RADIO TEST REPORT

Report No.: SHATBL2212015W02

Applicant

Third Reality, Inc.

Address

NO.9 Nanxu Road,RunZhou District,Zhenjiang,Jiangsu,China

Product Name	:	Sensi V3
Brand Name	:	N/A
Model Name	:	3RSV03029BWU
Series Model	:	N/A
FCC－ID	:	2AOCT-3RSV03029BWU
Test Standard	:	FCC Part15.247

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TEST RESULT CERTIFICATION

Applicant's Name..... : Third Reality, Inc

Address..... : NO.9 Nanxu Road,RunZhou District,Zhenjiang,Jiangsu,China

Manufacturer's Name..... : Third Reality, Inc

Address..... : NO.9 Nanxu Road,RunZhou District,Zhenjiang,Jiangsu,China

Product Description

Product Name..... : Sensi V3

Brand Name.....: N/A

Model Name..... : 3RSV03029BWU

Series Model.....: N/A

Test Standards..... : FCC Part15.247

Test Procedure.....: ANSI C63.10-2013

This device described above has been tested by ATBL, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
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Date of Test

Date of receipt of test item..... : 2022-12-09

Date (s) of performance of tests.....: 2022-12-12 ~ 2023-01-12

Date of Issue..... : 2023-01-13

Test Result..... : Pass

Report Prepared by : Jack Suo

(Jack Suo)

Report Approved by : Ghost Li.

(Ghost Li)

Authorized Signatory : Terry Yang

(Terry Yang)

Table of Contents Page

1. SUMMARY OF TEST RESULTS 6

2. GENERAL INFORMATION 7

2.1 GENERAL DESCRIPTION OF THE EUT 7

2.2 DESCRIPTION OF THE TEST MODES 9

2.3 TEST SOFTWARE AND POWER LEVEL 9

2.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED 10

2.5 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS 11

2.6LABORATORY INFORMATION 11

2.7 MEASUREMENT UNCERTAINTY 11

2.8 EQUIPMENTS LIST 12

3. EMC EMISSION TEST 13

3.1 CONDUCTED EMISSION MEASUREMENT 13

3.2 RADIATED EMISSION MEASUREMENT 17

4.CONDUCTED SPURIOUS & BAND EDGE EMISSION 38

4.1 LIMIT 38

4.2 TEST PROCEDURE 38

4.3 DEVIATION FROM STANDARD 38

4.4 TEST SETUP 38

4.5 EUT OPERATION CONDITIONS 38

4.6 TEST RESULTS 39

5. POWER SPECTRAL DENSITY TEST 42

5.1 LIMIT 42

5.2 TEST PROCEDURE 42

5.3 DEVIATION FROM STANDARD 42

5.4 TEST SETUP 42

5.5 EUT OPERATION CONDITIONS 42

5.6 TEST RESULTS 43

6. BANDWIDTH TEST 45

6.1 LIMIT 45

6.2 TEST PROCEDURE 45

6.3 DEVIATION FROM STANDARD 45

6.4 TEST SETUP 45

6.5 EUT OPERATION CONDITIONS 46

Table of Contents Page

6.6 TEST RESULTS 46
7. PEAK OUTPUT POWER TEST 49
7.1 LIMIT 49
7.2 TEST PROCEDURE 49
7.3 DEVIATION FROM STANDARD 49
7.4 TEST SETUP 49
7.5 EUT OPERATION CONDITIONS 49
7.6 TEST RESULTS 50
8. ANTENNA REQUIREMENT 52
8.1 STANDARD REQUIREMENT 52
8.2 EUT ANTENNA 52
9.APPENDIX-PHOTOS OF TEST SETUP 53

Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	2023-01-13	SHATBL2212015W02	ALL	Initial Issue

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

KDB 558074 D01 15.247 Meas Guidance v05r02.

FCC Part 15.247,Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	--
15.247 (a)(2)	6dB&99% Bandwidth	PASS	--
15.247 (b)(3)	Output Power	PASS	--
15.247(d) & 15.209 & 15.205	Radiated Spurious Emission	PASS	--
15.247(d) & 15.205	Conducted Spurious & Band Edge Emission	PASS	--
15.247 (e)	Power Spectral Density	PASS	--
15.205	Restricted bands of operation	PASS	--
15.203	Antenna Requirement	PASS	--

NOTE:

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

(2)All tests are according to ANSI C63.10-2013.

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

<table>
<tr><td>Product Name</td><td>Sensi V3</td></tr>
<tr><td>Trade Name</td><td>N/A</td></tr>
<tr><td>Model Name</td><td>3RSV03029BWU</td></tr>
<tr><td>Series Model</td><td>N/A</td></tr>
<tr><td>Model Difference</td><td>N/A</td></tr>
<tr><td>Product Description</td><td>The EUT is Sensi V3
<table>
<tr><td>Operation Frequency:</td><td>802.11b/g/n 20: 2412~2462 MHz
802.11n40:2422~2452 MHz</td></tr>
<tr><td>Modulation Type:</td><td>802.11b(DSSS):CCK,DQPSK,DBPSK
802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM
802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM</td></tr>
<tr><td>Bit Rate of Transmitter:</td><td>802.11b:11/5.5/2/1Mbps
802.11g:54/48/36/24/18/12/9/6Mbps
802.11n(20MHz):MCS7/MCS6/MCS5/MCS4/MCS3/MCS2/MCS1/MCS0
802.11n(40MHz): MCS7/MCS6/MCS5/MCS4/MCS3/MCS2/MCS1/MCS0</td></tr>
<tr><td>Number of Channel:</td><td>802.11b/g/n20: 11CH
802.11n40:7CH</td></tr>
<tr><td>Antenna Designation:</td><td>Chip ANT</td></tr>
<tr><td>Antenna Gain (dBi):</td><td>1.88dBi</td></tr>
<tr><td>Duty Cycle:</td><td>>98%</td></tr>
</table></td></tr>
<tr><td>Channel List</td><td>Please refer to the Note 2.</td></tr>
<tr><td>Adapter</td><td>Model:MF-05001000SA1
Brand:Moveforest
Input:100~240V~50/60Hz 0.4A
Output:DC5V/1A</td></tr>
<tr><td>Battery</td><td>N/A</td></tr>
<tr><td>Hardware version number</td><td>MB0.3+ DB0.2</td></tr>
<tr><td>Software version number</td><td>00.12.06</td></tr>
<tr><td>Connecting I/O Port(s)</td><td>Please refer to the User's Manual</td></tr>
</table>

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.

2.

Operation Frequency of channel			
802.11b/g/n(20MHz)		Channel List for 802.11n(40MHz)	
Channel	Frequency	Channel	Frequency
01	2412	03	2422
02	2417	04	2427
03	2422	05	2432
04	2427	06	2437
05	2432	07	2442
06	2437	08	2447
07	2442	09	2452
08	2447		
09	2452		
10	2457		
11	2462		

Note:
In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:
Carrier Frequency Channel

2.4GHz Test Frequency:

For 802.11b/g/n (HT20)	
Channel	Freq.(MHz)
01	2412
06	2437
11	2462

For 802.11n (HT40)	
Channel	Freq.(MHz)
03	2422
06	2437
09	2452

3.

Ant.	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	3RSV03029BWU	Chip ANT	N/A	1.88dBi	WLANANT

2.2 DESCRIPTION OF THE TEST MODES

Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Worst Mode	Description	Data Rate
Mode 1	TX IEEE 802.11b CH1	1Mbps
Mode 2	TX IEEE 802.11b CH6	1Mbps
Mode 3	TX IEEE 802.11 b CH11	1Mbps
Mode 4	TX IEEE 802.11g CH1	6Mbps
Mode 5	TX IEEE 802.11g CH6	6Mbps
Mode 6	TX IEEE 802.11g CH11	6Mbps
Mode 7	TX IEEE 802.11n HT20 CH1	MCS0
Mode 8	TX IEEE 802.11n HT20 CH6	MCS0
Mode 9	TX IEEE 802.11n HT20 CH11	MCS0
Mode 10	TX IEEE 802.11n HT40 CH03	MCS0
Mode 11	TX IEEE 802.11n HT40 CH06	MCS0
Mode 12	TX IEEE 802.11n HT40 CH09	MCS0

Note:

(1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.

(2) We have be tested for all available U.S. voltage and frequencies(For 120V,50/60Hz and 240V, 50/60Hz) for which the device is capable of operation, and the worst case of 120V /60Hz is shown in the report.

Conducted Emission

Test Case	
Conducted Emission	Keeping WIFI TX

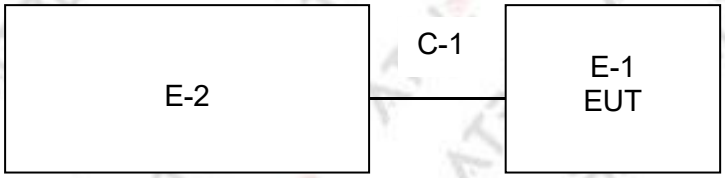
2.3 TEST SOFTWARE AND POWER LEVEL

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

RF Function	Type	Mode Or Modulation type	Ant Gain(dBi)	Power Class	Software For Testing
WIFI(2.4G)	2.4G WIFI	802.11b	1.88	Auto	Provided by the customer
		802.11g		Auto	
		802.11n(HT20)		Auto	
		802.11n(HT40)		Auto	

2.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiation Test Set



Conduction Test Set

2.5 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

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

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
E-2	Adapter	Moveforest	MF-05001000SA1	N/A	N/A
C-1	USB	N/A	20cm	N/A	N/A

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Type No.	Note
E-3	Notebook	Lenovo	DESKTOP-USDEO09	00326-10000-00000-AA636	N/A
C-2	USB	N/A	100cm	N/A	N/A

Note:

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

2.6LABORATORY INFORMATION

Company Name:	Shanghai ATBL Technology Co., Ltd.
Address:	Building 8, No. 160, Basheng Road, Waigaoqiao Free Trade Zone, Pudong New Area, Shanghai
Telephone:	+86(0)21-51298625
The FCC Registration Number (FRN):	0031025281
A2LA Number:	6184.01
CNAS Number:	CNAS L14531

2.7 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	RF output power, conducted	±0.958dB
2	Conducted spurious emissions	±2.988dB
3	All emissions, radiated 30MHz-1GHz	±2.50dB
4	All emissions, radiated 1GHz-18GHz	±3.51dB
5	Occupied bandwidth	±23.20Hz
6	Power spectral density	±0.886dB

2.8 EQUIPMENTS LIST

2.8.1 Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Management number	Calibrated until
Test Receiver	R&S	ESCI	100469	SHATBL-E003	2023.05.20
Spectrum Analyzer	Agilent	N9020A	MY50200811	SHATBL-E017	2023.05.20
Bilog Antenna	SCHWARZBECK	VLUB 9168	01174	SHATBL-E008	2023.05.20
Horn Antenna	SCHWARZBECK	BBHA 9120D	02014	SHATBL-E009	2023.05.20
Pre-Amplifier (0.1M-3GHz)	JPT	JPA-10M1G35	21010100035001	SHATBL-E005	2023.05.20
Pre-Amplifier (1G-18GHz)	JPT	JPA0118-55-303A	1910001800055000	SHATBL-E006	2023.05.20
Temperature & Humidity	DeLi	DeLi	N/A	SHATBL-E016	2023.05.20
Antenna/Turntable Controller	Brilliant	N/A	N/A	SHATBL-E007	N/A
Test SW	FALA	EMC-RI(Ver.4A2)		SHATBL-E046	N/A

2.8.2 RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	equipment number	Calibrated until
Power meter (with pulse power sensor)	Anritsu	ML2496A	1935001	SHATBL-W030	2023.09.27
Pulse power sensor (with power meter)	Anritsu	MA2411B	1911006	SHATBL-W031	2023.09.27
Signal Analyzer	Agilent	N9020A	MY57300196	SHATBL-W004	2023.09.27
Signal Generator	Agilent	N5182B	MY46240556	SHATBL-W005	2023.09.27
Wireless Communications Test Set	R&S	CMW500	101331	SHATBL-W007	2023.09.27
Temperature & Humidity	Deli	deli	N/A	SHATBL-W011	2023.09.27
Attenuator	Agilent	8494B	DC-18G	SHATBL-W009	2023.09.27
Attenuator	Agilent	8496B	DC-18G	SHATBL-W010	2023.09.27
power splitter	MNK	MPD-DC/6-2S	62315 G51	SHATBL-W015	2023.09.27
			62315 G52	SHATBL-W016	2023.09.27
Filter	Chengdu kangmaiwei	ZBSF-C2400-2483.5-T3	N/A	SHATBL-W021	N/A
Constant temperature and humidity box	KSON	THS-B6C-150	6159K	SHATBL-W019	2023.01.17
Test SW	FALA	LZ-RF(Ver.LzRF-03A3.1)		SHATBL-W020	N/A

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

The radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table.

FREQUENCY (MHz)	Conducted Emission limit (dBuV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

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.

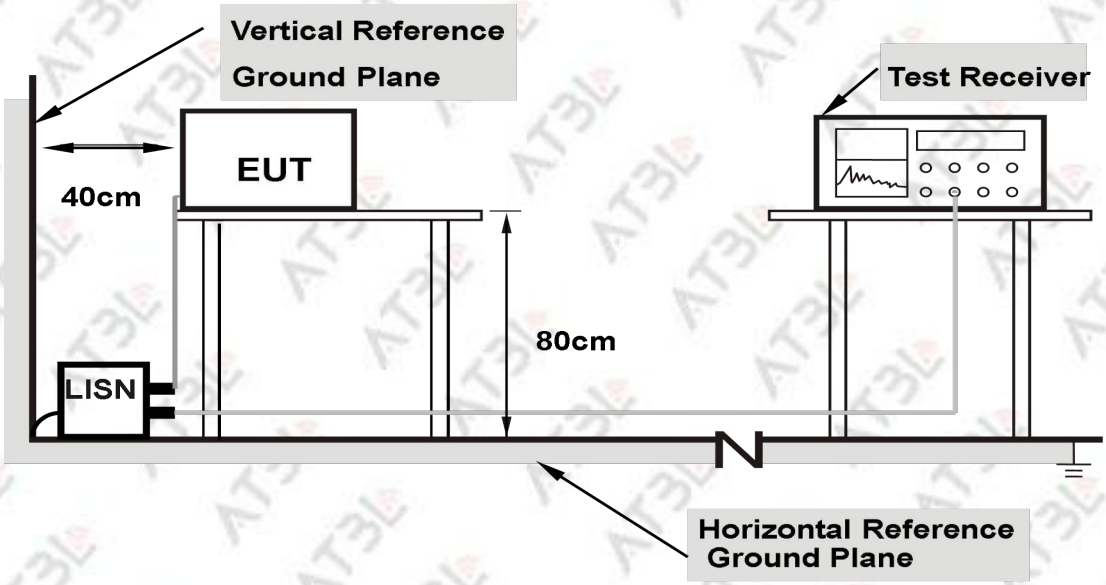
The following table is the setting of the receiver

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 is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment are powered from additional LISN(s). The LISN provides 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 is at least 80 cm from the nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 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 cm from other units and other metal planes support units.

3.1.4 EUT OPERATING CONDITIONS

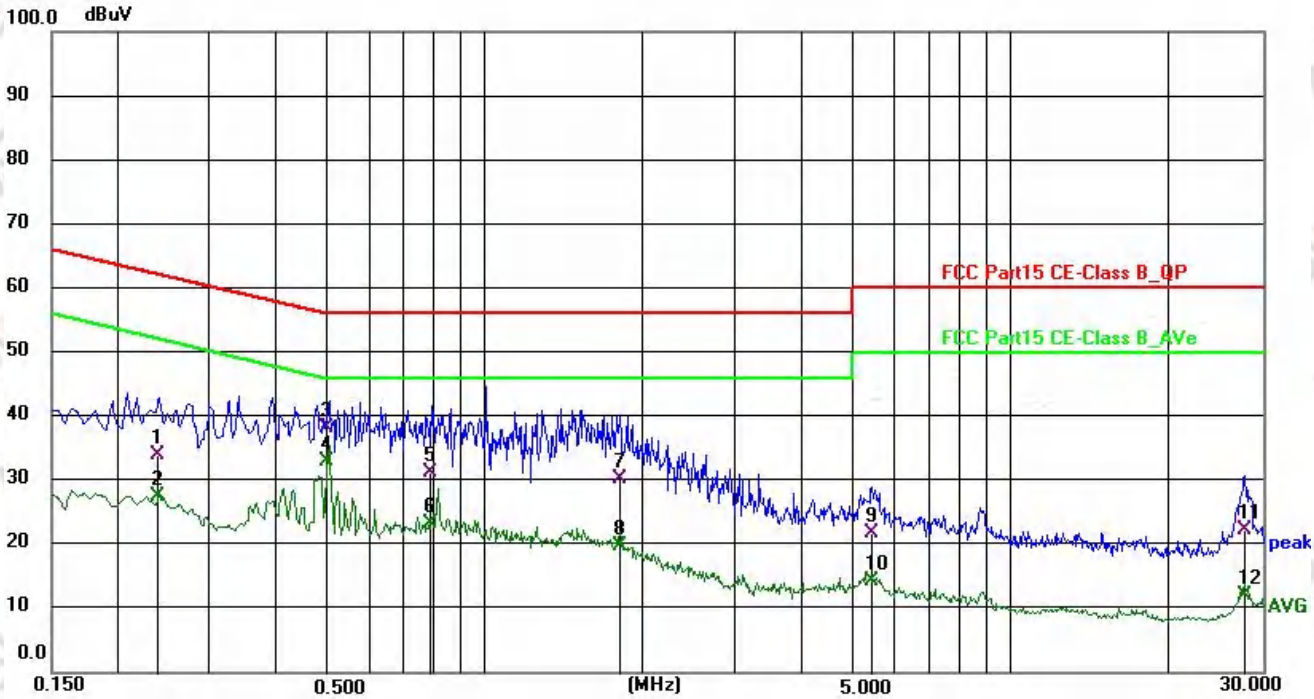
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.1.5 TEST RESULT

Temperature:	22.8℃	Relative Humidity:	51%RH
Test Voltage:	AC 120V/60Hz	Phase:	L
Test Mode:	TX Mode		

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2396	23.25	10.74	33.99	62.11	-28.12	QP
2	0.2396	16.77	10.74	27.51	52.11	-24.60	AVG
3	0.4999	27.60	10.66	38.26	56.00	-17.74	QP
4	0.4999	22.35	10.66	33.01	46.00	-12.99	AVG
5	0.7893	20.60	10.70	31.30	56.00	-24.70	QP
6	0.7893	12.53	10.70	23.23	46.00	-22.77	AVG
7	1.8042	19.39	10.77	30.16	56.00	-25.84	QP
8	1.8042	9.05	10.77	19.82	46.00	-26.18	AVG
9	5.4198	11.08	10.80	21.88	60.00	-38.12	QP
10	5.4198	3.61	10.80	14.41	50.00	-35.59	AVG
11	27.8562	10.98	11.27	22.25	60.00	-37.75	QP
12	27.8562	0.80	11.27	12.07	50.00	-37.93	AVG

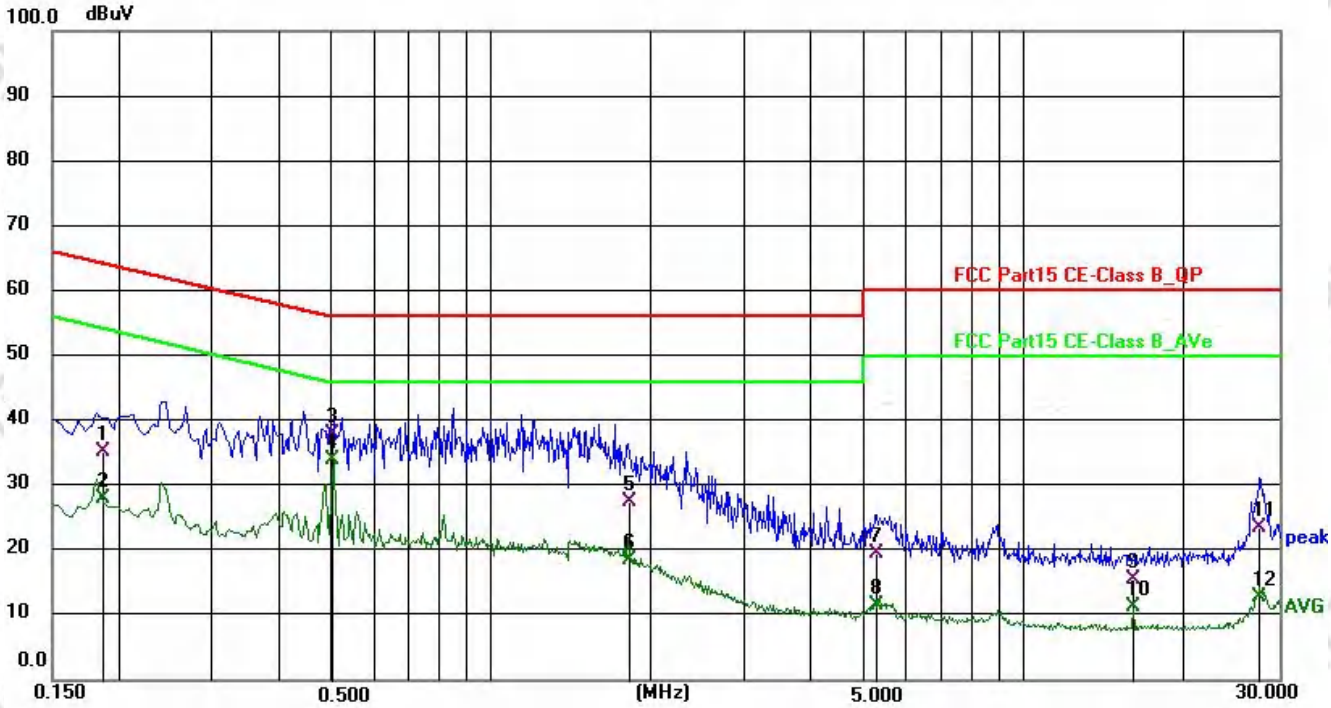
Remark:
1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit.
3. Factor=LISN factor+Cable loss+Limiter (10dB)



Temperature:	22.8℃	Relative Humidity:	51%RH
Test Voltage:	AC 120V/60Hz	Phase:	N
Test Mode:	TX Mode		

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1865	24.70	10.41	35.11	64.19	-29.08	QP
2	0.1865	17.68	10.41	28.09	54.19	-26.10	AVG
3	0.5028	27.56	10.32	37.88	56.00	-18.12	QP
4	0.5028	23.55	10.32	33.87	46.00	-12.13	AVG
5	1.8206	17.12	10.39	27.51	56.00	-28.49	QP
6	1.8206	8.23	10.39	18.62	46.00	-27.38	AVG
7	5.2958	9.23	10.41	19.64	60.00	-40.36	QP
8	5.2958	1.23	10.41	11.64	50.00	-38.36	AVG
9	15.9931	4.73	10.70	15.43	60.00	-44.57	QP
10	15.9931	0.67	10.70	11.37	50.00	-38.63	AVG
11	27.6349	12.35	11.23	23.58	60.00	-36.42	QP
12	27.6349	1.66	11.23	12.89	50.00	-37.11	AVG

Remark:
1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit.
3. Factor=LISN factor+Cable loss+Limiter (10dB)



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS

In any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the Restricted band specified on Part15.205(a)&209(a) limit in the table and according to ANSI C63.10-2013 below has to be followed.

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

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)	(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).

LIMITS OF RESTRICTED FREQUENCY BANDS

IC:

FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (GHz)
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	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	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	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	Above 38.6
13.36-13.41			

For Radiated Emission

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/QP/AV
Start Frequency	9 kHz/150kHz(Peak/QP/AV)
Stop Frequency	150kHz/30MHz(Peak/QP/AV)
RB / VB (emission in restricted band)	200Hz (From 9kHz to 0.15MHz)/ 9kHz (From 0.15MHz to 30MHz); 200Hz (From 9kHz to 0.15MHz)/ 9kHz (From 0.15MHz to 30MHz)

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/QP
Start Frequency	30 MHz(Peak/QP)
Stop Frequency	1000 MHz (Peak/QP)
RB / VB (emission in restricted band)	120 kHz / 300 kHz

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/AV
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier hamonic(Peak/AV)
RB / VB (emission in restricted band)	1MHz / 3MHz(Peak) 1 MHz/1/T MHz(AVG)

For Restricted band

Spectrum Parameter	Setting
Detector	Peak/AV
Start/Stop Frequency	2310MHz to 2500MHz
RB / VB	1 MHz / 3 MHz(Peak) 1 MHz/1/T MHz(AVG)

Receiver Parameter	Setting
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

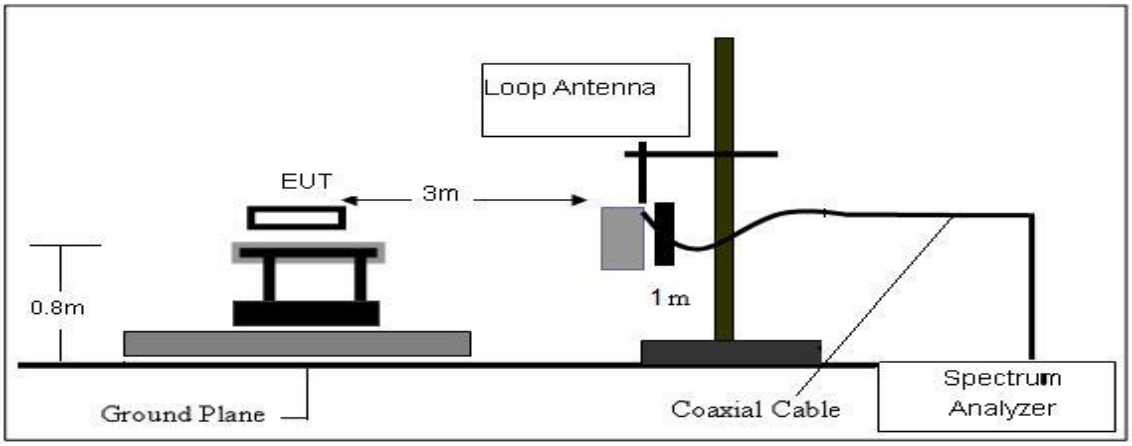
a. The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz,and above 1GHz.
b. The EUT was placed on the top of a rotating table 0.8 m (above 1GHz is 1.5 m) above the ground at a 3 m an echoic chamber test site. The table was rotated 360 degree to determine the position of the highest radiation.
c. The height of the equipment shall be 0.8 m (above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarization of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and Quasi Peak detector mode will be re-measured.
e. If the Peak Mode measured value is compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and no additional QP Mode measurement was performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

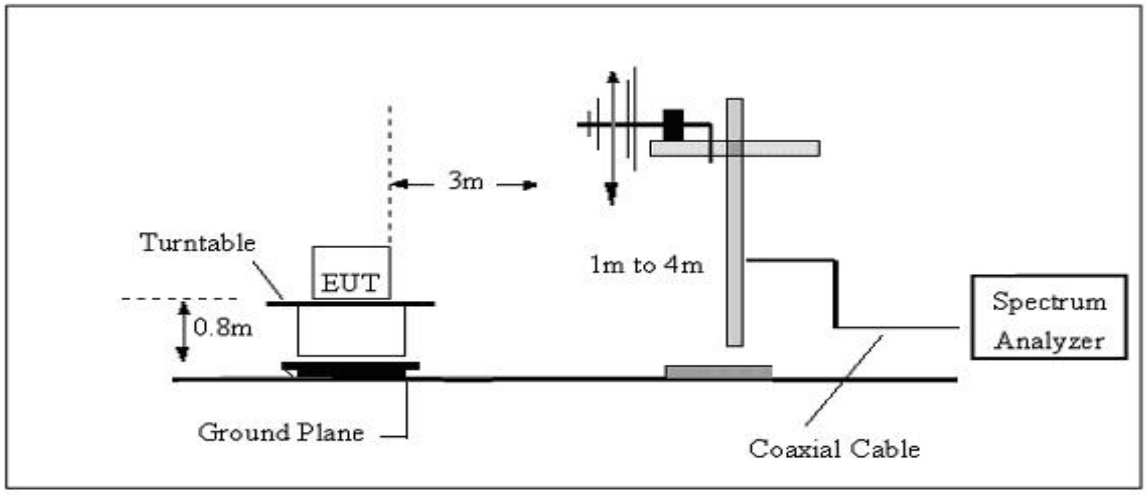
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

3.2.3 TEST SETUP

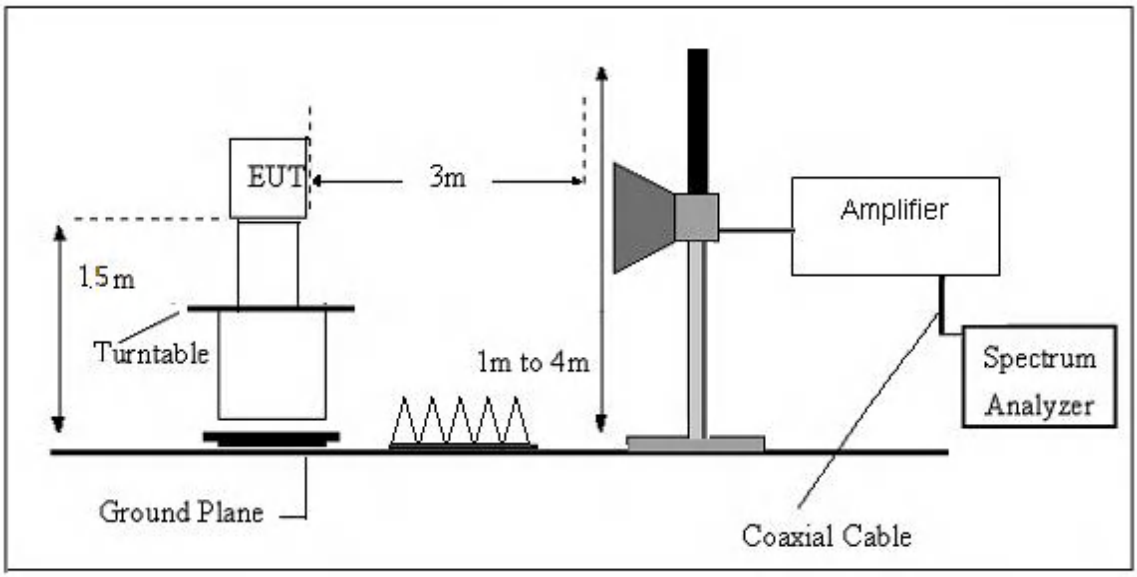
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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



3.2.4 EUT OPERATING CONDITIONS

Please refer to section 3.1.4 of this report.

3.2.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where

FS = Field Strength

CL = Cable Attenuation Factor (Cable Loss)

RA = Reading Amplitude

AG = Amplifier Gain

AF = Antenna Factor

For example

Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dBμV/m)	(dBμV/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

Factor=AF+CL-AG

3.2.6 TEST RESULTS(RADIATEDSPURIOUS EMISSIONS)

9kHz - 30MHz

Temperature:	22.8℃	Relative Humidity:	51%RH
Test Voltage:	125V	Polarization:	--
Test Mode:	TX Mode		

Note:

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

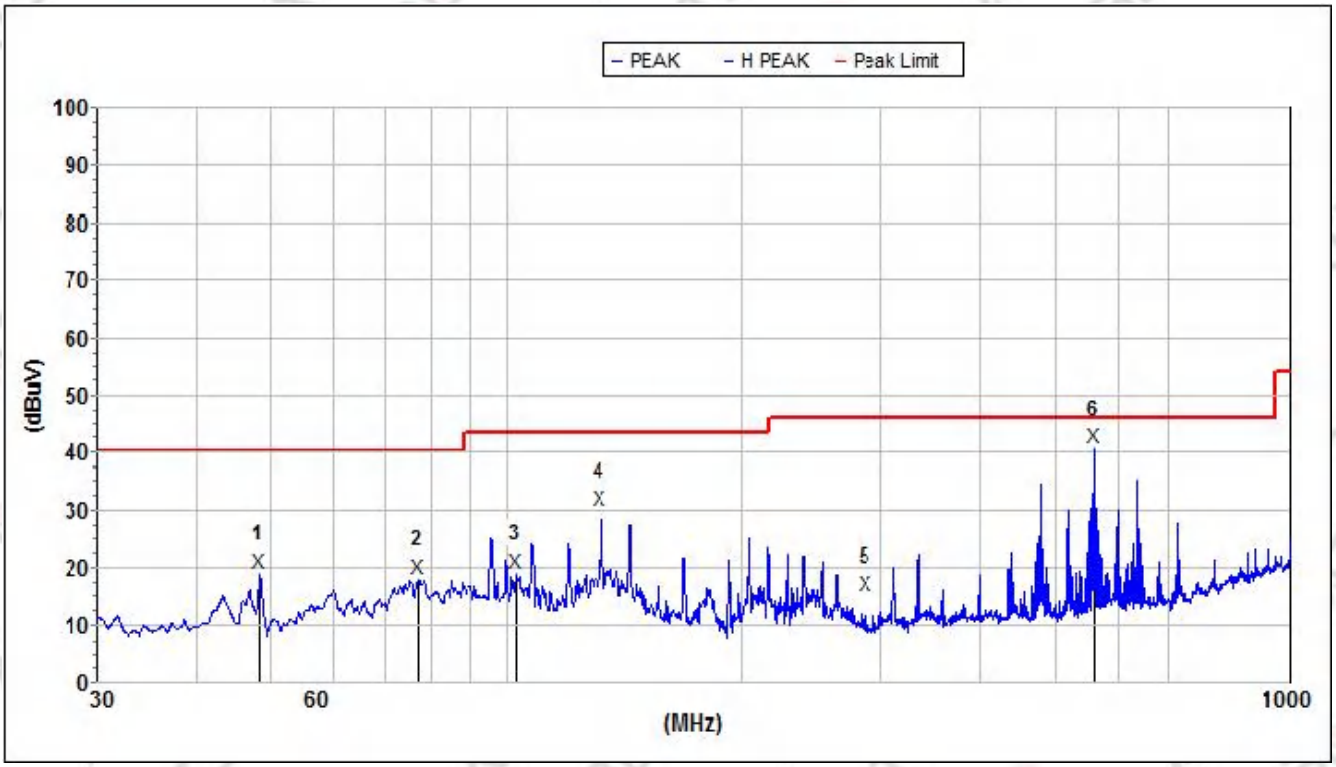
Distance extrapolation factor =40 log (specific distance/test distance)(dB);

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

30MHz - 1000MHz

Temperature:	22.8℃	Relative Humidity:	51%RH
Test Voltage:	125V	Phase:	Horizontal
Test Mode:	Mode 1		

Mode 1 Horizontal

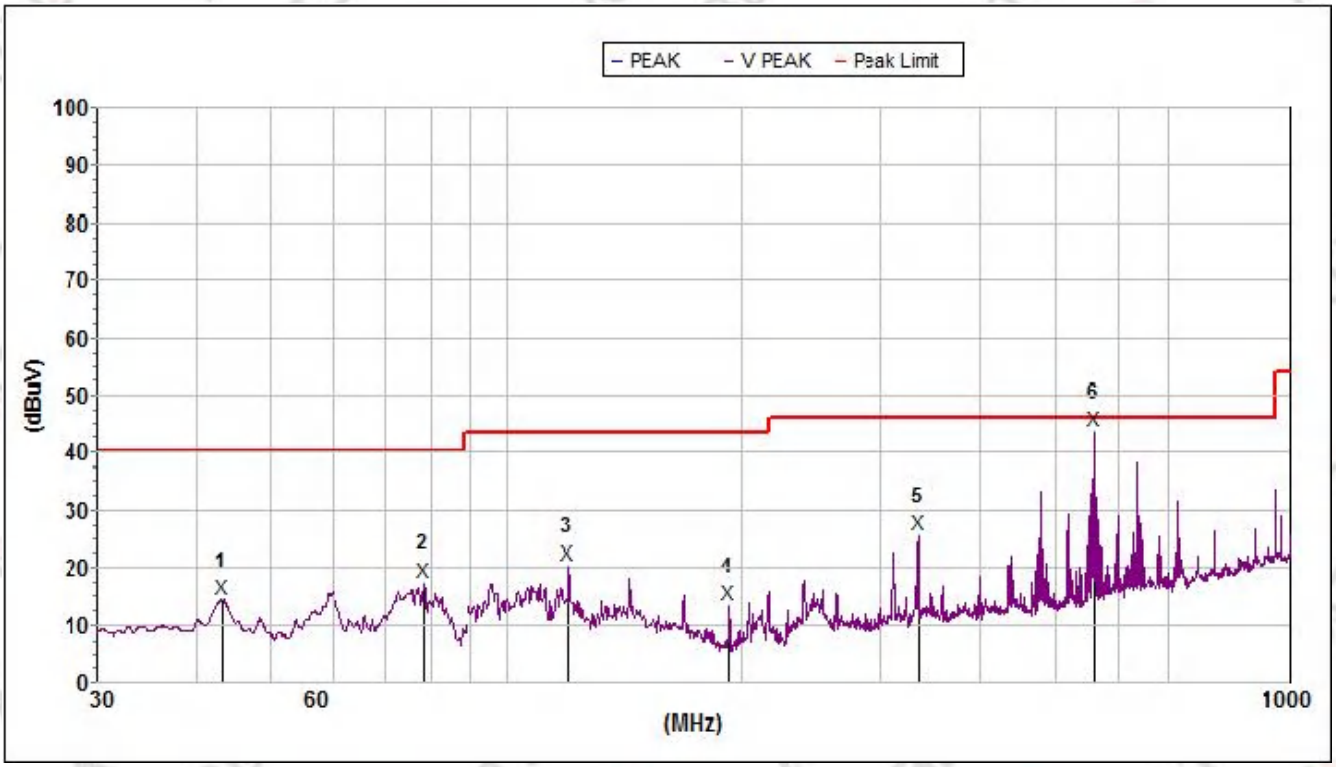


Mk.	Freq.(MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak								
1	48.416591	19.2	40.0	20.8	13.6	32.6	0.8	H
2	76.915558	18.0	40.0	22.0	9.8	32.9	0.9	H
3	102.719216	19.2	43.5	24.3	10.4	32.9	1.4	H
4	131.757724	30.0	43.5	13.5	12.9	32.9	1.4	H
5	287.485938	15.2	46.0	30.8	12.5	32.7	2.6	H
6	559.710646	40.8	46.0	5.2	15.5	32.4	3.1	H

30MHz - 1000MHz

Temperature:	22.8℃	Relative Humidity:	51%RH
Test Voltage:	125V	Phase:	Vertical
Test Mode:	Mode 1		

Mode 1 Vertical

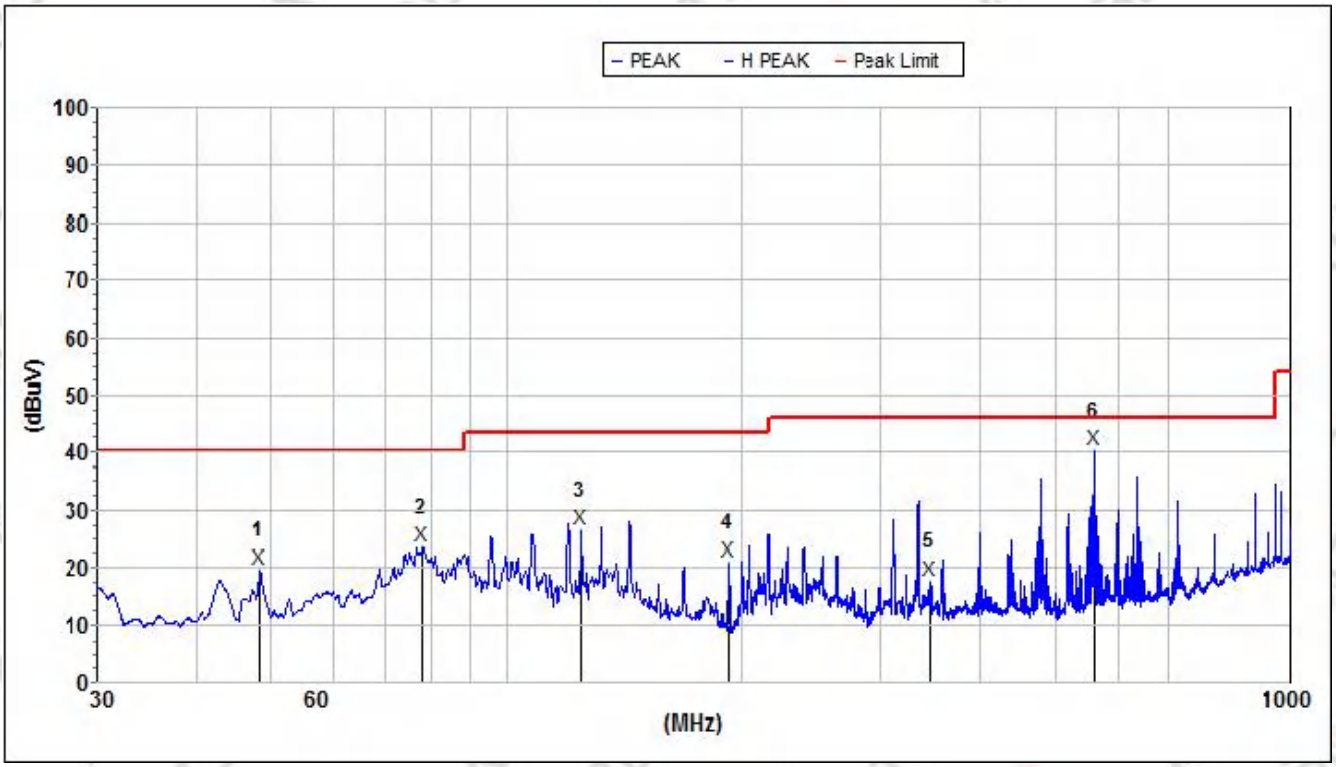


Mk.	Freq.(MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L.(dB)	Pol.
Peak								
1	43.429513	14.6	40.0	25.4	13.9	32.5	0.8	V
2	78.413354	17.4	40.0	22.6	9.5	32.9	0.9	V
3	119.645652	20.4	43.5	23.1	12.2	32.9	1.4	V
4	191.409140	13.5	43.5	30.0	10.4	32.8	2.2	V
5	334.858889	25.7	46.0	20.3	13.5	32.6	2.7	V
6	559.710646	43.8	46.0	2.2	17.6	32.4	3.1	V

30MHz - 1000MHz

Temperature:	22.8℃	Relative Humidity:	51%RH
Test Voltage:	125V	Phase:	Horizontal
Test Mode:	Mode 2		

Mode 2 Horizontal

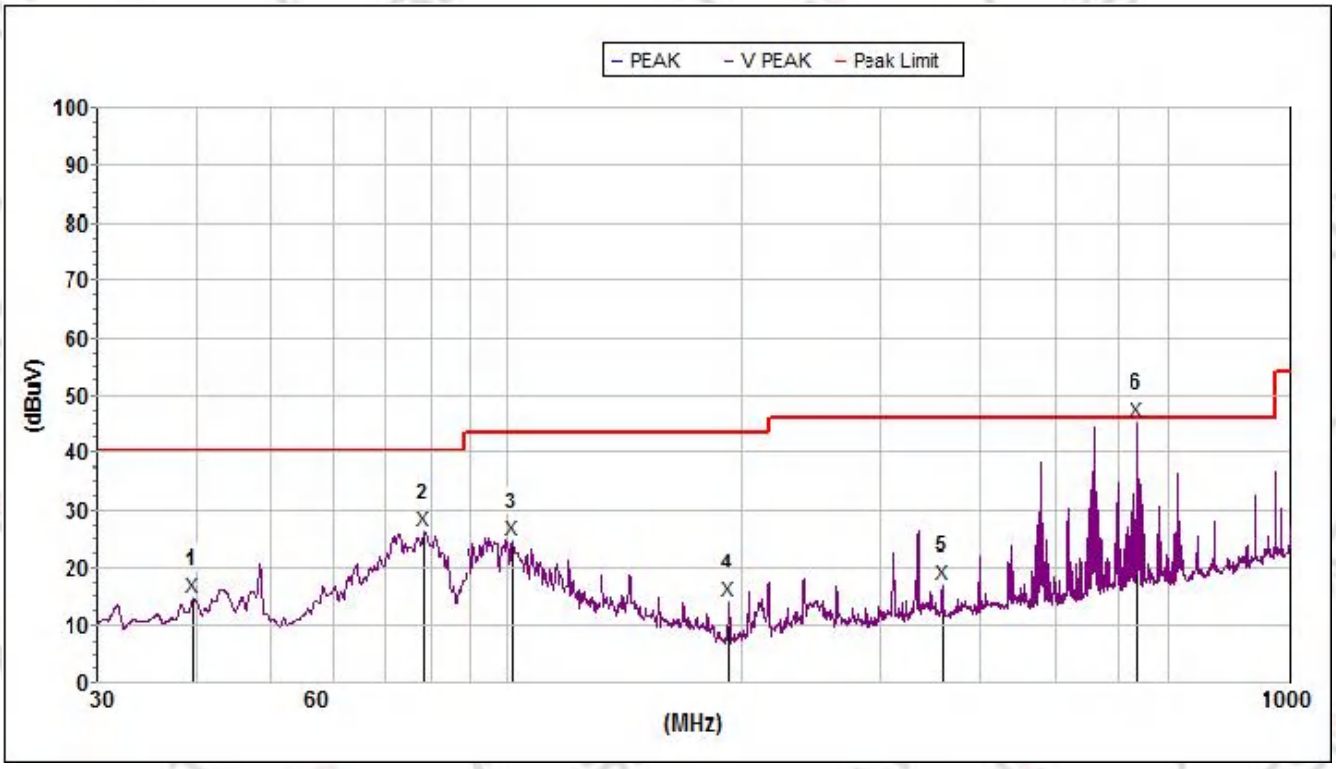


Mk.	Freq.(MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L.(dB)	Pol.
Peak								
1	48.416591	19.7	40.0	20.3	13.6	32.6	0.8	H
2	78.001995	23.6	40.0	16.4	9.6	32.9	0.9	H
3	123.915521	26.7	43.5	16.8	12.5	32.9	1.4	H
4	191.409140	21.0	43.5	22.5	10.4	32.8	2.2	H
5	346.201687	17.9	46.0	28.1	13.4	32.5	2.7	H
6	559.710646	40.5	46.0	5.5	15.5	32.4	3.1	H

30MHz - 1000MHz

Temperature:	22.8℃	Relative Humidity:	51%RH
Test Voltage:	125V	Phase:	Vertical
Test Mode:	TX Mode 2		

Mode2 Vertical



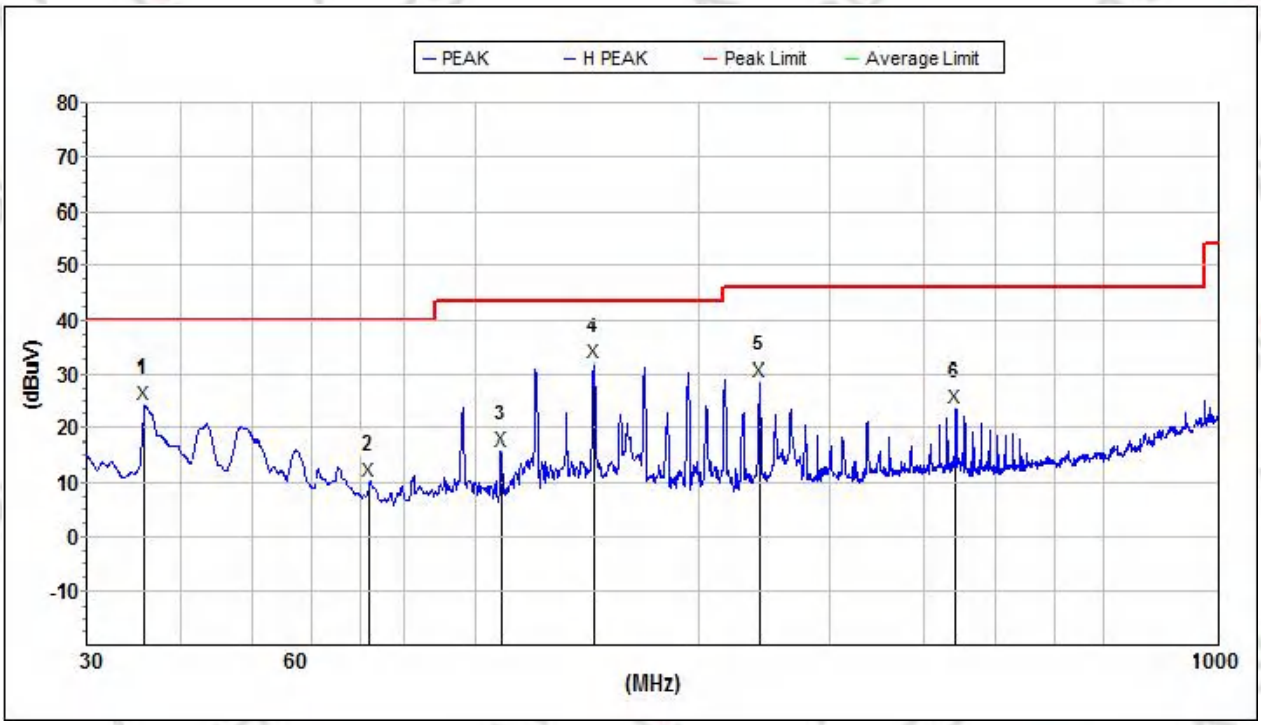
Mk.	Freq.(MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L.(dB)	Pol.
Peak								
1	39.645155	14.9	40.0	25.1	14.0	32.4	0.8	V
2	78.413354	26.4	40.0	13.6	9.5	32.9	0.9	V
3	101.644307	24.7	43.5	18.8	10.3	32.9	1.4	V
4	191.409140	14.2	43.5	29.3	10.4	32.8	2.2	V
5	359.186005	17.0	46.0	29.0	14.0	32.5	2.7	V
6	639.488826	45.4	46.0	0.6	19.2	32.3	3.4	V

(30MHz -1000MHz)

Temperature:	23.4℃	Relative Humidity:	55%RH
Test Voltage:	125V	Phase:	Horizontal
Test Mode:	TX Mode 3		

Remark:
1. Margin = Result (Result =Reading + Factor)–Limit
2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

Mode 3 Horizontal



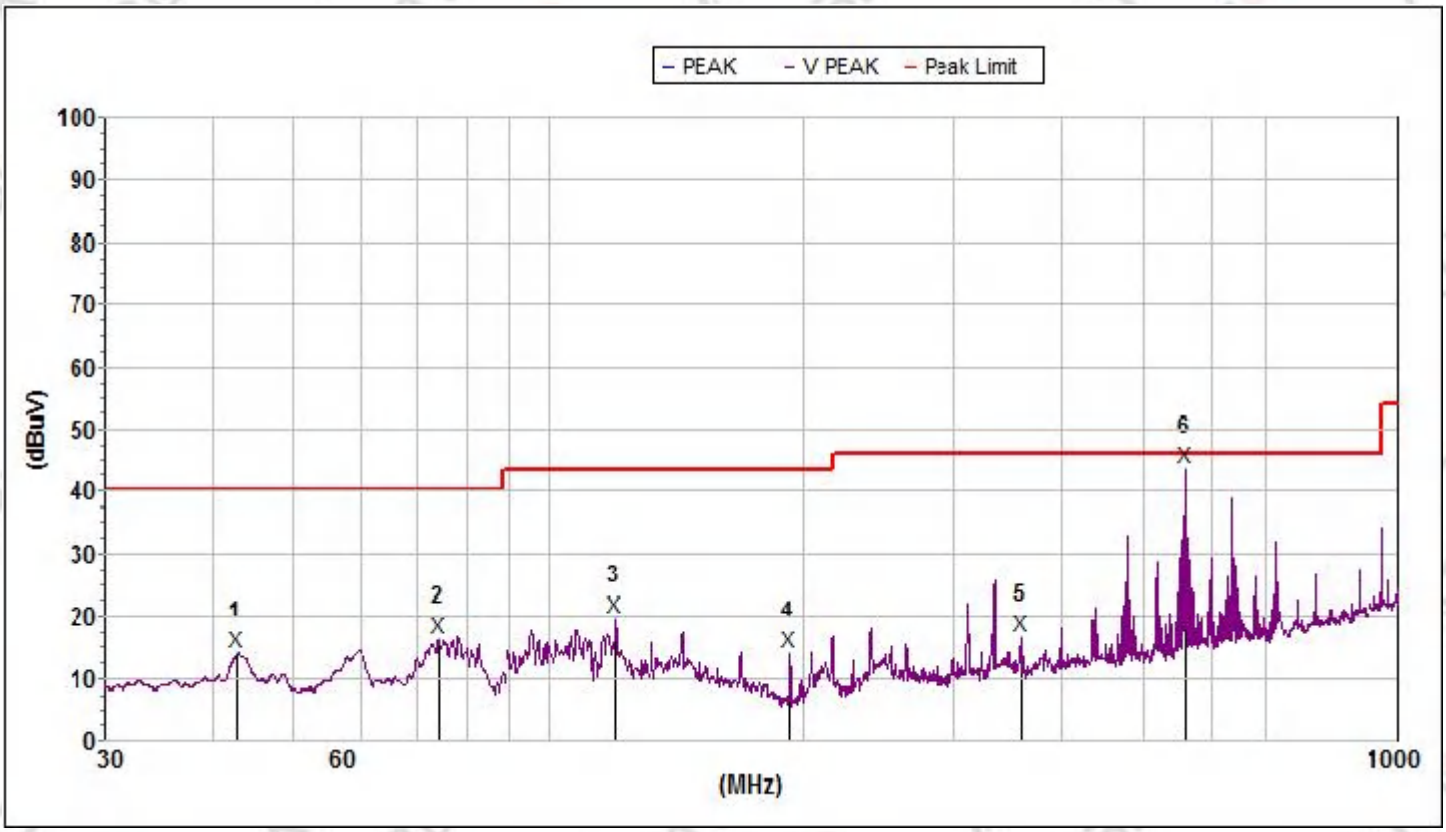
Mk.	Freq.(MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L.(dB)	Pol.
Peak								
1	43.505724	14.2	40.0	25.8	13.9	32.5	0.8	H
2	77.456872	18.7	40.0	21.3	9.7	32.9	0.9	H
3	131.757724	30.4	43.5	13.1	12.9	32.9	1.4	H
4	203.879936	24.3	43.5	19.2	10.0	32.8	2.4	H
5	359.186005	16.5	46.0	29.5	13.5	32.5	2.7	H
6	559.710646	41.1	46.0	4.9	15.5	32.4	3.1	H

(30MHz -1000MHz)

Temperature:	23.4℃	Relative Humidity:	55%RH
Test Voltage:	125V	Phase:	Vertical
Test Mode:	TX Mode 3		

Remark:
1. Margin = Result (Result =Reading + Factor)–Limit
2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

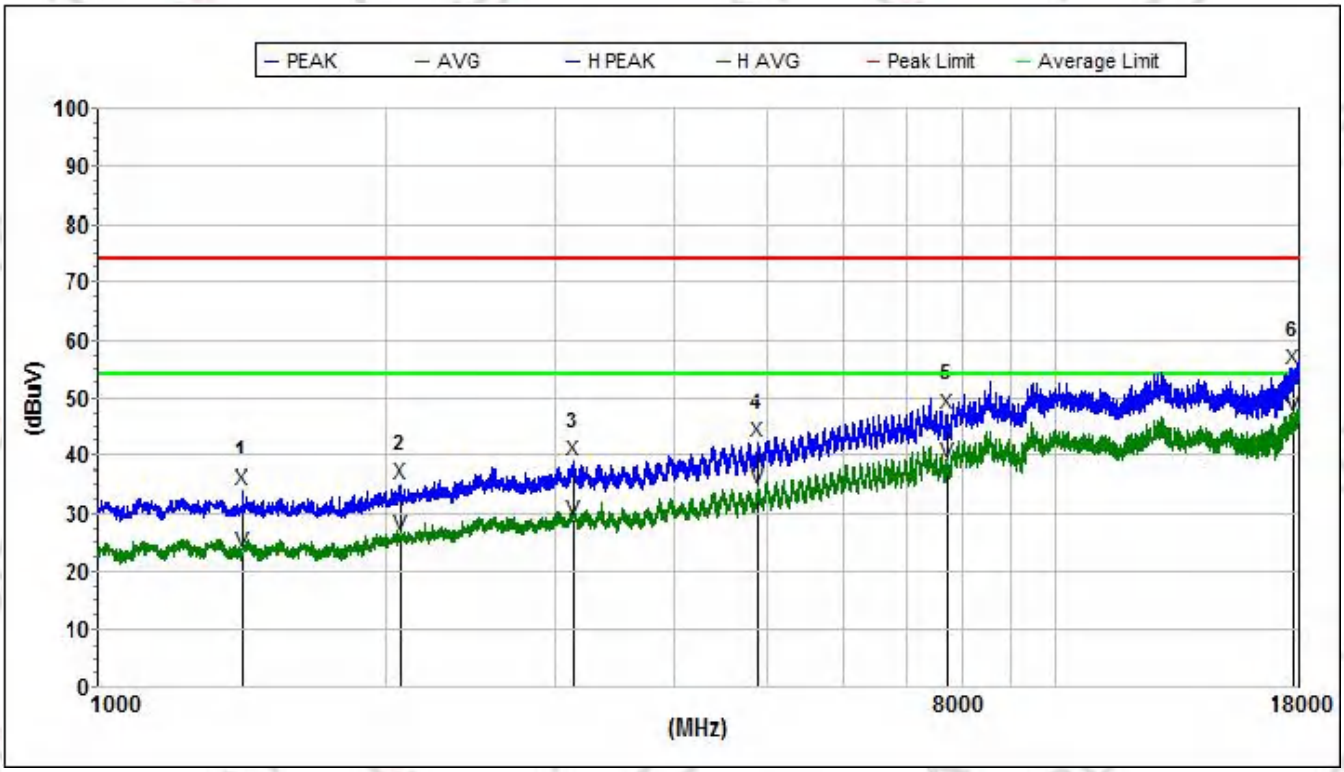
Mode 3 Vertical



Mk.	Freq.(MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L.(dB)	Pol.
Peak								
1	43.050457	14.1	40.0	25.9	13.9	32.5	0.8	V
2	74.005250	16.6	40.0	23.4	10.2	32.9	0.9	V
3	119.645652	19.9	43.5	23.6	12.2	32.9	1.4	V
4	191.409140	14.1	43.5	29.4	10.4	32.8	2.2	V
5	359.186005	16.9	46.0	29.1	14.0	32.5	2.7	V
6	559.710646	43.8	46.0	2.2	17.6	32.4	3.1	V

1GHz~18GHz

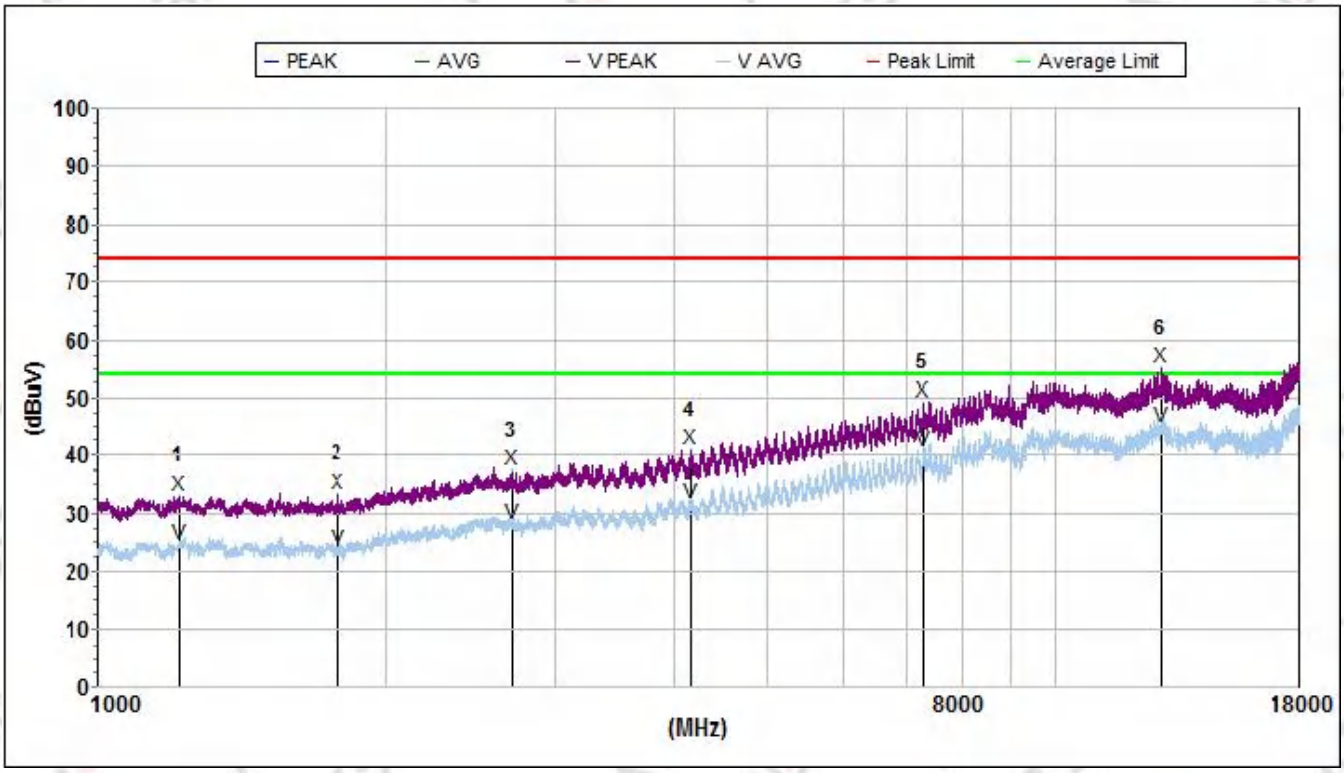
Mode 1 Horizontal



Mk.	Freq.(MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak								
1	1418.200000	34.2	74.0	39.8	25.5	61.4	2.4	H
2	2066.750000	35.2	74.0	38.8	26.9	60.9	2.7	H
3	3139.450000	39.1	74.0	34.9	29.7	58.6	3.0	H
4	4898.100000	42.4	74.0	31.6	32.7	57.4	3.6	H
5	7704.800000	47.4	74.0	26.6	36.5	57.7	4.8	H
6	17797.700000	55.0	74.0	19.0	41.1	57.8	7.0	H
AVG								
1	1418.200000	23.4	54.0	30.6	25.5	61.4	2.4	H
2	2066.750000	26.3	54.0	27.7	26.9	60.9	2.7	H
3	3139.450000	28.9	54.0	25.1	29.7	58.6	3.0	H
4	4898.100000	34.4	54.0	19.6	32.7	57.4	3.6	H
5	7704.800000	38.8	54.0	15.2	36.5	57.7	4.8	H
6	17797.700000	46.9	54.0	7.1	41.1	57.8	7.0	H

1GHz~18GHz

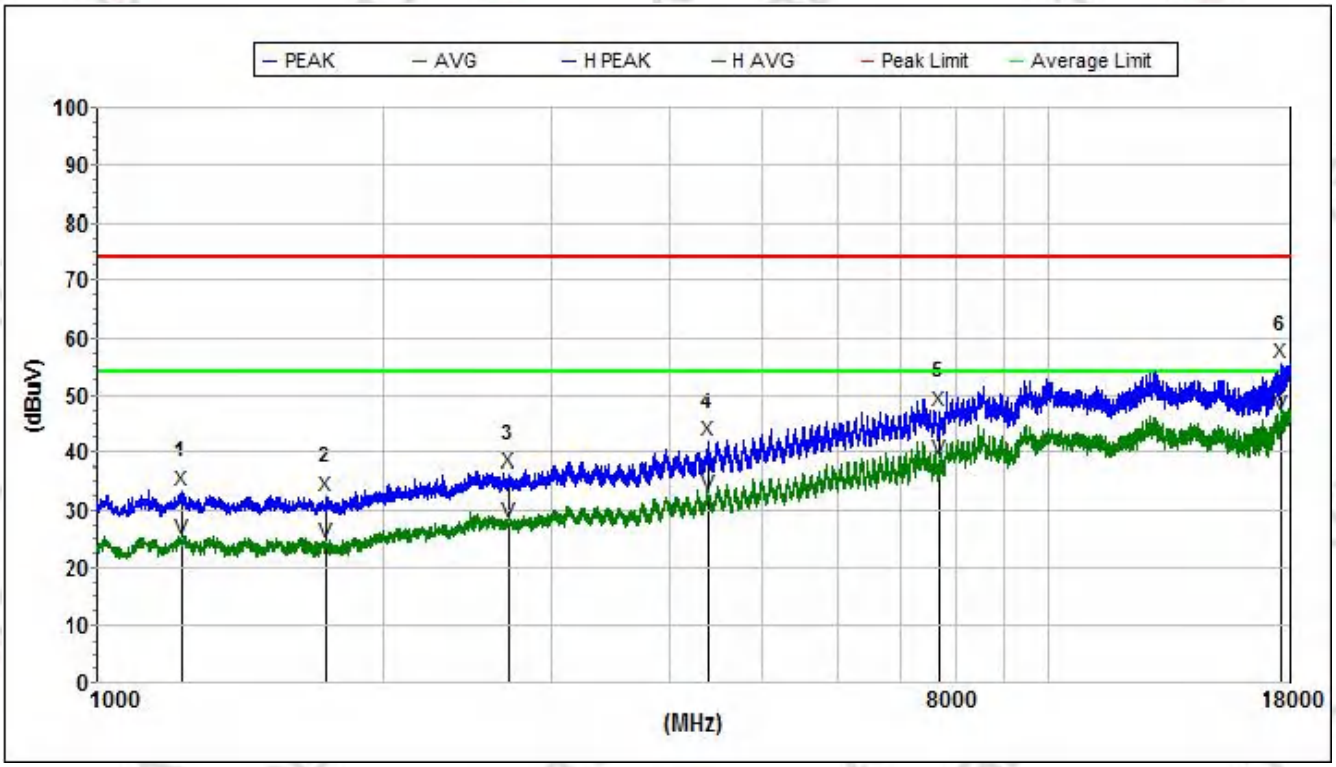
Mode 1 Vertical



Mk.	Freq.(MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak								
1	1215.900000	33.1	74.0	40.9	25.7	60.9	2.3	V
2	1786.250000	33.6	74.0	40.4	25.1	61.3	2.6	V
3	2710.200000	37.6	74.0	36.4	28.2	59.4	2.9	V
4	4159.450000	41.0	74.0	33.0	30.9	58.2	3.4	V
5	7289.150000	49.2	74.0	24.8	36.8	57.6	4.5	V
6	12917.000000	55.2	74.0	18.8	39.7	57.8	6.1	V
AVG								
1	1215.900000	24.8	54.0	29.2	25.7	60.9	2.3	V
2	1786.250000	23.7	54.0	30.3	25.1	61.3	2.6	V
3	2710.200000	28.2	54.0	25.8	28.2	59.4	2.9	V
4	4159.450000	32.0	54.0	22.0	30.9	58.2	3.4	V
5	7289.150000	40.7	54.0	13.3	36.8	57.6	4.5	V
6	12917.000000	45.1	54.0	8.9	39.7	57.8	6.1	V

1GHz~18GHz

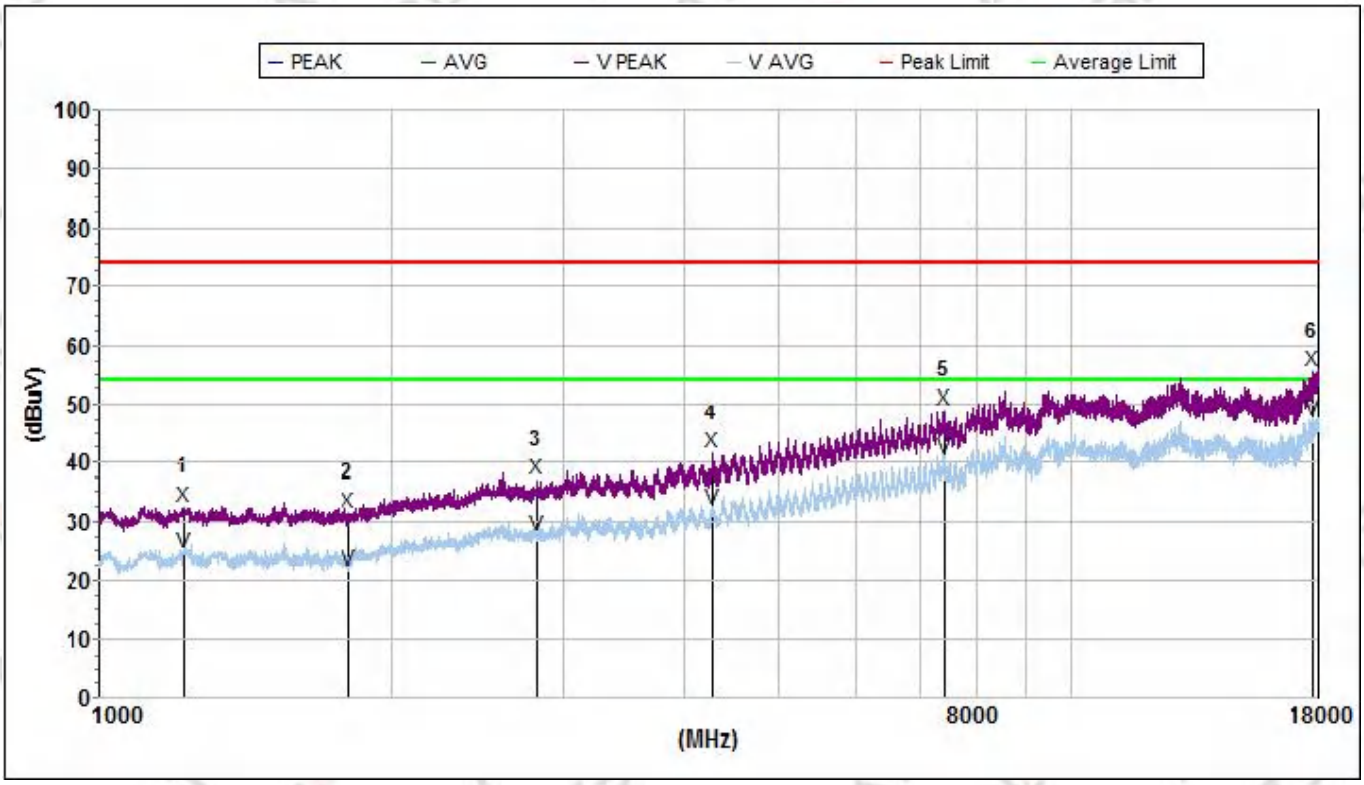
Mode 2 Horizontal



Mk.	Freq.(MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak								
1	1222.700000	33.4	74.0	40.6	25.7	60.9	2.3	H
2	1738.650000	32.5	74.0	41.5	25.1	61.2	2.6	H
3	2712.750000	36.6	74.0	37.4	28.2	59.4	2.9	H
4	4379.600000	42.0	74.0	32.0	31.5	58.1	3.5	H
5	7697.150000	47.5	74.0	26.5	36.5	57.7	4.8	H
6	17587.750000	55.6	74.0	18.4	39.8	58.0	6.9	H
AVG								
1	1222.700000	25.0	54.0	29.0	25.7	60.9	2.3	H
2	1738.650000	24.2	54.0	29.8	25.1	61.2	2.6	H
3	2712.750000	28.0	54.0	26.0	28.2	59.4	2.9	H
4	4379.600000	32.9	54.0	21.1	31.5	58.1	3.5	H
5	7697.150000	38.8	54.0	15.2	36.5	57.7	4.8	H
6	17587.750000	46.6	54.0	7.4	39.8	58.0	6.9	H

1GHz~18GHz

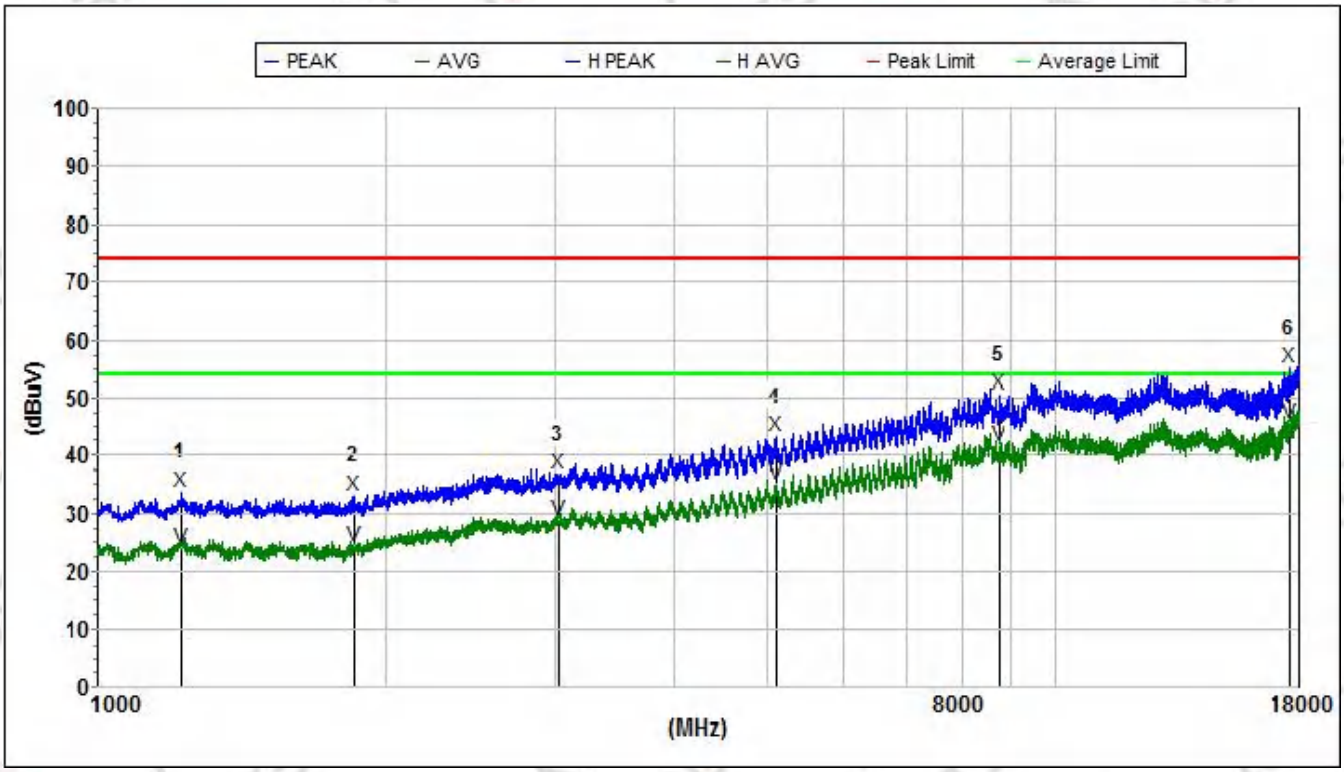
Mode 2 Vertical



Mk.	Freq.(MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak								
1	1220.150000	32.6	74.0	41.4	25.7	60.9	2.3	V
2	1808.350000	31.5	74.0	42.5	25.1	61.3	2.6	V
3	2818.150000	37.2	74.0	36.8	28.5	59.4	2.9	V
4	4270.800000	41.9	74.0	32.1	31.2	58.2	3.4	V
5	7406.450000	49.1	74.0	24.9	36.5	57.5	4.6	V
6	17790.050000	55.6	74.0	18.4	41.0	57.8	7.0	V
AVG								
1	1220.150000	24.6	54.0	29.4	25.7	60.9	2.3	V
2	1808.350000	21.7	54.0	32.3	25.1	61.3	2.6	V
3	2818.150000	27.6	54.0	26.4	28.5	59.4	2.9	V
4	4270.800000	32.4	54.0	21.6	31.2	58.2	3.4	V
5	7406.450000	40.8	54.0	13.2	36.5	57.5	4.6	V
6	17790.050000	47.4	54.0	6.6	41.0	57.8	7.0	V

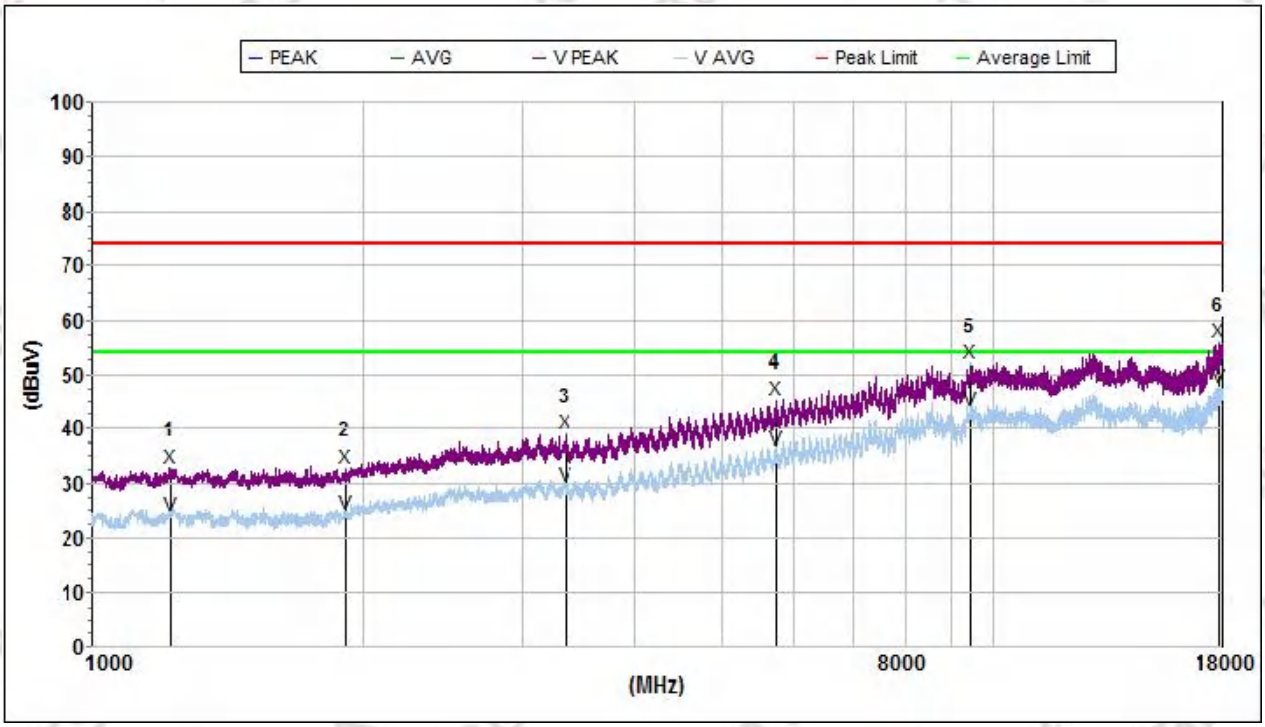
1GHz~18GHz

Mode 3Horizontal



Mk.	Freq.(MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak								
1	1221.000000	33.8	74.0	40.2	25.7	60.9	2.3	H
2	1850.850000	33.3	74.0	40.7	25.4	61.1	2.6	H
3	3023.850000	37.0	74.0	37.0	29.5	58.8	3.0	H
4	5108.900000	43.4	74.0	30.6	33.1	57.5	3.7	H
5	8746.050000	50.7	74.0	23.3	38.1	58.0	5.2	H
6	17583.500000	55.1	74.0	18.9	39.8	58.1	6.9	H
AVG								
1	1221.000000	23.9	54.0	30.1	25.7	60.9	2.3	H
2	1850.850000	24.3	54.0	29.7	25.4	61.1	2.6	H
3	3023.850000	28.9	54.0	25.1	29.5	58.8	3.0	H
4	5108.900000	35.2	54.0	18.8	33.1	57.5	3.7	H
5	8746.050000	41.8	54.0	12.2	38.1	58.0	5.2	H
6	17583.500000	45.6	54.0	8.4	39.8	58.1	6.9	H

1GHz~18GHz Mode 3Vertical



Mk.	Freq.(MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak								
1	1221.850000	32.9	74.0	41.1	25.7	60.9	2.3	V
2	1912.050000	33.0	74.0	41.0	25.7	61.0	2.6	V
3	3345.150000	39.0	74.0	35.0	29.5	58.2	3.1	V
4	5734.500000	45.4	74.0	28.6	33.5	58.1	4.0	V
5	9466.000000	52.1	74.0	21.9	38.6	59.7	5.4	V
6	17807.050000	55.8	74.0	18.2	41.2	57.8	7.0	V
AVG								
1	1221.850000	24.1	54.0	29.9	25.7	60.9	2.3	V
2	1912.050000	24.3	54.0	29.7	25.7	61.0	2.6	V
3	3345.150000	29.6	54.0	24.4	29.5	58.2	3.1	V
4	5734.500000	36.1	54.0	17.9	33.5	58.1	4.0	V
5	9466.000000	43.5	54.0	10.5	38.6	59.7	5.4	V
6	17807.050000	47.6	54.0	6.4	41.2	57.8	7.0	V

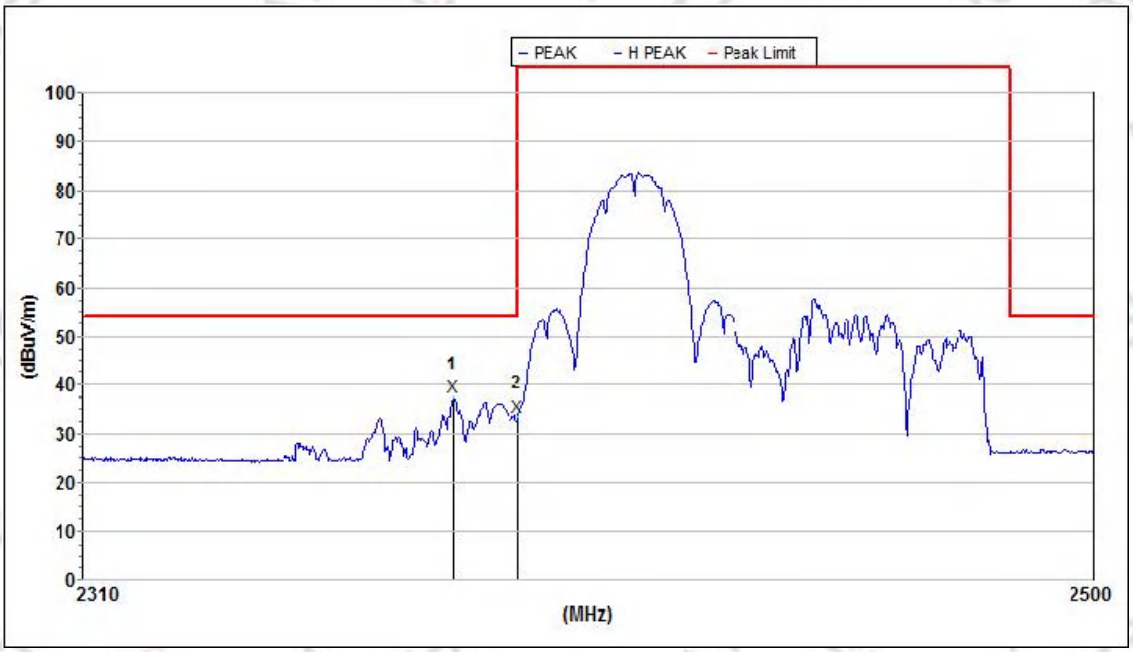
Note:

1. Factor=Ant.Factor+cable loss-Amp.Gain .
2. Level contains the factor;Margin=Limit-Level.
3. 802.11b, 802.11g, 802.11n (HT-20), 802.11n (HT-40) mode all have been tested, the worst case is 802.11b, only show the worst case.
4. Other 18G-25G Emission detected are more than 20dB below the limit.

3.2.6 TEST RESULTS (BAND EDGE REQUIREMENTS)

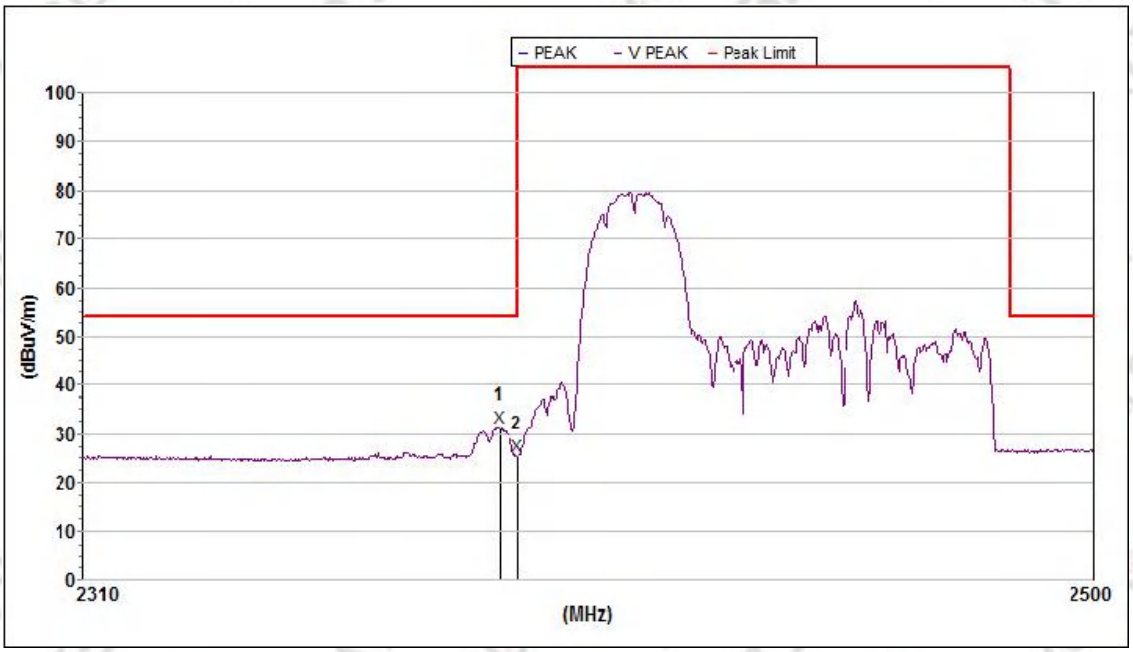
802.11b-Low

Horizontal



Mk.	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
AVG								
1	2377.803919	37.4	54.0	16.6	27.3	59.6	2.8	H
2	2390.000000	33.5	54.0	20.5	27.3	59.6	2.8	H

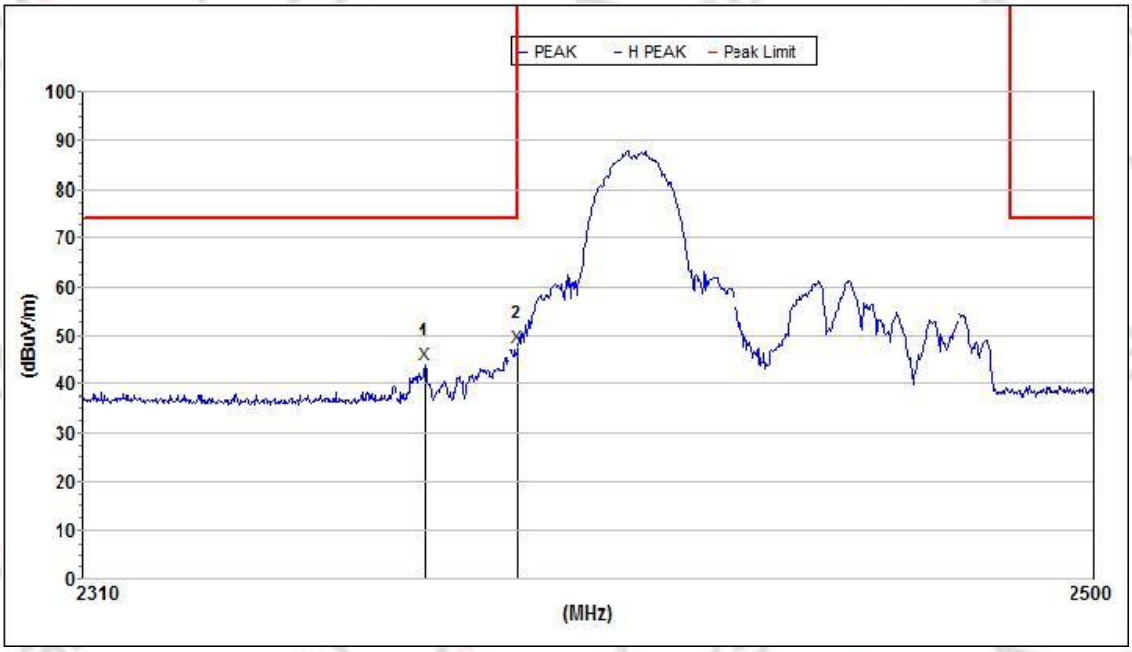
Vertical



Mk.	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
AVG								
1	2386.465321	31.4	54.0	22.6	27.3	59.6	2.8	V
2	2390.000000	25.3	54.0	28.7	27.3	59.6	2.8	V

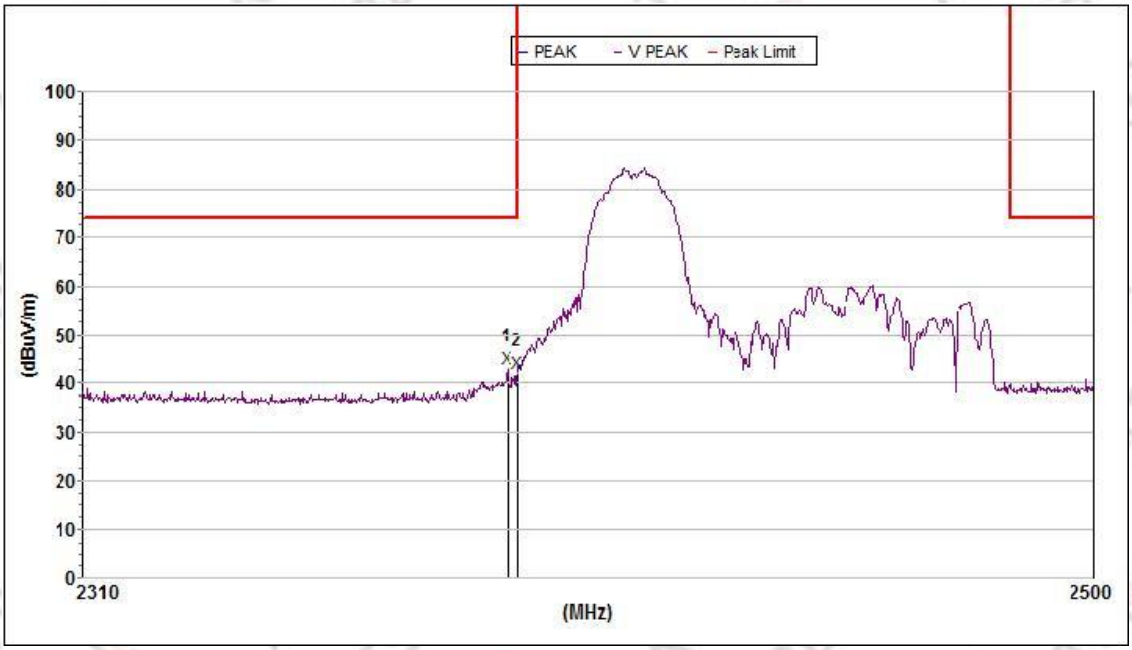
802.11b -Low

Horizontal



Mk.	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak								
1	2372.734700	44.0	74.0	30.0	27.3	59.6	2.8	H
2	2390.000000	47.6	74.0	26.4	27.3	59.6	2.8	H

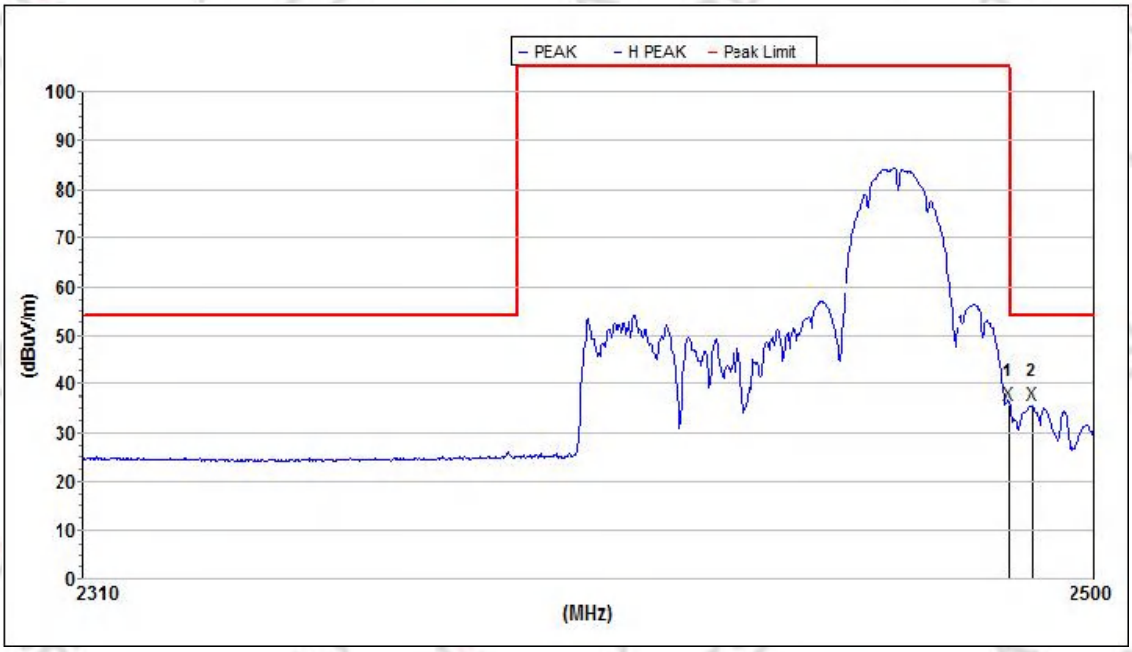
Vertical



Mk.	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak								
1	2387.974869	43.0	74.0	31.0	27.3	59.6	2.8	V
2	2390.000000	42.2	74.0	31.8	27.3	59.6	2.8	V

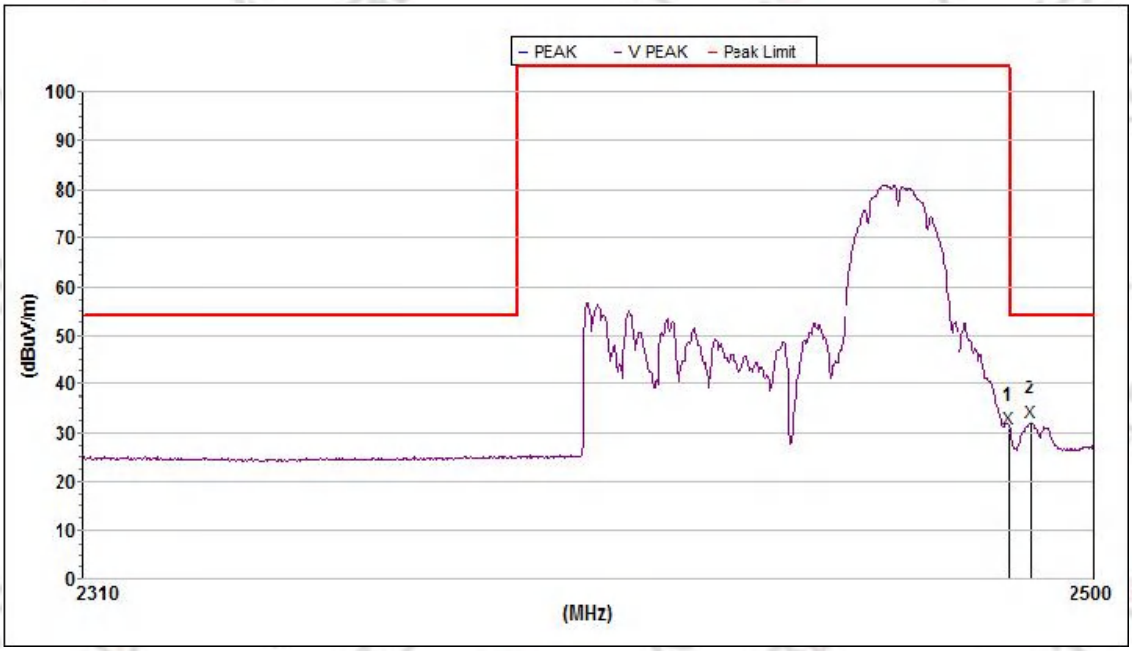
802.11b -High

Horizontal



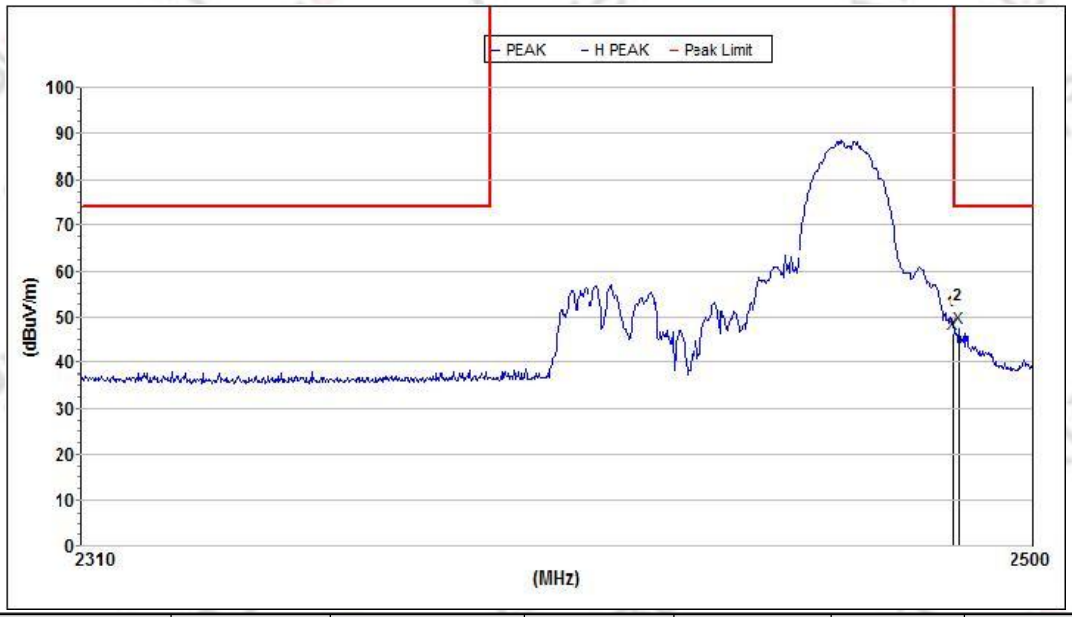
Mk.	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
AVG								
1	2483.501000	35.8	54.0	18.2	27.7	58.9	2.8	H
2	2487.974924	36.0	54.0	18.0	27.7	58.9	2.8	H

Vertical



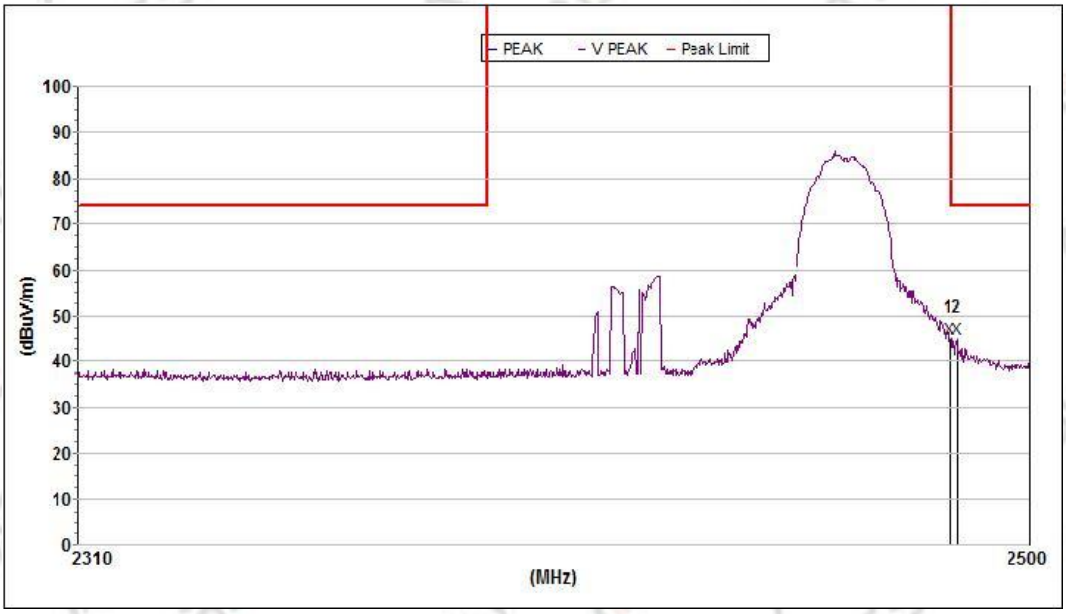
Mk.	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
AVG								
1	2483.501000	30.9	54.0	23.1	27.7	58.9	2.8	V
2	2487.581641	32.2	54.0	21.8	27.7	58.9	2.8	V

802.11b -High Horizontal



Mk.	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak								
1	2483.501000	46.5	74.0	27.5	27.7	58.9	2.8	H
2	2484.633992	47.7	74.0	26.3	27.7	58.9	2.8	H

Vertical



Mk.	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak								
1	2483.501000	45.1	74.0	28.9	27.7	58.9	2.8	V
2	2484.830393	45.0	74.0	29.0	27.7	58.9	2.8	V

Note: 802.11b, 802.11g, 802.11n (HT-20), 802.11n (HT-40) mode all have been tested, the worst case is 802.11b, only show the worst case.

4.CONDUCTED SPURIOUS & BAND EDGE EMISSION

4.1 LIMIT

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

4.2 TEST PROCEDURE

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	30 MHz to 10th carrier harmonic
RB / VB (emission in restricted band)	100 kHz/300 kHz
Trace-Mode:	Max hold

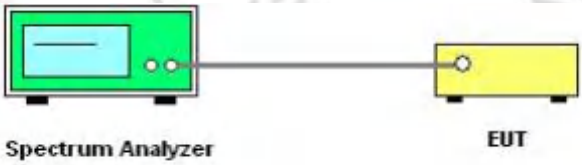
For Band edge

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	Lower Band Edge: 2310 to 2445 MHz Upper Band Edge: 2430 to 2565 MHz
RB / VB (emission in restricted band)	100 kHz/300 kHz
Trace-Mode:	Max hold

4.3 DEVIATION FROM STANDARD

No deviation.

4.4 TEST SETUP



The EUT which is powered by the Battery, is connected to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

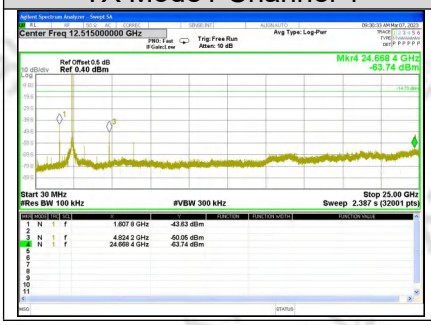
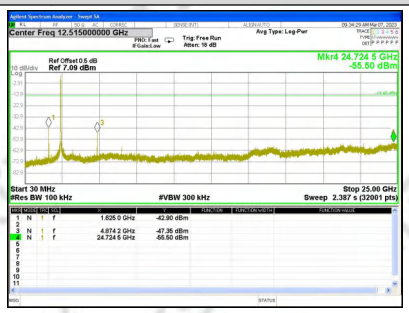
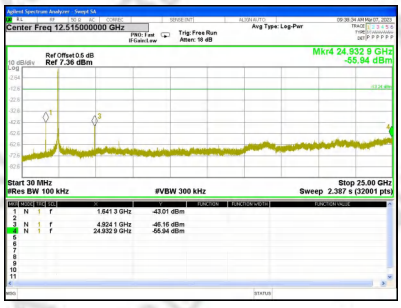
4.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

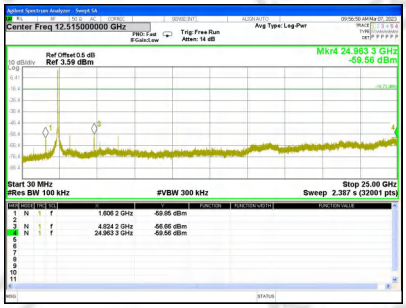
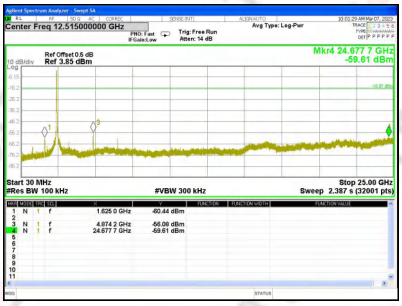
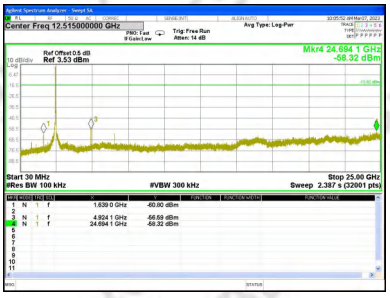
4.6 TEST RESULTS

Temperature:	22.8℃	Relative Humidity:	51%RH
Test Voltage:	DC 5V	Test Mode:	TX Mode1/2/3/4/5/6/7/8/9/10/11/12

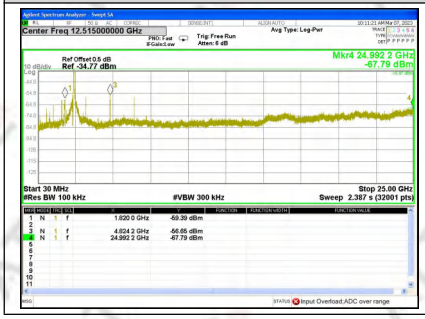
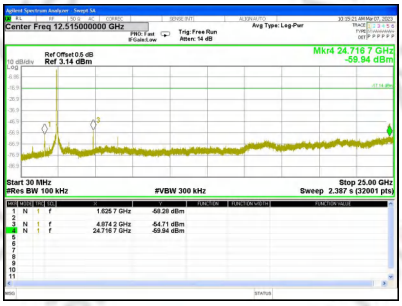
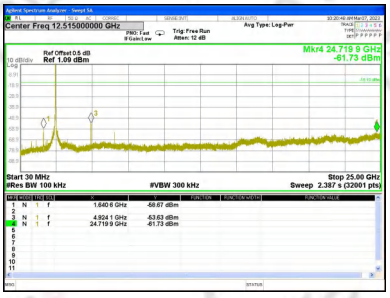
802.11b

TX Mode1 Channel 1	TX Mode2 Channel 6	TX Mode3 Channel 11
		

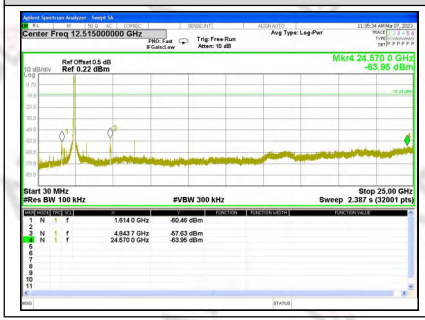
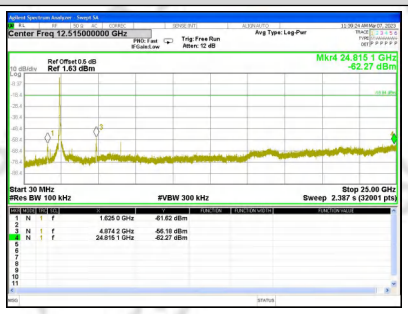
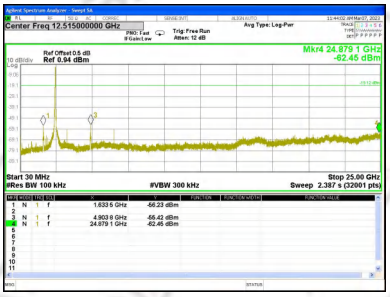
802.11g

TX Mode4 Channel 1	TX Mode5 Channel 6	TX Mode6 Channel 11
		

802.11n20

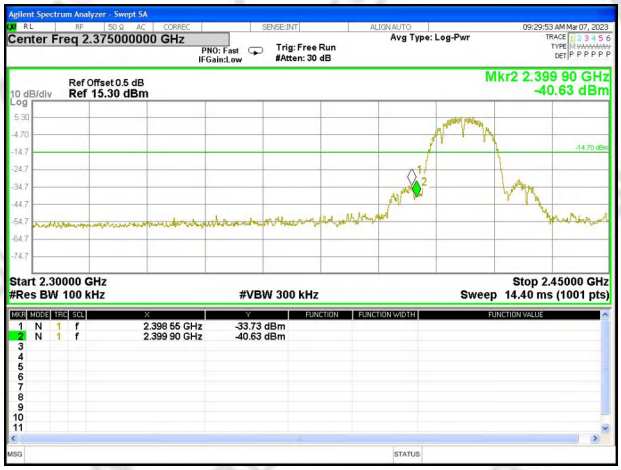
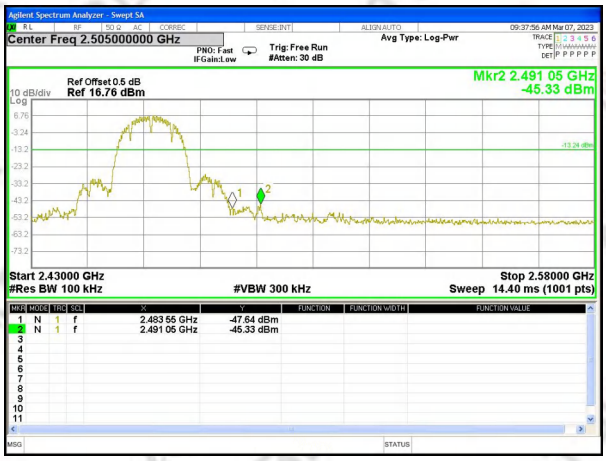
TX Mode7 Channel 1	TX Mode8 Channel 6	TX Mode9 Channel 11
		

802.11n40

TX Mode10 Channel 3	TX Mode11 Channel 6	TX Mode12 Channel 9
		

For Band edge(it's also the reference level for conducted spurious emission)

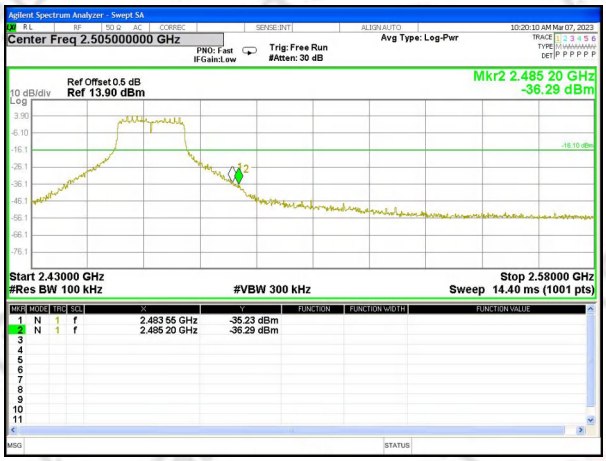
802.11b

TX Mode1 Channel 1	TX Mode3 Channel 11
	

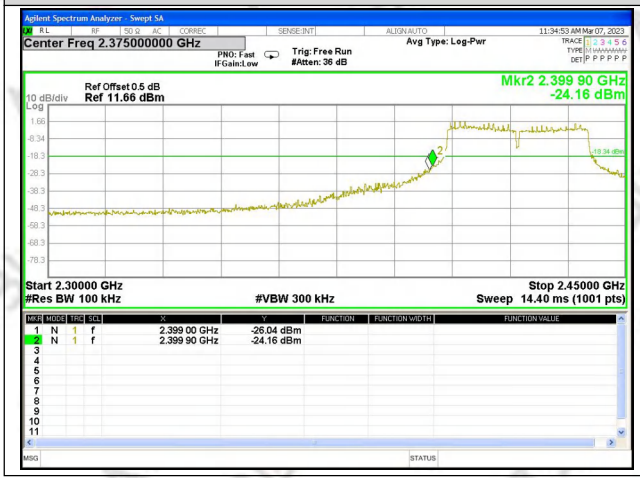
802.11g

TX Mode4 Channel 1	TX Mode6 Channel 11

802.11n20

TX Mode7 Channel 1	TX Mode9 Channel 11
	

802.11n40

TX Mode10 Channel 3	TX Mode12 Channel 9
	

5. POWER SPECTRAL DENSITY TEST

5.1 LIMIT

FCC Part15.247,Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e)	Power Spectral Density	≤8 dBm (RBW ≥3kHz)	2400-2483.5	PASS

5.2 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the 100 kHz ≥ RBW ≥3 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP

5.5 EUT OPERATION CONDITIONS

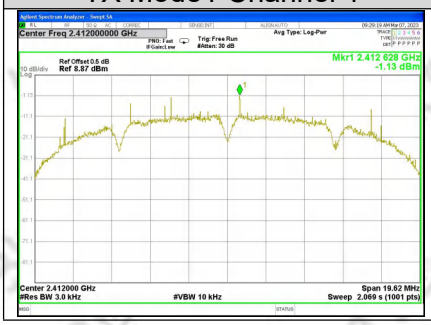
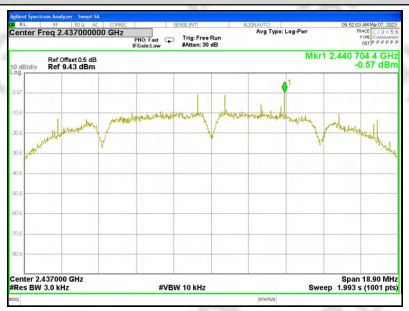
Please refer to section 3.1.4 of this report.

5.6 TEST RESULTS

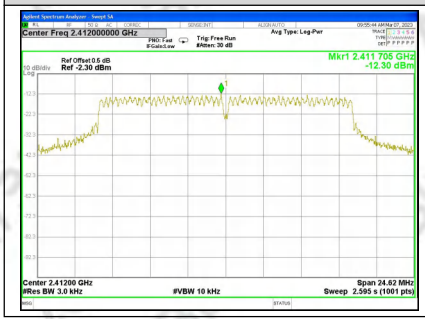
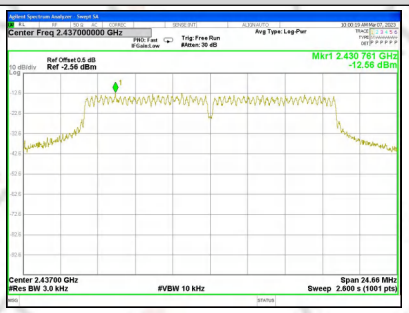
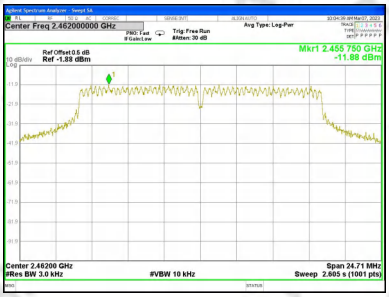
Temperature:	22.8℃	Relative Humidity:	51%RH
Test Voltage:	DC 5V	Test Mode:	TX Mode1/2/3/4/5/6/7/8/9/10/11/12

Test mode	Frequency	Power Density (dBm/3kHz)	Limit (3kHz/dBm)	Result
Mode1	2412 MHz	-1.13	≤8	PASS
Mode2	2437 MHz	-0.57	≤8	PASS
Mode3	2462 MHz	1.70	≤8	PASS
Mode4	2412 MHz	-12.30	≤8	PASS
Mode5	2437 MHz	-12.56	≤8	PASS
Mode6	2462 MHz	-11.88	≤8	PASS
Mode7	2412 MHz	-10.60	≤8	PASS
Mode8	2437 MHz	-10.87	≤8	PASS
Mode9	2462 MHz	-9.22	≤8	PASS
Mode10	2422 MHz	-12.06	≤8	PASS
Mode11	2437 MHz	-10.99	≤8	PASS
Mode12	2452 MHz	-11.91	≤8	PASS

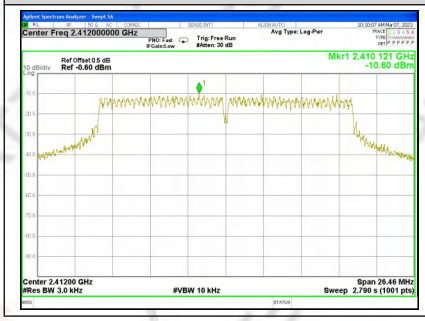
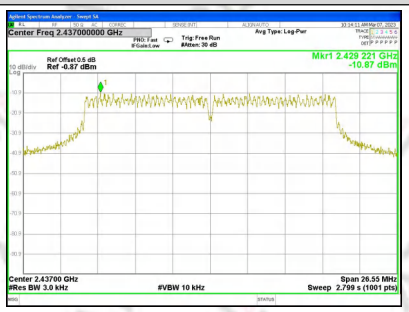
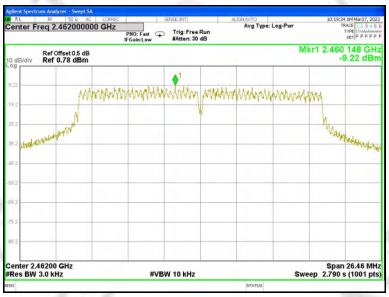
802.11b

TX Mode1 Channel 1	TX Mode2 Channel 6	TX Mode3 Channel 11
		

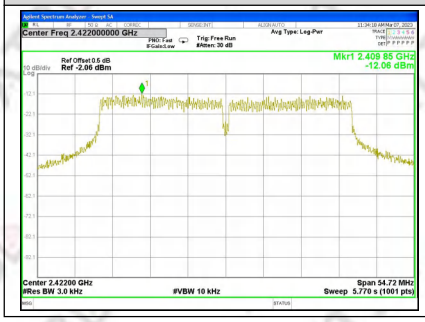
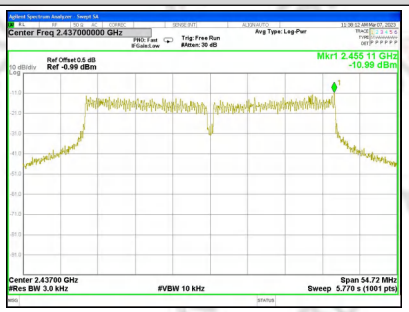
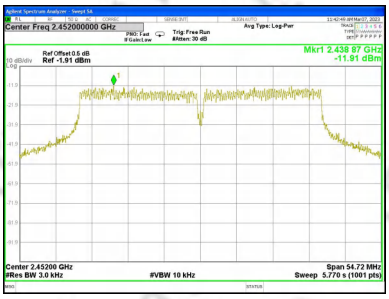
802.11g

TX Mode4 Channel 1	TX Mode5 Channel 6	TX Mode6 Channel 11
		

802.11n20

TX Mode7 Channel 1	TX Mode8 Channel 6	TX Mode9 Channel 11
		

802.11n40

TX Mode10 Channel 3	TX Mode11 Channel 6	TX Mode12 Channel 9
		

6. BANDWIDTH TEST

6.1 LIMIT

FCC Part15.247,Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	≥500kHz (6dB bandwidth)	2400-2483.5	PASS
15.247	99% Bandwidth	For reporting purposes only.	2400-2483.5	PASS

6.2 TEST PROCEDURE

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described above (i.e., RBW = 100 kHz, VBW≥3RBW, peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be≥6 dB.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP

6.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

6.6 TEST RESULTS

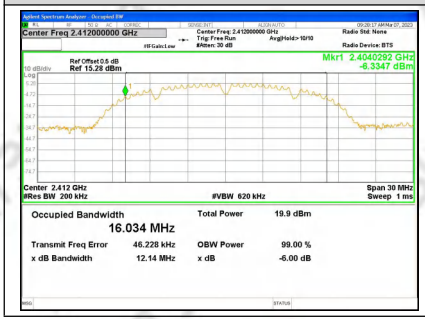
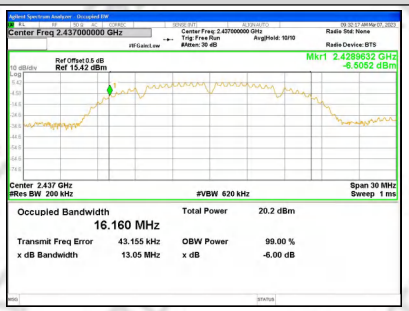
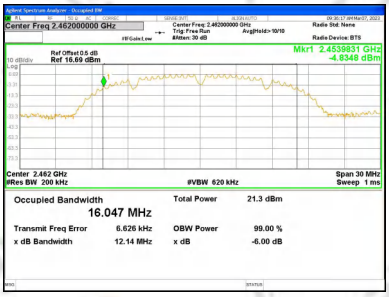
Temperature:	22.8℃	Relative Humidity:	51%RH
Test Voltage:	DC 5V	Test Mode:	TX Mode1/2/3/4/5/6/7/8/9/10/11/12

Test mode	Frequency	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	6dB Bandwidth Limit(kHz)	Result
Mode1	2412 MHz	13.08	16.034	≥500kHz	PASS
Mode2	2437 MHz	12.60	16.160	≥500kHz	PASS
Mode3	2462 MHz	12.15	16.047	≥500kHz	PASS
Mode4	2412 MHz	16.41	17.148	≥500kHz	PASS
Mode5	2437 MHz	16.44	17.505	≥500kHz	PASS
Mode6	2462 MHz	16.47	17.188	≥500kHz	PASS
Mode7	2412 MHz	17.64	18.143	≥500kHz	PASS
Mode8	2437 MHz	17.70	18.333	≥500kHz	PASS
Mode9	2462 MHz	17.64	18.150	≥500kHz	PASS
Mode10	2422 MHz	36.48	37.331	≥500kHz	PASS
Mode11	2437 MHz	36.48	37.861	≥500kHz	PASS
Mode12	2452 MHz	36.48	37.384	≥500kHz	PASS

6dB Bandwidth &99% Bandwidth

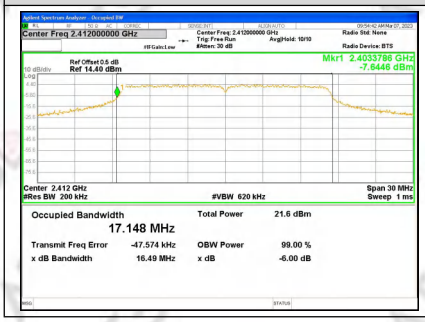
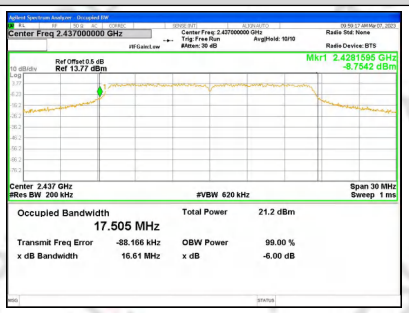
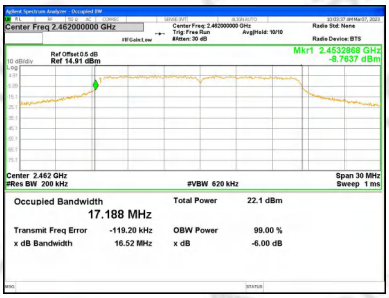
802.11b

6dB Bandwidth Mode1 CH 01	6dB Bandwidth Mode2 CH 06	6dB Bandwidth Mode3 CH 11

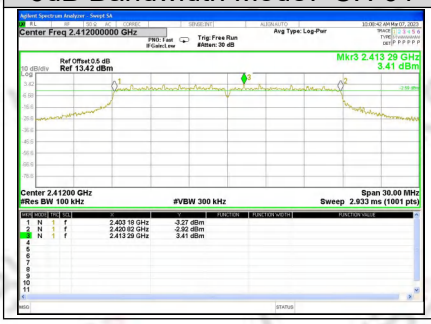
99% Bandwidth Mode1 CH 01	99% Bandwidth Mode2 CH 06	99% Bandwidth Mode3 CH 11
		

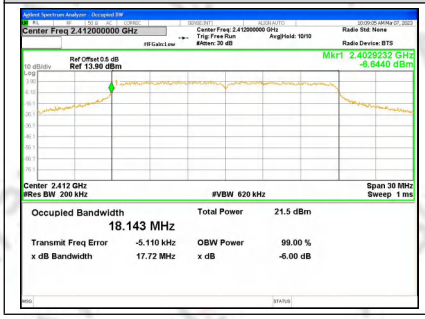
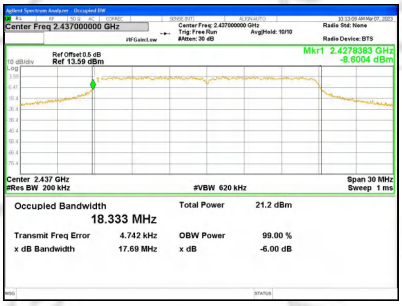
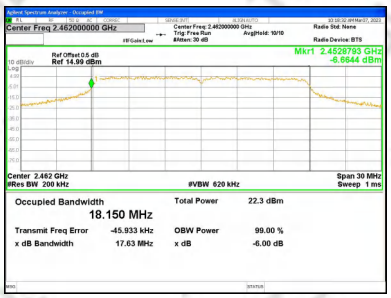
802.11g

6dB Bandwidth Mode4 CH 01	6dB Bandwidth Mode5 CH 06	6dB Bandwidth Mode6CH 11

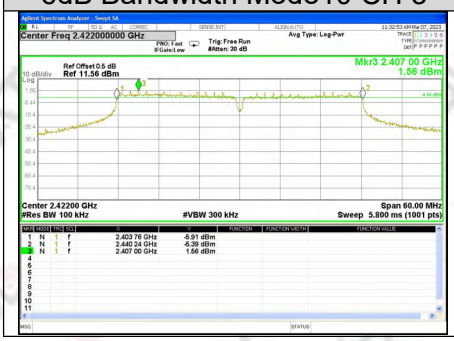
99% Bandwidth Mode4 CH 01	99% Bandwidth Mode5 CH 06	99% Bandwidth Mode6 CH 11
		

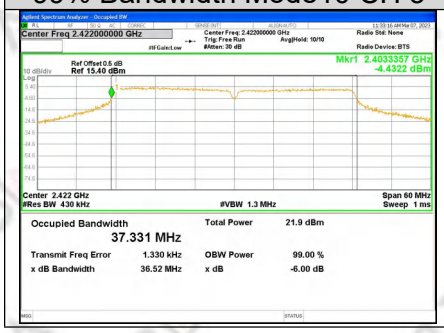
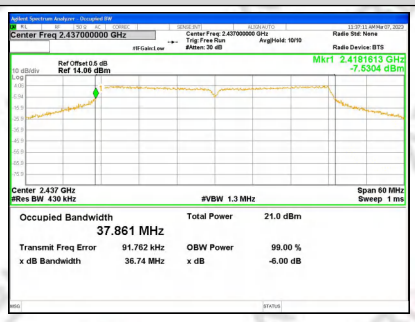
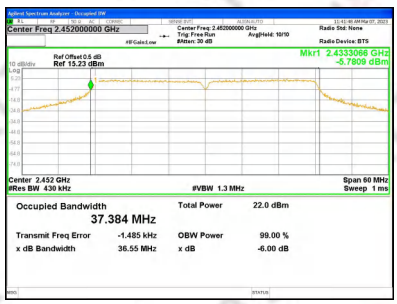
802.11n20

6dB Bandwidth Mode7 CH 01	6dB Bandwidth Mode8 CH 06	6dB Bandwidth Mode9 CH 11
		

99% Bandwidth Mode7 CH 01	99% Bandwidth Mode8CH 06	99% Bandwidth Mode9 CH 11
		

802.11n40

6dB Bandwidth Mode10 CH 3	6dB Bandwidth Mode11 CH 6	6dB Bandwidth Mode12 CH 9
		

99% Bandwidth Mode10 CH 3	99% Bandwidth Mode11 CH 6	99% Bandwidth Mode12 CH 9
		

7. PEAK OUTPUT POWER TEST

7.1 LIMIT

FCC Part15.247				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Output Power	1 watt or 30dBm	2400-2483.5	PASS

7.2 TEST PROCEDURE

PKPM1 Peak power meter method:
The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP

7.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

7.6 TEST RESULTS

Temperature:	22.8℃	Relative Humidity:	51%RH
Test Voltage:	DC 5V	Test Mode:	TX Mode1/2/3/4/5/6/7/8/9/10/11/12

Test mode	Test Channel	Frequency	Peak Conducted Output Power	Average Conducted Output Power	LIMIT
		(MHz)	(dBm)	(dBm)	dBm
Mode1	CH01	2412	19.76	18.65	30
Mode2	CH06	2437	20.15	18.98	30
Mode3	CH11	2462	21.44	20.30	30
Mode4	CH01	2412	25.04	22.77	30
Mode5	CH06	2437	24.84	22.47	30
Mode6	CH11	2462	25.01	22.77	30
Mode7	CH01	2412	24.87	23.48	30
Mode8	CH06	2437	24.65	23.30	30
Mode9	CH11	2462	23.80	22.44	30
Mode10	CH03	2422	23.40	21.09	30
Mode11	CH06	2437	24.29	22.33	30
Mode12	CH09	2452	24.66	24.40	30

Test Mode	Frequency	Peak Conducted Output Power	Antenna Gain	EIRP Power	LIMIT
	(MHz)	(dBm)	(dBi)	(dBm)	dBm
Mode1	2412	19.76	1.88	21.64	36
Mode2	2437	20.15	1.88	22.03	36
Mode3	2462	21.44	1.88	23.32	36
Mode4	2412	25.04	1.88	26..92	36
Mode5	2437	24.84	1.88	26.72	36
Mode6	2462	25.01	1.88	26.89	36
Mode7	2412	24.87	1.88	26.75	36
Mode8	2437	24.65	1.88	26.53	36
Mode9	2462	23.80	1.88	25.68	36
Mode10	2422	23.40	1.88	25.28	36
Mode11	2437	24.29	1.88	26.17	36
Mode12	2452	24.66	1.88	26.54	36

Note: Our power sensor test AVG power has no duty cycle display. The power sensor measures AVG power is Burst power. The software has considered the factor of the duty cycle factor, so it is unnecessary to add it again.

8. ANTENNA REQUIREMENT

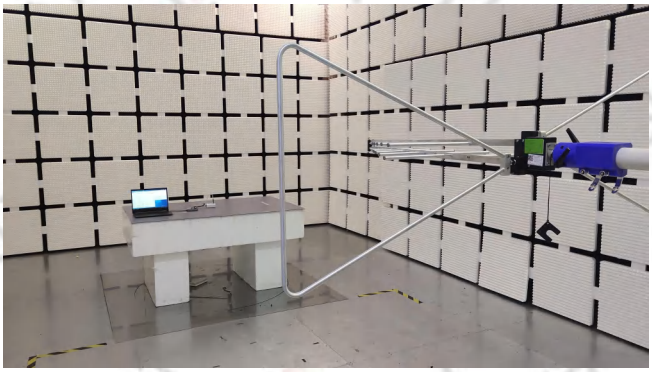
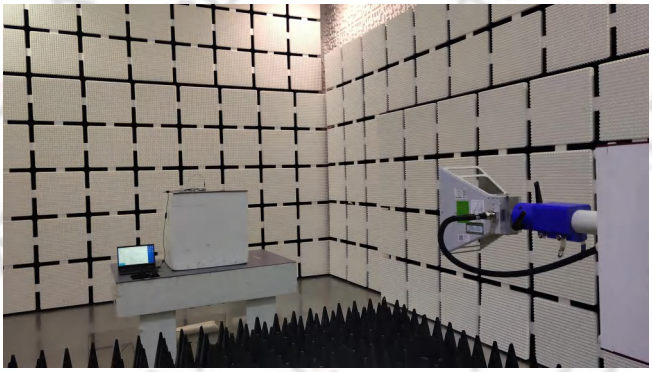
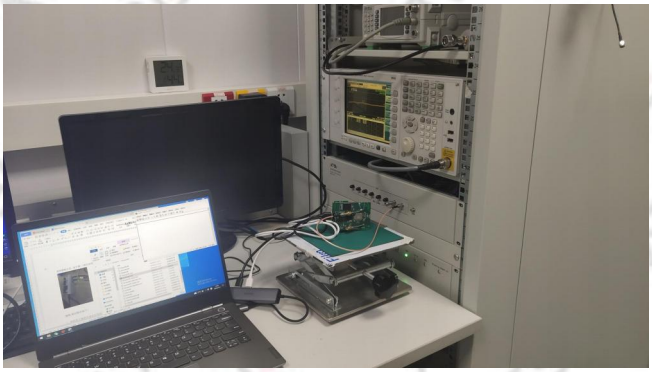
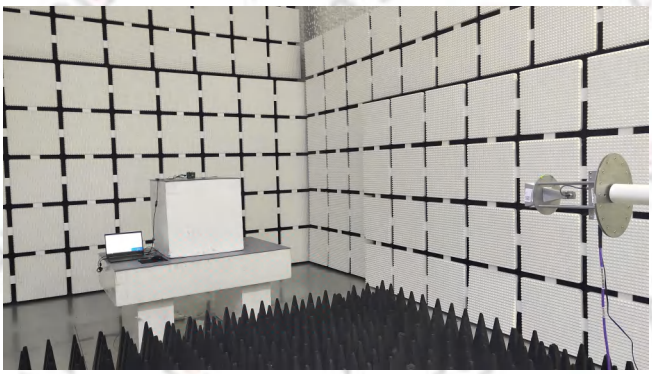
8.1 STANDARD REQUIREMENT

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.

8.2 EUT ANTENNA

The EUT antenna is Chip Antenna. It comply with the standard requirement.

9.APPENDIX-PHOTOS OF TEST SETUP

Radiated Emissions for 30MHz-1GHz	Radiated Emissions for 1GHz-18GHz
	
Radiated Emissions for 9kHz-30MHz	**Conducted for RF**
	
Radiated Emissions for above 18GHz	**AC Power Line Conducted Emissions**
	

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