

# TEST REPORT

## CERTIFICATE OF CONFORMITY

**Standard:** 47 CFR FCC Part 15, Subpart E (Section 15.407)

**Report No.:** RFBEIH-WTW-P23080448-1

**FCC ID:** P27-ES1A

**Product:** ES1 (A)

**Brand:** Comcast Xfinity, Cox, Shaw, XUMO (Charter)

**Model No.:** COESST11AEI

**Series Model:** COESSTxxAEI xx (The "xx" can be 11, 12, 13, 14 and blank for marketing difference)

**Received Date:** 2023/8/21

**Test Date:** 2023/8/24 ~ 2023/9/12

**Issued Date:** 2023/12/12

**Applicant:** Sercomm Corporation

**Address:** 8F, No. 3-1, YuanQu St., NanKang, Taipei 115, Taiwan, R.O.C.

**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. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

**FCC Registration /** 198487 / TW2021

**Designation Number:**

**Approved by:**

*Jeremy Lin*

**Date:**

2023/12/12

Jeremy Lin / Project Engineer

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Prepared by : Annie Chang / Senior Specialist

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## Release Control Record

Issue No.	Description	Date Issued
RFBEIH-WTW-P23080448-1	Original release.	2023/12/12

## 1 Certificate

**Product:** ES1 (A)

**Brand:** Comcast Xfinity, Cox, Shaw, XUMO (Charter)

**Test Model:** COESST11AEI

**Series Model:** COESSTxxAEI xx (The "xx" can be 11, 12, 13, 14 and blank for marketing difference)

**Sample Status:** Engineering sample

**Applicant:** Sercomm Corporation

**Test Date:** 2023/8/24 ~ 2023/9/12

**Standard:** 47 CFR FCC Part 15, Subpart E (Section 15.407)

**Measurement** ANSI C63.10-2013

**procedure:** 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)(1) 15.407(a)(2) 15.407(a)(3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(1) 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 -16.56 dB at 0.45665 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -12.3 dB at 37.42 MHz
15.407(b) (1/10) 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 -1.5 dB at 5150.00, 5350.00, 5470.00, 5725.00 and 5934.40 MHz
15.203	Antenna Requirement	Pass	Antenna connector is IPEX not a standard connector.

### Notes:

- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- 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) (±)
RF Output Power	-	1.1 dB
Power Spectral Density	-	1.2 dB
6 dB Bandwidth	-	960 Hz
Occupied Bandwidth	-	960 Hz
AC Power Conducted Emissions	9 kHz ~ 30 MHz	3.00 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	2.38 dB
	30 MHz ~ 1 GHz	5.7 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 6 GHz	4.83 dB
	6 GHz ~ 18 GHz	5.37 dB
	18 GHz ~ 40 GHz	5.24 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	ES1 (A)
Brand	Comcast Xfinity, Cox, Shaw, XUMO (Charter)
Test Model	COESST11AEI
Series Model	COESSTxxAEI xx (The "xx" can be 11, 12,13,14 and blank for marketing difference)
Model Difference	Marketing Differentiation
Status of EUT	Engineering sample
Power Supply Rating	DC power from Adapter
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode 1024QAM for OFDMA in 11ax mode
Modulation Technology	OFDM, OFDMA
Transfer Rate	Up to 1201.0 Mbps
Operating Frequency	5.18 GHz~5.24 GHz, 5.26 GHz~5.32 GHz, 5.5 GHz~5.72 GHz, 5.745 GHz~5.825 GHz
Number of Channel	802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):25 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):12 802.11ac (VHT80), 802.11ax (HE80):6
Output Power	5.18 GHz ~ 5.24 GHz : 204.659 mW (23.11 dBm) 5.26 GHz ~ 5.32 GHz : 200.47 mW (23.02 dBm) 5.5 GHz ~ 5.72 GHz : 186.464 mW (22.71 dBm) 5.745 GHz ~ 5.825 GHz : 567.456 mW (27.54 dBm)
EUT Category	Client device

Note:

1. The EUT uses following accessories.

Item	Brand	Model	Specification
AC Adapter 1	Netbit	NBC08A050150HU	AC Input : 100-120V, 50-60Hz, 0.2A DC Output : 5.0V, 1.5A DC Cable : 1.8m, non shielded
AC Adapter 2	LEADER	ML08-8050150-A1	AC Input : 100-120V, 50-60Hz, 0.25A DC Output : 5.0V, 1.5A DC Cable : 1.8m, non shielded
AC Adapter 3	AcBel	WAP003	AC Input : 100-120V, 50-60Hz, 0.25A DC Output : 5.15V, 1.5A DC Cable : 1.8m, non shielded

2. There are Bluetooth and WLAN (2.4 GHz & 5 GHz) technology used for the EUT.

3. WLAN 2.4GHz, WLAN 5GHz and BT technologies cannot transmit at same time.

4. The EUT doesn't support Partial RU mode.

5. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

### 3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna No.	Gain (dBi)	Antenna Type	Connector Type
WIFI0	3.6	PIFA	IPEX
WIFI1	4.6	PIFA	IPEX

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

2. The EUT incorporates a MIMO function:

5 GHz Band		
Modulation Mode	TX & RX Configuration	
802.11a	2TX	2RX
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
802.11ac (VHT20)	2TX	2RX
802.11ac (VHT40)	2TX	2RX
802.11ac (VHT80)	2TX	2RX
802.11ax (HE20)	2TX	2RX
802.11ax (HE40)	2TX	2RX
802.11ax (HE80)	2TX	2RX

Note: The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz), 802.11ac mode for 20 MHz (40 MHz, 80 MHz) and 802.11ax mode for 20 MHz (40 MHz, 80 MHz) therefore the manufacturer will control the power for 802.11n/ac mode is same as the 802.11ax mode or more lower than it and investigated worst case to representative mode in test report.



### 3.3 Channel List

#### FOR 5180 ~ 5320 MHz

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

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

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

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

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

Channel	Frequency	Channel	Frequency
42	5210 MHz	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		

**FOR 5745 ~ 5825 MHz:**

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

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

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

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

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

Channel	Frequency
155	5775 MHz

### 3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. EUT can be used in the following ways: XYZ 3-axis. Pre-scan in these ways and find the worst case as a representative test condition. 2. For Unwanted Emission below/ above 1 GHz has EUT + Adapter 1 (NBC08A050150HU)/ EUT + Adapter 2 (ML08-8050150-A1)/ EUT + Adapter 3 (WAP003) mode of power supply. Pre-scan these modes and find the worst case as a representative test condition.
Worst Case:	1. X/ Y/ Z Worst Condition: X Axis for Unwanted Emission above 1GHz and Unwanted Emission below 1GHz. 2. For Unwanted Emission below/above 1 GHz EUT + Adapter 2 (ML08-8050150-A1) mode is the worst case of power supply.

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

Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
26 dB Bandwidth	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 / Power Spectral Density	802.11a	CDD	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	6Mb/s
	802.11ax (HE20)	CDD	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	MCS0
	802.11ax (HE40)	CDD	38, 46, 54, 62, 102, 110, 134, 142, 151, 159	BPSK	MCS0
	802.11ax (HE80)	CDD	42, 58, 106, 122, 138, 155	BPSK	MCS0
6 dB Bandwidth	802.11a	CDD	144, 149, 157, 165	BPSK	6Mb/s
	802.11ax (HE20)	CDD	144, 149, 157, 165	BPSK	MCS0
	802.11ax (HE40)	CDD	142, 151, 159	BPSK	MCS0
	802.11ax (HE80)	CDD	138, 155	BPSK	MCS0
Occupied Bandwidth	802.11a	CDD	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	6Mb/s
	802.11ax (HE20)	CDD	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	MCS0
	802.11ax (HE40)	CDD	38, 46, 54, 62, 102, 110, 134, 142, 151, 159	BPSK	MCS0
	802.11ax (HE80)	CDD	42, 58, 106, 122, 138, 155	BPSK	MCS0



Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
Frequency Stability	802.11a	-	36	unmodulated	-
AC Power Conducted Emissions	802.11ax (HE40)	CDD	151	BPSK	MCS0
Unwanted Emissions below 1 GHz	802.11ax (HE40)	CDD	151	BPSK	MCS0
Unwanted Emissions above 1 GHz	802.11a	CDD	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	6Mb/s
	802.11ax (HE20)	CDD	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	MCS0
	802.11ax (HE40)	CDD	38, 46, 54, 62, 102, 110, 134, 142, 151, 159	BPSK	MCS0
	802.11ax (HE80)	CDD	42, 58, 106, 122, 138, 155	BPSK	MCS0

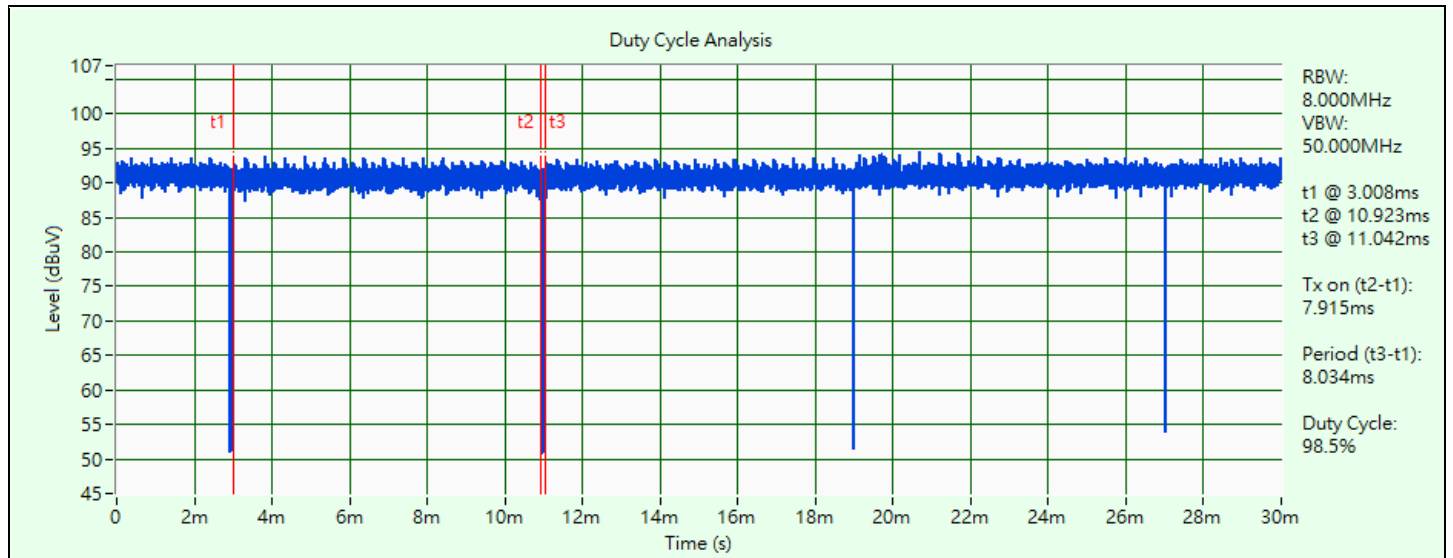
### 3.5 Duty Cycle of Test Signal

**802.11a:** Duty cycle = 7.915 ms / 8.034 ms x 100% = 98.5%

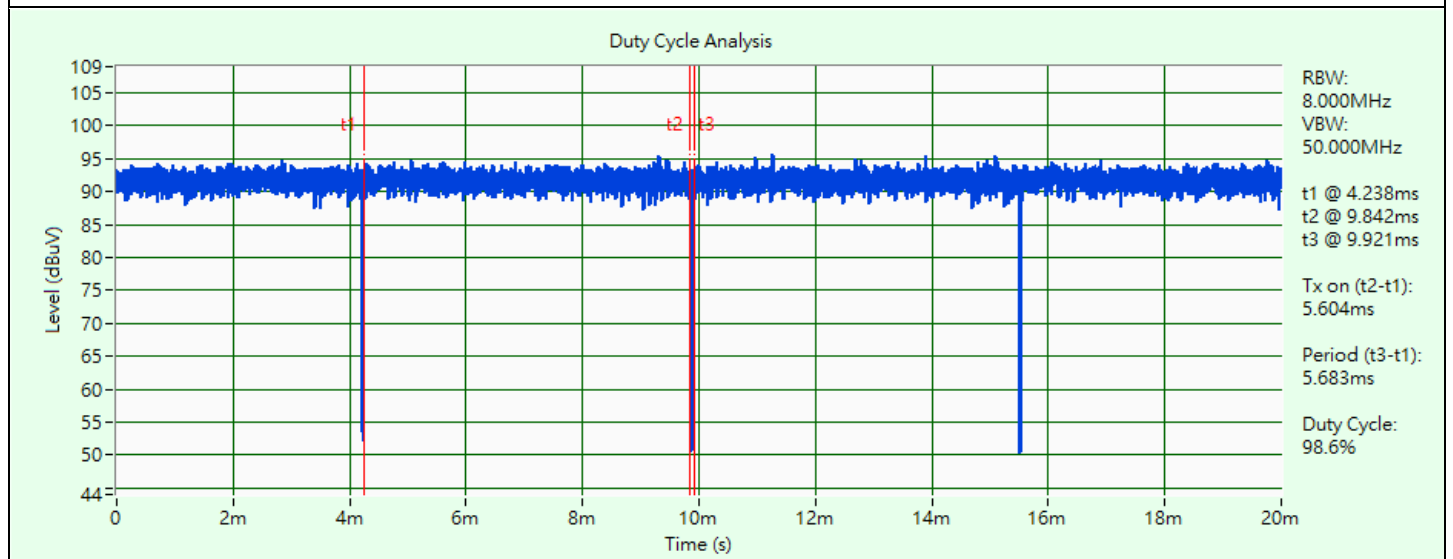
**802.11ax (HE20):** Duty cycle = 5.604 ms / 5.683 ms x 100% = 98.6%

**802.11ax (HE40):** Duty cycle = 2.81 ms / 2.849 ms x 100% = 98.6%

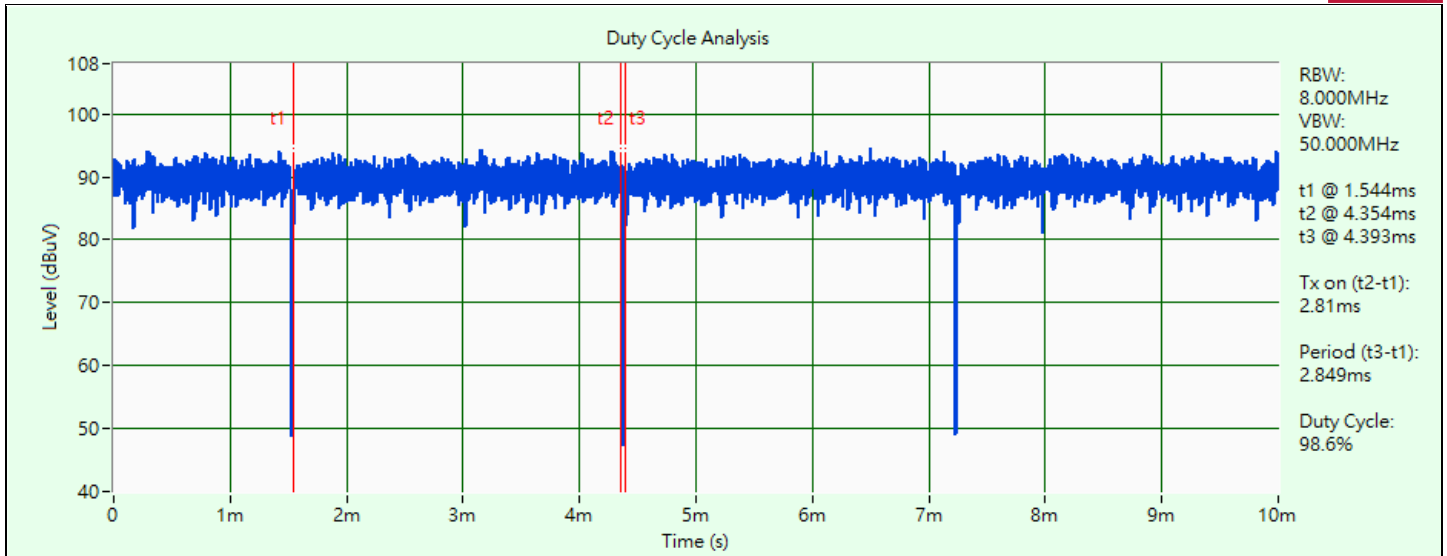
**802.11ax (HE80):** Duty cycle = 1.378 ms / 1.398 ms x 100% = 98.6%



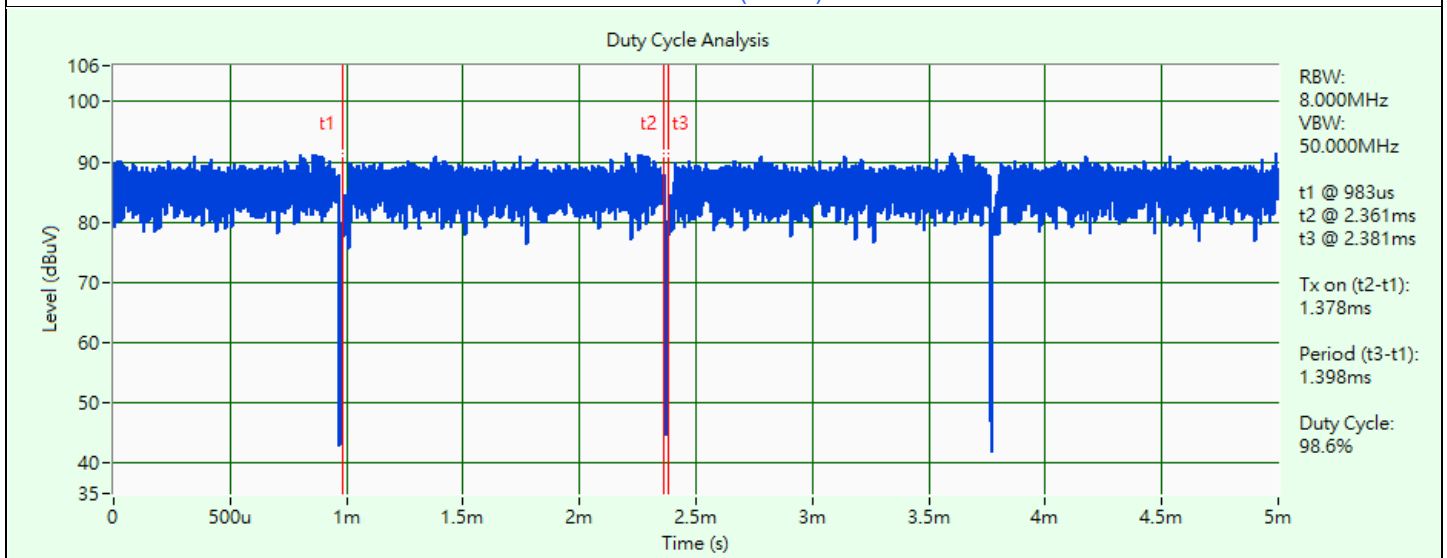
802.11a



802.11ax (HE20)



802.11ax (HE40)

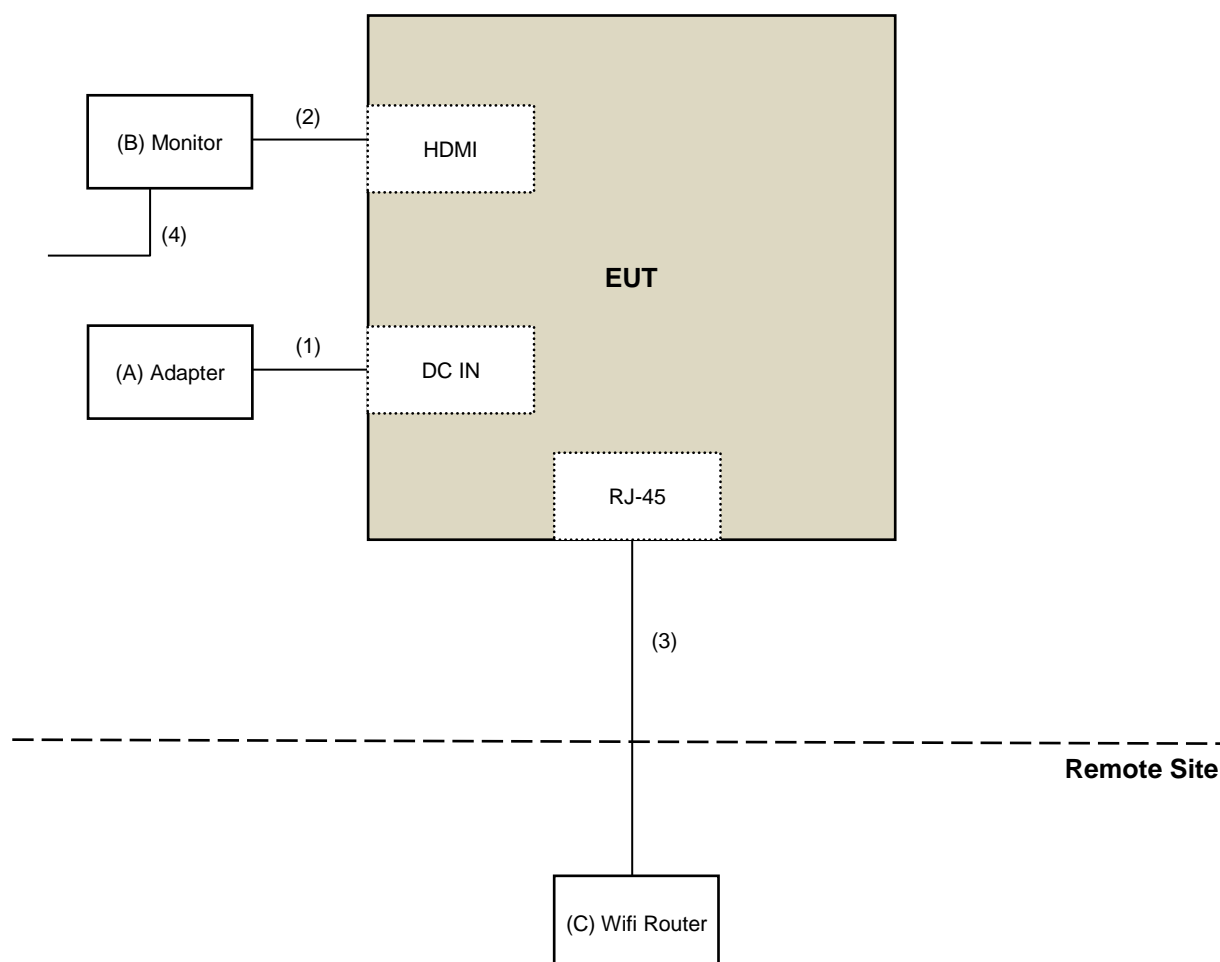


802.11ax (HE80)

### 3.6 Test Program Used and Operation Descriptions

Controlling software (Tera Term V4.8) 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	Adapter	LEADER	ML08-8050150-A1	N/A	N/A	Supplied by applicant
B	Monitor	ASUS	PA279CV	M7LMTF235926	DoC	Provided by Lab
C	Wifi Router	NETGEAR	R6350	58E798B00017E	DoC	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	DC cable	1	1.8	N	0	Supplied by applicant
2	HDMI cable	1	2	Y	0	Provided by Lab
3	RJ45 cable	1	10	N	0	Provided by Lab
4	AC power cable	1	1.8	N	0	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
PXA Signal Analyzer Keysight	N9030A	MY54490260	2023/7/13	2024/7/12
Signal Analyzer R&S	FSV40	101042	2023/9/5	2024/9/4
		101544	2023/5/9	2024/5/8
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in LK - Oven
2. Tested Date: 2023/9/12

### 4.2 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Power Meter Anritsu	ML2495A	0842014	2023/5/5	2024/5/4
Pulse Power Sensor Anritsu	MA2411B	0738404	2023/5/5	2024/5/4
PXA Signal Analyzer Keysight	N9030A	MY54490260	2023/7/13	2024/7/12
Signal Analyzer R&S	FSV40	101042	2023/9/5	2024/9/4
		101544	2023/5/9	2024/5/8
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
USB Wideband Power Sensor Keysight	U2021XA	U2021XA_001	2023/6/6	2024/6/5

Notes:

1. The test was performed in LK - Oven
2. Tested Date: 2023/9/12

### 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 Source Schaffner	Proflin2105- 208NSG1007	55616	N/A	N/A
PXA Signal Analyzer Keysight	N9030A	MY54490260	2023/7/13	2024/7/12
Signal Analyzer R&S	FSV40	101042	2023/9/5	2024/9/4
		101544	2023/5/9	2024/5/8
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Temperature & Humidity Chamber Terchy	MHU-225AU	920409	2023/6/26	2024/6/25

Notes:

1. The test was performed in LK - Oven
2. Tested Date: 2023/9/12

#### 4.7 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance LYNICS	0900510	E1-01-305	2023/2/13	2024/2/12
		E1-011285	2022/9/19	2023/9/18
		E1-011286	2022/9/19	2023/9/18
EMI Test Receiver R&S	ESCS 30	100276	2023/4/20	2024/4/19
	ESR3	102412	2022/12/21	2023/12/20
Fixed Attenuator STI	STI02-2200-10	NO.4	2022/9/2	2023/9/1
High Voltage Probe Schwarzbeck	TK9420	00982	2022/12/14	2023/12/13
Isolation Transformer Erika Fiedler	D-65396	017	2022/9/8	2023/9/7
LISN Schwarzbeck	NNLK 8121	8121-731	2023/6/9	2024/6/8
		8121-00759	2023/8/21	2024/8/20
		8121-808	2023/5/2	2024/5/1
	NNLK 8129	8129229	2023/6/27	2024/6/26
	NSLK 8128	8128-244	2022/11/8	2023/11/7
RF Coaxial Cable PEWC	5D-FB	Cable-CO5-01	2023/1/19	2024/1/18
Software BVADT	Cond_V7.3.7.4	N/A	N/A	N/A

Notes:

1. The test was performed in Linkou Conduction 5.
2. Tested Date: 2023/8/24

#### 4.8 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
* Loop Antenna EMCI	LPA600	270	2021/9/2	2023/9/1
Bi_Log Antenna Schwarzbeck	VULB 9168	137	2022/10/21	2023/10/20
Coupling / Decoupling Network Schwarzbeck	CDNE-M2	00097	2023/5/25	2024/5/24
	CDNE-M3	00091	2023/5/25	2024/5/24
MXE EMI Receiver Agilent	N9038A	MY51210129	2023/3/24	2024/3/23
		MY51210137	2023/6/5	2024/6/4
Preamplifier EMCI	EMC001340	980269	2023/6/27	2024/6/26
Preamplifier HP	8447D	2432A03504	2023/2/16	2024/2/15
RF Coaxial Cable Pacific	8D-FB	Cable-CH6-02	2023/6/27	2024/6/26
Signal Analyzer R&S	FSV40	101544	2023/5/9	2024/5/8
Software BVADT	Radiated_V8.7.08	N/A	N/A	N/A
Tower ADT	AT100	0306	N/A	N/A
Turn Table ADT	TT100	0306	N/A	N/A

Notes:

- \* The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA
- The test was performed in Linkou 966 Chamber 6 (CH 6).
- Tested Date: 2023/8/24

#### 4.9 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Band Pass Filter Micro-Tronics	BRM17690	005	2023/5/25	2024/5/24
Boresight antenna tower fixture BV	BAF-02	6	N/A	N/A
High Pass Filter Wainwright	WHK 3.1/18G-10SS	SN 8	2023/5/25	2024/5/24
Horn Antenna EMCO	3115	00028257	2022/11/13	2023/11/12
Horn Antenna ETS-Lindgren	3117-PA	00215857	2022/11/13	2023/11/12
Horn Antenna Schwarzbeck	BBHA 9170	212	2022/10/20	2023/10/19
MXE EMI Receiver Agilent	N9038A	MY51210129	2023/3/24	2024/3/23
		MY51210137	2023/6/5	2024/6/4
Notch Filter Micro-Tronics	BRC50703-01	010	2023/5/25	2024/5/24
Preamplifier EMCI	EMC0126545 EMC184045B	980076	2023/2/16	2024/2/15
		980175	2023/9/2	2024/9/1
		980235	2023/2/16	2024/2/15
Preamplifier HP	8449B	3008A01201	2023/2/16	2024/2/15
RF Coaxial Cable EMCI	EMC104	190801	2023/7/6	2024/7/5
		190804	2023/7/6	2024/7/5
RF Coaxial Cable EMEC	EM102-KMKM-3.5	EM102-KMKM-3.5-02	2022/9/27	2023/9/26
RF Coaxial Cable HUBER+SUHNER	SF-104	Cable-CH6-01	2023/7/6	2024/7/5
Signal Analyzer R&S	FSV40	101042	2023/9/5	2024/9/4
		101544	2023/5/9	2024/5/8
Software BVADT	Radiated_V7.7.1.1.1	N/A	N/A	N/A
Tower ADT	AT100	0306	N/A	N/A
Turn Table ADT	TT100	0306	N/A	N/A

Notes:

1. The test was performed in Linkou 966 Chamber 6 (CH 6).
2. Tested Date: 2023/9/5 ~ 2023/9/8

## 5 Limits of Test Items

### 5.1 26 dB Bandwidth

The results are for reference only.

### 5.2 RF Output Power

Operation Band	EUT Category	Limit
U-NII-1	Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
	Fixed point-to-point Access Point	1 Watt (30 dBm)
	Indoor Access Point	1 Watt (30 dBm)
	Mobile and Portable client device	250mW (24 dBm)

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  $\geq 40$  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	EUT Category	Limit
U-NII-1	Outdoor Access Point	17 dBm/MHz
	Fixed point-to-point Access Point	
	Indoor Access Point	
	Mobile and Portable client device	11 dBm/MHz

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 5.15-5.25 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (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) <sup>*1</sup>	PK: 68.2 (dBµV/m) <sup>*1</sup>
	PK: 10 (dBm/MHz) <sup>*2</sup>	PK: 105.2 (dBµV/m) <sup>*2</sup>
	PK: 15.6 (dBm/MHz) <sup>*3</sup>	PK: 110.8 (dBµV/m) <sup>*3</sup>
	PK: 27 (dBm/MHz) <sup>*4</sup>	PK: 122.2 (dBµV/m) <sup>*4</sup>

<sup>\*1</sup> beyond 75 MHz or more above of the band edge.

<sup>\*2</sup> below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.

<sup>\*3</sup> below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.

<sup>\*4</sup> from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

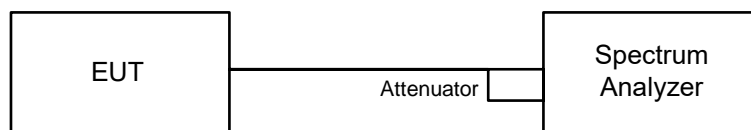
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

## 6 Test Arrangements

### 6.1 26 dB Bandwidth

#### 6.1.1 Test Setup

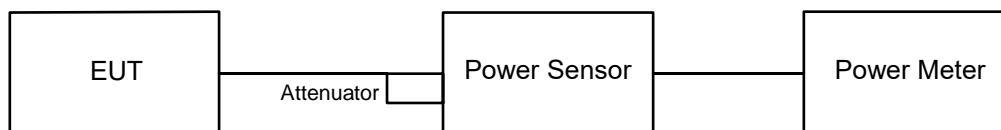


#### 6.1.2 Test Procedure

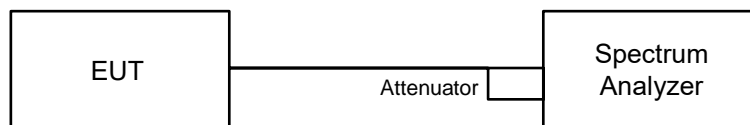
- a. Set RBW = approximately 1% of the emission bandwidth.
- b. Set the VBW > RBW.
- c. Detector = Peak.
- d. Trace mode = max hold.
- e. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat 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-1

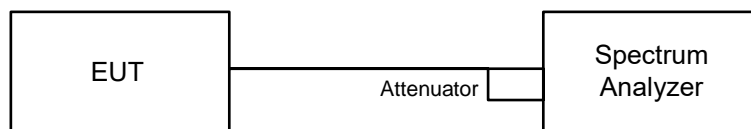
- a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
- b. Set RBW = 1 MHz, Set VBW  $\geq$  3 MHz, Detector = RMS
- c. Sweep points  $\geq$   $[2 \times \text{span} / \text{RBW}]$ . (This gives bin-to-bin spacing  $\leq$  RBW / 2, so that narrowband signals are not lost between 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

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

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz, Set VBW  $\geq$  3 MHz, Detector = RMS
- Sweep points  $\geq$   $[2 \times \text{span} / \text{RBW}]$ . (This gives bin-to-bin spacing  $\leq$  RBW / 2, so that narrowband signals are not lost between frequency bins.)
- Sweep time = auto, trigger set to "free run".
- Trace average at least 100 traces in power averaging mode.
- Record the max value

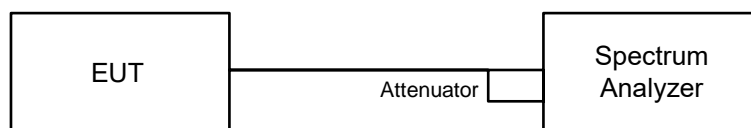
#### For specified measurement bandwidth 500 kHz:

##### Method SA-1

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 300 kHz, Set VBW  $\geq$  1 MHz, Detector = RMS
- 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  $\text{BWCF} = 10\log(500 \text{ kHz}/300 \text{ kHz})$
- Sweep points  $\geq$   $[2 \times \text{span} / \text{RBW}]$ . (This gives bin-to-bin spacing  $\leq$  RBW / 2, so that narrowband signals are not lost between frequency bins.)
- Sweep time = auto, trigger set to "free run".
- Trace average at least 100 traces in power averaging mode.
- Record the max value

## 6.4 6 dB Bandwidth

### 6.4.1 Test Setup

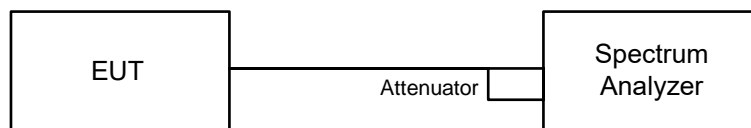


### 6.4.2 Test Procedure

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

## 6.5 Occupied Bandwidth

### 6.5.1 Test Setup

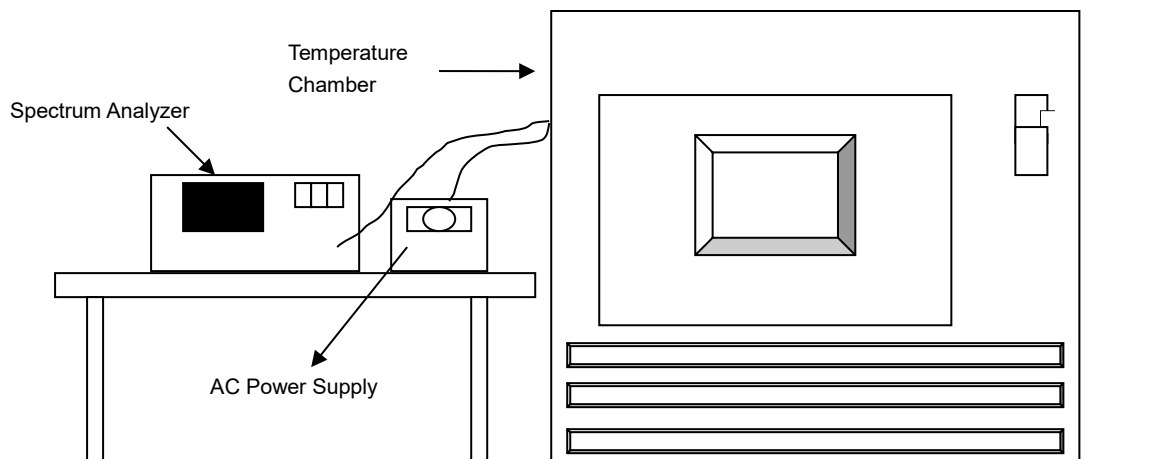


### 6.5.2 Test Procedure

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

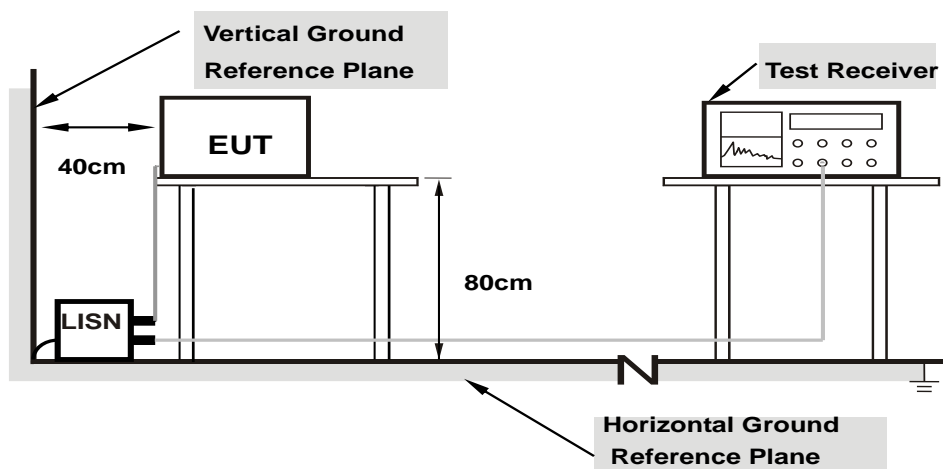


### 6.6.2 Test Procedure

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

## 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

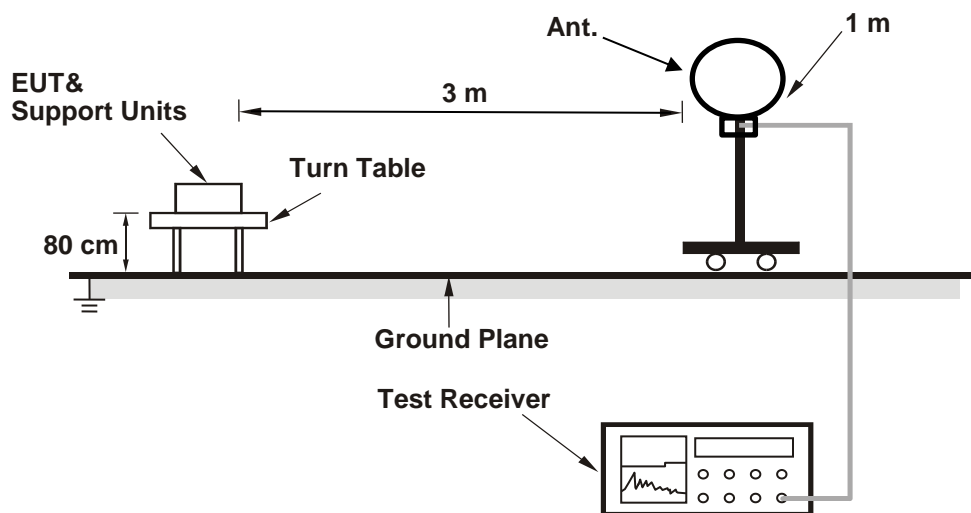
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50 uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- 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.

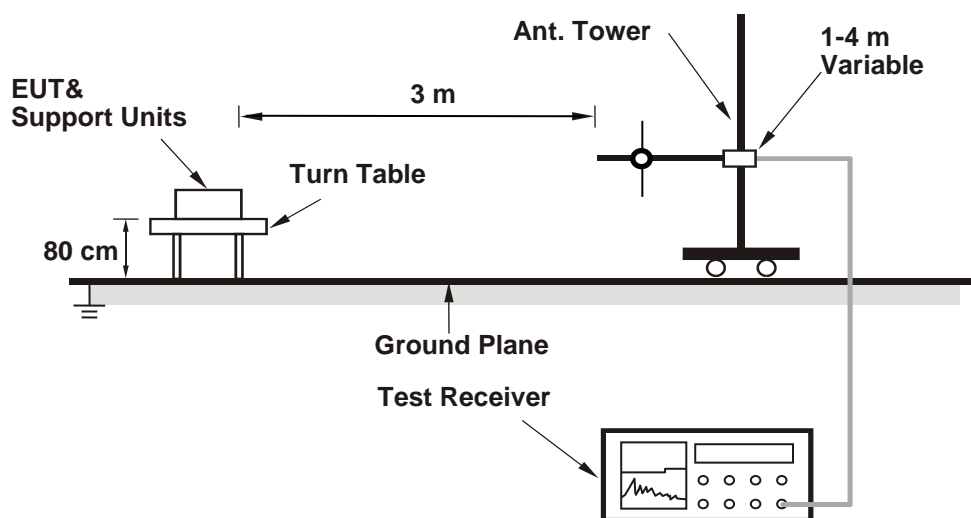
## 6.8 Unwanted Emissions below 1 GHz

### 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

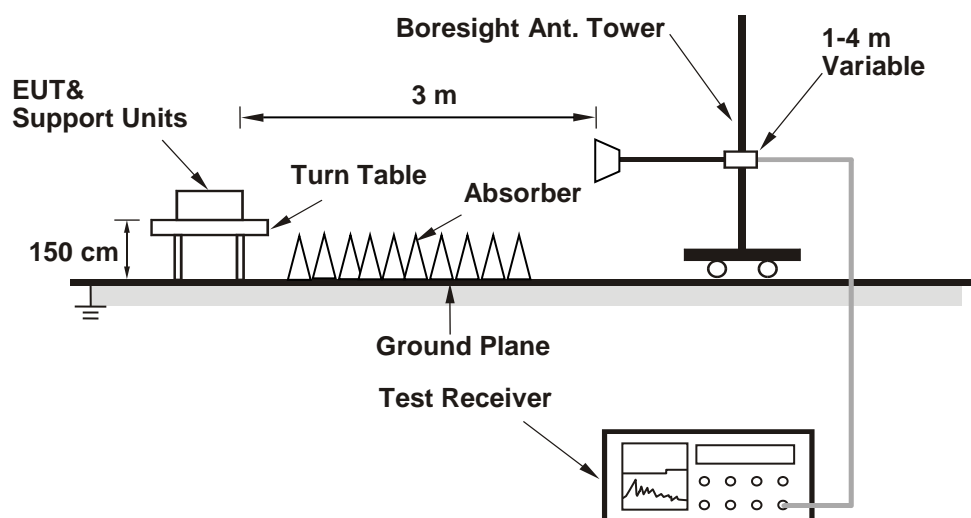
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the 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 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) at frequency below 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

- 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.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 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.
- 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.
- 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:

- 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.
- For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle  $< 98\%$ ) or 10 Hz (Duty cycle  $\geq 98\%$ ) for Average detection (AV) at frequency above 1 GHz.
- 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, 76% RH	Tested By:	Dalen Dai
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#### 802.11a

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	18.48	18.19
60	5300	18.46	18.18
64	5320	18.49	18.23
100	5500	18.44	18.22
116	5580	18.50	18.22
140	5700	18.45	18.31
144 (U-NII-2C)	5720	14.14	14.12
144 (U-NII-3)	5720	4.25	4.11

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
52	5260	18.19	23.59 < 24
60	5300	18.18	23.59 < 24
64	5320	18.23	23.6 < 24
100	5500	18.22	23.6 < 24
116	5580	18.22	23.6 < 24
140	5700	18.31	23.62 < 24
144 (U-NII-2C)	5720	14.12	22.49 < 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	20.37	20.35
60	5300	20.32	20.34
64	5320	20.32	20.39
100	5500	20.28	20.31
116	5580	20.30	20.37
140	5700	20.32	20.31
144 (U-NII-2C)	5720	15.08	15.13
144 (U-NII-3)	5720	5.26	5.18

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
52	5260	20.35	24.08 > 24
60	5300	20.32	24.07 > 24
64	5320	20.32	24.07 > 24
100	5500	20.28	24.07 > 24
116	5580	20.30	24.07 > 24
140	5700	20.31	24.07 > 24
144 (U-NII-2C)	5720	15.08	22.78 < 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	40.68	40.84
62	5310	40.68	40.71
102	5510	40.66	40.72
110	5550	40.75	41.07
134	5670	40.89	42.99
142 (U-NII-2C)	5710	35.25	35.22
142 (U-NII-3)	5710	5.35	5.37

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
54	5270	40.68	27.09 > 24
62	5310	40.68	27.09 > 24
102	5510	40.66	27.09 > 24
110	5550	40.75	27.1 > 24
134	5670	40.89	27.11 > 24
142 (U-NII-2C)	5710	35.22	26.46 > 24

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

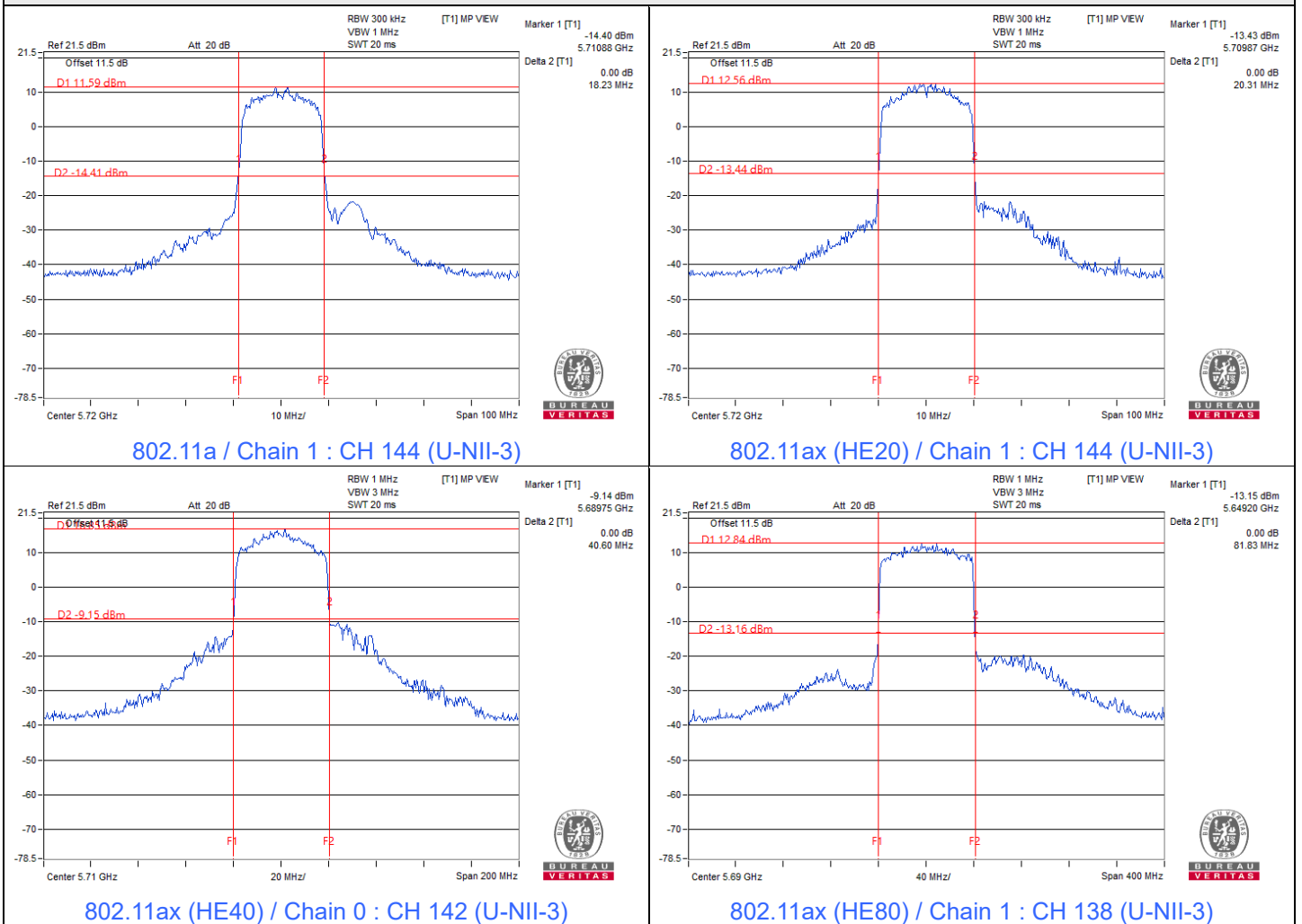
**802.11ax (HE80)**

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	82.02	81.93
106	5530	82.09	82.06
122	5610	82.15	81.93
138 (U-NII-2C)	5690	75.86	75.80
138 (U-NII-3)	5690	6.16	6.03

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
58	5290	81.93	30.13 > 24
106	5530	82.06	30.14 > 24
122	5610	81.93	30.13 > 24
138 (U-NII-2C)	5690	75.80	29.79 > 24

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

### Spectrum Plot of Minimum Value



**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, 76% RH	Tested By:	Dalen Dai
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### 802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	18.66	18.47	143.759	21.58	24	Pass
40	5200	18.62	18.44	142.601	21.54	24	Pass
48	5240	18.67	18.42	143.123	21.56	24	Pass
52	5260	18.70	18.38	142.996	21.55	23.59	Pass
60	5300	18.63	18.49	143.578	21.57	23.59	Pass
64	5320	18.61	18.41	141.953	21.52	23.6	Pass
100	5500	18.55	18.40	140.797	21.49	23.6	Pass
116	5580	18.65	18.42	142.785	21.55	23.6	Pass
140	5700	18.09	17.82	124.951	20.97	23.62	Pass
*144 (U-NII-2C)	5720	17.87	17.67	119.714	20.78	22.49	Pass
*144 (U-NII-3)	5720	9.57	9.42	17.807	12.51	30	Pass
149	5745	24.65	24.23	556.593	27.46	30	Pass
157	5785	24.49	24.26	547.876	27.39	30	Pass
165	5825	24.61	24.18	550.886	27.41	30	Pass

#### Notes:

- \* : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
- Directional gain is the maximum gain of antennas.
- For U-NII-1, the maximum gain is 4.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2A, the maximum gain is 4.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2C, the maximum gain is 4.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the maximum gain is 4.6 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				
36	5180	18.96	18.78	154.214	21.88	24	Pass
40	5200	18.94	18.77	153.679	21.87	24	Pass
48	5240	18.98	18.73	153.713	21.87	24	Pass
52	5260	18.97	18.68	152.676	21.84	24	Pass
60	5300	18.90	18.74	152.442	21.83	24	Pass
64	5320	18.92	18.75	152.972	21.85	24	Pass
100	5500	18.91	18.70	151.935	21.82	24	Pass
116	5580	18.93	18.73	152.808	21.84	24	Pass
140	5700	16.59	16.43	89.558	19.52	24	Pass
*144 (U-NII-2C)	5720	17.99	17.63	120.893	20.82	22.78	Pass
*144 (U-NII-3)	5720	10.39	10.07	21.102	13.24	30	Pass
149	5745	24.47	24.15	539.914	27.32	30	Pass
157	5785	24.48	24.01	532.311	27.26	30	Pass
165	5825	24.33	24.12	529.245	27.24	30	Pass

**Notes:**

- \* : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
- Directional gain is the maximum gain of antennas.
- For U-NII-1, the maximum gain is 4.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2A, the maximum gain is 4.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2C, the maximum gain is 4.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the maximum gain is 4.6 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				
38	5190	19.33	19.28	170.427	22.32	24	Pass
46	5230	20.11	20.09	204.659	23.11	24	Pass
54	5270	20.05	19.97	200.47	23.02	24	Pass
62	5310	18.67	18.51	144.578	21.60	24	Pass
102	5510	17.24	17.16	104.966	20.21	24	Pass
110	5550	19.77	19.62	186.464	22.71	24	Pass
134	5670	19.60	19.43	178.901	22.53	24	Pass
*142 (U-NII-2C)	5710	19.11	19.10	162.753	22.12	24	Pass
*142 (U-NII-3)	5710	6.30	6.37	8.601	9.35	30	Pass
151	5755	24.80	24.24	567.456	27.54	30	Pass
159	5795	24.62	24.36	562.632	27.50	30	Pass

**Notes:**

- \* : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
- Directional gain is the maximum gain of antennas.
- For U-NII-1, the maximum gain is 4.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2A, the maximum gain is 4.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2C, the maximum gain is 4.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the maximum gain is 4.6 dBi < 6 dBi, so the output power limit shall not be reduced.

**802.11ax (HE80)**

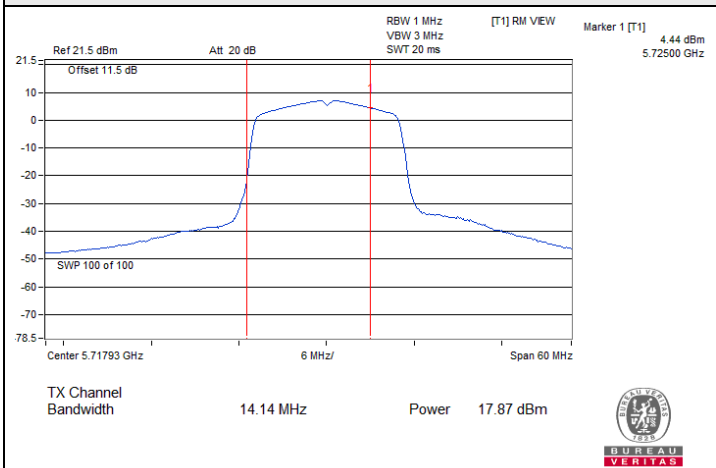
Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
42	5210	19.12	19.08	162.568	22.11	24	Pass
58	5290	18.74	18.68	148.607	21.72	24	Pass
106	5530	18.38	18.32	136.786	21.36	24	Pass
122	5610	18.60	18.46	142.589	21.54	24	Pass
*138 (U-NII-2C)	5690	19.07	19.01	160.339	22.05	24	Pass
*138 (U-NII-3)	5690	4.53	4.41	5.598	7.48	30	Pass
155	5775	19.15	18.82	158.432	22.00	30	Pass

**Notes:**

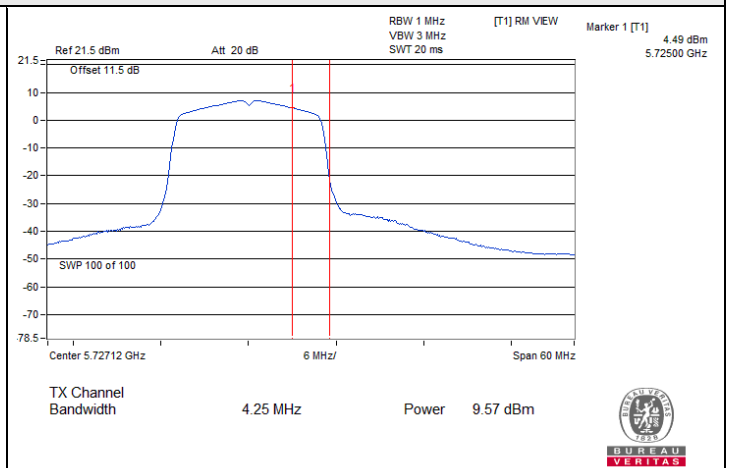
- \* : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
- Directional gain is the maximum gain of antennas.
- For U-NII-1, the maximum gain is 4.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2A, the maximum gain is 4.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2C, the maximum gain is 4.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the maximum gain is 4.6 dBi < 6 dBi, so the output power limit shall not be reduced.



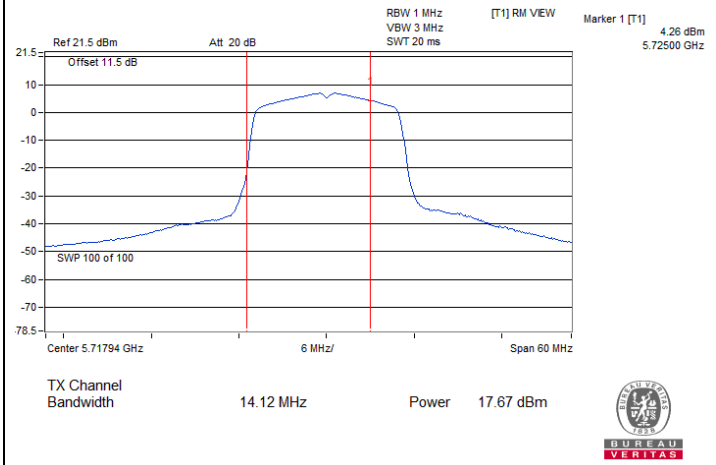
### Spectrum Plot for channel straddling



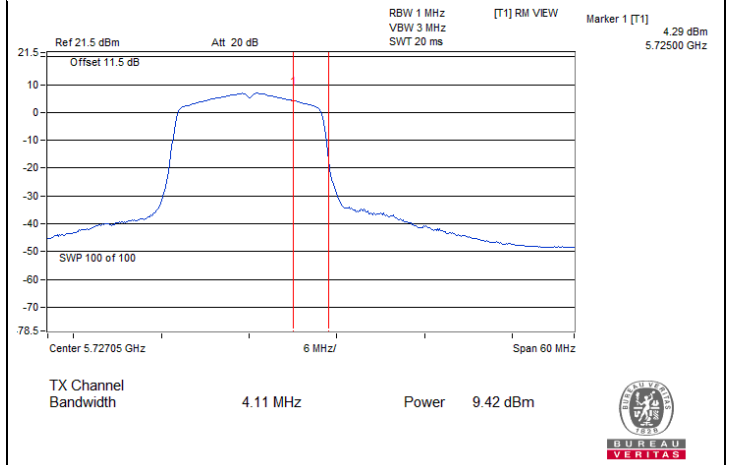
802.11a / Chain 0 : CH 144 (U-NII-2C)



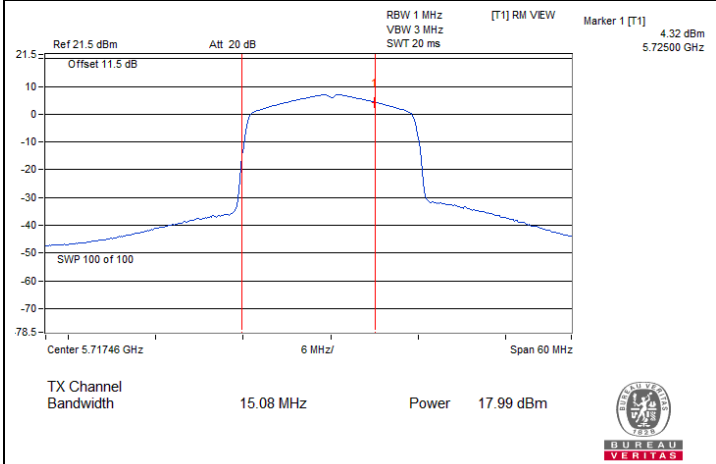
802.11a / Chain 0 : CH 144 (U-NII-3)



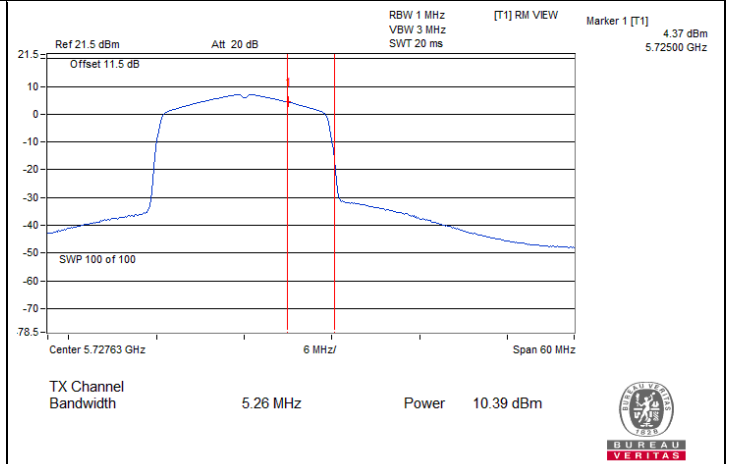
802.11a / Chain 1 : CH 144 (U-NII-2C)



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



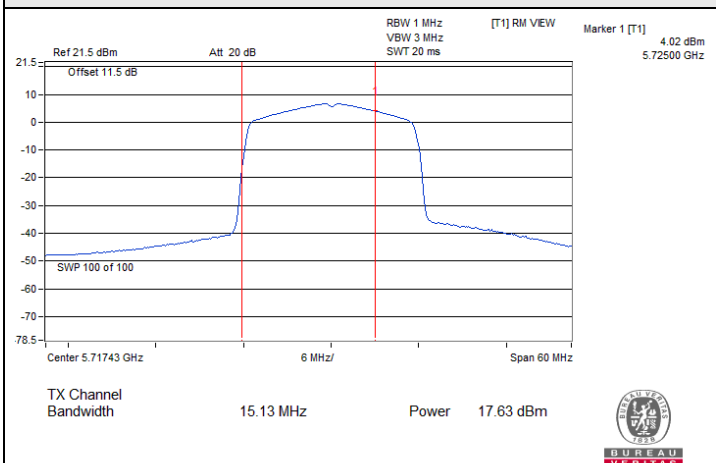
802.11ax (HE20) / Chain 0 : CH 144 (U-NII-2C)



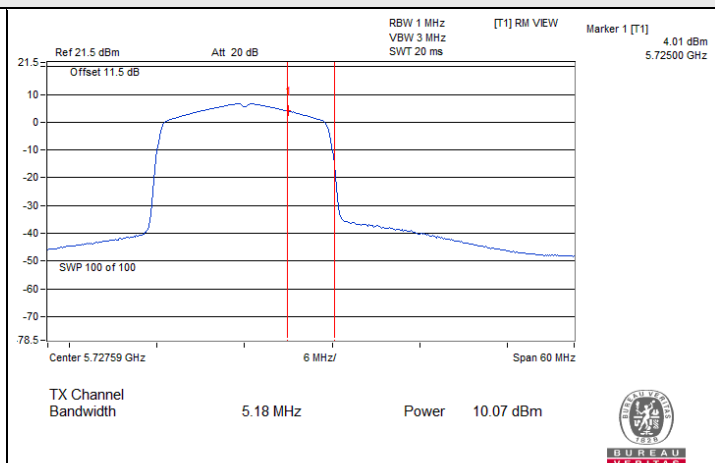
802.11ax (HE20) / Chain 0 : CH 144 (U-NII-3)



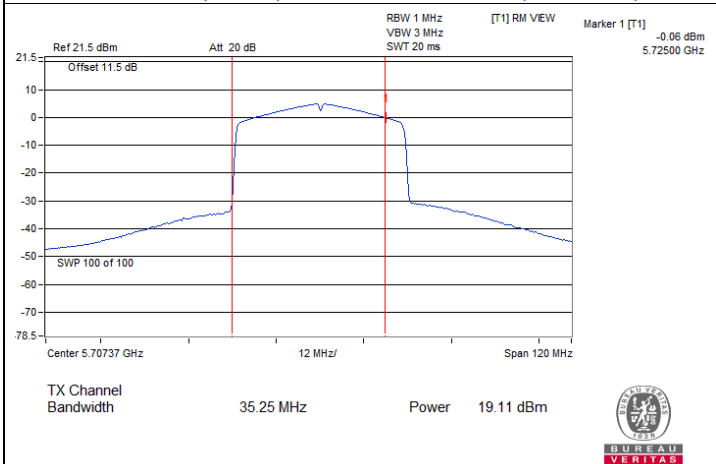
### Spectrum Plot for channel straddling



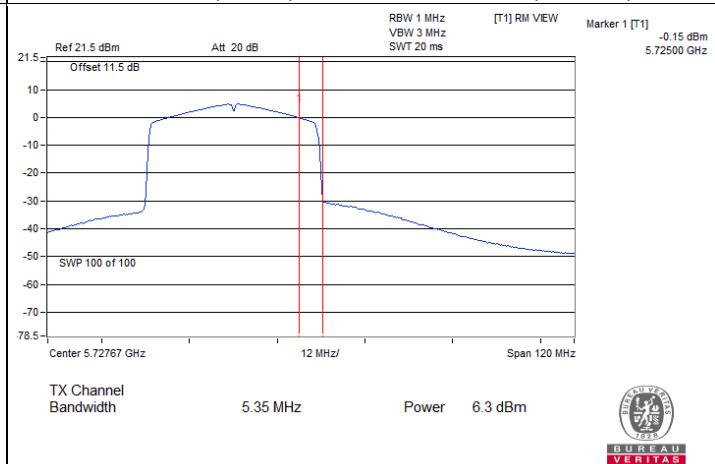
802.11ax (HE20) / Chain 1 : CH 144 (U-NII-2C)



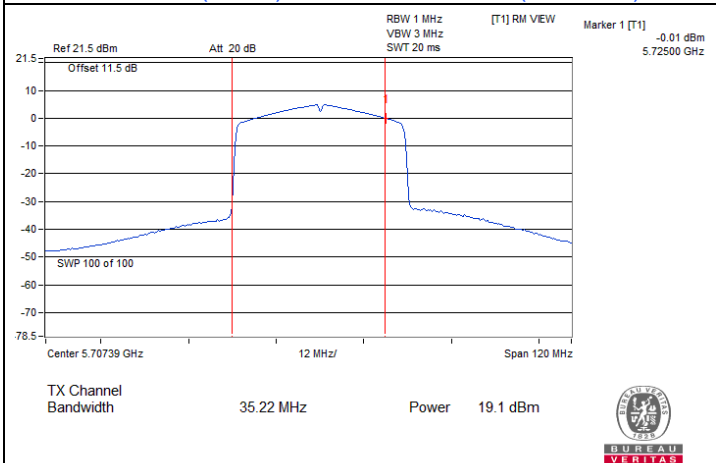
802.11ax (HE20) / Chain 1 : CH 144 (U-NII-3)



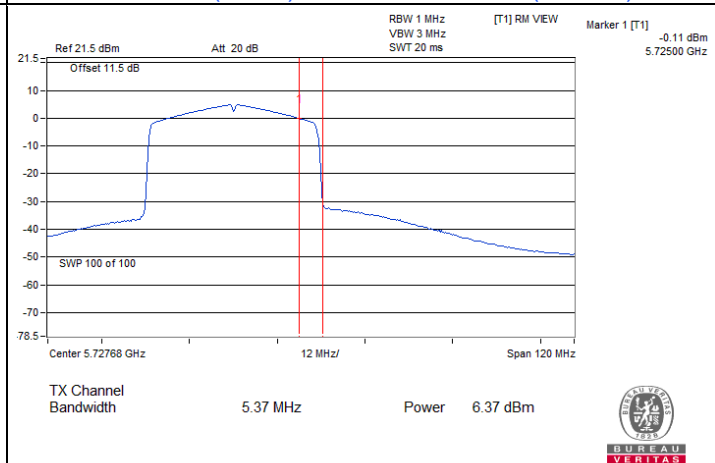
802.11ax (HE40) / Chain 0 : CH 142 (U-NII-2C)



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

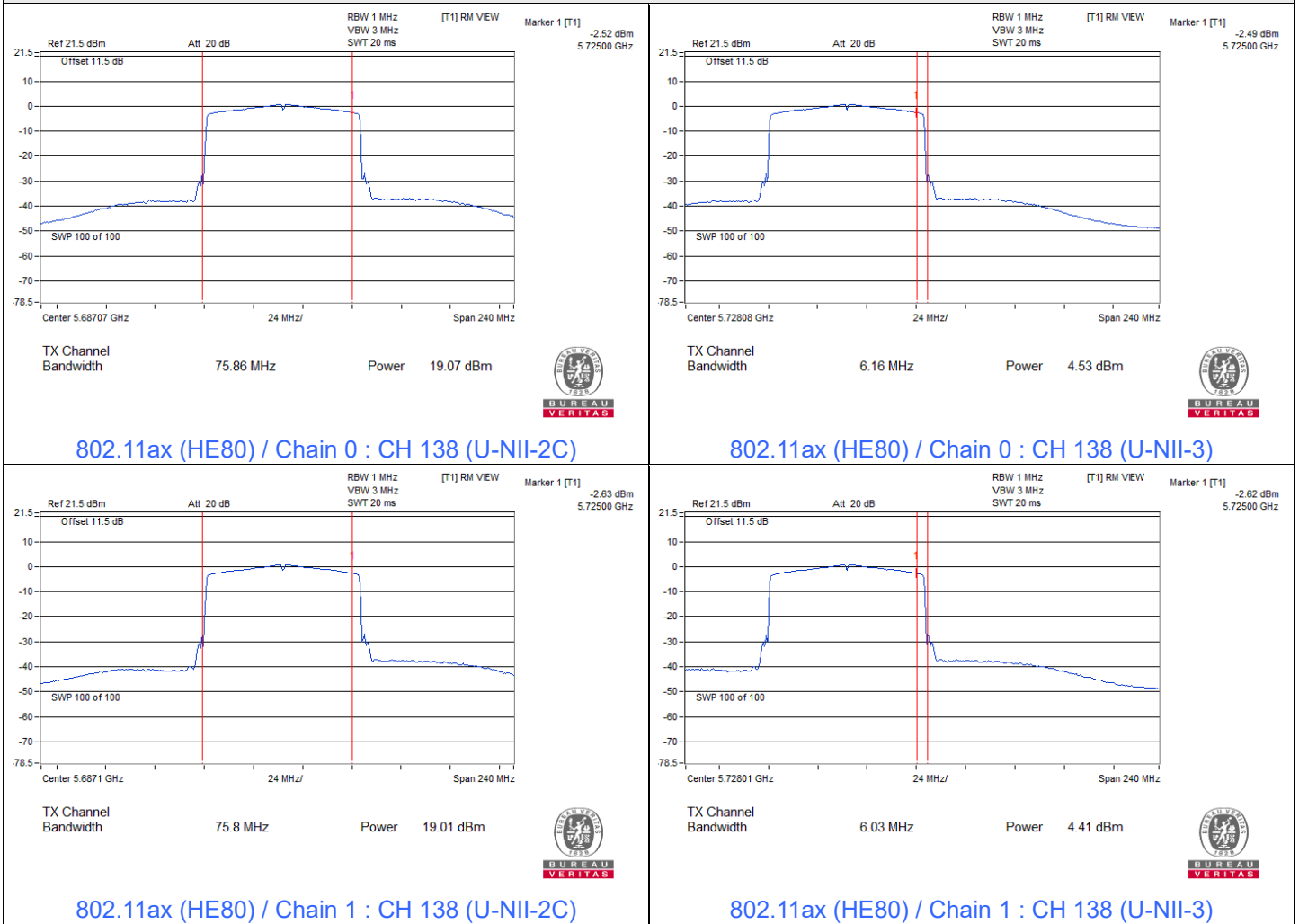


802.11ax (HE40) / Chain 1 : CH 142 (U-NII-2C)



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

### Spectrum Plot for channel straddling





### 7.3 Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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#### 802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1			
36	5180	6.86	6.69	9.79	9.88	Pass
40	5200	6.90	6.69	9.81	9.88	Pass
48	5240	6.91	6.69	9.81	9.88	Pass
52	5260	6.94	6.63	9.80	9.88	Pass
60	5300	6.83	6.72	9.79	9.88	Pass
64	5320	6.81	6.66	9.75	9.88	Pass
100	5500	6.79	6.66	9.74	9.88	Pass
116	5580	6.89	6.66	9.79	9.88	Pass
140	5700	6.54	6.33	9.45	9.88	Pass
144 (U-NII-2C)	5720	6.86	6.69	9.79	9.88	Pass

#### Notes:

- 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.
- Directional gain =  $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-1, the directional gain is 7.12 dBi > 6dBi, so the power density limit shall be reduced to  $11-(7.12-6) = 9.88$  dBm/MHz.
- For U-NII-2A, the directional gain is 7.12 dBi > 6 dBi, so the power density limit shall be reduced to  $11-(7.12-6) = 9.88$  dBm/MHz.
- For U-NII-2C, the directional gain is 7.12 dBi > 6 dBi, so the power density limit shall be reduced to  $11-(7.12-6) = 9.88$  dBm/MHz.

**802.11ax (HE20)**

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1			
36	5180	6.90	6.71	9.82	9.88	Pass
40	5200	6.86	6.68	9.78	9.88	Pass
48	5240	6.92	6.65	9.80	9.88	Pass
52	5260	6.93	6.66	9.81	9.88	Pass
60	5300	6.87	6.68	9.79	9.88	Pass
64	5320	6.87	6.68	9.79	9.88	Pass
100	5500	6.86	6.66	9.77	9.88	Pass
116	5580	6.83	6.69	9.77	9.88	Pass
140	5700	4.85	4.64	7.76	9.88	Pass
144 (U-NII-2C)	5720	6.89	6.61	9.76	9.88	Pass

**Notes:**

- 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.
- Directional gain =  $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-1, the directional gain is 7.12 dBi > 6dBi, so the power density limit shall be reduced to  $11-(7.12-6) = 9.88$  dBm/MHz.
- For U-NII-2A, the directional gain is 7.12 dBi > 6 dBi, so the power density limit shall be reduced to  $11-(7.12-6) = 9.88$  dBm/MHz.
- For U-NII-2C, the directional gain is 7.12 dBi > 6 dBi, so the power density limit shall be reduced to  $11-(7.12-6) = 9.88$  dBm/MHz.

**802.11ax (HE40)**

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1			
38	5190	4.55	4.47	7.52	9.88	Pass
46	5230	5.31	5.23	8.28	9.88	Pass
54	5270	5.29	5.18	8.25	9.88	Pass
62	5310	3.76	3.70	6.74	9.88	Pass
102	5510	2.34	2.26	5.31	9.88	Pass
110	5550	4.82	4.72	7.78	9.88	Pass
134	5670	4.71	4.63	7.68	9.88	Pass
142 (U-NII-2C)	5710	4.86	4.63	7.76	9.88	Pass

**Notes:**

- 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.
- Directional gain =  $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-1, the directional gain is 7.12 dBi > 6dBi, so the power density limit shall be reduced to  $11-(7.12-6) = 9.88$  dBm/MHz.
- For U-NII-2A, the directional gain is 7.12 dBi > 6 dBi, so the power density limit shall be reduced to  $11-(7.12-6) = 9.88$  dBm/MHz.
- For U-NII-2C, the directional gain is 7.12 dBi > 6 dBi, so the power density limit shall be reduced to  $11-(7.12-6) = 9.88$  dBm/MHz.

**802.11ax (HE80)**

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1			
42	5210	0.42	0.35	3.40	9.88	Pass
58	5290	0.19	0.15	3.18	9.88	Pass
106	5530	-0.24	-0.37	2.71	9.88	Pass
122	5610	0.11	0.02	3.08	9.88	Pass
138 (U-NII-2C)	5690	0.82	0.74	3.79	9.88	Pass

**Notes:**

- 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.
- Directional gain =  $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-1, the directional gain is 7.12 dBi > 6dBi, so the power density limit shall be reduced to  $11-(7.12-6) = 9.88$  dBm/MHz.
- For U-NII-2A, the directional gain is 7.12 dBi > 6 dBi, so the power density limit shall be reduced to  $11-(7.12-6) = 9.88$  dBm/MHz.
- For U-NII-2C, the directional gain is 7.12 dBi > 6 dBi, so the power density limit shall be reduced to  $11-(7.12-6) = 9.88$  dBm/MHz.

**802.11a**

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
Chain 0	144 (U-NII-3)	5720	-4.1	-1.88	3.01	1.13	28.88	Pass
	149	5745	4.94	7.16	3.01	10.17	28.88	Pass
	157	5785	4.73	6.95	3.01	9.96	28.88	Pass
	165	5825	4.65	6.87	3.01	9.88	28.88	Pass
Chain 1	144 (U-NII-3)	5720	-4.42	-2.2	3.01	0.81	28.88	Pass
	149	5745	4.58	6.8	3.01	9.81	28.88	Pass
	157	5785	4.47	6.69	3.01	9.7	28.88	Pass
	165	5825	4.36	6.58	3.01	9.59	28.88	Pass

**Notes:**

1. Method E) 2) c) Measure and add 10 log(NANT) dB of KDB 662911 is using for calculating total power density.
2. Directional gain =  $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. For U-NII-3, the directional gain is 7.12 dBi > 6 dBi, so the power density limit shall be reduced to  $30 - (7.12 - 6) = 28.88$  dBm/500kHz.

**802.11ax (HE20)**

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
Chain 0	144 (U-NII-3)	5720	-4.9	-2.68	3.01	0.33	28.88	Pass
	149	5745	3.46	5.68	3.01	8.69	28.88	Pass
	157	5785	3.48	5.7	3.01	8.71	28.88	Pass
	165	5825	3.27	5.49	3.01	8.5	28.88	Pass
Chain 1	144 (U-NII-3)	5720	-5.34	-3.12	3.01	-0.11	28.88	Pass
	149	5745	3.19	5.41	3.01	8.42	28.88	Pass
	157	5785	3.07	5.29	3.01	8.3	28.88	Pass
	165	5825	3.08	5.3	3.01	8.31	28.88	Pass

**Notes:**

1. Method E) 2) c) Measure and add 10 log(NANT) dB of KDB 662911 is using for calculating total power density.
2. Directional gain =  $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. For U-NII-3, the directional gain is 7.12 dBi > 6 dBi, so the power density limit shall be reduced to  $30 - (7.12 - 6) = 28.88$  dBm/500kHz.

802.11ax (HE40)

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
Chain 0	142 (U-NII-3)	5710	-9.3	-7.08	3.01	-4.07	28.88	Pass
	151	5755	0.74	2.96	3.01	5.97	28.88	Pass
	159	5795	0.8	3.02	3.01	6.03	28.88	Pass
Chain 1	142 (U-NII-3)	5710	-9.36	-7.14	3.01	-4.13	28.88	Pass
	151	5755	0.38	2.6	3.01	5.61	28.88	Pass
	159	5795	0.19	2.41	3.01	5.42	28.88	Pass

Notes:

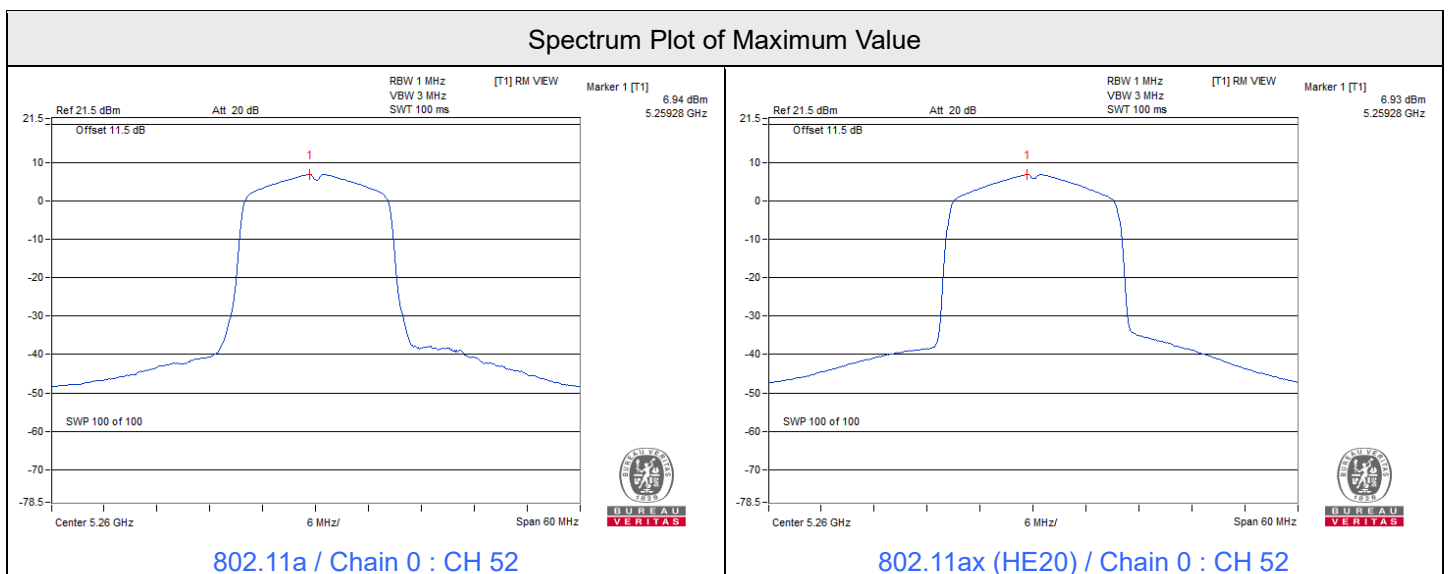
- Method E) 2) c) Measure and add 10 log(NANT) dB of KDB 662911 is using for calculating total power density.
- Directional gain =  $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-3, the directional gain is 7.12 dBi > 6 dBi, so the power density limit shall be reduced to  $30 - (7.12 - 6) = 28.88 \text{ dBm/500kHz}$ .

802.11ax (HE80)

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
Chain 0	138 (U-NII-3)	5690	-11.66	-9.44	3.01	-6.43	28.88	Pass
	155	5775	-8.67	-6.45	3.01	-3.44	28.88	Pass
Chain 1	138 (U-NII-3)	5690	-11.9	-9.68	3.01	-6.67	28.88	Pass
	155	5775	-8.74	-6.52	3.01	-3.51	28.88	Pass

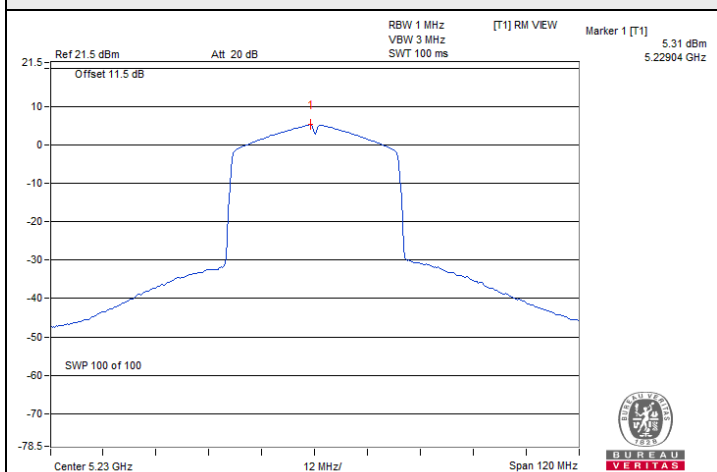
Notes:

- Method E) 2) c) Measure and add 10 log(NANT) dB of KDB 662911 is using for calculating total power density.
- Directional gain =  $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-3, the directional gain is 7.12 dBi > 6 dBi, so the power density limit shall be reduced to  $30 - (7.12 - 6) = 28.88 \text{ dBm/500kHz}$ .

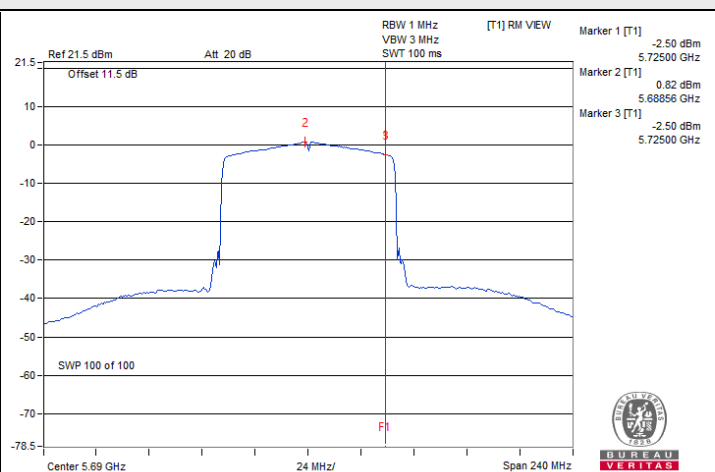




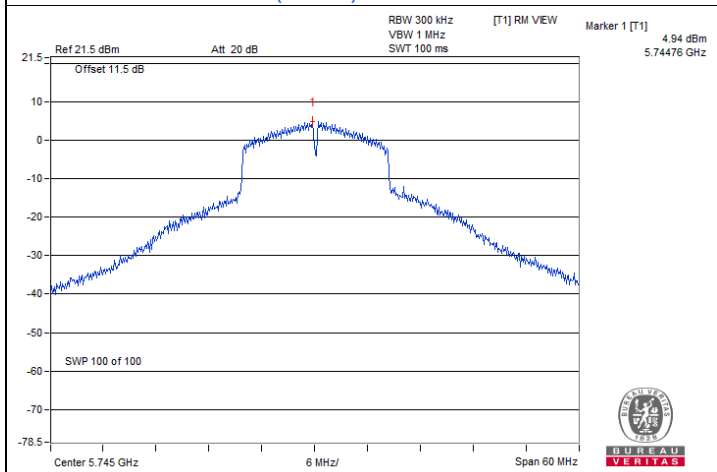
### Spectrum Plot of Maximum Value



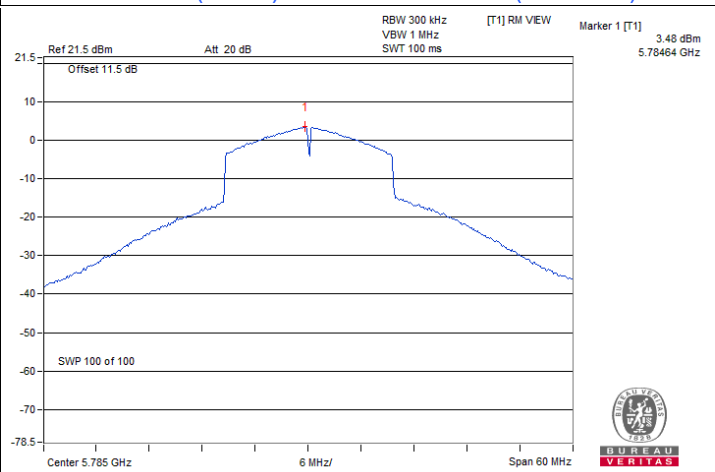
802.11ax (HE40) / Chain 0 : CH 46



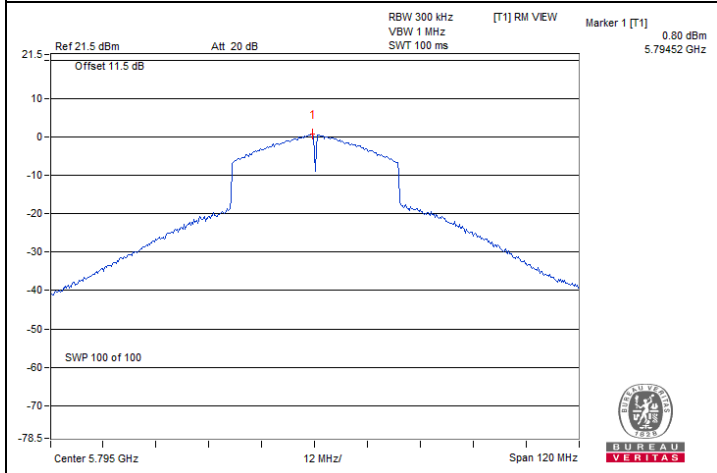
802.11ax (HE80) / Chain 0 : CH 138 (U-NII-2C)



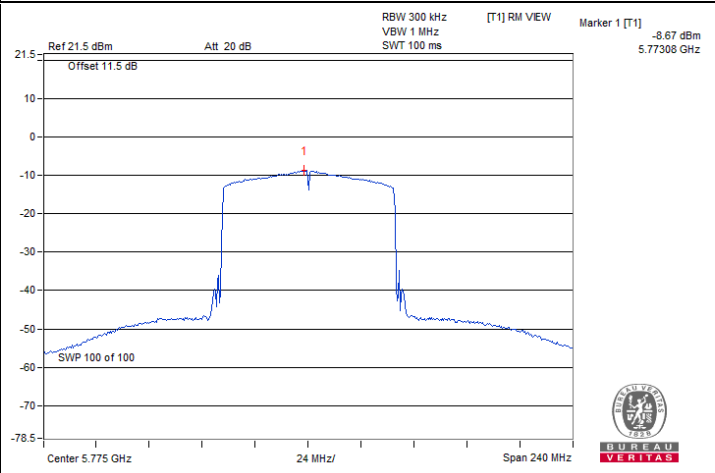
802.11a / Chain 0 : CH 149



802.11ax (HE20) / Chain 0 : CH 157



802.11ax (HE40) / Chain 0 : CH 159



802.11ax (HE80) / Chain 0 : CH 155

#### 7.4 6 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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##### 802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
144 (U-NII-3)	5720	2.61	2.62	0.5	Pass
149	5745	15.11	15.04	0.5	Pass
157	5785	15.15	15.14	0.5	Pass
165	5825	15.13	15.12	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	2.61	2.63	0.5	Pass
149	5745	15.14	15.10	0.5	Pass
157	5785	15.12	15.14	0.5	Pass
165	5825	15.12	15.13	0.5	Pass

##### 802.11ax (HE40)

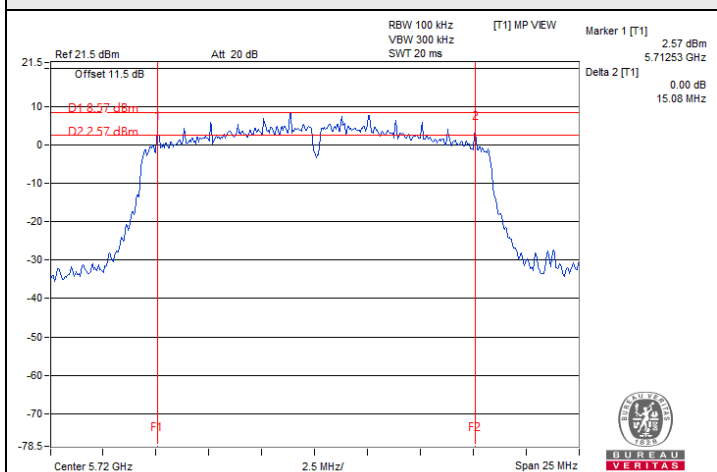
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
142 (U-NII-3)	5710	2.60	2.62	0.5	Pass
151	5755	30.13	30.18	0.5	Pass
159	5795	30.15	28.83	0.5	Pass

##### 802.11ax (HE80)

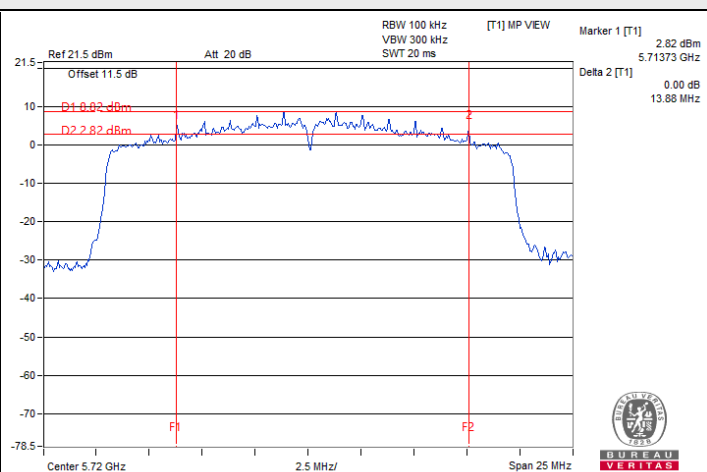
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
138 (U-NII-3)	5690	2.72	2.70	0.5	Pass
155	5775	75.49	75.17	0.5	Pass



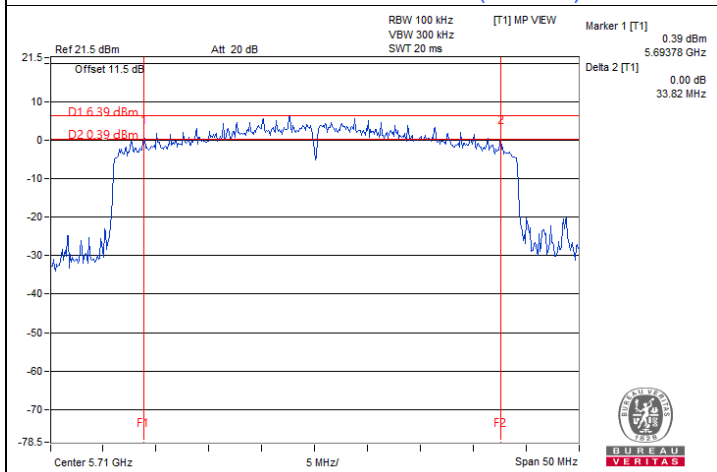
### Spectrum Plot of Minimum Value



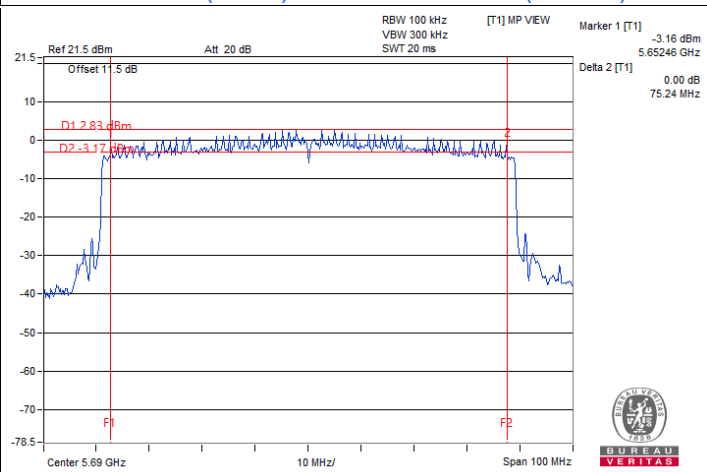
802.11a / Chain 0 : CH 144 (U-NII-3)



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



802.11ax (HE40) / Chain 0 : 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, 76% RH	Tested By:	Dalen Dai
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### 802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.20	16.20
40	5200	16.20	16.20
48	5240	16.20	16.20
52	5260	16.20	16.08
60	5300	16.20	16.20
64	5320	16.20	16.08
100	5500	16.20	16.20
116	5580	16.20	16.20
140	5700	16.20	16.20
144 (U-NII-2C)	5720	13.04	13.04
144 (U-NII-3)	5720	3.16	3.16
149	5745	24.60	23.40
157	5785	24.48	23.28
165	5825	24.48	23.04

### 802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	18.60	18.60
40	5200	18.48	18.72
48	5240	18.60	18.60
52	5260	18.60	18.60
60	5300	18.60	18.60
64	5320	18.72	18.60
100	5500	18.60	18.72
116	5580	18.60	18.60
140	5700	18.60	18.72
144 (U-NII-2C)	5720	14.36	14.24
144 (U-NII-3)	5720	4.36	4.36
149	5745	24.24	23.28
157	5785	24.24	22.08
165	5825	22.68	21.96

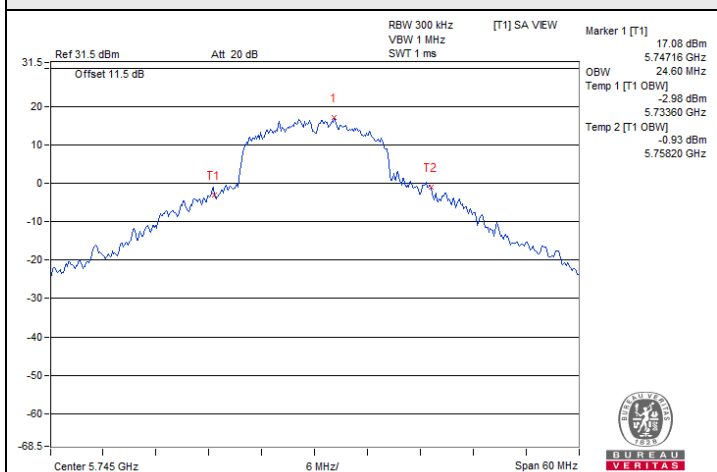
**802.11ax (HE40)**

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	37.44	37.44
46	5230	37.44	37.44
54	5270	37.44	37.44
62	5310	37.44	37.20
102	5510	37.44	37.44
110	5550	37.44	37.44
134	5670	37.44	37.20
142 (U-NII-2C)	5710	33.72	33.72
142 (U-NII-3)	5710	3.72	3.72
151	5755	48.70	48.87
159	5795	48.24	48.24

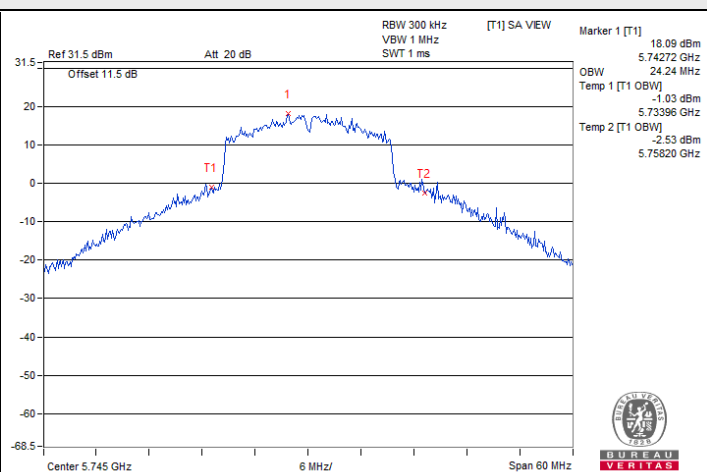
**802.11ax (HE80)**

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	77.76	76.80
58	5290	76.80	76.80
106	5530	76.80	77.28
122	5610	76.80	76.80
138 (U-NII-2C)	5690	73.40	73.40
138 (U-NII-3)	5690	3.40	3.40
155	5775	76.80	76.80

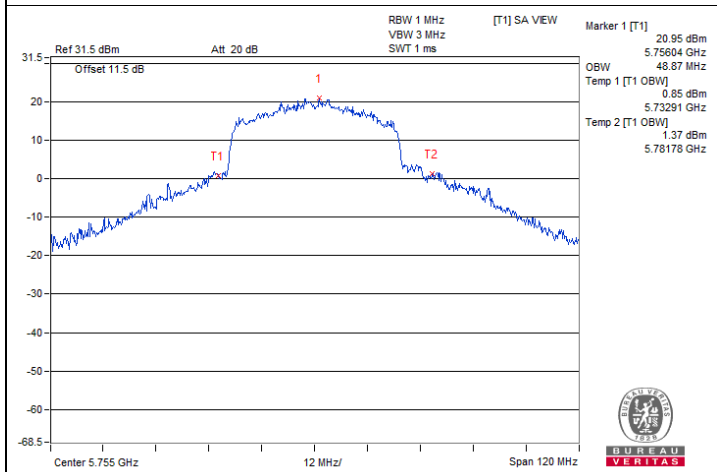
### Spectrum Plot of Maximum Value



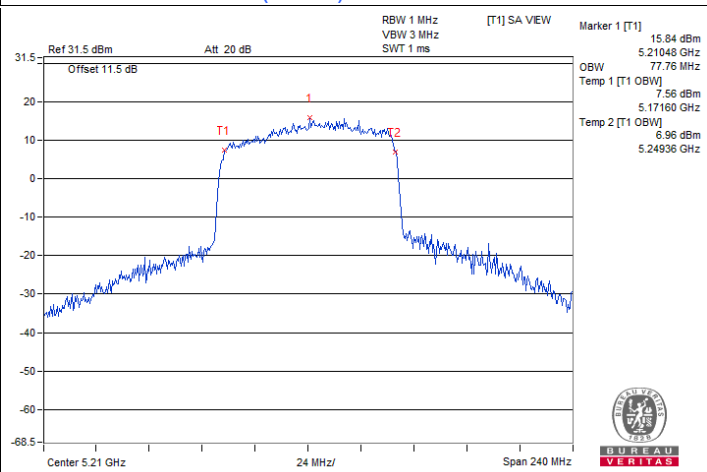
802.11a / Chain 0 : CH 149



802.11ax (HE20) / Chain 0 : CH 149

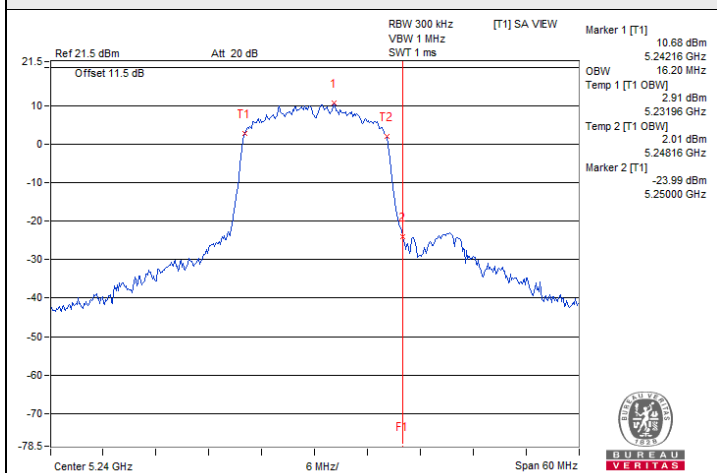


802.11ax (HE40) / Chain 1 : CH 151

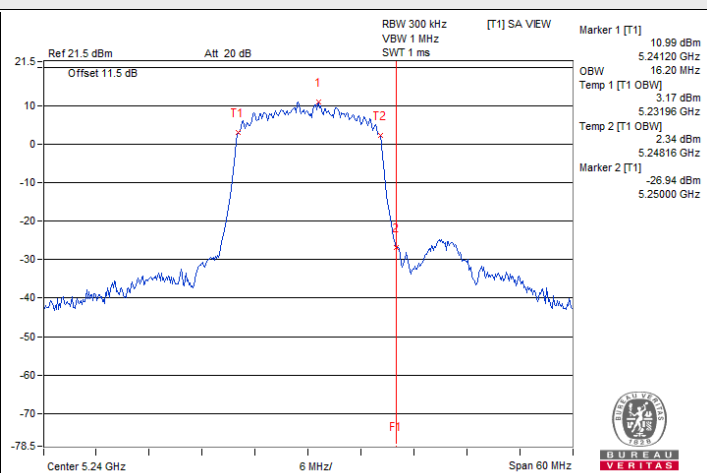


802.11ax (HE80) / Chain 0 : CH 42

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



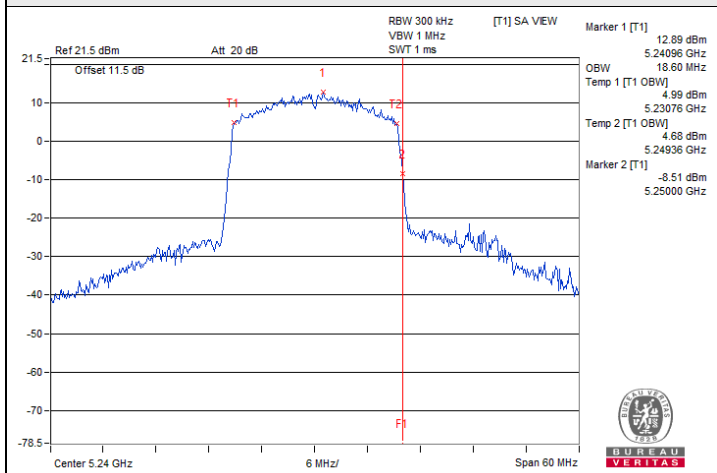
802.11a / Chain 0 : CH 48



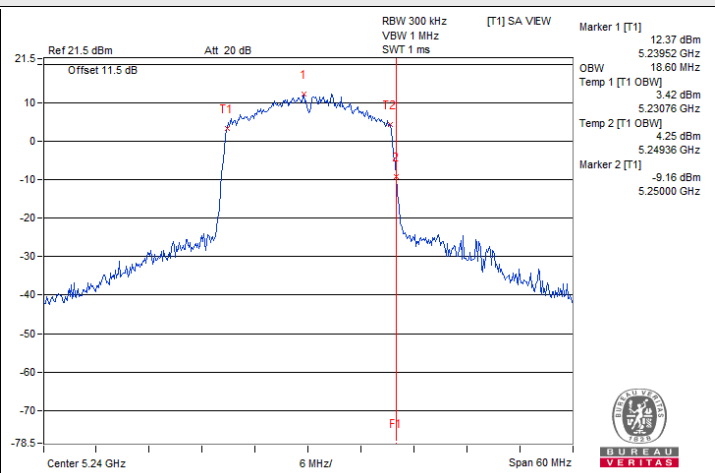
802.11a / Chain 1 : CH 48



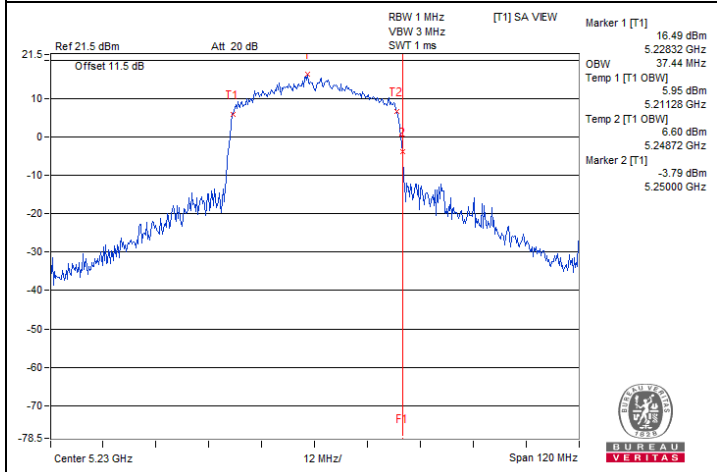
### Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2A)



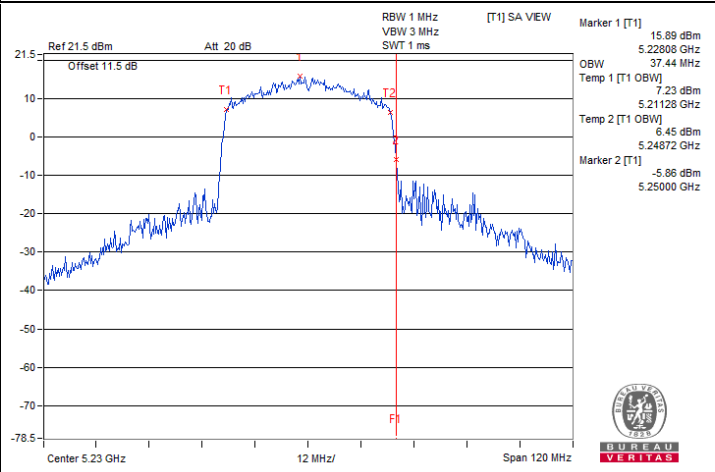
802.11ax (HE20) / Chain 0 : CH 48



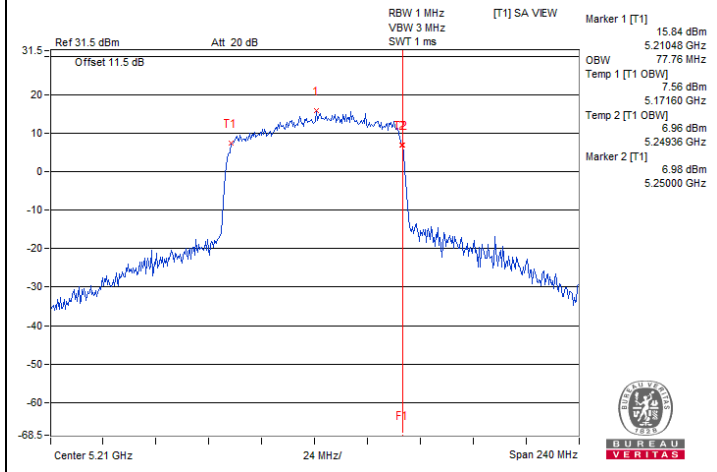
802.11ax (HE20) / Chain 1 : CH 48



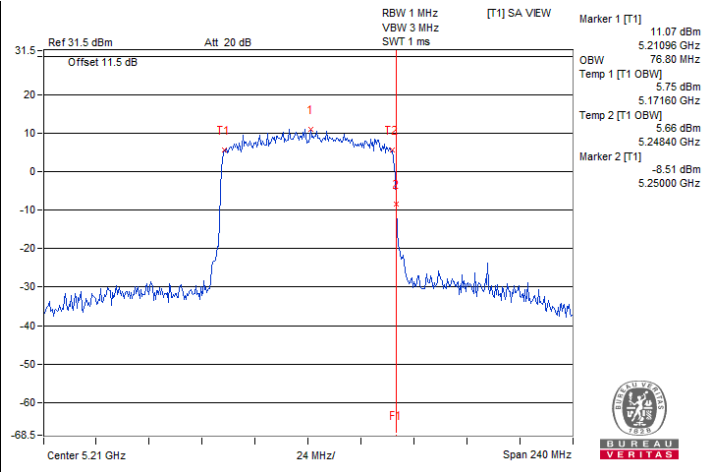
802.11ax (HE40) / Chain 0 : CH 46



802.11ax (HE40) / Chain 1 : CH 46

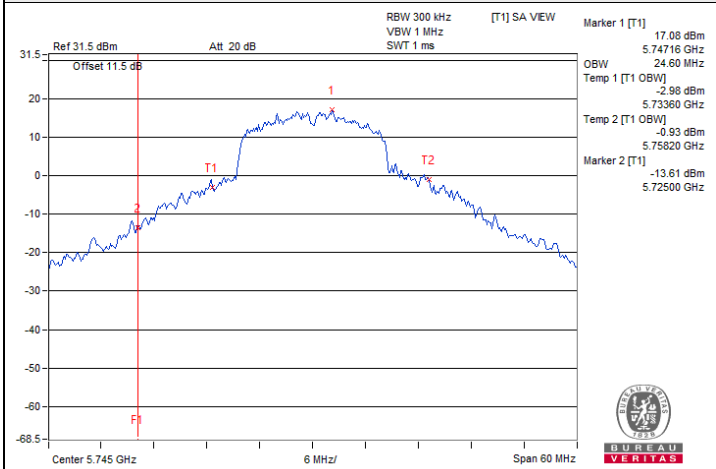


802.11ax (HE80) / Chain 0 : CH 42

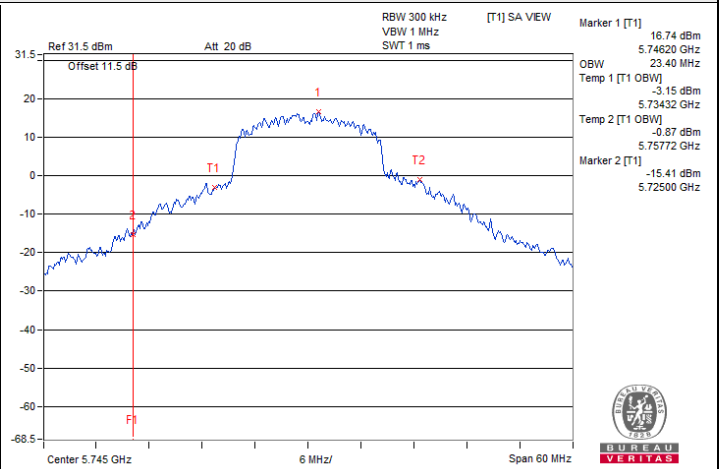


802.11ax (HE80) / Chain 1 : CH 42

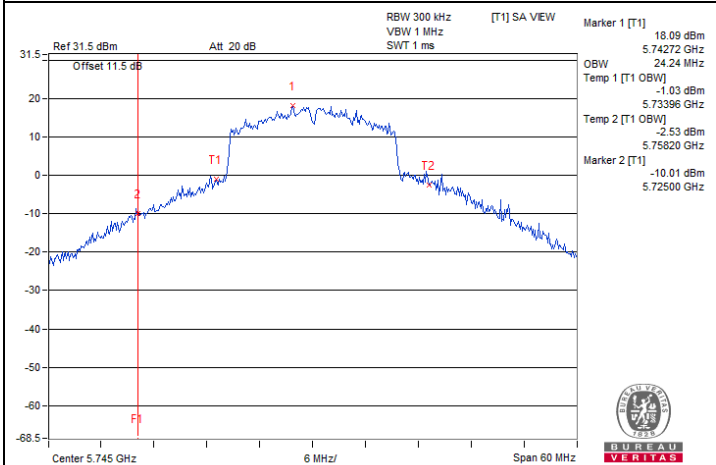
### Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2C)



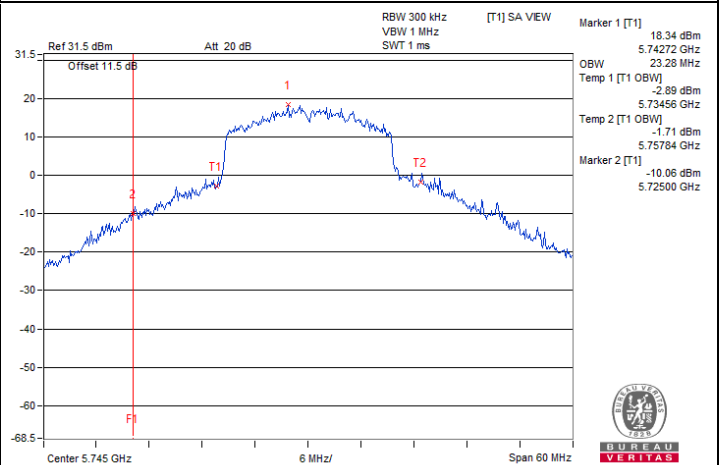
802.11a / Chain 0 : CH 149



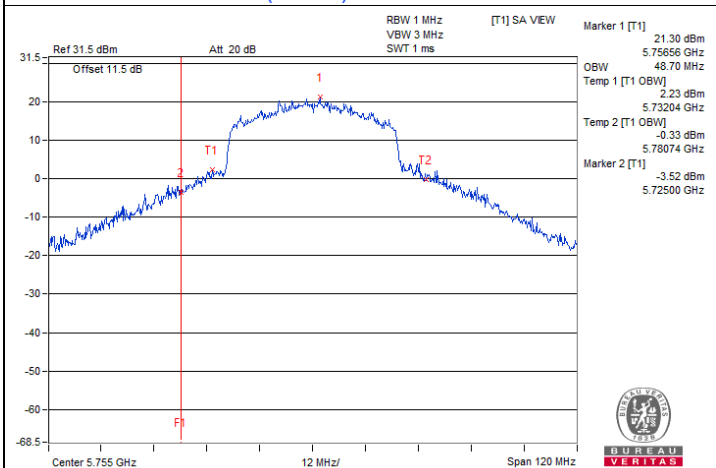
802.11a / Chain 1 : CH 149



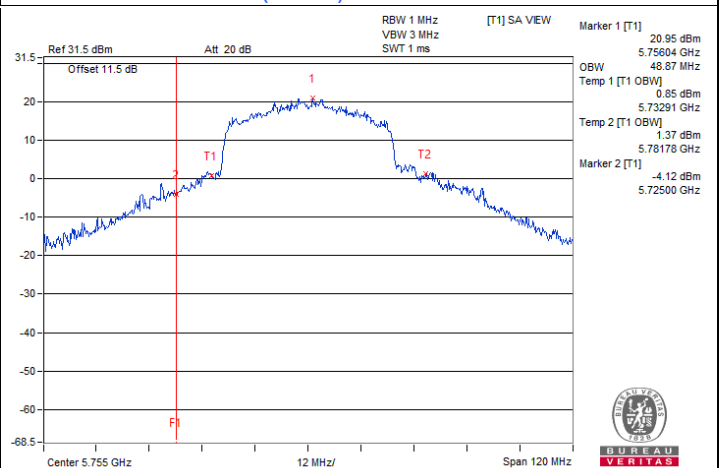
802.11ax (HE20) / Chain 0 : CH 149



802.11ax (HE20) / Chain 1 : CH 149



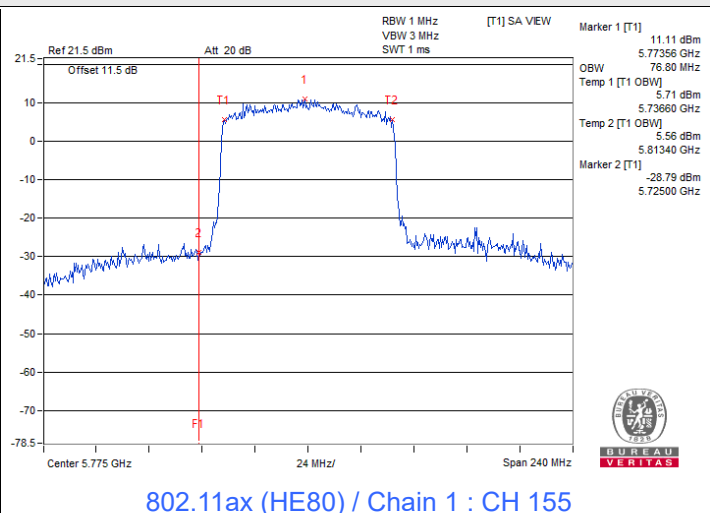
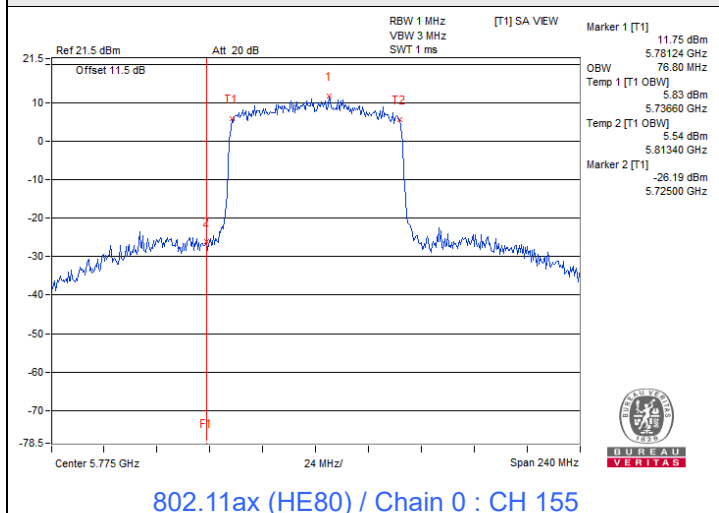
802.11ax (HE40) / Chain 0 : CH 151



802.11ax (HE40) / Chain 1 : CH 151



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



## 7.6 Frequency Stability

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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### Frequency Stability Versus Temperature

Operating Frequency: 5180 MHz

Temp. (°C)	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	5180.0201	Pass	5180.019	Pass	5180.021	Pass	5180.0201	Pass
30	120	5180.0066	Pass	5180.0024	Pass	5180.0059	Pass	5180.0058	Pass
20	120	5179.9971	Pass	5179.9998	Pass	5179.9969	Pass	5179.9981	Pass
10	120	5180.0084	Pass	5180.0101	Pass	5180.0087	Pass	5180.0091	Pass
0	120	5180.0252	Pass	5180.025	Pass	5180.0244	Pass	5180.0262	Pass

### Frequency Stability Versus Voltage

Operating Frequency: 5180 MHz

Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	138	5180.0036	Pass	5180.0058	Pass	5180.003	Pass	5180.0036	Pass
	120	5179.9971	Pass	5179.9998	Pass	5179.9969	Pass	5179.9981	Pass
	102	5179.9914	Pass	5179.9917	Pass	5179.9932	Pass	5179.9901	Pass

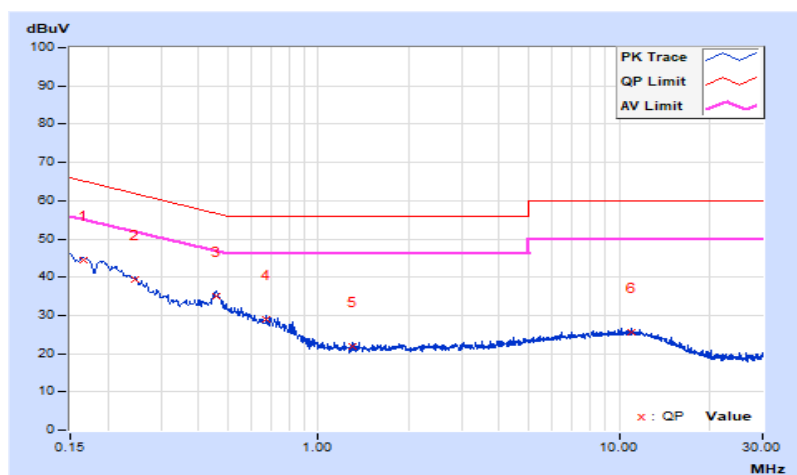
## 7.7 AC Power Conducted Emissions

RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 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	25°C, 75% RH
Tested By	Jed Wu		

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	0.16524	10.07	34.33	17.47	44.40	27.54	65.20	55.20	-20.80	-27.66
2	0.24675	10.14	29.34	16.31	39.48	26.45	61.87	51.87	-22.39	-25.42
<b>3</b>	<b>0.45665</b>	<b>10.23</b>	<b>24.70</b>	<b>19.96</b>	<b>34.93</b>	<b>30.19</b>	<b>56.75</b>	<b>46.75</b>	<b>-21.82</b>	<b>-16.56</b>
4	0.67143	10.28	18.65	9.18	28.93	19.46	56.00	46.00	-27.07	-26.54
5	1.30263	10.38	11.63	5.74	22.01	16.12	56.00	46.00	-33.99	-29.88
6	10.93650	10.73	14.71	8.66	25.44	19.39	60.00	50.00	-34.56	-30.61

### 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



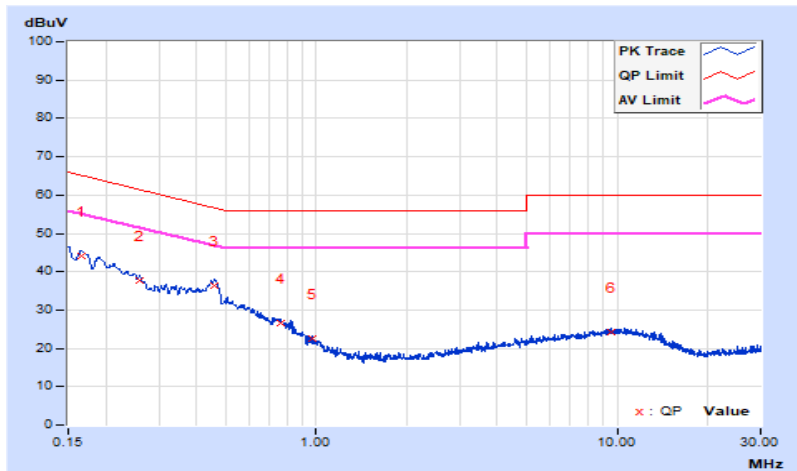


<b>RF Mode</b>	802.11ax (HE40)	<b>Channel</b>	CH 151 : 5755 MHz
<b>Frequency Range</b>	150 kHz ~ 30 MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9 kHz
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 75% RH
<b>Tested By</b>	Jed Wu		

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	0.16524	10.10	34.03	15.40	44.13	25.50	65.20	55.20	-21.07	-29.70
2	0.25885	10.19	27.38	12.45	37.57	22.64	61.47	51.47	-23.90	-28.83
3	0.45786	10.21	25.99	10.67	36.20	20.88	56.73	46.73	-20.53	-25.85
4	0.75975	10.24	16.26	5.50	26.50	15.74	56.00	46.00	-29.50	-30.26
5	0.96660	10.27	12.23	3.70	22.50	13.97	56.00	46.00	-33.50	-32.03
6	9.61331	10.67	13.56	8.65	24.23	19.32	60.00	50.00	-35.77	-30.68

**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



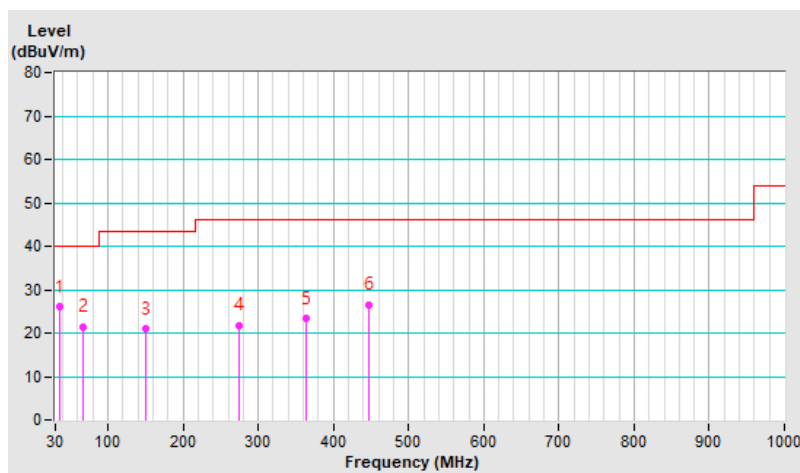
## 7.8 Unwanted Emissions below 1 GHz

RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 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, 70% RH
Tested By	Jed Wu		

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	36.74	26.0 QP	40.0	-14.0	1.31 H	343	35.9	-9.9
2	66.57	21.5 QP	40.0	-18.5	1.20 H	331	31.6	-10.1
3	150.81	20.9 QP	43.5	-22.6	1.54 H	266	29.0	-8.1
4	273.47	21.7 QP	46.0	-24.3	1.43 H	107	28.6	-6.9
5	364.17	23.3 QP	46.0	-22.7	1.72 H	74	28.2	-4.9
6	447.88	26.4 QP	46.0	-19.6	1.93 H	74	29.1	-2.7

### Remarks:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- Margin value = Emission Level – Limit value
- The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
- 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.

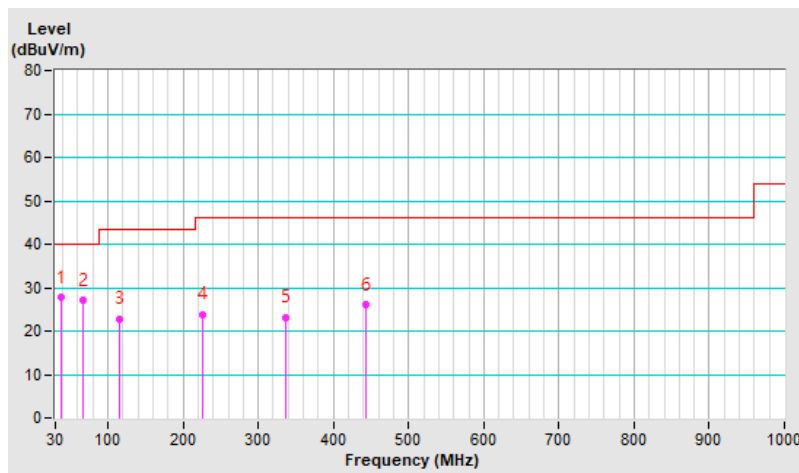


<b>RF Mode</b>	802.11ax (HE40)	<b>Channel</b>	CH 151 : 5755 MHz
<b>Frequency Range</b>	30 MHz ~ 1 GHz	<b>Detector Function &amp; Bandwidth</b>	QP: RB=120kHz, DET=Quasi-Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	23°C, 70% RH
<b>Tested By</b>	Jed Wu		

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	37.42	27.7 QP	40.0	-12.3	1.39 V	295	37.5	-9.8
2	66.62	27.0 QP	40.0	-13.0	1.62 V	65	37.1	-10.1
3	114.49	22.8 QP	43.5	-20.7	1.85 V	332	34.3	-11.5
4	226.72	23.8 QP	46.0	-22.2	1.79 V	130	34.5	-10.7
5	336.67	23.1 QP	46.0	-22.9	1.42 V	173	28.3	-5.2
6	443.95	26.0 QP	46.0	-20.0	1.16 V	106	28.7	-2.7

**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 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

<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 36 : 5180 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	64.2 PK	74.0	-9.8	2.89 H	237	50.9	13.3
2	5150.00	45.0 AV	54.0	-9.0	2.89 H	237	31.7	13.3
3	*5180.00	114.4 PK			2.89 H	237	101.0	13.4
4	*5180.00	104.0 AV			2.89 H	237	90.6	13.4
5	#10360.00	61.3 PK	68.2	-6.9	2.31 H	203	37.3	24.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	65.0 PK	74.0	-9.0	3.92 V	2	51.7	13.3
2	5150.00	46.1 AV	54.0	-7.9	3.92 V	2	32.8	13.3
3	*5180.00	115.6 PK			3.92 V	2	102.2	13.4
4	*5180.00	105.9 AV			3.92 V	2	92.5	13.4
5	#10360.00	61.9 PK	68.2	-6.3	3.56 V	30	37.9	24.0

### 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.



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 40 : 5200 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

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	*5200.00	114.5 PK			1.71 H	238	100.9	13.6
2	*5200.00	103.8 AV			1.71 H	238	90.2	13.6
3	#10400.00	61.3 PK	68.2	-6.9	1.13 H	204	37.2	24.1
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	*5200.00	115.7 PK			2.74 V	1	102.1	13.6
2	*5200.00	105.7 AV			2.74 V	1	92.1	13.6
3	#10400.00	61.9 PK	68.2	-6.3	2.38 V	29	37.8	24.1

**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.



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 48 : 5240 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	115.3 PK			1.94 H	270	101.5	13.8
2	*5240.00	105.1 AV			1.94 H	270	91.3	13.8
3	5350.00	55.9 PK	74.0	-18.1	1.94 H	270	41.6	14.3
4	5350.00	42.0 AV	54.0	-12.0	1.94 H	270	27.7	14.3
5	#10480.00	61.0 PK	68.2	-7.2	1.36 H	236	36.8	24.2

**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	*5240.00	116.5 PK			2.97 V	35	102.7	13.8
2	*5240.00	105.7 AV			2.97 V	35	91.9	13.8
3	5350.00	56.1 PK	74.0	-17.9	2.97 V	35	41.8	14.3
4	5350.00	42.3 AV	54.0	-11.7	2.97 V	35	28.0	14.3
5	#10480.00	61.6 PK	68.2	-6.6	2.61 V	63	37.4	24.2

**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.



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 52 : 5260 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.0 PK	74.0	-19.0	2.66 H	177	41.7	13.3
2	5150.00	41.8 AV	54.0	-12.2	2.66 H	177	28.5	13.3
3	*5260.00	114.6 PK			2.66 H	177	100.5	14.1
4	*5260.00	104.5 AV			2.66 H	177	90.4	14.1
5	#10520.00	61.0 PK	68.2	-7.2	2.08 H	143	36.7	24.3

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.4 PK	74.0	-18.6	3.69 V	302	42.1	13.3
2	5150.00	42.2 AV	54.0	-11.8	3.69 V	302	28.9	13.3
3	*5260.00	115.7 PK			3.69 V	302	101.6	14.1
4	*5260.00	105.6 AV			3.69 V	302	91.5	14.1
5	#10520.00	61.6 PK	68.2	-6.6	3.33 V	330	37.3	24.3

**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.
6. " # ": The radiated frequency is out of the restricted band.



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 60 : 5300 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	114.9 PK			1.76 H	281	100.5	14.4
2	*5300.00	104.7 AV			1.76 H	281	90.3	14.4
3	10600.00	61.1 PK	74.0	-12.9	1.28 H	247	36.8	24.3
4	10600.00	47.7 AV	54.0	-6.3	1.28 H	247	23.4	24.3
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	*5300.00	116.1 PK			2.79 V	46	101.7	14.4
2	*5300.00	106.0 AV			2.79 V	46	91.6	14.4
3	10600.00	61.7 PK	74.0	-12.3	2.43 V	74	37.4	24.3
4	10600.00	48.3 AV	54.0	-5.7	2.43 V	74	24.0	24.3

**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.





<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 64 : 5320 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

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	115.6 PK			1.74 H	247	101.2	14.4
2	*5320.00	105.4 AV			1.74 H	247	91.0	14.4
3	5350.00	56.0 PK	74.0	-18.0	1.74 H	247	41.7	14.3
4	5350.00	42.3 AV	54.0	-11.7	1.74 H	247	28.0	14.3
5	10640.00	61.0 PK	74.0	-13.0	1.30 H	213	36.2	24.8
6	10640.00	47.6 AV	54.0	-6.4	1.30 H	213	22.8	24.8
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	*5320.00	116.7 PK			2.77 V	12	102.3	14.4
2	*5320.00	106.5 AV			2.77 V	12	92.1	14.4
3	5350.00	56.6 PK	74.0	-17.4	2.77 V	12	42.3	14.3
4	5350.00	42.6 AV	54.0	-11.4	2.77 V	12	28.3	14.3
5	10640.00	61.6 PK	74.0	-12.4	2.41 V	40	36.8	24.8
6	10640.00	48.2 AV	54.0	-5.8	2.41 V	40	23.4	24.8

**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.

<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 100 : 5500 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	58.4 PK	74.0	-15.6	1.81 H	247	44.1	14.3
2	5460.00	42.7 AV	54.0	-11.3	1.81 H	247	28.4	14.3
3	#5470.00	64.9 PK	68.2	-3.3	1.81 H	247	50.6	14.3
4	*5500.00	113.6 PK			1.81 H	247	99.3	14.3
5	*5500.00	103.5 AV			1.81 H	247	89.2	14.3
6	11000.00	61.0 PK	74.0	-13.0	1.33 H	213	35.6	25.4
7	11000.00	47.8 AV	54.0	-6.2	1.33 H	213	22.4	25.4

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	59.1 PK	74.0	-14.9	2.84 V	12	44.8	14.3
2	5460.00	43.3 AV	54.0	-10.7	2.84 V	12	29.0	14.3
3	#5470.00	65.3 PK	68.2	-2.9	2.84 V	12	51.0	14.3
4	*5500.00	114.6 PK			2.84 V	12	100.3	14.3
5	*5500.00	104.8 AV			2.84 V	12	90.5	14.3
6	11000.00	61.6 PK	74.0	-12.4	2.48 V	40	36.2	25.4
7	11000.00	48.4 AV	54.0	-5.6	2.48 V	40	23.0	25.4

**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.



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 116 : 5580 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	113.3 PK			1.53 H	244	99.2	14.1
2	*5580.00	103.5 AV			1.53 H	244	89.4	14.1
3	11160.00	61.1 PK	74.0	-12.9	1.05 H	210	34.7	26.4
4	11160.00	47.9 AV	54.0	-6.1	1.05 H	210	21.5	26.4

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	114.5 PK			2.56 V	9	100.4	14.1
2	*5580.00	104.8 AV			2.56 V	9	90.7	14.1
3	11160.00	61.7 PK	74.0	-12.3	2.20 V	37	35.3	26.4
4	11160.00	48.5 AV	54.0	-5.5	2.20 V	37	22.1	26.4

**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.



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 140 : 5700 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**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	112.0 PK			1.78 H	238	98.1	13.9
2	*5700.00	101.9 AV			1.78 H	238	88.0	13.9
3	#5725.00	66.2 PK	68.2	-2.0	1.78 H	238	52.4	13.8
4	11400.00	60.5 PK	74.0	-13.5	1.30 H	204	33.7	26.8
5	11400.00	47.3 AV	54.0	-6.7	1.30 H	204	20.5	26.8

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	113.3 PK			2.81 V	3	99.4	13.9
2	*5700.00	103.5 AV			2.81 V	3	89.6	13.9
<b>3</b>	<b>#5725.00</b>	<b>66.7 PK</b>	<b>68.2</b>	<b>-1.5</b>	<b>2.81 V</b>	<b>3</b>	<b>52.9</b>	<b>13.8</b>
4	11400.00	61.1 PK	74.0	-12.9	2.45 V	31	34.3	26.8
5	11400.00	47.9 AV	54.0	-6.1	2.45 V	31	21.1	26.8

**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.



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 144 : 5720 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**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	55.5 PK	68.2	-12.7	3.50 H	237	41.2	14.3
2	*5720.00	112.8 PK			3.50 H	237	98.9	13.9
3	*5720.00	103.0 AV			3.50 H	237	89.1	13.9
4	11440.00	60.8 PK	74.0	-13.2	3.02 H	223	33.6	27.2
5	11440.00	47.6 AV	54.0	-6.4	3.02 H	223	20.4	27.2

**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	56.2 PK	68.2	-12.0	1.15 V	2	41.9	14.3
2	*5720.00	114.2 PK			1.15 V	2	100.3	13.9
3	*5720.00	104.5 AV			1.15 V	2	90.6	13.9
4	11440.00	61.4 PK	74.0	-12.6	1.00 V	28	34.2	27.2
5	11440.00	48.2 AV	54.0	-5.8	1.00 V	28	21.0	27.2

**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.



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 149 : 5745 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5649.60	57.0 PK	68.2	-11.2	1.61 H	307	43.2	13.8
2	*5745.00	117.0 PK			1.61 H	307	103.2	13.8
3	*5745.00	107.3 AV			1.61 H	307	93.5	13.8
4	#5975.20	56.4 PK	68.2	-11.8	1.61 H	307	41.9	14.5
5	11490.00	60.2 PK	74.0	-13.8	1.03 H	273	32.6	27.6
6	11490.00	47.0 AV	54.0	-7.0	1.03 H	273	19.4	27.6

**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	#5646.80	56.1 PK	68.2	-12.1	2.58 V	6	42.3	13.8
2	*5745.00	118.1 PK			2.58 V	6	104.3	13.8
3	*5745.00	108.4 AV			2.58 V	6	94.6	13.8
4	#6000.00	56.2 PK	68.2	-12.0	2.58 V	6	41.7	14.5
5	11490.00	60.8 PK	74.0	-13.2	2.22 V	34	33.2	27.6
6	11490.00	47.6 AV	54.0	-6.4	2.22 V	34	20.0	27.6

**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.



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 157 : 5785 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**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	#5630.00	55.2 PK	68.2	-13.0	1.63 H	310	41.3	13.9
2	*5785.00	117.6 PK			1.63 H	310	103.9	13.7
3	*5785.00	108.0 AV			1.63 H	310	94.3	13.7
4	#5932.80	56.4 PK	68.2	-11.8	1.63 H	310	42.0	14.4
5	11570.00	60.8 PK	74.0	-13.2	1.01 H	276	33.4	27.4
6	11570.00	47.6 AV	54.0	-6.4	1.01 H	276	20.2	27.4

**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	#5610.00	56.4 PK	68.2	-11.8	2.56 V	3	42.5	13.9
2	*5785.00	118.8 PK			2.56 V	3	105.1	13.7
3	*5785.00	109.2 AV			2.56 V	3	95.5	13.7
4	#5997.60	56.9 PK	68.2	-11.3	2.56 V	3	42.4	14.5
5	11570.00	61.4 PK	74.0	-12.6	2.20 V	31	34.0	27.4
6	11570.00	48.2 AV	54.0	-5.8	2.20 V	31	20.8	27.4

**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.



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 165 : 5825 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**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	#5601.20	55.4 PK	68.2	-12.8	1.66 H	304	41.5	13.9
2	*5825.00	117.9 PK			1.66 H	304	104.0	13.9
3	*5825.00	108.4 AV			1.66 H	304	94.5	13.9
4	#5925.60	58.6 PK	68.2	-9.6	1.66 H	304	44.3	14.3
5	11650.00	61.0 PK	74.0	-13.0	1.08 H	270	33.3	27.7
6	11650.00	47.8 AV	54.0	-6.2	1.08 H	270	20.1	27.7

**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	#5628.80	55.6 PK	68.2	-12.6	2.53 V	3	41.7	13.9
2	*5825.00	119.1 PK			2.53 V	3	105.2	13.9
3	*5825.00	109.6 AV			2.53 V	3	95.7	13.9
4	#5932.00	57.6 PK	68.2	-10.6	2.53 V	3	43.2	14.4
5	11650.00	61.6 PK	74.0	-12.4	2.17 V	32	33.9	27.7
6	11650.00	48.4 AV	54.0	-5.6	2.17 V	32	20.7	27.7

**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.



<b>RF Mode</b>	802.11ax (HE20)	<b>Channel</b>	CH 36 : 5180 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	65.8 PK	74.0	-8.2	2.89 H	236	52.5	13.3
2	5150.00	47.2 AV	54.0	-6.8	2.89 H	236	33.9	13.3
3	*5180.00	117.4 PK			2.89 H	236	104.0	13.4
4	*5180.00	104.7 AV			2.89 H	236	91.3	13.4
5	#10360.00	60.3 PK	68.2	-7.9	2.30 H	204	36.3	24.0

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	67.2 PK	74.0	-6.8	3.92 V	3	53.9	13.3
2	5150.00	48.4 AV	54.0	-5.6	3.92 V	3	35.1	13.3
3	*5180.00	118.6 PK			3.92 V	3	105.2	13.4
4	*5180.00	105.9 AV			3.92 V	3	92.5	13.4
5	#10360.00	60.9 PK	68.2	-7.3	3.55 V	29	36.9	24.0

**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.



<b>RF Mode</b>	802.11ax (HE20)	<b>Channel</b>	CH 40 : 5200 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

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	*5200.00	116.7 PK			1.71 H	236	103.1	13.6
2	*5200.00	103.5 AV			1.71 H	236	89.9	13.6
3	#10400.00	61.3 PK	68.2	-6.9	1.14 H	202	37.2	24.1
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	*5200.00	117.9 PK			2.74 V	2	104.3	13.6
2	*5200.00	105.3 AV			2.74 V	2	91.7	13.6
3	#10400.00	61.9 PK	68.2	-6.3	2.38 V	29	37.8	24.1

**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.



<b>RF Mode</b>	802.11ax (HE20)	<b>Channel</b>	CH 48 : 5240 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	116.7 PK			1.95 H	278	102.9	13.8
2	*5240.00	104.0 AV			1.95 H	278	90.2	13.8
3	5350.00	54.8 PK	74.0	-19.2	1.95 H	278	40.5	14.3
4	5350.00	41.9 AV	54.0	-12.1	1.95 H	278	27.6	14.3
5	#10480.00	61.3 PK	68.2	-6.9	1.37 H	244	37.1	24.2

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	*5240.00	118.0 PK			2.98 V	43	104.2	13.8
2	*5240.00	105.0 AV			2.98 V	43	91.2	13.8
3	5350.00	55.6 PK	74.0	-18.4	2.98 V	43	41.3	14.3
4	5350.00	42.6 AV	54.0	-11.4	2.98 V	43	28.3	14.3
5	#10480.00	61.9 PK	68.2	-6.3	2.62 V	70	37.7	24.2

**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.

<b>RF Mode</b>	802.11ax (HE20)	<b>Channel</b>	CH 52 : 5260 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	54.8 PK	74.0	-19.2	1.79 H	239	41.5	13.3
2	5150.00	41.5 AV	54.0	-12.5	1.79 H	239	28.2	13.3
3	*5260.00	118.0 PK			1.79 H	239	103.9	14.1
4	*5260.00	105.6 AV			1.79 H	239	91.5	14.1
5	#10520.00	60.6 PK	68.2	-7.6	1.35 H	205	36.3	24.3

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.1 PK	74.0	-18.9	2.82 V	4	41.8	13.3
2	5150.00	41.8 AV	54.0	-12.2	2.82 V	4	28.5	13.3
3	*5260.00	119.3 PK			2.82 V	4	105.2	14.1
4	*5260.00	106.8 AV			2.82 V	4	92.7	14.1
5	#10520.00	61.2 PK	68.2	-7.0	2.46 V	32	36.9	24.3

**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.
6. " # ": The radiated frequency is out of the restricted band.



<b>RF Mode</b>	802.11ax (HE20)	<b>Channel</b>	CH 60 : 5300 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

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	117.6 PK			1.68 H	239	103.2	14.4
2	*5300.00	105.0 AV			1.68 H	239	90.6	14.4
3	10600.00	60.4 PK	74.0	-13.6	1.16 H	196	36.1	24.3
4	10600.00	47.0 AV	54.0	-7.0	1.16 H	196	22.7	24.3
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	*5300.00	118.8 PK			2.73 V	1	104.4	14.4
2	*5300.00	106.3 AV			2.73 V	1	91.9	14.4
3	10600.00	61.0 PK	74.0	-13.0	2.37 V	29	36.7	24.3
4	10600.00	47.6 AV	54.0	-6.4	2.37 V	29	23.3	24.3

**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.



<b>RF Mode</b>	802.11ax (HE20)	<b>Channel</b>	CH 64 : 5320 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	116.4 PK			2.14 H	274	102.0	14.4
2	*5320.00	103.8 AV			2.14 H	274	89.4	14.4
3	5350.00	55.5 PK	74.0	-18.5	2.14 H	274	41.2	14.3
4	5350.00	42.4 AV	54.0	-11.6	2.14 H	274	28.1	14.3
5	10640.00	61.2 PK	74.0	-12.8	1.66 H	240	36.4	24.8
6	10640.00	47.8 AV	54.0	-6.2	1.66 H	240	23.0	24.8

**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	*5320.00	117.5 PK			3.17 V	39	103.1	14.4
2	*5320.00	105.0 AV			3.17 V	39	90.6	14.4
3	5350.00	55.7 PK	74.0	-18.3	3.17 V	39	41.4	14.3
4	5350.00	42.6 AV	54.0	-11.4	3.17 V	39	28.3	14.3
5	10640.00	61.8 PK	74.0	-12.2	2.81 V	67	37.0	24.8
6	10640.00	48.4 AV	54.0	-5.6	2.81 V	67	23.6	24.8

**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.



<b>RF Mode</b>	802.11ax (HE20)	<b>Channel</b>	CH 100 : 5500 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	56.1 PK	74.0	-17.9	1.78 H	168	41.8	14.3
2	5460.00	42.8 AV	54.0	-11.2	1.78 H	168	28.5	14.3
3	#5470.00	60.6 PK	68.2	-7.6	1.78 H	168	46.3	14.3
4	*5500.00	113.8 PK			1.78 H	168	99.5	14.3
5	*5500.00	101.4 AV			1.78 H	168	87.1	14.3
6	11000.00	61.2 PK	74.0	-12.8	1.36 H	134	35.8	25.4
7	11000.00	48.0 AV	54.0	-6.0	1.36 H	134	22.6	25.4

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	57.1 PK	74.0	-16.9	2.81 V	293	42.8	14.3
2	5460.00	43.1 AV	54.0	-10.9	2.81 V	293	28.8	14.3
3	#5470.00	62.7 PK	68.2	-5.5	2.81 V	293	48.4	14.3
4	*5500.00	114.8 PK			2.81 V	293	100.5	14.3
5	*5500.00	102.4 AV			2.81 V	293	88.1	14.3
6	11000.00	61.8 PK	74.0	-12.2	2.45 V	321	36.4	25.4
7	11000.00	48.6 AV	54.0	-5.4	2.45 V	321	23.2	25.4

**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.



<b>RF Mode</b>	802.11ax (HE20)	<b>Channel</b>	CH 116 : 5580 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	113.4 PK			1.50 H	165	99.3	14.1
2	*5580.00	100.8 AV			1.50 H	165	86.7	14.1
3	11160.00	61.1 PK	74.0	-12.9	1.02 H	131	34.7	26.4
4	11160.00	47.9 AV	54.0	-6.1	1.02 H	131	21.5	26.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	114.5 PK			2.53 V	290	100.4	14.1
2	*5580.00	102.1 AV			2.53 V	290	88.0	14.1
3	11160.00	61.7 PK	74.0	-12.3	2.17 V	318	35.3	26.4
4	11160.00	48.5 AV	54.0	-5.5	2.17 V	318	22.1	26.4

**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.





<b>RF Mode</b>	802.11ax (HE20)	<b>Channel</b>	CH 140 : 5700 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	111.2 PK			2.83 H	231	97.3	13.9
2	*5700.00	99.1 AV			2.83 H	231	85.2	13.9
3	#5725.00	65.1 PK	68.2	-3.1	2.83 H	231	51.3	13.8
4	11400.00	61.3 PK	74.0	-12.7	2.35 H	229	34.5	26.8
5	11400.00	48.1 AV	54.0	-5.9	2.35 H	229	21.3	26.8

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	112.8 PK			3.86 V	356	98.9	13.9
2	*5700.00	100.6 AV			3.86 V	356	86.7	13.9
<b>3</b>	<b>#5725.00</b>	<b>66.7 PK</b>	<b>68.2</b>	<b>-1.5</b>	<b>3.86 V</b>	<b>356</b>	<b>52.9</b>	<b>13.8</b>
4	11400.00	61.9 PK	74.0	-12.1	3.50 V	24	35.1	26.8
5	11400.00	48.7 AV	54.0	-5.3	3.50 V	24	21.9	26.8

**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.



<b>RF Mode</b>	802.11ax (HE20)	<b>Channel</b>	CH 144 : 5720 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

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	56.1 PK	68.2	-12.1	1.43 H	232	41.8	14.3
2	*5720.00	116.1 PK			1.43 H	232	102.2	13.9
3	*5720.00	104.0 AV			1.43 H	232	90.1	13.9
4	11440.00	61.0 PK	74.0	-13.0	1.71 H	198	33.8	27.2
5	11440.00	47.8 AV	54.0	-6.2	1.71 H	198	20.6	27.2

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	56.5 PK	68.2	-11.7	2.46 V	357	42.2	14.3
2	*5720.00	117.4 PK			2.46 V	357	103.5	13.9
3	*5720.00	105.2 AV			2.46 V	357	91.3	13.9
4	11440.00	61.6 PK	74.0	-12.4	2.10 V	25	34.4	27.2
5	11440.00	48.4 AV	54.0	-5.6	2.10 V	25	21.2	27.2

**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.



<b>RF Mode</b>	802.11ax (HE20)	<b>Channel</b>	CH 149 : 5745 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**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	#5646.40	56.6 PK	68.2	-11.6	2.08 H	316	42.8	13.8
2	*5745.00	118.1 PK			2.08 H	316	104.3	13.8
3	*5745.00	106.2 AV			2.08 H	316	92.4	13.8
4	#5942.00	56.5 PK	68.2	-11.7	2.08 H	316	42.1	14.4
5	11490.00	61.4 PK	74.0	-12.6	1.50 H	282	33.8	27.6
6	11490.00	48.2 AV	54.0	-5.8	1.50 H	282	20.6	27.6

**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	#5647.20	59.4 PK	68.2	-8.8	3.05 V	15	45.6	13.8
2	*5745.00	119.5 PK			3.05 V	15	105.7	13.8
3	*5745.00	107.6 AV			3.05 V	15	93.8	13.8
4	#5974.00	56.6 PK	68.2	-11.6	3.05 V	15	42.1	14.5
5	11490.00	62.0 PK	74.0	-12.0	2.69 V	44	34.4	27.6
6	11490.00	48.8 AV	54.0	-5.2	2.69 V	44	21.2	27.6

**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.



<b>RF Mode</b>	802.11ax (HE20)	<b>Channel</b>	CH 157 : 5785 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**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	#5630.80	55.7 PK	68.2	-12.5	2.34 H	236	41.8	13.9
2	*5785.00	117.2 PK			2.34 H	236	103.5	13.7
3	*5785.00	105.5 AV			2.34 H	236	91.8	13.7
4	#5931.60	56.3 PK	68.2	-11.9	2.34 H	236	41.9	14.4
5	11570.00	60.5 PK	74.0	-13.5	1.76 H	202	33.1	27.4
6	11570.00	47.3 AV	54.0	-6.7	1.76 H	202	19.9	27.4

**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	#5650.00	55.4 PK	68.2	-12.8	3.31 V	77	41.6	13.8
2	*5785.00	118.5 PK			3.31 V	77	104.8	13.7
3	*5785.00	106.4 AV			3.31 V	77	92.7	13.7
4	#5942.80	57.3 PK	68.2	-10.9	3.31 V	77	42.9	14.4
5	11570.00	61.1 PK	74.0	-12.9	2.95 V	105	33.7	27.4
6	11570.00	47.9 AV	54.0	-6.1	2.95 V	105	20.5	27.4

**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.



<b>RF Mode</b>	802.11ax (HE20)	<b>Channel</b>	CH 165 : 5825 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**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	#5630.00	55.1 PK	68.2	-13.1	3.00 H	4	41.2	13.9
2	*5825.00	116.9 PK			3.00 H	4	103.0	13.9
3	*5825.00	105.2 AV			3.00 H	4	91.3	13.9
4	#5926.00	58.6 PK	68.2	-9.6	3.00 H	4	44.3	14.3
5	11650.00	60.2 PK	74.0	-13.8	2.42 H	330	32.5	27.7
6	11650.00	47.0 AV	54.0	-7.0	2.42 H	330	19.3	27.7

**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	#5646.40	55.3 PK	68.2	-12.9	3.97 V	63	41.5	13.8
2	*5825.00	118.1 PK			3.97 V	63	104.2	13.9
3	*5825.00	106.3 AV			3.97 V	63	92.4	13.9
4	#5925.60	58.6 PK	68.2	-9.6	3.97 V	63	44.3	14.3
5	11650.00	60.8 PK	74.0	-13.2	3.61 V	119	33.1	27.7
6	11650.00	47.6 AV	54.0	-6.4	3.61 V	119	19.9	27.7

**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.



<b>RF Mode</b>	802.11ax (HE40)	<b>Channel</b>	CH 38 : 5190 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

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	70.5 PK	74.0	-3.5	2.90 H	288	57.2	13.3
2	5150.00	51.8 AV	54.0	-2.2	2.90 H	288	38.5	13.3
3	*5190.00	113.8 PK			2.90 H	288	100.3	13.5
4	*5190.00	101.5 AV			2.90 H	288	88.0	13.5
5	#10380.00	60.5 PK	68.2	-7.7	2.32 H	254	36.5	24.0

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	71.1 PK	74.0	-2.9	3.93 V	53	57.8	13.3
2	<b>5150.00</b>	<b>52.5 AV</b>	<b>54.0</b>	<b>-1.5</b>	<b>3.93 V</b>	<b>53</b>	<b>39.2</b>	<b>13.3</b>
3	*5190.00	114.9 PK			3.93 V	53	101.4	13.5
4	*5190.00	102.7 AV			3.93 V	53	89.2	13.5
5	#10380.00	61.1 PK	68.2	-7.1	3.57 V	81	37.1	24.0

**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.



<b>RF Mode</b>	802.11ax (HE40)	<b>Channel</b>	CH 46 : 5230 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

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	*5230.00	114.3 PK			1.93 H	279	100.5	13.8
2	*5230.00	102.0 AV			1.93 H	279	88.2	13.8
3	5350.00	55.8 PK	74.0	-18.2	1.93 H	279	41.5	14.3
4	5350.00	42.3 AV	54.0	-11.7	1.93 H	279	28.0	14.3
5	#10460.00	60.9 PK	68.2	-7.3	1.35 H	245	36.8	24.1

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	*5230.00	115.5 PK			2.97 V	44	101.7	13.8
2	*5230.00	102.9 AV			2.97 V	44	89.1	13.8
3	5350.00	56.2 PK	74.0	-17.8	2.97 V	44	41.9	14.3
4	5350.00	42.6 AV	54.0	-11.4	2.97 V	44	28.3	14.3
5	#10460.00	61.5 PK	68.2	-6.7	2.61 V	72	37.4	24.1

**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.



<b>RF Mode</b>	802.11ax (HE40)	<b>Channel</b>	CH 54 : 5270 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.9 PK	74.0	-18.1	2.75 H	284	42.6	13.3
2	5150.00	41.5 AV	54.0	-12.5	2.75 H	284	28.2	13.3
3	*5270.00	115.5 PK			2.75 H	284	101.3	14.2
4	*5270.00	103.3 AV			2.75 H	284	89.1	14.2
5	#10540.00	60.4 PK	68.2	-7.8	2.27 H	250	36.1	24.3

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.2 PK	74.0	-17.8	3.78 V	49	42.9	13.3
2	5150.00	41.8 AV	54.0	-12.2	3.78 V	49	28.5	13.3
3	*5270.00	116.6 PK			3.78 V	49	102.4	14.2
4	*5270.00	104.3 AV			3.78 V	49	90.1	14.2
5	#10540.00	61.0 PK	68.2	-7.2	3.42 V	77	36.7	24.3

**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.
6. " # ": The radiated frequency is out of the restricted band.





<b>RF Mode</b>	802.11ax (HE40)	<b>Channel</b>	CH 62 : 5310 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**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	113.4 PK			2.16 H	282	99.0	14.4
2	*5310.00	101.2 AV			2.16 H	282	86.8	14.4
3	5350.00	71.3 PK	74.0	-2.7	2.16 H	282	57.0	14.3
4	5350.00	50.3 AV	54.0	-3.7	2.16 H	282	36.0	14.3
5	10620.00	60.7 PK	74.0	-13.3	1.68 H	248	36.1	24.6
6	10620.00	47.3 AV	54.0	-6.7	1.68 H	248	22.7	24.6

**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	*5310.00	114.4 PK			3.19 V	47	100.0	14.4
2	*5310.00	102.2 AV			3.19 V	47	87.8	14.4
<b>3</b>	<b>5350.00</b>	<b>72.5 PK</b>	<b>74.0</b>	<b>-1.5</b>	<b>3.19 V</b>	<b>47</b>	<b>58.2</b>	<b>14.3</b>
4	5350.00	51.8 AV	54.0	-2.2	3.19 V	47	37.5	14.3
5	10620.00	61.3 PK	74.0	-12.7	2.83 V	75	36.7	24.6
6	10620.00	47.9 AV	54.0	-6.1	2.83 V	75	23.3	24.6

**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.



<b>RF Mode</b>	802.11ax (HE40)	<b>Channel</b>	CH 102 : 5510 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**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	61.7 PK	74.0	-12.3	1.03 H	239	47.4	14.3
2	5460.00	46.1 AV	54.0	-7.9	1.03 H	239	31.8	14.3
3	#5470.00	65.8 PK	68.2	-2.4	1.03 H	239	51.5	14.3
4	*5510.00	110.8 PK			1.03 H	239	96.5	14.3
5	*5510.00	98.7 AV			1.03 H	239	84.4	14.3
6	11020.00	61.0 PK	74.0	-13.0	1.36 H	205	35.4	25.6
7	11020.00	47.8 AV	54.0	-6.2	1.36 H	205	22.2	25.6

**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	62.7 PK	74.0	-11.3	1.00 V	4	48.4	14.3
2	5460.00	47.0 AV	54.0	-7.0	1.00 V	4	32.7	14.3
3	#5470.00	66.7 PK	68.2	-1.5	1.00 V	4	52.4	14.3
4	*5510.00	112.0 PK			1.00 V	4	97.7	14.3
5	*5510.00	99.8 AV			1.00 V	4	85.5	14.3
6	11020.00	61.6 PK	74.0	-12.4	1.64 V	32	36.0	25.6
7	11020.00	48.4 AV	54.0	-5.6	1.64 V	32	22.8	25.6

**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.



<b>RF Mode</b>	802.11ax (HE40)	<b>Channel</b>	CH 110 : 5550 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5550.00	113.9 PK			1.43 H	238	99.5	14.4
2	*5550.00	101.4 AV			1.43 H	238	87.0	14.4
3	11100.00	62.0 PK	74.0	-12.0	1.71 H	204	35.8	26.2
4	11100.00	48.8 AV	54.0	-5.2	1.71 H	204	22.6	26.2

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	*5550.00	114.9 PK			2.46 V	3	100.5	14.4
2	*5550.00	102.7 AV			2.46 V	3	88.3	14.4
3	11100.00	62.6 PK	74.0	-11.4	2.10 V	31	36.4	26.2
4	11100.00	49.4 AV	54.0	-4.6	2.10 V	31	23.2	26.2

**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.



<b>RF Mode</b>	802.11ax (HE40)	<b>Channel</b>	CH 134 : 5670 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

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	111.0 PK			1.36 H	230	97.1	13.9
2	*5670.00	98.9 AV			1.36 H	230	85.0	13.9
3	#5725.00	64.6 PK	68.2	-3.6	1.36 H	230	50.8	13.8
4	11340.00	61.8 PK	74.0	-12.2	1.78 H	196	35.0	26.8
5	11340.00	48.6 AV	54.0	-5.4	1.78 H	196	21.8	26.8

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	*5670.00	112.4 PK			2.39 V	355	98.5	13.9
2	*5670.00	100.3 AV			2.39 V	355	86.4	13.9
<b>3</b>	<b>#5725.00</b>	<b>66.7 PK</b>	<b>68.2</b>	<b>-1.5</b>	<b>2.39 V</b>	<b>355</b>	<b>52.9</b>	<b>13.8</b>
4	11340.00	62.4 PK	74.0	-11.6	2.03 V	23	35.6	26.8
5	11340.00	49.2 AV	54.0	-4.8	2.03 V	23	22.4	26.8

**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.



<b>RF Mode</b>	802.11ax (HE40)	<b>Channel</b>	CH 142 : 5710 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

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	55.7 PK	68.2	-12.5	1.42 H	230	41.4	14.3
2	*5710.00	114.0 PK			1.42 H	230	100.2	13.8
3	*5710.00	101.8 AV			1.42 H	230	88.0	13.8
4	11420.00	60.6 PK	74.0	-13.4	1.72 H	196	33.7	26.9
5	11420.00	47.4 AV	54.0	-6.6	1.72 H	196	20.5	26.9

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	#5470.00	56.3 PK	68.2	-11.9	2.46 V	357	42.0	14.3
2	*5710.00	115.2 PK			2.46 V	357	101.4	13.8
3	*5710.00	103.1 AV			2.46 V	357	89.3	13.8
4	11420.00	61.2 PK	74.0	-12.8	2.11 V	26	34.3	26.9
5	11420.00	48.0 AV	54.0	-6.0	2.11 V	26	21.1	26.9

**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.



<b>RF Mode</b>	802.11ax (HE40)	<b>Channel</b>	CH 151 : 5755 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5649.20	65.1 PK	68.2	-3.1	1.83 H	316	51.3	13.8
2	*5755.00	116.8 PK			1.83 H	316	102.9	13.9
3	*5755.00	104.6 AV			1.83 H	316	90.7	13.9
4	#5931.60	59.1 PK	68.2	-9.1	1.83 H	316	44.7	14.4
5	11510.00	60.2 PK	74.0	-13.8	1.25 H	282	32.5	27.7
6	11510.00	47.0 AV	54.0	-7.0	1.25 H	282	19.3	27.7

**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	#5645.20	66.3 PK	68.2	-1.9	2.80 V	15	52.5	13.8
2	*5755.00	118.1 PK			2.80 V	15	104.2	13.9
3	*5755.00	105.9 AV			2.80 V	15	92.0	13.9
4	#5932.00	58.1 PK	68.2	-10.1	2.80 V	15	43.7	14.4
5	11510.00	60.8 PK	74.0	-13.2	2.00 V	43	33.1	27.7
6	11510.00	47.6 AV	54.0	-6.4	2.00 V	43	19.9	27.7

**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.



<b>RF Mode</b>	802.11ax (HE40)	<b>Channel</b>	CH 159 : 5795 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**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	#5630.00	58.1 PK	68.2	-10.1	1.80 H	318	44.2	13.9
2	*5795.00	116.8 PK			1.80 H	318	103.0	13.8
3	*5795.00	104.8 AV			1.80 H	318	91.0	13.8
4	#5929.60	63.4 PK	68.2	-4.8	1.80 H	318	49.1	14.3
5	11590.00	60.0 PK	74.0	-14.0	1.22 H	284	32.7	27.3
6	11590.00	46.8 AV	54.0	-7.2	1.22 H	284	19.5	27.3

**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	#5649.60	57.0 PK	68.2	-11.2	2.77 V	16	43.2	13.8
2	*5795.00	118.2 PK			2.77 V	16	104.4	13.8
3	*5795.00	106.1 AV			2.77 V	16	92.3	13.8
4	#5929.20	62.8 PK	68.2	-5.4	2.77 V	16	48.5	14.3
5	11590.00	60.6 PK	74.0	-13.4	2.41 V	45	33.3	27.3
6	11590.00	47.4 AV	54.0	-6.6	2.41 V	45	20.1	27.3

**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.
6. " # " : The radiated frequency is out of the restricted band.



<b>RF Mode</b>	802.11ax (HE80)	<b>Channel</b>	CH 42 : 5210 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

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	69.7 PK	74.0	-4.3	2.26 H	238	56.4	13.3
2	5150.00	52.0 AV	54.0	-2.0	2.26 H	238	38.7	13.3
3	*5210.00	109.0 PK			2.26 H	238	95.3	13.7
4	*5210.00	97.2 AV			2.26 H	238	83.5	13.7
5	5350.00	61.9 PK	74.0	-12.1	2.26 H	238	47.6	14.3
6	5350.00	44.5 AV	54.0	-9.5	2.26 H	238	30.2	14.3
7	#10420.00	60.5 PK	68.2	-7.7	1.68 H	204	36.4	24.1
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	70.8 PK	74.0	-3.2	3.29 V	1	57.5	13.3
2	<b>5150.00</b>	<b>52.5 AV</b>	<b>54.0</b>	<b>-1.5</b>	<b>3.29 V</b>	<b>1</b>	<b>39.2</b>	<b>13.3</b>
3	*5210.00	110.0 PK			3.29 V	1	96.3	13.7
4	*5210.00	98.4 AV			3.29 V	1	84.7	13.7
5	5350.00	62.5 PK	74.0	-11.5	3.29 V	1	48.2	14.3
6	5350.00	44.8 AV	54.0	-9.2	3.29 V	1	30.5	14.3
7	#10420.00	61.1 PK	68.2	-7.1	2.93 V	29	37.0	24.1

**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 (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=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24.1°C, 75.3% RH
Tested By	Jed Wu		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.7 PK	74.0	-15.3	1.63 H	238	45.4	13.3
2	5150.00	43.7 AV	54.0	-10.3	1.63 H	238	30.4	13.3
3	*5290.00	111.0 PK			1.63 H	238	96.7	14.3
4	*5290.00	98.8 AV			1.63 H	238	84.5	14.3
5	5350.00	68.5 PK	74.0	-5.5	1.63 H	238	54.2	14.3
6	5350.00	51.4 AV	54.0	-2.6	1.63 H	238	37.1	14.3
7	#10580.00	60.9 PK	68.2	-7.3	1.15 H	204	36.7	24.2

**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	60.5 PK	74.0	-13.5	2.66 V	3	47.2	13.3
2	5150.00	44.6 AV	54.0	-9.4	2.66 V	3	31.3	13.3
3	*5290.00	111.9 PK			2.66 V	3	97.6	14.3
4	*5290.00	99.8 AV			2.66 V	3	85.5	14.3
5	5350.00	69.6 PK	74.0	-4.4	2.66 V	3	55.3	14.3
<b>6</b>	<b>5350.00</b>	<b>52.5 AV</b>	<b>54.0</b>	<b>-1.5</b>	<b>2.66 V</b>	<b>3</b>	<b>38.2</b>	<b>14.3</b>
7	#10580.00	61.5 PK	68.2	-6.7	2.30 V	31	37.3	24.2

**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	802.11ax (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=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24.1°C, 75.3% RH
Tested By	Jed Wu		

**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	66.1 PK	74.0	-7.9	1.15 H	237	51.8	14.3
2	5460.00	49.3 AV	54.0	-4.7	1.15 H	237	35.0	14.3
3	#5470.00	64.7 PK	68.2	-3.5	1.15 H	237	50.4	14.3
4	*5530.00	108.6 PK			1.15 H	237	94.2	14.4
5	*5530.00	97.1 AV			1.15 H	237	82.7	14.4
6	11060.00	60.5 PK	74.0	-13.5	1.79 H	223	34.6	25.9
7	11060.00	47.3 AV	54.0	-6.7	1.79 H	223	21.4	25.9

**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	68.5 PK	74.0	-5.5	2.18 V	2	54.2	14.3
2	5460.00	50.4 AV	54.0	-3.6	2.18 V	2	36.1	14.3
3	#5470.00	66.7 PK	68.2	-1.5	2.18 V	2	52.4	14.3
4	*5530.00	109.7 PK			2.18 V	2	95.3	14.4
5	*5530.00	98.0 AV			2.18 V	2	83.6	14.4
6	11060.00	61.1 PK	74.0	-12.9	1.82 V	30	35.2	25.9
7	11060.00	47.9 AV	54.0	-6.1	1.82 V	30	22.0	25.9

**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.



<b>RF Mode</b>	802.11ax (HE80)	<b>Channel</b>	CH 122 : 5610 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

**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	108.5 PK			1.51 H	236	94.6	13.9
2	*5610.00	96.4 AV			1.51 H	236	82.5	13.9
3	#5725.00	66.1 PK	68.2	-2.1	1.51 H	236	52.3	13.8
4	11220.00	60.6 PK	74.0	-13.4	1.03 H	202	34.0	26.6
5	11220.00	47.4 AV	54.0	-6.6	1.03 H	202	20.8	26.6

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5610.00	109.8 PK			2.54 V	1	95.9	13.9
2	*5610.00	97.7 AV			2.54 V	1	83.8	13.9
<b>3</b>	<b>#5725.00</b>	<b>66.7 PK</b>	<b>68.2</b>	<b>-1.5</b>	<b>2.54 V</b>	<b>1</b>	<b>52.9</b>	<b>13.8</b>
4	11220.00	61.2 PK	74.0	-12.8	2.18 V	29	34.6	26.6
5	11220.00	48.0 AV	54.0	-6.0	2.18 V	29	21.4	26.6

**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.



<b>RF Mode</b>	802.11ax (HE80)	<b>Channel</b>	CH 138 : 5690 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	24.1°C, 75.3% RH
<b>Tested By</b>	Jed Wu		

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	55.3 PK	68.2	-12.9	1.56 H	231	41.0	14.3
2	*5690.00	108.7 PK			1.56 H	231	94.9	13.8
3	*5690.00	96.9 AV			1.56 H	231	83.1	13.8
4	11380.00	60.2 PK	74.0	-13.8	1.08 H	197	33.4	26.8
5	11380.00	47.0 AV	54.0	-7.0	1.08 H	197	20.2	26.8
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	#5470.00	55.6 PK	68.2	-12.6	2.59 V	356	41.3	14.3
2	*5690.00	111.0 PK			2.59 V	356	97.2	13.8
3	*5690.00	98.9 AV			2.59 V	356	85.1	13.8
4	11380.00	60.8 PK	74.0	-13.2	1.98 V	27	34.0	26.8
5	11380.00	47.6 AV	54.0	-6.4	1.98 V	27	20.8	26.8

**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 (HE80)	Channel	CH 155 : 5775 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	24.1°C, 75.3% RH
Tested By	Jed Wu		

**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	#5646.00	63.3 PK	68.2	-4.9	1.82 H	315	49.5	13.8
2	*5775.00	108.9 PK			1.82 H	315	95.1	13.8
3	*5775.00	96.8 AV			1.82 H	315	83.0	13.8
4	#5925.20	66.0 PK	68.2	-2.2	1.82 H	315	51.7	14.3
5	11550.00	60.9 PK	74.0	-13.1	1.24 H	281	33.4	27.5
6	11550.00	47.7 AV	54.0	-6.3	1.24 H	281	20.2	27.5

**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	#5638.80	63.4 PK	68.2	-4.8	2.79 V	15	49.6	13.8
2	*5775.00	110.3 PK			2.79 V	15	96.5	13.8
3	*5775.00	98.3 AV			2.79 V	15	84.5	13.8
<b>4</b>	<b>#5934.40</b>	<b>66.7 PK</b>	<b>68.2</b>	<b>-1.5</b>	<b>2.79 V</b>	<b>15</b>	<b>52.3</b>	<b>14.4</b>
5	11550.00	61.5 PK	74.0	-12.5	2.43 V	43	34.0	27.5
6	11550.00	48.3 AV	54.0	-5.7	2.43 V	43	20.8	27.5

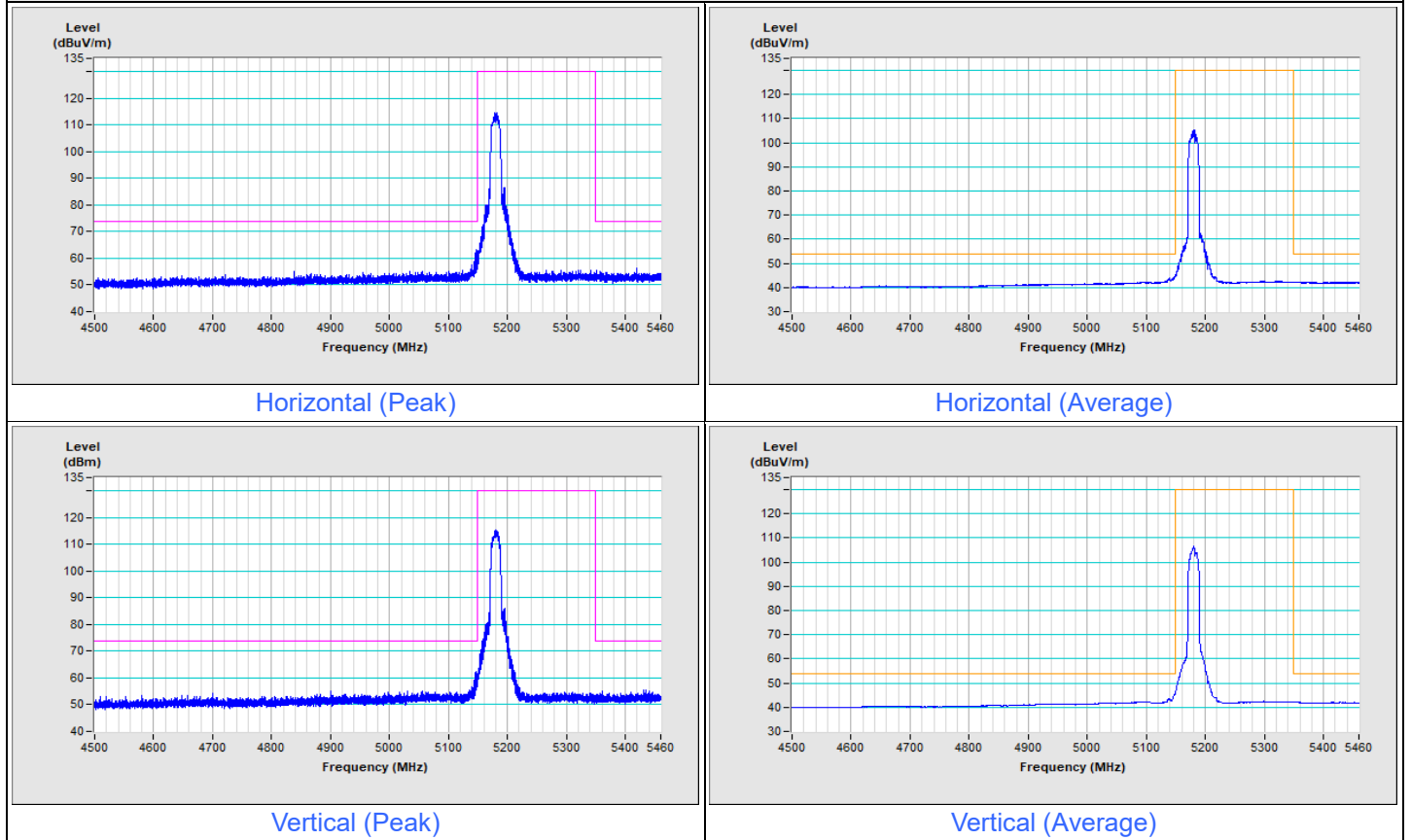
**Remarks:**

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.

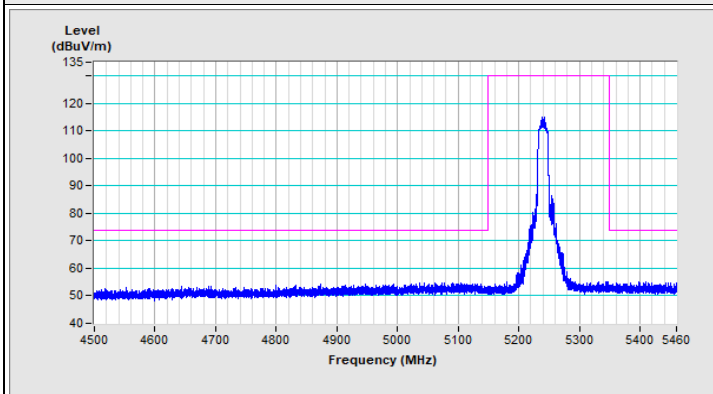
### Plot of Band Edge

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=10 Hz, DET=Peak
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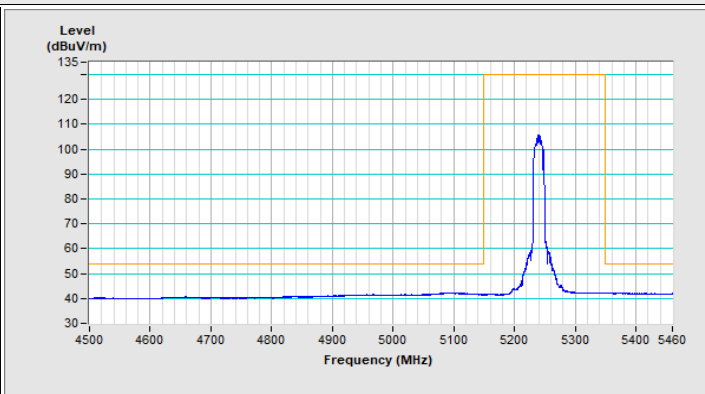
#### 802.11a Channel 36



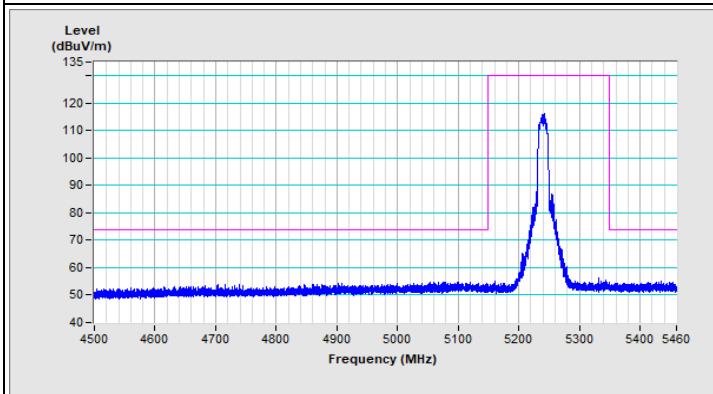
### 802.11a Channel 48



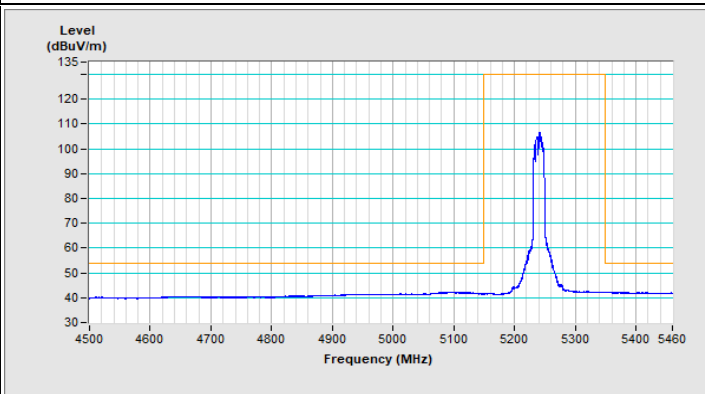
Horizontal (Peak)



Horizontal (Average)

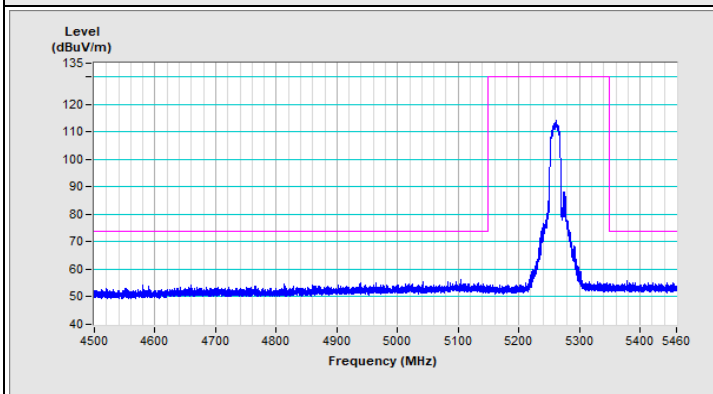


Vertical (Peak)

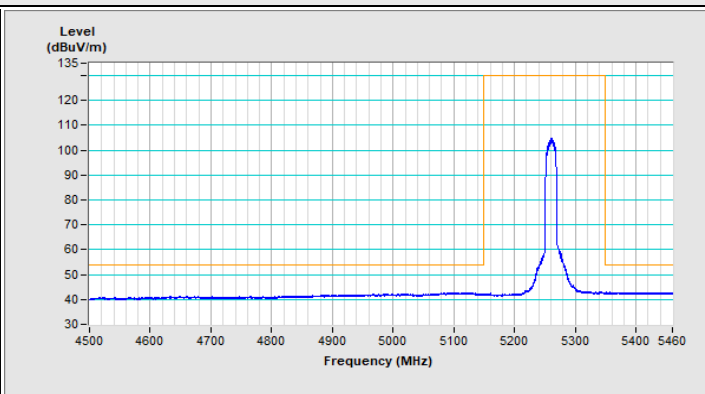


Vertical (Average)

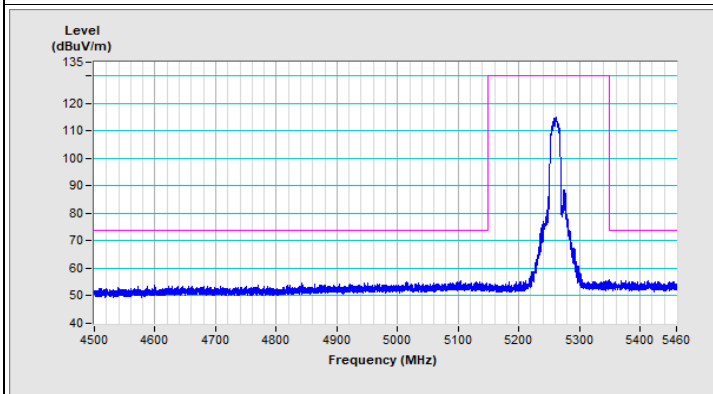
### 802.11a Channel 52



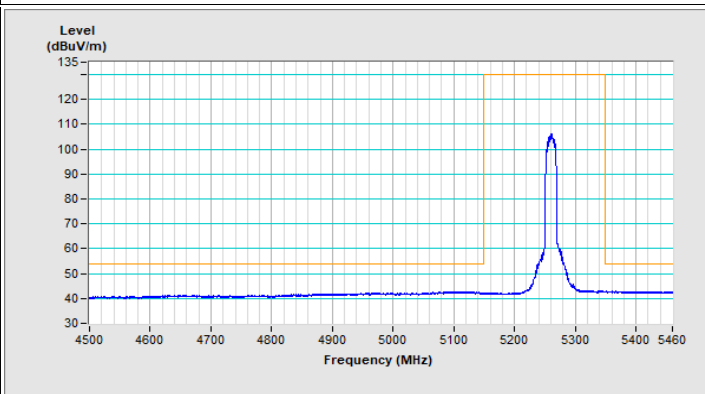
Horizontal (Peak)



Horizontal (Average)

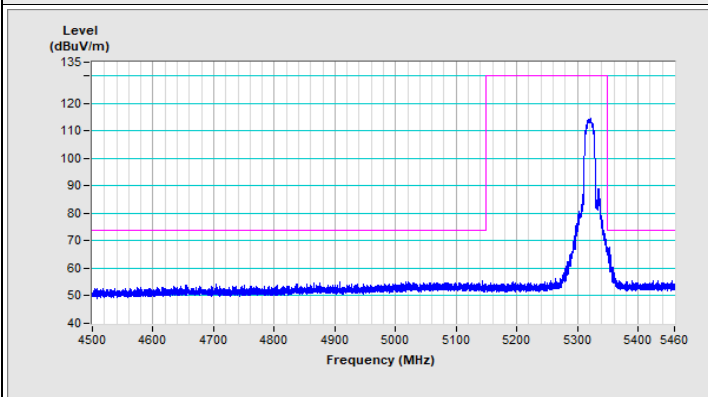


Vertical (Peak)

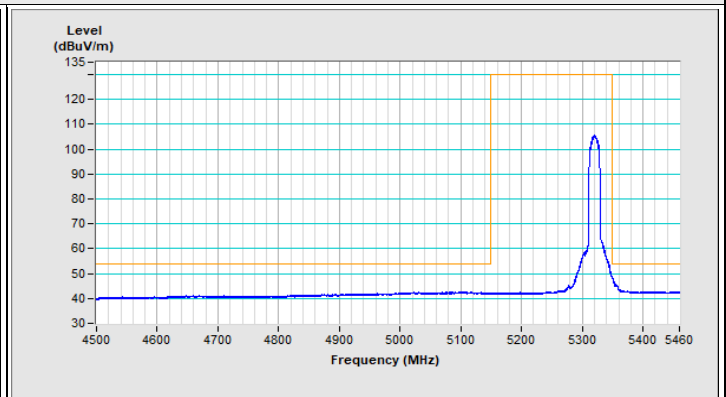


Vertical (Average)

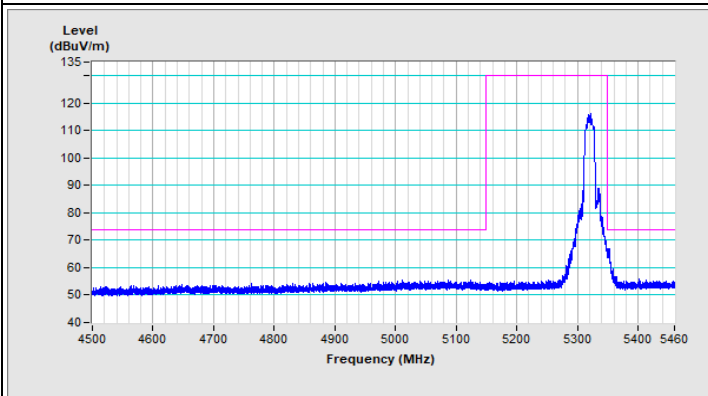
### 802.11a Channel 64



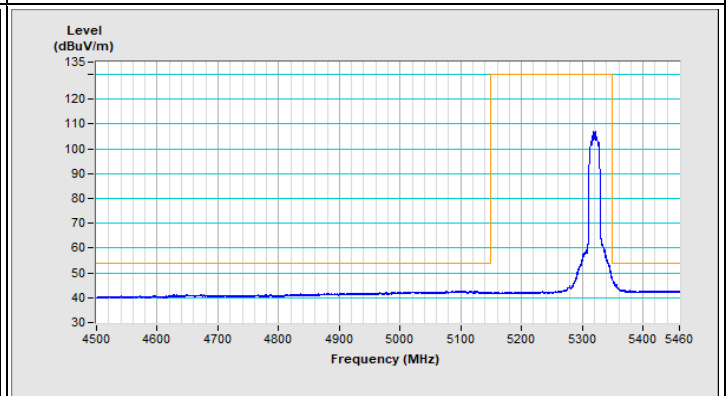
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)

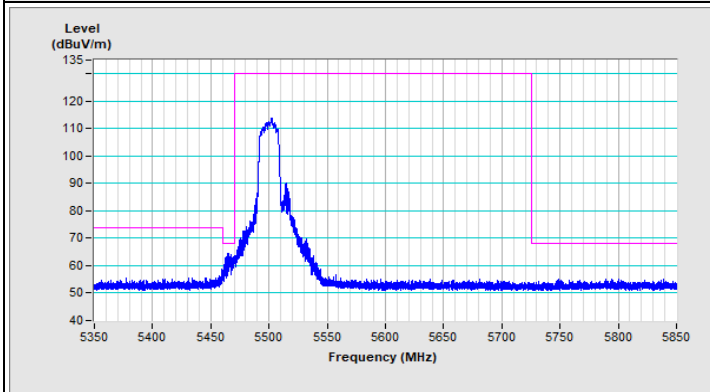


Vertical (Average)

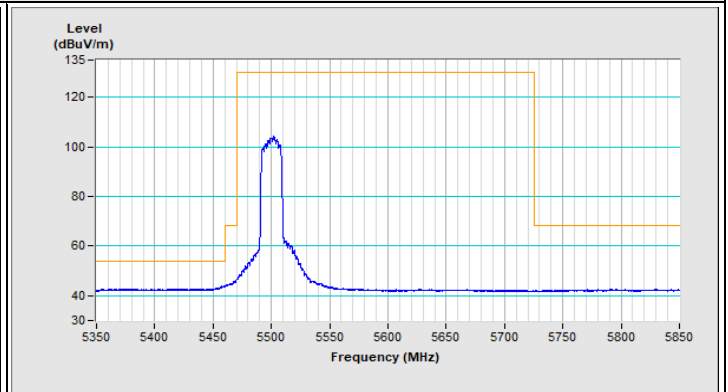


Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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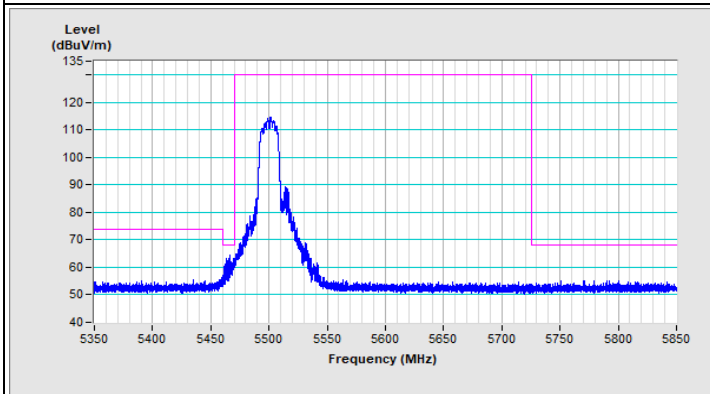
### 802.11a Channel 100



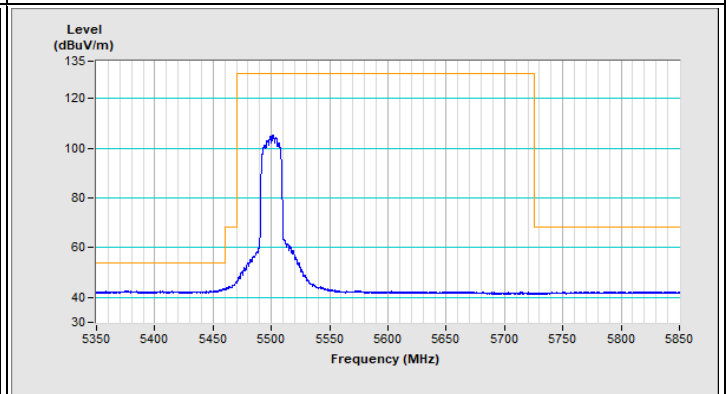
Horizontal (Peak)



Horizontal (Average)

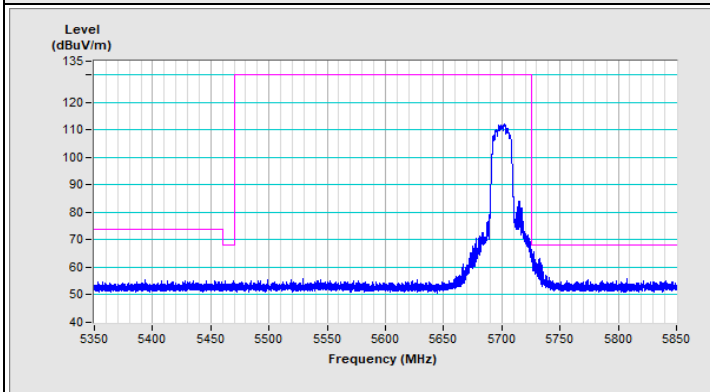


Vertical (Peak)

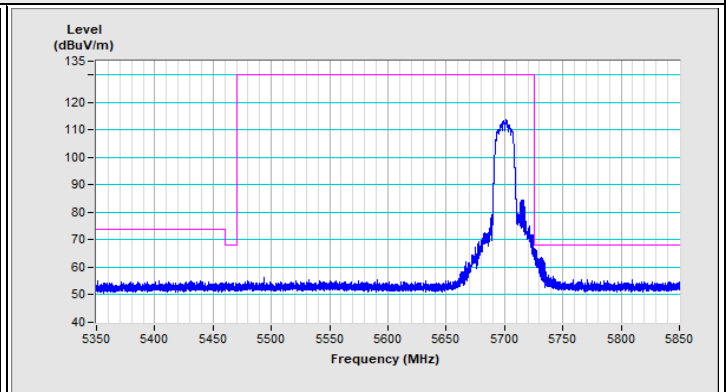


Vertical (Average)

### 802.11a Channel 140



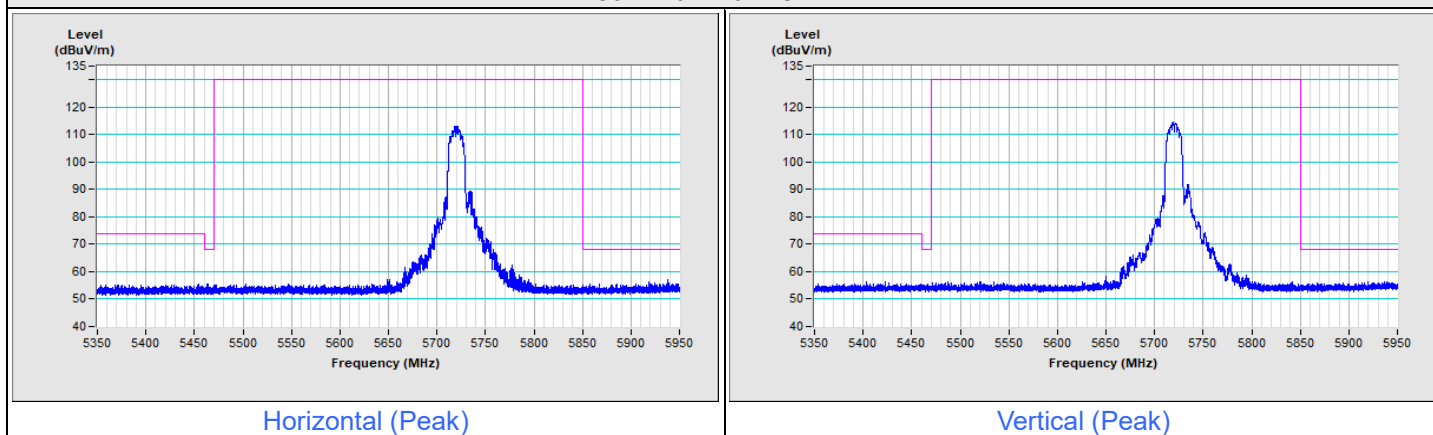
Horizontal (Peak)



Vertical (Peak)

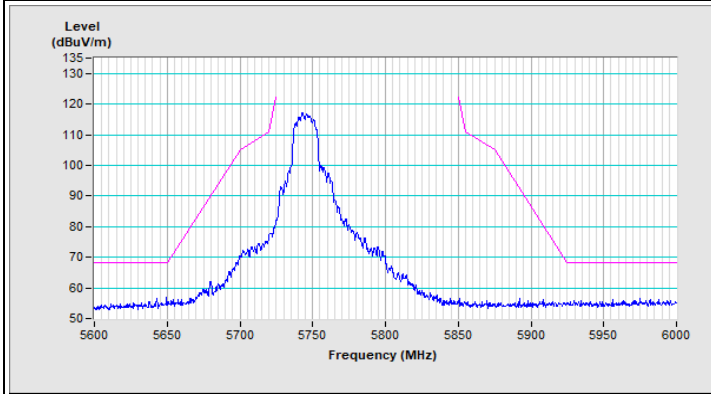
Frequency Range	5.35 GHz ~ 5.95 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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### 802.11a Channel 144

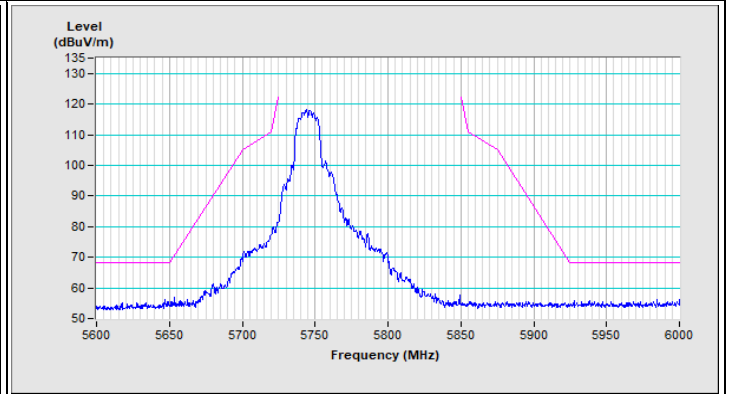


Frequency Range	5.6 GHz ~ 6 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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### 802.11a Channel 149

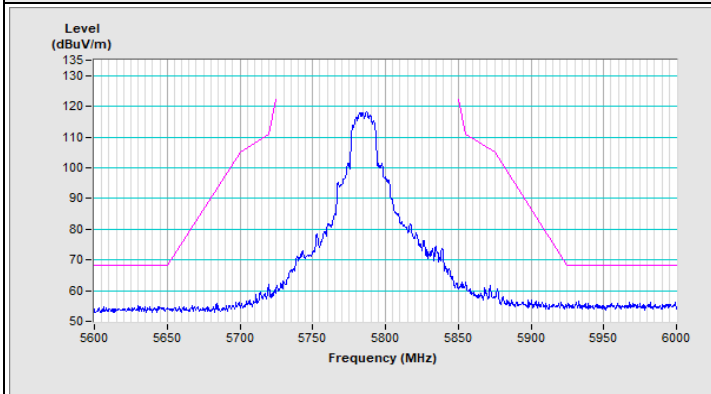


Horizontal (Peak)

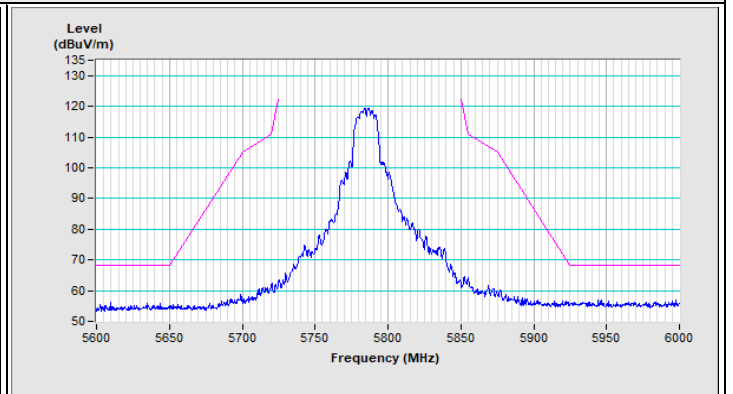


Vertical (Peak)

### 802.11a Channel 157

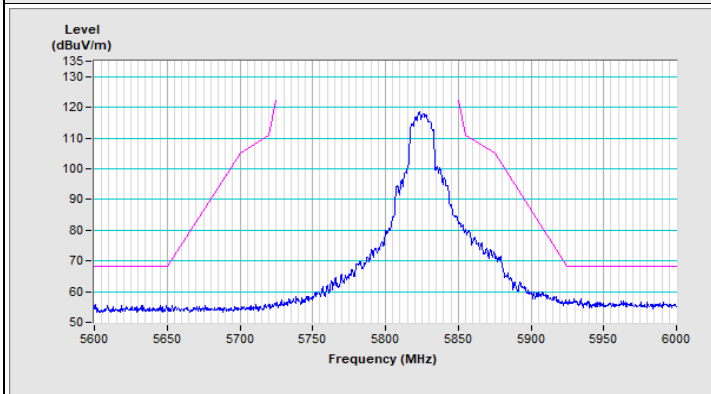


Horizontal (Peak)

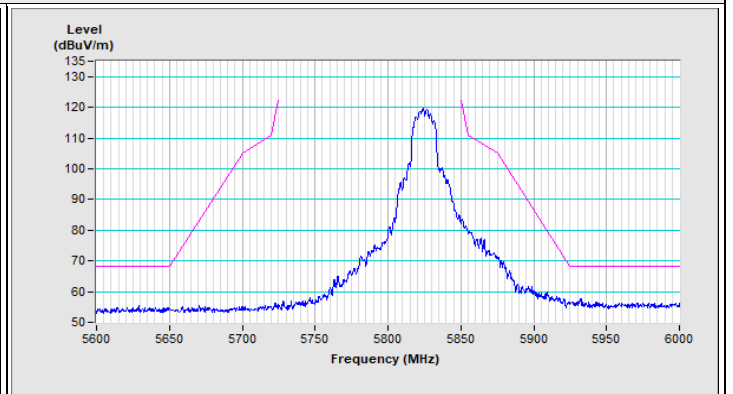


Vertical (Peak)

### 802.11a Channel 165



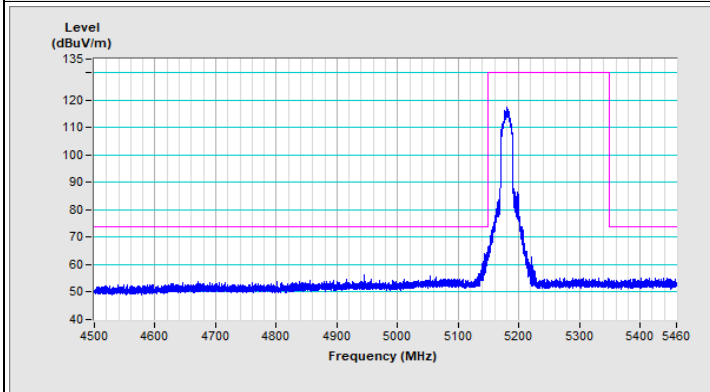
Horizontal (Peak)



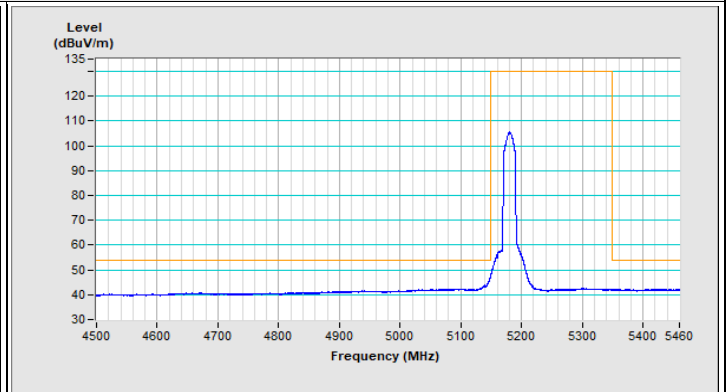
Vertical (Peak)

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=10 Hz, DET=Peak
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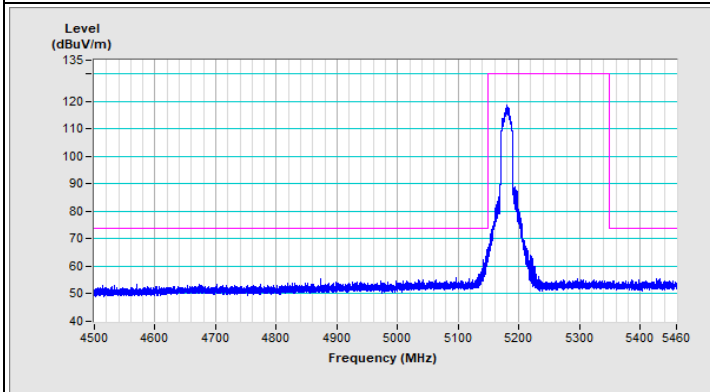
### 802.11ax (HE20) Channel 36



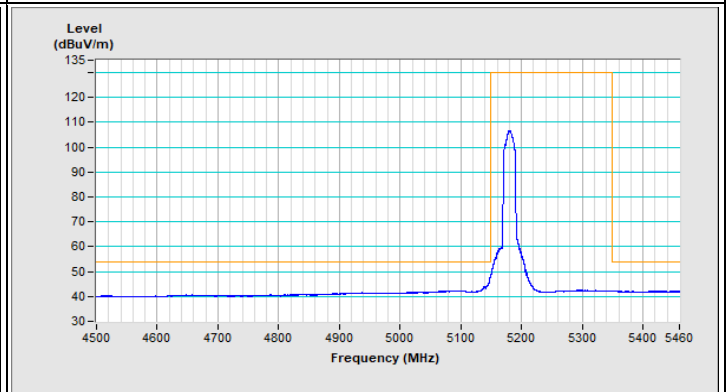
Horizontal (Peak)



Horizontal (Average)

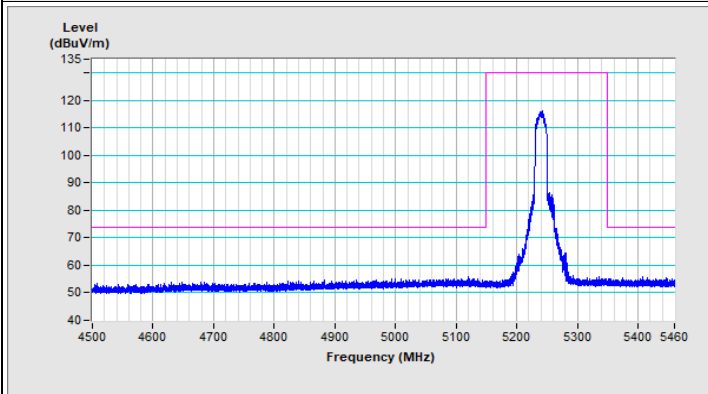


Vertical (Peak)

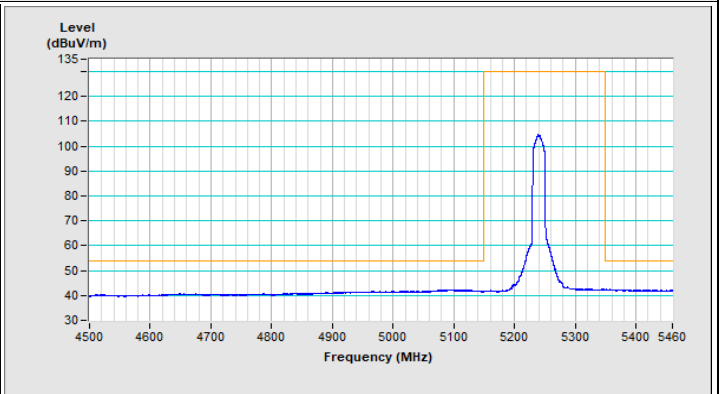


Vertical (Average)

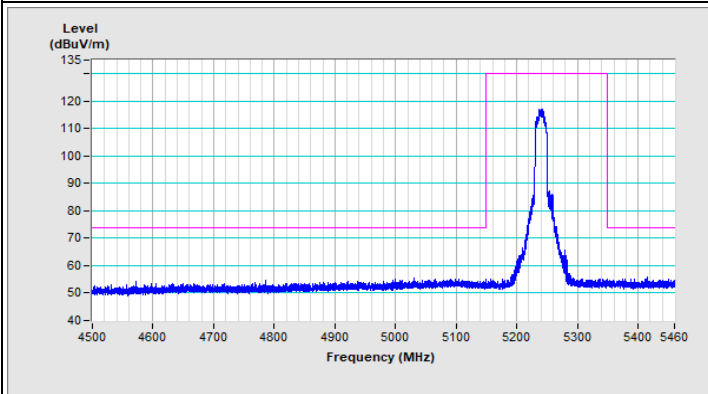
### 802.11ax (HE20) Channel 48



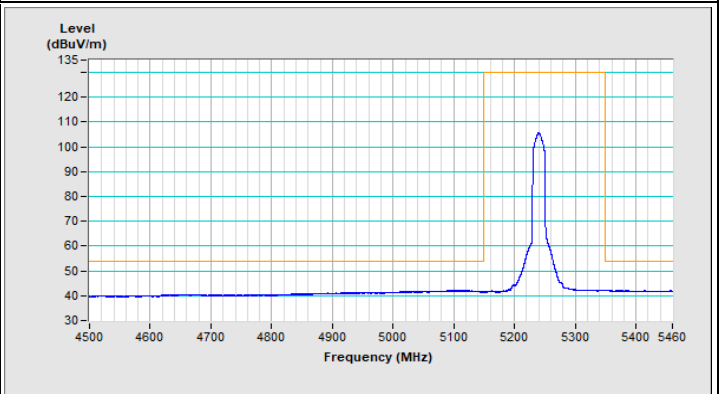
Horizontal (Peak)



Horizontal (Average)

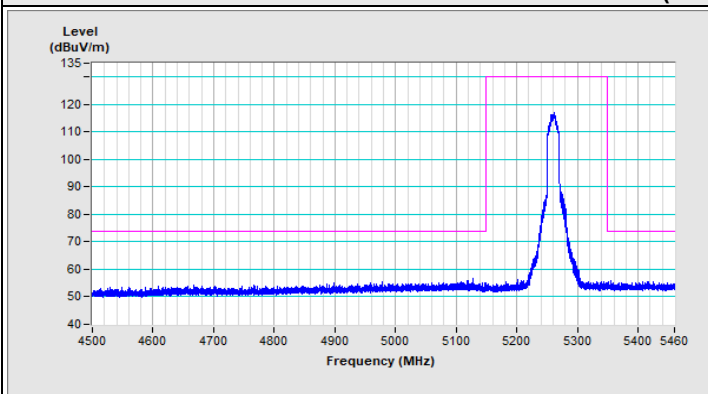


Vertical (Peak)

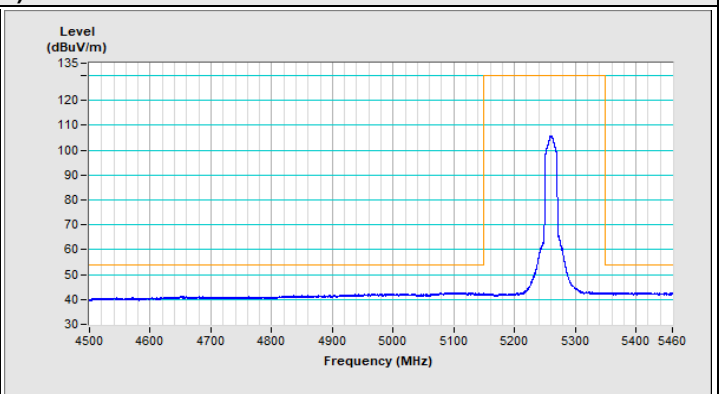


Vertical (Average)

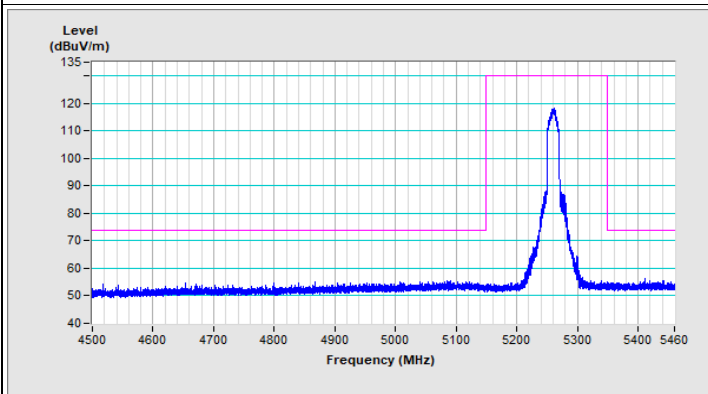
### 802.11ax (HE20) Channel 52



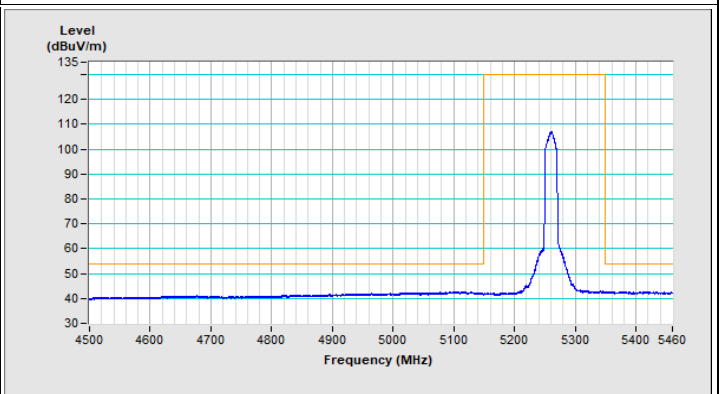
Horizontal (Peak)



Horizontal (Average)

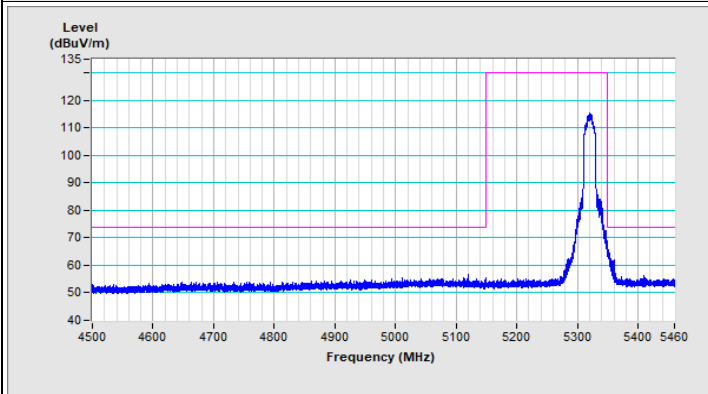


Vertical (Peak)

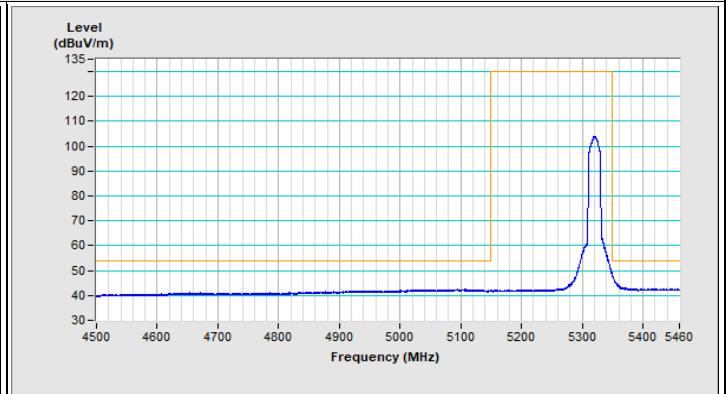


Vertical (Average)

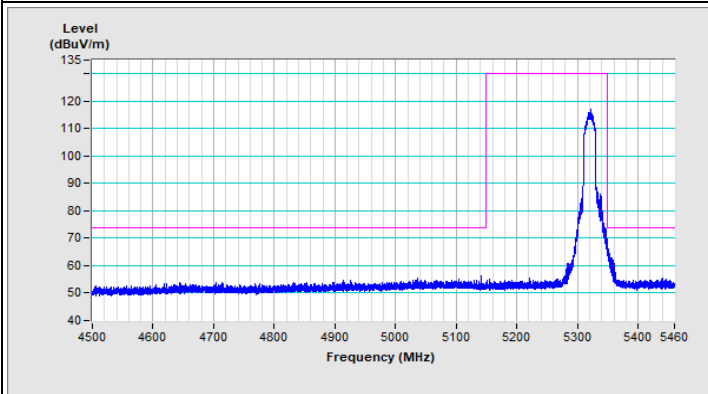
### 802.11ax (HE20) Channel 64



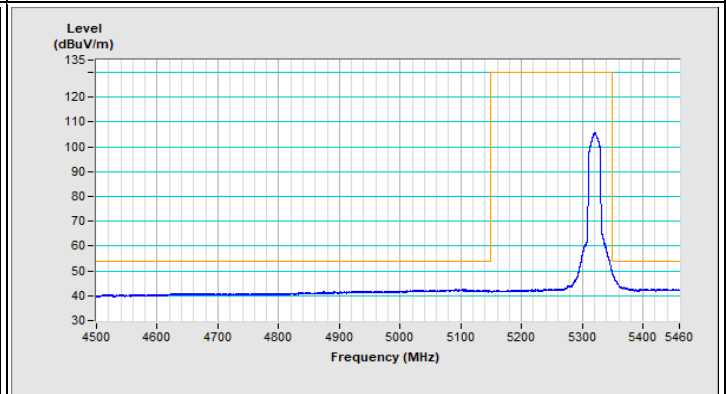
Horizontal (Peak)



Horizontal (Average)



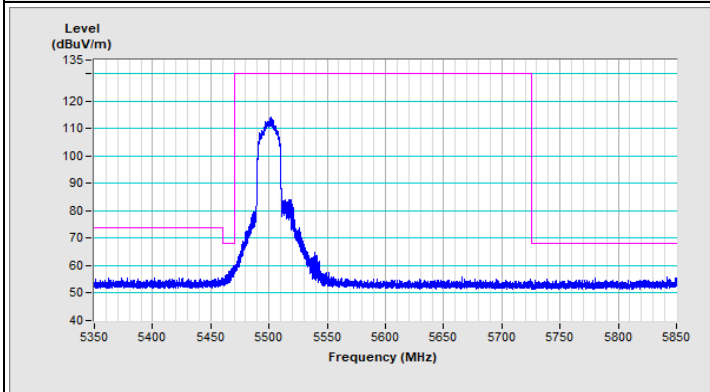
Vertical (Peak)



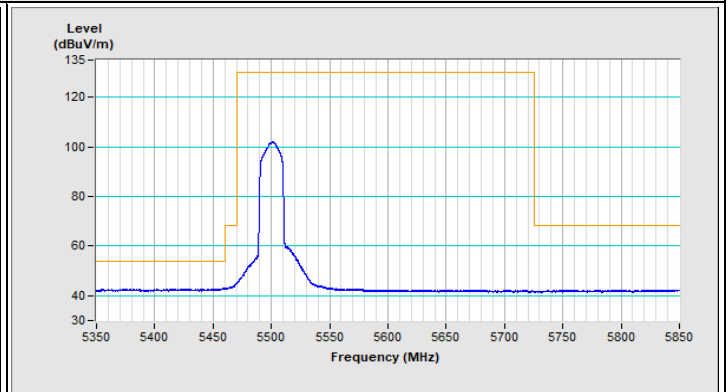
Vertical (Average)

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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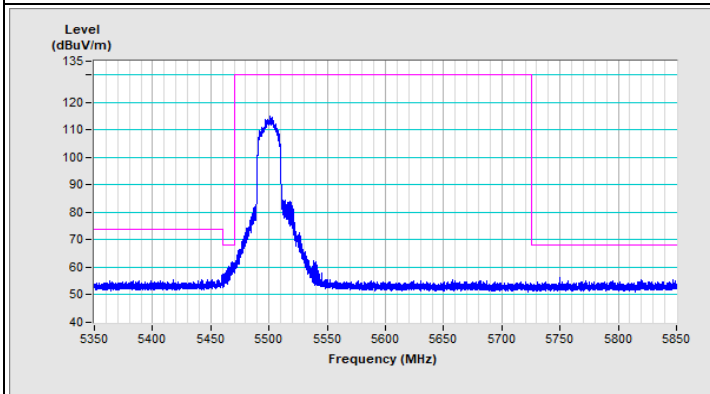
### 802.11ax (HE20) Channel 100



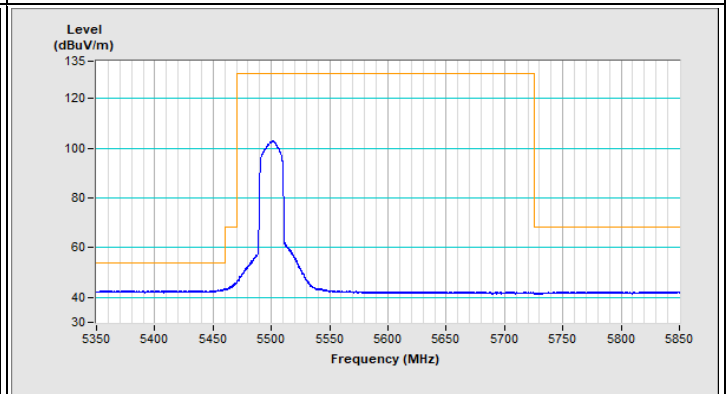
Horizontal (Peak)



Horizontal (Average)

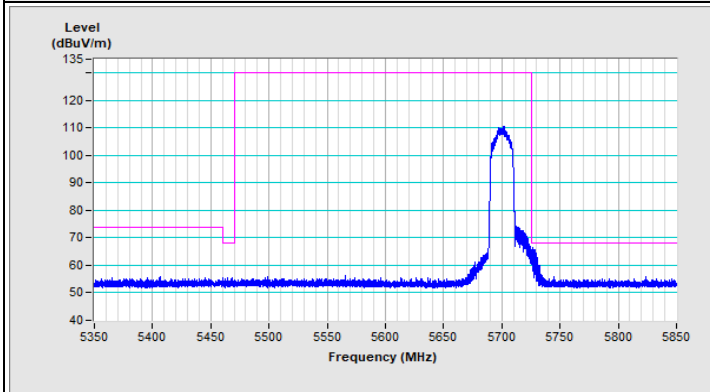


Vertical (Peak)

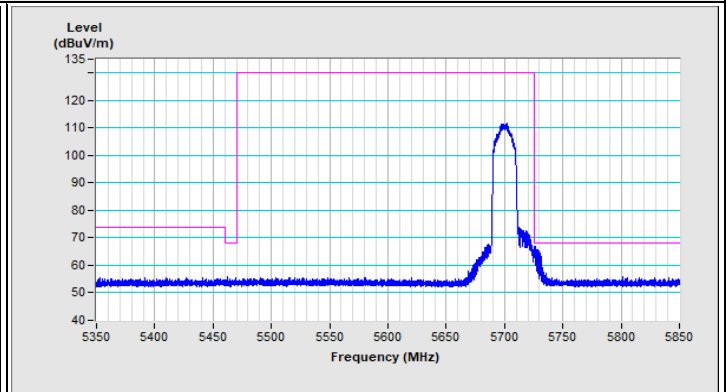


Vertical (Average)

### 802.11ax (HE20) Channel 140



Horizontal (Peak)

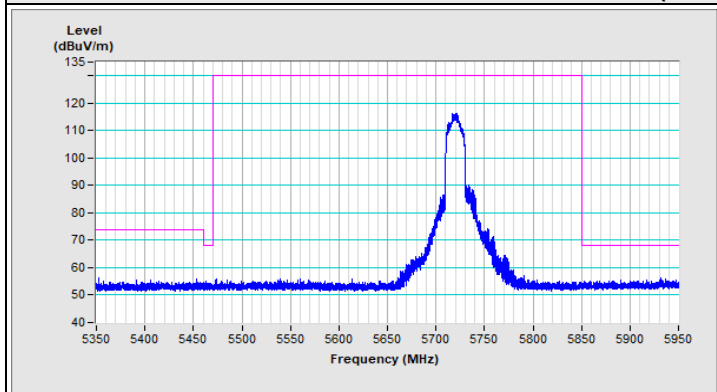


Vertical (Peak)

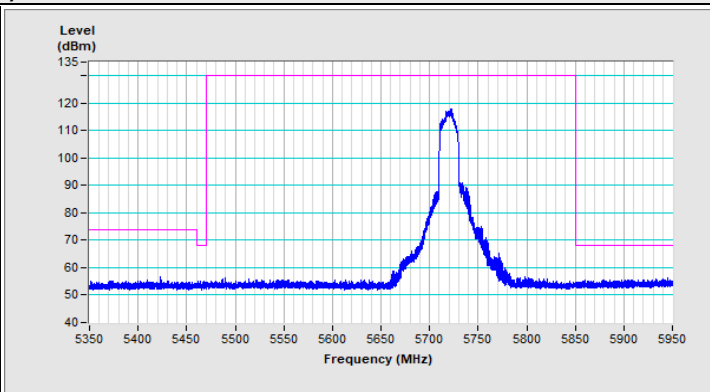


Frequency Range	5.35 GHz ~ 5.95 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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### 802.11ax (HE20) Channel 144



Horizontal (Peak)

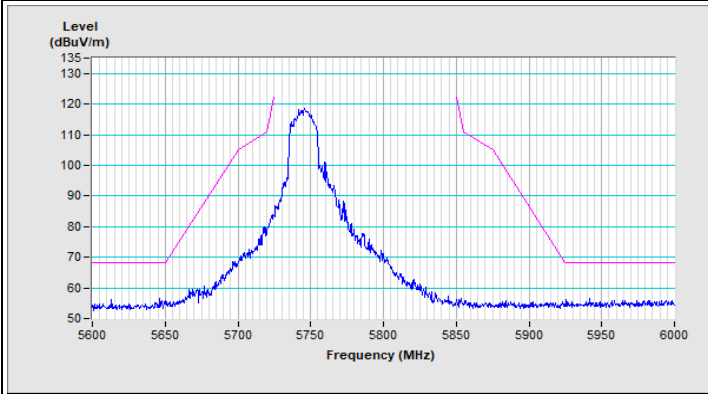


Vertical (Peak)

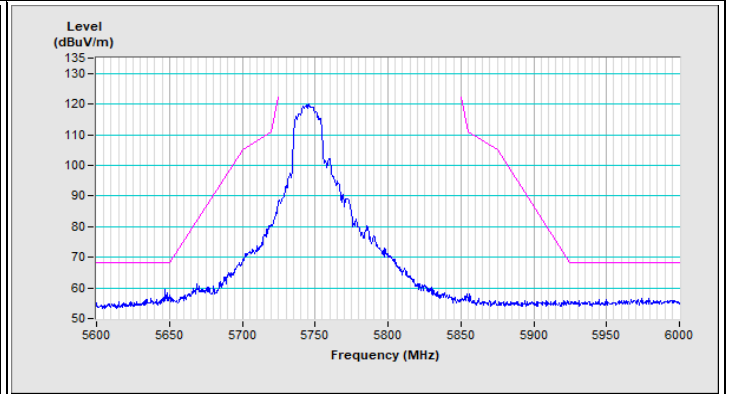


Frequency Range	5.6 GHz ~ 6 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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### 802.11ax (HE20) Channel 149

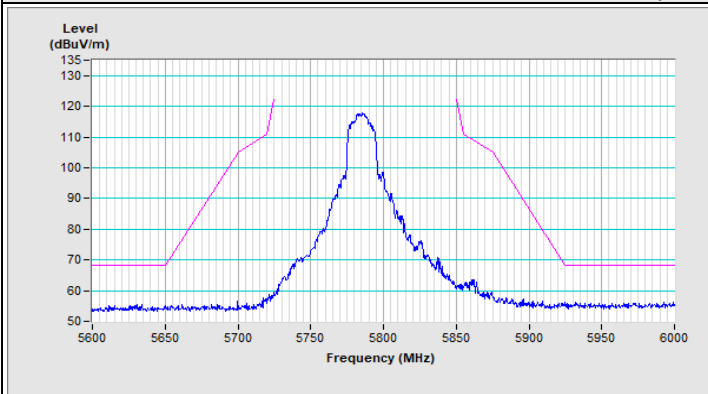


Horizontal (Peak)

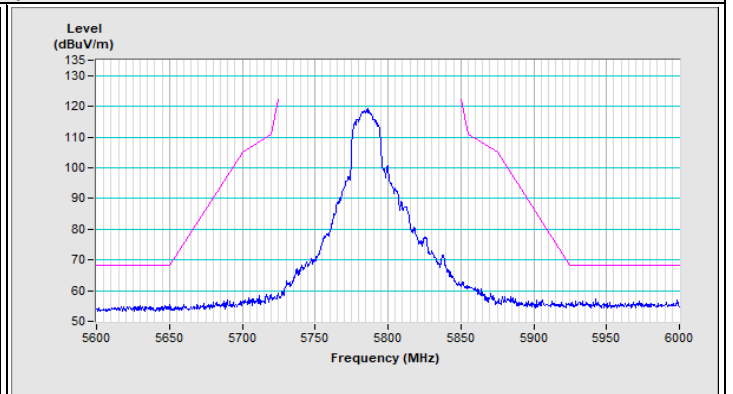


Vertical (Peak)

### 802.11ax (HE20) Channel 157

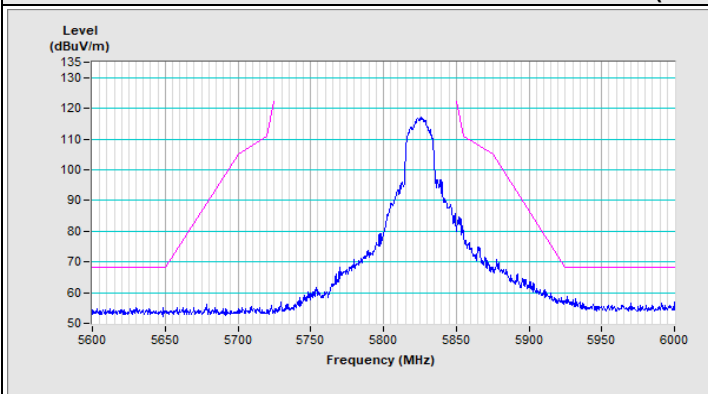


Horizontal (Peak)

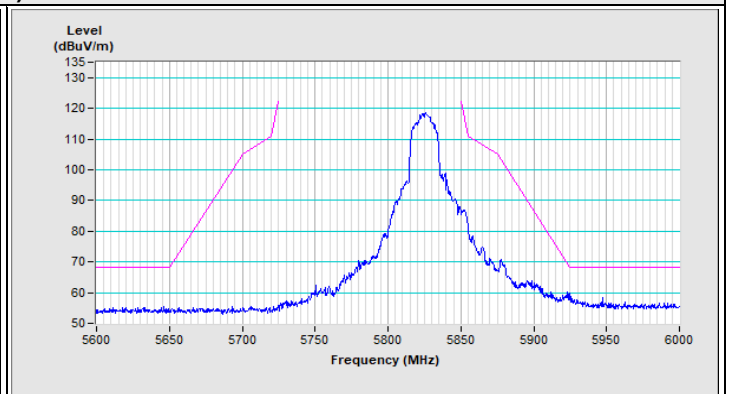


Vertical (Peak)

### 802.11ax (HE20) Channel 165



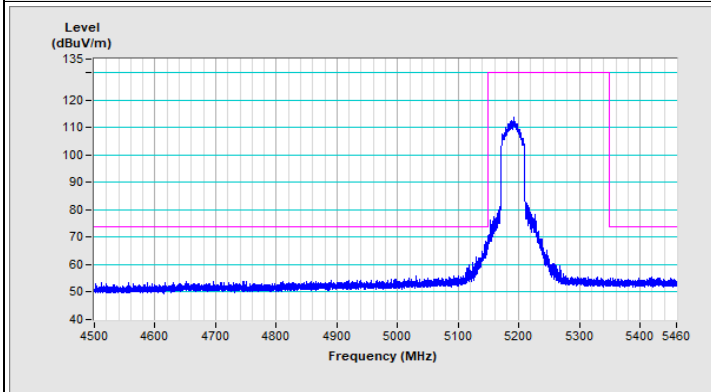
Horizontal (Peak)



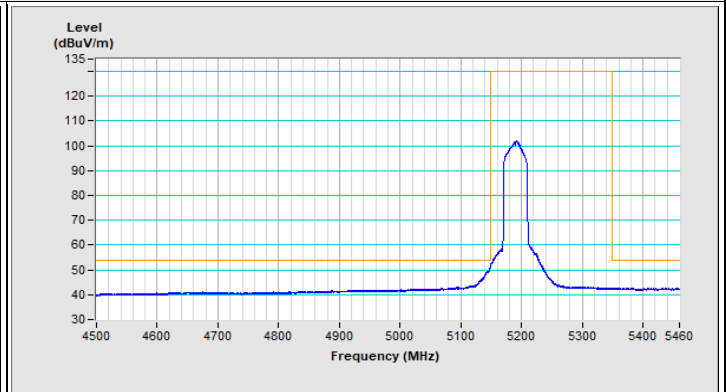
Vertical (Peak)

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=10 Hz, DET=Peak
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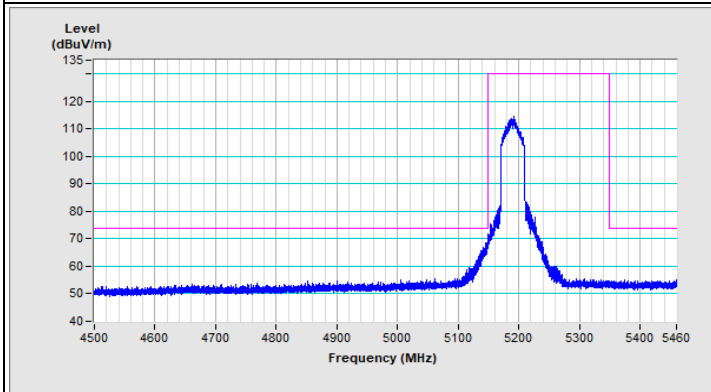
**802.11ax (HE40) Channel 38**



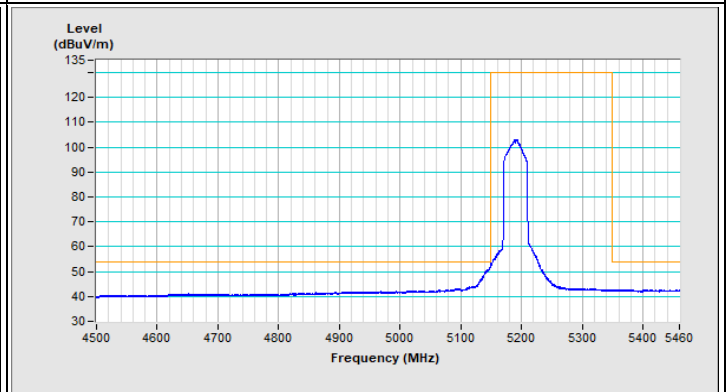
Horizontal (Peak)



Horizontal (Average)

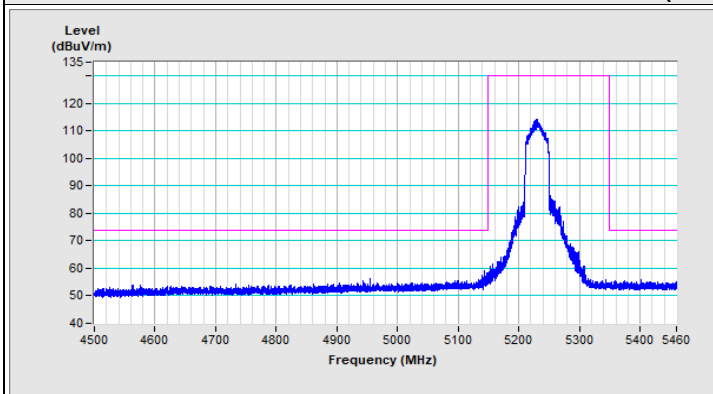


Vertical (Peak)

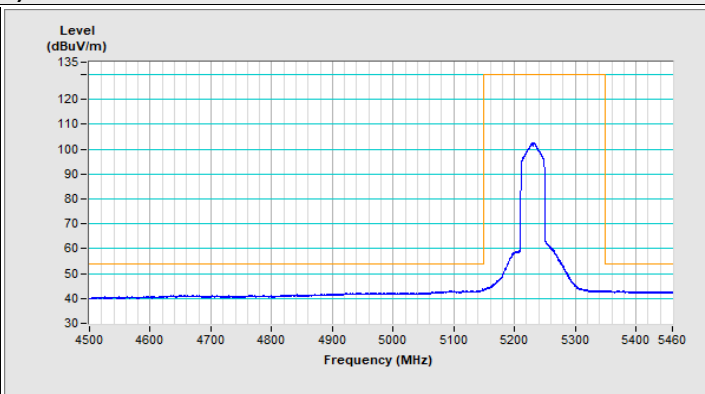


Vertical (Average)

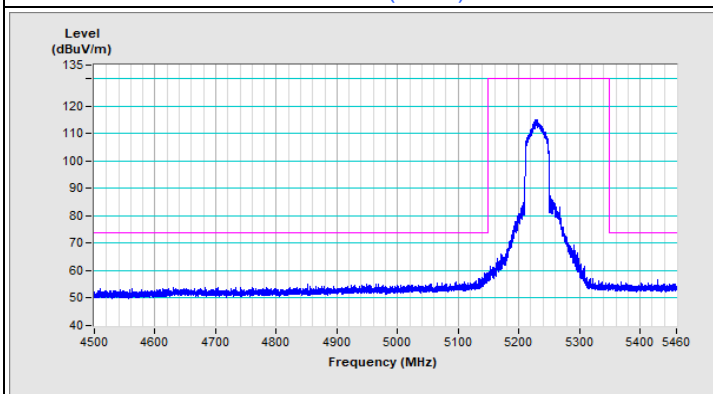
### 802.11ax (HE40) Channel 46



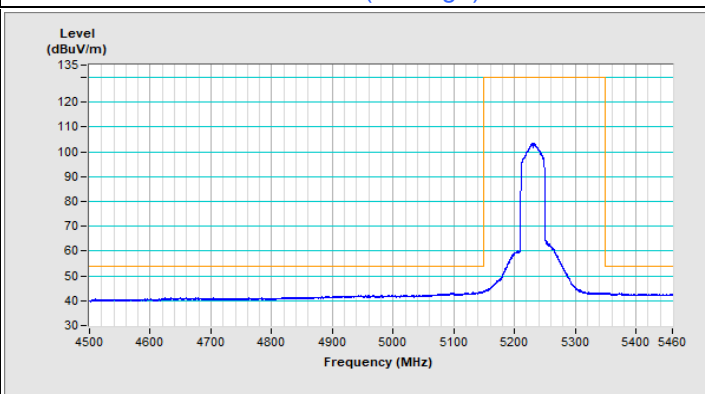
Horizontal (Peak)



Horizontal (Average)

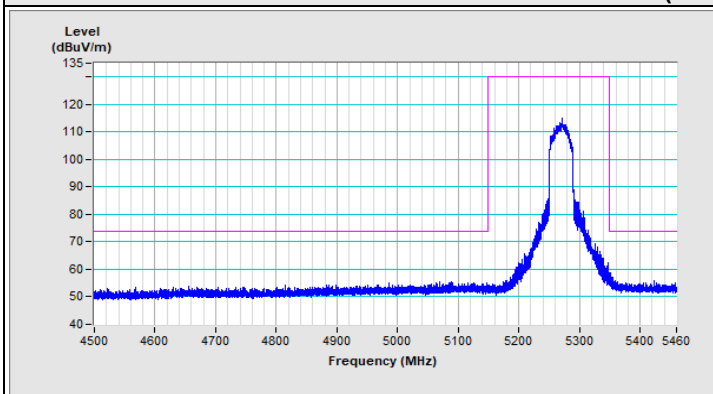


Vertical (Peak)

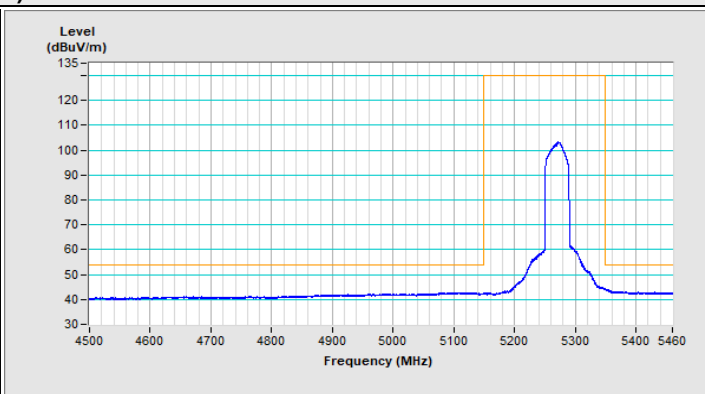


Vertical (Average)

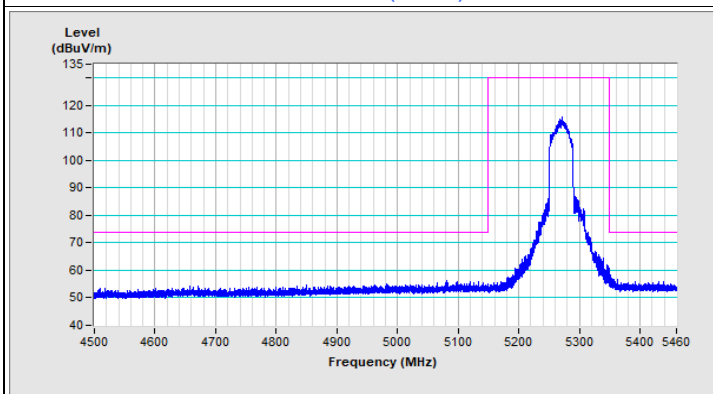
### 802.11ax (HE40) Channel 54



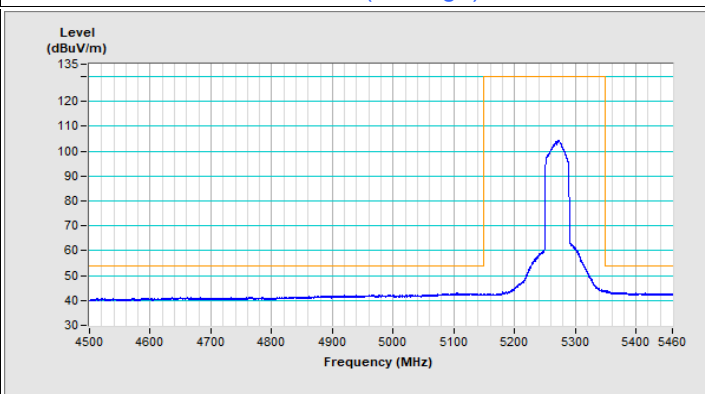
Horizontal (Peak)



Horizontal (Average)

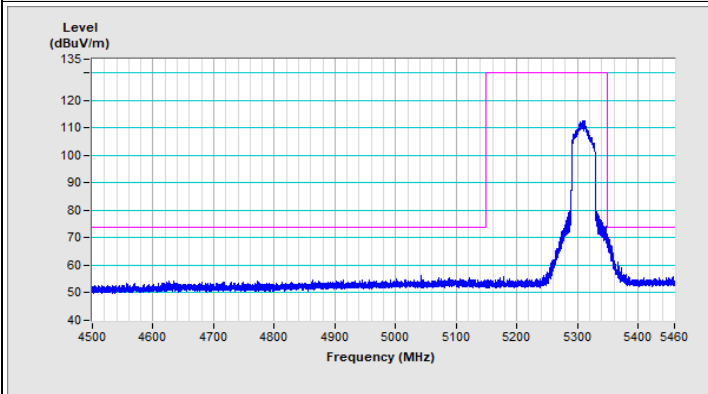


Vertical (Peak)

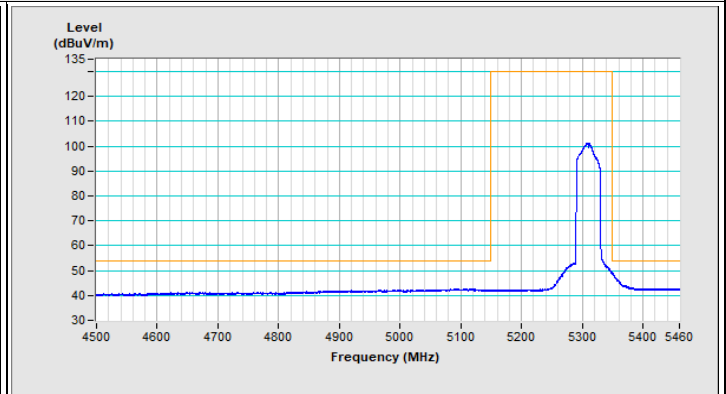


Vertical (Average)

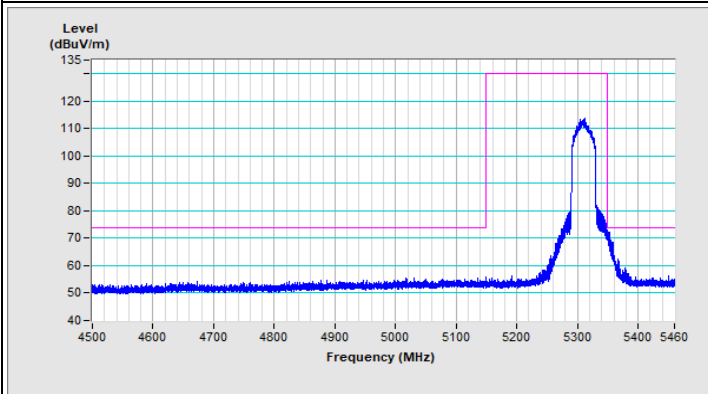
### 802.11ax (HE40) Channel 62



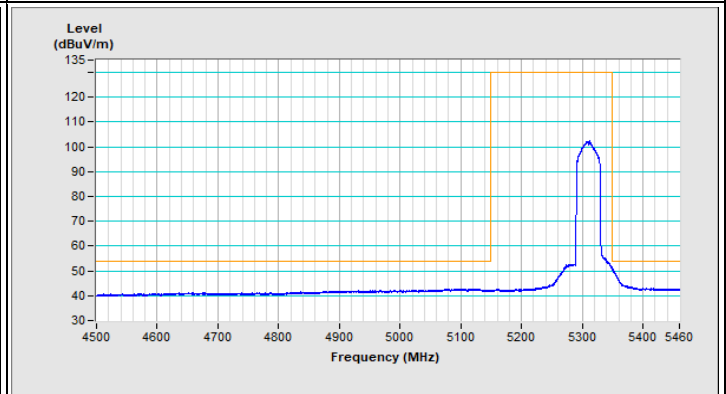
Horizontal (Peak)



Horizontal (Average)



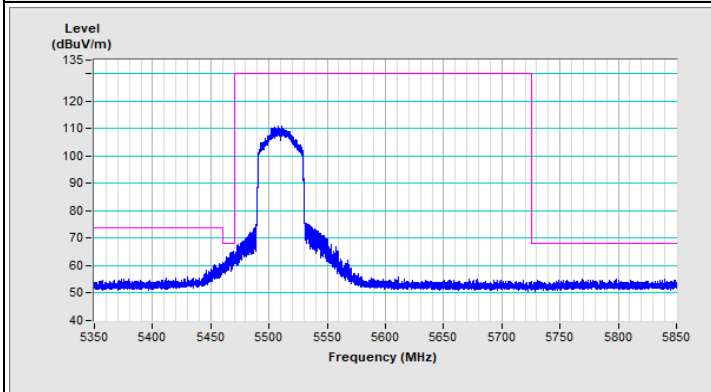
Vertical (Peak)



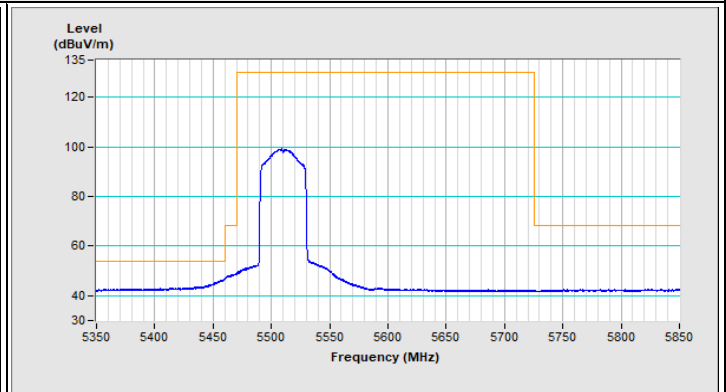
Vertical (Average)

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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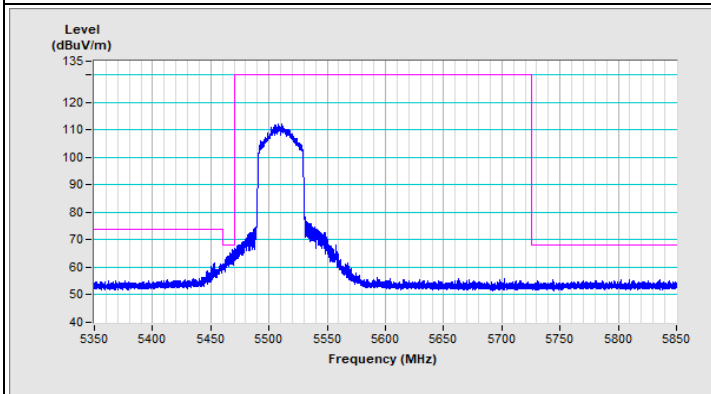
**802.11ax (HE40) Channel 102**



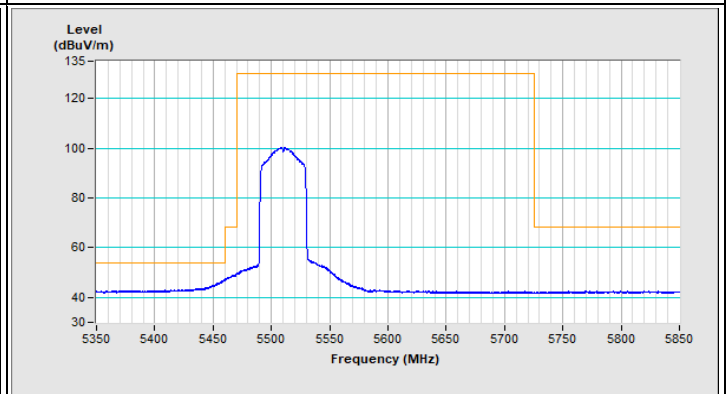
Horizontal (Peak)



Horizontal (Average)

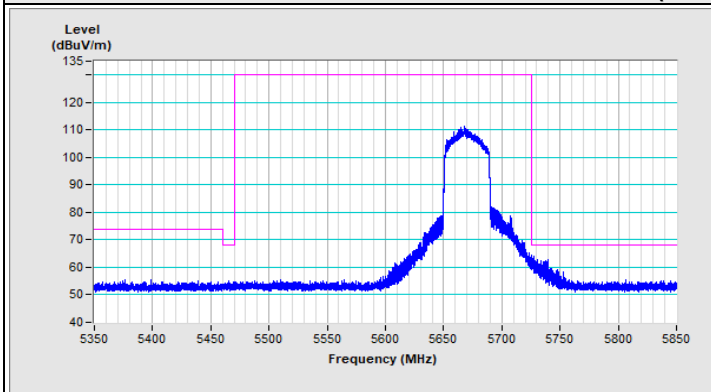


Vertical (Peak)

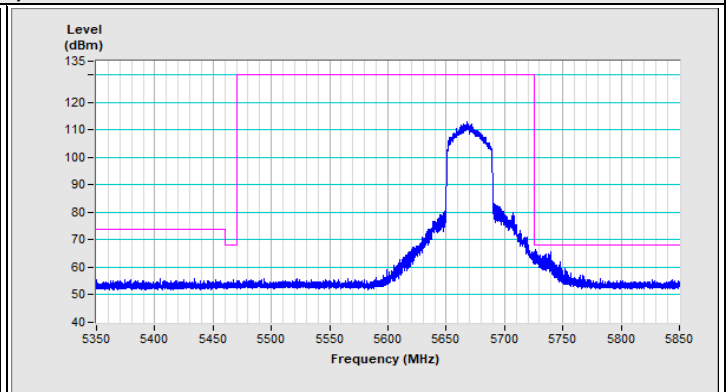


Vertical (Average)

**802.11ax (HE40) Channel 134**



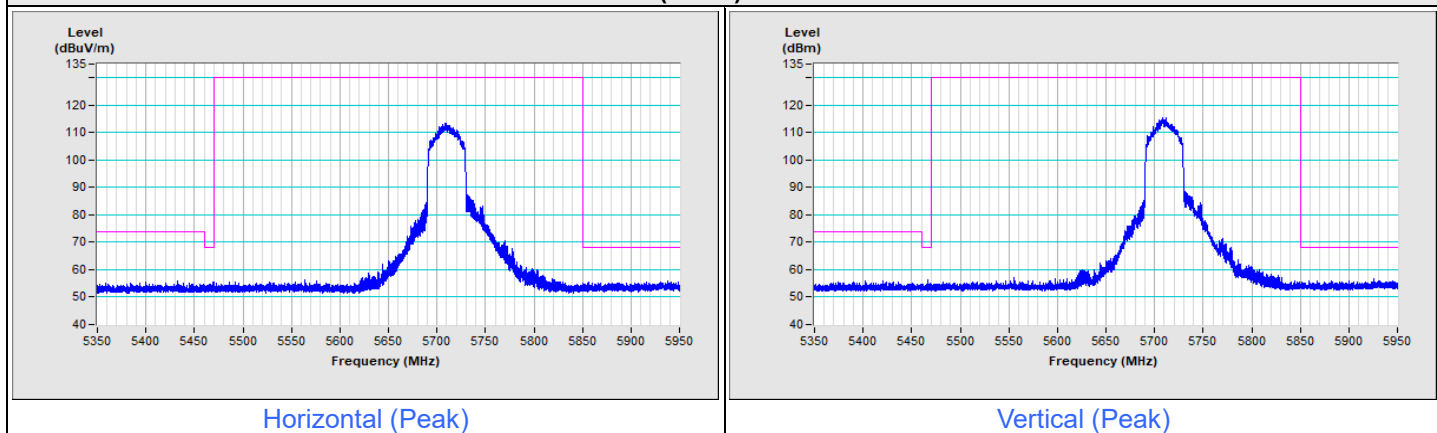
Horizontal (Peak)



Vertical (Peak)

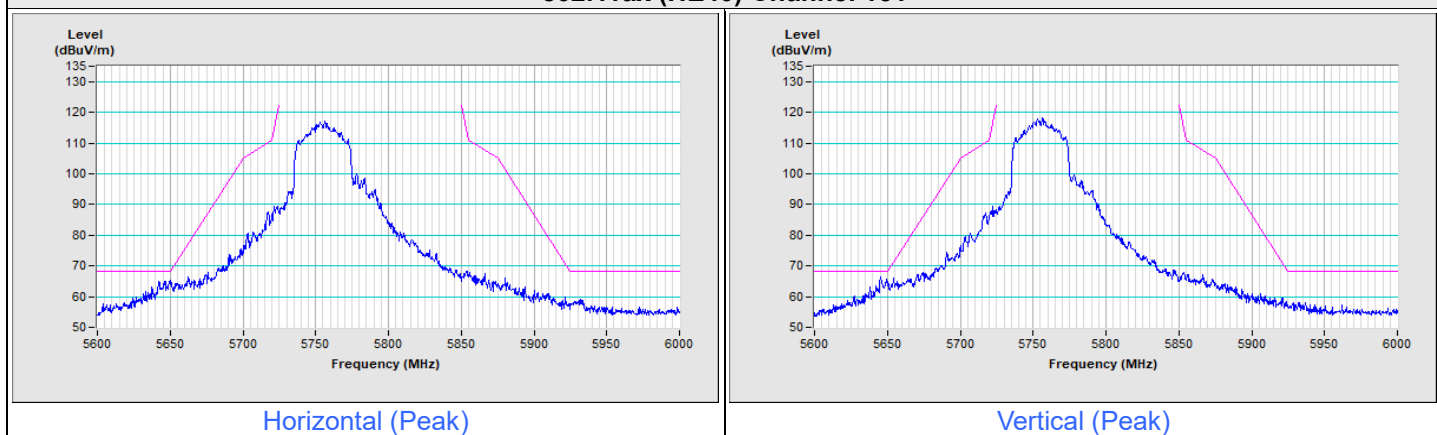
Frequency Range	5.35 GHz ~ 5.95 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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**802.11ax (HE40) Channel 142**

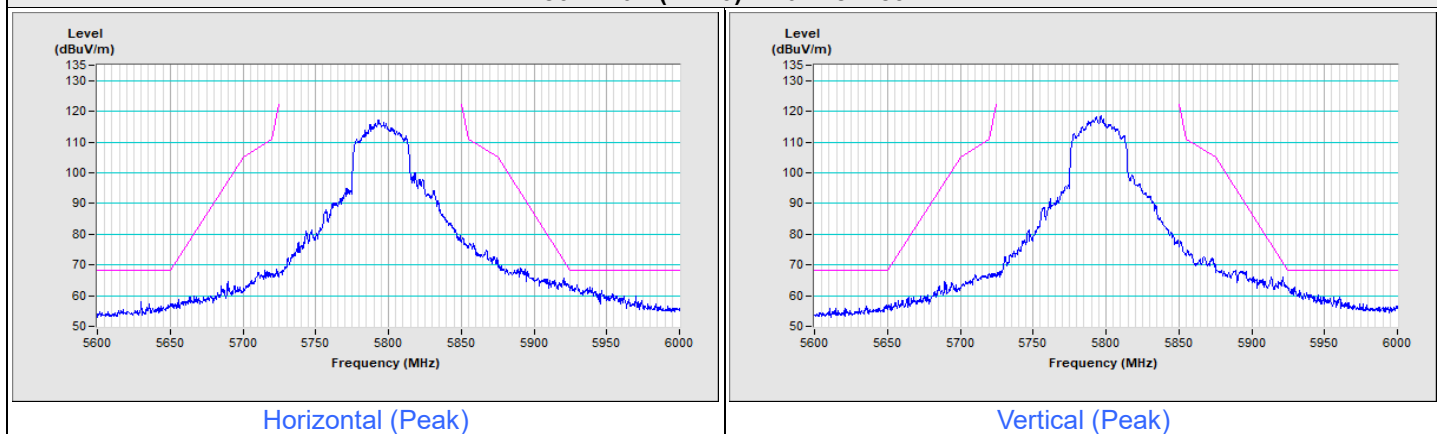


Frequency Range	5.6 GHz ~ 6 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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**802.11ax (HE40) Channel 151**

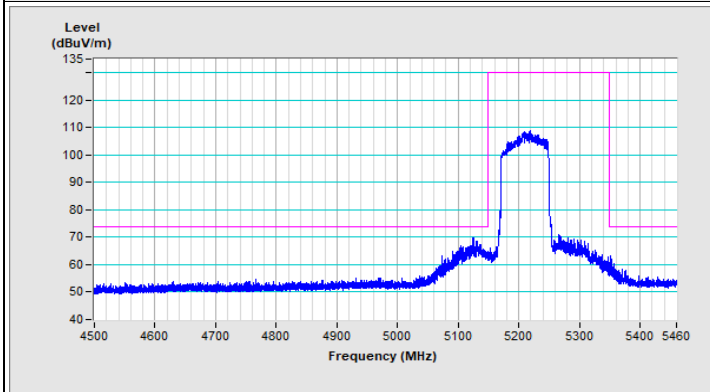


**802.11ax (HE40) Channel 159**

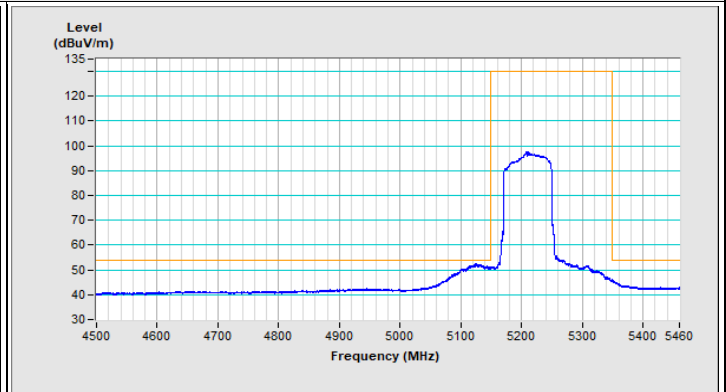


Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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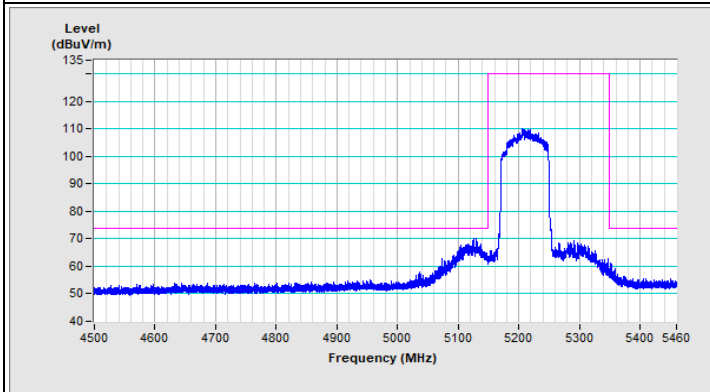
### 802.11ax (HE80) Channel 42



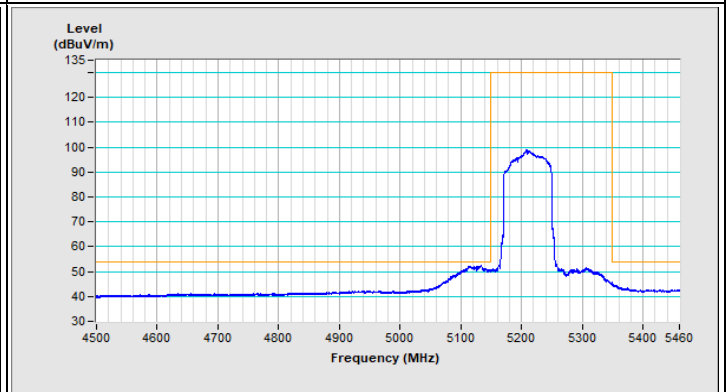
Horizontal (Peak)



Horizontal (Average)

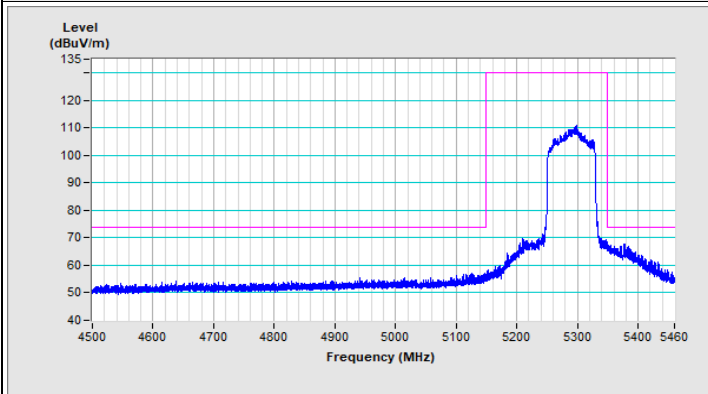


Vertical (Peak)

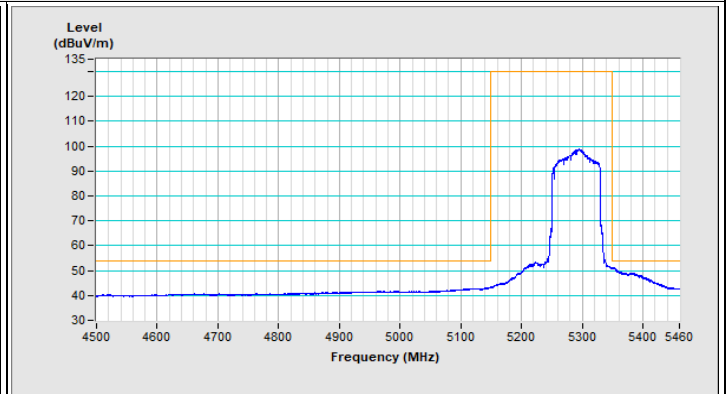


Vertical (Average)

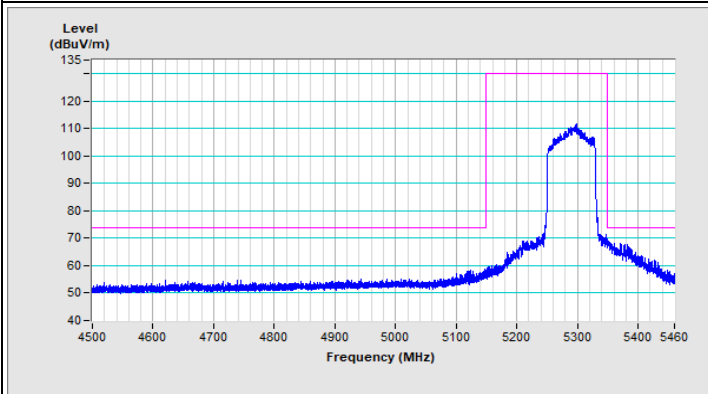
### 802.11ax (HE80) Channel 58



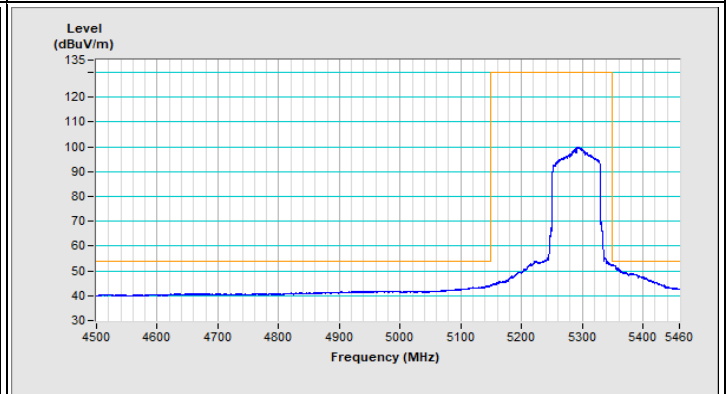
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)

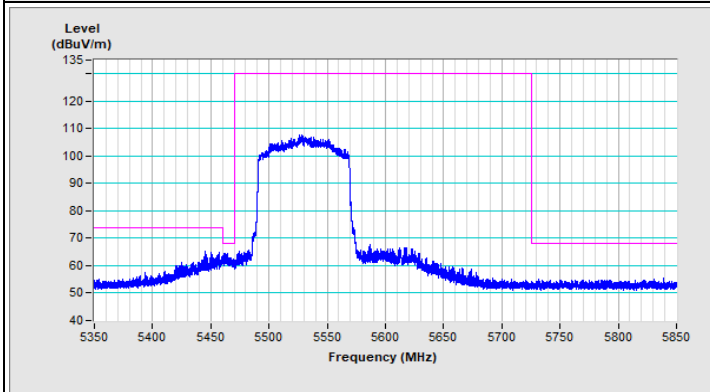


Vertical (Average)

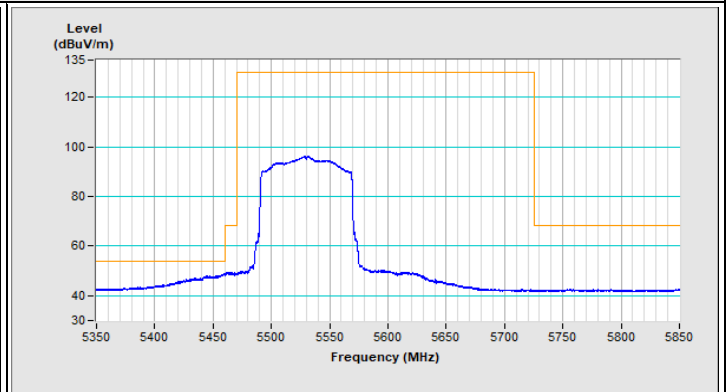


Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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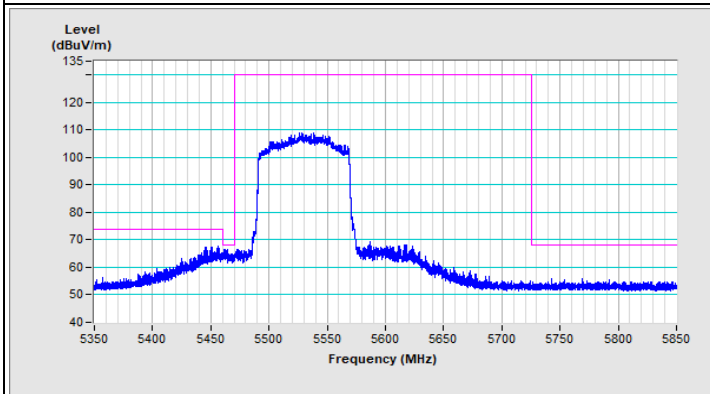
### 802.11ax (HE80) Channel 106



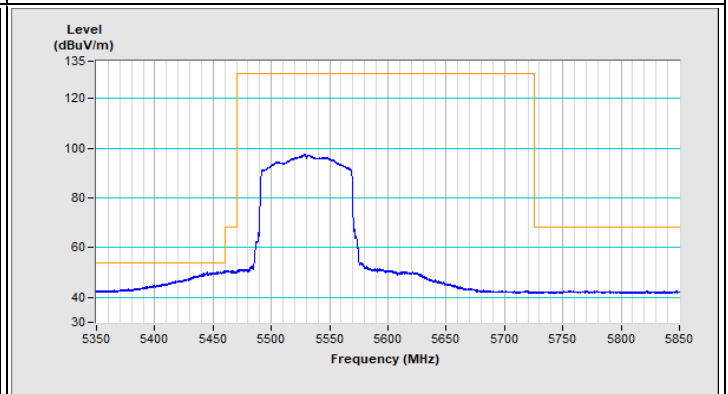
Horizontal (Peak)



Horizontal (Average)

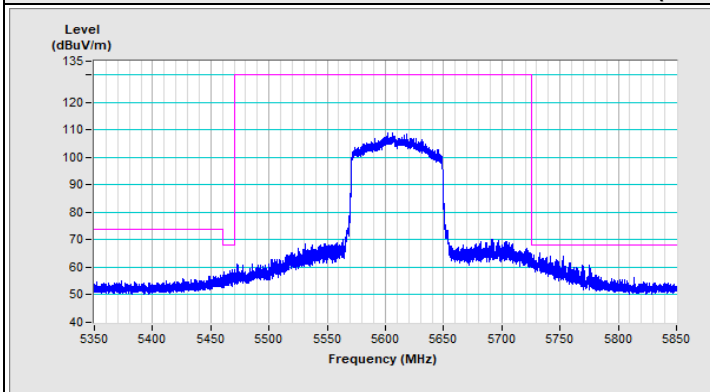


Vertical (Peak)

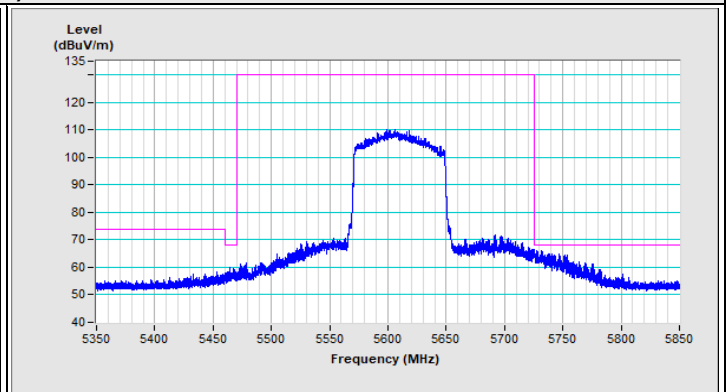


Vertical (Average)

### 802.11ax (HE80) Channel 122



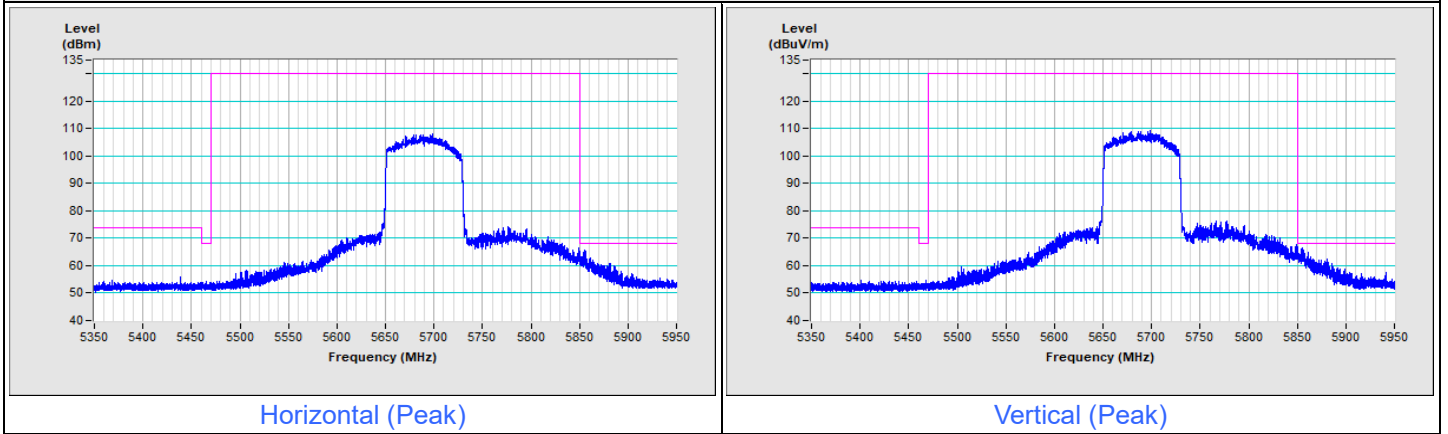
Horizontal (Peak)



Vertical (Peak)

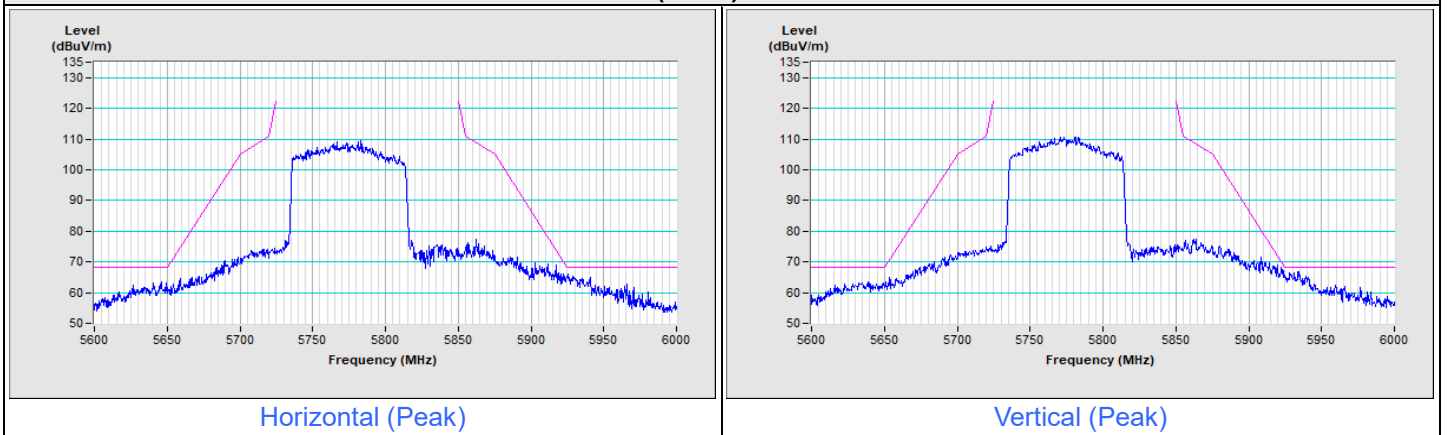
Frequency Range	5.35 GHz ~ 5.95 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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**802.11ax (HE80) Channel 138**



Frequency Range	5.6 GHz ~ 6 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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**802.11ax (HE80) Channel 155**



## 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:

**Lin Kou EMC/RF Lab**

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](mailto: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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