



FCC Part 15E Test Report

FCC ID: 2BR3I-FS210P

Applicant: Hunan Chuangke Photoelectric Co. LTD

Address: No.9 Factory Building, Electronic Information Manufacturing Base, No.199, Aviation Road, Wangcheng District, Changsha city, Hunan Province

Manufacturer: Hunan Chuangke Photoelectric Co. LTD

Address: No.9 Factory Building, Electronic Information Manufacturing Base, No.199, Aviation Road, Wangcheng District, Changsha city, Hunan Province

Product Name: Projector

Trade Mark: N/A

Model Number: FS210P
O1, O1Pro, O1Max, P10

Date of Receipt: Aug. 13, 2025

Test Date: Aug. 13, 2025 - Sep. 10, 2025

Date of Report: Sep. 10, 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-250813038R

Prepared (Test Engineer): Alisa Song

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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)	Average 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.

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

The test results presented in this report relate only to the object tested.

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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 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	$\pm 2.56\text{dB}$
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	$\pm 0.2\text{MHz}$
8	PSD	$\pm 0.69\text{dB}$
9	Temperature	$\pm 0.5^{\circ}\text{C}$
10	Humidity	$\pm 2\%$
11	Time	$\pm 2\%$



2.. GENERAL INFORMATION

2.1. GENERAL DESCRIPTION OF EUT

Product Name:	Projector
Trade Mark:	N/A
Model Number:	FS210P O1, O1Pro, O1Max, P10
Model Difference:	All models are same as the samples except model name, appearance color, they have the same structure and circuit.
Sample number:	250813038-01
Operation Frequency:	5180-5240, 5745-5825MHz(802.11a/n/ac/ax(HT20/HE20)) 5190-5230, 5755-5795MHz(802.11n/ac/ax(HT40/HE40))
Channel numbers:	See channel list
Channel separation:	5MHz
Modulation technology:	802.11a(OFDM): BPSK, QPSK, 16-QAM, 64-QAM 802.11n(OFDM): BPSK, QPSK, 16-QAM, 64-QAM 802.11ac/ax(OFDM): BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
Rate of Transmitter	802.11a: 6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps 802.11n: Up to 300Mbps 802.11ac/ax: up to 867Mbps
Antenna Type:	Internal Antenna
Antenna gain:	5.1G: 3.02dBi, 5.8G: 2.19dBi
Power Supply:	100-240V~ 50/60Hz

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.
- 3.The product supports only the SU mode.



2. Channel List

Channel List for 802.11a/n(HT20)/ac(HT20)/ax(HE20)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
40	5200	48	5240

Channel List for 802.11n(HT40)/ac(HT40)/ax(HE40)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230

Channel List for 802.11a/n(HT20)/ac(HT20)/ax(HE20)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	161	5805
153	5765	165	5825
157	5785		

Channel List for 802.11n(HT40)/ac(HT40)/ax(HE40)			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795



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.

Band 1:

Pretest Mode	Modulation	Channel
Mode 1	802.11a	CH36
Mode 2		CH44
Mode 3		CH48
Mode 4	802.11n HT20	CH36
Mode 5		CH44
Mode 6		CH48
Mode 7	802.11n HT40	CH38
Mode 8		CH46
Mode 9	802.11ac HT20	CH36
Mode 10		CH44
Mode 11		CH48
Mode 12	802.11ax HE20	CH36
Mode 13		CH44
Mode 14		CH48
Mode 15	802.11ac HT40	CH38
Mode 16		CH46
Mode 17	802.11ax HE40	CH38
Mode 18		CH46

Band 4:

Pretest Mode	Modulation	Channel
Mode 19	802.11a	CH149
Mode 20		CH157
Mode 21		CH165
Mode 22	802.11n HT20	CH149
Mode 23		CH157
Mode 24		CH165
Mode 25	802.11n HT40	CH151
Mode 26		CH159
Mode 27	802.11ac HT20	CH149
Mode 28		CH157
Mode 29		CH165
Mode 30	802.11ax HE20	CH149
Mode 31		CH157
Mode 32		CH165
Mode 33	802.11ac HT40	CH151
Mode 34		CH159
Mode 35	802.11ax HE40	CH151
Mode 36		CH159

Note: (1) The measurements are performed at the highest, middle, lowest available channels.

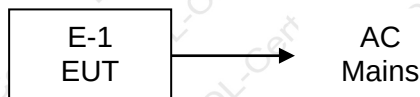
(2) During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and under that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.

(3) For the two items of conducted disturbance at the power supply end and space radiation below 1GHz, all modes have undergone pre-tests. The report only shows the worst test results of mode 6.

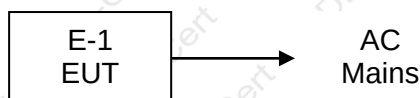


2.3. BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

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	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: AIC8800			
Mode	802.11a	802.11n HT20	802.11n HT40	802.11ac HT20/ax HE20 ac HT40/ax HE40
Data Rate	6Mbps	MSC0	MSC0	MSC0
Power Setting of Software	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
17	Temperature & humidity chamber	Changfeng	CF-150-40-P	CF170802-01	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 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

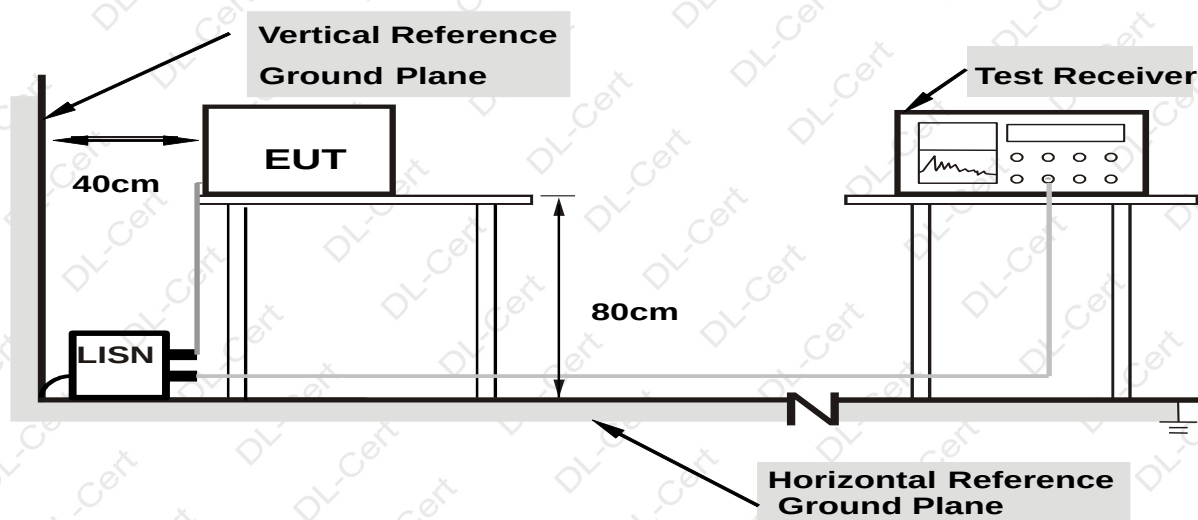
- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- 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

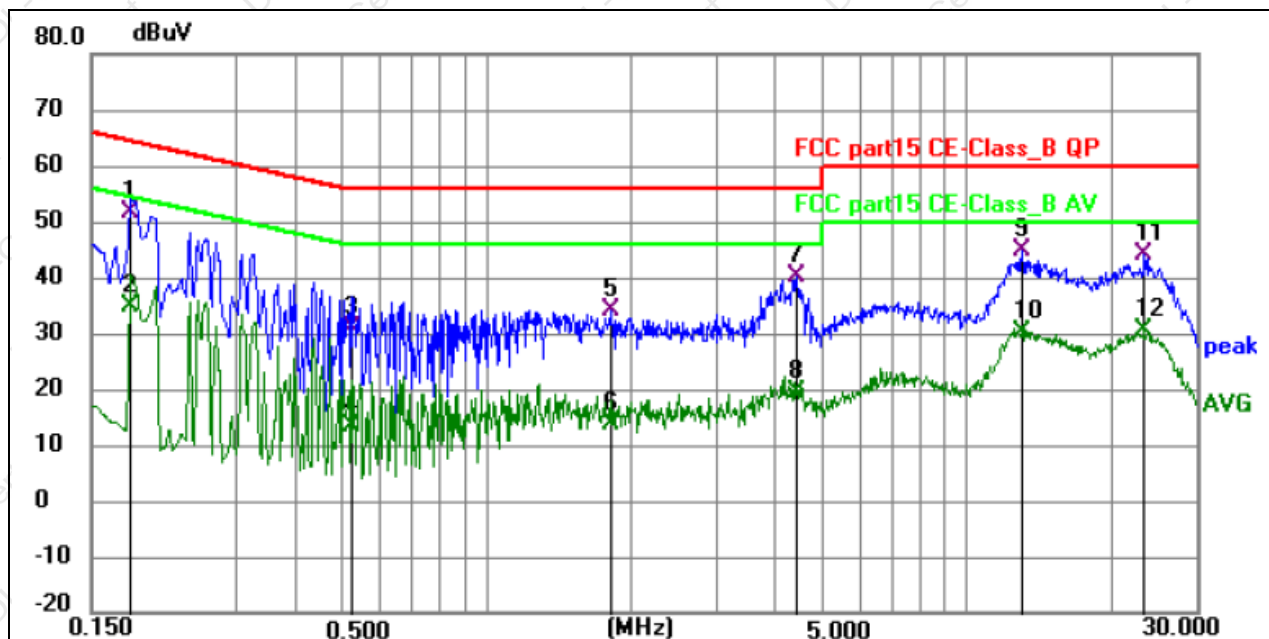
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

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

Temperature:	25 °C	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	L
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 6



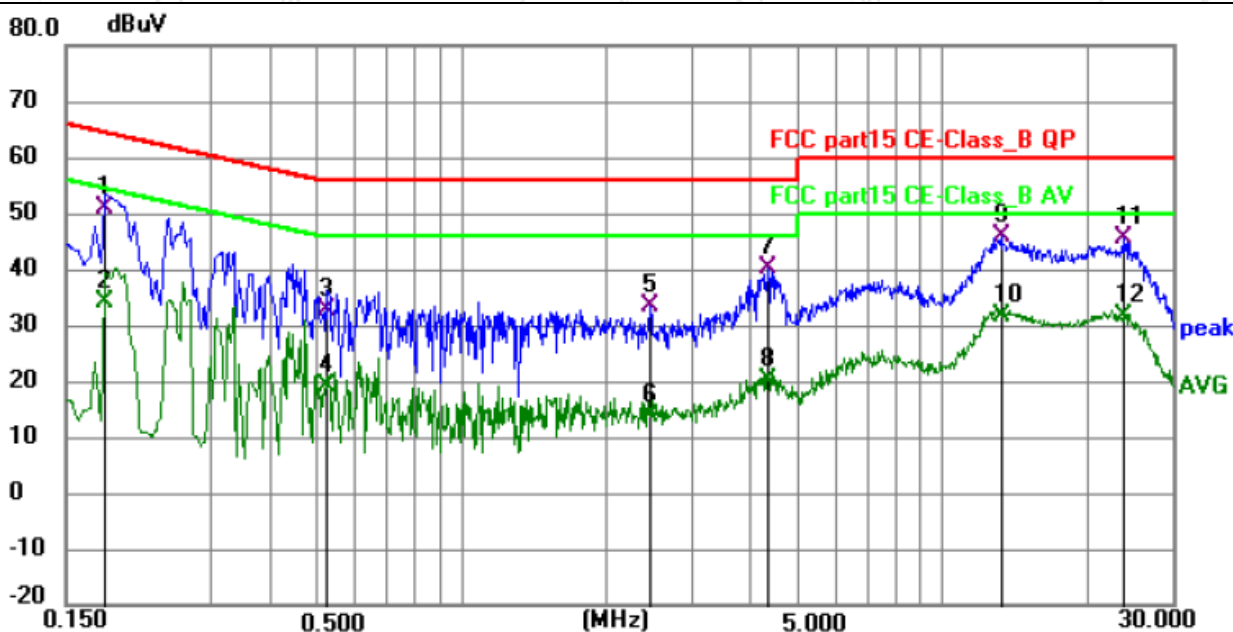
Remark:

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 *	0.1814	41.98	9.67	51.65	64.42	-12.77	QP	P	
2	0.1814	25.08	9.67	34.75	54.42	-19.67	AVG	P	
3	0.5231	20.88	9.85	30.73	56.00	-25.27	QP	P	
4	0.5231	3.62	9.85	13.47	46.00	-32.53	AVG	P	
5	1.8150	24.28	9.99	34.27	56.00	-21.73	QP	P	
6	1.8150	3.87	9.99	13.86	46.00	-32.14	AVG	P	
7	4.4294	30.33	9.91	40.24	56.00	-15.76	QP	P	
8	4.4294	9.60	9.91	19.51	46.00	-26.49	AVG	P	
9	13.0110	34.80	9.92	44.72	60.00	-15.28	QP	P	
10	13.0110	20.31	9.92	30.23	50.00	-19.77	AVG	P	
11	23.4420	34.00	10.14	44.14	60.00	-15.86	QP	P	
12	23.4420	20.43	10.14	30.57	50.00	-19.43	AVG	P	



Temperature:	25 °C	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	N
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 6



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 *	0.1814	41.31	9.67	50.98	64.42	-13.44	QP	P	
2	0.1814	24.26	9.67	33.93	54.42	-20.49	AVG	P	
3	0.5231	23.00	9.85	32.85	56.00	-23.15	QP	P	
4	0.5231	9.25	9.85	19.10	46.00	-26.90	AVG	P	
5	2.4674	23.38	9.97	33.35	56.00	-22.65	QP	P	
6	2.4674	3.76	9.97	13.73	46.00	-32.27	AVG	P	
7	4.3395	30.38	9.91	40.29	56.00	-15.71	QP	P	
8	4.3395	10.13	9.91	20.04	46.00	-25.96	AVG	P	
9	13.2134	36.06	9.93	45.99	60.00	-14.01	QP	P	
10	13.2134	21.71	9.93	31.64	50.00	-18.36	AVG	P	
11	23.7164	35.26	10.16	45.42	60.00	-14.58	QP	P	
12	23.7164	21.37	10.16	31.53	50.00	-18.47	AVG	P	



3.2. RADIATED EMISSION MEASUREMENT

3.2.1. RADIATED EMISSION LIMITS

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 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.

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 (micromvolts/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:

- 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:

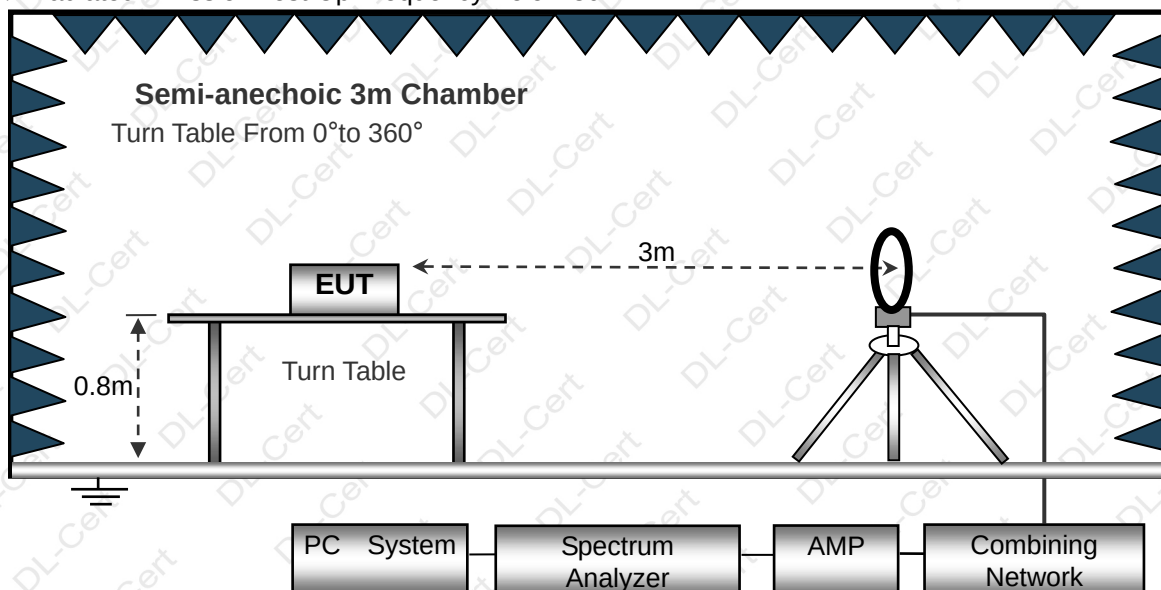
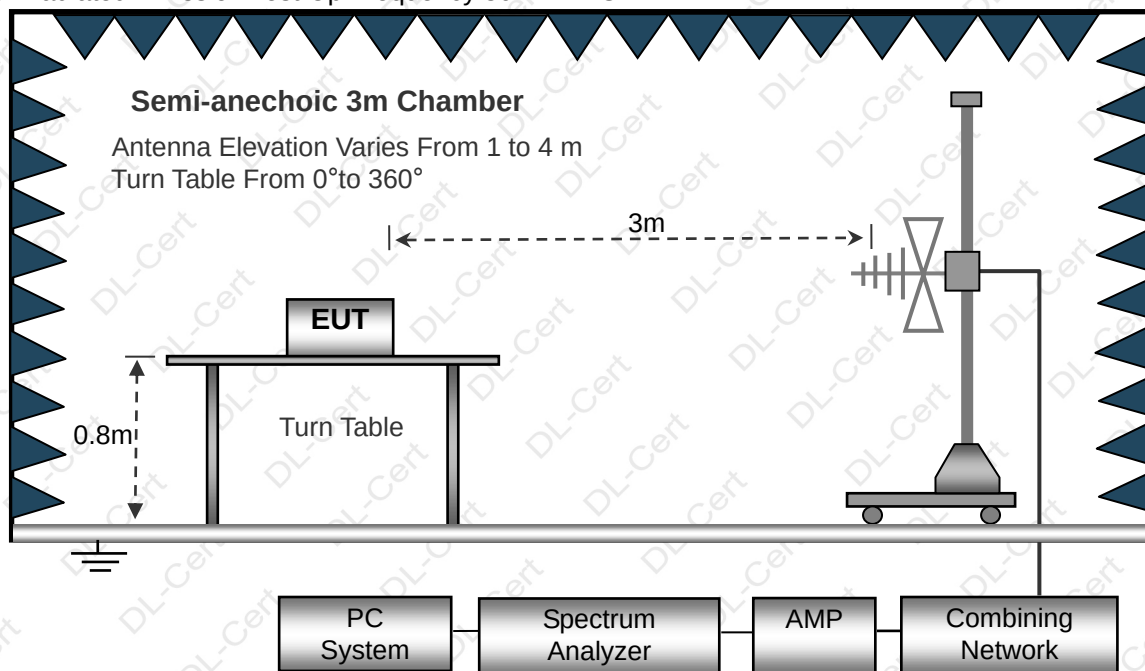
- Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre.
- Test the EUT in the lowest channel, the middle channel, the Highest channel

Note:

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

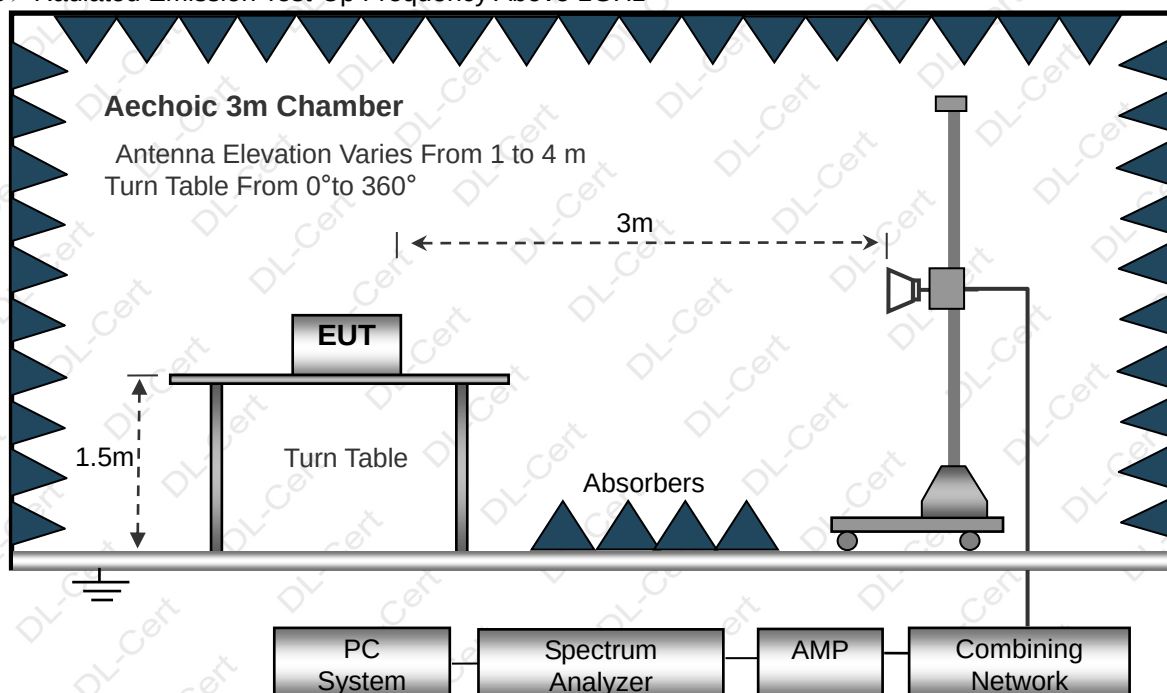
3.2.3. DEVIATION FROM TEST STANDARD

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 3	Polarization :	--

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

NOTE:

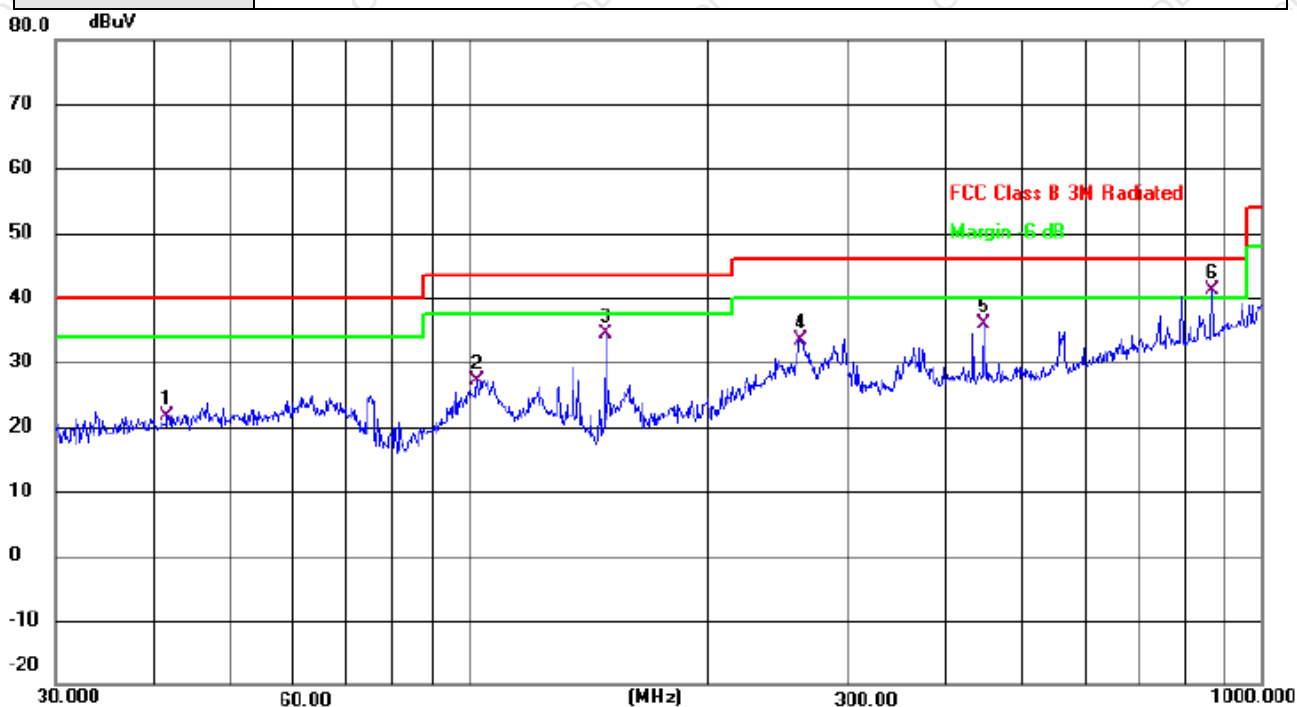
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log (\text{specific distance/test distance})$ (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. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dB	Margin dB	Detector
1		41.7129	29.26	-7.64	21.62	40.00	-18.38	QP
2		102.3597	35.98	-8.87	27.11	43.50	-16.39	QP
3		148.4410	47.20	-12.71	34.49	43.50	-9.01	QP
4		261.9753	40.44	-6.96	33.48	46.00	-12.52	QP
5		446.4141	38.13	-2.26	35.87	46.00	-10.13	QP
6	*	866.0879	36.27	4.92	41.19	46.00	-4.81	QP

Remark:

Correct Factor = Cable loss + Antenna factor – Preamplifier;

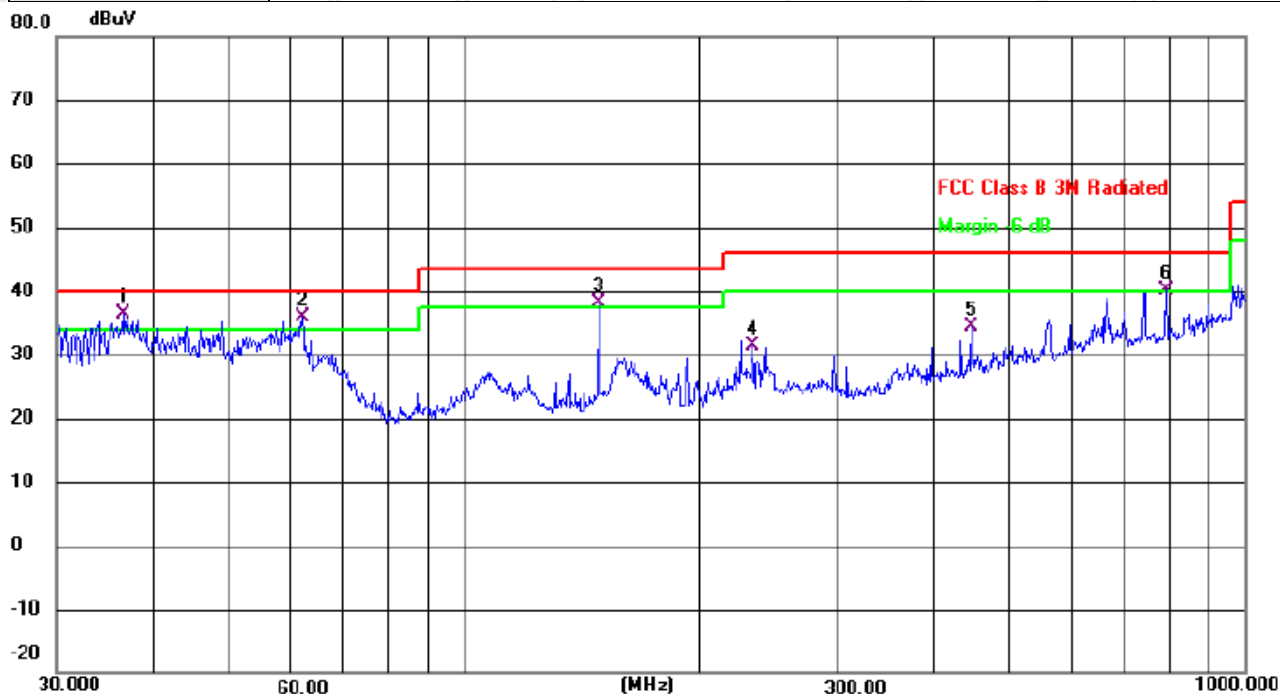
Level = Reading Level + Correct Factor; Margin = Level - Limit;



Shenzhen DL Testing Technology Co., Ltd.

Report No.: DLE-250813038R

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	Measurement	Limit	Margin	
		MHz	dBuV	dB	dBuV	dB	dB	Detector
1	*	36.5092	45.48	-9.21	36.27	40.00	-3.73	QP
2	!	61.9951	44.14	-8.31	35.83	40.00	-4.17	QP
3	!	148.4410	50.91	-12.71	38.20	43.50	-5.30	QP
4		234.1684	39.06	-7.76	31.30	46.00	-14.70	QP
5		446.4141	36.71	-2.26	34.45	46.00	-11.55	QP
6	!	793.3960	36.44	3.74	40.18	46.00	-5.82	QP

Remark:

Correct Factor = Cable loss + Antenna factor – Preamplifier;

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

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

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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	56.36	49.05	15.3	37.39	60	68.2	-8.20	PK
V	10360	41.58	49.05	15.3	37.39	45.22	54	-8.78	AV
V	15540	52.44	49.16	15.27	40.45	59	74	-15.00	PK
V	15540	39.21	49.16	15.27	40.45	45.77	54	-8.23	AV
H	10360	56.19	49.05	15.3	37.39	59.83	68.2	-8.37	PK
H	10360	40.52	49.05	15.3	37.39	44.16	54	-9.84	AV
H	15540	51.23	49.16	15.27	40.45	57.79	74	-16.21	PK
H	15540	38.64	49.16	15.27	40.45	45.2	54	-8.80	AV
operation frequency:5200									
V	10400	57.63	49.09	15.34	37.42	61.3	68.2	-6.90	PK
V	10400	39.88	49.09	15.34	37.42	43.55	54	-10.45	AV
V	15600	52.66	49.18	15.29	40.47	59.24	74	-14.76	PK
V	15600	38.24	49.18	15.29	40.47	44.82	54	-9.18	AV
H	10400	56.31	49.09	15.34	37.42	59.98	68.2	-8.22	PK
H	10400	39.58	49.09	15.34	37.42	43.25	54	-10.75	AV
H	15600	53.63	49.18	15.29	40.47	60.21	74	-13.79	PK
H	15600	38.52	49.18	15.29	40.47	45.1	54	-8.90	AV
operation frequency:5240									
V	10480	58.21	49.11	15.37	37.46	61.93	68.2	-6.27	PK
V	10480	39.52	49.11	15.37	37.46	43.24	54	-10.76	AV
V	15720	53.86	49.21	15.34	40.51	60.5	74	-13.50	PK
V	15720	38.41	49.21	15.34	40.51	45.05	54	-8.95	AV
H	10480	57.85	49.11	15.37	31.31	55.42	68.2	-12.78	PK
H	10480	45.66	49.11	15.37	31.31	43.23	54	-10.77	AV
H	15720	54.54	49.21	15.34	40.51	61.18	74	-12.82	PK
H	15720	37.57	49.21	15.34	40.51	44.21	54	-9.79	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.



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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	38.12	49.05	15.3	37.39	41.76	54	-12.24	AV
V	15540	52.46	49.16	15.27	40.45	59.02	74	-14.98	PK
V	15540	38.25	49.16	15.27	40.45	44.81	54	-9.19	AV
H	10360	56.84	49.05	15.3	37.39	60.48	68.2	-7.72	PK
H	10360	39.86	49.05	15.3	37.39	43.5	54	-10.50	AV
H	15540	51.61	49.16	15.27	40.45	58.17	74	-15.83	PK
H	15540	38.63	49.16	15.27	40.45	45.19	54	-8.81	AV
operation frequency:5200									
V	10400	56.85	49.09	15.34	37.42	60.52	68.2	-7.68	PK
V	10400	39.66	49.09	15.34	37.42	43.33	54	-10.67	AV
V	15600	52.54	49.18	15.29	40.47	59.12	74	-14.88	PK
V	15600	38.14	49.18	15.29	40.47	44.72	54	-9.28	AV
H	10400	55.56	49.09	15.34	37.42	59.23	68.2	-8.97	PK
H	10400	40.85	49.09	15.34	37.42	44.52	54	-9.48	AV
H	15600	53.63	49.18	15.29	40.47	60.21	74	-13.79	PK
H	15600	39.74	49.18	15.29	40.47	46.32	54	-7.68	AV
operation frequency:5240									
V	10480	57.63	49.11	15.37	37.46	61.35	68.2	-6.85	PK
V	10480	40.54	49.11	15.37	37.46	44.26	54	-9.74	AV
V	15720	52.81	49.21	15.34	40.51	59.45	74	-14.55	PK
V	15720	38.66	49.21	15.34	40.51	45.3	54	-8.70	AV
H	10480	57.28	49.11	15.37	31.31	54.85	68.2	-13.35	PK
H	10480	44.84	49.11	15.37	31.31	42.41	54	-11.59	AV
H	15720	51.36	49.21	15.34	40.51	58	74	-16.00	PK
H	15720	39.52	49.21	15.34	40.51	46.16	54	-7.84	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.									



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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	39.66	49.07	15.33	37.41	43.33	54	-10.67	AV
V	15570	52.85	49.17	15.28	40.46	59.42	74	-14.58	PK
V	15570	38.84	49.17	15.28	40.46	45.41	54	-8.59	AV
H	10380	56.66	49.07	15.33	37.41	60.33	68.2	-7.87	PK
H	10380	40.58	49.07	15.33	37.41	44.25	54	-9.75	AV
H	15570	52.63	49.17	15.28	40.46	59.2	74	-14.80	PK
H	15570	38.44	49.17	15.28	40.46	45.01	54	-8.99	AV
operation frequency:5230									
V	10460	57.69	49.11	15.37	37.46	61.41	68.2	-6.79	PK
V	10460	39.52	49.11	15.37	37.46	43.24	54	-10.76	AV
V	15690	52.84	49.21	15.34	40.51	59.48	74	-14.52	PK
V	15690	38.63	49.21	15.34	40.51	45.27	54	-8.73	AV
H	10460	57.47	49.11	15.37	31.31	55.04	68.2	-13.16	PK
H	10460	44.45	49.11	15.37	31.31	42.02	54	-11.98	AV
H	15690	52.26	49.21	15.34	40.51	58.9	74	-15.10	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.									



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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	56.55	49.05	15.3	37.39	60.19	68.2	-8.01	PK
V	10360	39.31	49.05	15.3	37.39	42.95	54	-11.05	AV
V	15540	51.86	49.16	15.27	40.45	58.42	74	-15.58	PK
V	15540	38.28	49.16	15.27	40.45	44.84	54	-9.16	AV
H	10360	56.64	49.05	15.3	37.39	60.28	68.2	-7.92	PK
H	10360	38.56	49.05	15.3	37.39	42.2	54	-11.80	AV
H	15540	52.15	49.16	15.27	40.45	58.71	74	-15.29	PK
H	15540	39.57	49.16	15.27	40.45	46.13	54	-7.87	AV
operation frequency:5200									
V	10400	56.63	49.09	15.34	37.42	60.3	68.2	-7.90	PK
V	10400	41.54	49.09	15.34	37.42	45.21	54	-8.79	AV
V	15600	52.52	49.18	15.29	40.47	59.1	74	-14.90	PK
V	15600	40.36	49.18	15.29	40.47	46.94	54	-7.06	AV
H	10400	55.48	49.09	15.34	37.42	59.15	68.2	-9.05	PK
H	10400	40.52	49.09	15.34	37.42	44.19	54	-9.81	AV
H	15600	53.63	49.18	15.29	40.47	60.21	74	-13.79	PK
H	15600	41.21	49.18	15.29	40.47	47.79	54	-6.21	AV
operation frequency:5240									
V	10480	57.52	49.11	15.37	37.46	61.24	68.2	-6.96	PK
V	10480	40.66	49.11	15.37	37.46	44.38	54	-9.62	AV
V	15720	51.67	49.21	15.34	40.51	58.31	74	-15.69	PK
V	15720	39.64	49.21	15.34	40.51	46.28	54	-7.72	AV
H	10480	57.51	49.11	15.37	31.31	55.08	68.2	-13.12	PK
H	10480	44.63	49.11	15.37	31.31	42.2	54	-11.80	AV
H	15720	52.25	49.21	15.34	40.51	58.89	74	-15.11	PK
H	15720	40.68	49.21	15.34	40.51	47.32	54	-6.68	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.									



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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	56.81	49.07	15.33	37.41	60.48	68.2	-7.72	PK
V	10360	40.21	49.07	15.33	37.41	43.88	54	-10.12	AV
V	15540	52.36	49.17	15.28	40.46	58.93	74	-15.07	PK
V	15540	39.74	49.17	15.28	40.46	46.31	54	-7.69	AV
H	10360	56.58	49.07	15.33	37.41	60.25	68.2	-7.95	PK
H	10360	40.46	49.07	15.33	37.41	44.13	54	-9.87	AV
H	15540	51.55	49.17	15.28	40.46	58.12	74	-15.88	PK
H	15540	39.41	49.17	15.28	40.46	45.98	54	-8.02	AV
operation frequency:5200									
V	10400	57.53	49.11	15.37	37.46	61.25	68.2	-6.95	PK
V	10400	41.85	49.11	15.37	37.46	45.57	54	-8.43	AV
V	15600	52.63	49.21	15.34	40.51	59.27	74	-14.73	PK
V	15600	39.45	49.21	15.34	40.51	46.09	54	-7.91	AV
H	10400	57.21	49.11	15.37	31.31	54.78	68.2	-13.42	PK
H	10400	44.56	49.11	15.37	31.31	42.13	54	-11.87	AV
H	15600	52.52	49.21	15.34	40.51	59.16	74	-14.84	PK
H	15600	40.43	49.21	15.34	40.51	47.07	54	-6.93	AV
operation frequency:5240									
V	10480	56.44	49.07	15.33	37.41	60.11	68.2	-8.09	PK
V	10480	41.41	49.07	15.33	37.41	45.08	54	-8.92	AV
V	15720	51.63	49.17	15.28	40.46	58.2	74	-15.80	PK
V	15720	39.63	49.17	15.28	40.46	46.2	54	-7.80	AV
H	10480	56.57	49.07	15.33	37.41	60.24	68.2	-7.96	PK
H	10480	41.65	49.07	15.33	37.41	45.32	54	-8.68	AV
H	15720	52.63	49.17	15.28	40.46	59.2	74	-14.80	PK
H	15720	40.48	49.17	15.28	40.46	47.05	54	-6.95	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.									



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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	57.66	49.11	15.37	37.46	61.38	68.2	-6.82	PK
V	10380	40.68	49.11	15.37	37.46	44.4	54	-9.60	AV
V	15570	51.64	49.21	15.34	40.51	58.28	74	-15.72	PK
V	15570	39.66	49.21	15.34	40.51	46.3	54	-7.70	AV
H	10380	57.58	49.11	15.37	31.31	55.15	68.2	-13.05	PK
H	10380	44.21	49.11	15.37	31.31	41.78	54	-12.22	AV
H	15570	52.26	49.21	15.34	40.51	58.9	74	-15.10	PK
H	15570	40.41	49.21	15.34	40.51	47.05	54	-6.95	AV
operation frequency:5230									
V	10460	56.63	49.07	15.33	37.41	60.3	68.2	-7.90	PK
V	10460	40.28	49.07	15.33	37.41	43.95	54	-10.05	AV
V	15690	52.34	49.17	15.28	40.46	58.91	74	-15.09	PK
V	15690	39.74	49.17	15.28	40.46	46.31	54	-7.69	AV
H	10460	56.63	49.07	15.33	37.41	60.3	68.2	-7.90	PK
H	10460	40.48	49.07	15.33	37.41	44.15	54	-9.85	AV
H	15690	51.41	49.17	15.28	40.46	57.98	74	-16.02	PK
H	15690	39.69	49.17	15.28	40.46	46.26	54	-7.74	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.



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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	57.55	49.11	15.37	37.46	61.27	68.2	-6.93	PK
V	10380	41.81	49.11	15.37	37.46	45.53	54	-8.47	AV
V	15570	52.69	49.21	15.34	40.51	59.33	74	-14.67	PK
V	15570	39.44	49.21	15.34	40.51	46.08	54	-7.92	AV
H	10380	57.28	49.11	15.37	31.31	54.85	68.2	-13.35	PK
H	10380	44.32	49.11	15.37	31.31	41.89	54	-12.11	AV
H	15570	52.66	49.21	15.34	40.51	59.3	74	-14.70	PK
H	15570	40.47	49.21	15.34	40.51	47.11	54	-6.89	AV
operation frequency:5230									
V	10460	56.45	49.07	15.33	37.41	60.12	68.2	-8.08	PK
V	10460	41.46	49.07	15.33	37.41	45.13	54	-8.87	AV
V	15690	51.68	49.17	15.28	40.46	58.25	74	-15.75	PK
V	15690	39.67	49.17	15.28	40.46	46.24	54	-7.76	AV
H	10460	56.56	49.07	15.33	37.41	60.23	68.2	-7.97	PK
H	10460	41.52	49.07	15.33	37.41	45.19	54	-8.81	AV
H	15690	52.63	49.17	15.28	40.46	59.2	74	-14.80	PK
H	15690	40.47	49.17	15.28	40.46	47.04	54	-6.96	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.									



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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	54.52	49.05	15.3	37.39	58.16	74	-15.84	PK
V	11490	41.93	49.05	15.3	37.39	45.57	54	-8.43	AV
V	17235	55.52	49.16	15.27	40.45	62.08	68.2	-6.12	PK
V	17235	40.33	49.16	15.27	40.45	46.89	54	-7.11	AV
H	11490	52.64	49.05	15.3	37.39	56.28	74	-17.72	PK
H	11490	42.85	49.05	15.3	37.39	46.49	54	-7.51	AV
H	17235	51.25	49.16	15.27	40.45	57.81	68.2	-10.39	PK
H	17235	40.36	49.16	15.27	40.45	46.92	54	-7.08	AV
operation frequency:5785									
V	11570	51.52	49.09	15.34	37.42	55.19	74	-18.81	PK
V	11570	41.26	49.09	15.34	37.42	44.93	54	-9.07	AV
V	17355	50.75	49.18	15.29	40.47	57.33	68.2	-10.87	PK
V	17355	40.41	49.18	15.29	40.47	46.99	54	-7.01	AV
H	11570	50.56	49.09	15.34	37.42	54.23	74	-19.77	PK
H	11570	42.18	49.09	15.34	37.42	45.85	54	-8.15	AV
H	17355	48.34	49.18	15.29	40.47	54.92	68.2	-13.28	PK
H	17355	40.66	49.18	15.29	40.47	47.24	54	-6.76	AV
operation frequency:5825									
V	11650	52.58	49.11	15.37	37.46	56.3	74	-17.70	PK
V	11650	41.41	49.11	15.37	37.46	45.13	54	-8.87	AV
V	17475	49.83	49.21	15.34	40.51	56.47	68.2	-11.73	PK
V	17475	40.41	49.21	15.34	40.51	47.05	54	-6.95	AV
H	11650	57.63	49.11	15.37	31.31	55.2	74	-18.80	PK
H	11650	48.58	49.11	15.37	31.31	46.15	54	-7.85	AV
H	17475	49.54	49.21	15.34	40.51	56.18	68.2	-12.02	PK
H	17475	40.63	49.21	15.34	40.51	47.27	54	-6.73	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.



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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	49.58	49.05	15.3	37.39	53.22	74	-20.78	PK
V	11490	42.56	49.05	15.3	37.39	46.2	54	-7.80	AV
V	17235	48.25	49.16	15.27	40.45	54.81	68.2	-13.39	PK
V	17235	40.91	49.16	15.27	40.45	47.47	54	-6.53	AV
H	11490	49.56	49.05	15.3	37.39	53.2	74	-20.80	PK
H	11490	41.37	49.05	15.3	37.39	45.01	54	-8.99	AV
H	17235	48.45	49.16	15.27	40.45	55.01	68.2	-13.19	PK
H	17235	40.63	49.16	15.27	40.45	47.19	54	-6.81	AV
operation frequency:5785									
V	11570	52.21	49.09	15.34	37.42	55.88	74	-18.12	PK
V	11570	42.46	49.09	15.34	37.42	46.13	54	-7.87	AV
V	17355	49.54	49.18	15.29	40.47	56.12	68.2	-12.08	PK
V	17355	40.85	49.18	15.29	40.47	47.43	54	-6.57	AV
H	11570	49.36	49.09	15.34	37.42	53.03	74	-20.97	PK
H	11570	43.84	49.09	15.34	37.42	47.51	54	-6.49	AV
H	17355	49.23	49.18	15.29	40.47	55.81	68.2	-12.39	PK
H	17355	40.67	49.18	15.29	40.47	47.25	54	-6.75	AV
operation frequency:5825									
V	11650	51.26	49.11	15.37	37.46	54.98	74	-19.02	PK
V	11650	41.64	49.11	15.37	37.46	45.36	54	-8.64	AV
V	17475	48.21	49.21	15.34	40.51	54.85	68.2	-13.35	PK
V	17475	40.63	49.21	15.34	40.51	47.27	54	-6.73	AV
H	11650	57.84	49.11	15.37	31.31	55.41	74	-18.59	PK
H	11650	44.85	49.11	15.37	31.31	42.42	54	-11.58	AV
H	17475	49.23	49.21	15.34	40.51	55.87	68.2	-12.33	PK
H	17475	40.44	49.21	15.34	40.51	47.08	54	-6.92	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.									



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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	41.63	49.07	15.33	37.41	45.3	54	-8.70	AV
V	17265	49.85	49.17	15.28	40.46	56.42	68.2	-11.78	PK
V	17265	40.14	49.17	15.28	40.46	46.71	54	-7.29	AV
H	11510	48.58	49.07	15.33	37.41	52.25	74	-21.75	PK
H	11510	41.33	49.07	15.33	37.41	45	54	-9.00	AV
H	17265	49.24	49.17	15.28	40.46	55.81	68.2	-12.39	PK
H	17265	40.44	49.17	15.28	40.46	47.01	54	-6.99	AV
operation frequency:5795									
V	11590	49.21	49.11	15.37	37.46	52.93	74	-21.07	PK
V	11590	41.63	49.11	15.37	37.46	45.35	54	-8.65	AV
V	17385	48.18	49.21	15.34	40.51	54.82	68.2	-13.38	PK
V	17385	40.64	49.21	15.34	40.51	47.28	54	-6.72	AV
H	11590	57.53	49.11	15.37	31.31	55.1	74	-18.90	PK
H	11590	44.88	49.11	15.37	31.31	42.45	54	-11.55	AV
H	17385	48.13	49.21	15.34	40.51	54.77	68.2	-13.43	PK
H	17385	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.									



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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	49.63	49.05	15.3	37.39	53.27	74	-20.73	PK
V	11490	42.24	49.05	15.3	37.39	45.88	54	-8.12	AV
V	17235	48.87	49.16	15.27	40.45	55.43	68.2	-12.77	PK
V	17235	40.34	49.16	15.27	40.45	46.9	54	-7.10	AV
H	11490	48.46	49.05	15.3	37.39	52.1	74	-21.90	PK
H	11490	41.12	49.05	15.3	37.39	44.76	54	-9.24	AV
H	17235	48.21	49.16	15.27	40.45	54.77	68.2	-13.43	PK
H	17235	40.63	49.16	15.27	40.45	47.19	54	-6.81	AV
operation frequency:5785									
V	11570	48.63	49.09	15.34	37.42	52.3	74	-21.70	PK
V	11570	41.31	49.09	15.34	37.42	44.98	54	-9.02	AV
V	17355	49.14	49.18	15.29	40.47	55.72	68.2	-12.48	PK
V	17355	40.63	49.18	15.29	40.47	47.21	54	-6.79	AV
H	11570	49.55	49.09	15.34	37.42	53.22	74	-20.78	PK
H	11570	43.66	49.09	15.34	37.42	47.33	54	-6.67	AV
H	17355	49.67	49.18	15.29	40.47	56.25	68.2	-11.95	PK
H	17355	40.95	49.18	15.29	40.47	47.53	54	-6.47	AV
operation frequency:5825									
V	11650	49.63	49.11	15.37	37.46	53.35	74	-20.65	PK
V	11650	41.31	49.11	15.37	37.46	45.03	54	-8.97	AV
V	17475	48.43	49.21	15.34	40.51	55.07	68.2	-13.13	PK
V	17475	40.55	49.21	15.34	40.51	47.19	54	-6.81	AV
H	11650	57.26	49.11	15.37	31.31	54.83	74	-19.17	PK
H	11650	44.67	49.11	15.37	31.31	42.24	54	-11.76	AV
H	17475	48.52	49.21	15.34	40.51	55.16	68.2	-13.04	PK
H	17475	40.53	49.21	15.34	40.51	47.17	54	-6.83	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.									



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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	49.69	49.07	15.33	37.41	53.36	74	-20.64	PK
V	11490	42.45	49.07	15.33	37.41	46.12	54	-7.88	AV
V	17235	48.41	49.17	15.28	40.46	54.98	68.2	-13.22	PK
V	17235	41.33	49.17	15.28	40.46	47.9	54	-6.10	AV
H	11490	48.57	49.07	15.33	37.41	52.24	74	-21.76	PK
H	11490	42.26	49.07	15.33	37.41	45.93	54	-8.07	AV
H	17235	48.24	49.17	15.28	40.46	54.81	68.2	-13.39	PK
H	17235	40.75	49.17	15.28	40.46	47.32	54	-6.68	AV
operation frequency:5785									
V	11570	49.66	49.11	15.37	37.46	53.38	74	-20.62	PK
V	11570	41.58	49.11	15.37	37.46	45.3	54	-8.70	AV
V	17355	48.41	49.21	15.34	40.51	55.05	68.2	-13.15	PK
V	17355	40.66	49.21	15.34	40.51	47.3	54	-6.70	AV
H	11570	57.25	49.11	15.37	31.31	54.82	74	-19.18	PK
H	11570	44.63	49.11	15.37	31.31	42.2	54	-11.80	AV
H	17355	48.44	49.21	15.34	40.51	55.08	68.2	-13.12	PK
H	17355	40.57	49.21	15.34	40.51	47.21	54	-6.79	AV
operation frequency:5825									
V	11650	48.53	49.07	15.33	37.41	52.2	74	-21.80	PK
V	11650	42.52	49.07	15.33	37.41	46.19	54	-7.81	AV
V	17475	49.16	49.17	15.28	40.46	55.73	68.2	-12.47	PK
V	17475	40.84	49.17	15.28	40.46	47.41	54	-6.59	AV
H	11650	48.85	49.07	15.33	37.41	52.52	74	-21.48	PK
H	11650	41.66	49.07	15.33	37.41	45.33	54	-8.67	AV
H	17475	48.52	49.17	15.28	40.46	55.09	68.2	-13.11	PK
H	17475	40.63	49.17	15.28	40.46	47.2	54	-6.80	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.									



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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	49.52	49.11	15.37	37.46	53.24	74	-20.76	PK
V	11510	41.96	49.11	15.37	37.46	45.68	54	-8.32	AV
V	17265	48.55	49.21	15.34	40.51	55.19	68.2	-13.01	PK
V	17265	40.14	49.21	15.34	40.51	46.78	54	-7.22	AV
H	11510	57.22	49.11	15.37	31.31	54.79	74	-19.21	PK
H	11510	44.68	49.11	15.37	31.31	42.25	54	-11.75	AV
H	17265	48.56	49.21	15.34	40.51	55.2	68.2	-13.00	PK
H	17265	40.57	49.21	15.34	40.51	47.21	54	-6.79	AV
operation frequency:5795									
V	11590	49.21	49.07	15.33	37.41	52.88	74	-21.12	PK
V	11590	42.46	49.07	15.33	37.41	46.13	54	-7.87	AV
V	17385	48.48	49.17	15.28	40.46	55.05	68.2	-13.15	PK
V	17385	41.36	49.17	15.28	40.46	47.93	54	-6.07	AV
H	11590	48.54	49.07	15.33	37.41	52.21	74	-21.79	PK
H	11590	42.21	49.07	15.33	37.41	45.88	54	-8.12	AV
H	17385	48.26	49.17	15.28	40.46	54.83	68.2	-13.37	PK
H	17385	40.85	49.17	15.28	40.46	47.42	54	-6.58	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.									



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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	49.11	15.37	37.46	52.93	74	-21.07	PK
V	11510	41.53	49.11	15.37	37.46	45.25	54	-8.75	AV
V	17265	48.48	49.21	15.34	40.51	55.12	68.2	-13.08	PK
V	17265	40.63	49.21	15.34	40.51	47.27	54	-6.73	AV
H	11510	57.24	49.11	15.37	31.31	54.81	74	-19.19	PK
H	11510	44.21	49.11	15.37	31.31	41.78	54	-12.22	AV
H	17265	48.63	49.21	15.34	40.51	55.27	68.2	-12.93	PK
H	17265	40.55	49.21	15.34	40.51	47.19	54	-6.81	AV
operation frequency:5795									
V	11590	48.56	49.07	15.33	37.41	52.23	74	-21.77	PK
V	11590	42.85	49.07	15.33	37.41	46.52	54	-7.48	AV
V	17385	49.41	49.17	15.28	40.46	55.98	68.2	-12.22	PK
V	17385	40.63	49.17	15.28	40.46	47.2	54	-6.80	AV
H	11590	48.85	49.07	15.33	37.41	52.52	74	-21.48	PK
H	11590	41.61	49.07	15.33	37.41	45.28	54	-8.72	AV
H	17385	48.69	49.17	15.28	40.46	55.26	68.2	-12.94	PK
H	17385	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.									

**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 1:5000MHz-5150MHz, Band 4:5600MHz-5785MHz
Stop Frequency	Band 1:5350MHz-5460MHz, 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:

- 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.
- 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.
- 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.
- Test the EUT in the lowest channel,the Highest channel

Note:

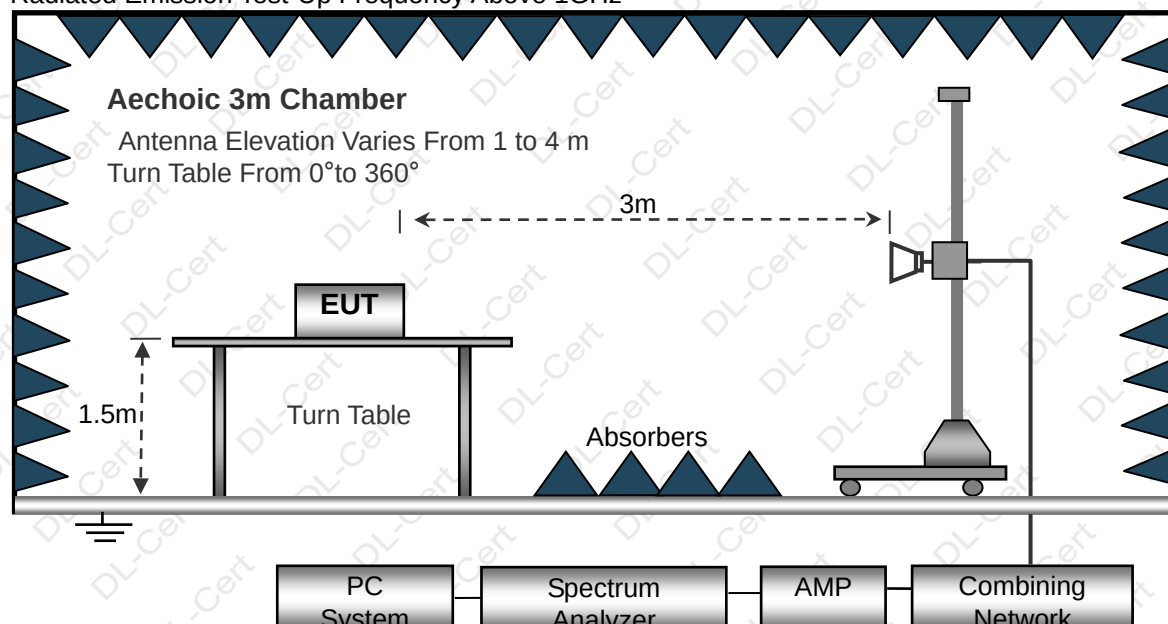
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

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 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	5110	53.63	49.12	15.6	37.34	57.45	74	-16.55	PK
V	5110	39.41	49.12	15.6	37.34	43.23	54	-10.77	AV
V	5135	54.13	49.19	15.24	40.43	60.61	74	-13.39	PK
V	5135	36.28	49.19	15.24	40.43	42.76	54	-11.24	AV
V	5150	53.35	49.12	15.6	37.34	57.17	74	-16.83	PK
V	5150	39.85	49.12	15.6	37.34	43.67	54	-10.33	AV
H	5110	52.21	49.12	15.6	37.34	56.03	74	-17.97	PK
H	5110	37.66	49.12	15.6	37.34	41.48	54	-12.52	AV
H	5135	54.57	49.19	15.24	40.43	61.05	74	-12.95	PK
H	5135	33.85	49.19	15.24	40.43	40.33	54	-13.67	AV
H	5150	54.44	49.19	15.24	40.43	60.92	74	-13.08	PK
H	5150	36.21	49.19	15.24	40.43	42.69	54	-11.31	AV
operation frequency:5240									
V	5350	53.55	49.12	15.6	37.34	57.37	74	-16.63	PK
V	5350	39.74	49.12	15.6	37.34	43.56	54	-10.44	AV
V	5360	53.21	49.13	15.32	37.46	56.86	74	-17.14	PK
V	5360	35.46	49.13	15.32	37.46	39.11	54	-14.89	AV
V	5385	53.15	49.24	15.36	40.51	59.78	74	-14.22	PK
V	5385	32.84	49.24	15.36	40.51	39.47	54	-14.53	AV
H	5350	54.63	49.19	15.24	40.43	61.11	74	-12.89	PK
H	5350	36.52	49.19	15.24	40.43	43	54	-11	AV
H	5360	52.63	49.13	15.32	31.31	50.13	74	-23.87	PK
H	5360	40.44	49.13	15.32	31.31	37.94	54	-16.06	AV
H	5385	52.37	49.24	15.36	40.51	59	74	-15	PK
H	5385	32.63	49.24	15.36	40.51	39.26	54	-14.74	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.									



802.11n 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	5110	53.35	49.12	15.6	37.34	57.17	74	-16.83	PK
V	5110	39.85	49.12	15.6	37.34	43.67	54	-10.33	AV
V	5135	54.41	49.19	15.24	40.43	60.89	74	-13.11	PK
V	5135	36.25	49.19	15.24	40.43	42.73	54	-11.27	AV
V	5150	52.63	49.12	15.6	37.34	56.45	74	-17.55	PK
V	5150	37.41	49.12	15.6	37.34	41.23	54	-12.77	AV
H	5110	54.63	49.19	15.24	40.43	61.11	74	-12.89	PK
H	5110	33.44	49.19	15.24	40.43	39.92	54	-14.08	AV
H	5135	53.85	49.13	15.32	37.46	57.5	74	-16.5	PK
H	5135	35.42	49.13	15.32	37.46	39.07	54	-14.93	AV
H	5150	53.52	49.24	15.36	40.51	60.15	74	-13.85	PK
H	5150	32.41	49.24	15.36	40.51	39.04	54	-14.96	AV
operation frequency:5240									
V	5350	52.25	49.13	15.32	31.31	49.75	74	-24.25	PK
V	5350	40.58	49.13	15.32	31.31	38.08	54	-15.92	AV
V	5360	52.63	49.24	15.36	40.51	59.26	74	-14.74	PK
V	5360	32.21	49.24	15.36	40.51	38.84	54	-15.16	AV
V	5385	51.52	49.12	15.6	37.34	55.34	74	-18.66	PK
V	5385	33.66	49.12	15.6	37.34	37.48	54	-16.52	AV
H	5350	51.52	49.19	15.24	40.43	58	74	-16	PK
H	5350	33.41	49.19	15.24	40.43	39.89	54	-14.11	AV
H	5360	51.57	49.12	15.6	37.34	55.39	74	-18.61	PK
H	5360	33.69	49.12	15.6	37.34	37.51	54	-16.49	AV
H	5385	50.52	49.19	15.24	40.43	57	74	-17	PK
H	5385	32.21	49.19	15.24	40.43	38.69	54	-15.31	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	5110	53.36	49.13	15.32	37.46	57.01	74	-16.99	PK
V	5110	34.38	49.13	15.32	37.46	38.03	54	-15.97	AV
V	5135	50.44	49.24	15.36	40.51	57.07	74	-16.93	PK
V	5135	33.69	49.24	15.36	40.51	40.32	54	-13.68	AV
V	5150	54.52	49.13	15.32	31.31	52.02	74	-21.98	PK
V	5150	36.63	49.13	15.32	31.31	34.13	54	-19.87	AV
H	5110	51.21	49.24	15.36	40.51	57.84	74	-16.16	PK
H	5110	33.52	49.24	15.36	40.51	40.15	54	-13.85	AV
H	5135	52.58	49.12	15.33	37.41	56.2	74	-17.8	PK
H	5135	34.63	49.12	15.33	37.41	38.25	54	-15.75	AV
H	5150	51.21	49.19	15.28	40.46	57.76	74	-16.24	PK
H	5150	33.41	49.19	15.28	40.46	39.96	54	-14.04	AV
operation frequency:5240									
V	5350	52.23	49.12	15.33	37.41	55.85	74	-18.15	PK
V	5350	34.74	49.12	15.33	37.41	38.36	54	-15.64	AV
V	5360	50.46	49.19	15.28	40.46	57.01	74	-16.99	PK
V	5360	33.85	49.19	15.28	40.46	40.4	54	-13.6	AV
V	5385	52.21	49.12	15.33	37.41	55.83	74	-18.17	PK
V	5385	34.63	49.12	15.33	37.41	38.25	54	-15.75	AV
H	5350	51.52	49.19	15.28	40.46	58.07	74	-15.93	PK
H	5350	33.76	49.19	15.28	40.46	40.31	54	-13.69	AV
H	5360	52.64	49.12	15.33	37.41	56.26	74	-17.74	PK
H	5360	34.57	49.12	15.33	37.41	38.19	54	-15.81	AV
H	5385	50.66	49.19	15.28	40.46	57.21	74	-16.79	PK
H	5385	33.58	49.19	15.28	40.46	40.13	54	-13.87	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.									



802.11ax HE20

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	5110	52.63	49.12	15.6	37.39	56.5	74	-17.5	PK
V	5110	35.21	49.12	15.6	37.39	39.08	54	-14.92	AV
V	5135	51.63	49.19	15.24	40.45	58.13	74	-15.87	PK
V	5135	34.85	49.19	15.24	40.45	41.35	54	-12.65	AV
V	5150	52.66	49.12	15.6	37.39	56.53	74	-17.47	PK
V	5150	34.41	49.12	15.6	37.39	38.28	54	-15.72	AV
H	5110	50.33	49.19	15.24	40.45	56.83	74	-17.17	PK
H	5110	35.85	49.19	15.24	40.45	42.35	54	-11.65	AV
H	5135	53.24	49.13	15.34	37.46	56.91	74	-17.09	PK
H	5135	37.52	49.13	15.34	37.46	41.19	54	-12.81	AV
H	5150	50.66	49.24	15.35	40.51	57.28	74	-16.72	PK
H	5150	36.41	49.24	15.35	40.51	43.03	54	-10.97	AV
operation frequency:5240									
V	5350	54.88	49.13	15.34	31.31	52.4	74	-21.6	PK
V	5350	41.22	49.13	15.34	31.31	38.74	54	-15.26	AV
V	5360	52.56	49.24	15.35	40.51	59.18	74	-14.82	PK
V	5360	36.55	49.24	15.35	40.51	43.17	54	-10.83	AV
V	5385	52.88	49.12	15.32	37.41	56.49	74	-17.51	PK
V	5385	37.44	49.12	15.32	37.41	41.05	54	-12.95	AV
H	5350	52.63	49.19	15.36	40.46	59.26	74	-14.74	PK
H	5350	36.52	49.19	15.36	40.46	43.15	54	-10.85	AV
H	5360	52.21	49.12	15.32	37.41	55.82	74	-18.18	PK
H	5360	37.34	49.12	15.32	37.41	40.95	54	-13.05	AV
H	5385	51.75	49.19	15.36	40.46	58.38	74	-15.62	PK
H	5385	36.18	49.19	15.36	40.46	42.81	54	-11.19	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	5110	54.69	49.13	15.34	37.34	58.24	74	-15.76	PK
V	5110	36.55	49.13	15.34	37.34	40.1	54	-13.9	AV
V	5135	51.58	49.24	15.35	40.43	58.12	74	-15.88	PK
V	5135	36.58	49.24	15.35	40.43	43.12	54	-10.88	AV
V	5150	54.36	49.13	15.34	37.34	57.91	74	-16.09	PK
V	5150	41.41	49.13	15.34	37.34	44.96	54	-9.04	AV
H	5110	50.85	49.24	15.35	40.43	57.39	74	-16.61	PK
H	5110	35.21	49.24	15.35	40.43	41.75	54	-12.25	AV
H	5135	52.36	49.13	15.32	37.48	56.03	74	-17.97	PK
H	5135	35.52	49.13	15.32	37.48	39.19	54	-14.81	AV
H	5150	51.21	49.24	15.36	40.42	57.75	74	-16.25	PK
H	5150	35.85	49.24	15.36	40.42	42.39	54	-11.61	AV
operation frequency:5230									
V	5350	53.25	49.12	15.6	37.34	57.07	74	-16.93	PK
V	5350	39.81	49.12	15.6	37.34	43.63	54	-10.37	AV
V	5360	54.88	49.19	15.24	40.43	61.36	74	-12.64	PK
V	5360	36.23	49.19	15.24	40.43	42.71	54	-11.29	AV
V	5385	52.65	49.12	15.6	37.34	56.47	74	-17.53	PK
V	5385	37.46	49.12	15.6	37.34	41.28	54	-12.72	AV
H	5350	54.41	49.19	15.24	40.43	60.89	74	-13.11	PK
H	5350	33.48	49.19	15.24	40.43	39.96	54	-14.04	AV
H	5360	53.21	49.13	15.32	37.46	56.86	74	-17.14	PK
H	5360	35.63	49.13	15.32	37.46	39.28	54	-14.72	AV
H	5385	53.58	49.24	15.36	40.51	60.21	74	-13.79	PK
H	5385	32.52	49.24	15.36	40.51	39.15	54	-14.85	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.									



802.11ac 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	5110	52.32	49.13	15.32	31.31	49.82	74	-24.18	PK
V	5110	40.54	49.13	15.32	31.31	38.04	54	-15.96	AV
V	5135	52.67	49.24	15.36	40.51	59.3	74	-14.7	PK
V	5135	32.63	49.24	15.36	40.51	39.26	54	-14.74	AV
V	5150	51.55	49.12	15.6	37.34	55.37	74	-18.63	PK
V	5150	33.64	49.12	15.6	37.34	37.46	54	-16.54	AV
H	5110	51.55	49.19	15.24	40.43	58.03	74	-15.97	PK
H	5110	33.46	49.19	15.24	40.43	39.94	54	-14.06	AV
H	5135	51.57	49.12	15.6	37.34	55.39	74	-18.61	PK
H	5135	33.64	49.12	15.6	37.34	37.46	54	-16.54	AV
H	5150	50.56	49.19	15.24	40.43	57.04	74	-16.96	PK
H	5150	32.85	49.19	15.24	40.43	39.33	54	-14.67	AV
operation frequency:5230									
V	5350	53.21	49.13	15.32	37.46	56.86	74	-17.14	PK
V	5350	34.36	49.13	15.32	37.46	38.01	54	-15.99	AV
V	5360	50.52	49.24	15.36	40.51	57.15	74	-16.85	PK
V	5360	33.41	49.24	15.36	40.51	40.04	54	-13.96	AV
V	5385	54.56	49.13	15.32	31.31	52.06	74	-21.94	PK
V	5385	36.52	49.13	15.32	31.31	34.02	54	-19.98	AV
H	5350	51.33	49.24	15.36	40.51	57.96	74	-16.04	PK
H	5350	33.58	49.24	15.36	40.51	40.21	54	-13.79	AV
H	5360	52.41	49.12	15.33	37.41	56.03	74	-17.97	PK
H	5360	34.66	49.12	15.33	37.41	38.28	54	-15.72	AV
H	5385	51.52	49.19	15.28	40.46	58.07	74	-15.93	PK
H	5385	33.46	49.19	15.28	40.46	40.01	54	-13.99	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.									



802.11ax HE40

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	5110	52.58	49.12	15.33	37.41	56.2	74	-17.8	PK
V	5110	34.76	49.12	15.33	37.41	38.38	54	-15.62	AV
V	5135	50.21	49.19	15.28	40.46	56.76	74	-17.24	PK
V	5135	33.83	49.19	15.28	40.46	40.38	54	-13.62	AV
V	5150	52.21	49.12	15.33	37.41	55.83	74	-18.17	PK
V	5150	34.41	49.12	15.33	37.41	38.03	54	-15.97	AV
H	5110	51.52	49.19	15.28	40.46	58.07	74	-15.93	PK
H	5110	33.76	49.19	15.28	40.46	40.31	54	-13.69	AV
H	5135	52.64	49.12	15.33	37.41	56.26	74	-17.74	PK
H	5135	34.57	49.12	15.33	37.41	38.19	54	-15.81	AV
H	5150	50.66	49.19	15.28	40.46	57.21	74	-16.79	PK
H	5150	33.58	49.19	15.28	40.46	40.13	54	-13.87	AV
operation frequency:5230									
V	5350	52.63	49.12	15.6	37.39	56.5	74	-17.5	PK
V	5350	35.21	49.12	15.6	37.39	39.08	54	-14.92	AV
V	5360	51.63	49.19	15.24	40.45	58.13	74	-15.87	PK
V	5360	34.85	49.19	15.24	40.45	41.35	54	-12.65	AV
V	5385	52.66	49.12	15.6	37.39	56.53	74	-17.47	PK
V	5385	34.41	49.12	15.6	37.39	38.28	54	-15.72	AV
H	5350	50.33	49.19	15.24	40.45	56.83	74	-17.17	PK
H	5350	35.85	49.19	15.24	40.45	42.35	54	-11.65	AV
H	5360	53.24	49.13	15.34	37.46	56.91	74	-17.09	PK
H	5360	37.52	49.13	15.34	37.46	41.19	54	-12.81	AV
H	5385	50.66	49.24	15.35	40.51	57.28	74	-16.72	PK
H	5385	36.41	49.24	15.35	40.51	43.03	54	-10.97	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.									



802.11a(Band 4)

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	5650	51.25	46.38	12.43	35.65	52.95	68.2	-15.25	PK
V	5650	40.56	46.38	12.43	35.65	42.26	54	-11.74	AV
H	5720	51.48	46.56	12.47	35.76	53.15	68.2	-15.05	PK
H	5720	40.41	46.56	12.47	35.76	42.08	54	-11.92	AV
V	5650	51.83	46.38	12.43	35.65	53.53	68.2	-14.67	PK
V	5650	40.57	46.38	12.43	35.65	42.27	54	-11.73	AV
H	5720	51.16	46.56	12.47	35.76	52.83	68.2	-15.37	PK
H	5720	40.52	46.56	12.47	35.76	42.19	54	-11.81	AV
operation frequency:5825									
V	5855	56.22	46.55	12.65	35.87	58.19	68.2	-10.01	PK
V	5855	42.64	46.55	12.65	35.87	44.61	54	-9.39	AV
H	5875	56.28	46.58	12.67	35.93	58.3	68.2	-9.9	PK
H	5875	42.36	46.58	12.67	35.93	44.38	54	-9.62	AV
V	5855	56.64	46.55	12.65	35.87	58.61	68.2	-9.59	PK
V	5855	42.81	46.55	12.65	35.87	44.78	54	-9.22	AV
H	5875	55.96	46.58	12.67	35.93	57.98	68.2	-10.22	PK
H	5875	42.52	46.58	12.67	35.93	44.54	54	-9.46	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	5650	50.63	47.36	13.18	36.26	52.71	68.2	-15.49	PK
V	5650	40.78	47.36	13.18	36.26	42.86	54	-11.14	AV
H	5720	51.55	47.38	13.2	36.29	53.66	68.2	-14.54	PK
H	5720	41.63	47.38	13.2	36.29	43.74	54	-10.26	AV
V	5650	51.41	47.36	13.18	36.26	53.49	68.2	-14.71	PK
V	5650	41.68	47.36	13.18	36.26	43.76	54	-10.24	AV
H	5720	51.63	47.38	13.2	36.29	53.74	68.2	-14.46	PK
H	5720	40.65	47.38	13.2	36.29	42.76	54	-11.24	AV
operation frequency:5825									
V	5855	51.25	48.32	15.24	37.37	55.54	68.2	-12.66	PK
V	5855	40.53	48.32	15.24	37.37	44.82	54	-9.18	AV
H	5875	51.74	48.36	15.27	37.39	56.04	68.2	-12.16	PK
H	5875	41.86	48.36	15.27	37.39	46.16	54	-7.84	AV
V	5855	51.75	48.32	15.24	37.37	56.04	68.2	-12.16	PK
V	5855	40.63	48.32	15.24	37.37	44.92	54	-9.08	AV
H	5875	50.62	48.36	15.27	37.39	54.92	68.2	-13.28	PK
H	5875	40.84	48.36	15.27	37.39	45.14	54	-8.86	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:5745									
V	5650	51.25	46.38	12.43	35.65	52.95	68.2	-15.25	PK
V	5650	40.56	46.38	12.43	35.65	42.26	54	-11.74	AV
H	5720	51.58	46.56	12.47	35.76	53.25	68.2	-14.95	PK
H	5720	40.86	46.56	12.47	35.76	42.53	54	-11.47	AV
V	5650	51.52	46.38	12.43	35.65	53.22	68.2	-14.98	PK
V	5650	40.54	46.38	12.43	35.65	42.24	54	-11.76	AV
H	5720	51.69	46.56	12.47	35.76	53.36	68.2	-14.84	PK
H	5720	40.85	46.56	12.47	35.76	42.52	54	-11.48	AV
operation frequency:5825									
V	5855	55.21	46.55	12.65	35.87	57.18	68.2	-11.02	PK
V	5855	43.33	46.55	12.65	35.87	45.3	54	-8.7	AV
H	5875	55.48	46.58	12.67	35.93	57.5	68.2	-10.7	PK
H	5875	43.94	46.58	12.67	35.93	45.96	54	-8.04	AV
V	5855	56.63	46.55	12.65	35.87	58.6	68.2	-9.6	PK
V	5855	43.55	46.55	12.65	35.87	45.52	54	-8.48	AV
H	5875	56.84	46.58	12.67	35.93	58.86	68.2	-9.34	PK
H	5875	43.09	46.58	12.67	35.93	45.11	54	-8.89	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.



802.11ax HE20

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	5650	51.41	47.36	13.18	36.26	53.49	68.2	-14.71	PK
V	5650	41.43	47.36	13.18	36.26	43.51	54	-10.49	AV
H	5720	51.28	47.38	13.2	36.29	53.39	68.2	-14.81	PK
H	5720	41.33	47.38	13.2	36.29	43.44	54	-10.56	AV
V	5650	51.44	47.36	13.18	36.26	53.52	68.2	-14.68	PK
V	5650	41.38	47.36	13.18	36.26	43.46	54	-10.54	AV
H	5720	51.53	47.38	13.2	36.29	53.64	68.2	-14.56	PK
H	5720	41.64	47.38	13.2	36.29	43.75	54	-10.25	AV
operation frequency:5825									
V	5855	51.52	48.32	15.24	37.37	55.81	68.2	-12.39	PK
V	5855	40.16	48.32	15.24	37.37	44.45	54	-9.55	AV
H	5875	51.74	48.36	15.27	37.39	56.04	68.2	-12.16	PK
H	5875	41.58	48.36	15.27	37.39	45.88	54	-8.12	AV
V	5855	51.16	48.32	15.24	37.37	55.45	68.2	-12.75	PK
V	5855	41.94	48.32	15.24	37.37	46.23	54	-7.77	AV
H	5875	51.69	48.36	15.27	37.39	55.99	68.2	-12.21	PK
H	5875	41.34	48.36	15.27	37.39	45.64	54	-8.36	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:5745									
V	5650	51.33	46.38	12.43	35.65	53.03	68.2	-15.17	PK
V	5650	40.85	46.38	12.43	35.65	42.55	54	-11.45	AV
H	5720	51.33	46.56	12.47	35.76	53	68.2	-15.2	PK
H	5720	41.25	46.56	12.47	35.76	42.92	54	-11.08	AV
V	5650	51.39	46.38	12.43	35.65	53.09	68.2	-15.11	PK
V	5650	40.72	46.38	12.43	35.65	42.42	54	-11.58	AV
H	5720	51.53	46.56	12.47	35.76	53.2	68.2	-15	PK
H	5720	40.34	46.56	12.47	35.76	42.01	54	-11.99	AV
operation frequency:5825									
V	5855	55.69	46.55	12.65	35.87	57.66	68.2	-10.54	PK
V	5855	43.75	46.55	12.65	35.87	45.72	54	-8.28	AV
H	5875	55.25	46.58	12.67	35.93	57.27	68.2	-10.93	PK
H	5875	42.86	46.58	12.67	35.93	44.88	54	-9.12	AV
V	5855	55.34	46.55	12.65	35.87	57.31	68.2	-10.89	PK
V	5855	43.21	46.55	12.65	35.87	45.18	54	-8.82	AV
H	5875	55.16	46.58	12.67	35.93	57.18	68.2	-11.02	PK
H	5875	42.74	46.58	12.67	35.93	44.76	54	-9.24	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:5745									
V	5650	51.33	47.36	13.18	36.26	53.41	68.2	-14.79	PK
V	5650	41.35	47.36	13.18	36.26	43.43	54	-10.57	AV
H	5720	51.83	47.38	13.2	36.29	53.94	68.2	-14.26	PK
H	5720	40.15	47.38	13.2	36.29	42.26	54	-11.74	AV
V	5650	51.66	47.36	13.18	36.26	53.74	68.2	-14.46	PK
V	5650	40.04	47.36	13.18	36.26	42.12	54	-11.88	AV
H	5720	51.63	47.38	13.2	36.29	53.74	68.2	-14.46	PK
H	5720	40.87	47.38	13.2	36.29	42.98	54	-11.02	AV
operation frequency:5825									
V	5855	51.25	48.32	15.24	37.37	55.54	68.2	-12.66	PK
V	5855	41.33	48.32	15.24	37.37	45.62	54	-8.38	AV
H	5875	51.54	48.36	15.27	37.39	55.84	68.2	-12.36	PK
H	5875	40.28	48.36	15.27	37.39	44.58	54	-9.42	AV
V	5855	51.06	48.32	15.24	37.37	55.35	68.2	-12.85	PK
V	5855	40.52	48.32	15.24	37.37	44.81	54	-9.19	AV
H	5875	51.63	48.36	15.27	37.39	55.93	68.2	-12.27	PK
H	5875	40.24	48.36	15.27	37.39	44.54	54	-9.46	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.



802.11ax HE40

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	5650	51.63	46.38	12.43	35.65	53.33	68.2	-14.87	PK
V	5650	40.58	46.38	12.43	35.65	42.28	54	-11.72	AV
H	5720	51.63	46.56	12.47	35.76	53.3	68.2	-14.9	PK
H	5720	40.64	46.56	12.47	35.76	42.31	54	-11.69	AV
V	5650	51.51	46.38	12.43	35.65	53.21	68.2	-14.99	PK
V	5650	40.46	46.38	12.43	35.65	42.16	54	-11.84	AV
H	5720	51.34	46.56	12.47	35.76	53.01	68.2	-15.19	PK
H	5720	40.77	46.56	12.47	35.76	42.44	54	-11.56	AV
operation frequency:5825									
V	5855	55.56	46.55	12.65	35.87	57.53	68.2	-10.67	PK
V	5855	43.11	46.55	12.65	35.87	45.08	54	-8.92	AV
H	5875	56.36	46.58	12.67	35.93	58.38	68.2	-9.82	PK
H	5875	42.52	46.58	12.67	35.93	44.54	54	-9.46	AV
V	5855	56.83	46.55	12.65	35.87	58.8	68.2	-9.4	PK
V	5855	43.41	46.55	12.65	35.87	45.38	54	-8.62	AV
H	5875	56.46	46.58	12.67	35.93	58.48	68.2	-9.72	PK
H	5875	43.25	46.58	12.67	35.93	45.27	54	-8.73	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

Please see annex test data.



4.. AVERAGING 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 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

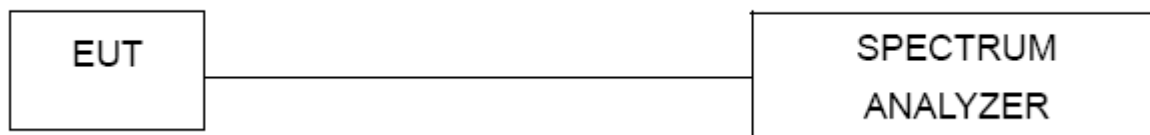
Method SA-2 uses trace averaging across ON and OFF times of the EUT transmissions, followed by duty cycle correction. The procedure for this method is as follows:

- 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) 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 1MHz 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 $[10 \log (1 / 0.25)] = 6 \text{ dB}$ 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

Please see annex test data.

**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 $\geq$ 1MHz for band 1 RBW $\geq$ 510KHz for band 4
VB	VBW $\geq$ 3RBW
Detector	RMS (i.e., power averaging).
Trace	Average
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/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

Please see annex test data.



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

Please see annex test data.



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) $\geq$ 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

Please see annex test data.



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.

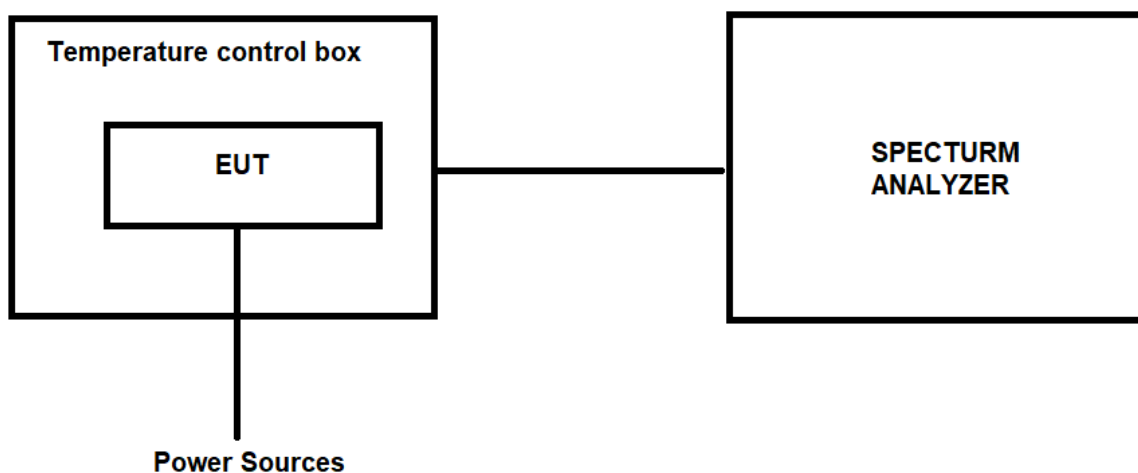
8.1.1. TEST PROCEDURE

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	Spectrum Frequency (MHz)				Deviation (ppm)				Verdict
		(MHz)	802.11a	802.11n HT20	802.11ac HT20	802.11ax HT20	802.11a HT20	802.11n HT20	802.11ac HT20	802.11ax HT20	
132V	-20℃	5180	5180.0052	5180.0021	5180.0063	5180.0052	1.0039	0.4054	1.2162	1.0039	PASS
		5220	5220.0088	5220.0016	5220.0015	5220.0085	1.6858	0.3065	0.2874	1.6284	PASS
		5240	5240.0024	5240.0025	5240.0013	5240.0021	0.4580	0.4771	0.2481	0.4008	PASS
		5745	5745.0014	5745.0014	5745.0023	5745.0063	0.2437	0.2437	0.4003	1.0966	PASS
		5785	5785.0023	5785.0021	5785.0023	5785.0051	0.3976	0.3630	0.3976	0.8816	PASS
		5825	5825.0055	5825.0012	5825.0015	5825.0052	0.9442	0.2060	0.2575	0.8927	PASS
108V	-20℃	5180	5180.0056	5180.003	5180.0022	5180.0056	1.0811	0.5792	0.4247	1.0811	PASS
		5220	5220.0014	5220.0052	5220.0032	5220.0063	0.2682	0.9962	0.6130	1.2069	PASS
		5240	5240.0011	5240.0025	5240.0023	5240.0022	0.2099	0.4771	0.4389	0.4198	PASS
		5745	5745.0016	5745.0013	5745.0014	5745.0041	0.2785	0.2263	0.2437	0.7137	PASS
		5785	5785.0052	5785.0012	5785.0025	5785.0052	0.8989	0.2074	0.4322	0.8989	PASS
		5825	5825.0013	5825.0052	5825.0052	5825.0013	0.2232	0.8927	0.8927	0.2232	PASS
120V	25℃	5180	5180.0024	5180.0013	5180.0023	5180.0024	0.4633	0.2510	0.4440	0.4633	PASS
		5220	5220.0011	5220.0037	5220.0014	5220.0011	0.2107	0.7088	0.2682	0.2107	PASS
		5240	5240.0057	5240.0016	5240.0022	5240.0057	1.0878	0.3053	0.4198	1.0878	PASS
		5745	5745.0055	5745.0025	5745.0063	5745.0055	0.9574	0.4352	1.0966	0.9574	PASS
		5785	5785.0063	5785.0016	5785.0054	5785.0063	1.0890	0.2766	0.9334	1.0890	PASS
		5825	5825.0012	5825.0015	5825.0048	5825.0012	0.2060	0.2575	0.8240	0.2060	PASS
132V	50℃	5180	5180.0016	5180.0037	5180.0041	5180.0033	0.3089	0.7143	0.7915	0.6371	PASS
		5220	5220.0035	5220.0046	5220.0032	5220.0034	0.6705	0.8812	0.6130	0.6513	PASS
		5240	5240.0014	5240.0025	5240.0011	5240.0015	0.2672	0.4771	0.2099	0.2863	PASS
		5745	5745.0023	5745.0056	5745.0025	5745.0063	0.4003	0.9748	0.4352	1.0966	PASS
		5785	5785.0063	5785.0064	5785.0021	5785.0061	1.0890	1.1063	0.3630	1.0545	PASS
		5825	5825.0055	5825.0052	5825.0023	5825.0054	0.9442	0.8927	0.3948	0.9270	PASS
108V	50℃	5180	5180.0084	5180.0026	5180.0024	5180.0084	1.6216	0.5019	0.4633	1.6216	PASS
		5220	5220.0051	5220.0052	5220.0028	5220.0051	0.9770	0.9962	0.5364	0.9770	PASS
		5240	5240.0063	5240.0028	5240.0043	5240.0063	1.2023	0.5344	0.8206	1.2023	PASS
		5745	5745.0015	5745.0029	5745.0024	5745.0015	0.2611	0.5048	0.4178	0.2611	PASS
		5785	5785.0054	5785.0024	5785.0024	5785.0054	0.9334	0.4149	0.4149	0.9334	PASS
		5825	5825.0028	5825.0037	5825.0042	5825.0028	0.4807	0.6352	0.7210	0.4807	PASS



Test Voltage	Test Temp.	Measured Frequency (MHz)	Spectrum Frequency (MHz)			Deviation (ppm)			Verdict
			802.11n HT40	802.11ac HT40	802.11ax HT40	802.11n HT40	802.11ac HT40	802.11ax HT40	
132V	-20℃	5190	5190.0032	5190.0021	5190.0025	0.6166	0.4046	0.4817	PASS
		5230	5230.0064	5230.0053	5230.0063	1.2237	1.0134	1.2046	PASS
		5755	5755.0028	5755.0014	5755.0021	0.4865	0.2433	0.3649	PASS
		5795	5795.0053	5795.0051	5795.0055	0.9146	0.8801	0.9491	PASS
108V		5190	5190.0014	5190.0026	5190.0014	0.2697	0.5010	0.2697	PASS
		5230	5230.0014	5230.0046	5230.0019	0.2677	0.8795	0.3633	PASS
		5755	5755.0036	5755.0025	5755.0013	0.6255	0.4344	0.2259	PASS
		5795	5795.0048	5795.0044	5795.0048	0.8283	0.7593	0.8283	PASS
120V	25℃	5190	5190.0041	5190.0056	5190.0048	0.7900	1.0790	0.9249	PASS
		5230	5230.0043	5230.0032	5230.0045	0.8222	0.6119	0.8604	PASS
		5755	5755.0023	5755.0013	5755.0026	0.3997	0.2259	0.4518	PASS
		5795	5795.0025	5795.0034	5795.0024	0.4314	0.5867	0.4142	PASS
132V	50℃	5190	5190.0016	5190.0028	5190.0011	0.3083	0.5395	0.2119	PASS
		5230	5230.0015	5230.0016	5230.0013	0.2868	0.3059	0.2486	PASS
		5755	5755.0033	5755.0025	5755.0035	0.5734	0.4344	0.6082	PASS
		5795	5795.0058	5795.0033	5795.0057	1.0009	0.5695	0.9836	PASS
108V	50℃	5190	5190.0022	5190.0014	5190.0063	0.4239	0.2697	1.2139	PASS
		5230	5230.0012	5230.0015	5230.0018	0.2294	0.2868	0.3442	PASS
		5755	5755.0023	5755.0013	5755.0025	0.3997	0.2259	0.4344	PASS
		5795	5795.0014	5795.0015	5795.0014	0.2416	0.2588	0.2416	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 Internal 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 *****