



Test Report

FCC ID: 2A6T2-X96MAXPLUS

Applicant: SHENZHEN AMEDIA TECHNOLOGY CO., LTD

Address: 201, Building 2, Stech Park, Taoyuan Community, Dalang Street, LongHua District, ShenZhen

Manufacturer: SHENZHEN AMEDIA TECHNOLOGY CO., LTD

Address: 201, Building 2, Stech Park, Taoyuan Community, Dalang Street, LongHua District, ShenZhen

Product: Smart TV box

Trade Mark: N/A

Model No.: X96 max+
X96MAX PLUS

Date of Receipt: Apr. 02, 2025

Test Date: Apr. 02, 2025 - May. 26, 2025

Date of Report: Apr. 15, 2025

Prepared By: Shenzhen DL Testing Technology Co., Ltd.

Address: 101-201, Comprehensive Building, Tongzhou Electronics Longgang Factory Area, No.1
Baolong Fifth Road, Baolong Community, Baolong Street, Longgang District, Shenzhen,
China

Applicable Standards: ANSI C63.10:2013
RSS-247 issue 3 August 2023
RSS-Gen Issue 5, Amendment 2, February, 2021

Test Result: Pass

Report Number: DLE-250402026-3R

Prepared (Test Engineer): Alisa Song

Reviewer (Supervisor): Jack Bu

Approved (Manager): Jade Yang



This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.



Table of Contents	Page
1. . SUMMARY OF TEST RESULTS	4
1.1. MEASUREMENT UNCERTAINTY	5
2. . GENERAL INFORMATION	6
2.1. GENERAL DESCRIPTION OF EUT	6
2.2. DESCRIPTION OF TEST MODES	8
2.3. BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	9
2.4. DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)	9
2.5. TABLE OF PARAMETERS OF TEST SOFTWARE SETTING	9
2.6. EQUIPMENTS LIST FOR ALL TEST ITEMS	10
3. . EMC EMISSION TEST	11
3.1. CONDUCTED EMISSION MEASUREMENT	11
3.1.1. POWER LINE CONDUCTED EMISSION LIMITS	11
3.1.2. TEST PROCEDURE	11
3.1.3. DEVIATION FROM TEST STANDARD	11
3.1.4. TEST SETUP	12
3.1.5. EUT OPERATING CONDITIONS	12
3.1.6. TEST RESULTS	12
3.2. RADIATED EMISSION MEASUREMENT	15
3.2.1. RADIATED EMISSION LIMITS	15
3.2.2. TEST PROCEDURE	16
3.2.3. DEVIATION FROM TEST STANDARD	17
3.2.4. TEST SETUP	17
3.2.5. EUT OPERATING CONDITIONS	18
3.2.6. TEST RESULTS (BETWEEN 9KHZ – 30 MHZ)	19
3.2.7. TEST RESULTS (BETWEEN 30MHZ – 1GHZ)	20
3.2.8. TEST RESULTS (1GHZ~40GHZ)	22
3.3 RADIATED BAND EMISSION MEASUREMENT	32
3.3.1 TEST REQUIREMENT:	32
3.3.2 TEST PROCEDURE	34
3.3.3 DEVIATION FROM TEST STANDARD	35
3.3.4 TEST SETUP	35
3.3.5 EUT OPERATING CONDITIONS	35
4. . EIRP&AVERAGE OUTPUT POWER	48
4.1. APPLIED PROCEDURES / LIMIT	48
4.1.1. TEST PROCEDURE	48
4.1.2. DEVIATION FROM STANDARD	49
4.1.3. TEST SETUP	49
4.1.4. EUT OPERATION CONDITIONS	49
4.1.5. TEST RESULTS	50



Table of Contents	Page
5. . POWER SPECTRAL DENSITY TEST	58
5.1. APPLIED PROCEDURES / LIMIT	58
5.1.1. TEST PROCEDURE	58
5.1.2. DEVIATION FROM STANDARD	59
5.1.3. TEST SETUP	59
5.1.4. EUT OPERATION CONDITIONS	59
5.1.5. TEST RESULTS	60
6. . 6DB&26DB&99% BANDWIDTH TEST	68
6.1. APPLIED PROCEDURES / LIMIT	68
6.1.1. TEST PROCEDURE	68
6.1.2. DEVIATION FROM STANDARD	68
6.1.3. TEST SETUP	68
6.1.4. EUT OPERATION CONDITIONS	69
6.1.5. TEST RESULTS	69
7. . DUTY CYCLE TEST SIGNAL	82
7.1. APPLIED PROCEDURES / LIMIT	82
7.1.1. TEST PROCEDURE	82
7.1.2. DEVIATION FROM STANDARD	82
7.1.3. TEST SETUP	82
7.1.4. EUT OPERATION CONDITIONS	82
7.1.5. TEST RESULTS	83
8. . FREQUENCY STABILITY	90
8.1. APPLIED PROCEDURES / LIMIT	90
8.1.1. TEST PROCEDURE	90
8.1.2. DEVIATION FROM STANDARD	90
8.1.3. TEST SETUP	90
8.1.4. EUT OPERATION CONDITIONS	90
8.1.5. TEST RESULTS	91
9. . TRANSMISSION IN THE ABSENCE OF DATA	94
9.1. STANDARD REQUIREMENT	94
9.2. TEST RESULT	94
10. . ANTENNA REQUIREMENT	95
10.1. STANDARD REQUIREMENT	95
10.2. EUT ANTENNA	95
11. . TEST SEUUP PHOTO	95
12. . EUT PHOTO	95

**1.. SUMMARY OF TEST RESULTS**

Test procedures according to the technical standards:

FCC Part15 (15.407) , Subpart E RSS-247 issue 3 August 2023 RSS-Gen Issue 5, Amendment 2, February, 2021			
Standard Section	Test Item	Judgment	Remark
15.207 RSS-Gen Section 8.8	Conducted Emission	PASS	
15.407(b), 15.209 RSS-247&RSS-Gen Section 8.9&RSS-Gen Section 8.10	Radiated Spurious Emission	PASS	
15.407 (b) RSS-247 Section 6.2	Band Edge Emission	PASS	
15.407 (a) RSS-247 Section 6.2	EIRP&Average Output Power	PASS	
15.407 (a) RSS-247 Section 6.2	Power Spectral Density	PASS	
15.407(a) (e) RSS-247 Section 6.2	26dB bandwidth and 99%dB Bandwidth 6dB bandwidth and 99%dB Bandwidth	PASS	
15.407(g) RSS-GEN 8.11	Frequency Stability	PASS	
15.407(c) RSS-247 Section 6.4	Transmission in case of Absence of Information	PASS	
15.203 RSS-Gen Section 6.8	Antenna Requirement	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

Test lab: Shenzhen DL Testing Technology Co., Ltd.

101-201, Comprehensive Building, Tongzhou Electronics Longgang Factory Area, No.1

Address: Baolong Fifth Road, Baolong Community, Baolong Street, Longgang District, Shenzhen, China

FCC Test Firm Registration Number: 854456

Designation Number: CN1307

IC Registered No.: 27485

CAB ID.: CN0118

**1.1. MEASUREMENT UNCERTAINTY**

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$ · providing a level of confidence of approximately **95 %** °

No.	Item	Uncertainty
1	Conducted Emission Test	$\pm 2.56\text{dB}$
2	RF power,conducted	$\pm 0.42\text{dB}$
3	Spurious emissions,conducted	$\pm 2.76\text{dB}$
4	All emissions,radiated(<30MHz)	$\pm 3.54\text{dB}$
5	All emissions,radiated(<1G)	$\pm 3.65\text{dB}$
6	All emissions,radiated(>1G)	$\pm 4.89\text{dB}$
7	Occupied bandwidth	$\pm 0.2\%$
8	PSD	$\pm 0.69\text{dB}$
9	Temperature	$\pm 0.5^{\circ}\text{C}$
10	Humidity	$\pm 2\%$



2.. GENERAL INFORMATION

2.1. GENERAL DESCRIPTION OF EUT

Product Name:	Smart TV box
Trademark	N/A
Model No.:	X96 max+ X96MAX PLUS
Model Difference	All models are same as the samples except model name, they have the same structure and circuit.
Operation Frequency:	5180-5240, 5745-5825MHz(802.11a/n/ac(HT20)) 5190-5230, 5755-5795MHz(802.11n/ac(HT40)) 5210MHz, 5775MHz (802.11ac(HT80))
Channel numbers:	See channel list
S/N:	20250402001
Sample number:	20250402-01
HVIN:	X96 max+
Channel separation:	20MHz/40MHz/80MHz
Modulation technology:	64QAM, 16QAM, QPSK, BPSK for OFDM
Rate of Transmitter	802.11a: 6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps 802.11n: Up to 300Mbps 802.11ac: up to 867Mbps
Antenna Type:	Internal Antenna
Antenna gain:	WiFi 5.2G: 0.95dBi WiFi 5.8G: 1.47dBi
Power Supply:	DC 5V from adapter
Adapter:	Model No.: JKY168-0502000U Input: 100-240V~ 50/60Hz 0.35A Output: DC 5.0V/2000mA

Note:

- 1.For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- 2.The EUT's all information provided by client.



2. Channel List

Channel List for 802.11a/n(HT20)/ac(HT20)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
40	5200	48	5240

Channel List for 802.11n(HT40)/ac(HT40)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230

Channel List for 802.11ac(HT80)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
42	5210	/	/

Channel List for 802.11a/n(HT20)/ac(HT20)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	161	5805
153	5765	165	5825
157	5785		

Channel List for 802.11n(HT40)/ac(HT40)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795

Channel List for 802.11ac(HT80)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
155	5775	/	/



2.2. DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Description			
Pretest Mode	Channel	Band 1	Band 4
Mode 1	802.11a/n/acHT20	CH36, CH44, CH48	CH149, CH157, CH165
Mode 2	802.11n/acHT40	CH38, CH46	CH151, CH159
Mode 3	802.11acHT80	CH42	CH155
Mode 4	Link Mode		

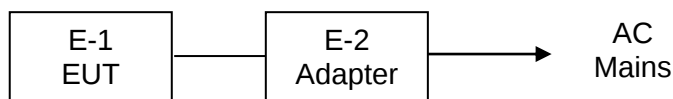
For Radiated Emission			
Pretest Mode	Channel	Band 1	Band 4
Mode 1	802.11a/n/acHT20	CH36, CH44, CH48	CH149, CH157, CH165
Mode 2	802.11n/acHT40	CH38, CH46	CH151, CH159
Mode 3	802.11acHT80	CH42	CH155
Mode 4	Link Mode		

Note: 1. The measurements are performed at the highest, middle, lowest available channels.
2. During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.

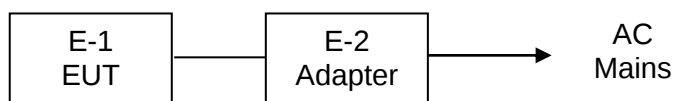


2.3. BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test



Power Line Conducted Emission Test



2.4. DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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.

Item	Equipment	Model/Type No.	Series No.	Note
E-1	Smart TV box	X96 max+	N/A	EUT
E-2	Adapter	JKY168-0502000U	JKY0502000	JKY

Item	Shielded Type	Ferrite Core	Length	Note

Note:

- (1) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

2.5. TABLE OF PARAMETERS OF TEST SOFTWARE SETTING

During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the end product.

Max output power Setting				
Test software Version	Test program: RF TEST Setup			
Mode	802.11a	802.11n HT20	802.11n HT40	802.11ac HT20/HT40/HT80
Data Rate	6Mbps	MSC0	MSC0	MSC0
Power Setting of Softwave	60	60	66	66

**2.6. EQUIPMENTS LIST FOR ALL TEST ITEMS**

Radiation test, Band-edge test and 6db bandwidth test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	Agilent	E4408B	MY50140780	Nov. 01, 2024	Oct. 31, 2025
2	Test Receiver (9kHz-7GHz)	R&S	ESRP7	101393	Nov. 01, 2024	Oct. 31, 2025
3	Bilog Antenna (30MHz-1GHz)	R&S	VULB9162	00306	Nov. 01, 2024	Oct. 31, 2025
4	Horn Antenna (1GHz-18GHz)	Schwarzbeck	BBHA9120D	02139	Nov. 01, 2024	Oct. 31, 2025
5	Horn Antenna (18GHz-40GHz)	A.H. Systems	SAS-574	588	Nov. 01, 2024	Oct. 31, 2025
6	Amplifier (9KHz-6GHz)	Schwarzbeck	BBV9743B	00153	Nov. 01, 2024	Oct. 31, 2025
7	Amplifier (1GHz-18GHz)	EMEC	EM01G8GA	00270	Nov. 01, 2024	Oct. 31, 2025
8	Amplifier (18GHz-40GHz)	Quanjuda	DLE-161	97	Nov. 01, 2024	Oct. 31, 2025
9	Loop Antenna (9KHz-30MHz)	Schwarzbeck	FMZB1519B	00014	Nov. 01, 2024	Oct. 31, 2025
10	RF cables1 (9kHz-1GHz)	ChengYu	966	004	Nov. 01, 2024	Oct. 31, 2025
11	RF cables2 (1GHz-40GHz)	ChengYu	966	003	Nov. 01, 2024	Oct. 31, 2025
12	Antenna connector	Florida RF Labs	N/A	RF 01#	Nov. 01, 2024	Oct. 31, 2025
13	Power probe	KEYSIGHT	U2021XA	MY55210018	Nov. 01, 2024	Oct. 31, 2025
14	Signal Analyzer 9kHz-26.5GHz	Agilent	N9020A	MY55370280	Nov. 01, 2024	Oct. 31, 2025
15	Test Receiver 20kHz-40GHz	R&S	ESU 40	100376	Nov. 01, 2024	Oct. 31, 2025
16	D.C. Power Supply	LongWei	PS-305D	010964729	Nov. 01, 2024	Oct. 31, 2025

Conduction Test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	843 Shielded Room	YIHENG	843 Room	843	Nov. 05, 2023	Nov. 04, 2026
2	EMI Receiver	R&S	ESR	101421	Nov. 01, 2024	Oct. 31, 2025
3	LISN	R&S	ENV216	102417	Nov. 01, 2024	Oct. 31, 2025
4	843 Cable 1#	ChengYu	CE Cable	001	Nov. 01, 2024	Oct. 31, 2025

Other

Item	Name	Manufacturer	Model	Software version
1	EMC Conduction Test System	FALA	EZ_EMCC	EMC-CON 3A1.1
2	EMC radiation test system	FALA	EZ_EMCC	FA-03A2
3	RF test system	MAIWEI	MTS8310	2.0.0.0
4	RF communication test system	MAIWEI	MTS8200	2.0.0.0



3.. EMC EMISSION TEST

3.1. CONDUCTED EMISSION MEASUREMENT

3.1.1. POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Limit (dBuV)		Standard
	Quasi-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC&RSS
0.5 -5.0	56.00	46.00	FCC&RSS
5.0 -30.0	60.00	50.00	FCC&RSS

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

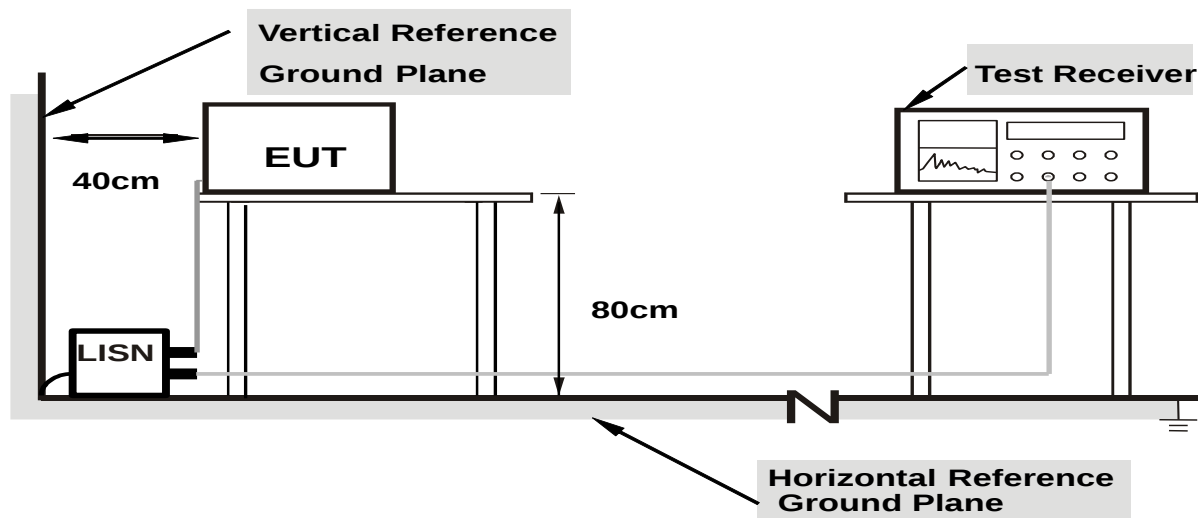
3.1.2. TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3. DEVIATION FROM TEST STANDARD

No deviation

3.1.4. TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.5. EUT OPERATING CONDITIONS

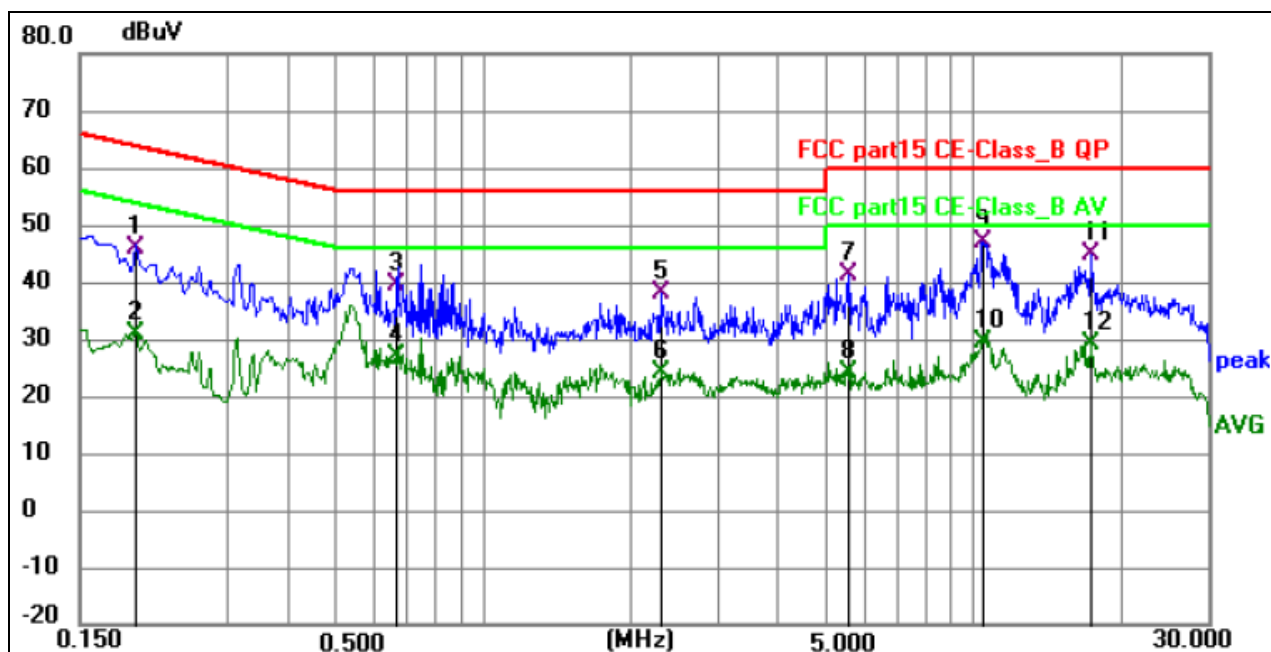
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

We pretest AC 120V and AC 230V, the worst voltage was AC 120V and the data recording in the report.

3.1.6. TEST RESULTS



Temperature:	25 °C	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	L
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 4



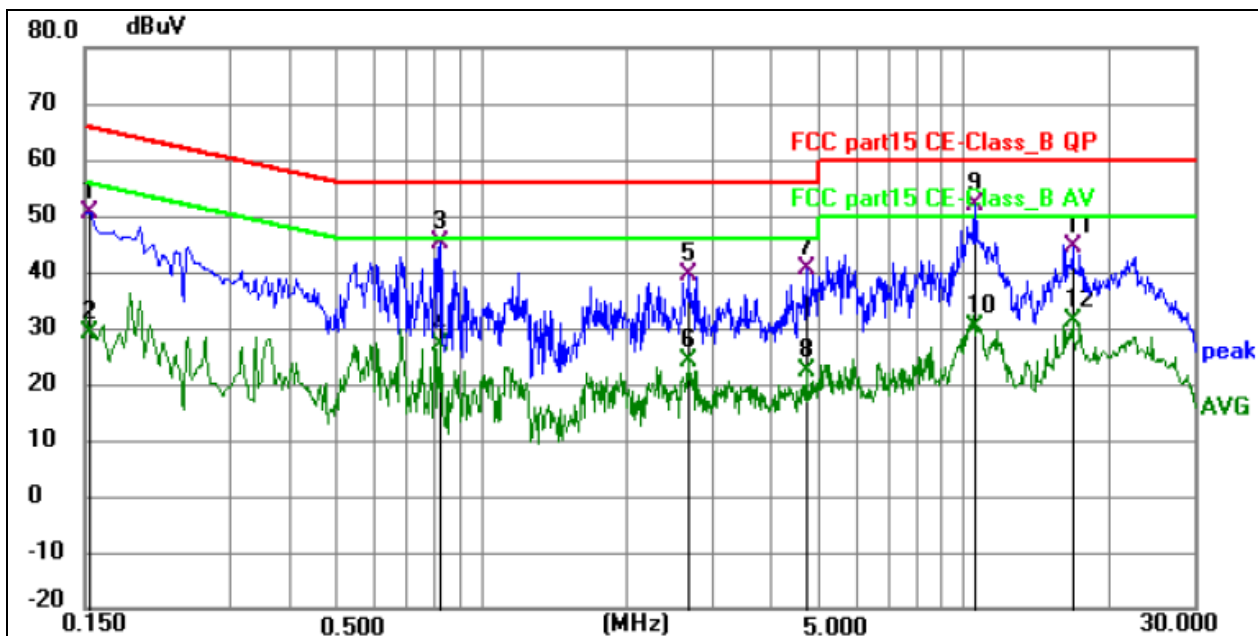
Remark:

Margin = Limit – Level, Correct Factor = Cable lose + LISN insertion loss, Level= Reading + Correct factor

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1949	36.08	9.85	45.93	63.83	-17.90	QP	P	
2	0.1949	21.15	9.85	31.00	53.83	-22.83	AVG	P	
3	0.6675	29.40	9.94	39.34	56.00	-16.66	QP	P	
4	0.6675	16.96	9.94	26.90	46.00	-19.10	AVG	P	
5	2.3100	27.93	9.98	37.91	56.00	-18.09	QP	P	
6	2.3100	14.17	9.98	24.15	46.00	-21.85	AVG	P	
7	5.5545	31.13	9.96	41.09	60.00	-18.91	QP	P	
8	5.5545	14.12	9.96	24.08	50.00	-25.92	AVG	P	
9 *	10.4685	37.22	9.89	47.11	60.00	-12.89	QP	P	
10	10.4685	19.58	9.89	29.47	50.00	-20.53	AVG	P	
11	17.4255	34.73	10.01	44.74	60.00	-15.26	QP	P	
12	17.4255	19.17	10.01	29.18	50.00	-20.82	AVG	P	



Temperature:	25 °C	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	N
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 4



Remark:

Margin = Limit – Level, Correct Factor = Cable lose + LISN insertion loss, Level= Reading + Correct factor

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1545	40.76	9.89	50.65	65.75	-15.10	QP	P	
2	0.1545	19.29	9.89	29.18	55.75	-26.57	AVG	P	
3	0.8250	35.39	9.93	45.32	56.00	-10.68	QP	P	
4	0.8250	17.18	9.93	27.11	46.00	-18.89	AVG	P	
5	2.7015	29.36	9.96	39.32	56.00	-16.68	QP	P	
6	2.7015	14.06	9.96	24.02	46.00	-21.98	AVG	P	
7	4.7085	30.63	9.92	40.55	56.00	-15.45	QP	P	
8	4.7085	12.43	9.92	22.35	46.00	-23.65	AVG	P	
9 *	10.5540	41.97	9.89	51.86	60.00	-8.14	QP	P	
10	10.5540	20.44	9.89	30.33	50.00	-19.67	AVG	P	
11	16.7820	34.61	10.00	44.61	60.00	-15.39	QP	P	
12	16.7820	21.21	10.00	31.21	50.00	-18.79	AVG	P	



3.2. RADIATED EMISSION MEASUREMENT

3.2.1. RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

15.407(b)& RSS-247 Undesirable emission limits. Except as shown in paragraph (b) (10)& RSS-247 of this section, the maximum

emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1)For transmitters operating in the 5.15-5.25GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2)For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3)For transmitters operating in the 5.47-5.725GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (4)For transmitters operating solely in the 5.725-5.850GHz band:
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 10dBm/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.

For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Any unwanted emissions that fall into the band 5250-5350 MHz shall be attenuated below the channel power by at least 26dB, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth (i.e. 99% bandwidth), above 5250 MHz. The 26 dB bandwidth may fall into the 5250-5350 MHz band; however, if the occupied bandwidth also falls within the 5250-5350 MHz band, the transmission is considered as intentional and the devices shall comply with all requirements in the band 5250-5350 MHz including implementing dynamic frequency selection (DFS) and TPC, on the portion of the emission that resides in the 5250-5350 MHz band.

Devices operating in the band 5725-5850 MHz shall comply with the following e.i.r.p. spectral density limits:

- a) 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;
- b) 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10dBm/MHz at 25 MHz above or below the band edges; 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27dBm/MHz at 75 MHz above or below the band edges; and
- d) -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/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



LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C& RSS-247.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	40GHz
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2. TEST PROCEDURE

Below 1GHz test procedure as below:

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

- Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre.
- Test the EUT in the lowest channel, the middle channel, the Highest channel

Note:

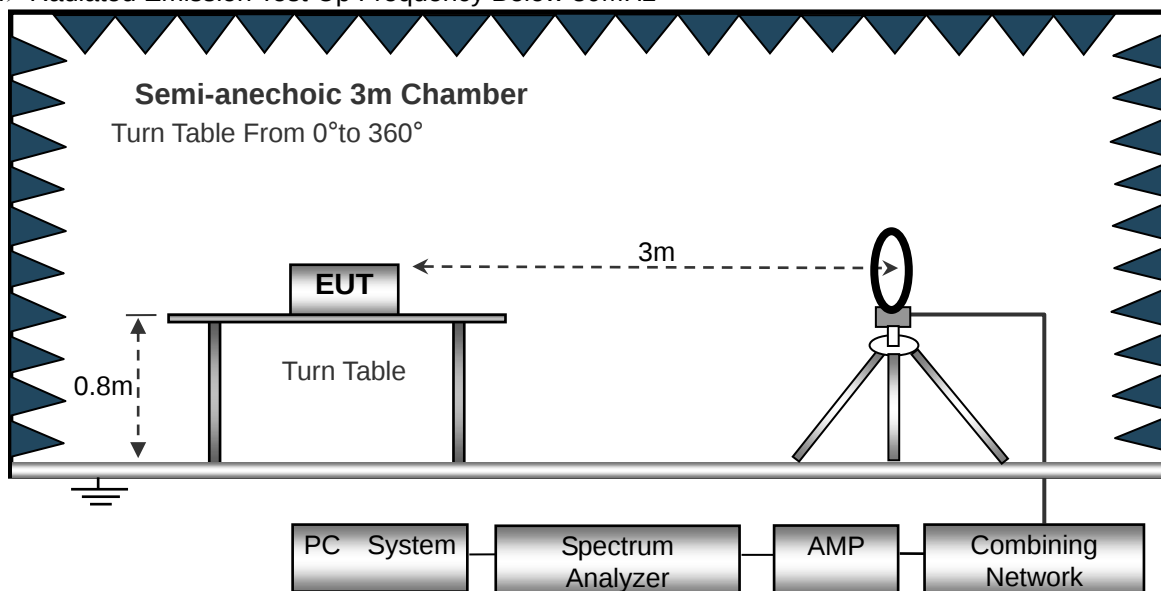
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3. DEVIATION FROM TEST STANDARD

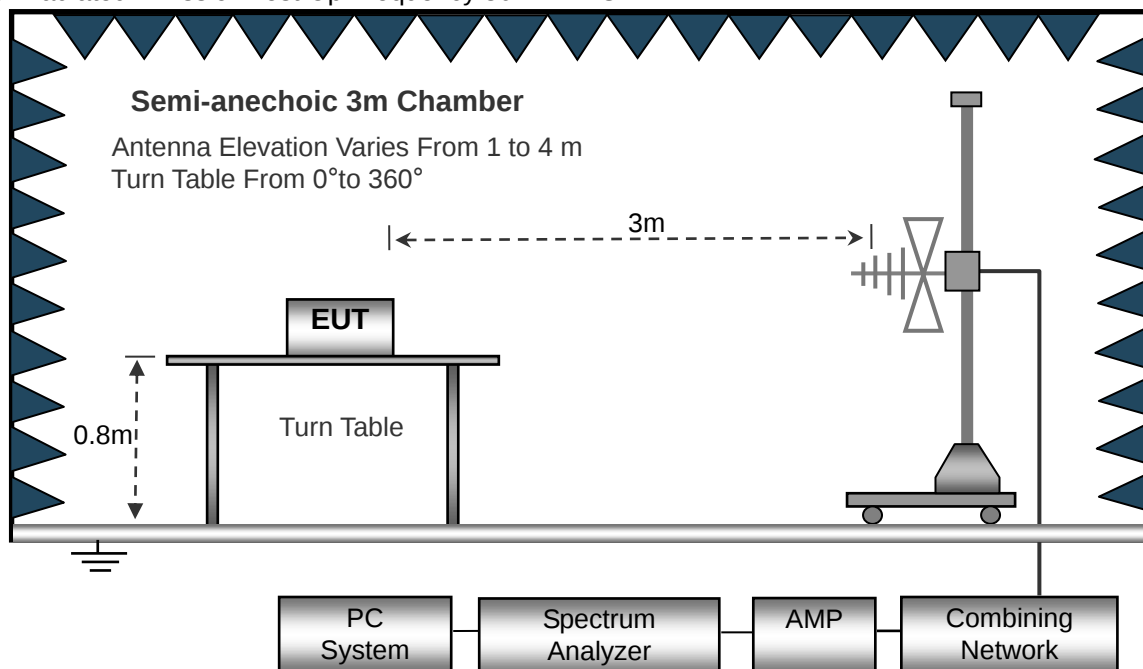
No deviation

3.2.4. TEST SETUP

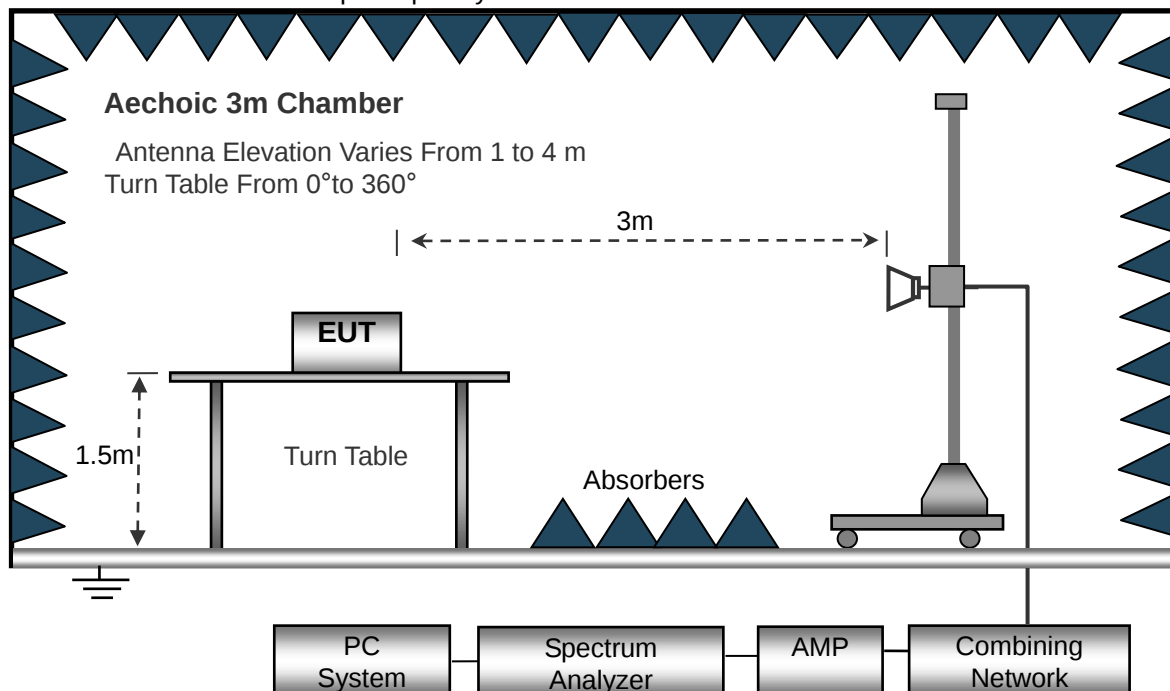
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



3.2.5. EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

**3.2.6. TEST RESULTS (Between 9KHz – 30 MHz)**

Temperature:	20℃	Relative Humidity:	48%
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	Mode 4	Polarization :	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

NOTE:

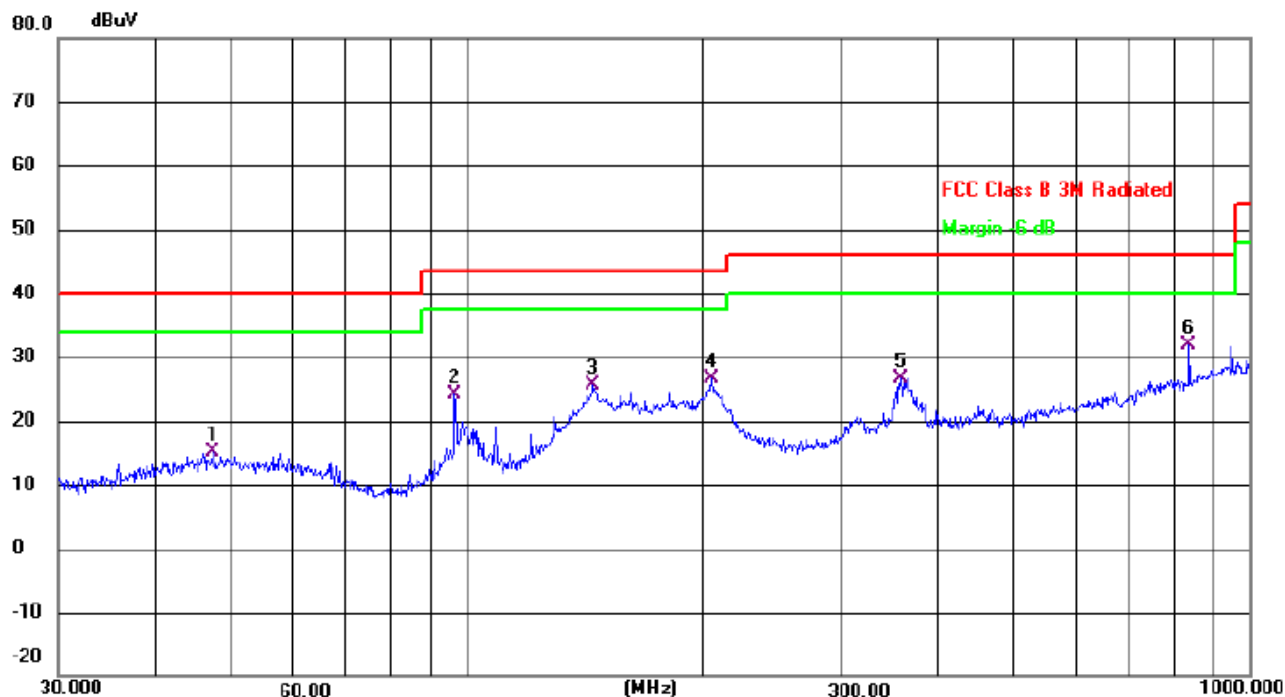
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log (\text{specific distance}/\text{test distance})$ (dB);

Limit line = specific limits(dBuv) + distance extrapolation factor.

**3.2.7. TEST RESULTS (Between 30MHz – 1GHz)**

Temperature:	26℃	Relative Humidity:	54%
Pressure:	1010 hPa	Polarization :	Horizontal
Test Voltage :	AC 120V/60Hz		
Test Mode :	Mode 4		



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector
	MHz	dBuV	dB	dBuV	dB	dB	
1	47.3255	27.89	-12.81	15.08	40.00	-24.92	QP
2	96.4362	39.94	-15.82	24.12	43.50	-19.38	QP
3	144.8418	43.96	-18.39	25.57	43.50	-17.93	QP
4	204.9551	41.49	-14.85	26.64	43.50	-16.86	QP
5	357.9287	37.16	-10.43	26.73	46.00	-19.27	QP
6 *	836.2443	33.81	-1.98	31.83	46.00	-14.17	QP

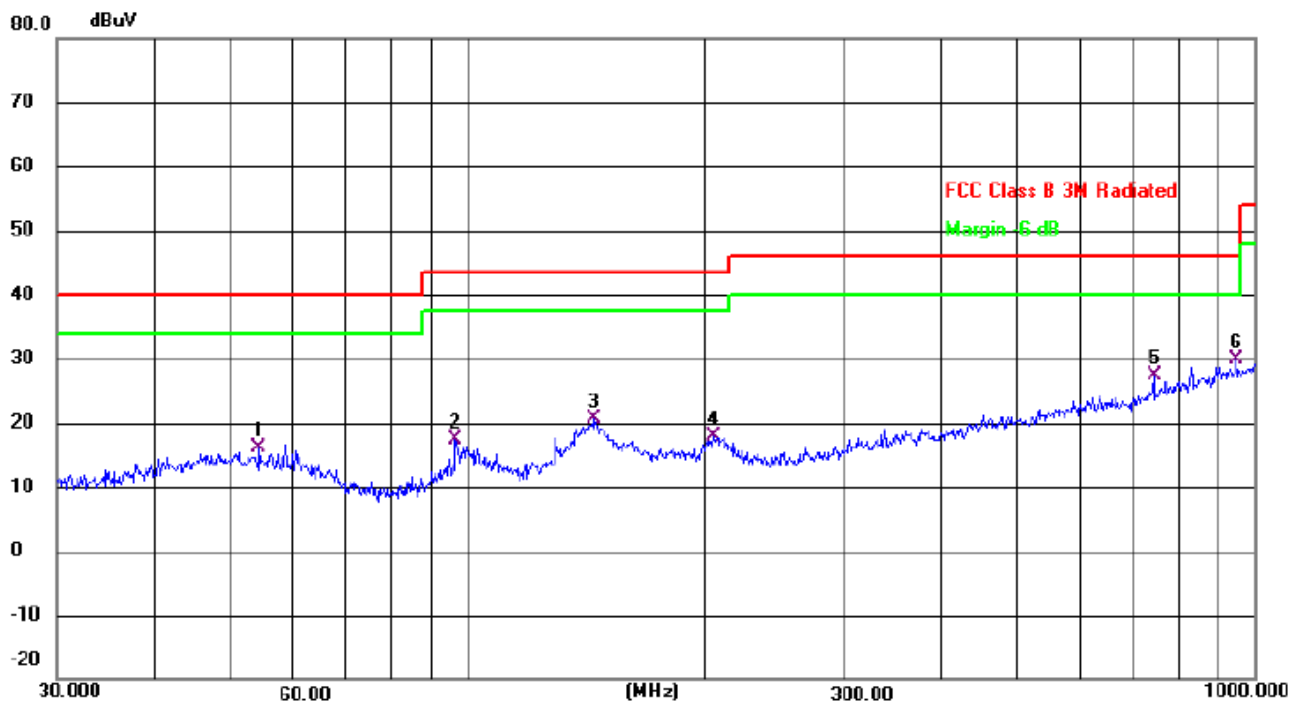
Remark:

Correct Factor = Cable loss + Antenna factor – Preamplifier;

Level = Reading Level + Correct Factor; Margin = Level - Limit;



Temperature:	26°C	Relative Humidity:	54%
Pressure:	1010 hPa	Polarization :	Vertical
test voltage :	AC 120V/60Hz		
Test Mode :	Mode 4		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	
		MHz	dBuV	dB	dBuV	dB	dB	Detector
1		54.2610	29.48	-13.37	16.11	40.00	-23.89	QP
2		96.4362	33.17	-15.82	17.35	43.50	-26.15	QP
3		144.8418	38.96	-18.39	20.57	43.50	-22.93	QP
4		204.9551	32.84	-14.85	17.99	43.50	-25.51	QP
5		744.8661	30.58	-3.25	27.33	46.00	-18.67	QP
6	*	948.7610	30.10	-0.27	29.83	46.00	-16.17	QP

Remark:

Correct Factor = Cable loss + Antenna factor – Preamplifier;

Level = Reading Level + Correct Factor; Margin = Level - Limit;

**3.2.8. TEST RESULTS (1ghz~40ghZ)**

802.11a band 1

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:5180									
V	10360	56.35	49.05	15.3	37.39	59.99	68.2	-8.21	PK
V	10360	41.84	49.05	15.3	37.39	45.48	54	-8.52	AV
V	15540	52.85	49.16	15.27	40.45	59.41	74	-14.59	PK
V	15540	39.63	49.16	15.27	40.45	46.19	54	-7.81	AV
H	10360	56.35	49.05	15.3	37.39	59.99	68.2	-8.21	PK
H	10360	40.96	49.05	15.3	37.39	44.6	54	-9.40	AV
H	15540	51.44	49.16	15.27	40.45	58	74	-16.00	PK
H	15540	38.88	49.16	15.27	40.45	45.44	54	-8.56	AV
operation frequency:5200									
V	10400	57.21	49.09	15.34	37.42	60.88	68.2	-7.32	PK
V	10400	39.63	49.09	15.34	37.42	43.3	54	-10.70	AV
V	15600	52.88	49.18	15.29	40.47	59.46	74	-14.54	PK
V	15600	38.64	49.18	15.29	40.47	45.22	54	-8.78	AV
H	10400	56.82	49.09	15.34	37.42	60.49	68.2	-7.71	PK
H	10400	39.96	49.09	15.34	37.42	43.63	54	-10.37	AV
H	15600	53.14	49.18	15.29	40.47	59.72	74	-14.28	PK
H	15600	38.85	49.18	15.29	40.47	45.43	54	-8.57	AV
operation frequency:5240									
V	10480	58.56	49.11	15.37	37.46	62.28	68.2	-5.92	PK
V	10480	39.68	49.11	15.37	37.46	43.4	54	-10.60	AV
V	15720	53.84	49.21	15.34	40.51	60.48	74	-13.52	PK
V	15720	38.36	49.21	15.34	40.51	45	54	-9.00	AV
H	10480	57.52	49.11	15.37	31.31	55.09	68.2	-13.11	PK
H	10480	45.31	49.11	15.37	31.31	42.88	54	-11.12	AV
H	15720	54.89	49.21	15.34	40.51	61.53	74	-12.47	PK
H	15720	37.21	49.21	15.34	40.51	43.85	54	-10.15	AV
Remark: 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit 2. If peak below the average limit, the average emission was no test. 3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.									



802.11n HT20

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5180									
V	10360	56.63	49.05	15.3	37.39	60.27	68.2	-7.93	PK
V	10360	38.67	49.05	15.3	37.39	42.31	54	-11.69	AV
V	15540	52.14	49.16	15.27	40.45	58.7	74	-15.30	PK
V	15540	38.56	49.16	15.27	40.45	45.12	54	-8.88	AV
H	10360	56.68	49.05	15.3	37.39	60.32	68.2	-7.88	PK
H	10360	39.85	49.05	15.3	37.39	43.49	54	-10.51	AV
H	15540	51.36	49.16	15.27	40.45	57.92	74	-16.08	PK
H	15540	38.21	49.16	15.27	40.45	44.77	54	-9.23	AV
operation frequency:5200									
V	10400	56.32	49.09	15.34	37.42	59.99	68.2	-8.21	PK
V	10400	39.68	49.09	15.34	37.42	43.35	54	-10.65	AV
V	15600	52.85	49.18	15.29	40.47	59.43	74	-14.57	PK
V	15600	38.96	49.18	15.29	40.47	45.54	54	-8.46	AV
H	10400	55.87	49.09	15.34	37.42	59.54	68.2	-8.66	PK
H	10400	40.52	49.09	15.34	37.42	44.19	54	-9.81	AV
H	15600	53.66	49.18	15.29	40.47	60.24	74	-13.76	PK
H	15600	39.85	49.18	15.29	40.47	46.43	54	-7.57	AV
operation frequency:5240									
V	10480	57.24	49.11	15.37	37.46	60.96	68.2	-7.24	PK
V	10480	40.69	49.11	15.37	37.46	44.41	54	-9.59	AV
V	15720	52.52	49.21	15.34	40.51	59.16	74	-14.84	PK
V	15720	38.84	49.21	15.34	40.51	45.48	54	-8.52	AV
H	10480	57.56	49.11	15.37	31.31	55.13	68.2	-13.07	PK
H	10480	44.85	49.11	15.37	31.31	42.42	54	-11.58	AV
H	15720	51.65	49.21	15.34	40.51	58.29	74	-15.71	PK
H	15720	39.56	49.21	15.34	40.51	46.2	54	-7.80	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11n HT40

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5190									
V	10380	56.58	49.07	15.33	37.41	60.25	68.2	-7.95	PK
V	10380	39.21	49.07	15.33	37.41	42.88	54	-11.12	AV
V	15570	52.96	49.17	15.28	40.46	59.53	74	-14.47	PK
V	15570	38.85	49.17	15.28	40.46	45.42	54	-8.58	AV
H	10380	56.23	49.07	15.33	37.41	59.9	68.2	-8.30	PK
H	10380	40.87	49.07	15.33	37.41	44.54	54	-9.46	AV
H	15570	52.52	49.17	15.28	40.46	59.09	74	-14.91	PK
H	15570	38.63	49.17	15.28	40.46	45.2	54	-8.80	AV
operation frequency:5230									
V	10460	57.52	49.11	15.37	37.46	61.24	68.2	-6.96	PK
V	10460	39.68	49.11	15.37	37.46	43.4	54	-10.60	AV
V	15690	52.84	49.21	15.34	40.51	59.48	74	-14.52	PK
V	15690	38.21	49.21	15.34	40.51	44.85	54	-9.15	AV
H	10460	57.36	49.11	15.37	31.31	54.93	68.2	-13.27	PK
H	10460	44.52	49.11	15.37	31.31	42.09	54	-11.91	AV
H	15690	52.41	49.21	15.34	40.51	59.05	74	-14.95	PK
H	15690	39.24	49.21	15.34	40.51	45.88	54	-8.12	AV
Remark: 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit 2. If peak below the average limit, the average emission was no test. 3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.									



802.11ac HT20

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5180									
V	10360	56.52	49.05	15.3	37.39	60.16	68.2	-8.04	PK
V	10360	39.13	49.05	15.3	37.39	42.77	54	-11.23	AV
V	15540	51.38	49.16	15.27	40.45	57.94	74	-16.06	PK
V	15540	38.21	49.16	15.27	40.45	44.77	54	-9.23	AV
H	10360	56.23	49.05	15.3	37.39	59.87	68.2	-8.33	PK
H	10360	38.37	49.05	15.3	37.39	42.01	54	-11.99	AV
H	15540	52.69	49.16	15.27	40.45	59.25	74	-14.75	PK
H	15540	39.44	49.16	15.27	40.45	46	54	-8.00	AV
operation frequency:5200									
V	10400	56.52	49.09	15.34	37.42	60.19	68.2	-8.01	PK
V	10400	41.53	49.09	15.34	37.42	45.2	54	-8.80	AV
V	15600	52.85	49.18	15.29	40.47	59.43	74	-14.57	PK
V	15600	40.54	49.18	15.29	40.47	47.12	54	-6.88	AV
H	10400	55.56	49.09	15.34	37.42	59.23	68.2	-8.97	PK
H	10400	40.58	49.09	15.34	37.42	44.25	54	-9.75	AV
H	15600	53.84	49.18	15.29	40.47	60.42	74	-13.58	PK
H	15600	41.52	49.18	15.29	40.47	48.1	54	-5.90	AV
operation frequency:5240									
V	10480	57.69	49.11	15.37	37.46	61.41	68.2	-6.79	PK
V	10480	40.64	49.11	15.37	37.46	44.36	54	-9.64	AV
V	15720	51.48	49.21	15.34	40.51	58.12	74	-15.88	PK
V	15720	39.64	49.21	15.34	40.51	46.28	54	-7.72	AV
H	10480	57.66	49.11	15.37	31.31	55.23	68.2	-12.97	PK
H	10480	44.27	49.11	15.37	31.31	41.84	54	-12.16	AV
H	15720	52.46	49.21	15.34	40.51	59.1	74	-14.90	PK
H	15720	40.52	49.21	15.34	40.51	47.16	54	-6.84	AV
Remark: 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit 2. If peak below the average limit, the average emission was no test. 3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.									



802.11ac 40

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5190									
V	10380	56.32	49.07	15.33	37.41	59.99	68.2	-8.21	PK
V	10380	40.27	49.07	15.33	37.41	43.94	54	-10.06	AV
V	15570	52.75	49.17	15.28	40.46	59.32	74	-14.68	PK
V	15570	39.41	49.17	15.28	40.46	45.98	54	-8.02	AV
H	10380	56.21	49.07	15.33	37.41	59.88	68.2	-8.32	PK
H	10380	40.58	49.07	15.33	37.41	44.25	54	-9.75	AV
H	15570	51.35	49.17	15.28	40.46	57.92	74	-16.08	PK
H	15570	39.41	49.17	15.28	40.46	45.98	54	-8.02	AV
operation frequency:5230									
V	10460	57.63	49.11	15.37	37.46	61.35	68.2	-6.85	PK
V	10460	41.28	49.11	15.37	37.46	45	54	-9.00	AV
V	15690	52.14	49.21	15.34	40.51	58.78	74	-15.22	PK
V	15690	39.21	49.21	15.34	40.51	45.85	54	-8.15	AV
H	10460	57.93	49.11	15.37	31.31	55.5	68.2	-12.70	PK
H	10460	44.58	49.11	15.37	31.31	42.15	54	-11.85	AV
H	15690	52.21	49.21	15.34	40.51	58.85	74	-15.15	PK
H	15690	40.74	49.21	15.34	40.51	47.38	54	-6.62	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

802.11ac HT80

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5210									
V	10420	56.69	49.07	15.33	37.41	60.36	68.2	-7.84	PK
V	10420	41.21	49.07	15.33	37.41	44.88	54	-9.12	AV
V	15630	51.57	49.17	15.28	40.46	58.14	74	-15.86	PK
V	15630	39.63	49.17	15.28	40.46	46.2	54	-7.80	AV
H	10420	56.18	49.07	15.33	37.41	59.85	68.2	-8.35	PK
H	10420	41.65	49.07	15.33	37.41	45.32	54	-8.68	AV
H	15630	52.83	49.17	15.28	40.46	59.4	74	-14.60	PK
H	15630	40.74	49.17	15.28	40.46	47.31	54	-6.69	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11a band 4

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:5745									
V	11490	54.52	49.05	15.3	37.39	58.16	74	-15.84	PK
V	11490	41.43	49.05	15.3	37.39	45.07	54	-8.93	AV
V	17235	55.27	49.16	15.27	40.45	61.83	68.2	-6.37	PK
V	17235	40.63	49.16	15.27	40.45	47.19	54	-6.81	AV
H	11490	52.64	49.05	15.3	37.39	56.28	74	-17.72	PK
H	11490	42.62	49.05	15.3	37.39	46.26	54	-7.74	AV
H	17235	51.48	49.16	15.27	40.45	58.04	68.2	-10.16	PK
H	17235	40.36	49.16	15.27	40.45	46.92	54	-7.08	AV
operation frequency:5785									
V	11570	51.41	49.09	15.34	37.42	55.08	74	-18.92	PK
V	11570	41.26	49.09	15.34	37.42	44.93	54	-9.07	AV
V	17355	50.68	49.18	15.29	40.47	57.26	68.2	-10.94	PK
V	17355	40.41	49.18	15.29	40.47	46.99	54	-7.01	AV
H	11570	50.73	49.09	15.34	37.42	54.4	74	-19.60	PK
H	11570	42.21	49.09	15.34	37.42	45.88	54	-8.12	AV
H	17355	48.69	49.18	15.29	40.47	55.27	68.2	-12.93	PK
H	17355	40.21	49.18	15.29	40.47	46.79	54	-7.21	AV
operation frequency:5825									
V	11650	52.63	49.11	15.37	37.46	56.35	74	-17.65	PK
V	11650	41.24	49.11	15.37	37.46	44.96	54	-9.04	AV
V	17475	49.57	49.21	15.34	40.51	56.21	68.2	-11.99	PK
V	17475	40.21	49.21	15.34	40.51	46.85	54	-7.15	AV
H	11650	57.83	49.11	15.37	31.31	55.4	74	-18.60	PK
H	11650	48.77	49.11	15.37	31.31	46.34	54	-7.66	AV
H	17475	49.34	49.21	15.34	40.51	55.98	68.2	-12.22	PK
H	17475	40.66	49.21	15.34	40.51	47.3	54	-6.70	AV
Remark: 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit 2. If peak below the average limit, the average emission was no test. 3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.									



802.11n HT20

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5745									
V	11490	49.52	49.05	15.3	37.39	53.16	74	-20.84	PK
V	11490	42.42	49.05	15.3	37.39	46.06	54	-7.94	AV
V	17235	48.21	49.16	15.27	40.45	54.77	68.2	-13.43	PK
V	17235	40.68	49.16	15.27	40.45	47.24	54	-6.76	AV
H	11490	49.63	49.05	15.3	37.39	53.27	74	-20.73	PK
H	11490	41.21	49.05	15.3	37.39	44.85	54	-9.15	AV
H	17235	48.74	49.16	15.27	40.45	55.3	68.2	-12.90	PK
H	17235	40.66	49.16	15.27	40.45	47.22	54	-6.78	AV
operation frequency:5785									
V	11570	52.52	49.09	15.34	37.42	56.19	74	-17.81	PK
V	11570	42.41	49.09	15.34	37.42	46.08	54	-7.92	AV
V	17355	49.83	49.18	15.29	40.47	56.41	68.2	-11.79	PK
V	17355	40.18	49.18	15.29	40.47	46.76	54	-7.24	AV
H	11570	49.54	49.09	15.34	37.42	53.21	74	-20.79	PK
H	11570	43.89	49.09	15.34	37.42	47.56	54	-6.44	AV
H	17355	49.15	49.18	15.29	40.47	55.73	68.2	-12.47	PK
H	17355	40.52	49.18	15.29	40.47	47.1	54	-6.90	AV
operation frequency:5825									
V	11650	51.36	49.11	15.37	37.46	55.08	74	-18.92	PK
V	11650	41.67	49.11	15.37	37.46	45.39	54	-8.61	AV
V	17475	48.65	49.21	15.34	40.51	55.29	68.2	-12.91	PK
V	17475	40.23	49.21	15.34	40.51	46.87	54	-7.13	AV
H	11650	57.52	49.11	15.37	31.31	55.09	74	-18.91	PK
H	11650	44.16	49.11	15.37	31.31	41.73	54	-12.27	AV
H	17475	49.85	49.21	15.34	40.51	56.49	68.2	-11.71	PK
H	17475	40.95	49.21	15.34	40.51	47.59	54	-6.41	AV
Remark: 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit 2. If peak below the average limit, the average emission was no test. 3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.									



802.11n HT40

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5755									
V	11510	49.21	49.07	15.33	37.41	52.88	74	-21.12	PK
V	11510	41.93	49.07	15.33	37.41	45.6	54	-8.40	AV
V	17265	49.78	49.17	15.28	40.46	56.35	68.2	-11.85	PK
V	17265	40.64	49.17	15.28	40.46	47.21	54	-6.79	AV
H	11510	48.26	49.07	15.33	37.41	51.93	74	-22.07	PK
H	11510	41.28	49.07	15.33	37.41	44.95	54	-9.05	AV
H	17265	49.32	49.17	15.28	40.46	55.89	68.2	-12.31	PK
H	17265	40.69	49.17	15.28	40.46	47.26	54	-6.74	AV
operation frequency:5795									
V	11590	49.52	49.11	15.37	37.46	53.24	74	-20.76	PK
V	11590	41.66	49.11	15.37	37.46	45.38	54	-8.62	AV
V	17385	48.21	49.21	15.34	40.51	54.85	68.2	-13.35	PK
V	17385	40.63	49.21	15.34	40.51	47.27	54	-6.73	AV
H	11590	57.87	49.11	15.37	31.31	55.44	74	-18.56	PK
H	11590	44.52	49.11	15.37	31.31	42.09	54	-11.91	AV
H	17385	48.13	49.21	15.34	40.51	54.77	68.2	-13.43	PK
H	17385	40.85	49.21	15.34	40.51	47.49	54	-6.51	AV
Remark: 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit 2. If peak below the average limit, the average emission was no test. 3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.									



802.11ac HT20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:5745									
V	11490	49.69	49.05	15.3	37.39	53.33	74	-20.67	PK
V	11490	42.54	49.05	15.3	37.39	46.18	54	-7.82	AV
V	17235	48.25	49.16	15.27	40.45	54.81	68.2	-13.39	PK
V	17235	40.33	49.16	15.27	40.45	46.89	54	-7.11	AV
H	11490	48.85	49.05	15.3	37.39	52.49	74	-21.51	PK
H	11490	41.64	49.05	15.3	37.39	45.28	54	-8.72	AV
H	17235	48.96	49.16	15.27	40.45	55.52	68.2	-12.68	PK
H	17235	40.25	49.16	15.27	40.45	46.81	54	-7.19	AV
operation frequency:5785									
V	11570	48.21	49.09	15.34	37.42	51.88	74	-22.12	PK
V	11570	41.26	49.09	15.34	37.42	44.93	54	-9.07	AV
V	17355	49.37	49.18	15.29	40.47	55.95	68.2	-12.25	PK
V	17355	40.65	49.18	15.29	40.47	47.23	54	-6.77	AV
H	11570	49.33	49.09	15.34	37.42	53	74	-21.00	PK
H	11570	43.41	49.09	15.34	37.42	47.08	54	-6.92	AV
H	17355	49.78	49.18	15.29	40.47	56.36	68.2	-11.84	PK
H	17355	40.16	49.18	15.29	40.47	46.74	54	-7.26	AV
operation frequency:5825									
V	11650	49.52	49.11	15.37	37.46	53.24	74	-20.76	PK
V	11650	41.61	49.11	15.37	37.46	45.33	54	-8.67	AV
V	17475	48.38	49.21	15.34	40.51	55.02	68.2	-13.18	PK
V	17475	40.26	49.21	15.34	40.51	46.9	54	-7.10	AV
H	11650	57.52	49.11	15.37	31.31	55.09	74	-18.91	PK
H	11650	44.51	49.11	15.37	31.31	42.08	54	-11.92	AV
H	17475	48.69	49.21	15.34	40.51	55.33	68.2	-12.87	PK
H	17475	40.52	49.21	15.34	40.51	47.16	54	-6.84	AV
Remark: 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit 2. If peak below the average limit, the average emission was no test. 3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.									



802.11ac HT40

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5755									
V	11510	49.41	49.07	15.33	37.41	53.08	74	-20.92	PK
V	11510	42.58	49.07	15.33	37.41	46.25	54	-7.75	AV
V	17265	48.26	49.17	15.28	40.46	54.83	68.2	-13.37	PK
V	17265	41.24	49.17	15.28	40.46	47.81	54	-6.19	AV
H	11510	48.62	49.07	15.33	37.41	52.29	74	-21.71	PK
H	11510	42.96	49.07	15.33	37.41	46.63	54	-7.37	AV
H	17265	48.52	49.17	15.28	40.46	55.09	68.2	-13.11	PK
H	17265	40.84	49.17	15.28	40.46	47.41	54	-6.59	AV

operation frequency:5795

V	11590	49.69	49.11	15.37	37.46	53.41	74	-20.59	PK
V	11590	41.31	49.11	15.37	37.46	45.03	54	-8.97	AV
V	17385	48.78	49.21	15.34	40.51	55.42	68.2	-12.78	PK
V	17385	40.13	49.21	15.34	40.51	46.77	54	-7.23	AV
H	11590	57.55	49.11	15.37	31.31	55.12	74	-18.88	PK
H	11590	44.34	49.11	15.37	31.31	41.91	54	-12.09	AV
H	17385	48.28	49.21	15.34	40.51	54.92	68.2	-13.28	PK
H	17385	40.13	49.21	15.34	40.51	46.77	54	-7.23	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

802.11ac HT80

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5775									
V	11550	48.85	49.07	15.33	37.41	52.52	74	-21.48	PK
V	11550	42.24	49.07	15.33	37.41	45.91	54	-8.09	AV
V	17325	49.63	49.17	15.28	40.46	56.2	68.2	-12.00	PK
V	17325	40.58	49.17	15.28	40.46	47.15	54	-6.85	AV
H	11550	48.34	49.07	15.33	37.41	52.01	74	-21.99	PK
H	11550	41.63	49.07	15.33	37.41	45.3	54	-8.70	AV
H	17325	48.21	49.17	15.28	40.46	54.78	68.2	-13.42	PK
H	17325	40.27	49.17	15.28	40.46	46.84	54	-7.16	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



3.3 RADIATED BAND EMISSION MEASUREMENT

3.3.1 TEST REQUIREMENT:

15.407 (b)& RSS-247 Section 5.5& RSS-247 Section 6.2.1.2&6.2.4.3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

(1) For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p.

(2) Devices operating in the band 5725-5850 MHz shall have e.i.r.p. of unwanted emissions comply with the following:

- a) 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;
- b) 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;
- c) 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and
- d) -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			



MHz
0.090-0.110
2.1735-2.1905
3.020-3.026
4.125-4.128
4.17725-4.17775
4.20725-4.20775
5.677-5.683
6.215-6.218
6.26775-6.26825
6.31175-6.31225
8.291-8.294
8.362-8.366
8.37625-8.38675
8.41425-8.41475
12.29-12.293
12.51975-12.52025
12.57675-12.57725
13.36-13.41
16.42-16.423
16.69475-16.69525
16.80425-16.80475
25.5-25.67
37.5-38.25
73-74.6
74.8-75.2
108-138
156.52475-156.52525
156.7-156.9

MHz
240-285
322-335.4
399.9-410
608-614
960-1427
1435-1626.5
1645.5-1646.5
1660-1710
1718.8-1722.2
2200-2300
2310-2390
2655-2900
3260-3267
3332-3339
3345.8-3358
3500-4400
4500-5150
5350-5460
7250-7750
8025-8500

GHz
9.0-9.2
9.3-9.5
10.6-12.7
13.25-13.4
14.47-14.5
15.35-16.2
17.7-21.4
22.01-23.12
23.6-24.0
31.2-31.8
36.43-36.5
Above 38.6

* Certain frequency bands listed in Table 6 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to the devices are set out in the 200- and 300-series of RSSs, such as RSS-210 and RSS-310, which contain the requirements that apply to licence-exempt radio apparatus.



For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Any unwanted emissions that fall into the band 5250-5350 MHz shall be attenuated below the channel power by at least 26dB, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth (i.e. 99% bandwidth), above 5250 MHz. The 26 dB bandwidth may fall into the 5250-5350 MHz band; however, if the occupied bandwidth also falls within the 5250-5350 MHz band, the transmission is considered as intentional and the devices shall comply with all requirements in the band 5250-5350 MHz including implementing dynamic frequency selection (DFS) and TPC, on the portion of the emission that resides in the 5250-5350 MHz band.

Frequencies (MHz)	Field Strength (micorvolts/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

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	5000MHz
Stop Frequency	5420MHz
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

3.3.2 TEST PROCEDURE

Above 1GHz test procedure as below:

- The EUT was placed on the top of a rotating table 0.1 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel, the highest channel

Note:

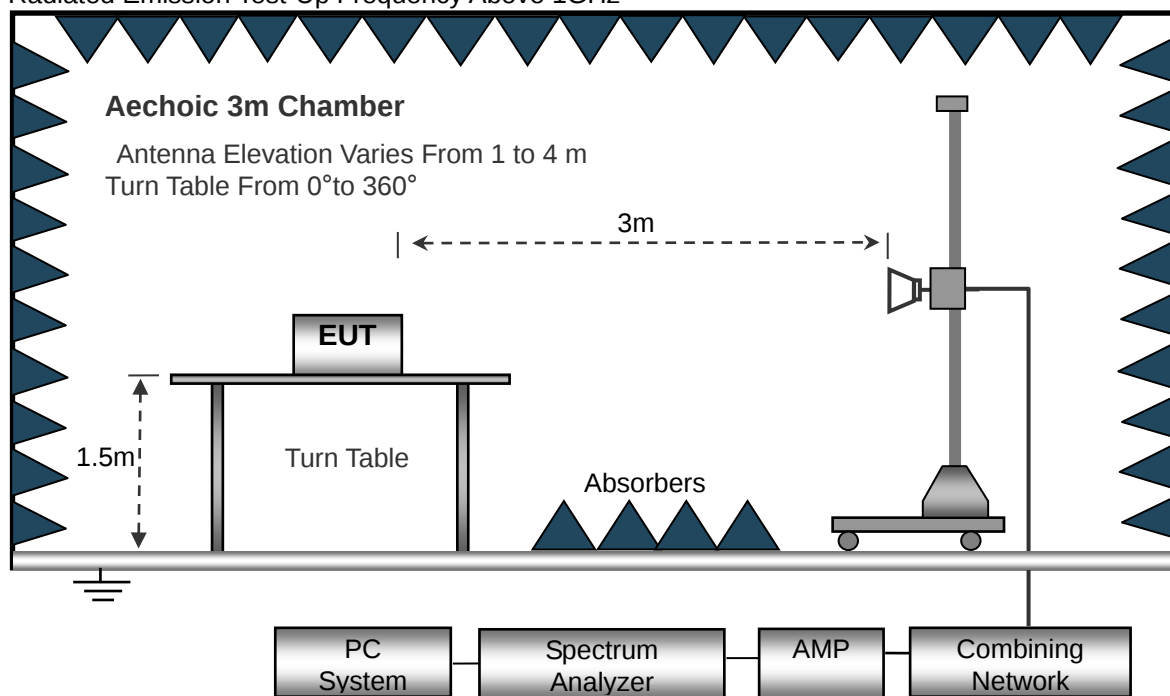
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

3.3.3 DEVIATION FROM TEST STANDARD

No deviation

3.3.4 TEST SETUP

Radiated Emission Test-Up Frequency Above 1GHz



3.3.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

**3.3.6 TEST RESULT**

802.11a

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5180									
V	5150	53.24	49.12	15.6	37.34	57.06	74	-16.94	PK
V	5150	39.51	49.12	15.6	37.34	43.33	54	-10.67	AV
V	5145	54.28	49.19	15.24	40.43	60.76	74	-13.24	PK
V	5145	36.63	49.19	15.24	40.43	43.11	54	-10.89	AV
H	5150	52.55	49.12	15.6	37.34	56.37	74	-17.63	PK
H	5150	37.51	49.12	15.6	37.34	41.33	54	-12.67	AV
H	5145	54.85	49.19	15.24	40.43	61.33	74	-12.67	PK
H	5145	33.63	49.19	15.24	40.43	40.11	54	-13.89	AV
operation frequency:5240									
V	5350	53.21	49.13	15.32	37.46	56.86	74	-17.14	PK
V	5350	35.41	49.13	15.32	37.46	39.06	54	-14.94	AV
V	5370	53.36	49.24	15.36	40.51	59.99	74	-14.01	PK
V	5370	32.85	49.24	15.36	40.51	39.48	54	-14.52	AV
H	5350	52.41	49.13	15.32	31.31	49.91	74	-24.09	PK
H	5350	40.83	49.13	15.32	31.31	38.33	54	-15.67	AV
H	5370	52.85	49.24	15.36	40.51	59.48	74	-14.52	PK
H	5370	32.36	49.24	15.36	40.51	38.99	54	-15.01	AV
Remark:									
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit									
2. If peak below the average limit, the average emission was no test.									
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.									



802.11n HT20

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5180									
V	5150	51.74	49.12	15.6	37.34	55.56	74	-18.44	PK
V	5150	33.23	49.12	15.6	37.34	37.05	54	-16.95	AV
V	5145	51.52	49.19	15.24	40.43	58	74	-16	PK
V	5145	33.31	49.19	15.24	40.43	39.79	54	-14.21	AV
H	5150	51.85	49.12	15.6	37.34	55.67	74	-18.33	PK
H	5150	33.36	49.12	15.6	37.34	37.18	54	-16.82	AV
H	5145	50.58	49.19	15.24	40.43	57.06	74	-16.94	PK
H	5145	32.41	49.19	15.24	40.43	38.89	54	-15.11	AV
operation frequency:5240									
V	5350	53.69	49.13	15.32	37.46	57.34	74	-16.66	PK
V	5350	34.55	49.13	15.32	37.46	38.2	54	-15.8	AV
V	5370	50.84	49.24	15.36	40.51	57.47	74	-16.53	PK
V	5370	33.56	49.24	15.36	40.51	40.19	54	-13.81	AV
H	5350	54.38	49.13	15.32	31.31	51.88	74	-22.12	PK
H	5350	36.52	49.13	15.32	31.31	34.02	54	-19.98	AV
H	5370	51.84	49.24	15.36	40.51	58.47	74	-15.53	PK
H	5370	33.21	49.24	15.36	40.51	39.84	54	-14.16	AV
Remark: 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit 2. If peak below the average limit, the average emission was no test. 3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.									



802.11ac HT20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:5180									
V	5150	52.63	49.12	15.33	37.41	56.25	74	-17.75	PK
V	5150	34.25	49.12	15.33	37.41	37.87	54	-16.13	AV
V	5145	51.84	49.19	15.28	40.46	58.39	74	-15.61	PK
V	5145	33.21	49.19	15.28	40.46	39.76	54	-14.24	AV
H	5150	52.16	49.12	15.33	37.41	55.78	74	-18.22	PK
H	5150	34.88	49.12	15.33	37.41	38.5	54	-15.5	AV
H	5145	50.54	49.19	15.28	40.46	57.09	74	-16.91	PK
H	5145	33.36	49.19	15.28	40.46	39.91	54	-14.09	AV
operation frequency:5240									
V	5350	53.21	49.13	15.32	37.46	56.86	74	-17.14	PK
V	5350	36.18	49.13	15.32	37.46	39.83	54	-14.17	AV
V	5370	50.16	49.24	15.36	40.51	56.79	74	-17.21	PK
V	5370	33.65	49.24	15.36	40.51	40.28	54	-13.72	AV
H	5350	53.85	49.13	15.32	31.31	51.35	74	-22.65	PK
H	5350	40.63	49.13	15.32	31.31	38.13	54	-15.87	AV
H	5370	51.17	49.24	15.36	40.51	57.8	74	-16.2	PK
H	5370	35.52	49.24	15.36	40.51	42.15	54	-11.85	AV
Remark: 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit 2. If peak below the average limit, the average emission was no test. 3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.									



802.11n HT40

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5190									
V	5150	52.69	49.12	15.6	37.39	56.56	74	-17.44	PK
V	5150	35.54	49.12	15.6	37.39	39.41	54	-14.59	AV
V	5145	51.85	49.19	15.24	40.45	58.35	74	-15.65	PK
V	5145	34.56	49.19	15.24	40.45	41.06	54	-12.94	AV
H	5150	52.57	49.12	15.6	37.39	56.44	74	-17.56	PK
H	5150	34.63	49.12	15.6	37.39	38.5	54	-15.5	AV
H	5145	50.28	49.19	15.24	40.45	56.78	74	-17.22	PK
H	5145	35.24	49.19	15.24	40.45	41.74	54	-12.26	AV
operation frequency:5230									
V	5350	53.26	49.13	15.34	37.46	56.93	74	-17.07	PK
V	5350	37.37	49.13	15.34	37.46	41.04	54	-12.96	AV
V	5370	50.63	49.24	15.35	40.51	57.25	74	-16.75	PK
V	5370	36.64	49.24	15.35	40.51	43.26	54	-10.74	AV
H	5350	54.85	49.13	15.34	31.31	52.37	74	-21.63	PK
H	5350	41.83	49.13	15.34	31.31	39.35	54	-14.65	AV
H	5370	52.14	49.24	15.35	40.51	58.76	74	-15.24	PK
H	5370	36.63	49.24	15.35	40.51	43.25	54	-10.75	AV
Remark: 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit 2. If peak below the average limit, the average emission was no test. 3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.									



802.11ac HT40

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5190									
V	5150	52.52	49.12	15.32	37.41	56.13	74	-17.87	PK
V	5150	37.23	49.12	15.32	37.41	40.84	54	-13.16	AV
V	5145	52.87	49.19	15.36	40.46	59.5	74	-14.5	PK
V	5145	36.34	49.19	15.36	40.46	42.97	54	-11.03	AV
H	5150	52.86	49.12	15.32	37.41	56.47	74	-17.53	PK
H	5150	37.38	49.12	15.32	37.41	40.99	54	-13.01	AV
H	5145	51.63	49.19	15.36	40.46	58.26	74	-15.74	PK
H	5145	36.34	49.19	15.36	40.46	42.97	54	-11.03	AV
operation frequency:5230									
V	5350	54.21	49.13	15.34	37.34	57.76	74	-16.24	PK
V	5350	36.66	49.13	15.34	37.34	40.21	54	-13.79	AV
V	5370	51.58	49.24	15.35	40.43	58.12	74	-15.88	PK
V	5370	36.74	49.24	15.35	40.43	43.28	54	-10.72	AV
H	5350	54.52	49.13	15.34	37.34	58.07	74	-15.93	PK
H	5350	41.63	49.13	15.34	37.34	45.18	54	-8.82	AV
H	5370	50.67	49.24	15.35	40.43	57.21	74	-16.79	PK
H	5370	35.65	49.24	15.35	40.43	42.19	54	-11.81	AV
Remark: 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit 2. If peak below the average limit, the average emission was no test. 3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.									



802.11ac HT80

Polar (H/V)	Frequency (MHz)	Meter Reading (dBUV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Detector Type
operation frequency:5210									
V	5150	52.21	49.13	15.32	37.48	55.88	74	-18.12	PK
V	5150	35.63	49.13	15.32	37.48	39.3	54	-14.7	AV
V	5145	51.84	49.24	15.36	40.42	58.38	74	-15.62	PK
V	5145	35.85	49.24	15.36	40.42	42.39	54	-11.61	AV
H	5150	52.63	49.13	15.32	37.48	56.3	74	-17.7	PK
H	5150	36.84	49.13	15.32	37.48	40.51	54	-13.49	AV
H	5145	50.37	49.24	15.36	40.42	56.91	74	-17.09	PK
H	5145	35.66	49.24	15.36	40.42	42.2	54	-11.8	AV
operation frequency:5210									
V	5350	52.96	49.13	15.32	37.48	56.63	74	-17.37	PK
V	5350	35.52	49.13	15.32	37.48	39.19	54	-14.81	AV
V	5370	51.48	49.24	15.36	40.42	58.02	74	-15.98	PK
V	5370	35.96	49.24	15.36	40.42	42.5	54	-11.5	AV
H	5350	52.85	49.13	15.32	37.48	56.52	74	-17.48	PK
H	5350	36.69	49.13	15.32	37.48	40.36	54	-13.64	AV
H	5370	50.17	49.24	15.36	40.42	56.71	74	-17.29	PK
H	5370	35.69	49.24	15.36	40.42	42.23	54	-11.77	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11a

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:5745									
V	5725	51.22	48.32	15.24	37.37	55.51	68.2	-12.69	PK
V	5725	40.84	48.32	15.24	37.37	45.13	54	-8.87	AV
V	5720	51.99	48.36	15.27	37.39	56.29	74	-17.71	PK
V	5720	41.58	48.36	15.27	37.39	45.88	54	-8.12	AV
H	5725	51.53	48.32	15.24	37.37	55.82	68.2	-12.38	PK
H	5725	40.67	48.32	15.24	37.37	44.96	54	-9.04	AV
H	5720	50.16	48.36	15.27	37.39	54.46	74	-19.54	PK
H	5720	40.67	48.36	15.27	37.39	44.97	54	-9.03	AV
operation frequency:5825									
V	5850	51.16	46.38	12.43	35.65	52.86	68.2	-15.34	PK
V	5850	40.88	46.38	12.43	35.65	42.58	54	-11.42	AV
V	5870	51.14	46.56	12.47	35.76	52.81	68.2	-15.39	PK
V	5870	40.63	46.56	12.47	35.76	42.3	54	-11.7	AV
H	5850	50.58	46.38	12.43	35.65	52.28	68.2	-15.92	PK
H	5850	40.63	46.38	12.43	35.65	42.33	54	-11.67	AV
H	5870	51.14	46.56	12.47	35.76	52.81	68.2	-15.39	PK
H	5870	40.36	46.56	12.47	35.76	42.03	54	-11.97	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11n HT20

Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
operation frequency:5745									
V	5725	55.25	46.55	12.65	35.87	57.22	68.2	-10.98	PK
V	5725	42.96	46.55	12.65	35.87	44.93	54	-9.07	AV
V	5720	55.85	46.58	12.67	35.93	57.87	68.2	-10.33	PK
V	5720	42.35	46.58	12.67	35.93	44.37	54	-9.63	AV
H	5725	55.63	46.55	12.65	35.87	57.6	68.2	-10.6	PK
H	5725	42.41	46.55	12.65	35.87	44.38	54	-9.62	AV
H	5720	55.18	46.58	12.67	35.93	57.2	68.2	-11	PK
H	5720	42.36	46.58	12.67	35.93	44.38	54	-9.62	AV
operation frequency:5825									
V	5850	50.14	47.36	13.18	36.26	52.22	68.2	-15.98	PK
V	5850	40.38	47.36	13.18	36.26	42.46	54	-11.54	AV
V	5870	51.43	47.38	13.2	36.29	53.54	68.2	-14.66	PK
V	5870	41.14	47.38	13.2	36.29	43.25	54	-10.75	AV
H	5850	51.19	47.36	13.18	36.26	53.27	68.2	-14.93	PK
H	5850	41.64	47.36	13.18	36.26	43.72	54	-10.28	AV
H	5870	51.36	47.38	13.2	36.29	53.47	68.2	-14.73	PK
H	5870	40.57	47.38	13.2	36.29	42.68	54	-11.32	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11ac HT20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:5180									
V	5725	50.25	48.32	15.24	37.37	54.54	68.2	-13.66	PK
V	5725	41.52	48.32	15.24	37.37	45.81	54	-8.19	AV
V	5720	51.14	48.36	15.27	37.39	55.44	74	-18.56	PK
V	5720	41.19	48.36	15.27	37.39	45.49	54	-8.51	AV
H	5725	50.52	48.32	15.24	37.37	54.81	68.2	-13.39	PK
H	5725	40.21	48.32	15.24	37.37	44.5	54	-9.5	AV
H	5720	51.63	48.36	15.27	37.39	55.93	74	-18.07	PK
H	5720	40.85	48.36	15.27	37.39	45.15	54	-8.85	AV
operation frequency:5240									
V	5850	51.21	46.38	12.43	35.65	52.91	68.2	-15.29	PK
V	5850	40.73	46.38	12.43	35.65	42.43	54	-11.57	AV
V	5870	51.85	46.56	12.47	35.76	53.52	68.2	-14.68	PK
V	5870	40.94	46.56	12.47	35.76	42.61	54	-11.39	AV
H	5850	51.21	46.38	12.43	35.65	52.91	68.2	-15.29	PK
H	5850	40.93	46.38	12.43	35.65	42.63	54	-11.37	AV
H	5870	51.85	46.56	12.47	35.76	53.52	68.2	-14.68	PK
H	5870	40.83	46.56	12.47	35.76	42.5	54	-11.5	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11n HT40

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:5755									
V	5725	56.58	46.55	12.65	35.87	58.55	68.2	-9.65	PK
V	5725	43.69	46.55	12.65	35.87	45.66	54	-8.34	AV
V	5720	56.74	46.58	12.67	35.93	58.76	68.2	-9.44	PK
V	5720	43.21	46.58	12.67	35.93	45.23	54	-8.77	AV
H	5725	55.63	46.55	12.65	35.87	57.6	68.2	-10.6	PK
H	5725	42.34	46.55	12.65	35.87	44.31	54	-9.69	AV
H	5720	55.36	46.58	12.67	35.93	57.38	68.2	-10.82	PK
H	5720	42.67	46.58	12.67	35.93	44.69	54	-9.31	AV
operation frequency:5795									
V	5850	51.21	47.36	13.18	36.26	53.29	68.2	-14.91	PK
V	5850	41.63	47.36	13.18	36.26	43.71	54	-10.29	AV
V	5870	51.21	47.38	13.2	36.29	53.32	68.2	-14.88	PK
V	5870	41.85	47.38	13.2	36.29	43.96	54	-10.04	AV
H	5850	51.21	47.36	13.18	36.26	53.29	68.2	-14.91	PK
H	5850	41.52	47.36	13.18	36.26	43.6	54	-10.4	AV
H	5870	51.27	47.38	13.2	36.29	53.38	68.2	-14.82	PK
H	5870	40.15	47.38	13.2	36.29	42.26	54	-11.74	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11ac HT40

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:5190									
V	5725	51.14	48.32	15.24	37.37	55.43	68.2	-12.77	PK
V	5725	41.33	48.32	15.24	37.37	45.62	54	-8.38	AV
V	5720	51.38	48.36	15.27	37.39	55.68	74	-18.32	PK
V	5720	41.65	48.36	15.27	37.39	45.95	54	-8.05	AV
H	5725	51.53	48.32	15.24	37.37	55.82	68.2	-12.38	PK
H	5725	40.14	48.32	15.24	37.37	44.43	54	-9.57	AV
H	5720	51.18	48.36	15.27	37.39	55.48	74	-18.52	PK
H	5720	40.36	48.36	15.27	37.39	44.66	54	-9.34	AV
operation frequency:5230									
V	5850	51.21	46.38	12.43	35.65	52.91	68.2	-15.29	PK
V	5850	40.18	46.38	12.43	35.65	41.88	54	-12.12	AV
V	5870	51.58	46.56	12.47	35.76	53.25	68.2	-14.95	PK
V	5870	40.63	46.56	12.47	35.76	42.3	54	-11.7	AV
H	5850	51.41	46.38	12.43	35.65	53.11	68.2	-15.09	PK
H	5850	40.83	46.38	12.43	35.65	42.53	54	-11.47	AV
H	5870	51.18	46.56	12.47	35.76	52.85	68.2	-15.35	PK
H	5870	40.31	46.56	12.47	35.76	41.98	54	-12.02	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



802.11ac HT80

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:5775									
V	5725	55.21	46.55	12.65	35.87	57.18	68.2	-11.02	PK
V	5725	42.36	46.55	12.65	35.87	44.33	54	-9.67	AV
V	5720	54.84	46.58	12.67	35.93	56.86	68.2	-11.34	PK
V	5720	42.48	46.58	12.67	35.93	44.5	54	-9.5	AV
H	5725	55.62	46.55	12.65	35.87	57.59	68.2	-10.61	PK
H	5725	43.34	46.55	12.65	35.87	45.31	54	-8.69	AV
H	5720	55.11	46.58	12.67	35.93	57.13	68.2	-11.07	PK
H	5720	42.26	46.58	12.67	35.93	44.28	54	-9.72	AV
V	5850	51.21	47.36	13.18	36.26	53.29	68.2	-14.91	PK
V	5850	41.88	47.36	13.18	36.26	43.96	54	-10.04	AV
V	5870	51.63	47.38	13.2	36.29	53.74	68.2	-14.46	PK
V	5870	40.52	47.38	13.2	36.29	42.63	54	-11.37	AV
H	5850	51.63	47.36	13.18	36.26	53.71	68.2	-14.49	PK
H	5850	40.41	47.36	13.18	36.26	42.49	54	-11.51	AV
H	5870	51.33	47.38	13.2	36.29	53.44	68.2	-14.76	PK
H	5870	41.21	47.38	13.2	36.29	43.32	54	-10.68	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Note:1. The antenna gain is compensated in the test data.



4.. EIRP&AVERAGE OUTPUT POWER

4.1. APPLIED PROCEDURES / LIMIT

For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi.

For other devices, the maximum e.i.r.p. shall not exceed 200 mW or $10 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

4.1.1. TEST PROCEDURE

- a. The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting : RBW = 1MHz
Span $\geq 99\%$ OBW(30MHz/60MHz/120MHz etc.)
VBW $\geq 3 \times$ RBW
Sweep = auto
Detector function = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
Trace = max hold
Method SA-2 uses trace averaging across ON and OFF times of the EUT transmissions, followed by duty cycle correction. The procedure for this method is as follows:
 - a)Measure the duty cycle D of the transmitter output signal as described in 12.2.
 - b)Set span to encompass the entire 26 dB EBW or 99% OBW of the signal.
 - c)Set RBW=1 MHz.
 - d)Set VBW ≥ 3 MHz.
 - e)Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing $\leq \text{RBW} / 2$, so that narrowband signals are not lost between frequency bins.)
 - f) Sweep time = auto.
 - g) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
 - h) Do not use sweep triggering. Allow the sweep to "free run."
 - i) Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the ON and OFF periods of the transmitter.
 - j) Compute power by integrating the spectrum across the 26 dB EBW or 99% OBW of the signal using the instrument's band power measurement function with band limits set equal to the EBW or OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels
(in power units) at 1 MHz intervals extending across the 26 dB EBW or 99% OBW of the spectrum.
 - k) Add $[10 \log (1 / D)]$, where D is the duty cycle, to the measured power to compute the average power during the actual transmission times (because the measurement represents an average over both the ON and OFF times of the transmission). For example, add $[10 \log (1 / 0.25)] = 6$ dB if the duty cycle is 25%.



4.1.2. DEVIATION FROM STANDARD

No deviation.

4.1.3. TEST SETUP



4.1.4. EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

**4.1.5. TEST RESULTS**

Temperature:	25 °C	Relative Humidity:	60%
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz

Band	Mode	Test Channel	Average Output Power (dBm)	Duty factor (dB)	Total Output Power(dBm)	LIMIT (dBm)
Band 1	802.11a	Low	8.231	1.12	9.351	23.98
		Middle	8.549	1.12	9.669	23.98
		High	9.984	1.12	11.104	23.98
	802.11ac HT20	Low	8.723	0.13	8.853	23.98
		Middle	8.745	0.13	8.875	23.98
		High	10.365	0.13	10.495	23.98
	802.11ac HT40	Low	9.201	0.26	9.461	23.98
		High	9.447	0.26	9.707	23.98
	802.11ac HT80	/	9.598	0.5	10.098	23.98
	802.11n HT20	Low	9.199	0.13	9.329	23.98
		Middle	9.241	0.16	9.401	23.98
		High	10.727	0.13	10.857	23.98
	802.11n HT40	Low	9.532	0.26	9.792	23.98
		High	9.212	0.26	9.472	23.98

Band	Mode	Test Channel	Average Output Power (dBm)	Duty factor (dB)	Total Output Power(dBm)	LIMIT (dBm)
Band 4	802.11a	Low	7.295	1.12	8.415	30
		Middle	6.999	1.12	8.119	30
		High	8.35	0.87	9.22	30
	802.11ac HT20	Low	8.133	0.16	8.293	30
		Middle	7.972	0.16	8.132	30
		High	9.262	0.16	9.422	30
	802.11ac HT40	Low	8.6	0.26	8.86	30
		High	8.755	0.32	9.075	30
	802.11ac HT80	/	8.654	0.63	9.284	30
	802.11n HT20	Low	8.056	0.13	8.186	30
		Middle	7.793	0.13	7.923	30
		High	9.31	0.13	9.44	30
	802.11n HT40	Low	8.543	0.26	8.803	30
		High	8.9	0.26	9.16	30

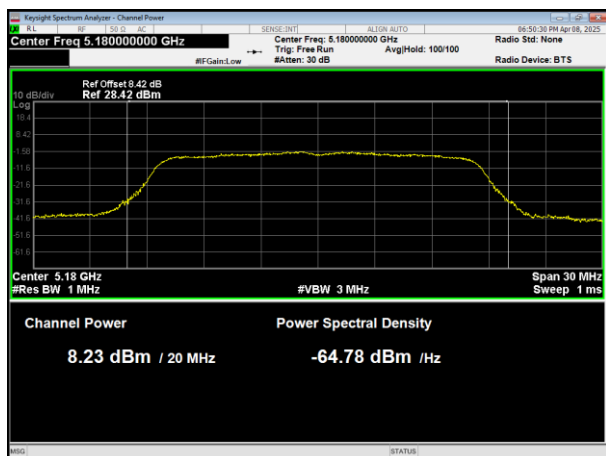


Band	Mode	Test Channel	Total Output Power(dB)	Antenna gain (dBi)	EIRP Output Power(dB)
Band 1	802.11a	Low	9.351	0.95	10.301
		Middle	9.669	0.95	10.619
		High	11.104	0.95	12.054
	802.11ac HT20	Low	8.853	0.95	9.803
		Middle	8.875	0.95	9.825
		High	10.495	0.95	11.445
	802.11ac HT40	Low	9.461	0.95	10.411
		High	9.707	0.95	10.657
	802.11ac HT80	/	10.098	0.95	11.048
	802.11n HT20	Low	9.329	0.95	10.279
		Middle	9.401	0.95	10.351
		High	10.857	0.95	11.807
	802.11n HT40	Low	9.792	0.95	10.742
		High	9.472	0.95	10.422

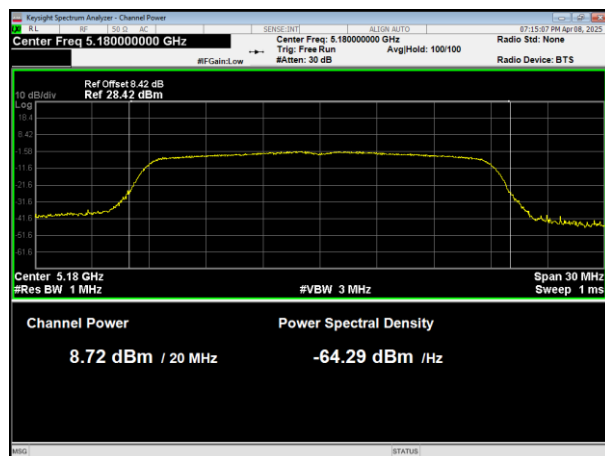
Band	Mode	Test Channel	Total Output Power(dB)	Antenna gain (dBi)	EIRP Output Power(dB)
Band 4	802.11a	Low	8.415	1.47	9.885
		Middle	8.119	1.47	9.589
		High	9.22	1.47	10.69
	802.11ac HT20	Low	8.293	1.47	9.763
		Middle	8.132	1.47	9.602
		High	9.422	1.47	10.892
	802.11ac HT40	Low	8.86	1.47	10.33
		High	9.075	1.47	10.545
	802.11ac HT80	/	9.284	1.47	10.754
	802.11n HT20	Low	8.186	1.47	9.656
		Middle	7.923	1.47	9.393
		High	9.44	1.47	10.91
	802.11n HT40	Low	8.803	1.47	10.273
		High	9.16	1.47	10.63



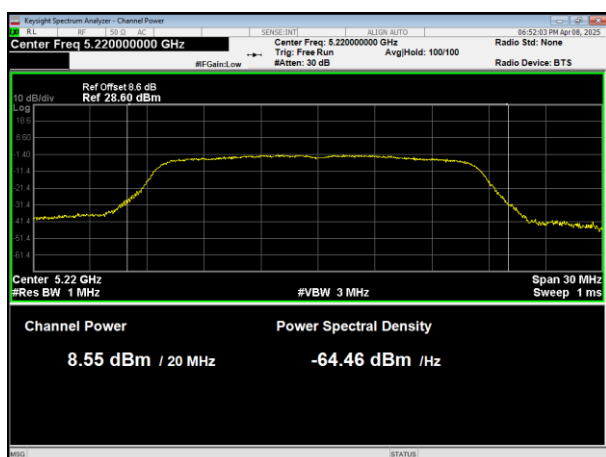
802.11a



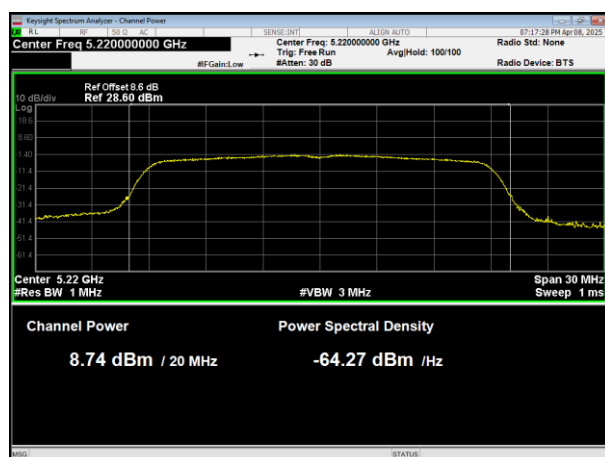
802.11ac HT20



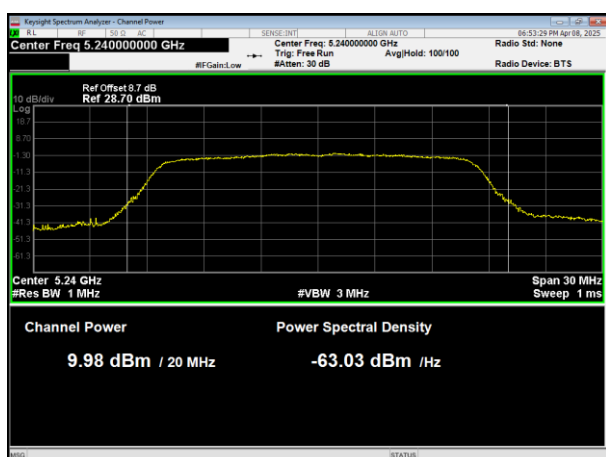
5180MHz



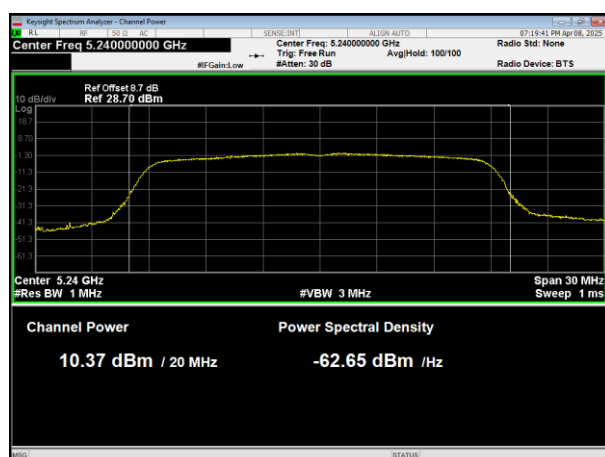
5180MHz



5200MHz



5200MHz

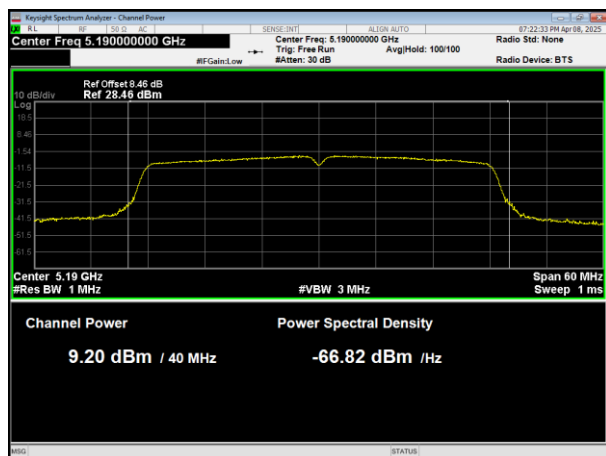


5240MHz

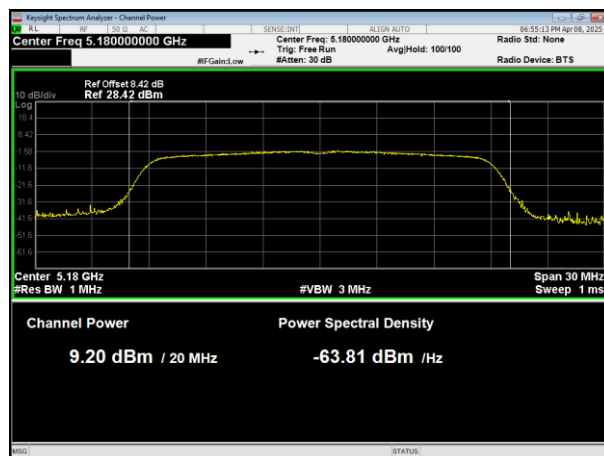
5240MHz



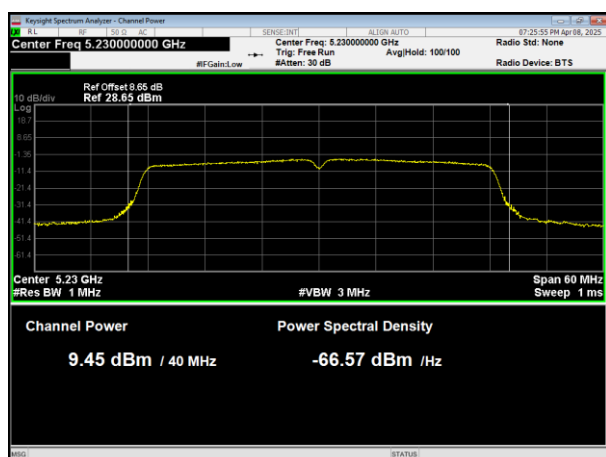
802.11ac HT40



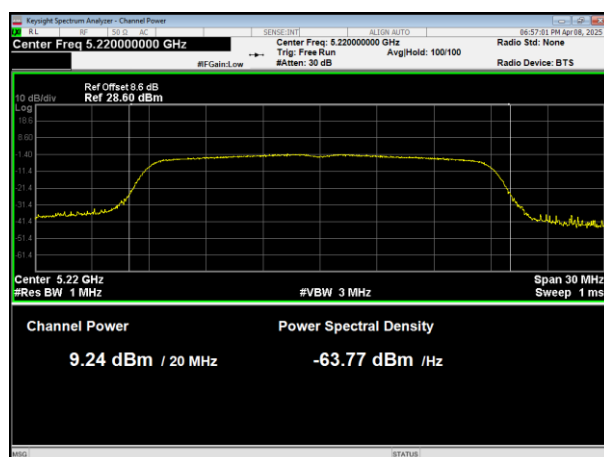
802.11n HT20



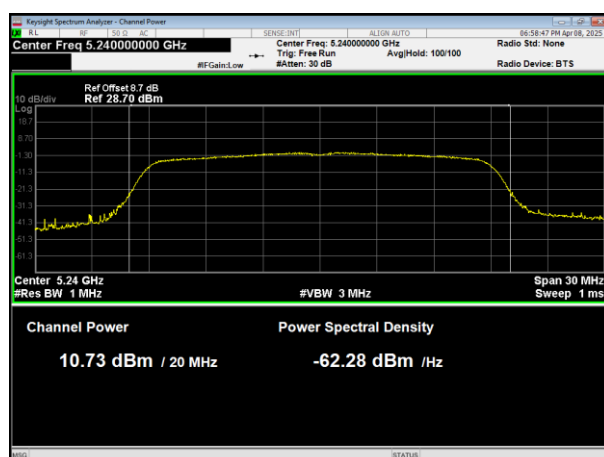
5190MHz



5180MHz



5230MHz

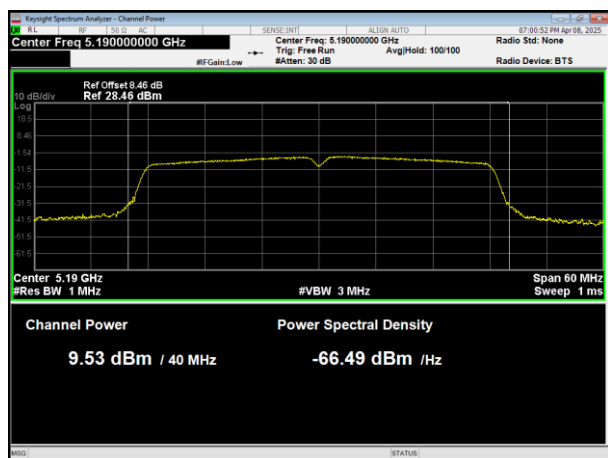


5200MHz

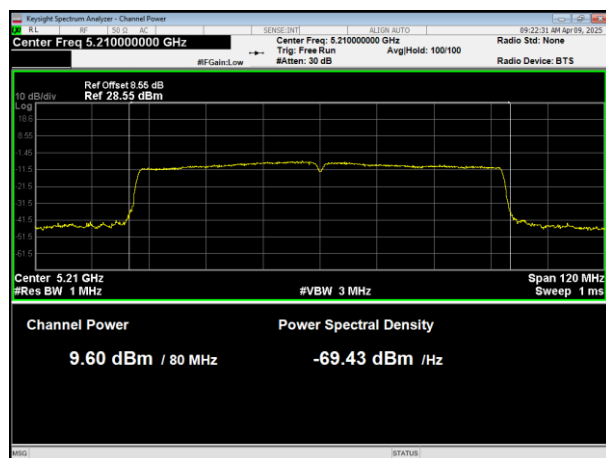
5240MHz



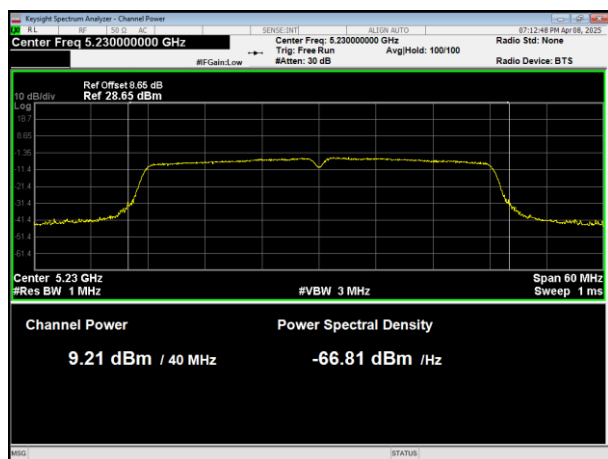
802.11n HT40



802.11ac HT80



5190MHz

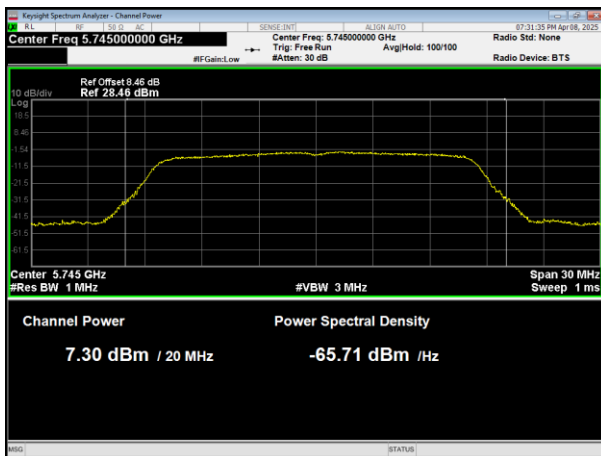


5210MHz

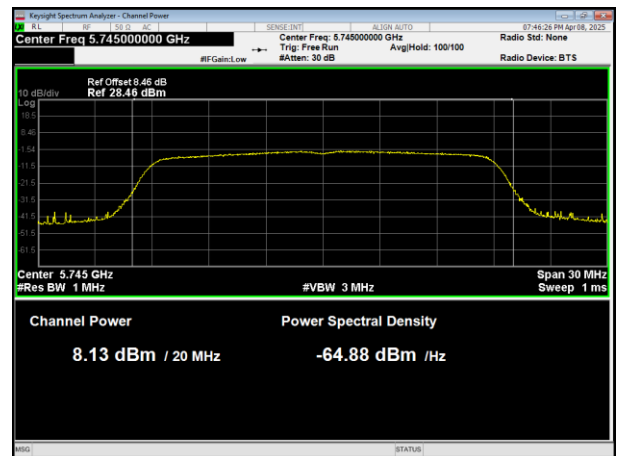
5230MHz



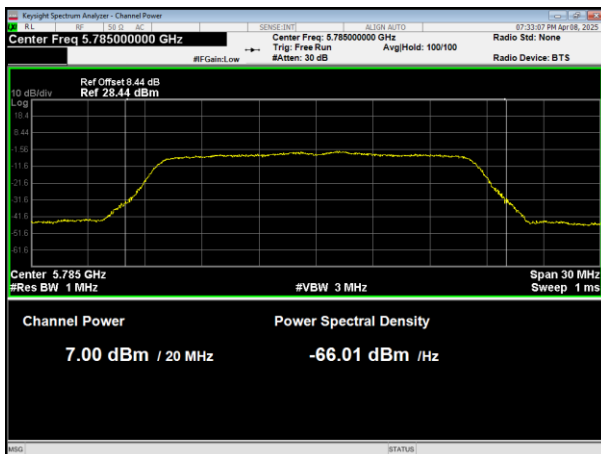
802.11a



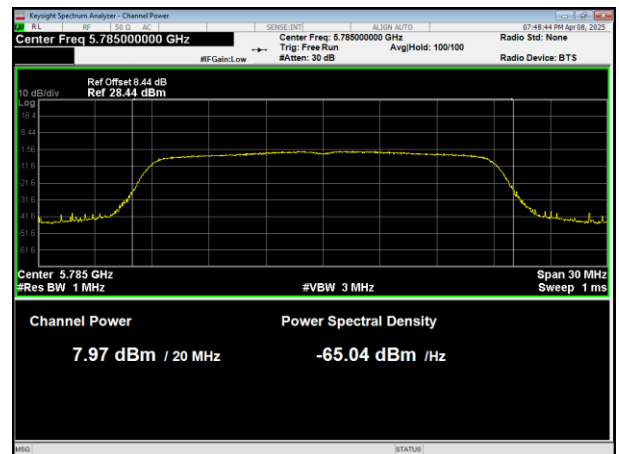
802.11ac HT20



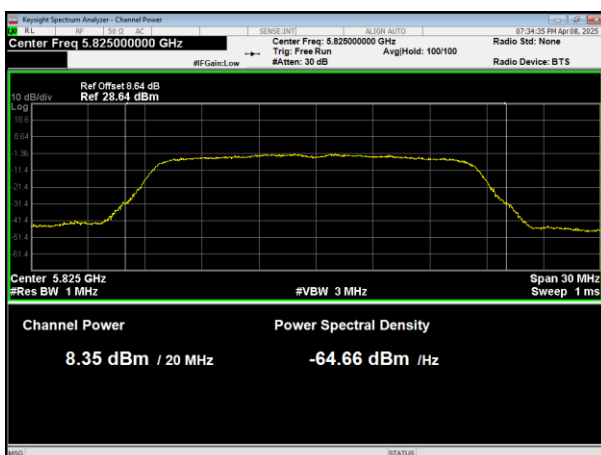
5745MHz



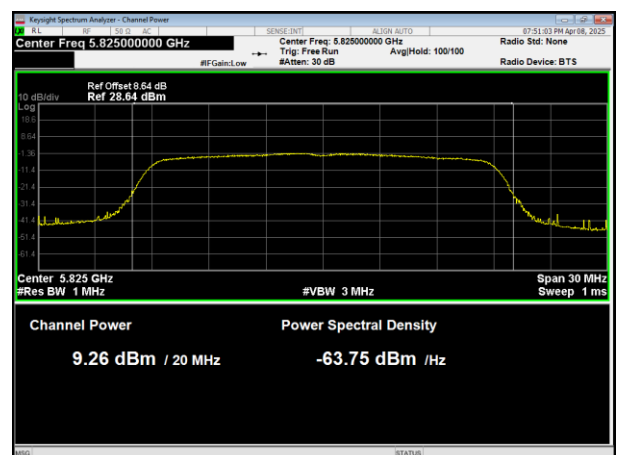
5745MHz



5785MHz



5785MHz

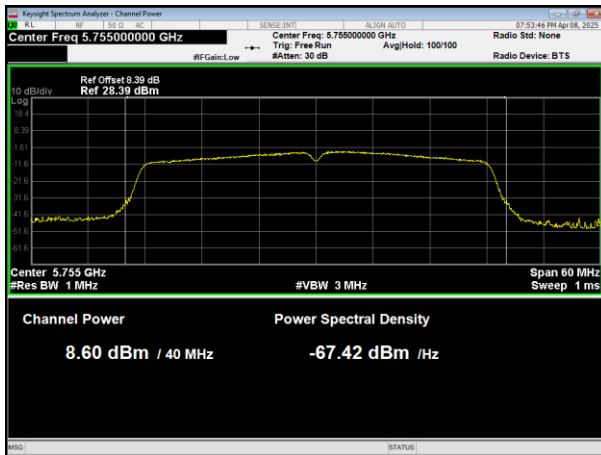


5825MHz

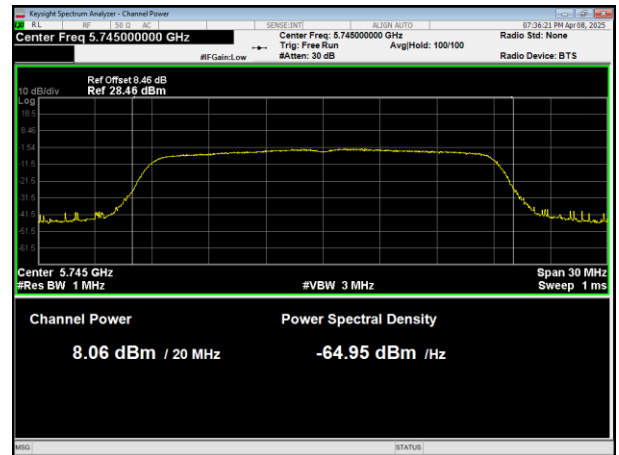
5825MHz



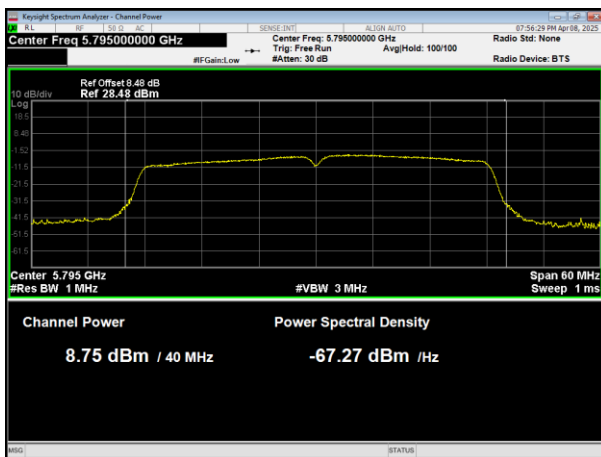
802.11ac HT40



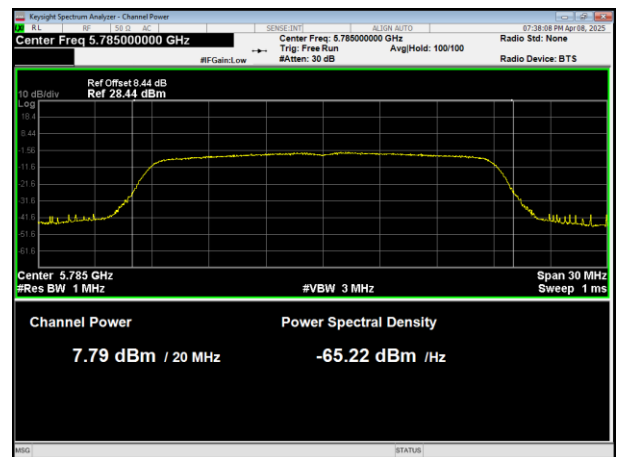
802.11n HT20



5755MHz



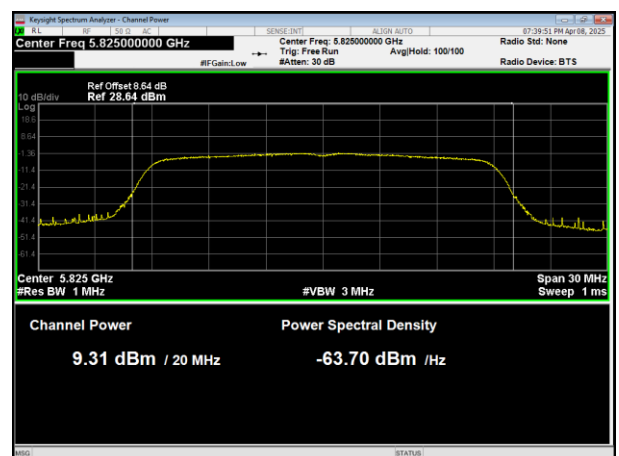
5745MHz



5795MHz



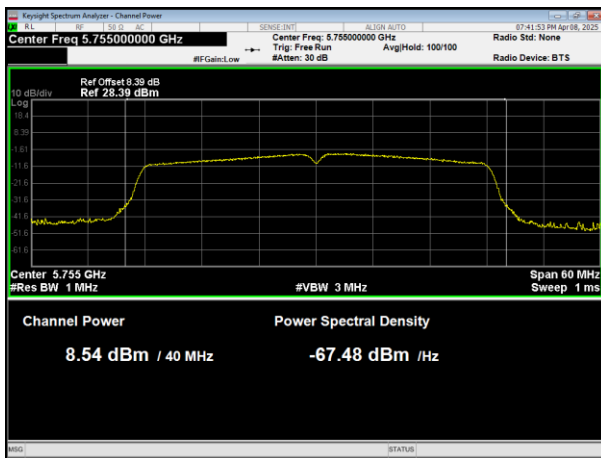
5785MHz



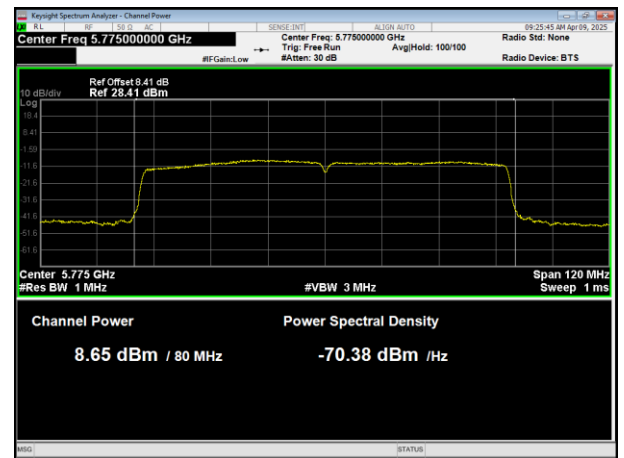
5825MHz



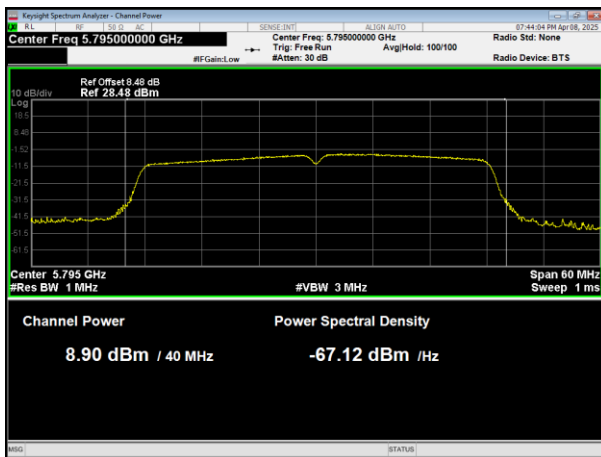
802.11n HT40



802.11ac HT80



5755MHz



5775MHz

5795MHz



5.. POWER SPECTRAL DENSITY TEST

5.1. APPLIED PROCEDURES / LIMIT

In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.
For other devices, the maximum e.i.r.p. shall not exceed 200 mW or $10 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.
In addition, the maximum power spectral density shall not exceed 30 dBm in any 500 kHz band.

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	= the frequency band of operation
RB	RBW $\geq$ 1MHz for band 1 RBW $\geq$ 510KHz for band 4
VB	VBW $\geq$ 3RBW
Detector	RMS (i.e., power averaging).
Trace	Max Hold
Sweep Time	Auto

5.1.1. TEST PROCEDURE

1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows FCC KDB 789033 D02.
3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to Spectrum.
4. For U-NII1, U-NII-2A, U-NII-2C Band:
Set RBW=1MHz, VBW=3MHz, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)
For U-NII-3 Band:
Set RBW=510 kHz, VBW=3*RBW, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)
5. Use the cursor on spectrum to peak search the highest level of trace
6. Record the max. reading and add $10 \log(1/\text{duty cycle})$.
we test all antennas, the antenna 1 was worst mode and the data recording in the report.
7. Duty factor Reference is made to the test results in Section 7.1.5.



Method SA-2 uses trace averaging across ON and OFF times of the EUT transmissions, followed by duty cycle correction. The procedure for this method is as follows:

- a) Measure the duty cycle D of the transmitter output signal as described in 12.2.
- b) Set span to encompass the entire 26 dB EBW or 99% OBW of the signal.
- c) Set RBW=1 MHz.
- d) Set VBW $\geq$ 3 MHz.
- e) Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing $\leq \text{RBW} / 2$, so that narrowband signals are not lost between frequency bins.)
- f) Sweep time = auto.
- g) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
- h) Do not use sweep triggering. Allow the sweep to "free run."
- i) Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the ON and OFF periods of the transmitter.
- j. Use the peak search function on the instrument to find the peak of the spectrum.
- k. Make the following adjustments to the peak value of the spectrum, if applicable:
 - 1) If method SA-2 or SA-2A was used, then add $[10 \log (1 / D)]$, where D is the duty cycle, to the peak of the spectrum.
 - 2) If method SA-3A was used and the linear mode was used in step h) of 12.3.2.7, add 1 dB to the final result to compensate for the difference between linear averaging and power averaging.
- l. The result is the PPSD.

5.1.2. DEVIATION FROM STANDARD

No deviation.

5.1.3. TEST SETUP



5.1.4. EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



5.1.5. TEST RESULTS

	Mode	Test Channel	Reading Level (dBm/MHz)	Duty factor (dB)	PSD (dBm/MHz)	Limit (dBm)	Result
Band1	802.11a	Low	-1.062	1.12	0.058	11.00	PASS
		Middle	-0.883	1.12	0.237	11.00	PASS
		High	0.9	1.12	2.02	11.00	PASS
	802.11ac20	Low	-1.108	0.13	-0.978	11.00	PASS
		Middle	-0.667	0.13	-0.537	11.00	PASS
		High	0.817	0.13	0.947	11.00	PASS
	802.11ac40	Low	-3.548	0.26	-3.288	11.00	PASS
		High	-3.441	0.26	-3.181	11.00	PASS
	802.11ac80	/	-6.034	0.5	-5.534	11.00	PASS
	802.11n20	Low	-0.668	0.13	-0.538	11.00	PASS
		Middle	-0.637	0.16	-0.477	11.00	PASS
		High	1.109	0.13	1.239	11.00	PASS
	802.11n40	Low	-3.791	0.26	-3.531	11.00	PASS
		High	-3.92	0.26	-3.66	11.00	PASS

	Mode	Test Channel	Reading Level (dBm/510kHz)	Duty factor (dB)	RB factor (dB)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Result
Band4	802.11a	Low	-5.065	1.12	-0.09	-3.855	30.00	PASS
		Middle	-5.501	1.12	-0.09	-4.291	30.00	PASS
		High	-4.036	0.87	-0.09	-3.076	30.00	PASS
	802.11ac20	Low	-4.667	0.16	-0.09	-4.417	30.00	PASS
		Middle	-4.665	0.16	-0.09	-4.415	30.00	PASS
		High	-3.466	0.16	-0.09	-3.216	30.00	PASS
	802.11ac40	Low	-6.297	0.26	-0.09	-5.947	30.00	PASS
		High	-6.798	0.32	-0.09	-6.388	30.00	PASS
	802.11ac80	/	-10.199	0.63	-0.09	-9.479	30.00	PASS
	802.11n20	Low	-4.657	0.13	-0.09	-4.437	30.00	PASS
		Middle	-5.057	0.13	-0.09	-4.837	30.00	PASS
		High	-3.453	0.13	-0.09	-3.233	30.00	PASS
	802.11n40	Low	-6.523	0.26	-0.09	-6.173	30.00	PASS
		High	-6.612	0.26	-0.09	-6.262	30.00	PASS

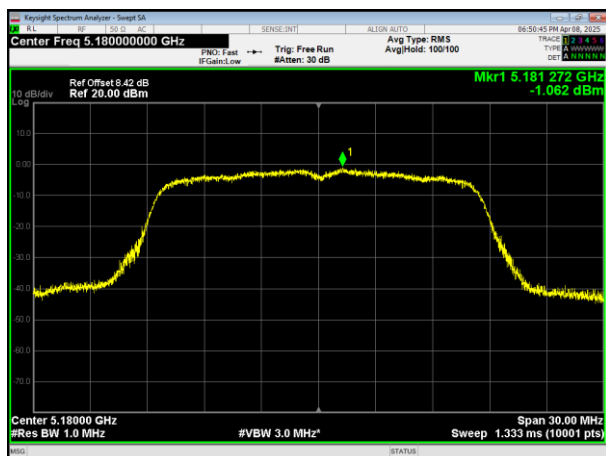
Note: RB factor=10log(510/500k)



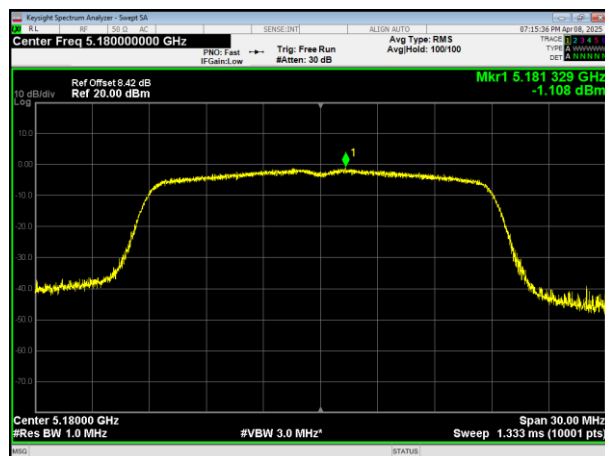
	Mode	Test Channel	PSD (dBm/MHz)	Antenna gain (dBi)	EIRP PSD (dBm/MHz)	Limit (dBm)	Result
Band1	802.11a	Low	0.058	0.95	1.008	10	PASS
		Middle	0.237	0.95	1.187	10	PASS
		High	2.02	0.95	2.97	10	PASS
	802.11ac20	Low	-0.978	0.95	-0.028	10	PASS
		Middle	-0.537	0.95	0.413	10	PASS
		High	0.947	0.95	1.897	10	PASS
	802.11ac40	Low	-3.288	0.95	-2.338	10	PASS
		High	-3.181	0.95	-2.231	10	PASS
	802.11ac80	/	-5.534	0.95	-4.584	10	PASS
	802.11n20	Low	-0.538	0.95	0.412	10	PASS
		Middle	-0.477	0.95	0.473	10	PASS
		High	1.239	0.95	2.189	10	PASS
	802.11n40	Low	-3.531	0.95	-2.581	10	PASS
		High	-3.66	0.95	-2.71	10	PASS



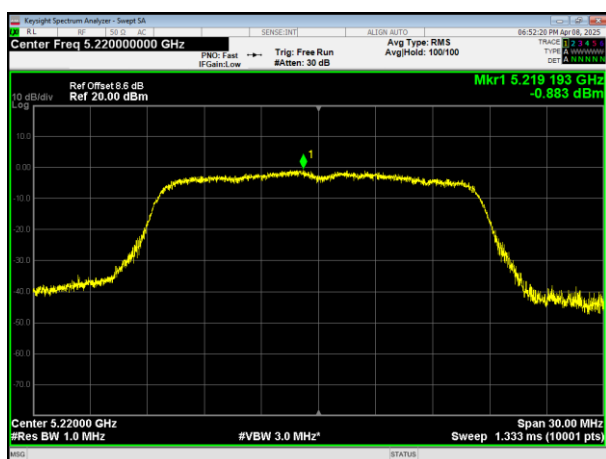
802.11a



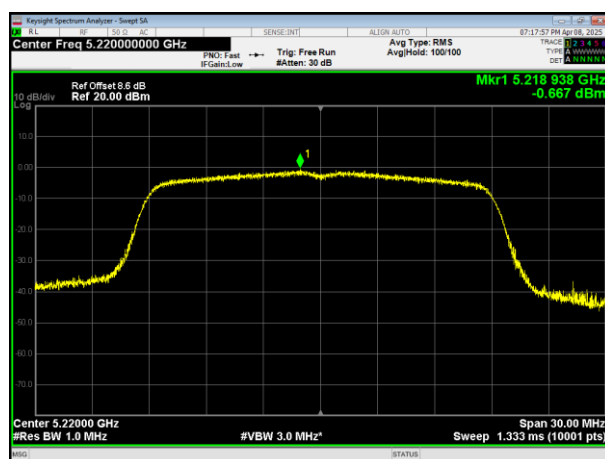
802.11ac HT20



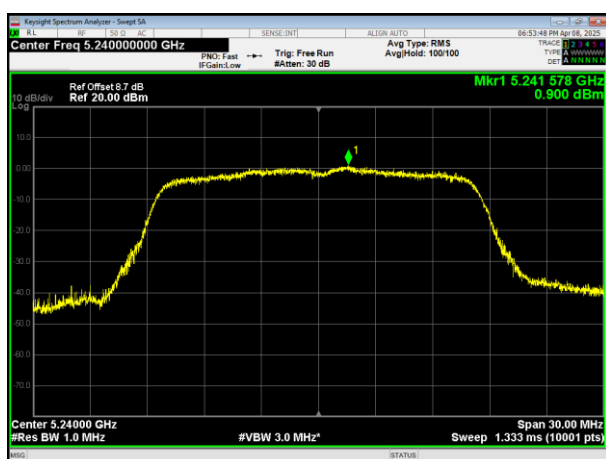
5180MHz



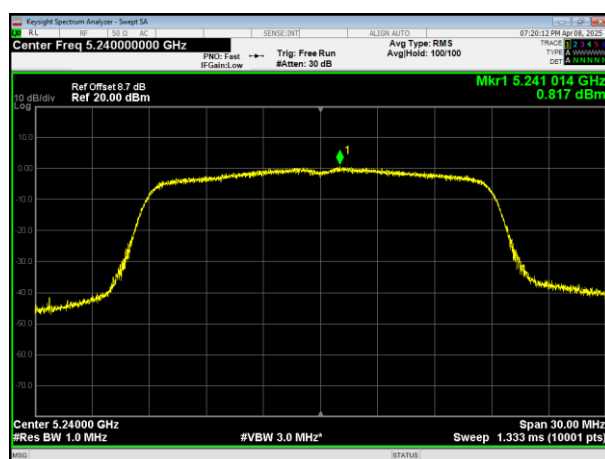
5180MHz



5200MHz



5200MHz

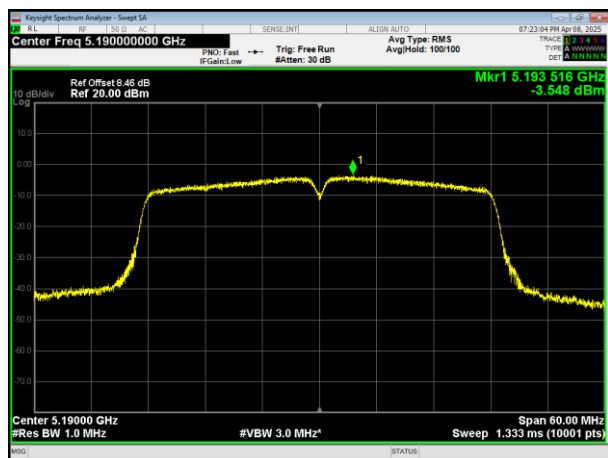


5240MHz

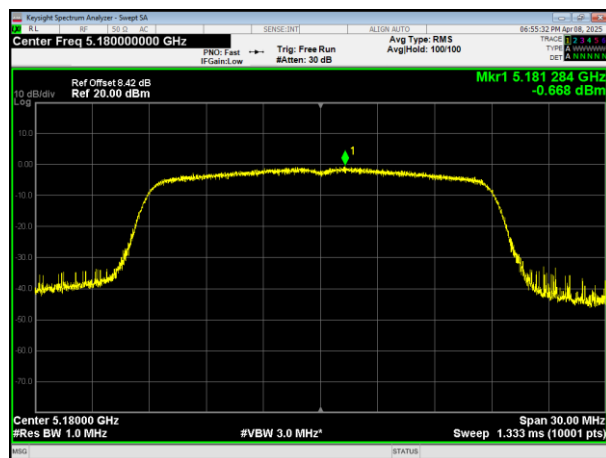
5240MHz



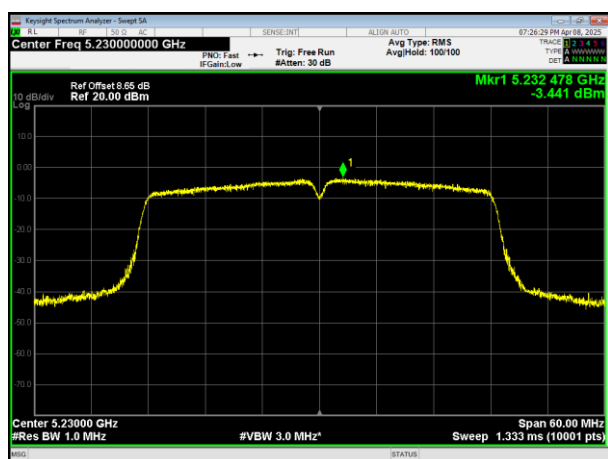
802.11ac HT40



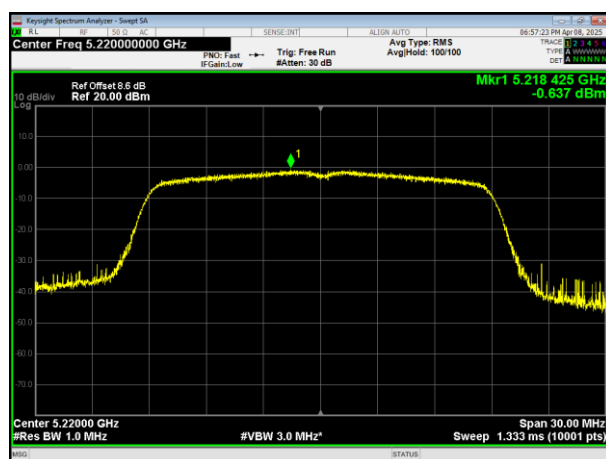
802.11n HT20



5190MHz



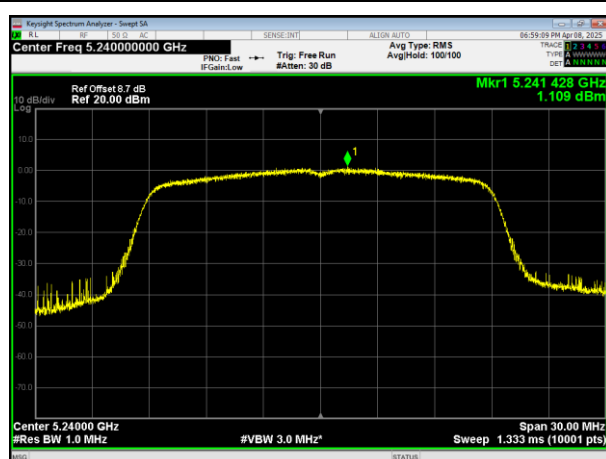
5180MHz



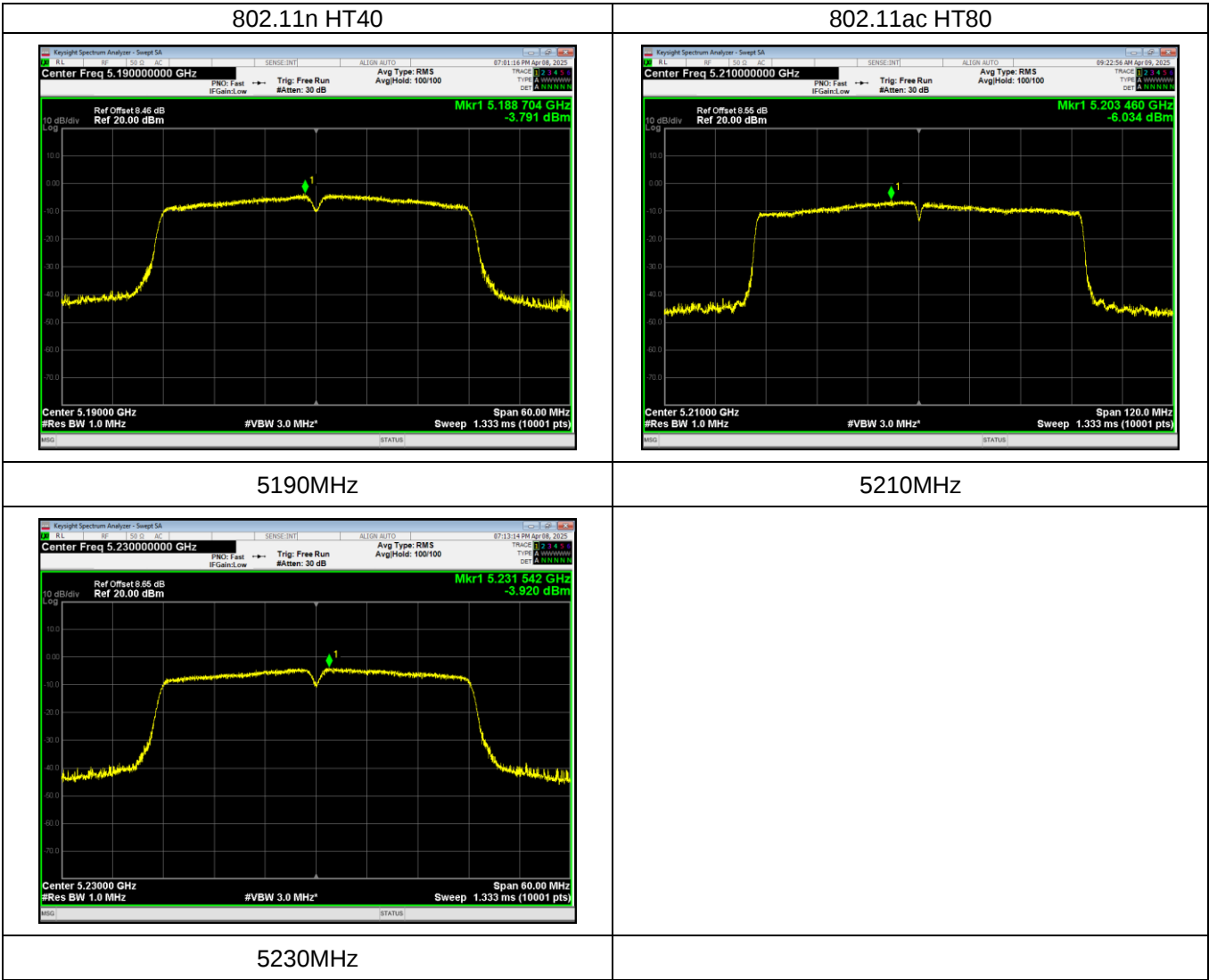
5230MHz



5200MHz

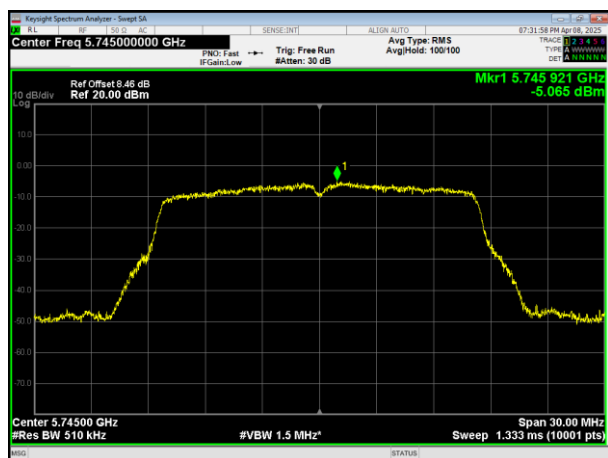


5240MHz

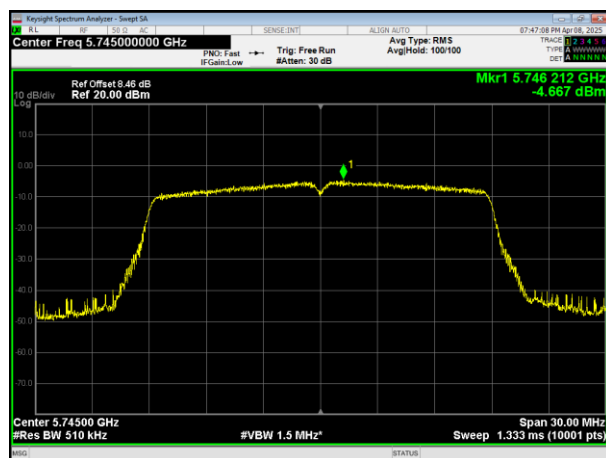




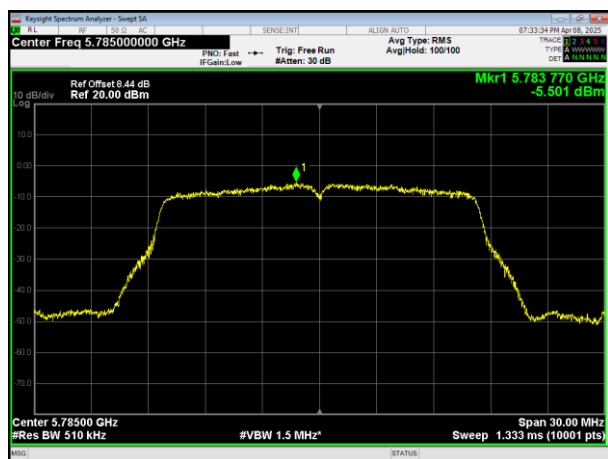
802.11a



802.11ac HT20



5745MHz



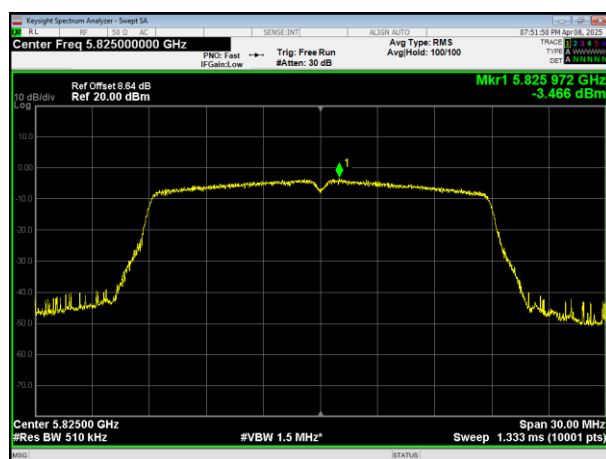
5745MHz



5785MHz



5785MHz

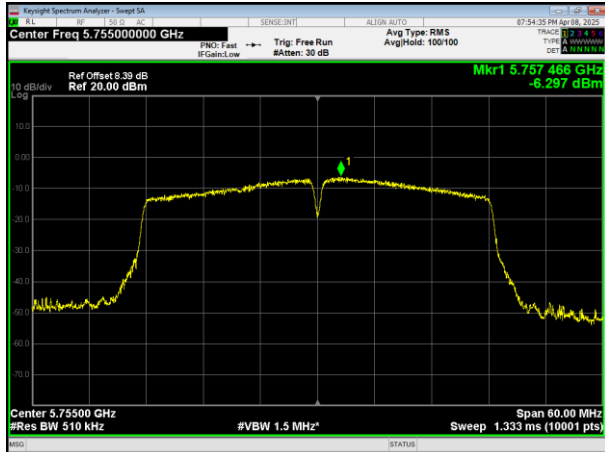


5825MHz

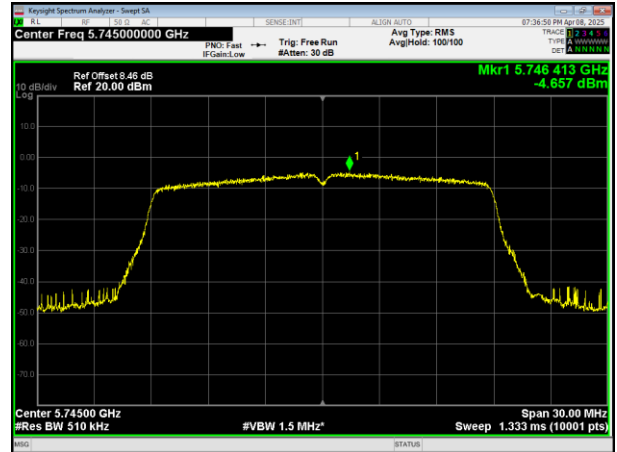
5825MHz



802.11ac HT40



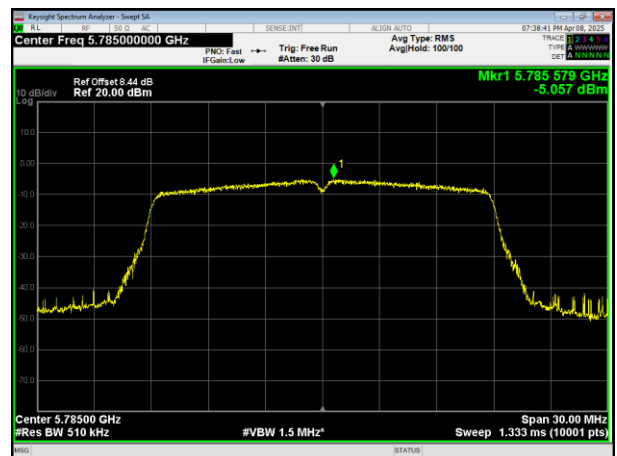
802.11n HT20



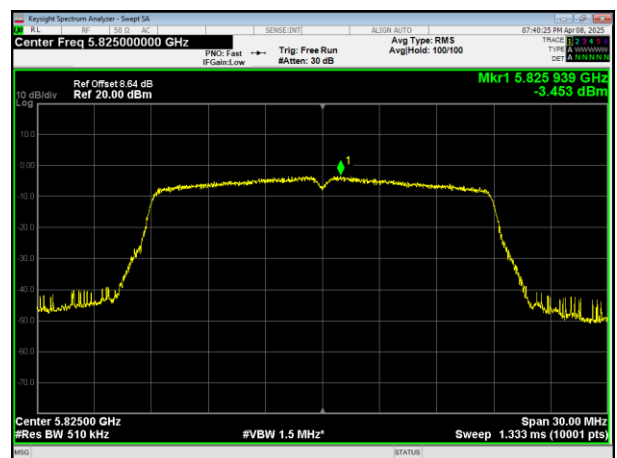
5755MHz



5745MHz



5795MHz

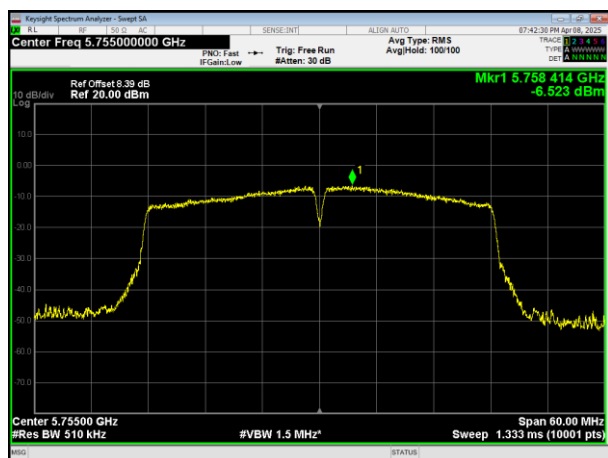


5785MHz

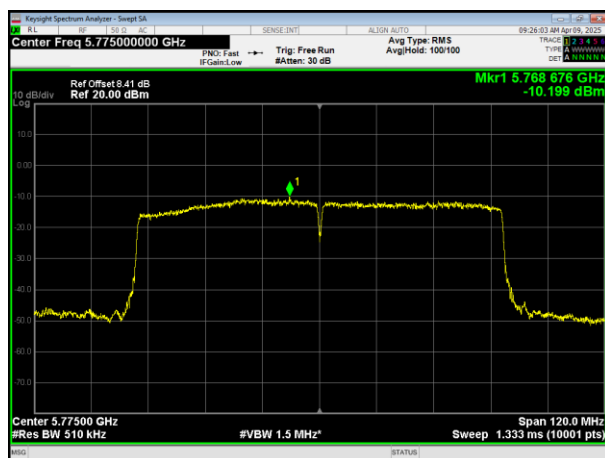
5825MHz



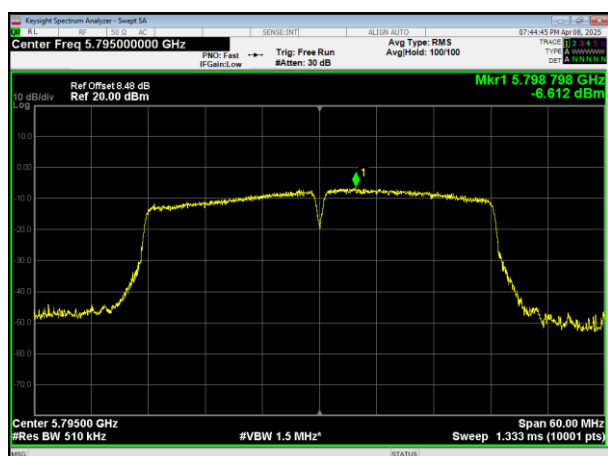
802.11n HT40



802.11ac HT80



5755MHz



5775MHz

5795MHz



6.. 6DB&26DB&99% BANDWIDTH TEST

6.1. APPLIED PROCEDURES / LIMIT

The 26 dB bandwidth is used to determine the conducted power limits.

There is no limit bandwidth for U-NII-1, U-NII-2-A and U-NII-2-C.

The minimum of 6dB Bandwidth measurement is 0.5 MHz for U-NII-3

6.1.1. TEST PROCEDURE

6dB Bandwidth	
Spectrum Parameters	Setting
RBW	100KHz
VBW	300KHz
Span	30MHz(20MHz Bandwidth mode) 60MHz(40MHz Bandwidth mode) 120MHz(80MHz Bandwidth mode)
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

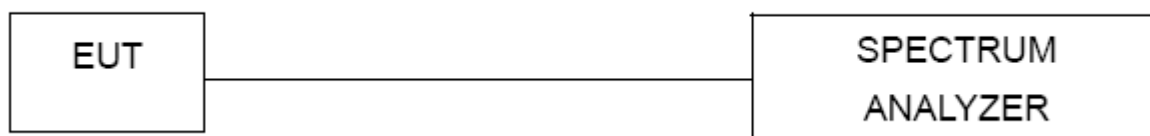
26dB Bandwidth	
Spectrum Parameters	Setting
RBW	approximately 1% of the emission bandwidth
VBW	>RBW
Span	30MHz(20MHz Bandwidth mode) 60MHz(40MHz Bandwidth mode) 120MHz(80MHz Bandwidth mode)
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

99% Occupied Bandwidth	
Spectrum Parameters	Setting
RBW	1% to 5% of the OBW
VBW	Approximately three times the RBW
Span	between 1.5 times and 5.0 times the OBW
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

6.1.2. DEVIATION FROM STANDARD

No deviation.

6.1.3. TEST SETUP





6.1.4. EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.5. TEST RESULTS

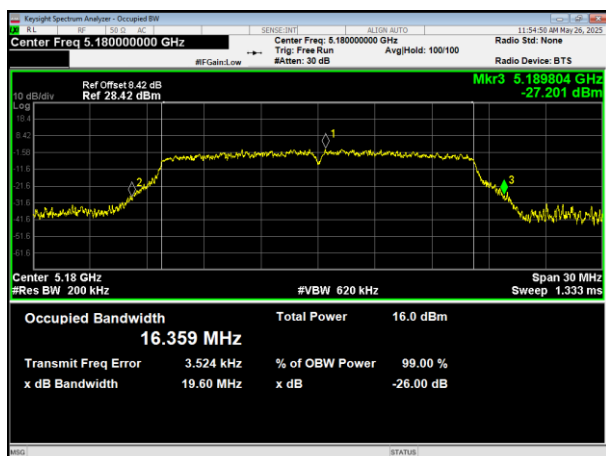
		Test Channel	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	Result
Band 1	802.11a	Low	19.602	16.384	Pass
		Middle	19.693	16.388	Pass
		High	19.385	16.326	Pass
	802.11ac HT20	Low	20.167	17.560	Pass
		Middle	20.522	17.562	Pass
		High	19.998	17.512	Pass
	802.11ac HT40	Low	40.497	35.898	Pass
		High	40.656	36.028	Pass
	802.11ac HT80	/	79.976	75.327	Pass
	802.11n HT20	Low	20.179	17.557	Pass
		Middle	20.135	17.593	Pass
		High	19.941	17.538	Pass
	802.11n HT40	Low	40.532	35.965	Pass
		High	40.375	36.029	Pass

		Test Channel	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	6dB Bandwidth Limit (MHz)	Result
Band 4	802.11a	Low	16.379	16.405	>0.5	Pass
		Middle	15.446	16.429	>0.5	Pass
		High	16.05	16.353	>0.5	Pass
	802.11ac HT20	Low	15.31	17.576	>0.5	Pass
		Middle	16.668	17.570	>0.5	Pass
		High	16.486	17.576	>0.5	Pass
	802.11ac HT40	Low	32.571	35.698	>0.5	Pass
		High	35.071	35.852	>0.5	Pass
	802.11ac HT80	/	75.129	75.170	>0.5	Pass
	802.11n HT20	Low	15.355	17.610	>0.5	Pass
		Middle	15.037	17.602	>0.5	Pass
		High	16.162	17.588	>0.5	Pass
	802.11n HT40	Low	35.015	35.719	>0.5	Pass
		High	35.103	35.869	>0.5	Pass

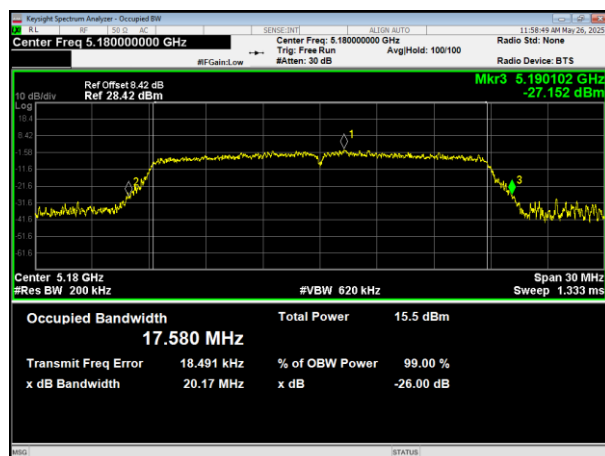


26dB Bandwidth

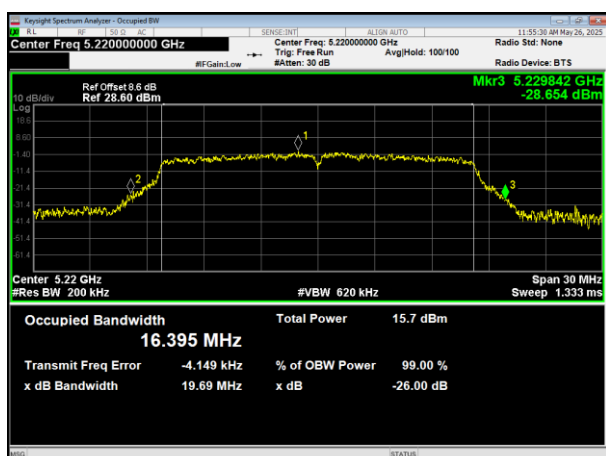
802.11a



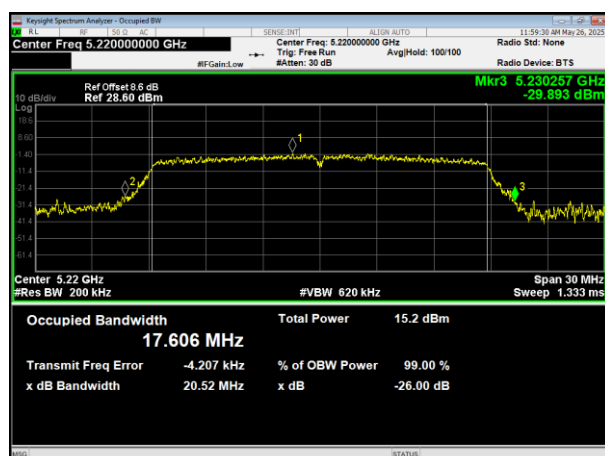
802.11ac HT20



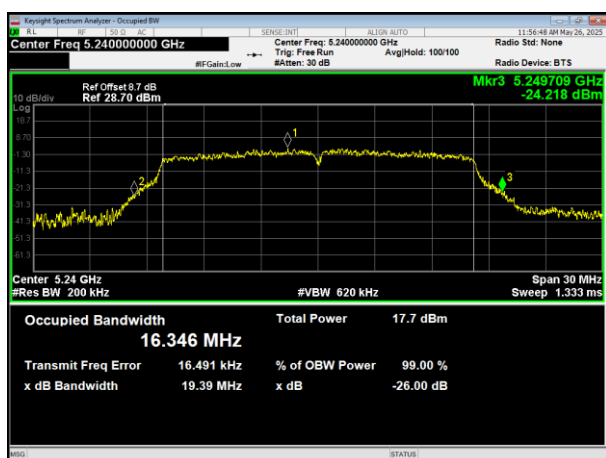
5180MHz



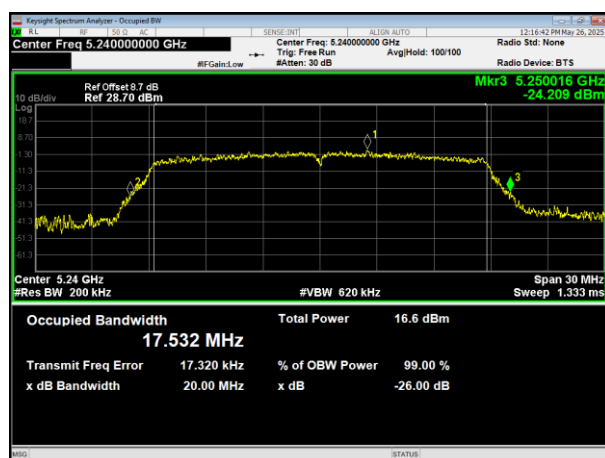
5180MHz



5200MHz



5200MHz



5240MHz

5240MHz