FCC Part 15E Test Report
FCC ID: 2BSVU-MG5MAX

Applicant:	OS POWER TECHNOLOGY CO., LTD
Address:	7F., No. 5, Qiao'an St., Zhonghe Dist., New Taipei City 23557, Taiwan (R.O.C.)
Manufacturer:	SHENZHEN AMEDIA TECHNOLOGY CO., LTD
Address:	Room 201, Building 2, Stech Park, Gaofeng community, Dalang Street, Longhua District, Shenzhen, China
Product:	Media Player
Trade Mark:	N/A
Model No.:	MG5 Max, MG5 Plus
Date of Receipt:	Oct. 26, 2025
Test Date:	Oct. 26, 2025 - Nov. 13, 2025
Date of Report:	Nov. 13, 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:	FCC PART 15 E 15.407 ANSI C63.10:2020
Test Result:	Pass
Report Number:	DLE-251023009R

Prepared (Test Engineer):	Ken Tan
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.

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.407) , Subpart E			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.407(b), 15.205, 15.209	Radiated Spurious Emission	PASS	
15.407(b), 15.205, 15.209	Band Edge Emission	PASS	
15.407 (a)	Maximum Conducted Output Power	PASS	
15.407 (a)	Power Spectral Density	PASS	
15.407(a) (e)	26dB bandwidth and 99%dB Bandwidth 6dB bandwidth and 99%dB Bandwidth	PASS	
15.407(g)	Frequency Stability	PASS	
15.407(c)	Transmission in case of Absence of Information	PASS	
15.203	Antenna Requirement	PASS	

NOTE:

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

Test lab: 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

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** ± **U**, where expended 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	±2.56dB
2	RF power,conducted	±0.42dB
3	Spurious emissions,conducted	±2.76dB
4	All emissions,radiated(<30MHz)	±3.54dB
5	All emissions,radiated(<1G)	±3.65dB
6	All emissions,radiated(>1G)	±4.89dB
7	Occupied bandwidth	±0.2%
8	PSD	±0.69dB
9	Temperature	±0.5°C
10	Humidity	±2%
11	Time	±2%

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product Name:	Media Player
Trademark	N/A
Model No.:	MG5 Max, MG5 Plus
Model Difference	All models are same as the samples except model name and color, they have the same structure and circuit.
Operation Frequency:	5745-5825MHz(802.11a/n/ac(HT20)) 5755-5795MHz(802.11n/ac(HT40))
Channel numbers:	See channel list
Channel separation:	5MHz
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:	External antenna
Antenna gain:	4.76dBi
Power Supply:	DC 5V from adapter
Adapter:	Model: J180C-0502000UX Input: 100-240V~50/60Hz, 0.6A Output: 5.0V⎓2.0A 10.0W Manufacturer: Shenzhen JiuZhou Power Technology Co.,Ltd.

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)
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

2.2 DESCRIPTION OF TEST MODES

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

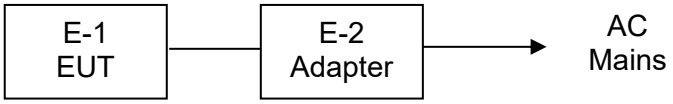
Description		
Pretest Mode	Channel	Band 4
Mode 1	802.11a/n/acHT20	CH149, CH157, CH165
Mode 2	802.11n/acHT40	CH151, CH159
Mode 3	Link Mode	

For Conducted & Radiated Emission		
Pretest Mode	Channel	Band 4
Mode 1	802.11a/n/acHT20	CH149, CH157, CH165
Mode 2	802.11n/acHT40	CH151, CH159
Mode 3	Link Mode	

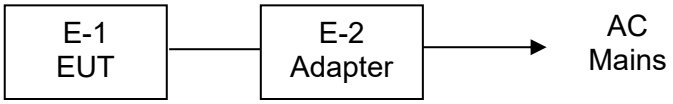
Note: 1. The measurements are performed at the highest, middle, lowest available channels.
2. During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's 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	Media Player	MG5 Max	N/A	EUT
E-2	Adapter	J180C-0502000UX	N/A	N/A

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_V2.1			
Mode	802.11a	802.11n HT20	802.11n HT40	802.11ac HT20/HT40
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	Oct. 25, 2025	Oct. 24, 2026
2	Test Receiver (9kHz-7GHz)	R&S	ESRP7	101393	Oct. 25, 2025	Oct. 24, 2026
3	Bilog Antenna (30MHz-1GHz)	R&S	VULB9162	00306	Oct. 25, 2025	Oct. 24, 2026
4	Horn Antenna (1GHz-18GHz)	Schwarzbeck	BBHA9120D	02139	Oct. 25, 2025	Oct. 24, 2026
5	Horn Antenna (18GHz-40GHz)	A.H. Systems	SAS-574	588	Oct. 25, 2025	Oct. 24, 2026
6	Amplifier (9KHz-6GHz)	Schwarzbeck	BBV9743B	00153	Oct. 25, 2025	Oct. 24, 2026
7	Amplifier (1GHz-18GHz)	EMEC	EM01G8GA	00270	Oct. 25, 2025	Oct. 24, 2026
8	Amplifier (18GHz-40GHz)	Quanjuda	DLE-161	97	Oct. 25, 2025	Oct. 24, 2026
9	Loop Antenna (9KHz-30MHz)	Schwarzbeck	FMZB1519B	00014	Oct. 25, 2025	Oct. 24, 2026
10	RF cables1 (9kHz-1GHz)	ChengYu	966	004	Oct. 25, 2025	Oct. 24, 2026
11	RF cables2 (1GHz-40GHz)	ChengYu	966	003	Oct. 25, 2025	Oct. 24, 2026
12	Antenna connector	Florida RF Labs	N/A	RF 01#	Oct. 25, 2025	Oct. 24, 2026
13	Power probe	KEYSIGHT	U2021XA	MY55210018	Oct. 25, 2025	Oct. 24, 2026
14	Signal Analyzer 9kHz-26.5GHz	Agilent	N9020A	MY55370280	Oct. 25, 2025	Oct. 24, 2026
15	Test Receiver 20kHz-40GHz	R&S	ESU 40	100376	Oct. 25, 2025	Oct. 24, 2026
16	D.C. Power Supply	LongWei	PS-305D	010964729	Oct. 25, 2025	Oct. 24, 2026
17	Temperature & humidity chamber	Changfeng	CF-150-40-P	CF170802-01	Oct. 25, 2025	Oct. 24, 2026

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	Oct. 25, 2025	Oct. 24, 2026
3	LISN	R&S	ENV216	102417	Oct. 25, 2025	Oct. 24, 2026
4	843 Cable 1#	ChengYu	CE Cable	001	Oct. 25, 2025	Oct. 24, 2026

Other

Item	Name	Manufacturer	Model	Software version
1	EMC Conduction Test System	FALA	EZ_EMC	EMC-CON 3A1.1
2	EMC radiation test system	FALA	EZ_EMC	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
0.5 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

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.

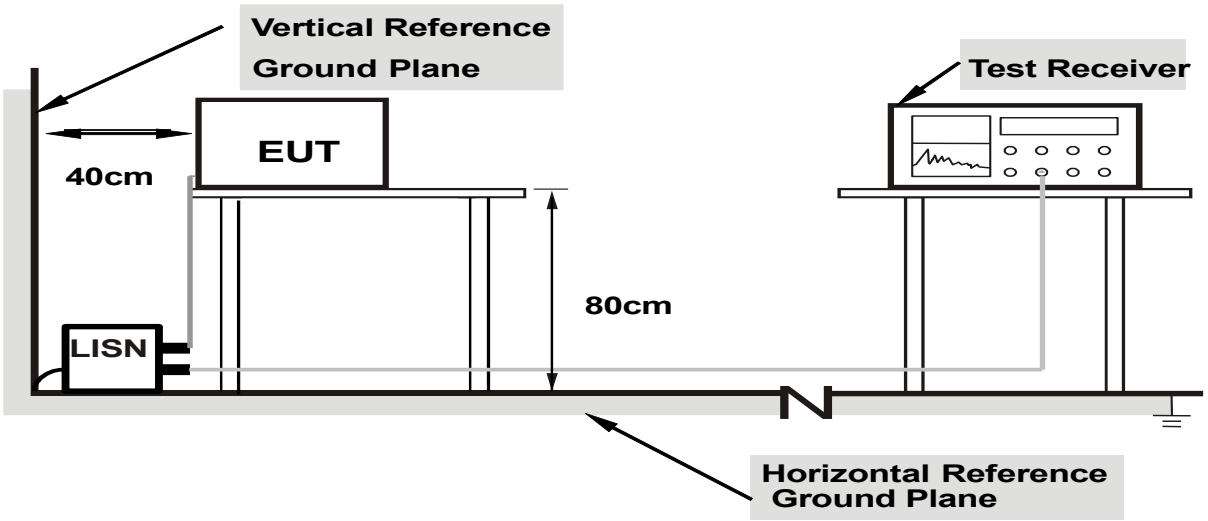
d. LISN at least 80 cm from nearest part of EUT chassis.

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

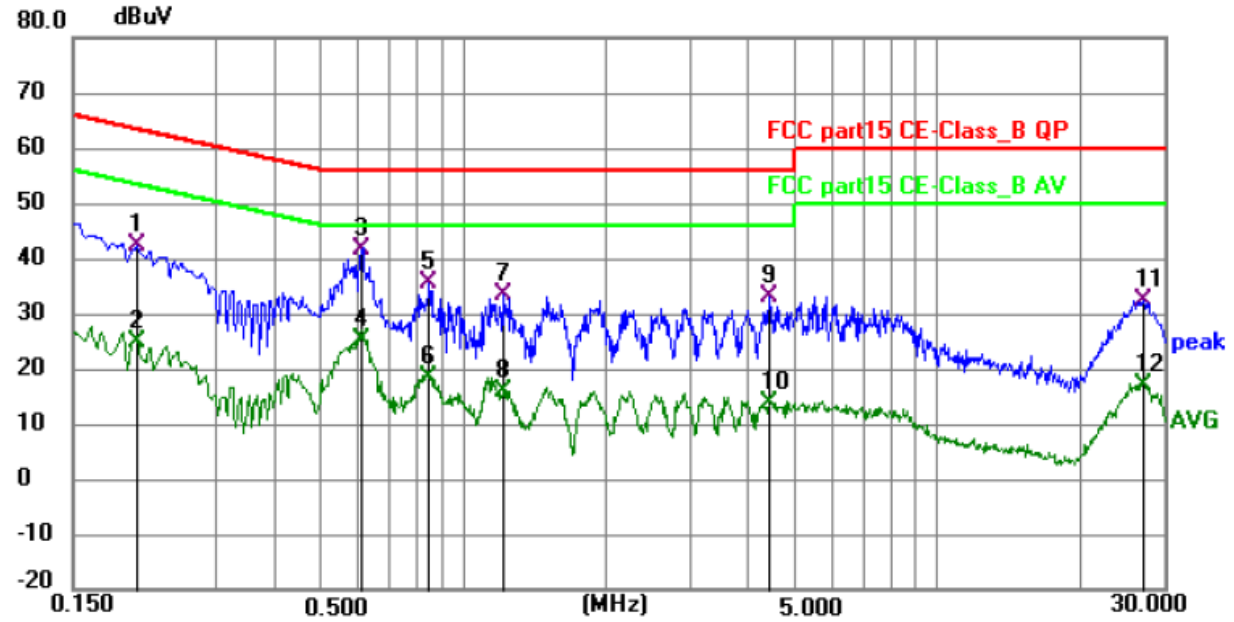
3.1.5 EUT OPERATING CONDITIONS

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

PASS
Please refer to the following page.

Temperature:	25 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	L
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 3

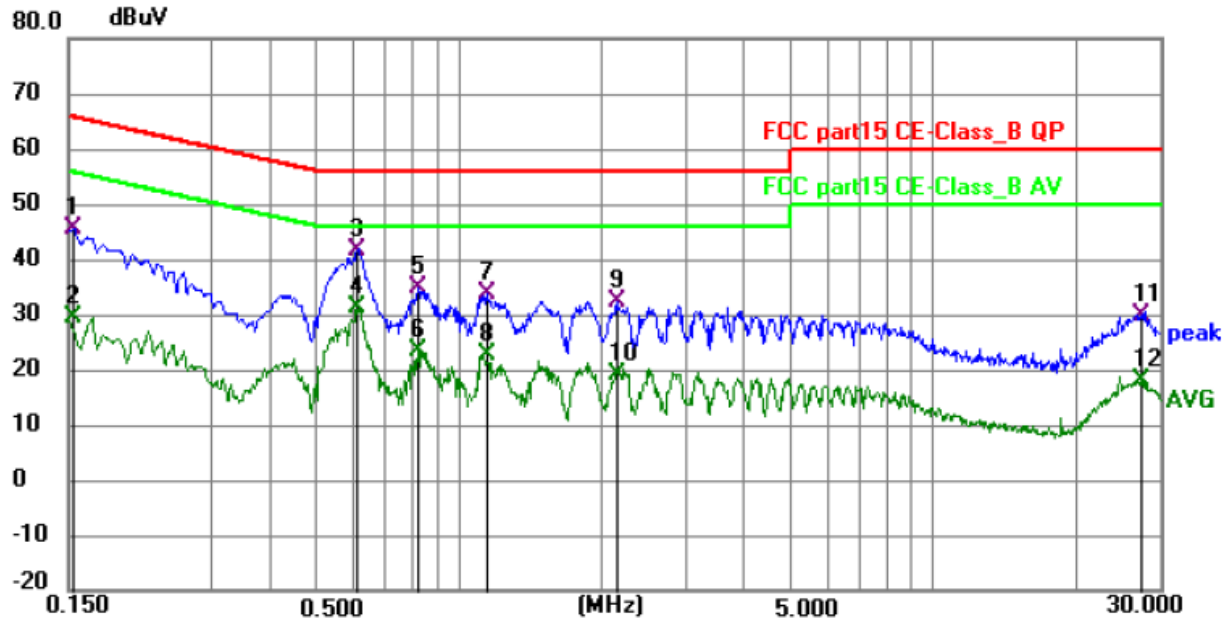


Remark:

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	0.2040	32.37	9.86	42.23	63.45	-21.22	QP	P	
2	0.2040	14.95	9.86	24.81	53.45	-28.64	AVG	P	
3 *	0.6134	32.11	9.57	41.68	56.00	-14.32	QP	P	
4	0.6134	15.73	9.57	25.30	46.00	-20.70	AVG	P	
5	0.8475	26.19	9.52	35.71	56.00	-20.29	QP	P	
6	0.8475	9.05	9.52	18.57	46.00	-27.43	AVG	P	
7	1.2164	23.83	9.49	33.32	56.00	-22.68	QP	P	
8	1.2164	6.39	9.49	15.88	46.00	-30.12	AVG	P	
9	4.4205	23.89	9.04	32.93	56.00	-23.07	QP	P	
10	4.4205	4.79	9.04	13.83	46.00	-32.17	AVG	P	
11	27.2310	22.46	9.80	32.26	60.00	-27.74	QP	P	
12	27.2310	7.08	9.80	16.88	50.00	-33.12	AVG	P	

Temperature:	25 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	N
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 3



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	35.49	9.96	45.45	65.75	-20.30	QP	P	
2	0.1545	19.39	9.96	29.35	55.75	-26.40	AVG	P	
3 *	0.6134	32.18	9.57	41.75	56.00	-14.25	QP	P	
4	0.6134	21.72	9.57	31.29	46.00	-14.71	AVG	P	
5	0.8250	25.28	9.52	34.80	56.00	-21.20	QP	P	
6	0.8250	13.81	9.52	23.33	46.00	-22.67	AVG	P	
7	1.1490	24.14	9.50	33.64	56.00	-22.36	QP	P	
8	1.1490	13.03	9.50	22.53	46.00	-23.47	AVG	P	
9	2.1480	23.04	9.41	32.45	56.00	-23.55	QP	P	
10	2.1480	9.85	9.41	19.26	46.00	-26.74	AVG	P	
11	27.2985	20.10	9.80	29.90	60.00	-30.10	QP	P	
12	27.2985	8.13	9.80	17.93	50.00	-32.07	AVG	P	

3.2 RADIATED EMISSION MEASUREMENT

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

15.407(b)Undesirable emission limits. Except as shown in paragraph (b) (10) 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 to10dBm/MHzat25 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.

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.
(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:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The 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.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (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.
e. 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.

Above 1GHz test procedure as below:

g. 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.
h. Test the EUT in the lowest channel, the middle channel, the Highest channel

Note:

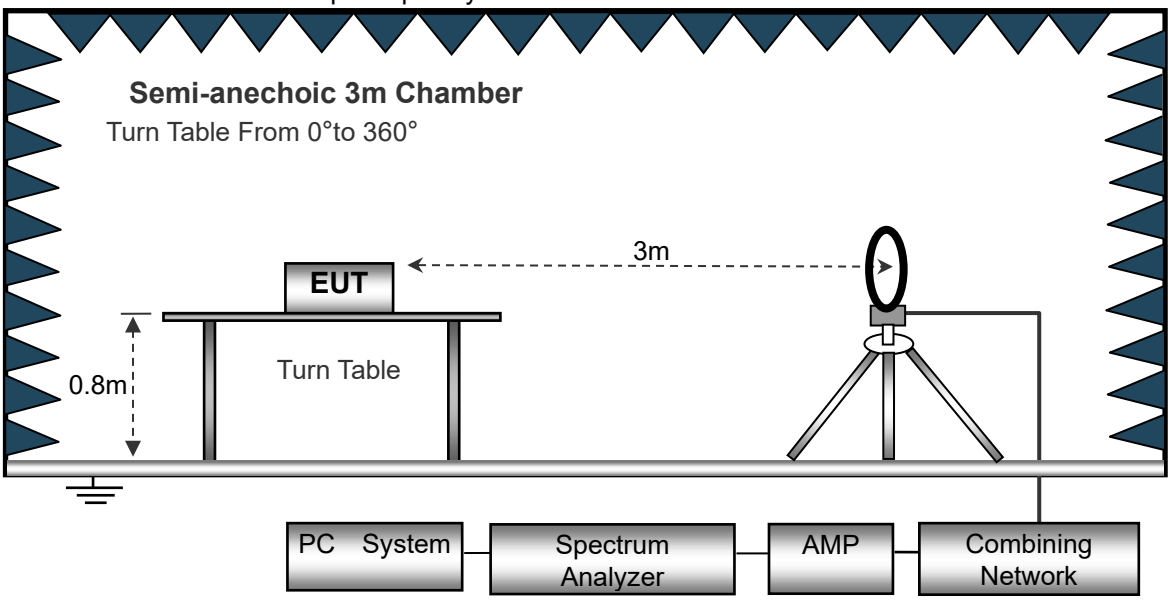
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3 DEVIATION FROM TEST STANDARD

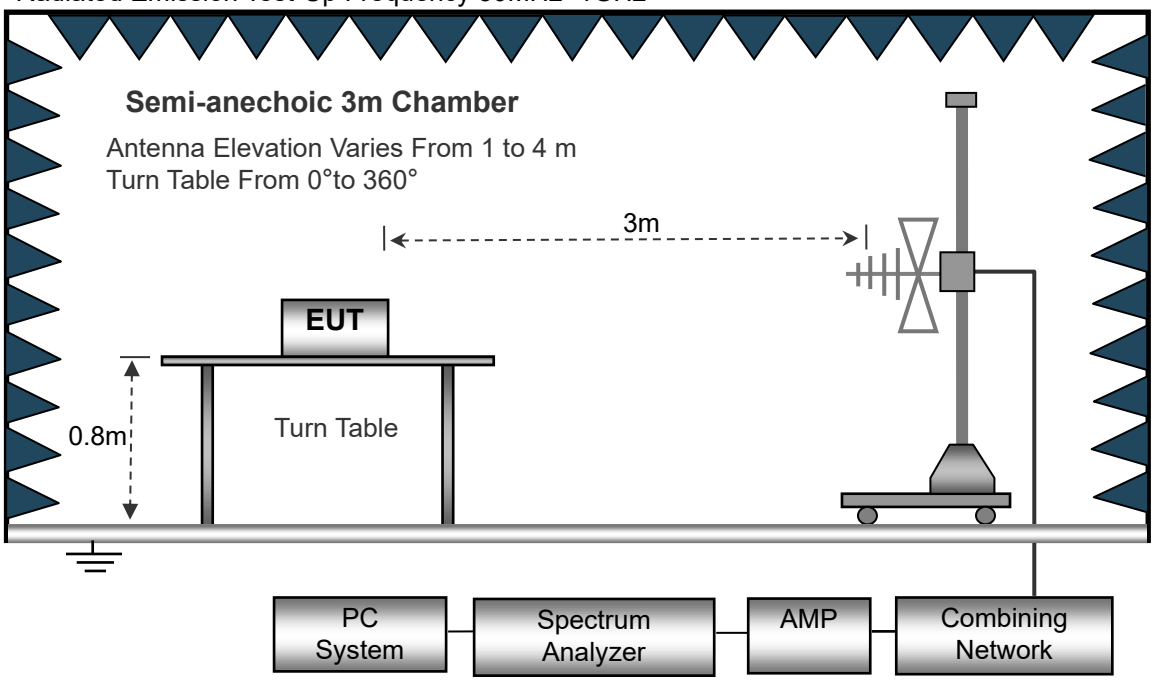
No deviation

3.2.4 TEST SETUP

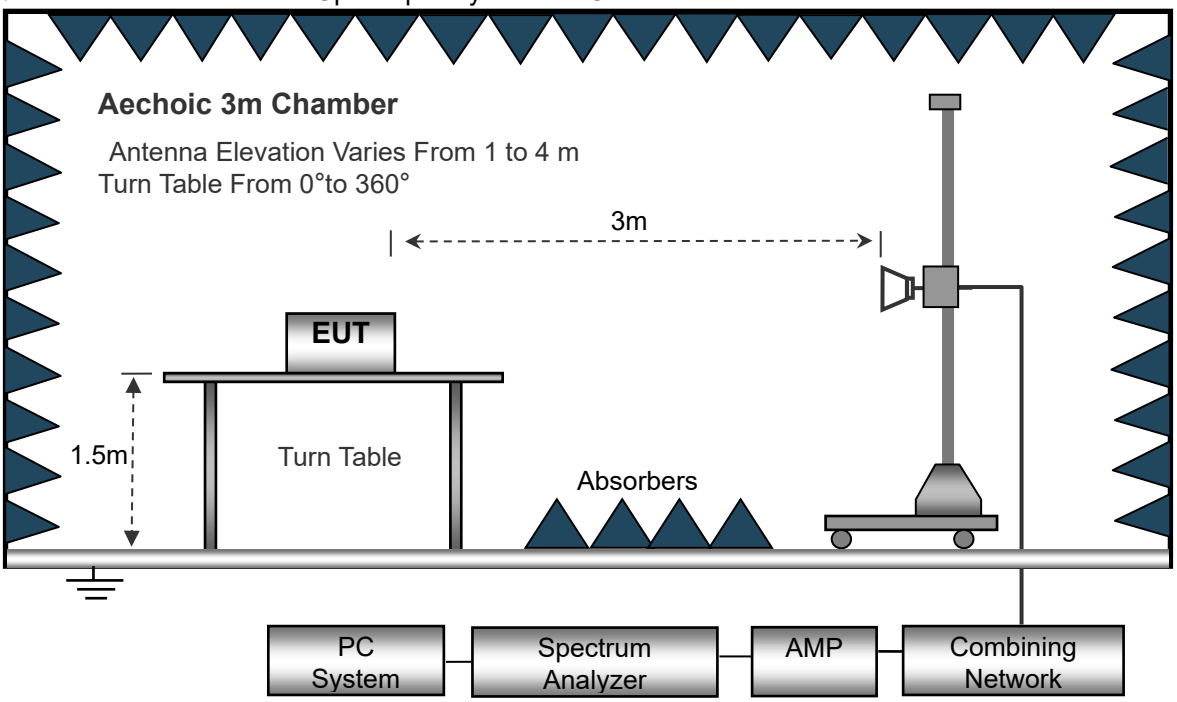
（A）Radiated Emission Test-Up Frequency Below 30MHz



（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)

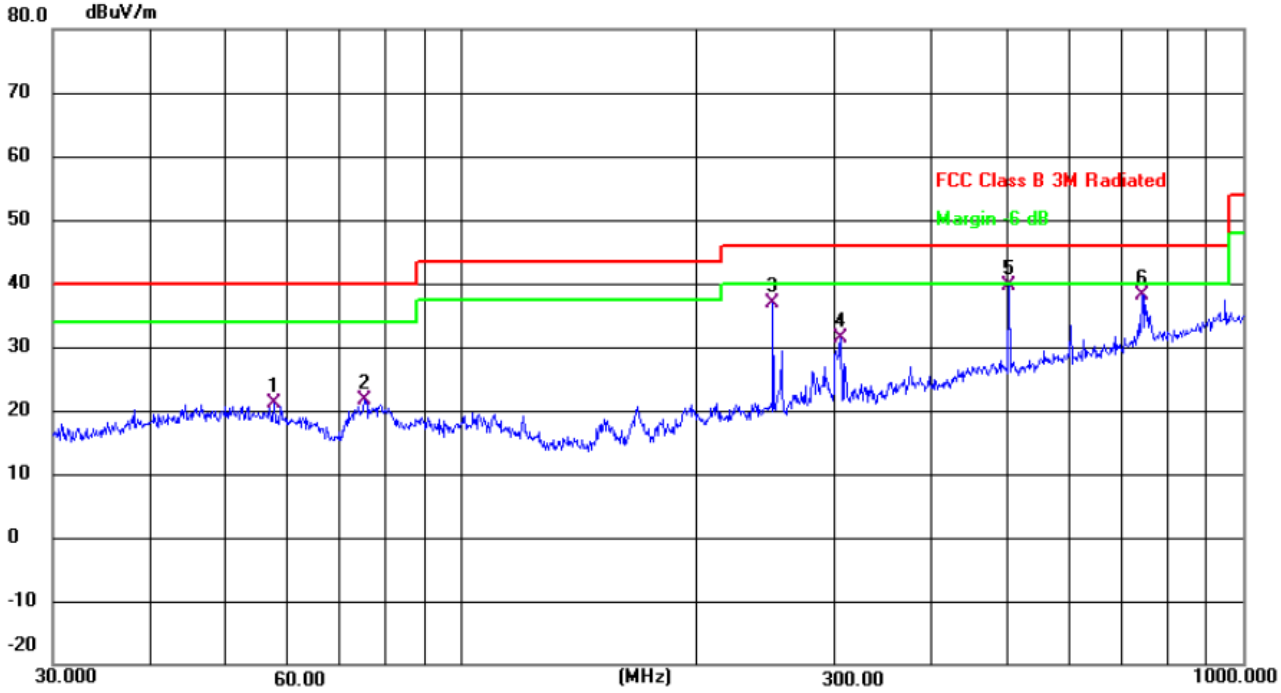
Temperature:	20℃	Relative Humidtity:	48%
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	Mode 3	Polarization :	--

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 (specific distance/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 3		



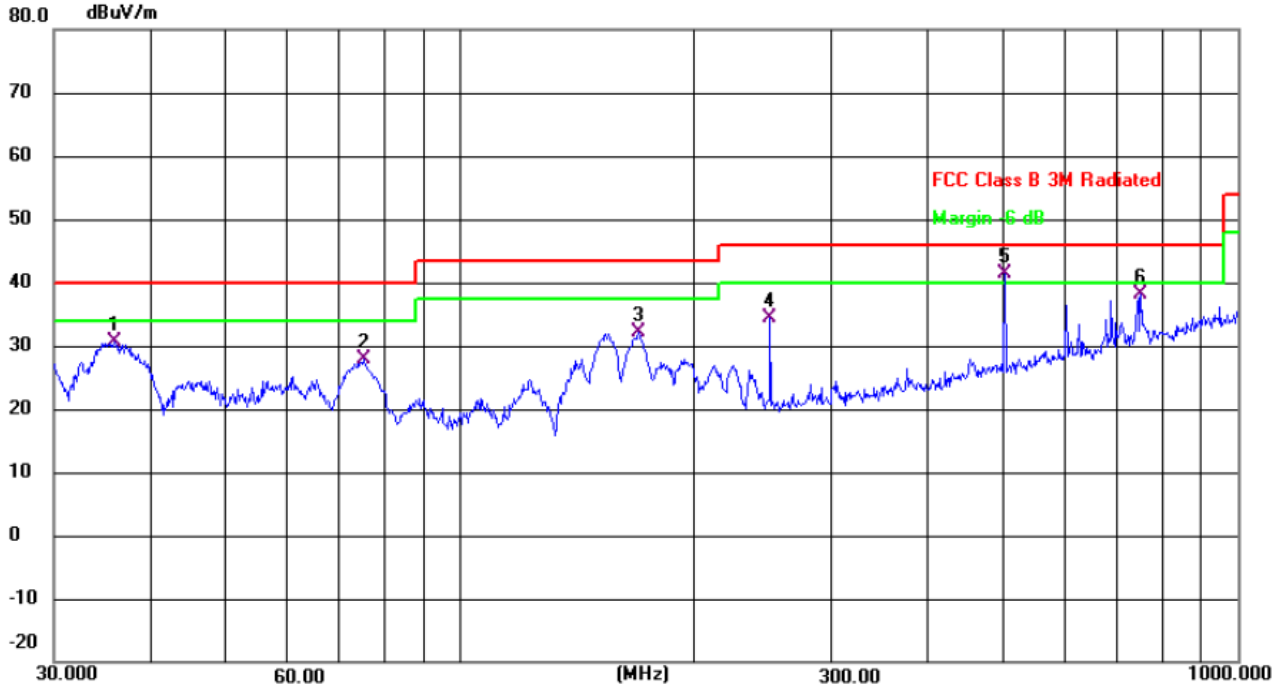
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		57.5939	28.60	-7.59	21.01	40.00	-18.99	QP
2		75.1822	34.06	-12.39	21.67	40.00	-18.33	QP
3		250.3012	44.18	-7.32	36.86	46.00	-9.14	QP
4		305.6800	37.41	-6.12	31.29	46.00	-14.71	QP
5	*	501.1790	41.13	-1.47	39.66	46.00	-6.34	QP
6		742.2587	35.27	2.94	38.21	46.00	-7.79	QP

Remark:

Correct Factor = Cable loss + Antenna factor – Preamplifier;

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

Temperature:	26℃	Relative Humidity:	54%
Pressure:	1010 hPa	Polarization :	Vertical
Test Voltage:	AC 120V/60Hz		
Test Mode:	Mode 3		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		35.8746	40.04	-9.39	30.65	40.00	-9.35	QP
2		75.1822	40.15	-12.39	27.76	40.00	-12.24	QP
3		169.5990	43.60	-11.54	32.06	43.50	-11.44	QP
4		250.3012	41.64	-7.32	34.32	46.00	-11.68	QP
5	*	501.1790	42.76	-1.47	41.29	46.00	-4.71	QP
6		750.1083	35.03	3.07	38.10	46.00	-7.90	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 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	53.88	49.05	15.3	37.39	57.52	74	-16.48	PK
V	11490	41.56	49.05	15.3	37.39	45.2	54	-8.80	AV
V	17235	54.89	49.16	15.27	40.45	61.45	68.2	-6.75	PK
V	17235	40.2	49.16	15.27	40.45	46.76	54	-7.24	AV
H	11490	52.31	49.05	15.3	37.39	55.95	74	-18.05	PK
H	11490	41.76	49.05	15.3	37.39	45.4	54	-8.60	AV
H	17235	51.14	49.16	15.27	40.45	57.7	68.2	-10.50	PK
H	17235	39.73	49.16	15.27	40.45	46.29	54	-7.71	AV
operation frequency:5785									
V	11570	50.98	49.09	15.34	37.42	54.65	74	-19.35	PK
V	11570	40.87	49.09	15.34	37.42	44.54	54	-9.46	AV
V	17355	50.03	49.18	15.29	40.47	56.61	68.2	-11.59	PK
V	17355	40.02	49.18	15.29	40.47	46.6	54	-7.40	AV
H	11570	49.87	49.09	15.34	37.42	53.54	74	-20.46	PK
H	11570	41.81	49.09	15.34	37.42	45.48	54	-8.52	AV
H	17355	47.88	49.18	15.29	40.47	54.46	68.2	-13.74	PK
H	17355	40.15	49.18	15.29	40.47	46.73	54	-7.27	AV
operation frequency:5825									
V	11650	51.84	49.11	15.37	37.46	55.56	74	-18.44	PK
V	11650	40.88	49.11	15.37	37.46	44.6	54	-9.40	AV
V	17475	49.14	49.21	15.34	40.51	55.78	68.2	-12.42	PK
V	17475	40.43	49.21	15.34	40.51	47.07	54	-6.93	AV
H	11650	57	49.11	15.37	31.31	54.57	74	-19.43	PK
H	11650	48.14	49.11	15.37	31.31	45.71	54	-8.29	AV
H	17475	49.2	49.21	15.34	40.51	55.84	68.2	-12.36	PK
H	17475	40.02	49.21	15.34	40.51	46.66	54	-7.34	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 (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	49.47	49.05	15.3	37.39	53.11	74	-20.89	PK
V	11490	42.13	49.05	15.3	37.39	45.77	54	-8.23	AV
V	17235	48.36	49.16	15.27	40.45	54.92	68.2	-13.28	PK
V	17235	40.55	49.16	15.27	40.45	47.11	54	-6.89	AV
H	11490	49.14	49.05	15.3	37.39	52.78	74	-21.22	PK
H	11490	40.87	49.05	15.3	37.39	44.51	54	-9.49	AV
H	17235	47.97	49.16	15.27	40.45	54.53	68.2	-13.67	PK
H	17235	40.13	49.16	15.27	40.45	46.69	54	-7.31	AV
operation frequency:5785									
V	11570	51.84	49.09	15.34	37.42	55.51	74	-18.49	PK
V	11570	42.29	49.09	15.34	37.42	45.96	54	-8.04	AV
V	17355	49.14	49.18	15.29	40.47	55.72	68.2	-12.48	PK
V	17355	39.82	49.18	15.29	40.47	46.4	54	-7.60	AV
H	11570	49.2	49.09	15.34	37.42	52.87	74	-21.13	PK
H	11570	42.81	49.09	15.34	37.42	46.48	54	-7.52	AV
H	17355	49.58	49.18	15.29	40.47	56.16	68.2	-12.04	PK
H	17355	39.8	49.18	15.29	40.47	46.38	54	-7.62	AV
operation frequency:5825									
V	11650	51.48	49.11	15.37	37.46	55.2	74	-18.80	PK
V	11650	41.22	49.11	15.37	37.46	44.94	54	-9.06	AV
V	17475	47.82	49.21	15.34	40.51	54.46	68.2	-13.74	PK
V	17475	40.22	49.21	15.34	40.51	46.86	54	-7.14	AV
H	11650	57.18	49.11	15.37	31.31	54.75	74	-19.25	PK
H	11650	44.45	49.11	15.37	31.31	42.02	54	-11.98	AV
H	17475	49.25	49.21	15.34	40.51	55.89	68.2	-12.31	PK
H	17475	39.93	49.21	15.34	40.51	46.57	54	-7.43	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	11510	49.14	49.07	15.33	37.41	52.81	74	-21.19	PK
V	11510	41.22	49.07	15.33	37.41	44.89	54	-9.11	AV
V	17265	49.47	49.17	15.28	40.46	56.04	68.2	-12.16	PK
V	17265	39.74	49.17	15.28	40.46	46.31	54	-7.69	AV
H	11510	48.45	49.07	15.33	37.41	52.12	74	-21.88	PK
H	11510	41.45	49.07	15.33	37.41	45.12	54	-8.88	AV
H	17265	48.83	49.17	15.28	40.46	55.4	68.2	-12.80	PK
H	17265	40.28	49.17	15.28	40.46	46.85	54	-7.15	AV
operation frequency:5795									
V	11590	49.03	49.11	15.37	37.46	52.75	74	-21.25	PK
V	11590	41.22	49.11	15.37	37.46	44.94	54	-9.06	AV
V	17385	47.73	49.21	15.34	40.51	54.37	68.2	-13.83	PK
V	17385	40.06	49.21	15.34	40.51	46.7	54	-7.30	AV
H	11590	57.2	49.11	15.37	31.31	54.77	74	-19.23	PK
H	11590	44.18	49.11	15.37	31.31	41.75	54	-12.25	AV
H	17385	47.76	49.21	15.34	40.51	54.4	68.2	-13.80	PK
H	17385	39.95	49.21	15.34	40.51	46.59	54	-7.41	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.

802.11ac 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	48.94	49.05	15.3	37.39	52.58	74	-21.42	PK
V	11490	45.17	49.05	15.3	37.39	48.81	54	-5.19	AV
V	17235	47.98	49.16	15.27	40.45	54.54	68.2	-13.66	PK
V	17235	43.08	49.16	15.27	40.45	49.64	54	-4.36	AV
H	11490	47.95	49.05	15.3	37.39	51.59	74	-22.41	PK
H	11490	45.06	49.05	15.3	37.39	48.7	54	-5.30	AV
H	17235	47.88	49.16	15.27	40.45	54.44	68.2	-13.76	PK
H	17235	43.81	49.16	15.27	40.45	50.37	54	-3.63	AV
operation frequency:5785									
V	11570	47.94	49.09	15.34	37.42	51.61	74	-22.39	PK
V	11570	44.44	49.09	15.34	37.42	48.11	54	-5.89	AV
V	17355	49.08	49.18	15.29	40.47	55.66	68.2	-12.54	PK
V	17355	42.77	49.18	15.29	40.47	49.35	54	-4.65	AV
H	11570	49.24	49.09	15.34	37.42	52.91	74	-21.09	PK
H	11570	43.04	49.09	15.34	37.42	46.71	54	-7.29	AV
H	17355	48.78	49.18	15.29	40.47	55.36	68.2	-12.84	PK
H	17355	43.18	49.18	15.29	40.47	49.76	54	-4.24	AV
operation frequency:5825									
V	11650	48.77	49.11	15.37	37.46	52.49	74	-21.51	PK
V	11650	44.28	49.11	15.37	37.46	48	54	-6.00	AV
V	17475	48.16	49.21	15.34	40.51	54.8	68.2	-13.40	PK
V	17475	43.19	49.21	15.34	40.51	49.83	54	-4.17	AV
H	11650	56.77	49.11	15.37	31.31	54.34	74	-19.66	PK
H	11650	44.15	49.11	15.37	31.31	41.72	54	-12.28	AV
H	17475	47.82	49.21	15.34	40.51	54.46	68.2	-13.74	PK
H	17475	43.96	49.21	15.34	40.51	50.6	54	-3.40	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:5755									
V	11510	49.05	49.07	15.33	37.41	52.72	74	-21.28	PK
V	11510	44.83	49.07	15.33	37.41	48.5	54	-5.50	AV
V	17265	47.88	49.17	15.28	40.46	54.45	68.2	-13.75	PK
V	17265	42.94	49.17	15.28	40.46	49.51	54	-4.49	AV
H	11510	47.99	49.07	15.33	37.41	51.66	74	-22.34	PK
H	11510	44.75	49.07	15.33	37.41	48.42	54	-5.58	AV
H	17265	48.18	49.17	15.28	40.46	54.75	68.2	-13.45	PK
H	17265	43.85	49.17	15.28	40.46	50.42	54	-3.58	AV
operation frequency:5795									
V	11590	48.83	49.11	15.37	37.46	52.55	74	-21.45	PK
V	11590	43.63	49.11	15.37	37.46	47.35	54	-6.65	AV
V	17385	47.42	49.21	15.34	40.51	54.06	68.2	-14.14	PK
V	17385	42.92	49.21	15.34	40.51	49.56	54	-4.44	AV
H	11590	56.44	49.11	15.37	31.31	54.01	74	-19.99	PK
H	11590	44.12	49.11	15.37	31.31	41.69	54	-12.31	AV
H	17385	47.93	49.21	15.34	40.51	54.57	68.2	-13.63	PK
H	17385	43.79	49.21	15.34	40.51	50.43	54	-3.57	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)

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)
For transmitters operating in the 5.15-5.25 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.
For transmitters operating solely in the 5.725-5.850 GHz band:
(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.
(ii) Devices certified before March 2, 2017 with antenna gain greater than 10 dBi may demonstrate compliance with the emission limits in § 15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease by March 2, 2018. Devices certified before March 2, 2018 with antenna gain of 10 dBi or less may demonstrate compliance with the emission limits in § 15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease before March 2, 2020.
The provisions of §15.205 apply to intentional radiators operating under this section,15.205 Restricted bands of operation

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			

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	Band 4:5600MHz-5785MHz
Stop Frequency	Band 4:5780MHz-6000MHz
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

3.3.2 TEST PROCEDURE

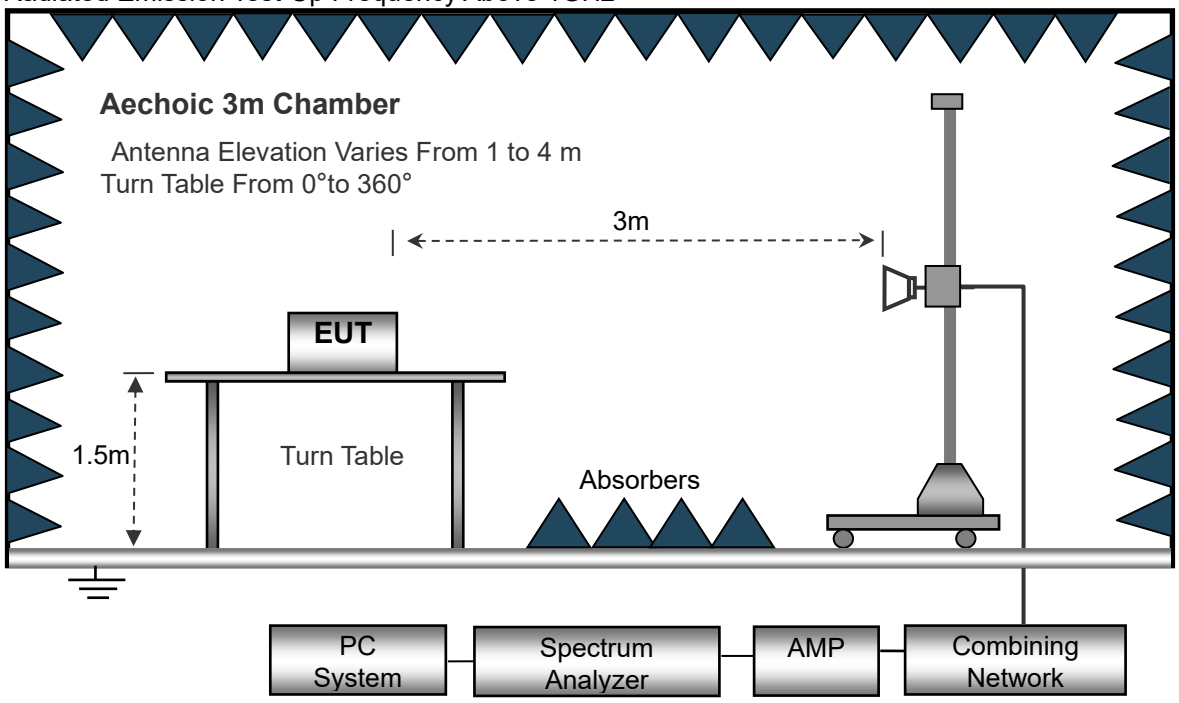
Above 1GHz test procedure as below:
a. 1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The 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.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. 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(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	5725	50.85	46.38	12.43	35.65	52.55	68.2	-15.65	PK
V	5725	40.44	46.38	12.43	35.65	42.14	54	-11.86	AV
V	5720	51.63	46.56	12.47	35.76	53.3	68.2	-14.9	PK
V	5720	41.18	46.56	12.47	35.76	42.85	54	-11.15	AV
H	5725	51.16	46.38	12.43	35.65	52.86	68.2	-15.34	PK
H	5725	40.27	46.38	12.43	35.65	41.97	54	-12.03	AV
H	5720	49.79	46.56	12.47	35.76	51.46	68.2	-16.74	PK
H	5720	40.27	46.56	12.47	35.76	41.94	54	-12.06	AV

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:5825									
V	5850	50.79	46.55	12.65	35.87	52.76	68.2	-15.44	PK
V	5850	40.48	46.55	12.65	35.87	42.45	54	-11.55	AV
V	5870	50.77	46.58	12.67	35.93	52.79	68.2	-15.41	PK
V	5870	40.23	46.58	12.67	35.93	42.25	54	-11.75	AV
H	5850	50.21	46.55	12.65	35.87	52.18	68.2	-16.02	PK
H	5850	40.23	46.55	12.65	35.87	42.2	54	-11.8	AV
H	5870	50.77	46.58	12.67	35.93	52.79	68.2	-15.41	PK
H	5870	39.96	46.58	12.67	35.93	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.

802.11n 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	5725	55.03	47.36	13.18	36.26	57.11	68.2	-11.09	PK
V	5725	42.7	47.36	13.18	36.26	44.78	54	-9.22	AV
V	5720	55.63	47.38	13.2	36.29	57.74	68.2	-10.46	PK
V	5720	42.09	47.38	13.2	36.29	44.2	54	-9.8	AV
H	5725	55.41	47.36	13.18	36.26	57.49	68.2	-10.71	PK
H	5725	42.15	47.36	13.18	36.26	44.23	54	-9.77	AV
H	5720	54.96	47.38	13.2	36.29	57.07	68.2	-11.13	PK
H	5720	42.1	47.38	13.2	36.29	44.21	54	-9.79	AV

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:5825									
V	5850	49.9	48.32	15.24	37.37	54.19	68.2	-14.01	PK
V	5850	40.11	48.32	15.24	37.37	44.4	54	-9.6	AV
V	5870	51.19	48.36	15.27	37.39	55.49	68.2	-12.71	PK
V	5870	40.87	48.36	15.27	37.39	45.17	54	-8.83	AV
H	5850	50.95	48.32	15.24	37.37	55.24	68.2	-12.96	PK
H	5850	41.38	48.32	15.24	37.37	45.67	54	-8.33	AV
H	5870	51.12	48.36	15.27	37.39	55.42	68.2	-12.78	PK
H	5870	40.3	48.36	15.27	37.39	44.6	54	-9.4	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	56.36	46.38	12.43	35.65	58.06	68.2	-10.14	PK
V	5725	43.43	46.38	12.43	35.65	45.13	54	-8.87	AV
V	5720	56.52	46.56	12.47	35.76	58.19	68.2	-10.01	PK
V	5720	42.95	46.56	12.47	35.76	44.62	54	-9.38	AV
H	5725	55.41	46.38	12.43	35.65	57.11	68.2	-11.09	PK
H	5725	42.08	46.38	12.43	35.65	43.78	54	-10.22	AV
H	5720	55.14	46.56	12.47	35.76	56.81	68.2	-11.39	PK
H	5720	42.41	46.56	12.47	35.76	44.08	54	-9.92	AV

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:5795									
V	5850	50.97	46.55	12.65	35.87	52.94	68.2	-15.26	PK
V	5850	41.37	46.55	12.65	35.87	43.34	54	-10.66	AV
V	5870	50.97	46.58	12.67	35.93	52.99	68.2	-15.21	PK
V	5870	41.59	46.58	12.67	35.93	43.61	54	-10.39	AV
H	5850	50.97	46.55	12.65	35.87	52.94	68.2	-15.26	PK
H	5850	41.25	46.55	12.65	35.87	43.22	54	-10.78	AV
H	5870	51.03	46.58	12.67	35.93	53.05	68.2	-15.15	PK
H	5870	39.88	46.58	12.67	35.93	41.9	54	-12.1	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	5725	51.68	47.36	13.18	36.26	53.76	68.2	-14.44	PK
V	5725	33.93	47.36	13.18	36.26	36.01	54	-17.99	AV
V	5720	50.59	47.38	13.2	36.29	52.7	68.2	-15.5	PK
V	5720	33.23	47.38	13.2	36.29	35.34	54	-18.66	AV
H	5725	51.48	47.36	13.18	36.26	53.56	68.2	-14.64	PK
H	5725	34.23	47.36	13.18	36.26	36.31	54	-17.69	AV
H	5720	49.89	47.38	13.2	36.29	52	68.2	-16.2	PK
H	5720	33.05	47.38	13.2	36.29	35.16	54	-18.84	AV

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:5825									
V	5850	52.95	48.32	15.24	37.37	57.24	68.2	-10.96	PK
V	5850	35.51	48.32	15.24	37.37	39.8	54	-14.2	AV
V	5870	49.51	48.36	15.27	37.39	53.81	68.2	-14.39	PK
V	5870	33.01	48.36	15.27	37.39	37.31	54	-16.69	AV
H	5850	52.87	48.32	15.24	37.37	57.16	68.2	-11.04	PK
H	5850	40.02	48.32	15.24	37.37	44.31	54	-9.69	AV
H	5870	50.51	48.36	15.27	37.39	54.81	68.2	-13.39	PK
H	5870	34.78	48.36	15.27	37.39	39.08	54	-14.92	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:5755									
V	5725	52.01	46.38	12.43	35.65	53.71	68.2	-14.49	PK
V	5725	36.51	46.38	12.43	35.65	38.21	54	-15.79	AV
V	5720	52.17	46.56	12.47	35.76	53.84	68.2	-14.36	PK
V	5720	35.71	46.56	12.47	35.76	37.38	54	-16.62	AV
H	5725	52.2	46.38	12.43	35.65	53.9	68.2	-14.3	PK
H	5725	36.73	46.38	12.43	35.65	38.43	54	-15.57	AV
H	5720	50.47	46.56	12.47	35.76	52.14	68.2	-16.06	PK
H	5720	35.73	46.56	12.47	35.76	37.4	54	-16.6	AV

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:5795									
V	5850	54.17	47.36	13.18	36.26	56.25	68.2	-11.95	PK
V	5850	35.93	47.36	13.18	36.26	38.01	54	-15.99	AV
V	5870	50.88	47.38	13.2	36.29	52.99	68.2	-15.21	PK
V	5870	36.33	47.38	13.2	36.29	38.44	54	-15.56	AV
H	5850	53.96	47.36	13.18	36.26	56.04	68.2	-12.16	PK
H	5850	40.63	47.36	13.18	36.26	42.71	54	-11.29	AV
H	5870	49.96	47.38	13.2	36.29	52.07	68.2	-16.13	PK
H	5870	34.51	47.38	13.2	36.29	36.62	54	-17.38	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.

3.4 CONDUCTED BAND EMISSION MEASUREMENT

3.4.1 TEST REQUIREMENT:

FCC Part15 C Section 15.209 and 15.407

(1) For transmitters operating in the 5.15-5.25 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.
(4) For transmitters operating in the 5.725-5.85 GHz 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.

Spectrum Parameter	Setting	
Attenuation	Auto	
Start Frequency	5150MHz	5725MHz
Stop Frequency	5250MHz	5850MHz
RB / VB (emission in restricted band)	1 MHz / 3 MHz for Peak, 1 MHz / 10Hz for Average	

3.4.2 TEST PROCEDURE

Test method: FCC KDB 789033 G)& Parts 15.407(b)(4) & 15.209(a)

3.4.3 DEVIATION FROM TEST STANDARD

No deviation

3.4.4 TEST SETUP

3.4.5 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.

3.4.6 TEST RESULT

The antenna gain is compensated in the test data.

For the measurement records, refer to the appendix I.

4. CONDUCTED OUTPUT POWER

4.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart E/ RSS-247		
Test Item	Limit	Frequency Range (MHz)
Conducted Output Power	For FCC client devices: 250mW (24dBm)	5150-5250
	For RSS: e.i.r.p. power: not exceed 200 mW(23dBm) or 10 + 10 log10 B	
	250mW (24dBm) or 11 + 10 log10 B	5250-5350
	250mW (24dBm) or 11 + 10 log10 B	For FCC:5470-5725 For IC:5470-5600 5650-5725
	1 Watt (30dBm)	5725-5850
Note: For ISED: B=99% bandwidth.		

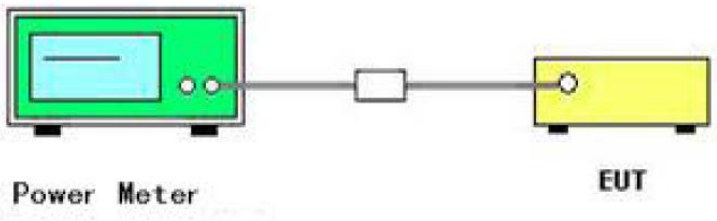
4.1.1 TEST PROCEDURE

a. Connect each EUT's antenna output to power meter by RF cable and attenuator
b. Get each antenna port's output power of EUT.

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



4.1.4 EUT OPERATION CONDITIONS

1) The EUT is configured to transmit continuously.
2) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
3) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.

4.1.5 TEST RESULTS

For the measurement records, refer to the appendix I.

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.
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 ≥ 1MHz for band 1 RBW ≥ 510KHz for band 4
VB	VBW ≥ 3RBW
Detector	RMS (i.e., power averaging).
Trace	Max Hold
Sweep Time	Auto

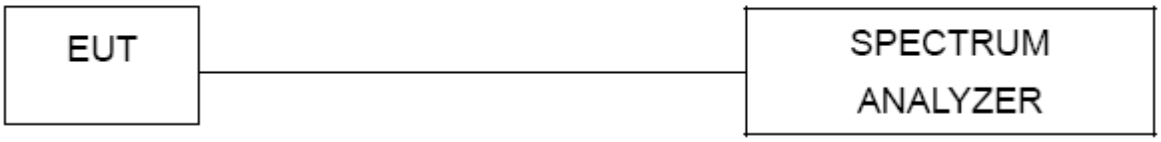
5.1.1 TEST PROCEDURE

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. User the cursor on spectrum to peak search the highest level of trace
6. Record the max. reading and add 10 log(1/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.

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

For the measurement records, refer to the appendix I.

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

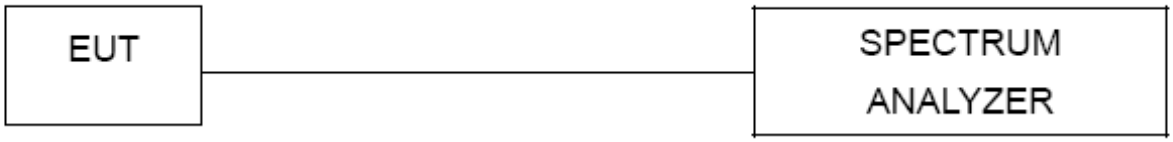
26dB Bandwidth	
Spectrum Parameters	Setting
RBW	approximately 1% of the emission bandwidth
VBW	>RBW
Span	30MHz(20MHz Bandwidth mode) 60MHz(40MHz Bandwidth mode) 120MHz(80MHz Bandwidth mode)
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

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

For the measurement records, refer to the appendix I.

7. DUTY CYCLE TEST SIGNAL

7.1 APPLIED PROCEDURES / LIMIT

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle. All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

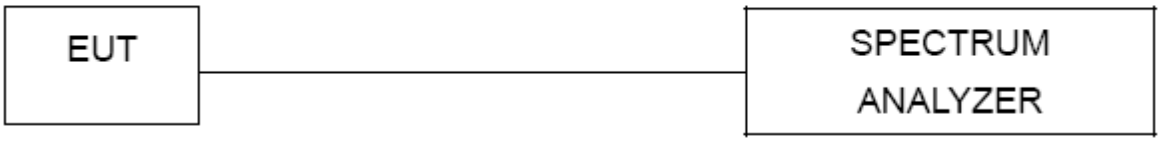
7.1.1 TEST PROCEDURE

1. Set RBW = 1 MHz.
2. Set the video bandwidth (VBW) ≥RBW.
3. Detector = Peak.
4. Sweep = auto couple.
5. Allow the trace to stabilize.
6. Span=0

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP



7.1.4 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.

7.1.5 TEST RESULTS

For the measurement records, refer to the appendix I.

8. FREQUENCY STABILITY

8.1 APPLIED PROCEDURES / LIMIT

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

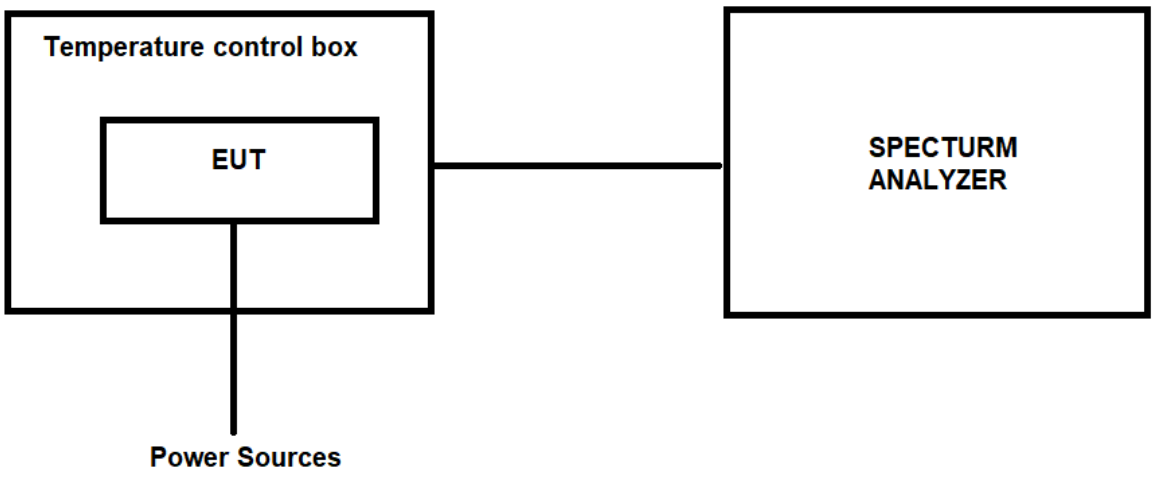
8.1.1 TEST PROCEDURE

1. The EUT was placed inside temperature chamber and powered and powered by nominal DC voltage.
2. Set EUT as normal operation.
3. Turn the EUT on and couple its output to spectrum.
4. Turn the EUT off and set the chamber to the highest temperature specified.
5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT and measure the operating frequency.
6. Repeat step with the temperature chamber set to the lowest temperature.

8.1.2 DEVIATION FROM STANDARD

No deviation.

8.1.3 TEST SETUP



8.1.4 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.

8.1.5 TEST RESULTS

Test Voltage	Test Temp.	Measured Frequency (MHz)	Spectrum Frequency (MHz)			Δ Frequency (PPM)		
			802.11a	802.11n HT20	802.11ac HT20	802.11a	802.11n HT20	802.11ac HT20
132V	-20℃	5745	5745.0369	5745.0355	5745.0395	0.0369	0.0355	0.0395
		5785	5785.0359	5785.0339	5785.0382	0.0359	0.0339	0.0382
		5825	5825.0382	5825.0362	5825.0324	0.0382	0.0362	0.0324
108V		5745	5745.0247	5745.0285	5745.0255	0.0247	0.0285	0.0255
		5785	5785.0384	5785.0346	5785.0337	0.0384	0.0346	0.0337
		5825	5825.0445	5825.0469	5825.0476	0.0445	0.0469	0.0476
120V	25℃	5745	5745.0342	5745.0333	5745.0369	0.0342	0.0333	0.0369
		5785	5785.0489	5785.0435	5785.0475	0.0489	0.0435	0.0475
		5825	5825.0225	5825.0255	5825.0294	0.0225	0.0255	0.0294
132V	50℃	5745	5745.0628	5745.0646	5745.0615	0.0628	0.0646	0.0615
		5785	5785.0430	5785.0415	5785.0449	0.0430	0.0415	0.0449
		5825	5825.0662	5825.0664	5825.0666	0.0662	0.0664	0.0666
108V	50℃	5745	5745.0462	5745.0449	5745.0436	0.0462	0.0449	0.0436
		5785	5785.0229	5785.0256	5785.0243	0.0229	0.0256	0.0243
		5825	5825.0734	5825.0747	5825.0758	0.0734	0.0747	0.0758

Note:The test result is PASS.

Test Voltage	Test Temp.	Measured Frequency (MHz)	Spectrum Frequency (MHz)		Δ Frequency (PPM)	
			802.11n HT40	802.11ac HT40	802.11n HT40	802.11ac HT40
132V	-20℃	5755	5755.0589	5755.0558	0.0589	0.0558
		5795	5795.0616	5795.0615	0.0616	0.0615
108V		5755	5755.0246	5755.0654	0.0246	0.0654
		5795	5795.0435	5795.0485	0.0435	0.0485
120V	25℃	5755	5755.0217	5755.0266	0.0217	0.0266
		5795	5795.0569	5795.0528	0.0569	0.0528
132V	50℃	5755	5755.0462	5755.0449	0.0462	0.0449
		5795	5795.0316	5795.0336	0.0316	0.0336
108V	50℃	5755	5755.0314	5755.0336	0.0314	0.0336
		5795	5795.0465	5795.0442	0.0465	0.0442

Note:The test result is PASS.

9. TRANSMISSION IN THE ABSENCE OF DATA

9.1 STANDARD REQUIREMENT

According to §15.407(c)
The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

9.2 TEST RESULT

No non-compliance noted:
Refer to the theory of operation.

10. ANTENNA REQUIREMENT

10.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

10.2 EUT ANTENNA

The EUT Antenna is built-in antenna, It comply with the standard requirement.

11. TEST SEUUP PHOTO

Reference to the appendix I for details.

12. EUT PHOTO

Reference to the appendix II for details.

※※※※※ **END OF REPORT** ※※※※※