TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart E (Section 15.407)**
Report No.:	RFBHQL-WTW-P23020458-1
FCC ID:	A8J-EWS850APA
Product:	AX1800 Outdoor Access Point
Brand:	EnGenius
Model No.:	EWS850APA
Received Date:	2022/12/9
Test Date:	2022/12/21 ~ 2023/3/2
Issued Date:	2023/3/20
Applicant:	EnGenius Technologies, Inc.
Address:	1580 Scenic Ave, Costa Mesa, CA 92626, 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 (1):	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kewi Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003
Test Location (2):	No. 70, Wenming Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
FCC Registration / Designation Number:	281270 / TW0032

Approved by: Jeremy Lin , **Date:** 2023/3/20

Jeremy Lin / Project Engineer

This test report consists of 84 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The test results in the report only apply to the tested sample. The test results in this report are traceable to the national or international standards.

Prepared by : Celine Chou / Senior Specialist

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RFBHQL-WTW-P23020458-1	Original release.	2023/3/20

1 Certificate

Product:	AX1800 Outdoor Access Point
Brand:	EnGenius
Test Model:	EWS850APA
Sample Status:	Engineering sample
Applicant:	EnGenius Technologies, Inc.
Test Date:	2022/12/21 ~ 2023/3/2
Standard:	47 CFR FCC Part 15, Subpart E (Section 15.407)
Measurement procedure:	ANSI C63.10-2013 KDB 789033 D02 General UNII Test Procedure New Rules v02r01 KDB 662911 D01 Multiple Transmitter Output v02r01

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

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
Clause	Test Item	Result	Remark
15.407(a)(1) 15.407(a)(3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(1) 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 -5.59 dB at 0.47400 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -1.0 dB at 82.38 MHz
15.407(b) (1/10) 15.407(b) (4(i)/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -1.0 dB at 5641.60 MHz
15.203	Antenna Requirement	Pass	Antenna connector is R-SMA not a standard connector.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

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

Measurement	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	3.00 dB
	30 MHz ~ 1 GHz	2.93 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	1.76 dB
	18 GHz ~ 40 GHz	1.77 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	AX1800 Outdoor Access Point
Brand	EnGenius
Test Model	EWS850APA
Status of EUT	Engineering sample
Power Supply Rating	54 Vdc (POE)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM 1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK 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	5180 ~ 5240 MHz, 5745 ~ 5825 MHz
Number of Channel	5180 ~ 5240 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 5745 ~ 5825 MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 5 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 2 802.11ac (VHT80), 802.11ax (HE80): 1
Output Power	CDD Mode: 5180 ~ 5240 MHz: 16.47 dBm (44.373 mW) 5745 ~ 5825 MHz: 26.80 dBm (478.530 mW) Beamforming Mode: 5180 ~ 5240 MHz: 13.45 dBm (22.144 mW) 5745 ~ 5825 MHz: 26.68 dBm (465.935 mW)
EUT Category	Outdoor Access Point

Note:

1. The EUT uses following accessories.

PoE		
Brand	Model	Specification
EnGenius	EPA5006GR	AC Input : 100-240 Vac, 0.8 A, 50-60 Hz DC Output : 54 Vdc, 0.6 A; PIN 4,5: 54 Vdc; PIN 7,8 RETURN Power Line : 0.5m non-shielded AC power cable without core
Ground Cable		
Brand	Model	Specification
BO YAO TECHNOLOGY CO., LTD.	EM22053001	1.8m non-shielded ground cable without core

2. There are two radios for the EUT.

Radio	Function	TX/RX Function
1	WLAN 2.4GHz	2TX / 2RX
2	WLAN 5GHz	2TX / 2RX

3. Simultaneously transmission condition.

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

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

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Ant. Type	Dipole					
Connector	R-SMA					
Frequency (MHz)	2400MHz	2450MHz	2500MHz	5150MHz	5550MHz	5850MHz
Gain (dBi)	5.08	5.13	5.17	5.12	5.09	5.17

Note: The EUT will install at outdoor area, the highest antenna gain from the horizon above 30 degrees as below.

Antenna No.	Antenna gain	Antenna install degree
7102A0414000	-0.84 dBi	
Due to device Will restriced installation position as above photo, thus consider to above 30 degrees highest antenna gain are chosen from Y-Z Plane (antenna specification of 0~60 deg and 300~360 deg)		

* 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 the same as the 802.11ax or more lower than it and investigated worst case to representative mode in test report.

3.3 Channel List

FOR 5180 ~ 5240 MHz

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

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

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

Channel	Frequency
42	5210 MHz

FOR 5745 ~ 5825 MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

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

Channel	Frequency
155	5775 MHz

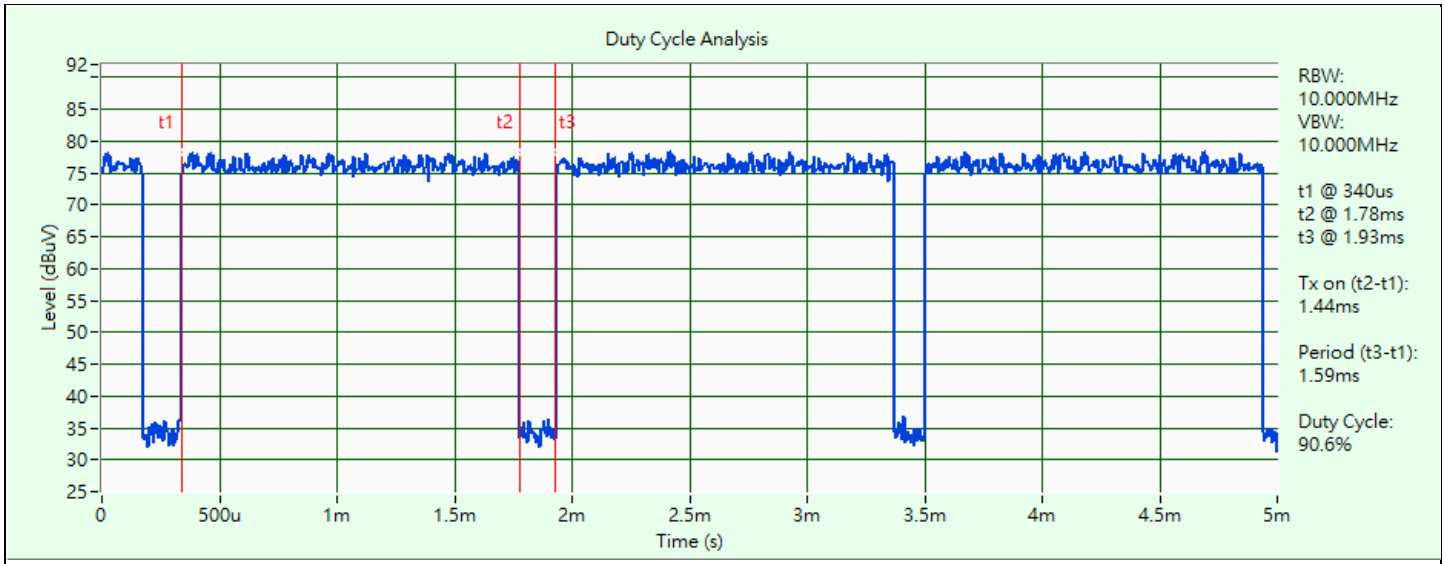
3.4 Test Mode Applicability and Tested Channel Detail

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

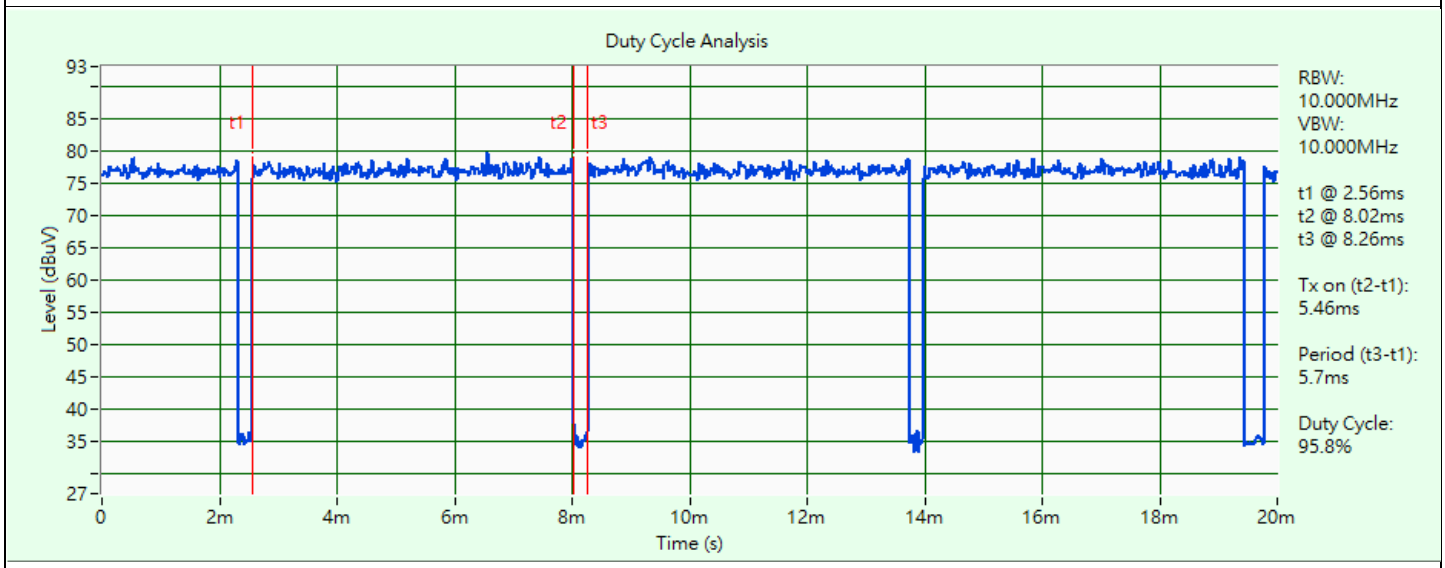
Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	802.11a	CDD	36, 40, 48, 149, 157, 165	OFDM	6Mb/s
	802.11n (HT20)	CDD & Beamforming	36, 40, 48, 149, 157, 165	OFDM	MCS0
	802.11n (HT40)		38, 46, 151, 159	OFDM	MCS0
	802.11ac (VHT20)		36, 40, 48, 149, 157, 165	OFDM	MCS0
	802.11ac (VHT40)		38, 46, 151, 159	OFDM	MCS0
	802.11ac (VHT80)		42, 155	OFDM	MCS0
	802.11ax (HE20)		36, 40, 48, 149, 157, 165	OFDMA	MCS0
	802.11ax (HE40)		38, 46, 151, 159	OFDMA	MCS0
	802.11ax (HE80)		42, 155	OFDMA	MCS0
Power Spectral Density	802.11a	CDD	36, 40, 48, 149, 157, 165	OFDM	6Mb/s
	802.11ax (HE20)		36, 40, 48, 149, 157, 165	OFDMA	MCS0
	802.11ax (HE40)		38, 46, 151, 159	OFDMA	MCS0
	802.11ax (HE80)		42, 155	OFDMA	MCS0
6 dB Bandwidth	802.11a	CDD	149, 157, 165	OFDM	6Mb/s
	802.11ax (HE20)		149, 157, 165	OFDMA	MCS0
	802.11ax (HE40)		151, 159	OFDMA	MCS0
	802.11ax (HE80)		155	OFDMA	MCS0
Occupied Bandwidth	802.11a	CDD	36, 40, 48, 149, 157, 165	OFDM	6Mb/s
	802.11ax (HE20)		36, 40, 48, 149, 157, 165	OFDMA	MCS0
	802.11ax (HE40)		38, 46, 151, 159	OFDMA	MCS0
	802.11ax (HE80)		42, 155	OFDMA	MCS0
Frequency Stability	802.11a	-	36	un-modulation	-
AC Power Conducted Emissions	802.11a	CDD	149	BPSK	6Mb/s
Unwanted Emissions below 1 GHz	802.11a	CDD	149	BPSK	6Mb/s
Unwanted Emissions above 1 GHz	802.11a	CDD	36, 40, 48, 149, 157, 165	OFDM	6Mb/s
	802.11ax (HE20)		36, 40, 48, 149, 157, 165	OFDMA	MCS0
	802.11ax (HE40)		38, 46, 151, 159	OFDMA	MCS0
	802.11ax (HE80)		42, 155	OFDMA	MCS0

3.5 Duty Cycle of Test Signal

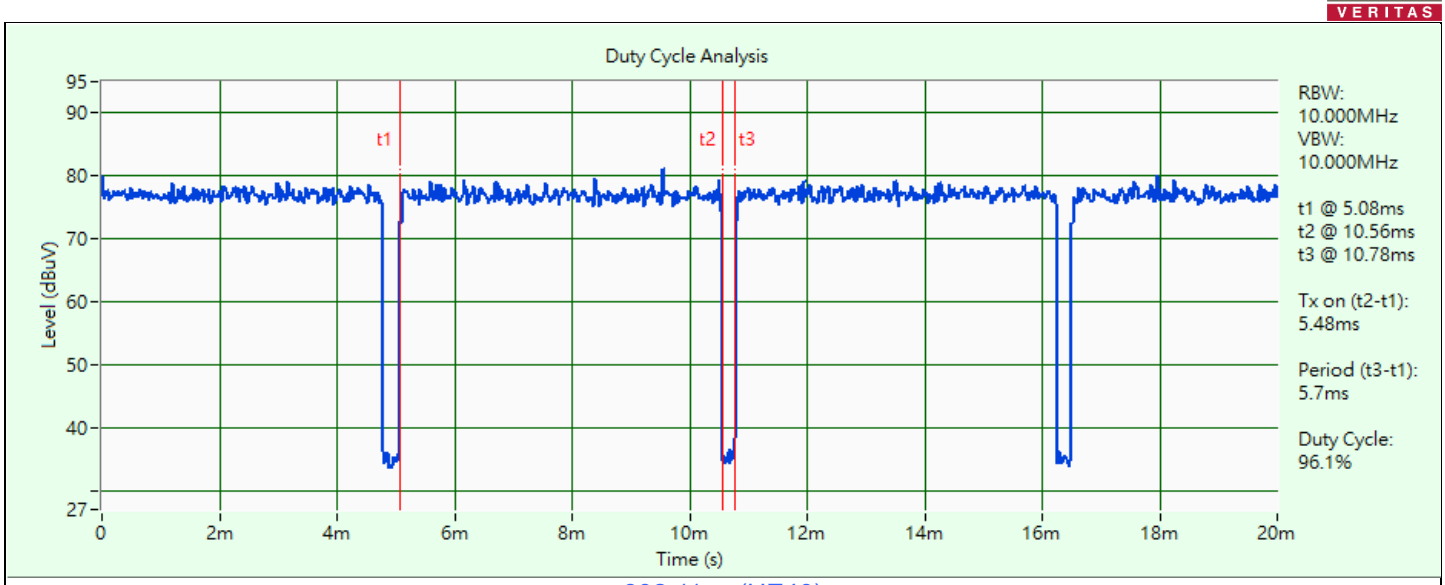
802.11a: Duty cycle = 1.44 ms / 1.59 ms x 100% = 90.6%, duty factor = 10 * log (1/Duty cycle) = 0.43 dB
802.11ax (HE20): Duty cycle = 5.46 ms / 5.7 ms x 100% = 95.8%, duty factor = 10 * log (1/Duty cycle) = 0.19 dB
802.11ax (HE40): Duty cycle = 5.48 ms / 5.7 ms x 100% = 96.1%, duty factor = 10 * log (1/Duty cycle) = 0.17 dB
802.11ax (HE80): Duty cycle = 5.46 ms / 5.7 ms x 100% = 95.8%, duty factor = 10 * log (1/Duty cycle) = 0.19 dB



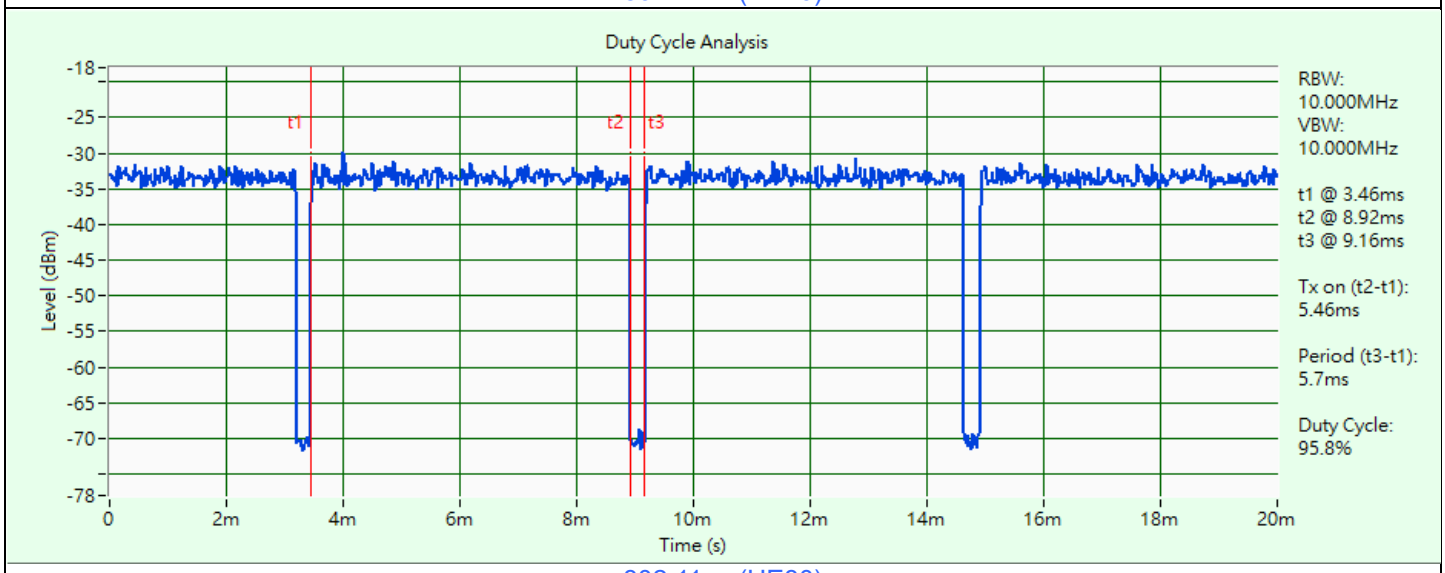
802.11a



802.11ax (HE20)



802.11ax (HE40)

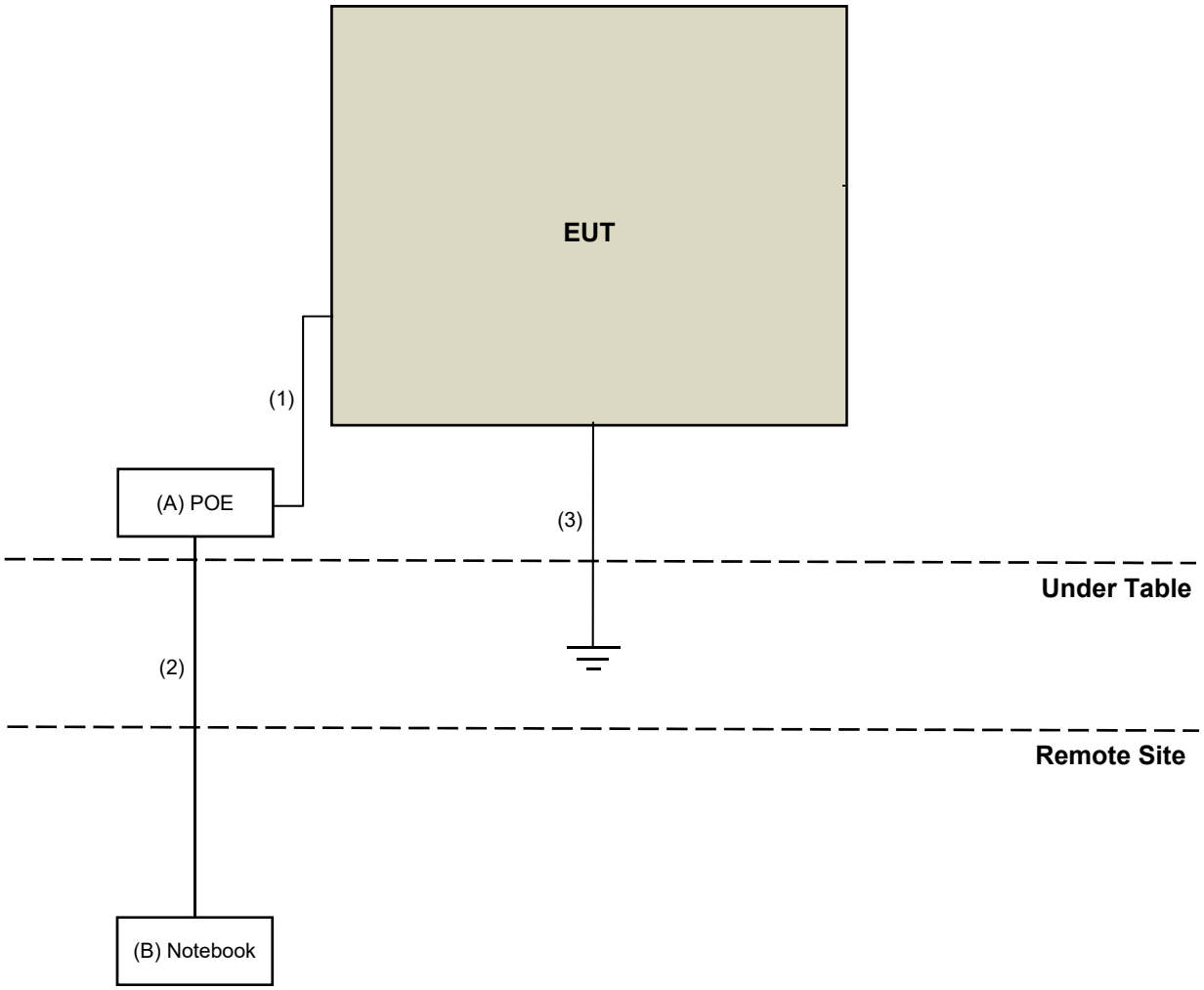


802.11ax (HE80)

3.6 Test Program Used and Operation Descriptions

Controlling software QSPR V5.0-00196 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	L440	R9-0GFJKK	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-45 Cable	1	1.0	N	0	Provided by Lab
2	RJ-45 Cable	1	3.0	N	0	Provided by Lab
3	Ground Cable	1	1.8	N	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 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190004/MY55190007/MY55210005	2022/7/13	2023/7/12

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/3/2

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSV40	100979	2022/3/25	2023/3/24

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/3/2

4.3 6 dB Bandwidth

Refer to section 4.2 to get information of the instruments.

4.4 Occupied Bandwidth

Refer to section 4.2 to get information of the instruments.

4.5 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	2022/6/23	2023/6/22
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSV40	100979	2022/3/25	2023/3/24
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: 2023/3/2

4.6 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
LISN R&S	ESH3-Z5	100311	2022/9/12	2023/9/11
LISN ROHDE & SCHWARZ	ENV216	101826	2022/3/14	2023/3/13
RF Coaxial Cable WOKEN	5D-FB	Cable-cond1-01	2022/1/15	2023/1/14
Software BVADT	BVADT_Cond_ V7.3.7.4	N/A	N/A	N/A
Test Receiver Rohde&Schwarz	ESCI	100613	2022/12/5	2023/12/4
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: 2022/12/21

4.7 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
Bi-log Broadband Antenna Schwarzbeck	VULB9168	9168-1213	2022/10/20	2023/10/19
Loop Antenna EMCI	EM-6879	269	2022/9/19	2023/9/18
Loop Antenna TESEQ	HLA 6121	45745	2022/7/27	2023/7/26
Pre-amplifier EMCI	EMC001340	980201	2022/9/23	2023/9/22
Pre_Amplifier EMCI	EMC330N	980782	2022/1/17	2023/1/16
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	2022/1/15	2023/1/14
	EMCCFD400-NM-NM-500	201233	2022/1/17	2023/1/16
	EMCCFD400-NM-NM-3000	201235	2022/1/17	2023/1/16
	EMCCFD400-NM-NM-9000	201236	2022/1/17	2023/1/16
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Spectrum Analyzer R&S	FSW43	101866	2022/1/14	2023/1/13
Test Receiver R&S	ESR3+	102782	2022/12/12	2023/12/11
Turn Table Max-Full	MF-7802BS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208674	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 8.
2. Tested Date: 2022/12/21

4.8 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
Horn Antenna RFSPIN	DRH18-E	210103A18E	2022/11/13	2023/11/12
Horn Antenna Schwarzbeck	BBHA 9170	9170-1049	2022/11/13	2023/11/12
Pre_Amplifier EMCI	EMC118A45SE	980808	2022/12/29	2023/12/28
	EMC184045SE	980788	2023/1/16	2024/1/15
RF Coaxial Cable EMCI	EMC101G-KM-KM-2000	201254	2023/1/16	2024/1/15
	EMC101G-KM-KM-3000	201257	2023/1/16	2024/1/15
	EMC101G-KM-KM-5000	201260	2023/1/16	2024/1/15
	EMC104-SM-SM-1000	210102	2023/1/16	2024/1/15
	EMC104-SM-SM-3000	201231	2023/1/16	2024/1/15
	EMC104-SM-SM-9000	201243	2023/1/16	2024/1/15
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Spectrum Analyzer R&S	FSW43	101866	2023/1/10	2024/1/9
Test Receiver R&S	ESR3+	102782	2022/12/12	2023/12/11
Turn Table Max-Full	MF-7802BS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208674	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 8.
2. Tested Date: 2023/2/22

5 Limits of Test Items

5.1 RF Output Power

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

Operation Band	Limit
U-NII-3	1 Watt (30 dBm)

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.

5.2 Power Spectral Density

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

Operation Band	Limit
U-NII-3	30 dBm/500 kHz

5.3 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.

5.4 Occupied Bandwidth

The results are for reference only.

5.5 Frequency Stability

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

5.6 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.

5.7 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).

5.8 Unwanted Emissions above 1 GHz

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

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

Notes:

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

Limits of unwanted emission out of the restricted bands

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

For transmitters operating in the 5.15-5.25 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)

For transmitters operating in the 5.725-5.850 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.		

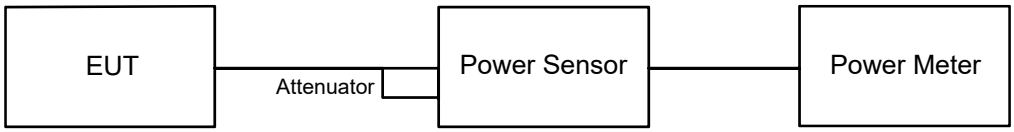
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup

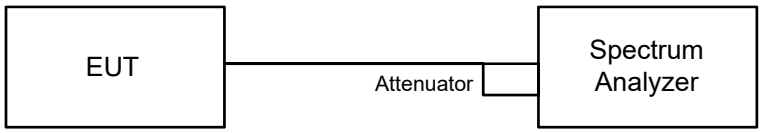


6.1.2 Test Procedure

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.

6.2 Power Spectral Density

6.2.1 Test Setup



6.2.2 Test Procedure

For specified measurement bandwidth 1 MHz:
Method SA-2

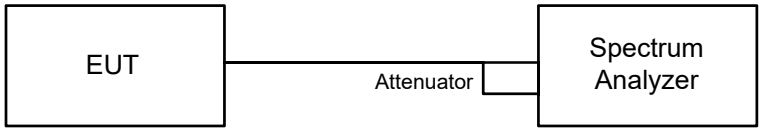
a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
d. Sweep time = auto, trigger 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).

6.3 6 dB Bandwidth

6.3.1 Test Setup

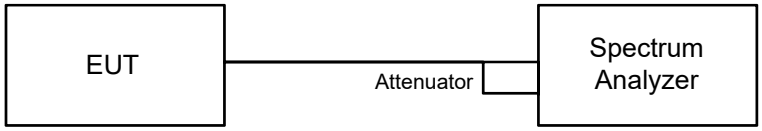


6.3.2 Test Procedure

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.

6.4 Occupied Bandwidth

6.4.1 Test Setup

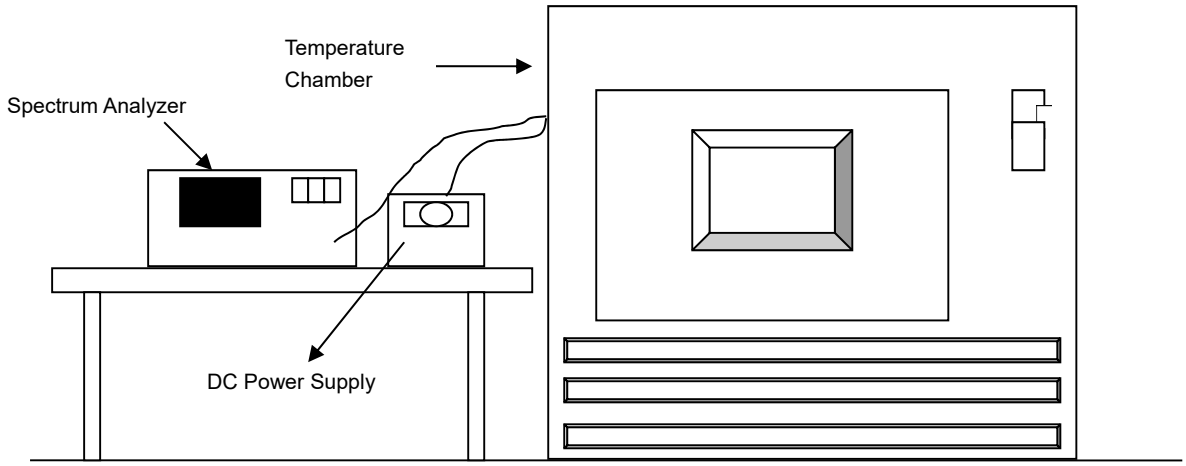


6.4.2 Test Procedure

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.

6.5 Frequency Stability

6.5.1 Test Setup

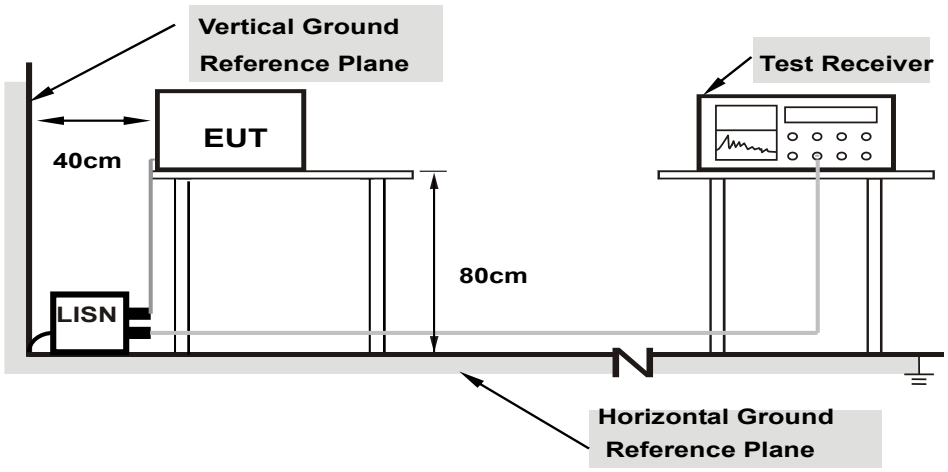


6.5.2 Test Procedure

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.

6.6 AC Power Conducted Emissions

6.6.1 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).

6.6.2 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.

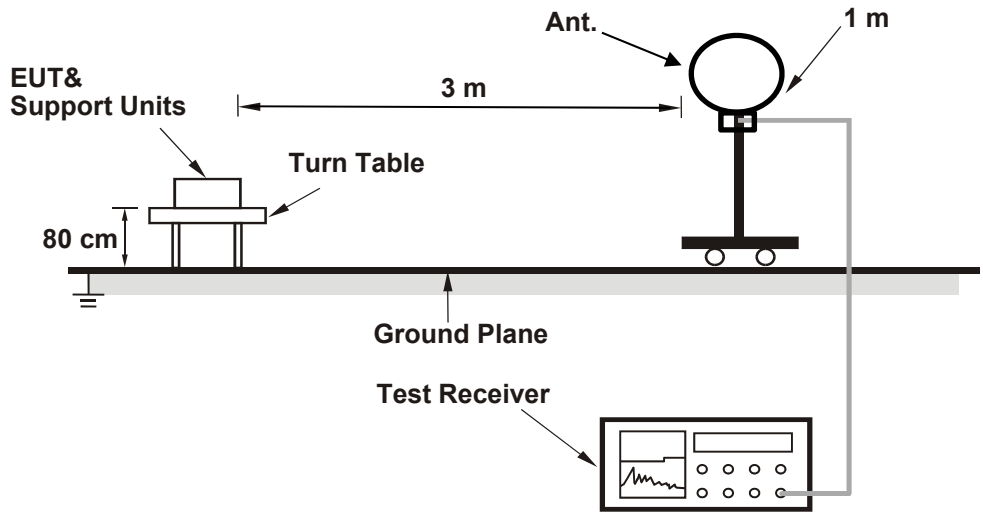
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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.

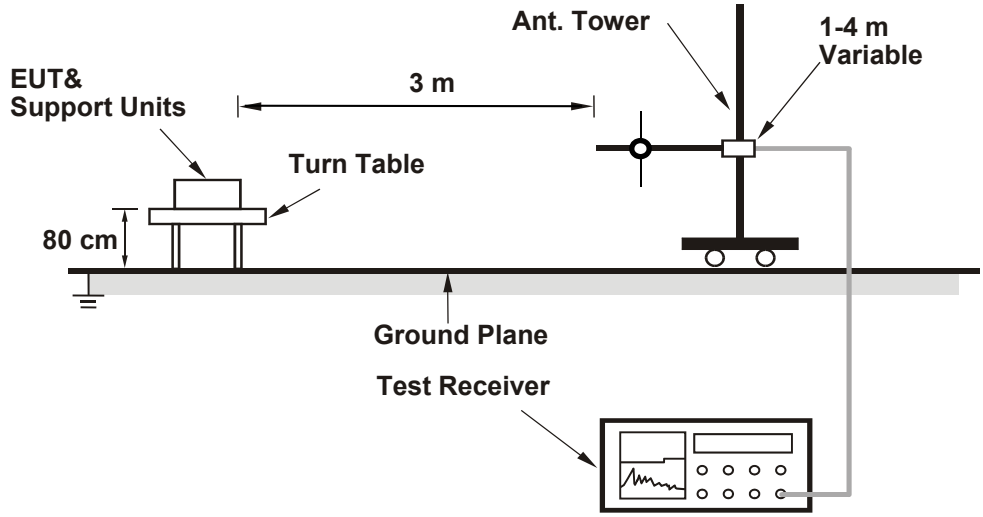
6.7 Unwanted Emissions below 1 GHz

6.7.1 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).

6.7.2 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.

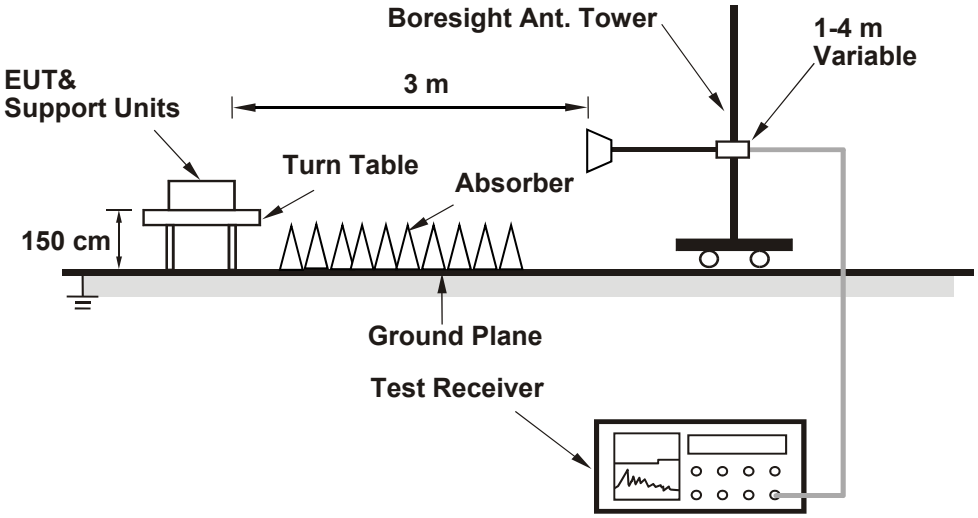
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

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.

6.8 Unwanted Emissions above 1 GHz

6.8.1 Test Setup



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

6.8.2 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 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)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
36	5180	13.26	13.58	43.987	16.43	30	-0.84	36.251	15.59	21	Pass
40	5200	13.22	13.62	44.004	16.43	30	-0.84	36.265	15.59	21	Pass
48	5240	13.37	13.55	44.373	16.47	30	-0.84	36.569	15.63	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
149	5745	23.31	24.22	478.530	26.80	30	Pass
157	5785	23.21	24.25	475.484	26.77	30	Pass
165	5825	23.08	24.12	461.462	26.64	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 5.12 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-1, the gain of above 30 degrees from the horizon is -0.84 dBi, EIRP (dBm) = Average Power (dBm) + (-0.84) dBi

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
36	5180	12.67	12.81	37.591	15.75	30	-0.84	30.98	14.91	21	Pass
40	5200	12.62	12.85	37.556	15.75	30	-0.84	30.951	14.91	21	Pass
48	5240	12.85	12.97	39.091	15.92	30	-0.84	32.216	15.08	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
149	5745	22.07	23.12	366.181	25.64	30	Pass
157	5785	22.16	23.08	367.673	25.65	30	Pass
165	5825	22.28	22.87	362.686	25.60	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 5.12 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-1, the gain of above 30 degrees from the horizon is -0.84 dBi, EIRP (dBm) = Average Power (dBm) + (-0.84) dBi

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
38	5190	12.44	13.05	37.722	15.77	30	-0.84	31.088	14.93	21	Pass
46	5230	12.41	13.29	38.749	15.88	30	-0.84	31.935	15.04	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
151	5755	22.66	23.71	419.465	26.23	30	Pass
159	5795	22.59	23.61	411.166	26.14	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 5.12 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-1, the gain of above 30 degrees from the horizon is -0.84 dBi, EIRP (dBm) = Average Power (dBm) + (-0.84) dBi

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
36	5180	12.85	12.98	39.136	15.93	30	-0.84	32.253	15.09	21	Pass
40	5200	12.74	13.01	38.792	15.89	30	-0.84	31.970	15.05	21	Pass
48	5240	13.00	13.17	40.702	16.10	30	-0.84	33.544	15.26	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
149	5745	22.23	23.37	384.379	25.85	30	Pass
157	5785	22.35	23.19	380.240	25.80	30	Pass
165	5825	22.41	23.01	374.167	25.73	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 5.12 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-1, the gain of above 30 degrees from the horizon is -0.84 dBi, EIRP (dBm) = Average Power (dBm) + (-0.84) dBi

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
38	5190	12.61	13.33	39.767	16.00	30	-0.84	32.774	15.16	21	Pass
46	5230	12.58	13.41	40.041	16.03	30	-0.84	32.999	15.19	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
151	5755	22.74	23.89	432.838	26.36	30	Pass
159	5795	22.78	23.76	427.355	26.31	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 5.12 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-1, the gain of above 30 degrees from the horizon is -0.84 dBi, EIRP (dBm) = Average Power (dBm) + (-0.84) dBi

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
42	5210	12.41	13.01	37.417	15.73	30	-0.84	30.837	14.89	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
155	5775	20.61	21.18	246.300	23.91	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 5.12 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-1, the gain of above 30 degrees from the horizon is -0.84 dBi, EIRP (dBm) = Average Power (dBm) + (-0.84) dBi

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
36	5180	13.12	13.32	41.990	16.23	30	-0.84	34.606	15.39	21	Pass
40	5200	13.15	13.39	42.481	16.28	30	-0.84	35.010	15.44	21	Pass
48	5240	13.31	13.59	44.285	16.46	30	-0.84	36.497	15.62	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
149	5745	22.56	23.55	406.766	26.09	30	Pass
157	5785	22.58	23.42	400.920	26.03	30	Pass
165	5825	22.63	23.25	394.580	25.96	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 5.12 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-1, the gain of above 30 degrees from the horizon is -0.84 dBi, EIRP (dBm) = Average Power (dBm) + (-0.84) dBi

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
38	5190	13.09	13.69	43.759	16.41	30	-0.84	36.063	15.57	21	Pass
46	5230	12.99	13.79	43.840	16.42	30	-0.84	36.130	15.58	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
151	5755	23.06	24.21	465.935	26.68	30	Pass
159	5795	22.94	24.23	461.639	26.64	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 5.12 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-1, the gain of above 30 degrees from the horizon is -0.84 dBi, EIRP (dBm) = Average Power (dBm) + (-0.84) dBi

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
42	5210	12.78	13.49	41.303	16.16	30	-0.84	34.039	15.32	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
155	5775	20.73	21.23	251.044	24.00	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 5.12 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-3, the maximum gain is 5.17 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-1, the gain of above 30 degrees from the horizon is -0.84 dBi, EIRP (dBm) = Average Power (dBm) + (-0.84) dBi

802.11n (HT20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
36	5180	9.66	9.80	18.797	12.74	27.87	2.17	30.981	14.91	21	Pass
40	5200	9.61	9.84	18.779	12.74	27.87	2.17	30.951	14.91	21	Pass
48	5240	9.84	9.96	19.547	12.91	27.87	2.17	32.217	15.08	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
149	5745	22.07	23.12	366.181	25.64	27.82	Pass
157	5785	22.16	23.08	367.673	25.65	27.82	Pass
165	5825	22.28	22.87	362.686	25.60	27.82	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. For U-NII-1, the directional gain is 8.13 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.13-6) = 27.87 dBm.
3. 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.
4. For U-NII-1, the gain of above 30 degrees from the horizon is -0.84 dBi, EIRP (dBm) = Average Power (dBm) + (-0.84) dBi + 10 log (2 of TX antenna elements)

802.11n (HT40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
38	5190	9.43	10.04	18.863	12.76	27.87	2.17	31.089	14.93	21	Pass
46	5230	9.40	10.28	19.376	12.87	27.87	2.17	31.935	15.04	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
151	5755	22.66	23.71	419.465	26.23	27.82	Pass
159	5795	22.59	23.61	411.166	26.14	27.82	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. For U-NII-1, the directional gain is 8.13 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.13-6) = 27.87 dBm.
3. 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.
4. For U-NII-1, the gain of above 30 degrees from the horizon is -0.84 dBi, EIRP (dBm) = Average Power (dBm) + (-0.84) dBi + 10 log (2 of TX antenna elements)

802.11ac (VHT20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
36	5180	9.84	9.97	19.569	12.92	27.87	2.17	32.253	15.09	21	Pass
40	5200	9.73	10.00	19.397	12.88	27.87	2.17	31.969	15.05	21	Pass
48	5240	9.99	10.16	20.352	13.09	27.87	2.17	33.543	15.26	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
149	5745	22.23	23.37	384.379	25.85	27.82	Pass
157	5785	22.35	23.19	380.240	25.80	27.82	Pass
165	5825	22.41	23.01	374.167	25.73	27.82	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. For U-NII-1, the directional gain is 8.13 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.13-6) = 27.87 dBm.
3. 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.
4. For U-NII-1, the gain of above 30 degrees from the horizon is -0.84 dBi, EIRP (dBm) = Average Power (dBm) + (-0.84) dBi + 10 log (2 of TX antenna elements)

802.11ac (VHT40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
38	5190	9.60	10.32	19.885	12.99	27.87	2.17	32.774	15.16	21	Pass
46	5230	9.57	10.40	20.022	13.02	27.87	2.17	33.000	15.19	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
151	5755	22.74	23.89	432.838	26.36	27.82	Pass
159	5795	22.78	23.76	427.355	26.31	27.82	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. For U-NII-1, the directional gain is 8.13 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.13-6) = 27.87 dBm.
3. 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.
4. For U-NII-1, the gain of above 30 degrees from the horizon is -0.84 dBi, EIRP (dBm) = Average Power (dBm) + (-0.84) dBi + 10 log (2 of TX antenna elements)

802.11ac (VHT80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
42	5210	9.40	10.00	18.710	12.72	27.87	2.17	30.837	14.89	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
155	5775	20.61	21.18	246.300	23.91	27.82	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. For U-NII-1, the directional gain is 8.13 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.13-6) = 27.87 dBm.
3. 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.
4. For U-NII-1, the gain of above 30 degrees from the horizon is -0.84 dBi, EIRP (dBm) = Average Power (dBm) + (-0.84) dBi + 10 log (2 of TX antenna elements)

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
36	5180	10.11	10.31	20.996	13.22	27.87	2.17	34.605	15.39	21	Pass
40	5200	10.14	10.38	21.242	13.27	27.87	2.17	35.010	15.44	21	Pass
48	5240	10.30	10.58	22.144	13.45	27.87	2.17	36.497	15.62	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
149	5745	22.56	23.55	406.766	26.09	27.82	Pass
157	5785	22.58	23.42	400.920	26.03	27.82	Pass
165	5825	22.63	23.25	394.580	25.96	27.82	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. For U-NII-1, the directional gain is 8.13 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.13-6) = 27.87 dBm.
3. 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.
4. For U-NII-1, the gain of above 30 degrees from the horizon is -0.84 dBi, EIRP (dBm) = Average Power (dBm) + (-0.84) dBi + 10 log (2 of TX antenna elements)

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
38	5190	10.08	10.68	21.881	13.40	27.87	2.17	36.063	15.57	21	Pass
46	5230	9.98	10.78	21.921	13.41	27.87	2.17	36.129	15.58	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
151	5755	23.06	24.21	465.935	26.68	27.82	Pass
159	5795	22.94	24.23	461.639	26.64	27.82	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. For U-NII-1, the directional gain is 8.13 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.13-6) = 27.87 dBm.
3. 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.
4. For U-NII-1, the gain of above 30 degrees from the horizon is -0.84 dBi, EIRP (dBm) = Average Power (dBm) + (-0.84) dBi + 10 log (2 of TX antenna elements)

802.11ax (HE80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
42	5210	9.77	10.48	20.653	13.15	27.87	2.17	34.039	15.32	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
155	5775	20.73	21.23	251.044	24.00	27.82	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. For U-NII-1, the directional gain is 8.13 dBi > 6 dBi, so the output power limit shall be reduced to 30-(8.13-6) = 27.87 dBm.
3. 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.
4. For U-NII-1, the gain of above 30 degrees from the horizon is -0.84 dBi, EIRP (dBm) = Average Power (dBm) + (-0.84) dBi + 10 log (2 of TX antenna elements)

7.2 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				
36	5180	0.15	0.32	0.43	3.68	14.87	Pass
40	5200	0.06	0.56	0.43	3.76	14.87	Pass
48	5240	0.04	0.42	0.43	3.67	14.87	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 = gain of antenna element + 10 log (2 of TX antenna elements)
3. For U-NII-1, the directional gain is 8.13 dBi > 6dBi, so the power density limit shall be reduced to 17-(8.13-6) = 14.87 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				
36	5180	0.10	0.12	0.19	3.31	14.87	Pass
40	5200	0.18	0.35	0.19	3.47	14.87	Pass
48	5240	0.17	0.50	0.19	3.54	14.87	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 = gain of antenna element + 10 log (2 of TX antenna elements)
3. For U-NII-1, the directional gain is 8.13 dBi > 6dBi, so the power density limit shall be reduced to 17-(8.13-6) = 14.87 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				
38	5190	-2.91	-2.43	0.17	0.52	14.87	Pass
46	5230	-3.12	-2.26	0.17	0.51	14.87	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 = gain of antenna element + 10 log (2 of TX antenna elements)
3. For U-NII-1, the directional gain is 8.13 dBi > 6dBi, so the power density limit shall be reduced to 17-(8.13-6) = 14.87 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				
42	5210	-6.33	-5.73	0.19	-2.82	14.87	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 = gain of antenna element + 10 log (2 of TX antenna elements)
3. For U-NII-1, the directional gain is 8.13 dBi > 6dBi, so the power density limit shall be reduced to 17-(8.13-6) = 14.87 dBm/MHz.

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					
149	5745	-2.04	-2.13	0.93	0.43	3.58	27.82	Pass
157	5785	-2.11	-2.09	0.91	0.43	3.56	27.82	Pass
165	5825	-2.43	-2.35	0.62	0.43	3.27	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 = gain of antenna element + 10 log (2 of TX antenna elements)
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					
149	5745	-4.10	-3.46	-0.76	0.19	1.65	27.82	Pass
157	5785	-4.47	-4.20	-1.32	0.19	1.09	27.82	Pass
165	5825	-4.70	-4.20	-1.43	0.19	0.98	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 = gain of antenna element + 10 log (2 of TX antenna elements)
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					
151	5755	-6.00	-5.55	-2.76	0.17	-0.37	27.82	Pass
159	5795	-5.66	-5.06	-2.34	0.17	0.05	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 = gain of antenna element + 10 log (2 of TX antenna elements)
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.

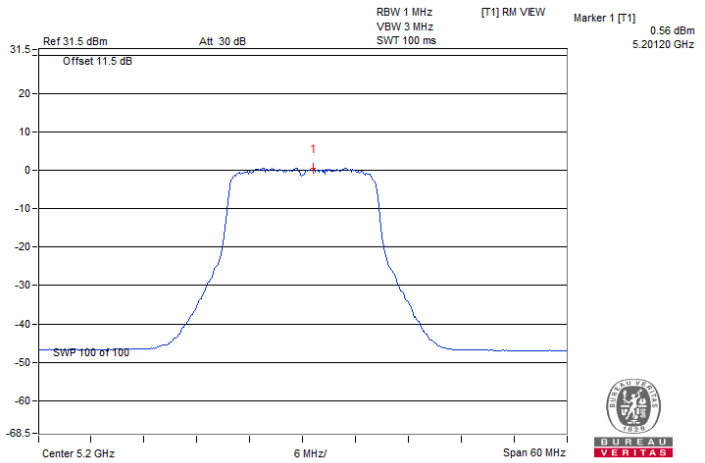
802.11ax (HE80)

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					
155	5775	-9.26	-8.62	-5.92	0.19	-3.51	27.82	Pass

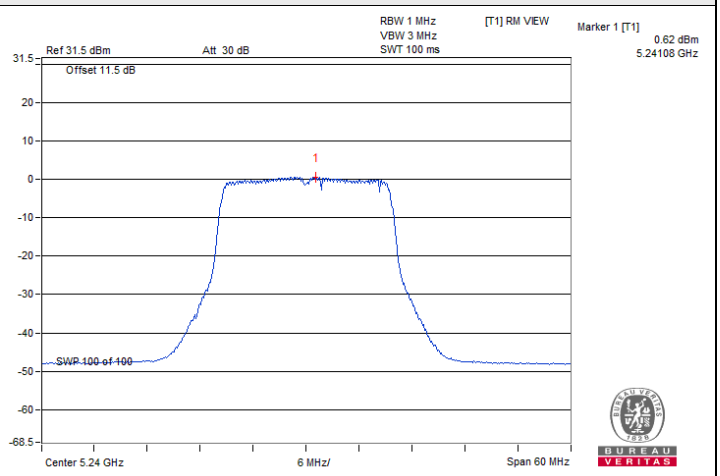
Notes:

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 = gain of antenna element + 10 log (2 of TX antenna elements)
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.

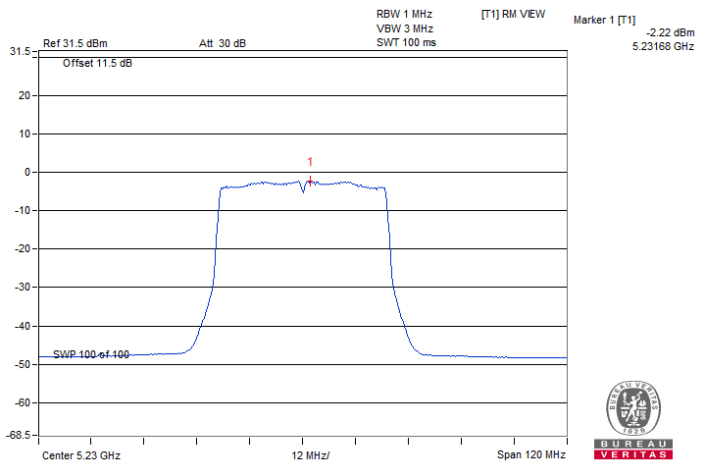
Spectrum Plot of Maximum Value



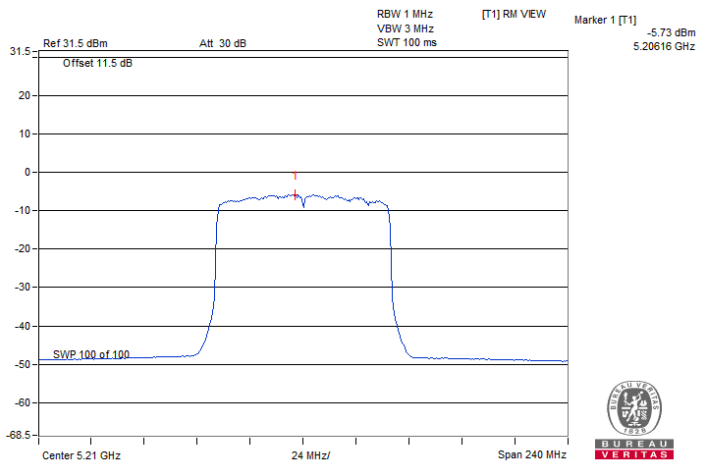
802.11a / Chain 1 : CH 40



802.11ax (HE20) / Chain 1 : CH 48

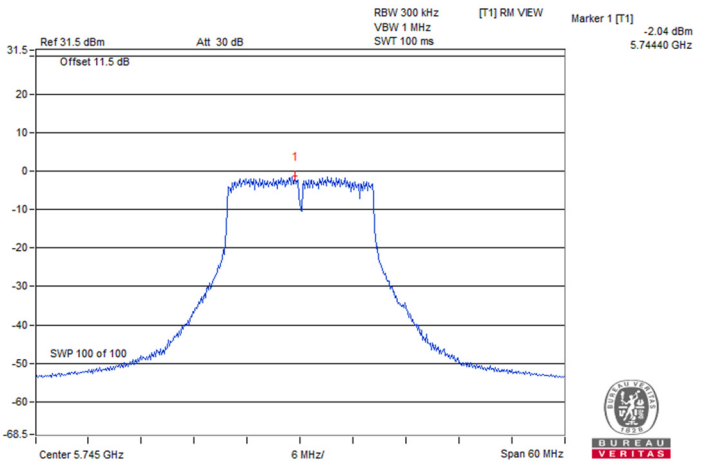


802.11ax (HE40) / Chain 1 : CH 46

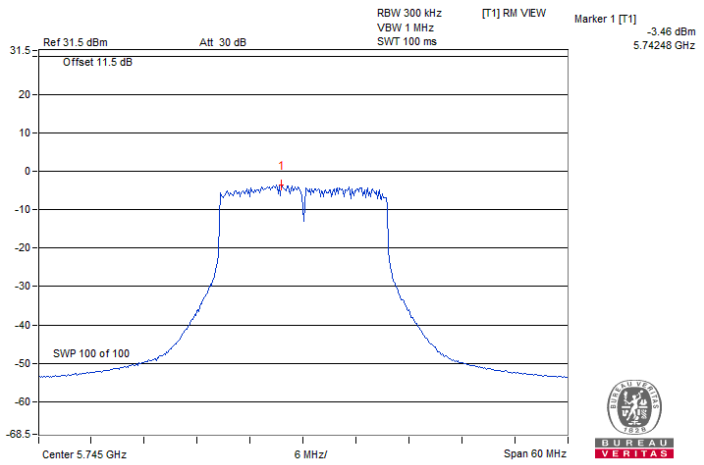


802.11ax (HE80) / Chain 1 : CH 42

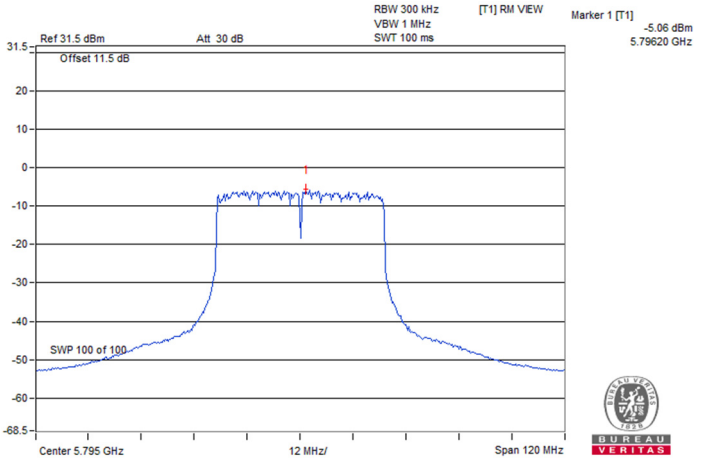
Spectrum Plot of Maximum Value



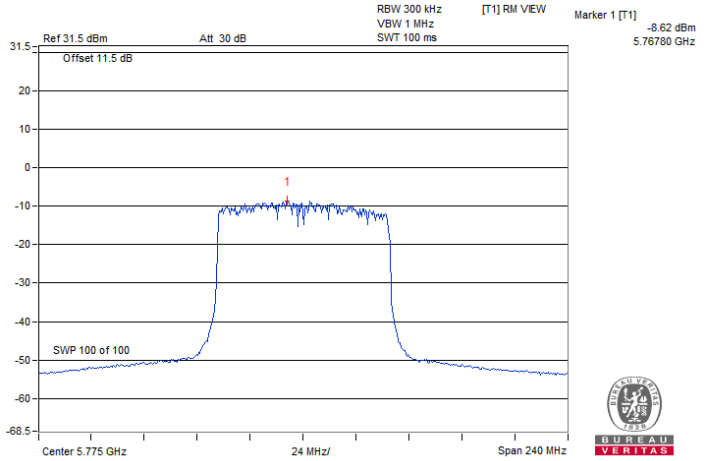
802.11a / Chain 0 : CH 149



802.11ax (HE20) / Chain 1 : CH 149



802.11ax (HE40) / Chain 1 : CH 159



802.11ax (HE80) / Chain 1 : CH 155

7.3 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		
149	5745	15.47	15.37	0.5	Pass
157	5785	15.47	15.35	0.5	Pass
165	5825	15.75	16.03	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
149	5745	17.48	17.78	0.5	Pass
157	5785	16.50	16.76	0.5	Pass
165	5825	17.62	17.44	0.5	Pass

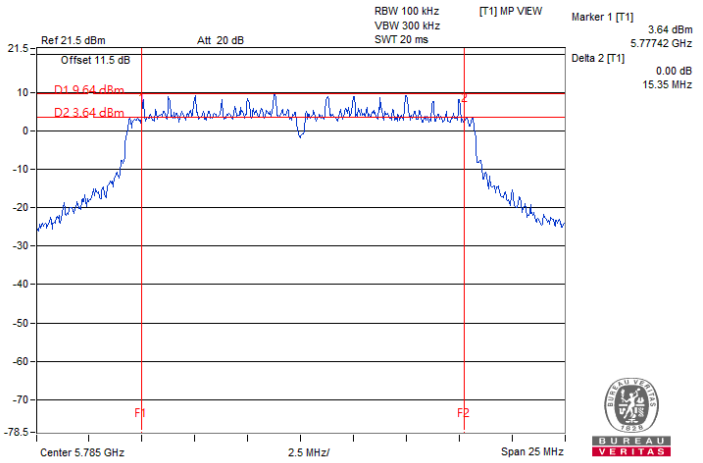
802.11ax (HE40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
151	5755	37.19	37.27	0.5	Pass
159	5795	36.50	36.56	0.5	Pass

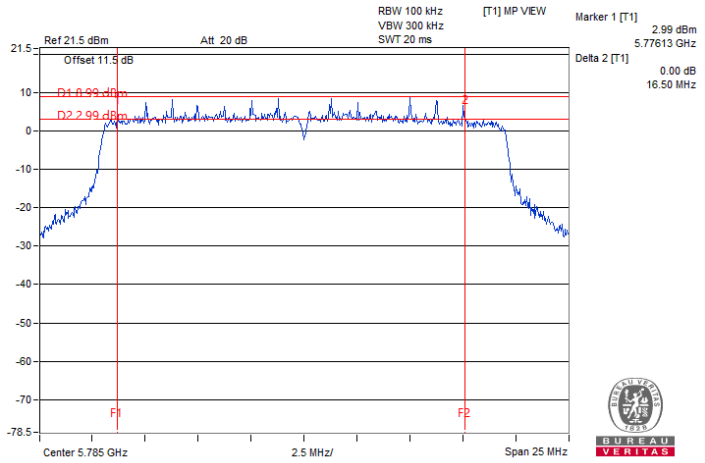
802.11ax (HE80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
155	5775	75.74	76.55	0.5	Pass

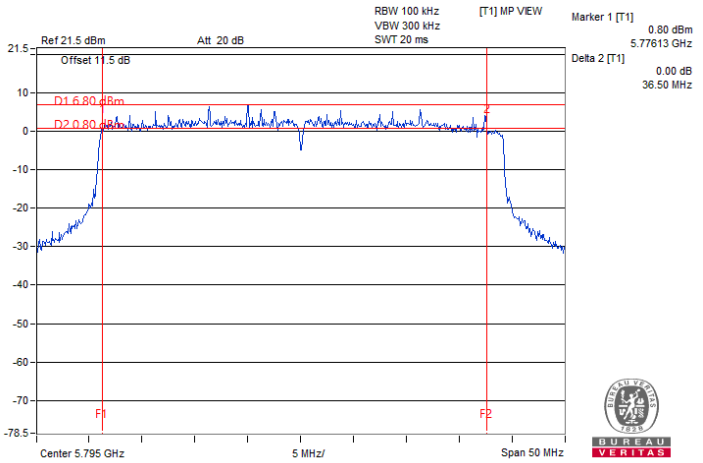
Spectrum Plot of Minimum Value



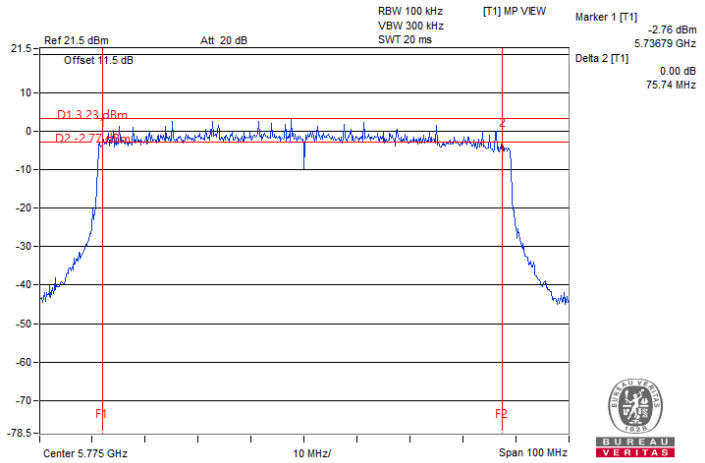
802.11a / Chain 1 : CH 157



802.11ax (HE20) / Chain 0 : CH 157



802.11ax (HE40) / Chain 0 : CH 159



802.11ax (HE80) / Chain 0 : CH 155

7.4 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
36	5180	16.44	16.56
40	5200	16.44	16.44
48	5240	16.44	16.44
149	5745	16.44	16.54
157	5785	16.64	16.54
165	5825	16.54	16.64

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	18.84	18.96
40	5200	18.84	18.96
48	5240	18.96	18.96
149	5745	18.94	18.94
157	5785	18.94	18.94
165	5825	19.04	18.94

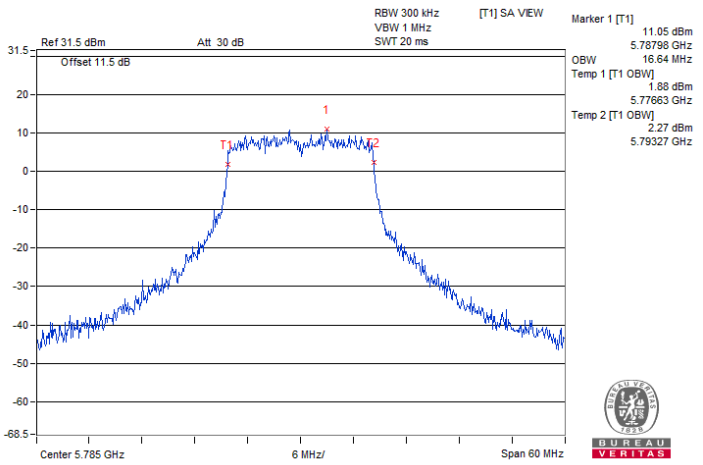
802.11ax (HE40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	38.16	38.16
46	5230	38.16	38.16
151	5755	38.08	38.27
159	5795	38.27	38.27

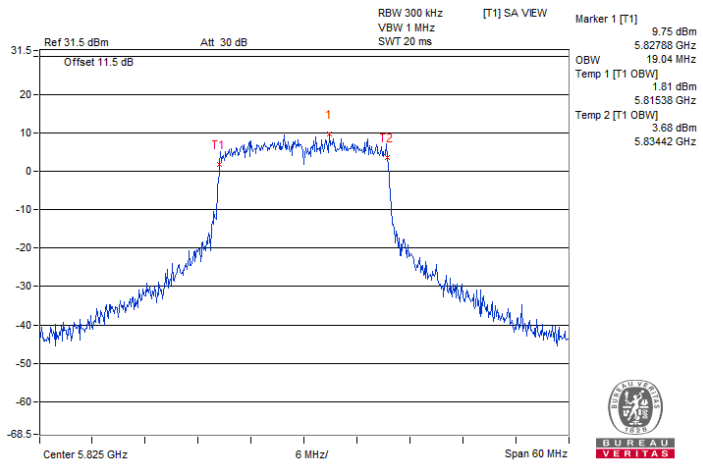
802.11ax (HE80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	77.28	77.28
155	5775	77.31	76.92

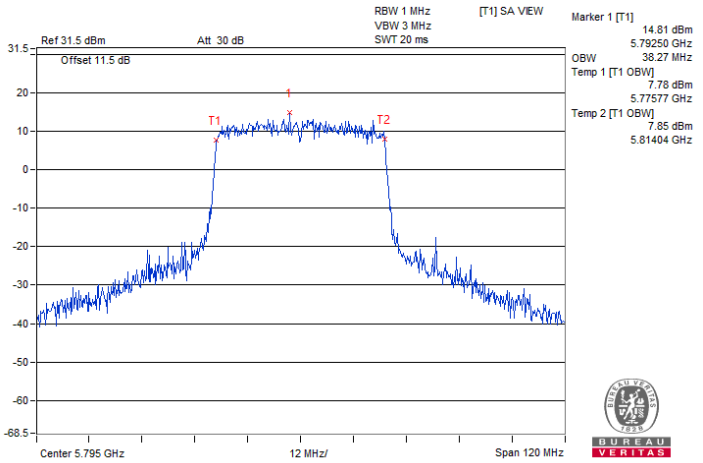
Spectrum Plot of Maximum Value



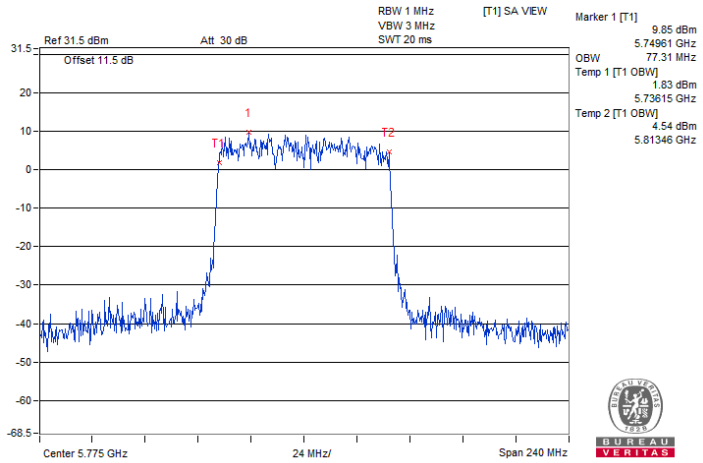
802.11a / Chain 0 : CH 157



802.11ax (HE20) / Chain 0 : CH 165



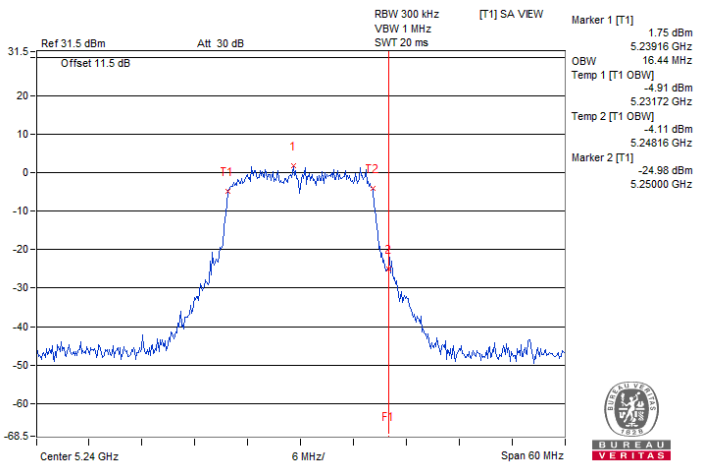
802.11ax (HE40) / Chain 0 : CH 159



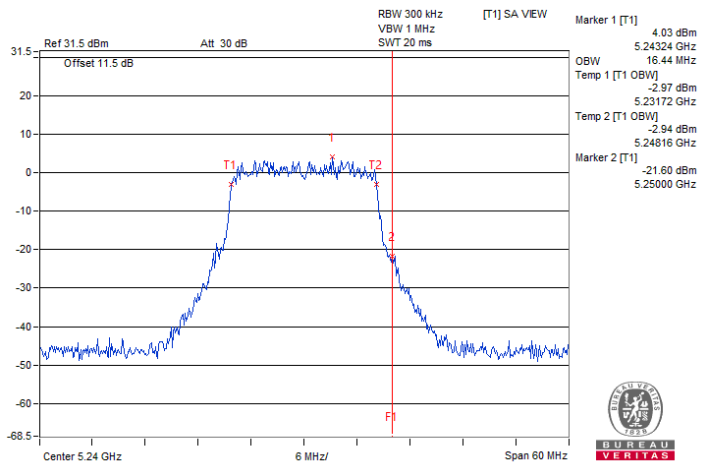
802.11ax (HE80) / Chain 0 : CH 155

Spectrum Plot for nearby DFS band

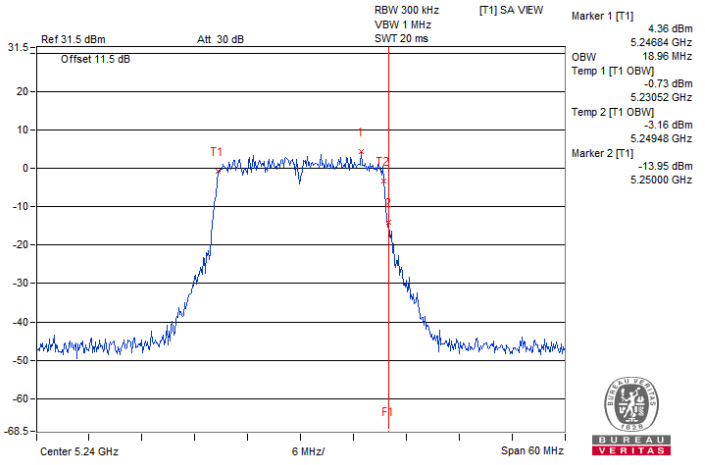
(DFS is required, if 99% OCP straddle into U-NII-2A)



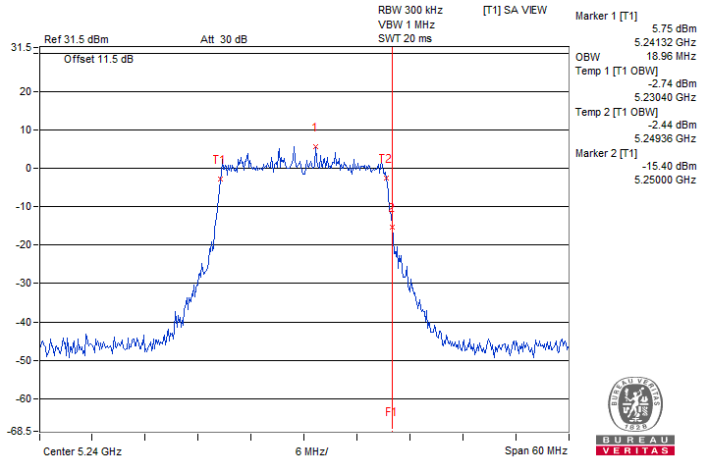
802.11a / Chain 0 : CH 48



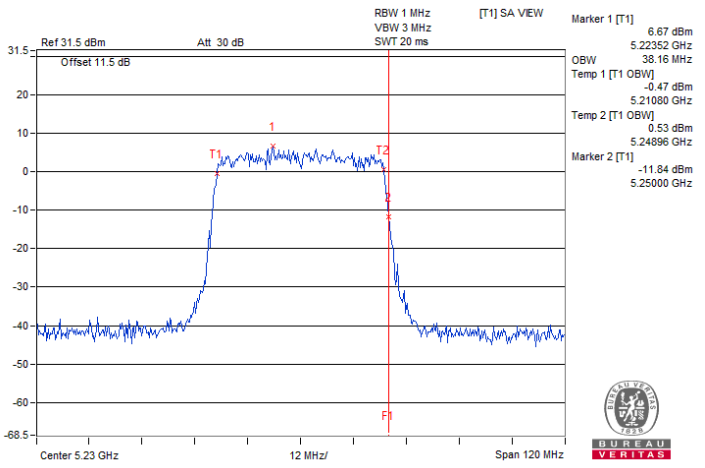
802.11a / Chain 1 : CH 48



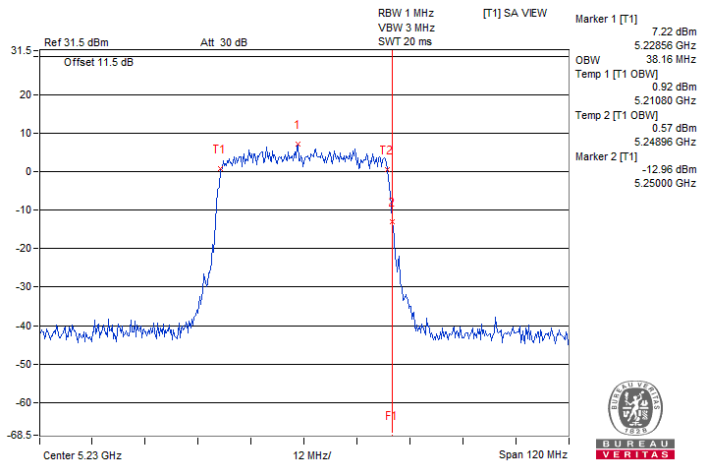
802.11ax (HE20) / Chain 0 : CH 48



802.11ax (HE20) / Chain 1 : CH 48



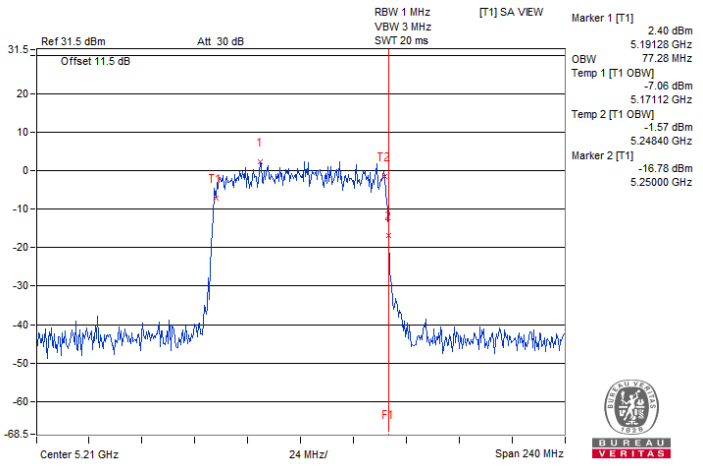
802.11ax (HE40) / Chain 0 : CH 46



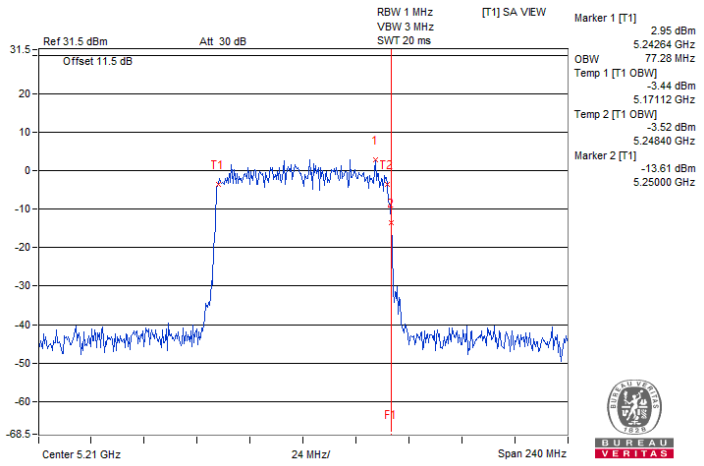
802.11ax (HE40) / Chain 1 : CH 46

Spectrum Plot for nearby DFS band

(DFS is required, if 99% OCP straddle into U-NII-2A)



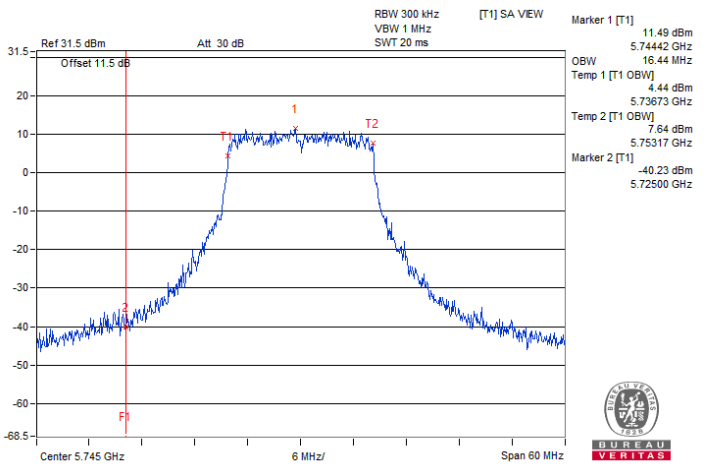
802.11ax (HE80) / Chain 0 : CH 42



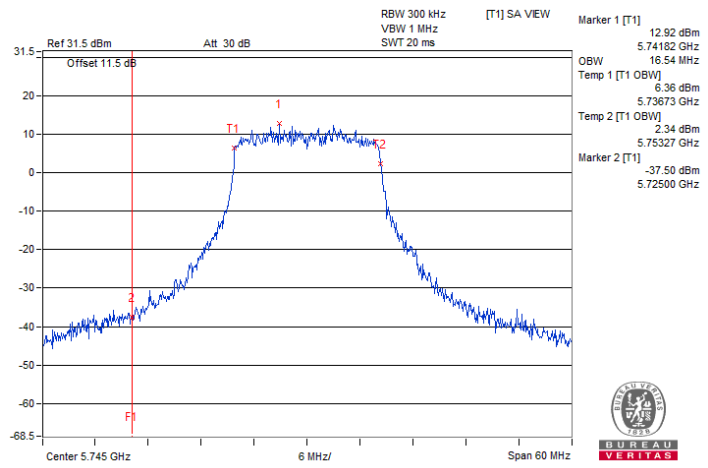
802.11ax (HE80) / Chain 1 : CH 42

Spectrum Plot for nearby DFS band

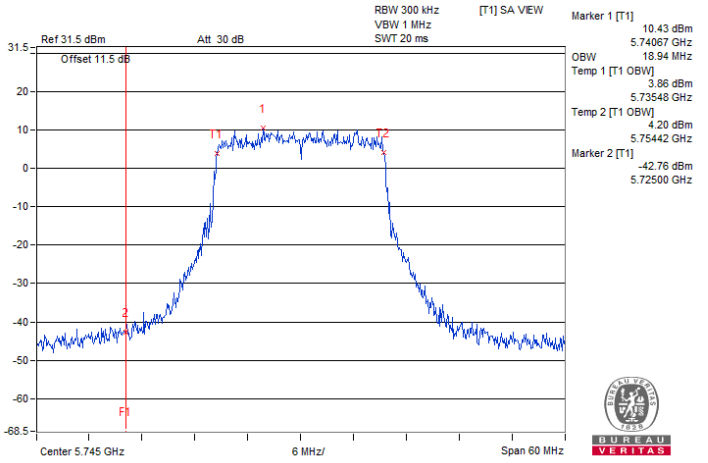
(DFS is required, if 99% OCP straddle into U-NII-2C)



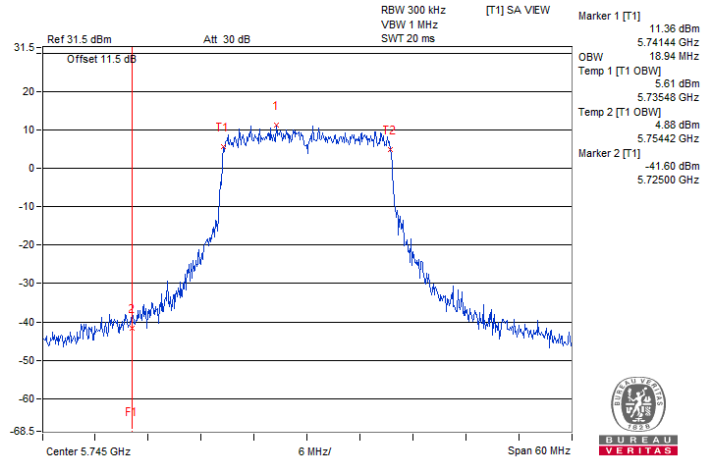
802.11a / Chain 0 : CH 149



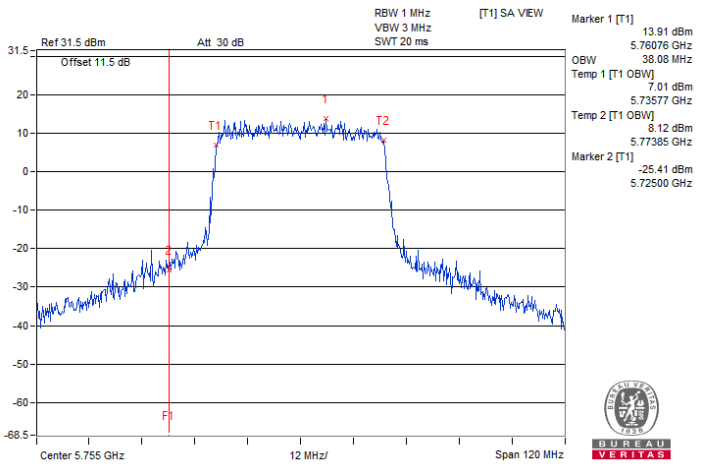
802.11a / Chain 1 : CH 149



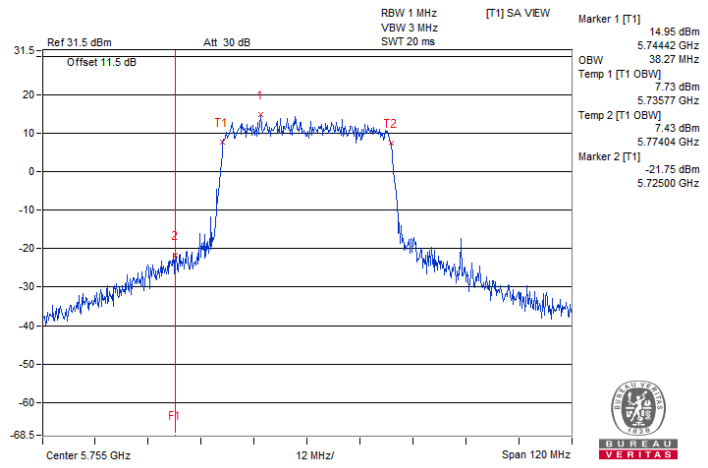
802.11ax (HE20) / Chain 0 : CH 149



802.11ax (HE20) / Chain 1 : CH 149



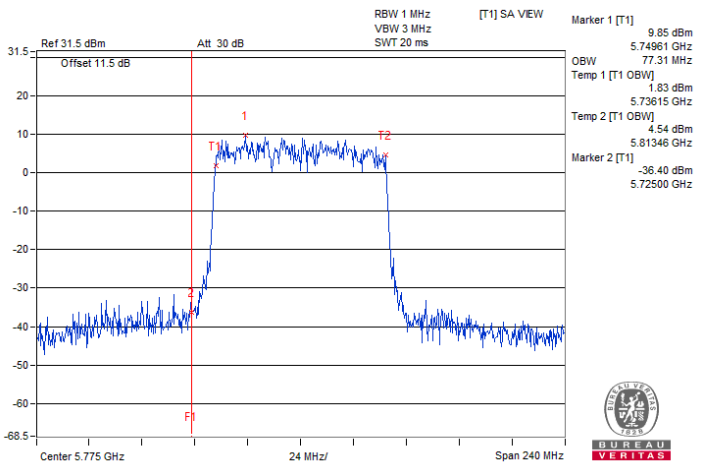
802.11ax (HE40) / Chain 0 : CH 151



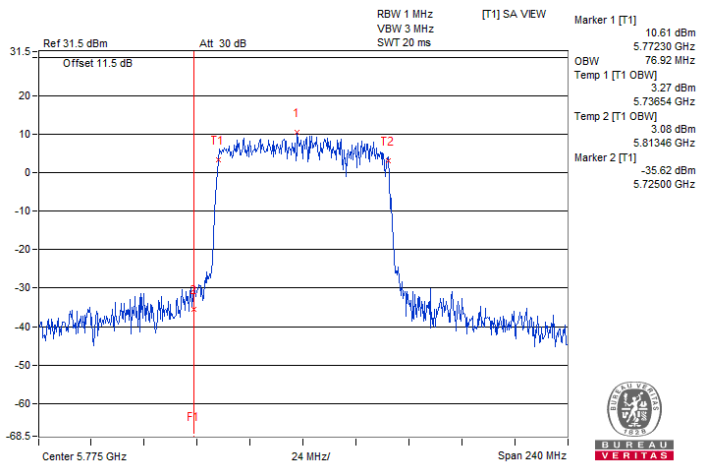
802.11ax (HE40) / Chain 1 : CH 151

Spectrum Plot for nearby DFS band

(DFS is required, if 99% OCP straddle into U-NII-2C)



802.11ax (HE80) / Chain 0 : CH 155



802.11ax (HE80) / Chain 1 : CH 155

7.5 Frequency Stability

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

802.11a

Frequency Stability Versus Temperature									
Operating Frequency: 5180 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	54.0	5180.0002	Pass	5179.9991	Pass	5180.0011	Pass	5180.0002	Pass
50	54.0	5179.9866	Pass	5179.9863	Pass	5179.9846	Pass	5179.9845	Pass
40	54.0	5180.019	Pass	5180.0165	Pass	5180.0187	Pass	5180.02	Pass
30	54.0	5179.9786	Pass	5179.9751	Pass	5179.9789	Pass	5179.9793	Pass
20	54.0	5179.9902	Pass	5179.99	Pass	5179.9946	Pass	5179.9912	Pass
10	54.0	5179.988	Pass	5179.985	Pass	5179.9874	Pass	5179.988	Pass
0	54.0	5180.008	Pass	5180.0083	Pass	5180.0046	Pass	5180.0067	Pass
-10	54.0	5180.0083	Pass	5180.0041	Pass	5180.0088	Pass	5180.0065	Pass
-20	54.0	5180.012	Pass	5180.014	Pass	5180.0159	Pass	5180.0153	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180 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	5179.9901	Pass	5179.991	Pass	5179.991	Pass	5179.9908	Pass
	54.0	5179.9902	Pass	5179.99	Pass	5179.9946	Pass	5179.9912	Pass
	45.9	5179.9869	Pass	5179.9862	Pass	5179.987	Pass	5179.99	Pass

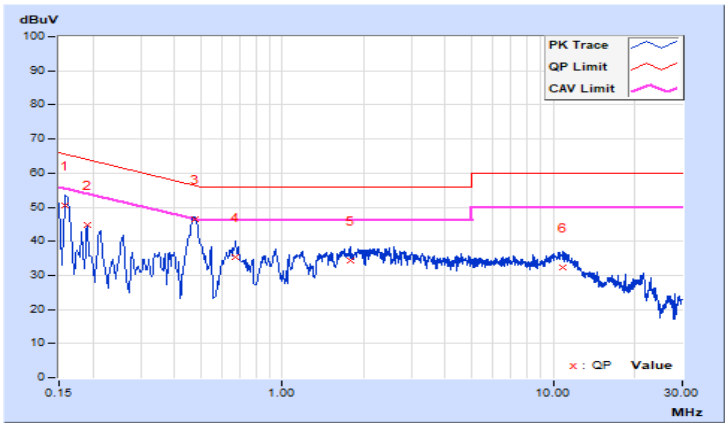
7.6 AC Power Conducted Emissions

RF Mode	802.11a	**Channel**	CH 149：5745 MHz
Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	54 Vdc	**Environmental Conditions**	25°C, 75% RH
Tested By	Edison Lee		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15800	9.62	40.84	26.76	50.46	36.38	65.57	55.57	-15.11	-19.19
2	0.19000	9.64	34.99	20.15	44.63	29.79	64.04	54.04	-19.41	-24.25
3	**0.47400**	**9.69**	**36.79**	**31.16**	**46.48**	**40.85**	**56.44**	**46.44**	**-9.96**	**-5.59**
4	0.66987	9.69	25.72	20.13	35.41	29.82	56.00	46.00	-20.59	-16.18
5	1.78600	9.72	24.48	19.94	34.20	29.66	56.00	46.00	-21.80	-16.34
6	10.79800	9.79	22.56	17.62	32.35	27.41	60.00	50.00	-27.65	-22.59

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

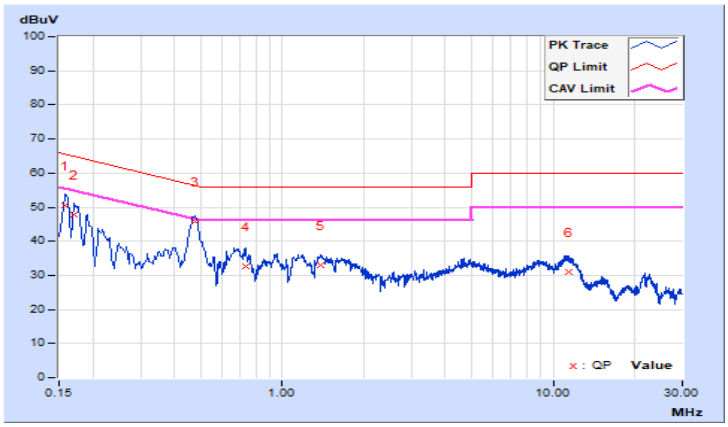


RF Mode	802.11a	**Channel**	CH 149：5745 MHz
Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	54 Vdc	**Environmental Conditions**	25°C, 75% RH
Tested By	Edison Lee		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15800	9.62	40.83	26.73	50.45	36.35	65.57	55.57	-15.12	-19.22
2	0.17000	9.62	38.29	23.06	47.91	32.68	64.96	54.96	-17.05	-22.28
3	0.47686	9.68	36.27	30.62	45.95	40.30	56.39	46.39	-10.44	-6.09
4	0.73400	9.69	22.95	17.19	32.64	26.88	56.00	46.00	-23.36	-19.12
5	1.38600	9.71	23.45	19.50	33.16	29.21	56.00	46.00	-22.84	-16.79
6	11.39400	9.81	21.29	16.27	31.10	26.08	60.00	50.00	-28.90	-23.92

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



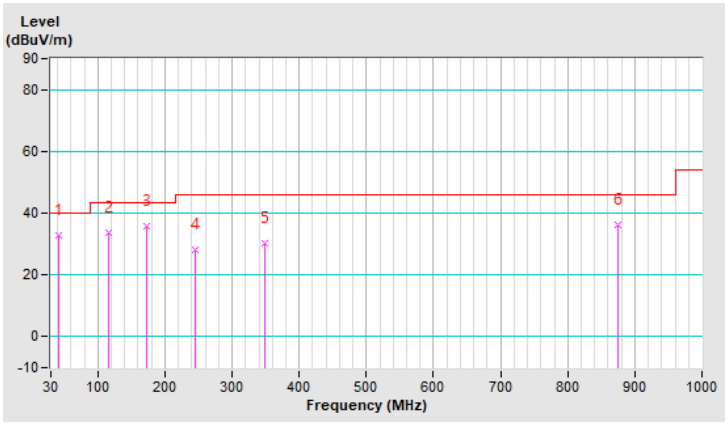
7.7 Unwanted Emissions below 1 GHz

RF Mode	802.11a	**Channel**	CH 149：5745 MHz
Frequency Range	9 kHz ~ 1 GHz	**Detector Function & Bandwidth**	(QP) RB = 120kHz
Input Power	54 Vdc	**Environmental Conditions**	21°C, 69% RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	41.64	32.7 QP	40.0	-7.3	1.25 H	165	46.1	-13.4
2	115.36	33.8 QP	43.5	-9.7	1.25 H	259	49.4	-15.6
3	172.59	35.7 QP	43.5	-7.8	1.00 H	188	49.4	-13.7
4	245.34	28.0 QP	46.0	-18.0	1.00 H	259	42.5	-14.5
5	349.13	30.1 QP	46.0	-15.9	1.50 H	290	41.7	-11.6
6	874.87	36.0 QP	46.0	-10.0	1.00 H	158	37.4	-1.4

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 emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

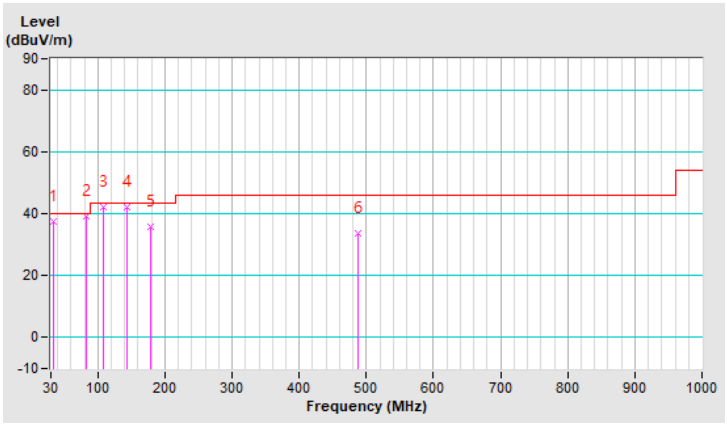


RF Mode	802.11a	Channel	CH 149：5745 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	54 Vdc	Environmental Conditions	21°C, 69% RH
Tested By	Greg Lin		

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	34.85	37.6 QP	40.0	-2.4	1.00 V	108	51.9	-14.3
2	**82.38**	**39.0 QP**	**40.0**	**-1.0**	**1.25 V**	**308**	**57.6**	**-18.6**
3	107.60	42.3 QP	43.5	-1.2	1.25 V	118	58.7	-16.4
4	142.52	42.0 QP	43.5	-1.5	1.25 V	146	55.3	-13.3
5	179.38	35.6 QP	43.5	-7.9	1.00 V	358	50.1	-14.5
6	486.87	33.8 QP	46.0	-12.2	1.50 V	86	41.8	-8.0

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 of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



7.8 Unwanted Emissions above 1 GHz

RF Mode	802.11a	**Channel**	CH 36：5180 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	**Environmental Conditions**	20.9°C, 74.8% 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	59.8 PK	74.0	-14.2	3.89 H	343	38.8	21.0
2	5150.00	47.8 AV	54.0	-6.2	3.89 H	343	26.8	21.0
3	*5180.00	103.6 PK			3.89 H	343	62.4	41.2
4	*5180.00	93.5 AV			3.89 H	343	52.3	41.2
5	#10360.00	62.8 PK	68.2	-5.4	3.72 H	311	38.4	24.4
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	5150.00	60.6 PK	74.0	-13.4	1.88 V	326	39.6	21.0
2	5150.00	48.0 AV	54.0	-6.0	1.88 V	326	27.0	21.0
3	*5180.00	112.4 PK			1.93 V	333	71.2	41.2
4	*5180.00	102.8 AV			1.93 V	333	61.6	41.2
5	#10360.00	63.0 PK	68.2	-5.2	2.14 V	288	38.6	24.4

Remarks:

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

RF Mode	802.11a	Channel	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	Environmental Conditions	20.9°C, 74.8% 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	*5200.00	103.5 PK			3.85 H	337	62.4	41.1
2	*5200.00	93.6 AV			3.85 H	337	52.5	41.1
3	#10400.00	63.2 PK	68.2	-5.0	3.75 H	312	38.6	24.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	112.3 PK			1.97 V	337	71.2	41.1
2	*5200.00	102.3 AV			1.97 V	337	61.2	41.1
3	#10400.00	63.4 PK	68.2	-4.8	2.05 V	296	38.8	24.6

Remarks:

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

RF Mode	802.11a	Channel	CH 48：5240 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	Environmental Conditions	20.9°C, 74.8% 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	*5240.00	103.6 PK			4.00 H	338	62.7	40.9
2	*5240.00	93.7 AV			4.00 H	338	52.8	40.9
3	5350.00	60.2 PK	74.0	-13.8	4.00 H	341	39.2	21.0
4	5350.00	47.2 AV	54.0	-6.8	4.00 H	341	26.2	21.0
5	#10480.00	63.2 PK	68.2	-5.0	3.73 H	306	38.3	24.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	112.0 PK			1.49 V	333	71.1	40.9
2	*5240.00	101.9 AV			1.49 V	333	61.0	40.9
3	5350.00	60.4 PK	74.0	-13.6	1.55 V	336	39.4	21.0
4	5350.00	47.4 AV	54.0	-6.6	1.55 V	336	26.4	21.0
5	#10480.00	63.5 PK	68.2	-4.7	1.88 V	304	38.6	24.9

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 36：5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	Environmental Conditions	20.9°C, 74.8% 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	59.5 PK	74.0	-14.5	3.87 H	343	38.5	21.0
2	5150.00	47.4 AV	54.0	-6.6	3.87 H	343	26.4	21.0
3	*5180.00	106.1 PK			3.89 H	339	64.9	41.2
4	*5180.00	93.2 AV			3.89 H	339	52.0	41.2
5	#10360.00	63.0 PK	68.2	-5.2	3.74 H	311	38.6	24.4
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	5150.00	60.0 PK	74.0	-14.0	1.94 V	328	39.0	21.0
2	5150.00	47.9 AV	54.0	-6.1	1.94 V	328	26.9	21.0
3	*5180.00	115.6 PK			1.89 V	325	74.4	41.2
4	*5180.00	102.6 AV			1.89 V	325	61.4	41.2
5	#10360.00	63.2 PK	68.2	-5.0	2.03 V	312	38.8	24.4

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	Environmental Conditions	20.9°C, 74.8% 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	*5200.00	104.1 PK			3.85 H	339	63.0	41.1
2	*5200.00	92.7 AV			3.85 H	339	51.6	41.1
3	#10400.00	63.1 PK	68.2	-5.1	3.69 H	315	38.5	24.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	115.3 PK			1.99 V	330	74.2	41.1
2	*5200.00	102.6 AV			1.99 V	330	61.5	41.1
3	#10400.00	63.6 PK	68.2	-4.6	2.10 V	289	39.0	24.6

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 48：5240 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	Environmental Conditions	20.9°C, 74.8% 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	*5240.00	105.7 PK			4.00 H	339	64.8	40.9
2	*5240.00	92.9 AV			4.00 H	339	52.0	40.9
3	5350.00	60.3 PK	74.0	-13.7	4.00 H	333	39.3	21.0
4	5350.00	47.2 AV	54.0	-6.8	4.00 H	333	26.2	21.0
5	#10480.00	63.3 PK	68.2	-4.9	3.76 H	317	38.4	24.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	115.2 PK			2.03 V	329	74.3	40.9
2	*5240.00	102.1 AV			2.03 V	329	61.2	40.9
3	5350.00	60.6 PK	74.0	-13.4	2.05 V	333	39.6	21.0
4	5350.00	47.3 AV	54.0	-6.7	2.05 V	333	26.3	21.0
5	#10480.00	63.6 PK	68.2	-4.6	2.02 V	305	38.7	24.9

Remarks:

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

RF Mode	802.11ax (HE40)	Channel	CH 38：5190 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	Environmental Conditions	20.9°C, 74.8% 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	60.2 PK	74.0	-13.8	3.87 H	343	39.2	21.0
2	5150.00	47.5 AV	54.0	-6.5	3.87 H	343	26.5	21.0
3	*5190.00	103.2 PK			3.85 H	341	62.1	41.1
4	*5190.00	90.2 AV			3.85 H	341	49.1	41.1
5	#10380.00	62.9 PK	68.2	-5.3	3.75 H	309	38.4	24.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.5 PK	74.0	-13.5	2.11 V	332	39.5	21.0
2	5150.00	48.4 AV	54.0	-5.6	2.11 V	332	27.4	21.0
3	*5190.00	113.4 PK			2.05 V	326	72.3	41.1
4	*5190.00	100.4 AV			2.05 V	326	59.3	41.1
5	#10380.00	63.1 PK	68.2	-5.1	2.18 V	299	38.6	24.5

Remarks:

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

RF Mode	802.11ax (HE40)	Channel	CH 46：5230 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	Environmental Conditions	20.9°C, 74.8% 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	*5230.00	104.6 PK			4.00 H	340	63.7	40.9
2	*5230.00	91.2 AV			4.00 H	340	50.3	40.9
3	5350.00	59.6 PK	74.0	-14.4	4.00 H	336	38.6	21.0
4	5350.00	47.3 AV	54.0	-6.7	4.00 H	336	26.3	21.0
5	#10460.00	63.1 PK	68.2	-5.1	3.72 H	322	38.2	24.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5230.00	113.6 PK			2.04 V	326	72.7	40.9
2	*5230.00	100.3 AV			2.04 V	326	59.4	40.9
3	5350.00	59.8 PK	74.0	-14.2	2.09 V	328	38.8	21.0
4	5350.00	47.5 AV	54.0	-6.5	2.09 V	328	26.5	21.0
5	#10460.00	63.4 PK	68.2	-4.8	2.13 V	295	38.5	24.9

Remarks:

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

RF Mode	802.11ax (HE80)	Channel	CH 42：5210 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	Environmental Conditions	20.9°C, 74.8% 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	59.9 PK	74.0	-14.1	3.96 H	344	38.9	21.0
2	5150.00	47.7 AV	54.0	-6.3	3.96 H	344	26.7	21.0
3	*5210.00	99.2 PK			4.00 H	339	58.2	41.0
4	*5210.00	87.7 AV			4.00 H	339	46.7	41.0
5	#10420.00	62.9 PK	68.2	-5.3	3.77 H	316	38.3	24.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.6 PK	74.0	-13.4	2.08 V	330	39.6	21.0
2	5150.00	48.3 AV	54.0	-5.7	2.08 V	330	27.3	21.0
3	*5210.00	110.1 PK			2.04 V	327	69.1	41.0
4	*5210.00	96.8 AV			2.04 V	327	55.8	41.0
5	#10420.00	63.1 PK	68.2	-5.1	2.16 V	294	38.5	24.6

Remarks:

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

RF Mode	802.11a	Channel	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	Environmental Conditions	20.9°C, 74.8% 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	#5646.40	60.5 PK	68.2	-7.7	3.02 H	346	38.6	21.9
2	*5745.00	111.4 PK			3.06 H	342	69.4	42.0
3	*5745.00	101.2 AV			3.06 H	342	59.2	42.0
4	#5948.00	61.7 PK	68.2	-6.5	3.02 H	346	39.2	22.5
5	11490.00	66.4 PK	74.0	-7.6	3.68 H	320	39.2	27.2
6	11490.00	47.8 AV	54.0	-6.2	3.68 H	320	20.6	27.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5604.40	61.1 PK	68.2	-7.1	2.00 V	68	39.4	21.7
2	*5745.00	122.4 PK			1.94 V	47	80.4	42.0
3	*5745.00	112.1 AV			1.94 V	47	70.1	42.0
4	#5948.00	61.6 PK	68.2	-6.6	2.00 V	68	39.1	22.5
5	11490.00	65.7 PK	74.0	-8.3	2.11 V	69	38.5	27.2
6	11490.00	48.1 AV	54.0	-5.9	2.11 V	69	20.9	27.2

Remarks:

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

RF Mode	802.11a	Channel	CH 157：5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	Environmental Conditions	20.9°C, 74.8% 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	#5607.60	61.1 PK	68.2	-7.1	3.13 H	344	39.4	21.7
2	*5785.00	111.0 PK			3.13 H	344	68.8	42.2
3	*5785.00	101.0 AV			3.13 H	344	58.8	42.2
4	#5998.00	61.5 PK	68.2	-6.7	3.13 H	344	38.9	22.6
5	11570.00	65.3 PK	74.0	-8.7	3.63 H	321	38.1	27.2
6	11570.00	48.0 AV	54.0	-6.0	3.63 H	321	20.8	27.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5608.80	60.6 PK	68.2	-7.6	2.03 V	46	38.9	21.7
2	*5785.00	122.8 PK			1.96 V	50	80.6	42.2
3	*5785.00	112.7 AV			1.96 V	50	70.5	42.2
4	#5961.60	61.3 PK	68.2	-6.9	2.03 V	46	38.7	22.6
5	11570.00	65.8 PK	74.0	-8.2	2.10 V	74	38.6	27.2
6	11570.00	48.4 AV	54.0	-5.6	2.10 V	74	21.2	27.2

Remarks:

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

RF Mode	802.11a	Channel	CH 165：5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	Environmental Conditions	20.9°C, 74.8% 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	#5613.60	61.1 PK	68.2	-7.1	3.10 H	343	39.4	21.7
2	*5825.00	111.4 PK			3.10 H	343	69.0	42.4
3	*5825.00	101.5 AV			3.10 H	343	59.1	42.4
4	#5942.40	61.3 PK	68.2	-6.9	3.10 H	343	38.8	22.5
5	11650.00	64.4 PK	74.0	-9.6	3.57 H	325	37.9	26.5
6	11650.00	48.1 AV	54.0	-5.9	3.57 H	325	21.6	26.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5628.80	61.2 PK	68.2	-7.0	2.02 V	58	39.4	21.8
2	*5825.00	122.1 PK			2.02 V	52	79.7	42.4
3	*5825.00	112.0 AV			2.02 V	52	69.6	42.4
4	#5926.80	61.7 PK	68.2	-6.5	2.02 V	58	39.2	22.5
5	11650.00	64.9 PK	74.0	-9.1	2.15 V	77	38.4	26.5
6	11650.00	48.5 AV	54.0	-5.5	2.15 V	77	22.0	26.5

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	Environmental Conditions	20.9°C, 74.8% 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	#5630.40	60.5 PK	68.2	-7.7	3.06 H	340	38.7	21.8
2	*5745.00	114.1 PK			3.06 H	340	72.1	42.0
3	*5745.00	100.4 AV			3.06 H	340	58.4	42.0
4	#5996.80	61.3 PK	68.2	-6.9	3.06 H	340	38.7	22.6
5	11490.00	65.5 PK	74.0	-8.5	3.59 H	330	38.3	27.2
6	11490.00	47.8 AV	54.0	-6.2	3.59 H	330	20.6	27.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5638.80	61.1 PK	68.2	-7.1	1.96 V	55	39.3	21.8
2	*5745.00	123.9 PK			1.92 V	54	81.9	42.0
3	*5745.00	111.2 AV			1.92 V	54	69.2	42.0
4	#5964.40	61.8 PK	68.2	-6.4	1.96 V	55	39.2	22.6
5	11490.00	65.8 PK	74.0	-8.2	2.08 V	72	38.6	27.2
6	11490.00	48.2 AV	54.0	-5.8	2.08 V	72	21.0	27.2

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 157：5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	Environmental Conditions	20.9°C, 74.8% 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	#5646.80	61.0 PK	68.2	-7.2	3.03 H	341	39.1	21.9
2	*5785.00	113.3 PK			3.03 H	341	71.1	42.2
3	*5785.00	100.4 AV			3.03 H	341	58.2	42.2
4	#5952.40	61.6 PK	68.2	-6.6	3.03 H	341	39.1	22.5
5	11570.00	65.3 PK	74.0	-8.7	3.69 H	325	38.1	27.2
6	11570.00	47.8 AV	54.0	-6.2	3.69 H	325	20.6	27.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5646.80	61.9 PK	68.2	-6.3	1.95 V	57	40.0	21.9
2	*5785.00	123.3 PK			1.93 V	53	81.1	42.2
3	*5785.00	111.3 AV			1.93 V	53	69.1	42.2
4	#5992.40	61.4 PK	68.2	-6.8	1.95 V	57	38.8	22.6
5	11570.00	65.8 PK	74.0	-8.2	1.99 V	76	38.6	27.2
6	11570.00	48.2 AV	54.0	-5.8	1.99 V	76	21.0	27.2

Remarks:

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

RF Mode	802.11ax (HE20)	Channel	CH 165：5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	Environmental Conditions	20.9°C, 74.8% 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	#5615.60	60.4 PK	68.2	-7.8	3.11 H	346	38.6	21.8
2	*5825.00	112.5 PK			3.11 H	346	70.1	42.4
3	*5825.00	100.3 AV			3.11 H	346	57.9	42.4
4	#5981.20	61.0 PK	68.2	-7.2	3.11 H	346	38.4	22.6
5	11650.00	64.5 PK	74.0	-9.5	3.49 H	329	38.0	26.5
6	11650.00	48.0 AV	54.0	-6.0	3.49 H	329	21.5	26.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5638.80	61.9 PK	68.2	-6.3	1.98 V	67	40.1	21.8
2	*5825.00	124.1 PK			1.95 V	50	81.7	42.4
3	*5825.00	111.6 AV			1.95 V	50	69.2	42.4
4	#5927.60	62.1 PK	68.2	-6.1	1.98 V	67	39.6	22.5
5	11650.00	65.0 PK	74.0	-9.0	2.04 V	70	38.5	26.5
6	11650.00	48.6 AV	54.0	-5.4	2.04 V	70	22.1	26.5

Remarks:

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

RF Mode	802.11ax (HE40)	Channel	CH 151：5755 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	Environmental Conditions	20.9°C, 74.8% 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	#5646.80	60.6 PK	68.2	-7.6	2.95 H	339	38.7	21.9
2	*5755.00	110.6 PK			2.95 H	339	68.5	42.1
3	*5755.00	97.6 AV			2.95 H	339	55.5	42.1
4	#5948.40	61.6 PK	68.2	-6.6	2.95 H	339	39.1	22.5
5	11510.00	65.2 PK	74.0	-8.8	3.72 H	325	37.9	27.3
6	11510.00	47.9 AV	54.0	-6.1	3.72 H	325	20.6	27.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5619.60	61.9 PK	68.2	-6.3	2.11 V	52	40.1	21.8
2	*5755.00	122.1 PK			2.08 V	48	80.0	42.1
3	*5755.00	108.9 AV			2.08 V	48	66.8	42.1
4	#5963.20	62.0 PK	68.2	-6.2	2.11 V	52	39.4	22.6
5	11510.00	65.7 PK	74.0	-8.3	2.06 V	65	38.4	27.3
6	11510.00	48.3 AV	54.0	-5.7	2.06 V	65	21.0	27.3

Remarks:

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

RF Mode	802.11ax (HE40)	Channel	CH 159：5795 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	Environmental Conditions	20.9°C, 74.8% 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	#5628.00	60.8 PK	68.2	-7.4	3.06 H	339	39.0	21.8
2	*5795.00	110.5 PK			3.06 H	339	68.3	42.2
3	*5795.00	97.8 AV			3.06 H	339	55.6	42.2
4	#5952.80	61.2 PK	68.2	-7.0	3.06 H	339	38.7	22.5
5	11590.00	65.3 PK	74.0	-8.7	3.72 H	333	38.2	27.1
6	11590.00	48.3 AV	54.0	-5.7	3.72 H	333	21.2	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	#5645.20	61.1 PK	68.2	-7.1	1.99 V	56	39.2	21.9
2	*5795.00	122.1 PK			1.95 V	50	79.9	42.2
3	*5795.00	108.8 AV			1.95 V	50	66.6	42.2
4	#5942.00	63.0 PK	68.2	-5.2	1.99 V	56	40.5	22.5
5	11590.00	65.9 PK	74.0	-8.1	2.16 V	76	38.8	27.1
6	11590.00	48.9 AV	54.0	-5.1	2.16 V	76	21.8	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.

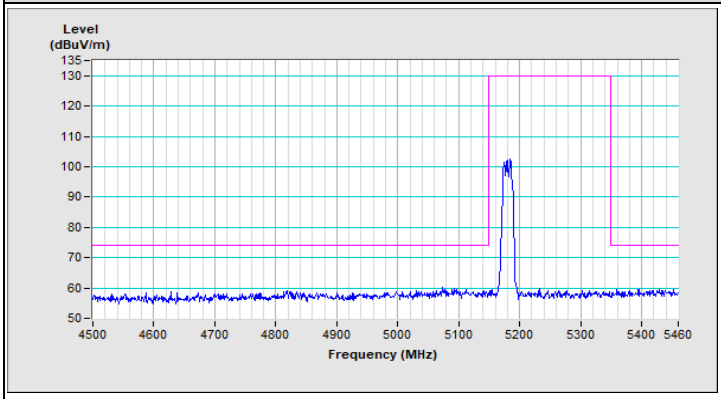
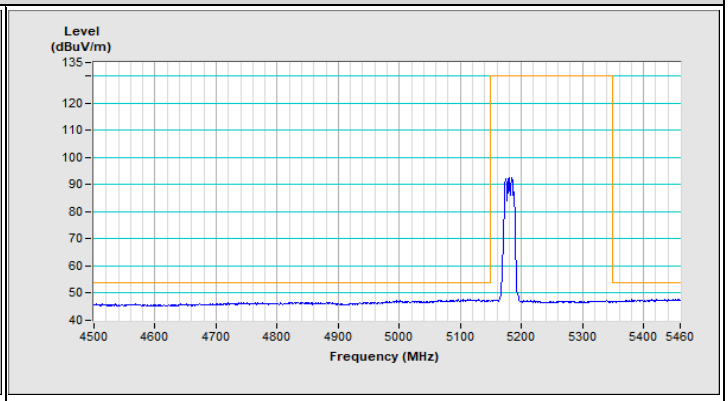
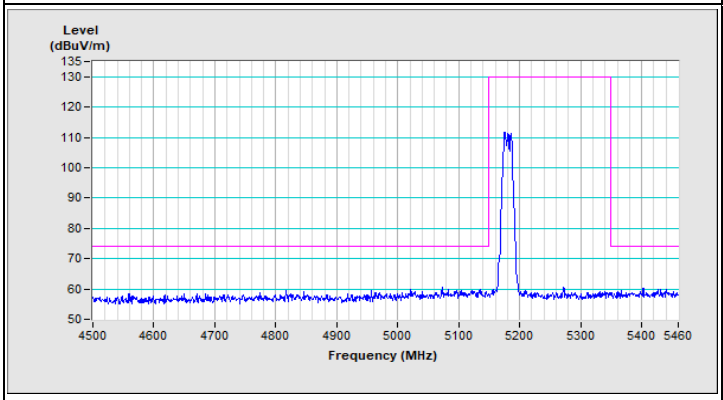
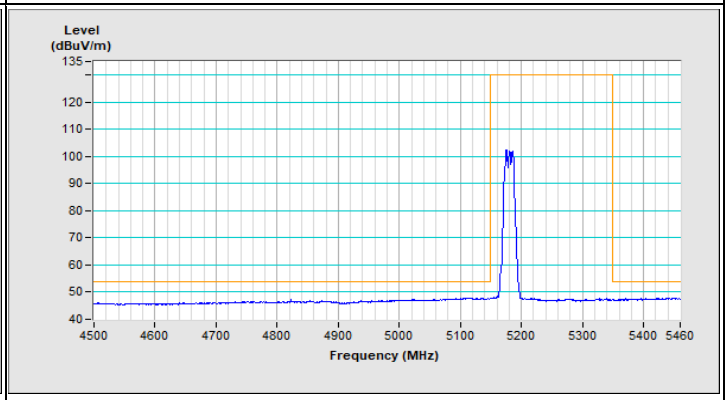
RF Mode	802.11ax (HE80)	Channel	CH 155：5775 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	54 Vdc	Environmental Conditions	20.9°C, 74.8% RH
Tested By	Rex Wang		

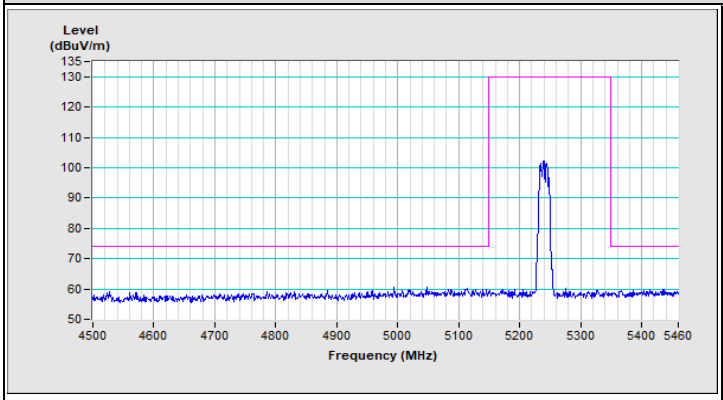
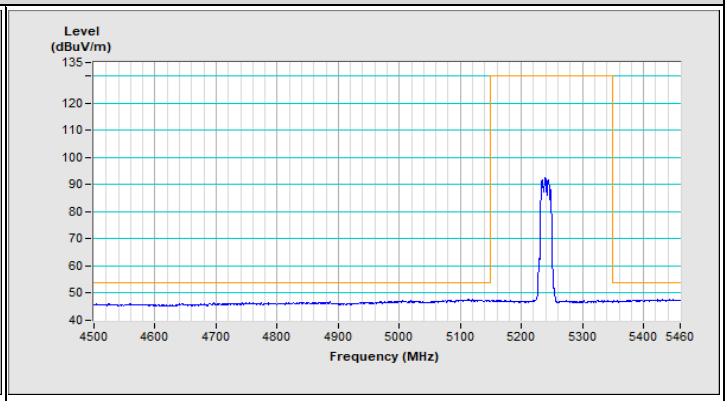
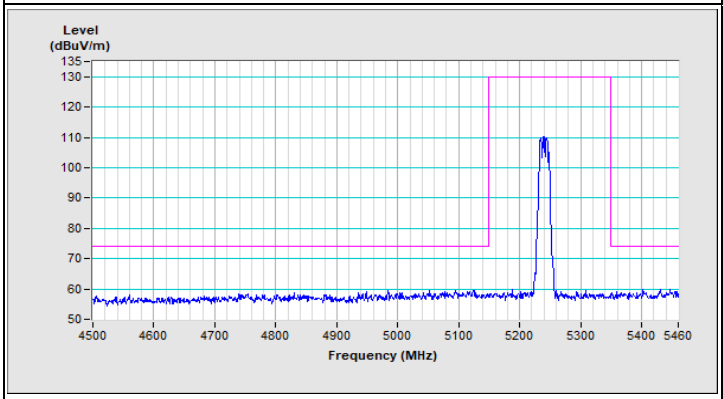
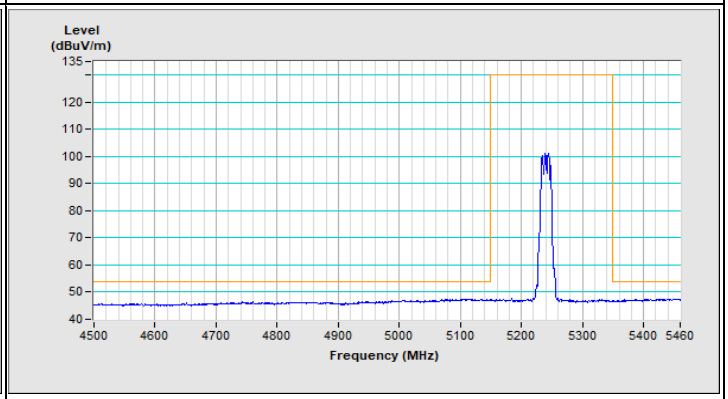
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5629.60	61.1 PK	68.2	-7.1	3.04 H	341	39.3	21.8
2	*5775.00	106.6 PK			3.04 H	341	64.5	42.1
3	*5775.00	94.1 AV			3.04 H	341	52.0	42.1
4	#5990.40	62.0 PK	68.2	-6.2	3.04 H	341	39.4	22.6
5	11550.00	65.4 PK	74.0	-8.6	3.55 H	320	38.1	27.3
6	11550.00	48.2 AV	54.0	-5.8	3.55 H	320	20.9	27.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	**#5641.60**	**67.2 PK**	**68.2**	**-1.0**	**1.93 V**	**52**	**45.4**	**21.8**
2	*5775.00	118.9 PK			1.98 V	51	76.8	42.1
3	*5775.00	105.2 AV			1.98 V	51	63.1	42.1
4	#5928.00	62.9 PK	68.2	-5.3	1.93 V	52	40.4	22.5
5	11550.00	65.9 PK	74.0	-8.1	2.07 V	72	38.6	27.3
6	11550.00	48.6 AV	54.0	-5.4	2.07 V	72	21.3	27.3

Remarks:

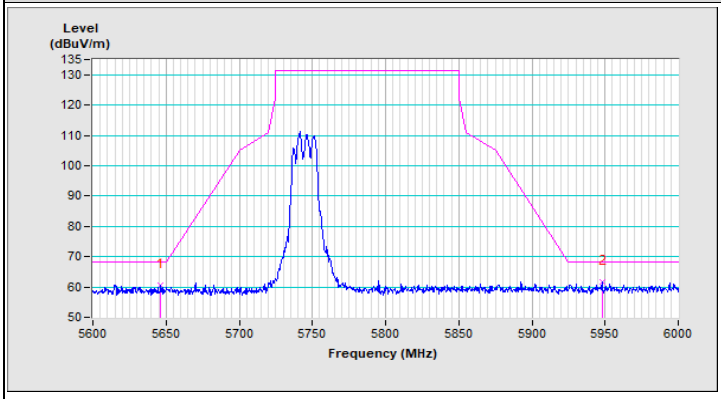
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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

Plot of Band Edge

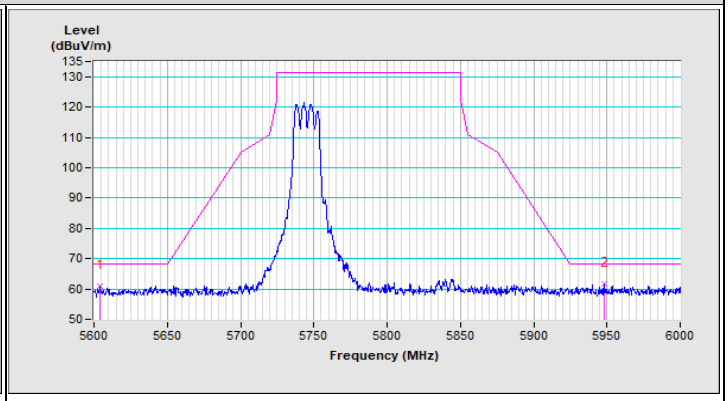
802.11a Channel 36	
	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)

802.11a Channel 48	
	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)

802.11a Channel 149

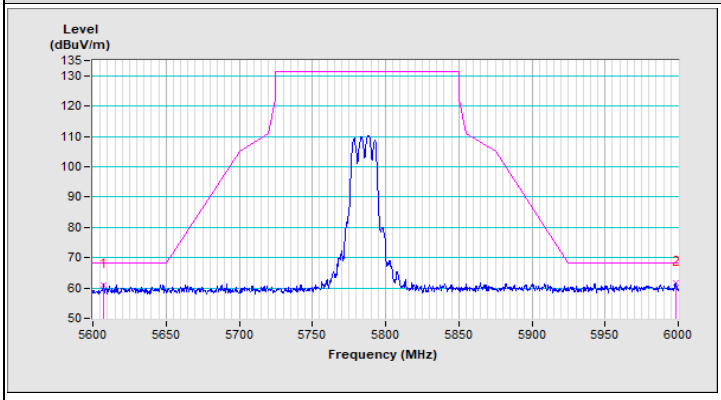


Horizontal (Peak)

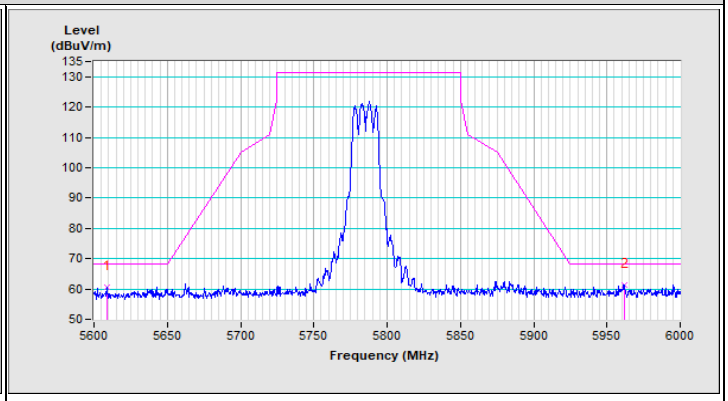


Vertical (Peak)

802.11a Channel 157

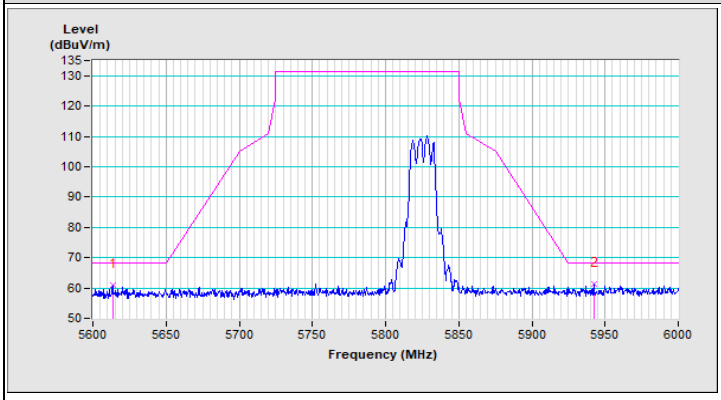


Horizontal (Peak)

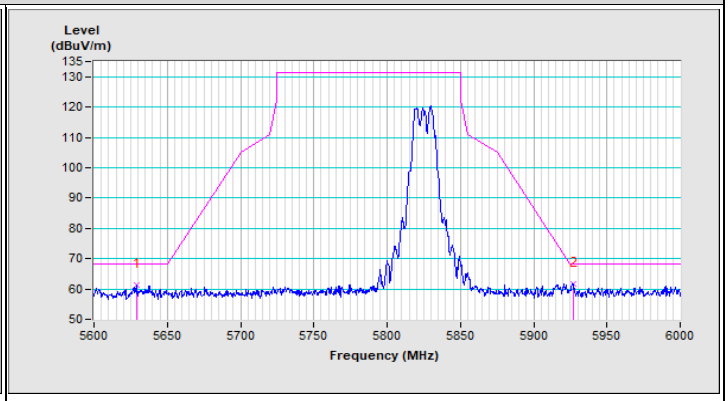


Vertical (Peak)

802.11a Channel 165

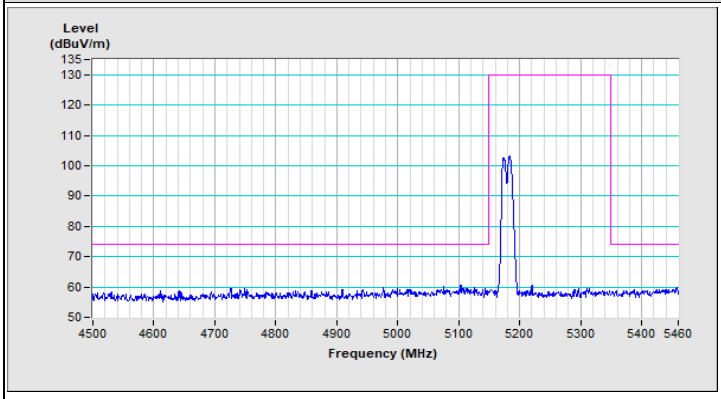


Horizontal (Peak)

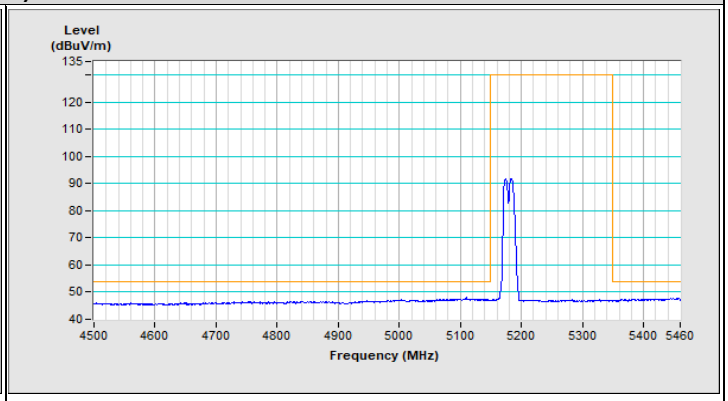


Vertical (Peak)

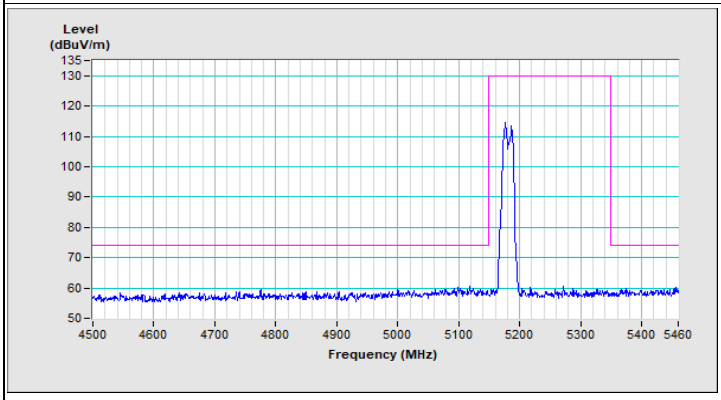
802.11ax (HE20) Channel 36



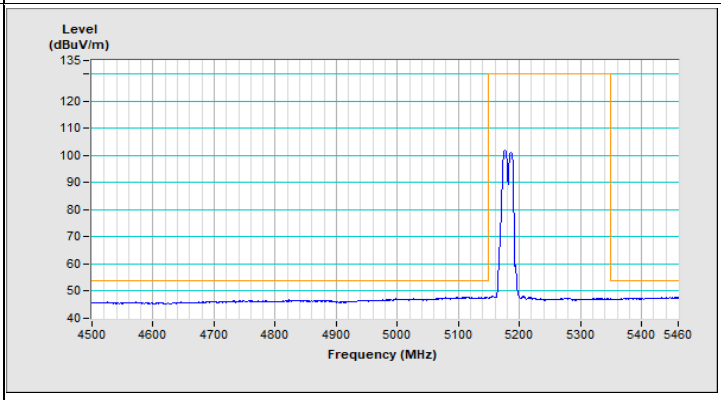
Horizontal (Peak)



Horizontal (Average)

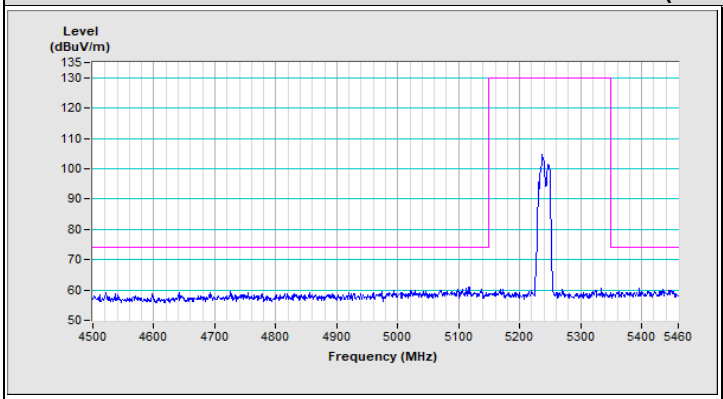


Vertical (Peak)

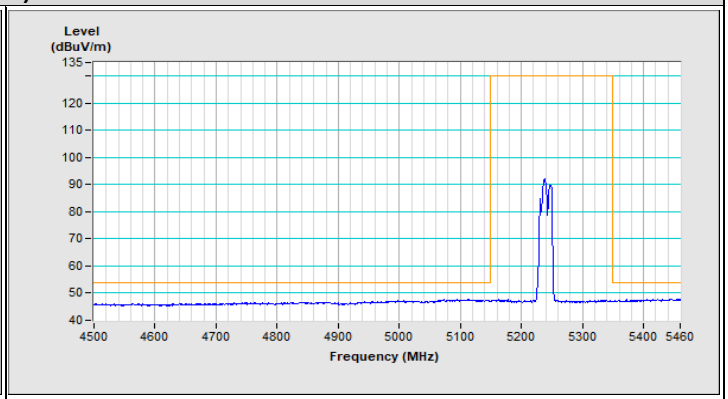


Vertical (Average)

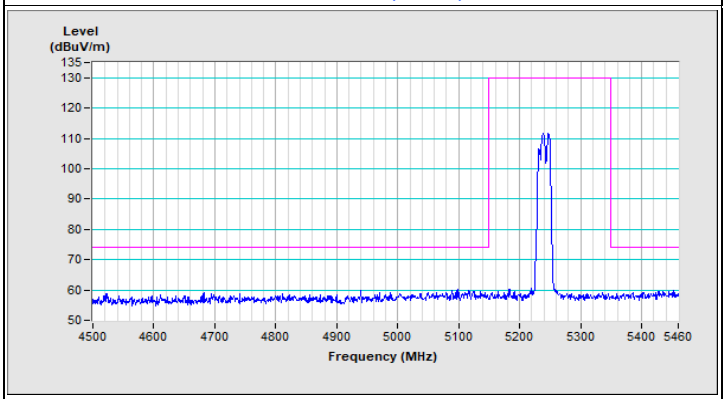
802.11ax (HE20) Channel 48



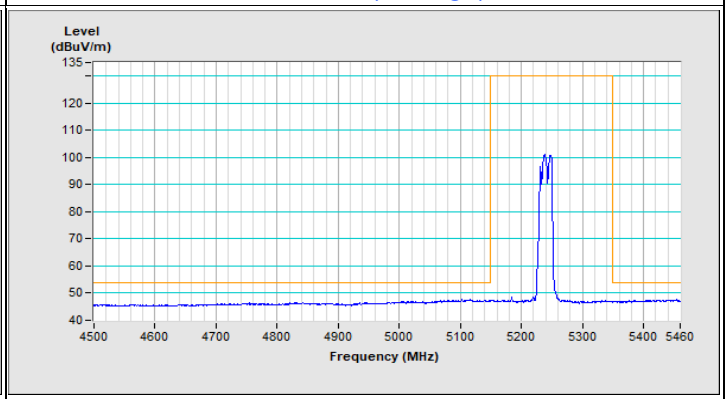
Horizontal (Peak)



Horizontal (Average)

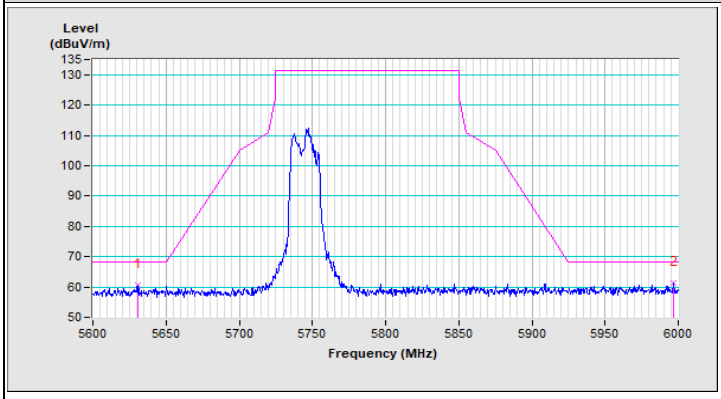


Vertical (Peak)

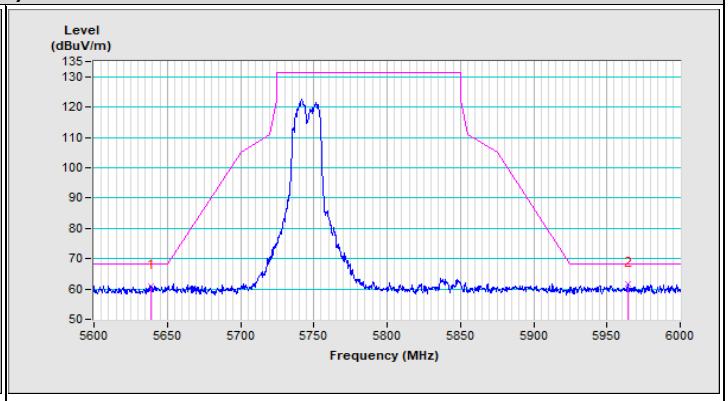


Vertical (Average)

802.11ax (HE20) Channel 149

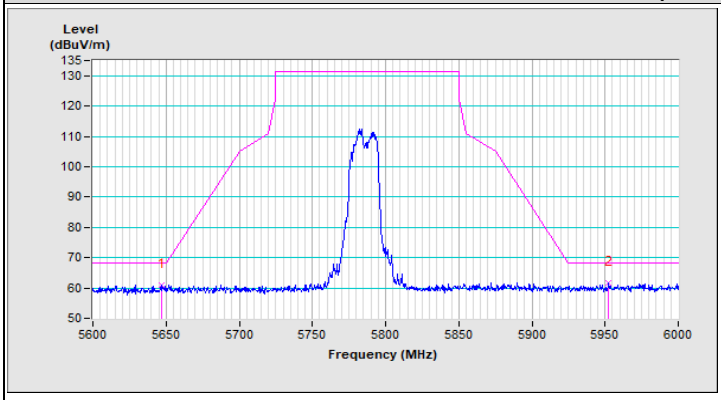


Horizontal (Peak)

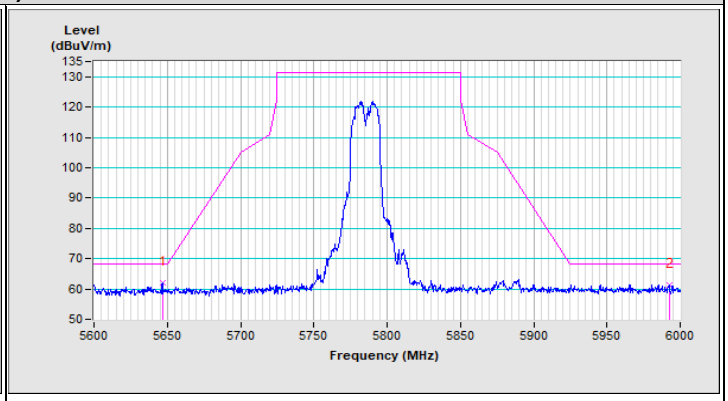


Vertical (Peak)

802.11ax (HE20) Channel 157

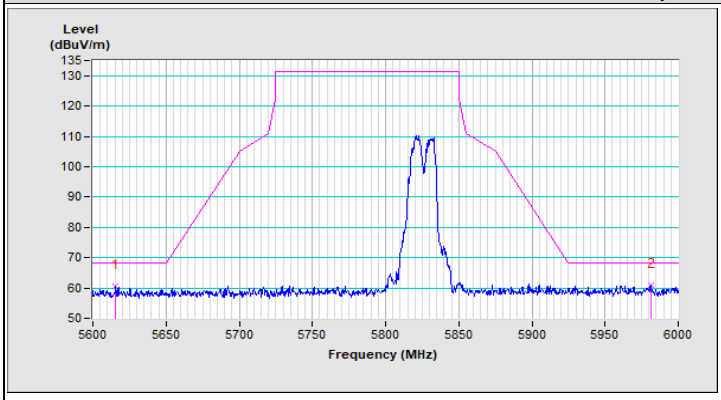


Horizontal (Peak)

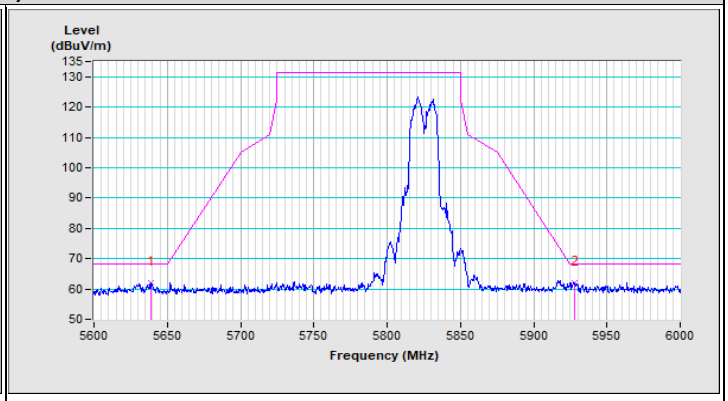


Vertical (Peak)

802.11ax (HE20) Channel 165

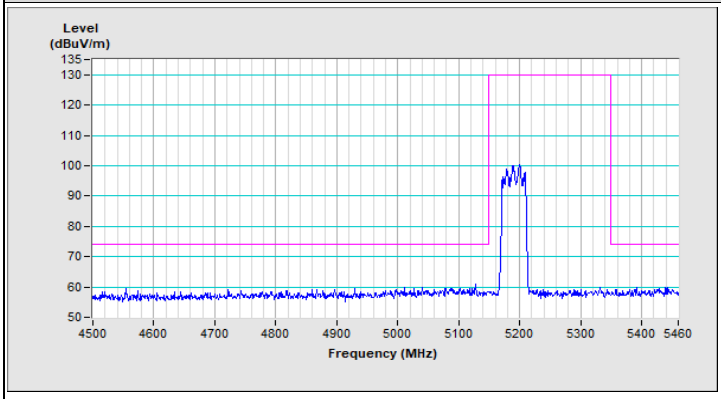


Horizontal (Peak)

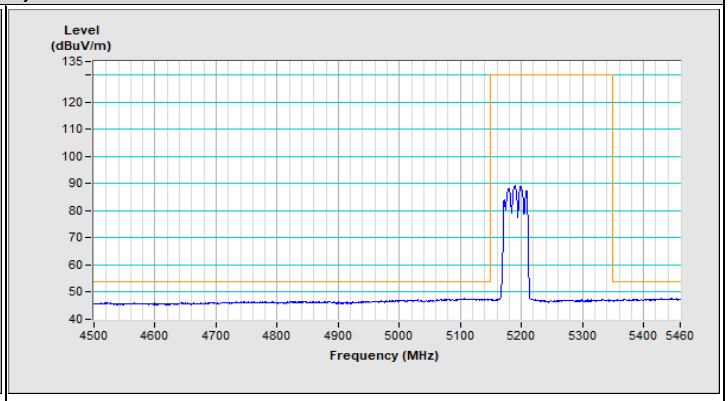


Vertical (Peak)

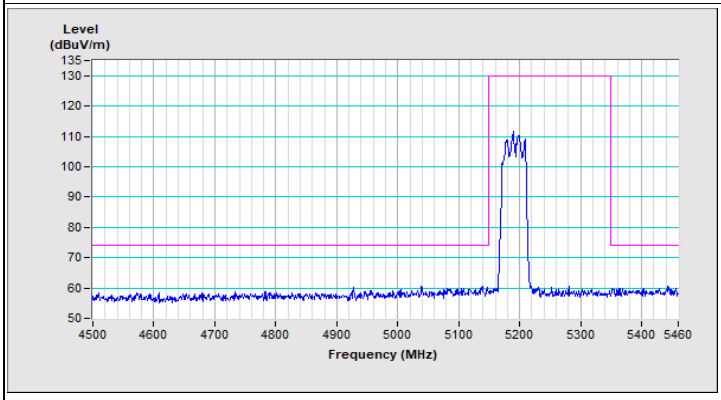
802.11ax (HE40) Channel 38



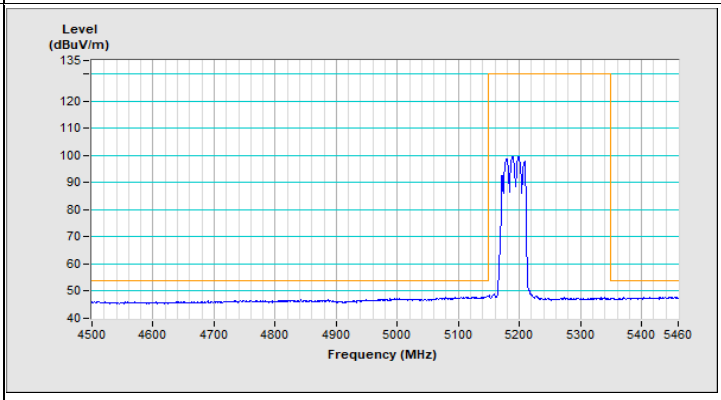
Horizontal (Peak)



Horizontal (Average)

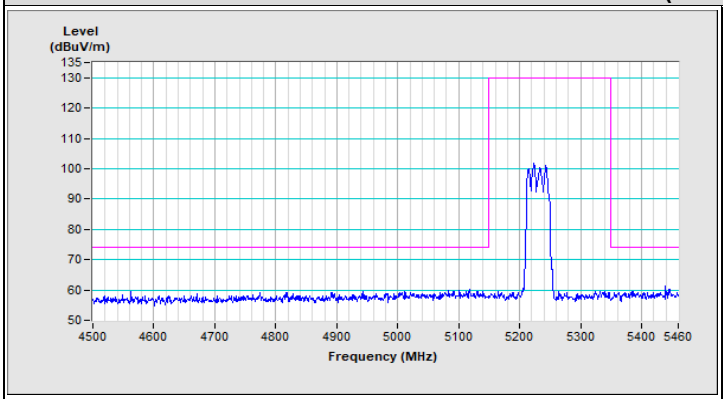


Vertical (Peak)

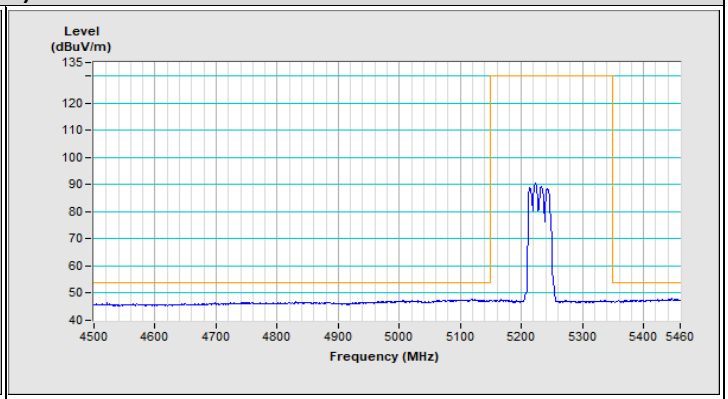


Vertical (Average)

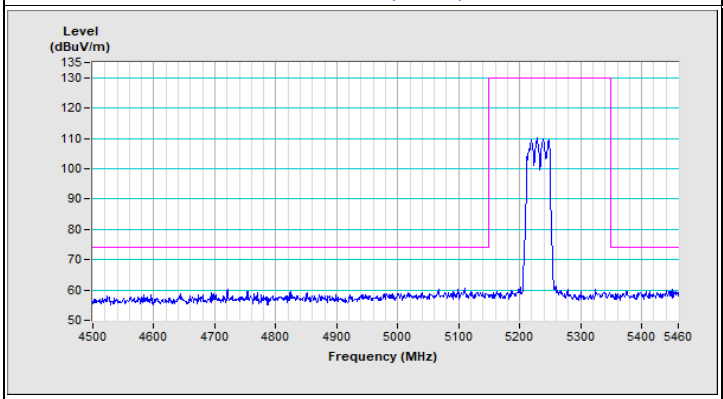
802.11ax (HE40) Channel 46



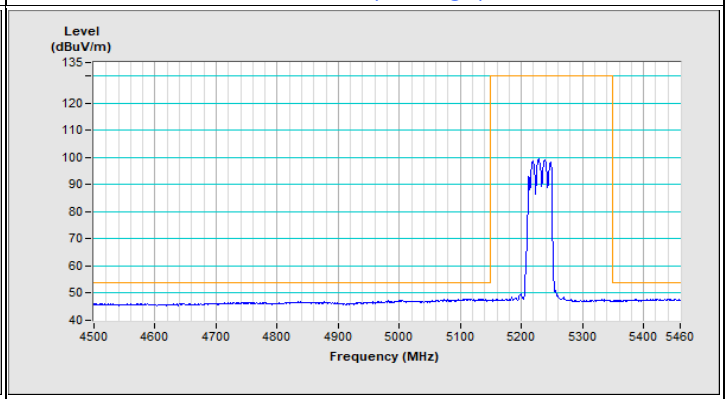
Horizontal (Peak)



Horizontal (Average)

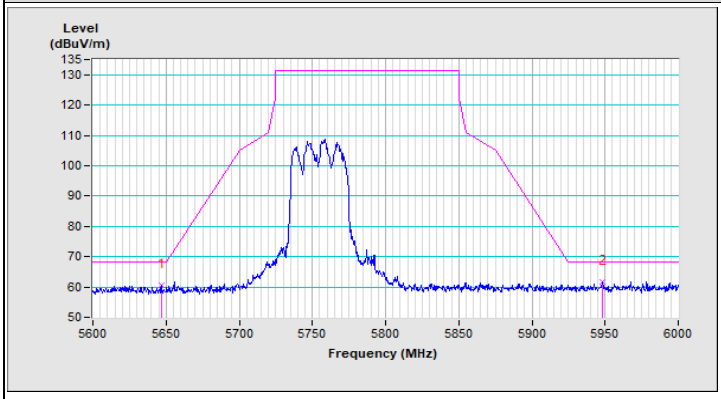


Vertical (Peak)

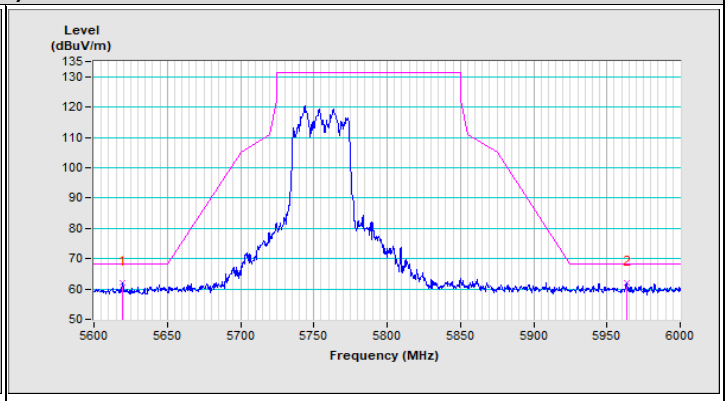


Vertical (Average)

802.11ax (HE40) Channel 151

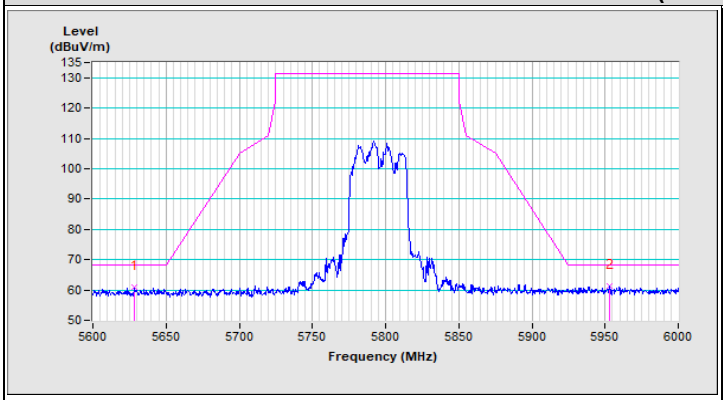


Horizontal (Peak)

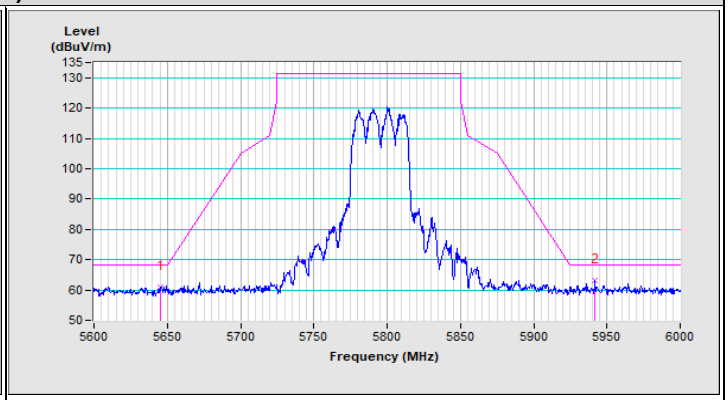


Vertical (Peak)

802.11ax (HE40) Channel 159

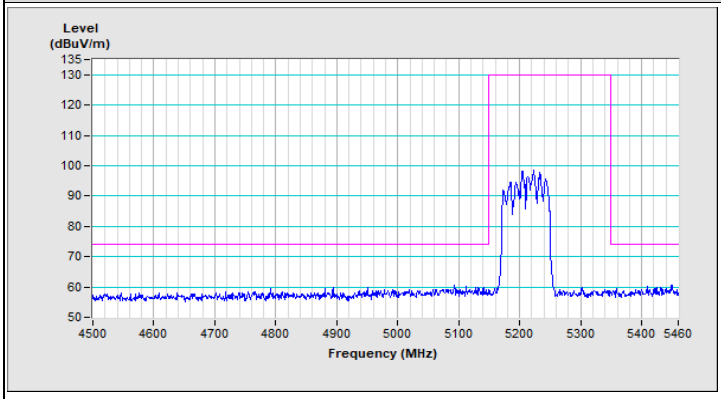


Horizontal (Peak)

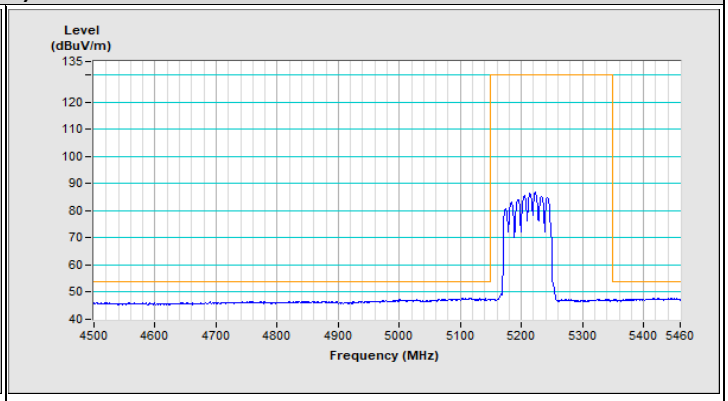


Vertical (Peak)

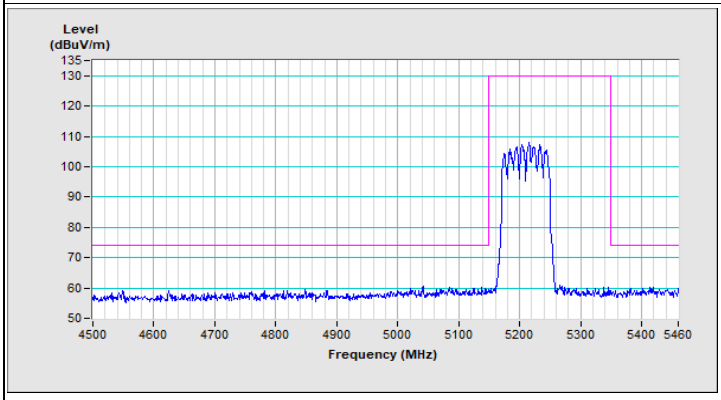
802.11ax (HE80) Channel 42



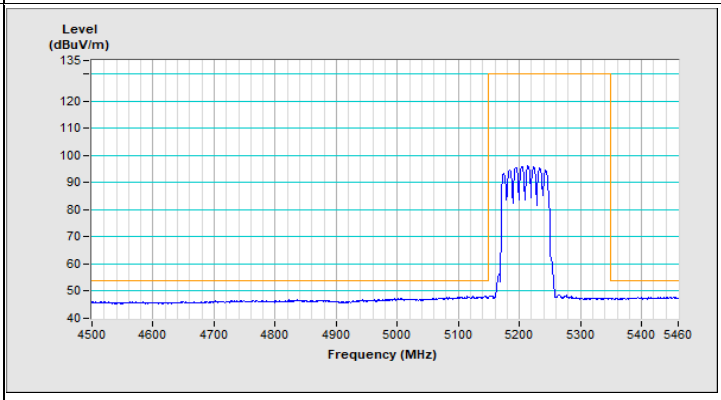
Horizontal (Peak)



Horizontal (Average)

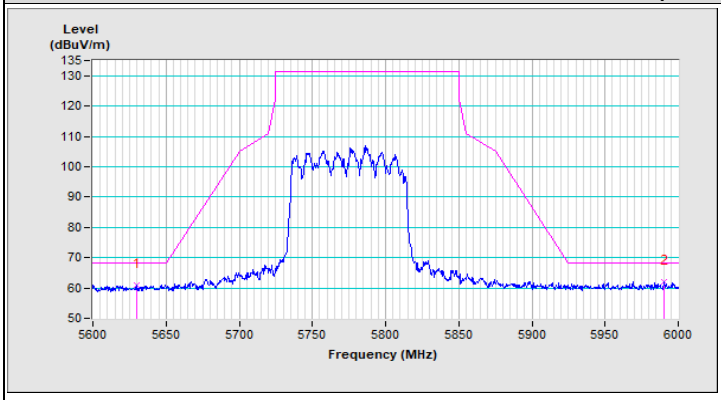


Vertical (Peak)

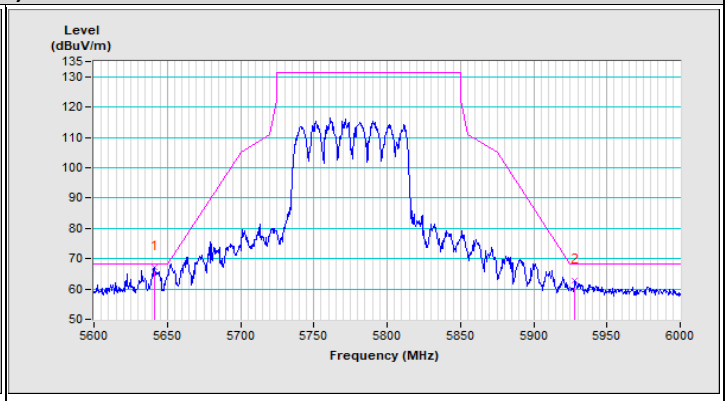


Vertical (Average)

802.11ax (HE80) Channel 155



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:

Lin Kou EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

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

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

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

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

--- END ---