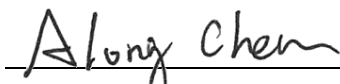


FCC Test Report

FCC ID : I8811ACAP22W
Equipment : 802.11ac Wave 2 Wall-Plate Unified Access Point
Model No. : WAC500H
Brand Name : ZYXEL
Applicant : Zyxel Communications Corporation
Address : No.2 Industry East RD. IX, Hsinchu Science Park,
Hsinchu 30075, Taiwan, R.O.C
Standard : 47 CFR FCC Part 15.407
Received Date : Jun. 24, 2020
Tested Date : Jul. 21 ~Aug. 31, 2020

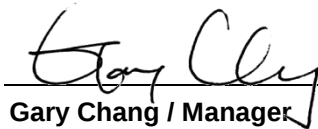
We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:



Along Chen / Assistant Manager

Approved by:



Gary Chang / Manager



Table of Contents

1	GENERAL DESCRIPTION	5
1.1	Information.....	5
1.2	Local Support Equipment List	10
1.3	Test Setup Chart	11
1.4	The Equipment List	13
1.5	Test Standards	15
1.6	Reference Guidance	15
1.7	Deviation from Test Standard and Measurement Procedure.....	15
1.8	Measurement Uncertainty	15
2	TEST CONFIGURATION	16
2.1	Testing Facility.....	16
2.2	The Worst Test Modes and Channel Details	17
3	TRANSMITTER TEST RESULTS.....	19
3.1	Conducted Emissions.....	19
3.2	Emission Bandwidth	36
3.3	RF Output Power	50
3.4	Peak Power Spectral Density	54
3.5	Transmitter Radiated and Band Edge Emissions	70
3.6	Frequency Stability.....	149
4	TEST LABORATORY INFORMATION	151

Release Record

Report No.	Version	Description	Issued Date
FR062401AN	Rev. 01	Initial issue	Oct. 07, 2020

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 16.839MHz 43.91 (Margin -6.09dB) - AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 51500.00MHz 53.88 (Margin -0.12dB) - AV	Pass
15.407(a)	Emission Bandwidth	Meet the requirement of limit	Pass
15.407(e)	6dB bandwidth	Meet the requirement of limit	Pass
15.407(a)	RF Output Power	Max Power [dBm]: Non-beamforming mode 5150~5250MHz: 26.43 5725~5850MHz: 27.14 Beamforming mode 5150~5250MHz: 26.14 5725~5850MHz: 26.23	Pass
15.407(a)	Peak Power Spectral Density	Meet the requirement of limit	Pass
15.407(g)	Frequency Stability	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N _{TX})	Data Rate / MCS
5150-5250 5725-5850	a	5180-5240 5745-5825	36-48 [4] 149-165 [5]	2	6-54 Mbps
5150-5250 5725-5850	n (HT20)	5180-5240 5745-5825	36-48 [4] 149-165 [5]	2	MCS 0-15
5150-5250 5725-5850	n (HT40)	5190-5230 5755-5795	38-46 [2] 151-159 [2]	2	MCS 0-15
5150-5250 5725-5850	ac (VHT20)	5180-5240 5745-5825	36-48 [4] 149-165 [5]	2	MCS 0-9
5150-5250 5725-5850	ac (VHT40)	5190-5230 5755-5795	38-46 [2] 151-159 [2]	2	MCS 0-9
5150-5250 5725-5850	ac (VHT80)	5210 5775	42 [1] 155 [1]	2	MCS 0-9

Note 1: RF output power specifies that Maximum Conducted Output Power.
 Note 2: 802.11a/n/ac uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
 Note 3: 802.11ac supports beamforming function.

1.1.2 Antenna Details

Ant. No.	Brand	Model	Type	Connector	Operating Frequencies (MHz) / Antenna Gain (dBi)		
					2400~2483.5	5150~5250	5725~5850
1	Lynwave	ALX20M-222AA5	PIFA	N/A	0	2.5	2.5
2	Lynwave	ALX20M-222AA4	PIFA	N/A	0	2.5	2.5

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	12Vdc from adapter 30~57Vdc from POE
--------------------------	---

Note: The above power supply is not bundled in market.

1.1.4 Accessories

N/A

1.1.5 Channel List

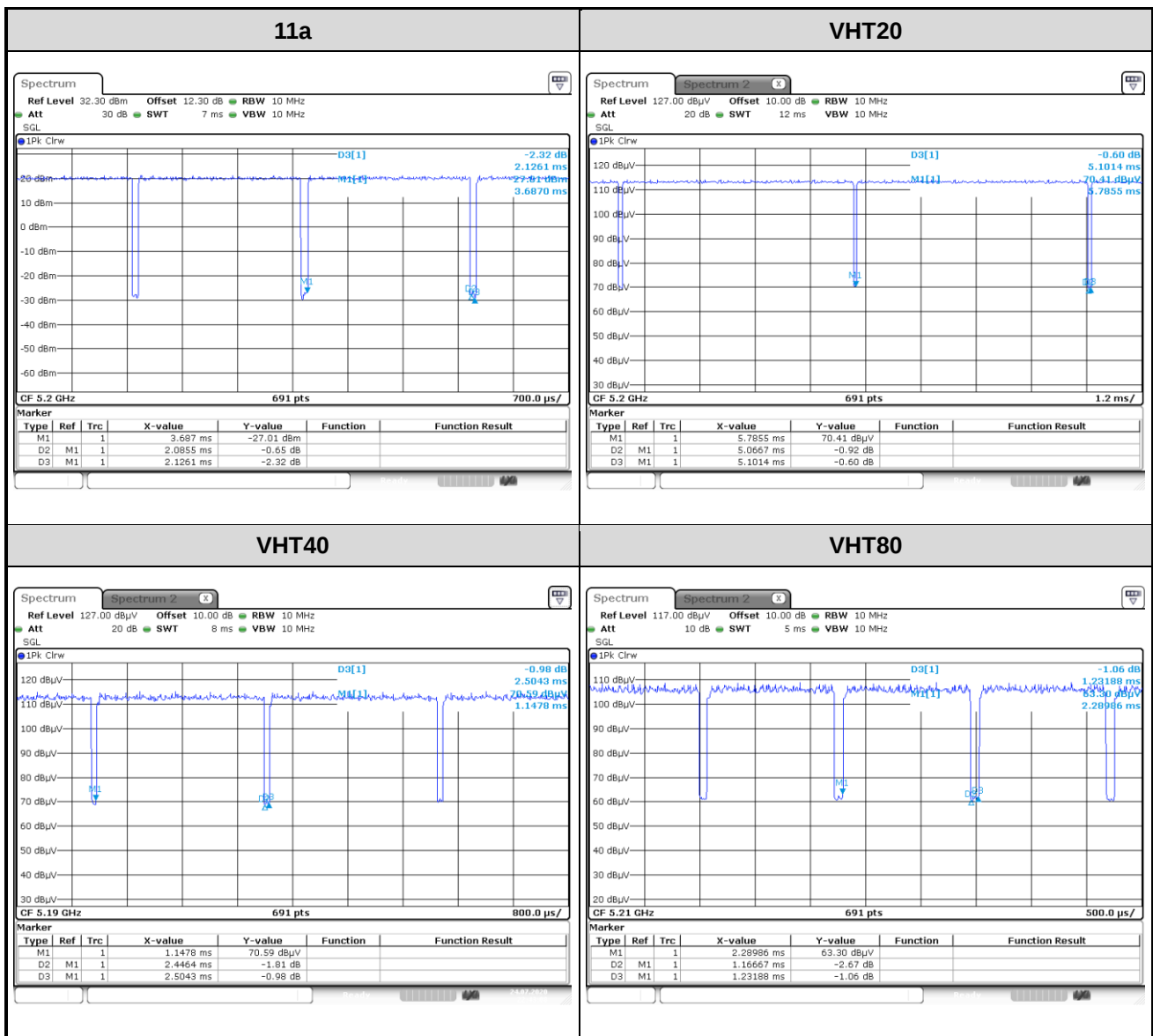
For Frequency band 5150-5250 MHz			
802.11 a / HT20 / VHT20		HT40 / VHT40	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
36	5180	38	5190
40	5200	46	5230
44	5220	VHT80	
48	5240	42	5210

For Frequency band 5725~5850 MHz			
802.11 a / HT20 / VHT20		HT40 / VHT40	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
149	5745	151	5755
153	5765	159	5795
157	5785	VHT80	
161	5805	155	5775
165	5825	---	---

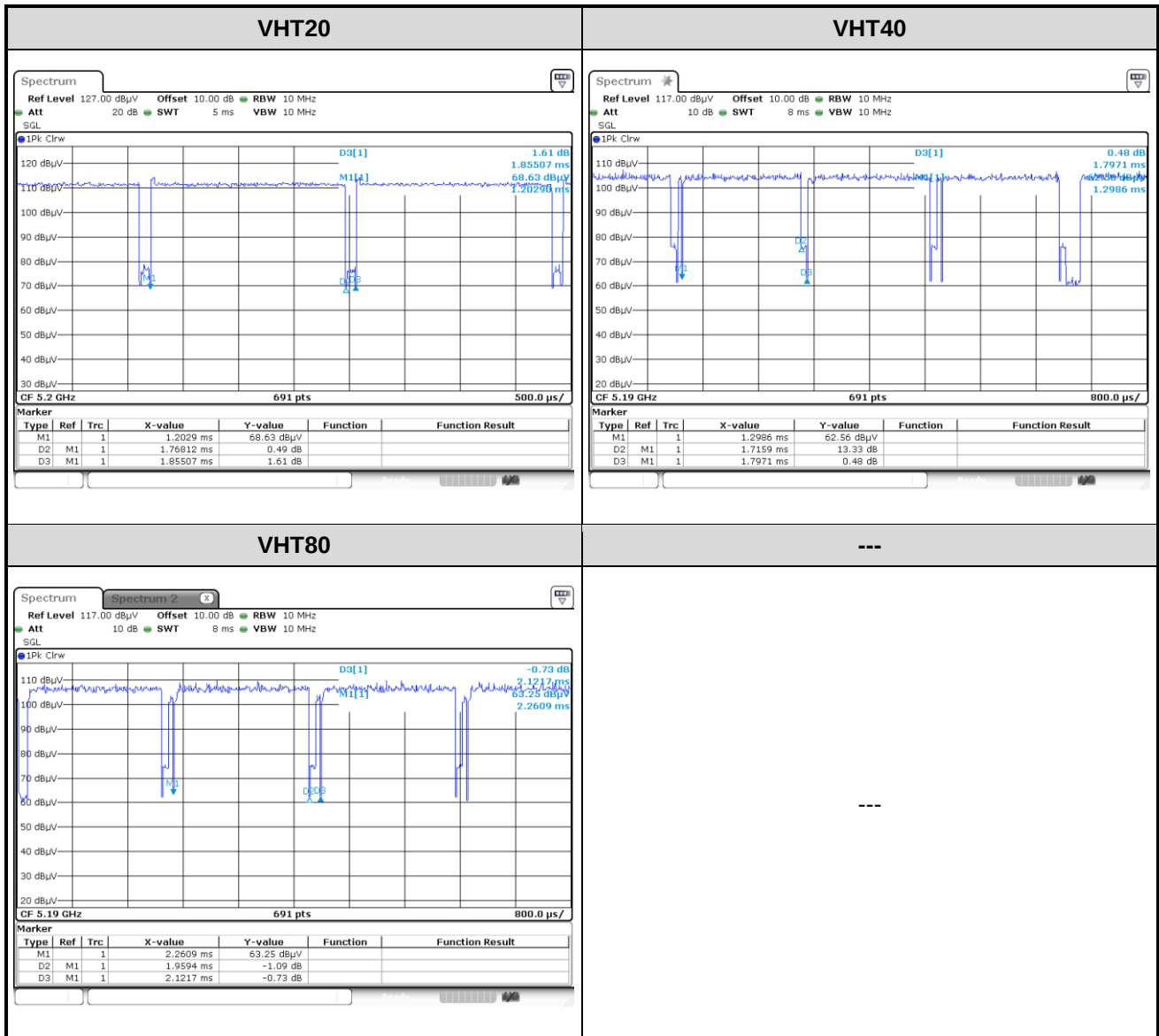
1.1.6 Test Tool and Duty Cycle

Test Tool	Non-beamforming: qdart_conn.win.1.0_installer, Version: 0073 Beamforming: Putty, Version: 0.6				
	Mode	Non-beamforming		Beamforming	
Duty Cycle and Duty Factor		Duty cycle (%)	Duty factor (dB)	Duty cycle (%)	Duty factor (dB)
	11a	98.09%	0.08	---	---
	VHT20	99.32%	0.03	95.31%	0.21
	VHT40	97.69%	0.10	95.48%	0.20
	VHT80	94.71%	0.24	92.35%	0.35

Non-beamforming mode



Beamforming mode



1.1.7 Power Index of Test Tool

Modulation Mode	Test Frequency (MHz)	Power Index	
		Non-Beamforming	Beamforming
11a	5180	20	---
11a	5200	23.5	---
11a	5240	23	---
11a	5745	24	---
11a	5785	24	---
11a	5825	24	---
VHT20	5180	19.5	22
VHT20	5200	23.5	26
VHT20	5240	23	25.5
VHT20	5745	24	26.5
VHT20	5785	24	26.5
VHT20	5825	24	26.5
VHT40	5190	17	19
VHT40	5230	22	24
VHT40	5755	23.5	26.5
VHT40	5795	24	27
VHT80	5210	14.5	17.5
VHT80	5775	20.5	22.5

1.2 Local Support Equipment List

Non-beamforming mode

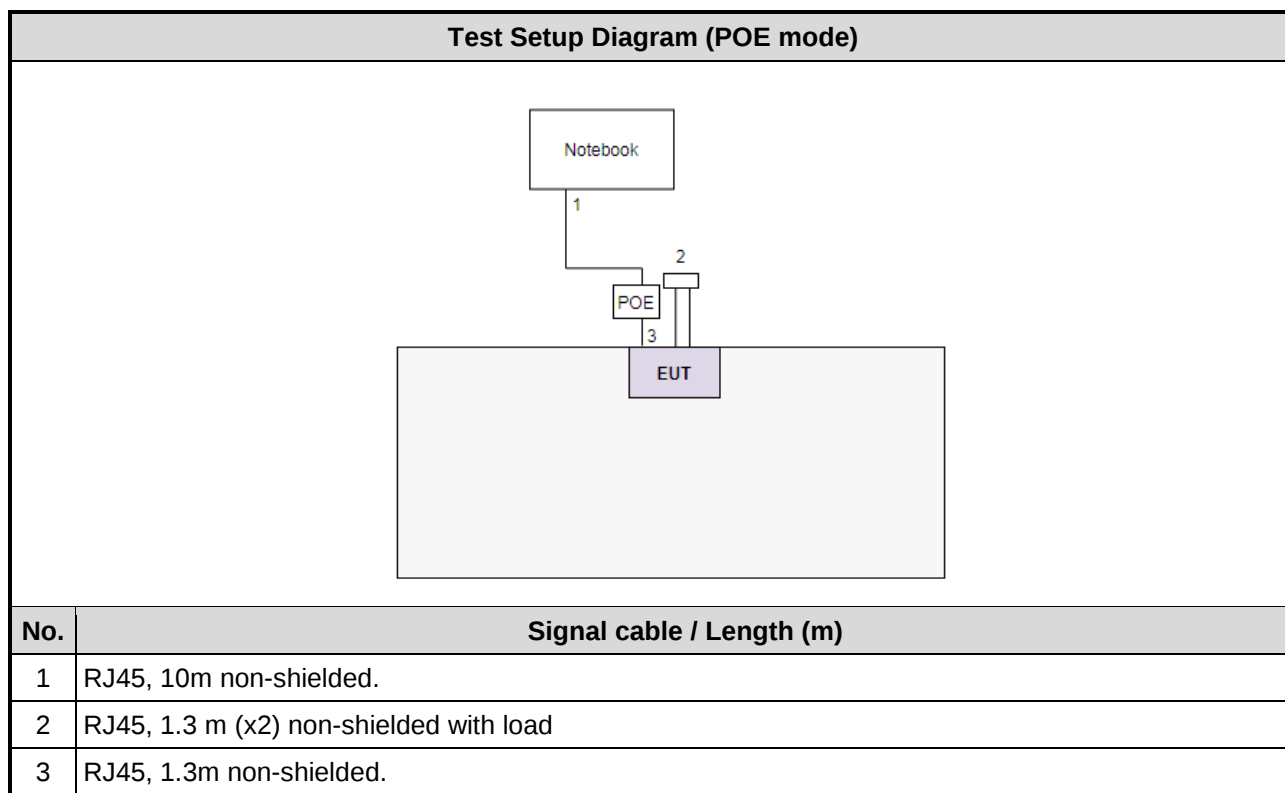
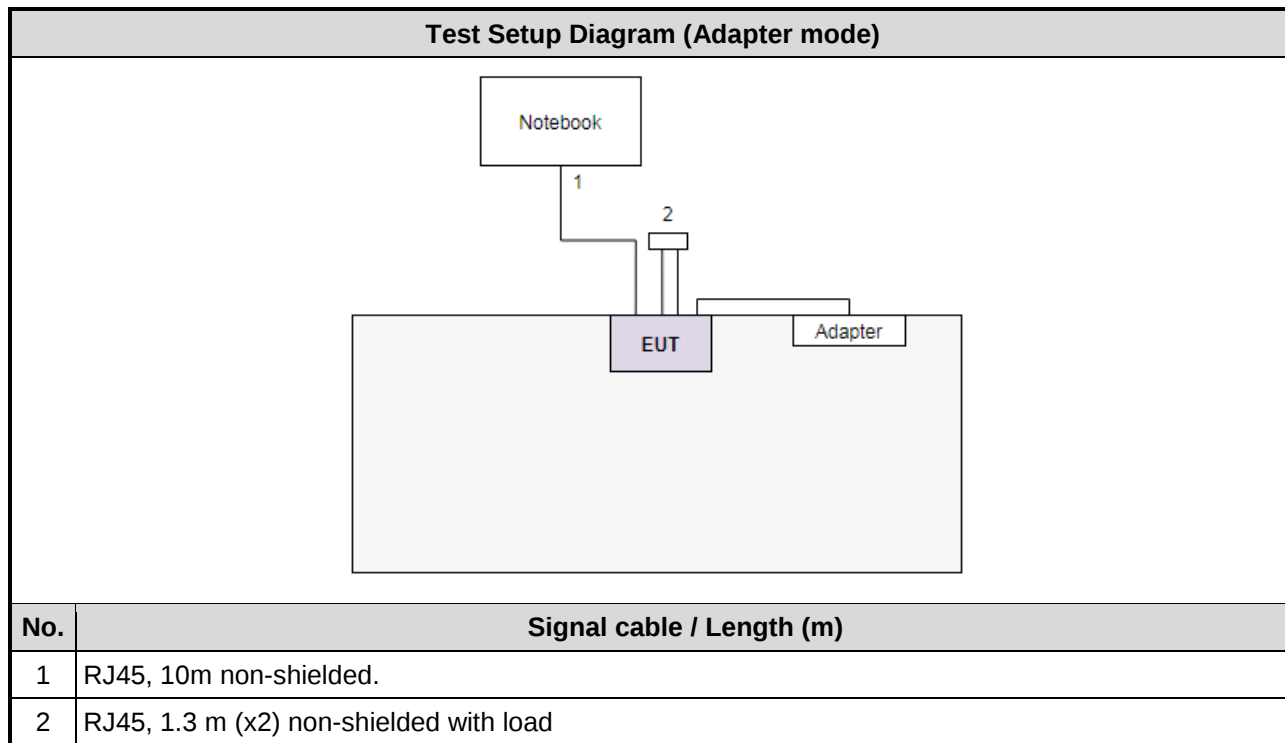
Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	RJ45	ICC	RJ45-1.3m	---	---
2	RJ45	ICC	RJ45-10m	---	---
3	RJ45 Load	ICC	---	---	---
4	Notebook	DELL	Latitude E5470	DoC	---
5	Notebook	DELL	Latitude E5470	DoC	---
6	RJ45	ICC	RJ45-1.3m	---	---
7	POE Switch	ZYXEL	XS1930-12HP	---	Provided by applicant.
8	Adapter	APD	WA-30P12R	---	Provided by applicant.

Beamforming mode

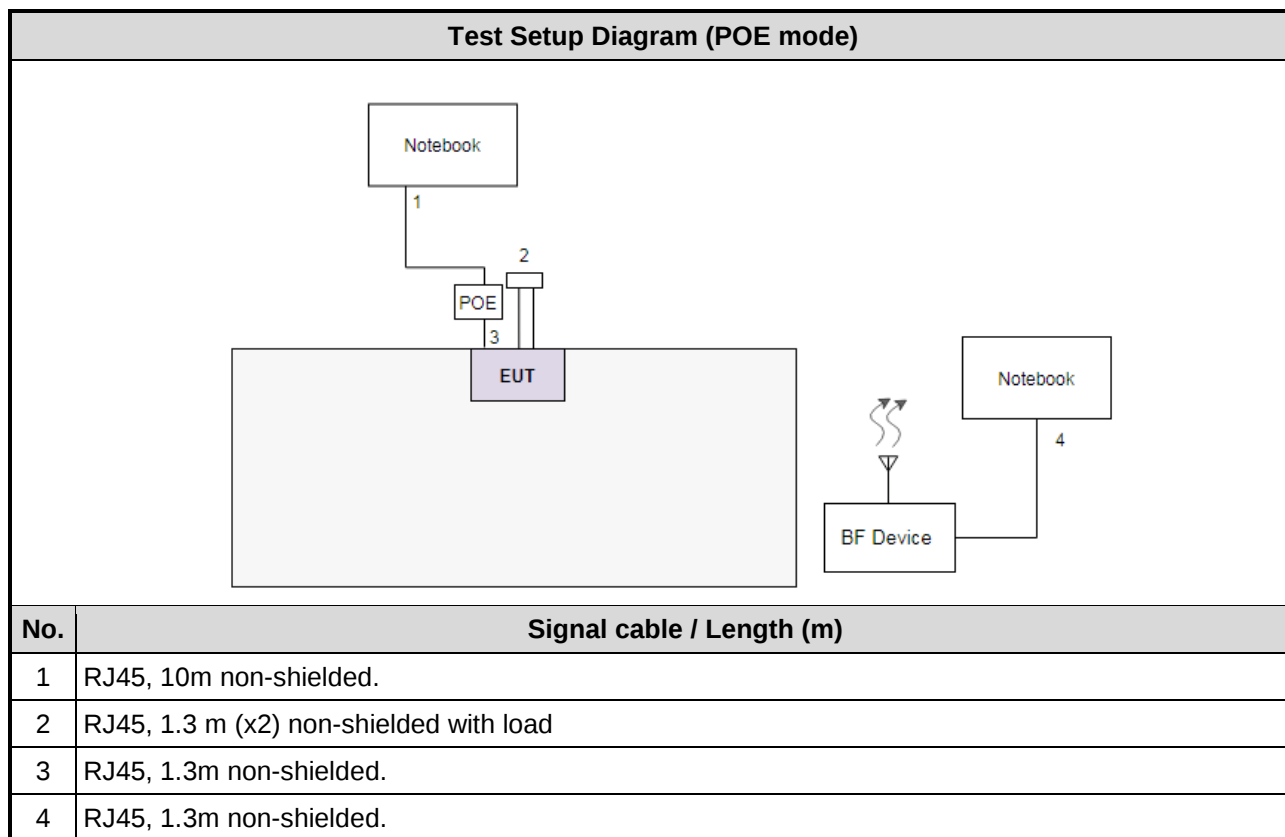
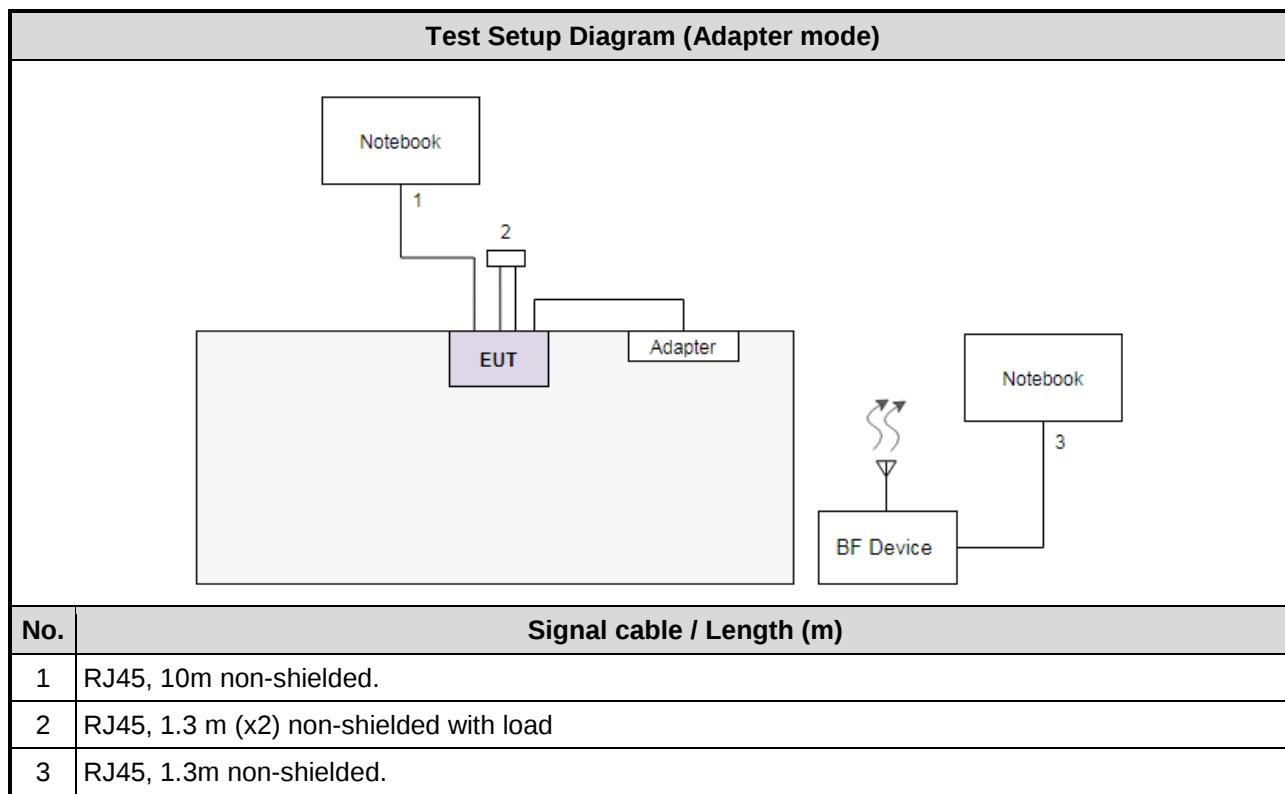
Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	RJ45	ICC	RJ45-1.3m	---	---
2	RJ45	ICC	RJ45-10m	---	---
3	RJ45 Load	ICC	---	---	---
4	Notebook	DELL	Latitude E5470	DoC	---
5	Notebook	DELL	Latitude E5470	DoC	---
6	RJ45	ICC	RJ45-1.3m	---	---
7	BF Device	ZYXEL	WAC500H	---	Provided by applicant.
8	POE Switch	ZYXEL	XS1930-12HP	---	Provided by applicant.
9	Adapter	APD	WA-30P12R	---	Provided by applicant.

1.3 Test Setup Chart

Non-beamforming mode



Beamforming mode



1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Test Date	Aug. 27, 2020				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101658	Dec. 12, 2019	Dec. 11, 2020
LISN	R&S	ENV216	101579	Mar. 12, 2020	Mar. 11, 2021
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 22, 2019	Oct. 21, 2020
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Test Date	Jul. 21 ~ Jul. 27, 2020				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101498	Dec. 17, 2019	Dec. 16, 2020
Receiver	R&S	ESR3	101657	Feb. 14, 2020	Feb. 13, 2021
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jul. 10, 2020	Jul. 09, 2021
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 12, 2019	Dec. 11, 2020
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 15, 2019	Nov. 14, 2020
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 13, 2019	Nov. 12, 2020
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 07, 2019	Oct. 06, 2020
Preamplifier	EMC	EMC02325	980225	Jul. 03, 2020	Jul. 02, 2021
Preamplifier	Agilent	83017A	MY39501308	Oct. 08, 2019	Oct. 07, 2020
Preamplifier	EMC	EMC184045B	980192	Jul. 21, 2020	Jul. 20, 2021
RF Cable	EMC	EMC104-SM-SM-8000	181106	Oct. 07, 2019	Oct. 06, 2020
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Oct. 07, 2019	Oct. 06, 2020
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Oct. 07, 2019	Oct. 06, 2020
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	160502	Oct. 07, 2019	Oct. 06, 2020
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 07, 2019	Oct. 06, 2020
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Oct. 07, 2019	Oct. 06, 2020
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Test Date	Aug. 28 ~ Aug. 31, 2020				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101063	Apr. 30, 2020	Apr. 29, 2021
Power Meter	Anritsu	ML2495A	1241002	Oct. 23, 2019	Oct. 22, 2020
Power Sensor	Anritsu	MA2411B	1207366	Oct. 23, 2019	Oct. 22, 2020
AC POWER SOURCE	APC	AFC-500W	F312060012	Dec. 02, 2019	Dec. 01, 2020
Measurement Software	Sporton	SENSE-15247_DTS	V5.9	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

47 CFR FCC Part 15.407

ANSI C63.10-2013

FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01

1.6 Reference Guidance

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

FCC KDB 412172 D01 Determining ERP and EIRP v01r01

1.7 Deviation from Test Standard and Measurement Procedure

None

1.8 Measurement Uncertainty

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor ($k=2$)).

Measurement Uncertainty	
Parameters	Uncertainty
Bandwidth	± 34.130 Hz
Conducted power	± 0.808 dB
Frequency error	$\pm 1 \times 10^{-9}$
Power density	± 0.583 dB
Conducted emission	± 2.715 dB
AC conducted emission	± 2.92 dB
Radiated emission ≤ 1 GHz	± 3.41 dB
Radiated emission > 1 GHz	± 4.59 dB
Time	$\pm 0.1\%$
Temperature	± 0.4 °C

2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corp.
Test Site	CO01-WS, 03CH01-WS, TH01-WS
Address of Test Site	No. 3-1, Lane 6, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C.

- FCC Designation No.: TW2732
- FCC site registration No.: 181692
- ISED#: 10807A
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

Non-beamforming mode

For Frequency band 5150-5250 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate (Mbps) / MCS	Test Configuration
Conducted Emissions	VHT20	5200	MCS 0	1, 2
Radiated Emissions ≤1GHz	VHT20	5200	MCS 0	1, 2
RF Output Power	11a VHT20 VHT40 VHT80	5180 / 5200 / 5240 5180 / 5200 / 5240 5190 / 5230 5210	6 Mbps MCS 0 MCS 0 MCS 0	1
Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	11a VHT20 VHT40 VHT80	5180 / 5200 / 5240 5180 / 5200 / 5240 5190 / 5230 5210	6 Mbps MCS 0 MCS 0 MCS 0	1
Frequency Stability	Un-modulation	5200	---	1
NOTE: 1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The Z-plane results were found as the worst case and were shown in this report. 2. The EUT had been tested by following test configurations. 1) Configuration 1: Adapter mode 2) Configuration 2: POE mode				

For Frequency band 5725-5850 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate (Mbps) / MCS	Test Configuration
Conducted Emissions	VHT40	5755	MCS 0	1, 2
Radiated Emissions ≤1GHz	VHT40	5755	MCS 0	1, 2
RF Output Power	11a VHT20 VHT40 VHT80	5745 / 5785 / 5825 5745 / 5785 / 5825 5755 / 5795 5775	6 Mbps MCS 0 MCS 0 MCS 0	1
Radiated Emissions >1GHz Emission Bandwidth 6dB bandwidth Peak Power Spectral Density	11a VHT20 VHT40 VHT80	5745 / 5785 / 5825 5745 / 5785 / 5825 5755 / 5795 5775	6 Mbps MCS 0 MCS 0 MCS 0	1
Frequency Stability	Un-modulation	5785	---	1
NOTE: 1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The Z-plane results were found as the worst case and were shown in this report. 2. The EUT had been tested by following test configurations. 1) Configuration 1: Adapter mode 2) Configuration 2: POE mode				

Beamforming mode

For Frequency band 5150-5250 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate (Mbps) / MCS	Test Configuration
Conducted Emissions	VHT20	5200	MCS 0	1, 2
Radiated Emissions ≤1GHz	VHT20	5200	MCS 0	1, 2
RF Output Power	VHT20 VHT40 VHT80	5180 / 5200 / 5240 5190 / 5230 5210	MCS 0 MCS 0 MCS 0	1
Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	VHT20 VHT40 VHT80	5180 / 5200 / 5240 5190 / 5230 5210	MCS 0 MCS 0 MCS 0	1
NOTE: - The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The Z-plane results were found as the worst case and were shown in this report. - The EUT had been tested by following test configurations. - Configuration 1: Adapter mode - Configuration 2: POE mode				

For Frequency band 5725-5850 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate (Mbps) / MCS	Test Configuration
Conducted Emissions	VHT40	5755	MCS 0	1, 2
Radiated Emissions ≤1GHz	VHT40	5755	MCS 0	1, 2
RF Output Power	VHT20 VHT40 VHT80	5745 / 5785 / 5825 5755 / 5795 5775	MCS 0 MCS 0 MCS 0	1
Radiated Emissions >1GHz Emission Bandwidth 6dB bandwidth Peak Power Spectral Density	VHT20 VHT40 VHT80	5745 / 5785 / 5825 5755 / 5795 5775	MCS 0 MCS 0 MCS 0	1
NOTE: - The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The Z-plane results were found as the worst case and were shown in this report. - The EUT had been tested by following test configurations. - Configuration 1: Adapter mode - Configuration 2: POE mode				

3 Transmitter Test Results

3.1 Conducted Emissions

3.1.1 Limit of Conducted Emissions

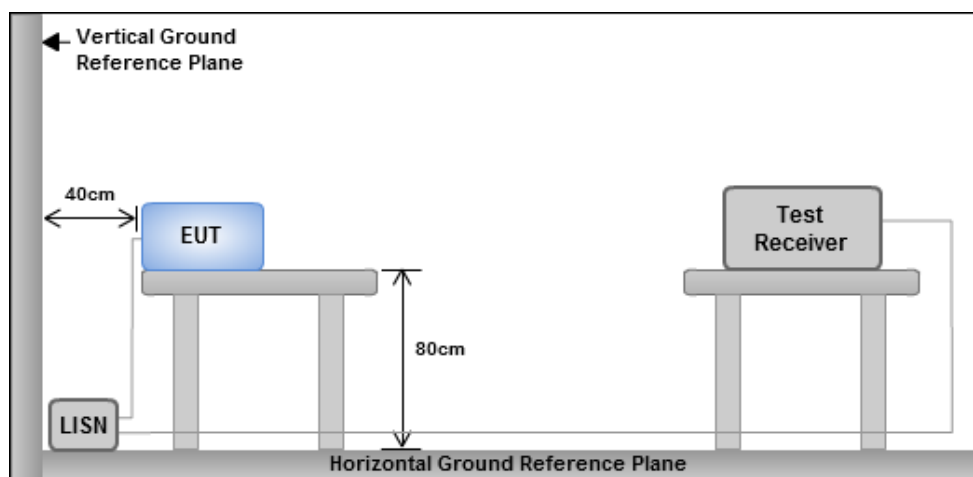
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

3.1.2 Test Procedures

1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.
3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
4. This measurement was performed with AC 120V / 60Hz.

3.1.3 Test Setup



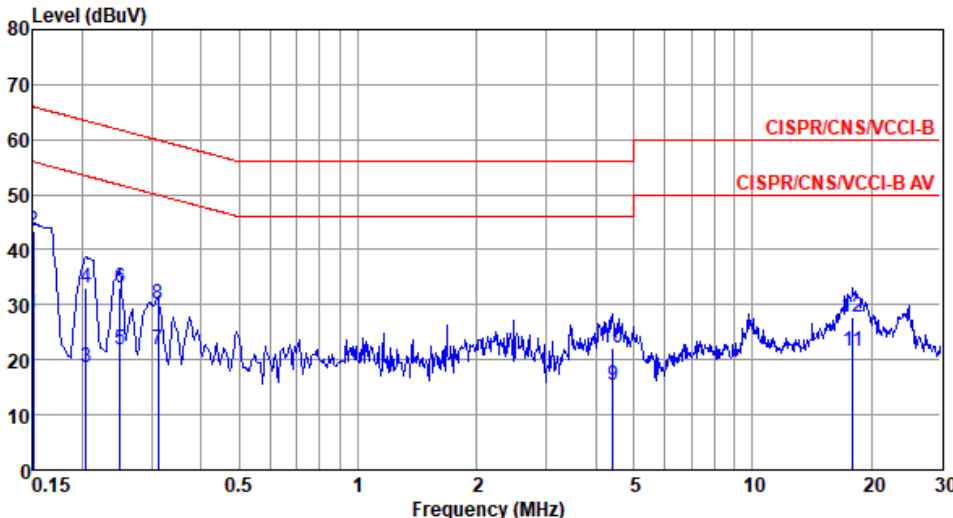
- Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions

Non-beamforming mode

Modulation	VHT20	Test Freq. (MHz)	5200
Power Phase	Line	Test Configuration	1

Test by : Alex Tsai Temperature: 24°C Humidity: 60%



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1	0.150	28.33	56.00	-27.67	18.48	9.64	0.05	Average
2*	0.150	43.50	66.00	-22.50	33.65	9.64	0.05	QP
3	0.204	18.59	53.45	-34.86	8.71	9.63	0.06	Average
4	0.204	33.18	63.45	-30.27	23.30	9.63	0.06	QP
5	0.249	21.80	51.78	-29.98	11.89	9.63	0.07	Average
6	0.249	33.17	61.78	-28.61	23.26	9.63	0.07	QP
7	0.312	21.95	49.93	-27.98	12.02	9.63	0.07	Average
8	0.312	30.04	59.93	-29.89	20.11	9.63	0.07	QP
9	4.430	15.47	46.00	-30.53	5.15	9.65	0.30	Average
10	4.430	22.24	56.00	-33.76	11.92	9.65	0.30	QP
11	17.944	21.54	50.00	-28.46	10.62	9.72	0.64	Average
12	17.944	27.76	60.00	-32.24	16.84	9.72	0.64	QP

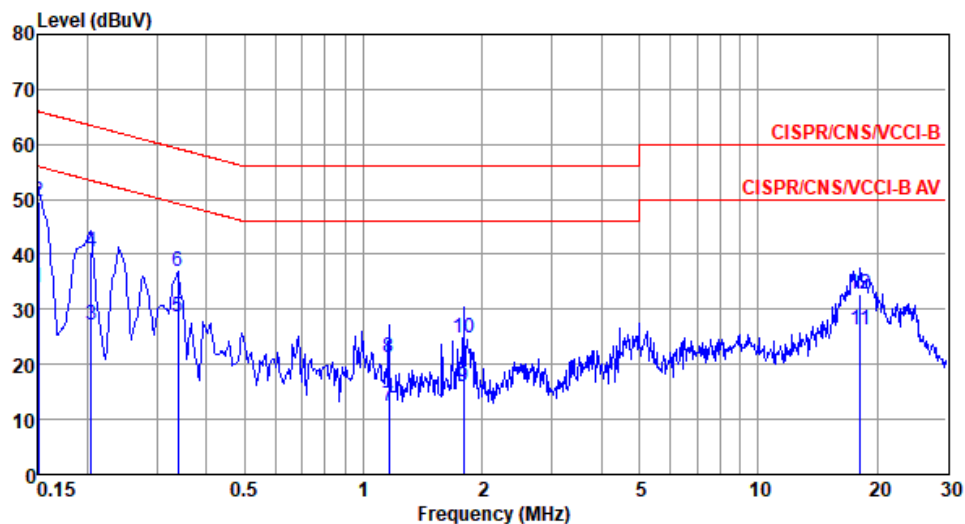
Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT20	Test Freq. (MHz)	5200
Power Phase	Neutral	Test Configuration	1

Test by : Alex Tsai

Temperature: 24°C

Humidity: 60%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.150	33.86	56.00	-22.14	24.03	9.66	0.05	Average
2*	0.150	49.59	66.00	-16.41	39.76	9.66	0.05	QP
3	0.204	27.24	53.45	-26.21	17.38	9.65	0.06	Average
4	0.204	40.58	63.45	-22.87	30.72	9.65	0.06	QP
5	0.339	28.53	49.22	-20.69	18.63	9.65	0.08	Average
6	0.339	36.98	59.22	-22.24	27.08	9.65	0.08	QP
7	1.160	12.35	46.00	-33.65	2.36	9.65	0.13	Average
8	1.160	21.28	56.00	-34.72	11.29	9.65	0.13	QP
9	1.790	16.06	46.00	-29.94	5.98	9.66	0.17	Average
10	1.790	24.87	56.00	-31.13	14.79	9.66	0.17	QP
11	18.135	26.32	50.00	-23.68	15.39	9.82	0.64	Average
12	18.135	32.78	60.00	-27.22	21.85	9.82	0.64	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

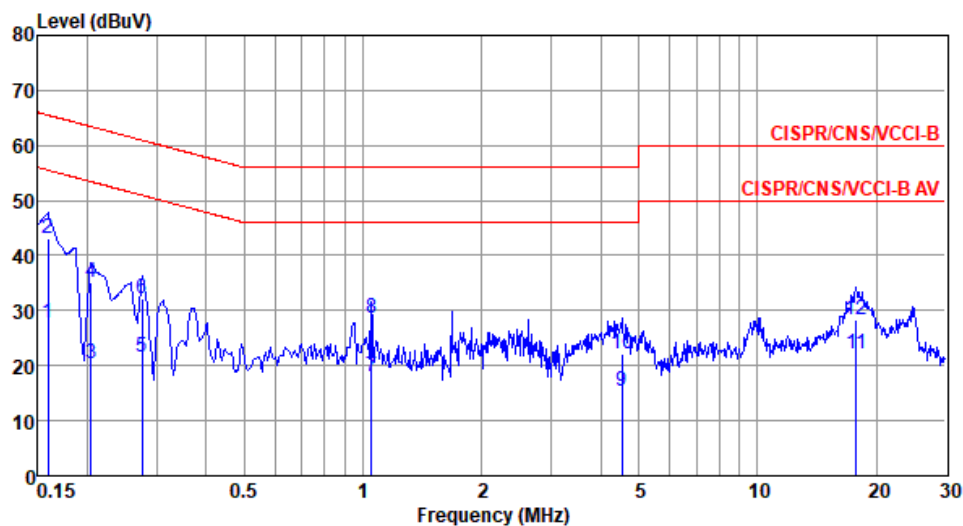
Note 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT40	Test Freq. (MHz)	5755
Power Phase	Line	Test Configuration	1

Test by : Alex Tsai

Temperature: 24°C

Humidity: 60%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.159	27.69	55.52	-27.83	17.83	9.64	0.05	Average
2*	0.159	43.21	65.52	-22.31	33.35	9.64	0.05	QP
3	0.204	20.33	53.45	-33.12	10.45	9.63	0.06	Average
4	0.204	35.22	63.45	-28.23	25.34	9.63	0.06	QP
5	0.276	21.57	50.94	-29.37	11.65	9.63	0.07	Average
6	0.276	32.17	60.94	-28.77	22.25	9.63	0.07	QP
7	1.049	17.95	46.00	-28.05	7.88	9.63	0.12	Average
8	1.049	28.58	56.00	-27.42	18.51	9.63	0.12	QP
9	4.525	15.43	46.00	-30.57	5.10	9.66	0.30	Average
10	4.525	22.26	56.00	-33.74	11.93	9.66	0.30	QP
11	17.755	22.08	50.00	-27.92	11.18	9.71	0.63	Average
12	17.755	28.20	60.00	-31.80	17.30	9.71	0.63	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

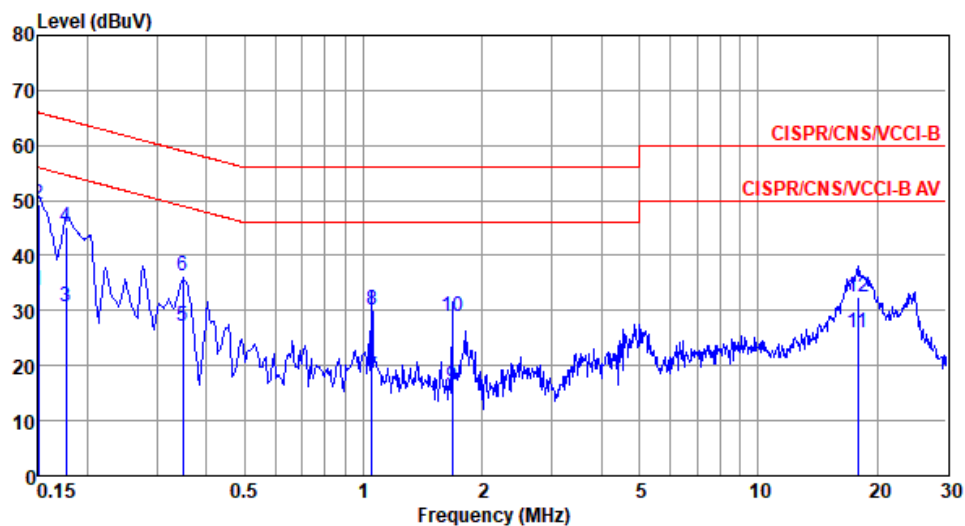
Note 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT40	Test Freq. (MHz)	5755
Power Phase	Neutral	Test Configuration	1

Test by : Alex Tsai

Temperature: 24°C

Humidity: 60%



	Freq	Level	Limit	Over	Read	LISN	cable	Remark
	MHz	dBuV	Line	Limit	Level	factor	loss	
			dBuV	dB	dBuV	dB	dB	
1	0.150	33.76	56.00	-22.24	23.93	9.66	0.05	Average
2*	0.150	49.40	66.00	-16.60	39.57	9.66	0.05	QP
3	0.177	30.69	54.64	-23.95	20.84	9.65	0.06	Average
4	0.177	45.14	64.64	-19.50	35.29	9.65	0.06	QP
5	0.348	27.08	49.00	-21.92	17.18	9.65	0.08	Average
6	0.348	36.30	59.00	-22.70	26.40	9.65	0.08	QP
7	1.049	18.04	46.00	-27.96	8.07	9.65	0.12	Average
8	1.049	30.14	56.00	-25.86	20.17	9.65	0.12	QP
9	1.680	16.24	46.00	-29.76	6.16	9.66	0.17	Average
10	1.680	28.98	56.00	-27.02	18.90	9.66	0.17	QP
11	17.849	26.09	50.00	-23.91	15.17	9.82	0.64	Average
12	17.849	32.45	60.00	-27.55	21.53	9.82	0.64	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

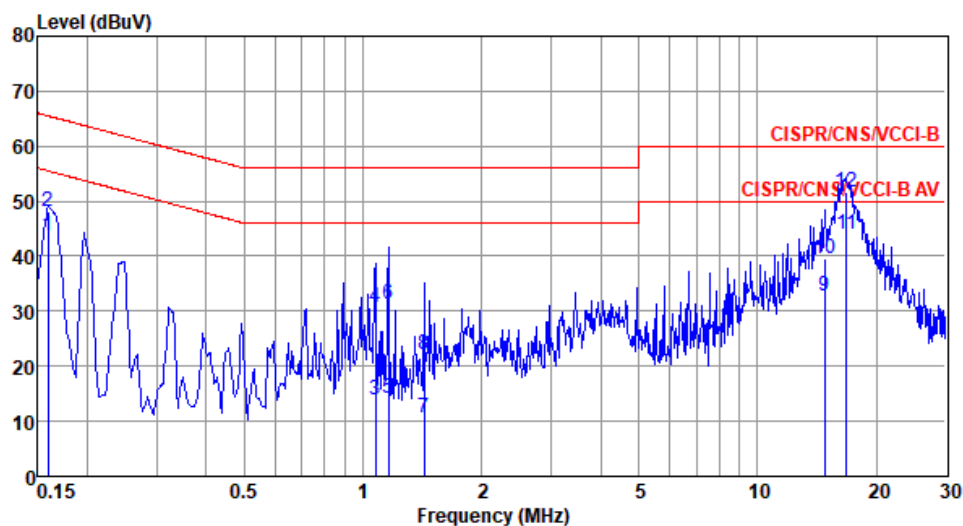
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT20	Test Freq. (MHz)	5200
Power Phase	Line	Test Configuration	2

Test by : Alex Tsai

Temperature: 24°C

Humidity: 60%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.159	43.63	55.52	-11.89	33.77	9.64	0.05	Average
2	0.159	48.15	65.52	-17.37	38.29	9.64	0.05	QP
3	1.077	13.94	46.00	-32.06	3.86	9.63	0.13	Average
4	1.077	30.58	56.00	-25.42	20.50	9.63	0.13	QP
5	1.160	14.30	46.00	-31.70	4.22	9.63	0.13	Average
6	1.160	31.32	56.00	-24.68	21.24	9.63	0.13	QP
7	1.426	10.49	46.00	-35.51	0.37	9.64	0.15	Average
8	1.426	22.27	56.00	-33.73	12.15	9.64	0.15	QP
9	14.828	32.77	50.00	-17.23	21.99	9.71	0.59	Average
10	14.828	39.46	60.00	-20.54	28.68	9.71	0.59	QP
11*	16.839	43.91	50.00	-6.09	33.05	9.71	0.62	Average
12	16.839	51.67	60.00	-8.33	40.81	9.71	0.62	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

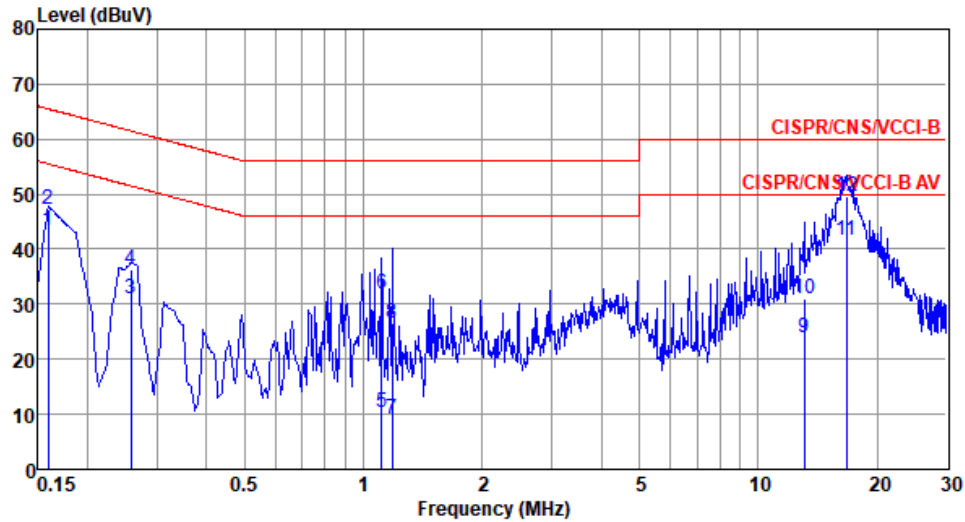
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT20	Test Freq. (MHz)	5200
Power Phase	Neutral	Test Configuration	2

Test by : Alex Tsai

Temperature: 24°C

Humidity: 60%



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1	0.159	43.38	55.52	-12.14	33.54	9.66	0.05	Average
2	0.159	47.22	65.52	-18.30	37.38	9.66	0.05	QP
3	0.258	31.13	51.51	-20.38	21.25	9.65	0.07	Average
4	0.258	36.40	61.51	-25.11	26.52	9.65	0.07	QP
5	1.111	10.40	46.00	-35.60	0.41	9.65	0.13	Average
6	1.111	31.85	56.00	-24.15	21.86	9.65	0.13	QP
7	1.184	9.08	46.00	-36.92	-0.91	9.65	0.13	Average
8	1.184	26.71	56.00	-29.29	16.72	9.65	0.13	QP
9	13.057	23.97	50.00	-26.03	13.32	9.77	0.52	Average
10	13.057	30.97	60.00	-29.03	20.32	9.77	0.52	QP
11*	16.750	41.66	50.00	-8.34	30.80	9.81	0.62	Average
12	16.750	49.68	60.00	-10.32	38.82	9.81	0.62	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

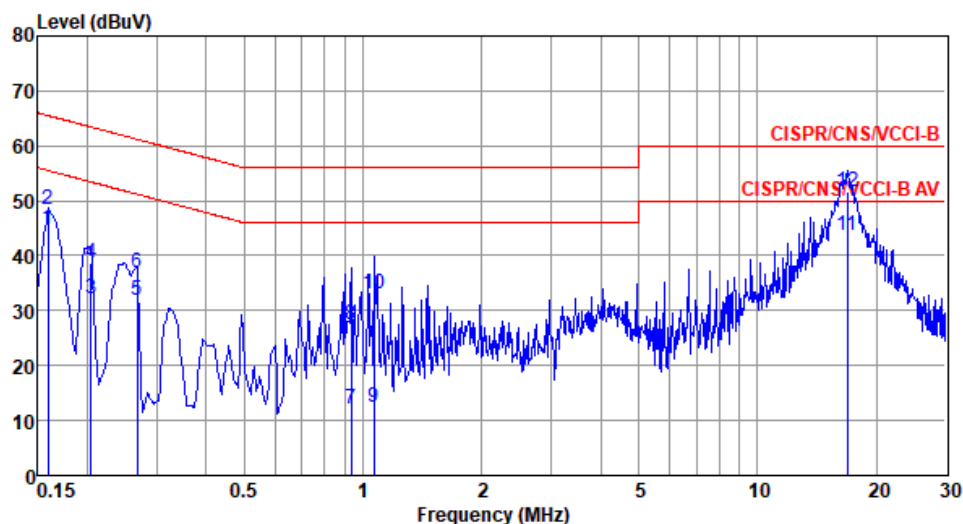
Note 2: Over Limit (dB) = Level (dBuV) - Limit Line (dBuV).

Modulation	VHT40	Test Freq. (MHz)	5755
Power Phase	Line	Test Configuration	2

Test by : Alex Tsai

Temperature: 24°C

Humidity: 60%



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1	0.159	44.74	55.52	-10.78	34.88	9.64	0.05	Average
2	0.159	48.56	65.52	-16.96	38.70	9.64	0.05	QP
3	0.204	32.04	53.45	-21.41	22.16	9.63	0.06	Average
4	0.204	38.59	63.45	-24.86	28.71	9.63	0.06	QP
5	0.267	32.00	51.20	-19.20	22.09	9.63	0.07	Average
6	0.267	37.05	61.20	-24.15	27.14	9.63	0.07	QP
7	0.933	12.02	46.00	-33.98	1.96	9.63	0.12	Average
8	0.933	27.56	56.00	-28.44	17.50	9.63	0.12	QP
9	1.065	12.35	46.00	-33.65	2.27	9.63	0.13	Average
10	1.065	33.15	56.00	-22.85	23.07	9.63	0.13	QP
11*	16.928	43.82	50.00	-6.18	32.95	9.71	0.62	Average
12	16.928	51.69	60.00	-8.31	40.82	9.71	0.62	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

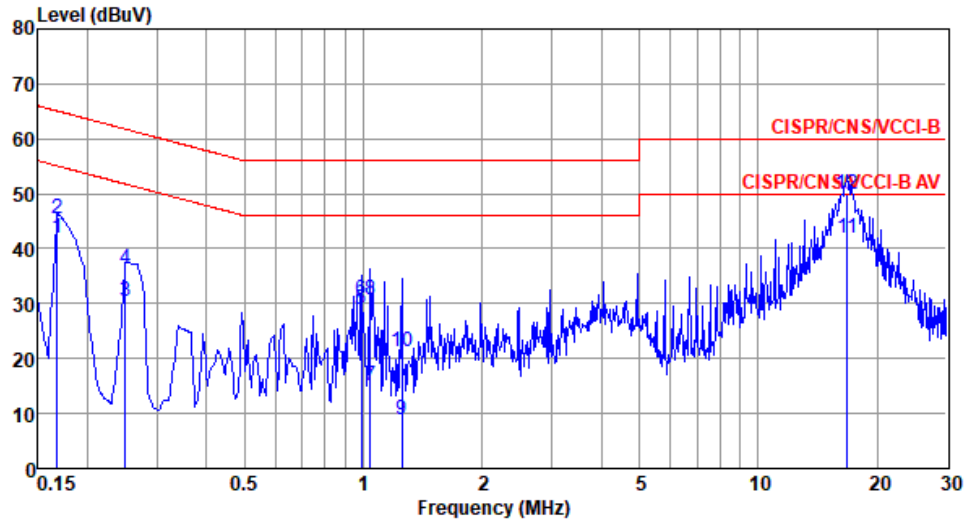
Note 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT40	Test Freq. (MHz)	5755
Power Phase	Neutral	Test Configuration	2

Test by : Alex Tsai

Temperature: 24°C

Humidity: 60%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.168	41.96	55.08	-13.12	32.12	9.66	0.05	Average
2	0.168	45.60	65.08	-19.48	35.76	9.66	0.05	QP
3	0.249	30.43	51.78	-21.35	20.55	9.65	0.07	Average
4	0.249	36.35	61.78	-25.43	26.47	9.65	0.07	QP
5	0.989	28.85	46.00	-17.15	18.88	9.65	0.12	Average
6	0.989	30.79	56.00	-25.21	20.82	9.65	0.12	QP
7	1.043	15.11	46.00	-30.89	5.14	9.65	0.12	Average
8	1.043	30.80	56.00	-25.20	20.83	9.65	0.12	QP
9	1.249	8.74	46.00	-37.26	-1.27	9.65	0.14	Average
10	1.249	21.33	56.00	-34.67	11.32	9.65	0.14	QP
11*	16.839	41.86	50.00	-8.14	31.00	9.81	0.62	Average
12	16.839	49.93	60.00	-10.07	39.07	9.81	0.62	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

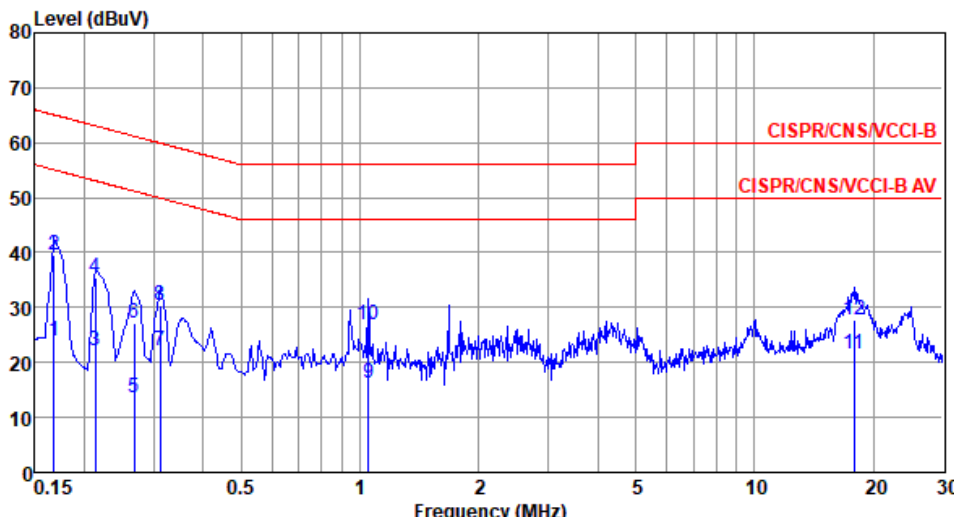
Beamforming mode

Modulation	VHT20	Test Freq. (MHz)	5200
Power Phase	Line	Test Configuration	1

Test by : Alex Tsai

Temperature: 24°C

Humidity: 60%



Freq	Level	Limit	Over	Read	LISN	cable		
MHz	dBuV	Line	Limit	Level	factor	loss	Remark	
		dBuV	dB	dBuV	dB	dB		
1	0.168	23.77	55.08	-31.31	13.91	9.64	0.05	Average
2*	0.168	39.47	65.08	-25.61	29.61	9.64	0.05	QP
3	0.213	22.17	53.10	-30.93	12.29	9.63	0.06	Average
4	0.213	35.48	63.10	-27.62	25.60	9.63	0.06	QP
5	0.267	13.49	51.20	-37.71	3.58	9.63	0.07	Average
6	0.267	27.17	61.20	-34.03	17.26	9.63	0.07	QP
7	0.312	22.18	49.93	-27.75	12.25	9.63	0.07	Average
8	0.312	30.34	59.93	-29.59	20.41	9.63	0.07	QP
9	1.050	16.28	46.00	-29.72	6.21	9.63	0.12	Average
10	1.050	26.87	56.00	-29.13	16.80	9.63	0.12	QP
11	17.920	21.66	50.00	-28.34	10.74	9.72	0.64	Average
12	17.920	27.70	60.00	-32.30	16.78	9.72	0.64	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

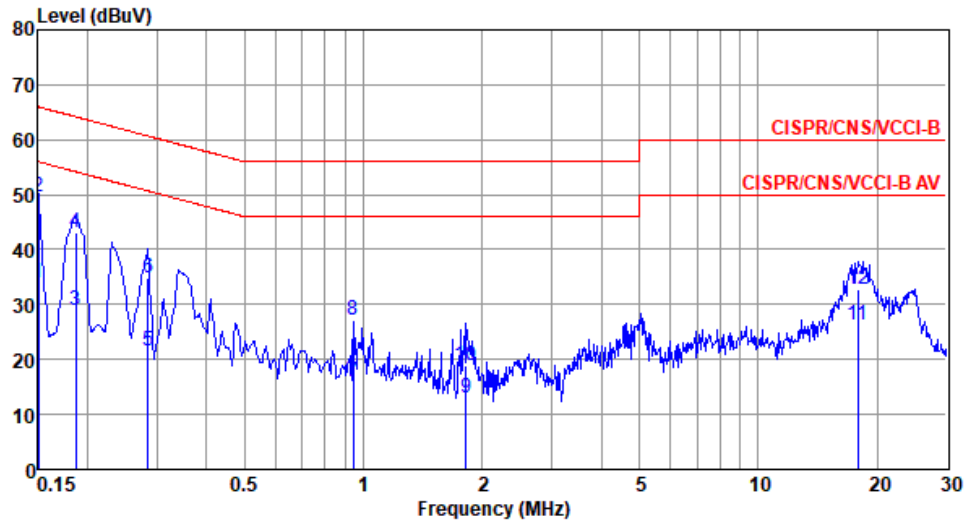
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT20	Test Freq. (MHz)	5200
Power Phase	Neutral	Test Configuration	1

Test by : Alex Tsai

Temperature: 24°C

Humidity: 60%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.150	34.02	56.00	-21.98	24.19	9.66	0.05	Average
2*	0.150	49.63	66.00	-16.37	39.80	9.66	0.05	QP
3	0.186	28.87	54.20	-25.33	19.02	9.65	0.06	Average
4	0.186	43.06	64.20	-21.14	33.21	9.65	0.06	QP
5	0.285	21.63	50.68	-29.05	11.75	9.65	0.07	Average
6	0.285	34.87	60.68	-25.81	24.99	9.65	0.07	QP
7	0.943	15.87	46.00	-30.13	5.90	9.65	0.12	Average
8	0.943	27.18	56.00	-28.82	17.21	9.65	0.12	QP
9	1.823	13.05	46.00	-32.95	2.97	9.66	0.17	Average
10	1.823	18.75	56.00	-37.25	8.67	9.66	0.17	QP
11	17.920	26.15	50.00	-23.85	15.23	9.82	0.64	Average
12	17.920	32.76	60.00	-27.24	21.84	9.82	0.64	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

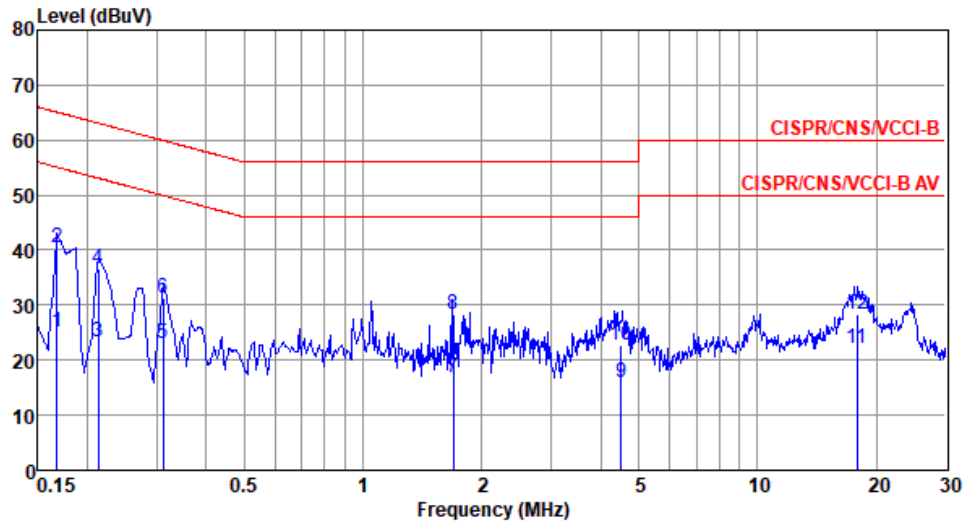
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT40	Test Freq. (MHz)	5755
Power Phase	Line	Test Configuration	1

Test by : Alex Tsai

Temperature: 24°C

Humidity: 60%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.168	25.13	55.08	-29.95	15.27	9.64	0.05	Average
2*	0.168	40.55	65.08	-24.53	30.69	9.64	0.05	QP
3	0.213	23.33	53.10	-29.77	13.45	9.63	0.06	Average
4	0.213	36.54	63.10	-26.56	26.66	9.63	0.06	QP
5	0.312	23.15	49.93	-26.78	13.22	9.63	0.07	Average
6	0.312	31.29	59.93	-28.64	21.36	9.63	0.07	QP
7	1.691	16.88	46.00	-29.12	6.73	9.64	0.17	Average
8	1.691	28.37	56.00	-27.63	18.22	9.64	0.17	QP
9	4.515	15.88	46.00	-30.12	5.55	9.66	0.30	Average
10	4.515	22.71	56.00	-33.29	12.38	9.66	0.30	QP
11	17.854	22.08	50.00	-27.92	11.16	9.72	0.64	Average
12	17.854	28.25	60.00	-31.75	17.33	9.72	0.64	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

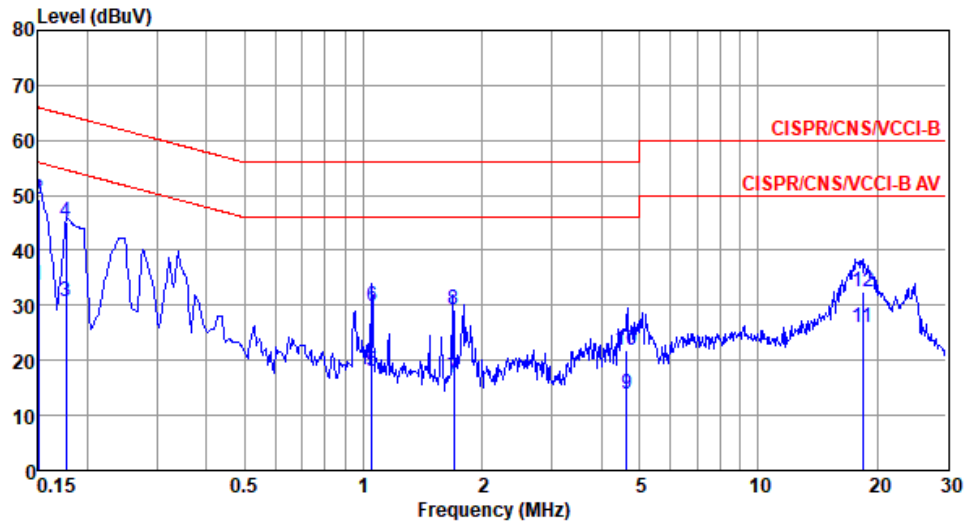
Note 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT40	Test Freq. (MHz)	5755
Power Phase	Neutral	Test Configuration	1

Test by : Alex Tsai

Temperature: 24°C

Humidity: 60%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.150	33.68	56.00	-22.32	23.85	9.66	0.05	Average
2*	0.150	49.19	66.00	-16.81	39.36	9.66	0.05	QP
3	0.177	30.57	54.64	-24.07	20.72	9.65	0.06	Average
4	0.177	45.05	64.64	-19.59	35.20	9.65	0.06	QP
5	1.051	17.99	46.00	-28.01	8.02	9.65	0.12	Average
6	1.051	29.87	56.00	-26.13	19.90	9.65	0.12	QP
7	1.691	16.69	46.00	-29.31	6.61	9.66	0.17	Average
8	1.691	29.33	56.00	-26.67	19.25	9.66	0.17	QP
9	4.645	13.88	46.00	-32.12	3.62	9.68	0.31	Average
10	4.645	21.95	56.00	-34.05	11.69	9.68	0.31	QP
11	18.395	26.06	50.00	-23.94	15.11	9.83	0.64	Average
12	18.395	32.47	60.00	-27.53	21.52	9.83	0.64	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

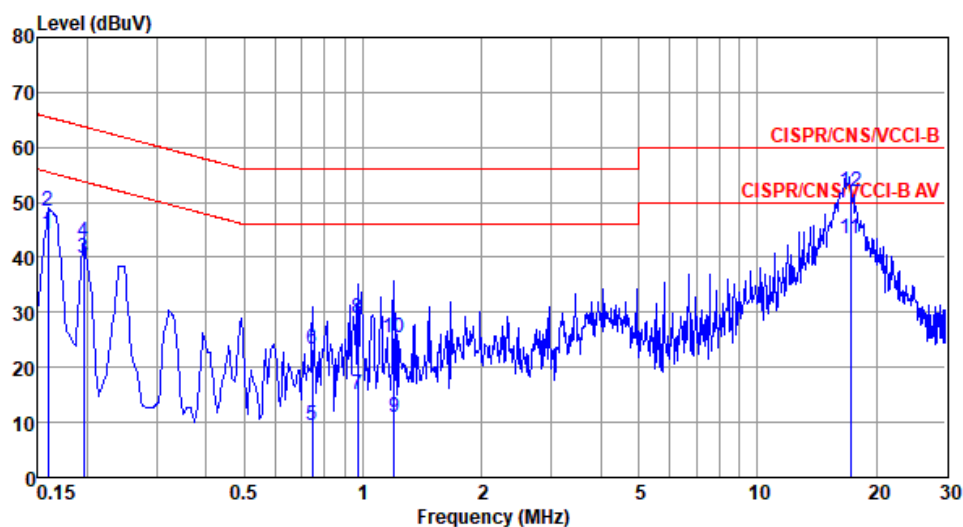
Note 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT20	Test Freq. (MHz)	5200
Power Phase	Line	Test Configuration	2

Test by : Alex Tsai

Temperature: 24°C

Humidity: 60%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.159	44.18	55.52	-11.34	34.34	9.66	0.05	Average
2	0.159	48.28	65.52	-17.24	38.44	9.66	0.05	QP
3	0.195	39.95	53.80	-13.85	30.09	9.65	0.06	Average
4	0.195	42.82	63.80	-20.98	32.96	9.65	0.06	QP
5	0.743	9.58	46.00	-36.42	-0.37	9.65	0.11	Average
6	0.743	23.27	56.00	-32.73	13.32	9.65	0.11	QP
7	0.968	15.03	46.00	-30.97	5.06	9.65	0.12	Average
8	0.968	28.96	56.00	-27.04	18.99	9.65	0.12	QP
9	1.199	10.91	46.00	-35.09	0.90	9.65	0.14	Average
10	1.199	25.37	56.00	-30.63	15.36	9.65	0.14	QP
11*	17.202	43.39	50.00	-6.61	32.50	9.82	0.63	Average
12	17.202	51.88	60.00	-8.12	40.99	9.82	0.63	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

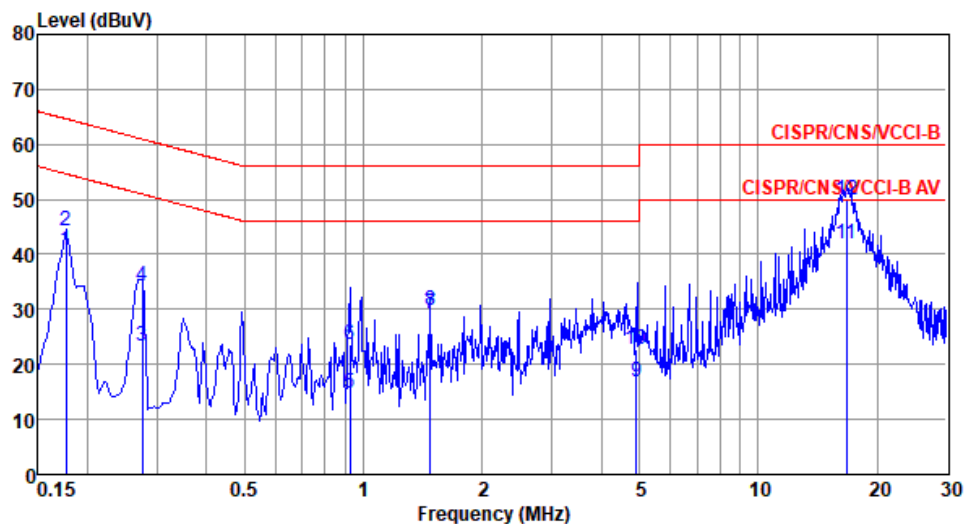
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT20	Test Freq. (MHz)	5200
Power Phase	Neutral	Test Configuration	2

Test by : Alex Tsai

Temperature: 24°C

Humidity: 60%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.177	40.85	54.64	-13.79	31.00	9.65	0.06	Average
2	0.177	44.39	64.64	-20.25	34.54	9.65	0.06	QP
3	0.276	23.37	50.94	-27.57	13.49	9.65	0.07	Average
4	0.276	34.24	60.94	-26.70	24.36	9.65	0.07	QP
5	0.923	14.85	46.00	-31.15	4.88	9.65	0.12	Average
6	0.923	23.48	56.00	-32.52	13.51	9.65	0.12	QP
7	1.480	29.17	46.00	-16.83	19.13	9.66	0.15	Average
8	1.480	29.85	56.00	-26.15	19.81	9.66	0.15	QP
9	4.918	16.77	46.00	-29.23	6.50	9.68	0.31	Average
10	4.918	22.69	56.00	-33.31	12.42	9.68	0.31	QP
11*	16.710	41.88	50.00	-8.12	31.02	9.81	0.62	Average
12	16.710	49.82	60.00	-10.18	38.96	9.81	0.62	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

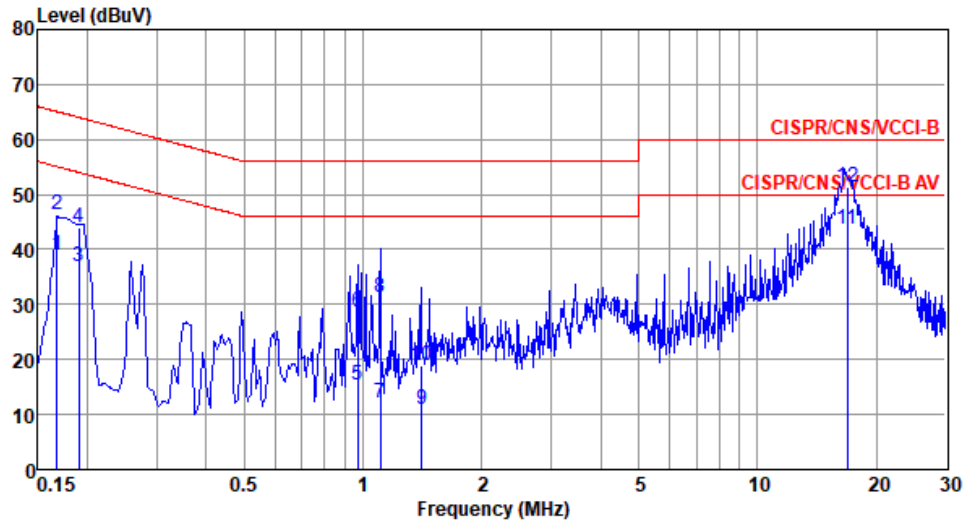
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT40	Test Freq. (MHz)	5755
Power Phase	Line	Test Configuration	2

Test by : Alex Tsai

Temperature: 24°C

Humidity: 60%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.168	38.95	55.08	-16.13	29.09	9.64	0.05	Average
2	0.168	46.47	65.08	-18.61	36.61	9.64	0.05	QP
3	0.190	36.82	54.02	-17.20	26.95	9.63	0.06	Average
4	0.190	44.06	64.02	-19.96	34.19	9.63	0.06	QP
5	0.968	15.41	46.00	-30.59	5.34	9.63	0.12	Average
6	0.968	28.69	56.00	-27.31	18.62	9.63	0.12	QP
7	1.108	12.00	46.00	-34.00	1.92	9.63	0.13	Average
8	1.108	31.35	56.00	-24.65	21.27	9.63	0.13	QP
9	1.410	11.05	46.00	-34.95	0.94	9.63	0.15	Average
10	1.410	18.85	56.00	-37.15	8.74	9.63	0.15	QP
11*	16.880	43.78	50.00	-6.22	32.92	9.71	0.62	Average
12	16.880	51.47	60.00	-8.53	40.61	9.71	0.62	QP

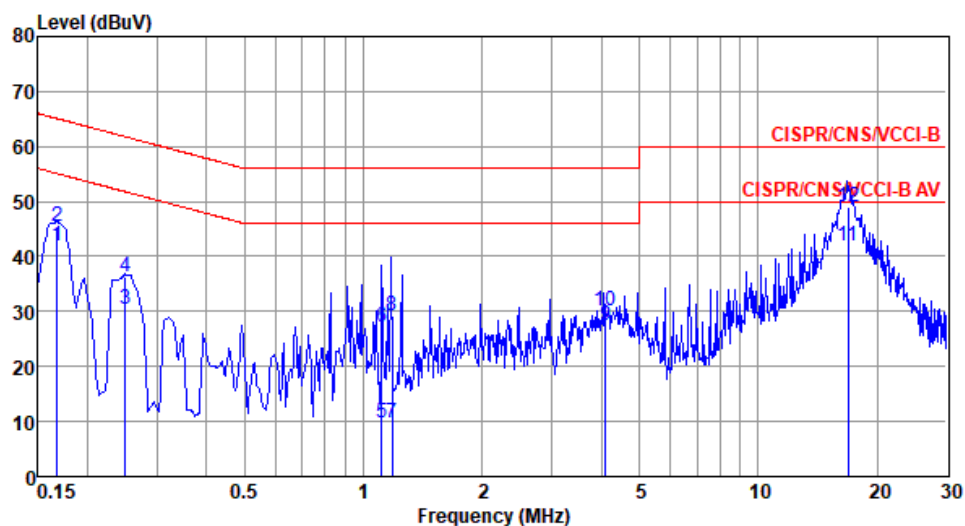
Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT40	Test Freq. (MHz)	5755
Power Phase	Neutral	Test Configuration	2

Test by : Alex Tsai

Temperature: 24°C

Humidity: 60%



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1	0.168	41.82	55.08	-13.26	31.98	9.66	0.05	Average
2	0.168	45.52	65.08	-19.56	35.68	9.66	0.05	QP
3	0.249	30.42	51.78	-21.36	20.54	9.65	0.07	Average
4	0.249	36.19	61.78	-25.59	26.31	9.65	0.07	QP
5	1.112	9.75	46.00	-36.25	-0.24	9.65	0.13	Average
6	1.112	27.06	56.00	-28.94	17.07	9.65	0.13	QP
7	1.180	9.85	46.00	-36.15	-0.14	9.65	0.13	Average
8	1.180	29.20	56.00	-26.80	19.21	9.65	0.13	QP
9	4.102	27.44	46.00	-18.56	17.22	9.67	0.29	Average
10	4.102	30.05	56.00	-25.95	19.83	9.67	0.29	QP
11*	16.910	41.88	50.00	-8.12	31.02	9.81	0.62	Average
12	16.910	49.05	60.00	-10.95	38.19	9.81	0.62	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

3.2 Emission Bandwidth

3.2.1 Limit of Emission bandwidth

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

3.2.2 Test Procedures

26dB Bandwidth

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW, Detector = Peak.
3. Trace mode = max hold.
4. Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

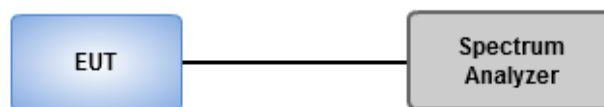
Occupied Bandwidth

1. Set RBW = 1 % to 5 % of the OBW.
2. Set VBW $\geq$ 3 RBW.
3. Sample detection and single sweep mode shall be used.
4. Use the 99 % power bandwidth function of the instrument.

6dB Bandwidth

1. Set RBW = 100kHz, VBW = 300kHz.
2. Detector = Peak, Trace mode = max hold.
3. Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.2.3 Test Setup



3.2.4 Test Result of Emission Bandwidth

Ambient Condition	25°C / 67%	Tested By	Aska Huang
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Non-beamforming mode

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	34.42M	17.149M	17M1D1D	18.696M	16.353M
802.11ac VHT20_Nss1,(MCS0)_2TX	36.957M	18.017M	18M0D1D	19.638M	17.583M
802.11ac VHT40_Nss1,(MCS0)_2TX	71.884M	36.179M	36M2D1D	39.42M	35.89M
802.11ac VHT80_Nss1,(MCS0)_2TX	83.188M	75.832M	75M8D1D	82.899M	75.832M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	16.304M	23.806M	23M8D1D	14.42M	18.09M
802.11ac VHT20_Nss1,(MCS0)_2TX	17.609M	24.53M	24M5D1D	15.725M	19.103M
802.11ac VHT40_Nss1,(MCS0)_2TX	35.652M	55.861M	55M9D1D	32.174M	46.454M
802.11ac VHT80_Nss1,(MCS0)_2TX	76.232M	76.122M	76M1D1D	75.652M	75.832M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Max-OBW = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Min-OBW = Minimum 99% occupied bandwidth;

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	18.841M	16.425M	18.696M	16.353M
5200MHz	Pass	Inf	32.319M	16.57M	34.275M	17.149M
5240MHz	Pass	Inf	31.159M	16.57M	34.42M	16.932M
5745MHz	Pass	500k	16.304M	23.806M	16.304M	22.431M
5785MHz	Pass	500k	16.304M	20.839M	16.304M	21.78M
5825MHz	Pass	500k	16.304M	18.09M	14.42M	21.056M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	19.638M	17.583M	19.783M	17.583M
5200MHz	Pass	Inf	28.406M	17.728M	36.957M	18.017M
5240MHz	Pass	Inf	29.348M	17.728M	34.493M	17.945M
5745MHz	Pass	500k	17.609M	24.53M	16.522M	23.3M
5785MHz	Pass	500k	17.609M	21.129M	17.536M	22.287M
5825MHz	Pass	500k	17.174M	19.103M	15.725M	22.359M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	39.565M	35.89M	39.42M	35.89M
5230MHz	Pass	Inf	51.304M	36.179M	71.884M	36.179M
5755MHz	Pass	500k	35.362M	48.046M	32.174M	51.085M
5795MHz	Pass	500k	35.652M	46.454M	35.217M	55.861M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	82.899M	75.832M	83.188M	75.832M
5775MHz	Pass	500k	75.652M	75.832M	76.232M	76.122M

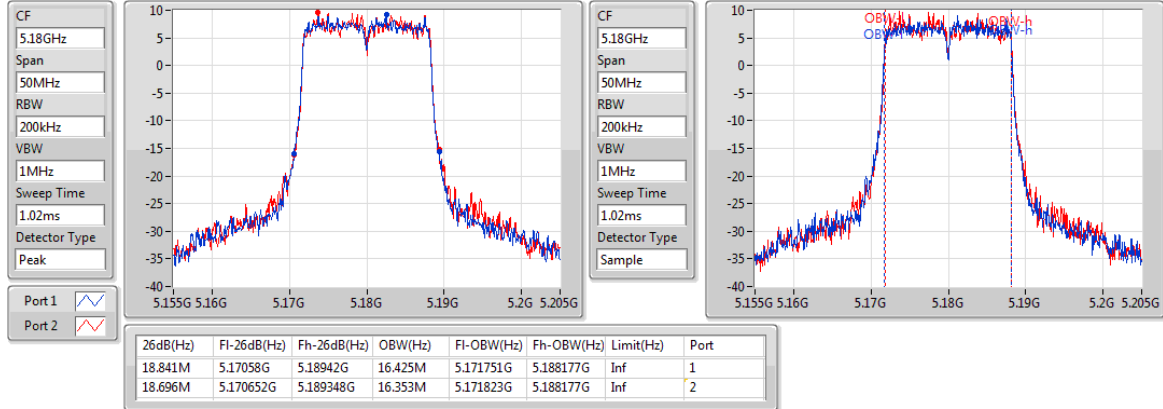
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_2TX

EBW

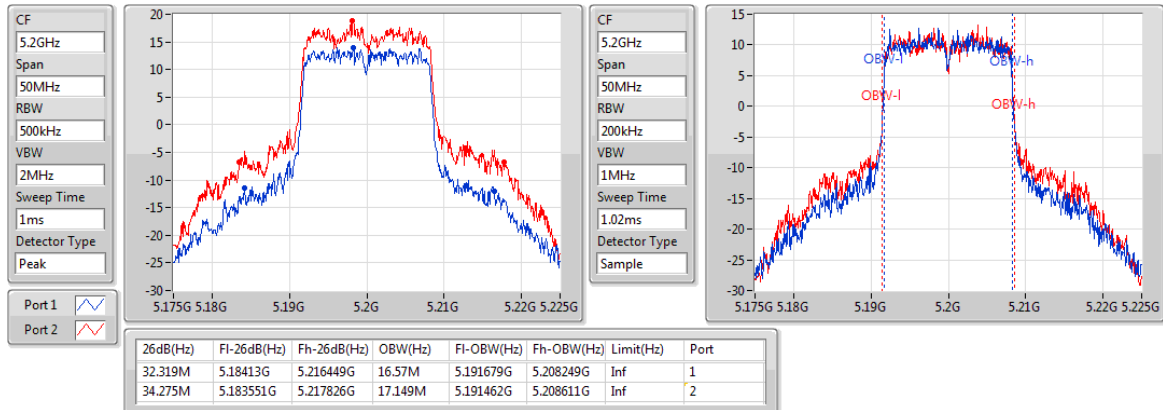
5180MHz



802.11a_Nss1,(6Mbps)_2TX

EBW

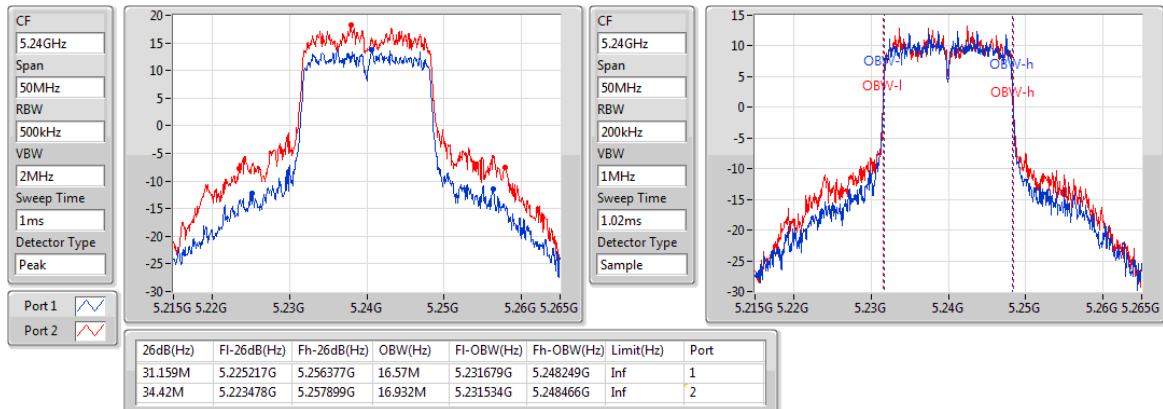
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802.11a_Nss1,(6Mbps)_2TX

EBW

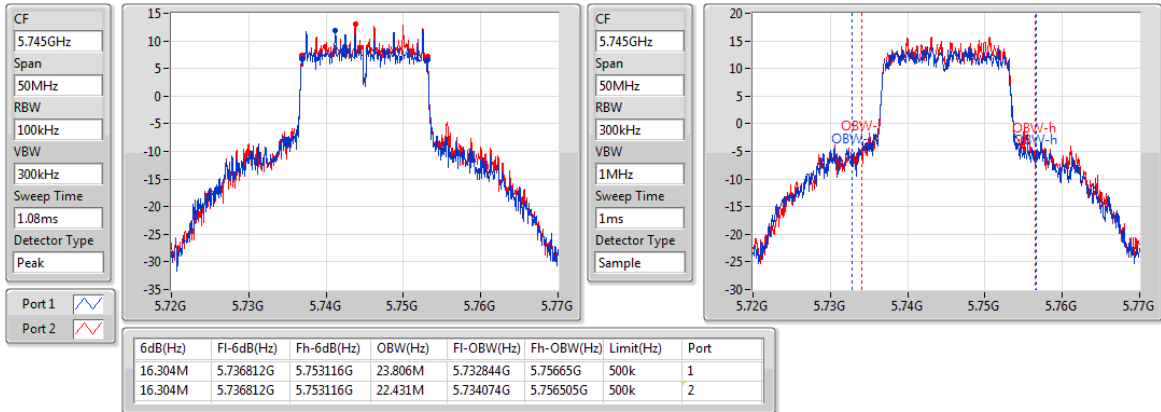
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802.11a_Nss1,(6Mbps)_2TX

EBW

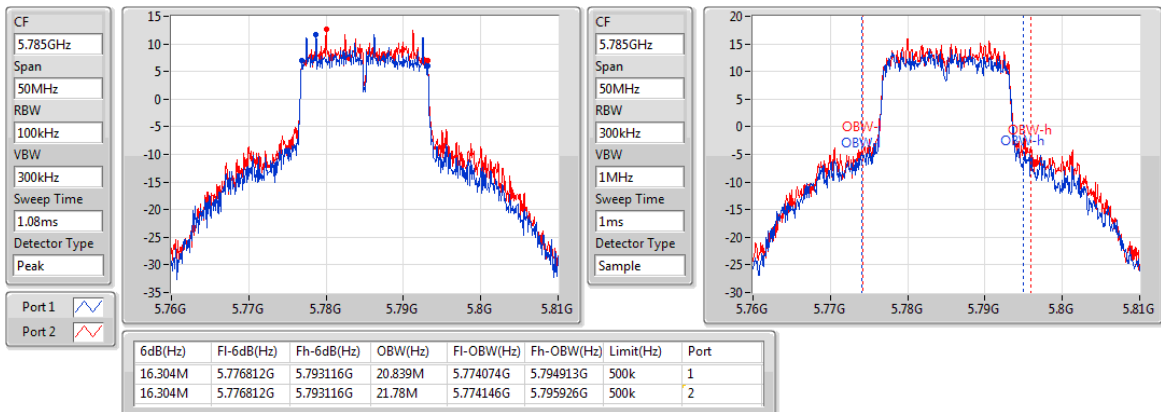
5745MHz



802.11a_Nss1,(6Mbps)_2TX

EBW

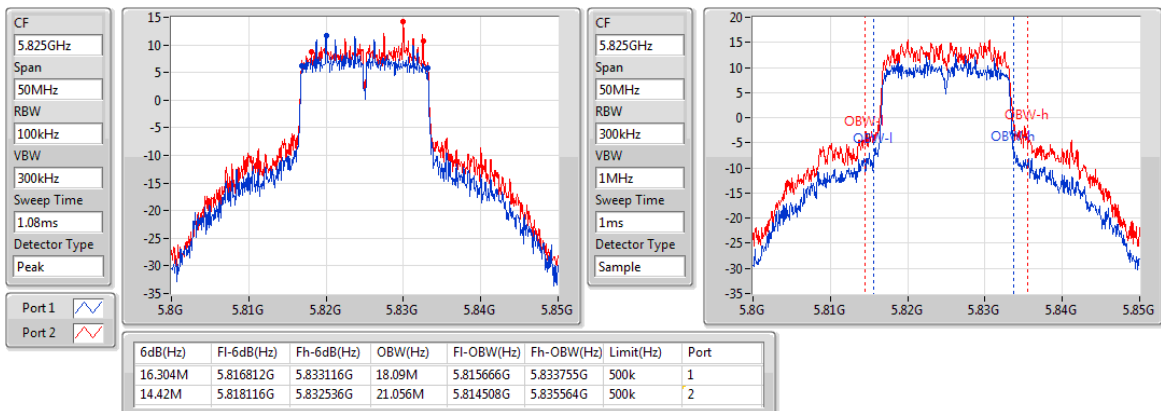
5785MHz



802.11a_Nss1,(6Mbps)_2TX

EBW

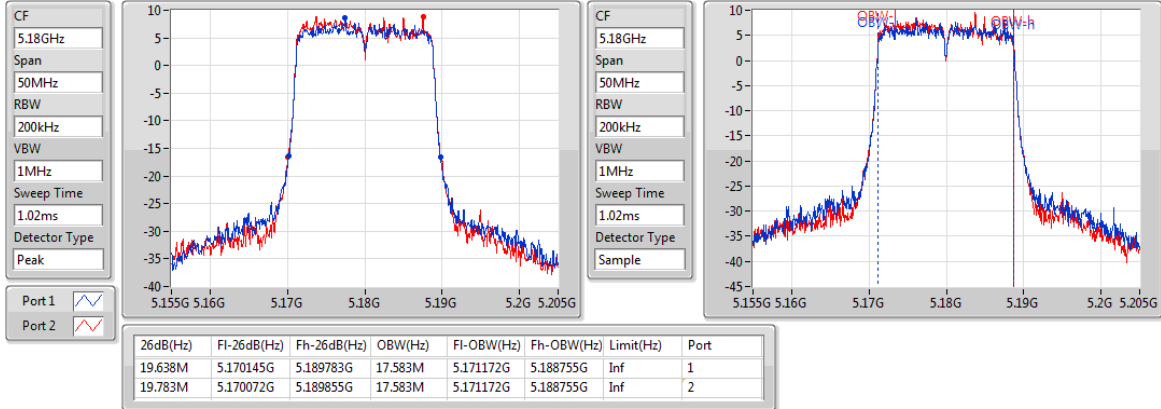
5825MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

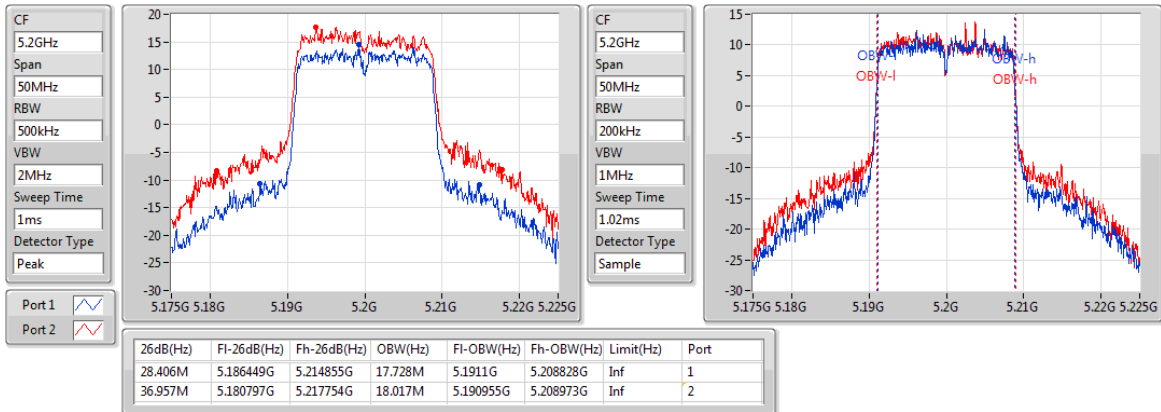
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802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

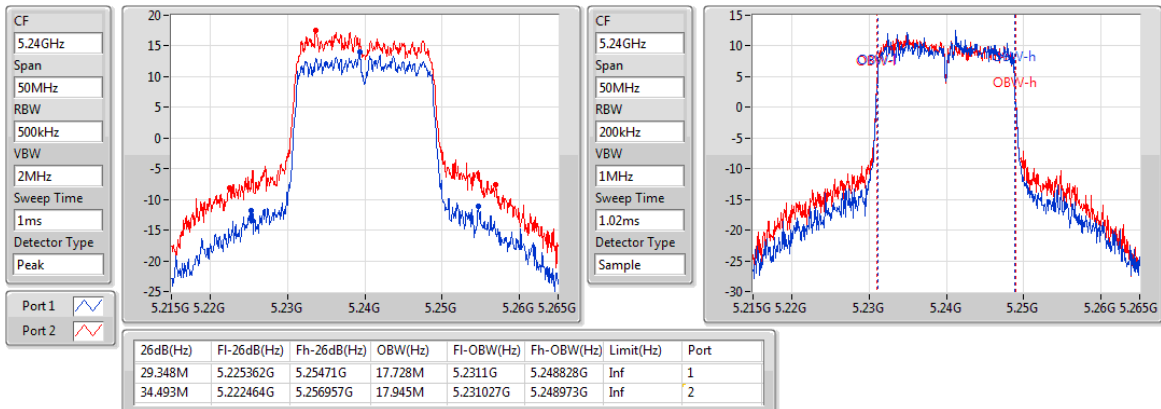
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802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

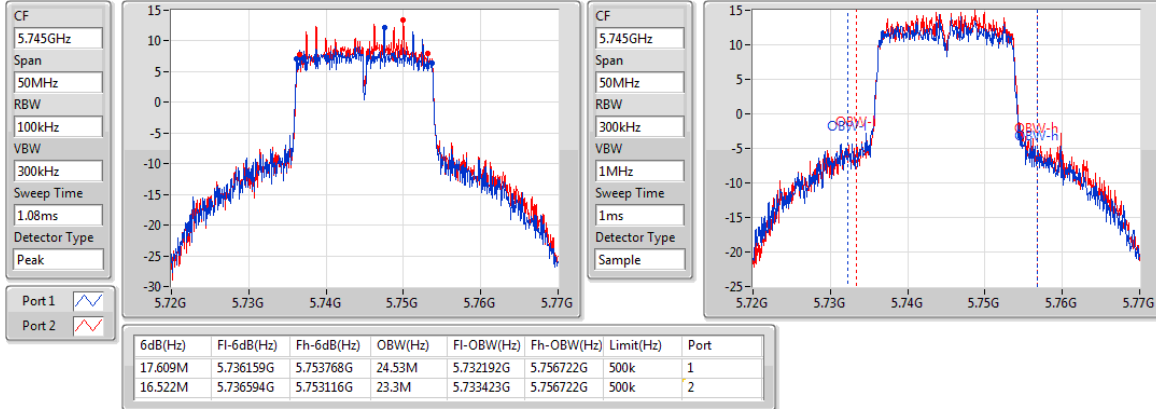
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802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

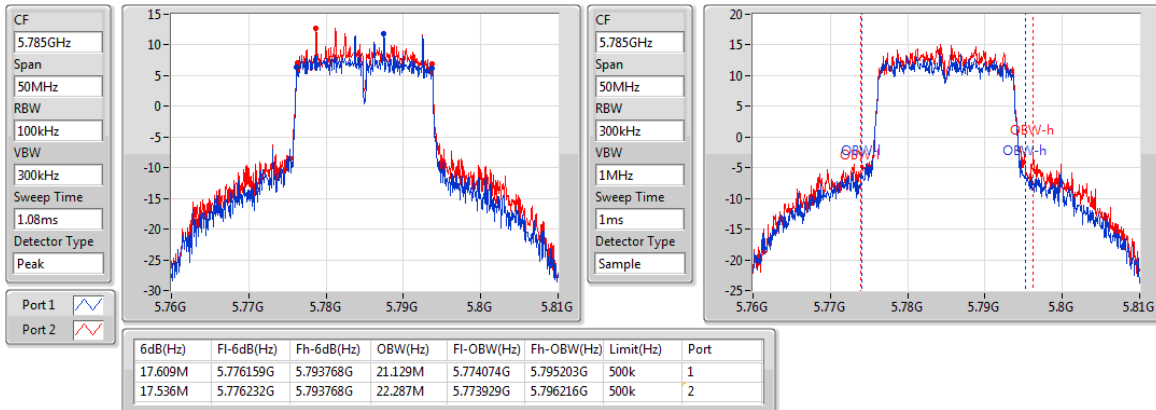
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802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

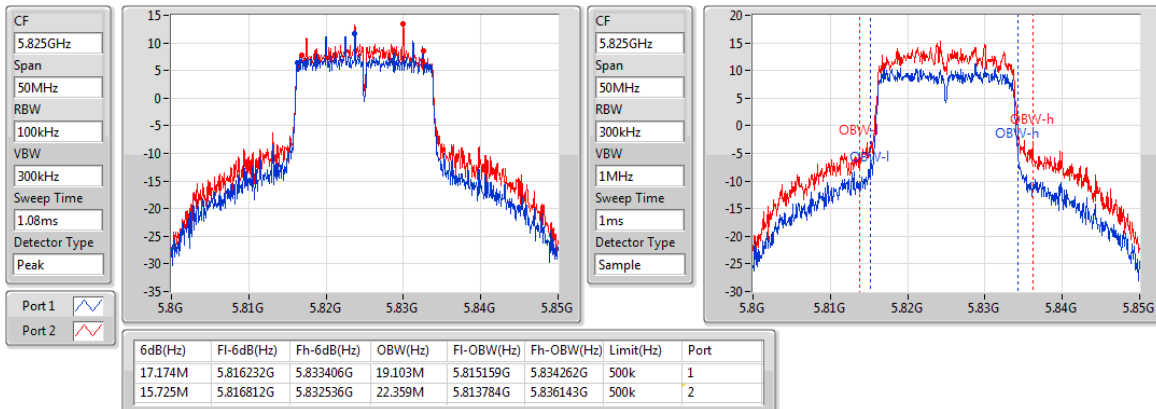
5785MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

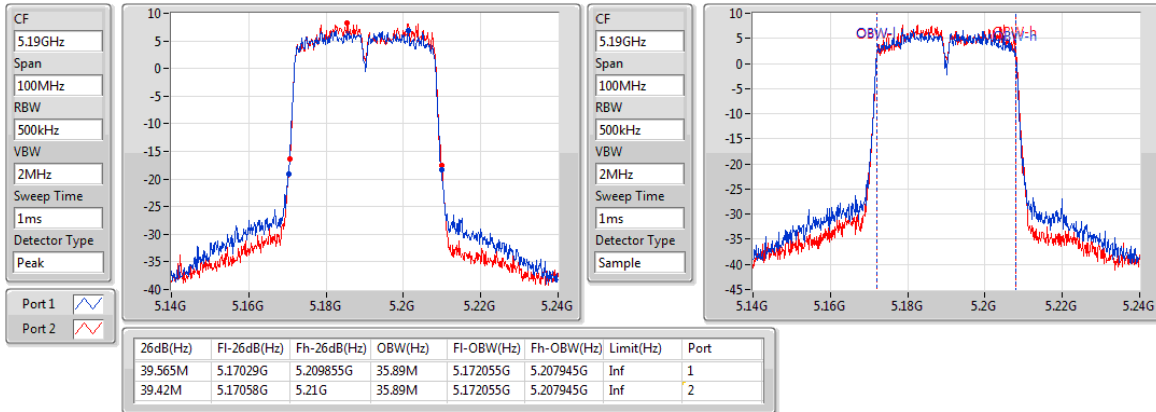
5825MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

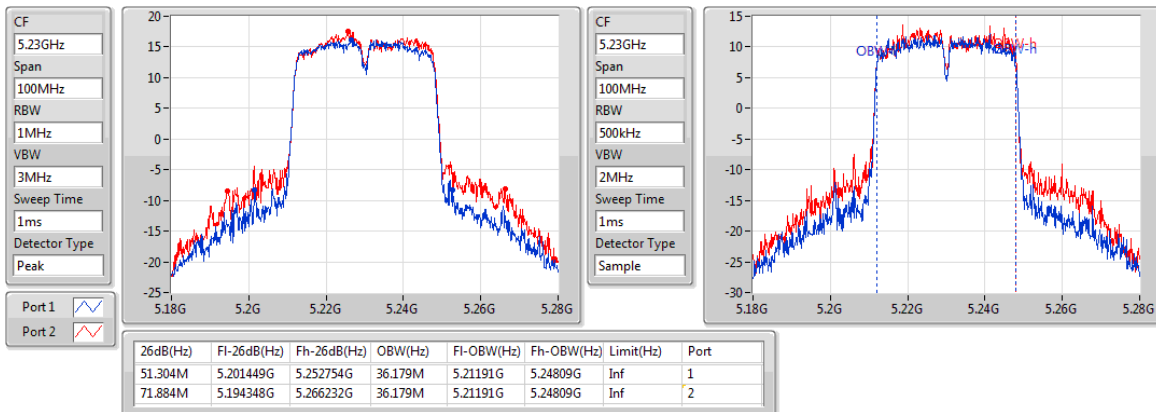
5190MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

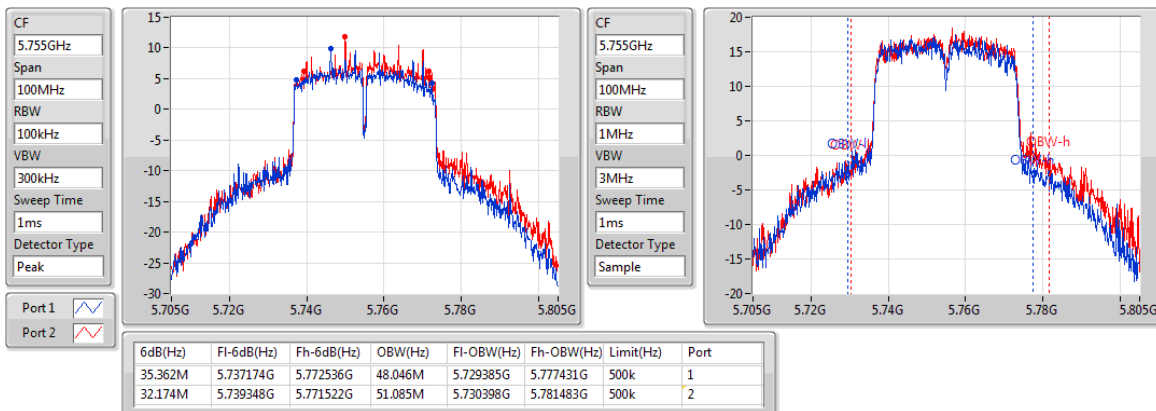
5230MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

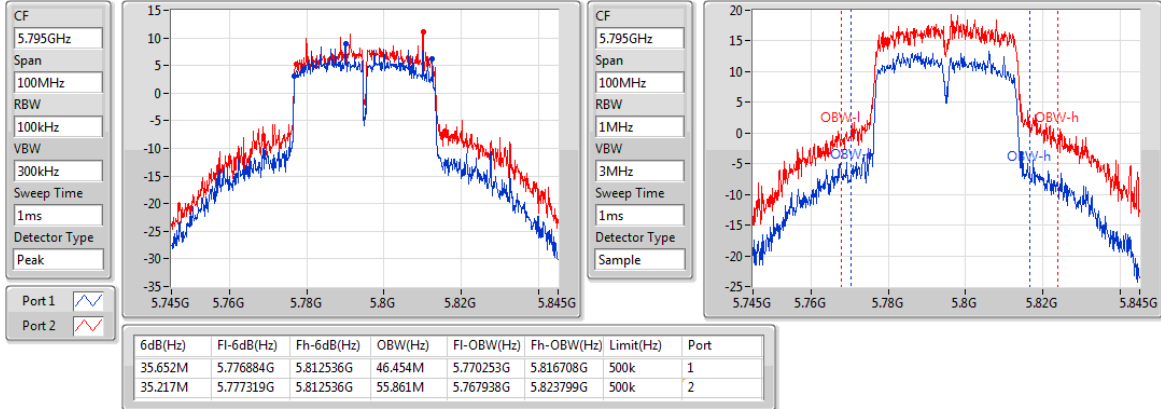
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802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

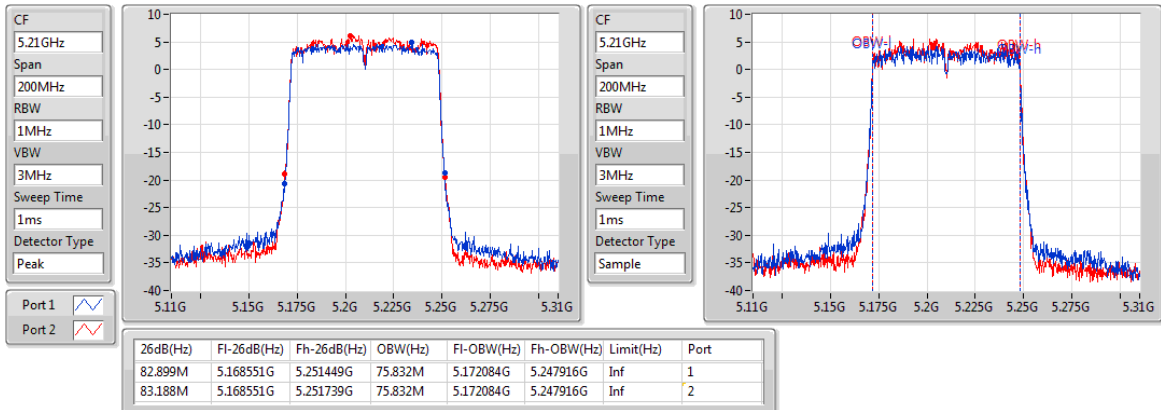
5795MHz



802.11ac VHT80_Nss1,(MCS0)_2TX

EBW

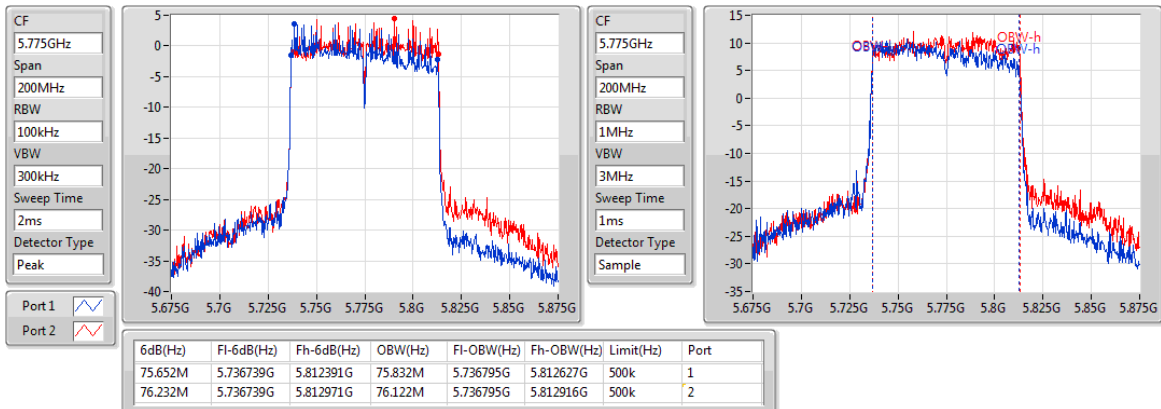
5210MHz



802.11ac VHT80_Nss1,(MCS0)_2TX

EBW

5775MHz



Beamforming mode

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	35.942M	18.452M	18M5D1D	19.058M	17.583M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	40.435M	36.324M	36M3D1D	38.696M	35.745M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	82.609M	75.832M	75M8D1D	82.319M	75.253M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	17.536M	18.886M	18M9D1D	16.449M	17.8M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	35.362M	47.323M	47M3D1D	33.913M	36.758M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	73.913M	75.543M	75M5D1D	72.754M	75.543M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Max-OBW = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Min-OBW = Minimum 99% occupied bandwidth;

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	20M	17.583M	19.058M	17.583M
5200MHz	Pass	Inf	24.565M	17.8M	35.29M	18.452M
5240MHz	Pass	Inf	35.942M	17.945M	21.087M	17.728M
5745MHz	Pass	500k	17.536M	18.452M	16.449M	18.379M
5785MHz	Pass	500k	17.391M	18.017M	16.667M	18.886M
5825MHz	Pass	500k	17.464M	17.8M	17.101M	18.307M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	38.696M	35.745M	39.275M	36.035M
5230MHz	Pass	Inf	39.42M	36.179M	40.435M	36.324M
5755MHz	Pass	500k	35.362M	39.797M	35.072M	45.586M
5795MHz	Pass	500k	35.072M	36.758M	33.913M	47.323M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	82.319M	75.253M	82.609M	75.832M
5775MHz	Pass	500k	72.754M	75.543M	73.913M	75.543M

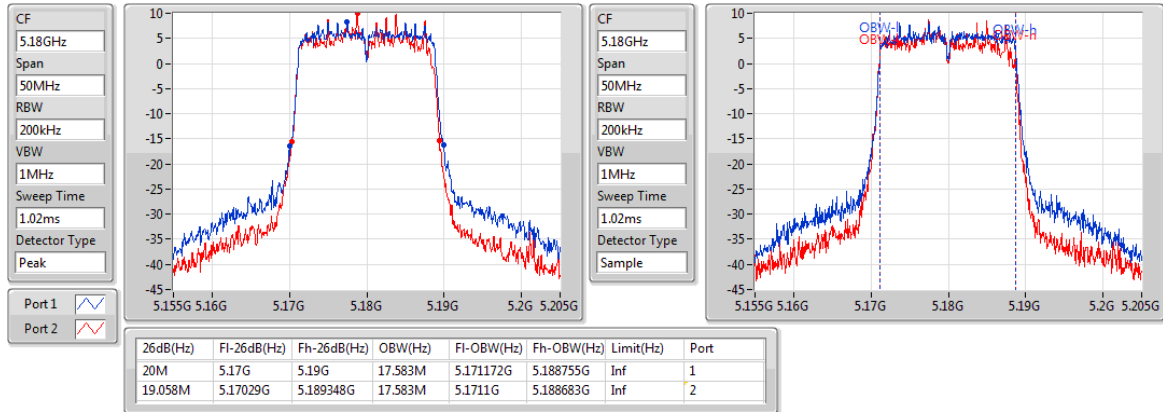
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

Port X-OBW = Port X 99% occupied bandwidth;

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

EBW

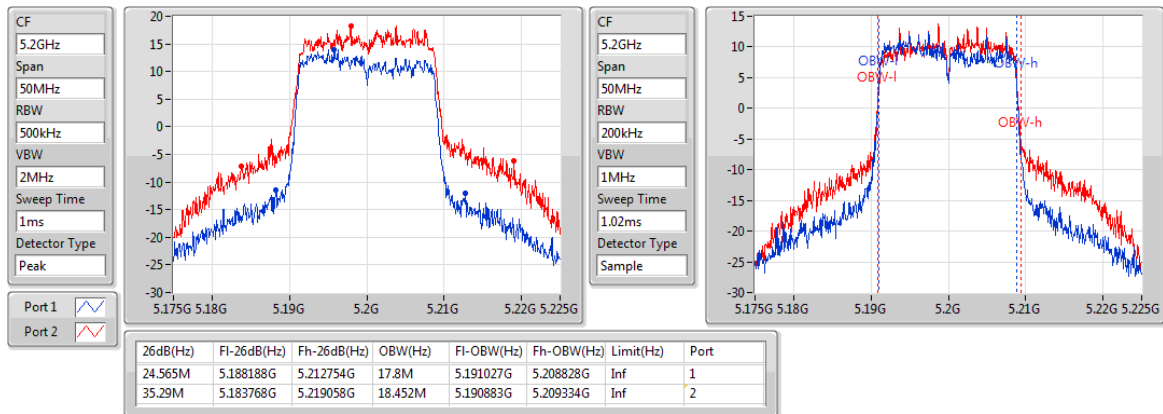
5180MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

EBW

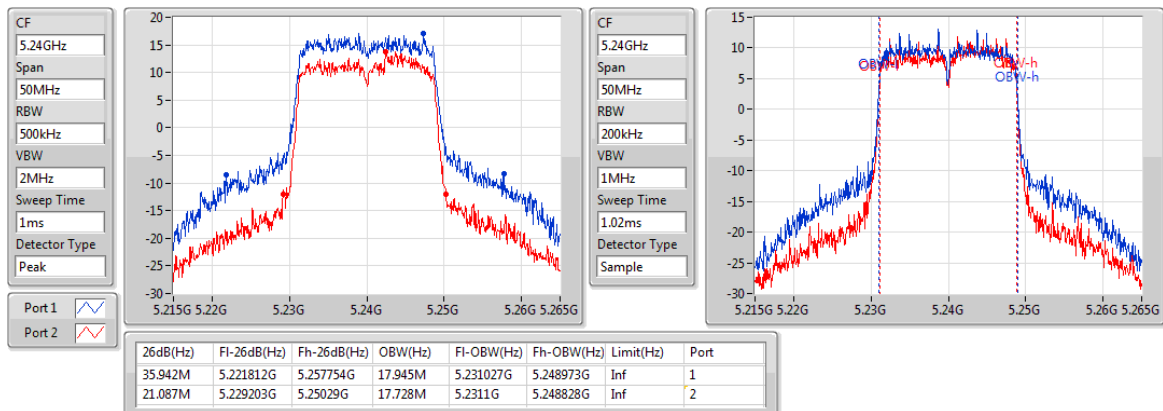
5200MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

EBW

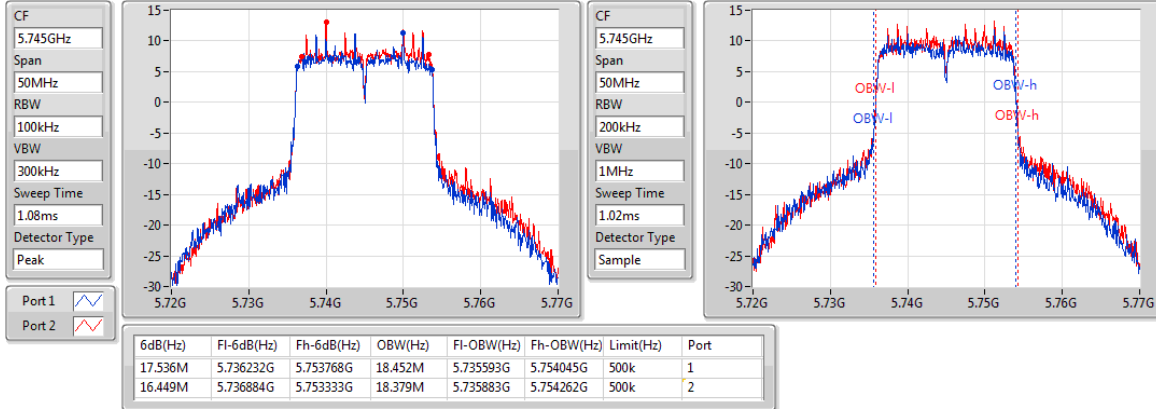
5240MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

EBW

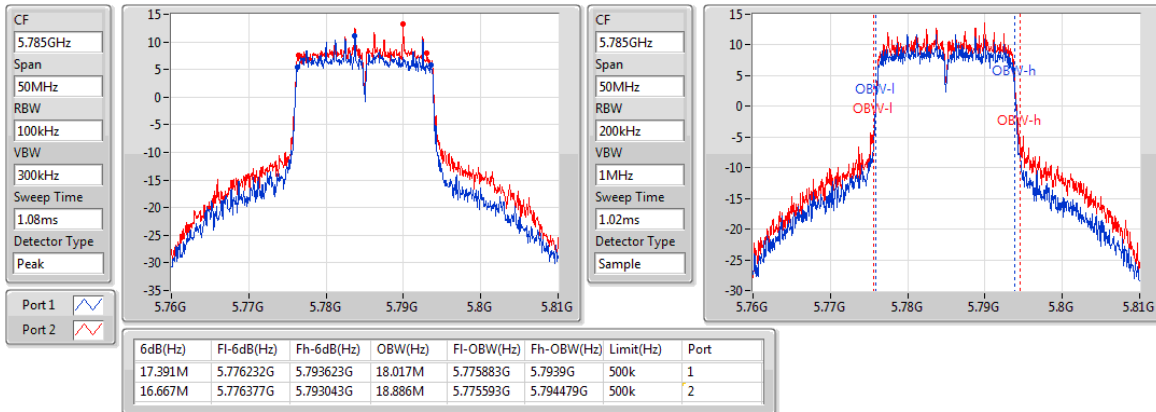
5745MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

EBW

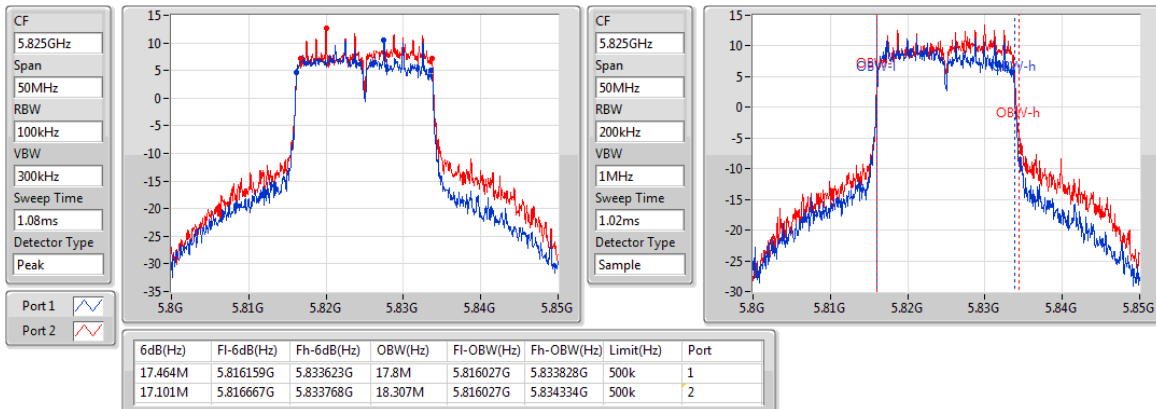
5785MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

EBW

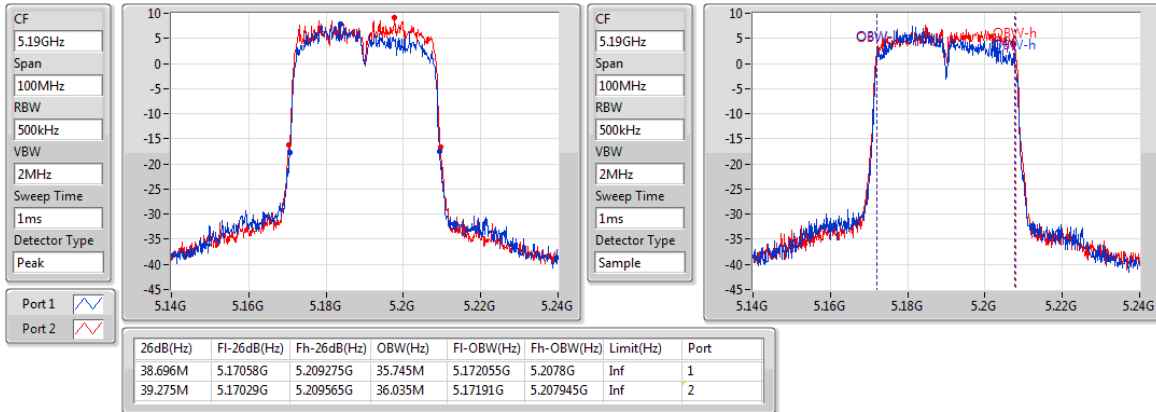
5825MHz



802.11ac VHT40-BF_Nss1,(MCS0)_2TX

EBW

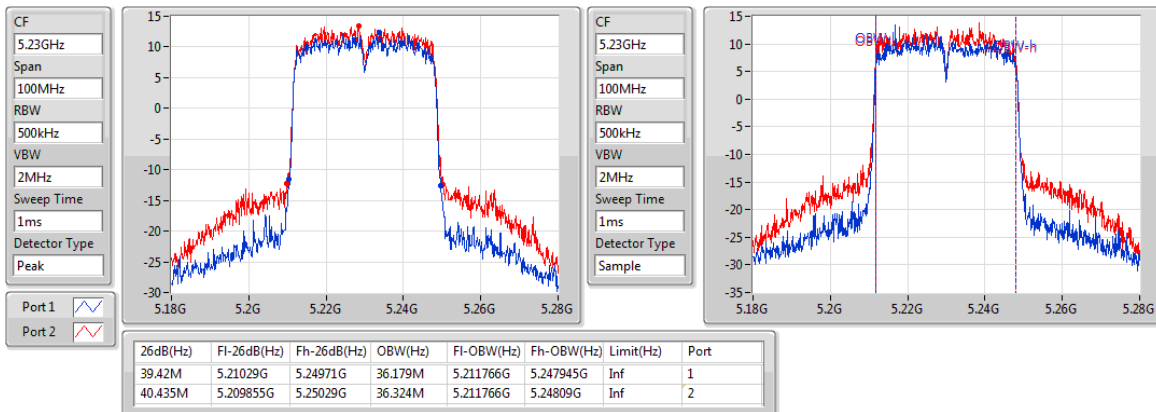
5190MHz



802.11ac VHT40-BF_Nss1,(MCS0)_2TX

EBW

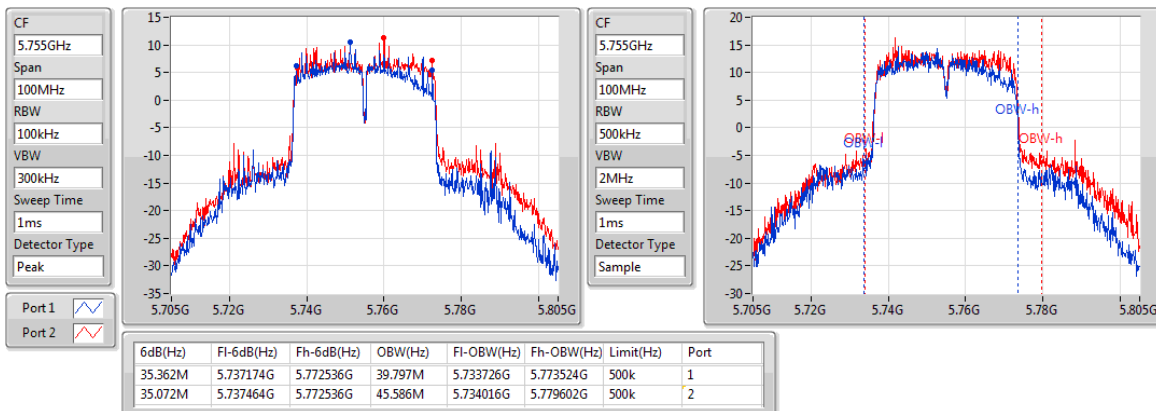
5230MHz



802.11ac VHT40-BF_Nss1,(MCS0)_2TX

EBW

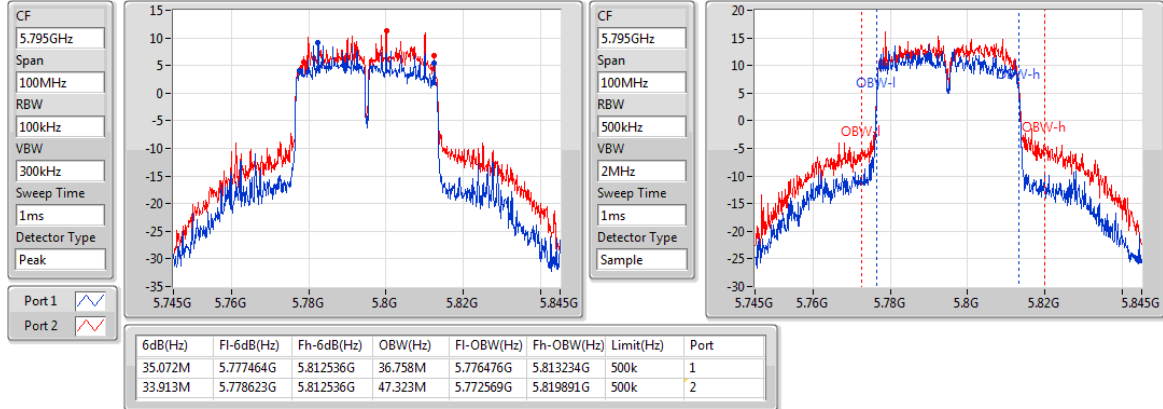
5755MHz



802.11ac VHT40-BF_Nss1,(MCS0)_2TX

EBW

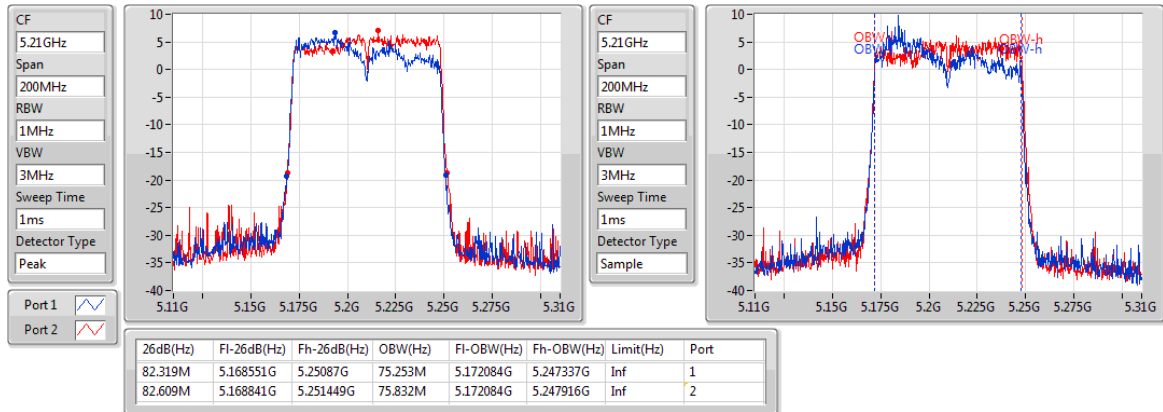
5795MHz



802.11ac VHT80-BF_Nss1,(MCS0)_2TX

EBW

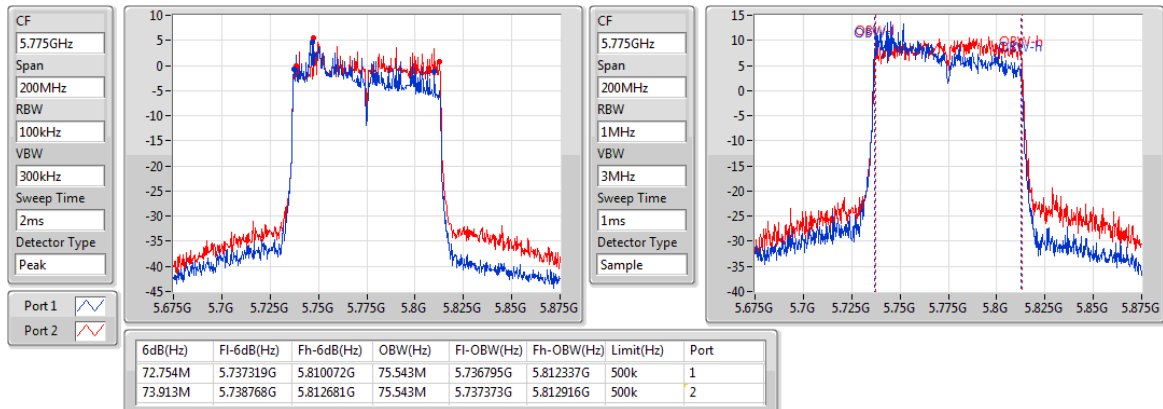
5210MHz



802.11ac VHT80-BF_Nss1,(MCS0)_2TX

EBW

5775MHz



3.3 RF Output Power

3.3.1 Limit of RF Output Power

Frequency band 5150-5250 MHz		
Operating Mode		Limit
☐	Outdoor access point	Conducted Power: 1 W The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm)
☒	Indoor access point	Conducted Power: 1 W
☐	Fixed point-to-point access points	Conducted Power: 1 W
☐	Client devices	Conducted Power: 250 mW

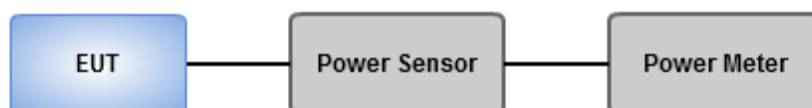
Frequency Band (MHz)	Limit
☒ 5725 ~ 5850	Conducted Power: 1 W

3.3.2 Test Procedures

Method PM-G (Measurement using a gated RF average power meter)

Measurements is performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

3.3.3 Test Setup



3.3.4 Test Result of Maximum Conducted Output Power

Ambient Condition	25°C / 67%	Tested By	Aska Huang
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Non-beamforming mode

Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	26.39	0.43551	28.89	0.77446
802.11ac VHT20_Nss1,(MCS0)_2TX	26.43	0.43954	28.93	0.78163
802.11ac VHT40_Nss1,(MCS0)_2TX	25.70	0.37154	28.20	0.66069
802.11ac VHT80_Nss1,(MCS0)_2TX	17.75	0.05957	20.25	0.10593
5.725-5.85GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	26.74	0.47206	29.24	0.83946
802.11ac VHT20_Nss1,(MCS0)_2TX	26.72	0.46989	29.22	0.83560
802.11ac VHT40_Nss1,(MCS0)_2TX	27.14	0.51761	29.64	0.92045
802.11ac VHT80_Nss1,(MCS0)_2TX	23.44	0.22080	25.94	0.39264

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	2.50	19.83	20.32	23.09	30.00	25.59	36.00
5200MHz	Pass	2.50	23.13	23.62	26.39	30.00	28.89	36.00
5240MHz	Pass	2.50	23.07	23.48	26.29	30.00	28.79	36.00
5745MHz	Pass	2.50	23.41	24.02	26.74	30.00	29.24	36.00
5785MHz	Pass	2.50	22.86	23.94	26.44	30.00	28.94	36.00
5825MHz	Pass	2.50	22.49	23.76	26.18	30.00	28.68	36.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	2.50	19.36	19.93	22.66	30.00	25.16	36.00
5200MHz	Pass	2.50	23.26	23.57	26.43	30.00	28.93	36.00
5240MHz	Pass	2.50	23.05	23.43	26.25	30.00	28.75	36.00
5745MHz	Pass	2.50	23.38	24.01	26.72	30.00	29.22	36.00
5785MHz	Pass	2.50	22.81	23.92	26.41	30.00	28.91	36.00
5825MHz	Pass	2.50	22.47	23.73	26.16	30.00	28.66	36.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	2.50	16.95	17.51	20.25	30.00	22.75	36.00
5230MHz	Pass	2.50	22.43	22.94	25.70	30.00	28.20	36.00
5755MHz	Pass	2.50	23.82	24.41	27.14	30.00	29.64	36.00
5795MHz	Pass	2.50	23.22	24.76	27.07	30.00	29.57	36.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz	Pass	2.50	14.43	15.02	17.75	30.00	20.25	36.00
5775MHz	Pass	2.50	19.86	20.93	23.44	30.00	25.94	36.00

DG = Directional Gain; **Port X** = Port X output power

Beamforming mode

Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	26.14	0.41115	31.65	1.46218
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	24.55	0.28510	30.06	1.01391
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	17.36	0.05445	22.87	0.19364
5.725-5.85GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	25.94	0.39264	31.45	1.39637
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	26.23	0.41976	31.74	1.49279
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	21.74	0.14928	27.25	0.53088

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	5.51	19.06	18.24	21.68	30.00	27.19	36.00
5200MHz	Pass	5.51	23.42	22.82	26.14	30.00	31.65	36.00
5240MHz	Pass	5.51	22.89	22.38	25.65	30.00	31.16	36.00
5745MHz	Pass	5.51	23.26	22.58	25.94	30.00	31.45	36.00
5785MHz	Pass	5.51	23.31	22.45	25.91	30.00	31.42	36.00
5825MHz	Pass	5.51	23.19	22.14	25.71	30.00	31.22	36.00
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	5.51	16.75	15.45	19.16	30.00	24.67	36.00
5230MHz	Pass	5.51	22.20	20.75	24.55	30.00	30.06	36.00
5755MHz	Pass	5.51	23.76	22.61	26.23	30.00	31.74	36.00
5795MHz	Pass	5.51	23.48	22.06	25.84	30.00	31.35	36.00
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz	Pass	5.51	14.83	13.81	17.36	30.00	22.87	36.00
5775MHz	Pass	5.51	19.21	18.19	21.74	30.00	27.25	36.00

DG = Directional Gain = $2.5 + 10 \cdot \log(2/1) = 5.51$ dBi

Port X = Port X output power

3.4 Peak Power Spectral Density

3.4.1 Limit of Peak Power Spectral Density

Frequency band 5150-5250 MHz		
Operating Mode		Limit
☐	Outdoor access point	17 dBm / MHz
☒	Indoor access point	17 dBm / MHz
☐	Fixed point-to-point access points	17 dBm / MHz
☐	Client devices	11 dBm / MHz

Frequency Band (MHz)		Limit
☒	5725 ~ 5850	30 dBm /500 kHz

3.4.2 Test Procedures

For 5150 ~ 5250 MHz

Duty cycle $\geq 98\%$

1. Set RBW = 1 MHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS.
2. Trace average 100 traces.
3. Use the peak marker function to determine the maximum amplitude level.

Duty cycle $< 98\%$

1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = RMS.
2. Set sweep time $\geq 10 \times (\text{number of points in sweep}) \times (\text{total on/off period of the transmitted signal})$.
3. Perform a single sweep.
4. Use the peak marker function to determine the maximum amplitude level.
5. Add $10 \log(1/x)$, where x is the duty cycle.

For 5725 ~ 5850 MHz

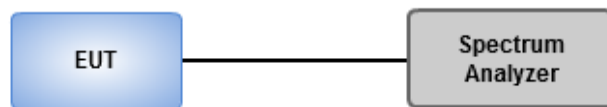
Duty cycle $\geq 98\%$

1. Set RBW = 500 kHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS.
2. Trace average 100 traces.
3. Use the peak marker function to determine the maximum amplitude level.

Duty cycle $< 98\%$

1. Set RBW = 500 kHz, VBW = 3 MHz, Detector = RMS.
2. Set sweep time $\geq 10 \times (\text{number of points in sweep}) \times (\text{total on/off period of the transmitted signal})$.
3. Perform a single sweep.
4. Use the peak marker function to determine the maximum amplitude level.
5. Add $10 \log(1/x)$, where x is the duty cycle.

3.4.3 Test Setup



3.4.4 Test Result of Peak Power Spectral Density

Ambient Condition	25°C / 67%	Tested By	Aska Huang
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Non-beamforming mode

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	13.43	18.94
802.11ac VHT20_Nss1,(MCS0)_2TX	13.26	18.77
802.11ac VHT40_Nss1,(MCS0)_2TX	9.88	15.39
802.11ac VHT80_Nss1,(MCS0)_2TX	-1.57	3.94
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	12.21	17.72
802.11ac VHT20_Nss1,(MCS0)_2TX	12.21	17.72
802.11ac VHT40_Nss1,(MCS0)_2TX	9.54	15.05
802.11ac VHT80_Nss1,(MCS0)_2TX	2.73	8.24

RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

Result

Mode	Result	DG (dBi)	Port 1 (dBm/R BW)	Port 2 (dBm/R BW)	PD (dBm/R BW)	PD Limit (dBm/R BW)	EIRP PD (dBm/R BW)	EIRP PD Limit (dBm/R BW)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	5.51	7.06	7.83	10.23	17.00	15.74	23.00
5200MHz	Pass	5.51	10.11	11.07	13.43	17.00	18.94	23.00
5240MHz	Pass	5.51	9.86	10.76	13.21	17.00	18.72	23.00
5745MHz	Pass	5.51	8.93	9.76	12.21	30.00	17.72	36.00
5785MHz	Pass	5.51	8.78	10.06	12.11	30.00	17.62	36.00
5825MHz	Pass	5.51	8.43	9.71	11.96	30.00	17.47	36.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	5.51	6.47	7.50	9.95	17.00	15.46	23.00
5200MHz	Pass	5.51	9.87	10.94	13.26	17.00	18.77	23.00
5240MHz	Pass	5.51	10.14	10.85	13.23	17.00	18.74	23.00
5745MHz	Pass	5.51	8.64	10.04	12.21	30.00	17.72	36.00
5785MHz	Pass	5.51	8.49	9.94	12.16	30.00	17.67	36.00
5825MHz	Pass	5.51	8.30	9.96	12.01	30.00	17.52	36.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	5.51	0.60	1.80	4.24	17.00	9.75	23.00
5230MHz	Pass	5.51	6.28	7.39	9.88	17.00	15.39	23.00
5755MHz	Pass	5.51	6.19	7.12	9.54	30.00	15.05	36.00
5795MHz	Pass	5.51	5.62	7.24	9.35	30.00	14.86	36.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz	Pass	5.51	-5.21	-3.97	-1.57	17.00	3.94	23.00
5775MHz	Pass	5.51	-0.45	0.61	2.73	30.00	8.24	36.00

DG = Directional Gain = $2.5 + 10 \cdot \log(2/1) = 5.51$ dBi

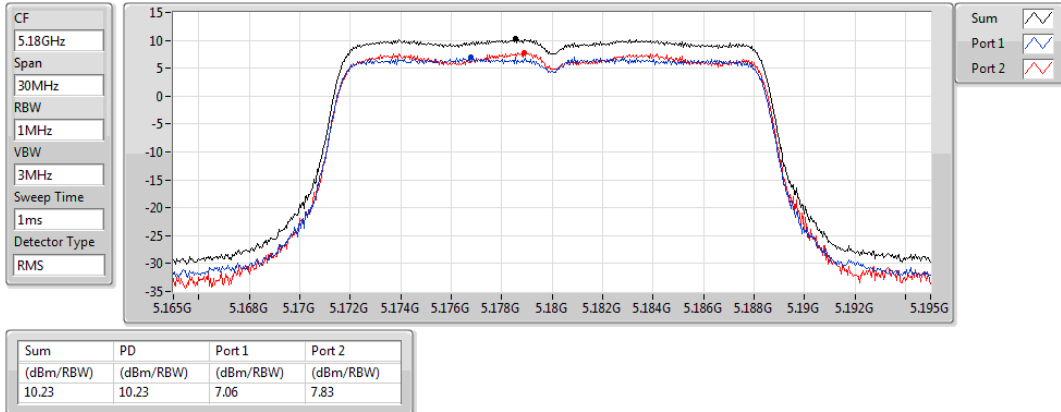
RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port Xpower density;

802.11a_Nss1,(6Mbps)_2TX

PSD

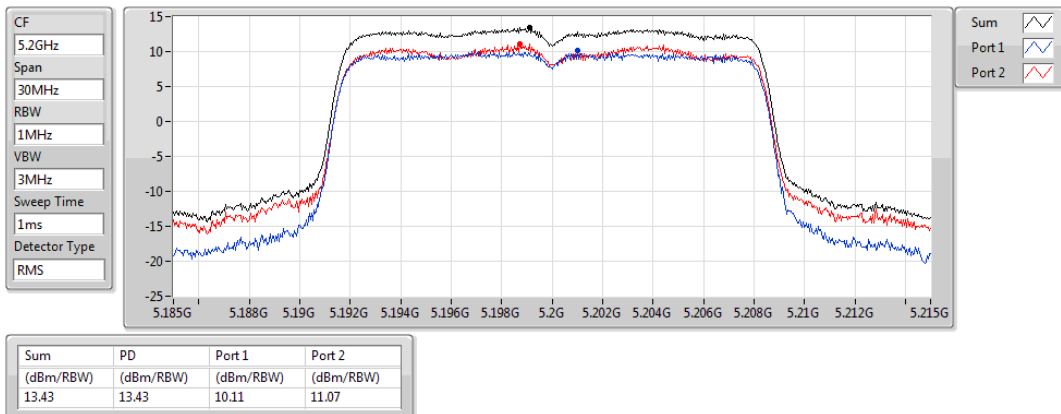
5180MHz



802.11a_Nss1,(6Mbps)_2TX

PSD

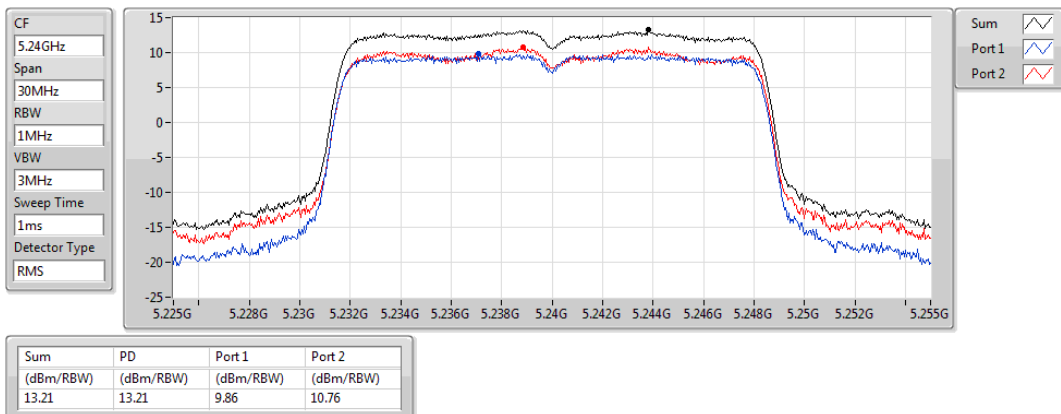
5200MHz



802.11a_Nss1,(6Mbps)_2TX

PSD

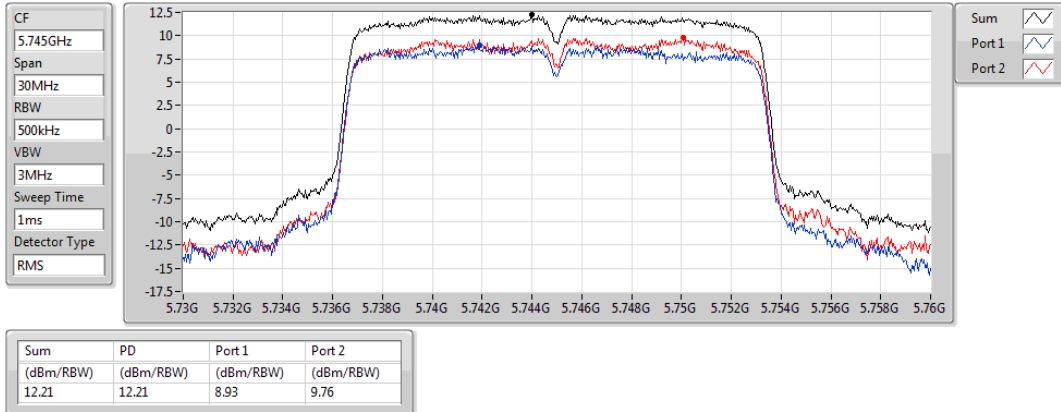
5240MHz



802.11a_Nss1,(6Mbps)_2TX

PSD

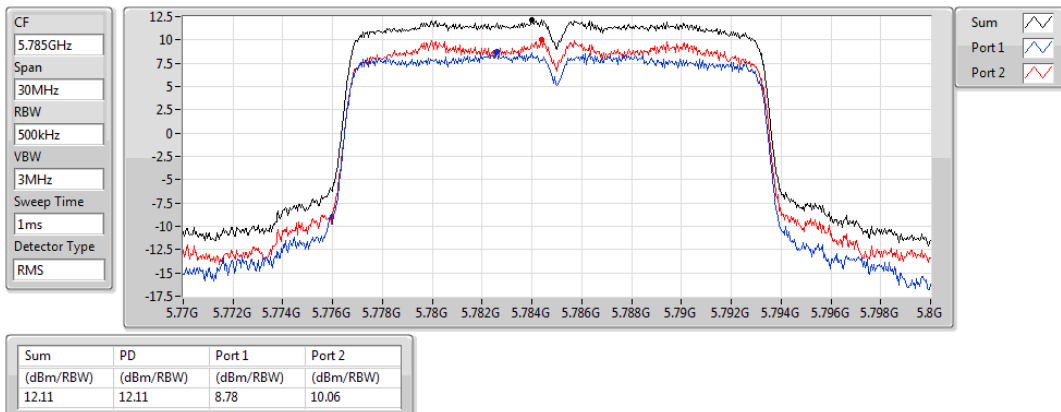
5745MHz



802.11a_Nss1,(6Mbps)_2TX

PSD

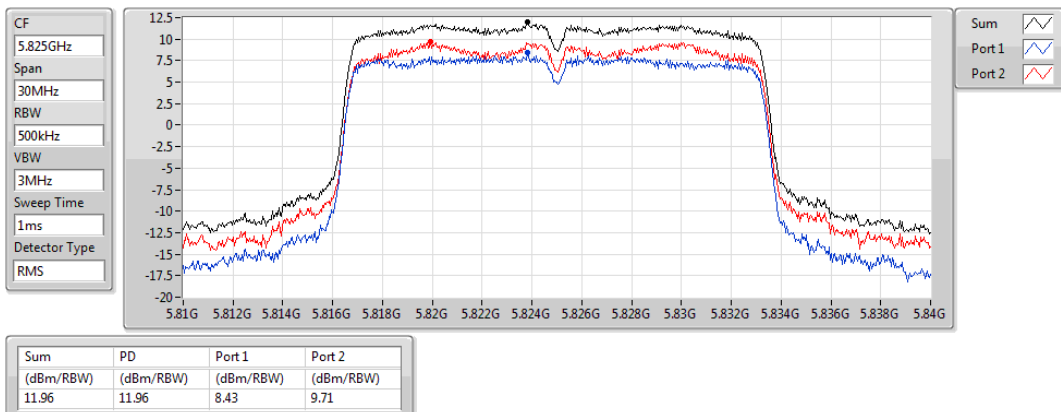
5785MHz



802.11a_Nss1,(6Mbps)_2TX

PSD

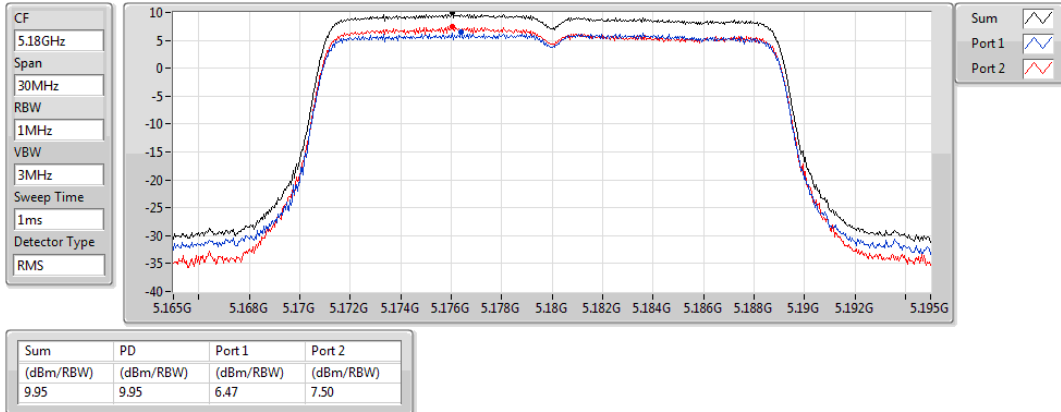
5825MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

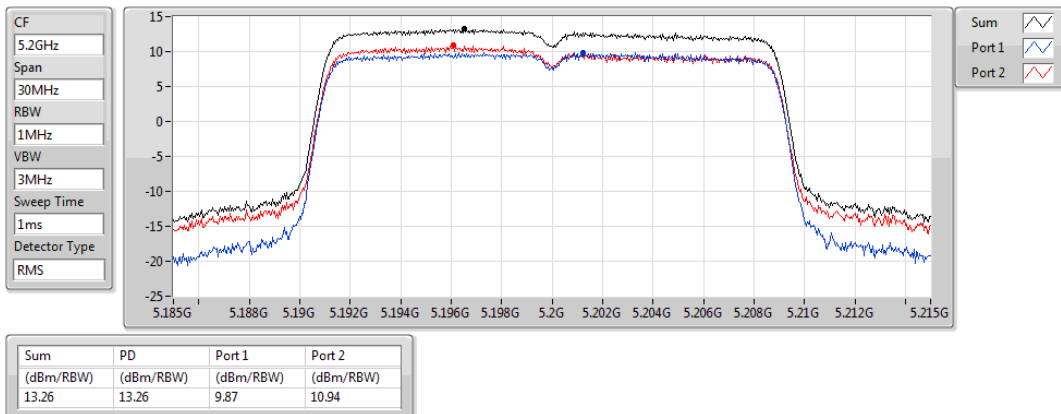
5180MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

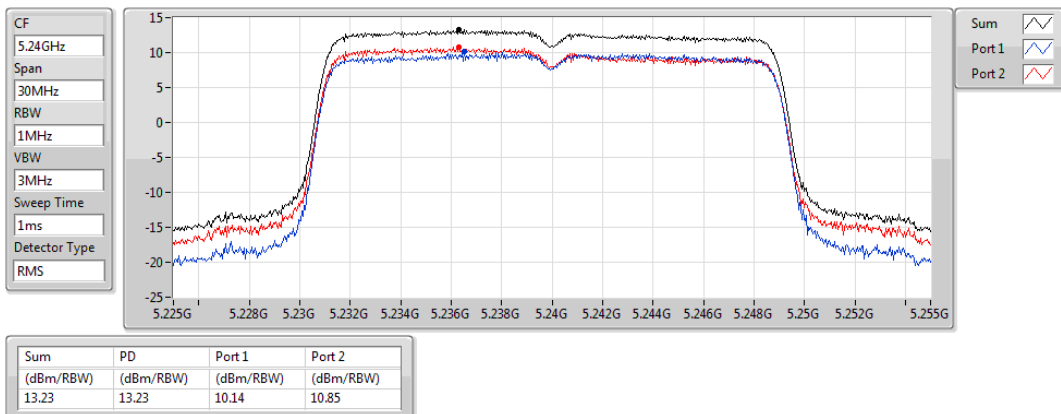
5200MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

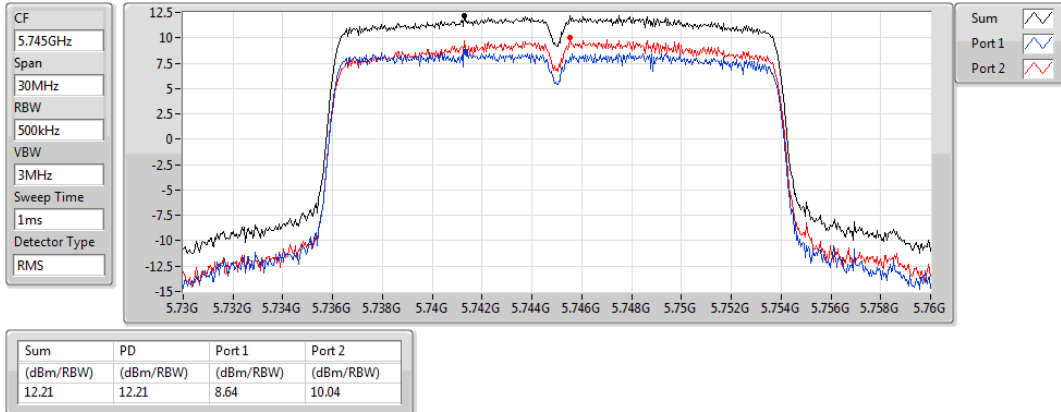
5240MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

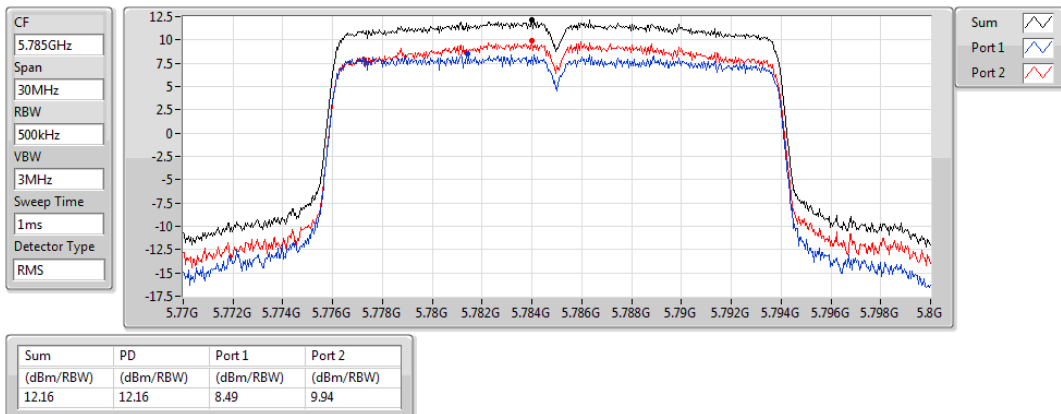
5745MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

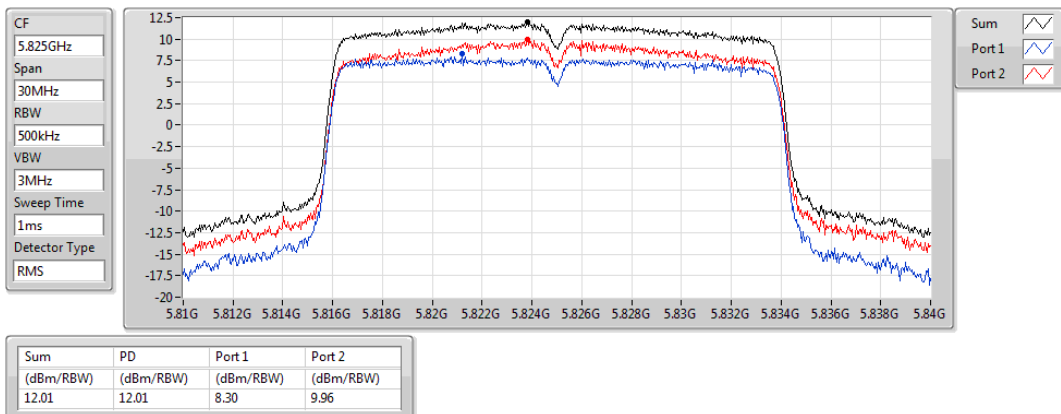
5785MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

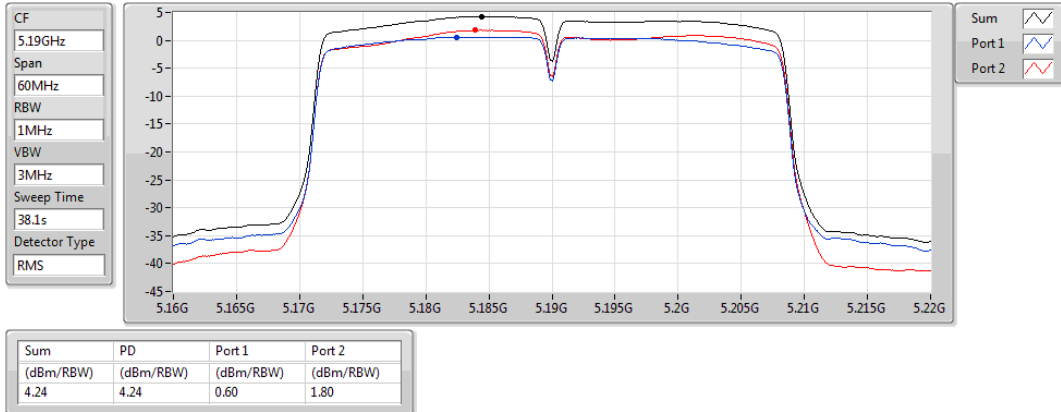
5825MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

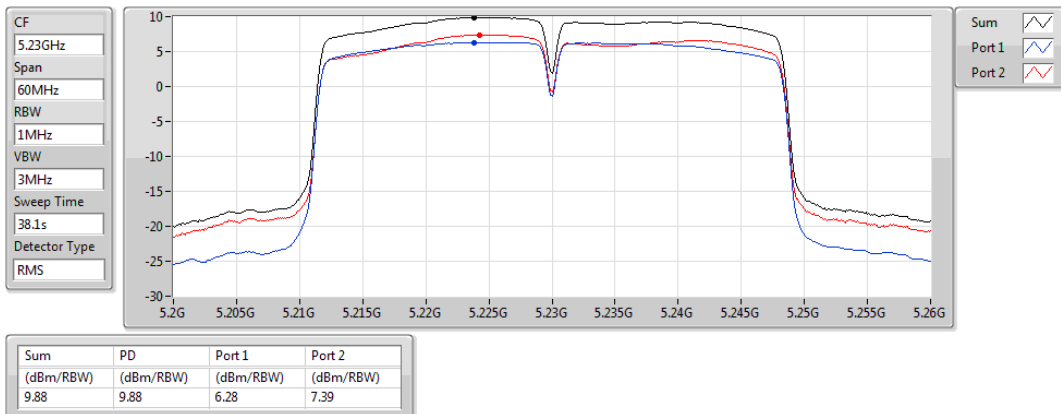
5190MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

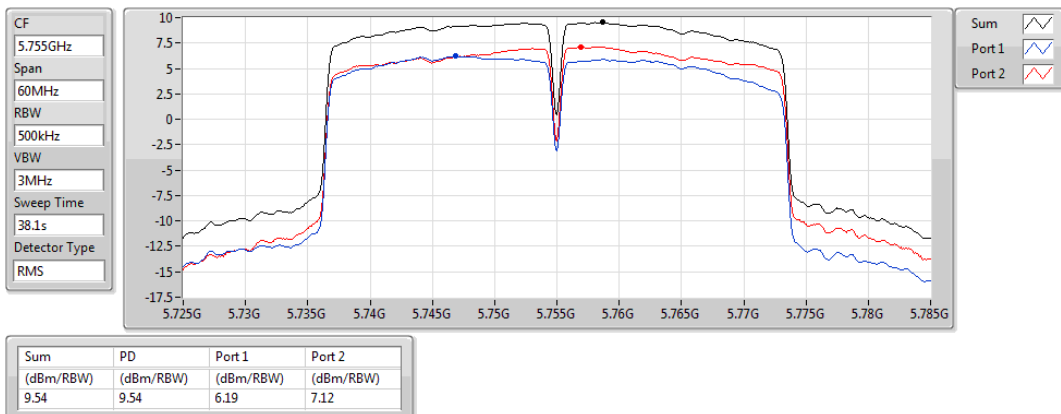
5230MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

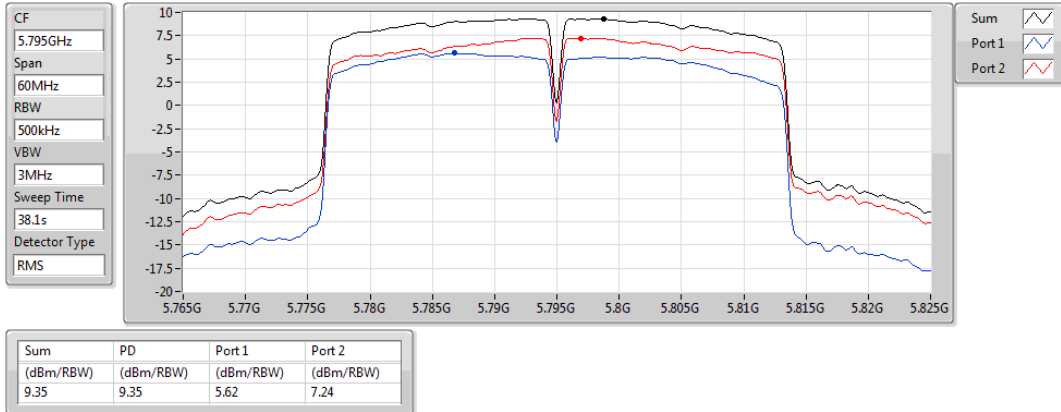
5755MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

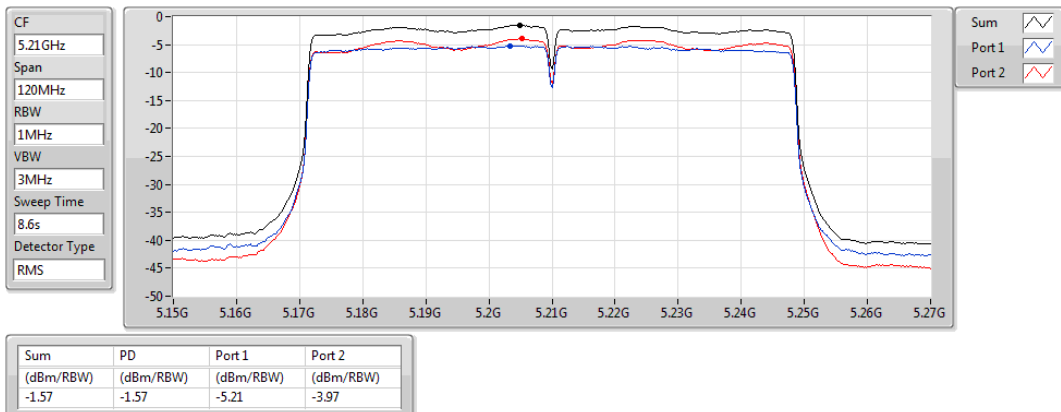
5795MHz



802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

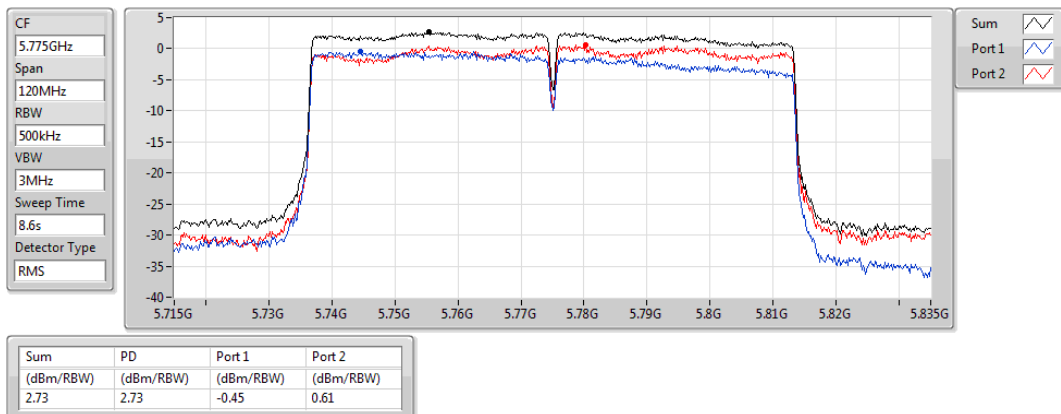
5210MHz



802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

5775MHz



Beamforming mode

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	12.70	18.21
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	8.60	14.11
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-1.49	4.02
5.725-5.85GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	10.79	16.30
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	8.98	14.49
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	1.47	6.98

RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

Result

Mode	Result	DG (dBi)	Port 1 (dBm/R BW)	Port 2 (dBm/R BW)	PD (dBm/R BW)	PD Limit (dBm/R BW)	EIRP PD (dBm/R BW)	EIRP PD Limit (dBm/R BW)
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	5.51	5.23	6.46	8.42	17.00	13.93	23.00
5200MHz	Pass	5.51	10.01	10.42	12.70	17.00	18.21	23.00
5240MHz	Pass	5.51	8.67	9.85	12.22	17.00	17.73	23.00
5745MHz	Pass	5.51	7.85	8.34	10.79	30.00	16.30	36.00
5785MHz	Pass	5.51	7.27	8.52	10.77	30.00	16.28	36.00
5825MHz	Pass	5.51	7.29	8.47	10.50	30.00	16.01	36.00
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	5.51	0.69	0.66	3.20	17.00	8.71	23.00
5230MHz	Pass	5.51	5.35	6.13	8.60	17.00	14.11	23.00
5755MHz	Pass	5.51	5.92	6.33	8.98	30.00	14.49	36.00
5795MHz	Pass	5.51	4.85	6.59	8.39	30.00	13.90	36.00
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz	Pass	5.51	-3.48	-3.79	-1.49	17.00	4.02	23.00
5775MHz	Pass	5.51	-1.14	-0.85	1.47	30.00	6.98	36.00

DG = Directional Gain = $2.5 + 10 \cdot \log(2/1) = 5.51$ dBi

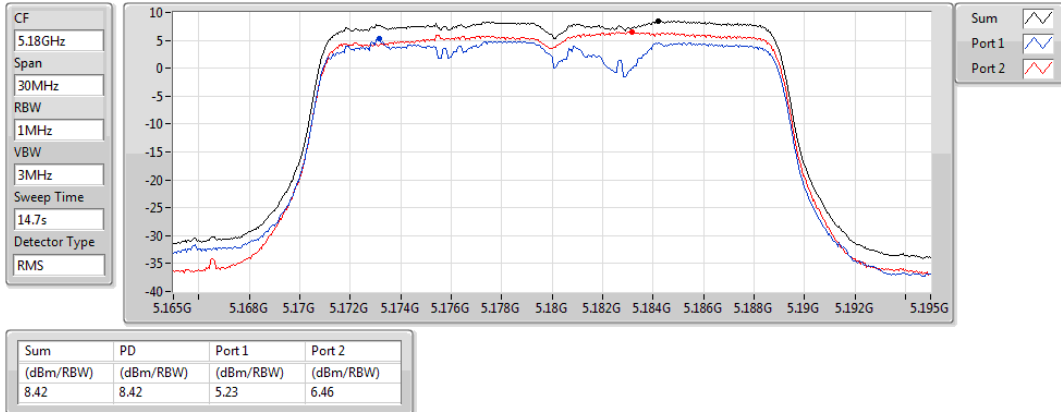
RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port Xpower density;

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

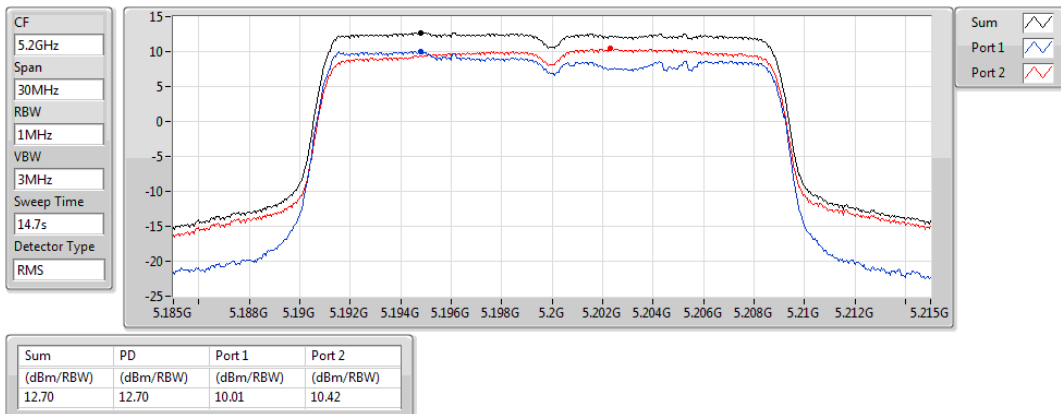
5180MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

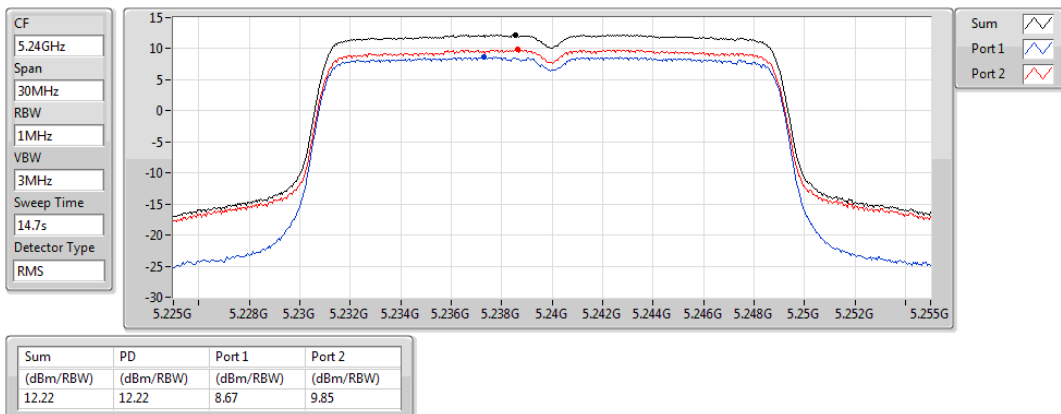
5200MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

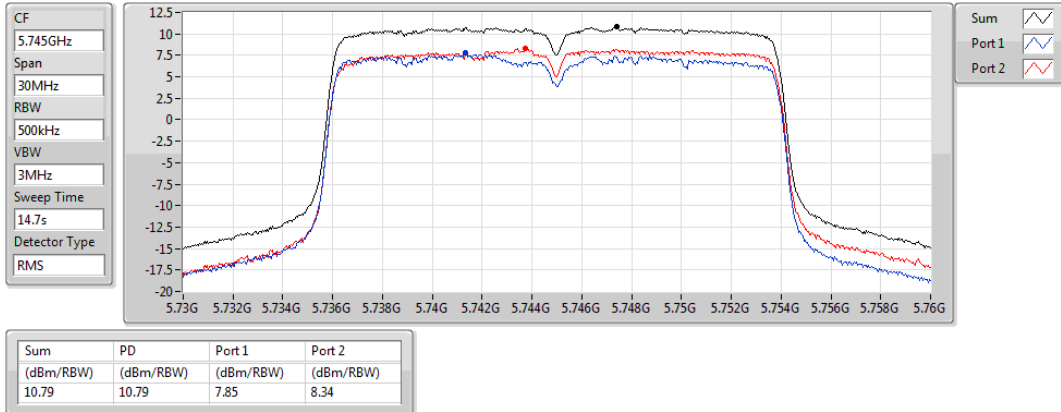
5240MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

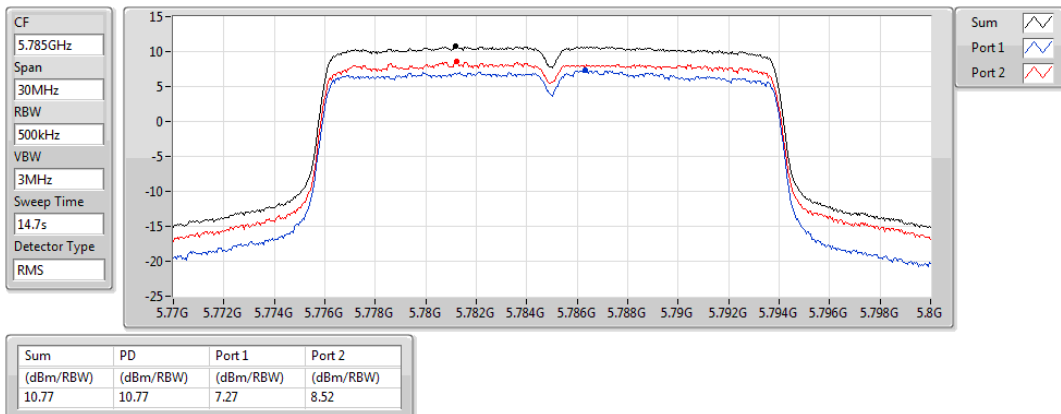
5745MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

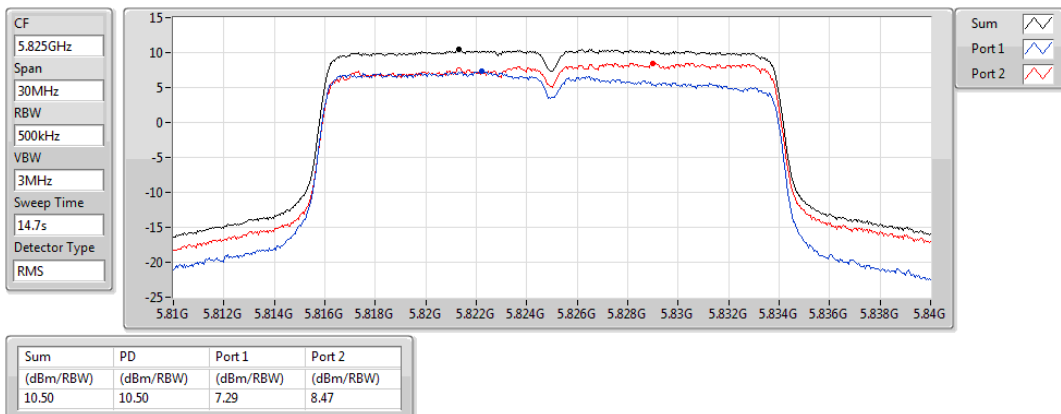
5785MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

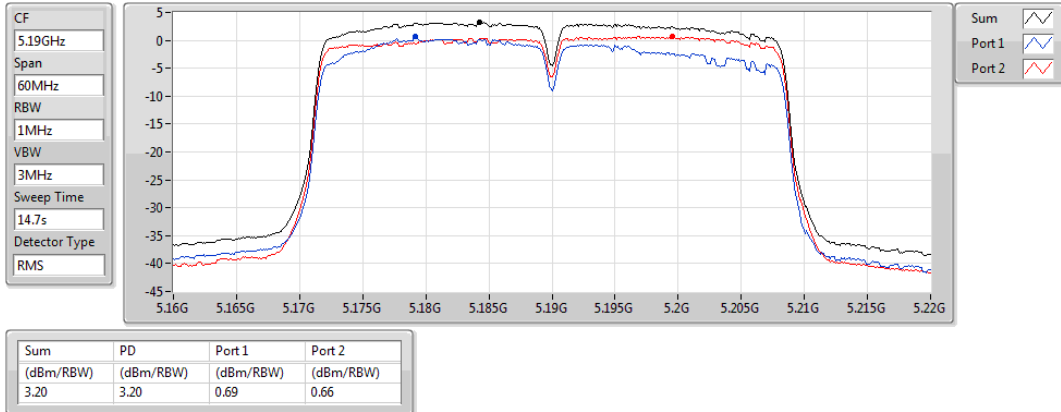
5825MHz



802.11ac VHT40-BF_Nss1,(MCS0)_2TX

PSD

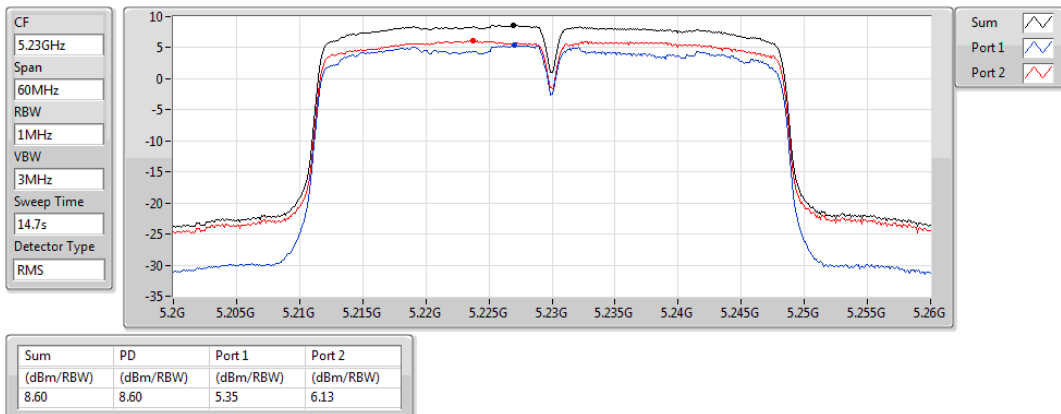
5190MHz



802.11ac VHT40-BF_Nss1,(MCS0)_2TX

PSD

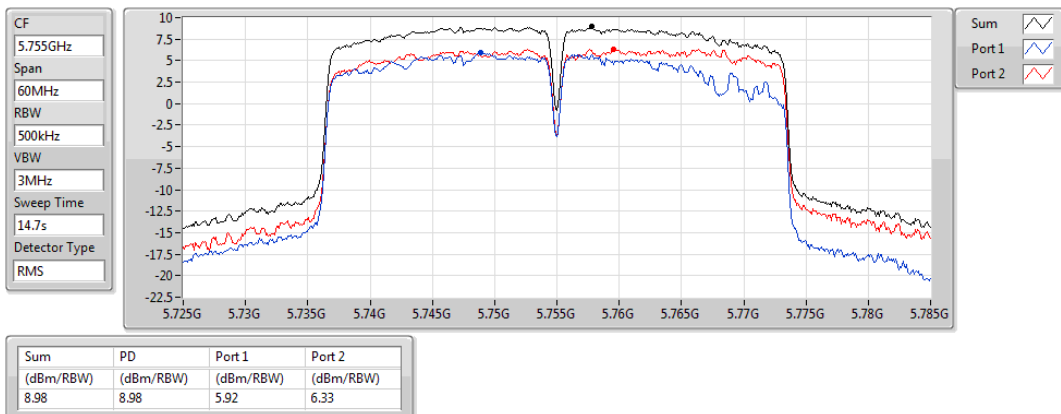
5230MHz



802.11ac VHT40-BF_Nss1,(MCS0)_2TX

PSD

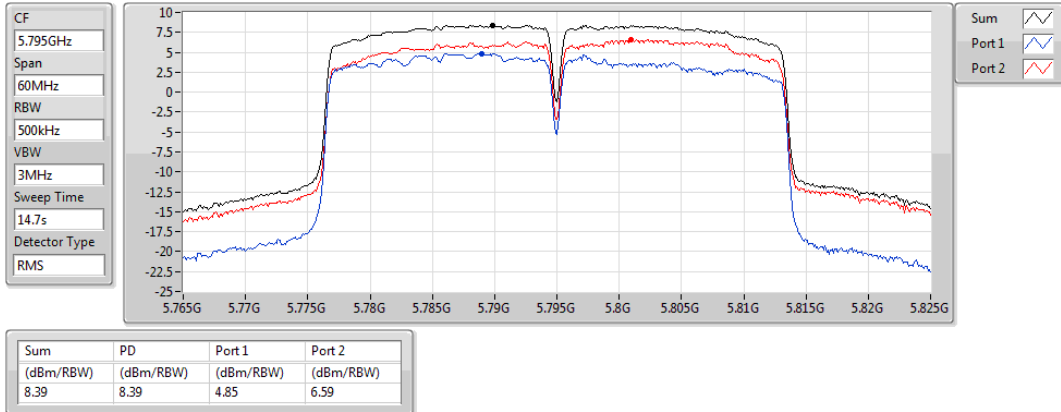
5755MHz



802.11ac VHT40-BF_Nss1,(MCS0)_2TX

PSD

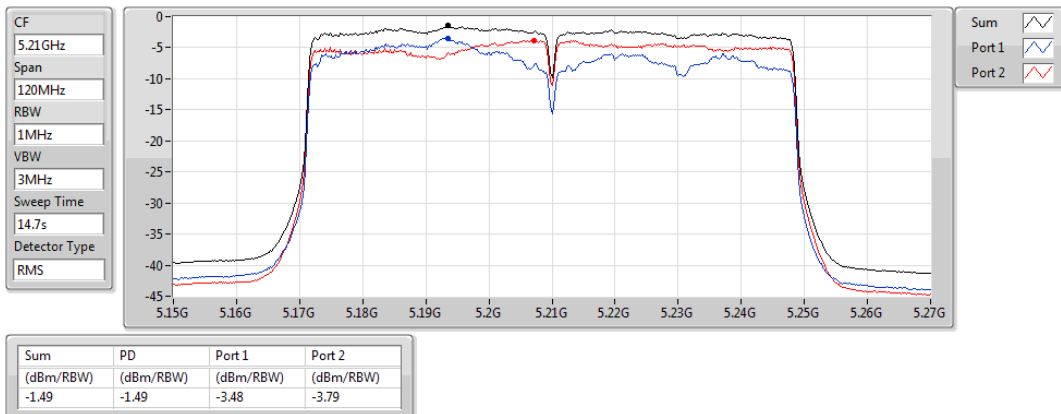
5795MHz



802.11ac VHT80-BF_Nss1,(MCS0)_2TX

PSD

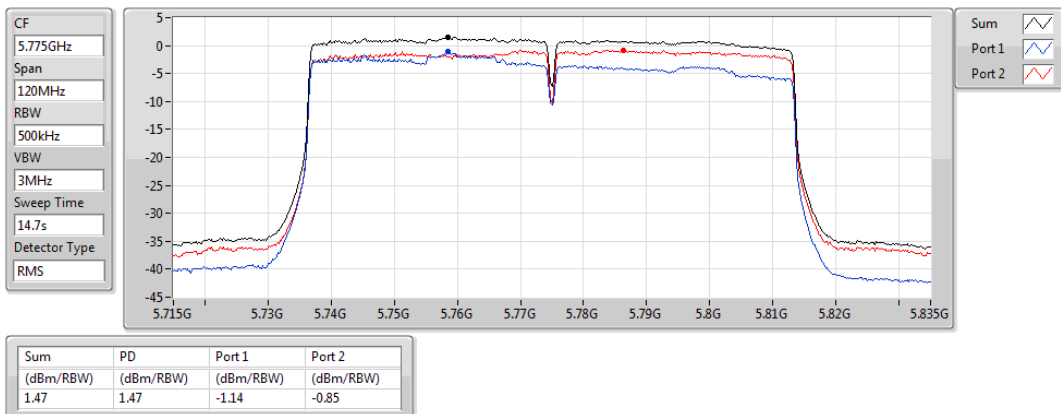
5210MHz



802.11ac VHT80-BF_Nss1,(MCS0)_2TX

PSD

5775MHz



3.5 Transmitter Radiated and Band Edge Emissions

3.5.1 Limit of Transmitter Radiated and Band Edge Emissions

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1:
Qusai-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit

Note 2:
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.850 GHz	All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Note 1: Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

3.5.2 Test Procedures

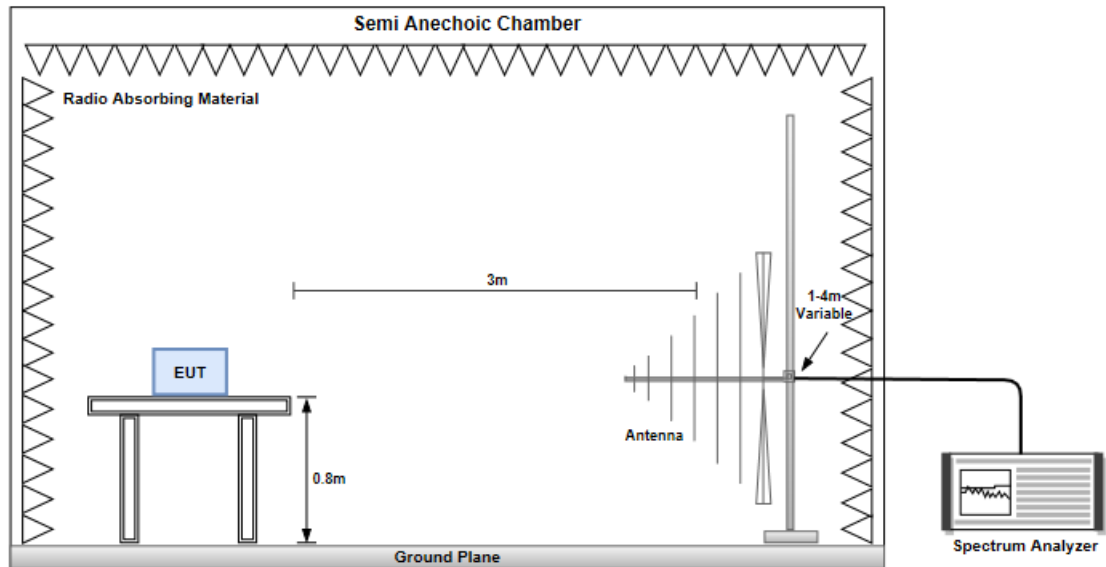
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

Note:

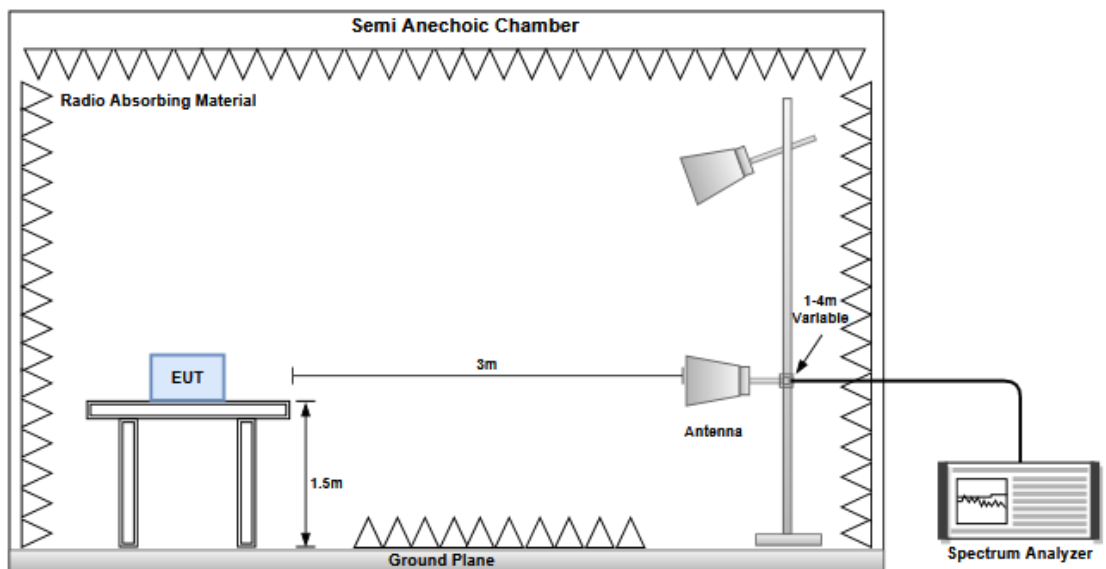
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above 1GHz.

3.5.3 Test Setup

Radiated Emissions below 1 GHz

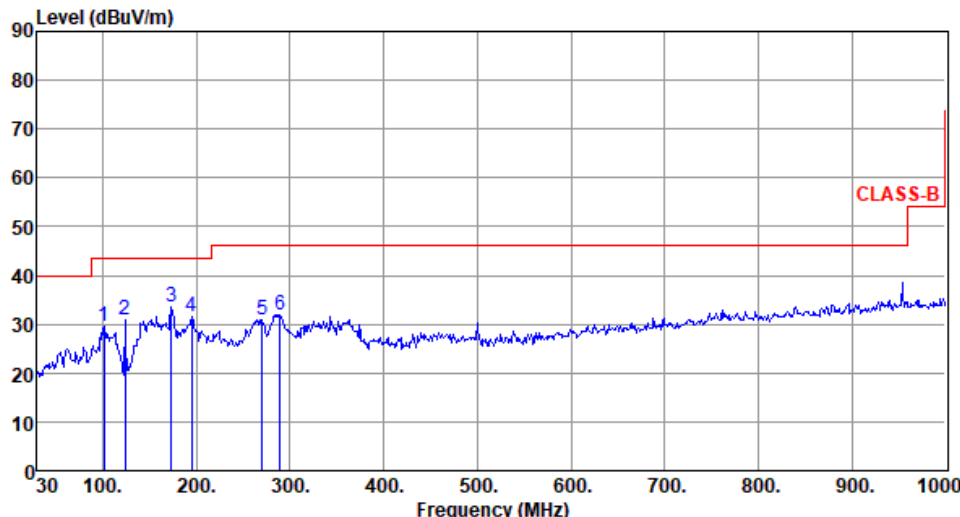


Radiated Emissions above 1 GHz



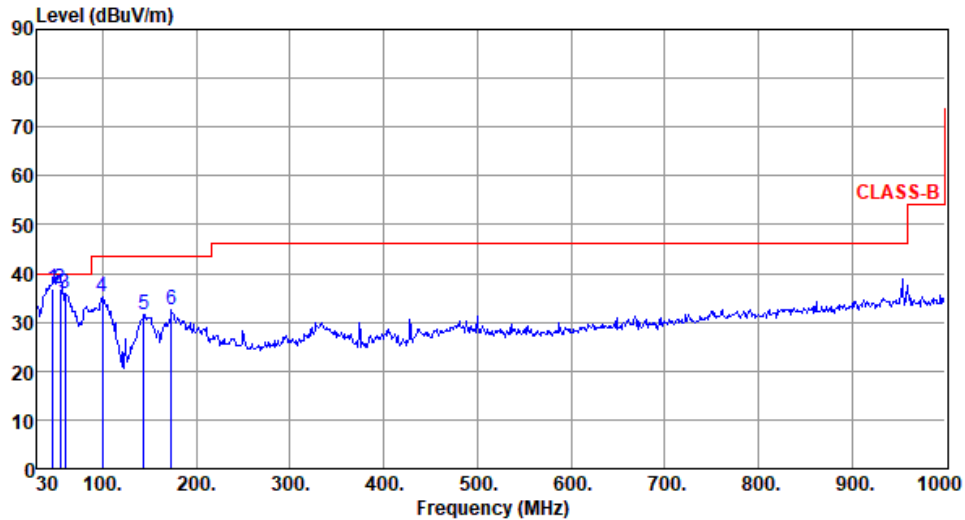
Non- beamforming mode

3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	VHT20	Test Freq. (MHz)	5200																																																																						
Polarization	Horizontal	Test Configuration	1																																																																						
Test By :Akun Chung Temperature(°C):23 Humidity(%):68																																																																									
Level (dBUV/m)  <table><tr><th></th><th>Freq. MHz</th><th>Emission level dBUV/m</th><th>Limit dBUV/m</th><th>Margin dB</th><th>SA reading dBUV</th><th>Factor dB</th><th>Remark</th><th>ANT High cm</th><th>Turn Table deg</th></tr><tr><td>1</td><td>101.78</td><td>29.59</td><td>43.50</td><td>-13.91</td><td>42.42</td><td>-12.83</td><td>Peak</td><td>---</td><td>---</td></tr><tr><td>2</td><td>124.09</td><td>30.84</td><td>43.50</td><td>-12.66</td><td>41.04</td><td>-10.20</td><td>Peak</td><td>---</td><td>---</td></tr><tr><td>3</td><td>173.56</td><td>33.43</td><td>43.50</td><td>-10.07</td><td>42.85</td><td>-9.42</td><td>Peak</td><td>---</td><td>---</td></tr><tr><td>4</td><td>194.90</td><td>31.61</td><td>43.50</td><td>-11.89</td><td>43.20</td><td>-11.59</td><td>Peak</td><td>---</td><td>---</td></tr><tr><td>5</td><td>270.56</td><td>31.01</td><td>46.00</td><td>-14.99</td><td>40.05</td><td>-9.04</td><td>Peak</td><td>---</td><td>---</td></tr><tr><td>6</td><td>288.99</td><td>31.91</td><td>46.00</td><td>-14.09</td><td>40.26</td><td>-8.35</td><td>Peak</td><td>---</td><td>---</td></tr></table>					Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg	1	101.78	29.59	43.50	-13.91	42.42	-12.83	Peak	---	---	2	124.09	30.84	43.50	-12.66	41.04	-10.20	Peak	---	---	3	173.56	33.43	43.50	-10.07	42.85	-9.42	Peak	---	---	4	194.90	31.61	43.50	-11.89	43.20	-11.59	Peak	---	---	5	270.56	31.01	46.00	-14.99	40.05	-9.04	Peak	---	---	6	288.99	31.91	46.00	-14.09	40.26	-8.35	Peak	---	---
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg																																																																
1	101.78	29.59	43.50	-13.91	42.42	-12.83	Peak	---	---																																																																
2	124.09	30.84	43.50	-12.66	41.04	-10.20	Peak	---	---																																																																
3	173.56	33.43	43.50	-10.07	42.85	-9.42	Peak	---	---																																																																
4	194.90	31.61	43.50	-11.89	43.20	-11.59	Peak	---	---																																																																
5	270.56	31.01	46.00	-14.99	40.05	-9.04	Peak	---	---																																																																
6	288.99	31.91	46.00	-14.09	40.26	-8.35	Peak	---	---																																																																
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m). Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.																																																																									

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical	Test Configuration	1

Test By :Akun Chung Temperature(°C):23 Humidity(%):68



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	46.49	36.88	40.00	-3.12	44.95	-8.07	QP	100	141
2	54.25	36.87	40.00	-3.13	45.44	-8.57	QP	100	134
3	60.07	35.92	40.00	-4.08	44.73	-8.81	Peak	---	---
4	99.84	35.07	43.50	-8.43	48.37	-13.30	Peak	---	---
5	143.49	31.65	43.50	-11.85	40.42	-8.77	Peak	---	---
6	173.56	32.42	43.50	-11.08	41.84	-9.42	Peak	---	---

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

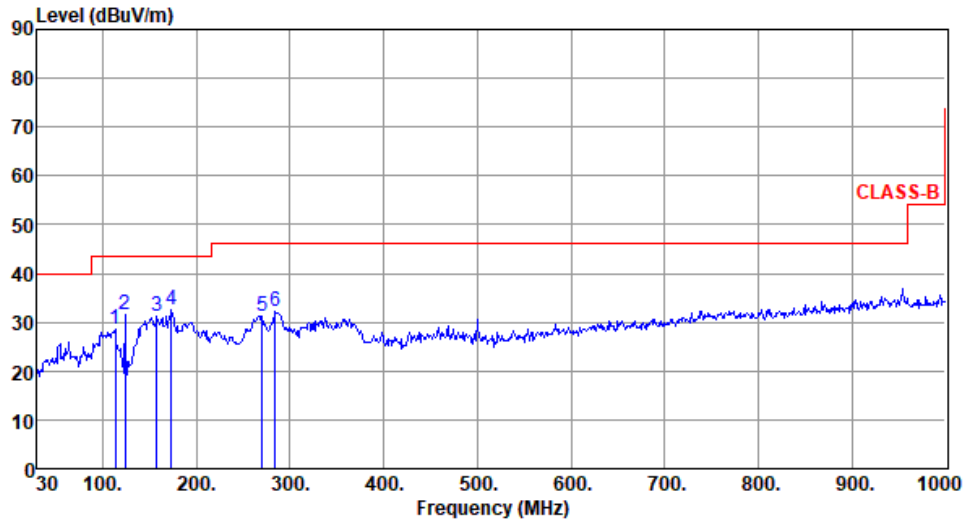
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal	Test Configuration	1

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 68



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	113.42	28.62	43.50	-14.88	39.77	-11.15	Peak	---	---
2	124.09	31.42	43.50	-12.08	41.62	-10.20	Peak	---	---
3	158.04	31.08	43.50	-12.42	39.83	-8.75	Peak	---	---
4	173.56	32.71	43.50	-10.79	42.13	-9.42	Peak	---	---
5	270.56	31.37	46.00	-14.63	40.41	-9.04	Peak	---	---
6	284.14	32.32	46.00	-13.68	40.78	-8.46	Peak	---	---

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

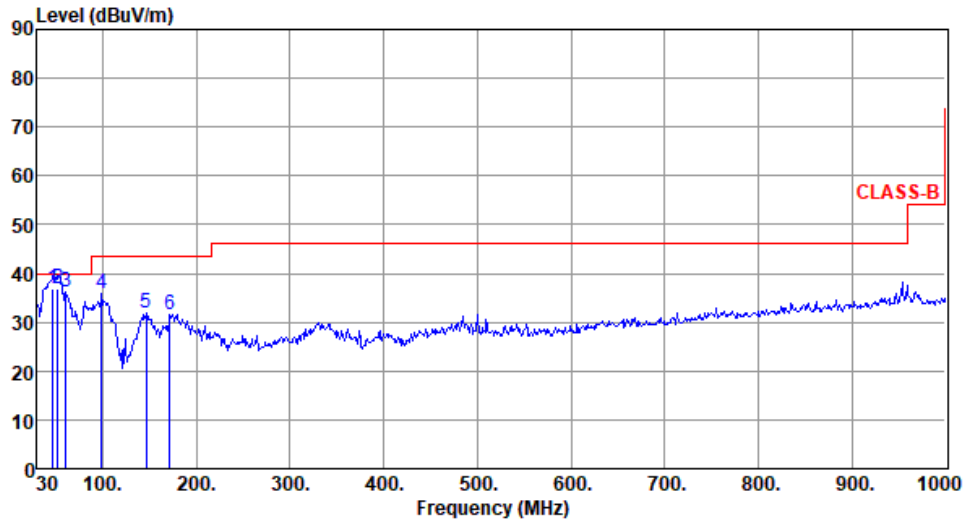
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical	Test Configuration	1

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 68



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	46.49	36.88	40.00	-3.12	44.95	-8.07	QP	100	134
2	52.31	36.85	40.00	-3.15	45.19	-8.34	QP	100	139
3	61.04	36.34	40.00	-3.66	45.25	-8.91	Peak	---	---
4	98.87	36.02	43.50	-7.48	49.56	-13.54	Peak	---	---
5	146.40	31.80	43.50	-11.70	40.65	-8.85	Peak	---	---
6	171.62	31.62	43.50	-11.88	40.79	-9.17	Peak	---	---

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

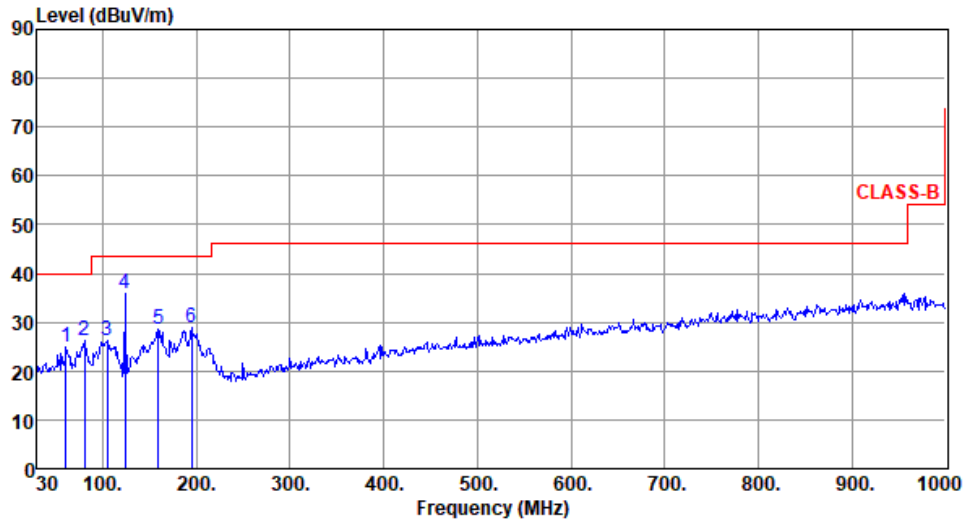
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal	Test Configuration	2

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	61.04	24.76	40.00	-15.24	33.67	-8.91	Peak	---	---
2	80.44	26.32	40.00	-13.68	39.42	-13.10	Peak	---	---
3	104.69	26.38	43.50	-17.12	38.65	-12.27	Peak	---	---
4	124.09	35.80	43.50	-7.70	46.00	-10.20	Peak	---	---
5	159.01	28.67	43.50	-14.83	37.31	-8.64	Peak	---	---
6	194.90	28.82	43.50	-14.68	40.41	-11.59	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

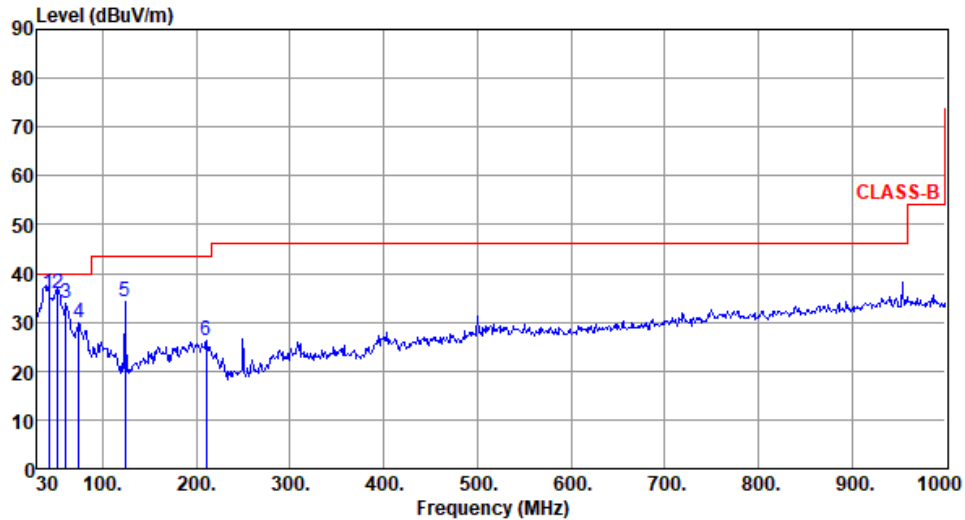
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical	Test Configuration	2

Test By :Akun Chung Temperature(°C):23 Humidity(%):68



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	42.61	35.86	40.00	-4.14	43.87	-8.01	QP	100	81
2	52.31	35.80	40.00	-4.20	44.14	-8.34	QP	100	84
3	61.04	33.76	40.00	-6.24	42.67	-8.91	Peak	---	---
4	74.62	30.02	40.00	-9.98	41.71	-11.69	Peak	---	---
5	124.09	34.13	43.50	-9.37	44.33	-10.20	Peak	---	---
6	210.42	26.22	43.50	-17.28	38.10	-11.88	Peak	---	---

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

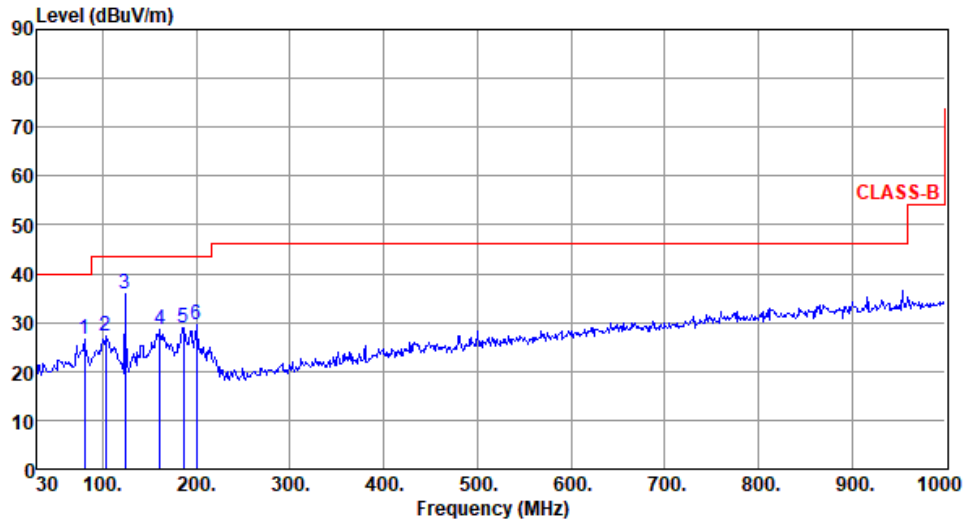
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal	Test Configuration	2

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	80.44	26.41	40.00	-13.59	39.51	-13.10	Peak	---	---
2	102.75	27.17	43.50	-16.33	39.91	-12.74	Peak	---	---
3	124.09	35.73	43.50	-7.77	45.93	-10.20	Peak	---	---
4	160.95	28.47	43.50	-15.03	37.20	-8.73	Peak	---	---
5	186.17	28.81	43.50	-14.69	39.63	-10.82	Peak	---	---
6	199.75	29.67	43.50	-13.83	41.47	-11.80	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

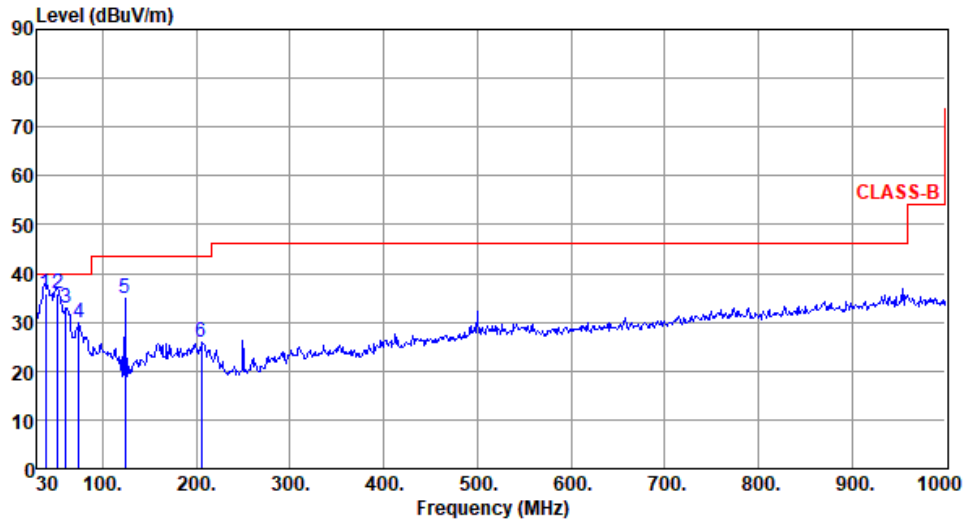
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical	Test Configuration	2

Test By :Akun Chung Temperature(°C):23 Humidity(%):68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	38.73	35.89	40.00	-4.11	44.39	-8.50	QP	100	80
2	52.31	35.85	40.00	-4.15	44.19	-8.34	QP	100	86
3	61.04	32.97	40.00	-7.03	41.88	-8.91	Peak	---	---
4	74.62	29.92	40.00	-10.08	41.61	-11.69	Peak	---	---
5	124.09	34.96	43.50	-8.54	45.16	-10.20	Peak	---	---
6	205.57	25.89	43.50	-17.61	37.69	-11.80	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

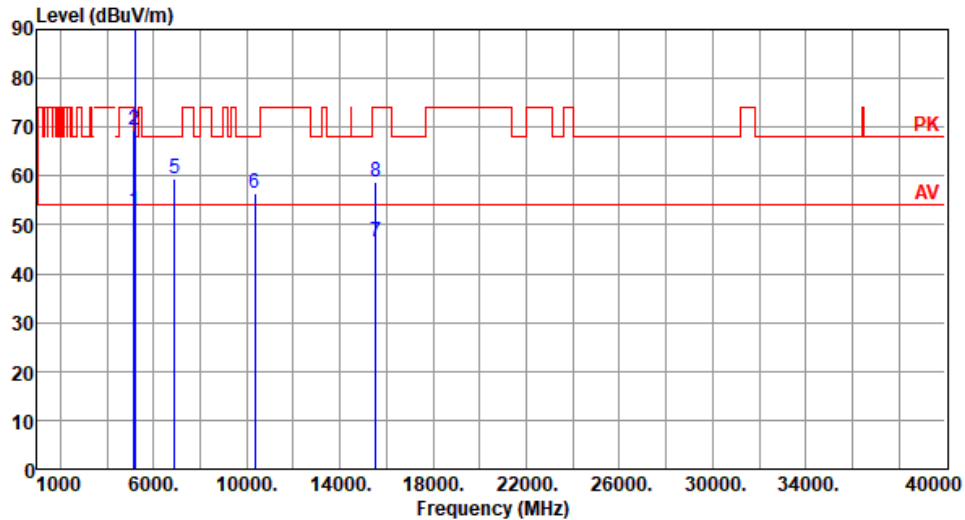
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

3.5.1 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11a

Modulation	11a	Test Freq. (MHz)	5180
Polarization	Horizontal	Test Configuration	1
Test By :Roger Lu Temperature(°C):23 Humidity(%):62			
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical	Test Configuration	1

Test By :Roger Lu Temperature(°C):23 Humidity(%):62



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.79	54.00	-1.21	48.15	4.64	Average	172	356
2	5150.00	69.57	74.00	-4.43	64.93	4.64	Peak	172	356
3 *	5180.00	104.58			100.12	4.46	Average	172	356
4 *	5180.00	114.49			110.03	4.46	Peak	172	356
5	6906.66	59.34	68.20	-8.86	51.41	7.93	Peak	268	267
6	10360.00	56.44	68.20	-11.76	42.25	14.19	Peak	100	150
7	15540.00	46.57	54.00	-7.43	31.66	14.91	Average	162	139
8	15540.00	58.79	74.00	-15.21	43.88	14.91	Peak	162	139

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

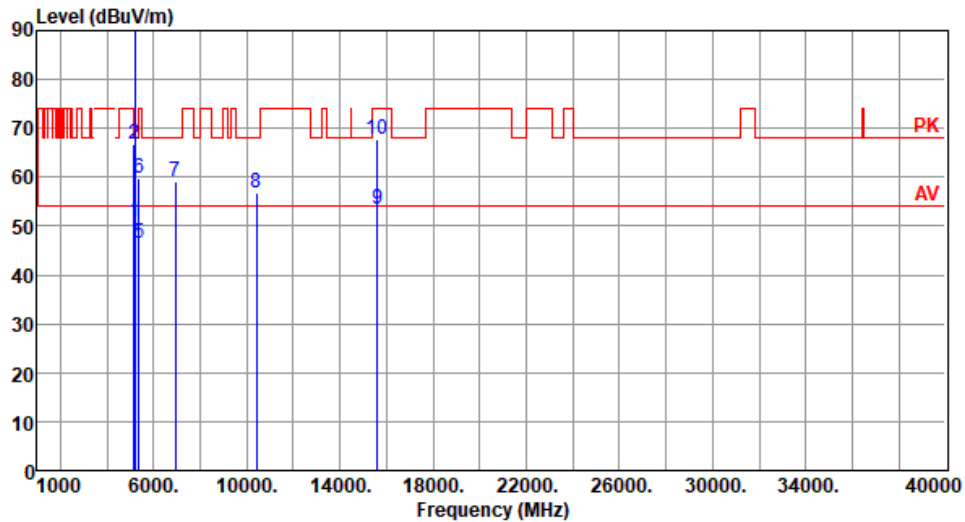
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal	Test Configuration	1

Test By : Roger Lu Temperature(°C):23 Humidity(%):62



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	50.67	54.00	-3.33	46.03	4.64	Average	303	347
2	5150.00	66.60	74.00	-7.40	61.96	4.64	Peak	303	347
3 *	5200.00	105.45			101.10	4.35	Average	303	347
4 *	5200.00	115.35			111.00	4.35	Peak	303	347
5	5350.00	46.57	54.00	-7.43	42.63	3.94	Average	303	347
6	5350.00	59.82	74.00	-14.18	55.88	3.94	Peak	303	347
7	6933.33	59.13	68.20	-9.07	51.11	8.02	Peak	140	294
8	10400.00	56.87	68.20	-11.33	42.57	14.30	Peak	100	30
9	15600.00	53.60	54.00	-0.40	38.96	14.64	Average	354	135
10	15600.00	67.90	74.00	-6.10	53.26	14.64	Peak	354	135

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

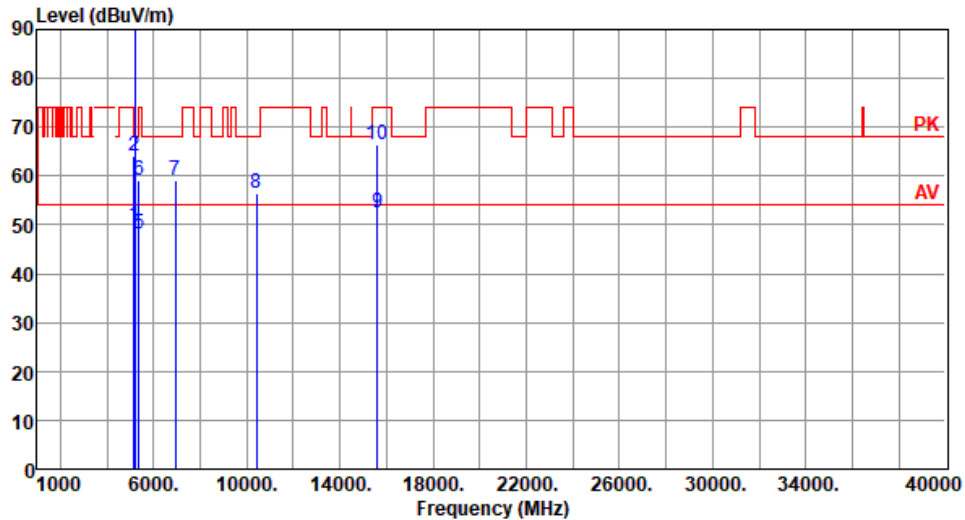
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical	Test Configuration	1

Test By :Roger Lu Temperature(°C):23 Humidity(%):62



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	49.98	54.00	-4.02	45.34	4.64	Average	182	359
2	5150.00	64.21	74.00	-9.79	59.57	4.64	Peak	182	359
3 *	5200.00	108.42			104.07	4.35	Average	182	359
4 *	5200.00	116.90			112.55	4.35	Peak	182	359
5	5350.00	48.16	54.00	-5.84	44.22	3.94	Average	182	359
6	5350.00	59.15	74.00	-14.85	55.21	3.94	Peak	182	359
7	6933.33	59.09	68.20	-9.11	51.07	8.02	Peak	269	261
8	10400.00	56.32	68.20	-11.88	42.02	14.30	Peak	100	150
9	15600.00	52.46	54.00	-1.54	37.82	14.64	Average	161	138
10	15600.00	66.51	74.00	-7.49	51.87	14.64	Peak	161	138

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

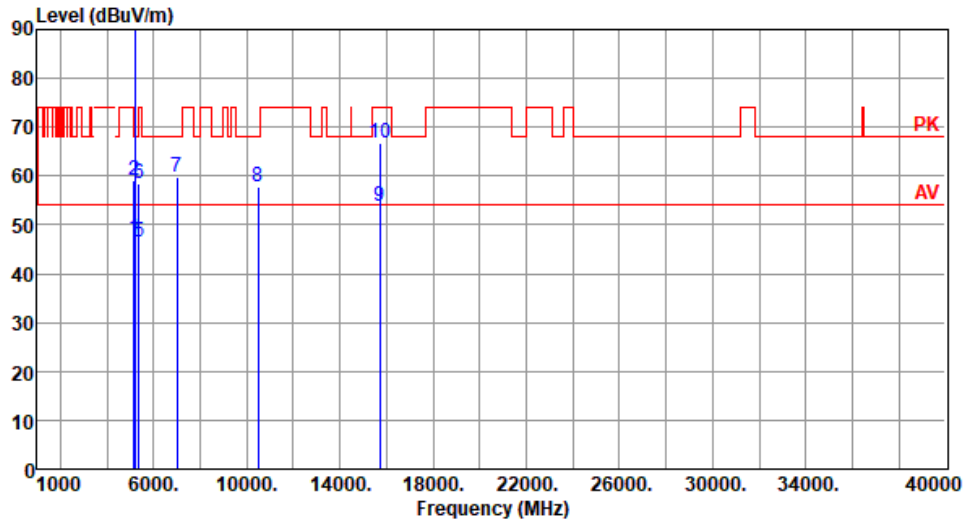
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal	Test Configuration	1

Test By :Roger Lu Temperature(°C):23 Humidity(%):62



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	47.30	54.00	-6.70	42.66	4.64	Average	357	344
2	5150.00	59.22	74.00	-14.78	54.58	4.64	Peak	357	344
3 *	5240.00	104.91			100.70	4.21	Average	357	344
4 *	5240.00	114.87			110.66	4.21	Peak	357	344
5	5350.00	46.49	54.00	-7.51	42.55	3.94	Average	357	344
6	5350.00	58.60	74.00	-15.40	54.66	3.94	Peak	357	344
7	6986.66	59.68	68.20	-8.52	51.45	8.23	Peak	140	298
8	10480.00	57.93	68.20	-10.27	43.47	14.46	Peak	100	125
9	15720.00	53.69	54.00	-0.31	39.48	14.21	Average	226	134
10	15720.00	66.65	74.00	-7.35	52.44	14.21	Peak	226	134

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

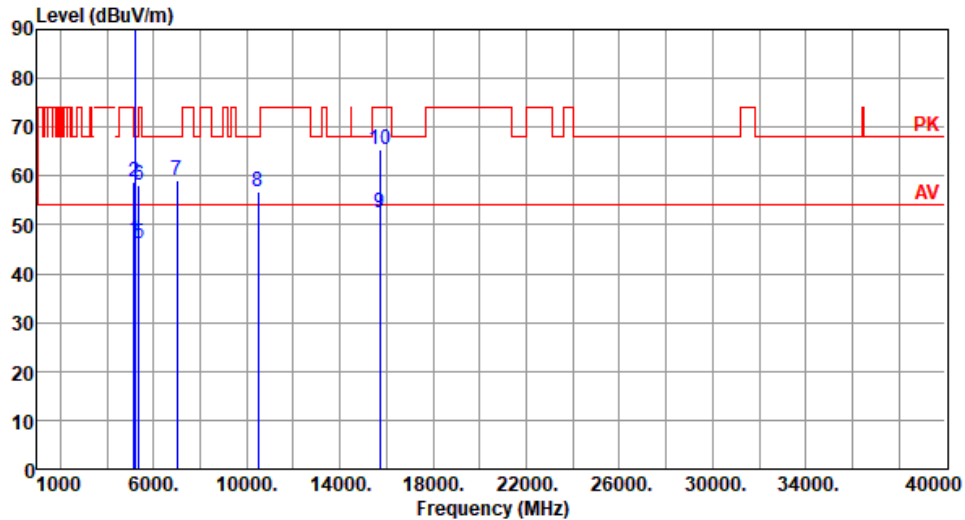
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical	Test Configuration	1

Test By :Roger Lu Temperature(°C):23 Humidity(%):62



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.89	54.00	-7.11	42.25	4.64	Average	189	298
2	5150.00	58.88	74.00	-15.12	54.24	4.64	Peak	189	298
3 *	5240.00	107.66			103.45	4.21	Average	189	298
4 *	5240.00	116.32			112.11	4.21	Peak	189	298
5	5350.00	46.14	54.00	-7.86	42.20	3.94	Average	189	298
6	5350.00	58.04	74.00	-15.96	54.10	3.94	Peak	189	298
7	6986.66	59.25	68.20	-8.95	51.02	8.23	Peak	270	262
8	10480.00	56.79	68.20	-11.41	42.33	14.46	Peak	100	153
9	15720.00	52.48	54.00	-1.52	38.27	14.21	Average	165	140
10	15720.00	65.43	74.00	-8.57	51.22	14.21	Peak	165	140

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

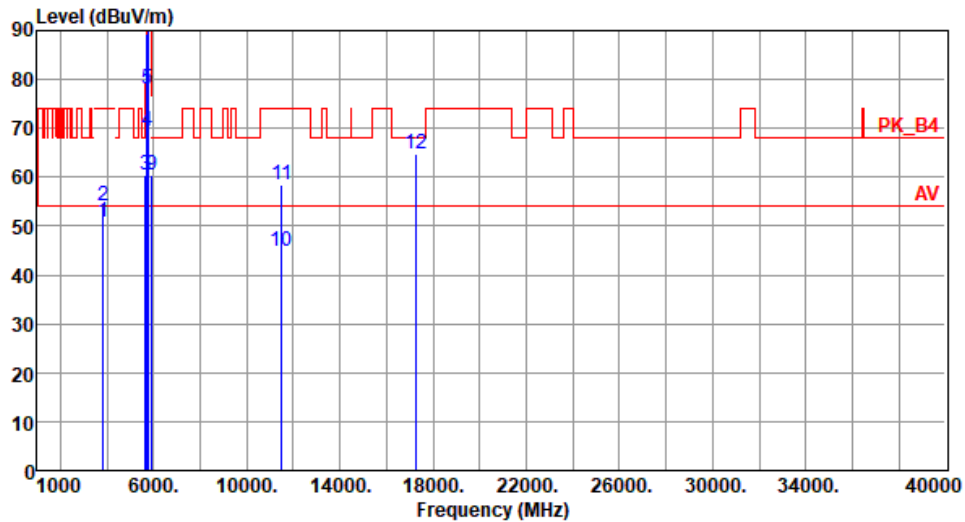
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal	Test Configuration	1

Test By : Roger Lu Temperature(°C):23 Humidity(%):62



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3830.00	50.83	54.00	-3.17	50.00	0.83	Average	156	352
2	3830.00	54.14	74.00	-19.86	53.31	0.83	Peak	156	352
3	5650.00	60.42	68.20	-7.78	55.88	4.54	Peak	100	245
4	5700.00	69.50	105.20	-35.70	64.82	4.68	Peak	100	245
5	5720.00	78.06	110.80	-32.74	73.25	4.81	Peak	100	245
6	5725.00	89.40	122.20	-32.80	84.55	4.85	Peak	100	245
7 *	5745.00	106.86			101.87	4.99	Average	100	245
8 *	5745.00	115.61			110.62	4.99	Peak	100	245
9	5925.00	60.44	68.20	-7.76	55.01	5.43	Peak	100	245
10	11490.00	44.73	54.00	-9.27	30.10	14.63	Average	100	260
11	11490.00	58.41	74.00	-15.59	43.78	14.63	Peak	100	260
12	17235.00	64.66	68.20	-3.54	46.90	17.76	Peak	100	24

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

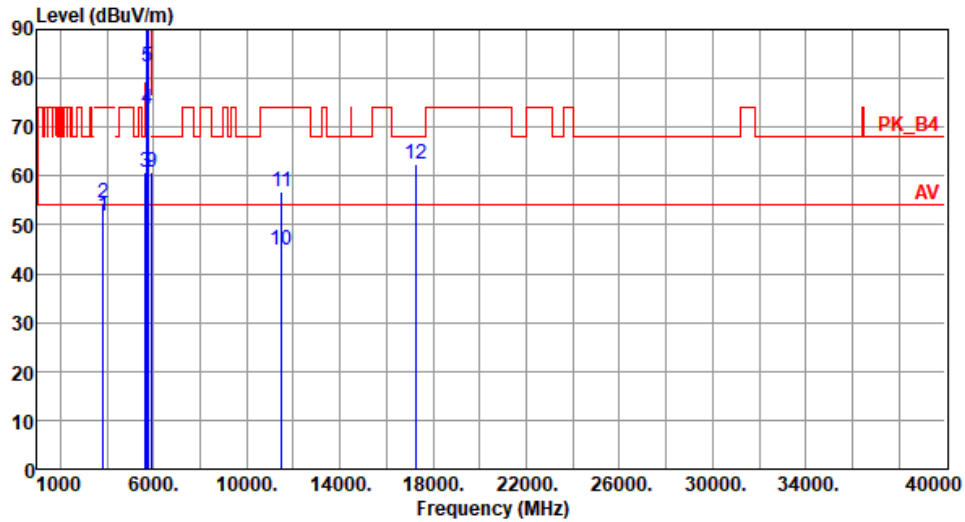
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical	Test Configuration	1

Test By :Roger Lu Temperature(°C):23 Humidity(%):62



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3830.00	51.90	54.00	-2.10	51.07	0.83	Average	193	311
2	3830.00	54.60	74.00	-19.40	53.77	0.83	Peak	193	311
3	5650.00	60.73	68.20	-7.47	56.19	4.54	Peak	191	270
4	5700.00	73.58	105.20	-31.62	68.90	4.68	Peak	191	270
5	5720.00	82.44	110.80	-28.36	77.63	4.81	Peak	191	270
6	5725.00	95.16	122.20	-27.04	90.31	4.85	Peak	191	270
7 *	5745.00	109.33			104.34	4.99	Average	191	270
8 *	5745.00	118.82			113.83	4.99	Peak	191	270
9	5925.00	60.63	68.20	-7.57	55.20	5.43	Peak	191	270
10	11490.00	44.69	54.00	-9.31	30.06	14.63	Average	100	203
11	11490.00	56.78	74.00	-17.22	42.15	14.63	Peak	100	203
12	17235.00	62.35	68.20	-5.85	44.59	17.76	Peak	100	50

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

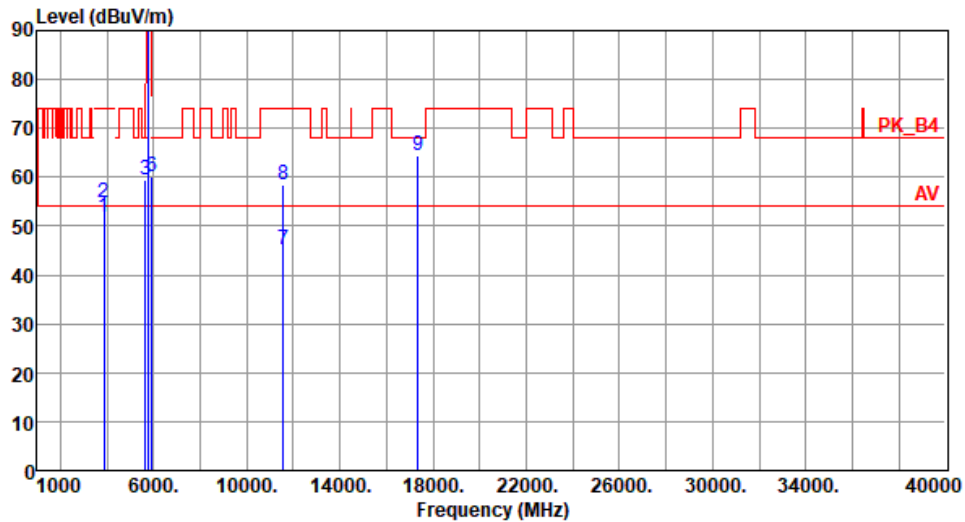
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	1

Test By :Roger Lu Temperature(°C):23 Humidity(%):62



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3856.66	51.67	54.00	-2.33	50.66	1.01	Average	253	357
2	3856.66	54.94	74.00	-19.06	53.93	1.01	Peak	253	357
3	5650.00	59.40	68.20	-8.80	54.86	4.54	Peak	100	241
4 *	5785.00	106.70			101.59	5.11	Average	100	241
5 *	5785.00	116.00			110.89	5.11	Peak	100	241
6	5925.00	60.06	68.20	-8.14	54.63	5.43	Peak	100	241
7	11570.00	45.29	54.00	-8.71	30.79	14.50	Average	100	150
8	11570.00	58.39	74.00	-15.61	43.89	14.50	Peak	100	150
9	17355.00	64.52	68.20	-3.68	46.16	18.36	Peak	100	20

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

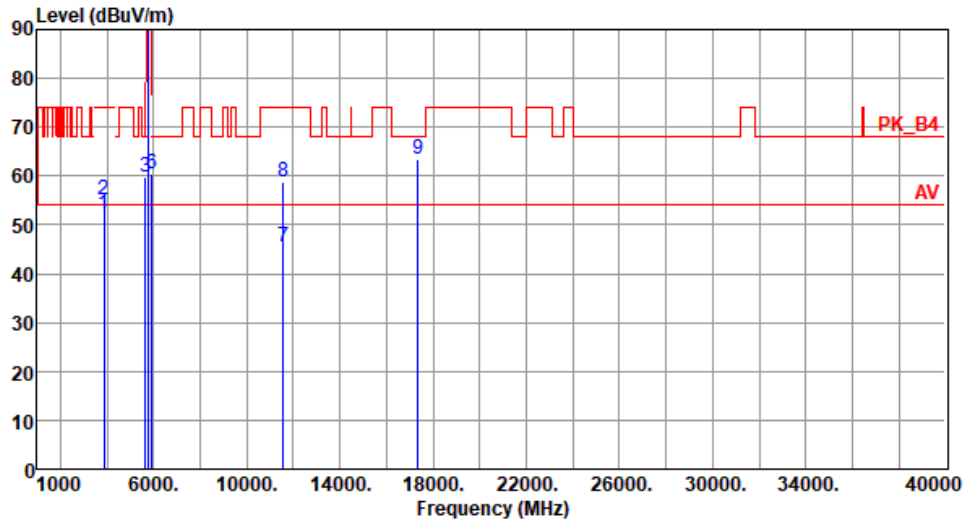
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	11a	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	1

Test By :Roger Lu Temperature(°C):23 Humidity(%):62



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3856.66	52.12	54.00	-1.88	51.11	1.01	Average	194	306
2	3856.66	55.27	74.00	-18.73	54.26	1.01	Peak	194	306
3	5650.00	59.65	68.20	-8.55	55.11	4.54	Peak	211	281
4 *	5785.00	109.27			104.16	5.11	Average	211	281
5 *	5785.00	118.54			113.43	5.11	Peak	211	281
6	5925.00	60.28	68.20	-7.92	54.85	5.43	Peak	211	281
7	11570.00	45.60	54.00	-8.40	31.10	14.50	Average	100	200
8	11570.00	58.77	74.00	-15.23	44.27	14.50	Peak	100	200
9	17355.00	63.57	68.20	-4.63	45.21	18.36	Peak	384	46

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

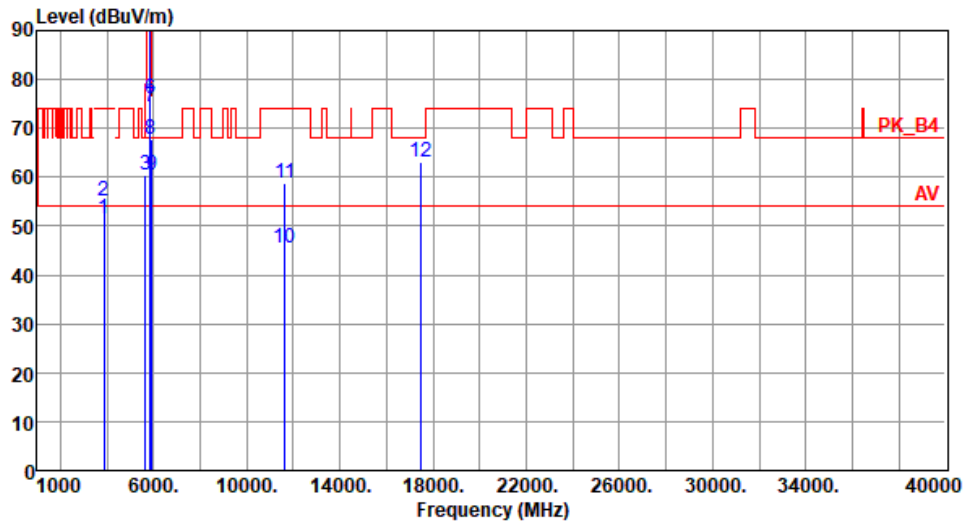
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3:"*" is Peak / Average value of fundamental frequency

Modulation	11a	Test Freq. (MHz)	5825
Polarization	Horizontal	Test Configuration	1

Test By : Roger Lu Temperature(°C): 23 Humidity(%): 62



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	51.42	54.00	-2.58	50.29	1.13	Average	268	4
2	3883.33	55.29	74.00	-18.71	54.16	1.13	Peak	268	4
3	5650.00	60.53	68.20	-7.67	55.99	4.54	Peak	100	250
4 *	5825.00	107.19			101.90	5.29	Average	100	250
5 *	5825.00	116.00			110.71	5.29	Peak	100	250
6	5850.00	76.07	122.20	-46.13	70.62	5.45	Peak	100	250
7	5855.00	74.29	110.80	-36.51	68.85	5.44	Peak	100	250
8	5875.00	67.80	105.20	-37.40	62.36	5.44	Peak	100	250
9	5925.00	60.43	68.20	-7.77	55.00	5.43	Peak	100	250
10	11650.00	45.49	54.00	-8.51	31.28	14.21	Average	100	210
11	11650.00	58.90	74.00	-15.10	44.69	14.21	Peak	100	210
12	17475.00	63.06	68.20	-5.14	44.20	18.86	Peak	100	11

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

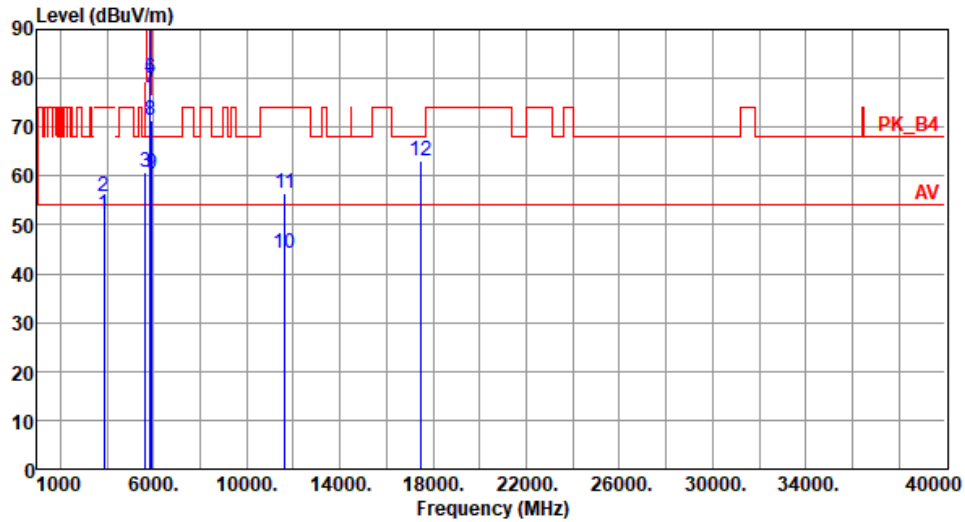
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	11a	Test Freq. (MHz)	5825
Polarization	Vertical	Test Configuration	1

Test By :Roger Lu Temperature(°C):23 Humidity(%):62



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	52.03	54.00	-1.97	50.90	1.13	Average	176	309
2	3883.33	55.88	74.00	-18.12	54.75	1.13	Peak	176	309
3	5650.00	60.88	68.20	-7.32	56.34	4.54	Peak	199	284
4 *	5825.00	109.56			104.27	5.29	Average	199	284
5 *	5825.00	118.88			113.59	5.29	Peak	199	284
6	5850.00	80.10	122.20	-42.10	74.65	5.45	Peak	199	284
7	5855.00	78.03	110.80	-32.77	72.59	5.44	Peak	199	284
8	5875.00	71.28	105.20	-33.92	65.84	5.44	Peak	199	284
9	5925.00	60.54	68.20	-7.66	55.11	5.43	Peak	199	284
10	11650.00	44.32	54.00	-9.68	30.11	14.21	Average	100	207
11	11650.00	56.30	74.00	-17.70	42.09	14.21	Peak	100	207
12	17475.00	62.95	68.20	-5.25	44.09	18.86	Peak	100	207

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

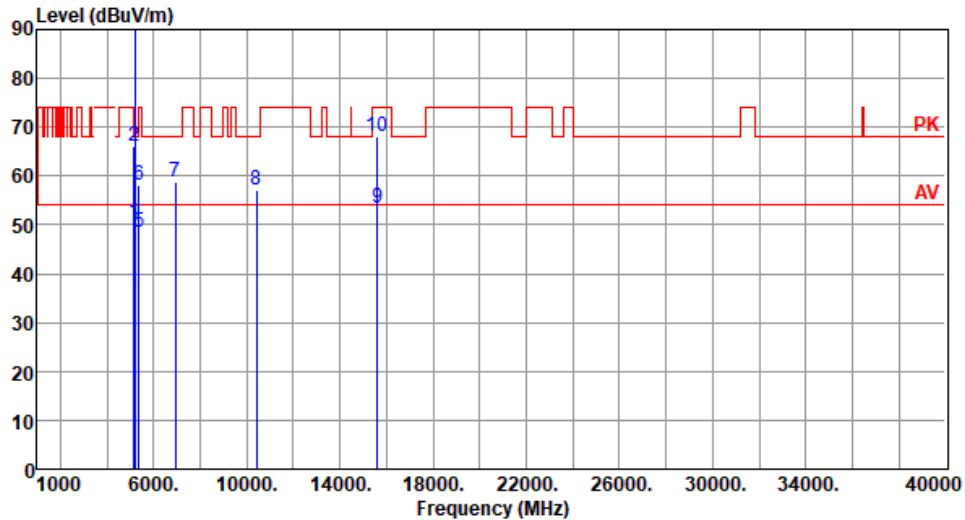
3.5.2 Transmitter Radiated Unwanted Emissions (Above 1GHz) for ac VHT20

Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Horizontal	Test Configuration	1
Test By :Akun Chung Temperature(°C):24 Humidity(%):64			
Level (dBuV/m)			

Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical	Test Configuration	1
Test By :Akun Chung Temperature(°C):24 Humidity(%):64			
Level (dBuV/m)			

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal	Test Configuration	1

Test By :Roger Lu Temperature(°C):23 Humidity(%):62



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	50.48	54.00	-3.52	45.84	4.64	Average	274	338
2	5150.00	66.16	74.00	-7.84	61.52	4.64	Peak	274	338
3 *	5200.00	104.58			100.23	4.35	Average	274	338
4 *	5200.00	115.37			111.02	4.35	Peak	274	338
5	5350.00	48.38	54.00	-5.62	44.44	3.94	Average	274	338
6	5350.00	58.27	74.00	-15.73	54.33	3.94	Peak	274	338
7	6933.33	58.64	68.20	-9.56	50.62	8.02	Peak	138	300
8	10400.00	57.19	68.20	-11.01	42.89	14.30	Peak	100	139
9	15600.00	53.51	54.00	-0.49	38.87	14.64	Average	136	106
10	15600.00	68.02	74.00	-5.98	53.38	14.64	Peak	136	106

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

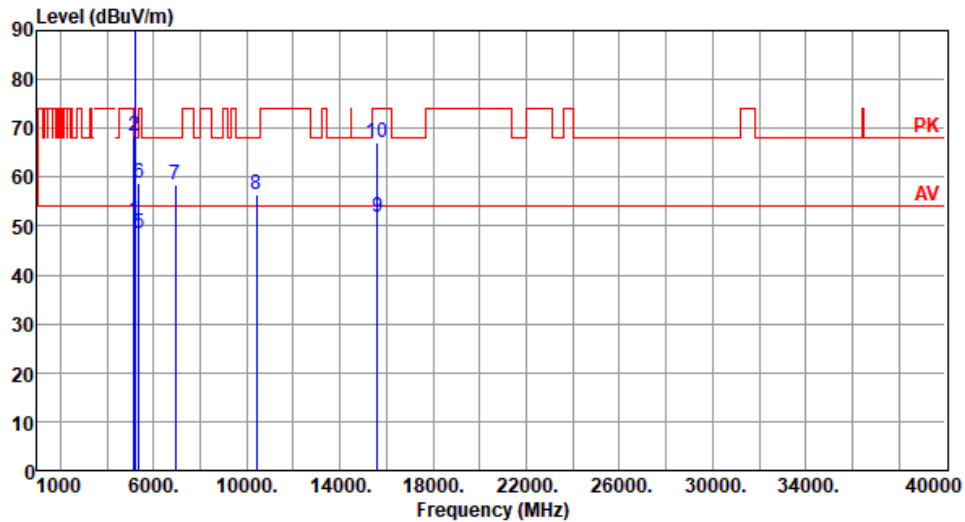
Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical	Test Configuration	1

Test By : Roger Lu

Temperature(°C):23

Humidity(%):62



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	51.06	54.00	-2.94	46.42	4.64	Average	199	356
2	5150.00	68.50	74.00	-5.50	63.86	4.64	Peak	199	356
3 *	5200.00	107.47			103.12	4.35	Average	199	356
4 *	5200.00	118.33			113.98	4.35	Peak	199	356
5	5350.00	48.48	54.00	-5.52	44.54	3.94	Average	199	356
6	5350.00	58.82	74.00	-15.18	54.88	3.94	Peak	199	356
7	6933.33	58.35	68.20	-9.85	50.33	8.02	Peak	263	265
8	10400.00	56.56	68.20	-11.64	42.26	14.30	Peak	100	154
9	15600.00	51.85	54.00	-2.15	37.21	14.64	Average	161	139
10	15600.00	67.03	74.00	-6.97	52.39	14.64	Peak	161	139

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

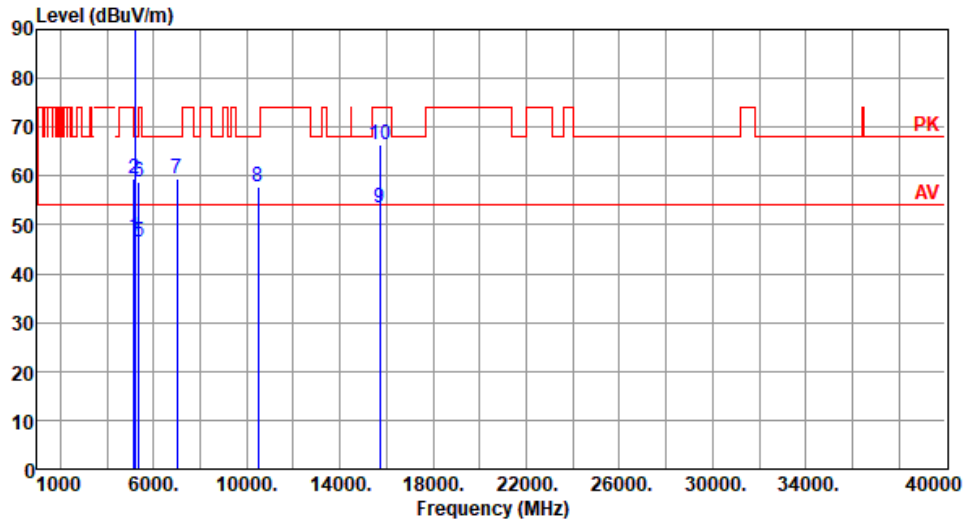
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal	Test Configuration	1

Test By : Akun Chung Temperature(°C): 24 Humidity(%): 64



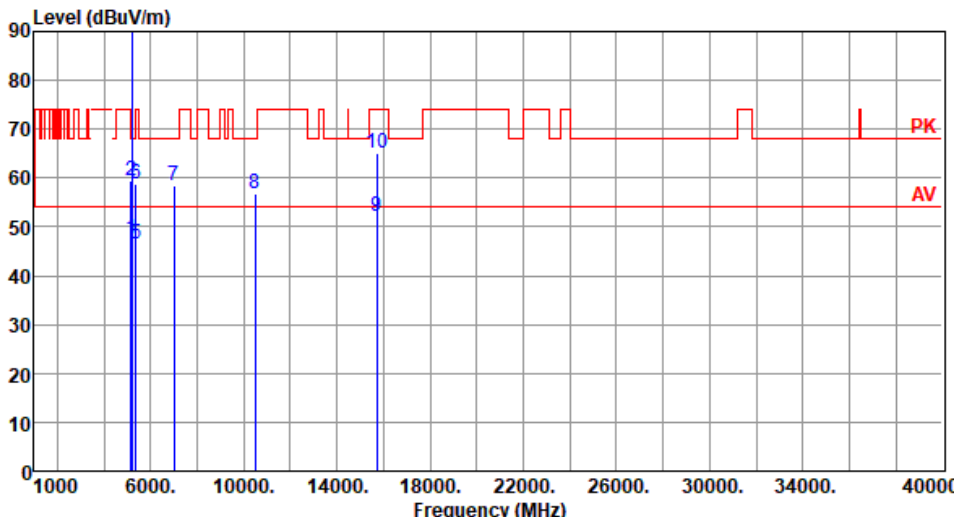
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	47.50	54.00	-6.50	42.86	4.64	Average	288	345
2	5150.00	59.30	74.00	-14.70	54.66	4.64	Peak	288	345
3 *	5240.00	104.09			99.88	4.21	Average	288	345
4 *	5240.00	114.41			110.20	4.21	Peak	288	345
5	5350.00	46.53	54.00	-7.47	42.59	3.94	Average	288	345
6	5350.00	58.72	74.00	-15.28	54.78	3.94	Peak	288	345
7	6986.66	59.48	68.20	-8.72	51.25	8.23	Peak	128	295
8	10480.00	57.71	68.20	-10.49	43.25	14.46	Peak	100	126
9	15720.00	53.52	54.00	-0.48	39.31	14.21	Average	228	136
10	15720.00	66.46	74.00	-7.54	52.25	14.21	Peak	228	136

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

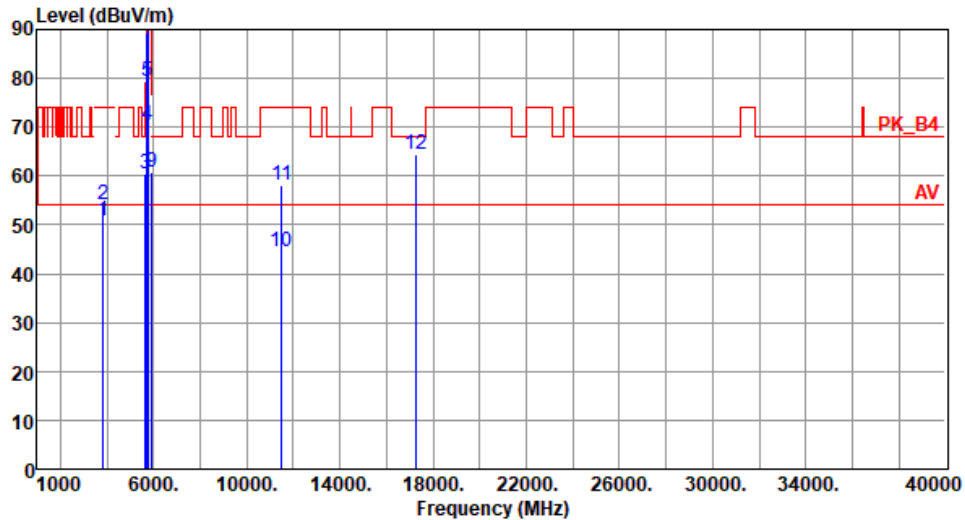
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5240																																																																																																														
Polarization	Vertical	Test Configuration	1																																																																																																														
Test By :Akun Chung Temperature(°C):24 Humidity(%):64																																																																																																																	
Level (dBUV/m)  <table><tr><th></th><th>Freq. MHz</th><th>Emission level dBUV/m</th><th>Limit dBUV/m</th><th>Margin dB</th><th>SA reading dBUV</th><th>Factor dB</th><th>Remark</th><th>ANT High cm</th><th>Turn Table deg</th></tr><tr><td>1</td><td>5150.00</td><td>47.44</td><td>54.00</td><td>-6.56</td><td>42.80</td><td>4.64</td><td>Average</td><td>177</td><td>355</td></tr><tr><td>2</td><td>5150.00</td><td>59.60</td><td>74.00</td><td>-14.40</td><td>54.96</td><td>4.64</td><td>Peak</td><td>177</td><td>355</td></tr><tr><td>3 *</td><td>5240.00</td><td>107.10</td><td></td><td></td><td>102.89</td><td>4.21</td><td>Average</td><td>177</td><td>355</td></tr><tr><td>4 *</td><td>5240.00</td><td>117.73</td><td></td><td></td><td>113.52</td><td>4.21</td><td>Peak</td><td>177</td><td>355</td></tr><tr><td>5</td><td>5350.00</td><td>46.63</td><td>54.00</td><td>-7.37</td><td>42.69</td><td>3.94</td><td>Average</td><td>177</td><td>355</td></tr><tr><td>6</td><td>5350.00</td><td>58.63</td><td>74.00</td><td>-15.37</td><td>54.69</td><td>3.94</td><td>Peak</td><td>177</td><td>355</td></tr><tr><td>7</td><td>6986.66</td><td>58.34</td><td>68.20</td><td>-9.86</td><td>50.11</td><td>8.23</td><td>Peak</td><td>270</td><td>265</td></tr><tr><td>8</td><td>10480.00</td><td>56.67</td><td>68.20</td><td>-11.53</td><td>42.21</td><td>14.46</td><td>Peak</td><td>100</td><td>158</td></tr><tr><td>9</td><td>15720.00</td><td>52.26</td><td>54.00</td><td>-1.74</td><td>38.05</td><td>14.21</td><td>Average</td><td>170</td><td>142</td></tr><tr><td>10</td><td>15720.00</td><td>65.19</td><td>74.00</td><td>-8.81</td><td>50.98</td><td>14.21</td><td>Peak</td><td>170</td><td>142</td></tr></table>					Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg	1	5150.00	47.44	54.00	-6.56	42.80	4.64	Average	177	355	2	5150.00	59.60	74.00	-14.40	54.96	4.64	Peak	177	355	3 *	5240.00	107.10			102.89	4.21	Average	177	355	4 *	5240.00	117.73			113.52	4.21	Peak	177	355	5	5350.00	46.63	54.00	-7.37	42.69	3.94	Average	177	355	6	5350.00	58.63	74.00	-15.37	54.69	3.94	Peak	177	355	7	6986.66	58.34	68.20	-9.86	50.11	8.23	Peak	270	265	8	10480.00	56.67	68.20	-11.53	42.21	14.46	Peak	100	158	9	15720.00	52.26	54.00	-1.74	38.05	14.21	Average	170	142	10	15720.00	65.19	74.00	-8.81	50.98	14.21	Peak	170	142
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg																																																																																																								
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2	5150.00	59.60	74.00	-14.40	54.96	4.64	Peak	177	355																																																																																																								
3 *	5240.00	107.10			102.89	4.21	Average	177	355																																																																																																								
4 *	5240.00	117.73			113.52	4.21	Peak	177	355																																																																																																								
5	5350.00	46.63	54.00	-7.37	42.69	3.94	Average	177	355																																																																																																								
6	5350.00	58.63	74.00	-15.37	54.69	3.94	Peak	177	355																																																																																																								
7	6986.66	58.34	68.20	-9.86	50.11	8.23	Peak	270	265																																																																																																								
8	10480.00	56.67	68.20	-11.53	42.21	14.46	Peak	100	158																																																																																																								
9	15720.00	52.26	54.00	-1.74	38.05	14.21	Average	170	142																																																																																																								
10	15720.00	65.19	74.00	-8.81	50.98	14.21	Peak	170	142																																																																																																								
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m). Note 3: "*" is Peak / Average value of fundamental frequency																																																																																																																	

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal	Test Configuration	1

Test By : Akun Chung Temperature(°C): 24 Humidity(%): 64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3830.00	50.71	54.00	-3.29	49.88	0.83	Average	158	351
2	3830.00	53.98	74.00	-20.02	53.15	0.83	Peak	158	351
3	5650.00	60.53	68.20	-7.67	55.99	4.54	Peak	100	249
4	5700.00	70.26	105.20	-34.94	65.58	4.68	Peak	100	249
5	5720.00	79.44	110.80	-31.36	74.63	4.81	Peak	100	249
6	5725.00	89.44	122.20	-32.76	84.59	4.85	Peak	100	249
7 *	5745.00	105.96			100.97	4.99	Average	100	249
8 *	5745.00	115.13			110.14	4.99	Peak	100	249
9	5925.00	60.76	68.20	-7.44	55.33	5.43	Peak	100	249
10	11490.00	44.66	54.00	-9.34	30.03	14.63	Average	100	262
11	11490.00	58.19	74.00	-15.81	43.56	14.63	Peak	100	262
12	17235.00	64.52	68.20	-3.68	46.76	17.76	Peak	100	25

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

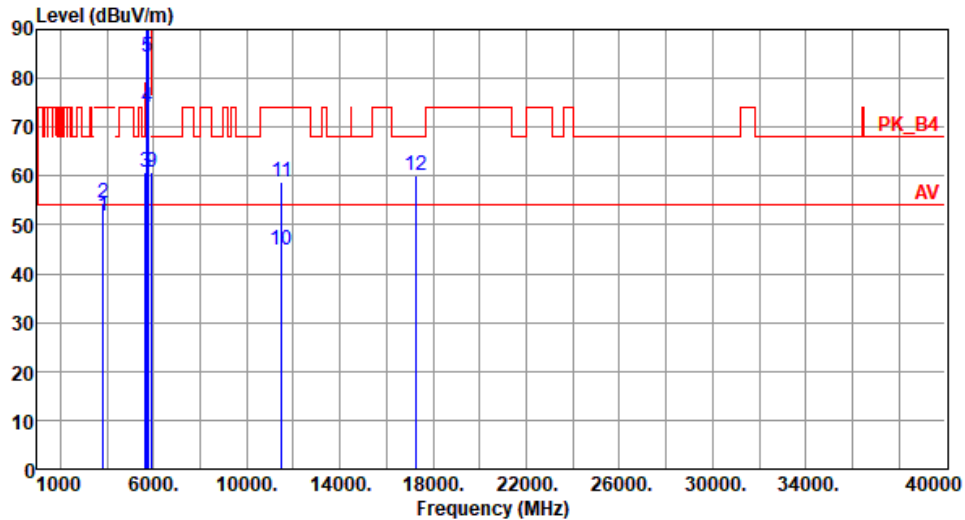
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical	Test Configuration	1

Test By : Akun Chung Temperature(°C): 24 Humidity(%): 64



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3830.00	51.81	54.00	-2.19	50.98	0.83	Average	229	319
2	3830.00	54.45	74.00	-19.55	53.62	0.83	Peak	229	319
3	5650.00	60.76	68.20	-7.44	56.22	4.54	Peak	195	271
4	5700.00	73.91	105.20	-31.29	69.23	4.68	Peak	195	271
5	5720.00	84.43	110.80	-26.37	79.62	4.81	Peak	195	271
6	5725.00	96.21	122.20	-25.99	91.36	4.85	Peak	195	271
7 *	5745.00	108.43			103.44	4.99	Average	195	271
8 *	5745.00	117.93			112.94	4.99	Peak	195	271
9	5925.00	60.91	68.20	-7.29	55.48	5.43	Peak	195	271
10	11490.00	44.74	54.00	-9.26	30.11	14.63	Average	100	207
11	11490.00	58.78	74.00	-15.22	44.15	14.63	Peak	100	207
12	17235.00	60.07	68.20	-8.13	42.31	17.76	Peak	100	52

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

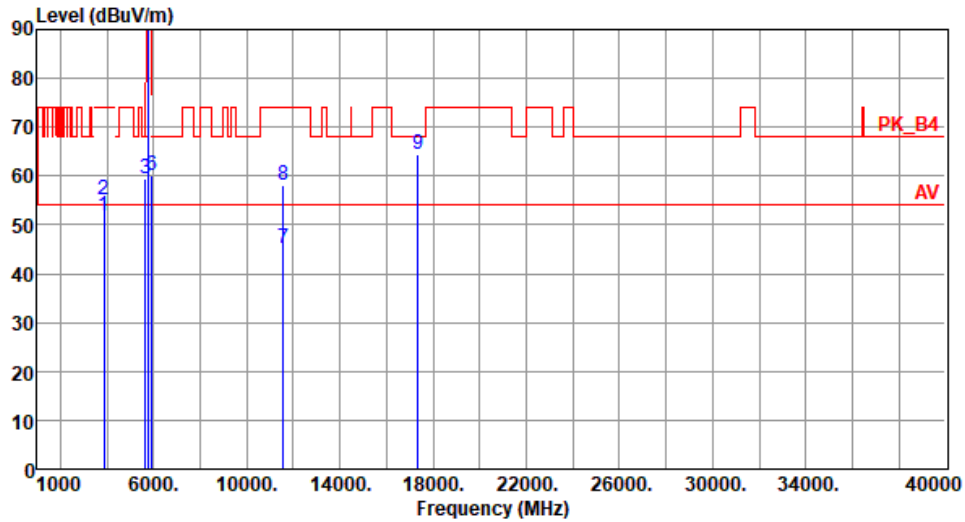
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	1

Test By : Akun Chung Temperature(°C): 24 Humidity(%): 64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3856.66	51.88	54.00	-2.12	50.87	1.01	Average	258	359
2	3856.66	55.13	74.00	-18.87	54.12	1.01	Peak	259	359
3	5650.00	59.53	68.20	-8.67	54.99	4.54	Peak	100	245
4 *	5785.00	105.83			100.72	5.11	Average	100	245
5 *	5785.00	115.34			110.23	5.11	Peak	100	245
6	5925.00	60.25	68.20	-7.95	54.82	5.43	Peak	100	245
7	11570.00	45.19	54.00	-8.81	30.69	14.50	Average	100	147
8	11570.00	58.19	74.00	-15.81	43.69	14.50	Peak	100	147
9	17355.00	64.48	68.20	-3.72	46.12	18.36	Peak	100	21

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

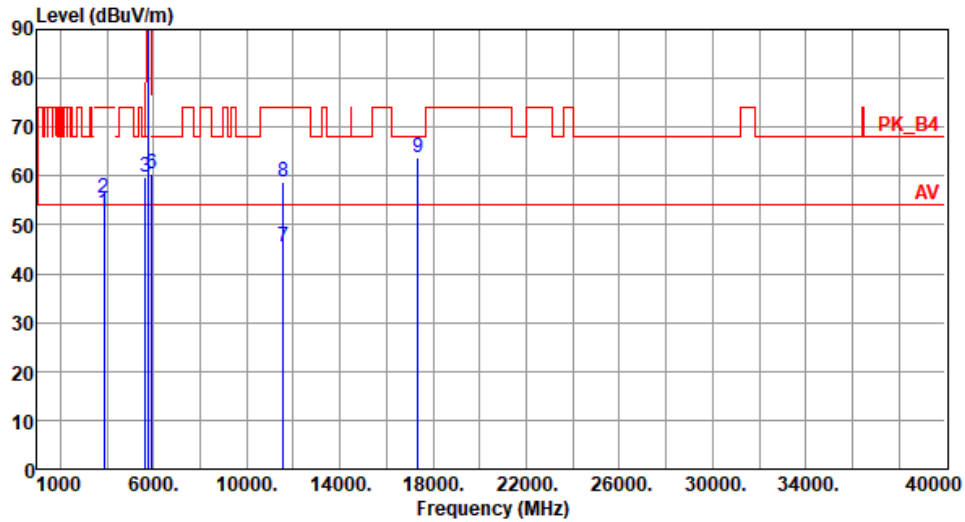
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	1

Test By : Akun Chung Temperature(°C): 24 Humidity(%): 64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3856.66	52.39	54.00	-1.61	51.38	1.01	Average	199	302
2	3856.66	55.54	74.00	-18.46	54.53	1.01	Peak	199	302
3	5650.00	59.90	68.20	-8.30	55.36	4.54	Peak	222	283
4 *	5785.00	108.34			103.23	5.11	Average	222	283
5 *	5785.00	117.63			112.52	5.11	Peak	222	283
6	5925.00	60.42	68.20	-7.78	54.99	5.43	Peak	222	283
7	11570.00	45.53	54.00	-8.47	31.03	14.50	Average	100	203
8	11570.00	58.86	74.00	-15.14	44.36	14.50	Peak	100	203
9	17355.00	63.72	68.20	-4.48	45.36	18.36	Peak	386	47

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

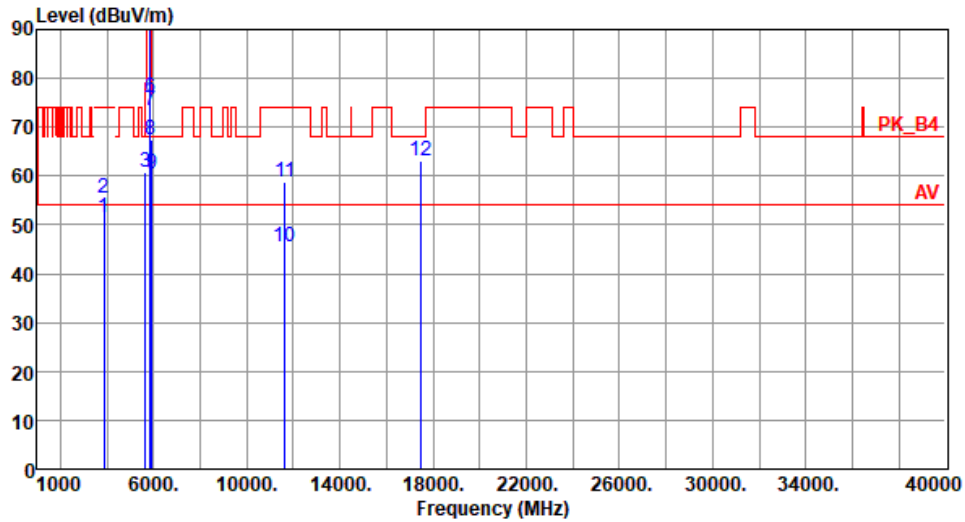
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal	Test Configuration	1

Test By :Akun Chung Temperature(°C):24 Humidity(%):64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	51.49	54.00	-2.51	50.36	1.13	Average	267	5
2	3883.33	55.45	74.00	-18.55	54.32	1.13	Peak	267	5
3	5650.00	60.80	68.20	-7.40	56.26	4.54	Peak	100	244
4 *	5825.00	106.18			100.89	5.29	Average	100	244
5 *	5825.00	115.40			110.11	5.29	Peak	100	244
6	5850.00	76.07	122.20	-46.13	70.62	5.45	Peak	100	244
7	5855.00	73.29	110.80	-37.51	67.85	5.44	Peak	100	244
8	5875.00	67.55	105.20	-37.65	62.11	5.44	Peak	100	244
9	5925.00	60.53	68.20	-7.67	55.10	5.43	Peak	100	244
10	11650.00	45.56	54.00	-8.44	31.35	14.21	Average	100	212
11	11650.00	58.72	74.00	-15.28	44.51	14.21	Peak	100	212
12	17475.00	63.00	68.20	-5.20	44.14	18.86	Peak	100	16

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

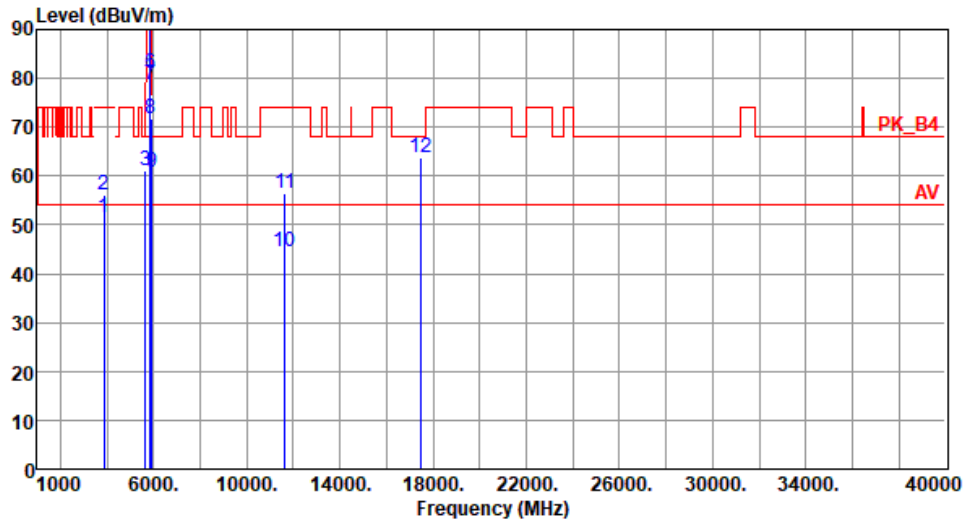
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3:"*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical	Test Configuration	1

Test By :Akun Chung Temperature(°C):24 Humidity(%):64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	51.61	54.00	-2.39	50.48	1.13	Average	179	312
2	3883.33	56.01	74.00	-17.99	54.88	1.13	Peak	179	312
3	5650.00	61.13	68.20	-7.07	56.59	4.54	Peak	177	299
4 *	5825.00	108.65			103.36	5.29	Average	177	299
5 *	5825.00	119.45			114.16	5.29	Peak	177	299
6	5850.00	81.13	122.20	-41.07	75.68	5.45	Peak	177	299
7	5855.00	78.65	110.80	-32.15	73.21	5.44	Peak	177	299
8	5875.00	71.80	105.20	-33.40	66.36	5.44	Peak	177	299
9	5925.00	60.79	68.20	-7.41	55.36	5.43	Peak	177	299
10	11650.00	44.40	54.00	-9.60	30.19	14.21	Average	100	205
11	11650.00	56.40	74.00	-17.60	42.19	14.21	Peak	100	205
12	17475.00	63.65	68.20	-4.55	44.79	18.86	Peak	100	57

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

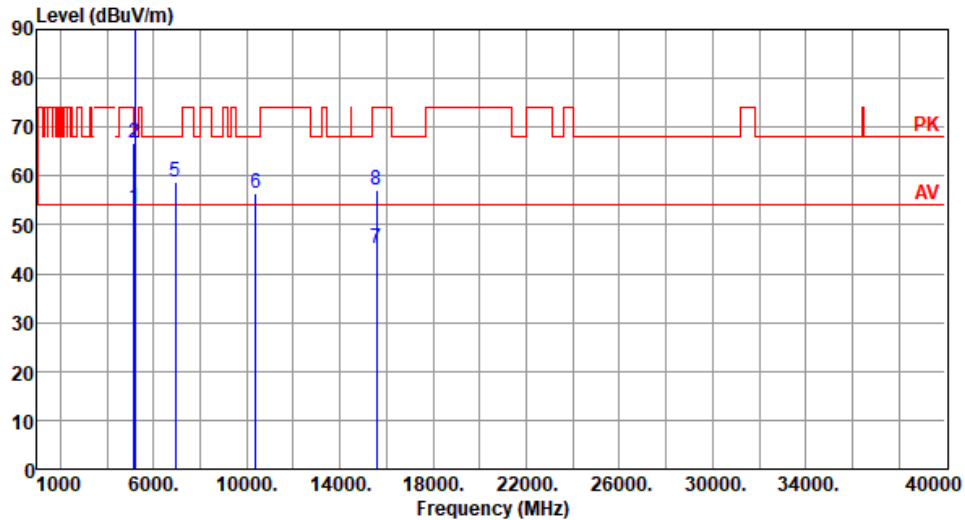
Note 3: "*" is Peak / Average value of fundamental frequency

3.5.3 Transmitter Radiated Unwanted Emissions (Above 1GHz) for ac VHT40

Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Horizontal	Test Configuration	1
Test By :Akun Chung Temperature(°C):24 Humidity(%):64			
Level (dBuV/m)			

Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical	Test Configuration	1

Test By : Akun Chung Temperature(°C): 24 Humidity(%): 64



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	53.63	54.00	-0.37	48.99	4.64	Average	164	355
2	5150.00	66.76	74.00	-7.24	62.12	4.64	Peak	164	355
3 *	5190.00	99.50			95.09	4.41	Average	164	352
4 *	5190.00	108.52			104.11	4.41	Peak	164	352
5	6920.00	58.74	68.20	-9.46	50.77	7.97	Peak	267	263
6	10380.00	56.46	68.20	-11.74	42.22	14.24	Peak	100	156
7	15570.00	45.30	54.00	-8.70	30.52	14.78	Average	100	159
8	15570.00	56.98	74.00	-17.02	42.20	14.78	Peak	100	159

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

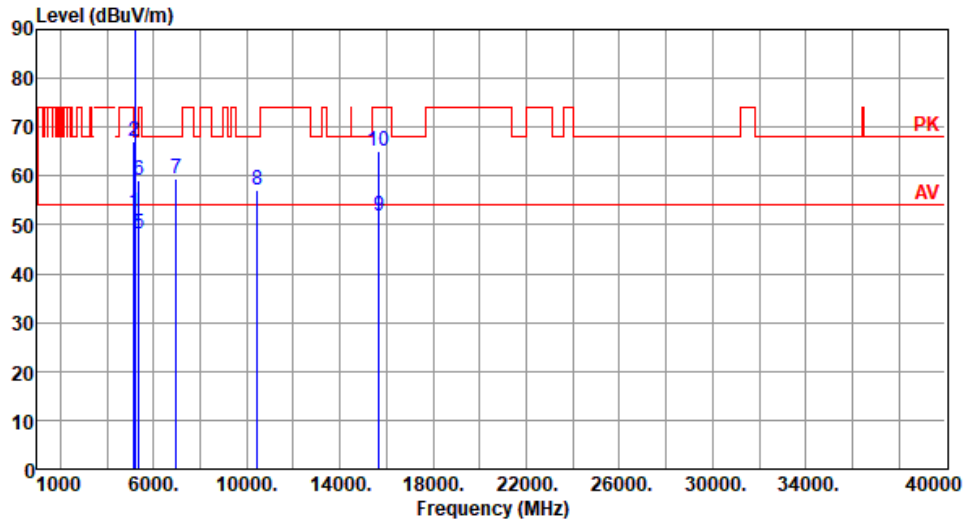
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal	Test Configuration	1

Test By : Akun Chung Temperature(°C): 24 Humidity(%): 64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.43	54.00	-1.57	47.79	4.64	Average	375	336
2	5150.00	67.02	74.00	-6.98	62.38	4.64	Peak	375	336
3 *	5230.00	102.27			98.02	4.25	Average	375	336
4 *	5230.00	111.69			107.44	4.25	Peak	375	336
5	5350.00	48.22	54.00	-5.78	44.28	3.94	Average	375	336
6	5350.00	59.16	74.00	-14.84	55.22	3.94	Peak	375	336
7	6973.33	59.40	68.20	-8.80	51.22	8.18	Peak	143	295
8	10460.00	56.98	68.20	-11.22	42.56	14.42	Peak	100	33
9	15690.00	51.76	54.00	-2.24	37.50	14.26	Average	216	130
10	15690.00	64.98	74.00	-9.02	50.72	14.26	Peak	216	130

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

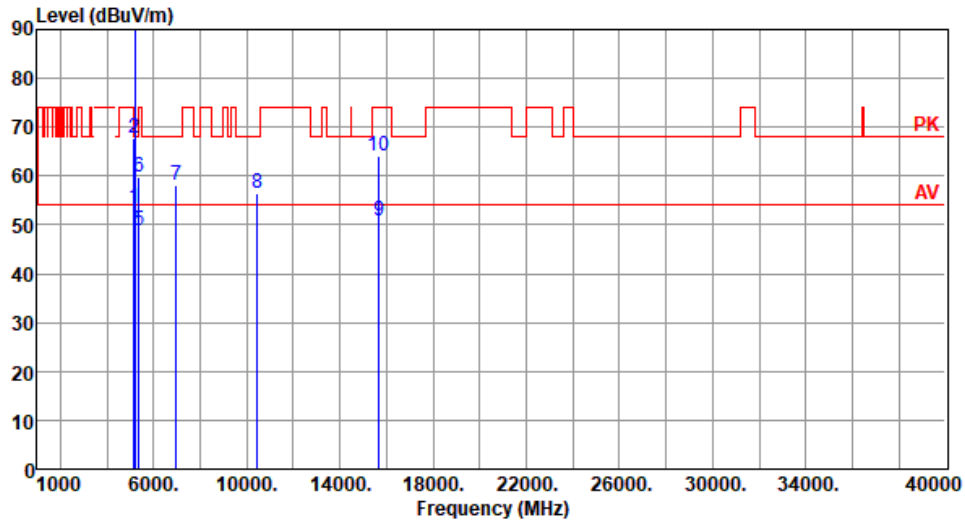
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical	Test Configuration	1

Test By : Akun Chung Temperature(°C): 24 Humidity(%): 64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	53.51	54.00	-0.49	48.87	4.64	Average	164	349
2	5150.00	67.91	74.00	-6.09	63.27	4.64	Peak	164	349
3 *	5230.00	104.46			100.21	4.25	Average	164	349
4 *	5230.00	113.79			109.54	4.25	Peak	164	349
5	5350.00	48.81	54.00	-5.19	44.87	3.94	Average	164	349
6	5350.00	59.83	74.00	-14.17	55.89	3.94	Peak	164	349
7	6973.33	58.20	68.20	-10.00	50.02	8.18	Peak	263	265
8	10460.00	56.44	68.20	-11.76	42.02	14.42	Peak	100	158
9	15690.00	50.84	54.00	-3.16	36.58	14.26	Average	169	142
10	15690.00	64.11	74.00	-9.89	49.85	14.26	Peak	169	142

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

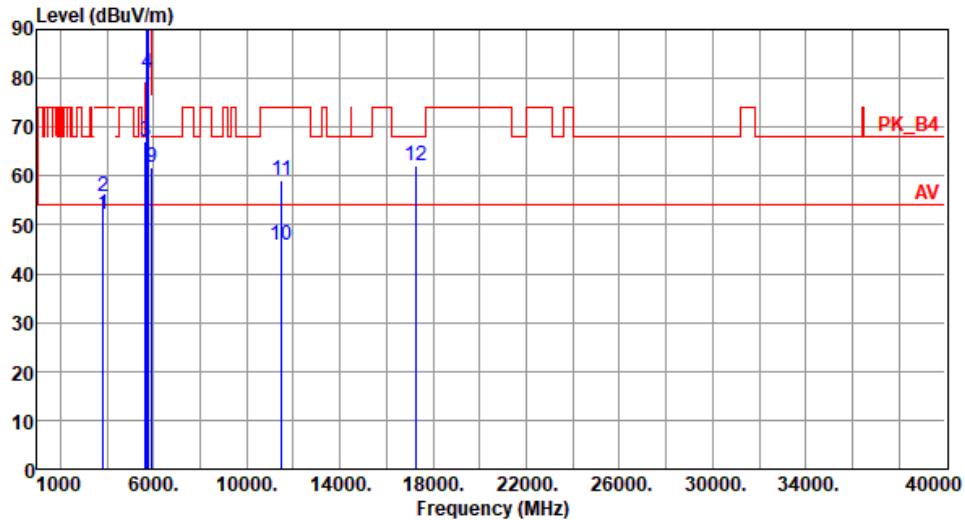
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal	Test Configuration	1

Test By : Akun Chung Temperature(°C): 24 Humidity(%): 64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3836.66	52.06	54.00	-1.94	51.18	0.88	Average	192	355
2	3836.66	55.82	74.00	-18.18	54.94	0.88	Peak	192	355
3	5650.00	67.06	68.20	-1.14	62.52	4.54	Peak	148	55
4	5700.00	81.18	105.20	-24.02	76.50	4.68	Peak	148	55
5	5720.00	94.30	110.80	-16.50	89.49	4.81	Peak	148	55
6	5725.00	97.15	122.20	-25.05	92.30	4.85	Peak	148	55
7 *	5755.00	104.72			99.70	5.02	Average	148	55
8 *	5755.00	115.62			110.60	5.02	Peak	148	55
9	5925.00	61.75	68.20	-6.45	56.32	5.43	Peak	148	55
10	11510.00	45.89	54.00	-8.11	31.28	14.61	Average	100	210
11	11510.00	59.20	74.00	-14.80	44.59	14.61	Peak	100	210
12	17265.00	62.20	68.20	-6.00	44.33	17.87	Peak	100	23

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

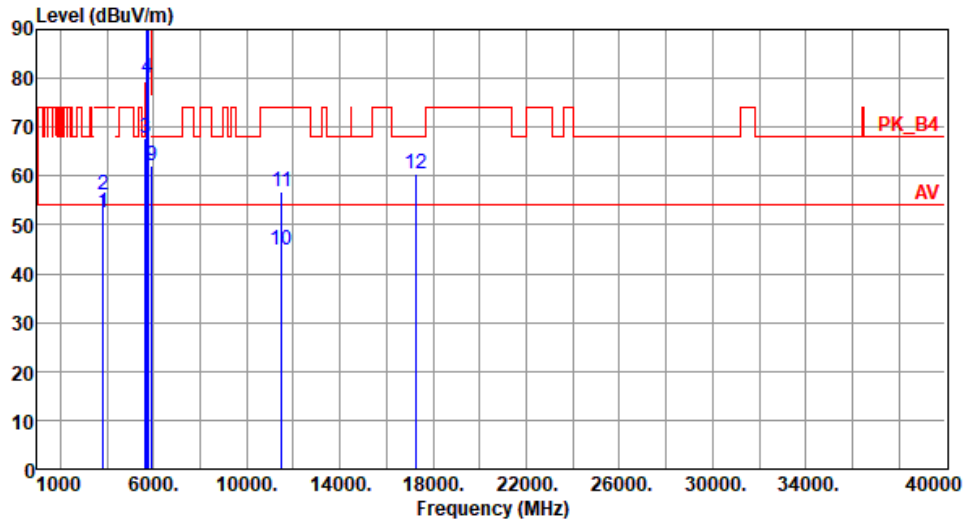
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical	Test Configuration	1

Test By :Akun Chung Temperature(°C):24 Humidity(%):64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3836.66	52.50	54.00	-1.50	51.62	0.88	Average	179	307
2	3836.66	56.02	74.00	-17.98	55.14	0.88	Peak	179	307
3	5650.00	67.89	68.20	-0.31	63.35	4.54	Peak	190	278
4	5700.00	80.13	105.20	-25.07	75.45	4.68	Peak	190	278
5	5720.00	94.23	110.80	-16.57	89.42	4.81	Peak	190	278
6	5725.00	96.65	122.20	-25.55	91.80	4.85	Peak	190	278
7 *	5755.00	106.74			101.72	5.02	Average	190	278
8 *	5755.00	116.48			111.46	5.02	Peak	190	278
9	5925.00	61.97	68.20	-6.23	56.54	5.43	Peak	190	278
10	11510.00	44.86	54.00	-9.14	30.25	14.61	Average	100	207
11	11510.00	56.79	74.00	-17.21	42.18	14.61	Peak	100	207
12	17265.00	60.47	68.20	-7.73	42.60	17.87	Peak	100	58

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

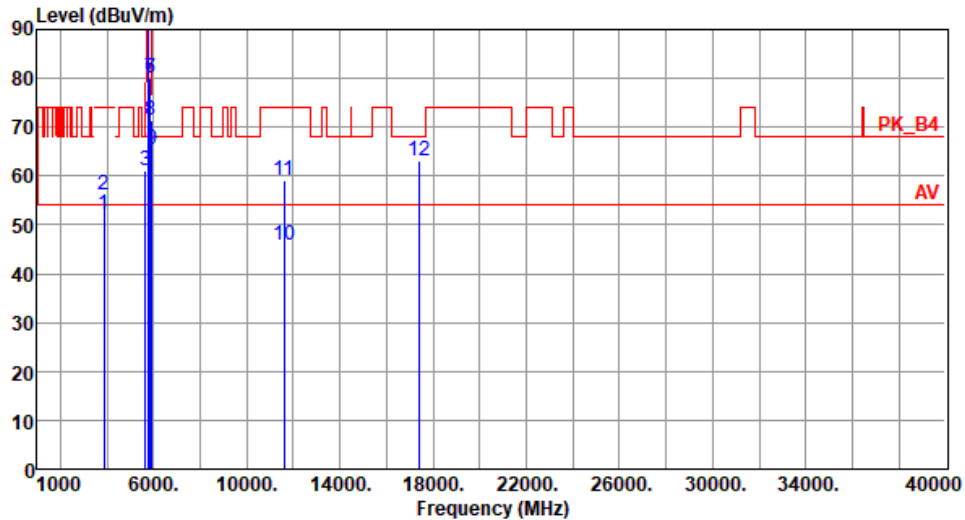
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal	Test Configuration	1

Test By : Akun Chung Temperature(°C): 24 Humidity(%): 64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3863.33	52.00	54.00	-2.00	50.97	1.03	Average	188	357
2	3863.33	55.98	74.00	-18.02	54.95	1.03	Peak	188	357
3	5650.00	61.06	68.20	-7.14	56.52	4.54	Peak	148	55
4 *	5795.00	104.83			99.70	5.13	Average	148	55
5 *	5795.00	115.73			110.60	5.13	Peak	148	55
6	5850.00	80.10	122.20	-42.10	74.65	5.45	Peak	148	55
7	5855.00	80.10	110.80	-30.70	74.66	5.44	Peak	148	55
8	5875.00	71.33	105.20	-33.87	65.89	5.44	Peak	148	55
9	5925.00	65.41	68.20	-2.79	59.98	5.43	Peak	148	55
10	11590.00	45.88	54.00	-8.12	31.42	14.46	Average	100	215
11	11590.00	59.12	74.00	-14.88	44.66	14.46	Peak	100	215
12	17385.00	63.04	68.20	-5.16	44.48	18.56	Peak	100	22

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

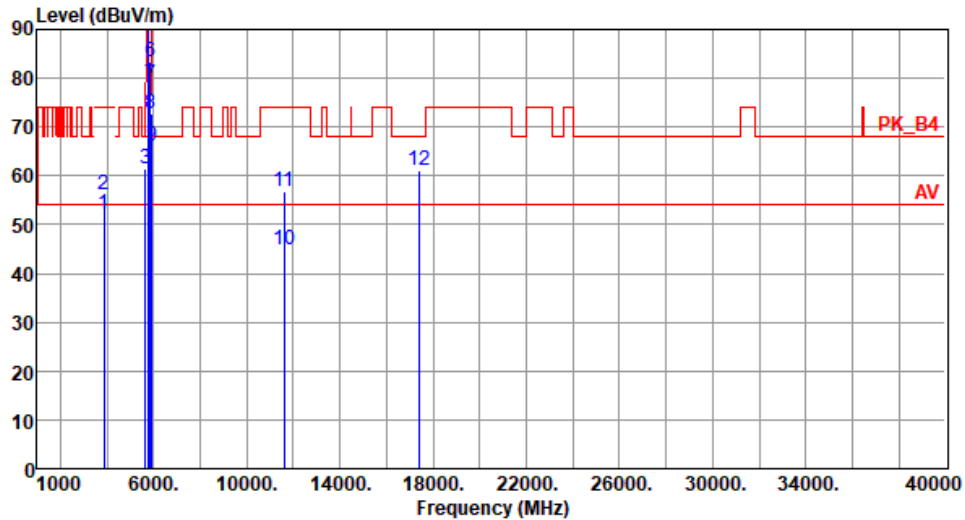
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Vertical	Test Configuration	1

Test By : Akun Chung Temperature(°C): 24 Humidity(%): 64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3863.33	52.04	54.00	-1.96	51.01	1.03	Average	189	351
2	3863.33	56.28	74.00	-17.72	55.25	1.03	Peak	189	351
3	5650.00	61.37	68.20	-6.83	56.83	4.54	Peak	195	277
4 *	5795.00	107.38			102.25	5.13	Average	195	277
5 *	5795.00	116.49			111.36	5.13	Peak	195	277
6	5850.00	83.29	122.20	-38.91	77.84	5.45	Peak	195	277
7	5855.00	78.70	110.80	-32.10	73.26	5.44	Peak	195	277
8	5875.00	72.69	105.20	-32.51	67.25	5.44	Peak	195	277
9	5925.00	66.11	68.20	-2.09	60.68	5.43	Peak	195	277
10	11590.00	44.70	54.00	-9.30	30.24	14.46	Average	100	204
11	11590.00	56.76	74.00	-17.24	42.30	14.46	Peak	100	204
12	17385.00	61.19	68.20	-7.01	42.63	18.56	Peak	100	52

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

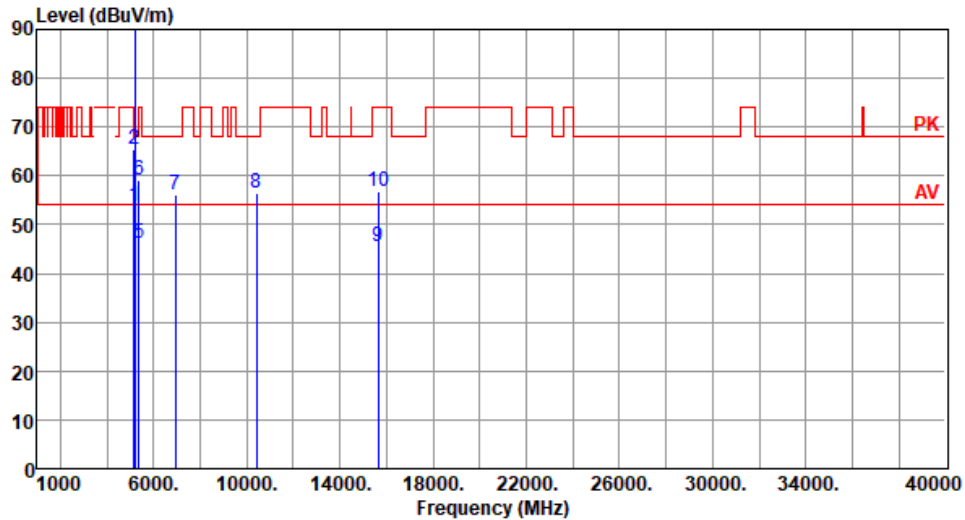
Note 3: "*" is Peak / Average value of fundamental frequency

3.5.4 Transmitter Radiated Unwanted Emissions (Above 1GHz) for ac VHT80

Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Horizontal	Test Configuration	1
Test By :Akun Chung Temperature(°C):23 Humidity(%):62			
Level (dBuV/m)			

Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical	Test Configuration	1

Test By :Akun Chung Temperature(°C):23 Humidity(%):62



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	53.79	54.00	-0.21	49.15	4.64	Average	187	349
2	5150.00	65.48	74.00	-8.52	60.84	4.64	Peak	187	349
3 *	5210.00	93.93			89.61	4.32	Average	171	356
4 *	5210.00	103.65			99.33	4.32	Peak	171	356
5	5350.00	46.20	54.00	-7.80	42.26	3.94	Average	171	356
6	5350.00	59.09	74.00	-14.91	55.15	3.94	Peak	171	356
7	6946.66	56.09	68.20	-12.11	48.01	8.08	Peak	268	266
8	10420.00	56.36	68.20	-11.84	42.02	14.34	Peak	100	157
9	15630.00	45.42	54.00	-8.58	30.91	14.51	Average	100	163
10	15630.00	56.77	74.00	-17.23	42.26	14.51	Peak	100	163

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

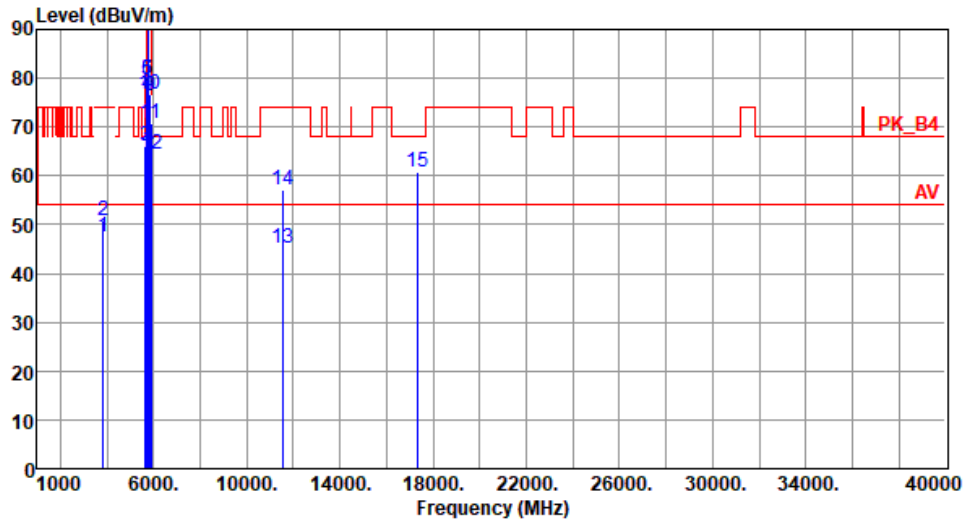
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal	Test Configuration	1

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 62



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3850.00	47.46	54.00	-6.54	46.50	0.96	Average	251	354
2	3850.00	50.97	74.00	-23.03	50.01	0.96	Peak	251	354
3	5650.00	65.97	68.20	-2.23	61.43	4.54	Peak	269	347
4	5700.00	76.72	105.20	-28.48	72.04	4.68	Peak	269	347
5	5720.00	79.75	110.80	-31.05	74.94	4.81	Peak	269	347
6	5725.00	79.57	122.20	-42.63	74.72	4.85	Peak	269	347
7 *	5775.00	96.69			91.61	5.08	Average	269	347
8 *	5775.00	106.30			101.22	5.08	Peak	269	347
9	5850.00	76.42	122.20	-45.78	70.97	5.45	Peak	269	347
10	5855.00	76.55	110.80	-34.25	71.11	5.44	Peak	269	347
11	5875.00	70.77	105.20	-34.43	65.33	5.44	Peak	269	347
12	5925.00	64.38	68.20	-3.82	58.95	5.43	Peak	269	347
13	11550.00	45.20	54.00	-8.80	30.67	14.53	Average	100	220
14	11550.00	57.22	74.00	-16.78	42.69	14.53	Peak	100	220
15	17325.00	60.85	68.20	-7.35	42.68	18.17	Peak	100	12

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

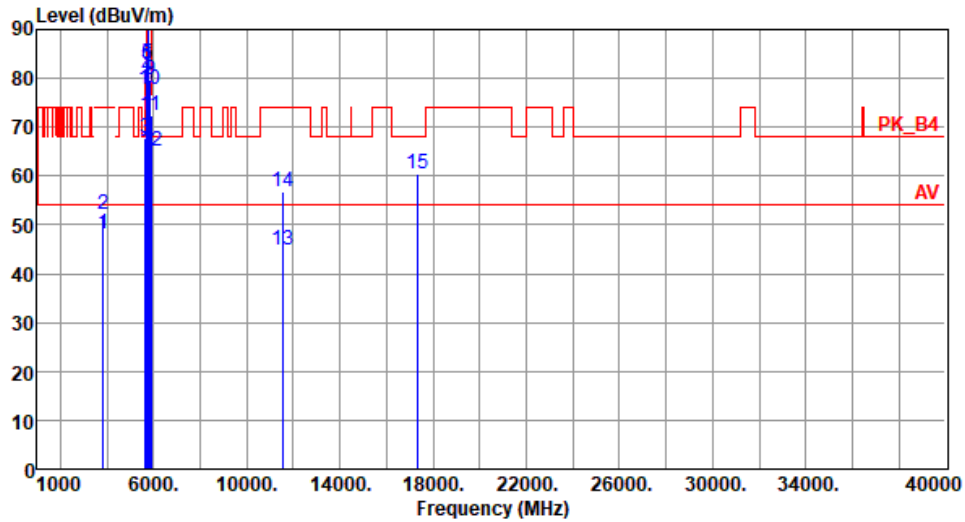
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Vertical	Test Configuration	1

Test By : Akun Chung Temperature(°C): 23 Humidity(%): 62



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3850.00	48.07	54.00	-5.93	47.11	0.96	Average	195	302
2	3850.00	52.12	74.00	-21.88	51.16	0.96	Peak	195	302
3	5650.00	67.73	68.20	-0.47	63.19	4.54	Peak	202	285
4	5700.00	80.24	105.20	-24.96	75.56	4.68	Peak	202	285
5	5720.00	83.02	110.80	-27.78	78.21	4.81	Peak	202	285
6	5725.00	82.80	122.20	-39.40	77.95	4.85	Peak	202	285
7 *	5775.00	99.56			94.48	5.08	Average	202	285
8 *	5775.00	109.18			104.10	5.08	Peak	202	285
9	5850.00	79.74	122.20	-42.46	74.29	5.45	Peak	202	285
10	5855.00	77.80	110.80	-33.00	72.36	5.44	Peak	202	285
11	5875.00	72.39	105.20	-32.81	66.95	5.44	Peak	202	285
12	5925.00	65.05	68.20	-3.15	59.62	5.43	Peak	202	285
13	11550.00	44.75	54.00	-9.25	30.22	14.53	Average	100	201
14	11550.00	56.74	74.00	-17.26	42.21	14.53	Peak	100	201
15	17325.00	60.56	68.20	-7.64	42.39	18.17	Peak	100	50

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

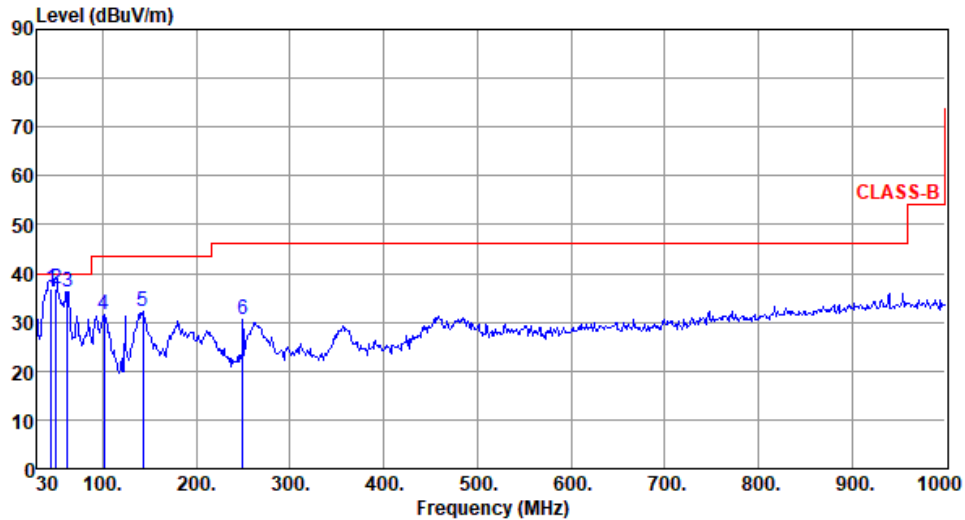
Beamforming mode

3.5.5 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal	Test Configuration	1
Test By :Roger Lu Temperature(°C):25 Humidity(%):61			
Level (dBuV/m) <			

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical	Test Configuration	1

Test By :Roger Lu Temperature(°C):25 Humidity(%):61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	45.02	36.91	40.00	-3.09	44.89	-7.98	QP	104	136
2	50.25	36.99	40.00	-3.01	45.11	-8.12	QP	100	135
3	62.01	36.21	40.00	-3.79	45.50	-9.29	Peak	---	---
4	101.78	31.60	43.50	-11.90	44.43	-12.83	Peak	---	---
5	142.52	32.06	43.50	-11.44	40.88	-8.82	Peak	---	---
6	249.22	30.47	46.00	-15.53	40.52	-10.05	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

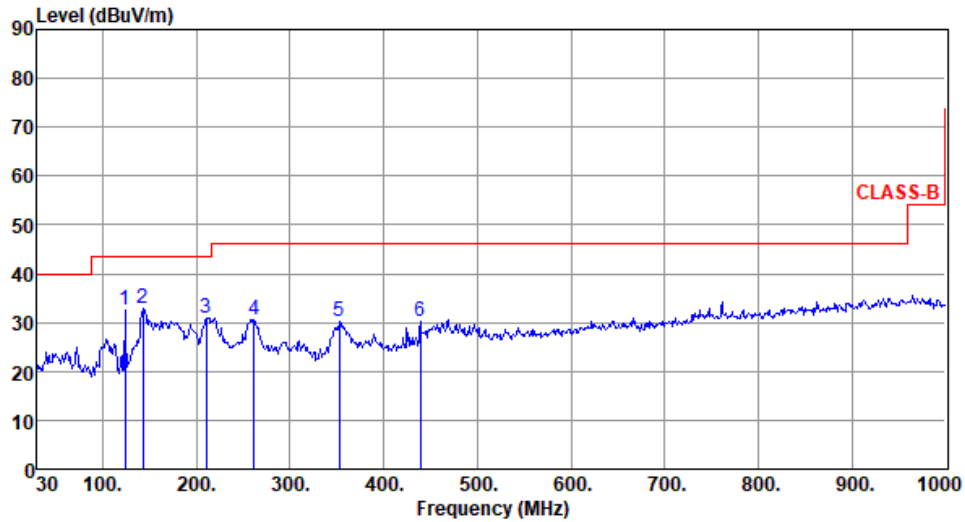
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal	Test Configuration	1

Test By :Roger Lu Temperature(°C):25 Humidity(%):61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	124.09	32.70	43.50	-10.80	42.90	-10.20	Peak	---	---
2	142.52	32.89	43.50	-10.61	41.71	-8.82	Peak	---	---
3	210.42	30.98	43.50	-12.52	42.86	-11.88	Peak	---	---
4	261.83	30.61	46.00	-15.39	40.19	-9.58	Peak	---	---
5	353.01	30.09	46.00	-15.91	36.62	-6.53	Peak	---	---
6	439.34	30.39	46.00	-15.61	34.80	-4.41	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

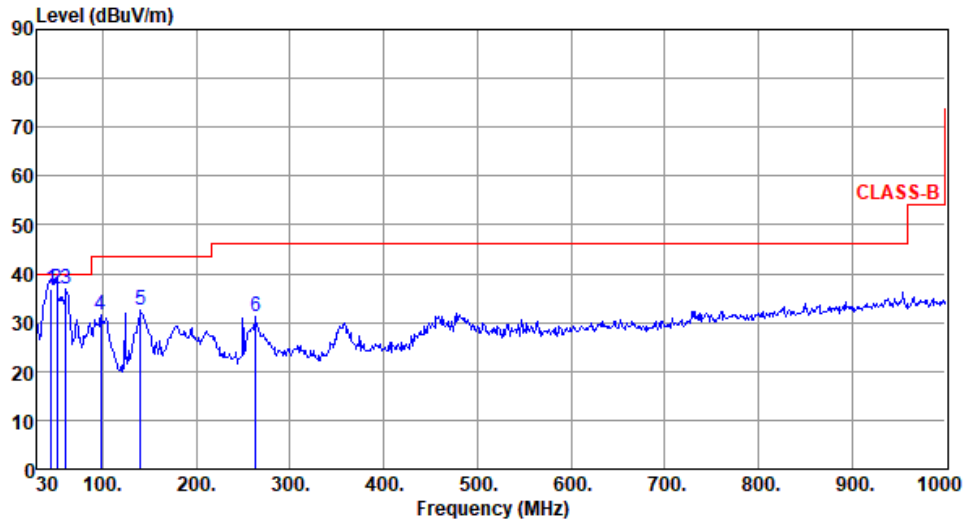
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical	Test Configuration	1

Test By :Roger Lu Temperature(°C):25 Humidity(%):61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	44.89	36.92	40.00	-3.08	44.93	-8.01	QP	102	137
2	51.26	36.97	40.00	-3.03	45.27	-8.30	QP	100	133
3	61.04	36.87	40.00	-3.13	45.78	-8.91	Peak	---	---
4	97.90	31.53	43.50	-11.97	45.07	-13.54	Peak	---	---
5	140.58	32.64	43.50	-10.86	41.68	-9.04	Peak	---	---
6	263.77	31.18	46.00	-14.82	40.64	-9.46	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

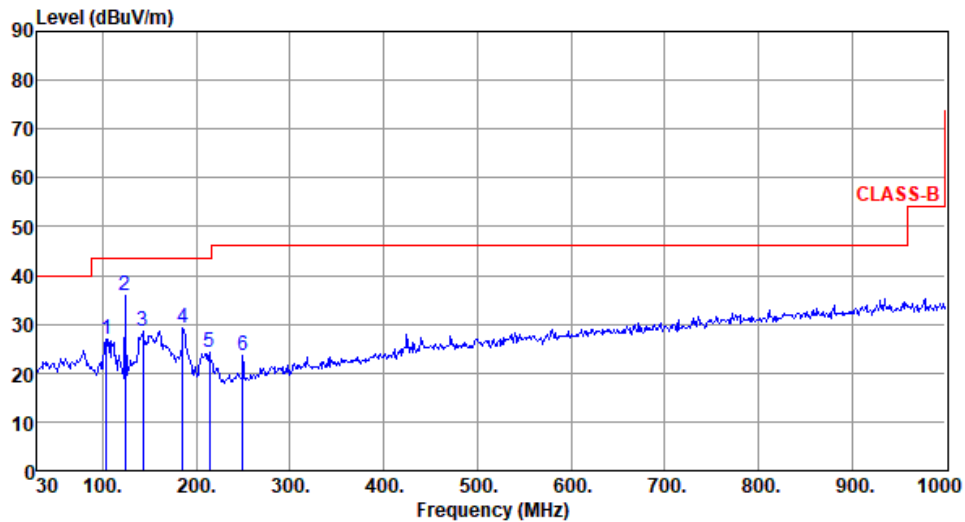
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal	Test Configuration	2

Test By :Roger Lu

Temperature(°C):25

Humidity(%):61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	103.72	26.75	43.50	-16.75	39.35	-12.60	Peak	---	---
2	124.09	35.92	43.50	-7.58	46.12	-10.20	Peak	---	---
3	142.52	28.41	43.50	-15.09	37.23	-8.82	Peak	---	---
4	185.20	29.12	43.50	-14.38	39.83	-10.71	Peak	---	---
5	214.30	24.12	43.50	-19.38	36.00	-11.88	Peak	---	---
6	249.22	23.43	46.00	-22.57	33.48	-10.05	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

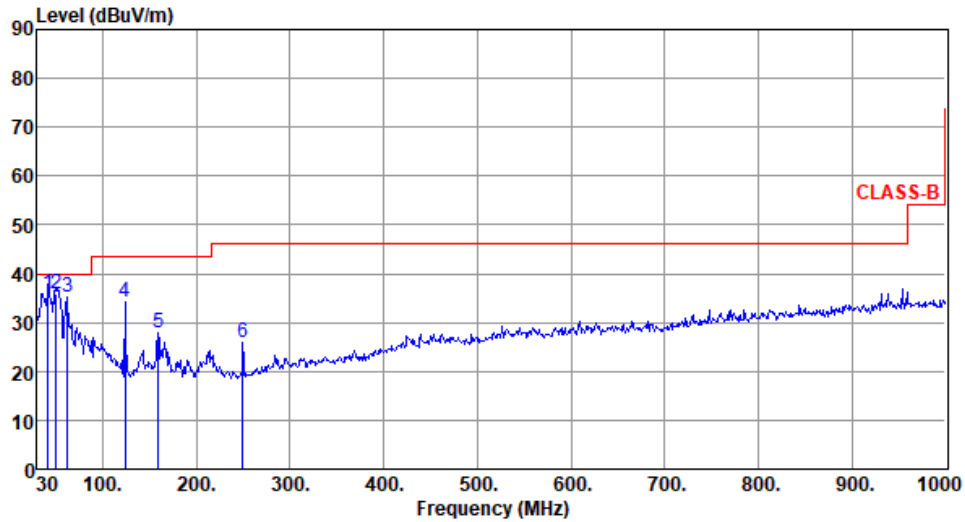
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical	Test Configuration	2

Test By :Roger Lu Temperature(°C):25 Humidity(%):61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	41.64	35.99	40.00	-4.01	44.20	-8.21	QP	100	99
2	50.29	35.94	40.00	-4.06	44.07	-8.13	QP	100	86
3	62.01	35.23	40.00	-4.77	44.52	-9.29	Peak	---	---
4	124.09	34.34	43.50	-9.16	44.54	-10.20	Peak	---	---
5	159.01	27.75	43.50	-15.75	36.39	-8.64	Peak	---	---
6	249.22	25.82	46.00	-20.18	35.87	-10.05	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

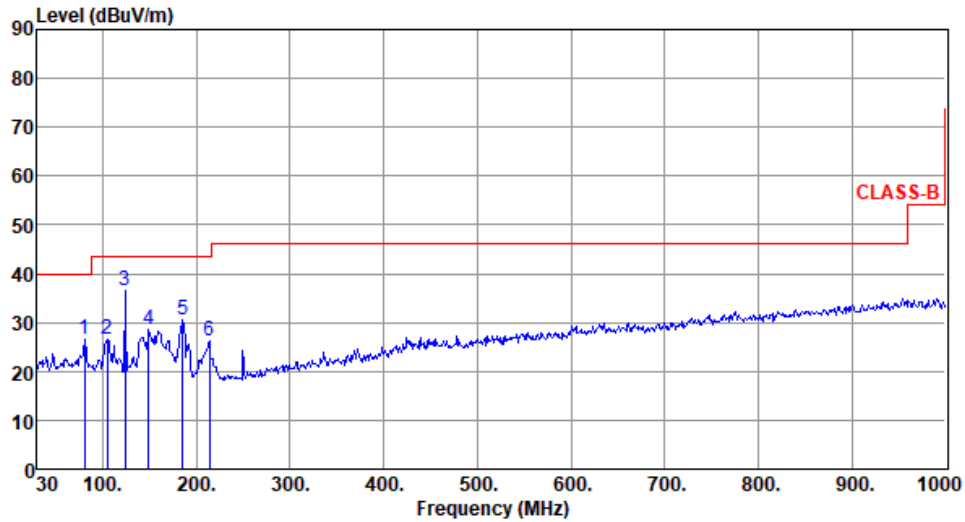
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal	Test Configuration	2

Test By :Roger Lu Temperature(°C):25 Humidity(%):61



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	80.44	26.48	40.00	-13.52	39.58	-13.10	Peak	---	---
2	104.69	26.50	43.50	-17.00	38.77	-12.27	Peak	---	---
3	124.09	36.48	43.50	-7.02	46.68	-10.20	Peak	---	---
4	149.31	28.70	43.50	-14.80	37.53	-8.83	Peak	---	---
5	185.20	30.52	43.50	-12.98	41.23	-10.71	Peak	---	---
6	214.30	26.18	43.50	-17.32	38.06	-11.88	Peak	---	---

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

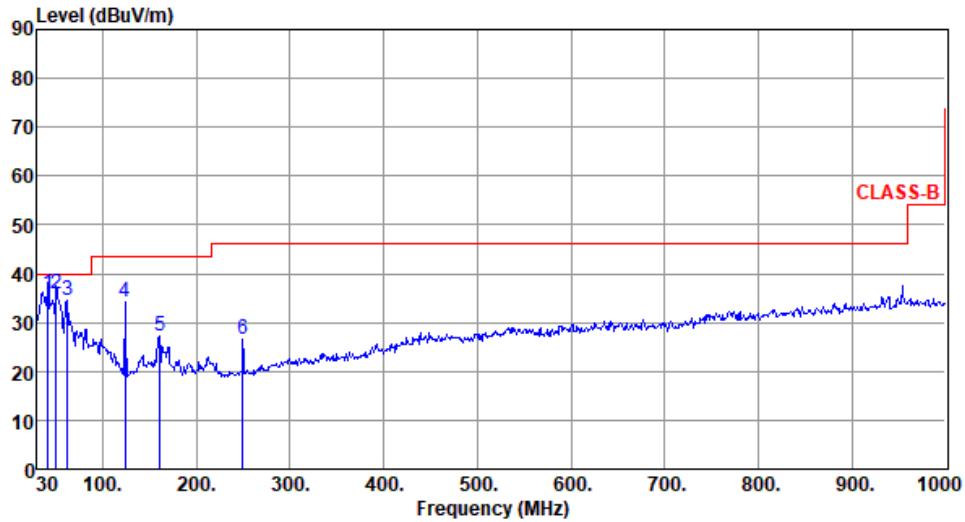
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical	Test Configuration	2

Test By :Roger Lu Temperature(°C):25 Humidity(%):61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	41.54	35.92	40.00	-4.08	44.17	-8.25	QP	100	92
2	50.12	35.87	40.00	-4.13	43.96	-8.09	QP	100	88
3	62.01	34.56	40.00	-5.44	43.85	-9.29	Peak	---	---
4	124.09	34.29	43.50	-9.21	44.49	-10.20	Peak	---	---
5	160.95	27.20	43.50	-16.30	35.93	-8.73	Peak	---	---
6	249.22	26.62	46.00	-19.38	36.67	-10.05	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

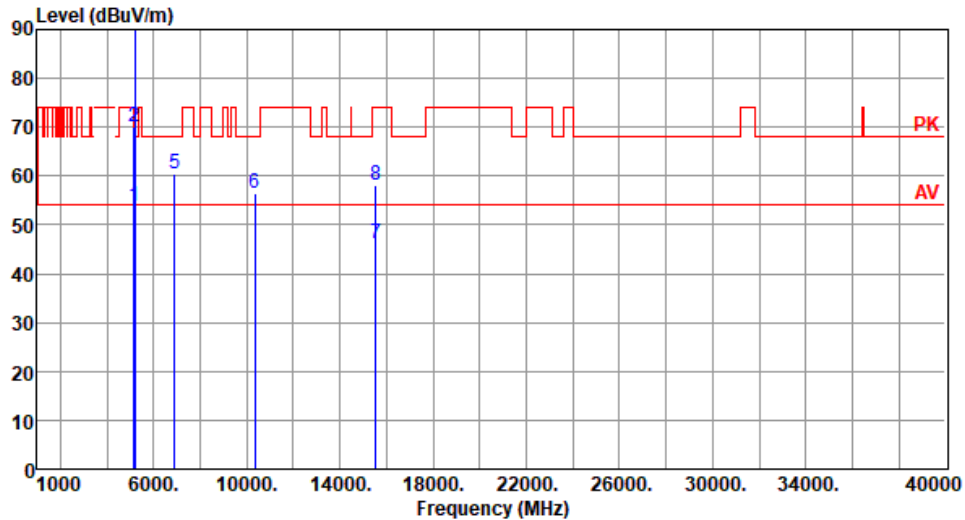
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

3.5.6 Transmitter Radiated Unwanted Emissions (Above 1GHz) for ac VHT20

Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Horizontal	Test Configuration	1
Test By :Akun Chung Temperature(°C):25 Humidity(%):61			
Level (dBuV/m)			

Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical	Test Configuration	1

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 61



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	53.75	54.00	-0.25	49.11	4.64	Average	182	3
2	5150.00	70.05	74.00	-3.95	65.41	4.64	Peak	182	3
3 *	5180.00	103.18			98.72	4.46	Average	182	3
4 *	5180.00	114.75			110.29	4.46	Peak	182	3
5	6906.66	60.32	68.20	-7.88	52.39	7.93	Peak	100	152
6	10360.00	56.59	68.20	-11.61	42.40	14.19	Peak	100	132
7	15540.00	46.16	54.00	-7.84	31.25	14.91	Average	100	136
8	15540.00	58.27	74.00	-15.73	43.36	14.91	Peak	100	136

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

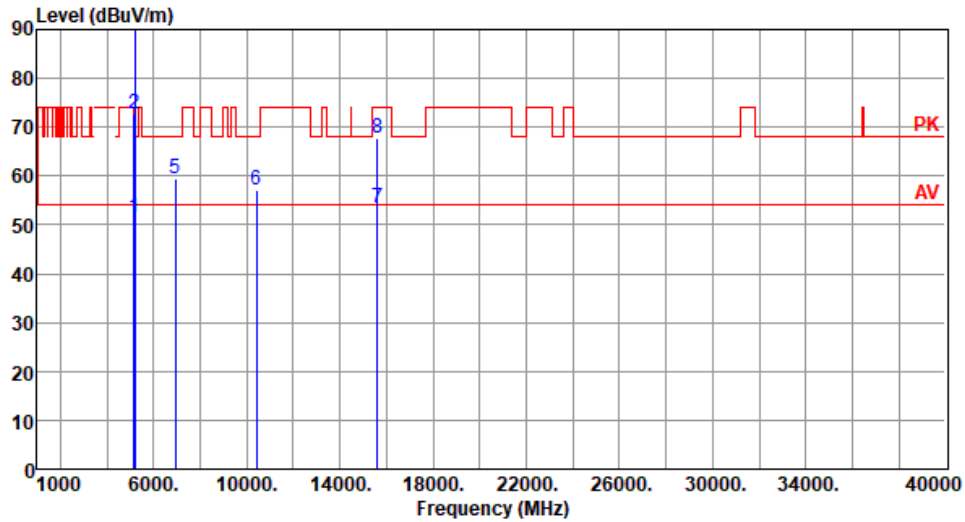
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal	Test Configuration	1

Test By :Roger Lu Temperature(°C):25 Humidity(%):61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	51.45	54.00	-2.55	46.81	4.64	Average	197	344
2	5150.00	72.76	74.00	-1.24	68.12	4.64	Peak	197	344
3 *	5200.00	107.13			102.78	4.35	Average	197	344
4 *	5200.00	118.82			114.47	4.35	Peak	197	344
5	6933.33	59.52	68.20	-8.68	51.50	8.02	Peak	142	289
6	10400.00	57.10	68.20	-11.10	42.80	14.30	Peak	100	50
7	15600.00	53.56	54.00	-0.44	38.92	14.64	Average	145	107
8	15600.00	67.90	74.00	-6.10	53.26	14.64	Peak	145	107

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

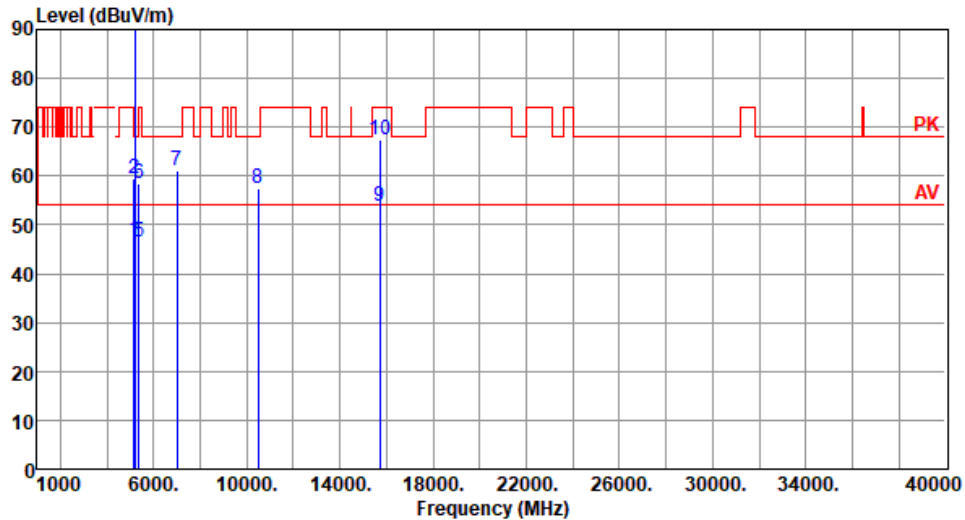
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical	Test Configuration	1
Test By :Roger Lu Temperature(°C):25 Humidity(%):61			
Level (dBuV/m)			

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal	Test Configuration	1

Test By :Akun Chung Temperature(°C):25 Humidity(%):61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.89	54.00	-7.11	42.25	4.64	Average	206	347
2	5150.00	59.42	74.00	-14.58	54.78	4.64	Peak	206	347
3 *	5240.00	107.96			103.75	4.21	Average	206	347
4 *	5240.00	119.92			115.71	4.21	Peak	206	347
5	5350.00	46.46	54.00	-7.54	42.52	3.94	Average	206	347
6	5350.00	58.57	74.00	-15.43	54.63	3.94	Peak	206	347
7	6986.66	61.01	68.20	-7.19	52.78	8.23	Peak	139	287
8	10480.00	57.32	68.20	-10.88	42.86	14.46	Peak	100	118
9	15720.00	53.73	54.00	-0.27	39.52	14.21	Average	136	109
10	15720.00	67.56	74.00	-6.44	53.35	14.21	Peak	136	109

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

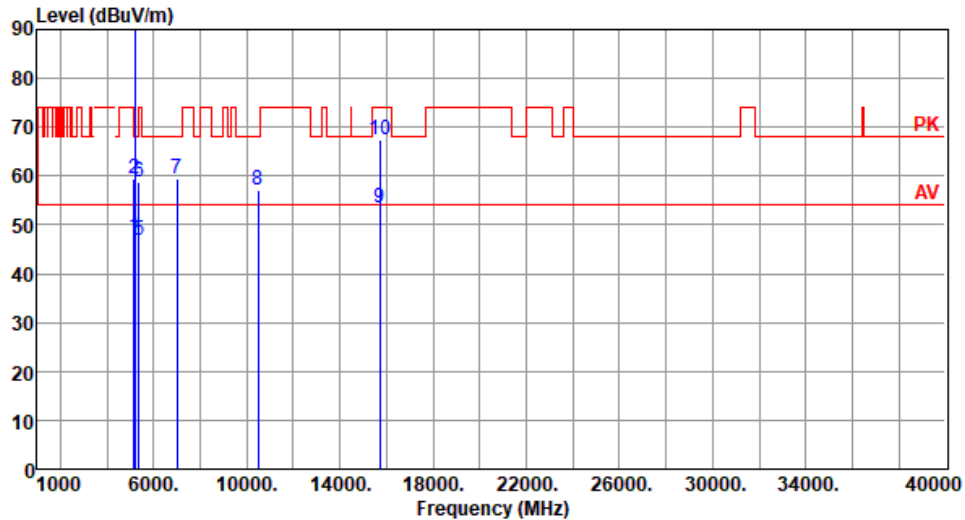
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical	Test Configuration	1

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	47.51	54.00	-6.49	42.87	4.64	Average	169	355
2	5150.00	59.53	74.00	-14.47	54.89	4.64	Peak	169	355
3 *	5240.00	108.67			104.46	4.21	Average	169	355
4 *	5240.00	120.39			116.18	4.21	Peak	169	355
5	5350.00	46.72	54.00	-7.28	42.78	3.94	Average	169	355
6	5350.00	58.71	74.00	-15.29	54.77	3.94	Peak	169	355
7	6986.66	59.46	68.20	-8.74	51.23	8.23	Peak	275	276
8	10480.00	57.25	68.20	-10.95	42.79	14.46	Peak	100	156
9	15720.00	53.63	54.00	-0.37	39.42	14.21	Average	150	139
10	15720.00	67.32	74.00	-6.68	53.11	14.21	Peak	150	139

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

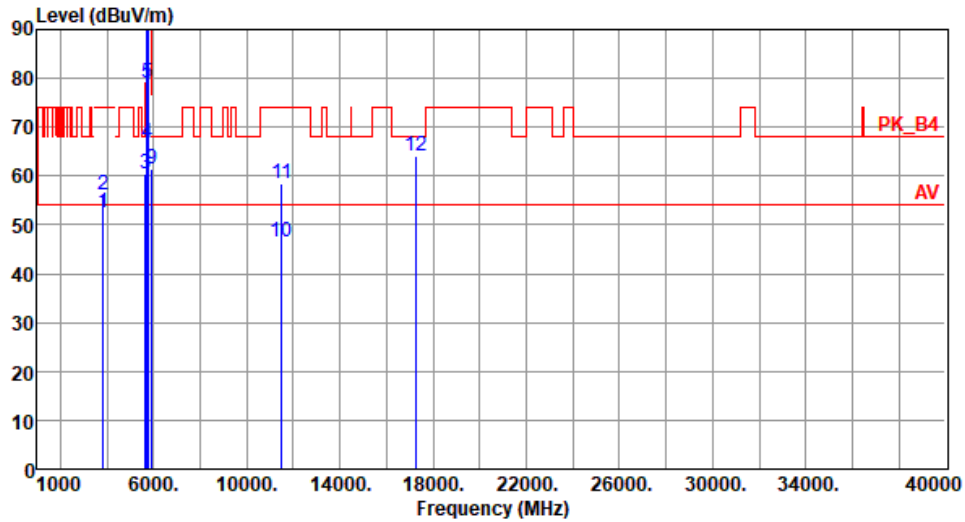
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal	Test Configuration	1

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3830.00	52.31	54.00	-1.69	51.48	0.83	Average	219	352
2	3830.00	56.16	74.00	-17.84	55.33	0.83	Peak	219	352
3	5650.00	60.53	68.20	-7.67	55.99	4.54	Peak	240	346
4	5700.00	66.84	105.20	-38.36	62.16	4.68	Peak	240	346
5	5720.00	78.95	110.80	-31.85	74.14	4.81	Peak	240	346
6	5725.00	90.15	122.20	-32.05	85.30	4.85	Peak	240	346
7 *	5745.00	107.86			102.87	4.99	Average	240	346
8 *	5745.00	117.46			112.47	4.99	Peak	240	346
9	5925.00	61.31	68.20	-6.89	55.88	5.43	Peak	240	346
10	11490.00	46.51	54.00	-7.49	31.88	14.63	Average	100	26
11	11490.00	58.51	74.00	-15.49	43.88	14.63	Peak	100	26
12	17235.00	64.05	68.20	-4.15	46.29	17.76	Peak	187	22

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

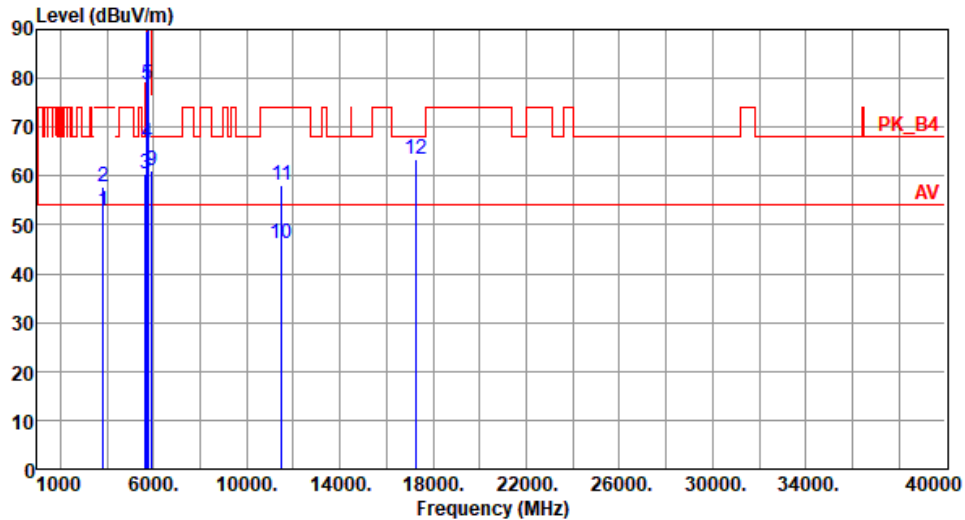
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical	Test Configuration	1

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3830.00	52.91	54.00	-1.09	52.08	0.83	Average	185	300
2	3830.00	57.72	74.00	-16.28	56.89	0.83	Peak	185	300
3	5650.00	60.33	68.20	-7.87	55.79	4.54	Peak	133	68
4	5700.00	66.68	105.20	-38.52	62.00	4.68	Peak	133	68
5	5720.00	78.79	110.80	-32.01	73.98	4.81	Peak	133	68
6	5725.00	89.63	122.20	-32.57	84.78	4.85	Peak	133	68
7 *	5745.00	107.56			102.57	4.99	Average	133	68
8 *	5745.00	117.31			112.32	4.99	Peak	133	68
9	5925.00	61.21	68.20	-6.99	55.78	5.43	Peak	133	68
10	11490.00	46.08	54.00	-7.92	31.45	14.63	Average	100	56
11	11490.00	58.10	74.00	-15.90	43.47	14.63	Peak	100	56
12	17235.00	63.42	68.20	-4.78	45.66	17.76	Peak	375	52

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

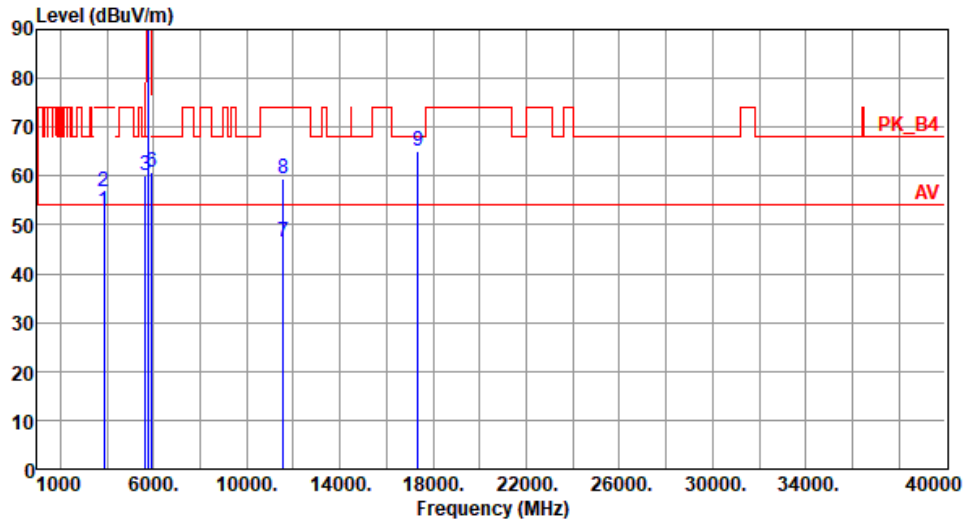
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	1

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3856.66	52.75	54.00	-1.25	51.74	1.01	Average	281	339
2	3856.66	56.87	74.00	-17.13	55.86	1.01	Peak	281	339
3	5650.00	60.06	68.20	-8.14	55.52	4.54	Peak	249	349
4 *	5785.00	107.85			102.74	5.11	Average	249	349
5 *	5785.00	118.61			113.50	5.11	Peak	249	349
6	5925.00	60.93	68.20	-7.27	55.50	5.43	Peak	249	349
7	11570.00	46.49	54.00	-7.51	31.99	14.50	Average	100	25
8	11570.00	59.39	74.00	-14.61	44.89	14.50	Peak	100	25
9	17355.00	65.01	68.20	-3.19	46.65	18.36	Peak	188	22

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

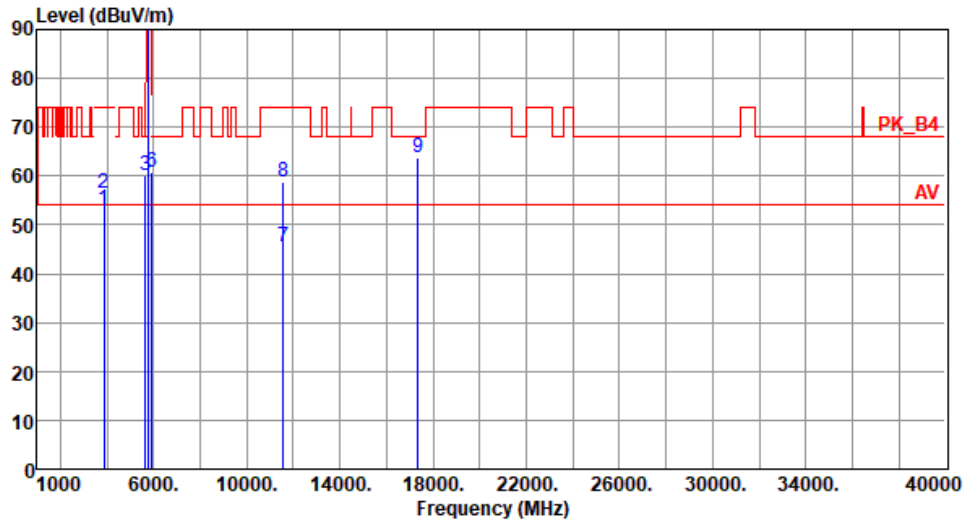
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	1

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 61



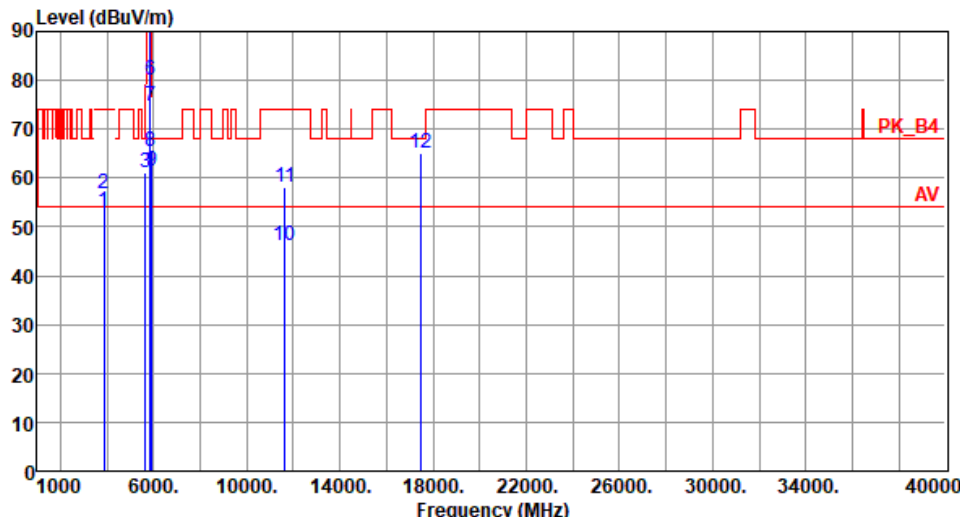
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3856.66	53.25	54.00	-0.75	52.24	1.01	Average	208	312
2	3856.66	56.44	74.00	-17.56	55.43	1.01	Peak	208	312
3	5650.00	59.99	68.20	-8.21	55.45	4.54	Peak	128	66
4 *	5785.00	107.73			102.62	5.11	Average	128	66
5 *	5785.00	118.56			113.45	5.11	Peak	128	66
6	5925.00	60.91	68.20	-7.29	55.48	5.43	Peak	128	66
7	11570.00	45.55	54.00	-8.45	31.05	14.50	Average	100	44
8	11570.00	58.94	74.00	-15.06	44.44	14.50	Peak	100	44
9	17355.00	63.84	68.20	-4.36	45.48	18.36	Peak	385	52

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

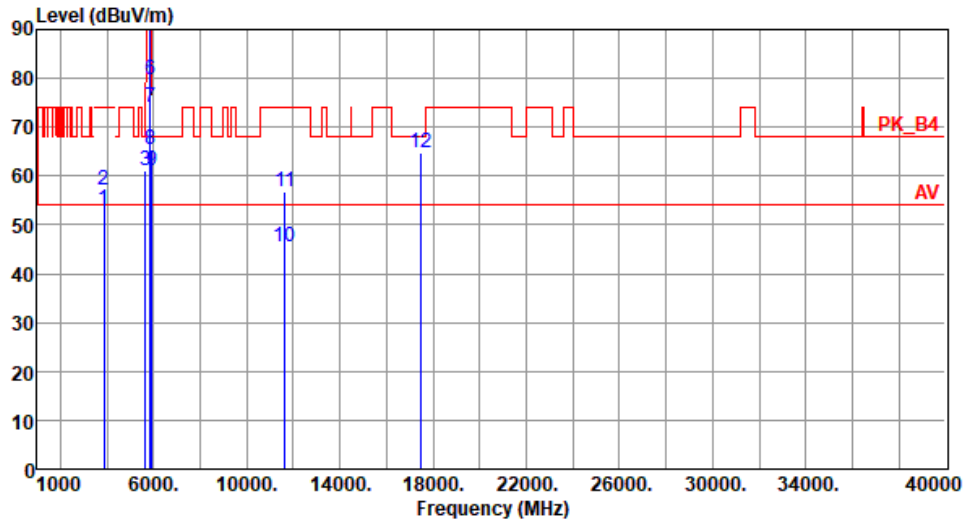
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT20	Test Freq. (MHz)	5825																																																																																																																																		
Polarization	Horizontal	Test Configuration	1																																																																																																																																		
Test By :Roger Lu Temperature(°C):25 Humidity(%):61																																																																																																																																					
Level (dBuV/m)  <table><tr><th></th><th>Freq. MHz</th><th>Emission level dBuV/m</th><th>Limit dBuV/m</th><th>Margin dB</th><th>SA reading dBuV</th><th>Factor dB</th><th>Remark</th><th>ANT High cm</th><th>Turn Table deg</th></tr><tr><td>1</td><td>3883.33</td><td>53.00</td><td>54.00</td><td>-1.00</td><td>51.87</td><td>1.13</td><td>Average</td><td>244</td><td>358</td></tr><tr><td>2</td><td>3883.33</td><td>56.88</td><td>74.00</td><td>-17.12</td><td>55.75</td><td>1.13</td><td>Peak</td><td>244</td><td>358</td></tr><tr><td>3</td><td>5650.00</td><td>61.15</td><td>68.20</td><td>-7.05</td><td>56.61</td><td>4.54</td><td>Peak</td><td>221</td><td>342</td></tr><tr><td>4 *</td><td>5825.00</td><td>107.32</td><td></td><td></td><td>102.03</td><td>5.29</td><td>Average</td><td>221</td><td>342</td></tr><tr><td>5 *</td><td>5825.00</td><td>117.62</td><td></td><td></td><td>112.33</td><td>5.29</td><td>Peak</td><td>221</td><td>342</td></tr><tr><td>6</td><td>5850.00</td><td>80.12</td><td>122.20</td><td>-42.08</td><td>74.67</td><td>5.45</td><td>Peak</td><td>221</td><td>342</td></tr><tr><td>7</td><td>5855.00</td><td>74.80</td><td>110.80</td><td>-36.00</td><td>69.36</td><td>5.44</td><td>Peak</td><td>221</td><td>342</td></tr><tr><td>8</td><td>5875.00</td><td>65.59</td><td>105.20</td><td>-39.61</td><td>60.15</td><td>5.44</td><td>Peak</td><td>221</td><td>342</td></tr><tr><td>9</td><td>5925.00</td><td>61.41</td><td>68.20</td><td>-6.79</td><td>55.98</td><td>5.43</td><td>Peak</td><td>221</td><td>342</td></tr><tr><td>10</td><td>11650.00</td><td>46.08</td><td>54.00</td><td>-7.92</td><td>31.87</td><td>14.21</td><td>Average</td><td>100</td><td>29</td></tr><tr><td>11</td><td>11650.00</td><td>58.06</td><td>74.00</td><td>-15.94</td><td>43.85</td><td>14.21</td><td>Peak</td><td>100</td><td>29</td></tr><tr><td>12</td><td>17475.00</td><td>65.08</td><td>68.20</td><td>-3.12</td><td>46.22</td><td>18.86</td><td>Peak</td><td>186</td><td>25</td></tr></table>					Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg	1	3883.33	53.00	54.00	-1.00	51.87	1.13	Average	244	358	2	3883.33	56.88	74.00	-17.12	55.75	1.13	Peak	244	358	3	5650.00	61.15	68.20	-7.05	56.61	4.54	Peak	221	342	4 *	5825.00	107.32			102.03	5.29	Average	221	342	5 *	5825.00	117.62			112.33	5.29	Peak	221	342	6	5850.00	80.12	122.20	-42.08	74.67	5.45	Peak	221	342	7	5855.00	74.80	110.80	-36.00	69.36	5.44	Peak	221	342	8	5875.00	65.59	105.20	-39.61	60.15	5.44	Peak	221	342	9	5925.00	61.41	68.20	-6.79	55.98	5.43	Peak	221	342	10	11650.00	46.08	54.00	-7.92	31.87	14.21	Average	100	29	11	11650.00	58.06	74.00	-15.94	43.85	14.21	Peak	100	29	12	17475.00	65.08	68.20	-3.12	46.22	18.86	Peak	186	25
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg																																																																																																																												
1	3883.33	53.00	54.00	-1.00	51.87	1.13	Average	244	358																																																																																																																												
2	3883.33	56.88	74.00	-17.12	55.75	1.13	Peak	244	358																																																																																																																												
3	5650.00	61.15	68.20	-7.05	56.61	4.54	Peak	221	342																																																																																																																												
4 *	5825.00	107.32			102.03	5.29	Average	221	342																																																																																																																												
5 *	5825.00	117.62			112.33	5.29	Peak	221	342																																																																																																																												
6	5850.00	80.12	122.20	-42.08	74.67	5.45	Peak	221	342																																																																																																																												
7	5855.00	74.80	110.80	-36.00	69.36	5.44	Peak	221	342																																																																																																																												
8	5875.00	65.59	105.20	-39.61	60.15	5.44	Peak	221	342																																																																																																																												
9	5925.00	61.41	68.20	-6.79	55.98	5.43	Peak	221	342																																																																																																																												
10	11650.00	46.08	54.00	-7.92	31.87	14.21	Average	100	29																																																																																																																												
11	11650.00	58.06	74.00	-15.94	43.85	14.21	Peak	100	29																																																																																																																												
12	17475.00	65.08	68.20	-3.12	46.22	18.86	Peak	186	25																																																																																																																												
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m). Note 3:"*" is Peak / Average value of fundamental frequency																																																																																																																																					

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical	Test Configuration	1

Test By :Roger Lu Temperature(°C):25 Humidity(%):61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	53.19	54.00	-0.81	52.06	1.13	Average	188	310
2	3883.33	57.08	74.00	-16.92	55.95	1.13	Peak	188	310
3	5650.00	61.08	68.20	-7.12	56.54	4.54	Peak	119	65
4 *	5825.00	107.07			101.78	5.29	Average	119	65
5 *	5825.00	117.28			111.99	5.29	Peak	119	65
6	5850.00	79.58	122.20	-42.62	74.13	5.45	Peak	119	65
7	5855.00	74.00	110.80	-36.80	68.56	5.44	Peak	119	65
8	5875.00	65.49	105.20	-39.71	60.05	5.44	Peak	119	65
9	5925.00	61.23	68.20	-6.97	55.80	5.43	Peak	119	65
10	11650.00	45.66	54.00	-8.34	31.45	14.21	Average	100	58
11	11650.00	56.68	74.00	-17.32	42.47	14.21	Peak	100	58
12	17475.00	64.68	68.20	-3.52	45.82	18.86	Peak	377	52

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

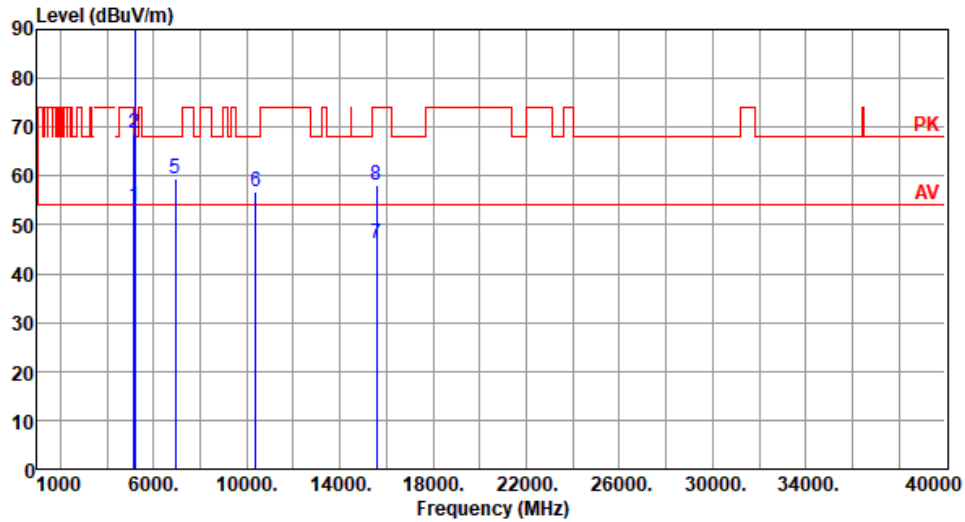
Note 3: "*" is Peak / Average value of fundamental frequency

3.5.7 Transmitter Radiated Unwanted Emissions (Above 1GHz) for ac VHT40

Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Horizontal	Test Configuration	1
Test By :Akun Chung Temperature(°C):25 Humidity(%):61			
Level (dBuV/m)			

Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical	Test Configuration	1

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 61



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	53.88	54.00	-0.12	49.24	4.64	Average	145	2
2	5150.00	68.60	74.00	-5.40	63.96	4.64	Peak	145	2
3 *	5190.00	98.88			94.47	4.41	Average	186	359
4 *	5190.00	110.26			105.85	4.41	Peak	186	359
5	6920.00	59.41	68.20	-8.79	51.44	7.97	Peak	266	258
6	10380.00	56.72	68.20	-11.48	42.48	14.24	Peak	100	158
7	15570.00	46.22	54.00	-7.78	31.44	14.78	Average	100	163
8	15570.00	58.22	74.00	-15.78	43.44	14.78	Peak	100	163

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

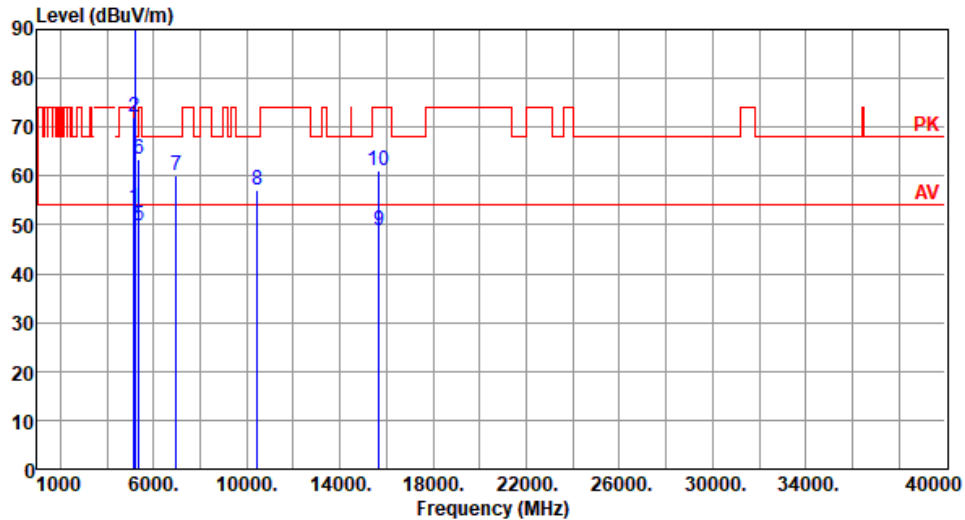
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal	Test Configuration	1

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	53.55	54.00	-0.45	48.91	4.64	Average	243	347
2	5150.00	71.96	74.00	-2.04	67.32	4.64	Peak	243	347
3 *	5230.00	103.50			99.25	4.25	Average	243	347
4 *	5230.00	113.55			109.30	4.25	Peak	243	347
5	5350.00	49.83	54.00	-4.17	45.89	3.94	Average	243	347
6	5350.00	63.60	74.00	-10.40	59.66	3.94	Peak	243	347
7	6973.33	60.03	68.20	-8.17	51.85	8.18	Peak	144	307
8	10460.00	57.22	68.20	-10.98	42.80	14.42	Peak	100	139
9	15690.00	48.97	54.00	-5.03	34.71	14.26	Average	239	114
10	15690.00	61.12	74.00	-12.88	46.86	14.26	Peak	239	114

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

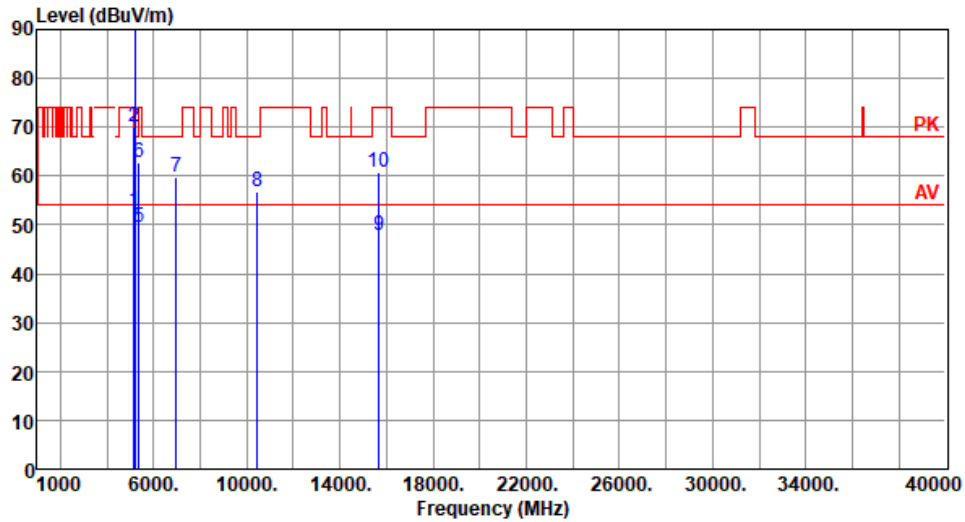
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical	Test Configuration	1

Test By :Akun Chung Temperature(°C):25 Humidity(%):61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.69	54.00	-1.31	48.05	4.64	Average	162	1
2	5150.00	70.23	74.00	-3.77	65.59	4.64	Peak	162	1
3 *	5230.00	103.67			99.42	4.25	Average	173	1
4 *	5230.00	113.81			109.56	4.25	Peak	173	1
5	5350.00	49.63	54.00	-4.37	45.69	3.94	Average	162	1
6	5350.00	62.71	74.00	-11.29	58.77	3.94	Peak	162	1
7	6973.33	59.65	68.20	-8.55	51.47	8.18	Peak	255	265
8	10460.00	56.78	68.20	-11.42	42.36	14.42	Peak	100	145
9	15690.00	47.74	54.00	-6.26	33.48	14.26	Average	166	147
10	15690.00	60.94	74.00	-13.06	46.68	14.26	Peak	166	147

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

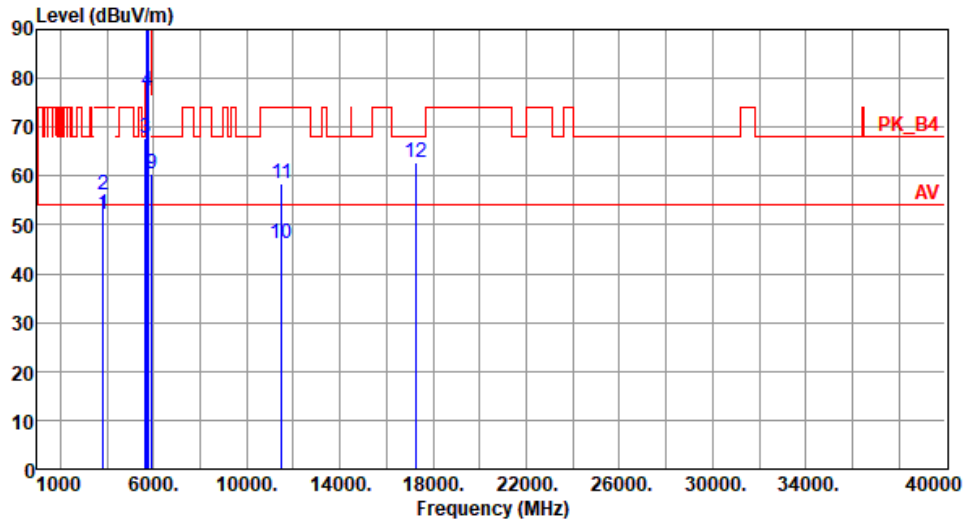
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal	Test Configuration	1

Test By :Akun Chung Temperature(°C):25 Humidity(%):61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3836.66	52.29	54.00	-1.71	51.41	0.88	Average	182	351
2	3836.66	56.20	74.00	-17.80	55.32	0.88	Peak	182	351
3	5650.00	67.78	68.20	-0.42	63.24	4.54	Peak	261	349
4	5700.00	77.47	105.20	-27.73	72.79	4.68	Peak	261	349
5	5720.00	89.66	110.80	-21.14	84.85	4.81	Peak	261	349
6	5725.00	96.39	122.20	-25.81	91.54	4.85	Peak	261	349
7 *	5755.00	104.87			99.85	5.02	Average	261	349
8 *	5755.00	116.51			111.49	5.02	Peak	261	349
9	5925.00	60.43	68.20	-7.77	55.00	5.43	Peak	261	349
10	11510.00	46.29	54.00	-7.71	31.68	14.61	Average	100	29
11	11510.00	58.36	74.00	-15.64	43.75	14.61	Peak	100	29
12	17265.00	62.75	68.20	-5.45	44.88	17.87	Peak	185	33

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

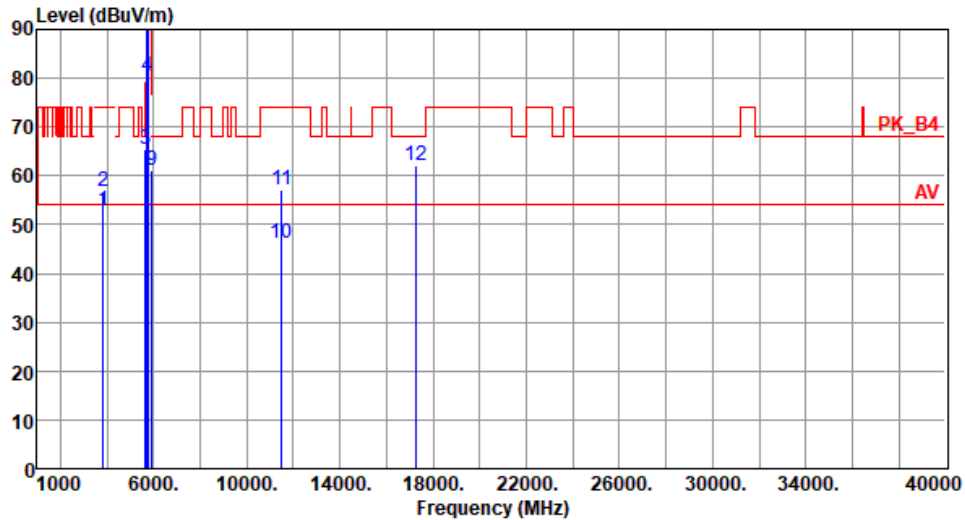
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical	Test Configuration	1

Test By :Akun Chung Temperature(°C):25 Humidity(%):61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3836.66	52.73	54.00	-1.27	51.85	0.88	Average	192	304
2	3836.66	56.64	74.00	-17.36	55.76	0.88	Peak	192	304
3	5650.00	65.43	68.20	-2.77	60.89	4.54	Peak	119	273
4	5700.00	80.32	105.20	-24.88	75.64	4.68	Peak	119	273
5	5720.00	95.38	110.80	-15.42	90.57	4.81	Peak	119	273
6	5725.00	96.90	122.20	-25.30	92.05	4.85	Peak	119	273
7 *	5755.00	105.45			100.43	5.02	Average	119	273
8 *	5755.00	117.47			112.45	5.02	Peak	119	273
9	5925.00	61.05	68.20	-7.15	55.62	5.43	Peak	119	273
10	11510.00	46.03	54.00	-7.97	31.42	14.61	Average	100	53
11	11510.00	57.03	74.00	-16.97	42.42	14.61	Peak	100	53
12	17265.00	62.12	68.20	-6.08	44.25	17.87	Peak	177	58

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

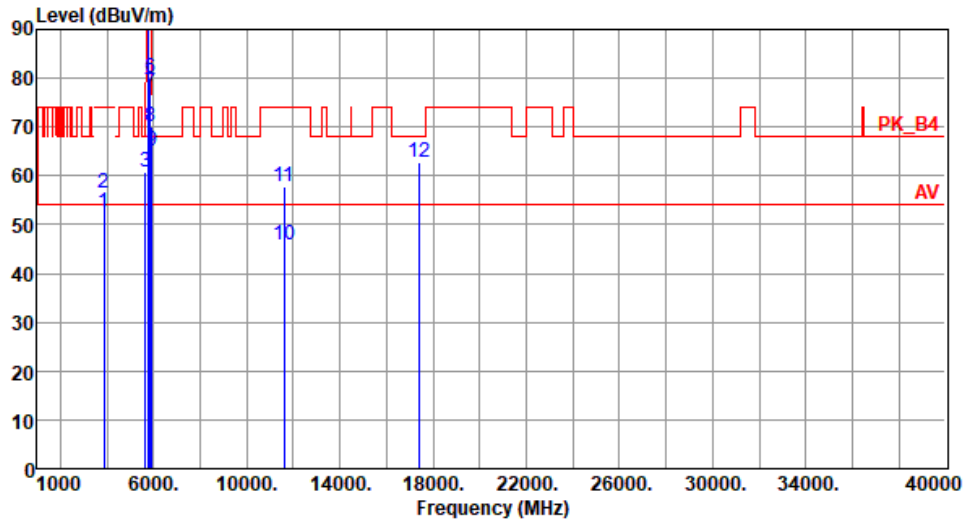
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal	Test Configuration	1

Test By :Akun Chung Temperature(°C):25 Humidity(%):61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3863.33	52.47	54.00	-1.53	51.44	1.03	Average	185	356
2	3863.33	56.36	74.00	-17.64	55.33	1.03	Peak	185	356
3	5650.00	60.89	68.20	-7.31	56.35	4.54	Peak	172	346
4 *	5795.00	105.40			100.27	5.13	Average	172	346
5 *	5795.00	116.09			110.96	5.13	Peak	172	346
6	5850.00	79.88	122.20	-42.32	74.43	5.45	Peak	172	346
7	5855.00	76.98	110.80	-33.82	71.54	5.44	Peak	172	346
8	5875.00	70.16	105.20	-35.04	64.72	5.44	Peak	172	346
9	5925.00	64.93	68.20	-3.27	59.50	5.43	Peak	172	346
10	11590.00	45.91	54.00	-8.09	31.45	14.46	Average	100	23
11	11590.00	57.91	74.00	-16.09	43.45	14.46	Peak	100	23
12	17385.00	62.79	68.20	-5.41	44.23	18.56	Peak	175	27

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

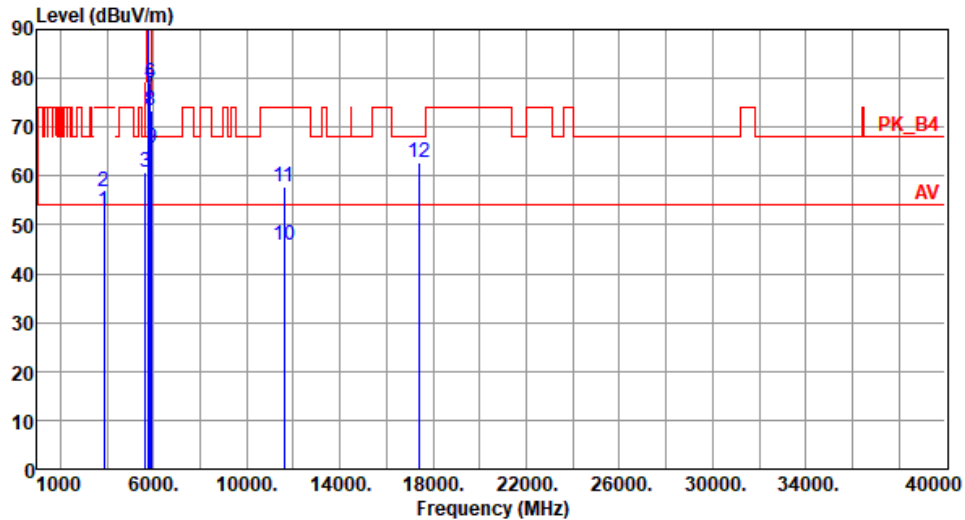
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Vertical	Test Configuration	1

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3863.33	52.92	54.00	-1.08	51.89	1.03	Average	193	302
2	3863.33	56.78	74.00	-17.22	55.75	1.03	Peak	193	302
3	5650.00	60.76	68.20	-7.44	56.22	4.54	Peak	221	274
4 *	5795.00	106.42			101.29	5.13	Average	221	274
5 *	5795.00	117.68			112.55	5.13	Peak	221	274
6	5850.00	79.08	122.20	-43.12	73.63	5.45	Peak	221	274
7	5855.00	77.10	110.80	-33.70	71.66	5.44	Peak	221	274
8	5875.00	73.37	105.20	-31.83	67.93	5.44	Peak	221	274
9	5925.00	65.63	68.20	-2.57	60.20	5.43	Peak	221	274
10	11590.00	45.83	54.00	-8.17	31.37	14.46	Average	100	53
11	11590.00	57.76	74.00	-16.24	43.30	14.46	Peak	100	53
12	17385.00	62.77	68.20	-5.43	44.21	18.56	Peak	303	55

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

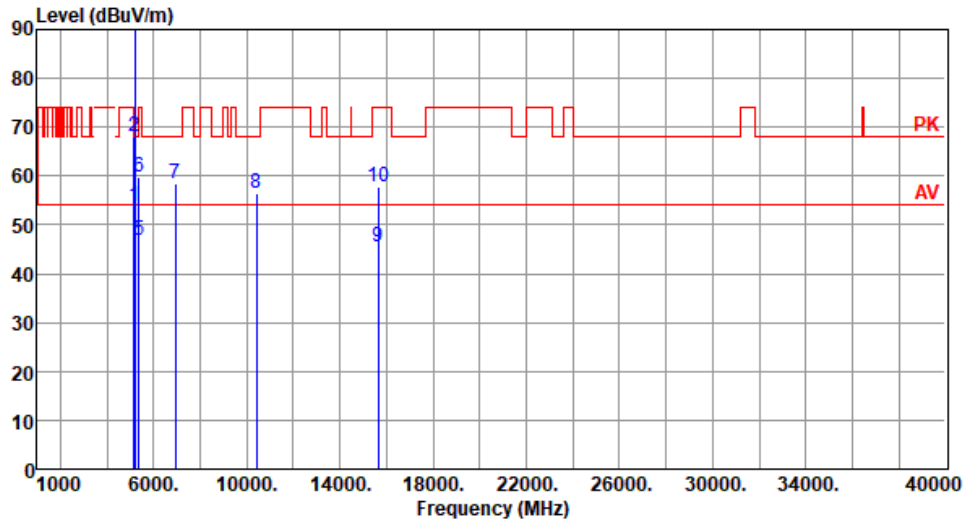
Note 3: "*" is Peak / Average value of fundamental frequency

3.5.8 Transmitter Radiated Unwanted Emissions (Above 1GHz) for ac VHT80

Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Horizontal	Test Configuration	1
Test By :Akun Chung Temperature(°C):25 Humidity(%):61			
Level (dBuV/m)			

Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical	Test Configuration	1

Test By :Akun Chung Temperature(°C):25 Humidity(%):61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	53.80	54.00	-0.20	49.16	4.64	Average	178	357
2	5150.00	68.03	74.00	-5.97	63.39	4.64	Peak	178	357
3 *	5210.00	94.12			89.80	4.32	Average	178	357
4 *	5210.00	104.21			99.89	4.32	Peak	178	357
5	5350.00	46.81	54.00	-7.19	42.87	3.94	Average	178	357
6	5350.00	59.81	74.00	-14.19	55.87	3.94	Peak	178	357
7	6946.66	58.32	68.20	-9.88	50.24	8.08	Peak	271	271
8	10420.00	56.40	68.20	-11.80	42.06	14.34	Peak	100	166
9	15630.00	45.58	54.00	-8.42	31.07	14.51	Average	100	170
10	15630.00	57.78	74.00	-16.22	43.27	14.51	Peak	100	170

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

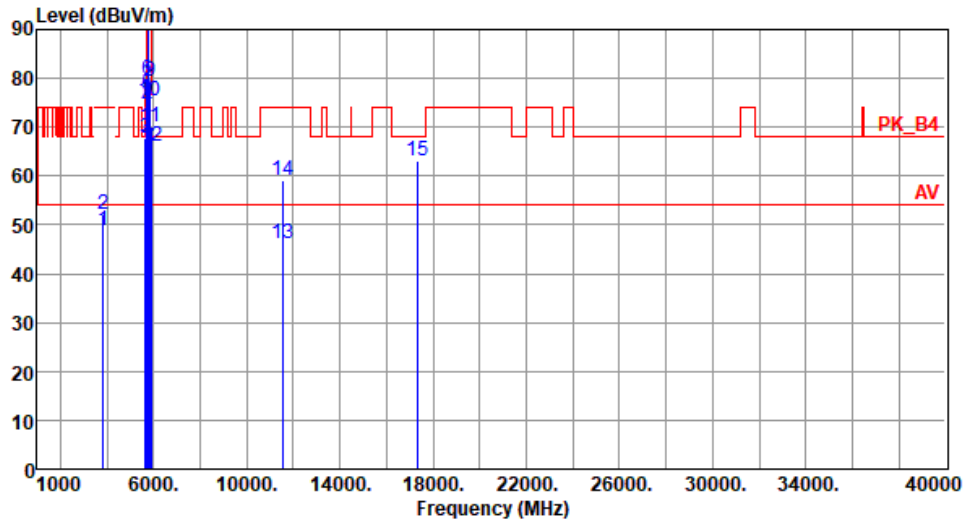
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal	Test Configuration	1

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 61



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3850.00	48.66	54.00	-5.34	47.70	0.96	Average	287	348
2	3850.00	52.08	74.00	-21.92	51.12	0.96	Peak	287	348
3	5650.00	67.71	68.20	-0.49	63.17	4.54	Peak	241	343
4	5700.00	74.02	105.20	-31.18	69.34	4.68	Peak	241	343
5	5720.00	76.68	110.80	-34.12	71.87	4.81	Peak	241	343
6	5725.00	79.71	122.20	-42.49	74.86	4.85	Peak	241	343
7 *	5775.00	98.44			93.36	5.08	Average	241	343
8 *	5775.00	110.33			105.25	5.08	Peak	241	343
9	5850.00	79.40	122.20	-42.80	73.95	5.45	Peak	241	343
10	5855.00	75.31	110.80	-35.49	69.87	5.44	Peak	241	343
11	5875.00	70.09	105.20	-35.11	64.65	5.44	Peak	241	343
12	5925.00	66.09	68.20	-2.11	60.66	5.43	Peak	241	343
13	11550.00	46.22	54.00	-7.78	31.69	14.53	Average	100	28
14	11550.00	59.22	74.00	-14.78	44.69	14.53	Peak	100	28
15	17325.00	63.04	68.20	-5.16	44.87	18.17	Peak	100	30

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

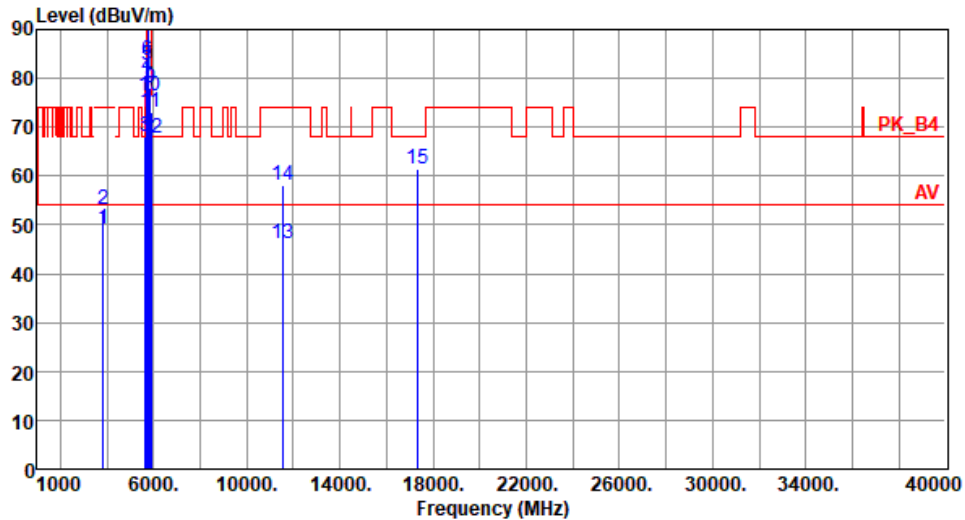
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Vertical	Test Configuration	1

Test By : Akun Chung Temperature(°C): 25 Humidity(%): 61



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3850.00	49.29	54.00	-4.71	48.33	0.96	Average	206	311
2	3850.00	53.08	74.00	-20.92	52.12	0.96	Peak	206	311
3	5650.00	68.00	68.20	-0.20	63.46	4.54	Peak	214	274
4	5700.00	80.29	105.20	-24.91	75.61	4.68	Peak	214	274
5	5720.00	82.61	110.80	-28.19	77.80	4.81	Peak	214	274
6	5725.00	83.82	122.20	-38.38	78.97	4.85	Peak	214	274
7 *	5775.00	99.43			94.35	5.08	Average	214	274
8 *	5775.00	112.00			106.92	5.08	Peak	214	274
9	5850.00	78.04	122.20	-44.16	72.59	5.45	Peak	214	274
10	5855.00	76.30	110.80	-34.50	70.86	5.44	Peak	214	274
11	5875.00	73.02	105.20	-32.18	67.58	5.44	Peak	214	274
12	5925.00	67.60	68.20	-0.60	62.17	5.43	Peak	214	274
13	11550.00	46.02	54.00	-7.98	31.49	14.53	Average	100	52
14	11550.00	58.01	74.00	-15.99	43.48	14.53	Peak	100	52
15	17325.00	61.49	68.20	-6.71	43.32	18.17	Peak	100	58

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: "*" is Peak / Average value of fundamental frequency

3.6 Frequency Stability

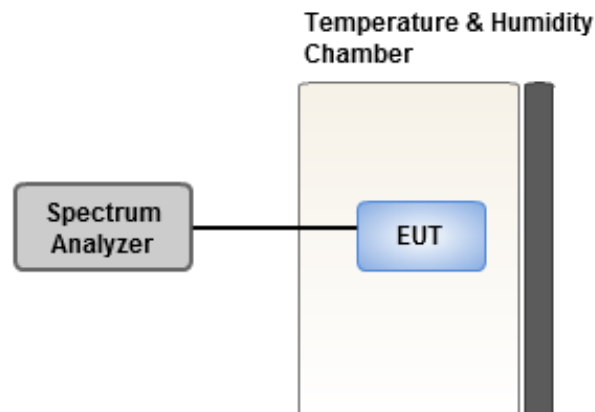
3.6.1 Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

3.6.2 Test Procedures

1. The EUT is installed in an environment test chamber with external power source.
2. Set the chamber to operate at 20 centigrade and external power source to output at nominal voltage of EUT.
3. A sufficient stabilization period at each temperature is used prior to each frequency measurement.
4. When temperature is stabled, measure the frequency stability.
5. The test shall be performed under normal and extreme condition for temperature and voltage.

3.6.3 Test Setup



3.6.4 Test Result of Frequency Stability

Ambient Condition	25°C / 67%	Tested By	Aska Huang
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Frequency: 5200 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°C Vmax	-5.37	-5.53	-5.29	-4.48
T20°C Vmin	-4.90	-4.57	-4.66	-4.96
T50°C Vnom	-10.43	-10.63	-10.07	-10.46
T40°C Vnom	-8.44	-7.90	-7.64	-8.62
T30°C Vnom	-6.06	-6.02	-5.59	-5.71
T20°C Vnom	-5.13	-5.00	-5.43	-4.63
T10°C Vnom	2.45	2.30	2.47	2.24
T0°C Vnom	4.88	4.66	5.16	5.41
T-10°C Vnom	6.78	7.33	7.03	7.04
T-20°C Vnom	8.39	8.24	9.19	8.79
T-30°C Vnom	9.68	9.64	9.71	9.79
Vnom [V]: 120	Vmax [V]: 138			Vmin [V]: 102
Tnom [°C]: 20	Tmax [°C]: 50			Tmin [°C]: -30

Frequency: 5785 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°C Vmax	-4.33	-3.64	-3.78	-3.97
T20°C Vmin	-3.77	-4.45	-3.58	-4.15
T50°C Vnom	-9.45	-9.16	-9.05	-9.06
T40°C Vnom	-7.22	-6.78	-7.25	-6.78
T30°C Vnom	-4.97	-4.89	-5.01	-5.00
T20°C Vnom	-3.92	-3.79	-4.49	-3.93
T10°C Vnom	2.84	2.23	2.98	2.89
T0°C Vnom	5.82	5.55	5.56	5.06
T-10°C Vnom	6.23	6.58	6.36	6.78
T-20°C Vnom	7.67	7.87	7.78	7.96
T-30°C Vnom	9.01	8.58	8.69	9.08
Vnom [V]: 120	Vmax [V]: 138			Vmin [V]: 102
Tnom [°C]: 20	Tmax [°C]: 50			Tmin [°C]: -30

4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

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Kwei Shan Site II

Tel: 886-3-271-8640

No. 14-1, Lane 19, Wen San 3rd
St., Kwei Shan District, Tao Yuan
City 333, Taiwan, R.O.C.

If you have any suggestion, please feel free to contact us as below information.

Tel: 886-3-271-8666

Fax: 886-3-318-0155

Email: ICC_Service@icertifi.com.tw

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