TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: **47 CFR FCC Part 15, Subpart E (Section 15.407)**
Report No.: RFBBQZ-WTW-P21020440C
FCC ID: PY320100488
Product: Orbi Router, Orbi Satellite, Orbi Pro WiFi 6 Mini Router, Orbi Pro WiFi 6 Mini Satellite
Brand: NETGEAR
Model No.: RBR350
Series Model: RBS350, SXR30, SXS30
Received Date: 2023/8/9
Test Date: 2023/8/21 ~ 2023/9/2
Issued Date: 2023/9/12

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
Lin Kou Laboratories
Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kewi Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number: 788550 / TW0003

Approved by: Jeremy Lin , **Date:** **2023/9/12**
Jeremy Lin / Project Engineer

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Prepared by : Pettie Chen / Senior Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBBQZ-WTW-P21020440C	Original release.	2023/9/12

1 Certificate

Product:	Orbi Router, Orbi Satellite, Orbi Pro WiFi 6 Mini Router, Orbi Pro WiFi 6 Mini Satellite
Brand:	NETGEAR
Test Model:	RBR350
Series Model:	RBS350, SXR30, SXS30
Sample Status:	Mass product
Applicant and Manufacturer:	NETGEAR, INC.
Test Date:	2023/8/21 ~ 2023/9/2
Standard:	47 CFR FCC Part 15, Subpart E (Section 15.407)
Measurement procedure:	ANSI C63.10-2013 KDB 789033 D02 General UNII Test Procedure New Rules v02r01 KDB 662911 D01 Multiple Transmitter Output v02r01

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 RF characteristics under the conditions specified in this report.

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
Clause	Test Item	Result	Remark
15.407(a)(2)	26 dB Bandwidth	Pass	For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.
15.407(a)(2) 15.407(a)(3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(2) 15.407(a)(3)	Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB Bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
---	Occupied Bandwidth	-	Reference only.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -11.05 dB at 0.25205 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -4.7 dB at 51.34 MHz
15.407(b) (2/10) 15.407(b) (3/10) 15.407(b) (4(i)/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.4 dB at 5350.00 MHz
15.203	Antenna Requirement	Pass	Antenna connector is I-PEX not a standard connector.

Notes:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. The “Dynamic Frequency Selection measurement” was recorded in DFS test report.

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	Specification	Expanded Uncertainty (k=2) (±)
Occupied Bandwidth	-	491.896 Hz
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.99 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.59 dB
	30 MHz ~ 1 GHz	3.64 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Orbi Router, Orbi Satellite, Orbi Pro WiFi 6 Mini Router, Orbi Pro WiFi 6 Mini Satellite
Brand	NETGEAR
Test Model	RBR350
Series Model	RBS350, SXR30, SXS30
Status of EUT	Mass product
Power Supply Rating	12Vdc (adapter)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM 1024QAM for OFDMA
Modulation Technology	OFDM, OFDMA
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 300Mbps 802.11ac: up to 867Mbps 802.11ax: up to 1200Mbps
Operating Frequency	5260 ~ 5320 MHz, 5500 ~ 5720 MHz
Number of Channel	5260 ~ 5320 MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 4 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 2 802.11ac (VHT80), 802.11ax (HE80): 1 5500 ~ 5720 MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 12 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 6 802.11ac (VHT80), 802.11ax (HE80): 3
Output Power	CDD Mode: 5260 ~ 5320 MHz: 213.181 mW (23.29 dBm) 5500 ~ 5720 MHz: 217.706 mW (23.38 dBm) Beamforming Mode: 5260 ~ 5320 MHz: 213.181 mW (23.29 dBm) 5500 ~ 5720 MHz: 217.706 mW (23.38 dBm)

Note:

1. This report is prepared for FCC class II permissive change. This report is issued as a supplementary report of BV CPS report no.: RFBBQZ-WTW-P21020440-1. Difference compared with the original report is adding 5260~5320MHz and 5500~5720MHz band. Therefore, the EUT was tested and presented in the test report.
2. The models are listed as below.

Brand	Product Name	Model Name	Difference
NETGEAR	Orbi Router	RBR350	Function: Master RJ45*4
	Orbi Pro WiFi 6 Mini Router	SXR30	Function: Master RJ45*4 The HW design is identical with RBR350 except its housing.
	Orbi Pro WiFi 6 Mini Satellite	SXS30	Function: Master + Client RJ45*4 The HW design is identical with RBR350 except its housing.
	Orbi Satellite	RBS350	Function: Master + Client RJ45*2

3. The EUT uses following adapters.

Adapter 1	
Brand	NETGEAR
Model	AD2076F10
P/N	332-11079-01
Input Power	100-120Vac, 50/60Hz, 0.56A
Output Power	12Vdc, 1.5A
Power Line	1.8m power cable without core attached on adapter

Adapter 2	
Brand	NETGEAR
Model	2ABB018F 1
P/N	332-11508-01
Input Power	100-120Vac, 50/60Hz, 0.6A
Output Power	12.0Vdc, 1.5A
Power Line	1.8m power cable without core attached on adapter

* After pre-test, adapter 1 was chosen for final test and presented in the test report.

4. 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.

5. The EUT has two different solutions by absorber on PCB, and the Option A was the worst case for final test.

Option	Solution	Remark
Option A	PCB without absorber	-
Option B	PCB with absorber	Different absorber position
Option C	PCB with absorber	Different absorber position
Option D	PCB with absorber	Different absorber position

*The detail information please refer to “Internal Photo”

6. The EUT has two different pin-to-pin FEM in 2.4G module, after pretest the mode 1 was the worst case for final test.

Mode	Description
1	1st 2.4G FEM
2	2nd 2.4G FEM

*The detail information please refer to “Internal Photo”

7. WLAN 2.4GHz & WLAN 5GHz technology can transmit at same time.

3.2 Antenna Description of EUT

1. The following antennas were provided to the EUT.

Ant. Type	Dipole				
Connecter Type	I-PEX				
Antenna Gain (dBi)					
Item	2.4G	5G Band 1	5G Band 2	5G Band 3	5G Band 4
Ant 1(1st)	2.98	3.00	2.89	2.96	2.95
Ant 1(2nd)	2.98	2.22	1.76	2.76	2.81
Ant 2	1.76	3.00	2.45	2.93	2.41

* Antenna 1(1st) & Ant 2 were chosen for final test and presented in the test report

* Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

2. The EUT incorporates a MIMO function. Physically, the EUT provides 2 completed transmitters and 2 receivers.

Modulation Mode	Beamforming Mode	TX Function
802.11a	Not Support	2TX
802.11n (HT20)	Support	2TX
802.11n (HT40)	Support	2TX
802.11ac (VHT20)	Support	2TX
802.11ac (VHT40)	Support	2TX
802.11ac (VHT80)	Support	2TX
802.11ax (HE20)	Support	2TX
802.11ax (HE40)	Support	2TX
802.11ax (HE80)	Support	2TX

* The bandwidth and modulation are similar for HT20/HT40 on 802.11n mode and VHT20/VHT40/VHT80 on 802.11ac mode and HE20/HE40/HE80 on 802.11ax mode. Therefore, the investigated worst case is the representative mode in test report. (Final test mode refer section 3.4)

* For 802.11n and 802.11ac, CDD mode and Beamforming mode are presented in power output test item. For other test items, CDD mode is the worst case for final tests after pretesting.

* Partial RU (resource unit) and channel puncturing/bandwidth reduction mechanisms are not supported.

3.3 Channel List

FOR 5260 ~ 5320 MHz

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

Channel	Frequency	Channel	Frequency
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

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

Channel	Frequency
58	5290 MHz

FOR 5500 ~ 5720 MHz

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

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

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

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

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

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

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition.
Worst Case:	Worst Condition: Z mode

Following channel(s) was (were) selected for the final test as listed below:

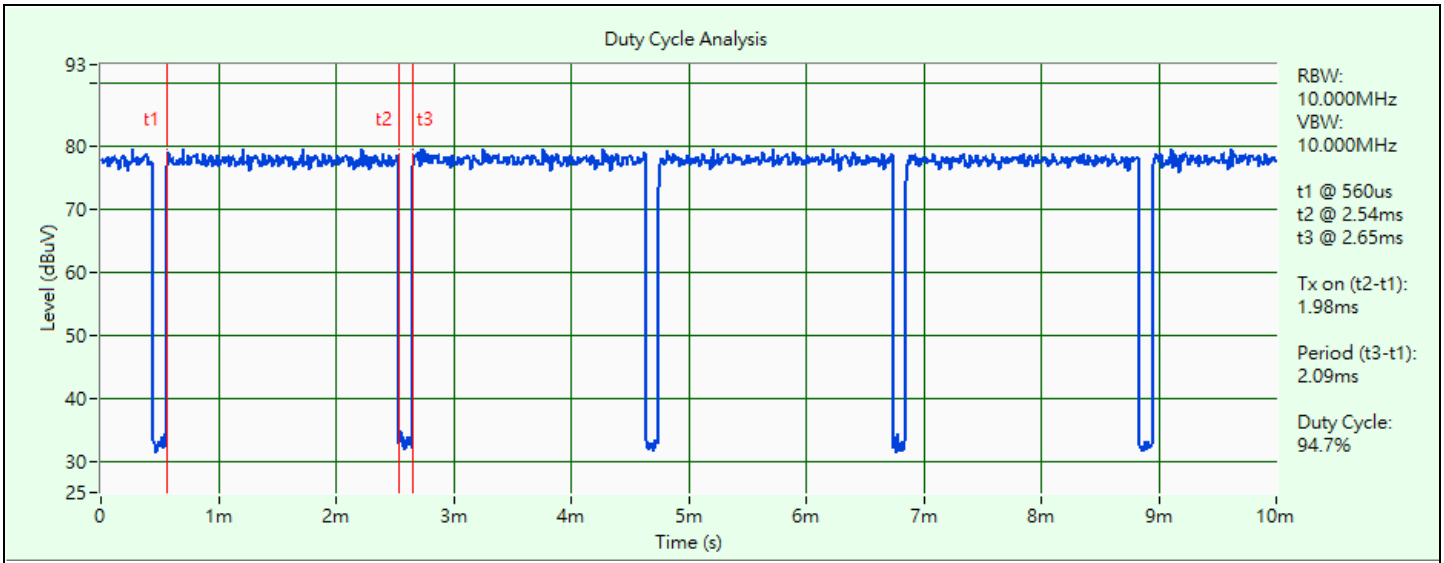
Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
26 dB Bandwidth	A1	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
		802.11ax (HE20)	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
		802.11ax (HE40)	CDD	54, 62, 102, 110, 134, 142	BPSK	MCS0
		802.11ax (HE80)	CDD	58, 106, 122, 138	BPSK	MCS0
RF Output Power	A1	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
		802.11ax (HE20)	CDD & Beamforming	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	54, 62, 102, 110, 134, 142	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	58, 106, 122, 138	BPSK	MCS0
Power Spectral Density	A1	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
		802.11ax (HE20)	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
		802.11ax (HE40)	CDD	54, 62, 102, 110, 134, 142	BPSK	MCS0
		802.11ax (HE80)	CDD	58, 106, 122, 138	BPSK	MCS0
6 dB Bandwidth	A1	802.11a	CDD	144	BPSK	6Mb/s
		802.11ax (HE20)	CDD	144	BPSK	MCS0
		802.11ax (HE40)	CDD	142	BPSK	MCS0
		802.11ax (HE80)	CDD	138	BPSK	MCS0
Occupied Bandwidth	A1	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
		802.11ax (HE20)	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
		802.11ax (HE40)	CDD	54, 62, 102, 110, 134, 142	BPSK	MCS0
		802.11ax (HE80)	CDD	58, 106, 122, 138	BPSK	MCS0
Frequency Stability	A1	802.11a	-	100	unmodulated	-

Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
AC Power Conducted Emissions	A1, A2, B1, B2, C1, C2, D1, D2	802.11ax (HE20)	CDD	140	BPSK	MCS0
Unwanted Emissions below 1 GHz	A1, A2, B1, B2, C1, C2, D1, D2	802.11ax (HE20)	CDD	140	BPSK	MCS0
Unwanted Emissions above 1 GHz	A1	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
		802.11ax (HE20)	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
		802.11ax (HE40)	CDD	54, 62, 102, 110, 134, 142	BPSK	MCS0
		802.11ax (HE80)	CDD	58, 106, 122, 138	BPSK	MCS0

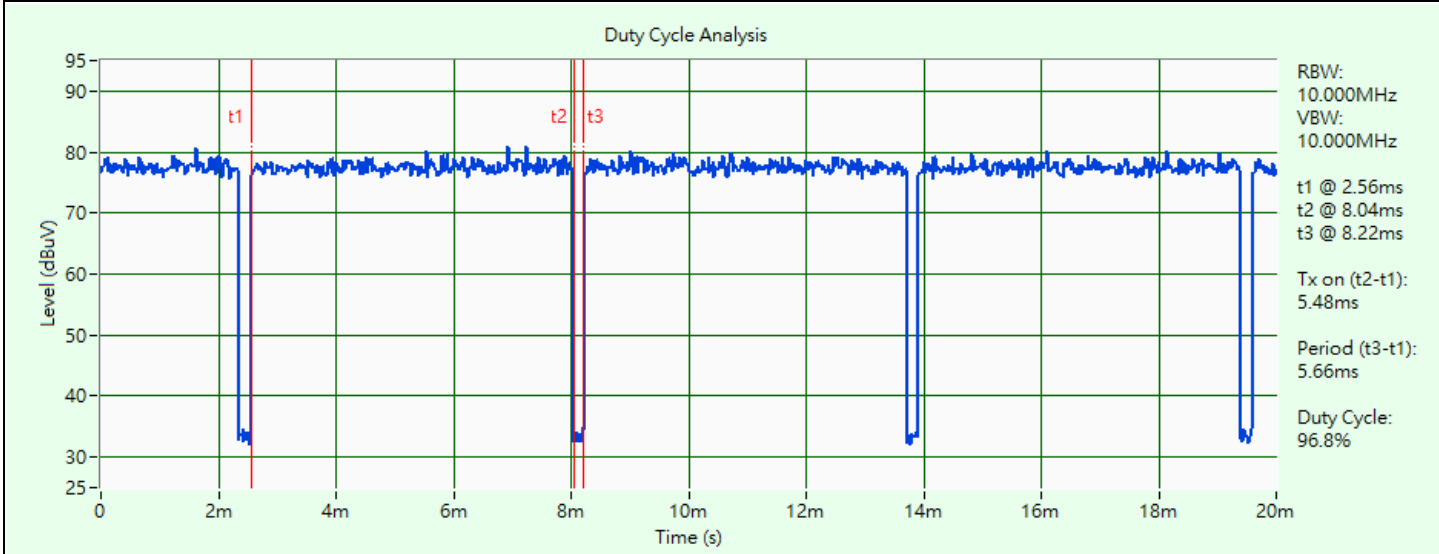
	Mode	EUT Model	Adapter
EUT Configure Mode:	A1	RBR350	Adapter 1
	A2		Adapter 2
	B1	SXR30	Adapter 1
	B2		Adapter 2
	C1	SXS30	Adapter 1
	C2		Adapter 2
	D1	RBS350	Adapter 1
	D2		Adapter 2

3.5 Duty Cycle of Test Signal

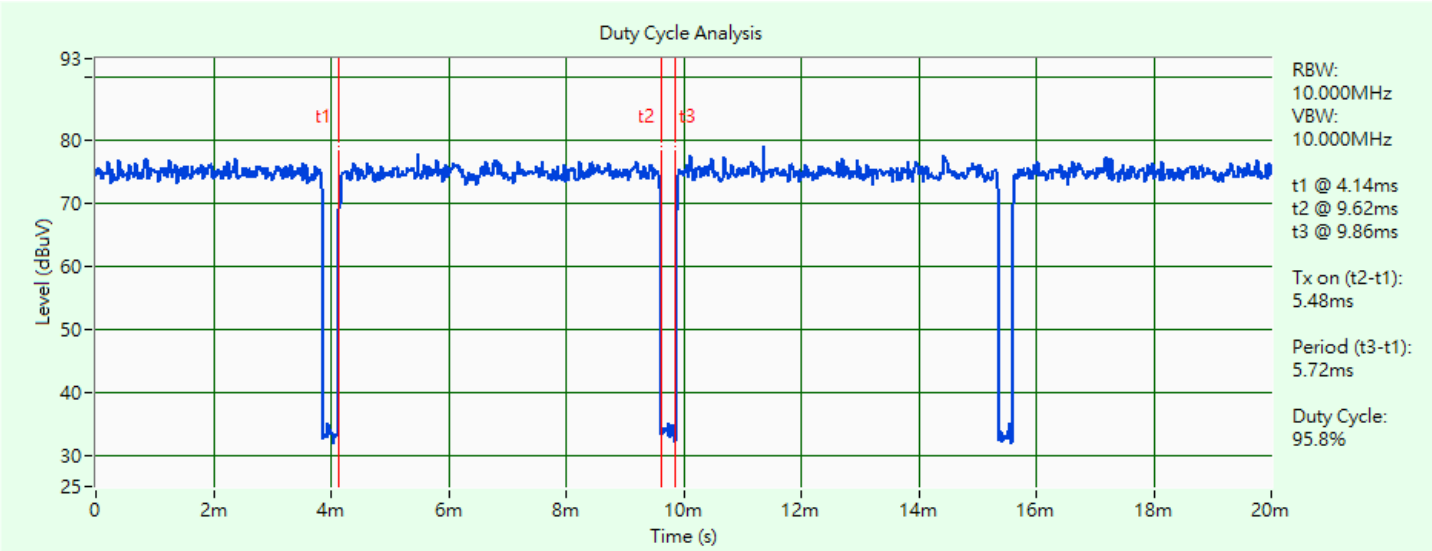
802.11a: Duty cycle = 1.98 ms / 2.09 ms x 100% = 94.7%, duty factor = 10 * log (1/Duty cycle) = 0.23 dB
802.11ax (HE20): Duty cycle = 5.48 ms / 5.66 ms x 100% = 96.8%, duty factor = 10 * log (1/Duty cycle) = 0.14 dB
802.11ax (HE40): Duty cycle = 5.48 ms / 5.72 ms x 100% = 95.8%, duty factor = 10 * log (1/Duty cycle) = 0.19 dB
802.11ax (HE80): Duty cycle = 5.48 ms / 5.68 ms x 100% = 96.5%, duty factor = 10 * log (1/Duty cycle) = 0.16 dB



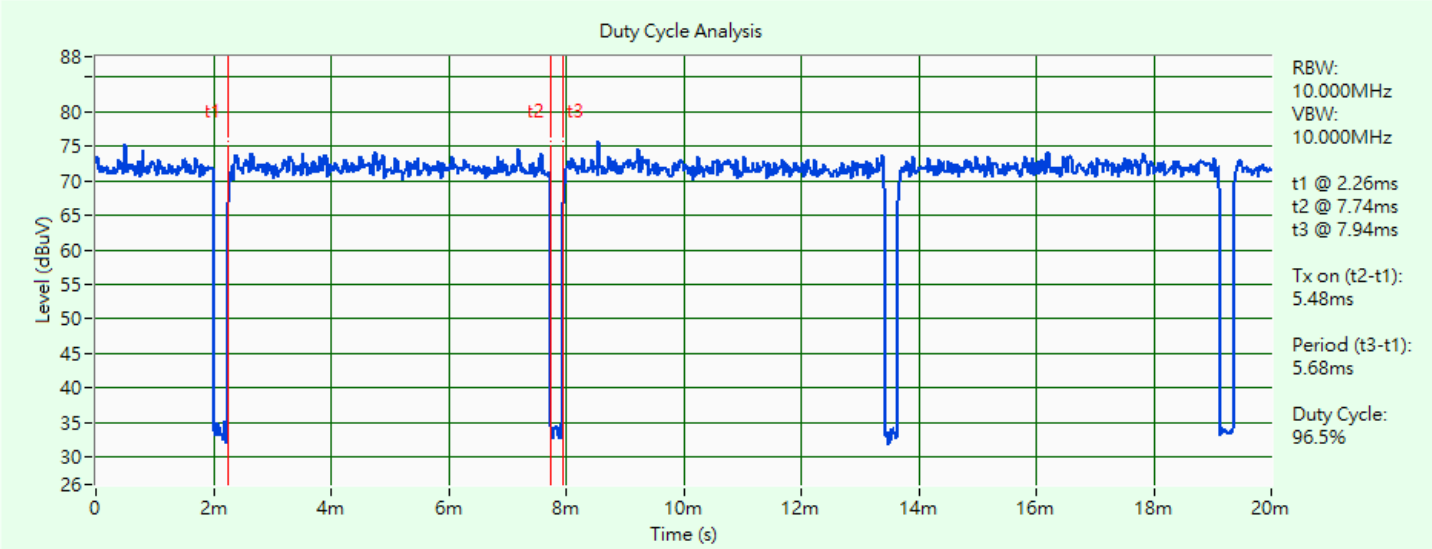
802.11a



802.11ax (HE20)



802.11ax (HE40)

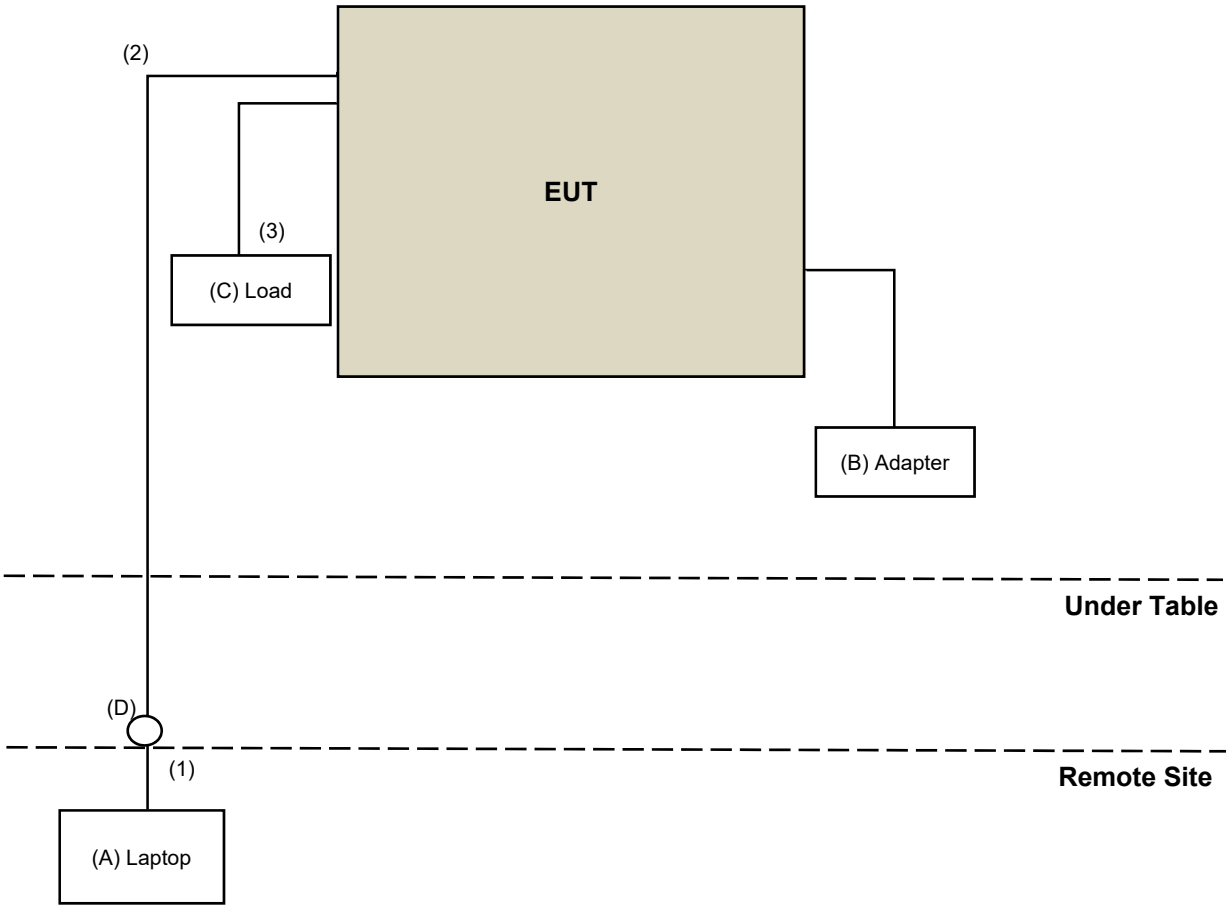


802.11ax (HE80)

3.6 Test Program Used and Operation Descriptions

Controlling software QSPR Version 5.0-00200 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Laptop	DELL	E5430	2RL3YW1	N/A	Provided by Lab
B	Adapter	NETGEAR	AD2076F10	N/A	N/A	Supplied by applicant
C	Load	N/A	N/A	N/A	N/A	Provided by Lab
D	LAN connector	N/A	N/A	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-45 Cable	1	10	N	N	Provided by Lab
2	RJ-45 Cable	1	2	N	N	Supplied by applicant
3	RJ-45 Cable	3	1.5	N	N	Provided by Lab

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 26 dB Bandwidth

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Signal & Spectrum Analyzer R&S	FSV3044	101105	2023/2/22	2024/2/21
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/9/1 ~ 2023/9/2

4.2 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Peak Power Analyzer Keysight	8990B	MY51000485	2023/1/19	2024/1/18
Signal & Spectrum Analyzer R&S	FSV3044	101105	2023/2/22	2024/2/21
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
Wideband Power Sensor Keysight	N1923A	MY58020002	2023/1/18	2024/1/17
		MY58140009	2023/1/18	2024/1/17

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/9/1 ~ 2023/9/2

4.3 Power Spectral Density

Refer to section 4.1 to get information of the instruments.

4.4 6 dB Bandwidth

Refer to section 4.1 to get information of the instruments.

4.5 Occupied Bandwidth

Refer to section 4.1 to get information of the instruments.

4.6 Frequency Stability

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
AC Power Supply JIN YIH Technology	6905S	1720444	N/A	N/A
Digital Multimeter Fluke	87-III	70360742	2023/7/6	2024/7/5
Signal & Spectrum Analyzer R&S	FSV3044	101105	2023/2/22	2024/2/21
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
Temperature & Humidity Chamber Terchy	HRM-120RF	931022	2022/12/27	2023/12/26

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/9/1 ~ 2023/9/2

4.7 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
EMI Test Receiver R&S	ESCI	100613	2022/12/5	2023/12/4
LISN R&S	ENV216	101826	2023/3/23	2024/3/22
	ESH3-Z5	100311	2022/9/12	2023/9/11
RF Coaxial Cable Woken	5D-FB	Cable-cond1-01	2023/1/7	2024/1/6
Software BVADT	BVADT_Cond_ V7.3.7.4	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2022/8/31	2023/8/30

Notes:

1. The test was performed in HY - Conduction 1.
2. Tested Date: 2023/8/22 ~ 2023/8/24

4.8 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-155	2022/10/21	2023/10/20
EMI Test Receiver R&S	ESR3	102782	2022/12/12	2023/12/11
Loop Antenna Electro-Metrics	EM-6879	269	2022/9/19	2023/9/18
Loop Antenna TESEQ	HLA 6121	45745	2023/8/8	2024/8/7
Preamplifier Agilent	8447D	2944A10631	2023/5/7	2024/5/6
Preamplifier EMCI	EMC001340	980201	2022/9/23	2023/9/22
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	2023/1/7	2024/1/6
RF Coaxial Cable Woken	8D-FB	Cable-CH4-01	2023/7/8	2024/7/7
Signal & Spectrum Analyzer R&S	FSW43	101866	2023/1/10	2024/1/9
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2023/8/22 ~ 2023/8/24

4.9 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	5	N/A	N/A
EMI Test Receiver R&S	ESR3	102782	2022/12/12	2023/12/11
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-408	2022/11/13	2023/11/12
	BBHA 9170	9170-480	2022/11/13	2023/11/12
		BBHA9170241	2022/10/20	2023/10/19
		BBHA9170243	2022/11/13	2023/11/12
Preamplifier EMCI	EMC 184045	980116	2022/10/1	2023/9/30
Preamplifier Keysight	83017A	MY53270295	2023/5/7	2024/5/6
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2023/7/8	2024/7/7
	EMC102-KM-KM-3000	150929	2023/7/8	2024/7/7
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03(250724)	2023/5/7	2024/5/6
	Sucoflex 104	MY 13380+295012/04	2023/5/7	2024/5/6
Signal & Spectrum Analyzer R&S	FSW43	101866	2023/1/10	2024/1/9
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2023/8/21 ~ 2023/8/22

5 Limits of Test Items

5.1 26 dB Bandwidth

The results are for reference only.

5.2 RF Output Power

Operation Band	Limit
U-NII-2A	250 mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	250 mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

Per KDB 662911 D01 Multiple Transmitter Output 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.

5.3 Power Spectral Density

Operation Band	Limit
U-NII-2A	11 dBm/MHz
U-NII-2C	11 dBm/MHz
U-NII-3	30 dBm/500 kHz

5.4 6 dB Bandwidth

Within the 5.725-5.850 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

5.5 Occupied Bandwidth

The results are for reference only.

5.6 Frequency Stability

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

5.7 AC Power Conducted Emissions

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

Notes:

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 0.50 MHz.

5.8 Unwanted Emissions below 1 GHz

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

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

5.9 Unwanted Emissions above 1 GHz

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)
Above 960	500	3

Notes:

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 1000 MHz, 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 20 dB 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 3 m	
	PK: 74 (dBμV/m)	AV: 54 (dBμV/m)

For transmitters operating in the 5.25-5.35 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(2)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m)

For transmitters operating in the 5.47-5.725 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(3)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m)

For transmitters operating in the 5.725-5.850 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
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.		

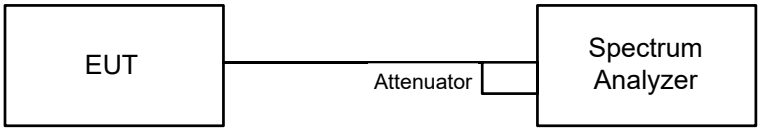
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 26 dB Bandwidth

6.1.1 Test Setup



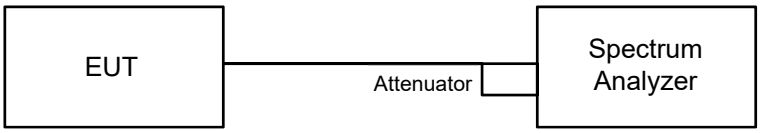
6.1.2 Test Procedure

a. Set RBW = approximately 1% of the emission bandwidth.
b. Set the VBW > RBW.
c. Detector = Peak.
d. Trace mode = max hold.
e. 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%.

6.2 RF Output Power

6.2.1 Test Setup

For channel straddling:



6.2.2 Test Procedure

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 and set the detector to average. Duty factor is not added to measured value.

For channel straddling:

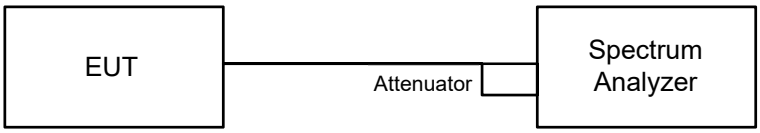
Method SA-2A

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
d. Manually set sweep time ≥ 10 × (number of points in sweep) × (total on/off period of the transmitted signal).
e. Perform a single sweep.
f. Record the max value and add 10 log (1/duty cycle).

Note: When measuring straddle channel power, use compute power by integrating the spectrum across the 26 dB EBW or 99% OBW of the signal using the instrument's band power measurement function, with band limits set equal to the EBW or OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels (in power units) at 1 MHz intervals extending across the 26 dB EBW or 99% OBW of the spectrum.

6.3 Power Spectral Density

6.3.1 Test Setup



6.3.2 Test Procedure

For specified measurement bandwidth 1 MHz:
Method SA-1

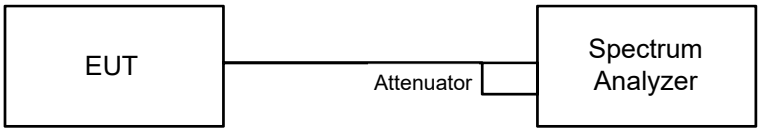
a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
d. Sweep time = auto, trigger set to “free run”.
e. Trace average at least 100 traces in power averaging mode.
f. Record the max value

For specified measurement bandwidth 500 kHz:
Method SA-1

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
c. 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(500 kHz/300 kHz)
d. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
e. Sweep time = auto, trigger set to “free run”.
f. Trace average at least 100 traces in power averaging mode.
g. Record the max value

6.4 6 dB Bandwidth

6.4.1 Test Setup

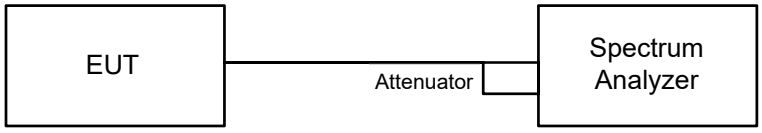


6.4.2 Test Procedure

a. Set resolution bandwidth (RBW) = 100 kHz.
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.

6.5 Occupied Bandwidth

6.5.1 Test Setup

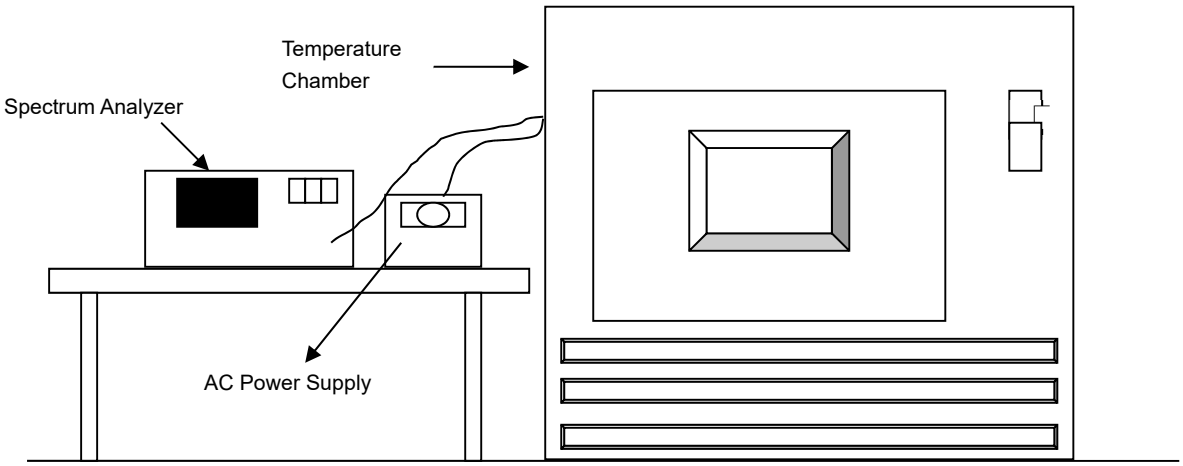


6.5.2 Test Procedure

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 Sampling. 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.

6.6 Frequency Stability

6.6.1 Test Setup

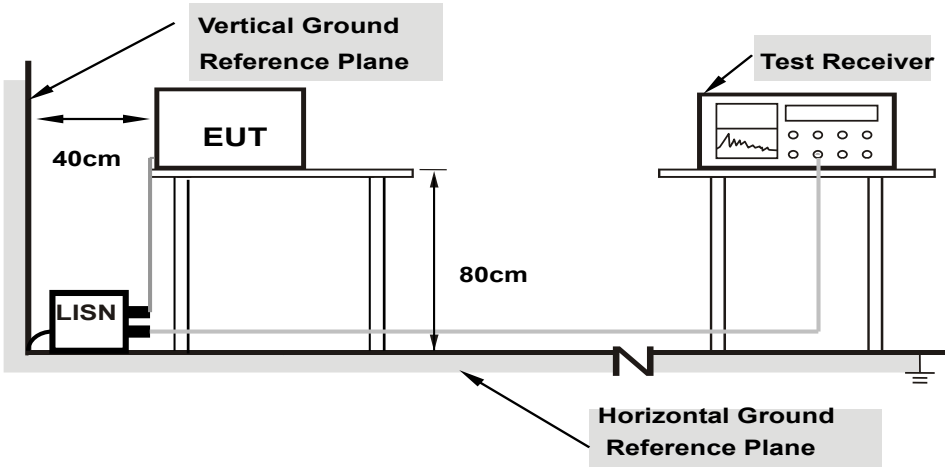


6.6.2 Test Procedure

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.

6.7 AC Power Conducted Emissions

6.7.1 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).

6.7.2 Test Procedure

a. The EUT was placed on a 0.8 meter to the top of table and 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/ 50 uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

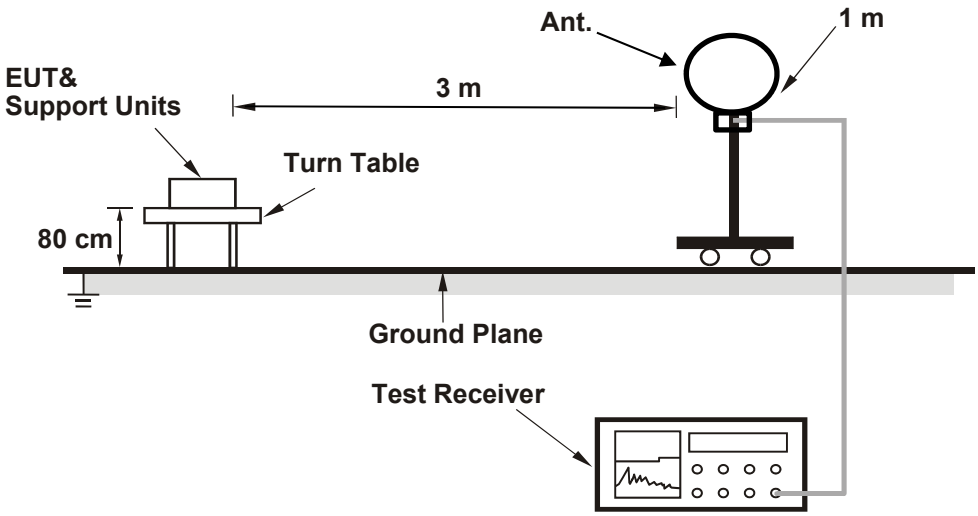
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz-30 MHz.

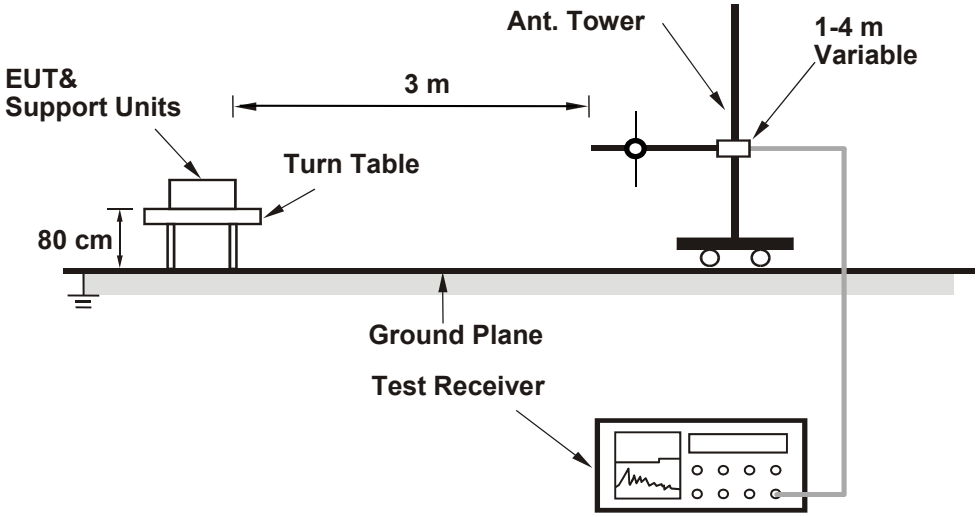
6.8 Unwanted Emissions below 1 GHz

6.8.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.8.2 Test Procedure

For Radiated emission below 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters 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. 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, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

For Radiated emission above 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters 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.

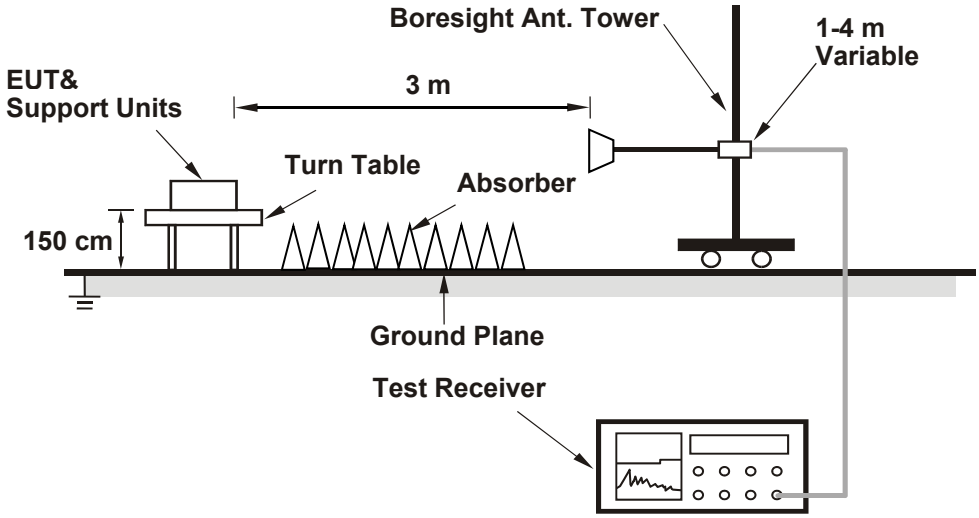
e. The test-receiver system was set to Quasi-peak(QP) detect function, Average(AV) detect function, Peak(PK) detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP), Average detection (AV), Peak detection (PK) at frequency (30MHz to 1 GHz).
2. All modes of operation were investigated and the worst-case emissions are reported.

6.9 Unwanted Emissions above 1 GHz

6.9.1 Test Setup



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

6.9.2 Test Procedure

a. The EUT was placed on the top of a rotating table 1.5 meters 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 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.

Notes:

1. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) and Average detection (AV) at frequency above 1 GHz.
2. For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10 Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1 GHz.
3. All modes of operation were investigated and the worst-case emissions are reported.

7 Test Results of Test Item

7.1 26 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Ivan Tseng

802.11a

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	20.86	20.57
60	5300	20.73	20.83
64	5320	20.77	20.80
100	5500	20.72	20.81
116	5580	20.80	20.77
140	5700	20.82	20.78
144 (U-NII-2C)	5720	15.39	15.37
144 (U-NII-3)	5720	5.32	5.33

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	20.57	24.13	>	24
60	5300	20.73	24.16	>	24
64	5320	20.77	24.17	>	24
100	5500	20.72	24.16	>	24
116	5580	20.77	24.17	>	24
140	5700	20.78	24.17	>	24
144 (U-NII-2C)	5720	15.37	22.86	<	24

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

802.11ax (HE20)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	22.22	21.58
60	5300	22.15	21.66
64	5320	21.93	21.66
100	5500	22.11	21.86
116	5580	21.87	21.93
140	5700	21.90	21.95
144 (U-NII-2C)	5720	15.94	15.85
144 (U-NII-3)	5720	5.85	5.75

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	21.58	24.34	>	24
60	5300	21.66	24.35	>	24
64	5320	21.66	24.35	>	24
100	5500	21.86	24.39	>	24
116	5580	21.87	24.39	>	24
140	5700	21.90	24.4	>	24
144 (U-NII-2C)	5720	15.85	23	<	24

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

802.11ax (HE40)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	41.65	41.81
62	5310	41.54	41.49
102	5510	41.36	42.08
110	5550	41.42	41.39
134	5670	41.94	41.65
142 (U-NII-2C)	5710	35.92	36.03
142 (U-NII-3)	5710	5.76	5.67

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
54	5270	41.65	27.19	>	24
62	5310	41.49	27.17	>	24
102	5510	41.36	27.16	>	24
110	5550	41.39	27.16	>	24
134	5670	41.65	27.19	>	24
142 (U-NII-2C)	5710	35.92	26.55	>	24

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

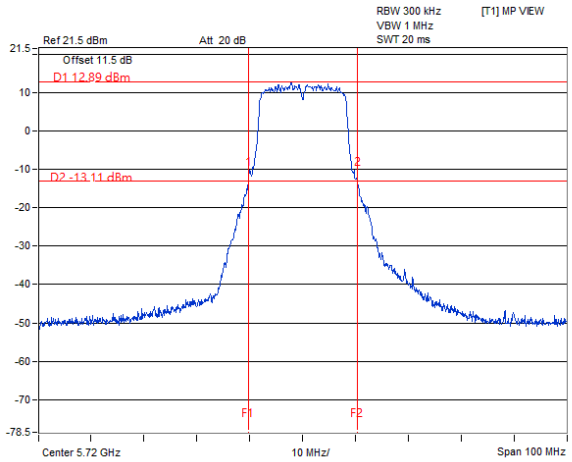
802.11ax (HE80)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	83.34	83.36
106	5530	83.19	83.80
122	5610	83.61	83.28
138 (U-NII-2C)	5690	76.65	76.53
138 (U-NII-3)	5690	6.94	6.53

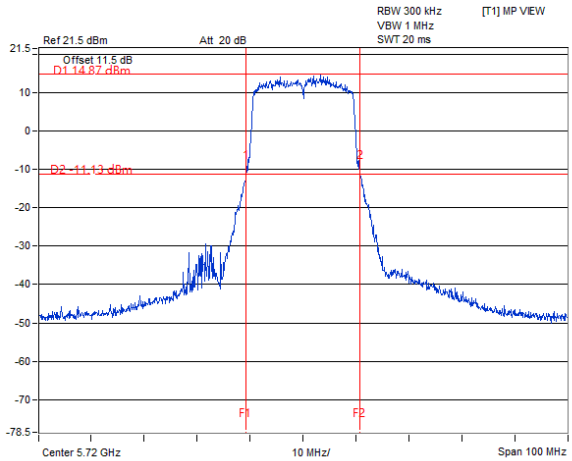
Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
58	5290	83.34	30.2	>	24
106	5530	83.19	30.2	>	24
122	5610	83.28	30.2	>	24
138 (U-NII-2C)	5690	76.53	29.83	>	24

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

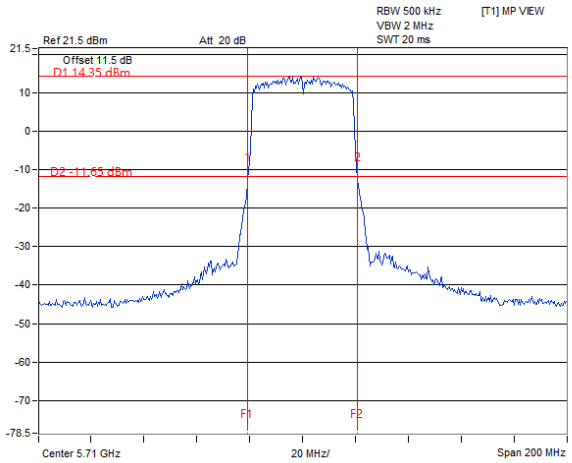
Spectrum Plot of Minimum Value



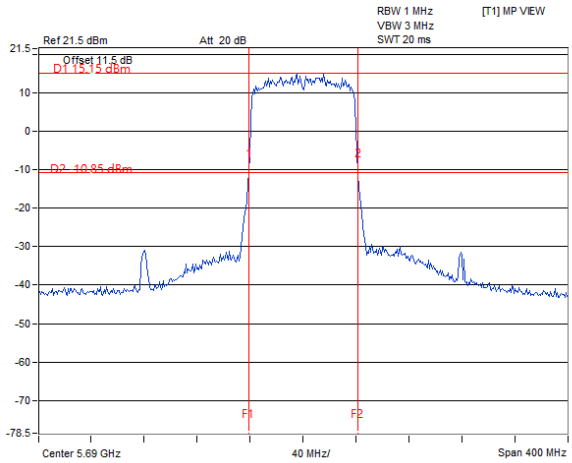
802.11a / Chain 0 : CH 144 (U-NII-3)



802.11ax (HE20) / Chain 1 : CH 144 (U-NII-3)



802.11ax (HE40) / Chain 1 : CH 142 (U-NII-3)



802.11ax (HE80) / Chain 1 : CH 138 (U-NII-3)

Notes:

1. For U-NII-2C straddle channel = 5725 MHz - Marker 1
2. For U-NII-3 straddle channel = Marker 1 + Delta 2 - 5725 MHz

7.2 RF Output Power

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Ivan Tseng

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	19.85	20.20	201.318	23.04	24	Pass
60	5300	19.88	20.26	203.444	23.08	24	Pass
64	5320	19.85	20.22	201.801	23.05	24	Pass
100	5500	20.02	20.46	211.635	23.26	24	Pass
116	5580	20.35	19.92	206.567	23.15	24	Pass
140	5700	20.03	20.22	205.889	23.14	24	Pass
*144 (U-NII-2C)	5720	19.09	19.57	181.207	22.58	22.86	Pass
*144 (U-NII-3)	5720	12.70	13.18	41.608	16.19	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2A, the maximum gain is 2.89 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 2.96 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 2.95 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	20.05	20.42	211.312	23.25	24	Pass
60	5300	20.02	20.52	**213.181**	**23.29**	24	Pass
64	5320	19.97	20.46	210.485	23.23	24	Pass
100	5500	20.11	20.38	211.709	23.26	24	Pass
116	5580	20.18	20.02	204.693	23.11	24	Pass
140	5700	20.21	20.34	213.098	23.29	24	Pass
*144 (U-NII-2C)	5720	19.21	19.37	175.444	22.44	23	Pass
*144 (U-NII-3)	5720	13.73	13.65	48.315	16.84	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2A, the maximum gain is 2.89 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 2.96 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 2.95 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
54	5270	19.94	20.55	212.129	23.27	24	Pass
62	5310	19.82	20.42	206.094	23.14	24	Pass
102	5510	19.73	20.48	205.659	23.13	24	Pass
110	5550	20.08	20.15	205.373	23.13	24	Pass
134	5670	20.17	20.22	209.188	23.21	24	Pass
*142 (U-NII-2C)	5710	20.04	20.32	**217.706**	**23.38**	24	Pass
*142 (U-NII-3)	5710	10.07	10.08	21.24	13.27	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2A, the maximum gain is 2.89 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 2.96 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 2.95 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
58	5290	18.95	19.45	166.628	22.22	24	Pass
106	5530	20.04	20.18	205.157	23.12	24	Pass
122	5610	20.42	20.12	212.956	23.28	24	Pass
*138 (U-NII-2C)	5690	20.11	20.27	216.606	23.36	24	Pass
*138 (U-NII-3)	5690	6.43	6.11	8.788	9.44	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2A, the maximum gain is 2.89 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 2.96 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 2.95 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	20.05	20.42	211.312	23.25	24	Pass
60	5300	20.02	20.52	**213.181**	**23.29**	24	Pass
64	5320	19.97	20.46	210.485	23.23	24	Pass
100	5500	20.11	20.38	211.709	23.26	24	Pass
116	5580	20.18	20.02	204.693	23.11	24	Pass
140	5700	20.21	20.34	213.098	23.29	24	Pass
*144 (U-NII-2C)	5720	19.21	19.37	175.444	22.44	23	Pass
*144 (U-NII-3)	5720	13.73	13.65	48.315	16.84	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 5.68 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the directional gain is 5.96 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the directional gain is 5.69 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
54	5270	19.94	20.55	212.129	23.27	24	Pass
62	5310	19.82	20.42	206.094	23.14	24	Pass
102	5510	19.73	20.48	205.659	23.13	24	Pass
110	5550	20.08	20.15	205.373	23.13	24	Pass
134	5670	20.17	20.22	209.188	23.21	24	Pass
*142 (U-NII-2C)	5710	20.04	20.32	**217.706**	**23.38**	24	Pass
*142 (U-NII-3)	5710	10.07	10.08	21.24	13.27	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 5.68 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the directional gain is 5.96 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the directional gain is 5.69 dBi < 6 dBi, so the output power limit shall not be reduced.

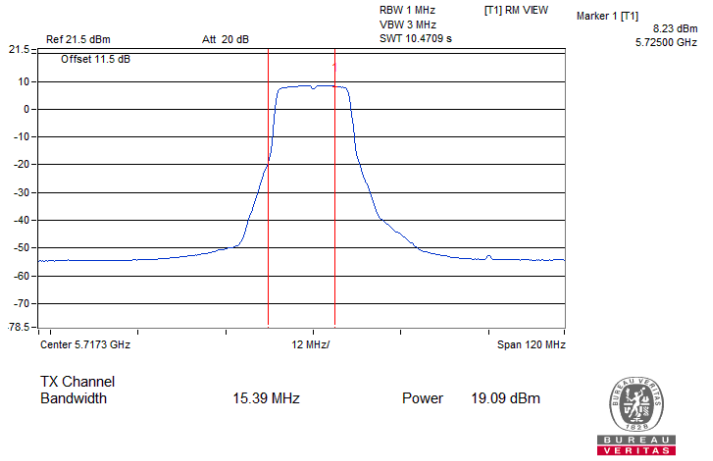
802.11ax (HE80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
58	5290	18.95	19.45	166.628	22.22	24	Pass
106	5530	20.04	20.18	205.157	23.12	24	Pass
122	5610	20.42	20.12	212.956	23.28	24	Pass
*138 (U-NII-2C)	5690	20.11	20.27	216.606	23.36	24	Pass
*138 (U-NII-3)	5690	6.43	6.11	8.788	9.44	30	Pass

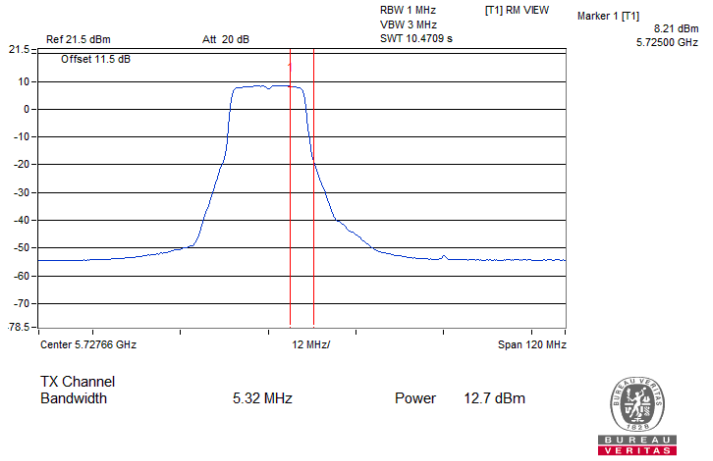
Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 5.68 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the directional gain is 5.96 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the directional gain is 5.69 dBi < 6 dBi, so the output power limit shall not be reduced.

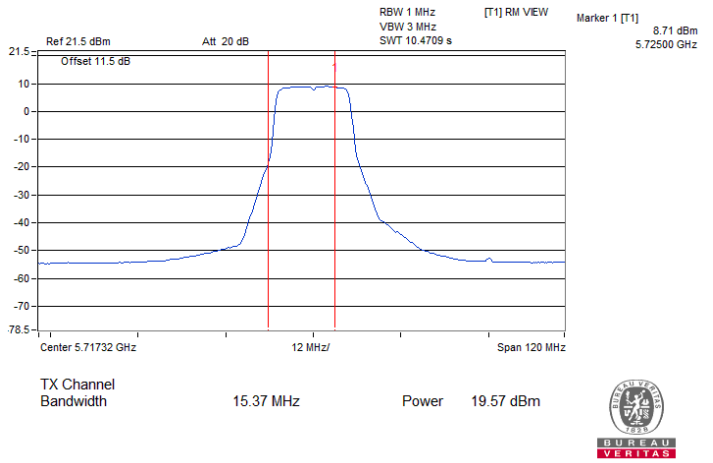
Spectrum Plot for channel straddling



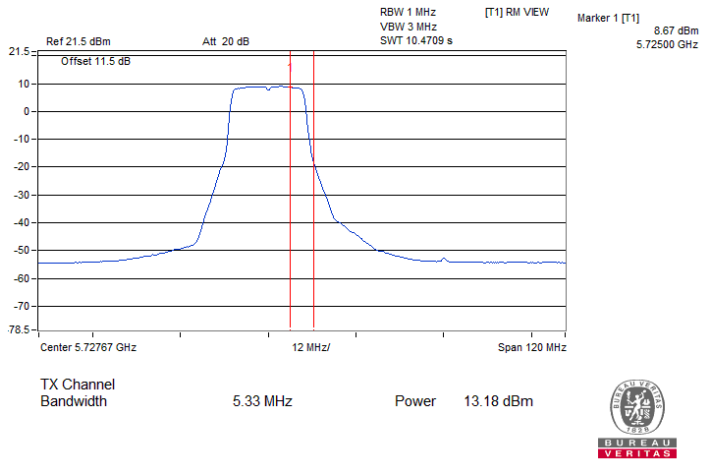
802.11a / Chain 0 : CH 144 (U-NII-2C)



802.11a / Chain 0 : CH 144 (U-NII-3)

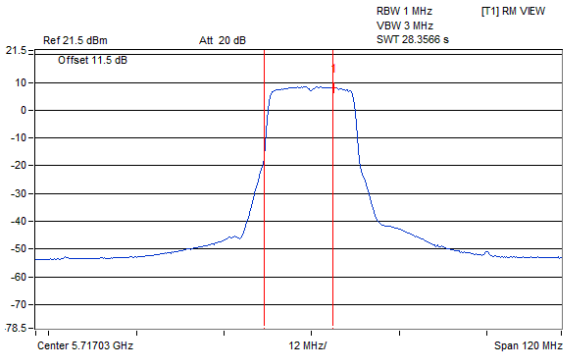


802.11a / Chain 1 : CH 144 (U-NII-2C)



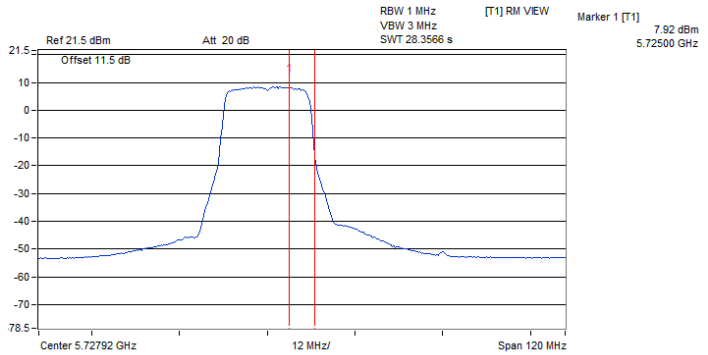
802.11a / Chain 1 : CH 144 (U-NII-3)

Spectrum Plot for channel straddling



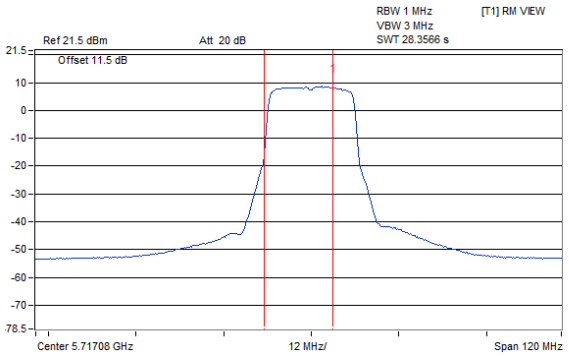
TX Channel Bandwidth 15.94 MHz Power 19.21 dBm

802.11ax (HE20) / Chain 0 : CH 144 (U-NII-2C)



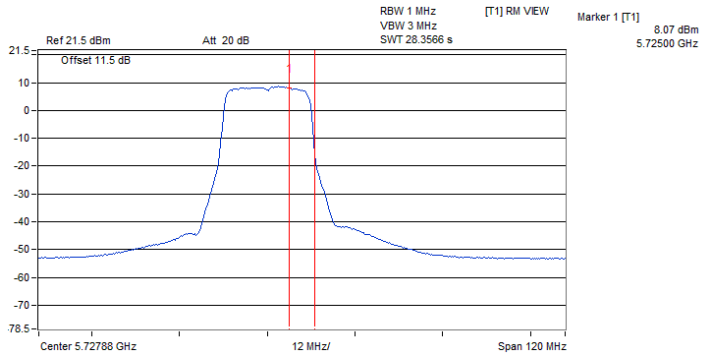
TX Channel Bandwidth 5.85 MHz Power 13.73 dBm

802.11ax (HE20) / Chain 0 : CH 144 (U-NII-3)



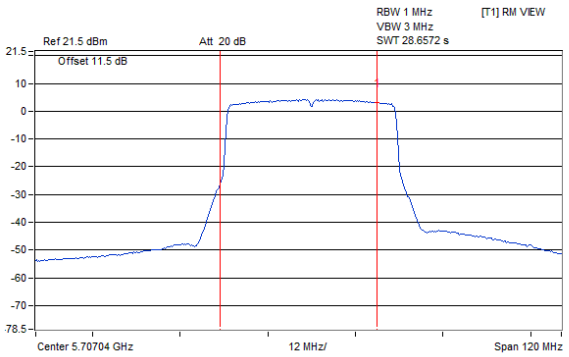
TX Channel Bandwidth 15.85 MHz Power 19.37 dBm

802.11ax (HE20) / Chain 1 : CH 144 (U-NII-2C)



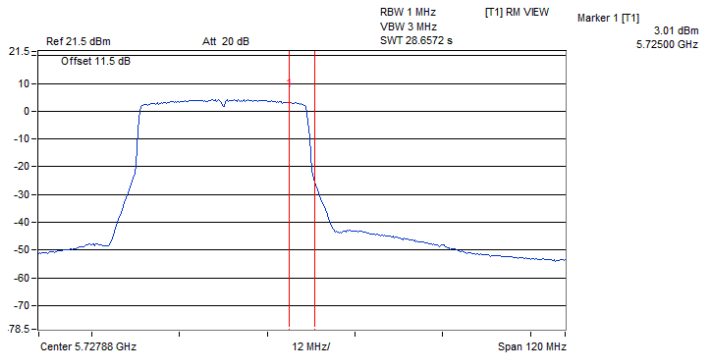
TX Channel Bandwidth 5.75 MHz Power 13.65 dBm

802.11ax (HE20) / Chain 1 : CH 144 (U-NII-3)



TX Channel Bandwidth 35.92 MHz Power 20.04 dBm

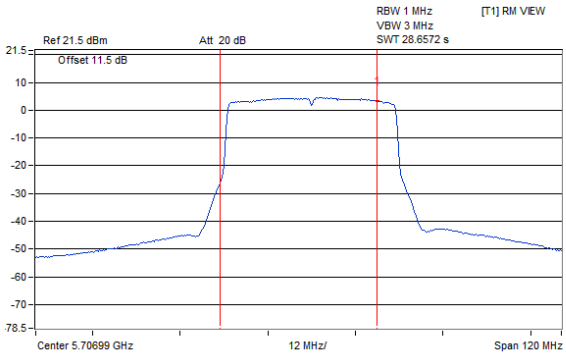
802.11ax (HE40) / Chain 0 : CH 142 (U-NII-2C)



TX Channel Bandwidth 5.76 MHz Power 10.07 dBm

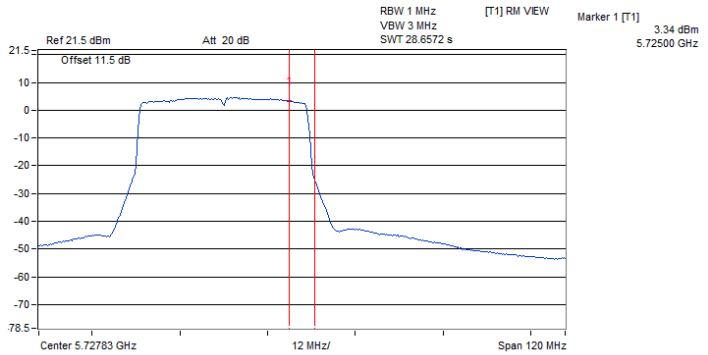
802.11ax (HE40) / Chain 0 : CH 142 (U-NII-3)

Spectrum Plot for channel straddling



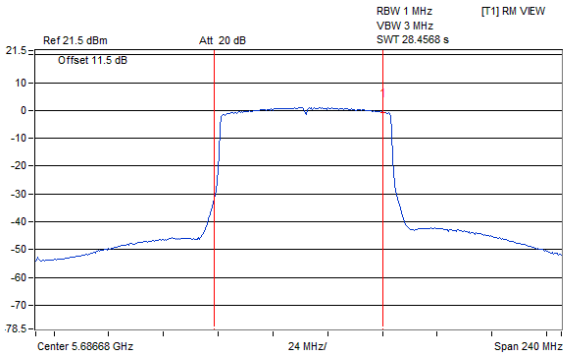
TX Channel Bandwidth 36.03 MHz Power 20.32 dBm

802.11ax (HE40) / Chain 1 : CH 142 (U-NII-2C)



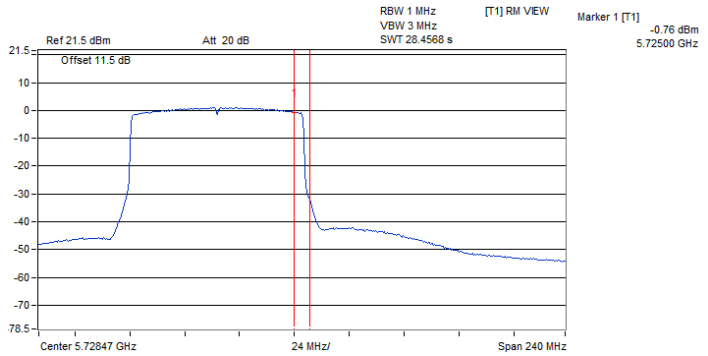
TX Channel Bandwidth 5.67 MHz Power 10.08 dBm

802.11ax (HE40) / Chain 1 : CH 142 (U-NII-3)



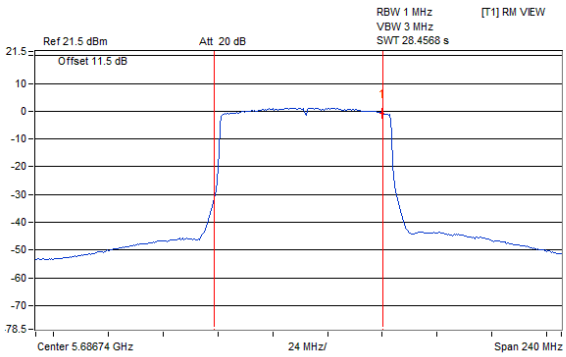
TX Channel Bandwidth 76.65 MHz Power 20.11 dBm

802.11ax (HE80) / Chain 0 : CH 138 (U-NII-2C)



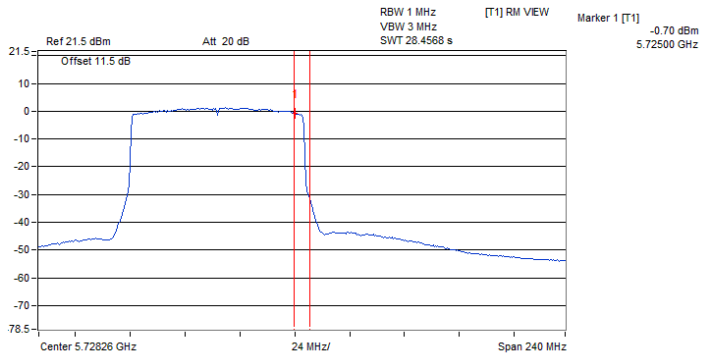
TX Channel Bandwidth 6.94 MHz Power 6.43 dBm

802.11ax (HE80) / Chain 0 : CH 138 (U-NII-3)



TX Channel Bandwidth 76.53 MHz Power 20.27 dBm

802.11ax (HE80) / Chain 1 : CH 138 (U-NII-2C)



TX Channel Bandwidth 6.53 MHz Power 6.11 dBm

802.11ax (HE80) / Chain 1 : CH 138 (U-NII-3)

7.3 Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Ivan Tseng

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
52	5260	6.84	7.35	0.23	10.34	11	Pass
60	5300	6.81	7.31	0.23	10.31	11	Pass
64	5320	6.74	7.20	0.23	10.22	11	Pass
100	5500	6.97	7.68	0.23	10.58	11	Pass
116	5580	7.19	6.88	0.23	10.28	11	Pass
140	5700	6.92	7.15	0.23	10.28	11	Pass
144 (U-NII-2C)	5720	6.97	7.26	0.23	10.36	11	Pass

Notes:

1. Method E) 2) 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. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 5.68 dBi < 6 dBi, so the power density limit shall not be reduced.
4. For U-NII-2C, the directional gain is 5.96 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
52	5260	7.02	7.37	0.14	10.35	11	Pass
60	5300	7.08	7.62	0.14	10.51	11	Pass
64	5320	7.01	7.25	0.14	10.28	11	Pass
100	5500	7.09	7.77	0.14	10.59	11	Pass
116	5580	7.06	7.07	0.14	10.22	11	Pass
140	5700	7.23	7.31	0.14	10.42	11	Pass
144 (U-NII-2C)	5720	7.06	7.17	0.14	10.27	11	Pass

Notes:

1. Method E) 2) 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. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 5.68 dBi < 6 dBi, so the power density limit shall not be reduced.
4. For U-NII-2C, the directional gain is 5.96 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
54	5270	3.84	4.54	0.19	7.40	11	Pass
62	5310	3.81	4.21	0.19	7.21	11	Pass
102	5510	3.71	4.34	0.19	7.24	11	Pass
110	5550	4.10	4.23	0.19	7.37	11	Pass
134	5670	4.18	4.32	0.19	7.45	11	Pass
142 (U-NII-2C)	5710	4.06	4.24	0.19	7.35	11	Pass

Notes:

1. Method E) 2) 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. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 5.68 dBi < 6 dBi, so the power density limit shall not be reduced.
4. For U-NII-2C, the directional gain is 5.96 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
58	5290	-0.06	0.57	0.16	3.44	11	Pass
106	5530	0.95	1.08	0.16	4.19	11	Pass
122	5610	1.69	1.21	0.16	4.63	11	Pass
138 (U-NII-2C)	5690	1.04	1.19	0.16	4.29	11	Pass

Notes:

1. Method E) 2) 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. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 5.68 dBi < 6 dBi, so the power density limit shall not be reduced.
4. For U-NII-2C, the directional gain is 5.96 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
144 (U-NII-3)	5720	-2.05	-1.73	1.12	0.23	3.57	30	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-3, the directional gain is 5.69 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
144 (U-NII-3)	5720	-2.64	-2.55	0.42	0.14	2.78	30	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-3, the directional gain is 5.69 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
142 (U-NII-3)	5710	-6.02	-7.54	-3.7	0.19	-1.29	30	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-3, the directional gain is 5.69 dBi < 6 dBi, so the power density limit shall not be reduced.

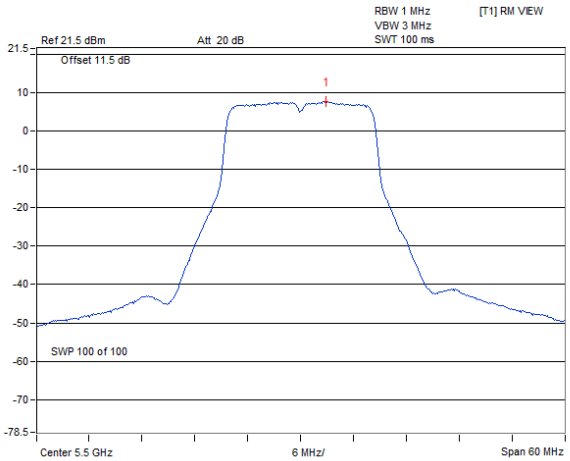
802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
138 (U-NII-3)	5690	-10.42	-10.57	-7.48	0.16	-5.10	30	Pass

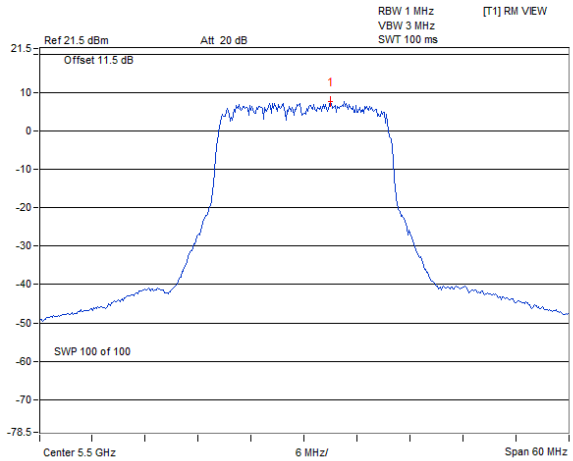
Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-3, the directional gain is 5.69 dBi < 6 dBi, so the power density limit shall not be reduced.

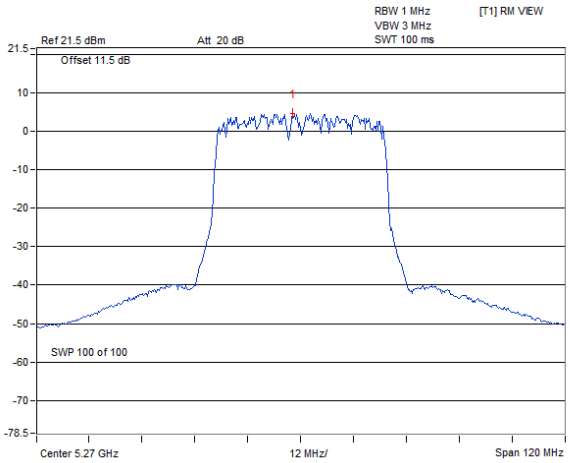
Spectrum Plot of Maximum Value



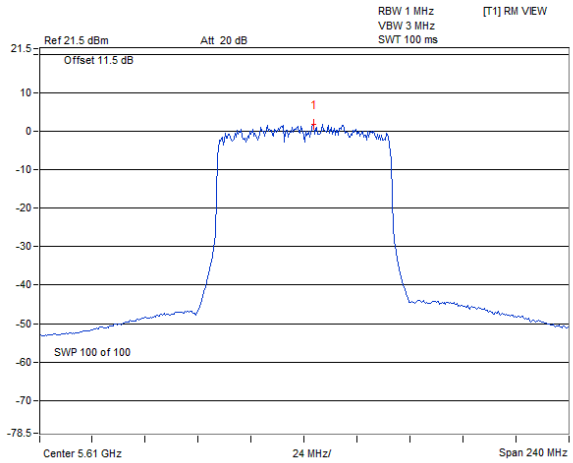
802.11a / Chain 1 : CH 100



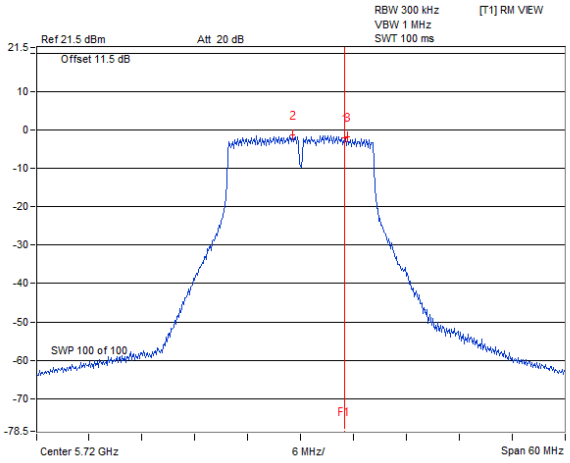
802.11ax (HE20) / Chain 1 : CH 100



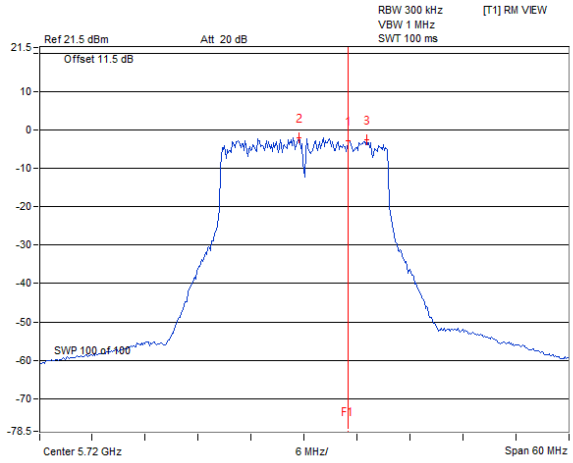
802.11ax (HE40) / Chain 1 : CH 54



802.11ax (HE80) / Chain 0 : CH 122

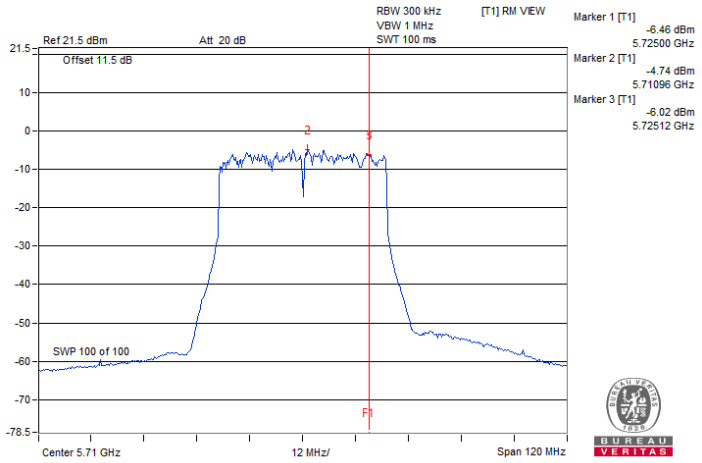


802.11a / Chain 1 : CH 144 (U-NII-3)

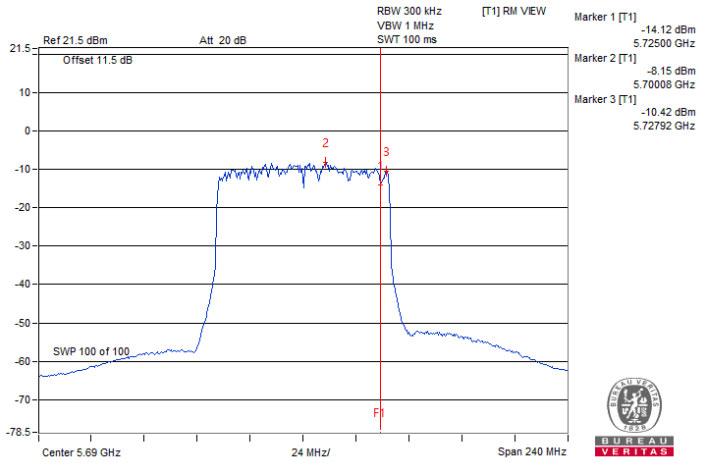


802.11ax (HE20) / Chain 1 : CH 144 (U-NII-3)

Spectrum Plot of Maximum Value



802.11ax (HE40) / Chain 0 : CH 142 (U-NII-3)



802.11ax (HE80) / Chain 0 : CH 138 (U-NII-3)

7.4 6 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Ivan Tseng

802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
144 (U-NII-3)	5720	2.90	3.16	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
144 (U-NII-3)	5720	4.25	3.96	0.5	Pass

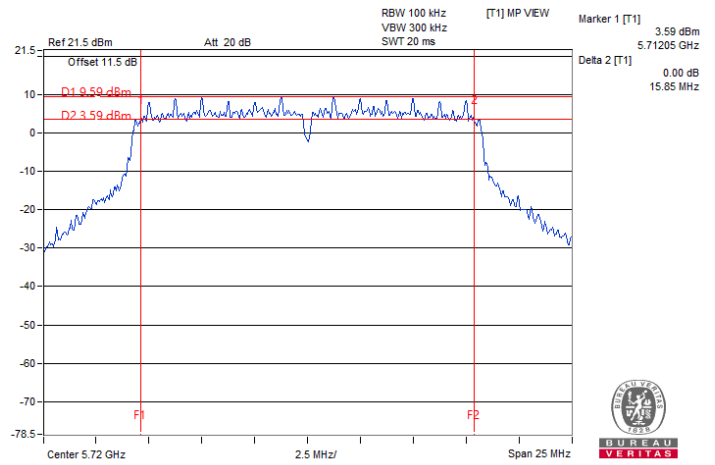
802.11ax (HE40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
142 (U-NII-3)	5710	4.08	3.88	0.5	Pass

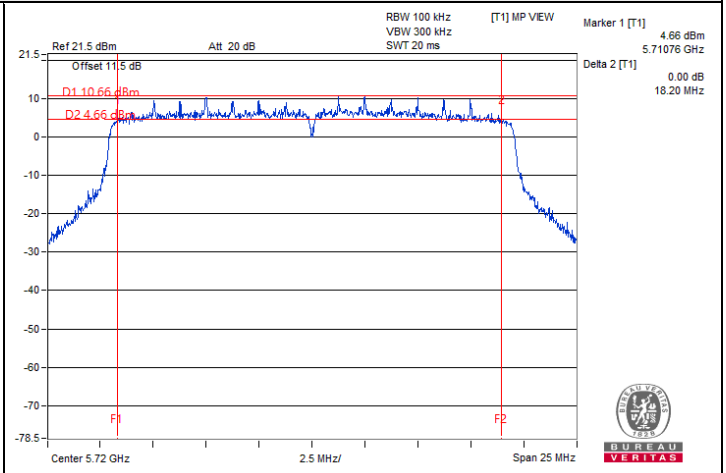
802.11ax (HE80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
138 (U-NII-3)	5690	4.00	2.45	0.5	Pass

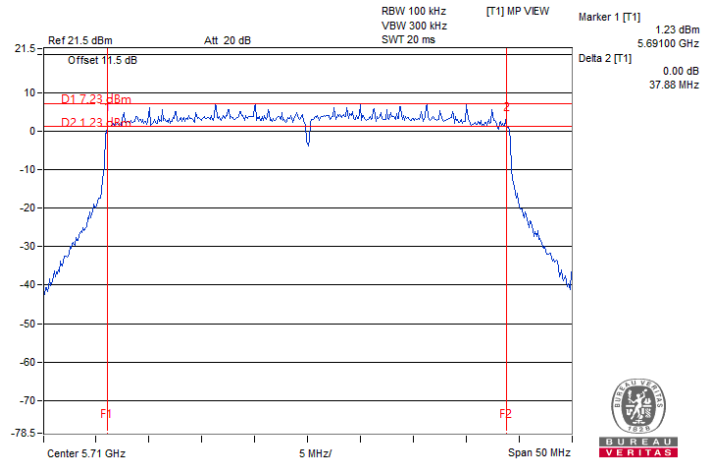
Spectrum Plot of Minimum Value



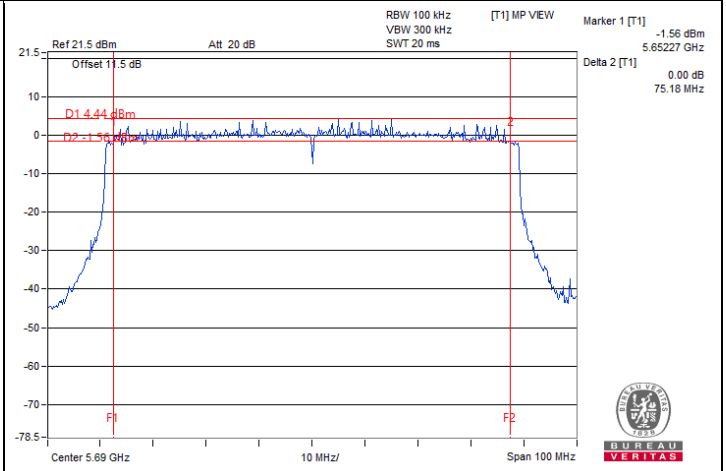
802.11a / Chain 0 : CH 144 (U-NII-3)



802.11ax (HE20) / Chain 1 : CH 144 (U-NII-3)



802.11ax (HE40) / Chain 1 : CH 142 (U-NII-3)



802.11ax (HE80) / Chain 1 : CH 138 (U-NII-3)

Note: For U-NII-3 straddle channel = Marker 1 + Delta 2 - 5725 MHz

7.5 Occupied Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Ivan Tseng

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	16.44	16.44
60	5300	16.44	16.44
64	5320	16.44	16.44
100	5500	16.44	16.44
116	5580	16.44	16.44
140	5700	16.44	16.44
144 (U-NII-2C)	5720	13.28	13.28
144 (U-NII-3)	5720	3.16	3.16

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	18.96	18.96
60	5300	18.96	18.96
64	5320	18.90	18.90
100	5500	18.90	18.96
116	5580	18.96	18.90
140	5700	18.96	18.96
144 (U-NII-2C)	5720	14.60	14.60
144 (U-NII-3)	5720	4.36	4.36

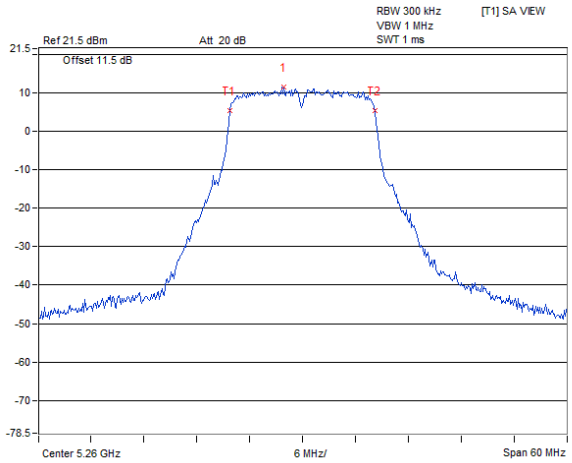
802.11ax (HE40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	37.92	37.68
62	5310	37.92	37.92
102	5510	37.92	37.92
110	5550	38.16	37.92
134	5670	37.92	37.92
142 (U-NII-2C)	5710	33.96	33.96
142 (U-NII-3)	5710	3.96	3.96

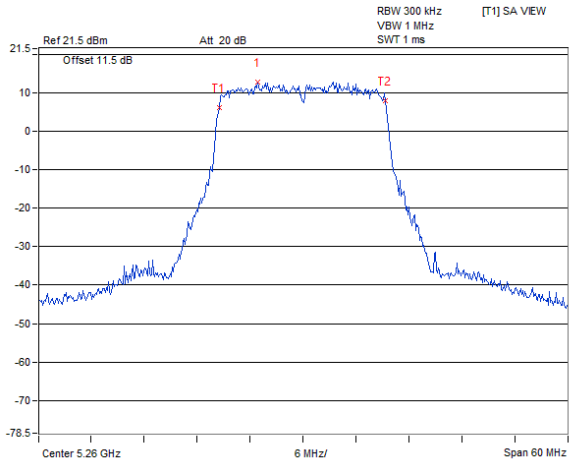
802.11ax (HE80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	77.28	77.28
106	5530	77.28	77.28
122	5610	77.28	77.28
138 (U-NII-2C)	5690	73.88	73.88
138 (U-NII-3)	5690	3.40	3.40

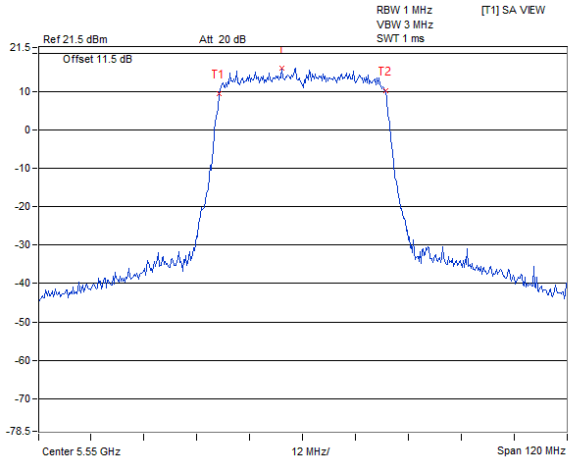
Spectrum Plot of Maximum Value



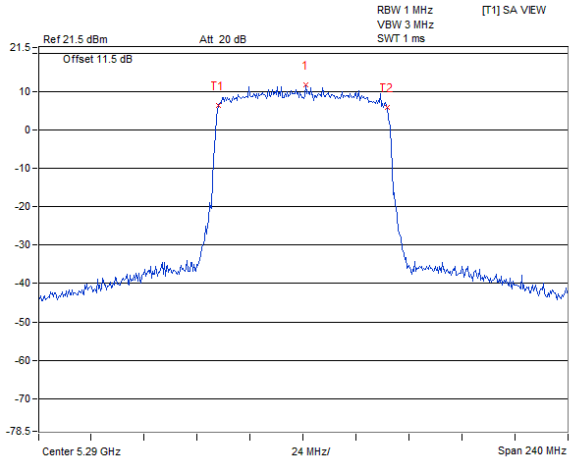
802.11a / Chain 0 : CH 52



802.11ax (HE20) / Chain 0 : CH 52



802.11ax (HE40) / Chain 0 : CH 110



802.11ax (HE80) / Chain 0 : CH 58

7.6 Frequency Stability

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Ivan Tseng

802.11a

Frequency Stability Versus Temperature									
Operating Frequency: 5260 MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
40	120	5259.9782	Pass	5259.981	Pass	5259.983	Pass	5259.9821	Pass
30	120	5260.0073	Pass	5260.0031	Pass	5260.0039	Pass	5260.0039	Pass
20	120	5260.0258	Pass	5260.0233	Pass	5260.0255	Pass	5260.0268	Pass
10	120	5260.0227	Pass	5260.0244	Pass	5260.023	Pass	5260.0234	Pass
0	120	5259.9872	Pass	5259.987	Pass	5259.9863	Pass	5259.9829	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5260 MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	138	5260.0323	Pass	5260.0345	Pass	5260.0318	Pass	5260.0324	Pass
	120	5260.0258	Pass	5260.0233	Pass	5260.0255	Pass	5260.0268	Pass
	102	5260.0199	Pass	5260.0202	Pass	5260.0217	Pass	5260.0186	Pass

7.7 AC Power Conducted Emissions

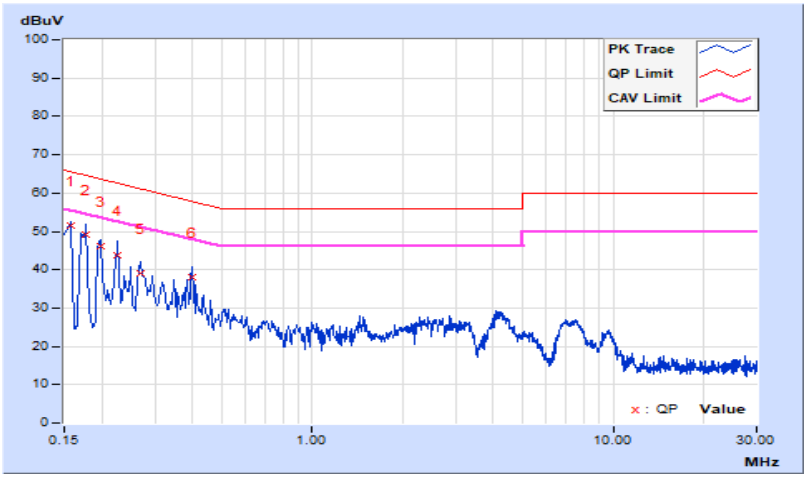
Test Mode A1

RF Mode	802.11ax (HE20)	**Channel**	CH 140：5700 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 70% RH
Tested By	Luis Lee		

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	0.15800	9.67	41.96	26.99	51.63	36.66	65.57	55.57	-13.94	-18.91
2	0.17800	9.68	39.63	24.45	49.31	34.13	64.58	54.58	-15.27	-20.45
3	0.19780	9.70	36.39	22.22	46.09	31.92	63.70	53.70	-17.61	-21.78
4	0.22600	9.71	33.97	21.64	43.68	31.35	62.60	52.60	-18.92	-21.25
5	0.26992	9.73	29.41	16.03	39.14	25.76	61.12	51.12	-21.98	-25.36
6	0.39800	9.79	28.42	22.28	38.21	32.07	57.90	47.90	-19.69	-15.83

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

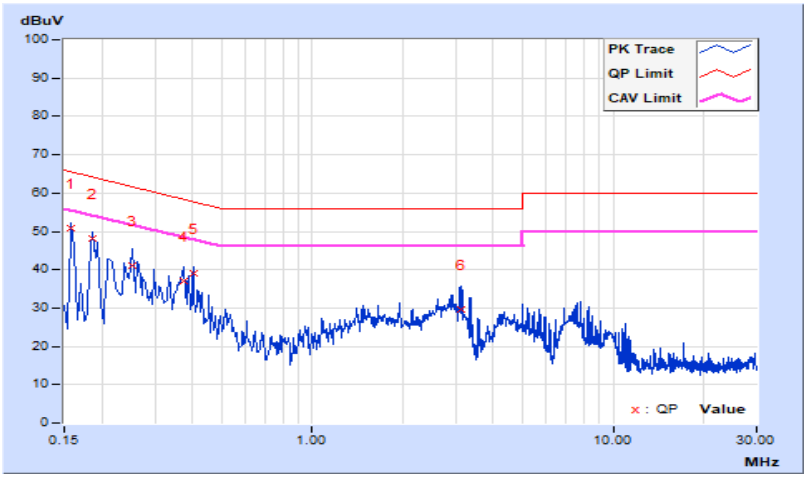


RF Mode	802.11ax (HE20)	**Channel**	CH 140：5700 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 70% RH
Tested By	Luis Lee		

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	0.15800	9.67	41.03	26.56	50.70	36.23	65.57	55.57	-14.87	-19.34
2	0.18600	9.69	38.54	22.78	48.23	32.47	64.21	54.21	-15.98	-21.74
3	0.25400	9.72	31.20	20.65	40.92	30.37	61.63	51.63	-20.71	-21.26
4	0.37400	9.76	27.42	20.73	37.18	30.49	58.41	48.41	-21.23	-17.92
5	0.40200	9.77	29.28	22.38	39.05	32.15	57.81	47.81	-18.76	-15.66
6	3.14200	9.94	19.58	14.55	29.52	24.49	56.00	46.00	-26.48	-21.51

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



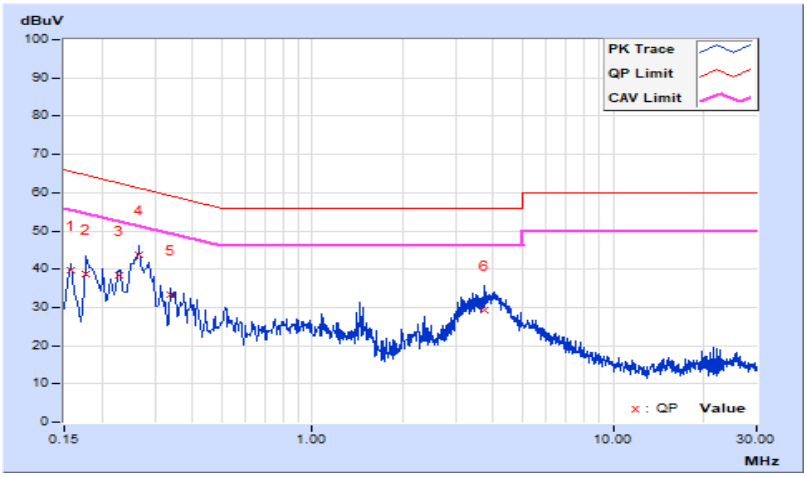
Test Mode A2

RF Mode	802.11ax (HE20)	**Channel**	CH 140：5700 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 70% RH
Tested By	Luis Lee		

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	0.15800	9.67	30.12	20.64	39.79	30.31	65.57	55.57	-25.78	-25.26
2	0.17800	9.68	29.09	18.75	38.77	28.43	64.58	54.58	-25.81	-26.15
3	0.22804	9.71	28.51	22.80	38.22	32.51	62.52	52.52	-24.30	-20.01
4	0.26600	9.73	34.19	26.53	43.92	36.26	61.24	51.24	-17.32	-14.98
5	0.33800	9.76	23.68	17.32	33.44	27.08	59.25	49.25	-25.81	-22.17
6	3.75000	9.95	19.21	12.16	29.16	22.11	56.00	46.00	-26.84	-23.89

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

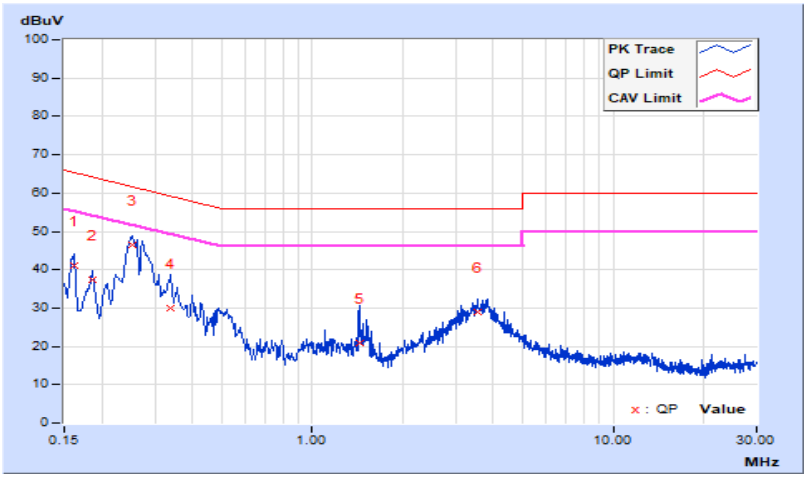


RF Mode	802.11ax (HE20)	**Channel**	CH 140：5700 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 70% RH
Tested By	Luis Lee		

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	0.16190	9.67	31.48	18.54	41.15	28.21	65.37	55.37	-24.22	-27.16
2	0.18600	9.69	27.83	17.89	37.52	27.58	64.21	54.21	-26.69	-26.63
3	**0.25205**	**9.72**	**36.71**	**30.92**	**46.43**	**40.64**	**61.69**	**51.69**	**-15.26**	**-11.05**
4	0.33800	9.75	20.12	13.69	29.87	23.44	59.25	49.25	-29.38	-25.81
5	1.43400	9.86	11.17	3.87	21.03	13.73	56.00	46.00	-34.97	-32.27
6	3.53400	9.95	19.02	12.75	28.97	22.70	56.00	46.00	-27.03	-23.30

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



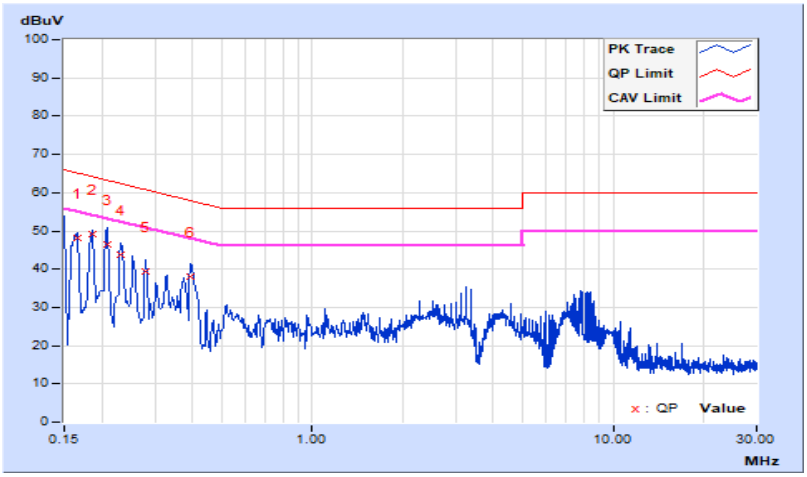
Test Mode B1

RF Mode	802.11ax (HE20)	**Channel**	CH 140：5700 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 70% RH
Tested By	Luis Lee		

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	0.16600	9.67	38.36	22.80	48.03	32.47	65.16	55.16	-17.13	-22.69
2	0.18600	9.69	39.31	23.89	49.00	33.58	64.21	54.21	-15.21	-20.63
3	0.20905	9.70	36.91	24.66	46.61	34.36	63.24	53.24	-16.63	-18.88
4	0.23000	9.71	34.04	22.87	43.75	32.58	62.45	52.45	-18.70	-19.87
5	0.27800	9.74	29.76	16.15	39.50	25.89	60.88	50.88	-21.38	-24.99
6	0.39400	9.79	28.39	21.57	38.18	31.36	57.98	47.98	-19.80	-16.62

Remarks:

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

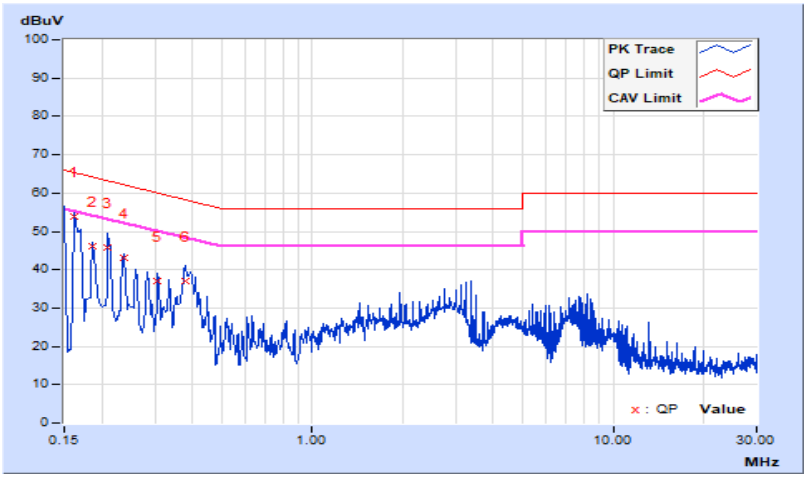


RF Mode	802.11ax (HE20)	**Channel**	CH 140：5700 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 70% RH
Tested By	Luis Lee		

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	**0.16200**	**9.67**	**44.16**	**26.18**	**53.83**	**35.85**	**65.36**	**55.36**	**-11.53**	**-19.51**
2	0.18600	9.69	36.54	20.84	46.23	30.53	64.21	54.21	-17.98	-23.68
3	0.21000	9.70	36.17	22.34	45.87	32.04	63.21	53.21	-17.34	-21.17
4	0.23785	9.71	33.45	23.39	43.16	33.10	62.17	52.17	-19.01	-19.07
5	0.30600	9.74	27.15	18.51	36.89	28.25	60.08	50.08	-23.19	-21.83
6	0.37800	9.76	27.42	20.13	37.18	29.89	58.32	48.32	-21.14	-18.43

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



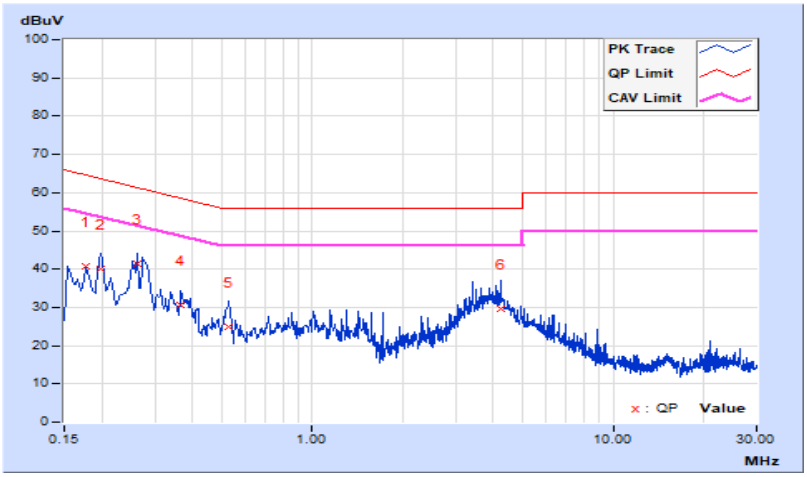
Test Mode B2

RF Mode	802.11ax (HE20)	**Channel**	CH 140：5700 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 70% RH
Tested By	Luis Lee		

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	0.17800	9.68	31.08	20.08	40.76	29.76	64.58	54.58	-23.82	-24.82
2	0.19800	9.70	30.30	20.21	40.00	29.91	63.69	53.69	-23.69	-23.78
3	0.26200	9.73	31.78	23.13	41.51	32.86	61.37	51.37	-19.86	-18.51
4	0.36600	9.77	20.78	15.10	30.55	24.87	58.59	48.59	-28.04	-23.72
5	0.52984	9.80	15.10	10.11	24.90	19.91	56.00	46.00	-31.10	-26.09
6	4.22200	9.95	19.57	13.67	29.52	23.62	56.00	46.00	-26.48	-22.38

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

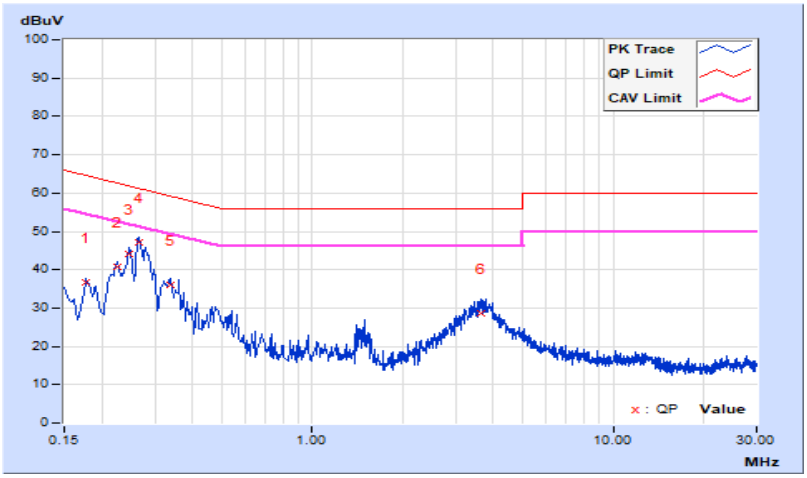


RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 70% RH
Tested By	Luis Lee		

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	0.17800	9.68	27.02	17.21	36.70	26.89	64.58	54.58	-27.88	-27.69
2	0.22565	9.71	30.97	25.67	40.68	35.38	62.61	52.61	-21.93	-17.23
3	0.24600	9.72	34.54	26.59	44.26	36.31	61.89	51.89	-17.63	-15.58
4	0.26429	9.72	37.57	29.02	47.29	38.74	61.30	51.30	-14.01	-12.56
5	0.33767	9.75	26.36	19.57	36.11	29.32	59.26	49.26	-23.15	-19.94
6	3.64200	9.96	18.55	11.98	28.51	21.94	56.00	46.00	-27.49	-24.06

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



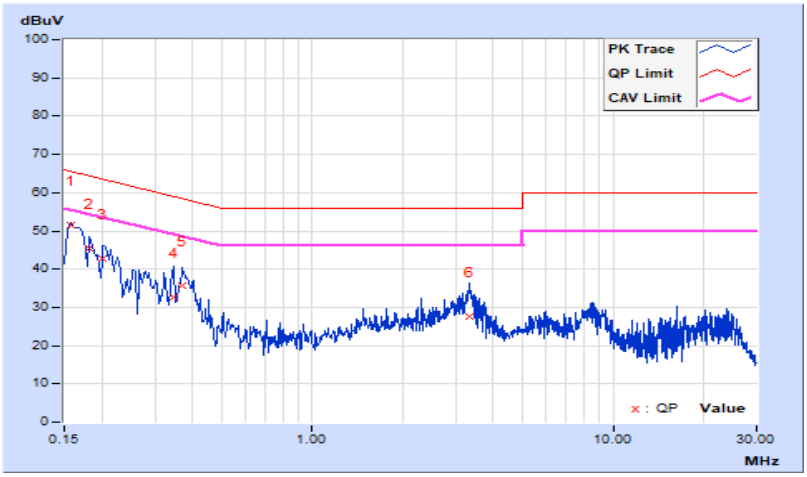
Test Mode C1

RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	0.15770	9.62	41.76	22.37	51.38	31.99	65.58	55.58	-14.20	-23.59
2	0.18200	9.63	35.97	20.31	45.60	29.94	64.39	54.39	-18.79	-24.45
3	0.20200	9.64	33.20	16.49	42.84	26.13	63.53	53.53	-20.69	-27.40
4	0.34600	9.66	22.84	14.81	32.50	24.47	59.06	49.06	-26.56	-24.59
5	0.37000	9.67	26.11	18.15	35.78	27.82	58.50	48.50	-22.72	-20.68
6	3.31800	9.73	17.91	11.20	27.64	20.93	56.00	46.00	-28.36	-25.07

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

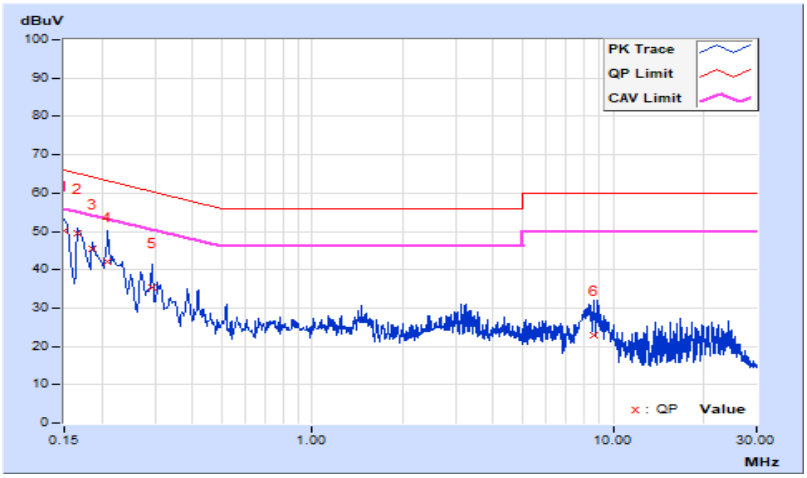


RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	0.15000	9.62	40.58	20.82	50.20	30.44	66.00	56.00	-15.80	-25.56
2	0.16600	9.63	39.98	25.54	49.61	35.17	65.16	55.16	-15.55	-19.99
3	0.18600	9.63	35.95	22.85	45.58	32.48	64.21	54.21	-18.63	-21.73
4	0.21000	9.64	32.61	20.32	42.25	29.96	63.21	53.21	-20.96	-23.25
5	0.29400	9.65	25.58	15.02	35.23	24.67	60.41	50.41	-25.18	-25.74
6	8.60600	9.80	12.96	6.77	22.76	16.57	60.00	50.00	-37.24	-33.43

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



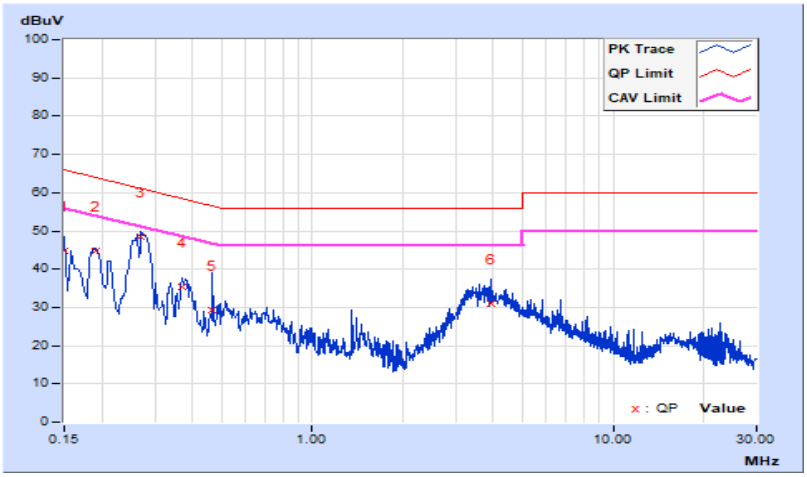
Test Mode C2

RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	0.15000	9.66	35.14	19.13	44.80	28.79	66.00	56.00	-21.20	-27.21
2	0.19000	9.69	34.97	27.22	44.66	36.91	64.04	54.04	-19.38	-17.13
3	0.27000	9.73	38.62	29.71	48.35	39.44	61.12	51.12	-12.77	-11.68
4	0.37000	9.78	25.63	18.51	35.41	28.29	58.50	48.50	-23.09	-20.21
5	0.46600	9.80	19.38	9.87	29.18	19.67	56.58	46.58	-27.40	-26.91
6	3.91000	9.95	20.98	14.72	30.93	24.67	56.00	46.00	-25.07	-21.33

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

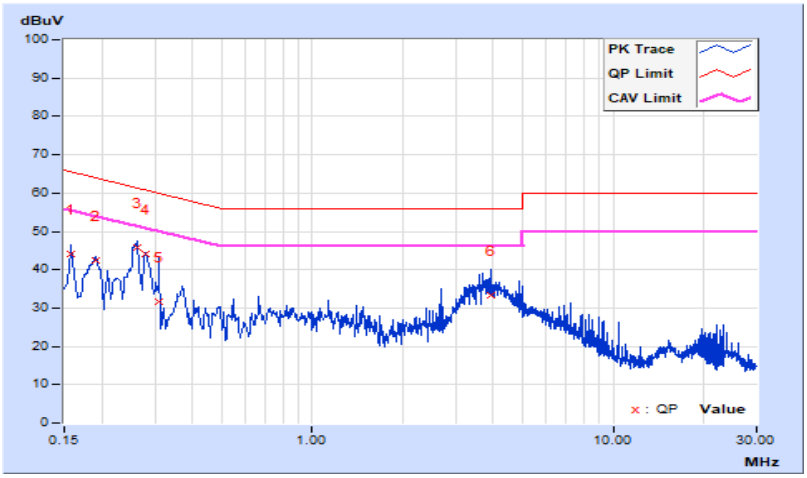


RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	0.15800	9.67	34.53	23.89	44.20	33.56	65.57	55.57	-21.37	-22.01
2	0.19000	9.69	32.79	24.42	42.48	34.11	64.04	54.04	-21.56	-19.93
3	0.26200	9.72	36.11	28.63	45.83	38.35	61.37	51.37	-15.54	-13.02
4	0.27786	9.73	34.38	26.41	44.11	36.14	60.88	50.88	-16.77	-14.74
5	0.31000	9.74	21.97	11.54	31.71	21.28	59.97	49.97	-28.26	-28.69
6	3.91395	9.97	23.28	16.64	33.25	26.61	56.00	46.00	-22.75	-19.39

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



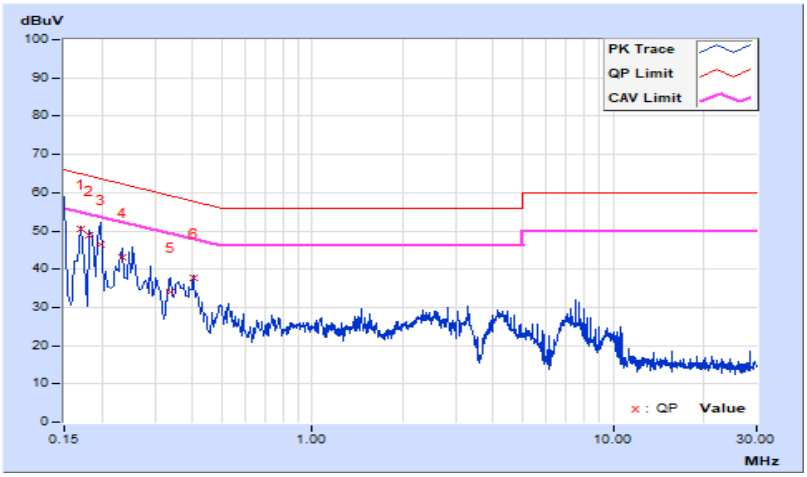
Test Mode D1

RF Mode	802.11ax (HE20)	**Channel**	CH 140：5700 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 70% RH
Tested By	Luis Lee		

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	0.17000	9.68	40.88	24.58	50.56	34.26	64.96	54.96	-14.40	-20.70
2	0.18200	9.69	39.11	23.72	48.80	33.41	64.39	54.39	-15.59	-20.98
3	0.19780	9.70	36.74	22.54	46.44	32.24	63.70	53.70	-17.26	-21.46
4	0.23400	9.72	33.45	23.20	43.17	32.92	62.31	52.31	-19.14	-19.39
5	0.33678	9.76	24.30	16.42	34.06	26.18	59.28	49.28	-25.22	-23.10
6	0.40200	9.79	27.81	20.37	37.60	30.16	57.81	47.81	-20.21	-17.65

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

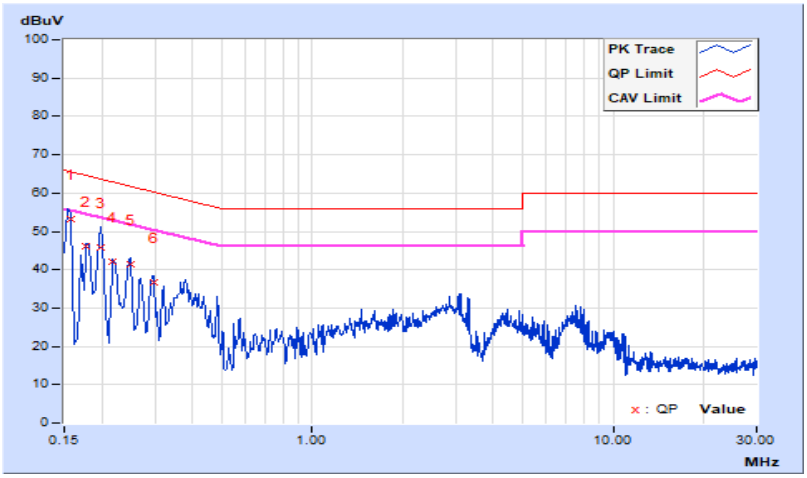


RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 70% RH
Tested By	Luis Lee		

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	0.15800	9.67	43.61	26.10	53.28	35.77	65.57	55.57	-12.29	-19.80
2	0.17801	9.68	36.60	20.36	46.28	30.04	64.58	54.58	-18.30	-24.54
3	0.19800	9.70	36.04	20.84	45.74	30.54	63.69	53.69	-17.95	-23.15
4	0.21800	9.71	32.28	20.57	41.99	30.28	62.89	52.89	-20.90	-22.61
5	0.24941	9.72	31.58	22.29	41.30	32.01	61.78	51.78	-20.48	-19.77
6	0.29677	9.73	27.10	17.86	36.83	27.59	60.33	50.33	-23.50	-22.74

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



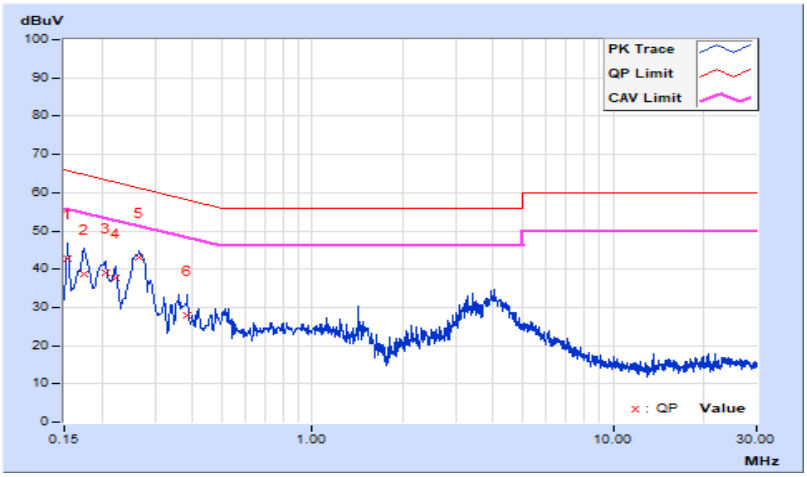
Test Mode D2

RF Mode	802.11ax (HE20)	**Channel**	CH 140：5700 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 70% RH
Tested By	Luis Lee		

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	0.15400	9.66	33.20	17.92	42.86	27.58	65.78	55.78	-22.92	-28.20
2	0.17400	9.68	29.02	17.05	38.70	26.73	64.77	54.77	-26.07	-28.04
3	0.20577	9.70	29.19	20.03	38.89	29.73	63.37	53.37	-24.48	-23.64
4	0.22200	9.71	28.15	18.22	37.86	27.93	62.74	52.74	-24.88	-24.81
5	0.26569	9.73	33.34	25.11	43.07	34.84	61.25	51.25	-18.18	-16.41
6	0.38600	9.78	18.05	11.09	27.83	20.87	58.15	48.15	-30.32	-27.28

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

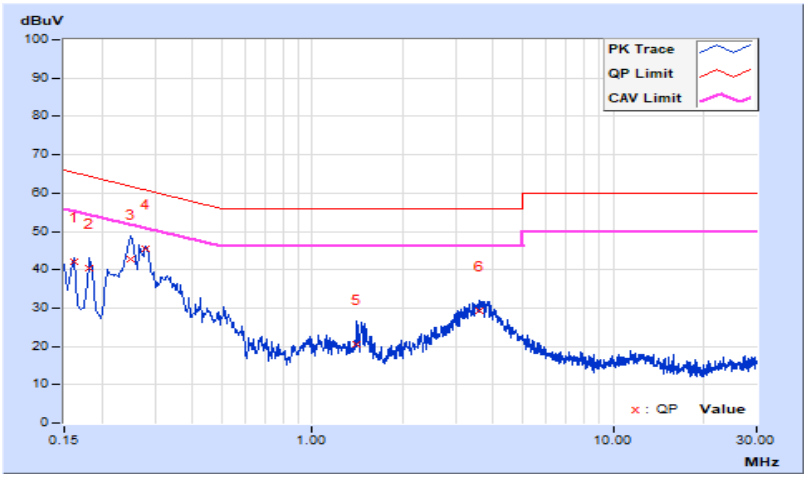


RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 70% RH
Tested By	Luis Lee		

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	0.16190	9.67	32.25	20.94	41.92	30.61	65.37	55.37	-23.45	-24.76
2	0.18200	9.69	30.77	21.47	40.46	31.16	64.39	54.39	-23.93	-23.23
3	0.25000	9.72	33.12	26.40	42.84	36.12	61.76	51.76	-18.92	-15.64
4	**0.27800**	**9.73**	**35.87**	**29.59**	**45.60**	**39.32**	**60.88**	**50.88**	**-15.28**	**-11.56**
5	1.40600	9.86	10.67	4.29	20.53	14.15	56.00	46.00	-35.47	-31.85
6	3.57400	9.95	19.43	13.08	29.38	23.03	56.00	46.00	-26.62	-22.97

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



7.8 Unwanted Emissions below 1 GHz

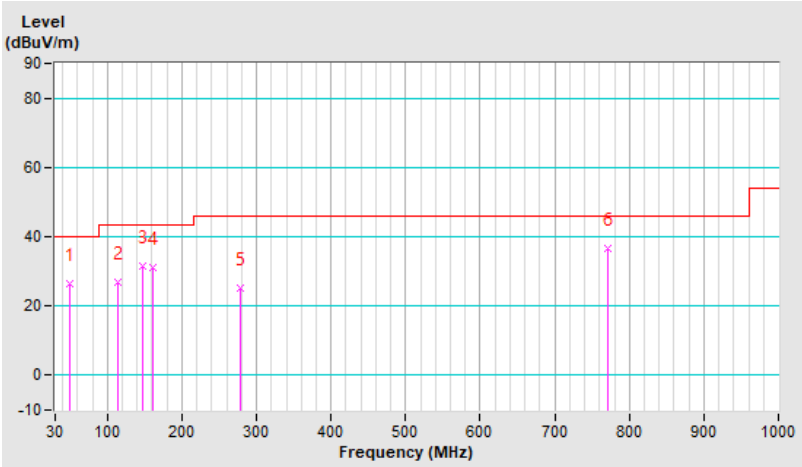
Test Mode A1

RF Mode	802.11ax (HE20)	**Channel**	CH 140：5700 MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 66% RH
Tested By	Titan Hsu		

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	50.37	26.6 QP	40.0	-13.4	1.00 H	110	35.1	-8.5
2	114.39	26.9 QP	43.5	-16.6	1.50 H	267	38.3	-11.4
3	147.37	31.4 QP	43.5	-12.1	1.50 H	70	40.0	-8.6
4	160.95	31.1 QP	43.5	-12.4	1.50 H	97	39.6	-8.5
5	278.32	25.3 QP	46.0	-20.7	1.00 H	248	33.2	-7.9
6	772.05	36.4 QP	46.0	-9.6	1.50 H	49	33.9	2.5

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

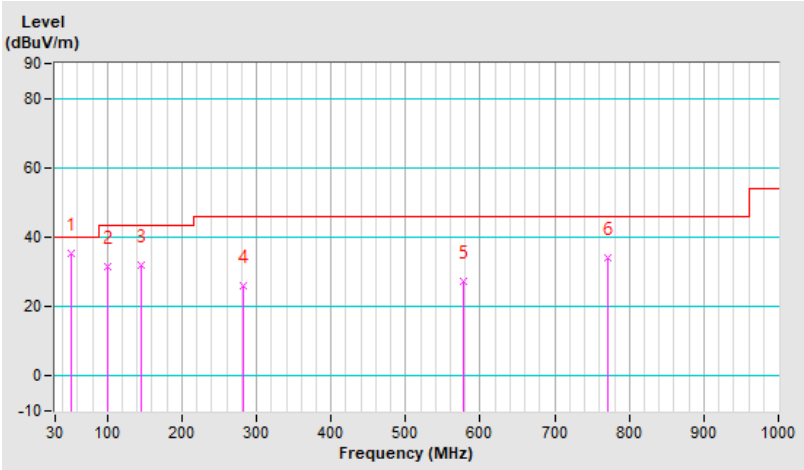


RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	**51.34**	**35.3 QP**	**40.0**	**-4.7**	**1.01 V**	**1**	**43.9**	**-8.6**
2	99.84	31.6 QP	43.5	-11.9	1.01 V	156	44.7	-13.1
3	144.46	31.9 QP	43.5	-11.6	1.01 V	213	40.7	-8.8
4	283.17	26.1 QP	46.0	-19.9	1.50 V	213	33.8	-7.7
5	577.08	27.4 QP	46.0	-18.6	1.50 V	183	29.5	-2.1
6	772.05	33.9 QP	46.0	-12.1	1.01 V	302	31.4	2.5

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



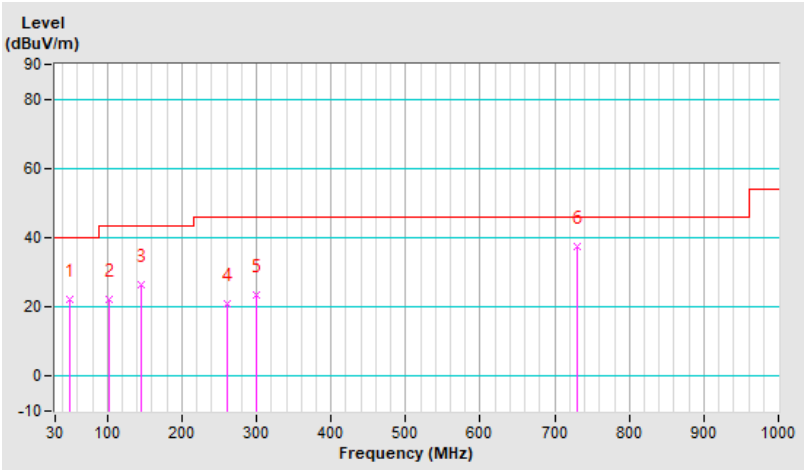
Test Mode A2

RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	49.40	22.3 QP	40.0	-17.7	1.49 H	128	30.8	-8.5
2	101.78	22.1 QP	43.5	-21.4	1.49 H	136	35.0	-12.9
3	145.43	26.3 QP	43.5	-17.2	1.01 H	100	35.0	-8.7
4	260.86	21.0 QP	46.0	-25.0	1.49 H	78	29.8	-8.8
5	300.63	23.4 QP	46.0	-22.6	1.01 H	235	30.9	-7.5
6	730.34	37.4 QP	46.0	-8.6	1.49 H	288	36.2	1.2

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

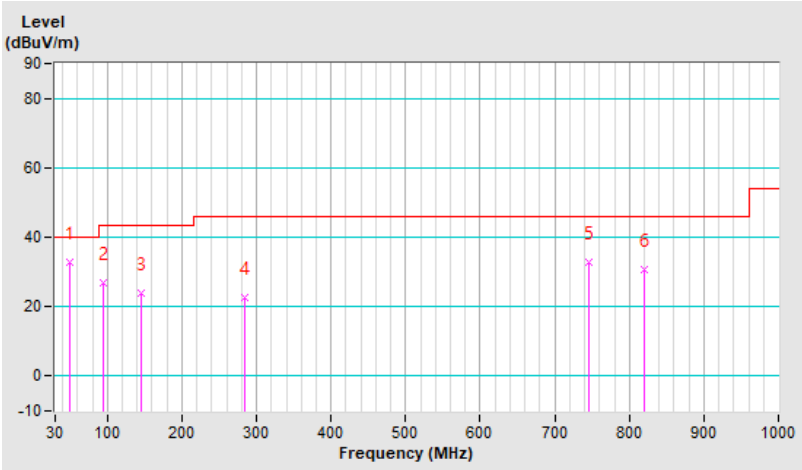


RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	50.37	32.6 QP	40.0	-7.4	1.50 V	95	41.1	-8.5
2	94.02	27.0 QP	43.5	-16.5	1.00 V	220	40.9	-13.9
3	144.46	24.0 QP	43.5	-19.5	1.50 V	189	32.8	-8.8
4	285.11	22.6 QP	46.0	-23.4	1.50 V	75	30.4	-7.8
5	745.86	32.6 QP	46.0	-13.4	1.00 V	243	30.8	1.8
6	820.55	30.8 QP	46.0	-15.2	1.00 V	85	27.7	3.1

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 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



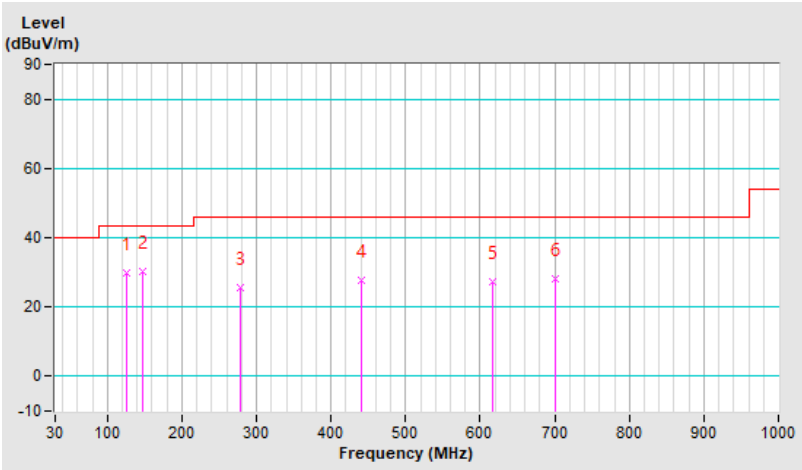
Test Mode B1

RF Mode	802.11ax (HE20)	**Channel**	CH 140：5700 MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 66% RH
Tested By	Titan Hsu		

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	125.06	30.0 QP	43.5	-13.5	1.49 H	281	40.5	-10.5
2	146.40	30.4 QP	43.5	-13.1	1.49 H	115	39.0	-8.6
3	278.32	25.6 QP	46.0	-20.4	1.00 H	89	33.5	-7.9
4	441.28	27.6 QP	46.0	-18.4	1.00 H	67	32.5	-4.9
5	616.85	27.5 QP	46.0	-18.5	1.49 H	18	28.4	-0.9
6	700.27	28.1 QP	46.0	-17.9	1.49 H	88	27.7	0.4

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

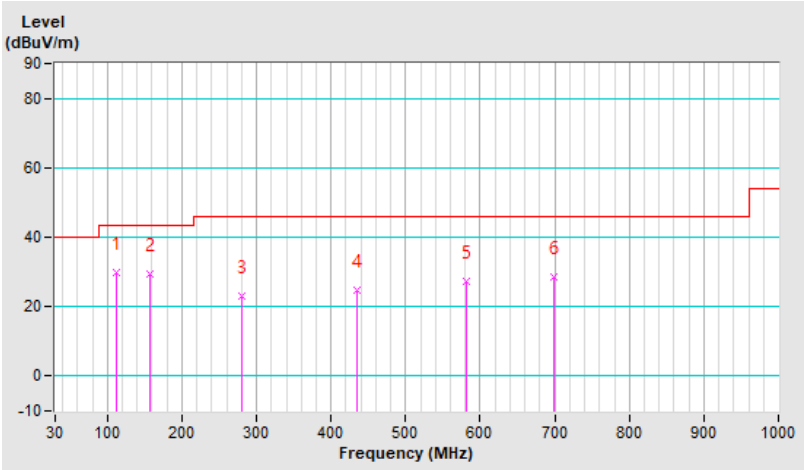


RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	112.45	30.0 QP	43.5	-13.5	1.01 V	273	41.6	-11.6
2	158.04	29.6 QP	43.5	-13.9	1.01 V	215	38.2	-8.6
3	281.23	23.1 QP	46.0	-22.9	1.01 V	193	30.9	-7.8
4	434.49	24.9 QP	46.0	-21.1	1.50 V	242	29.8	-4.9
5	581.93	27.5 QP	46.0	-18.5	1.01 V	276	29.5	-2.0
6	699.30	28.5 QP	46.0	-17.5	1.50 V	325	28.1	0.4

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



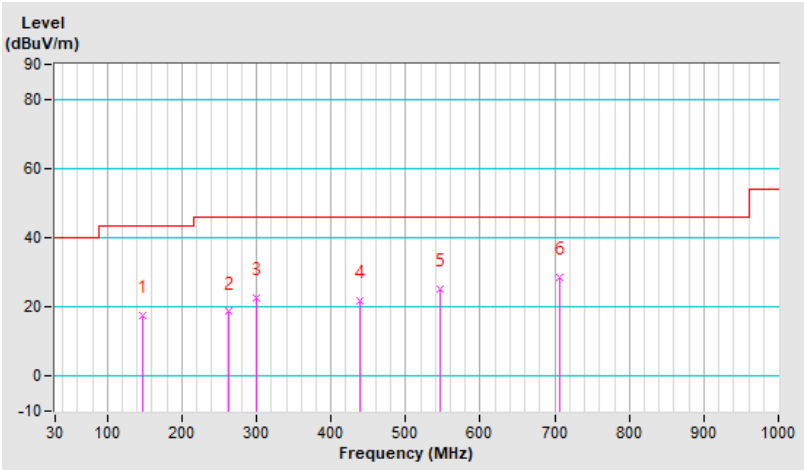
Test Mode B2

RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	146.40	17.5 QP	43.5	-26.0	1.01 H	261	26.1	-8.6
2	261.83	18.6 QP	46.0	-27.4	1.50 H	81	27.3	-8.7
3	299.66	22.7 QP	46.0	-23.3	1.01 H	243	30.1	-7.4
4	439.34	21.8 QP	46.0	-24.2	1.01 H	218	26.6	-4.8
5	546.04	25.2 QP	46.0	-20.8	1.01 H	96	28.3	-3.1
6	706.09	28.6 QP	46.0	-17.4	1.01 H	122	28.2	0.4

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

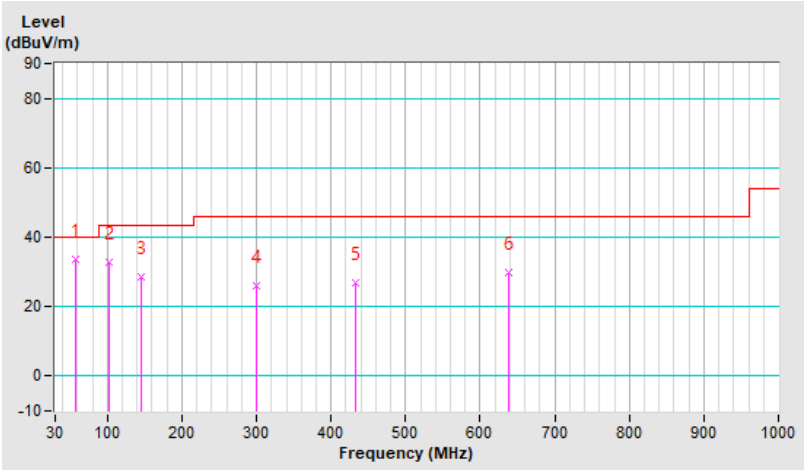


RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	**58.13**	**33.5 QP**	**40.0**	**-6.5**	**1.00 V**	**274**	**42.5**	**-9.0**
2	101.78	32.6 QP	43.5	-10.9	1.00 V	207	45.5	-12.9
3	145.43	28.7 QP	43.5	-14.8	1.00 V	162	37.4	-8.7
4	299.66	26.1 QP	46.0	-19.9	1.49 V	214	33.5	-7.4
5	433.52	26.9 QP	46.0	-19.1	1.00 V	176	31.9	-5.0
6	639.16	29.7 QP	46.0	-16.3	1.49 V	356	30.3	-0.6

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



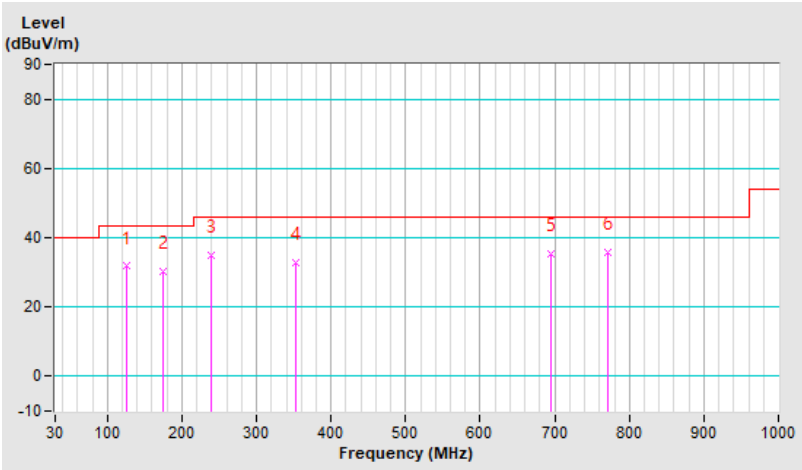
Test Mode C1

RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	125.59	31.7 QP	43.5	-11.8	2.00 H	281	42.1	-10.4
2	174.80	30.2 QP	43.5	-13.3	2.00 H	265	39.5	-9.3
3	239.46	34.9 QP	46.0	-11.1	2.00 H	18	44.6	-9.7
4	351.93	32.8 QP	46.0	-13.2	1.00 H	11	39.5	-6.7
5	694.94	35.5 QP	46.0	-10.5	1.00 H	21	35.2	0.3
6	770.86	35.7 QP	46.0	-10.3	2.00 H	290	33.3	2.4

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

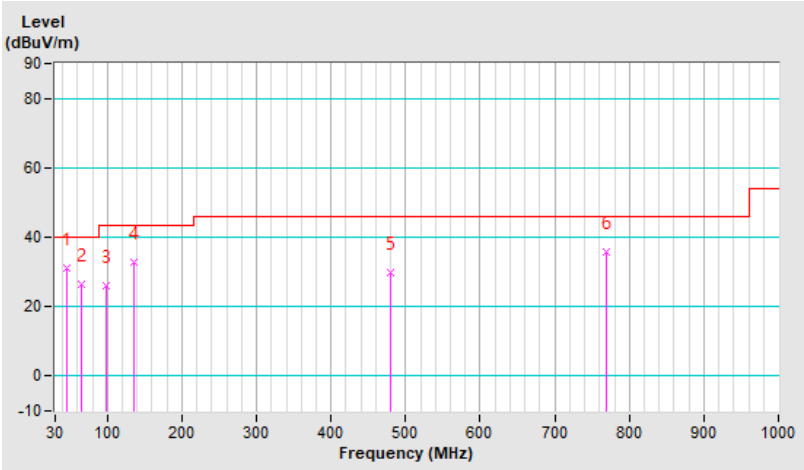


RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	**45.46**	**31.2 QP**	**40.0**	**-8.8**	**1.49 V**	**92**	**39.9**	**-8.7**
2	65.14	26.3 QP	40.0	-13.7	1.00 V	310	36.2	-9.9
3	97.48	25.9 QP	43.5	-17.6	1.00 V	7	39.4	-13.5
4	135.43	32.9 QP	43.5	-10.6	1.00 V	102	42.4	-9.5
5	479.86	30.0 QP	46.0	-16.0	1.49 V	13	34.2	-4.2
6	769.45	35.8 QP	46.0	-10.2	1.49 V	165	33.4	2.4

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



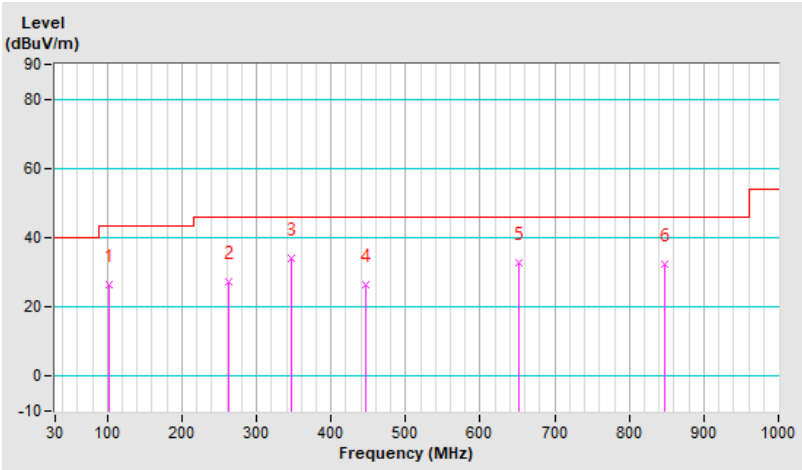
Test Mode C2

RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	101.70	26.5 QP	43.5	-17.0	1.00 H	53	39.4	-12.9
2	263.36	27.4 QP	46.0	-18.6	1.51 H	166	36.1	-8.7
3	346.30	34.1 QP	46.0	-11.9	1.00 H	49	40.9	-6.8
4	447.52	26.5 QP	46.0	-19.5	2.00 H	148	31.3	-4.8
5	651.36	32.9 QP	46.0	-13.1	1.00 H	49	33.4	-0.5
6	848.17	32.5 QP	46.0	-13.5	1.51 H	219	29.2	3.3

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 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

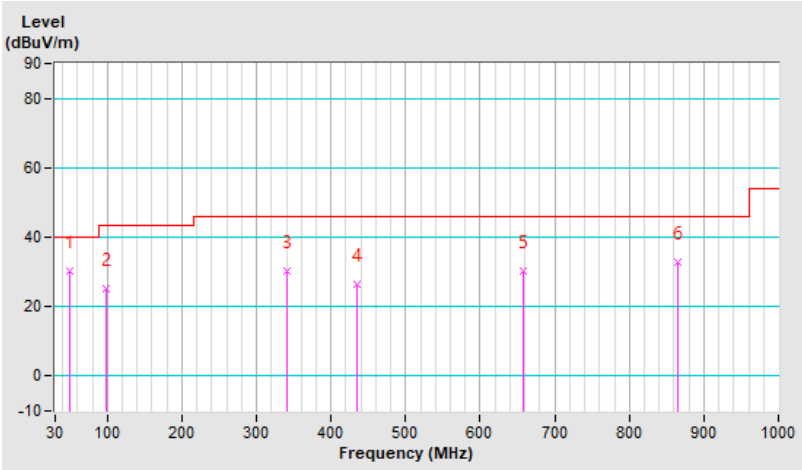


RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	49.68	30.1 QP	40.0	-9.9	1.49 V	259	38.6	-8.5
2	97.48	25.3 QP	43.5	-18.2	1.49 V	129	38.8	-13.5
3	340.68	30.4 QP	46.0	-15.6	1.49 V	123	37.2	-6.8
4	434.87	26.4 QP	46.0	-19.6	1.00 V	186	31.3	-4.9
5	656.99	30.4 QP	46.0	-15.6	1.00 V	113	30.8	-0.4
6	865.04	32.8 QP	46.0	-13.2	1.99 V	7	29.3	3.5

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



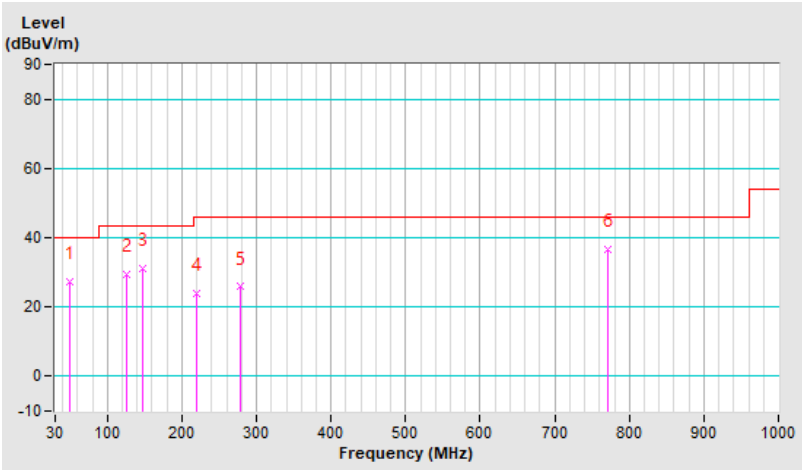
Test Mode D1

RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	50.37	27.2 QP	40.0	-12.8	1.49 H	113	35.7	-8.5
2	125.06	29.3 QP	43.5	-14.2	1.49 H	275	39.8	-10.5
3	146.40	31.3 QP	43.5	-12.2	1.01 H	100	39.9	-8.6
4	220.12	24.0 QP	46.0	-22.0	1.49 H	93	35.3	-11.3
5	278.32	25.8 QP	46.0	-20.2	1.01 H	71	33.7	-7.9
6	771.08	36.4 QP	46.0	-9.6	1.01 H	17	34.0	2.4

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

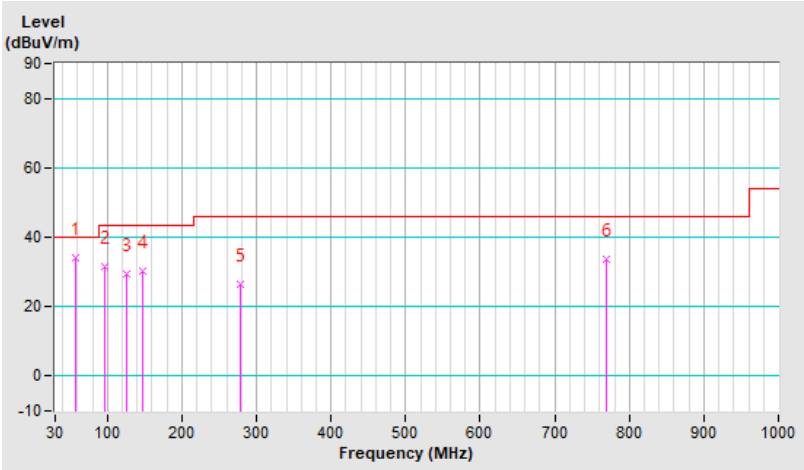


RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	**58.13**	**33.9 QP**	**40.0**	**-6.1**	**1.00 V**	**5**	**42.9**	**-9.0**
2	95.96	31.4 QP	43.5	-12.1	1.00 V	171	45.1	-13.7
3	126.03	29.3 QP	43.5	-14.2	1.00 V	43	39.6	-10.3
4	146.40	30.1 QP	43.5	-13.4	1.00 V	128	38.7	-8.6
5	279.29	26.5 QP	46.0	-19.5	1.49 V	212	34.4	-7.9
6	770.11	33.6 QP	46.0	-12.4	1.00 V	310	31.2	2.4

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



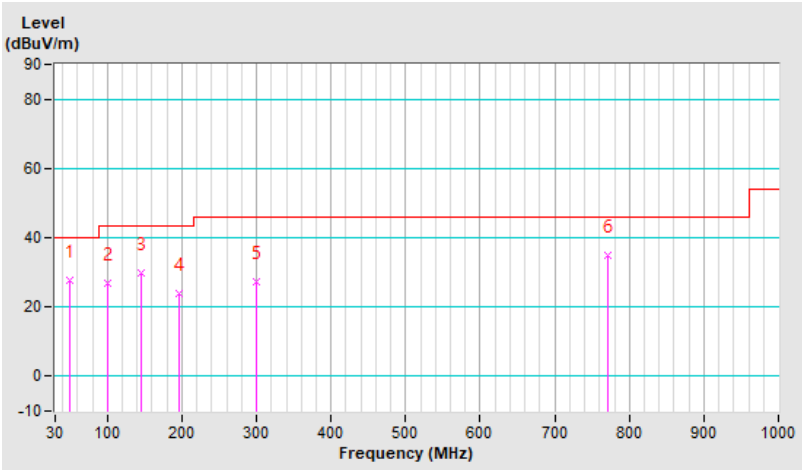
Test Mode D2

RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	50.37	27.9 QP	40.0	-12.1	1.49 H	124	36.4	-8.5
2	100.81	27.0 QP	43.5	-16.5	1.00 H	260	40.0	-13.0
3	145.43	29.9 QP	43.5	-13.6	1.00 H	93	38.6	-8.7
4	196.84	24.0 QP	43.5	-19.5	1.00 H	91	35.5	-11.5
5	299.66	27.4 QP	46.0	-18.6	1.00 H	240	34.8	-7.4
6	771.08	34.8 QP	46.0	-11.2	1.00 H	151	32.4	2.4

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

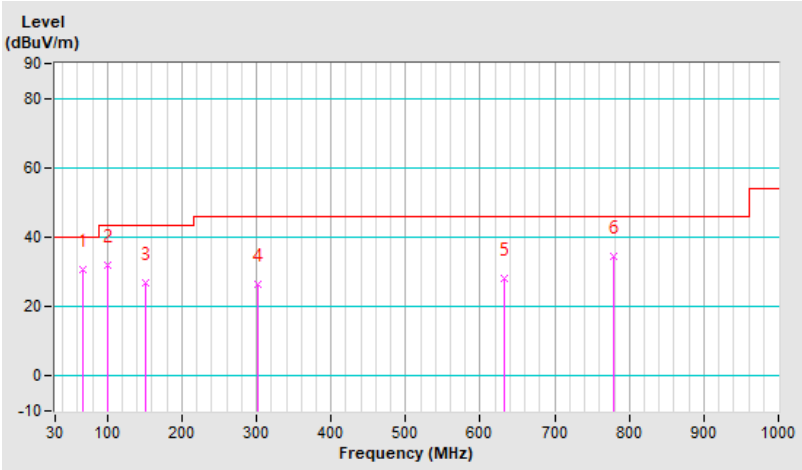


RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	67.83	30.6 QP	40.0	-9.4	1.01 V	13	40.9	-10.3
2	99.84	31.9 QP	43.5	-11.6	1.01 V	243	45.0	-13.1
3	151.25	26.8 QP	43.5	-16.7	1.01 V	196	35.4	-8.6
4	302.57	26.3 QP	46.0	-19.7	1.50 V	164	33.7	-7.4
5	632.37	28.3 QP	46.0	-17.7	1.50 V	76	29.0	-0.7
6	778.84	34.6 QP	46.0	-11.4	1.50 V	30	32.1	2.5

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 of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



7.9 Unwanted Emissions above 1 GHz

RF Mode	802.11a	Channel	CH 52：5260 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	60.4 PK	74.0	-13.6	1.56 H	201	47.8	12.6
2	5150.00	47.1 AV	54.0	-6.9	1.56 H	201	34.5	12.6
3	*5260.00	109.8 PK			1.56 H	201	66.8	43.0
4	*5260.00	100.1 AV			1.56 H	201	57.1	43.0
5	#10520.00	61.0 PK	68.2	-7.2	1.95 H	308	38.9	22.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.7 PK	74.0	-13.3	1.28 V	184	48.1	12.6
2	5150.00	47.4 AV	54.0	-6.6	1.28 V	184	34.8	12.6
3	*5260.00	119.4 PK			1.28 V	184	76.4	43.0
4	*5260.00	109.1 AV			1.28 V	184	66.1	43.0
5	#10520.00	61.4 PK	68.2	-6.8	2.21 V	195	39.3	22.1

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	**Channel**	CH 60：5300 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 66% RH
Tested By	Titan Hsu		

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	109.1 PK			1.56 H	201	66.0	43.1
2	*5300.00	99.4 AV			1.56 H	201	56.3	43.1
3	10600.00	61.2 PK	74.0	-12.8	1.98 H	321	39.1	22.1
4	10600.00	48.0 AV	54.0	-6.0	1.98 H	321	25.9	22.1
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	*5300.00	118.3 PK			1.17 V	181	75.2	43.1
2	*5300.00	108.4 AV			1.17 V	181	65.3	43.1
3	10600.00	61.6 PK	74.0	-12.4	2.28 V	197	39.5	22.1
4	10600.00	48.3 AV	54.0	-5.7	2.28 V	197	26.2	22.1

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, the limit was restricted at the RF Output Power.

RF Mode	802.11a	Channel	CH 64：5320 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	110.1 PK			1.54 H	199	67.0	43.1
2	*5320.00	100.1 AV			1.54 H	199	57.0	43.1
3	5350.00	60.5 PK	74.0	-13.5	1.54 H	199	47.7	12.8
4	5350.00	47.4 AV	54.0	-6.6	1.54 H	199	34.6	12.8
5	10640.00	61.3 PK	74.0	-12.7	1.95 H	332	39.0	22.3
6	10640.00	48.1 AV	54.0	-5.9	1.95 H	332	25.8	22.3
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	*5320.00	117.5 PK			1.14 V	187	74.4	43.1
2	*5320.00	107.7 AV			1.14 V	187	64.6	43.1
3	5350.00	61.3 PK	74.0	-12.7	1.14 V	187	48.5	12.8
4	5350.00	48.9 AV	54.0	-5.1	1.14 V	187	36.1	12.8
5	10640.00	61.6 PK	74.0	-12.4	2.25 V	189	39.3	22.3
6	10640.00	48.3 AV	54.0	-5.7	2.25 V	189	26.0	22.3

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, the limit was restricted at the RF Output Power.

RF Mode	802.11ax (HE20)	Channel	CH 52：5260 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	60.3 PK	74.0	-13.7	1.66 H	200	47.7	12.6
2	5150.00	47.1 AV	54.0	-6.9	1.66 H	200	34.5	12.6
3	*5260.00	111.7 PK			1.66 H	200	68.7	43.0
4	*5260.00	98.9 AV			1.66 H	200	55.9	43.0
5	#10520.00	60.9 PK	68.2	-7.3	1.92 H	309	38.8	22.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.6 PK	74.0	-13.4	1.11 V	186	48.0	12.6
2	5150.00	47.5 AV	54.0	-6.5	1.11 V	186	34.9	12.6
3	*5260.00	120.8 PK			1.11 V	186	77.8	43.0
4	*5260.00	107.6 AV			1.11 V	186	64.6	43.0
5	#10520.00	61.3 PK	68.2	-6.9	2.18 V	189	39.2	22.1

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE20)	**Channel**	CH 60：5300 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 66% RH
Tested By	Titan Hsu		

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	112.1 PK			1.66 H	198	69.0	43.1
2	*5300.00	99.4 AV			1.66 H	198	56.3	43.1
3	10600.00	61.1 PK	74.0	-12.9	1.92 H	325	39.0	22.1
4	10600.00	47.9 AV	54.0	-6.1	1.92 H	325	25.8	22.1
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	*5300.00	120.2 PK			1.20 V	185	77.1	43.1
2	*5300.00	107.9 AV			1.20 V	185	64.8	43.1
3	10600.00	61.6 PK	74.0	-12.4	2.18 V	187	39.5	22.1
4	10600.00	48.1 AV	54.0	-5.9	2.18 V	187	26.0	22.1

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, the limit was restricted at the RF Output Power.

RF Mode	802.11ax (HE20)	Channel	CH 64：5320 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	110.2 PK			1.53 H	203	67.1	43.1
2	*5320.00	97.9 AV			1.53 H	203	54.8	43.1
3	5350.00	60.8 PK	74.0	-13.2	1.53 H	203	48.0	12.8
4	5350.00	47.2 AV	54.0	-6.8	1.53 H	203	34.4	12.8
5	10640.00	61.1 PK	74.0	-12.9	1.89 H	309	38.8	22.3
6	10640.00	48.0 AV	54.0	-6.0	1.89 H	309	25.7	22.3
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	*5320.00	119.8 PK			1.10 V	186	76.7	43.1
2	*5320.00	107.3 AV			1.10 V	186	64.2	43.1
3	5350.00	62.0 PK	74.0	-12.0	1.10 V	186	49.2	12.8
4	5350.00	49.7 AV	54.0	-4.3	1.10 V	186	36.9	12.8
5	10640.00	61.5 PK	74.0	-12.5	2.15 V	185	39.2	22.3
6	10640.00	48.2 AV	54.0	-5.8	2.15 V	185	25.9	22.3

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, the limit was restricted at the RF Output Power.

RF Mode	802.11ax (HE40)	Channel	CH 54：5270 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	60.6 PK	74.0	-13.4	1.47 H	202	48.0	12.6
2	5150.00	47.3 AV	54.0	-6.7	1.47 H	202	34.7	12.6
3	*5270.00	109.2 PK			1.47 H	202	66.2	43.0
4	*5270.00	96.8 AV			1.47 H	202	53.8	43.0
5	#10540.00	60.8 PK	68.2	-7.4	1.92 H	326	38.7	22.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.8 PK	74.0	-13.2	1.11 V	182	48.2	12.6
2	5150.00	47.8 AV	54.0	-6.2	1.11 V	182	35.2	12.6
3	*5270.00	118.3 PK			1.11 V	182	75.3	43.0
4	*5270.00	105.6 AV			1.11 V	182	62.6	43.0
5	#10540.00	61.1 PK	68.2	-7.1	2.19 V	189	39.0	22.1

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE40)	Channel	CH 62：5310 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	108.7 PK			1.45 H	201	65.6	43.1
2	*5310.00	95.4 AV			1.45 H	201	52.3	43.1
3	5350.00	60.8 PK	74.0	-13.2	1.45 H	201	48.0	12.8
4	5350.00	47.6 AV	54.0	-6.4	1.45 H	201	34.8	12.8
5	10620.00	60.9 PK	74.0	-13.1	1.85 H	325	38.7	22.2
6	10620.00	47.7 AV	54.0	-6.3	1.85 H	325	25.5	22.2
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	*5310.00	117.9 PK			1.07 V	184	74.8	43.1
2	*5310.00	105.3 AV			1.07 V	184	62.2	43.1
3	5350.00	64.8 PK	74.0	-9.2	1.07 V	184	52.0	12.8
4	5350.00	53.3 AV	54.0	-0.7	1.07 V	184	40.5	12.8
5	10620.00	61.3 PK	74.0	-12.7	2.15 V	186	39.1	22.2
6	10620.00	48.0 AV	54.0	-6.0	2.15 V	186	25.8	22.2

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, the limit was restricted at the RF Output Power.

RF Mode	802.11ax (HE80)	Channel	CH 58：5290 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	60.8 PK	74.0	-13.2	1.48 H	202	48.2	12.6
2	5150.00	47.2 AV	54.0	-6.8	1.48 H	202	34.6	12.6
3	*5290.00	105.8 PK			1.48 H	202	62.7	43.1
4	*5290.00	93.1 AV			1.48 H	202	50.0	43.1
5	5350.00	61.2 PK	74.0	-12.8	1.48 H	202	48.4	12.8
6	5350.00	48.2 AV	54.0	-5.8	1.48 H	202	35.4	12.8
7	#10580.00	60.7 PK	68.2	-7.5	1.95 H	331	38.5	22.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.4 PK	74.0	-12.6	1.09 V	182	48.8	12.6
2	5150.00	48.1 AV	54.0	-5.9	1.09 V	182	35.5	12.6
3	*5290.00	113.9 PK			1.09 V	182	70.8	43.1
4	*5290.00	100.9 AV			1.09 V	182	57.8	43.1
5	5350.00	65.2 PK	74.0	-8.8	1.09 V	182	52.4	12.8
6	**5350.00**	**53.6 AV**	**54.0**	**-0.4**	**1.09 V**	**182**	**40.8**	**12.8**
7	#10580.00	61.0 PK	68.2	-7.2	2.13 V	188	38.8	22.2

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	Channel	CH 100：5500 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.0 PK	74.0	-14.0	2.53 H	70	46.9	13.1
2	5460.00	46.9 AV	54.0	-7.1	2.53 H	70	33.8	13.1
3	#5470.00	60.9 PK	68.2	-7.3	2.53 H	70	47.9	13.0
4	*5500.00	111.2 PK			2.53 H	70	67.7	43.5
5	*5500.00	100.2 AV			2.53 H	70	56.7	43.5
6	11000.00	62.0 PK	74.0	-12.0	1.92 H	314	39.1	22.9
7	11000.00	48.7 AV	54.0	-5.3	1.92 H	314	25.8	22.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.1 PK	74.0	-12.9	1.44 V	176	48.0	13.1
2	5460.00	48.2 AV	54.0	-5.8	1.44 V	176	35.1	13.1
3	#5470.00	61.5 PK	68.2	-6.7	1.44 V	176	48.5	13.0
4	*5500.00	118.2 PK			1.44 V	176	74.7	43.5
5	*5500.00	108.5 AV			1.44 V	176	65.0	43.5
6	11000.00	62.5 PK	74.0	-11.5	2.17 V	199	39.6	22.9
7	11000.00	49.4 AV	54.0	-4.6	2.17 V	199	26.5	22.9

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	**Channel**	CH 116：5580 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 66% RH
Tested By	Titan Hsu		

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	108.9 PK			2.32 H	72	65.3	43.6
2	*5580.00	98.8 AV			2.32 H	72	55.2	43.6
3	11160.00	61.2 PK	74.0	-12.8	1.99 H	326	38.7	22.5
4	11160.00	48.2 AV	54.0	-5.8	1.99 H	326	25.7	22.5
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	*5580.00	118.0 PK			1.62 V	176	74.4	43.6
2	*5580.00	107.7 AV			1.62 V	176	64.1	43.6
3	11160.00	62.2 PK	74.0	-11.8	2.34 V	196	39.7	22.5
4	11160.00	49.0 AV	54.0	-5.0	2.34 V	196	26.5	22.5

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, the limit was restricted at the RF Output Power.

RF Mode	802.11a	**Channel**	CH 140：5700 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 66% RH
Tested By	Titan Hsu		

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	109.6 PK			2.30 H	73	65.6	44.0
2	*5700.00	99.0 AV			2.30 H	73	55.0	44.0
3	#5725.00	60.3 PK	68.2	-7.9	2.30 H	73	46.8	13.5
4	11400.00	62.4 PK	74.0	-11.6	1.89 H	299	39.0	23.4
5	11400.00	49.3 AV	54.0	-4.7	1.89 H	299	25.9	23.4
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	117.6 PK			1.75 V	181	73.6	44.0
2	*5700.00	107.5 AV			1.75 V	181	63.5	44.0
3	#5725.00	62.2 PK	68.2	-6.0	1.75 V	181	48.7	13.5
4	11400.00	63.3 PK	74.0	-10.7	2.14 V	191	39.9	23.4
5	11400.00	50.1 AV	54.0	-3.9	2.14 V	191	26.7	23.4

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	Channel	CH 144：5720 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	#5470.00	60.7 PK	68.2	-7.5	2.49 H	74	47.7	13.0
2	*5720.00	110.7 PK			2.49 H	74	66.6	44.1
3	*5720.00	100.8 AV			2.49 H	74	56.7	44.1
4	#5850.00	61.4 PK	68.2	-6.8	2.49 H	74	47.5	13.9
5	11440.00	62.5 PK	74.0	-11.5	1.89 H	312	39.1	23.4
6	11440.00	49.3 AV	54.0	-4.7	1.89 H	312	25.9	23.4
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	#5470.00	60.8 PK	68.2	-7.4	1.42 V	183	47.8	13.0
2	*5720.00	116.6 PK			1.42 V	183	72.5	44.1
3	*5720.00	106.8 AV			1.42 V	183	62.7	44.1
4	#5850.00	61.7 PK	68.2	-6.5	1.42 V	183	47.8	13.9
5	11440.00	62.9 PK	74.0	-11.1	2.05 V	189	39.5	23.4
6	11440.00	49.7 AV	54.0	-4.3	2.05 V	189	26.3	23.4

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE20)	Channel	CH 100：5500 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.7 PK	74.0	-13.3	2.34 H	75	47.6	13.1
2	5460.00	47.1 AV	54.0	-6.9	2.34 H	75	34.0	13.1
3	#5470.00	62.2 PK	68.2	-6.0	2.34 H	75	49.2	13.0
4	*5500.00	111.7 PK			2.34 H	75	68.2	43.5
5	*5500.00	98.6 AV			2.34 H	75	55.1	43.5
6	11000.00	61.7 PK	74.0	-12.3	1.96 H	317	38.8	22.9
7	11000.00	48.7 AV	54.0	-5.3	1.96 H	317	25.8	22.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.3 PK	74.0	-12.7	1.72 V	177	48.2	13.1
2	5460.00	48.8 AV	54.0	-5.2	1.72 V	177	35.7	13.1
3	#5470.00	62.7 PK	68.2	-5.5	1.72 V	177	49.7	13.0
4	*5500.00	119.7 PK			1.72 V	177	76.2	43.5
5	*5500.00	106.8 AV			1.72 V	177	63.3	43.5
6	11000.00	62.5 PK	74.0	-11.5	2.19 V	189	39.6	22.9
7	11000.00	49.4 AV	54.0	-4.6	2.19 V	189	26.5	22.9

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE20)	Channel	CH 116：5580 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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			2.40 H	75	67.9	43.6
2	*5580.00	97.6 AV			2.40 H	75	54.0	43.6
3	11160.00	61.2 PK	74.0	-12.8	1.92 H	337	38.7	22.5
4	11160.00	48.1 AV	54.0	-5.9	1.92 H	337	25.6	22.5
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	*5580.00	119.6 PK			1.90 V	179	76.0	43.6
2	*5580.00	106.3 AV			1.90 V	179	62.7	43.6
3	11160.00	62.3 PK	74.0	-11.7	2.25 V	196	39.8	22.5
4	11160.00	49.2 AV	54.0	-4.8	2.25 V	196	26.7	22.5

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, the limit was restricted at the RF Output Power.

RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	109.8 PK			2.39 H	70	65.8	44.0
2	*5700.00	97.9 AV			2.39 H	70	53.9	44.0
3	#5725.00	60.4 PK	68.2	-7.8	2.39 H	70	46.9	13.5
4	11400.00	62.4 PK	74.0	-11.6	1.99 H	320	39.0	23.4
5	11400.00	49.3 AV	54.0	-4.7	1.99 H	320	25.9	23.4
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	119.0 PK			1.89 V	183	75.0	44.0
2	*5700.00	106.4 AV			1.89 V	183	62.4	44.0
3	#5725.00	61.6 PK	68.2	-6.6	1.89 V	183	48.1	13.5
4	11400.00	63.0 PK	74.0	-11.0	2.27 V	199	39.6	23.4
5	11400.00	49.8 AV	54.0	-4.2	2.27 V	199	26.4	23.4

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE20)	Channel	CH 144：5720 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	#5470.00	60.8 PK	68.2	-7.4	2.48 H	78	47.8	13.0
2	*5720.00	113.9 PK			2.48 H	78	69.8	44.1
3	*5720.00	100.4 AV			2.48 H	78	56.3	44.1
4	#5850.00	61.8 PK	68.2	-6.4	2.48 H	78	47.9	13.9
5	11440.00	62.4 PK	74.0	-11.6	1.88 H	309	39.0	23.4
6	11440.00	49.3 AV	54.0	-4.7	1.88 H	309	25.9	23.4
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	#5470.00	61.0 PK	68.2	-7.2	1.42 V	187	48.0	13.0
2	*5720.00	118.5 PK			1.42 V	187	74.4	44.1
3	*5720.00	105.8 AV			1.42 V	187	61.7	44.1
4	#5850.00	62.1 PK	68.2	-6.1	1.42 V	187	48.2	13.9
5	11440.00	62.8 PK	74.0	-11.2	2.05 V	185	39.4	23.4
6	11440.00	49.5 AV	54.0	-4.5	2.05 V	185	26.1	23.4

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE40)	Channel	CH 102：5510 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	61.0 PK	74.0	-13.0	2.39 H	65	47.9	13.1
2	5460.00	47.7 AV	54.0	-6.3	2.39 H	65	34.6	13.1
3	#5470.00	62.8 PK	68.2	-5.4	2.39 H	65	49.8	13.0
4	*5510.00	109.4 PK			2.39 H	65	65.8	43.6
5	*5510.00	96.1 AV			2.39 H	65	52.5	43.6
6	11020.00	61.7 PK	74.0	-12.3	1.86 H	319	38.9	22.8
7	11020.00	48.6 AV	54.0	-5.4	1.86 H	319	25.8	22.8
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	5460.00	64.3 PK	74.0	-9.7	1.82 V	177	51.2	13.1
2	5460.00	50.3 AV	54.0	-3.7	1.82 V	177	37.2	13.1
3	#5470.00	65.3 PK	68.2	-2.9	1.82 V	177	52.3	13.0
4	*5510.00	116.5 PK			1.82 V	177	72.9	43.6
5	*5510.00	103.9 AV			1.82 V	177	60.3	43.6
6	11020.00	62.3 PK	74.0	-11.7	2.18 V	202	39.5	22.8
7	11020.00	49.1 AV	54.0	-4.9	2.18 V	202	26.3	22.8

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE40)	**Channel**	CH 110：5550 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 66% RH
Tested By	Titan Hsu		

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	106.2 PK			1.87 H	63	62.7	43.5
2	*5550.00	93.7 AV			1.87 H	63	50.2	43.5
3	11100.00	61.4 PK	74.0	-12.6	1.79 H	318	38.9	22.5
4	11100.00	48.2 AV	54.0	-5.8	1.79 H	318	25.7	22.5
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	*5550.00	117.1 PK			1.82 V	180	73.6	43.5
2	*5550.00	103.7 AV			1.82 V	180	60.2	43.5
3	11100.00	62.2 PK	74.0	-11.8	2.31 V	182	39.7	22.5
4	11100.00	49.1 AV	54.0	-4.9	2.31 V	182	26.6	22.5

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, the limit was restricted at the RF Output Power.

RF Mode	802.11ax (HE40)	**Channel**	CH 134：5670 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 66% RH
Tested By	Titan Hsu		

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	108.2 PK			1.88 H	61	64.2	44.0
2	*5670.00	96.1 AV			1.88 H	61	52.1	44.0
3	#5725.00	60.5 PK	68.2	-7.7	1.88 H	61	47.0	13.5
4	11340.00	61.9 PK	74.0	-12.1	1.83 H	306	38.9	23.0
5	11340.00	48.6 AV	54.0	-5.4	1.83 H	306	25.6	23.0
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	*5670.00	117.1 PK			1.84 V	181	73.1	44.0
2	*5670.00	104.5 AV			1.84 V	181	60.5	44.0
3	#5725.00	61.3 PK	68.2	-6.9	1.84 V	181	47.8	13.5
4	11340.00	62.6 PK	74.0	-11.4	2.25 V	193	39.6	23.0
5	11340.00	49.3 AV	54.0	-4.7	2.25 V	193	26.3	23.0

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE40)	Channel	CH 142：5710 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	#5470.00	60.8 PK	68.2	-7.4	2.52 H	77	47.8	13.0
2	*5710.00	110.6 PK			2.52 H	77	66.5	44.1
3	*5710.00	98.0 AV			2.52 H	77	53.9	44.1
4	#5850.00	61.5 PK	68.2	-6.7	2.52 H	77	47.6	13.9
5	11420.00	62.2 PK	74.0	-11.8	1.92 H	331	38.7	23.5
6	11420.00	49.2 AV	54.0	-4.8	1.92 H	331	25.7	23.5
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	#5470.00	61.1 PK	68.2	-7.1	1.33 V	185	48.1	13.0
2	*5710.00	115.7 PK			1.33 V	185	71.6	44.1
3	*5710.00	103.1 AV			1.33 V	185	59.0	44.1
4	#5850.00	61.8 PK	68.2	-6.4	1.33 V	185	47.9	13.9
5	11420.00	62.5 PK	74.0	-11.5	2.05 V	192	39.0	23.5
6	11420.00	49.4 AV	54.0	-4.6	2.05 V	192	25.9	23.5

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE80)	Channel	CH 106：5530 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	63.0 PK	74.0	-11.0	1.48 H	45	49.9	13.1
2	5460.00	48.5 AV	54.0	-5.5	1.48 H	45	35.4	13.1
3	#5470.00	63.1 PK	68.2	-5.1	1.48 H	45	50.1	13.0
4	*5530.00	104.6 PK			1.48 H	45	61.0	43.6
5	*5530.00	92.2 AV			1.48 H	45	48.6	43.6
6	#5725.00	60.7 PK	68.2	-7.5	1.48 H	45	47.2	13.5
7	11060.00	61.5 PK	74.0	-12.5	1.96 H	317	38.9	22.6
8	11060.00	48.4 AV	54.0	-5.6	1.96 H	317	25.8	22.6
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	65.8 PK	74.0	-8.2	1.77 V	178	52.7	13.1
2	5460.00	51.9 AV	54.0	-2.1	1.77 V	178	38.8	13.1
3	#5470.00	66.6 PK	68.2	-1.6	1.77 V	178	53.6	13.0
4	*5530.00	112.8 PK			1.77 V	178	69.2	43.6
5	*5530.00	100.6 AV			1.77 V	178	57.0	43.6
6	#5725.00	61.0 PK	68.2	-7.2	1.77 V	178	47.5	13.5
7	11060.00	62.3 PK	74.0	-11.7	2.21 V	186	39.7	22.6
8	11060.00	49.2 AV	54.0	-4.8	2.21 V	186	26.6	22.6

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE80)	Channel	CH 122：5610 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	105.1 PK			1.48 H	48	61.3	43.8
2	*5610.00	92.9 AV			1.48 H	48	49.1	43.8
3	#5725.00	60.7 PK	68.2	-7.5	1.48 H	48	47.2	13.5
4	11220.00	61.9 PK	74.0	-12.1	1.93 H	302	39.2	22.7
5	11220.00	48.8 AV	54.0	-5.2	1.93 H	302	26.1	22.7
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	*5610.00	113.7 PK			1.78 V	179	69.9	43.8
2	*5610.00	101.5 AV			1.78 V	179	57.7	43.8
3	#5725.00	61.5 PK	68.2	-6.7	1.78 V	179	48.0	13.5
4	11220.00	62.3 PK	74.0	-11.7	2.17 V	192	39.6	22.7
5	11220.00	49.2 AV	54.0	-4.8	2.17 V	192	26.5	22.7

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE80)	Channel	CH 138：5690 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	#5470.00	60.8 PK	68.2	-7.4	2.36 H	79	47.8	13.0
2	*5690.00	106.6 PK			2.36 H	79	62.7	43.9
3	*5690.00	93.9 AV			2.36 H	79	50.0	43.9
4	#5850.00	61.6 PK	68.2	-6.6	2.36 H	79	47.7	13.9
5	11380.00	62.0 PK	74.0	-12.0	1.95 H	316	38.8	23.2
6	11380.00	48.7 AV	54.0	-5.3	1.95 H	316	25.5	23.2
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	#5470.00	61.4 PK	68.2	-6.8	1.34 V	187	48.4	13.0
2	*5690.00	113.2 PK			1.34 V	187	69.3	43.9
3	*5690.00	100.3 AV			1.34 V	187	56.4	43.9
4	#5850.00	61.9 PK	68.2	-6.3	1.34 V	187	48.0	13.9
5	11380.00	62.2 PK	74.0	-11.8	2.02 V	195	39.0	23.2
6	11380.00	48.9 AV	54.0	-5.1	2.02 V	195	25.7	23.2

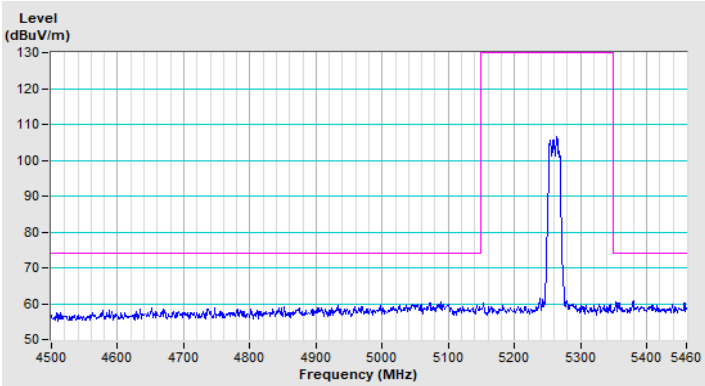
Remarks:

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, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

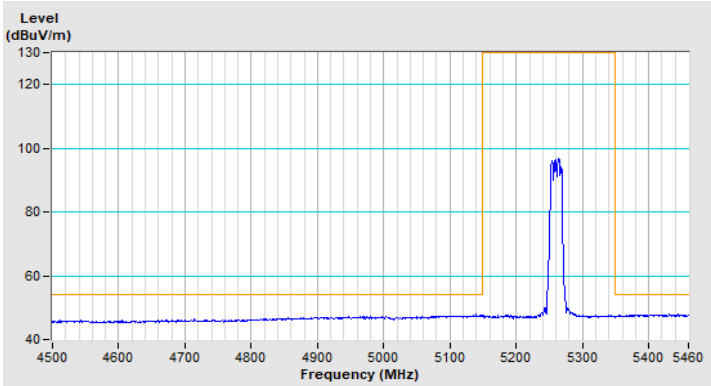
Plot of Band Edge

Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak

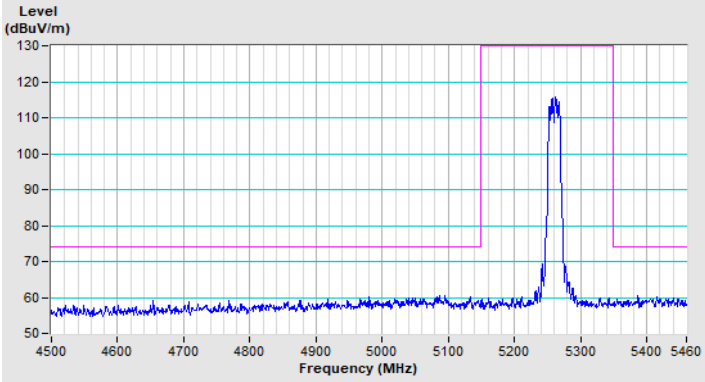
802.11a Channel 52



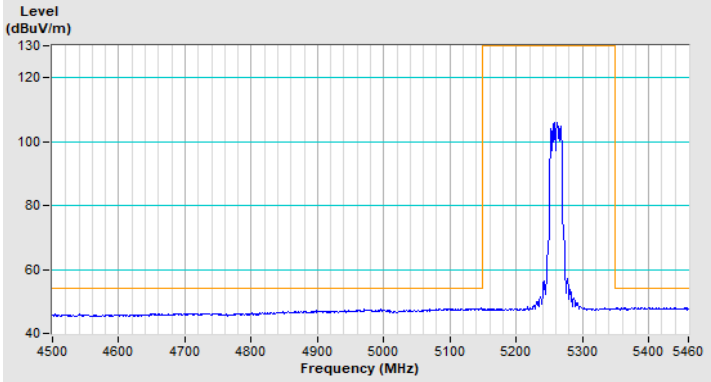
Horizontal (Peak)



Horizontal (Average)

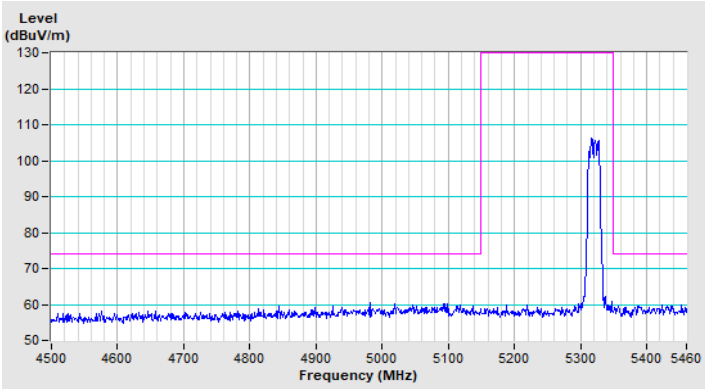


Vertical (Peak)

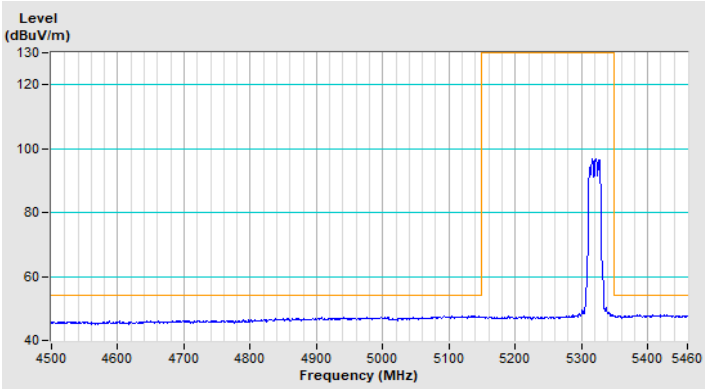


Vertical (Average)

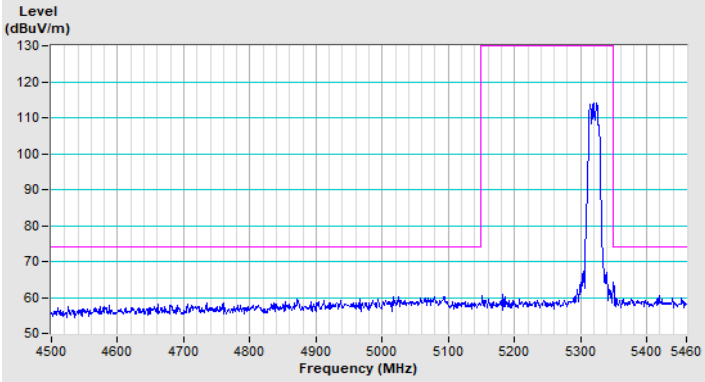
802.11a Channel 64



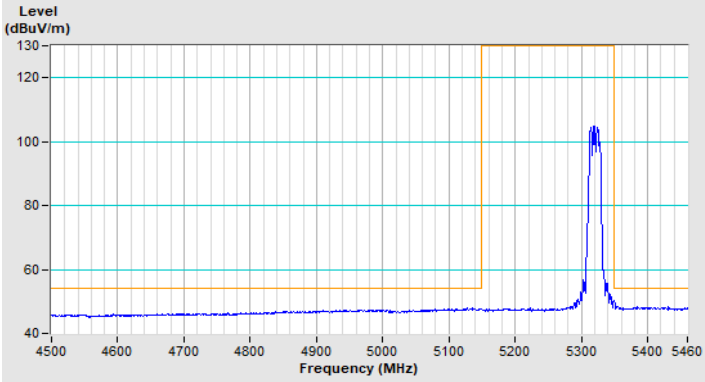
Horizontal (Peak)



Horizontal (Average)



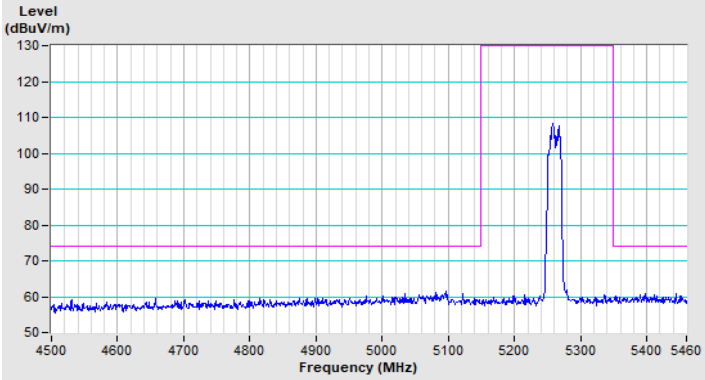
Vertical (Peak)



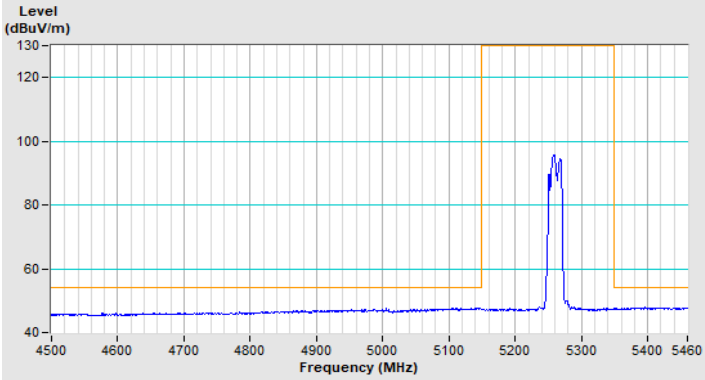
Vertical (Average)

Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak

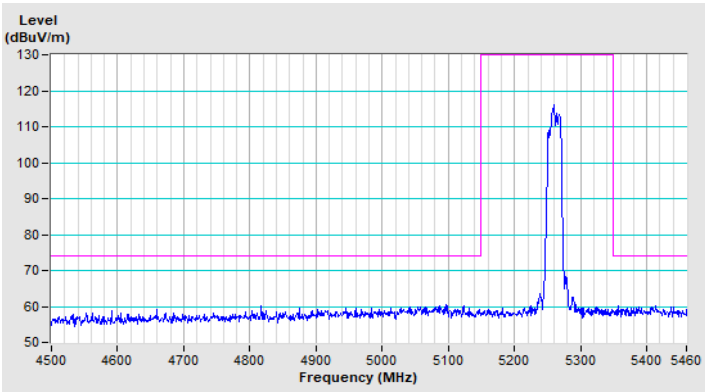
802.11ax (HE20) Channel 52



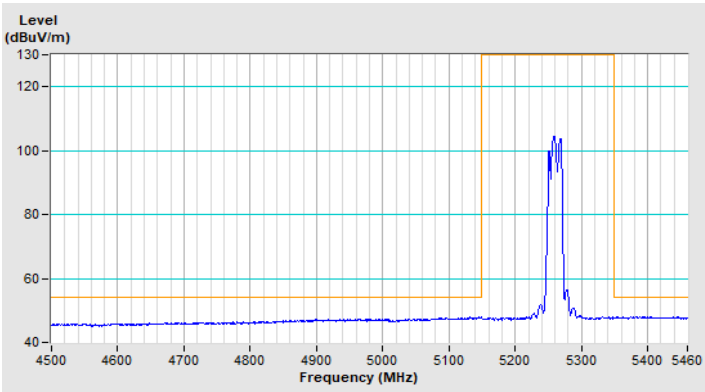
Horizontal (Peak)



Horizontal (Average)

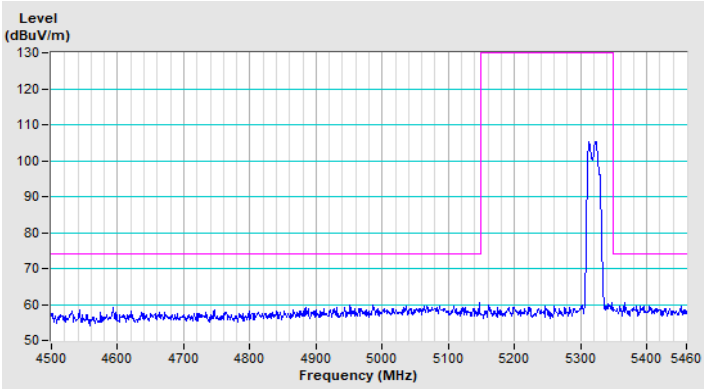


Vertical (Peak)

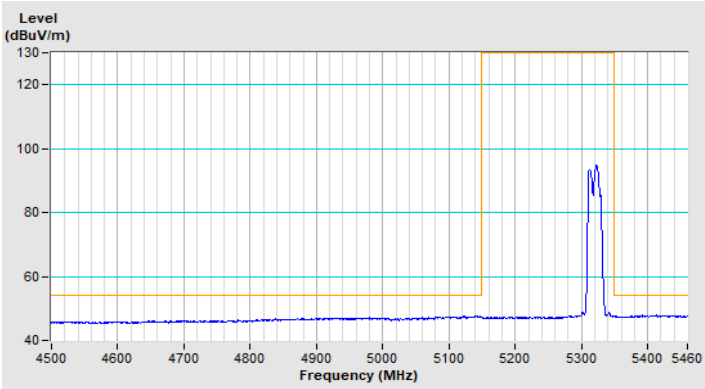


Vertical (Average)

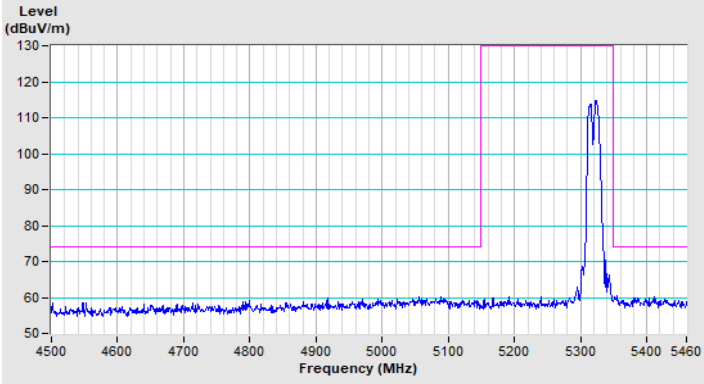
802.11ax (HE20) Channel 64



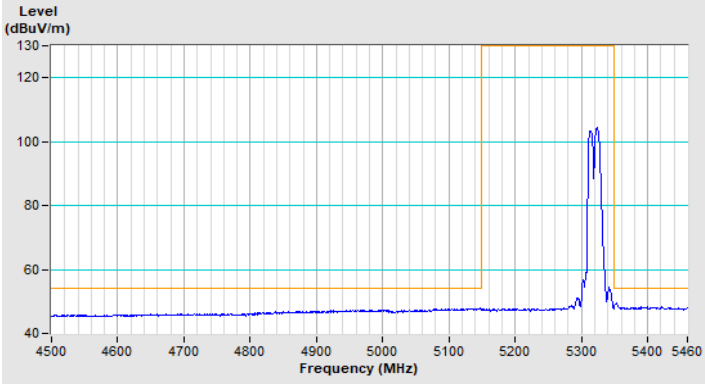
Horizontal (Peak)



Horizontal (Average)



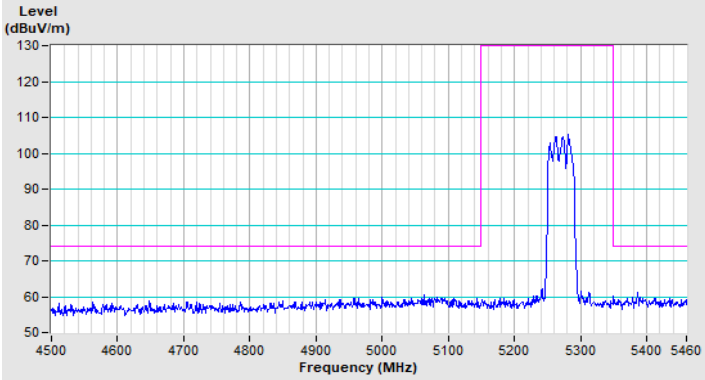
Vertical (Peak)



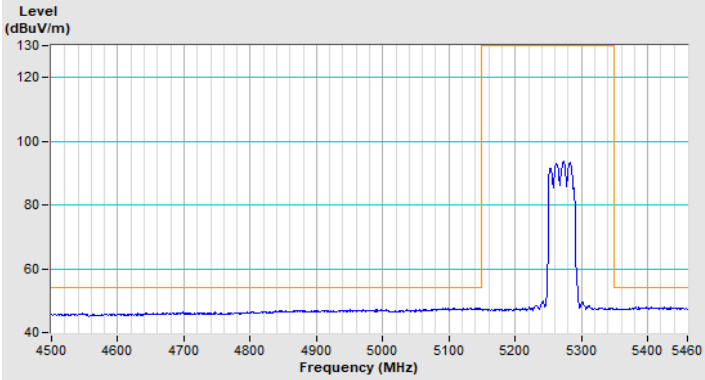
Vertical (Average)

Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak

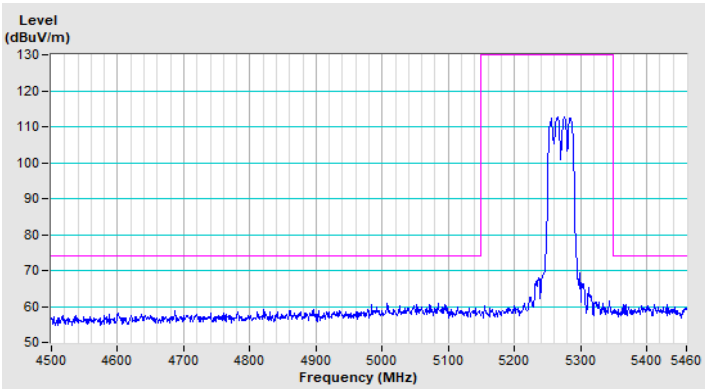
802.11ax (HE40) Channel 54



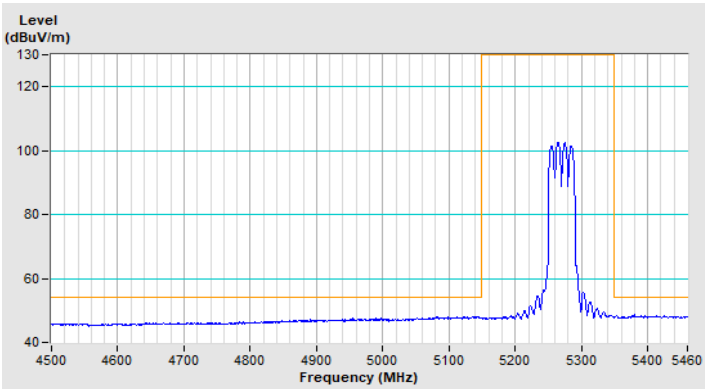
Horizontal (Peak)



Horizontal (Average)

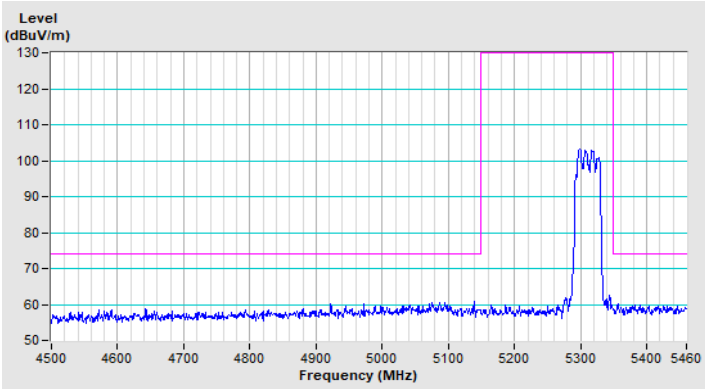


Vertical (Peak)

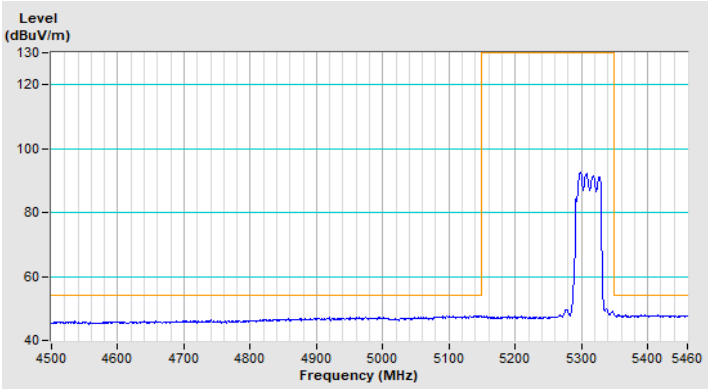


Vertical (Average)

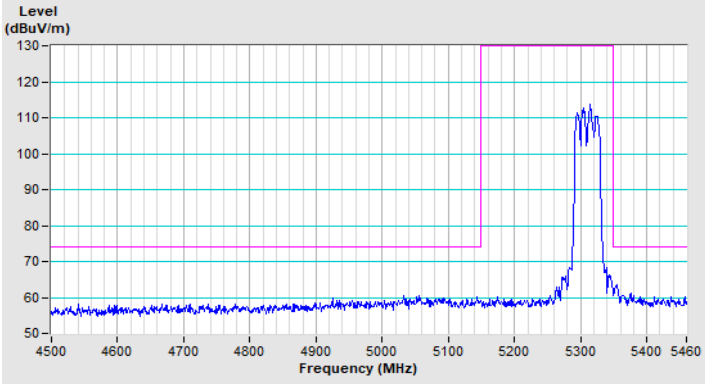
802.11ax (HE40) Channel 62



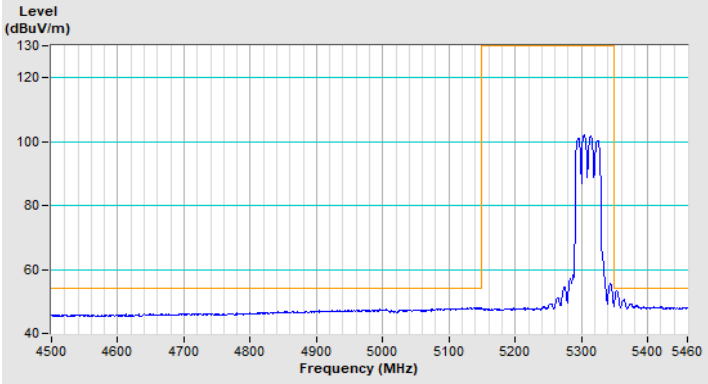
Horizontal (Peak)



Horizontal (Average)



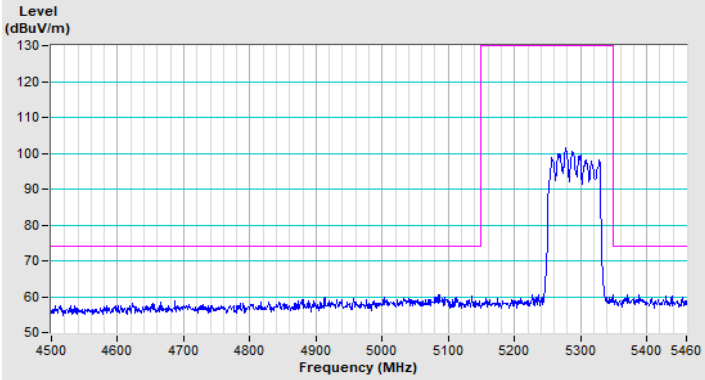
Vertical (Peak)



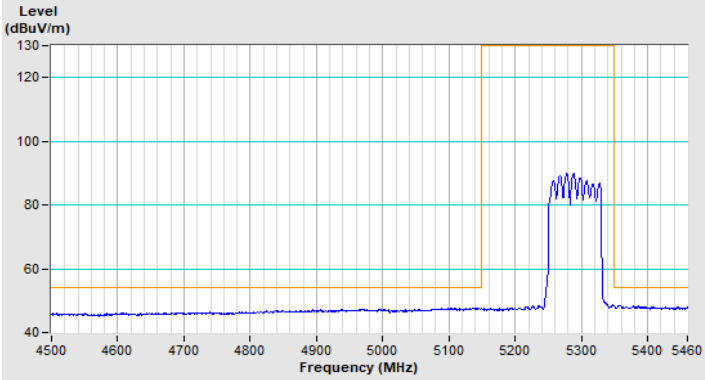
Vertical (Average)

Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak

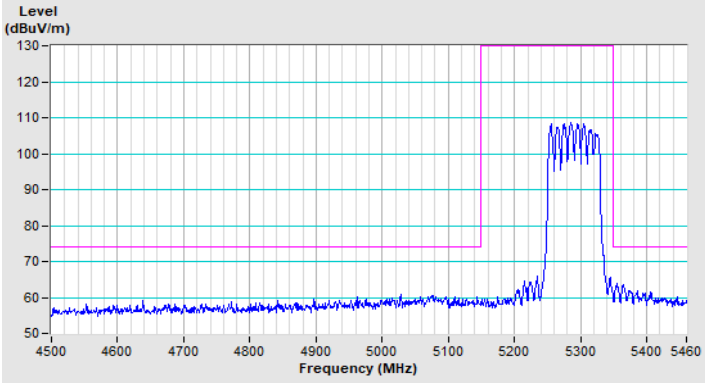
802.11ax (HE80) Channel 58



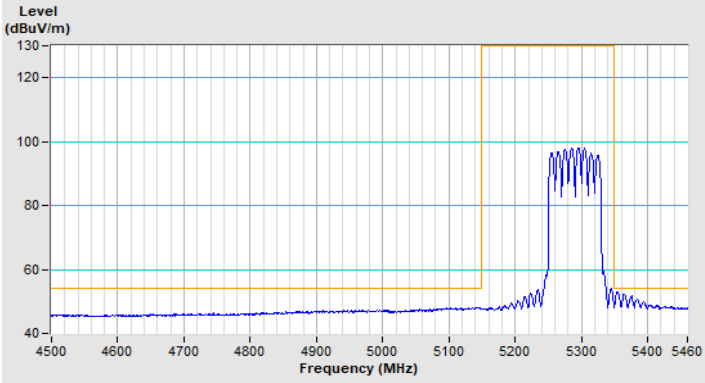
Horizontal (Peak)



Horizontal (Average)



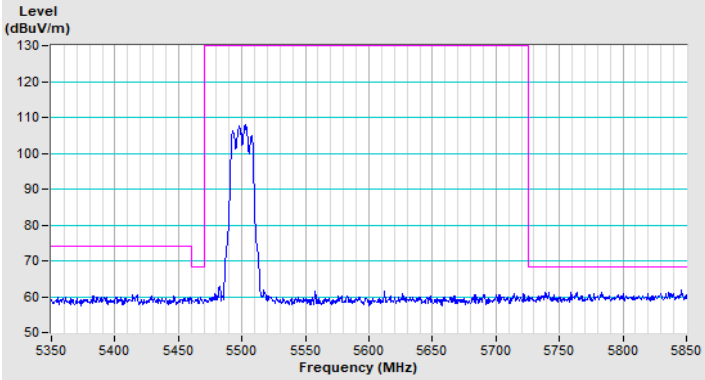
Vertical (Peak)



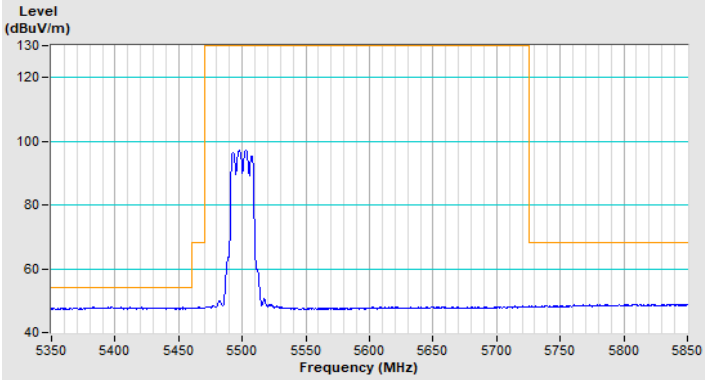
Vertical (Average)

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak

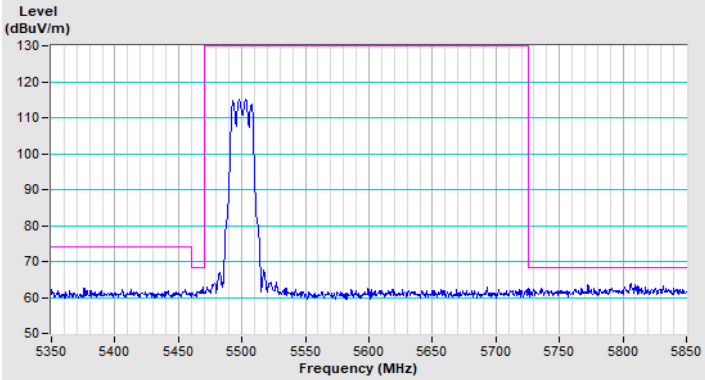
802.11a Channel 100



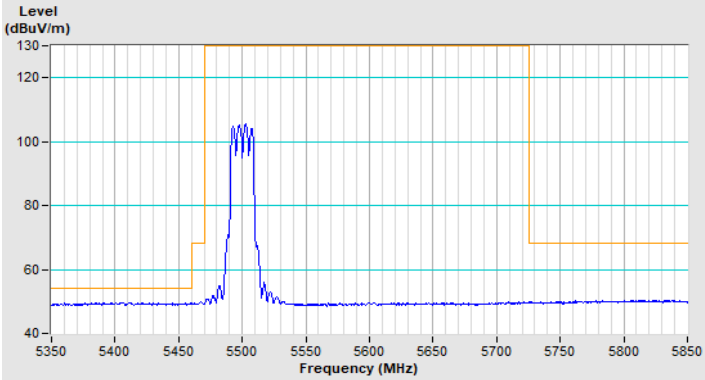
Horizontal (Peak)



Horizontal (Average)

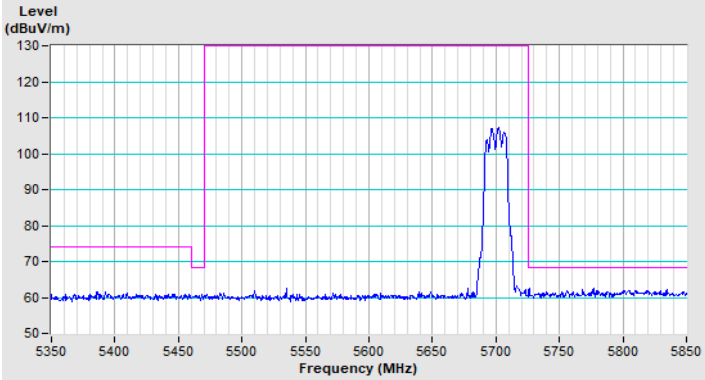


Vertical (Peak)

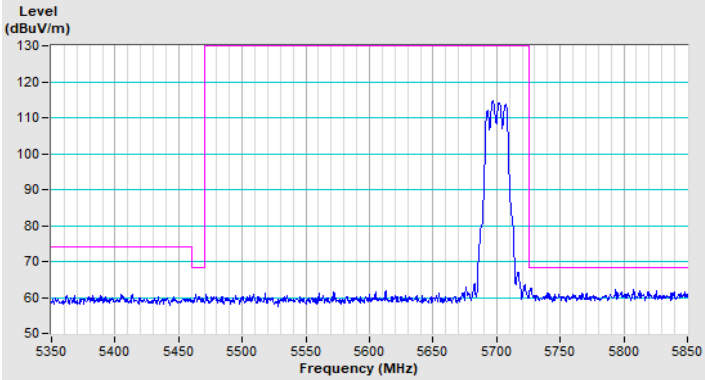


Vertical (Average)

802.11a Channel 140

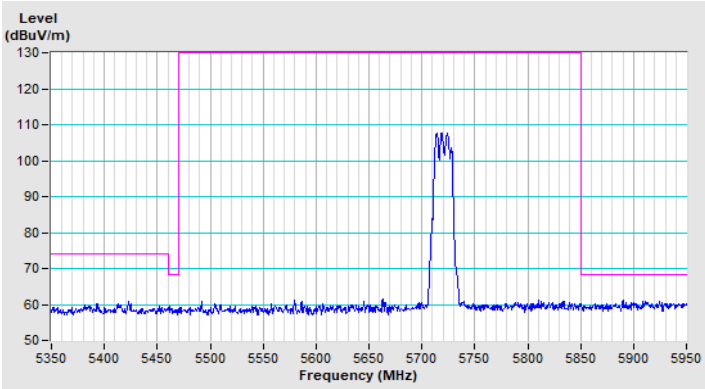


Horizontal (Peak)

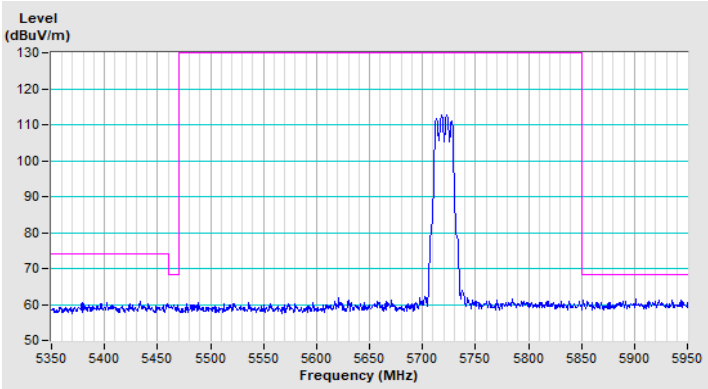


Vertical (Peak)

802.11a Channel 144



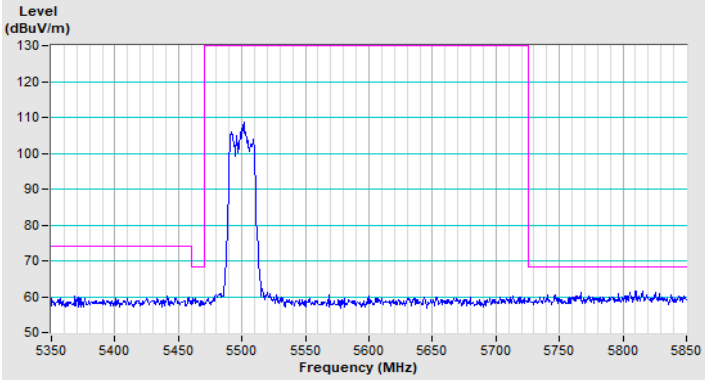
Horizontal (Peak)



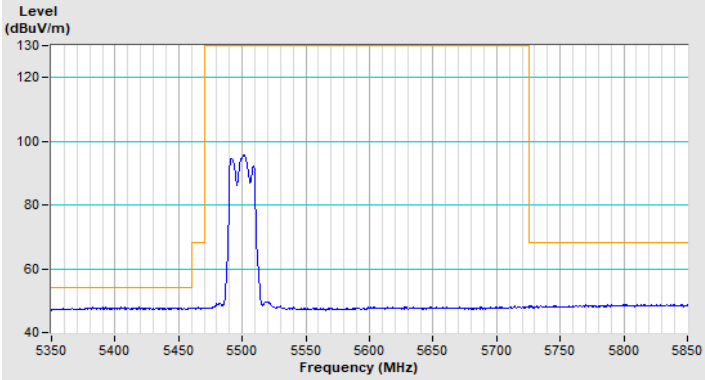
Vertical (Peak)

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak

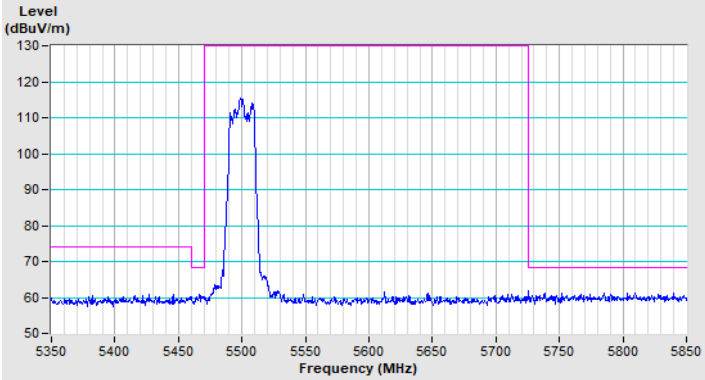
802.11ax (HE20) Channel 100



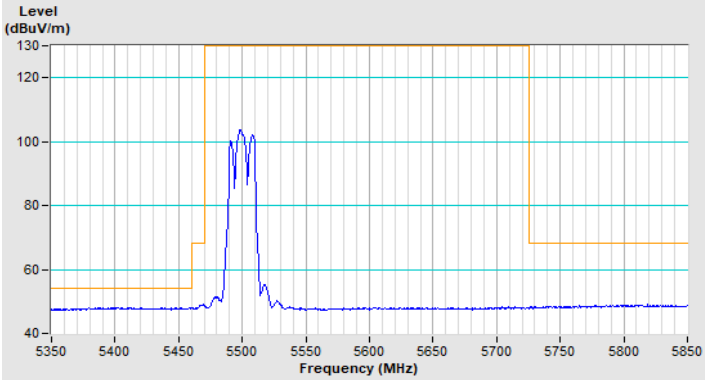
Horizontal (Peak)



Horizontal (Average)

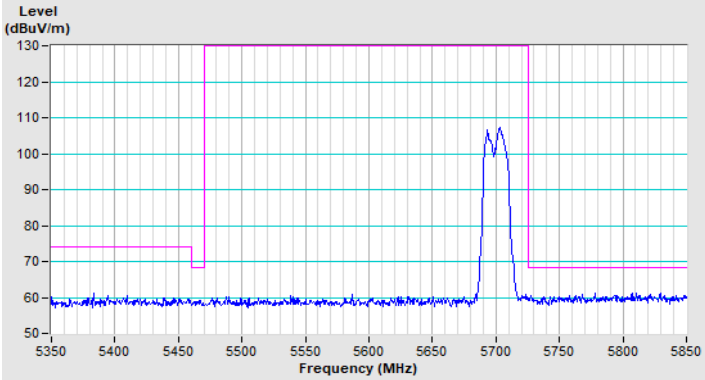


Vertical (Peak)

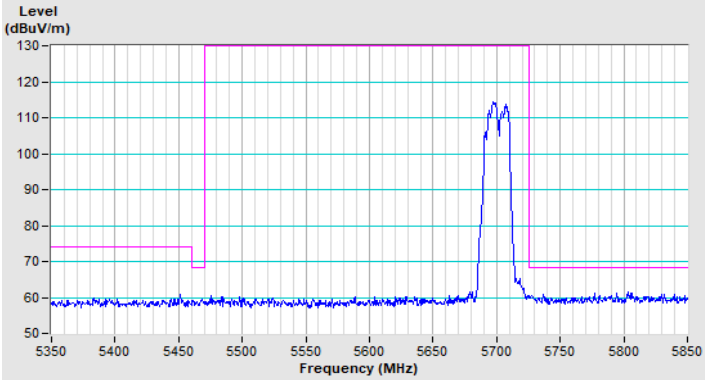


Vertical (Average)

802.11ax (HE20) Channel 140

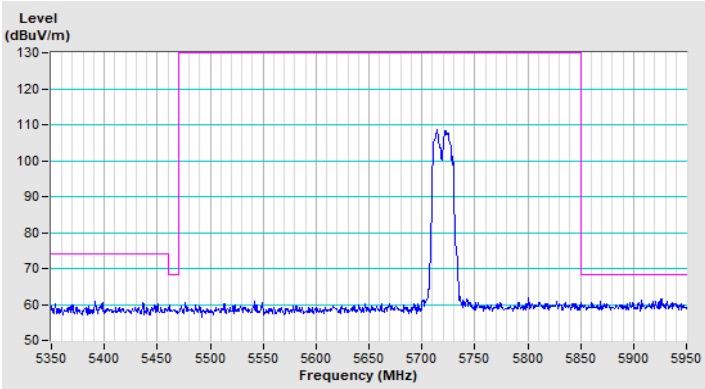


Horizontal (Peak)

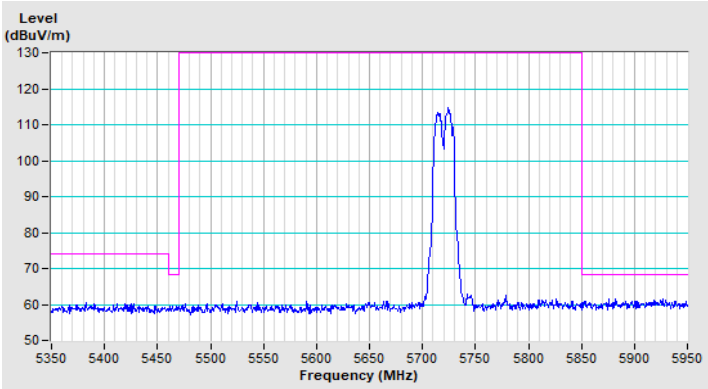


Vertical (Peak)

802.11ax (HE20) Channel 144



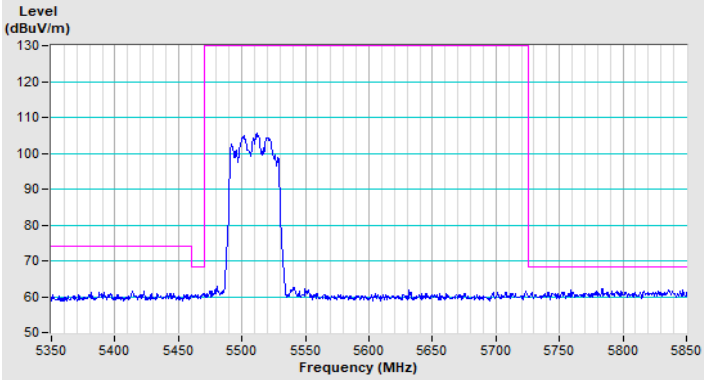
Horizontal (Peak)



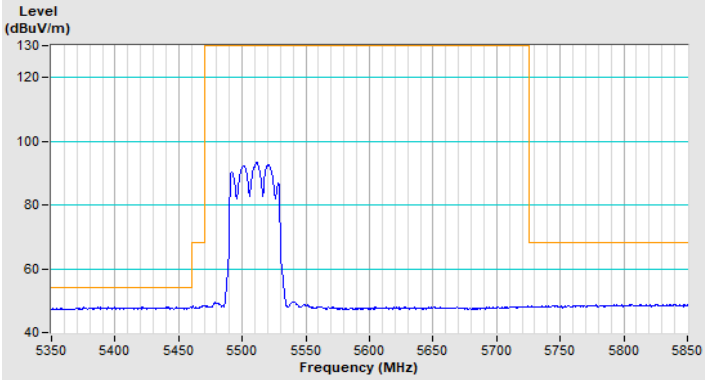
Vertical (Peak)

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak

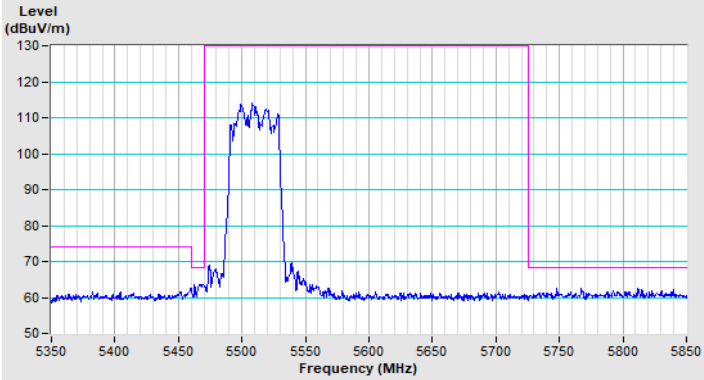
802.11ax (HE40) Channel 102



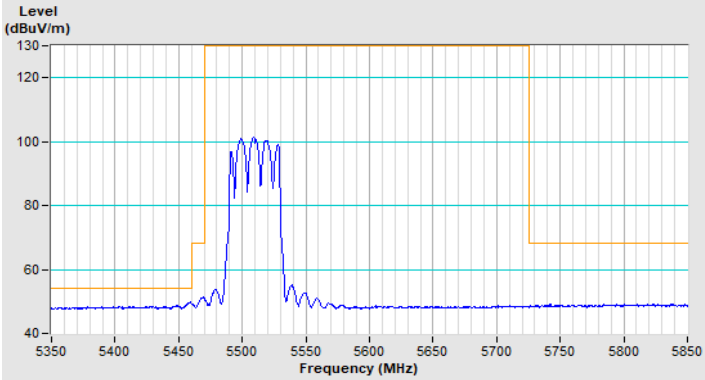
Horizontal (Peak)



Horizontal (Average)

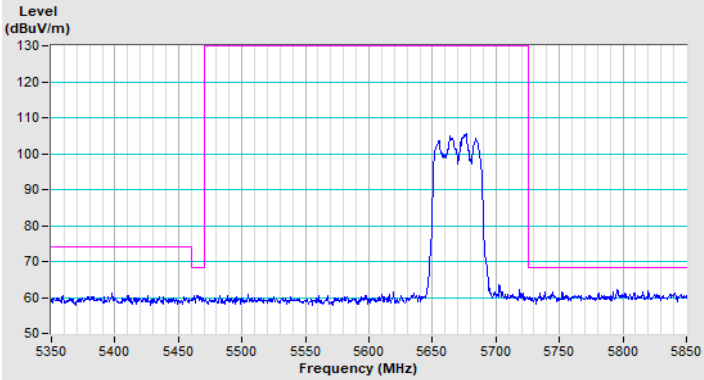


Vertical (Peak)

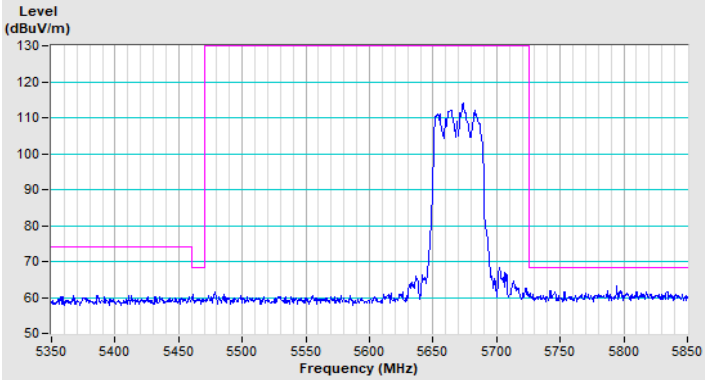


Vertical (Average)

802.11ax (HE40) Channel 134

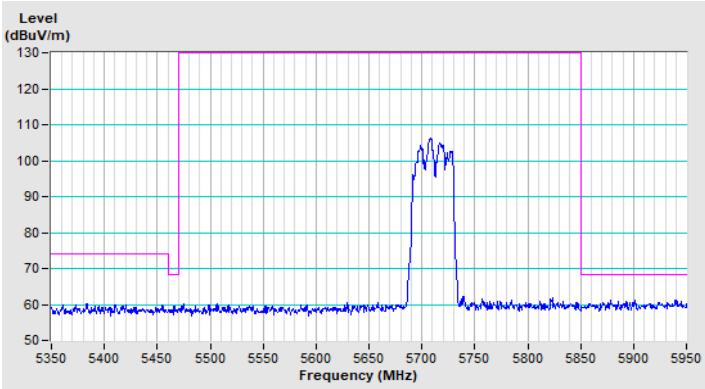


Horizontal (Peak)

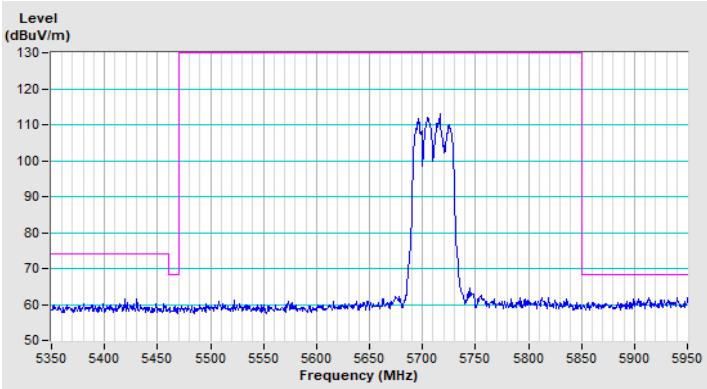


Vertical (Peak)

802.11ax (HE40) Channel 142



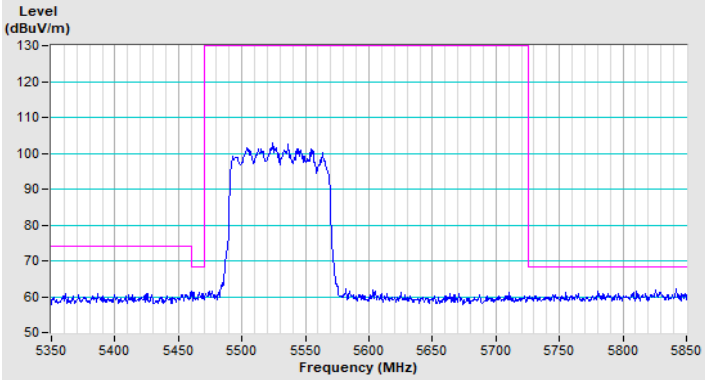
Horizontal (Peak)



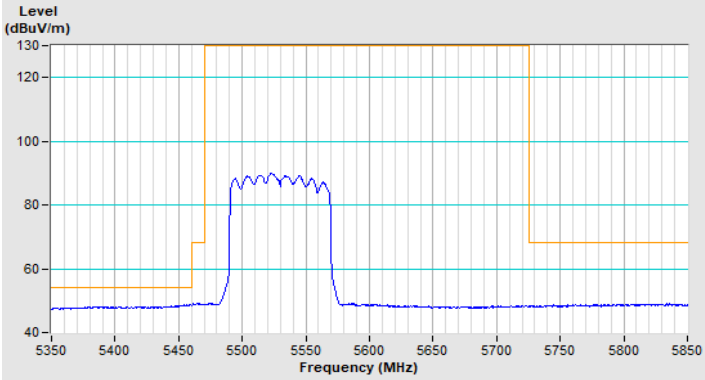
Vertical (Peak)

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak

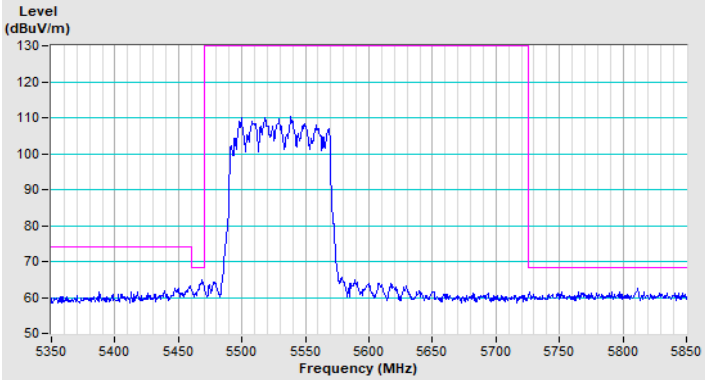
802.11ax (HE80) Channel 106



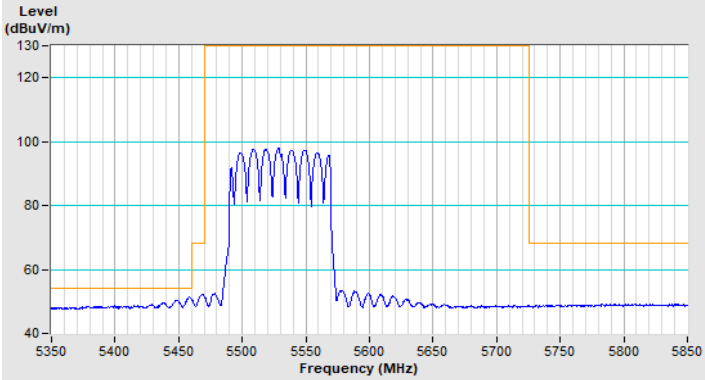
Horizontal (Peak)



Horizontal (Average)

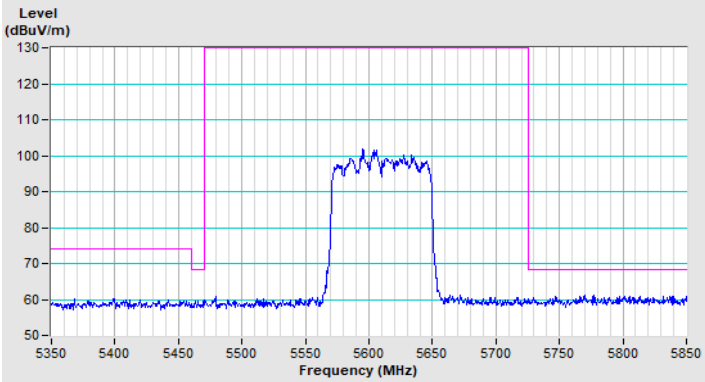


Vertical (Peak)

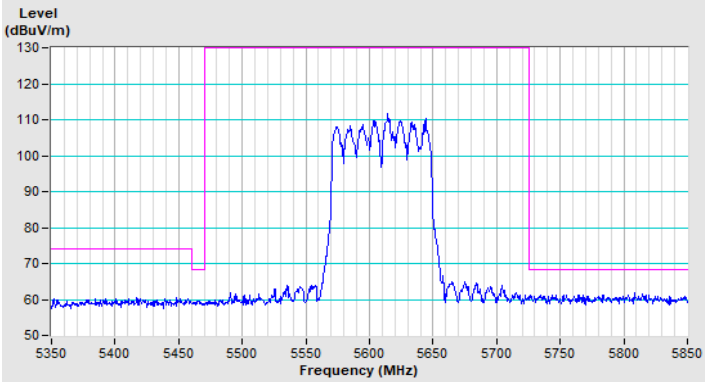


Vertical (Average)

802.11ax (HE80) Channel 122



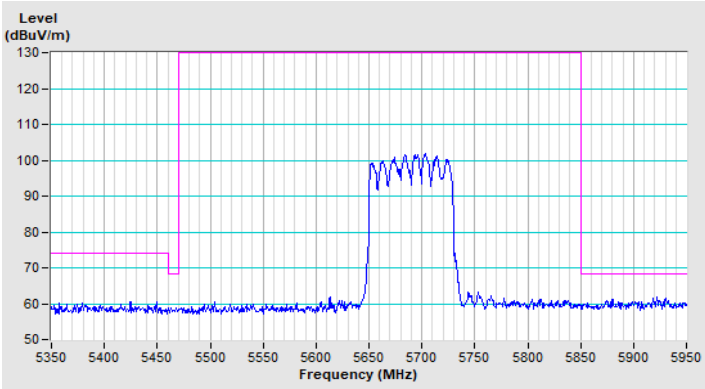
Horizontal (Peak)



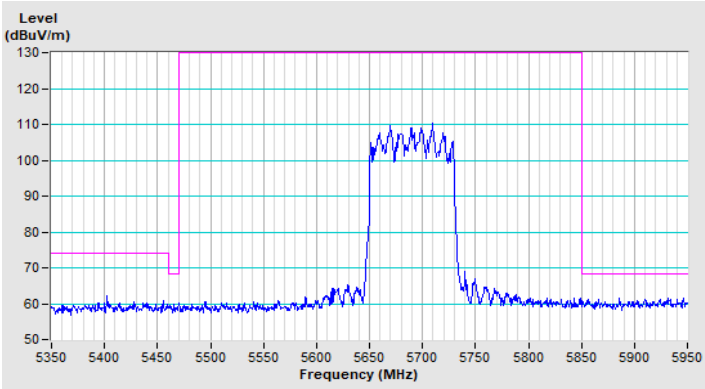
Vertical (Peak)

Frequency Range	5.35 GHz ~ 5.95 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak

802.11ax (HE80) Channel 138



Horizontal (Peak)



Vertical (Peak)

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 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.

If you have any comments, please feel free to contact us at the following:

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Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab
Tel: 886-3-3183232
Fax: 886-3-3270892

Email: service.adt@bureauveritas.com
Web Site: http://ee.bureauveritas.com.tw

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

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