ACCREDITED
Certificate # 5200.01

FCC Part 15, Subpart E
Test Report

FCC ID:	ARS-10BDL3351T
Applicant:	Top Victory Electronics (Taiwan) Co Ltd
Address:	10F., No.230, Liancheng Rd., Zhonghe Dist., New Taipei City, 23553 Taiwan
Manufacturer:	MMD(Shanghai)Electronics Technology Co Ltd
Address:	Room 5060A No 2 Building 555 Dong Chan Road, Min Hang District, SHANGHAI 200241, CHINA
Product(s):	Colour Monitor
Brand(s):	Philips
Test Model(s):	10BDL3351T
Series Model(s):	See section 2.1
Test Date:	Mar. 13, 2024 ~ Apr. 02, 2024
Issued Date:	Apr. 03, 2024
Issued By:	Hwa-Hsing (Dongguan) Testing Co., Ltd.
Address:	No.101, Building N1, Yuyuan 2 Road, Yuyuan Industrial Park, HuangJiang Town, Dongguan City, People's Republic of China
Test Firm Registration No.:	915896
Standards:	FCC Part 15, Subpart E, Section 15.407 ANSI C63.10:2013

The above equipment has been tested by **Hwa-Hsing (Dongguan) Testing Co., Ltd.**, 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 EMC characteristics under the conditions specified in this report.

Prepared by : Nature Lee
Nature Lee

Reviewed by : Dragon Long
Dragon Long

Approved by : Scott He
Scott He

HWA-HSING (DONGGUAN) TESTING CO., LTD. LYNS-TCi

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Release Control Record

Issue No.	Description	Date Issued
23122202-02-RF-US-04	Original Release	Apr. 03, 2024

1. Summary of Test Results

FCC part 15, subpart e (section 15.407 under new rule) ANSI C63.10:2013 789033 D02 General UNII Test Procedures New Rules v01r03 KDB 662911 D01 v02r01			
Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit.
15.407(b) (1/2/3/4/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Meet the requirement of limit.

Note: The EUT has been verified to comply with the requirements of FCC Part 15, Subpart B, Class A (DoC). The test report has been issued separately.

1.1 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:
The listed uncertainties are the worst cases uncertainty for the entire range of measurement. Please note that the uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results.

Measurement	Frequency	Expended Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.66 dB
Radiated Emissions up to 1 GHz	9KHz ~ 30MHz	2.16 dB
	30MHz ~ 1000MHz	3.47 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	4.84 dB
	18GHz ~ 40GHz	4.67 dB

1.2 Modification Record

There were no modifications required for compliance.

2. General Information

2.1 General Description of EUT

Product(s)	Colour Monitor
Test Model(s)	10BDL3351T
Sample No.	HS2403020002; HS2403020003
Series Model(s)	10BDL********** The "*" could be any alphanumeric character including blank for marketing differentiation.
Status of EUT	Engineering Prototype
Power Supply Rating	DC 12V from Adapter or DC 48V from POE
Modulation Technology	OFDM
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Transfer Rate	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to mcs7 802.11ac: up to mcs9
Operating Frequency	5180~5240MHz,5745~5825MHz
Number of Channel	See the section 2.2
Maximum Output Power	13.73dBm for 5150 ~ 5250MHz 14.13dBm for 5725 ~ 5850MHz
Antenna Type	PIFA Antenna
Max. Antenna Gain	2.69dBi for 5150 ~ 5250MHz (Peak) 2.91dBi for 5725 ~ 5850MHz (Peak)
Antenna Connector	I-PEX
Accessory Device	N/A
Data Cable Supplied	Adapter Cable: Unshielded, 180cm

Note:

1. Please refer to the EUT photo document (23122202-02-01&-02) for detailed product photo.
2. 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. Model difference: These models are only different from model name for trade purpose.
4. For the test results, the EUT had been tested with all power supply type, and only the worst case was shown in the test report.
5. The EUT incorporates SISO function, provides 1 completed Transmit and 1 Receive Chain.

Support mode	Transmit and receive mode	Transmit and receive chain
802.11a	SISO	1TX/1RX
802.11n HT20	SISO	1TX/1RX
802.11n HT40	SISO	1TX/1RX
802.11ac VHT20	SISO	1TX/1RX
802.11ac VHT40	SISO	1TX/1RX
802.11ac VHT80	SISO	1TX/1RX

2.2 Description of Test Channels

For 5150 ~ 5250MHz

4 channels are provided for 802.11a, 802.11ac 20MHz, 802.11n (20MHz):

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

2 channels are provided for 802.11ac 40MHz, 802.11n (40MHz):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel are provided for 802.11ac (80MHz):

Channel	Frequency	Channel	Frequency
42	5210MHz	--	--

For 5725 ~ 5850MHz

5 channels are provided for 802.11a, 802.11ac 20MHz, 802.11n (20MHz):

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

2 channels are provided for 802.11a c 40MHz, 802.11n (40MHz):

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (80MHz):

Channel	Frequency	Channel	Frequency
155	5775MHz	--	--

2.3 Power setting value from test software:

Test mode	Antenna Chains TX/RX	Freq. Band (MHz)	Power setting value
802.11a	SISO	5150-5250	Default
802.11n (20MHz)	SISO		Default
802.11n (40MHz)	SISO		Default
802.11ac 20MHz	SISO		Default
802.11ac 40MHz	SISO		Default
802.11ac 80MHz	SISO		Default
802.11a	SISO	5725-5850	Default
802.11n (20MHz)	SISO		Default
802.11n (40MHz)	SISO		Default
802.11ac 20MHz	SISO		Default
802.11ac 40MHz	SISO		Default
802.11ac 80MHz	SISO		Default

2.4 Test Mode Applicability and Tested Channel Detail

Applicable test items	X-Axis	Y-Axis	Z-Axis	Voltage Supply
AC Power Conducted Emission	N/A	N/A	N/A	DC12V from adapter via AC120V input
Radiated Emissions	√	√	√	
Band Edge Measurement	N/A	N/A	N/A	
Max Average Transmit Power	N/A	N/A	N/A	
Peak Power Spectral Density	N/A	N/A	N/A	
Frequency Stability	N/A	N/A	N/A	
1. The EUT had been pre-tested on the positioned of each 3 Axis. 2. "N/A" means no effect.				

Applicable test items	Antenna Transmit and receive mode	X-Axis	Y-Axis	Z-Axis
Radiated Emissions	SISO	√	√	*√
1. * means the worst-case axis.				

Antenna Transmit and receive mode	Test mode	Centre Frequency	Worst-Axis
SISO mode	**802.11n HT20**	5240MHz	Z
	802.11ac VHT20	5240MHz	Z
	802.11n HT40	5230MHz	Z
	802.11ac VHT40	5230MHz	Z

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.

Power Line Conducted Emission Test:

EUT Configure mode	Worst Position	Freq. Band (MHz)	Antenna Transmitter technique	Tested channel	Modulation technology	Modulation type	Data rate (Mbps)
802.11a	-	5150-5250 5725-5850	SISO	36	OFDM	BPSK	6.0

Radiated Emission Test (Below 1GHz):

EUT Configure mode	Worst Position	Freq. Band (MHz)	Antenna Transmitter technique	Worst case channel	Modulation technology	Modulation type	Data rate (Mbps)
802.11a	Z-plane	5150-5250 5725-5850	SISO	36	OFDM	BPSK	6.0

Radiated Emission Test (Above 1GHz):

EUT configure mode	Worst position	Freq. Band (MHz)	Antenna Transmitter technique	Tested channel	Modulation technology	Modulation type	Data rate (Mbps)
802.11a	Z-plane	5150-5250	SISO	36, 40, 48	OFDM	BPSK	6.0
802.11n (20MHz)	Z-plane		SISO	36, 40, 48	OFDM	BPSK	MCS0
802.11n (40MHz)	Z-plane		SISO	38, 46	OFDM	BPSK	MCS0
802.11ac 80MHz	Z-plane		SISO	42	OFDM	BPSK	MCS0
802.11a	Z-plane	5725-5850	SISO	149, 157, 165	OFDM	BPSK	6.0
802.11n (20MHz)	Z-plane		SISO	149, 157, 165	OFDM	BPSK	MCS0
802.11n (40MHz)	Z-plane		SISO	151, 159	OFDM	BPSK	MCS0
802.11ac 80MHz	Z-plane		SISO	155	OFDM	BPSK	MCS0

Antenna Port Conducted Measurement:

*This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

EUT configure mode	Antenna Transmitter technique	Freq. Band (MHz)	Tested channel	Modulation technology	Modulation type	Data rate (Mbps)
802.11a	SISO	5150-5250	36, 40, 48	OFDM	BPSK	6.0
802.11n (20MHz)	SISO		36, 40, 48	OFDM	BPSK	MCS0
802.11n (40MHz)	SISO		38, 46	OFDM	BPSK	MCS0
802.11ac 80MHz	SISO		42	OFDM	BPSK	MCS0
802.11a	SISO	5725-5850	149, 157, 165	OFDM	BPSK	6.0
802.11n (20MHz)	SISO		149, 157, 165	OFDM	BPSK	MCS0
802.11n (40MHz)	SISO		151, 159	OFDM	BPSK	MCS0
802.11ac 80MHz	SISO		155	OFDM	BPSK	MCS0

Test Condition:

Applicable test items	Environmental Conditions	Tested by
AC Power Conducted Emission	25deg. C, 65%RH	Jim Xu
Radiated Emissions	25deg. C, 65%RH	Jim Xu
Antenna Port Conducted Measurement	25deg. C, 65%RH	Dragon long

2.5 Description of Support Units

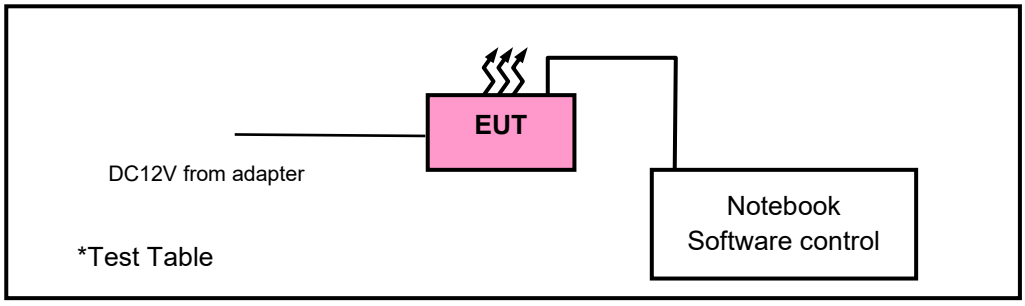
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Product	Brand	Model No.	Serial No.	FCC ID
1.	Notebook	Lenovo	ThinkPad X280	SL10P97665	N/A

Insert Cable Connections to/from EUT provided by test team.

No.	Signal Cable Description Of The Above Support Units
1.	USB serial cable Un-shielding 1.0m

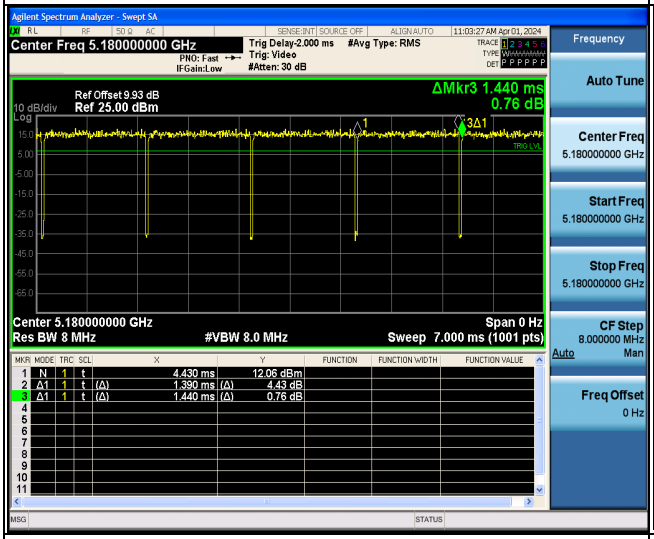
2.6 Configuration of System under Test



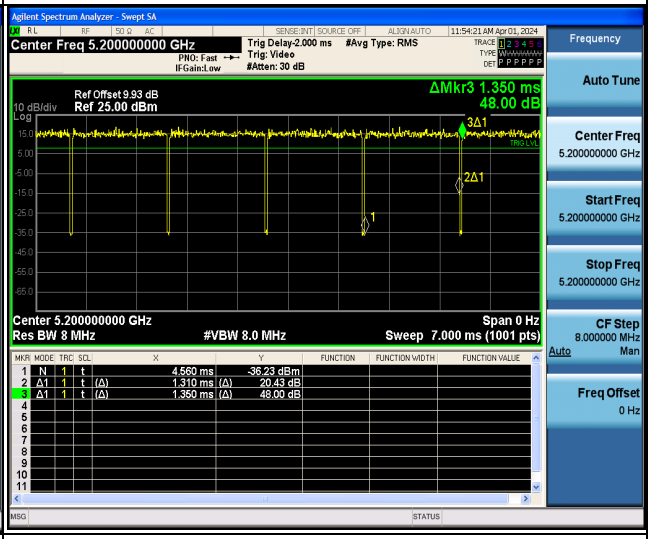
2.7 Duty Cycle of Test Signal

Test mode	Duty cycle (%)	Duty cycle factor=10*log (1/duty cycle) (dB)
802.11a	96.53%	0.15
802.11n HT20	97.04%	0.13
802.11n HT40	94.20%	0.26
802.11ac VHT80	88.89%	0.51

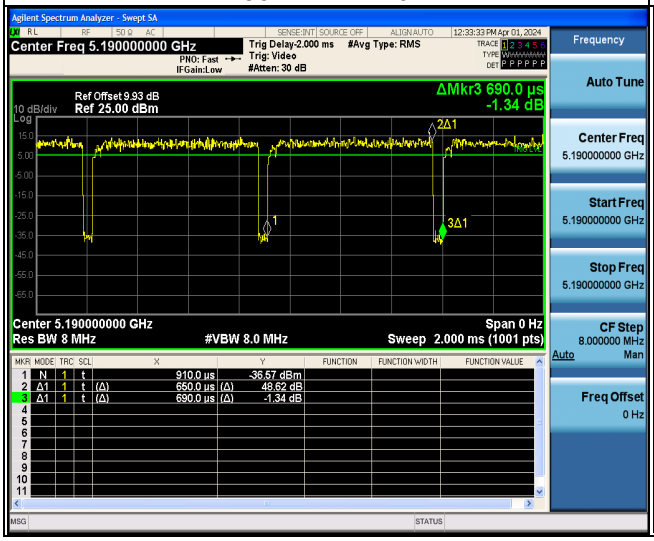
802.11a



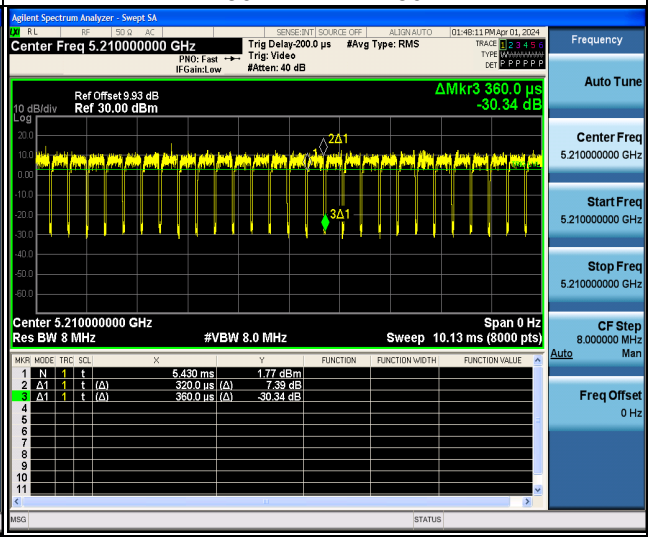
802.11n HT20



802.11n HT40



802.11ac VHT80



3. Test Types and Results

3.1 Radiated Emission and Band-edge Measurement

3.1.1 Limits of radiated emission and band-edge measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

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
* DTS emissions in non-restricted frequency bands Subclause 11.11 of ANSI C63.10 is applicable. * DTS emissions in restricted frequency bands Subclause 11.12 of ANSI C63.10 is applicable		

Note:

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 1000MHz, 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 20dB under any condition of modulation.

3.1.2 Limits of unwanted emission out of the restricted bands

Applicable to	Limit	
789033 D02 General UNII Test Procedures New Rules v01r03	Field strength at 3m	
	PK: 74 (dBμV/m)	AV: 54 (dBμV/m)
Applicable to	EIRP Limit	Equivalent field strength at 3m
15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m)
15.407(b)(2)		
15.407(b)(3)		
15.407(b)(4)	Note	Note

*For transmitters operating in the 5.725-5.85 GHz band:

Section 15.407(b)(4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the alternative limit.
15.407(b)(4)(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
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).

3.1.3 Test Instruments

Radiated emission below 30MHz:

Equipment	Manufacturer	Model No.	Serial No.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR7	100962	2024-12-17
3m Semi-anechoic Chamber	MAORUI	9m*6m*6m	NSEMC003	2026-03-12**
Test software	FARAD	FARAD	EZ_EMCV1.1.4.2	N/A
Loop Antenna	EMCI	HLA 6121	56735	2024-05-04*
Antenna Tower	MF	MFA-440H	NA	NA
Turn Table	MF	MFT-201SS	NA	NA
Antenna Tower&Turn Table Controller	MF	MF-7802	NA	NA

Frequency Range below 1GHz:

Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Next Cal.**
EMI Test Receiver (9kHz~3GHz)	Rohde&Schwarz	ESPI 7	101978	2024-12-17
Broadband antenna (25MHz~2500MHz)	Schwarzbeck	VULB 9168	937	2024-08-18
3m Semi-anechoic Chamber	MAORUI	9m*6m*6m	HS-2018037	2026-03-12**
Signal Amplifier (30MHz~1000MHz)	Com-power	PAM-103	18020051	2024-08-06
Attenuator	R&S	TS2GA-6dB	18101101	N/A
Test software	FARAD	EZ_EMC V1.1.4.2	N/A	N/A

Frequency Range above 1GHz:

Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Next Cal.**
EMI Test Receiver	Rohde&Schwarz	ESPI 7	101978	2024-12-17
3m Semi-anechoic Chamber	MAORUI	9m*6m*6m	NSEMC003	2026-03-12**
Test software	FARAD	EZ_EMCV1.1.4.2	N/A	N/A
Digital Multimeter	FLUKE	15B+	43512617WS	2024-08-07
Horn Antenna	Schwarzbeck	BBHA 9170	979	2024-05-03*
Spectrum Analyzer	Rohde&Schwarz	FSV-40N	101783	2024-12-17
Broadband Coaxial Preamplifier	Schwarzbeck	BBV 9718	25	2024-08-06
Pre-Amplifier	EMCI	EMC 184045SE	9870709	2024-12-17
Spectrum	Keysight	N9020A	MY51240612	2024-08-06

Note:
1. The calibration interval of the above test instruments is 12 months or 24 months (*) or 36 months (**).
2. The test was performed in 966.

3.1.4 Test Procedures

a. Peak emission levels are measured by setting the instrument as follow:

1) RBW & VBW setting as a function of frequency:

Frequency	RBW	VBW
9kHz~150kHz	200Hz	600Hz
0.15MHz~30MHz	9kHz	30kHz
30MHz~1000MHz	120kHz	300kHz
>1000MHz	1MHz	3MHz

2) Detector = peak.
3) Sweep time = auto.
4) Trace mode = max hold.
5) Allow sweeps to continue until the trace stabilizes. (Note that the required measurement time may be lengthened for low-duty-cycle applications.)

Note: If the peak-detected amplitude can be shown to comply with the average limit, then it is not necessary to perform a separate average measurement.

b. Average emission levels are measured by setting the instrument as follow:

- **Trace averaging with continuous EUT transmission at full power**

If the EUT can be configured or modified to transmit continuously (D ≥ 98%). then the average emission levels shall be measured using the following method (with EUT transmitting continuously):

1) RBW=1 MHz (unless otherwise specified).
2) VBW ≥ 3 *RBW.
3) Detector =RMS
4) Sweep time = auto.
5) Perform a trace average of at least 100 traces.

- **Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction**

If continuous transmission of the EUT (D ≥ 98%) cannot be achieved and the duty cycle is constant (duty cycle variations are less than ±2%). then the following procedure shall be used

1) The EUT shall be configured to operate at the maximum achievable duty cycle.
2) Measure the duty cycle D of the transmitter output signal as described in 11.6.
3) RBW=1 MHz (unless otherwise specified).
4) VBW ≥ 3 *RBW.
5) Detector =RMS
6) Sweep time = auto.
7) Perform a trace average of at least 100 traces.

A correction factor shall be added to the measurement results prior to comparing with the emission limit to compute the emission level that would have been measured had the test been performed at 100% duty cycle. The correction factor is computed as follows:

*If power averaging (rms) mode was used in step 5). then the applicable correction factor is [10 10g (1/ D)], where D is the duty cycle.

**If linear voltage averaging mode was used in step f). then the applicable correction factor is [20 10g (1/D)], where D is the duty cycle.

***If a specific emission is demonstrated to be continuous (D > 98%) rather than turning ON and OFF with the transmit cycle, then no duty cycle correction is required for that.

- **Reduced VBW Averaqing across ON and OFF times of the EUT transmissions with max hold**

If continuous transmission of the EUT (D > 98%) cannot be achieved and the duty cycle is not constant (duty cycle variations exceed ±2%), then the following procedure shall be used:

1) RBW = 1MHz.
2) VBW ≥ 1/T.
3) Detector =peak
4) Sweep time = auto.
5) Trace mode = max hold.
6) Allow max hold to run for at least [50 x (1/ D)] traces

c. The EUT was placed on the top of a rotating table 0.8 meters (below 1GHz) / 1.5 meters (1-18GHz) / 1.5 meters (18-40GHz) above the reference ground. The table was rotated 360 degrees to determine the position of the highest radiation.
d. The EUT was set 3meters away from the interference-receiving antenna (Below 1GHz) & (Above 1-18GHz), which was mounted on the top of a variable-height antenna tower. The EUT was set 1meters away from the interference-receiving antenna (18-40GHz).
e. 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.
f. 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.
g. 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.
h. The test-receiver system was set to peak and average detected 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.

Note:

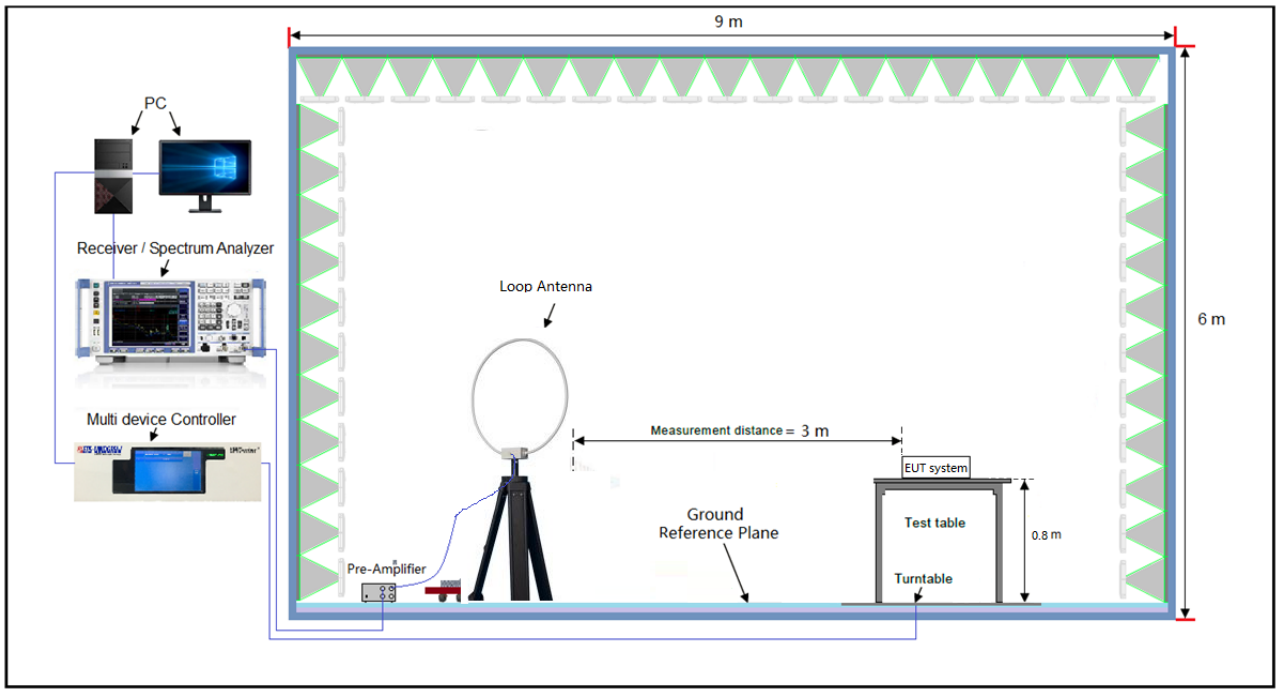
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz & 360kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth =3mHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth =1/T for Average (Duty cycle < 98 %) detection at frequency above 1 GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is =10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

3.1.5 Deviation from Test Standard

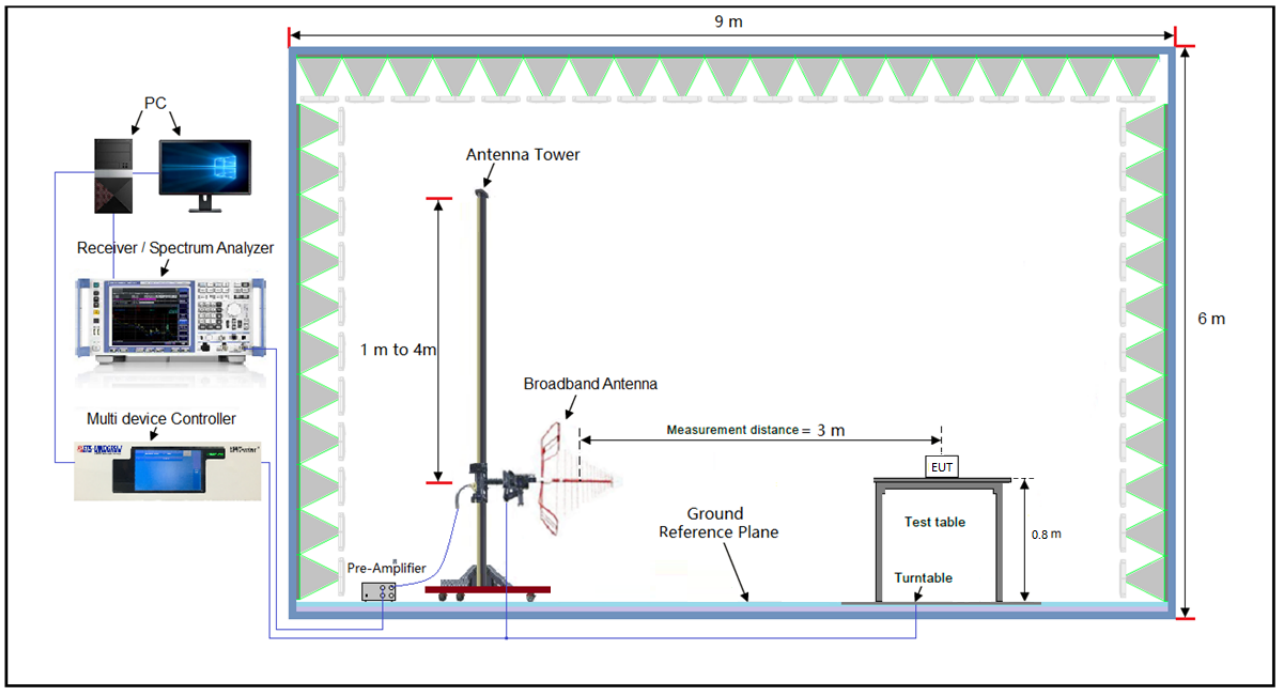
No deviation.

3.1.6 Test Setup

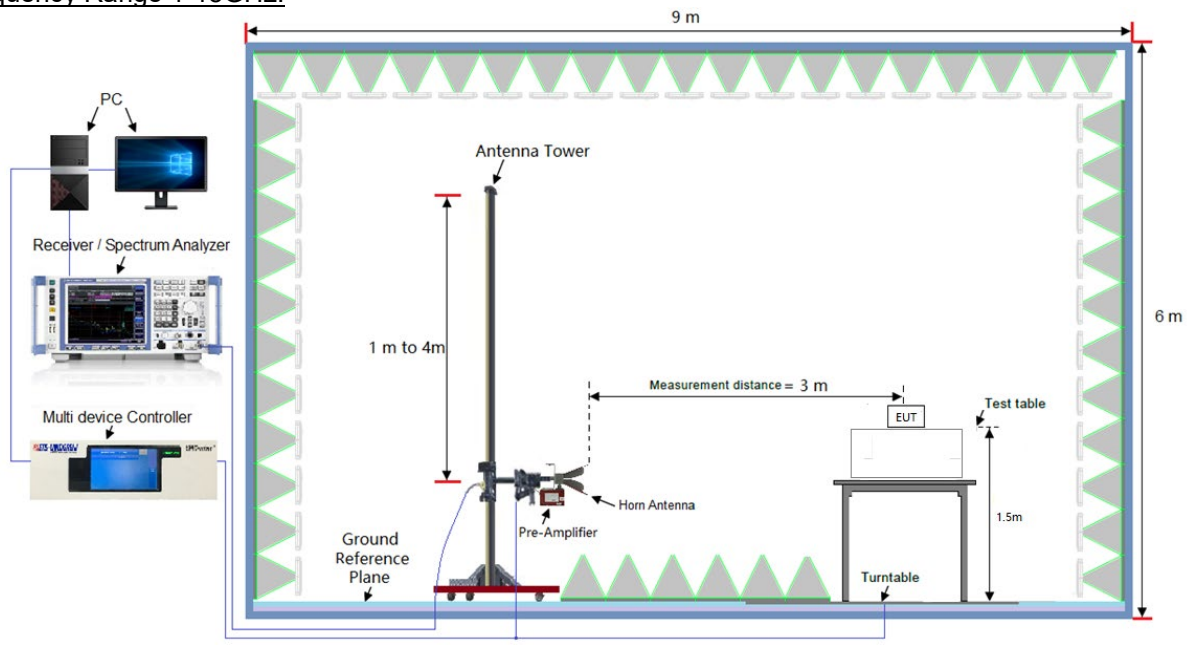
Radiated emission below 30MHz:



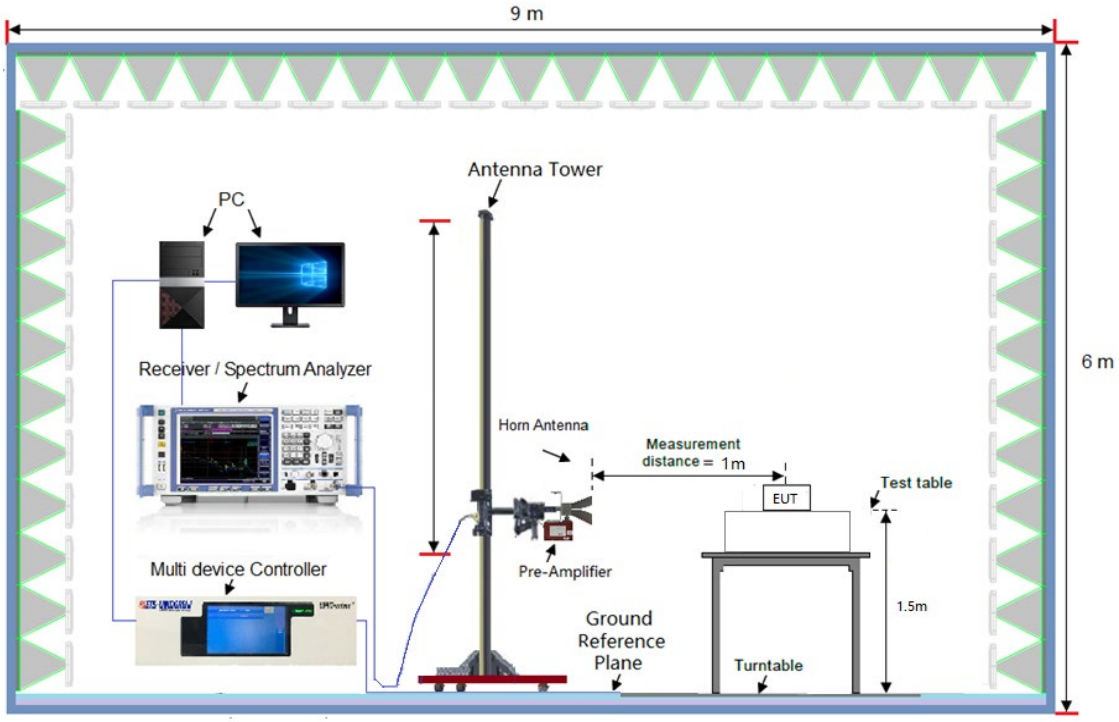
Frequency Range below 1GHz:



Frequency Range 1-18GHz:



Frequency Range 18-40GHz:



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

3.1.7 EUT Operating Conditions

a. Placed the EUT on the testing table.

b. Set the EUT under transmission condition continuously at specific channel frequency.

3.1.8 Test Results

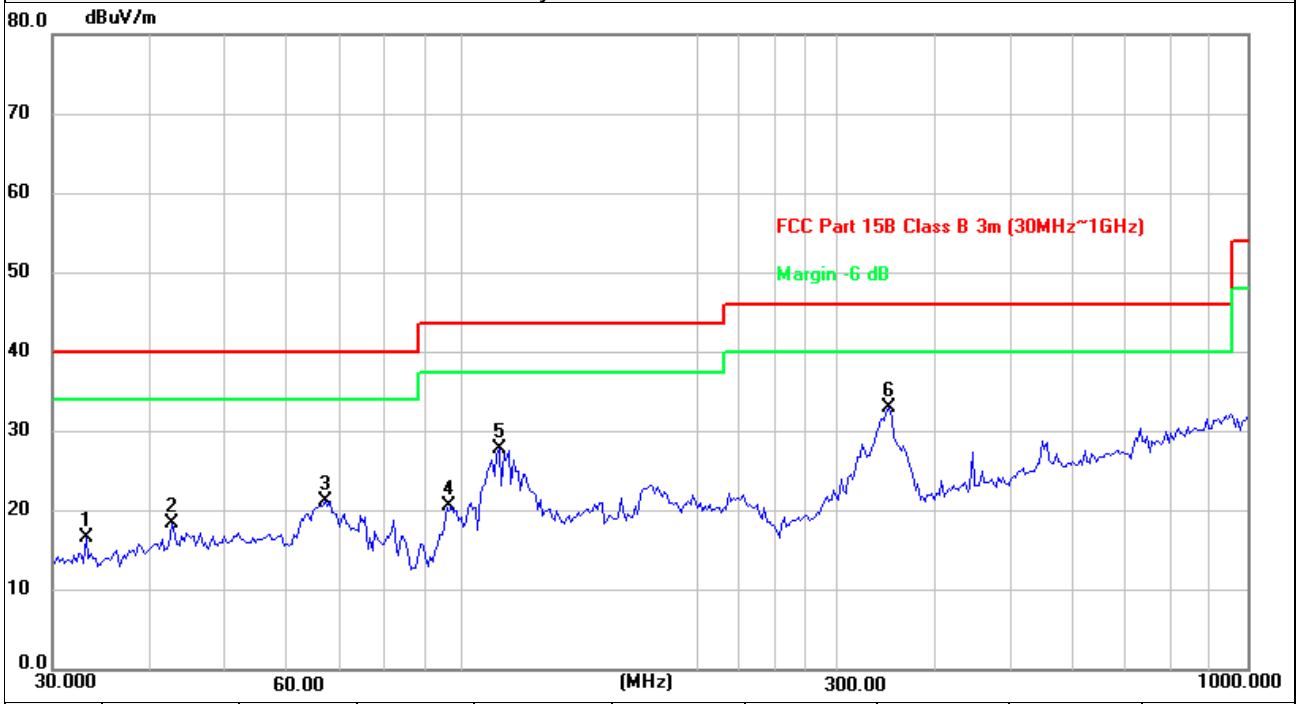
9kHz ~ 30MHz Data:

The amplitude of spurious emissions attenuated more than 20dB below the permissible value is not required to be report.

30MHz ~ 1GHz Worst-Case Data:

Test Mode	802.11a TX		
Test Channel	Channel 100	Frequency Range	30MHz ~ 1GHz
Detector Function	Peak (PK) Quasi-peak (QP)	Tested By	Jim Xu

Antennal Polarity &Test Distance: Horizontal at 3m



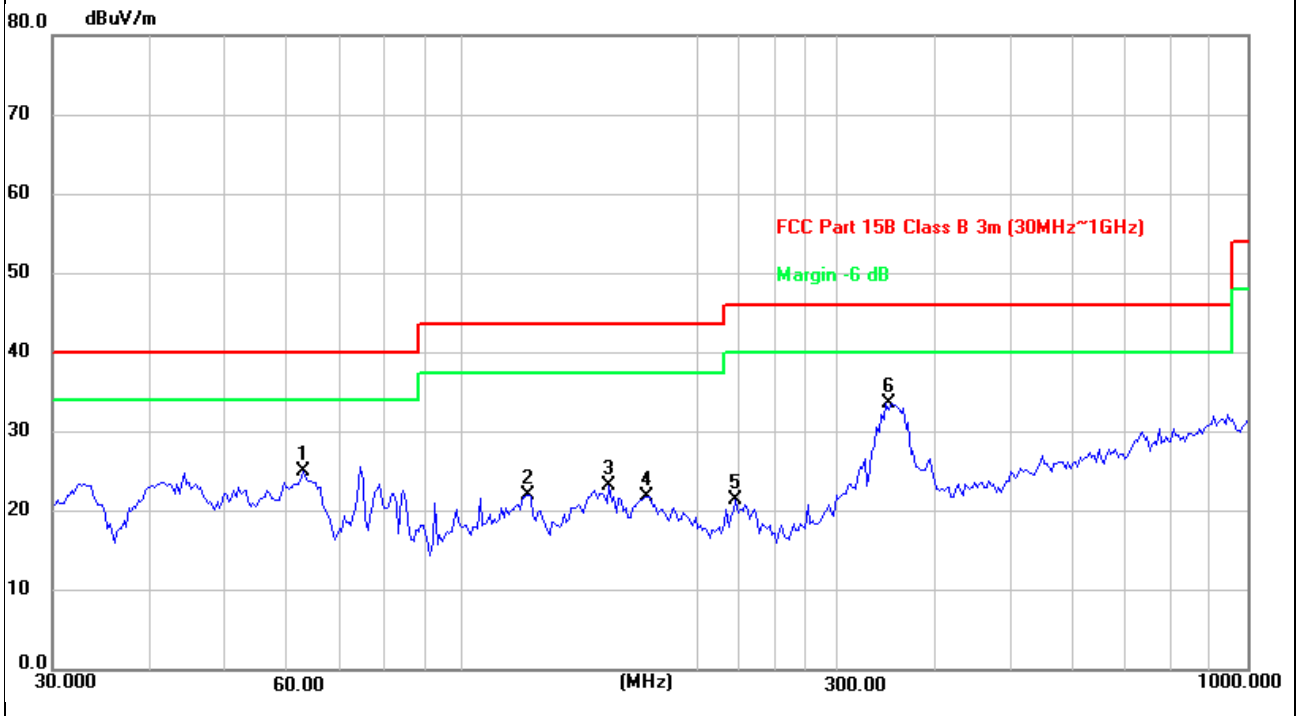
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	33.0950	34.43	-17.70	16.73	40.00	-23.27	peak	193	320
2	42.6000	33.77	-15.40	18.37	40.00	-21.63	peak	153	269
3	66.7325	37.29	-15.99	21.30	40.00	-18.70	peak	104	224
4	96.7749	40.03	-19.40	20.63	43.50	-22.87	peak	255	329
5	111.3468	44.37	-16.59	27.78	43.50	-15.72	peak	309	304
6	349.2500	44.90	-11.96	32.94	46.00	-13.06	peak	266	111

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value

Test Mode	802.11a TX		
Test Channel	Channel 100	Frequency Range	30MHz ~ 1GHz
Detector Function	Peak (PK) Quasi-peak (QP)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Vertical at 3m



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	62.6507	40.52	-15.39	25.13	40.00	-14.87	peak	197	111
2	121.1231	37.38	-15.34	22.04	43.50	-21.46	peak	399	2
3	153.7385	36.97	-13.79	23.18	43.50	-20.32	peak	271	184
4	171.9946	35.71	-13.82	21.89	43.50	-21.61	peak	161	258
5	222.9502	37.27	-15.88	21.39	46.00	-24.61	peak	176	304
6	351.7079	45.46	-11.85	33.61	46.00	-12.39	peak	253	48

Remarks:

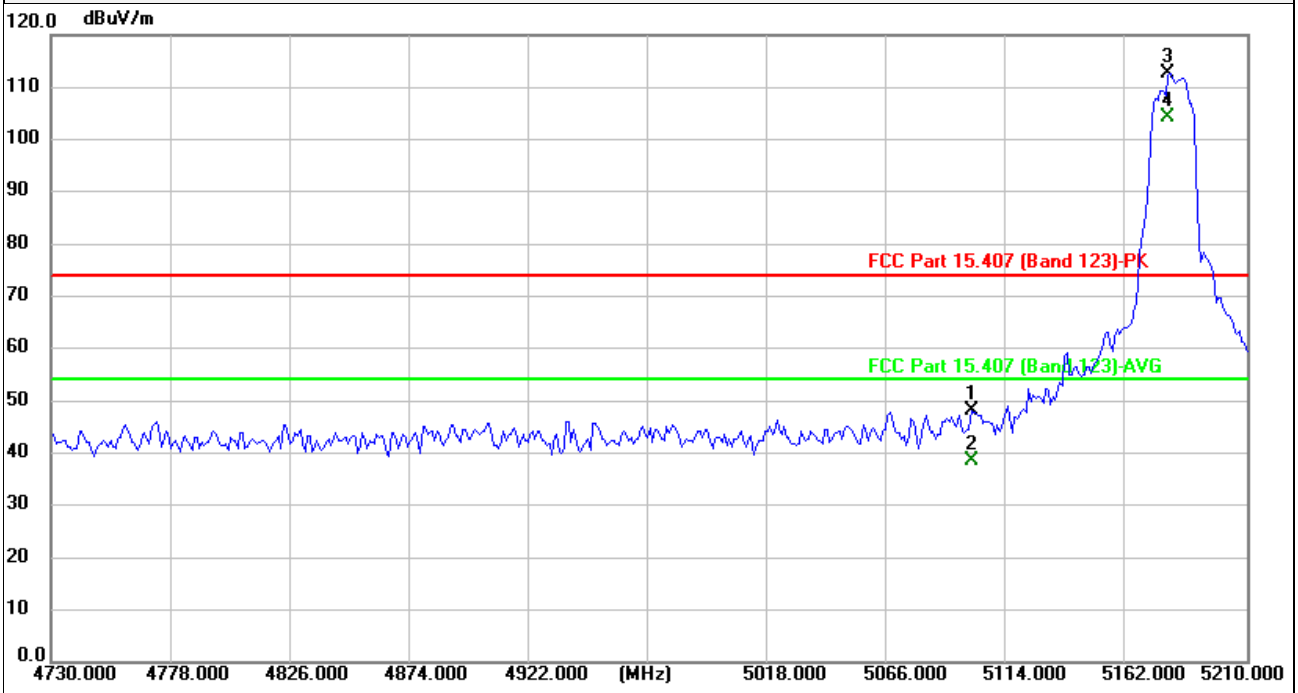
1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value

Above 1GHz Data:

802.11a

Test Mode	802.11a_5180MHz		
Test channel	36	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test distance: Horizontal at 3m



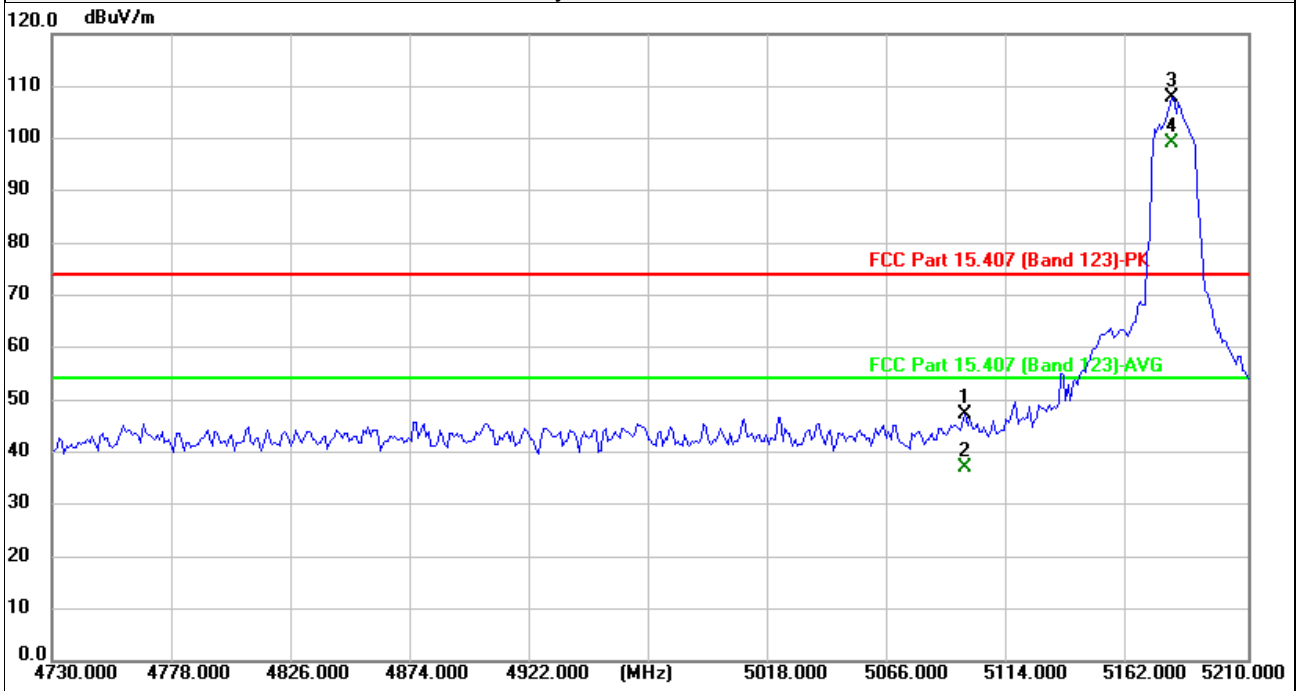
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5099.379	41.85	6.23	48.08	74.00	-25.92	peak	113	320
2	5099.379	32.34	6.23	38.57	54.00	-15.43	AVG	113	320
3	5179.218	103.90	8.82	112.72			peak	113	320
4	5179.218	95.40	8.82	104.22			AVG	113	320
5	10360.000	40.10	17.89	57.99	74.00	-16.01	peak	254	110
6	10360.000	28.41	17.89	46.30	54.00	-7.70	AVG	254	110
7	15540.000	35.01	22.17	57.18	74.00	-16.82	peak	341	6
8	15540.000	25.09	22.17	47.26	54.00	-6.74	AVG	341	6

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report

Test Mode	802.11a_5180MHz		
Test channel	36	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Vertical at 3m



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5096.493	40.92	6.22	47.14	74.00	-26.86	peak	114	18
2	5096.493	30.72	6.22	36.94	54.00	-17.06	AVG	114	18
3	5180.180	98.99	8.85	107.84			peak	114	18
4	5180.180	90.40	8.85	99.25			AVG	114	18
5	10360.000	39.40	17.89	57.29	74.00	-16.71	peak	228	358
6	10360.000	29.43	17.89	47.32	54.00	-6.68	AVG	228	358
7	15540.000	25.63	22.17	47.80	74.00	-26.20	peak	244	253
8	15540.000	24.16	22.17	46.33	54.00	-7.67	AVG	244	253

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report

Test Mode	802.11a_5200MHz		
Test channel	40	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

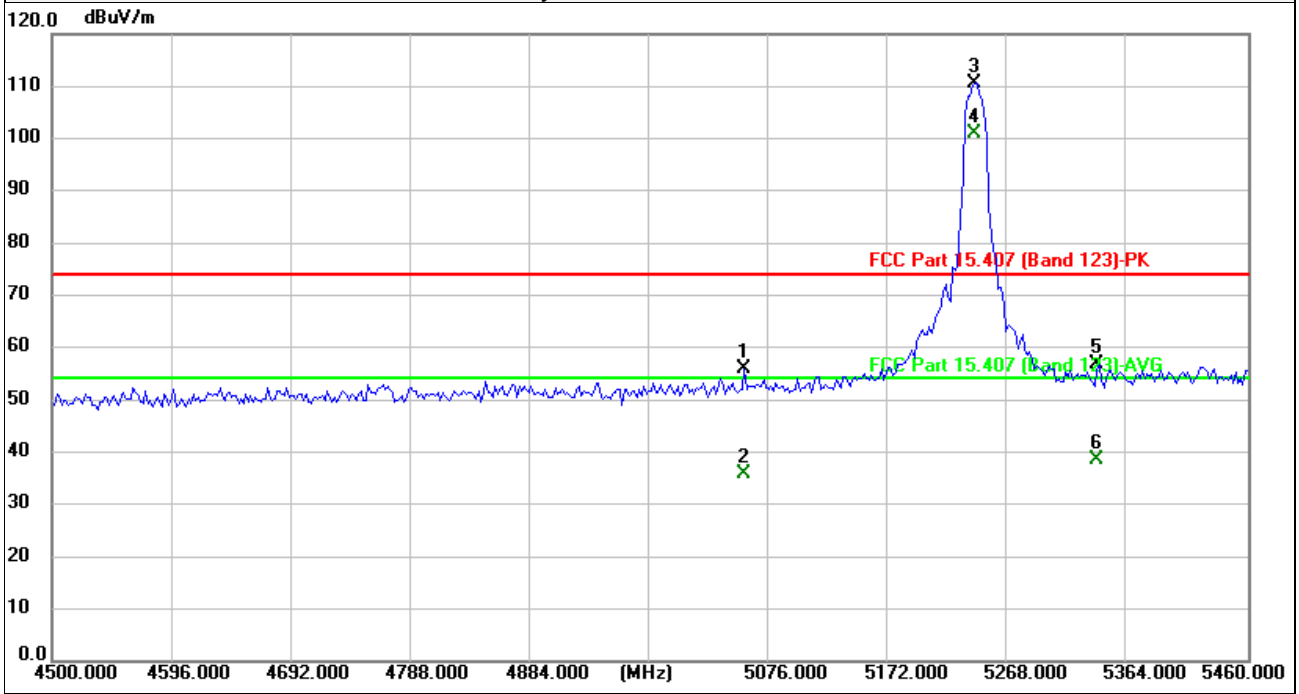
Antennal Polarity& Test Distance: Horizontal at 3m									
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5197.07	9.43	113.50	74.00			106	314	104
2	5197.35	9.43	103.78	54.00			106	314	104
3	10400.000	38.22	18.00	56.22	74.00	-17.78	peak	189	143
4	10400.000	28.29	18.00	46.29	54.00	-7.71	AVG	189	143
5	15600.000	34.34	22.03	56.37	74.00	-17.63	peak	101	208
6	15600.000	24.19	22.03	46.22	54.00	-7.78	AVG	101	208
Antennal Polarity& Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5198.91	9.43	108.34	74.00			108	150	200
2	5197.06	9.43	99.49	54.00			108	150	200
3	10400.000	39.43	18.00	57.43	74.00	-16.57	peak	395	123
4	10400.000	29.29	18.00	47.29	54.00	-6.71	AVG	395	123
5	15600.000	35.53	22.03	57.56	74.00	-16.44	peak	163	170
6	15600.000	25.15	22.03	47.18	54.00	-6.82	AVG	163	170

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report

Test Mode	802.11a_5240MHz		
Test channel	48	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test distance: Horizontal at 3m



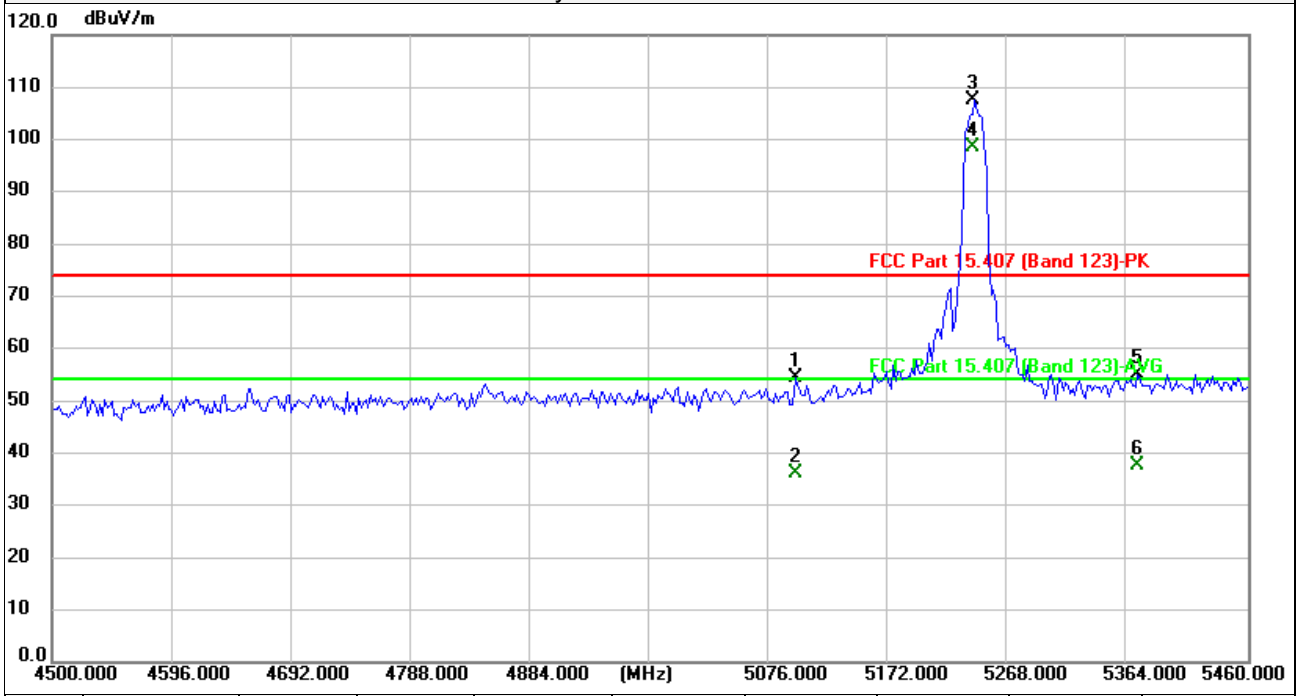
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5055.992	49.85	6.09	55.94	74.00	-18.06	peak	132	309
2	5055.992	29.70	6.09	35.79	54.00	-18.21	AVG	132	309
3	5242.605	102.18	8.34	110.52			peak	132	309
4	5242.605	92.58	8.34	100.92			AVG	132	309
5	5340.721	49.80	6.90	56.70	74.00	-17.30	peak	132	309
6	5340.721	31.64	6.90	38.54	54.00	-15.46	AVG	132	309
7	10480.000	39.07	18.22	57.29	74.00	-16.71	peak	220	247
8	10480.000	28.11	18.22	46.33	54.00	-7.67	AVG	220	247
9	15720.000	35.37	21.75	57.12	74.00	-16.88	peak	219	69
10	15720.000	24.64	21.75	46.39	54.00	-7.61	AVG	219	69

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report

Test Mode	802.11a_5240MHz		
Test channel	48	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Vertical at 3m



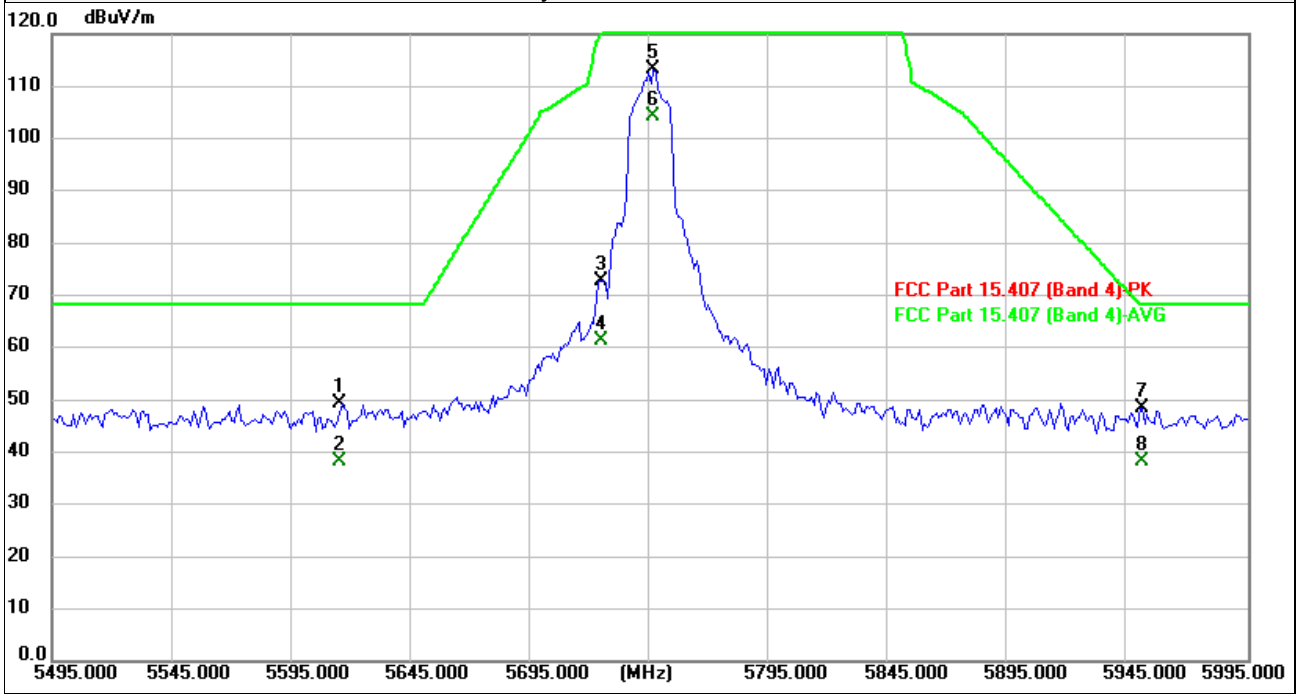
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5096.393	48.22	6.22	54.44	74.00	-19.56	peak	306	331
2	5096.393	29.79	6.22	36.01	54.00	-17.99	AVG	306	331
3	5240.681	99.05	8.39	107.44			peak	306	331
4	5240.681	90.26	8.39	98.65			AVG	306	331
5	5371.503	48.04	6.98	55.02	74.00	-18.98	peak	306	331
6	5371.503	30.73	6.98	37.71	54.00	-16.29	AVG	306	331
7	10480.000	39.74	18.22	57.96	74.00	-16.04	peak	377	304
8	10480.000	28.06	18.22	46.28	54.00	-7.72	AVG	377	304
9	15720.000	35.39	21.75	57.14	74.00	-16.86	peak	252	1
10	15720.000	25.25	21.75	47.00	54.00	-7.00	AVG	252	1

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report

Test Mode	802.11a_5745MHz		
Test channel	149	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test distance: Horizontal at 3m



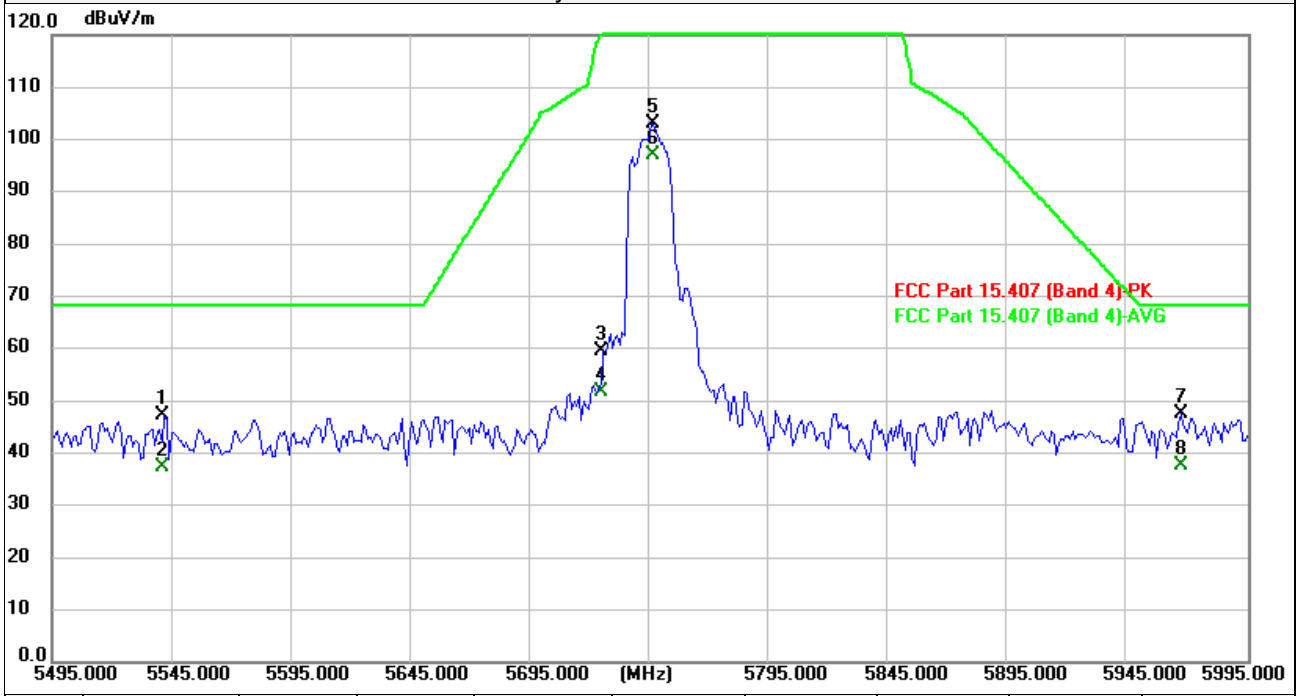
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5616.242	41.88	7.46	49.34	68.20	-18.86	peak	316	276
2	5616.242	30.76	7.46	38.22	68.20	-29.98	AVG	316	276
3	5725.000	65.22	7.58	72.80	122.20	-49.40	peak	316	276
4	5725.000	53.89	7.58	61.47	122.20	-60.73	AVG	316	276
5	5746.503	105.71	7.60	113.31	122.20	-8.89	peak	316	276
6	5746.503	96.73	7.60	104.33	122.20	-17.87	AVG	316	276
7	5950.912	40.54	7.84	48.38	68.20	-19.82	peak	316	276
8	5950.912	30.40	7.84	38.24	68.20	-29.96	AVG	316	276
9	11490.000	48.19	19.53	67.72	74.00	-6.28	peak	204	332
10	11490.000	31.15	19.53	50.68	54.00	-3.32	AVG	204	332
11	17235.000	37.48	26.86	64.34	68.30	-3.96	peak	185	157
12	17235.000	22.83	26.86	49.69	54.00	-4.31	AVG	185	157

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report

Test Mode	802.11a_5745MHz		
Test channel	149	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Vertical at 3m



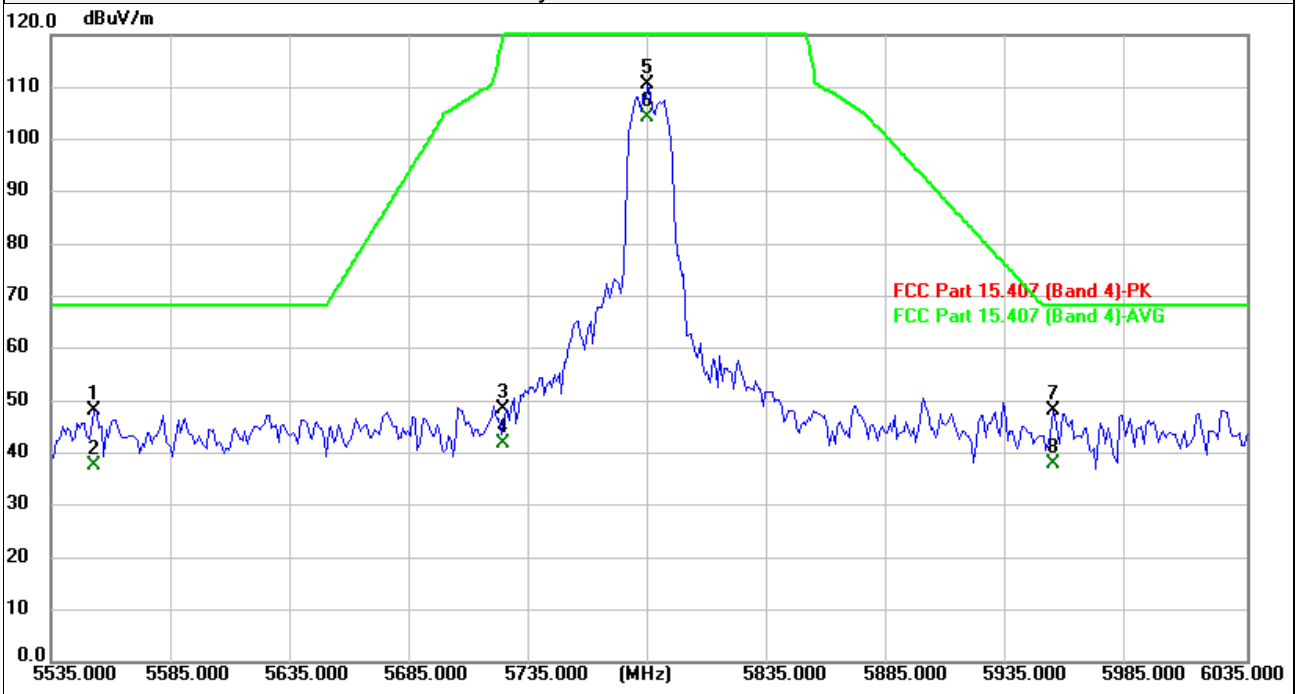
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5542.094	39.81	7.39	47.20	68.20	-21.00	peak	379	351
2	5542.094	29.92	7.39	37.31	68.20	-30.89	AVG	379	351
3	5725.000	52.07	7.58	59.65	122.20	-62.55	peak	379	351
4	5725.000	44.17	7.58	51.75	122.20	-70.45	AVG	379	351
5	5746.503	95.54	7.60	103.14	122.20	-19.06	peak	379	351
6	5746.503	89.49	7.60	97.09	122.20	-25.11	AVG	379	351
7	5966.944	39.69	7.86	47.55	68.20	-20.65	peak	379	351
8	5966.944	29.85	7.86	37.71	68.20	-30.49	AVG	379	351
9	11490.000	39.27	19.53	58.80	74.00	-15.20	peak	120	63
10	11490.000	29.32	19.53	48.85	54.00	-5.15	AVG	120	63
11	17235.000	33.93	26.86	60.79	68.30	-7.51	peak	137	226
12	17235.000	22.96	26.86	49.82	54.00	-4.18	AVG	137	226

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report

Test Mode	802.11a_5785MHz		
Test channel	157	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Horizontal at 3m



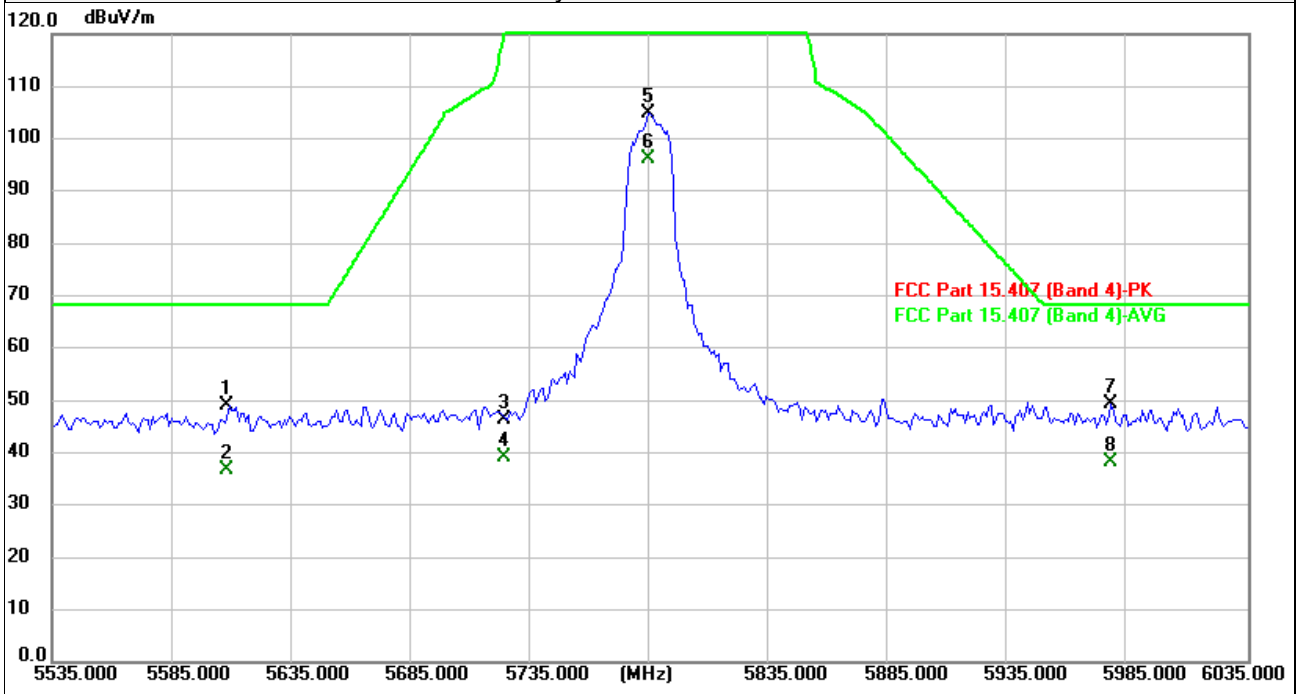
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5553.036	40.77	7.39	48.16	68.20	-20.04	peak	369	271
2	5553.036	30.41	7.39	37.80	68.20	-30.40	AVG	369	271
3	5725.000	40.91	7.58	48.49	122.20	-73.71	peak	369	271
4	5725.000	34.23	7.58	41.81	122.20	-80.39	AVG	369	271
5	5784.499	102.78	7.65	110.43	122.20	-11.77	peak	369	271
6	5784.499	96.66	7.65	104.31	122.20	-17.89	AVG	369	271
7	5953.838	40.40	7.84	48.24	68.20	-19.96	peak	369	271
8	5953.838	30.04	7.84	37.88	68.20	-30.32	AVG	369	271
9	11570.000	38.78	19.55	58.33	74.00	-15.67	peak	318	208
10	11570.000	26.82	19.55	46.37	54.00	-7.63	AVG	318	208
11	17355.000	30.33	27.62	57.95	68.30	-10.35	peak	120	28
12	17355.000	20.59	27.62	48.21	54.00	-5.79	AVG	120	28

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report

Test Mode	802.11a_5785MHz		
Test channel	157	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Vertical at 3m



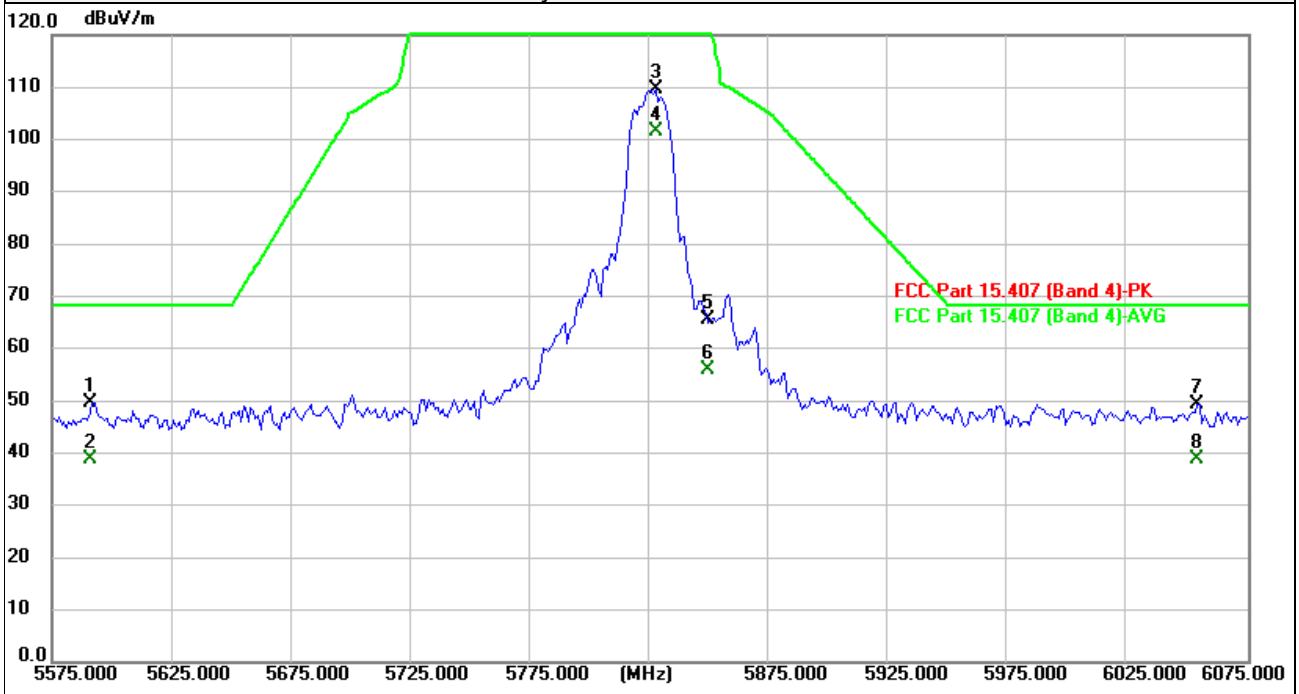
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5609.148	41.51	7.46	48.97	68.20	-19.23	peak	245	42
2	5609.148	29.41	7.46	36.87	68.20	-31.33	AVG	245	42
3	5725.000	38.87	7.58	46.45	122.20	-75.75	peak	245	42
4	5725.000	31.51	7.58	39.09	122.20	-83.11	AVG	245	42
5	5784.499	97.26	7.65	104.91	122.20	-17.29	peak	245	42
6	5784.499	88.50	7.65	96.15	122.20	-26.05	AVG	245	42
7	5977.886	41.57	7.88	49.45	68.20	-18.75	peak	245	42
8	5977.886	30.26	7.88	38.14	68.20	-30.06	AVG	245	42
9	11570.000	38.57	19.55	58.12	74.00	-15.88	peak	265	211
10	11570.000	27.78	19.55	47.33	54.00	-6.67	AVG	265	211
11	17355.000	30.07	27.62	57.69	68.30	-10.61	peak	238	217
12	17355.000	19.64	27.62	47.26	54.00	-6.74	AVG	238	217

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report

Test Mode	802.11a_5825MHz		
Test channel	165	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test distance: Horizontal at 3m



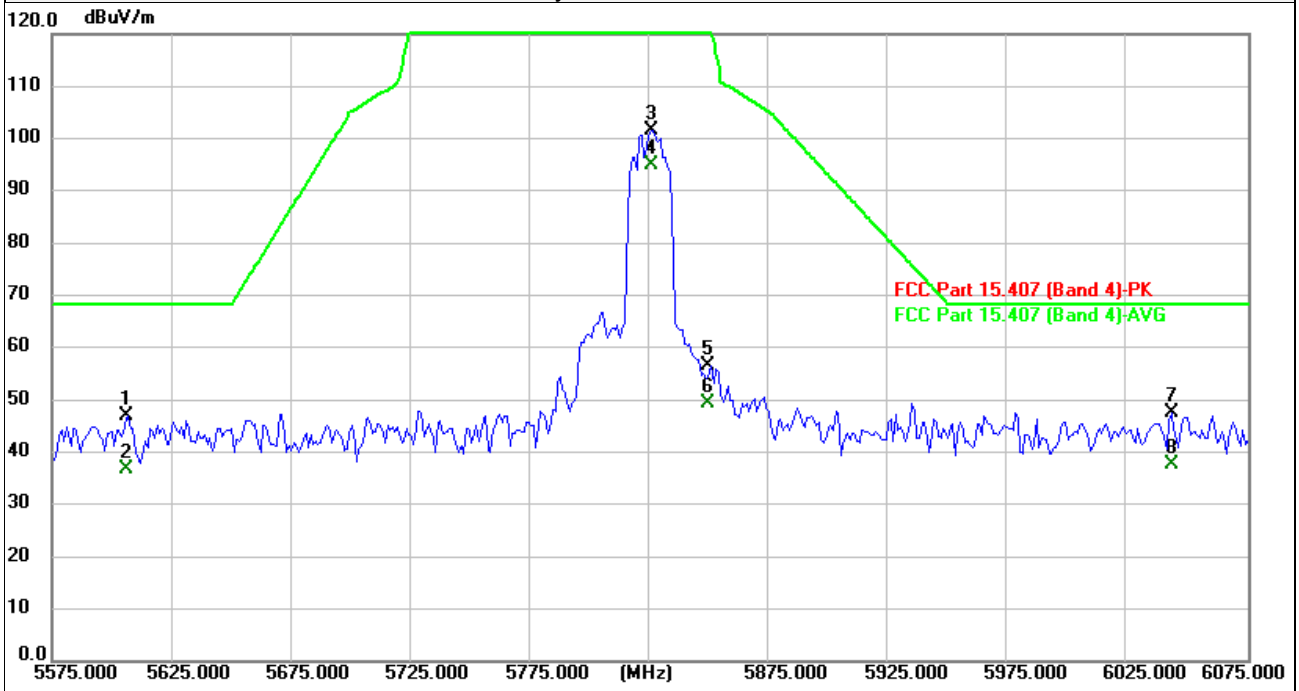
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5592.034	42.17	7.44	49.61	68.20	-18.59	peak	109	318
2	5592.034	31.36	7.44	38.80	68.20	-29.40	AVG	109	318
3	5827.505	102.09	7.70	109.79	122.20	-12.41	peak	109	318
4	5827.505	93.98	7.70	101.68	122.20	-20.52	AVG	109	318
5	5850.000	57.84	7.72	65.56	122.20	-56.64	peak	109	318
6	5850.000	48.20	7.72	55.92	122.20	-66.28	AVG	109	318
7	6053.958	41.27	8.16	49.43	68.20	-18.77	peak	109	318
8	6053.958	30.67	8.16	38.83	68.20	-29.37	AVG	109	318
9	11650.000	37.59	19.57	57.16	74.00	-16.84	peak	224	53
10	11650.000	26.50	19.57	46.07	54.00	-7.93	AVG	224	53
11	17475.000	29.53	28.39	57.92	68.30	-10.38	peak	337	59
12	17475.000	18.74	28.39	47.13	54.00	-6.87	AVG	337	59

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report

Test Mode	802.11a_5825MHz		
Test channel	165	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Vertical at 3m



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5607.064	39.40	7.45	46.85	68.20	-21.35	peak	235	47
2	5607.064	29.25	7.45	36.70	68.20	-31.50	AVG	235	47
3	5825.501	93.82	7.70	101.52	122.20	-20.68	peak	235	47
4	5825.501	87.32	7.70	95.02	122.20	-27.18	AVG	235	47
5	5850.000	48.89	7.72	56.61	122.20	-65.59	peak	235	47
6	5850.000	41.58	7.72	49.30	122.20	-72.90	AVG	235	47
7	6042.936	39.54	8.10	47.64	68.20	-20.56	peak	235	47
8	6042.936	29.69	8.10	37.79	68.20	-30.41	AVG	235	47
9	11650.000	38.69	19.57	58.26	74.00	-15.74	peak	351	269
10	11650.000	27.58	19.57	47.15	54.00	-6.85	AVG	351	269
11	17475.000	28.93	28.39	57.32	68.30	-10.98	peak	114	47
12	17475.000	17.62	28.39	46.01	54.00	-7.99	AVG	114	47

Remarks:

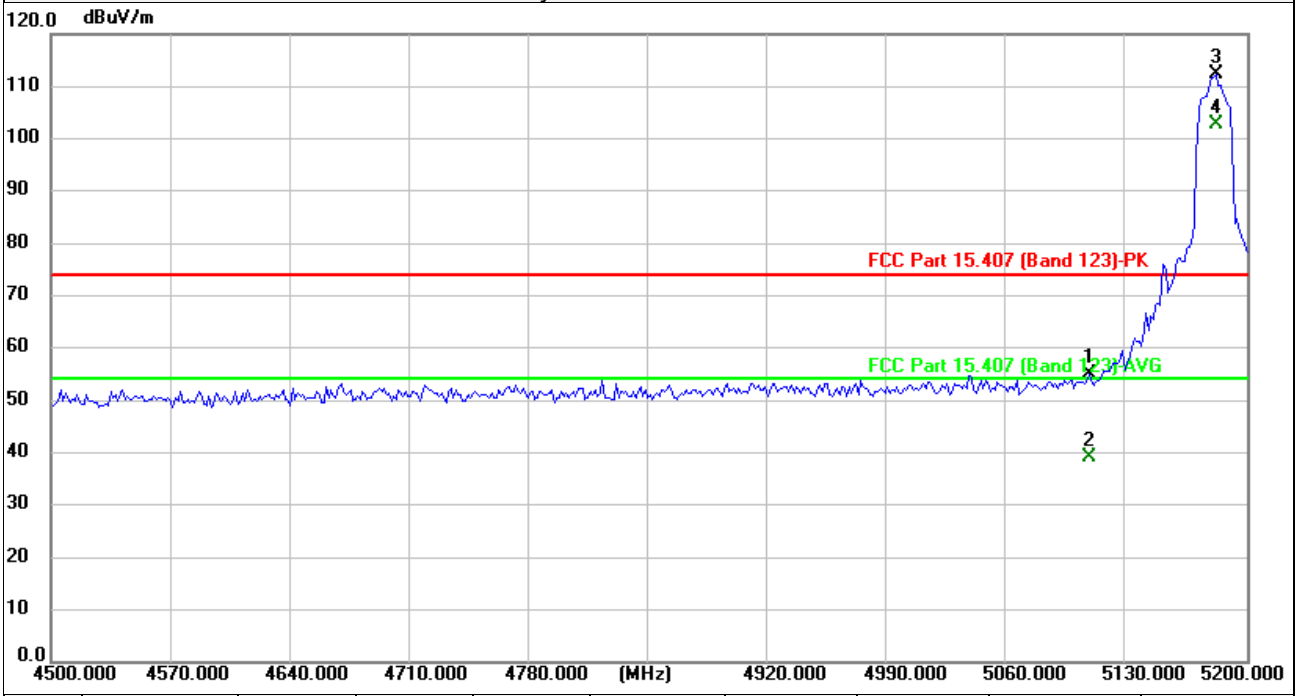
1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Above 1GHz Data:

802.11n HT20

Test Mode	802.11n HT20_5180MHz		
Test channel	36	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test distance: Horizontal at 3m



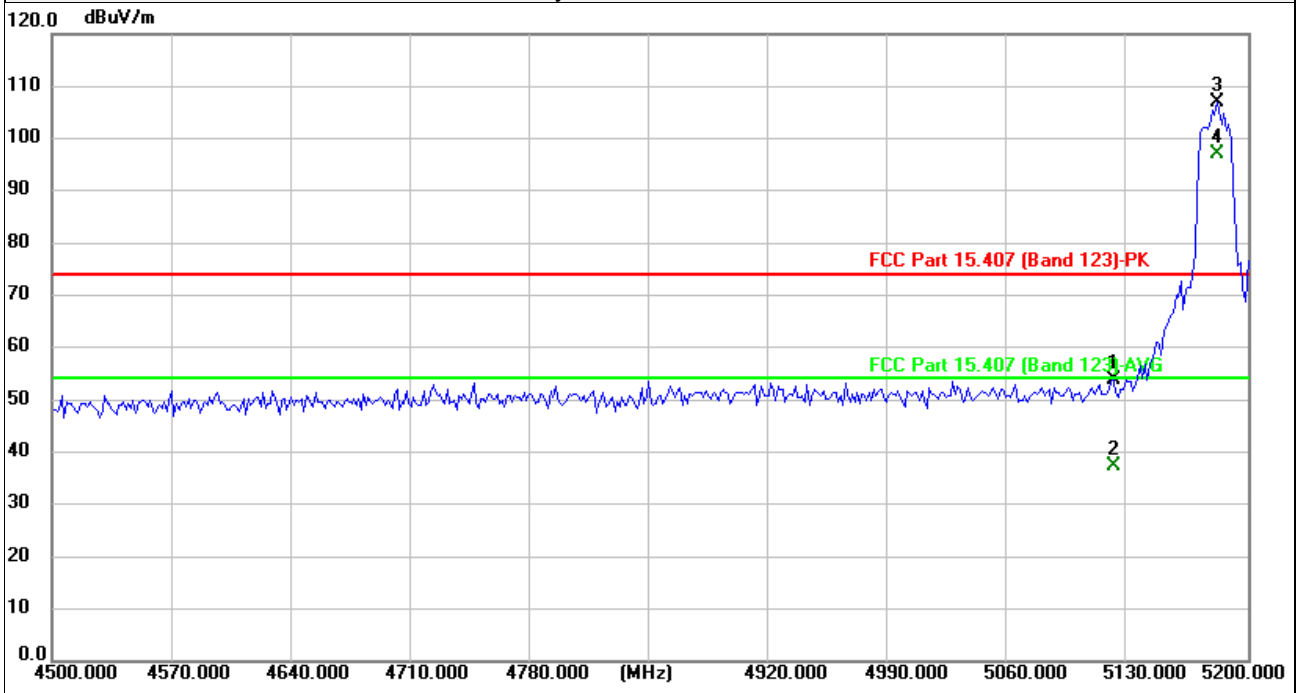
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5107.415	48.59	6.47	55.06	74.00	-18.94	peak	119	313
2	5107.415	32.66	6.47	39.13	54.00	-14.87	AVG	119	313
3	5181.764	103.39	8.89	112.28			peak	119	313
4	5181.764	93.84	8.89	102.73			AVG	119	313
5	10360.000	39.73	17.89	57.62	74.00	-16.38	peak	362	27
6	10360.000	29.46	17.89	47.35	54.00	-6.65	AVG	362	27
7	15540.000	34.97	22.17	57.14	74.00	-16.86	peak	334	158
8	15540.000	25.09	22.17	47.26	54.00	-6.74	AVG	334	158

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11n HT20_5180MHz		
Test channel	36	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Vertical at 3m



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5121.443	47.06	6.92	53.98	74.00	-20.02	peak	325	330
2	5121.443	30.38	6.92	37.30	54.00	-16.70	AVG	325	330
3	5181.764	98.21	8.89	107.10			peak	325	330
4	5181.764	88.06	8.89	96.95			AVG	325	330
5	10360.000	40.09	17.89	57.98	74.00	-16.02	peak	186	122
6	10360.000	28.43	17.89	46.32	54.00	-7.68	AVG	186	122
7	15540.000	36.26	22.17	58.43	74.00	-15.57	peak	387	273
8	15540.000	25.38	22.17	47.55	54.00	-6.45	AVG	387	273

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11n HT20_5200MHz		
Test channel	40	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

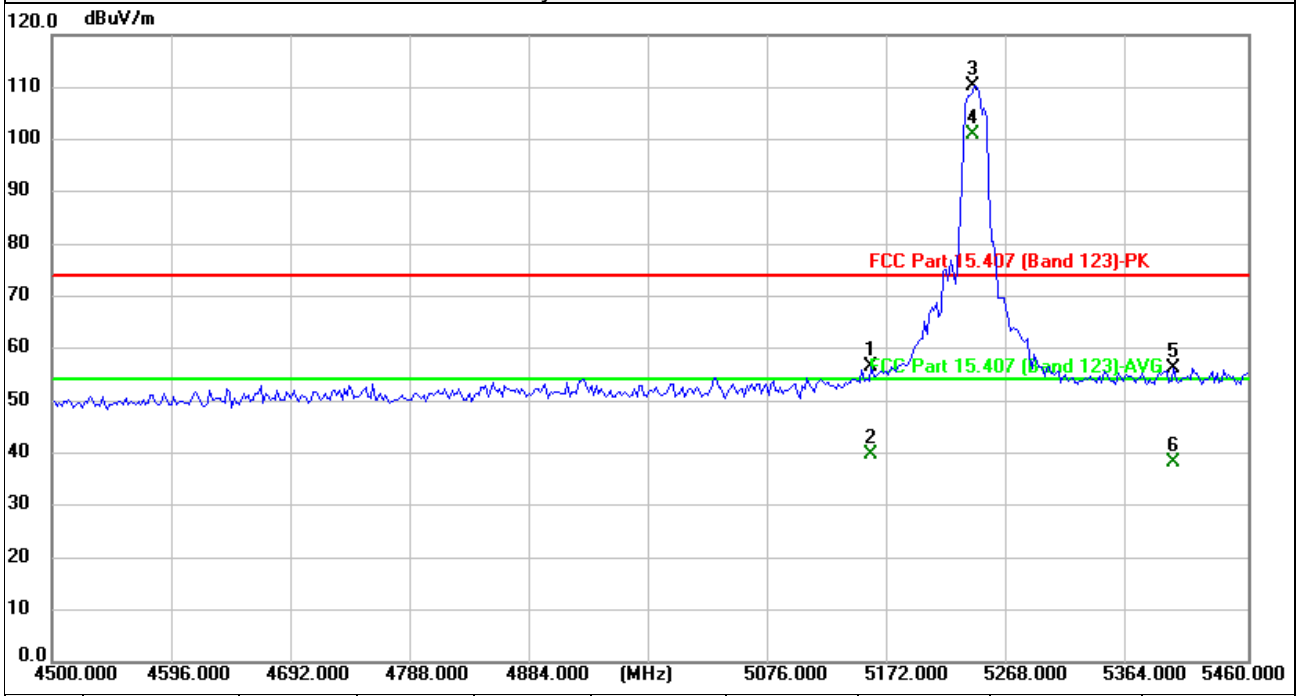
Antennal Polarity& Test Distance: Horizontal at 3m									
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5200.000	102.38	9.43	111.81			peak	105	311
2	5200.000	93.01	9.43	102.44			AVG	105	311
3	10400.000	39.39	18.00	57.39	74.00	-16.61	peak	129	74
4	10400.000	28.18	18.00	46.18	54.00	-7.82	AVG	129	74
5	15600.000	36.63	22.03	58.66	74.00	-15.34	peak	134	264
6	15600.000	25.79	22.03	47.82	54.00	-6.18	AVG	134	264
Antennal Polarity& Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5200.000	97.80	9.49	107.29			peak	100	150
2	5200.000	88.49	9.49	97.98			AVG	100	150
3	10400.000	40.62	18.00	58.62	74.00	-15.38	peak	397	345
4	10400.000	29.38	18.00	47.38	54.00	-6.62	AVG	397	345
5	15600.000	35.91	22.03	57.94	74.00	-16.06	peak	379	134
6	15600.000	24.22	22.03	46.25	54.00	-7.75	AVG	379	134

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11n HT20_5240MHz		
Test channel	48	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test distance: Horizontal at 3m



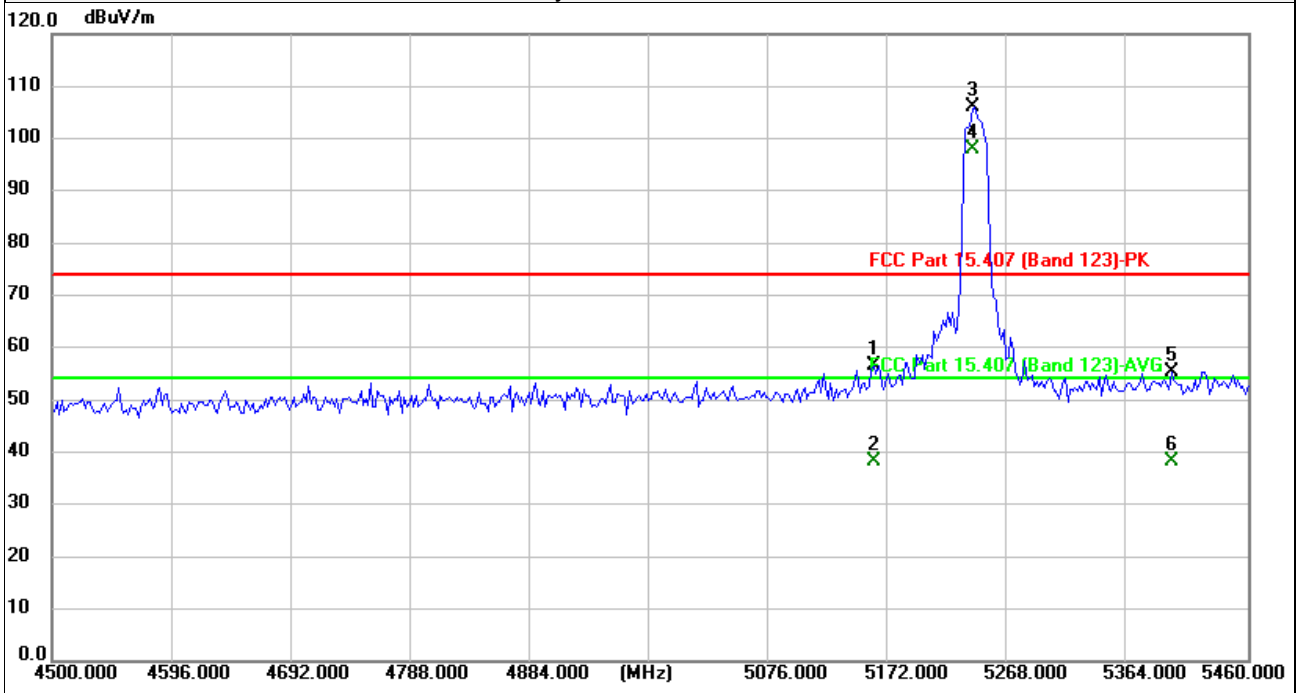
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5157.956	48.37	8.12	56.49	74.00	-17.51	peak	103	311
2	5157.956	31.55	8.12	39.67	54.00	-14.33	AVG	103	311
3	5240.681	101.92	8.39	110.31			peak	103	311
4	5240.681	92.57	8.39	100.96			AVG	103	311
5	5400.361	49.12	7.06	56.18	74.00	-17.82	peak	103	311
6	5400.361	31.34	7.06	38.40	54.00	-15.60	AVG	103	311
7	10480.000	38.72	18.22	56.94	74.00	-17.06	peak	282	294
8	10480.000	28.16	18.22	46.38	54.00	-7.62	AVG	282	294
9	15720.000	36.79	21.75	58.54	74.00	-15.46	peak	277	251
10	15720.000	25.34	21.75	47.09	54.00	-6.91	AVG	277	251

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11n HT20_5240MHz		
Test channel	48	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Vertical at 3m



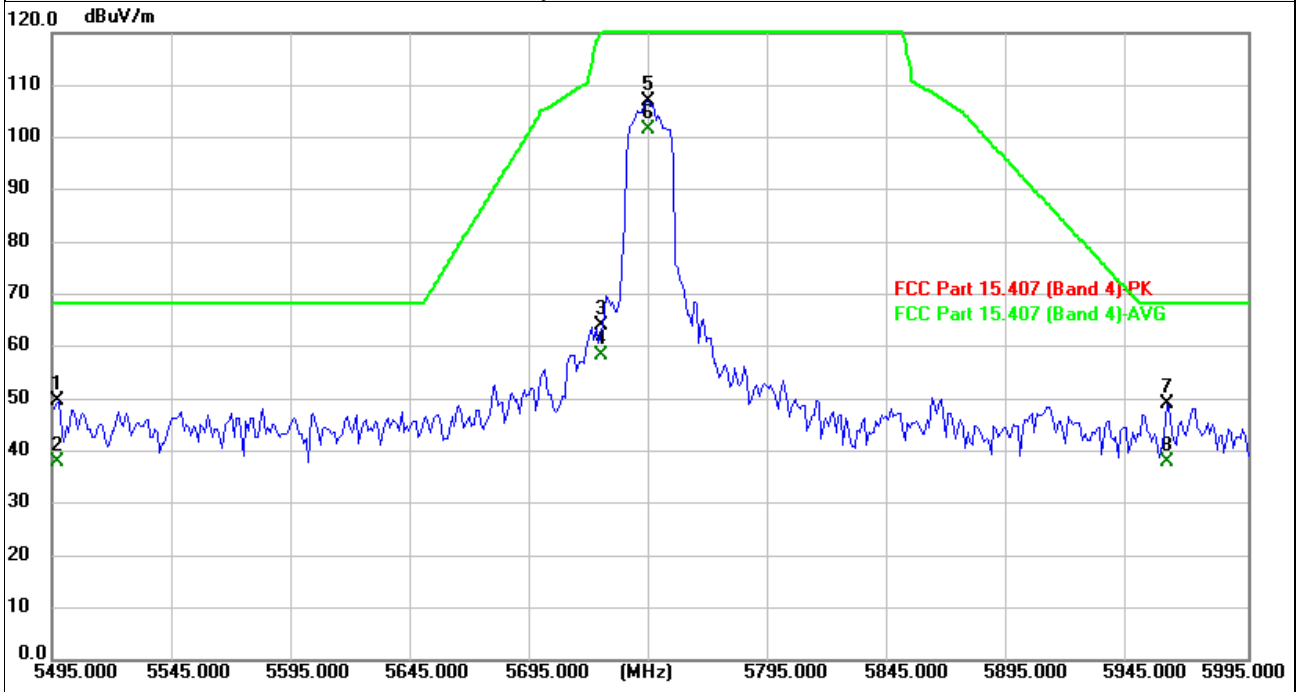
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5159.880	48.36	8.18	56.54	74.00	-17.46	peak	323	331
2	5159.880	30.17	8.18	38.35	54.00	-15.65	AVG	323	331
3	5240.681	97.78	8.39	106.17			peak	323	331
4	5240.681	89.42	8.39	97.81			AVG	323	331
5	5398.437	48.35	7.06	55.41	74.00	-18.59	peak	323	331
6	5398.437	31.07	7.06	38.13	54.00	-15.87	AVG	323	331
7	10480.000	39.41	18.22	57.63	74.00	-16.37	peak	179	21
8	10480.000	29.00	18.22	47.22	54.00	-6.78	AVG	179	21
9	15720.000	36.14	21.75	57.89	74.00	-16.11	peak	356	178
10	15720.000	24.60	21.75	46.35	54.00	-7.65	AVG	356	178

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11n HT20_5745MHz		
Test channel	149	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test distance: Horizontal at 3m



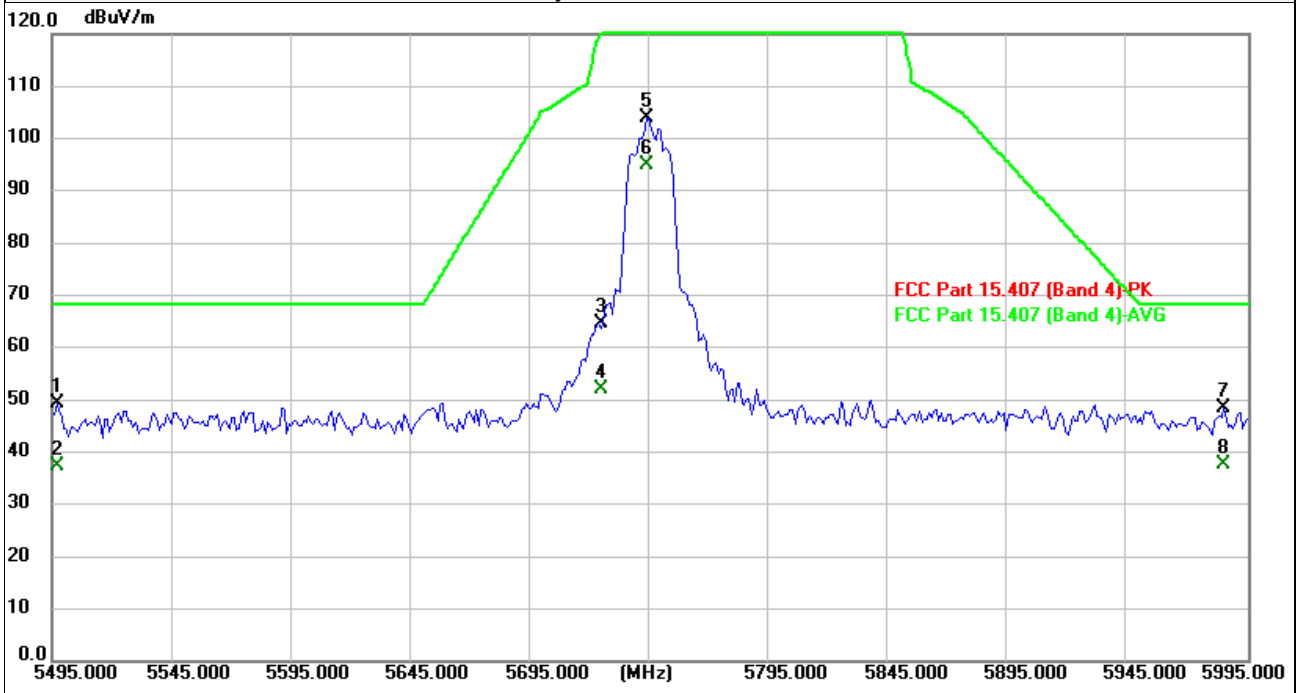
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5498.006	42.20	7.34	49.54	68.20	-18.66	peak	100	220
2	5498.006	30.62	7.34	37.96	68.20	-30.24	AVG	100	220
3	5725.000	56.33	7.58	63.91	122.20	-58.29	peak	100	220
4	5725.000	50.74	7.58	58.32	122.20	-63.88	AVG	100	220
5	5744.499	99.45	7.60	107.05	122.20	-15.15	peak	100	220
6	5744.499	93.97	7.60	101.57	122.20	-20.63	AVG	100	220
7	5960.932	41.06	7.86	48.92	68.20	-19.28	peak	100	220
8	5960.932	30.12	7.86	37.98	68.20	-30.22	AVG	100	220
9	11490.000	39.73	19.53	59.26	74.00	-14.74	peak	219	131
10	11490.000	27.69	19.53	47.22	54.00	-6.78	AVG	219	131
11	17235.000	31.77	26.86	58.63	68.30	-9.67	peak	148	47
12	17235.000	21.89	26.86	48.75	54.00	-5.25	AVG	148	47

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11n HT20_5745MHz		
Test channel	149	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Vertical at 3m



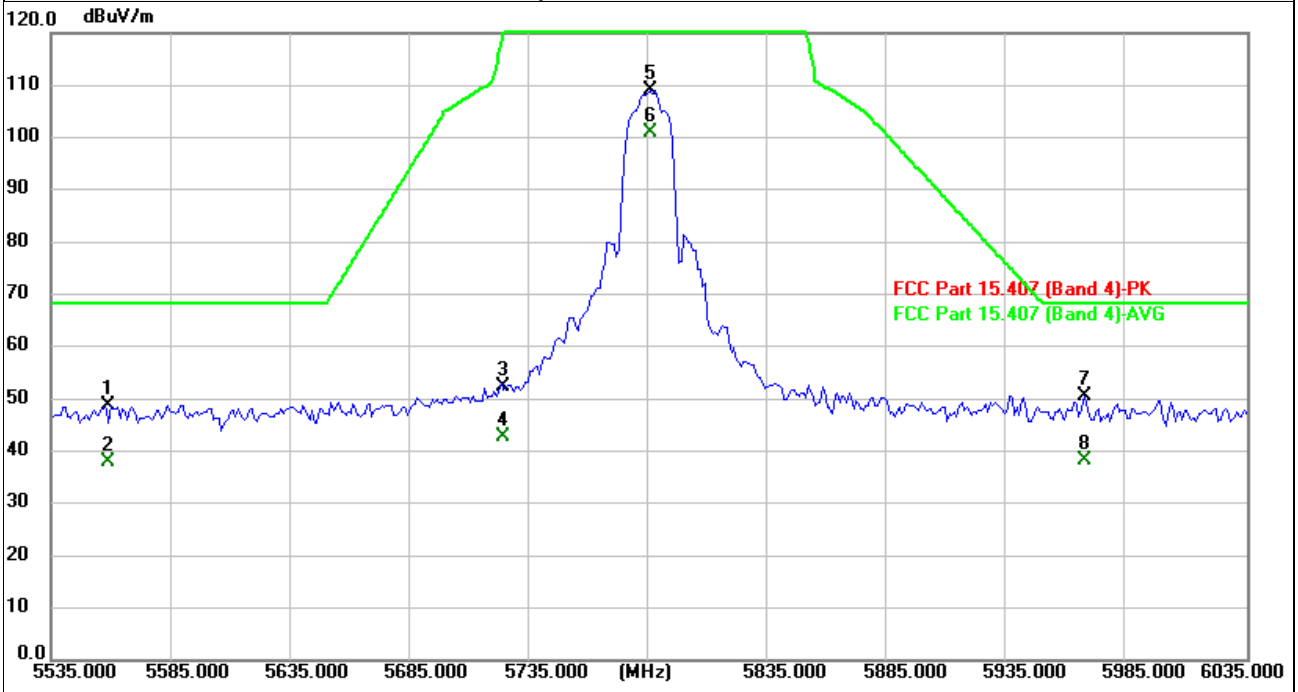
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5497.004	41.99	7.33	49.32	68.20	-18.88	peak	261	43
2	5497.004	30.11	7.33	37.44	68.20	-30.76	AVG	261	43
3	5725.000	57.07	7.58	64.65	122.20	-57.55	peak	261	43
4	5725.000	44.44	7.58	52.02	122.20	-70.18	AVG	261	43
5	5743.497	96.42	7.60	104.02	122.20	-18.18	peak	261	43
6	5743.497	87.23	7.60	94.83	122.20	-27.37	AVG	261	43
7	5984.980	40.57	7.89	48.46	68.20	-19.74	peak	261	43
8	5984.980	29.85	7.89	37.74	68.20	-30.46	AVG	261	43
9	11490.000	37.80	19.53	57.33	74.00	-16.67	peak	236	245
10	11490.000	27.71	19.53	47.24	54.00	-6.76	AVG	236	245
11	17235.000	31.10	26.86	57.96	68.30	-10.34	peak	396	179
12	17235.000	19.34	26.86	46.20	54.00	-7.80	AVG	396	179

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11n HT20_5785MHz		
Test channel	157	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Horizontal at 3m



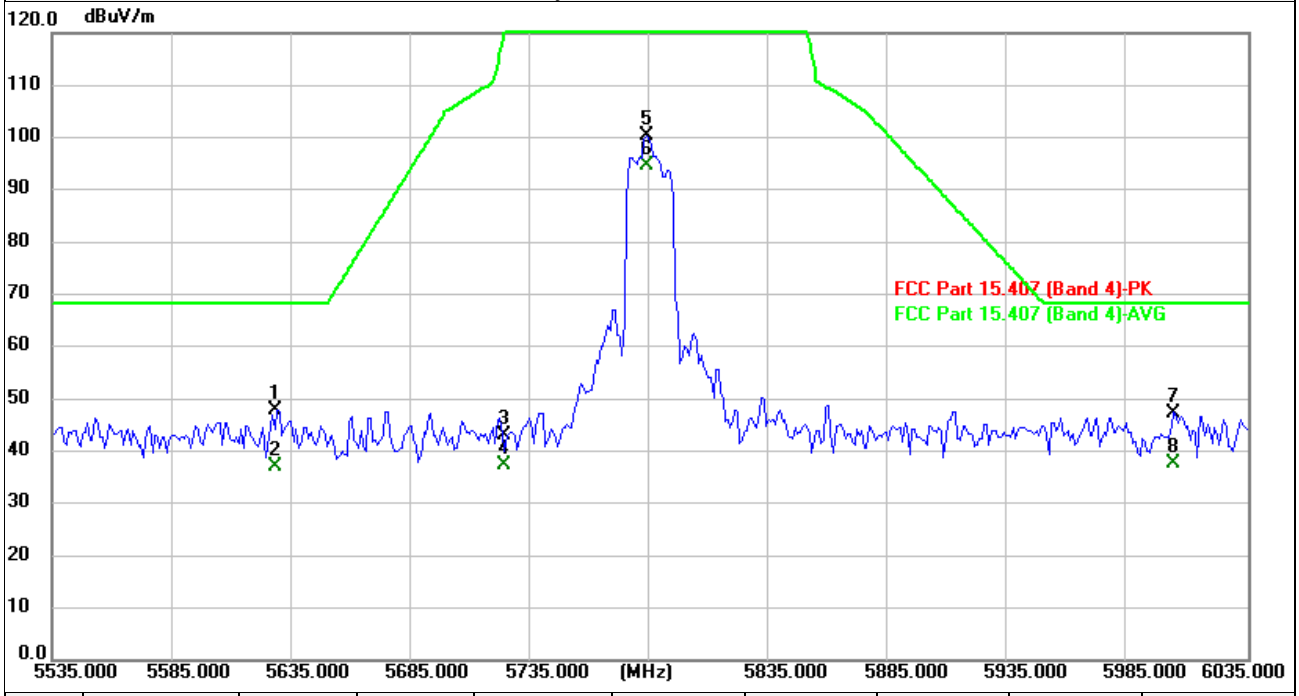
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5560.050	41.37	7.40	48.77	68.20	-19.43	peak	118	319
2	5560.050	30.69	7.40	38.09	68.20	-30.11	AVG	118	319
3	5725.000	44.64	7.58	52.22	122.20	-69.98	peak	118	319
4	5725.000	35.24	7.58	42.82	122.20	-79.38	AVG	118	319
5	5785.501	101.52	7.65	109.17	122.20	-13.03	peak	118	319
6	5785.501	93.37	7.65	101.02	122.20	-21.18	AVG	118	319
7	5966.864	42.63	7.86	50.49	68.20	-17.71	peak	118	319
8	5966.864	30.32	7.86	38.18	68.20	-30.02	AVG	118	319
9	11570.000	37.49	19.55	57.04	74.00	-16.96	peak	234	243
10	11570.000	27.84	19.55	47.39	54.00	-6.61	AVG	234	243
11	17355.000	31.25	27.62	58.87	68.30	-9.43	peak	281	146
12	17355.000	18.61	27.62	46.23	54.00	-7.77	AVG	281	146

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11n HT20_5785MHz		
Test channel	157	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Vertical at 3m



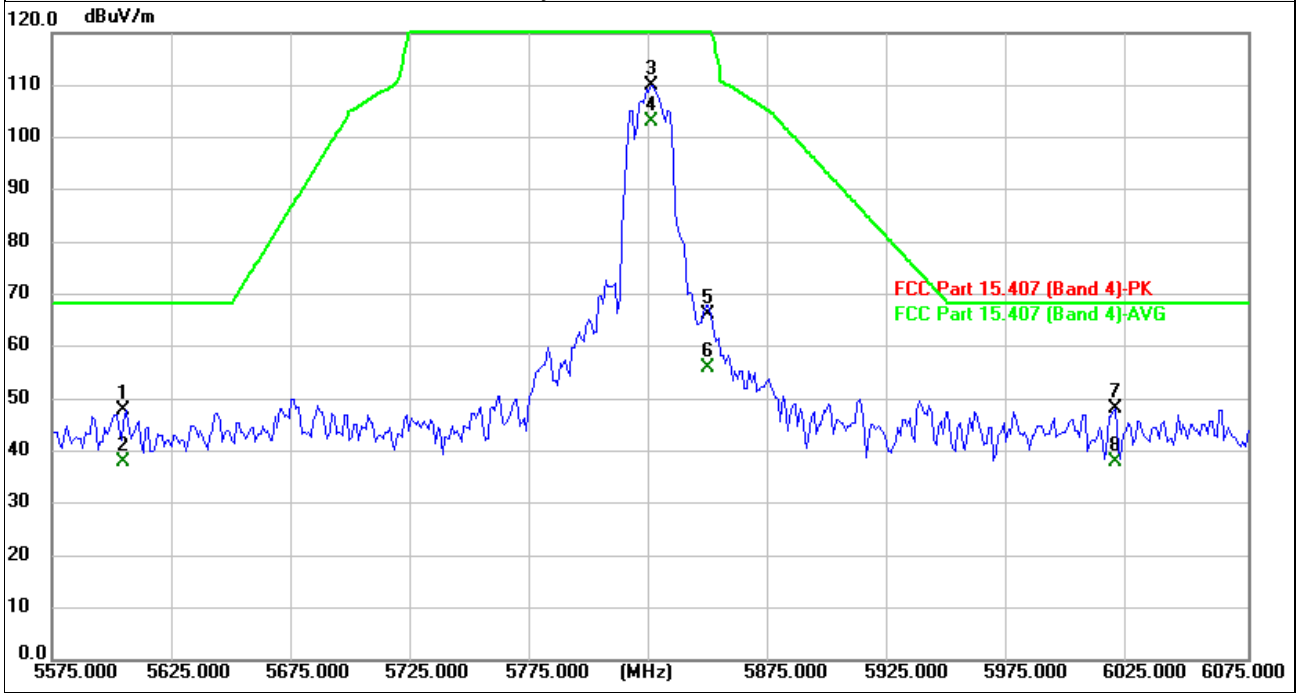
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5629.188	40.25	7.48	47.73	68.20	-20.47	peak	395	47
2	5629.188	29.59	7.48	37.07	68.20	-31.13	AVG	395	47
3	5725.000	35.35	7.58	42.93	122.20	-79.27	peak	395	47
4	5725.000	29.92	7.58	37.50	122.20	-84.70	AVG	395	47
5	5783.497	92.73	7.65	100.38	122.20	-21.82	peak	395	47
6	5783.497	86.93	7.65	94.58	122.20	-27.62	AVG	395	47
7	6003.938	39.49	7.91	47.40	68.20	-20.80	peak	395	47
8	6003.938	29.65	7.91	37.56	68.20	-30.64	AVG	395	47
9	11570.000	39.06	19.55	58.61	74.00	-15.39	peak	309	53
10	11570.000	27.78	19.55	47.33	54.00	-6.67	AVG	309	53
11	17355.000	30.12	27.62	57.74	68.30	-10.56	peak	248	240
12	17355.000	18.77	27.62	46.39	54.00	-7.61	AVG	248	240

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11n HT20_5825MHz		
Test channel	165	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test distance: Horizontal at 3m



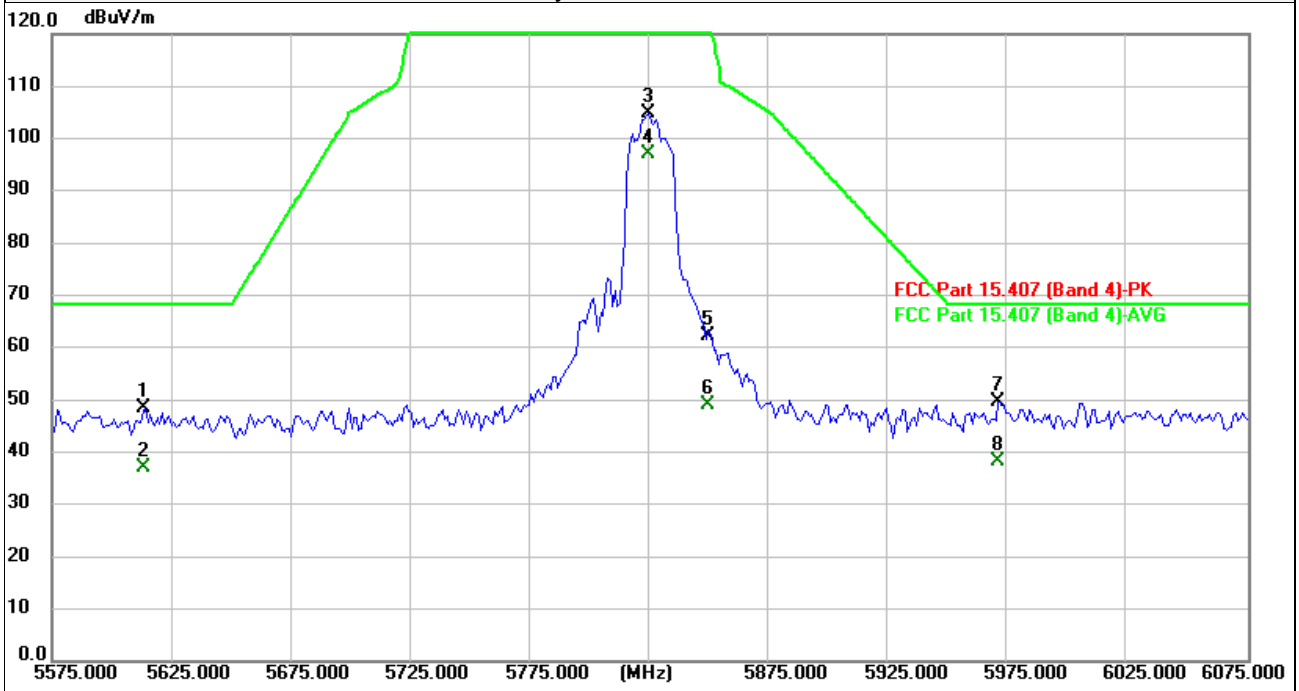
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5606.062	40.48	7.45	47.93	68.20	-20.27	peak	361	272
2	5606.062	30.60	7.45	38.05	68.20	-30.15	AVG	361	272
3	5825.501	102.36	7.70	110.06	122.20	-12.14	peak	361	272
4	5825.501	95.37	7.70	103.07	122.20	-19.13	AVG	361	272
5	5850.000	58.41	7.72	66.13	122.20	-56.07	peak	361	272
6	5850.000	48.09	7.72	55.81	122.20	-66.39	AVG	361	272
7	6019.890	40.11	8.00	48.11	68.20	-20.09	peak	361	272
8	6019.890	30.08	8.00	38.08	68.20	-30.12	AVG	361	272
9	11650.000	38.86	19.57	58.43	74.00	-15.57	peak	227	282
10	11650.000	26.72	19.57	46.29	54.00	-7.71	AVG	227	282
11	17475.000	28.74	28.39	57.13	68.30	-11.17	peak	254	226
12	17475.000	17.83	28.39	46.22	54.00	-7.78	AVG	254	226

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11n HT20_5825MHz		
Test channel	165	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Vertical at 3m



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5614.078	40.90	7.46	48.36	68.20	-19.84	peak	256	38
2	5614.078	29.56	7.46	37.02	68.20	-31.18	AVG	256	38
3	5824.499	97.11	7.69	104.80	122.20	-17.40	peak	256	38
4	5824.499	89.36	7.69	97.05	122.20	-25.15	AVG	256	38
5	5850.000	54.68	7.72	62.40	122.20	-59.80	peak	256	38
6	5850.000	41.44	7.72	49.16	122.20	-73.04	AVG	256	38
7	5970.792	41.72	7.87	49.59	68.20	-18.61	peak	256	38
8	5970.792	30.30	7.87	38.17	68.20	-30.03	AVG	256	38
9	11650.000	39.05	19.57	58.62	74.00	-15.38	peak	155	53
10	11650.000	27.76	19.57	47.33	54.00	-6.67	AVG	155	53
11	17475.000	29.90	28.39	58.29	68.30	-10.01	peak	280	240
12	17475.000	18.74	28.39	47.13	54.00	-6.87	AVG	280	240

Remarks:

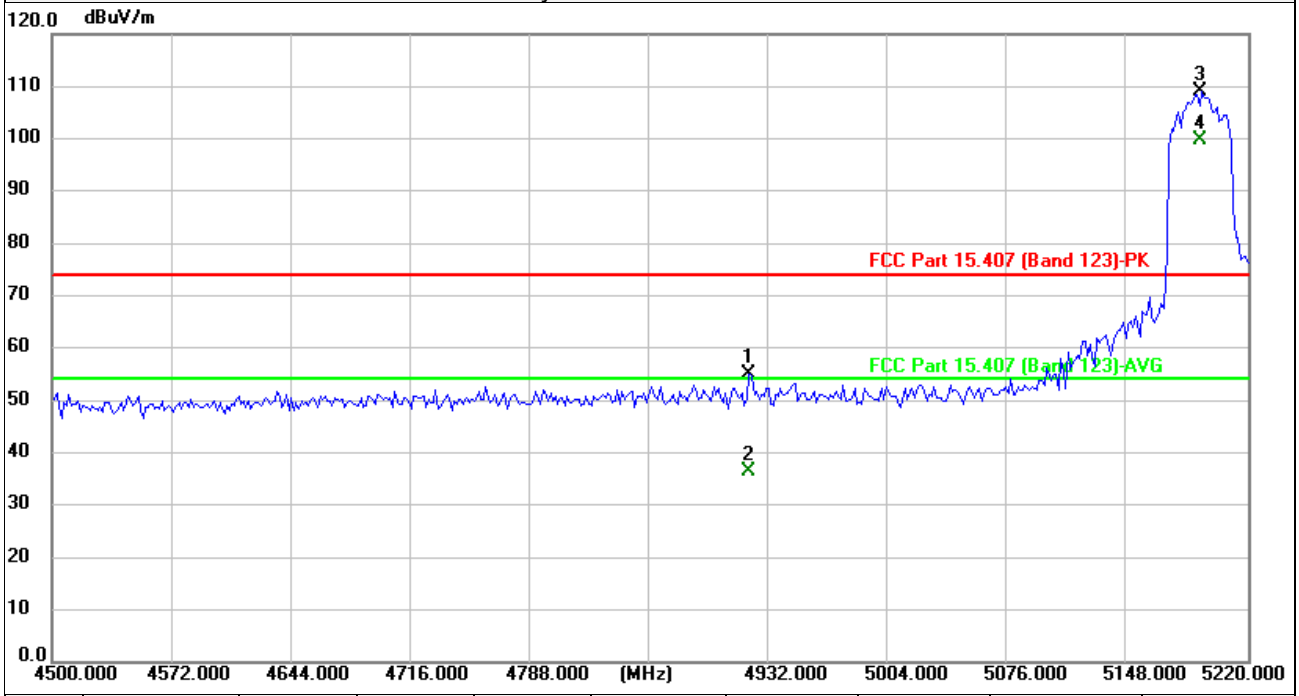
1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Above 1GHz Data:

802.11n HT40

Test Mode	802.11n HT40_5190MHz		
Test channel	38	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test distance: Horizontal at 3m



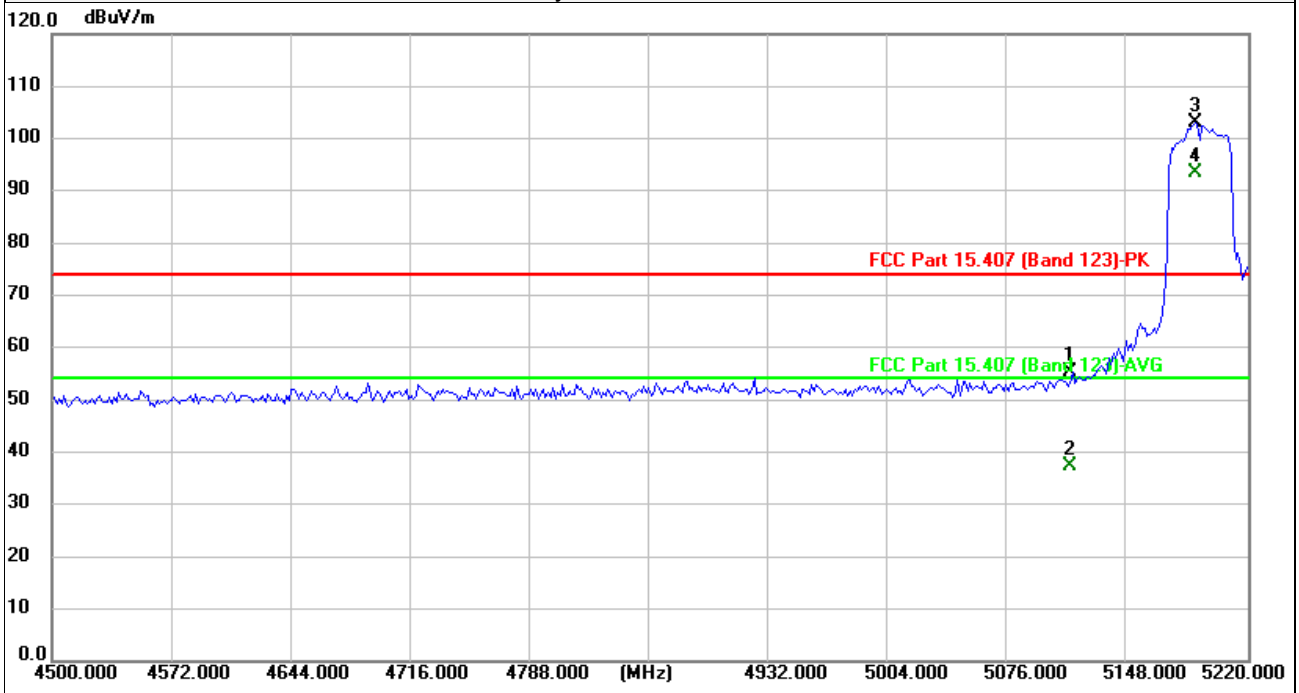
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	4919.880	48.78	6.38	55.16	74.00	-18.84	peak	111	300
2	4919.880	30.05	6.38	36.43	54.00	-17.57	AVG	111	300
3	5192.585	99.65	9.26	108.91			peak	111	300
4	5192.585	90.63	9.26	99.89			AVG	111	300
5	10380.000	39.22	17.94	57.16	74.00	-16.84	peak	183	226
6	10380.000	29.44	17.94	47.38	54.00	-6.62	AVG	183	226
7	15570.000	36.51	22.10	58.61	74.00	-15.39	peak	103	282
8	15570.000	26.29	22.10	48.39	54.00	-5.61	AVG	103	282

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11n HT40_5190MHz		
Test channel	38	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Vertical at 3m



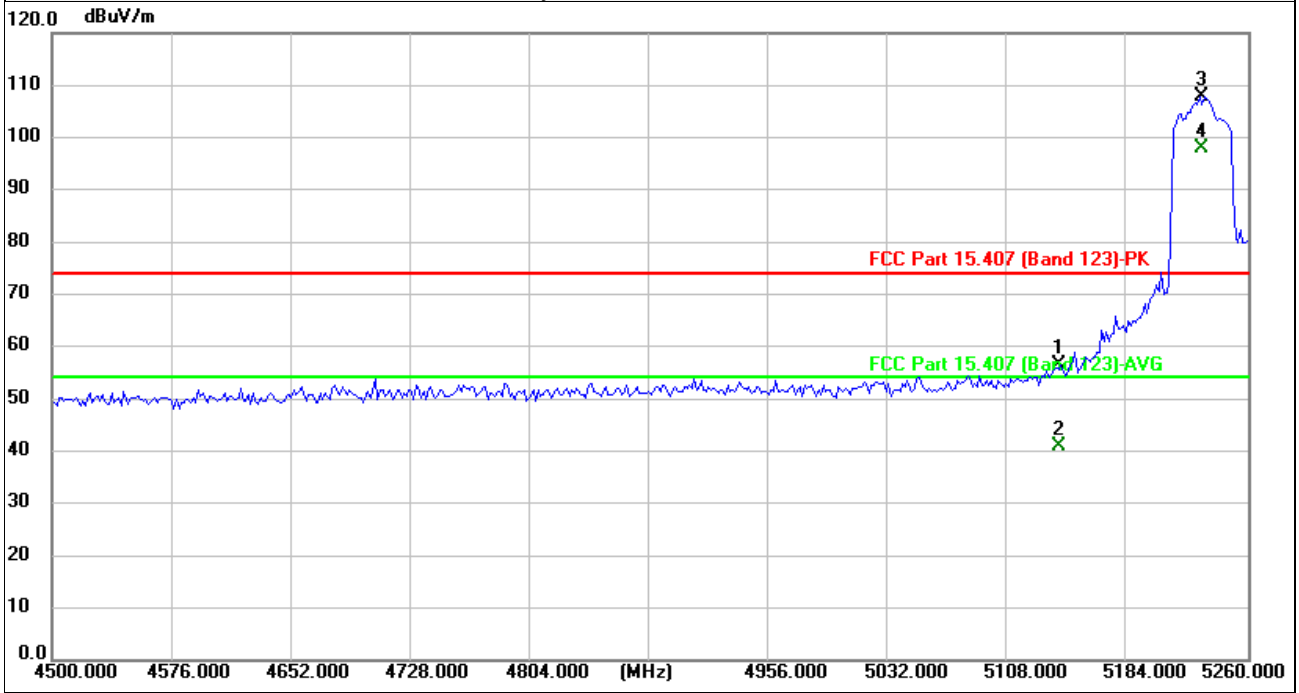
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5114.669	48.61	6.71	55.32	74.00	-18.68	peak	100	151
2	5114.669	30.61	6.71	37.32	54.00	-16.68	AVG	100	151
3	5188.257	93.96	9.12	103.08			peak	100	151
4	5188.257	84.21	9.12	93.33			AVG	100	151
5	10380.000	40.28	17.94	58.22	74.00	-15.78	peak	278	224
6	10380.000	28.45	17.94	46.39	54.00	-7.61	AVG	278	224
7	15570.000	35.29	22.10	57.39	74.00	-16.61	peak	346	334
8	15570.000	25.07	22.10	47.17	54.00	-6.83	AVG	346	334

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11n HT40_5230MHz		
Test channel	46	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test distance: Horizontal at 3m



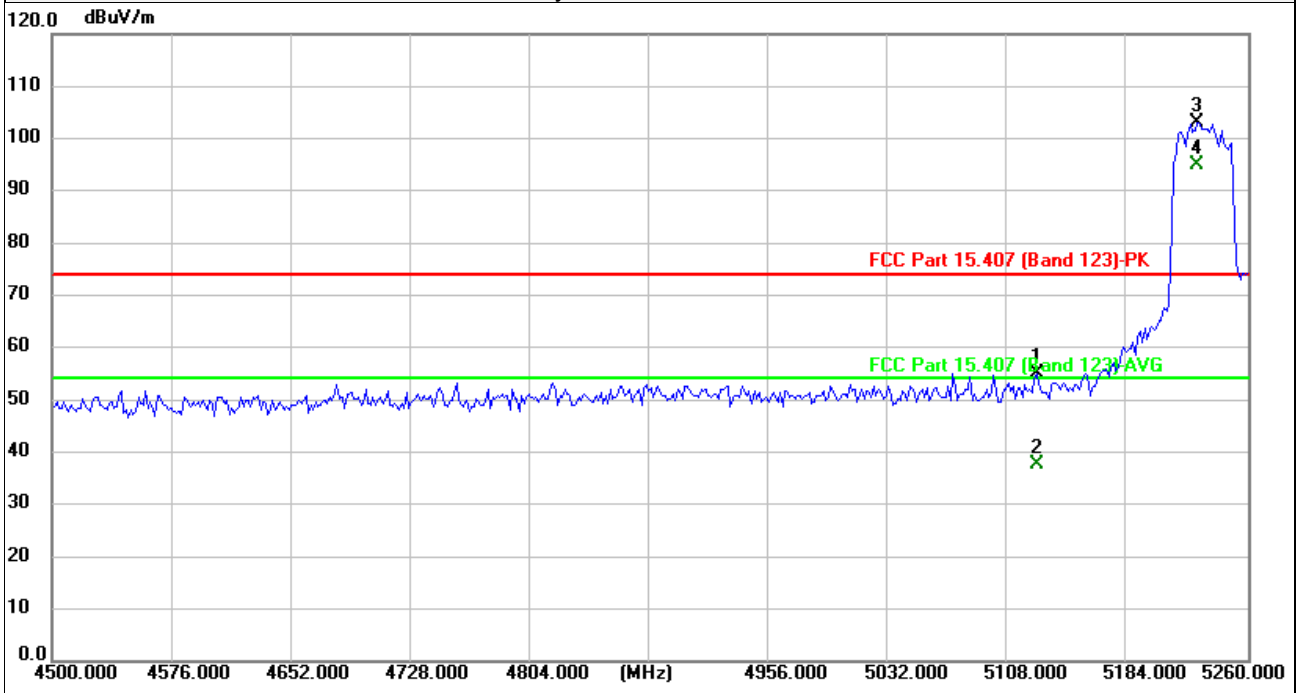
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5141.202	49.06	7.57	56.63	74.00	-17.37	peak	111	311
2	5141.202	33.44	7.57	41.01	54.00	-12.99	AVG	111	311
3	5232.585	99.20	8.62	107.82			peak	111	311
4	5232.585	89.36	8.62	97.98			AVG	111	311
5	10460.000	40.18	18.16	58.34	74.00	-15.66	peak	232	94
6	10460.000	29.10	18.16	47.26	54.00	-6.74	AVG	232	94
7	15690.000	36.14	21.82	57.96	74.00	-16.04	peak	289	193
8	15690.000	25.31	21.82	47.13	54.00	-6.87	AVG	289	193

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11n HT40_5230MHz		
Test channel	46	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Vertical at 3m



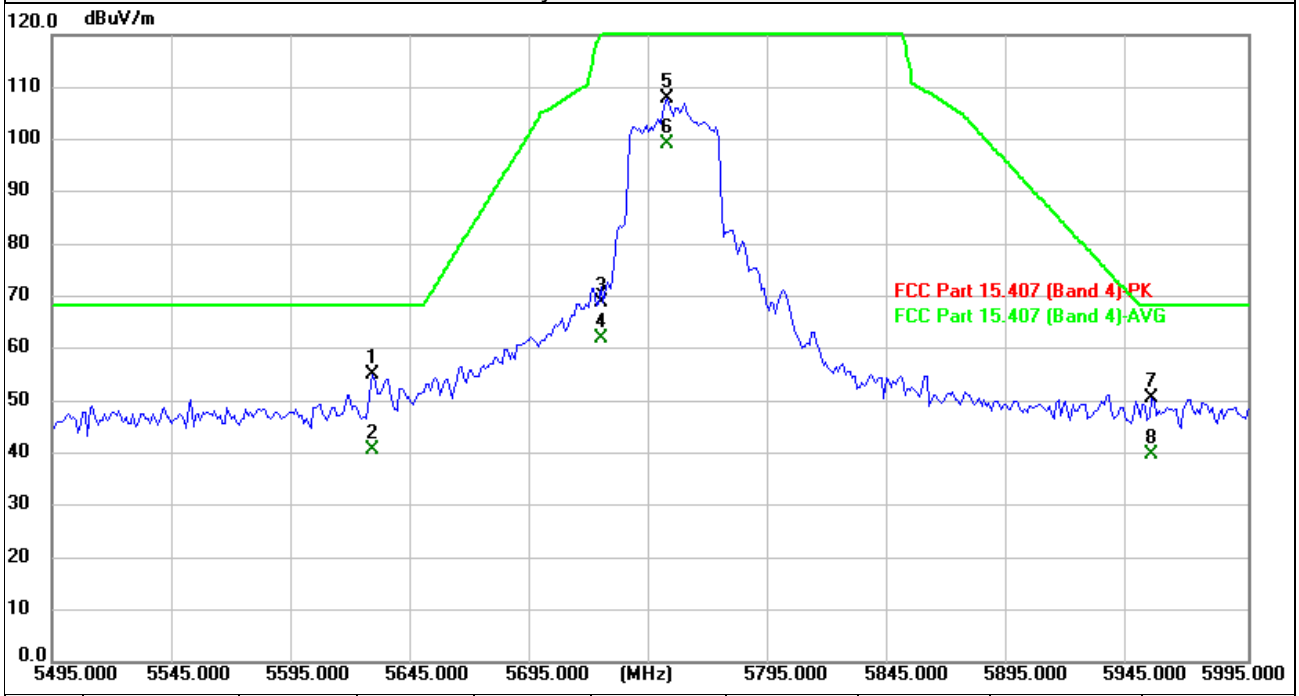
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5125.972	47.98	7.07	55.05	74.00	-18.95	peak	323	332
2	5125.972	30.54	7.07	37.61	54.00	-16.39	AVG	323	332
3	5228.016	94.40	8.74	103.14			peak	323	332
4	5228.016	86.18	8.74	94.92			AVG	323	332
5	10460.000	39.10	18.16	57.26	74.00	-16.74	peak	247	135
6	10460.000	29.66	18.16	47.82	54.00	-6.18	AVG	247	135
7	15690.000	36.82	21.82	58.64	74.00	-15.36	peak	235	110
8	15690.000	25.36	21.82	47.18	54.00	-6.82	AVG	235	110

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11n HT40_5755MHz		
Test channel	151	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test distance: Horizontal at 3m



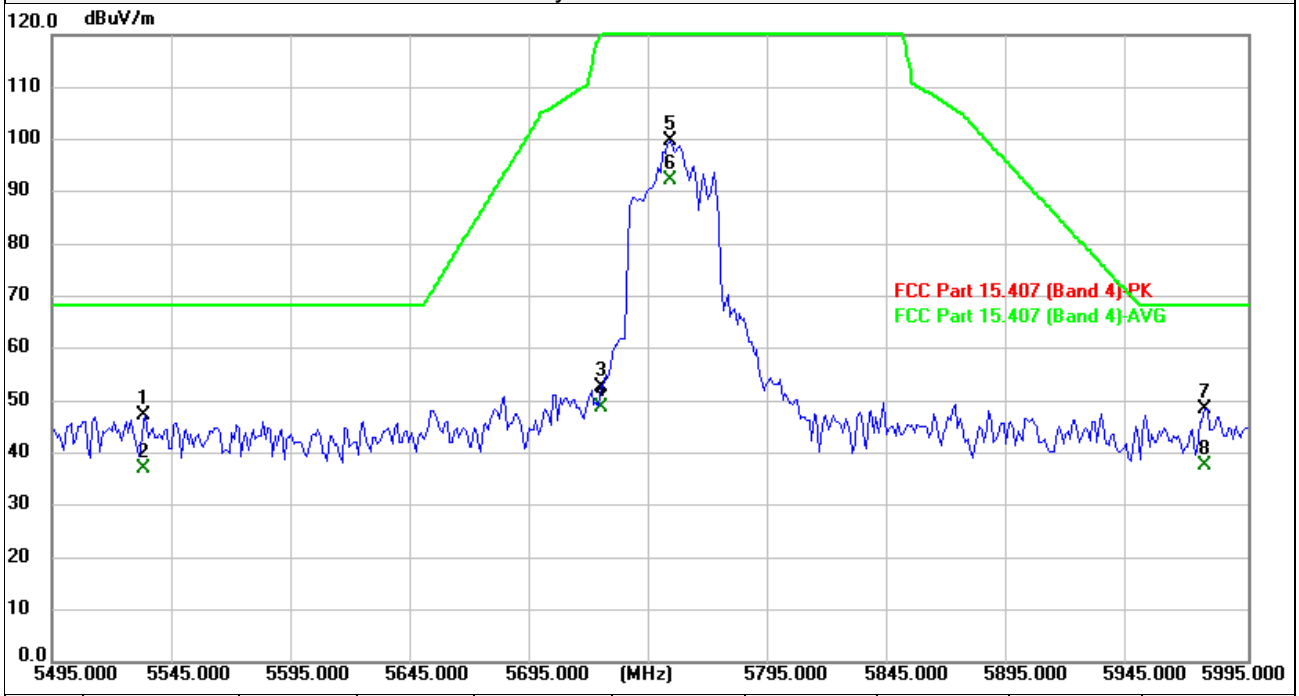
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5629.269	47.43	7.48	54.91	68.20	-13.29	peak	100	321
2	5629.269	33.29	7.48	40.77	68.20	-27.43	AVG	100	321
3	5725.000	61.33	7.58	68.91	122.20	-53.29	peak	100	321
4	5725.000	54.37	7.58	61.95	122.20	-60.25	AVG	100	321
5	5752.515	100.36	7.61	107.97	122.20	-14.23	peak	100	321
6	5752.515	91.64	7.61	99.25	122.20	-22.95	AVG	100	321
7	5954.920	42.66	7.84	50.50	68.20	-17.70	peak	100	321
8	5954.920	31.81	7.84	39.65	68.20	-28.55	AVG	100	321
9	11510.000	37.73	19.53	57.26	74.00	-16.74	peak	233	57
10	11510.000	28.36	19.53	47.89	54.00	-6.11	AVG	233	57
11	17265.000	31.36	27.06	58.42	68.30	-9.88	peak	280	128
12	17265.000	19.93	27.06	46.99	54.00	-7.01	AVG	280	128

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report

Test Mode	802.11n HT40_5755MHz		
Test channel	151	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Vertical at 3m



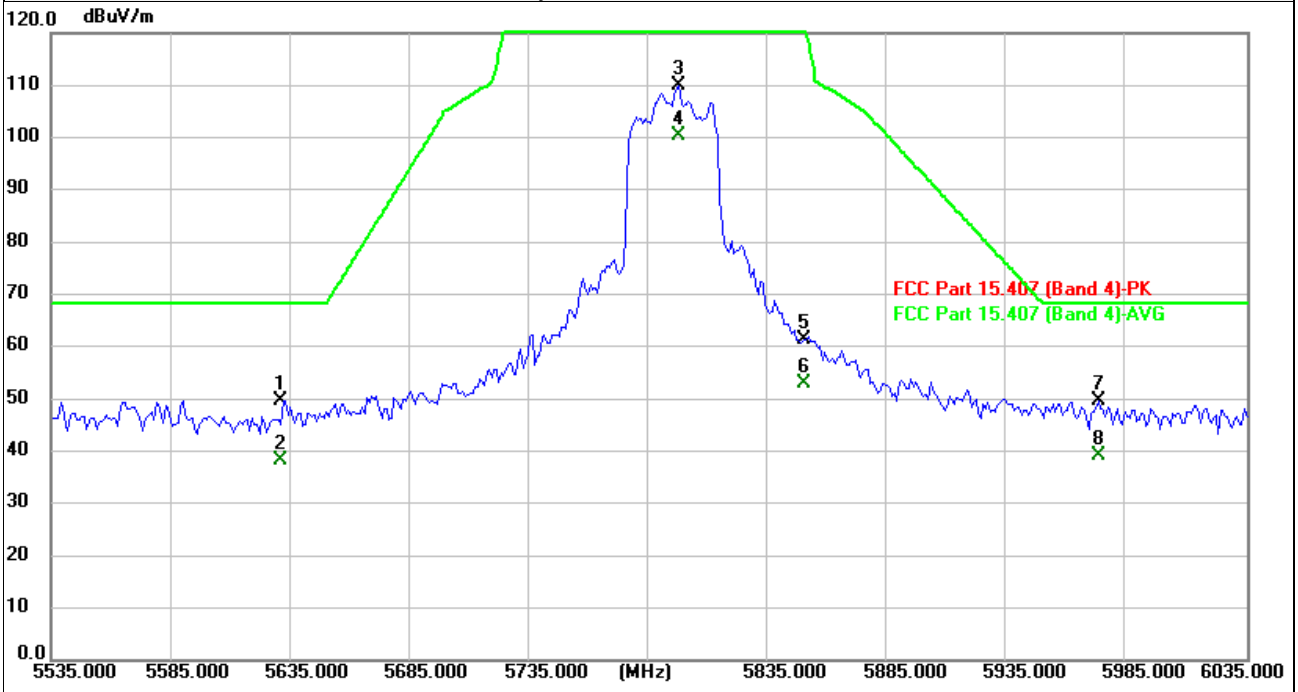
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5534.078	39.84	7.38	47.22	68.20	-20.98	peak	400	48
2	5534.078	29.77	7.38	37.15	68.20	-31.05	AVG	400	48
3	5725.000	45.22	7.58	52.80	122.20	-69.40	peak	400	48
4	5725.000	41.23	7.58	48.81	122.20	-73.39	AVG	400	48
5	5753.517	92.17	7.61	99.78	122.20	-22.42	peak	400	48
6	5753.517	84.76	7.61	92.37	122.20	-29.83	AVG	400	48
7	5976.964	40.53	7.88	48.41	68.20	-19.79	peak	400	48
8	5976.964	29.91	7.88	37.79	68.20	-30.41	AVG	400	48
9	11510.000	38.81	19.53	58.34	74.00	-15.66	peak	335	30
10	11510.000	26.76	19.53	46.29	54.00	-7.71	AVG	335	30
11	17265.000	30.12	27.06	57.18	68.30	-11.12	peak	341	59
12	17265.000	20.32	27.06	47.38	54.00	-6.62	AVG	341	59

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11n HT40_5795MHz		
Test channel	159	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Horizontal at 3m



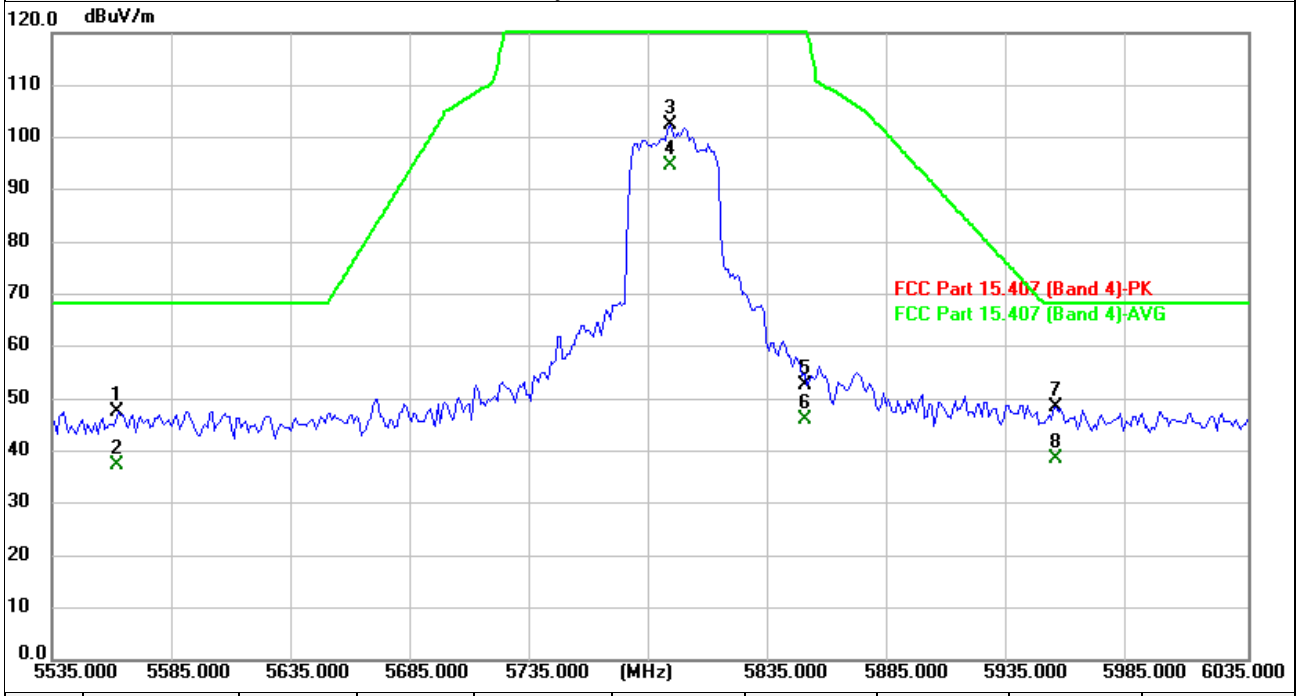
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5632.194	42.13	7.48	49.61	68.20	-18.59	peak	310	273
2	5632.194	30.84	7.48	38.32	68.20	-29.88	AVG	310	273
3	5797.525	102.24	7.66	109.90	122.20	-12.30	peak	310	273
4	5797.525	92.84	7.66	100.50	122.20	-21.70	AVG	310	273
5	5850.000	53.73	7.72	61.45	122.20	-60.75	peak	310	273
6	5850.000	45.28	7.72	53.00	122.20	-69.20	AVG	310	273
7	5972.876	41.65	7.87	49.52	68.20	-18.68	peak	310	273
8	5972.876	31.35	7.87	39.22	68.20	-28.98	AVG	310	273
9	11590.000	36.44	19.56	56.00	74.00	-18.00	peak	213	312
10	11590.000	28.06	19.56	47.62	54.00	-6.38	AVG	213	312
11	17385.000	29.82	27.82	57.64	68.30	-10.66	peak	336	95
12	17385.000	21.36	27.82	49.18	54.00	-4.82	AVG	336	95

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11n HT40_5795MHz		
Test channel	159	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Vertical at 3m



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5563.056	40.28	7.41	47.69	68.20	-20.51	peak	256	33
2	5563.056	29.88	7.41	37.29	68.20	-30.91	AVG	256	33
3	5793.517	94.71	7.66	102.37	122.20	-19.83	peak	256	33
4	5793.517	87.12	7.66	94.78	122.20	-27.42	AVG	256	33
5	5850.000	45.08	7.72	52.80	122.20	-69.40	peak	256	33
6	5850.000	38.34	7.72	46.06	122.20	-76.14	AVG	256	33
7	5954.840	40.64	7.84	48.48	68.20	-19.72	peak	256	33
8	5954.840	30.80	7.84	38.64	68.20	-29.56	AVG	256	33
9	11590.000	38.70	19.56	58.26	74.00	-15.74	peak	345	323
10	11590.000	27.78	19.56	47.34	54.00	-6.66	AVG	345	323
11	17385.000	28.26	27.82	56.08	68.30	-12.22	peak	288	289
12	17385.000	21.14	27.82	48.96	54.00	-5.04	AVG	288	289

Remarks:

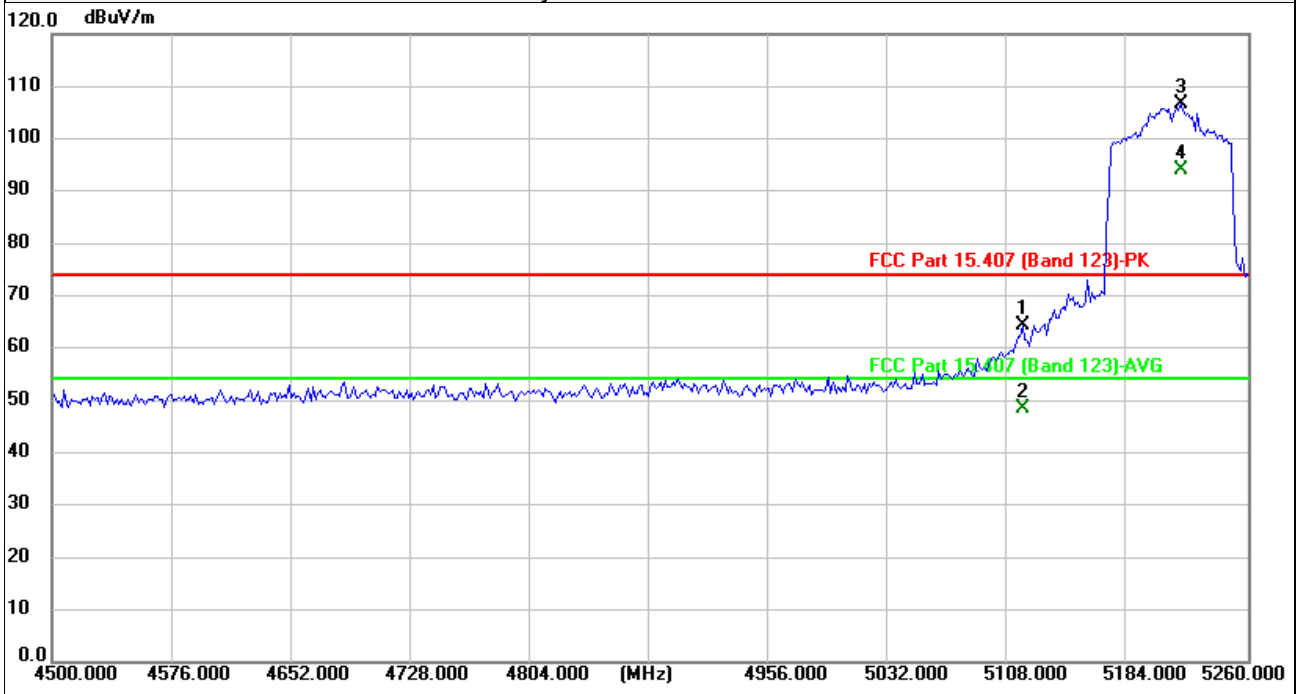
1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Above 1GHz Data:

802.11ac VHT80

Test Mode	802.11ac VHT80_5210MHz		
Test channel	42	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test distance: Horizontal at 3m



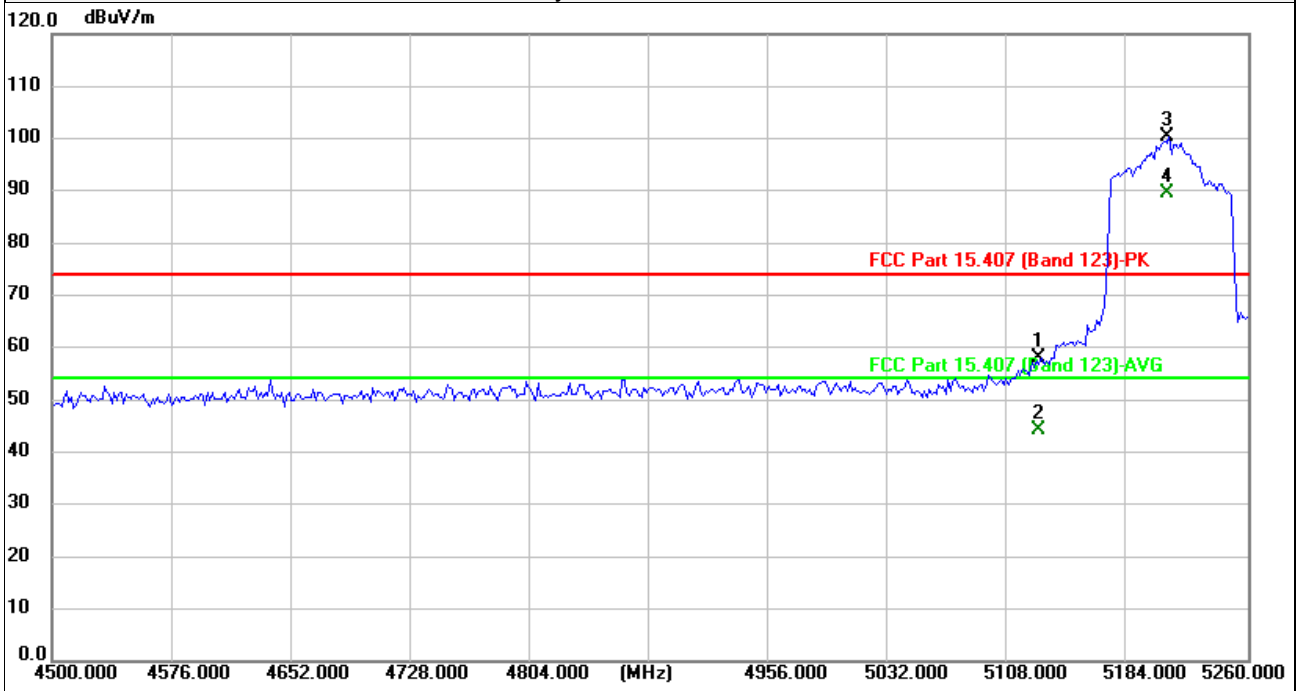
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5116.834	57.64	6.77	64.41	74.00	-9.59	peak	100	314
2	5116.834	41.54	6.77	48.31	54.00	-5.69	AVG	100	314
3	5217.355	97.51	9.02	106.53			peak	100	314
4	5217.355	85.17	9.02	94.19			AVG	100	314
5	10420.000	39.49	18.05	57.54	74.00	-16.46	peak	311	358
6	10420.000	31.43	18.05	49.48	54.00	-4.52	AVG	311	358
7	15630.000	38.02	21.95	59.97	74.00	-14.03	peak	138	105
8	15630.000	26.29	21.95	48.24	54.00	-5.76	AVG	138	105

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11ac VHT80_5210MHz		
Test channel	42	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Vertical at 3m



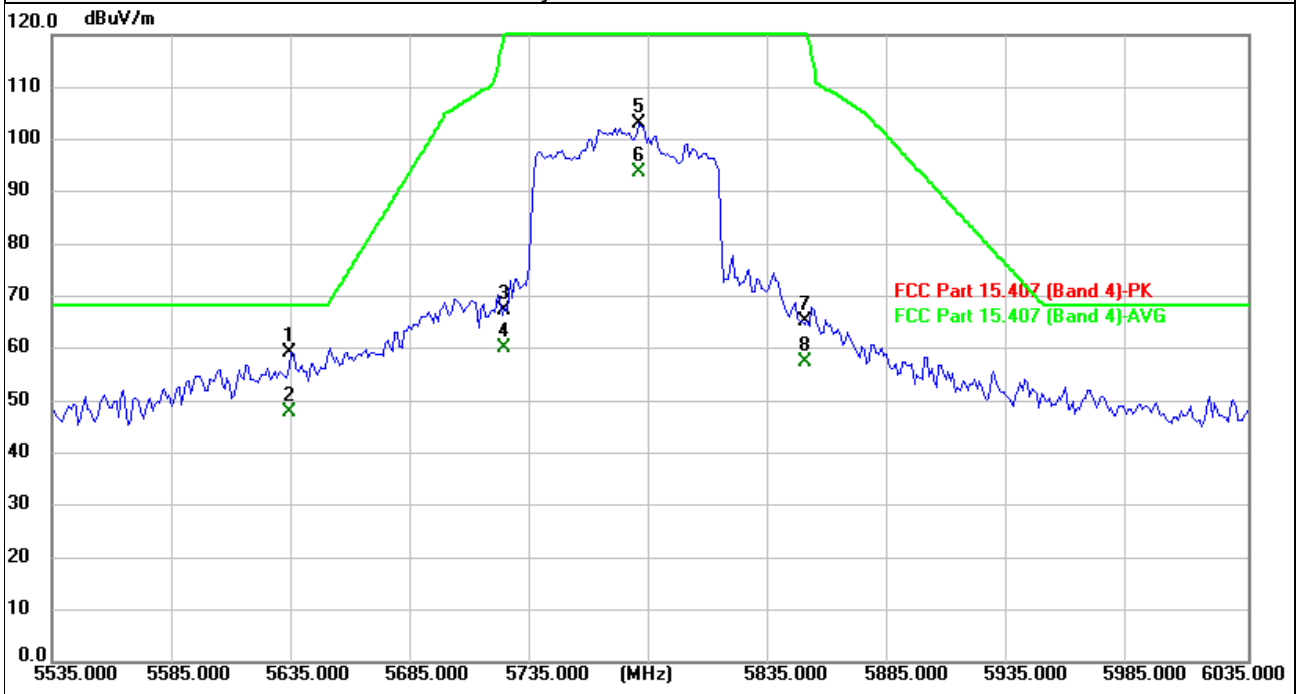
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5129.018	50.98	7.17	58.15	74.00	-15.85	peak	128	54
2	5129.018	36.96	7.17	44.13	54.00	-9.87	AVG	128	54
3	5209.739	90.99	9.23	100.22			peak	128	54
4	5209.739	80.43	9.23	89.66			AVG	128	54
5	10420.000	38.64	18.05	56.69	74.00	-17.31	peak	229	324
6	10420.000	31.20	18.05	49.25	54.00	-4.75	AVG	229	324
7	15630.000	34.21	21.95	56.16	74.00	-17.84	peak	346	190
8	15630.000	24.79	21.95	46.74	54.00	-7.26	AVG	346	190

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11ac VHT80_5775MHz		
Test channel	155	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test distance: Horizontal at 3m



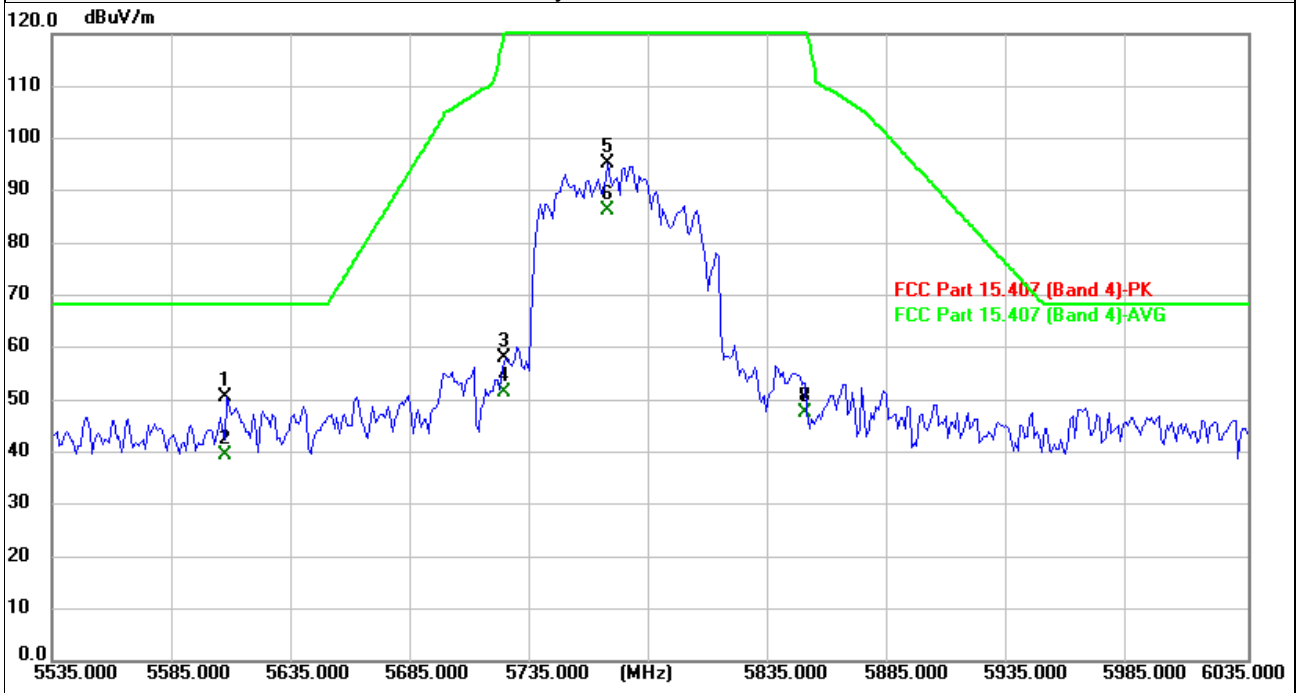
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5635.200	51.82	7.48	59.30	68.20	-8.90	peak	123	315
2	5635.200	40.46	7.48	47.94	68.20	-20.26	AVG	123	315
3	5725.000	59.69	7.58	67.27	122.20	-54.93	peak	123	315
4	5725.000	52.51	7.58	60.09	122.20	-62.11	AVG	123	315
5	5780.491	95.53	7.65	103.18	122.20	-19.02	peak	123	315
6	5780.491	86.06	7.65	93.71	122.20	-28.49	AVG	123	315
7	5850.000	57.45	7.72	65.17	122.20	-57.03	peak	123	315
8	5850.000	49.60	7.72	57.32	122.20	-64.88	AVG	123	315
9	11550.000	37.32	19.54	56.86	74.00	-17.14	peak	267	268
10	11550.000	29.47	19.54	49.01	54.00	-4.99	AVG	267	268
11	17325.000	30.33	27.43	57.76	68.30	-10.54	peak	387	316
12	17325.000	20.96	27.43	48.39	54.00	-5.61	AVG	387	316

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Test Mode	802.11ac VHT80_5775MHz		
Test channel	155	Frequency Range	1GHz ~ 40GHz
Detector Function	Peak (PK) Average (AVG)	Tested By	Jim Xu

Antennal Polarity& Test Distance: Vertical at 3m



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (cm)	Table Angle (Degree)
1	5608.146	43.20	7.46	50.66	68.20	-17.54	peak	399	50
2	5608.146	32.12	7.46	39.58	68.20	-28.62	AVG	399	50
3	5725.000	50.42	7.58	58.00	122.20	-64.20	peak	399	50
4	5725.000	43.92	7.58	51.50	122.20	-70.70	AVG	399	50
5	5767.465	87.62	7.62	95.24	122.20	-26.96	peak	399	50
6	5767.465	78.75	7.62	86.37	122.20	-35.83	AVG	399	50
7	5850.000	39.86	7.72	47.58	122.20	-74.62	peak	399	50
8	5850.000	39.91	7.72	47.63	122.20	-74.57	AVG	399	50
9	11550.000	38.26	19.54	57.80	74.00	-16.20	peak	103	283
10	11550.000	29.56	19.54	49.10	54.00	-4.90	AVG	103	283
11	17325.000	30.06	27.43	57.49	68.30	-10.81	peak	376	287
12	17325.000	22.11	27.43	49.54	54.00	-4.46	AVG	376	287

Remarks:

1. Emission Level = Read Level + Factor (Antenna Factor + Cable Loss - Preamp Factor)
2. Margin value = Emission level – Limit value
3. The other spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

3.2 Conducted Emission Measurement

3.2.1 Limits of Conducted Emission Measurement

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

Note: 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 to0.50MHz.

3.2.2 Test Instruments

Equipment	Manufacturer	Model No.	Serial No.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR 7	101961	2024-12-17
Artificial Mains Network	Rohde&Schwarz	ENV216	3560.6550.15	2024-12-17
Test software	FARAD	EZ_EMC V1.1.4.2	N/A	N/A
Broadcast test system	R&S	SFU	100410	2024-08-06

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to LISAI/CHINA.
2. The test was performed in Shielded Room.

3.2.3 Test Procedures

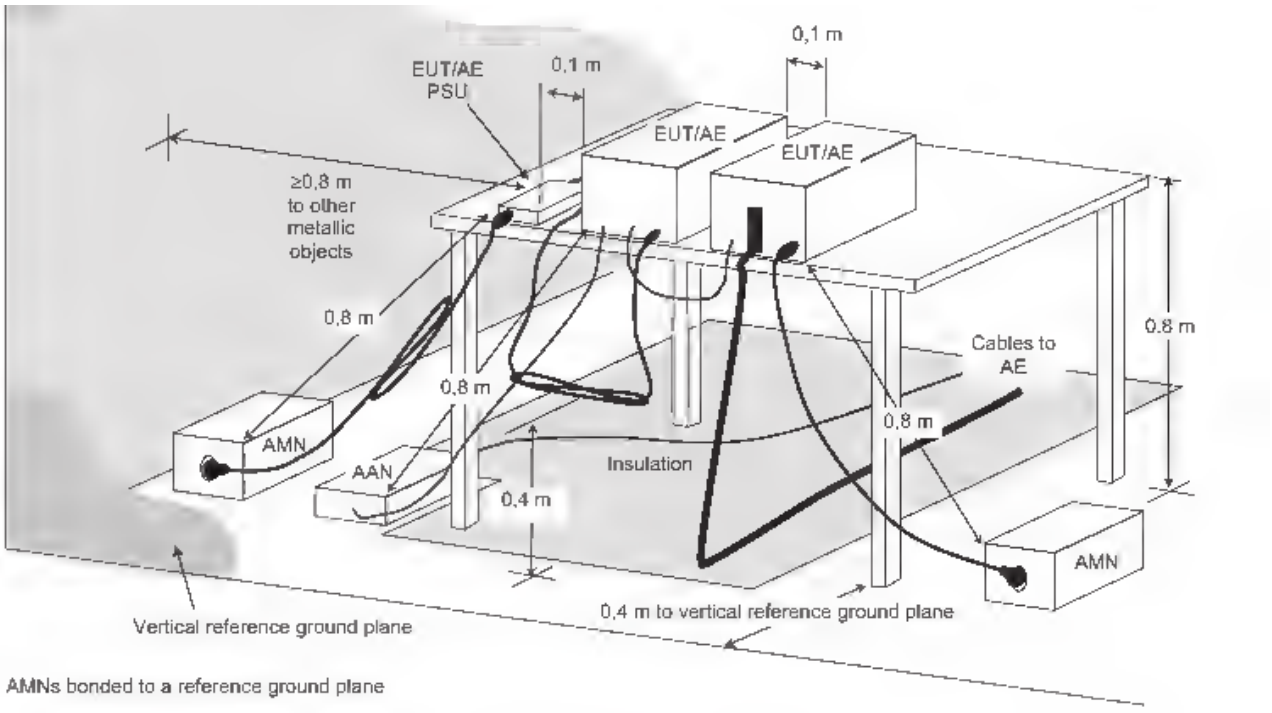
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/50uH of coupling impedance 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 150kHz to 30MHz was searched. Emission levels under (Limit – 20dB) was not recorded.

Note: All modes of operation were investigated and the worst-case emissions are reported.

3.2.4 Deviation from Test Standard

No deviation.

3.2.5 Test setup



3.2.6 EUT Operating Conditions

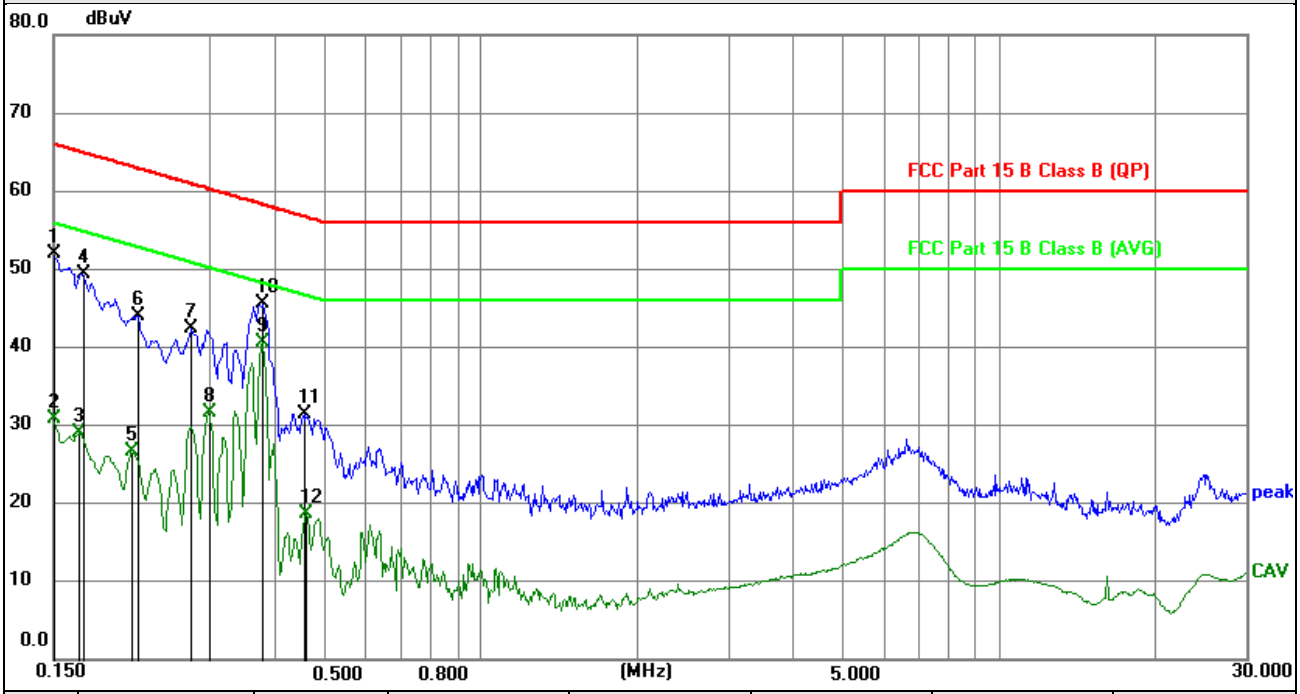
a. Placed the EUT on the testing table.

b. Set the EUT under transmission condition continuously at specific channel frequency.

3.2.7 Test Results

Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz

Phase of Power: Line (L)



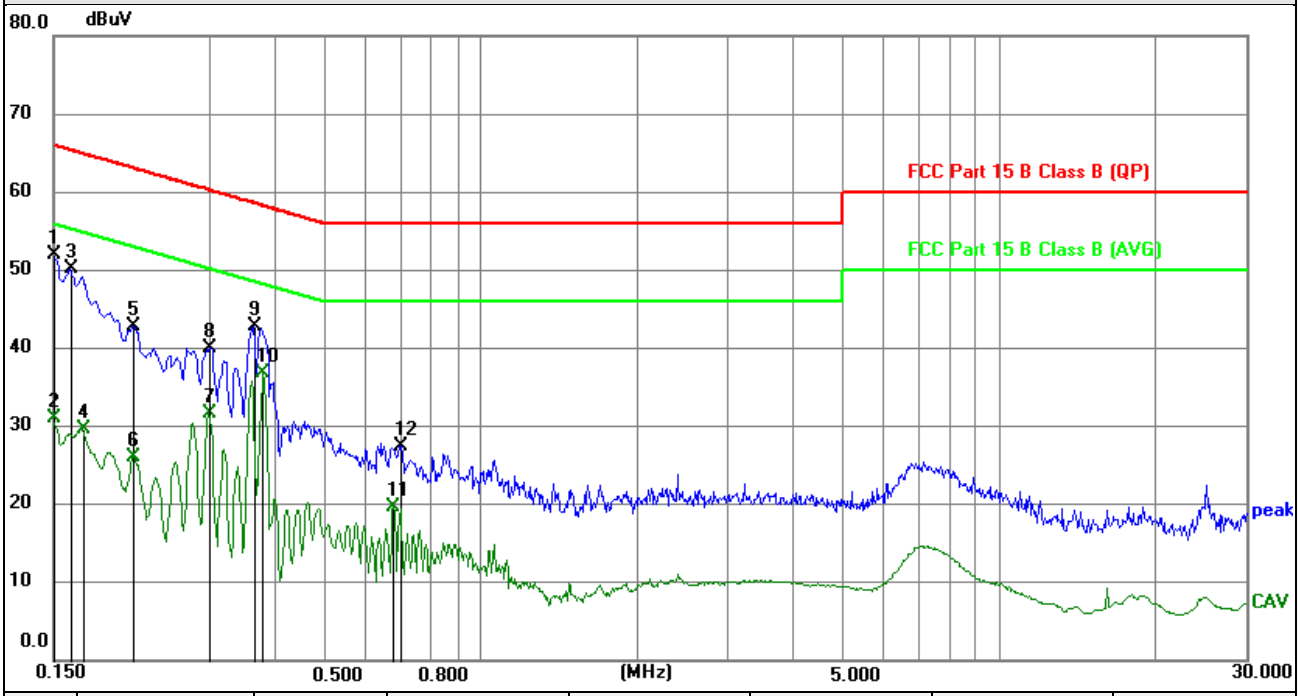
No	Frequency	Reading	Correction Factor	Emission Level	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	Detector
1	0.1500	41.73	10.19	51.92	66.00	-14.08	peak
2	0.1500	20.63	10.19	30.82	56.00	-25.18	AVG
3	0.1680	18.77	10.17	28.94	55.06	-26.12	AVG
4	0.1703	39.22	10.16	49.38	64.95	-15.57	peak
5	0.2108	16.39	10.15	26.54	53.17	-26.63	AVG
6	0.2175	33.89	10.15	44.04	62.91	-18.87	peak
7	0.2760	32.23	10.19	42.42	60.94	-18.52	peak
8	0.2985	21.41	10.20	31.61	50.28	-18.67	AVG
9	0.3795	30.41	10.12	40.53	48.29	-7.76	AVG
10	0.3817	35.51	10.12	45.63	58.24	-12.61	peak
11	0.4582	21.30	10.11	31.41	56.73	-25.32	peak
12	0.4627	8.56	10.11	18.67	46.64	-27.97	AVG

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

Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz

Phase of Power: Neutral (N)



No.	Frequency	Reading	Correction Factor	Emission Level	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	Detector
1	0.1500	41.79	10.19	51.98	66.00	-14.02	peak
2	0.1500	20.75	10.19	30.94	56.00	-25.06	AVG
3	0.1613	39.95	10.17	50.12	65.40	-15.28	peak
4	0.1703	19.49	10.16	29.65	54.95	-25.30	AVG
5	0.2130	32.67	10.15	42.82	63.09	-20.27	peak
6	0.2130	15.90	10.15	26.05	53.09	-27.04	AVG
7	0.2985	21.48	10.18	31.66	50.28	-18.62	AVG
8	0.3007	29.87	10.18	40.05	60.22	-20.17	peak
9	0.3660	32.75	10.12	42.87	58.59	-15.72	peak
10	0.3817	26.68	10.10	36.78	48.24	-11.46	AVG
11	0.6809	9.64	10.10	19.74	46.00	-26.26	AVG
12	0.6990	17.34	10.10	27.44	56.00	-28.56	peak

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.

3.3 Transmit Power Measurement

3.3.1 Limits of Transmit Power Measurement

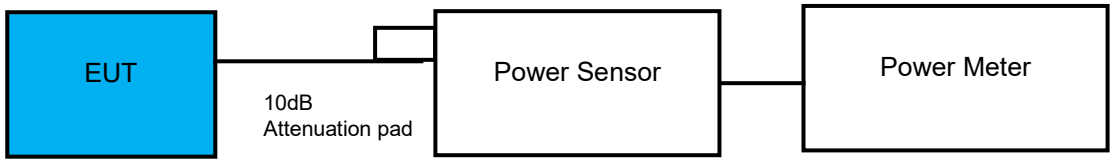
Operation Band	EUT Category		Limit
U-NII-1	-	Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW (21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
	-	Fixed point-to-point Access Point	1 Watt (30 dBm)
	-	Indoor Access Point	1 Watt (30 dBm)
	√	Mobile and Portable client device	250mW (24 dBm)
U-NII-2A	-		250mW(24dBm) or 11 dBm+10LogB*
U-NII-2C	-		250mW(24dBm) or 11 dBm+10LogB*
U-NII-3	√		1 Watt (30 dBm)

* B is the 26dB emission bandwidth in MHz.

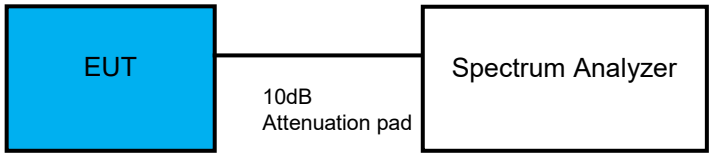
Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,
Array Gain = 0 dB (i.e., no array gain) for N_{ANT} ≤4;
Array Gain = 0 dB (i.e., no array gain) for channel widths 2 40 MHz for any ≥N_{ANT},
Array Gain = 5 log(N_{ANT}/Nss) dB or 3 dB, whichever is less for 20-MHz channel widths with N_{ANT} ≥5.
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/Nss) dB.

3.3.2 Test Setup

For conducted power measurement setup:



For 26dB and Occupied Bandwidth measurement setup:



3.3.3 Test Instruments

Refer to section 5 to get information of above instrument.

3.3.4 Test Procedures

*For average power measurement:

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. Duty factor is not added to measured value.

*For 26dB bandwidth measurement:

1) Set RBW = approximately 1% of the emission bandwidth.
2) Set the VBW > RBW.
3) Detector = RMS.
4) Trace mode = max hold.
5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

*For 6dB bandwidth measurement:

1) Set RBW = 100 kHz.
2) Set the video bandwidth (VBW) ≥ 3 RBW.
3) Detector = Peak.
4) Trace mode = max hold.
5) Sweep = auto couple.
6) Allow the trace to stabilize.
7) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.3.5 Deviation from Test Standard

No deviation.

3.3.6 EUT Operating Conditions

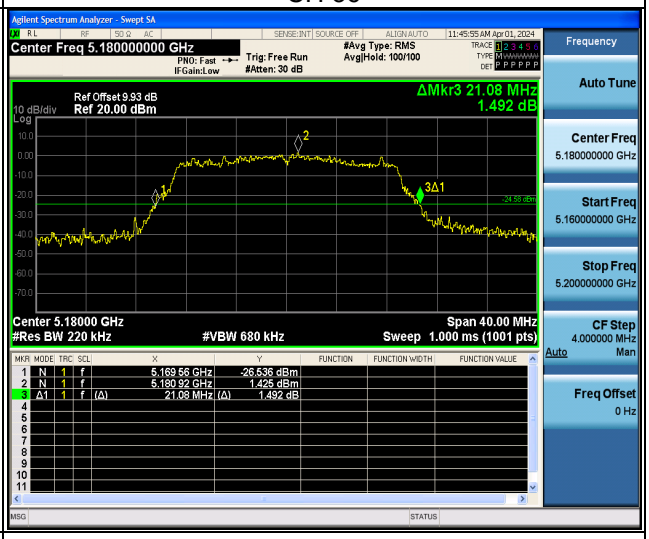
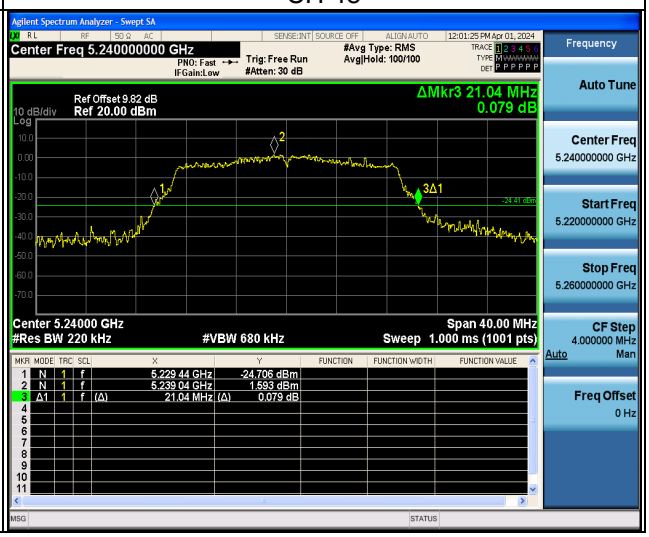
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

3.3.7 Test Results

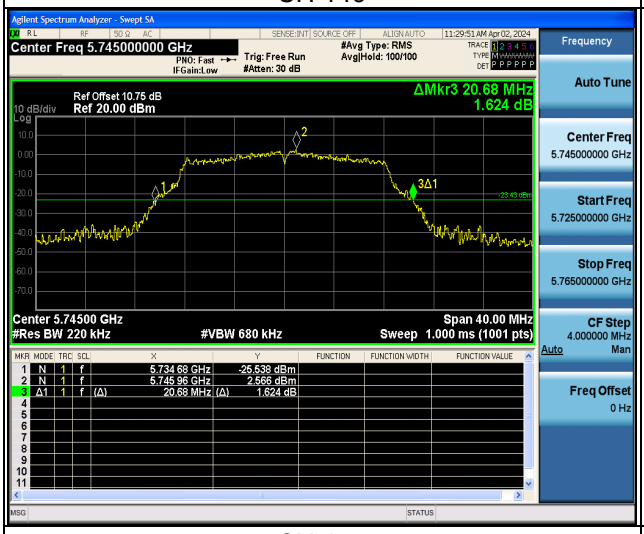
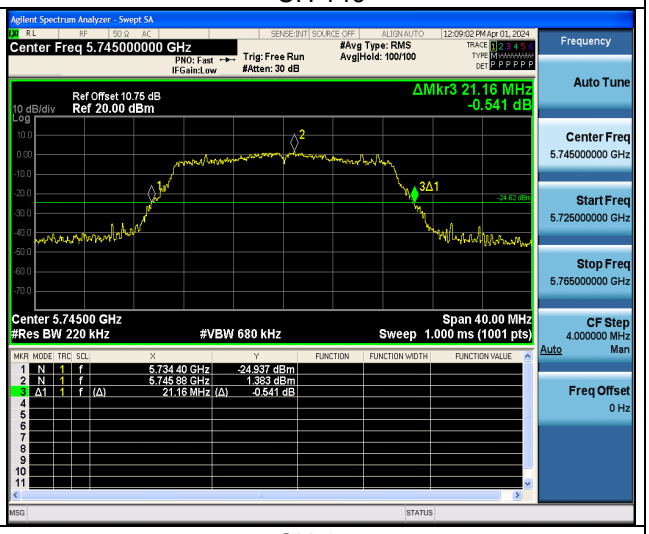
Test mode	Channel Number	Freq. (MHz)	Maximum conducted power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Verdict
11a	36	5180	10.70	2.69	13.39	24.00	Pass
	40	5200	10.93	2.69	13.62	24.00	Pass
	48	5240	11.04	2.69	13.73	24.00	Pass
	149	5745	11.22	2.91	14.13	30.00	Pass
	157	5785	10.59	2.91	13.50	30.00	Pass
	165	5825	10.89	2.91	13.80	30.00	Pass
11n HT20	36	5180	10.31	2.69	13.00	24.00	Pass
	40	5200	10.59	2.69	13.28	24.00	Pass
	48	5240	10.95	2.69	13.64	24.00	Pass
	149	5745	10.79	2.91	13.70	30.00	Pass
	157	5785	10.57	2.91	13.48	30.00	Pass
	165	5825	10.56	2.91	13.47	30.00	Pass
11n HT40	38	5190	10.07	2.69	12.76	24.00	Pass
	46	5230	10.33	2.69	13.02	24.00	Pass
	151	5755	10.85	2.91	13.76	30.00	Pass
	159	5795	10.64	2.91	13.55	30.00	Pass
11ac VHT80	42	5210	10.05	2.69	12.74	24.00	Pass
	155	5775	10.84	2.91	13.75	30.00	Pass

Test mode	Channel Number	Freq. (MHz)	26dBc bandwidth (MHz)	11 dBm +10LogB* (dBm)	Occupied Bandwidth (MHz)
11a	36	5180	20.840	-	17.180
	40	5200	20.760	-	17.254
	48	5240	21.080	-	17.186
	149	5745	20.680	-	17.158
	157	5785	20.800	-	17.153
	165	5825	21.040	-	17.148
11n HT20	36	5180	21.080	-	18.133
	40	5200	20.960	-	18.273
	48	5240	21.040	-	18.203
	149	5745	21.160	-	18.167
	157	5785	21.360	-	18.182
	165	5825	21.000	-	18.137
11n HT40	38	5190	39.520	-	36.430
	46	5230	39.280	-	36.311
	151	5755	39.680	-	36.398
	159	5795	39.760	-	36.303
11ac VHT80	42	5210	81.440	-	75.398
	155	5775	80.480	-	75.389

26dBc bandwidth

802.11a	802.11n20
CH 36	CH 36
	
CH 40	CH 40
	
CH 48	CH 48
	

26dBc bandwidth

802.11a	802.11n HT20
CH 149	CH 149
	
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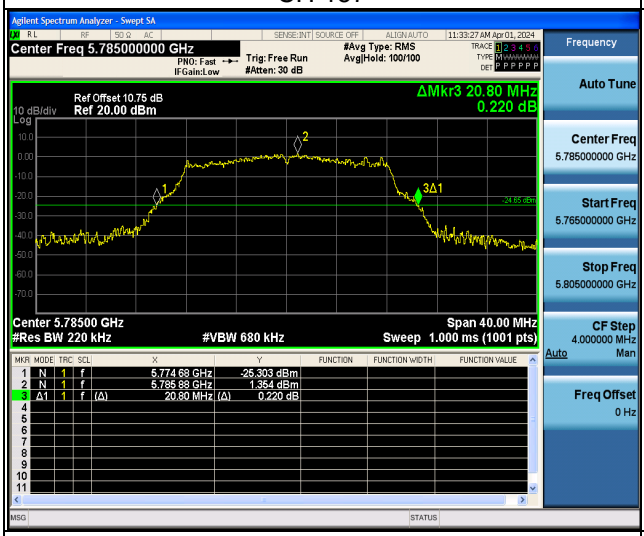	
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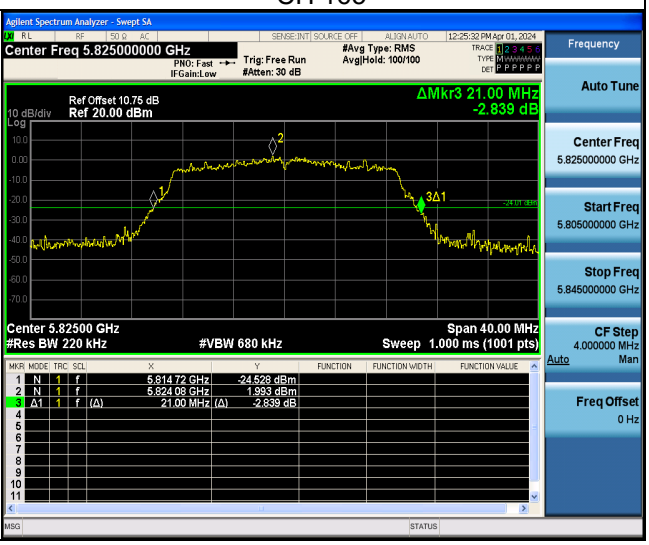
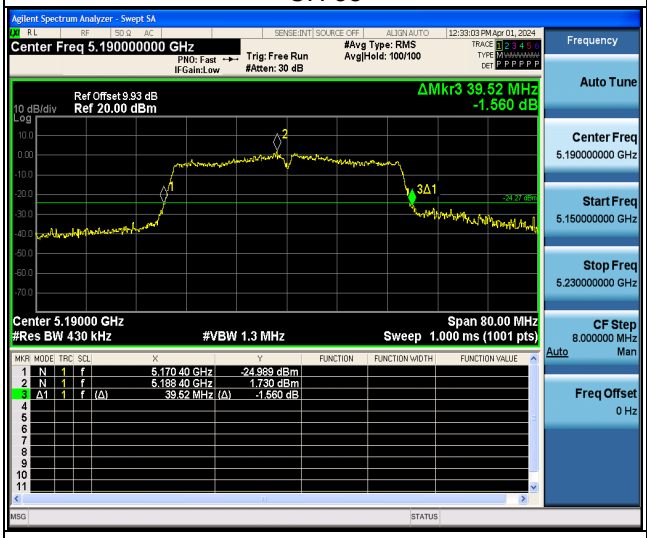
	

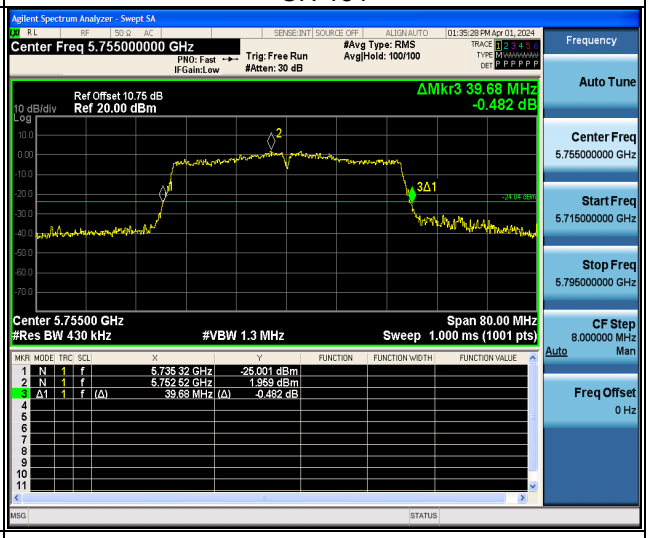
26dBc bandwidth

802.11n HT40

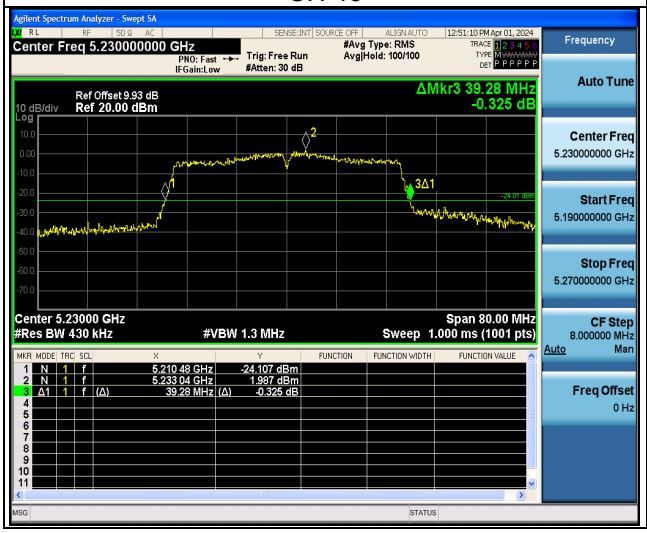
CH 38



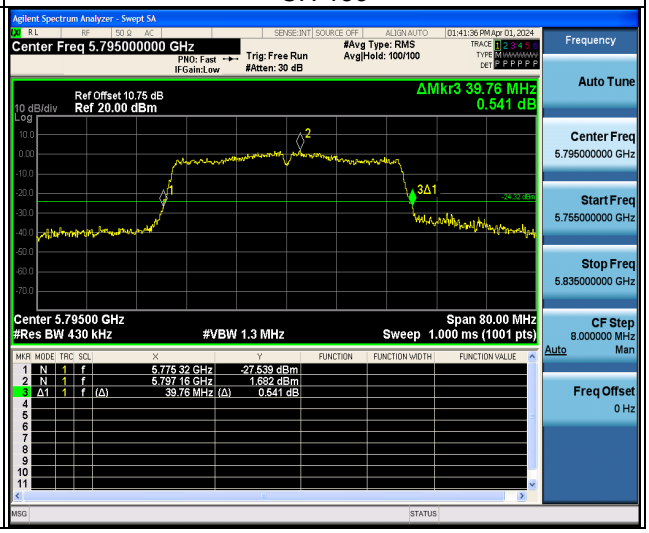
CH 151



CH 46



CH 159



26dBc bandwidth

802.11ac VHT80	
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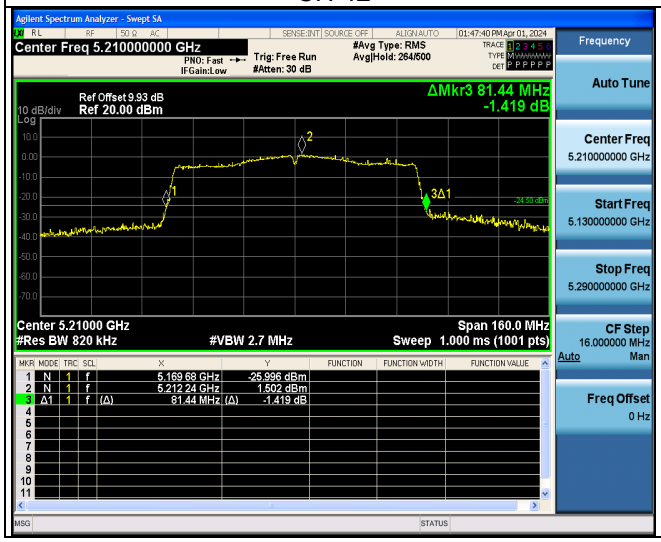	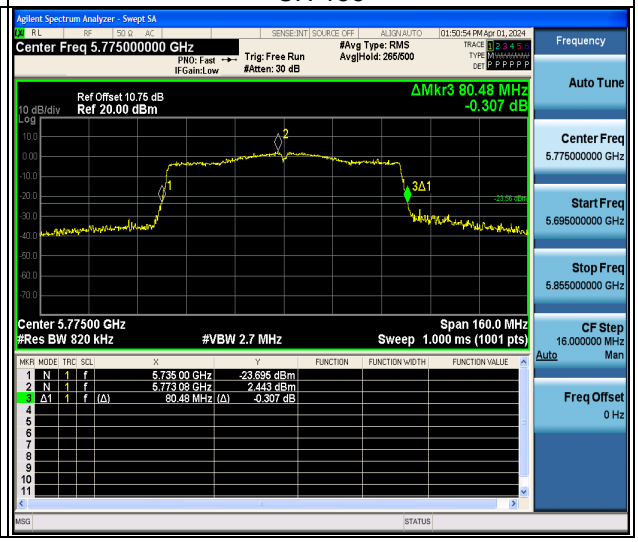

Occupied bandwidth

802.11a	802.11n20
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	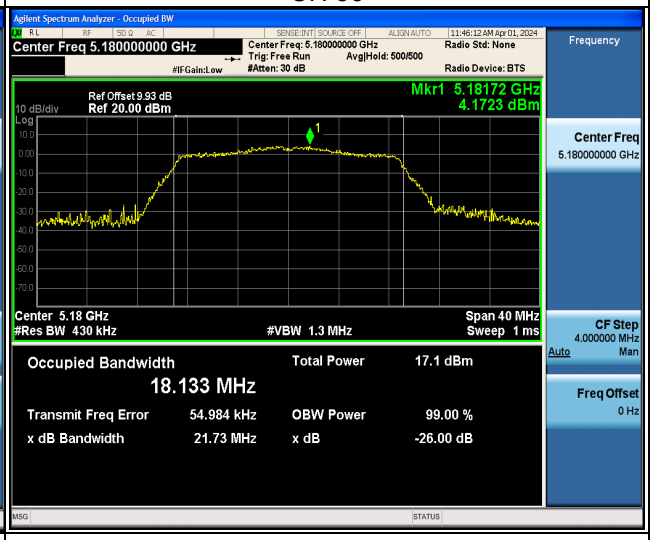
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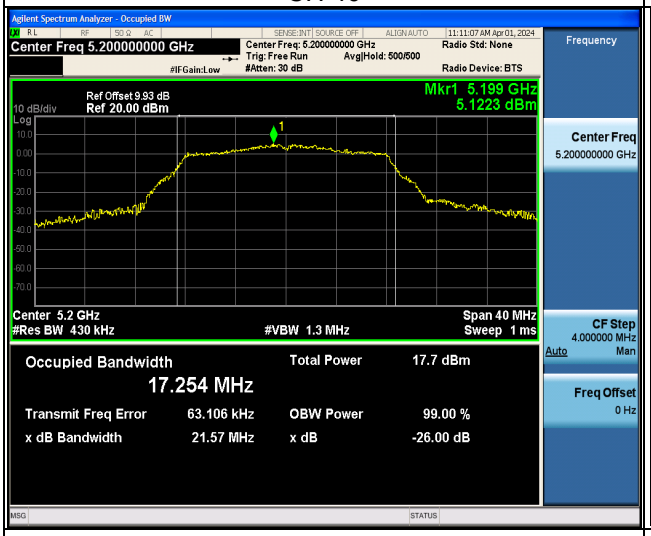
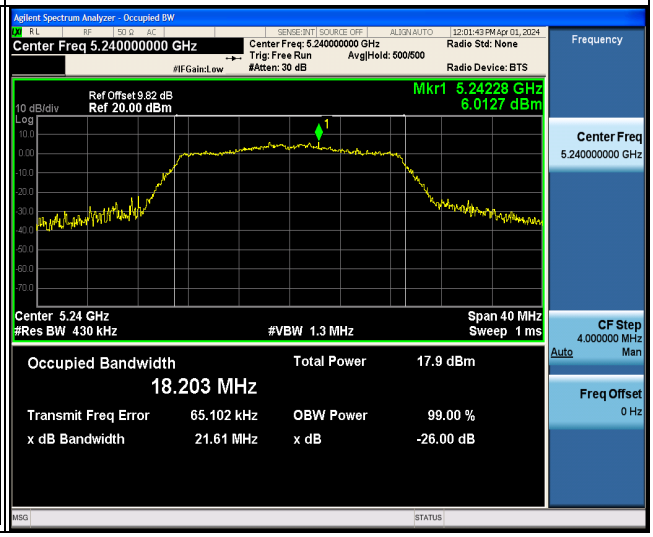
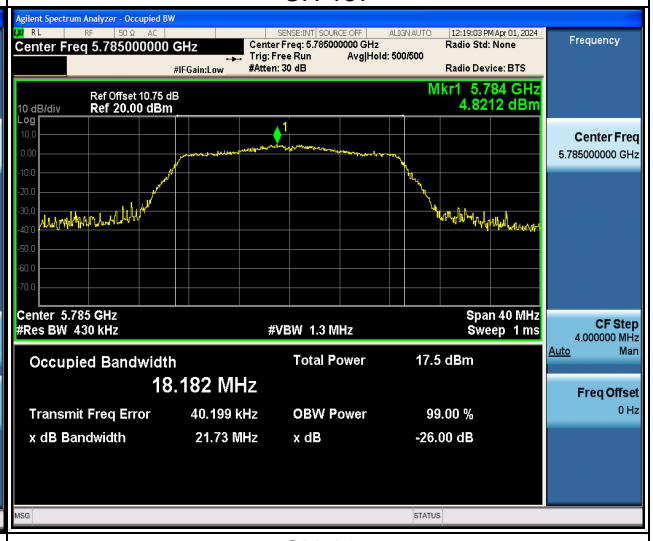
	
CH 48	CH 48
	

Occupied bandwidth

802.11a	802.11n HT20
CH 149	CH 149
	
CH 157	CH 157
	
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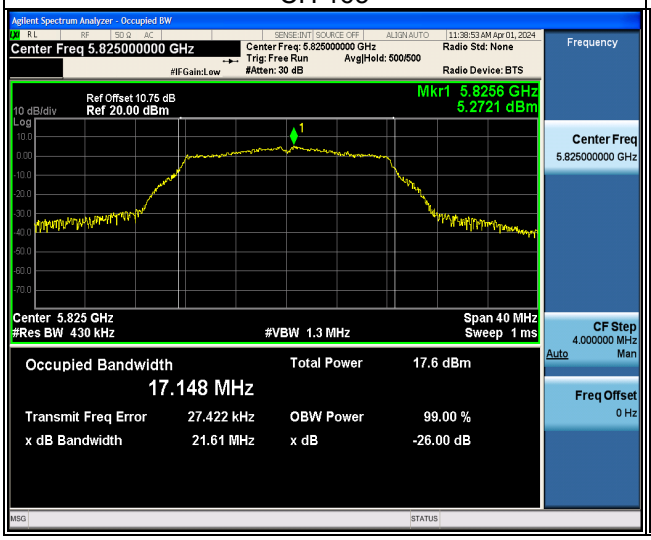
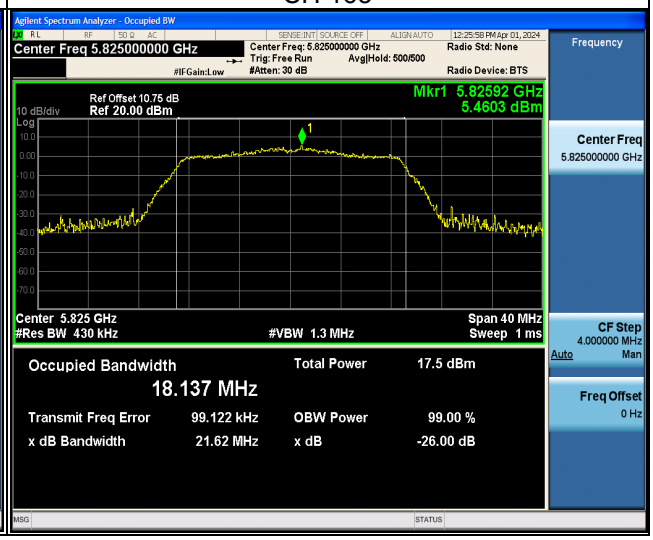
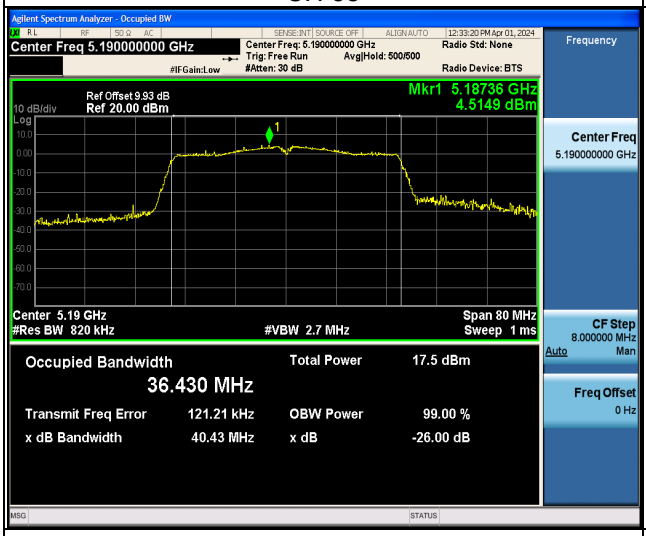
	

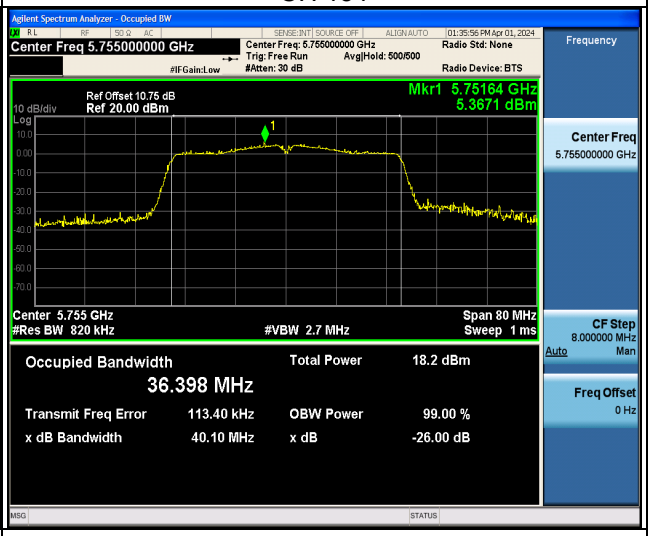
Occupied bandwidth

802.11n HT40

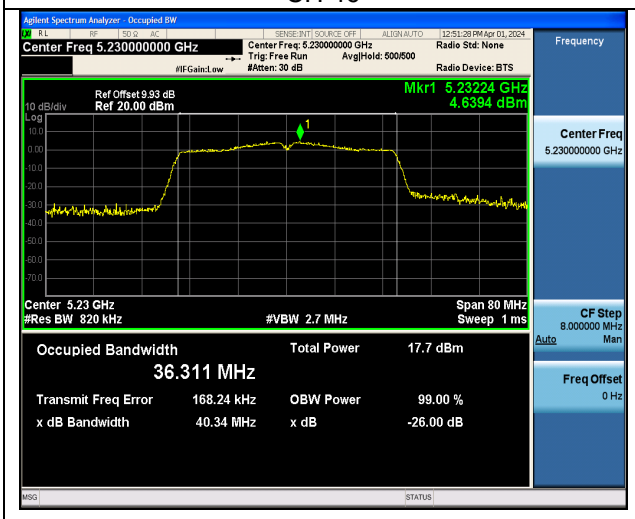
CH 38



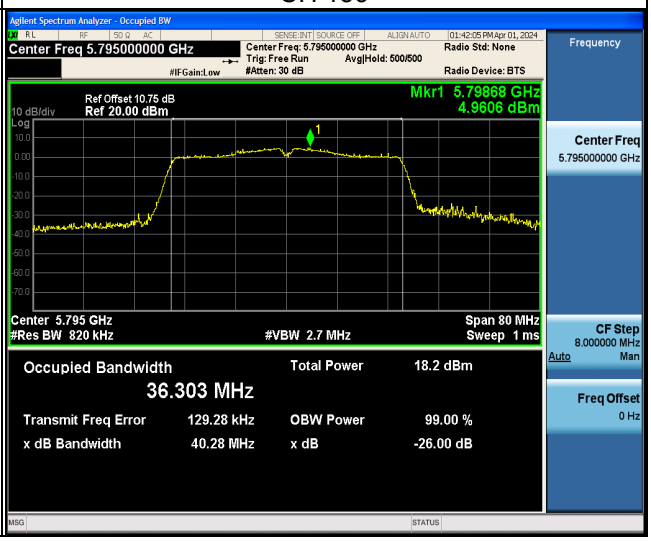
CH 151



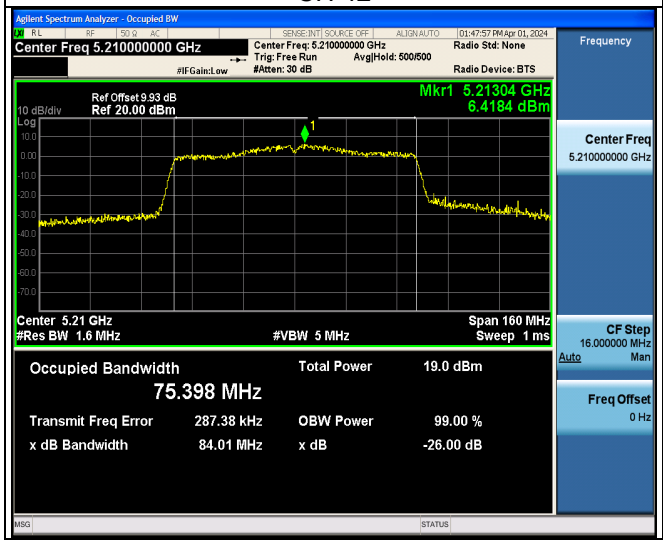
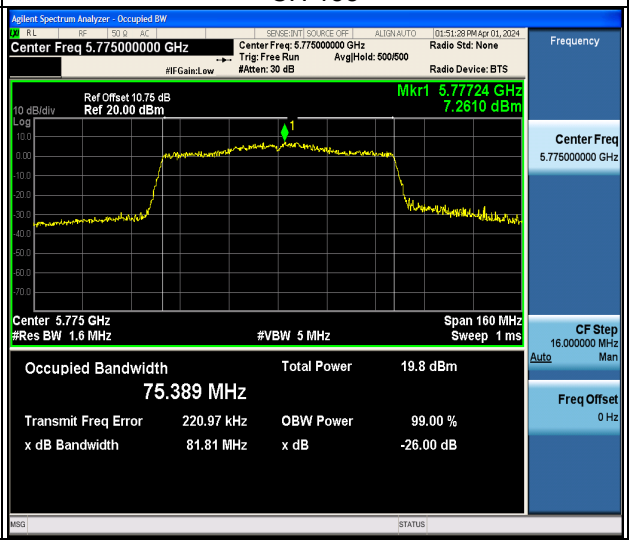
CH 46



CH 159



Occupied bandwidth

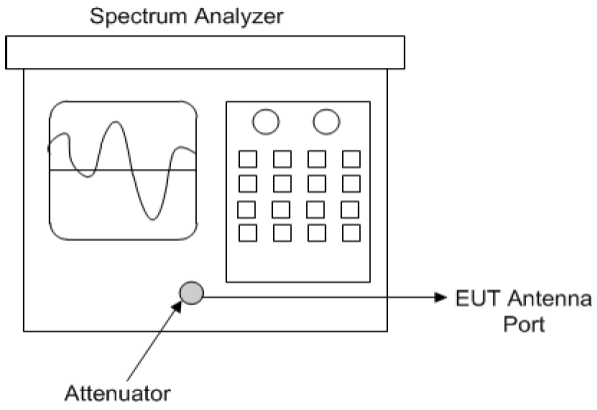
802.11ac VHT80	
CH 42	CH 155
	

3.4 Peak Power Spectral Density Measurement

3.4.1 Limits of Peak Power Spectral Density Measurement

Operation Band	EUT Category		Limit
U-NII-1	-	Outdoor Access Point	17dBm/ MHz
	-	Fixed point-to-point Access Point	
	-	Indoor Access Point	
	√	Mobile and Portable client device	11dBm/ MHz
U-NII-2A	-		11dBm/ MHz
U-NII-2C	-		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

3.4.2 Test Setup



Spectrum analyzer test configuration

3.4.3 Test Instruments

Refer to section 5 to get information of above instrument.

3.4.4 Test Procedure

For U-NII-1, U-NII-2A, U-NII-2C band:

Using method SA-2
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 1MHz, Set VBW =3mHz, Detector = RMS
3) Set Channel power measure = 1MHz
4) Sweep time = auto, trigger set to “free run”.
5) Trace average at least 100 traces in power averaging mode.
6) Record the max value and add 10 log (1/duty cycle)

For U-NII-3 band:

Using method SA-2
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 300 kHz, Set VBW =1 MHz, Detector = RMS
3) Set Channel power measure = 1MHz
4) Sweep time = auto, trigger set to “free run”.
5) Trace average at least 100 traces in power averaging mode.
6) Record the max value and add 10 log (1/duty cycle)

3.4.5 Deviation from Test Standard

No deviation.

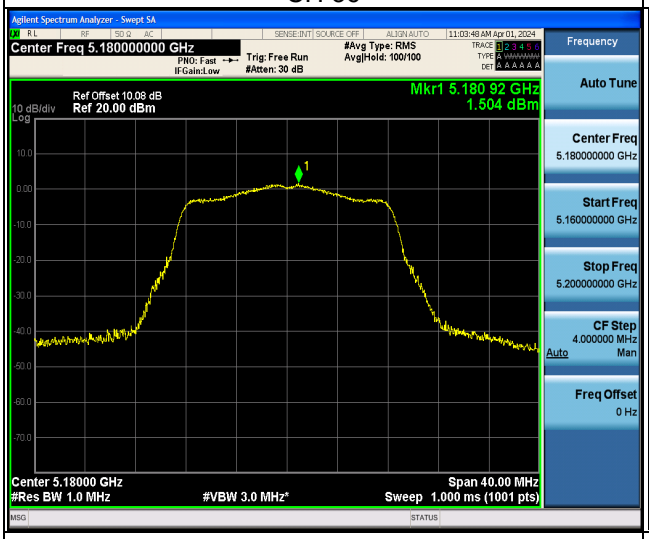
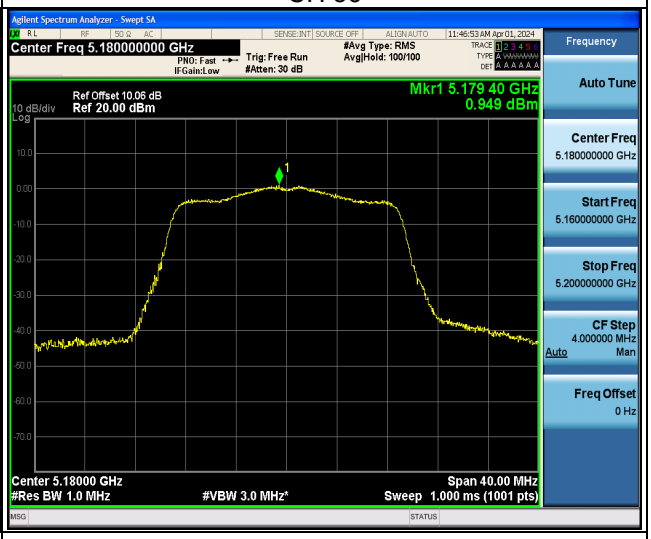
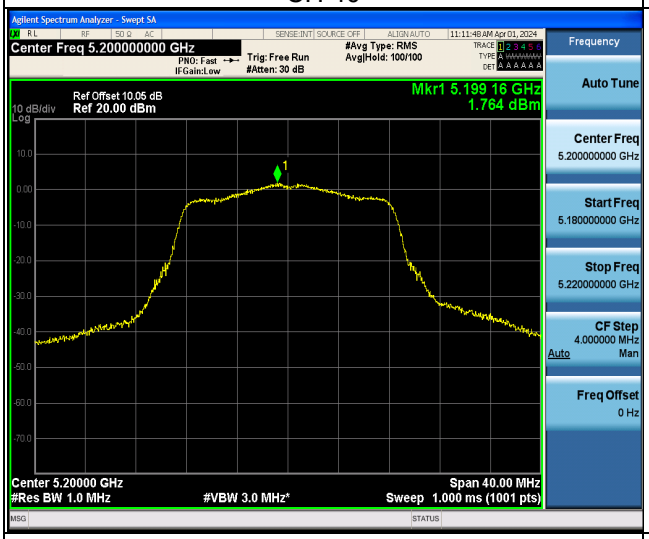
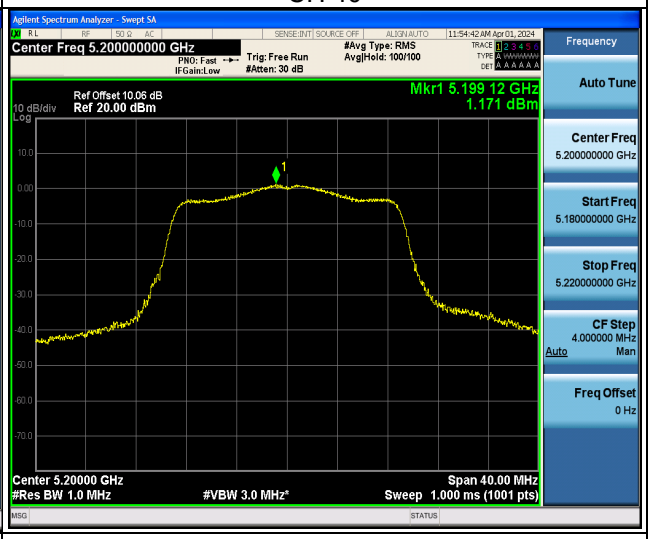
3.4.6 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

3.4.7 Test Results

Test mode	Channel Number	Freq. (MHz)	Maximum conducted PSD (dBm)	RBW factor (dB)	Total PSD (dBm)	Limit (dBm)	Verdict
11a	36	5180	1.50	-	1.500	11	Pass
	40	5200	1.76	-	1.760	11	Pass
	48	5240	1.70	-	1.700	11	Pass
	149	5745	-0.23	2.218	1.988	30	Pass
	157	5785	-0.77	2.218	1.448	30	Pass
	165	5825	-1.00	2.218	1.218	30	Pass
11n HT20	36	5180	0.95	-	0.950	11	Pass
	40	5200	1.17	-	1.170	11	Pass
	48	5240	1.62	-	1.620	11	Pass
	149	5745	-1.13	2.218	1.088	30	Pass
	157	5785	-1.47	2.218	0.748	30	Pass
	165	5825	-1.57	2.218	0.648	30	Pass
11n HT40	38	5190	-2.33	-	-2.330	11	Pass
	46	5230	-1.99	-	-1.990	11	Pass
	151	5755	-4.63	2.218	-2.412	30	Pass
	159	5795	-4.52	2.218	-2.302	30	Pass
11ac VHT80	42	5210	1.31	-	1.310	11	Pass
	155	5775	-0.91	2.218	1.308	30	Pass

Note: For devices operating in the bands 5.15−5.25 GHz, 5.25−5.35 GHz, and 5.47−5.725 GHz, the preceding procedures make use of 1 MHz RBW.
For devices operating in the band 5.725−5.85 GHz, the rules
specify a measurement bandwidth of 500 kHz. Cause the spectrum analyzers do not have 500 kHz RBW, The use of RBW is 300 kHz, it will be add the factor: 10*Log(500kHz/300kHz).

802.11a	802.11n20
CH 36	CH 36
	
CH 40	CH 40
	
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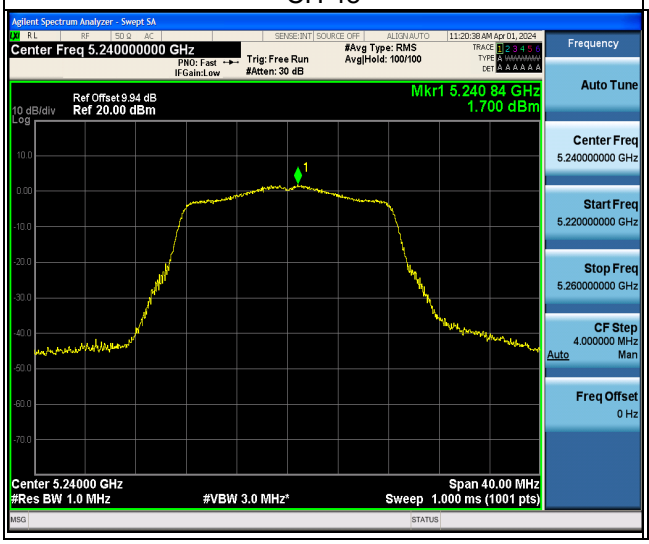
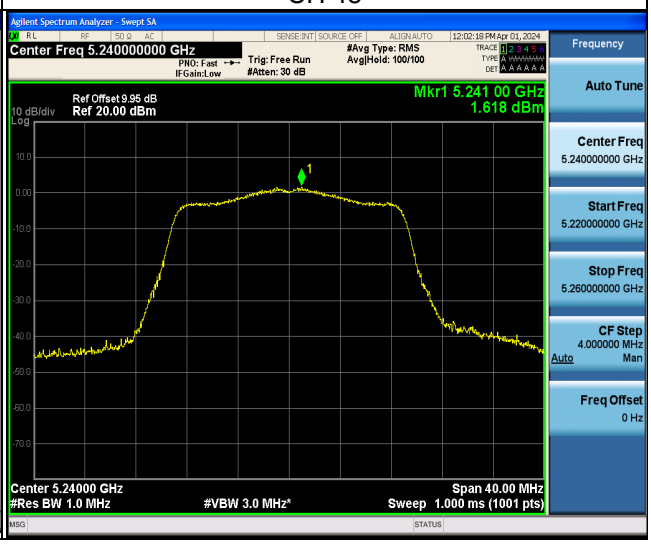
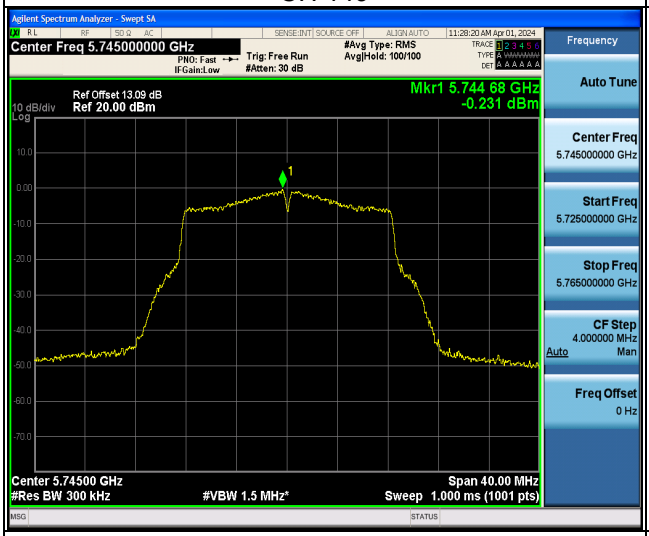
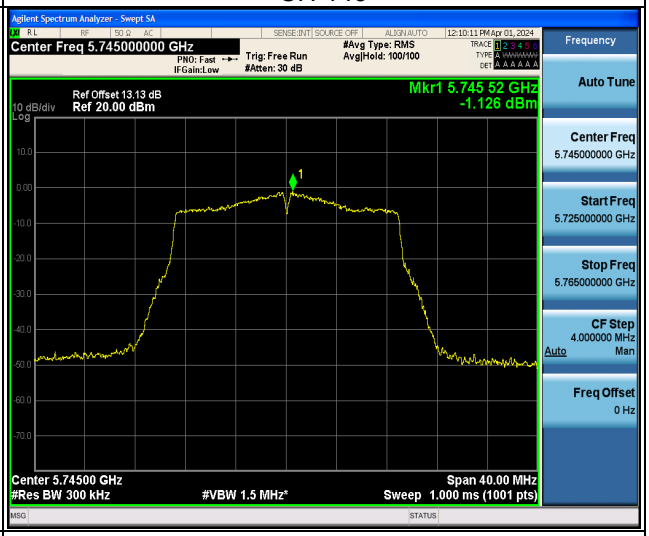
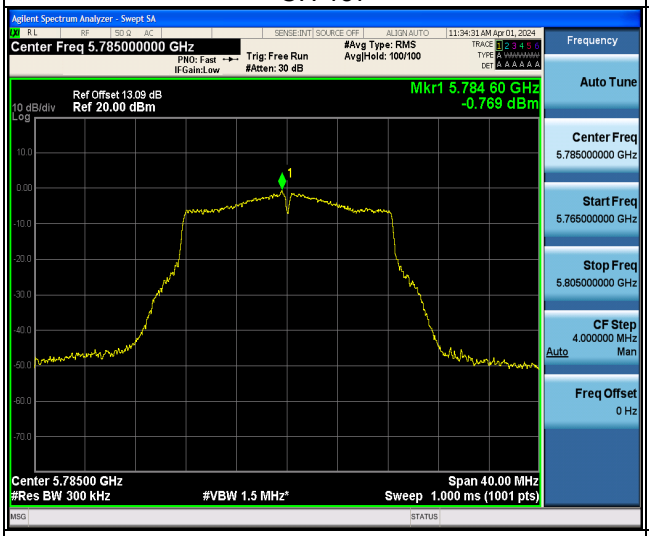
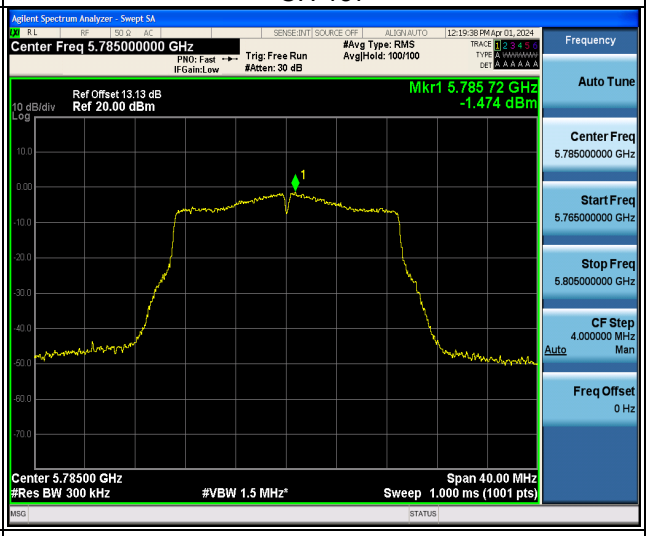
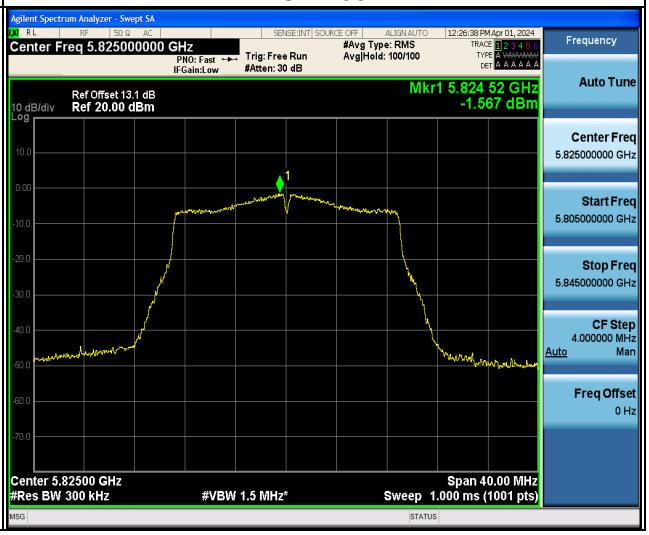
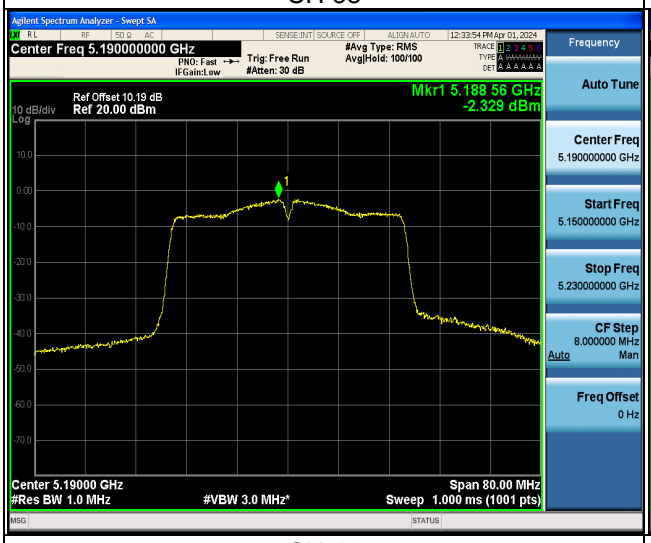
	

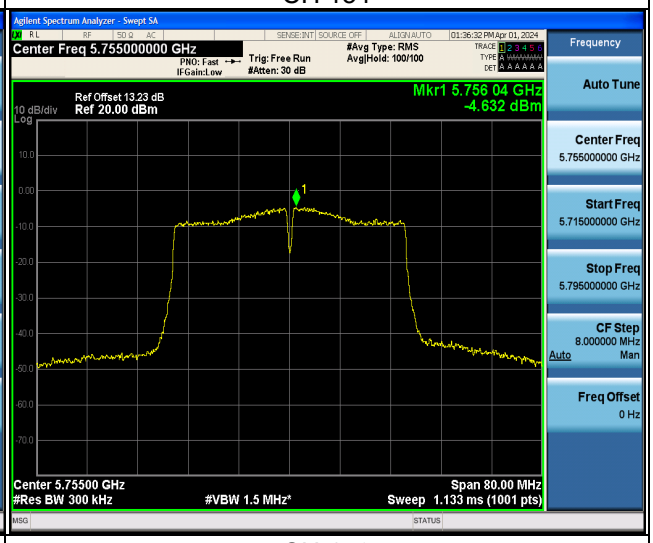
802.11a	802.11n HT20
CH 149	CH 149
	
CH 157	CH 157
	
CH 165	CH 165
	

802.11n HT40

CH 38

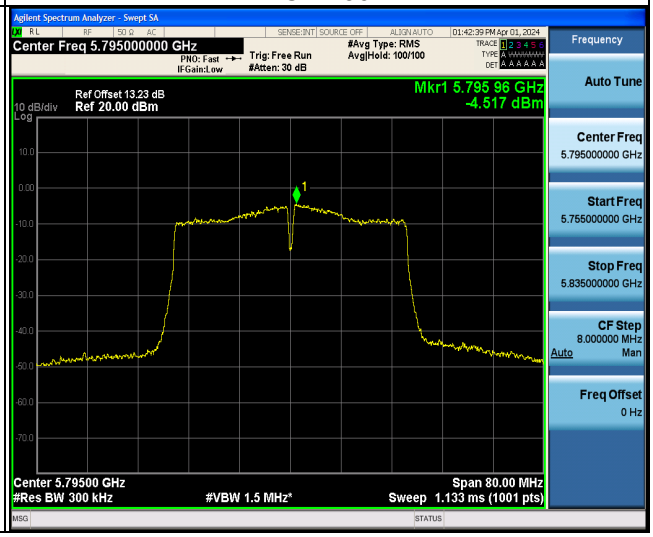


CH 151



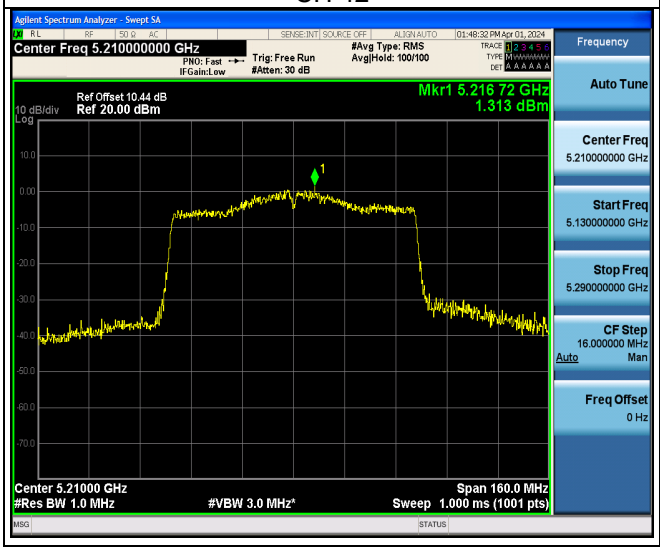
CH 46

CH 159



802.11ac VHT80

CH 42



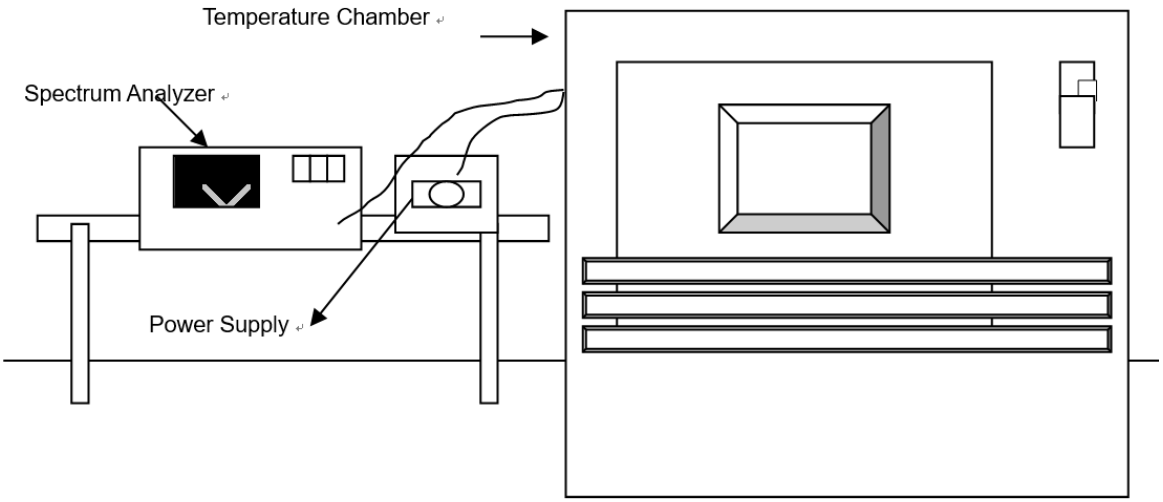
CH 155

3.5 Frequency Stability

3.5.1 Limits of Frequency Stability Measurement

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

3.5.2 Test Setup



3.5.3 Test Instruments

Refer to section 5 to get information of above instrument.

3.5.4 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 2 and 3 with the temperature chamber set to the lowest temperature.

f. The test chamber was allowed to stabilize at +20degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

3.5.5 Deviation from Test Standard

No deviation.

3.5.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at the channel frequencies individually.

3.5.7 Test Result

Frequency stability versus temp.									
Operating frequency: 5180MHz									
Temp. (℃)	Power supply (V)	0 minute		2 minute		5 minute		10 minute	
		Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift
50	NV	5179.9818	-0.00035	5180.0044	0.00008	5179.9786	-0.00041	5179.9815	-0.00036
40	NV	5179.9886	-0.00022	5180.0047	0.00009	5179.9873	-0.00025	5179.9901	-0.00019
30	NV	5180.0028	0.00005	5180.0111	0.00021	5180.0044	0.00008	5180.0047	0.00009
20	NV	5179.9947	-0.00010	5180.0207	0.00040	5179.9925	-0.00014	5179.9915	-0.00016
10	NV	5179.9899	-0.00019	5180.0129	0.00025	5179.9873	-0.00025	5179.9916	-0.00016
0	NV	5180.0129	0.00025	5179.9925	-0.00014	5180.0114	0.00022	5180.0111	0.00021
-10	NV	5179.9766	-0.00045	5179.9947	-0.00010	5179.9762	-0.00046	5179.9791	-0.00040
-20	NV	5180.0216	0.00042	5180.0189	0.00036	5180.0221	0.00043	5180.0189	0.00036
-30	NV	5180.0207	0.00040	5180.0207	0.00040	5180.0222	0.00043	5180.0202	0.00039

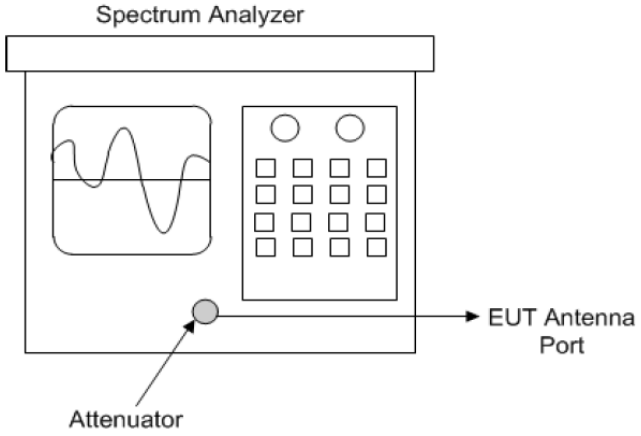
Frequency stability versus temp.									
Operating frequency: 5180MHz									
Temp. (℃)	Power supply (V)	0 minute		2 minute		5 minute		10 minute	
		Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift
20	LV	5180.0114	0.00022	5179.9941	-0.00011	5179.9923	-0.00015	5179.9909	-0.00018
	NV	5179.9898	-0.00020	5179.9915	-0.00016	5179.9925	-0.00014	5179.9915	-0.00016
	HV	5179.9905	-0.00018	5179.9944	-0.00011	5179.9921	-0.00015	5179.9915	-0.00016

3.6 6dB Bandwidth Measurement

3.6.1 Limits of Conducted Out of Band Emission Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

3.6.2 Test Setup



3.6.3 Test Instruments

Refer to section 5 to get information of above instrument.

3.6.4 Test Procedure

a. Set resolution bandwidth (RBW) = 100kHz
b. Set the video bandwidth (VBW) 2 3 x RBW, Detector = Peak.
c. Trace mode = maxhold.
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

3.6.5 Deviation from Test Standard

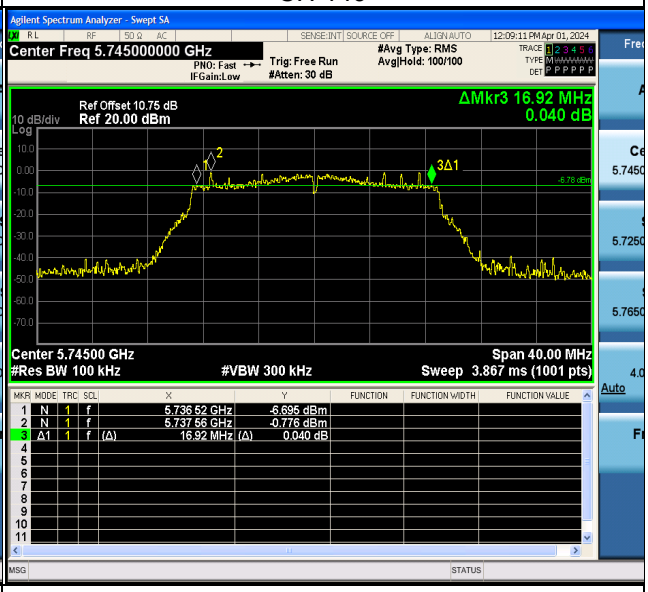
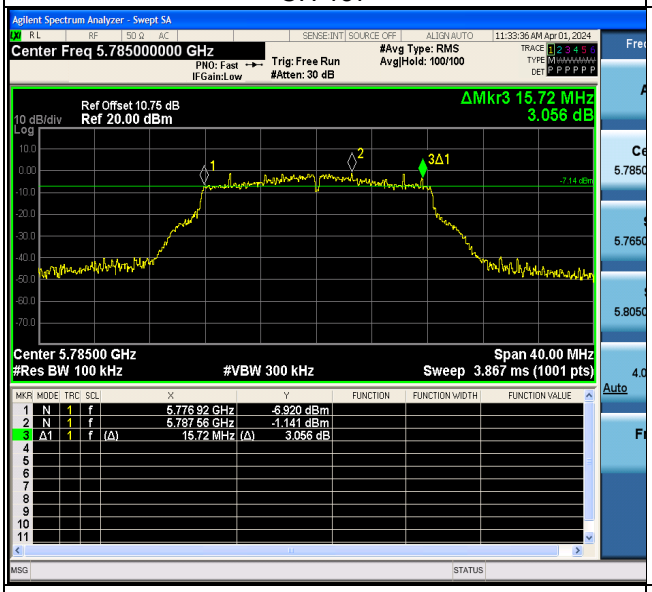
No deviation.

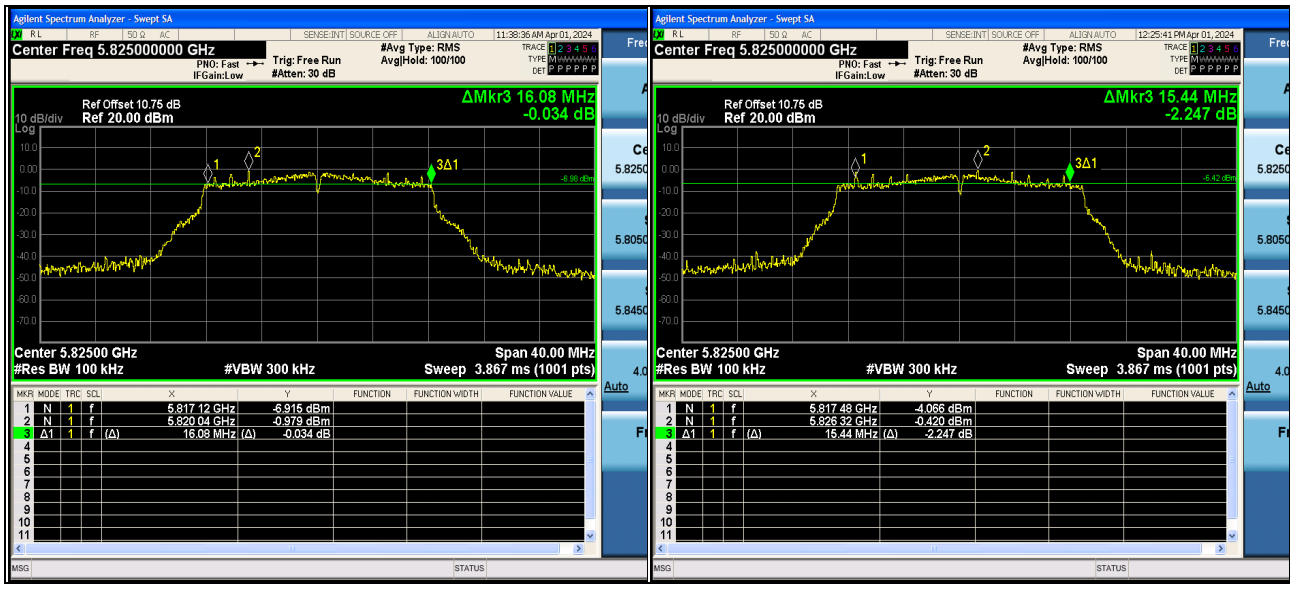
3.6.6 EUT Operating Condition

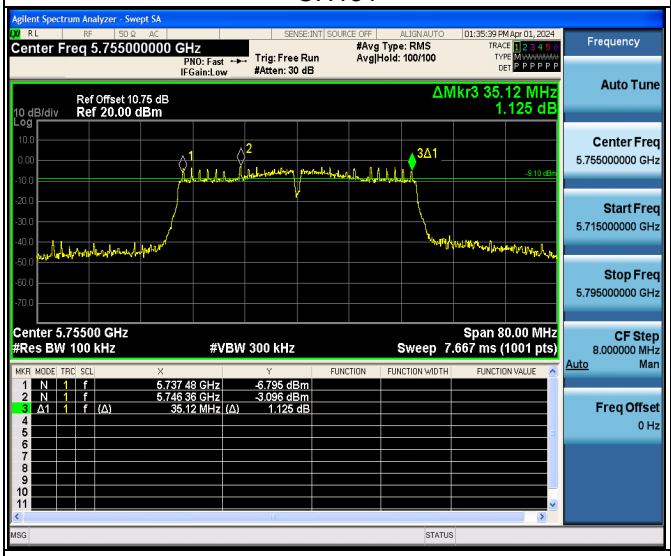
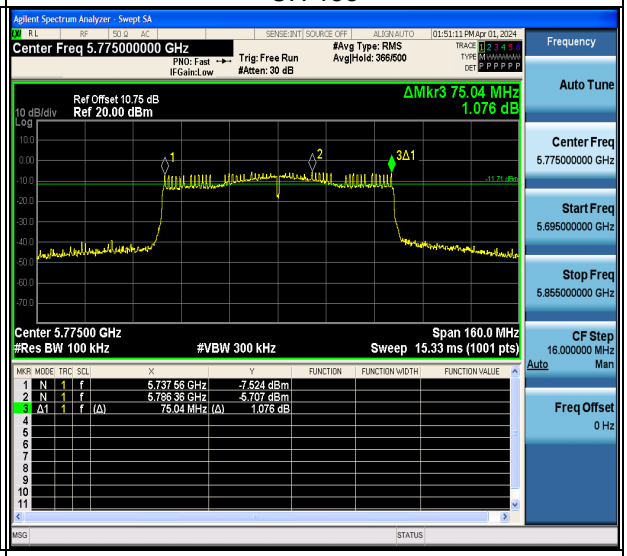
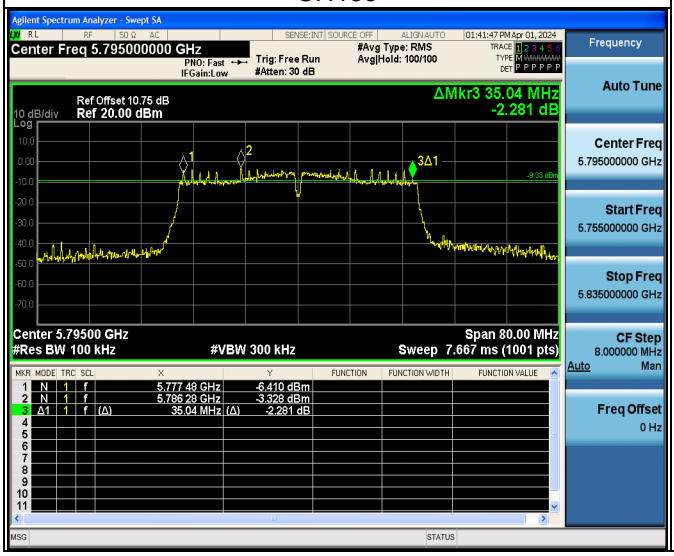
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

3.6.7 Test results

Test mode	Channel Number	Freq. (MHz)	6dBc bandwidth (MHz)	Limit (MHz)	Verdict
11a	149	5745	16.000	≥0.5	Pass
	157	5785	15.720	≥0.5	Pass
	165	5825	16.080	≥0.5	Pass
11n HT20	149	5745	16.920	≥0.5	Pass
	157	5785	16.520	≥0.5	Pass
	165	5825	15.440	≥0.5	Pass
11n HT40	151	5755	35.120	≥0.5	Pass
	159	5795	35.040	≥0.5	Pass
11ac VHT80	155	5775	75.040	≥0.5	Pass

802.11a	802.11n HT20
CH 149	CH 149
	
CH 157	CH 157
	
CH 165	CH 165


Agilent Spectrum Analyzer - Swept SA
Center Freq 5.825000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 100/100
11:38:36 AM Apr 01, 2024
Ref Offset 10.75 dB
10 dB/div
Ref 20.00 dBm
ΔMkr3 16.08 MHz
-0.034 dB
Center 5.82500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40.00 MHz
Sweep 3.867 ms (1001 pts)
1 N 1 f 5.817 12 GHz -6.915 dBm
2 N 1 f 5.820 04 GHz -0.979 dBm
3 Δ1 1 f (Δ) 16.08 MHz (Δ) -0.034 dB
Agilent Spectrum Analyzer - Swept SA
Center Freq 5.825000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 100/100
12:25:41 PM Apr 01, 2024
Ref Offset 10.75 dB
10 dB/div
Ref 20.00 dBm
ΔMkr3 15.44 MHz
-2.247 dB
Center 5.82500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40.00 MHz
Sweep 3.867 ms (1001 pts)
1 N 1 f 5.817 48 GHz -4.066 dBm
2 N 1 f 5.826 32 GHz -0.420 dBm
3 Δ1 1 f (Δ) 15.44 MHz (Δ) -2.247 dB

802.11n HT40	802.11ac VHT80
CH151	CH 155
	
CH159	
	

4. Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

5. Test Instruments

Equipment	Manufacturer	Model No.	Serial No.	Next Cal.Date
Spectrum	Keysight	N9020A	MY51240612	2024-08-06
Power Meter 10Hz~18GHz	Tonscend	JS0806-2	188060126	2024-08-06
Spectrum Analyzer	Rohde&Schwarz	FSV-40N	101783	2024-12-17
Signal generator	Keysight	E4421	GB40051020	2025-03-14
Universal Switch Control Unit	Rohde&Schwarz	CMW500	12010002k50	2024-12-17
Humidity tester	Jingchuang	GSP-8A	CMA22B000592	2024-12-24
Test Software	Tonscend	JS0806-2	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months.
2. The test was performed in RF Chamber.

Appendix – Information on The Testing Laboratories

We, Hwa-Hsing (Dongguan) Testing Co., Ltd., A global provider of TESTING and CERTIFICATION services for consumer products, electronic products and wireless information technology products. Adhering to the core values “HONEST and TRUSTWORTHY, OBJECTIVE and IMPARTIALITY, RIGOROUS and AFFICIENT”, commitment to provide professional, perfect and efficient comprehensive ONE-STOP solution of TESTING and CERTIFICATION services for Manufacturers, Buyers, Traders, Brands, Retailers. Assist client to better manage risk, protect their brands, reduce costs and cut time to over 150 markets in global. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

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

Lab Address: No.101, Building N1, Yuyuan 2 Road, Yuyuan Industrial Park, HuangJiang Town, Dongguan City, People’s Republic of China
Contact Tel: 0769-83078199
Email: Customerservice.dg@hwa-hsing.com
Web Site: www.hwa-hsing.com

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