

## SAR TEST REPORT



The following samples were submitted and identified on behalf of the client as:

**Product Name** Portable Computing Device  
**Brand Name** Microsoft  
**Model No.** 1926  
**Prepared for** Microsoft Corporation  
One Microsoft Way, Redmond, WA 98052-6399 USA  
**Standards** IEEE/ANSI C95.1-1992, IEEE 1528-2013,  
KDB248227D01v02r02, KDB865664D01v01r04,  
KDB865664D02v01r02, KDB447498D01v06,  
KDB616217D04v01r02,  
**FCC ID** C3K1926  
**Date of Receipt** Sep. 30, 2019  
**Date of Test(s)** Oct. 31, 2019 ~ Jan. 20, 2020  
**Date of Issue** Apr. 24, 2020

In the configuration tested, the EUT complied with the standards specified above.

**Remarks:**

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS Taiwan Electronic & Communication Laboratory or testing done by SGS Taiwan Electronic & Communication Laboratory in connection with distribution or use of the product described in this report must be approved by SGS Taiwan Electronic & Communication Laboratory in writing.

**Signed on behalf of SGS**

Clerk / Ruby Ou	Engineer / Bond Tsai	Asst. Manager / John Yeh

**Date: Apr. 24, 2020**

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## Revision History

Report Number	Revision	Description	Issue Date
E5/2019/90016	Rev.00	Initial creation of document	Apr. 24, 2020

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## Contents

<b>1. General Information .....</b>	<b>4</b>
1.1 Testing Laboratory .....	4
1.2 Details of Applicant.....	4
1.3 Description of EUT .....	5
1.4 Test Environment.....	67
1.5 Operation Description.....	67
1.6 Proximity sensor operation description .....	70
1.7 The SAR Measurement System .....	118
1.8 System Components .....	120
1.9 SAR System Verification.....	122
1.10 Tissue Simulant Fluid for the Frequency Band .....	124
1.11 Evaluation Procedures.....	127
1.12 Probe Calibration Procedures.....	128
1.13 Test Standards and Limits .....	131
<b>2. Summary of Results .....</b>	<b>133</b>
2.1 Decision rules.....	133
2.2 Summary of Results .....	133
2.3 Reporting statements of conformity .....	136
<b>3. Simultaneous Transmission Analysis.....</b>	<b>137</b>
3.1 Estimated SAR calculation .....	138
3.2 SPLSR evaluation and analysis.....	138
<b>4. Instruments List.....</b>	<b>150</b>
<b>5. Measurements.....</b>	<b>151</b>
<b>6. SAR System Performance Verification.....</b>	<b>175</b>
<b>7. Uncertainty Budget.....</b>	<b>188</b>
<b>Appendixes .....</b>	<b>190</b>
E5201990016 SAR_Appendix A Photographs .....	190
E5201990016 SAR_Appendix B DAE & Probe Cal. Certificate .....	190
E5201990016 SAR_Appendix C Phantom Description & Dipole Cal. Certificate .....	190

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

# 1. General Information

## 1.1 Testing Laboratory

SGS Taiwan Ltd. Electronics & Communication Laboratory	
No. 2, Keji 1st Rd., Guishan Township, Taoyuan County, 33383, Taiwan	
Tel	+886-2-2299-3279
Fax	+886-2-2298-0488
Internet	<a href="http://www.tw.sgs.com/">http://www.tw.sgs.com/</a>

## 1.2 Details of Applicant

Company Name	Microsoft Corporation
Company Address	One Microsoft Way, Redmond, WA 98052-6399 USA

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

### 1.3 Description of EUT

General Information of Host:

Equipment Under Test	Portable Computing Device		
Brand Name	Microsoft		
Model No.	1926		
Integrated Module	Brand Name : Intel Model Name : AX200D2WL		
FCC ID	C3K1926		
Mode of Operation	<input checked="" type="checkbox"/> WLAN802.11 a/b/g/n/ac/ax(20M/40M/80M/160M) <input checked="" type="checkbox"/> Bluetooth		
Duty Cycle	WLAN802.11 a/b/g/n/ac/ax(20M/40M/80M/160M)	1	
	Bluetooth	1	
TX Frequency Range (MHz)	WLAN802.11 b/g/n/ax(20M)	2412	— 2472
	WLAN802.11 n/ax(40M)	2422	— 2462
	WLAN802.11 a/n/ac/ax(20M) 5.2G	5180	— 5240
	WLAN802.11 n/ac/ax(40M) 5.2G	5190	— 5230
	WLAN802.11 ac/ax(80M) 5.2G	5210	
	WLAN802.11 ac/ax(160M) 5.2G	5250	
	WLAN802.11 a/n/ac/ax(20M) 5.3G	5260	— 5320
	WLAN802.11 n/ac/ax(40M) 5.3G	5270	— 5310
	WLAN802.11 ac/ax(80M) 5.3G	5290	
	WLAN802.11 a/n/ac/ax(20M) 5.6G	5500	— 5720
	WLAN802.11 n/ac/ax(40M) 5.6G	5510	— 5710
	WLAN802.11 ac/ax(80M) 5.6G	5530	— 5690
	WLAN802.11 ac/ax(160M) 5.6G	5570	
	WLAN802.11 a/n/ac/ax(20M) 5.8G	5745	— 5825
	WLAN802.11 n/ac/ax(40M) 5.8G	5710	— 5795
	WLAN802.11 ac/ax(80M) 5.8G	5775	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

TX Frequency Range (MHz)	Bluetooth	2402	—	2480
Channel Number (ARFCN)	WLAN802.11 b/g/n/ax(20M)	1	—	13
	WLAN802.11 n/ax(40M)	3	—	11
	WLAN802.11 a/n/ac/ax(20M) 5.2G	36	—	48
	WLAN802.11 n/ac/ax(40M) 5.2G	38	—	46
	WLAN802.11 ac/ax(80M) 5.2G	42		
	WLAN802.11 ac/ax(160M) 5.2G	50		
	WLAN802.11 a/n/ac/ax(20M) 5.3G	52	—	64
	WLAN802.11 n/ac/ax(40M) 5.3G	54	—	62
	WLAN802.11 ac/ax(80M) 5.3G	58		
	WLAN802.11 a/n/ac/ax(20M) 5.6G	100	—	144
	WLAN802.11 n/ac/ax(40M) 5.6G	102	—	142
	WLAN802.11 ac/ax(80M) 5.6G	106	—	138
	WLAN802.11 ac/ax(160M) 5.6G	114		
	WLAN802.11 a/n/ac/ax(20M) 5.8G	149	—	165
	WLAN802.11 n/ac/ax(40M) 5.8G	151	—	159
	WLAN802.11 ac/ax(80M) 5.8G	155		
	Bluetooth	0	—	78

**Note:**

This is the SAR report for host FCC ID: [C3K1926] containing module FCC ID: [C3K1901].

The host 1926 FCC ID:C3K1926 includes a low power 13.56 MHz NFC transmitter,.

The RF exposure contribution from this co-located transmitter are negligible and therefore simultaneous transmissions between the Wi-Fi/Bluetooth module C3K1901 and the NFC transmitter would not impact the SAR values reported for the stand-alone transmitter.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## SISO Full

Max. SAR (1g) (Unit: W/Kg)					
Antenna	Band	Measured	Reported	Channel	Position
Tx1	WLAN 802.11b	0.77	0.78	10	Back side
	WLAN 802.11n(40M) 5.2G	0.98	0.99	38	Back side
	WLAN 802.11ac(80M) 5.2G	1.06	1.08	42	Back side
	WLAN 802.11n(40M) 5.3G	1.01	1.03	54	Back side
	WLAN 802.11ac(80M) 5.3G	1.01	1.06	58	Back side
	WLAN 802.11ac(80M) 5.6G	1.10	1.16	106	Back side
	WLAN 802.11n(40M) 5.8G	1.14	1.16	159	Back side
	WLAN 802.11ac(80M) 5.8G	0.99	1.01	155	Back side
Tx2	WLAN 802.11b	0.98	1.01	6	Back side
	Bluetooth(GFSK)	0.09	0.13	0	Top side
	WLAN 802.11ac(80M) 5.2G	0.45	0.46	42	Top side
	WLAN 802.11ac(80M) 5.3G	0.43	0.45	58	Top side
	WLAN 802.11ac(160M) 5.6G	0.47	0.48	114	Top side
	WLAN 802.11ac(80M) 5.8G	0.42	0.44	155	Top side

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan /新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

# SISO Reduced

Max. SAR (1g) (Unit: W/Kg)					
Antenna	Band	Measured	Reported	Channel	Position
Tx1	WLAN 802.11b	1.04	1.07	6	Back side
	WLAN 802.11ac(160M) 5.2G	0.68	0.71	50	Back side
	WLAN 802.11ac(80M) 5.3G	0.62	0.65	58	Back side
	WLAN 802.11ac(160M) 5.6G	0.76	0.78	114	Back side
	WLAN 802.11ac(80M) 5.8G	0.71	0.73	155	Back side
Tx2	WLAN 802.11b	0.71	0.71	1	Back side
	WLAN 802.11ac(160M) 5.2G	0.55	0.57	50	Back side
	WLAN 802.11ac(80M) 5.3G	0.64	0.66	58	Back side
	WLAN 802.11ac(160M) 5.6G	0.47	0.48	114	Back side
	WLAN 802.11ac(80M) 5.8G	0.40	0.41	155	Back side

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan /新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group



**Antenna Information**

Vendor	Advanced Wireless & Antenna Inc.									
Antenna	Main/Tx1 (Loop)					Aux/Tx2 (monopole)				
Part Number	DQ60AYF0006					DQ60AYF0006				
Frequency	2.4G	5.2G	5.3G	5.6G	5.8G	2.4G	5.2G	5.3G	5.6G	5.8G
Gain (dBi)	1.80	0.90	1.10	1.60	-0.70	3.2	0.90	1.40	0.5	0.4

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

# WLAN802.11 a/b/g/n(20M/40M)/ac/ax(20M/40M/80M/160M) conducted power table:

Band \ Antenna	SISO		MIMO
	Tx1	Tx2	Tx1 + Tx2
WLAN802.11b	V	V	-
WLAN802.11g	V	V	-
WLAN802.11n(20M)	V	V	V
WLAN802.11n(40M)	V	V	V
WLAN802.11ax(20M)	V	V	V
WLAN802.11ax(40M)	V	V	V
WLAN802.11a	V	V	-
WLAN802.11n(20M) 5G	V	V	V
WLAN802.11n(40M) 5G	V	V	V
WLAN802.11ac(20M) 5G	V	V	V
WLAN802.11ac(40M) 5G	V	V	V
WLAN802.11ac(80M) 5G	V	V	V
WLAN802.11ac(160M) 5G	V	V	V
WLAN802.11ax(20M) 5G	V	V	V
WLAN802.11ax(40M) 5G	V	V	V
WLAN802.11ax(80M) 5G	V	V	V
WLAN802.11ax(160M) 5G	V	V	V

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

### SISO Full power

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
2450 MHz	802.11b	1	2412	1Mbps	20.00	19.95
		2	2417		20.00	19.91
		6	2437		20.00	19.93
		10	2457		20.00	19.97
		11	2462		18.75	18.74
		12	2467		18.00	17.96
		13	2472		15.75	15.60
	802.11g	1	2412	6Mbps	18.50	18.37
		2	2417		20.00	19.77
		6	2437		20.00	19.96
		10	2457		20.00	19.71
		11	2462		16.00	15.98
		12	2467		14.00	13.99
		13	2472		11.50	11.49
	802.11n20-HT0	1	2412	MCS0	18.50	18.37
		2	2417		20.00	19.85
		6	2437		20.00	19.89
		10	2457		20.00	19.96
		11	2462		16.00	15.83
		12	2467		14.00	13.94
		13	2472		11.50	11.48
	802.11ax20-HE0	1	2412	MCS0	18.50	18.32
		2	2417		20.00	19.73
		6	2437		20.00	19.97
		10	2457		20.00	19.87
		11	2462		16.00	15.97
		12	2467		14.00	13.97
		13	2472		11.50	11.39

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
2450 MHz	802.11n40-HT0	3	2422	MCS0	17.50	17.38
		4	2427		18.00	17.81
		6	2437		18.00	17.94
		8	2447		15.00	14.78
		9	2452		14.25	14.10
		10	2457		12.00	11.99
		11	2462		12.00	11.99
	802.11ax40-HE0	3	2422	MCS0	17.50	17.32
		4	2427		18.00	17.96
		6	2437		18.00	17.90
		8	2447		15.00	14.77
		9	2452		14.25	14.08
		10	2457		12.00	11.99
		11	2462		12.00	11.97

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.15-5.25 GHz	802.11a	36	5180	6Mbps	17.00	16.99
		40	5200		17.00	16.95
		44	5220		17.00	16.96
		48	5240		17.00	16.98
	802.11n20-HT0	36	5180	MCS0	17.00	16.93
		40	5200		17.00	16.90
		44	5220		17.00	16.99
		48	5240		17.00	16.98
	802.11ac20-VHT0	36	5180	MCS0	17.00	16.88
		40	5200		17.00	16.81
		44	5220		17.00	16.91
		48	5240		17.00	16.87
	802.11ax20-HE0	36	5180	MCS0	17.00	16.97
		40	5200		17.00	16.85
		44	5220		17.00	16.97
		48	5240		17.00	16.90
	802.11n40-HT0	38	5190	MCS0	17.00	16.98
		46	5230		17.00	16.94
	802.11ac40-VHT0	38	5190	MCS0	17.00	16.90
		46	5230		17.00	16.87
	802.11ax40-HE0	38	5190	MCS0	17.00	16.73
		46	5230		17.00	16.87
	802.11ac80-VHT0	42	5210	MCS0	17.00	16.97
	802.11ax80-HE0	42	5210	MCS0	17.00	16.86
	802.11ac160-VHT0	50	5250	MCS0	15.00	14.98
	802.11ax160-HE0	50	5250	MCS0	15.00	14.91

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.25-5.35 GHz	802.11a	52	5260	6Mbps	17.00	16.97
		56	5280		17.00	16.90
		60	5300		17.00	16.99
		64	5320		17.00	16.98
	802.11n20-HT0	52	5260	MCS0	17.00	16.97
		56	5280		17.00	16.90
		60	5300		17.00	16.94
		64	5320		17.00	16.93
	802.11ac20-VHT0	52	5260	MCS0	17.00	16.90
		56	5280		17.00	16.80
		60	5300		17.00	16.91
		64	5320		17.00	16.90
	802.11ax20-HE0	52	5260	MCS0	17.00	16.84
		56	5280		17.00	16.90
		60	5300		17.00	16.76
		64	5320		17.00	16.71
	802.11n40-HT0	54	5270	MCS0	17.00	16.98
		62	5310		17.00	16.99
	802.11ac40-VHT0	54	5270	MCS0	17.00	16.89
		62	5310		17.00	16.91
	802.11ax40-HE0	54	5270	MCS0	17.00	16.82
		62	5310		17.00	16.76
	802.11ac80-VHT0	58	5290	MCS0	17.00	16.84
	802.11ax80-HE0	58	5290	MCS0	17.00	16.91

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11a	100	5500	6Mbps	17.00	16.99
		104	5520		17.00	16.85
		116	5580		17.00	16.97
		120	5600		17.00	16.84
		136	5680		17.00	16.94
		140	5700		17.00	16.99
		144	5720		17.00	16.91
	802.11n20-HT0	100	5500	MCS0	17.00	16.96
		104	5520		17.00	17.00
		116	5580		17.00	16.95
		120	5600		17.00	16.89
		136	5680		17.00	16.96
		140	5700		17.00	16.96
		144	5720		17.00	16.85
	802.11ac20-VHT0	100	5500	MCS0	17.00	16.89
		104	5520		17.00	16.82
		116	5580		17.00	16.87
		120	5600		17.00	16.95
		136	5680		17.00	16.81
		140	5700		17.00	16.85
		144	5720		17.00	16.82
	802.11ax20-HE0	100	5500	MCS0	17.00	16.87
		104	5520		17.00	16.76
		116	5580		17.00	16.97
		120	5600		17.00	16.91
		136	5680		17.00	16.95
		140	5700		17.00	16.96
		144	5720		17.00	16.99

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11n40-HT0	102	5510	MCS0	17.00	16.86
		110	5550		17.00	16.97
		118	5590		17.00	16.93
		134	5670		17.00	16.97
		142	5710		17.00	16.91
	802.11ac40-VHT0	102	5510	MCS0	17.00	16.83
		110	5550		17.00	16.87
		118	5590		17.00	16.96
		134	5670		17.00	16.85
		142	5710		17.00	16.88
	802.11ax40-HE0	102	5510	MCS0	17.00	16.86
		110	5550		17.00	16.97
		118	5590		17.00	16.85
		134	5670		17.00	16.75
		142	5710		17.00	16.95
	802.11ac80-VHT0	106	5530	MCS0	17.00	16.83
		122	5610		17.00	16.89
		138	5690		17.00	16.76
	802.11ax80-HE0	106	5530	MCS0	17.00	16.82
		122	5610		17.00	16.80
		138	5690		17.00	16.84
	802.11ac160-VHT0	114	5570	MCS0	15.00	14.97
	802.11ax160-HE0	114	5570	MCS0	15.00	14.94

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Tx1 antenna						
Mode	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5800 MHz	802.11a	149	5745	6Mbps	17.00	16.81
		157	5785		17.00	16.98
		165	5825		17.00	16.90
	802.11n20-HT0	149	5745	MCS0	17.00	16.77
		157	5785		17.00	16.96
		165	5825		17.00	16.87
	802.11ac20-VHT0	149	5745	MCS0	17.00	16.74
		157	5785		17.00	16.86
		165	5825		17.00	16.84
	802.11ax20-HE0	149	5745	MCS0	17.00	16.94
		157	5785		17.00	16.92
		165	5825		17.00	16.94
	802.11n40-HT0	151	5755	MCS0	17.00	16.94
		159	5795		17.00	16.97
	802.11ac40-VHT0	151	5755	MCS0	17.00	16.91
		159	5795		17.00	16.90
	802.11ax40-HE0	151	5755	MCS0	17.00	16.96
		159	5795		17.00	16.77
	802.11ac80-VHT0	155	5775	MCS0	17.00	16.96
	802.11ax80-HE0	155	5775	MCS0	17.00	16.74

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
2450 MHz	802.11b	1	2412	1Mbps	20.00	19.90
		2	2417		20.00	19.86
		6	2437		20.00	19.92
		10	2457		20.00	19.91
		11	2462		18.75	18.74
		12	2467		17.00	16.99
		13	2472		15.75	15.58
	802.11g	1	2412	6Mbps	17.50	17.32
		2	2417		20.00	19.70
		6	2437		20.00	19.92
		10	2457		20.00	19.75
		11	2462		16.00	15.90
		12	2467		14.00	13.97
		13	2472		11.25	11.23
	802.11n20-HT0	1	2412	MCS0	17.50	17.46
		2	2417		20.00	19.78
		6	2437		20.00	19.76
		10	2457		20.00	19.89
		11	2462		16.00	15.79
		12	2467		14.00	13.83
		13	2472		11.25	11.23
	802.11ax20-HE0	1	2412	MCS0	17.50	17.48
		2	2417		20.00	19.80
		6	2437		20.00	19.96
		10	2457		20.00	19.73
		11	2462		16.00	15.95
		12	2467		14.00	13.96
		13	2472		11.25	11.24

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
2450 MHz	802.11n40-HT0	3	2422	MCS0	17.50	17.36
		4	2427		18.00	17.91
		6	2437		18.00	17.83
		8	2447		15.00	14.80
		9	2452		14.25	14.08
		10	2457		12.00	11.97
		11	2462		11.50	11.43
	802.11ax40-HE0	3	2422	MCS0	17.50	17.30
		4	2427		18.00	17.73
		6	2437		18.00	17.89
		8	2447		15.00	14.98
		9	2452		14.25	14.06
		10	2457		12.00	11.98
		11	2462		11.50	11.46

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.15-5.25 GHz	802.11a	36	5180	6Mbps	15.625	15.54
		40	5200		15.625	15.56
		44	5220		15.625	15.48
		48	5240		15.625	15.55
	802.11n20-HT0	36	5180	MCS0	15.625	15.43
		40	5200		15.625	15.56
		44	5220		15.625	15.54
		48	5240		15.625	15.49
	802.11ac20-VHT0	36	5180	MCS0	15.625	15.45
		40	5200		15.625	15.55
		44	5220		15.625	15.54
		48	5240		15.625	15.48
	802.11ax20-HE0	36	5180	MCS0	15.625	15.56
		40	5200		15.625	15.42
		44	5220		15.625	15.51
		48	5240		15.625	15.54
	802.11n40-HT0	38	5190	MCS0	15.625	15.57
		46	5230		15.625	15.61
	802.11ac40-VHT0	38	5190	MCS0	15.625	15.54
		46	5230		15.625	15.51
	802.11ax40-HE0	38	5190	MCS0	15.625	15.47
		46	5230		15.625	15.53
	802.11ac80-VHT0	42	5210	MCS0	15.625	15.60
	802.11ax80-HE0	42	5210	MCS0	15.625	15.53
	802.11ac160-VHT0	50	5250	MCS0	15.25	15.06
	802.11ax160-HE0	50	5250	MCS0	15.25	15.24

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.25-5.35 GHz	802.11a	52	5260	6Mbps	15.625	15.42
		56	5280		15.625	15.41
		60	5300		15.625	15.45
		64	5320		15.625	15.44
	802.11n20-HT0	52	5260	MCS0	15.625	15.39
		56	5280		15.625	15.45
		60	5300		15.625	15.34
		64	5320		15.625	15.46
	802.11ac20-VHT0	52	5260	MCS0	15.625	15.44
		56	5280		15.625	15.37
		60	5300		15.625	15.46
		64	5320		15.625	15.45
	802.11ax20-HE0	52	5260	MCS0	15.625	15.41
		56	5280		15.625	15.38
		60	5300		15.625	15.38
		64	5320		15.625	15.44
	802.11n40-HT0	54	5270	MCS0	15.625	15.47
		62	5310		15.625	15.58
	802.11ac40-VHT0	54	5270	MCS0	15.625	15.45
		62	5310		15.625	15.41
	802.11ax40-HE0	54	5270	MCS0	15.625	15.39
		62	5310		15.625	15.34
	802.11ac80-VHT0	58	5290	MCS0	15.625	15.54
	802.11ax80-HE0	58	5290	MCS0	15.625	15.45

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11a	100	5500	6Mbps	15.25	15.21
		104	5520		15.25	15.19
		116	5580		15.25	15.18
		120	5600		15.25	15.22
		136	5680		15.25	15.21
		140	5700		15.25	15.13
		144	5720		15.25	15.14
	802.11n20-HT0	100	5500	MCS0	15.25	15.18
		104	5520		15.25	15.21
		116	5580		15.25	15.19
		120	5600		15.25	15.11
		136	5680		15.25	15.14
		140	5700		15.25	15.21
		144	5720		15.25	15.15
	802.11ac20-VHT0	100	5500	MCS0	15.25	15.14
		104	5520		15.25	15.16
		116	5580		15.25	15.13
		120	5600		15.25	15.18
		136	5680		15.25	15.21
		140	5700		15.25	15.16
		144	5720		15.25	15.13
	802.11ax20-HE0	100	5500	MCS0	15.25	15.12
		104	5520		15.25	15.16
		116	5580		15.25	15.18
		120	5600		15.25	15.14
		136	5680		15.25	15.22
		140	5700		15.25	15.22
		144	5720		15.25	15.21

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11n40-HT0	102	5510	MCS0	15.25	15.18
		110	5550		15.25	15.13
		118	5590		15.25	15.12
		134	5670		15.25	15.19
		142	5710		15.25	15.14
	802.11ac40-VHT0	102	5510	MCS0	15.25	15.09
		110	5550		15.25	15.07
		118	5590		15.25	15.18
		134	5670		15.25	15.12
		142	5710		15.25	15.15
	802.11ax40-HE0	102	5510	MCS0	15.25	15.13
		110	5550		15.25	15.16
		118	5590		15.25	15.15
		134	5670		15.25	15.12
		142	5710		15.25	15.18
	802.11ac80-VHT0	106	5530	MCS0	15.25	15.23
		122	5610		15.25	15.11
		138	5690		15.25	15.20
	802.11ax80-HE0	106	5530	MCS0	15.25	15.21
		122	5610		15.25	15.18
		138	5690		15.25	15.14
	802.11ac160-VHT0	114	5570	MCS0	15.25	15.13
	802.11ax160-HE0	114	5570	MCS0	15.25	15.18

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Mode	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5800 MHz	802.11a	149	5745	6Mbps	14.875	14.71
		157	5785		14.875	14.65
		165	5825		14.875	14.56
	802.11n20-HT0	149	5745	MCS0	14.875	14.67
		157	5785		14.875	14.58
		165	5825		14.875	14.66
	802.11ac20-VHT0	149	5745	MCS0	14.875	14.71
		157	5785		14.875	14.69
		165	5825		14.875	14.59
	802.11ax20-HE0	149	5745	MCS0	14.875	14.56
		157	5785		14.875	14.59
		165	5825		14.875	14.62
	802.11n40-HT0	151	5755	MCS0	14.875	14.73
		159	5795		14.875	14.57
	802.11ac40-VHT0	151	5755	MCS0	14.875	14.64
		159	5795		14.875	14.72
	802.11ax40-HE0	151	5755	MCS0	14.875	14.59
		159	5795		14.875	14.57
	802.11ac80-VHT0	155	5775	MCS0	14.875	14.75
	802.11ax80-HE0	155	5775	MCS0	14.875	14.72

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



# MIMO Full power

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
2450 MHz	802.11n20-HT0	1	2412	MCS0	16.75	16.73
		2	2417		18.00	17.88
		6	2437		18.00	17.90
		10	2457		18.00	17.85
		11	2462		15.00	14.94
		12	2467		13.50	13.41
		13	2472		8.25	8.01
	802.11ax20-HE0	1	2412	MCS0	16.75	16.71
		2	2417		18.00	17.72
		6	2437		18.00	17.76
		10	2457		18.00	17.71
		11	2462		15.00	14.71
		12	2467		13.50	13.29
		13	2472		8.25	8.17
	802.11n40-HT0	3	2422	MCS0	16.75	16.62
		4	2427		15.00	14.96
		6	2437		17.00	16.97
		8	2447		14.00	13.95
		9	2452		13.75	13.71
		10	2457		11.00	10.87
		11	2462		9.00	8.98
	802.11ax40-HE0	3	2422	MCS0	16.75	16.68
		4	2427		15.00	14.94
		6	2437		17.00	16.87
		8	2447		14.00	13.86
		9	2452		13.75	13.71
		10	2457		11.00	10.92
		11	2462		9.00	8.91

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.15-5.25 GHz	802.11n20-HT0	36	5180	MCS0	17.00	16.82
		40	5200		17.00	16.67
		44	5220		17.00	16.97
		48	5240		17.00	16.95
	802.11ac20-VHT0	36	5180	MCS0	17.00	16.79
		40	5200		17.00	16.87
		44	5220		17.00	16.94
		48	5240		17.00	16.92
	802.11ax20-HE0	36	5180	MCS0	17.00	16.71
		40	5200		17.00	16.88
		44	5220		17.00	16.97
		48	5240		17.00	16.92
	802.11n40-HT0	38	5190	MCS0	17.00	16.96
		46	5230		17.00	16.81
	802.11ac40-VHT0	38	5190	MCS0	17.00	16.92
		46	5230		17.00	16.76
	802.11ax40-HE0	38	5190	MCS0	17.00	16.74
		46	5230		17.00	16.94
	802.11ac80-VHT0	42	5210	MCS0	17.00	17.74
	802.11ax80-HE0	42	5210	MCS0	17.00	16.96
	802.11ac160-VHT0	50	5250	MCS0	13.50	13.49
	802.11ax160-HE0	50	5250	MCS0	13.50	13.48

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.25-5.35 GHz	802.11n20-HT0	52	5260	MCS0	17.00	16.94
		56	5280		17.00	16.87
		60	5300		17.00	16.92
		64	5320		17.00	16.91
	802.11ac20-VHT0	52	5260	MCS0	17.00	16.90
		56	5280		17.00	16.82
		60	5300		17.00	16.87
		64	5320		17.00	16.86
	802.11ax20-HE0	52	5260	MCS0	17.00	16.92
		56	5280		17.00	16.91
		60	5300		17.00	16.82
		64	5320		17.00	16.76
	802.11n40-HT0	54	5270	MCS0	17.00	16.97
		62	5310		16.50	16.48
	802.11ac40-VHT0	54	5270	MCS0	17.00	16.94
		62	5310		16.50	16.45
	802.11ax40-HE0	54	5270	MCS0	17.00	16.88
		62	5310		16.50	16.37
	802.11ac80-VHT0	58	5290	MCS0	16.25	16.23
	802.11ax80-HE0	58	5290	MCS0	16.25	16.24

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11n20-HT0	100	5500	MCS0	17.00	16.96
		104	5520		17.00	16.91
		116	5580		17.00	16.87
		120	5600		17.00	16.78
		136	5680		17.00	16.92
		140	5700		17.00	16.91
		144	5720		17.00	16.72
	802.11ac20-VHT0	100	5500	MCS0	17.00	16.93
		104	5520		17.00	16.97
		116	5580		17.00	16.84
		120	5600		17.00	16.76
		136	5680		17.00	16.97
		140	5700		17.00	16.88
		144	5720		17.00	16.68
	802.11ax20-HE0	100	5500	MCS0	17.00	16.94
		104	5520		17.00	16.72
		116	5580		17.00	16.72
		120	5600		17.00	16.94
		136	5680		17.00	16.87
		140	5700		17.00	16.86
		144	5720		17.00	16.76

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11n40-HT0	102	5510	MCS0	17.00	16.78
		110	5550		17.00	16.92
		118	5590		17.00	16.94
		134	5670		17.00	16.98
		142	5710		17.00	16.96
	802.11ac40-VHT0	102	5510	MCS0	17.00	16.74
		110	5550		17.00	16.89
		118	5590		17.00	16.81
		134	5670		17.00	16.95
		142	5710		17.00	16.94
	802.11ax40-HE0	102	5510	MCS0	17.00	16.98
		110	5550		17.00	16.73
		118	5590		17.00	16.71
		134	5670		17.00	16.82
		142	5710		17.00	16.73
	802.11ac80-VHT0	106	5530	MCS0	17.00	16.79
		122	5610		17.00	16.74
		138	5690		17.00	16.72
	802.11ax80-HE0	106	5530	MCS0	17.00	16.98
		122	5610		17.00	16.95
		138	5690		17.00	16.94
	802.11ac160-VHT0	114	5570	MCS0	13.50	13.36
	802.11ax160-HE0	114	5570	MCS0	13.50	13.21

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Mode	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5800 MHz	802.11n20-HT0	149	5745	MCS0	17.00	16.81
		157	5785		17.00	16.94
		165	5825		17.00	16.89
	802.11ac20-VHT0	149	5745	MCS0	17.00	16.76
		157	5785		17.00	16.90
		165	5825		17.00	16.85
	802.11ax20-HE0	149	5745	MCS0	17.00	16.73
		157	5785		17.00	16.88
		165	5825		17.00	16.80
	802.11n40-HT0	151	5755	MCS0	17.00	16.84
		159	5795		17.00	16.98
	802.11ac40-VHT0	151	5755	MCS0	17.00	16.81
		159	5795		17.00	16.95
	802.11ax40-HE0	151	5755	MCS0	17.00	16.66
		159	5795		17.00	16.84
	802.11ac80-VHT0	155	5775	MCS0	17.00	16.98
	802.11ax80-HE0	155	5775	MCS0	17.00	16.85

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
2450 MHz	802.11n20-HT0	1	2412	MCS0	16.75	16.68
		2	2417		18.00	17.91
		6	2437		18.00	17.83
		10	2457		18.00	17.83
		11	2462		15.00	14.87
		12	2467		13.50	13.28
		13	2472		8.25	7.84
	802.11ax20-HE0	1	2412	MCS0	16.75	16.66
		2	2417		18.00	17.75
		6	2437		18.00	17.68
		10	2457		18.00	17.74
		11	2462		15.00	14.51
		12	2467		13.50	13.04
		13	2472		8.25	8.09
	802.11n40-HT0	3	2422	MCS0	16.75	16.39
		4	2427		15.00	14.94
		6	2437		17.00	16.93
		8	2447		14.00	13.97
		9	2452		13.75	13.32
		10	2457		11.00	10.35
		11	2462		9.00	8.89
	802.11ax40-HE0	3	2422	MCS0	16.75	16.62
		4	2427		15.00	14.91
		6	2437		17.00	16.63
		8	2447		14.00	13.89
		9	2452		13.75	13.65
		10	2457		11.00	10.73
		11	2462		9.00	8.82

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.15-5.25 GHz	802.11n20-HT0	36	5180	MCS0	15.625	15.43
		40	5200		15.625	15.56
		44	5220		15.625	15.54
		48	5240		15.625	15.49
	802.11ac20-VHT0	36	5180	MCS0	15.625	15.45
		40	5200		15.625	15.55
		44	5220		15.625	15.54
		48	5240		15.625	15.48
	802.11ax20-HE0	36	5180	MCS0	15.625	15.56
		40	5200		15.625	15.42
		44	5220		15.625	15.51
		48	5240		15.625	15.54
	802.11n40-HT0	38	5190	MCS0	15.625	15.57
		46	5230		15.625	15.61
	802.11ac40-VHT0	38	5190	MCS0	15.625	15.54
		46	5230		15.625	15.51
	802.11ax40-HE0	38	5190	MCS0	15.625	15.47
		46	5230		15.625	15.53
	802.11ac80-VHT0	42	5210	MCS0	15.625	15.60
	802.11ax80-HE0	42	5210	MCS0	15.625	15.53
	802.11ac160-VHT0	50	5250	MCS0	13.5	13.42
	802.11ax160-HE0	50	5250	MCS0	13.5	13.27

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.25-5.35 GHz	802.11n20-HT0	52	5260	MCS0	15.625	15.39
		56	5280		15.625	15.45
		60	5300		15.625	15.34
		64	5320		15.625	15.46
	802.11ac20-VHT0	52	5260	MCS0	15.625	15.44
		56	5280		15.625	15.37
		60	5300		15.625	15.46
		64	5320		15.625	15.45
	802.11ax20-HE0	52	5260	MCS0	15.625	15.41
		56	5280		15.625	15.38
		60	5300		15.625	15.38
		64	5320		15.625	15.44
	802.11n40-HT0	54	5270	MCS0	15.625	15.47
		62	5310		15.625	15.58
	802.11ac40-VHT0	54	5270	MCS0	15.625	15.45
		62	5310		15.625	15.41
	802.11ax40-HE0	54	5270	MCS0	15.625	15.39
		62	5310		15.625	15.34
	802.11ac80-VHT0	58	5290	MCS0	15.625	15.54
	802.11ax80-HE0	58	5290	MCS0	15.625	15.45

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11n20-HT0	100	5500	MCS0	15.25	15.18
		104	5520		15.25	15.21
		116	5580		15.25	15.19
		120	5600		15.25	15.11
		136	5680		15.25	15.14
		140	5700		15.25	15.21
		144	5720		15.25	15.15
	802.11ac20-VHT0	100	5500	MCS0	15.25	15.14
		104	5520		15.25	15.16
		116	5580		15.25	15.13
		120	5600		15.25	15.18
		136	5680		15.25	15.21
		140	5700		15.25	15.16
		144	5720		15.25	15.13
	802.11ax20-HE0	100	5500	MCS0	15.25	15.12
		104	5520		15.25	15.16
		116	5580		15.25	15.18
		120	5600		15.25	15.14
		136	5680		15.25	15.22
		140	5700		15.25	15.22
		144	5720		15.25	15.21

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11n40-HT0	102	5510	MCS0	15.25	15.18
		110	5550		15.25	15.13
		118	5590		15.25	15.12
		134	5670		15.25	15.19
		142	5710		15.25	15.14
	802.11ac40-VHT0	102	5510	MCS0	15.25	15.09
		110	5550		15.25	15.07
		118	5590		15.25	15.18
		134	5670		15.25	15.12
		142	5710		15.25	15.15
	802.11ax40-HE0	102	5510	MCS0	15.25	15.13
		110	5550		15.25	15.16
		118	5590		15.25	15.15
		134	5670		15.25	15.12
		142	5710		15.25	15.18
	802.11ac80-VHT0	106	5530	MCS0	15.25	15.23
		122	5610		15.25	15.11
		138	5690		15.25	15.20
	802.11ax80-HE0	106	5530	MCS0	15.25	15.21
		122	5610		15.25	15.18
		138	5690		15.25	15.14
	802.11ac160-VHT0	114	5570	MCS0	13.50	13.29
	802.11ax160-HE0	114	5570	MCS0	13.50	13.24

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Mode	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5800 MHz	802.11n20-HT0	149	5745	MCS0	14.875	14.67
		157	5785		14.875	14.58
		165	5825		14.875	14.66
	802.11ac20-VHT0	149	5745	MCS0	14.875	14.71
		157	5785		14.875	14.69
		165	5825		14.875	14.59
	802.11ax20-HE0	149	5745	MCS0	14.875	14.56
		157	5785		14.875	14.59
		165	5825		14.875	14.62
	802.11n40-HT0	151	5755	MCS0	14.875	14.73
		159	5795		14.875	14.57
	802.11ac40-VHT0	151	5755	MCS0	14.875	14.64
		159	5795		14.875	14.72
	802.11ax40-HE0	151	5755	MCS0	14.875	14.59
		159	5795		14.875	14.57
	802.11ac80-VHT0	155	5775	MCS0	14.875	14.75
	802.11ax80-HE0	155	5775	MCS0	14.875	14.72

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## SISO Reduced power

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
2450 MHz	802.11b	1	2412	1Mbps	17.00	16.93
		2	2417		17.00	16.84
		6	2437		17.00	16.91
		10	2457		17.00	16.81
		11	2462		17.00	16.90
		12	2467		17.00	16.88
		13	2472		14.75	14.71
	802.11g	1	2412	6Mbps	17.00	16.93
		2	2417		17.00	16.79
		6	2437		17.00	16.98
		10	2457		17.00	16.81
		11	2462		15.00	14.82
		12	2467		13.00	12.91
		13	2472		10.50	10.30
	802.11n20-HT0	1	2412	MCS0	17.00	16.89
		2	2417		17.00	16.74
		6	2437		17.00	16.89
		10	2457		17.00	16.81
		11	2462		15.00	14.85
		12	2467		13.00	12.94
		13	2472		10.50	10.39
	802.11ax20-HE0	1	2412	MCS0	17.00	16.88
		2	2417		17.00	16.81
		6	2437		17.00	16.80
		10	2457		17.00	16.82
		11	2462		15.00	14.76
		12	2467		13.00	12.94
		13	2472		10.50	10.29

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
2450 MHz	802.11n40-HT0	3	2422	MCS0	16.50	16.22
		4	2427		17.00	16.91
		6	2437		17.00	16.93
		8	2447		14.00	13.84
		9	2452		13.50	13.36
		10	2457		11.00	10.82
		11	2462		11.00	10.75
	802.11ax40-HE0	3	2422	MCS0	16.50	16.38
		4	2427		17.00	16.72
		6	2437		17.00	16.80
		8	2447		14.00	13.95
		9	2452		13.50	13.32
		10	2457		11.00	10.86
		11	2462		11.00	10.76

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.15-5.25 GHz	802.11a	36	5180	6Mbps	10.50	10.29
		40	5200		10.50	10.33
		44	5220		10.50	10.35
		48	5240		10.50	10.39
	802.11n20-HT0	36	5180	MCS0	10.50	10.36
		40	5200		10.50	10.41
		44	5220		10.50	10.36
		48	5240		10.50	10.42
	802.11ac20-VHT0	36	5180	MCS0	10.50	10.33
		40	5200		10.50	10.27
		44	5220		10.50	10.39
		48	5240		10.50	10.29
	802.11ax20-HE0	36	5180	MCS0	10.50	10.31
		40	5200		10.50	10.36
		44	5220		10.50	10.37
		48	5240		10.50	10.36
	802.11n40-HT0	38	5190	MCS0	10.50	10.31
		46	5230		10.50	10.41
	802.11ac40-VHT0	38	5190	MCS0	10.50	10.35
		46	5230		10.50	10.32
	802.11ax40-HE0	38	5190	MCS0	10.50	10.29
		46	5230		10.50	10.38
	802.11ac80-VHT0	42	5210	MCS0	10.50	10.43
	802.11ax80-HE0	42	5210	MCS0	10.50	10.35
	802.11ac160-VHT0	50	5250	MCS0	10.50	10.41
	802.11ax160-HE0	50	5250	MCS0	10.50	10.32

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.25-5.35 GHz	802.11a	52	5260	6Mbps	10.50	10.41
		56	5280		10.50	10.37
		60	5300		10.50	10.36
		64	5320		10.50	10.33
	802.11n20-HT0	52	5260	MCS0	10.50	10.32
		56	5280		10.50	10.35
		60	5300		10.50	10.32
		64	5320		10.50	10.35
	802.11ac20-VHT0	52	5260	MCS0	10.50	10.31
		56	5280		10.50	10.41
		60	5300		10.50	10.29
		64	5320		10.50	10.42
	802.11ax20-HE0	52	5260	MCS0	10.50	10.31
		56	5280		10.50	10.35
		60	5300		10.50	10.37
		64	5320		10.50	10.41
	802.11n40-HT0	54	5270	MCS0	10.50	10.44
		62	5310		10.50	10.40
	802.11ac40-VHT0	54	5270	MCS0	10.50	10.42
		62	5310		10.50	10.34
	802.11ax40-HE0	54	5270	MCS0	10.50	10.37
		62	5310		10.50	10.42
	802.11ac80-VHT0	58	5290	MCS0	10.50	10.38
	802.11ax80-HE0	58	5290	MCS0	10.50	10.36

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11a	100	5500	6Mbps	11.00	10.87
		104	5520		11.00	10.91
		116	5580		11.00	10.84
		120	5600		11.00	10.81
		136	5680		11.00	10.92
		140	5700		11.00	10.82
		144	5720		11.00	10.93
	802.11n20-HT0	100	5500	MCS0	11.00	10.88
		104	5520		11.00	10.82
		116	5580		11.00	10.91
		120	5600		11.00	10.86
		136	5680		11.00	10.93
		140	5700		11.00	10.85
		144	5720		11.00	10.92
	802.11ac20-VHT0	100	5500	MCS0	11.00	10.88
		104	5520		11.00	10.84
		116	5580		11.00	10.92
		120	5600		11.00	10.89
		136	5680		11.00	10.91
		140	5700		11.00	10.83
		144	5720		11.00	10.82
	802.11ax20-HE0	100	5500	MCS0	11.00	10.86
		104	5520		11.00	10.91
		116	5580		11.00	10.88
		120	5600		11.00	10.92
		136	5680		11.00	10.85
		140	5700		11.00	10.93
		144	5720		11.00	10.85

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11n40-HT0	102	5510	MCS0	11.00	10.81
		110	5550		11.00	10.79
		118	5590		11.00	10.85
		134	5670		11.00	10.91
		142	5710		11.00	10.89
	802.11ac40-VHT0	102	5510	MCS0	11.00	10.82
		110	5550		11.00	10.94
		118	5590		11.00	10.92
		134	5670		11.00	10.89
		142	5710		11.00	10.85
	802.11ax40-HE0	102	5510	MCS0	11.00	10.89
		110	5550		11.00	10.93
		118	5590		11.00	10.89
		134	5670		11.00	10.84
		142	5710		11.00	10.91
	802.11ac80-VHT0	106	5530	MCS0	11.00	10.95
		122	5610		11.00	10.90
		138	5690		11.00	10.94
	802.11ax80-HE0	106	5530	MCS0	11.00	10.89
		122	5610		11.00	10.83
		138	5690		11.00	10.88
	802.11ac160-VHT0	114	5570	MCS0	11.00	10.95
	802.11ax160-HE0	114	5570	MCS0	11.00	10.93

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Mode	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5800 MHz	802.11a	149	5745	6Mbps	11.00	10.88
		157	5785		11.00	10.91
		165	5825		11.00	10.84
	802.11n20-HT0	149	5745	MCS0	11.00	10.91
		157	5785		11.00	10.81
		165	5825		11.00	10.84
	802.11ac20-VHT0	149	5745	MCS0	11.00	10.82
		157	5785		11.00	10.93
		165	5825		11.00	10.84
	802.11ax20-HE0	149	5745	MCS0	11.00	10.92
		157	5785		11.00	10.87
		165	5825		11.00	10.82
	802.11n40-HT0	151	5755	MCS0	11.00	10.95
		159	5795		11.00	10.92
	802.11ac40-VHT0	151	5755	MCS0	11.00	10.93
		159	5795		11.00	10.89
	802.11ax40-HE0	151	5755	MCS0	11.00	10.83
		159	5795		11.00	10.88
	802.11ac80-VHT0	155	5775	MCS0	11.00	10.94
	802.11ax80-HE0	155	5775	MCS0	11.00	10.92

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
2450 MHz	802.11b	1	2412	1Mbps	12.75	12.73
		2	2417		12.75	12.63
		6	2437		12.75	12.70
		10	2457		12.75	12.59
		11	2462		12.75	12.64
		12	2467		12.75	12.61
		13	2472		12.75	12.58
	802.11g	1	2412	6Mbps	12.75	12.62
		2	2417		12.75	12.63
		6	2437		12.75	12.61
		10	2457		12.75	12.59
		11	2462		12.75	12.61
		12	2467		12.75	12.32
		13	2472		10.25	10.05
	802.11n20-HT0	1	2412	MCS0	12.75	12.71
		2	2417		12.75	12.67
		6	2437		12.75	12.63
		10	2457		12.75	12.66
		11	2462		12.75	12.64
		12	2467		12.75	12.58
		13	2472		10.25	10.00
	802.11ax20-HE0	1	2412	MCS0	12.75	12.56
		2	2417		12.75	12.62
		6	2437		12.75	12.68
		10	2457		12.75	12.61
		11	2462		12.75	12.58
		12	2467		12.75	12.65
		13	2472		10.25	10.10

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
2450 MHz	802.11n40-HT0	3	2422	MCS0	12.75	12.67
		4	2427		12.75	12.63
		6	2437		12.75	12.67
		8	2447		12.75	12.58
		9	2452		12.75	12.66
		10	2457		11.00	10.99
		11	2462		11.00	10.84
	802.11ax40-HE0	3	2422	MCS0	12.75	12.67
		4	2427		12.75	12.61
		6	2437		12.75	12.52
		8	2447		12.75	12.58
		9	2452		12.75	12.54
		10	2457		11.00	10.83
		11	2462		11.00	10.81

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.15-5.25 GHz	802.11a	36	5180	6Mbps	13.375	13.22
		40	5200		13.375	13.25
		44	5220		13.375	13.25
		48	5240		13.375	13.28
	802.11n20-HT0	36	5180	MCS0	13.375	13.19
		40	5200		13.375	13.24
		44	5220		13.375	13.26
		48	5240		13.375	13.26
	802.11ac20-VHT0	36	5180	MCS0	13.375	13.21
		40	5200		13.375	13.29
		44	5220		13.375	13.26
		48	5240		13.375	13.18
	802.11ax20-HE0	36	5180	MCS0	13.375	13.22
		40	5200		13.375	13.24
		44	5220		13.375	13.25
		48	5240		13.375	13.21
	802.11n40-HT0	38	5190	MCS0	13.375	13.26
		46	5230		13.375	13.22
	802.11ac40-VHT0	38	5190	MCS0	13.375	13.16
		46	5230		13.375	13.18
	802.11ax40-HE0	38	5190	MCS0	13.375	13.28
		46	5230		13.375	13.22
	802.11ac80-VHT0	42	5210	MCS0	13.375	13.31
	802.11ax80-HE0	42	5210	MCS0	13.375	13.24
	802.11ac160-VHT0	50	5250	MCS0	13.375	13.28
	802.11ax160-HE0	50	5250	MCS0	13.375	13.25

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.25-5.35 GHz	802.11a	52	5260	6Mbps	13.375	13.29
		56	5280		13.375	13.21
		60	5300		13.375	13.18
		64	5320		13.375	13.22
	802.11n20-HT0	52	5260	MCS0	13.375	13.26
		56	5280		13.375	13.26
		60	5300		13.375	13.21
		64	5320		13.375	13.29
	802.11ac20-VHT0	52	5260	MCS0	13.375	13.28
		56	5280		13.375	13.25
		60	5300		13.375	13.19
		64	5320		13.375	13.24
	802.11ax20-HE0	52	5260	MCS0	13.375	13.26
		56	5280		13.375	13.17
		60	5300		13.375	13.22
		64	5320		13.375	13.26
	802.11n40-HT0	54	5270	MCS0	13.375	13.29
		62	5310		13.375	13.22
	802.11ac40-VHT0	54	5270	MCS0	13.375	13.17
		62	5310		13.375	13.22
	802.11ax40-HE0	54	5270	MCS0	13.375	13.24
		62	5310		13.375	13.27
	802.11ac80-VHT0	58	5290	MCS0	13.375	13.30
	802.11ax80-HE0	58	5290	MCS0	13.375	13.25

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11a	100	5500	6Mbps	11.25	11.17
		104	5520		11.25	11.19
		116	5580		11.25	11.11
		120	5600		11.25	11.14
		136	5680		11.25	11.21
		140	5700		11.25	11.14
		144	5720		11.25	11.18
	802.11n20-HT0	100	5500	MCS0	11.25	11.18
		104	5520		11.25	11.14
		116	5580		11.25	11.21
		120	5600		11.25	11.18
		136	5680		11.25	11.09
		140	5700		11.25	11.06
		144	5720		11.25	11.15
	802.11ac20-VHT0	100	5500	MCS0	11.25	11.12
		104	5520		11.25	11.18
		116	5580		11.25	11.21
		120	5600		11.25	11.13
		136	5680		11.25	11.05
		140	5700		11.25	11.18
		144	5720		11.25	11.13
	802.11ax20-HE0	100	5500	MCS0	11.25	11.19
		104	5520		11.25	11.13
		116	5580		11.25	11.21
		120	5600		11.25	11.12
		136	5680		11.25	11.17
		140	5700		11.25	11.21
		144	5720		11.25	11.16

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11n40-HT0	102	5510	MCS0	11.25	11.20
		110	5550		11.25	11.11
		118	5590		11.25	11.07
		134	5670		11.25	11.14
		142	5710		11.25	11.14
	802.11ac40-VHT0	102	5510	MCS0	11.25	11.19
		110	5550		11.25	11.11
		118	5590		11.25	11.16
		134	5670		11.25	11.19
		142	5710		11.25	11.13
	802.11ax40-HE0	102	5510	MCS0	11.25	11.03
		110	5550		11.25	11.21
		118	5590		11.25	11.19
		134	5670		11.25	11.14
		142	5710		11.25	11.17
	802.11ac80-VHT0	106	5530	MCS0	11.25	11.20
		122	5610		11.25	11.18
		138	5690		11.25	11.22
	802.11ax80-HE0	106	5530	MCS0	11.25	11.15
		122	5610		11.25	11.11
		138	5690		11.25	11.09
	802.11ac160-VHT0	114	5570	MCS0	11.25	11.17
	802.11ax160-HE0	114	5570	MCS0	11.25	11.15

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Mode	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5800 MHz	802.11a	149	5745	6Mbps	11.125	11.04
		157	5785		11.125	10.98
		165	5825		11.125	11.02
	802.11n20-HT0	149	5745	MCS0	11.125	11.05
		157	5785		11.125	11.03
		165	5825		11.125	10.96
	802.11ac20-VHT0	149	5745	MCS0	11.125	10.99
		157	5785		11.125	11.05
		165	5825		11.125	11.02
	802.11ax20-HE0	149	5745	MCS0	11.125	10.99
		157	5785		11.125	10.92
		165	5825		11.125	11.03
	802.11n40-HT0	151	5755	MCS0	11.125	11.07
		159	5795		11.125	11.01
	802.11ac40-VHT0	151	5755	MCS0	11.125	10.97
		159	5795		11.125	10.94
	802.11ax40-HE0	151	5755	MCS0	11.125	10.98
		159	5795		11.125	11.05
	802.11ac80-VHT0	155	5775	MCS0	11.125	11.03
	802.11ax80-HE0	155	5775	MCS0	11.125	11.01

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

### MIMO Reduced power

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
2450 MHz	802.11n20-HT0	1	2412	MCS0	17.00	16.85
		2	2417		17.00	16.60
		6	2437		17.00	16.60
		10	2457		17.00	16.55
		11	2462		15.00	14.76
		12	2467		13.00	12.87
		13	2472		10.50	10.11
	802.11ax20-HE0	1	2412	MCS0	17.00	16.83
		2	2417		17.00	16.62
		6	2437		17.00	16.72
		10	2457		17.00	16.55
		11	2462		15.00	14.50
		12	2467		13.00	12.71
		13	2472		10.50	10.22
	802.11n40-HT0	3	2422	MCS0	16.50	16.11
		4	2427		17.00	16.78
		6	2437		17.00	16.79
		8	2447		14.00	13.78
		9	2452		13.50	13.12
		10	2457		11.00	10.73
		11	2462		11.00	10.71
	802.11ax40-HE0	3	2422	MCS0	16.50	16.27
		4	2427		17.00	16.47
		6	2437		17.00	16.56
		8	2447		14.00	13.93
		9	2452		13.50	13.08
		10	2457		11.00	10.67
		11	2462		11.00	10.73

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.15-5.25 GHz	802.11n20-HT0	36	5180	MCS0	10.50	10.31
		40	5200		10.50	10.30
		44	5220		10.50	10.34
		48	5240		10.50	10.34
	802.11ac20-VHT0	36	5180	MCS0	10.50	10.32
		40	5200		10.50	10.21
		44	5220		10.50	10.37
		48	5240		10.50	10.26
	802.11ax20-HE0	36	5180	MCS0	10.50	10.25
		40	5200		10.50	10.32
		44	5220		10.50	10.31
		48	5240		10.50	10.35
	802.11n40-HT0	38	5190	MCS0	10.50	10.31
		46	5230		10.50	10.37
	802.11ac40-VHT0	38	5190	MCS0	10.50	10.34
		46	5230		10.50	10.30
	802.11ax40-HE0	38	5190	MCS0	10.50	10.23
		46	5230		10.50	10.35
	802.11ac80-VHT0	42	5210	MCS0	10.50	10.31
	802.11ax80-HE0	42	5210	MCS0	10.50	10.35
	802.11ac160-VHT0	50	5250	MCS0	10.50	10.31
	802.11ax160-HE0	50	5250	MCS0	10.50	10.24

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.25-5.35 GHz	802.11n20-HT0	52	5260	MCS0	10.50	10.30
		56	5280		10.50	10.30
		60	5300		10.50	10.31
		64	5320		10.50	10.35
	802.11ac20-VHT0	52	5260	MCS0	10.50	10.31
		56	5280		10.50	10.37
		60	5300		10.50	10.21
		64	5320		10.50	10.37
	802.11ax20-HE0	52	5260	MCS0	10.50	10.26
		56	5280		10.50	10.33
		60	5300		10.50	10.33
		64	5320		10.50	10.40
	802.11n40-HT0	54	5270	MCS0	10.50	10.37
		62	5310		10.50	10.36
	802.11ac40-VHT0	54	5270	MCS0	10.50	10.34
		62	5310		10.50	10.30
	802.11ax40-HE0	54	5270	MCS0	10.50	10.34
		62	5310		10.50	10.34
	802.11ac80-VHT0	58	5290	MCS0	10.50	10.37
	802.11ax80-HE0	58	5290	MCS0	10.50	10.34

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11n20-HT0	100	5500	MCS0	11.00	10.84
		104	5520		11.00	10.80
		116	5580		11.00	10.89
		120	5600		11.00	10.81
		136	5680		11.00	10.83
		140	5700		11.00	10.85
		144	5720		11.00	10.83
	802.11ac20-VHT0	100	5500	MCS0	11.00	10.86
		104	5520		11.00	10.81
		116	5580		11.00	10.83
		120	5600		11.00	10.88
		136	5680		11.00	10.83
		140	5700		11.00	10.81
		144	5720		11.00	10.80
	802.11ax20-HE0	100	5500	MCS0	11.00	10.82
		104	5520		11.00	10.86
		116	5580		11.00	10.84
		120	5600		11.00	10.89
		136	5680		11.00	10.78
		140	5700		11.00	10.84
		144	5720		11.00	10.81

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11n40-HT0	102	5510	MCS0	11.00	10.77
		110	5550		11.00	10.78
		118	5590		11.00	10.82
		134	5670		11.00	10.85
		142	5710		11.00	10.81
	802.11ac40-VHT0	102	5510	MCS0	11.00	10.80
		110	5550		11.00	10.86
		118	5590		11.00	10.87
		134	5670		11.00	10.82
		142	5710		11.00	10.80
	802.11ax40-HE0	102	5510	MCS0	11.00	10.81
		110	5550		11.00	10.91
		118	5590		11.00	10.85
		134	5670		11.00	10.83
		142	5710		11.00	10.86
	802.11ac80-VHT0	106	5530	MCS0	11.00	10.89
		122	5610		11.00	10.89
		138	5690		11.00	10.93
	802.11ax80-HE0	106	5530	MCS0	11.00	10.80
		122	5610		11.00	10.81
		138	5690		11.00	10.82
	802.11ac160-VHT0	114	5570	MCS0	11.00	10.91
	802.11ax160-HE0	114	5570	MCS0	11.00	10.88

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx1 antenna						
Mode	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5800 MHz	802.11n20-HT0	149	5745	MCS0	11.00	10.84
		157	5785		11.00	10.81
		165	5825		11.00	10.82
	802.11ac20-VHT0	149	5745	MCS0	11.00	10.74
		157	5785		11.00	10.90
		165	5825		11.00	10.77
	802.11ax20-HE0	149	5745	MCS0	11.00	10.84
		157	5785		11.00	10.84
		165	5825		11.00	10.79
	802.11n40-HT0	151	5755	MCS0	11.00	10.81
		159	5795		11.00	10.84
	802.11ac40-VHT0	151	5755	MCS0	11.00	10.87
		159	5795		11.00	10.87
	802.11ax40-HE0	151	5755	MCS0	11.00	10.75
		159	5795		11.00	10.81
	802.11ac80-VHT0	155	5775	MCS0	11.00	10.94
	802.11ax80-HE0	155	5775	MCS0	11.00	10.88

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
2450 MHz	802.11n20-HT0	1	2412	MCS0	12.75	12.64
		2	2417		12.75	12.61
		6	2437		12.75	12.62
		10	2457		12.75	12.62
		11	2462		12.75	12.64
		12	2467		12.75	12.57
		13	2472		10.25	9.98
	802.11ax20-HE0	1	2412	MCS0	12.75	12.55
		2	2417		12.75	12.62
		6	2437		12.75	12.61
		10	2457		12.75	12.53
		11	2462		12.75	12.49
		12	2467		12.75	12.62
		13	2472		10.25	10.07
	802.11n40-HT0	3	2422	MCS0	12.75	12.63
		4	2427		12.75	12.57
		6	2437		12.75	12.56
		8	2447		12.75	12.54
		9	2452		12.75	12.64
		10	2457		11.00	10.77
		11	2462		11.00	10.78
	802.11ax40-HE0	3	2422	MCS0	12.75	12.61
		4	2427		12.75	12.57
		6	2437		12.75	12.43
		8	2447		12.75	12.57
		9	2452		12.75	12.48
		10	2457		11.00	10.67
		11	2462		11.00	10.75

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.15-5.25 GHz	802.11n20-HT0	36	5180	MCS0	13.375	13.13
		40	5200		13.375	13.22
		44	5220		13.375	13.26
		48	5240		13.375	13.22
	802.11ac20-VHT0	36	5180	MCS0	13.375	13.13
		40	5200		13.375	13.20
		44	5220		13.375	13.25
		48	5240		13.375	13.15
	802.11ax20-HE0	36	5180	MCS0	13.375	13.22
		40	5200		13.375	13.23
		44	5220		13.375	13.25
		48	5240		13.375	13.14
	802.11n40-HT0	38	5190	MCS0	13.375	13.25
		46	5230		13.375	13.14
	802.11ac40-VHT0	38	5190	MCS0	13.375	13.16
		46	5230		13.375	13.10
	802.11ax40-HE0	38	5190	MCS0	13.375	13.21
		46	5230		13.375	13.19
	802.11ac80-VHT0	42	5210	MCS0	13.375	13.29
	802.11ax80-HE0	42	5210	MCS0	13.375	13.15
	802.11ac160-VHT0	50	5250	MCS0	13.375	13.20
	802.11ax160-HE0	50	5250	MCS0	13.375	13.25

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.25-5.35 GHz	802.11n20-HT0	52	5260	MCS0	13.375	13.22
		56	5280		13.375	13.23
		60	5300		13.375	13.21
		64	5320		13.375	13.23
	802.11ac20-VHT0	52	5260	MCS0	13.375	13.24
		56	5280		13.375	13.25
		60	5300		13.375	13.19
		64	5320		13.375	13.22
	802.11ax20-HE0	52	5260	MCS0	13.375	13.23
		56	5280		13.375	13.16
		60	5300		13.375	13.17
		64	5320		13.375	13.24
	802.11n40-HT0	54	5270	MCS0	13.375	13.21
		62	5310		13.375	13.16
	802.11ac40-VHT0	54	5270	MCS0	13.375	13.16
		62	5310		13.375	13.21
	802.11ax40-HE0	54	5270	MCS0	13.375	13.20
		62	5310		13.375	13.21
	802.11ac80-VHT0	58	5290	MCS0	13.375	13.21
	802.11ax80-HE0	58	5290	MCS0	13.375	13.22

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11n20-HT0	100	5500	MCS0	11.25	11.16
		104	5520		11.25	11.11
		116	5580		11.25	11.19
		120	5600		11.25	11.13
		136	5680		11.25	11.02
		140	5700		11.25	11.03
		144	5720		11.25	11.07
	802.11ac20-VHT0	100	5500	MCS0	11.25	11.05
		104	5520		11.25	11.12
		116	5580		11.25	11.06
		120	5600		11.25	11.13
		136	5680		11.25	10.97
		140	5700		11.25	11.09
		144	5720		11.25	11.12
	802.11ax20-HE0	100	5500	MCS0	11.25	11.17
		104	5520		11.25	11.13
		116	5580		11.25	11.06
		120	5600		11.25	11.11
		136	5680		11.25	11.05
		140	5700		11.25	11.17
		144	5720		11.25	11.07

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5600 MHz	802.11n40-HT0	102	5510	MCS0	11.25	11.11
		110	5550		11.25	11.03
		118	5590		11.25	11.01
		134	5670		11.25	11.12
		142	5710		11.25	11.09
	802.11ac40-VHT0	102	5510	MCS0	11.25	11.15
		110	5550		11.25	11.06
		118	5590		11.25	11.07
		134	5670		11.25	11.12
		142	5710		11.25	11.11
	802.11ax40-HE0	102	5510	MCS0	11.25	11.03
		110	5550		11.25	11.17
		118	5590		11.25	11.14
		134	5670		11.25	11.07
		142	5710		11.25	11.07
	802.11ac80-VHT0	106	5530	MCS0	11.25	11.12
		122	5610		11.25	11.10
		138	5690		11.25	11.17
	802.11ax80-HE0	106	5530	MCS0	11.25	11.12
		122	5610		11.25	11.11
		138	5690		11.25	11.01
	802.11ac160-VHT0	114	5570	MCS0	11.25	11.14
	802.11ax160-HE0	114	5570	MCS0	11.25	11.07

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tx2 antenna						
Mode	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5800 MHz	802.11n20-HT0	149	5745	MCS0	11.125	10.99
		157	5785		11.125	10.94
		165	5825		11.125	10.93
	802.11ac20-VHT0	149	5745	MCS0	11.125	10.96
		157	5785		11.125	11.01
		165	5825		11.125	10.97
	802.11ax20-HE0	149	5745	MCS0	11.125	10.95
		157	5785		11.125	10.86
		165	5825		11.125	10.95
	802.11n40-HT0	151	5755	MCS0	11.125	10.98
		159	5795		11.125	11.00
	802.11ac40-VHT0	151	5755	MCS0	11.125	10.97
		159	5795		11.125	10.92
	802.11ax40-HE0	151	5755	MCS0	11.125	10.89
		159	5795		11.125	10.96
	802.11ac80-VHT0	155	5775	MCS0	11.125	10.95
	802.11ax80-HE0	155	5775	MCS0	11.125	10.93

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

### Bluetooth conducted power table:

Mode	Channel	Frequency (MHz)	1Mbps		2Mbps		3Mbps	
			Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
BR/EDR	CH 00	2402	11.50	11.09	7.50	7.23	7.50	7.26
	CH 39	2441		10.72		7.29		7.31
	CH 78	2480		10.62		7.40		7.29

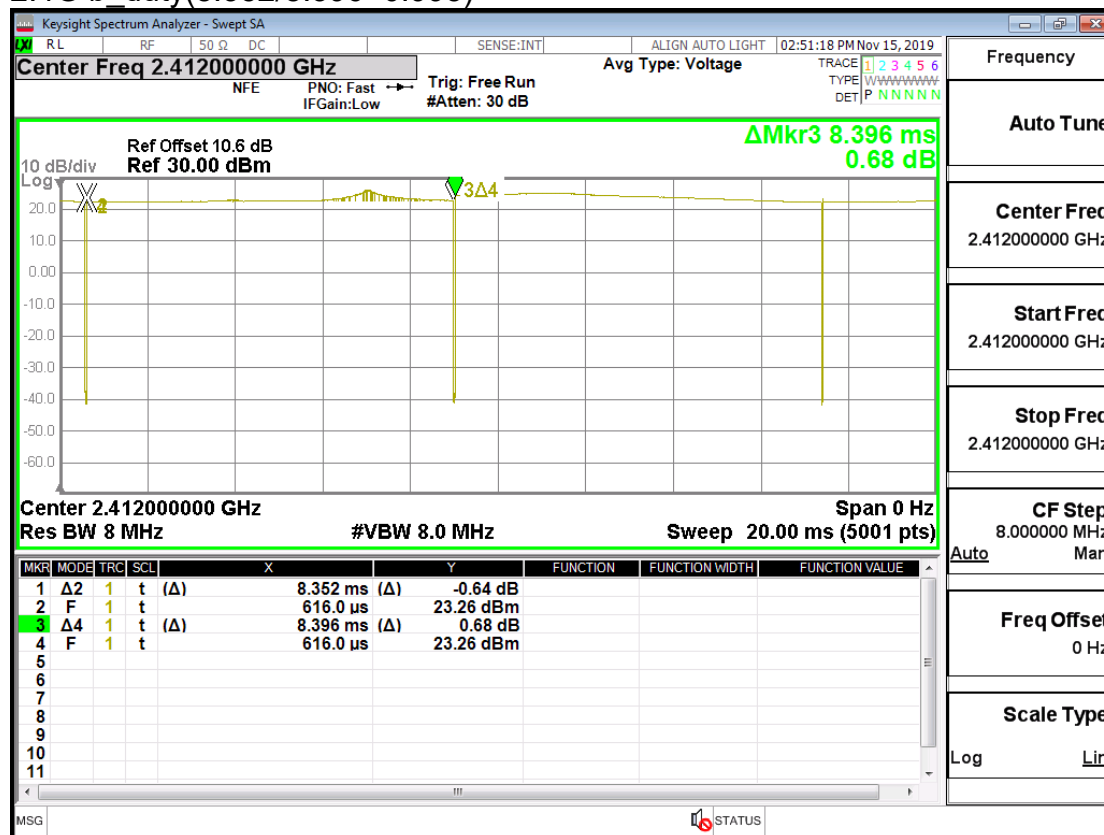
Mode	Channel	Frequency (MHz)	GFSK	
			Max. Rated Avg. Power + Max. Tolerance (dBm)	Average Output Power (dBm)
LE	CH 00	2402	7.5	7.45
	CH 19	2440		7.49
	CH 39	2480		7.29

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

2.4G b\_duty(8.352/8.396=0.995)



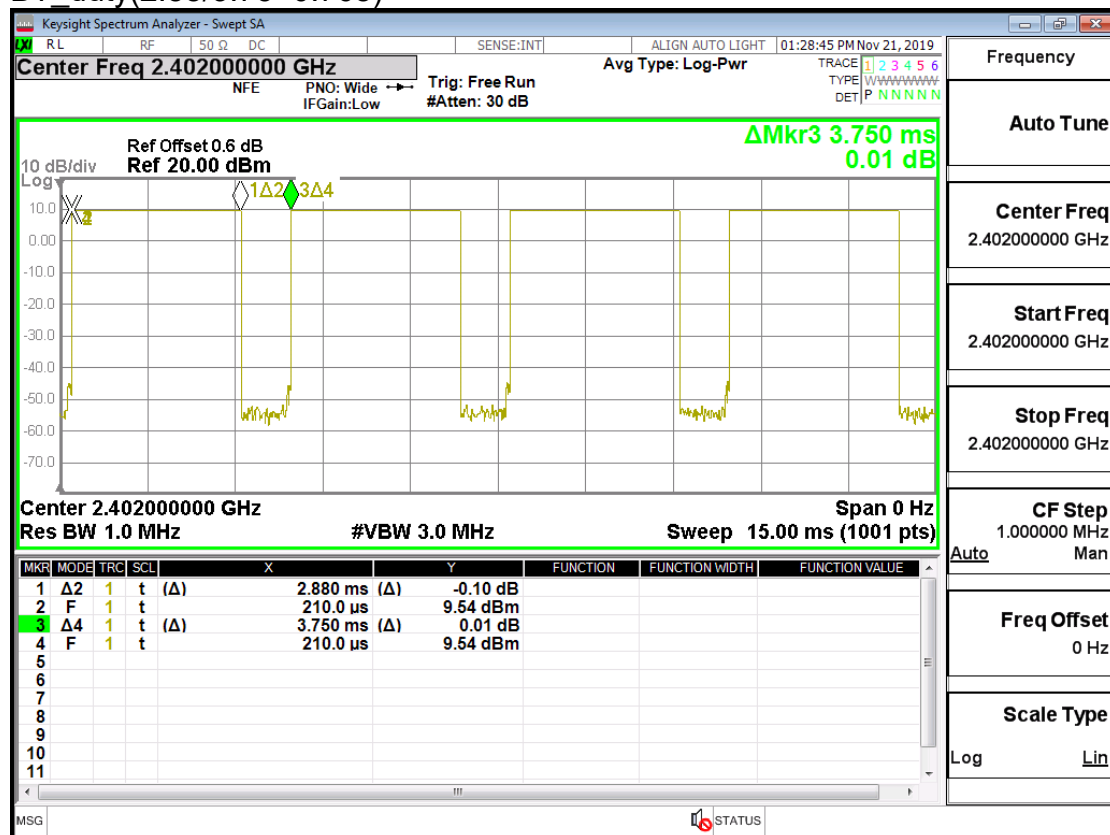
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



## BT\_duty(2.88/3.75=0.768)



## 5G n40\_duty(3.98/4.026=0.989)



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

5G ac80\_duty(3.966/4.007=0.99)



5G ac160\_duty(2.789/2.832=0.985)



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 1.4 Test Environment

Ambient Temperature: 22±2° C

Tissue Simulating Liquid: 22±2° C

## 1.5 Operation Description

Use chipset specific software to control the EUT, and makes it transmit in maximum power. Measurements are performed respectively on the lowest, middle and highest channels of the operating band(s). The EUT is set to maximum power level during all tests, and at the beginning of each test the battery is fully charged.

The device is a personal computing device computer with independent capacitive proximity sensors for power reduction. Proximity sensor 1 is collocated with TX1 antenna, proximity sensor 2 is collocated with TX2 antenna.

Transmission mode	WLAN TX1 proximity sensor	WLAN TX2 proximity sensor	WLAN TX1 power	WLAN TX2 power
WLAN	Inactive	Inactive	Full	Full
	Inactive	Active	Full	Reduced
	Active	Inactive	Reduced	Full
	Active	Active	Reduced	Reduced

### WLAN TX1\_full power condition

Backside\_4mm, top side\_9mm, bottom side/right side/left side\_0mm.

### WLAN TX1\_reduced power condition

Backside\_0mm, top side\_0mm.

### WLAN TX2\_full power condition

Backside\_6mm, top side\_4mm, bottom side/right side/left side\_0mm.

### WLAN TX2\_reduced power condition

Backside\_0mm, top side\_0mm.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## Note:

## 802.11b DSSS SAR Test Requirements:

1. SAR is measured for 2.4 GHz 802.11b DSSS mode using the highest measured maximum output power channel, when the reported SAR of the highest measured maximum output power channel for the exposure configuration is  $\leq 0.8$  W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.
2. When the reported SAR is  $> 0.8$  W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is  $> 1.2$  W/kg, SAR is required for the third channel; i.e., all channels require testing.

## 802.11g/n OFDM SAR Test Exclusion Requirements:

3. SAR is not required for 802.11g/n when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is  $\leq 1.2$  W/kg.

## Initial Test Configuration:

4. An initial test configuration is determined for OFDM transmission modes according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each standalone and aggregated frequency band.
5. SAR is measured using the highest measured maximum output power channel. When the reported SAR of the initial test configuration is  $> 0.8$  W/kg, SAR measurement is required for the subsequent next highest measured output power channel(s) in the initial test configuration until the reported SAR is  $\leq 1.2$  W/kg or all required channels are tested.
6. Since the highest reported SAR for the initial test configuration is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is  $\leq 1.2$  W/kg, SAR is not required for subsequent test configuration.
7. BT and WLAN Tx2 use the same antenna path, but they can't transmit at the same time.
8. According to KDB447498 D01, testing of other required channels is not required when the reported 1-g SAR for the highest output channel is  $\leq 0.8$  W/kg, when the transmission band is  $\leq 100$  MHz.
9. According to KDB865664 D01, SAR measurement variability must be assessed

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



for each frequency band. When the original highest measured SAR is  $\geq 0.8$  W/kg, repeated that measurement once. Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is  $> 1.20$  or when the original or repeated measurement is  $\geq 1.45$  W/kg ( $\sim 10\%$  from the 1-g SAR limit)

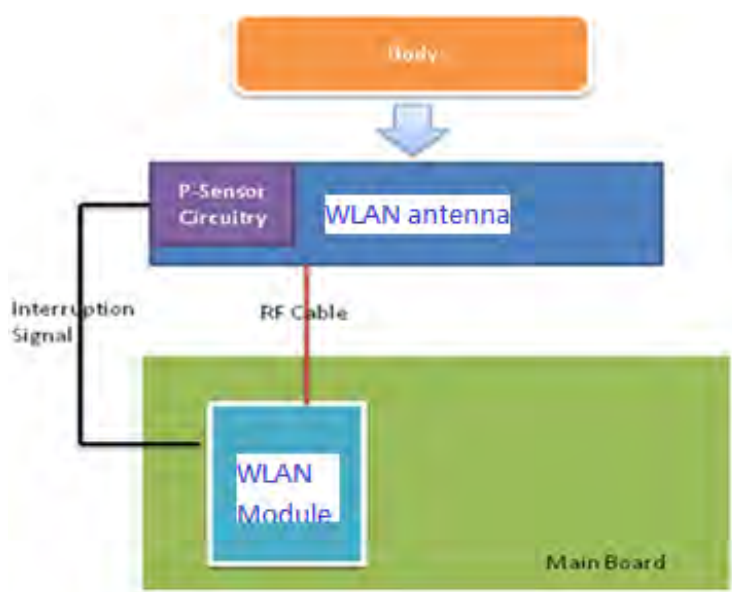
10. Based on FCC guidance, general principles of KDB248227D01 can be applied to 802.11ax to determine initial test configuration with 802.11ax being considered as the highest 802.11 mode for the appropriate frequency band.
11. For 2.4/5GHz WLAN TX1 and TX2 antennas, the maximum output power of each antenna during simultaneous transmission (whatever full or reduced power) is the same with (or less than) that used in standalone transmission, and we used the sum and/or SPLSR of standalone 1-g SAR provision in KDB447498D01 to exclude the simultaneous transmitted SAR measurement.
12. 1901 and 1926 hosts use identical Wi-Fi antennas, SAR sensors, form factor and SAR back-off.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 1.6 Proximity sensor operation description

The P-sensor being used to reduce output power is capacitive in which when the object such as human body, metal or plastic is being approached, the sensing capacitance would be increased with the antenna pad. Once the capacitance is accumulated, and reached over the threshold as set in MCU of the microchip, the interruption signal is pulled low (High state without trigger) and further inform modem module of the transmitter to make power reduction.



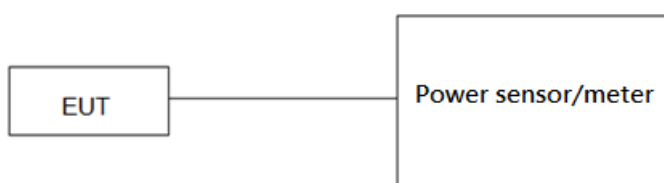
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

### 1.6.1 Proximity sensor measurement procedure

1. The proximity sensor is collocated with WLAN antenna.
2. Output power is measured, and monitored by using the power sensor and power meter. A RF cables with sufficient length was being attached from the antenna port of the module, and used for the measurement. The appropriate loss attenuated from cable is compensated in the power meter.



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 1.6.2 Trigger distances for back/top side

### Test procedure:

1. The entire back surface or edge of the device is positioned below a flat phantom filled with the required tissue equivalent medium and positioned at least 20 mm further than the distance that triggers power reduction.
2. The back surface or edge is moved toward the phantom in 3 mm steps until the sensor triggers.
3. The back surface or edge is again moved toward the phantom, but in 1 mm steps, until it is at least 5 mm past the triggering point or touching the phantom
4. If the device is not touching the phantom, it is moved in 3 mm steps until it touches the phantom to confirm that the sensor remains triggered and the maximum power stays reduced.
5. The back surface or edge is then moved back (further away) from the phantom until maximum output power is returned to the normal maximum level.
6. The process is then reversed by moving the device away from the phantom to determine triggering release, until it is at least 10 mm beyond the point that triggers the return of normal maximum power.
7. The measured output power within  $\pm 5$  mm of the triggering points, or until the device is touching the phantom, for movements to and from the phantom should be tabulated.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



8. To ensure all production units are compliant, it is generally necessary to reduce the triggering distance determined from the triggering tests by 1 mm, or more if it is necessary, and use the smallest distance for movements to and from the phantom, minus 1 mm, as the sensor triggering distance for determining the SAR measurement distance.
9. For WLAN TX1\_back side, the trigger distance of proximity sensor is 5mm. For WLAN TX2\_back side, the trigger distance of proximity sensor is 7mm.
10. For WLAN TX1\_top side, the trigger distance of proximity sensor is 10mm, For WLAN TX2\_top side, the trigger distance of proximity sensor is 5mm and we perform the 1.6.3 tilt angle testing in next step.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

### 1.6.3 Tilt angle testing

#### Test procedure:

1. The influence of table tilt angles to proximity sensor triggering is determined by positioning each device edge that contains a transmitting antenna, perpendicular to the flat phantom, at the smallest sensor triggering test distance determined in sections 1.6.2 by rotating the device around the edge next to the phantom in  $\leq 10$  deg increments until the device is  $\pm 45$ deg or more from the vertical position at 0 deg.
2. If sensor triggering is released and normal maximum output power is restored within the  $\pm 45$ deg range, the procedures in step 1) should be repeated by reducing the device to phantom separation distance by 1 mm until the proximity sensor no longer releases triggering, and maximum output power remains in the reduced mode.
3. The smallest separation distance determined in steps 1) and 2), minus 1 mm, is the sensor triggering distance for device tilt coverage. The smallest separation distance determined in sections 1.6.2, 1.6.3 minus 1 mm should be used in the SAR measurements.
4. The influence of device tilt angles to proximity sensor triggering is determined by positioning top and right sides, please refer to table 1.6.5 and 1.6.6.
5. After the tilt angle testing for top side on WLAN TX1 and WLAN TX2, the sensor is not released during  $\pm 45$ deg, so  $10-1=9$ mm for WLAN TX1 and  $5-1=4$ mm for WLAN TX2 are used in the SAR measurements of top side.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

#### 1.6.4 Proximity sensor coverage

The following procedures do not apply and are not required for configurations where the antenna and sensor are collocated and the peak SAR location is overlapping with the sensor.

Test procedure:

1. The back surface or edges of the device is positioned at a test separation distance less than or equal to the distance required for back surface or edge triggering, with both the antenna and sensor pad located at least 20 mm laterally outside the edge (boundary) of the phantom, along the direction of maximum antenna and sensor offset.
2. The similar sequence of steps applied to determine sensor triggering distance in section 1.6.2 are used to verify back surface and edge sensor coverage by moving the device (sensor and antenna) horizontally toward the phantom while maintaining the same vertical separation between the back surface or edge and the phantom.
3. After the exact location where triggering of power reduction is determined, with respect to the sensor and antenna, the device movement should be continued, in 3 mm increments, until both the sensor and antenna(s) are fully under the phantom and at least 20 mm inside the phantom edge.
4. The process is then repeated from the other direction, at the opposite end of maximum antenna and sensor offset, by rotating the device 180 degrees.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

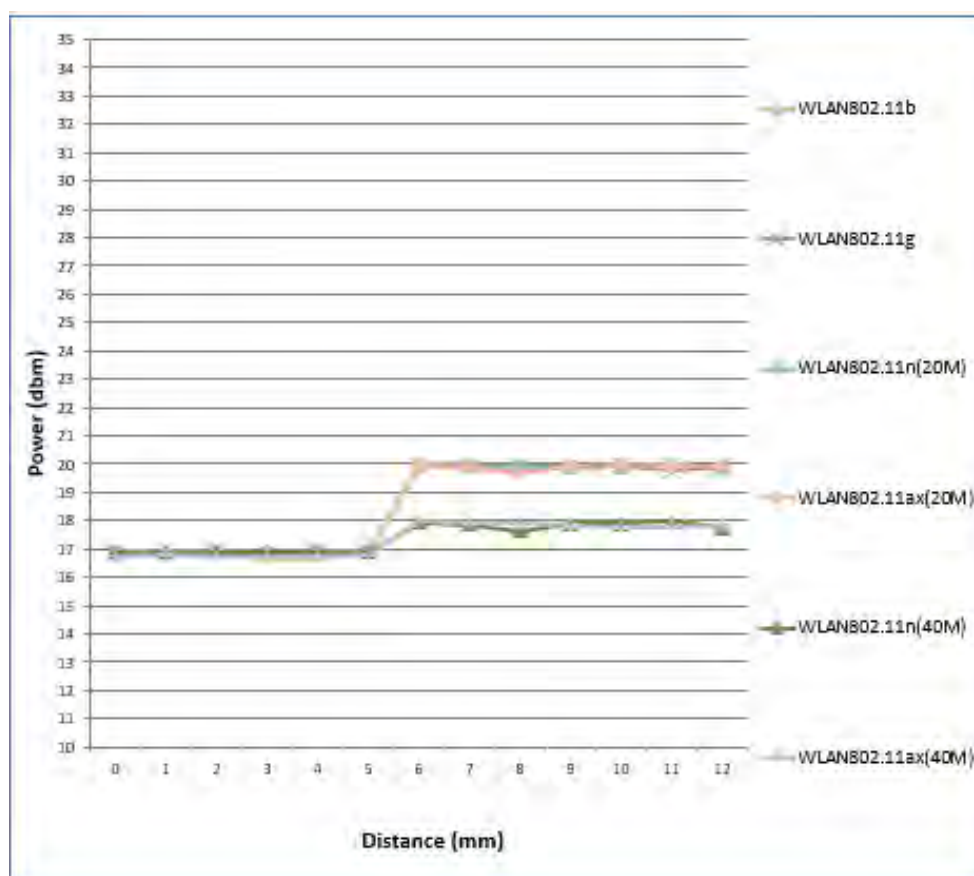
### 1.6.5 Results

The measured output power within  $\pm 5$  mm of the triggering points, or until the device is touching the phantom, for movements to and from the phantom is tabulated in the following.

#### Back side

Moving device toward the phantom

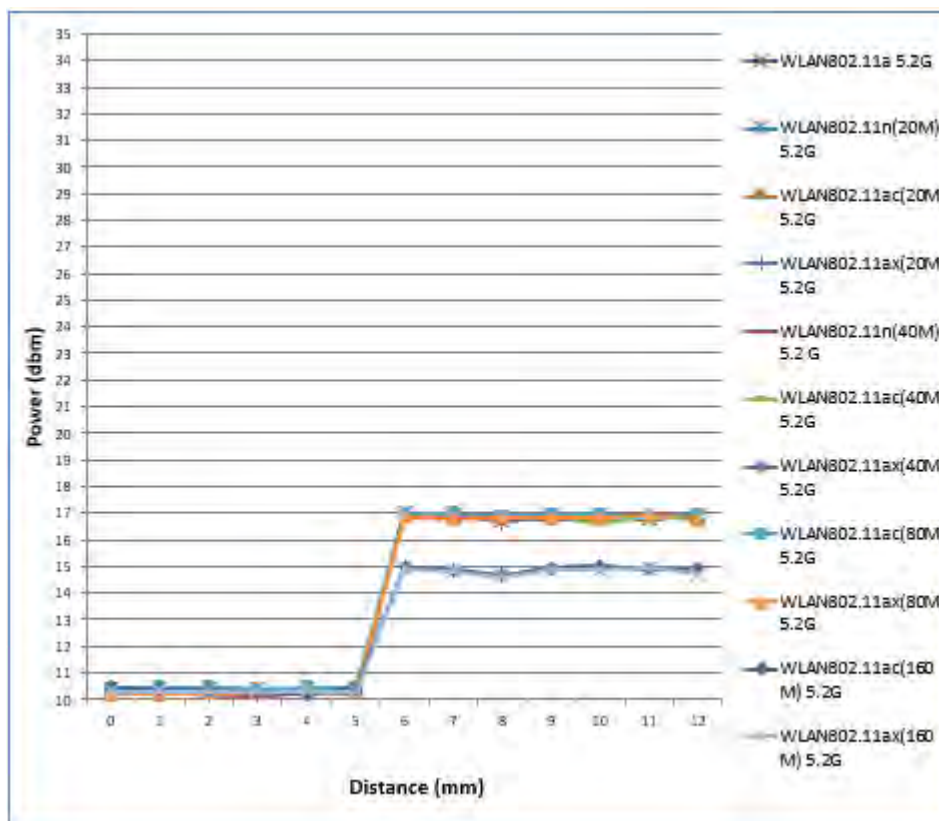
WLAN Tx1



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

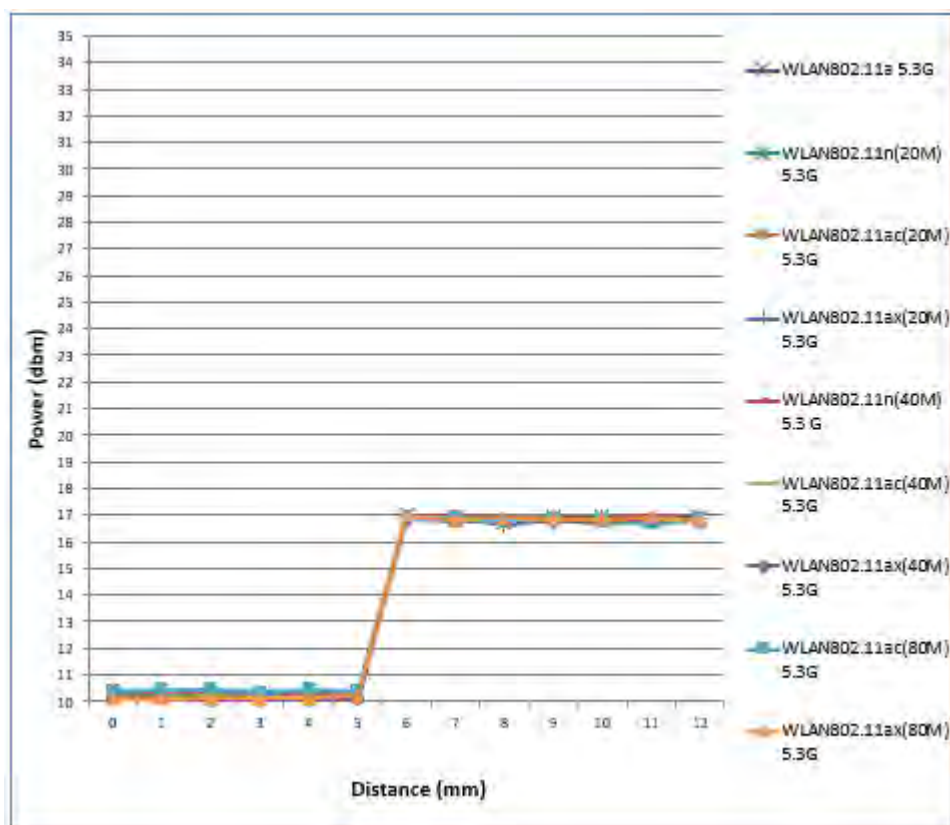
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

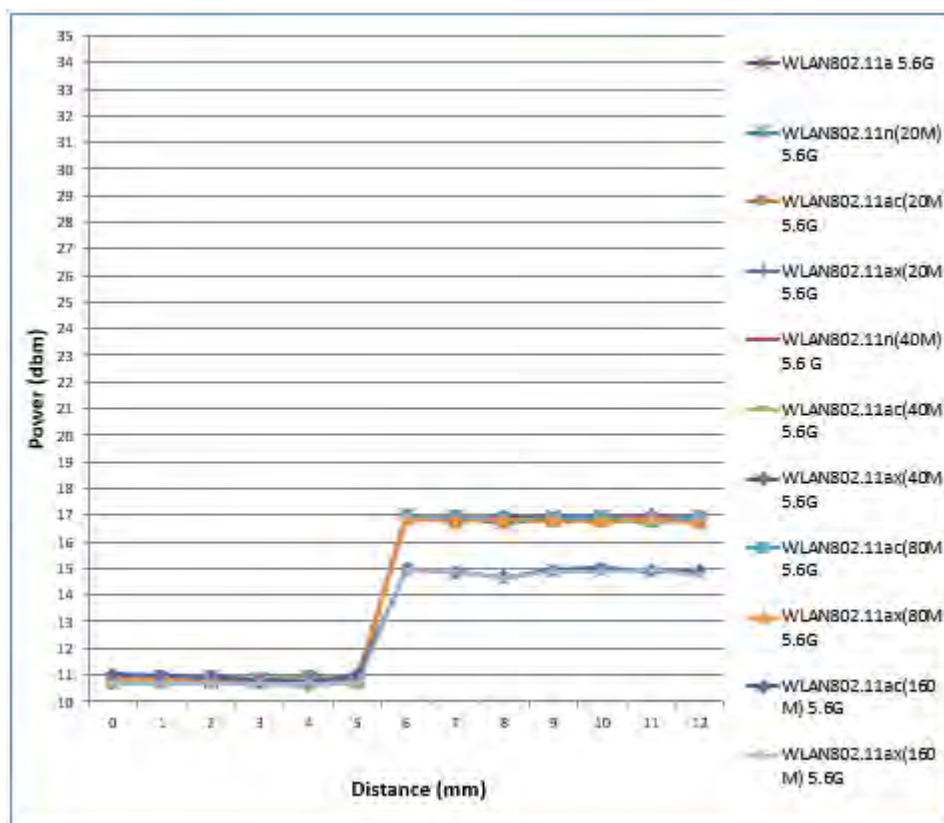
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

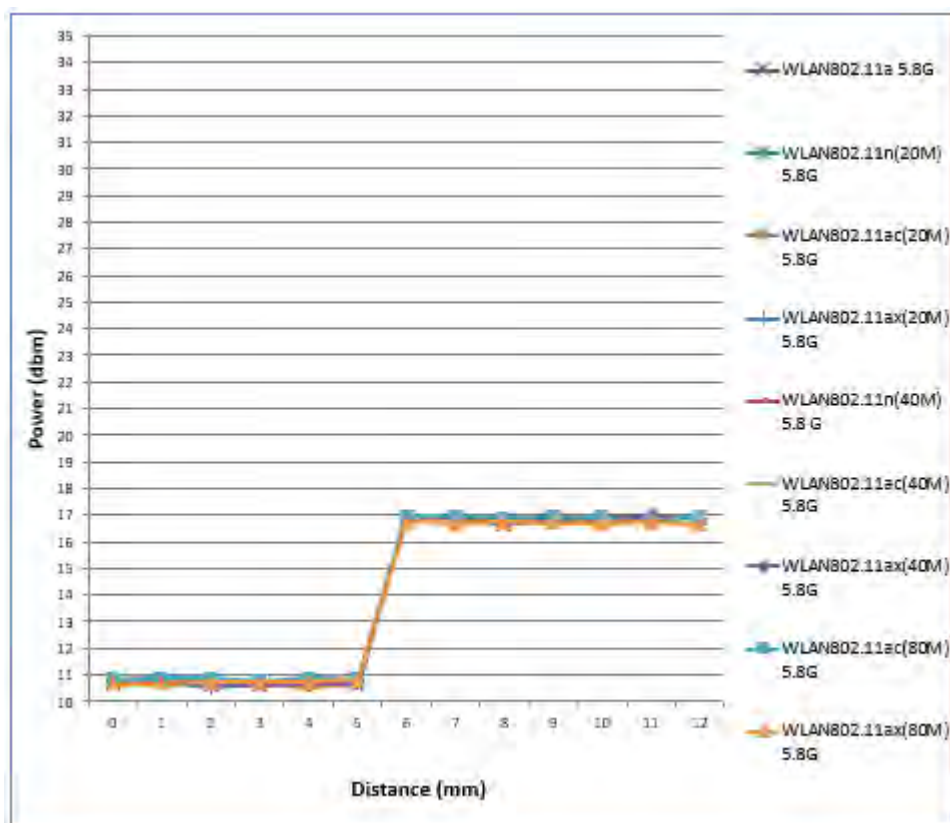


Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.





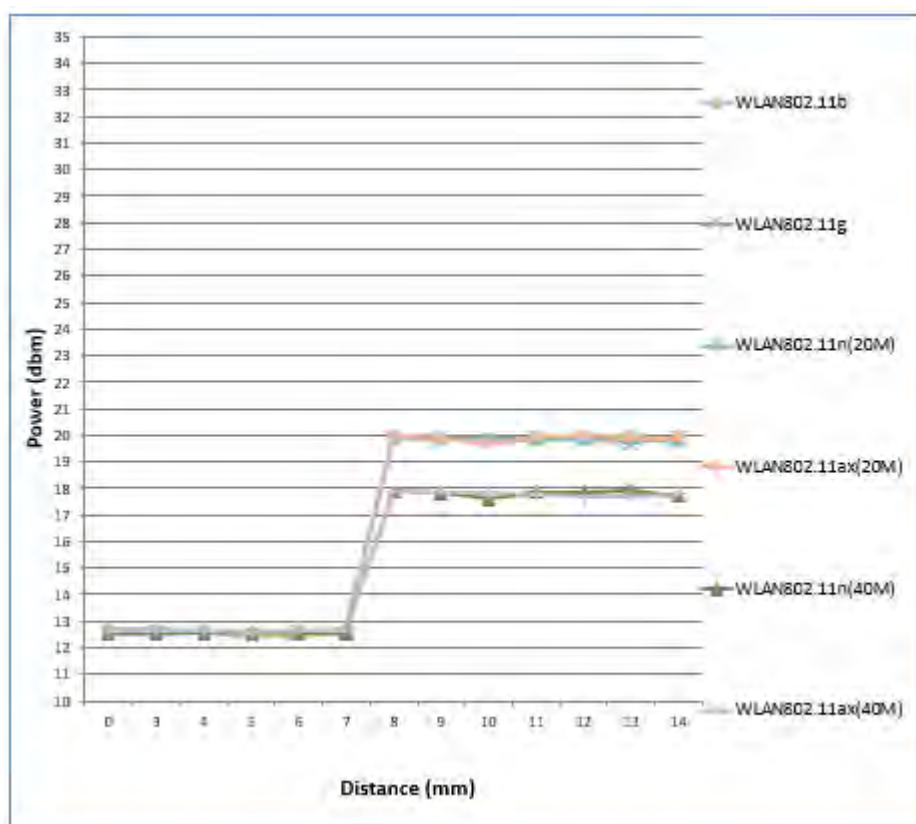
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



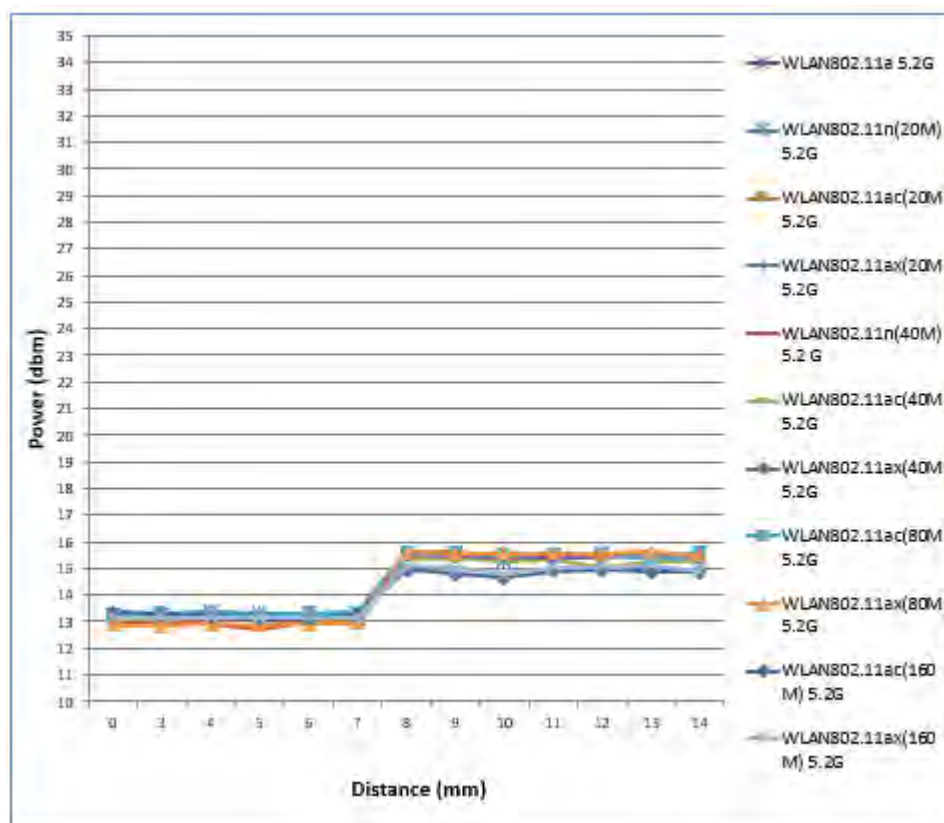
## WLAN Tx2



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

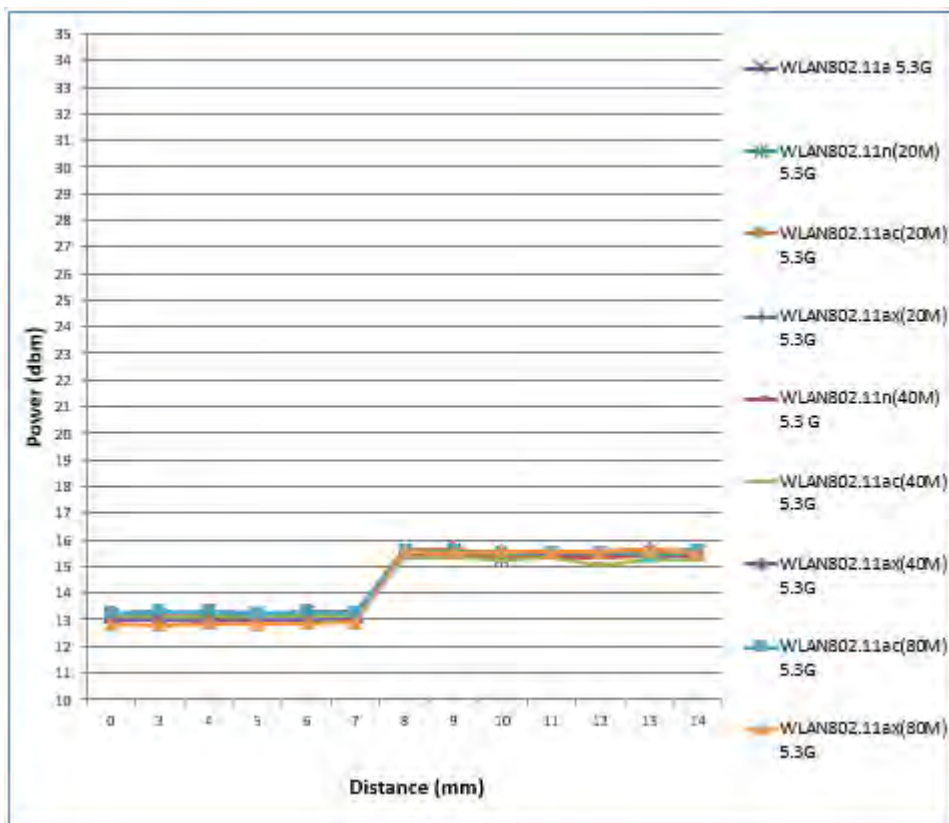
台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

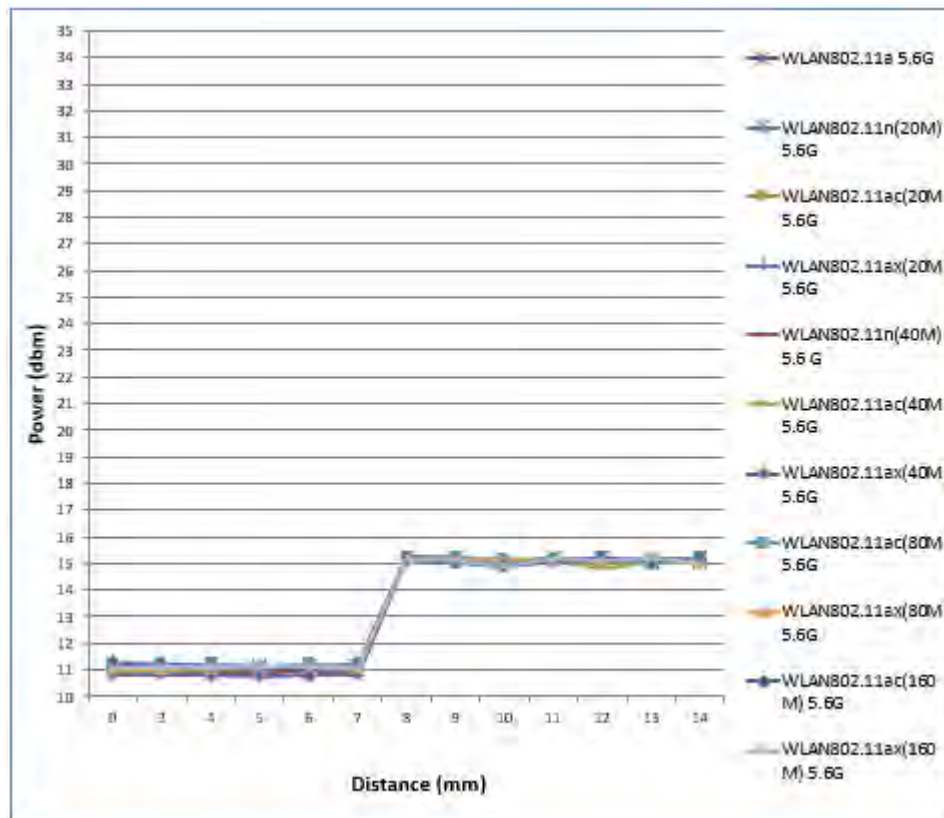
Member of SGS Group



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

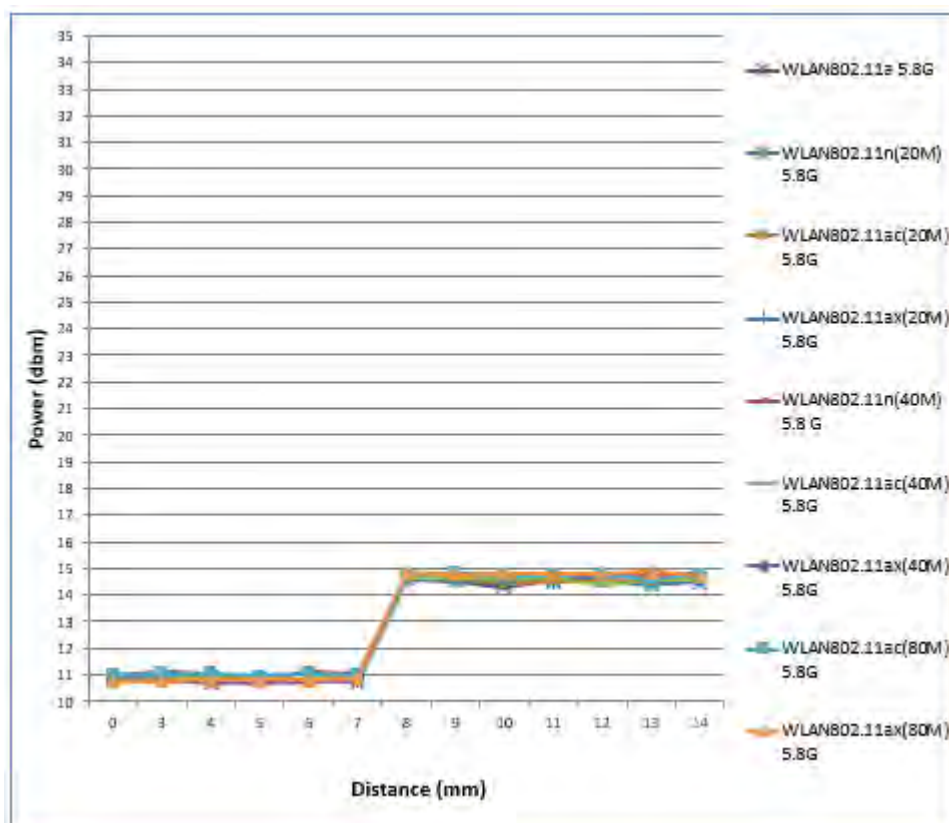
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



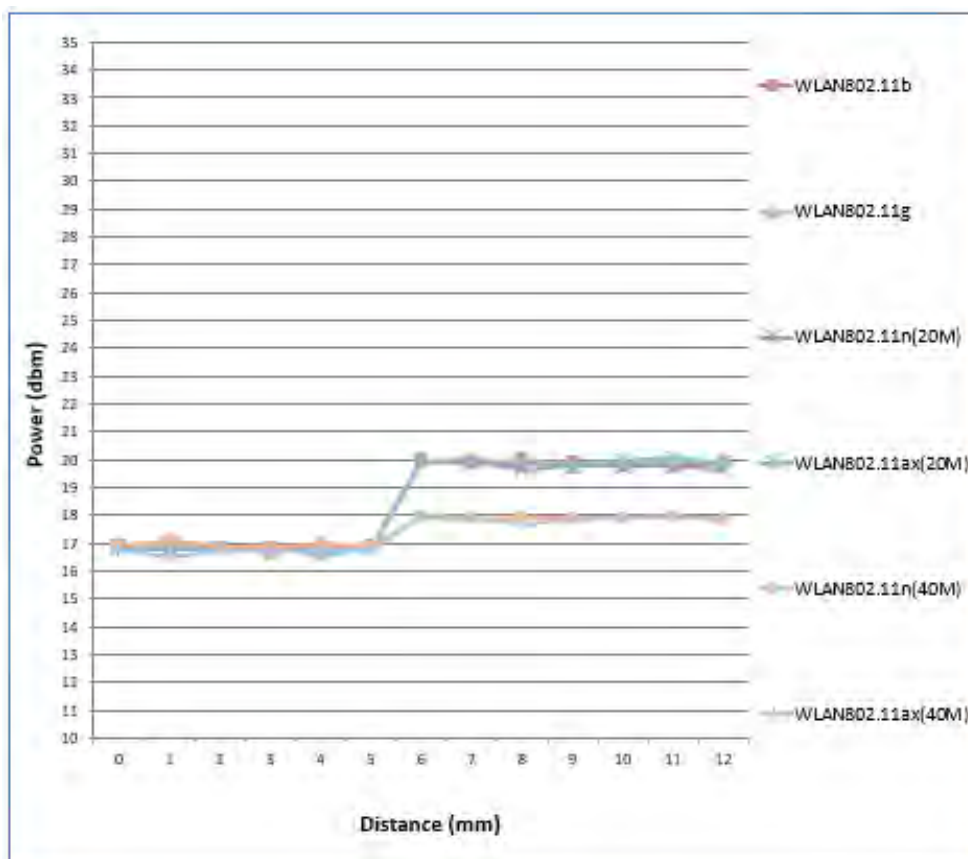
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Moving device away from the phantom

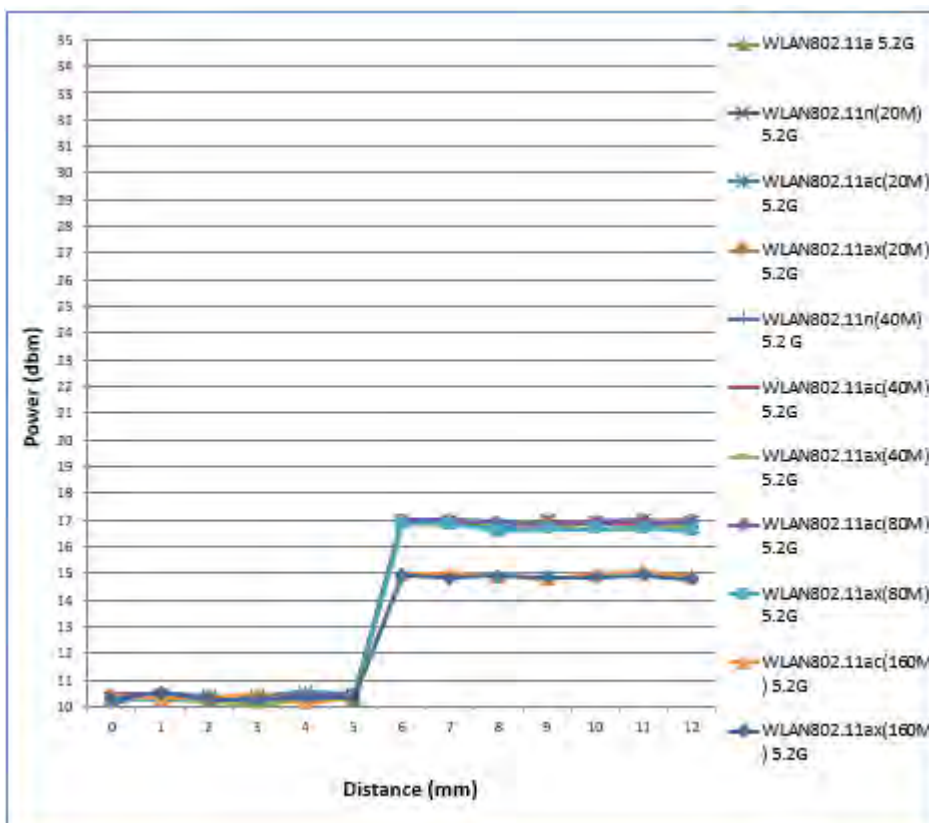
WLAN Tx1



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

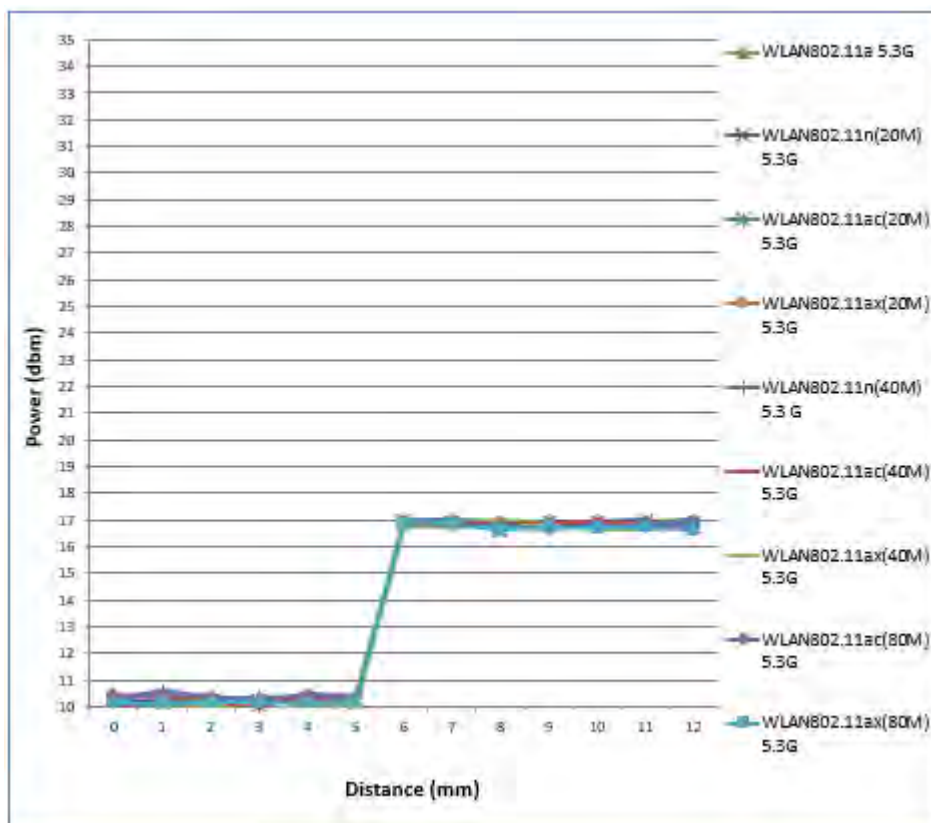


Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



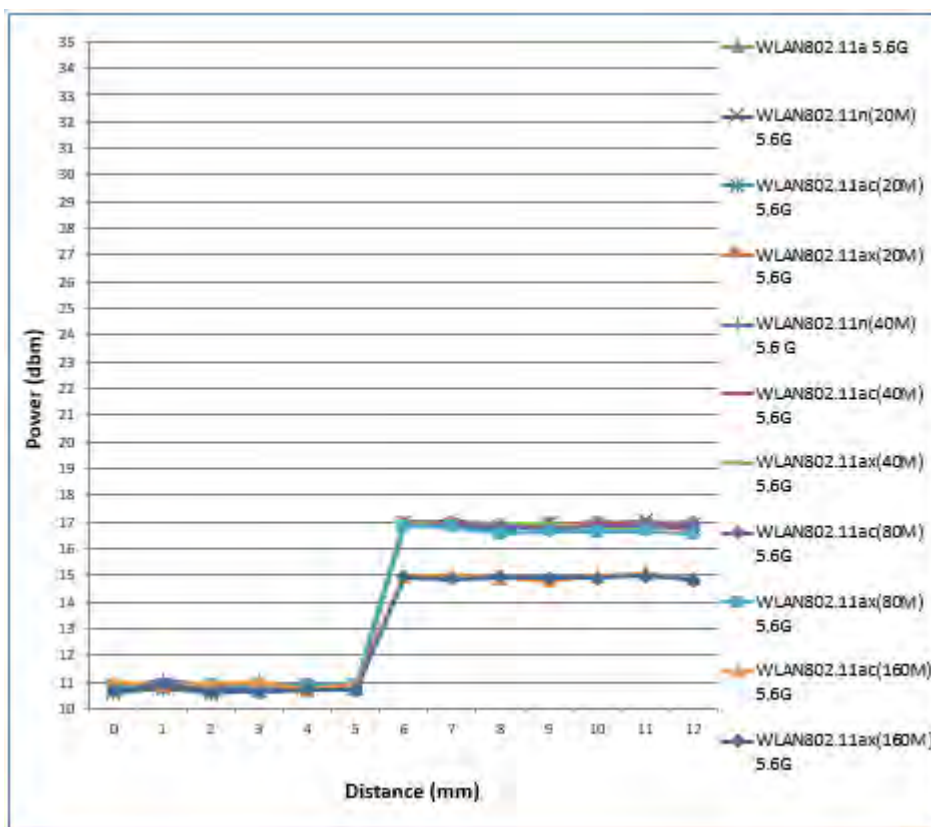


Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

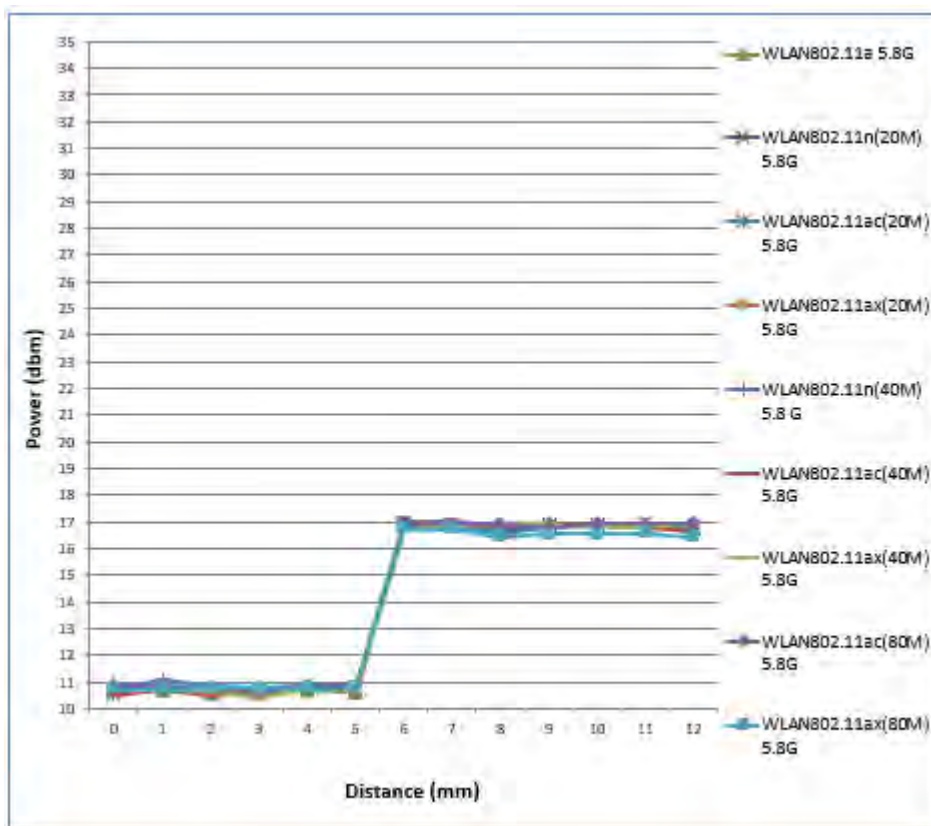




Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

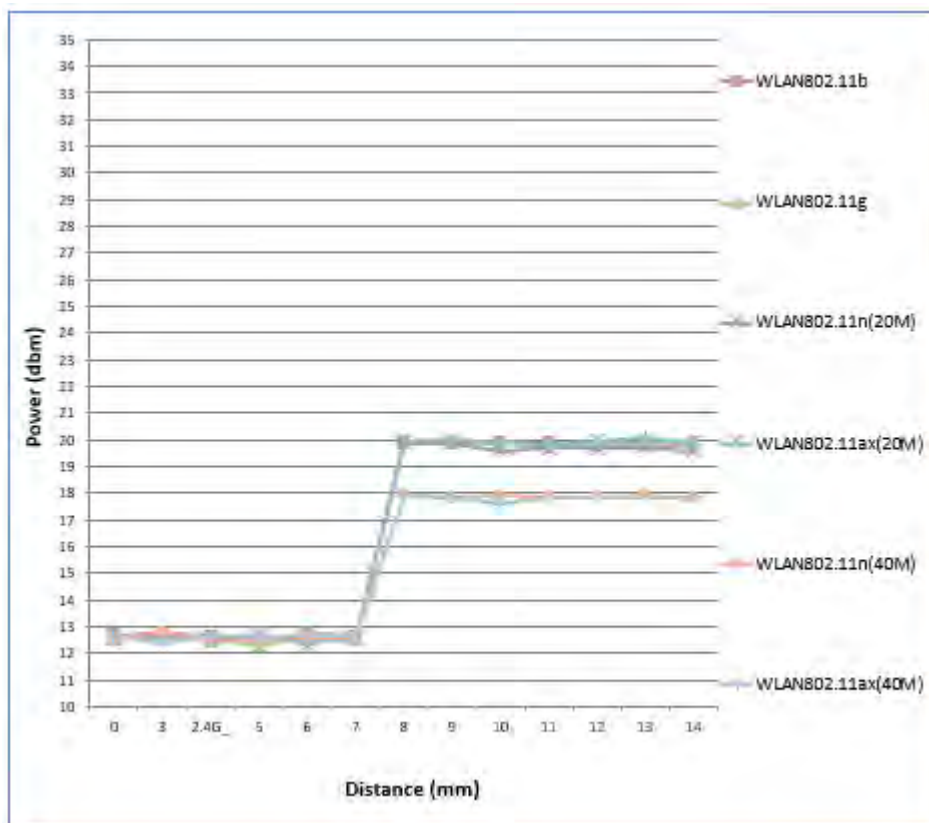


Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

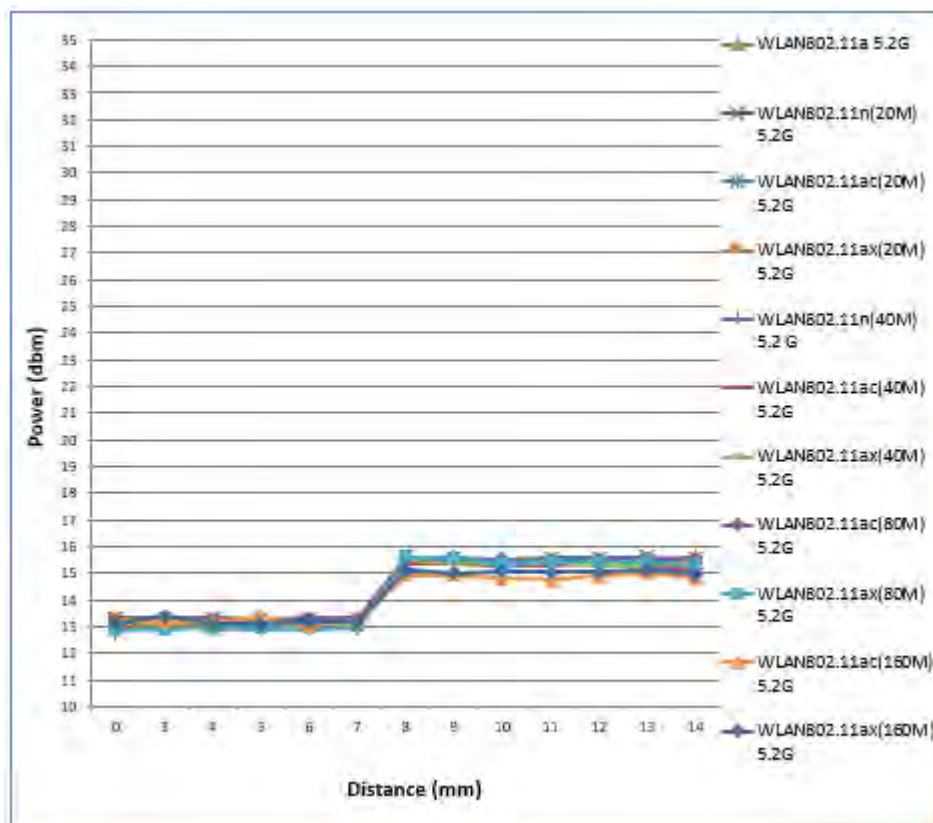
Tx2



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

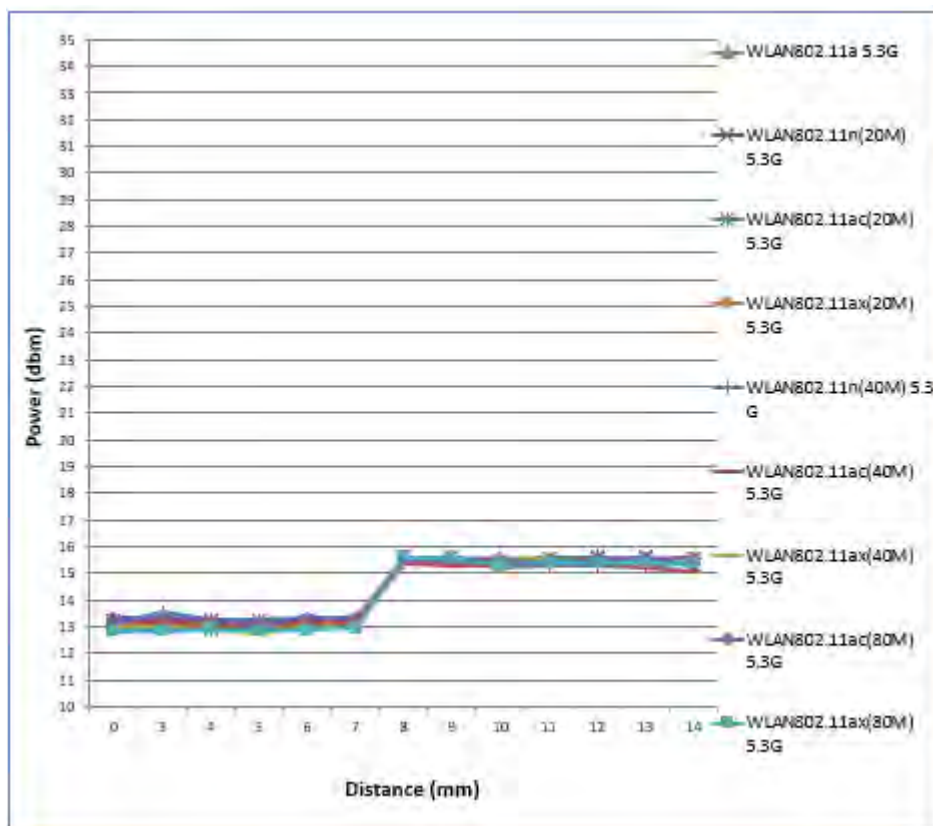
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

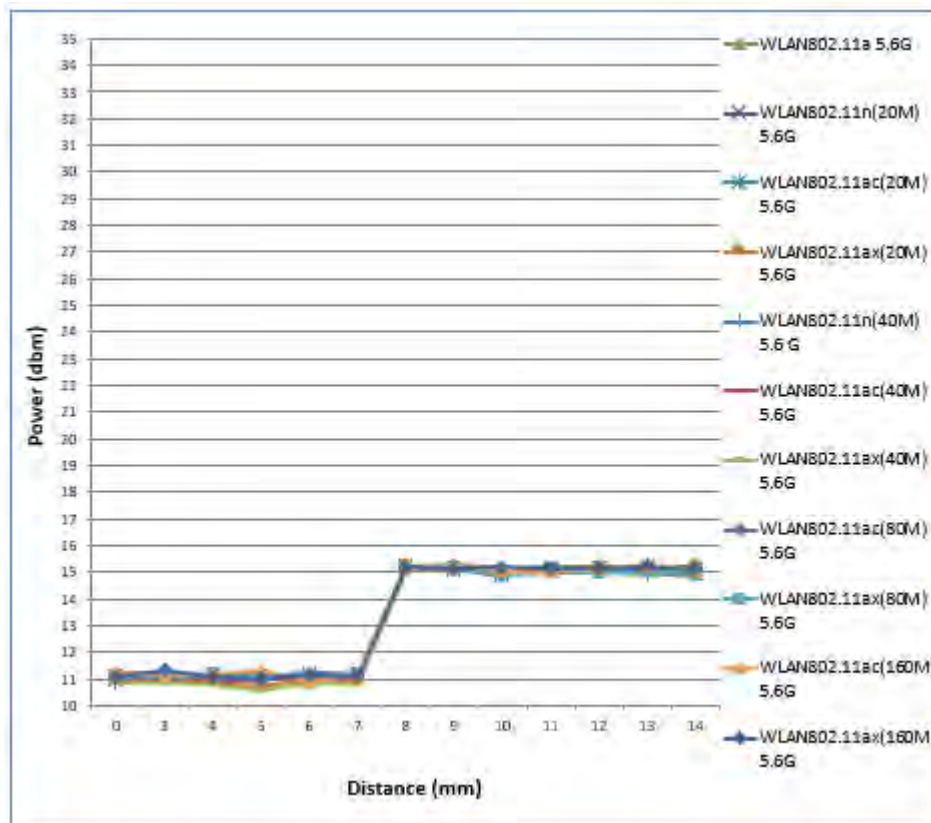
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

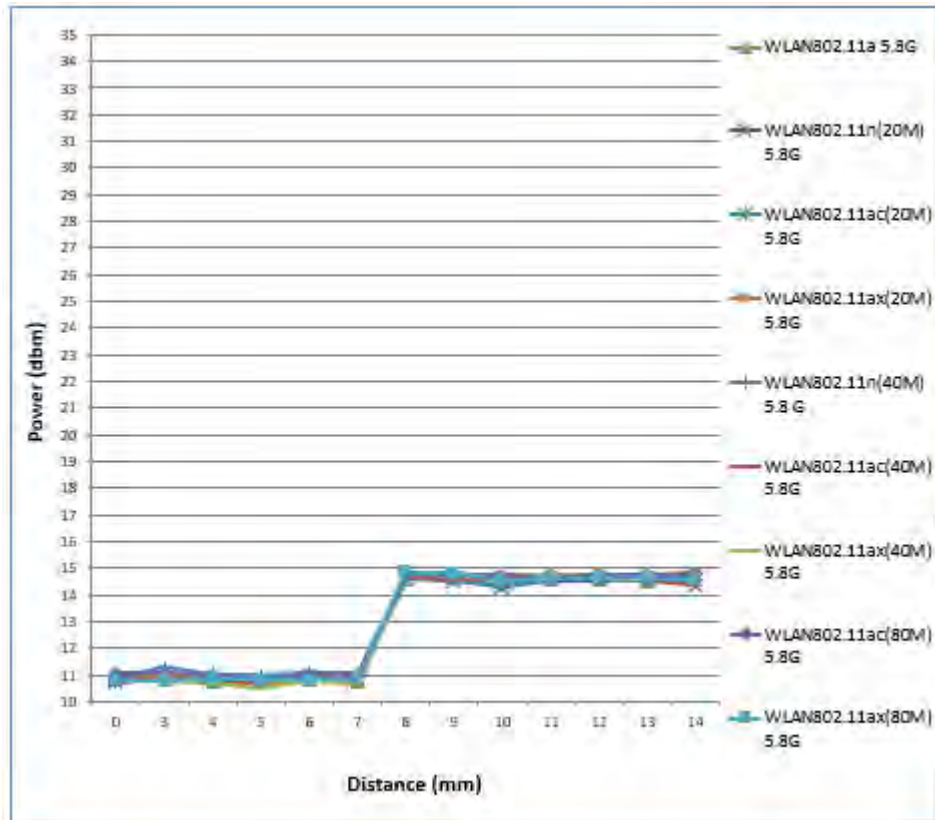
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



For WLAN TX1\_back side, the worst trigger distance of proximity sensor is 5mm, and we test backside SAR in 4mm with full power and 0mm with reduced power. For WLAN TX2\_back side, the worst trigger distance of proximity sensor is 7mm, and we test backside SAR in 6mm with full power and 0mm with reduced power.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

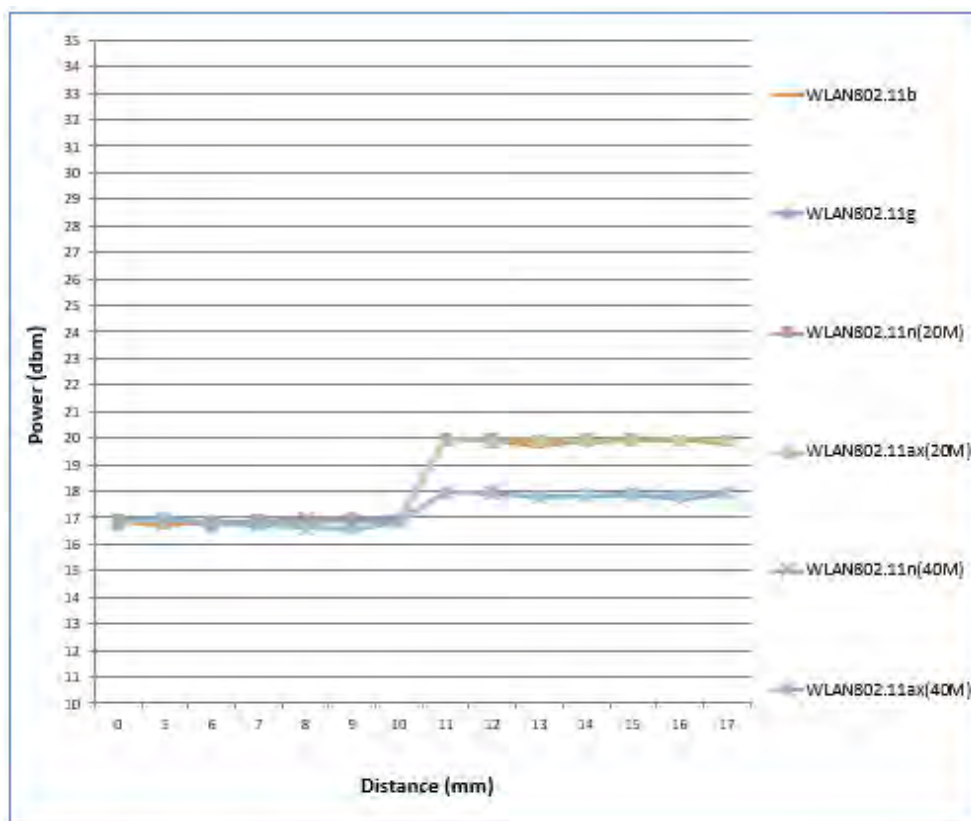
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



## Top side

Moving device toward the phantom

WLAN Tx1

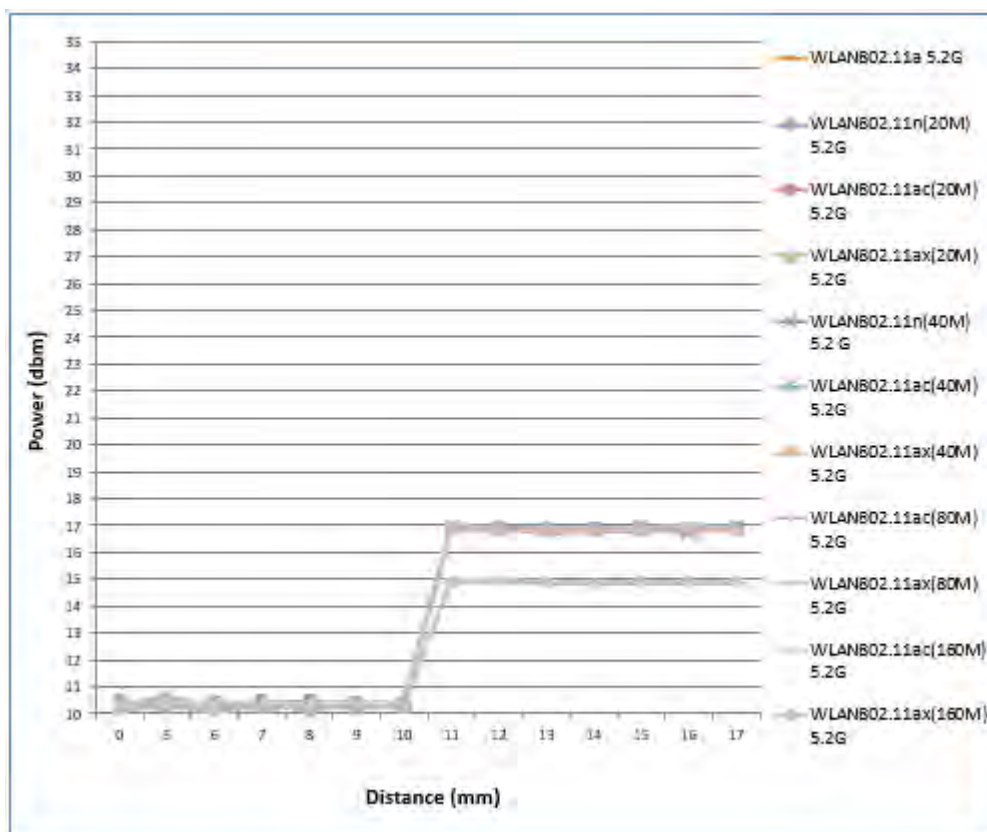


Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.





Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

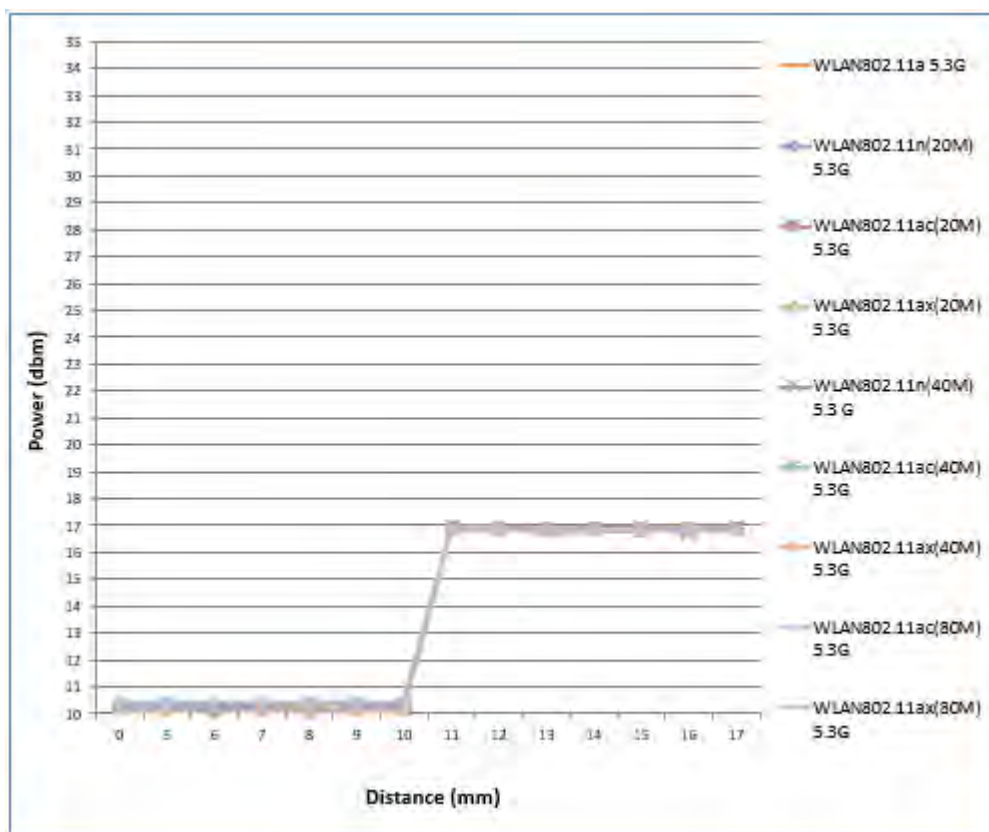
台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

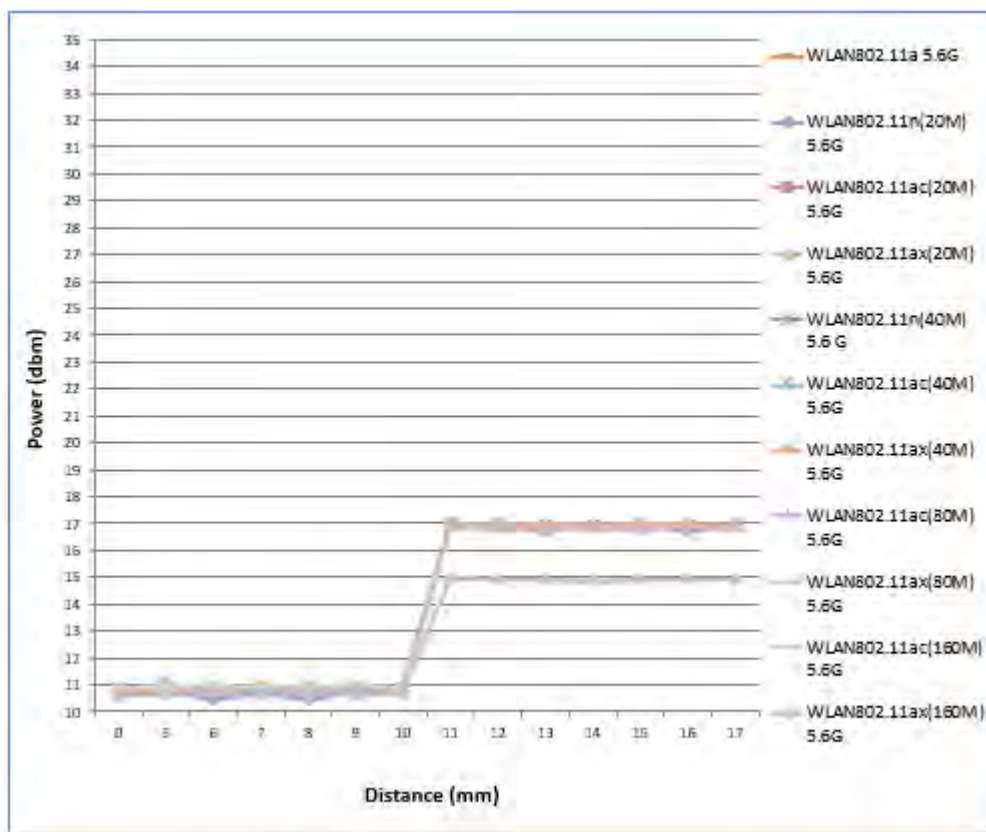
台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

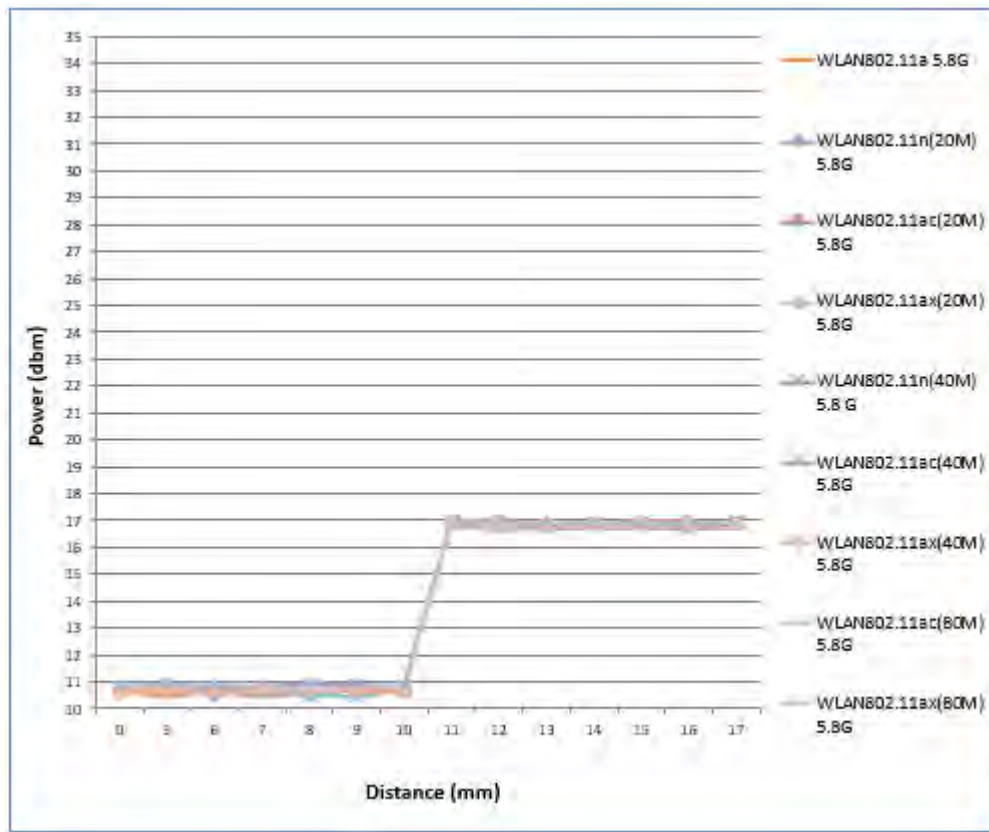
台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

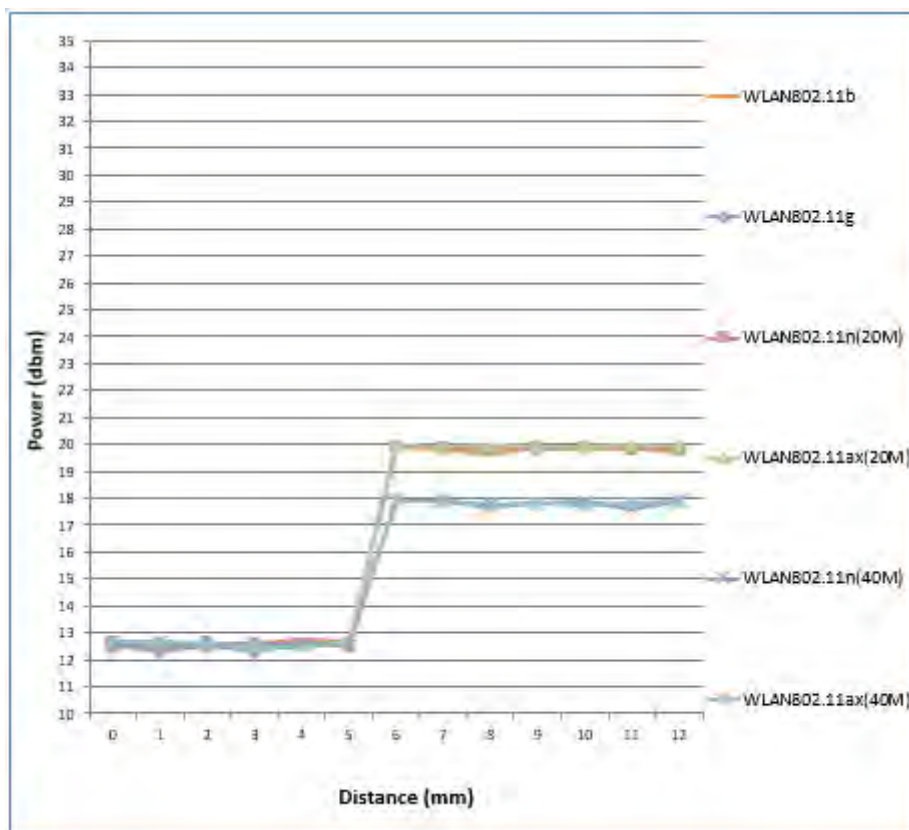


Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

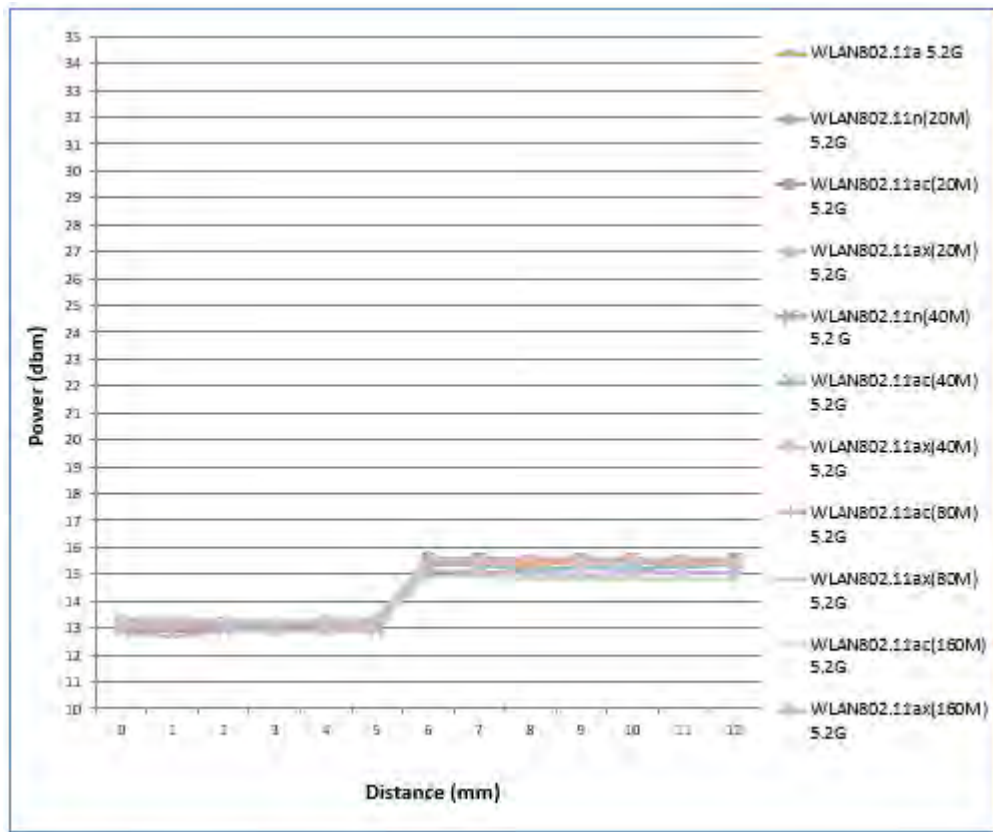
## WLAN Tx2



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

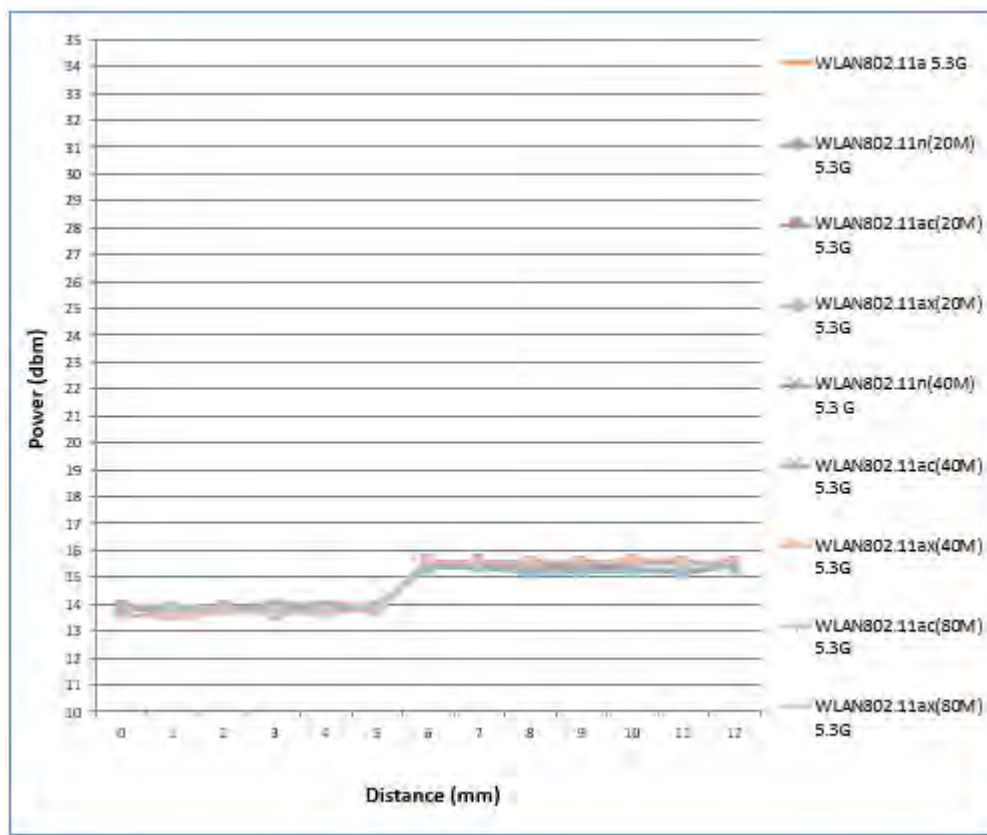
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

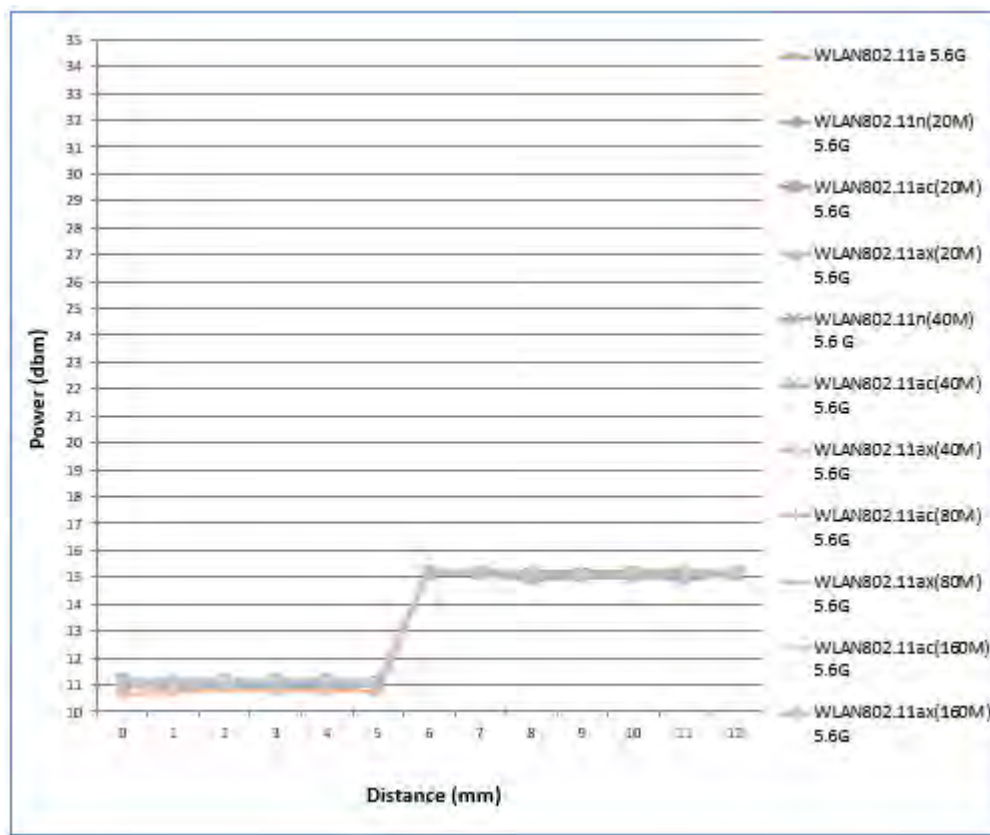


Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.





Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

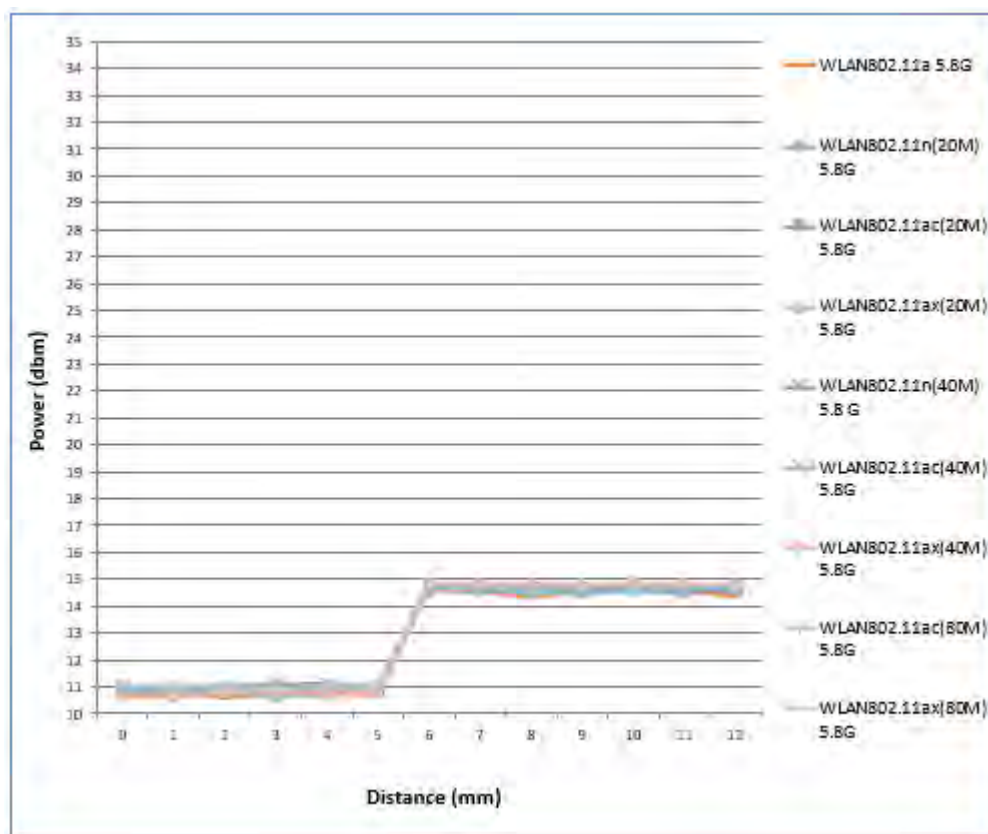
t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group





Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

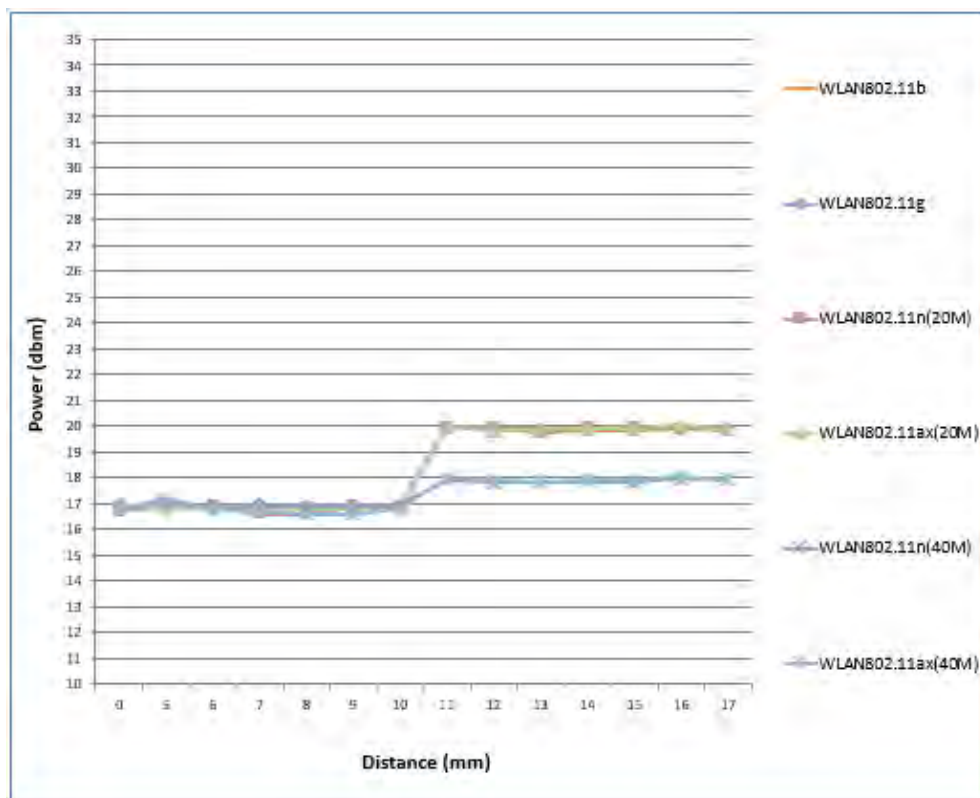
f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Moving device away from the phantom

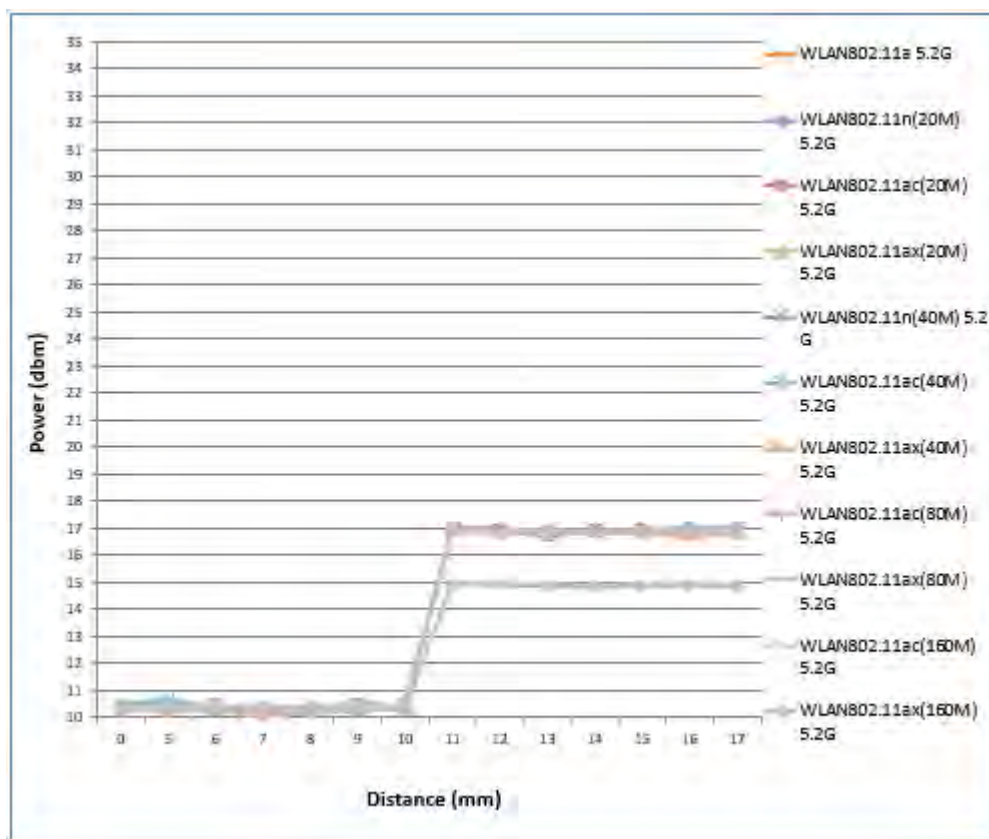
WLAN Tx1



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

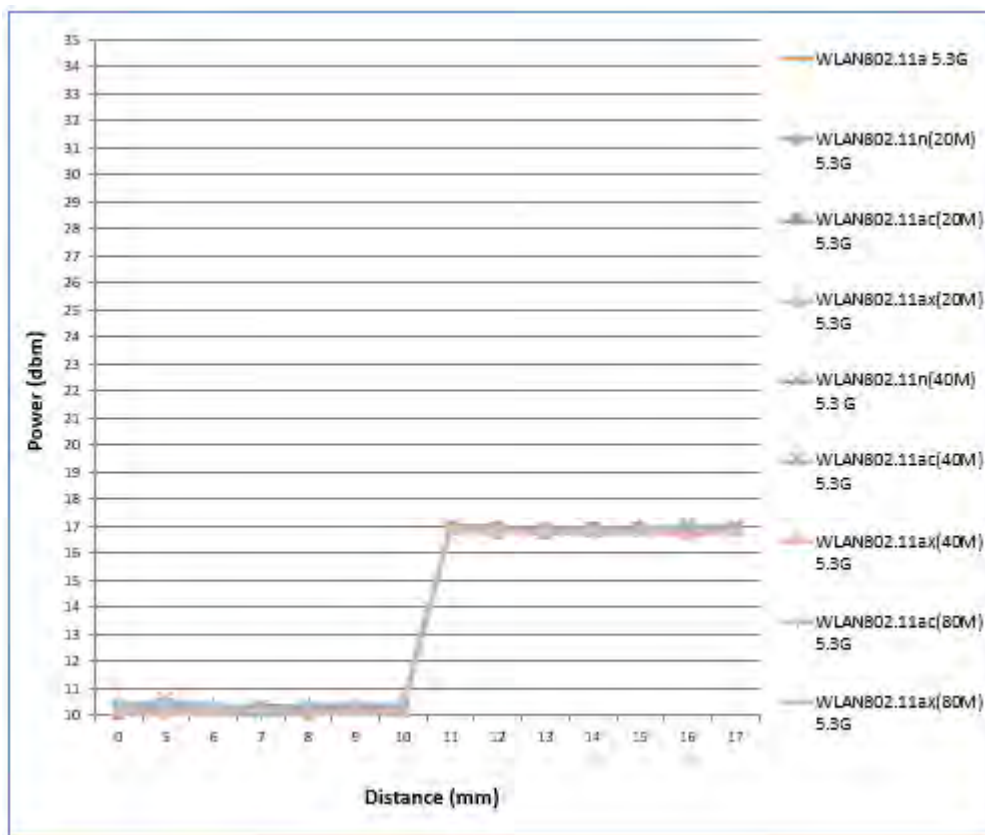
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

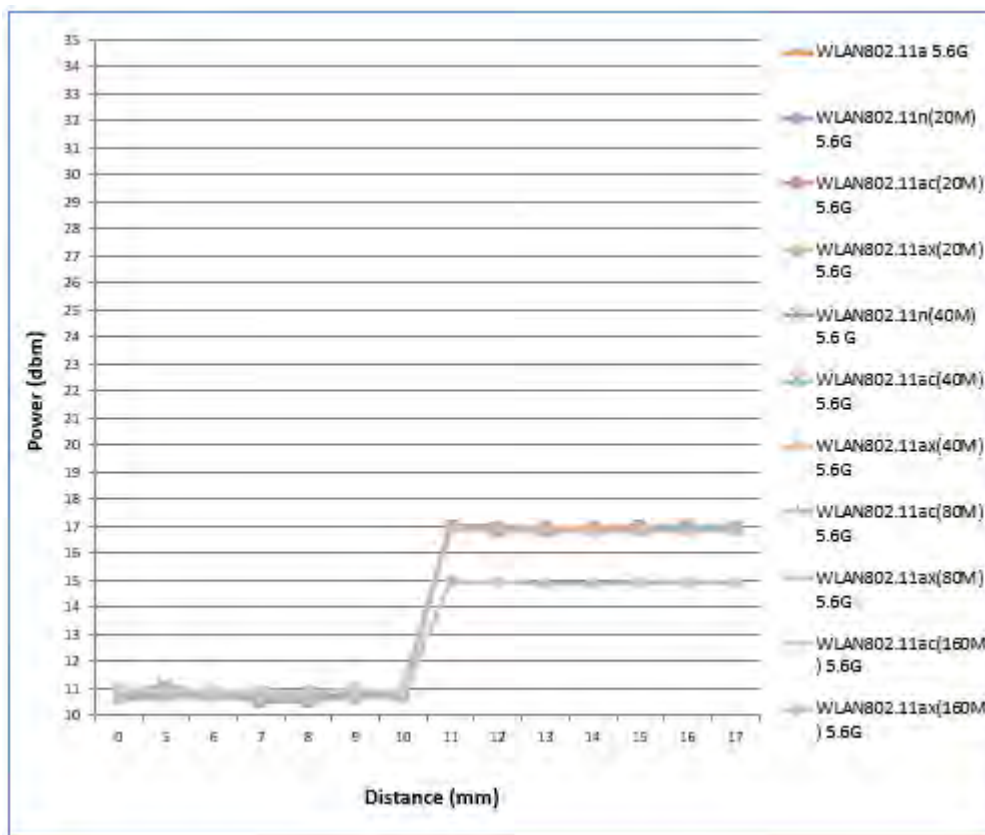
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

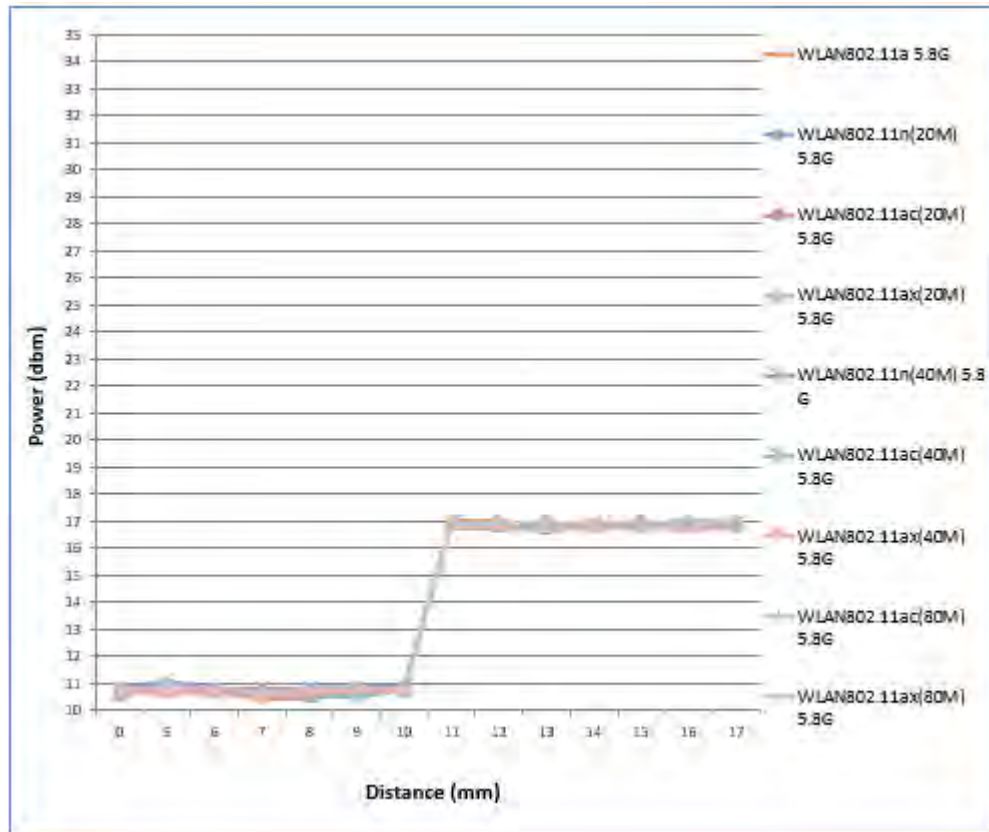
台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

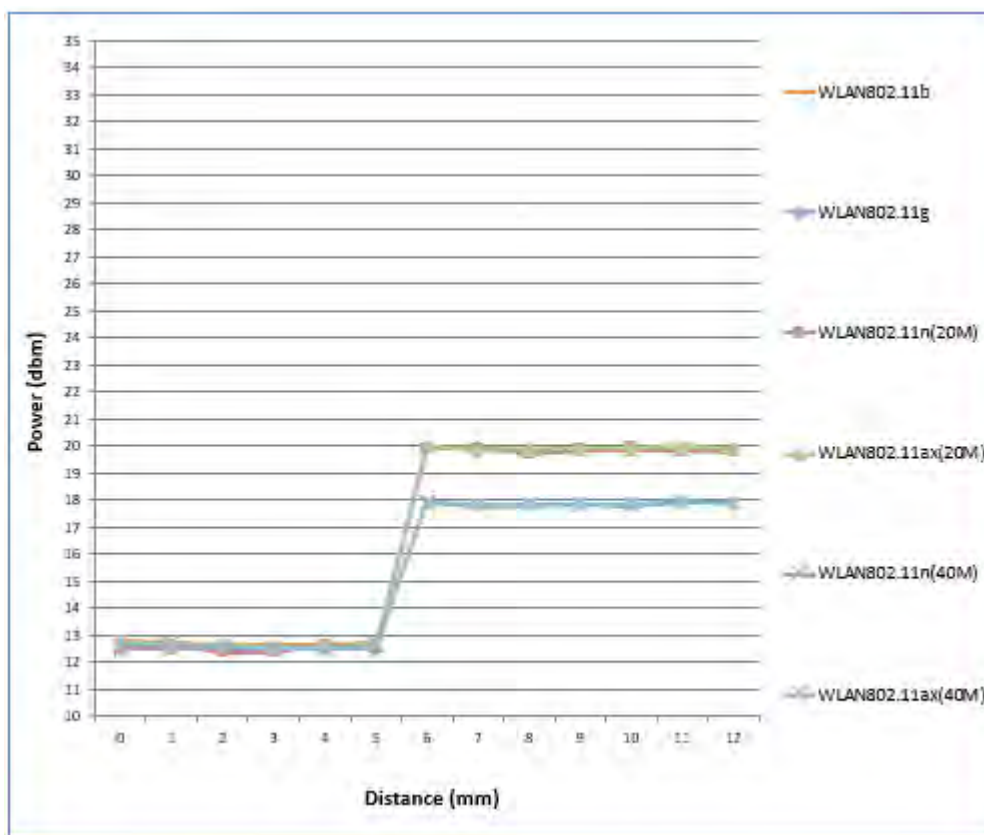


Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## WLAN Tx2

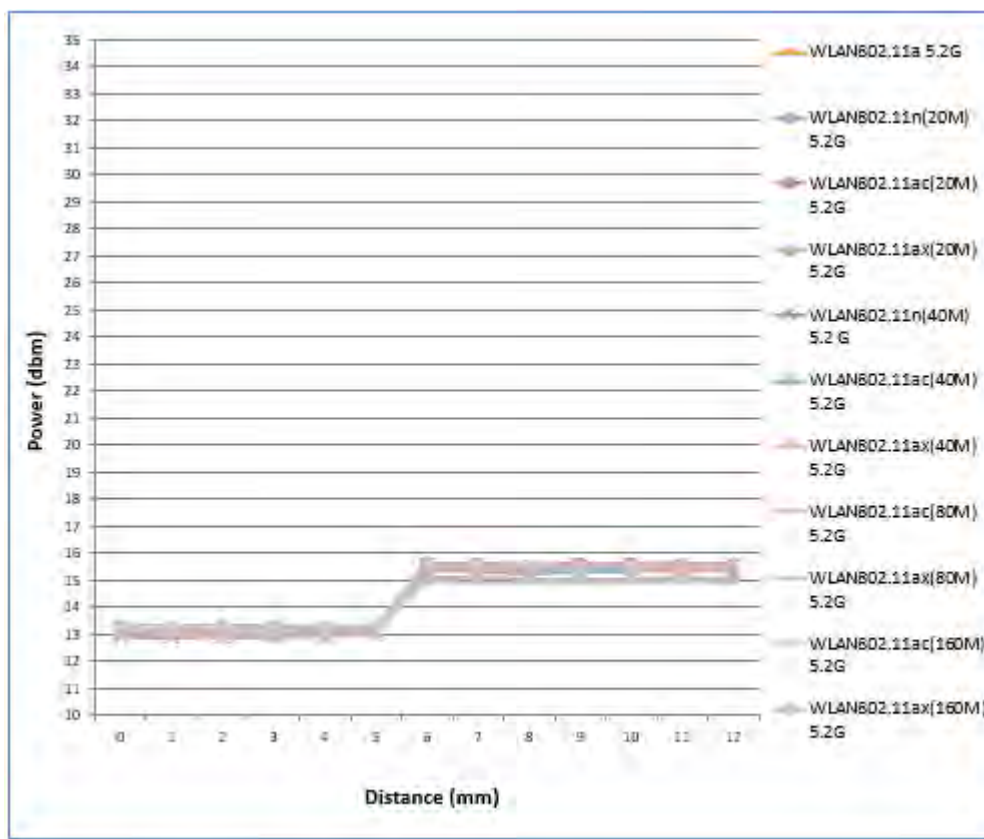


Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



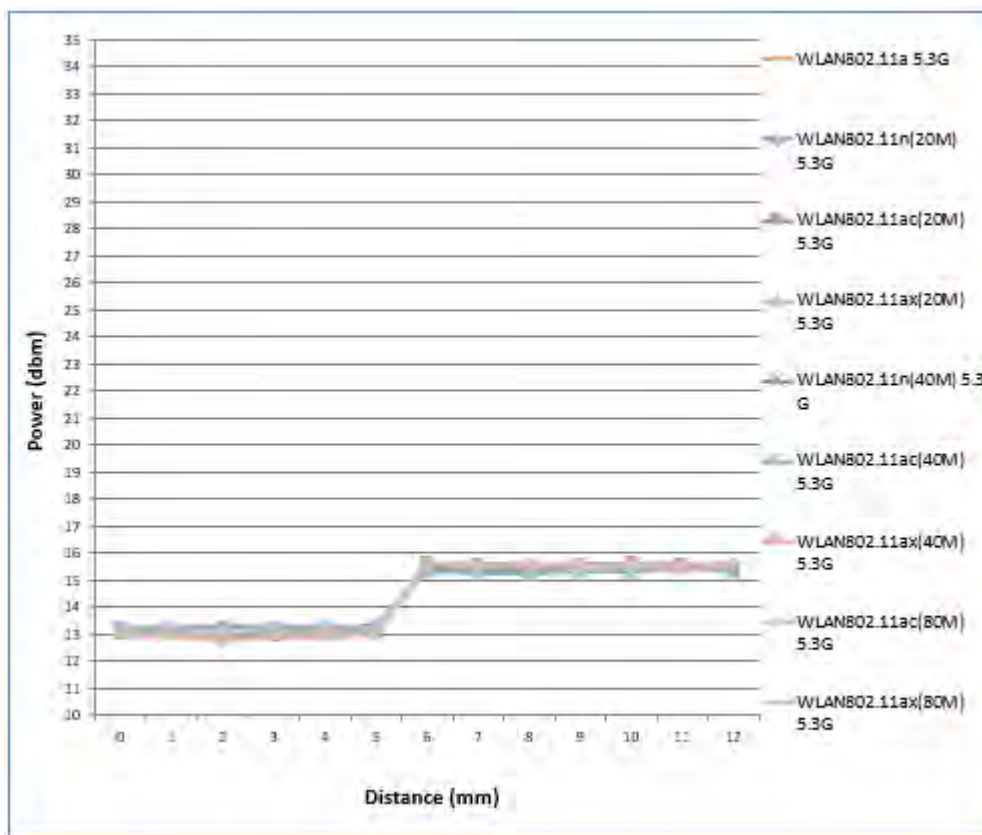


Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

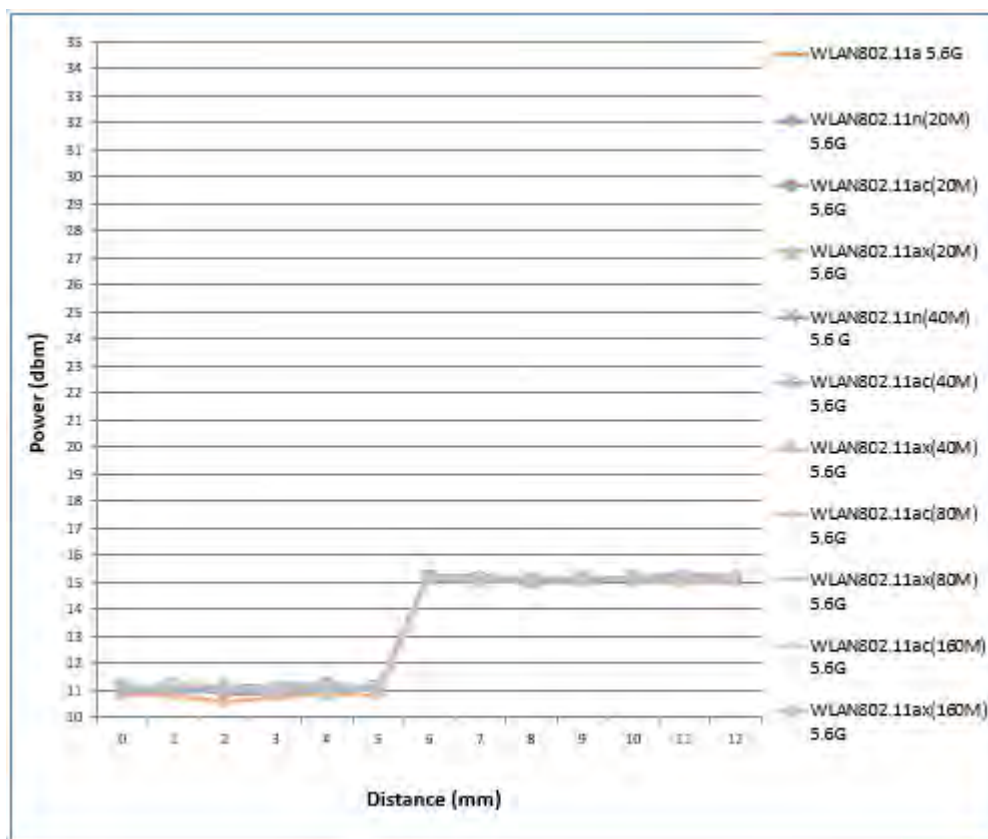




Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

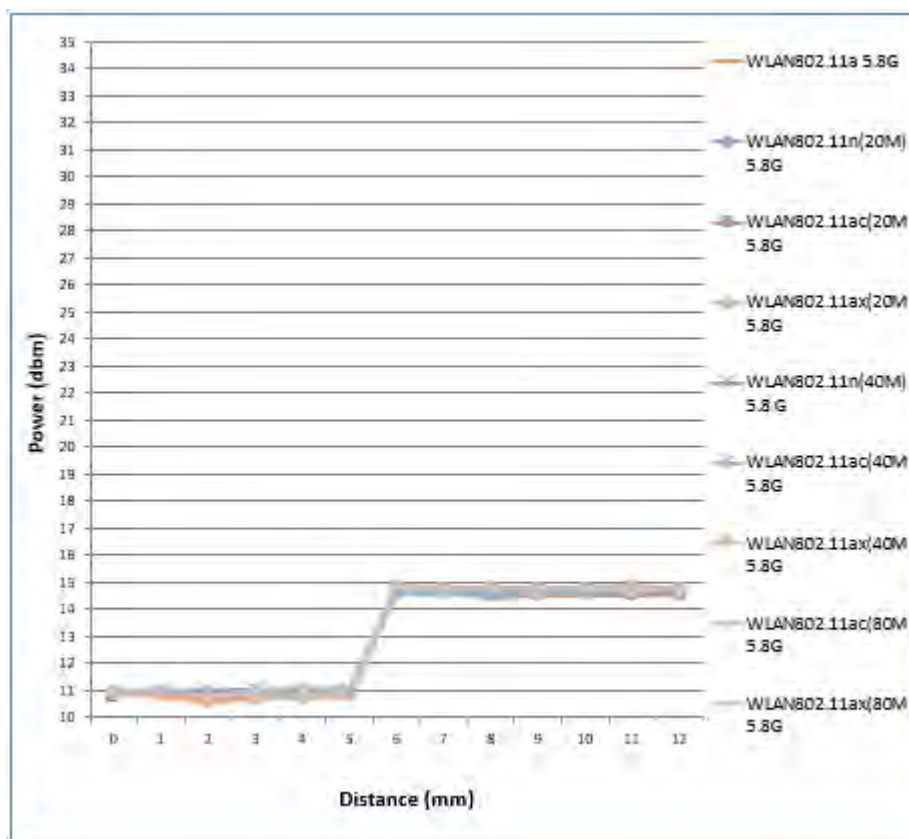


Table 1.6.5 Tilt angle test results for WLAN TX1\_top side

P-sensor ON/OFF	-50 deg	-45 deg	-40 deg	-30 deg	-20 deg	-10 deg	0 deg	10 deg	20 deg	30 deg	40 deg	45 deg	50 deg
10mm	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON

Table 1.6.6 Tilt angle test results for WLAN TX2\_top side

P-sensor ON/OFF	-50 deg	-45 deg	-40 deg	-30 deg	-20 deg	-10 deg	0 deg	10 deg	20 deg	30 deg	40 deg	45 deg	50 deg
5mm	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON

During the tilt angle testing for WLAN TX1\_top side, the sensor is not released in 10mm, so 10-1=9mm is used in the SAR measurement.  
During the tilt angle testing for WLAN TX2\_top side, the sensor is not released in 5mm, so 5-1=4mm is used in the SAR measurement.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## Note:

1. The triggering variations and hysteresis effect has been evaluated separately according to the tissue-equivalent medium required for each frequency band, and sensor triggering does not change with different tissue-equivalent media.
2. The default power level for sensor failure and malfunctioning, including all compliance concerns, has been addressed in 1.6.6 for the proximity sensor implementation to be acceptable.
3. Conducted power is monitored qualitatively to identify the general triggering characteristics and recorded quantitatively, versus spacing.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 1.6.6 Operation description for P-sensor

**Power Reduction Design Specification (for P-sensor)**

The mechanism of power reduction is used for WLAN. The reduced power for each technology/band is defined in Table1-1. With P-sensor mechanism, please refer to SISO reduced power table and MIMO reduced power table in section 1.3 to be the WLAN default power when P-sensor fails or malfunctions.

**Table1-1 : The power reduction scenario table**

Band	Power Reduction
WLAN	YES
BT	NO

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

A block diagram of the SAR measurement System is given in Fig. a. This SAR Measurement System uses a Computer-controlled 3-D stepper motor system (SPEAG DASY 5 professional system). The model EX3DV4 field probe is used to determine the internal electric fields. The SAR can be obtained from the equation  $SAR = \sigma (|E_i|^2) / \rho$  where  $\sigma$  and  $\rho$  are the conductivity and mass density of the tissue-simulant.

1. A standard high precision 6-axis robot (Staubli RX family) with controller, teach pendant and software. An arm extension is for accommodating the data acquisition electronics (DAE).
2. A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
3. A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

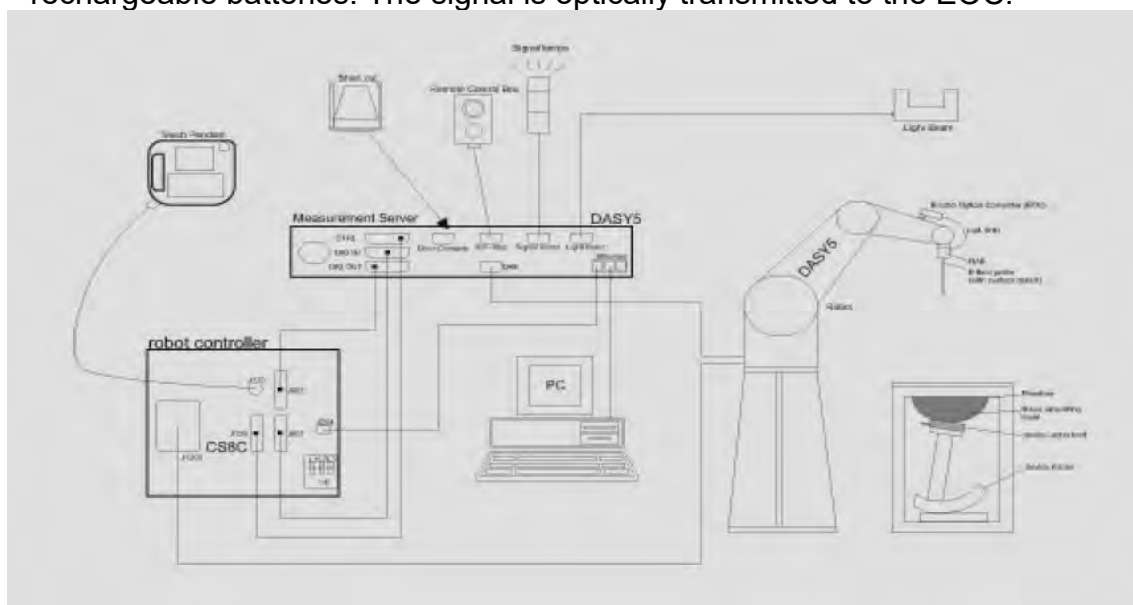


Fig. a The block diagram of SAR system

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.


4. The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to the DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.
5. The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
6. A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
7. A computer operating Windows 7.
8. DASY 5 software.
9. Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
10. Tissue simulating liquid mixed according to the given recipes.
11. Validation dipole kits allowing to validate the proper functioning of the system.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 1.8 System Components

### EX3DV4 E-Field Probe


Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Calibration	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL 2450/5200/5300/5600/5800 MHz Additional CF for other liquids and frequencies upon request	
Frequency	10 MHz to > 6 GHz	
Directivity	$\pm 0.3$ dB in HSL (rotation around probe axis) $\pm 0.5$ dB in tissue material (rotation normal to probe axis)	
Dynamic Range	10 $\mu$ W/g to > 100 mW/g Linearity: $\pm 0.2$ dB (noise: typically < 1 $\mu$ W/g)	
Dimensions	Tip diameter: 2.5 mm	
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。


This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



## PHANTOM

Model	ELI	
Construction	The ELI phantom is used for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom is compatible with all SPEAG dosimetric probes and dipoles.	
Shell Thickness	2 ± 0.2 mm	
Filling Volume	Approx. 30 liters	
Dimensions	Major axis: 600 mm Minor axis: 400 mm	

## DEVICE HOLDER

Construction	The device holder (Supporter) for Notebook is made by POM (polyoxymethylene resin) , which is non-metal and non-conductive. The height can be adjusted to fit varies kind of notebooks.	
		Device Holder

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 1.9 SAR System Verification

The microwave circuit arrangement for system verification is sketched in Fig. b. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within  $\pm 10\%$  from the target SAR values. These tests were done at 2450/5200/5300/5600/5800 MHz. The tests were conducted on the same days as the measurement of the DUT. The obtained results from the system accuracy verification are displayed in the table 1 (SAR values are normalized to 1W forward power delivered to the dipole). During the tests, the liquid depth above the ear reference points was  $\geq 15 \text{ cm} \pm 5 \text{ mm}$  (frequency  $\leq 3 \text{ GHz}$ ) or  $\geq 10 \text{ cm} \pm 5 \text{ mm}$  (frequency  $> 3 \text{ GHz}$ ) in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.

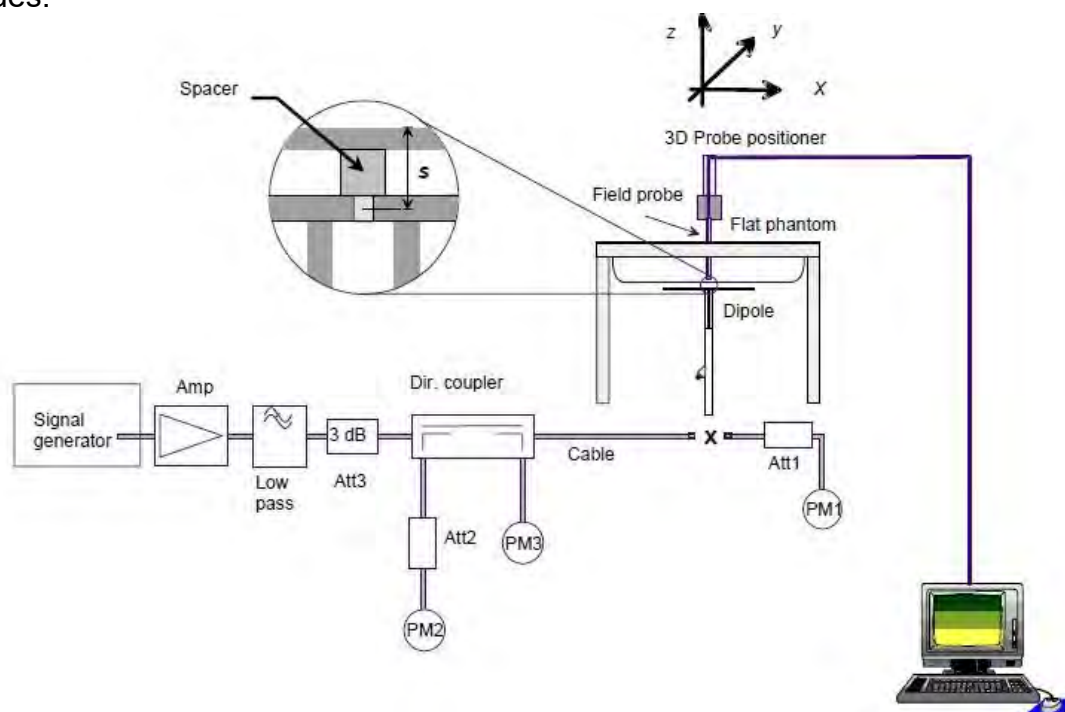


Fig. b The block diagram of system verification

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Validation Kit	S/N	Frequency (MHz)		1W Target SAR-1g (mW/g)	pin=250mW Measured SAR-1g (mW/g)	Measured SAR-1g normalized to 1W (mW/g)	Deviation (%)	Measured Date
D2450V2	869	2450	Body	51.8	13.10	52.4	1.16%	Oct, 31, 2019
D2450V2	869	2450	Body	51.8	12.90	51.6	-0.39%	Jan, 16, 2020
Validation Kit	S/N	Frequency (MHz)		1W Target SAR-1g (mW/g)	Pin=100mW Measured SAR-1g (mW/g)	Measured SAR-1g normalized to 1W (mW/g)	Deviation (%)	Measured Date
D5GHzV2	1040	5200	Body	73.4	7.42	74.2	1.09%	Nov, 02, 2019
			Body	73.4	7.33	73.3	-0.14%	Nov, 03, 2019
			Body	73.4	7.32	73.2	-0.27%	Jan, 17, 2020
		5300	Body	72.9	7.35	73.5	0.82%	Nov, 04, 2019
			Body	72.9	7.38	73.8	1.23%	Nov, 05, 2019
			Body	72.9	7.39	73.9	1.37%	Jan, 18, 2020
		5600	Body	80.5	7.89	78.9	-1.99%	Nov, 06, 2019
			Body	80.5	7.98	79.8	-0.87%	Jan, 19, 2020
		5800	Body	75.5	7.37	73.7	-2.38%	Nov, 08, 2019
			Body	75.5	7.42	74.2	-1.72%	Nov, 09, 2019
			Body	75.5	7.43	74.3	-1.59%	Jan, 20, 2020

Table 1. Results of system validation

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

### 1.10 Tissue Simulant Fluid for the Frequency Band

The dielectric properties for this Head-simulant fluid were measured by using the Agilent Model 85070E Dielectric Probe (rates frequency band 200 MHz to 20 GHz) in conjunction with Network Analyzer.

All dielectric parameters of tissue simulates were measured within 24 hours of SAR measurements. The measured conductivity and permittivity are all within  $\pm 5\%$  of the target values.

The depth of the tissue simulant in the flat section of the phantom was  $\geq 15 \text{ cm} \pm 5 \text{ mm}$  (Frequency  $\leq 3\text{G}$ ) or  $\geq 10 \text{ cm} \pm 5 \text{ mm}$  (Frequency  $> 3\text{G}$ ) during all tests. (Fig. 2)

Tissue Type	Measurement Date	Measured Frequency (MHz)	Target Dielectric Constant, $\epsilon_r$	Target Conductivity, $\sigma$ (S/m)	Measured Dielectric Constant, $\epsilon_r$	Measured Conductivity, $\sigma$ (S/m)	% dev $\epsilon_r$	% dev $\sigma$
Body	Oct, 31. 2019	2402	52.764	1.904	53.133	1.888	0.70%	-0.85%
		2412	52.751	1.914	53.120	1.897	0.70%	-0.87%
		2437	52.717	1.938	53.076	1.920	0.68%	-0.91%
		2441	52.712	1.941	53.071	1.925	0.68%	-0.84%
		2450	52.700	1.950	53.058	1.933	0.68%	-0.87%
		2457	52.691	1.960	53.051	1.944	0.68%	-0.81%
		2462	52.685	1.967	53.049	1.950	0.69%	-0.87%
	Nov, 02. 2019	2480	52.662	1.993	53.030	1.974	0.70%	-0.93%
		5190	49.028	5.288	49.475	5.225	0.91%	-1.18%
		5200	49.014	5.299	49.462	5.243	0.91%	-1.06%
	Nov, 03. 2019	5230	48.974	5.334	49.409	5.283	0.89%	-0.96%
		5200	49.014	5.299	49.461	5.241	0.91%	-1.10%
		5210	49.001	5.311	49.431	5.251	0.88%	-1.13%
	Nov, 04. 2019	5270	48.919	5.381	49.296	5.314	0.77%	-1.25%
		5300	48.879	5.416	49.279	5.351	0.82%	-1.20%
		5310	48.865	5.428	49.256	5.363	0.80%	-1.19%
	Nov, 05. 2019	5290	48.892	5.404	49.293	5.341	0.82%	-1.17%
		5300	48.879	5.416	49.274	5.349	0.81%	-1.24%
	Nov, 06. 2019	5530	48.566	5.685	49.348	5.580	1.61%	-1.84%
		5600	48.471	5.766	49.266	5.664	1.64%	-1.78%
		5610	48.458	5.778	49.243	5.673	1.62%	-1.82%
		5690	48.349	5.872	49.108	5.765	1.57%	-1.81%
	Nov, 08. 2019	5755	48.261	5.947	48.913	5.834	1.35%	-1.91%
		5795	48.207	5.994	48.887	5.878	1.41%	-1.94%
		5800	48.200	6.000	48.884	5.887	1.42%	-1.88%
	Nov, 09. 2019	5775	48.234	5.971	48.890	5.855	1.36%	-1.94%
		5800	48.200	6.000	48.884	5.884	1.42%	-1.93%

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Tissue Type	Measurement Date	Measured Frequency (MHz)	Target Dielectric Constant, $\epsilon_r$	Target Conductivity, $\sigma$ (S/m)	Measured Dielectric Constant, $\epsilon_r$	Measured Conductivity, $\sigma$ (S/m)	% dev $\epsilon_r$	% dev $\sigma$
Body	2020/1/16	2402	52.764	1.904	53.137	1.885	0.71%	-1.00%
		2412	52.751	1.914	53.109	1.892	0.68%	-1.13%
		2437	52.717	1.938	53.102	1.918	0.73%	-1.01%
		2441	52.712	1.941	53.070	1.923	0.68%	-0.95%
		2450	52.700	1.950	53.056	1.928	0.68%	-1.13%
		2457	52.691	1.960	53.053	1.929	0.69%	-1.58%
		2462	52.685	1.967	53.052	1.949	0.70%	-0.92%
		2480	52.662	1.993	53.011	1.972	0.66%	-1.03%
	2020/1/17	5180	49.041	5.276	49.461	5.217	0.86%	-1.12%
		5190	49.028	5.288	49.460	5.228	0.88%	-1.13%
		5200	49.014	5.299	49.460	5.236	0.91%	-1.19%
		5210	49.001	5.311	49.456	5.252	0.93%	-1.11%
		5230	48.974	5.334	49.415	5.271	0.90%	-1.19%
		5250	48.947	5.358	49.363	5.293	0.85%	-1.21%
	2020/1/18	5270	48.919	5.381	49.361	5.315	0.90%	-1.23%
		5290	48.892	5.404	49.291	5.339	0.82%	-1.21%
		5300	48.879	5.416	49.287	5.347	0.84%	-1.28%
		5310	48.865	5.428	49.272	5.363	0.83%	-1.19%
	2020/1/19	5530	48.566	5.685	49.267	5.579	1.44%	-1.86%
		5570	48.513	5.732	49.264	5.625	1.55%	-1.87%
		5600	48.471	5.766	49.258	5.656	1.62%	-1.92%
		5610	48.458	5.778	49.221	5.671	1.57%	-1.85%
		5690	48.349	5.872	49.112	5.760	1.58%	-1.90%
	2020/1/20	5755	48.261	5.947	49.018	5.838	1.57%	-1.84%
		5775	48.234	5.971	48.932	5.854	1.45%	-1.96%
		5795	48.207	5.994	48.897	5.876	1.43%	-1.97%
		5800	48.200	6.000	48.871	5.881	1.39%	-1.98%

Table 2. Dielectric Parameters of Tissue Simulant Fluid

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

The composition of the tissue simulating liquid:

Frequency (MHz)	Mode	Ingredient						Total amount
		DGMBE	Water	Salt	Preventol D-7	Cellulose	Sugar	
2450	Body	301.7ml	698.3ml	—	—	—	—	1.0L(Kg)

Simulating Liquids for 5 GHz, Manufactured by SPEAG:

Ingredients	Water	Esters, Emulsifiers, Inhibitors	Sodium and Salt
(% by weight)	60-80	20-40	0-1.5

Table 3. Recipes for Tissue Simulating Liquid

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



### 1.11 Evaluation Procedures

The entire evaluation of the spatial peak values is performed within the Post-processing engine (SEMCAD). The system always gives the maximum values for the 1 g and 10 g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

1. The extraction of the measured data (grid and values) from the Zoom Scan.
2. The calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
3. The generation of a high-resolution mesh within the measured volume
4. The interpolation of all measured values from the measurement grid to the high-resolution grid
5. The extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
6. The calculation of the averaged SAR within masses of 1g and 10g.

The probe is calibrated at the center of the dipole sensors that is located 1 to 2.7mm away from the probe tip. During measurements, the probe stops shortly above the phantom surface, depending on the probe and the surface detecting system. Both distances are included as parameters in the probe configuration file. The software always knows exactly how far away the measured point is from the surface. As the probe cannot directly measure at the surface, the values between the deepest measured point and the surface must be extrapolated. The angle between the probe axis and the surface normal line is less than 30 degree.

In the Area Scan, the gradient of the interpolation function is evaluated to find all the extreme of the SAR distribution. The uncertainty on the locations of the extreme is less than 1/20 of the grid size. Only local maximum within -2 dB of the global maximum are searched and passed for the Cube Scan measurement. In the Cube Scan, the interpolation function is used to extrapolate the Peak SAR from the lowest measurement points to the inner phantom surface (the extrapolation distance). The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5mm.

The maximum search is automatically performed after each area scan measurement. It is based on splines in two or three dimensions. The procedure can find the maximum for most SAR distributions even with relatively large grid spacing. After the area scanning measurement, the probe is automatically moved to a position at the interpolated maximum. The following scan can directly use this position for reference, e.g., for a finer resolution grid or the cube evaluations. The 1g and 10g peak evaluations are only available for the predefined cube 7x7x7 scans. The routines are verified and optimized for the grid dimensions used in these cube measurements.

The measured volume of 30x30x30mm contains about 30g of tissue.

The first procedure is an extrapolation (incl. Boundary correction) to get the points between the lowest measured plane and the surface. The next step uses 3D

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

interpolation to get all points within the measured volume. In the last step, a 1g cube is placed numerically into the volume and its averaged SAR is calculated. This cube is moved around until the highest averaged SAR is found. If the highest SAR is found at the edge of the measured volume, the system will issue a warning: higher SAR values might be found outside of the measured volume. In that case the cube measurement can be repeated, using the new interpolated maximum as the center.

## 1.12 Probe Calibration Procedures

For the calibration of E-field probes in lossy liquids, an electric field with an accurately known field strength must be produced within the measured liquid. For standardization purposes it would be desirable if all measurements which are necessary to assess the correct field strength would be traceable to standardized measurement procedures. In the following two different calibration techniques are summarized:

### 1.12.1 Transfer Calibration with Temperature Probes

In lossy liquids the specific absorption rate (SAR) is related both to the electric field ( $E$ ) and the temperature gradient ( $\delta T / \delta t$ ) in the liquid.

$$SAR = C \frac{\delta T}{\delta t},$$

whereby  $\sigma$  is the conductivity,  $\rho$  the density and  $c$  the heat capacity of the liquid.

Hence, the electric field in lossy liquid can be measured indirectly by measuring the temperature gradient in the liquid. Non-disturbing temperature probes (optical probes or thermistor probes with resistive lines) with high spatial resolution (<1-2 mm) and fast reaction time (<1 s) are available and can be easily calibrated with high precision [1]. The setup and the exciting source have no influence on the calibration; only the relative positioning uncertainties of the standard temperature probe and the E-field probe to be calibrated must be considered. However, several problems limit the available accuracy of probe calibrations with temperature probes:

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



- The temperature gradient is not directly measurable but must be evaluated from temperature measurements at different time steps. Special precaution is necessary to avoid measurement errors caused by temperature gradients due to energy equalizing effects or convection currents in the liquid. Such effects cannot be completely avoided, as the measured field itself destroys the thermal equilibrium in the liquid. With a careful setup these errors can be kept small.
- The measured volume around the temperature probe is not well defined. It is difficult to calculate the energy transfer from a surrounding gradient temperature field into the probe. These effects must be considered, since temperature probes are calibrated in liquid with homogeneous temperatures. There is no traceable standard for temperature rise measurements.
- The calibration depends on the assessment of the specific density, the heat capacity and the conductivity of the medium. While the specific density and heat capacity can be measured accurately with standardized procedures ( $\sim 2\%$  for  $c$ ; much better for  $\rho$ ), there is no standard for the measurement of the conductivity. Depending on the method and liquid, the error can well exceed  $\pm 5\%$ .
- Temperature rise measurements are not very sensitive and therefore are often performed at a higher power level than the E-field measurements. The nonlinearities in the system (e.g., power measurements, different components, etc.) must be considered.

Considering these problems, the possible accuracy of the calibration of E-field probes with temperature gradient measurements in a carefully designed setup is about  $\pm 10\%$  (RSS) [2]. Recently, a setup which is a combination of the waveguide techniques and the thermal measurements was presented in [3]. The estimated uncertainty of the setup is  $\pm 5\%$  (RSS) when the same liquid is used for the calibration and for actual measurements and  $\pm 7\text{-}9\%$  (RSS) when not, which is in good agreement with the estimates given in [2].

### 1.12.2 Calibration with Analytical Fields

In this method a technical setup is used in which the field can be calculated analytically from measurements of other physical magnitudes (e.g., input power). This corresponds to the standard field method for probe calibration in air; however, there is no standard defined for fields in lossy liquids.

When using calculated fields in lossy liquids for probe calibration, several points must be considered in the assessment of the uncertainty:

- The setup must enable accurate determination of the incident power.
- The accuracy of the calculated field strength will depend on the assessment of the dielectric parameters of the liquid.
- Due to the small wavelength in liquids with high permittivity, even small

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

setups might be above the resonant cutoff frequencies. The field distribution in the setup must be carefully checked for conformity with the theoretical field distribution.

## References

1. N. Kuster, Q. Balzano, and J.C. Lin, Eds., *Mobile Communications Safety*, Chapman & Hall, London, 1997.
2. K. Meier, M. Burkhardt, T. Schmid, and N. Kuster, "Broadband calibration of E-field probes in lossy media", *IEEE Transactions on Microwave Theory and Techniques*, vol. 44, no. 10, pp. 1954-1962, Oct. 1996.
3. K. Jokela, P. Hyysalo, and L. Puranen, "Calibration of specific absorption rate (SAR) probes in waveguide at 900 MHz", *IEEE Transactions on Instrumentation and Measurements*, vol. 47, no. 2, pp. 432-438, Apr. 1998.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

### 1.13 Test Standards and Limits

According to FCC 47CFR §2.1093(d) The limits to be used for evaluation are based generally on criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate ("SAR") in Section 4.2 of "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," ANSI/IEEE C95.1, By the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017. These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in "Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields," NCRP Report No. 86, Section 17.4.5. Copyright NCRP, 1986, Bethesda, Maryland 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards. The criteria to be used are specified in paragraphs (d)(1) and (d)(2) of this section and shall apply for portable devices transmitting in the frequency range from 100 kHz to 6 GHz. Portable devices that transmit at frequencies above 6 GHz are to be evaluated in terms of the MPE limits specified in § 1.1310 of this chapter. Measurements and calculations to demonstrate compliance with MPE field strength or power density limits for devices operating above 6 GHz should be made at a minimum distance of 5 cm from the radiating source.

- (1) Limits for Occupational/Controlled exposure: 0.4 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 8 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 20 W/kg, as averaged over an 10 grams of tissue (defined as a tissue volume in the shape of a cube).
- (2) Occupational/Controlled limits apply when persons are exposed as a consequence of their employment provided these persons are fully aware of and exercise control over their exposure. Awareness of exposure can be accomplished by use of warning labels or by specific training or education through appropriate means, such as an RF safety program in a work environment.
- (3) Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure. Warning labels placed on consumer

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section. (Table 4.)

Human Exposure	Uncontrolled Environment General Population	Controlled Environment Occupational
Spatial Peak SAR (Brain)	1.60 W/kg	8.00 W/kg
Spatial Average SAR (Whole Body)	0.08 W/kg	0.40 W/kg
Spatial Peak SAR (Hands/Feet/Ankle/Wrist)	4.00 W/kg	20.00 W/kg

Table 4. RF exposure limits

Notes:

1. Uncontrolled environments are defined as locations where there is potential exposure of individuals who have no knowledge or control of their potential exposure.
2. Controlled environments are defined as locations where there is potential exposure of individuals who have knowledge of their potential exposure and can exercise control over their exposure.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 2. Summary of Results

### 2.1 Decision rules

Reported measurement data comply with IEEE 1528-2013:  
Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

### 2.2 Summary of Results

#### SISO Full

#### WLAN Tx1 Antenna

Antenna	Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 1g (W/kg)		Plot page
										Measured	Reported	
Tx1	WLAN 802.11b	Back side	4	10	2457	20.00	19.97	1.01	100.69%	0.769	0.778	151
		Top side	9	10	2457	20.00	19.97	1.01	100.69%	0.250	0.253	-
		Bottom side	0	10	2457	20.00	19.97	1.01	100.69%	0.012	0.012	-
		Right side	0	10	2457	20.00	19.97	1.01	100.69%	0.070	0.071	-
		Left side	0	10	2457	20.00	19.97	1.01	100.69%	0.035	0.035	-
		Back side*	4	38	5190	17.00	16.98	1.01	100.46%	0.977	0.993	152
		Back side	4	38	5190	17.00	16.98	1.01	100.46%	0.958	0.973	-
		Top side	9	38	5190	17.00	16.98	1.01	101.39%	0.965	0.990	-
	WLAN 802.11n(40M) 5.2G	Bottom side	0	38	5190	17.00	16.98	1.01	100.46%	0.571	0.580	-
		Right side	0	38	5190	17.00	16.98	1.01	100.46%	0.041	0.042	-
		Left side	0	38	5190	17.00	16.98	1.01	100.46%	0.066	0.067	-
		Back side*	4	42	5210	17.00	16.97	1.01	100.46%	0.018	0.018	-
		Back side	4	42	5210	17.00	16.97	1.01	100.69%	1.060	1.080	153
		Top side	9	42	5210	17.00	16.97	1.01	100.69%	0.998	1.017	-
		Bottom side	0	42	5210	17.00	16.97	1.01	100.69%	0.620	0.632	-
		Right side	0	42	5210	17.00	16.97	1.01	100.69%	0.042	0.043	-
	WLAN 802.11ac(80M) 5.2G	Left side	0	42	5210	17.00	16.97	1.01	100.69%	0.065	0.066	-
		Back side*	4	54	5270	17.00	16.98	1.01	100.69%	0.020	0.020	-
		Back side	4	54	5270	17.00	16.98	1.01	100.46%	1.010	1.026	154
		Top side	9	62	5310	17.00	16.99	1.01	100.46%	0.992	1.008	-
		Bottom side	0	62	5310	17.00	16.99	1.01	100.23%	0.984	0.998	-
		Right side	0	62	5310	17.00	16.99	1.01	100.23%	0.576	0.584	-
		Left side	0	62	5310	17.00	16.99	1.01	100.23%	0.039	0.040	-
		Back side*	4	62	5310	17.00	16.99	1.01	100.23%	0.060	0.061	-
	WLAN 802.11n(40M) 5.3G	Back side	4	58	5290	17.00	16.84	1.01	103.75%	1.010	1.060	155
		Top side	9	58	5290	17.00	16.84	1.01	103.75%	0.999	1.049	-
		Bottom side	0	58	5290	17.00	16.84	1.01	103.75%	0.603	0.633	-
		Right side	0	58	5290	17.00	16.84	1.01	103.75%	0.040	0.042	-
		Left side	0	58	5290	17.00	16.84	1.01	103.75%	0.062	0.065	-
		Back side*	4	106	5530	17.00	16.83	1.01	103.75%	0.022	0.023	-
		Back side	4	106	5530	17.00	16.83	1.01	103.99%	1.100	1.157	156
		Top side	9	122	5610	17.00	16.89	1.01	103.99%	1.004	1.056	-
	WLAN 802.11ac(80M) 5.6G	Bottom side	0	122	5610	17.00	16.89	1.01	102.57%	0.986	1.023	-
		Right side	0	122	5610	17.00	16.89	1.01	102.57%	0.624	0.647	-
		Left side	0	122	5610	17.00	16.89	1.01	102.57%	0.045	0.047	-
		Back side*	4	151	5755	17.00	16.94	1.01	102.57%	0.063	0.065	-
		Back side	4	151	5755	17.00	16.94	1.01	102.57%	0.024	0.025	-
		Top side	9	159	5795	17.00	16.97	1.01	101.39%	1.030	1.056	-
		Bottom side	0	159	5795	17.00	16.97	1.01	100.69%	1.140	1.161	157
		Right side	0	159	5795	17.00	16.97	1.01	100.69%	1.100	1.120	-
	WLAN 802.11n(40M) 5.8G	Left side	0	159	5795	17.00	16.97	1.01	100.69%	0.667	0.679	-
		Back side*	4	155	5775	17.00	16.96	1.01	100.69%	0.048	0.049	-
		Back side	4	155	5775	17.00	16.96	1.01	100.69%	0.070	0.071	-
		Top side	9	155	5775	17.00	16.96	1.01	100.69%	0.022	0.022	-
		Bottom side	0	155	5775	17.00	16.96	1.01	100.93%	0.985	1.006	158
		Right side	0	155	5775	17.00	16.96	1.01	100.93%	0.956	0.976	-
		Left side	0	155	5775	17.00	16.96	1.01	100.93%	0.760	0.776	-
		Back side*	4	155	5775	17.00	16.96	1.01	100.93%	0.039	0.040	-

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## WLAN Tx2 Antenna

Antenna	Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 1g (W/kg)		Plot page
										Measured	Reported	
Tx2	WLAN 802.11b	Back side	6	1	2412	20.00	19.90	1.01	102.33%	0.913	0.939	-
		Back side	6	6	2437	20.00	19.92	1.01	101.86%	0.984	1.008	159
		Back side*	6	6	2437	20.00	19.92	1.01	101.86%	0.947	0.970	-
		Back side	6	10	2457	20.00	19.91	1.01	102.09%	0.903	0.927	-
		Top side	4	6	2437	20.00	19.92	1.01	101.86%	0.420	0.430	-
		Bottom side	0	6	2437	20.00	19.92	1.01	101.86%	0.037	0.038	-
		Right side	0	6	2437	20.00	19.92	1.01	101.86%	0.151	0.155	-
		Left side	0	6	2437	20.00	19.92	1.01	101.86%	0.148	0.152	-
	WLAN 802.11ac(80M) 5.2G	Back side	6	42	5210	15.625	15.60	1.01	100.58%	0.139	0.141	-
		Top side	4	42	5210	15.625	15.60	1.01	100.58%	0.448	0.456	160
		Bottom side	0	42	5210	15.625	15.60	1.01	100.58%	0.038	0.039	-
		Right side	0	42	5210	15.625	15.60	1.01	100.58%	0.107	0.109	-
		Left side	0	42	5210	15.625	15.60	1.01	100.58%	0.011	0.011	-
		Back side	6	58	5290	15.625	15.54	1.01	101.98%	0.241	0.249	-
	WLAN 802.11ac(80M) 5.3G	Top side	4	58	5290	15.625	15.54	1.01	101.98%	0.431	0.445	161
		Bottom side	0	58	5290	15.625	15.54	1.01	101.98%	0.036	0.037	-
		Right side	0	58	5290	15.625	15.54	1.01	101.98%	0.103	0.106	-
		Left side	0	58	5290	15.625	15.54	1.01	101.98%	0.013	0.013	-
	WLAN 802.11ac(160M) 5.6G	Back side	6	114	5570	15.25	15.18	1.02	101.62%	0.234	0.241	-
		Top side	4	114	5570	15.25	15.18	1.02	101.62%	0.469	0.484	162
		Bottom side	0	114	5570	15.25	15.18	1.02	101.62%	0.039	0.040	-
		Right side	0	114	5570	15.25	15.18	1.02	101.62%	0.112	0.116	-
		Left side	0	114	5570	15.25	15.18	1.02	101.62%	0.012	0.012	-
	WLAN 802.11ac(80M) 5.8G	Back side	6	155	5775	14.875	14.75	1.01	102.92%	0.259	0.269	-
		Top side	4	155	5775	14.875	14.75	1.01	102.92%	0.421	0.438	163
		Bottom side	0	155	5775	14.875	14.75	1.01	102.92%	0.035	0.036	-
		Right side	0	155	5775	14.875	14.75	1.01	102.92%	0.100	0.104	-
		Left side	0	155	5775	14.875	14.75	1.01	102.92%	0.010	0.010	-
		Back side	6	155	5775	14.875	14.75	1.01	102.92%	0.010	0.010	-
Tx2	Bluetooth (GFSK)	Back side	0	0	2402	11.50	11.09	1.30	109.90%	0.079	0.113	-
		Top side	0	0	2402	11.50	11.09	1.30	109.90%	0.092	0.132	164
		Bottom side	0	0	2402	11.50	11.09	1.30	109.90%	0.007	0.010	-
		Right side	0	0	2402	11.50	11.09	1.30	109.90%	0.030	0.043	-
		Left side	0	0	2402	11.50	11.09	1.30	109.90%	0.030	0.043	-
		Back side	0	0	2402	11.50	11.09	1.30	109.90%	0.030	0.043	-
		Top side	0	0	2402	11.50	11.09	1.30	109.90%	0.030	0.043	-
		Bottom side	0	0	2402	11.50	11.09	1.30	109.90%	0.030	0.043	-

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## SISO Reduced

### WLAN Tx1 Antenna

Antenna	Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	power scaling	Averaged SAR over 1g (W/kg)		Plot page
										Measured	Reported	
Tx1	WLAN 802.11b	Back side	0	1	2412	17.00	16.93	1.01	101.62%	0.881	0.900	-
		Back side	0	6	2437	17.00	16.91	1.01	102.09%	1.040	1.067	165
		Back side*	0	6	2437	17.00	16.91	1.01	102.09%	0.998	1.024	-
		Top side	0	1	2412	17.00	16.93	1.01	101.62%	0.628	0.642	-
	WLAN 802.11ac(160M) 5.2G	Back side	0	50	5250	10.50	10.41	1.01	102.09%	0.683	0.705	166
		Top side	0	50	5250	10.50	10.41	1.01	102.09%	0.669	0.691	-
	WLAN 802.11ac(80M) 5.3G	Back side	0	58	5290	10.50	10.38	1.01	102.80%	0.621	0.646	167
		Top side	0	58	5290	10.50	10.38	1.01	102.80%	0.608	0.632	-
	WLAN 802.11ac(160M) 5.6G	Back side	0	114	5570	11.00	10.95	1.01	101.16%	0.764	0.782	168
		Top side	0	114	5570	11.00	10.95	1.01	101.16%	0.748	0.765	-
	WLAN 802.11ac(80M) 5.8G	Back side	0	155	5775	11.00	10.94	1.01	101.39%	0.713	0.731	169
		Top side	0	155	5775	11.00	10.94	1.01	101.39%	0.698	0.716	-

\* - repeated at the highest SAR measurement according to the KDB 865664 D01

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



**WLAN Tx2 Antenna**

Antenna	Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	power scaling	Averaged SAR over 1g (W/kg)		Plot page
										Measured	Reported	
Tx2	WLAN 802.11b	Back side	0	1	2412	12.75	12.73	1.01	100.46%	0.707	0.714	170
		Top side	0	1	2412	12.75	12.73	1.01	100.46%	0.371	0.375	-
	WLAN 802.11ac(160M) 5.2G	Back side	0	50	5250	13.375	13.28	1.01	102.21%	0.552	0.571	171
		Top side	0	50	5250	13.375	13.28	1.01	102.21%	0.484	0.500	-
	WLAN 802.11ac(80M) 5.3G	Back side	0	58	5290	13.375	13.30	1.01	101.74%	0.639	0.658	172
		Top side	0	58	5290	13.375	13.30	1.01	101.74%	0.561	0.577	-
	WLAN 802.11ac(160M) 5.6G	Back side	0	114	5570	11.25	11.17	1.01	101.86%	0.468	0.482	173
		Top side	0	114	5570	11.25	11.17	1.01	101.86%	0.411	0.424	-
	WLAN 802.11ac(80M) 5.8G	Back side	0	155	5775	11.125	11.03	1.01	102.21%	0.400	0.414	174
		Top side	0	155	5775	11.125	11.03	1.01	102.21%	0.351	0.363	-

Note:

$$\text{Scaling} = \frac{\text{reported SAR}}{\text{measured SAR}} = \frac{P_2(\text{mW})}{P_1(\text{mW})} = 10^{\left(\frac{P_2 - P_1}{10}\right)} (\text{dBm})$$

Reported SAR = measured SAR \* (scaling)

Where P2 is maximum specified power, P1 is measured conducted power

**2.3 Reporting statements of conformity**

The conformity statement in this report is based solely on the test results, measurement uncertainty is excluded.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



### 3. Simultaneous Transmission Analysis

#### Simultaneous Transmission Scenarios:

Simultaneous Transmit Configurations	TX1 power	TX2 power	
2.4GHz WLAN TX1 + 2.4GHz WLAN TX2	Full	Full	
2.4GHz WLAN TX1 + 2.4GHz WLAN TX2	Full	Reduced	
2.4GHz WLAN TX1 + 2.4GHz WLAN TX2	Reduced	Full	
2.4GHz WLAN TX1 + 2.4GHz WLAN TX2	Reduced	Reduced	
5GHz WLAN TX1 + 5GHz WLAN TX2	Full	Full	
5GHz WLAN TX1 + 5GHz WLAN TX2	Full	Reduced	
5GHz WLAN TX1 + 5GHz WLAN TX2	Reduced	Full	
5GHz WLAN TX1 + 5GHz WLAN TX2	Reduced	Reduced	
2.4GHz WLAN TX1 + BT	Full	Full	
2.4GHz WLAN TX1 + BT	Reduced	Full	
5GHz WLAN TX1 + BT	Full	Full	
5GHz WLAN TX1 + BT	Reduced	Full	
Simultaneous Transmit Configurations	TX1 power	TX2 power	BT power
5GHz WLAN TX1 + 5GHz WLAN TX2 + BT	Full	Full	Full
5GHz WLAN TX1 + 5GHz WLAN TX2 + BT	Reduced	Reduced	Full
Simultaneous Transmit Configurations	TX2 power	BT power	
5GHz WLAN TX2 + BT	Full	Full	
5GHz WLAN TX2 + BT	Reduced	Full	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

### 3.1 Estimated SAR calculation

According to KDB447498 D01v06 – When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:

$$\text{Estimated SAR} = \frac{\text{Max. tune up power (mW)}}{\text{Min. test separation distance(mm)}} \times \frac{\sqrt{f(\text{GHz})}}{7.5}$$

If the minimum test separation distance is < 5mm, a distance of 5mm is used for estimated SAR calculation. When the test separation distance is >50mm, the 0.4W/kg is used for SAR-1g.

### 3.2 SPLSR evaluation and analysis

Per KDB447498D01, when the sum of SAR is larger than the limit, SAR test exclusion is determined by the SAR sum to peak location separation ratio(SPLSR).

The simultaneous transmitting antennas in each operating mode and exposure condition combination must be considered one pair at a time to determine the SAR to peak location separation ratio to qualify for test exclusion.

The ratio is determined by  $(\text{SAR1} + \text{SAR2})^{1.5}/R_i$ , rounded to two decimal digits, and must be  $\leq 0.04$  for all antenna pairs in the configuration to qualify for 1-g SAR test exclusion.

SAR1 and SAR2 are the highest reported or estimated SAR for each antenna in the pair, and  $R_i$  is the separation distance between the peak SAR locations for the antenna pair in mm.

When standalone test exclusion applies, SAR is estimated; the peak location is assumed to be at the feed-point or geometric center of the antenna.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

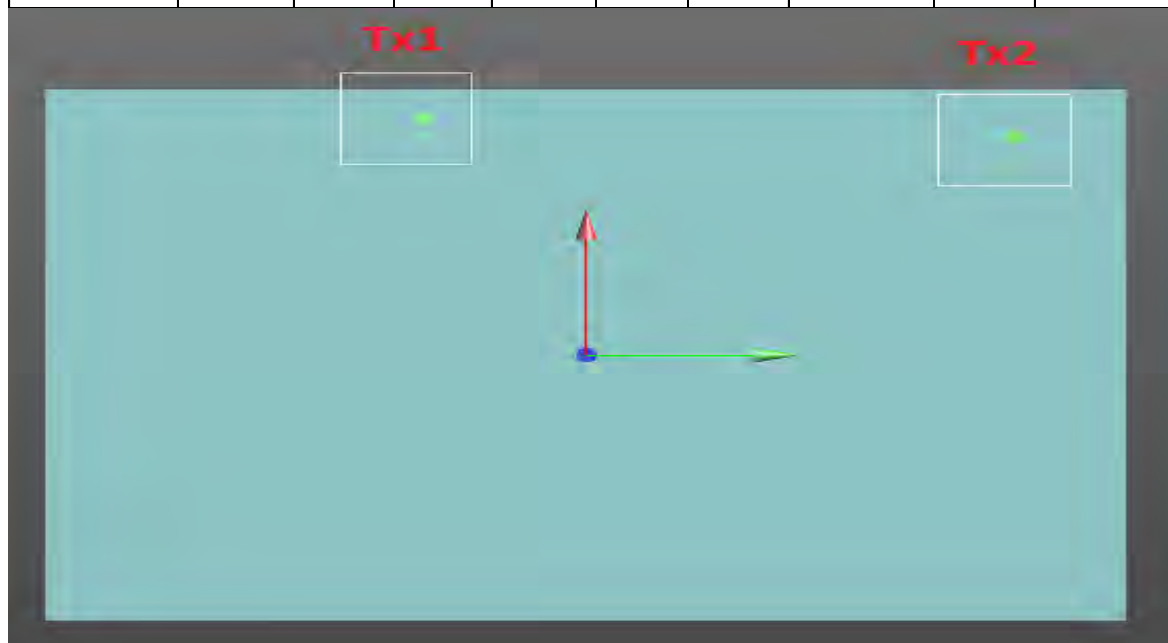
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 2.4GHz WLAN TX1 Full + 2.4GHz WLAN TX2 Full

No.	Conditions	Position	Max. WLAN Tx1	Max. WLAN Tx2	SAR Sum	SPLSR
1	2.4 GHz WLAN Tx1 + WLAN Tx2	Back side	0.778	1.008	<b>1.786</b>	Analyzed as below
		Top side	0.253	0.430	0.683	$\Sigma$ SAR<1.6, Not required
		Bottom side	0.012	0.038	0.050	$\Sigma$ SAR<1.6, Not required
		Right side	0.071	0.155	0.226	$\Sigma$ SAR<1.6, Not required
		Left side	0.035	0.152	0.187	$\Sigma$ SAR<1.6, Not required

## 2.4 GHz WLAN MIMO

Conditions	Position	SAR Value (W/kg)	Coordinates (cm)			$\Sigma$ SAR (W/kg)	Peak Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
			x	y	z				
WLAN Tx1	Back side	0.778	0.78	-0.37	-0.04	1.786	133.74	0.018	SPLSR<0.04, Not required
WLAN Tx2		1.008	0.72	0.97	-0.04				



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

### 5GHz WLAN TX1 Full + 5GHz WLAN TX2 Full

No.	Conditions	Position	Max. WLAN Tx1	Max. WLAN Tx2	SAR Sum	SPLSR
2	5 GHz WLAN Tx1 + WLAN Tx2	Back side	1.161	0.269	1.430	$\Sigma$ SAR<1.6, Not required
		Top side	0.776	0.484	1.260	$\Sigma$ SAR<1.6, Not required
		Bottom side	0.049	0.04	0.089	$\Sigma$ SAR<1.6, Not required
		Right side	0.071	0.116	0.187	$\Sigma$ SAR<1.6, Not required
		Left side	0.025	0.013	0.038	$\Sigma$ SAR<1.6, Not required

### 2.4GHz WLAN TX1 Full + BT Full

No.	Conditions	Position	Max. WLAN Tx1	BT	SAR Sum	SPLSR
3	2.4 GHz WLAN Tx1 + BT	Back side	0.778	0.113	0.891	$\Sigma$ SAR<1.6, Not required
		Top side	0.253	0.132	0.385	$\Sigma$ SAR<1.6, Not required
		Bottom side	0.012	0.010	0.022	$\Sigma$ SAR<1.6, Not required
		Right side	0.071	0.043	0.114	$\Sigma$ SAR<1.6, Not required
		Left side	0.035	0.043	0.078	$\Sigma$ SAR<1.6, Not required

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

### 5GHz WLAN TX1 Full + BT Full

No.	Conditions	Position	Max. WLAN Tx1	BT	SAR Sum	SPLSR
4	5 GHz WLAN Tx1 + BT	Back side	1.161	0.113	1.274	$\Sigma$ SAR<1.6, Not required
		Top side	0.776	0.132	0.908	$\Sigma$ SAR<1.6, Not required
		Bottom side	0.049	0.010	0.059	$\Sigma$ SAR<1.6, Not required
		Right side	0.071	0.043	0.114	$\Sigma$ SAR<1.6, Not required
		Left side	0.025	0.043	0.068	$\Sigma$ SAR<1.6, Not required

### 5GHz WLAN TX1 Full + 5GHz WLAN TX2 Full + BT

No.	Conditions	Position	Max. WLAN Tx1	Max. WLAN Tx2	BT	SAR Sum	SPLSR
5	5 GHz WLAN Tx1 + WLAN Tx2 + BT	Back side	1.161	0.269	0.113	1.543	$\Sigma$ SAR<1.6, Not required
		Top side	0.776	0.484	0.132	1.392	$\Sigma$ SAR<1.6, Not required
		Bottom side	0.049	0.04	0.010	0.099	$\Sigma$ SAR<1.6, Not required
		Right side	0.071	0.116	0.043	0.230	$\Sigma$ SAR<1.6, Not required
		Left side	0.025	0.013	0.043	0.081	$\Sigma$ SAR<1.6, Not required

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 2.4GHz WLAN TX1 Reduced + 2.4GHz WLAN TX2 Reduced

No.	Conditions	Position	Max. WLAN Tx1	Max. WLAN Tx2	SAR Sum	SPLSR
6	2.4 GHz WLAN Tx1 + WLAN Tx2	Back side	1.067	0.714	<b>1.781</b>	Analyzed as below
		Top side	0.642	0.375	1.017	$\Sigma$ SAR<1.6, Not required

## 2.4 GHz WLAN MIMO

Conditions	Position	SAR Value (W/kg)	Coordinates (cm)			$\Sigma$ SAR (W/kg)	Peak Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
			x	y	z				
WLAN Tx1	Back side	1.067	0.75	-0.41	-0.03	1.781	137.68	0.017	SPLSR<0.04, Not required
WLAN Tx2		0.714	0.71	0.97	-0.03				



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

### 5GHz WLAN TX1 Reduced + 5GHz WLAN TX2 Reduced

No.	Conditions	Position	Max. WLAN Tx1	Max. WLAN Tx2	SAR Sum	SPLSR
7	5 GHz WLAN Tx1 + WLAN Tx2	Back side	0.782	0.658	1.440	$\Sigma$ SAR<1.6, Not required
		Top side	0.765	0.577	1.342	$\Sigma$ SAR<1.6, Not required

### 2.4GHz WLAN TX1 Reduced + BT Full

No.	Conditions	Position	Max. WLAN Tx1	BT	SAR Sum	SPLSR
8	2.4 GHz WLAN Tx1 + BT	Back side	1.067	0.113	1.180	$\Sigma$ SAR<1.6, Not required
		Top side	0.642	0.132	0.774	$\Sigma$ SAR<1.6, Not required

### 5GHz WLAN TX1 Reduced + BT Full

No.	Conditions	Position	Max. WLAN Tx1	BT	SAR Sum	SPLSR
9	5 GHz WLAN Tx1 + BT	Back side	0.782	0.113	0.895	$\Sigma$ SAR<1.6, Not required
		Top side	0.765	0.132	0.897	$\Sigma$ SAR<1.6, Not required

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

### 5GHz WLAN TX1 Reduced + 5GHz WLAN TX2 Reduced + BT

No.	Conditions	Position	Max. WLAN Tx1	Max. WLAN Tx2	BT	SAR Sum	SPLSR
10	5 GHz WLAN Tx1 + WLAN Tx2 + BT	Back side	0.782	0.658	0.113	1.553	$\Sigma$ SAR<1.6, Not required
		Top side	0.765	0.577	0.132	1.474	$\Sigma$ SAR<1.6, Not required

### 2.4GHz WLAN TX1 Full + 2.4GHz WLAN TX2 Reduced

No.	Conditions	Position	Max. WLAN Tx1	Max. WLAN Tx2	SAR Sum	SPLSR
11	2.4 GHz WLAN Tx1 + WLAN Tx2	Back side	0.778	0.714	1.492	$\Sigma$ SAR<1.6, Not required
		Top side	0.253	0.375	0.628	$\Sigma$ SAR<1.6, Not required
		Bottom side	0.012	-	-	$\Sigma$ SAR<1.6, Not required
		Right side	0.071	-	-	$\Sigma$ SAR<1.6, Not required
		Left side	0.035	-	-	$\Sigma$ SAR<1.6, Not required

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

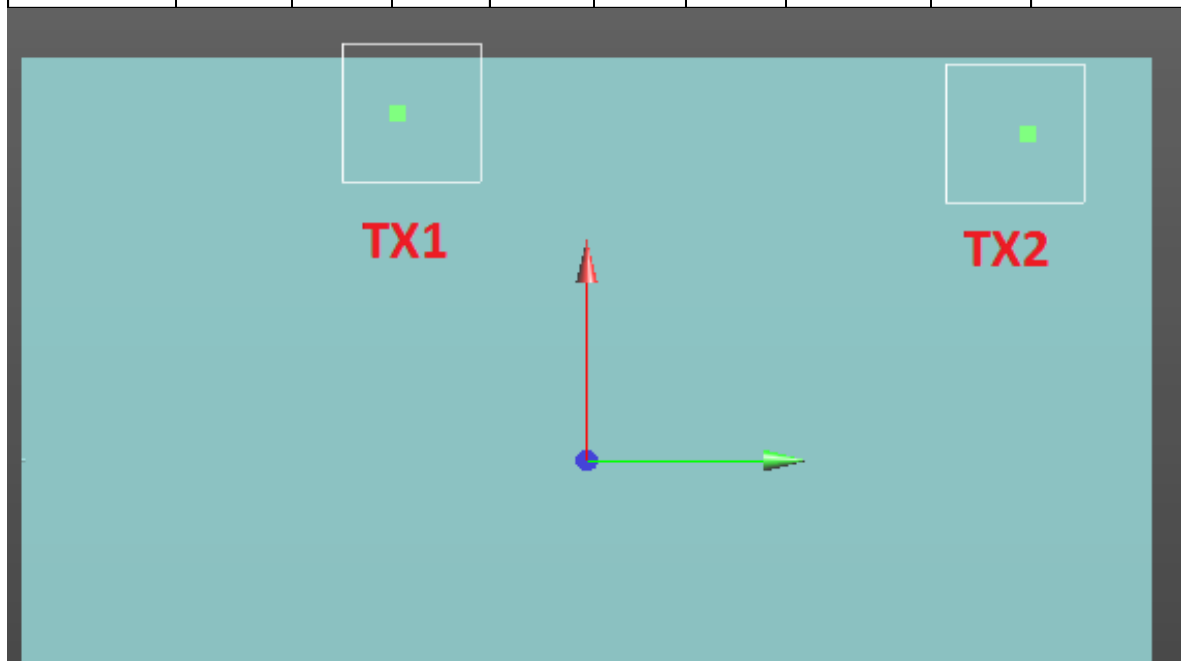


## 2.4GHz WLAN TX1 Reduced + 2.4GHz WLAN TX2 Full

No.	Conditions	Position	Max. WLAN Tx1	Max. WLAN Tx2	SAR Sum	SPLSR
12	2.4 GHz WLAN Tx1 + WLAN Tx2	Back side	1.067	1.008	<b>2.075</b>	Analyzed as below
		Top side	0.642	0.430	1.072	$\Sigma$ SAR<1.6, Not required
		Bottom side	-	0.038	-	$\Sigma$ SAR<1.6, Not required
		Right side	-	0.155	-	$\Sigma$ SAR<1.6, Not required
		Left side	-	0.152	-	$\Sigma$ SAR<1.6, Not required

## 2.4 GHz WLAN MIMO

Conditions	Position	SAR Value (W/kg)	Coordinates (cm)			$\Sigma$ SAR (W/kg)	Peak Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
			x	y	z				
WLAN Tx1	Back side	1.067	0.75	-0.41	-0.03	2.075	133.88	0.022	SPLSR<0.04, Not required
WLAN Tx2		1.008	0.72	0.97	-0.04				



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
 除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

### 5GHz WLAN TX1 Full + 5GHz WLAN TX2 Reduced

No.	Conditions	Position	Max. WLAN Tx1	Max. WLAN Tx2	SAR Sum	SPLSR
13	5 GHz WLAN Tx1 + WLAN Tx2	Back side	1.161	0.658	<b>1.819</b>	Analyzed as below
		Top side	0.776	0.577	1.353	$\Sigma$ SAR<1.6, Not required
		Bottom side	0.049	-	-	$\Sigma$ SAR<1.6, Not required
		Right side	0.071	-	-	$\Sigma$ SAR<1.6, Not required
		Left side	0.025	-	-	$\Sigma$ SAR<1.6, Not required

### 5 GHz WLAN MIMO

Conditions	Position	SAR Value (W/kg)	Coordinates (cm)			$\Sigma$ SAR (W/kg)	Peak Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
			x	y	z				
WLAN Tx1	Back side	1.161	0.73	-0.32	-0.04	1.819	130.86	0.019	SPLSR<0.04, Not required
WLAN Tx2		0.658	0.79	0.96	-0.03				



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

**5GHz WLAN TX1 Reduced + 5GHz WLAN TX2 Full**

No.	Conditions	Position	Max. WLAN Tx1	Max. WLAN Tx2	SAR Sum	SPLSR
14	5 GHz WLAN Tx1 + WLAN Tx2	Back side	0.782	0.269	1.051	$\Sigma$ SAR<1.6, Not required
		Top side	0.765	0.484	1.249	$\Sigma$ SAR<1.6, Not required
		Bottom side	-	0.04	-	$\Sigma$ SAR<1.6, Not required
		Right side	-	0.116	-	$\Sigma$ SAR<1.6, Not required
		Left side	-	0.013	-	$\Sigma$ SAR<1.6, Not required

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

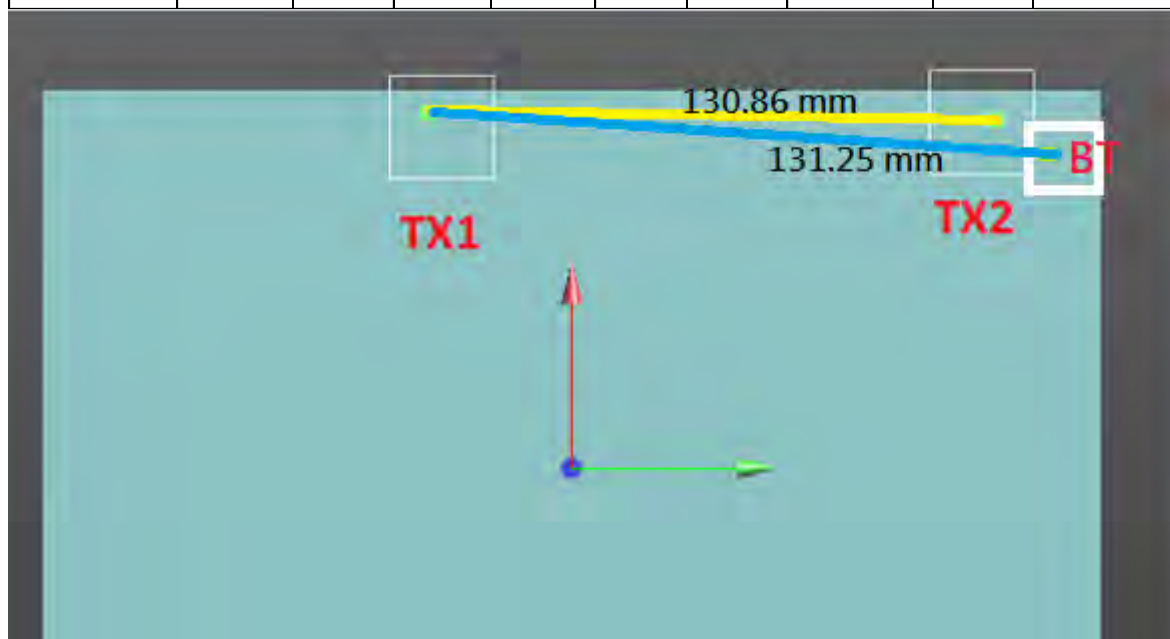
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 5GHz WLAN TX1 Full + 5GHz WLAN TX2 Reduced + BT

No.	Conditions	Position	Max. WLAN Tx1	Max. WLAN Tx2	BT	SAR Sum	SPLSR
15	5 GHz WLAN Tx1 + WLAN Tx2 + BT	Back side	1.161	0.658	0.113	<b>1.932</b>	Analyzed as below
		Top side	0.776	0.577	0.132	1.485	$\Sigma$ SAR<1.6, Not required
		Bottom side	0.049	-	0.010	-	$\Sigma$ SAR<1.6, Not required
		Right side	0.071	-	0.043	-	$\Sigma$ SAR<1.6, Not required
		Left side	0.025	-	0.043	-	$\Sigma$ SAR<1.6, Not required

## 5 GHz WLAN MIMO + BT

Conditions	Position	SAR Value (W/kg)	Coordinates (cm)			$\Sigma$ SAR (W/kg)	Peak Location Separation Distance (mm)	SPLSR	Simultaneous Transmission SAR Test
			x	y	z				
WLAN Tx1	Back side	1.161	0.73	-0.32	-0.04	1.932	130.86	0.021	SPLSR<0.04, Not required
WLAN Tx2+BT		0.771	0.79	0.96	-0.03				



\*For peak SAR location of WLANTx2 + BT, using the peak SAR location with smallest separation distance between WLAN TX1 - WLAN TX2 pair and WLAN TX1 - BT pair to be the worst case condition.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

### 5GHz WLAN TX1 Reduced + 5GHz WLAN TX2 Full + BT

No.	Conditions	Position	Max. WLAN Tx1	Max. WLAN Tx2	BT	SAR Sum	SPLSR
16	5 GHz WLAN Tx1 + WLAN Tx2 + BT	Back side	0.782	0.269	0.113	1.164	$\Sigma$ SAR<1.6, Not required
		Top side	0.765	0.484	0.132	1.381	$\Sigma$ SAR<1.6, Not required
		Bottom side	-	0.04	0.010	-	$\Sigma$ SAR<1.6, Not required
		Right side	-	0.116	0.043	-	$\Sigma$ SAR<1.6, Not required
		Left side	-	0.013	0.043	-	$\Sigma$ SAR<1.6, Not required

### 5GHz WLAN TX2 Full + BT

No.	Conditions	Position	Max. WLAN Tx2	BT	SAR Sum	SPLSR
17	5 GHz WLAN Tx2 + BT	Back side	0.269	0.113	0.382	$\Sigma$ SAR<1.6, Not required
		Top side	0.484	0.132	0.616	$\Sigma$ SAR<1.6, Not required
		Bottom side	0.04	0.010	0.050	$\Sigma$ SAR<1.6, Not required
		Right side	0.116	0.043	0.159	$\Sigma$ SAR<1.6, Not required
		Left side	0.013	0.043	0.056	$\Sigma$ SAR<1.6, Not required

### 5GHz WLAN TX2 Reduced + BT

No.	Conditions	Position	Max. WLAN Tx2	BT	SAR Sum	SPLSR
18	5 GHz WLAN Tx2 + BT	Back side	0.658	0.113	0.771	$\Sigma$ SAR<1.6, Not required
		Top side	0.577	0.132	0.709	$\Sigma$ SAR<1.6, Not required

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 4. Instruments List

Manufacturer	Device	Type	Serial number	Date of last calibration	Date of next calibration
SPEAG	Dosimetric E-Field Probe	EX3DV4	7509	Mar.25,2019	Mar.24,2020
			3578	Jun.19,2019	Jun.18,2020
SPEAG	System Validation Dipole	D2450V2	869	Jun.27,2019	Jun.26,2020
		D5GHzV2	1040	Jun.24,2019	Jun.23,2020
SPEAG	Data acquisition Electronics	DAE4	877	Mar.22,2019	Mar.21,2020
SPEAG	Software	DASY 52 52.10.1	N/A	Calibration not required	Calibration not required
SPEAG	Phantom	ELI	N/A	Calibration not required	Calibration not required
Agilent	Network Analyzer	E5071C	MY46107530	Feb.23,2019	Feb.22,2020
Agilent	Dielectric Probe Kit	85070E	MY44300677	Calibration not required	Calibration not required
Agilent	Dual-directional coupler	772D	MY46151242	Jul.30,2019	Jul.29,2020
		778D	MY48220468	Jul.30,2019	Jul.29,2020
Agilent	Signal Generator	N5181A	MY50141235	Apr.22,2019	Apr.21,2020
Agilent	Power Meter	E4417A	MY51410006	Feb.19,2019	Feb.18,2020
Agilent	Power Sensor	E9301H	MY51470001	Feb.19,2019	Feb.18,2020
			MY51470002	Feb.19,2019	Feb.18,2020
TECPEL	Digital thermometer	DTM-303A	TP130074	Mar.26,2019	Mar.25,2020

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 5. Measurements

Date: 2019/10/31

### WLAN 802.11b\_Body\_Back side\_CH 10\_4mm\_TX1

Communication System: WLAN 2.45G; Frequency: 2457 MHz; Duty Cycle: 1:0.995

Medium parameters used:  $f = 2457$  MHz;  $\sigma = 1.944$  S/m;  $\epsilon_r = 53.051$ ;  $\rho = 1050$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7509; ConvF(8.05, 8.05, 8.05); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (51x101x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 1.02 W/kg

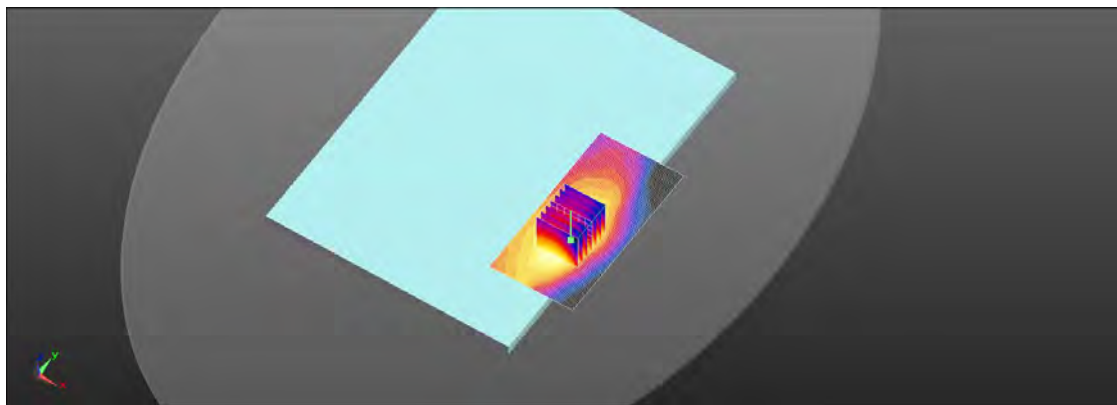
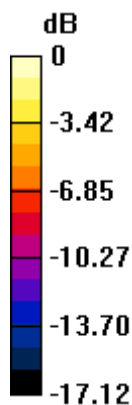
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.571 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.17 W/kg

**SAR(1 g) = 0.769 W/kg; SAR(10 g) = 0.439 W/kg**

Maximum value of SAR (measured) = 0.995 W/kg



0 dB = 0.995 W/kg = -0.02 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Date: 2019/11/2

**WLAN 802.11n(40M) 5.2G\_Body\_Back side\_CH 38\_4mm\_TX1**

Communication System: WLAN 5G; Frequency: 5190 MHz; Duty Cycle: 1:0.989

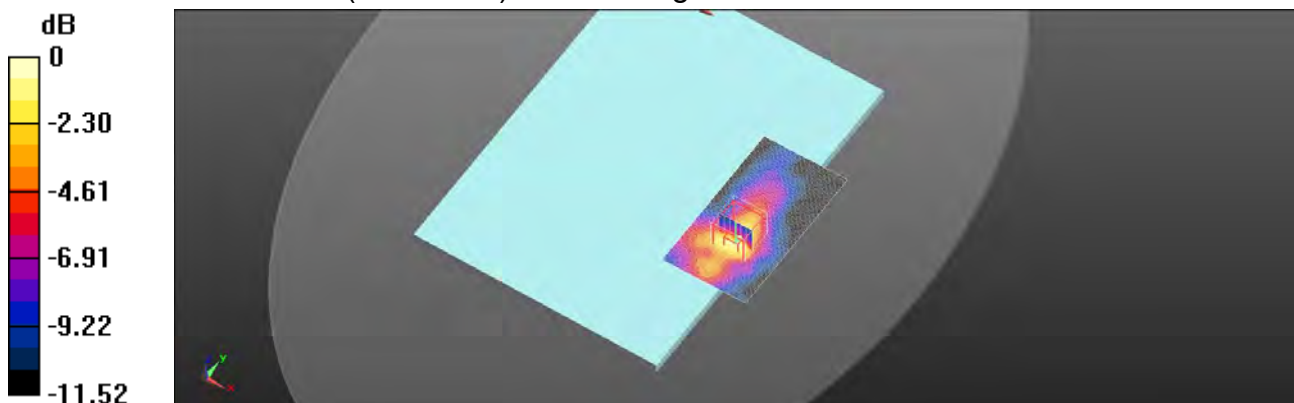
Medium parameters used:  $f = 5190 \text{ MHz}$ ;  $\sigma = 5.225 \text{ S/m}$ ;  $\epsilon_r = 49.475$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

Ambient temperature:  $22.2^\circ\text{C}$ ; Liquid temperature:  $21.8^\circ\text{C}$ 

## DASY5 Configuration:

- Probe: EX3DV4 - SN7509; ConvF(4.81, 4.81, 4.81); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$ Maximum value of SAR (interpolated) =  $1.56 \text{ W/kg}$ **Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$ Reference Value =  $5.295 \text{ V/m}$ ; Power Drift =  $0.06 \text{ dB}$ Peak SAR (extrapolated) =  $1.66 \text{ W/kg}$ **SAR(1 g) =  $0.977 \text{ W/kg}$ ; SAR(10 g) =  $0.479 \text{ W/kg}$** Maximum value of SAR (measured) =  $1.66 \text{ W/kg}$  $0 \text{ dB} = 1.66 \text{ W/kg} = 2.21 \text{ dBW/kg}$ 

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group



Date: 2019/11/3

# **WLAN 802.11ac(80M) 5.2G\_Body\_Back side\_CH 42\_4mm\_TX1**

Communication System: WLAN 5G; Frequency: 5210 MHz; Duty Cycle: 1: 0.989

Medium parameters used:  $f = 5210 \text{ MHz}$ ;  $\sigma = 5.251 \text{ S/m}$ ;  $\epsilon_r = 49.431$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $22.0^\circ\text{C}$ ; Liquid temperature:  $21.9^\circ\text{C}$

## DASY5 Configuration:

- Probe: EX3DV4 - SN7509; ConvF(4.81, 4.81, 4.81); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $1.56 \text{ W/kg}$

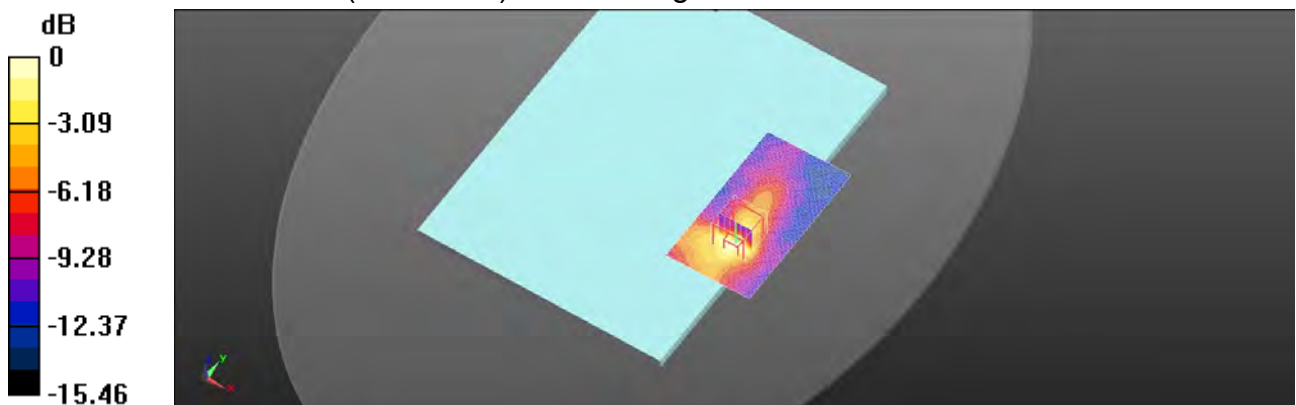
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $3.943 \text{ V/m}$ ; Power Drift =  $0.03 \text{ dB}$

Peak SAR (extrapolated) =  $1.75 \text{ W/kg}$

**SAR(1 g) =  $1.06 \text{ W/kg}$ ; SAR(10 g) =  $0.487 \text{ W/kg}$**

Maximum value of SAR (measured) =  $1.73 \text{ W/kg}$



$0 \text{ dB} = 1.73 \text{ W/kg} = 2.39 \text{ dBW/kg}$

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Date: 2019/11/4

**WLAN 802.11n(40M) 5.3G\_Body\_Back side\_CH 54\_4mm\_TX1**

Communication System: WLAN 5G; Frequency: 5270 MHz; Duty Cycle: 1: 0.989

Medium parameters used:  $f = 5270$  MHz;  $\sigma = 5.314$  S/m;  $\epsilon_r = 49.296$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 21.7°C

## DASY5 Configuration:

- Probe: EX3DV4 - SN7509; ConvF(4.66, 4.66, 4.66); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.42 W/kg

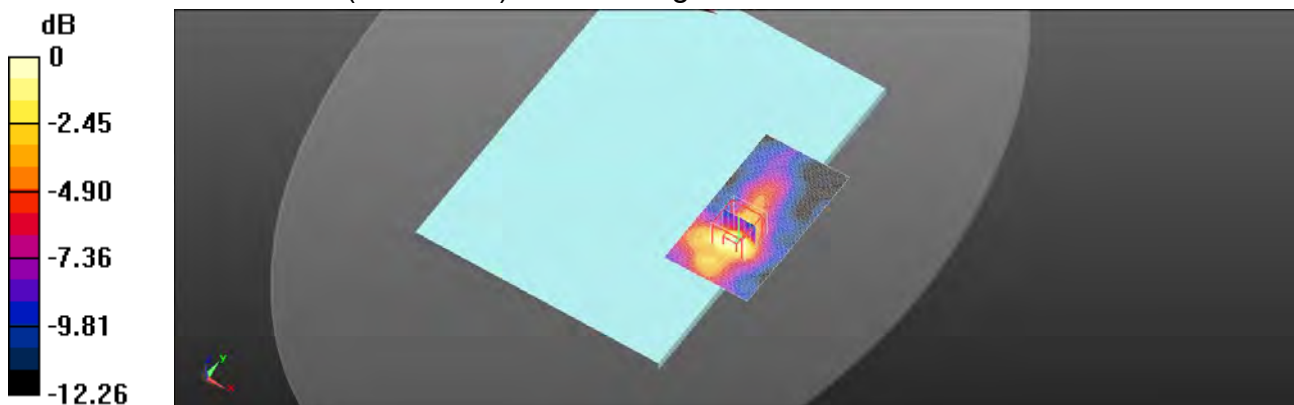
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.480 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.55 W/kg

**SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.487 W/kg**

Maximum value of SAR (measured) = 1.54 W/kg



0 dB = 1.54 W/kg = 1.87 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2019/11/5

**WLAN 802.11ac(80M) 5.3G\_Body\_Back side\_CH 58\_4mm\_TX1**

Communication System: WLAN 5G; Frequency: 5290 MHz; Duty Cycle: 1: 0.989

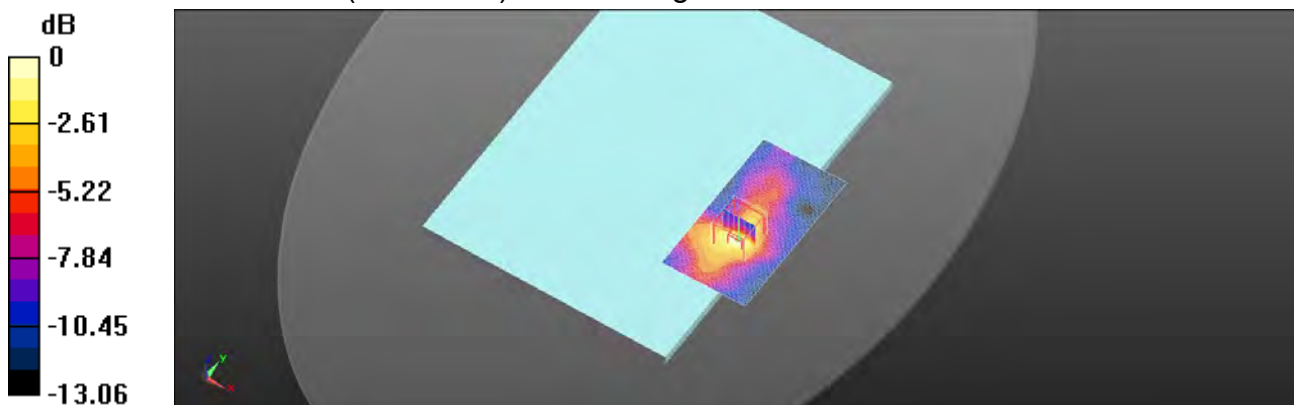
Medium parameters used:  $f = 5290 \text{ MHz}$ ;  $\sigma = 5.341 \text{ S/m}$ ;  $\epsilon_r = 49.293$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

Ambient temperature:  $22.1^\circ\text{C}$ ; Liquid temperature:  $21.6^\circ\text{C}$ 

## DASY5 Configuration:

- Probe: EX3DV4 - SN7509; ConvF(4.66, 4.66, 4.66); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$ Maximum value of SAR (interpolated) =  $1.82 \text{ W/kg}$ **Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$ Reference Value =  $4.121 \text{ V/m}$ ; Power Drift =  $0.06 \text{ dB}$ Peak SAR (extrapolated) =  $1.77 \text{ W/kg}$ **SAR(1 g) =  $1.01 \text{ W/kg}$ ; SAR(10 g) =  $0.478 \text{ W/kg}$** Maximum value of SAR (measured) =  $1.72 \text{ W/kg}$  $0 \text{ dB} = 1.72 \text{ W/kg} = 2.35 \text{ dBW/kg}$ 

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2019/11/6

# WLAN 802.11ac(80M) 5.6G\_Body\_Back side\_CH 106\_4mm\_TX1

Communication System: WLAN 5G; Frequency: 5530 MHz; Duty Cycle: 1: 0.989

Medium parameters used:  $f = 5530 \text{ MHz}$ ;  $\sigma = 5.58 \text{ S/m}$ ;  $\epsilon_r = 49.348$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $22.4^\circ\text{C}$ ; Liquid temperature:  $21.9^\circ\text{C}$

## DASY5 Configuration:

- Probe: EX3DV4 - SN7509; ConvF(4.19, 4.19, 4.19); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $1.49 \text{ W/kg}$

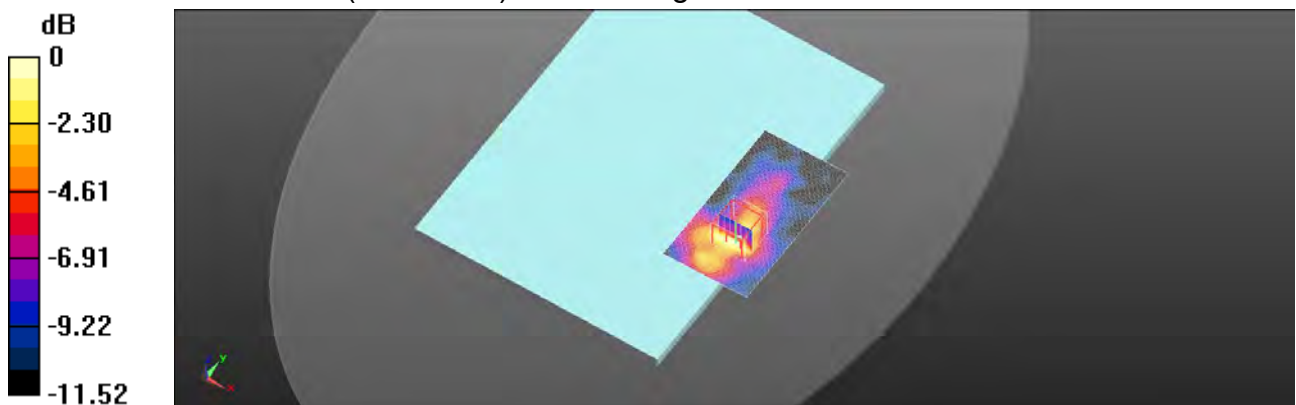
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $5.279 \text{ V/m}$ ; Power Drift =  $-0.01 \text{ dB}$

Peak SAR (extrapolated) =  $1.70 \text{ W/kg}$

**SAR(1 g) =  $1.1 \text{ W/kg}$ ; SAR(10 g) =  $0.507 \text{ W/kg}$**

Maximum value of SAR (measured) =  $1.63 \text{ W/kg}$



$0 \text{ dB} = 1.63 \text{ W/kg} = 2.11 \text{ dBW/kg}$

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2019/11/8

## WLAN 802.11n(40M) 5.8G\_Body\_Back side\_CH 159\_4mm\_TX1

Communication System: WLAN 5G; Frequency: 5795 MHz; Duty Cycle: 1: 0.989

Medium parameters used:  $f = 5795 \text{ MHz}$ ;  $\sigma = 5.878 \text{ S/m}$ ;  $\epsilon_r = 48.887$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 21.7°C

### DASY5 Configuration:

- Probe: EX3DV4 - SN7509; ConvF(4.2, 4.2, 4.2); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 2.04 W/kg

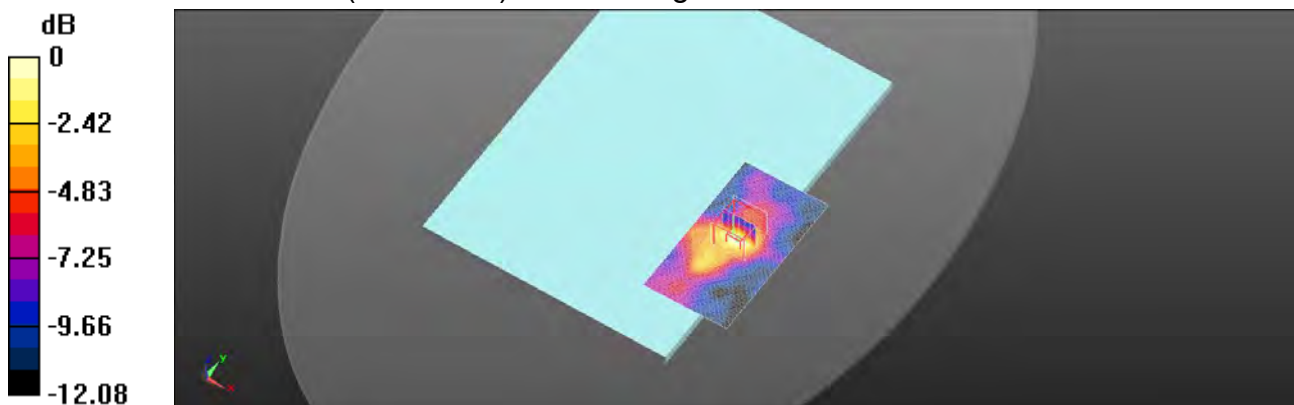
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.760 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 2.15 W/kg

**SAR(1 g) = 1.14 W/kg; SAR(10 g) = 0.533 W/kg**

Maximum value of SAR (measured) = 1.80 W/kg



0 dB = 1.80 W/kg = 2.56 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Date: 2019/11/9

**WLAN 802.11ac(80M) 5.8G\_Body\_Back side\_CH 155\_4mm\_TX1**

Communication System: WLAN 5G; Frequency: 5775 MHz; Duty Cycle: 1: 0.989

Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.855$  S/m;  $\epsilon_r = 48.89$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.0°C; Liquid temperature: 21.8°C

## DASY5 Configuration:

- Probe: EX3DV4 - SN7509; ConvF(4.2, 4.2, 4.2); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.56 W/kg

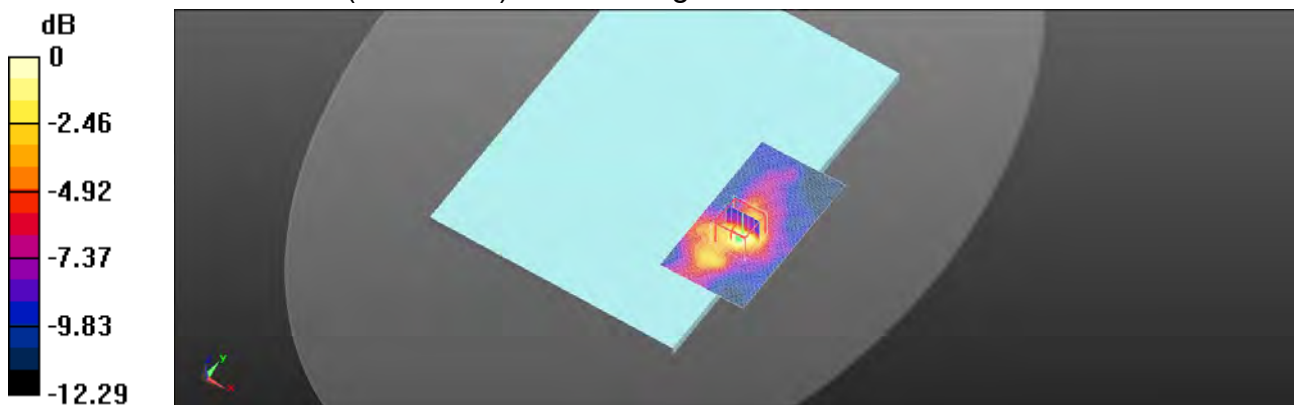
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.201 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.77 W/kg

**SAR(1 g) = 0.985 W/kg; SAR(10 g) = 0.462 W/kg**

Maximum value of SAR (measured) = 1.71 W/kg



0 dB = 1.71 W/kg = 2.32 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2019/10/31

**WLAN 802.11b\_Body\_Back side\_CH 6\_6mm\_Tx2**

Communication System: WLAN 2.45G; Frequency: 2437 MHz; Duty Cycle: 1:0.995

Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.92$  S/m;  $\epsilon_r = 53.076$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 21.6°C

## DASY5 Configuration:

- Probe: EX3DV4 - SN7509; ConvF(8.05, 8.05, 8.05); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (51x101x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 1.47 W/kg

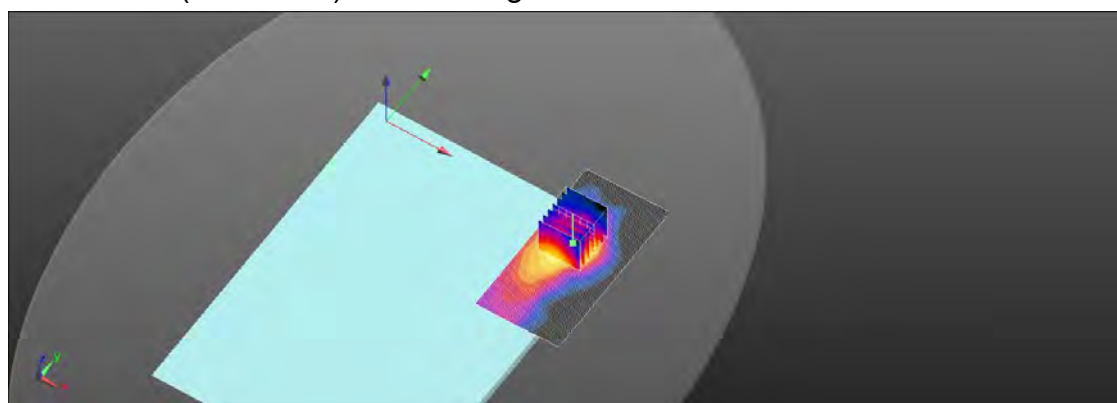
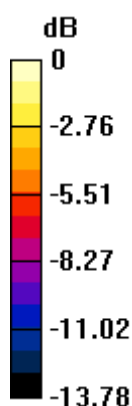
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.318 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.49 W/kg

**SAR(1 g) = 0.984 W/kg; SAR(10 g) = 0.547 W/kg**

Maximum value of SAR (measured) = 1.29 W/kg



0 dB = 1.29 W/kg = 1.09 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2020/1/17

**WLAN 802.11ac(80M) 5.2G\_Body\_Top side\_CH 42\_4mm\_Tx2**

Communication System: WLAN 5G; Frequency: 5210 MHz; Duty Cycle: 1:0.99

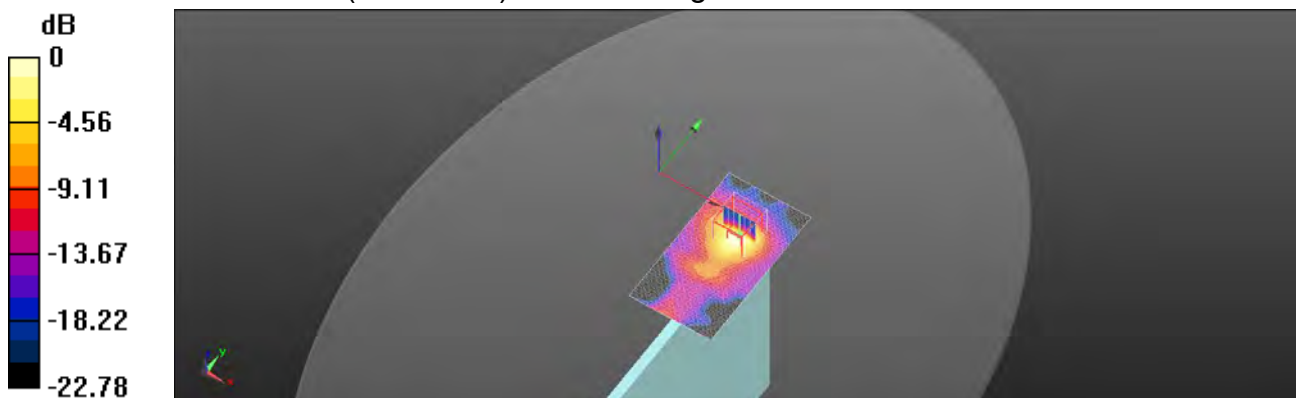
Medium parameters used:  $f = 5210 \text{ MHz}$ ;  $\sigma = 5.252 \text{ S/m}$ ;  $\epsilon_r = 49.456$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

Ambient temperature:  $22.3^\circ\text{C}$ ; Liquid temperature:  $21.8^\circ\text{C}$ 

## DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(4.82, 4.82, 4.82); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x111x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$ Maximum value of SAR (interpolated) =  $0.886 \text{ W/kg}$ **Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$ Reference Value =  $2.764 \text{ V/m}$ ; Power Drift =  $-0.02 \text{ dB}$ Peak SAR (extrapolated) =  $2.30 \text{ W/kg}$ **SAR(1 g) =  $0.448 \text{ W/kg}$ ; SAR(10 g) =  $0.139 \text{ W/kg}$** Maximum value of SAR (measured) =  $0.906 \text{ W/kg}$  $0 \text{ dB} = 0.906 \text{ W/kg} = -0.43 \text{ dBW/kg}$ 

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group



Date: 2020/1/18

# WLAN 802.11ac(80M) 5.3G\_Body\_Top side\_CH 58\_4mm\_Tx2

Communication System: WLAN 5G; Frequency: 5290 MHz; Duty Cycle: 1: 0.99

Medium parameters used:  $f = 5290 \text{ MHz}$ ;  $\sigma = 5.339 \text{ S/m}$ ;  $\epsilon_r = 49.291$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature:  $22.1^\circ\text{C}$ ; Liquid temperature:  $21.4^\circ\text{C}$

## DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(4.82, 4.82, 4.82); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x121x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$

Maximum value of SAR (interpolated) =  $0.820 \text{ W/kg}$

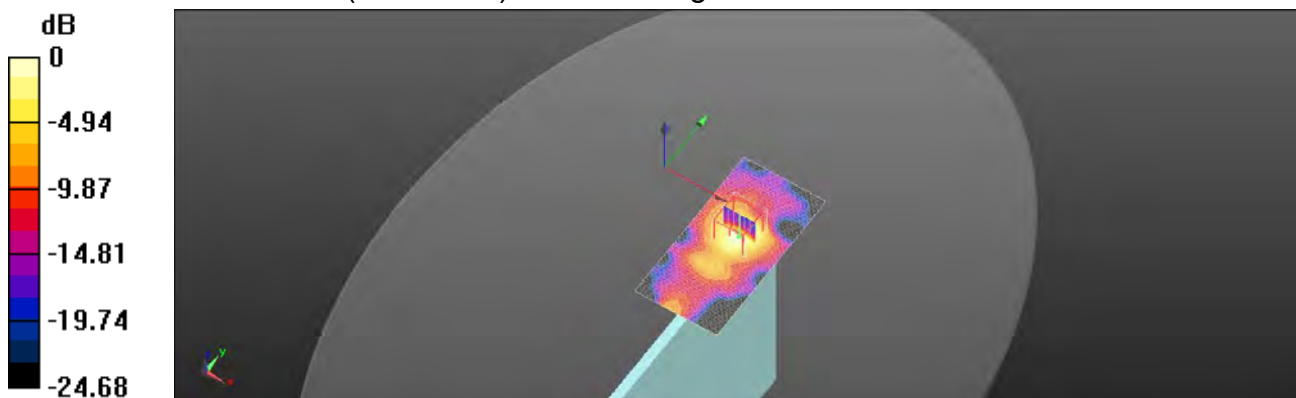
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$

Reference Value =  $3.265 \text{ V/m}$ ; Power Drift =  $0.03 \text{ dB}$

Peak SAR (extrapolated) =  $1.82 \text{ W/kg}$

**SAR(1 g) =  $0.431 \text{ W/kg}$ ; SAR(10 g) =  $0.139 \text{ W/kg}$**

Maximum value of SAR (measured) =  $0.832 \text{ W/kg}$



0 dB =  $0.832 \text{ W/kg}$  =  $-0.80 \text{ dBW/kg}$

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Date: 2020/1/19

**WLAN 802.11ac(160M) 5.6G\_Body\_Top side\_CH 114\_4mm\_Tx2**

Communication System: WLAN 5G; Frequency: 5570 MHz; Duty Cycle: 1:0.985

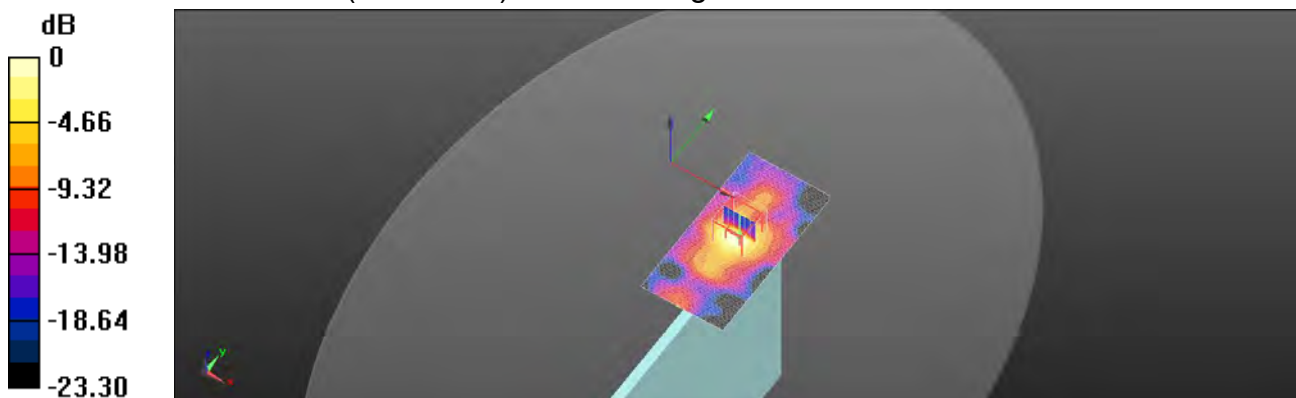
Medium parameters used:  $f = 5570 \text{ MHz}$ ;  $\sigma = 5.625 \text{ S/m}$ ;  $\epsilon_r = 49.264$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

Ambient temperature:  $22.5^\circ\text{C}$ ; Liquid temperature:  $21.8^\circ\text{C}$ 

## DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(4.21, 4.21, 4.21); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x121x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$ Maximum value of SAR (interpolated) =  $0.970 \text{ W/kg}$ **Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$ Reference Value =  $2.754 \text{ V/m}$ ; Power Drift =  $0.03 \text{ dB}$ Peak SAR (extrapolated) =  $2.08 \text{ W/kg}$ **SAR(1 g) =  $0.469 \text{ W/kg}$ ; SAR(10 g) =  $0.155 \text{ W/kg}$** Maximum value of SAR (measured) =  $0.938 \text{ W/kg}$  $0 \text{ dB} = 0.938 \text{ W/kg} = -0.28 \text{ dBW/kg}$ 

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2020/1/20

**WLAN 802.11ac(80M) 5.8G\_Body\_Top side\_CH 155\_4mm\_Tx2**

Communication System: WLAN 5G; Frequency: 5775 MHz; Duty Cycle: 1:0.99

Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.854$  S/m;  $\epsilon_r = 48.932$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.1°C; Liquid temperature: 21.6°C

## DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(4.33, 4.33, 4.33); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x121x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 0.856 W/kg

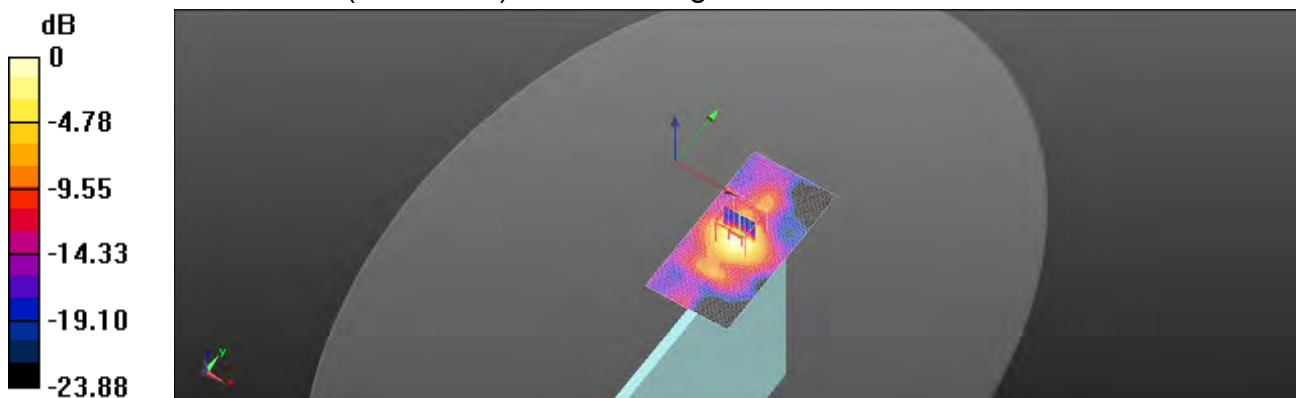
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.553 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.91 W/kg

**SAR(1 g) = 0.421 W/kg; SAR(10 g) = 0.136 W/kg**

Maximum value of SAR (measured) = 0.823 W/kg



0 dB = 0.823 W/kg = -0.85 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2019/10/31

**Bluetooth(GFSK)\_Body\_Top side\_CH 39\_0mm**

Communication System: Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:0.768

Medium parameters used:  $f = 2441$  MHz;  $\sigma = 1.925$  S/m;  $\epsilon_r = 53.071$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 21.6°C

## DASY5 Configuration:

- Probe: EX3DV4 - SN7509; ConvF(8.05, 8.05, 8.05); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x101x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 0.129 W/kg

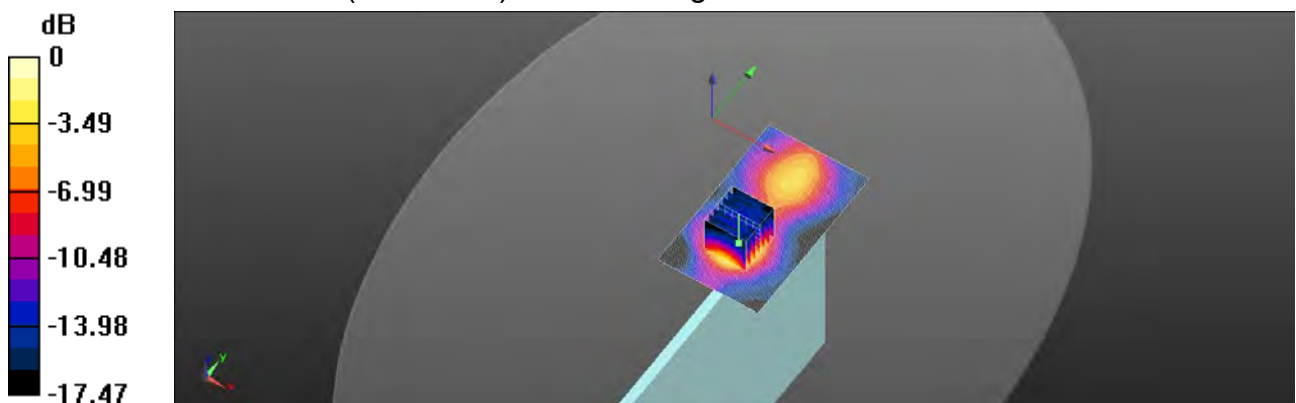
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.026 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.170 W/kg

**SAR(1 g) = 0.092 W/kg; SAR(10 g) = 0.044 W/kg**

Maximum value of SAR (measured) = 0.126 W/kg



0 dB = 0.126 W/kg = -8.99 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2019/10/31

**WLAN 802.11b\_Body\_Back side\_CH 6\_0mm\_Tx1**

Communication System: WLAN 2.45G; Frequency: 2437 MHz; Duty Cycle: 1:0.995  
Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.92$  S/m;  $\epsilon_r = 53.076$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Ambient temperature: 22.3°C; Liquid temperature: 21.6°C

## DASY5 Configuration:

- Probe: EX3DV4 - SN7509; ConvF(8.05, 8.05, 8.05); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x101x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 1.44 W/kg

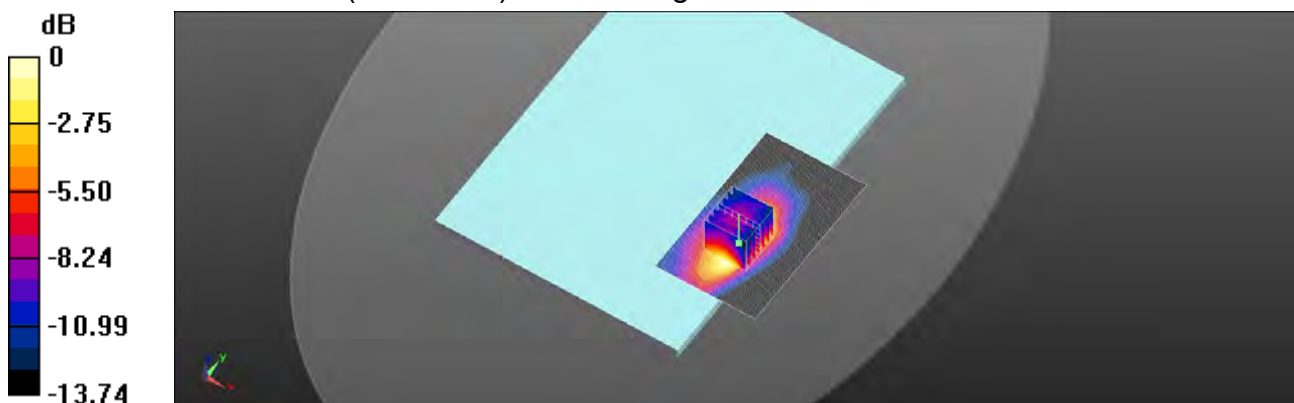
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.478 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.54 W/kg

**SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.569 W/kg**

Maximum value of SAR (measured) = 1.35 W/kg



0 dB = 1.35 W/kg = 1.30 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2020/1/17

**WLAN 802.11ac(160M) 5.2G\_Body\_Back side\_CH 50\_0mm\_Tx1**

Communication System: WLAN 5G; Frequency: 5250 MHz; Duty Cycle: 1:0.985

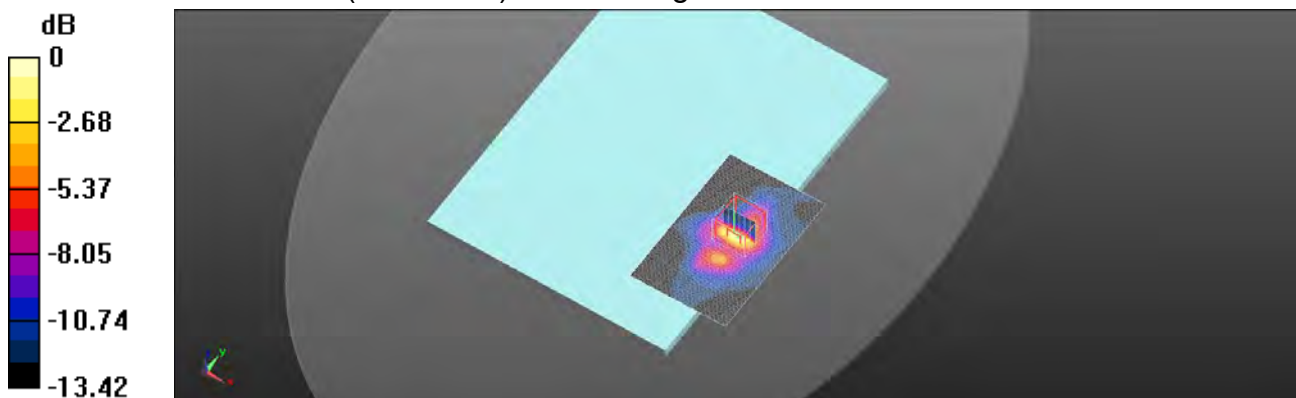
Medium parameters used:  $f = 5250 \text{ MHz}$ ;  $\sigma = 5.293 \text{ S/m}$ ;  $\epsilon_r = 49.363$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

Ambient temperature:  $22.3^\circ\text{C}$ ; Liquid temperature:  $21.8^\circ\text{C}$ 

## DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(4.82, 4.82, 4.82); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (71x111x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$ Maximum value of SAR (interpolated) =  $1.17 \text{ W/kg}$ **Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$ Reference Value =  $3.392 \text{ V/m}$ ; Power Drift =  $0.06 \text{ dB}$ Peak SAR (extrapolated) =  $3.57 \text{ W/kg}$ **SAR(1 g) =  $0.683 \text{ W/kg}$ ; SAR(10 g) =  $0.249 \text{ W/kg}$** Maximum value of SAR (measured) =  $1.44 \text{ W/kg}$  $0 \text{ dB} = 1.44 \text{ W/kg} = 1.58 \text{ dBW/kg}$ 

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group



Date: 2020/1/18

**WLAN 802.11ac(80M) 5.3G\_Body\_Back side\_CH 58\_0mm\_Tx1**

Communication System: WLAN 5G; Frequency: 5290 MHz; Duty Cycle: 1:0.99

Medium parameters used:  $f = 5290$  MHz;  $\sigma = 5.339$  S/m;  $\epsilon_r = 49.291$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.1°C; Liquid temperature: 21.4°C

## DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(4.82, 4.82, 4.82); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (71x121x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.05 W/kg

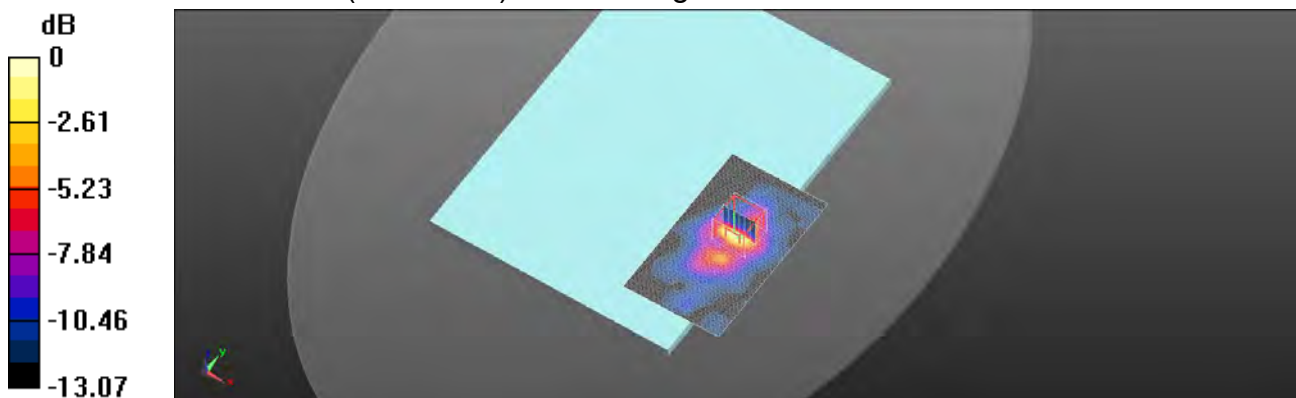
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.356 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 3.59 W/kg

**SAR(1 g) = 0.621 W/kg; SAR(10 g) = 0.228 W/kg**

Maximum value of SAR (measured) = 1.28 W/kg



0 dB = 1.28 W/kg = 1.06 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Date: 2020/1/19

**WLAN 802.11ac(160M) 5.6G\_Body\_Back side\_CH 114\_0mm\_Tx1**

Communication System: WLAN 5G; Frequency: 5570 MHz; Duty Cycle: 1:0.985

Medium parameters used:  $f = 5570 \text{ MHz}$ ;  $\sigma = 5.625 \text{ S/m}$ ;  $\epsilon_r = 49.264$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

Ambient temperature: 22.5°C; Liquid temperature: 21.8°C

## DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(4.21, 4.21, 4.21); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (71x121x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.46 W/kg

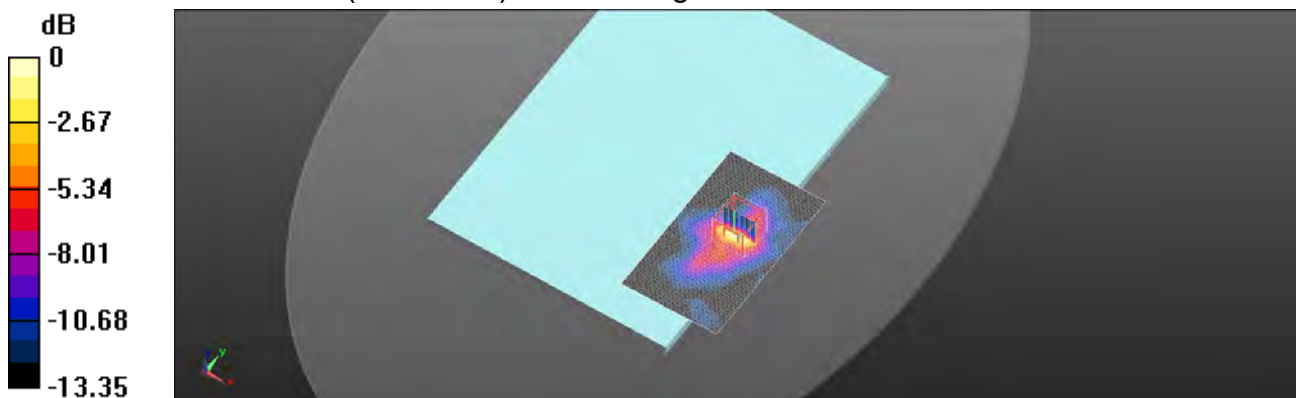
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.907 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 4.76 W/kg

**SAR(1 g) = 0.764 W/kg; SAR(10 g) = 0.278 W/kg**

Maximum value of SAR (measured) = 1.56 W/kg



0 dB = 1.56 W/kg = 1.93 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2020/1/20

**WLAN 802.11ac(80M) 5.8G\_Body\_Top side\_CH 155\_0mm\_Tx1**

Communication System: WLAN 5G; Frequency: 5775 MHz; Duty Cycle: 1:0.99

Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.854$  S/m;  $\epsilon_r = 48.932$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.1°C; Liquid temperature: 21.6°C

## DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(4.33, 4.33, 4.33); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (71x121x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.20 W/kg

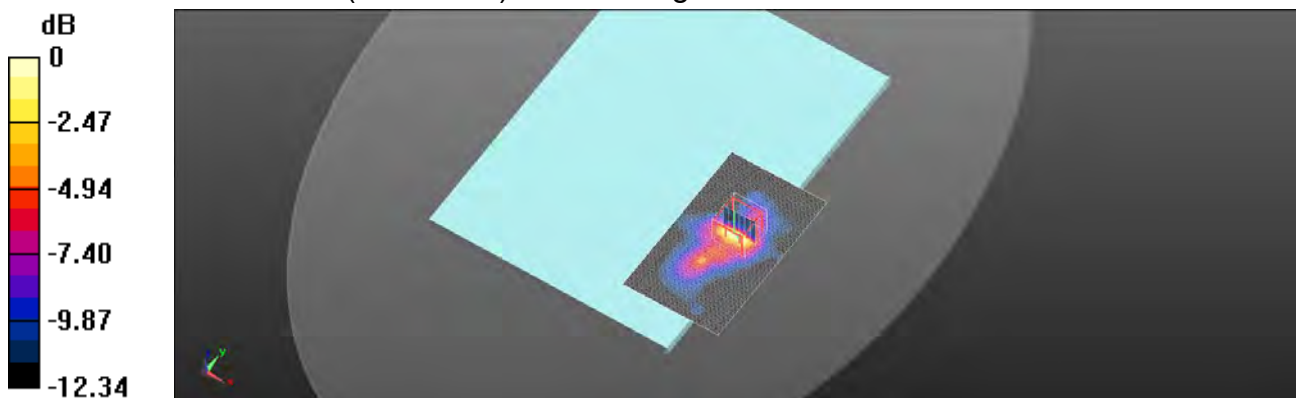
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.109 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 4.61 W/kg

**SAR(1 g) = 0.713 W/kg; SAR(10 g) = 0.264 W/kg**

Maximum value of SAR (measured) = 1.37 W/kg



0 dB = 1.37 W/kg = 1.36 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Date: 2020/1/16

**WLAN 802.11b\_Body\_Back side\_CH 1\_0mm\_Tx2**

Communication System: WLAN 2.45G; Frequency: 2412 MHz; Duty Cycle: 1:0.995

Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.892$  S/m;  $\epsilon_r = 53.109$ ;  $\rho = 1000$  g/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.1°C; Liquid temperature: 21.2°C

## DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(7.61, 7.61, 7.61); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x101x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 1.14 W/kg

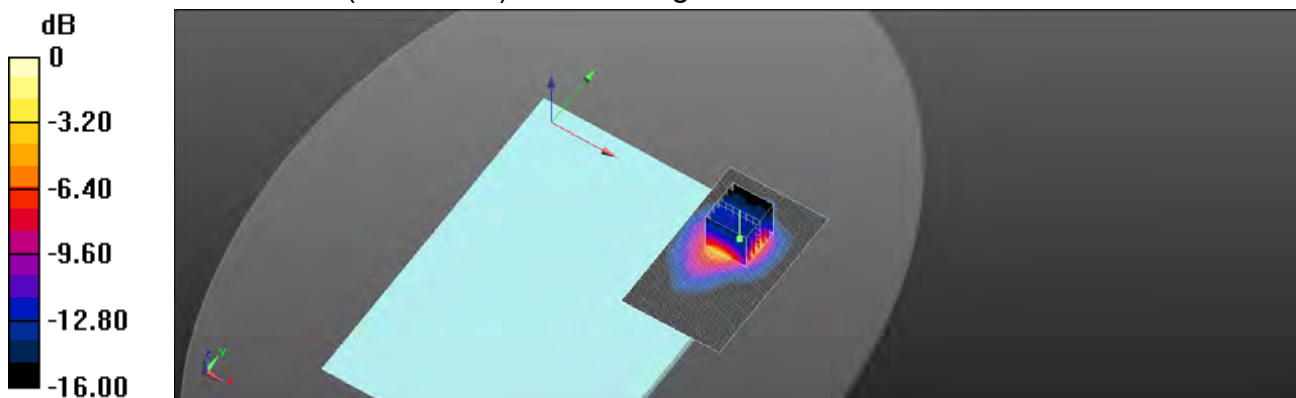
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.981 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.42 W/kg

**SAR(1 g) = 0.707 W/kg; SAR(10 g) = 0.315 W/kg**

Maximum value of SAR (measured) = 1.08 W/kg



0 dB = 1.08 W/kg = 0.33 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2020/1/17

**WLAN 802.11ac(160M) 5.2G\_Body\_Back side\_CH 50\_0mm\_Tx2**

Communication System: WLAN 5G; Frequency: 5250 MHz; Duty Cycle: 1:0.985

Medium parameters used:  $f = 5250$  MHz;  $\sigma = 5.293$  S/m;  $\epsilon_r = 49.363$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 21.8°C

## DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(4.82, 4.82, 4.82); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (71x121x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.07 W/kg

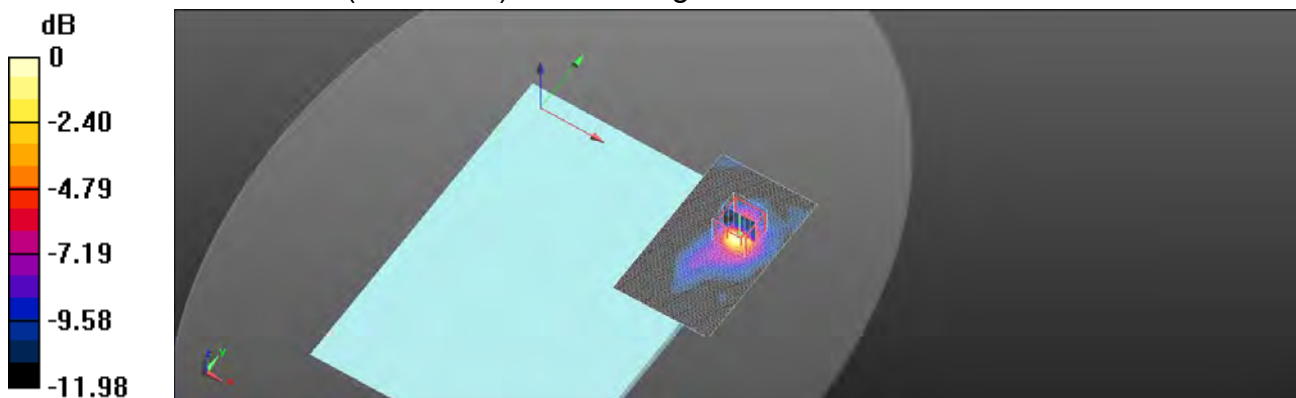
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.168 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 2.43 W/kg

**SAR(1 g) = 0.552 W/kg; SAR(10 g) = 0.211 W/kg**

Maximum value of SAR (measured) = 1.05 W/kg



0 dB = 1.05 W/kg = 0.23 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2020/1/18

**WLAN 802.11ac(80M) 5.3G\_Body\_Back side\_CH 58\_0mm\_Tx2**

Communication System: WLAN 5G; Frequency: 5290 MHz; Duty Cycle: 1:0.99

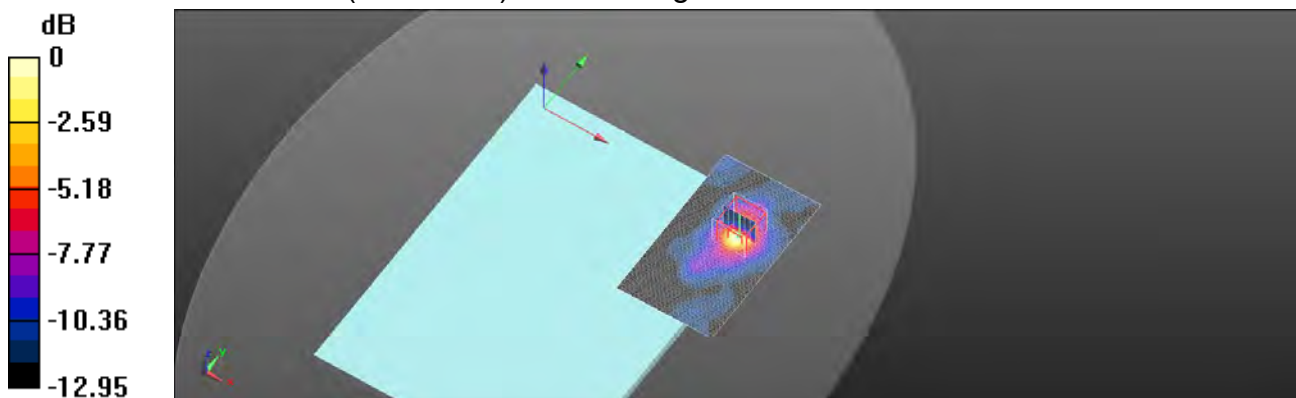
Medium parameters used:  $f = 5290 \text{ MHz}$ ;  $\sigma = 5.339 \text{ S/m}$ ;  $\epsilon_r = 49.291$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

Ambient temperature:  $22.1^\circ\text{C}$ ; Liquid temperature:  $21.4^\circ\text{C}$ 

## DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(4.82, 4.82, 4.82); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (71x121x1):** Interpolated grid:  $dx=10 \text{ mm}$ ,  $dy=10 \text{ mm}$ Maximum value of SAR (interpolated) =  $1.29 \text{ W/kg}$ **Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=2\text{mm}$ Reference Value =  $3.598 \text{ V/m}$ ; Power Drift =  $-0.03 \text{ dB}$ Peak SAR (extrapolated) =  $2.84 \text{ W/kg}$ **SAR(1 g) =  $0.639 \text{ W/kg}$ ; SAR(10 g) =  $0.232 \text{ W/kg}$** Maximum value of SAR (measured) =  $1.28 \text{ W/kg}$ 0 dB =  $1.28 \text{ W/kg}$  =  $1.08 \text{ dBW/kg}$ 

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group



Date: 2020/1/19

**WLAN 802.11ac(160M) 5.6G\_Body\_Back side\_CH 114\_0mm\_Tx2**

Communication System: WLAN 5G; Frequency: 5690 MHz; Duty Cycle: 1:0.99

Medium parameters used:  $f = 5690$  MHz;  $\sigma = 5.76$  S/m;  $\epsilon_r = 49.112$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.5°C; Liquid temperature: 21.8°C

## DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(4.21, 4.21, 4.21); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (71x121x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 0.837 W/kg

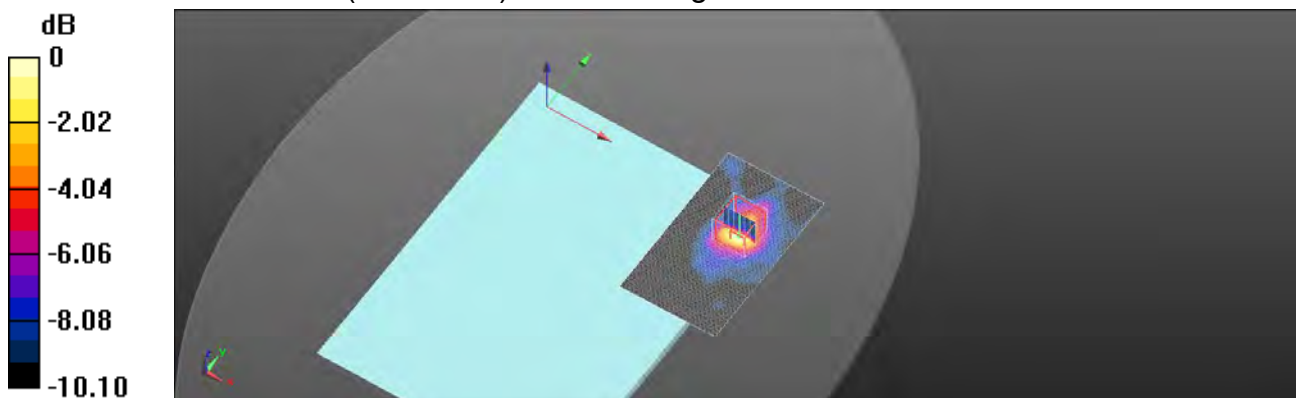
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.719 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 2.30 W/kg

**SAR(1 g) = 0.468 W/kg; SAR(10 g) = 0.212 W/kg**

Maximum value of SAR (measured) = 0.874 W/kg



0 dB = 0.874 W/kg = -0.59 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Date: 2020/1/20

**WLAN 802.11ac(80M) 5.8G\_Body\_Back side\_CH 155\_0mm\_Tx2**

Communication System: WLAN 5G; Frequency: 5775 MHz; Duty Cycle: 1:0.99

Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.854$  S/m;  $\epsilon_r = 48.932$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.1°C; Liquid temperature: 21.6°C

## DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(4.33, 4.33, 4.33); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (71x121x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 0.738 W/kg

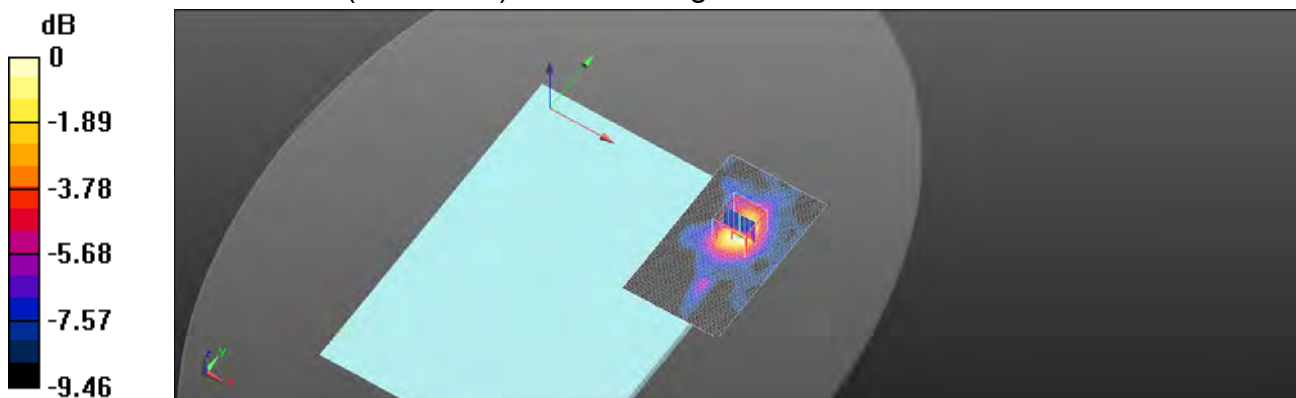
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.915 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 2.06 W/kg

**SAR(1 g) = 0.400 W/kg; SAR(10 g) = 0.207 W/kg**

Maximum value of SAR (measured) = 0.746 W/kg



0 dB = 0.746 W/kg = -1.27 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group



## 6. SAR System Performance Verification

Date: 2019/10/31

### Dipole 2450 MHz\_SN:869

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.933$  S/m;  $\epsilon_r = 53.058$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 21.6°C

### DASY5 Configuration:

- Probe: EX3DV4 - SN7509; ConvF(8.05, 8.05, 8.05); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x131x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 20.3 W/kg

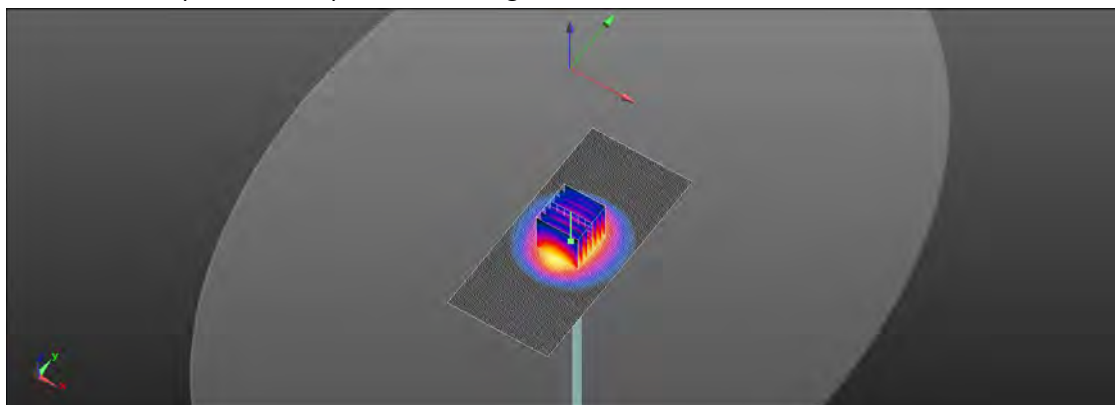
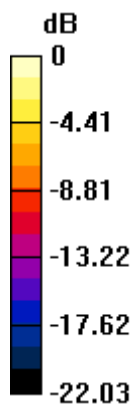
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 98.68 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 26.1 W/kg

**SAR(1 g) = 13.1 W/kg; SAR(10 g) = 6.18 W/kg**

Maximum value of SAR (measured) = 19.4 W/kg



0 dB = 19.4 W/kg = 12.88 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Date: 2020/1/16

**Dipole 2450 MHz\_SN:869**

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.928$  S/m;  $\epsilon_r = 53.056$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.1°C; Liquid temperature: 21.2°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3578; ConvF(7.61, 7.61, 7.61); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x91x1):** Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 20.6 W/kg

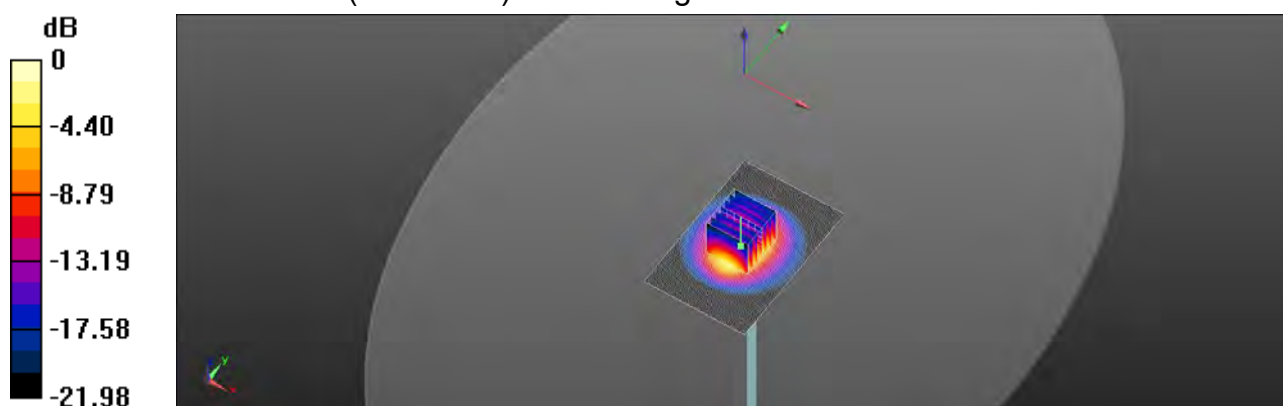
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 98.22 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 26.0 W/kg

**SAR(1 g) = 12.9 W/kg; SAR(10 g) = 6.21 W/kg**

Maximum value of SAR (measured) = 19.5 W/kg



0 dB = 19.5 W/kg = 12.90 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2019/11/2

**Dipole 5200 MHz\_SN:1040**

Communication System: CW; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5200$  MHz;  $\sigma = 5.243$  S/m;  $\epsilon_r = 49.462$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.2°C; Liquid temperature: 21.8°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN7509; ConvF(4.81, 4.81, 4.81); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x81x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 14.5 W/kg

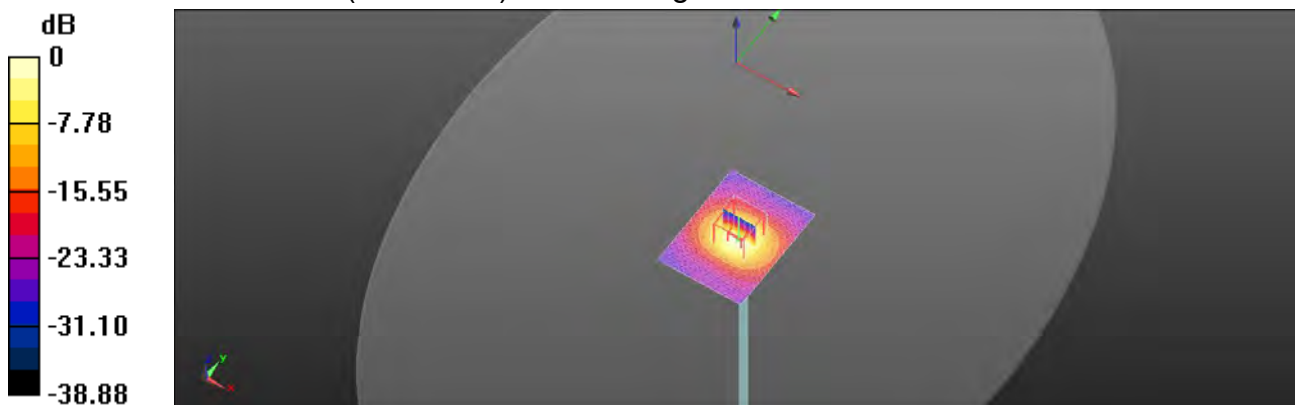
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 56.88 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 28.6 W/kg

**SAR(1 g) = 7.42 W/kg; SAR(10 g) = 2.10 W/kg**

Maximum value of SAR (measured) = 14.9 W/kg



0 dB = 14.9 W/kg = 11.73 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Date: 2019/11/3

**Dipole 5200 MHz\_SN:1040**

Communication System: CW; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5200$  MHz;  $\sigma = 5.241$  S/m;  $\epsilon_r = 49.461$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.0°C; Liquid temperature: 21.9°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN7509; ConvF(4.81, 4.81, 4.81); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x81x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 14.3 W/kg

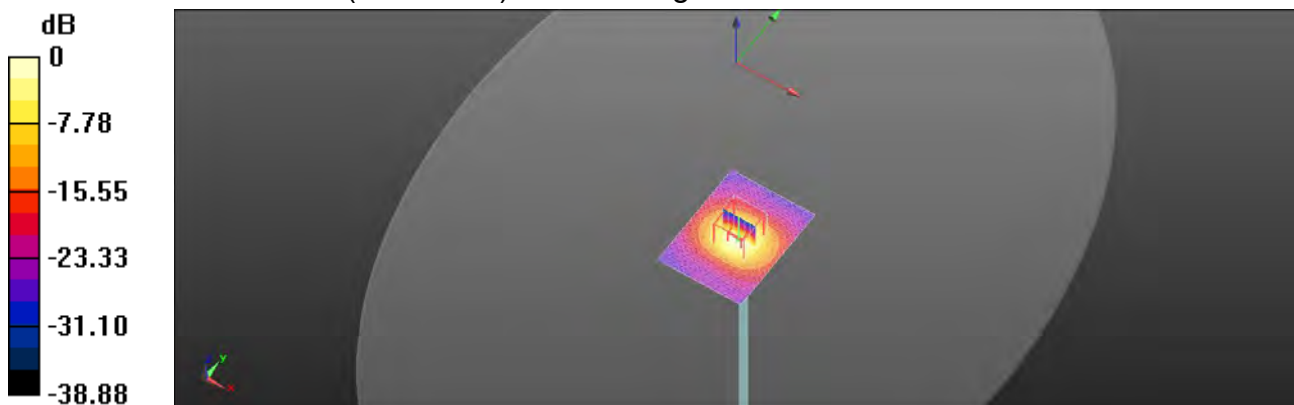
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 56.22 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 28.1 W/kg

**SAR(1 g) = 7.33 W/kg; SAR(10 g) = 2.05 W/kg**

Maximum value of SAR (measured) = 14.2 W/kg



0 dB = 14.2 W/kg = 11.34 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2020/1/17

**Dipole 5200 MHz\_SN:1040**

Communication System: CW; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5200$  MHz;  $\sigma = 5.236$  S/m;  $\epsilon_r = 49.46$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 21.8°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3578; ConvF(4.82, 4.82, 4.82); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x91x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 14.5 W/kg

**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 53.45 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 29.0 W/kg

**SAR(1 g) = 7.32 W/kg; SAR(10 g) = 2.06 W/kg**

Maximum value of SAR (measured) = 14.8 W/kg



0 dB = 14.8 W/kg = 11.69 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2019/11/4

**Dipole 5300 MHz\_SN:1040**

Communication System: CW; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5300$  MHz;  $\sigma = 5.351$  S/m;  $\epsilon_r = 49.279$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 21.7°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN7509; ConvF(4.66, 4.66, 4.66); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x81x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 14.8 W/kg

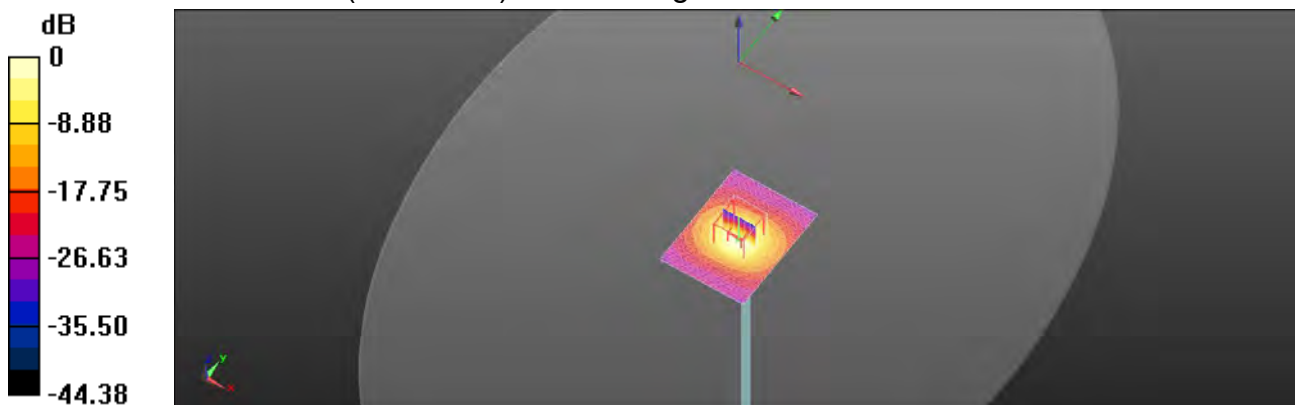
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 58.21 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 29.6 W/kg

**SAR(1 g) = 7.35 W/kg; SAR(10 g) = 2.05 W/kg**

Maximum value of SAR (measured) = 15.2 W/kg



0 dB = 15.2 W/kg = 11.82 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Date: 2019/11/5

**Dipole 5300 MHz\_SN:1040**

Communication System: CW; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5300$  MHz;  $\sigma = 5.349$  S/m;  $\epsilon_r = 49.274$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.1°C; Liquid temperature: 21.6°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN7509; ConvF(4.66, 4.66, 4.66); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x81x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 15.0 W/kg

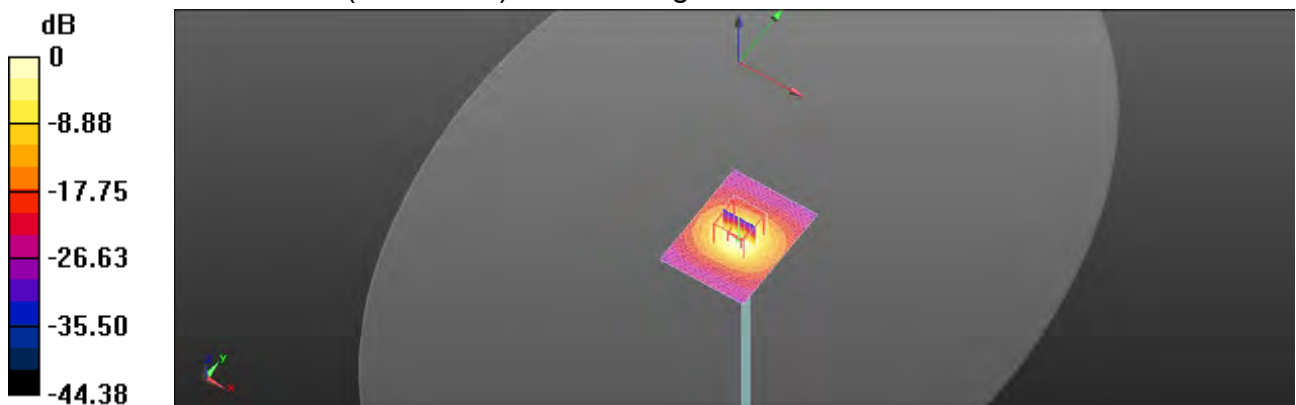
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 60.22 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 28.8 W/kg

**SAR(1 g) = 7.38 W/kg; SAR(10 g) = 2.08 W/kg**

Maximum value of SAR (measured) = 15.6 W/kg



0 dB = 15.6 W/kg = 12.02 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group



Date: 2020/1/18

**Dipole 5300 MHz\_SN:1040**

Communication System: CW; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5300$  MHz;  $\sigma = 5.347$  S/m;  $\epsilon_r = 49.287$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.1°C; Liquid temperature: 21.4°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3578; ConvF(4.82, 4.82, 4.82); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x81x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 19.8 W/kg

**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 63.68 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 40.9 W/kg

**SAR(1 g) = 7.39 W/kg; SAR(10 g) = 2.09 W/kg**

Maximum value of SAR (measured) = 20.0 W/kg



0 dB = 20.0 W/kg = 13.01 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2019/11/6

**Dipole 5600 MHz\_SN:1040**

Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.664$  S/m;  $\epsilon_r = 49.266$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.4°C; Liquid temperature: 21.9°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN7509; ConvF(4.19, 4.19, 4.19); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x91x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 16.0 W/kg

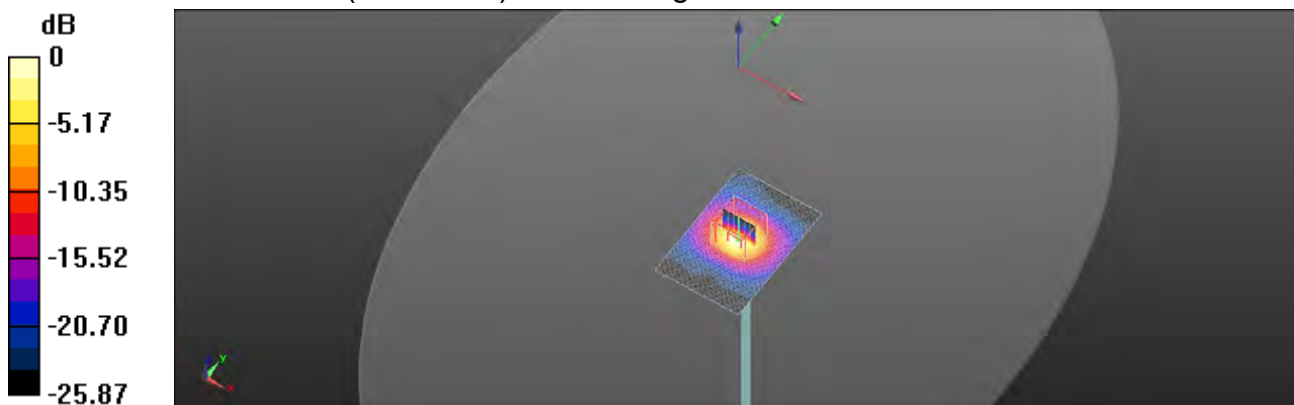
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 56.07 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 31.8 W/kg

**SAR(1 g) = 7.89 W/kg; SAR(10 g) = 2.21 W/kg**

Maximum value of SAR (measured) = 16.0 W/kg



0 dB = 16.0 W/kg = 12.04 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2020/1/19

**Dipole 5600 MHz\_SN:1040**

Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.656$  S/m;  $\epsilon_r = 49.258$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.5°C; Liquid temperature: 21.8°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3578; ConvF(4.21, 4.21, 4.21); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x91x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 15.1 W/kg

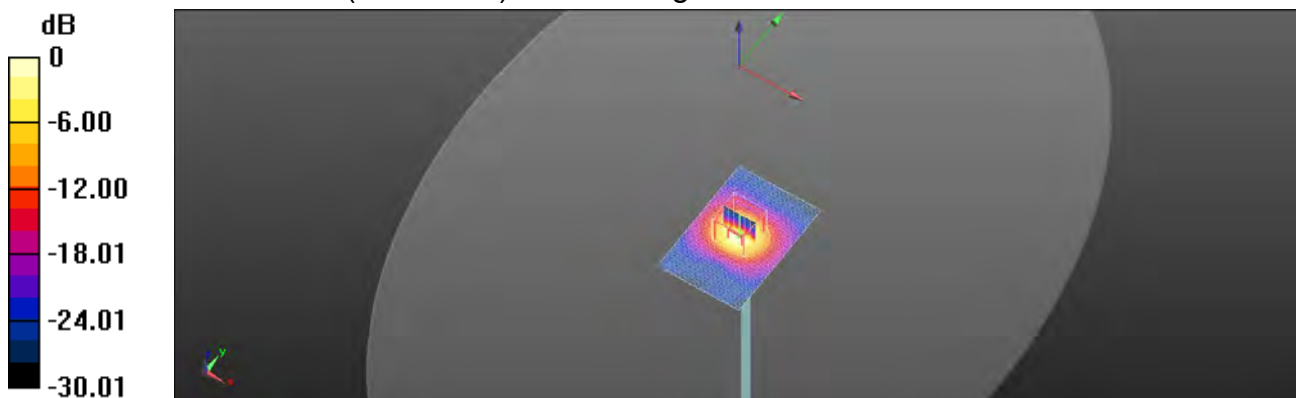
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 51.88 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 32.0 W/kg

**SAR(1 g) = 7.98 W/kg; SAR(10 g) = 2.25 W/kg**

Maximum value of SAR (measured) = 15.3 W/kg



0 dB = 15.3 W/kg = 11.85 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2019/11/8

**Dipole 5800 MHz\_SN:1040**

Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5800$  MHz;  $\sigma = 5.887$  S/m;  $\epsilon_r = 48.884$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 21.7°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN7509; ConvF(4.2, 4.2, 4.2); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x81x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 15.8 W/kg

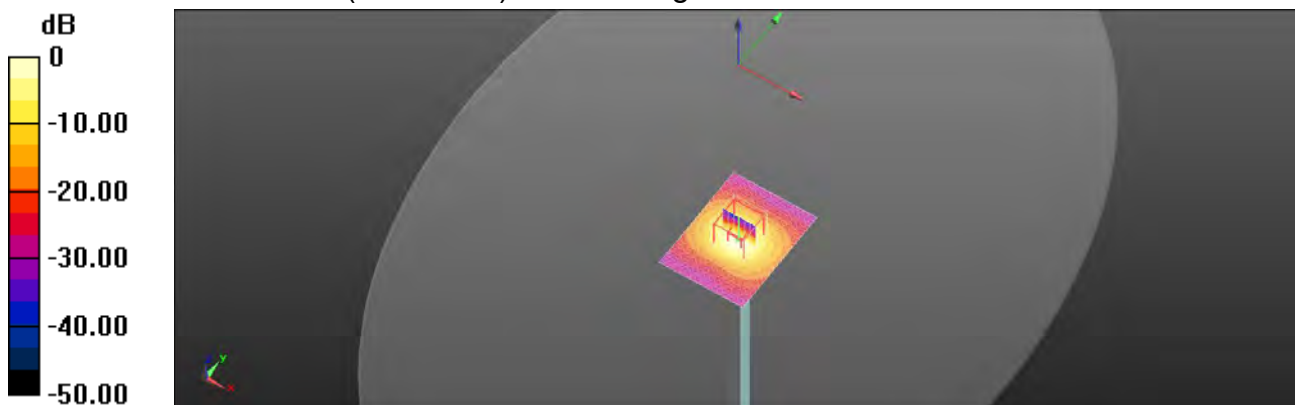
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 56.64 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 33.3 W/kg

**SAR(1 g) = 7.37 W/kg; SAR(10 g) = 2.05 W/kg**

Maximum value of SAR (measured) = 15.8 W/kg



0 dB = 15.8 W/kg = 11.98 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2019/11/9

**Dipole 5800 MHz\_SN:1040**

Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5800$  MHz;  $\sigma = 5.884$  S/m;  $\epsilon_r = 48.884$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.0°C; Liquid temperature: 21.8°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN7509; ConvF(4.2, 4.2, 4.2); Calibrated: 2019/3/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x81x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 15.4 W/kg

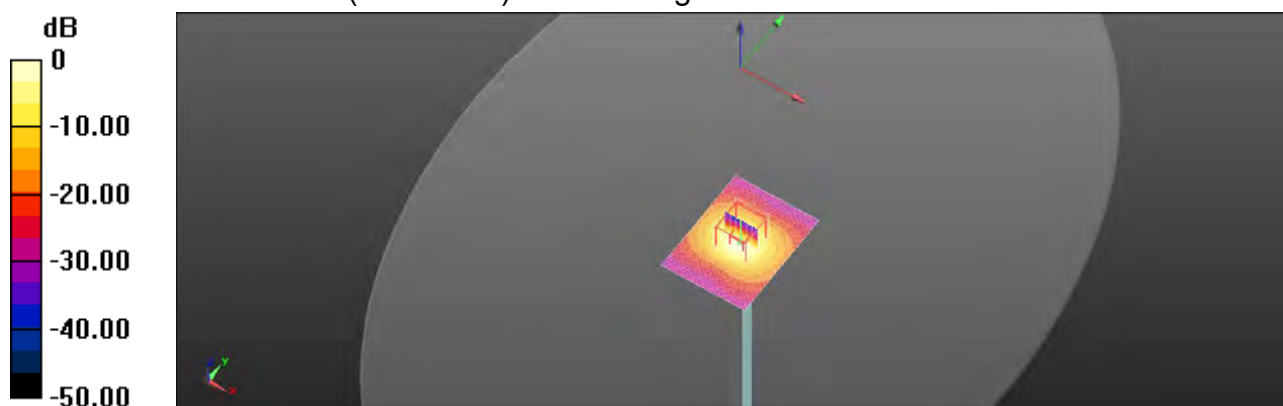
**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 56.32 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 33.3 W/kg

**SAR(1 g) = 7.42 W/kg; SAR(10 g) = 2.07 W/kg**

Maximum value of SAR (measured) = 16.1 W/kg



0 dB = 16.1 W/kg = 12.15 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of SGS Group

Date: 2020/1/20

**Dipole 5800 MHz\_SN:1040**

Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5800$  MHz;  $\sigma = 5.881$  S/m;  $\epsilon_r = 48.871$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient temperature: 22.1°C; Liquid temperature: 21.6°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3578; ConvF(4.33, 4.33, 4.33); Calibrated: 2019/6/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn877; Calibrated: 2019/3/22
- Phantom: ELI
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

**Area Scan (61x81x1):** Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 20.5 W/kg

**Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 62.35 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 45.9 W/kg

**SAR(1 g) = 7.43 W/kg; SAR(10 g) = 2.09 W/kg**

Maximum value of SAR (measured) = 20.4 W/kg



0 dB = 20.4 W/kg = 13.10 dBW/kg

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



## 7. Uncertainty Budget

Measurement Uncertainty evaluation template for DUT SAR test (3-6G)

A	c	D	e		f	g	h=c * f / e	i=c * g / e	k
Source of Uncertainty	Tolerance/ Uncertainty	Probability Distributio	Div	Div Value	ci (1g)	ci (10g)	Standard uncertainty	Standard uncertainty	vi, or Veff
<b>Measurement system</b>									
Probe calibration	6.55%	N	1	1	1	1	6.55%	6.55%	∞
<i>Isotropy , Axial</i>	3.50%	R	$\sqrt{3}$	1.732	1	1	2.02%	2.02%	∞
<i>Isotropy, Hemispherical</i>	9.60%	R	$\sqrt{3}$	1.732	1	1	5.54%	5.54%	∞
Modulation Response	2.40%	R	$\sqrt{3}$	1.732	1	1	1.40%	1.40%	∞
Boundary Effect	1.00%	R	$\sqrt{3}$	1.732	1	1	0.58%	0.58%	∞
Linearity	4.70%	R	$\sqrt{3}$	1.732	1	1	2.71%	2.71%	∞
Detection Limits	1.00%	R	$\sqrt{3}$	1.732	1	1	0.58%	0.58%	∞
Readout Electronics	0.30%	N	1	1	1	1	0.30%	0.30%	∞
Response time	0.80%	R	$\sqrt{3}$	1.732	1	1	0.46%	0.46%	∞
Integration Time	2.60%	R	$\sqrt{3}$	1.732	1	1	1.50%	1.50%	∞
<b>Measurement drift (class A evaluation)</b>	1.75%	R	$\sqrt{3}$	1.732	1	1	1.01%	1.01%	∞
RF ambient condition - noise	3.00%	R	$\sqrt{3}$	1.732	1	1	1.73%	1.73%	∞
RF ambient conditions - reflections	3.00%	R	$\sqrt{3}$	1.732	1	1	1.73%	1.73%	∞
Probe positioner Mechanical restrictions	0.40%	R	$\sqrt{3}$	1.732	1	1	0.23%	0.23%	∞
Probe Positioning with respect to phantom shell	2.90%	R	$\sqrt{3}$	1.732	1	1	1.67%	1.67%	∞
Post-processing	1.00%	R	$\sqrt{3}$	1.732	1	1	0.58%	0.58%	∞
Max SAR Eval	1.00%	R	$\sqrt{3}$	1.732	1	1	0.58%	0.58%	∞
<b>Test Sample related</b>									
Test sample positioning	2.90%	N	1	1	1	1	2.90%	2.90%	M-1
Device Holder Uncertainty	3.60%	N	1	1	1	1	3.60%	3.60%	M-1
Drift of output power	5.00%	R	$\sqrt{3}$	1.732	1	1	2.89%	2.89%	∞
<b>Phantom and Setup</b>									
Phantom Uncertainty	4.00%	R	$\sqrt{3}$	1.732	1	1	2.31%	2.31%	∞
Liquid permittivity (mea.)	1.64%	N	1	1	0.64	0.43	1.05%	0.71%	M
Liquid Conductivity (mea.)	1.94%	N	1	1	0.6	0.49	1.16%	0.95%	M
Combined standard uncertainty		RSS					11.82%	11.77%	
Expan uncertainty (95% confidence interval), K=2							23.64%	23.53%	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group



Measurement Uncertainty evaluation template for DUT SAR test (0.3-3G)

A	c	D	e		f	g	h=c * f / e	i=c * g / e	k
Source of Uncertainty	Tolerance/ Uncertainty	Probability Distributio	Div	Div Value	ci (1g)	ci (10g)	Standard uncertainty	Standard uncertainty	vi, or Veff
<b>Measurement system</b>									
Probe calibration	6.00%	N	1	1	1	1	6.00%	6.00%	∞
<b>Isotropy , Axial</b>	3.50%	R	$\sqrt{3}$	1.732	1	1	2.02%	2.02%	∞
<b>Isotropy, Hemispherical</b>	9.60%	R	$\sqrt{3}$	1.732	1	1	5.54%	5.54%	∞
Modulation Response	2.40%	R	$\sqrt{3}$	1.732	1	1	1.40%	1.40%	∞
Boundary Effect	1.00%	R	$\sqrt{3}$	1.732	1	1	0.58%	0.58%	∞
Linearity	4.70%	R	$\sqrt{3}$	1.732	1	1	2.71%	2.71%	∞
Detection Limits	1.00%	R	$\sqrt{3}$	1.732	1	1	0.58%	0.58%	∞
Readout Electronics	0.30%	N	1	1	1	1	0.30%	0.30%	∞
Response time	0.80%	R	$\sqrt{3}$	1.732	1	1	0.46%	0.46%	∞
Integration Time	2.60%	R	$\sqrt{3}$	1.732	1	1	1.50%	1.50%	∞
<b>Measurement drift (class A evaluation)</b>	1.75%	R	$\sqrt{3}$	1.732	1	1	1.01%	1.01%	∞
RF ambient condition - noise	3.00%	R	$\sqrt{3}$	1.732	1	1	1.73%	1.73%	∞
RF ambient conditions - reflections	3.00%	R	$\sqrt{3}$	1.732	1	1	1.73%	1.73%	∞
Probe positioner Mechanical restrictions	0.40%	R	$\sqrt{3}$	1.732	1	1	0.23%	0.23%	∞
Probe Positioning with respect to phantom shell	2.90%	R	$\sqrt{3}$	1.732	1	1	1.67%	1.67%	∞
Post-processing	1.00%	R	$\sqrt{3}$	1.732	1	1	0.58%	0.58%	∞
Max SAR Eval	1.00%	R	$\sqrt{3}$	1.732	1	1	0.58%	0.58%	∞
<b>Test Sample related</b>									
Test sample positioning	2.90%	N	1	1	1	1	2.90%	2.90%	M-1
Device Holder Uncertainty	3.60%	N	1	1	1	1	3.60%	3.60%	M-1
Drift of output power	5.00%	R	$\sqrt{3}$	1.732	1	1	2.89%	2.89%	∞
<b>Phantom and Setup</b>									
Phantom Uncertainty	4.00%	R	$\sqrt{3}$	1.732	1	1	2.31%	2.31%	∞
Liquid permittivity (mea.)	0.73%	N	1	1	0.64	0.43	0.47%	0.31%	M
Liquid Conductivity (mea.)	1.58%	N	1	1	0.6	0.49	0.95%	0.77%	M
Combined standard uncertainty		RSS					11.47%	11.44%	
Expant uncertainty (95% confidence interval), K=2							22.93%	22.88%	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan / 新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

## Appendixes

**Refer to separated files for the following appendixes.**

**E5201990016 SAR\_Appendix A Photographs**

**E5201990016 SAR\_Appendix B DAE & Probe Cal. Certificate**

**E5201990016 SAR\_Appendix C Phantom Description & Dipole Cal. Certificate**

**- End of report -**

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.