TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart E (Section 15.407)**
Report No.:	RFBHQL-WTW-P23060721
FCC ID:	2AVVV-MW09
Product:	Outdoor Wireless Access Point
Brand:	meter
Model No.:	MW09
Received Date:	2023/6/30
Test Date:	2023/8/24 ~ 2023/9/15
Issued Date:	2023/10/6
Applicant:	Meter, Inc
Address:	548 Market St San Francisco CA 94104 USA
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kewi Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003

Approved by: Jeremy Lin , **Date:** 2023/10/6

Jeremy Lin / Project Engineer

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Prepared by : Celine Chou / Senior Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBHQL-WTW-P23060721	Original release.	2023/10/6

1 Certificate

Product:	Outdoor Wireless Access Point
Brand:	meter
Test Model:	MW09
Sample Status:	Engineering sample
Applicant:	Meter, Inc
Test Date:	2023/8/24 ~ 2023/9/15
Standard:	47 CFR FCC Part 15, Subpart E (Section 15.407)
Measurement procedure:	ANSI C63.10-2013 KDB 789033 D02 General UNII Test Procedure New Rules v02r01 KDB 662911 D01 Multiple Transmitter Output v02r01

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

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
Clause	Test Item	Result	Remark
15.407(a)(2)	26 dB Bandwidth	Pass	For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.
15.407(a)(2) 15.407(a)(3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(2) 15.407(a)(3)	Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB Bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
---	Occupied Bandwidth	-	Reference only.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -5.63 dB at 0.53400 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -3.4 dB at 115.36 MHz
15.407(b) (2/10) 15.407(b) (3/10) 15.407(b) (4(i)/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.3 dB at 5470.00 MHz
15.203	Antenna Requirement	Pass	Antenna connector is brass not a standard connector.

Notes:

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

2.1 Measurement Uncertainty

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

Parameter	Specification	Expanded Uncertainty (k=2) (±)
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.99 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.59 dB
	30 MHz ~ 1 GHz	3.60 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 dB

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

2.2 Supplementary Information

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

3 General Information

3.1 General Description of EUT

Product	Outdoor Wireless Access Point
Brand	meter
Test Model	MW09
Status of EUT	Engineering sample
Power Supply Rating	54 Vdc (POE)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM 1024QAM for OFDMA
Modulation Technology	OFDM, OFDMA
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6 Mbps 802.11n: up to 300 Mbps 802.11ac: up to 867 Mbps 802.11ax: up to 1200 Mbps
Operating Frequency	5260 ~ 5320 MHz 5500 ~ 5720 MHz
Number of Channel	5260 ~ 5320 MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 4 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 2 802.11ac (VHT80), 802.11ax (HE80): 1 5500 ~ 5720 MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 12 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 6 802.11ac (VHT80), 802.11ax (HE80): 3
Output Power	CDD Mode: 5260 ~ 5320 MHz: 236.958 mW (23.75 dBm) 5500 ~ 5720 MHz: 235.881 mW (23.73 dBm) Beamforming Mode: 5260 ~ 5320 MHz: 118.487 mW (20.74 dBm) 5500 ~ 5720 MHz: 117.949 mW (20.72 dBm)

Note:

1. This report is prepared for FCC class II permissive change for is adding 5.26GHz to 5.32GHz and 5.50GHz to 5.72GHz by software.
2. Regarding changes to digital components (memory), applicants for this part have been evaluated through the Class 1 Permissive change process and no non-compliance has occurred. Therefore, this evaluation mainly focuses on the conditions for software to activate the DFS band.
3. There are four radios for the EUT.

Radio	Function	TX/RX Function
1	WLAN 2.4G	2TX / 2RX
2	WLAN 5G	2TX / 2RX
3	Scanning	1RX only (TX disabled)
4	BT LE	1TX / 1RX

* 2.4GHz (Radio 1) & 5GHz (Radio 2) & BT LE (Radio 4) technology can transmit at same time.

4. The EUT uses following accessories.

Item	Brand	Model	Specification
POE	EnGenius	EPA5006GR	I/P: 100-240 Vac, 50-60 Hz, 0.8 A O/P: 54 Vdc, 0.6 A PIN 4,5: 54 Vdc PIN 7,8 RETURN Power Line: 0.5 m non-shielded AC power cable without core
Ground Cable	-	-	1.75 m non-shielded ground cable without core

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

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Ant. Type		Dipole						
Connector		brass						
Frequency (MHz)		2400 MHz	2450 MHz	2500 MHz	5150 MHz	5350 MHz	5550 MHz	5850 MHz
Gain (dBi)	Ant. 2-1	5.08	5.13	5.17	-	-	-	-
	Ant. 2-2	5.08	5.13	5.17	-	-	-	-
	Ant. 5-1	-	-	-	5.12	5.05	5.09	5.17
	Ant. 5-2	-	-	-	5.12	5.05	5.09	5.17

* 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:

1. All of modulation mode support beamforming function except 802.11a modulation mode.
2. The EUT support Beamforming and CDD mode, therefore both mode were investigated and the worst case scenario was identified. The worst case data were presented in test report.
3. The modulation and bandwidth are similar for 802.11n mode for 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.
4. Partial RU (resource unit), channel puncturing and bandwidth reduction mechanisms are not supported.

3.3 Channel List

FOR 5260 ~ 5320 MHz

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

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

Channel	Frequency
58	5290 MHz

FOR 5500 ~ 5720 MHz

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

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

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

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

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

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

3.4 Test Mode Applicability and Tested Channel Detail

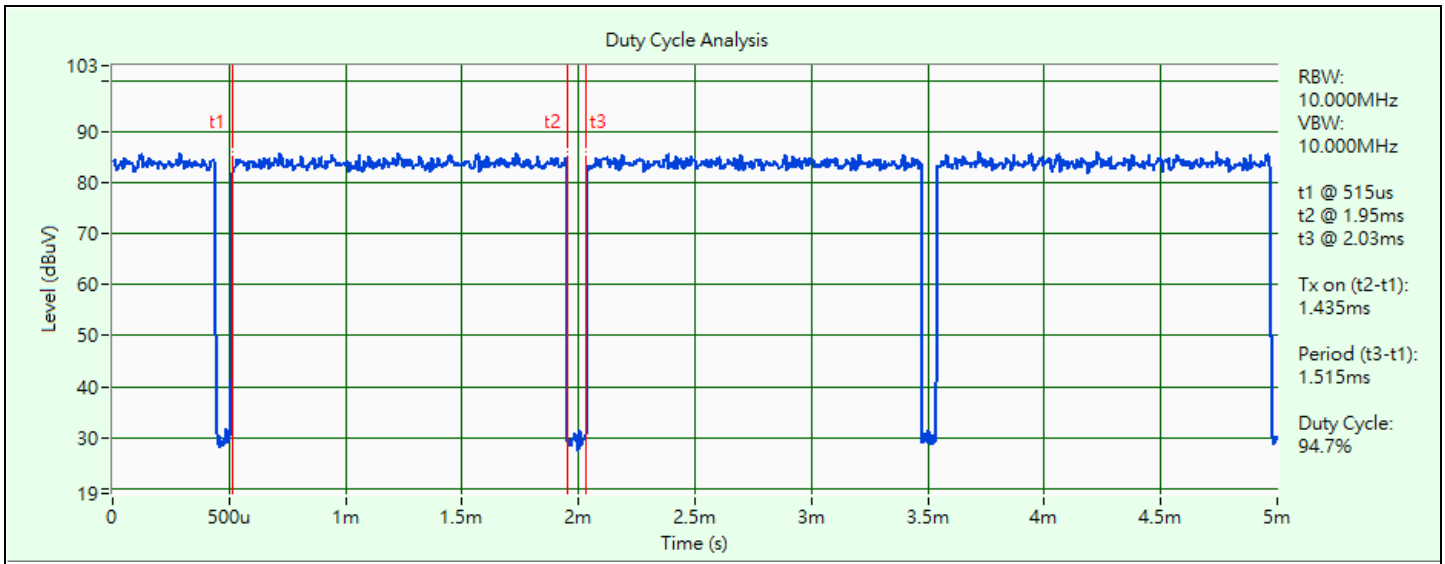
Pre-Scan:	1. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). 2. EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition.
Worst Case:	X-axis/ Y-axis/ Z-axis Worst Condition: Z-axis

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

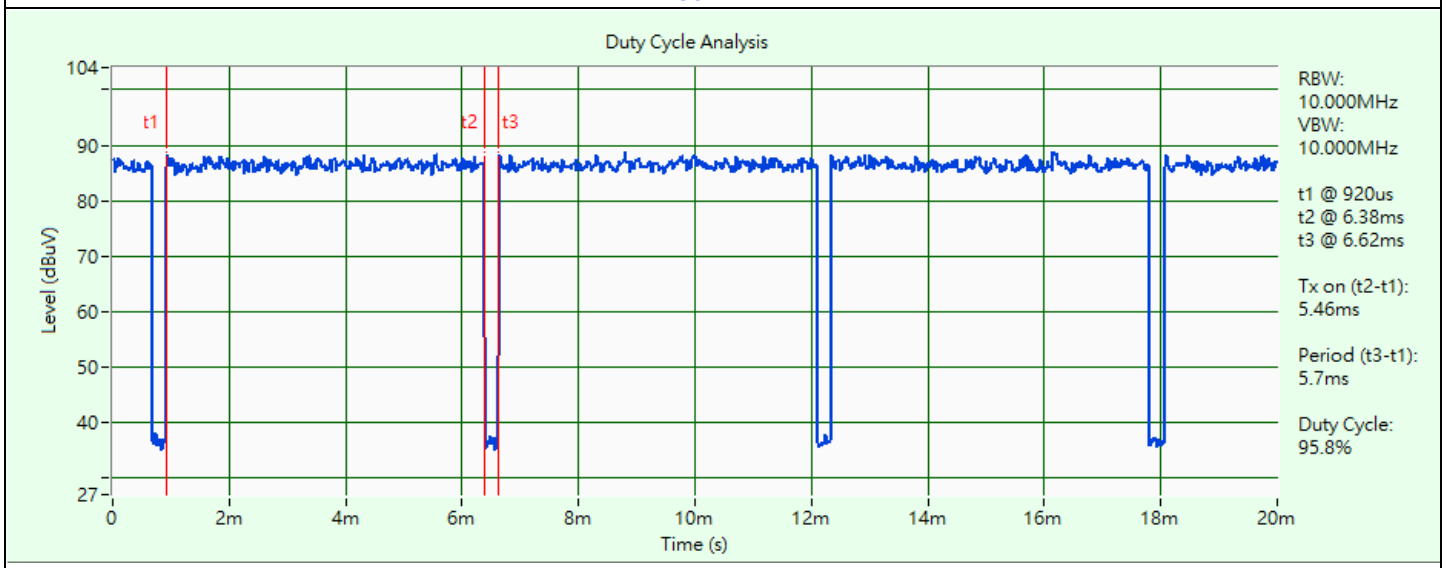
Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
26 dB Bandwidth	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
	802.11ax (HE20)	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
	802.11ax (HE40)	CDD	54, 62, 102, 110, 134, 142	BPSK	MCS0
	802.11ax (HE80)	CDD	58, 106, 122, 138	BPSK	MCS0
RF Output Power	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
	802.11n (HT20)	CDD & Beamforming	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
	802.11n (HT40)	CDD & Beamforming	54, 62, 102, 110, 134, 142	BPSK	MCS0
	802.11ac (VHT20)	CDD & Beamforming	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
	802.11ac (VHT40)	CDD & Beamforming	54, 62, 102, 110, 134, 142	BPSK	MCS0
	802.11ac (VHT80)	CDD & Beamforming	58, 106, 122, 138	BPSK	MCS0
	802.11ax (HE20)	CDD & Beamforming	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
	802.11ax (HE40)	CDD & Beamforming	54, 62, 102, 110, 134, 142	BPSK	MCS0
	802.11ax (HE80)	CDD & Beamforming	58, 106, 122, 138	BPSK	MCS0
Power Spectral Density	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
	802.11ax (HE20)	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
	802.11ax (HE40)	CDD	54, 62, 102, 110, 134, 142	BPSK	MCS0
	802.11ax (HE80)	CDD	58, 106, 122, 138	BPSK	MCS0
6 dB Bandwidth	802.11a	CDD	144	BPSK	6Mb/s
	802.11ax (HE20)	CDD	144	BPSK	MCS0
	802.11ax (HE40)	CDD	142	BPSK	MCS0
	802.11ax (HE80)	CDD	138	BPSK	MCS0
Occupied Bandwidth	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
	802.11ax (HE20)	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
	802.11ax (HE40)	CDD	54, 62, 102, 110, 134, 142	BPSK	MCS0
	802.11ax (HE80)	CDD	58, 106, 122, 138	BPSK	MCS0
Frequency Stability	802.11a	-	52	unmodulated	-
AC Power Conducted Emissions	802.11ax (HE40)	CDD	54	BPSK	MCS0
Unwanted Emissions below 1 GHz	802.11ax (HE40)	CDD	54	BPSK	MCS0
Unwanted Emissions above 1 GHz	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

3.5 Duty Cycle of Test Signal

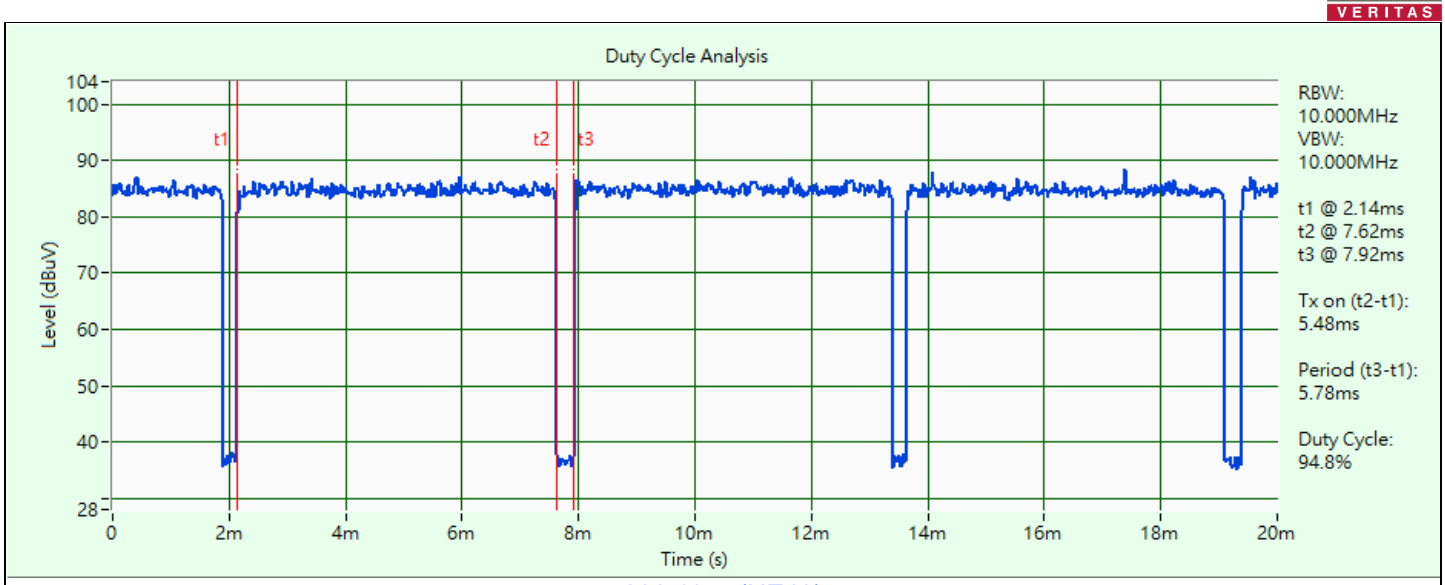
802.11a: Duty cycle = 1.435 ms / 1.515 ms x 100% = 94.7%, duty factor = 10 * log (1/Duty cycle) = 0.24 dB
802.11ax (HE20): Duty cycle = 5.46 ms / 5.7 ms x 100% = 95.8%, duty factor = 10 * log (1/Duty cycle) = 0.19 dB
802.11ax (HE40): Duty cycle = 5.48 ms / 5.78 ms x 100% = 94.8%, duty factor = 10 * log (1/Duty cycle) = 0.23 dB
802.11ax (HE80): Duty cycle = 5.48 ms / 5.7 ms x 100% = 96.1%, duty factor = 10 * log (1/Duty cycle) = 0.17 dB



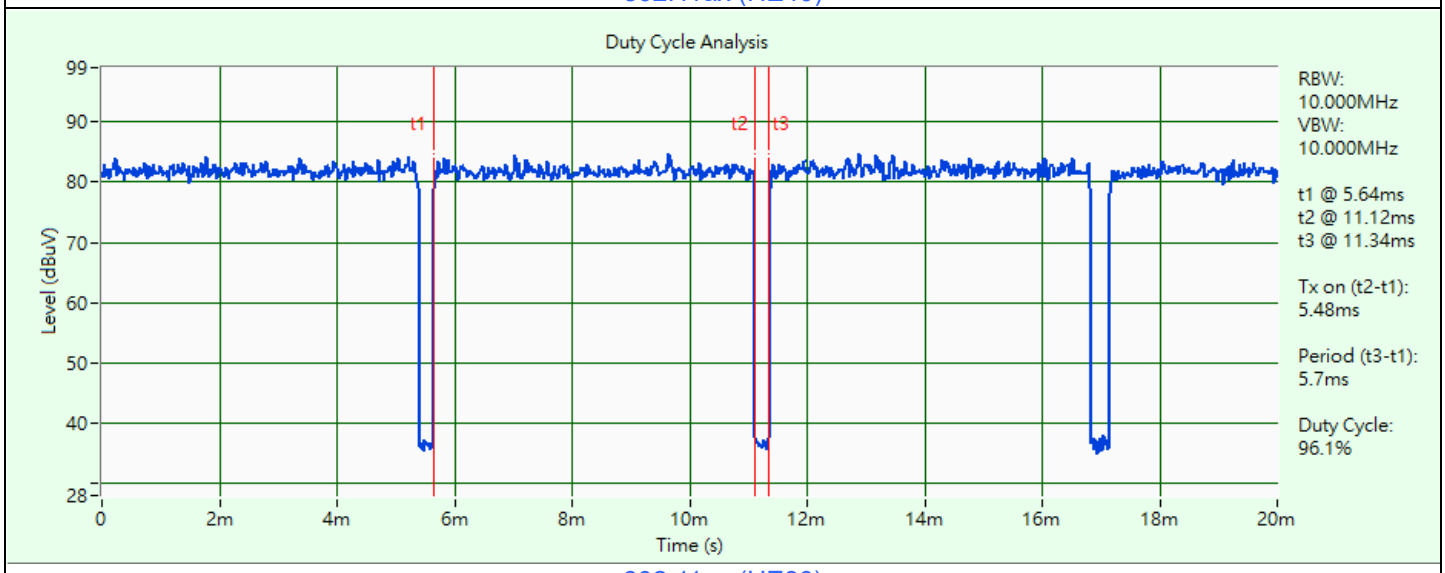
802.11a



802.11ax (HE20)



802.11ax (HE40)

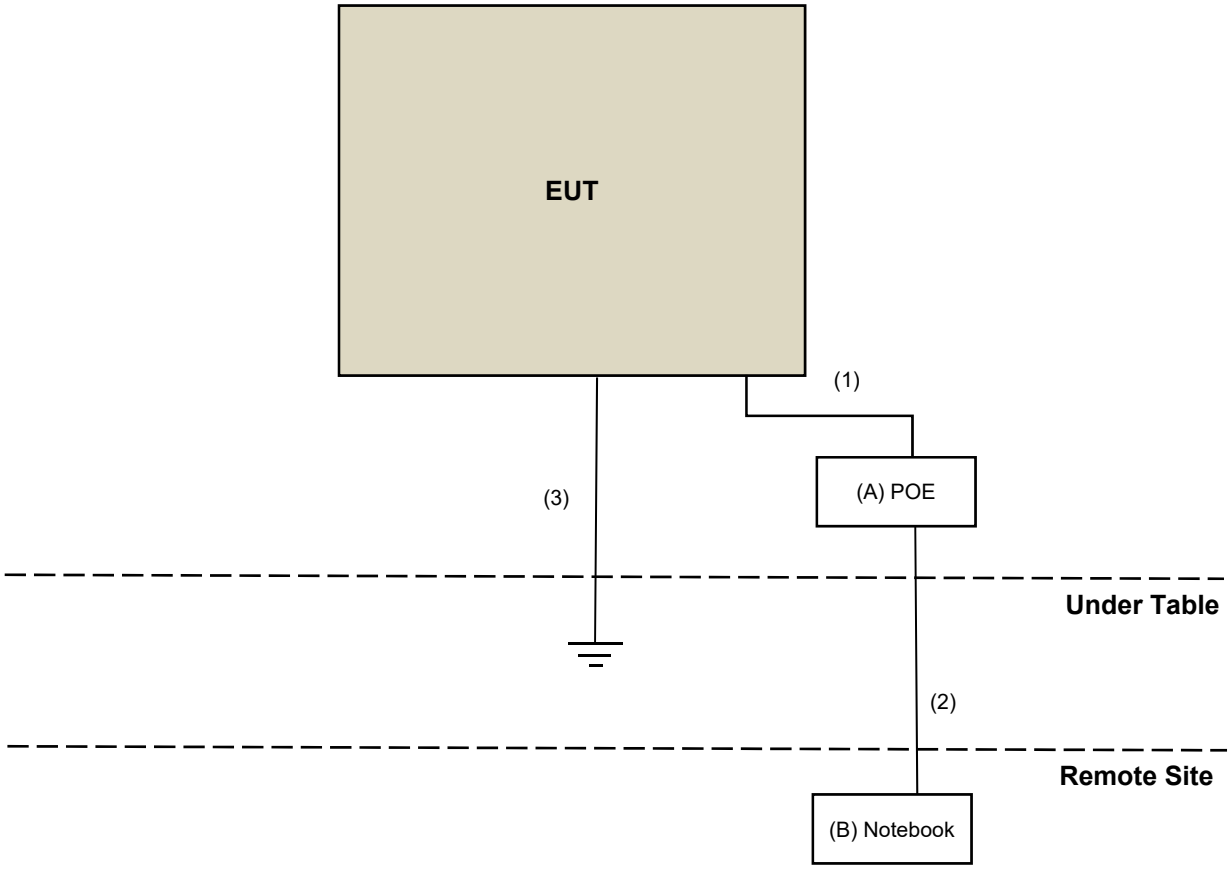


802.11ax (HE80)

3.6 Test Program Used and Operation Descriptions

Controlling software QSPR V5.0.188.0 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	POE	EnGenius	EPA5006GR	N/A	N/A	Accessory of EUT
B	Notebook	Lenovo	X250ALT5	PC06HPSE	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-45 Cable	1	1.5	No	0	Provided by Lab
2	RJ-45 Cable	1	10	No	0	Provided by Lab
3	Ground Cable	1	1.75	No	0	Accessory of EUT

4 Test Instruments

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

4.1 26 dB Bandwidth

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

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/9/15

4.2 RF Output Power

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

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/9/15

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
3-channel DC power supply JIN YIH Technology	ODP3033	ODP30332128138	N/A	N/A
Digital Multimeter Fluke	87-III	70360742	2023/7/6	2024/7/5
Signal & Spectrum Analyzer R&S	FSV3044	101105	2023/2/22	2024/2/21
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
Temperature & Humidity Chamber Terchy	HRM-120RF	931022	2022/12/27	2023/12/26

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/9/15

4.7 AC Power Conducted Emissions

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

Notes:

1. The test was performed in HY - Conduction 1.
2. Tested Date: 2023/8/28

4.8 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower &Turn BV ADT	AT100	AT93021705	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-160	2022/10/20	2023/10/19
Loop Antenna Electro-Metrics	EM-6879	269	2022/9/19	2023/9/18
Loop Antenna TESEQ	HLA 6121	45745	2023/8/8	2024/8/7
MXE EMI Receiver Keysight	N9038A	MY55420137	2023/5/3	2024/5/2
Preamplifier Agilent	8447D	2944A10638	2023/5/7	2024/5/6
Preamplifier EMCI	EMC001340	980201	2022/9/23	2023/9/22
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	2023/1/7	2024/1/6
RF Coaxial Cable Woken	8D-FB	Cable-CH9-01	2023/5/7	2024/5/6
Signal & Spectrum Analyzer R&S	FSW43	101867	2022/12/30	2023/12/29
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 4.
2. Tested Date: 2023/8/25

4.9 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower &Turn BV ADT	AT100	AT93021705	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	5	N/A	N/A
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-1169	2022/11/13	2023/11/12
	BBHA 9170	9170-480	2022/11/13	2023/11/12
		BBHA9170243	2022/11/13	2023/11/12
MXE EMI Receiver Keysight	N9038A	MY55420137	2023/5/3	2024/5/2
Notch Filter Micro-Tronics	BRM17690	004	2023/1/11	2024/1/10
	BRM50716	060	2023/1/11	2024/1/10
Preamplifier Agilent	8449B	3008A02367	2023/2/15	2024/2/14
Preamplifier EMCI	EMC 184045	980116	2022/10/1	2023/9/30
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2023/7/8	2024/7/7
	EMC102-KM-KM-3000	150929	2023/7/8	2024/7/7
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/4)	2023/1/7	2024/1/6
RF Coaxial Cable HUBER+SUHNER&EMCI	SUCOFLEX 104& EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	2023/1/7	2024/1/6
Signal & Spectrum Analyzer R&S	FSW43	101867	2022/12/30	2023/12/29
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 4.
2. Tested Date: 2023/8/24 ~ 2023/8/25

5 Limits of Test Items

5.1 26 dB Bandwidth

The results are for reference only.

5.2 RF Output Power

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

*B is the 26 dB emission bandwidth in megahertz

Per KDB 662911 D01 Multiple Transmitter Output Method of conducted output power measurement on IEEE 802.11 devices,

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

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

5.3 Power Spectral Density

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

5.4 6 dB Bandwidth

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

5.5 Occupied Bandwidth

The results are for reference only.

5.6 Frequency Stability

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

5.7 AC Power Conducted Emissions

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

Notes:

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

5.8 Unwanted Emissions below 1 GHz

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

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

Notes:

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

5.9 Unwanted Emissions above 1 GHz

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

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
Above 960	500	3

Notes:

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

Limits of unwanted emission out of the restricted bands

Applicable To	Limit	
789033 D02 General UNII Test Procedure New Rules v02r01	Field Strength at 3 m	
	PK: 74 (dBµV/m)	AV: 54 (dBµV/m)

For transmitters operating in the 5.25-5.35 GHz band:

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

For transmitters operating in the 5.47-5.725 GHz band:

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

For transmitters operating in the 5.725-5.850 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(4)(i)	PK: -27 (dBm/MHz) *1 PK: 10 (dBm/MHz) *2 PK: 15.6 (dBm/MHz) *3 PK: 27 (dBm/MHz) *4	PK: 68.2 (dBµV/m) *1 PK: 105.2 (dBµV/m) *2 PK: 110.8 (dBµV/m) *3 PK: 122.2 (dBµV/m) *4
*1 beyond 75 MHz or more above of the band edge. *2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above. *3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above. *4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.		

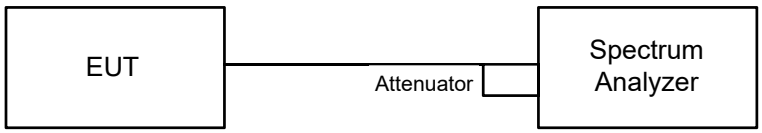
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 26 dB Bandwidth

6.1.1 Test Setup



6.1.2 Test Procedure

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

6.2 RF Output Power

6.2.1 Test Setup

For channel straddling:

6.2.2 Test Procedure

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

For channel straddling:

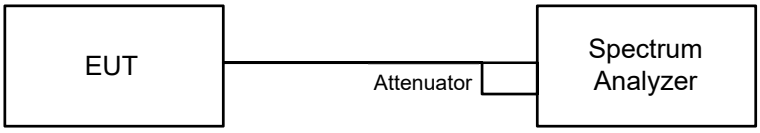
Method SA-2A

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

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

6.3 Power Spectral Density

6.3.1 Test Setup



6.3.2 Test Procedure

For specified measurement bandwidth 1 MHz:

Method SA-2

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
d. Sweep time = auto, trigger set to “free run”.
e. Trace average at least 100 traces in power averaging mode.
f. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
g. Record the max value and add 10 log (1/duty cycle).

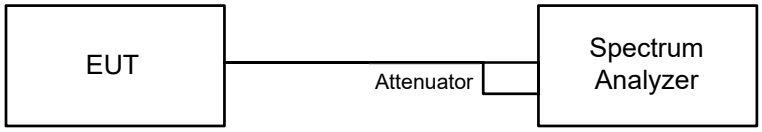
For specified measurement bandwidth 500 kHz:

Method SA-2

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
c. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/300 kHz)
d. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
e. Sweep time = auto, trigger set to “free run”.
f. Trace average at least 100 traces in power averaging mode.
g. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
h. Record the max value and add 10 log (1/duty cycle).

6.4 6 dB Bandwidth

6.4.1 Test Setup

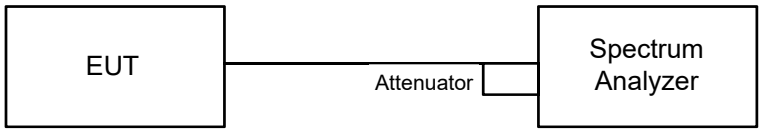


6.4.2 Test Procedure

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

6.5 Occupied Bandwidth

6.5.1 Test Setup

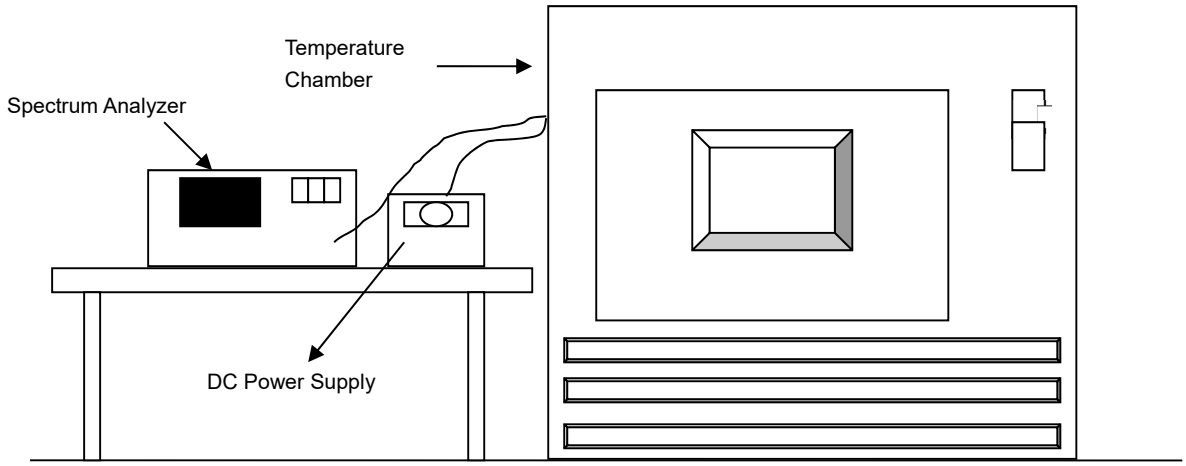


6.5.2 Test Procedure

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

6.6 Frequency Stability

6.6.1 Test Setup

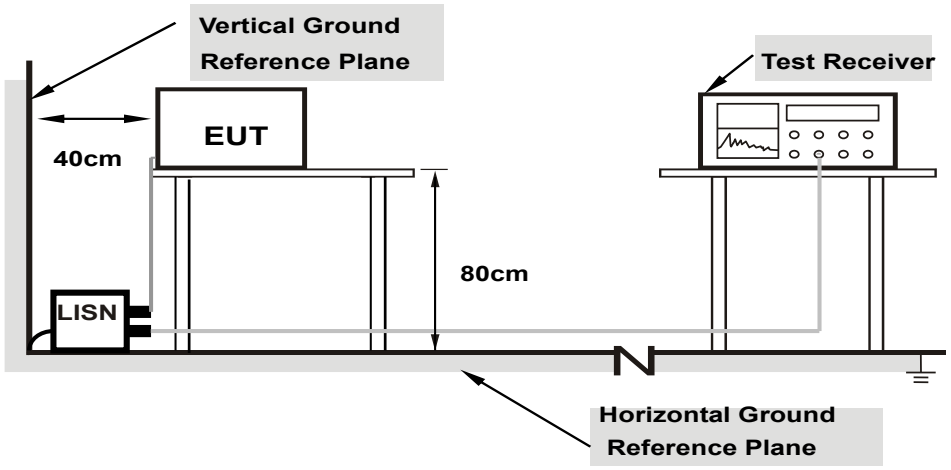


6.6.2 Test Procedure

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

6.7 AC Power Conducted Emissions

6.7.1 Test Setup



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

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

6.7.2 Test Procedure

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

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

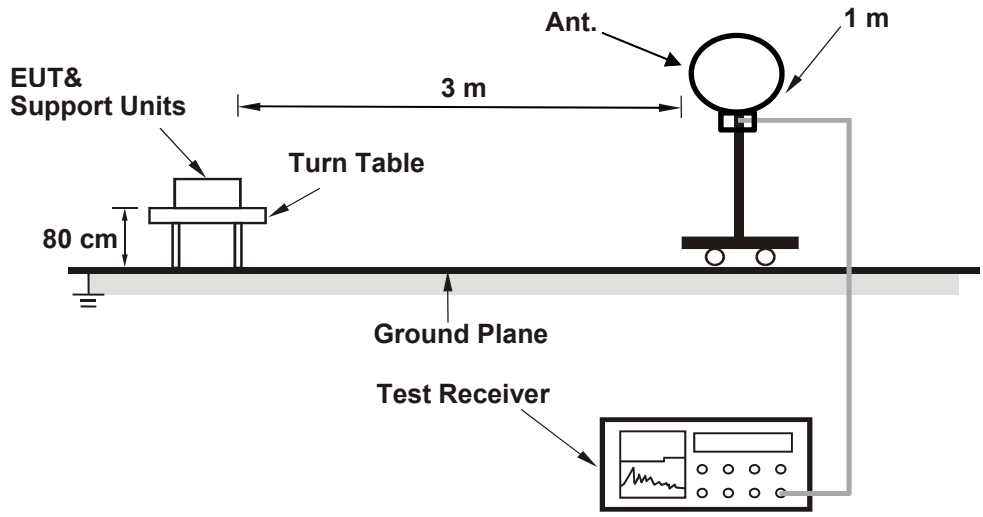
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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

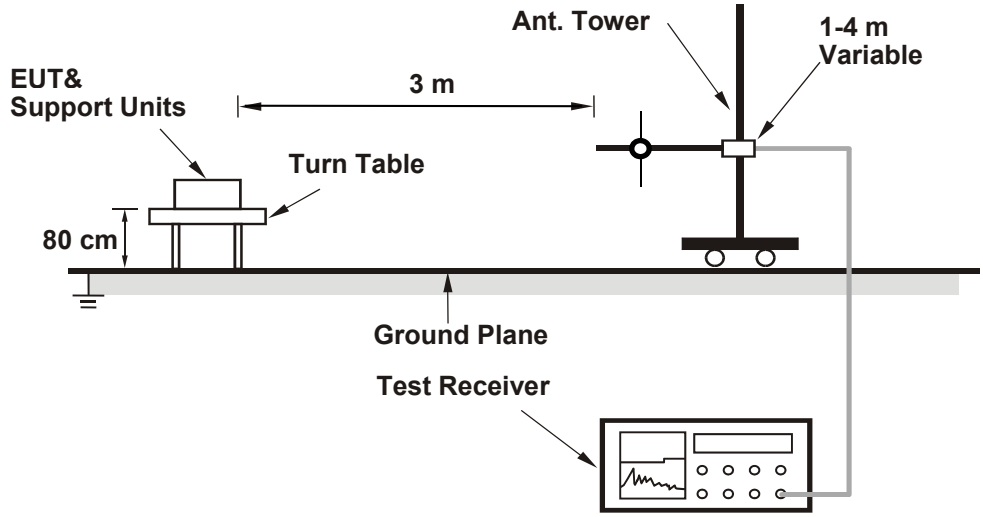
6.8 Unwanted Emissions below 1 GHz

6.8.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.8.2 Test Procedure

For Radiated emission below 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

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

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

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

For Radiated emission above 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

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

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

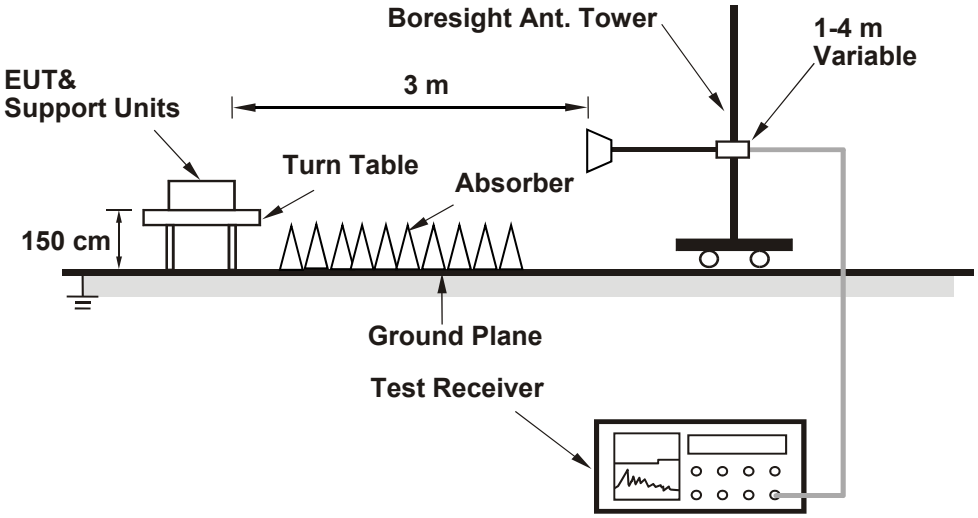
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

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

a. The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

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

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Notes:

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

7 Test Results of Test Item

7.1 26 dB Bandwidth

Input Power:	54 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang

802.11a

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	21.00	20.96
60	5300	20.83	20.72
64	5320	20.81	20.81
100	5500	20.97	20.77
116	5580	20.98	20.96
140	5700	20.83	20.97
144 (U-NII-2C)	5720	15.45	15.44
144 (U-NII-3)	5720	5.42	5.43

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	20.96	24.21	>	24
60	5300	20.72	24.16	>	24
64	5320	20.81	24.18	>	24
100	5500	20.77	24.17	>	24
116	5580	20.96	24.21	>	24
140	5700	20.83	24.18	>	24
144 (U-NII-2C)	5720	15.44	22.88	<	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	21.75	21.50
60	5300	21.85	21.85
64	5320	21.74	21.77
100	5500	21.64	22.01
116	5580	21.72	21.95
140	5700	21.75	21.95
144 (U-NII-2C)	5720	16.00	16.08
144 (U-NII-3)	5720	5.93	5.91

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	21.50	24.32	>	24
60	5300	21.85	24.39	>	24
64	5320	21.74	24.37	>	24
100	5500	21.64	24.35	>	24
116	5580	21.72	24.36	>	24
140	5700	21.75	24.37	>	24
144 (U-NII-2C)	5720	16.00	23.04	<	24

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

802.11ax (HE40)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	41.72	41.72
62	5310	41.40	41.32
102	5510	41.85	41.65
110	5550	41.49	41.38
134	5670	41.39	41.49
142 (U-NII-2C)	5710	35.64	35.75
142 (U-NII-3)	5710	5.75	5.85

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
54	5270	41.72	27.2	>	24
62	5310	41.32	27.16	>	24
102	5510	41.65	27.19	>	24
110	5550	41.38	27.16	>	24
134	5670	41.39	27.16	>	24
142 (U-NII-2C)	5710	35.64	26.51	>	24

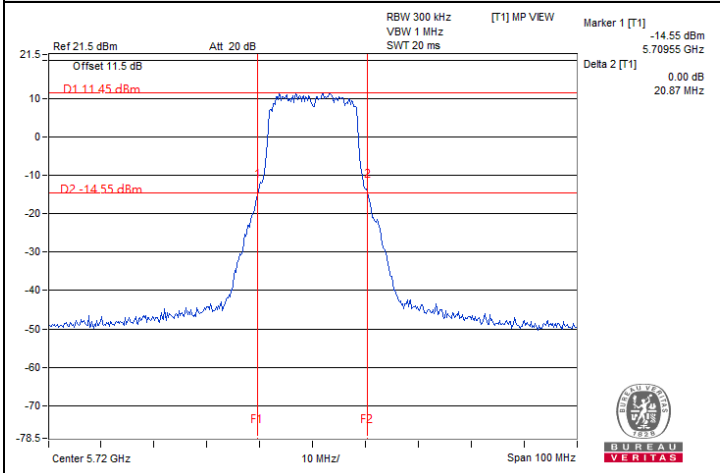
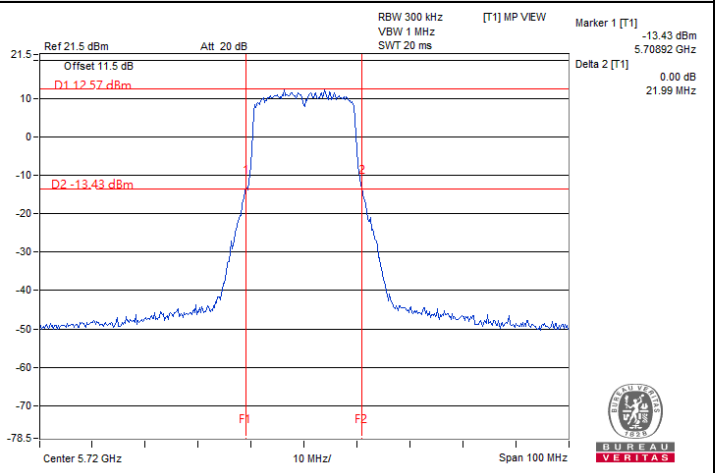
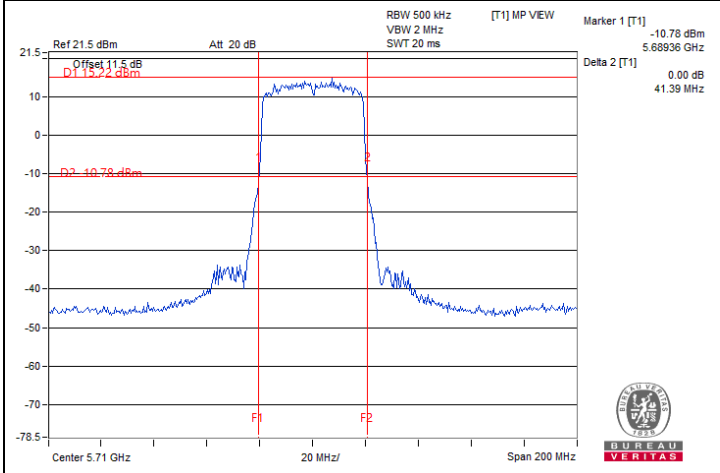
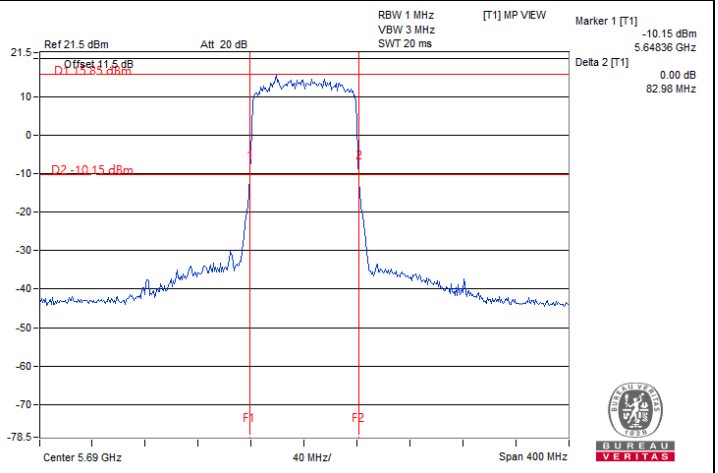
Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11ax (HE80)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	83.20	83.66
106	5530	83.46	83.51
122	5610	83.13	83.43
138 (U-NII-2C)	5690	76.64	76.63
138 (U-NII-3)	5690	6.34	6.75

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
58	5290	83.20	30.2	>	24
106	5530	83.46	30.21	>	24
122	5610	83.13	30.19	>	24
138 (U-NII-2C)	5690	76.63	29.84	>	24

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

Spectrum Plot of Minimum Value	
	
802.11a / Chain 0 : CH 144 (U-NII-3)	802.11ax (HE20) / Chain 1 : CH 144 (U-NII-3)
	
802.11ax (HE40) / Chain 0 : CH 142 (U-NII-3)	802.11ax (HE80) / Chain 0 : CH 138 (U-NII-3)

Notes:

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

7.2 RF Output Power

Input Power:	54 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	18.33	19.04	148.245	21.71	24	Pass
60	5300	18.25	19.06	147.372	21.68	24	Pass
64	5320	18.30	18.85	144.344	21.59	24	Pass
100	5500	18.65	18.74	148.099	21.71	24	Pass
116	5580	18.75	18.83	151.373	21.80	24	Pass
140	5700	18.45	18.73	144.629	21.60	24	Pass
*144 (U-NII-2C)	5720	17.84	17.88	129.002	21.11	22.88	Pass
*144 (U-NII-3)	5720	11.27	11.77	30.013	14.77	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2A, the maximum gain is 5.05 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 5.09 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	18.21	19.01	145.838	21.64	24	Pass
60	5300	18.23	19.26	150.861	21.79	24	Pass
64	5320	18.25	18.96	145.539	21.63	24	Pass
100	5500	18.46	18.56	141.925	21.52	24	Pass
116	5580	18.45	18.57	141.929	21.52	24	Pass
140	5700	18.36	18.85	145.285	21.62	24	Pass
*144 (U-NII-2C)	5720	17.11	17.26	109.214	20.38	23.04	Pass
*144 (U-NII-3)	5720	11.82	11.92	32.117	15.07	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2A, the maximum gain is 5.05 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 5.09 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
54	5270	20.08	20.73	220.163	23.43	24	Pass
62	5310	20.07	20.74	220.202	23.43	24	Pass
102	5510	20.33	20.36	216.537	23.36	24	Pass
110	5550	20.24	20.28	212.341	23.27	24	Pass
134	5670	20.22	20.71	222.957	23.48	24	Pass
*142 (U-NII-2C)	5710	19.90	19.96	207.581	23.17	24	Pass
*142 (U-NII-3)	5710	9.95	10.01	20.998	13.22	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2A, the maximum gain is 5.05 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 5.09 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	18.26	19.05	147.341	21.68	24	Pass
60	5300	18.30	19.31	152.918	21.84	24	Pass
64	5320	18.31	19.01	147.38	21.68	24	Pass
100	5500	18.52	18.61	143.732	21.58	24	Pass
116	5580	18.51	18.62	143.736	21.58	24	Pass
140	5700	18.42	18.92	147.485	21.69	24	Pass
*144 (U-NII-2C)	5720	17.23	17.32	111.49	20.47	23.04	Pass
*144 (U-NII-3)	5720	11.92	12.02	32.866	15.17	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2A, the maximum gain is 5.05 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 5.09 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
54	5270	20.25	20.86	227.824	23.58	24	Pass
62	5310	20.22	20.85	226.815	23.56	24	Pass
102	5510	20.48	20.55	225.187	23.53	24	Pass
110	5550	20.42	20.46	221.327	23.45	24	Pass
134	5670	20.35	20.84	229.732	23.61	24	Pass
*142 (U-NII-2C)	5710	20.00	20.02	211.436	23.25	24	Pass
*142 (U-NII-3)	5710	10.05	10.06	21.364	13.30	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2A, the maximum gain is 5.05 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 5.09 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
58	5290	18.98	20.16	182.821	22.62	24	Pass
106	5530	18.15	18.16	130.777	21.17	24	Pass
122	5610	20.43	20.68	227.358	23.57	24	Pass
*138 (U-NII-2C)	5690	20.42	20.46	230.212	23.62	24	Pass
*138 (U-NII-3)	5690	6.61	6.58	9.498	9.78	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2A, the maximum gain is 5.05 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 5.09 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	18.34	19.10	149.517	21.75	24	Pass
60	5300	18.35	19.37	154.888	21.90	24	Pass
64	5320	18.34	19.05	148.586	21.72	24	Pass
100	5500	18.56	18.65	145.062	21.62	24	Pass
116	5580	18.54	18.68	145.240	21.62	24	Pass
140	5700	18.45	18.97	148.870	21.73	24	Pass
*144 (U-NII-2C)	5720	17.40	17.42	115.004	20.61	23.04	Pass
*144 (U-NII-3)	5720	12.09	12.11	33.862	15.30	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2A, the maximum gain is 5.05 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 5.09 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
54	5270	20.41	21.04	236.958	23.75	24	Pass
62	5310	20.37	20.96	233.631	23.69	24	Pass
102	5510	20.65	20.72	234.177	23.70	24	Pass
110	5550	20.55	20.62	228.846	23.60	24	Pass
134	5670	20.47	20.95	235.881	23.73	24	Pass
*142 (U-NII-2C)	5710	20.06	20.07	214.130	23.31	24	Pass
*142 (U-NII-3)	5710	10.11	10.12	21.661	13.36	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2A, the maximum gain is 5.05 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 5.09 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
58	5290	19.11	20.33	189.365	22.77	24	Pass
106	5530	18.29	18.35	135.844	21.33	24	Pass
122	5610	20.58	20.84	235.627	23.72	24	Pass
*138 (U-NII-2C)	5690	20.55	20.51	235.033	23.71	24	Pass
*138 (U-NII-3)	5690	6.71	6.65	9.686	9.86	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2A, the maximum gain is 5.05 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 5.09 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	15.20	16.00	72.924	18.63	21.94	Pass
60	5300	15.22	16.25	75.436	18.78	21.94	Pass
64	5320	15.24	15.95	72.775	18.62	21.94	Pass
100	5500	15.45	15.55	70.967	18.51	21.90	Pass
116	5580	15.44	15.56	70.969	18.51	21.90	Pass
140	5700	15.35	15.84	72.648	18.61	21.90	Pass
*144 (U-NII-2C)	5720	14.10	14.25	54.611	17.37	20.94	Pass
*144 (U-NII-3)	5720	8.81	8.91	16.060	12.06	27.82	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 8.06 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.06-6)].
4. For U-NII-2C, the directional gain is 8.10 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.10-6)].
5. For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.18-6) = 27.82 dBm.

802.11n (HT40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
54	5270	17.07	17.72	110.089	20.42	21.94	Pass
62	5310	17.06	17.73	110.108	20.42	21.94	Pass
102	5510	17.32	17.35	108.276	20.35	21.90	Pass
110	5550	17.23	17.27	106.178	20.26	21.90	Pass
134	5670	17.21	17.70	111.486	20.47	21.90	Pass
*142 (U-NII-2C)	5710	16.99	16.96	105.119	20.22	21.90	Pass
*142 (U-NII-3)	5710	7.05	6.95	10.573	10.24	27.82	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 8.06 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.06-6)].
4. For U-NII-2C, the directional gain is 8.10 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.10-6)].
5. For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.18-6) = 27.82 dBm.

802.11ac (VHT20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	15.25	16.04	73.676	18.67	21.94	Pass
60	5300	15.29	16.30	76.464	18.83	21.94	Pass
64	5320	15.30	16.00	73.695	18.67	21.94	Pass
100	5500	15.51	15.60	71.871	18.57	21.90	Pass
116	5580	15.50	15.61	71.873	18.57	21.90	Pass
140	5700	15.41	15.91	73.748	18.68	21.90	Pass
*144 (U-NII-2C)	5720	14.22	14.31	55.749	17.46	20.94	Pass
*144 (U-NII-3)	5720	8.91	9.01	16.434	12.16	27.82	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 8.06 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.06-6)].
4. For U-NII-2C, the directional gain is 8.10 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.10-6)].
5. For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.18-6) = 27.82 dBm.

802.11ac (VHT40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
54	5270	17.24	17.85	113.92	20.57	21.94	Pass
62	5310	17.21	17.84	113.415	20.55	21.94	Pass
102	5510	17.47	17.54	112.601	20.52	21.90	Pass
110	5550	17.41	17.45	110.671	20.44	21.90	Pass
134	5670	17.34	17.83	114.874	20.60	21.90	Pass
*142 (U-NII-2C)	5710	17.07	17.13	108.19	20.34	21.90	Pass
*142 (U-NII-3)	5710	7.12	7.13	10.881	10.37	27.82	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 8.06 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.06-6)].
4. For U-NII-2C, the directional gain is 8.10 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.10-6)].
5. For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.18-6) = 27.82 dBm.

802.11ac (VHT80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
58	5290	15.97	17.15	91.417	19.61	21.94	Pass
106	5530	15.14	15.15	65.393	18.16	21.90	Pass
122	5610	17.42	17.67	113.687	20.56	21.90	Pass
*138 (U-NII-2C)	5690	17.42	17.45	115.246	20.62	21.90	Pass
*138 (U-NII-3)	5690	3.53	3.56	4.706	6.73	27.82	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 8.06 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.06-6)].
4. For U-NII-2C, the directional gain is 8.10 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.10-6)].
5. For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.18-6) = 27.82 dBm.

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
52	5260	15.33	16.09	74.764	18.74	21.94	Pass
60	5300	15.34	16.36	77.449	18.89	21.94	Pass
64	5320	15.33	16.04	74.298	18.71	21.94	Pass
100	5500	15.55	15.64	72.536	18.61	21.90	Pass
116	5580	15.53	15.67	72.625	18.61	21.90	Pass
140	5700	15.44	15.96	74.440	18.72	21.90	Pass
*144 (U-NII-2C)	5720	14.39	14.41	57.506	17.60	20.94	Pass
*144 (U-NII-3)	5720	9.08	9.10	16.932	12.29	27.82	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 8.06 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.06-6)].
4. For U-NII-2C, the directional gain is 8.10 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.10-6)].
5. For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.18-6) = 27.82 dBm.

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
54	5270	17.40	18.03	118.487	20.74	21.94	Pass
62	5310	17.36	17.95	116.824	20.68	21.94	Pass
102	5510	17.64	17.71	117.097	20.69	21.90	Pass
110	5550	17.54	17.61	114.431	20.59	21.90	Pass
134	5670	17.46	17.94	117.949	20.72	21.90	Pass
*142 (U-NII-2C)	5710	17.24	17.29	112.379	20.51	21.90	Pass
*142 (U-NII-3)	5710	7.29	7.34	11.368	10.56	27.82	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 8.06 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.06-6)].
4. For U-NII-2C, the directional gain is 8.10 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.10-6)].
5. For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.18-6) = 27.82 dBm.

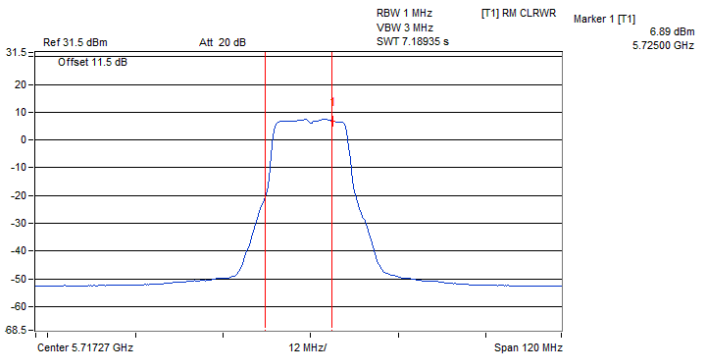
802.11ax (HE80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
58	5290	16.10	17.32	94.689	19.76	21.94	Pass
106	5530	15.28	15.34	67.927	18.32	21.90	Pass
122	5610	17.57	17.83	117.821	20.71	21.90	Pass
*138 (U-NII-2C)	5690	17.55	17.52	117.931	20.72	21.90	Pass
*138 (U-NII-3)	5690	3.69	3.66	4.849	6.86	27.82	Pass

Notes:

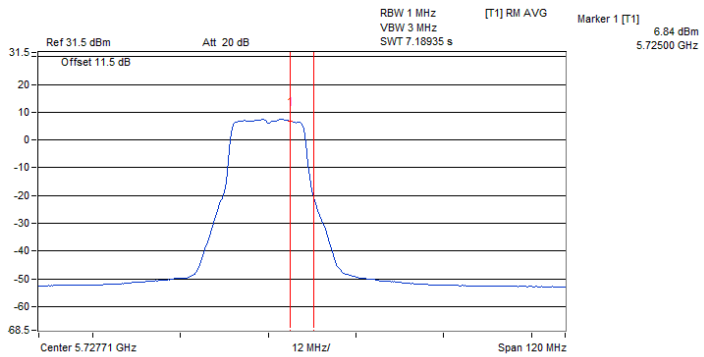
1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 8.06 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.06-6)].
4. For U-NII-2C, the directional gain is 8.10 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(8.10-6)].
5. For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.18-6) = 27.82 dBm.

Spectrum Plot for channel straddling



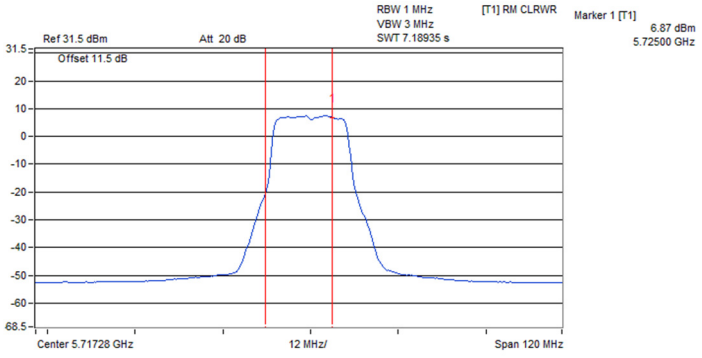
TX Channel Bandwidth 15.45 MHz Power 17.84 dBm

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



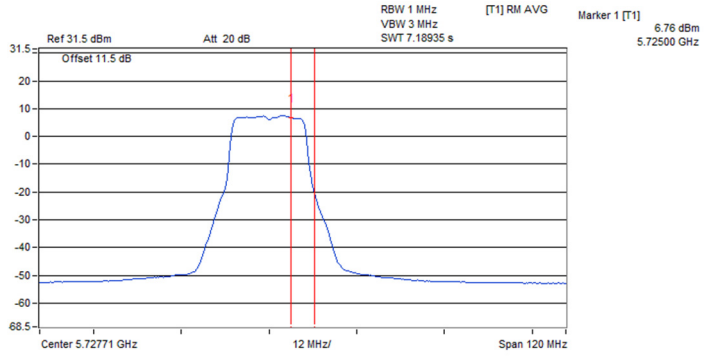
TX Channel Bandwidth 5.42 MHz Power 11.27 dBm

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



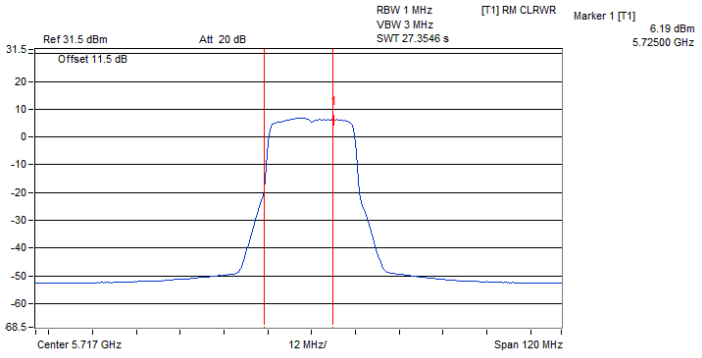
TX Channel Bandwidth 15.44 MHz Power 17.88 dBm

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



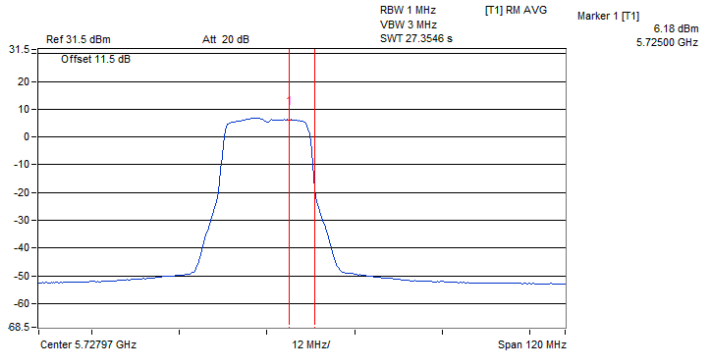
TX Channel Bandwidth 5.43 MHz Power 11.77 dBm

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



TX Channel Bandwidth 16 MHz Power 17.4 dBm

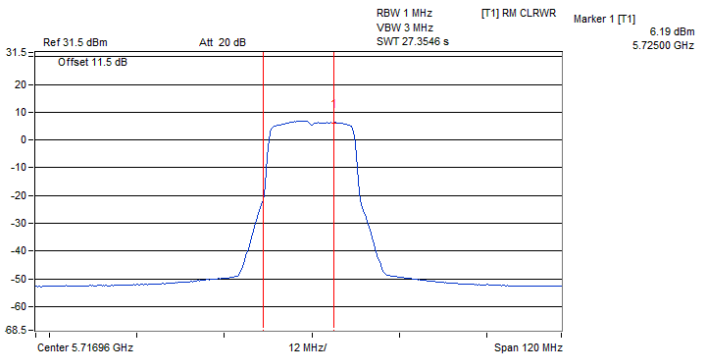
802.11ax (HE20) / Chain 0 : CH 144 (U-NII-2C)



TX Channel Bandwidth 5.93 MHz Power 12.09 dBm

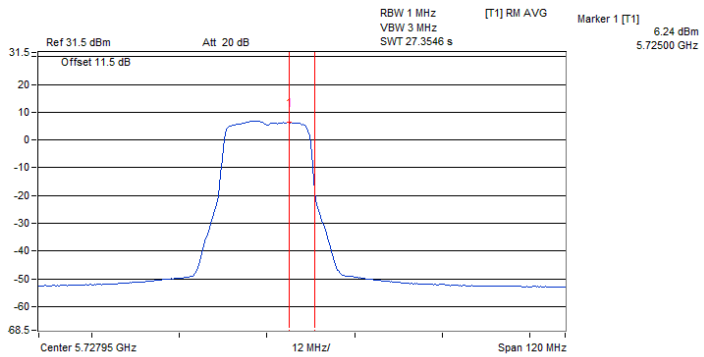
802.11ax (HE20) / Chain 0 : CH 144 (U-NII-3)

Spectrum Plot for channel straddling



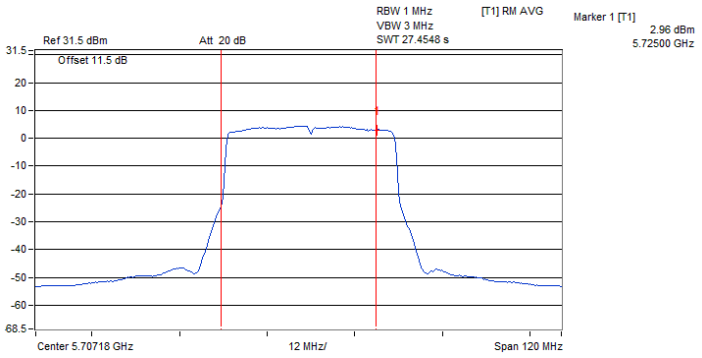
TX Channel Bandwidth 16.08 MHz Power 17.42 dBm

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



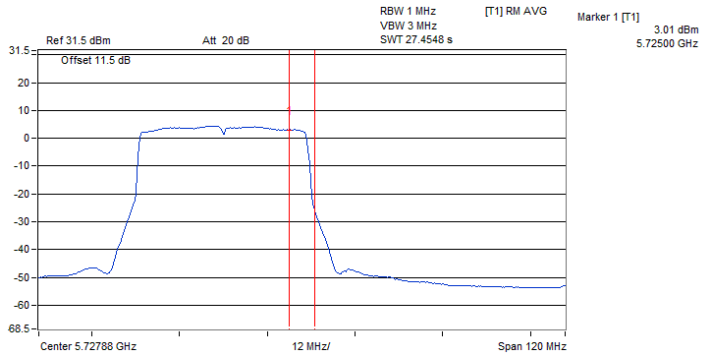
TX Channel Bandwidth 5.91 MHz Power 12.11 dBm

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



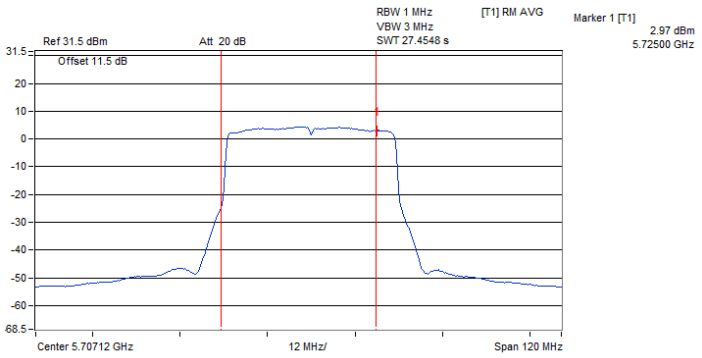
TX Channel Bandwidth 35.64 MHz Power 20.06 dBm

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



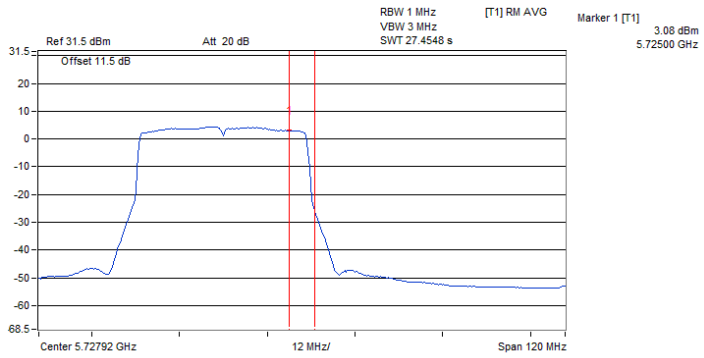
TX Channel Bandwidth 5.75 MHz Power 10.11 dBm

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



TX Channel Bandwidth 35.75 MHz Power 20.07 dBm

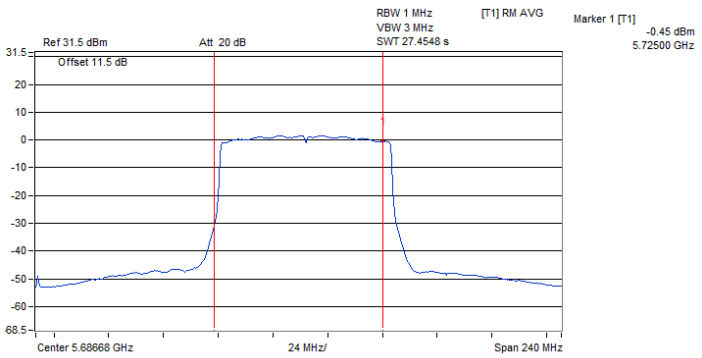
802.11ax (HE40) / Chain 1 : CH 142 (U-NII-2C)



TX Channel Bandwidth 5.85 MHz Power 10.12 dBm

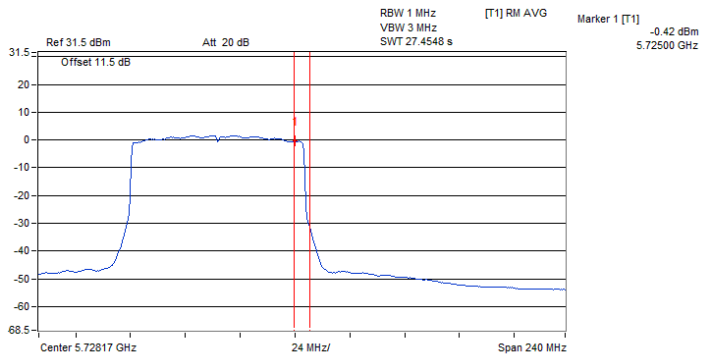
802.11ax (HE40) / Chain 1 : CH 142 (U-NII-3)

Spectrum Plot for channel straddling



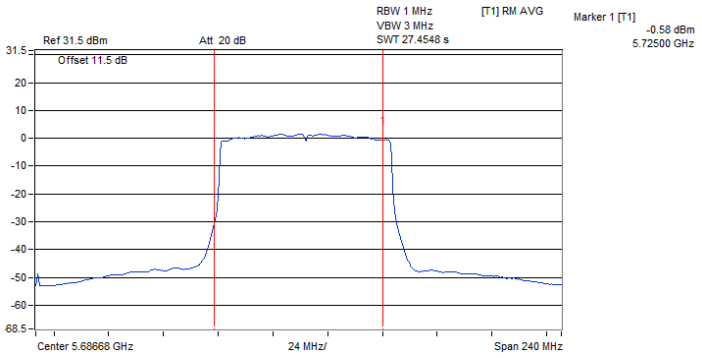
TX Channel Bandwidth 76.64 MHz Power 20.55 dBm

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



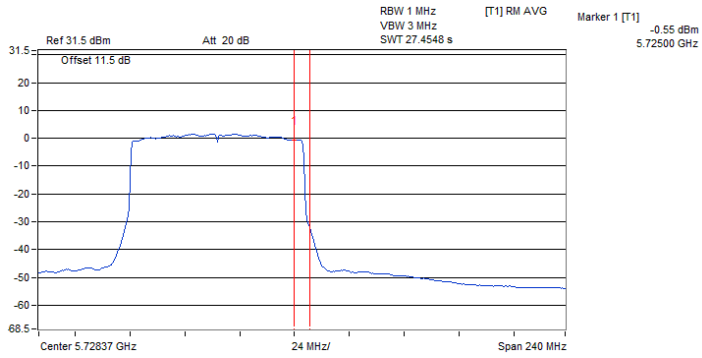
TX Channel Bandwidth 6.34 MHz Power 6.71 dBm

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



TX Channel Bandwidth 76.63 MHz Power 20.51 dBm

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



TX Channel Bandwidth 6.75 MHz Power 6.65 dBm

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

7.3 Power Spectral Density

Input Power:	54 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
52	5260	5.07	5.71	0.24	8.65	8.94	Pass
60	5300	4.90	5.77	0.24	8.61	8.94	Pass
64	5320	5.08	5.52	0.24	8.56	8.94	Pass
100	5500	5.28	5.46	0.24	8.62	8.90	Pass
116	5580	5.49	5.42	0.24	8.71	8.90	Pass
140	5700	5.00	5.37	0.24	8.44	8.90	Pass
144 (U-NII-2C)	5720	5.15	5.61	0.24	8.64	8.90	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 8.06 dBi > 6 dBi, so the power density limit shall be reduced to 11-(8.06-6) = 8.94 dBm/MHz.
4. For U-NII-2C, the directional gain is 8.10 dBi > 6 dBi, so the power density limit shall be reduced to 11-(8.10-6) = 8.90 dBm/MHz.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
52	5260	4.84	5.46	0.19	8.36	8.94	Pass
60	5300	4.96	6.11	0.19	8.77	8.94	Pass
64	5320	4.40	5.82	0.19	8.37	8.94	Pass
100	5500	5.33	5.12	0.19	8.43	8.90	Pass
116	5580	5.26	5.36	0.19	8.51	8.90	Pass
140	5700	4.88	5.67	0.19	8.49	8.90	Pass
144 (U-NII-2C)	5720	4.45	5.40	0.19	8.15	8.90	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 8.06 dBi > 6 dBi, so the power density limit shall be reduced to 11-(8.06-6) = 8.94 dBm/MHz.
4. For U-NII-2C, the directional gain is 8.10 dBi > 6 dBi, so the power density limit shall be reduced to 11-(8.10-6) = 8.90 dBm/MHz.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
54	5270	4.22	4.59	0.23	7.65	8.94	Pass
62	5310	3.89	4.80	0.23	7.61	8.94	Pass
102	5510	4.27	4.65	0.23	7.70	8.90	Pass
110	5550	4.36	4.17	0.23	7.51	8.90	Pass
134	5670	4.27	4.74	0.23	7.75	8.90	Pass
142 (U-NII-2C)	5710	4.41	4.44	0.23	7.67	8.90	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 8.06 dBi > 6 dBi, so the power density limit shall be reduced to 11-(8.06-6) = 8.94 dBm/MHz.
4. For U-NII-2C, the directional gain is 8.10 dBi > 6 dBi, so the power density limit shall be reduced to 11-(8.10-6) = 8.90 dBm/MHz.

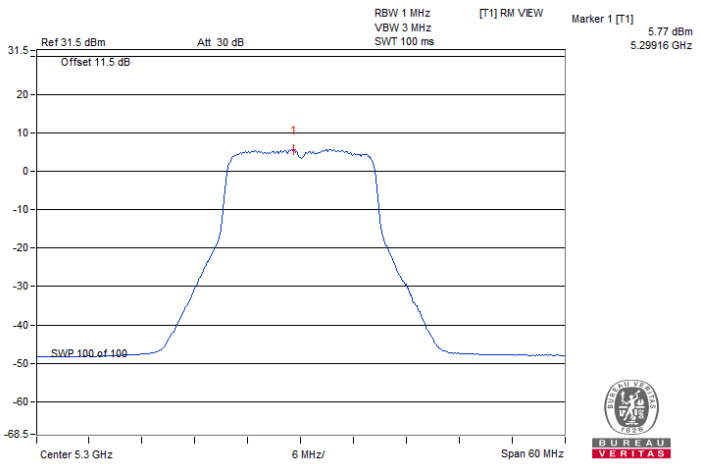
802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
58	5290	-0.21	1.41	0.17	3.86	8.94	Pass
106	5530	-0.83	-0.78	0.17	2.38	8.90	Pass
122	5610	0.99	1.57	0.17	4.47	8.90	Pass
138 (U-NII-2C)	5690	0.91	1.71	0.17	4.51	8.90	Pass

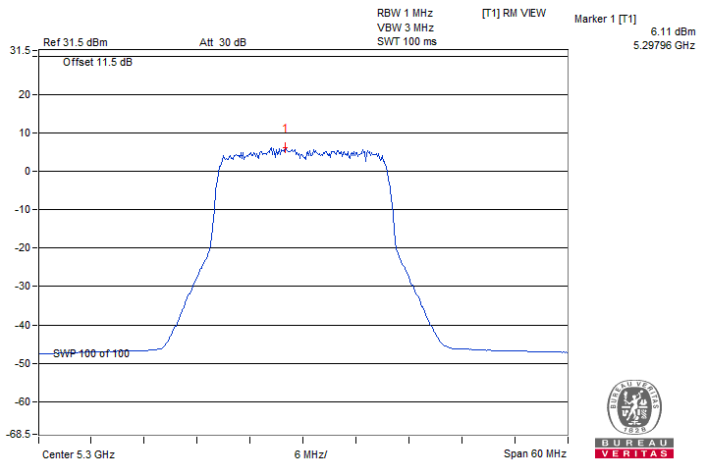
Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-2A, the directional gain is 8.06 dBi > 6 dBi, so the power density limit shall be reduced to 11-(8.06-6) = 8.94 dBm/MHz.
4. For U-NII-2C, the directional gain is 8.10 dBi > 6 dBi, so the power density limit shall be reduced to 11-(8.10-6) = 8.90 dBm/MHz.

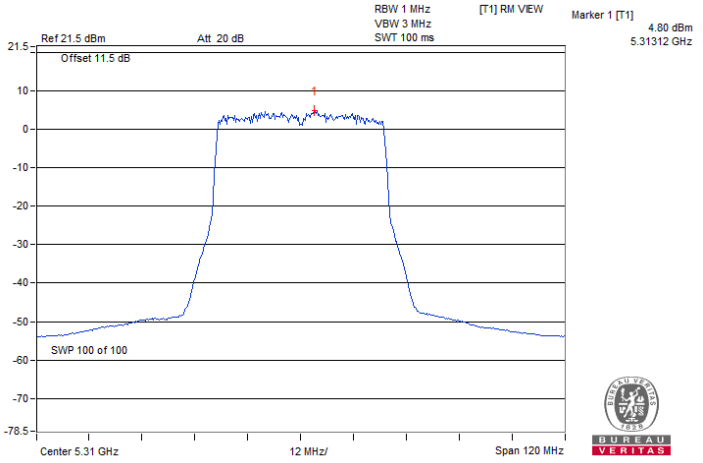
Spectrum Plot of Maximum Value



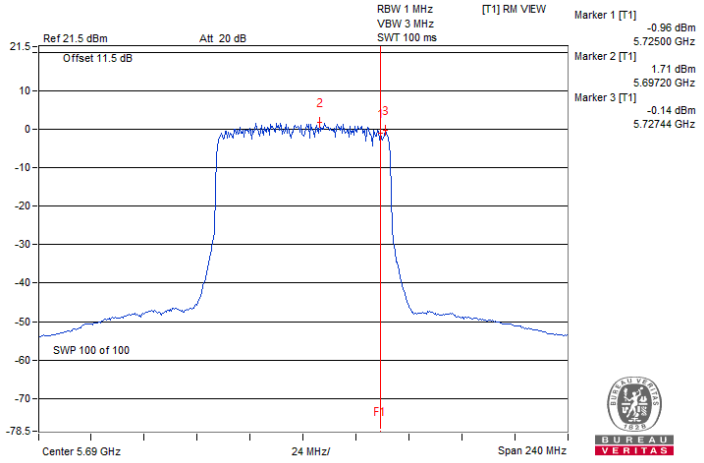
802.11a / Chain 1 : CH 60



802.11ax (HE20) / Chain 1 : CH 60



802.11ax (HE40) / Chain 1 : CH 62



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

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
144 (U-NII-3)	5720	-3.21	-3.23	-0.21	0.24	2.25	27.82	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the power density limit shall be reduced to 30-(8.18-6) = 27.82 dBm/500kHz.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
144 (U-NII-3)	5720	-4.60	-4.50	-1.54	0.19	0.87	27.82	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the power density limit shall be reduced to 30-(8.18-6) = 27.82 dBm/500kHz.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
142 (U-NII-3)	5710	-6.26	-6.14	-3.19	0.23	-0.74	27.82	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the power density limit shall be reduced to 30-(8.18-6) = 27.82 dBm/500kHz.

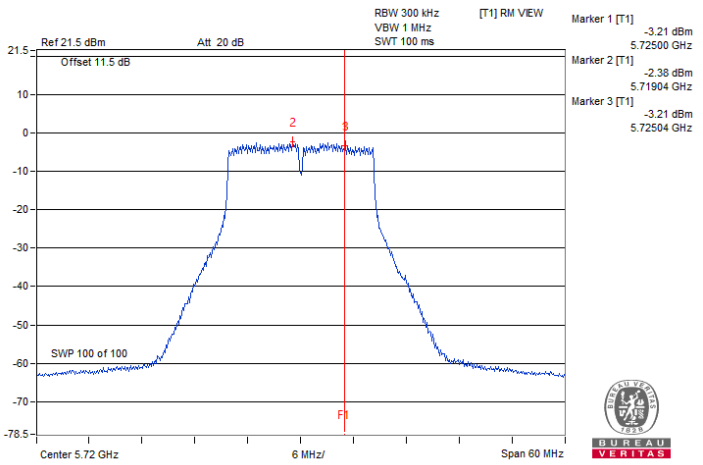
802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
138 (U-NII-3)	5690	-10.15	-9.77	-6.95	0.17	-4.56	27.82	Pass

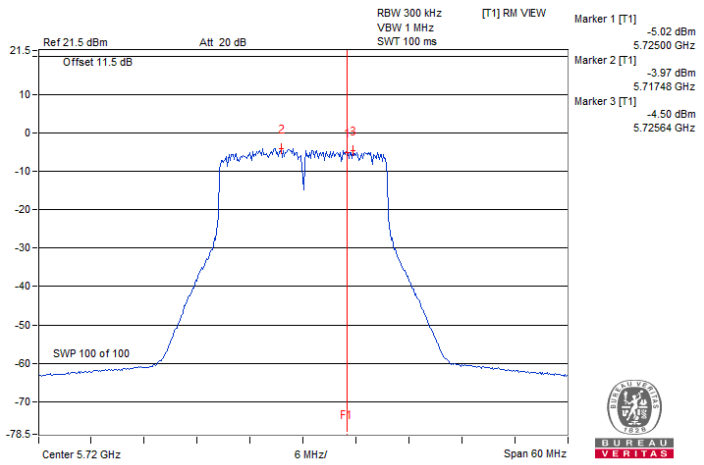
Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-3, the directional gain is 8.18 dBi > 6 dBi, so the power density limit shall be reduced to 30-(8.18-6) = 27.82 dBm/500kHz.

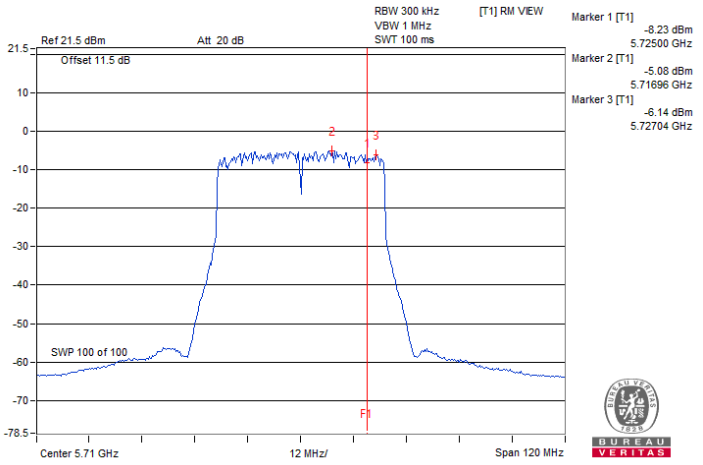
Spectrum Plot of Maximum Value



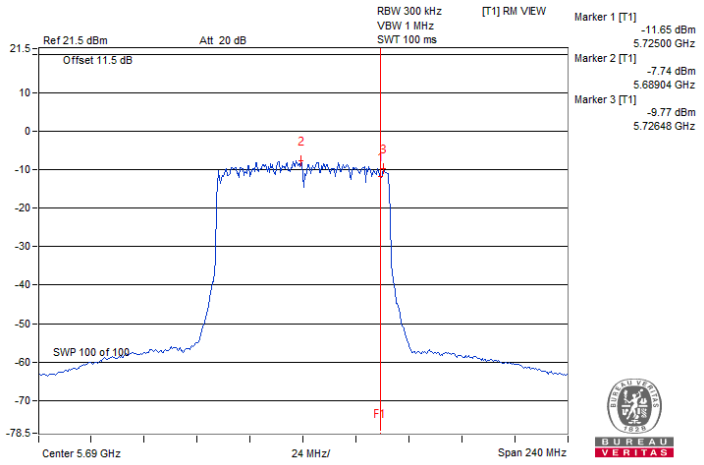
802.11a / Chain 0 : CH 144 (U-NII-3)



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



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



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

7.4 6 dB Bandwidth

Input Power:	54 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang

802.11a

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

802.11ax (HE20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
144 (U-NII-3)	5720	4.11	4.10	0.5	Pass

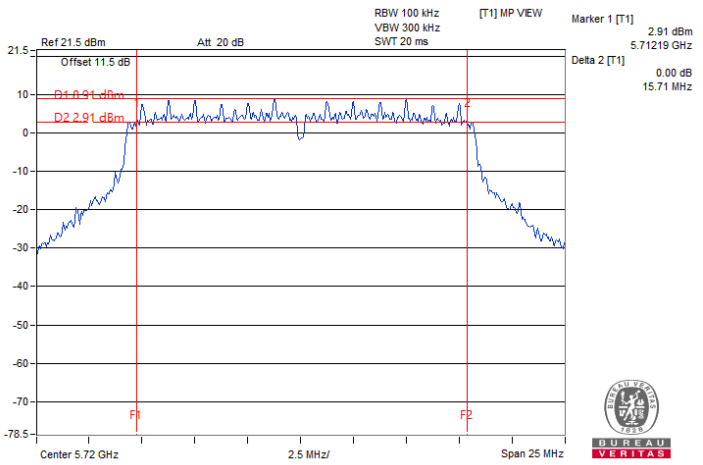
802.11ax (HE40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
142 (U-NII-3)	5710	3.78	3.61	0.5	Pass

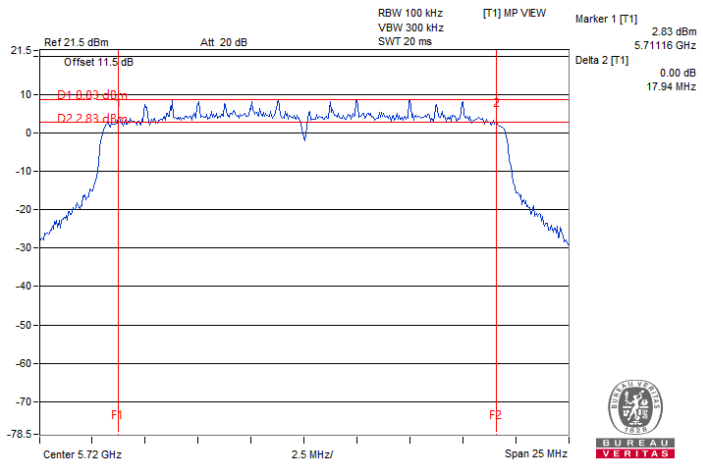
802.11ax (HE80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
138 (U-NII-3)	5690	2.78	2.71	0.5	Pass

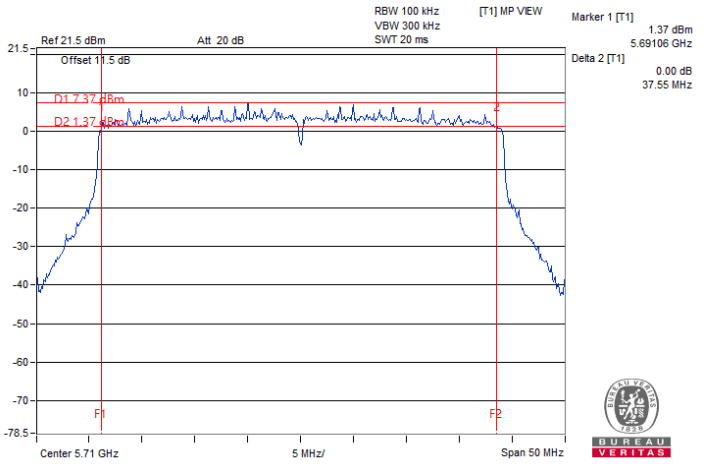
Spectrum Plot of Minimum Value



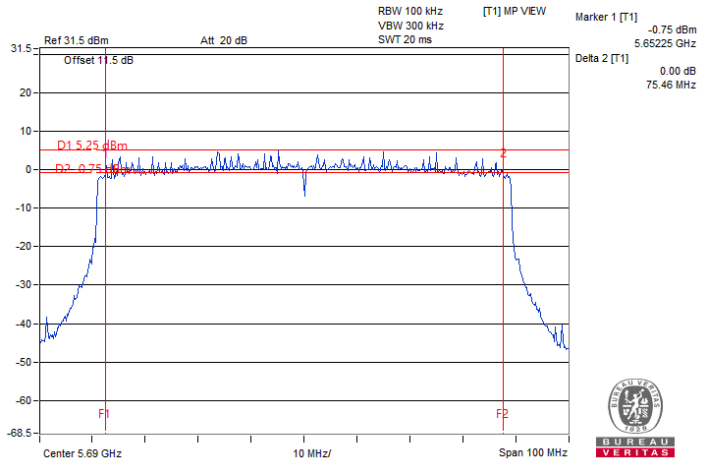
802.11a / Chain 1 : CH 144 (U-NII-3)



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



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



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

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

7.5 Occupied Bandwidth

Input Power:	54 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang

802.11a

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

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	18.96	18.84
60	5300	18.96	18.96
64	5320	18.84	19.08
100	5500	19.08	18.96
116	5580	19.08	18.96
140	5700	18.84	18.96
144 (U-NII-2C)	5720	14.48	14.48
144 (U-NII-3)	5720	4.48	4.48

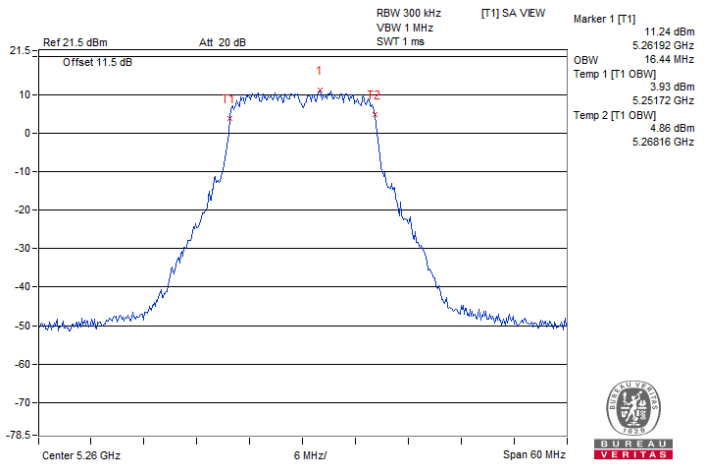
802.11ax (HE40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	38.16	37.92
62	5310	37.92	37.92
102	5510	38.16	37.68
110	5550	38.04	37.92
134	5670	38.16	38.16
142 (U-NII-2C)	5710	33.96	34.20
142 (U-NII-3)	5710	3.96	3.96

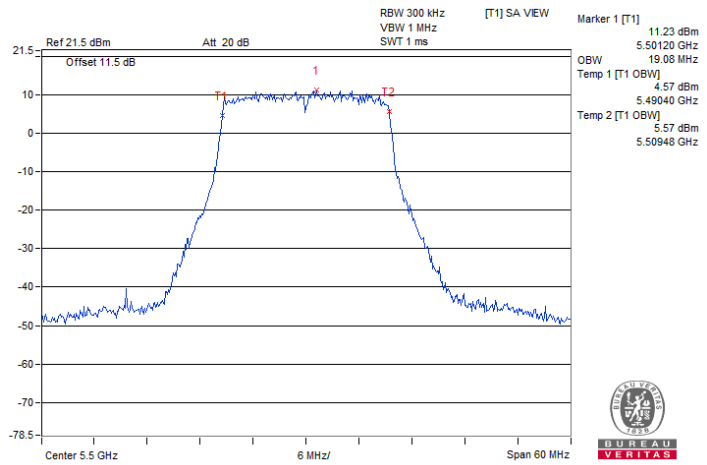
802.11ax (HE80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	77.28	77.28
106	5530	77.28	77.28
122	5610	77.76	77.28
138 (U-NII-2C)	5690	73.64	73.88
138 (U-NII-3)	5690	3.40	3.40

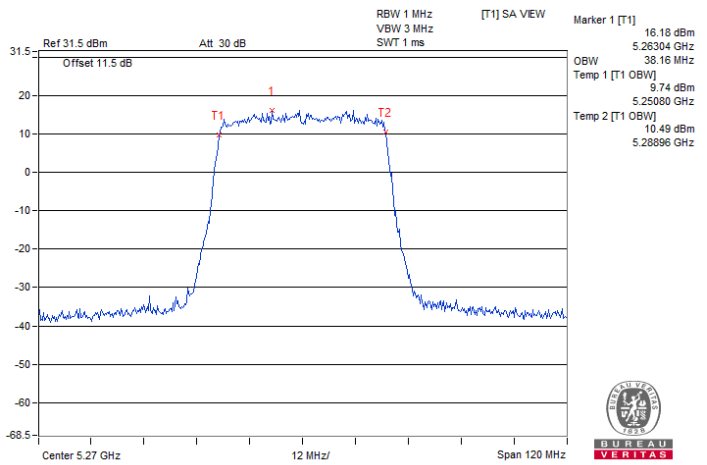
Spectrum Plot of Maximum Value



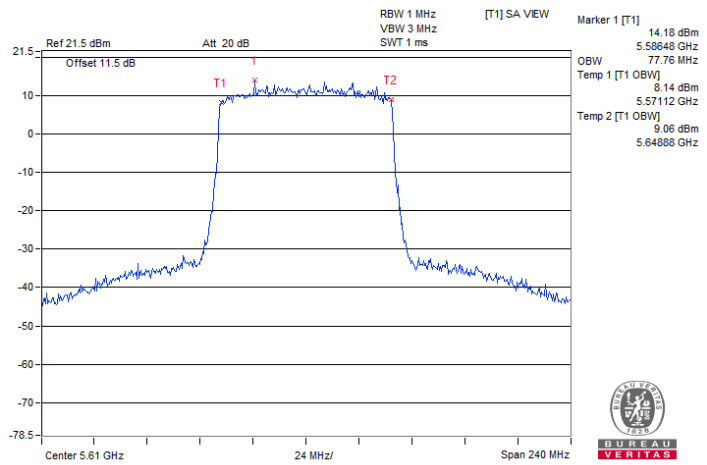
802.11a / Chain 0 : CH 52



802.11ax (HE20) / Chain 0 : CH 100



802.11ax (HE40) / Chain 0 : CH 54



802.11ax (HE80) / Chain 0 : CH 122

7.6 Frequency Stability

Input Power:	54 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang

Frequency Stability Versus Temperature									
Operating Frequency: 5260 MHz									
Temp. (℃)	Power Supply (Vdc)	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
60	54	5259.9865	Pass	5259.9906	Pass	5259.9874	Pass	5259.9864	Pass
50	54	5259.9726	Pass	5259.9736	Pass	5259.9719	Pass	5259.9719	Pass
40	54	5260.0208	Pass	5260.0183	Pass	5260.0206	Pass	5260.0219	Pass
30	54	5259.9797	Pass	5259.9762	Pass	5259.9801	Pass	5259.9805	Pass
20	54	5259.9916	Pass	5259.9914	Pass	5259.996	Pass	5259.9926	Pass
10	54	5259.9893	Pass	5259.9877	Pass	5259.9902	Pass	5259.9908	Pass
0	54	5260.0197	Pass	5260.02	Pass	5260.0215	Pass	5260.0237	Pass
-10	54	5260.0201	Pass	5260.0211	Pass	5260.0206	Pass	5260.0236	Pass
-20	48	5259.9765	Pass	5259.9785	Pass	5259.9752	Pass	5259.9746	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5260 MHz									
Temp. (℃)	Power Supply (Vdc)	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	62.1	5259.9992	Pass	5260.0001	Pass	5260.0001	Pass	5260	Pass
	54.0	5259.9916	Pass	5259.9914	Pass	5259.996	Pass	5259.9926	Pass
	45.9	5259.996	Pass	5259.9952	Pass	5259.996	Pass	5259.9938	Pass

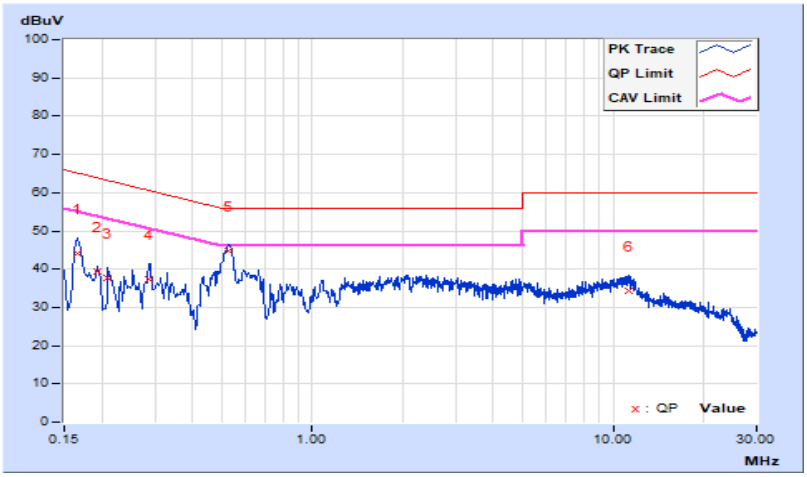
7.7 AC Power Conducted Emissions

RF Mode	802.11ax (HE40)	**Channel**	CH 54：5270 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	Rex Wang		

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	0.16579	9.63	34.33	20.80	43.96	30.43	65.17	55.17	-21.21	-24.74
2	0.19400	9.64	29.81	18.52	39.45	28.16	63.86	53.86	-24.41	-25.70
3	0.21000	9.64	28.01	17.46	37.65	27.10	63.21	53.21	-25.56	-26.11
4	0.28754	9.65	27.63	19.35	37.28	29.00	60.60	50.60	-23.32	-21.60
5	0.52985	9.67	35.04	30.13	44.71	39.80	56.00	46.00	-11.29	-6.20
6	11.21400	9.79	24.65	19.52	34.44	29.31	60.00	50.00	-25.56	-20.69

Remarks:

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

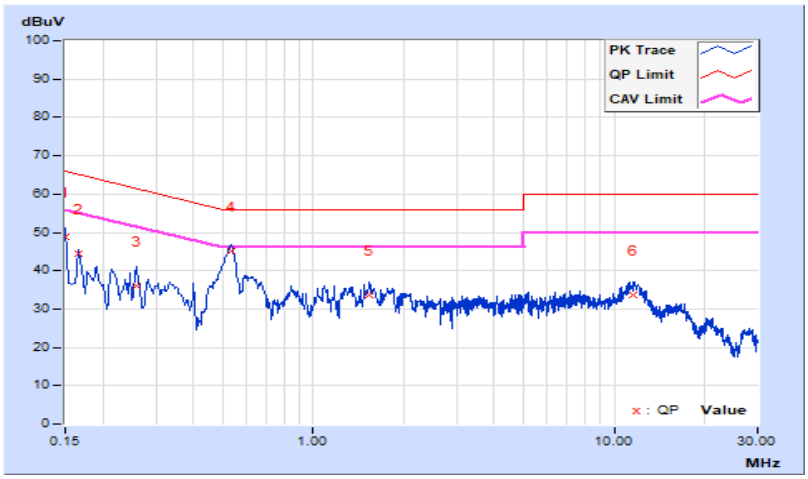


RF Mode	802.11ax (HE40)	**Channel**	CH 54：5270 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Rex Wang		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15000	9.62	39.27	25.40	48.89	35.02	66.00	56.00	-17.11	-20.98
2	0.16600	9.63	34.94	21.15	44.57	30.78	65.16	55.16	-20.59	-24.38
3	0.25800	9.65	26.36	17.86	36.01	27.51	61.50	51.50	-25.49	-23.99
4	**0.53400**	**9.68**	**35.53**	**30.69**	**45.21**	**40.37**	**56.00**	**46.00**	**-10.79**	**-5.63**
5	1.53206	9.71	23.93	19.81	33.64	29.52	56.00	46.00	-22.36	-16.48
6	11.59800	9.82	23.70	18.65	33.52	28.47	60.00	50.00	-26.48	-21.53

Remarks:

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



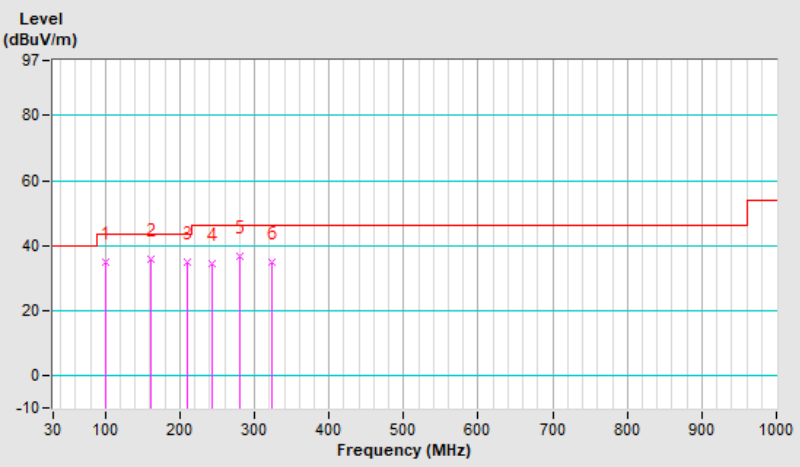
7.8 Unwanted Emissions below 1 GHz

RF Mode	802.11ax (HE40)	**Channel**	CH 54：5270 MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	22°C, 76% RH
Tested By	Rex Wang		

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	99.84	34.9 QP	43.5	-8.6	1.51 H	109	48.7	-13.8
2	161.92	35.7 QP	43.5	-7.8	1.51 H	73	44.8	-9.1
3	209.45	35.1 QP	43.5	-8.4	1.01 H	132	47.1	-12.0
4	243.40	34.6 QP	46.0	-11.4	1.01 H	111	44.6	-10.0
5	281.23	36.9 QP	46.0	-9.1	1.01 H	103	45.3	-8.4
6	322.94	34.7 QP	46.0	-11.3	1.01 H	221	42.1	-7.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

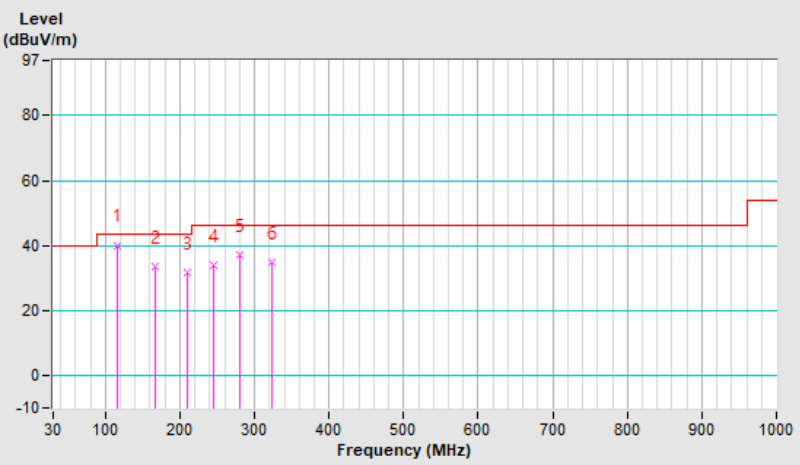


RF Mode	802.11ax (HE40)	Channel	CH 54：5270 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 76% RH
Tested By	Rex Wang		

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	**115.36**	**40.1 QP**	**43.5**	**-3.4**	**1.00 V**	**166**	**52.2**	**-12.1**
2	167.74	33.5 QP	43.5	-10.0	1.99 V	12	42.9	-9.4
3	209.45	31.9 QP	43.5	-11.6	1.00 V	350	43.9	-12.0
4	244.37	33.9 QP	46.0	-12.1	1.00 V	193	43.8	-9.9
5	281.23	37.1 QP	46.0	-8.9	1.25 V	145	45.5	-8.4
6	322.94	34.9 QP	46.0	-11.1	1.25 V	213	42.3	-7.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



7.9 Unwanted Emissions above 1 GHz

RF Mode	802.11a	**Channel**	CH 52：5260 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	21.6°C, 76.8% RH
Tested By	Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	60.8 PK	74.0	-13.2	1.50 H	325	39.8	21.0
2	5150.00	47.6 AV	54.0	-6.4	1.50 H	325	26.6	21.0
3	*5260.00	111.1 PK			1.50 H	325	70.3	40.8
4	*5260.00	100.4 AV			1.50 H	325	59.6	40.8
5	#10520.00	62.7 PK	68.2	-5.5	1.55 H	334	37.7	25.0
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	61.3 PK	74.0	-12.7	1.60 V	76	40.3	21.0
2	5150.00	48.3 AV	54.0	-5.7	1.60 V	76	27.3	21.0
3	*5260.00	121.3 PK			1.60 V	76	80.5	40.8
4	*5260.00	111.1 AV			1.60 V	76	70.3	40.8
5	#10520.00	63.1 PK	68.2	-5.1	1.75 V	104	38.1	25.0

Remarks:

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

RF Mode	802.11a	Channel	CH 60：5300 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6°C, 76.8% RH
Tested By	Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	111.4 PK			1.51 H	326	70.6	40.8
2	*5300.00	100.9 AV			1.51 H	326	60.1	40.8
3	10600.00	63.1 PK	74.0	-10.9	1.67 H	333	38.1	25.0
4	10600.00	49.3 AV	54.0	-4.7	1.67 H	333	24.3	25.0
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	*5300.00	121.0 PK			1.63 V	332	80.2	40.8
2	*5300.00	111.0 AV			1.63 V	332	70.2	40.8
3	10600.00	63.3 PK	74.0	-10.7	1.77 V	124	38.3	25.0
4	10600.00	49.6 AV	54.0	-4.4	1.77 V	124	24.6	25.0

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.

RF Mode	802.11a	Channel	CH 64：5320 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6°C, 76.8% RH
Tested By	Rex Wang		

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	111.0 PK			1.50 H	325	70.1	40.9
2	*5320.00	101.0 AV			1.50 H	325	60.1	40.9
3	5350.00	60.8 PK	74.0	-13.2	1.50 H	325	39.8	21.0
4	5350.00	47.7 AV	54.0	-6.3	1.50 H	325	26.7	21.0
5	10640.00	64.1 PK	74.0	-9.9	1.68 H	343	38.4	25.7
6	10640.00	49.9 AV	54.0	-4.1	1.68 H	343	24.2	25.7
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	*5320.00	120.8 PK			1.79 V	324	79.9	40.9
2	*5320.00	110.8 AV			1.79 V	324	69.9	40.9
3	5350.00	61.2 PK	74.0	-12.8	1.79 V	324	40.2	21.0
4	5350.00	49.1 AV	54.0	-4.9	1.79 V	324	28.1	21.0
5	10640.00	64.2 PK	74.0	-9.8	1.77 V	128	38.5	25.7
6	10640.00	50.1 AV	54.0	-3.9	1.77 V	128	24.4	25.7

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.

RF Mode	802.11a	Channel	CH 100：5500 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	62.5 PK	74.0	-11.5	1.55 H	321	41.1	21.4
2	5460.00	48.8 AV	54.0	-5.2	1.55 H	321	27.4	21.4
3	#5470.00	62.8 PK	68.2	-5.4	1.55 H	321	41.4	21.4
4	*5500.00	111.7 PK			1.55 H	321	70.2	41.5
5	*5500.00	101.2 AV			1.55 H	321	59.7	41.5
6	11000.00	64.7 PK	74.0	-9.3	1.60 H	339	38.0	26.7
7	11000.00	50.1 AV	54.0	-3.9	1.60 H	339	23.4	26.7
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	5460.00	62.8 PK	74.0	-11.2	1.49 V	64	41.4	21.4
2	5460.00	49.0 AV	54.0	-5.0	1.49 V	64	27.6	21.4
3	#5470.00	63.0 PK	68.2	-5.2	1.49 V	64	41.6	21.4
4	*5500.00	121.5 PK			1.49 V	64	80.0	41.5
5	*5500.00	111.3 AV			1.49 V	64	69.8	41.5
6	11000.00	64.9 PK	74.0	-9.1	1.81 V	135	38.2	26.7
7	11000.00	50.3 AV	54.0	-3.7	1.81 V	135	23.6	26.7

Remarks:

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

RF Mode	802.11a	Channel	CH 116：5580 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	111.4 PK			1.52 H	326	69.8	41.6
2	*5580.00	101.3 AV			1.52 H	326	59.7	41.6
3	11160.00	64.0 PK	74.0	-10.0	1.60 H	343	38.2	25.8
4	11160.00	49.4 AV	54.0	-4.6	1.60 H	343	23.6	25.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	121.3 PK			1.51 V	57	79.7	41.6
2	*5580.00	111.3 AV			1.51 V	57	69.7	41.6
3	11160.00	64.1 PK	74.0	-9.9	1.84 V	139	38.3	25.8
4	11160.00	49.6 AV	54.0	-4.4	1.84 V	139	23.8	25.8

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.

RF Mode	802.11a	Channel	CH 140：5700 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	111.0 PK			1.57 H	327	69.3	41.7
2	*5700.00	100.9 AV			1.57 H	327	59.2	41.7
3	#5725.00	62.9 PK	68.2	-5.3	1.57 H	327	40.7	22.2
4	11400.00	65.1 PK	74.0	-8.9	1.66 H	339	38.1	27.0
5	11400.00	50.4 AV	54.0	-3.6	1.66 H	339	23.4	27.0
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	*5700.00	121.0 PK			1.48 V	66	79.3	41.7
2	*5700.00	111.0 AV			1.48 V	66	69.3	41.7
3	#5725.00	63.1 PK	68.2	-5.1	1.48 V	66	40.9	22.2
4	11400.00	65.4 PK	74.0	-8.6	1.87 V	129	38.4	27.0
5	11400.00	50.7 AV	54.0	-3.3	1.87 V	129	23.7	27.0

Remarks:

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

RF Mode	802.11a	Channel	CH 144：5720 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	61.7 PK	68.2	-6.5	1.50 H	324	40.3	21.4
2	*5720.00	112.0 PK			1.50 H	324	70.1	41.9
3	*5720.00	101.7 AV			1.50 H	324	59.8	41.9
4	#5850.00	62.8 PK	68.2	-5.4	1.50 H	324	40.3	22.5
5	11440.00	65.3 PK	74.0	-8.7	1.63 H	337	38.2	27.1
6	11440.00	50.5 AV	54.0	-3.5	1.63 H	337	23.4	27.1
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	#5470.00	61.9 PK	68.2	-6.3	1.54 V	57	40.5	21.4
2	*5720.00	122.0 PK			1.54 V	57	80.1	41.9
3	*5720.00	111.8 AV			1.54 V	57	69.9	41.9
4	#5850.00	62.9 PK	68.2	-5.3	1.54 V	57	40.4	22.5
5	11440.00	65.6 PK	74.0	-8.4	1.82 V	133	38.5	27.1
6	11440.00	50.8 AV	54.0	-3.2	1.82 V	133	23.7	27.1

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 52：5260 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6°C, 76.8% RH
Tested By	Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.6 PK	74.0	-13.4	1.50 H	325	39.6	21.0
2	5150.00	47.8 AV	54.0	-6.2	1.50 H	325	26.8	21.0
3	*5260.00	113.2 PK			1.50 H	325	72.4	40.8
4	*5260.00	100.2 AV			1.50 H	325	59.4	40.8
5	#10520.00	63.1 PK	68.2	-5.1	1.69 H	335	38.1	25.0
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	61.2 PK	74.0	-12.8	1.81 V	171	40.2	21.0
2	5150.00	48.3 AV	54.0	-5.7	1.81 V	171	27.3	21.0
3	*5260.00	123.5 PK			1.81 V	171	82.7	40.8
4	*5260.00	111.3 AV			1.81 V	171	70.5	40.8
5	#10520.00	63.3 PK	68.2	-4.9	1.77 V	102	38.3	25.0

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 60：5300 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6°C, 76.8% RH
Tested By	Rex Wang		

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	114.1 PK			1.53 H	320	73.3	40.8
2	*5300.00	101.1 AV			1.53 H	320	60.3	40.8
3	10600.00	63.1 PK	74.0	-10.9	1.68 H	336	38.1	25.0
4	10600.00	49.2 AV	54.0	-4.8	1.68 H	336	24.2	25.0
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	*5300.00	124.9 PK			1.81 V	173	84.1	40.8
2	*5300.00	111.5 AV			1.81 V	173	70.7	40.8
3	10600.00	63.4 PK	74.0	-10.6	1.74 V	105	38.4	25.0
4	10600.00	49.5 AV	54.0	-4.5	1.74 V	105	24.5	25.0

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.

RF Mode	802.11ax (HE20)	Channel	CH 64：5320 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6°C, 76.8% RH
Tested By	Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	114.2 PK			1.46 H	322	73.3	40.9
2	*5320.00	100.8 AV			1.46 H	322	59.9	40.9
3	5350.00	60.9 PK	74.0	-13.1	1.46 H	322	39.9	21.0
4	5350.00	47.5 AV	54.0	-6.5	1.46 H	322	26.5	21.0
5	10640.00	63.5 PK	74.0	-10.5	1.63 H	340	37.8	25.7
6	10640.00	49.7 AV	54.0	-4.3	1.63 H	340	24.0	25.7
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	*5320.00	123.8 PK			1.80 V	324	82.9	40.9
2	*5320.00	111.0 AV			1.80 V	324	70.1	40.9
3	5376.00	62.0 PK	74.0	-12.0	1.80 V	324	40.9	21.1
4	5376.00	50.2 AV	54.0	-3.8	1.80 V	324	29.1	21.1
5	10640.00	63.7 PK	74.0	-10.3	1.74 V	105	38.0	25.7
6	10640.00	50.0 AV	54.0	-4.0	1.74 V	105	24.3	25.7

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.

RF Mode	802.11ax (HE20)	Channel	CH 100：5500 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	61.6 PK	74.0	-12.4	1.52 H	323	40.2	21.4
2	5460.00	48.5 AV	54.0	-5.5	1.52 H	323	27.1	21.4
3	#5470.00	63.0 PK	68.2	-5.2	1.52 H	323	41.6	21.4
4	*5500.00	114.2 PK			1.52 H	323	72.7	41.5
5	*5500.00	101.0 AV			1.52 H	323	59.5	41.5
6	11000.00	64.7 PK	74.0	-9.3	1.64 H	342	38.0	26.7
7	11000.00	49.9 AV	54.0	-4.1	1.64 H	342	23.2	26.7
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	5460.00	61.8 PK	74.0	-12.2	1.92 V	11	40.4	21.4
2	5460.00	48.7 AV	54.0	-5.3	1.92 V	11	27.3	21.4
3	#5470.00	63.1 PK	68.2	-5.1	1.92 V	11	41.7	21.4
4	*5500.00	124.4 PK			1.92 V	11	82.9	41.5
5	*5500.00	111.1 AV			1.92 V	11	69.6	41.5
6	11000.00	65.0 PK	74.0	-9.0	1.79 V	137	38.3	26.7
7	11000.00	50.1 AV	54.0	-3.9	1.79 V	137	23.4	26.7

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 116：5580 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	114.0 PK			1.53 H	325	72.4	41.6
2	*5580.00	101.3 AV			1.53 H	325	59.7	41.6
3	11160.00	64.2 PK	74.0	-9.8	1.61 H	342	38.4	25.8
4	11160.00	49.2 AV	54.0	-4.8	1.61 H	342	23.4	25.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	124.1 PK			1.83 V	12	82.5	41.6
2	*5580.00	111.4 AV			1.83 V	12	69.8	41.6
3	11160.00	64.4 PK	74.0	-9.6	1.84 V	140	38.6	25.8
4	11160.00	49.3 AV	54.0	-4.7	1.84 V	140	23.5	25.8

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.

RF Mode	802.11ax (HE20)	Channel	CH 140：5700 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	113.4 PK			1.57 H	327	71.7	41.7
2	*5700.00	100.8 AV			1.57 H	327	59.1	41.7
3	#5725.00	62.0 PK	68.2	-6.2	1.57 H	327	39.8	22.2
4	11400.00	65.6 PK	74.0	-8.4	1.63 H	337	38.6	27.0
5	11400.00	50.3 AV	54.0	-3.7	1.63 H	337	23.3	27.0
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	*5700.00	123.6 PK			1.83 V	6	81.9	41.7
2	*5700.00	110.8 AV			1.83 V	6	69.1	41.7
3	#5725.00	63.4 PK	68.2	-4.8	1.83 V	6	41.2	22.2
4	11400.00	65.7 PK	74.0	-8.3	1.87 V	137	38.7	27.0
5	11400.00	50.5 AV	54.0	-3.5	1.87 V	137	23.5	27.0

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 144：5720 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	61.2 PK	68.2	-7.0	1.57 H	320	39.8	21.4
2	*5720.00	113.6 PK			1.57 H	320	71.7	41.9
3	*5720.00	100.6 AV			1.57 H	320	58.7	41.9
4	#5850.00	62.2 PK	68.2	-6.0	1.57 H	320	39.7	22.5
5	11440.00	65.7 PK	74.0	-8.3	1.64 H	339	38.6	27.1
6	11440.00	50.3 AV	54.0	-3.7	1.64 H	339	23.2	27.1
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	#5470.00	61.5 PK	68.2	-6.7	1.91 V	9	40.1	21.4
2	*5720.00	123.8 PK			1.91 V	9	81.9	41.9
3	*5720.00	110.7 AV			1.91 V	9	68.8	41.9
4	#5850.00	62.3 PK	68.2	-5.9	1.91 V	9	39.8	22.5
5	11440.00	65.9 PK	74.0	-8.1	1.81 V	141	38.8	27.1
6	11440.00	50.4 AV	54.0	-3.6	1.81 V	141	23.3	27.1

Remarks:

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

RF Mode	802.11ax (HE40)	Channel	CH 54：5270 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6°C, 76.8% RH
Tested By	Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.6 PK	74.0	-13.4	1.47 H	326	39.6	21.0
2	5150.00	47.8 AV	54.0	-6.2	1.47 H	326	26.8	21.0
3	*5270.00	110.7 PK			1.47 H	326	69.9	40.8
4	*5270.00	97.5 AV			1.47 H	326	56.7	40.8
5	#10540.00	62.8 PK	68.2	-5.4	1.77 H	330	37.7	25.1
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	61.3 PK	74.0	-12.7	1.76 V	326	40.3	21.0
2	5150.00	48.8 AV	54.0	-5.2	1.76 V	326	27.8	21.0
3	*5270.00	121.1 PK			1.76 V	326	80.3	40.8
4	*5270.00	108.5 AV			1.76 V	326	67.7	40.8
5	#10540.00	63.0 PK	68.2	-5.2	1.80 V	115	37.9	25.1

Remarks:

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

RF Mode	802.11ax (HE40)	Channel	CH 62：5310 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6°C, 76.8% RH
Tested By	Rex Wang		

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	111.5 PK			1.52 H	320	70.7	40.8
2	*5310.00	97.7 AV			1.52 H	320	56.9	40.8
3	5350.00	59.9 PK	74.0	-14.1	1.52 H	320	38.9	21.0
4	5350.00	47.7 AV	54.0	-6.3	1.52 H	320	26.7	21.0
5	10620.00	63.1 PK	74.0	-10.9	1.58 H	338	37.8	25.3
6	10620.00	49.4 AV	54.0	-4.6	1.58 H	338	24.1	25.3
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	*5310.00	121.6 PK			1.76 V	330	80.8	40.8
2	*5310.00	107.9 AV			1.76 V	330	67.1	40.8
3	5354.30	64.0 PK	74.0	-10.0	1.76 V	330	43.0	21.0
4	5354.30	51.9 AV	54.0	-2.1	1.76 V	330	30.9	21.0
5	10620.00	63.5 PK	74.0	-10.5	1.77 V	100	38.2	25.3
6	10620.00	49.7 AV	54.0	-4.3	1.77 V	100	24.4	25.3

Remarks:

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

RF Mode	802.11ax (HE40)	Channel	CH 102：5510 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	61.2 PK	74.0	-12.8	1.64 H	329	39.8	21.4
2	5460.00	48.1 AV	54.0	-5.9	1.64 H	329	26.7	21.4
3	#5470.00	62.4 PK	68.2	-5.8	1.64 H	329	41.0	21.4
4	*5510.00	111.1 PK			1.64 H	329	69.6	41.5
5	*5510.00	97.8 AV			1.64 H	329	56.3	41.5
6	11020.00	65.1 PK	74.0	-8.9	1.64 H	332	38.4	26.7
7	11020.00	49.9 AV	54.0	-4.1	1.64 H	332	23.2	26.7
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	5460.00	63.0 PK	74.0	-11.0	1.53 V	55	41.6	21.4
2	5460.00	49.9 AV	54.0	-4.1	1.53 V	55	28.5	21.4
3	#5470.00	66.9 PK	68.2	-1.3	1.53 V	55	45.5	21.4
4	*5510.00	121.0 PK			1.53 V	55	79.5	41.5
5	*5510.00	107.8 AV			1.53 V	55	66.3	41.5
6	11020.00	65.3 PK	74.0	-8.7	1.87 V	136	38.6	26.7
7	11020.00	50.0 AV	54.0	-4.0	1.87 V	136	23.3	26.7

Remarks:

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

RF Mode	802.11ax (HE40)	Channel	CH 110：5550 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	111.2 PK			1.52 H	325	69.7	41.5
2	*5550.00	98.2 AV			1.52 H	325	56.7	41.5
3	11100.00	64.6 PK	74.0	-9.4	1.59 H	346	38.4	26.2
4	11100.00	49.5 AV	54.0	-4.5	1.59 H	346	23.3	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	121.2 PK			1.87 V	10	79.7	41.5
2	*5550.00	108.4 AV			1.87 V	10	66.9	41.5
3	11100.00	64.8 PK	74.0	-9.2	1.82 V	139	38.6	26.2
4	11100.00	49.6 AV	54.0	-4.4	1.82 V	139	23.4	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.

RF Mode	802.11ax (HE40)	Channel	CH 134：5670 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	111.7 PK			1.54 H	323	70.0	41.7
2	*5670.00	98.3 AV			1.54 H	323	56.6	41.7
3	#5725.00	63.0 PK	68.2	-5.2	1.54 H	323	40.8	22.2
4	11340.00	64.9 PK	74.0	-9.1	1.61 H	340	38.5	26.4
5	11340.00	49.8 AV	54.0	-4.2	1.61 H	340	23.4	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	*5670.00	121.9 PK			1.44 V	60	80.2	41.7
2	*5670.00	108.3 AV			1.44 V	60	66.6	41.7
3	#5725.00	63.4 PK	68.2	-4.8	1.44 V	60	41.2	22.2
4	11340.00	65.1 PK	74.0	-8.9	1.78 V	137	38.7	26.4
5	11340.00	50.0 AV	54.0	-4.0	1.78 V	137	23.6	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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE40)	Channel	CH 142：5710 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	61.6 PK	68.2	-6.6	1.57 H	325	40.2	21.4
2	*5710.00	110.6 PK			1.57 H	325	68.8	41.8
3	*5710.00	98.3 AV			1.57 H	325	56.5	41.8
4	#5850.00	62.6 PK	68.2	-5.6	1.57 H	325	40.1	22.5
5	11420.00	65.4 PK	74.0	-8.6	1.58 H	346	38.3	27.1
6	11420.00	50.2 AV	54.0	-3.8	1.58 H	346	23.1	27.1
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	#5470.00	61.9 PK	68.2	-6.3	1.52 V	57	40.5	21.4
2	*5710.00	120.7 PK			1.52 V	57	78.9	41.8
3	*5710.00	108.4 AV			1.52 V	57	66.6	41.8
4	#5850.00	62.9 PK	68.2	-5.3	1.52 V	57	40.4	22.5
5	11420.00	65.8 PK	74.0	-8.2	1.84 V	135	38.7	27.1
6	11420.00	50.5 AV	54.0	-3.5	1.84 V	135	23.4	27.1

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=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	21.6°C, 76.8% RH
Tested By	Rex Wang		

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	*5290.00	107.1 PK			1.54 H	325	66.3	40.8
2	*5290.00	94.1 AV			1.54 H	325	53.3	40.8
3	5350.00	60.6 PK	74.0	-13.4	1.54 H	325	39.6	21.0
4	5350.00	47.8 AV	54.0	-6.2	1.54 H	325	26.8	21.0
5	#10580.00	63.0 PK	68.2	-5.2	1.64 H	335	38.0	25.0
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	*5290.00	117.3 PK			1.75 V	324	76.5	40.8
2	*5290.00	104.6 AV			1.75 V	324	63.8	40.8
3	5350.00	64.7 PK	74.0	-9.3	1.75 V	327	43.7	21.0
4	5350.00	51.1 AV	54.0	-2.9	1.75 V	327	30.1	21.0
5	#10580.00	63.3 PK	68.2	-4.9	1.84 V	106	38.3	25.0

Remarks:

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

RF Mode	802.11ax (HE80)	Channel	CH 106：5530 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	62.7 PK	74.0	-11.3	1.57 H	329	41.3	21.4
2	5460.00	49.4 AV	54.0	-4.6	1.57 H	329	28.0	21.4
3	#5470.00	62.8 PK	68.2	-5.4	1.57 H	329	41.4	21.4
4	*5530.00	107.1 PK			1.57 H	329	65.6	41.5
5	*5530.00	94.1 AV			1.57 H	329	52.6	41.5
6	11060.00	64.7 PK	74.0	-9.3	1.63 H	340	38.3	26.4
7	11060.00	49.7 AV	54.0	-4.3	1.63 H	340	23.3	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	5460.00	68.2 PK	74.0	-5.8	1.85 V	10	46.8	21.4
2	5460.00	53.5 AV	54.0	-0.5	1.85 V	10	32.1	21.4
3	**#5470.00**	**67.9 PK**	**68.2**	**-0.3**	**1.85 V**	**10**	**46.5**	**21.4**
4	*5530.00	117.1 PK			1.85 V	10	75.6	41.5
5	*5530.00	104.2 AV			1.85 V	10	62.7	41.5
6	11060.00	64.9 PK	74.0	-9.1	1.87 V	139	38.5	26.4
7	11060.00	49.8 AV	54.0	-4.2	1.87 V	139	23.4	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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE80)	Channel	CH 122：5610 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	62.2 PK	68.2	-6.0	1.52 H	324	40.8	21.4
2	*5610.00	108.9 PK			1.52 H	324	67.3	41.6
3	*5610.00	95.8 AV			1.52 H	324	54.2	41.6
4	#5725.00	63.1 PK	68.2	-5.1	1.52 H	324	40.9	22.2
5	11220.00	64.1 PK	74.0	-9.9	1.63 H	337	38.3	25.8
6	11220.00	49.2 AV	54.0	-4.8	1.63 H	337	23.4	25.8
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	62.5 PK	68.2	-5.7	1.86 V	7	41.1	21.4
2	*5610.00	119.1 PK			1.86 V	7	77.5	41.6
3	*5610.00	106.0 AV			1.86 V	7	64.4	41.6
4	#5725.00	63.4 PK	68.2	-4.8	1.86 V	7	41.2	22.2
5	11220.00	64.3 PK	74.0	-9.7	1.82 V	142	38.5	25.8
6	11220.00	49.3 AV	54.0	-4.7	1.82 V	142	23.5	25.8

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 138：5690 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	61.1 PK	68.2	-7.1	1.52 H	325	39.7	21.4
2	*5690.00	108.1 PK			1.52 H	325	66.4	41.7
3	*5690.00	95.3 AV			1.52 H	325	53.6	41.7
4	#5850.00	62.2 PK	68.2	-6.0	1.52 H	325	39.7	22.5
5	11380.00	65.2 PK	74.0	-8.8	1.53 H	337	38.4	26.8
6	11380.00	50.1 AV	54.0	-3.9	1.53 H	337	23.3	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	#5470.00	61.3 PK	68.2	-6.9	2.08 V	7	39.9	21.4
2	*5690.00	118.1 PK			2.08 V	7	76.4	41.7
3	*5690.00	105.3 AV			2.08 V	7	63.6	41.7
4	#5850.00	62.5 PK	68.2	-5.7	2.08 V	7	40.0	22.5
5	11380.00	65.4 PK	74.0	-8.6	1.87 V	138	38.6	26.8
6	11380.00	50.4 AV	54.0	-3.6	1.87 V	138	23.6	26.8

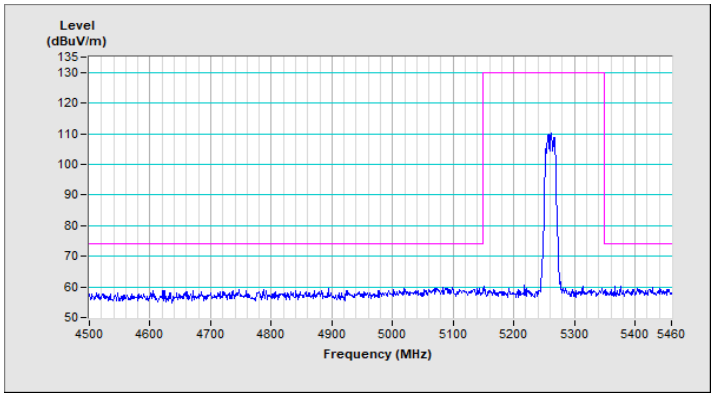
Remarks:

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.

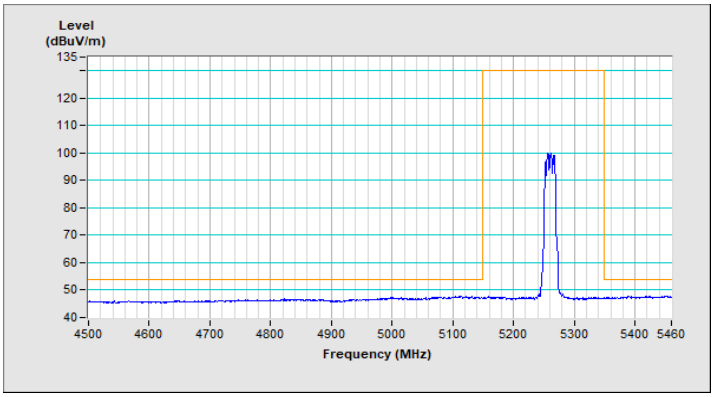
Plot of Band Edge

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

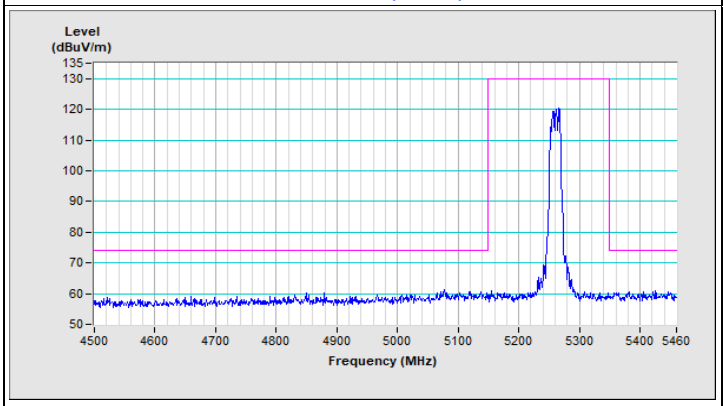
802.11a Channel 52



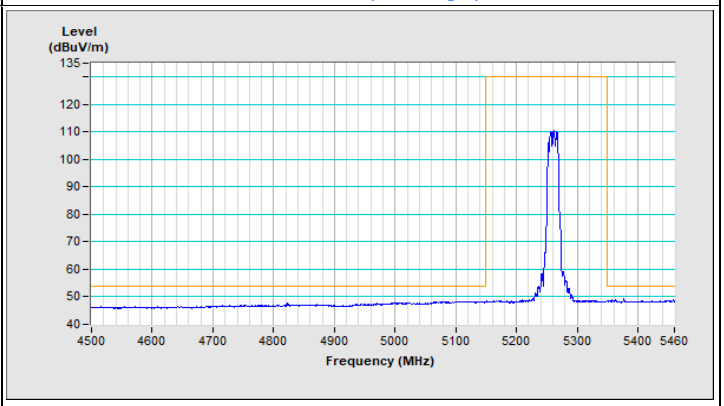
Horizontal (Peak)



Horizontal (Average)

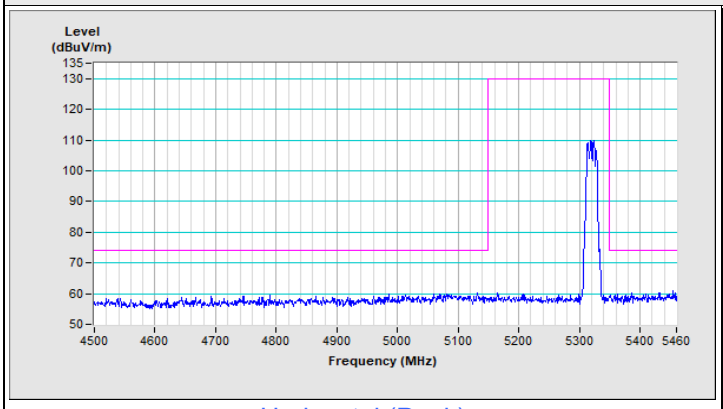


Vertical (Peak)

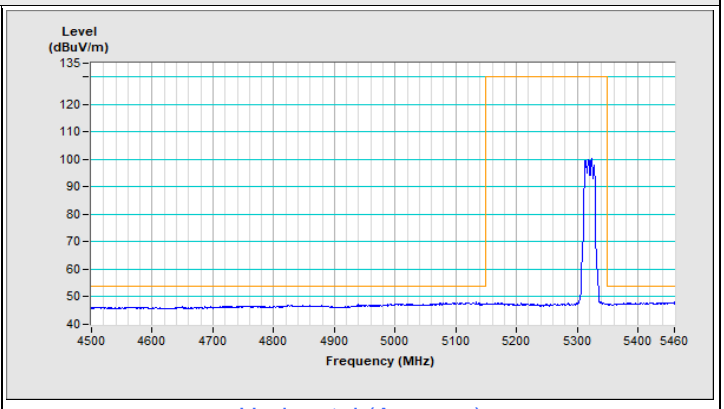


Vertical (Average)

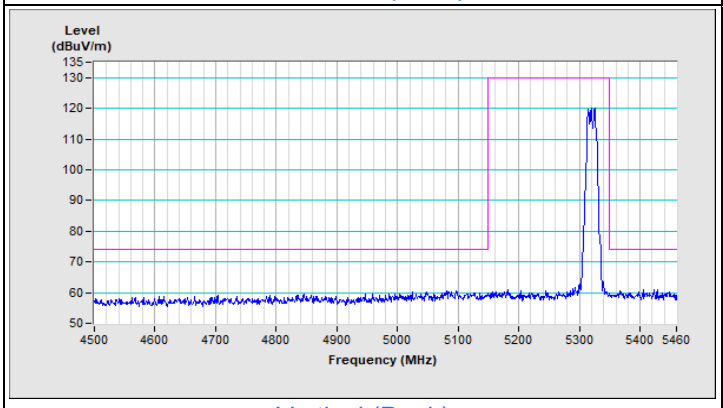
802.11a Channel 64



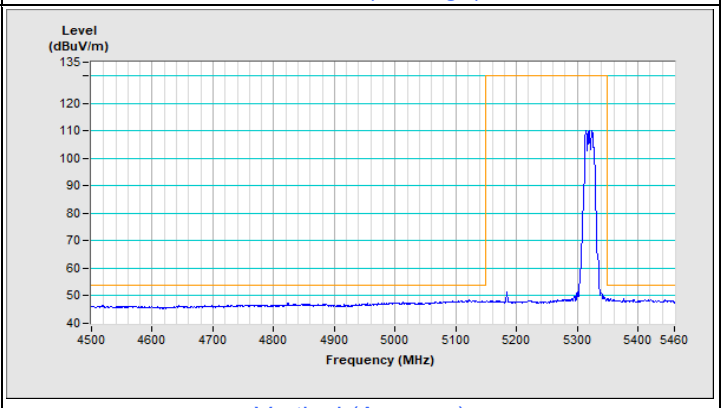
Horizontal (Peak)



Horizontal (Average)



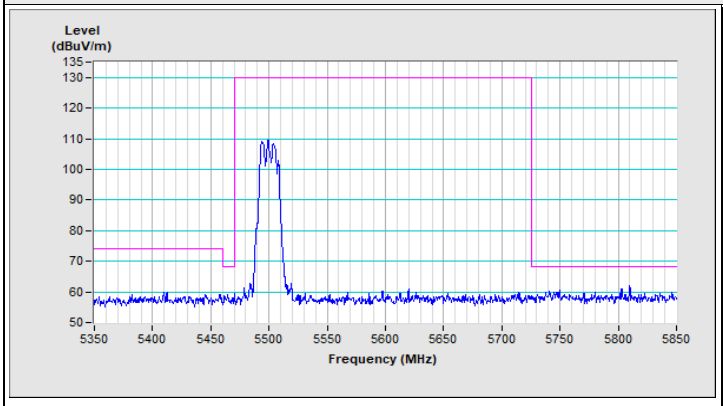
Vertical (Peak)



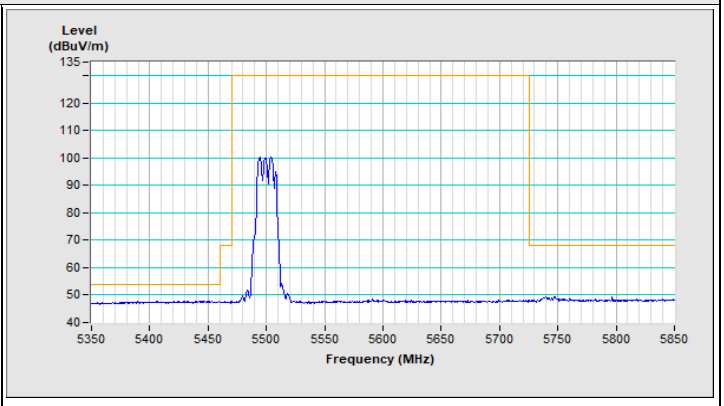
Vertical (Average)

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

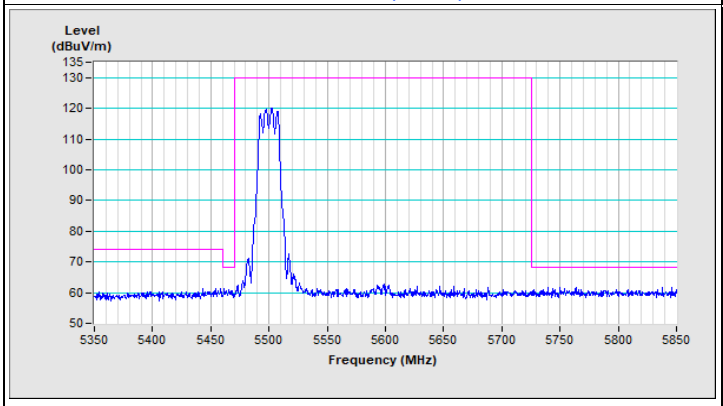
802.11a Channel 100



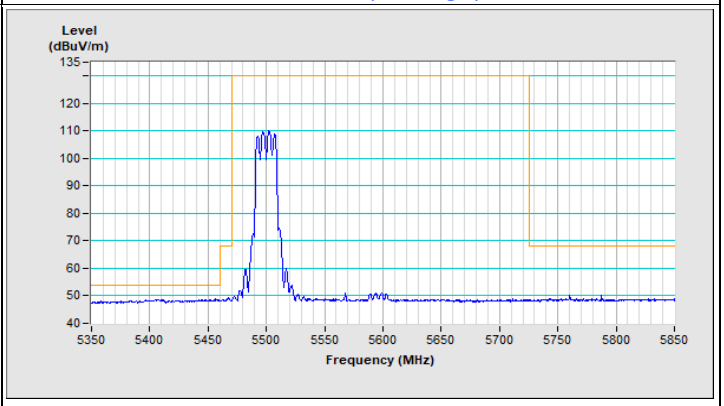
Horizontal (Peak)



Horizontal (Average)

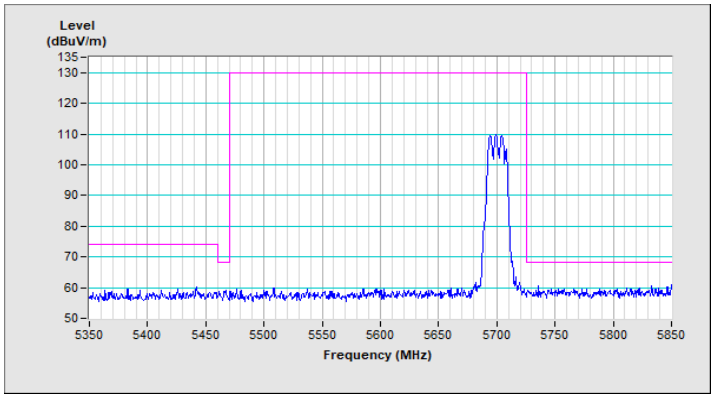


Vertical (Peak)

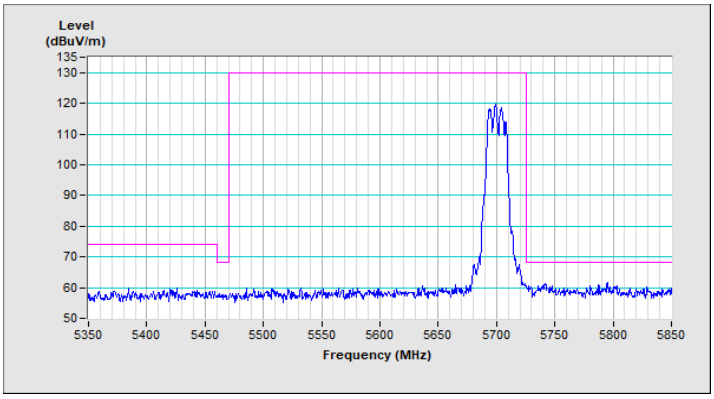


Vertical (Average)

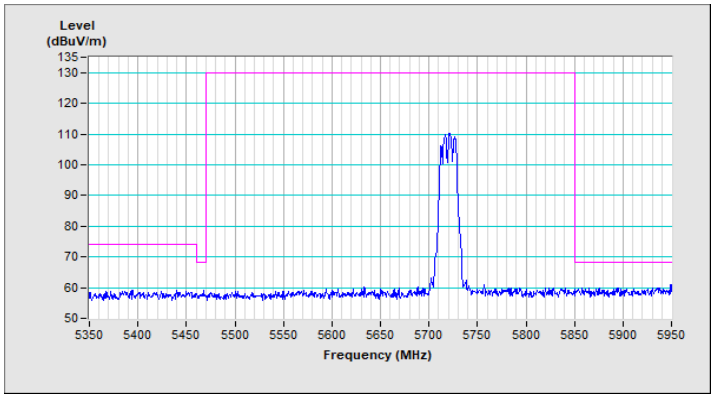
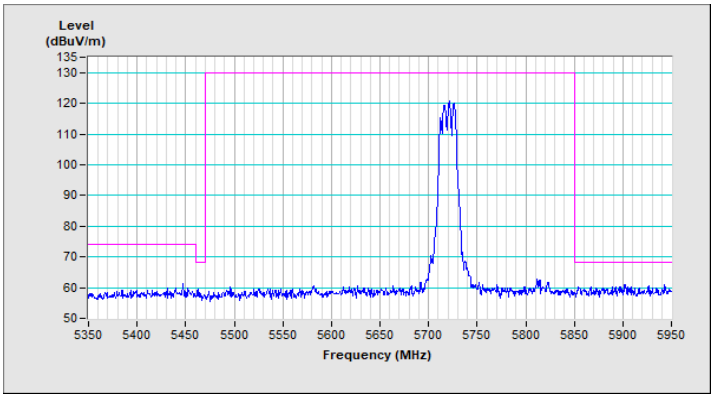
802.11a Channel 140



Horizontal (Peak)

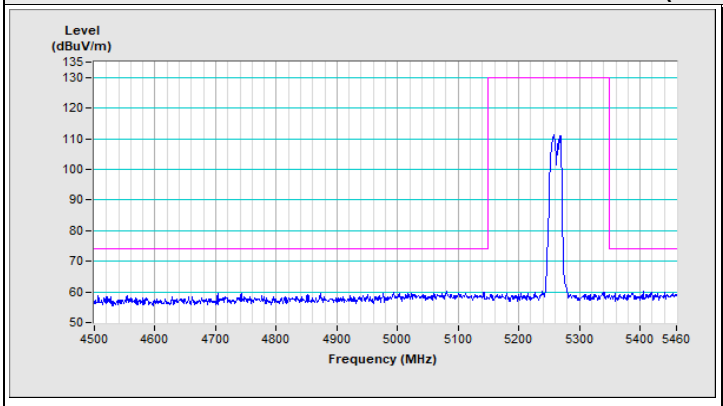


Vertical (Peak)

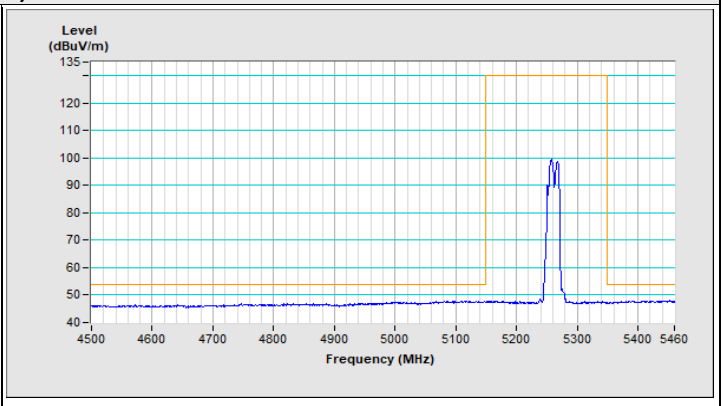
802.11a Channel 144	
	
Horizontal (Peak)	Vertical (Peak)

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

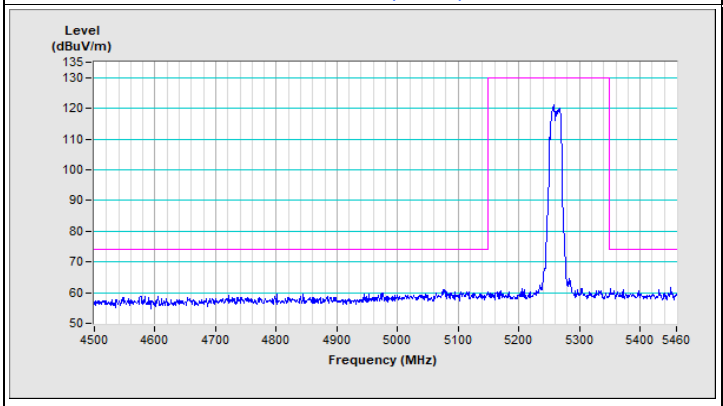
802.11ax (HE20) Channel 52



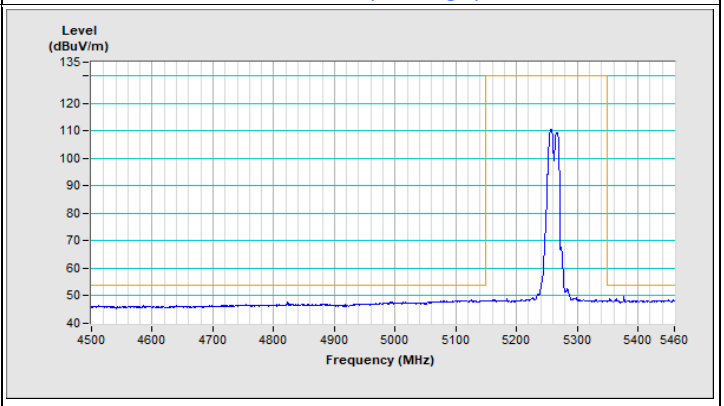
Horizontal (Peak)



Horizontal (Average)

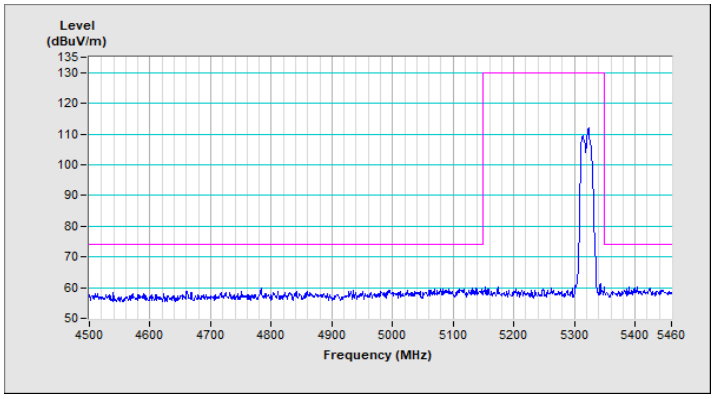


Vertical (Peak)

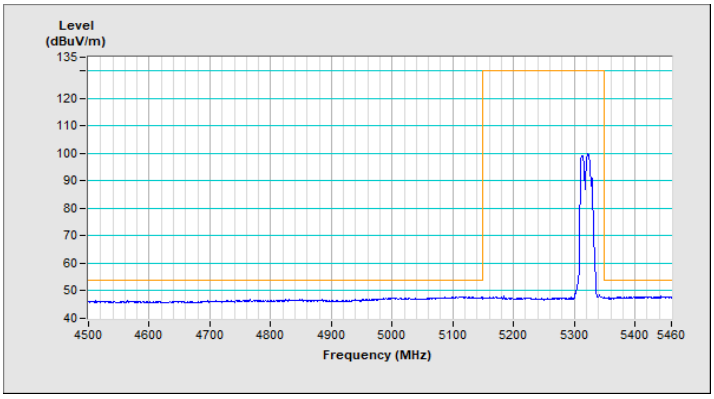


Vertical (Average)

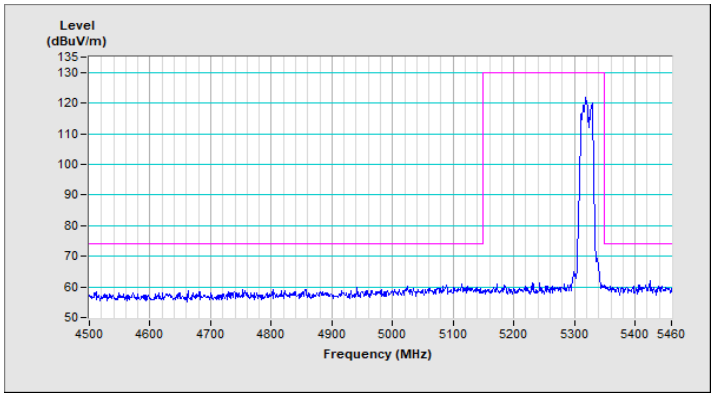
802.11ax (HE20) Channel 64



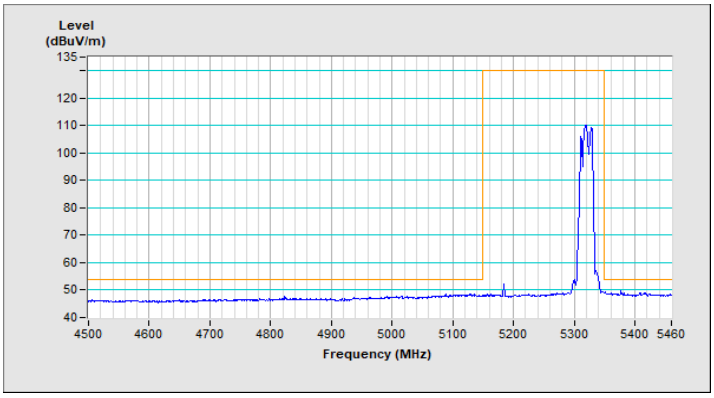
Horizontal (Peak)



Horizontal (Average)



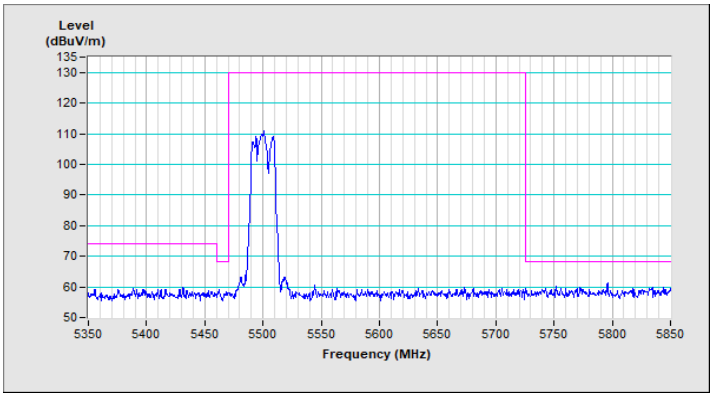
Vertical (Peak)



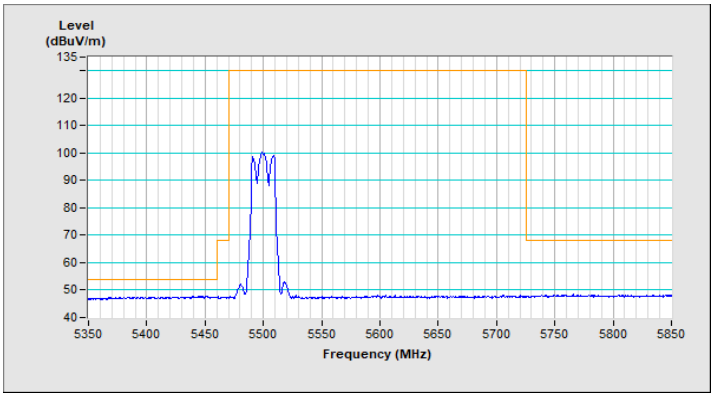
Vertical (Average)

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

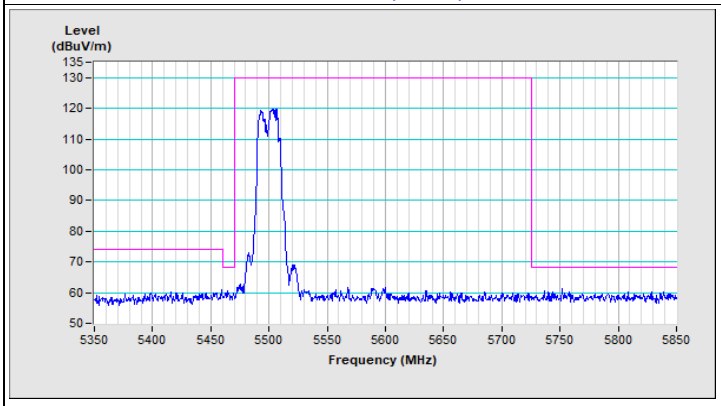
802.11ax (HE20) Channel 100



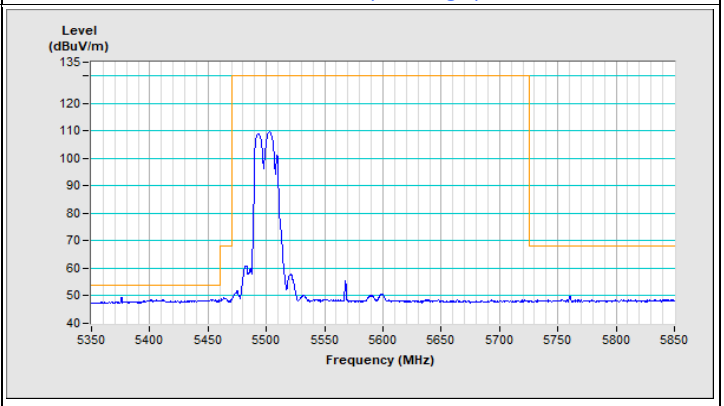
Horizontal (Peak)



Horizontal (Average)

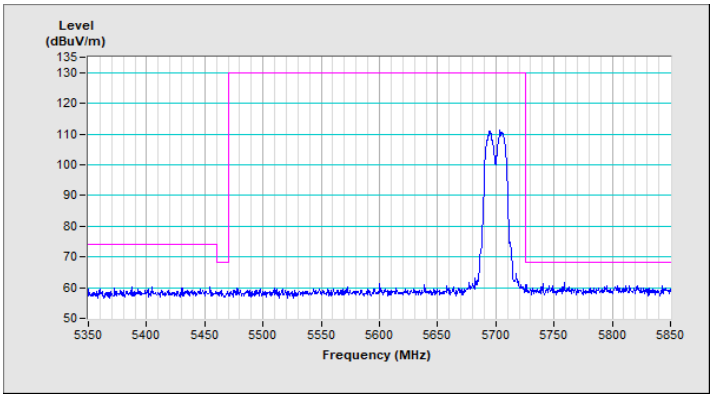


Vertical (Peak)

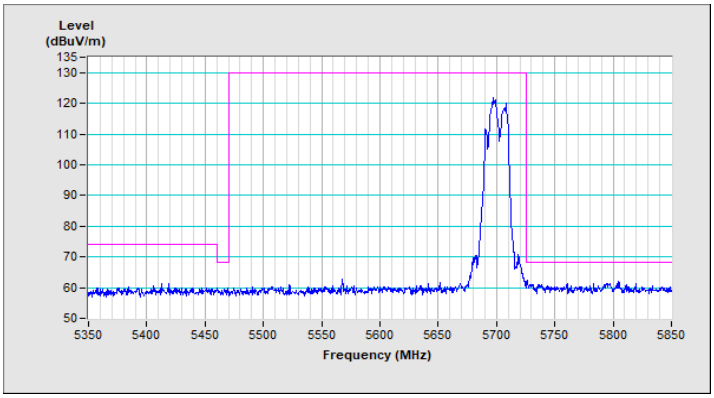


Vertical (Average)

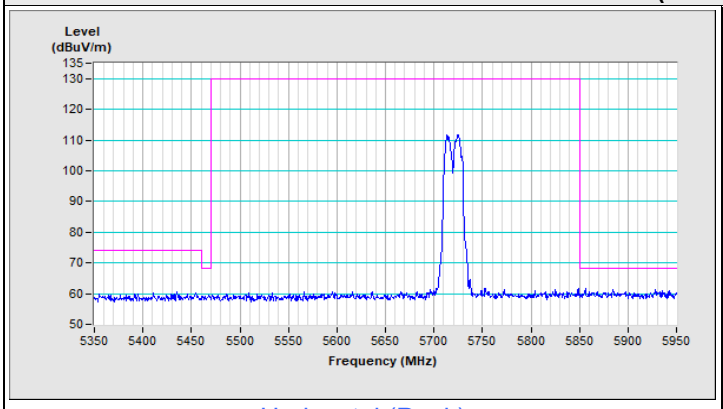
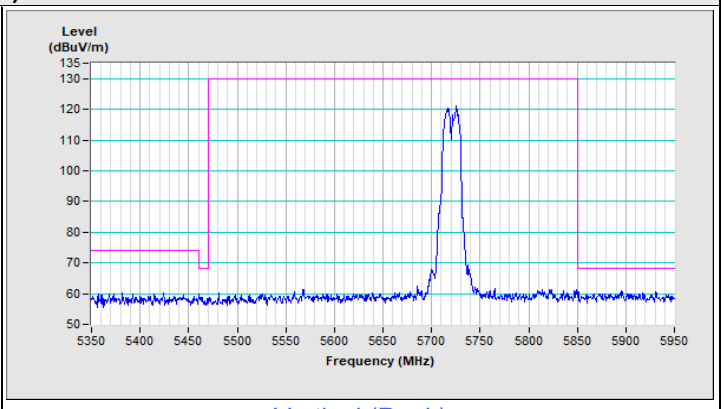
802.11ax (HE20) Channel 140



Horizontal (Peak)

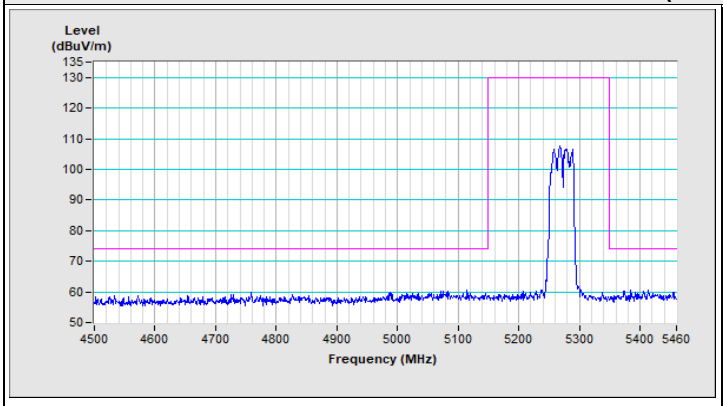


Vertical (Peak)

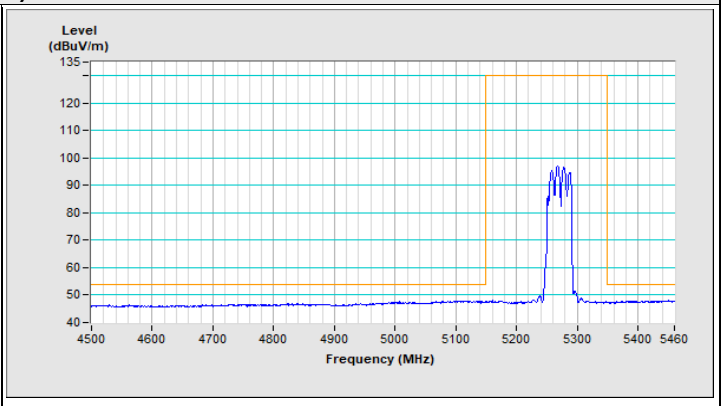
802.11ax (HE20) Channel 144	
	
Horizontal (Peak)	Vertical (Peak)

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

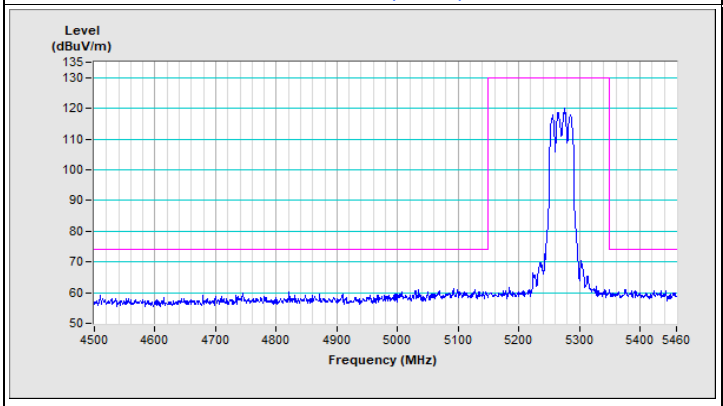
802.11ax (HE40) Channel 54



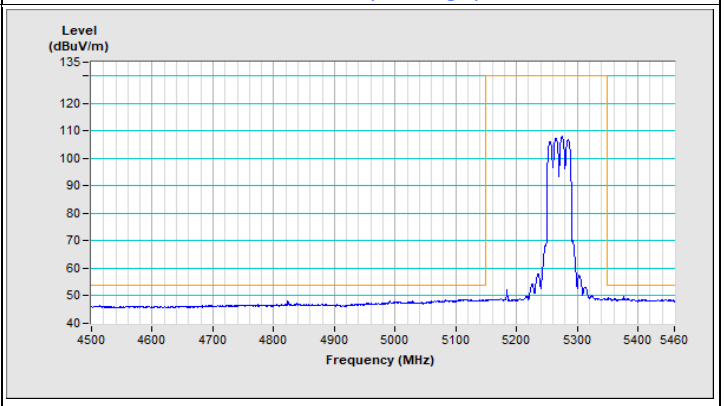
Horizontal (Peak)



Horizontal (Average)

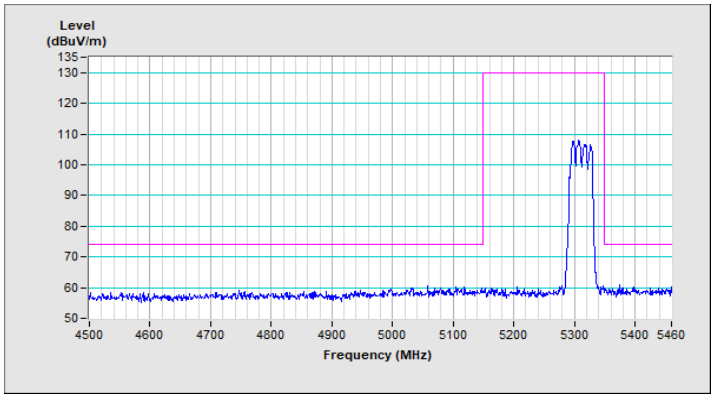


Vertical (Peak)

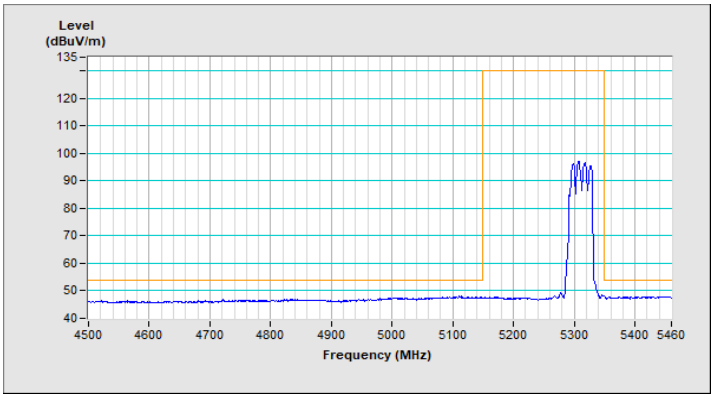


Vertical (Average)

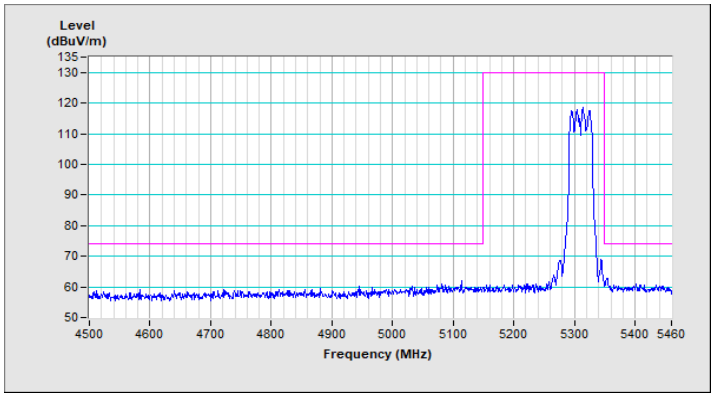
802.11ax (HE40) Channel 62



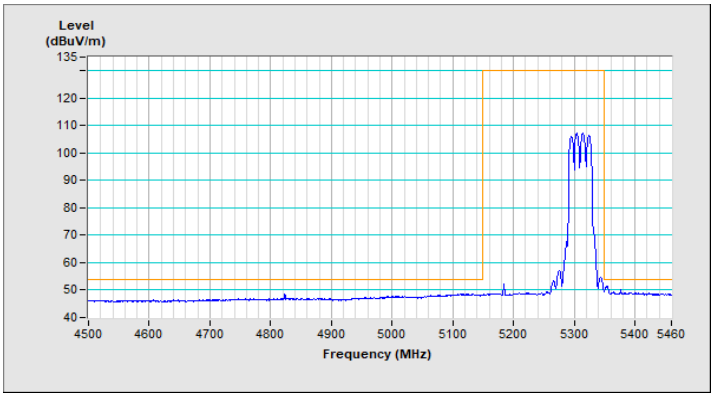
Horizontal (Peak)



Horizontal (Average)



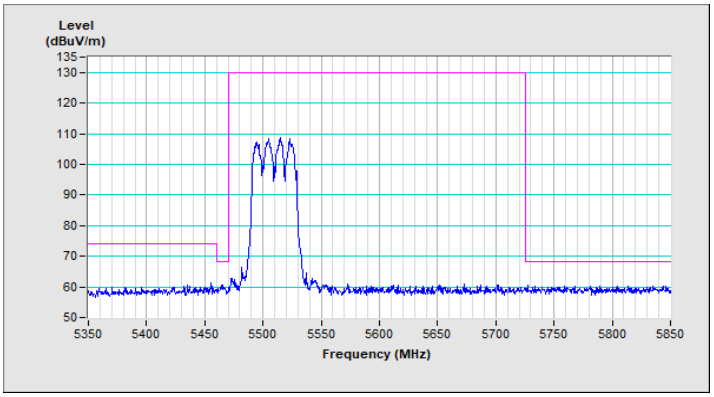
Vertical (Peak)



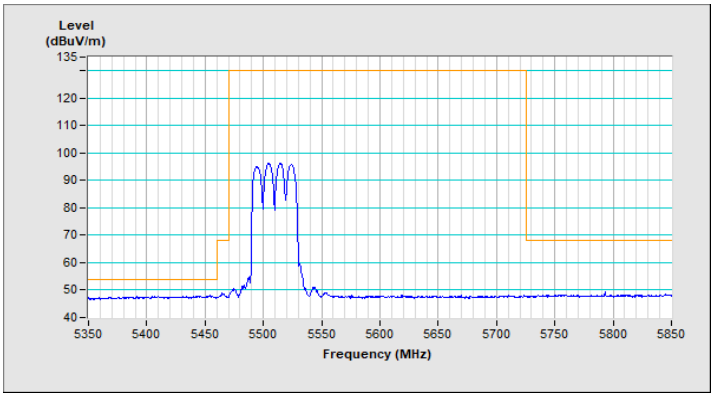
Vertical (Average)

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

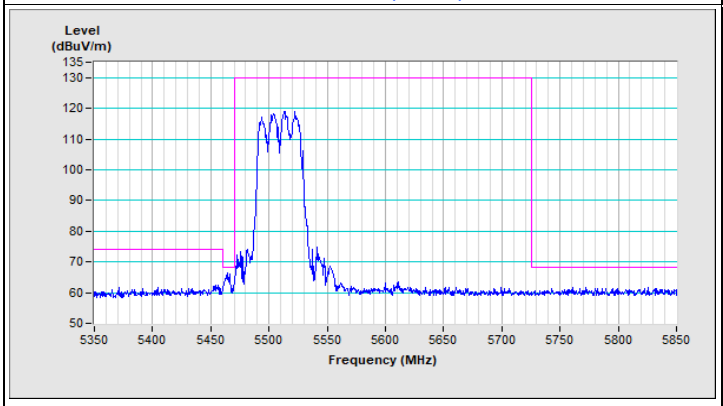
802.11ax (HE40) Channel 102



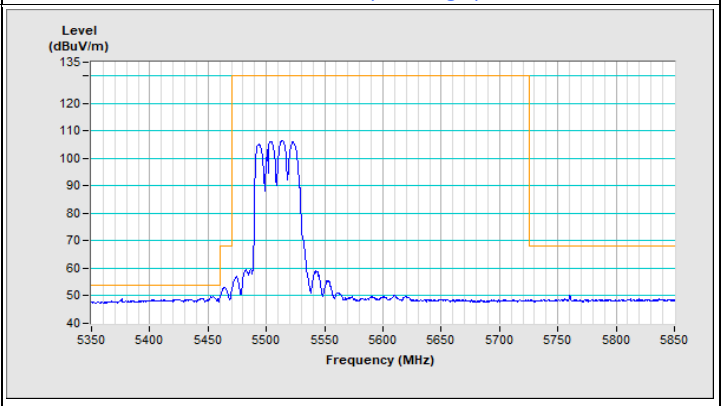
Horizontal (Peak)



Horizontal (Average)

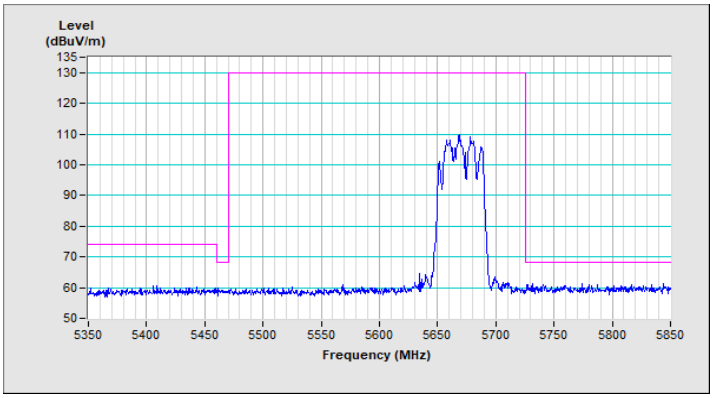


Vertical (Peak)

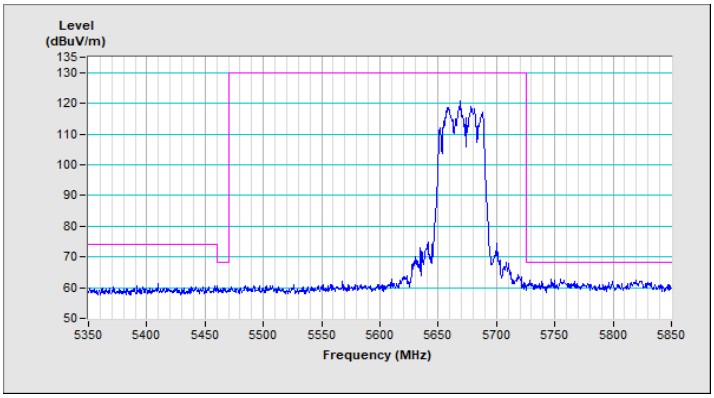


Vertical (Average)

802.11ax (HE40) Channel 134

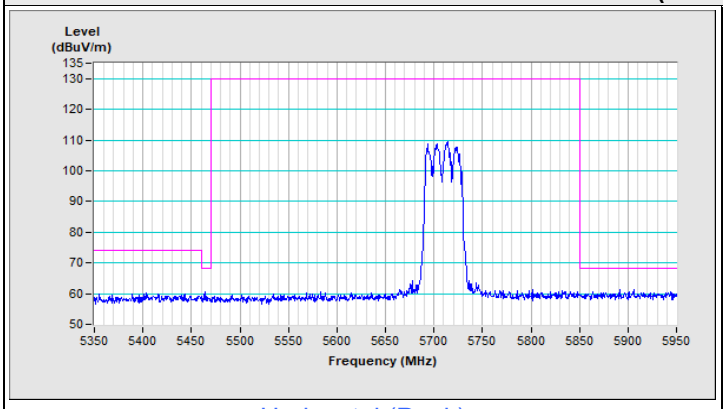


Horizontal (Peak)

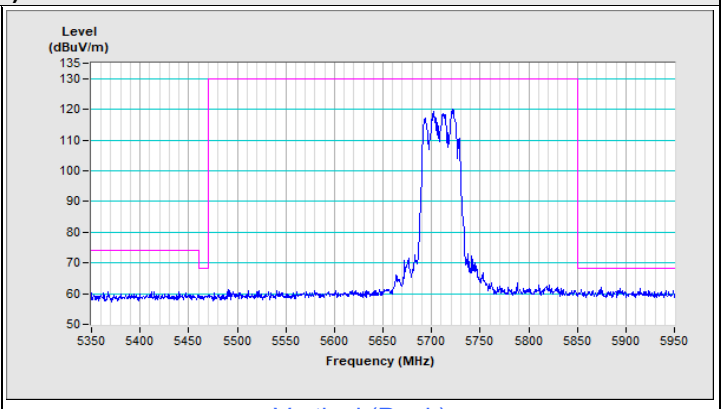


Vertical (Peak)

802.11ax (HE40) Channel 142



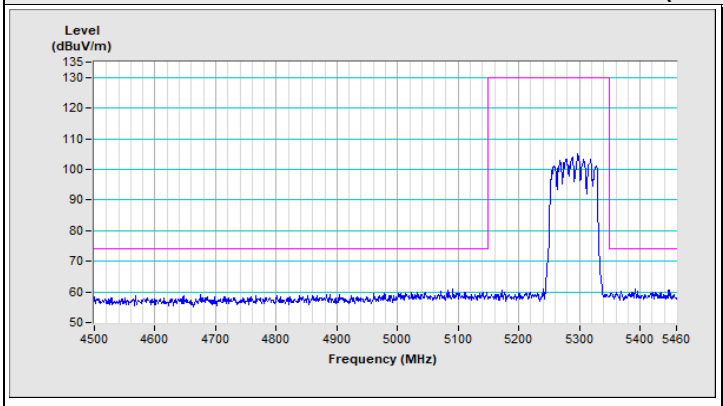
Horizontal (Peak)



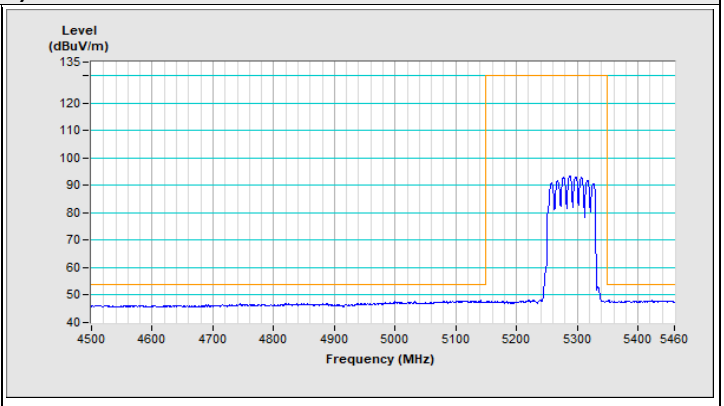
Vertical (Peak)

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

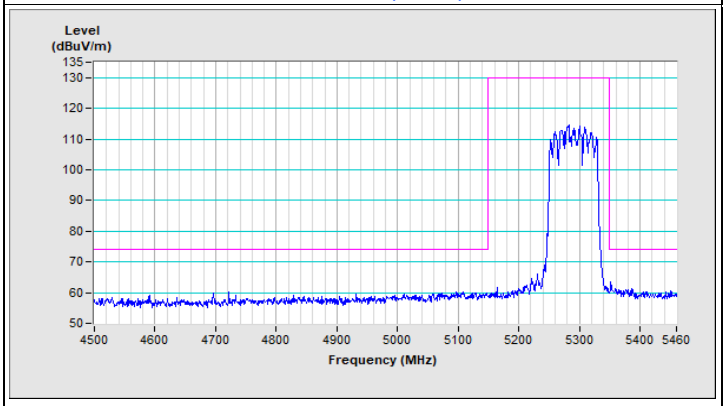
802.11ax (HE80) Channel 58



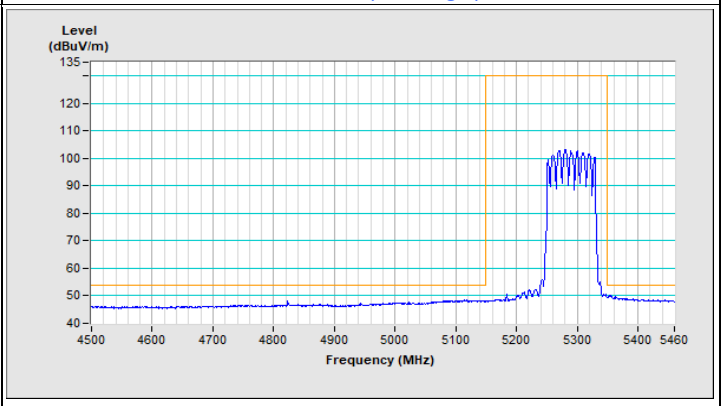
Horizontal (Peak)



Horizontal (Average)



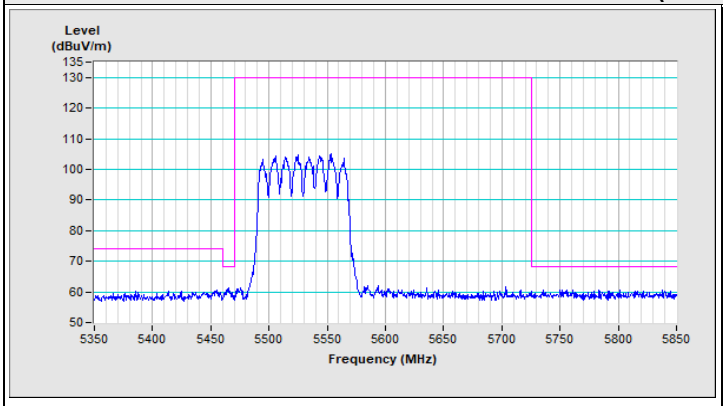
Vertical (Peak)



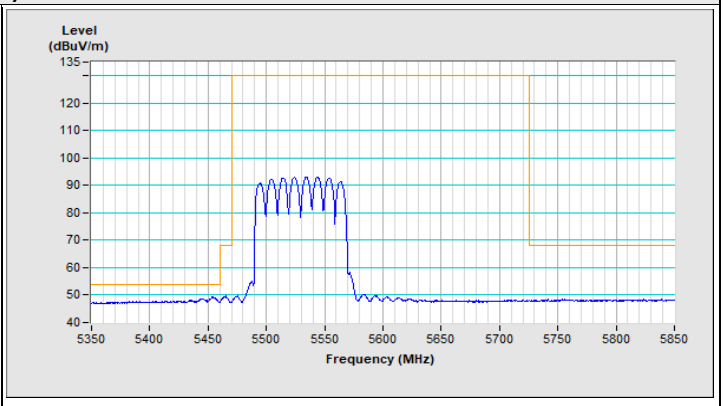
Vertical (Average)

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

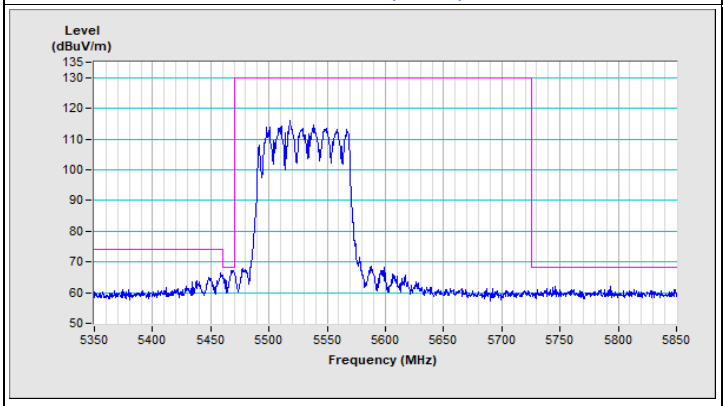
802.11ax (HE80) Channel 106



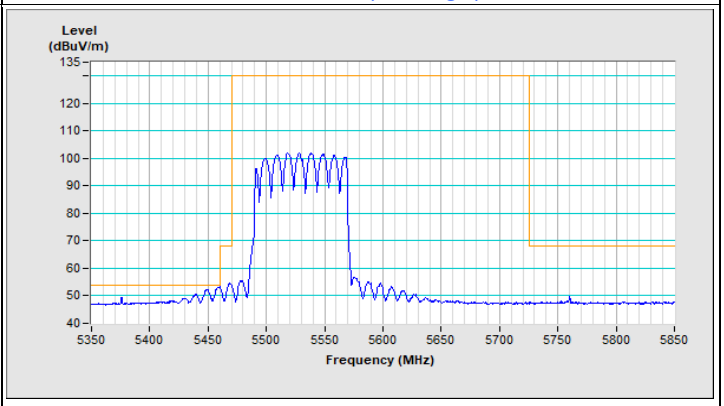
Horizontal (Peak)



Horizontal (Average)

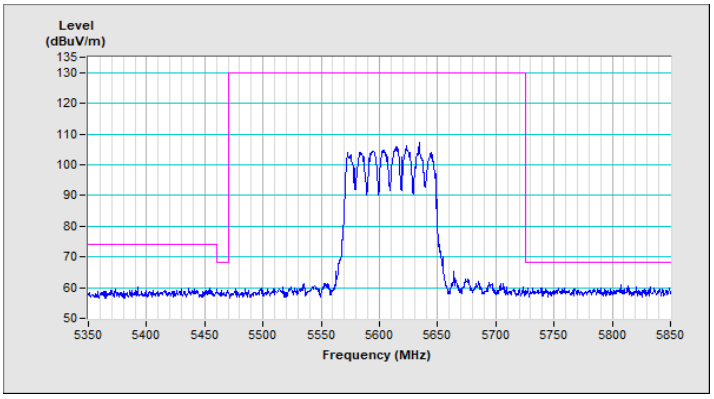


Vertical (Peak)

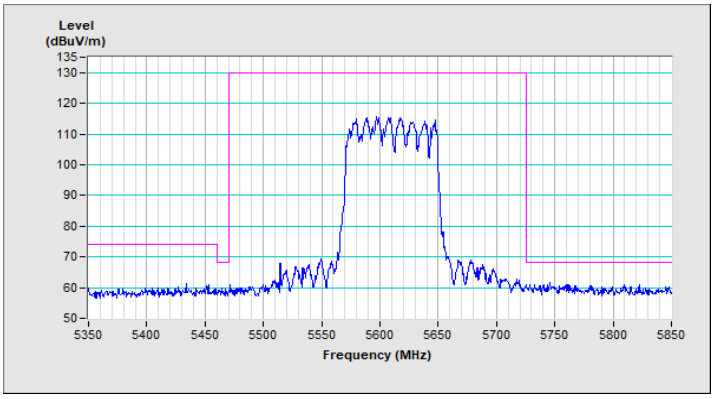


Vertical (Average)

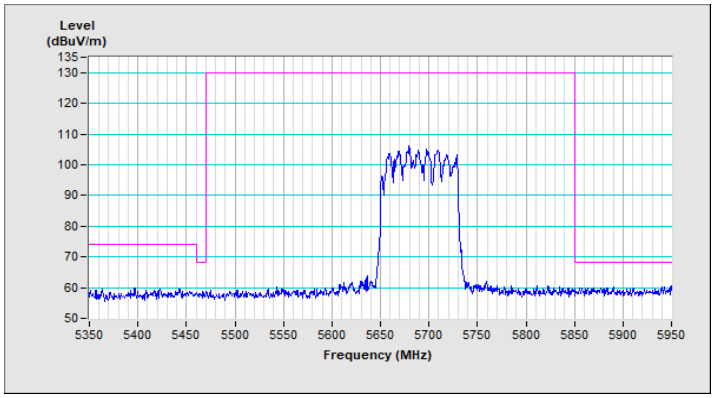
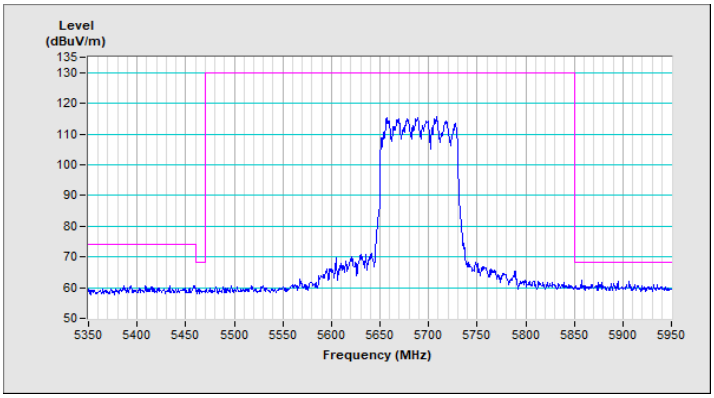
802.11ax (HE80) Channel 122



Horizontal (Peak)



Vertical (Peak)

802.11ax (HE80) Channel 138	
	
Horizontal (Peak)	Vertical (Peak)

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of the Testing Laboratories

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

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

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

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