

## TEST REPORT

**Product** : L400, S400, S500, TS-400, IP400  
**Trade mark** : AIPTEK/iBeamBLOCK/hp  
**Model/Type reference** : L400 PAD  
**Serial Number** : N/A  
**Report Number** : EED32I00318003  
**FCC ID** : 2AHTC-IBBL4  
**Date of Issue** : Jul. 14, 2017  
**Test Standards** : 47 CFR Part 15Subpart C  
**Test result** : PASS

Prepared for:

**Global Aiptek Corporation**  
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**County, Taiwan**

Prepared by:

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Date:

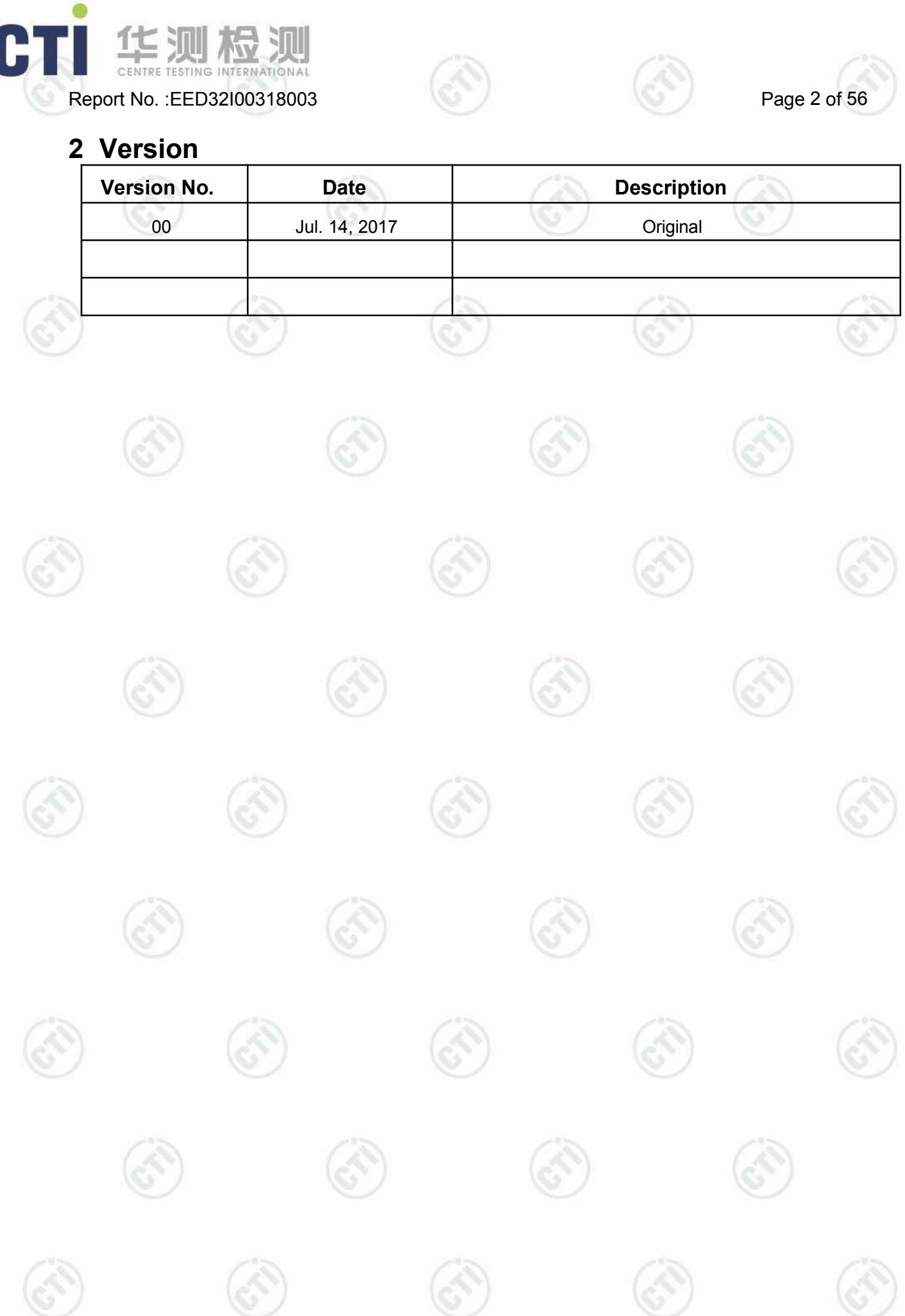
Jul. 14, 2017

Check No.:2402615206



**2 Version**

Version No.	Date	Description
00	Jul. 14, 2017	Original



### 3 Test Summary

Test Item	Test Requirement	Test method	Result
<b>Antenna Requirement</b>	47 CFR Part 15 Subpart C Section 15.203/15.247 (c)	ANSI C63.10-2013	PASS
<b>AC Power Line Conducted Emission</b>	47 CFR Part 15 Subpart C Section 15.207	ANSI C63.10-2013	PASS
<b>Conducted Peak Output Power</b>	47 CFR Part 15 Subpart C Section 15.247 (b)(3)	ANSI C63.10-2013/ KDB 558074 D01v04	PASS
<b>6dB Occupied Bandwidth</b>	47 CFR Part 15 Subpart C Section 15.247 (a)(2)	ANSI C63.10-2013/ KDB 558074 D01v04	PASS
<b>Power Spectral Density</b>	47 CFR Part 15 Subpart C Section 15.247 (e)	ANSI C63.10-2013/ KDB 558074 D01v04	PASS
<b>Band-edge for RF Conducted Emissions</b>	47 CFR Part 15 Subpart C Section 15.247(d)	ANSI C63.10-2013/ KDB 558074 D01v04	PASS
<b>RF Conducted Spurious Emissions</b>	47 CFR Part 15 Subpart C Section 15.247(d)	ANSI C63.10-2013/ KDB 558074 D01v04	PASS
<b>Radiated Spurious Emissions</b>	47 CFR Part 15 Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS
<b>Restricted bands around fundamental frequency (Radiated Emission)</b>	47 CFR Part 15 Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS

Remark:

Test according to ANSI C63.4-2014 & ANSI C63.10-2013.

The tested sample(s) and the sample information are provided by the client.

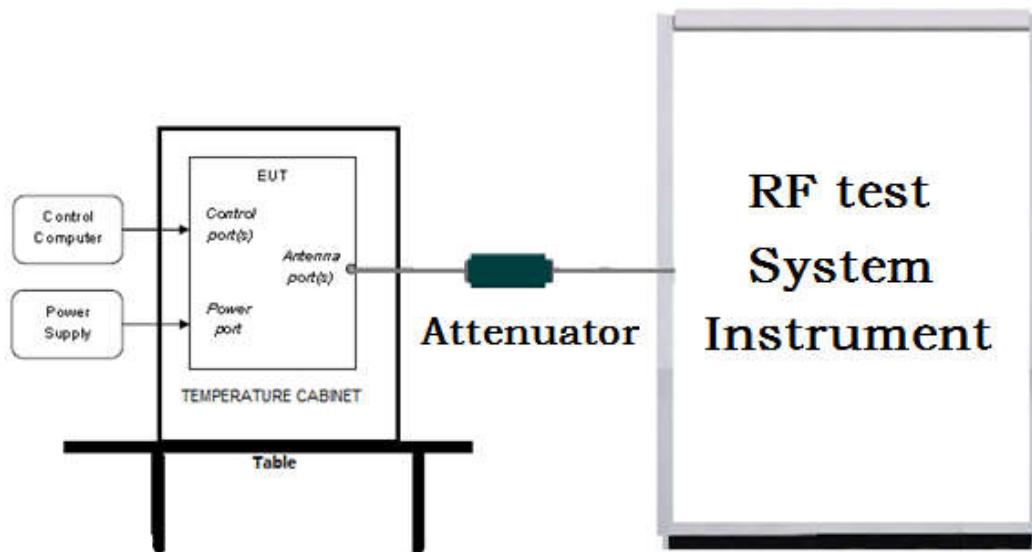
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## 5 Test Requirement

### 5.1 Test setup

#### 5.1.1 For Conducted test setup



#### 5.1.2 For Radiated Emissions test setup

##### Radiated Emissions setup:

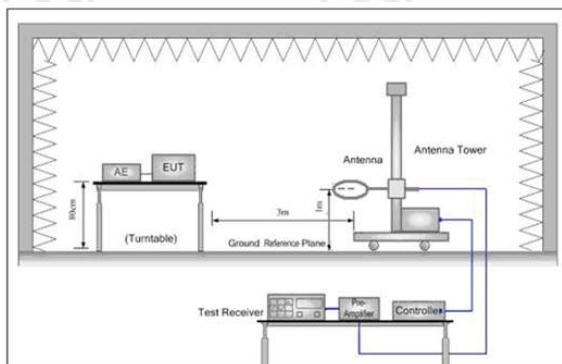


Figure 1. Below 30MHz

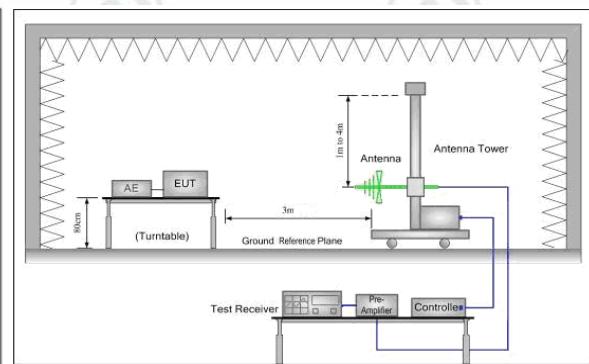


Figure 2. 30MHz to 1GHz

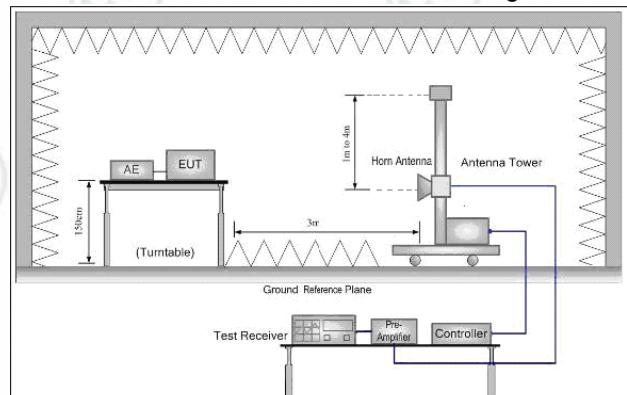
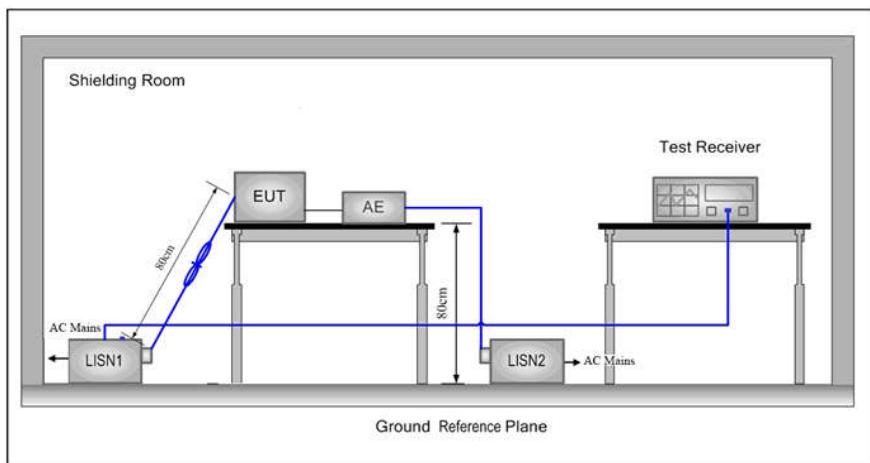


Figure 3. Above 1GHz

### 5.1.3 For Conducted Emissions test setup

#### Conducted Emissions setup



## 5.2 Test Environment

### Operating Environment:

Temperature:	25.0 °C
Humidity:	53 % RH
Atmospheric Pressure:	1010mbar

## 5.3 Test Condition

### Test channel:

Test Mode	Tx/Rx	RF Channel		
		Low(L)	Middle(M)	High(H)
802.11b/g/n(HT20)	2412MHz ~2462 MHz	Channel 1	Channel 6	Channel11
		2412MHz	2437MHz	2462MHz
Transmitting mode:	Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate.			

### Test mode:

#### Pre-scan under all rate at lowest channel 1

Mode		802.11b				802.11g				802.11n (HT20)			
Data Rate		1Mbps	2Mbps	5.5Mbps	11Mbps	802.11g				802.11n (HT20)			
Power(dBm)		21.27	21.33	21.41	21.50	802.11g				802.11n (HT20)			
Mode	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps
Power(dBm)	22.84	22.79	22.68	22.60	22.51	22.44	22.37	22.29	21.94	21.87	22.79	21.70	21.66
Mode	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps	58.5Mbps	65Mbps	65Mbps	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps
Power(dBm)	21.87	22.79	21.70	21.66	21.81	21.78	21.89	21.89	21.94	21.87	22.79	21.70	21.66

Through Pre-scan, 11Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20);

## 6 General Information

### 6.1 Client Information

Applicant:	Global Aiptek Corporation
Address of Applicant:	5F, No. 550, Xianzheng 2nd Rd., Zhubei City, Hsinchu County, Taiwan
Manufacturer:	Global Aiptek Corporation
Address of Manufacturer:	5F, No. 550, Xianzheng 2nd Rd., Zhubei City, Hsinchu County, Taiwan
Factory:	Shenzhen ACT Industrial Co., Ltd
Address of Factory:	1~8F, No. 5 Building, Beishan Industrial Park, No. 146 Beishan Avenue, Yantian District, Shenzhen City

### 6.2 General Description of EUT

Product Name:	L400, S400, S500, TS-400, IP400
Model No.(EUT):	L400 PAD
Trade Mark:	AIPIEK/iBeamBLOCK/hp
EUT Supports Radios application:	WIFI 2.4GHz 802.11b/g/n(HT20), BT4.0 Dual mode
AC adapter:	MODEL: DSA-42PFB-12 1 120350; Input: 100-240V~50/60Hz, 1.2A; Output: 12V---3.5A
Sample Received Date:	Dec. 16, 2016
Sample tested Date:	Dec. 16, 2016 to Jun. 23, 2017

### 6.3 Product Specification subjective to this standard

Operation Frequency:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz
Channel Numbers:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels
Channel Separation:	5MHz
Type of Modulation:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20) : OFDM (64QAM, 16QAM, QPSK,BPSK)
Sample Type:	mobile production
Test Power Grade:	N/A
Test Software of EUT:	N/A
Antenna Type and Gain:	PIFA Antenna and -4.5dBi
Test Voltage:	AC 120V/60Hz

#### Operation Frequency each of channel(802.11b/g/n HT20)

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

## 6.4 Description of Support Units

The EUT has been tested with associated equipment below.

Associated equipment name	Manufacture	model	Supplied by
AE1	Projector	Global Aiptek Corporation	L400
AE2	Mobile Power	Global Aiptek Corporation	PB-TS02

## 6.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd.  
 Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China 518101  
 Telephone: +86 (0) 755 3368 3668 Fax:+86 (0) 755 3368 3385  
 No tests were sub-contracted.

## 6.6 Deviation from Standards

None.

## 6.7 Abnormalities from Standard Conditions

None.

## 6.8 Other Information Requested by the Customer

None.

## 6.9 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	$7.9 \times 10^{-8}$
2	RF power, conducted	0.31dB (30MHz-1GHz) 0.57dB (1GHz-18GHz)
3	Radiated Spurious emission test	4.5dB (30MHz-1GHz) 4.8dB (1GHz-12.75GHz)
4	Conduction emission	3.6dB (9kHz to 150kHz) 3.2dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	2.8%
7	DC power voltages	0.025%

## 7 Equipment List

RF test system					
Equipment	Manufacturer	Model No.	Serial Number	Cal. Date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Signal Generator	Keysight	E8257D	MY53401106	03-14-2017	03-13-2018
Communication test set test set	Agilent	N4010A	MY51400230	03-14-2017	03-13-2018
Spectrum Analyzer	Keysight	N9010A	MY54510339	03-14-2017	03-13-2018
Signal Generator	Keysight	N5182B	MY53051549	03-14-2017	03-13-2018
High-pass filter	Sinoscite	FL3CX03WG18 NM12-0398-002	TTF20120439	01-11-2017	01-10-2018
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	003	01-11-2017	01-10-2018
DC Power	Keysight	E3642A	MY54436035	03-14-2017	03-13-2018
power meter & power sensor	R&S	OSP120	101374	03-14-2017	03-13-2018
RF control unit	JS Tonscend	JS0806-2	158060006	03-14-2017	03-13-2018

Conducted disturbance Test					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Receiver	R&S	ESCI	100009	06-14-2017	06-13-2018
Temperature/ Humidity Indicator	TAYLOR	1451	1905	05-08-2017	05-07-2018
LISN	R&S	ENV216	100098	06-13-2017	06-12-2018
LISN	schwarzbeck	NNLK8121	8121-529	06-13-2017	06-12-2018
Current Probe	R&S	EZ17	100106	06-13-2017	06-12-2018
ISN	TESEQ GmbH	ISN T800	30297	02-23-2017	02-22-2018

3M Semi/full-anechoic Chamber					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
3M Chamber & Accessory Equipment	TDK	SAC-3	TTE20130797	06-05-2016	06-05-2019
TRILOG Broadband Antenna	SCHWARZBEC K	VULB9163	9163-484	05-23-2017	05-22-2018
Microwave Preamplifier	Agilent	8449B	3008A02425	02-16-2017	02-15-2018
Horn Antenna	ETS-LINDGREN	3117	00057407	07-20-2015	07-18-2018
Loop Antenna	ETS	6502	00071730	07-30-2015	07-28-2017
Microwave Preamplifier	A.H.SYSTEMS	PAP-1840-60	6041.6042	06-30-2015	06-28-2018
Horn Antenna	A.H.SYSTEMS	SAS-574 374	374	06-30-2015	06-28-2018
Spectrum Analyzer	R&S	FSP40	100416	06-13-2017	06-12-2018
Receiver	R&S	ESCI	100435	06-14-2017	06-13-2018
LISN	schwarzbeck	NNBM8125	81251547	06-13-2017	06-12-2018
LISN	schwarzbeck	NNBM8125	81251548	06-13-2017	06-12-2018
Signal Generator	Agilent	E4438C	MY45095744	03-14-2017	03-13-2018
Signal Generator	Keysight	E8257D	MY53401106	03-14-2017	03-13-2018
Temperature/ Humidity Indicator	TAYLOR	1451	1905	05-08-2017	05-07-2018
Cable line	Fulai(7M)	SF106	5219/6A	01-11-2017	01-10-2018
Cable line	Fulai(6M)	SF106	5220/6A	01-11-2017	01-10-2018
Cable line	Fulai(3M)	SF106	5216/6A	01-11-2017	01-10-2018
Cable line	Fulai(3M)	SF106	5217/6A	01-11-2017	01-10-2018
High-pass filter	Sinoscite	FL3CX03WG18 NM12-0398-002	TTF20120439	01-11-2017	01-10-2018
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	003	01-11-2017	01-10-2018
band rejection filter	Sinoscite	FL5CX01CA09 CL12-0395-001	TTF20120434	01-11-2017	01-10-2018
band rejection filter	Sinoscite	FL5CX01CA08 CL12-0393-001	TTF20120435	01-11-2017	01-10-2018
band rejection filter	Sinoscite	FL5CX02CA04 CL12-0396-002	TTF20120436	01-11-2017	01-10-2018
band rejection filter	Sinoscite	FL5CX02CA03 CL12-0394-001	TTF20120437	01-11-2017	01-10-2018

## 8 Radio Technical Requirements Specification

### Reference documents for testing:

No.	Identity	Document Title
1	FCC Part15C	Subpart C-Intentional Radiators
2	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

### Test Results List:

Test Requirement	Test method	Test item	Verdict	Note
Part15C Section 15.247 (b)(3)	ANSI C63.10/ KDB 558074	Conducted Peak Output Power	PASS	Appendix A)
Part15C Section 15.247 (a)(2)	ANSI C63.10/ KDB 558074	6dB Occupied Bandwidth	PASS	Appendix B)
Part15C Section 15.247(d)	ANSI C63.10/ KDB 558074	Band-edge for RF Conducted Emissions	PASS	Appendix C)
Part15C Section 15.247(d)	ANSI C63.10/ KDB 558074	RF Conducted Spurious Emissions	PASS	Appendix D)
Part15C Section 15.247 (e)	ANSI C63.10/ KDB 558074	Power Spectral Density	PASS	Appendix E)
Part15C Section 15.203/15.247 (c)	ANSI C63.10	Antenna Requirement	PASS	Appendix F)
Part15C Section 15.207	ANSI C63.10	AC Power Line Conducted Emission	PASS	Appendix G)
Part15C Section 15.205/15.209	ANSI C63.10	Restricted bands around fundamental frequency (Radiated Emission)	PASS	Appendix H)
Part15C Section 15.205/15.209	ANSI C63.10	Radiated Spurious Emissions	PASS	Appendix I)

## Appendix A): Conducted Peak Output Power

### Test Procedure

1. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Measure the conducted output power and record the results in the test report.

### Result Table

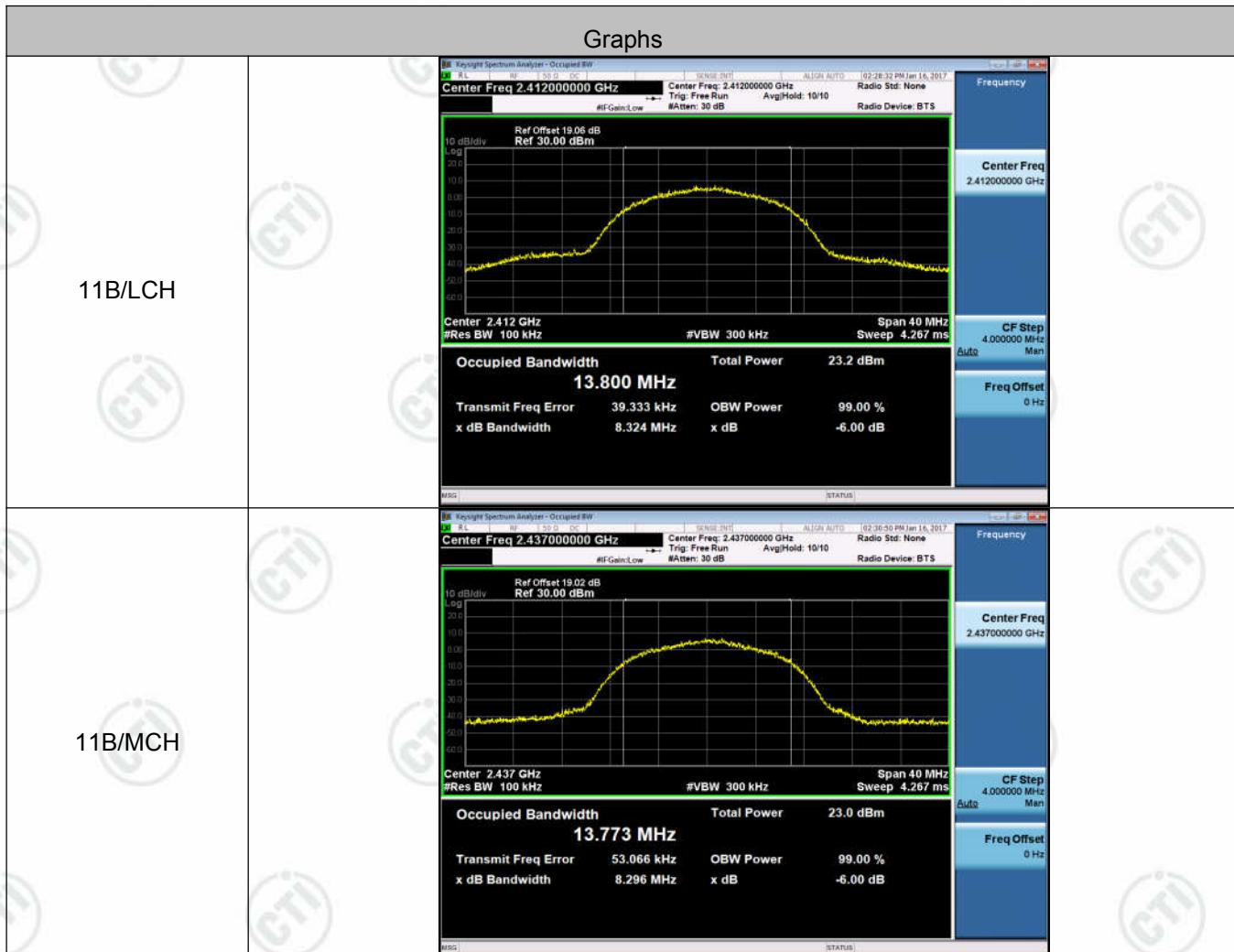
Mode	Channel	Conducted Peak Output Power [dBm]	Verdict
11B	LCH	21.50	PASS
11B	MCH	21.29	PASS
11B	HCH	21.20	PASS
11G	LCH	22.84	PASS
11G	MCH	23.22	PASS
11G	HCH	23.06	PASS
11N20SISO	LCH	21.94	PASS
11N20SISO	MCH	21.96	PASS
11N20SISO	HCH	21.76	PASS

## Appendix B): 6dB Occupied Bandwidth

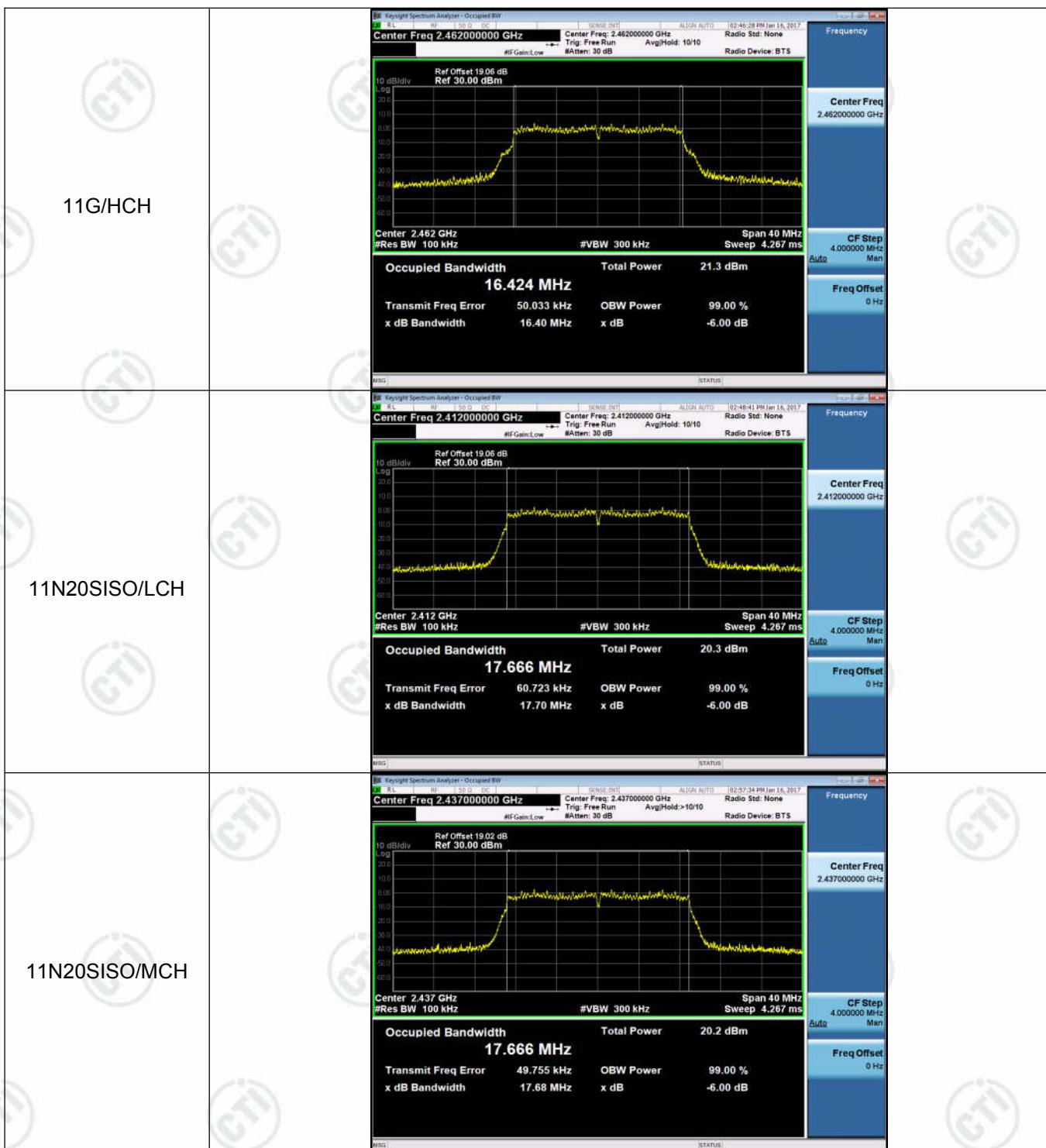
### Result Table

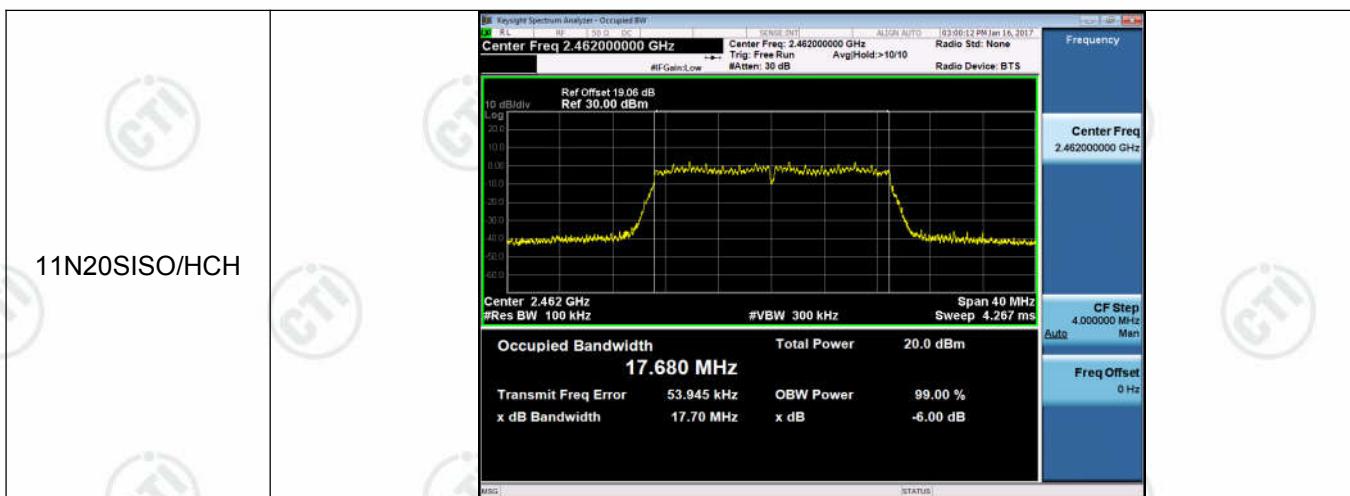
Mode	Channel	6dB Bandwidth [MHz]	99% OBW [MHz]	Verdict	Remark
11B	LCH	8.324	13.800	PASS	Peak detector
11B	MCH	8.296	13.773	PASS	
11B	HCH	9.546	13.826	PASS	
11G	LCH	16.45	16.437	PASS	
11G	MCH	16.42	16.417	PASS	
11G	HCH	16.40	16.424	PASS	
11N20SISO	LCH	17.70	17.666	PASS	
11N20SISO	MCH	17.68	17.666	PASS	
11N20SISO	HCH	17.70	17.680	PASS	

### Test Graph









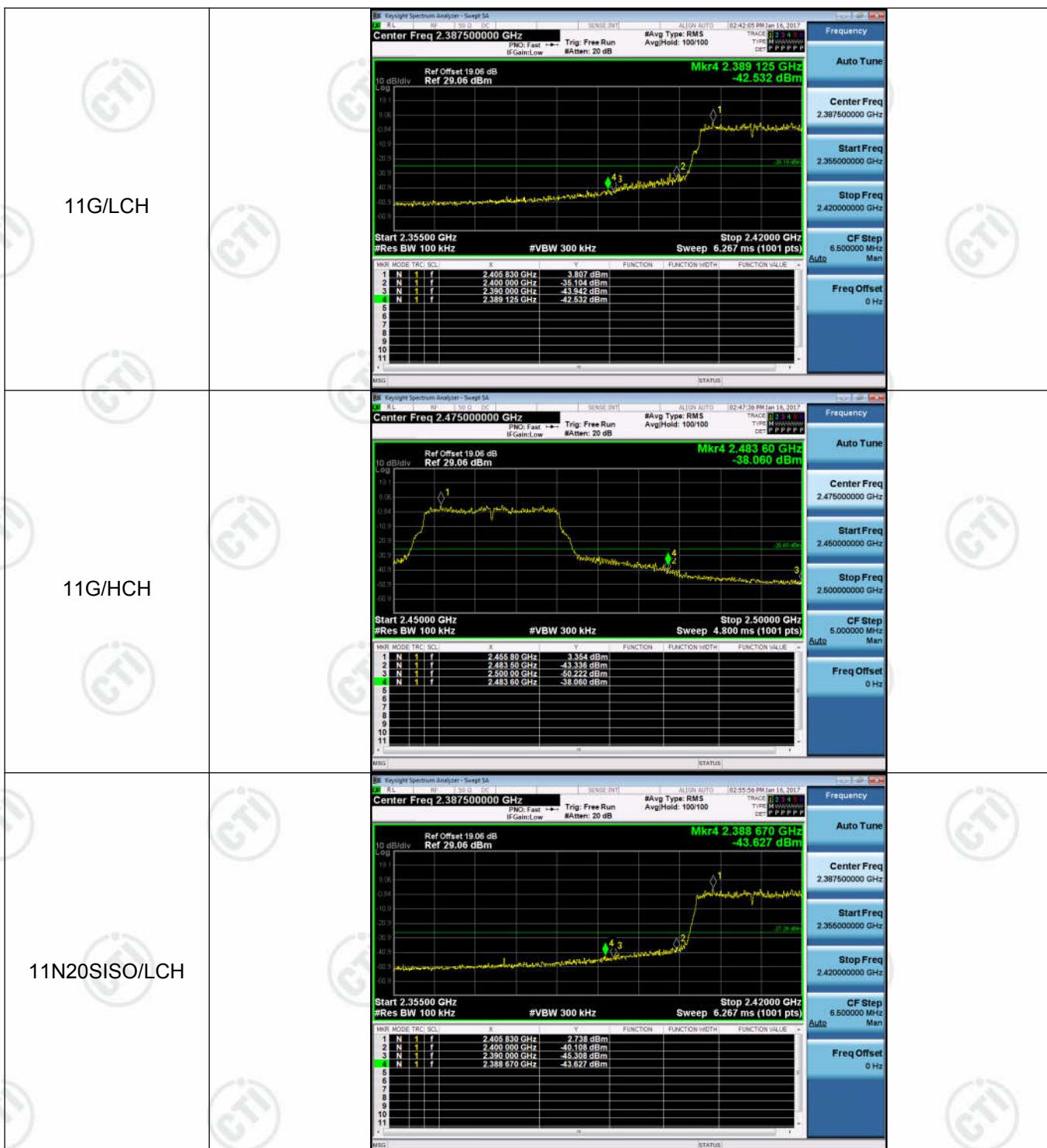
## Appendix C): Band-edge for RF Conducted Emissions

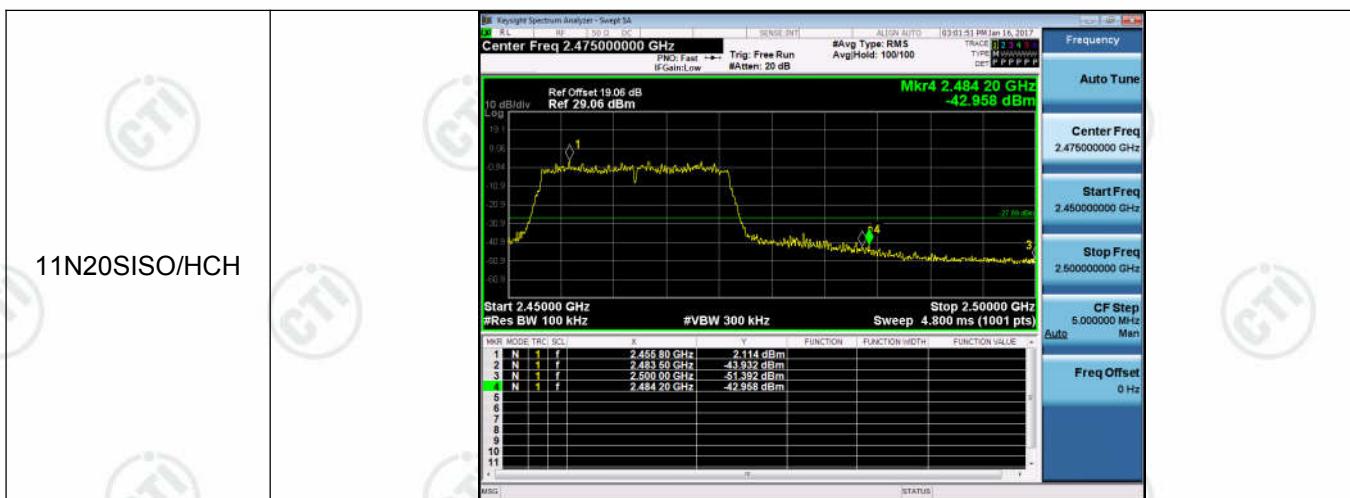
### Result Table

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	6.487	-45.829	-23.51	PASS
11B	HCH	6.922	-46.092	-23.08	PASS
11G	LCH	3.807	-42.532	-26.19	PASS
11G	HCH	3.354	-38.060	-26.65	PASS
11N20SISO	LCH	2.738	-43.627	-27.26	PASS
11N20SISO	HCH	2.114	-42.958	-27.89	PASS

### Test Graph





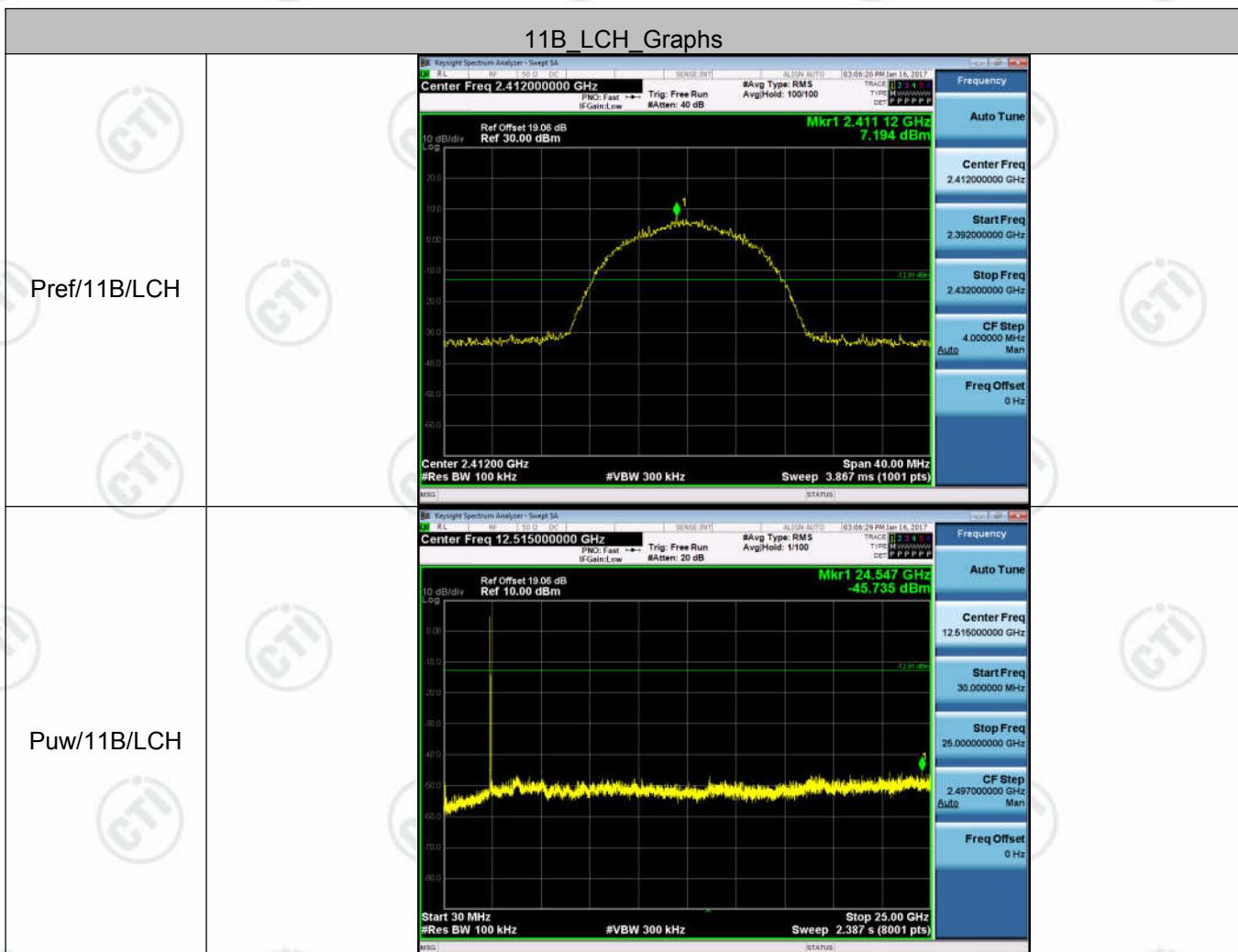


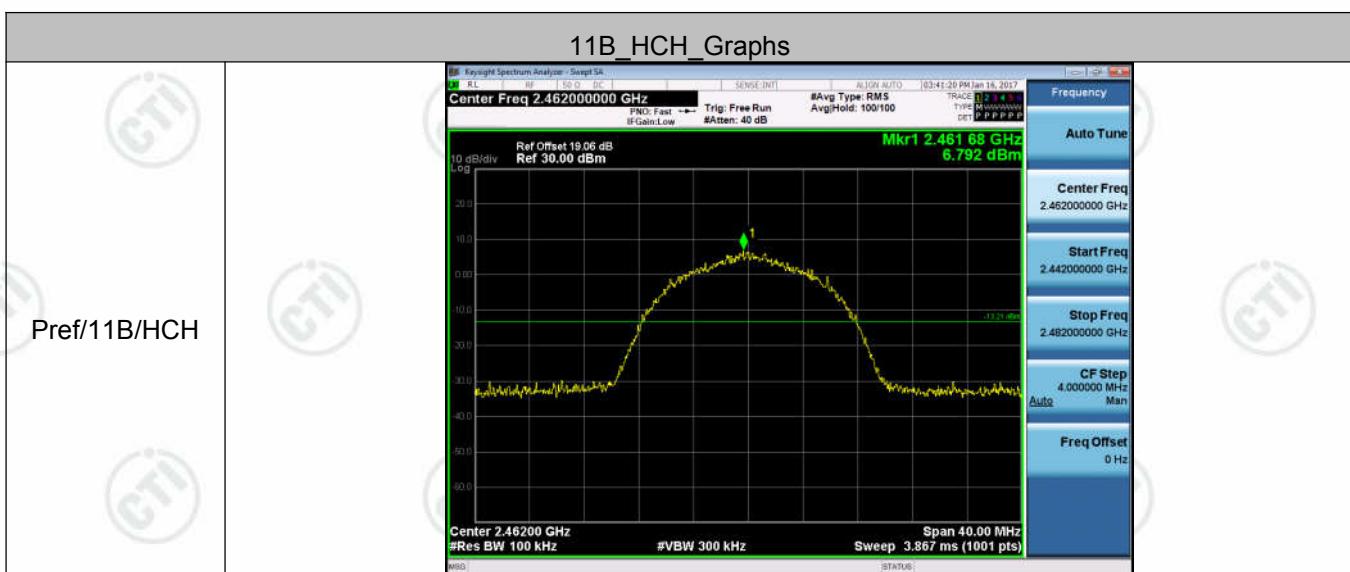
## Appendix D): RF Conducted Spurious Emissions

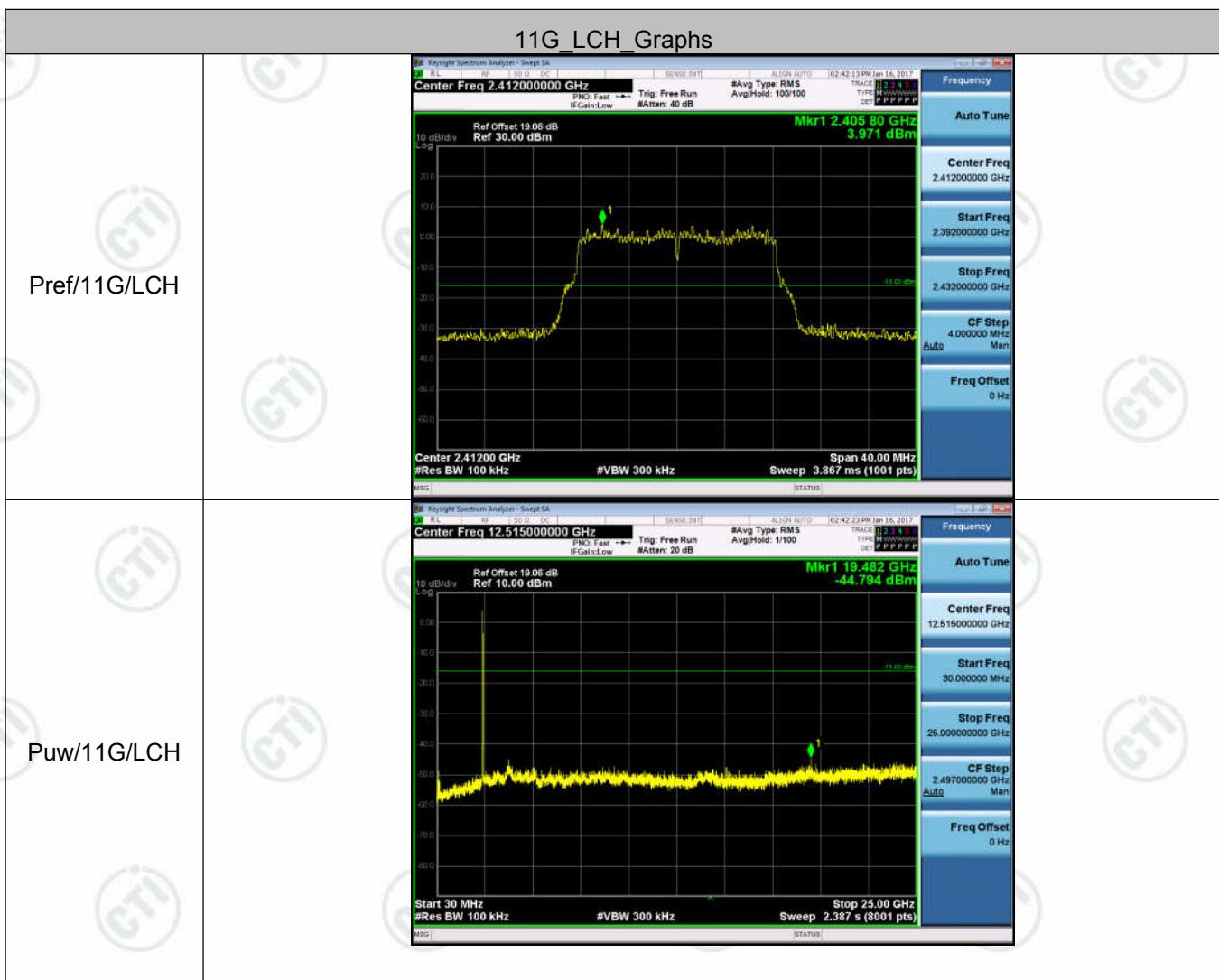
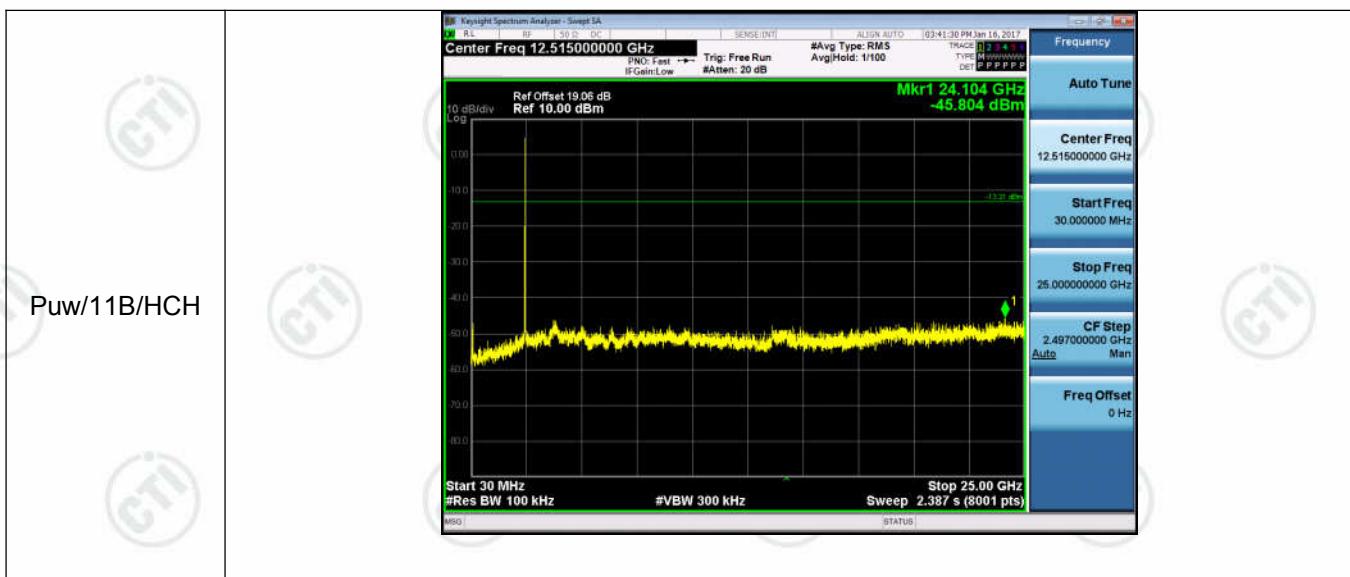
Result Table

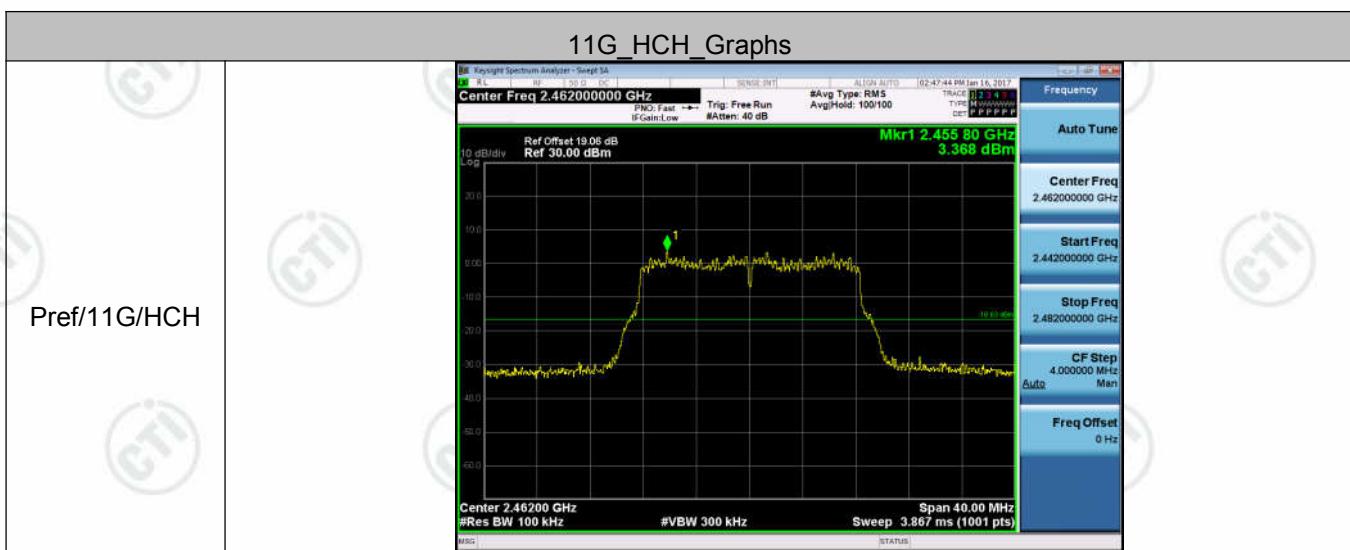
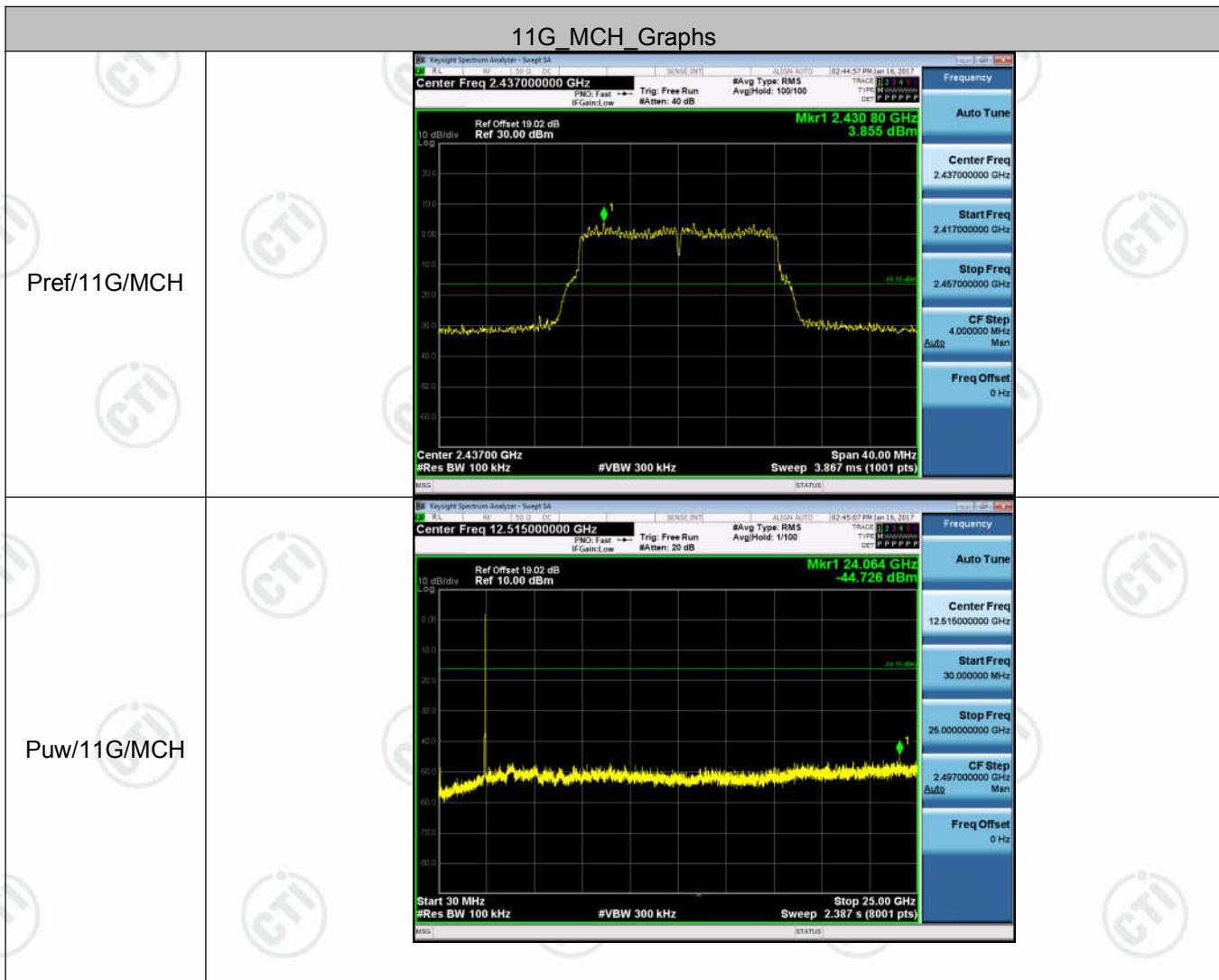
Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
11B	LCH	7.194	<Limit	PASS
11B	MCH	7.002	<Limit	PASS
11B	HCH	6.792	<Limit	PASS
11G	LCH	3.971	<Limit	PASS
11G	MCH	3.855	<Limit	PASS
11G	HCH	3.368	<Limit	PASS
11N20SISO	LCH	2.72	<Limit	PASS
11N20SISO	MCH	2.661	<Limit	PASS
11N20SISO	HCH	2.391	<Limit	PASS

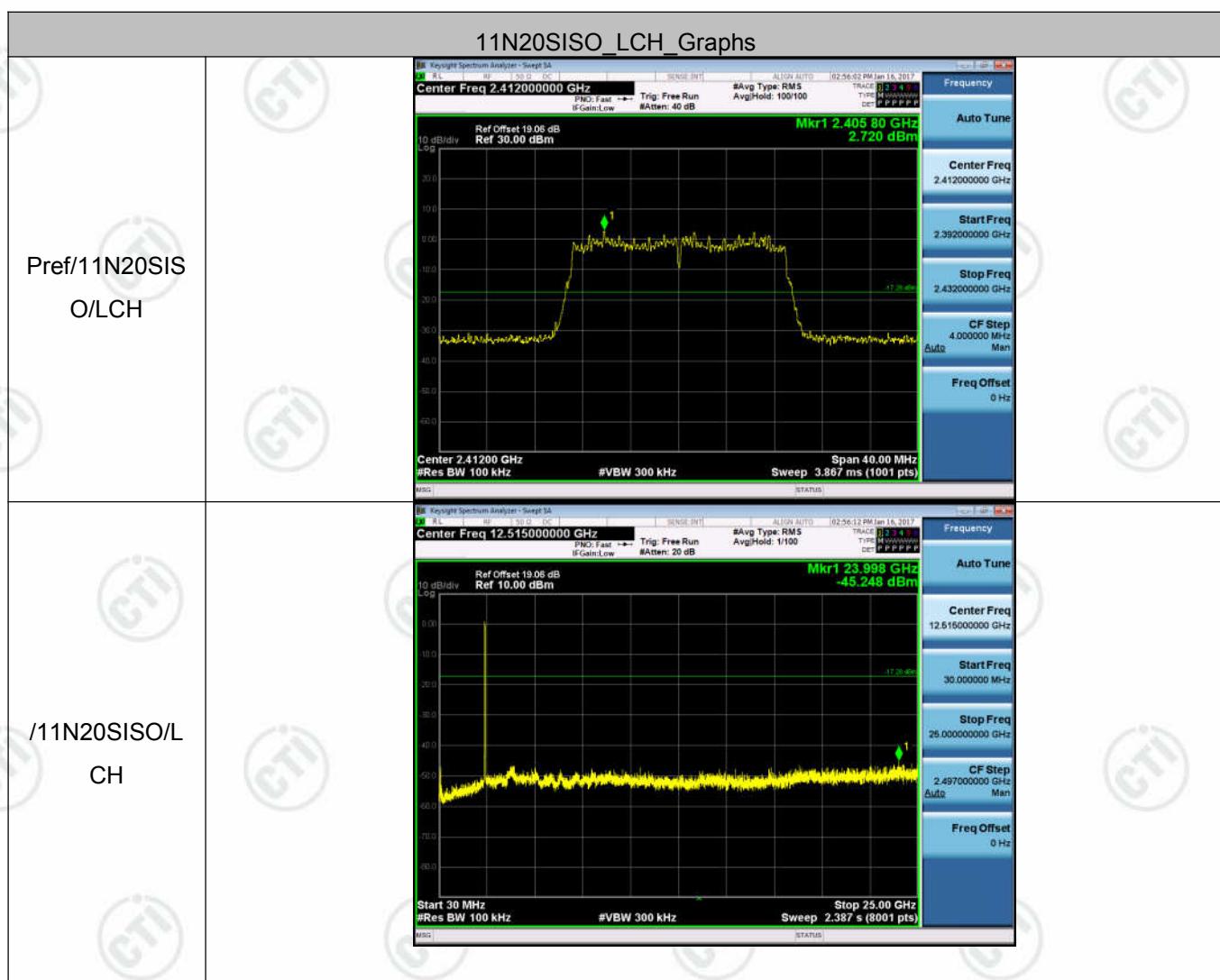
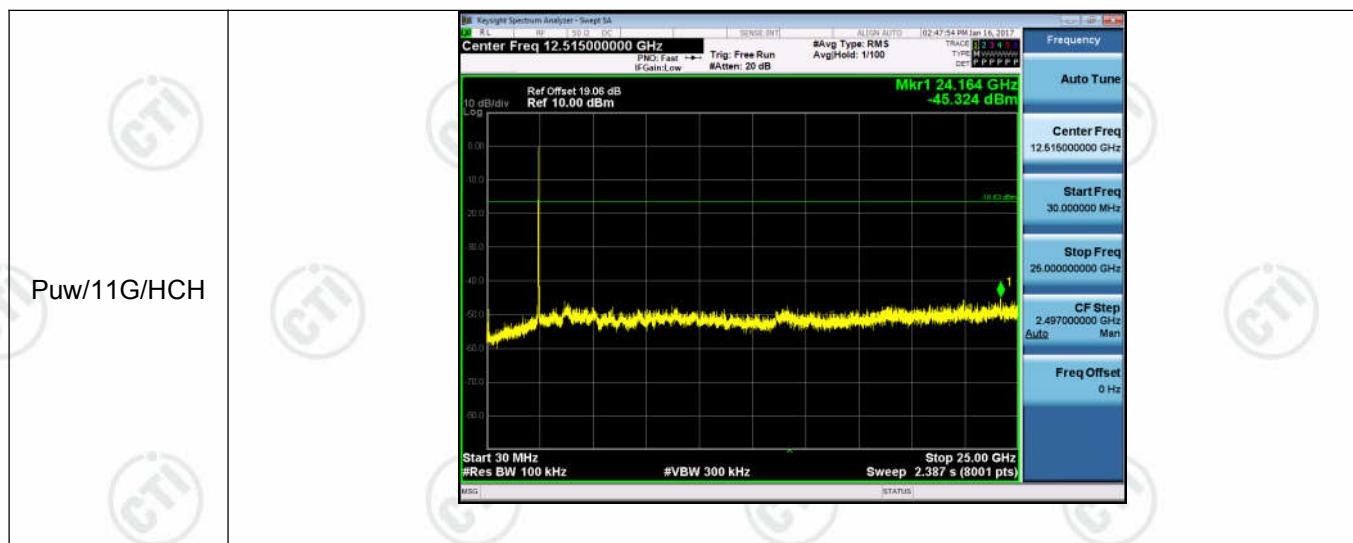
Test Graph

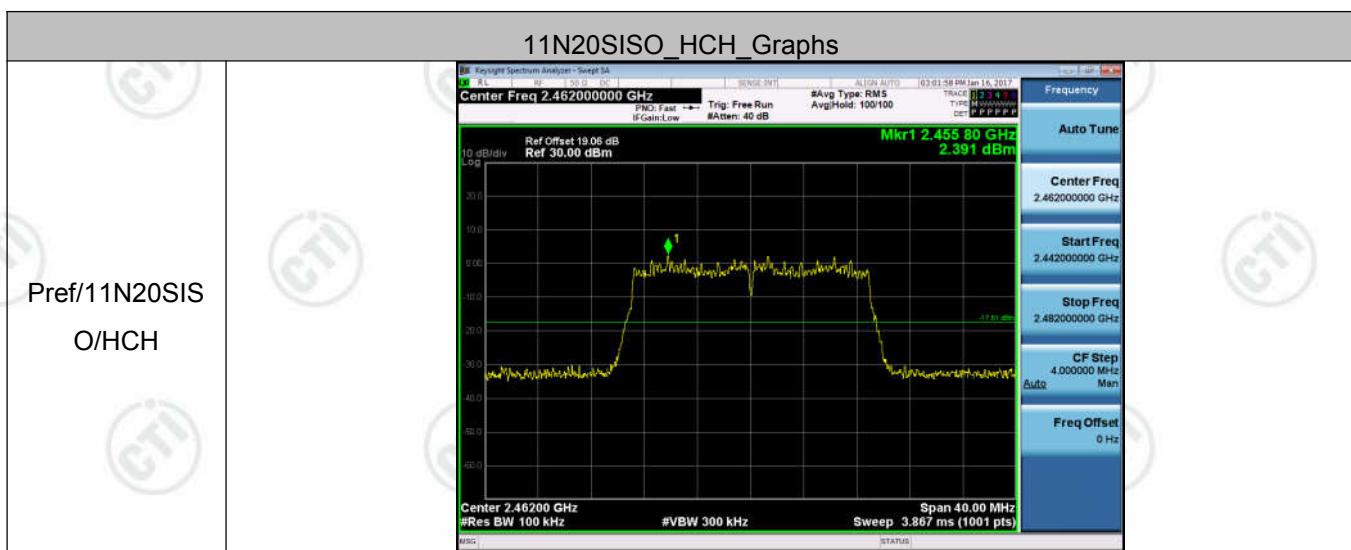


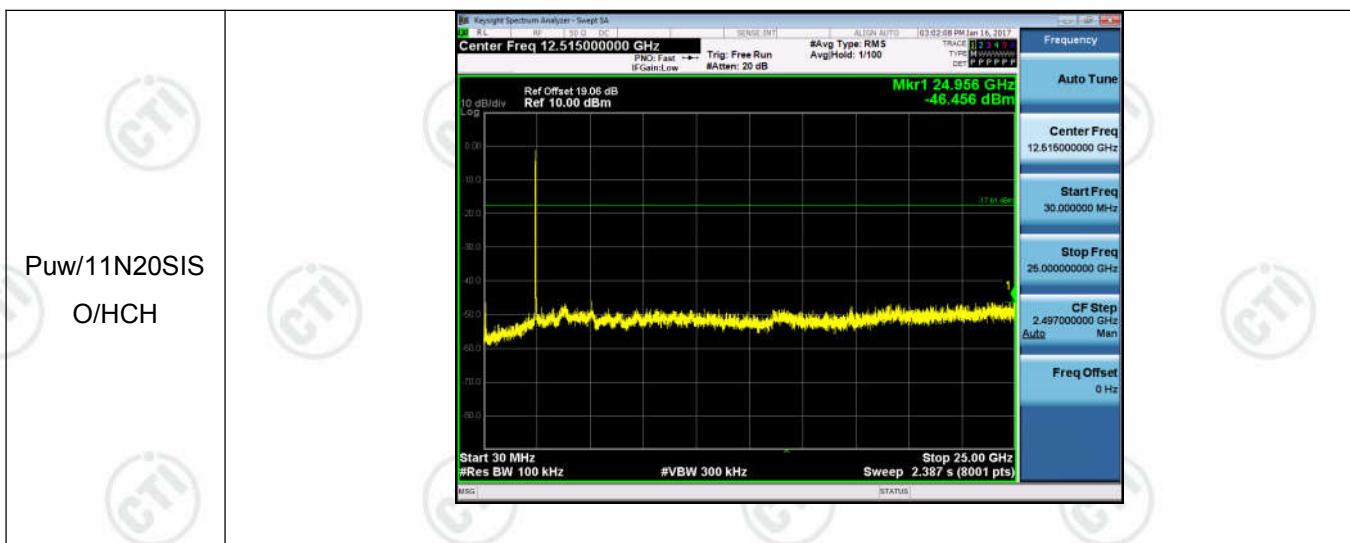










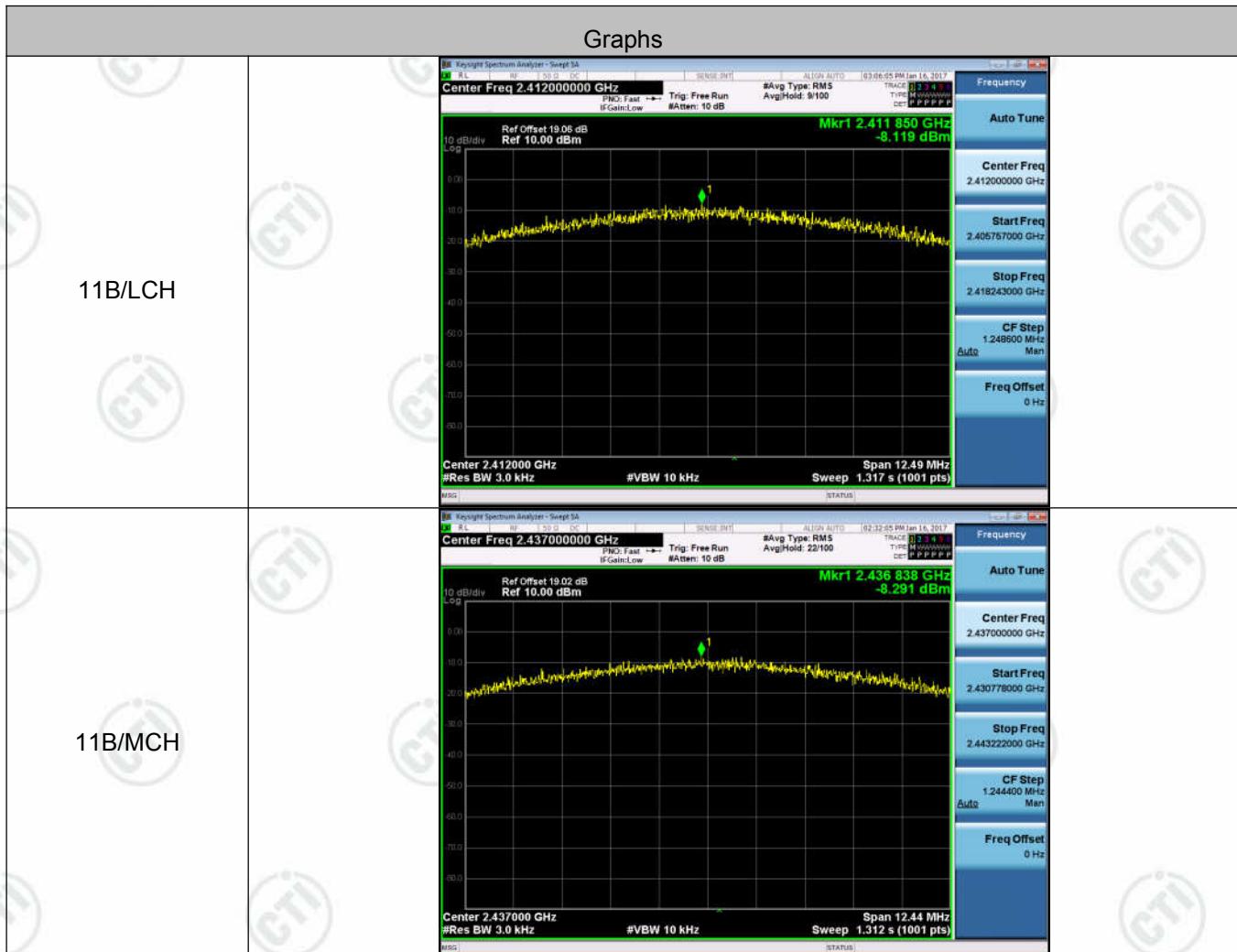


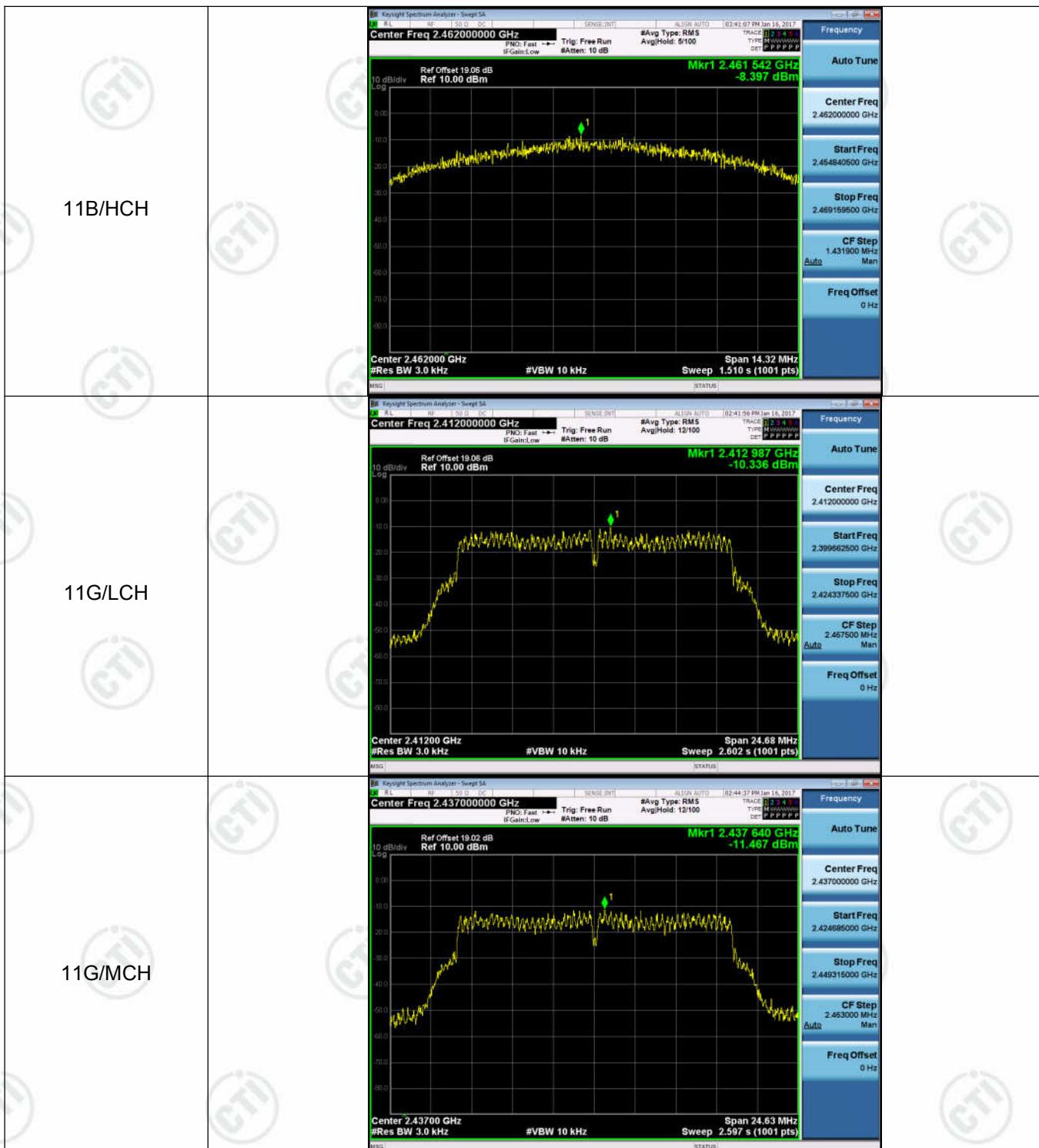
## Appendix E): Power Spectral Density

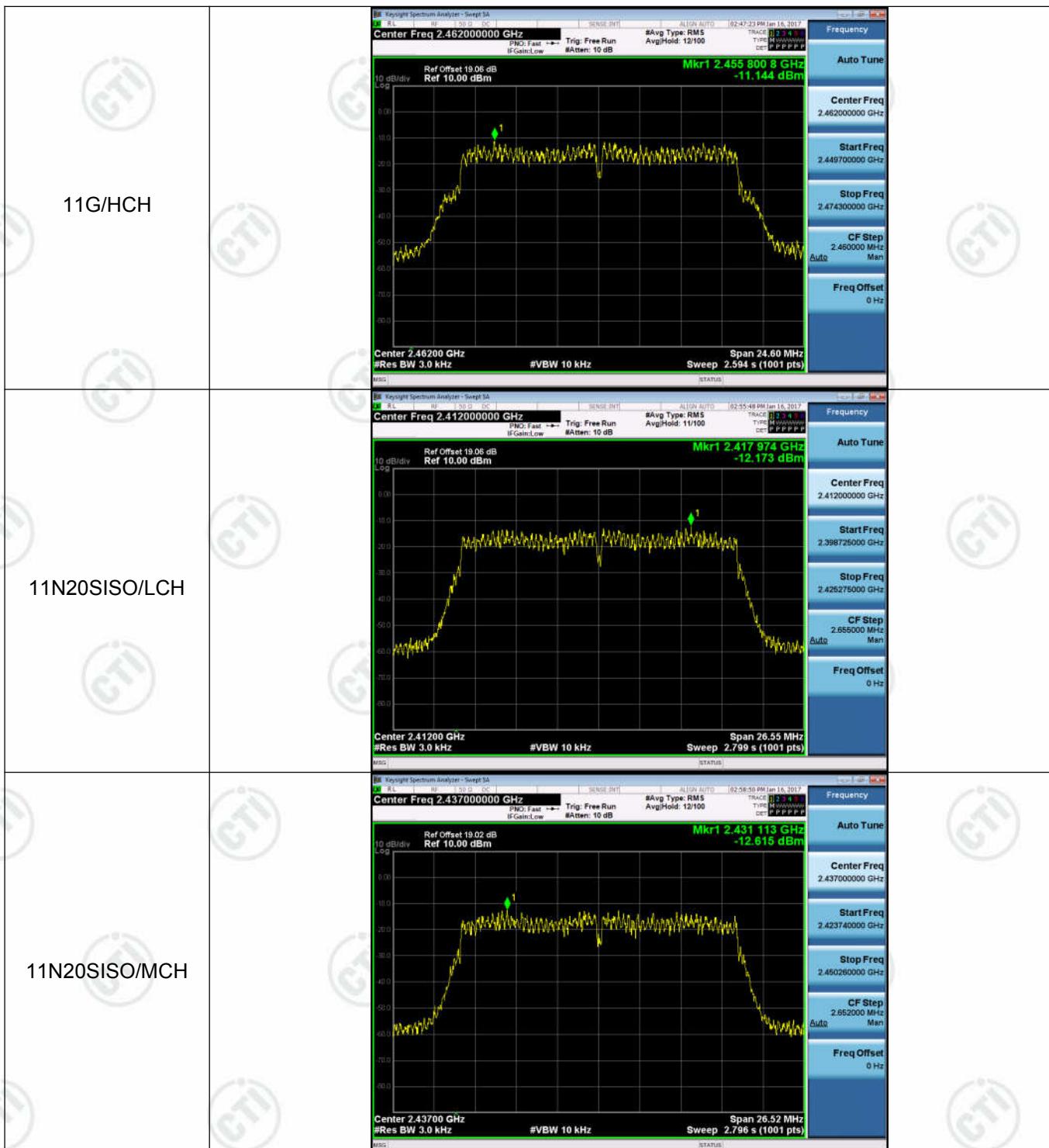
### Result Table

Mode	Channel	Power Spectral Density [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	LCH	-8.119	8	PASS
11B	MCH	-8.291	8	PASS
11B	HCH	-8.397	8	PASS
11G	LCH	-10.336	8	PASS
11G	MCH	-11.467	8	PASS
11G	HCH	-11.144	8	PASS
11N20SISO	LCH	-12.173	8	PASS
11N20SISO	MCH	-12.615	8	PASS
11N20SISO	HCH	-12.456	8	PASS

### Test Graph









## Appendix F): Antenna Requirement

### 15.203 requirement:

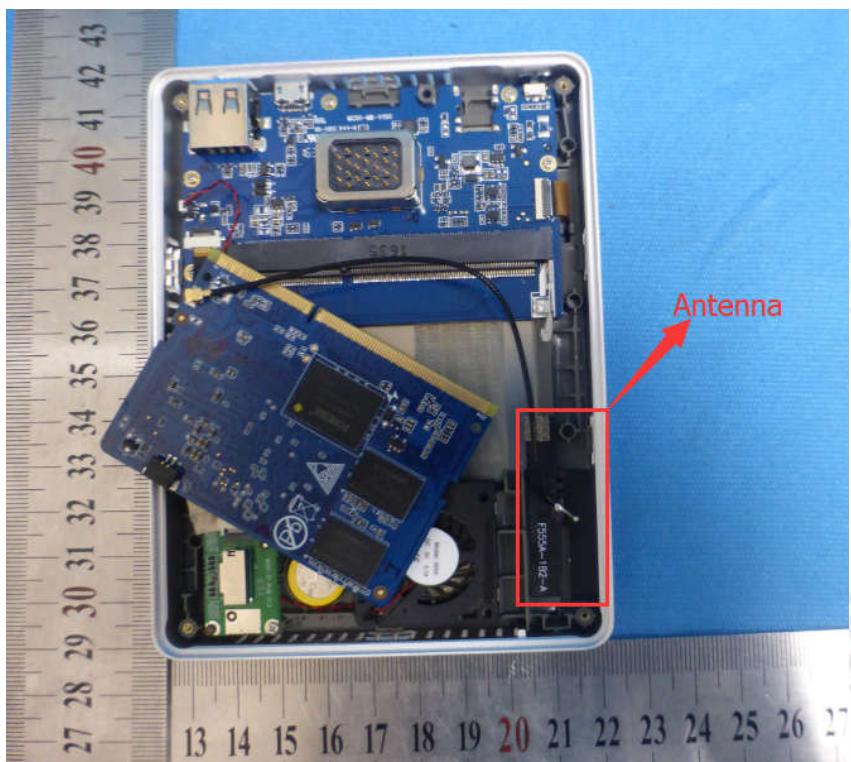
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

### 15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### EUT Antenna:

The antenna is integrated on the inner shell and no consideration of replacement. The best case gain of the antenna is -4.5dBi.



## Appendix G): AC Power Line Conducted Emission

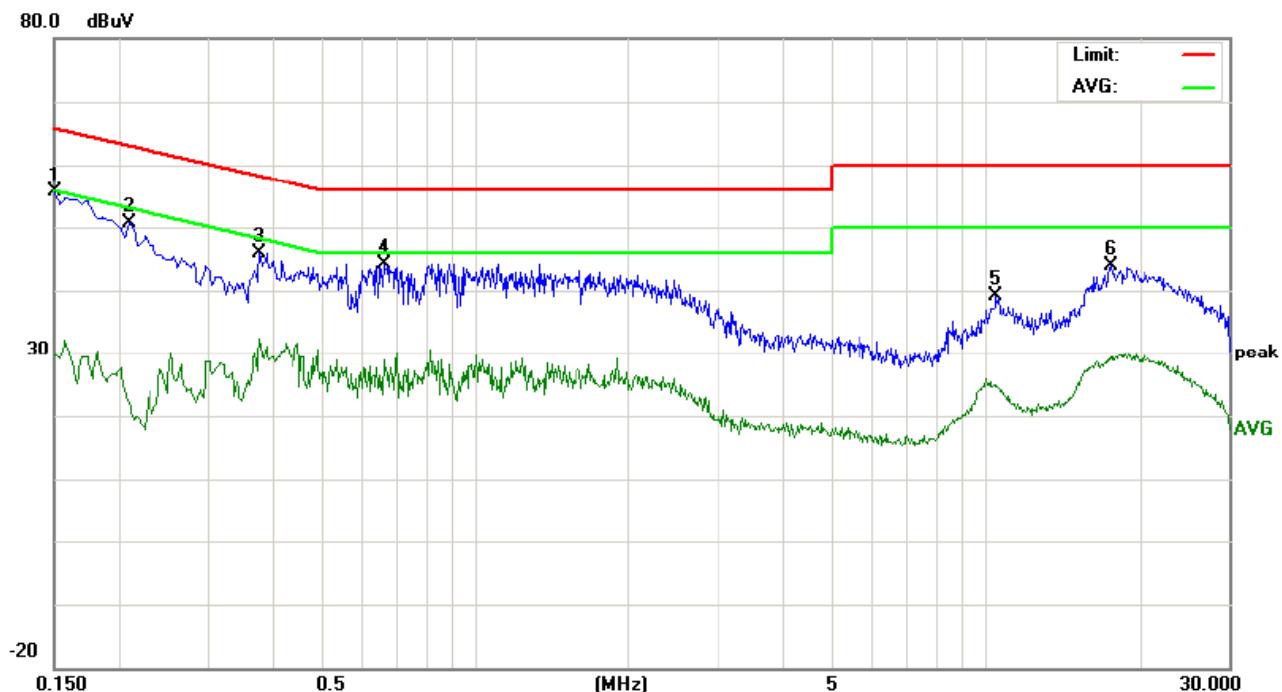
Test Procedure:	<p>Test frequency range :150KHz-30MHz</p> <p>1)The mains terminal disturbance voltage test was conducted in a shielded room.</p> <p>2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a <math>50\Omega/50\mu\text{H} + 5\Omega</math> linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.</p> <p>3)The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,</p> <p>4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.</p> <p>5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.</p>														
Limit:	<table border="1"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th> <th colspan="2">Limit (dB<math>\mu</math>V)</th> </tr> <tr> <th>Quasi-peak</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>0.15-0.5</td> <td>66 to 56*</td> <td>56 to 46*</td> </tr> <tr> <td>0.5-5</td> <td>56</td> <td>46</td> </tr> <tr> <td>5-30</td> <td>60</td> <td>50</td> </tr> </tbody> </table> <p>* The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.</p> <p>NOTE : The lower limit is applicable at the transition frequency</p>	Frequency range (MHz)	Limit (dB $\mu$ V)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dB $\mu$ V)														
	Quasi-peak	Average													
0.15-0.5	66 to 56*	56 to 46*													
0.5-5	56	46													
5-30	60	50													

### Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

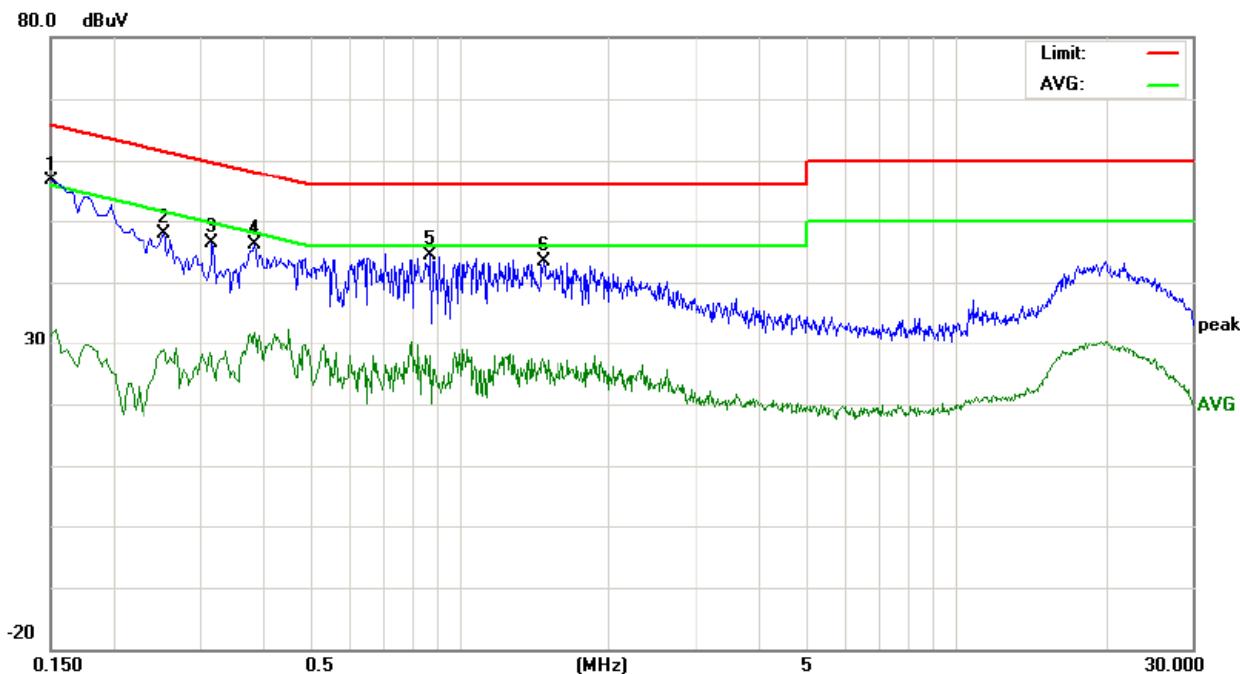
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Live line:



No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		
		MHz	Peak	QP	Avg	peak	QP	Avg	QP	Avg	QP	Avg	P/F
1	0.1500	45.87	41.28	23.52	9.77	55.64	51.05	33.29	65.99	55.99	-14.94	-22.70	P
2	0.2100	40.93	34.24	11.99	9.72	50.65	43.96	21.71	63.20	53.20	-19.24	-31.49	P
3	0.3780	36.13	31.90	20.61	9.76	45.89	41.66	30.37	58.32	48.32	-16.66	-17.95	P
4	0.6620	34.37	30.39	15.43	9.75	44.12	40.14	25.18	56.00	46.00	-15.86	-20.82	P
5	10.4899	29.11	21.85	14.02	9.90	39.01	31.75	23.92	60.00	50.00	-28.25	-26.08	P
6	17.6059	33.69	25.86	18.03	10.09	43.78	35.95	28.12	60.00	50.00	-24.05	-21.88	P

Neutral line:



No.	Freq.	Reading_Level (dBuV)			Correct Factor		Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		MHz	Peak	QP	Avg	dB	peak	QP	Avg	QP	Avg	QP	Avg		
1	0.1500	46.85	40.71	19.92	9.77	56.62	50.48	29.69	65.99	55.99	-15.51	-26.30	P		
2	0.2540	38.11	29.82	16.05	9.75	47.86	39.57	25.80	61.62	51.62	-22.05	-25.82	P		
3	0.3180	36.50	29.83	16.91	9.77	46.27	39.60	26.68	59.76	49.76	-20.16	-23.08	P		
4	0.3860	36.45	31.77	20.88	9.75	46.20	41.52	30.63	58.15	48.15	-16.63	-17.52	P		
5	0.8780	34.68	30.91	15.51	9.75	44.43	40.66	25.26	56.00	46.00	-15.34	-20.74	P		
6	1.4780	33.62	27.61	15.88	9.67	43.29	37.28	25.55	56.00	46.00	-18.72	-20.45	P		

Notes:

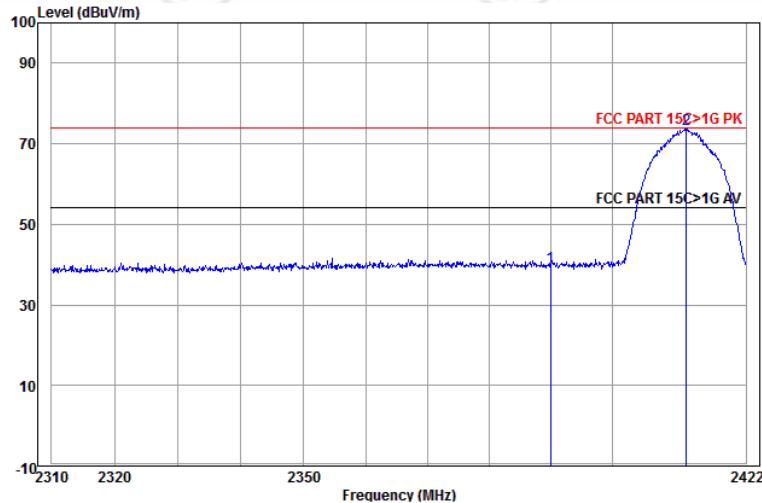
1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

## Appendix H): Restricted bands around fundamental frequency (Radiated)

Receiver Setup:	Frequency	Detector	RBW	VBW	Remark		
Test Procedure:	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak		
	Above 1GHz	Peak	1MHz	3MHz	Peak		
		Peak	1MHz	10Hz	Average		
<b>Below 1GHz test procedure as below:</b>							
<ol style="list-style-type: none"> <li>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.</li> <li>The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>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.</li> <li>For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel</li> </ol>							
<b>Above 1GHz test procedure as below:</b>							
<ol style="list-style-type: none"> <li>Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber change form table 0.8 meter to 1.5 meter( Above 18GHz the distance is 1 meter and table is 1.5 meter).</li> <li>Test the EUT in the lowest channel , the Highest channel</li> <li>The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.</li> <li>Repeat above procedures until all frequencies measured was complete.</li> </ol>							
Limit:	Frequency	Limit (dB $\mu$ V/m @3m)	Remark				
Limit:	30MHz-88MHz	40.0	Quasi-peak Value				
	88MHz-216MHz	43.5	Quasi-peak Value				
	216MHz-960MHz	46.0	Quasi-peak Value				
	960MHz-1GHz	54.0	Quasi-peak Value				
	Above 1GHz	54.0	Average Value				
		74.0	Peak Value				

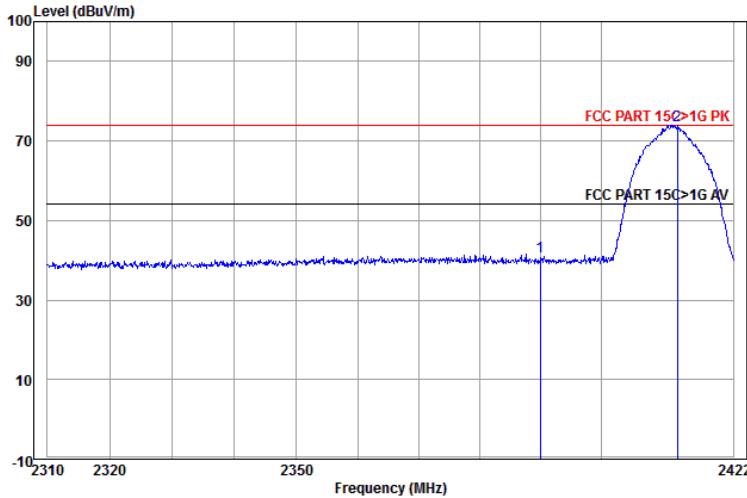
**Test plot as follows:**

Worse case mode:	802.11b (11Mbps)		
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Peak



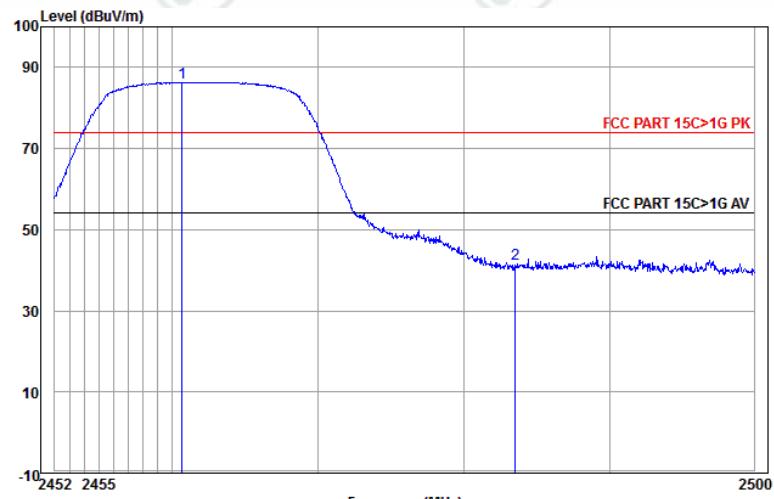
Freq	Ant Factor	Cable Loss Factor	Preamp Factor	Read Level		Limit Line	Over Limit	Over Limit Pol/Phase	Remark
				MHz	dB	dB	dBuV	dBuV/m	dBuV/m
1	2390.000	32.53	4.28	44.03	46.69	39.47	74.00	-34.53	Horizontal
2 pp	2412.158	32.58	4.33	44.05	80.91	73.77	74.00	-0.23	Horizontal

Worse case mode:	802.11b (11Mbps)		
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Vertical	Remark: Peak



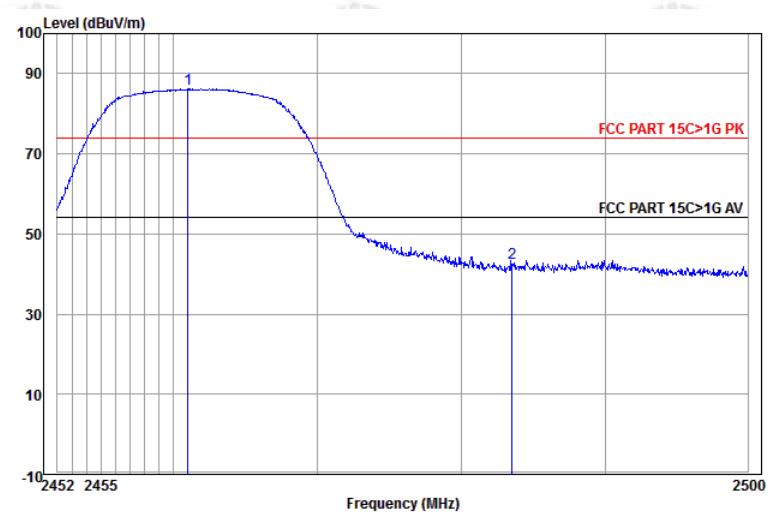
Freq	Ant Factor	Cable Loss Factor	Preamp Factor	Read Level		Limit Line	Over Limit	Over Limit Pol/Phase	Remark
				MHz	dB	dB	dBuV	dBuV/m	dBuV/m
1	2390.000	32.53	4.28	44.03	48.27	41.05	74.00	-32.95	Vertical
2 pp	2412.729	32.58	4.34	44.06	81.11	73.97	74.00	-0.03	Vertical

Worse case mode:	802.11b (11Mbps)		
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Horizontal	Remark: Peak



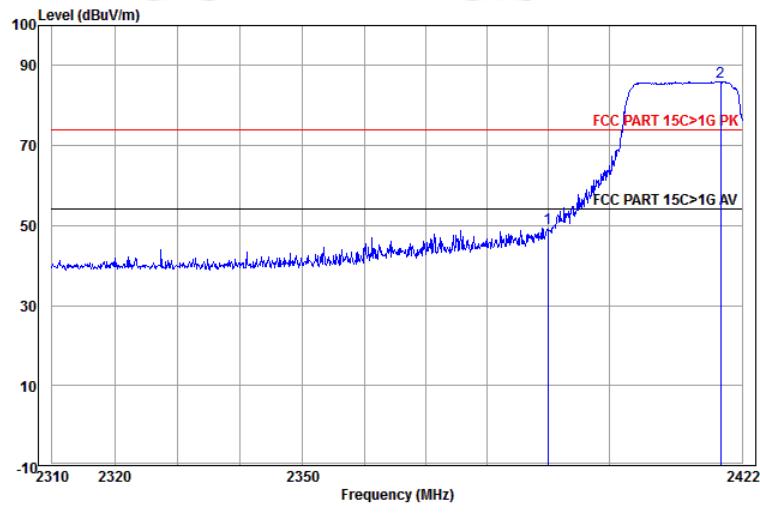
Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level		Limit Line	Over Limit	Over Limit Pol/Phase	Remark
				MHz	dB/m	dB	dB	dBuV	dBuV/m
1 pp	2460.667	32.67	4.45	44.11	93.33	86.34	74.00	12.34	Horizontal
2	2483.500	32.71	4.51	44.14	48.33	41.41	74.00	-32.59	Horizontal

Worse case mode:	802.11b (11Mbps)		
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Vertical	Remark: Peak



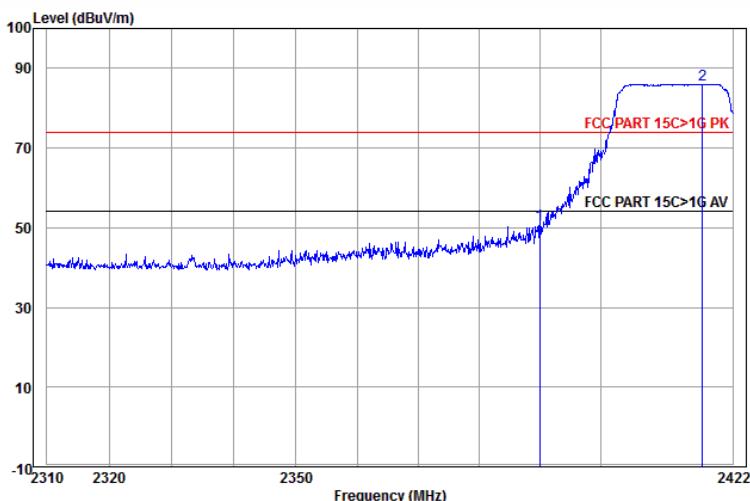
Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level		Limit Line	Over Limit	Over Limit Pol/Phase	Remark
				MHz	dB/m	dB	dB	dBuV	dBuV/m
1 pp	2461.001	32.67	4.45	44.11	93.15	86.16	74.00	12.16	Vertical
2	2483.500	32.71	4.51	44.14	49.62	42.70	74.00	-31.30	Vertical

Worse case mode:	802.11g (6Mbps)		
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Peak



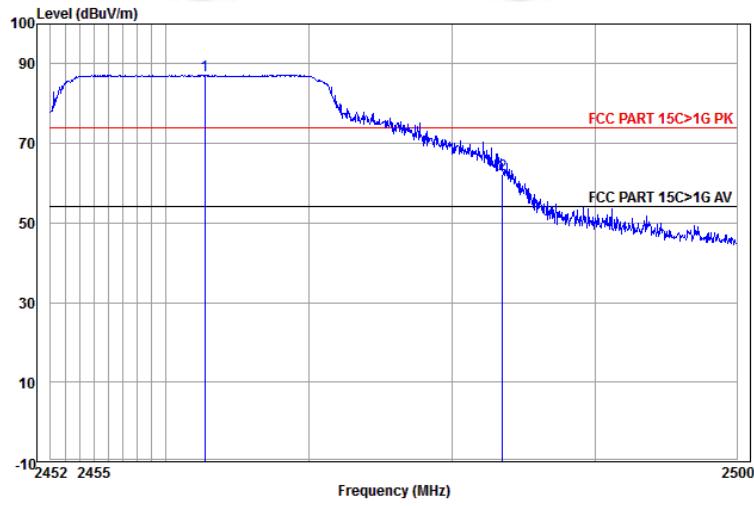
Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level		Limit Line	Over Limit	Over Limit Pol/Phase	Remark
				MHz	dB/m	dB	dB	dBuV	dBuV/m
1	2390.000	32.53	4.28	44.03	56.53	49.31	74.00	-24.69	Horizontal
2 pp	2418.448	32.59	4.35	44.06	93.06	85.94	74.00	11.94	Horizontal

Worse case mode:	802.11g (6Mbps)		
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Vertical	Remark: Peak



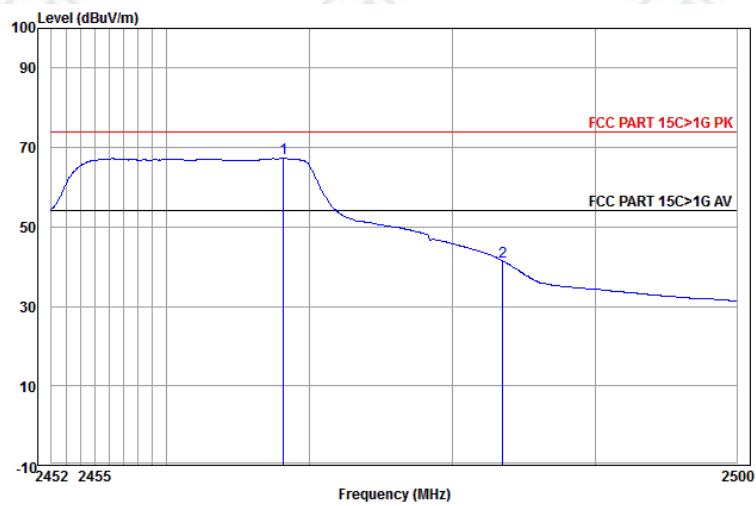
Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level		Limit Line	Over Limit	Over Limit Pol/Phase	Remark
				MHz	dB/m	dB	dB	dBuV	dBuV/m
1	2390.000	32.53	4.28	44.03	58.05	50.83	74.00	-23.17	Vertical
2 pp	2416.960	32.59	4.35	44.06	93.13	86.01	74.00	12.01	Vertical

Worse case mode:	802.11g (6Mbps)		
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Horizontal	Remark: Peak



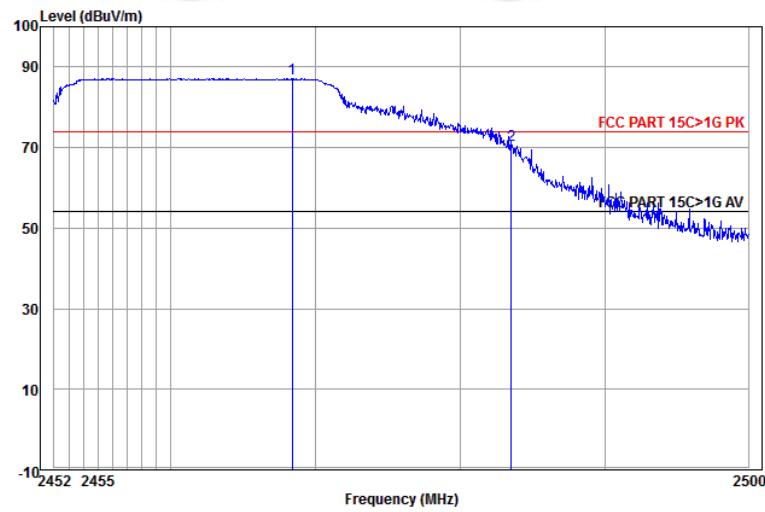
Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level		Limit Line	Over Limit	Over Line Pol/Phase	Remark
				MHz	dB/m	dB	dB	dBuV	dBuV/m
1 pp	2462.719	32.68	4.46	44.12	94.14	87.16	74.00	13.16	Horizontal
2	2483.500	32.71	4.51	44.14	69.14	62.22	74.00	-11.78	Horizontal

Worse case mode:	802.11g (6Mbps)		
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Horizontal	Remark: Average



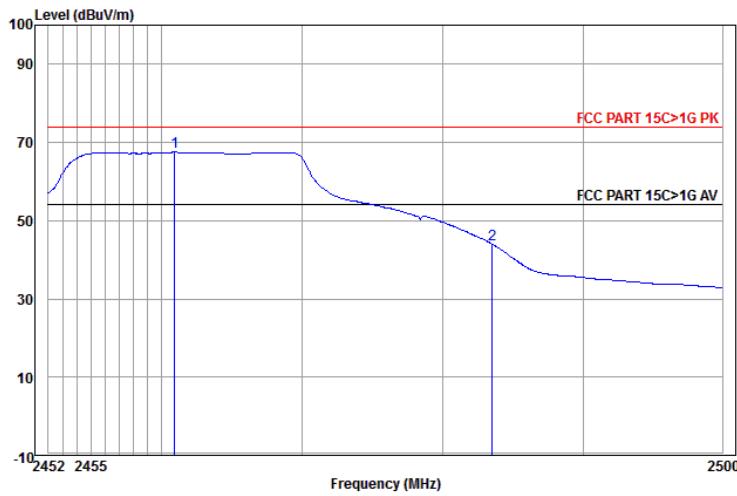
Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level		Limit Line	Over Limit	Over Line Pol/Phase	Remark	
				MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m
1 pp	2468.168	32.69	4.47	44.12	74.26	67.30	54.00	13.30	Horizontal	Average
2	2483.500	32.71	4.51	44.14	48.31	41.39	54.00	-12.61	Horizontal	Average

Worse case mode:	802.11g (6Mbps)		
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Vertical	Remark: Peak



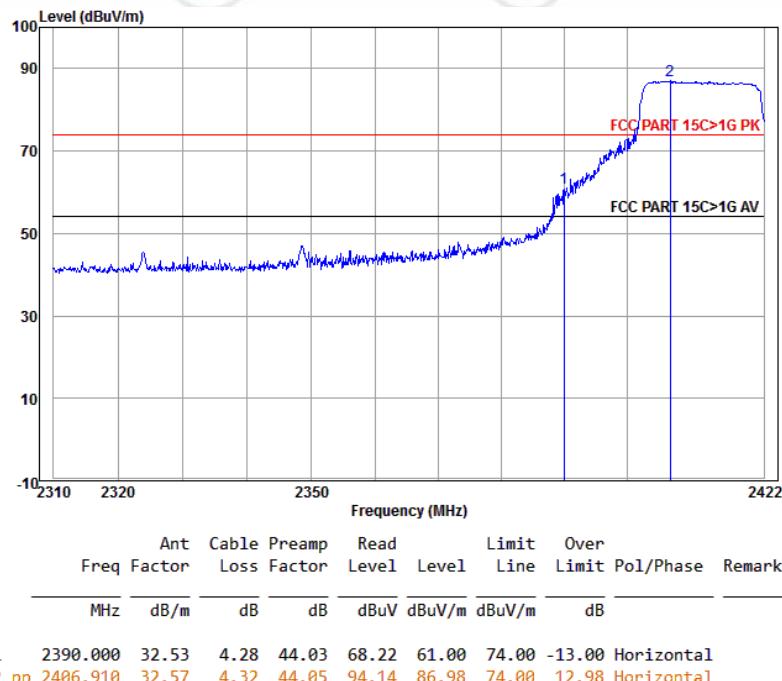
Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level		Limit Line	Over Limit	Over Limit Pol/Phase	Remark
				MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m
1 pp	2468.359	32.69	4.47	44.12	94.08	87.12	74.00	13.12	Vertical
2	2483.500	32.71	4.51	44.14	77.52	70.60	74.00	-3.40	Vertical

Worse case mode:	802.11g (6Mbps)		
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Vertical	Remark: Average

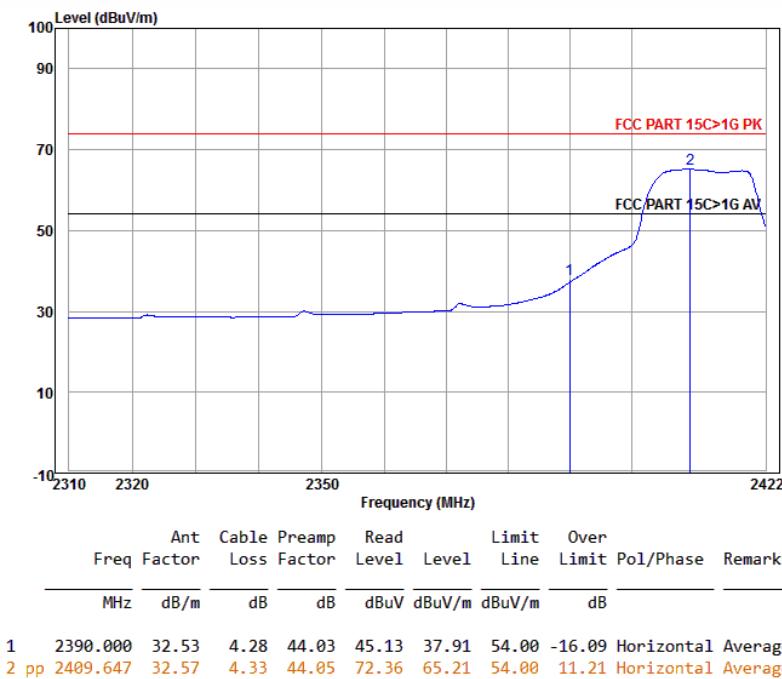


Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level		Limit Line	Over Limit	Over Limit Pol/Phase	Remark
				MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m
1 pp	2460.906	32.67	4.45	44.11	74.60	67.61	54.00	13.61	Vertical
2	2483.500	32.71	4.51	44.14	50.91	43.99	54.00	-10.01	Vertical

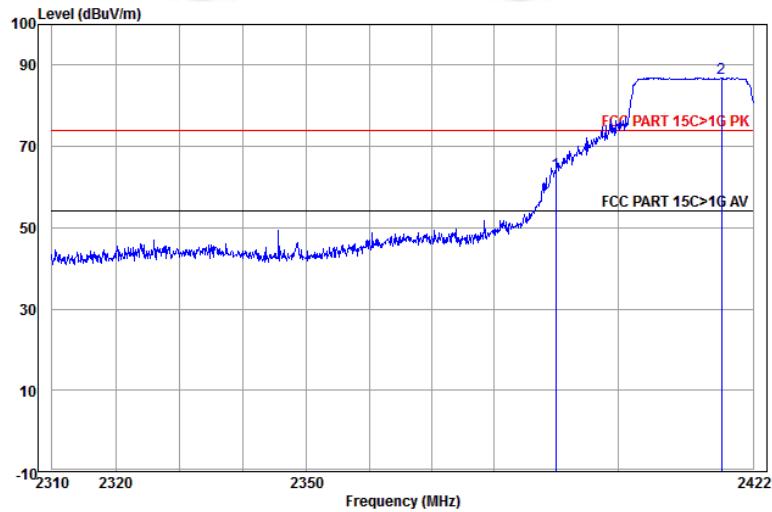
Worse case mode:	802.11n(HT20) (6.5Mbps)		
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Peak



Worse case mode:	802.11n(HT20) (6.5Mbps)		
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Average

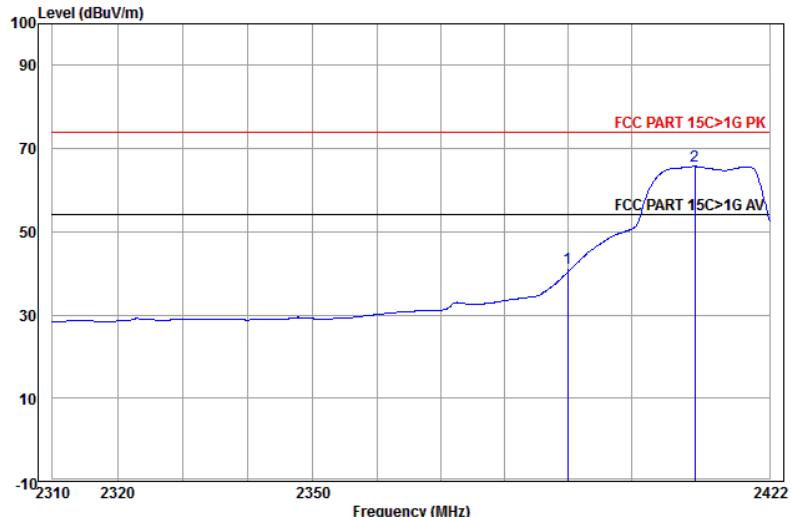


Worse case mode:	802.11n(HT20) (6.5Mbps)		
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Vertical	Remark: Peak



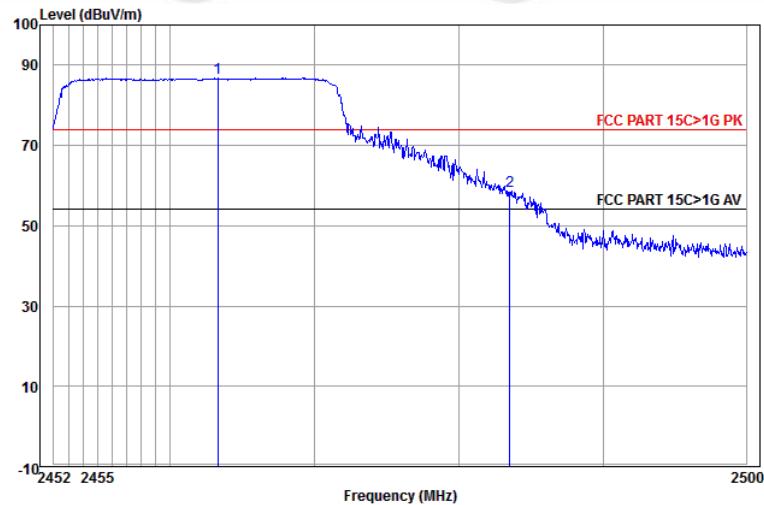
Freq	Ant Factor	Cable Loss Factor	Preamp Factor	Read Level		Limit Line	Over Limit	Over Line Pol/Phase	Remark
				MHz	dB/m	dB	dBuV	dBuV/m	dB
1	2390.000	32.53	4.28	44.03	70.55	63.33	74.00	-10.67	Vertical
2 pp	2416.845	32.59	4.35	44.06	94.02	86.90	74.00	12.90	Vertical

Worse case mode:	802.11n(HT20) (6.5Mbps)		
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Vertical	Remark: Average



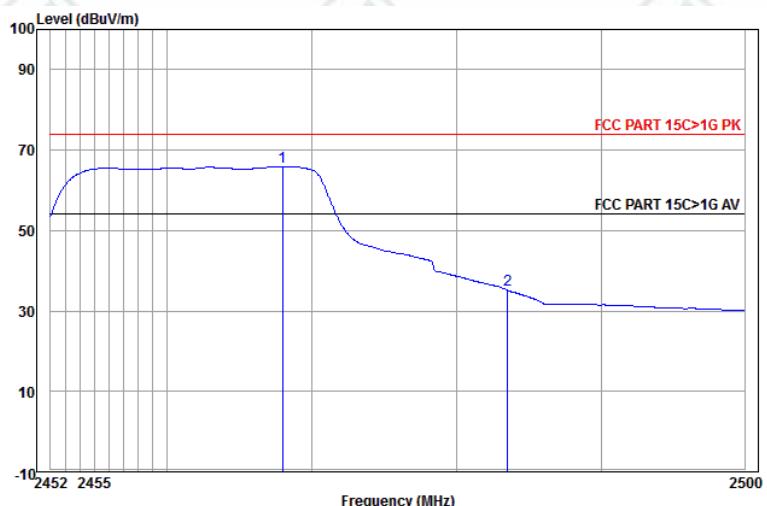
Freq	Ant Factor	Cable Loss Factor	Preamp Factor	Read Level		Limit Line	Over Limit	Over Line Pol/Phase	Remark
				MHz	dB/m	dB	dBuV	dBuV/m	dB
1	2390.000	32.53	4.28	44.03	48.45	41.23	54.00	-12.77	Vertical Average
2 pp	2410.104	32.57	4.33	44.05	72.88	65.73	54.00	11.73	Vertical Average

Worse case mode:	802.11n(HT20) (6.5Mbps)		
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Horizontal	Remark: Peak



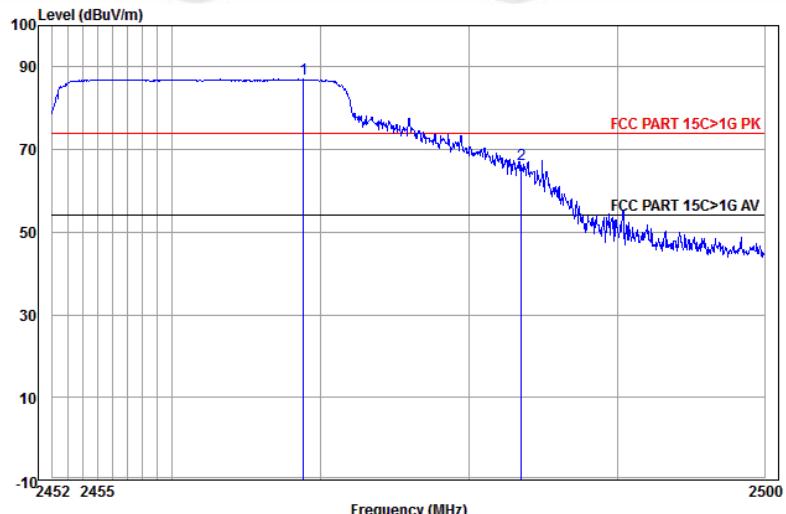
Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Limit Level	Line Limit	Over Limit	Over Pol/Phase	Remark
MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2463.292	32.68	4.46	44.12	93.77	86.79	74.00	12.79	Horizontal
2	2483.500	32.71	4.51	44.14	65.52	58.60	74.00	-15.40	Horizontal

Worse case mode:	802.11n(HT20) (6.5Mbps)		
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Horizontal	Remark:Average



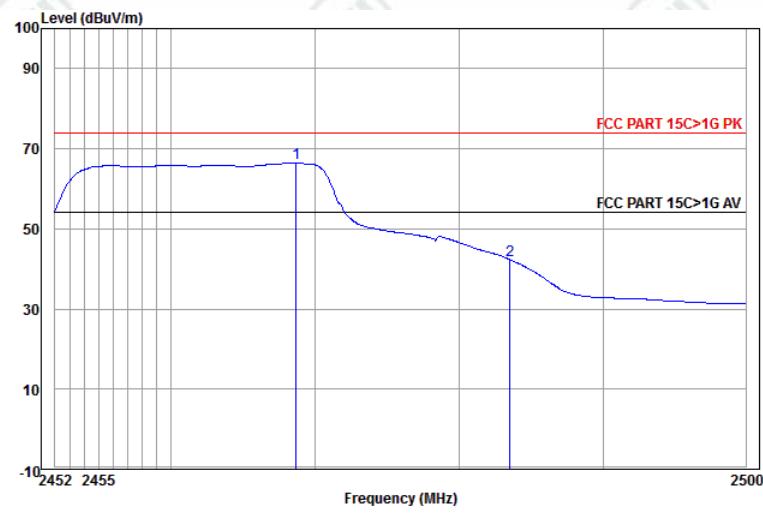
Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Limit Level	Line Limit	Over Limit	Over Pol/Phase	Remark
MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2467.929	32.69	4.47	44.12	72.81	65.85	54.00	11.85	Horizontal Average
2	2483.500	32.71	4.51	44.14	42.06	35.14	54.00	-18.86	Horizontal Average

Worse case mode:	802.11n(HT20) (6.5Mbps)		
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Vertical	Remark: Peak



Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Limit Level	Line Limit	Over Limit	Over Pol/Phase	Remark
MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dBuV/m	dB	
1 pp	2468.838	32.69	4.47	44.12	93.97	87.01	74.00	13.01	Vertical
2	2483.500	32.71	4.51	44.14	73.29	66.37	74.00	-7.63	Vertical

Worse case mode:	802.11n(HT20) (6.5Mbps)		
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Vertical	Remark: Average



Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Limit Level	Line Limit	Over Limit	Over Pol/Phase	Remark
MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dBuV/m	dB	
1 pp	2468.646	32.69	4.47	44.12	73.32	66.36	54.00	12.36	Vertical Average
2	2483.500	32.71	4.51	44.14	49.11	42.19	54.00	-11.81	Vertical Average

**Note:**

1) Through Pre-scan transmitting mode and charge+transmitter mode with all kind of modulation and data rate, find the 11Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20); and then Only the worst case is recorded in the report.

2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading - Correct Factor

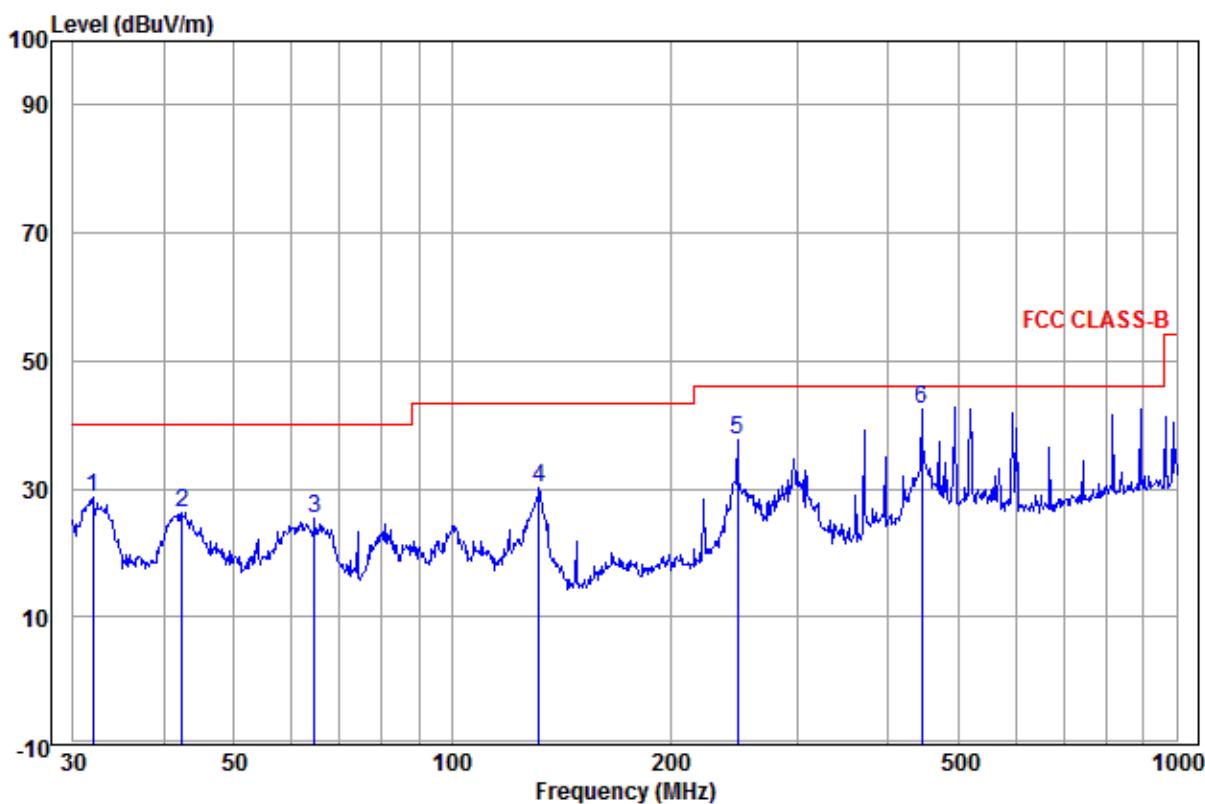
Correct Factor = Preamplifier Factor- Antenna Factor-Cable Factor

## Appendix I): Radiated Spurious Emissions

Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Test Procedure:	<b>Below 1GHz test procedure as below:</b> <ol style="list-style-type: none"> <li>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.</li> <li>The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>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.</li> <li>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 was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>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.</li> </ol> <b>Above 1GHz test procedure as below:</b> <ol style="list-style-type: none"> <li>Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter( Above 18GHz the distance is 1 meter and table is 1.5 meter)..</li> <li>Test the EUT in the lowest channel ,the middle channel ,the Highest channel</li> <li>The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.</li> <li>Repeat above procedures until all frequencies measured was complete.</li> </ol>				
Limit:	Frequency	Field strength (microvolt/meter)	Limit (dB $\mu$ V/m)	Remark	Measurement distance (m)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	960MHz-1GHz	500	54.0	Quasi-peak	3
	Above 1GHz	500	54.0	Average	3
	Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.				

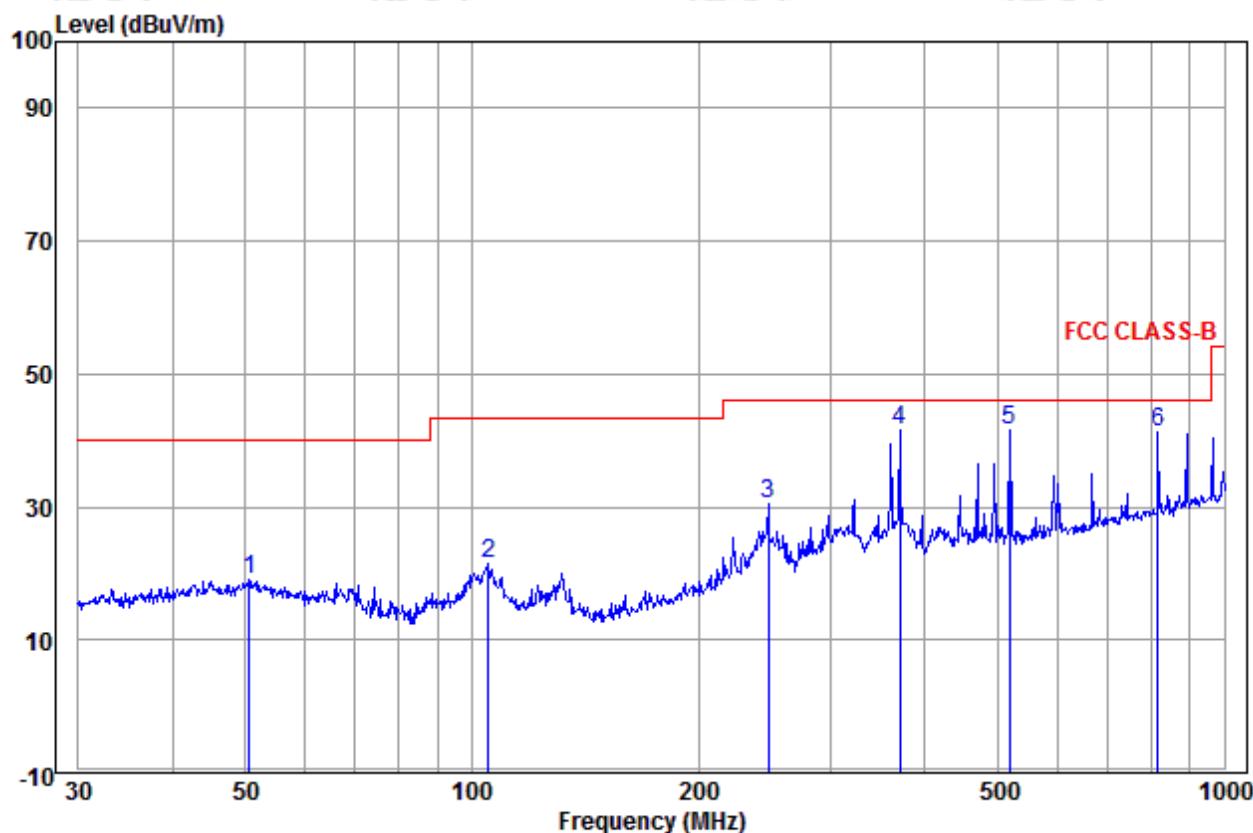
**Radiated Spurious Emissions test Data:  
Radiated Emission below 1GHz**

30MHz~1GHz (QP)		
Test mode:	Transmitting	Vertical



Freq	Ant Factor	Cable Loss	Read Level		Limit Line	Over Limit	Over Line Pol/Phase	Remark
			MHz	dB/m	dB	dBuV	dBuV/m	
1	31.955	10.99	0.08	17.51	28.58	40.00	-11.42	Vertical
2	42.451	12.64	0.07	13.51	26.22	40.00	-13.78	Vertical
3	64.659	10.33	0.23	14.66	25.22	40.00	-14.78	Vertical
4	131.758	8.86	0.60	20.79	30.25	43.50	-13.25	Vertical
5	247.682	11.96	1.33	24.49	37.78	46.00	-8.22	Vertical
6 pp	444.851	16.22	1.46	24.84	42.52	46.00	-3.48	Vertical

Test mode:	Transmitting	Horizontal
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Freq	Ant Factor	Cable Loss	Read Level		Limit Line	Over Limit	Over Limit Pol/Phase	Remark
			MHz	dB/m	dB	dBuV	dBuV/m	
1	50.586	13.18	0.12	5.80	19.10	40.00	-20.90	Horizontal
2	105.272	10.68	0.59	10.32	21.59	43.50	-21.91	Horizontal
3	247.682	11.96	1.33	17.05	30.34	46.00	-15.66	Horizontal
4	370.702	14.93	1.32	25.20	41.45	46.00	-4.55	Horizontal
5 pp	519.065	17.51	1.53	22.53	41.57	46.00	-4.43	Horizontal
6	815.968	20.97	2.46	17.86	41.29	46.00	-4.71	Horizontal

**Transmitter Emission above 1GHz**

Test mode: 802.11b(11Mbps)			Test Frequency: 2412MHz			Remark: Peak			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB $\mu$ V)	Final test level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over Limit (dB)	Result	Antenna Polaxis
1630.264	31.11	2.94	43.85	56.96	47.16	74.00	-26.84	Pass	Horizontal
1851.542	31.48	3.12	43.63	53.98	44.95	74.00	-29.05	Pass	Horizontal
4824.000	34.73	5.10	44.60	52.84	48.07	74.00	-25.93	Pass	Horizontal
6594.518	36.21	6.84	44.56	46.66	45.15	74.00	-28.85	Pass	Horizontal
7236.000	36.42	6.69	44.80	42.48	40.79	74.00	-33.21	Pass	Horizontal
9648.000	37.93	7.70	45.57	47.93	47.99	74.00	-26.01	Pass	Horizontal
1333.284	30.53	2.66	44.20	53.49	42.48	74.00	-31.52	Pass	Vertical
1630.264	31.11	2.94	43.85	53.48	43.68	74.00	-30.32	Pass	Vertical
4824.000	34.73	5.10	44.60	44.31	39.54	74.00	-34.46	Pass	Vertical
6445.156	36.13	6.98	44.55	45.33	43.89	74.00	-30.11	Pass	Vertical
7236.000	36.42	6.69	44.80	47.63	45.94	74.00	-28.06	Pass	Vertical
9648.000	37.93	7.70	45.57	43.73	43.79	74.00	-30.21	Pass	Vertical

Test mode: 802.11b(11Mbps)			Test Frequency: 2437MHz			Remark: Peak			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB $\mu$ V)	Final test level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over Limit (dB)	Result	Antenna Polaxis
1289.885	30.43	2.62	44.26	47.96	36.75	74.00	-37.25	Pass	Horizontal
1818.842	31.43	3.10	43.66	48.23	39.10	74.00	-34.90	Pass	Horizontal
4874.000	34.84	5.09	44.60	45.62	40.95	74.00	-33.05	Pass	Horizontal
5850.919	35.79	7.10	44.51	47.13	45.51	74.00	-28.49	Pass	Horizontal
7311.000	36.43	6.76	44.86	44.89	43.22	74.00	-30.78	Pass	Horizontal
9748.000	38.03	7.61	45.55	43.54	43.63	74.00	-30.37	Pass	Horizontal
1107.186	29.99	2.40	44.52	47.57	35.44	74.00	-38.56	Pass	Vertical
1529.749	30.93	2.85	43.96	47.51	37.33	74.00	-36.67	Pass	Vertical
4874.000	34.84	5.09	44.60	47.92	43.25	74.00	-30.75	Pass	Vertical
5880.782	35.81	7.17	44.51	47.04	45.51	74.00	-28.49	Pass	Vertical
7311.000	36.43	6.76	44.86	46.51	44.84	74.00	-29.16	Pass	Vertical
9748.000	38.03	7.61	45.55	43.64	43.73	74.00	-30.27	Pass	Vertical

Test mode: 802.11b(11Mbps)			Test Frequency: 2462MHz			Remark: Peak				
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB $\mu$ V)	Final test level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over Limit (dB)	Result	Antenna Polaxis	
1235.257	30.31	2.56	44.33	47.52	36.06	74.00	-37.94	Pass	Horizontal	
1823.477	31.43	3.10	43.66	47.36	38.23	74.00	-35.77	Pass	Horizontal	
4924.000	34.94	5.07	44.60	44.30	39.71	74.00	-34.29	Pass	Horizontal	
6445.156	36.13	6.98	44.55	46.29	44.85	74.00	-29.15	Pass	Horizontal	
7386.000	36.44	6.83	44.92	43.12	41.47	74.00	-32.53	Pass	Horizontal	
9848.000	38.14	7.53	45.53	44.99	45.13	74.00	-28.87	Pass	Horizontal	
1251.079	30.35	2.57	44.31	47.06	35.67	74.00	-38.33	Pass	Vertical	
1491.300	30.85	2.82	44.01	47.49	37.15	74.00	-36.85	Pass	Vertical	
4924.000	34.94	5.07	44.60	44.41	39.82	74.00	-34.18	Pass	Vertical	
6299.178	36.06	7.13	44.53	46.48	45.14	74.00	-28.86	Pass	Vertical	
7386.000	36.44	6.83	44.92	44.08	42.43	74.00	-31.57	Pass	Vertical	
9848.000	38.14	7.53	45.53	43.79	43.93	74.00	-30.07	Pass	Vertical	

Test mode: 802.11g(6Mbps)			Test Frequency: 2412MHz			Remark: Peak				
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB $\mu$ V)	Final test level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over Limit (dB)	Result	Antenna Polaxis	
1159.096	30.13	2.47	44.44	48.42	36.58	74.00	-37.42	Pass	Horizontal	
1557.252	30.98	2.88	43.93	49.70	39.63	74.00	-34.37	Pass	Horizontal	
4824.000	34.73	5.10	44.60	43.15	38.38	74.00	-35.62	Pass	Horizontal	
5850.919	35.79	7.10	44.51	45.24	43.62	74.00	-30.38	Pass	Horizontal	
7236.000	36.42	6.69	44.80	44.17	42.48	74.00	-31.52	Pass	Horizontal	
9648.000	37.93	7.70	45.57	47.94	48.00	74.00	-26.00	Pass	Horizontal	
1406.496	30.68	2.74	44.11	59.13	48.44	74.00	-25.56	Pass	Vertical	
1630.264	31.11	2.94	43.85	58.04	48.24	74.00	-25.76	Pass	Vertical	
4824.000	34.73	5.10	44.60	47.56	42.79	74.00	-31.21	Pass	Vertical	
5747.586	35.71	6.87	44.52	46.37	44.43	74.00	-29.57	Pass	Vertical	
7236.000	36.42	6.69	44.80	47.78	46.09	74.00	-27.91	Pass	Vertical	
9648.000	37.93	7.70	45.57	50.15	50.21	74.00	-23.79	Pass	Vertical	

Test mode: 802.11g(6Mbps)			Test Frequency: 2437MHz			Remark: Peak			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB $\mu$ V)	Final test level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over Limit (dB)	Result	Antenna Polaxis
1557.252	30.98	2.88	43.93	52.85	42.78	74.00	-31.22	Pass	Horizontal
4149.351	33.18	5.37	44.60	45.91	39.86	74.00	-34.14	Pass	Horizontal
4874.000	34.84	5.09	44.60	49.53	44.86	74.00	-29.14	Pass	Horizontal
6017.064	35.91	7.41	44.50	44.54	43.36	74.00	-30.64	Pass	Horizontal
7311.000	36.43	6.76	44.86	42.91	41.24	74.00	-32.76	Pass	Horizontal
9748.000	38.03	7.61	45.55	44.02	44.11	74.00	-29.89	Pass	Horizontal
1406.496	30.68	2.74	44.11	59.48	48.79	74.00	-25.21	Pass	Vertical
1706.700	31.24	3.01	43.77	56.79	47.27	74.00	-26.73	Pass	Vertical
4874.000	34.84	5.09	44.60	52.71	48.04	74.00	-25.96	Pass	Vertical
5732.974	35.70	6.83	44.52	46.15	44.16	74.00	-29.84	Pass	Vertical
7311.000	36.43	6.76	44.86	50.48	48.81	74.00	-25.19	Pass	Vertical
9748.000	38.03	7.61	45.55	47.36	47.45	74.00	-26.55	Pass	Vertical

Test mode: 802.11g(6Mbps)			Test Frequency: 2462MHz			Remark: Peak			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB $\mu$ V)	Final test level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over Limit (dB)	Result	Antenna Polaxis
1630.264	31.11	2.94	43.85	52.06	42.26	74.00	-31.74	Pass	Horizontal
1851.542	31.48	3.12	43.63	51.71	42.68	74.00	-31.32	Pass	Horizontal
4924.000	34.94	5.07	44.60	50.41	45.82	74.00	-28.18	Pass	Horizontal
6428.771	36.12	7.00	44.54	45.49	44.07	74.00	-29.93	Pass	Horizontal
7386.000	36.44	6.83	44.92	45.98	44.33	74.00	-29.67	Pass	Horizontal
9848.000	38.14	7.53	45.53	42.66	42.80	74.00	-31.20	Pass	Horizontal
1483.727	30.84	2.81	44.02	53.07	42.70	74.00	-31.30	Pass	Vertical
1851.542	31.48	3.12	43.63	51.86	42.83	74.00	-31.17	Pass	Vertical
4924.000	34.94	5.07	44.60	47.54	42.95	74.00	-31.05	Pass	Vertical
5956.109	35.87	7.33	44.50	45.51	44.21	74.00	-29.79	Pass	Vertical
7386.000	36.44	6.83	44.92	48.94	47.29	74.00	-26.71	Pass	Vertical
9848.000	38.14	7.53	45.53	46.22	46.36	74.00	-27.64	Pass	Vertical

Test mode: 802.11n(HT20)(6.5Mbps)			Test Frequency: 2412MHz			Remark: Peak			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB $\mu$ V)	Final test level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over Limit (dB)	Result	Antenna Polaxis
1483.727	30.84	2.81	44.02	56.77	46.40	74.00	-27.60	Pass	Horizontal
1851.542	31.48	3.12	43.63	57.69	48.66	74.00	-25.34	Pass	Horizontal
4824.000	34.73	5.10	44.60	43.70	38.93	74.00	-35.07	Pass	Horizontal
5880.782	35.81	7.17	44.51	46.00	44.47	74.00	-29.53	Pass	Horizontal
7236.000	36.42	6.69	44.80	45.37	43.68	74.00	-30.32	Pass	Horizontal
9648.000	37.93	7.70	45.57	44.55	44.61	74.00	-29.39	Pass	Horizontal
1479.955	30.83	2.81	44.02	55.29	44.91	74.00	-29.09	Pass	Vertical
1732.967	31.29	3.03	43.75	49.37	39.94	74.00	-34.06	Pass	Vertical
4824.000	34.73	5.10	44.60	43.95	39.18	74.00	-34.82	Pass	Vertical
5880.782	35.81	7.17	44.51	46.10	44.57	74.00	-29.43	Pass	Vertical
7236.000	36.42	6.69	44.80	44.19	42.50	74.00	-31.50	Pass	Vertical
9648.000	37.93	7.70	45.57	48.60	48.66	74.00	-25.34	Pass	Vertical

Test mode: 802.11n(HT20)(6.5Mbps)			Test Frequency: 2437MHz			Remark: Peak			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB $\mu$ V)	Final test level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over Limit (dB)	Result	Antenna Polaxis
1506.563	30.88	2.83	43.99	47.16	36.88	74.00	-37.12	Pass	Horizontal
1791.273	31.38	3.08	43.69	47.00	37.77	74.00	-36.23	Pass	Horizontal
4874.000	34.84	5.09	44.60	48.23	43.56	74.00	-30.44	Pass	Horizontal
6331.329	36.07	7.10	44.53	46.36	45.00	74.00	-29.00	Pass	Horizontal
7311.000	36.43	6.76	44.86	44.97	43.30	74.00	-30.70	Pass	Horizontal
9748.000	38.03	7.61	45.55	47.34	47.43	74.00	-26.57	Pass	Horizontal
1371.145	30.61	2.70	44.15	48.21	37.37	74.00	-36.63	Pass	Vertical
1851.542	31.48	3.12	43.63	51.92	42.89	74.00	-31.11	Pass	Vertical
4874.000	34.84	5.09	44.60	42.59	37.92	74.00	-36.08	Pass	Vertical
5865.832	35.80	7.13	44.51	45.57	43.99	74.00	-30.01	Pass	Vertical
7311.000	36.43	6.76	44.86	42.74	41.07	74.00	-32.93	Pass	Vertical
9748.000	38.03	7.61	45.55	45.09	45.18	74.00	-28.82	Pass	Vertical

Test mode: 802.11n(HT20)(6.5Mbps)				Test Frequency: 2462MHz			Remark: Peak		
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB $\mu$ V)	Final test level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over Limit (dB)	Result	Antenna Polaxis
1479.955	30.83	2.81	44.02	51.72	41.34	74.00	-32.66	Pass	Horizontal
3192.366	33.43	5.58	44.68	53.13	47.46	74.00	-26.54	Pass	Horizontal
4924.000	34.94	5.07	44.60	54.80	50.21	74.00	-23.79	Pass	Horizontal
5776.922	35.73	6.93	44.52	46.49	44.63	74.00	-29.37	Pass	Horizontal
7386.000	36.44	6.83	44.92	52.01	50.36	74.00	-23.64	Pass	Horizontal
9848.000	38.14	7.53	45.53	46.43	46.57	74.00	-27.43	Pass	Horizontal
1529.749	30.93	2.85	43.96	49.98	39.80	74.00	-34.20	Pass	Vertical
4245.509	33.41	5.33	44.60	47.91	42.05	74.00	-31.95	Pass	Vertical
4924.000	34.94	5.07	44.60	47.21	42.62	74.00	-31.38	Pass	Vertical
5880.782	35.81	7.17	44.51	46.61	45.08	74.00	-28.92	Pass	Vertical
7386.000	36.44	6.83	44.92	47.82	46.17	74.00	-27.83	Pass	Vertical
9848.000	38.14	7.53	45.53	43.92	44.06	74.00	-29.94	Pass	Vertical

## Note:

1) Through Pre-scan transmitting mode and charge+transmitter mode with all kind of modulation and data rate, find the 11Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20) ; and then Only the worst case is recorded in the report.

2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

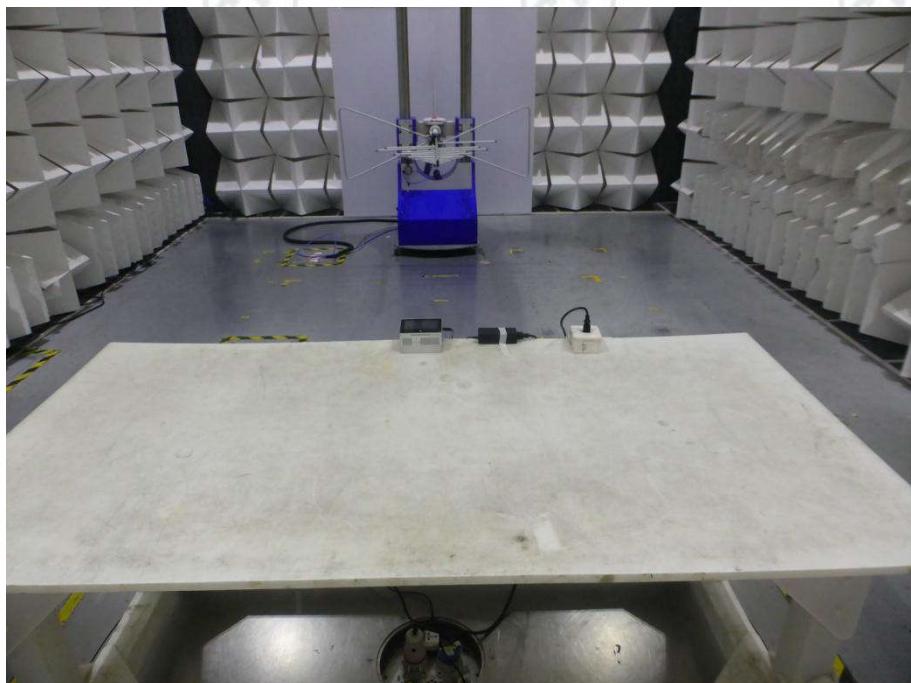
Final Test Level =Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor- Antenna Factor-Cable Factor

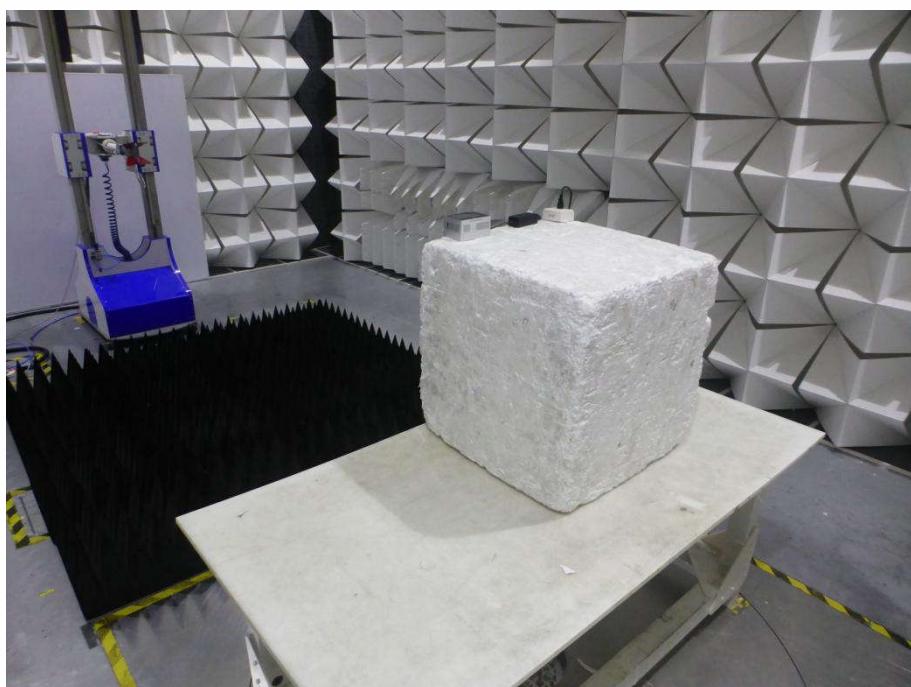
3) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

## PHOTOGRAPHS OF TEST SETUP

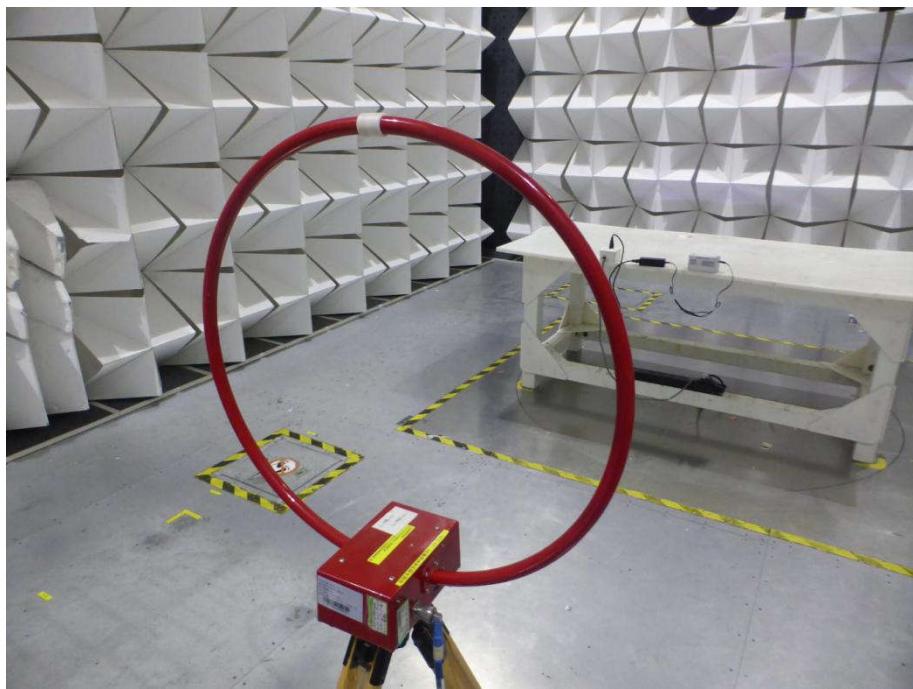
Test Model No.: L400 PAD



**Radiated spurious emission Test Setup-1(Below 1GHz)**



**Radiated spurious emission Test Setup-2(Above 1GHz)**



**Radiated spurious emission Test Setup-3(9KHz-30MHz)**



**Conducted Emissions Test Setup**

## PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32I00318001 for EUT external and internal photos.

\*\*\* End of Report \*\*\*

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

