FCC Test Report (WLAN)

Report No.:	RFBBQZ-WTW-P21060012-1
FCC ID:	PY321100531
Test Model:	MR70
Series Model:	MS70
Received Date:	2021/6/7
Test Date:	2021/10/9 ~ 2021/10/20
Issued Date:	2021/10/29
Applicant and Manufacturer:	NETGEAR, Inc.
Address:	350 East Plumeria Drive San Jose, CA 95134
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
FCC Registration / Designation Number:	723255 / TW2022

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Release Control Record

Issue No.	Description	Date Issued
RFBBQZ-WTW-P21060012-1	Original release.	2021/10/29

1 Certificate of Conformity

Product:	Mesh WiFi 6 Router, Mesh WiFi 6 Satellite
Brand:	NETGEAR
Test Model:	MR70
Series Model:	MS70
Sample Status:	Engineering sample
Applicant and Manufacturer:	NETGEAR, Inc.
Test Date:	2021/10/9 ~ 2021/10/20
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 : Vivian Huang , **Date:** 2021/10/29

Vivian Huang / Specialist

Approved by : , **Date:** 2021/10/29

Clark Lin / Technical 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)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -10.80dB at 0.26719 MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement*	Pass	Meet the requirement of limit. Minimum passing margin is -0.1 dB at 5470.00 MHz, 5919.07 MHz, 5149.30 MHz and 5466.00 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 ipex(MHF) not a standard connector.

Note:

1. For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOBE 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) (±)
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

Product	Mesh WiFi 6 Router, Mesh WiFi 6 Satellite
Brand	NETGEAR
Test Model	MR70
Series Model	MS70
Status of EUT	Engineering sample
Power Supply Rating	12 Vdc from power adapter
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode 1024QAM for OFDMA in 11ax HE mode
Modulation Technology	OFDM, OFDMA
Transfer Rate	802.11a: up to 54 Mbps 802.11n: up to 300 Mbps 802.11ac: up to 1733.3 Mbps 802.11ax: up to 2401.9 Mbps
Operating Frequency	5.18~5.32GHz, 5.50~5.72GHz, 5.745 ~ 5.825GHz
Number of Channel	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** **5.18 ~ 5.25 GHz:** 667.974 mW **5.25 ~ 5.32GHz:** 247.558 mW **5.5 ~ 5.72GHz:** 246.715 mW **5.745 ~ 5.825 GHz:** 868.573 mW **Beamforming Mode** **5.18 ~ 5.25 GHz:** 544.575 mW **5.25 ~ 5.32GHz:** 247.558 mW **5.5 ~ 5.72GHz:** 246.715 mW **5.745 ~ 5.825 GHz:** 867.187 mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter x1
Data Cable Supplied	NA

Note:

1. The EUT has two model names, which are identical to each other in all aspects except for the following information:

Product Name	Model Name	Description
Mesh WiFi 6 Router	MR70	Function: Master, WAN port and single GPHY
Mesh WiFi 6 Satellite	MS70	Function: Master+Client
Note: From the above models, the worst model was found in **MR70**.Therefore only the test data of the modes were recorded in this report.		

2. The EUT has below radios as following table:

Radio 1	Radio 2
WLAN 2.4GHz	WLAN 5GHz

3. Simultaneously transmission condition.

Condition	Technology	
1	WLAN (2.4GHz)_Ant0	WLAN (5GHz)_Ant1
2	WLAN (2.4GHz)_Ant1	WLAN (5GHz)_Ant0
Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.		

4. The EUT must be supplied one power adapter and following different models could be chosen as following table:

No.	Brand	Model name	Part Number	Spec	plug	Difference
1	NETGEAR	2ABB018F 1	332-10927-01 & 332-10927-02	Intput: 100-120Vac, 50/60Hz, 0.6A Output: 12Vdc, 1.5A Output Cable: Unshielded, 1.8m, Without core	US	Design are identical, the only difference is manufacture location.
2	NETGEAR	AD2076F10	332-10993-01 & 332-10993-03	Intput: 100-120Vac, 50/60Hz, 0.56A Output: 12Vdc, 1.5A Output Cable: Unshielded, 1.8m, Without core	US	Design are identical , the differences are: 1)manufacture location 2)-01 has BSMI logo, and -03 does not have BSMI logo.

Note:

1. From the above adapters, the worst Radiated Emissions was found in Adapter 2 and the worst Conducted Emissions test was found in Adapter 1. Therefore only the test data of the modes were recorded in this report.

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

Antenna NO.	RF Chain NO.	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connecter Type
2.4G_0	0	2.85	2.4~2.4835GHz	PIFA	ipex(MHF)
2.4G_1	1	2.8	2.4~2.4835GHz	PIFA	ipex(MHF)
5G_0	0	2.11	5.15~5.25GHz	PIFA	ipex(MHF)
		2.11	5.25~5.35GHz		
		2.45	5.47~5.725GHz		
		2.31	5.725~5.85GHz		
5G_1	1	2.82	5.15~5.25GHz	PIFA	ipex(MHF)
		2.82	5.25~5.35GHz		
		2.65	5.47~5.725GHz		
		2.74	5.725~5.85GHz		

6. The EUT incorporates a MIMO function:

5GHz Band		
MODULATION MODE	**TX & RX CONFIGURATION**	
802.11a	2TX	2RX
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
802.11ac (VHT20)	2TX	2RX
802.11ac (VHT40)	2TX	2RX
802.11ac (VHT80)	2TX	2RX
802.11ac (VHT160)	2TX	2RX
802.11ax (HE20)	2TX	2RX
802.11ax (HE40)	2TX	2RX
802.11ax (HE80)	2TX	2RX
802.11ax (HE160)	2TX	2RX

Note:

1. All of modulation mode support beamforming function except 802.11a 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)

7. 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.
8. 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) and 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) and 802.11ax (HE40):

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

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

Channel	Frequency	Channel	Frequency
42	5210 MHz	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) and 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) and 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) and 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) and 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 **RE<1G:** Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **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	157	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	157	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) (Output power only)		36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	MCS0
802.11ac (VHT40) (Output power only)		38 to 62	38, 46, 54, 62	OFDM	BPSK	MCS0
802.11ac (VHT80) (Output power only)		42, 58	42, 58	OFDM	BPSK	MCS0
802.11ac (VHT160) (Output power only)		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) (Output power only)		100 to 144	100, 116, 140, 144	OFDM	BPSK	MCS0
802.11ac (VHT40) (Output power only)		102 to 142	102, 110, 134, 142	OFDM	BPSK	MCS0
802.11ac (VHT80) (Output power only)		106 to 138	106, 122, 138	OFDM	BPSK	MCS0
802.11ac (VHT160) (Output power only)		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) (Output power only)		149 to 165	149, 157, 165	OFDM	BPSK	MCS0
802.11ac (VHT40) (Output power only)		151 to 159	151, 159	OFDM	BPSK	MCS0
802.11ac (VHT80) (Output power only)		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:

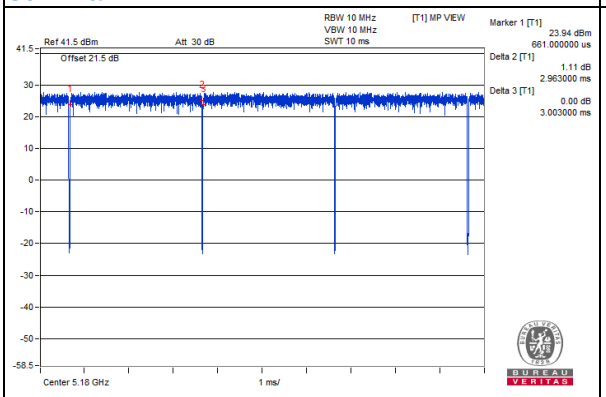
Applicable To	Environmental Conditions	Input Power	Tested By
RE≥1G	25deg. C, 75%RH	120Vac, 60Hz	Carter Lin
RE<1G	25deg. C, 68%RH	120Vac, 60Hz	Tom Yang
PLC	25deg. C, 68%RH	120Vac, 60Hz	Sampson Chen
APCM	25deg. C, 60%RH	120Vac, 60Hz	Leon Dai

3.3 Duty Cycle of Test Signal

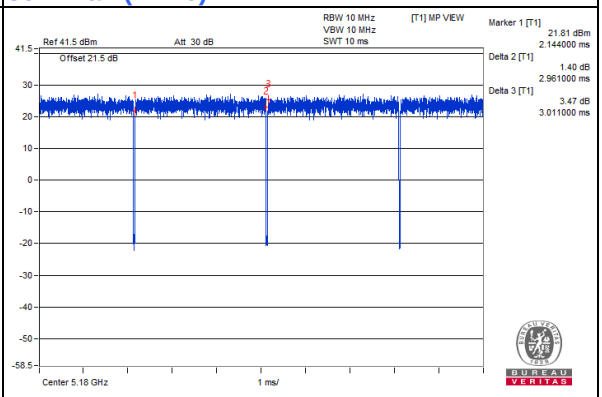
Duty cycle of test signal is ≥ 98 %, duty factor is not required.

802.11a: Duty cycle = 2.963 ms /3.003 ms=0.987
802.11ax (HE20): Duty cycle = 2.961 ms /3.011 ms=0.983
802.11ax (HE40): Duty cycle = 2.969 ms /3.007 ms=0.987
802.11ax (HE80): Duty cycle = 2.957 ms /2.997 ms=0.987
802.11ax (HE160): Duty cycle = 1.483 ms /1.508 ms=0.983

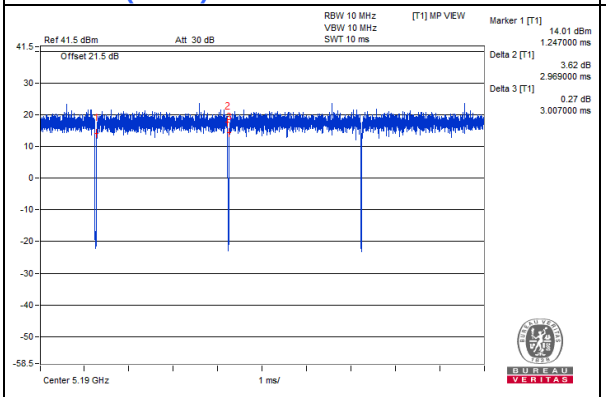
802.11a



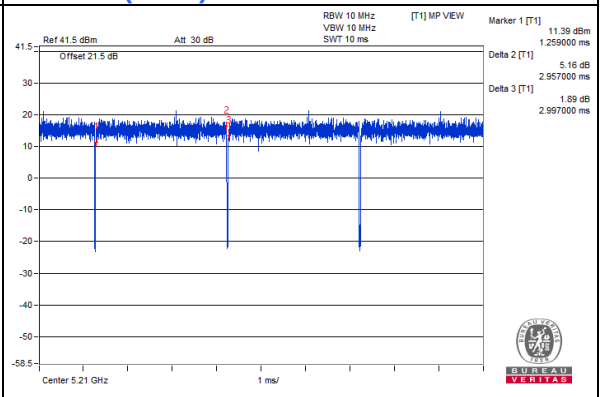
802.11ax (HE20)



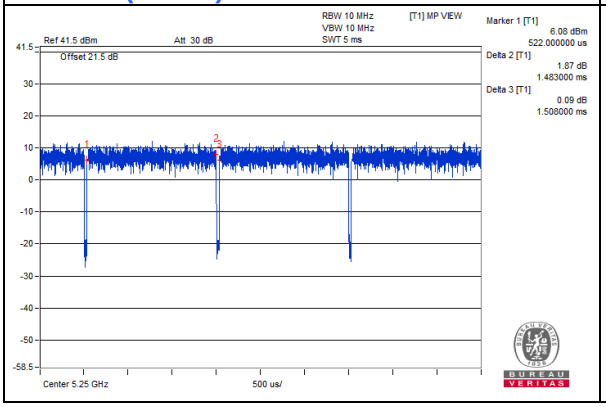
802.11ax (HE40)



802.11ax (HE80)



802.11ax (HE160)



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.

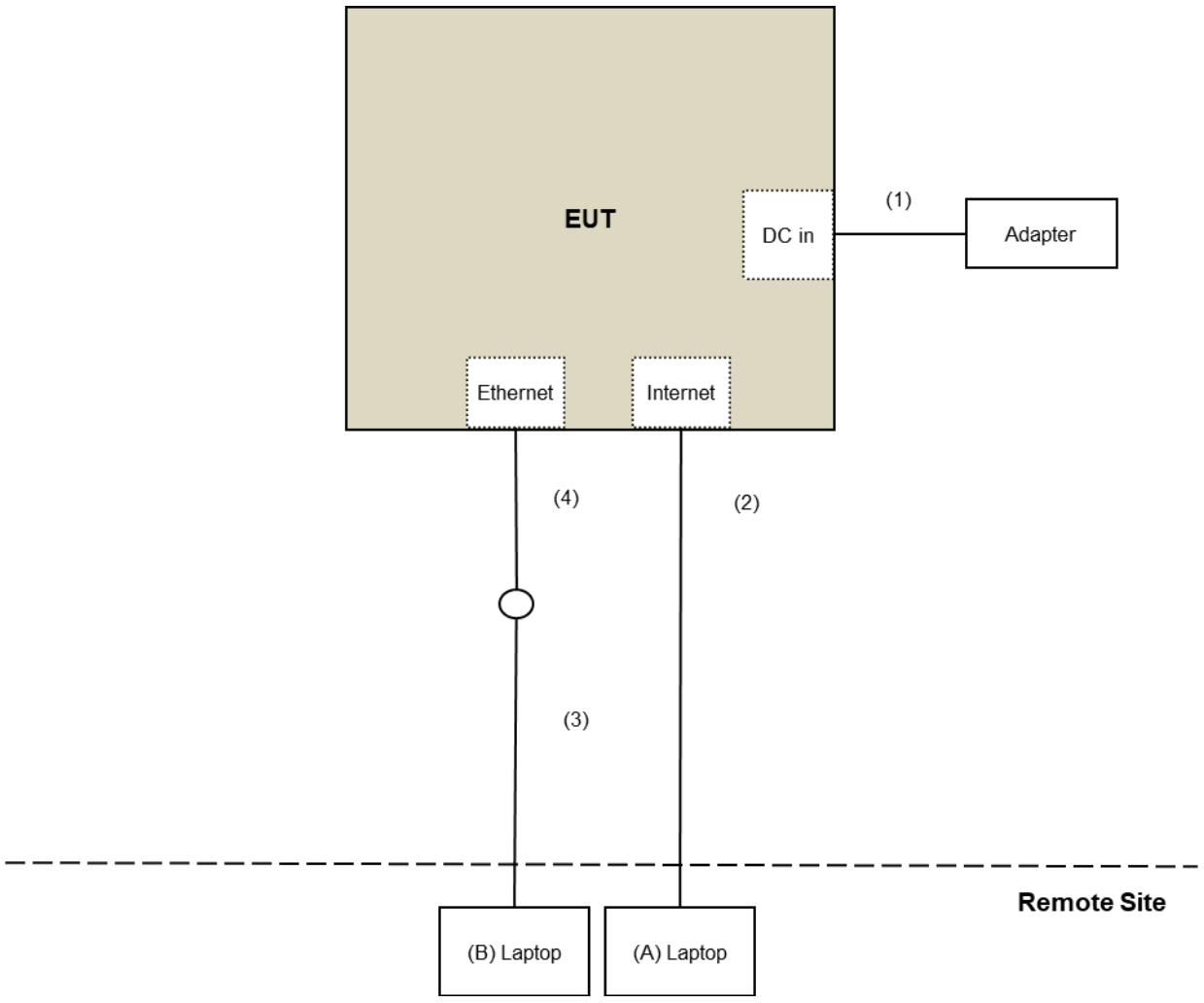
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Laptop	DELL	E5430	4YV4VY1	FCC DoC	Provided by Lab
B.	Laptop	DELL	E5430	HYV4VY1	FCC DoC	Provided by Lab

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	1.8	No	0	Supplied by client
2.	RJ-45 Cable	1	10	No	0	Provided by Lab
3.	RJ-45 Cable	1	10	No	0	Provided by Lab
4.	RJ-45 Cable	1	2	No	0	Supplied by client

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standard 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:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. 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 (dBμV/m)	AV:54 (dBμV/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(dBμV/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(dBμV/m) *1 PK:105.2 (dBμV/m) *2 PK: 110.8(dBμV/m) *3 PK:122.2 (dBμV/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:

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

4.1.2 Test Instruments

For Radiated emission & Bandedge & OOBE test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210202	2020/12/1	2021/11/30
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	NA	NA
Pre_Amplifier EMCI	EMC001340	980142	2021/5/24	2022/5/23
LOOP ANTENNA Electro-Metrics	EM-6879	264	2021/3/5	2022/3/4
RF Coaxial Cable JYEBO	5D-FB	LOOPCAB-001	2021/1/7	2022/1/6
RF Coaxial Cable JYEBO	5D-FB	LOOPCAB-002	2021/1/7	2022/1/6
Pre_Amplifier EMCI	EMC330N	980701	2021/3/10	2022/3/9
Trilog Broadband Antenna Schwarzbeck	VULB 9168	9168-406	2020/11/6	2021/11/5
RF Coaxial Cable COMMATE/PEWC	8D	966-4-1	2021/3/17	2022/3/16
RF Coaxial Cable COMMATE/PEWC	8D	966-4-2	2021/3/17	2022/3/16
RF Coaxial Cable COMMATE/PEWC	8D	966-4-3	2021/3/17	2022/3/16
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-03	2021/1/11	2022/1/10
Horn Antenna SCHWARZBECK	BBHA 9120D	9120D-783	2020/11/22	2021/11/21
Pre_Amplifier EMCI	EMC 12630 SE	980638	2021/4/7	2022/4/6
RF Cable-Frequency Range : 1-26.5GHz EMCI	EMC104-SM-SM-1200	160922	2020/12/25	2021/12/24
RF Coaxial Cable EMCI	EMC104-SM-SM-2000	180502	2021/4/26	2022/4/25
RF Coaxial Cable EMCI	EMC104-SM-SM-6000	180418	2021/4/26	2022/4/25
Pre_Amplifier EMCI	EMC184045SE	980387	2021/1/11	2022/1/10
Horn Antenna Schwarzbeck	BBHA 9170	BBHA9170519	2020/11/22	2021/11/21
RF Cable-Frequency range: 1-40GHz EMCI	EMC102-KM-KM-1200	160924	2021/1/11	2022/1/10
RF cable (40GHz) EMCI	EMC-KM-KM-4000	200214	2021/3/10	2022/3/9

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: 2021/10/9 ~ 2021/10/13

For other test items:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	101516	2021/3/8	2022/3/7
Power Meter Anritsu	ML2495A	1529002	2021/6/21	2022/6/20
Pulse Power Sensor Anritsu	MA2411B	1339443	2021/5/31	2022/5/30
Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	2021/4/13	2022/4/12
Software	ADT_RF Test Software V6.6.5.4	NA	NA	NA
AC Power Source GOOD WILL	6905S	1991551	NA	NA
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	2021/1/14	2022/1/13
True RMS Clamp Meter Fluke	325	31130711WS	2021/6/2	2022/6/1

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: 2021/10/20

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:

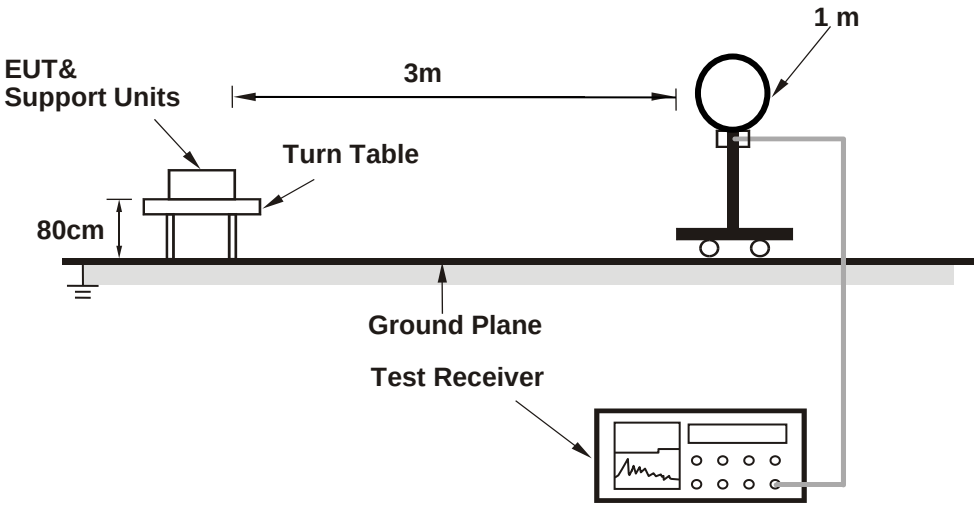
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 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

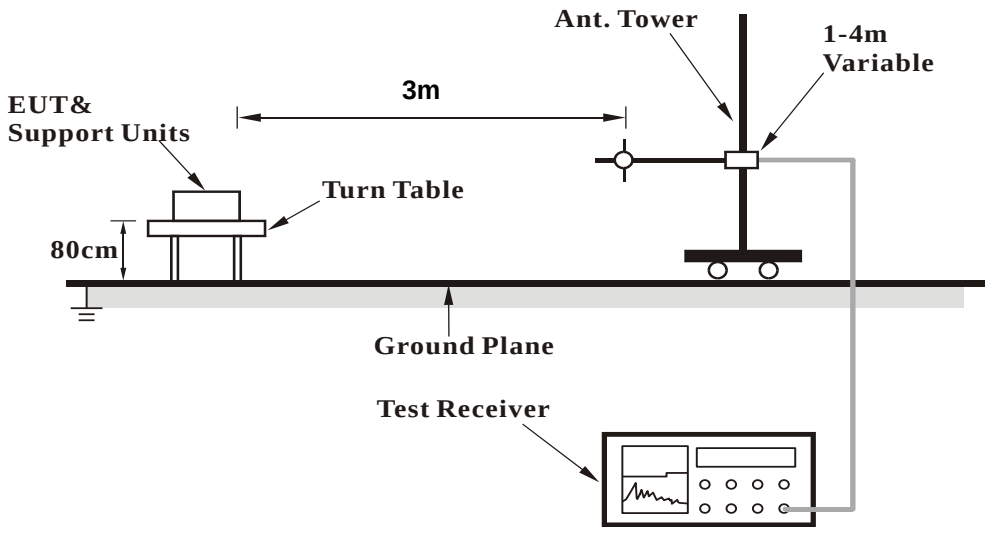
No deviation.

4.1.5 Test Setup

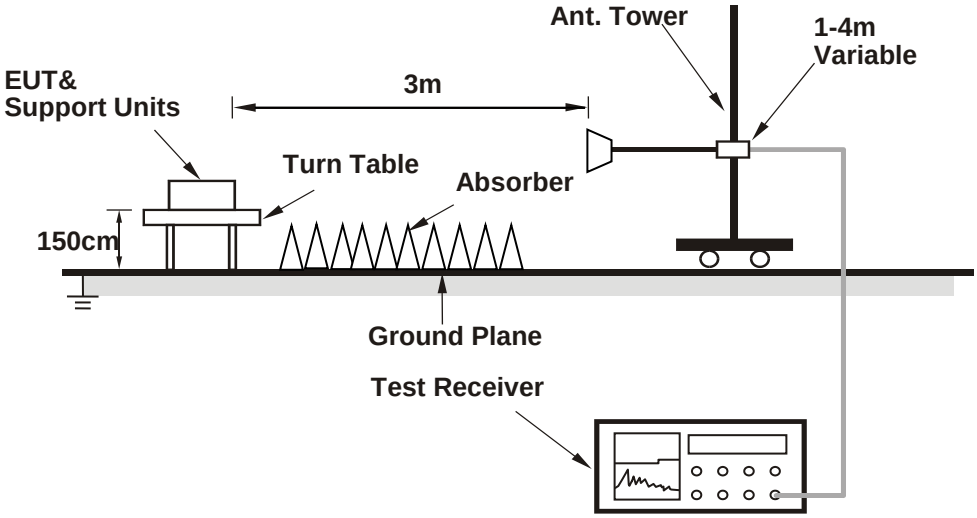
For Radiated emission below 30MHz



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

a. Connected the EUT with the Laptop which is placed on the testing table.
b. Controlling software (TOOL:Mtool 3.1.0.1) has been activated to set the EUT under transmission condition continuously.

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)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	5147.38	65.8 PK	74.0	-8.2	1.42 H	167	64.3	1.5
2	5147.38	48.3 AV	54.0	-5.7	1.42 H	167	46.8	1.5
3	*5180.00	111.1 PK			1.42 H	167	109.7	1.4
4	*5180.00	101.3 AV			1.42 H	167	99.9	1.4
5	#10360.00	62.2 PK	68.2	-6.0	3.97 H	354	51.5	10.7
6	15540.00	51.3 PK	74.0	-22.7	1.21 H	228	39.3	12.0
7	15540.00	40.4 AV	54.0	-13.6	1.21 H	228	28.4	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	5147.00	67.6 PK	74.0	-6.4	2.46 V	183	66.1	1.5
2	5147.00	53.4 AV	54.0	-0.6	2.46 V	183	51.9	1.5
3	*5180.00	116.5 PK			2.46 V	183	115.1	1.4
4	*5180.00	108.4 AV			2.46 V	183	107.0	1.4
5	#10360.00	61.9 PK	68.2	-6.3	1.99 V	76	51.2	10.7
6	15540.00	57.2 PK	74.0	-16.8	1.21 V	291	45.2	12.0
7	15540.00	48.2 AV	54.0	-5.8	1.21 V	291	36.2	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)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	65.3 PK	74.0	-8.7	1.37 H	177	63.8	1.5
2	5150.00	48.2 AV	54.0	-5.8	1.37 H	177	46.7	1.5
3	*5200.00	114.3 PK			1.37 H	177	112.7	1.6
4	*5200.00	104.5 AV			1.37 H	177	102.9	1.6
5	#10400.00	61.7 PK	68.2	-6.5	3.91 H	337	50.8	10.9
6	15600.00	52.0 PK	74.0	-22.0	1.32 H	215	40.0	12.0
7	15600.00	40.8 AV	54.0	-13.2	1.32 H	215	28.8	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	68.1 PK	74.0	-5.9	2.46 V	183	66.6	1.5
2	5150.00	53.6 AV	54.0	-0.4	2.46 V	183	52.1	1.5
3	*5200.00	121.0 PK			2.46 V	183	119.4	1.6
4	*5200.00	112.2 AV			2.46 V	183	110.6	1.6
5	#10400.00	61.9 PK	68.2	-6.3	1.91 V	88	51.0	10.9
6	15600.00	57.2 PK	74.0	-16.8	1.24 V	307	45.2	12.0
7	15600.00	48.6 AV	54.0	-5.4	1.24 V	307	36.6	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)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	*5240.00	112.4 PK			1.44 H	161	111.2	1.2
2	*5240.00	102.4 AV			1.44 H	161	101.2	1.2
3	5350.00	54.3 PK	74.0	-19.7	1.44 H	161	53.0	1.3
4	5350.00	42.8 AV	54.0	-11.2	1.44 H	161	41.5	1.3
5	#10480.00	61.9 PK	68.2	-6.3	4.00 H	348	51.0	10.9
6	15720.00	52.2 PK	74.0	-21.8	1.30 H	226	40.3	11.9
7	15720.00	40.9 AV	54.0	-13.1	1.30 H	226	29.0	11.9
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	*5240.00	118.8 PK			2.46 V	184	117.6	1.2
2	*5240.00	110.4 AV			2.46 V	184	109.2	1.2
3	5350.00	55.0 PK	74.0	-19.0	2.46 V	184	53.7	1.3
4	5350.00	43.6 AV	54.0	-10.4	2.46 V	184	42.3	1.3
5	#10480.00	61.2 PK	68.2	-7.0	1.97 V	68	50.3	10.9
6	15720.00	57.4 PK	74.0	-16.6	1.26 V	282	45.5	11.9
7	15720.00	48.5 AV	54.0	-5.5	1.26 V	282	36.6	11.9

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 802.11a	Channel	CH 52：5260 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	55.4 PK	74.0	-18.6	1.41 H	151	53.9	1.5
2	5150.00	44.0 AV	54.0	-10.0	1.41 H	151	42.5	1.5
3	*5260.00	111.0 PK			1.41 H	151	109.9	1.1
4	*5260.00	100.9 AV			1.41 H	151	99.8	1.1
5	#10520.00	61.7 PK	68.2	-6.5	4.00 H	360	50.8	10.9
6	15780.00	51.2 PK	74.0	-22.8	1.29 H	226	39.4	11.8
7	15780.00	40.3 AV	54.0	-13.7	1.29 H	226	28.5	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	55.8 PK	74.0	-18.2	2.47 V	184	54.3	1.5
2	5150.00	44.3 AV	54.0	-9.7	2.47 V	184	42.8	1.5
3	*5260.00	118.2 PK			2.47 V	184	117.1	1.1
4	*5260.00	109.6 AV			2.47 V	184	108.5	1.1
5	#10520.00	61.0 PK	68.2	-7.2	1.95 V	96	50.1	10.9
6	15780.00	57.8 PK	74.0	-16.2	1.29 V	302	46.0	11.8
7	15780.00	48.6 AV	54.0	-5.4	1.29 V	302	36.8	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 802.11a	Channel	CH 60：5300 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	111.3 PK			1.48 H	157	110.1	1.2
2	*5300.00	101.2 AV			1.48 H	157	100.0	1.2
3	10600.00	61.8 PK	74.0	-12.2	3.97 H	345	50.8	11.0
4	10600.00	50.1 AV	54.0	-3.9	3.97 H	345	39.1	11.0
5	15900.00	51.6 PK	74.0	-22.4	1.27 H	221	39.4	12.2
6	15900.00	40.6 AV	54.0	-13.4	1.27 H	221	28.4	12.2
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	*5300.00	118.1 PK			2.50 V	198	116.9	1.2
2	*5300.00	109.5 AV			2.50 V	198	108.3	1.2
3	10600.00	61.4 PK	74.0	-12.6	1.94 V	80	50.4	11.0
4	10600.00	49.5 AV	54.0	-4.5	1.94 V	80	38.5	11.0
5	15900.00	57.5 PK	74.0	-16.5	1.25 V	295	45.3	12.2
6	15900.00	48.6 AV	54.0	-5.4	1.25 V	295	36.4	12.2

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.

RF Mode	TX 802.11a	Channel	CH 64：5320 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	67.5 PK	74.0	-6.5	1.08 H	159	66.0	1.5
2	5150.00	49.4 AV	54.0	-4.6	1.08 H	159	47.9	1.5
3	*5320.00	111.7 PK			1.08 H	159	110.5	1.2
4	*5320.00	101.7 AV			1.08 H	159	100.5	1.2
5	10640.00	61.8 PK	74.0	-12.2	4.00 H	331	50.7	11.1
6	10640.00	50.3 AV	54.0	-3.7	4.00 H	331	39.2	11.1
7	15960.00	51.2 PK	74.0	-22.8	1.27 H	221	39.0	12.2
8	15960.00	40.1 AV	54.0	-13.9	1.27 H	221	27.9	12.2
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	*5320.00	117.0 PK			2.49 V	183	115.8	1.2
2	*5320.00	108.1 AV			2.49 V	183	106.9	1.2
3	5351.83	71.3 PK	74.0	-2.7	2.49 V	183	70.0	1.3
4	5351.83	53.5 AV	54.0	-0.5	2.49 V	183	52.2	1.3
5	10640.00	61.1 PK	74.0	-12.9	1.92 V	66	50.0	11.1
6	10640.00	49.4 AV	54.0	-4.6	1.92 V	66	38.3	11.1
7	15960.00	57.0 PK	74.0	-17.0	1.30 V	303	44.8	12.2
8	15960.00	48.2 AV	54.0	-5.8	1.30 V	303	36.0	12.2

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.

RF Mode	TX 802.11a	Channel	CH 100：5500 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	51.5 PK	74.0	-22.5	1.01 H	155	50.0	1.5
2	5460.00	39.4 AV	54.0	-14.6	1.01 H	155	37.9	1.5
3	#5470.00	55.4 PK	68.2	-12.8	1.01 H	155	53.9	1.5
4	*5500.00	105.2 PK			1.01 H	155	103.7	1.5
5	*5500.00	95.5 AV			1.01 H	155	94.0	1.5
6	11000.00	62.5 PK	74.0	-11.5	3.92 H	340	50.7	11.8
7	11000.00	50.6 AV	54.0	-3.4	3.92 H	340	38.8	11.8
8	#16500.00	51.4 PK	68.2	-16.8	1.21 H	223	37.3	14.1
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	5457.00	61.4 PK	74.0	-12.6	1.08 V	291	59.9	1.5
2	5457.00	45.7 AV	54.0	-8.3	1.08 V	291	44.2	1.5
3	5460.00	58.9 PK	74.0	-15.1	1.08 V	291	57.4	1.5
4	5460.00	47.2 AV	54.0	-6.8	1.08 V	291	45.7	1.5
5	#5470.00	68.0 PK	68.2	-0.2	1.08 V	291	66.5	1.5
6	*5500.00	115.1 PK			1.08 V	291	113.6	1.5
7	*5500.00	104.6 AV			1.08 V	291	103.1	1.5
8	11000.00	61.7 PK	74.0	-12.3	1.94 V	81	49.9	11.8
9	11000.00	49.8 AV	54.0	-4.2	1.94 V	81	38.0	11.8
10	#16500.00	56.9 PK	68.2	-11.3	1.30 V	295	42.8	14.1

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 116：5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	111.5 PK			1.40 H	158	109.8	1.7
2	*5580.00	101.3 AV			1.40 H	158	99.6	1.7
3	11160.00	60.0 PK	74.0	-14.0	3.60 H	0	48.1	11.9
4	11160.00	49.6 AV	54.0	-4.4	3.60 H	0	37.7	11.9
5	#16740.00	58.6 PK	68.2	-9.6	1.38 H	139	42.8	15.8
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	*5580.00	117.6 PK			1.21 V	278	115.9	1.7
2	*5580.00	109.2 AV			1.21 V	278	107.5	1.7
3	11160.00	61.6 PK	74.0	-12.4	1.88 V	66	49.7	11.9
4	11160.00	49.6 AV	54.0	-4.4	1.88 V	66	37.7	11.9
5	#16740.00	56.8 PK	68.2	-11.4	1.30 V	301	41.0	15.8

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 140：5700 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	110.8 PK			1.45 H	172	108.9	1.9
2	*5700.00	100.1 AV			1.45 H	172	98.2	1.9
3	#5725.00	55.9 PK	68.2	-12.3	1.45 H	172	53.9	2.0
4	11400.00	59.5 PK	74.0	-14.5	3.65 H	14	46.9	12.6
5	11400.00	49.0 AV	54.0	-5.0	3.65 H	14	36.4	12.6
6	#17100.00	59.1 PK	68.2	-9.1	1.41 H	141	42.7	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	*5700.00	117.0 PK			1.07 V	310	115.1	1.9
2	*5700.00	108.5 AV			1.07 V	310	106.6	1.9
3	#5725.00	67.8 PK	68.2	-0.4	1.07 V	310	65.8	2.0
4	11400.00	61.7 PK	74.0	-12.3	2.00 V	81	49.1	12.6
5	11400.00	49.8 AV	54.0	-4.2	2.00 V	81	37.2	12.6
6	#17100.00	56.8 PK	68.2	-11.4	1.28 V	307	40.4	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 144：5720 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	55.0 PK	74.0	-19.0	1.38 H	166	53.5	1.5
2	5460.00	43.0 AV	54.0	-11.0	1.38 H	166	41.5	1.5
3	#5470.00	55.8 PK	68.2	-12.4	1.38 H	166	54.3	1.5
4	*5720.00	111.2 PK			1.38 H	166	109.2	2.0
5	*5720.00	101.1 AV			1.38 H	166	99.1	2.0
6	#5850.00	53.6 PK	68.2	-14.6	1.38 H	166	51.3	2.3
7	11440.00	59.7 PK	74.0	-14.3	3.68 H	2	47.1	12.6
8	11440.00	48.9 AV	54.0	-5.1	3.68 H	2	36.3	12.6
9	#17160.00	58.8 PK	68.2	-9.4	1.39 H	148	42.2	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	55.2 PK	74.0	-18.8	1.11 V	311	53.7	1.5
2	5460.00	43.2 AV	54.0	-10.8	1.11 V	311	41.7	1.5
3	#5470.00	56.2 PK	68.2	-12.0	1.11 V	311	54.7	1.5
4	*5720.00	118.8 PK			1.11 V	311	116.8	2.0
5	*5720.00	110.0 AV			1.11 V	311	108.0	2.0
6	#5850.00	53.8 PK	68.2	-14.4	1.11 V	311	51.5	2.3
7	11440.00	61.3 PK	74.0	-12.7	1.90 V	79	48.7	12.6
8	11440.00	49.6 AV	54.0	-4.4	1.90 V	79	37.0	12.6
9	#17160.00	57.2 PK	68.2	-11.0	1.26 V	295	40.6	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 802.11a	Channel	CH 149：5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	#5648.56	59.1 PK	68.2	-9.1	3.97 H	286	57.3	1.8
2	*5745.00	117.7 PK			3.97 H	286	115.6	2.1
3	*5745.00	106.8 AV			3.97 H	286	104.7	2.1
4	#5943.10	52.1 PK	68.2	-16.1	3.97 H	286	49.8	2.3
5	11490.00	60.1 PK	74.0	-13.9	3.63 H	10	47.5	12.6
6	11490.00	49.6 AV	54.0	-4.4	3.63 H	10	37.0	12.6
7	#17235.00	58.7 PK	68.2	-9.5	1.43 H	149	41.9	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	#5643.34	66.6 PK	68.2	-1.6	1.04 V	293	64.8	1.8
2	*5745.00	123.7 PK			1.04 V	293	121.6	2.1
3	*5745.00	113.4 AV			1.04 V	293	111.3	2.1
4	#5940.55	54.9 PK	68.2	-13.3	1.04 V	293	52.6	2.3
5	11490.00	61.2 PK	74.0	-12.8	1.96 V	67	48.6	12.6
6	11490.00	49.3 AV	54.0	-4.7	1.96 V	67	36.7	12.6
7	#17235.00	57.1 PK	68.2	-11.1	1.30 V	299	40.3	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 157：5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	#5642.70	52.6 PK	68.2	-15.6	3.81 H	297	50.8	1.8
2	*5785.00	117.0 PK			3.81 H	297	114.8	2.2
3	*5785.00	105.9 AV			3.81 H	297	103.7	2.2
4	#5938.23	52.3 PK	68.2	-15.9	3.81 H	297	50.0	2.3
5	11570.00	59.8 PK	74.0	-14.2	3.66 H	6	47.4	12.4
6	11570.00	49.3 AV	54.0	-4.7	3.66 H	6	36.9	12.4
7	#17355.00	58.8 PK	68.2	-9.4	1.40 H	137	41.3	17.5
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	#5644.42	61.6 PK	68.2	-6.6	1.05 V	292	59.8	1.8
2	*5785.00	123.6 PK			1.05 V	292	121.4	2.2
3	*5785.00	113.2 AV			1.05 V	292	111.0	2.2
4	#5928.53	58.0 PK	68.2	-10.2	1.05 V	292	55.8	2.2
5	11570.00	62.3 PK	74.0	-11.7	2.02 V	253	49.9	12.4
6	11570.00	48.9 AV	54.0	-5.1	2.02 V	253	36.5	12.4
7	#17355.00	65.7 PK	68.2	-2.5	1.09 V	206	48.2	17.5

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 802.11a	Channel	CH 165：5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	#5573.16	52.2 PK	68.2	-16.0	3.88 H	301	50.5	1.7
2	*5825.00	117.7 PK			3.88 H	301	115.5	2.2
3	*5825.00	107.1 AV			3.88 H	301	104.9	2.2
4	#5925.12	58.2 PK	68.2	-10.0	3.88 H	301	56.0	2.2
5	11650.00	59.4 PK	74.0	-14.6	3.61 H	6	47.1	12.3
6	11650.00	49.0 AV	54.0	-5.0	3.61 H	6	36.7	12.3
7	#17475.00	59.2 PK	68.2	-9.0	1.42 H	144	40.8	18.4
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	#5638.75	56.6 PK	68.2	-11.6	1.01 V	291	54.8	1.8
2	*5825.00	122.9 PK			1.01 V	291	120.7	2.2
3	*5825.00	113.0 AV			1.01 V	291	110.8	2.2
4	#5927.19	66.3 PK	68.2	-1.9	1.01 V	291	64.1	2.2
5	11650.00	62.1 PK	74.0	-11.9	2.07 V	262	49.8	12.3
6	11650.00	48.5 AV	54.0	-5.5	2.07 V	262	36.2	12.3
7	#17475.00	65.8 PK	68.2	-2.4	1.13 V	212	47.4	18.4

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 36：5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	60.0 PK	74.0	-14.0	1.16 H	173	58.5	1.5
2	5150.00	49.0 AV	54.0	-5.0	1.16 H	173	47.5	1.5
3	*5180.00	111.7 PK			1.16 H	173	110.3	1.4
4	*5180.00	101.3 AV			1.16 H	173	99.9	1.4
5	#10360.00	57.8 PK	68.2	-10.4	3.75 H	359	47.1	10.7
6	15540.00	51.8 PK	74.0	-22.2	1.25 H	230	39.8	12.0
7	15540.00	40.9 AV	54.0	-13.1	1.25 H	230	28.9	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	66.8 PK	74.0	-7.2	1.11 V	304	65.3	1.5
2	5150.00	53.6 AV	54.0	-0.4	1.11 V	304	52.1	1.5
3	*5180.00	118.9 PK			1.11 V	304	117.5	1.4
4	*5180.00	107.0 AV			1.11 V	304	105.6	1.4
5	#10360.00	57.5 PK	68.2	-10.7	1.94 V	80	46.8	10.7
6	15540.00	53.5 PK	74.0	-20.5	1.25 V	297	41.5	12.0
7	15540.00	45.2 AV	54.0	-8.8	1.25 V	297	33.2	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)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	64.8 PK	74.0	-9.2	1.36 H	159	63.3	1.5
2	5150.00	48.5 AV	54.0	-5.5	1.36 H	159	47.0	1.5
3	*5200.00	113.8 PK			1.36 H	159	112.2	1.6
4	*5200.00	101.7 AV			1.36 H	159	100.1	1.6
5	#10400.00	57.6 PK	68.2	-10.6	3.70 H	360	46.7	10.9
6	15600.00	52.4 PK	74.0	-21.6	1.22 H	241	40.4	12.0
7	15600.00	41.4 AV	54.0	-12.6	1.22 H	241	29.4	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	67.3 PK	74.0	-6.7	1.11 V	304	65.8	1.5
2	5150.00	53.5 AV	54.0	-0.5	1.11 V	304	52.0	1.5
3	*5200.00	121.5 PK			1.11 V	304	119.9	1.6
4	*5200.00	109.8 AV			1.11 V	304	108.2	1.6
5	#10400.00	57.6 PK	68.2	-10.6	1.99 V	73	46.7	10.9
6	15600.00	53.6 PK	74.0	-20.4	1.26 V	308	41.6	12.0
7	15600.00	45.1 AV	54.0	-8.9	1.26 V	308	33.1	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)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	*5240.00	113.7 PK			1.40 H	151	112.5	1.2
2	*5240.00	101.5 AV			1.40 H	151	100.3	1.2
3	5350.00	54.1 PK	74.0	-19.9	1.40 H	151	52.8	1.3
4	5350.00	42.7 AV	54.0	-11.3	1.40 H	151	41.4	1.3
5	#10480.00	58.3 PK	68.2	-9.9	3.72 H	360	47.4	10.9
6	15720.00	51.9 PK	74.0	-22.1	1.28 H	234	40.0	11.9
7	15720.00	41.2 AV	54.0	-12.8	1.28 H	234	29.3	11.9
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	*5240.00	121.2 PK			1.05 V	310	120.0	1.2
2	*5240.00	109.4 AV			1.05 V	310	108.2	1.2
3	5350.00	54.4 PK	74.0	-19.6	1.05 V	310	53.1	1.3
4	5350.00	43.1 AV	54.0	-10.9	1.05 V	310	41.8	1.3
5	#10480.00	57.0 PK	68.2	-11.2	1.97 V	92	46.1	10.9
6	15720.00	53.6 PK	74.0	-20.4	1.25 V	305	41.7	11.9
7	15720.00	45.1 AV	54.0	-8.9	1.25 V	305	33.2	11.9

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 52：5260 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	54.8 PK	74.0	-19.2	1.42 H	182	53.3	1.5
2	5150.00	44.7 AV	54.0	-9.3	1.42 H	182	43.2	1.5
3	*5260.00	114.0 PK			1.42 H	182	112.9	1.1
4	*5260.00	101.8 AV			1.42 H	182	100.7	1.1
5	#10520.00	58.1 PK	68.2	-10.1	3.75 H	354	47.2	10.9
6	15780.00	52.1 PK	74.0	-21.9	1.27 H	234	40.3	11.8
7	15780.00	41.2 AV	54.0	-12.8	1.27 H	234	29.4	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	55.3 PK	74.0	-18.7	1.13 V	294	53.8	1.5
2	5150.00	45.5 AV	54.0	-8.5	1.13 V	294	44.0	1.5
3	*5260.00	120.8 PK			1.13 V	294	119.7	1.1
4	*5260.00	109.2 AV			1.13 V	294	108.1	1.1
5	#10520.00	57.1 PK	68.2	-11.1	1.91 V	74	46.2	10.9
6	15780.00	53.2 PK	74.0	-20.8	1.30 V	296	41.4	11.8
7	15780.00	45.1 AV	54.0	-8.9	1.30 V	296	33.3	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 (HE20)	Channel	CH 60：5300 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	113.5 PK			1.36 H	182	112.3	1.2
2	*5300.00	101.4 AV			1.36 H	182	100.2	1.2
3	10600.00	58.4 PK	74.0	-15.6	3.78 H	345	47.4	11.0
4	10600.00	47.2 AV	54.0	-6.8	3.78 H	345	36.2	11.0
5	15900.00	51.9 PK	74.0	-22.1	1.25 H	241	39.7	12.2
6	15900.00	41.3 AV	54.0	-12.7	1.25 H	241	29.1	12.2
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	*5300.00	120.8 PK			1.18 V	308	119.6	1.2
2	*5300.00	109.2 AV			1.18 V	308	108.0	1.2
3	10600.00	57.3 PK	74.0	-16.7	1.96 V	80	46.3	11.0
4	10600.00	46.2 AV	54.0	-7.8	1.96 V	80	35.2	11.0
5	15900.00	53.5 PK	74.0	-20.5	1.30 V	283	41.3	12.2
6	15900.00	45.2 AV	54.0	-8.8	1.30 V	283	33.0	12.2

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.

RF Mode	TX 802.11ax (HE20)	Channel	CH 64：5320 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	112.4 PK			1.16 H	163	111.2	1.2
2	*5320.00	102.5 AV			1.16 H	163	101.3	1.2
3	5350.00	63.8 PK	74.0	-10.2	1.16 H	163	62.5	1.3
4	5350.00	50.7 AV	54.0	-3.3	1.16 H	163	49.4	1.3
5	10640.00	58.4 PK	74.0	-15.6	3.81 H	360	47.3	11.1
6	10640.00	47.2 AV	54.0	-6.8	3.81 H	360	36.1	11.1
7	15960.00	52.4 PK	74.0	-21.6	1.27 H	241	40.2	12.2
8	15960.00	41.3 AV	54.0	-12.7	1.27 H	241	29.1	12.2
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	*5320.00	119.3 PK			1.11 V	304	118.1	1.2
2	*5320.00	108.2 AV			1.11 V	304	107.0	1.2
3	5351.27	67.6 PK	74.0	-6.4	1.11 V	304	66.3	1.3
4	5351.27	53.7 AV	54.0	-0.3	1.11 V	304	52.4	1.3
5	10640.00	57.1 PK	74.0	-16.9	1.94 V	68	46.0	11.1
6	10640.00	45.8 AV	54.0	-8.2	1.94 V	68	34.7	11.1
7	15960.00	53.6 PK	74.0	-20.4	1.21 V	313	41.4	12.2
8	15960.00	45.5 AV	54.0	-8.5	1.21 V	313	33.3	12.2

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.

RF Mode	TX 802.11ax (HE20)	Channel	CH 100：5500 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	53.0 PK	74.0	-21.0	1.17 H	162	51.5	1.5
2	5460.00	42.3 AV	54.0	-11.7	1.17 H	162	40.8	1.5
3	#5467.90	56.7 PK	68.2	-11.5	1.17 H	162	55.2	1.5
4	*5500.00	109.6 PK			1.17 H	162	108.1	1.5
5	*5500.00	99.0 AV			1.17 H	162	97.5	1.5
6	11000.00	57.3 PK	74.0	-16.7	3.81 H	360	45.5	11.8
7	11000.00	46.5 AV	54.0	-7.5	3.81 H	360	34.7	11.8
8	#16500.00	51.4 PK	68.2	-16.8	1.27 H	224	37.3	14.1
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	5459.20	62.1 PK	74.0	-11.9	1.01 V	290	60.6	1.5
2	5459.20	47.0 AV	54.0	-7.0	1.01 V	290	45.5	1.5
3	**#5470.00**	**68.1 PK**	**68.2**	**-0.1**	**1.01 V**	**290**	**66.6**	**1.5**
4	*5500.00	117.9 PK			1.01 V	290	116.4	1.5
5	*5500.00	105.5 AV			1.01 V	290	104.0	1.5
6	11000.00	58.1 PK	74.0	-15.9	1.94 V	84	46.3	11.8
7	11000.00	46.5 AV	54.0	-7.5	1.94 V	84	34.7	11.8
8	#16500.00	53.3 PK	68.2	-14.9	1.20 V	281	39.2	14.1

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 116：5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	113.6 PK			1.41 H	175	111.9	1.7
2	*5580.00	101.2 AV			1.41 H	175	99.5	1.7
3	11160.00	58.1 PK	74.0	-15.9	3.81 H	360	46.2	11.9
4	11160.00	47.0 AV	54.0	-7.0	3.81 H	360	35.1	11.9
5	#16740.00	51.4 PK	68.2	-16.8	1.28 H	216	35.6	15.8
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	*5580.00	120.7 PK			1.08 V	279	119.0	1.7
2	*5580.00	109.0 AV			1.08 V	279	107.3	1.7
3	11160.00	57.5 PK	74.0	-16.5	1.94 V	83	45.6	11.9
4	11160.00	46.0 AV	54.0	-8.0	1.94 V	83	34.1	11.9
5	#16740.00	53.5 PK	68.2	-14.7	1.21 V	293	37.7	15.8

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 140：5700 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	108.4 PK			1.37 H	155	106.5	1.9
2	*5700.00	97.3 AV			1.37 H	155	95.4	1.9
3	#5725.00	63.3 PK	68.2	-4.9	1.37 H	155	61.3	2.0
4	11400.00	57.4 PK	74.0	-16.6	3.70 H	345	44.8	12.6
5	11400.00	46.4 AV	54.0	-7.6	3.70 H	345	33.8	12.6
6	#17100.00	51.9 PK	68.2	-16.3	1.21 H	216	35.5	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	*5700.00	116.3 PK			1.04 V	292	114.4	1.9
2	*5700.00	105.1 AV			1.04 V	292	103.2	1.9
3	#5725.00	67.9 PK	68.2	-0.3	1.04 V	292	65.9	2.0
4	11400.00	57.3 PK	74.0	-16.7	1.95 V	90	44.7	12.6
5	11400.00	45.9 AV	54.0	-8.1	1.95 V	90	33.3	12.6
6	#17100.00	52.8 PK	68.2	-15.4	1.29 V	289	36.4	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 144：5720 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	56.5 PK	74.0	-17.5	1.46 H	152	55.0	1.5
2	5460.00	44.2 AV	54.0	-9.8	1.46 H	152	42.7	1.5
3	#5470.00	56.7 PK	68.2	-11.5	1.46 H	152	55.2	1.5
4	*5720.00	113.6 PK			1.46 H	152	111.6	2.0
5	*5720.00	101.4 AV			1.46 H	152	99.4	2.0
6	#5850.00	55.2 PK	68.2	-13.0	1.46 H	152	52.9	2.3
7	11440.00	57.7 PK	74.0	-16.3	3.75 H	360	45.1	12.6
8	11440.00	47.0 AV	54.0	-7.0	3.75 H	360	34.4	12.6
9	#17160.00	52.1 PK	68.2	-16.1	1.26 H	222	35.5	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	57.2 PK	74.0	-16.8	1.06 V	292	55.7	1.5
2	5460.00	44.6 AV	54.0	-9.4	1.06 V	292	43.1	1.5
3	#5470.00	57.5 PK	68.2	-10.7	1.06 V	292	56.0	1.5
4	*5720.00	121.7 PK			1.06 V	292	119.7	2.0
5	*5720.00	109.7 AV			1.06 V	292	107.7	2.0
6	#5850.00	55.8 PK	68.2	-12.4	1.06 V	292	53.5	2.3
7	11440.00	57.4 PK	74.0	-16.6	1.96 V	73	44.8	12.6
8	11440.00	46.1 AV	54.0	-7.9	1.96 V	73	33.5	12.6
9	#17160.00	53.5 PK	68.2	-14.7	1.19 V	283	36.9	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 (HE20)	Channel	CH 149：5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	#5649.37	62.1 PK	68.2	-6.1	3.93 H	311	60.3	1.8
2	*5745.00	118.6 PK			3.93 H	311	116.5	2.1
3	*5745.00	105.6 AV			3.93 H	311	103.5	2.1
4	#5949.56	52.8 PK	68.2	-15.4	3.93 H	311	50.5	2.3
5	11490.00	57.7 PK	74.0	-16.3	3.72 H	358	45.1	12.6
6	11490.00	46.9 AV	54.0	-7.1	3.72 H	358	34.3	12.6
7	#17235.00	51.9 PK	68.2	-16.3	1.19 H	238	35.1	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	#5646.48	64.2 PK	68.2	-4.0	1.00 V	291	62.4	1.8
2	*5745.00	123.3 PK			1.00 V	291	121.2	2.1
3	*5745.00	111.6 AV			1.00 V	291	109.5	2.1
4	#5993.57	55.9 PK	68.2	-12.3	1.00 V	291	53.6	2.3
5	11490.00	56.8 PK	74.0	-17.2	1.93 V	70	44.2	12.6
6	11490.00	45.7 AV	54.0	-8.3	1.93 V	70	33.1	12.6
7	#17235.00	53.0 PK	68.2	-15.2	1.30 V	297	36.2	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 802.11ax (HE20)	Channel	CH 157：5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	#5649.43	52.6 PK	68.2	-15.6	3.98 H	299	50.8	1.8
2	*5785.00	119.0 PK			3.98 H	299	116.8	2.2
3	*5785.00	105.8 AV			3.98 H	299	103.6	2.2
4	#5926.82	53.6 PK	68.2	-14.6	3.98 H	299	51.4	2.2
5	11570.00	57.4 PK	74.0	-16.6	3.75 H	350	45.0	12.4
6	11570.00	46.4 AV	54.0	-7.6	3.75 H	350	34.0	12.4
7	#17355.00	52.2 PK	68.2	-16.0	1.31 H	224	34.7	17.5
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	#5649.24	64.2 PK	68.2	-4.0	1.02 V	295	62.4	1.8
2	*5785.00	124.3 PK			1.02 V	295	122.1	2.2
3	*5785.00	112.2 AV			1.02 V	295	110.0	2.2
4	#5925.32	65.1 PK	68.2	-3.1	1.02 V	295	62.9	2.2
5	11570.00	57.8 PK	74.0	-16.2	1.94 V	95	45.4	12.4
6	11570.00	46.2 AV	54.0	-7.8	1.94 V	95	33.8	12.4
7	#17355.00	53.6 PK	68.2	-14.6	1.28 V	291	36.1	17.5

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 (HE20)	Channel	CH 165：5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	#5598.75	52.9 PK	68.2	-15.3	3.94 H	296	51.2	1.7
2	*5825.00	118.3 PK			3.94 H	296	116.1	2.2
3	*5825.00	105.0 AV			3.94 H	296	102.8	2.2
4	#5926.54	59.7 PK	68.2	-8.5	3.94 H	296	57.5	2.2
5	11650.00	58.3 PK	74.0	-15.7	3.71 H	360	46.0	12.3
6	11650.00	47.2 AV	54.0	-6.8	3.71 H	360	34.9	12.3
7	#17475.00	52.0 PK	68.2	-16.2	1.29 H	219	33.6	18.4
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	#5580.92	58.0 PK	68.2	-10.2	1.04 V	292	56.3	1.7
2	*5825.00	124.4 PK			1.04 V	292	122.2	2.2
3	*5825.00	111.7 AV			1.04 V	292	109.5	2.2
4	**#5919.07**	**72.5 PK**	**72.6**	**-0.1**	**1.04 V**	**292**	**70.3**	**2.2**
5	#5929.17	67.0 PK	68.2	-1.2	1.04 V	292	64.8	2.2
6	11650.00	57.2 PK	74.0	-16.8	1.97 V	91	44.9	12.3
7	11650.00	46.0 AV	54.0	-8.0	1.97 V	91	33.7	12.3
8	#17475.00	53.5 PK	68.2	-14.7	1.30 V	287	35.1	18.4

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 38：5190 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	58.4 PK	74.0	-15.6	1.23 H	167	56.9	1.5
2	5150.00	46.0 AV	54.0	-8.0	1.23 H	167	44.5	1.5
3	*5190.00	104.5 PK			1.23 H	167	103.1	1.4
4	*5190.00	95.0 AV			1.23 H	167	93.6	1.4
5	#10380.00	55.6 PK	68.2	-12.6	3.72 H	360	44.8	10.8
6	15570.00	52.5 PK	74.0	-21.5	1.25 H	233	40.4	12.1
7	15570.00	41.2 AV	54.0	-12.8	1.25 H	233	29.1	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	5148.80	64.8 PK	74.0	-9.2	1.02 V	305	63.3	1.5
2	5148.80	53.8 AV	54.0	-0.2	1.02 V	305	52.3	1.5
3	*5190.00	112.5 PK			1.02 V	305	111.1	1.4
4	*5190.00	100.2 AV			1.02 V	305	98.8	1.4
5	#10380.00	55.3 PK	68.2	-12.9	1.95 V	69	44.5	10.8
6	15570.00	51.4 PK	74.0	-22.6	1.26 V	303	39.3	12.1
7	15570.00	43.2 AV	54.0	-10.8	1.26 V	303	31.1	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)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	62.1 PK	74.0	-11.9	1.44 H	155	60.6	1.5
2	5150.00	47.6 AV	54.0	-6.4	1.44 H	155	46.1	1.5
3	*5230.00	111.3 PK			1.44 H	155	110.0	1.3
4	*5230.00	98.2 AV			1.44 H	155	96.9	1.3
5	#10460.00	55.2 PK	68.2	-13.0	3.71 H	360	44.3	10.9
6	15690.00	52.4 PK	74.0	-21.6	1.24 H	220	40.5	11.9
7	15690.00	41.0 AV	54.0	-13.0	1.24 H	220	29.1	11.9
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	5150.00	68.0 PK	74.0	-6.0	1.02 V	305	66.5	1.5
2	5150.00	53.6 AV	54.0	-0.4	1.02 V	305	52.1	1.5
3	*5230.00	119.1 PK			1.02 V	305	117.8	1.3
4	*5230.00	106.8 AV			1.02 V	305	105.5	1.3
5	#10460.00	55.8 PK	68.2	-12.4	1.99 V	67	44.9	10.9
6	15690.00	51.5 PK	74.0	-22.5	1.30 V	291	39.6	11.9
7	15690.00	43.4 AV	54.0	-10.6	1.30 V	291	31.5	11.9

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 54：5270 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	*5270.00	113.9 PK			1.47 H	162	112.8	1.1
2	*5270.00	98.7 AV			1.47 H	162	97.6	1.1
3	5350.97	61.8 PK	74.0	-12.2	1.47 H	162	60.5	1.3
4	5350.97	47.4 AV	54.0	-6.6	1.47 H	162	46.1	1.3
5	#10540.00	55.8 PK	68.2	-12.4	3.71 H	360	44.8	11.0
6	15810.00	52.3 PK	74.0	-21.7	1.20 H	242	40.5	11.8
7	15810.00	41.2 AV	54.0	-12.8	1.20 H	242	29.4	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	*5270.00	118.7 PK			1.02 V	305	117.6	1.1
2	*5270.00	106.7 AV			1.02 V	305	105.6	1.1
3	5350.97	66.5 PK	74.0	-7.5	1.02 V	305	65.2	1.3
4	5350.97	53.8 AV	54.0	-0.2	1.02 V	305	52.5	1.3
5	#10540.00	55.5 PK	68.2	-12.7	2.00 V	74	44.5	11.0
6	15810.00	51.6 PK	74.0	-22.4	1.22 V	288	39.8	11.8
7	15810.00	43.6 AV	54.0	-10.4	1.22 V	288	31.8	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 (HE40)	Channel	CH 62：5310 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	106.9 PK			1.09 H	165	105.7	1.2
2	*5310.00	96.8 AV			1.09 H	165	95.6	1.2
3	5350.00	63.5 PK	74.0	-10.5	1.09 H	165	62.2	1.3
4	5350.00	49.8 AV	54.0	-4.2	1.09 H	165	48.5	1.3
5	10620.00	56.1 PK	74.0	-17.9	3.76 H	360	45.0	11.1
6	10620.00	44.5 AV	54.0	-9.5	3.76 H	360	33.4	11.1
7	15930.00	52.9 PK	74.0	-21.1	1.29 H	242	40.8	12.1
8	15930.00	41.5 AV	54.0	-12.5	1.29 H	242	29.4	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	*5310.00	112.3 PK			1.02 V	305	111.1	1.2
2	*5310.00	100.3 AV			1.02 V	305	99.1	1.2
3	5350.00	65.5 PK	74.0	-8.5	1.02 V	305	64.2	1.3
4	5350.00	53.7 AV	54.0	-0.3	1.02 V	305	52.4	1.3
5	10620.00	55.2 PK	74.0	-18.8	1.93 V	60	44.1	11.1
6	10620.00	44.3 AV	54.0	-9.7	1.93 V	60	33.2	11.1
7	15930.00	51.6 PK	74.0	-22.4	1.26 V	312	39.5	12.1
8	15930.00	43.2 AV	54.0	-10.8	1.26 V	312	31.1	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.

RF Mode	TX 802.11ax (HE40)	Channel	CH 102：5510 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	54.1 PK	74.0	-19.9	1.21 H	159	52.6	1.5
2	5460.00	44.9 AV	54.0	-9.1	1.21 H	159	43.4	1.5
3	#5467.70	61.7 PK	68.2	-6.5	1.21 H	159	60.2	1.5
4	*5510.00	105.2 PK			1.21 H	159	103.7	1.5
5	*5510.00	95.1 AV			1.21 H	159	93.6	1.5
6	11020.00	56.2 PK	74.0	-17.8	3.72 H	360	44.4	11.8
7	11020.00	44.7 AV	54.0	-9.3	3.72 H	360	32.9	11.8
8	#16530.00	52.5 PK	68.2	-15.7	1.20 H	243	38.2	14.3
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	5458.30	63.6 PK	74.0	-10.4	1.10 V	292	62.1	1.5
2	5458.30	49.5 AV	54.0	-4.5	1.10 V	292	48.0	1.5
3	**#5470.00**	**68.1 PK**	**68.2**	**-0.1**	**1.10 V**	**292**	**66.6**	**1.5**
4	*5510.00	113.6 PK			1.10 V	292	112.1	1.5
5	*5510.00	101.1 AV			1.10 V	292	99.6	1.5
6	11020.00	55.5 PK	74.0	-18.5	1.94 V	85	43.7	11.8
7	11020.00	44.1 AV	54.0	-9.9	1.94 V	85	32.3	11.8
8	#16530.00	51.2 PK	68.2	-17.0	1.25 V	317	36.9	14.3

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 110：5550 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	*5550.00	113.6 PK			1.37 H	164	112.1	1.5
2	*5550.00	98.5 AV			1.37 H	164	97.0	1.5
3	11100.00	55.3 PK	74.0	-18.7	3.70 H	360	43.4	11.9
4	11100.00	44.0 AV	54.0	-10.0	3.70 H	360	32.1	11.9
5	#16650.00	52.4 PK	68.2	-15.8	1.30 H	234	37.1	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	*5550.00	118.3 PK			1.15 V	305	116.8	1.5
2	*5550.00	106.4 AV			1.15 V	305	104.9	1.5
3	11100.00	55.4 PK	74.0	-18.6	1.96 V	74	43.5	11.9
4	11100.00	44.1 AV	54.0	-9.9	1.96 V	74	32.2	11.9
5	#16650.00	51.6 PK	68.2	-16.6	1.32 V	306	36.3	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 (HE40)	Channel	CH 134：5670 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	112.8 PK			1.37 H	177	110.9	1.9
2	*5670.00	97.2 AV			1.37 H	177	95.3	1.9
3	#5725.00	64.7 PK	68.2	-3.5	1.37 H	177	62.7	2.0
4	11340.00	55.5 PK	74.0	-18.5	3.77 H	360	43.1	12.4
5	11340.00	44.5 AV	54.0	-9.5	3.77 H	360	32.1	12.4
6	#17010.00	51.8 PK	68.2	-16.4	1.20 H	221	35.2	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	*5670.00	116.9 PK			1.00 V	309	115.0	1.9
2	*5670.00	105.7 AV			1.00 V	309	103.8	1.9
3	#5725.00	67.8 PK	68.2	-0.4	1.00 V	309	65.8	2.0
4	11340.00	54.9 PK	74.0	-19.1	1.90 V	80	42.5	12.4
5	11340.00	43.8 AV	54.0	-10.2	1.90 V	80	31.4	12.4
6	#17010.00	51.2 PK	68.2	-17.0	1.25 V	308	34.6	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 142：5710 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	55.8 PK	74.0	-18.2	1.40 H	170	54.3	1.5
2	5460.00	43.6 AV	54.0	-10.4	1.40 H	170	42.1	1.5
3	#5470.00	56.6 PK	68.2	-11.6	1.40 H	170	55.1	1.5
4	*5710.00	113.8 PK			1.40 H	170	111.8	2.0
5	*5710.00	98.6 AV			1.40 H	170	96.6	2.0
6	#5850.00	57.3 PK	68.2	-10.9	1.40 H	170	55.0	2.3
7	11420.00	55.2 PK	74.0	-18.8	3.76 H	360	42.6	12.6
8	11420.00	44.0 AV	54.0	-10.0	3.76 H	360	31.4	12.6
9	#17130.00	52.7 PK	68.2	-15.5	1.20 H	226	36.2	16.5
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	56.6 PK	74.0	-17.4	1.06 V	302	55.1	1.5
2	5460.00	44.2 AV	54.0	-9.8	1.06 V	302	42.7	1.5
3	#5470.00	57.3 PK	68.2	-10.9	1.06 V	302	55.8	1.5
4	*5710.00	118.4 PK			1.06 V	302	116.4	2.0
5	*5710.00	106.7 AV			1.06 V	302	104.7	2.0
6	#5850.00	59.7 PK	68.2	-8.5	1.06 V	302	57.4	2.3
7	11420.00	54.6 PK	74.0	-19.4	2.00 V	54	42.0	12.6
8	11420.00	43.6 AV	54.0	-10.4	2.00 V	54	31.0	12.6
9	#17130.00	51.2 PK	68.2	-17.0	1.26 V	309	34.7	16.5

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 151：5755 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	#5641.40	60.9 PK	68.2	-7.3	3.94 H	306	59.1	1.8
2	*5755.00	114.5 PK			3.94 H	306	112.4	2.1
3	*5755.00	101.3 AV			3.94 H	306	99.2	2.1
4	#5928.47	53.8 PK	68.2	-14.4	3.94 H	306	51.6	2.2
5	11510.00	55.2 PK	74.0	-18.8	3.76 H	360	42.6	12.6
6	11510.00	44.2 AV	54.0	-9.8	3.76 H	360	31.6	12.6
7	#17265.00	52.9 PK	68.2	-15.3	1.30 H	232	36.1	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	#5634.40	67.9 PK	68.2	-0.3	1.05 V	310	66.1	1.8
2	*5755.00	119.7 PK			1.05 V	310	117.6	2.1
3	*5755.00	107.3 AV			1.05 V	310	105.2	2.1
4	#5928.44	58.4 PK	68.2	-9.8	1.05 V	310	56.2	2.2
5	11510.00	55.2 PK	74.0	-18.8	1.95 V	66	42.6	12.6
6	11510.00	44.1 AV	54.0	-9.9	1.95 V	66	31.5	12.6
7	#17265.00	51.6 PK	68.2	-16.6	1.26 V	301	34.8	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 (HE40)	Channel	CH 159：5795 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	#5645.91	54.9 PK	68.2	-13.3	4.00 H	301	53.1	1.8
2	*5795.00	115.3 PK			4.00 H	301	113.1	2.2
3	*5795.00	101.6 AV			4.00 H	301	99.4	2.2
4	#5929.07	61.4 PK	68.2	-6.8	4.00 H	301	59.2	2.2
5	11590.00	55.6 PK	74.0	-18.4	3.67 H	360	43.2	12.4
6	11590.00	44.0 AV	54.0	-10.0	3.67 H	360	31.6	12.4
7	#17385.00	52.3 PK	68.2	-15.9	1.28 H	227	34.4	17.9
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	#5649.74	66.0 PK	68.2	-2.2	1.03 V	295	64.2	1.8
2	*5795.00	121.6 PK			1.03 V	295	119.4	2.2
3	*5795.00	107.8 AV			1.03 V	295	105.6	2.2
4	#5928.88	67.7 PK	68.2	-0.5	1.03 V	295	65.5	2.2
5	11590.00	54.7 PK	74.0	-19.3	1.92 V	62	42.3	12.4
6	11590.00	43.8 AV	54.0	-10.2	1.92 V	62	31.4	12.4
7	#17385.00	51.6 PK	68.2	-16.6	1.21 V	319	33.7	17.9

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 42：5210 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	5144.40	60.7 PK	74.0	-13.3	1.06 H	167	59.2	1.5
2	5144.40	48.9 AV	54.0	-5.1	1.06 H	167	47.4	1.5
3	*5210.00	104.2 PK			1.06 H	167	102.8	1.4
4	*5210.00	93.0 AV			1.06 H	167	91.6	1.4
5	5354.20	53.3 PK	74.0	-20.7	1.06 H	167	52.0	1.3
6	5354.20	43.8 AV	54.0	-10.2	1.06 H	167	42.5	1.3
7	#10420.00	55.7 PK	68.2	-12.5	3.69 H	360	44.8	10.9
8	15630.00	52.7 PK	74.0	-21.3	1.24 H	228	40.7	12.0
9	15630.00	41.4 AV	54.0	-12.6	1.24 H	228	29.4	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	5149.30	64.3 PK	74.0	-9.7	1.00 V	308	62.8	1.5
2	**5149.30**	**53.9 AV**	**54.0**	**-0.1**	**1.00 V**	**308**	**52.4**	**1.5**
3	*5210.00	109.8 PK			1.00 V	308	108.4	1.4
4	*5210.00	97.2 AV			1.00 V	308	95.8	1.4
5	5350.00	54.6 PK	74.0	-19.4	1.00 V	308	53.3	1.3
6	5350.00	43.5 AV	54.0	-10.5	1.00 V	308	42.2	1.3
7	#10420.00	54.9 PK	68.2	-13.3	1.98 V	83	44.0	10.9
8	15630.00	51.4 PK	74.0	-22.6	1.30 V	298	39.4	12.0
9	15630.00	43.3 AV	54.0	-10.7	1.30 V	298	31.3	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 802.11ax (HE80)	Channel	CH 58：5290 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	5144.20	55.0 PK	74.0	-19.0	1.02 H	169	53.5	1.5
2	5144.20	43.9 AV	54.0	-10.1	1.02 H	169	42.4	1.5
3	*5290.00	106.5 PK			1.02 H	169	105.4	1.1
4	*5290.00	94.8 AV			1.02 H	169	93.7	1.1
5	5350.00	64.0 PK	74.0	-10.0	1.02 H	169	62.7	1.3
6	5350.00	52.1 AV	54.0	-1.9	1.02 H	169	50.8	1.3
7	#10580.00	55.3 PK	68.2	-12.9	3.73 H	360	44.3	11.0
8	15870.00	52.9 PK	74.0	-21.1	1.30 H	233	40.7	12.2
9	15870.00	41.3 AV	54.0	-12.7	1.30 H	233	29.1	12.2
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	5149.00	55.2 PK	74.0	-18.8	1.11 V	304	53.7	1.5
2	5149.00	44.3 AV	54.0	-9.7	1.11 V	304	42.8	1.5
3	*5290.00	109.3 PK			1.11 V	304	108.2	1.1
4	*5290.00	96.9 AV			1.11 V	304	95.8	1.1
5	5350.00	68.8 PK	74.0	-5.2	1.11 V	304	67.5	1.3
6	5350.00	53.7 AV	54.0	-0.3	1.11 V	304	52.4	1.3
7	#10580.00	54.8 PK	68.2	-13.4	1.91 V	74	43.8	11.0
8	15870.00	52.0 PK	74.0	-22.0	1.29 V	310	39.8	12.2
9	15870.00	43.6 AV	54.0	-10.4	1.29 V	310	31.4	12.2

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 (HE80)	Channel	CH 106：5530 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	1.34 H	165	53.3	1.5
2	5460.00	45.0 AV	54.0	-9.0	1.34 H	165	43.5	1.5
3	#5469.20	57.8 PK	68.2	-10.4	1.34 H	165	56.3	1.5
4	*5530.00	103.2 PK			1.34 H	165	101.7	1.5
5	*5530.00	92.3 AV			1.34 H	165	90.8	1.5
6	#5771.80	50.6 PK	68.2	-17.6	1.34 H	165	48.4	2.2
7	11060.00	55.2 PK	74.0	-18.8	3.66 H	360	43.3	11.9
8	11060.00	43.9 AV	54.0	-10.1	3.66 H	360	32.0	11.9
9	#16590.00	52.0 PK	68.2	-16.2	1.26 H	242	37.1	14.9
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	5458.10	67.4 PK	74.0	-6.6	1.02 V	290	65.9	1.5
2	5458.10	52.7 AV	54.0	-1.3	1.02 V	290	51.2	1.5
3	#5465.90	67.9 PK	68.2	-0.3	1.02 V	290	66.4	1.5
4	*5530.00	109.9 PK			1.02 V	290	108.4	1.5
5	*5530.00	97.8 AV			1.02 V	290	96.3	1.5
6	#5729.00	53.6 PK	68.2	-14.6	1.02 V	290	51.6	2.0
7	11060.00	55.3 PK	74.0	-18.7	1.97 V	78	43.4	11.9
8	11060.00	43.9 AV	54.0	-10.1	1.97 V	78	32.0	11.9
9	#16590.00	51.5 PK	68.2	-16.7	1.26 V	315	36.6	14.9

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 122：5610 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	103.4 PK			2.56 H	179	101.7	1.7
2	*5610.00	96.3 AV			2.56 H	179	94.6	1.7
3	#5725.00	64.5 PK	68.2	-3.7	2.56 H	179	62.5	2.0
4	11220.00	55.8 PK	74.0	-18.2	3.70 H	360	43.8	12.0
5	11220.00	44.7 AV	54.0	-9.3	3.70 H	360	32.7	12.0
6	#16830.00	53.0 PK	68.2	-15.2	1.23 H	227	36.8	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	*5610.00	115.2 PK			1.08 V	312	113.5	1.7
2	*5610.00	104.1 AV			1.08 V	312	102.4	1.7
3	#5725.00	67.9 PK	68.2	-0.3	1.08 V	312	65.9	2.0
4	11220.00	55.2 PK	74.0	-18.8	1.92 V	62	43.2	12.0
5	11220.00	44.2 AV	54.0	-9.8	1.92 V	62	32.2	12.0
6	#16830.00	52.0 PK	68.2	-16.2	1.24 V	294	35.8	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 (HE80)	Channel	CH 138：5690 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	56.7 PK	74.0	-17.3	2.58 H	158	55.2	1.5
2	5460.00	44.3 AV	54.0	-9.7	2.58 H	158	42.8	1.5
3	#5470.00	59.2 PK	68.2	-9.0	2.58 H	158	57.7	1.5
4	*5690.00	103.0 PK			2.58 H	158	101.1	1.9
5	*5690.00	95.9 AV			2.58 H	158	94.0	1.9
6	#5850.00	59.6 PK	68.2	-8.6	2.58 H	158	57.3	2.3
7	11380.00	56.0 PK	74.0	-18.0	3.76 H	360	43.5	12.5
8	11380.00	44.5 AV	54.0	-9.5	3.76 H	360	32.0	12.5
9	#17070.00	52.7 PK	68.2	-15.5	1.28 H	238	36.3	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	59.2 PK	74.0	-14.8	1.05 V	310	57.7	1.5
2	5460.00	46.7 AV	54.0	-7.3	1.05 V	310	45.2	1.5
3	#5470.00	62.1 PK	68.2	-6.1	1.05 V	310	60.6	1.5
4	*5690.00	116.7 PK			1.05 V	310	114.8	1.9
5	*5690.00	103.6 AV			1.05 V	310	101.7	1.9
6	#5850.00	63.7 PK	68.2	-4.5	1.05 V	310	61.4	2.3
7	11380.00	55.5 PK	74.0	-18.5	1.93 V	56	43.0	12.5
8	11380.00	44.0 AV	54.0	-10.0	1.93 V	56	31.5	12.5
9	#17070.00	51.2 PK	68.2	-17.0	1.25 V	295	34.8	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 (HE80)	Channel	CH 155：5775 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	#5622.60	60.7 PK	68.2	-7.5	3.95 H	299	58.9	1.8
2	*5775.00	109.7 PK			3.95 H	299	107.5	2.2
3	*5775.00	96.3 AV			3.95 H	299	94.1	2.2
4	#5937.68	57.7 PK	68.2	-10.5	3.95 H	299	55.4	2.3
5	11550.00	56.0 PK	74.0	-18.0	3.78 H	360	43.6	12.4
6	11550.00	44.5 AV	54.0	-9.5	3.78 H	360	32.1	12.4
7	#17325.00	53.0 PK	68.2	-15.2	1.23 H	223	35.8	17.2
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	#5638.50	67.5 PK	68.2	-0.7	1.00 V	298	65.7	1.8
2	*5775.00	116.3 PK			1.00 V	298	114.1	2.2
3	*5775.00	105.2 AV			1.00 V	298	103.0	2.2
4	#5927.60	62.8 PK	68.2	-5.4	1.00 V	298	60.6	2.2
5	11550.00	55.1 PK	74.0	-18.9	1.90 V	59	42.7	12.4
6	11550.00	43.7 AV	54.0	-10.3	1.90 V	59	31.3	12.4
7	#17325.00	51.6 PK	68.2	-16.6	1.27 V	288	34.4	17.2

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 50：5250 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	5138.90	58.9 PK	74.0	-15.1	1.01 H	166	57.4	1.5
2	5138.90	47.4 AV	54.0	-6.6	1.01 H	166	45.9	1.5
3	*5250.00	97.3 PK			1.01 H	166	96.2	1.1
4	*5250.00	87.2 AV			1.01 H	166	86.1	1.1
5	5407.50	55.8 PK	74.0	-18.2	1.01 H	166	54.5	1.3
6	5407.50	45.4 AV	54.0	-8.6	1.01 H	166	44.1	1.3
7	#10500.00	55.1 PK	68.2	-13.1	3.66 H	360	44.2	10.9
8	15750.00	53.1 PK	74.0	-20.9	1.23 H	221	41.2	11.9
9	15750.00	41.6 AV	54.0	-12.4	1.23 H	221	29.7	11.9
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	5094.80	65.4 PK	74.0	-8.6	1.04 V	303	64.0	1.4
2	5094.80	53.8 AV	54.0	-0.2	1.04 V	303	52.4	1.4
3	*5250.00	106.6 PK			1.04 V	303	105.5	1.1
4	*5250.00	94.0 AV			1.04 V	303	92.9	1.1
5	5351.85	65.8 PK	74.0	-8.2	1.04 V	303	64.5	1.3
6	5351.85	52.6 AV	54.0	-1.4	1.04 V	303	51.3	1.3
7	#10500.00	55.2 PK	68.2	-13.0	1.89 V	77	44.3	10.9
8	15750.00	51.6 PK	74.0	-22.4	1.21 V	293	39.7	11.9
9	15750.00	43.5 AV	54.0	-10.5	1.21 V	293	31.6	11.9

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 (HE160)	Channel	CH 114：5570 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Carter Lin		

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	5393.60	60.9 PK	74.0	-13.1	1.15 H	159	59.6	1.3
2	5393.60	49.5 AV	54.0	-4.5	1.15 H	159	48.2	1.3
3	#5466.40	56.9 PK	68.2	-11.3	1.15 H	159	55.4	1.5
4	*5570.00	98.6 PK			1.15 H	159	96.9	1.7
5	*5570.00	89.0 AV			1.15 H	159	87.3	1.7
6	#5727.20	60.5 PK	68.2	-7.7	1.15 H	159	58.5	2.0
7	11140.00	56.1 PK	74.0	-17.9	3.72 H	360	44.1	12.0
8	11140.00	44.8 AV	54.0	-9.2	3.72 H	360	32.8	12.0
9	#16710.00	53.1 PK	68.2	-15.1	1.27 H	220	37.4	15.7
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	5442.20	65.6 PK	74.0	-8.4	1.00 V	312	64.2	1.4
2	5442.20	52.9 AV	54.0	-1.1	1.00 V	312	51.5	1.4
3	5460.00	63.4 PK	74.0	-10.6	1.00 V	312	61.9	1.5
4	5460.00	53.6 AV	54.0	-0.4	1.00 V	312	52.1	1.5
5	**#5466.00**	**68.1 PK**	**68.2**	**-0.1**	**1.00 V**	**312**	**66.6**	**1.5**
6	*5570.00	105.7 PK			1.00 V	312	104.0	1.7
7	*5570.00	93.4 AV			1.00 V	312	91.7	1.7
8	#5739.10	64.8 PK	68.2	-3.4	1.00 V	312	62.7	2.1
9	11140.00	55.5 PK	74.0	-18.5	1.91 V	71	43.5	12.0
10	11140.00	44.6 AV	54.0	-9.4	1.91 V	71	32.6	12.0
11	#16710.00	52.1 PK	68.2	-16.1	1.31 V	308	36.4	15.7

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.

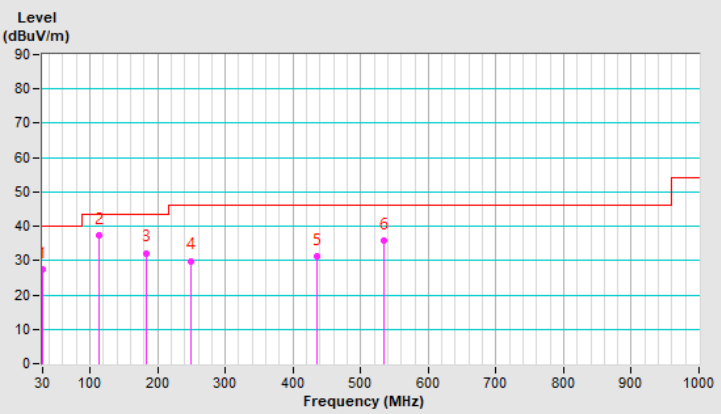
Below 1GHz Data:

RF Mode	TX 802.11ax (HE20)	Channel	CH 157：5785 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 66% RH
Tested By	Tom Yang		

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	30.82	27.3 QP	40.0	-12.7	1.00 H	271	41.1	-13.8
2	113.18	37.3 QP	43.5	-6.2	3.00 H	280	52.0	-14.7
3	182.53	32.2 QP	43.5	-11.3	1.50 H	79	46.0	-13.8
4	250.02	29.9 QP	46.0	-16.1	1.00 H	254	42.6	-12.7
5	435.44	31.4 QP	46.0	-14.6	2.00 H	202	37.8	-6.4
6	533.79	35.8 QP	46.0	-10.2	1.50 H	318	40.1	-4.3

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 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.

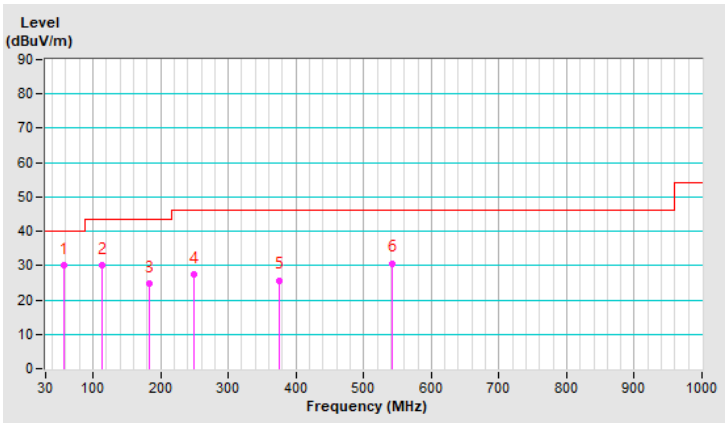


RF Mode	TX 802.11ax (HE20)	**Channel**	CH 157：5785 MHz
Frequency Range	9kHz ~ 1GHz	**Detector Function**	Quasi-Peak (QP)
Input Power	120Vac, 60Hz	**Environmental Conditions**	25 °C, 66% RH
Tested By	Tom Yang		

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	56.87	30.0 QP	40.0	-10.0	1.50 V	248	43.0	-13.0
2	112.45	30.0 QP	43.5	-13.5	1.50 V	245	44.9	-14.9
3	182.65	24.8 QP	43.5	-18.7	1.50 V	175	38.7	-13.9
4	250.02	27.5 QP	46.0	-18.5	1.50 V	179	40.2	-12.7
5	375.17	25.7 QP	46.0	-20.3	1.50 V	14	34.1	-8.4
6	541.72	30.7 QP	46.0	-15.3	2.00 V	360	34.8	-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	2021/10/13	2022/10/12
LISN R&S	ESH3-Z5	848773/004	2020/10/27	2021/10/26
LISN R & S	ESH3-Z5	835239/001	2021/3/26	2022/3/25
50 ohms Terminator	50	3	2020/10/26	2021/10/25
RF Coaxial Cable JYEBO	5D-FB	COCCAB-001	2021/9/25	2022/9/24
Fixed attenuator STI	STI02-2200-10	005	2021/8/27	2022/8/26
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: 2021/10/14

4.2.3 Test Procedure

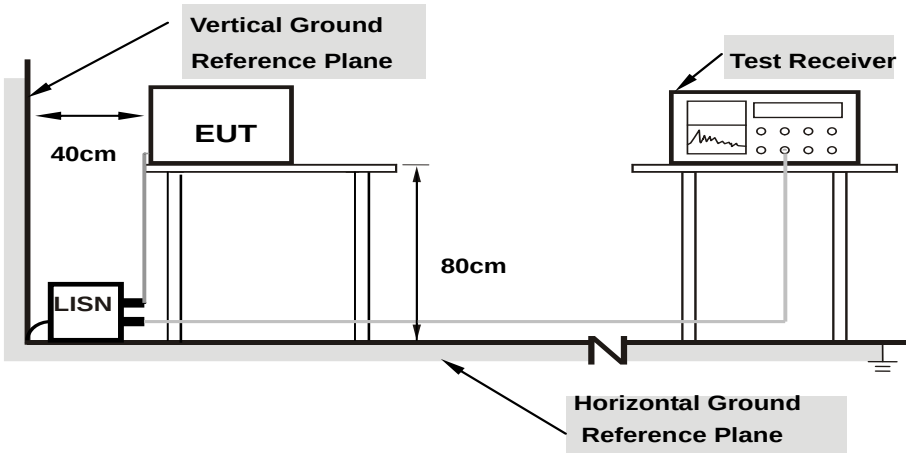
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
c. 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.

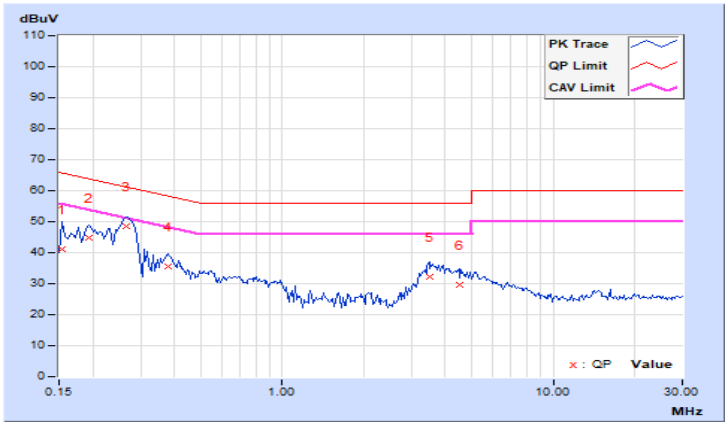
4.2.7 Test Results

RF Mode	TX 802.11ax (HE20)	Channel	CH 157：5785 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25 °C, 68% RH
Tested By	Sampson Chen		

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	10.05	30.97	18.75	41.02	28.80	65.79	55.79	-24.77	-26.99
2	0.19297	10.07	34.63	27.59	44.70	37.66	63.91	53.91	-19.21	-16.25
3	**0.26719**	**10.08**	**38.33**	**30.32**	**48.41**	**40.40**	**61.20**	**51.20**	**-12.79**	**-10.80**
4	0.38047	10.09	25.58	17.33	35.67	27.42	58.27	48.27	-22.60	-20.85
5	3.50000	10.30	21.93	15.12	32.23	25.42	56.00	46.00	-23.77	-20.58
6	4.51172	10.38	19.34	13.88	29.72	24.26	56.00	46.00	-26.28	-21.74

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

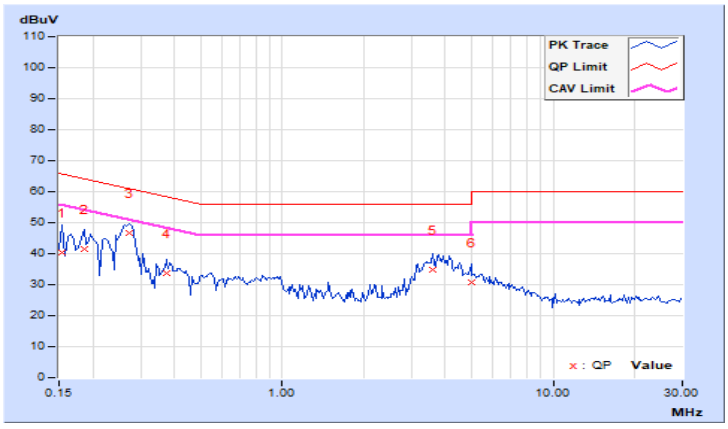


RF Mode	TX 802.11ax (HE20)	**Channel**	CH 157：5785 MHz
Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	25 °C, 68% RH
Tested By	Sampson Chen		

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	0.15391	10.07	30.48	18.17	40.55	28.24	65.79	55.79	-25.24	-27.55
2	0.18516	10.08	31.53	22.83	41.61	32.91	64.25	54.25	-22.64	-21.34
3	0.27109	10.10	36.57	28.74	46.67	38.84	61.08	51.08	-14.41	-12.24
4	0.37266	10.12	23.44	16.26	33.56	26.38	58.44	48.44	-24.88	-22.06
5	3.58984	10.33	24.33	18.04	34.66	28.37	56.00	46.00	-21.34	-17.63
6	4.97266	10.42	20.25	15.05	30.67	25.47	56.00	46.00	-25.33	-20.53

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 ≦ 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 (23.97 dBm)
U-NII-2A	√		250mW (23.97 dBm) or 11 dBm+10 log B*
U-NII-2C	√		250mW (23.97dBm) 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,

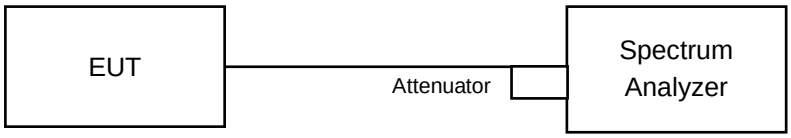
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

4.3.2 Test Setup

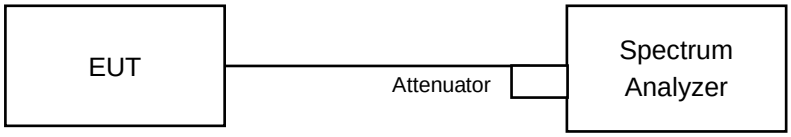
FOR POWER OUTPUT MEASUREMENT

For channel straddling 5250MHz & channel straddling 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 & channel straddling 5725MHz:

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 ≥ 3 x 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 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

POWER OUTPUT

CDD Mode

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	21.73	22.80	339.482	25.31	30	Pass
40	5200	24.63	25.77	667.974	28.25	30	Pass
48	5240	23.94	23.88	492.085	26.92	30	Pass
52	5260	20.08	20.21	206.813	23.16	23.97	Pass
60	5300	20.16	20.18	207.985	23.18	23.97	Pass
64	5320	20.11	20.13	205.604	23.13	23.97	Pass
100	5500	19.94	20.46	209.801	23.22	23.97	Pass
116	5580	20.04	20.23	206.364	23.15	23.97	Pass
140	5700	19.97	20.38	208.456	23.19	23.97	Pass
*144 (U-NII-2C Band)	5720	19.43	19.35	173.799	22.40	23.01	Pass
*144 (U-NII-3 Band)	5720	13.15	13.24	41.74	16.21	30	Pass
149	5745	26.21	26.33	847.367	29.28	30	Pass
157	5785	26.22	26.53	868.573	29.39	30	Pass
165	5825	26.12	26.41	846.783	29.28	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 maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
2. For U-NII-2A: The maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
3. For U-NII-2C: The maximum gain is 2.65 dBi < 6dBi, so the output power limit shall not be reduced.
4. For U-NII-3: The maximum gain is 2.74 dBi < 6dBi, so the output power limit shall not be reduced.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	21.76	24.37 > 24
60	5300	21.78	24.38 > 24
64	5320	21.72	24.36 > 24
100	5500	21.69	24.36 > 24
116	5580	21.79	24.38 > 24
140	5700	21.8	24.38 > 24
144 (U-NII-2C Band)	5720	15.9	23.01 < 24

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	20.33	20.59	222.446	23.47	30	Pass
40	5200	23.29	24.34	484.948	26.86	30	Pass
48	5240	24.42	24.06	531.377	27.25	30	Pass
52	5260	20.04	20.40	210.573	23.23	23.97	Pass
60	5300	19.82	20.40	205.588	23.13	23.97	Pass
64	5320	19.94	20.42	208.782	23.20	23.97	Pass
100	5500	19.76	18.43	164.286	22.16	23.97	Pass
116	5580	20.14	20.31	210.675	23.24	23.97	Pass
140	5700	19.35	18.59	158.376	22.00	23.97	Pass
*144 (U-NII-2C Band)	5720	19.06	18.24	147.219	21.68	23.04	Pass
*144 (U-NII-3 Band)	5720	13.46	12.64	40.547	16.08	30	Pass
149	5745	25.82	26.17	795.944	29.01	30	Pass
157	5785	25.77	26.26	800.241	29.03	30	Pass
165	5825	26.19	25.97	811.277	29.09	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 maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
2. For U-NII-2A: The maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
3. For U-NII-2C: The maximum gain is 2.65 dBi < 6dBi, so the output power limit shall not be reduced.
4. For U-NII-3: The maximum gain is 2.74 dBi < 6dBi, so the output power limit shall not be reduced.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	22.11	24.44 > 23.97
60	5300	22.04	24.43 > 23.97
64	5320	21.92	24.4 > 23.97
100	5500	21.88	24.4 > 23.97
116	5580	21.87	24.39 > 23.97
140	5700	21.85	24.39 > 23.97
144 (U-NII-2C Band)	5720	16.01	23.04 < 23.97

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	18.36	17.23	121.393	20.84	30	Pass
46	5230	23.18	23.60	437.056	26.41	30	Pass
54	5270	20.22	21.17	236.114	23.73	23.97	Pass
62	5310	18.22	18.15	131.687	21.20	23.97	Pass
102	5510	18.40	17.71	128.203	21.08	23.97	Pass
110	5550	19.87	20.34	205.194	23.12	23.97	Pass
134	5670	20.10	19.78	197.39	22.95	23.97	Pass
*142 (U-NII-2C Band)	5710	18.75	18.68	148.78	21.73	23.97	Pass
*142 (U-NII-3 Band)	5710	8.79	8.41	14.503	11.61	30	Pass
151	5755	25.46	25.88	738.818	28.69	30	Pass
159	5795	25.97	26.11	803.686	29.05	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 maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
2. For U-NII-2A: The maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
3. For U-NII-2C: The maximum gain is 2.65 dBi < 6dBi, so the output power limit shall not be reduced.
4. For U-NII-3: The maximum gain is 2.74 dBi < 6dBi, so the output power limit shall not be reduced.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
54	5270	41.4	27.17 > 23.97
62	5310	41.19	27.14 > 23.97
102	5510	41.16	27.14 > 23.97
110	5550	41.35	27.16 > 23.97
134	5670	41.38	27.16 > 23.97
142 (U-NII-2C Band)	5710	35.74	26.53 > 23.97

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	19.03	17.99	142.934	21.55	30	Pass
58	5290	19.95	19.14	180.89	22.57	23.97	Pass
106	5530	17.69	17.05	109.448	20.39	23.97	Pass
122	5610	20.21	20.68	221.904	23.46	23.97	Pass
*138 (U-NII-2C Band)	5690	18.85	19.71	170.277	22.31	23.97	Pass
*138 (U-NII-3 Band)	5690	5.17	5.92	7.197	8.57	30	Pass
155	5775	23.60	23.24	439.95	26.43	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 maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
2. For U-NII-2A: The maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
3. For U-NII-2C: The maximum gain is 2.65 dBi < 6dBi, so the output power limit shall not be reduced.
4. For U-NII-3: The maximum gain is 2.74 dBi < 6dBi, so the output power limit shall not be reduced.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	82.92	30.18 > 23.97
106	5530	82.78	30.17 > 23.97
122	5610	82.83	30.18 > 23.97
138 (U-NII-2C Band)	5690	76.32	29.82 > 23.97

802.11ac (VHT160)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
*50 (U-NII-1 Band)	5250	12.70	12.67	37.114	15.70	30	Pass
*50 (U-NII-2A Band)	5250	12.77	12.92	38.512	15.86	23.97	Pass
114	5570	18.20	17.12	117.592	20.70	23.97	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 maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
2. For U-NII-2A: The maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
3. For U-NII-2C: The maximum gain is 2.65 dBi < 6dBi, so the output power limit shall not be reduced.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
50 (U-NII-2A Band)	5250	83.26	30.2 > 23.97
114	5570	167.52	33.24 > 23.97

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	20.29	20.56	220.668	23.44	30	Pass
40	5200	23.91	24.75	544.575	27.36	30	Pass
48	5240	24.51	24.14	541.906	27.34	30	Pass
52	5260	20.12	20.36	211.444	23.25	23.97	Pass
60	5300	20.02	20.39	209.857	23.22	23.97	Pass
64	5320	20.21	20.31	212.353	23.27	23.97	Pass
100	5500	19.75	18.50	165.201	22.18	23.97	Pass
116	5580	20.22	20.32	212.843	23.28	23.97	Pass
140	5700	19.39	18.57	158.841	22.01	23.97	Pass
*144 (U-NII-2C Band)	5720	19.29	19.26	169.252	22.29	23.04	Pass
*144 (U-NII-3 Band)	5720	13.61	13.70	46.404	16.67	30	Pass
149	5745	26.20	26.12	826.13	29.17	30	Pass
157	5785	26.14	26.59	867.187	29.38	30	Pass
165	5825	26.20	26.32	845.418	29.27	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 maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
2. For U-NII-2A: The maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
3. For U-NII-2C: The maximum gain is 2.65 dBi < 6dBi, so the output power limit shall not be reduced.
4. For U-NII-3: The maximum gain is 2.74 dBi < 6dBi, so the output power limit shall not be reduced.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	22.11	24.44 > 23.97
60	5300	22.04	24.43 > 23.97
64	5320	21.92	24.4 > 23.97
100	5500	21.88	24.4 > 23.97
116	5580	21.87	24.39 > 23.97
140	5700	21.85	24.39 > 23.97
144 (U-NII-2C Band)	5720	16.01	23.04 < 23.97

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	18.39	17.22	121.747	20.85	30	Pass
46	5230	23.85	23.33	457.939	26.61	30	Pass
54	5270	20.42	21.38	247.558	23.94	23.97	Pass
62	5310	18.37	18.24	135.388	21.32	23.97	Pass
102	5510	18.47	17.76	130.011	21.14	23.97	Pass
110	5550	20.56	20.57	227.788	23.58	23.97	Pass
134	5670	20.70	20.45	228.407	23.59	23.97	Pass
*142 (U-NII-2C Band)	5710	19.71	19.69	186.651	22.71	23.97	Pass
*142 (U-NII-3 Band)	5710	9.26	9.37	17.083	12.33	30	Pass
151	5755	25.56	25.92	750.59	28.75	30	Pass
159	5795	26.17	26.33	843.536	29.26	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 maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
2. For U-NII-2A: The maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
3. For U-NII-2C: The maximum gain is 2.65 dBi < 6dBi, so the output power limit shall not be reduced.
4. For U-NII-3: The maximum gain is 2.74 dBi < 6dBi, so the output power limit shall not be reduced.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
54	5270	41.4	27.17 > 23.97
62	5310	41.19	27.14 > 23.97
102	5510	41.16	27.14 > 23.97
110	5550	41.35	27.16 > 23.97
134	5670	41.38	27.16 > 23.97
142 (U-NII-2C Band)	5710	35.74	26.53 > 23.97

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	19.05	18.02	143.74	21.58	30	Pass
58	5290	20.00	19.16	182.414	22.61	23.97	Pass
106	5530	17.76	17.07	110.637	20.44	23.97	Pass
122	5610	20.79	21.03	246.715	23.92	23.97	Pass
*138 (U-NII-2C Band)	5690	19.75	20.01	194.637	22.89	23.97	Pass
*138 (U-NII-3 Band)	5690	6.12	5.98	8.055	9.06	30	Pass
155	5775	23.64	23.25	442.555	26.46	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 maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
2. For U-NII-2A: The maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
3. For U-NII-2C: The maximum gain is 2.65 dBi < 6dBi, so the output power limit shall not be reduced.
4. For U-NII-3: The maximum gain is 2.74 dBi < 6dBi, so the output power limit shall not be reduced.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	82.92	30.18 > 23.97
106	5530	82.78	30.17 > 23.97
122	5610	82.83	30.18 > 23.97
138 (U-NII-2C Band)	5690	76.32	29.82 > 23.97

802.11ax (HE160)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
*50 (U-NII-1 Band)	5250	13.06	12.81	39.329	15.95	30	Pass
*50 (U-NII-2A Band)	5250	13.13	12.80	39.614	15.98	23.97	Pass
114	5570	18.25	17.19	119.194	20.76	23.97	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 maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
2. For U-NII-2A: The maximum gain is 2.82 dBi < 6dBi, so the output power limit shall not be reduced.
3. For U-NII-2C: The maximum gain is 2.65 dBi < 6dBi, so the output power limit shall not be reduced.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
50 (U-NII-2A Band)	5250	83.26	30.2 > 23.97
114	5570	167.52	33.24 > 23.97

Beamforming Mode

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	20.33	20.59	222.446	23.47	30	Pass
40	5200	23.29	24.34	484.948	26.86	30	Pass
48	5240	24.42	24.06	531.377	27.25	30	Pass
52	5260	20.04	20.40	210.573	23.23	23.97	Pass
60	5300	19.82	20.40	205.588	23.13	23.97	Pass
64	5320	19.94	20.42	208.782	23.20	23.97	Pass
100	5500	19.76	18.43	164.286	22.16	23.97	Pass
116	5580	20.14	20.31	210.675	23.24	23.97	Pass
140	5700	19.35	18.59	158.376	22.00	23.97	Pass
*144 (U-NII-2C Band)	5720	19.06	18.24	147.219	21.68	23.04	Pass
*144 (U-NII-3 Band)	5720	13.46	12.64	40.547	16.08	30	Pass
149	5745	25.82	26.17	795.944	29.01	30	Pass
157	5785	25.77	26.26	800.241	29.03	30	Pass
165	5825	26.19	25.97	811.277	29.09	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 = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.48 dBi < 6dBi, so the output power limit shall not be reduced.
2. For U-NII-2A: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.48 dBi < 6dBi, so the output power limit shall not be reduced.
3. For U-NII-2C: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.56 dBi < 6dBi, so the output power limit shall not be reduced.
4. For U-NII-3: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.54 dBi < 6dBi, so the output power limit shall not be reduced.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	22.11	24.44 > 23.97
60	5300	22.04	24.43 > 23.97
64	5320	21.92	24.4 > 23.97
100	5500	21.88	24.4 > 23.97
116	5580	21.87	24.39 > 23.97
140	5700	21.85	24.39 > 23.97
144 (U-NII-2C Band)	5720	16.01	23.04 < 23.97

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	18.36	17.23	121.393	20.84	30	Pass
46	5230	23.18	23.60	437.056	26.41	30	Pass
54	5270	20.22	21.17	236.114	23.73	23.97	Pass
62	5310	18.22	18.15	131.687	21.20	23.97	Pass
102	5510	18.40	17.71	128.203	21.08	23.97	Pass
110	5550	19.87	20.34	205.194	23.12	23.97	Pass
134	5670	20.10	19.78	197.39	22.95	23.97	Pass
*142 (U-NII-2C Band)	5710	18.75	18.68	148.78	21.73	23.97	Pass
*142 (U-NII-3 Band)	5710	8.79	8.41	14.503	11.61	30	Pass
151	5755	25.46	25.88	738.818	28.69	30	Pass
159	5795	25.97	26.11	803.686	29.05	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 = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.48 dBi < 6dBi, so the output power limit shall not be reduced.
2. For U-NII-2A: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.48 dBi < 6dBi, so the output power limit shall not be reduced.
3. For U-NII-2C: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.56 dBi < 6dBi, so the output power limit shall not be reduced.
4. For U-NII-3: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.54 dBi < 6dBi, so the output power limit shall not be reduced.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
54	5270	41.4	27.17 > 23.97
62	5310	41.19	27.14 > 23.97
102	5510	41.16	27.14 > 23.97
110	5550	41.35	27.16 > 23.97
134	5670	41.38	27.16 > 23.97
142 (U-NII-2C Band)	5710	35.74	26.53 > 23.97

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	19.03	17.99	142.934	21.55	30	Pass
58	5290	19.95	19.14	180.89	22.57	23.97	Pass
106	5530	17.69	17.05	109.448	20.39	23.97	Pass
122	5610	20.21	20.68	221.904	23.46	23.97	Pass
*138 (U-NII-2C Band)	5690	18.85	19.71	170.277	22.31	23.97	Pass
*138 (U-NII-3 Band)	5690	5.17	5.92	7.197	8.57	30	Pass
155	5775	23.60	23.24	439.95	26.43	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 = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.48 dBi < 6dBi, so the output power limit shall not be reduced.
2. For U-NII-2A: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.48 dBi < 6dBi, so the output power limit shall not be reduced.
3. For U-NII-2C: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.56 dBi < 6dBi, so the output power limit shall not be reduced.
4. For U-NII-3: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.54 dBi < 6dBi, so the output power limit shall not be reduced.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	82.92	30.18 > 23.97
106	5530	82.78	30.17 > 23.97
122	5610	82.83	30.18 > 23.97
138 (U-NII-2C Band)	5690	76.32	29.82 > 23.97

802.11ac (VHT160)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
*50 (U-NII-1 Band)	5250	12.70	12.67	37.114	15.70	30	Pass
*50 (U-NII-2A Band)	5250	12.77	12.92	38.512	15.86	23.97	Pass
114	5570	18.20	17.12	117.592	20.70	23.97	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 = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.48 dBi < 6dBi, so the output power limit shall not be reduced.
2. For U-NII-2A: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.48 dBi < 6dBi, so the output power limit shall not be reduced.
3. For U-NII-2C: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.56 dBi < 6dBi, so the output power limit shall not be reduced.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
50 (U-NII-2A Band)	5250	83.26	30.2 > 23.97
114	5570	167.52	33.24 > 23.97

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	20.29	20.56	220.668	23.44	30	Pass
40	5200	23.91	24.75	544.575	27.36	30	Pass
48	5240	24.51	24.14	541.906	27.34	30	Pass
52	5260	20.12	20.36	211.444	23.25	23.97	Pass
60	5300	20.02	20.39	209.857	23.22	23.97	Pass
64	5320	20.21	20.31	212.353	23.27	23.97	Pass
100	5500	19.75	18.50	165.201	22.18	23.97	Pass
116	5580	20.22	20.32	212.843	23.28	23.97	Pass
140	5700	19.39	18.57	158.841	22.01	23.97	Pass
*144 (U-NII-2C Band)	5720	19.29	19.26	169.252	22.29	23.04	Pass
*144 (U-NII-3 Band)	5720	13.61	13.70	46.404	16.67	30	Pass
149	5745	26.20	26.12	826.13	29.17	30	Pass
157	5785	26.14	26.59	867.187	29.38	30	Pass
165	5825	26.20	26.32	845.418	29.27	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 = 10 log[($10^{G0/20}$ + $10^{G1/20}$)^2 / 2] = 5.48 dBi < 6dBi, so the output power limit shall not be reduced.
2. For U-NII-2A: The directional gain = 10 log[($10^{G0/20}$ + $10^{G1/20}$)^2 / 2] = 5.48 dBi < 6dBi, so the output power limit shall not be reduced.
3. For U-NII-2C: The directional gain = 10 log[($10^{G0/20}$ + $10^{G1/20}$)^2 / 2] = 5.56 dBi < 6dBi, so the output power limit shall not be reduced.
4. For U-NII-3: The directional gain = 10 log[($10^{G0/20}$ + $10^{G1/20}$)^2 / 2] = 5.54 dBi < 6dBi, so the output power limit shall not be reduced.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	22.11	24.44 > 23.97
60	5300	22.04	24.43 > 23.97
64	5320	21.92	24.4 > 23.97
100	5500	21.88	24.4 > 23.97
116	5580	21.87	24.39 > 23.97
140	5700	21.85	24.39 > 23.97
144 (U-NII-2C Band)	5720	16.01	23.04 < 23.97

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	18.39	17.22	121.747	20.85	30	Pass
46	5230	23.85	23.33	457.939	26.61	30	Pass
54	5270	20.42	21.38	247.558	23.94	23.97	Pass
62	5310	18.37	18.24	135.388	21.32	23.97	Pass
102	5510	18.47	17.76	130.011	21.14	23.97	Pass
110	5550	20.56	20.57	227.788	23.58	23.97	Pass
134	5670	20.70	20.45	228.407	23.59	23.97	Pass
*142 (U-NII-2C Band)	5710	19.71	19.69	186.651	22.71	23.97	Pass
*142 (U-NII-3 Band)	5710	9.26	9.37	17.083	12.33	30	Pass
151	5755	25.56	25.92	750.59	28.75	30	Pass
159	5795	26.17	26.33	843.536	29.26	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 = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.48 dBi < 6dBi, so the output power limit shall not be reduced.
2. For U-NII-2A: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.48 dBi < 6dBi, so the output power limit shall not be reduced.
3. For U-NII-2C: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.56 dBi < 6dBi, so the output power limit shall not be reduced.
4. For U-NII-3: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.54 dBi < 6dBi, so the output power limit shall not be reduced.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
54	5270	41.4	27.17 > 23.97
62	5310	41.19	27.14 > 23.97
102	5510	41.16	27.14 > 23.97
110	5550	41.35	27.16 > 23.97
134	5670	41.38	27.16 > 23.97
142 (U-NII-2C Band)	5710	35.74	26.53 > 23.97

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	19.05	18.02	143.74	21.58	30	Pass
58	5290	20.00	19.16	182.414	22.61	23.97	Pass
106	5530	17.76	17.07	110.637	20.44	23.97	Pass
122	5610	20.79	21.03	246.715	23.92	23.97	Pass
*138 (U-NII-2C Band)	5690	19.75	20.01	194.637	22.89	23.97	Pass
*138 (U-NII-3 Band)	5690	6.12	5.98	8.055	9.06	30	Pass
155	5775	23.64	23.25	442.555	26.46	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 = 10 log[($10^{G0/20}$ + $10^{G1/20}$)^2 / 2] = 5.48 dBi < 6dBi, so the output power limit shall not be reduced.
2. For U-NII-2A: The directional gain = 10 log[($10^{G0/20}$ + $10^{G1/20}$)^2 / 2] = 5.48 dBi < 6dBi, so the output power limit shall not be reduced.
3. For U-NII-2C: The directional gain = 10 log[($10^{G0/20}$ + $10^{G1/20}$)^2 / 2] = 5.56 dBi < 6dBi, so the output power limit shall not be reduced.
4. For U-NII-3: The directional gain = 10 log[($10^{G0/20}$ + $10^{G1/20}$)^2 / 2] = 5.54 dBi < 6dBi, so the output power limit shall not be reduced.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	82.92	30.18 > 23.97
106	5530	82.78	30.17 > 23.97
122	5610	82.83	30.18 > 23.97
138 (U-NII-2C Band)	5690	76.32	29.82 > 23.97

802.11ax (HE160)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
*50 (U-NII-1 Band)	5250	13.06	12.81	39.329	15.95	30	Pass
*50 (U-NII-2A Band)	5250	13.13	12.80	39.614	15.98	23.97	Pass
114	5570	18.25	17.19	119.194	20.76	23.97	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 = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.48 dBi < 6dBi, so the output power limit shall not be reduced.
2. For U-NII-2A: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.48 dBi < 6dBi, so the output power limit shall not be reduced.
3. For U-NII-2C: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.56 dBi < 6dBi, so the output power limit shall not be reduced.

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

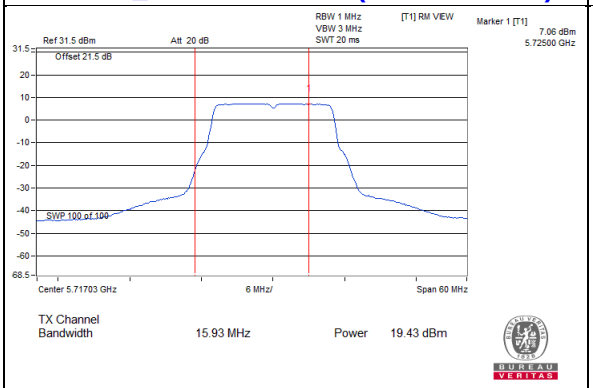
Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
50 (U-NII-2A Band)	5250	83.26	30.2 > 23.97
114	5570	167.52	33.24 > 23.97

For channel straddling 5725MHz of Power

CDD / Beamforming Mode

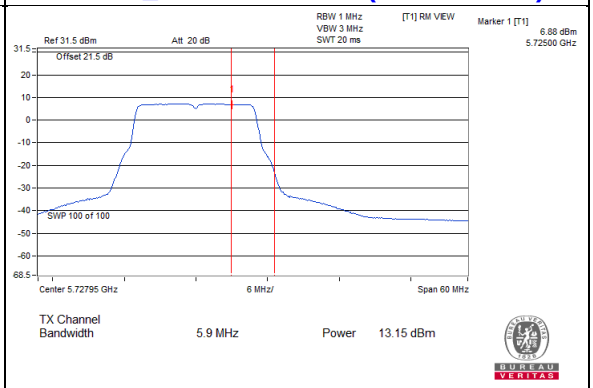
Spectrum Plot Value of Power

802.11a_Chain 0 / CH144 (U-NII-2C Band)



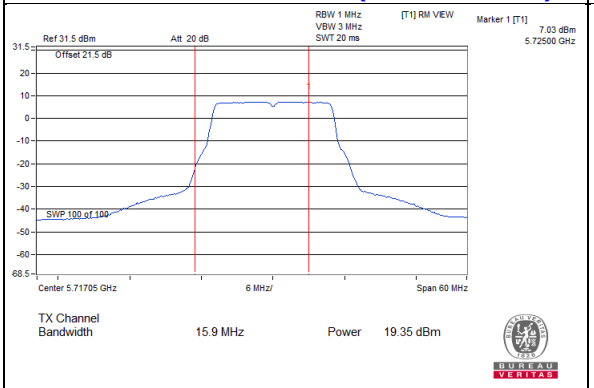
TX Channel Bandwidth 15.93 MHz Power 19.43 dBm

802.11a_Chain 0 / CH144 (U-NII-3 Band)



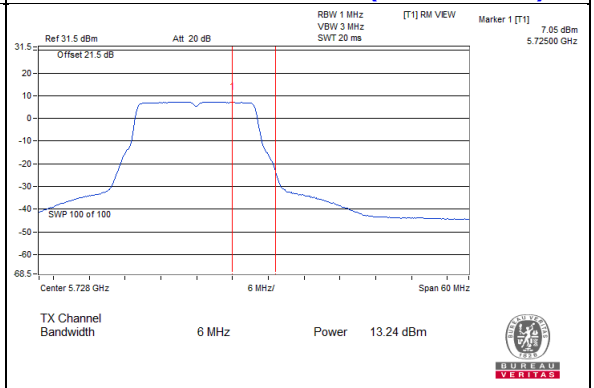
TX Channel Bandwidth 5.9 MHz Power 13.15 dBm

802.11a_Chain 1 / CH144 (U-NII-2C Band)



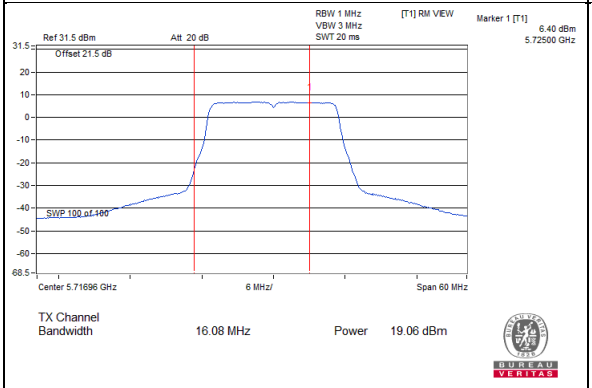
TX Channel Bandwidth 15.9 MHz Power 19.35 dBm

802.11a_Chain 1 / CH144 (U-NII-3 Band)



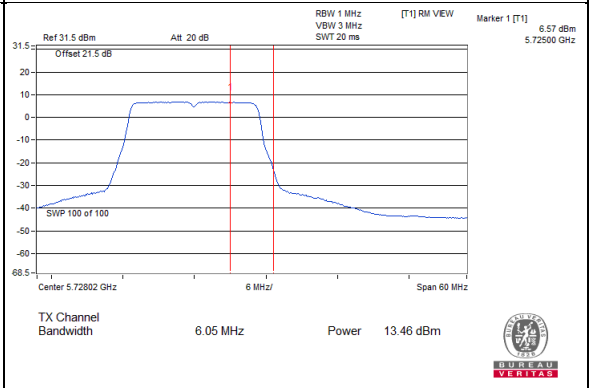
TX Channel Bandwidth 6 MHz Power 13.24 dBm

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



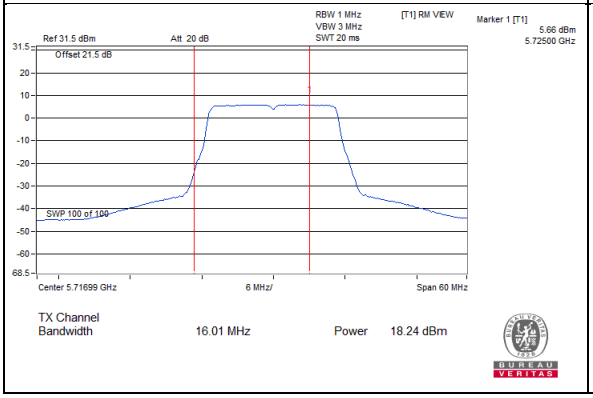
TX Channel Bandwidth 16.08 MHz Power 19.06 dBm

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



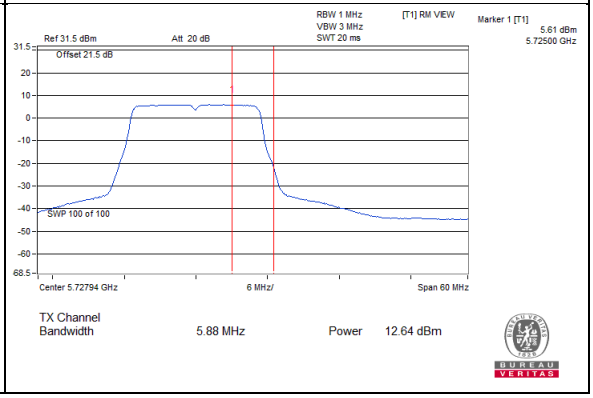
TX Channel Bandwidth 6.05 MHz Power 13.46 dBm

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



TX Channel Bandwidth 16.01 MHz Power 18.24 dBm

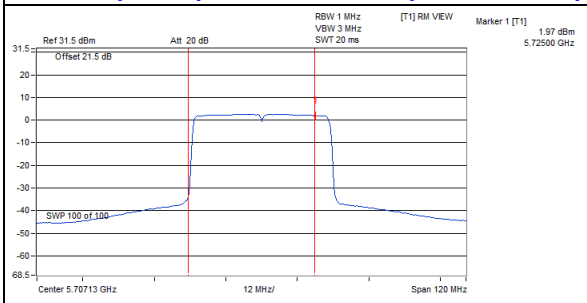
802.11ac (VHT20)_Chain 1 / CH144 (U-NII-3 Band)



TX Channel Bandwidth 5.88 MHz Power 12.64 dBm

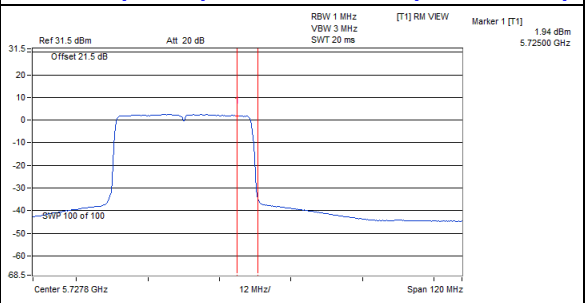
Spectrum Plot Value of Power

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



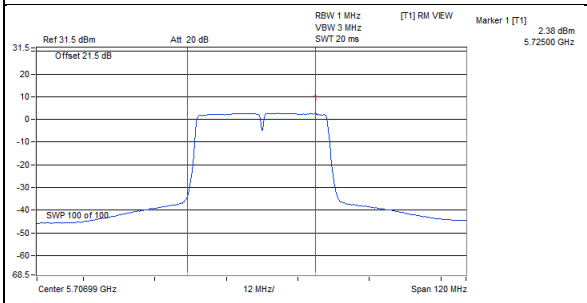
TX Channel Bandwidth 35.74 MHz Power 18.75 dBm

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



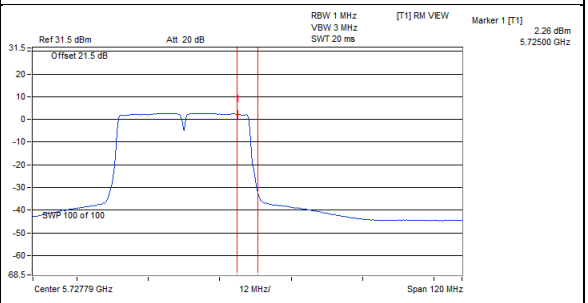
TX Channel Bandwidth 5.61 MHz Power 8.79 dBm

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



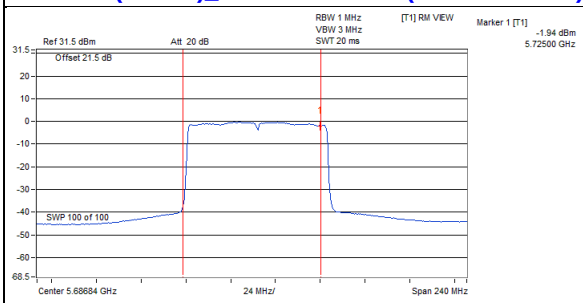
TX Channel Bandwidth 36.02 MHz Power 18.68 dBm

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



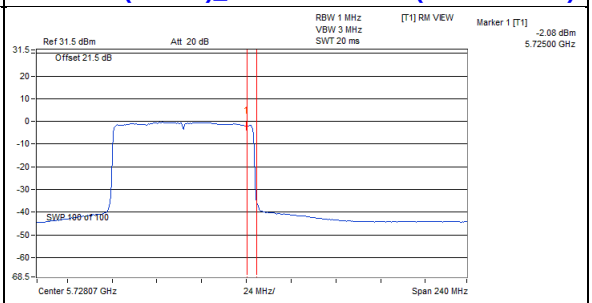
TX Channel Bandwidth 5.59 MHz Power 8.41 dBm

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



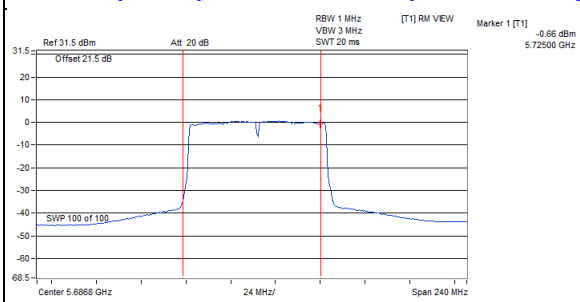
TX Channel Bandwidth 76.32 MHz Power 18.85 dBm

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



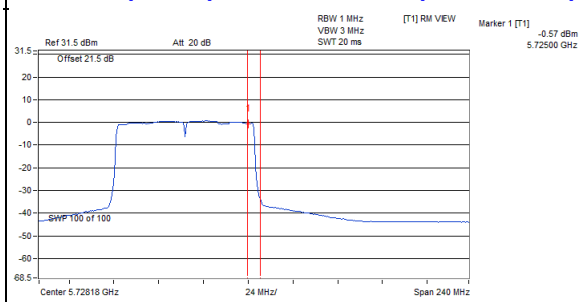
TX Channel Bandwidth 6.15 MHz Power 5.17 dBm

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



TX Channel Bandwidth 76.39 MHz Power 19.71 dBm

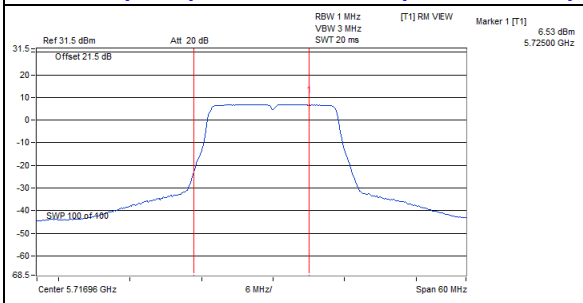
802.11ac (VHT80)_Chain 1 / CH138 (U-NII-3 Band)



TX Channel Bandwidth 6.37 MHz Power 5.92 dBm

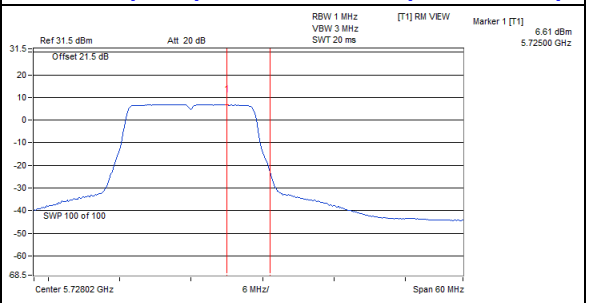
Spectrum Plot Value of Power

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



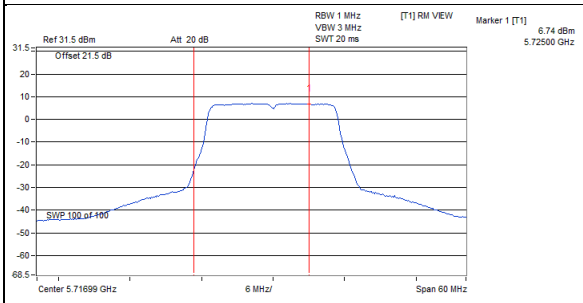
TX Channel Bandwidth 16.08 MHz Power 19.29 dBm

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



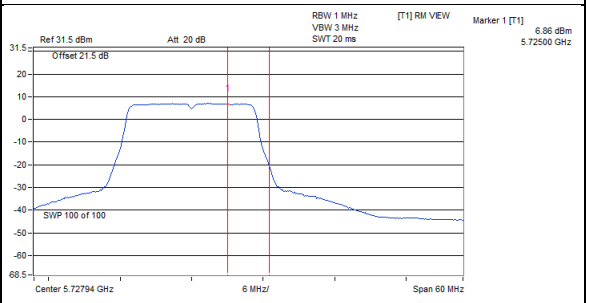
TX Channel Bandwidth 6.05 MHz Power 13.61 dBm

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



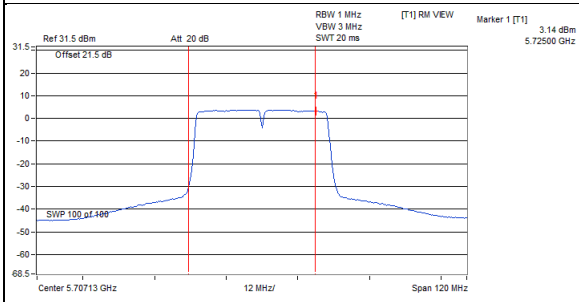
TX Channel Bandwidth 16.01 MHz Power 19.26 dBm

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



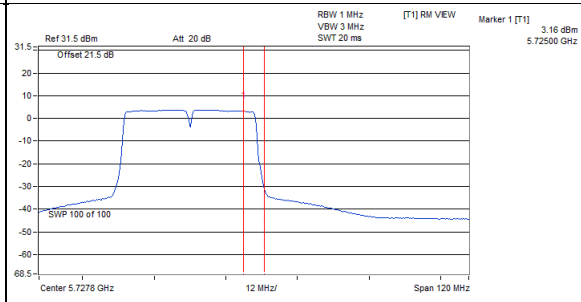
TX Channel Bandwidth 5.88 MHz Power 13.7 dBm

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



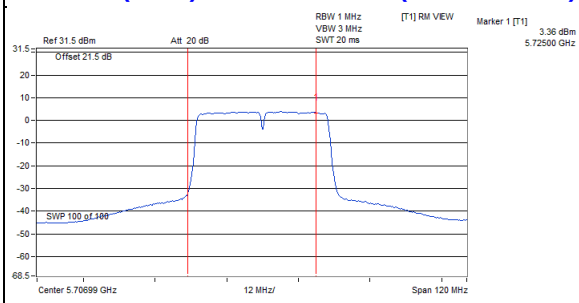
TX Channel Bandwidth 35.74 MHz Power 19.71 dBm

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



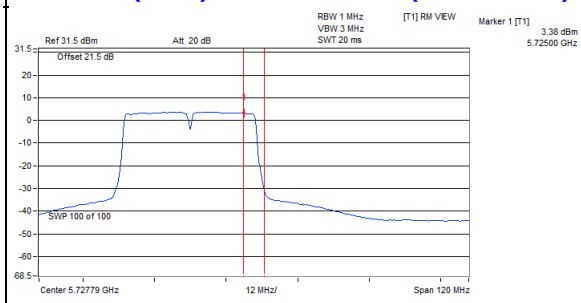
TX Channel Bandwidth 5.61 MHz Power 9.26 dBm

802.11ax (HE40)_Chain 1 / CH142 (U-NII-2C Band)

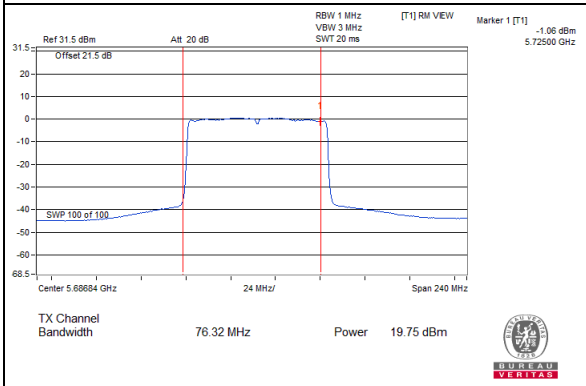
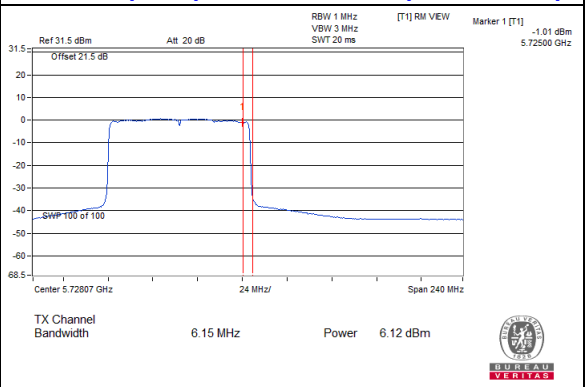
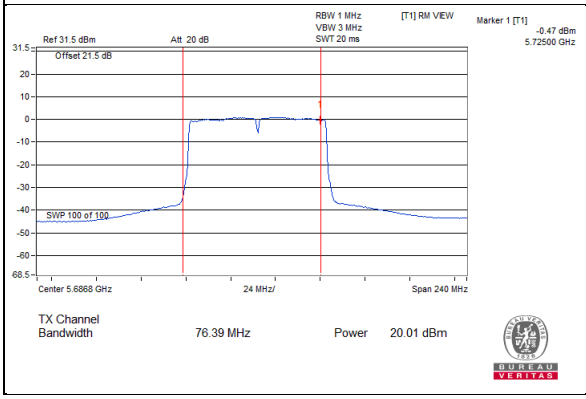
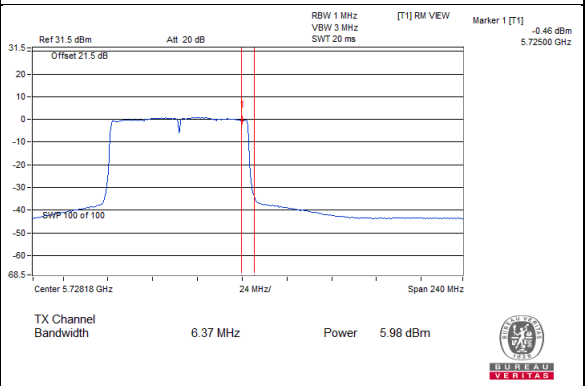


TX Channel Bandwidth 36.02 MHz Power 19.69 dBm

802.11ax (HE40)_Chain 1 / CH142 (U-NII-3 Band)



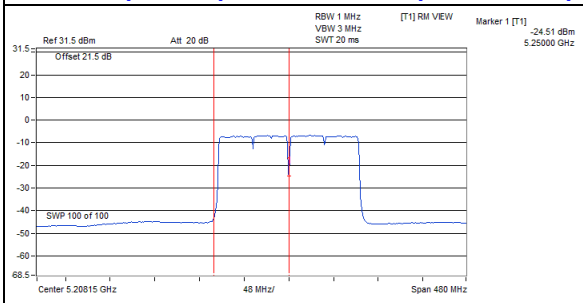
TX Channel Bandwidth 5.59 MHz Power 9.37 dBm

Spectrum Plot Value of Power	
802.11ax (HE80)_Chain 0 / CH138 (U-NII-2C Band)	**802.11ax (HE80)_Chain 0 / CH138 (U-NII-3 Band)**
 TX Channel Bandwidth 76.32 MHz Power 19.75 dBm	 TX Channel Bandwidth 6.15 MHz Power 6.12 dBm
802.11ax (HE80)_Chain 1 / CH138 (U-NII-2C Band)	**802.11ax (HE80)_Chain 1 / CH138 (U-NII-3 Band)**
 TX Channel Bandwidth 76.39 MHz Power 20.01 dBm	 TX Channel Bandwidth 6.37 MHz Power 5.98 dBm

For channel straddling 5250MHz of Power

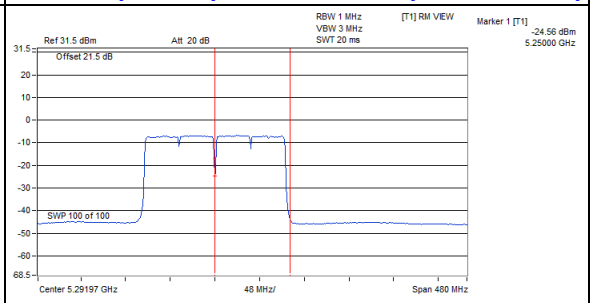
Spectrum Plot Value of Power

802.11ac (VHT160)_Chain 0 / CH50 (U-NII-1 Band)



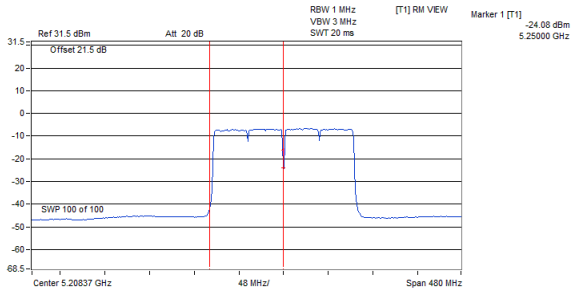
TX Channel Bandwidth 83.69 MHz Power 12.7 dBm

802.11ac (VHT160)_Chain 0 / CH50 (U-NII-2A Band)



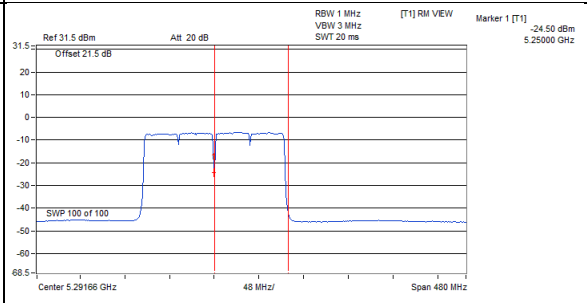
TX Channel Bandwidth 83.95 MHz Power 12.77 dBm

802.11ac (VHT160)_Chain 1 / CH50 (U-NII-1 Band)



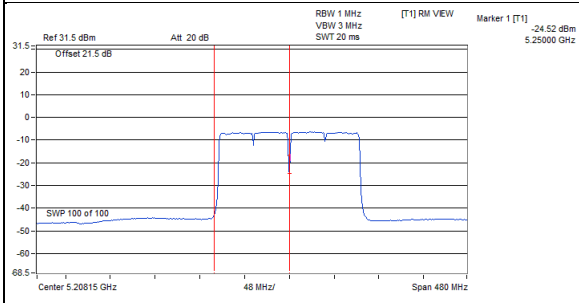
TX Channel Bandwidth 83.26 MHz Power 12.67 dBm

802.11ac (VHT160)_Chain 1 / CH50 (U-NII-2A Band)



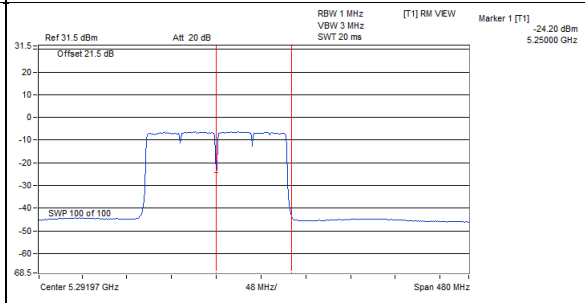
TX Channel Bandwidth 83.32 MHz Power 12.92 dBm

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



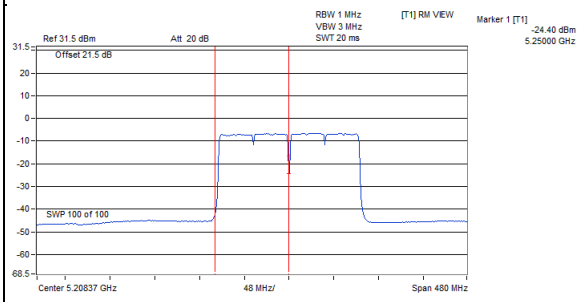
TX Channel Bandwidth 83.69 MHz Power 13.06 dBm

802.11ax (HE160)_Chain 0 / CH50 (U-NII-2A Band)



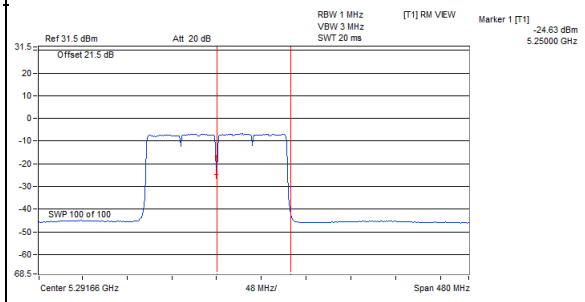
TX Channel Bandwidth 83.95 MHz Power 13.13 dBm

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



TX Channel Bandwidth 83.26 MHz Power 12.81 dBm

802.11ax (HE160)_Chain 1 / CH50 (U-NII-2A Band)



TX Channel Bandwidth 83.32 MHz Power 12.8 dBm

26dB OCCUPIED BANDWIDTH

802.11a

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
		Chain0	Chain1
52	5260	21.79	21.76
60	5300	21.78	21.82
64	5320	21.72	21.76
100	5500	21.75	21.69
116	5580	21.79	21.79
140	5700	21.83	21.8
144 (U-NII-2C Band)	5720	15.93	15.9

802.11ax (HE20)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
		Chain0	Chain1
52	5260	22.13	22.11
60	5300	22.16	22.04
64	5320	22.11	21.92
100	5500	22.03	21.88
116	5580	22.19	21.87
140	5700	22.16	21.85
144 (U-NII-2C Band)	5720	16.08	16.01

802.11ax (HE40)

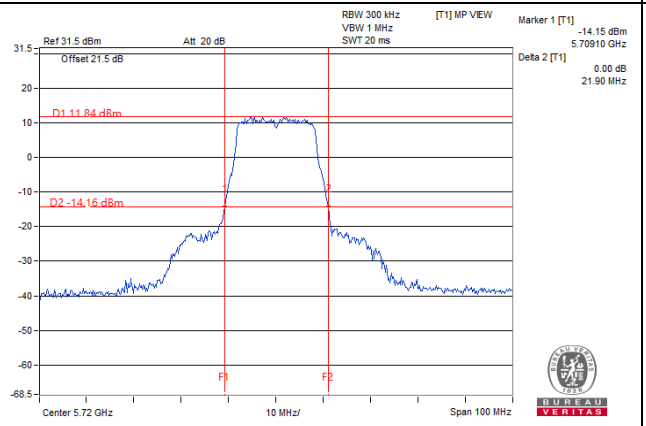
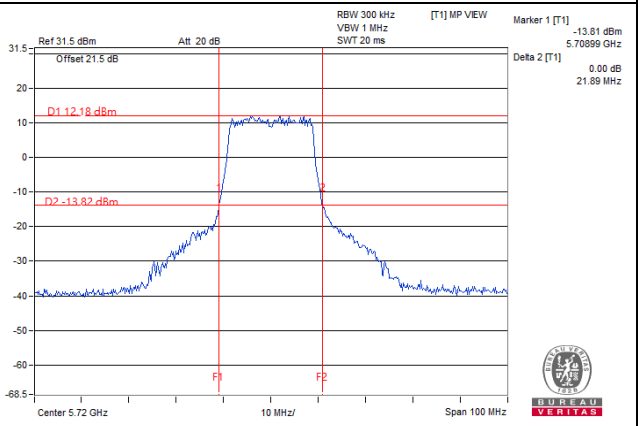
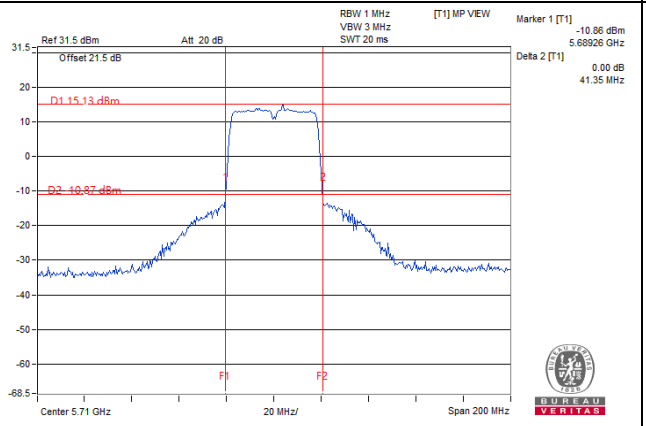
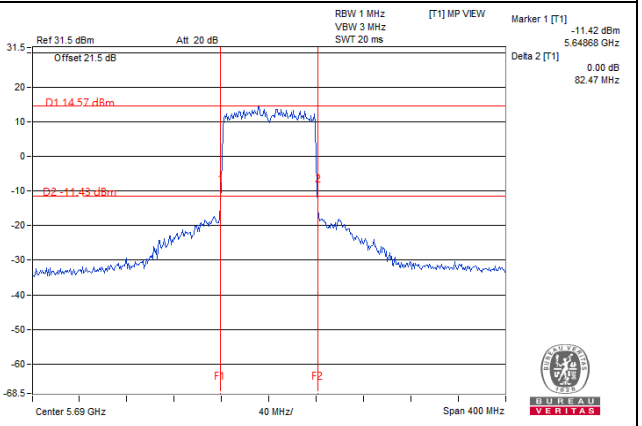
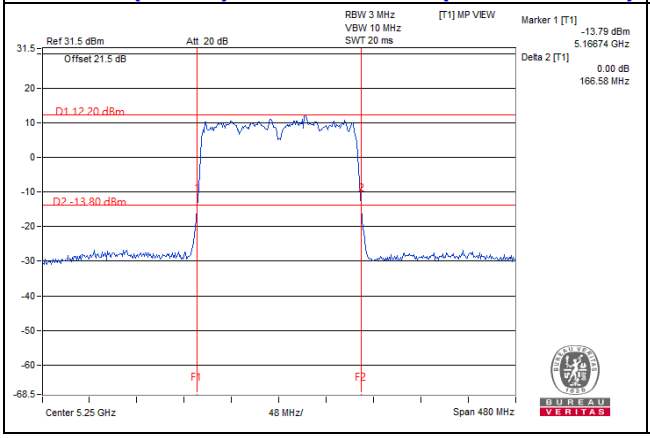
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
		Chain0	Chain1
54	5270	41.4	42.66
62	5310	41.24	41.19
102	5510	41.37	41.16
110	5550	41.35	41.47
134	5670	41.38	41.49
142 (U-NII-2C Band)	5710	35.74	36.02

802.11ax (HE80)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
		Chain0	Chain1
58	5290	82.96	82.92
106	5530	83.09	82.78
122	5610	82.88	82.83
138 (U-NII-2C Band)	5690	76.32	76.39

802.11ax (HE160)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
		Chain0	Chain1
50 (U-NII-2A Band)	5250	83.69	83.26
114	5570	168.95	167.52

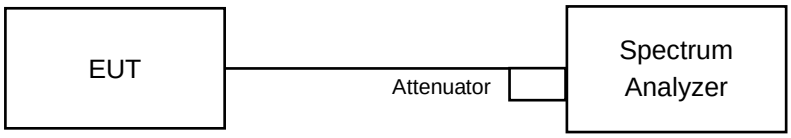
Spectrum Plot of Min. Value	
802.11a_Chain 1 / CH144 (U-NII-2C Band)	**802.11ax (HE20)_Chain 1 / CH144 (U-NII-2C Band)**
	
802.11ax (HE40)_Chain 0 / CH142 (U-NII-2C Band)	**802.11ax (HE80)_Chain 0 / CH138 (U-NII-2C Band)**
	
802.11ax (HE160)_Chain 1 / CH50 (U-NII-2A Band)	
	

Note:

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

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.64	17.28
40	5200	25.32	23.76
48	5240	18.6	17.88
52	5260	17.04	17.04
60	5300	17.04	17.04
64	5320	17.04	17.04
100	5500	17.04	17.04
116	5580	17.16	17.16
140	5700	17.04	17.04
144 (U-NII-2C Band)	5720	13.52	13.52
144 (U-NII-3 Band)	5720	3.52	3.52
149	5745	20.04	24.84
157	5785	21	27.12
165	5825	21.84	27.96

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	18.24	18
40	5200	19.8	19.56
48	5240	19.68	18.84
52	5260	18.12	18.12
60	5300	18.24	18.12
64	5320	18.12	17.88
100	5500	18.12	17.88
116	5580	18.24	18
140	5700	18.12	18
144 (U-NII-2C Band)	5720	14.12	14.12
144 (U-NII-3 Band)	5720	4.12	4
149	5745	20.16	30.48
157	5785	22.2	31.92
165	5825	23.64	32.16

802.11ax (HE40)

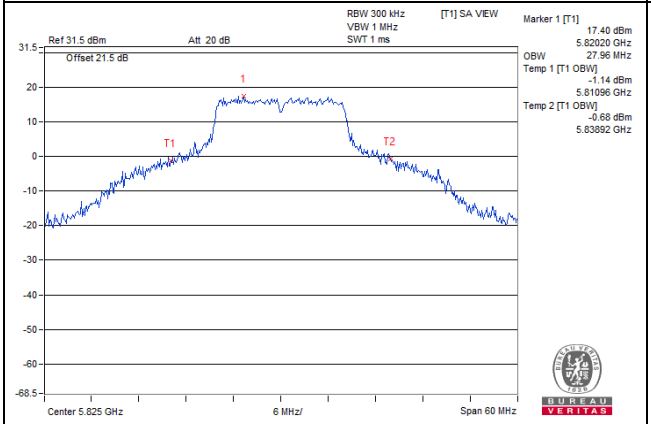
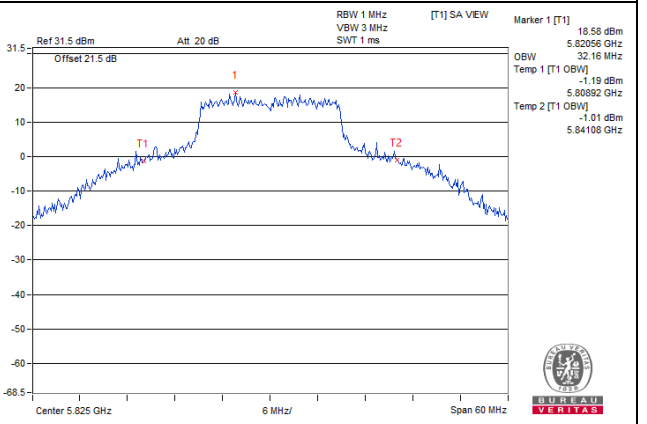
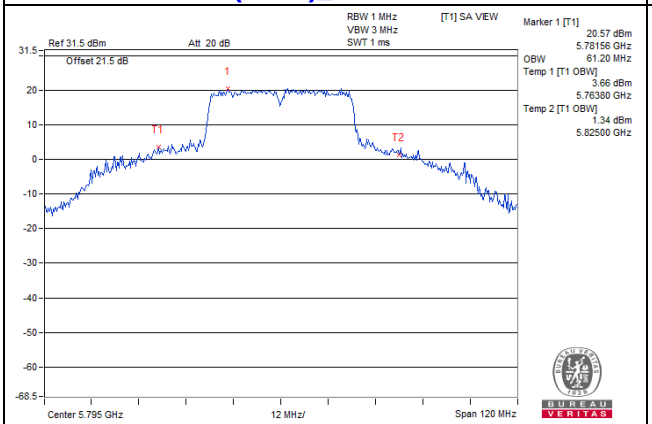
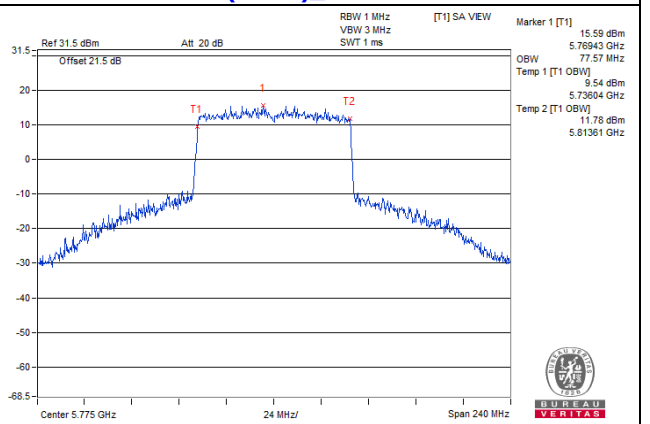
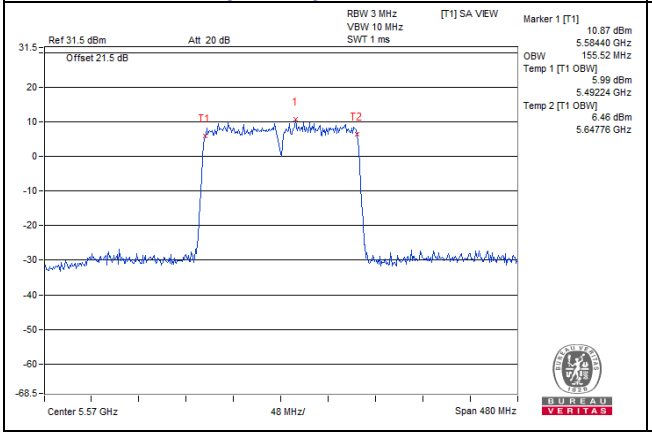
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.72	36.48
46	5230	37.92	37.2
54	5270	36.96	36.96
62	5310	36.72	36.48
102	5510	36.72	36.48
110	5550	36.72	36.96
134	5670	36.72	36.96
142 (U-NII-2C Band)	5710	33.48	33.48
142 (U-NII-3 Band)	5710	3.48	3.48
151	5755	47.76	50.88
159	5795	60.24	61.2

802.11ax (HE80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	75.84	75.84
58	5290	76.8	75.84
106	5530	77.28	76.32
122	5610	77.28	75.84
138 (U-NII-2C Band)	5690	73.88	72.92
138 (U-NII-3 Band)	5690	3.4	2.92
155	5775	77.57	75.84

802.11ax (HE160)

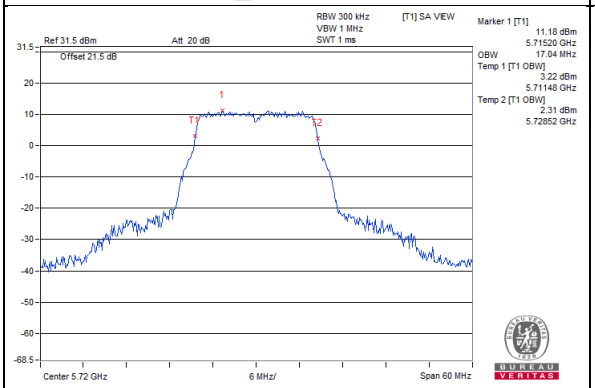
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
50 (U-NII-1)	5250	77.76	77.76
50 (U-NII-2A)	5250	76.8	77.76
114	5570	154.56	155.52

Spectrum Plot of Max. Value	
802.11a_Chain 1 / CH165	**802.11ax (HE20)_Chain 1 / CH165**
	
802.11ax (HE40)_Chain 1 / CH159	**802.11ax (HE80)_Chain 0 / CH155**
	
802.11ax (HE160)_Chain 1 / CH 114	
	

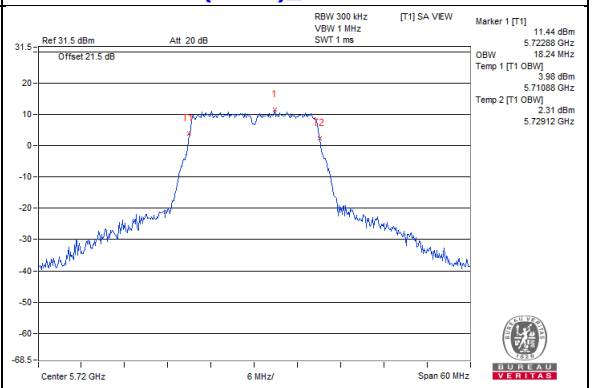
For channel straddling 5725MHz of OCP99% BW

Spectrum Plot Value of OCP99% BW

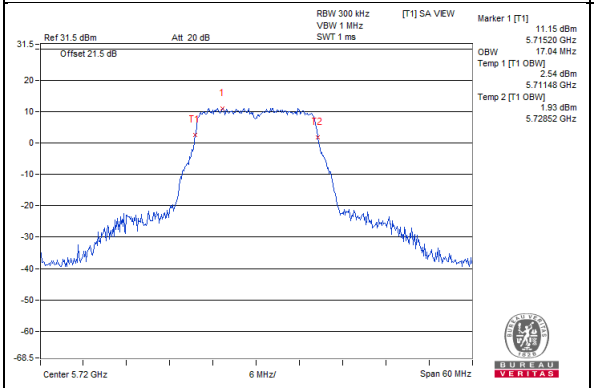
802.11a_Chain 0 / CH144



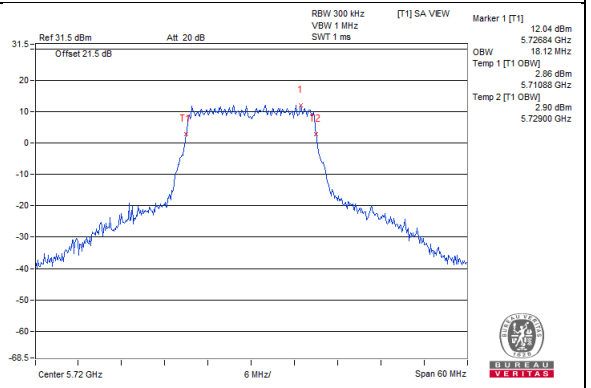
802.11ax (HE20)_Chain 0 / CH144



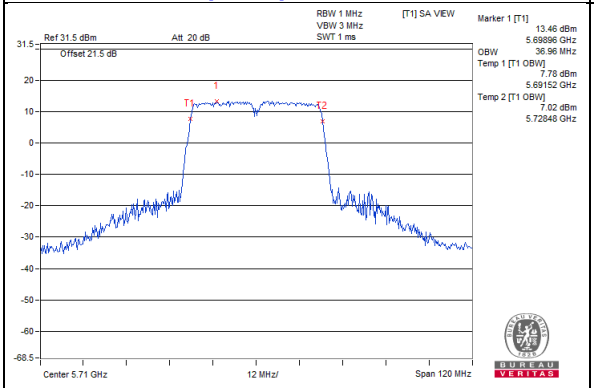
802.11a_Chain 1 / CH144



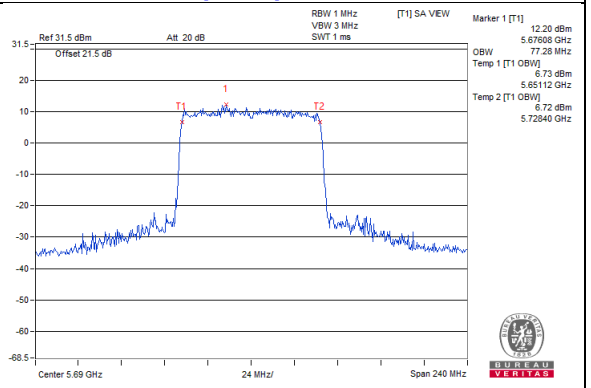
802.11ax (HE20)_Chain 1 / CH144



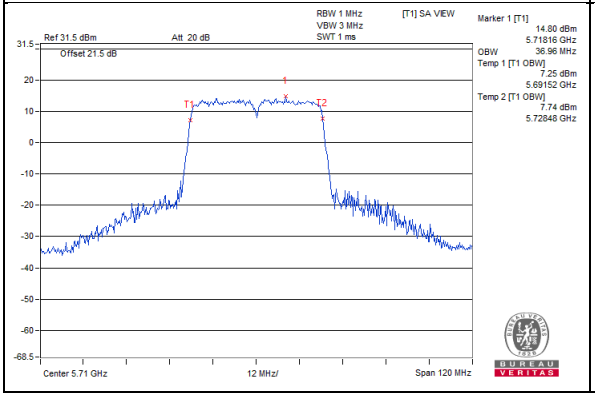
802.11ax (HE40)_Chain 0 / CH142



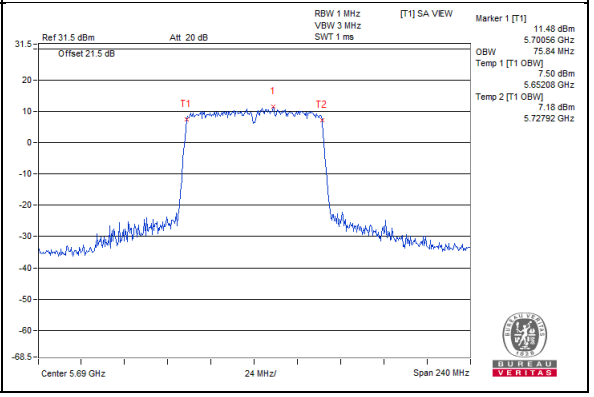
802.11ax (HE80)_Chain 0 / CH138



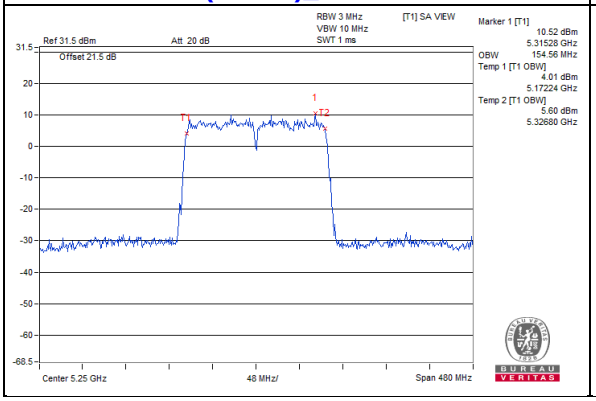
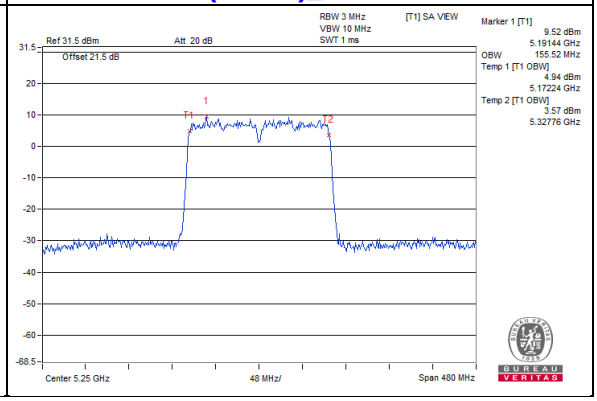
802.11ax (HE40)_Chain 1 / CH142



802.11ax (HE80)_Chain 1 / CH138



For channel straddling 5250MHz of OCP99% BW

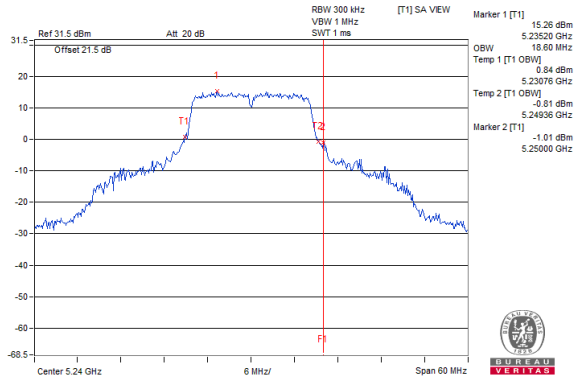
Spectrum Plot Value of OCP99% BW	
802.11ax (HE160)_Chain 0 / CH50	**802.11ax (HE160)_Chain 1 / CH50**
	

Note:

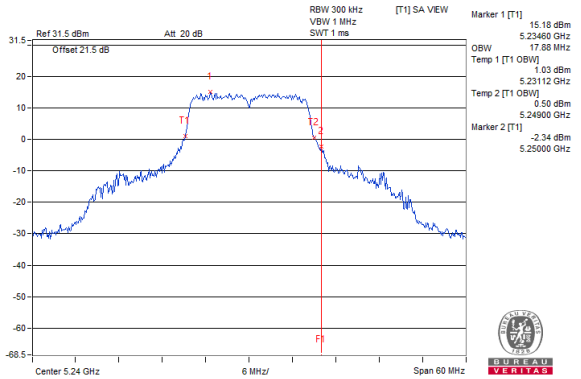
For CH144 (U-NII-2C) = 5725MHz - Temp 1
For CH142 (U-NII-2C) = 5725MHz - Temp 1
For CH138 (U-NII-2C) = 5725MHz - Temp 1
For CH144 (U-NII-3) = Temp 2 - 5725MHz
For CH142 (U-NII-3) = Temp 2 - 5725MHz
For CH138 (U-NII-3) = Temp 2 - 5725MHz
For CH50 (U-NII-2A) = Temp 2 – 5250MHz
For CH50 (U-NII-1) = 5250MHz – Temp 1

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

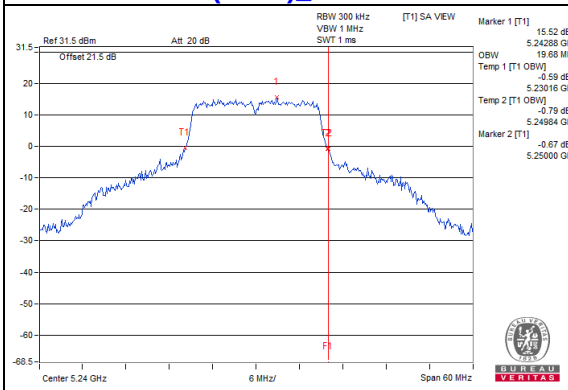
802.11a_Chain 0 / CH48



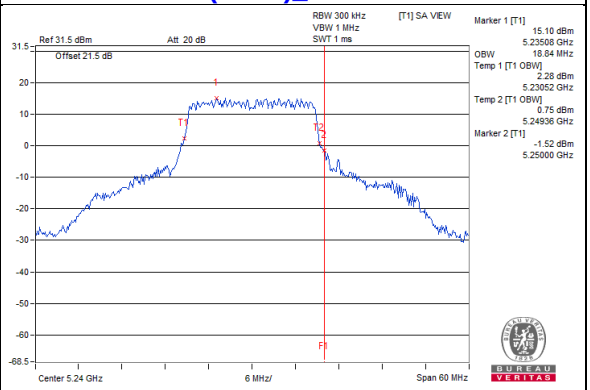
802.11a_Chain 1 / CH48



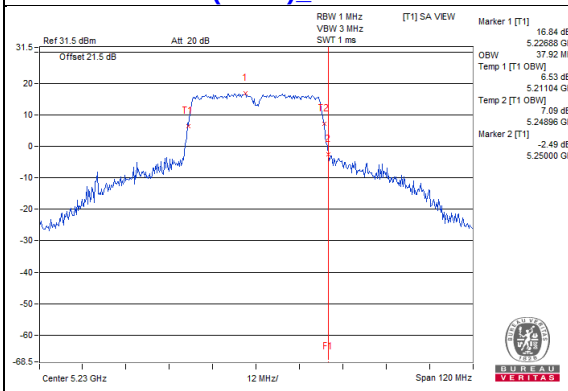
802.11ax (HE20)_Chain 0 / CH48



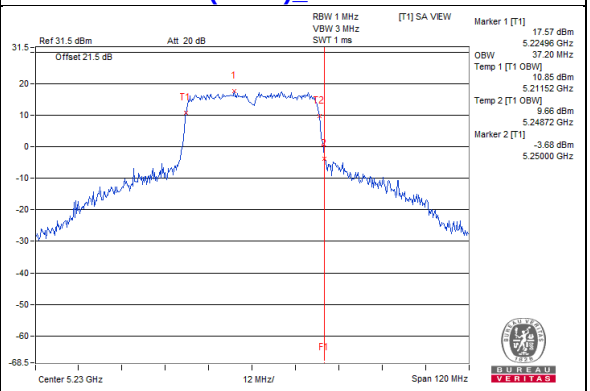
802.11ax (HE20)_Chain 1 / CH48



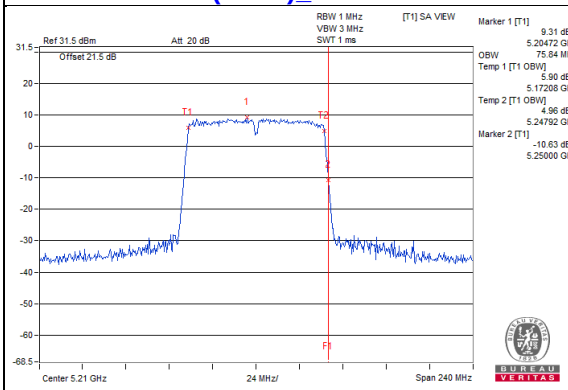
802.11ax (HE40)_Chain 0 / CH46



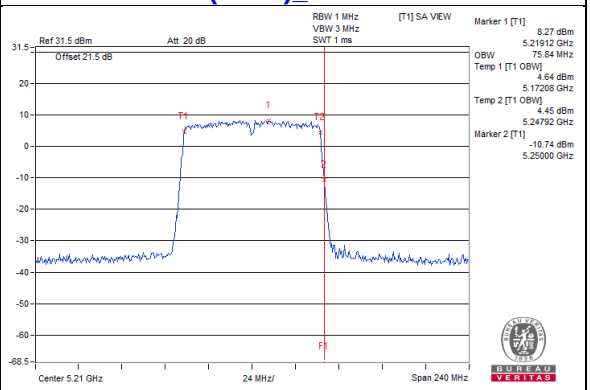
802.11ax (HE40)_Chain 1 / CH46



802.11ax (HE80)_Chain 0 / CH42

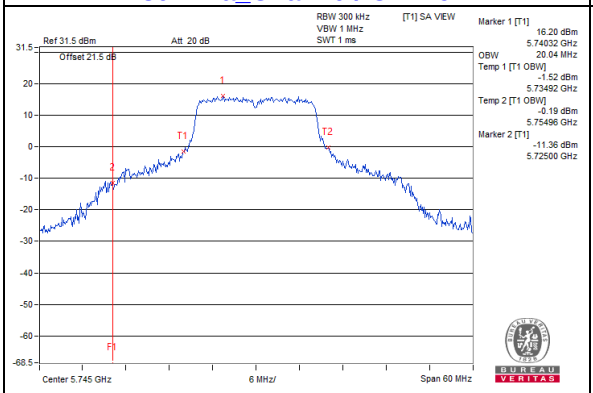


802.11ax (HE80)_Chain 1 / CH42

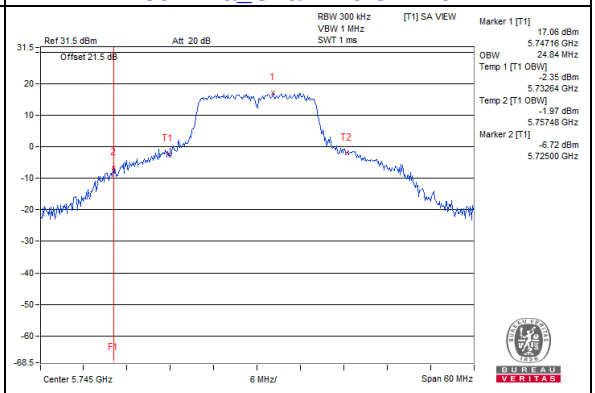


Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2C band)

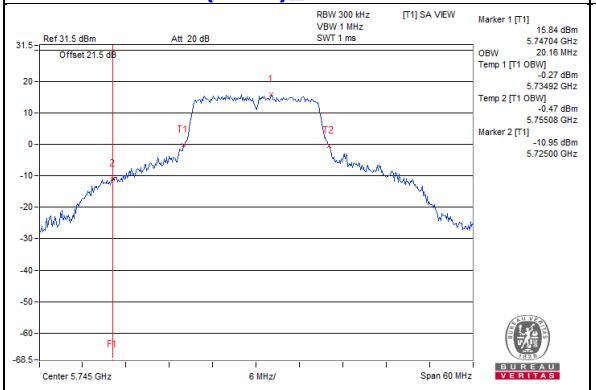
802.11a_Chain 0 / CH149



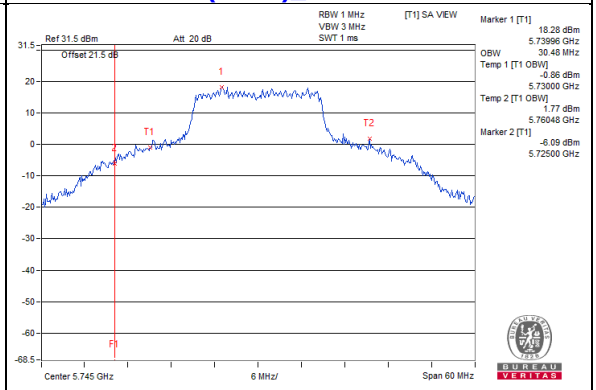
802.11a_Chain 1 / CH149



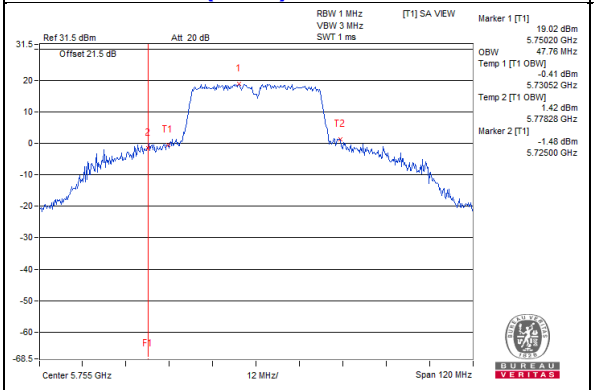
802.11ax (HE20)_Chain 0 / CH149



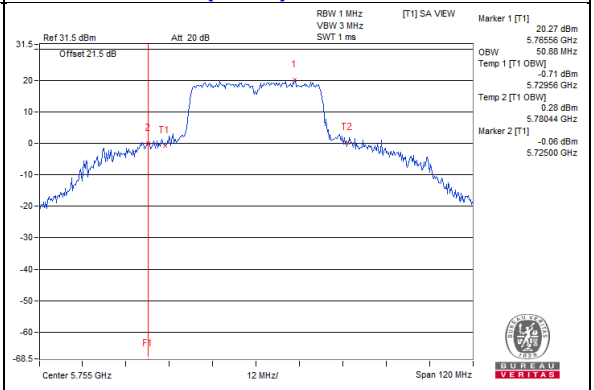
802.11ax (HE20)_Chain 1 / CH149



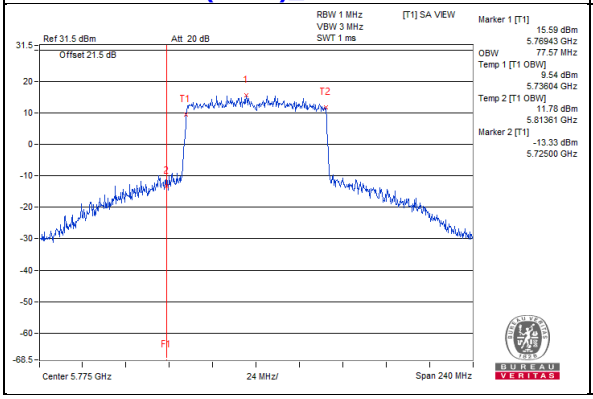
802.11ax (HE40)_Chain 0 / CH151



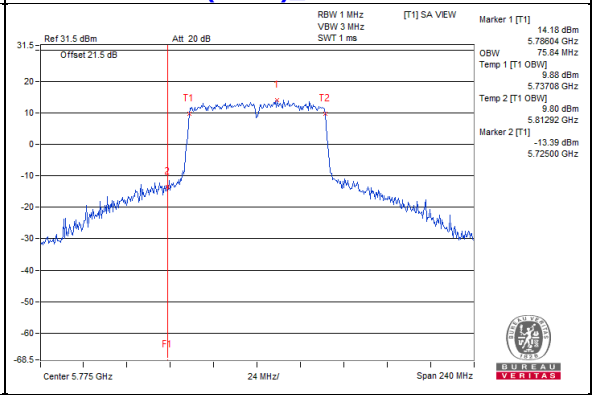
802.11ax (HE40)_Chain 1 / CH151



802.11ax (HE80)_Chain 0 / CH155



802.11ax (HE80)_Chain 1 / CH155

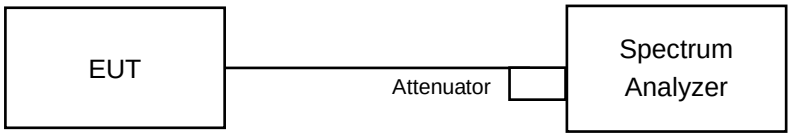


4.5 Peak Power Spectral Density Measurement

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:

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:

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW ≥ 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 = 10log(500kHz/300kHz)
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

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			
36	5180	9.80	9.35	12.59	17.00	Pass
40	5200	12.36	12.41	15.40	17.00	Pass
48	5240	11.12	10.51	13.84	17.00	Pass
52	5260	6.97	7.43	10.22	11.00	Pass
60	5300	7.16	7.07	10.13	11.00	Pass
64	5320	7.16	7.15	10.17	11.00	Pass
100	5500	5.67	6.92	9.35	11.00	Pass
116	5580	8.35	7.36	10.89	11.00	Pass
140	5700	7.83	7.10	10.49	11.00	Pass
144 (U-NII-2C Band)	5720	7.91	7.22	10.59	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&2A: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.48dBi < 6dBi, so the power density limit shall not be reduced.
3. For U-NII-2C: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.56dBi < 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			
36	5180	7.47	6.74	10.13	17.00	Pass
40	5200	10.63	11.04	13.85	17.00	Pass
48	5240	10.78	10.29	13.55	17.00	Pass
52	5260	6.97	7.11	10.05	11.00	Pass
60	5300	7.08	7.03	10.07	11.00	Pass
64	5320	6.98	7.02	10.01	11.00	Pass
100	5500	5.99	5.14	8.60	11.00	Pass
116	5580	6.90	6.69	9.81	11.00	Pass
140	5700	5.34	4.91	8.14	11.00	Pass
144 (U-NII-2C Band)	5720	6.93	6.77	9.86	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&2A: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.48dBi < 6dBi, so the power density limit shall not be reduced.
3. For U-NII-2C: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.56dBi < 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			
38	5190	1.32	0.63	4.00	17.00	Pass
46	5230	7.13	6.53	9.85	17.00	Pass
54	5270	4.43	4.86	7.66	11.00	Pass
62	5310	2.84	0.58	4.87	11.00	Pass
102	5510	2.05	1.56	4.82	11.00	Pass
110	5550	4.13	3.90	7.03	11.00	Pass
134	5670	3.56	3.80	6.69	11.00	Pass
142 (U-NII-2C Band)	5710	3.89	4.12	7.02	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&2A: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.48dBi < 6dBi, so the power density limit shall not be reduced.
3. For U-NII-2C: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.56dBi < 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			
42	5210	-0.54	-1.63	1.96	17.00	Pass
58	5290	0.71	-0.33	3.23	11.00	Pass
106	5530	-1.49	-2.36	1.11	11.00	Pass
122	5610	1.35	1.54	4.46	11.00	Pass
138 (U-NII-2C Band)	5690	1.43	1.43	4.44	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&2A: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.48dBi < 6dBi, so the power density limit shall not be reduced.
3. For U-NII-2C: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.56dBi < 6dBi, so the power density limit shall not be reduced.

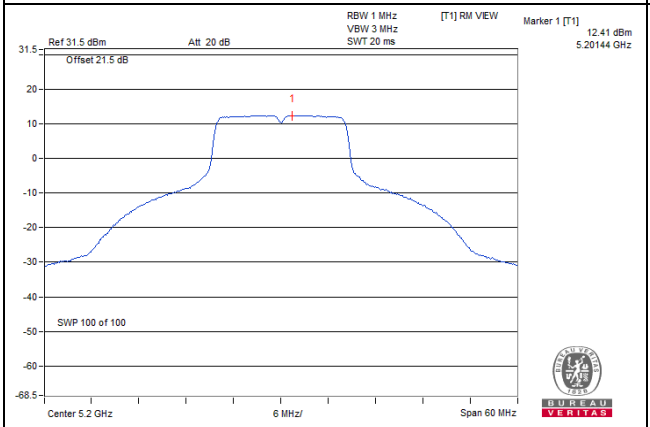
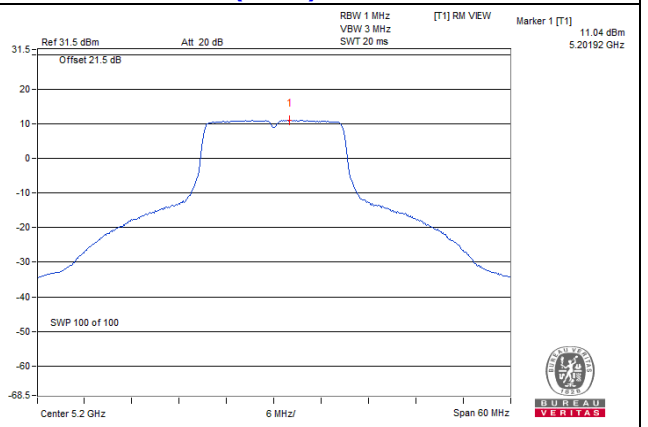
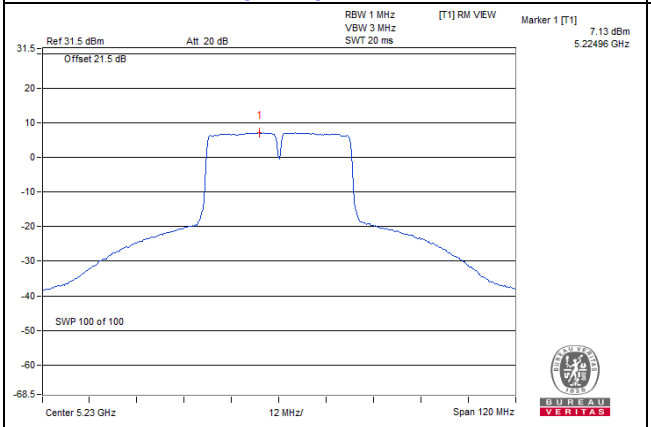
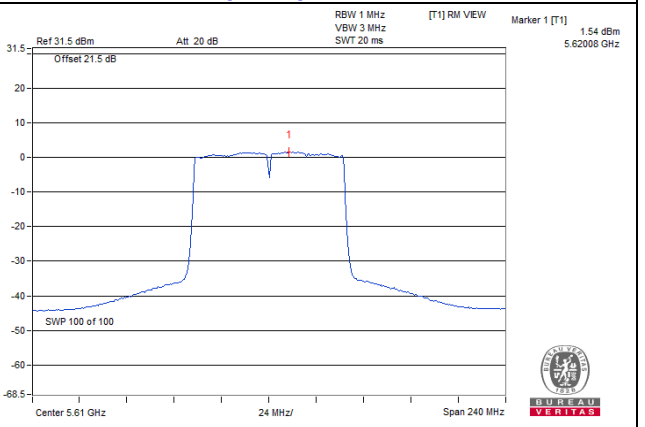
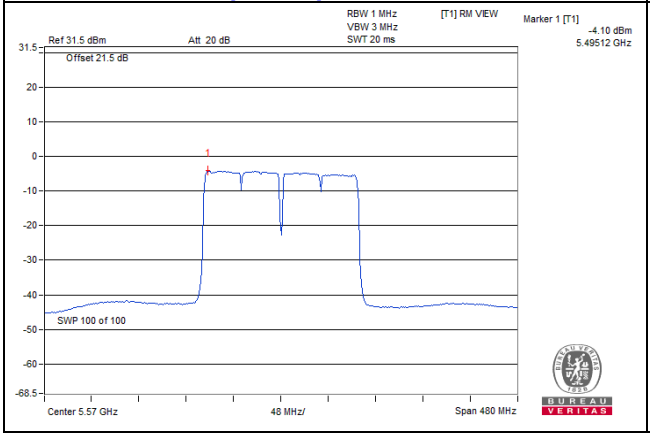
802.11ax (HE160)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
50 (U-NII-1)	5250	-6.45	-6.75	-3.59	17.00	Pass
50 (U-NII-2A)	5250	-6.28	-6.57	-3.41	11.00	Pass
114	5570	-4.10	-6.39	-2.09	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&2A: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.48dBi < 6dBi, so the power density limit shall not be reduced.

3. For U-NII-2C: The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 5.56dBi < 6dBi, so the power density limit shall not be reduced.

Spectrum Plot of Worst Value	
802.11a_Chain 1 / CH40	**802.11ax (HE20)_Chain 1 / CH40**
	
802.11ax (HE40)_Chain 0 / CH46	**802.11ax (HE80)_Chain 1 / CH122**
	
802.11ax (HE160)_Chain 0 / CH114	
	

For U-NII-3 band:

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)		Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
		Chain 0	Chain 1				
144 (U-NII-3 Band)	5720	-0.92	-1.50	1.81	4.03	30.00	Pass
149	5745	3.31	4.48	6.94	9.16	30.00	Pass
157	5785	3.47	4.23	6.88	9.10	30.00	Pass
165	5825	3.77	4.63	7.23	9.45	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 = 10 log[($10^{G0/20}$ + $10^{G1/20}$)^2 / 2] = 5.54dBi < 6dBi, so the power density limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)		Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
		Chain 0	Chain 1				
144 (U-NII-3 Band)	5720	-1.49	-2.20	1.18	3.40	30.00	Pass
149	5745	3.13	4.39	6.82	9.04	30.00	Pass
157	5785	3.25	4.59	6.98	9.20	30.00	Pass
165	5825	3.47	4.54	7.05	9.27	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 = 10 log[($10^{G0/20}$ + $10^{G1/20}$)^2 / 2] = 5.54dBi < 6dBi, so the power density limit shall not be reduced.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)		Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
		Chain 0	Chain 1				
142 (U-NII-3 Band)	5710	-5.81	-5.33	-2.55	-0.33	30.00	Pass
151	5755	-0.13	0.09	2.99	5.21	30.00	Pass
159	5795	0.66	0.62	3.65	5.87	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 = 10 log[($10^{G0/20}$ + $10^{G1/20}$)^2 / 2] = 5.54dBi < 6dBi, so the power density limit shall not be reduced.

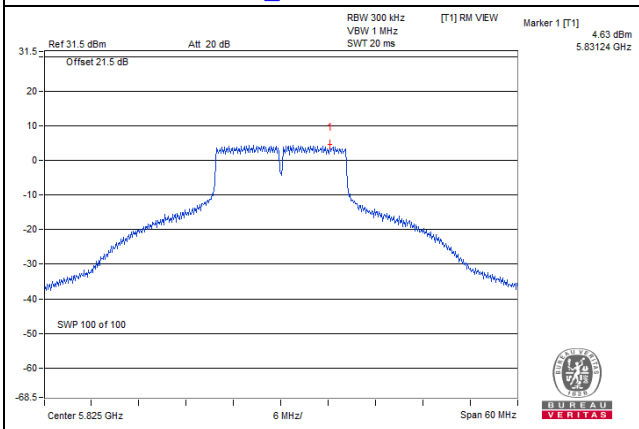
802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)		Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
		Chain 0	Chain 1				
138 (U-NII-3 Band)	5710	-9.12	-8.72	-5.91	-3.69	30.00	Pass
155	5755	-5.66	-5.48	-2.56	-0.34	30.00	Pass

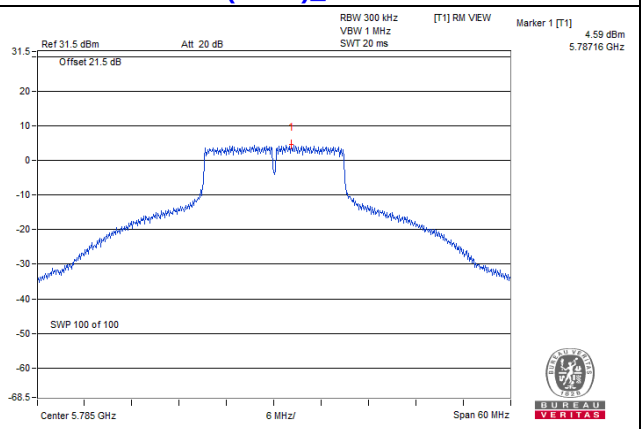
Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. The directional gain = 10 log[($10^{G0/20}$ + $10^{G1/20}$)^2 / 2] = 5.54dBi < 6dBi, so the power density limit shall not be reduced.

Spectrum Plot of Worst Value

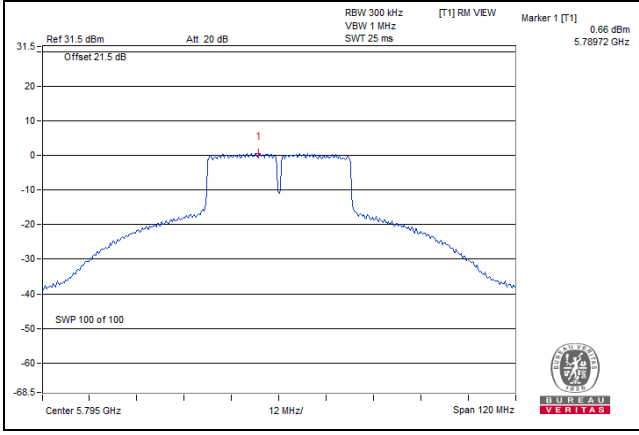
802.11a_Chain 1 / CH165



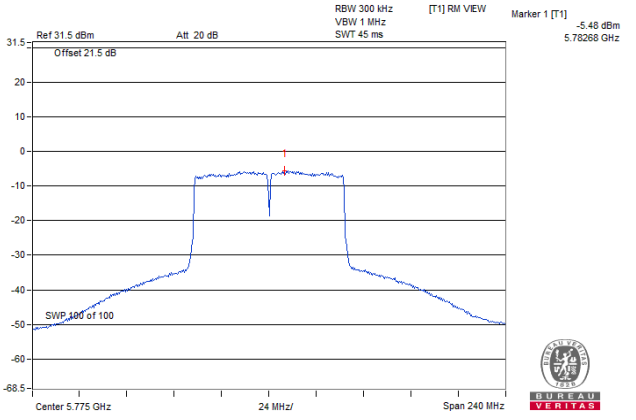
802.11ax (HE20)_Chain 1 / CH157



802.11ax (HE40)_Chain 0 / CH159



802.11ax (HE80)_Chain 1 / CH155

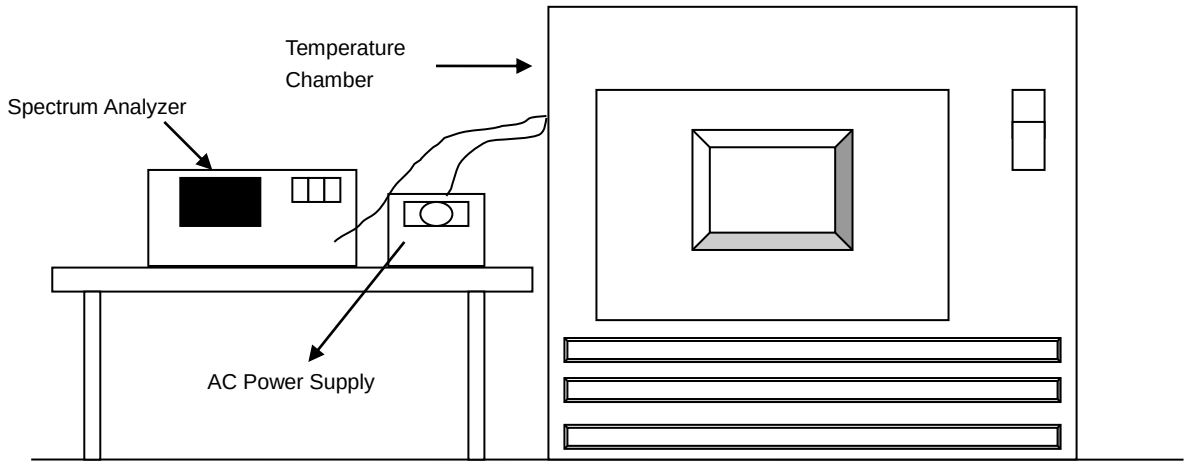


4.6 Frequency Stability Measurement

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

a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.

b. Turn the EUT on and couple its output to a spectrum analyzer.

c. Turn the EUT off and set the chamber to the highest temperature specified.

d. 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.

e. Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.

f. 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. (℃)	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
35	120	5179.9801	Pass	5179.9795	Pass	5179.9789	Pass	5179.9811	Pass
30	120	5179.9932	Pass	5179.9966	Pass	5179.9928	Pass	5179.9949	Pass
20	120	5180.0139	Pass	5180.016	Pass	5180.0172	Pass	5180.0176	Pass
10	120	5180.0112	Pass	5180.0075	Pass	5180.0077	Pass	5180.0111	Pass
0	120	5179.9868	Pass	5179.9862	Pass	5179.9885	Pass	5179.9889	Pass

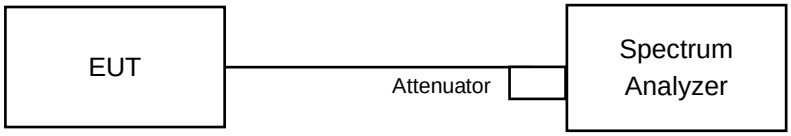
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
TEMP. (℃)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	138	5180.0259	Pass	5180.0258	Pass	5180.0243	Pass	5180.0237	Pass
	120	5180.0139	Pass	5180.016	Pass	5180.0172	Pass	5180.0176	Pass
	102	5180.024	Pass	5180.0213	Pass	5180.0237	Pass	5180.0192	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

a. Set resolution bandwidth (RBW) = 100kHz
b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
c. Trace mode = max hold.
d. Sweep = auto couple.
e. 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

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144 (U-NII-3 Band)	5720	3.19	3.19	0.5	Pass
149	5745	16.42	16.4	0.5	Pass
157	5785	16.43	16.41	0.5	Pass
165	5825	16.41	16.41	0.5	Pass

802.11ax (HE20)

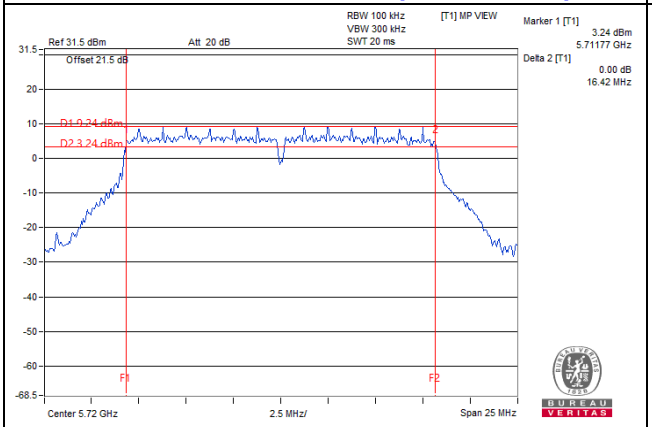
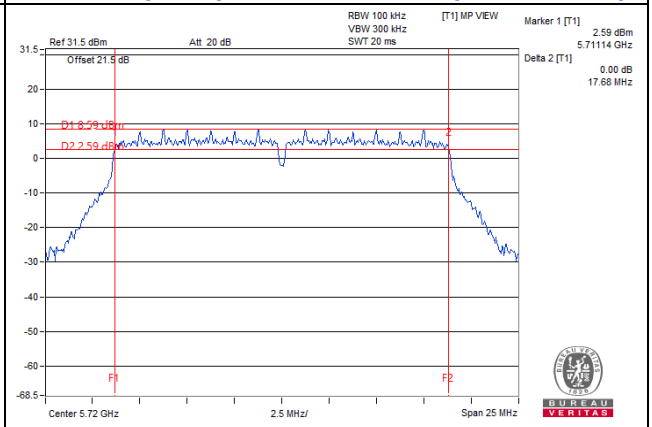
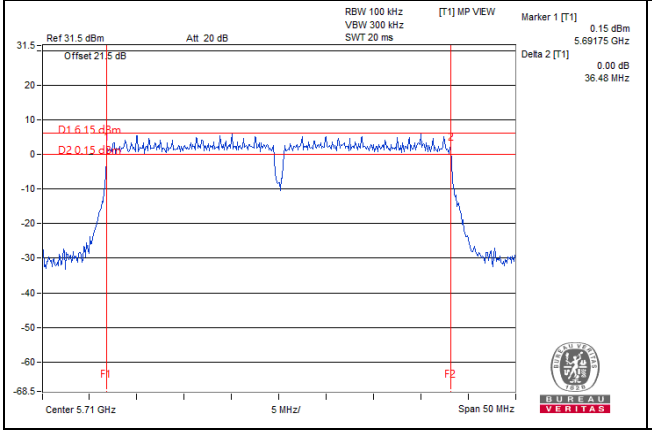
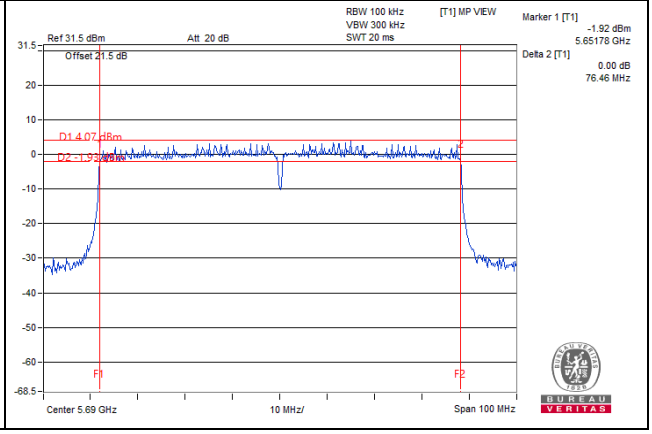
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144 (U-NII-3 Band)	5720	3.82	3.82	0.5	Pass
149	5745	17.66	17.62	0.5	Pass
157	5785	17.65	17.63	0.5	Pass
165	5825	17.65	17.62	0.5	Pass

802.11ax (HE40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
142 (U-NII-3 Band)	5710	3.25	3.23	0.5	Pass
151	5755	36.47	36.49	0.5	Pass
159	5795	36.45	36.51	0.5	Pass

802.11ax (HE80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
138 (U-NII-3 Band)	5690	3.88	3.24	0.5	Pass
155	5775	77.86	76.44	0.5	Pass

Spectrum Plot of Worst Value	
802.11a_Chain 0 / CH144 (U-NII-3 Band)	**802.11ax (HE20)_Chain 0 / CH144 (U-NII-3 Band)**
	
802.11ax (HE40)_Chain 1 / CH142 (U-NII-3 Band)	**802.11ax (HE80)_Chain 1 / CH138 (U-NII-3 Band)**
	

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

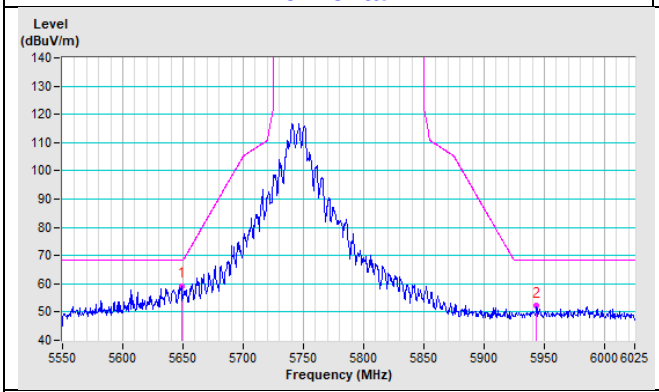
5 Pictures of Test Arrangements

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

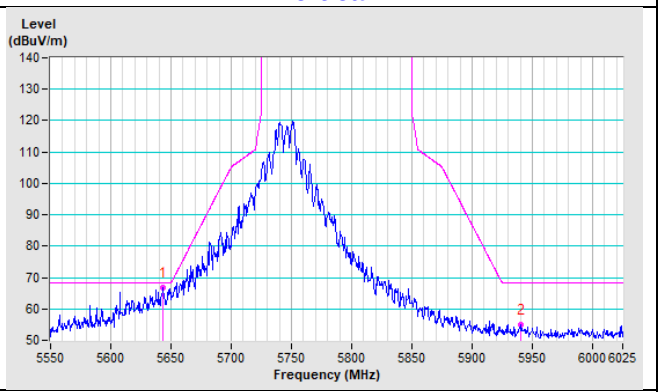
Annex A - Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

802.11a CH 149：5745 MHz

Horizontal

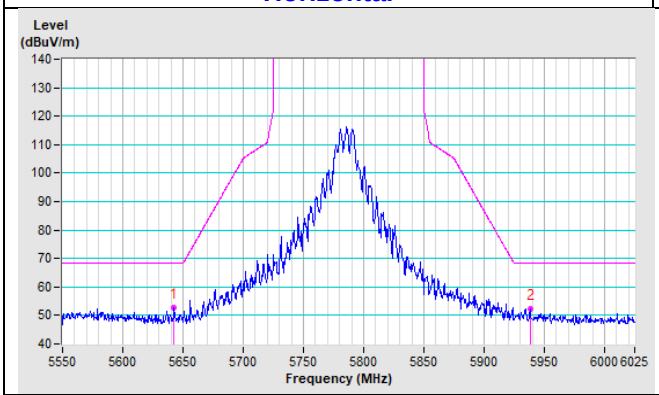


Vertical

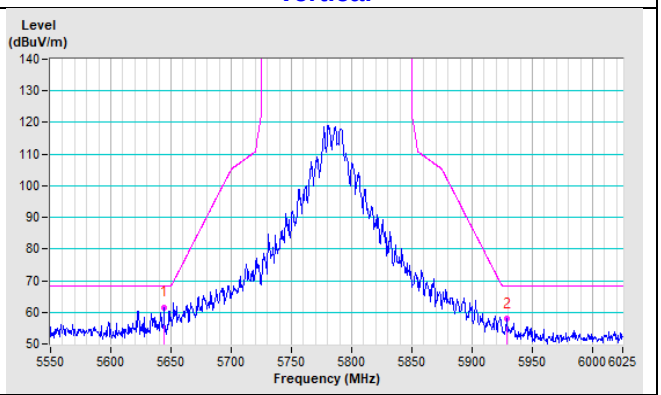


802.11a CH 157：5785 MHz

Horizontal

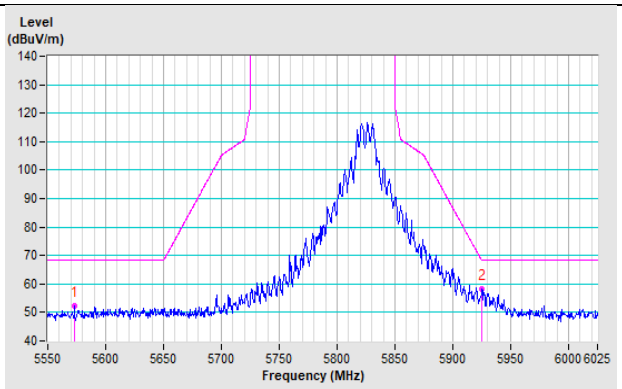


Vertical

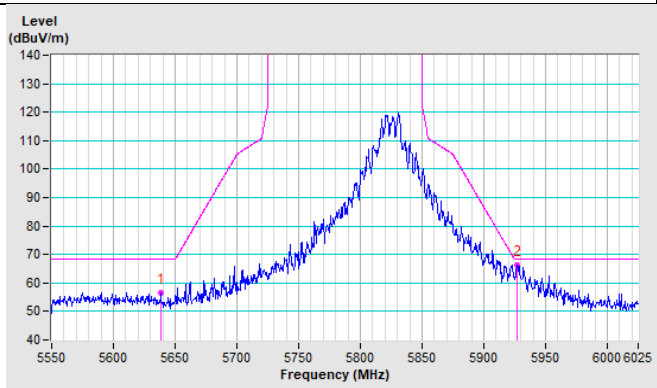


802.11a CH 165：5825 MHz

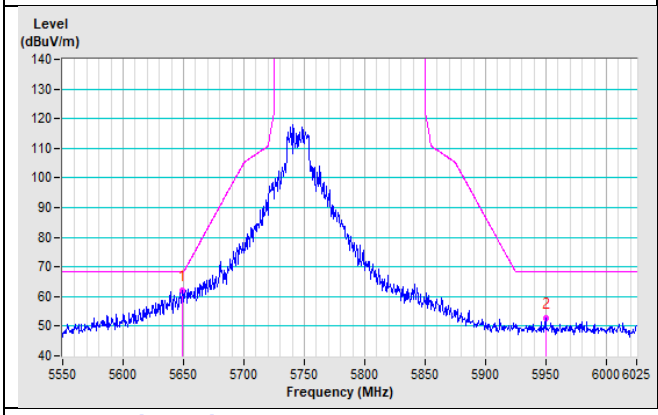
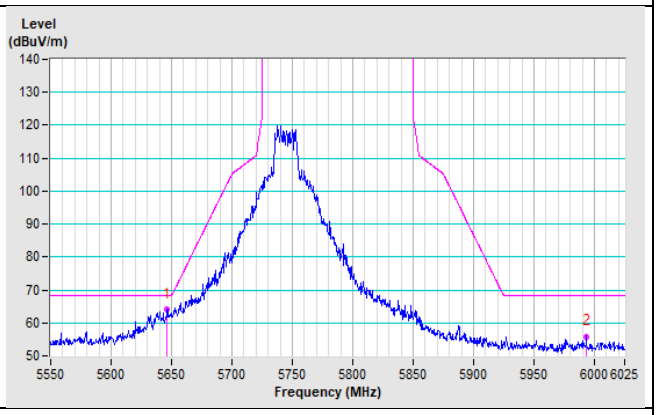
Horizontal



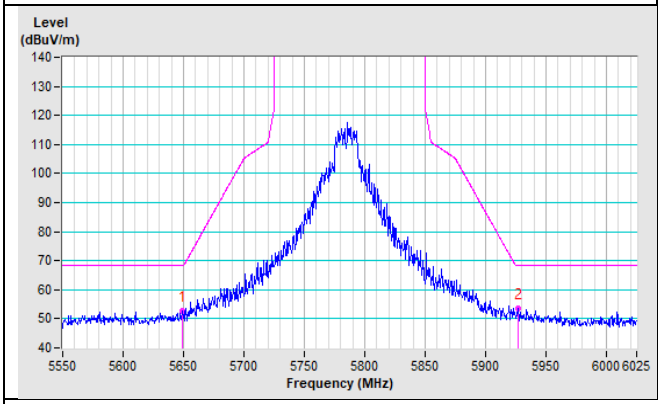
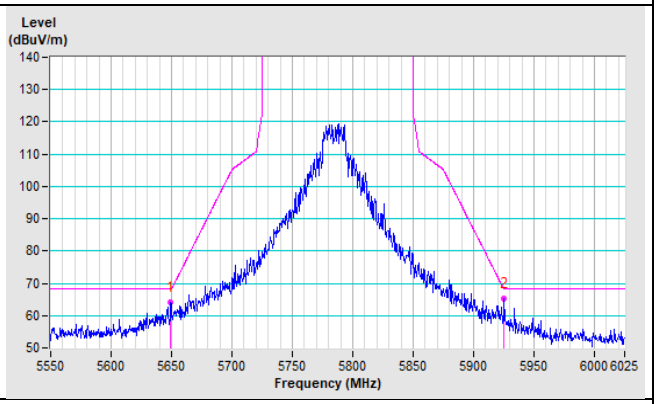
Vertical



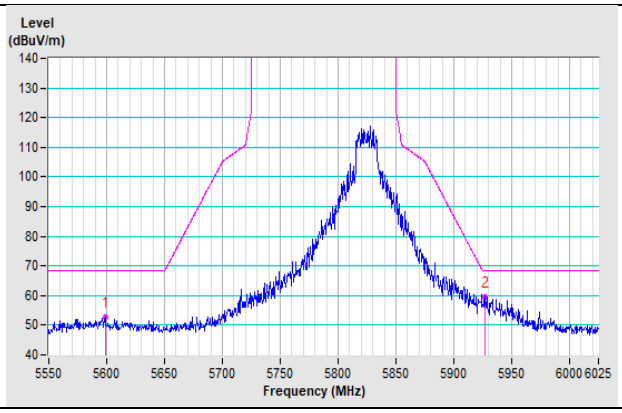
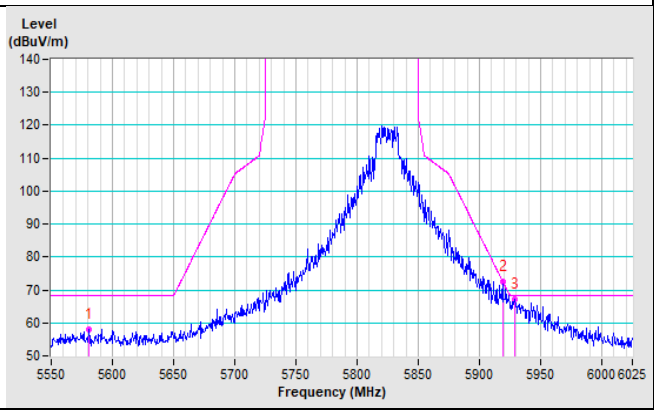
802.11ax (HE20) CH 149：5745 MHz

Horizontal	Vertical
	

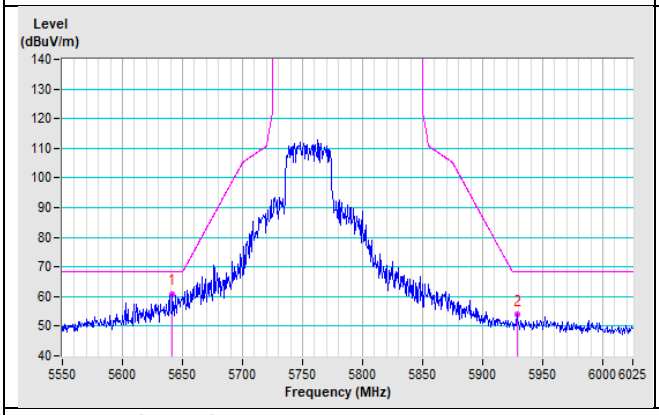
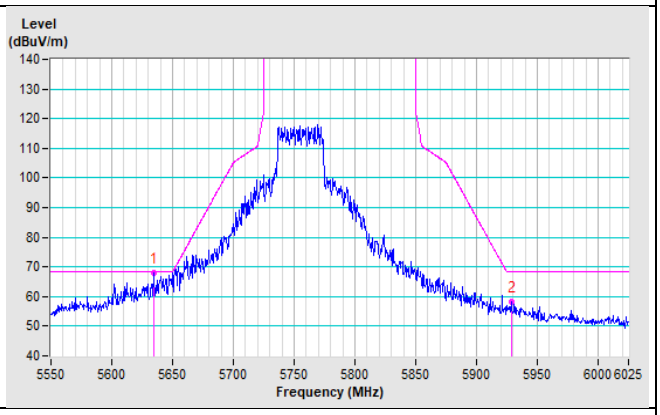
802.11ax (HE20) CH 157：5785 MHz

Horizontal	Vertical
	

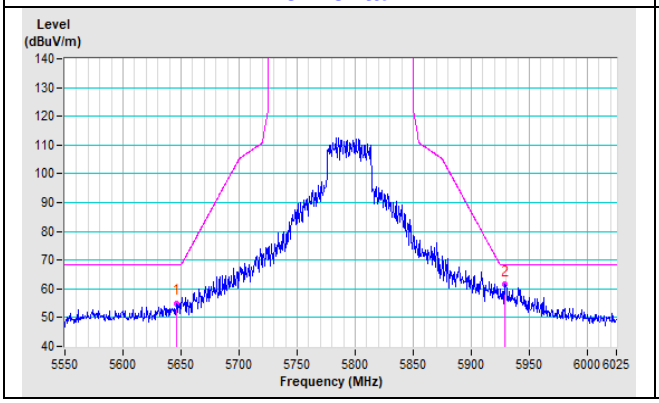
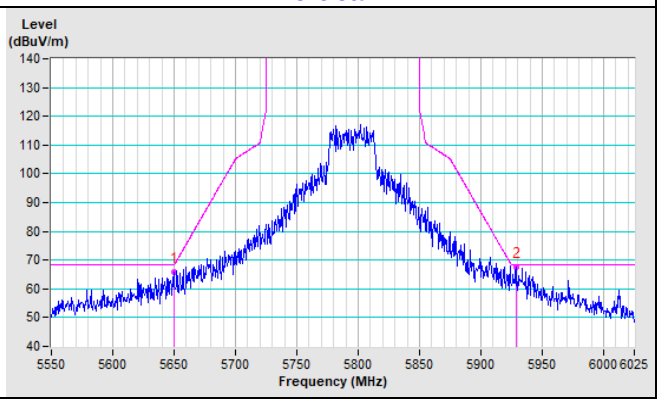
802.11ax (HE20) CH 165：5825 MHz

Horizontal	Vertical
	

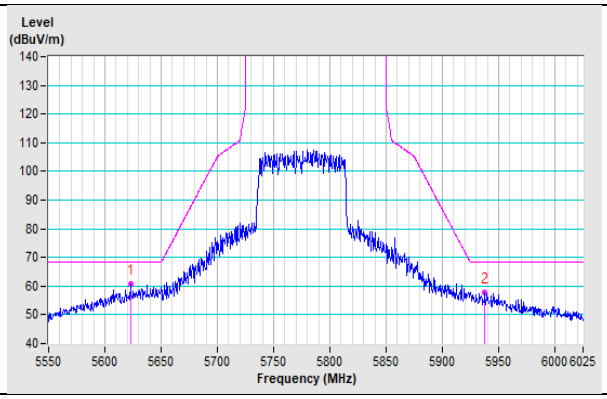
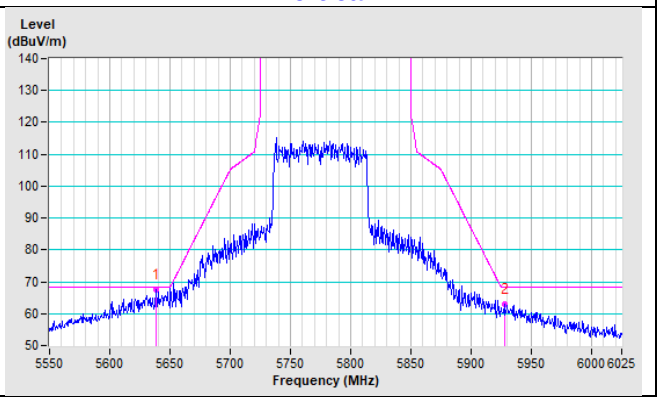
802.11ax (HE40) CH 151：5755 MHz

Horizontal	Vertical
	

802.11ax (HE40) CH 159：5795 MHz

Horizontal	Vertical
	

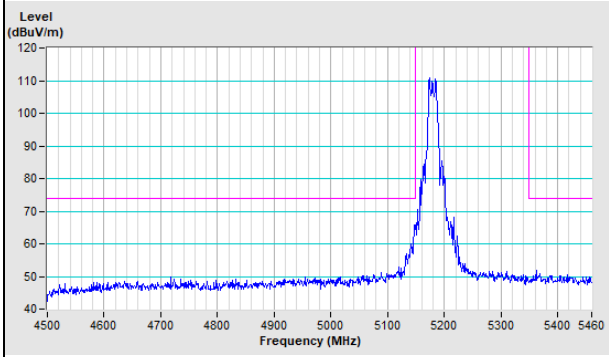
802.11ax (HE80) CH 155：5775 MHz

Horizontal	Vertical
	

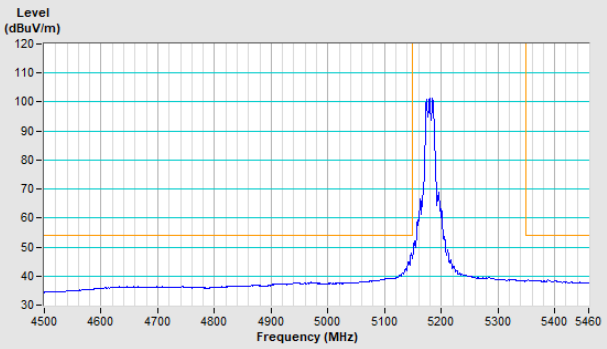
Annex B - Band-Edge Measurement (For U-NII-1, U-NII-2A, U-NII-2C band)

802.11a Channel 36

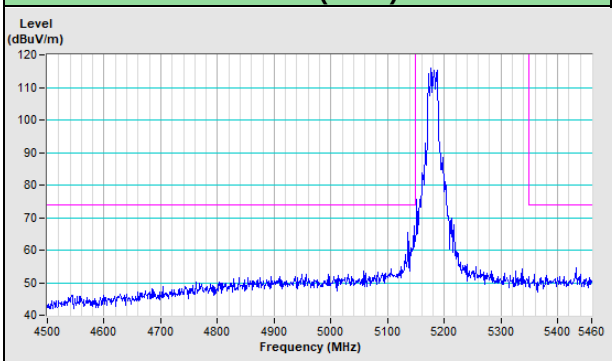
Horizontal (Peak)



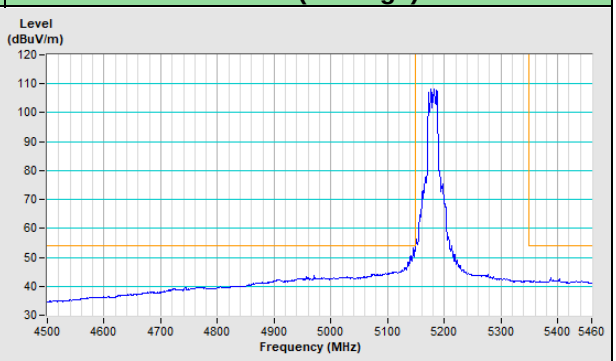
Horizontal (Average)



Vertical (Peak)

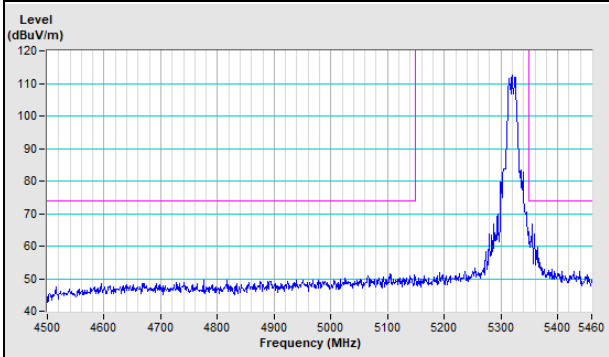


Vertical (Average)

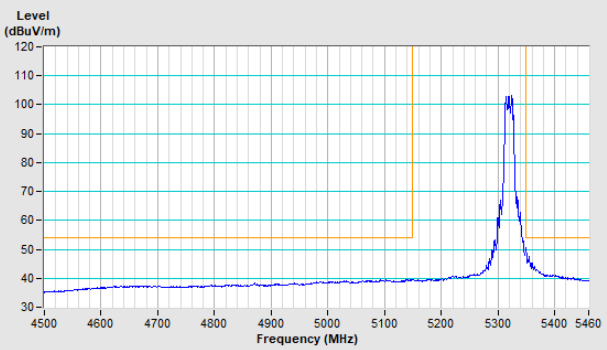


802.11a Channel 64

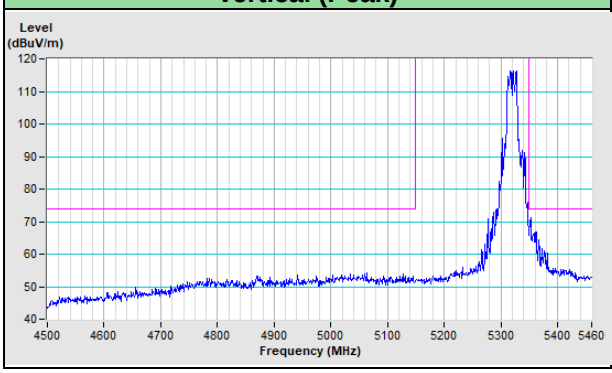
Horizontal (Peak)



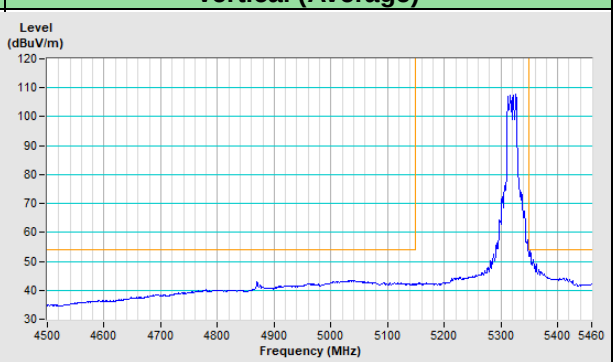
Horizontal (Average)



Vertical (Peak)

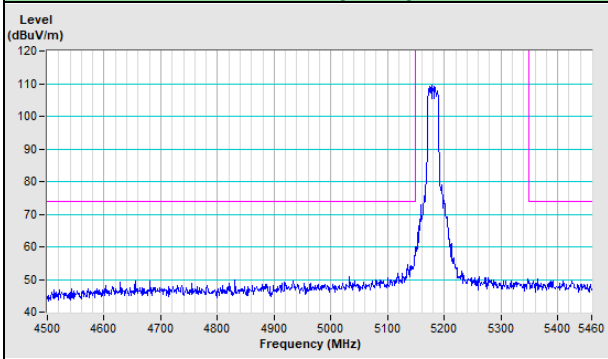


Vertical (Average)

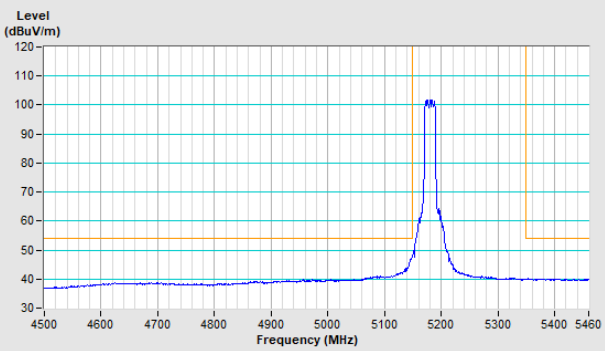


802.11ax (HE20) Channel 36

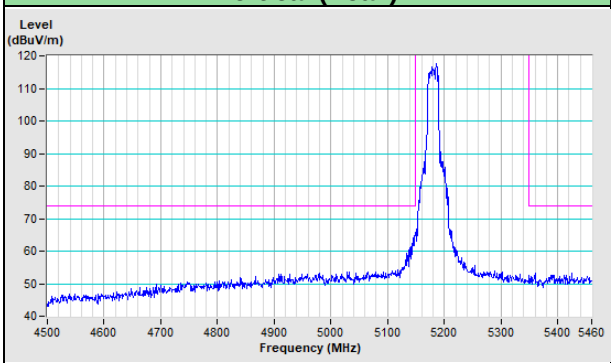
Horizontal (Peak)



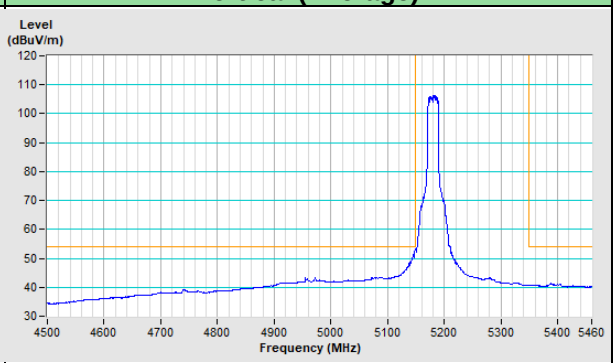
Horizontal (Average)



Vertical (Peak)

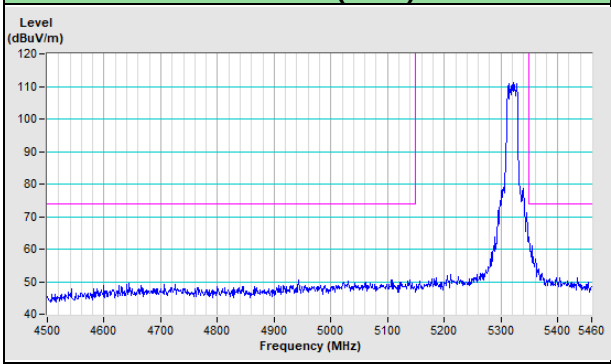


Vertical (Average)

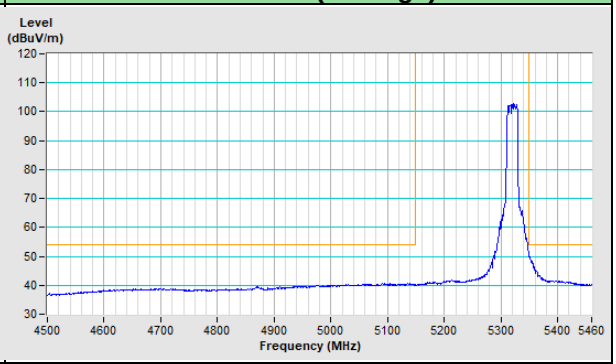


802.11ax (HE20) Channel 64

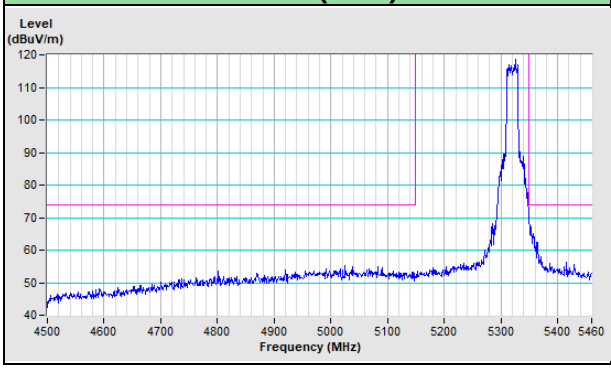
Horizontal (Peak)



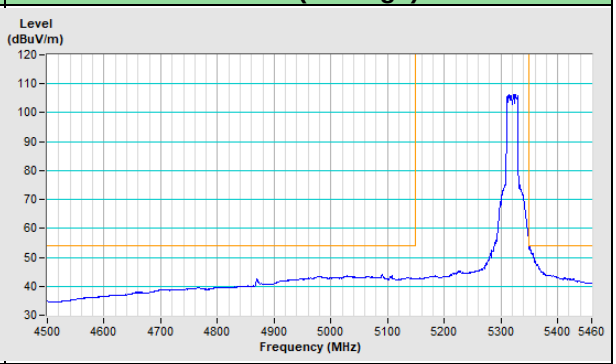
Horizontal (Average)

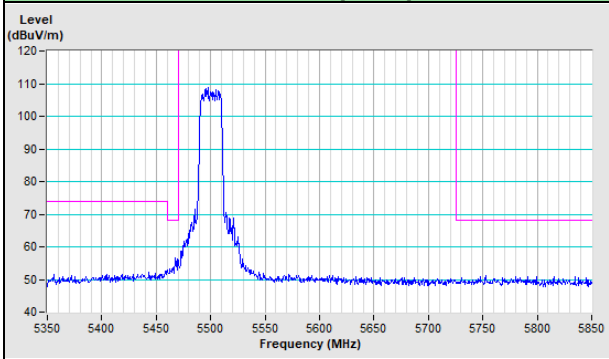
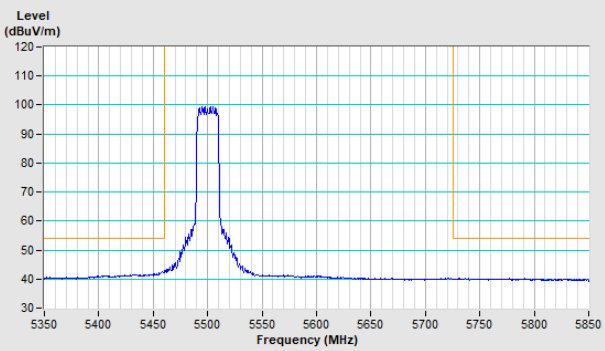
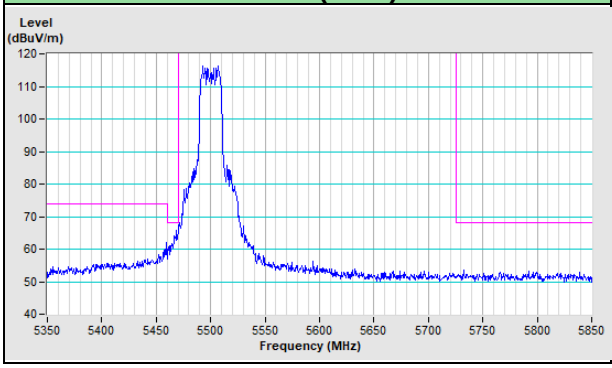
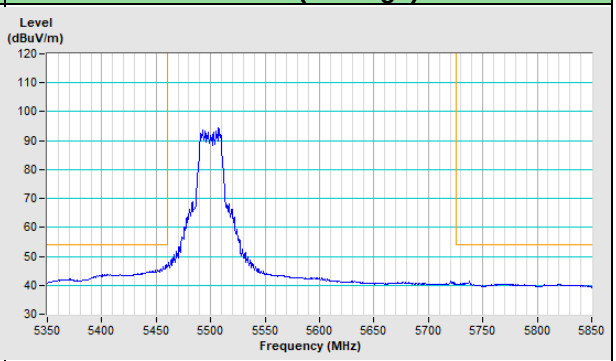


Vertical (Peak)



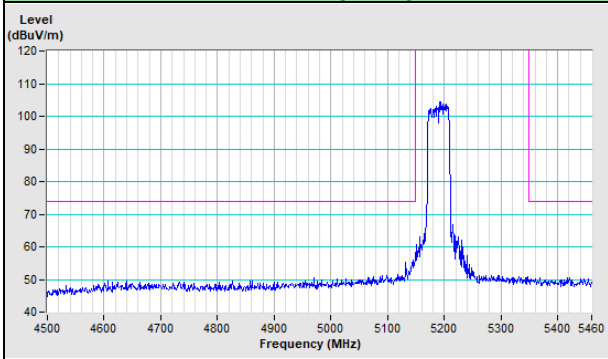
Vertical (Average)



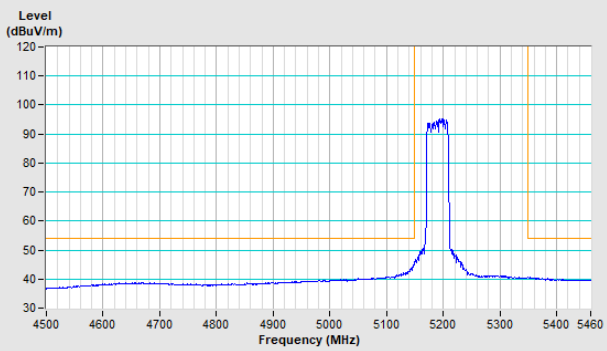
802.11ax (HE20) Channel 100	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ax (HE40) Channel 38

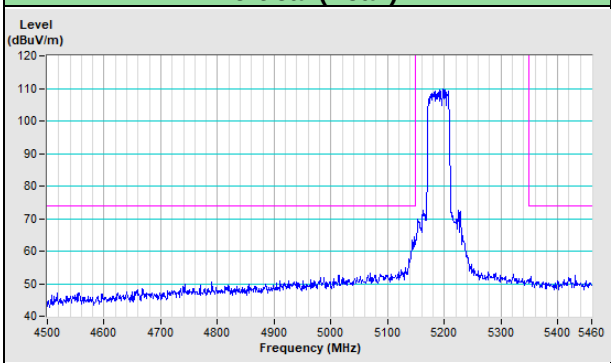
Horizontal (Peak)



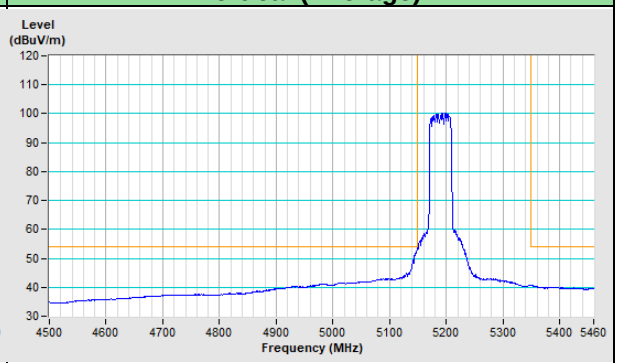
Horizontal (Average)



Vertical (Peak)

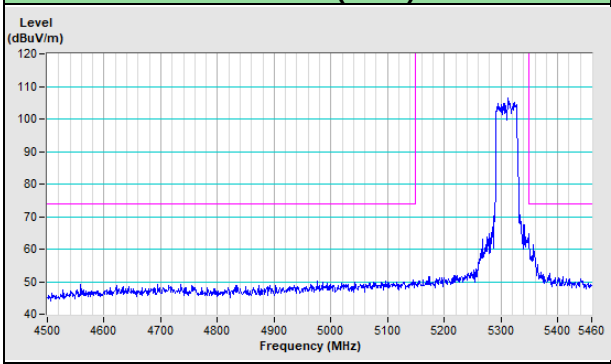


Vertical (Average)

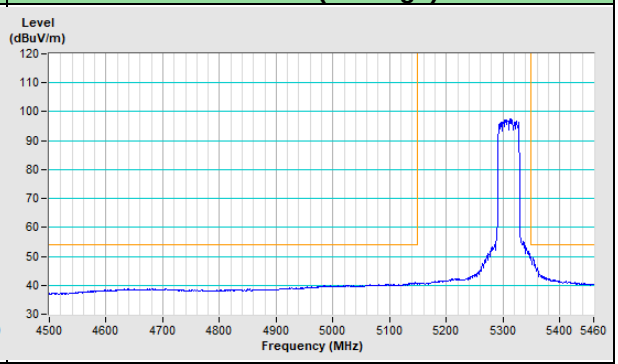


802.11ax (HE40) Channel 62

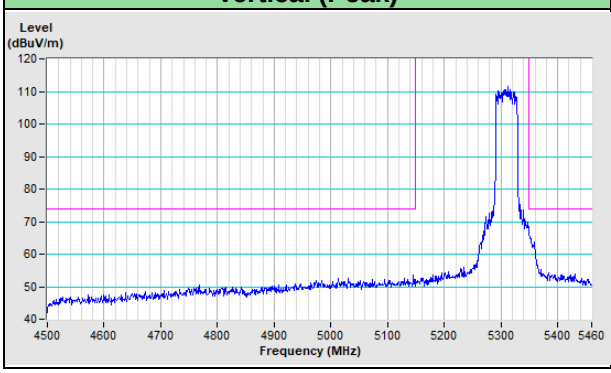
Horizontal (Peak)



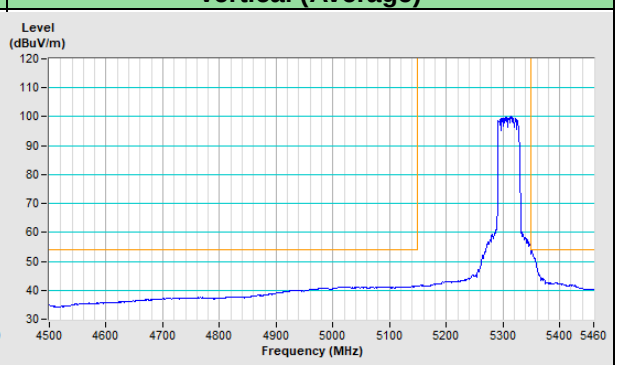
Horizontal (Average)

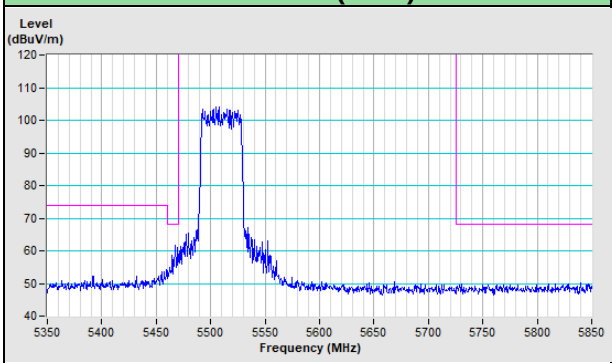
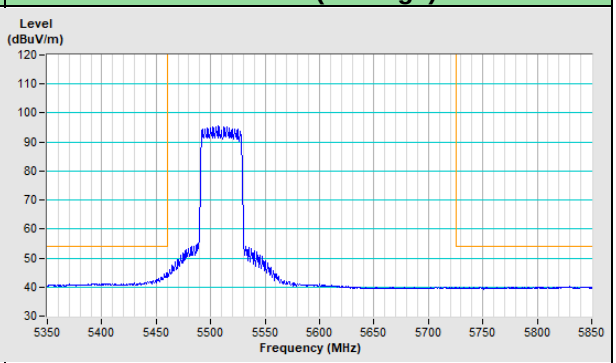
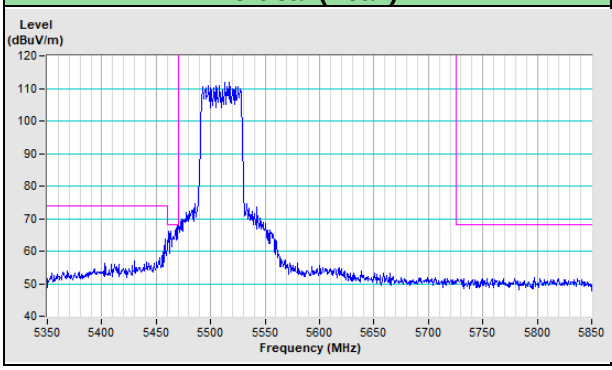
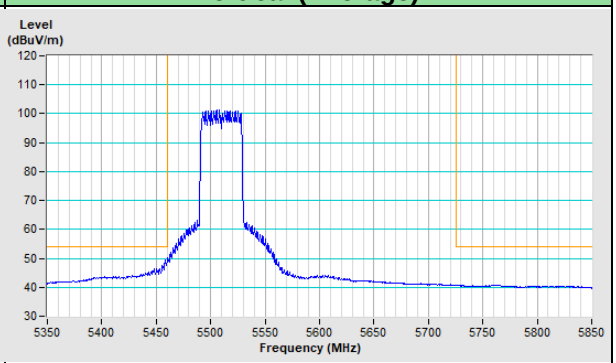


Vertical (Peak)



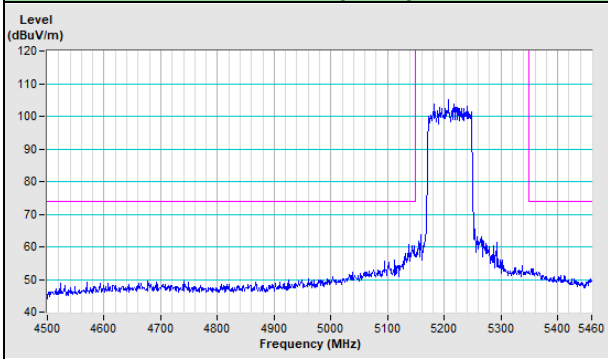
Vertical (Average)



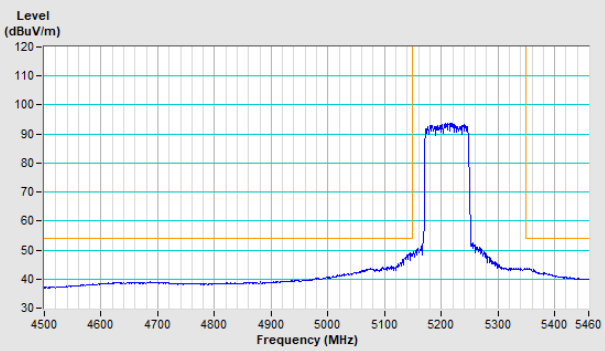
802.11ax (HE40) Channel 102	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ax (HE80) Channel 42

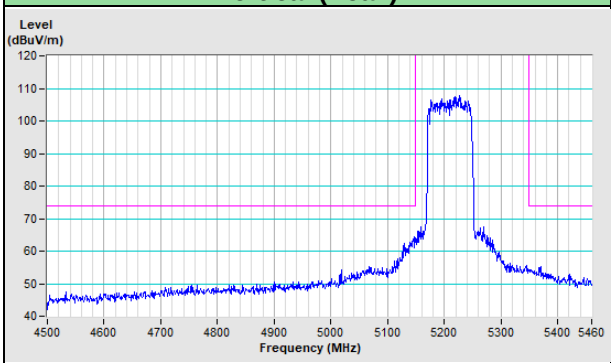
Horizontal (Peak)



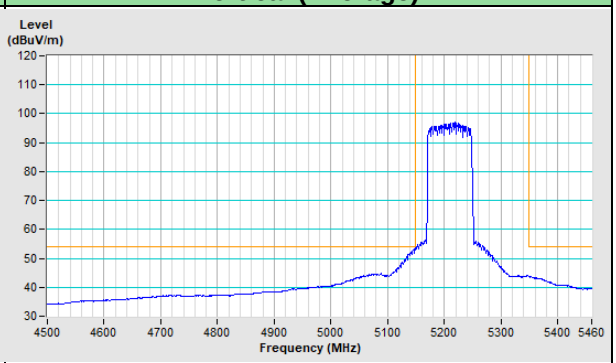
Horizontal (Average)



Vertical (Peak)

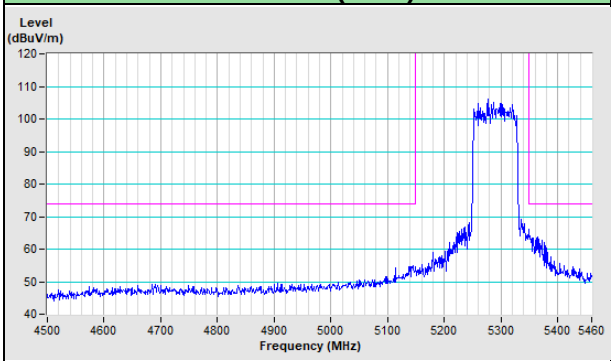


Vertical (Average)

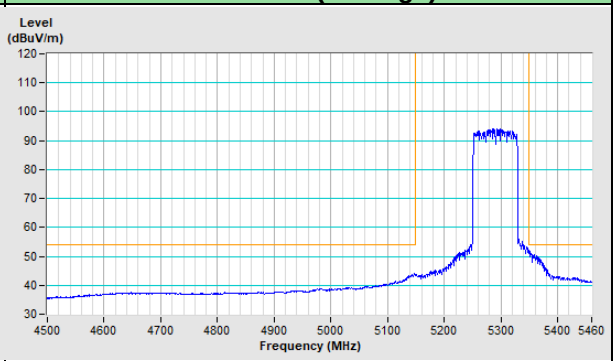


802.11ax (HE80) Channel 58

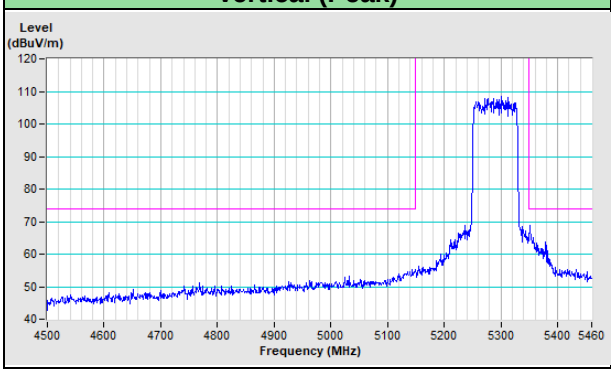
Horizontal (Peak)



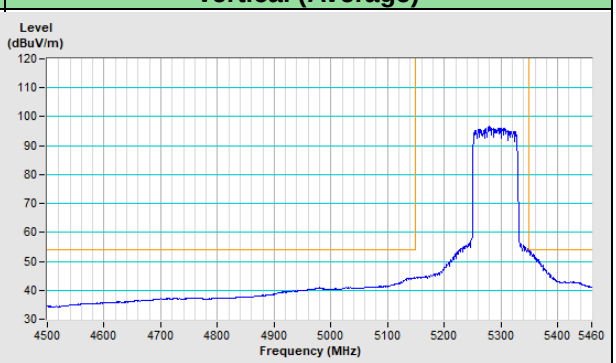
Horizontal (Average)

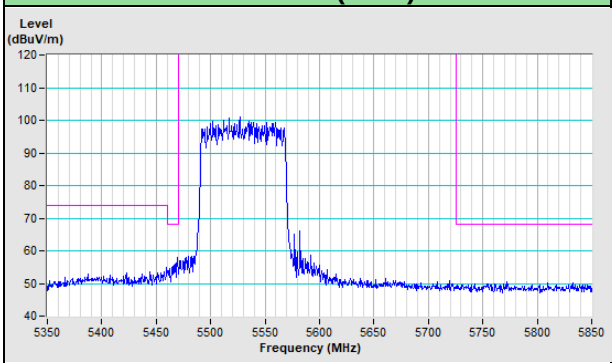
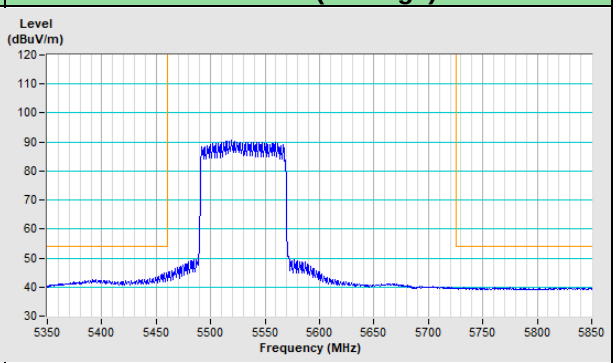
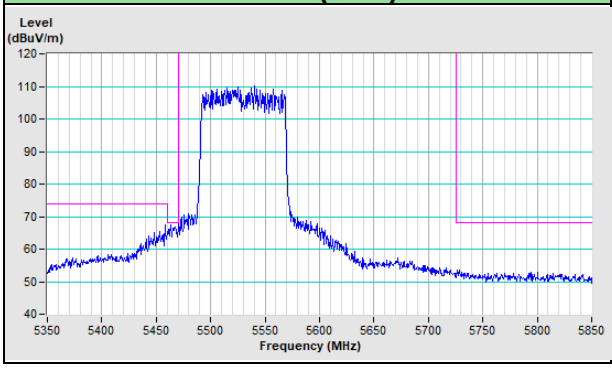
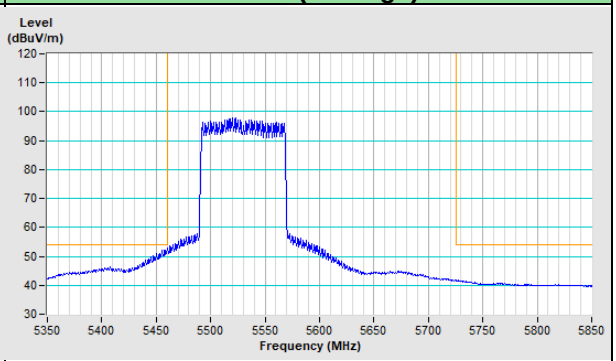


Vertical (Peak)



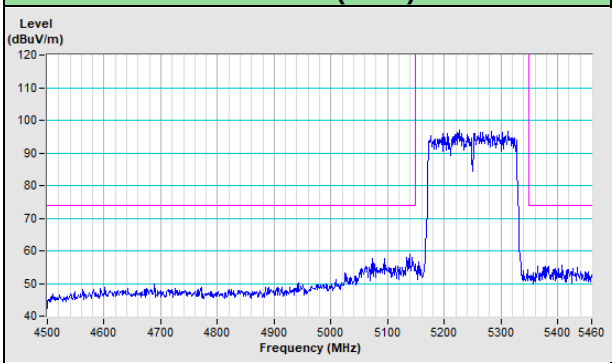
Vertical (Average)



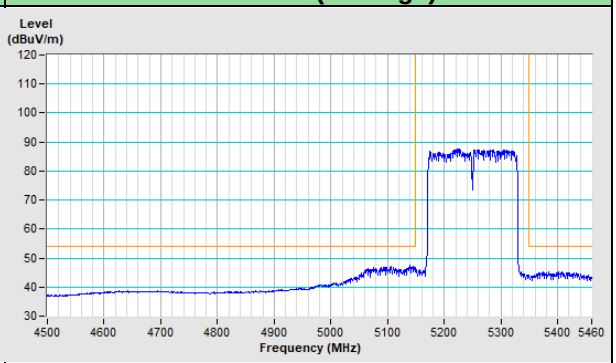
802.11ax (HE80) Channel 106	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ax (HE160) Channel 50

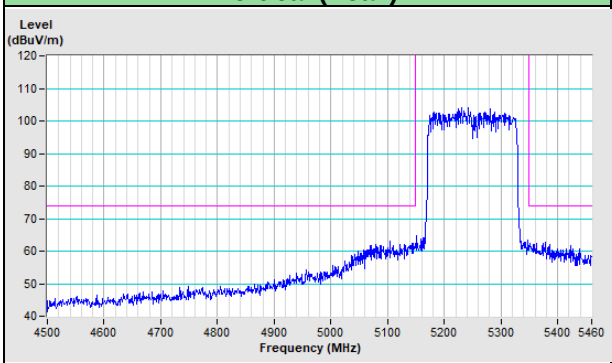
Horizontal (Peak)



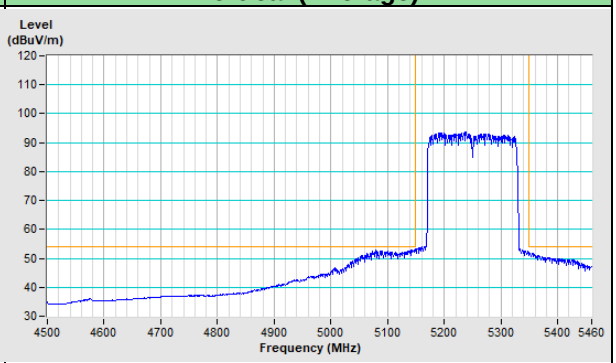
Horizontal (Average)



Vertical (Peak)

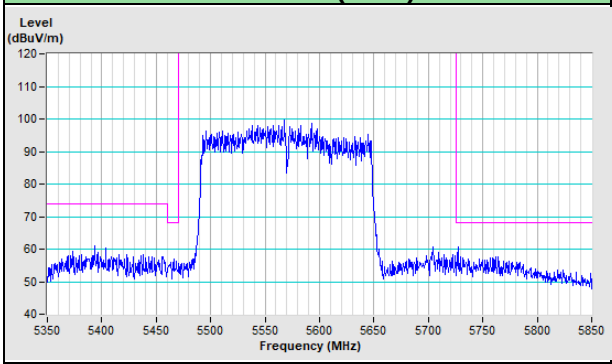


Vertical (Average)

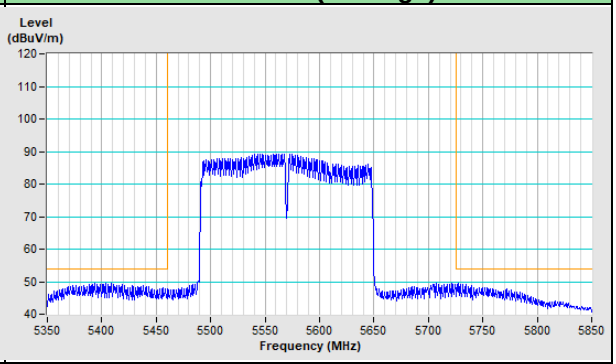


802.11ax (HE160) Channel 114

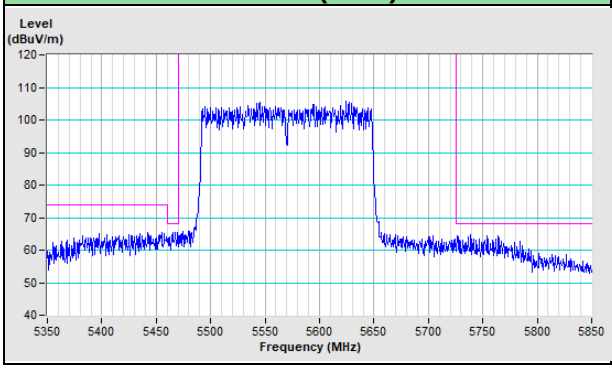
Horizontal (Peak)



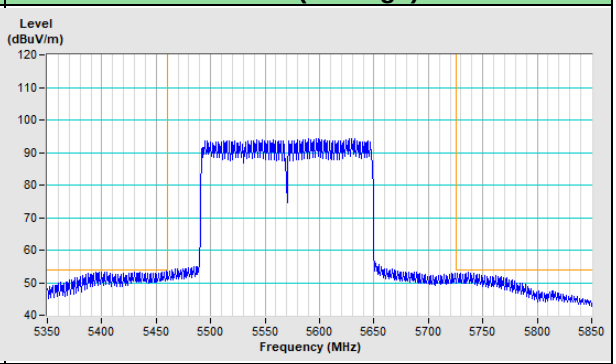
Horizontal (Average)



Vertical (Peak)



Vertical (Average)



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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