

FCC Test Report

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Test Model: DX4510-B0

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Release Control Record

Issue No.	Description	Date Issued
RFBFBE-WTW-P21031123-1	Original release.	Apr. 15, 2022

1 Certificate of Conformity

Product: AX6000 WiFi6 VDSL2 Bonding Gateway

Brand: ZYXEL

Test Model: DX4510-B0

Sample Status: Engineering sample

Applicant: Zyxel Communications Corporation

Test Date: Mar. 23 to July 30, 2021

Standard: 47 CFR FCC Part 15, Subpart E (Section 15.407)
ANSI C63.10: 2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by :



Date:

Apr. 15, 2022

Phoenix Huang / Specialist

Approved by :



Date:

Apr. 15, 2022

May Chen / Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(8)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -7.41 dB at 0.15391 MHz.
15.407(b) (1/2/3/4(i/ii)/8)	Radiated Emissions & Band Edge Measurement*	Pass	Meet the requirement of limit. Minimum passing margin is -0.5 dB at 5150.00 MHz, 5350.00 MHz, 5465.04 MHz, 5467.50 MHz and 5725.00 MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is i-pex(MHF) not a standard connector.

Note:

1. For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOB test plots were recorded in Annex A.
2. For U-NII-1, U-NII-2A, U-NII-2C band compliance with rule 15.407(b) of the band-edge items, the test plots were recorded in Annex B. Test Procedures refer to report 4.1.3.
3. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) ($\pm$)
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.9 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.1 dB
	30MHz ~ 1GHz	5.5 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.1 dB
	18GHz ~ 40GHz	5.3 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT (WLAN)

Product	AX6000 WiFi6 VDSL2 Bonding Gateway
Brand	ZYXEL
Test Model	DX4510-B0
Status of EUT	Engineering sample
CPU Model No.	BCM63138UKFSBG
RF Chip Model No.	BCM43684
Version of Firmware	V5.17(ABYL.0)b2
Power Supply Rating	12 Vdc from power adapter
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT20/40 in 2.4GHz mode 1024QAM for OFDMA in 11ax mode only
Modulation Technology	DSSS, OFDM, OFDMA
Transfer Rate	802.11b: up to 11 Mbps 802.11a/g: up to 54 Mbps 802.11n: up to 600 Mbps 802.11ac: up to 3466.7 Mbps 802.11ax: up to 4803.9 Mbps
Operating Frequency	2.4GHz: 2.412 ~ 2.462 GHz 5GHz: 5.18~ 5.32 GHz, 5.5 ~ 5.72 GHz, 5.745 ~ 5.825 GHz
Number of Channel	2.4GHz: 802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20): 11 802.11n (HT40), VHT40, 802.11ax (HE40): 7 5GHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 25 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 12 802.11ac (VHT80), 802.11ax (HE80): 6 802.11ac (VHT160), 802.11ax (HE160): 2
Output Power	CDD Mode: 2.412 ~ 2.462 GHz: 992.518 mW 5.18 ~ 5.32 GHz: 978.408 mW 5.5 ~ 5.72 GHz: 247.904 mW 5.745 ~ 5.825 GHz: 989.441 mW Beamforming Mode: 2.412 ~ 2.462 GHz: 974.469 mW 5.18 ~ 5.32 GHz: 978.408 mW 5.5 ~ 5.72 GHz: 247.904 mW 5.745 ~ 5.825 GHz: 989.441 mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note

Accessory Device	- AC Adaptor x 1 - Ethernet Cable, Non-shielded, 1.8 m - DSL Cable, Non-shielded, 1.8 m
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Note:

1. Simultaneously transmission condition.

Condition	Technology	
1	WLAN (2.4GHz)	WLAN (5GHz)

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

2. The EUT uses following adapter.

Adapter 1	
Brand	DVE
Model	DSA-36PFN-12 FUS
Input Power	AC input: 100-240 Vac, 50/60 Hz, 1.0 A
Output Power	DC output: 12 Vdc, 3.0A, 36.0 W
Power Line	DC output cable: Unshielded, 1.5 m
Adapter 2	
Brand	MNC
Model	MAUS-1202503000
Input Power	AC input: 100-240 Vac, 50/60 Hz, 0.8 A
Output Power	DC output: 12 Vdc, 2.5 A
Power Line	DC output cable: Unshielded, 1.5 m
Note: From the above adapters, the worst Radiated Emissions and Conducted Emissions test was found in Adapter 1. Therefore only the test data of the modes were recorded in this report.	

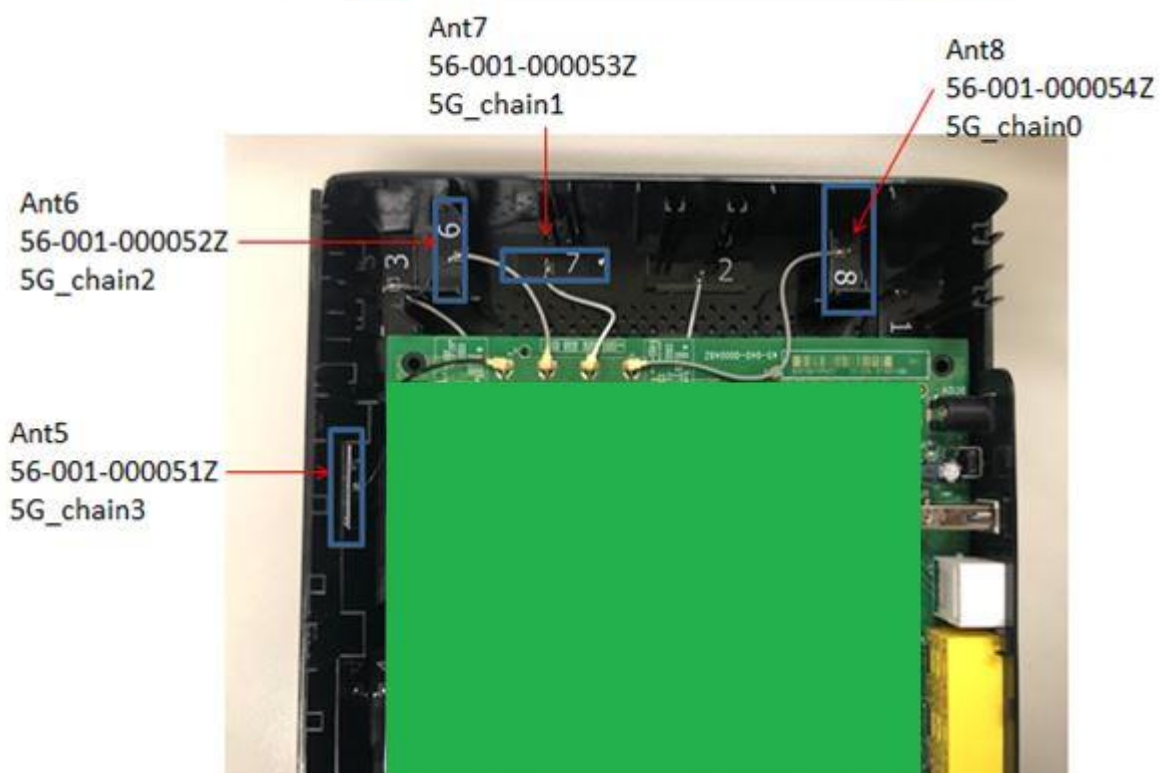
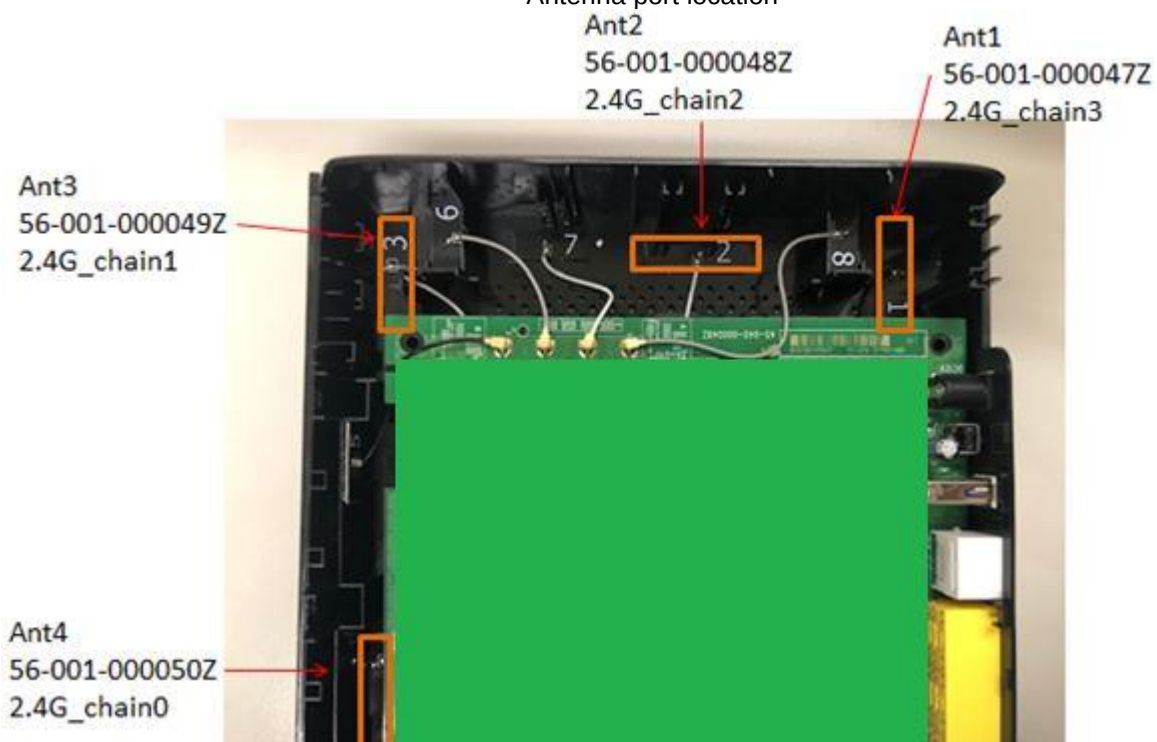
3. The antennas provided to the EUT, please refer to the following table:

Antenna No.	RF Chain No.	Brand	Model	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type	Cable Length (mm)
1	2.4G_Chain 3	WHAYU	56-001-000047Z	2.7	2.4~2.4835	Dipole	i-pex(MHF)	313
2	2.4G_Chain 2	WHAYU	56-001-000048Z	2.31	2.4~2.4835	Dipole	i-pex(MHF)	258
3	2.4G_Chain 1	WHAYU	56-001-000049Z	2.57	2.4~2.4835	Dipole	i-pex(MHF)	263
4	2.4G_Chain 0	WHAYU	56-001-000050Z	2.53	2.4~2.4835	Dipole	i-pex(MHF)	145
5	5G_Chain 3	WHAYU	56-001-000051Z	2.6	5.15~5.25	Dipole	i-pex(MHF)	59
				2.92	5.25~5.35			
				3.31	5.47~5.725			
				3.16	5.725~5.85			
6	5G_Chain 2	WHAYU	56-001-000052Z	2.99	5.15~5.25	Dipole	i-pex(MHF)	40
				3.22	5.25~5.35			
				3.13	5.47~5.725			
				2.18	5.725~5.85			
7	5G_Chain 1	WHAYU	56-001-000053Z	3.48	5.15~5.25	Dipole	i-pex(MHF)	45
				3.09	5.25~5.35			
				3.79	5.47~5.725			
				2.46	5.725~5.85			
8	5G_Chain 0	WHAYU	56-001-000054Z	0.63	5.15~5.25	Dipole	i-pex(MHF)	80
				2.62	5.25~5.35			
				2.61	5.47~5.725			
				3.73	5.725~5.85			

Note:

1. Antenna Gain refer to "P21031123 Multi-Antenna Systems Directional Gain measurement" files.
2. Maximum Correlated Directional Gain following KDB662911 D03 MIMO Antenna Gain Measurement.

* Antenna port location



4. The EUT incorporates a MIMO function:

2.4GHz Band		
MODULATION MODE	TX & RX CONFIGURATION	
802.11b	4TX	4RX
802.11g	4TX	4RX
802.11n (HT20)	4TX	4RX
802.11n (HT40)	4TX	4RX
VHT20	4TX	4RX
VHT40	4TX	4RX
802.11ax (HE20)	4TX	4RX
802.11ax (HE40)	4TX	4RX
5GHz Band		
MODULATION MODE	TX & RX CONFIGURATION	
802.11a	4TX	4RX
802.11n (HT20)	4TX	4RX
802.11n (HT40)	4TX	4RX
802.11ac (VHT20)	4TX	4RX
802.11ac (VHT40)	4TX	4RX
802.11ac (VHT80)	4TX	4RX
802.11ac (VHT160)	4TX	4RX
802.11ax (HE20)	4TX	4RX
802.11ax (HE40)	4TX	4RX
802.11ax (HE80)	4TX	4RX
802.11ax (HE160)	4TX	4RX

Note:

1. All of modulation mode support beamforming function except 802.11a/b/g modulation mode.
2. The EUT support Beamforming and CDD mode, therefore both mode were investigated and the worst case scenario was identified. The worst case data were presented in test report.
3. The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz), 802.11ac mode for 20MHz (40MHz, 80MHz, 160MHz) and 802.11ax mode for 20MHz (40MHz, 80MHz, 160MHz), therefore the manufacturer will control the power for 802.11n/ac mode is the same as the 802.11ax mode or more lower than it and investigated worst case to representative mode in test report. (Final test mode refer to section 3.2.1)

5. The power setting are list as below:

CDD Mode									
802.11a		802.11ac (VHT20)		802.11ac (VHT40)		802.11ac (VHT80)		802.11ac (VHT160)	
Frequency (MHz)	Power Setting	Frequency (MHz)	Power Setting	Frequency (MHz)	Power Setting	Frequency (MHz)	Power Setting	Frequency (MHz)	Power Setting
5180	48	5180	48	5190	54	5210	55	5250	54
5200	48	5200	48	5230	54	5290	55		
5240	48	5240	48	5270	55	5530	66		
5260	55	5260	55	5310	55	5690	71		
5300	55	5300	55	5510	68	5775	90		
5320	55	5320	55	5550	71				
5500	68	5500	70	5670	71				
5580	68	5580	70	5710	71				
5700	68	5700	71	5755	95				
5720	68	5720	70	5795	95				
5745	95	5745	95						
5785	95	5785	95						
5825	95	5825	95						
802.11ax (HE20)		802.11ax (HE40)		802.11ax (HE80)		802.11ax (HE160)			
Frequency (MHz)	Power Setting	Frequency (MHz)	Power Setting	Frequency (MHz)	Power Setting	Frequency (MHz)	Power Setting		
5180	48	5190	54	5210	55	5250	54		
5200	48	5230	54	5290	55				
5240	48	5270	55	5530	66				
5260	55	5310	55	5690	71				
5300	55	5510	68	5775	90				
5320	55	5550	71						
5500	68	5670	71						
5580	68	5710	71						
5700	68	5755	95						
5720	68	5795	95						
5745	95								
5785	95								
5825	95								

Beamforming Mode							
802.11ac (VHT20)		802.11ac (VHT40)		802.11ac (VHT80)		802.11ac (VHT160)	
Frequency (MHz)	Power Setting	Frequency (MHz)	Power Setting	Frequency (MHz)	Power Setting	Frequency (MHz)	Power Setting
5180	46	5190	47	5210	58	5250	48
5200	46	5230	47	5290	51		
5240	46	5270	51	5530	66		
5260	51	5310	51	5690	71		
5300	51	5510	68	5775	90		
5320	51	5550	71				
5500	70	5670	71				
5580	70	5710	71				
5700	71	5755	95				
5720	70	5795	95				
5745	95						
5785	95						
5825	95						
802.11ax (HE20)		802.11ax (HE40)		802.11ax (HE80)		802.11ax (HE160)	
Frequency (MHz)	Power Setting	Frequency (MHz)	Power Setting	Frequency (MHz)	Power Setting	Frequency (MHz)	Power Setting
5180	46	5190	47	5210	58	5250	48
5200	46	5230	47	5290	51		
5240	46	5270	51	5530	66		
5260	51	5310	51	5690	71		
5300	51	5510	68	5775	90		
5320	51	5550	71				
5500	70	5670	71				
5580	70	5710	71				
5700	71	5755	95				
5720	70	5795	95				
5745	95						
5785	95						
5825	95						

6. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.
7. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

3.2 Description of Test Modes

FOR 5180 ~ 5320MHz

8 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

Channel	Frequency	Channel	Frequency
36	5180 MHz	52	5260 MHz
40	5200 MHz	56	5280 MHz
44	5220 MHz	60	5300 MHz
48	5240 MHz	64	5320 MHz

4 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
38	5190 MHz	54	5270 MHz
46	5230 MHz	62	5310 MHz

2 channels are provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency	Channel	Frequency
42	5210MHz	58	5290 MHz

1 straddle channel is provided for 802.11ac (VHT160), 802.11ax (HE160):

Channel	Frequency
50	5250 MHz

FOR 5500 ~ 5720MHz

12 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

6 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz	142	5710 MHz

3 channels are provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency	Channel	Frequency
106	5530 MHz	138	5690 MHz
122	5610 MHz		

1 straddle channel is provided for 802.11ac (VHT160), 802.11ax (HE160):

Channel	Frequency
114	5570 MHz

FOR 5745 ~ 5825MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

Channel	Frequency	Channel	Frequency
149	5745 MHz	161	5805 MHz
153	5765 MHz	165	5825 MHz
157	5785 MHz		

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency
155	5775 MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE≥1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

Where **RE≥1G**: Radiated Emission above 1GHz
PLC: Power Line Conducted Emission

RE<1G: Radiated Emission below 1GHz
APCM: Antenna Port Conducted Measurement

Radiated Emission Test (Above 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

CDD Mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11a	5180-5320	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6Mb/s
802.11ax (HE20)		36 to 64	36, 40, 48, 52, 60, 64	OFDMA	BPSK	MCS0
802.11ax (HE40)		38 to 62	38, 46, 54, 62	OFDMA	BPSK	MCS0
802.11ax (HE80)		42, 58	42, 58	OFDMA	BPSK	MCS0
802.11ax (HE160)		50	50	OFDMA	BPSK	MCS0
802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	BPSK	6Mb/s
802.11ax (HE20)		100 to 144	100, 116, 140, 144	OFDMA	BPSK	MCS0
802.11ax (HE40)		102 to 142	102, 110, 134, 142	OFDMA	BPSK	MCS0
802.11ax (HE80)		106 to 138	106, 122, 138	OFDMA	BPSK	MCS0
802.11ax (HE160)		114	114	OFDMA	BPSK	MCS0
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6Mb/s
802.11ax (HE20)		149 to 165	149, 157, 165	OFDMA	BPSK	MCS0
802.11ax (HE40)		151 to 159	151, 159	OFDMA	BPSK	MCS0
802.11ax (HE80)		155	155	OFDMA	BPSK	MCS0

Radiated Emission Test (Below 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

CDD Mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11ax (HE20)	5180-5320, 5500-5720, 5745-5825	36 to 64, 100 to 144, 149 to 165	149	OFDMA	BPSK	MCS0

Power Line Conducted Emission Test:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

CDD Mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11ax (HE20)	5180-5320, 5500-5720, 5745-5825	36 to 64, 100 to 144, 149 to 165	149	OFDMA	BPSK	MCS0

Antenna Port Conducted Measurement:

- ☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

CDD Mode						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11a	5180-5320	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6Mb/s
802.11ac (VHT20) (for output power)		36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	MCS0
802.11ac (VHT40) (for output power)		38 to 62	38, 46, 54, 62	OFDM	BPSK	MCS0
802.11ac (VHT80) (for output power)		42, 58	42, 58	OFDM	BPSK	MCS0
802.11ac (VHT160) (for output power)		50	50	OFDM	BPSK	MCS0
802.11ax (HE20)		36 to 64	36, 40, 48, 52, 60, 64	OFDMA	BPSK	MCS0
802.11ax (HE40)		38 to 62	38, 46, 54, 62	OFDMA	BPSK	MCS0
802.11ax (HE80)		42, 58	42, 58	OFDMA	BPSK	MCS0
802.11ax (HE160)		50	50	OFDMA	BPSK	MCS0
802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	BPSK	6Mb/s
802.11ac (VHT20) (for output power)		100 to 144	100, 116, 140, 144	OFDM	BPSK	MCS0
802.11ac (VHT40) (for output power)		102 to 142	102, 110, 134, 142	OFDM	BPSK	MCS0
802.11ac (VHT80) (for output power)		106 to 138	106, 122, 138	OFDM	BPSK	MCS0
802.11ac (VHT160) (for output power)		114	114	OFDM	BPSK	MCS0
802.11ax (HE20)		100 to 144	100, 116, 140, 144	OFDMA	BPSK	MCS0
802.11ax (HE40)		102 to 142	102, 110, 134, 142	OFDMA	BPSK	MCS0
802.11ax (HE80)		106 to 138	106, 122, 138	OFDMA	BPSK	MCS0
802.11ax (HE160)		114	114	OFDMA	BPSK	MCS0
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6Mb/s
802.11ac (VHT20) (for output power)		149 to 165	149, 157, 165	OFDM	BPSK	MCS0
802.11ac (VHT40) (for output power)		151 to 159	151, 159	OFDM	BPSK	MCS0
802.11ac (VHT80) (for output power)		155	155	OFDM	BPSK	MCS0
802.11ax (HE20)		149 to 165	149, 157, 165	OFDMA	BPSK	MCS0
802.11ax (HE40)		151 to 159	151, 159	OFDMA	BPSK	MCS0
802.11ax (HE80)		155	155	OFDMA	BPSK	MCS0

Beamforming Mode (output power only)						
Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11ac (VHT20)	5180-5320	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	MCS0
802.11ac (VHT40)		38 to 62	38, 46, 54, 62	OFDM	BPSK	MCS0
802.11ac (VHT80)		42, 58	42, 58	OFDM	BPSK	MCS0
802.11ac (VHT160)		50	50	OFDM	BPSK	MCS0
802.11ax (HE20)		36 to 64	36, 40, 48, 52, 60, 64	OFDMA	BPSK	MCS0
802.11ax (HE40)		38 to 62	38, 46, 54, 62	OFDMA	BPSK	MCS0
802.11ax (HE80)		42, 58	42, 58	OFDMA	BPSK	MCS0
802.11ax (HE160)		50	50	OFDMA	BPSK	MCS0
802.11ac (VHT20)	5500-5720	100 to 144	100, 116, 140, 144	OFDM	BPSK	MCS0
802.11ac (VHT40)		102 to 142	102, 110, 134, 142	OFDM	BPSK	MCS0
802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	BPSK	MCS0
802.11ac (VHT160)		114	114	OFDM	BPSK	MCS0
802.11ax (HE20)		100 to 144	100, 116, 140, 144	OFDMA	BPSK	MCS0
802.11ax (HE40)		102 to 142	102, 110, 134, 142	OFDMA	BPSK	MCS0
802.11ax (HE80)		106 to 138	106, 122, 138	OFDMA	BPSK	MCS0
802.11ax (HE160)		114	114	OFDMA	BPSK	MCS0
802.11ac (VHT20)	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	MCS0
802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	MCS0
802.11ac (VHT80)		155	155	OFDM	BPSK	MCS0
802.11ax (HE20)		149 to 165	149, 157, 165	OFDMA	BPSK	MCS0
802.11ax (HE40)		151 to 159	151, 159	OFDMA	BPSK	MCS0
802.11ax (HE80)		155	155	OFDMA	BPSK	MCS0

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested By
RE _≥ 1G	22deg. C, 70%RH	120Vac, 60Hz	Sampson Chen
RE _{<} 1G	22deg. C, 70%RH	120Vac, 60Hz	Ryan Du
PLC	25deg. C, 75%RH	120Vac, 60Hz	Ryan Du
APCM	25deg. C, 60%RH	120Vac, 60Hz	Kevin Ko

3.3 Duty Cycle of Test Signal

If duty cycle of test signal is $\geq 98\%$, duty factor is not required.

If duty cycle of test signal is $< 98\%$, duty factor shall be considered.

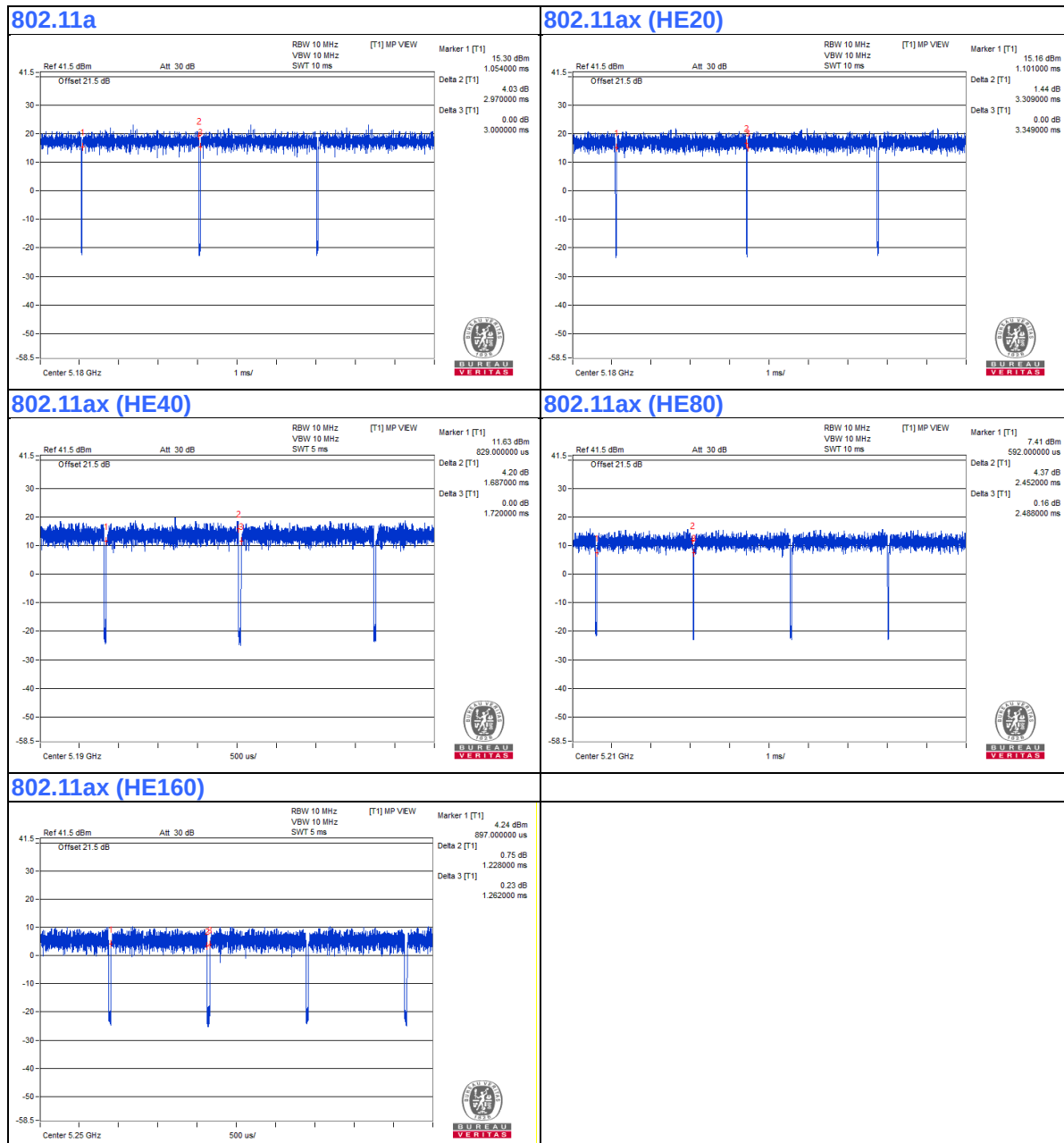
802.11a: Duty cycle = $2.97 \text{ ms} / 3 \text{ ms} = 0.99$

802.11ax (HE20): Duty cycle = $3.309 \text{ ms} / 3.349 \text{ ms} = 0.988$

802.11ax (HE40): Duty cycle = $1.687 \text{ ms} / 1.72 \text{ ms} = 0.981$

802.11ax (HE80): Duty cycle = $2.452 \text{ ms} / 2.488 \text{ ms} = 0.986$

802.11ax (HE160): Duty cycle = $1.228 \text{ ms} / 1.262 \text{ ms} = 0.973$, Duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.12 \text{ dB}$



3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

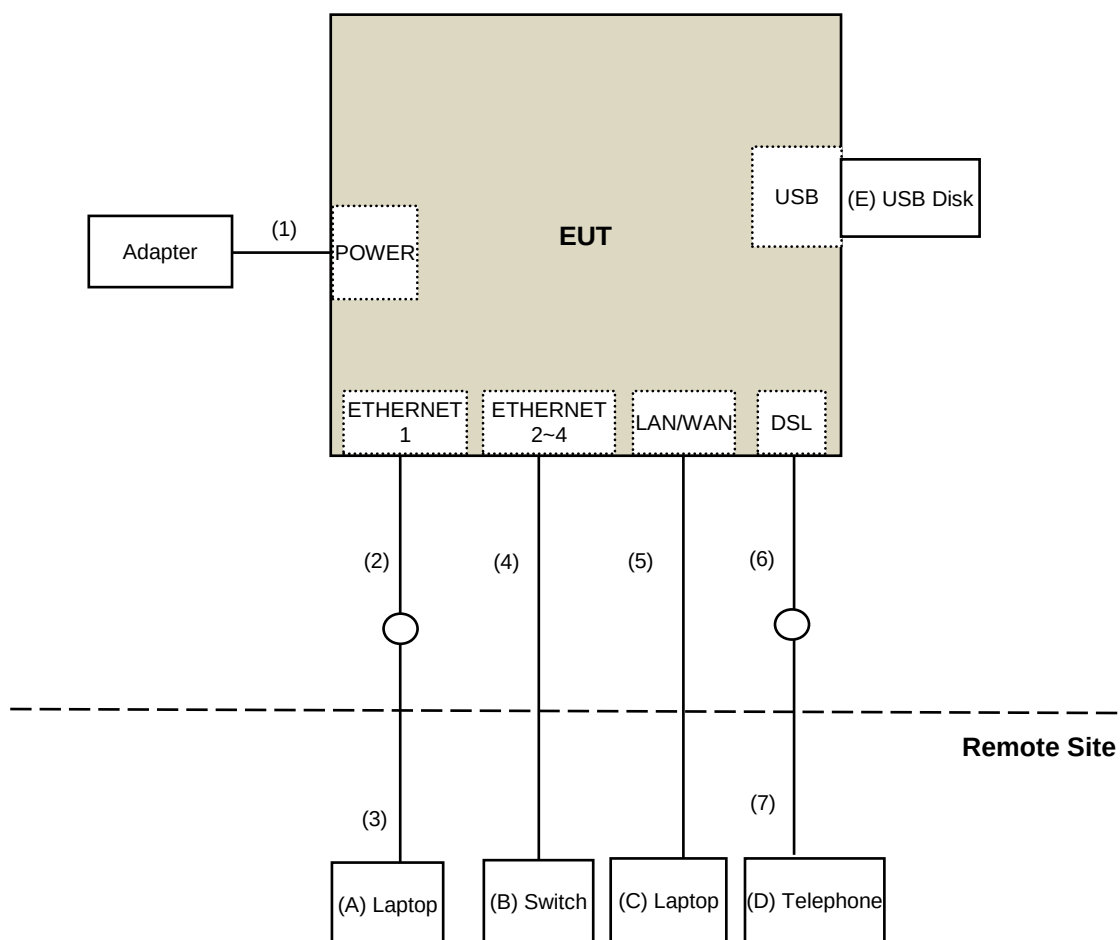
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Laptop	Lenovo	20U5S01X00 L14	PF-28LKK7	NA	Provided by Lab
B.	Switch	D-Link	DGS-1005D	DR8WC92000523	NA	Provided by Lab
C.	Laptop	DELL	E6420	B92T3R1	DoC	Provided by Lab
D.	Telephone	Remeo	TE-812	97280903	NA	Provided by Lab
E.	USB Disk	SanDisk	BM181225896Z	NA	NA	Provided by Lab

Note:

1. All power cords of the above support units are non-shielded (1.8m).

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC Cable	1	1.5	No	0	Supplied by client
2.	Ethernet Cable	1	1.8	No	0	Supplied by client
3.	RJ-45 Cable	1	10	No	0	Provided by Lab
4.	RJ-45 Cable	3	10	No	0	Provided by Lab
5.	RJ-45 Cable	1	10	No	0	Provided by Lab
6.	RJ-11 Cable	1	1.8	No	0	Supplied by client
7.	RJ-11 Cable	1	10	No	0	Provided by Lab

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards and References

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and references:

Test Standard:

FCC Part 15, Subpart E (15.407)

ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

References Test Guidance:

KDB 789033 D02 General UNII Test Procedure New Rules v02r01

KDB 662911 D01 Multiple Transmitter Output v02r01

All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

- The lower limit shall apply at the transition frequencies.
- Emission level (dBuV/m) = 20 log Emission level (uV/m).
- For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

Applicable To		Limit	
789033 D02 General UNII Test Procedure New Rules v02r01		Field Strength at 3m	
		PK:74 (dBuV/m)	AV:54 (dBuV/m)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3m
5150~5250 MHz	15.407(b)(1)	PK:-27 (dBm/MHz)	PK:68.2(dBuV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	15.407(b)(4)(i)	PK: -27 (dBm/MHz) ^{*1} PK: 10 (dBm/MHz) ^{*2} PK: 15.6 (dBm/MHz) ^{*3} PK: 27 (dBm/MHz) ^{*4}	PK: 68.2(dBuV/m) ^{*1} PK: 105.2 (dBuV/m) ^{*2} PK: 110.8(dBuV/m) ^{*3} PK: 122.2 (dBuV/m) ^{*4}
5725~5850 MHz	15.407(b)(4)(i)	PK:-27 (dBm/MHz) ^{*1} PK:10 (dBm/MHz) ^{*2} PK:15.6 (dBm/MHz) ^{*3} PK:27 (dBm/MHz) ^{*4}	PK: 68.2(dBuV/m) ^{*1} PK:105.2 (dBuV/m) ^{*2} PK: 110.8(dBuV/m) ^{*3} PK:122.2 (dBuV/m) ^{*4}
^{*1} beyond 75 MHz or more above of the band edge. ^{*2} below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above. ^{*3} below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above. ^{*4} from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.			

Note:

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts).}$$

4.1.2 Test Instruments

For Radiated Emission test & Bandedge & OOB (except 802.11ax (HE80)):

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210202	Dec. 01, 2020	Nov. 30, 2021
Pre-Amplifier EMCI	EMC001340	980142	May 25, 2020	May 24, 2021
Loop Antenna Electro-Metrics	EM-6879	264	Mar. 05, 2021	Mar. 04, 2022
RF Cable	5D-FB	LOOPCAB-001	Jan. 07, 2021	Jan. 06, 2022
RF Cable	5D-FB	LOOPCAB-002	Jan. 07, 2021	Jan. 06, 2022
Pre-Amplifier EMCI	EMC330N	980701	Mar. 10, 2021	Mar. 09, 2022
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-406	Nov. 06, 2020	Nov. 05, 2021
RF Cable	8D	966-4-1	Mar. 17, 2021	Mar. 16, 2022
RF Cable	8D	966-4-2	Mar. 17, 2021	Mar. 16, 2022
RF Cable	8D	966-4-3	Mar. 17, 2021	Mar. 16, 2022
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-03	Jan. 11, 2021	Jan. 10, 2022
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Nov. 22, 2020	Nov. 21, 2021
Pre-Amplifier EMCI	EMC 12630 SE	980638	Apr. 07, 2021	Apr. 06, 2022
RF Cable	EMC104-SM-SM-1200	160922	Dec. 25, 2020	Dec. 24, 2021
RF Cable	EMC104-SM-SM-2000	180502	Apr. 26, 2021	Apr. 25, 2022
RF Cable	EMC104-SM-SM-6000	180418	Apr. 26, 2021	Apr. 25, 2022
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 11, 2021	Jan. 10, 2022
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 22, 2020	Nov. 21, 2021
RF Cable	EMC102-KM-KM-1200	160924	Jan. 11, 2021	Jan. 10, 2022
RF Cable	EMC-KM-KM-4000	200214	Mar. 10, 2021	Mar. 09, 2022
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 4.
3. Tested Date: Apr. 26 to May 08, 2021

For Bandedge & OBE test: (for 802.11ax (HE80))

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210202	Dec. 01, 2020	Nov. 30, 2021
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Nov. 22, 2020	Nov. 21, 2021
Pre-Amplifier EMCI	EMC 12630 SE	980638	Apr. 08, 2020	Apr. 07, 2021
RF Cable	EMC104-SM-SM-1200	160922	Dec. 25, 2020	Dec. 24, 2021
RF Cable	EMC104-SM-SM-2000	180502	Apr. 29, 2020	Apr. 28, 2021
RF Cable	EMC104-SM-SM-6000	180418	Apr. 29, 2020	Apr. 28, 2021
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 11, 2021	Jan. 10, 2022
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 22, 2020	Nov. 21, 2021
RF Cable	EMC102-KM-KM-1200	160924	Jan. 11, 2021	Jan. 10, 2022
RF Cable	EMC-KM-KM-4000	200214	Mar. 10, 2021	Mar. 09, 2022
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 4.
3. Tested Date: Mar. 23, 2021

For other test items:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	101516	Mar. 08, 2021	Mar. 07, 2022
Power meter Anritsu	ML2495A	1529002	June 21, 2021	June 20, 2022
Power sensor Anritsu	MA2411B	1339443	May 31, 2021	May 30, 2022
10dB Attenuator Woken	MDCS18N-10	MDCS18N-10-01	Apr. 13, 2021	Apr. 12, 2022
AC Power Source Extech Electronics	6905S	1991551	NA	NA
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	Jan. 14, 2021	Jan. 13, 2022
True RMS Clamp Meter FLUKE	325	31130711WS	June 02, 2021	June 01, 2022
Software	ADT_RF Test Software V6.6.5.4	NA	NA	NA

- NOTE:**
1. The test was performed in Oven room 2.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. Tested Date: July 29 to 30, 2021

4.1.3 Test Procedure

For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

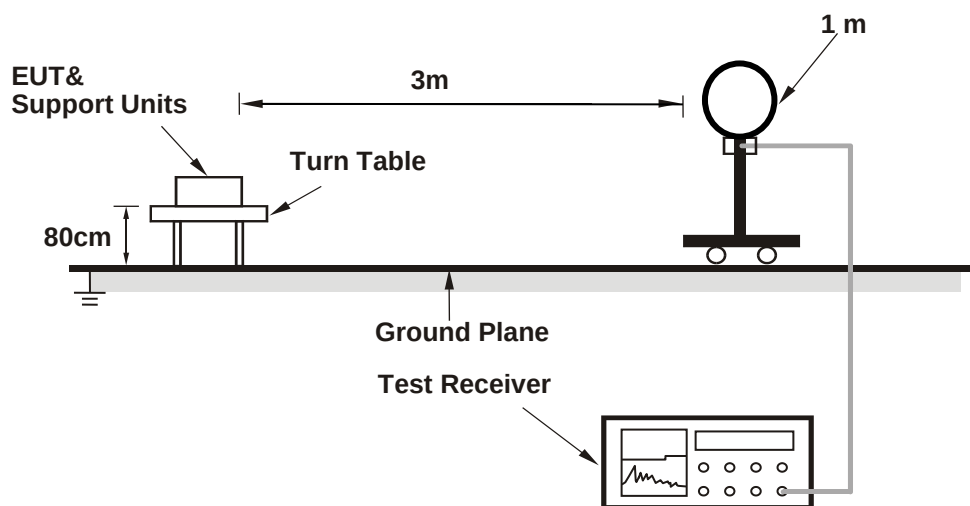
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

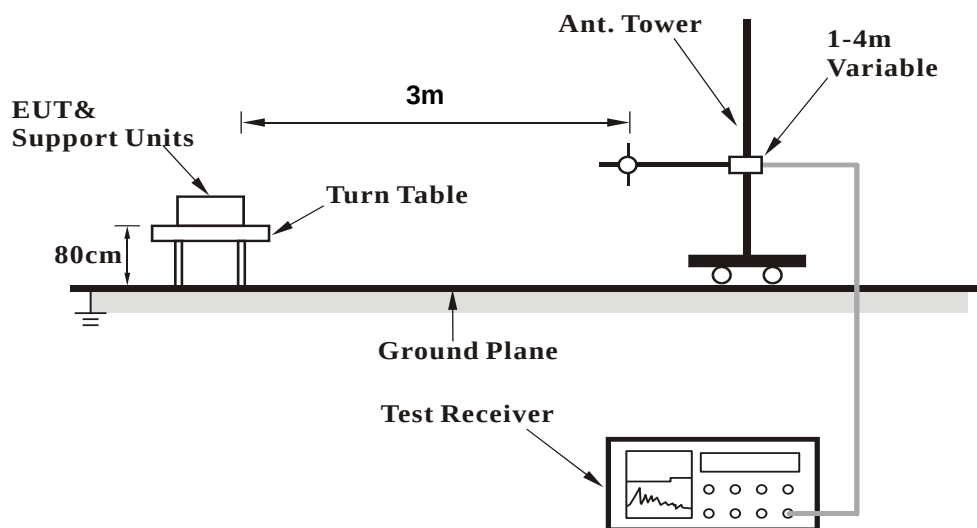
No deviation.

4.1.5 Test Setup

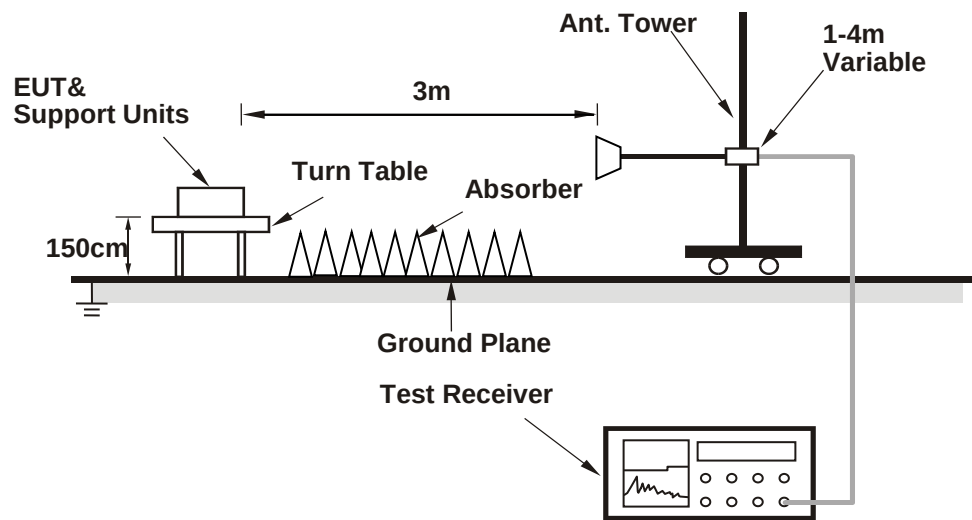
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.6 EUT Operating Condition

- Placed the EUT on the testing table.
- Controlling software (accessMTool_3.2.1.0) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1GHz Data:

RF Mode	TX 802.11a	Channel	CH 36 : 5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5142.20	65.1 PK	74.0	-8.9	1.44 H	74	64.0	1.1
2	5142.20	47.0 AV	54.0	-7.0	1.44 H	74	45.9	1.1
3	*5180.00	113.3 PK			1.44 H	74	112.3	1.0
4	*5180.00	104.7 AV			1.44 H	74	103.7	1.0
5	#10360.00	55.2 PK	68.2	-13.0	1.82 H	54	44.9	10.3
6	15540.00	51.4 PK	74.0	-22.6	1.52 H	158	39.4	12.0
7	15540.00	38.6 AV	54.0	-15.4	1.52 H	158	26.6	12.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5146.62	69.5 PK	74.0	-4.5	1.49 V	267	68.4	1.1
2	5146.62	53.4 AV	54.0	-0.6	1.49 V	267	52.3	1.1
3	*5180.00	119.3 PK			1.49 V	267	118.3	1.0
4	*5180.00	109.8 AV			1.49 V	267	108.8	1.0
5	#10360.00	55.4 PK	68.2	-12.8	1.39 V	126	45.1	10.3
6	15540.00	53.5 PK	74.0	-20.5	1.49 V	134	41.5	12.0
7	15540.00	39.8 AV	54.0	-14.2	1.49 V	134	27.8	12.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	63.2 PK	74.0	-10.8	1.45 H	68	62.1	1.1
2	5150.00	47.4 AV	54.0	-6.6	1.45 H	68	46.3	1.1
3	*5200.00	115.4 PK			1.44 H	78	114.3	1.1
4	*5200.00	106.5 AV			1.44 H	78	105.4	1.1
5	#10400.00	54.9 PK	68.2	-13.3	1.82 H	70	44.5	10.4
6	15600.00	51.5 PK	74.0	-22.5	1.55 H	160	39.5	12.0
7	15600.00	38.4 AV	54.0	-15.6	1.55 H	160	26.4	12.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	65.1 PK	74.0	-8.9	1.51 V	278	64.0	1.1
2	5150.00	52.6 AV	54.0	-1.4	1.51 V	278	51.5	1.1
3	*5200.00	121.5 PK			1.51 V	278	120.4	1.1
4	*5200.00	111.7 AV			1.51 V	278	110.6	1.1
5	#10400.00	55.9 PK	68.2	-12.3	1.44 V	138	45.5	10.4
6	15600.00	52.8 PK	74.0	-21.2	1.47 V	127	40.8	12.0
7	15600.00	39.3 AV	54.0	-14.7	1.47 V	127	27.3	12.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 48 : 5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	50.2 PK	74.0	-23.8	1.47 H	63	49.1	1.1
2	5150.00	39.9 AV	54.0	-14.1	1.47 H	63	38.8	1.1
3	*5240.00	114.9 PK			1.47 H	63	114.1	0.8
4	*5240.00	105.2 AV			1.47 H	63	104.4	0.8
5	5406.65	51.8 PK	74.0	-22.2	1.47 H	63	50.8	1.0
6	5406.65	40.1 AV	54.0	-13.9	1.47 H	63	39.1	1.0
7	#10480.00	55.5 PK	68.2	-12.7	1.78 H	79	45.2	10.3
8	15720.00	51.7 PK	74.0	-22.3	1.59 H	160	40.5	11.2
9	15720.00	38.4 AV	54.0	-15.6	1.59 H	160	27.2	11.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	54.4 PK	74.0	-19.6	1.52 V	264	53.3	1.1
2	5150.00	43.3 AV	54.0	-10.7	1.52 V	264	42.2	1.1
3	*5240.00	119.6 PK			1.52 V	264	118.8	0.8
4	*5240.00	110.0 AV			1.52 V	264	109.2	0.8
5	5350.00	55.7 PK	74.0	-18.3	1.52 V	264	54.9	0.8
6	5350.00	44.5 AV	54.0	-9.5	1.52 V	264	43.7	0.8
7	#10480.00	56.1 PK	68.2	-12.1	1.46 V	149	45.8	10.3
8	15720.00	53.4 PK	74.0	-20.6	1.46 V	135	42.2	11.2
9	15720.00	39.7 AV	54.0	-14.3	1.46 V	135	28.5	11.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 52 : 5260 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	50.4 PK	74.0	-23.6	1.54 H	107	49.3	1.1
2	5150.00	39.1 AV	54.0	-14.9	1.54 H	107	38.0	1.1
3	*5260.00	114.7 PK			1.54 H	107	114.0	0.7
4	*5260.00	104.8 AV			1.54 H	107	104.1	0.7
5	5414.64	52.6 PK	74.0	-21.4	1.54 H	107	51.6	1.0
6	5414.64	41.0 AV	54.0	-13.0	1.54 H	107	40.0	1.0
7	#10520.00	56.3 PK	68.2	-11.9	1.54 H	113	45.9	10.4
8	15780.00	53.4 PK	74.0	-20.6	1.59 H	181	42.3	11.1
9	15780.00	38.9 AV	54.0	-15.1	1.59 H	181	27.8	11.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	52.8 PK	74.0	-21.2	1.57 V	260	51.7	1.1
2	5150.00	42.6 AV	54.0	-11.4	1.57 V	260	41.5	1.1
3	*5260.00	119.3 PK			1.57 V	260	118.6	0.7
4	*5260.00	109.7 AV			1.57 V	260	109.0	0.7
5	5350.00	55.5 PK	74.0	-18.5	1.57 V	260	54.7	0.8
6	5350.00	44.5 AV	54.0	-9.5	1.57 V	260	43.7	0.8
7	#10520.00	57.1 PK	68.2	-11.1	1.73 V	313	46.7	10.4
8	15780.00	54.0 PK	74.0	-20.0	1.50 V	126	42.9	11.1
9	15780.00	40.2 AV	54.0	-13.8	1.50 V	126	29.1	11.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 60 : 5300 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	114.6 PK			1.56 H	96	113.9	0.7
2	*5300.00	104.6 AV			1.56 H	96	103.9	0.7
3	5350.00	57.8 PK	74.0	-16.2	1.56 H	96	57.0	0.8
4	5350.00	44.7 AV	54.0	-9.3	1.56 H	96	43.9	0.8
5	10600.00	56.0 PK	74.0	-18.0	1.51 H	121	45.5	10.5
6	10600.00	47.0 AV	54.0	-7.0	1.51 H	121	36.5	10.5
7	15900.00	53.2 PK	74.0	-20.8	1.62 H	169	41.4	11.8
8	15900.00	38.6 AV	54.0	-15.4	1.62 H	169	26.8	11.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	120.1 PK			1.51 V	255	119.4	0.7
2	*5300.00	109.8 AV			1.51 V	255	109.1	0.7
3	5350.00	60.0 PK	74.0	-14.0	1.51 V	255	59.2	0.8
4	5350.00	47.3 AV	54.0	-6.7	1.51 V	255	46.5	0.8
5	10600.00	57.2 PK	74.0	-16.8	1.78 V	297	46.7	10.5
6	10600.00	45.5 AV	54.0	-8.5	1.78 V	297	35.0	10.5
7	15900.00	54.2 PK	74.0	-19.8	1.44 V	124	42.4	11.8
8	15900.00	40.2 AV	54.0	-13.8	1.44 V	124	28.4	11.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

RF Mode	TX 802.11a	Channel	CH 64 : 5320 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	114.9 PK			1.41 H	104	114.2	0.7
2	*5320.00	104.9 AV			1.41 H	104	104.2	0.7
3	5354.50	62.3 PK	74.0	-11.7	1.41 H	104	61.5	0.8
4	5354.50	46.9 AV	54.0	-7.1	1.41 H	104	46.1	0.8
5	10640.00	55.6 PK	74.0	-18.4	1.49 H	113	45.2	10.4
6	10640.00	46.6 AV	54.0	-7.4	1.49 H	113	36.2	10.4
7	15960.00	53.0 PK	74.0	-21.0	1.58 H	179	40.9	12.1
8	15960.00	38.3 AV	54.0	-15.7	1.58 H	179	26.2	12.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	120.1 PK			1.51 V	261	119.4	0.7
2	*5320.00	110.1 AV			1.51 V	261	109.4	0.7
3	5350.00	71.4 PK	74.0	-2.6	1.51 V	261	70.6	0.8
4	5350.00	53.3 AV	54.0	-0.7	1.51 V	261	52.5	0.8
5	10640.00	57.5 PK	74.0	-16.5	1.82 V	307	47.1	10.4
6	10640.00	45.6 AV	54.0	-8.4	1.82 V	307	35.2	10.4
7	15960.00	53.8 PK	74.0	-20.2	1.43 V	111	41.7	12.1
8	15960.00	39.9 AV	54.0	-14.1	1.43 V	111	27.8	12.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

RF Mode	TX 802.11a	Channel	CH 100 : 5500 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	54.8 PK	74.0	-19.2	1.57 H	146	53.7	1.1
2	5460.00	42.5 AV	54.0	-11.5	1.57 H	146	41.4	1.1
3	#5470.00	66.8 PK	68.2	-1.4	1.57 H	146	65.7	1.1
4	*5500.00	112.6 PK			1.57 H	146	111.5	1.1
5	*5500.00	103.4 AV			1.57 H	146	102.3	1.1
6	11000.00	56.3 PK	74.0	-17.7	1.56 H	110	44.9	11.4
7	11000.00	47.0 AV	54.0	-7.0	1.56 H	110	35.6	11.4
8	#16500.00	53.4 PK	68.2	-14.8	1.64 H	177	39.2	14.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5456.24	60.8 PK	74.0	-13.2	1.59 V	269	59.7	1.1
2	5456.24	46.8 AV	54.0	-7.2	1.59 V	269	45.7	1.1
3	#5465.04	67.7 PK	68.2	-0.5	1.59 V	269	66.6	1.1
4	*5500.00	119.3 PK			1.59 V	269	118.2	1.1
5	*5500.00	108.8 AV			1.59 V	269	107.7	1.1
6	11000.00	56.9 PK	74.0	-17.1	1.82 V	290	45.5	11.4
7	11000.00	45.3 AV	54.0	-8.7	1.82 V	290	33.9	11.4
8	#16500.00	53.7 PK	68.2	-14.5	1.43 V	110	39.5	14.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 116 : 5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	115.3 PK			1.46 H	118	114.0	1.3
2	*5580.00	105.3 AV			1.46 H	118	104.0	1.3
3	11160.00	56.7 PK	74.0	-17.3	1.49 H	123	45.5	11.2
4	11160.00	47.4 AV	54.0	-6.6	1.49 H	123	36.2	11.2
5	#16740.00	53.3 PK	68.2	-14.9	1.65 H	166	38.0	15.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	120.5 PK			1.48 V	271	119.2	1.3
2	*5580.00	110.4 AV			1.48 V	271	109.1	1.3
3	11160.00	57.6 PK	74.0	-16.4	1.76 V	306	46.4	11.2
4	11160.00	45.9 AV	54.0	-8.1	1.76 V	306	34.7	11.2
5	#16740.00	53.7 PK	68.2	-14.5	1.42 V	116	38.4	15.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 140 : 5700 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	111.5 PK			1.60 H	149	110.0	1.5
2	*5700.00	101.3 AV			1.60 H	149	99.8	1.5
3	#5725.00	64.3 PK	68.2	-3.9	1.60 H	149	62.7	1.6
4	11400.00	55.6 PK	74.0	-18.4	1.55 H	126	43.4	12.2
5	11400.00	46.7 AV	54.0	-7.3	1.55 H	126	34.5	12.2
6	#17100.00	53.7 PK	68.2	-14.5	1.62 H	161	36.9	16.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	117.7 PK			1.47 V	278	116.2	1.5
2	*5700.00	107.0 AV			1.47 V	278	105.5	1.5
3	#5725.00	67.4 PK	68.2	-0.8	1.00 V	0	65.8	1.6
4	11400.00	57.3 PK	74.0	-16.7	1.76 V	284	45.1	12.2
5	11400.00	45.6 AV	54.0	-8.4	1.76 V	284	33.4	12.2
6	#17100.00	54.0 PK	68.2	-14.2	1.39 V	131	37.2	16.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 144 : 5720 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	54.8 PK	74.0	-19.2	1.45 H	115	53.7	1.1
2	5460.00	42.1 AV	54.0	-11.9	1.45 H	115	41.0	1.1
3	#5470.00	55.1 PK	68.2	-13.1	1.45 H	115	54.0	1.1
4	*5720.00	114.9 PK			1.45 H	115	113.3	1.6
5	*5720.00	105.1 AV			1.45 H	115	103.5	1.6
6	#5850.00	58.0 PK	68.2	-10.2	1.45 H	115	56.1	1.9
7	11440.00	56.5 PK	74.0	-17.5	1.53 H	110	44.3	12.2
8	11440.00	47.4 AV	54.0	-6.6	1.53 H	110	35.2	12.2
9	#17160.00	53.5 PK	68.2	-14.7	1.58 H	177	37.1	16.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	54.8 PK	74.0	-19.2	1.52 V	273	53.7	1.1
2	5460.00	42.1 AV	54.0	-11.9	1.52 V	273	41.0	1.1
3	#5470.00	55.1 PK	68.2	-13.1	1.52 V	273	54.0	1.1
4	*5720.00	119.8 PK			1.52 V	273	118.2	1.6
5	*5720.00	110.1 AV			1.52 V	273	108.5	1.6
6	#5850.00	57.7 PK	68.2	-10.5	1.52 V	273	55.8	1.9
7	11440.00	56.9 PK	74.0	-17.1	1.77 V	293	44.7	12.2
8	11440.00	45.3 AV	54.0	-8.7	1.77 V	293	33.1	12.2
9	#17160.00	54.5 PK	68.2	-13.7	1.44 V	115	38.1	16.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 149 : 5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5627.06	53.1 PK	68.2	-15.1	1.60 H	243	51.6	1.5
2	*5745.00	119.7 PK			1.60 H	243	118.0	1.7
3	*5745.00	109.6 AV			1.60 H	243	107.9	1.7
4	#5992.36	54.1 PK	68.2	-14.1	1.60 H	243	52.1	2.0
5	11490.00	54.6 PK	74.0	-19.4	1.48 H	140	42.5	12.1
6	11490.00	46.5 AV	54.0	-7.5	1.48 H	140	34.4	12.1
7	#17235.00	53.6 PK	68.2	-14.6	1.45 H	122	37.4	16.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5610.74	55.7 PK	68.2	-12.5	1.53 V	277	54.2	1.5
2	*5745.00	123.1 PK			1.53 V	277	121.4	1.7
3	*5745.00	112.9 AV			1.53 V	277	111.2	1.7
4	#5953.37	56.9 PK	68.2	-11.3	1.53 V	277	54.9	2.0
5	11490.00	56.2 PK	74.0	-17.8	2.02 V	292	44.1	12.1
6	11490.00	47.2 AV	54.0	-6.8	2.02 V	292	35.1	12.1
7	#17235.00	56.4 PK	68.2	-11.8	2.48 V	70	40.2	16.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 157 : 5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5573.85	53.6 PK	68.2	-14.6	1.55 H	246	52.2	1.4
2	*5785.00	119.7 PK			1.55 H	246	117.9	1.8
3	*5785.00	109.8 AV			1.55 H	246	108.0	1.8
4	#5937.92	54.1 PK	68.2	-14.1	1.55 H	246	52.1	2.0
5	11570.00	56.2 PK	74.0	-17.8	1.49 H	136	44.2	12.0
6	11570.00	47.2 AV	54.0	-6.8	1.49 H	136	35.2	12.0
7	#17355.00	54.1 PK	68.2	-14.1	1.44 H	129	37.1	17.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5638.39	55.8 PK	68.2	-12.4	1.55 V	274	54.3	1.5
2	*5785.00	122.7 PK			1.55 V	274	120.9	1.8
3	*5785.00	112.5 AV			1.55 V	274	110.7	1.8
4	#6000.15	56.8 PK	68.2	-11.4	1.55 V	274	54.8	2.0
5	11570.00	57.9 PK	74.0	-16.1	1.73 V	290	45.9	12.0
6	11570.00	47.6 AV	54.0	-6.4	1.73 V	290	35.6	12.0
7	#17355.00	57.4 PK	68.2	-10.8	2.54 V	58	40.4	17.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 165 : 5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5645.96	52.7 PK	68.2	-15.5	1.63 H	240	51.2	1.5
2	*5825.00	119.9 PK			1.63 H	240	118.1	1.8
3	*5825.00	109.9 AV			1.63 H	240	108.1	1.8
4	#5936.46	53.9 PK	68.2	-14.3	1.63 H	240	52.0	1.9
5	11650.00	56.8 PK	74.0	-17.2	1.44 H	137	45.1	11.7
6	11650.00	47.6 AV	54.0	-6.4	1.44 H	137	35.9	11.7
7	#17475.00	55.6 PK	68.2	-12.6	1.42 H	130	36.7	18.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5631.96	55.6 PK	68.2	-12.6	1.52 V	252	54.1	1.5
2	*5825.00	123.0 PK			1.52 V	252	121.2	1.8
3	*5825.00	112.6 AV			1.52 V	252	110.8	1.8
4	#5929.55	58.2 PK	68.2	-10.0	1.52 V	252	56.3	1.9
5	11650.00	58.4 PK	74.0	-15.6	1.60 V	279	46.7	11.7
6	11650.00	48.1 AV	54.0	-5.9	1.60 V	279	36.4	11.7
7	#17475.00	58.7 PK	68.2	-9.5	3.99 V	84	39.8	18.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 36 : 5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	67.0 PK	74.0	-7.0	1.43 H	230	65.9	1.1
2	5150.00	52.8 AV	54.0	-1.2	1.43 H	230	51.7	1.1
3	*5180.00	116.3 PK			1.43 H	230	115.3	1.0
4	*5180.00	105.6 AV			1.43 H	230	104.6	1.0
5	#10360.00	55.9 PK	68.2	-12.3	1.80 H	85	45.6	10.3
6	15540.00	51.7 PK	74.0	-22.3	1.65 H	165	39.7	12.0
7	15540.00	38.3 AV	54.0	-15.7	1.65 H	165	26.3	12.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	67.1 PK	74.0	-6.9	1.63 V	267	66.0	1.1
2	5150.00	53.4 AV	54.0	-0.6	1.63 V	267	52.3	1.1
3	*5180.00	119.3 PK			1.63 V	267	118.3	1.0
4	*5180.00	108.4 AV			1.63 V	267	107.4	1.0
5	#10360.00	55.7 PK	68.2	-12.5	1.34 V	126	45.4	10.3
6	15540.00	53.9 PK	74.0	-20.1	1.44 V	148	41.9	12.0
7	15540.00	39.9 AV	54.0	-14.1	1.44 V	148	27.9	12.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 40 : 5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	66.8 PK	74.0	-7.2	1.40 H	224	65.7	1.1
2	5150.00	52.4 AV	54.0	-1.6	1.40 H	224	51.3	1.1
3	*5200.00	114.4 PK			1.40 H	224	113.3	1.1
4	*5200.00	103.7 AV			1.40 H	224	102.6	1.1
5	#10400.00	55.4 PK	68.2	-12.8	1.75 H	81	45.0	10.4
6	15600.00	51.6 PK	74.0	-22.4	1.57 H	159	39.6	12.0
7	15600.00	38.5 AV	54.0	-15.5	1.57 H	159	26.5	12.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	67.9 PK	74.0	-6.1	1.62 V	259	66.8	1.1
2	5150.00	53.3 AV	54.0	-0.7	1.62 V	259	52.2	1.1
3	*5200.00	122.0 PK			1.62 V	259	120.9	1.1
4	*5200.00	110.3 AV			1.62 V	259	109.2	1.1
5	#10400.00	55.8 PK	68.2	-12.4	1.44 V	146	45.4	10.4
6	15600.00	52.4 PK	74.0	-21.6	1.47 V	129	40.4	12.0
7	15600.00	38.9 AV	54.0	-15.1	1.47 V	129	26.9	12.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 48 : 5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	51.3 PK	74.0	-22.7	1.49 H	231	50.2	1.1
2	5150.00	40.1 AV	54.0	-13.9	1.49 H	231	39.0	1.1
3	*5240.00	116.8 PK			1.49 H	231	116.0	0.8
4	*5240.00	106.1 AV			1.49 H	231	105.3	0.8
5	5400.00	52.1 PK	74.0	-21.9	1.49 H	231	51.1	1.0
6	5400.00	41.5 AV	54.0	-12.5	1.49 H	231	40.5	1.0
7	#10480.00	55.6 PK	68.2	-12.6	1.79 H	73	45.3	10.3
8	15720.00	51.9 PK	74.0	-22.1	1.62 H	172	40.7	11.2
9	15720.00	38.7 AV	54.0	-15.3	1.62 H	172	27.5	11.2

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	54.1 PK	74.0	-19.9	1.67 V	261	53.0	1.1
2	5150.00	43.0 AV	54.0	-11.0	1.67 V	261	41.9	1.1
3	*5240.00	120.1 PK			1.67 V	261	119.3	0.8
4	*5240.00	109.1 AV			1.67 V	261	108.3	0.8
5	5350.00	56.4 PK	74.0	-17.6	1.67 V	261	55.6	0.8
6	5350.00	44.5 AV	54.0	-9.5	1.67 V	261	43.7	0.8
7	#10480.00	56.2 PK	68.2	-12.0	1.47 V	129	45.9	10.3
8	15720.00	53.1 PK	74.0	-20.9	1.43 V	124	41.9	11.2
9	15720.00	39.3 AV	54.0	-14.7	1.43 V	124	28.1	11.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 52 : 5260 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	50.2 PK	74.0	-23.8	1.40 H	227	49.1	1.1
2	5150.00	39.2 AV	54.0	-14.8	1.40 H	227	38.1	1.1
3	*5260.00	116.3 PK			1.40 H	227	115.6	0.7
4	*5260.00	105.9 AV			1.40 H	227	105.2	0.7
5	5350.00	52.8 PK	74.0	-21.2	1.40 H	227	52.0	0.8
6	5350.00	40.8 AV	54.0	-13.2	1.40 H	227	40.0	0.8
7	#10520.00	56.4 PK	68.2	-11.8	1.50 H	107	46.0	10.4
8	15780.00	53.3 PK	74.0	-20.7	1.61 H	170	42.2	11.1
9	15780.00	38.6 AV	54.0	-15.4	1.61 H	170	27.5	11.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	52.9 PK	74.0	-21.1	1.59 V	253	51.8	1.1
2	5150.00	42.3 AV	54.0	-11.7	1.59 V	253	41.2	1.1
3	*5260.00	120.3 PK			1.59 V	253	119.6	0.7
4	*5260.00	109.3 AV			1.59 V	253	108.6	0.7
5	5350.00	56.3 PK	74.0	-17.7	1.59 V	253	55.5	0.8
6	5350.00	45.3 AV	54.0	-8.7	1.59 V	253	44.5	0.8
7	#10520.00	57.0 PK	68.2	-11.2	1.82 V	304	46.6	10.4
8	15780.00	54.6 PK	74.0	-19.4	1.44 V	130	43.5	11.1
9	15780.00	40.5 AV	54.0	-13.5	1.44 V	130	29.4	11.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 60 : 5300 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	116.2 PK			1.43 H	242	115.5	0.7
2	*5300.00	105.8 AV			1.43 H	242	105.1	0.7
3	5350.00	57.8 PK	74.0	-16.2	1.43 H	242	57.0	0.8
4	5350.00	45.0 AV	54.0	-9.0	1.43 H	242	44.2	0.8
5	10600.00	55.5 PK	74.0	-18.5	1.55 H	125	45.0	10.5
6	10600.00	46.7 AV	54.0	-7.3	1.55 H	125	36.2	10.5
7	15900.00	53.4 PK	74.0	-20.6	1.67 H	165	41.6	11.8
8	15900.00	38.9 AV	54.0	-15.1	1.67 H	165	27.1	11.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	121.2 PK			1.64 V	253	120.5	0.7
2	*5300.00	109.3 AV			1.64 V	253	108.6	0.7
3	5350.00	62.4 PK	74.0	-11.6	1.64 V	253	61.6	0.8
4	5350.00	48.6 AV	54.0	-5.4	1.64 V	253	47.8	0.8
5	10600.00	56.8 PK	74.0	-17.2	1.84 V	293	46.3	10.5
6	10600.00	45.1 AV	54.0	-8.9	1.84 V	293	34.6	10.5
7	15900.00	54.3 PK	74.0	-19.7	1.47 V	116	42.5	11.8
8	15900.00	40.4 AV	54.0	-13.6	1.47 V	116	28.6	11.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

RF Mode	TX 802.11ax (HE20)	Channel	CH 64 : 5320 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	116.1 PK			1.35 H	236	115.4	0.7
2	*5320.00	104.4 AV			1.35 H	236	103.7	0.7
3	5352.74	63.3 PK	74.0	-10.7	1.35 H	236	62.5	0.8
4	5352.74	47.8 AV	54.0	-6.2	1.35 H	236	47.0	0.8
5	10640.00	56.4 PK	74.0	-17.6	1.51 H	125	46.0	10.4
6	10640.00	47.2 AV	54.0	-6.8	1.51 H	125	36.8	10.4
7	15960.00	53.1 PK	74.0	-20.9	1.59 H	172	41.0	12.1
8	15960.00	38.5 AV	54.0	-15.5	1.59 H	172	26.4	12.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	119.4 PK			1.69 V	263	118.7	0.7
2	*5320.00	108.2 AV			1.69 V	263	107.5	0.7
3	5350.00	68.9 PK	74.0	-5.1	1.69 V	263	68.1	0.8
4	5350.00	53.2 AV	54.0	-0.8	1.69 V	263	52.4	0.8
5	10640.00	57.2 PK	74.0	-16.8	1.73 V	302	46.8	10.4
6	10640.00	45.4 AV	54.0	-8.6	1.73 V	302	35.0	10.4
7	15960.00	54.6 PK	74.0	-19.4	1.50 V	113	42.5	12.1
8	15960.00	40.5 AV	54.0	-13.5	1.50 V	113	28.4	12.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

RF Mode	TX 802.11ax (HE20)	Channel	CH 100 : 5500 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5456.71	58.6 PK	74.0	-15.4	1.43 H	231	57.5	1.1
2	5456.71	42.8 AV	54.0	-11.2	1.43 H	231	41.7	1.1
3	#5467.84	63.5 PK	68.2	-4.7	1.43 H	231	62.4	1.1
4	*5500.00	114.6 PK			1.43 H	231	113.5	1.1
5	*5500.00	103.2 AV			1.43 H	231	102.1	1.1
6	11000.00	56.0 PK	74.0	-18.0	1.47 H	105	44.6	11.4
7	11000.00	47.2 AV	54.0	-6.8	1.47 H	105	35.8	11.4
8	#16500.00	53.5 PK	68.2	-14.7	1.67 H	171	39.3	14.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5458.80	62.9 PK	74.0	-11.1	1.66 V	281	61.8	1.1
2	5458.80	47.7 AV	54.0	-6.3	1.66 V	281	46.6	1.1
3	#5468.73	67.4 PK	68.2	-0.8	1.66 V	281	66.3	1.1
4	*5500.00	119.1 PK			1.66 V	281	118.0	1.1
5	*5500.00	107.6 AV			1.66 V	281	106.5	1.1
6	11000.00	57.6 PK	74.0	-16.4	1.74 V	294	46.2	11.4
7	11000.00	45.9 AV	54.0	-8.1	1.74 V	294	34.5	11.4
8	#16500.00	53.7 PK	68.2	-14.5	1.50 V	135	39.5	14.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 116 : 5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	116.0 PK			1.38 H	242	114.7	1.3
2	*5580.00	104.4 AV			1.38 H	242	103.1	1.3
3	11160.00	55.7 PK	74.0	-18.3	1.47 H	110	44.5	11.2
4	11160.00	46.5 AV	54.0	-7.5	1.47 H	110	35.3	11.2
5	#16740.00	53.6 PK	68.2	-14.6	1.60 H	153	38.3	15.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	121.3 PK			1.65 V	253	120.0	1.3
2	*5580.00	109.3 AV			1.65 V	253	108.0	1.3
3	11160.00	56.9 PK	74.0	-17.1	1.81 V	308	45.7	11.2
4	11160.00	45.2 AV	54.0	-8.8	1.81 V	308	34.0	11.2
5	#16740.00	54.1 PK	68.2	-14.1	1.42 V	112	38.8	15.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 140 : 5700 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	116.5 PK			1.42 H	228	115.0	1.5
2	*5700.00	104.9 AV			1.42 H	228	103.4	1.5
3	#5725.00	64.3 PK	68.2	-3.9	1.42 H	228	62.7	1.6
4	11400.00	56.0 PK	74.0	-18.0	1.52 H	129	43.8	12.2
5	11400.00	47.0 AV	54.0	-7.0	1.52 H	129	34.8	12.2
6	#17100.00	53.5 PK	68.2	-14.7	1.56 H	182	36.7	16.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	117.5 PK			1.67 V	274	116.0	1.5
2	*5700.00	106.8 AV			1.67 V	274	105.3	1.5
3	#5725.00	67.7 PK	68.2	-0.5	1.67 V	274	66.1	1.6
4	11400.00	56.4 PK	74.0	-17.6	1.77 V	306	44.2	12.2
5	11400.00	44.8 AV	54.0	-9.2	1.77 V	306	32.6	12.2
6	#17100.00	53.4 PK	68.2	-14.8	1.36 V	124	36.6	16.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 144 : 5720 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	54.7 PK	74.0	-19.3	1.35 H	236	53.6	1.1
2	5460.00	42.0 AV	54.0	-12.0	1.35 H	236	40.9	1.1
3	#5470.00	55.1 PK	68.2	-13.1	1.35 H	236	54.0	1.1
4	*5720.00	116.6 PK			1.35 H	236	115.0	1.6
5	*5720.00	104.8 AV			1.35 H	236	103.2	1.6
6	#5850.00	58.0 PK	68.2	-10.2	1.35 H	236	56.1	1.9
7	11440.00	55.8 PK	74.0	-18.2	1.55 H	117	43.6	12.2
8	11440.00	46.9 AV	54.0	-7.1	1.55 H	117	34.7	12.2
9	#17160.00	53.6 PK	68.2	-14.6	1.61 H	198	37.2	16.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	54.8 PK	74.0	-19.2	1.60 V	253	53.7	1.1
2	5460.00	42.1 AV	54.0	-11.9	1.60 V	253	41.0	1.1
3	#5470.00	55.1 PK	68.2	-13.1	1.60 V	253	54.0	1.1
4	*5720.00	120.9 PK			1.60 V	253	119.3	1.6
5	*5720.00	109.2 AV			1.60 V	253	107.6	1.6
6	#5850.00	57.7 PK	68.2	-10.5	1.60 V	253	55.8	1.9
7	11440.00	57.7 PK	74.0	-16.3	1.74 V	310	45.5	12.2
8	11440.00	45.9 AV	54.0	-8.1	1.74 V	310	33.7	12.2
9	#17160.00	54.6 PK	68.2	-13.6	1.39 V	137	38.2	16.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 149 : 5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5649.87	54.1 PK	68.2	-14.1	1.54 H	238	52.6	1.5
2	*5745.00	119.9 PK			1.54 H	238	118.2	1.7
3	*5745.00	108.6 AV			1.54 H	238	106.9	1.7
4	#5994.55	53.8 PK	68.2	-14.4	1.54 H	238	51.8	2.0
5	11490.00	55.2 PK	74.0	-18.8	1.49 H	135	43.1	12.1
6	11490.00	45.1 AV	54.0	-8.9	1.49 H	135	33.0	12.1
7	#17235.00	55.1 PK	68.2	-13.1	1.36 H	116	38.9	16.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5576.66	57.5 PK	68.2	-10.7	1.58 V	257	56.1	1.4
2	*5745.00	122.6 PK			1.58 V	257	120.9	1.7
3	*5745.00	111.6 AV			1.58 V	257	109.9	1.7
4	#5954.62	57.6 PK	68.2	-10.6	1.58 V	257	55.6	2.0
5	11490.00	55.6 PK	74.0	-18.4	1.55 V	291	43.5	12.1
6	11490.00	45.4 AV	54.0	-8.6	1.55 V	291	33.3	12.1
7	#17235.00	56.2 PK	68.2	-12.0	4.00 V	69	40.0	16.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 157 : 5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5641.78	52.9 PK	68.2	-15.3	1.59 H	247	51.4	1.5
2	*5785.00	119.7 PK			1.59 H	247	117.9	1.8
3	*5785.00	108.5 AV			1.59 H	247	106.7	1.8
4	#5981.57	54.0 PK	68.2	-14.2	1.59 H	247	52.0	2.0
5	11570.00	55.7 PK	74.0	-18.3	1.44 H	144	43.7	12.0
6	11570.00	45.4 AV	54.0	-8.6	1.44 H	144	33.4	12.0
7	#17355.00	55.1 PK	68.2	-13.1	1.33 H	105	38.1	17.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5623.52	55.2 PK	68.2	-13.0	1.63 V	279	53.6	1.6
2	*5785.00	123.1 PK			1.63 V	279	121.3	1.8
3	*5785.00	111.9 AV			1.63 V	279	110.1	1.8
4	#5955.27	58.0 PK	68.2	-10.2	1.63 V	279	56.0	2.0
5	11570.00	55.8 PK	74.0	-18.2	1.51 V	284	43.8	12.0
6	11570.00	45.4 AV	54.0	-8.6	1.51 V	284	33.4	12.0
7	#17355.00	56.9 PK	68.2	-11.3	4.00 V	59	39.9	17.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE20)	Channel	CH 165 : 5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5607.21	53.5 PK	68.2	-14.7	1.56 H	237	52.0	1.5
2	*5825.00	119.7 PK			1.56 H	237	117.9	1.8
3	*5825.00	108.4 AV			1.56 H	237	106.6	1.8
4	#5988.72	54.9 PK	68.2	-13.3	1.56 H	237	52.9	2.0
5	11650.00	55.5 PK	74.0	-18.5	1.43 H	132	43.8	11.7
6	11650.00	45.3 AV	54.0	-8.7	1.43 H	132	33.6	11.7
7	#17475.00	55.5 PK	68.2	-12.7	1.38 H	109	36.6	18.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5617.21	56.2 PK	68.2	-12.0	1.67 V	257	54.6	1.6
2	*5825.00	122.7 PK			1.67 V	257	120.9	1.8
3	*5825.00	111.6 AV			1.67 V	257	109.8	1.8
4	#5946.00	58.1 PK	68.2	-10.1	1.67 V	257	56.1	2.0
5	11650.00	55.7 PK	74.0	-18.3	1.56 V	290	44.0	11.7
6	11650.00	45.2 AV	54.0	-8.8	1.56 V	290	33.5	11.7
7	#17475.00	55.8 PK	68.2	-12.4	4.00 V	79	36.9	18.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 38 : 5190 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5147.00	56.4 PK	74.0	-17.6	1.56 H	225	55.3	1.1
2	5147.00	45.2 AV	54.0	-8.8	1.56 H	225	44.1	1.1
3	*5190.00	108.7 PK			1.56 H	225	107.7	1.0
4	*5190.00	97.1 AV			1.56 H	225	96.1	1.0
5	#10380.00	55.4 PK	68.2	-12.8	1.70 H	70	45.1	10.3
6	15570.00	51.6 PK	74.0	-22.4	1.61 H	149	39.5	12.1
7	15570.00	38.3 AV	54.0	-15.7	1.61 H	149	26.2	12.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	64.8 PK	74.0	-9.2	1.55 V	274	63.7	1.1
2	5150.00	53.2 AV	54.0	-0.8	1.55 V	274	52.1	1.1
3	*5190.00	112.4 PK			1.55 V	274	111.4	1.0
4	*5190.00	100.7 AV			1.55 V	274	99.7	1.0
5	#10380.00	55.2 PK	68.2	-13.0	1.39 V	117	44.9	10.3
6	15570.00	53.9 PK	74.0	-20.1	1.40 V	154	41.8	12.1
7	15570.00	40.2 AV	54.0	-13.8	1.40 V	154	28.1	12.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 46 : 5230 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	63.4 PK	74.0	-10.6	1.57 H	220	62.3	1.1
2	5150.00	48.6 AV	54.0	-5.4	1.57 H	220	47.5	1.1
3	*5230.00	115.7 PK			1.57 H	220	114.8	0.9
4	*5230.00	103.6 AV			1.57 H	220	102.7	0.9
5	5388.77	54.1 PK	74.0	-19.9	1.57 H	220	53.1	1.0
6	5388.77	42.4 AV	54.0	-11.6	1.57 H	220	41.4	1.0
7	#10460.00	55.3 PK	68.2	-12.9	1.71 H	77	44.9	10.4
8	15690.00	51.3 PK	74.0	-22.7	1.61 H	145	40.0	11.3
9	15690.00	38.5 AV	54.0	-15.5	1.61 H	145	27.2	11.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	64.0 PK	74.0	-10.0	1.56 V	270	62.9	1.1
2	5150.00	50.9 AV	54.0	-3.1	1.56 V	270	49.8	1.1
3	*5230.00	117.9 PK			1.56 V	270	117.0	0.9
4	*5230.00	107.0 AV			1.56 V	270	106.1	0.9
5	5350.00	57.2 PK	74.0	-16.8	1.56 V	270	56.4	0.8
6	5350.00	46.1 AV	54.0	-7.9	1.56 V	270	45.3	0.8
7	#10460.00	55.6 PK	68.2	-12.6	1.28 V	132	45.2	10.4
8	15690.00	54.0 PK	74.0	-20.0	1.40 V	140	42.7	11.3
9	15690.00	40.0 AV	54.0	-14.0	1.40 V	140	28.7	11.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 54 : 5270 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	51.9 PK	74.0	-22.1	1.60 H	223	50.8	1.1
2	5150.00	40.3 AV	54.0	-13.7	1.60 H	223	39.2	1.1
3	*5270.00	115.4 PK			1.60 H	223	114.7	0.7
4	*5270.00	103.5 AV			1.60 H	223	102.8	0.7
5	5352.65	58.1 PK	74.0	-15.9	1.60 H	223	57.3	0.8
6	5352.65	46.4 AV	54.0	-7.6	1.60 H	223	45.6	0.8
7	#10540.00	56.0 PK	68.2	-12.2	1.52 H	117	45.6	10.4
8	15810.00	53.2 PK	74.0	-20.8	1.59 H	173	42.0	11.2
9	15810.00	38.9 AV	54.0	-15.1	1.59 H	173	27.7	11.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	54.4 PK	74.0	-19.6	1.52 V	282	53.3	1.1
2	5150.00	44.5 AV	54.0	-9.5	1.52 V	282	43.4	1.1
3	*5270.00	118.2 PK			1.52 V	282	117.5	0.7
4	*5270.00	107.2 AV			1.52 V	282	106.5	0.7
5	5350.00	61.1 PK	74.0	-12.9	1.52 V	282	60.3	0.8
6	5350.00	50.0 AV	54.0	-4.0	1.52 V	282	49.2	0.8
7	#10540.00	57.1 PK	68.2	-11.1	1.80 V	301	46.7	10.4
8	15810.00	54.4 PK	74.0	-19.6	1.50 V	137	43.2	11.2
9	15810.00	40.2 AV	54.0	-13.8	1.50 V	137	29.0	11.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 62 : 5310 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	108.3 PK			1.52 H	227	107.6	0.7
2	*5310.00	95.8 AV			1.52 H	227	95.1	0.7
3	5352.72	58.4 PK	74.0	-15.6	1.52 H	227	57.6	0.8
4	5352.72	45.5 AV	54.0	-8.5	1.52 H	227	44.7	0.8
5	10620.00	55.4 PK	74.0	-18.6	1.51 H	143	44.9	10.5
6	10620.00	46.7 AV	54.0	-7.3	1.51 H	143	36.2	10.5
7	15930.00	52.9 PK	74.0	-21.1	1.55 H	197	40.9	12.0
8	15930.00	38.6 AV	54.0	-15.4	1.55 H	197	26.6	12.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	111.8 PK			1.54 V	273	111.1	0.7
2	*5310.00	100.3 AV			1.54 V	273	99.6	0.7
3	5350.00	65.1 PK	74.0	-8.9	1.54 V	273	64.3	0.8
4	5350.00	53.2 AV	54.0	-0.8	1.54 V	273	52.4	0.8
5	10620.00	57.0 PK	74.0	-17.0	1.82 V	311	46.5	10.5
6	10620.00	45.3 AV	54.0	-8.7	1.82 V	311	34.8	10.5
7	15930.00	54.4 PK	74.0	-19.6	1.44 V	127	42.4	12.0
8	15930.00	40.5 AV	54.0	-13.5	1.44 V	127	28.5	12.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

RF Mode	TX 802.11ax (HE40)	Channel	CH 102 : 5510 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5458.00	53.4 PK	74.0	-20.6	1.59 H	234	52.3	1.1
2	5458.00	42.3 AV	54.0	-11.7	1.59 H	234	41.2	1.1
3	#5468.70	56.9 PK	68.2	-11.3	1.59 H	234	55.8	1.1
4	*5510.00	109.2 PK			1.59 H	234	108.1	1.1
5	*5510.00	96.9 AV			1.59 H	234	95.8	1.1
6	11020.00	55.5 PK	74.0	-18.5	1.53 H	119	44.1	11.4
7	11020.00	46.6 AV	54.0	-7.4	1.53 H	119	35.2	11.4
8	#16530.00	53.4 PK	68.2	-14.8	1.61 H	183	38.9	14.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.3 PK	74.0	-13.7	1.51 V	288	59.2	1.1
2	5460.00	48.0 AV	54.0	-6.0	1.51 V	288	46.9	1.1
3	#5467.50	67.7 PK	68.2	-0.5	1.51 V	288	66.6	1.1
4	*5510.00	113.8 PK			1.51 V	288	112.7	1.1
5	*5510.00	101.0 AV			1.51 V	288	99.9	1.1
6	11020.00	56.7 PK	74.0	-17.3	1.73 V	284	45.3	11.4
7	11020.00	45.2 AV	54.0	-8.8	1.73 V	284	33.8	11.4
8	#16530.00	53.9 PK	68.2	-14.3	1.43 V	122	39.4	14.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 110 : 5550 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	54.8 PK	74.0	-19.2	1.64 H	240	53.7	1.1
2	5460.00	44.7 AV	54.0	-9.3	1.64 H	240	43.6	1.1
3	#5470.00	61.3 PK	68.2	-6.9	1.64 H	240	60.2	1.1
4	*5550.00	114.9 PK			1.64 H	240	113.7	1.2
5	*5550.00	103.1 AV			1.64 H	240	101.9	1.2
6	11100.00	56.5 PK	74.0	-17.5	1.46 H	128	45.2	11.3
7	11100.00	47.3 AV	54.0	-6.7	1.46 H	128	36.0	11.3
8	#16650.00	53.9 PK	68.2	-14.3	1.62 H	179	38.5	15.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	64.2 PK	74.0	-9.8	1.53 V	282	63.1	1.1
2	5460.00	47.7 AV	54.0	-6.3	1.53 V	282	46.6	1.1
3	#5470.00	67.4 PK	68.2	-0.8	1.53 V	282	66.3	1.1
4	*5550.00	118.5 PK			1.53 V	282	117.3	1.2
5	*5550.00	106.0 AV			1.53 V	282	104.8	1.2
6	11100.00	57.2 PK	74.0	-16.8	1.72 V	306	45.9	11.3
7	11100.00	45.5 AV	54.0	-8.5	1.72 V	306	34.2	11.3
8	#16650.00	54.3 PK	68.2	-13.9	1.44 V	133	38.9	15.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 134 : 5670 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	114.6 PK			1.59 H	224	113.2	1.4
2	*5670.00	102.6 AV			1.59 H	224	101.2	1.4
3	#5725.00	64.7 PK	68.2	-3.5	1.59 H	224	63.1	1.6
4	11340.00	55.9 PK	74.0	-18.1	1.54 H	117	44.2	11.7
5	11340.00	46.9 AV	54.0	-7.1	1.54 H	117	35.2	11.7
6	#17010.00	53.2 PK	68.2	-15.0	1.50 H	186	35.9	17.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	116.6 PK			1.50 V	279	115.2	1.4
2	*5670.00	105.1 AV			1.50 V	279	103.7	1.4
3	#5725.00	67.3 PK	68.2	-0.9	1.50 V	279	65.7	1.6
4	11340.00	56.9 PK	74.0	-17.1	1.73 V	312	45.2	11.7
5	11340.00	45.5 AV	54.0	-8.5	1.73 V	312	33.8	11.7
6	#17010.00	54.7 PK	68.2	-13.5	1.46 V	124	37.4	17.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 142 : 5710 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	56.1 PK	74.0	-17.9	1.59 H	224	55.0	1.1
2	5460.00	43.4 AV	54.0	-10.6	1.59 H	224	42.3	1.1
3	#5470.00	56.5 PK	68.2	-11.7	1.59 H	224	55.4	1.1
4	*5710.00	114.5 PK			1.59 H	224	112.9	1.6
5	*5710.00	102.7 AV			1.59 H	224	101.1	1.6
6	#5850.00	60.4 PK	68.2	-7.8	1.59 H	224	58.5	1.9
7	11420.00	56.6 PK	74.0	-17.4	1.48 H	134	44.4	12.2
8	11420.00	47.4 AV	54.0	-6.6	1.48 H	134	35.2	12.2
9	#17130.00	53.3 PK	68.2	-14.9	1.61 H	176	36.7	16.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	55.9 PK	74.0	-18.1	1.51 V	274	54.8	1.1
2	5460.00	43.2 AV	54.0	-10.8	1.51 V	274	42.1	1.1
3	#5470.00	56.2 PK	68.2	-12.0	1.51 V	274	55.1	1.1
4	*5710.00	119.6 PK			1.51 V	274	118.0	1.6
5	*5710.00	106.7 AV			1.51 V	274	105.1	1.6
6	#5850.00	60.1 PK	68.2	-8.1	1.51 V	274	58.2	1.9
7	11420.00	57.4 PK	74.0	-16.6	1.80 V	305	45.2	12.2
8	11420.00	45.6 AV	54.0	-8.4	1.80 V	305	33.4	12.2
9	#17130.00	54.4 PK	68.2	-13.8	1.49 V	117	37.8	16.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5648.36	66.3 PK	68.2	-1.9	1.59 H	246	64.8	1.5
2	*5755.00	117.5 PK			1.59 H	246	115.8	1.7
3	*5755.00	105.6 AV			1.59 H	246	103.9	1.7
4	#5933.34	58.8 PK	68.2	-9.4	1.59 H	246	56.9	1.9
5	11510.00	55.2 PK	74.0	-18.8	1.45 H	137	43.1	12.1
6	11510.00	44.9 AV	54.0	-9.1	1.45 H	137	32.8	12.1
7	#17265.00	56.1 PK	68.2	-12.1	1.34 H	110	40.1	16.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5649.64	64.1 PK	68.2	-4.1	1.53 V	284	62.6	1.5
2	*5755.00	119.6 PK			1.53 V	284	117.9	1.7
3	*5755.00	107.9 AV			1.53 V	284	106.2	1.7
4	#5933.23	59.0 PK	68.2	-9.2	1.53 V	284	57.1	1.9
5	11510.00	55.4 PK	74.0	-18.6	1.54 V	275	43.3	12.1
6	11510.00	44.9 AV	54.0	-9.1	1.54 V	275	32.8	12.1
7	#17265.00	55.9 PK	68.2	-12.3	4.00 V	77	39.9	16.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE40)	Channel	CH 159 : 5795 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5632.77	59.4 PK	68.2	-8.8	1.54 H	229	57.9	1.5
2	*5795.00	117.9 PK			1.54 H	229	116.0	1.9
3	*5795.00	105.8 AV			1.54 H	229	103.9	1.9
4	#5927.79	67.5 PK	68.2	-0.7	1.54 H	229	65.6	1.9
5	11590.00	55.6 PK	74.0	-18.4	1.44 H	140	43.6	12.0
6	11590.00	45.4 AV	54.0	-8.6	1.44 H	140	33.4	12.0
7	#17385.00	55.4 PK	68.2	-12.8	1.35 H	112	37.6	17.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5638.47	56.2 PK	68.2	-12.0	1.51 V	268	54.7	1.5
2	*5795.00	119.8 PK			1.51 V	268	117.9	1.9
3	*5795.00	108.0 AV			1.51 V	268	106.1	1.9
4	#5927.74	62.6 PK	68.2	-5.6	1.51 V	268	60.7	1.9
5	11590.00	56.0 PK	74.0	-18.0	1.54 V	303	44.0	12.0
6	11590.00	45.3 AV	54.0	-8.7	1.54 V	303	33.3	12.0
7	#17385.00	55.6 PK	68.2	-12.6	4.00 V	68	37.8	17.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE80)	Channel	CH 42 : 5210 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.2 PK	74.0	-14.8	1.53 H	308	58.1	1.1
2	5150.00	47.9 AV	54.0	-6.1	1.53 H	308	46.8	1.1
3	*5210.00	104.3 PK			1.53 H	308	103.3	1.0
4	*5210.00	92.6 AV			1.53 H	308	91.6	1.0
5	5350.00	51.0 PK	74.0	-23.0	1.53 H	308	50.2	0.8
6	5350.00	40.0 AV	54.0	-14.0	1.53 H	308	39.2	0.8
7	#10420.00	55.9 PK	68.2	-12.3	1.76 H	77	45.5	10.4
8	15630.00	50.5 PK	74.0	-23.5	1.56 H	159	38.7	11.8
9	15630.00	38.0 AV	54.0	-16.0	1.56 H	159	26.2	11.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	63.6 PK	74.0	-10.4	1.60 V	88	62.5	1.1
2	5150.00	53.5 AV	54.0	-0.5	1.60 V	88	52.4	1.1
3	*5210.00	109.0 PK			1.60 V	88	108.0	1.0
4	*5210.00	96.6 AV			1.60 V	88	95.6	1.0
5	5350.00	54.4 PK	74.0	-19.6	1.60 V	88	53.6	0.8
6	5350.00	42.7 AV	54.0	-11.3	1.60 V	88	41.9	0.8
7	#10420.00	56.2 PK	68.2	-12.0	1.26 V	147	45.8	10.4
8	15630.00	54.0 PK	74.0	-20.0	1.44 V	129	42.2	11.8
9	15630.00	40.0 AV	54.0	-14.0	1.44 V	129	28.2	11.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE80)	Channel	CH 58 : 5290 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	47.2 PK	74.0	-26.8	1.52 H	310	46.1	1.1
2	5150.00	38.3 AV	54.0	-15.7	1.52 H	310	37.2	1.1
3	*5290.00	104.9 PK			1.52 H	310	104.2	0.7
4	*5290.00	93.0 AV			1.52 H	310	92.3	0.7
5	5350.00	58.6 PK	74.0	-15.4	1.52 H	310	57.8	0.8
6	5350.00	47.8 AV	54.0	-6.2	1.52 H	310	47.0	0.8
7	#10580.00	55.8 PK	68.2	-12.4	1.54 H	123	45.4	10.4
8	15870.00	53.1 PK	74.0	-20.9	1.57 H	172	41.5	11.6
9	15870.00	38.7 AV	54.0	-15.3	1.57 H	172	27.1	11.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	51.2 PK	74.0	-22.8	1.54 V	92	50.1	1.1
2	5150.00	40.5 AV	54.0	-13.5	1.54 V	92	39.4	1.1
3	*5290.00	108.4 PK			1.54 V	92	107.7	0.7
4	*5290.00	97.0 AV			1.54 V	92	96.3	0.7
5	5350.00	65.6 PK	74.0	-8.4	1.54 V	92	64.8	0.8
6	5350.00	53.5 AV	54.0	-0.5	1.54 V	92	52.7	0.8
7	#10580.00	56.7 PK	68.2	-11.5	1.81 V	291	46.3	10.4
8	15870.00	54.7 PK	74.0	-19.3	1.49 V	132	43.1	11.6
9	15870.00	40.5 AV	54.0	-13.5	1.49 V	132	28.9	11.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE80)	Channel	CH 106 : 5530 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	54.8 PK	74.0	-19.2	1.58 H	312	53.7	1.1
2	5460.00	43.2 AV	54.0	-10.8	1.58 H	312	42.1	1.1
3	#5470.00	57.1 PK	68.2	-11.1	1.58 H	312	56.0	1.1
4	*5530.00	104.2 PK			1.58 H	312	103.1	1.1
5	*5530.00	93.4 AV			1.58 H	312	92.3	1.1
6	#5725.00	48.6 PK	68.2	-19.6	1.58 H	312	47.0	1.6
7	11060.00	55.9 PK	74.0	-18.1	1.47 H	131	44.5	11.4
8	11060.00	46.8 AV	54.0	-7.2	1.47 H	131	35.4	11.4
9	#16590.00	53.3 PK	68.2	-14.9	1.56 H	190	38.0	15.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	65.0 PK	74.0	-9.0	1.58 V	95	63.9	1.1
2	5460.00	51.2 AV	54.0	-2.8	1.58 V	95	50.1	1.1
3	#5470.00	67.4 PK	68.2	-0.8	1.58 V	95	66.3	1.1
4	*5530.00	110.5 PK			1.58 V	95	109.4	1.1
5	*5530.00	97.7 AV			1.58 V	95	96.6	1.1
6	#5725.00	53.3 PK	68.2	-14.9	1.58 V	95	51.7	1.6
7	11060.00	57.4 PK	74.0	-16.6	1.81 V	290	46.0	11.4
8	11060.00	45.7 AV	54.0	-8.3	1.81 V	290	34.3	11.4
9	#16590.00	53.9 PK	68.2	-14.3	1.38 V	115	38.6	15.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE80)	Channel	CH 122 : 5610 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5610.00	111.5 PK			1.63 H	221	110.1	1.4
2	*5610.00	99.2 AV			1.63 H	221	97.8	1.4
3	#5725.00	65.2 PK	68.2	-3.0	1.63 H	221	63.6	1.6
4	11220.00	56.3 PK	74.0	-17.7	1.53 H	143	45.0	11.3
5	11220.00	47.3 AV	54.0	-6.7	1.53 H	143	36.0	11.3
6	#16830.00	53.1 PK	68.2	-15.1	1.51 H	191	37.5	15.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5610.00	115.9 PK			1.55 V	95	114.5	1.4
2	*5610.00	103.4 AV			1.55 V	95	102.0	1.4
3	#5725.00	67.3 PK	68.2	-0.9	1.55 V	95	65.7	1.6
4	11220.00	57.3 PK	74.0	-16.7	1.79 V	305	46.0	11.3
5	11220.00	45.8 AV	54.0	-8.2	1.79 V	305	34.5	11.3
6	#16830.00	54.5 PK	68.2	-13.7	1.44 V	137	38.9	15.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE80)	Channel	CH 138 : 5690 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	58.2 PK	74.0	-15.8	1.65 H	231	57.1	1.1
2	5460.00	45.2 AV	54.0	-8.8	1.65 H	231	44.1	1.1
3	#5470.00	62.3 PK	68.2	-5.9	1.65 H	231	61.2	1.1
4	*5690.00	111.3 PK			1.65 H	231	109.9	1.4
5	*5690.00	99.3 AV			1.65 H	231	97.9	1.4
6	#5850.00	65.7 PK	68.2	-2.5	1.65 H	231	63.8	1.9
7	11380.00	56.4 PK	74.0	-17.6	1.55 H	126	44.4	12.0
8	11380.00	47.2 AV	54.0	-6.8	1.55 H	126	35.2	12.0
9	#17070.00	53.9 PK	68.2	-14.3	1.59 H	179	37.0	16.9

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	59.2 PK	74.0	-14.8	1.61 V	95	58.1	1.1
2	5460.00	46.7 AV	54.0	-7.3	1.61 V	95	45.6	1.1
3	#5470.00	64.6 PK	68.2	-3.6	1.61 V	95	63.5	1.1
4	*5690.00	115.6 PK			1.61 V	95	114.2	1.4
5	*5690.00	103.8 AV			1.61 V	95	102.4	1.4
6	#5850.00	67.5 PK	68.2	-0.7	1.61 V	95	65.6	1.9
7	11380.00	56.8 PK	74.0	-17.2	1.78 V	285	44.8	12.0
8	11380.00	45.1 AV	54.0	-8.9	1.78 V	285	33.1	12.0
9	#17070.00	54.7 PK	68.2	-13.5	1.44 V	129	37.8	16.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE80)	Channel	CH 155 : 5775 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5645.87	62.7 PK	68.2	-5.5	1.52 H	309	61.3	1.4
2	*5775.00	110.5 PK			1.52 H	309	108.7	1.8
3	*5775.00	98.4 AV			1.52 H	309	96.6	1.8
4	#5925.63	59.6 PK	68.2	-8.6	1.52 H	309	57.8	1.8
5	11550.00	55.3 PK	74.0	-18.7	1.48 H	120	43.2	12.1
6	11550.00	45.1 AV	54.0	-8.9	1.48 H	120	33.0	12.1
7	#17325.00	55.8 PK	68.2	-12.4	1.36 H	95	39.4	16.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5649.81	67.1 PK	68.2	-1.1	1.61 V	96	65.7	1.4
2	*5775.00	115.9 PK			1.61 V	96	114.1	1.8
3	*5775.00	104.5 AV			1.61 V	96	102.7	1.8
4	#5928.67	67.0 PK	68.2	-1.2	1.61 V	96	65.2	1.8
5	11550.00	56.6 PK	74.0	-17.4	1.58 V	307	44.5	12.1
6	11550.00	45.7 AV	54.0	-8.3	1.58 V	307	33.6	12.1
7	#17325.00	55.5 PK	68.2	-12.7	4.00 V	75	39.1	16.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE160)	Channel	CH 50 : 5250 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.6 PK	74.0	-14.4	1.56 H	310	58.5	1.1
2	5150.00	45.2 AV	54.0	-8.8	1.56 H	310	44.1	1.1
3	*5250.00	99.9 PK			1.56 H	310	99.2	0.7
4	*5250.00	90.6 AV			1.56 H	310	89.9	0.7
5	5350.00	58.0 PK	74.0	-16.0	1.56 H	310	57.2	0.8
6	5350.00	45.1 AV	54.0	-8.9	1.56 H	310	44.3	0.8
7	5377.39	62.4 PK	74.0	-11.6	1.56 H	310	61.5	0.9
8	5377.39	43.8 AV	54.0	-10.2	1.56 H	310	42.9	0.9
9	#10500.00	56.4 PK	68.2	-11.8	1.49 H	143	46.2	10.2
10	15750.00	53.1 PK	74.0	-20.9	1.53 H	195	41.9	11.2
11	15750.00	38.7 AV	54.0	-15.3	1.53 H	195	27.5	11.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	69.2 PK	74.0	-4.8	1.55 V	88	68.1	1.1
2	5150.00	51.3 AV	54.0	-2.7	1.55 V	88	50.2	1.1
3	*5250.00	106.6 PK			1.55 V	88	105.9	0.7
4	*5250.00	94.5 AV			1.55 V	88	93.8	0.7
5	5350.00	64.7 PK	74.0	-9.3	1.55 V	88	63.9	0.8
6	5350.00	51.8 AV	54.0	-2.2	1.55 V	88	51.0	0.8
7	5377.39	73.4 PK	74.0	-0.6	1.55 V	88	72.5	0.9
8	5377.39	50.8 AV	54.0	-3.2	1.55 V	88	49.9	0.9
9	#10500.00	57.6 PK	68.2	-10.6	1.81 V	294	47.4	10.2
10	15750.00	54.4 PK	74.0	-19.6	1.39 V	113	43.2	11.2
11	15750.00	40.5 AV	54.0	-13.5	1.39 V	113	29.3	11.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ax (HE160)	Channel	CH 114 : 5570 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.0 PK	74.0	-14.0	1.44 H	306	58.9	1.1
2	5460.00	42.3 AV	54.0	-11.7	1.44 H	306	41.2	1.1
3	#5470.00	62.1 PK	68.2	-6.1	1.44 H	306	61.0	1.1
4	*5570.00	100.8 PK			1.44 H	306	99.5	1.3
5	*5570.00	89.2 AV			1.44 H	306	87.9	1.3
6	#5725.00	57.8 PK	68.2	-10.4	1.44 H	306	56.2	1.6
7	11140.00	55.3 PK	74.0	-18.7	1.54 H	139	44.0	11.3
8	11140.00	46.5 AV	54.0	-7.5	1.54 H	139	35.2	11.3
9	#16710.00	53.4 PK	68.2	-14.8	1.51 H	185	38.2	15.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	66.8 PK	74.0	-7.2	1.56 V	95	65.7	1.1
2	5460.00	47.1 AV	54.0	-6.9	1.56 V	95	46.0	1.1
3	#5470.00	67.5 PK	68.2	-0.7	1.56 V	95	66.4	1.1
4	*5570.00	105.5 PK			1.56 V	95	104.2	1.3
5	*5570.00	94.6 AV			1.56 V	95	93.3	1.3
6	#5725.00	65.3 PK	68.2	-2.9	1.56 V	95	63.7	1.6
7	11140.00	55.3 PK	74.0	-18.7	1.75 V	309	44.0	11.3
8	11140.00	43.2 AV	54.0	-10.8	1.75 V	309	31.9	11.3
9	#16710.00	54.7 PK	68.2	-13.5	1.43 V	137	39.5	15.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

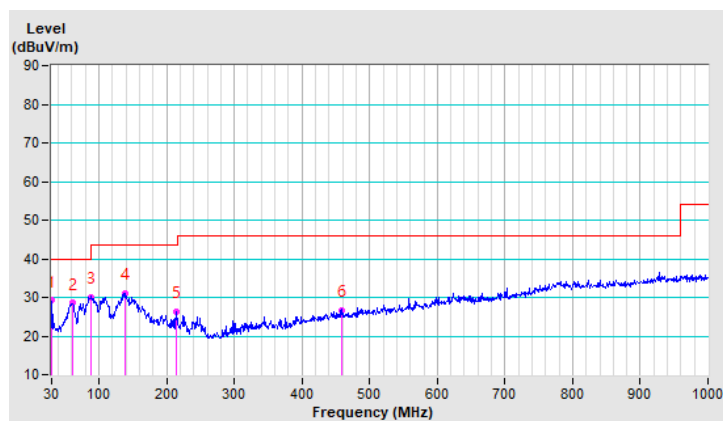
Below 1GHz Data:

RF Mode	TX 802.11ax (HE20)	Channel	CH 149 : 5745 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.55	29.2 QP	40.0	-10.8	1.50 H	11	42.8	-13.6
2	60.86	28.5 QP	40.0	-11.5	1.50 H	16	41.9	-13.4
3	88.38	30.1 QP	43.5	-13.4	2.50 H	241	48.5	-18.4
4	139.54	31.1 QP	43.5	-12.4	2.00 H	257	43.5	-12.4
5	214.26	26.3 QP	43.5	-17.2	2.00 H	124	41.4	-15.1
6	459.05	26.6 QP	46.0	-19.4	1.50 H	77	32.4	-5.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

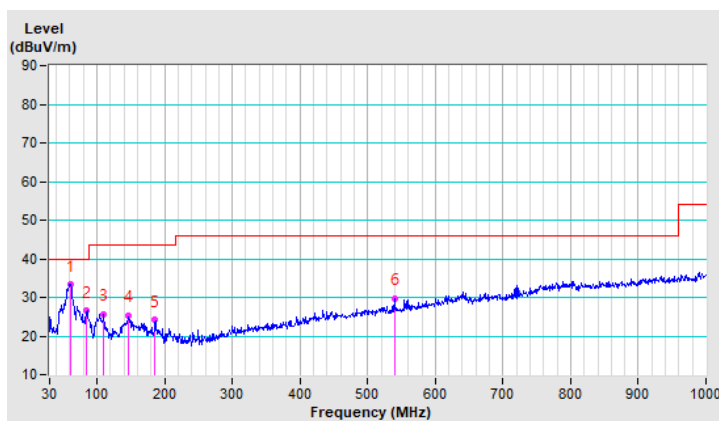


RF Mode	TX 802.11ax (HE20)	Channel	CH 149 : 5745 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	61.20	33.3 QP	40.0	-6.7	1.00 V	248	46.8	-13.5
2	85.25	26.5 QP	40.0	-13.5	1.50 V	78	44.8	-18.3
3	110.40	25.7 QP	43.5	-17.8	1.00 V	193	40.8	-15.1
4	147.07	25.2 QP	43.5	-18.3	1.50 V	221	37.1	-11.9
5	186.12	24.1 QP	43.5	-19.4	1.00 V	142	38.4	-14.3
6	540.01	29.6 QP	46.0	-16.4	1.00 V	174	33.7	-4.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	847124/029	Oct. 20, 2020	Oct. 19, 2021
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Oct. 27, 2020	Oct. 26, 2021
Line-Impedance Stabilization Network (for Peripheral) R&S	ESH3-Z5	835239/001	Mar. 26, 2021	Mar. 25, 2022
50 ohms Terminator	50	3	Oct. 26, 2020	Oct. 25, 2021
RF Cable	5D-FB	COCCAB-001	Sep. 26, 2020	Sep. 25, 2021
Fixed attenuator EMCI	STI02-2200-10	005	Aug. 29, 2020	Aug. 28, 2021
Software BVADT	BVADT_Cond_V7.3.7.4	NA	NA	NA

Note:

1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Conduction 1.
- 3 Tested Date: May 07, 2021

4.2.3 Test Procedure

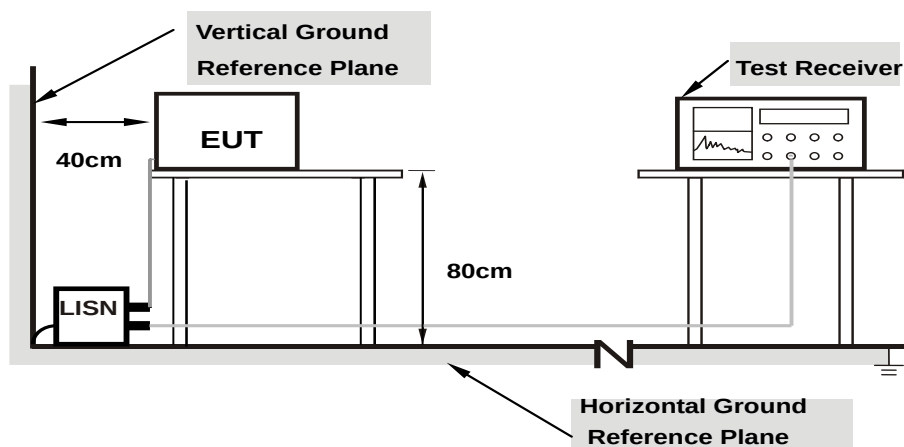
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

Note: All modes of operation were investigated and the worst-case emissions are reported.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.2.6 EUT Operating Condition

Same as 4.1.6.

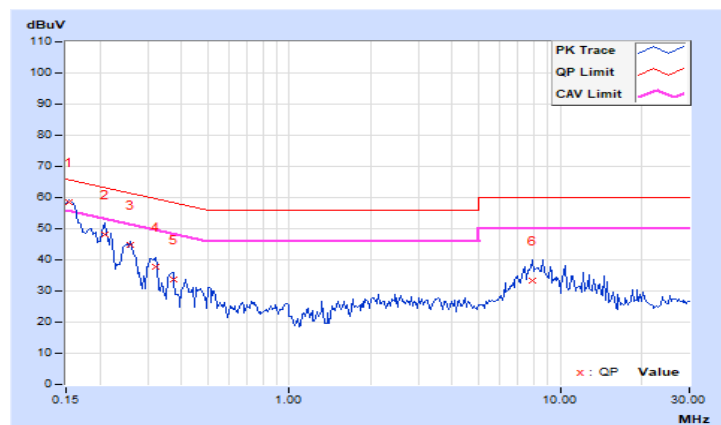
4.2.7 Test Results

RF Mode	TX 802.11ax (HE20)	Channel	CH 149 : 5745 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	9.96	48.42	35.16	58.38	45.12	65.79	55.79	-7.41	-10.67
2	0.20859	9.99	38.21	25.33	48.20	35.32	63.26	53.26	-15.06	-17.94
3	0.25938	10.00	34.63	24.25	44.63	34.25	61.45	51.45	-16.82	-17.20
4	0.32188	10.01	27.79	11.78	37.80	21.79	59.66	49.66	-21.86	-27.87
5	0.37266	10.02	23.67	10.47	33.69	20.49	58.44	48.44	-24.75	-27.95
6	7.92969	10.57	22.81	15.47	33.38	26.04	60.00	50.00	-26.62	-23.96

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

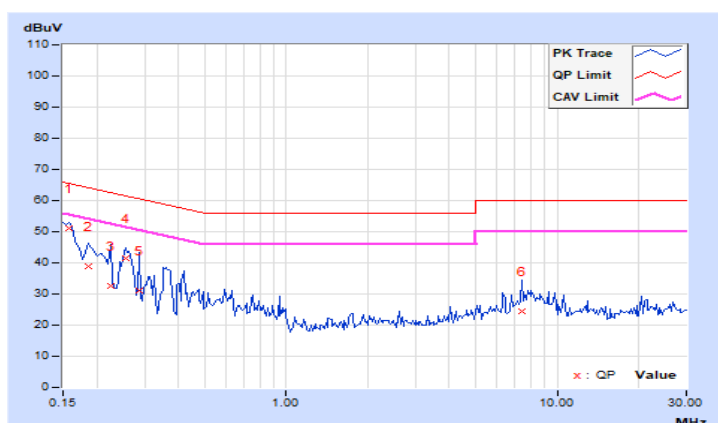


RF Mode	TX 802.11ax (HE20)	Channel	CH 149 : 5745 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15781	9.95	41.08	28.55	51.03	38.50	65.58	55.58	-14.55	-17.08
2	0.18516	9.97	28.83	14.64	38.80	24.61	64.25	54.25	-25.45	-29.64
3	0.22422	9.98	22.73	9.41	32.71	19.39	62.66	52.66	-29.95	-33.27
4	0.25547	9.99	31.42	22.46	41.41	32.45	61.58	51.58	-20.17	-19.13
5	0.28672	9.99	20.96	5.52	30.95	15.51	60.62	50.62	-29.67	-35.11
6	7.44531	10.46	13.81	6.92	24.27	17.38	60.00	50.00	-35.73	-32.62

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
	√	Indoor Access Point	1 Watt (30 dBm)
		Client device	250mW (24 dBm)
U-NII-2A	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	√		1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

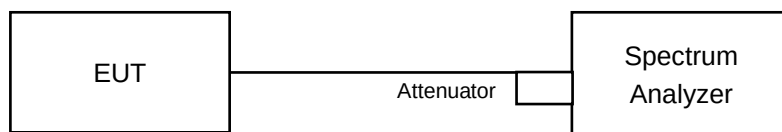
Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

For power measurements on all other devices: Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB.

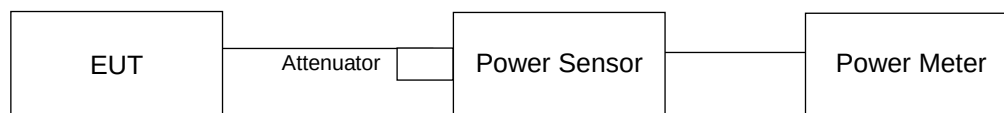
4.3.2 Test Setup

FOR POWER OUTPUT MEASUREMENT

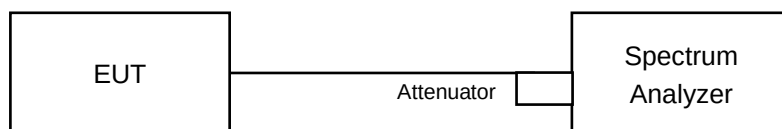
For channel straddling 5250MHz & 5725MHz:



For other channels:



FOR 26dB OCCUPIED BANDWIDTH



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

FOR POWER OUTPUT MEASUREMENT

For channel straddling 5250MHz & 5725MHz:

For other modulation mode

Follow FCC KDB 789033 UNII test procedure:

Method SA-1

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW =1MHz.
3. Set the VBW $\geq 3 \times$ RBW.
4. Number of points in sweep ≥ 2 Span / RBW.
5. Sweep time = auto.
6. Set trigger to free run (duty cycle ≥ 98 percent)
7. Detector = RMS.
8. Trace average at least 100 traces in power averaging mode
9. Compute power by integrating the spectrum across the 26 dB EBW of the signal.

For 802.11ac (VHT160) & 802.11ax (HE160) mode

Follow FCC KDB 789033 UNII test procedure:

Method SA-2

1. Set span to encompass the emission bandwidth (EBW) of the signal.
2. Set RBW =1MHz.
3. Set the VBW $\geq 3 \times$ RBW.
4. Number of points in sweep ≥ 2 Span / RBW.
5. Sweep time = auto.
6. Detector = RMS.
7. Trace average at least 100 traces in power averaging mode
8. Compute power by integrating the spectrum across the 26 dB EBW of the signal.
9. Duty factor need added to measured value (duty cycle < 98 percent).

For other channels:

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

FOR 26dB OCCUPIED BANDWIDTH

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW $>$ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 Test Results

CDD Mode

Power Output:

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	22.48	22.02	22.96	22.73	721.428	28.58	30	Pass
40	5200	23.71	24.24	23.22	24.09	966.766	29.85	30	Pass
48	5240	24.33	23.84	23.38	23.69	964.777	29.84	30	Pass
52	5260	17.30	16.67	16.79	17.34	202.108	23.06	24	Pass
60	5300	17.57	16.57	16.79	16.91	199.386	23.00	24	Pass
64	5320	17.43	16.26	16.61	17.59	200.828	23.03	24	Pass
100	5500	17.21	16.69	17.07	17.03	200.667	23.02	24	Pass
116	5580	17.31	17.09	16.65	17.28	204.69	23.11	24	Pass
140	5700	17.22	16.75	16.99	17.31	203.869	23.09	24	Pass
*144 (U-NII-2C Band)	5720	16.13	15.78	16.20	16.13	161.572	22.08	22.93	Pass
*144 (U-NII-3 Band)	5720	10.34	9.92	10.32	10.01	41.42	16.17	30	Pass
149	5745	23.67	23.65	23.44	24.73	982.516	29.92	30	Pass
157	5785	23.98	23.93	23.52	24.10	979.152	29.91	30	Pass
165	5825	23.80	23.53	23.92	24.30	981.065	29.92	30	Pass

Note: * Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
52	5260	21.64	24.35 > 24
60	5300	21.64	24.35 > 24
64	5320	21.59	24.34 > 24
100	5500	21.67	24.35 > 24
116	5580	21.6	24.34 > 24
140	5700	21.64	24.35 > 24
144 (U-NII-2C Band)	5720	15.62	22.93 < 24

Note: For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	21.56	21.09	21.01	20.98	523.244	27.19	30	Pass
40	5200	23.82	23.25	23.29	23.77	903.876	29.56	30	Pass
48	5240	23.30	22.55	22.99	22.56	773.052	28.88	30	Pass
52	5260	17.48	17.01	16.98	17.28	209.555	23.21	24	Pass
60	5300	17.47	16.93	16.79	17.66	211.262	23.25	24	Pass
64	5320	17.49	16.17	16.84	17.85	206.764	23.15	24	Pass
100	5500	17.28	17.65	16.78	17.57	216.458	23.35	24	Pass
116	5580	17.58	17.47	16.29	17.86	216.781	23.36	24	Pass
140	5700	17.30	17.66	16.22	17.12	205.45	23.13	24	Pass
*144 (U-NII-2C Band)	5720	15.92	16.11	16.53	16.29	167.454	22.24	22.97	Pass
*144 (U-NII-3 Band)	5720	10.99	11.01	11.41	11.20	52.197	17.18	30	Pass
149	5745	23.93	23.50	23.05	23.88	917.224	29.62	30	Pass
157	5785	22.73	23.69	23.32	24.29	904.701	29.57	30	Pass
165	5825	23.27	23.70	23.30	23.79	899.875	29.54	30	Pass

Note: * Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
52	5260	21.69	24.36 > 24
60	5300	21.64	24.35 > 24
64	5320	21.69	24.36 > 24
100	5500	21.76	24.37 > 24
116	5580	21.7	24.36 > 24
140	5700	21.64	24.35 > 24
144 (U-NII-2C Band)	5720	15.77	22.97 < 24

Note: For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	16.14	16.59	16.05	16.29	169.55	22.29	30	Pass
46	5230	23.62	21.76	22.94	22.96	774.598	28.89	30	Pass
54	5270	18.13	17.91	17.06	17.12	229.153	23.60	24	Pass
62	5310	15.87	16.46	15.23	14.90	147.141	21.68	24	Pass
102	5510	17.16	16.72	15.99	16.35	181.86	22.60	24	Pass
110	5550	17.88	17.61	17.02	17.63	227.346	23.57	24	Pass
134	5670	17.52	17.97	17.30	17.47	228.705	23.59	24	Pass
*142 (U-NII-2C Band)	5710	16.08	16.35	15.97	16.44	167.295	22.23	24	Pass
*142 (U-NII-3 Band)	5710	6.76	6.87	6.34	6.88	18.787	12.74	30	Pass
151	5755	23.76	23.69	23.20	23.19	888.946	29.49	30	Pass
159	5795	23.97	23.51	23.50	23.11	902.364	29.55	30	Pass

Note: * Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
54	5270	41.25	27.15 > 24
62	5310	41.31	27.16 > 24
102	5510	41.27	27.15 > 24
110	5550	41.26	27.15 > 24
134	5670	41.27	27.15 > 24
142 (U-NII-2C Band)	5710	35.59	26.51 > 24

Note: For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	15.88	16.13	15.05	15.81	149.842	21.76	30	Pass
58	5290	16.07	15.43	15.66	16.39	155.736	21.92	24	Pass
106	5530	16.15	16.01	15.68	16.34	161.148	22.07	24	Pass
122	5610	17.67	17.43	17.25	17.51	223.266	23.49	24	Pass
*138 (U-NII-2C Band)	5690	16.19	15.96	15.86	16.01	159.487	22.03	24	Pass
*138 (U-NII-3 Band)	5690	3.10	2.74	2.52	2.87	7.644	8.83	30	Pass
155	5775	21.96	22.10	22.08	22.30	650.478	28.13	30	Pass

Note: * Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
58	5290	82.37	30.15 > 24
106	5530	82.27	30.15 > 24
122	5610	82.19	30.14 > 24
138 (U-NII-2C Band)	5690	75.99	29.8 > 24

Note: For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ac (VHT160)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
*50 (U-NII-1 Band)	5250	11.30	11.31	11.29	11.86	57.36	17.59	30	Pass
*50 (U-NII-2A Band)	5250	11.83	11.73	12.02	12.39	65.149	18.14	24	Pass
114	5570	14.01	14.70	14.66	14.64	113.038	20.53	24	Pass

Note: * Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test. The duty factor was included in the total power.

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
50 (U-NII-2A Band)	5250	83.77	30.23 > 24
114	5570	167.9	33.25 > 24

Note: For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	21.95	21.48	21.40	21.35	571.777	27.57	30	Pass
40	5200	24.13	23.60	23.66	24.12	978.408	29.91	30	Pass
48	5240	23.63	22.90	23.37	22.96	840.626	29.25	30	Pass
52	5260	17.69	17.30	17.18	17.53	221.316	23.45	24	Pass
60	5300	17.76	17.14	17.06	17.87	223.515	23.49	24	Pass
64	5320	17.71	16.41	17.12	18.12	219.159	23.41	24	Pass
100	5500	17.61	18.01	17.13	17.92	234.504	23.70	24	Pass
116	5580	17.93	17.85	16.61	18.17	234.469	23.70	24	Pass
140	5700	17.81	18.06	16.65	17.48	226.582	23.55	24	Pass
*144 (U-NII-2C Band)	5720	16.41	16.28	16.80	16.50	178.746	22.52	22.97	Pass
*144 (U-NII-3 Band)	5720	11.26	11.22	11.72	11.39	55.241	17.42	30	Pass
149	5745	24.27	23.83	23.40	24.18	989.441	29.95	30	Pass
157	5785	23.11	24.04	23.71	24.65	984.863	29.93	30	Pass
165	5825	23.61	24.08	23.62	24.15	975.634	29.89	30	Pass

Note: * Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
52	5260	21.69	24.36 > 24
60	5300	21.64	24.35 > 24
64	5320	21.69	24.36 > 24
100	5500	21.76	24.37 > 24
116	5580	21.7	24.36 > 24
140	5700	21.64	24.35 > 24
144 (U-NII-2C Band)	5720	15.77	22.97 < 24

Note: For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	16.53	16.94	16.39	16.66	184.305	22.66	30	Pass
46	5230	23.96	22.15	23.28	23.28	838.573	29.24	30	Pass
54	5270	18.46	18.26	17.42	17.43	247.677	23.94	24	Pass
62	5310	16.20	16.80	15.57	15.24	159.027	22.01	24	Pass
102	5510	17.52	17.12	16.39	16.66	197.912	22.96	24	Pass
110	5550	18.25	17.95	17.39	18.02	247.423	23.93	24	Pass
134	5670	17.84	18.33	17.67	17.82	247.904	23.94	24	Pass
*142 (U-NII-2C Band)	5710	16.57	16.81	16.45	16.66	183.869	22.65	24	Pass
*142 (U-NII-3 Band)	5710	7.06	7.19	6.76	7.09	20.177	13.05	30	Pass
151	5755	24.11	24.06	23.58	23.56	967.336	29.86	30	Pass
159	5795	24.29	23.90	23.83	23.49	978.909	29.91	30	Pass

Note: * Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
54	5270	41.25	27.15 > 24
62	5310	41.31	27.16 > 24
102	5510	41.27	27.15 > 24
110	5550	41.26	27.15 > 24
134	5670	41.27	27.15 > 24
142 (U-NII-2C Band)	5710	35.59	26.51 > 24

Note: For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	16.24	16.53	15.39	16.14	162.76	22.12	30	Pass
58	5290	16.40	15.76	16.00	16.78	168.776	22.27	24	Pass
106	5530	16.47	16.35	16.03	16.70	174.373	22.41	24	Pass
122	5610	18.05	17.78	17.64	17.81	242.277	23.84	24	Pass
*138 (U-NII-2C Band)	5690	16.82	16.37	16.16	16.55	177.925	22.50	24	Pass
*138 (U-NII-3 Band)	5690	3.83	3.07	2.93	3.40	8.594	9.34	30	Pass
155	5775	22.10	22.46	22.42	22.78	702.631	28.47	30	Pass

Note: * Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
58	5290	82.37	30.15 > 24
106	5530	82.27	30.15 > 24
122	5610	82.19	30.14 > 24
138 (U-NII-2C Band)	5690	75.99	29.8 > 24

Note: For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ax (HE160)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
*50 (U-NII-1 Band)	5250	11.61	11.84	11.62	11.99	61.761	17.91	30	Pass
*50 (U-NII-2A Band)	5250	12.16	12.12	11.38	12.58	66.379	18.22	24	Pass
114	5570	14.38	15.06	15.05	14.96	122.8	20.89	24	Pass

Note: * Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test. The duty factor was included in the total power.

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
50 (U-NII-2A Band)	5250	83.77	30.23 > 24
114	5570	167.9	33.25 > 24

Note: For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

Beamforming Mode

Power Output:

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	21.56	21.09	21.01	20.98	523.244	27.19	30	Pass
40	5200	23.82	23.25	23.29	23.77	903.876	29.56	30	Pass
48	5240	23.30	22.55	22.99	22.56	773.052	28.88	30	Pass
52	5260	17.48	17.01	16.98	17.28	209.555	23.21	24	Pass
60	5300	17.47	16.93	16.79	17.66	211.262	23.25	24	Pass
64	5320	17.49	16.17	16.84	17.85	206.764	23.15	24	Pass
100	5500	17.28	17.65	16.78	17.57	216.458	23.35	24	Pass
116	5580	17.58	17.47	16.29	17.86	216.781	23.36	24	Pass
140	5700	17.30	17.66	16.22	17.12	205.45	23.13	24	Pass
*144 (U-NII-2C Band)	5720	15.92	16.11	16.53	16.29	167.454	22.24	22.97	Pass
*144 (U-NII-3 Band)	5720	10.99	11.01	11.41	11.20	52.197	17.18	30	Pass
149	5745	23.93	23.50	23.05	23.88	917.224	29.62	30	Pass
157	5785	22.73	23.69	23.32	24.29	904.701	29.57	30	Pass
165	5825	23.27	23.70	23.30	23.79	899.875	29.54	30	Pass

Note: * Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

1. For U-NII-1: The directional gain = 4.98dBi < 6dBi, so the power limit shall not be reduced.
2. For U-NII-2A: The directional gain = 4.28dBi < 6dBi, so the power limit shall not be reduced.
3. For U-NII-2C: The directional gain = 3.07dBi < 6dBi, so the power limit shall not be reduced.
4. For U-NII-3: The directional gain = 3.18dBi < 6dBi, so the power limit shall not be reduced.

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
52	5260	21.69	24.36 > 24
60	5300	21.64	24.35 > 24
64	5320	21.69	24.36 > 24
100	5500	21.76	24.37 > 24
116	5580	21.7	24.36 > 24
140	5700	21.64	24.35 > 24
144 (U-NII-2C Band)	5720	15.77	22.97 < 24

Note: For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	16.14	16.59	16.05	16.29	169.55	22.29	30	Pass
46	5230	23.62	21.76	22.94	22.96	774.598	28.89	30	Pass
54	5270	18.13	17.91	17.06	17.12	229.153	23.60	24	Pass
62	5310	15.87	16.46	15.23	14.90	147.141	21.68	24	Pass
102	5510	17.16	16.72	15.99	16.35	181.86	22.60	24	Pass
110	5550	17.88	17.61	17.02	17.63	227.346	23.57	24	Pass
134	5670	17.52	17.97	17.30	17.47	228.705	23.59	24	Pass
*142 (U-NII-2C Band)	5710	16.08	16.35	15.97	16.44	167.295	22.23	24	Pass
*142 (U-NII-3 Band)	5710	6.76	6.87	6.34	6.88	18.787	12.74	30	Pass
151	5755	23.76	23.69	23.20	23.19	888.946	29.49	30	Pass
159	5795	23.97	23.51	23.50	23.11	902.364	29.55	30	Pass

Note: * Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

1. For U-NII-1: The directional gain = 4.98dBi < 6dBi, so the power limit shall not be reduced.
2. For U-NII-2A: The directional gain = 4.28dBi < 6dBi, so the power limit shall not be reduced.
3. For U-NII-2C: The directional gain = 3.07dBi < 6dBi, so the power limit shall not be reduced.
4. For U-NII-3: The directional gain = 3.18dBi < 6dBi, so the power limit shall not be reduced.

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
54	5270	41.25	27.15 > 24
62	5310	41.31	27.16 > 24
102	5510	41.27	27.15 > 24
110	5550	41.26	27.15 > 24
134	5670	41.27	27.15 > 24
142 (U-NII-2C Band)	5710	35.59	26.51 > 24

Note: For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	15.88	16.13	15.05	15.81	149.842	21.76	30	Pass
58	5290	16.07	15.43	15.66	16.39	155.736	21.92	24	Pass
106	5530	16.15	16.01	15.68	16.34	161.148	22.07	24	Pass
122	5610	17.67	17.43	17.25	17.51	223.266	23.49	24	Pass
*138 (U-NII-2C Band)	5690	16.19	15.96	15.86	16.01	159.487	22.03	24	Pass
*138 (U-NII-3 Band)	5690	3.10	2.74	2.52	2.87	7.644	8.83	30	Pass
155	5775	21.96	22.10	22.08	22.30	650.478	28.13	30	Pass

Note: * Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

1. For U-NII-1: The directional gain = 4.98dBi < 6dBi, so the power limit shall not be reduced.
2. For U-NII-2A: The directional gain = 4.28dBi < 6dBi, so the power limit shall not be reduced.
3. For U-NII-2C: The directional gain = 3.07dBi < 6dBi, so the power limit shall not be reduced.
4. For U-NII-3: The directional gain = 3.18dBi < 6dBi, so the power limit shall not be reduced.

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
58	5290	82.37	30.15 > 24
106	5530	82.27	30.15 > 24
122	5610	82.19	30.14 > 24
138 (U-NII-2C Band)	5690	75.99	29.8 > 24

Note: For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ac (VHT160)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
*50 (U-NII-1 Band)	5250	11.30	11.31	11.29	11.86	57.36	17.59	30	Pass
*50 (U-NII-2A Band)	5250	11.83	11.73	12.02	12.39	65.149	18.14	24	Pass
114	5570	14.01	14.70	14.66	14.64	113.038	20.53	24	Pass

Note: * Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test. The duty factor was included in the total power.

1. For U-NII-1: The directional gain = 4.98dBi < 6dBi, so the power limit shall not be reduced.
2. For U-NII-2A: The directional gain = 4.28dBi < 6dBi, so the power limit shall not be reduced.
3. For U-NII-2C: The directional gain = 3.07dBi < 6dBi, so the power limit shall not be reduced.

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
50 (U-NII-2A Band)	5250	83.77	30.23 > 24
114	5570	167.9	33.25 > 24

Note: For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	21.95	21.48	21.40	21.35	571.777	27.57	30	Pass
40	5200	24.13	23.60	23.66	24.12	978.408	29.91	30	Pass
48	5240	23.63	22.90	23.37	22.96	840.626	29.25	30	Pass
52	5260	17.69	17.30	17.18	17.53	221.316	23.45	24	Pass
60	5300	17.76	17.14	17.06	17.87	223.515	23.49	24	Pass
64	5320	17.71	16.41	17.12	18.12	219.159	23.41	24	Pass
100	5500	17.61	18.01	17.13	17.92	234.504	23.70	24	Pass
116	5580	17.93	17.85	16.61	18.17	234.469	23.70	24	Pass
140	5700	17.81	18.06	16.65	17.48	226.582	23.55	24	Pass
*144 (U-NII-2C Band)	5720	16.41	16.28	16.80	16.50	178.746	22.52	22.97	Pass
*144 (U-NII-3 Band)	5720	11.26	11.22	11.72	11.39	55.241	17.42	30	Pass
149	5745	24.27	23.83	23.40	24.18	989.441	29.95	30	Pass
157	5785	23.11	24.04	23.71	24.65	984.863	29.93	30	Pass
165	5825	23.61	24.08	23.62	24.15	975.634	29.89	30	Pass

Note: * Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

1. For U-NII-1: The directional gain = 4.98dBi < 6dBi, so the power limit shall not be reduced.
2. For U-NII-2A: The directional gain = 4.28dBi < 6dBi, so the power limit shall not be reduced.
3. For U-NII-2C: The directional gain = 3.07dBi < 6dBi, so the power limit shall not be reduced.
4. For U-NII-3: The directional gain = 3.18dBi < 6dBi, so the power limit shall not be reduced.

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
52	5260	21.69	24.36 > 24
60	5300	21.64	24.35 > 24
64	5320	21.69	24.36 > 24
100	5500	21.76	24.37 > 24
116	5580	21.7	24.36 > 24
140	5700	21.64	24.35 > 24
144 (U-NII-2C Band)	5720	15.77	22.97 < 24

Note: For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	16.53	16.94	16.39	16.66	184.305	22.66	30	Pass
46	5230	23.96	22.15	23.28	23.28	838.573	29.24	30	Pass
54	5270	18.46	18.26	17.42	17.43	247.677	23.94	24	Pass
62	5310	16.20	16.80	15.57	15.24	159.027	22.01	24	Pass
102	5510	17.52	17.12	16.39	16.66	197.912	22.96	24	Pass
110	5550	18.25	17.95	17.39	18.02	247.423	23.93	24	Pass
134	5670	17.84	18.33	17.67	17.82	247.904	23.94	24	Pass
*142 (U-NII-2C Band)	5710	16.57	16.81	16.45	16.66	183.869	22.65	24	Pass
*142 (U-NII-3 Band)	5710	7.06	7.19	6.76	7.09	20.177	13.05	30	Pass
151	5755	24.11	24.06	23.58	23.56	967.336	29.86	30	Pass
159	5795	24.29	23.90	23.83	23.49	978.909	29.91	30	Pass

Note: * Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

1. For U-NII-1: The directional gain = 4.98dBi < 6dBi, so the power limit shall not be reduced.
2. For U-NII-2A: The directional gain = 4.28dBi < 6dBi, so the power limit shall not be reduced.
3. For U-NII-2C: The directional gain = 3.07dBi < 6dBi, so the power limit shall not be reduced.
4. For U-NII-3: The directional gain = 3.18dBi < 6dBi, so the power limit shall not be reduced.

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
54	5270	41.25	27.15 > 24
62	5310	41.31	27.16 > 24
102	5510	41.27	27.15 > 24
110	5550	41.26	27.15 > 24
134	5670	41.27	27.15 > 24
142 (U-NII-2C Band)	5710	35.59	26.51 > 24

Note: For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	16.24	16.53	15.39	16.14	162.76	22.12	30	Pass
58	5290	16.40	15.76	16.00	16.78	168.776	22.27	24	Pass
106	5530	16.47	16.35	16.03	16.70	174.373	22.41	24	Pass
122	5610	18.05	17.78	17.64	17.81	242.277	23.84	24	Pass
*138 (U-NII-2C Band)	5690	16.82	16.37	16.16	16.55	177.925	22.50	24	Pass
*138 (U-NII-3 Band)	5690	3.83	3.07	2.93	3.40	8.594	9.34	30	Pass
155	5775	22.10	22.46	22.42	22.78	702.631	28.47	30	Pass

Note: * Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

1. For U-NII-1: The directional gain = 4.98dBi < 6dBi, so the power limit shall not be reduced.
2. For U-NII-2A: The directional gain = 4.28dBi < 6dBi, so the power limit shall not be reduced.
3. For U-NII-2C: The directional gain = 3.07dBi < 6dBi, so the power limit shall not be reduced.
4. For U-NII-3: The directional gain = 3.18dBi < 6dBi, so the power limit shall not be reduced.

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
58	5290	82.37	30.15 > 24
106	5530	82.27	30.15 > 24
122	5610	82.19	30.14 > 24
138 (U-NII-2C Band)	5690	75.99	29.8 > 24

Note: For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ax (HE160)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
*50 (U-NII-1 Band)	5250	11.61	11.84	11.62	11.99	61.761	17.91	30	Pass
*50 (U-NII-2A Band)	5250	12.16	12.12	11.38	12.58	66.379	18.22	24	Pass
114	5570	14.38	15.06	15.05	14.96	122.8	20.89	24	Pass

Note: * Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test. The duty factor was included in the total power.

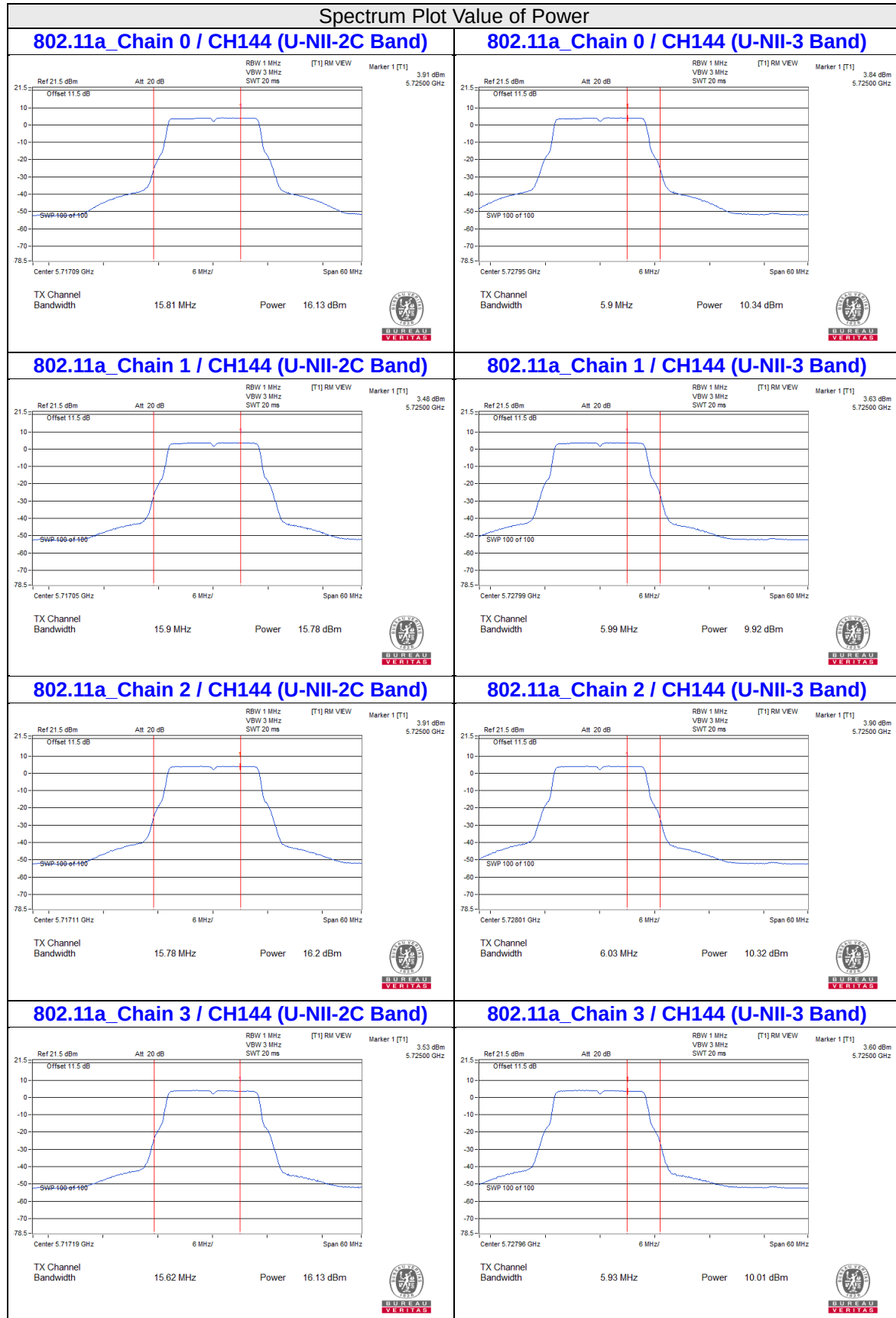
1. For U-NII-1: The directional gain = 4.98dBi < 6dBi, so the power limit shall not be reduced.
2. For U-NII-2A: The directional gain = 4.28dBi < 6dBi, so the power limit shall not be reduced.
3. For U-NII-2C: The directional gain = 3.07dBi < 6dBi, so the power limit shall not be reduced.

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
50 (U-NII-2A Band)	5250	83.77	30.23 > 24
114	5570	167.9	33.25 > 24

Note: For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

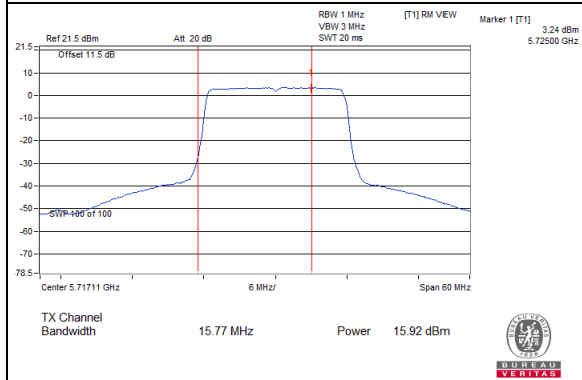
For channel straddling 5250MHz & 5725MHz of Power

CDD Mode

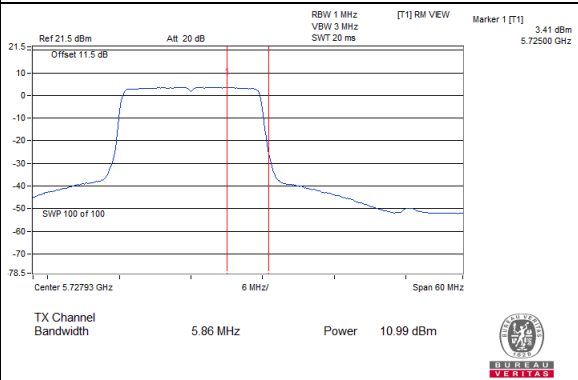


Spectrum Plot Value of Power

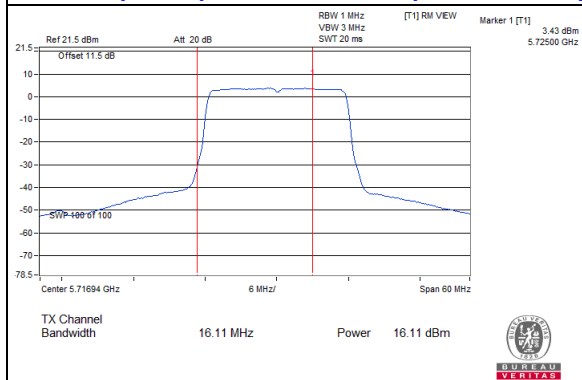
802.11ac (VHT20)_Chain 0 / CH144 (U-NII-2C Band)



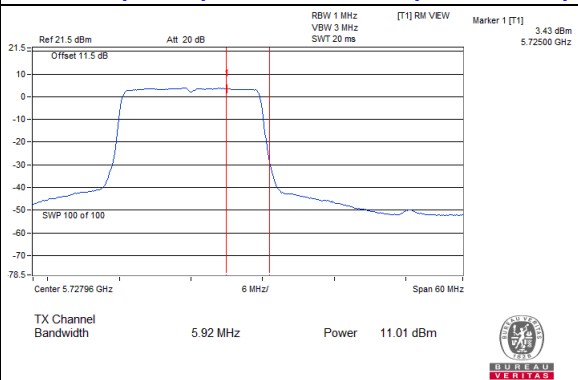
802.11ac (VHT20)_Chain 0 / CH144 (U-NII-3 Band)



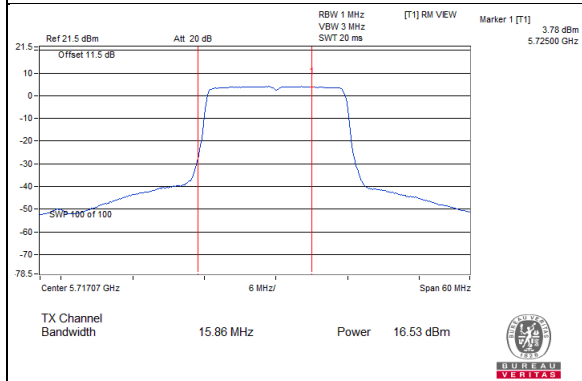
802.11ac (VHT20)_Chain 1 / CH144 (U-NII-2C Band)



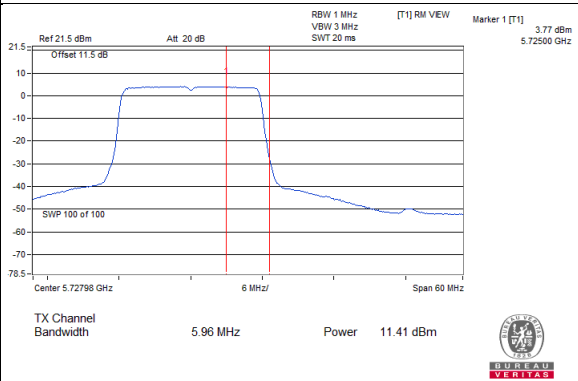
802.11ac (VHT20)_Chain 1 / CH144 (U-NII-3 Band)



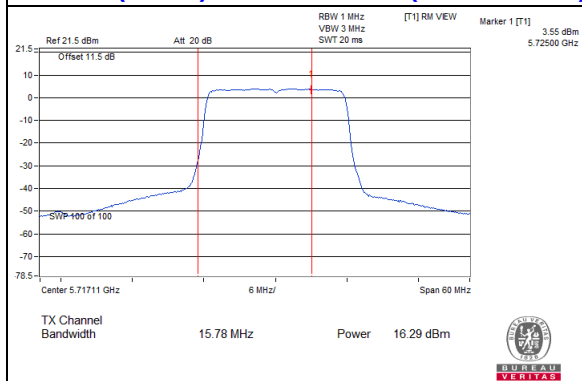
802.11ac (VHT20)_Chain 2 / CH144 (U-NII-2C Band)



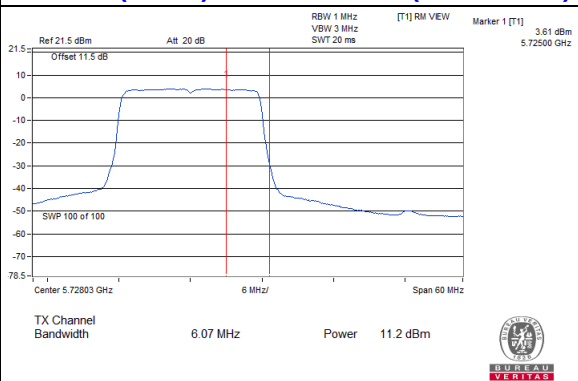
802.11ac (VHT20)_Chain 2 / CH144 (U-NII-3 Band)



802.11ac (VHT20)_Chain 3 / CH144 (U-NII-2C Band)

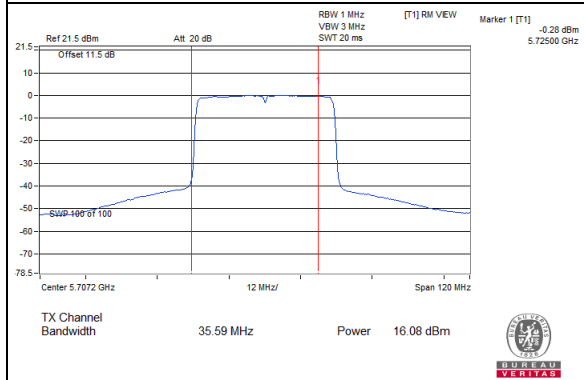


802.11ac (VHT20)_Chain 3 / CH144 (U-NII-3 Band)

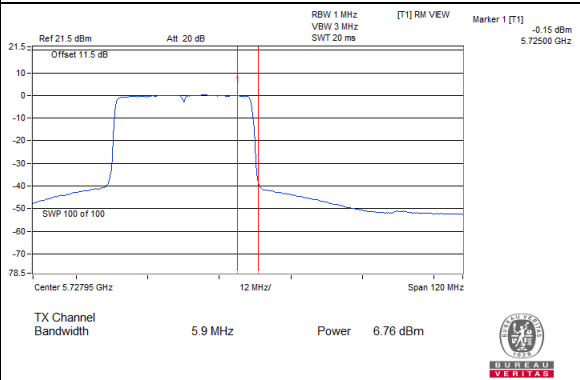


Spectrum Plot Value of Power

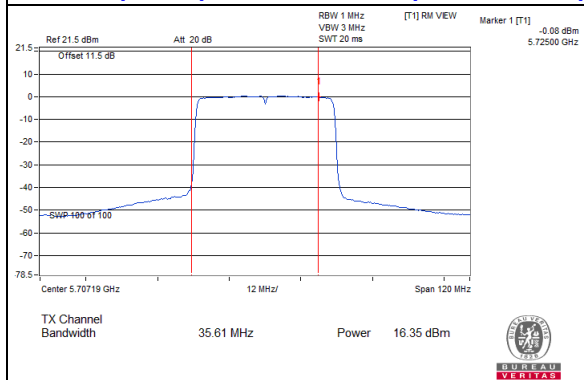
802.11ac (VHT40)_Chain 0 / CH142 (U-NII-2C Band)



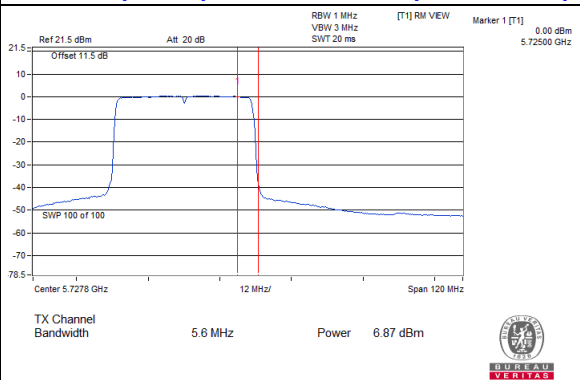
802.11ac (VHT40)_Chain 0 / CH142 (U-NII-3 Band)



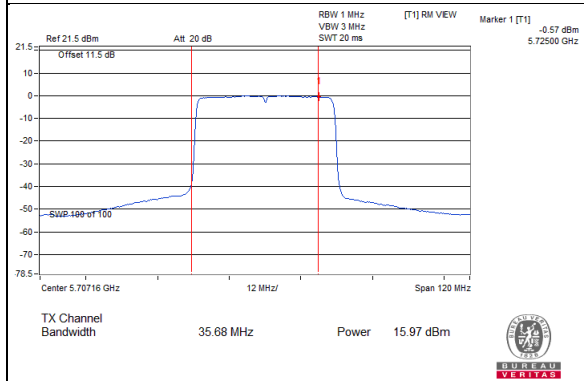
802.11ac (VHT40)_Chain 1 / CH142 (U-NII-2C Band)



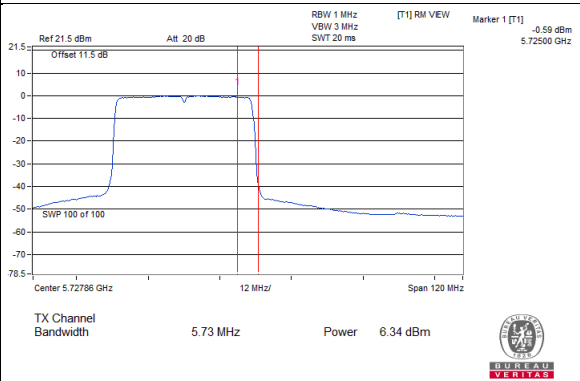
802.11ac (VHT40)_Chain 1 / CH142 (U-NII-3 Band)



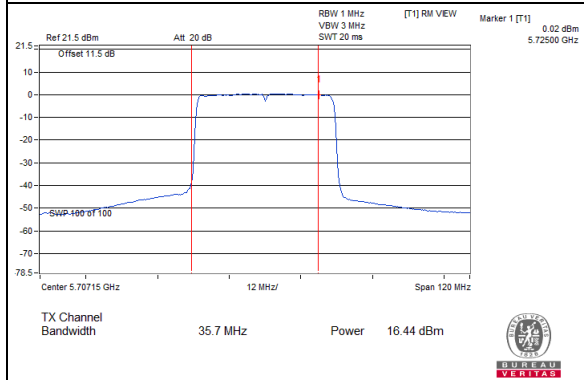
802.11ac (VHT40)_Chain 2 / CH142 (U-NII-2C Band)



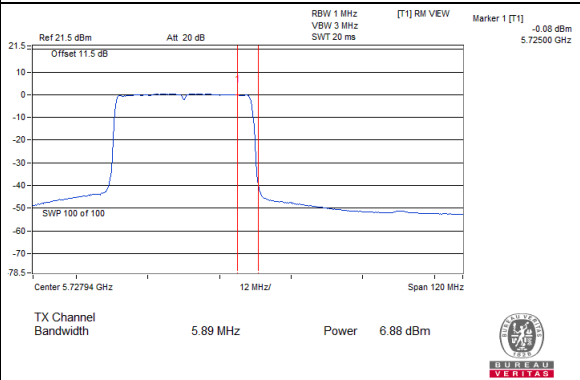
802.11ac (VHT40)_Chain 2 / CH142 (U-NII-3 Band)



802.11ac (VHT40)_Chain 3 / CH142 (U-NII-2C Band)

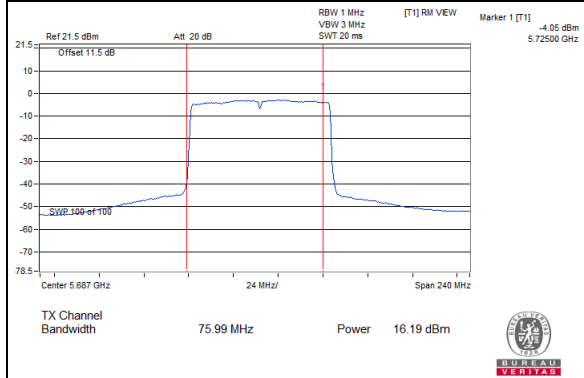


802.11ac (VHT40)_Chain 3 / CH142 (U-NII-3 Band)

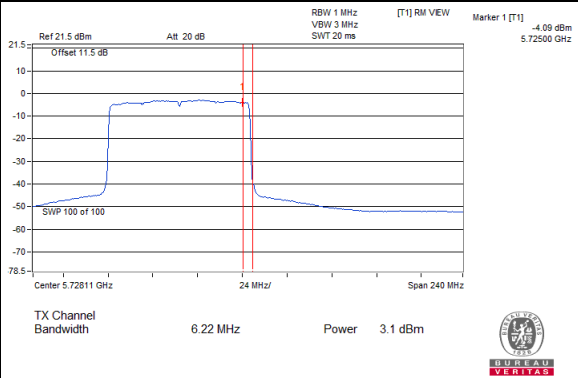


Spectrum Plot Value of Power

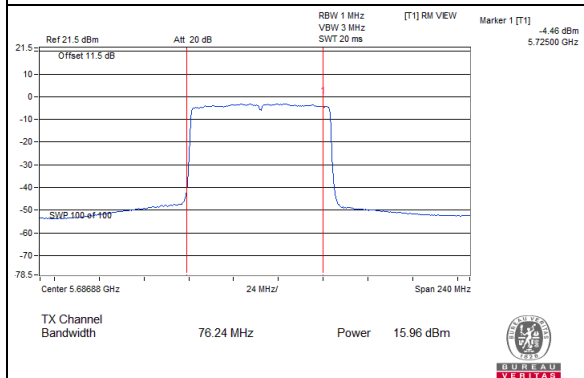
802.11ac (VHT80)_Chain 0 / CH138 (U-NII-2C Band)



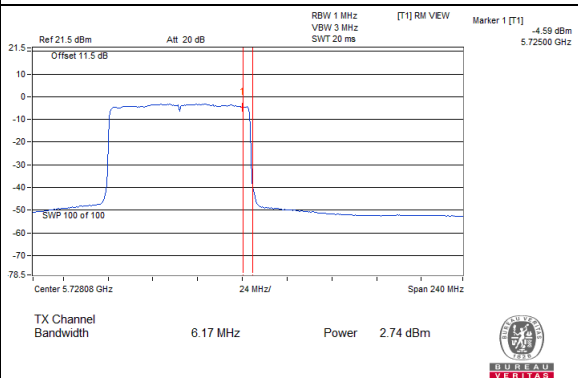
802.11ac (VHT80)_Chain 0 / CH138 (U-NII-3 Band)



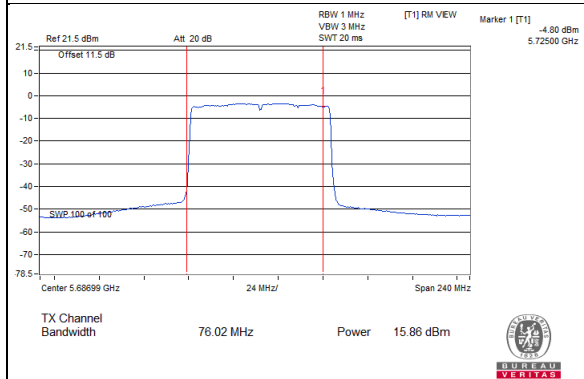
802.11ac (VHT80)_Chain 1 / CH138 (U-NII-2C Band)



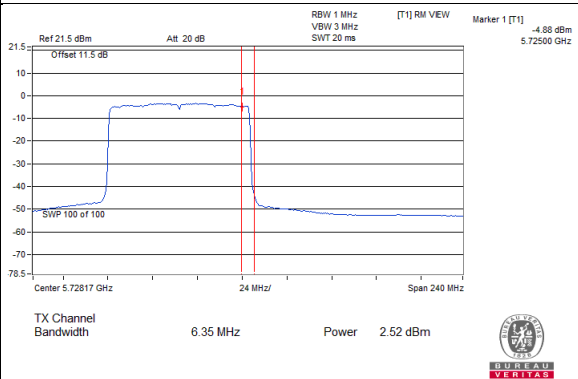
802.11ac (VHT80)_Chain 1 / CH138 (U-NII-3 Band)



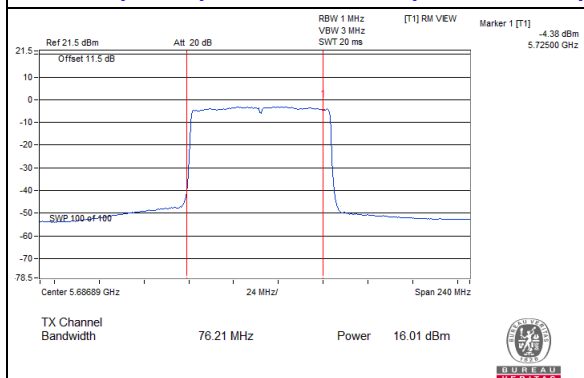
802.11ac (VHT80)_Chain 2 / CH138 (U-NII-2C Band)



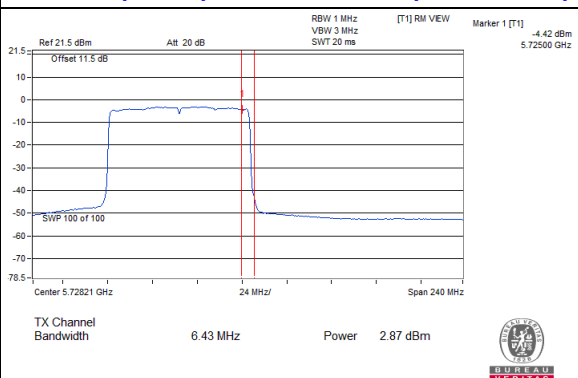
802.11ac (VHT80)_Chain 2 / CH138 (U-NII-3 Band)



802.11ac (VHT80)_Chain 3 / CH138 (U-NII-2C Band)



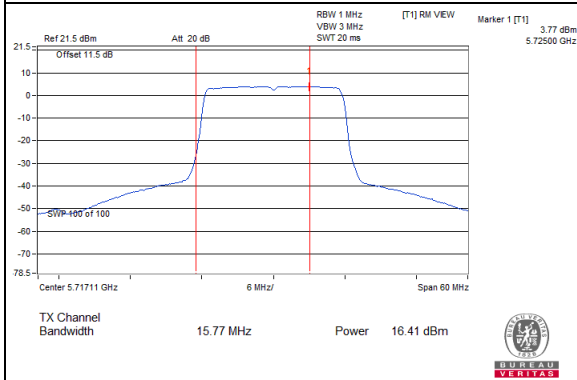
802.11ac (VHT80)_Chain 3 / CH138 (U-NII-3 Band)



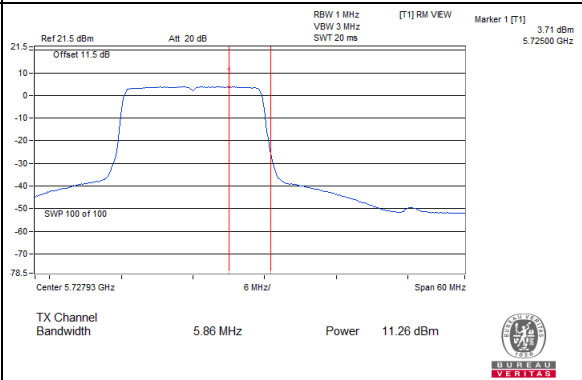


Spectrum Plot Value of Power

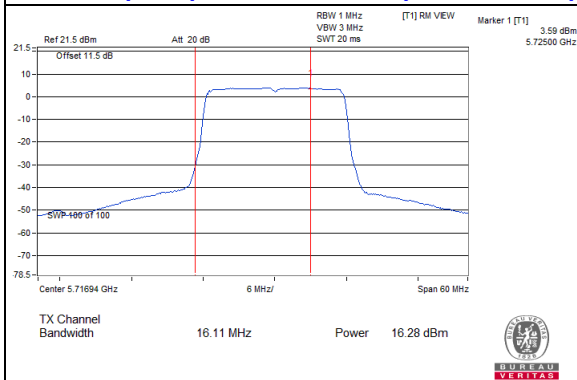
802.11ax (HE20)_Chain 0 / CH144 (U-NII-2C Band)



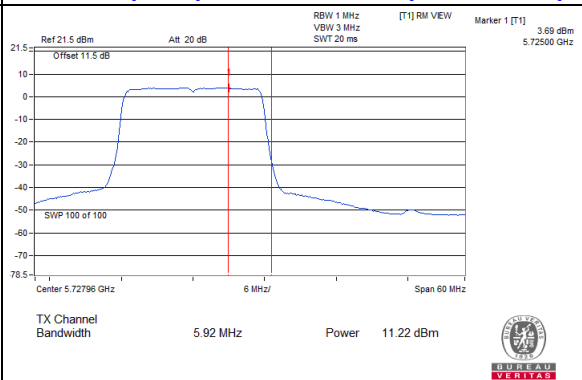
802.11ax (HE20)_Chain 0 / CH144 (U-NII-3 Band)



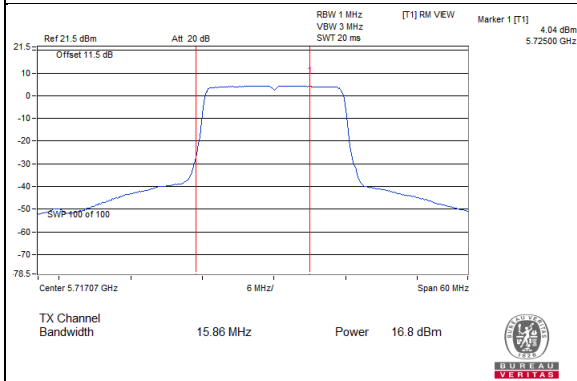
802.11ax (HE20)_Chain 1 / CH144 (U-NII-2C Band)



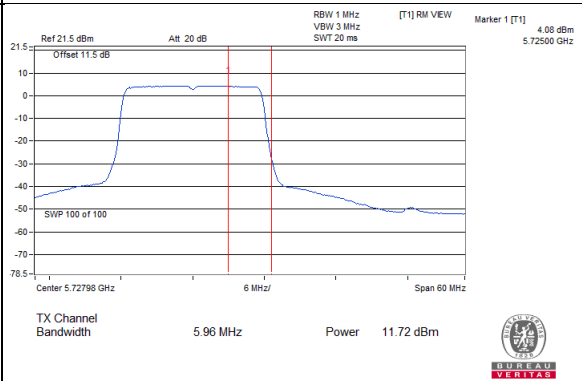
802.11ax (HE20)_Chain 1 / CH144 (U-NII-3 Band)



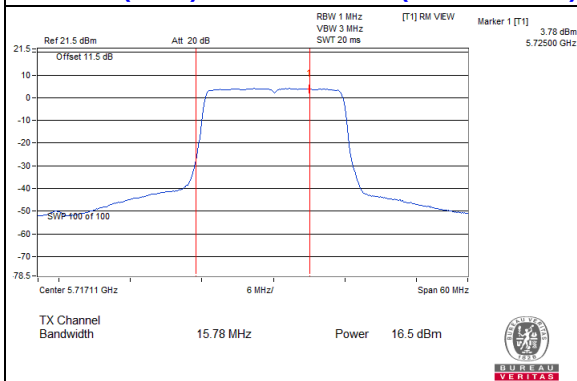
802.11ax (HE20)_Chain 2 / CH144 (U-NII-2C Band)



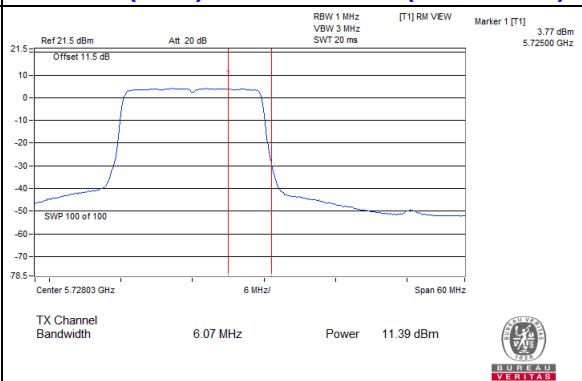
802.11ax (HE20)_Chain 2 / CH144 (U-NII-3 Band)



802.11ax (HE20)_Chain 3 / CH144 (U-NII-2C Band)



802.11ax (HE20)_Chain 3 / CH144 (U-NII-3 Band)







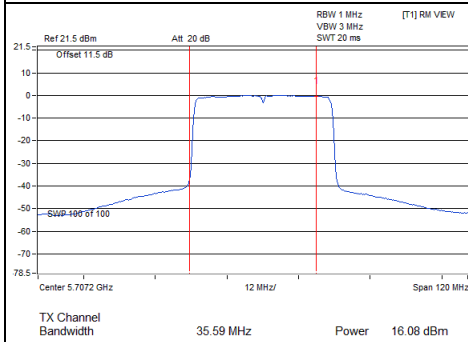


Beamforming Mode

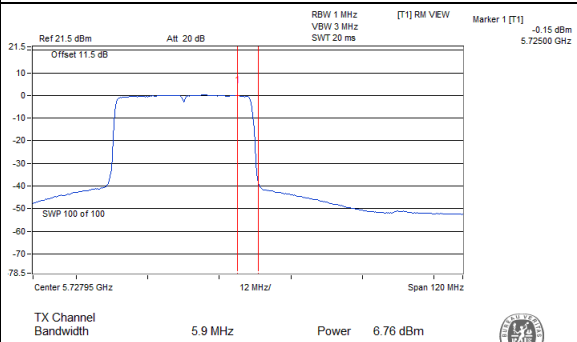


Spectrum Plot Value of Power

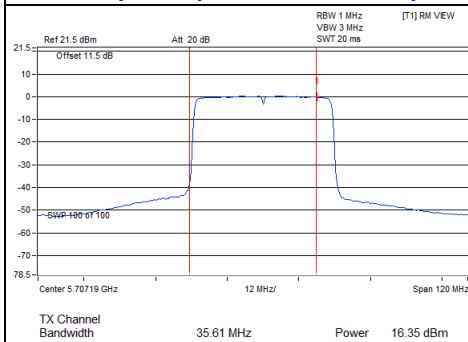
802.11ac (VHT40)_Chain 0 / CH142 (U-NII-2C Band)



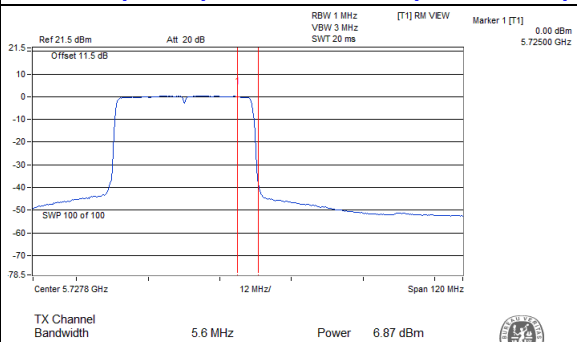
802.11ac (VHT40)_Chain 0 / CH142 (U-NII-3 Band)



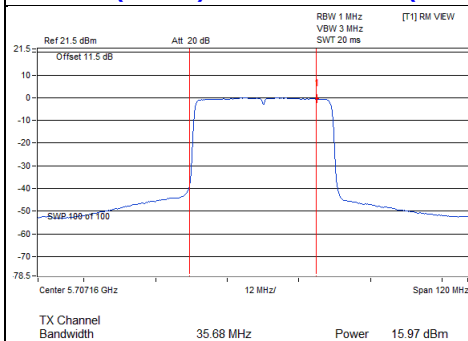
802.11ac (VHT40)_Chain 1 / CH142 (U-NII-2C Band)



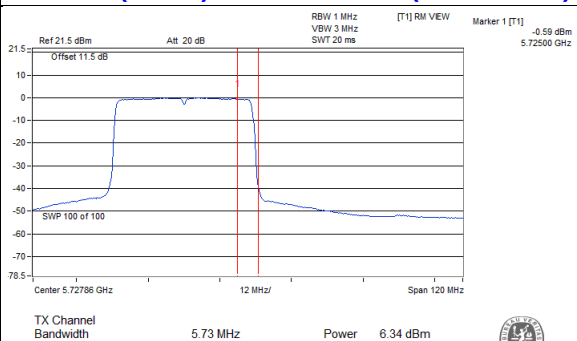
802.11ac (VHT40)_Chain 1 / CH142 (U-NII-3 Band)



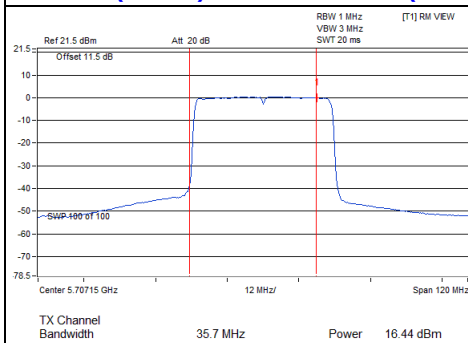
802.11ac (VHT40)_Chain 2 / CH142 (U-NII-2C Band)



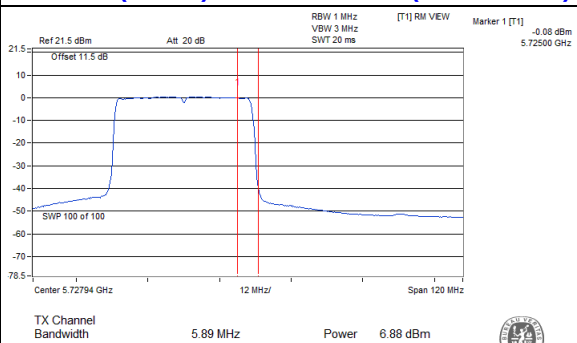
802.11ac (VHT40)_Chain 2 / CH142 (U-NII-3 Band)



802.11ac (VHT40)_Chain 3 / CH142 (U-NII-2C Band)

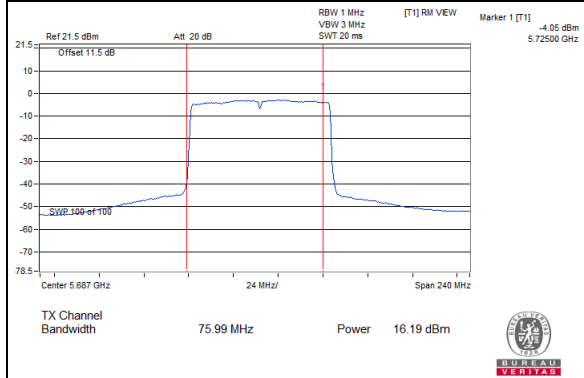


802.11ac (VHT40)_Chain 3 / CH142 (U-NII-3 Band)

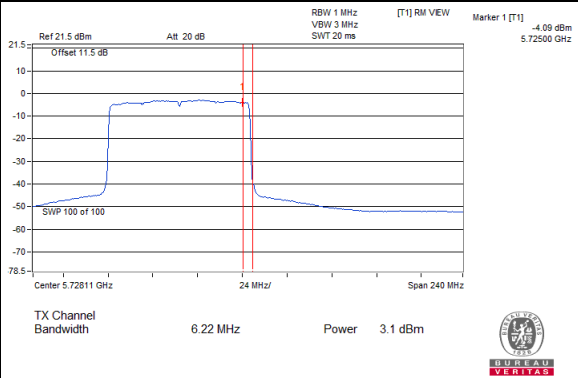


Spectrum Plot Value of Power

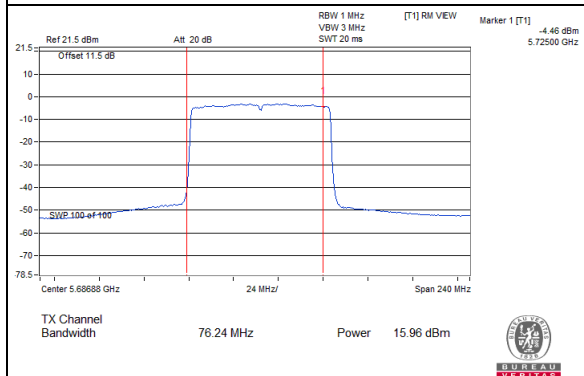
802.11ac (VHT80)_Chain 0 / CH138 (U-NII-2C Band)



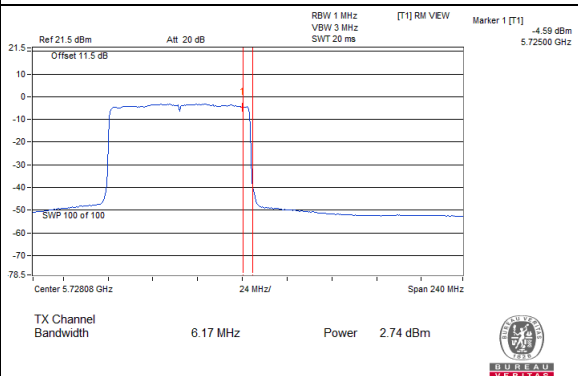
802.11ac (VHT80)_Chain 0 / CH138 (U-NII-3 Band)



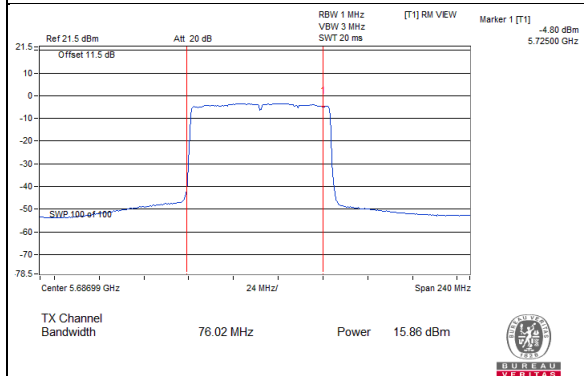
802.11ac (VHT80)_Chain 1 / CH138 (U-NII-2C Band)



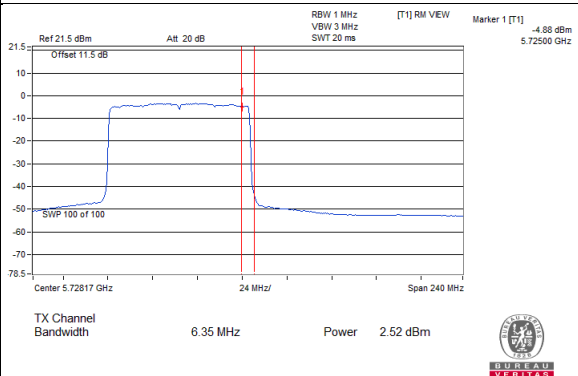
802.11ac (VHT80)_Chain 1 / CH138 (U-NII-3 Band)



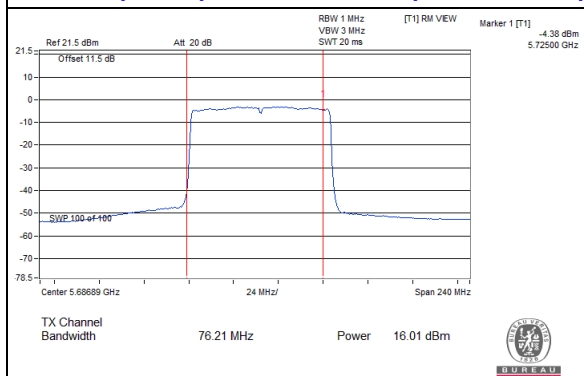
802.11ac (VHT80)_Chain 2 / CH138 (U-NII-2C Band)



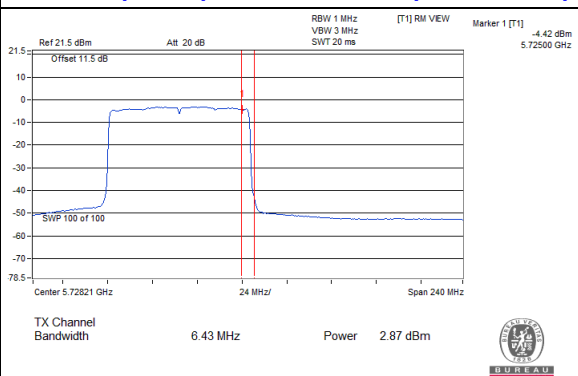
802.11ac (VHT80)_Chain 2 / CH138 (U-NII-3 Band)



802.11ac (VHT80)_Chain 3 / CH138 (U-NII-2C Band)



802.11ac (VHT80)_Chain 3 / CH138 (U-NII-3 Band)













26dB Bandwidth:

802.11a

Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	21.75	21.9	21.88	21.64
60	5300	21.74	21.91	21.91	21.64
64	5320	21.74	21.84	21.74	21.59
100	5500	21.8	21.9	21.83	21.67
116	5580	21.82	21.85	21.8	21.6
140	5700	21.72	21.95	21.81	21.64
144 (U-NII-2C Band)	5720	15.81	15.9	15.78	15.62

802.11ax (HE20)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	21.69	22.05	22.04	21.8
60	5300	21.64	21.96	21.93	21.83
64	5320	21.69	22.03	21.84	21.84
100	5500	21.76	22.04	21.78	21.76
116	5580	21.7	21.98	21.99	21.75
140	5700	21.64	22.04	21.94	21.8
144 (U-NII-2C Band)	5720	15.77	16.11	15.86	15.78

802.11ax (HE40)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
54	5270	41.54	41.25	41.62	41.55
62	5310	41.41	41.31	41.36	41.43
102	5510	41.51	41.27	41.54	41.36
110	5550	41.52	41.26	41.34	41.44
134	5670	41.6	41.27	41.27	41.35
142 (U-NII-2C Band)	5710	35.59	35.61	35.68	35.7

802.11ax (HE80)

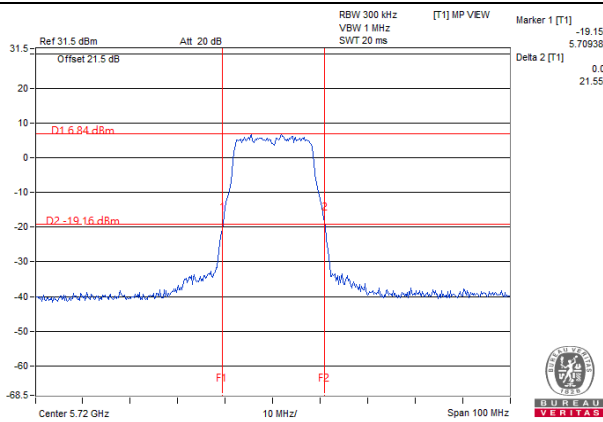
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	82.37	82.73	82.51	82.79
106	5530	82.44	82.57	82.27	82.71
122	5610	82.27	82.56	82.19	82.91
138 (U-NII-2C Band)	5690	75.99	76.24	76.02	76.21

802.11ax (HE160)

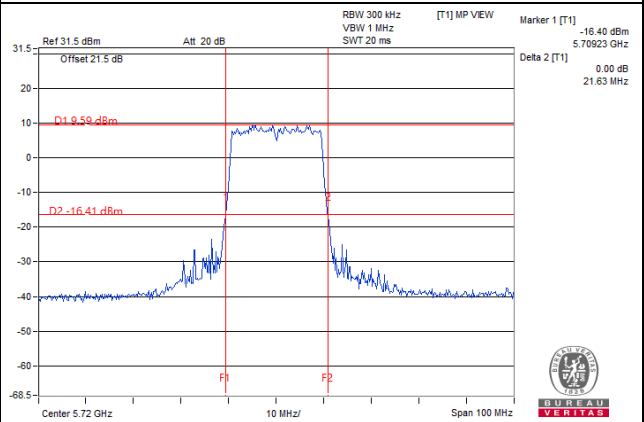
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
50 (U-NII-1 Band)	5250	83.05	83.22	83.28	83.36
50 (U-NII-2A Band)	5250	83.98	84.03	83.77	83.88
114	5570	168.36	168	167.9	168.18

Spectrum Plot of Worst Value

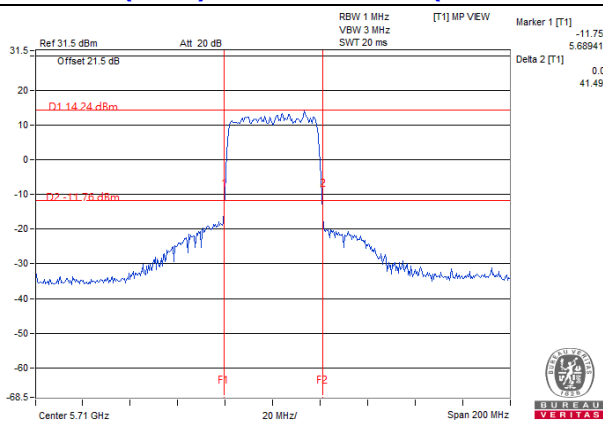
802.11a_Chain 3 / CH144 (U-NII-2C Band)



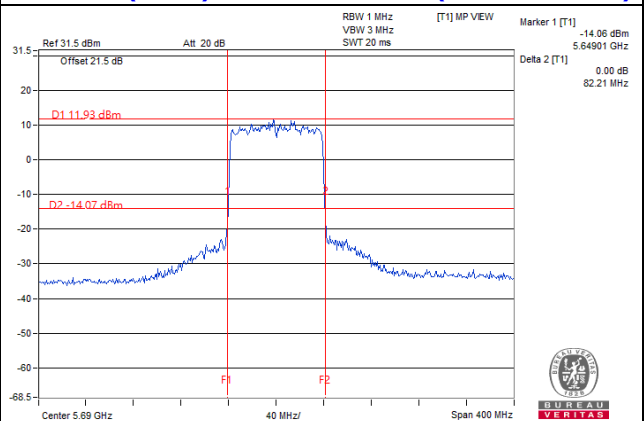
802.11ax (HE20)_Chain 0 / CH144 (U-NII-2C Band)



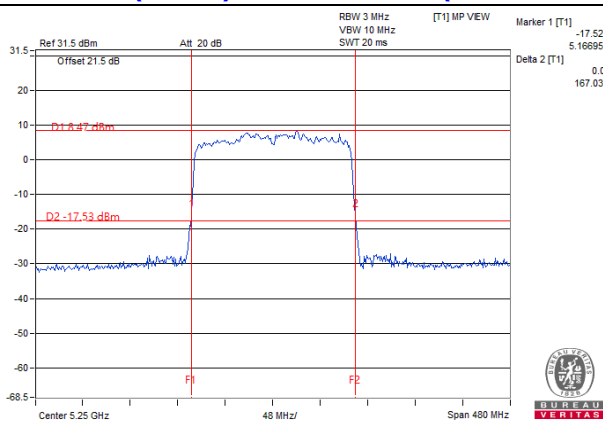
802.11ax (HE40)_Chain 0 / CH142 (U-NII-2C Band)



802.11ax (HE80)_Chain 0 / CH138 (U-NII-2C Band)



802.11ax (HE160)_Chain 0 / CH50 (U-NII-1 Band)

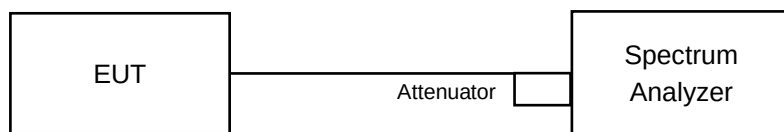


Note:

- For CH144 (U-NII-2C) = 5725MHz - Marker 1
- For CH142 (U-NII-2C) = 5725MHz - Marker 1
- For CH138 (U-NII-2C) = 5725MHz - Marker 1
- For CH50 (U-NII-1) = 5250MHz - Marker 1

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to SAMPLE. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean power of a given emission.

4.4.4 Test Results

CDD Mode

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	17.52	17.52	17.52	17.28
40	5200	17.4	17.52	17.4	17.4
48	5240	17.52	17.64	17.52	17.4
52	5260	16.92	17.04	16.92	16.92
60	5300	16.92	17.04	17.04	16.92
64	5320	16.92	17.04	16.92	16.92
100	5500	16.92	17.16	16.92	16.92
116	5580	16.92	17.04	17.04	16.92
140	5700	16.92	17.04	17.16	17.04
144 (U-NII-2C Band)	5720	13.4	13.52	13.4	13.4
144 (U-NII-3 Band)	5720	3.52	3.52	3.52	3.64
149	5745	17.88	18.24	17.76	17.64
157	5785	18.12	18.36	18.12	17.76
165	5825	17.88	18.12	18	17.52

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	19.2	19.32	19.2	19.2
40	5200	19.44	19.56	19.32	19.44
48	5240	19.08	19.32	19.08	19.2
52	5260	19.08	19.32	19.08	19.08
60	5300	19.08	19.32	19.08	19.08
64	5320	19.08	19.2	19.2	19.08
100	5500	19.08	19.2	19.2	19.2
116	5580	18.96	19.2	19.08	19.2
140	5700	19.08	19.2	19.08	19.2
144 (U-NII-2C Band)	5720	14.6	14.72	14.48	14.48
144 (U-NII-3 Band)	5720	4.48	4.6	4.6	4.6
149	5745	19.92	21	21.48	20.28
157	5785	20.04	21	22.32	20.52
165	5825	21.12	20.64	21.96	19.92

802.11ax (HE40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
38	5190	37.92	37.92	37.92	37.92
46	5230	37.92	37.92	37.92	37.92
54	5270	37.92	37.92	37.92	37.92
62	5310	37.68	37.92	37.92	37.92
102	5510	37.92	37.92	37.92	37.92
110	5550	37.92	37.92	37.92	37.92
134	5670	37.92	37.92	37.92	37.92
142 (U-NII-2C Band)	5710	33.96	33.96	33.96	33.96
142 (U-NII-3 Band)	5710	3.96	3.96	3.96	3.96
151	5755	39.84	49.68	48	51.36
159	5795	39.6	42.24	43.2	46.32

802.11ax (HE80)

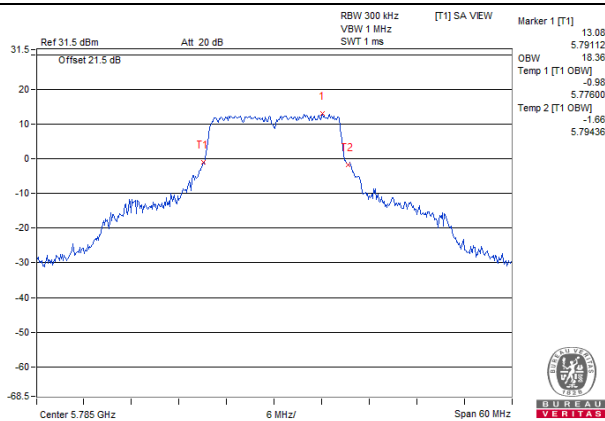
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	76.8	76.8	76.8	76.8
58	5290	77.28	76.8	76.8	76.8
106	5530	77.28	77.28	76.8	76.8
122	5610	76.8	76.8	76.8	76.8
138 (U-NII-2C Band)	5690	73.4	73.4	73.4	73.4
138 (U-NII-3 Band)	5690	3.88	3.4	3.4	3.4
155	5775	77.76	77.76	77.28	77.28

802.11ax (HE160)

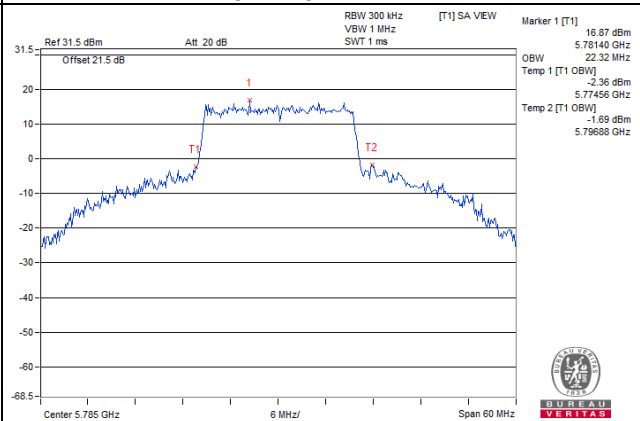
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
50 (U-NII-1 Band)	5250	77.76	77.76	77.76	77.76
50 (U-NII-2A Band)	5250	77.76	77.76	77.76	77.76
114	5570	155.52	155.52	155.52	155.52

Spectrum Plot of Worst Value

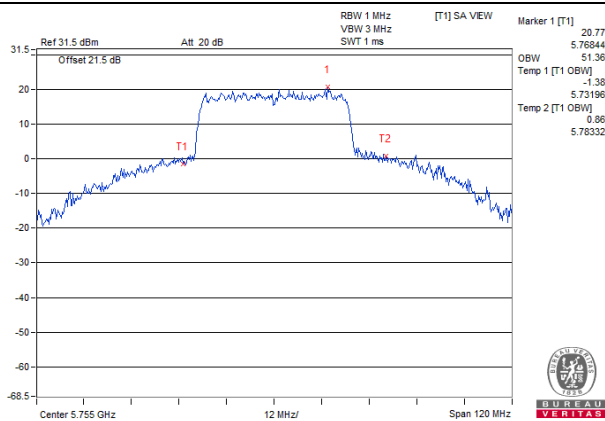
802.11a Chain 1 / CH157



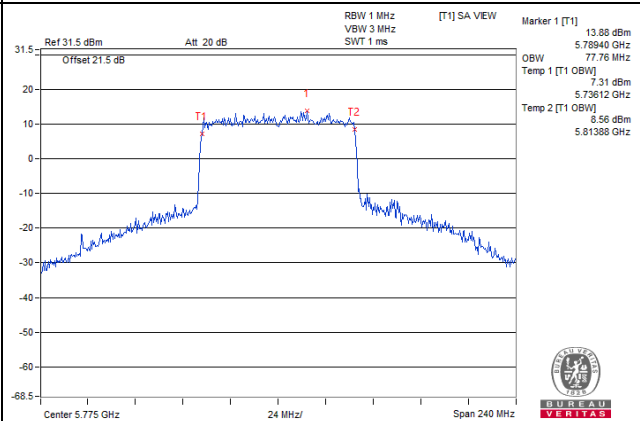
802.11ax (HE20) Chain 2 / CH157



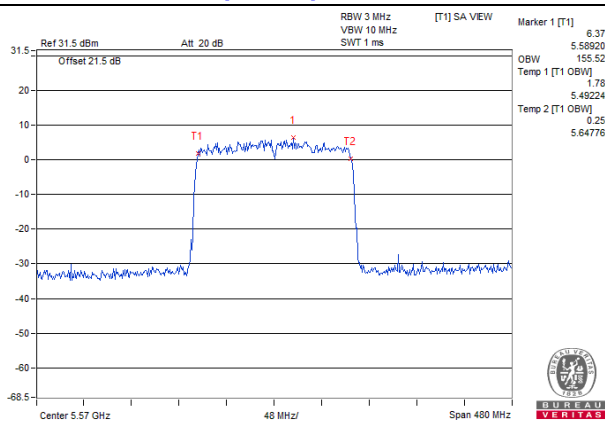
802.11ax (HE40) Chain 3 / CH151



802.11ax (HE80) Chain 0 / CH155

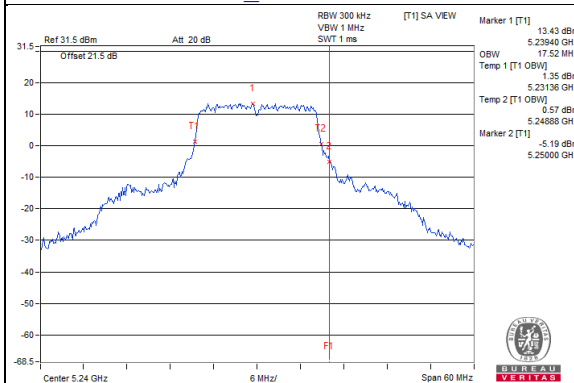


802.11ax (HE160) Chain 0 / CH114

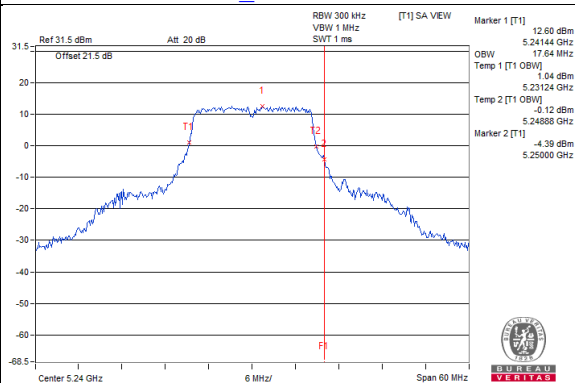


**Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2A band)**

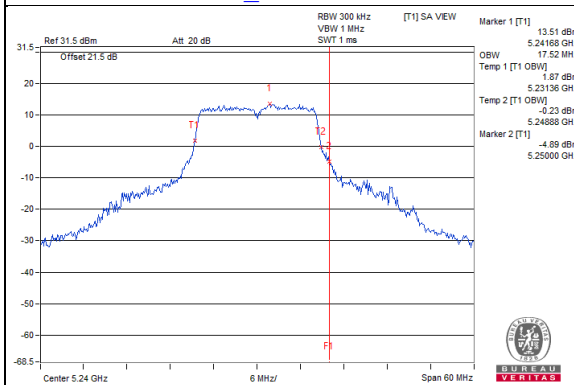
802.11a_Chain 0 / CH48



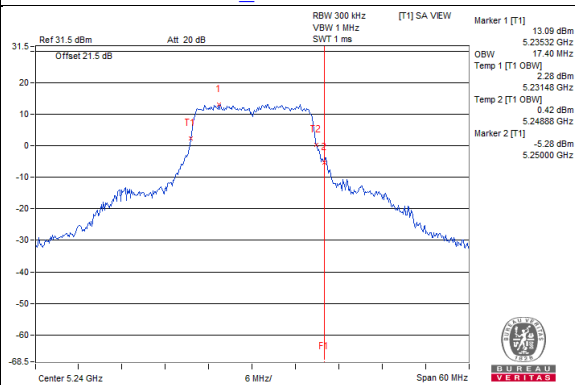
802.11a_Chain 1 / CH48



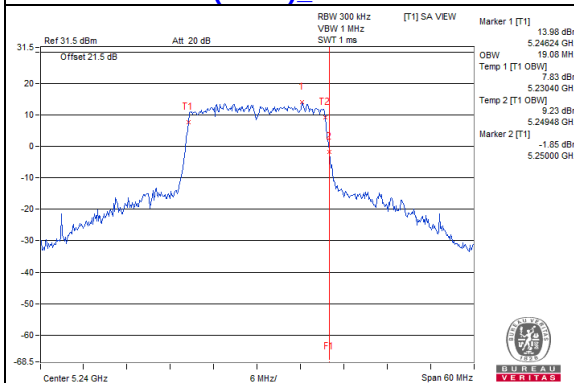
802.11a_Chain 2 / CH48



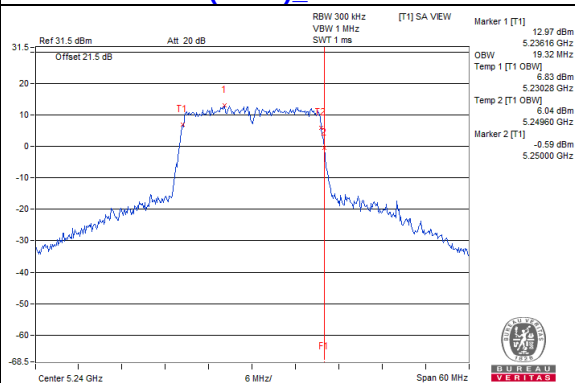
802.11a_Chain 3 / CH48



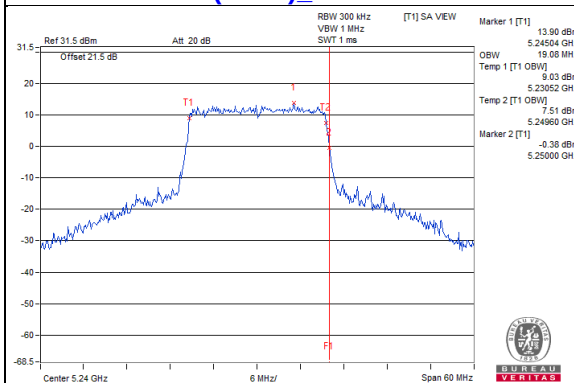
802.11ax (HE20)_Chain 0 / CH48



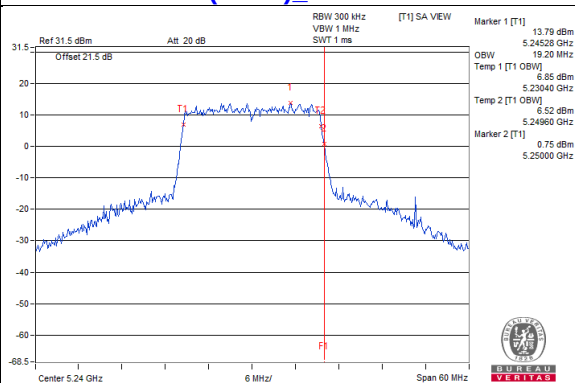
802.11ax (HE20)_Chain 1 / CH48



802.11ax (HE20)_Chain 2 / CH48

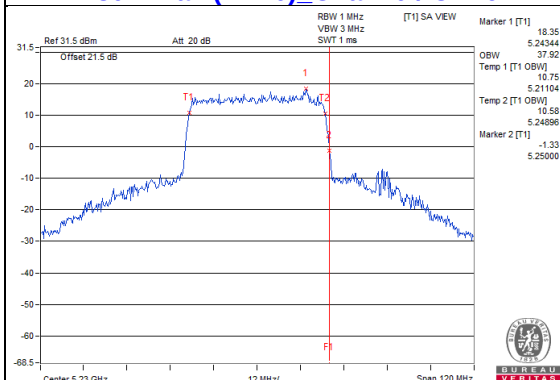


802.11ax (HE20)_Chain 3 / CH48

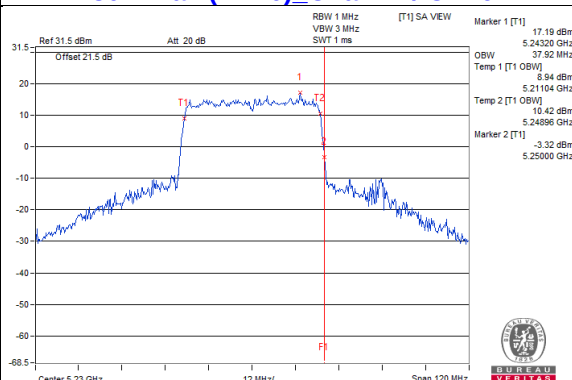


Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2A band)

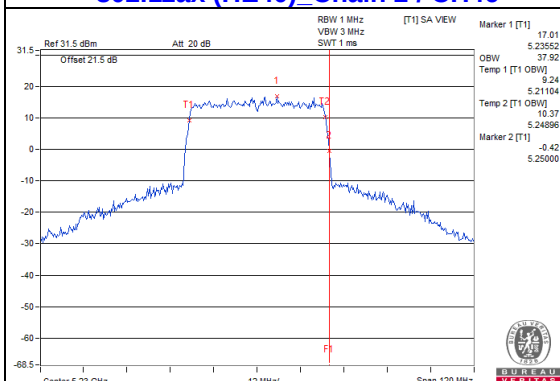
802.11ax (HE40)_Chain 0 / CH46



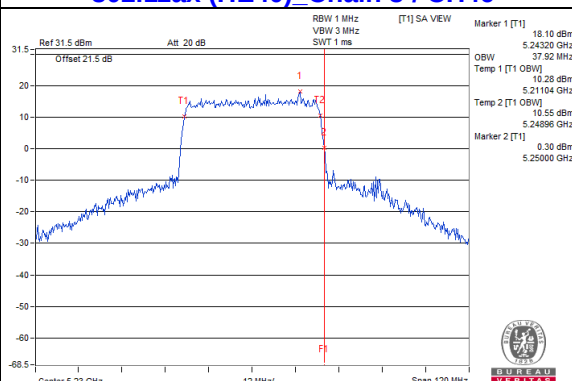
802.11ax (HE40)_Chain 1 / CH46



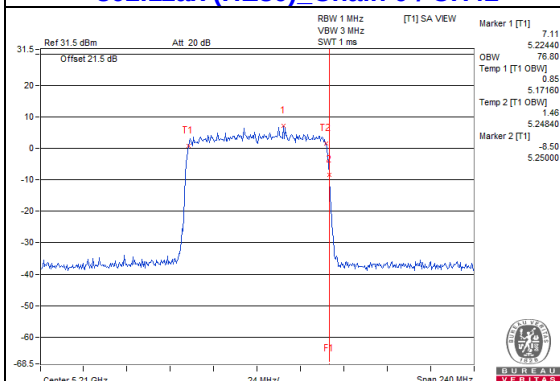
802.11ax (HE40)_Chain 2 / CH46



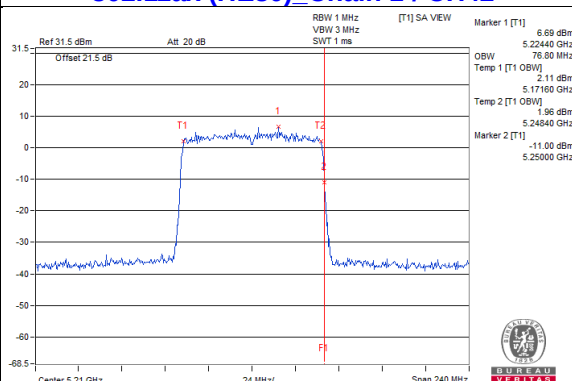
802.11ax (HE40)_Chain 3 / CH46



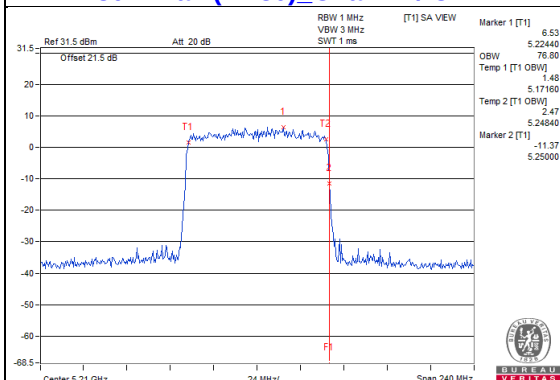
802.11ax (HE80)_Chain 0 / CH42



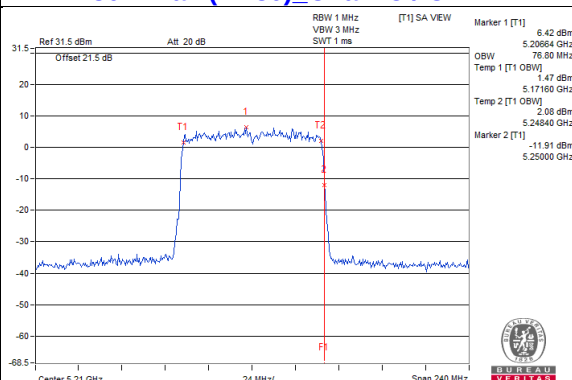
802.11ax (HE80)_Chain 1 / CH42



802.11ax (HE80)_Chain 2 / CH42

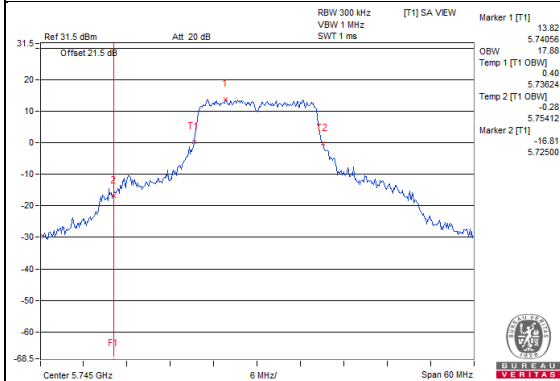


802.11ax (HE80)_Chain 3 / CH42

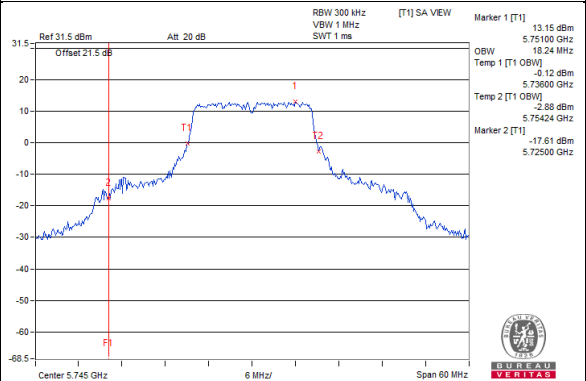


Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2C band)

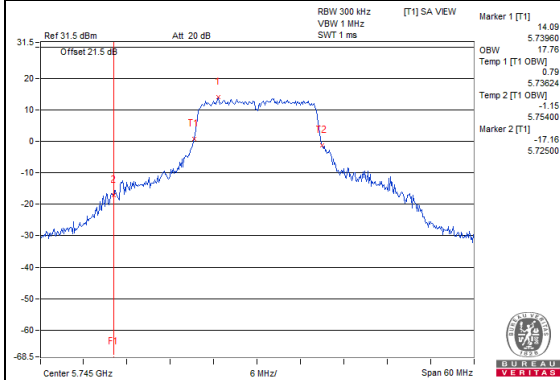
802.11a_Chain 0 / CH149



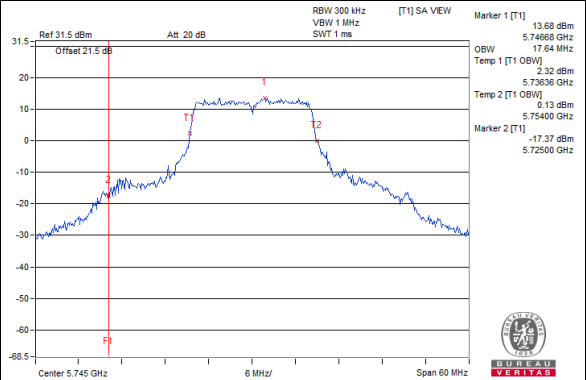
802.11a_Chain 1 / CH149



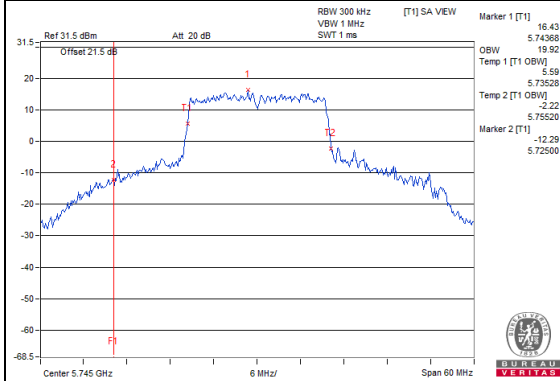
802.11a_Chain 2 / CH149



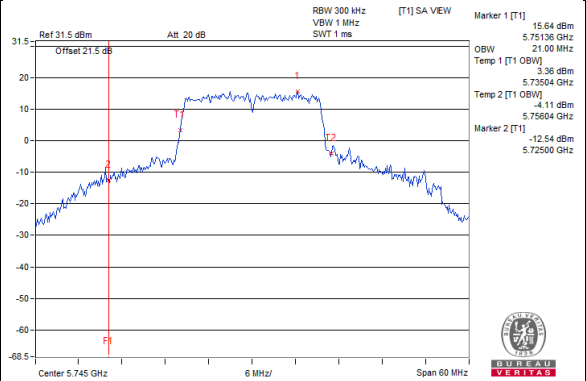
802.11a_Chain 3 / CH149



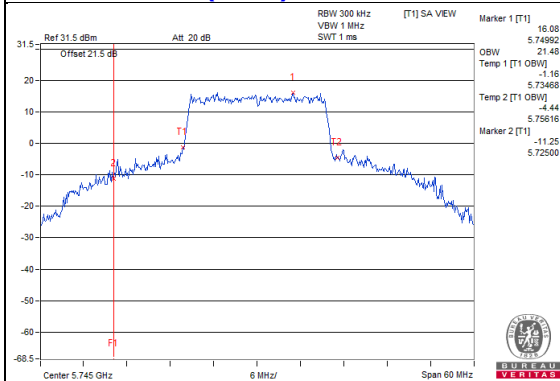
802.11ax (HE20)_Chain 0 / CH149



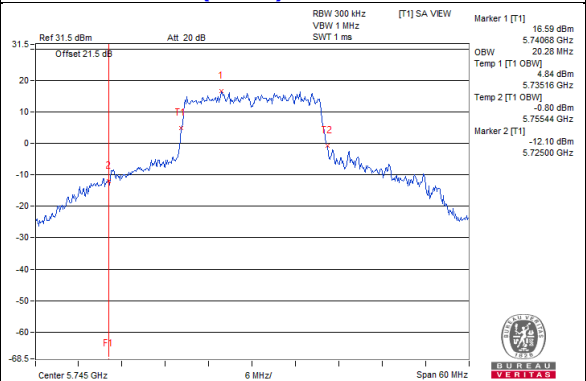
802.11ax (HE20)_Chain 1 / CH149



802.11ax (HE20)_Chain 2 / CH149

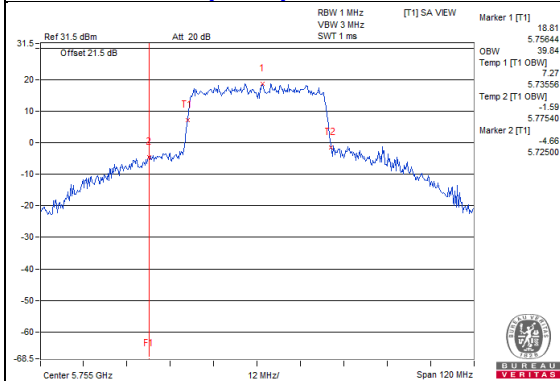


802.11ax (HE20)_Chain 3 / CH149

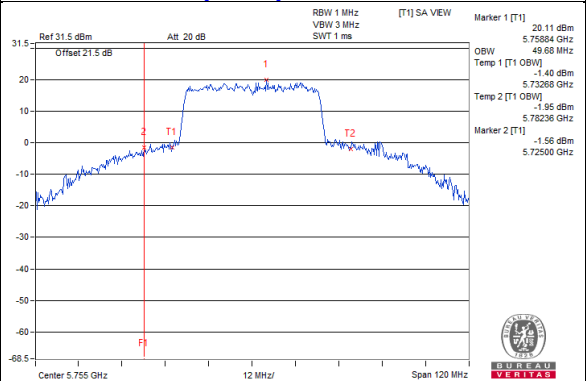


Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2C band)

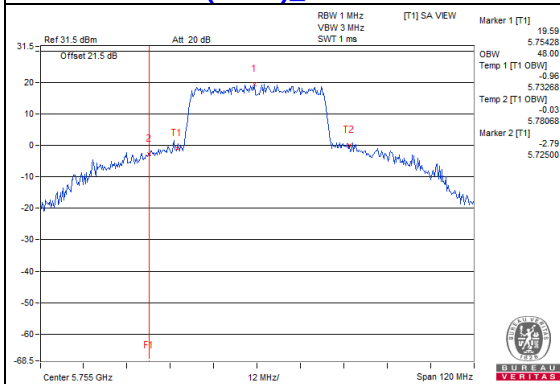
802.11ax (HE40)_Chain 0 / CH151



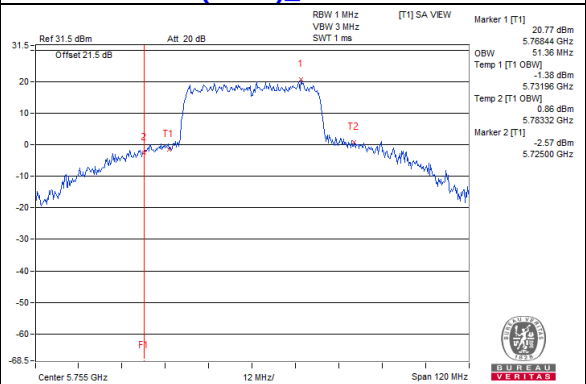
802.11ax (HE40)_Chain 1 / CH151



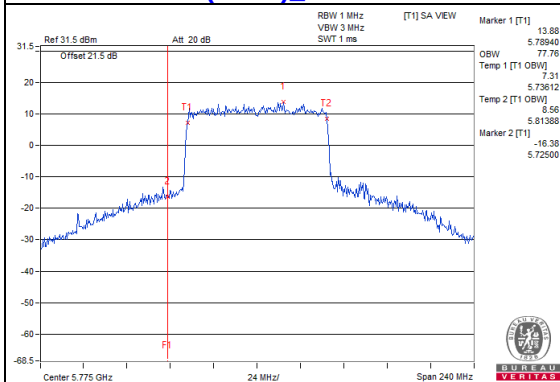
802.11ax (HE40)_Chain 2 / CH151



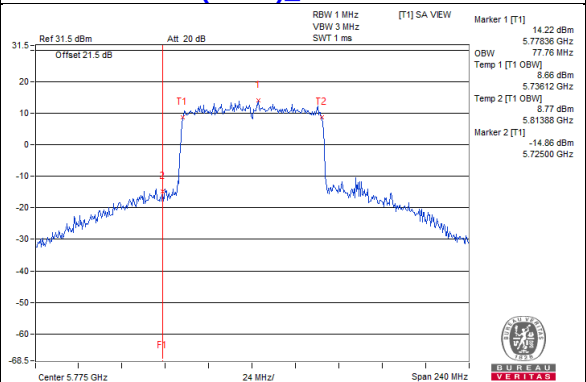
802.11ax (HE40)_Chain 3 / CH151



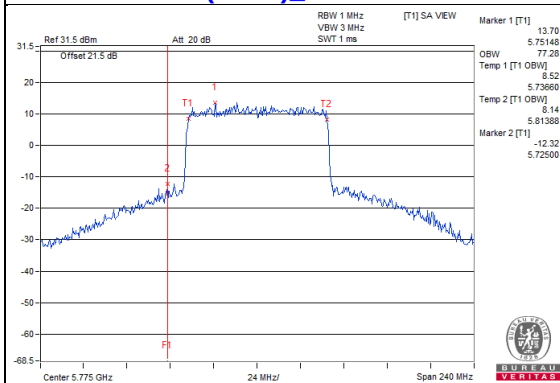
802.11ax (HE80)_Chain 0 / CH155



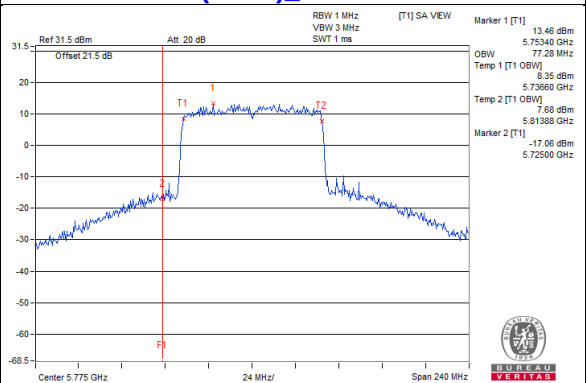
802.11ax (HE80)_Chain 1 / CH155



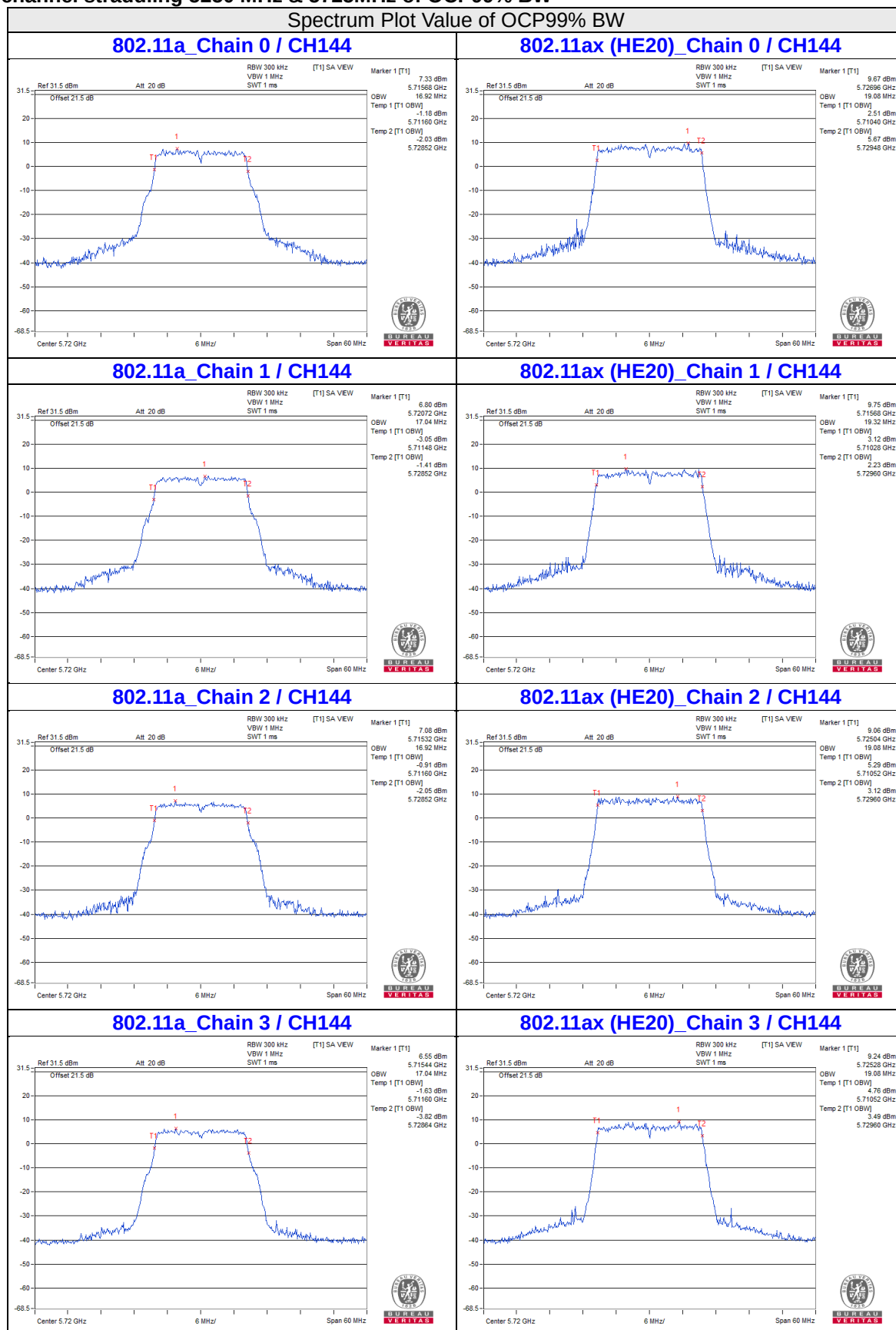
802.11ax (HE80)_Chain 2 / CH155



802.11ax (HE80)_Chain 3 / CH155



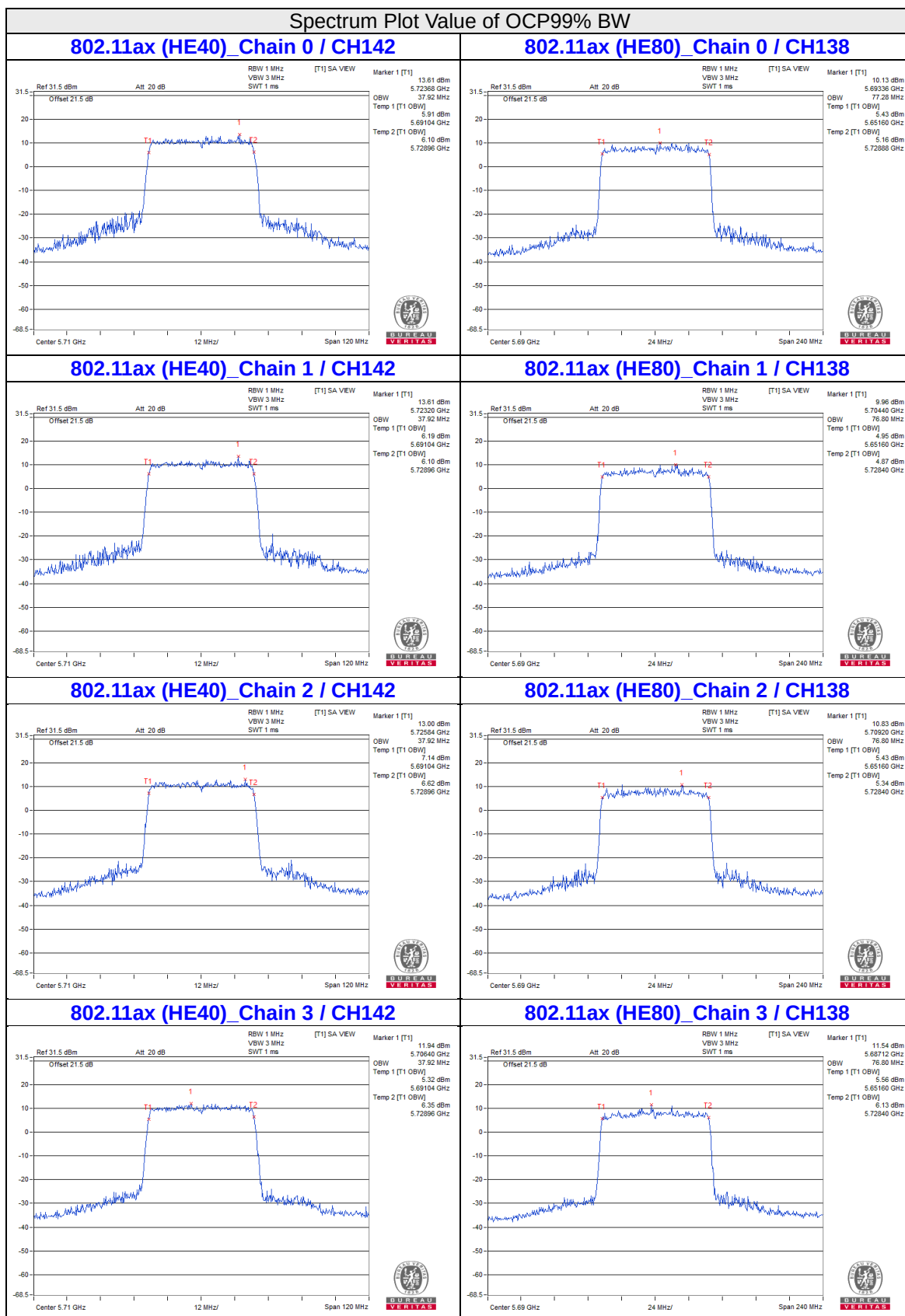
For channel straddling 5250 MHz & 5725MHz of OCP99% BW



Note:

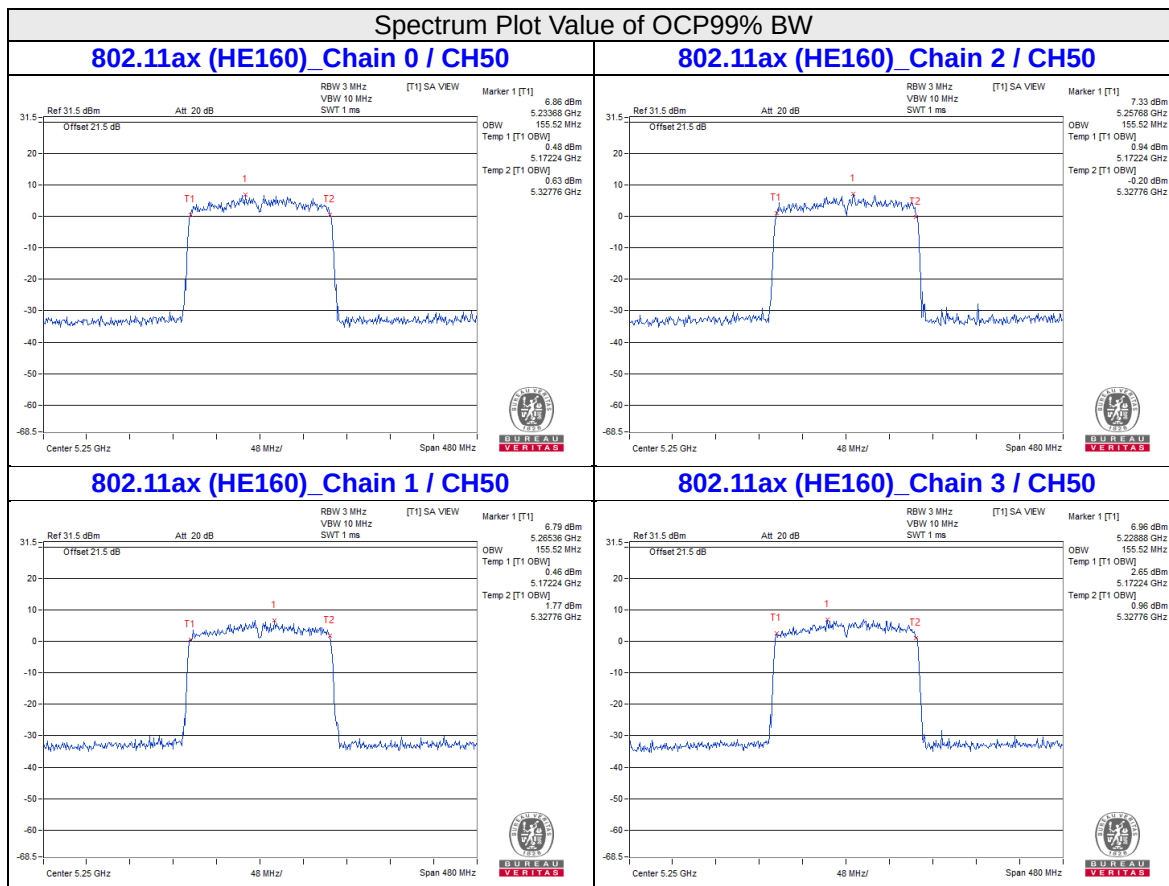
For CH144 (U-NII-2C) = 5725MHz - Temp 1

For CH144 (U-NII-3) = Temp 2 - 5725MHz



Note:

For CH142 (U-NII-2C) = 5725MHz - Temp 1
 For CH138 (U-NII-2C) = 5725MHz - Temp 1
 For CH142 (U-NII-3) = Temp 2 - 5725MHz
 For CH138 (U-NII-3) = Temp 2 - 5725MHz



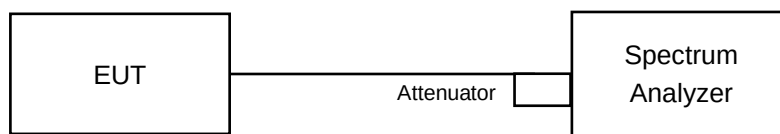
Note: For CH50 (U-NII-1) = 5250MHz – Temp 1
 For CH50 (U-NII-2A) = Temp 2 – 5250MHz

4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	
	√	Indoor Access Point	
		Client device	11dBm/ MHz
U-NII-2A	√		11dBm/ MHz
U-NII-2C	√		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

For U-NII-1, U-NII-2A, U-NII-2C band:

For 802.11ac (VHT160) & 802.11ax (HE160) mode

Using method SA-2

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
3. Sweep time = auto, trigger set to “free run”.
4. Trace average at least 100 traces in power averaging mode.
5. Record the max value and add 10 log (1/duty cycle)

For other modulation mode:

Using method SA-1

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
3. Sweep time = auto, trigger set to “free run”.
4. Trace average at least 100 traces in power averaging mode.
5. Record the max value

For U-NII-3 band:

For 802.11ac (VHT160) & 802.11ax (HE160) mode

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW $\geq$ 1 MHz, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(500\text{kHz}/300\text{kHz})$
5. Sweep time = auto, trigger set to "free run".
6. Trace average at least 100 traces in power averaging mode.
7. Record the max value and add 10 log (1/duty cycle)

For other modulation mode:

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW $\geq$ 1 MHz, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(500\text{kHz}/300\text{kHz})$
5. Sweep time = auto, trigger set to "free run".
6. Trace average at least 100 traces in power averaging mode.
7. Record the max value

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as Item 4.3.6.

4.5.7 Test Results

CDD Mode

For U-NII-1, U-NII-2A, U-NII-2C band:

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3			
36	5180	9.85	9.18	10.17	9.37	15.68	17.00	Pass
40	5200	9.86	8.93	9.54	8.94	15.36	17.00	Pass
48	5240	9.61	8.82	9.23	8.95	15.18	17.00	Pass
52	5260	1.96	1.83	2.05	2.27	8.05	11.00	Pass
60	5300	2.01	1.93	1.94	2.37	8.09	11.00	Pass
64	5320	2.12	1.88	2.13	2.43	8.17	11.00	Pass
100	5500	2.81	3.30	3.23	3.14	9.14	11.00	Pass
116	5580	2.90	3.32	3.34	3.25	9.23	11.00	Pass
140	5700	2.92	3.01	2.76	2.29	8.77	11.00	Pass
144 (U-NII-2C Band)	5720	2.87	2.84	2.77	2.37	8.74	11.00	Pass

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: The directional gain = 4.98dBi < 6dBi, so the power density limit shall not be reduced.
3. For U-NII-2A: The directional gain = 4.28dBi < 6dBi, so the power density limit shall not be reduced.
4. For U-NII-2C: The directional gain = 3.07dBi < 6dBi, so the power density limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3			
36	5180	6.14	6.10	6.19	6.66	12.30	17.00	Pass
40	5200	10.28	9.42	9.62	9.75	15.80	17.00	Pass
48	5240	7.99	7.19	7.44	7.38	13.53	17.00	Pass
52	5260	2.75	2.52	2.47	3.00	8.71	11.00	Pass
60	5300	2.70	2.51	2.36	3.15	8.71	11.00	Pass
64	5320	2.64	2.85	2.56	2.96	8.78	11.00	Pass
100	5500	3.02	3.64	3.20	3.41	9.34	11.00	Pass
116	5580	3.01	3.25	3.12	3.20	9.17	11.00	Pass
140	5700	3.02	3.19	2.79	2.31	8.86	11.00	Pass
144 (U-NII-2C Band)	5720	3.50	3.65	3.19	2.94	9.35	11.00	Pass

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: The directional gain = 4.98dBi < 6dBi, so the power density limit shall not be reduced.
3. For U-NII-2A: The directional gain = 4.28dBi < 6dBi, so the power density limit shall not be reduced.
4. For U-NII-2C: The directional gain = 3.07dBi < 6dBi, so the power density limit shall not be reduced.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3			
38	5190	-1.55	-2.17	-1.75	-1.45	4.30	17.00	Pass
46	5230	5.24	4.41	4.70	4.97	10.86	17.00	Pass
54	5270	0.97	0.64	1.99	1.88	7.43	11.00	Pass
62	5310	-2.58	-2.63	-1.77	-1.60	3.90	11.00	Pass
102	5510	-1.90	-1.59	-1.03	-0.54	4.79	11.00	Pass
110	5550	0.64	0.73	1.38	2.01	7.25	11.00	Pass
134	5670	0.73	0.58	1.23	1.08	6.93	11.00	Pass
142 (U-NII-2C Band)	5710	0.82	0.39	1.14	0.72	6.80	11.00	Pass

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: The directional gain = 4.98dBi < 6dBi, so the power density limit shall not be reduced.
3. For U-NII-2A: The directional gain = 4.28dBi < 6dBi, so the power density limit shall not be reduced.
4. For U-NII-2C: The directional gain = 3.07dBi < 6dBi, so the power density limit shall not be reduced.

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3			
42	5210	-5.74	-5.53	-5.20	-5.12	0.63	17.00	Pass
58	5290	-5.35	-5.15	-5.93	-4.83	0.72	11.00	Pass
106	5530	-5.08	-4.32	-4.30	-4.09	1.59	11.00	Pass
122	5610	-1.12	-1.85	-1.70	-1.19	4.57	11.00	Pass
138 (U-NII-2C Band)	5690	-1.62	-2.16	-1.87	-1.30	4.29	11.00	Pass

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: The directional gain = 4.98dBi < 6dBi, so the power density limit shall not be reduced.
3. For U-NII-2A: The directional gain = 4.28dBi < 6dBi, so the power density limit shall not be reduced.
4. For U-NII-2C: The directional gain = 3.07dBi < 6dBi, so the power density limit shall not be reduced.

802.11ax (HE160)

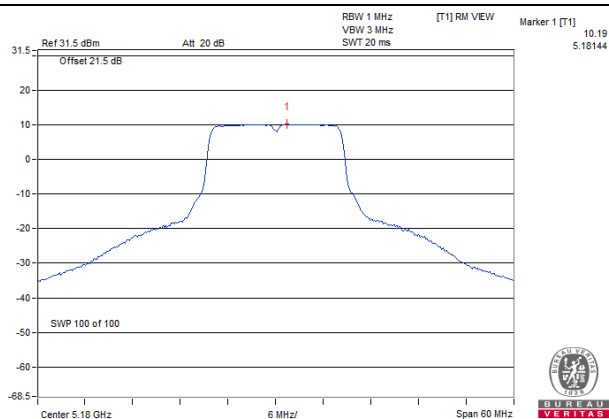
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
50 (U-NII-1 Band)	5250	-9.32	-9.63	-9.41	-8.85	0.12	-3.15	17.00	Pass
50 (U-NII-2A Band)	5250	-9.39	-9.38	-9.40	-8.85	0.12	-3.11	11.00	Pass
114	5570	-9.67	-8.77	-9.15	-8.69	0.12	-2.91	11.00	Pass

Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

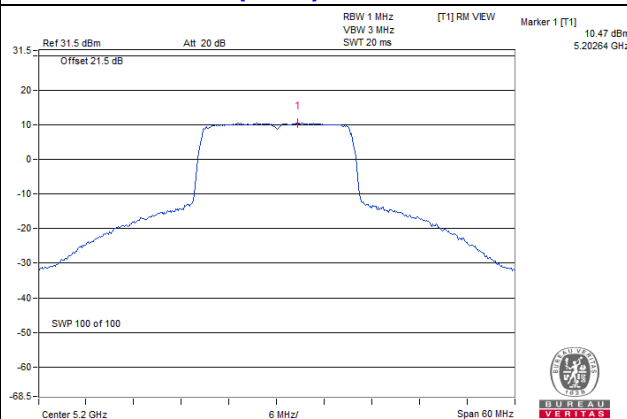
2. For U-NII-1: The directional gain = 4.98dBi < 6dBi, so the power density limit shall not be reduced.
3. For U-NII-2A: The directional gain = 4.28dBi < 6dBi, so the power density limit shall not be reduced.
4. For U-NII-2C: The directional gain = 3.07dBi < 6dBi, so the power density limit shall not be reduced.
5. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

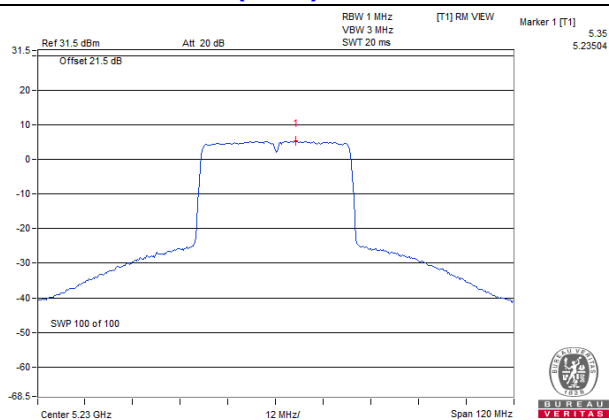
802.11a_Chain 2 / CH36



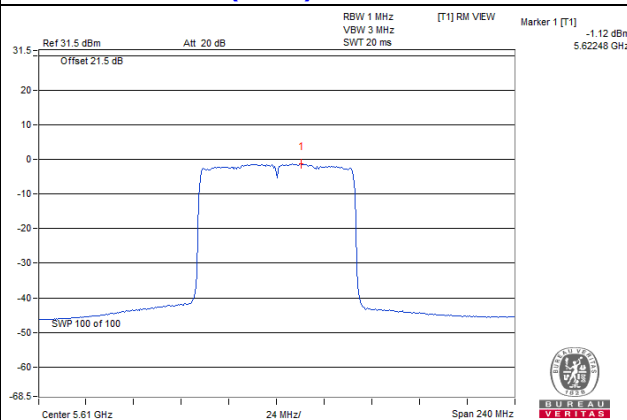
802.11ax (HE20)_Chain 0 / CH40



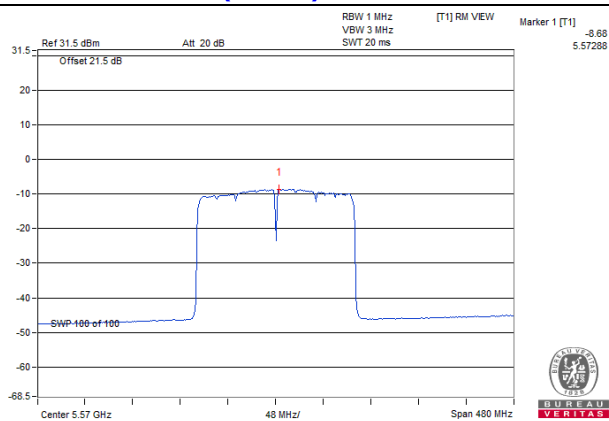
802.11ax (HE40)_Chain 0 / CH46



802.11ax (HE80)_Chain 0 / CH122



802.11ax (HE160)_Chain 3 / CH114



For U-NII-3 band:

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)				Total PSD (dBm/300k Hz)	Total PSD (dBm/500k Hz)	PSD Limit (dBm/500k Hz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
144 (U-NII-3 Band)	5720	-6.13	-5.96	-6.08	-6.20	-0.07	2.15	30.00	Pass
149	5745	1.21	0.67	0.91	0.70	6.90	9.12	30.00	Pass
157	5785	1.01	0.85	0.67	0.52	6.79	9.01	30.00	Pass
165	5825	1.10	0.37	0.93	0.30	6.71	8.93	30.00	Pass

Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. The directional gain = 3.18dBi < 6dBi, so the power density limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)				Total PSD (dBm/300k Hz)	Total PSD (dBm/500k Hz)	PSD Limit (dBm/500k Hz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
144 (U-NII-3 Band)	5720	-5.80	-5.55	-6.50	-6.27	0.01	2.23	30.00	Pass
149	5745	0.02	0.64	0.96	1.14	6.73	8.95	30.00	Pass
157	5785	0.21	0.58	0.86	0.76	6.63	8.85	30.00	Pass
165	5825	0.64	0.73	0.71	0.88	6.76	8.98	30.00	Pass

Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. The directional gain = 3.18dBi < 6dBi, so the power density limit shall not be reduced.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)				Total PSD (dBm/300k Hz)	Total PSD (dBm/500k Hz)	PSD Limit (dBm/500k Hz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
142 (U-NII-3 Band)	5710	-8.81	-9.40	-8.65	-8.99	-2.93	-0.71	30.00	Pass
151	5755	-3.01	-2.35	-2.49	-1.52	3.71	5.93	30.00	Pass
159	5795	-3.00	-2.67	-2.40	-1.71	3.60	5.82	30.00	Pass

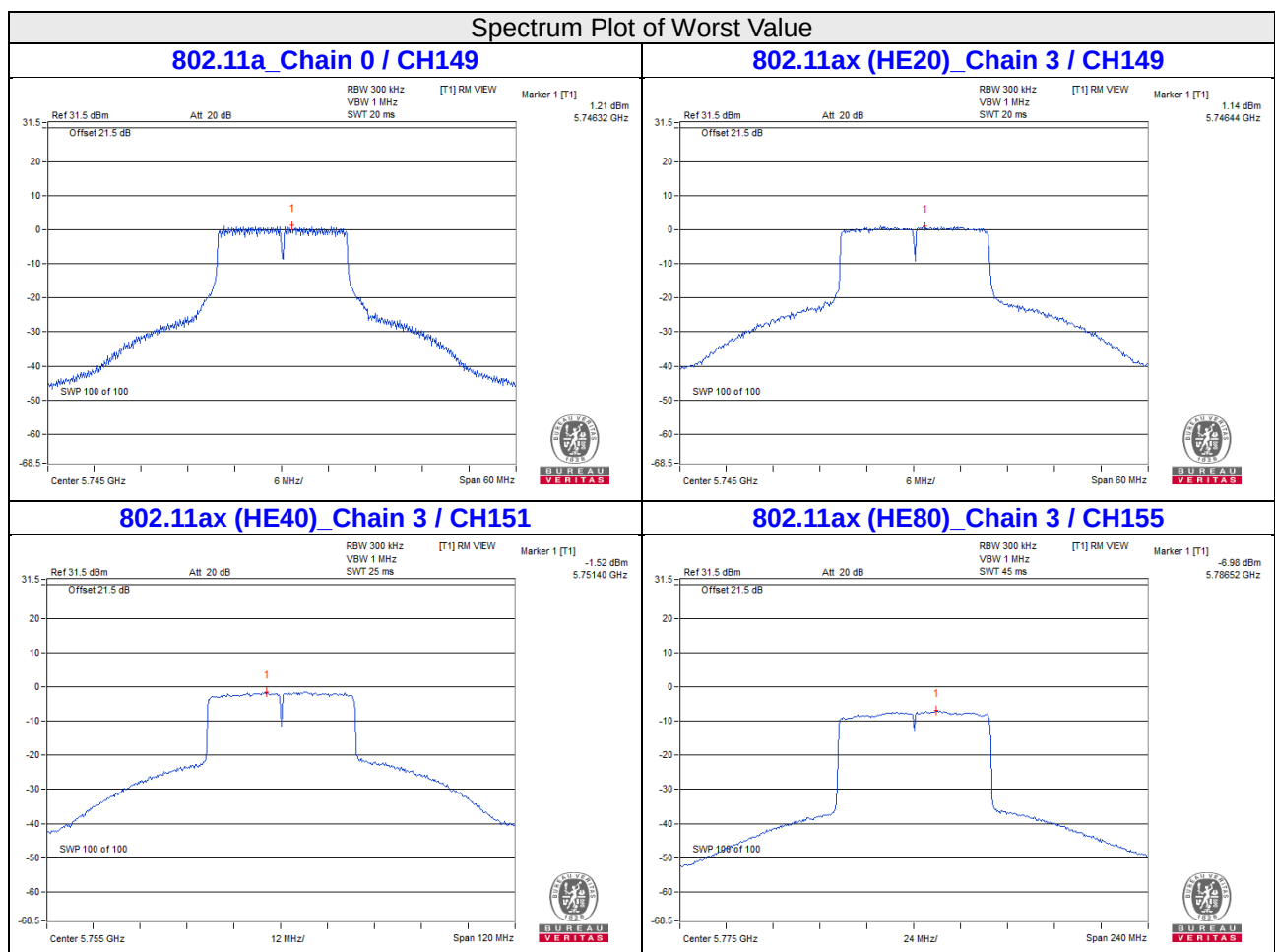
Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. The directional gain = 3.18dBi < 6dBi, so the power density limit shall not be reduced.

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)				Total PSD (dBm/300k Hz)	Total PSD (dBm/500k Hz)	PSD Limit (dBm/500k Hz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
138 (U-NII-3 Band)	5690	-11.80	-12.71	-12.33	-11.68	-6.09	-3.87	30.00	Pass
155	5775	-7.39	-7.19	-7.46	-6.98	-1.23	0.99	30.00	Pass

Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.

2. The directional gain = 3.18dBi < 6dBi, so the power density limit shall not be reduced.

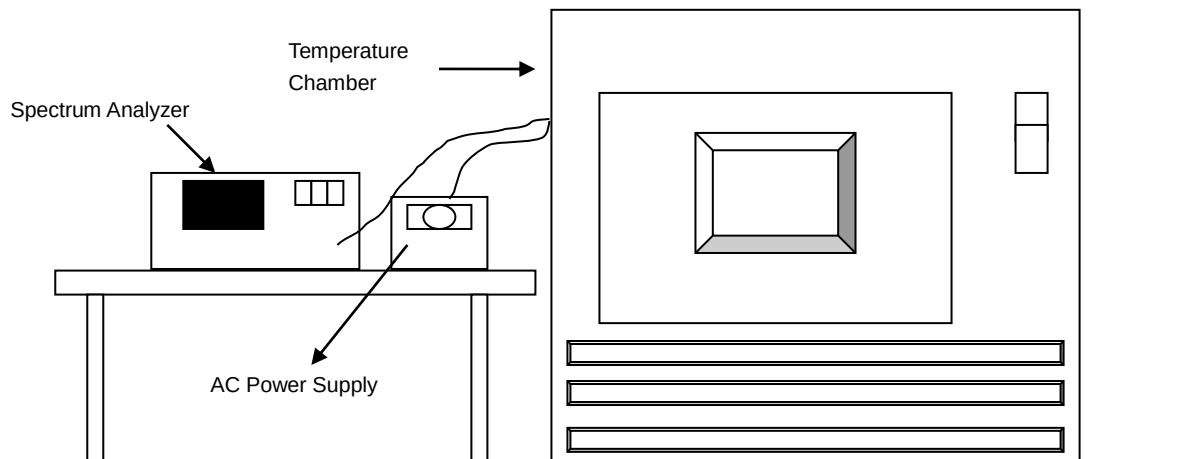


4.6 Frequency Stability Measurement

4.6.1 Limits of Frequency Stability Measurement

The frequency of the carrier signal shall be maintained within band of operation

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

- The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- Turn the EUT on and couple its output to a spectrum analyzer.
- Turn the EUT off and set the chamber to the highest temperature specified.
- Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes.
- Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.
- The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
TEMP. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
40	120	5180.0188	Pass	5180.0204	Pass	5180.0198	Pass	5180.0172	Pass
30	120	5179.9927	Pass	5179.9918	Pass	5179.9908	Pass	5179.9889	Pass
20	120	5179.9878	Pass	5179.9878	Pass	5179.9893	Pass	5179.9917	Pass
10	120	5180.0204	Pass	5180.0189	Pass	5180.0204	Pass	5180.0216	Pass
0	120	5180.0029	Pass	5180.0066	Pass	5180.0079	Pass	5180.0066	Pass

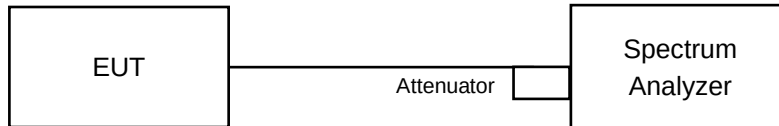
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
TEMP. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	138	5179.9887	Pass	5179.9875	Pass	5179.9896	Pass	5179.9911	Pass
	120	5179.9878	Pass	5179.9878	Pass	5179.9893	Pass	5179.9917	Pass
	102	5179.9872	Pass	5179.9881	Pass	5179.9887	Pass	5179.9926	Pass

4.7 6dB Bandwidth Measurement

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

MEASUREMENT PROCEDURE REF

- Set resolution bandwidth (RBW) = 100kHz
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.7.7 Test Results

CDD Mode

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
144 (U-NII-3 Band)	5720	3.23	3.26	3.22	3.27	0.5	Pass
149	5745	16.39	16.4	16.39	16.41	0.5	Pass
157	5785	16.41	16.41	16.41	16.4	0.5	Pass
165	5825	16.41	16.39	16.4	16.4	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
144 (U-NII-3 Band)	5720	4.55	4.51	4.58	4.56	0.5	Pass
149	5745	18.95	18.97	18.99	19.01	0.5	Pass
157	5785	18.9	18.78	18.91	19	0.5	Pass
165	5825	18.91	18.95	18.96	19	0.5	Pass

802.11ax (HE40)

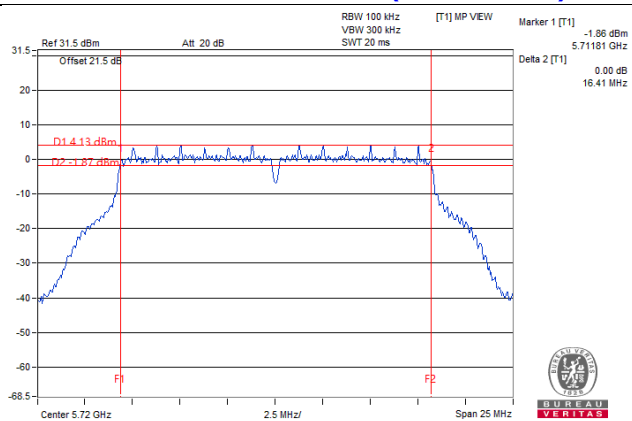
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
142 (U-NII-3 Band)	5710	3.7	3.84	3.94	4.02	0.5	Pass
151	5755	37.54	37.72	37.63	37.8	0.5	Pass
159	5795	37.54	37.76	36.92	37.75	0.5	Pass

802.11ax (HE80)

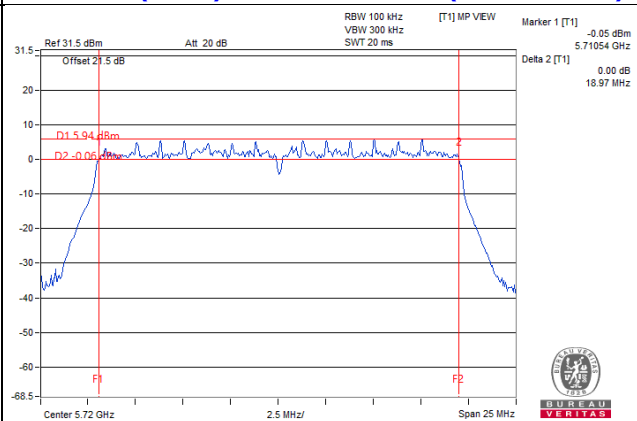
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
138 (U-NII-3 Band)	5690	3.32	3.86	3.69	3.97	0.5	Pass
155	5775	76.44	77.39	77.6	77.03	0.5	Pass

Spectrum Plot of Worst Value

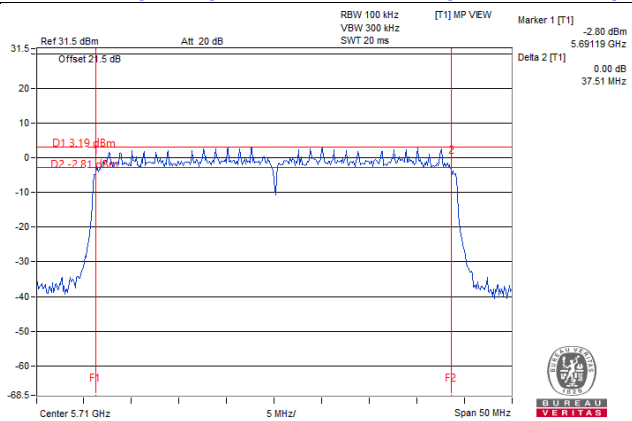
802.11a_Chain 2 / CH144 (U-NII-3 Band)



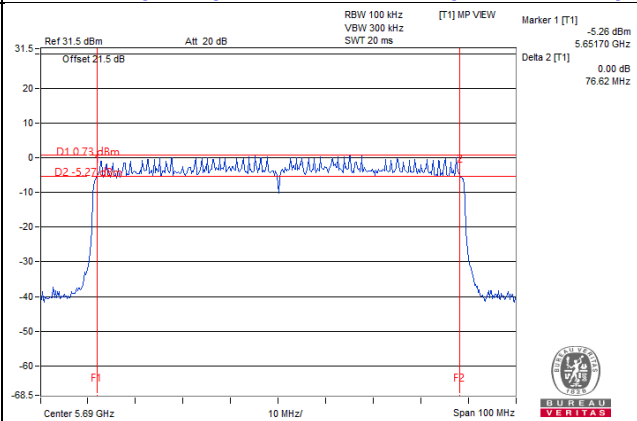
802.11ax (HE20)_Chain 1 / CH144 (U-NII-3 Band)



802.11ax (HE40)_Chain 0 / CH142 (U-NII-3 Band)



802.11ax (HE80)_Chain 0 / CH138 (U-NII-3 Band)



Note: The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

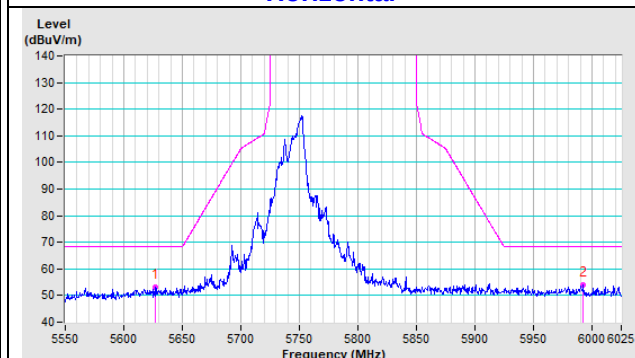
5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

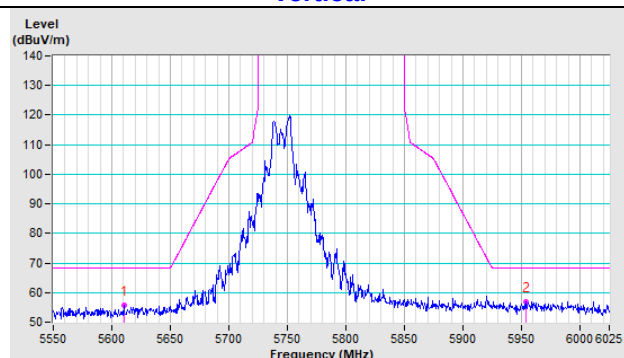
Annex A - Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

802.11a CH 149 : 5745 MHz

Horizontal

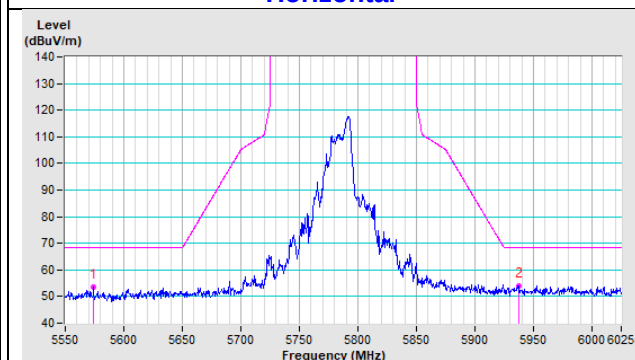


Vertical

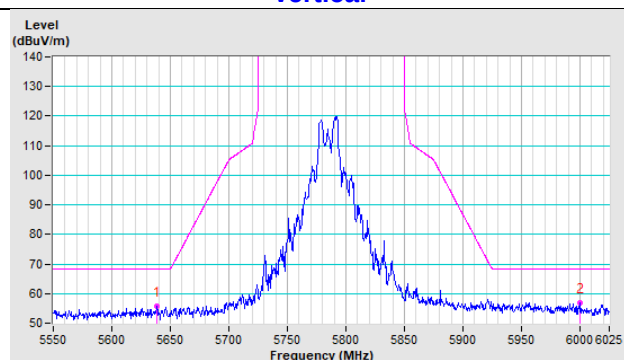


802.11a CH 157 : 5785 MHz

Horizontal

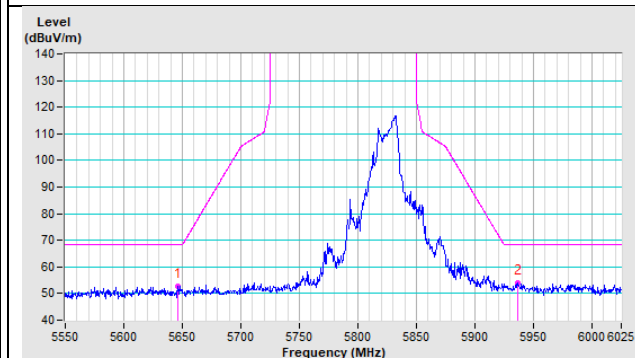


Vertical

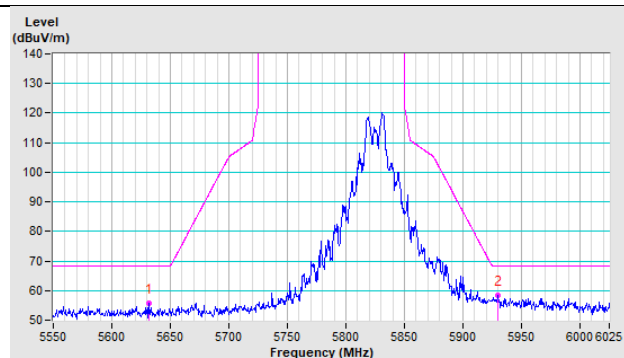


802.11a CH 165 : 5825 MHz

Horizontal

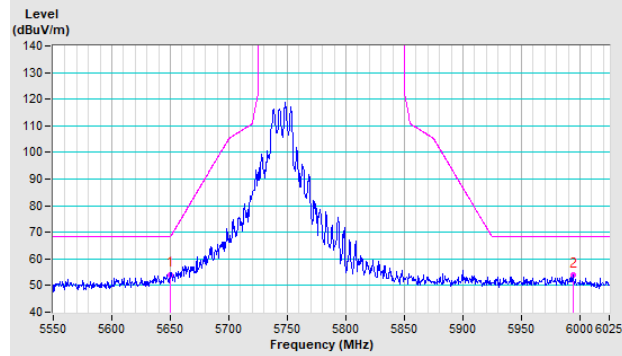


Vertical

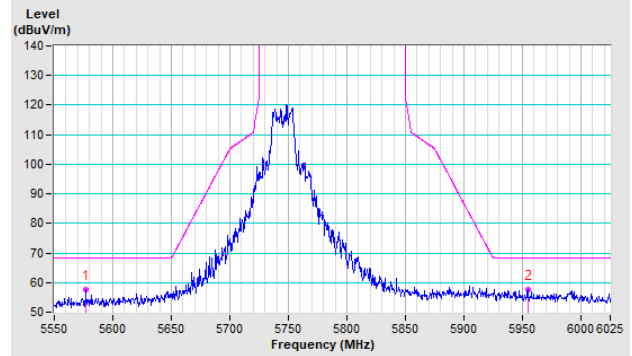


802.11ax (HE20) CH 149 : 5745 MHz

Horizontal

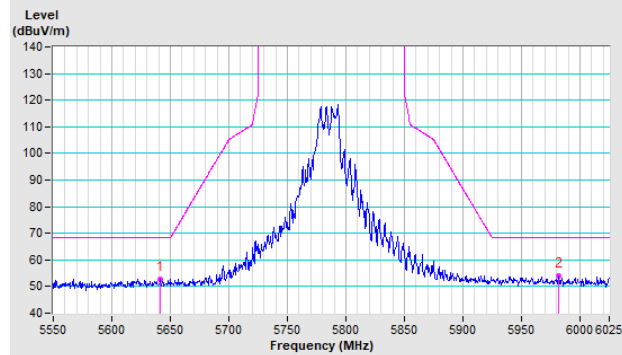


Vertical

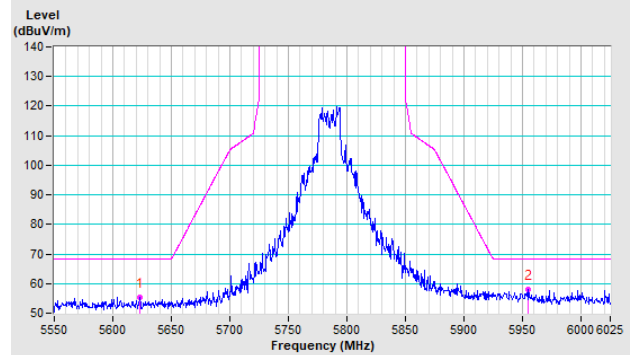


802.11ax (HE20) CH 157 : 5785 MHz

Horizontal

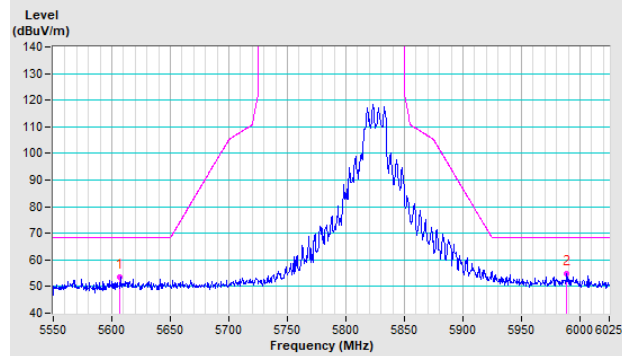


Vertical

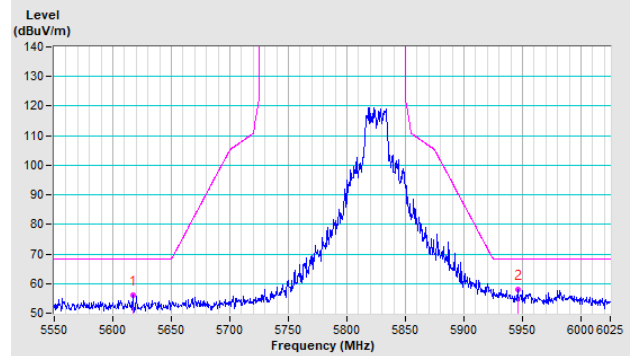


802.11ax (HE20) CH 165 : 5825 MHz

Horizontal

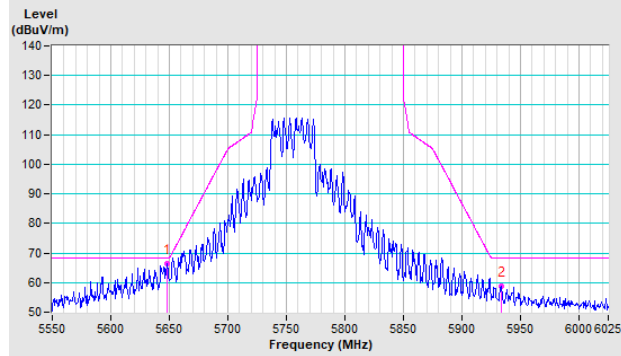


Vertical

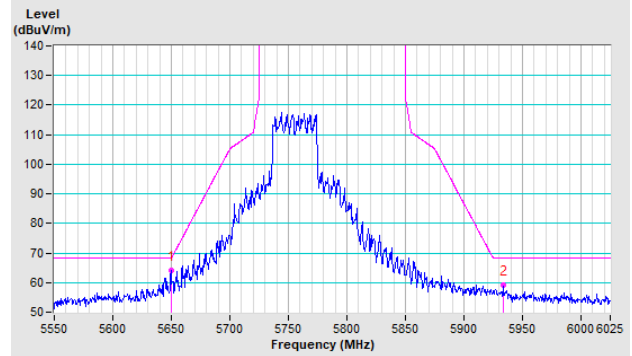


802.11ax (HE40) CH 151 : 5755 MHz

Horizontal

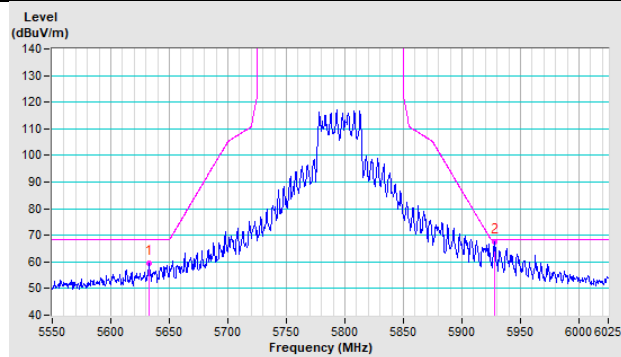


Vertical

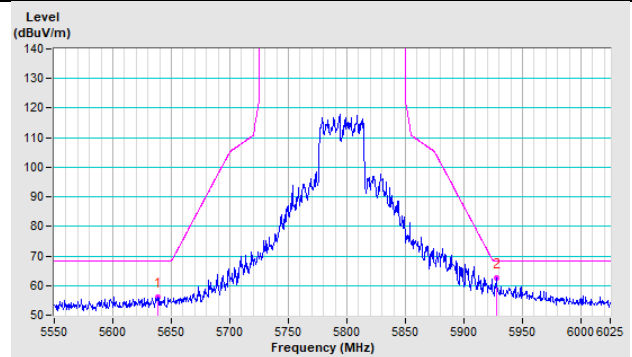


802.11ax (HE40) CH 159 : 5795 MHz

Horizontal

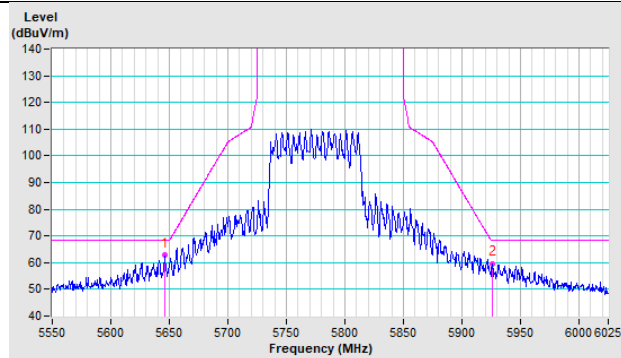


Vertical

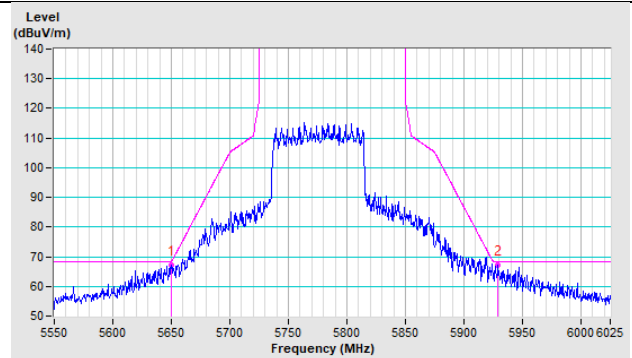


802.11ax (HE80) CH 155 : 5775 MHz

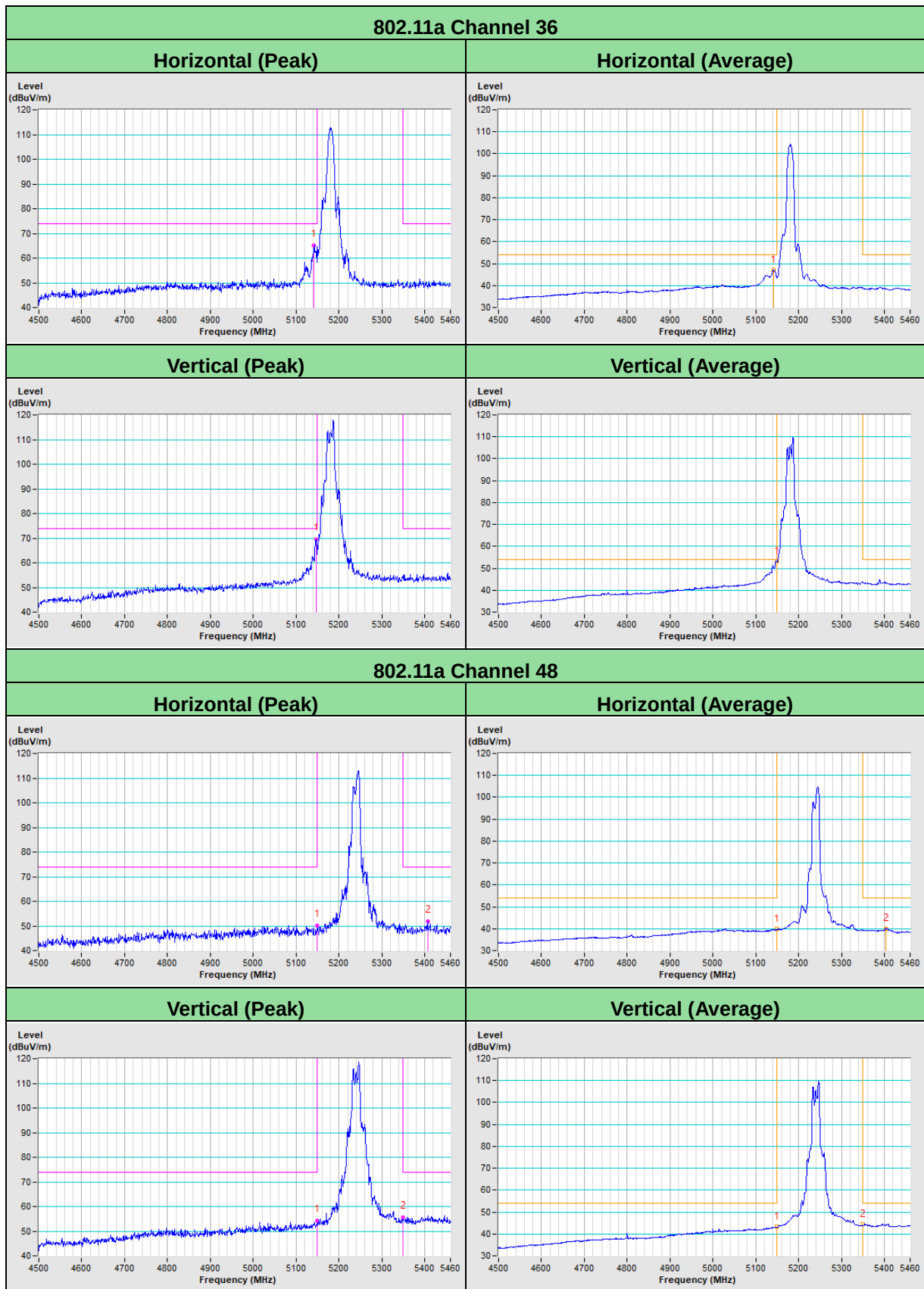
Horizontal

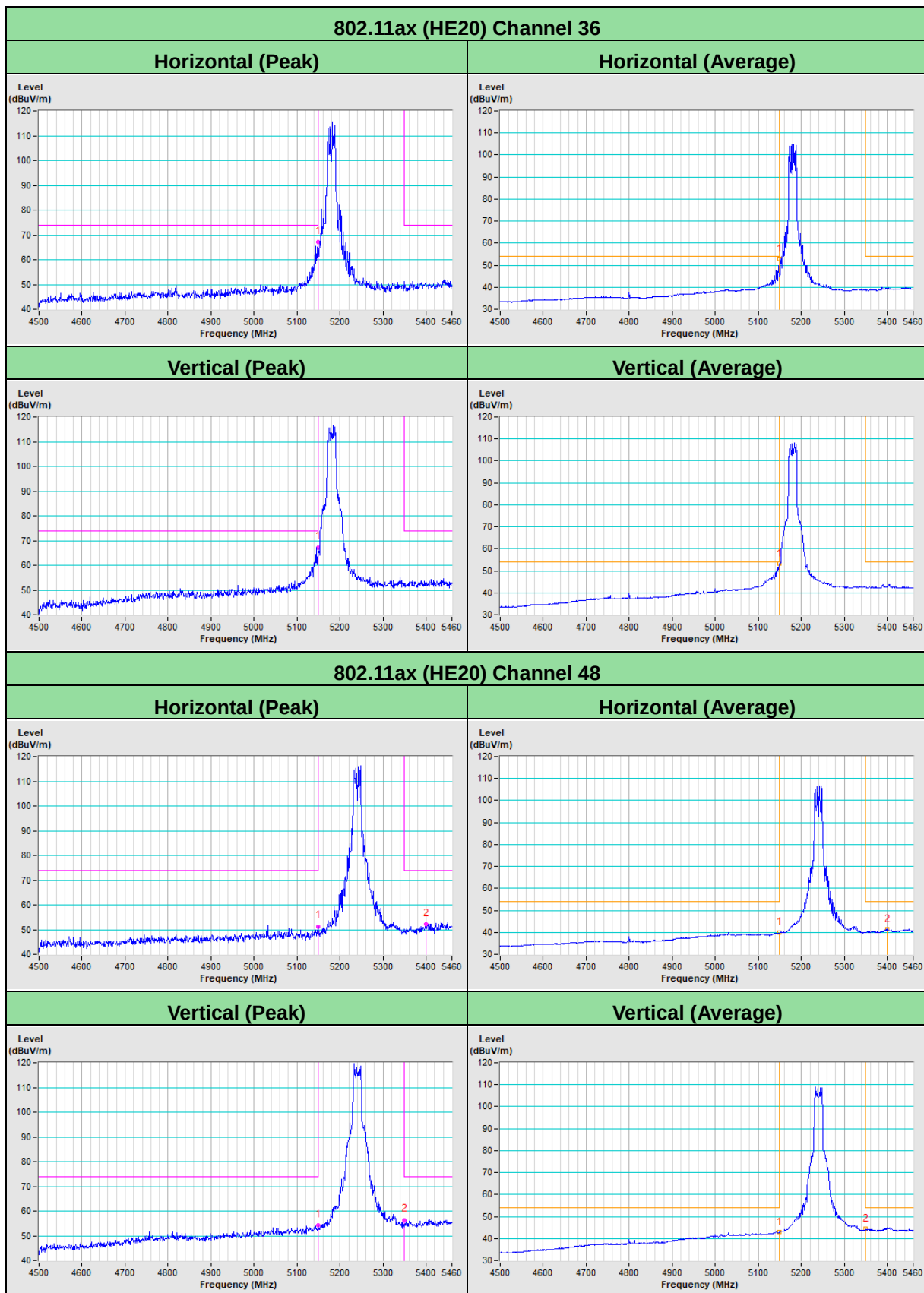


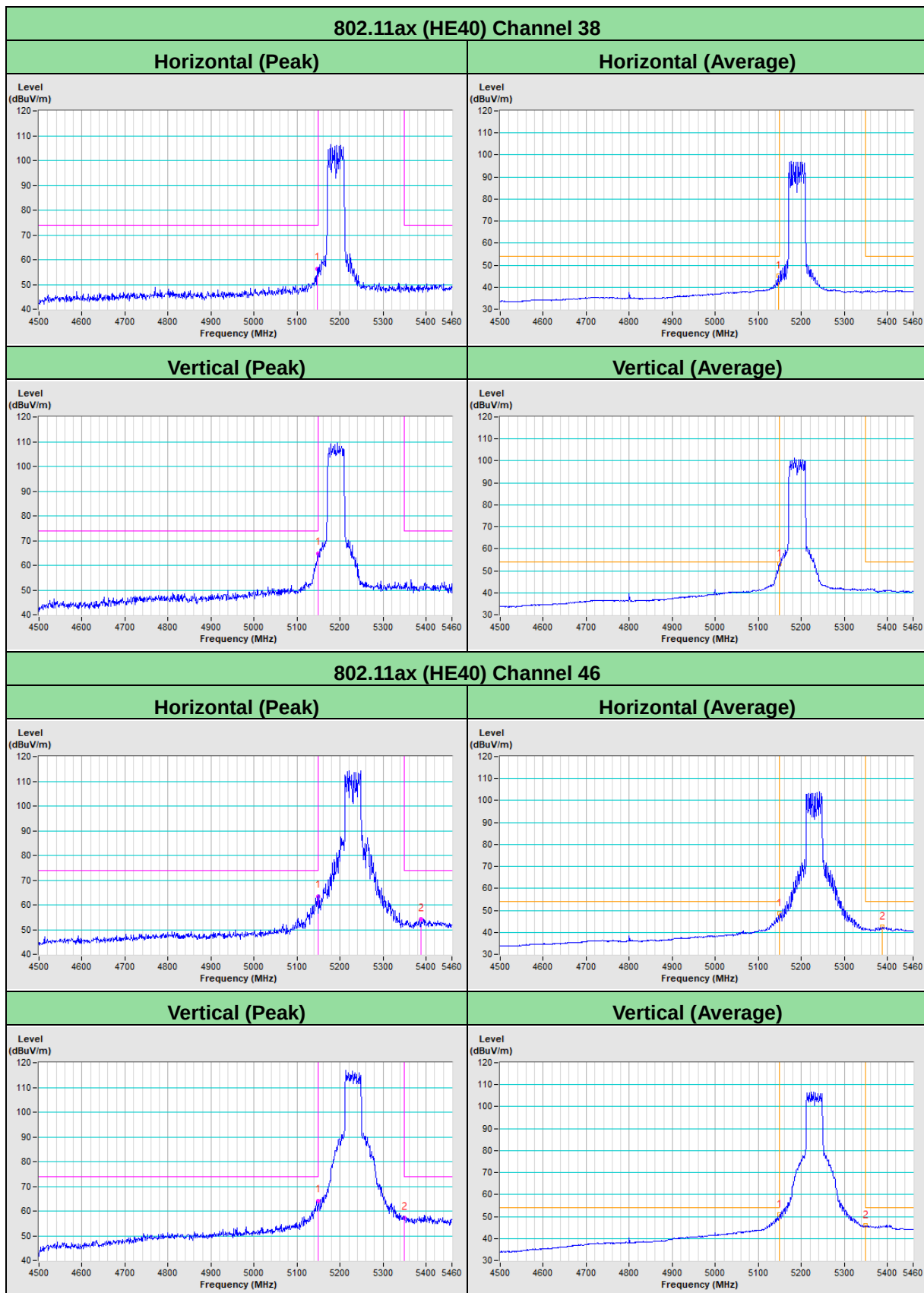
Vertical

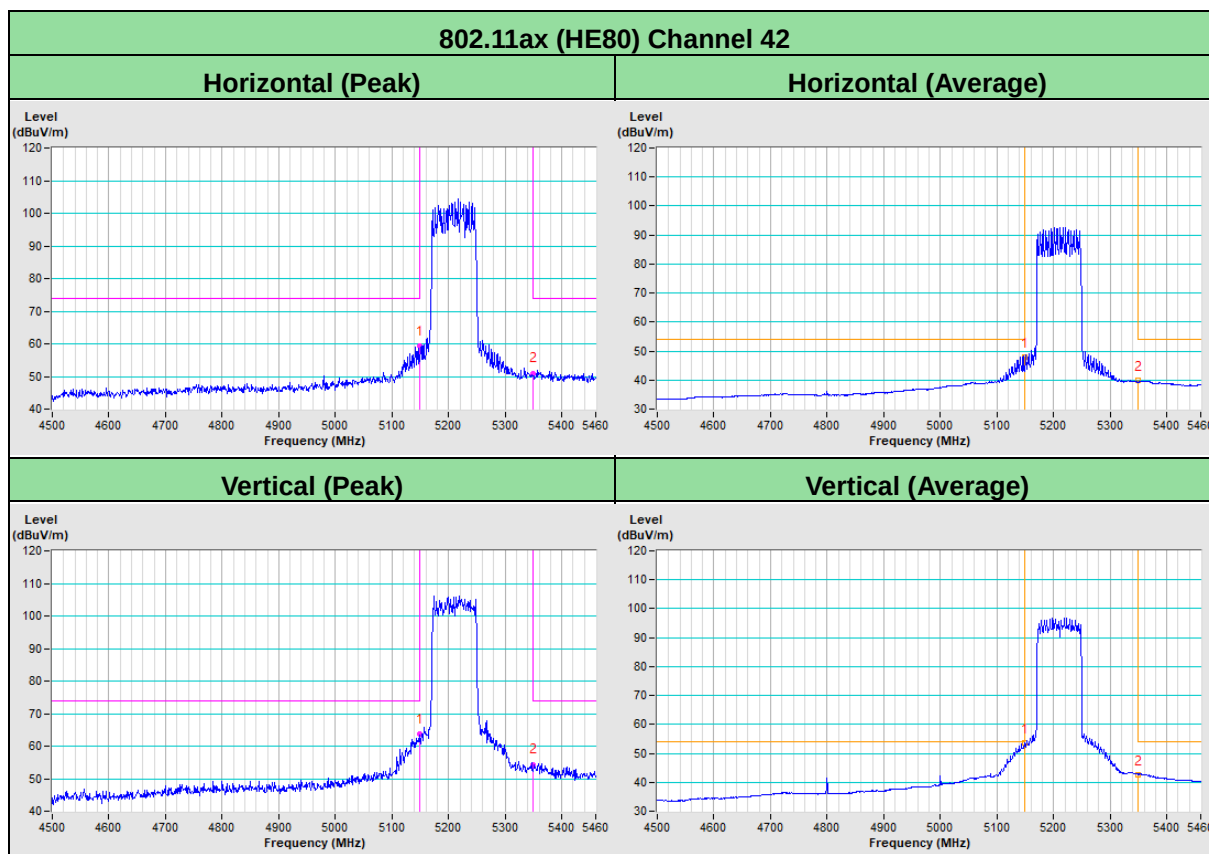


Annex B - Band-Edge Measurement (For U-NII-1, U-NII-2A, U-NII-2C band)









Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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The address and road map of all our labs can be found in our web site also.

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