TEST REPORT

Product	:	Yanshee
Trade mark	:	UBTECH
Model/Type reference	:	Yanshee
Serial Number	:	N/A
Report Number	:	EED32K00127803
FCC ID	:	2AHJX-YANSHEE
Date of Issue	:	Jul. 19, 2018
Test Standards	:	47 CFR Part 15 Subpart C
Test result	:	PASS

Prepared for:

UBTECH ROBOTICS CORP
16th and 22nd Floor, Block C1, Nanshan I Park, No.1001 Xueyuan Road, Nanshan District, Shenzhen City, P.R.CHINA

Prepared by:

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Tested By:	Tom chen (Test Project)	Compiled by:	Max Liang (Project Engineer)
Reviewed by:	Kevin yang (Reviewer)	Approved by:	Sheek Luo (Lab supervisor)
Date:	Jul. 19, 2018		Check No.:3096333402

CENTRE TESTING INTERNATIONAL GROUP CO.,LTD. Report Seal

2 Version

Version No.	Date	Description
00	Jul. 19, 2018	Original

3 Test Summary

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

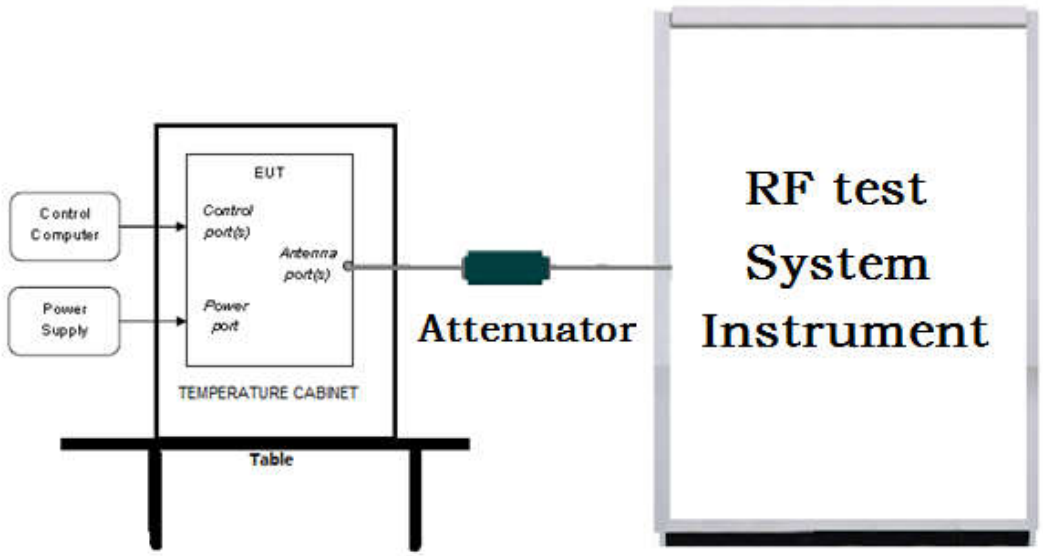
The tested sample(s) and the sample information are provided by the client.

4 Content

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:

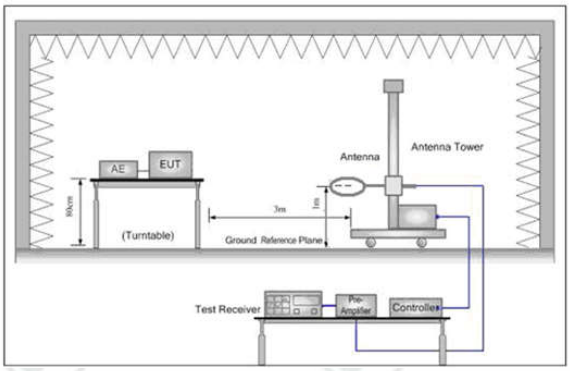


Figure 1. Below 30MHz

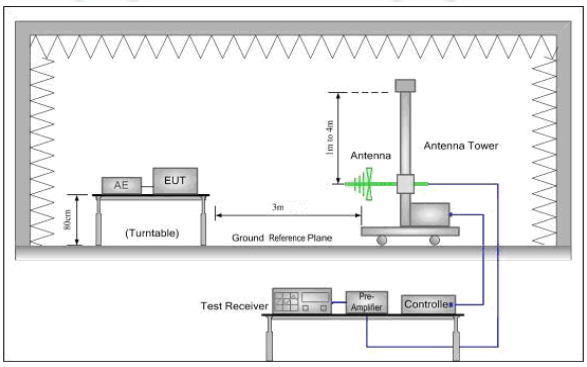


Figure 2. 30MHz to 1GHz

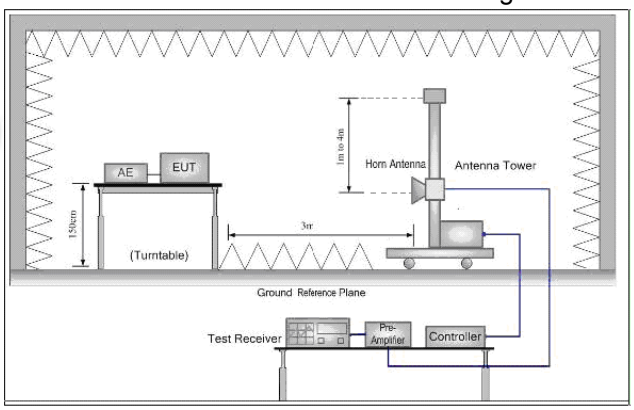
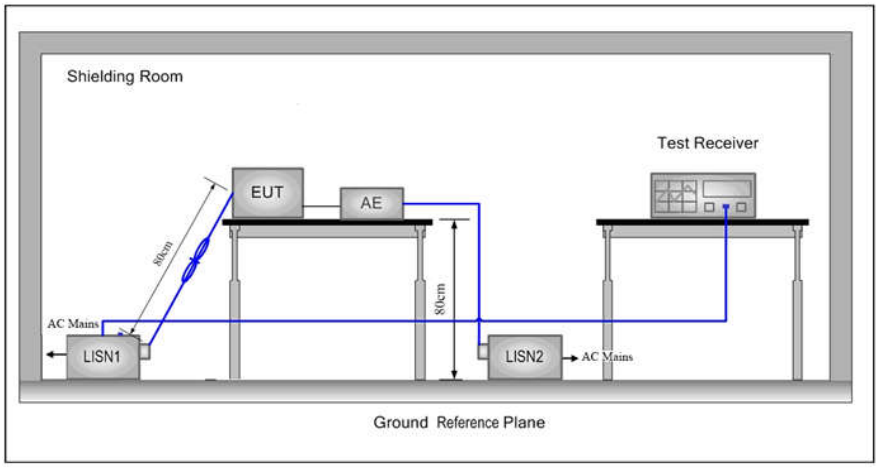


Figure 3. Above 1GHz

5.1.3 For Conducted Emissions test setup

Conducted Emissions setup



5.2 Test Environment

Operating Environment:	
Temperature:	24.8 °C
Humidity:	55 % 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
802.11n(HT40)	2422MHz ~2452 MHz	Channel 1	Channel 4	Channel7
		2422MHz	2437MHz	2452MHz
Transmitting mode:	The EUT transmitted the continuous signal at the specific channel(s).			

Test mode:

Pre-scan under all rate at lowest channel 1

Mode	802.11b				
Data Rate	1Mbps	2Mbps	5.5Mbps	11Mbps	
Power(dBm)	11.25	11.84	12.00	12.99	

Mode	802.11g							
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
Power(dBm)	17.80	17.45	17.01	16.84	16.45	16.21	15.84	15.32

Mode	802.11n (HT20)							
Data Rate	6.5Mbps	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps	58.5Mbps	65Mbps
Power(dBm)	17.68	17.25	17.07	16.84	16.54	16.12	15.85	15.21

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:	UBTECH ROBOTICS CORP
Address of Applicant:	16th and 22nd Floor, Block C1, Nanshan I Park, No.1001 Xueyuan Road, Nanshan District, Shenzhen City, P.R.CHINA
Manufacturer:	UBTECH ROBOTICS CORP
Address of Manufacturer:	16th and 22nd Floor, Block C1, Nanshan I Park, No.1001 Xueyuan Road, Nanshan District, Shenzhen City, P.R.CHINA
Factory:	UBTECH ROBOTICS CORP BAOAN BRANCH
Address of Factory:	1-2 Floor, B Block, Huilongda Industry Park, Shilongzai, Shiyan Street, Baoan District, Shenzhen City, P.R.CHINA

6.2 General Description of EUT

Product Name:	Yanshee	
Model No.(EUT):	Yanshee	
Trade Mark:	UBTECH	
EUT Supports Radios application:	BT 4.1 BT Dual mode, 2402MHz to 2480MHz WiFi IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz	
Power Supply:	Adapter	Model: HKA03609640-8A Input: 100-240V~50/60Hz, 1.5A Output: 9.6V⎓4.0A
	Battery	Rechargable Li-ion Battery 7.24V, 2750mAh, 19.91Wh
Sample Received Date:	May 24, 2018	
Sample tested Date:	May 24, 2018 to Jul. 19, 2018	

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)
Antenna Type and Gain:	Type: Ceramic antenna Gain: 1.8dBi
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 independently.

6.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd
Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China
Telephone: +86 (0) 755 3368 3668 Fax:+86 (0) 755 3368 3385
No tests were sub-contracted.
FCC Designation No.: CN1164

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	7.9×10^{-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

Conducted disturbance Test					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
Receiver	R&S	ESCI	100435	05-26-2017 05-25-2018	05-25-2018 05-24-2019
Temperature/ Humidity Indicator	Belida	TT-512	A19	01-24-2018	01-23-2019
LISN	R&S	ENV216	100098	05-11-2018	05-10-2019

RF Conducted test					
Equipment	**Manufacturer**	**Mode No.**	**Serial Number**	**Cal. Date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
Signal Generator	Keysight	E8257D	MY53401106	03-13-2018	03-12-2019
Spectrum Analyzer	Keysight	N9010A	MY54510339	03-13-2018	03-12-2019
Signal Generator	Keysight	N5182B	MY53051549	03-13-2018	03-12-2019
High-pass filter	Sinoscite	FL3CX03WG18 NM12-0398-002	---	01-10-2018	01-09-2019
High-pass filter	Sinoscite	FL3CX03WG18 NM12-0398-002	---	01-10-2018	01-09-2019
power meter & power sensor	R&S	OSP120	101374	04-11-2018	04-10-2019
RF control unit	JS Tonscend	JS0806-2	2015860006	03-13-2018	03-12-2019

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	---	06-04-2016	06-03-2019
TRILOG Broadband Antenna	SCHWARZBECK	VULB9163	9163-617	03-29-2018	03-28-2019
Preamplifier	JS Tonscend	EMC051845SE	980380	01-19-2018	01-18-2019
Horn Antenna	ETS-LINDGREN	3117	00057407	07-10-2018	07-08-2021
Double Ridge Horn Antenna	A.H.SYSTEMS	SAS-574	374	06-07-2015 06-05-2018	06-05-2018 06-03-2021
Loop Antenna	ETS	6502	00071730	06-22-2017	06-21-2019
Spectrum Analyzer	R&S	FSP40	100416	05-11-2018	05-10-2019
Receiver	R&S	ESCI	100435	05-26-2017 05-25-2018	05-25-2018 05-24-2019
LISN	schwarzbeck	NNBM8125	81251547	05-11-2018	05-10-2019
LISN	schwarzbeck	NNBM8125	81251548	05-11-2018	05-10-2019
Signal Generator	Agilent	E4438C	MY45095744	03-13-2018	03-12-2019
Signal Generator	Keysight	E8257D	MY53401106	03-13-2018	03-12-2019
Temperature/ Humidity Indicator	TAYLOR	1451	1905	05-02-2018	05-01-2019
Communication test set	Agilent	E5515C	GB47050534	03-16-2018	03-15-2019
Cable line	Fulai(7M)	SF106	5219/6A	01-10-2018	01-09-2019
Cable line	Fulai(6M)	SF106	5220/6A	01-10-2018	01-09-2019
Cable line	Fulai(3M)	SF106	5216/6A	01-10-2018	01-09-2019
Cable line	Fulai(3M)	SF106	5217/6A	01-10-2018	01-09-2019
Communication test set	R&S	CMW500	152394	03-16-2018	03-15-2019
High-pass filter	Sinoscite	FL3CX03WG18NM1 2-0398-002	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX01CA09CL12 -0395-001	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX01CA08CL12 -0393-001	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX02CA04CL12 -0396-002	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX02CA03CL12 -0394-001	---	01-10-2018	01-09-2019

8 Radio Technical Requirements Specification

Reference documents for testing:

No.	Identity	Document Title
1	FCC Part 15C	Subpart C-Intentional Radiators
2	ANSI C63.10-2013	American National Standard for Testing Unlicesed Wireless Devices

Test Results List:

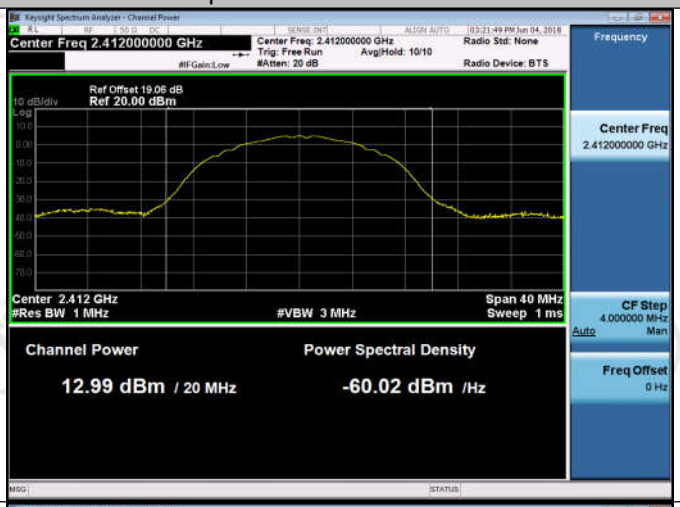
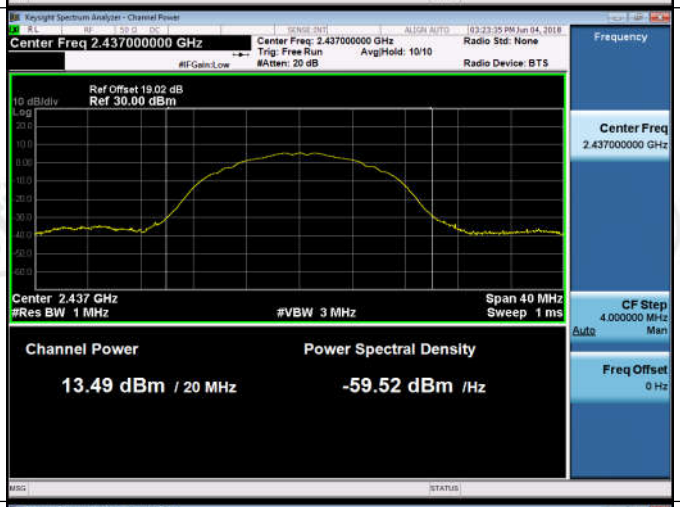
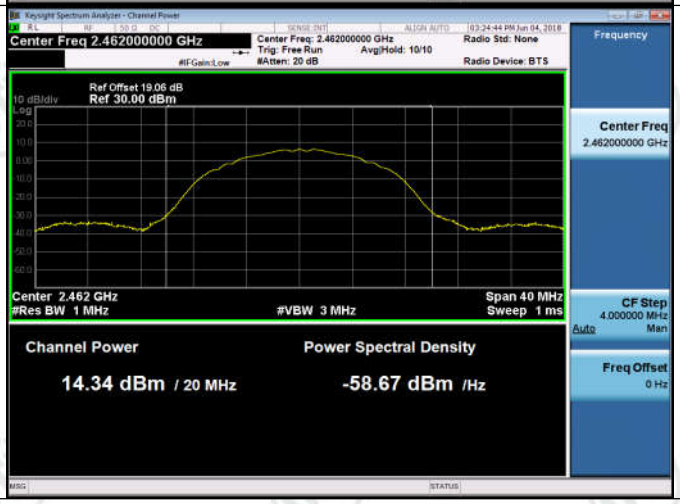
Test Requirement	Test method	Test item	Verdict	Note
Part15C Section 15.247 (b)(3)	ANSI C63.10	Conducted Peak Output Power	PASS	Appendix A)
Part15C Section 15.247 (a)(2)	ANSI C63.10	6dB Occupied Bandwidth	PASS	Appendix B)
Part15C Section 15.247(d)	ANSI C63.10	Band-edge for RF Conducted Emissions	PASS	Appendix C)
Part15C Section 15.247(d)	ANSI C63.10	RF Conducted Spurious Emissions	PASS	Appendix D)
Part15C Section 15.247 (e)	ANSI C63.10	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)

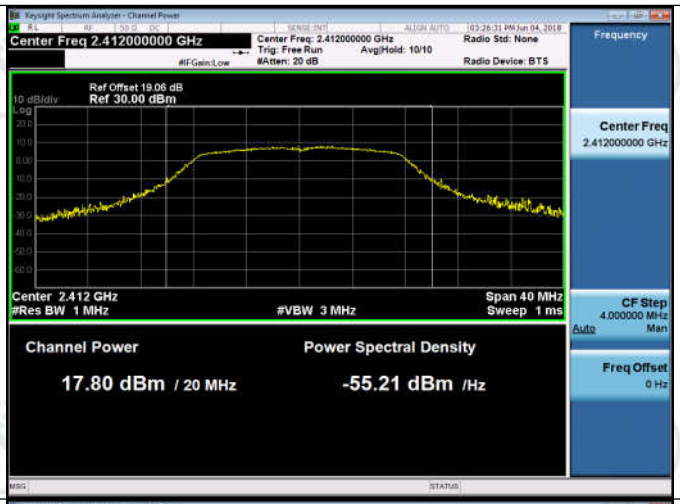
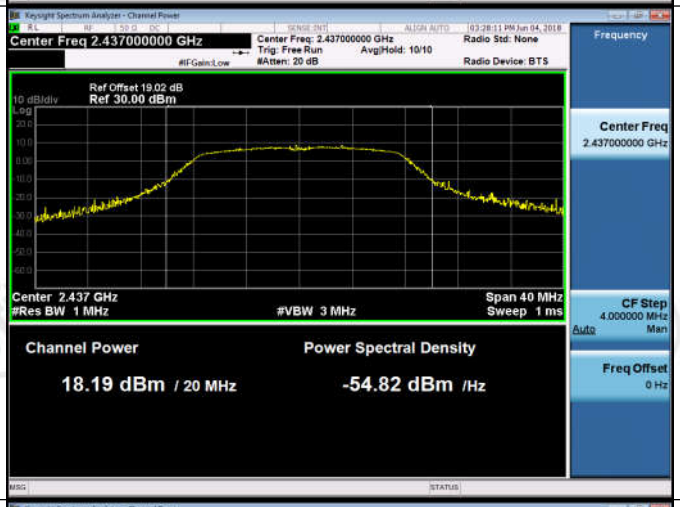
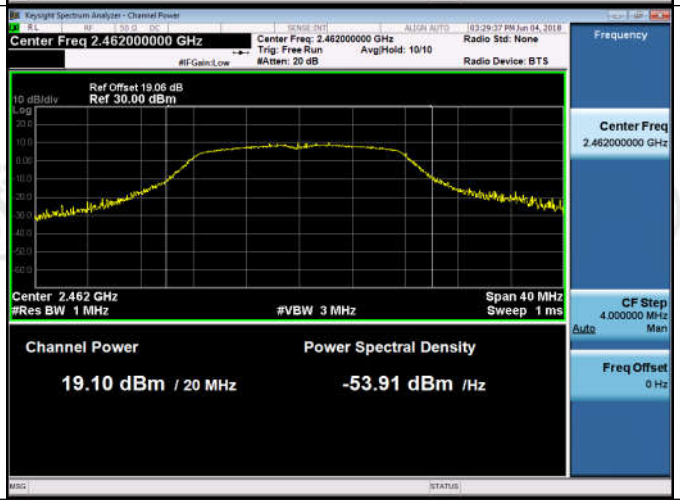
Appendix A): Conducted Peak Output Power

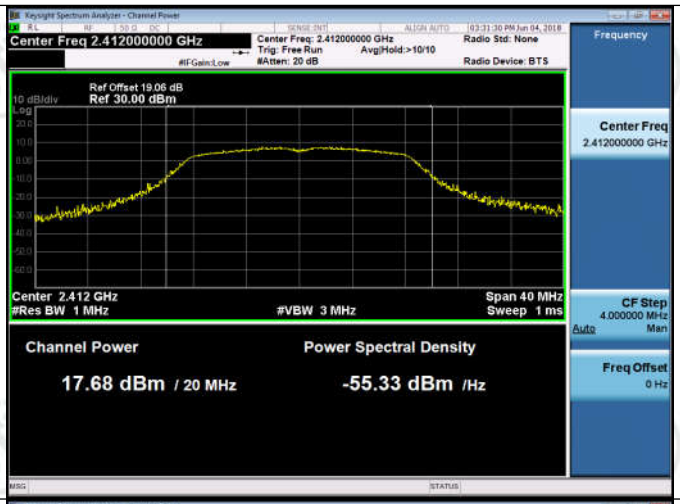
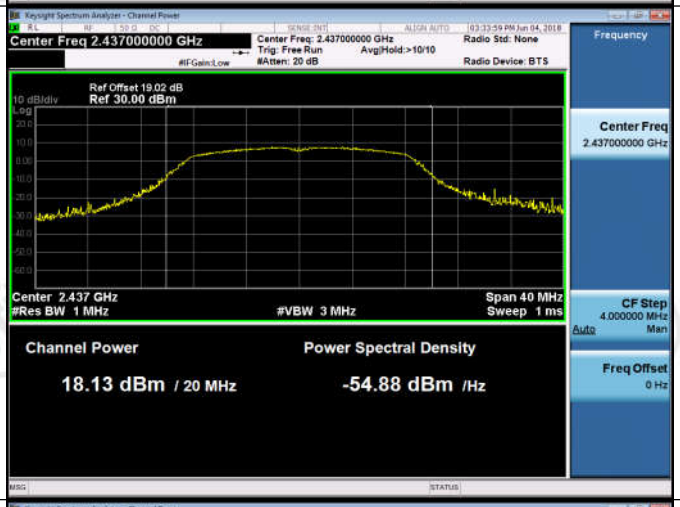
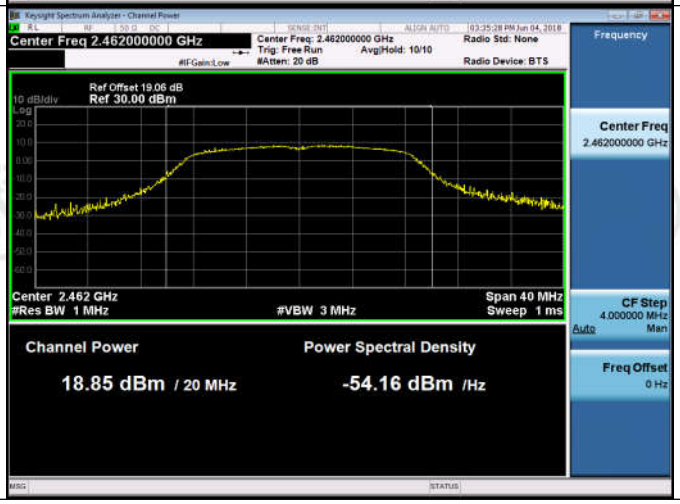
Result Table

Mode	Channel	Conducted Peak Output Power [dBm]	Verdict
11B	LCH	12.99	PASS
11B	MCH	13.49	PASS
11B	HCH	14.34	PASS
11G	LCH	17.8	PASS
11G	MCH	18.19	PASS
11G	HCH	19.1	PASS
11N20SISO	LCH	17.68	PASS
11N20SISO	MCH	18.13	PASS
11N20SISO	HCH	18.85	PASS

Test Graph

Graphs		
11B/LCH		
11B/MCH		
11B/HCH		

11G/LCH			
11G/MCH			
11G/HCH			

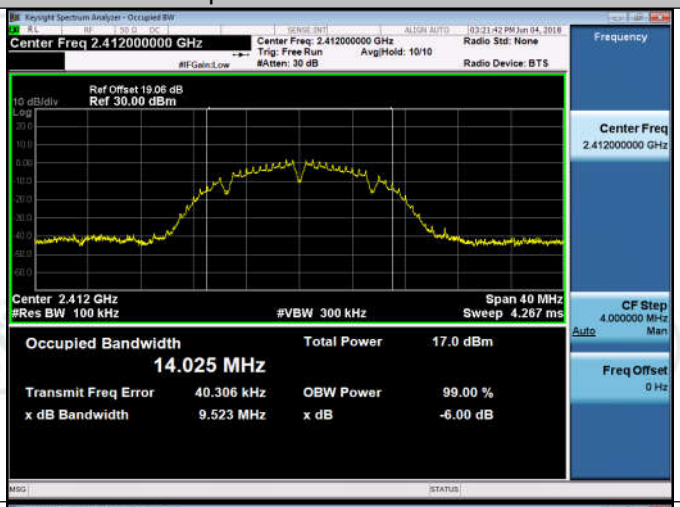
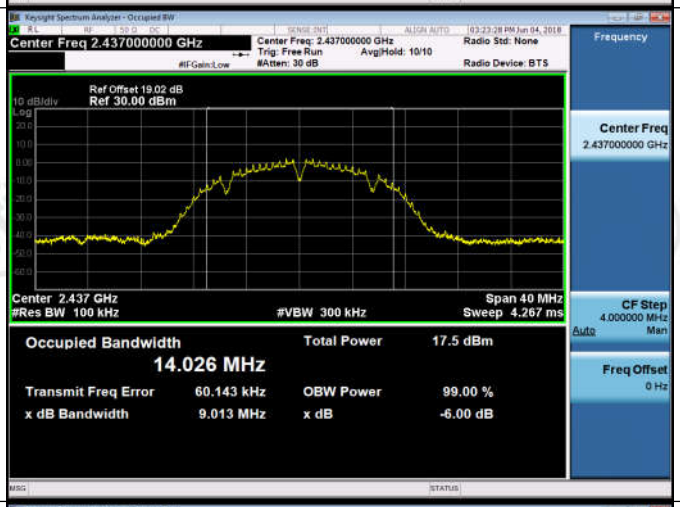
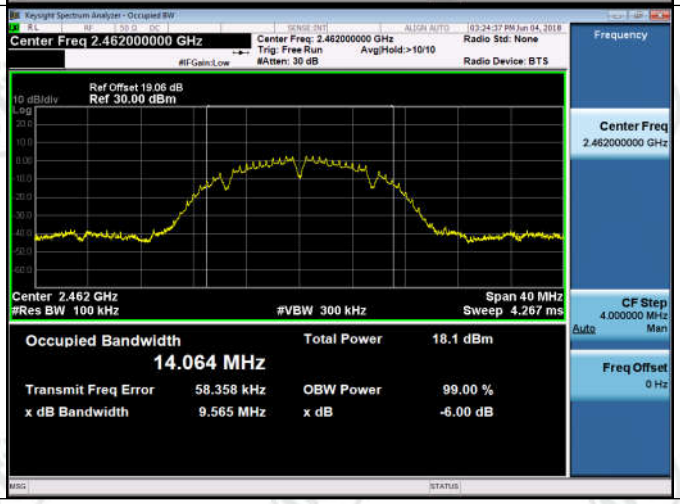
11N20SISO/LCH			
11N20SISO/MCH			
11N20SISO/HCH			

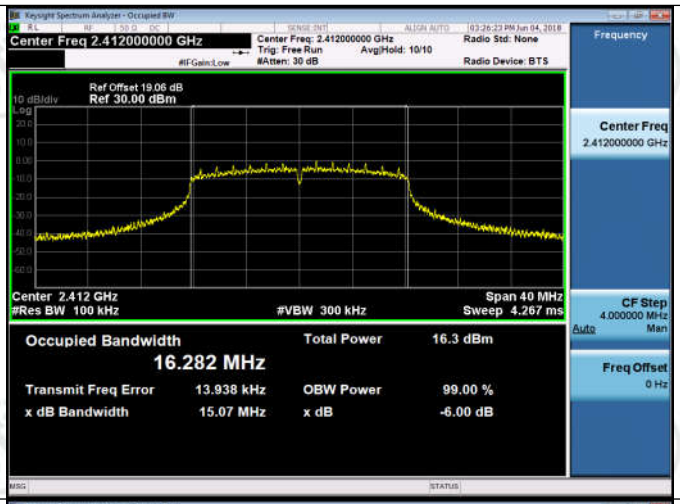
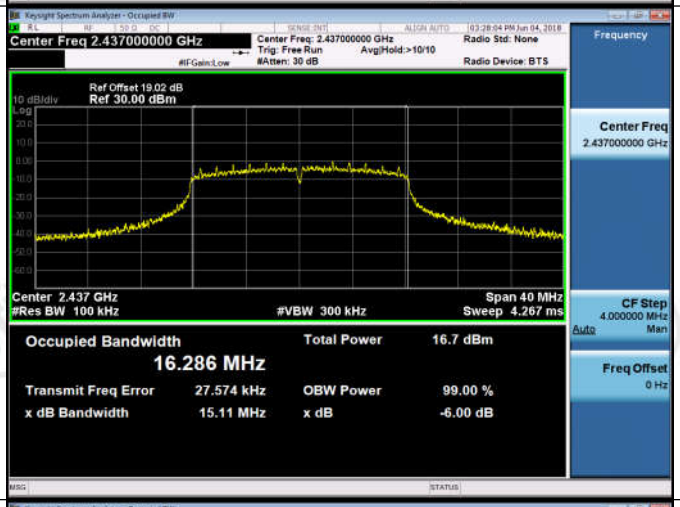
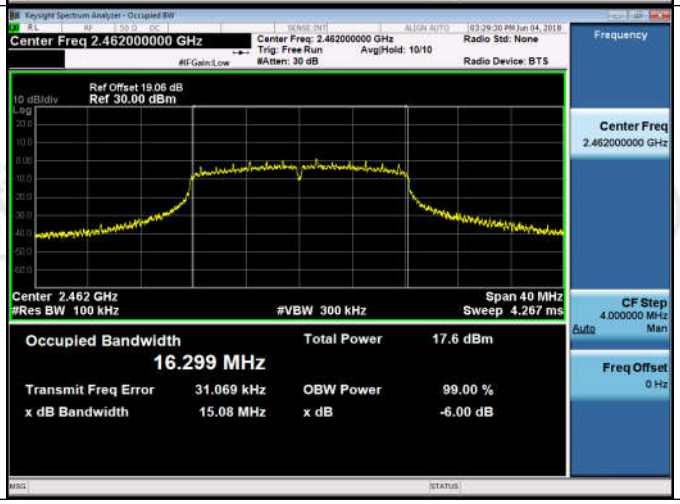
Appendix B): 6dB Occupied Bandwidth

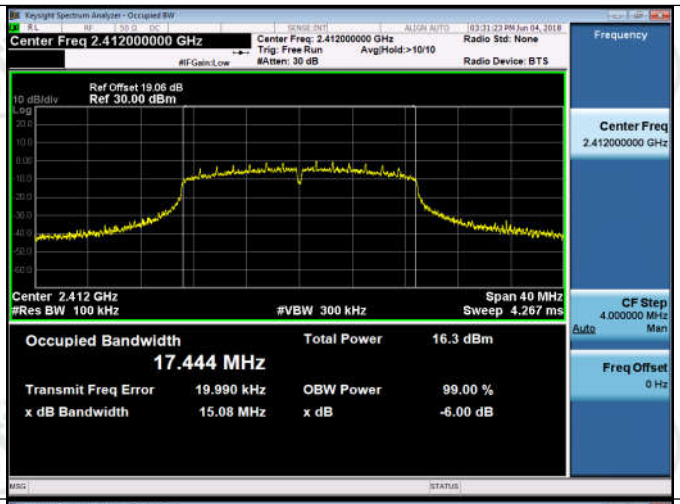
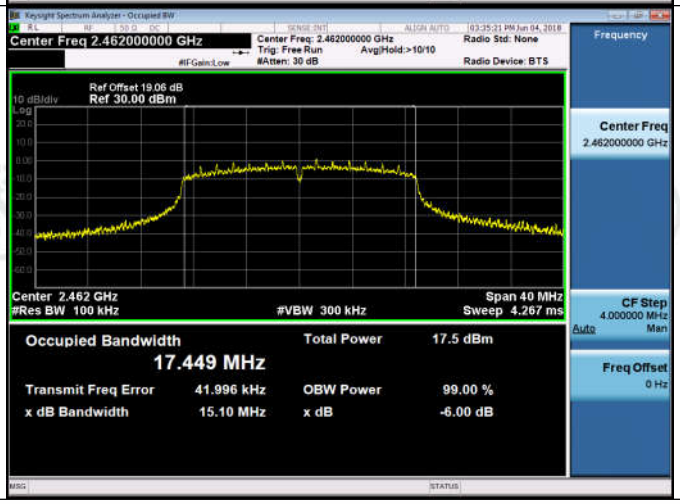
Result Table

Mode	Channel	6dB Bandwidth [MHz]	99% OBW [MHz]	Verdict	Remark
11B	LCH	9.523	14.025	PASS	Peak detector
11B	MCH	9.013	14.026	PASS	
11B	HCH	9.565	14.064	PASS	
11G	LCH	15.07	16.282	PASS	
11G	MCH	15.11	16.286	PASS	
11G	HCH	15.08	16.299	PASS	
11N20SISO	LCH	15.08	17.444	PASS	
11N20SISO	MCH	15.06	17.448	PASS	
11N20SISO	HCH	15.10	17.449	PASS	

Test Graph

Graphs		
11B/LCH		
11B/MCH		
11B/HCH		

11G/LCH			
11G/MCH			
11G/HCH			

11N20SISO/LCH			
11N20SISO/MCH			
11N20SISO/HCH			

Appendix C): Band-edge for RF Conducted Emissions

Result Table

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	2.002	-49.999	-28	PASS
11B	HCH	3.144	-46.723	-26.86	PASS
11G	LCH	-1.184	-46.559	-31.18	PASS
11G	HCH	0.764	-40.084	-29.24	PASS
11N20SISO	LCH	0.179	-44.653	-29.82	PASS
11N20SISO	HCH	0.814	-38.887	-29.19	PASS

Test Graph

Graphs		
11B/LCH		
11B/HCH		
11G/LCH		

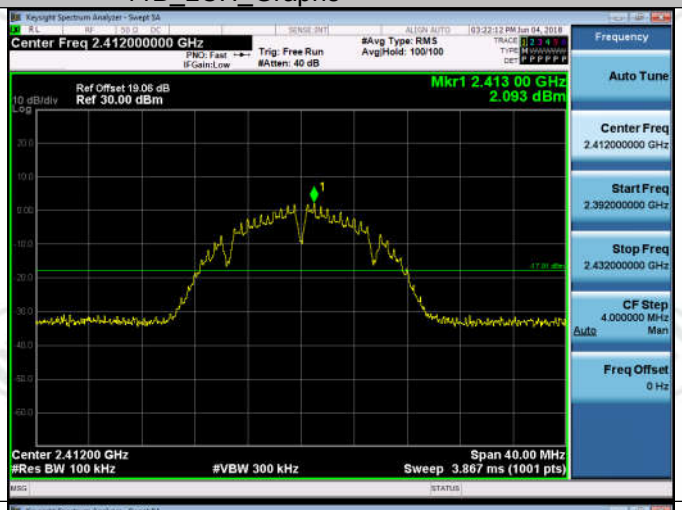
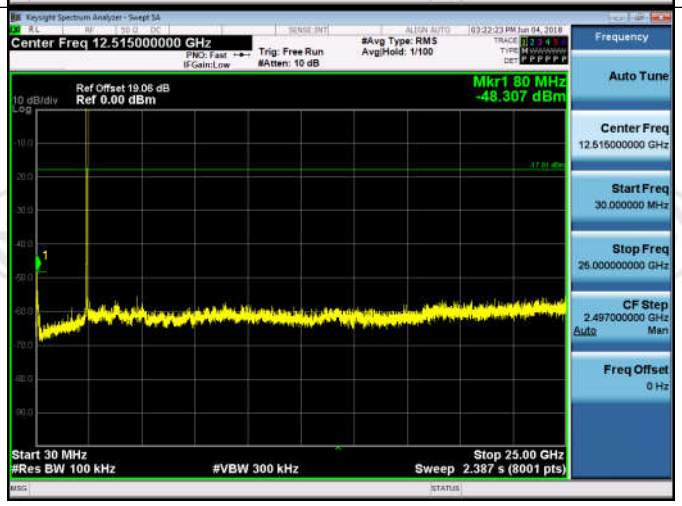
11G/HCH			
11N20SISO/LCH			
11N20SISO/HCH			

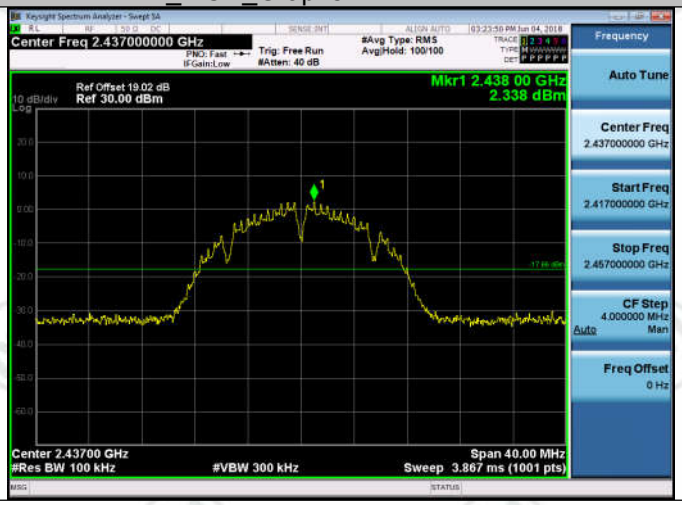
Appendix D): RF Conducted Spurious Emissions

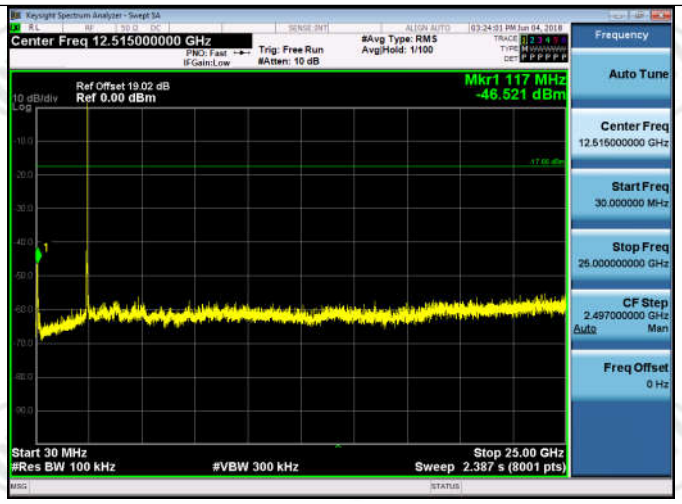
Result Table

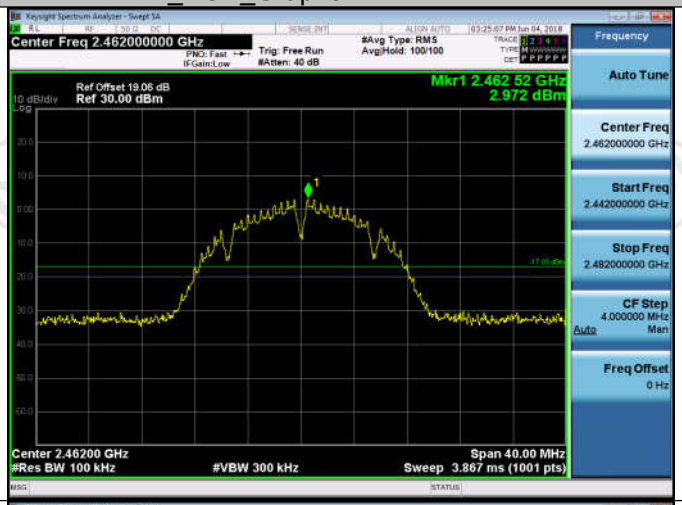
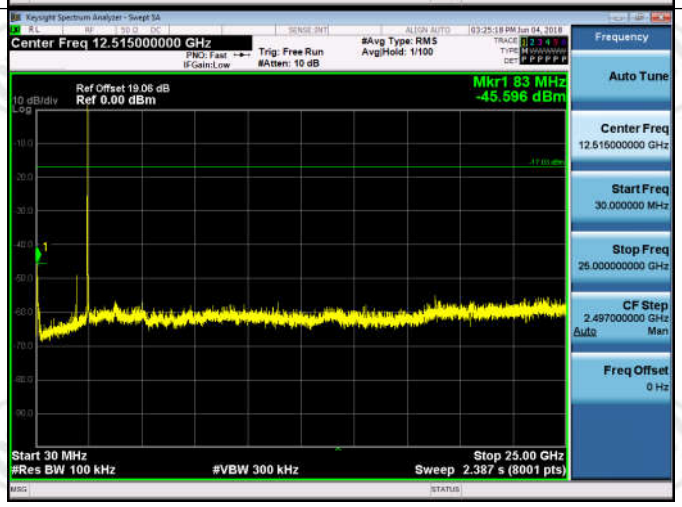
Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
11B	LCH	2.093	<Limit	PASS
11B	MCH	2.338	<Limit	PASS
11B	HCH	2.972	<Limit	PASS
11G	LCH	-0.818	<Limit	PASS
11G	MCH	0.036	<Limit	PASS
11G	HCH	-0.019	<Limit	PASS
11N20SISO	LCH	-0.422	<Limit	PASS
11N20SISO	MCH	0.133	<Limit	PASS
11N20SISO	HCH	0.894	<Limit	PASS

Test Graph

11B_LCH_Graphs	
Pref/11B/LCH	
Puw/11B/LCH	

11B_MCH_Graphs	
Pref/11B/MCH	

Puw/11B/MCH	

11B_HCH_Graphs	
Pref/11B/HCH	
Puw/11B/HCH	

11G_LCH_Graphs	
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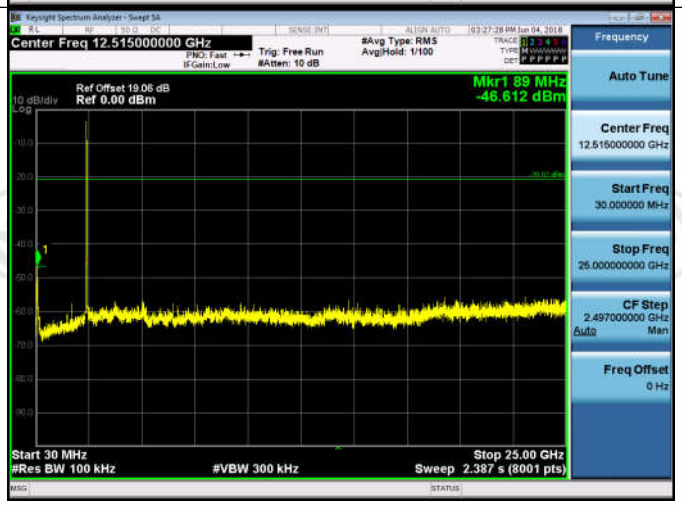
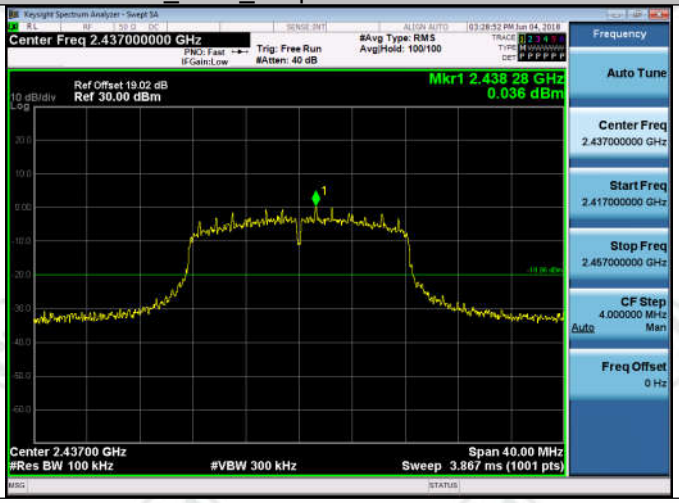
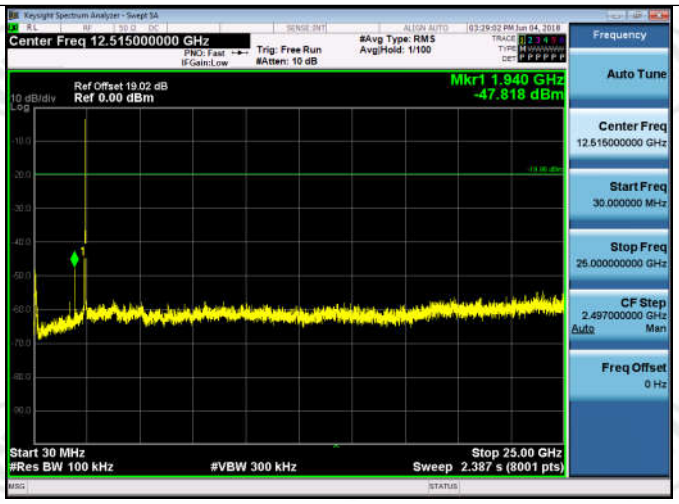
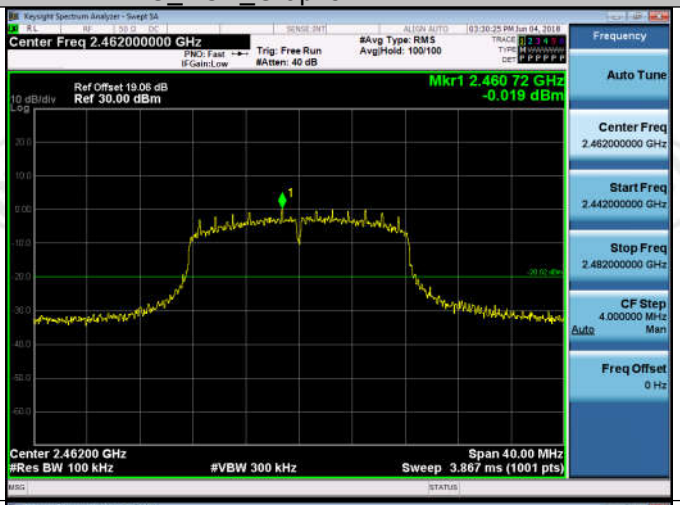
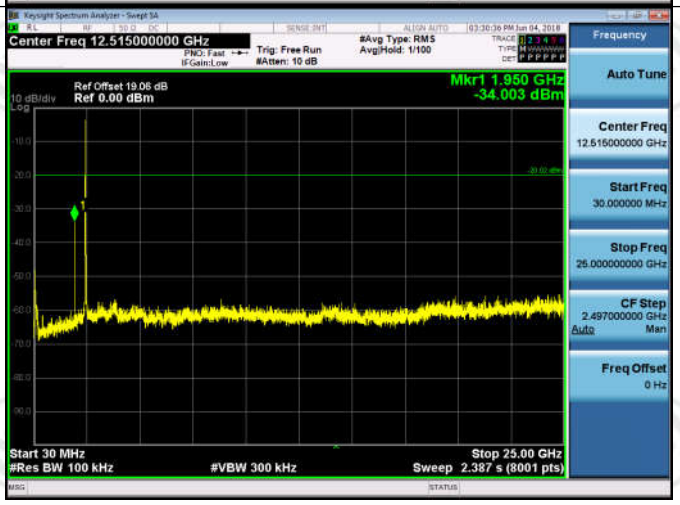
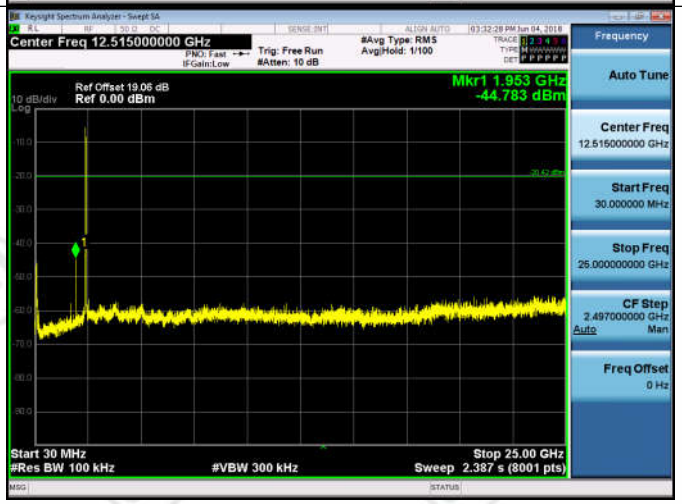
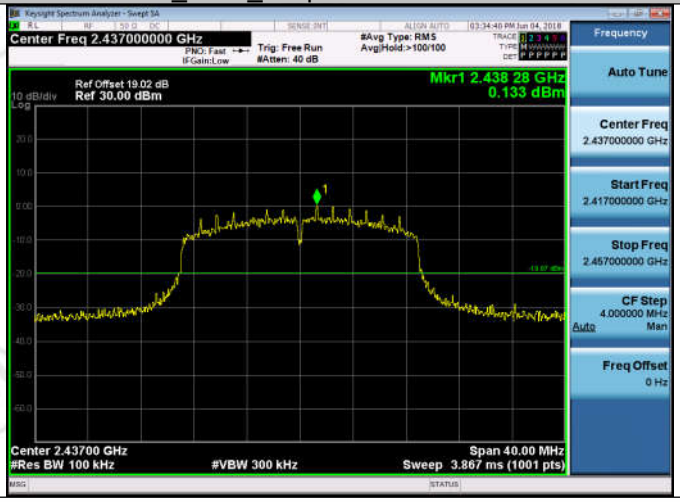
Puw/11G/LCH	

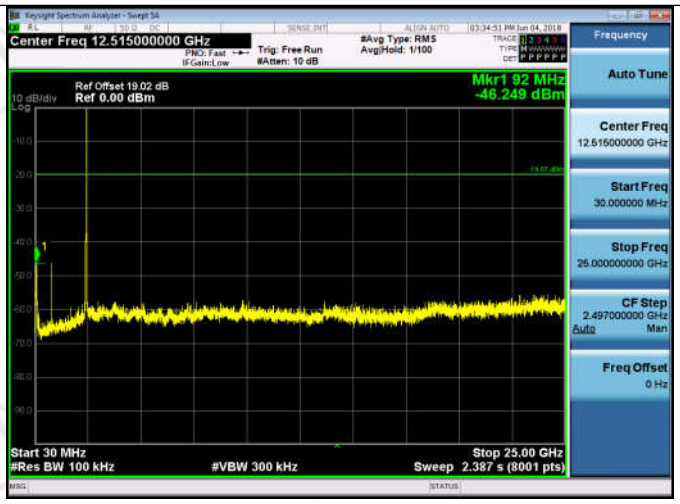
11G_MCH_Graphs	
Pref/11G/MCH	

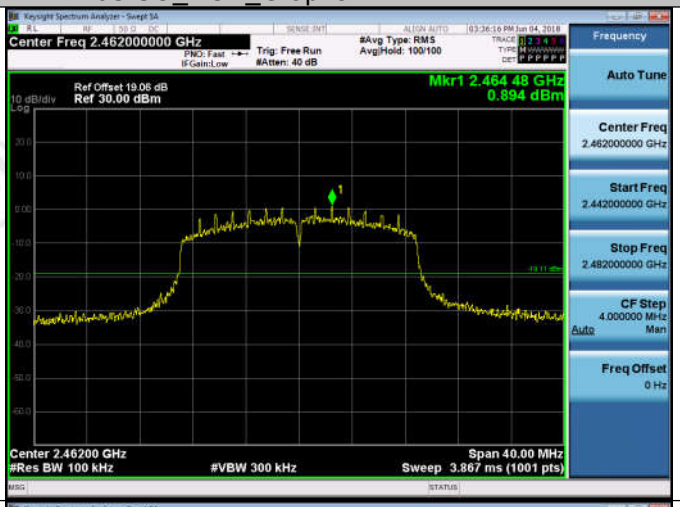
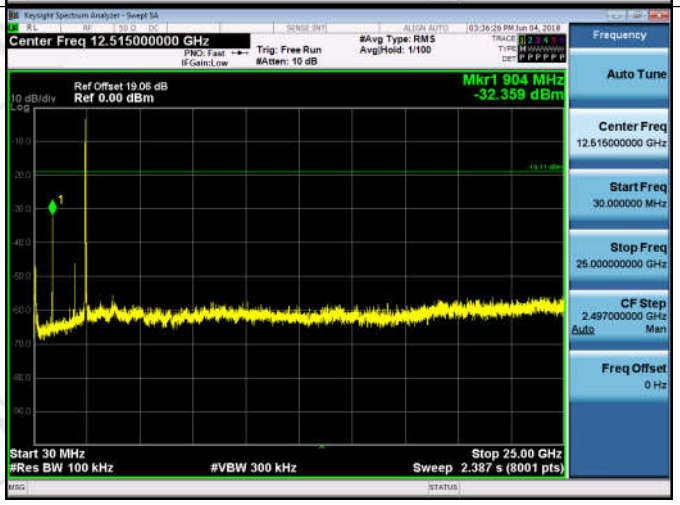
Puw/11G/MCH	

11G_HCH_Graphs	
Pref/11G/HCH	
Puw/11G/HCH	

11N20SISO_LCH_Graphs	
Pref/11N20SISO/LCH	
/11N20SISO/LCH	

11N20SISO_MCH_Graphs	
Pref/11N20SISO/MCH	

Puw/11N20SISO/MCH	

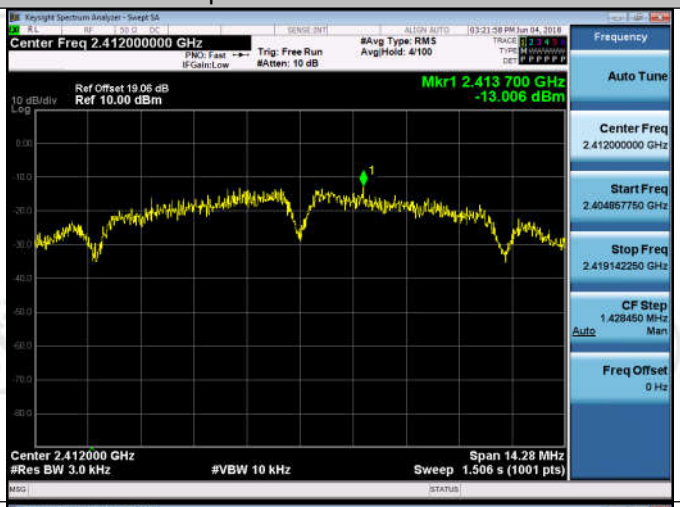
11N20SISO_HCH_Graphs	
Pref/11N20SISO/HCH	
Puw/11N20SISO/HCH	

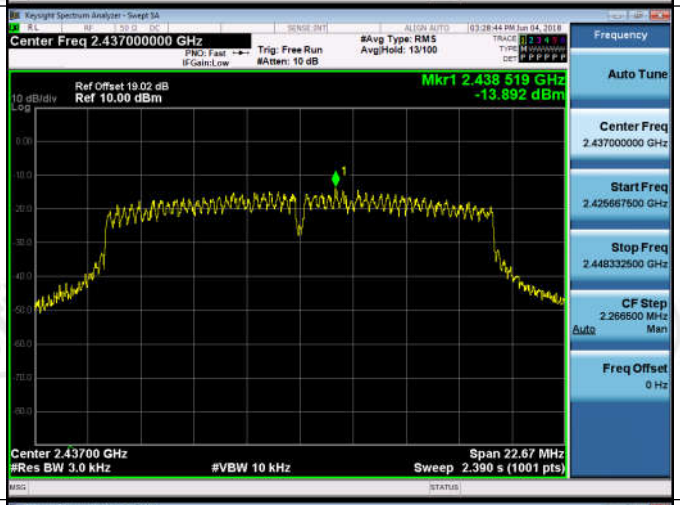
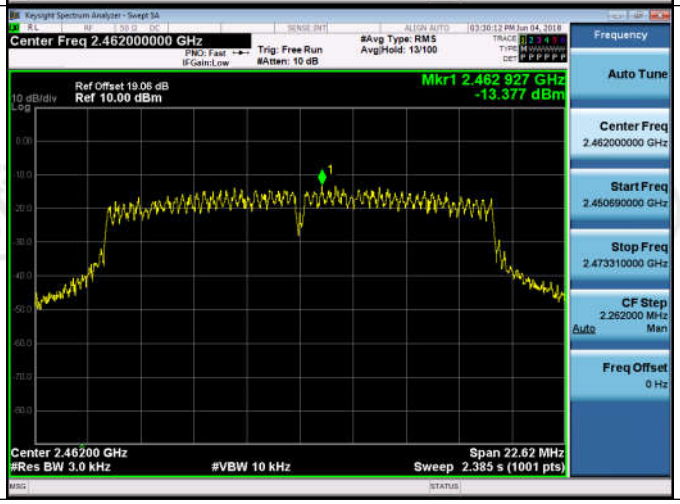
Appendix E): Power Spectral Density

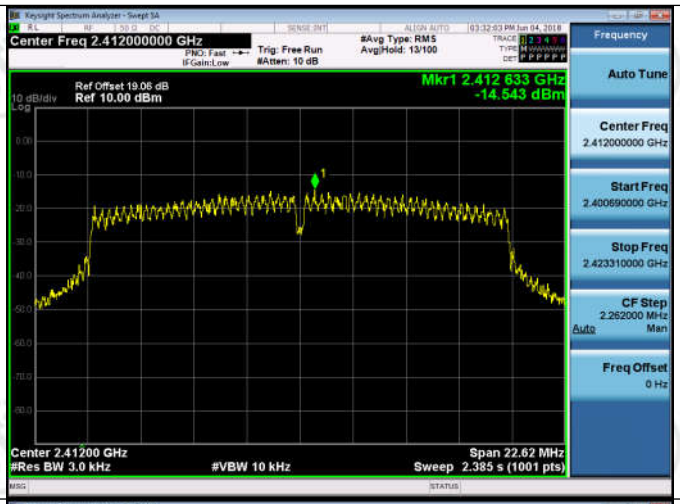
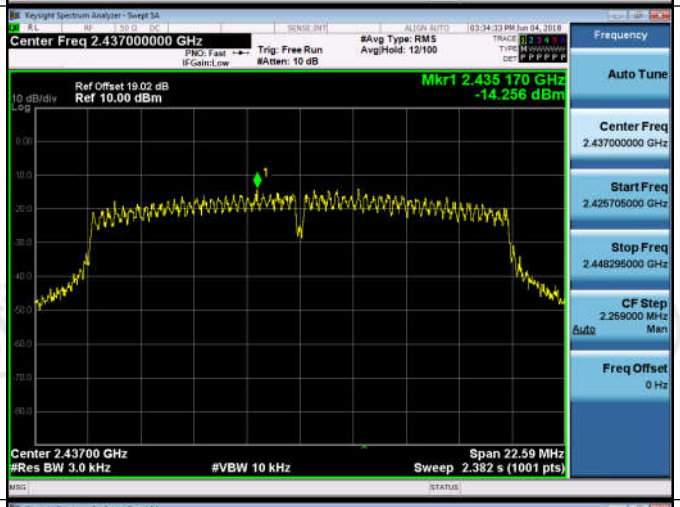
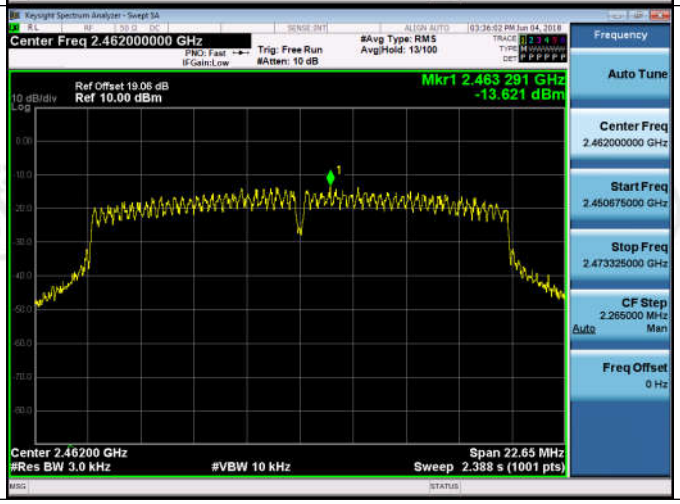
Result Table

Mode	Channel	Power Spectral Density [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	LCH	-13.006	8	PASS
11B	MCH	-11.274	8	PASS
11B	HCH	-10.762	8	PASS
11G	LCH	-14.172	8	PASS
11G	MCH	-13.892	8	PASS
11G	HCH	-13.377	8	PASS
11N20SISO	LCH	-14.543	8	PASS
11N20SISO	MCH	-14.256	8	PASS
11N20SISO	HCH	-13.621	8	PASS

Test Graph

Graphs		
11B/LCH		
11B/MCH		
11B/HCH		

11G/LCH			
11G/MCH			
11G/HCH			

11N20SISO/LCH			
11N20SISO/MCH			
11N20SISO/HCH			

Appendix F): Antenna Requirement

15.203 requirement:

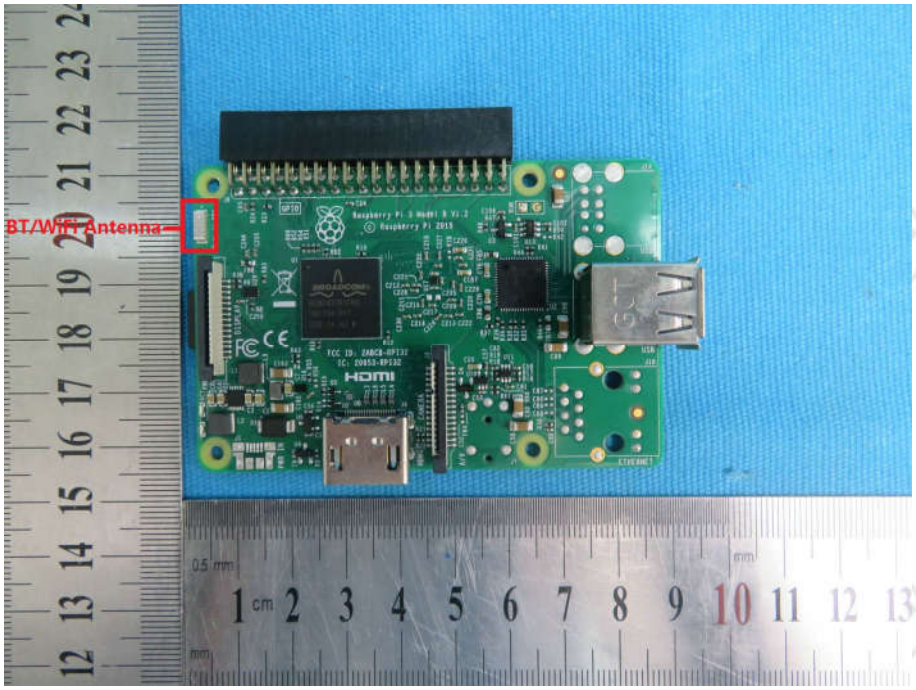
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit 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 ceramic antenna and no consideration of replacement. The best case gain of the antenna is 1.8dBi.



Appendix G): AC Power Line Conducted Emission

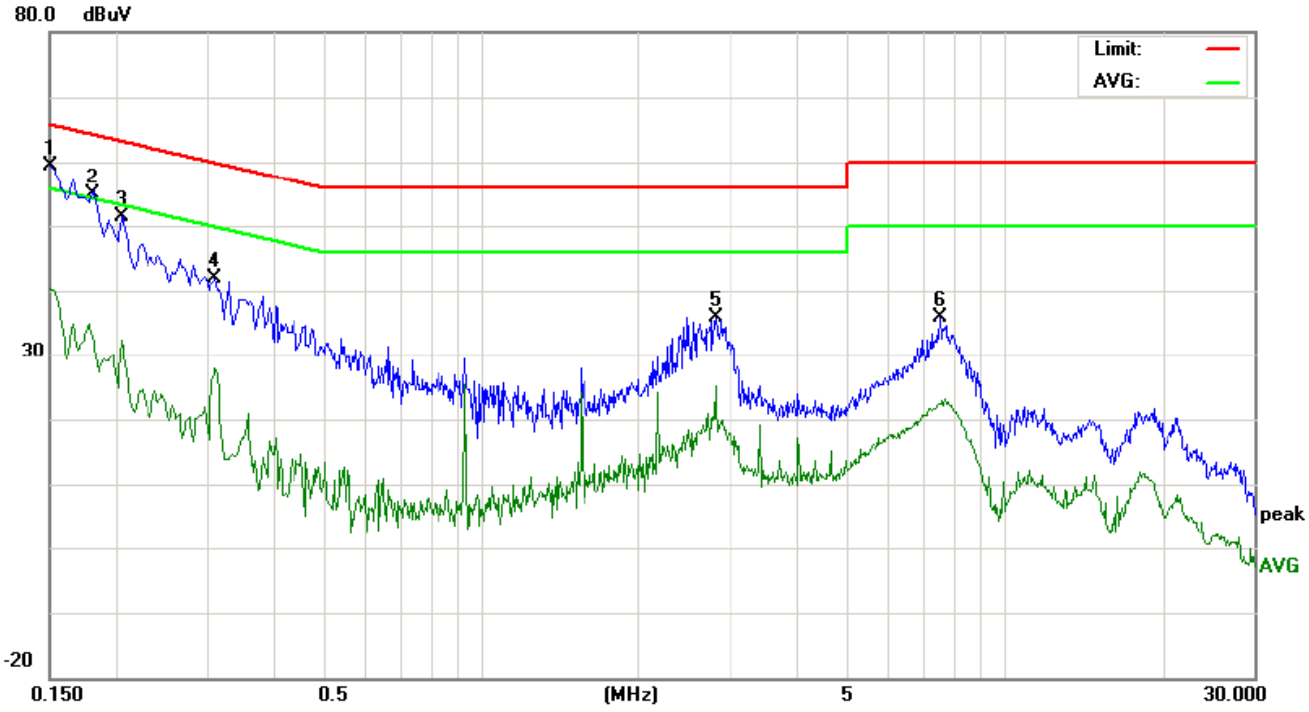
<table>
<tr><td>Test Procedure:</td><td>Test frequency range :150KHz-30MHz
1)The mains terminal disturbance voltage test was conducted in a shielded room.
2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. 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.
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,
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.
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.</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBμV)</th></tr>
<tr><th>Quasi-peak</th><th>Average</th></tr>
<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>
</table>
* The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.
NOTE : The lower limit is applicable at the transition frequency</td></tr>
</table>

Measurement Data

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

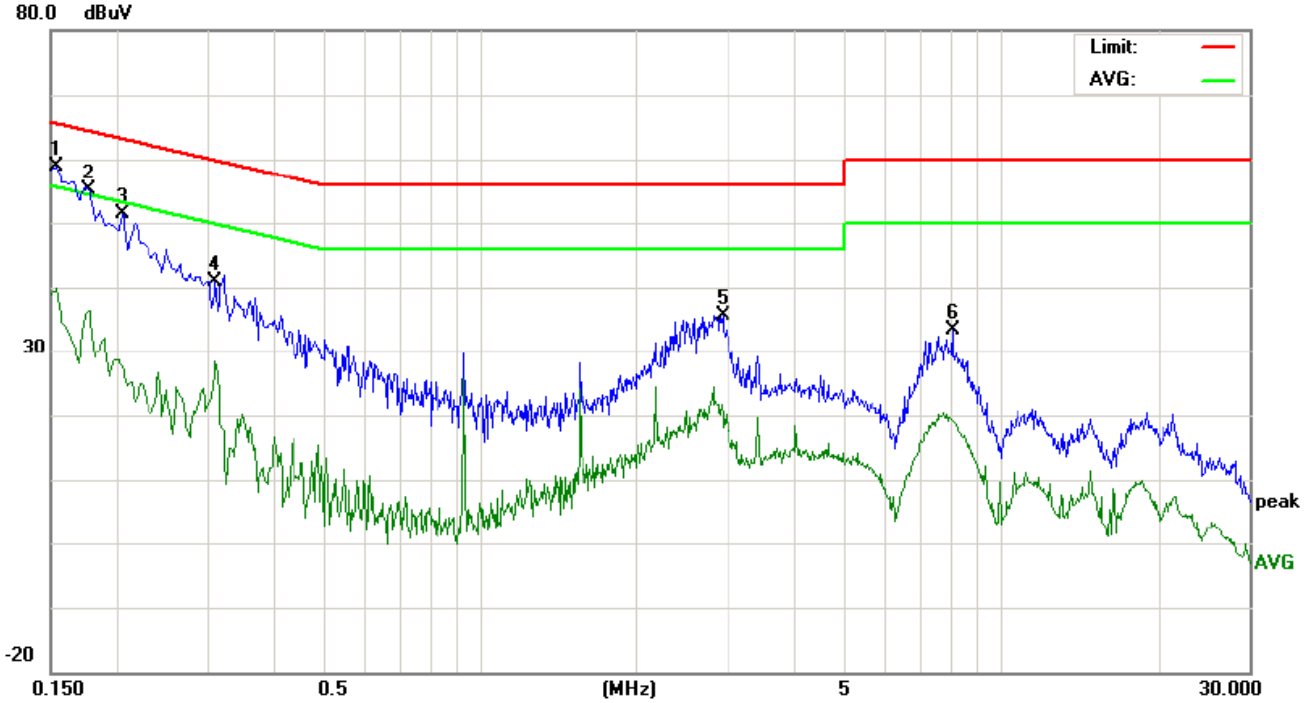
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Live line:



No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)			
	MHz	Peak	QP	AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG	P/F	Comment
1	0.1500	49.67	47.11	30.47	9.80	59.47	56.91	40.27	65.99	55.99	-9.08	-15.72	P	
2	0.1780	43.84	41.23	25.22	9.76	53.60	50.99	34.98	64.57	54.57	-13.58	-19.59	P	
3	0.2060	41.68	39.52	22.58	9.73	51.41	49.25	32.31	63.36	53.36	-14.11	-21.05	P	
4	0.3100	32.23	30.06	18.35	9.60	41.83	39.66	27.95	59.97	49.97	-20.31	-22.02	P	
5	2.8140	26.07	23.15	12.37	9.77	35.84	32.92	22.14	56.00	46.00	-23.08	-23.86	P	
6	7.5300	26.26	23.53	12.79	9.50	35.76	33.03	22.29	60.00	50.00	-26.97	-27.71	P	

Neutral line:



No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)			
	MHz	Peak	QP	AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG	P/F	Comment
1	0.1539	49.02	46.31	30.05	9.79	58.81	56.10	39.84	65.78	55.78	-9.68	-15.94	P	
2	0.1780	45.23	42.58	26.68	9.76	54.99	52.34	36.44	64.57	54.57	-12.23	-18.13	P	
3	0.2060	41.54	38.49	17.94	9.73	51.27	48.22	27.67	63.36	53.36	-15.14	-25.69	P	
4	0.3100	31.26	28.73	18.80	9.60	40.86	38.33	28.40	59.97	49.97	-21.64	-21.57	P	
5	2.9260	25.77	22.86	10.06	9.79	35.56	32.65	19.85	56.00	46.00	-23.35	-26.15	P	
6	8.0780	23.84	20.94	9.53	9.48	33.32	30.42	19.01	60.00	50.00	-29.58	-30.99	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
30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

Test Procedure:

Below 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. 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

Above 1GHz test procedure as below:

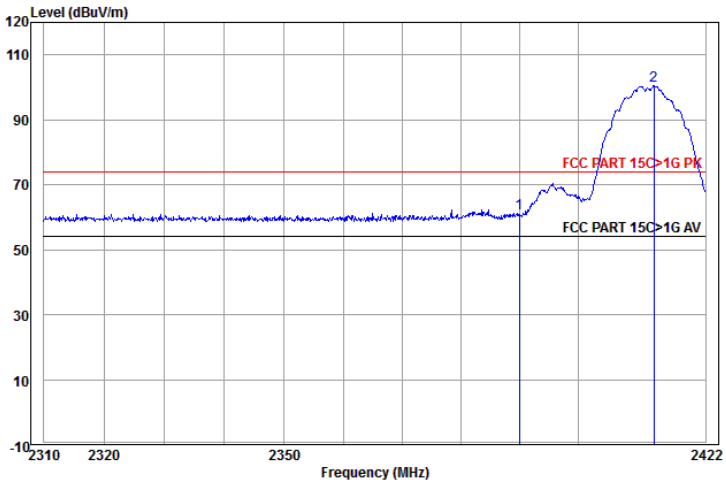
g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter).
h. Test the EUT in the lowest channel , the Highest channel
i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.
j. Repeat above procedures until all frequencies measured was complete.

Limit:

Frequency	Limit (dBμV/m @3m)	Remark
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

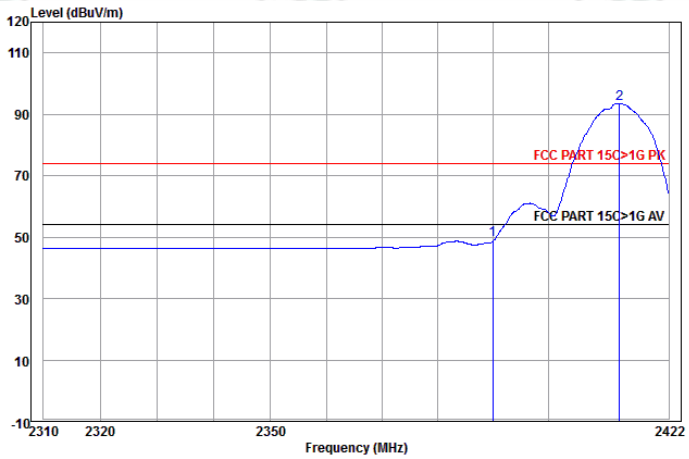
Test plot as follows:

Worse case mode:	802.11b (11Mbps)		
Frequency: 2412MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Peak



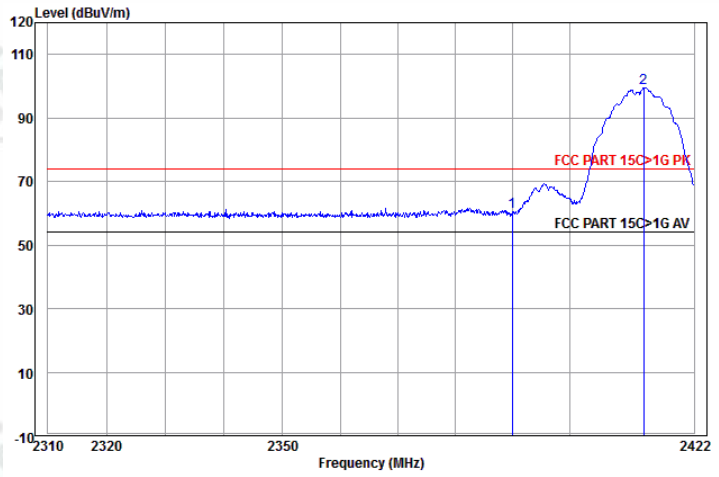
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	25.73	61.33	74.00	-12.67	Horizontal	Peak
2 pp	2413.072	32.58	3.08	64.80	100.46	74.00	26.46	Horizontal	Peak

Worse case mode:	802.11b (11Mbps)		
Frequency: 2412MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Average



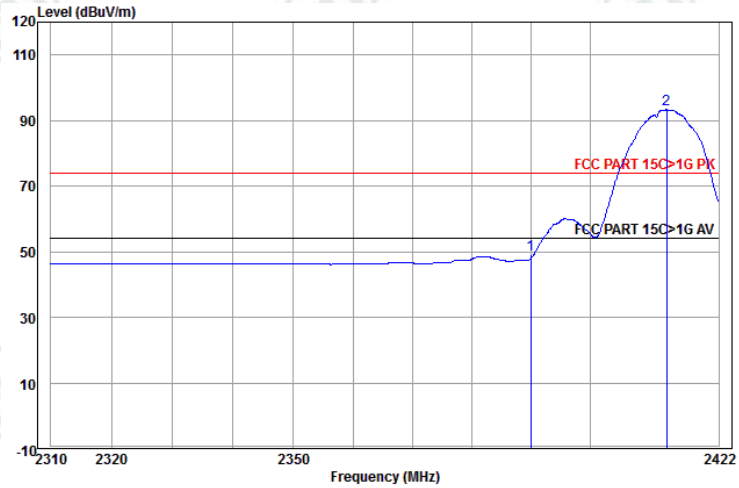
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	13.43	49.03	54.00	-4.97	Horizontal	Average
2 pp	2412.958	32.58	3.08	57.81	93.47	54.00	39.47	Horizontal	Average

Worse case mode:	802.11b (11Mbps)		
Frequency: 2412MHz	Test channel: Lowest	Polarization: Vertical	Remark: Peak



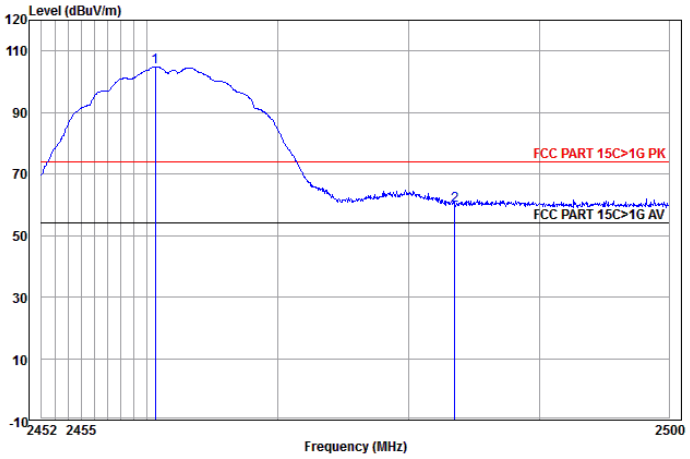
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	25.03	60.63	74.00	-13.37	Vertical	Peak
2 pp	2413.072	32.58	3.08	63.75	99.41	74.00	25.41	Vertical	Peak

Worse case mode:	802.11b (11Mbps)		
Frequency: 2412MHz	Test channel: Lowest	Polarization: Vertical	Remark: Average



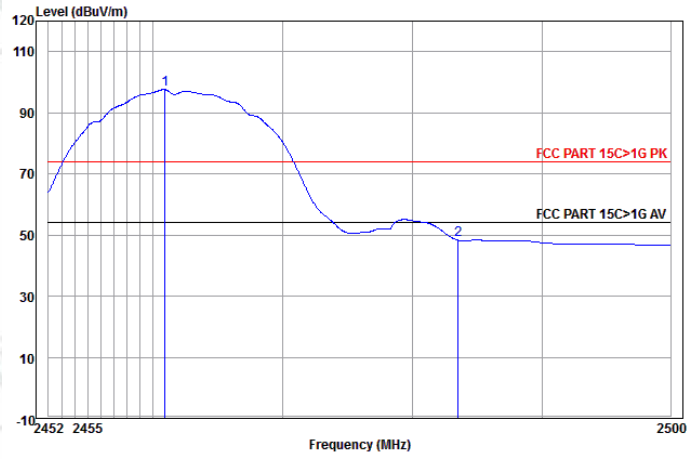
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	13.73	49.33	54.00	-4.67	Vertical	Average
2 pp	2413.072	32.58	3.08	57.61	93.27	54.00	39.27	Vertical	Average

Worse case mode:	802.11b (11Mbps)		
Frequency: 2462MHz	Test channel: Highest	Polarization: Horizontal	Remark: Peak



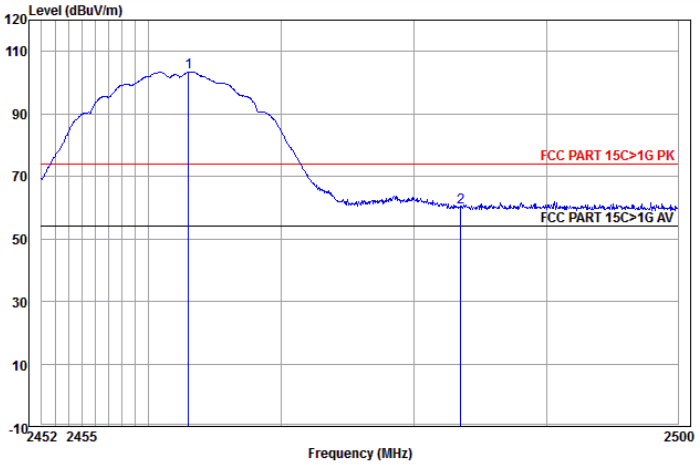
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2460.619	32.67	3.11	69.10	104.88	74.00	30.88	Horizontal	Peak
2	2483.500	32.71	3.12	23.79	59.62	74.00	-14.38	Horizontal	Peak

Worse case mode:	802.11b (11Mbps)		
Frequency: 2462MHz	Test channel: Highest	Polarization: Horizontal	Remark: Average



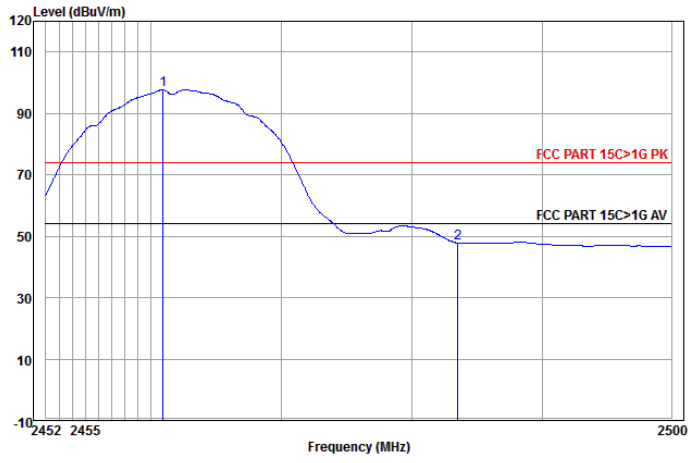
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2460.906	32.67	3.11	61.87	97.65	54.00	43.65	Horizontal	Average
2	2483.500	32.71	3.12	12.51	48.34	54.00	-5.66	Horizontal	Average

Worse case mode:	802.11b (11Mbps)		
Frequency: 2462MHz	Test channel: Highest	Polarization: Vertical	Remark: Peak



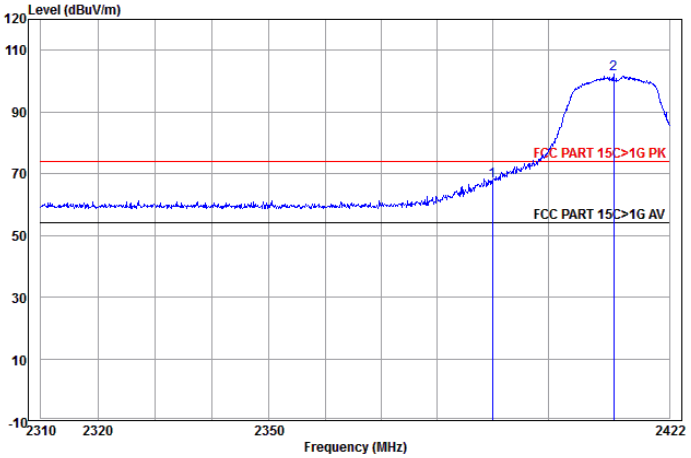
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2463.005	32.68	3.11	67.68	103.47	74.00	29.47	Vertical	Peak
2	2483.500	32.71	3.12	24.34	60.17	74.00	-13.83	Vertical	Peak

Worse case mode:	802.11b (11Mbps)		
Frequency: 2462MHz	Test channel: Highest	Polarization: Vertical	Remark: Average



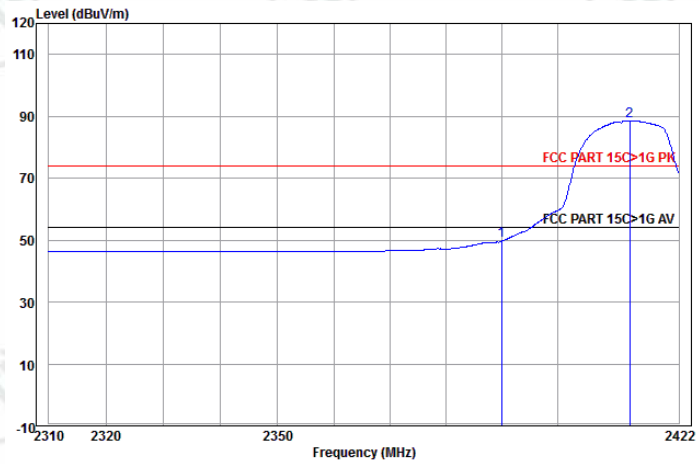
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2460.906	32.67	3.11	61.89	97.67	54.00	43.67	Vertical	Average
2	2483.500	32.71	3.12	11.84	47.67	54.00	-6.33	Vertical	Average

Worse case mode:	802.11g (6Mbps)		
Frequency: 2412MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Peak



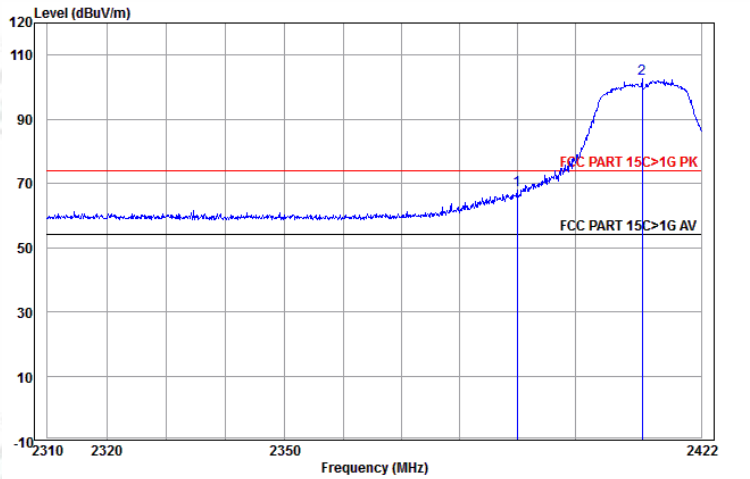
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	32.08	67.68	74.00	-6.32	Horizontal	Peak
2 pp	2411.930	32.58	3.08	66.76	102.42	74.00	28.42	Horizontal	Peak

Worse case mode:	802.11g (6Mbps)		
Frequency: 2412MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Average



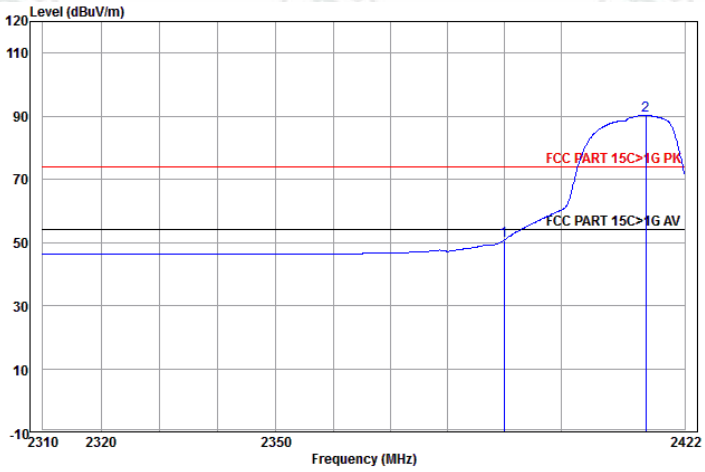
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	14.10	49.70	54.00	-4.30	Horizontal	Average
2 pp	2413.072	32.58	3.08	52.96	88.62	54.00	34.62	Horizontal	Average

Worse case mode:	802.11g (6Mbps)		
Frequency: 2412MHz	Test channel: Lowest	Polarization: Vertical	Remark: Peak



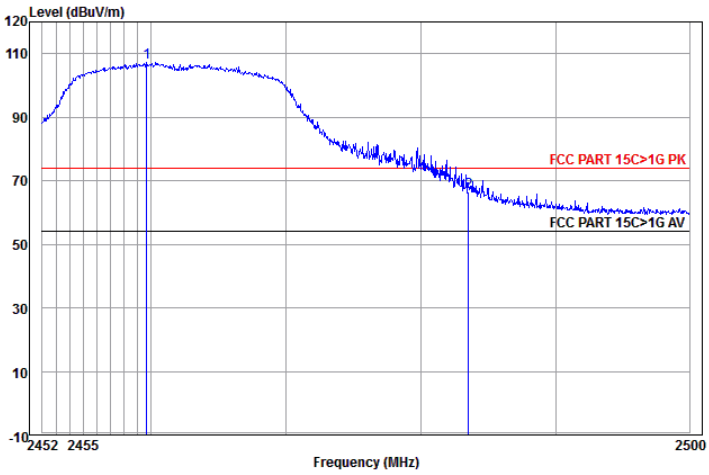
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	32.22	67.82	74.00	-6.18	Vertical	Peak
2 pp	2411.701	32.58	3.08	66.88	102.54	74.00	28.54	Vertical	Peak

Worse case mode:	802.11g (6Mbps)		
Frequency: 2412MHz	Test channel: Lowest	Polarization: Vertical	Remark: Average



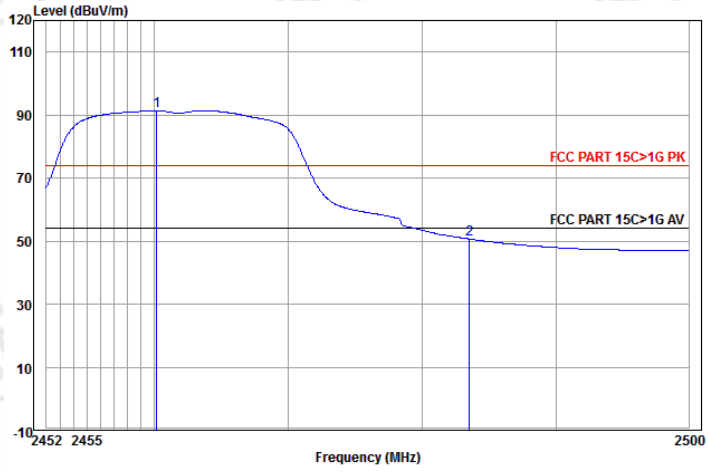
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	15.13	50.73	54.00	-3.27	Vertical	Average
2 pp	2415.129	32.58	3.08	54.61	90.27	54.00	36.27	Vertical	Average

Worse case mode:	802.11g (6Mbps)		
Frequency: 2462MHz	Test channel: Highest	Polarization: Horizontal	Remark: Peak



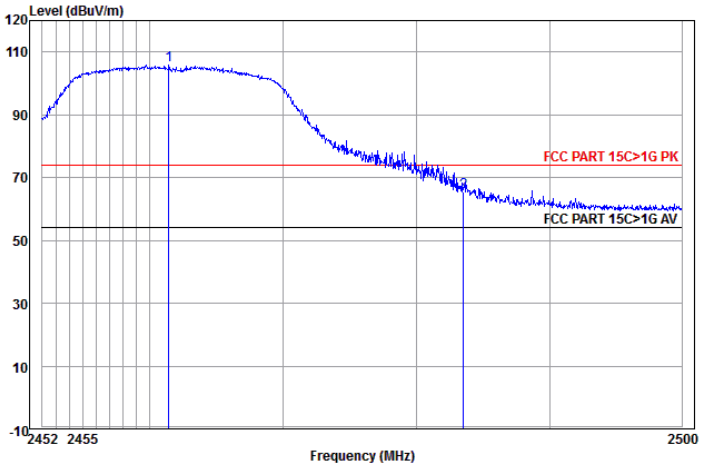
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2459.665	32.67	3.11	71.57	107.35	74.00	33.35	Horizontal	Peak
2	2483.500	32.71	3.12	30.78	66.61	74.00	-7.39	Horizontal	Peak

Worse case mode:	802.11g (6Mbps)		
Frequency: 2462MHz	Test channel: Highest	Polarization: Horizontal	Remark: Average



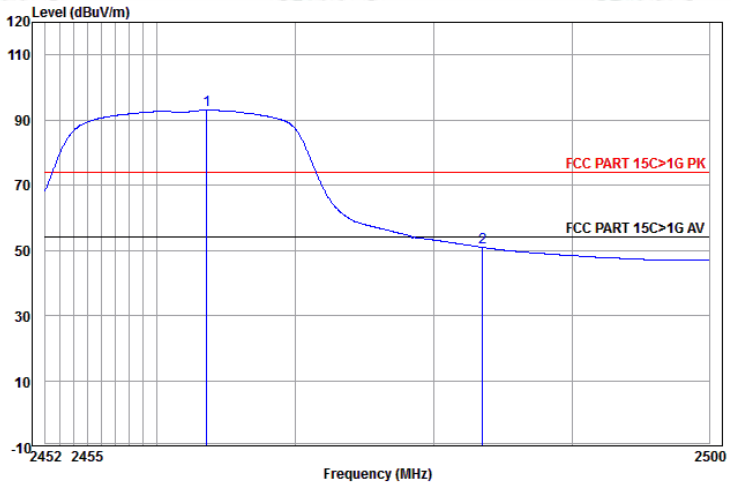
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2460.190	32.67	3.11	55.55	91.33	54.00	37.33	Horizontal	Average
2	2483.500	32.71	3.12	14.75	50.58	54.00	-3.42	Horizontal	Average

Worse case mode:	802.11g (6Mbps)		
Frequency: 2462MHz	Test channel: Highest	Polarization: Vertical	Remark: Peak



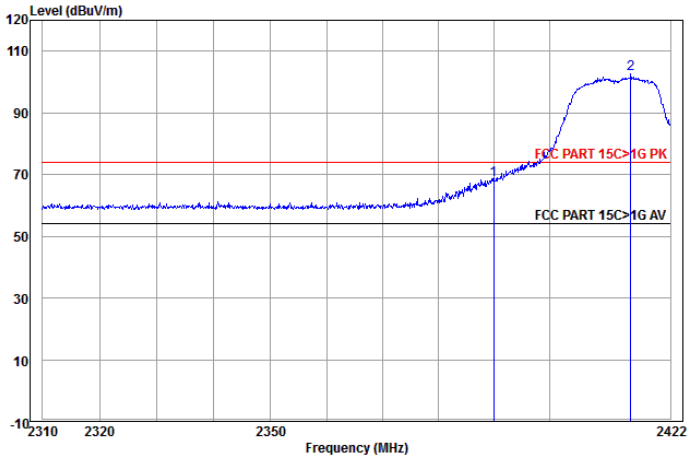
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2461.430	32.67	3.11	70.08	105.86	74.00	31.86	Vertical	Peak
2	2483.500	32.71	3.12	29.72	65.55	74.00	-8.45	Vertical	Peak

Worse case mode:	802.11g (6Mbps)		
Frequency: 2462MHz	Test channel: Highest	Polarization: Vertical	Remark: Average



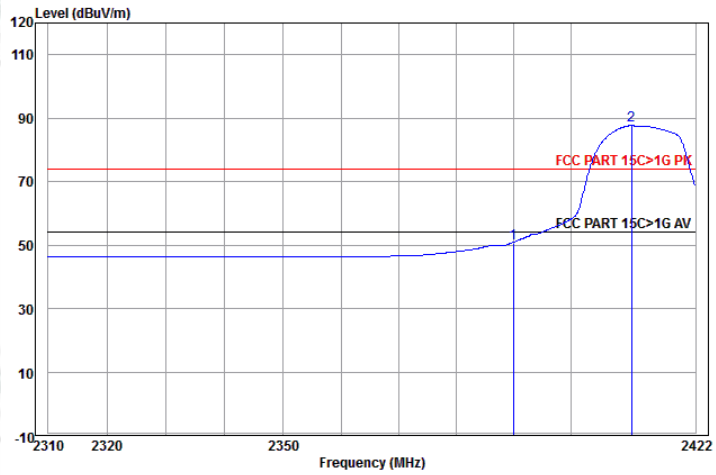
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2463.579	32.68	3.11	57.20	92.99	54.00	38.99	Vertical	Average
2	2483.500	32.71	3.12	15.01	50.84	54.00	-3.16	Vertical	Average

Worse case mode:	802.11n(HT20) (6.5Mbps)		
Frequency: 2412MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Peak



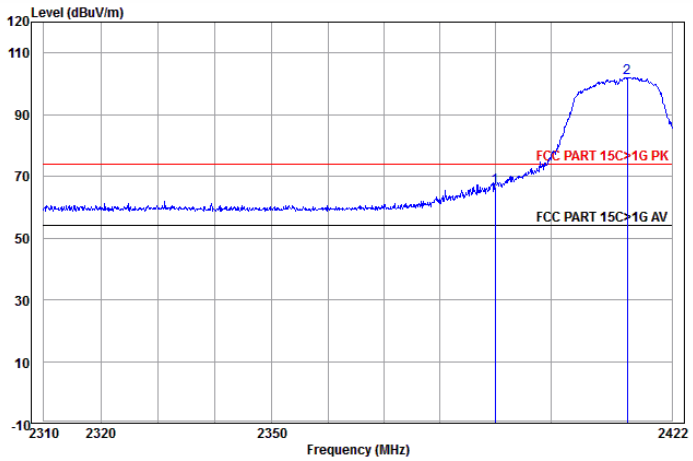
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	32.70	68.30	74.00	-5.70	Horizontal	Peak
2 pp	2414.786	32.58	3.08	66.87	102.53	74.00	28.53	Horizontal	Peak

Worse case mode:	802.11n(HT20) (6.5Mbps)		
Frequency: 2412MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Average



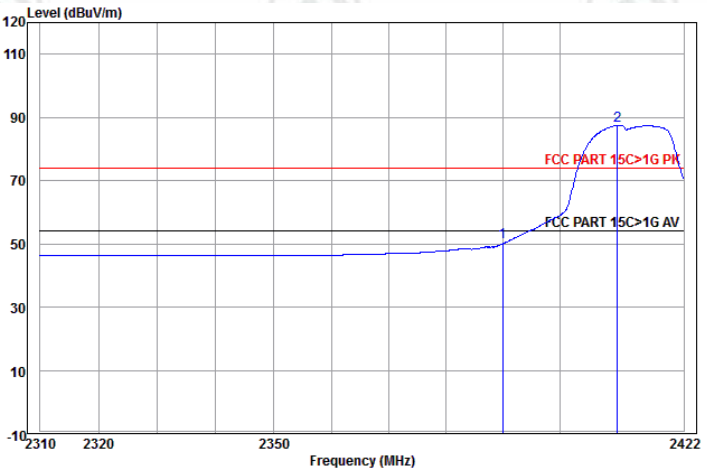
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	14.86	50.46	54.00	-3.54	Horizontal	Average
2 pp	2410.674	32.58	3.08	51.97	87.63	54.00	33.63	Horizontal	Average

Worse case mode:	802.11n(HT20) (6.5Mbps)		
Frequency: 2412MHz	Test channel: Lowest	Polarization: Vertical	Remark: Peak



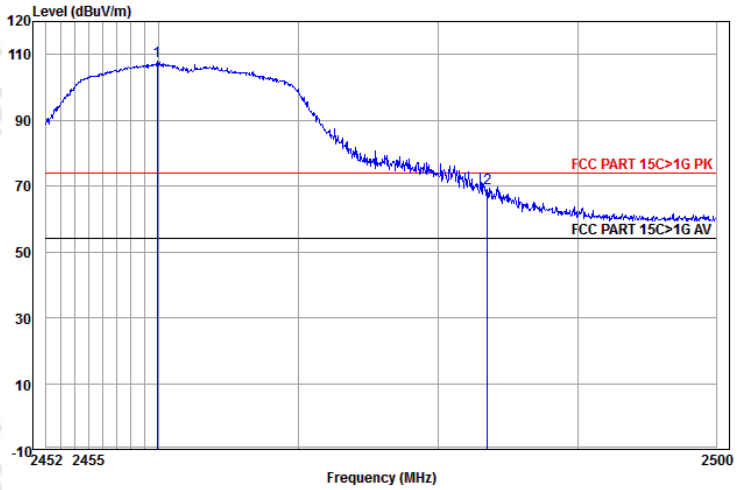
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	31.04	66.64	74.00	-7.36	Vertical	Peak
2 pp	2413.872	32.58	3.08	66.44	102.10	74.00	28.10	Vertical	Peak

Worse case mode:	802.11n(HT20) (6.5Mbps)		
Frequency: 2412MHz	Test channel: Lowest	Polarization: Vertical	Remark: Average



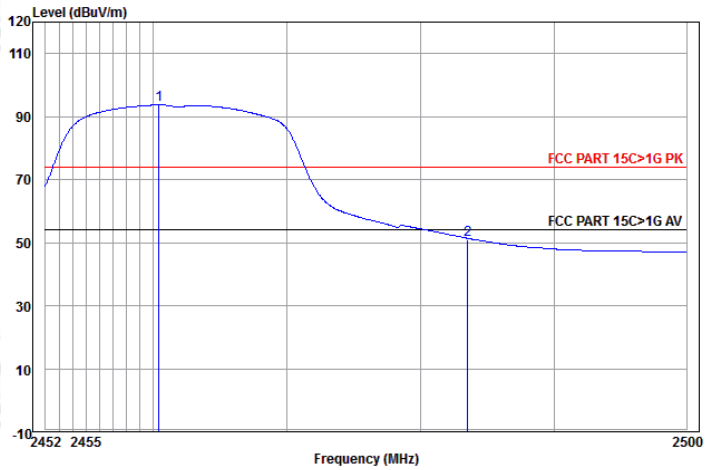
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	14.82	50.42	54.00	-3.58	Vertical	Average
2 pp	2410.218	32.57	3.08	51.81	87.46	54.00	33.46	Vertical	Average

Worse case mode:	802.11n(HT20) (6.5Mbps)		
Frequency: 2462MHz	Test channel: Highest	Polarization: Horizontal	Remark: Peak



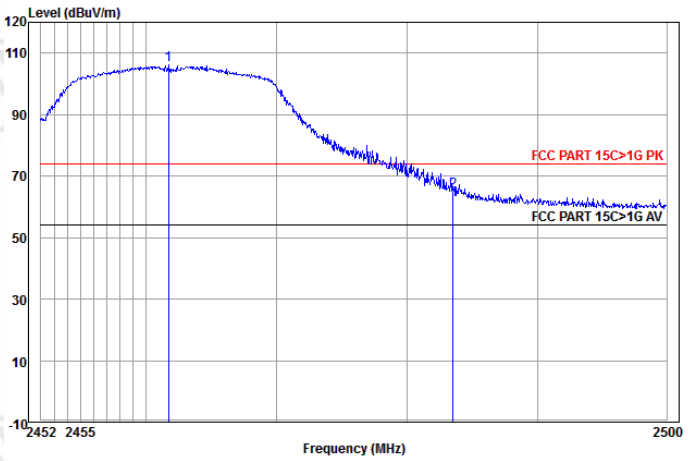
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2459.904	32.67	3.11	72.04	107.82	74.00	33.82	Horizontal	Peak
2	2483.500	32.71	3.12	33.51	69.34	74.00	-4.66	Horizontal	Peak

Worse case mode:	802.11n(HT20) (6.5Mbps)		
Frequency: 2462MHz	Test channel: Highest	Polarization: Horizontal	Remark:Average



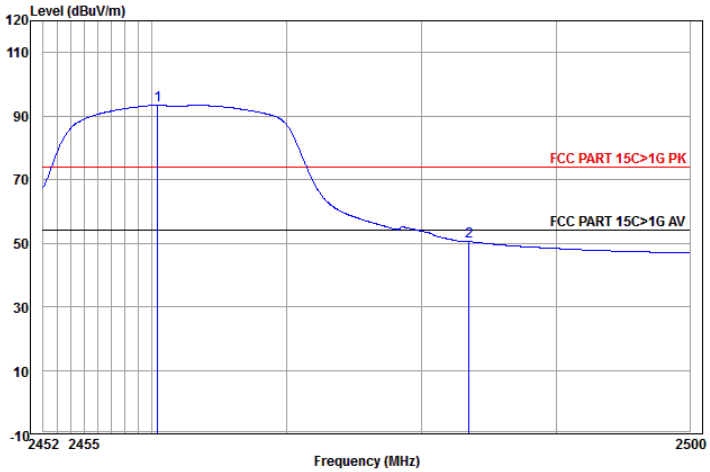
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2460.428	32.67	3.11	57.93	93.71	54.00	39.71	Horizontal	Average
2	2483.500	32.71	3.12	15.02	50.85	54.00	-3.15	Horizontal	Average

Worse case mode:	802.11n(HT20) (6.5Mbps)		
Frequency: 2462MHz	Test channel: Highest	Polarization: Vertical	Remark: Peak



	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2461.717	32.67	3.11	70.24	106.02	74.00	32.02	Vertical	Peak
2	2483.500	32.71	3.12	29.16	64.99	74.00	-9.01	Vertical	Peak

Worse case mode:	802.11n(HT20) (6.5Mbps)		
Frequency: 2462MHz	Test channel: Highest	Polarization: Vertical	Remark: Average



	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2460.428	32.67	3.11	57.67	93.45	54.00	39.45	Vertical	Average
2	2483.500	32.71	3.12	14.67	50.50	54.00	-3.50	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; 6Mbpsof rate is the worst case of 802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20) ;

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:

Below 1GHz test procedure as below:

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

Above 1GHz test procedure as below:

g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter)..
h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel
i. 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.
j. Repeat above procedures until all frequencies measured was complete.

Limit:

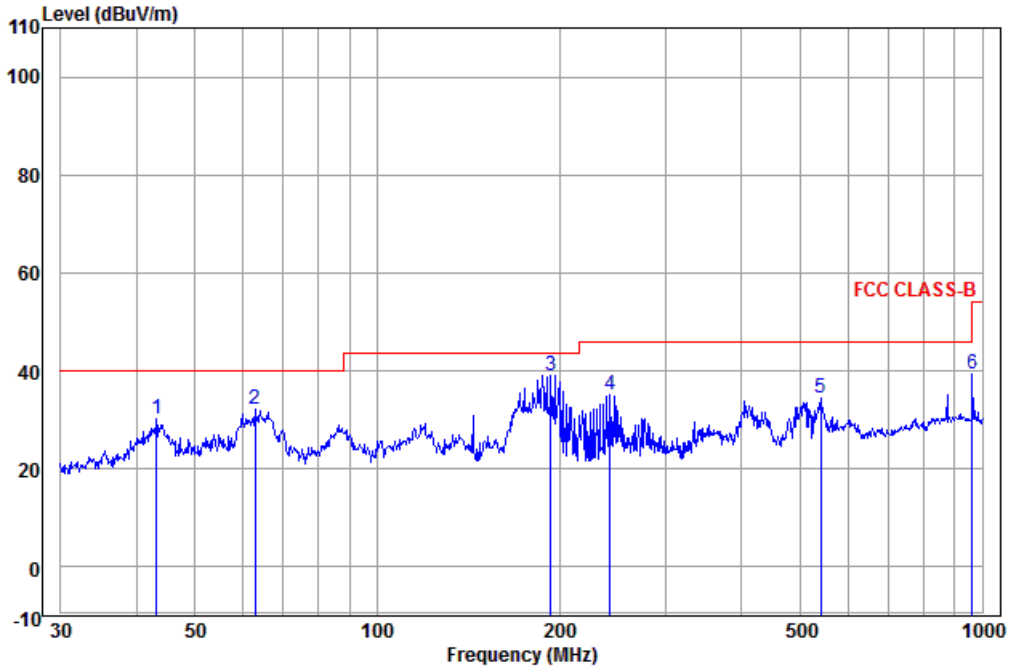
Frequency	Field strength (microvolt/meter)	Limit (dBμV/m)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	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:

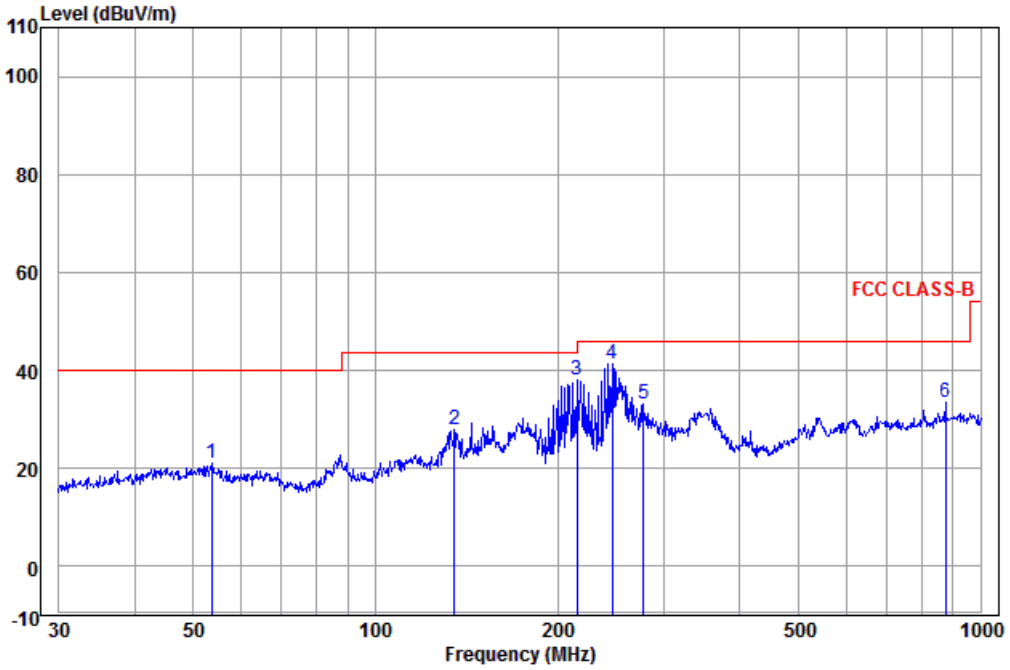
Radiated Emission below 1GHz

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



	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	43.202	14.08	0.07	15.97	30.12	40.00	-9.88	Vertical	QP
2	62.871	12.28	0.22	19.69	32.19	40.00	-7.81	Vertical	QP
3 pp	193.773	11.20	1.05	26.95	39.20	43.50	-4.30	Vertical	QP
4	242.525	12.45	1.31	21.45	35.21	46.00	-10.79	Vertical	QP
5	541.373	17.65	1.54	15.43	34.62	46.00	-11.38	Vertical	QP
6	962.162	21.95	2.14	15.34	39.43	54.00	-14.57	Vertical	QP

Test mode:	Transmitting	Horizontal



	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	53.693	14.01	0.15	6.78	20.94	40.00	-19.06	Horizontal	QP
2	135.032	9.76	0.60	17.66	28.02	43.50	-15.48	Horizontal	QP
3	215.268	11.86	1.18	25.02	38.06	43.50	-5.44	Horizontal	QP
4 pp	245.951	12.52	1.32	27.50	41.34	46.00	-4.66	Horizontal	QP
5	277.094	13.05	1.19	18.83	33.07	46.00	-12.93	Horizontal	QP
6	875.247	21.71	2.47	9.44	33.62	46.00	-12.38	Horizontal	QP

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 (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1267.104	30.38	1.96	44.29	48.55	36.60	74.00	-37.40	Pass	Horizontal
1533.648	30.93	2.33	43.96	48.73	38.03	74.00	-35.97	Pass	Horizontal
4824.000	34.73	6.02	44.60	47.21	43.36	74.00	-30.64	Pass	Horizontal
5880.782	35.81	7.32	44.51	50.26	48.88	74.00	-25.12	Pass	Horizontal
7236.000	36.42	6.94	44.80	46.15	44.71	74.00	-29.29	Pass	Horizontal
9648.000	37.93	7.01	45.57	46.32	45.69	74.00	-28.31	Pass	Horizontal
1232.117	30.30	1.91	44.34	48.21	36.08	74.00	-37.92	Pass	Vertical
1617.862	31.09	2.43	43.87	47.91	37.56	74.00	-36.44	Pass	Vertical
4824.000	34.73	6.02	44.60	48.60	44.75	74.00	-29.25	Pass	Vertical
6094.137	35.95	7.41	44.51	48.65	47.50	74.00	-26.50	Pass	Vertical
7236.000	36.42	6.94	44.80	46.40	44.96	74.00	-29.04	Pass	Vertical
9648.000	37.93	7.01	45.57	46.47	45.84	74.00	-28.16	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 (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1127.091	30.05	1.74	44.49	48.77	36.07	74.00	-37.93	Pass	Horizontal
1573.189	31.01	2.38	43.92	47.90	37.37	74.00	-36.63	Pass	Horizontal
4874.000	34.84	6.12	44.60	47.63	43.99	74.00	-30.01	Pass	Horizontal
6267.190	36.04	7.37	44.53	48.48	47.36	74.00	-26.64	Pass	Horizontal
7311.000	36.43	6.86	44.86	48.20	46.63	74.00	-27.37	Pass	Horizontal
9748.000	38.03	7.10	45.55	46.65	46.23	74.00	-27.77	Pass	Horizontal
1263.883	30.38	1.96	44.29	48.54	36.59	74.00	-37.41	Pass	Vertical
1585.248	31.03	2.39	43.90	48.32	37.84	74.00	-36.16	Pass	Vertical
4874.000	34.84	6.12	44.60	47.38	43.74	74.00	-30.26	Pass	Vertical
6428.771	36.12	7.33	44.54	48.68	47.59	74.00	-26.41	Pass	Vertical
7311.000	36.43	6.86	44.86	48.01	46.44	74.00	-27.56	Pass	Vertical
9748.000	38.03	7.10	45.55	45.84	45.42	74.00	-28.58	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 (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1251.079	30.35	1.94	44.31	48.05	36.03	74.00	-37.97	Pass	Horizontal
1613.749	31.08	2.43	43.87	47.60	37.24	74.00	-36.76	Pass	Horizontal
4924.000	34.94	6.22	44.60	47.22	43.78	74.00	-30.22	Pass	Horizontal
5821.207	35.77	7.26	44.52	48.97	47.48	74.00	-26.52	Pass	Horizontal
7386.000	36.44	6.78	44.92	47.74	46.04	74.00	-27.96	Pass	Horizontal
9848.000	38.14	7.19	45.53	46.23	46.03	74.00	-27.97	Pass	Horizontal
1296.469	30.45	2.01	44.25	48.51	36.72	74.00	-37.28	Pass	Vertical
1537.557	30.94	2.34	43.96	47.84	37.16	74.00	-36.84	Pass	Vertical
4924.000	34.94	6.22	44.60	47.74	44.30	74.00	-29.70	Pass	Vertical
6094.137	35.95	7.41	44.51	48.75	47.60	74.00	-26.40	Pass	Vertical
7386.000	36.44	6.78	44.92	46.87	45.17	74.00	-28.83	Pass	Vertical
9848.000	38.14	7.19	45.53	47.06	46.86	74.00	-27.14	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 (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1316.422	30.49	2.04	44.22	48.08	36.39	74.00	-37.61	Pass	Horizontal
1621.985	31.10	2.44	43.86	47.74	37.42	74.00	-36.58	Pass	Horizontal
4824.000	34.73	6.02	44.60	48.03	44.18	74.00	-29.82	Pass	Horizontal
6094.137	35.95	7.41	44.51	48.76	47.61	74.00	-26.39	Pass	Horizontal
7236.000	36.42	6.94	44.80	47.12	45.68	74.00	-28.32	Pass	Horizontal
9648.000	37.93	7.01	45.57	46.38	45.75	74.00	-28.25	Pass	Horizontal
1340.089	30.54	2.07	44.19	47.43	35.85	74.00	-38.15	Pass	Vertical
1537.557	30.94	2.34	43.96	47.47	36.79	74.00	-37.21	Pass	Vertical
4824.000	34.73	6.02	44.60	47.51	43.66	74.00	-30.34	Pass	Vertical
6445.156	36.13	7.32	44.55	48.64	47.54	74.00	-26.46	Pass	Vertical
7236.000	36.42	6.94	44.80	47.04	45.60	74.00	-28.40	Pass	Vertical
9648.000	37.93	7.01	45.57	46.49	45.86	74.00	-28.14	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 (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1286.606	30.43	1.99	44.26	48.64	36.80	74.00	-37.20	Pass	Horizontal
1518.111	30.90	2.31	43.98	47.59	36.82	74.00	-37.18	Pass	Horizontal
4874.000	34.84	6.12	44.60	47.32	43.68	74.00	-30.32	Pass	Horizontal
6094.137	35.95	7.41	44.51	48.60	47.45	74.00	-26.55	Pass	Horizontal
7311.000	36.43	6.86	44.86	46.92	45.35	74.00	-28.65	Pass	Horizontal
9748.000	38.03	7.10	45.55	46.07	45.65	74.00	-28.35	Pass	Horizontal
1267.104	30.38	1.96	44.29	48.15	36.20	74.00	-37.80	Pass	Vertical
1634.419	31.12	2.45	43.85	47.84	37.56	74.00	-36.44	Pass	Vertical
4874.000	34.84	6.12	44.60	48.11	44.47	74.00	-29.53	Pass	Vertical
5836.044	35.78	7.28	44.52	49.07	47.61	74.00	-26.39	Pass	Vertical
7311.000	36.43	6.86	44.86	47.38	45.81	74.00	-28.19	Pass	Vertical
9748.000	38.03	7.10	45.55	46.23	45.81	74.00	-28.19	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 (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1273.572	30.40	1.97	44.28	47.78	35.87	74.00	-38.13	Pass	Horizontal
1545.405	30.96	2.35	43.95	48.42	37.78	74.00	-36.22	Pass	Horizontal
4924.000	34.94	6.22	44.60	47.50	44.06	74.00	-29.94	Pass	Horizontal
6363.645	36.09	7.34	44.54	48.76	47.65	74.00	-26.35	Pass	Horizontal
7386.000	36.44	6.78	44.92	47.44	45.74	74.00	-28.26	Pass	Horizontal
9848.000	38.14	7.19	45.53	46.67	46.47	74.00	-27.53	Pass	Horizontal
1388.708	30.65	2.14	44.13	48.11	36.77	74.00	-37.23	Pass	Vertical
1800.416	31.40	2.64	43.68	47.69	38.05	74.00	-35.95	Pass	Vertical
4924.000	34.94	6.22	44.60	47.07	43.63	74.00	-30.37	Pass	Vertical
6235.364	36.02	7.38	44.52	48.31	47.19	74.00	-26.81	Pass	Vertical
7386.000	36.44	6.78	44.92	47.35	45.65	74.00	-28.35	Pass	Vertical
9848.000	38.14	7.19	45.53	46.53	46.33	74.00	-27.67	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 (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1238.405	30.32	1.92	44.33	48.19	36.10	74.00	-37.90	Pass	Horizontal
1549.344	30.96	2.35	43.94	48.39	37.76	74.00	-36.24	Pass	Horizontal
4824.000	34.73	6.02	44.60	47.94	44.09	74.00	-29.91	Pass	Horizontal
5865.832	35.80	7.31	44.51	49.49	48.09	74.00	-25.91	Pass	Horizontal
7236.000	36.42	6.94	44.80	46.49	45.05	74.00	-28.95	Pass	Horizontal
9648.000	37.93	7.01	45.57	46.30	45.67	74.00	-28.33	Pass	Horizontal
1299.773	30.46	2.01	44.25	49.01	37.23	74.00	-36.77	Pass	Vertical
1597.401	31.05	2.41	43.89	48.03	37.60	74.00	-36.40	Pass	Vertical
4824.000	34.73	6.02	44.60	48.20	44.35	74.00	-29.65	Pass	Vertical
5490.177	35.51	6.92	44.55	49.68	47.56	74.00	-26.44	Pass	Vertical
7236.000	36.42	6.94	44.80	46.98	45.54	74.00	-28.46	Pass	Vertical
9648.000	37.93	7.01	45.57	46.41	45.78	74.00	-28.22	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 (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1392.247	30.65	2.14	44.13	47.80	36.46	74.00	-37.54	Pass	Horizontal
1828.125	31.44	2.67	43.66	48.15	38.60	74.00	-35.40	Pass	Horizontal
4874.000	34.84	6.12	44.60	48.62	44.98	74.00	-29.02	Pass	Horizontal
6094.137	35.95	7.41	44.51	48.58	47.43	74.00	-26.57	Pass	Horizontal
7311.000	36.43	6.86	44.86	47.70	46.13	74.00	-27.87	Pass	Horizontal
9748.000	38.03	7.10	45.55	45.87	45.45	74.00	-28.55	Pass	Horizontal
1293.173	30.44	2.00	44.25	48.53	36.72	74.00	-37.28	Pass	Vertical
1764.123	31.34	2.60	43.72	48.23	38.45	74.00	-35.55	Pass	Vertical
4874.000	34.84	6.12	44.60	47.64	44.00	74.00	-30.00	Pass	Vertical
6047.776	35.93	7.43	44.51	49.14	47.99	74.00	-26.01	Pass	Vertical
7311.000	36.43	6.86	44.86	47.41	45.84	74.00	-28.16	Pass	Vertical
9748.000	38.03	7.10	45.55	46.48	46.06	74.00	-27.94	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 (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1138.626	30.07	1.76	44.48	48.20	35.55	74.00	-38.45	Pass	Horizontal
1541.476	30.95	2.34	43.95	48.51	37.85	74.00	-36.15	Pass	Horizontal
4924.000	34.94	6.22	44.60	47.74	44.30	74.00	-29.70	Pass	Horizontal
6078.644	35.94	7.42	44.51	49.40	48.25	74.00	-25.75	Pass	Horizontal
7386.000	36.44	6.78	44.92	46.74	45.04	74.00	-28.96	Pass	Horizontal
9848.000	38.14	7.19	45.53	46.71	46.51	74.00	-27.49	Pass	Horizontal
1303.086	30.46	2.02	44.24	48.62	36.86	74.00	-37.14	Pass	Vertical
1795.839	31.39	2.63	43.69	47.78	38.11	74.00	-35.89	Pass	Vertical
4924.000	34.94	6.22	44.60	47.45	44.01	74.00	-29.99	Pass	Vertical
6109.670	35.96	7.41	44.51	48.83	47.69	74.00	-26.31	Pass	Vertical
7386.000	36.44	6.78	44.92	47.59	45.89	74.00	-28.11	Pass	Vertical
9848.000	38.14	7.19	45.53	46.86	46.66	74.00	-27.34	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; 6Mbpsof rate is the worst case of 802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20) ;

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

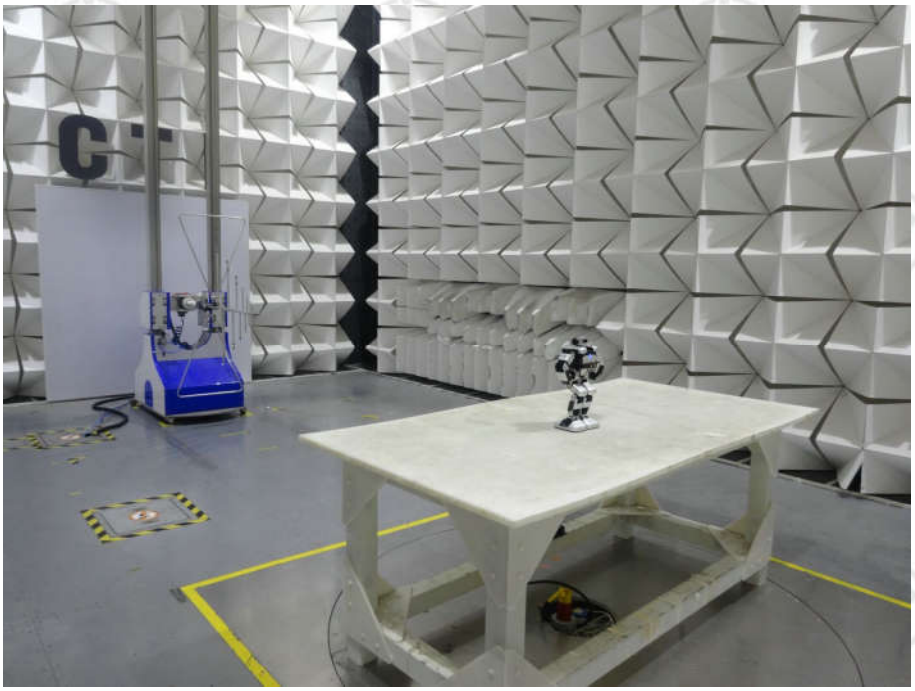
Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

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.

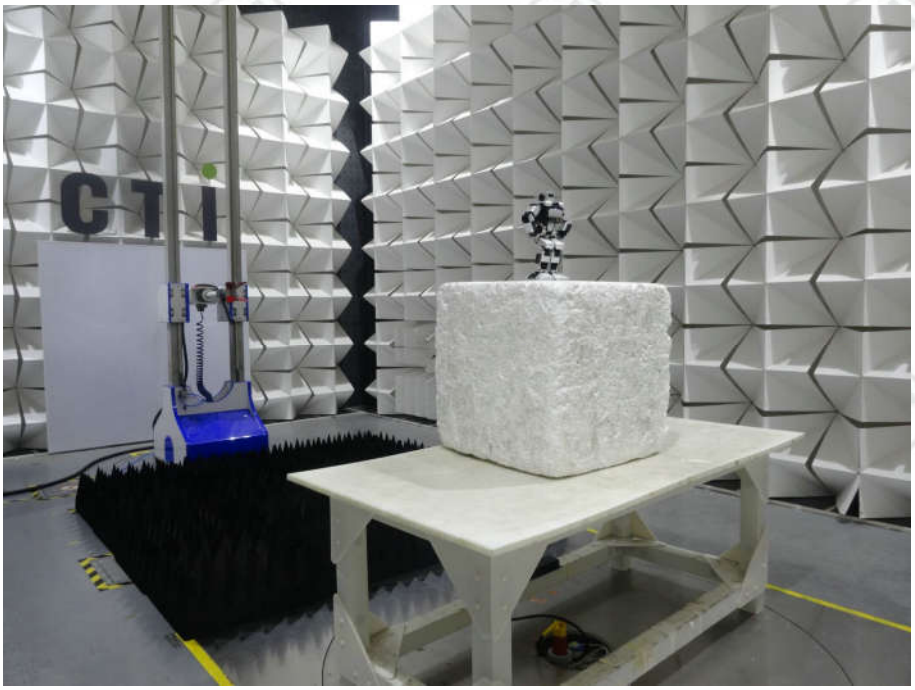
PHOTOGRAPHS OF TEST SETUP

Test model No.: Yanshee

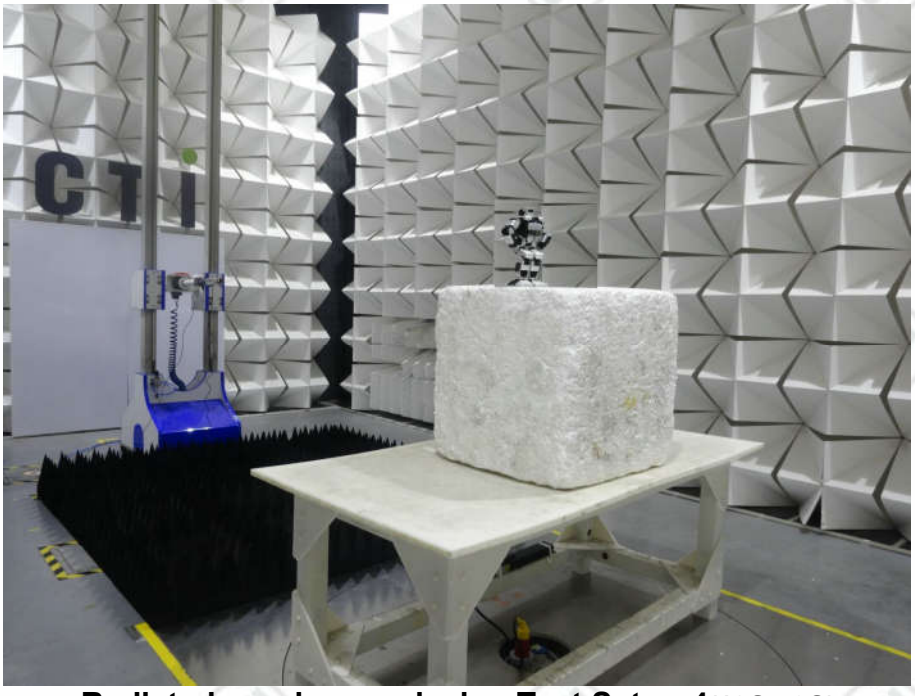
Radiated spurious emission Test Setup-1(9K-30M)



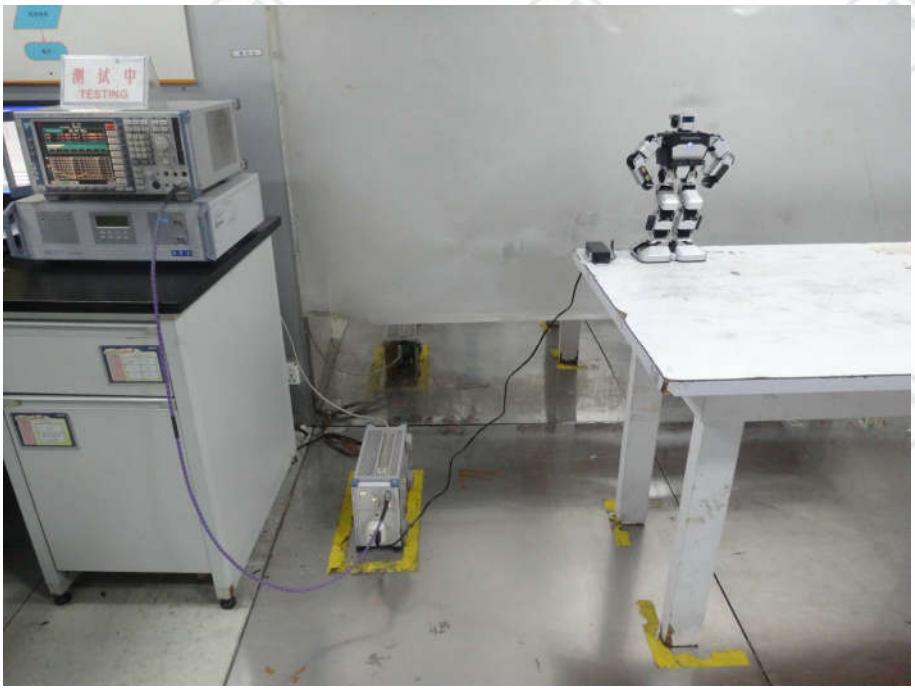
Radiated spurious emission Test Setup-2(30M-1G)



Radiated spurious emission Test Setup-3(1G-18G)



Radiated spurious emission Test Setup-4(18G-40G)



Conducted Emissions Test Setup

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No.EED32K00127801 for EUT external and internal photos.6

*** End of Report ***