TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart E (Section 15.407)**
Report No.:	RFBDYS-WTW-P22060926-1
FCC ID:	A8J-ENH500AX
Product:	Station6 2x2 Patch
Brand:	EnGenius
Model No.:	ENH500-AX
Received Date:	2022/10/21
Test Date:	2022/11/1 ~ 2022/11/27
Issued Date:	2023/1/4
Applicant:	EnGenius Technologies, Inc.
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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
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Test Location (2):	No. 70, Wenming Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
FCC Registration / Designation Number (1):	788550 / TW0003
FCC Registration / Designation Number (2):	281270 / TW0032

Approved by: Jeremy Lin , **Date:** **2023/1/4**

Jeremy Lin / Project Engineer

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Prepared by : Polly Chien / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBDYS-WTW-P22060926-1	Original release.	2023/1/4

1 Certificate

Product:	Station6 2x2 Patch
Brand:	EnGenius
Test Model:	ENH500-AX
Sample Status:	Engineering sample
Applicant:	EnGenius Technologies, Inc.
Test Date:	2022/11/1 ~ 2022/11/27
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)(1/2/3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	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 -19.55 dB at 0.49400 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -7.9 dB at 784.91 MHz
15.407(b) (1/2/3/4(i)/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.4 dB at 5150.00 MHz
15.203	Antenna Requirement	Pass	Antenna connector is ipex(MHF) 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	2.79 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.00 dB
	30MHz ~ 200MHz	2.91 dB
	200MHz ~1000MHz	2.93 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	2.93 dB
	18 GHz ~ 40 GHz	1.76 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	Station6 2x2 Patch
Brand	EnGenius
Test Model	ENH500-AX
Status of EUT	Engineering sample
Power Supply Rating	54Vdc from 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: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 300Mbps 802.11ac: up to 866.7Mbps 802.11ax: up to 1201.0Mbps
Operating Frequency	5180 ~ 5240MHz, 5745 ~ 5825MHz
Number of Channel	5180 ~ 5240MHz: 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 ~ 5825MHz: 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: 5.18 GHz ~ 5.24 GHz : 47.758 mW (16.79 dBm) 5.745 GHz ~ 5.825 GHz : 186.811 mW (22.71 dBm) Beamforming mode: 5.18 GHz ~ 5.24 GHz : 23.936 mW (13.79dBm) 5.745 GHz ~ 5.825 GHz : 117.870 mW (20.71 dBm)
EUT Category	Outdoor Access Point

Note:

1. The EUT uses following accessories.

POE		
Brand	Model	Specification
EnGenius	EPA5006GR	AC Input : 100-240Vac, 0.8A, 50-60Hz DC Output : 54Vdc, 0.6A Power cord: Non-shielding AC (0.5M)

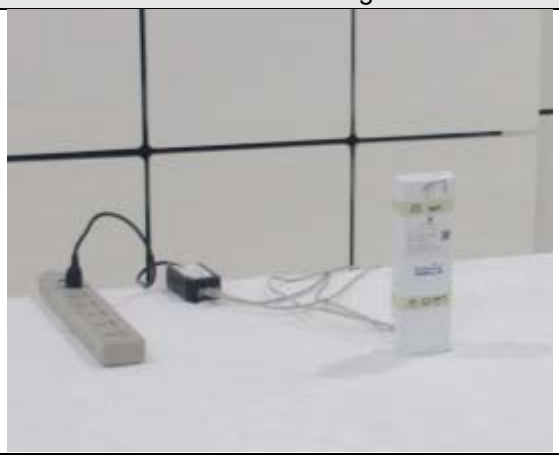
2. There is WLAN (2.4 GHz & 5 GHz) technology used for the EUT, it supported simultaneous transmission which was verified and compliance.
3. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Item	Type	Connector	Frequency Range	Gain (dBi)	
				Chain 0	Chain 1
2.4G	PIFA	ipex(MHF)	2400~2483.5MHz	2.12	-
5G	Patch	ipex(MHF)	5150~5250MHz	11.60	14.04
			5725~5850MHz	11.13	13.26

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

Antenna	Antenna gain	Antenna install degree
Patch	4.17 dBi	
Due to device can be configuration at different angle, thus consider to above 30 degrees from the horizon the highest antenna gain are chosen from antenna specification exhibits from 30 to 150 degrees for U-NII-1 band.		

* 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 bandwidth and modulation are similar for HT20/HT40 on 802.11n mode and VHT20/VHT40 on 802.11ac mode and HE20/HE40 on 802.11ax mode. The bandwidth and modulation are similar for VHT80/VHT160 on 802.11ac mode and HE80/HE160 on 802.11ax mode. Therefore the investigated worst case is the representative mode in test report.
4. The EUT device modulation technique OFDMA does not support partial RUs (resource units).

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

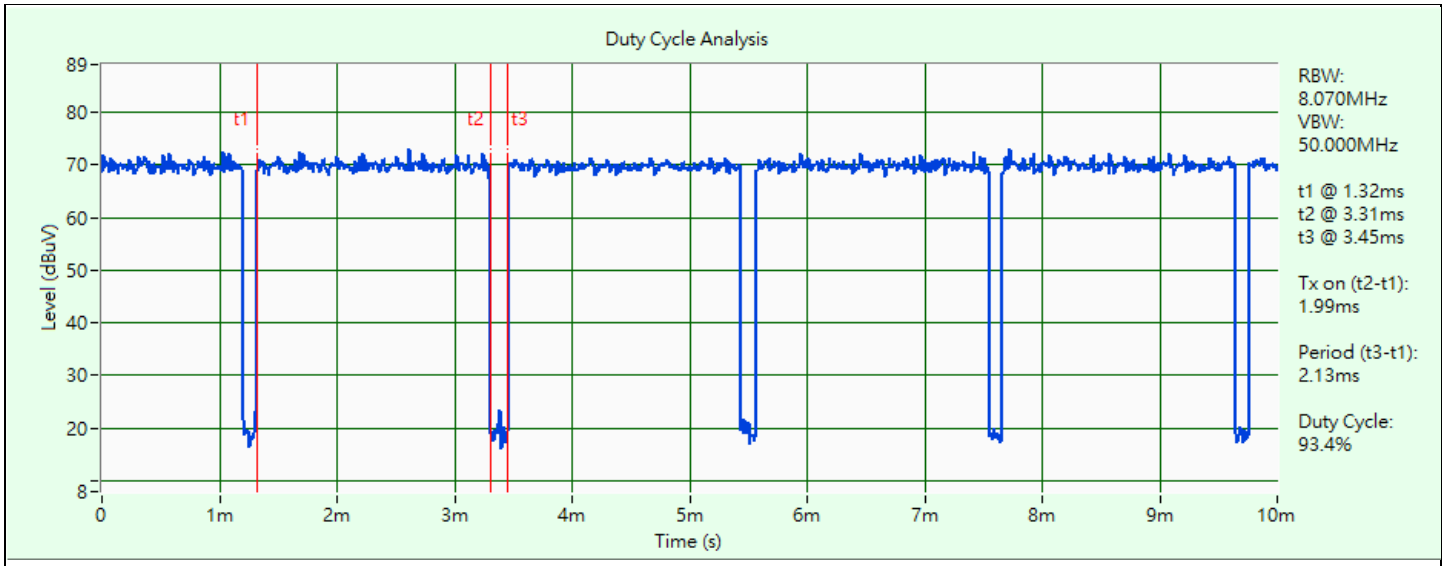
Following channel(s) was (were) selected for the final test as listed below:

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

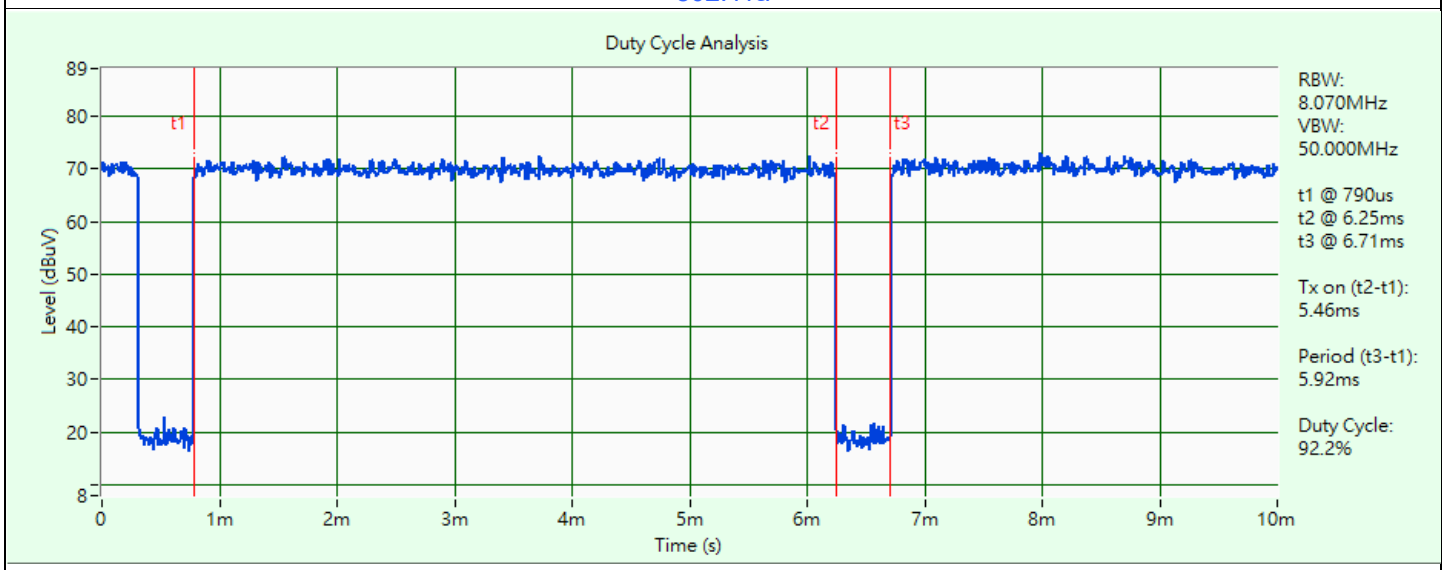
*The 802.11ax mode was the worst case for final test on RF Output Power.
Note: The EUT was positioned on the Z-plane during testing.

3.5 Duty Cycle of Test Signal

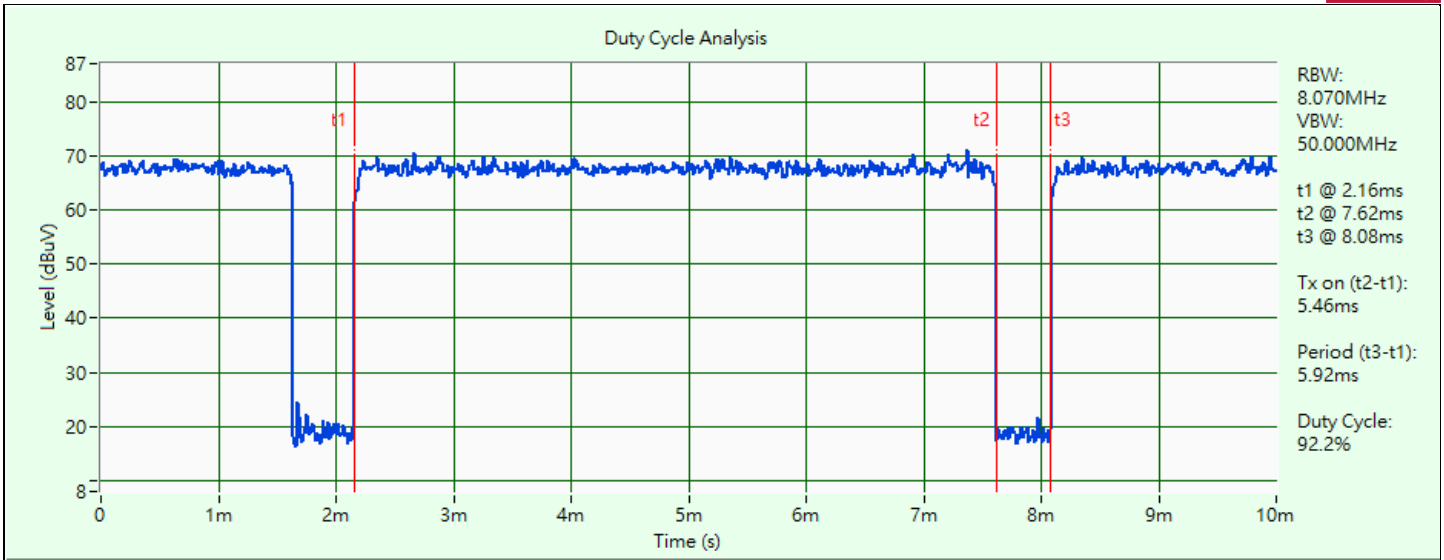
802.11a: Duty cycle = 1.99 ms / 2.13 ms x 100% = 93.4%, duty factor = 10 * log (1/Duty cycle) = 0.30 dB
802.11ax (HE20): Duty cycle = 5.46 ms / 5.92 ms x 100% = 92.2%, duty factor = 10 * log (1/Duty cycle) = 0.35 dB
802.11ax (HE40): Duty cycle = 5.46 ms / 5.92 ms x 100% = 92.2%, duty factor = 10 * log (1/Duty cycle) = 0.35 dB
802.11ax (HE80): Duty cycle = 5.46 ms / 5.97 ms x 100% = 91.5%, duty factor = 10 * log (1/Duty cycle) = 0.39 dB



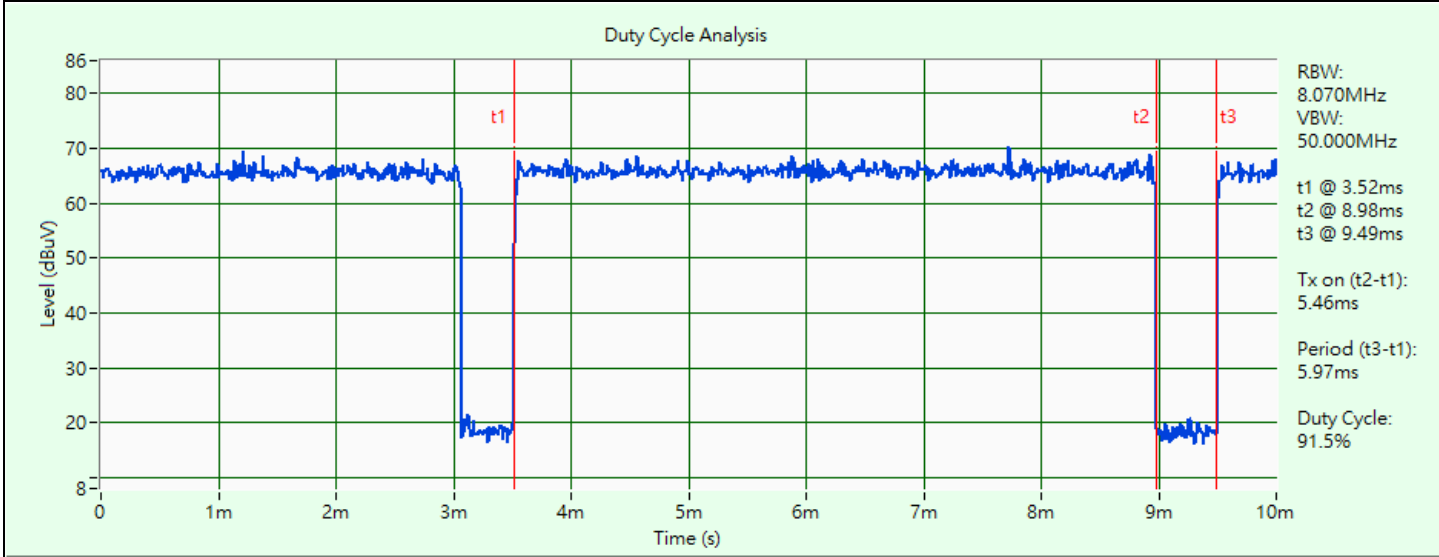
802.11a



802.11ax (HE20)



802.11ax (HE40)

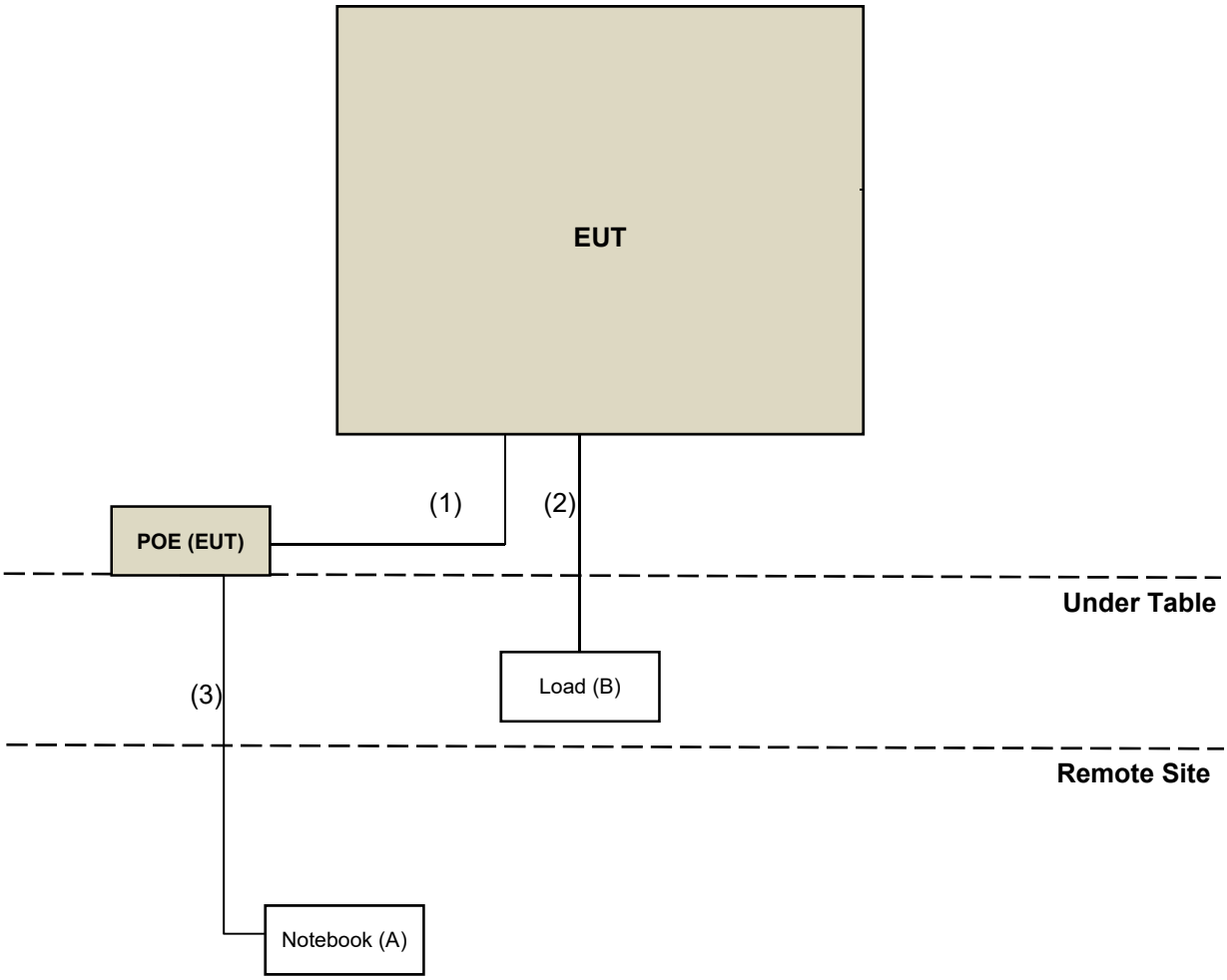


802.11ax (HE80)

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	Notebook	Lenovo	20J4 MD A003TW	PF-11H9AK	FCC DoC Approved	Provided by Lab
B	Load	N/A	N/A	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-45 Cable	1	1.5	NO	0	Provided by Lab
2	RJ-45 Cable	1	1.5	NO	0	Provided by Lab
3	RJ-45 Cable	1	7	NO	0	Provided by Lab

4 Test Instruments

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

4.1 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Peak Power Analyzer KEYSIGHT	8990B	MY51000485	2022/1/18	2023/1/17
Power sensor Keysight	U2021XA	MY55380009	2022/3/23	2023/3/22
Wideband Power Sensor(N1923A) KEYSIGHT	N1923A	MY58020002	2022/1/17	2023/1/16

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/11/27

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: 2022/11/27

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
AC Power Source ExTech	CFW-105	E000603	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	2022/1/3	2023/1/2

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/11/27

4.6 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
LISN R&S	ESH2-Z5	100100	2022/2/17	2023/2/16
LISN Schwarzbeck	NNLK 8121	8121-731	2022/5/26	2023/5/25
Receiver R&S	ESCI	100412	2022/8/22	2023/8/21
RF Coaxial Cable WORKEN	5D-FB	Cable-cond2-01	2022/9/3	2023/9/2
Software BVADT	BVADT_Cond_ V7.3.7.4	N/A	N/A	N/A
Temperature&Humidity Meter Lufft	5098.00	Lf11015	2022/1/7	2023/1/6
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2022/8/31	2023/8/30

Notes:

1. The test was performed in HY - Conduction 2.
2. Tested Date: 2022/11/3

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	2021/12/10	2022/12/9
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: 2022/11/2

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	2021/11/14	2022/11/13
Horn Antenna Schwarzbeck	BBHA 9170	9170-1049	2021/11/14	2022/11/13
Pre_Amplifier EMCI	EMC118A45SE	980808	2021/12/30	2022/12/29
	EMC184045SE	980788	2022/1/17	2023/1/16
RF Coaxial Cable EMCI	EMC101G-KM-KM-2000	201254	2022/1/17	2023/1/16
	EMC101G-KM-KM-3000	201257	2022/1/17	2023/1/16
	EMC101G-KM-KM-5000	201260	2022/1/17	2023/1/16
	EMC104-SM-SM-1000	210102	2022/1/17	2023/1/16
	EMC104-SM-SM-3000	201231	2022/1/17	2023/1/16
	EMC104-SM-SM-9000	201243	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	2021/12/10	2022/12/9
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: 2022/11/1 ~ 2022/11/3

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	250 mW (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)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
5150~5250 MHz	15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	15.407(b)(4)(i)	PK: -27 (dBm/MHz) *1 PK: 10 (dBm/MHz) *2 PK: 15.6 (dBm/MHz) *3 PK: 27 (dBm/MHz) *4	PK: 68.2 (dBμV/m) *1 PK: 105.2 (dBμV/m) *2 PK: 110.8 (dBμV/m) *3 PK: 122.2 (dBμV/m) *4

*1 beyond 75 MHz or more above of the band edge.

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

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

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

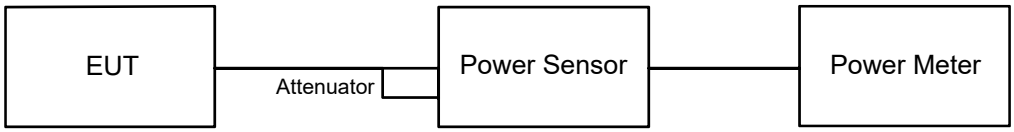
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup

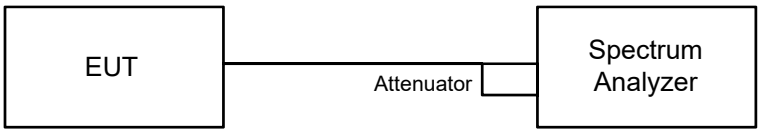


6.1.2 Test Procedure

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

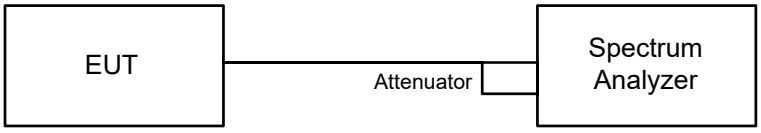
a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
d. Sweep time = auto, trigger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

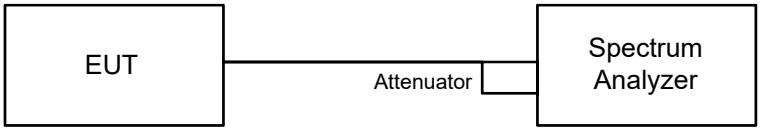


6.3.2 Test Procedure

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

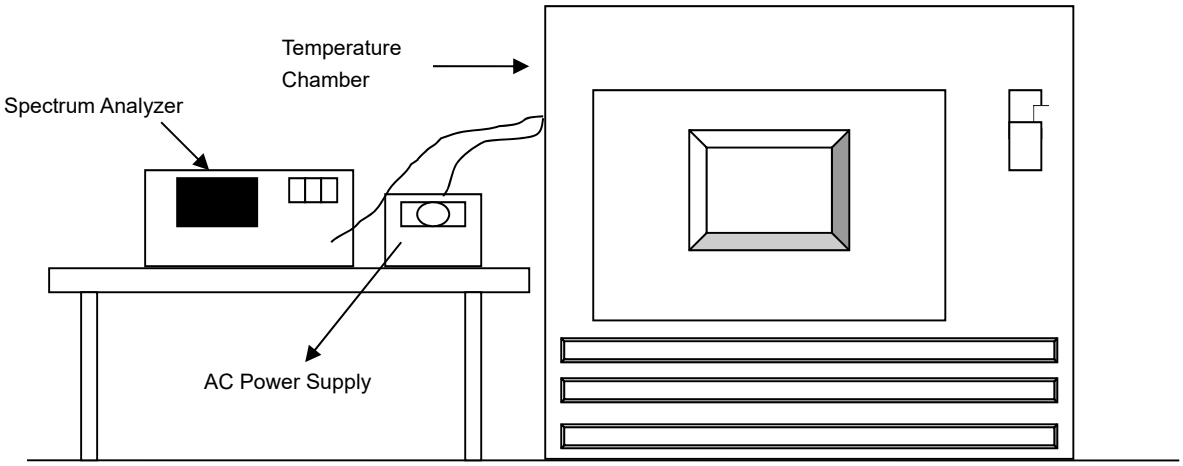


6.4.2 Test Procedure

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

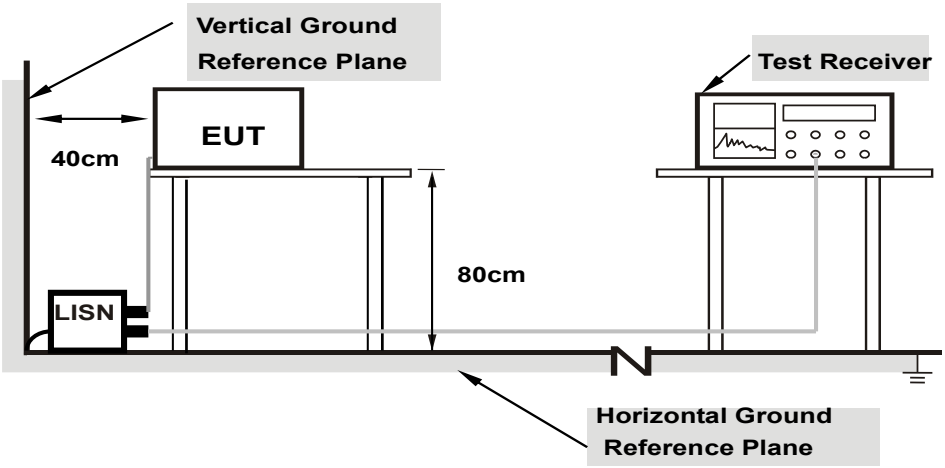


6.5.2 Test Procedure

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

6.6 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.

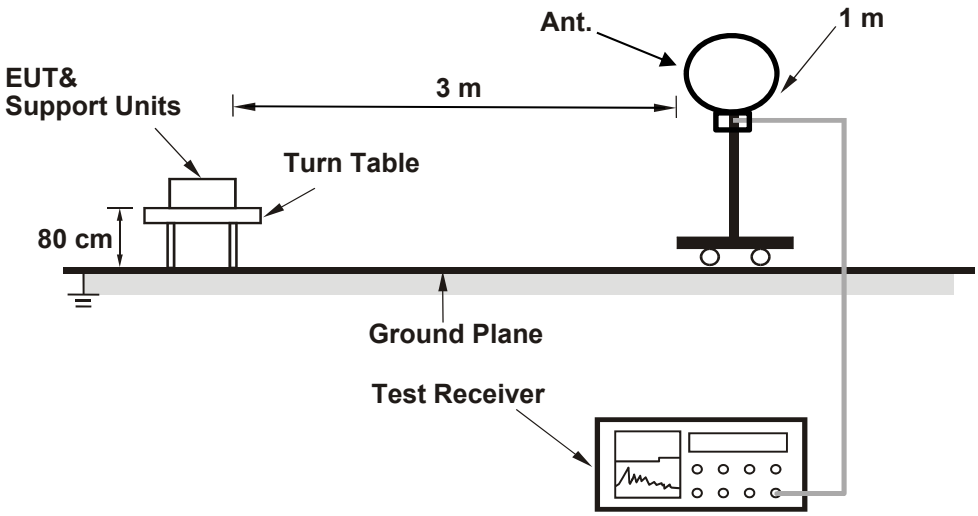
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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.

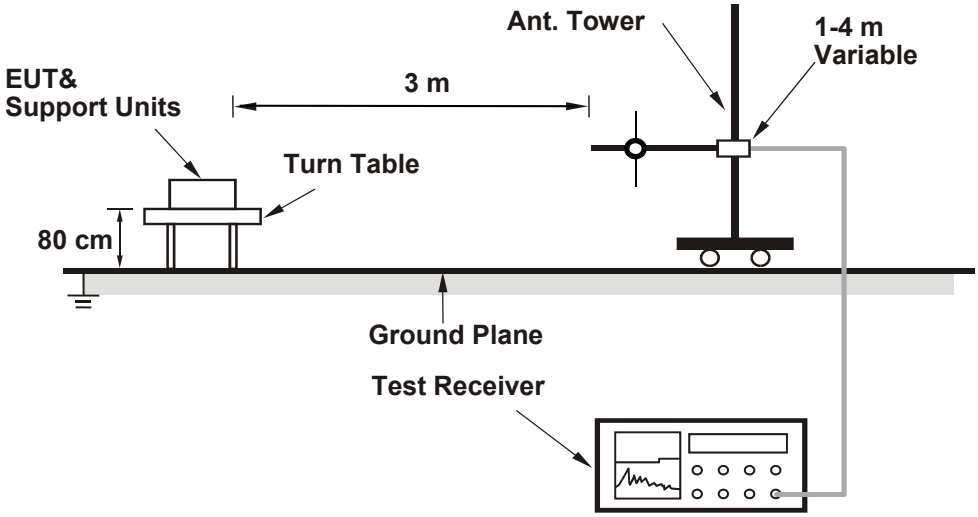
6.7 Unwanted Emissions below 1 GHz

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

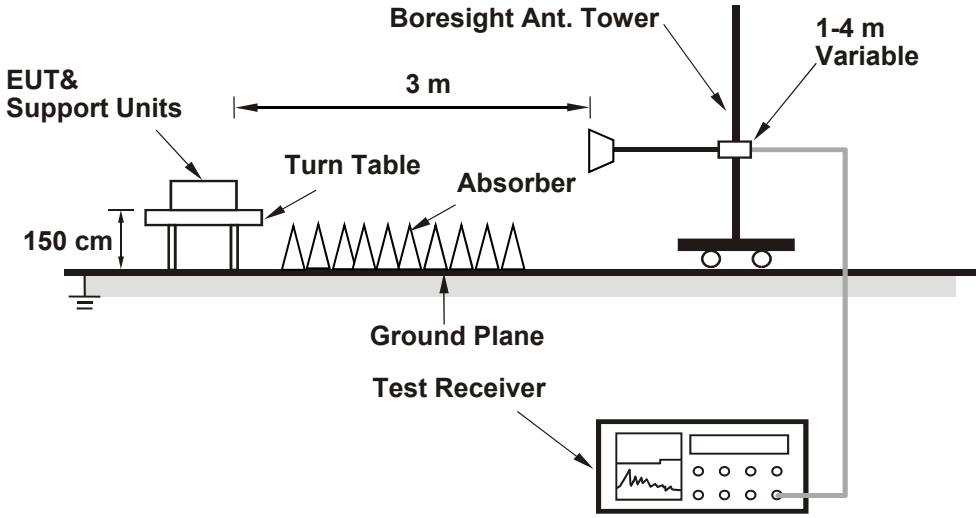
a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top 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:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang

802.11a CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	*Maximum Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
36	5180	13.52	13.63	45.558	16.59	21.96	4.17	119.124	20.76	21	Pass
40	5200	13.64	13.77	46.944	16.72	21.96	4.17	122.744	20.89	21	Pass
48	5240	13.61	13.62	45.976	16.63	21.96	4.17	120.226	20.8	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	19.51	19.73	183.303	22.63	22.74	Pass
157	5785	19.47	19.89	186.011	22.70	22.74	Pass
165	5825	19.53	19.84	186.126	22.70	22.74	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 14.04 dBi > 6 dBi, so the output power limit shall be reduced to 30-(14.04-6) = 21.96 dBm.
3. For U-NII-3, the maximum gain is 13.26 dBi > 6 dBi, so the output power limit shall be reduced to 30-(13.26-6) = 22.74 dBm.
4. * For U-NII-1, the gain of above 30 degrees from the horizon is 4.17 dBi, EIRP (dBm) = Average Power (dBm) + 4.17 dBi

802.11ax (HE20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	*Maximum Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
36	5180	13.55	13.61	45.608	16.59	21.96	4.17	119.124	20.76	21	Pass
40	5200	13.57	13.69	46.139	16.64	21.96	4.17	120.504	20.81	21	Pass
48	5240	13.59	13.63	45.923	16.62	21.96	4.17	119.95	20.79	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	19.47	19.89	186.011	22.70	22.74	Pass
157	5785	19.52	19.88	186.811	22.71	22.74	Pass
165	5825	19.45	19.93	186.506	22.71	22.74	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 14.04 dBi > 6 dBi, so the output power limit shall be reduced to 30-(14.04-6) = 21.96 dBm.
3. For U-NII-3, the maximum gain is 13.26 dBi > 6 dBi, so the output power limit shall be reduced to 30-(13.26-6) = 22.74 dBm.
4. * For U-NII-1, the gain of above 30 degrees from the horizon is 4.17 dBi, EIRP (dBm) = Average Power (dBm) + 4.17 dBi

802.11ax (HE40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	*Maximum Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
38	5190	13.53	13.74	46.202	16.65	21.96	4.17	120.781	20.82	21	Pass
46	5230	13.74	13.82	47.758	16.79	21.96	4.17	124.738	20.96	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	19.43	19.95	186.555	22.71	22.74	Pass
159	5795	19.53	19.85	186.348	22.70	22.74	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 14.04 dBi > 6 dBi, so the output power limit shall be reduced to 30-(14.04-6) = 21.96 dBm.
3. For U-NII-3, the maximum gain is 13.26 dBi > 6 dBi, so the output power limit shall be reduced to 30-(13.26-6) = 22.74 dBm.
4. * For U-NII-1, the gain of above 30 degrees from the horizon is 4.17 dBi, EIRP (dBm) = Average Power (dBm) + 4.17 dBi

802.11ax (HE80) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	*Maximum Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
42	5210	13.53	13.68	45.877	16.62	21.96	4.17	119.95	20.79	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	19.47	19.83	184.673	22.66	22.74	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 14.04 dBi > 6 dBi, so the output power limit shall be reduced to 30-(14.04-6) = 21.96 dBm.
3. For U-NII-3, the maximum gain is 13.26 dBi > 6 dBi, so the output power limit shall be reduced to 30-(13.26-6) = 22.74 dBm.
4. * For U-NII-1, the gain of above 30 degrees from the horizon is 4.17 dBi, EIRP (dBm) = Average Power (dBm) + 4.17 dBi

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	*Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
36	5180	10.55	10.61	22.858	13.59	20.08	7.18	119.399	20.77	21	Pass
40	5200	10.57	10.69	23.124	13.64	20.08	7.18	120.781	20.82	21	Pass
48	5240	10.59	10.63	23.016	13.62	20.08	7.18	120.226	20.8	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	17.47	17.89	117.365	20.70	20.73	Pass
157	5785	17.52	17.88	117.870	20.71	20.73	Pass
165	5825	17.45	17.93	117.677	20.71	20.73	Pass

Notes:

1. Directional gain = $10 \log[(10^{Chain0/20} + 10^{Chain1/20})^2 / 2]$
2. For U-NII-1, the directional gain is 15.92 dBi > 6 dBi, so the output power limit shall be reduced to 30-(15.92-6) = 20.08 dBm.
3. For U-NII-3, the directional gain is 15.27 dBi> 6 dBi, so the output power limit shall be reduced to 30-(15.27-6) = 20.73 dBm.
4. * For U-NII-1, the gain of above 30 degrees from the horizon is 4.17 dBi, EIRP (dBm) = Average Power (dBm) + 4.17 dBi + 10LogN (3.01 dB)

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	*Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
38	5190	10.53	10.74	23.156	13.65	20.08	7.18	121.06	20.83	21	Pass
46	5230	10.74	10.82	23.936	13.79	20.08	7.18	125.026	20.97	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	17.43	17.95	117.708	20.71	20.73	Pass
159	5795	17.53	17.85	117.578	20.70	20.73	Pass

Notes:

1. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
2. For U-NII-1, the directional gain is 15.92 dBi > 6 dBi, so the output power limit shall be reduced to 30-(15.92-6) = 20.08 dBm.
3. For U-NII-3, the directional gain is 15.27 dBi> 6 dBi, so the output power limit shall be reduced to 30-(15.27-6) = 20.73 dBm.
4. * For U-NII-1, the gain of above 30 degrees from the horizon is 4.17 dBi, EIRP (dBm) = Average Power (dBm) + 4.17 dBi + 10LogN (3.01 dB)

802.11ax (HE80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	*Directional Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
		Chain 0	Chain 1								
42	5210	10.53	10.68	22.993	13.62	20.08	7.18	120.226	20.8	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	17.47	17.83	116.521	20.66	20.73	Pass

Notes:

1. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
2. For U-NII-1, the directional gain is 15.92 dBi > 6 dBi, so the output power limit shall be reduced to 30-(15.92-6) = 20.08 dBm.
3. For U-NII-3, the directional gain is 15.27 dBi> 6 dBi, so the output power limit shall be reduced to 30-(15.27-6) = 20.73 dBm.
4. * For U-NII-1, the gain of above 30 degrees from the horizon is 4.17 dBi, EIRP (dBm) = Average Power (dBm) + 4.17 dBi + 10LogN (3.01 dB)

7.2 Power Spectral Density

Input Power:	120 Vac, 60 Hz	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	0.40	0.35	0.30	3.69	7.08	Pass
40	5200	0.54	0.64	0.30	3.90	7.08	Pass
48	5240	0.57	0.55	0.30	3.87	7.08	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10 \log[(10^{Chain0/20} + 10^{Chain1/20})^2 / 2]$
3. For U-NII-1, the directional gain is 15.92 dBi > 6dBi, so the power density limit shall be reduced to 17-(15.92-6) = 7.08 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	0.28	0.41	0.35	3.71	7.08	Pass
40	5200	0.43	0.43	0.35	3.79	7.08	Pass
48	5240	0.41	0.12	0.35	3.63	7.08	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10 \log[(10^{Chain0/20} + 10^{Chain1/20})^2 / 2]$
3. For U-NII-1, the directional gain is 15.92 dBi > 6dBi, so the power density limit shall be reduced to 17-(15.92-6) = 7.08 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	-2.45	-2.22	0.35	1.03	7.08	Pass
46	5230	-2.85	-2.25	0.35	0.82	7.08	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10 \log[(10^{Chain0/20} + 10^{Chain1/20})^2 / 2]$
3. For U-NII-1, the directional gain is 15.92 dBi > 6dBi, so the power density limit shall be reduced to 17-(15.92-6) = 7.08 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	-5.62	-5.68	0.39	-2.25	7.08	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-1, the directional gain is 15.92 dBi > 6dBi, so the power density limit shall be reduced to 17-(15.92-6) = 7.08 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	-0.37	-0.35	2.65	0.3	5.17	20.73	Pass
157	5785	-0.67	-0.20	2.58	0.3	5.10	20.73	Pass
165	5825	-0.94	-0.84	2.12	0.3	4.64	20.73	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-3, the directional gain is 15.27 dBi > 6 dBi, so the power density limit shall be reduced to 30-(15.27-6) = 20.73 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	-3.33	-3.26	-0.28	0.35	2.29	20.73	Pass
157	5785	-3.75	-3.12	-0.41	0.35	2.16	20.73	Pass
165	5825	-3.20	-3.13	-0.15	0.35	2.42	20.73	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-3, the directional gain is 15.27 dBi > 6 dBi, so the power density limit shall be reduced to 30-(15.27-6) = 20.73 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	-5.87	-5.17	-2.5	0.35	0.07	20.73	Pass
159	5795	-5.91	-5.42	-2.65	0.35	-0.08	20.73	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-3, the directional gain is 15.27 dBi > 6 dBi, so the power density limit shall be reduced to 30-(15.27-6) = 20.73 dBm/500kHz.

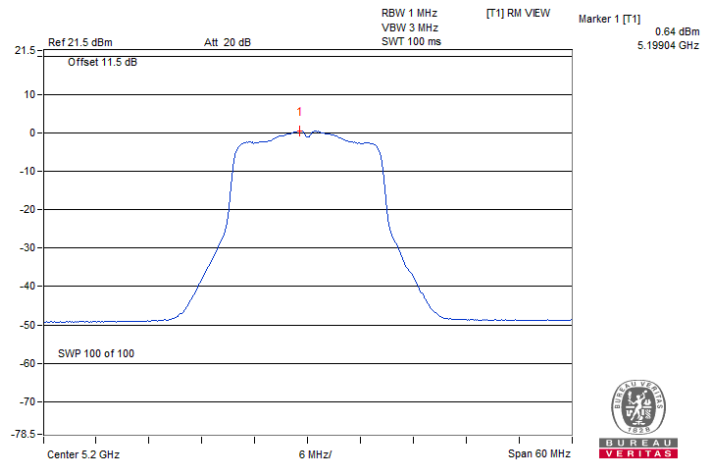
802.11ax (HE80)

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	-7.99	-7.49	-4.72	0.39	-2.11	20.73	Pass

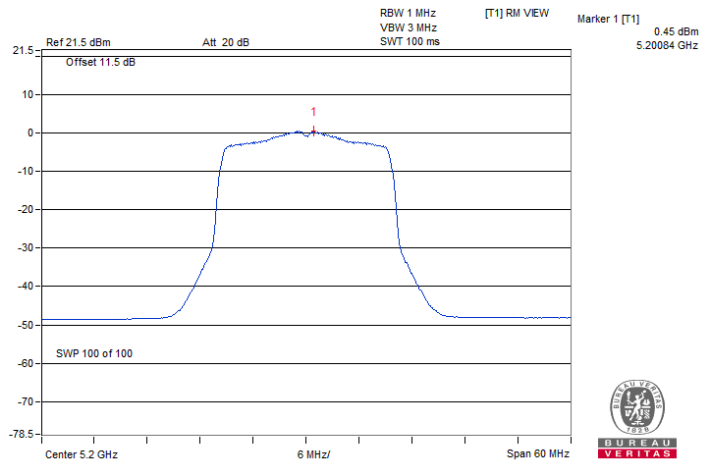
Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-3, the directional gain is 15.27 dBi > 6 dBi, so the power density limit shall be reduced to 30-(15.27-6) = 20.73 dBm/500kHz.

Spectrum Plot of Maximum Value

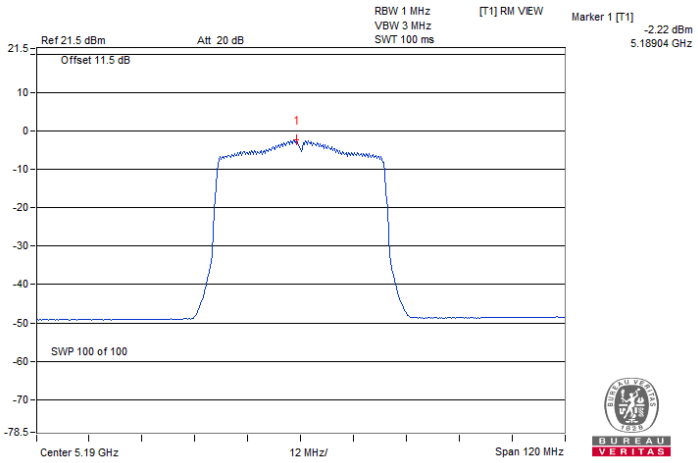


802.11a / Chain 1 : CH 40

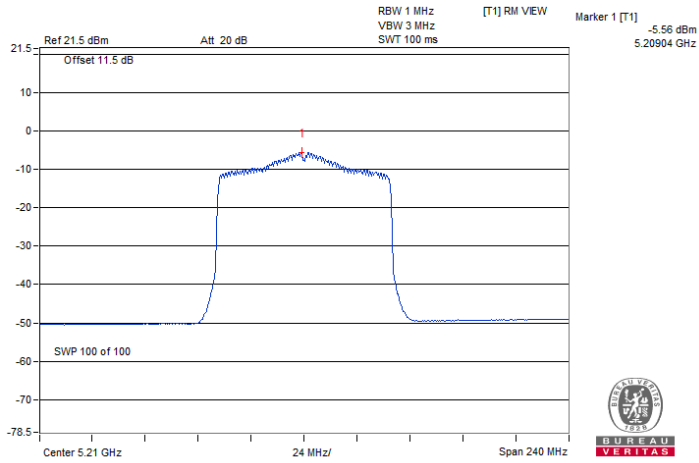


802.11ax (HE20) / Chain 0 : CH 40

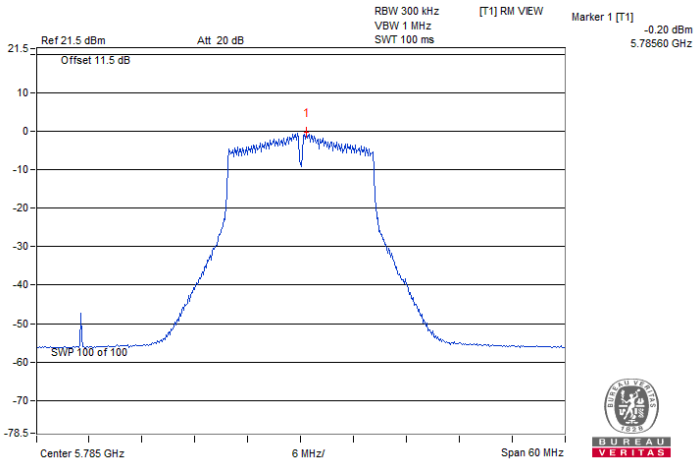
Spectrum Plot of Maximum Value



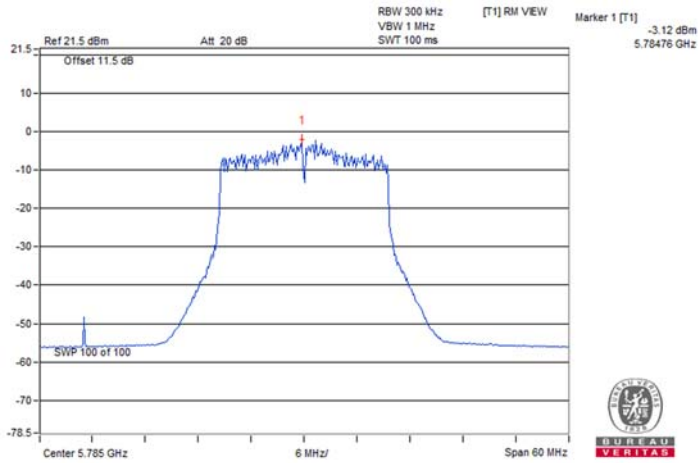
802.11ax (HE40) / Chain 1 : CH 38



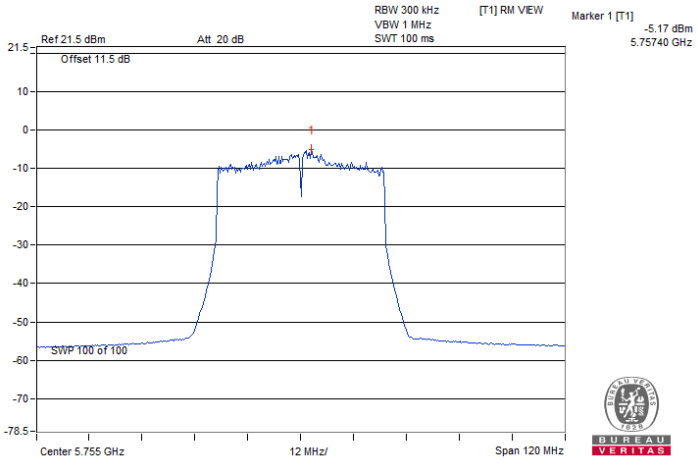
802.11ax (HE80) / Chain 0 : CH 42



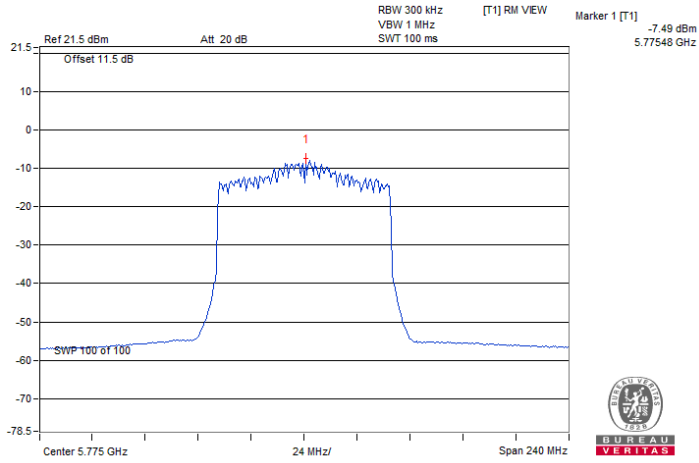
802.11a / Chain 1 : CH 157



802.11ax (HE20) / Chain 1 : CH 157



802.11ax (HE40) / Chain 1 : CH 151



802.11ax (HE80) / Chain 1 : CH 155

7.3 6 dB Bandwidth

Input Power:	120 Vac, 60 Hz	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	15.16	15.15	0.5	Pass
157	5785	15.16	15.12	0.5	Pass
165	5825	15.14	15.15	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
149	5745	16.33	16.32	0.5	Pass
157	5785	15.94	15.26	0.5	Pass
165	5825	16.35	15.32	0.5	Pass

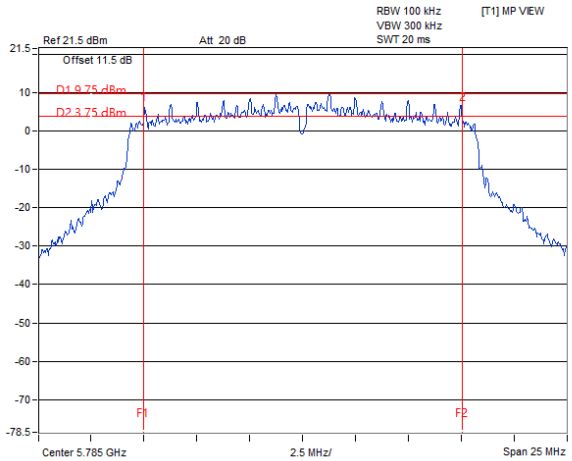
802.11ax (HE40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
151	5755	35.11	33.88	0.5	Pass
159	5795	36.76	35.14	0.5	Pass

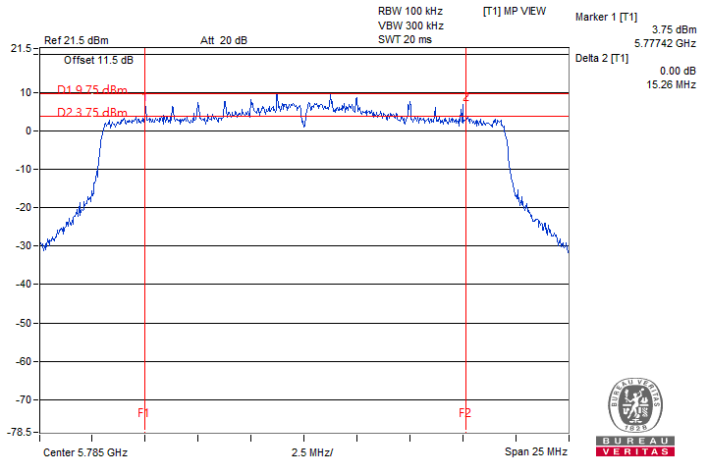
802.11ax (HE80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
155	5775	70.22	70.22	0.5	Pass

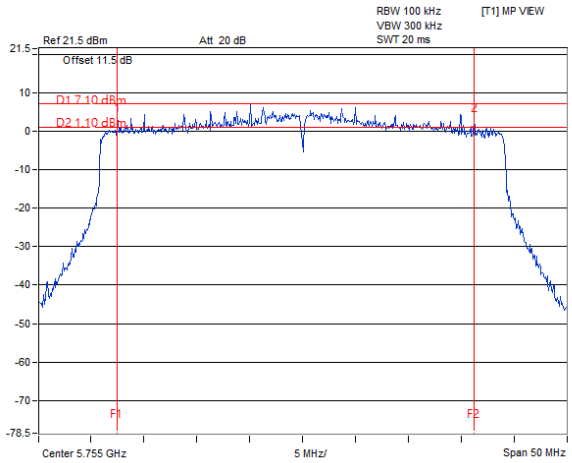
Spectrum Plot of Minimum Value



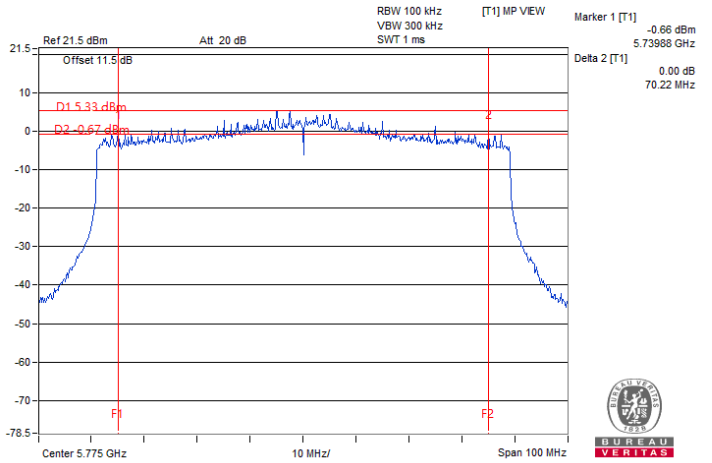
802.11a / Chain 1 : CH 157



802.11ax (HE20) / Chain 1 : CH 157



802.11ax (HE40) / Chain 1 : CH 151



802.11ax (HE80) / Chain 0 : CH 155

7.4 Occupied Bandwidth

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

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.32	16.32
40	5200	16.32	16.32
48	5240	16.32	16.32
149	5745	16.34	16.34
157	5785	16.34	16.34
165	5825	16.34	16.34

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	18.84	18.96
40	5200	18.84	18.84
48	5240	18.84	18.84
149	5745	18.87	18.87
157	5785	18.87	18.87
165	5825	18.87	18.87

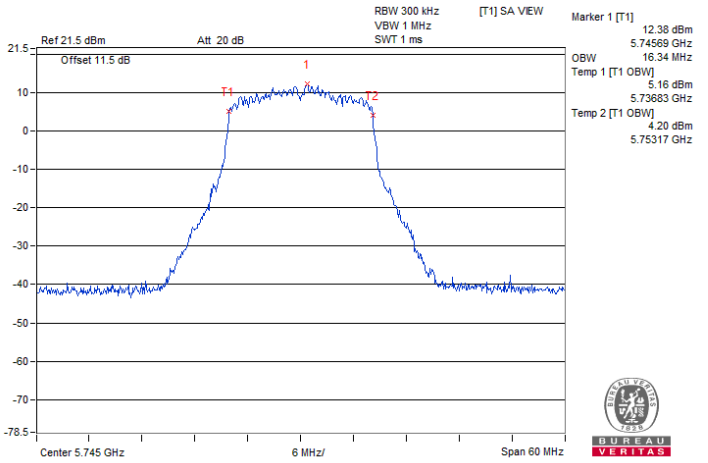
802.11ax (HE40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	37.92	37.92
46	5230	37.68	37.92
151	5755	37.74	37.92
159	5795	37.92	37.74

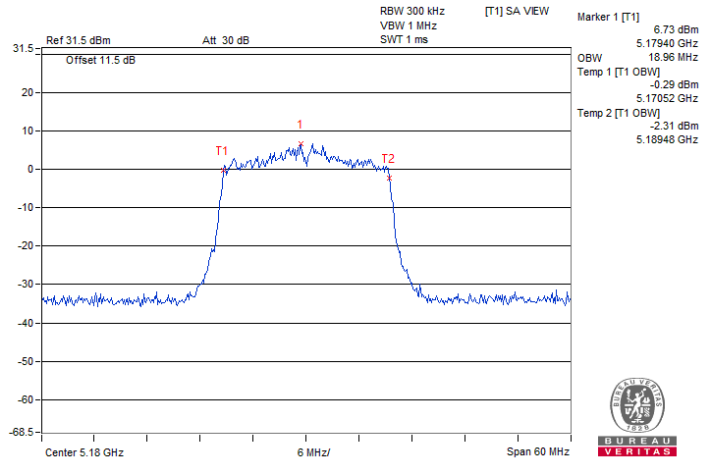
802.11ax (HE80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	76.80	76.80
155	5775	76.87	76.87

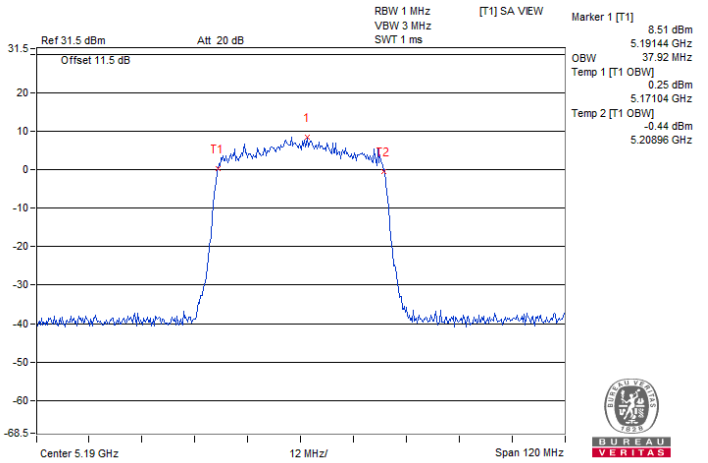
Spectrum Plot of Maximum Value



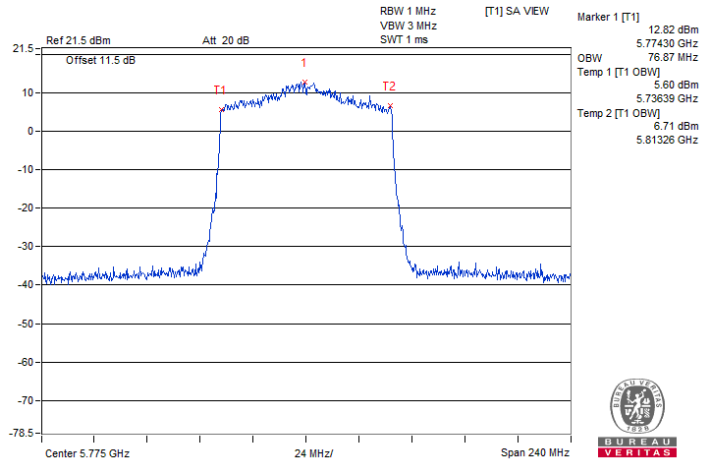
802.11a / Chain 0 : CH 149



802.11ax (HE20) / Chain 1 : CH 36

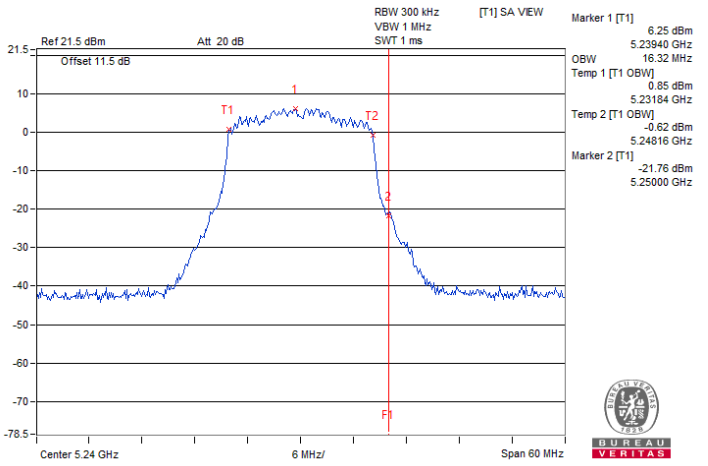


802.11ax (HE40) / Chain 0 : CH 38

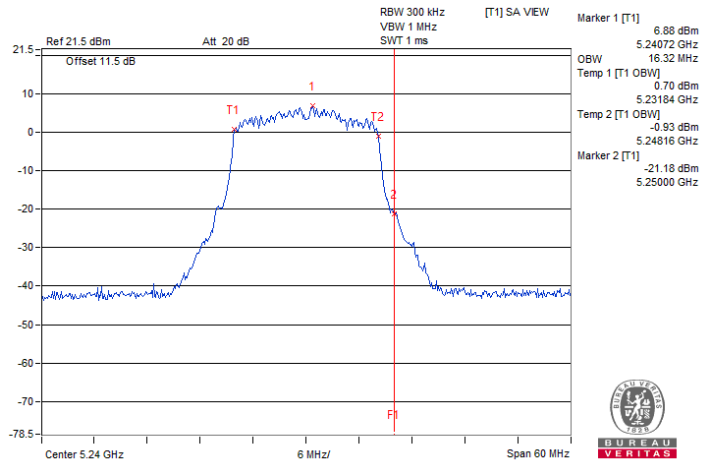


802.11ax (HE80) / Chain 0 : CH 155

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

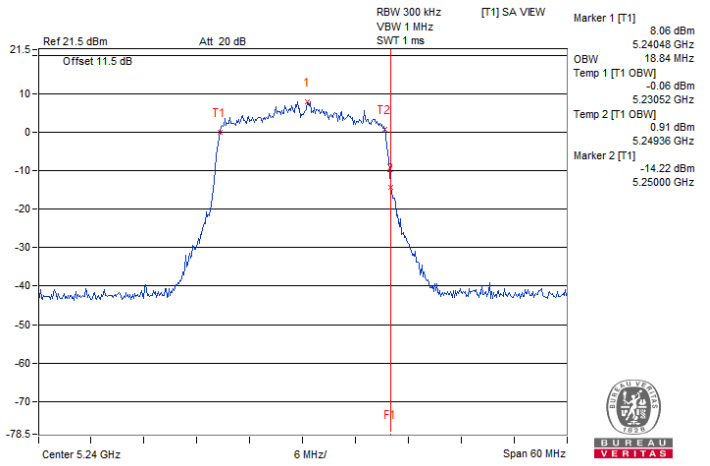


802.11a / Chain 0 : CH 48

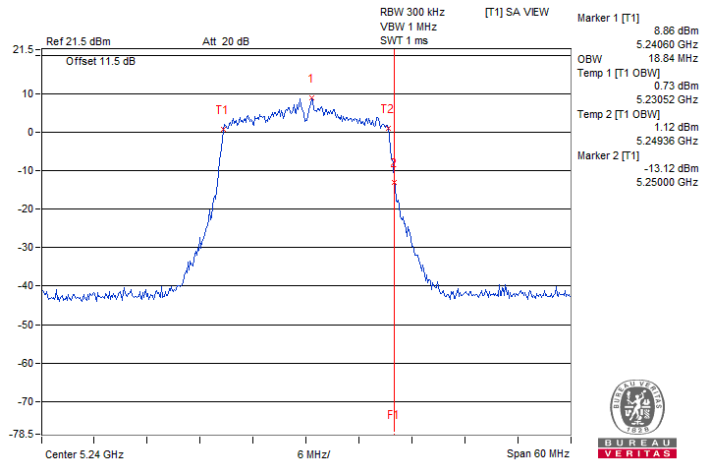


802.11a / Chain 1 : CH 48

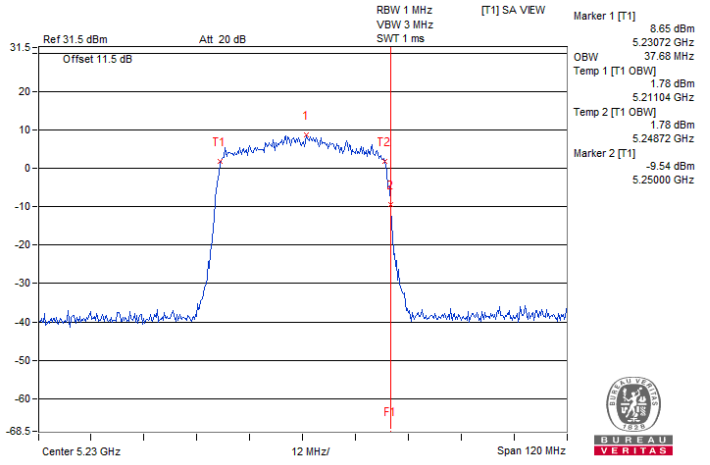
Spectrum Plot for nearby DFS band
(DFS is required, if 99% OCP straddle into U-NII-2A)



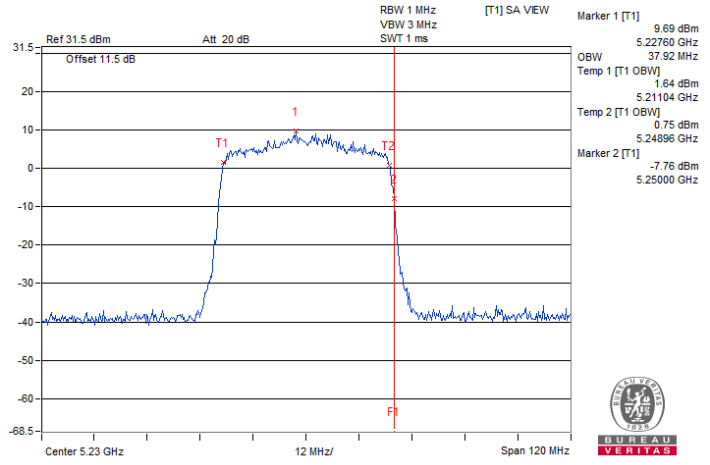
802.11ax (HE20) / Chain 0 : CH 48



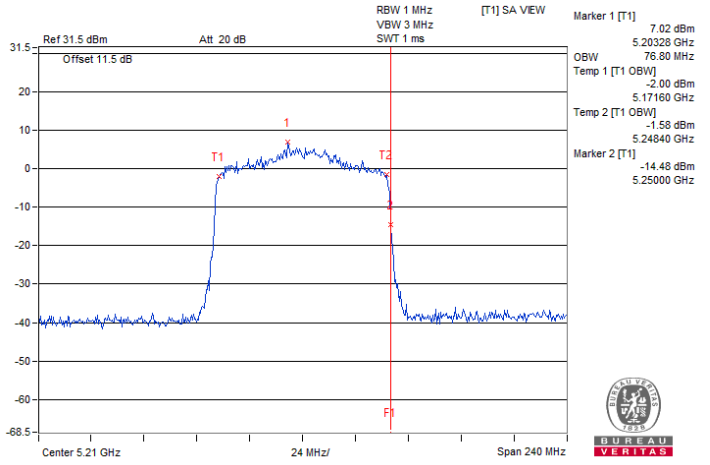
802.11ax (HE20) / Chain 1 : CH 48



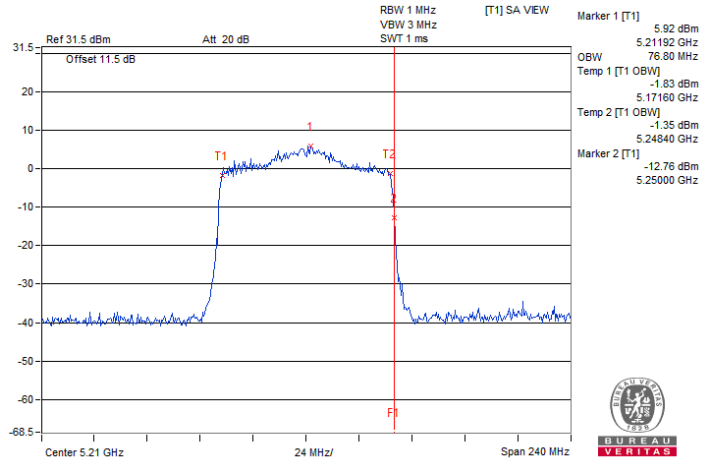
802.11ax (HE40) / Chain 0 : CH 46



802.11ax (HE40) / Chain 1 : CH 46

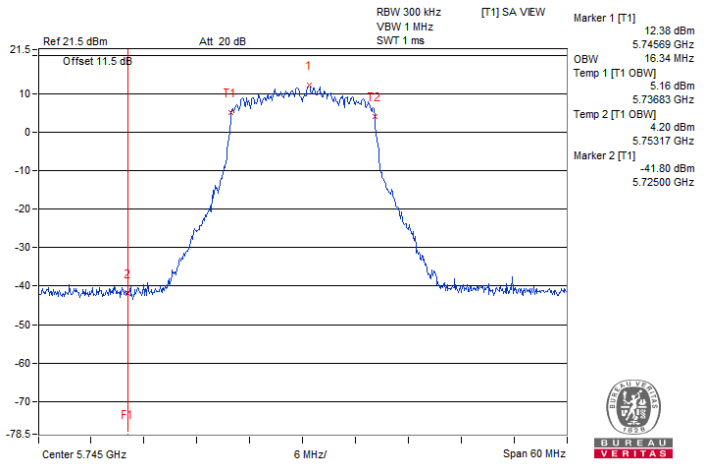


802.11ax (HE80) / Chain 0 : CH 42

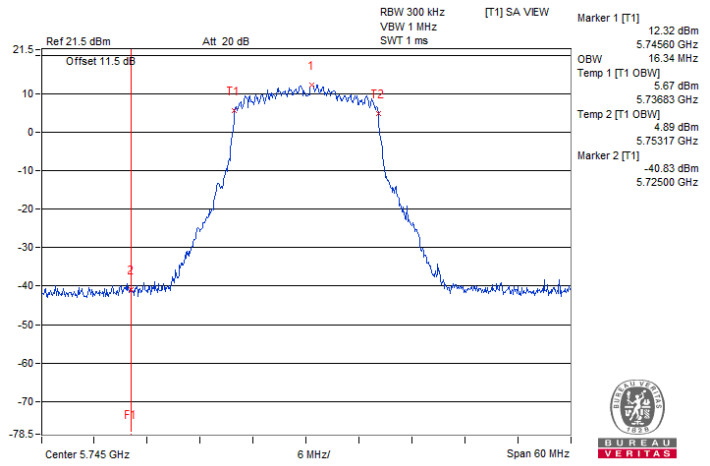


802.11ax (HE80) / Chain 1 : CH 42

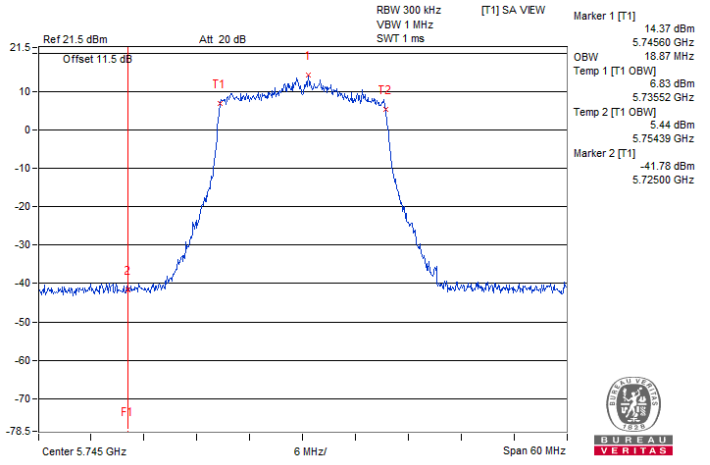
Spectrum Plot for nearby DFS band
(DFS is required, if 99% OCP straddle into U-NII-2C)



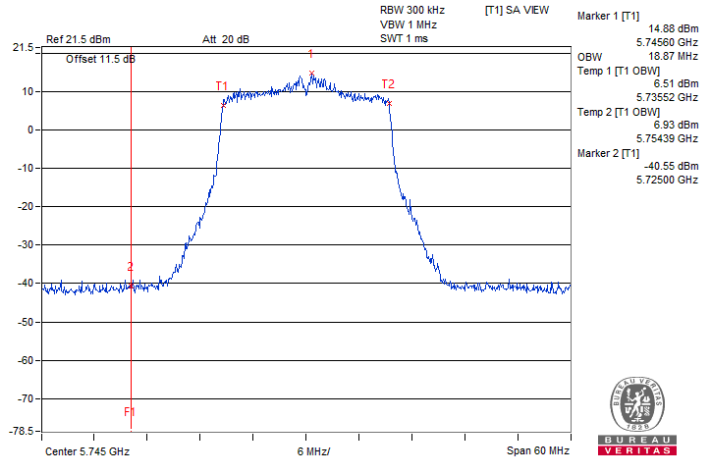
802.11a / Chain 0 : CH 149



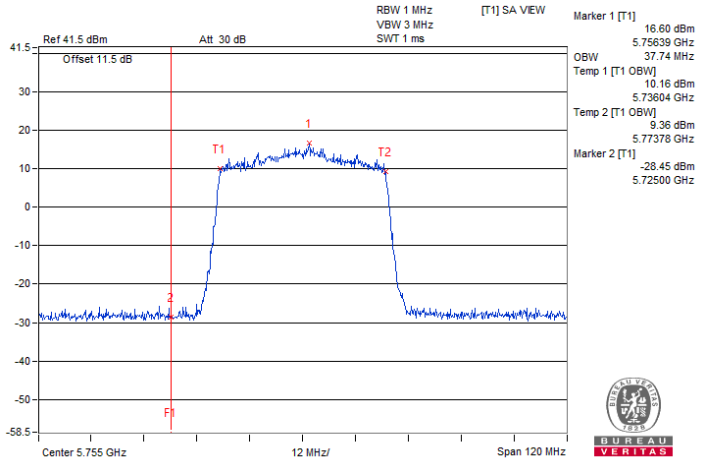
802.11a / Chain 1 : CH 149



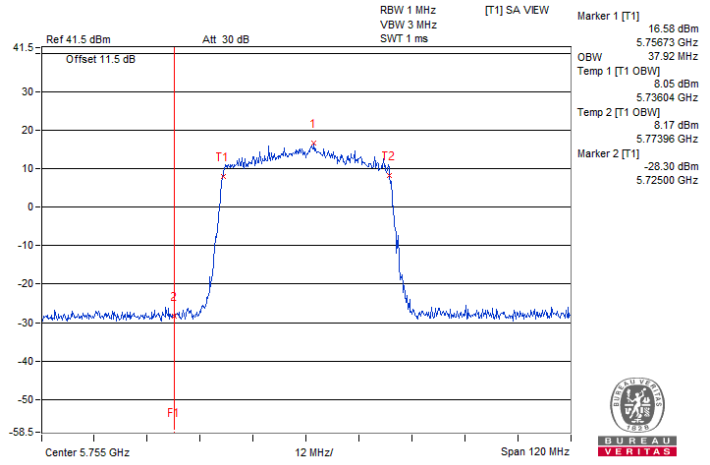
802.11ax (HE20) / Chain 0 : CH 149



802.11ax (HE20) / Chain 1 : CH 149



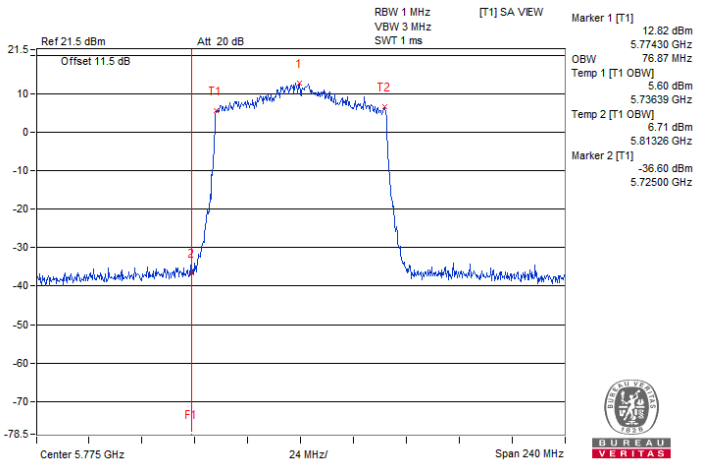
802.11ax (HE40) / Chain 0 : CH 151



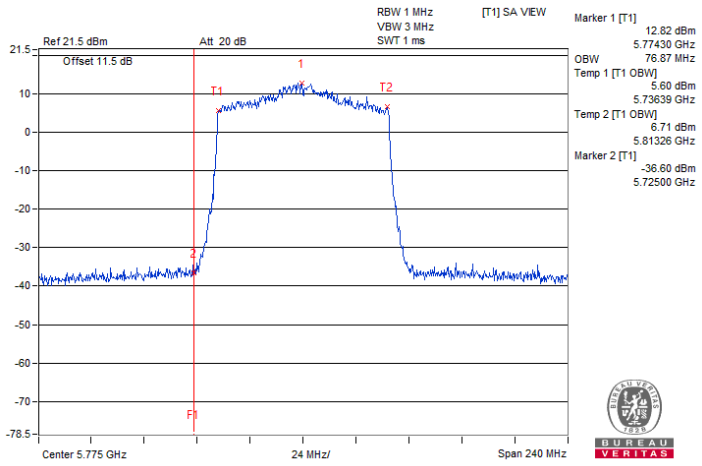
802.11ax (HE40) / Chain 1 : CH 151

Spectrum Plot for nearby DFS band

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



802.11ax (HE80) / Chain 0 : CH 155



802.11ax (HE80) / Chain 1 : CH 155

7.5 Frequency Stability

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

802.11a

Frequency Stability Versus Temperature									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
65	120	5180.0095	Pass	5180.0083	Pass	5180.0104	Pass	5180.0094	Pass
60	120	5179.9959	Pass	5179.9969	Pass	5179.9952	Pass	5179.9952	Pass
50	120	5179.9864	Pass	5179.9891	Pass	5179.99	Pass	5179.9912	Pass
40	120	5179.9878	Pass	5179.9844	Pass	5179.9882	Pass	5179.9834	Pass
30	120	5179.9995	Pass	5179.9992	Pass	5179.9986	Pass	5180.0004	Pass
20	120	5179.9972	Pass	5179.9942	Pass	5179.9967	Pass	5179.9972	Pass
10	120	5180.012	Pass	5180.0124	Pass	5180.0138	Pass	5180.016	Pass
0	120	5180.0176	Pass	5180.0134	Pass	5180.0128	Pass	5180.0158	Pass
-10	120	5180.0212	Pass	5180.0232	Pass	5180.02	Pass	5180.0246	Pass
-20	120	5180.0114	Pass	5180.0123	Pass	5180.0124	Pass	5180.0122	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	138	5179.9981	Pass	5179.9974	Pass	5179.9981	Pass	5180.0011	Pass
	120	5179.9972	Pass	5179.9942	Pass	5179.9967	Pass	5179.9972	Pass
	102	5179.9879	Pass	5179.9895	Pass	5179.9898	Pass	5179.9887	Pass

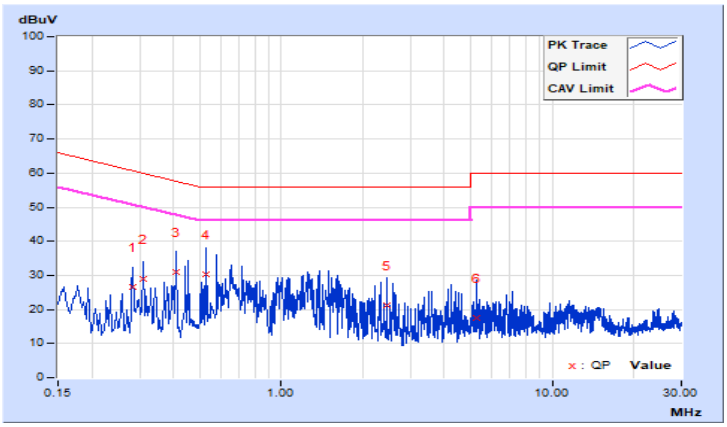
7.6 AC Power Conducted Emissions

RF Mode	802.11ax (HE20)	**Channel**	CH 157：5785 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	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	0.28200	10.15	16.51	2.00	26.66	12.15	60.76	50.76	-34.10	-38.61
2	0.31000	10.15	18.77	0.65	28.92	10.80	59.97	49.97	-31.05	-39.17
3	0.41000	10.16	20.70	2.53	30.86	12.69	57.65	47.65	-26.79	-34.96
4	0.53000	10.16	20.18	1.42	30.34	11.58	56.00	46.00	-25.66	-34.42
5	2.45800	10.23	11.13	6.89	21.36	17.12	56.00	46.00	-34.64	-28.88
6	5.28200	10.27	7.24	7.00	17.51	17.27	60.00	50.00	-42.49	-32.73

Remarks:

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

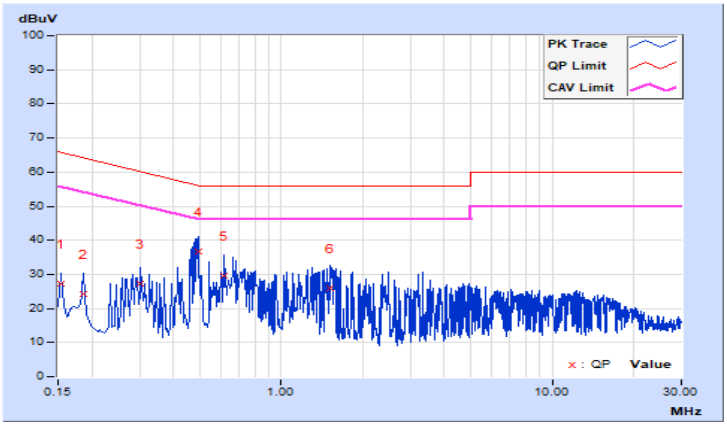


RF Mode	802.11ax (HE20)	Channel	CH 157：5785 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Edison Lee		

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	0.15400	10.13	17.09	8.27	27.22	18.40	65.78	55.78	-38.56	-37.38
2	0.18600	10.14	13.99	3.63	24.13	13.77	64.21	54.21	-40.08	-40.44
3	0.30200	10.16	17.05	0.64	27.21	10.80	60.19	50.19	-32.98	-39.39
4	**0.49400**	**10.17**	**26.38**	**1.17**	**36.55**	**11.34**	**56.10**	**46.10**	**-19.55**	**-34.76**
5	0.61800	10.18	19.29	4.32	29.47	14.50	56.00	46.00	-26.53	-31.50
6	1.51400	10.21	15.62	5.16	25.83	15.37	56.00	46.00	-30.17	-30.63

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



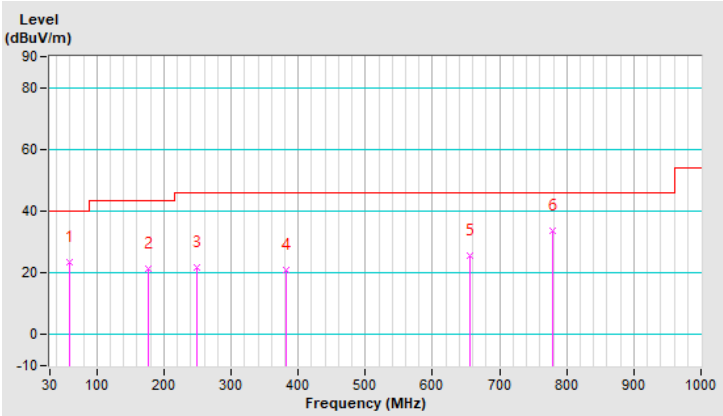
7.7 Unwanted Emissions below 1 GHz

RF Mode	802.11ax (HE20)	**Channel**	CH 157：5785 MHz
Frequency Range	9 kHz ~ 1 GHz	**Detector Function & Bandwidth**	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	19.8°C, 68.7% RH
Tested By	Edison Lee		

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	59.52	23.3 QP	40.0	-16.7	1.00 H	321	37.1	-13.8
2	176.20	21.2 QP	43.5	-22.3	1.50 H	111	35.3	-14.1
3	249.30	21.7 QP	46.0	-24.3	2.00 H	257	36.1	-14.4
4	381.45	21.1 QP	46.0	-24.9	2.00 H	311	31.7	-10.6
5	655.58	25.5 QP	46.0	-20.5	1.50 H	156	30.1	-4.6
6	779.29	33.8 QP	46.0	-12.2	1.00 H	23	36.3	-2.5

Remarks:

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

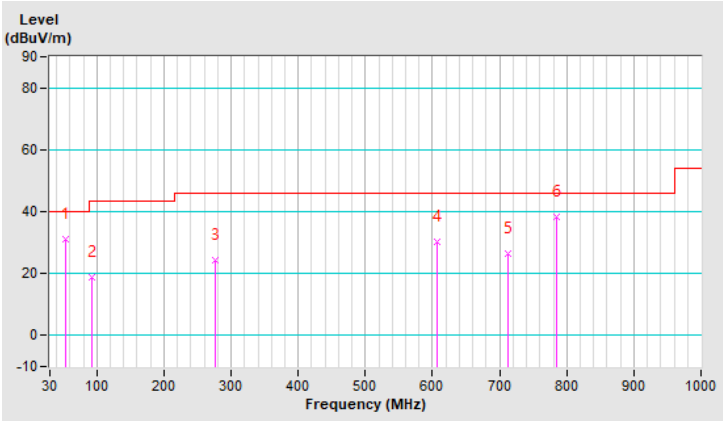


RF Mode	802.11ax (HE20)	Channel	CH 157：5785 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	19.8°C, 68.7% RH
Tested By	Edison Lee		

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	53.90	31.3 QP	40.0	-8.7	1.00 V	222	44.6	-13.3
2	93.26	18.8 QP	43.5	-24.7	1.50 V	322	37.5	-18.7
3	276.01	24.3 QP	46.0	-21.7	1.50 V	150	37.5	-13.2
4	606.38	30.3 QP	46.0	-15.7	2.00 V	196	35.5	-5.2
5	711.81	26.5 QP	46.0	-19.5	1.50 V	299	30.4	-3.9
6	**784.91**	**38.1 QP**	**46.0**	**-7.9**	**1.00 V**	**58**	**40.6**	**-2.5**

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The 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	120 Vac, 60 Hz	**Environmental Conditions**	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	60.5 PK	74.0	-13.5	1.46 H	346	58.4	2.1
2	4800.00	52.4 AV	54.0	-1.6	1.46 H	346	50.3	2.1
3	5040.00	60.4 PK	74.0	-13.6	1.43 H	354	58.2	2.2
4	5040.00	51.9 AV	54.0	-2.1	1.43 H	354	49.7	2.2
5	5150.00	65.7 PK	74.0	-8.3	1.45 H	357	63.2	2.5
6	5150.00	51.1 AV	54.0	-2.9	1.45 H	357	48.6	2.5
7	*5180.00	125.1 PK			1.45 H	354	84.8	40.3
8	*5180.00	113.9 AV			1.45 H	354	73.6	40.3
9	#10360.00	58.1 PK	68.2	-10.1	1.46 H	292	49.6	8.5
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	4800.00	59.0 PK	74.0	-15.0	1.29 V	4	56.9	2.1
2	4800.00	50.4 AV	54.0	-3.6	1.29 V	4	48.3	2.1
3	5040.00	58.6 PK	74.0	-15.4	1.27 V	1	56.4	2.2
4	5040.00	49.8 AV	54.0	-4.2	1.27 V	1	47.6	2.2
5	5150.00	66.1 PK	74.0	-7.9	1.34 V	357	63.6	2.5
6	5150.00	52.0 AV	54.0	-2.0	1.34 V	357	49.5	2.5
7	*5180.00	125.6 PK			1.20 V	352	85.3	40.3
8	*5180.00	114.5 AV			1.20 V	352	74.2	40.3
9	#10360.00	56.4 PK	68.2	-11.8	1.42 V	323	47.9	8.5

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	802.11a	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	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	62.3 PK	74.0	-11.7	1.46 H	353	60.2	2.1
2	4800.00	52.9 AV	54.0	-1.1	1.46 H	353	50.8	2.1
3	5040.00	61.9 PK	74.0	-12.1	1.42 H	356	59.7	2.2
4	5040.00	52.1 AV	54.0	-1.9	1.42 H	356	49.9	2.2
5	*5200.00	125.0 PK			1.50 H	358	84.8	40.2
6	*5200.00	114.0 AV			1.50 H	358	73.8	40.2
7	#10400.00	58.6 PK	68.2	-9.6	1.53 H	302	50.2	8.4
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	4800.00	59.5 PK	74.0	-14.5	1.31 V	5	57.4	2.1
2	4800.00	50.9 AV	54.0	-3.1	1.31 V	5	48.8	2.1
3	5040.00	59.4 PK	74.0	-14.6	1.25 V	359	57.2	2.2
4	5040.00	50.5 AV	54.0	-3.5	1.25 V	359	48.3	2.2
5	*5200.00	125.8 PK			1.29 V	3	85.6	40.2
6	*5200.00	114.7 AV			1.29 V	3	74.5	40.2
7	#10400.00	56.7 PK	68.2	-11.5	1.57 V	332	48.3	8.4

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 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	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	60.4 PK	74.0	-13.6	1.46 H	347	58.3	2.1
2	4800.00	52.2 AV	54.0	-1.8	1.46 H	347	50.1	2.1
3	5040.00	60.0 PK	74.0	-14.0	1.41 H	355	57.8	2.2
4	5040.00	51.5 AV	54.0	-2.5	1.41 H	355	49.3	2.2
5	*5240.00	124.4 PK			1.46 H	359	84.3	40.1
6	*5240.00	113.3 AV			1.46 H	359	73.2	40.1
7	5350.00	59.3 PK	74.0	-14.7	1.51 H	356	57.2	2.1
8	5350.00	46.6 AV	54.0	-7.4	1.51 H	356	44.5	2.1
9	#10480.00	58.0 PK	68.2	-10.2	1.56 H	296	49.5	8.5
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	4800.00	58.7 PK	74.0	-15.3	1.30 V	3	56.6	2.1
2	4800.00	49.9 AV	54.0	-4.1	1.30 V	3	47.8	2.1
3	5040.00	58.5 PK	74.0	-15.5	1.25 V	358	56.3	2.2
4	5040.00	49.5 AV	54.0	-4.5	1.25 V	358	47.3	2.2
5	*5240.00	125.0 PK			1.31 V	353	84.9	40.1
6	*5240.00	114.0 AV			1.31 V	353	73.9	40.1
7	5350.00	60.7 PK	74.0	-13.3	1.28 V	347	58.6	2.1
8	5350.00	47.7 AV	54.0	-6.3	1.28 V	347	45.6	2.1
9	#10480.00	56.1 PK	68.2	-12.1	1.39 V	325	47.6	8.5

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	802.11a	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	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	60.5 PK	74.0	-13.5	1.43 H	351	58.4	2.1
2	4800.00	51.5 AV	54.0	-2.5	1.43 H	351	49.4	2.1
3	5040.00	59.5 PK	74.0	-14.5	1.53 H	357	57.3	2.2
4	5040.00	50.6 AV	54.0	-3.4	1.53 H	357	48.4	2.2
5	#5647.20	63.7 PK	68.2	-4.5	1.45 H	357	60.3	3.4
6	*5745.00	129.3 PK			1.45 H	357	87.6	41.7
7	*5745.00	119.3 AV			1.45 H	357	77.6	41.7
8	#5946.80	59.8 PK	68.2	-8.4	1.45 H	357	56.1	3.7
9	11490.00	66.4 PK	74.0	-7.6	1.61 H	270	56.8	9.6
10	11490.00	53.3 AV	54.0	-0.7	1.61 H	270	43.7	9.6

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	4800.00	59.5 PK	74.0	-14.5	1.33 V	3	57.4	2.1
2	4800.00	50.2 AV	54.0	-3.8	1.33 V	3	48.1	2.1
3	5040.00	59.3 PK	74.0	-14.7	1.28 V	356	57.1	2.2
4	5040.00	48.8 AV	54.0	-5.2	1.28 V	356	46.6	2.2
5	#5647.60	65.9 PK	68.2	-2.3	1.35 V	6	62.5	3.4
6	*5745.00	130.2 PK			1.35 V	6	88.5	41.7
7	*5745.00	120.1 AV			1.35 V	6	78.4	41.7
8	#5955.20	62.1 PK	68.2	-6.1	1.35 V	6	58.3	3.8
9	11490.00	65.2 PK	74.0	-8.8	2.92 V	251	55.6	9.6
10	11490.00	52.7 AV	54.0	-1.3	2.92 V	251	43.1	9.6

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.

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	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	60.4 PK	74.0	-13.6	1.46 H	355	58.3	2.1
2	4800.00	51.3 AV	54.0	-2.7	1.46 H	355	49.2	2.1
3	5040.00	59.6 PK	74.0	-14.4	1.55 H	356	57.4	2.2
4	5040.00	50.6 AV	54.0	-3.4	1.55 H	356	48.4	2.2
5	#5602.80	62.1 PK	68.2	-6.1	1.47 H	357	58.9	3.2
6	*5785.00	128.6 PK			1.47 H	357	86.8	41.8
7	*5785.00	118.5 AV			1.47 H	357	76.7	41.8
8	#5982.80	60.4 PK	68.2	-7.8	1.47 H	357	56.4	4.0
9	11570.00	65.0 PK	74.0	-9.0	1.58 H	281	55.4	9.6
10	11570.00	52.9 AV	54.0	-1.1	1.58 H	281	43.3	9.6
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	4800.00	59.6 PK	74.0	-14.4	1.34 V	5	57.5	2.1
2	4800.00	50.2 AV	54.0	-3.8	1.34 V	5	48.1	2.1
3	5040.00	59.4 PK	74.0	-14.6	1.29 V	358	57.2	2.2
4	5040.00	48.7 AV	54.0	-5.3	1.29 V	358	46.5	2.2
5	#5620.00	63.4 PK	68.2	-4.8	1.39 V	7	60.1	3.3
6	*5785.00	129.4 PK			1.39 V	7	87.6	41.8
7	*5785.00	119.2 AV			1.39 V	7	77.4	41.8
8	#5975.60	61.3 PK	68.2	-6.9	1.39 V	7	57.3	4.0
9	11570.00	64.9 PK	74.0	-9.1	2.91 V	248	55.3	9.6
10	11570.00	52.3 AV	54.0	-1.7	2.91 V	248	42.7	9.6

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 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	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	60.7 PK	74.0	-13.3	1.44 H	352	58.6	2.1
2	4800.00	51.6 AV	54.0	-2.4	1.44 H	352	49.5	2.1
3	5040.00	59.5 PK	74.0	-14.5	1.55 H	357	57.3	2.2
4	5040.00	50.5 AV	54.0	-3.5	1.55 H	357	48.3	2.2
5	#5611.60	61.9 PK	68.2	-6.3	1.43 H	356	58.7	3.2
6	*5825.00	126.4 PK			1.43 H	356	84.6	41.8
7	*5825.00	116.3 AV			1.43 H	356	74.5	41.8
8	#5928.80	60.7 PK	68.2	-7.5	1.43 H	356	57.0	3.7
9	11650.00	63.6 PK	74.0	-10.4	1.52 H	276	54.1	9.5
10	11650.00	52.0 AV	54.0	-2.0	1.52 H	276	42.5	9.5
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	4800.00	59.6 PK	74.0	-14.4	1.34 V	2	57.5	2.1
2	4800.00	50.3 AV	54.0	-3.7	1.34 V	2	48.2	2.1
3	5040.00	59.5 PK	74.0	-14.5	1.29 V	355	57.3	2.2
4	5040.00	48.7 AV	54.0	-5.3	1.29 V	355	46.5	2.2
5	#5622.00	63.2 PK	68.2	-5.0	1.34 V	6	59.9	3.3
6	*5825.00	127.3 PK			1.34 V	6	85.5	41.8
7	*5825.00	117.1 AV			1.34 V	6	75.3	41.8
8	#5929.20	62.4 PK	68.2	-5.8	1.34 V	6	58.7	3.7
9	11650.00	64.8 PK	74.0	-9.2	2.87 V	246	55.3	9.5
10	11650.00	52.3 AV	54.0	-1.7	2.87 V	246	42.8	9.5

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 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	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	60.7 PK	74.0	-13.3	1.47 H	348	58.6	2.1
2	4800.00	52.5 AV	54.0	-1.5	1.47 H	348	50.4	2.1
3	5040.00	60.6 PK	74.0	-13.4	1.41 H	358	58.4	2.2
4	5040.00	51.8 AV	54.0	-2.2	1.41 H	358	49.6	2.2
5	5150.00	64.3 PK	74.0	-9.7	1.49 H	2	61.8	2.5
6	5150.00	50.8 AV	54.0	-3.2	1.49 H	2	48.3	2.5
7	*5180.00	125.8 PK			1.45 H	5	85.5	40.3
8	*5180.00	112.8 AV			1.45 H	5	72.5	40.3
9	#10360.00	58.3 PK	68.2	-9.9	1.53 H	306	49.8	8.5
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	4800.00	59.4 PK	74.0	-14.6	1.30 V	6	57.3	2.1
2	4800.00	50.6 AV	54.0	-3.4	1.30 V	6	48.5	2.1
3	5040.00	58.5 PK	74.0	-15.5	1.25 V	2	56.3	2.2
4	5040.00	49.6 AV	54.0	-4.4	1.25 V	2	47.4	2.2
5	5150.00	65.9 PK	74.0	-8.1	1.31 V	359	63.4	2.5
6	5150.00	51.8 AV	54.0	-2.2	1.31 V	359	49.3	2.5
7	*5180.00	126.5 PK			1.33 V	356	86.2	40.3
8	*5180.00	113.6 AV			1.33 V	356	73.3	40.3
9	#10360.00	56.6 PK	68.2	-11.6	1.62 V	332	48.1	8.5

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 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	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	61.3 PK	74.0	-12.7	1.48 H	350	59.2	2.1
2	4800.00	52.8 AV	54.0	-1.2	1.48 H	350	50.7	2.1
3	5040.00	60.9 PK	74.0	-13.1	1.43 H	357	58.7	2.2
4	5040.00	52.0 AV	54.0	-2.0	1.43 H	357	49.8	2.2
5	*5200.00	126.4 PK			1.49 H	359	86.2	40.2
6	*5200.00	113.3 AV			1.49 H	359	73.1	40.2
7	#10400.00	58.7 PK	68.2	-9.5	1.49 H	296	50.3	8.4
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	4800.00	59.5 PK	74.0	-14.5	1.31 V	6	57.4	2.1
2	4800.00	50.6 AV	54.0	-3.4	1.31 V	6	48.5	2.1
3	5040.00	59.1 PK	74.0	-14.9	1.26 V	3	56.9	2.2
4	5040.00	50.0 AV	54.0	-4.0	1.26 V	3	47.8	2.2
5	*5200.00	127.3 PK			1.32 V	8	87.1	40.2
6	*5200.00	114.2 AV			1.32 V	8	74.0	40.2
7	#10400.00	56.7 PK	68.2	-11.5	1.57 V	331	48.3	8.4

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 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	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	60.3 PK	74.0	-13.7	1.54 H	346	58.2	2.1
2	4800.00	51.9 AV	54.0	-2.1	1.54 H	346	49.8	2.1
3	5040.00	60.0 PK	74.0	-14.0	1.46 H	357	57.8	2.2
4	5040.00	51.6 AV	54.0	-2.4	1.46 H	357	49.4	2.2
5	*5240.00	125.5 PK			1.45 H	357	85.4	40.1
6	*5240.00	112.5 AV			1.45 H	357	72.4	40.1
7	5350.00	60.7 PK	74.0	-13.3	1.42 H	3	58.6	2.1
8	5350.00	47.3 AV	54.0	-6.7	1.42 H	3	45.2	2.1
9	#10480.00	58.7 PK	68.2	-9.5	1.49 H	298	50.2	8.5
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	4800.00	59.0 PK	74.0	-15.0	1.28 V	2	56.9	2.1
2	4800.00	50.2 AV	54.0	-3.8	1.28 V	2	48.1	2.1
3	5040.00	58.5 PK	74.0	-15.5	1.23 V	359	56.3	2.2
4	5040.00	49.4 AV	54.0	-4.6	1.23 V	359	47.2	2.2
5	*5240.00	126.5 PK			1.34 V	355	86.4	40.1
6	*5240.00	113.4 AV			1.34 V	355	73.3	40.1
7	5350.00	61.5 PK	74.0	-12.5	1.33 V	349	59.4	2.1
8	5350.00	48.3 AV	54.0	-5.7	1.33 V	349	46.2	2.1
9	#10480.00	56.7 PK	68.2	-11.5	1.63 V	334	48.2	8.5

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	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	59.6 PK	74.0	-14.4	1.47 H	353	57.5	2.1
2	4800.00	50.6 AV	54.0	-3.4	1.47 H	353	48.5	2.1
3	5040.00	59.4 PK	74.0	-14.6	1.51 H	358	57.2	2.2
4	5040.00	50.5 AV	54.0	-3.5	1.51 H	358	48.3	2.2
5	#5634.40	64.8 PK	68.2	-3.4	1.54 H	3	61.5	3.3
6	*5745.00	131.3 PK			1.54 H	3	89.6	41.7
7	*5745.00	119.2 AV			1.54 H	3	77.5	41.7
8	#5988.40	62.6 PK	68.2	-5.6	1.54 H	3	58.6	4.0
9	11490.00	65.4 PK	74.0	-8.6	1.53 H	275	55.8	9.6
10	11490.00	53.2 AV	54.0	-0.8	1.53 H	275	43.6	9.6
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	4800.00	59.2 PK	74.0	-14.8	1.43 V	4	57.1	2.1
2	4800.00	50.0 AV	54.0	-4.0	1.43 V	4	47.9	2.1
3	5040.00	59.5 PK	74.0	-14.5	1.49 V	7	57.3	2.2
4	5040.00	49.0 AV	54.0	-5.0	1.49 V	7	46.8	2.2
5	#5648.80	66.2 PK	68.2	-2.0	1.45 V	9	62.8	3.4
6	*5745.00	132.0 PK			1.45 V	9	90.3	41.7
7	*5745.00	119.8 AV			1.45 V	9	78.1	41.7
8	#5935.20	64.0 PK	68.2	-4.2	1.45 V	9	60.3	3.7
9	11490.00	64.9 PK	74.0	-9.1	2.87 V	249	55.3	9.6
10	11490.00	52.5 AV	54.0	-1.5	2.87 V	249	42.9	9.6

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.

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	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	59.7 PK	74.0	-14.3	1.48 H	352	57.6	2.1
2	4800.00	50.7 AV	54.0	-3.3	1.48 H	352	48.6	2.1
3	5040.00	59.4 PK	74.0	-14.6	1.51 H	355	57.2	2.2
4	5040.00	50.6 AV	54.0	-3.4	1.51 H	355	48.4	2.2
5	#5632.80	62.3 PK	68.2	-5.9	1.49 H	358	59.0	3.3
6	*5785.00	130.5 PK			1.49 H	358	88.7	41.8
7	*5785.00	117.9 AV			1.49 H	358	76.1	41.8
8	#5938.40	60.3 PK	68.2	-7.9	1.49 H	358	56.6	3.7
9	11570.00	65.2 PK	74.0	-8.8	1.56 H	279	55.6	9.6
10	11570.00	52.8 AV	54.0	-1.2	1.56 H	279	43.2	9.6
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	4800.00	59.4 PK	74.0	-14.6	1.33 V	4	57.3	2.1
2	4800.00	50.1 AV	54.0	-3.9	1.33 V	4	48.0	2.1
3	5040.00	59.6 PK	74.0	-14.4	1.38 V	353	57.4	2.2
4	5040.00	48.9 AV	54.0	-5.1	1.38 V	353	46.7	2.2
5	#5608.40	62.2 PK	68.2	-6.0	1.37 V	3	59.0	3.2
6	*5785.00	131.4 PK			1.37 V	3	89.6	41.8
7	*5785.00	118.8 AV			1.37 V	3	77.0	41.8
8	#5949.60	60.7 PK	68.2	-7.5	1.37 V	3	56.9	3.8
9	11570.00	64.4 PK	74.0	-9.6	2.84 V	252	54.8	9.6
10	11570.00	52.1 AV	54.0	-1.9	2.84 V	252	42.5	9.6

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 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	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	60.2 PK	74.0	-13.8	1.46 H	356	58.1	2.1
2	4800.00	50.9 AV	54.0	-3.1	1.46 H	356	48.8	2.1
3	5040.00	59.8 PK	74.0	-14.2	1.50 H	354	57.6	2.2
4	5040.00	50.7 AV	54.0	-3.3	1.50 H	354	48.5	2.2
5	#5632.40	61.2 PK	68.2	-7.0	1.46 H	355	57.9	3.3
6	*5825.00	129.9 PK			1.46 H	355	88.1	41.8
7	*5825.00	117.1 AV			1.46 H	355	75.3	41.8
8	#5945.60	60.5 PK	68.2	-7.7	1.46 H	355	56.8	3.7
9	11650.00	63.8 PK	74.0	-10.2	1.53 H	282	54.3	9.5
10	11650.00	52.1 AV	54.0	-1.9	1.53 H	282	42.6	9.5
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	4800.00	59.5 PK	74.0	-14.5	1.32 V	8	57.4	2.1
2	4800.00	50.2 AV	54.0	-3.8	1.32 V	8	48.1	2.1
3	5040.00	59.6 PK	74.0	-14.4	1.33 V	357	57.4	2.2
4	5040.00	49.1 AV	54.0	-4.9	1.33 V	357	46.9	2.2
5	#5635.60	62.6 PK	68.2	-5.6	1.36 V	5	59.2	3.4
6	*5825.00	130.4 PK			1.36 V	5	88.6	41.8
7	*5825.00	117.9 AV			1.36 V	5	76.1	41.8
8	#5957.60	61.7 PK	68.2	-6.5	1.36 V	5	57.8	3.9
9	11650.00	62.9 PK	74.0	-11.1	2.91 V	254	53.4	9.5
10	11650.00	51.3 AV	54.0	-2.7	2.91 V	254	41.8	9.5

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 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	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	60.9 PK	74.0	-13.1	1.38 H	352	58.8	2.1
2	4800.00	53.0 AV	54.0	-1.0	1.38 H	352	50.9	2.1
3	5040.00	60.5 PK	74.0	-13.5	1.44 H	356	58.3	2.2
4	5040.00	52.4 AV	54.0	-1.6	1.44 H	356	50.2	2.2
5	5150.00	66.4 PK	74.0	-7.6	1.37 H	357	63.9	2.5
6	5150.00	53.0 AV	54.0	-1.0	1.37 H	357	50.5	2.5
7	*5190.00	121.1 PK			1.59 H	356	80.8	40.3
8	*5190.00	108.5 AV			1.59 H	356	68.2	40.3
9	#10380.00	57.2 PK	68.2	-11.0	1.45 H	291	48.7	8.5
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	4800.00	58.6 PK	74.0	-15.4	1.34 V	1	56.5	2.1
2	4800.00	49.7 AV	54.0	-4.3	1.34 V	1	47.6	2.1
3	5040.00	58.4 PK	74.0	-15.6	1.26 V	359	56.2	2.2
4	5040.00	49.3 AV	54.0	-4.7	1.26 V	359	47.1	2.2
5	5150.00	66.9 PK	74.0	-7.1	1.37 V	358	64.4	2.5
6	**5150.00**	**53.6 AV**	**54.0**	**-0.4**	**1.37 V**	**358**	**51.1**	**2.5**
7	*5190.00	122.1 PK			1.41 V	356	81.8	40.3
8	*5190.00	109.4 AV			1.41 V	356	69.1	40.3
9	#10380.00	56.1 PK	68.2	-12.1	1.67 V	326	47.6	8.5

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	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	60.6 PK	74.0	-13.4	1.35 H	355	58.5	2.1
2	4800.00	51.9 AV	54.0	-2.1	1.35 H	355	49.8	2.1
3	5040.00	60.0 PK	74.0	-14.0	1.41 H	3	57.8	2.2
4	5040.00	50.9 AV	54.0	-3.1	1.41 H	3	48.7	2.2
5	*5230.00	123.0 PK			1.46 H	358	82.9	40.1
6	*5230.00	110.5 AV			1.46 H	358	70.4	40.1
7	5350.00	60.8 PK	74.0	-13.2	1.43 H	355	58.7	2.1
8	5350.00	48.6 AV	54.0	-5.4	1.43 H	355	46.5	2.1
9	#10460.00	57.1 PK	68.2	-11.1	1.49 H	297	48.6	8.5
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	4800.00	58.4 PK	74.0	-15.6	1.35 V	2	56.3	2.1
2	4800.00	49.3 AV	54.0	-4.7	1.35 V	2	47.2	2.1
3	5040.00	58.0 PK	74.0	-16.0	1.33 V	357	55.8	2.2
4	5040.00	49.0 AV	54.0	-5.0	1.33 V	357	46.8	2.2
5	*5230.00	124.2 PK			1.35 V	359	84.1	40.1
6	*5230.00	111.3 AV			1.35 V	359	71.2	40.1
7	5350.00	61.5 PK	74.0	-12.5	1.28 V	354	59.4	2.1
8	5350.00	49.4 AV	54.0	-4.6	1.28 V	354	47.3	2.1
9	#10460.00	55.9 PK	68.2	-12.3	1.56 V	324	47.4	8.5

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	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	59.7 PK	74.0	-14.3	1.45 H	358	57.6	2.1
2	4800.00	50.5 AV	54.0	-3.5	1.45 H	358	48.4	2.1
3	5040.00	59.5 PK	74.0	-14.5	1.52 H	354	57.3	2.2
4	5040.00	50.4 AV	54.0	-3.6	1.52 H	354	48.2	2.2
5	#5643.60	65.8 PK	68.2	-2.4	1.47 H	1	62.4	3.4
6	#5650.00	66.7 PK	68.2	-1.5	1.51 H	2	63.3	3.4
7	*5755.00	127.1 PK			1.47 H	1	85.3	41.8
8	*5755.00	114.6 AV			1.47 H	1	72.8	41.8
9	#5967.20	60.7 PK	68.2	-7.5	1.47 H	1	56.8	3.9
10	11510.00	64.9 PK	74.0	-9.1	1.56 H	273	55.3	9.6
11	11510.00	52.0 AV	54.0	-2.0	1.56 H	273	42.4	9.6
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	4800.00	58.9 PK	74.0	-15.1	1.37 V	8	56.8	2.1
2	4800.00	49.6 AV	54.0	-4.4	1.37 V	8	47.5	2.1
3	5040.00	58.8 PK	74.0	-15.2	1.34 V	356	56.6	2.2
4	5040.00	48.6 AV	54.0	-5.4	1.34 V	356	46.4	2.2
5	#5647.60	66.3 PK	68.2	-1.9	1.26 V	359	62.9	3.4
6	#5650.00	67.3 PK	68.2	-0.9	1.30 V	357	63.9	3.4
7	*5755.00	128.0 PK			1.26 V	359	86.2	41.8
8	*5755.00	115.4 AV			1.26 V	359	73.6	41.8
9	#5942.00	60.4 PK	68.2	-7.8	1.26 V	359	56.7	3.7
10	11510.00	64.3 PK	74.0	-9.7	2.88 V	253	54.7	9.6
11	11510.00	51.2 AV	54.0	-2.8	2.88 V	253	41.6	9.6

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 (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	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	59.8 PK	74.0	-14.2	1.50 H	352	57.7	2.1
2	4800.00	50.7 AV	54.0	-3.3	1.50 H	352	48.6	2.1
3	5040.00	59.5 PK	74.0	-14.5	1.49 H	356	57.3	2.2
4	5040.00	50.6 AV	54.0	-3.4	1.49 H	356	48.4	2.2
5	#5648.40	63.0 PK	68.2	-5.2	1.51 H	357	59.6	3.4
6	#5650.00	66.5 PK	68.2	-1.7	1.50 H	3	63.1	3.4
7	*5795.00	127.0 PK			1.51 H	357	85.2	41.8
8	*5795.00	113.9 AV			1.51 H	357	72.1	41.8
9	#5969.20	61.5 PK	68.2	-6.7	1.51 H	357	57.6	3.9
10	11590.00	64.6 PK	74.0	-9.4	1.62 H	279	55.1	9.5
11	11590.00	51.7 AV	54.0	-2.3	1.62 H	279	42.2	9.5
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	4800.00	59.2 PK	74.0	-14.8	1.34 V	4	57.1	2.1
2	4800.00	49.7 AV	54.0	-4.3	1.34 V	4	47.6	2.1
3	5040.00	59.0 PK	74.0	-15.0	1.33 V	354	56.8	2.2
4	5040.00	48.7 AV	54.0	-5.3	1.33 V	354	46.5	2.2
5	#5646.40	65.3 PK	68.2	-2.9	1.27 V	2	61.9	3.4
6	#5650.00	67.2 PK	68.2	-1.0	1.34 V	358	63.8	3.4
7	*5795.00	127.7 PK			1.27 V	2	85.9	41.8
8	*5795.00	115.1 AV			1.27 V	2	73.3	41.8
9	#5942.40	61.7 PK	68.2	-6.5	1.27 V	2	58.0	3.7
10	11590.00	64.0 PK	74.0	-10.0	2.93 V	262	54.5	9.5
11	11590.00	50.9 AV	54.0	-3.1	2.93 V	262	41.4	9.5

Remarks:

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

RF Mode	802.11ax (HE80)	**Channel**	CH 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	120 Vac, 60 Hz	**Environmental Conditions**	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	59.3 PK	74.0	-14.7	1.33 H	358	57.2	2.1
2	4800.00	47.3 AV	54.0	-6.7	1.33 H	358	45.2	2.1
3	5040.00	59.3 PK	74.0	-14.7	1.34 H	351	57.1	2.2
4	5040.00	47.0 AV	54.0	-7.0	1.34 H	351	44.8	2.2
5	5150.00	64.8 PK	74.0	-9.2	1.49 H	356	62.3	2.5
6	5150.00	52.7 AV	54.0	-1.3	1.49 H	356	50.2	2.5
7	*5210.00	117.0 PK			1.37 H	354	76.8	40.2
8	*5210.00	104.3 AV			1.37 H	354	64.1	40.2
9	#10420.00	56.7 PK	68.2	-11.5	1.48 H	294	48.3	8.4
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	4800.00	58.8 PK	74.0	-15.2	1.37 V	3	56.7	2.1
2	4800.00	46.4 AV	54.0	-7.6	1.37 V	3	44.3	2.1
3	5040.00	58.5 PK	74.0	-15.5	1.29 V	358	56.3	2.2
4	5040.00	45.8 AV	54.0	-8.2	1.29 V	358	43.6	2.2
5	5150.00	65.8 PK	74.0	-8.2	1.48 V	357	63.3	2.5
6	5150.00	53.1 AV	54.0	-0.9	1.48 V	357	50.6	2.5
7	*5210.00	117.8 PK			1.54 V	5	77.6	40.2
8	*5210.00	105.0 AV			1.54 V	5	64.8	40.2
9	#10420.00	55.8 PK	68.2	-12.4	1.56 V	331	47.4	8.4

Remarks:

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

RF Mode	802.11ax (HE80)	Channel	CH 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	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Edison Lee		

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	4800.00	59.5 PK	74.0	-14.5	1.47 H	355	57.4	2.1
2	4800.00	50.3 AV	54.0	-3.7	1.47 H	355	48.2	2.1
3	5040.00	58.9 PK	74.0	-15.1	1.48 H	353	56.7	2.2
4	5040.00	50.0 AV	54.0	-4.0	1.48 H	353	47.8	2.2
5	#5644.80	64.8 PK	68.2	-3.4	1.56 H	1	61.4	3.4
6	#5650.00	66.6 PK	68.2	-1.6	1.46 H	3	63.2	3.4
7	*5775.00	123.6 PK			1.56 H	1	81.9	41.7
8	*5775.00	111.0 AV			1.56 H	1	69.3	41.7
9	#5928.00	61.6 PK	68.2	-6.6	1.56 H	1	57.9	3.7
10	11550.00	64.4 PK	74.0	-9.6	1.67 H	284	54.8	9.6
11	11550.00	51.4 AV	54.0	-2.6	1.67 H	284	41.8	9.6
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	4800.00	58.9 PK	74.0	-15.1	1.33 V	2	56.8	2.1
2	4800.00	49.4 AV	54.0	-4.6	1.33 V	2	47.3	2.1
3	5040.00	58.6 PK	74.0	-15.4	1.28 V	356	56.4	2.2
4	5040.00	48.5 AV	54.0	-5.5	1.28 V	356	46.3	2.2
5	#5648.40	65.5 PK	68.2	-2.7	1.36 V	357	62.1	3.4
6	#5650.00	67.5 PK	68.2	-0.7	1.27 V	3	64.1	3.4
7	*5775.00	124.8 PK			1.36 V	357	83.1	41.7
8	*5775.00	112.1 AV			1.36 V	357	70.4	41.7
9	#5935.60	61.6 PK	68.2	-6.6	1.36 V	357	57.9	3.7
10	11550.00	63.4 PK	74.0	-10.6	2.87 V	264	53.8	9.6
11	11550.00	50.4 AV	54.0	-3.6	2.87 V	264	40.8	9.6

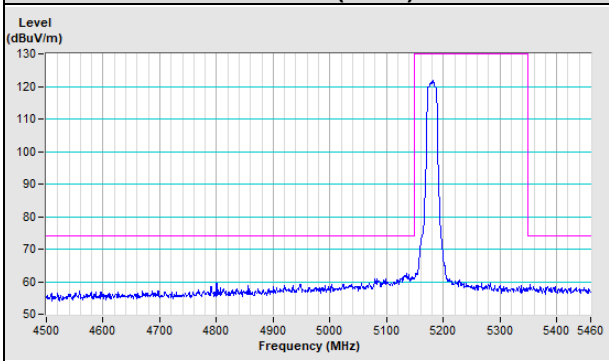
Remarks:

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.

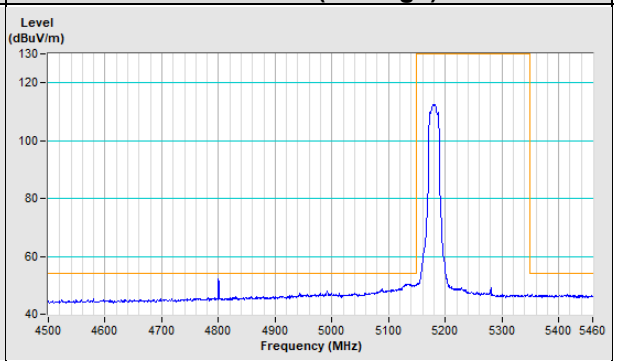
Band Edge

802.11a Channel 36

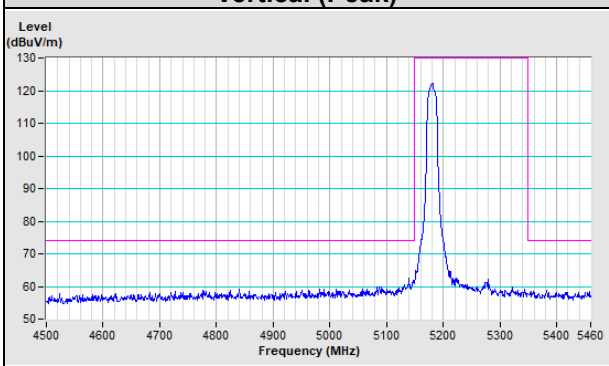
Horizontal (Peak)



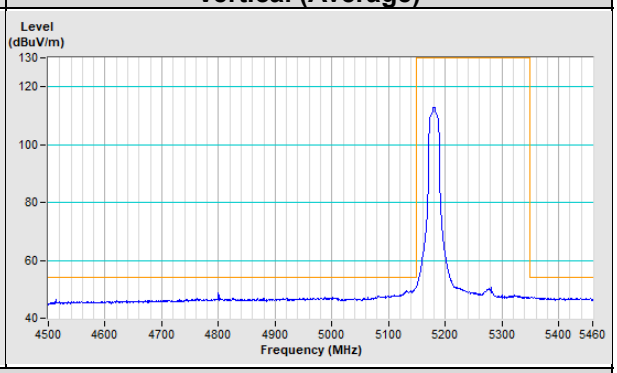
Horizontal (Average)



Vertical (Peak)

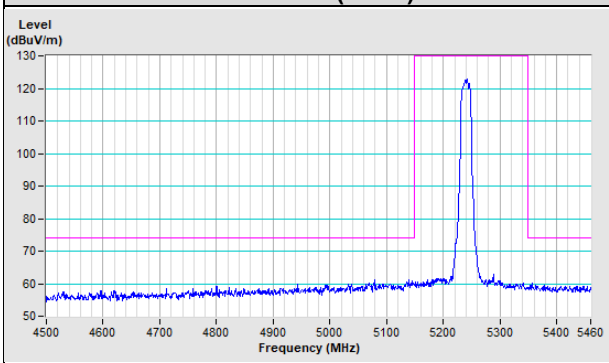


Vertical (Average)

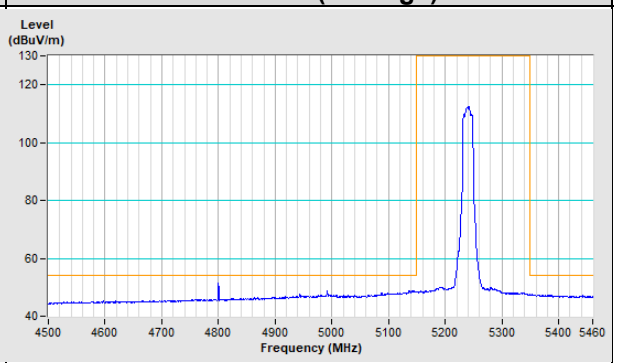


802.11a Channel 48

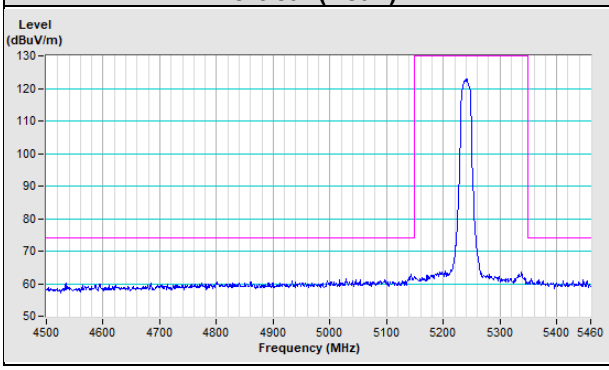
Horizontal (Peak)



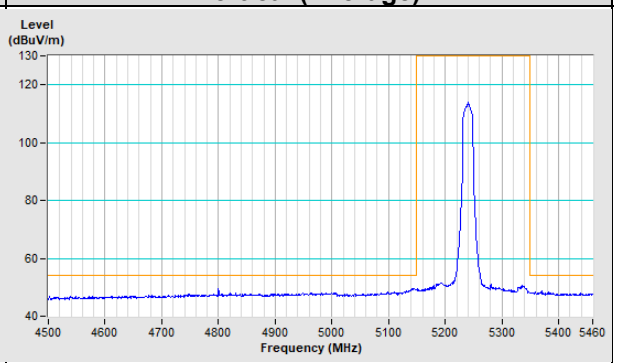
Horizontal (Average)



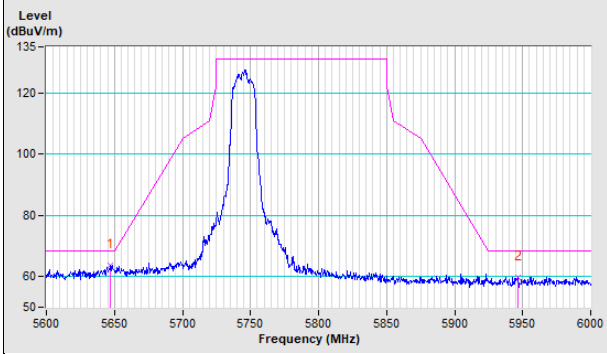
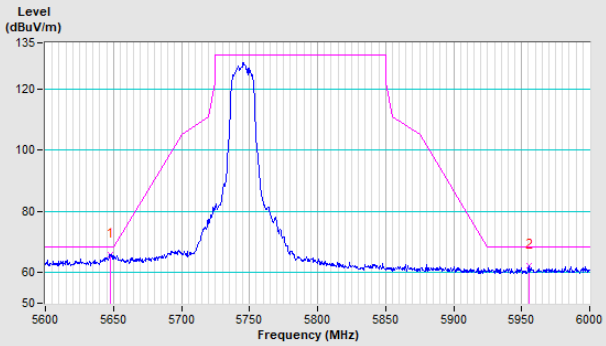
Vertical (Peak)



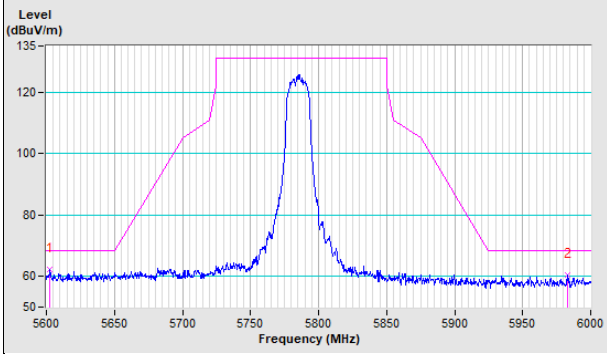
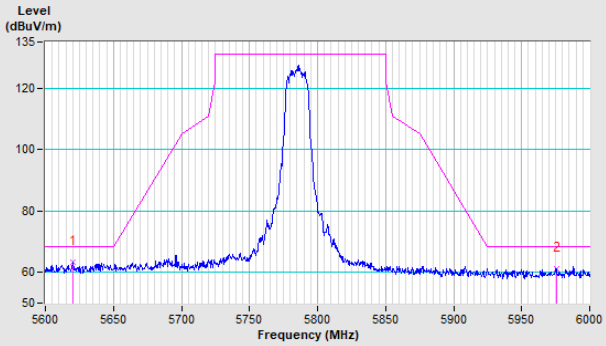
Vertical (Average)



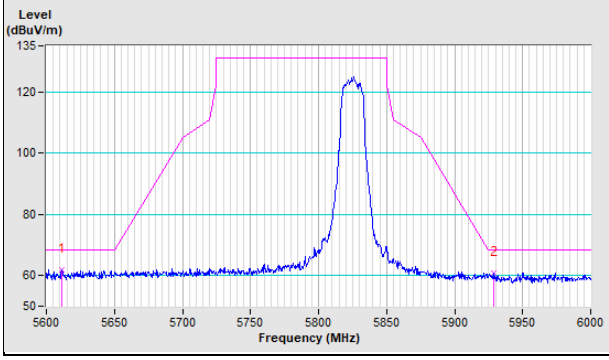
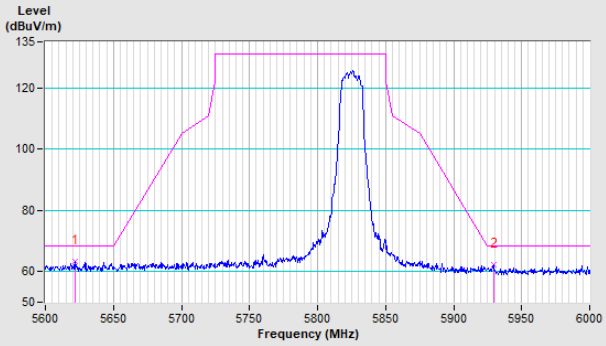
802.11a Channel 149

Horizontal (Peak)	Vertical (Peak)
	

802.11a Channel 157

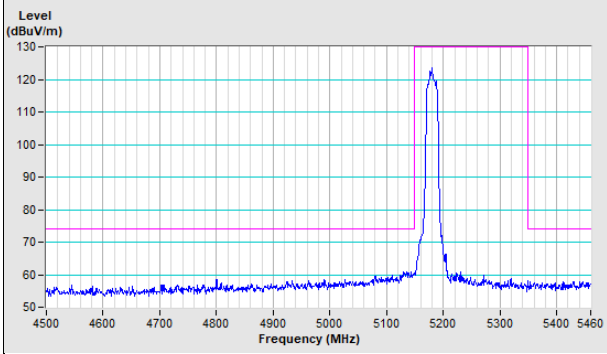
Horizontal (Peak)	Vertical (Peak)
	

802.11a Channel 165

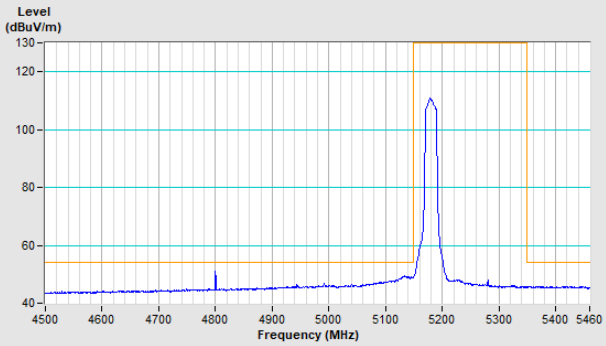
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE20) Channel 36

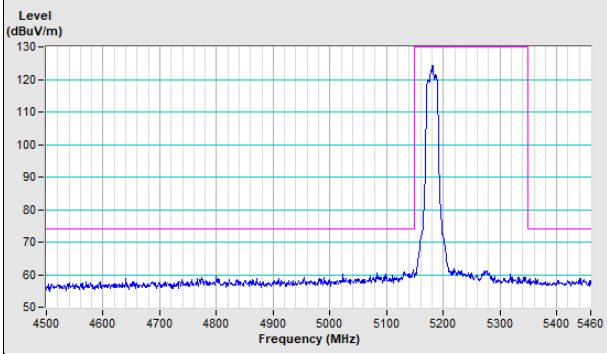
Horizontal (Peak)



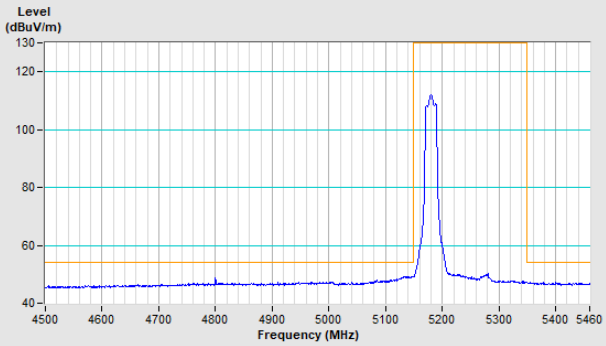
Horizontal (Average)



Vertical (Peak)

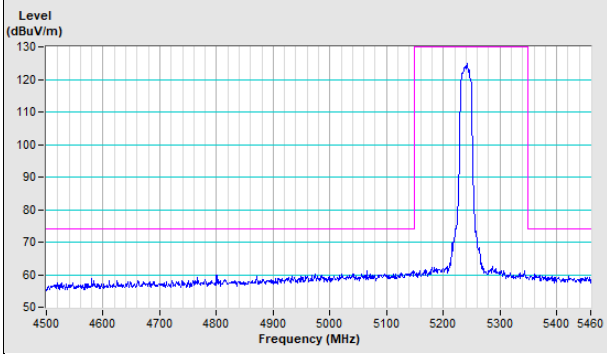


Vertical (Average)

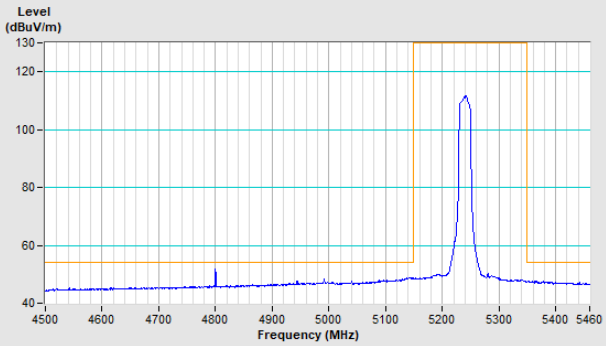


802.11ax (HE20) Channel 48

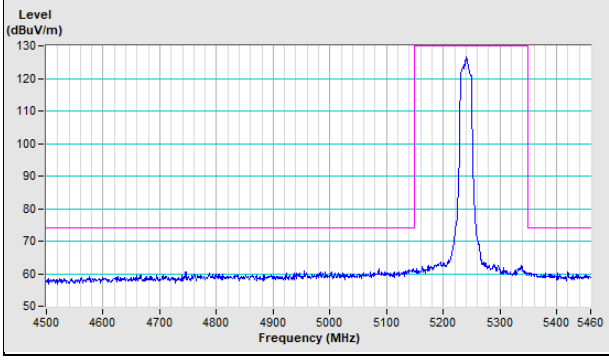
Horizontal (Peak)



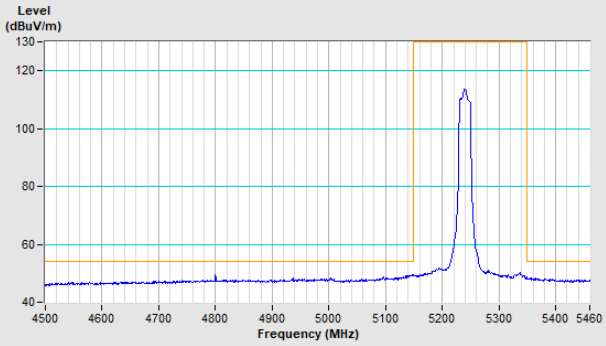
Horizontal (Average)



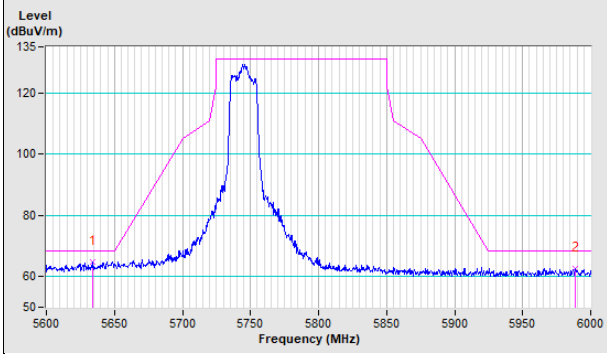
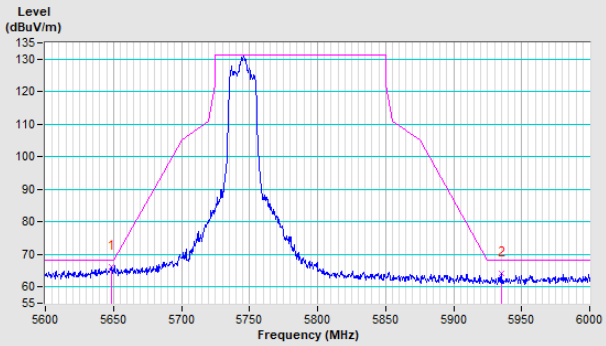
Vertical (Peak)



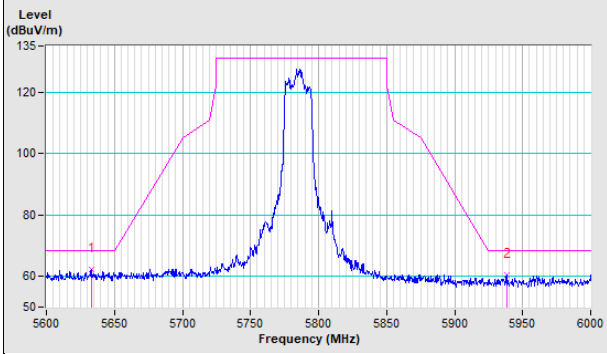
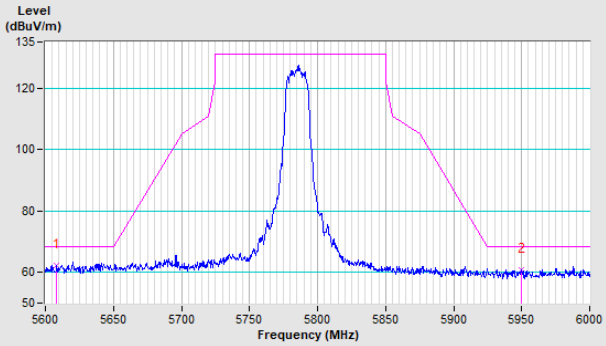
Vertical (Average)



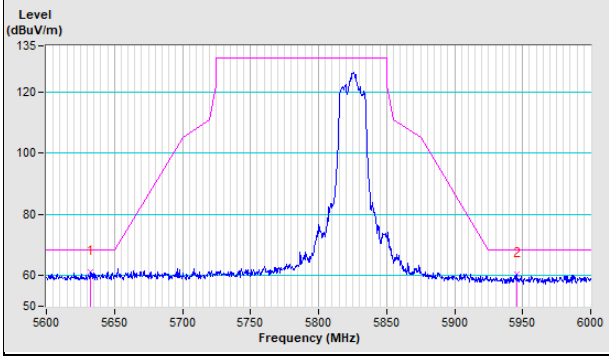
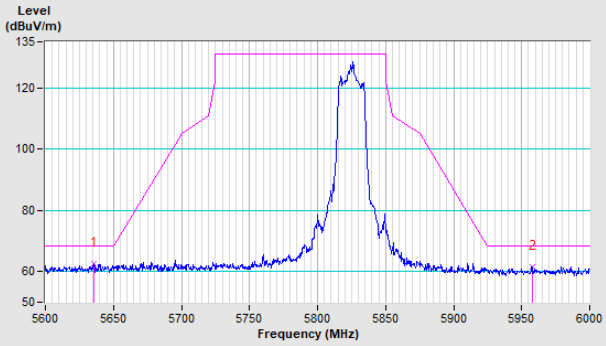
802.11ax (HE20) Channel 149

Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE20) Channel 157

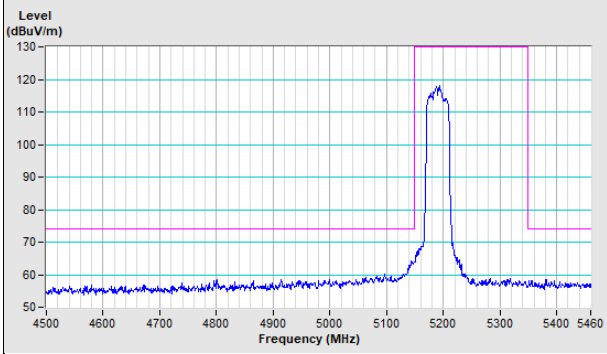
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE20) Channel 165

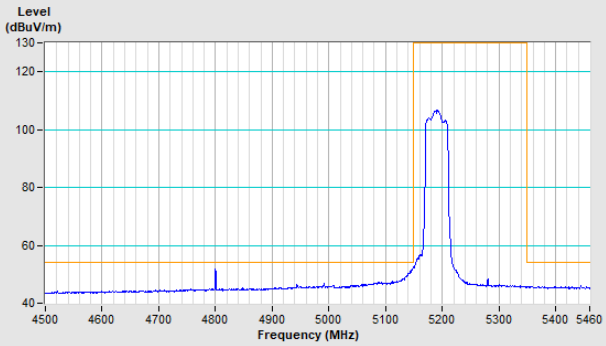
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE40) Channel 38

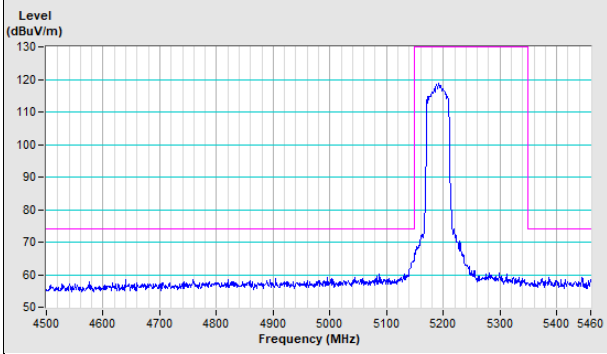
Horizontal (Peak)



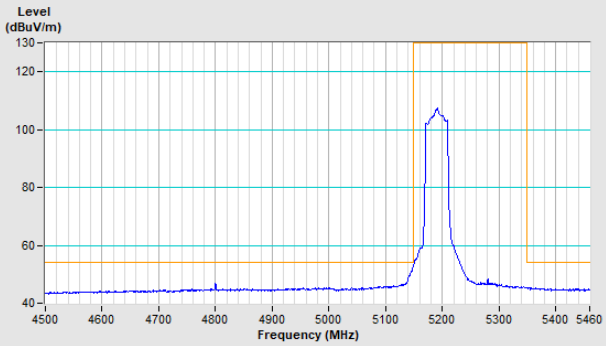
Horizontal (Average)



Vertical (Peak)

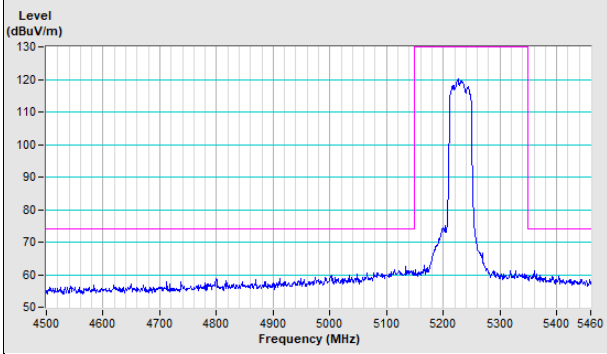


Vertical (Average)

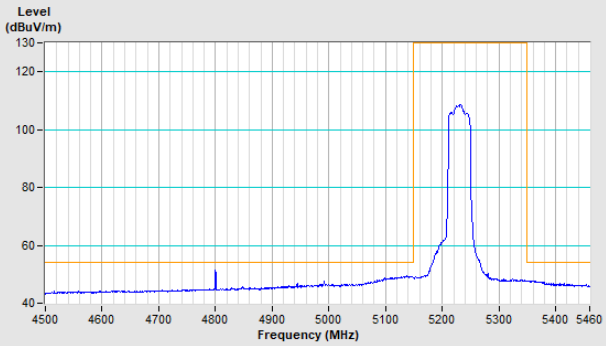


802.11ax (HE40) Channel 46

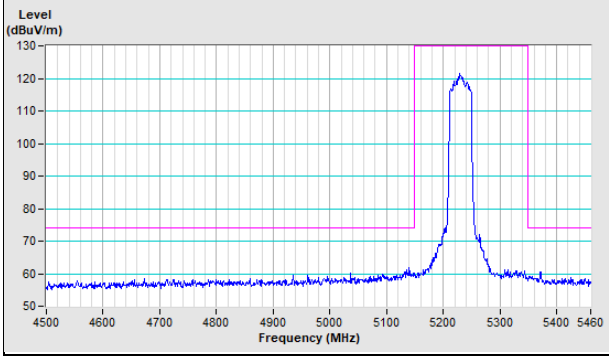
Horizontal (Peak)



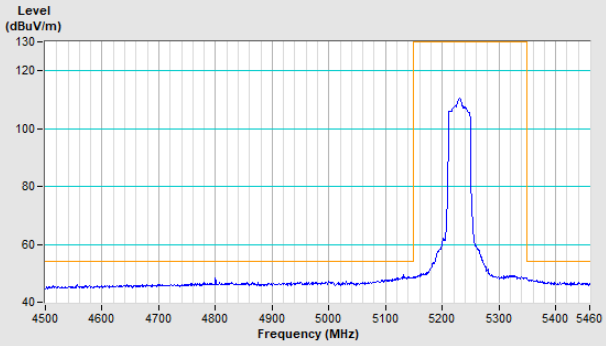
Horizontal (Average)

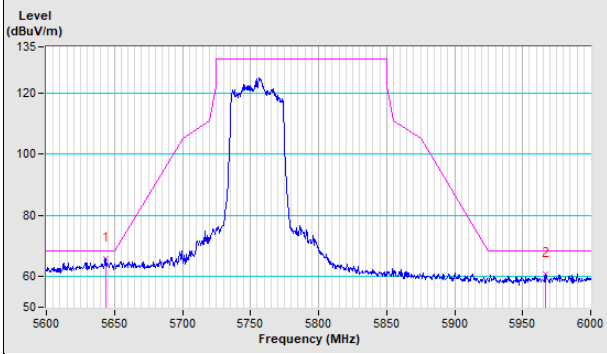
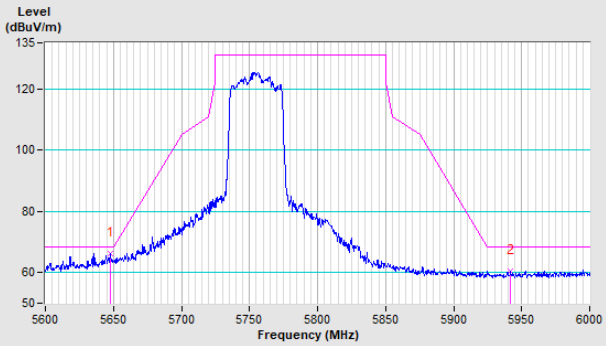


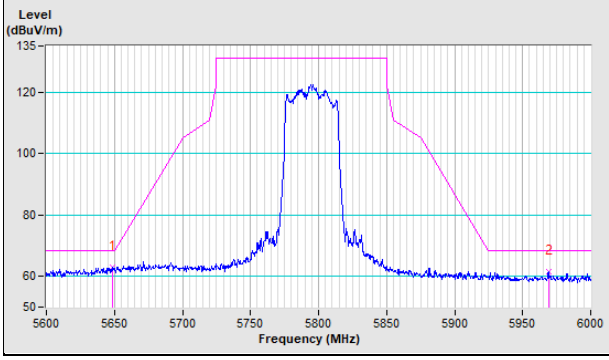
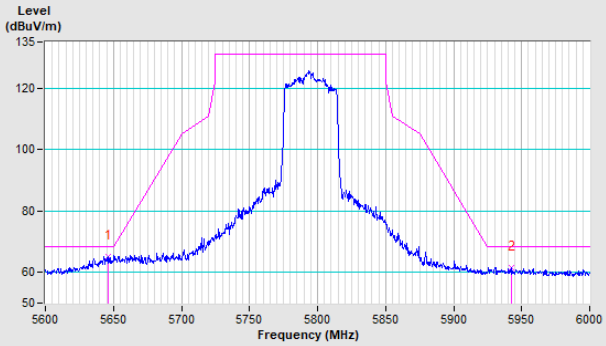
Vertical (Peak)



Vertical (Average)

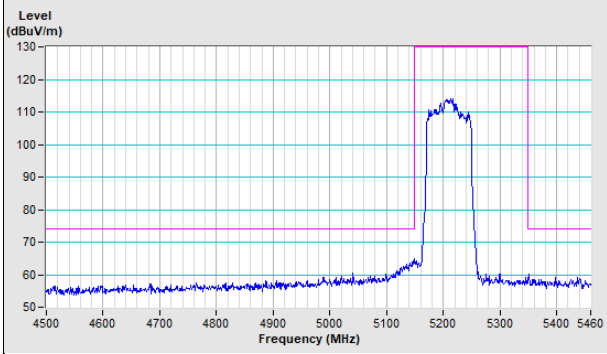


802.11ax (HE40) Channel 151	
Horizontal (Peak)	**Vertical (Peak)**
	

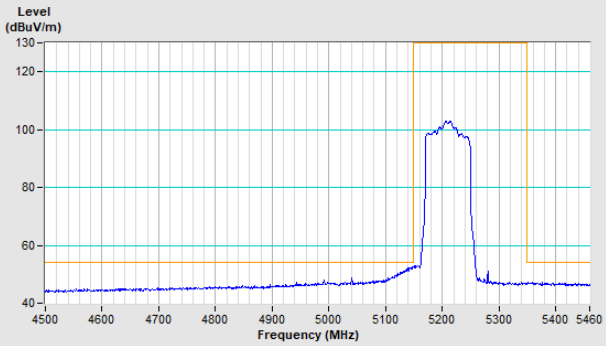
802.11ax (HE40) Channel 159	
Horizontal (Peak)	**Vertical (Peak)**
	

802.11ax (HE80) Channel 42

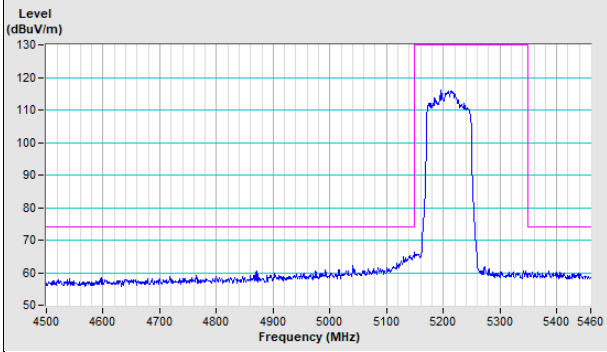
Horizontal (Peak)



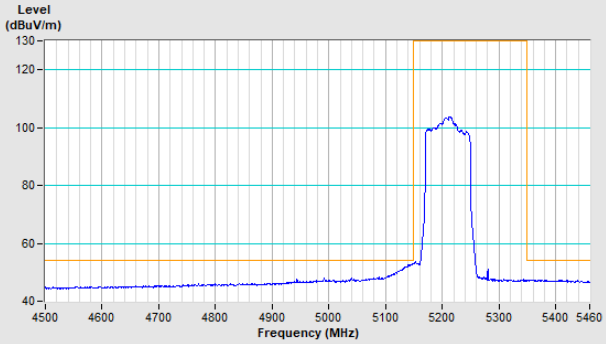
Horizontal (Average)



Vertical (Peak)

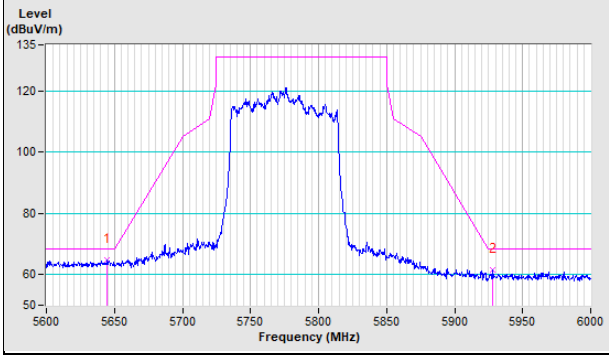


Vertical (Average)

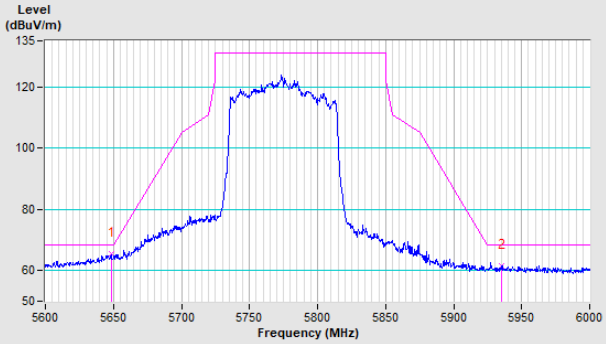


802.11ax (HE80) Channel 155

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:

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Web Site: http://ee.bureauveritas.com.tw

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

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