TEST REPORT

Product Name	:	Electrostatic Air Purifier
Trade mark	:	Nectar
Model/Type reference	:	HexaDuo Smart, AP360C, AP360CX
Serial Number	:	N/A
Report Number	:	EED32J00195901
FCC ID	:	LPV-HEXADUOSMART
Date of Issue	:	Sep. 26, 2017
Test Standards	:	47 CFR Part 15 Subpart C
Test result	:	PASS

Prepared for:

Alford Industries Ltd.
Unit 02, 6/F, Yen Sheng Centre, 64 Hoi Yuen Road,
Kwun Tong, Kowloon, Hong Kong

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
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Approved by: Sheek Luo (Lab supervisor)

Date: Sep. 26, 2017

Check No.: 2392126531

CENTRE TESTING INTERNATIONAL GROUP CO.,LTD. Report Seal

2 Version

Version No.	Date	Description
00	Sep. 26, 2017	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.

Model No.:HexaDuo Smart, AP360C, AP360CX

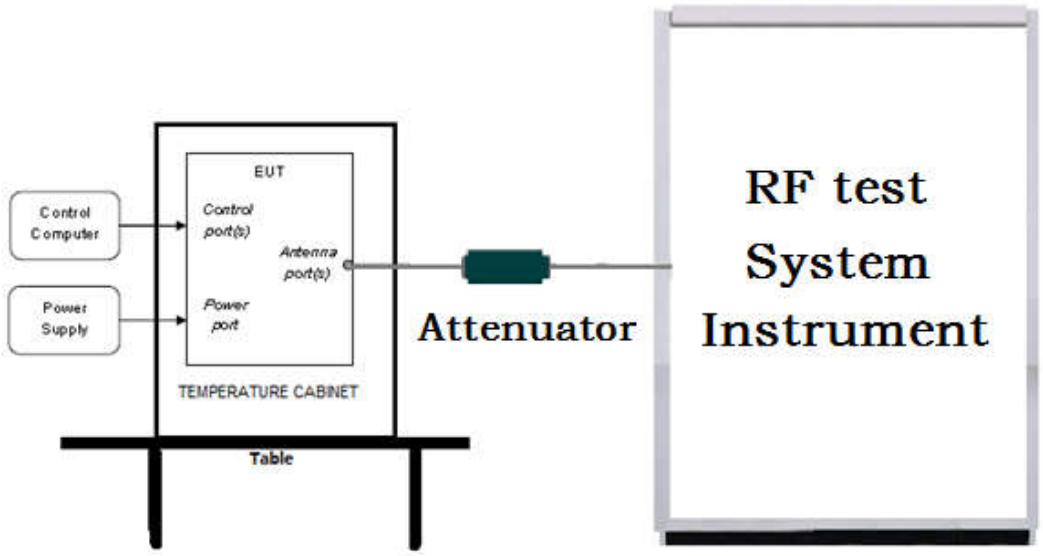
Only the model HexaDuo Smart was tested, since their cosmetic design, electrical circuit design, components used and internal wiring are 100% identical.

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:

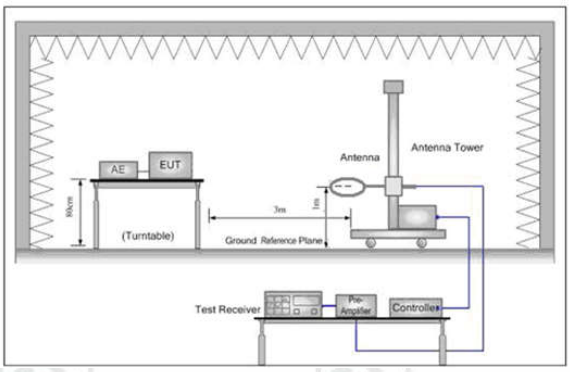


Figure 1. Below 30MHz

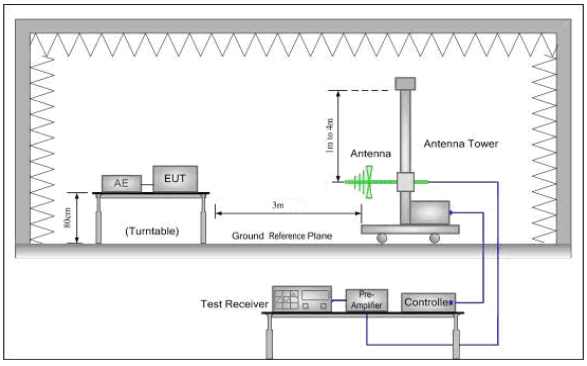


Figure 2. 30MHz to 1GHz

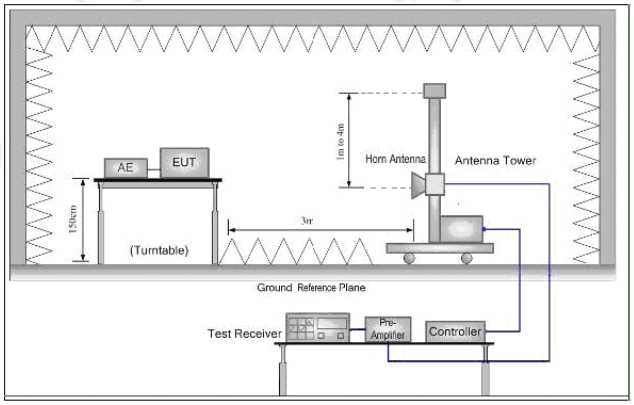
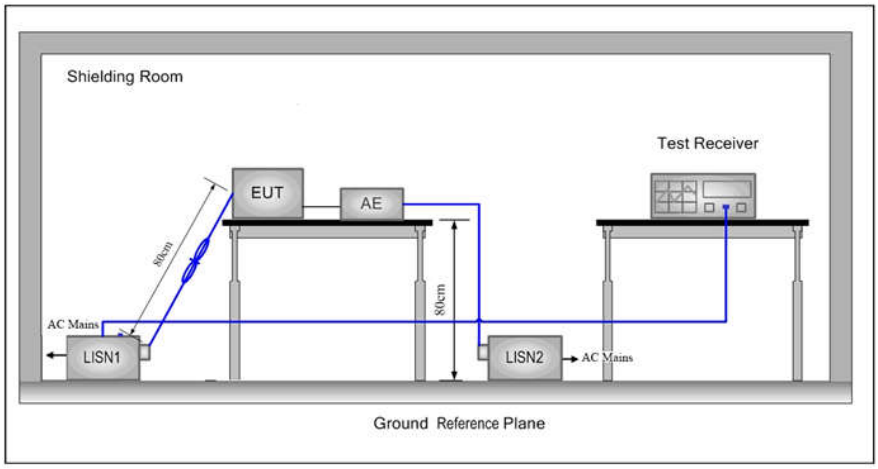


Figure 3. Above 1GHz

5.1.3 For Conducted Emissions test setup

Conducted Emissions setup



5.2 Test Environment

Operating Environment:	
Temperature:	26.6°C
Humidity:	56% RH
Atmospheric Pressure:	1010 mbar

5.3 Test Condition

Test channel:

Test Mode	Tx	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			
Data Rate	1Mbps	2Mbps	5.5Mbps	11Mbps
Power(dBm)	20.31	20.44	20.58	20.66

Mode	802.11g							
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
Power(dBm)	24.57	24.47	24.33	24.21	24.12	24.05	23.94	23.81

Mode	802.11n (HT20)							
Data Rate	6.5Mbps	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps	58.5Mbps	65Mbps
Power(dBm)	24.71	24.66	24.51	24.42	24.33	24.20	24.11	24.01

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:	Alford Industries Ltd.
Address of Applicant:	Unit 02, 6/F, Yen Sheng Centre, 64 Hoi Yuen Road, Kwun Tong, Kowloon, Hong Kong
Manufacturer:	Alford Industries Ltd.
Address of Manufacturer:	Unit 02, 6/F, Yen Sheng Centre, 64 Hoi Yuen Road, Kwun Tong, Kowloon, Hong Kong
Factory:	Foshan Shunde Alford Electronics Co., Ltd
Address of Factory:	Xinjiao Industrial Park, DaLiang, ShunDe, Foshan City, Guangdong Province, China

6.2 General Description of EUT

Product Name:	Electrostatic Air Purifier
Model No.:	HexaDuo Smart, AP360C, AP360CX
Test model No.:	HexaDuo Smart
Trade Mark:	Nectar
EUT Supports Radios application:	WiFi b/g/n(20M) , 2412MHz-2462MHz;
Power Supply:	AC 120V, 60Hz
Sample Received Date:	Sep. 14, 2017
Sample tested Date:	Sep. 14, 2017 to Sep. 26, 2017

6.3 Product Specification subjective to this standard

Operation Frequency:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz
Channel Numbers:	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)
Test Power Grade:	N/A
Test Software of EUT:	ESP Series Modules FCC&CE Test Tool V2.2.2 (manufacturer declare)
Antenna Type:	Integral antenna
Antenna Gain:	3dBi
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.

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 Test Facility

Test location

The test site a is located on *Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China.*

Test site at Centre Testing International Group Co., Ltd has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on November 06, 2014.

The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

FCC Designation No.: CN1164

FCC-Registration No.: 886427

Centre Testing International Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 886427.

6.7 Deviation from Standards

None.

6.8 Abnormalities from Standard Conditions

None.

6.9 Other Information Requested by the Customer

None.

6.10 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

RF test system					
Equipment	**Manufacturer**	**Mode 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	---	01-11-2017	01-10-2018
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	01-11-2017	01-10-2018
DC Power	Keysight	E3642A	MY54436035	03-14-2017	03-13-2018
PC-1	Lenovo	R4960d	---	04-01-2017	03-31-2018
power meter & power sensor	R&S	OSP120	101374	04-01-2016	03-13-2018
BT&WI-FI Automatic control	R&S	OSPB157	101374	03-14-2017	03-13-2018
RF control unit	JS Tonscend	JS0806-2	2015860006	03-14-2017	03-13-2018
BT&WI-FI Automatic test software	JS Tonscend	JSTS1120-2	---	03-14-2017	03-13-2018

Conducted disturbance Test					
Equipment	**Manufacturer**	**Mode 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
Communication test set	Agilent	E5515C	GB47050534	03-14-2017	03-13-2018
Communication test set	R&S	CMW500	152394	03-14-2017	03-13-2018
LISN	R&S	ENV216	100098	06-13-2017	06-12-2018
LISN	schwarzbeck	NNLK8121	8121-529	06-13-2017	06-12-2018
Voltage Probe	R&S	ESH2-Z3	--	06-13-2017	06-11-2020
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**	**Mode No.**	**Serial Number**	**Cal. date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
3M Chamber & Accessory Equipment	TDK	SAC-3	---	06-05-2016	06-05-2019
TRILOG Broadband Antenna	SCHWARZBECK	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	00057410	06-30-2015	06-28-2018
Horn Antenna	A.H.SYSTEMS	SAS-574	374	06-30-2015	06-28-2018
Loop Antenna	ETS	6502	00071730	06-22-2017	06-21-2019
Microwave Preamplifier	A.H.SYSTEMS	PAP-1840-60	6041.6042	06-30-2015	06-28-2018
Horn Antenna	A.H.SYSTEMS	SAS-574	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
Multi device Controller	maturo	NCD/070/10711112	---	01-12-2017	01-11-2018
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
Communication test set	Agilent	E5515C	GB47050534	03-14-2017	03-13-2018
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
Communication test set	R&S	CMW500	152394	03-14-2017	03-13-2018
High-pass filter	Sinoscite	FL3CX03WG18NM12-0398-002	---	01-11-2017	01-10-2018
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	01-11-2017	01-10-2018
band rejection filter	Sinoscite	FL5CX01CA09CL12-0395-001	---	01-11-2017	01-10-2018
band rejection filter	Sinoscite	FL5CX01CA08CL12-0393-001	---	01-11-2017	01-10-2018
band rejection filter	Sinoscite	FL5CX02CA04CL12-0396-002	---	01-11-2017	01-10-2018
band rejection filter	Sinoscite	FL5CX02CA03CL12-0394-001	---	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 Unlicesed 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

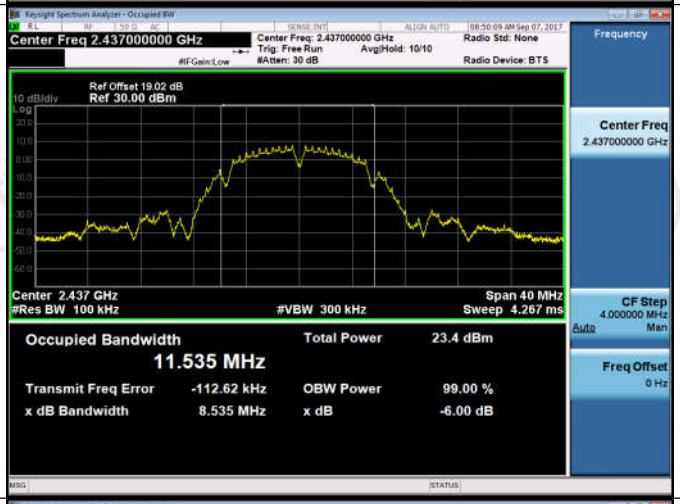
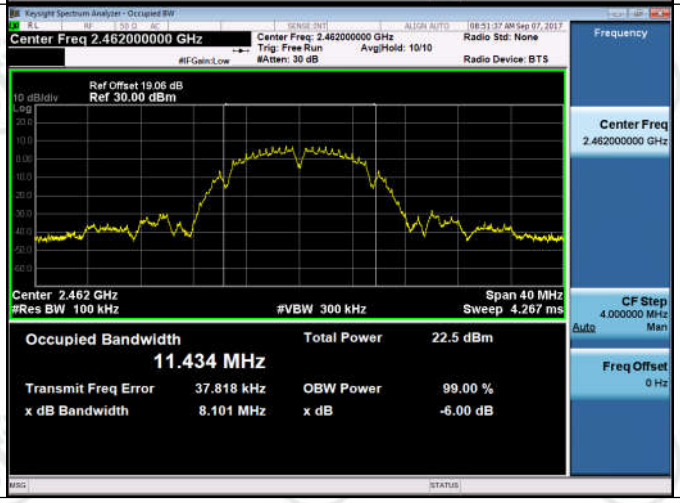
Mode	Channel	Conducted Peak Output Power [dBm]	Verdict
11B	LCH	20.66	PASS
11B	MCH	19.30	PASS
11B	HCH	18.68	PASS
11G	LCH	24.57	PASS
11G	MCH	23.94	PASS
11G	HCH	23.59	PASS
11N20SISO	LCH	24.71	PASS
11N20SISO	MCH	23.90	PASS
11N20SISO	HCH	23.55	PASS

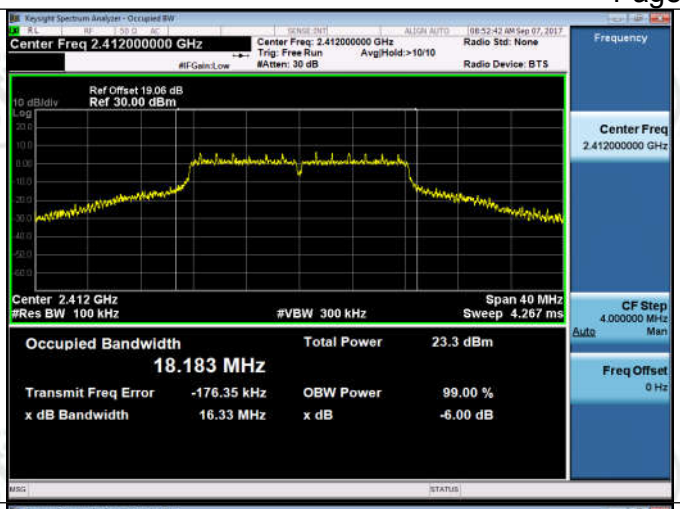
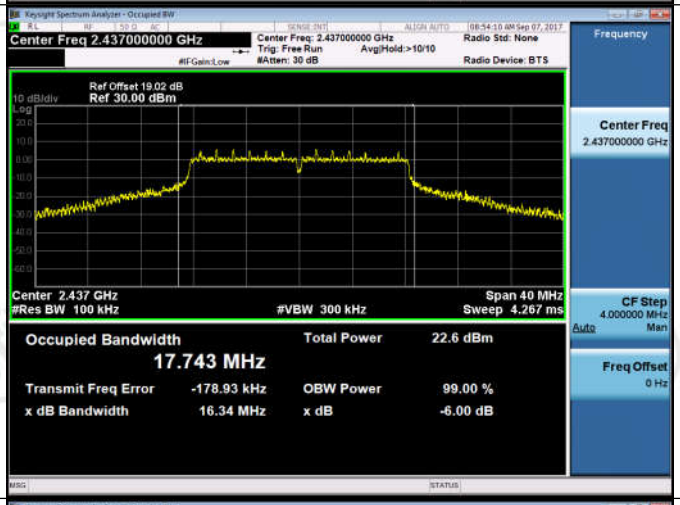
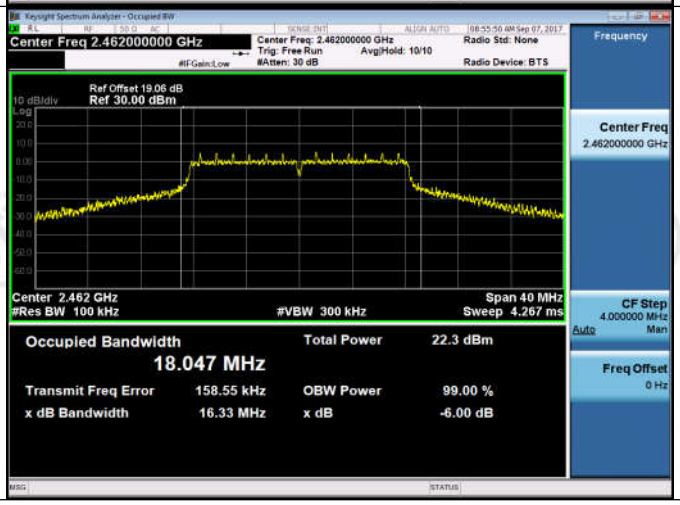
Appendix B): 6dB Occupied Bandwidth

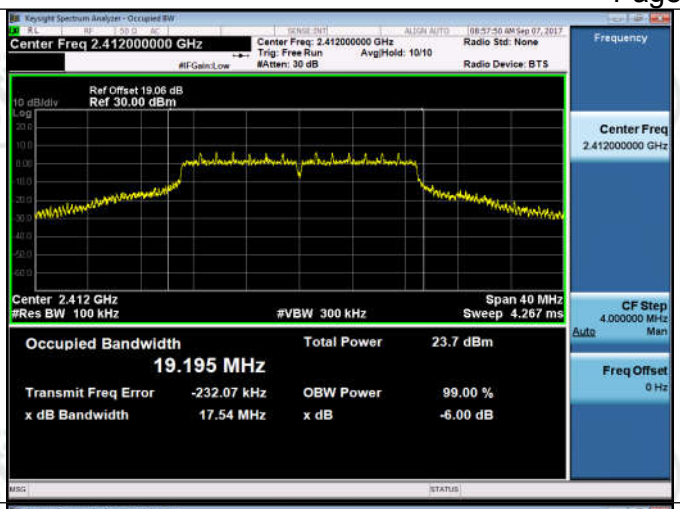
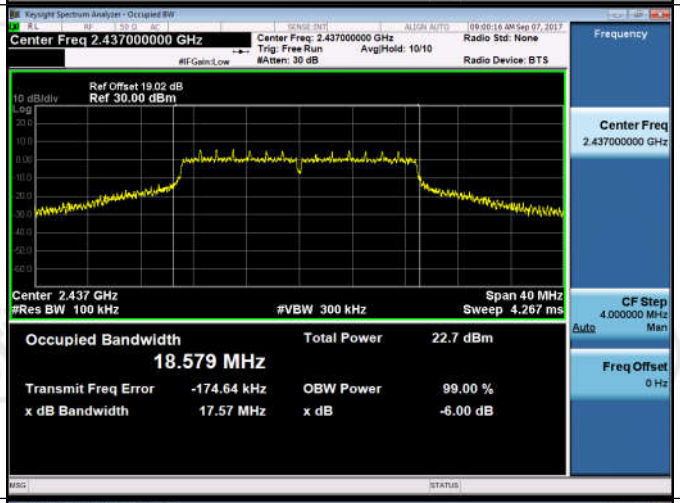
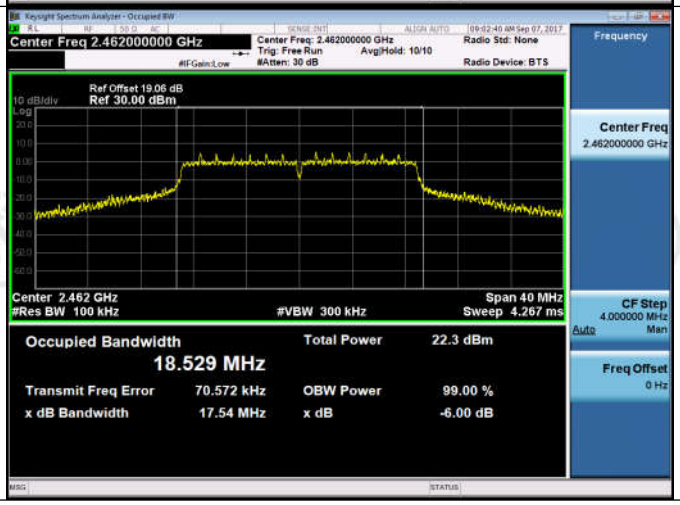
Result Table

Mode	Channel	6dB Bandwidth [MHz]	99% OBW [MHz]	Verdict	Remark
11B	LCH	8.098	11.991	PASS	Peak detector
11B	MCH	8.535	11.535	PASS	
11B	HCH	8.101	11.434	PASS	
11G	LCH	16.33	18.183	PASS	
11G	MCH	16.34	17.743	PASS	
11G	HCH	16.33	18.047	PASS	
11N20SISO	LCH	17.54	19.195	PASS	
11N20SISO	MCH	17.57	18.579	PASS	
11N20SISO	HCH	17.54	18.529	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	9.030	-33.964	-20.97	PASS
11B	HCH	7.070	-43.860	-22.93	PASS
11G	LCH	5.873	-31.026	-24.13	PASS
11G	HCH	5.173	-30.552	-24.83	PASS
11N20SISO	LCH	6.366	-28.597	-23.63	PASS
11N20SISO	HCH	5.302	-28.691	-24.7	PASS

Test Graph

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

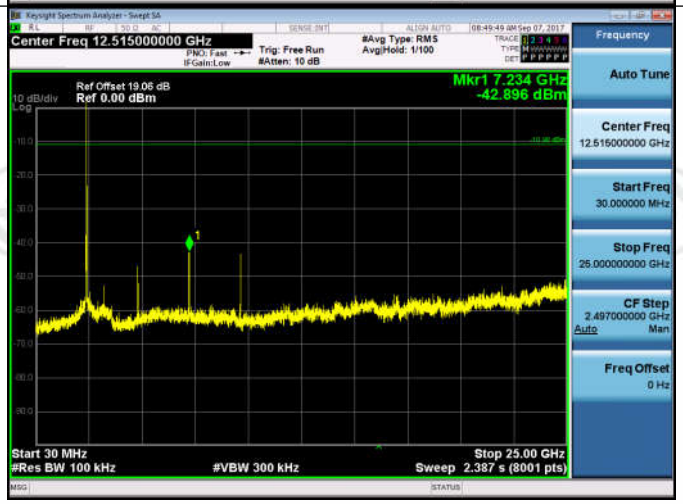
11G/HCH		
11N20SISO/LCH		
11N20SISO/HCH		

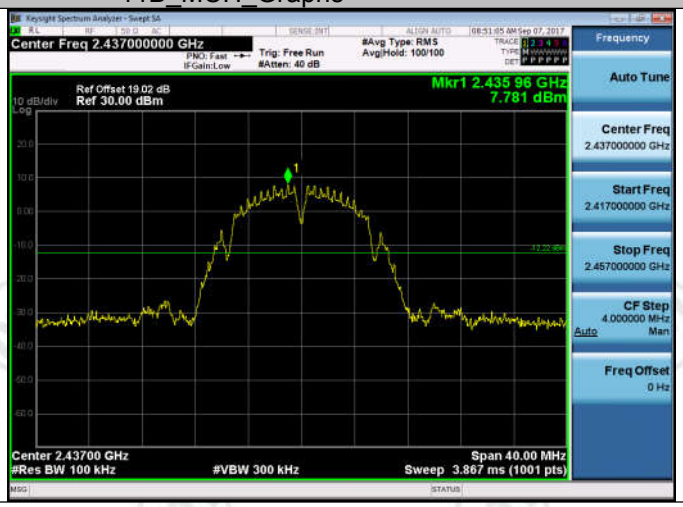
Appendix D): RF Conducted Spurious Emissions

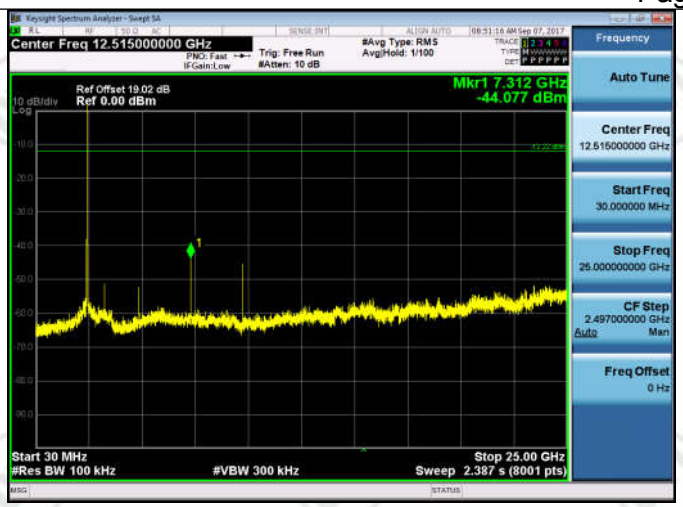
Result Table

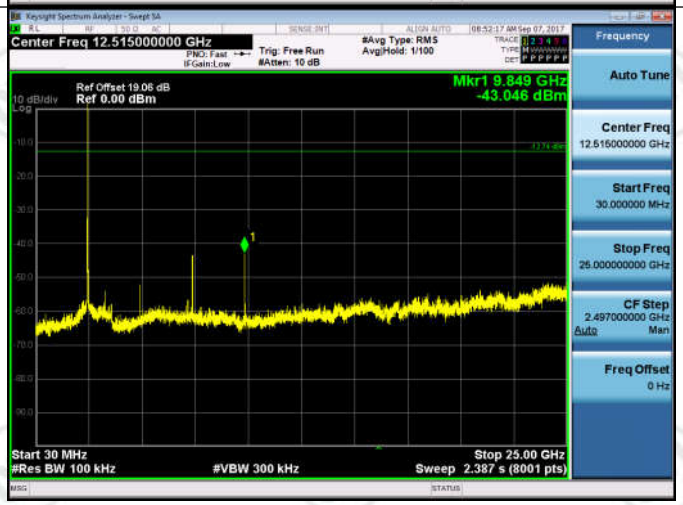
Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
11B	LCH	9.018	<Limit	PASS
11B	MCH	7.781	<Limit	PASS
11B	HCH	7.259	<Limit	PASS
11G	LCH	6.565	<Limit	PASS
11G	MCH	5.628	<Limit	PASS
11G	HCH	5.368	<Limit	PASS
11N20SISO	LCH	6.313	<Limit	PASS
11N20SISO	MCH	5.754	<Limit	PASS
11N20SISO	HCH	5.345	<Limit	PASS

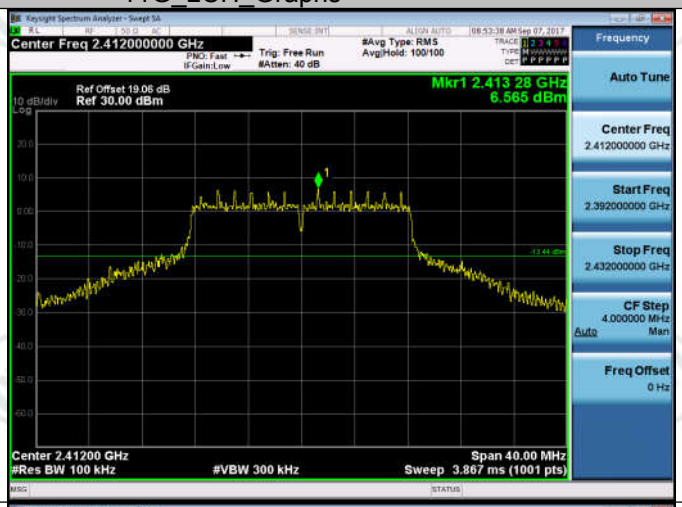
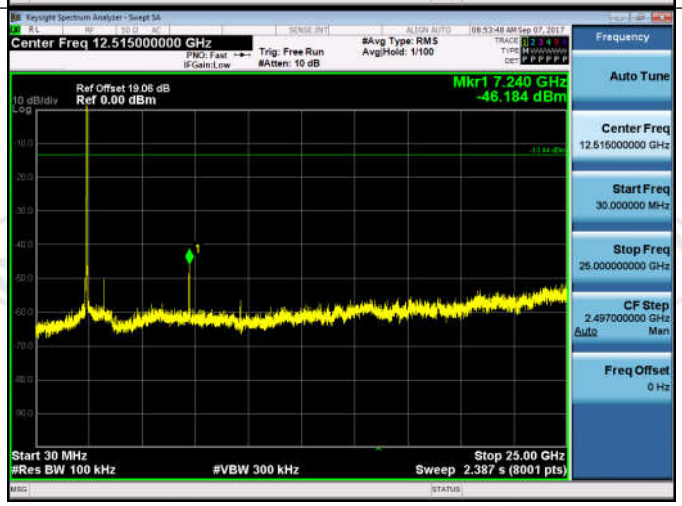
Test Graph

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

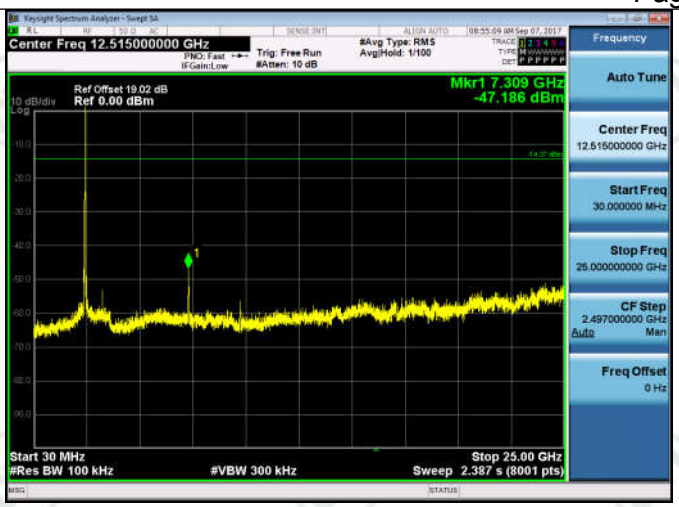
11B_MCH_Graphs	
Pref/11B/MCH	

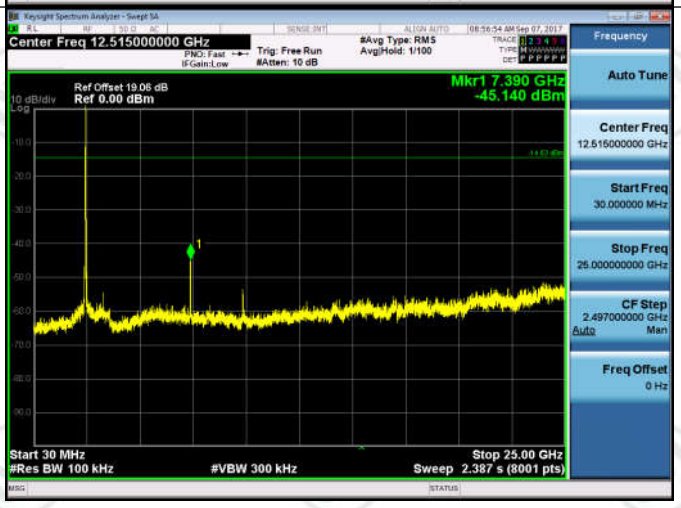
Puw/11B/MCH	

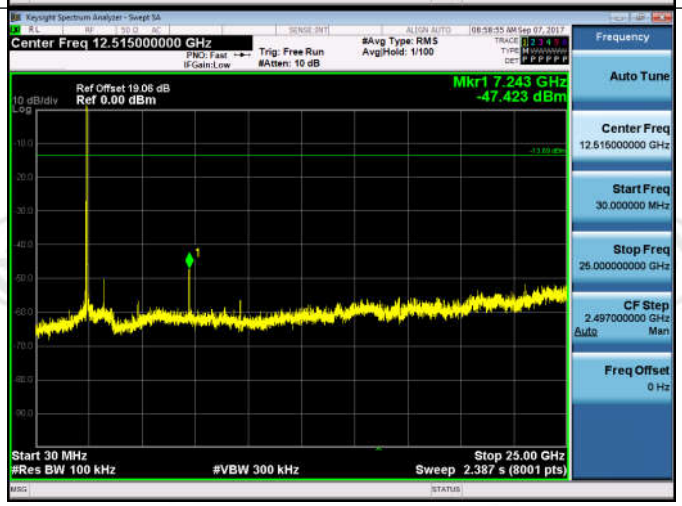
11B_HCH_Graphs	
Pref/11B/HCH	
Puw/11B/HCH	

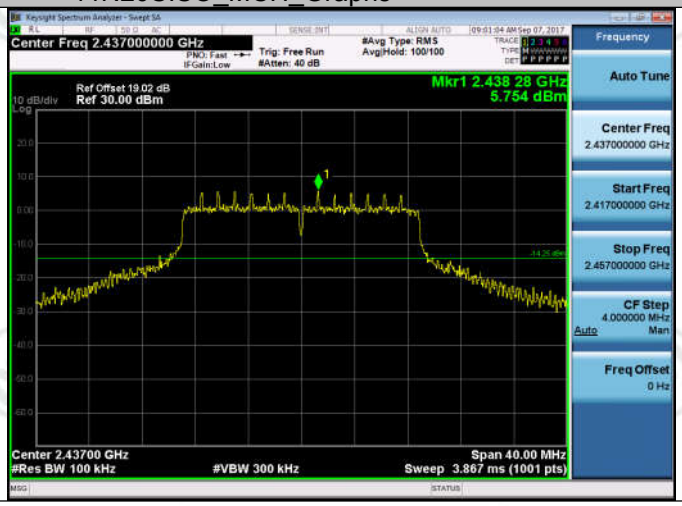
11G_LCH_Graphs	
Pref/11G/LCH	
Puw/11G/LCH	

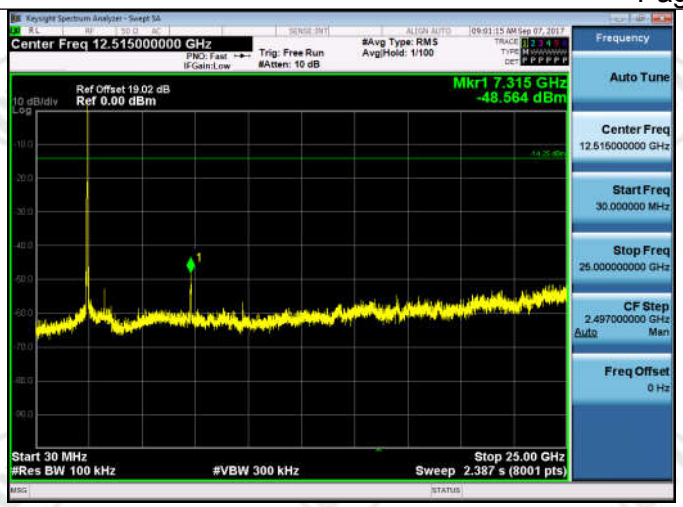
11G_MCH_Graphs	
Pref/11G/MCH	

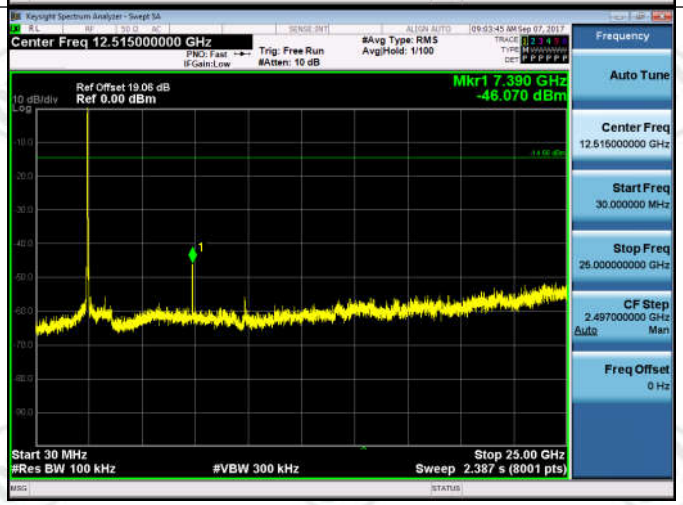
Puw/11G/MCH	

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	

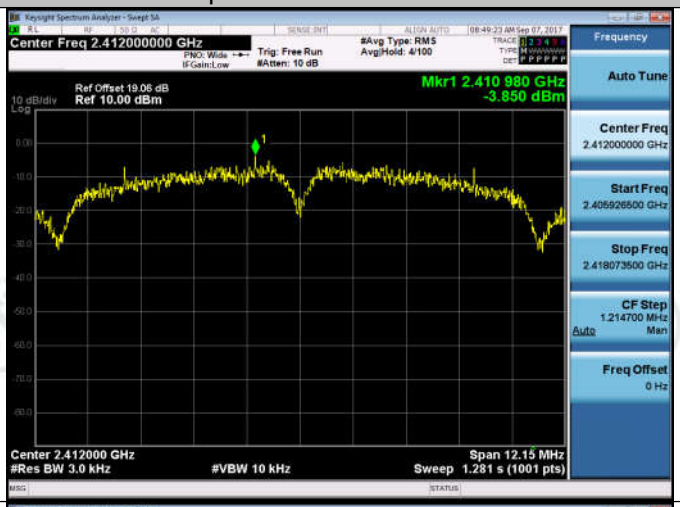
11N20SISO_HCH_Graphs	
Pref/11N20SISO/HCH	
Puw/11N20SISO/HCH	

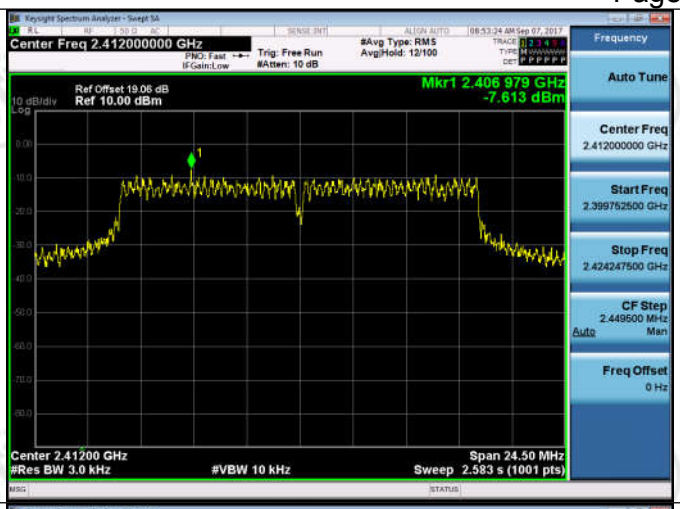
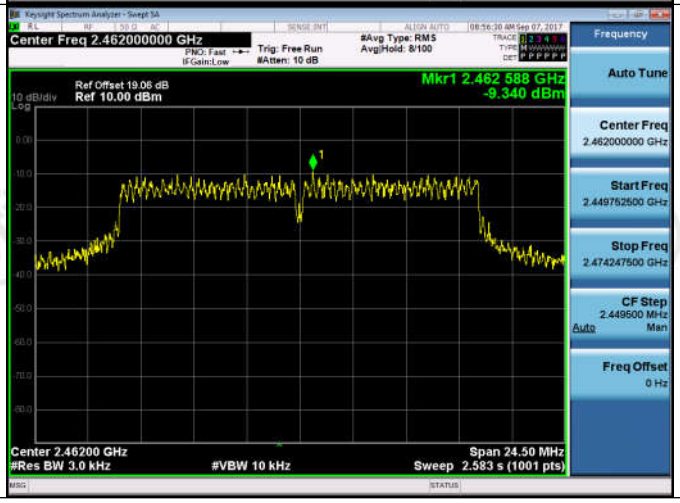
Appendix E): Power Spectral Density

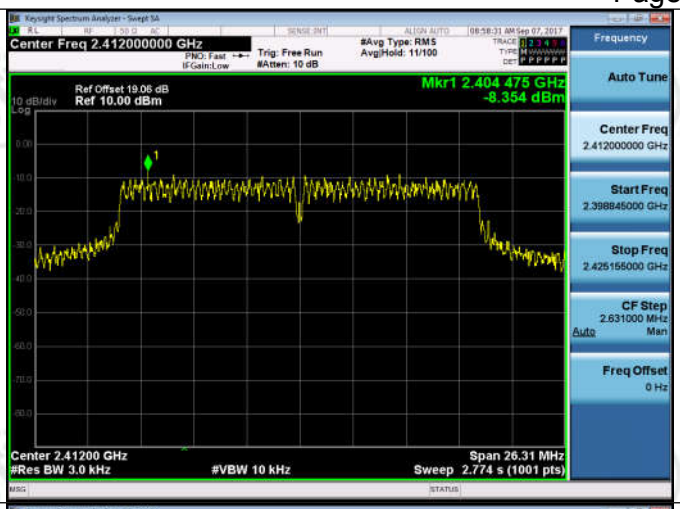
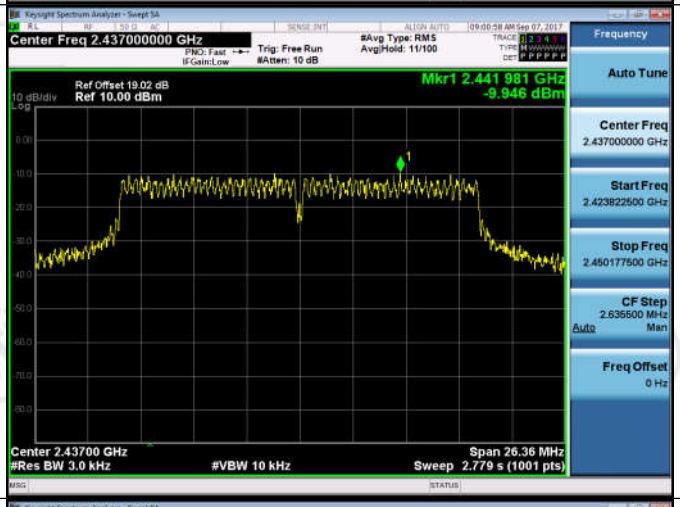
Result Table

Mode	Channel	Power Spectral Density [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	LCH	-3.850	8	PASS
11B	MCH	-4.694	8	PASS
11B	HCH	-4.879	8	PASS
11G	LCH	-7.613	8	PASS
11G	MCH	-9.277	8	PASS
11G	HCH	-9.340	8	PASS
11N20SISO	LCH	-8.354	8	PASS
11N20SISO	MCH	-9.946	8	PASS
11N20SISO	HCH	-8.576	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:

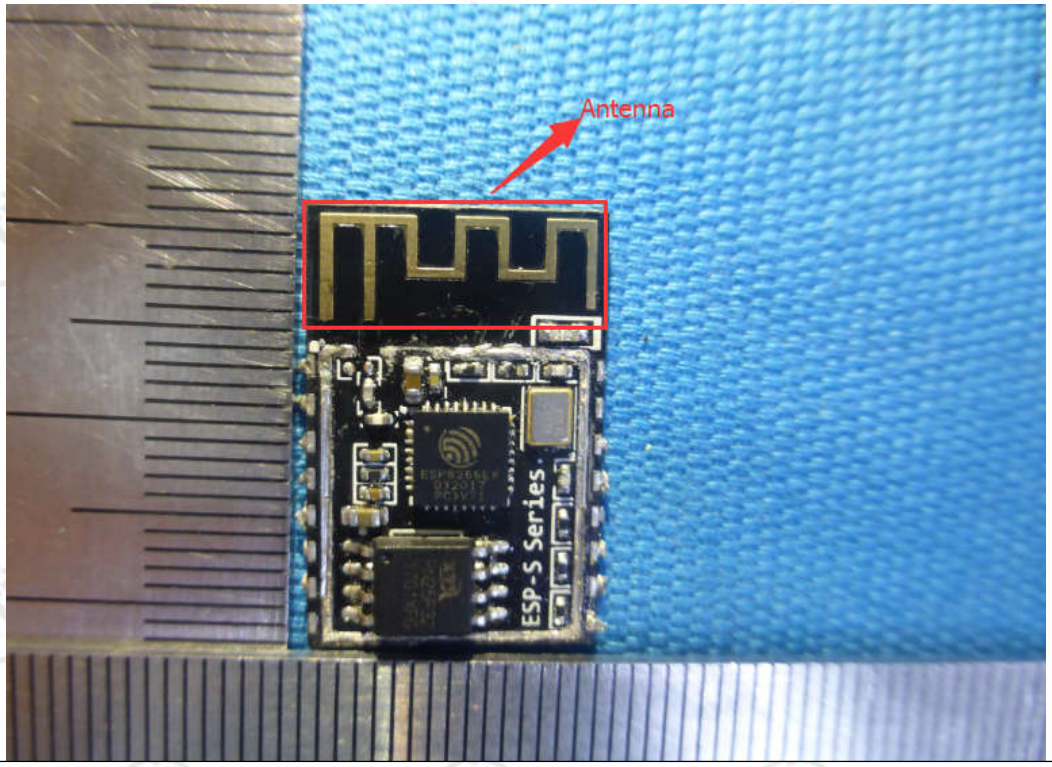
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit 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 integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 3dBi.



Appendix G): AC Power Line Conducted Emission

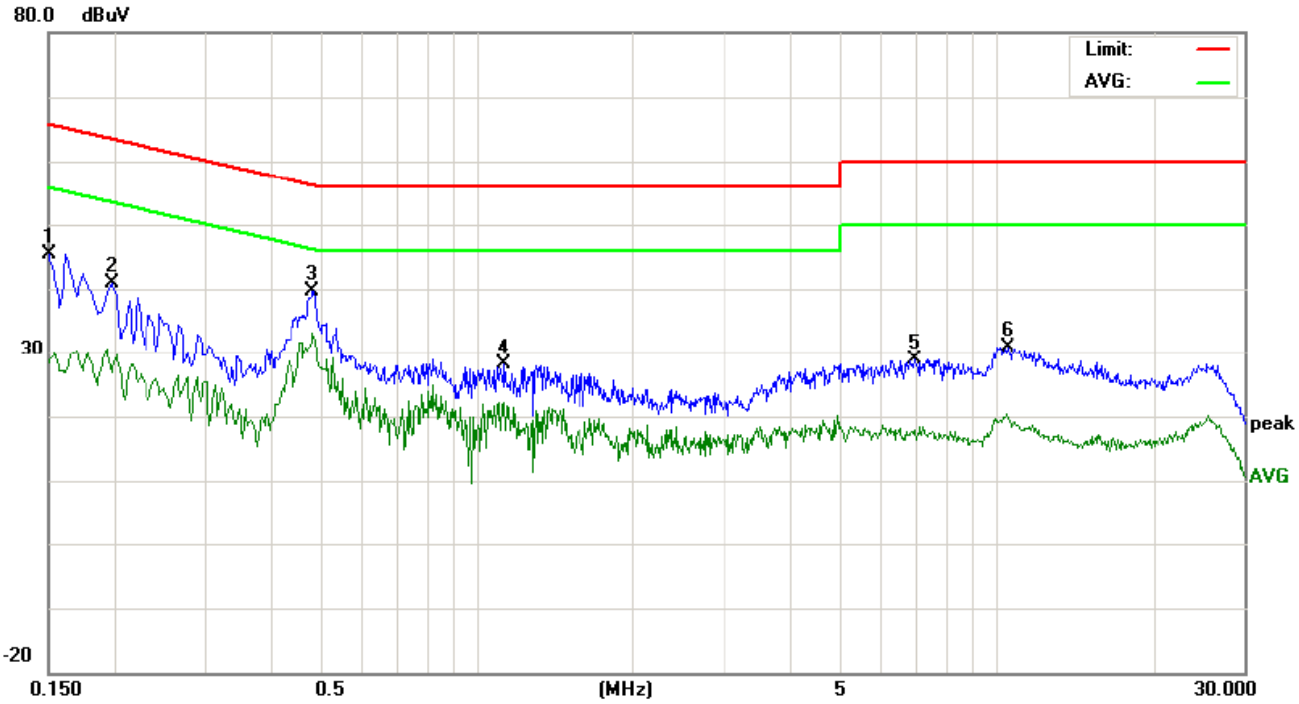
<table>
<tr><td>Test Procedure:</td><td>Test frequency range :150KHz-30MHz
1)The mains terminal disturbance voltage test was conducted in a shielded room.
2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. 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><td rowspan="2">Frequency range (MHz)</td><td colspan="2">Limit (dBμV)</td></tr>
<tr><td>Quasi-peak</td><td>Average</td></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.

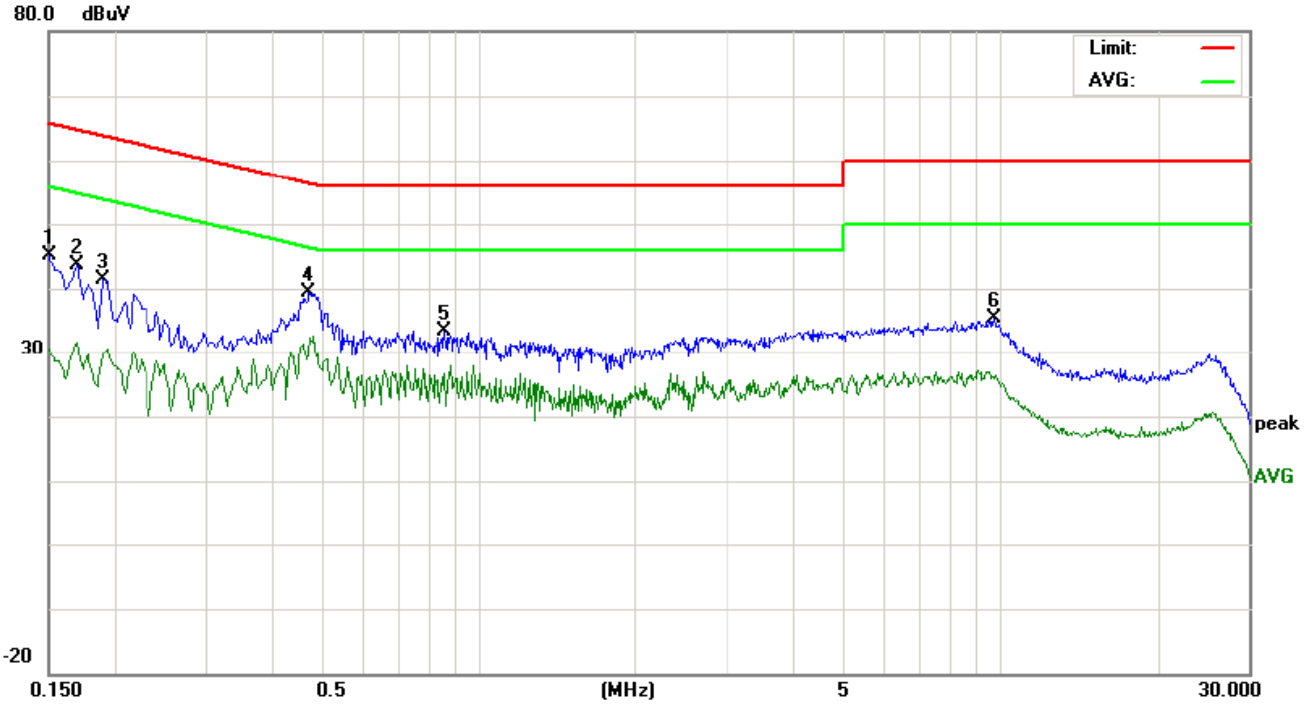
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

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	35.70	28.15	16.57	9.77	45.47	37.92	26.34	65.99	55.99	-28.07	-29.65	P	
2	0.1980	31.11	24.98	16.46	9.71	40.82	34.69	26.17	63.69	53.69	-29.00	-27.52	P	
3	0.4860	29.98	27.03	23.63	9.72	39.70	36.75	33.35	56.24	46.24	-19.49	-12.89	P	
4	1.1300	18.43	14.33	10.54	9.72	28.15	24.05	20.26	56.00	46.00	-31.95	-25.74	P	
5	6.9820	19.31	11.77	5.63	9.62	28.93	21.39	15.25	60.00	50.00	-38.61	-34.75	P	
6	10.5219	21.08	13.66	7.06	9.81	30.89	23.47	16.87	60.00	50.00	-36.53	-33.13	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	0.1500	35.42	28.89	18.43	9.77	45.19	38.66	28.20	65.99	55.99	-27.33	-27.79	P	
2	0.1700	33.97	29.40	20.60	9.74	43.71	39.14	30.34	64.96	54.96	-25.82	-24.62	P	
3	0.1900	31.62	26.33	19.24	9.72	41.34	36.05	28.96	64.03	54.03	-27.98	-25.07	P	
4	0.4740	29.61	24.71	20.72	9.72	39.33	34.43	30.44	56.44	46.44	-22.01	-16.00	P	
5	0.8620	23.52	19.25	17.12	9.75	33.27	29.00	26.87	56.00	46.00	-27.00	-19.13	P	
6	9.7100	25.69	20.42	15.31	9.77	35.46	30.19	25.08	60.00	50.00	-29.81	-24.92	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:

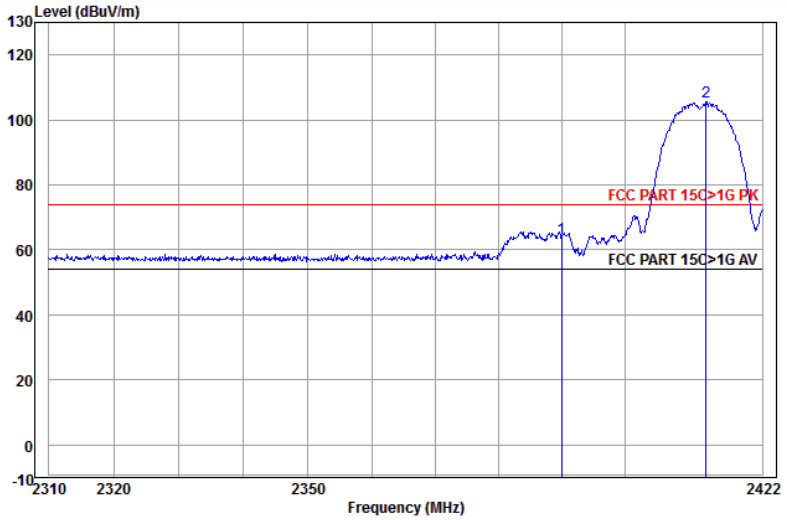
g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter).
h. Test the EUT in the lowest channel , the Highest channel
i. The radiation measurements are 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

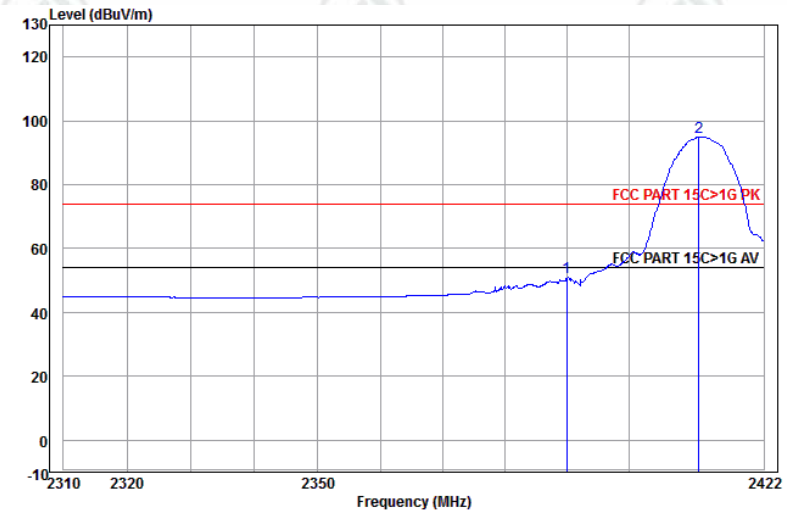
Test plot as follows:

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



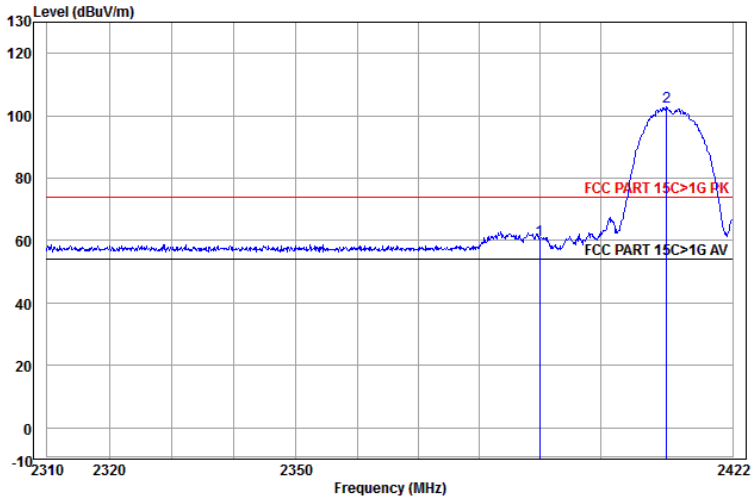
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	28.18	63.78	74.00	-10.22	Horizontal	
2 pp	2412.958	32.58	3.08	69.87	105.53	74.00	31.53	Horizontal	

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



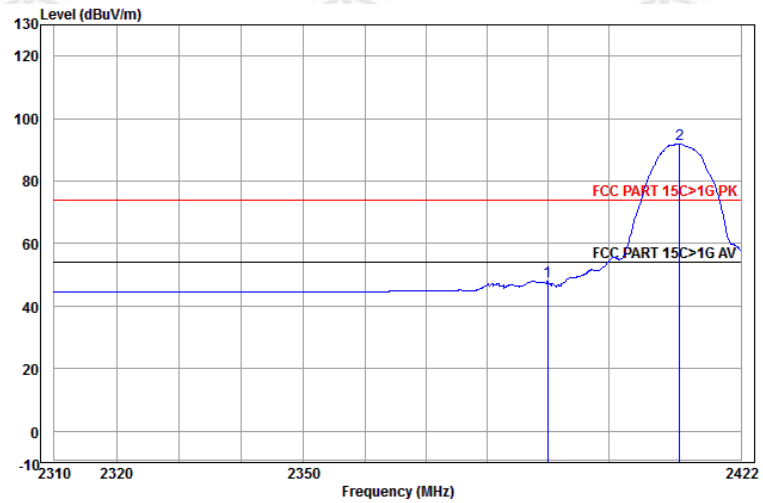
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	15.30	50.90	54.00	-3.10	Horizontal	Average
2 pp	2411.359	32.58	3.08	59.42	95.08	54.00	41.08	Horizontal	Average

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



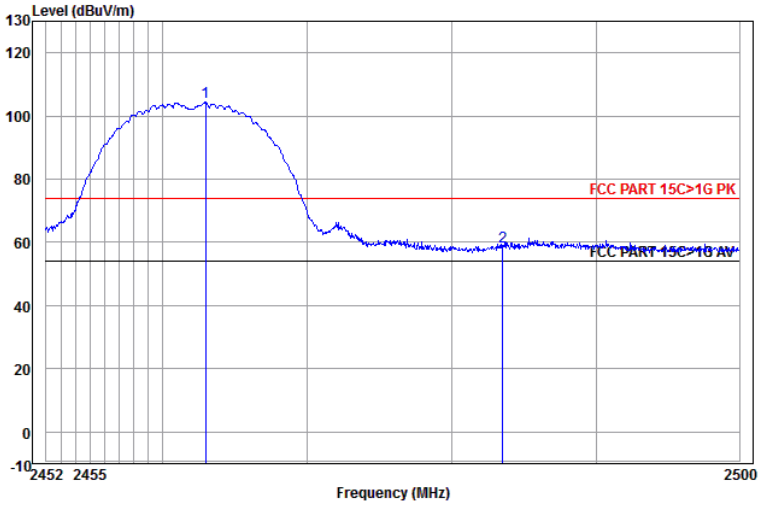
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	24.78	60.38	74.00	-13.62	Vertical	
2 pp	2411.016	32.58	3.08	67.11	102.77	74.00	28.77	Vertical	

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



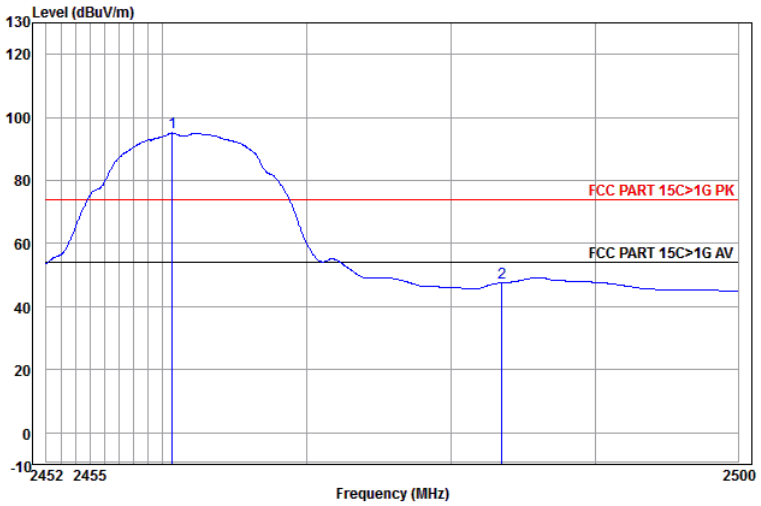
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	12.24	47.84	54.00	-6.16	Vertical	Average
2 pp	2411.816	32.58	3.08	56.37	92.03	54.00	38.03	Vertical	Average

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



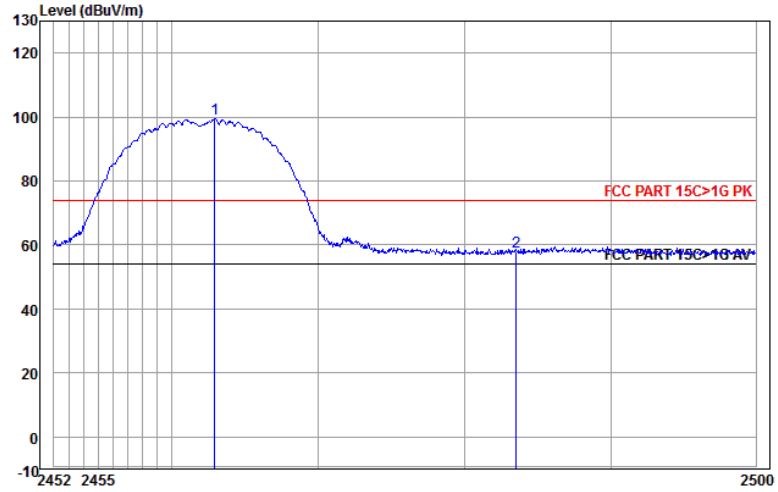
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2462.958	32.68	3.11	68.52	104.31	74.00	30.31	Horizontal	
2	2483.500	32.71	3.12	22.99	58.82	74.00	-15.18	Horizontal	

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



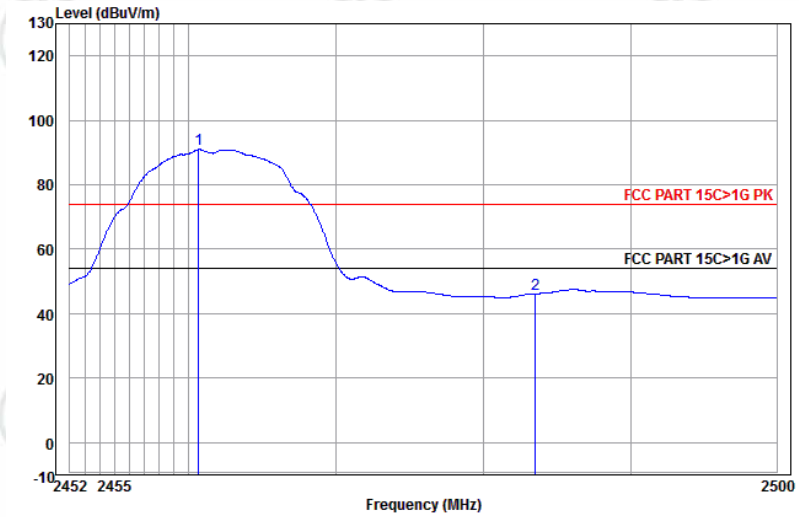
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2460.667	32.67	3.11	59.33	95.11	54.00	41.11	Horizontal	Average
2	2483.500	32.71	3.12	11.73	47.56	54.00	-6.44	Horizontal	Average

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



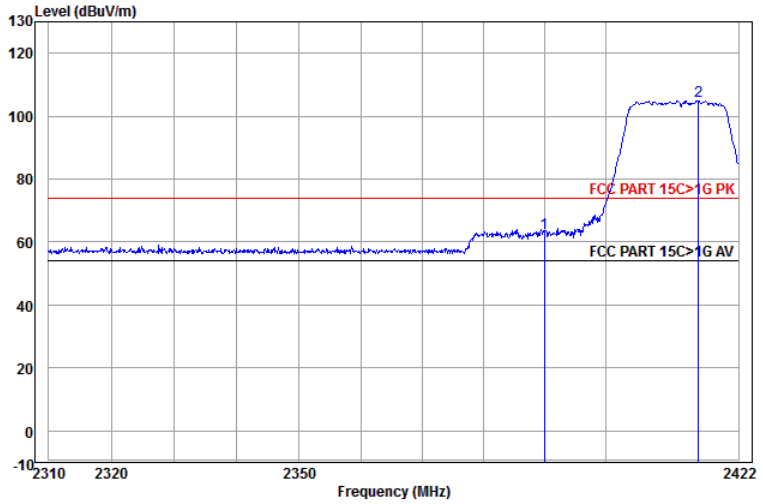
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2462.910	32.68	3.11	63.61	99.40	74.00	25.40	Vertical	
2	2483.500	32.71	3.12	22.04	57.87	74.00	-16.13	Vertical	

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



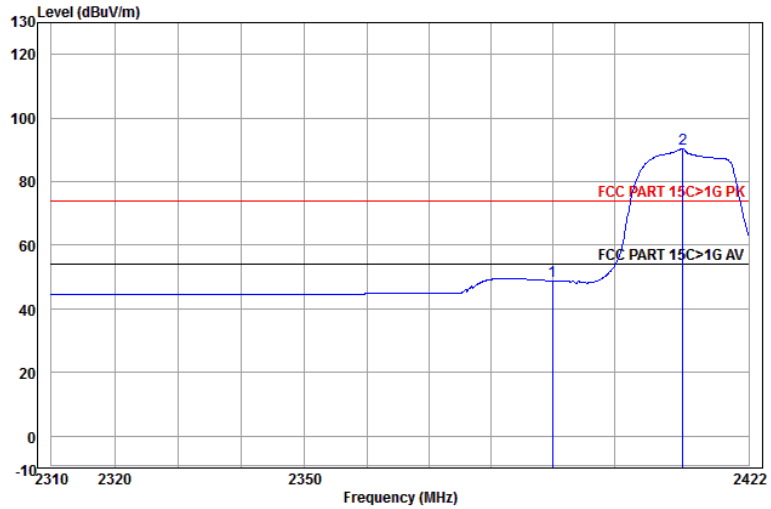
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2460.667	32.67	3.11	55.25	91.03	54.00	37.03	Vertical	Average
2	2483.500	32.71	3.12	10.36	46.19	54.00	-7.81	Vertical	Average

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



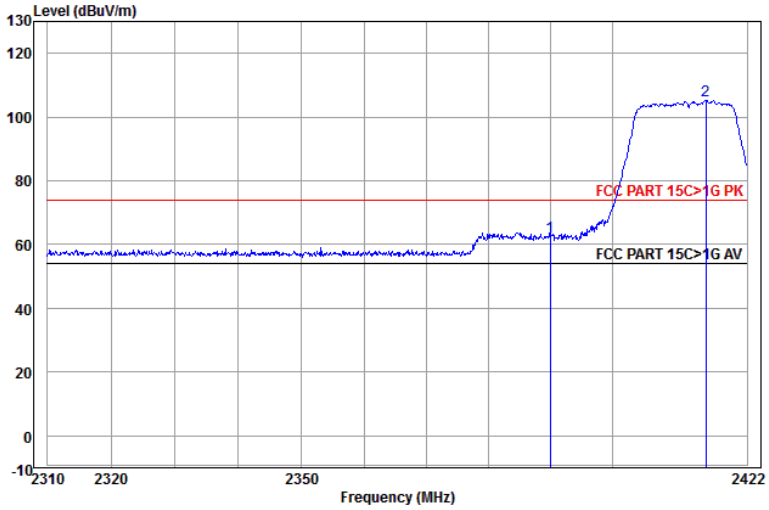
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	27.43	63.03	74.00	-10.97	Horizontal	
2 pp	2415.358	32.58	3.08	69.33	104.99	74.00	30.99	Horizontal	

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



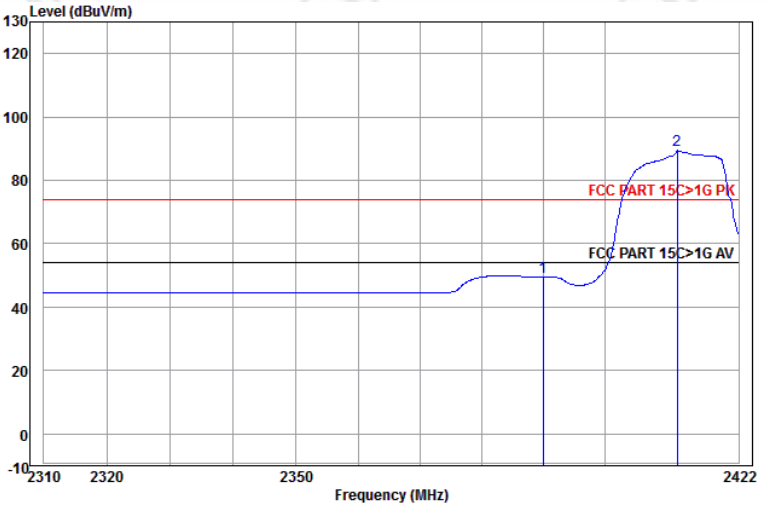
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	13.32	48.92	54.00	-5.08	Horizontal	Average
2 pp	2411.245	32.58	3.08	54.73	90.39	54.00	36.39	Horizontal	Average

Worse case mode:	802.11g (6Mbps)		
Frequency: 2390.0MHz	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	26.91	62.51	74.00	-11.49	Vertical	
2 pp	2415.244	32.58	3.08	69.56	105.22	74.00	31.22	Vertical	

Worse case mode:	802.11g (6Mbps)		
Frequency: 2390.0MHz	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	2389.990	32.53	3.07	13.85	49.45	54.00	-4.55	Vertical	Average
2 pp	2411.930	32.58	3.08	53.81	89.47	54.00	35.47	Vertical	Average