TEST REPORT

Product	:	70mai Dash Cam
Trade mark	:	70mai
Model/Type reference	:	Midrive D01
Serial Number	:	N/A
Report Number	:	EED32J00286701
FCC ID	:	2AOK9-MIDRIVED01
Date of Issue	:	Mar. 12, 2018
Test Standards	:	47 CFR Part 15 Subpart C
Test result	:	PASS

Prepared for:

70mai Co., Ltd.
Room 2220, building 2, No. 588, Zixing road, MinHang District, Shanghai.CHINA

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China
TEL: +86-755-3368 3668
FAX: +86-755-3368 3385

Tested By:	Tom- chen	Compiled by:	Mill chen
	Tom chen (Test Project)		Mill chen (Project Engineer)
Reviewed by:	Kevin Yang	Approved by:	Sheek. Luo
	Kevin yang (Reviewer)		Sheek Luo (Lab supervisor)
Date:	Mar. 12, 2018		Check No.:3319541486

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2 Version

Version No.	Date	Description
00	Mar. 12, 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	N/A
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.

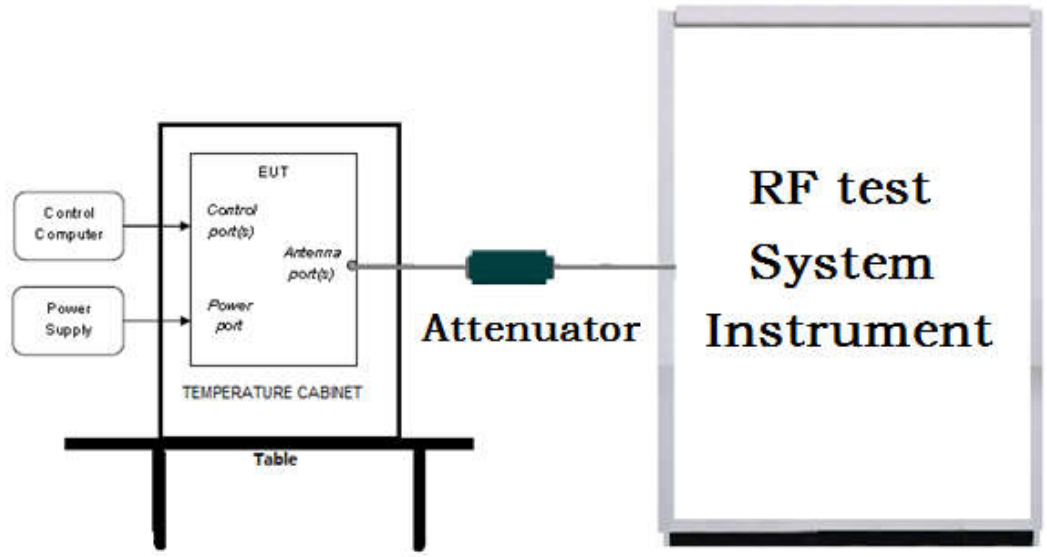
N/A: The tested sample is used in the vehicle, which has no AC mains input/output port , therefore it is not applicable.

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:

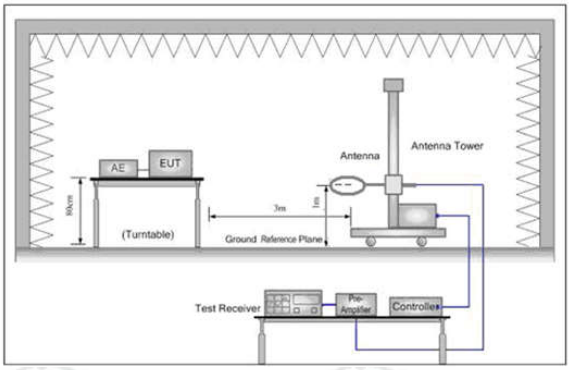


Figure 1. Below 30MHz

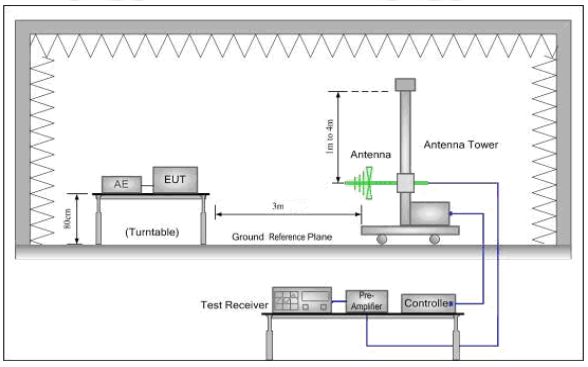


Figure 2. 30MHz to 1GHz

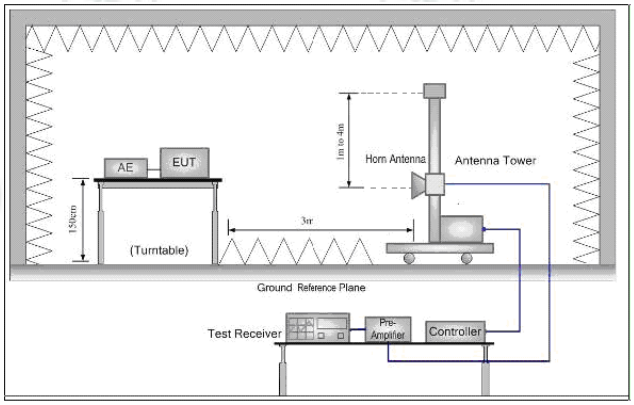
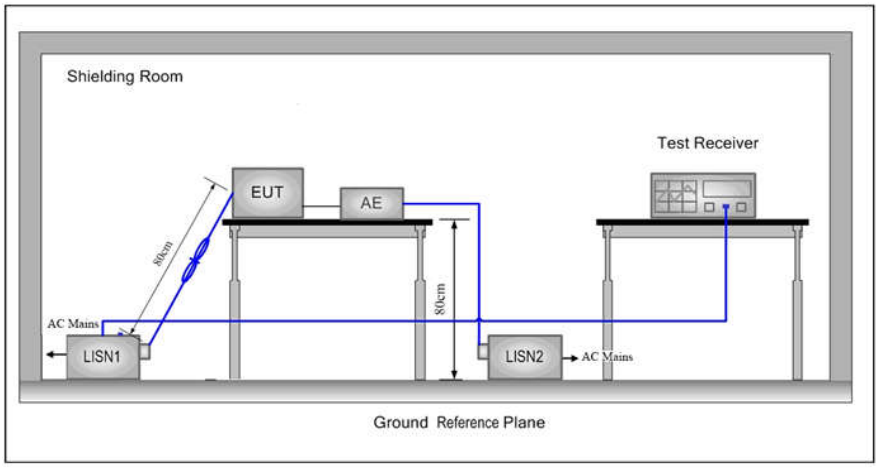


Figure 3. Above 1GHz

5.1.3 For Conducted Emissions test setup

Conducted Emissions setup



5.2 Test Environment

Operating Environment:	
Temperature:	26.5°C
Humidity:	58 % 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 transmitted the continuous modulation test 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)	**16.23**	**17.54**	**18.01**	**18.42**

Mode	**802.11g**							
Data Rate	**6Mbps**	**9Mbps**	**12Mbps**	**18Mbps**	**24Mbps**	**36Mbps**	**48Mbps**	**54Mbps**
Power(dBm)	**19.89**	**19.23**	**18.49**	**18.11**	**17.95**	**17.59**	**17.21**	**17.03**

Mode	**802.11n (HT20)**							
Data Rate	**6.5Mbps**	**13Mbps**	**19.5Mbps**	**26Mbps**	**39Mbps**	**52Mbps**	**58.5Mbps**	**65Mbps**
Power(dBm)	**18.75**	**18.21**	**18.08**	**17.97**	**17.54**	**17.11**	**16.86**	**16.27**

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:	70mai Co., Ltd.
Address of Applicant:	Room 2220, building 2, No. 588, Zixing road, MinHang District, Shanghai.CHINA
Manufacturer:	70mai Co., Ltd.
Address of Manufacturer:	Room 2220, building 2, No. 588, Zixing road, MinHang District, Shanghai.CHINA
Factory:	Dongguan Apical Electronics Co., Ltd.
Address of Factory:	6#, Shunxing 5 Rd, No.2 Industrial zone, Dajingtou, Dalang Town, DongGuang City

6.2 General Description of EUT

Product Name:	70mai Dash Cam
Mode No.(EUT):	Midrive D01
Trade Mark:	70mai
EUT Supports Radios application	WiFi b/g/n20 , 2412MHz-2462MHz
Firmware Version:	1.0.3.ww
Hardware Version:	DR0002-MAIN-01B-05
Power Supply:	DC12 V
Test Voltage:	DC12 V
Sample Received Date:	Dec. 15, 2017
Sample tested Date:	Dec. 15, 2017 to Jan. 04, 2018

6.3 Product Specification subjective to this standard

Operation Frequency:	WiFi b/g/n20 , 2412MHz-2462MHz
Channel Numbers:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels
Channel Separation:	5MHz
Type of Modulation:	DSSS, OFDM
Sample Type:	Portable
Test Power Grade:	N/A(manufacturer declare)
Test software of EUT	Realtek V1.0
Antenna Type:	FPC antenna
Antenna Gain:	-0.11dBi

Operation Frequency each of channel(802.11b/g/n HT20)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

6.4 Description of Support Units

The EUT has been tested with associated equipment below.

Description	Manufacturer	Model No.	Certification	Supplied by
Power Adapter	Xiaomi Communications Co., Ltd.	CZCDQ01BY	FCC VOC	Client

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 33683668 Fax:+86 (0) 755 33683385
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

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
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	---	01-11-2018	01-10-2019
DC Power	Keysight	E3642A	MY54436035	03-14-2017	03-31-2018
power meter & power sensor	R&S	OSP120	101374	03-14-2017	03-13-2018
RF control unit	JS Tonscend	JS0806-2	158060006	03-14-2017	03-13-2018
BT&WI-FI Automatic test software	JS Tonscend	JS1120-2	---	03-14-2017	03-31-2018

3M Semi/full-anechoic Chamber					
Equipment	**Manufacturer**	**Mode No.**	**Serial Number**	**Cal. date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
Receiver	R&S	ESCI	100435	06-14-2017	06-13-2018
Multi device Controller	maturo	NCD/070/10711 112	---	01-11-2018	01-10-2019
Horn Antenna	ETS-LINGREN	3117	00057410	06-30-2015	06-28-2018
Spectrum Analyzer	R&S	FSP40	100416	06-13-2017	06-12-2018
Preamplifier	JS Tonscend	EMC051845SE	980380	01-17-2018	01-16-2019
Loop Antenna	ETS-LINDGREN	6502	00071730	06-22-2017	06-21-2019
3M Chamber&Accessory Equipment	TDK	SAC-3	---	06-04-2016	06-03-2019
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	617	04-10-2017	04-09-2018
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
High-pass filter	Sinoscite	FL3CX03WG18 NM12-0398-002	---	01-11-2018	01-10-2019

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:

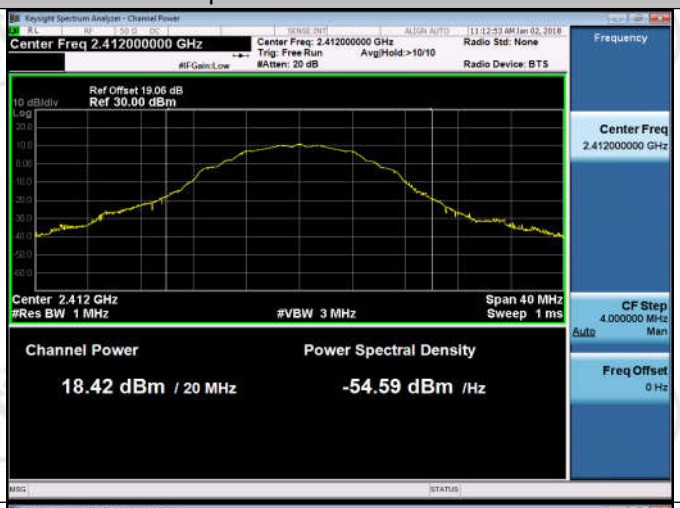
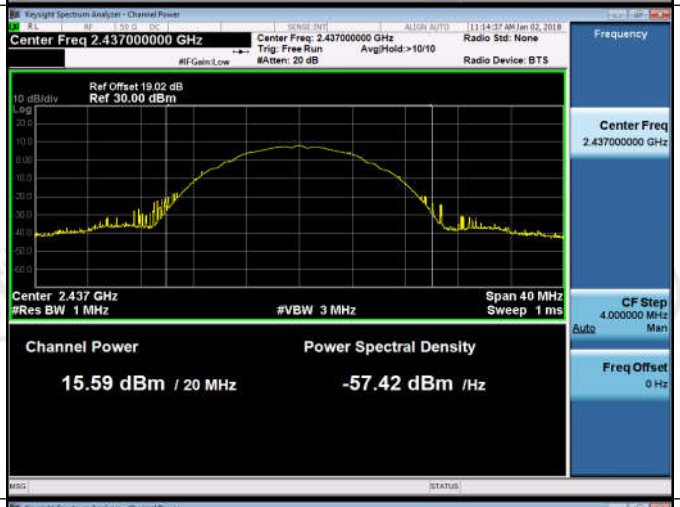
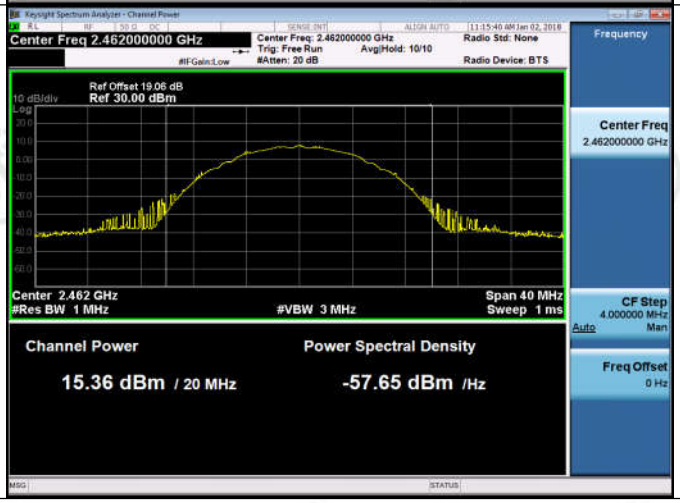
Test Requirement	Test method	Test item	Verdict	Note
Part15C Section 15.247 (b)(3)	ANSI C63.10/ KDB 558074	Conducted Peak Output Power	PASS	Appendix A)
Part15C Section 15.247 (a)(2)	ANSI C63.10/ KDB 558074	6dB Occupied Bandwidth	PASS	Appendix B)
Part15C Section 15.247(d)	ANSI C63.10/ KDB 558074	Band-edge 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	N/A	N/A
Part15C Section 15.205/15.209	ANSI C63.10	Restricted bands around fundamental frequency (Radiated Emission)	PASS	Appendix G)
Part15C Section 15.205/15.209	ANSI C63.10	Radiated Spurious Emissions	PASS	Appendix H)

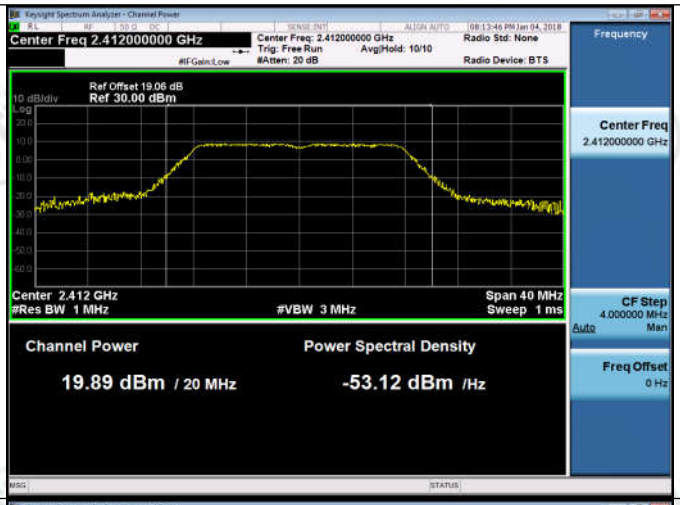
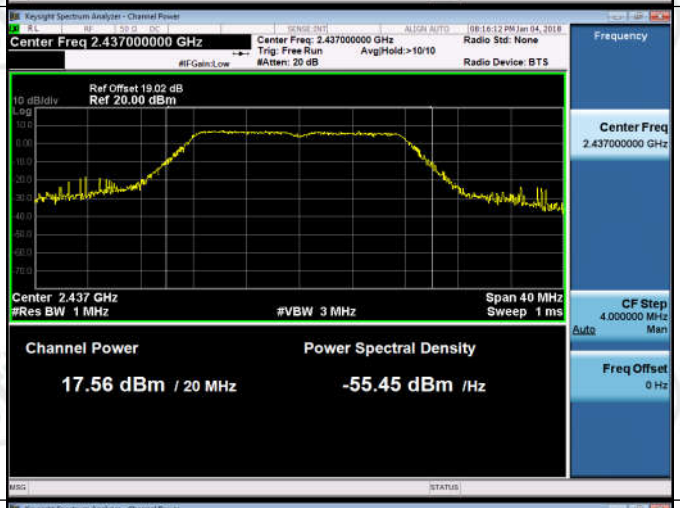
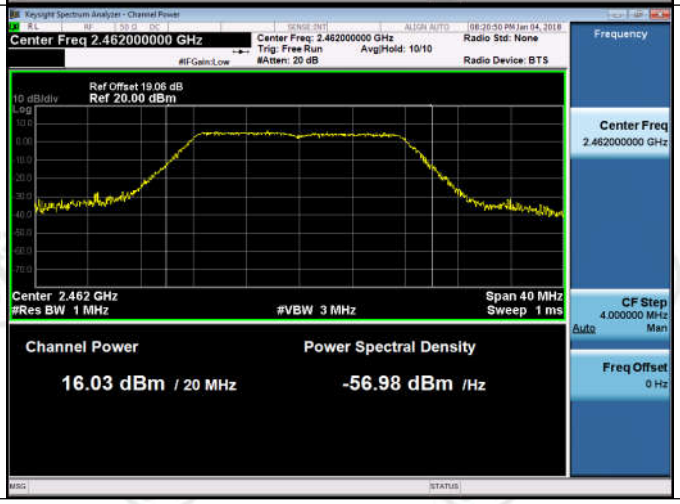
Appendix A): Conducted Peak Output Power

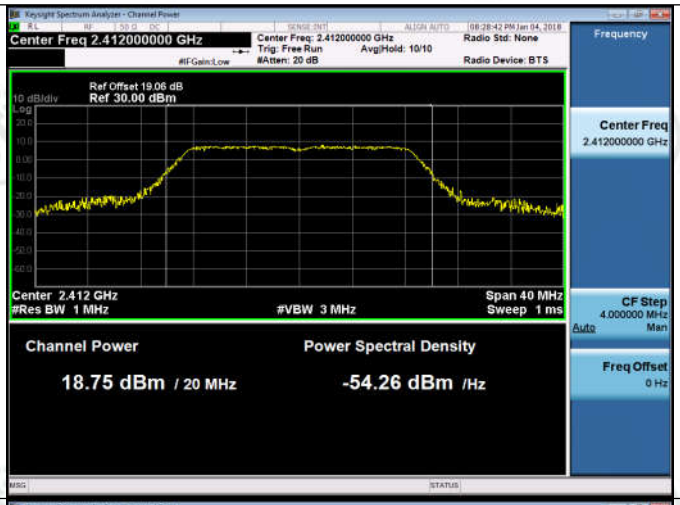
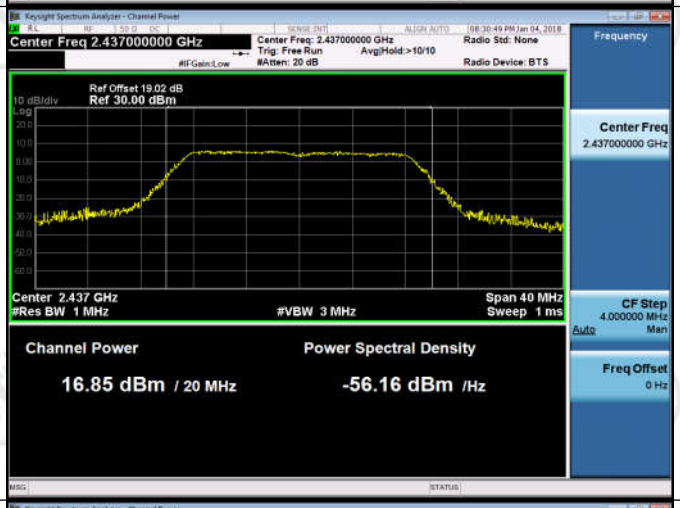
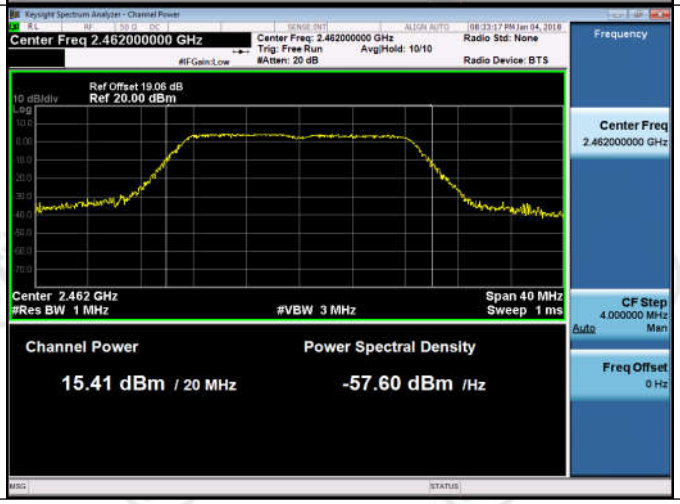
Result Table

Mode	Channel	Conducted Peak Output Power [dBm]	Verdict
11B	LCH	18.42	PASS
11B	MCH	15.59	PASS
11B	HCH	15.36	PASS
11G	LCH	19.89	PASS
11G	MCH	17.56	PASS
11G	HCH	16.03	PASS
11N20SISO	LCH	18.75	PASS
11N20SISO	MCH	16.85	PASS
11N20SISO	HCH	15.41	PASS

Test Graph

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

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

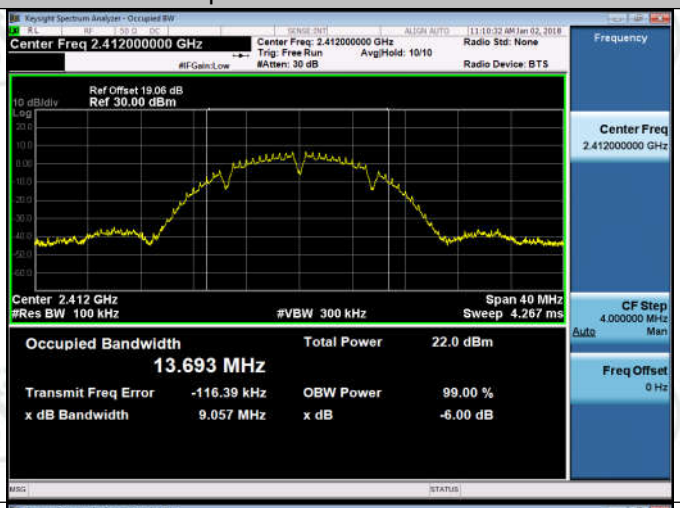
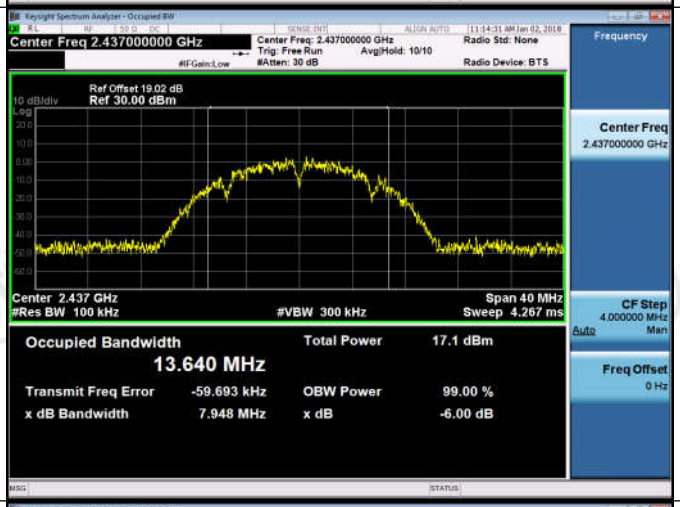
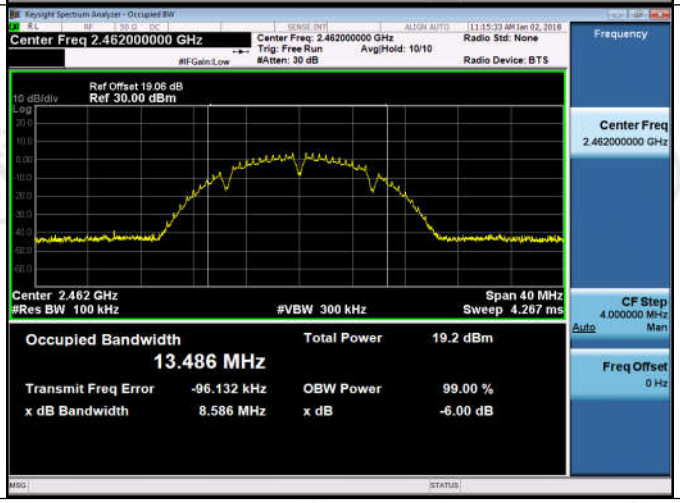
11N20SISO/LCH			
11N20SISO/MCH			
11N20SISO/HCH			

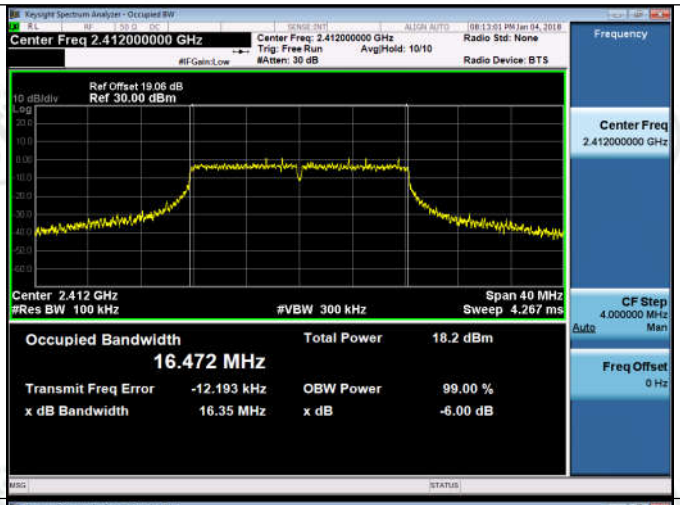
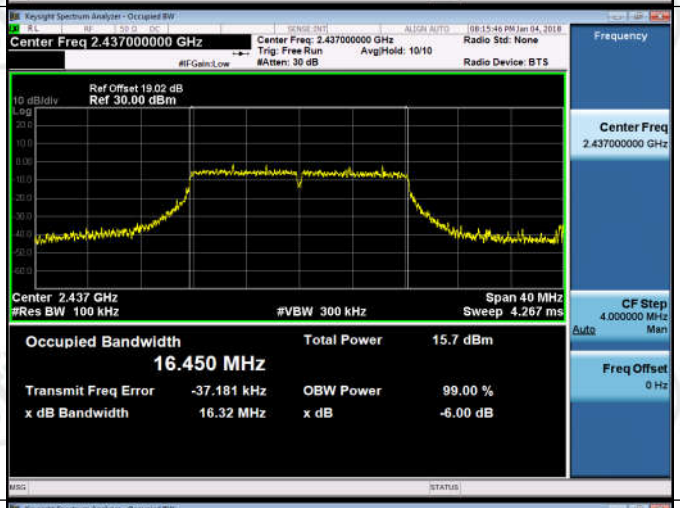
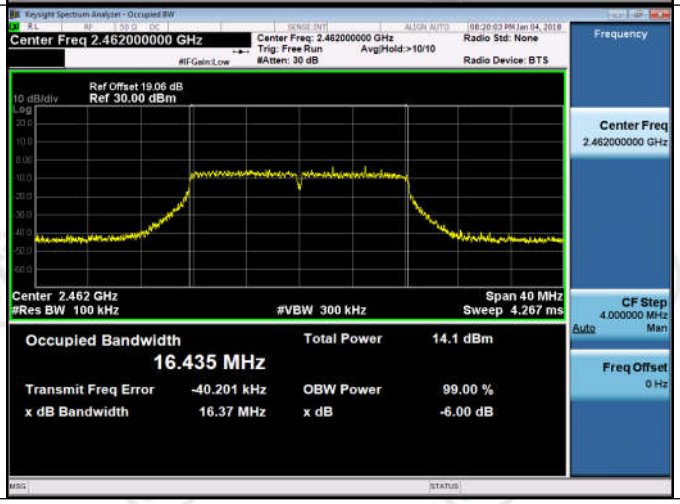
Appendix B): 6dB Occupied Bandwidth

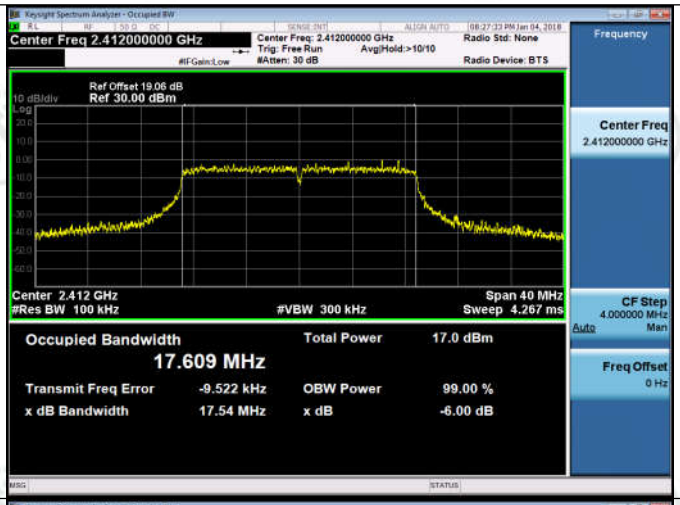
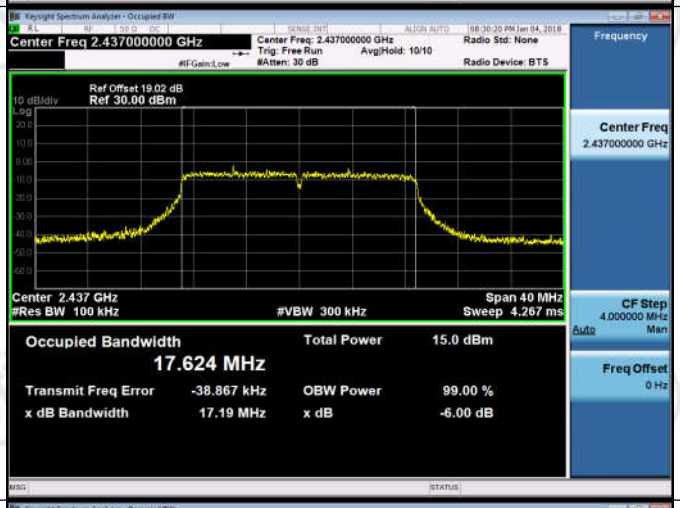
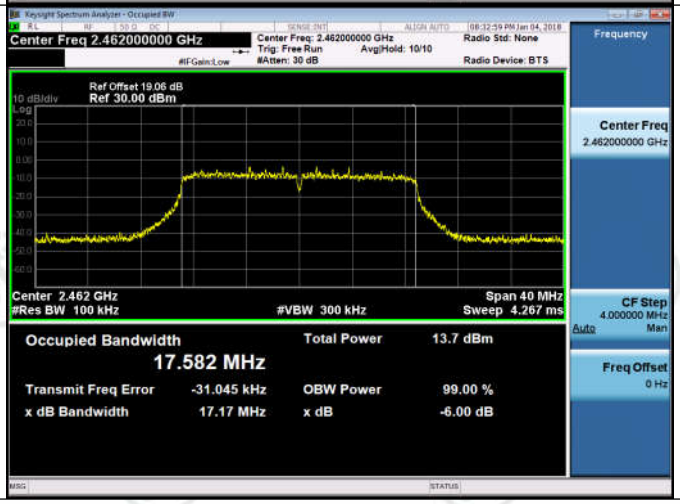
Result Table

Mode	Channel	6dB Bandwidth [MHz]	99% OBW [MHz]	Verdict	Remark
11B	LCH	9.057	13.693	PASS	Peak detector
11B	MCH	7.948	13.640	PASS	
11B	HCH	8.586	13.486	PASS	
11G	LCH	16.35	16.472	PASS	
11G	MCH	16.32	16.450	PASS	
11G	HCH	16.37	16.435	PASS	
11N20SISO	LCH	17.54	17.609	PASS	
11N20SISO	MCH	17.19	17.624	PASS	
11N20SISO	HCH	17.17	17.582	PASS	

Test Graph

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

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

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

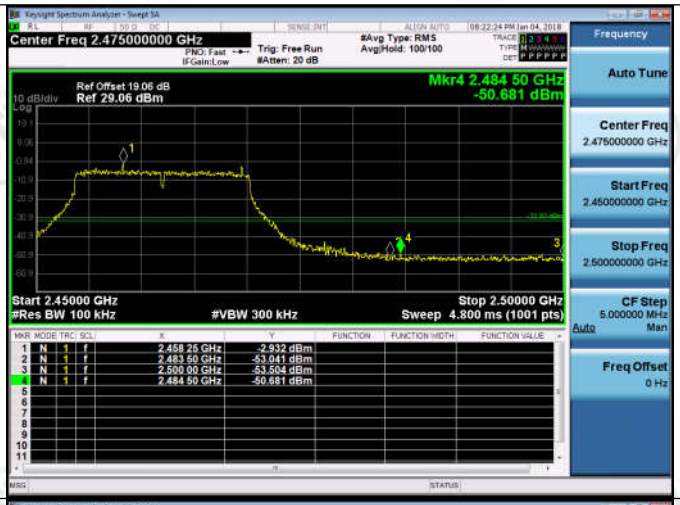
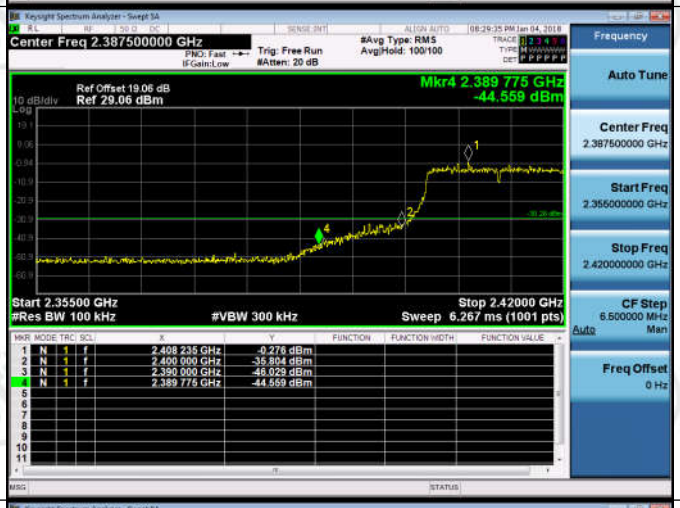
Appendix C): Band-edge for RF Conducted Emissions

Result Table

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	6.196	-49.285	-23.8	PASS
11B	HCH	3.932	-50.134	-26.07	PASS
11G	LCH	0.824	-44.204	-29.18	PASS
11G	HCH	-2.932	-50.681	-32.93	PASS
11N20SISO	LCH	-0.276	-44.559	-30.28	PASS
11N20SISO	HCH	-3.220	-50.730	-33.22	PASS

Test Graph

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

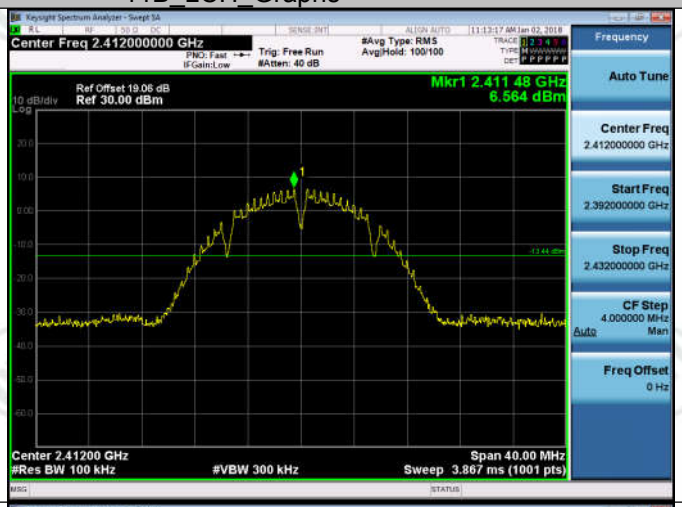
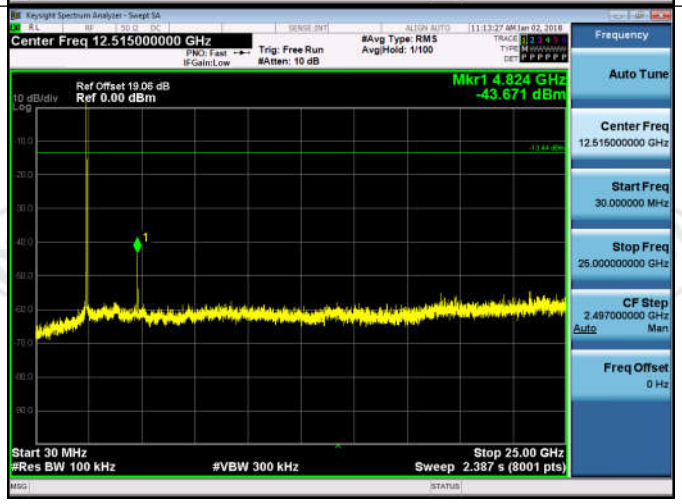
11G/HCH			
11N20SISO/LCH			
11N20SISO/HCH			

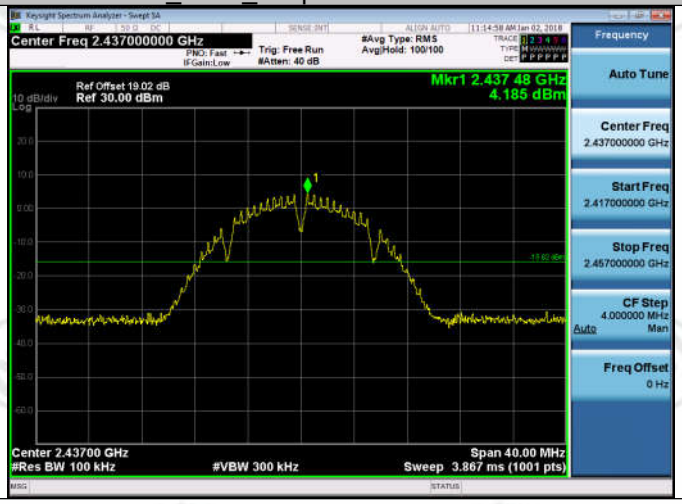
Appendix D): RF Conducted Spurious Emissions

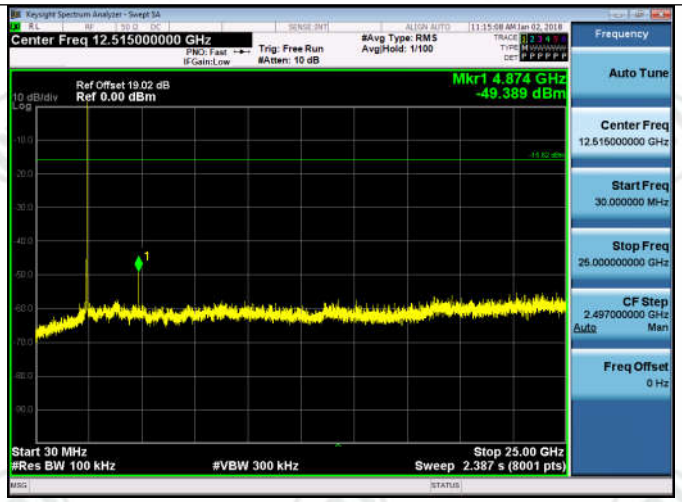
Result Table

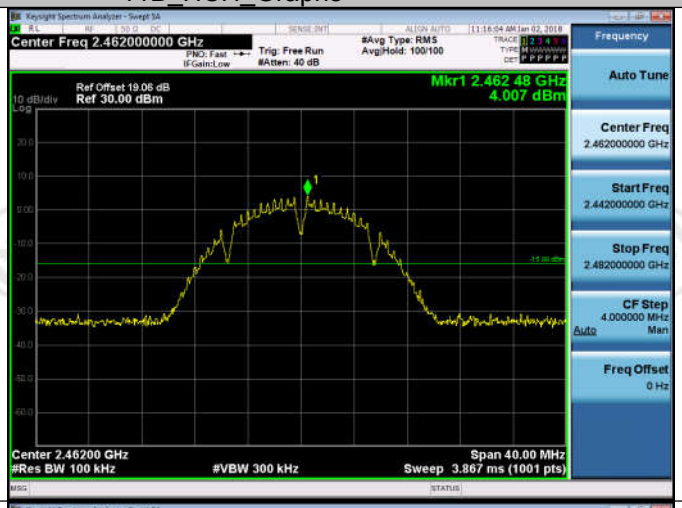
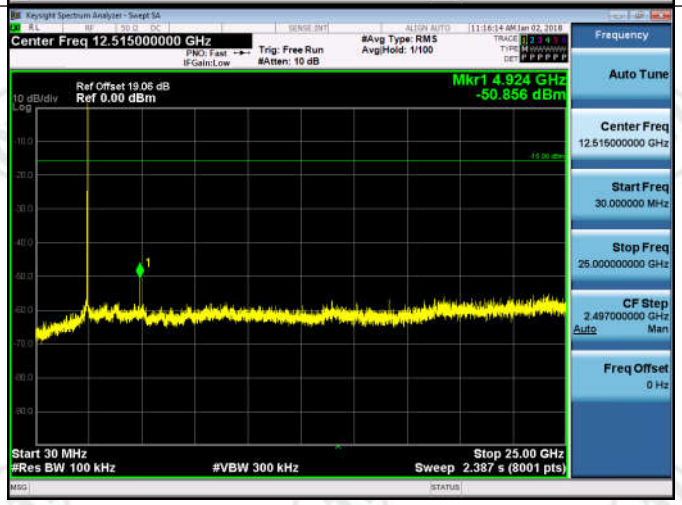
Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
11B	LCH	6.564	<Limit	PASS
11B	MCH	4.185	<Limit	PASS
11B	HCH	4.007	<Limit	PASS
11G	LCH	1.293	<Limit	PASS
11G	MCH	-1.028	<Limit	PASS
11G	HCH	-2.831	<Limit	PASS
11N20SISO	LCH	-0.296	<Limit	PASS
11N20SISO	MCH	-1.84	<Limit	PASS
11N20SISO	HCH	-3.078	<Limit	PASS

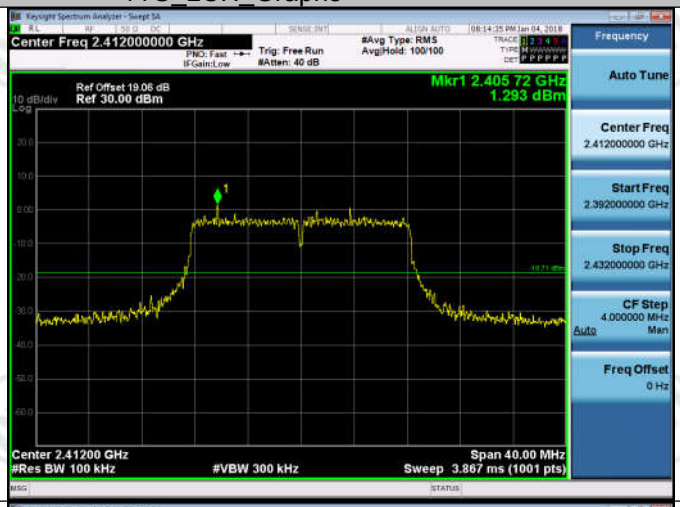
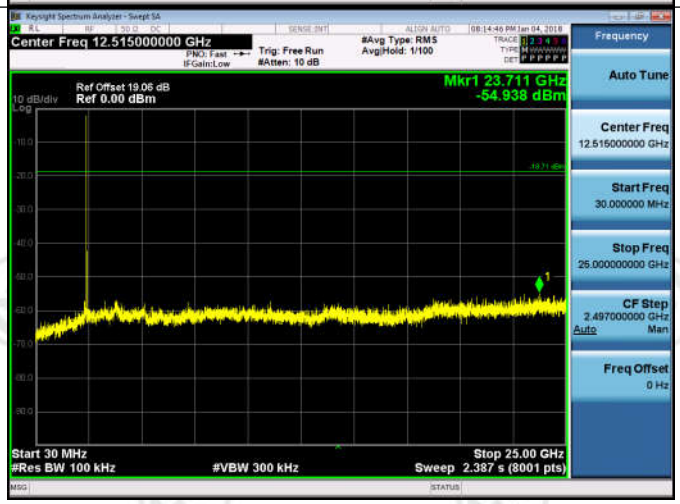
Test Graph

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

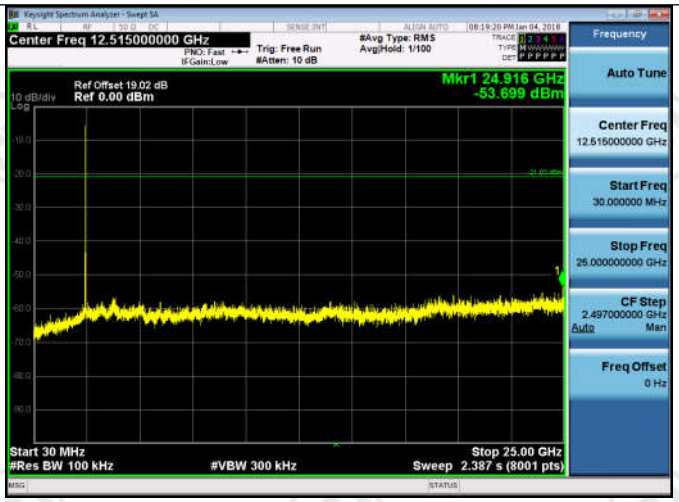
11B_MCH_Graphs	
Pref/11B/MCH	

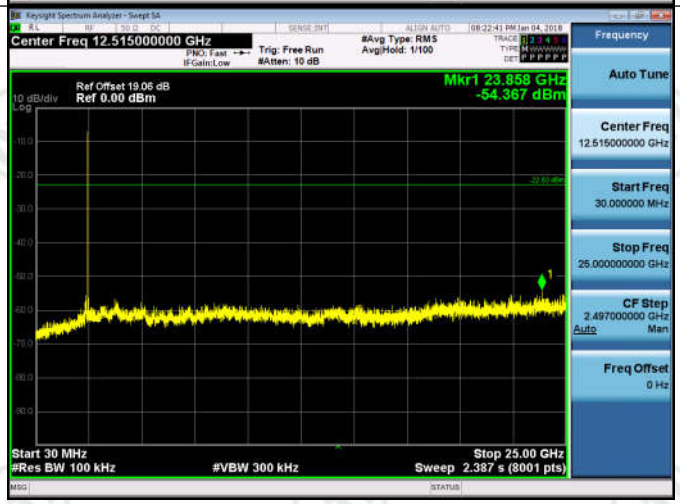
Puw/11B/MCH	

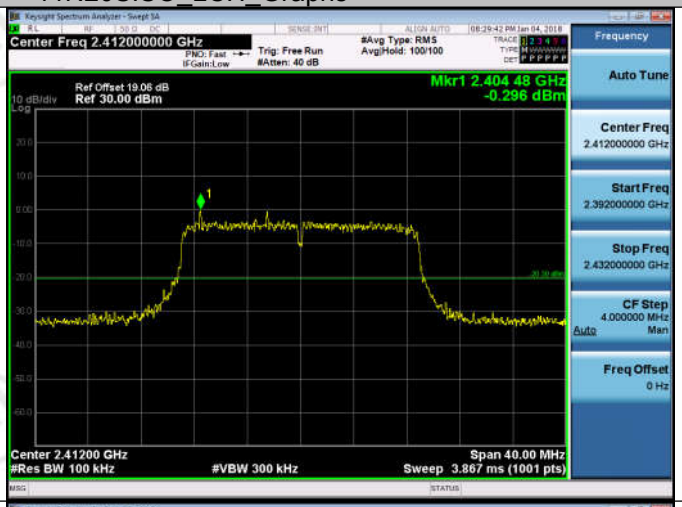
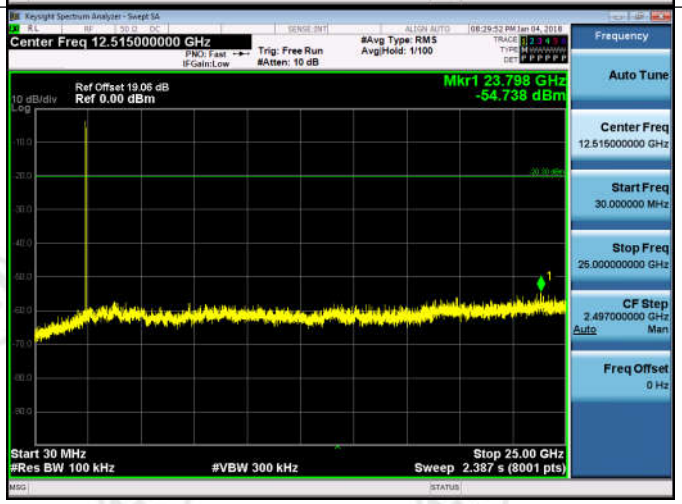
11B_HCH_Graphs	
Pref/11B/HCH	
Puw/11B/HCH	

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

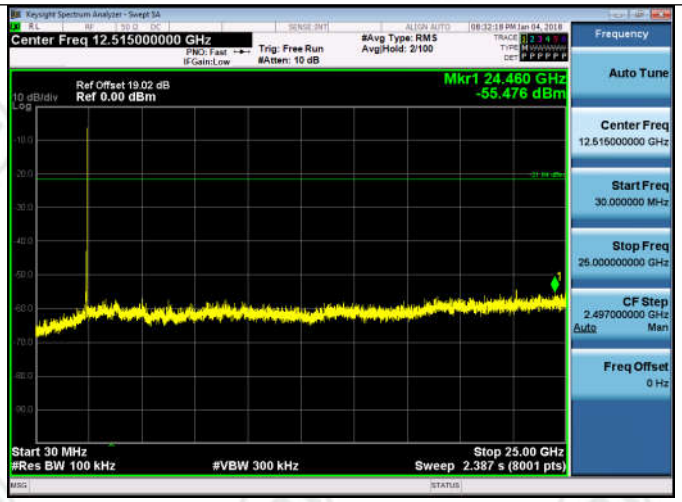
11G_MCH_Graphs	
Pref/11G/MCH	

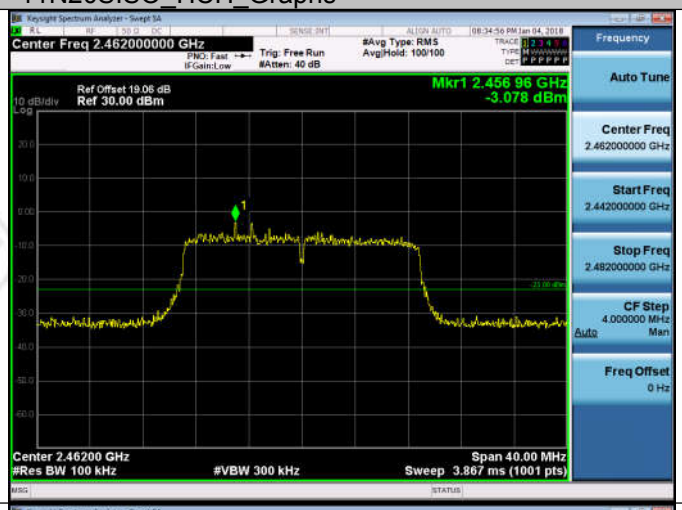
Puw/11G/MCH	

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	

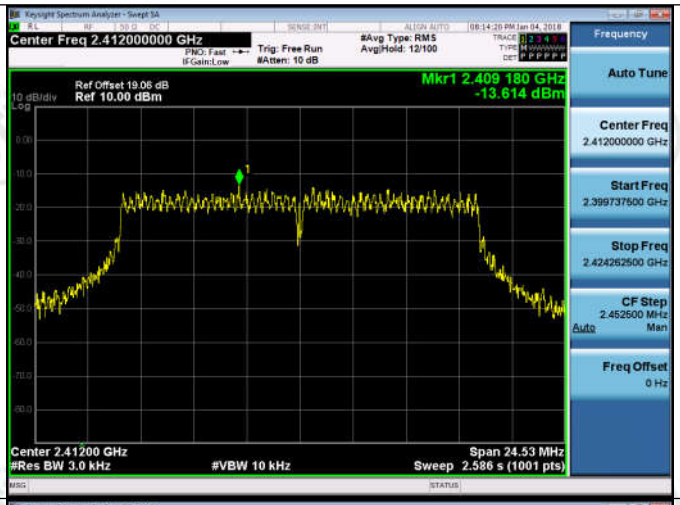
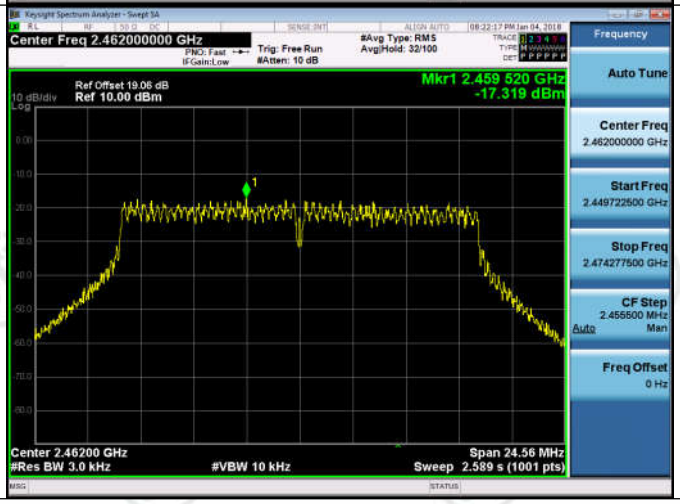
Appendix E): Power Spectral Density

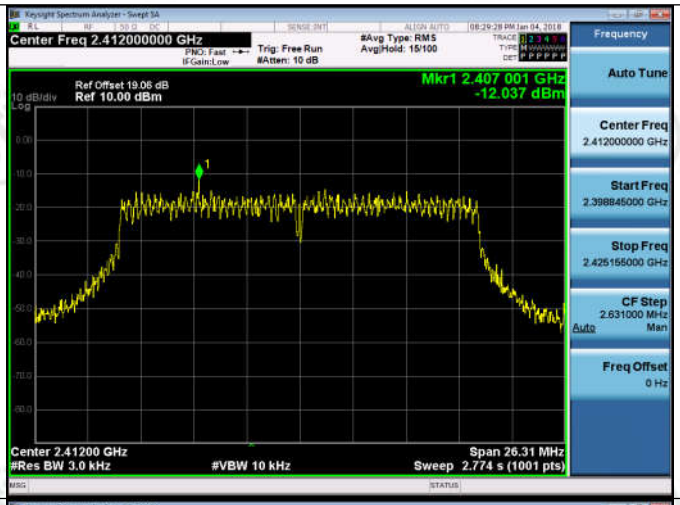
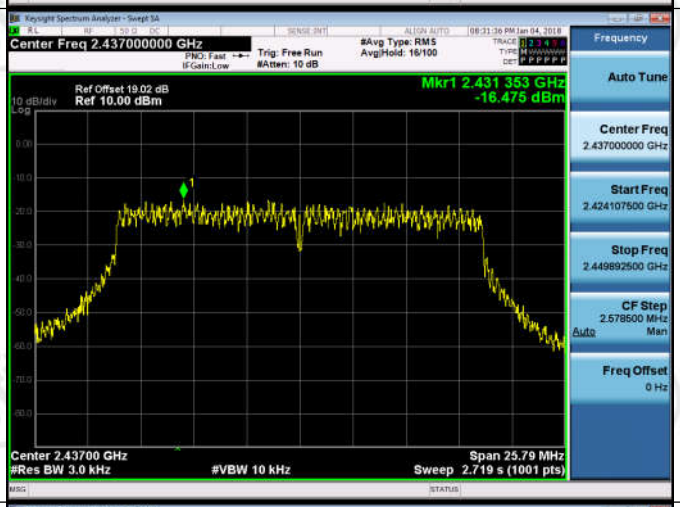
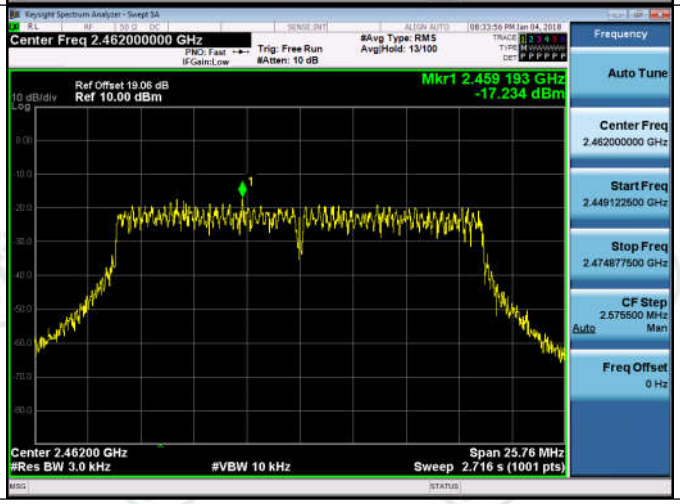
Result Table

Mode	Channel	Power Spectral Density [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	LCH	-8.100	8	PASS
11B	MCH	-6.564	8	PASS
11B	HCH	-11.272	8	PASS
11G	LCH	-13.614	8	PASS
11G	MCH	-15.586	8	PASS
11G	HCH	-17.319	8	PASS
11N20SISO	LCH	-12.037	8	PASS
11N20SISO	MCH	-16.475	8	PASS
11N20SISO	HCH	-17.234	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

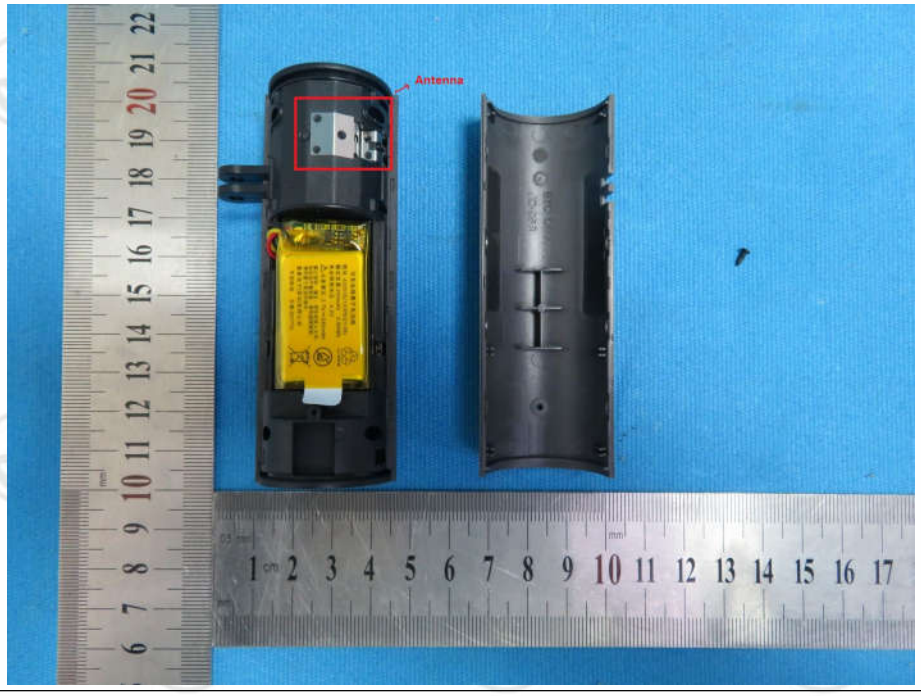
15.203 requirement:

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 -0.11dBi.

Appendix G): 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:

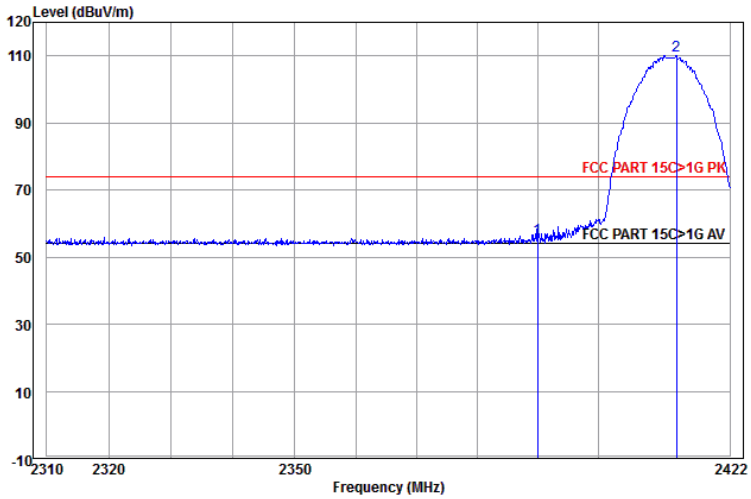
g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter).
h. Test the EUT in the lowest channel , the Highest channel
i. The radiation measurements are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

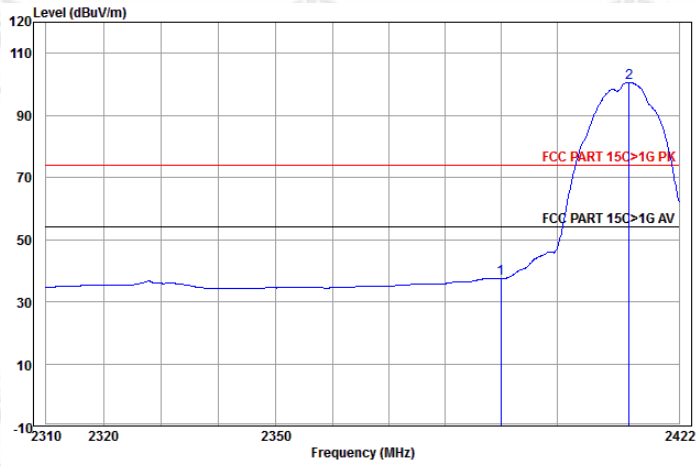
Test plot as follows:

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



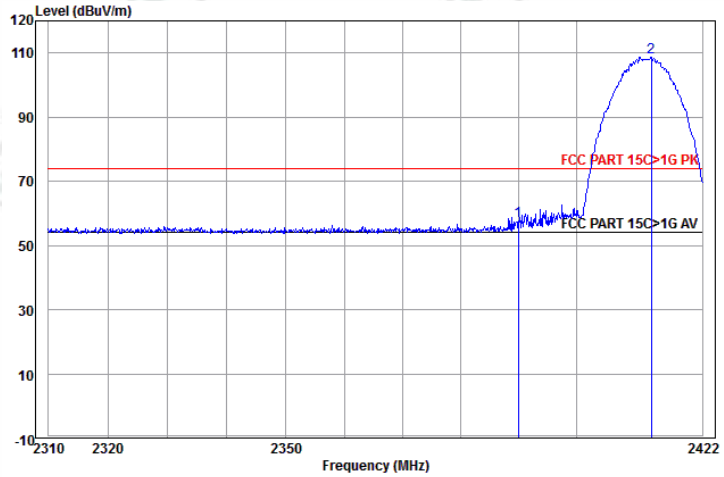
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	19.92	55.52	74.00	-18.48	Horizontal	
2 pp	2413.072	32.58	3.08	74.52	110.18	74.00	36.18	Horizontal	

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



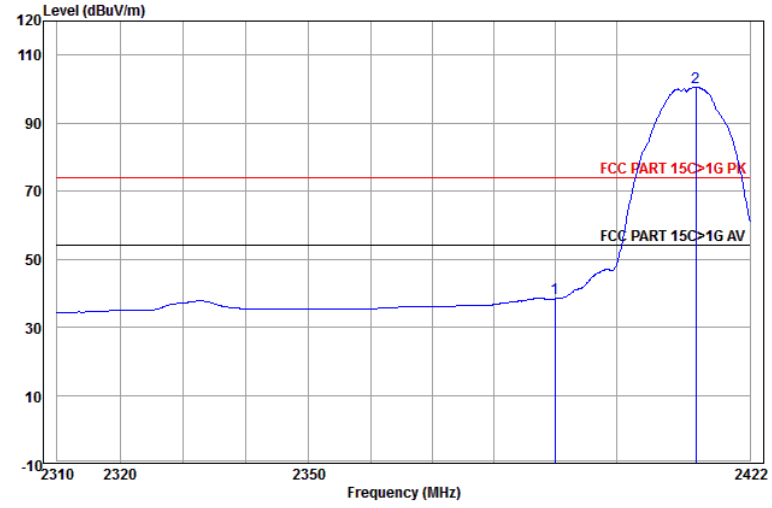
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	1.80	37.40	54.00	-16.60	Horizontal	Average
2 pp	2412.958	32.58	3.08	64.91	100.57	54.00	46.57	Horizontal	Average

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



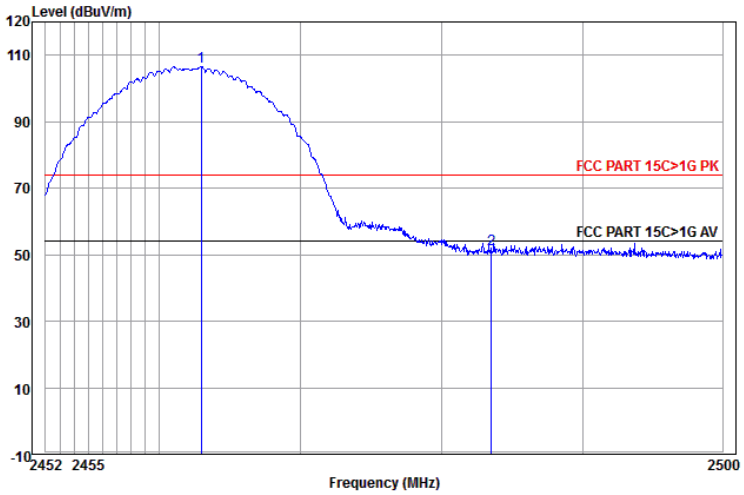
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	22.18	57.78	74.00	-16.22	Vertical	
2 pp	2413.072	32.58	3.08	73.13	108.79	74.00	34.79	Vertical	

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



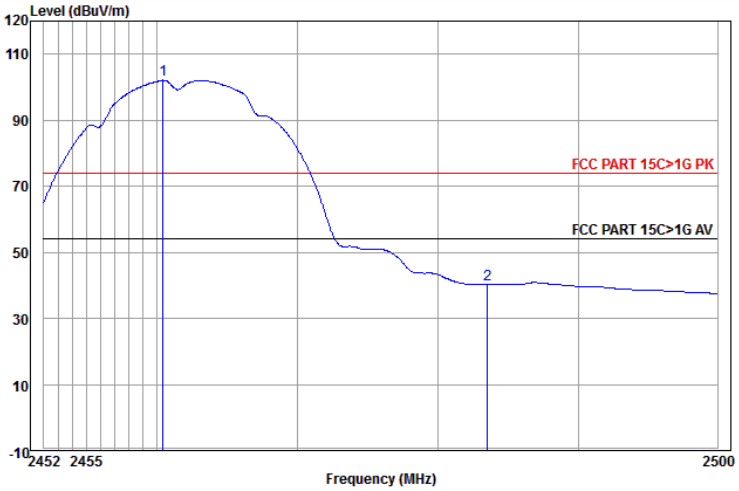
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	2.75	38.35	54.00	-15.65	Vertical	Average
2 pp	2413.072	32.58	3.08	64.83	100.49	54.00	46.49	Vertical	Average

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



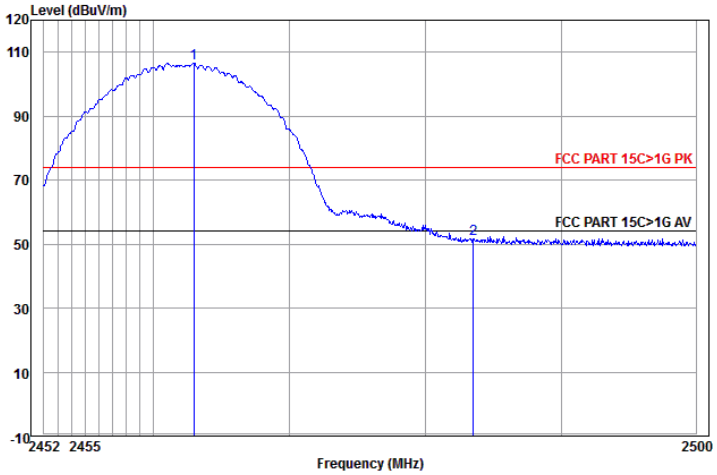
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2462.958	32.68	3.11	70.89	106.68	74.00	32.68	Horizontal	
2	2483.500	32.71	3.12	15.93	51.76	74.00	-22.24	Horizontal	

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



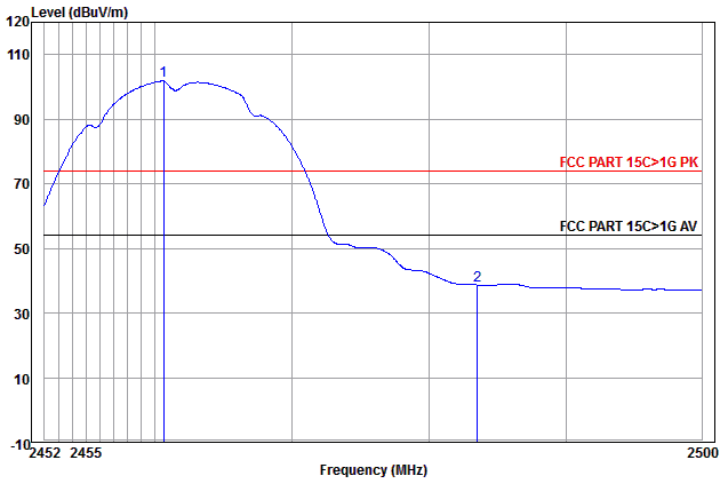
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2460.428	32.67	3.11	66.33	102.11	54.00	48.11	Horizontal	Average
2	2483.500	32.71	3.12	4.43	40.26	54.00	-13.74	Horizontal	Average

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



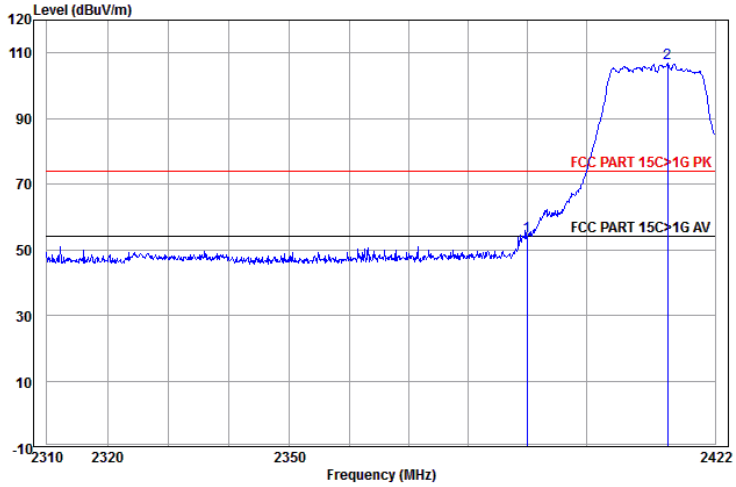
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2462.958	32.68	3.11	70.78	106.57	74.00	32.57	Vertical	
2	2483.500	32.71	3.12	15.85	51.68	74.00	-22.32	Vertical	

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



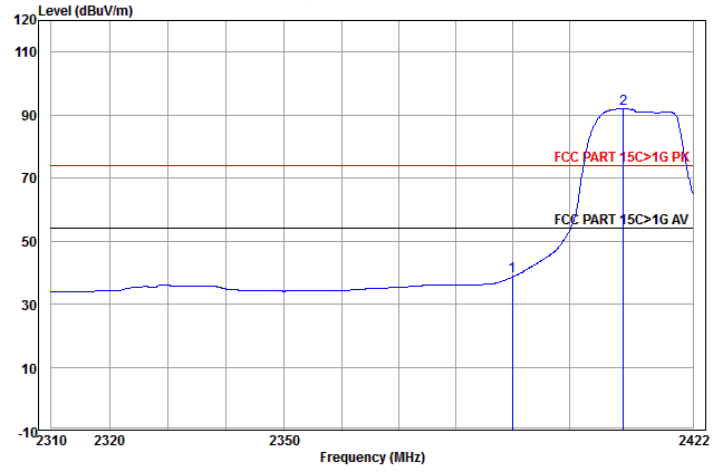
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2460.619	32.67	3.11	66.02	101.80	54.00	47.80	Vertical	Average
2	2483.500	32.71	3.12	2.87	38.70	54.00	-15.30	Vertical	Average

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



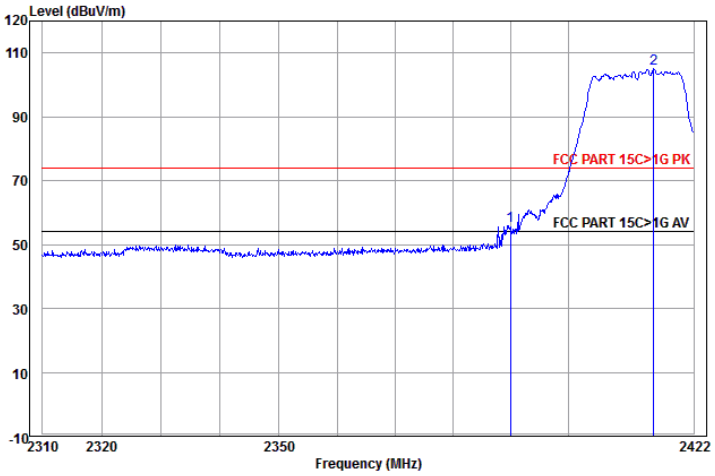
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	18.55	54.15	74.00	-19.85	Horizontal	
2 pp	2413.872	32.58	3.08	71.10	106.76	74.00	32.76	Horizontal	

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



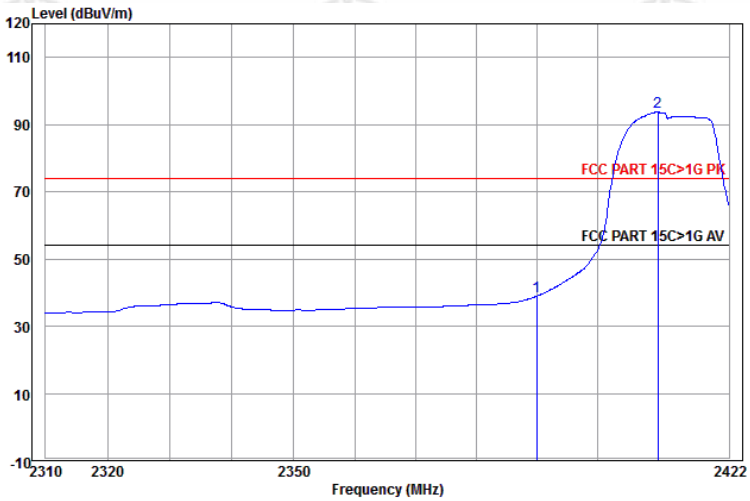
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	3.11	38.71	54.00	-15.29	Horizontal	Average
2 pp	2409.647	32.57	3.08	56.46	92.11	54.00	38.11	Horizontal	Average

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



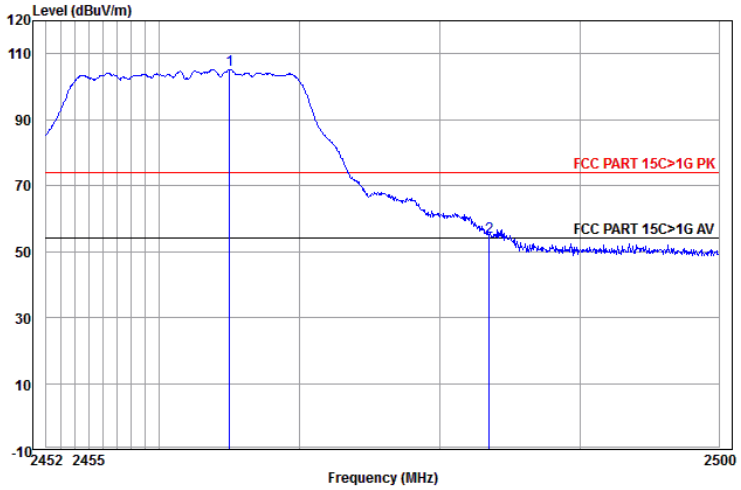
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	20.22	55.82	74.00	-18.18	Vertical	
2 pp	2415.015	32.58	3.08	69.29	104.95	74.00	30.95	Vertical	

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



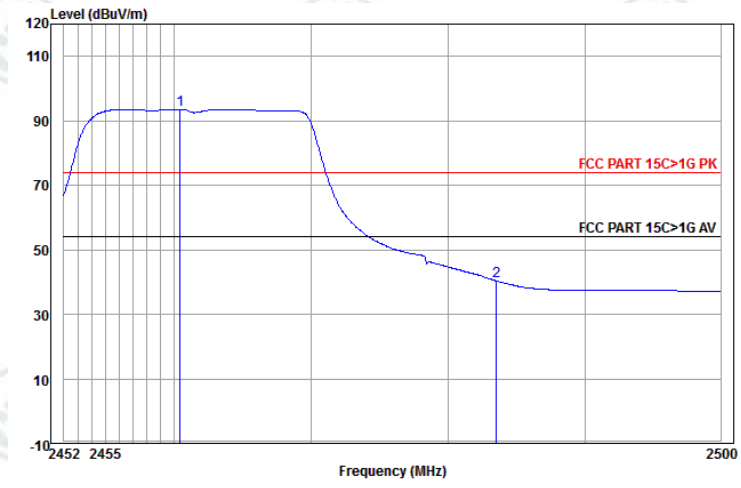
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	3.44	39.04	54.00	-14.96	Vertical	Average
2 pp	2410.104	32.57	3.08	58.08	93.73	54.00	39.73	Vertical	Average

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



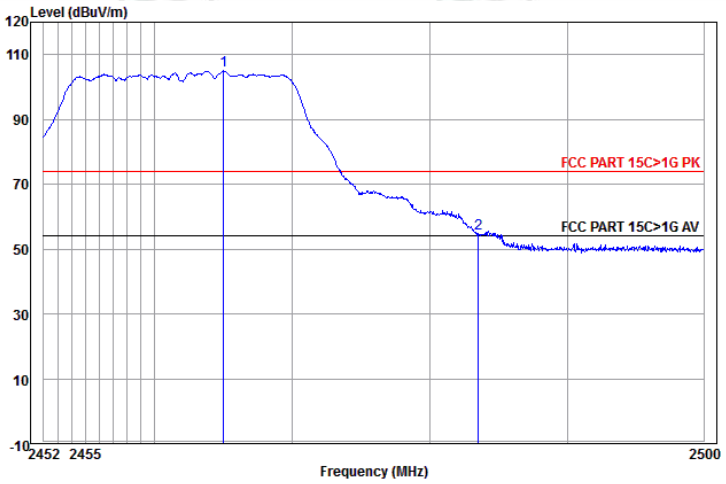
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2465.012	32.68	3.11	69.47	105.26	74.00	31.26	Horizontal	
2	2483.500	32.71	3.12	18.73	54.56	74.00	-19.44	Horizontal	

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



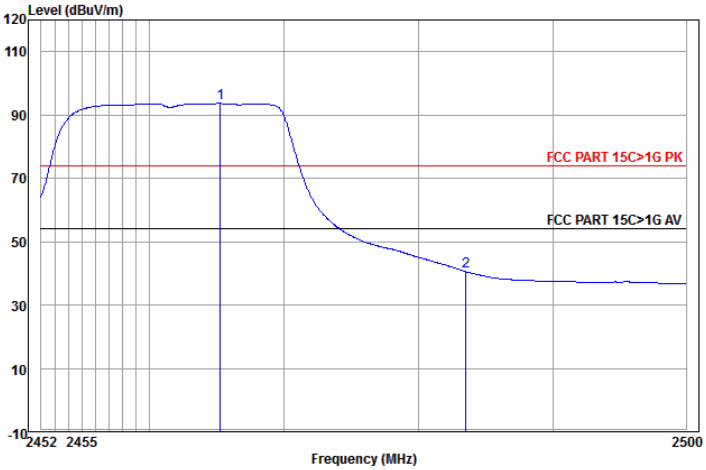
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2460.428	32.67	3.11	57.75	93.53	54.00	39.53	Horizontal	Average
2	2483.500	32.71	3.12	4.58	40.41	54.00	-13.59	Horizontal	Average

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



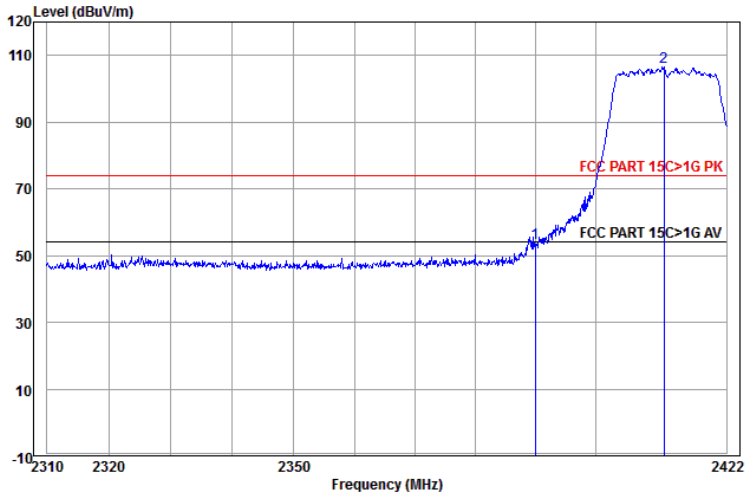
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2465.012	32.68	3.11	69.23	105.02	74.00	31.02	Vertical	
2	2483.500	32.71	3.12	18.88	54.71	74.00	-19.29	Vertical	

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



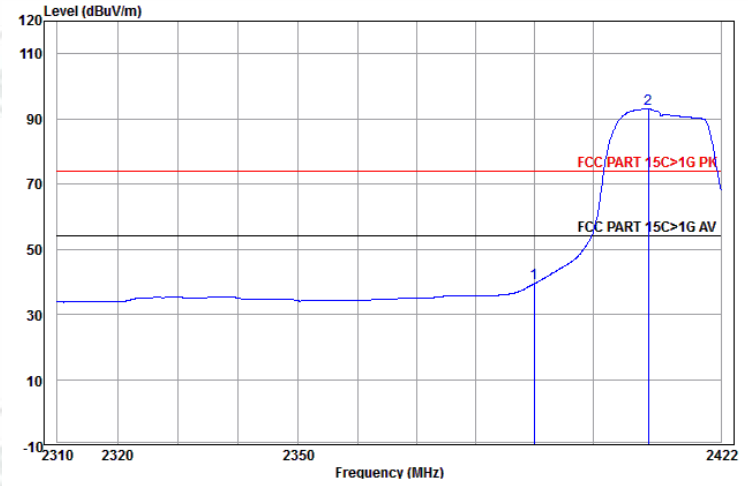
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2465.251	32.68	3.11	57.83	93.62	54.00	39.62	Vertical	Average
2	2483.500	32.71	3.12	4.74	40.57	54.00	-13.43	Vertical	Average

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



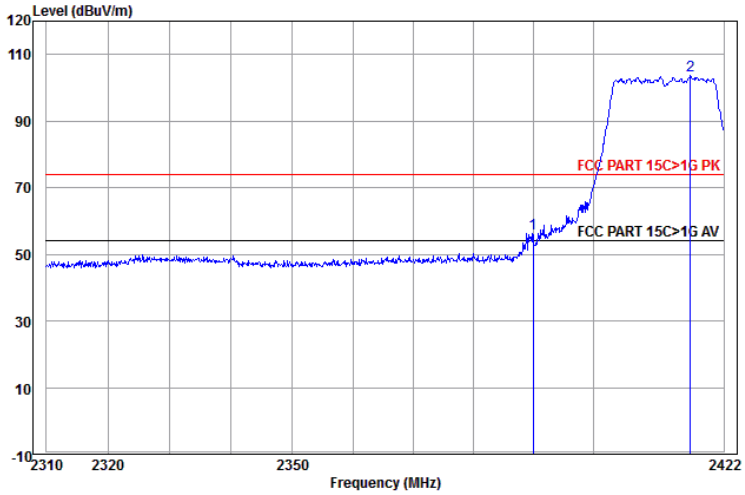
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	18.21	53.81	74.00	-20.19	Horizontal	
2 pp	2411.473	32.58	3.08	70.87	106.53	74.00	32.53	Horizontal	

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



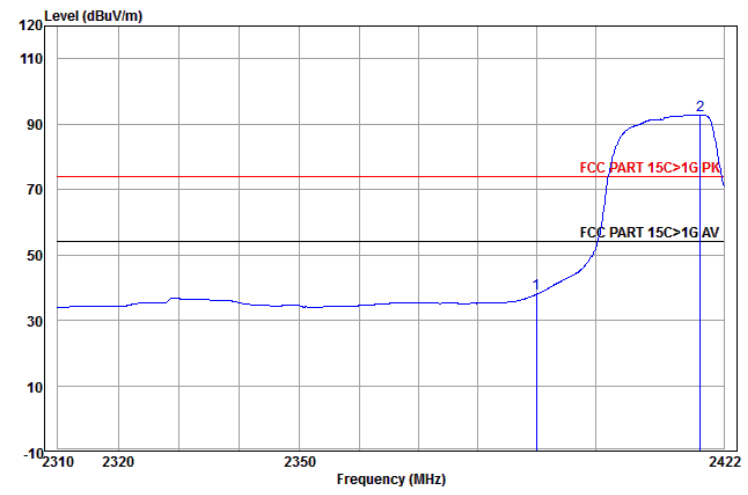
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	3.91	39.51	54.00	-14.49	Horizontal	Average
2 pp	2409.533	32.57	3.08	57.38	93.03	54.00	39.03	Horizontal	Average

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



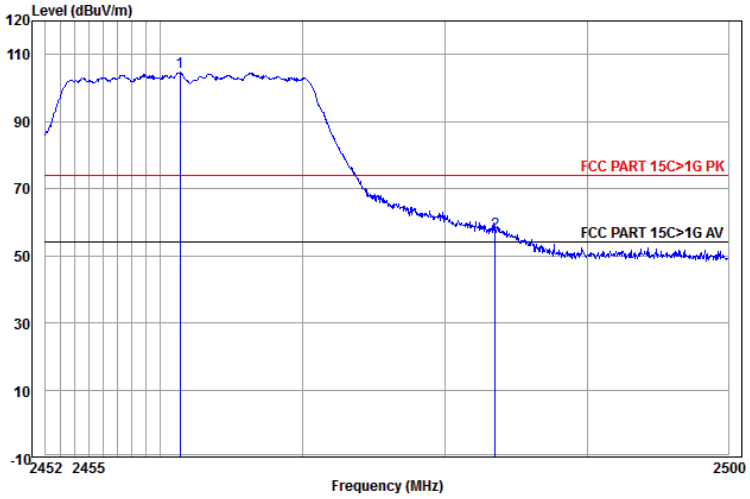
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	20.58	56.18	74.00	-17.82	Vertical	
2 pp	2416.387	32.59	3.08	67.99	103.66	74.00	29.66	Vertical	

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



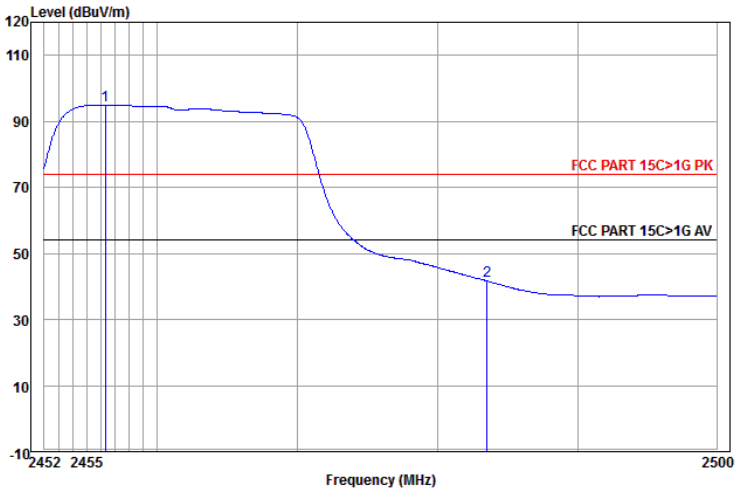
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	2.43	38.03	54.00	-15.97	Vertical	Average
2 pp	2417.990	32.59	3.08	57.08	92.75	54.00	38.75	Vertical	Average

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



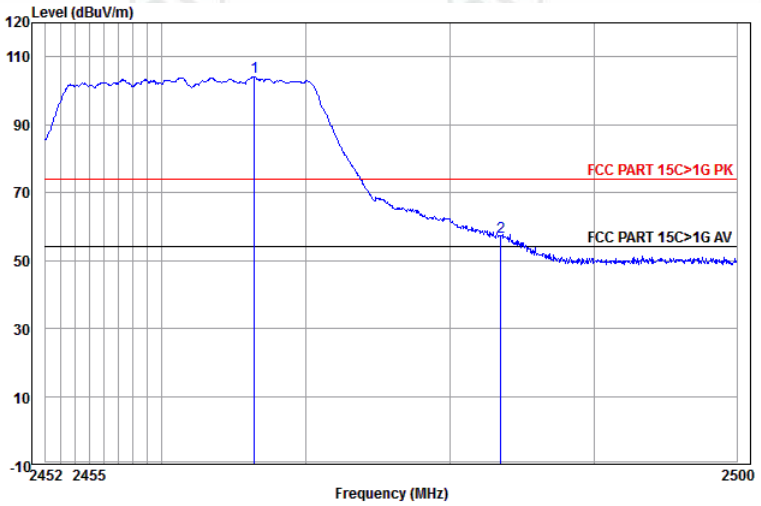
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2461.383	32.67	3.11	68.82	104.60	74.00	30.60	Horizontal	
2	2483.500	32.71	3.12	21.16	56.99	74.00	-17.01	Horizontal	

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



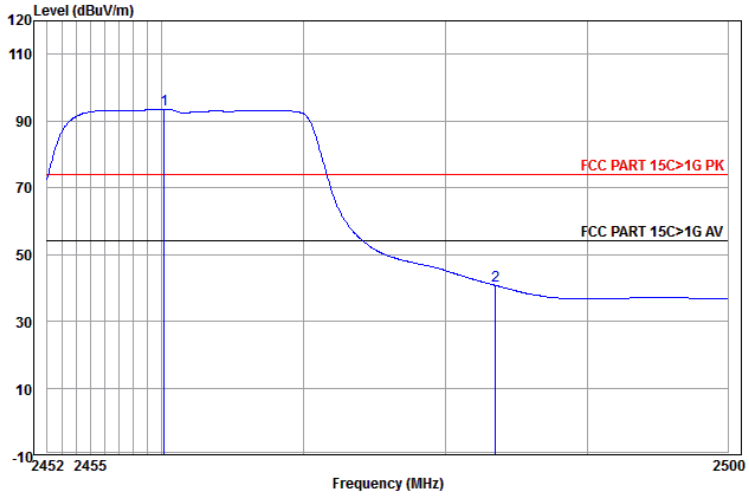
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2456.330	32.66	3.10	59.21	94.97	54.00	40.97	Horizontal	Average
2	2483.500	32.71	3.12	5.75	41.58	54.00	-12.42	Horizontal	Average

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	2466.398	32.68	3.11	68.32	104.11	74.00	30.11	Vertical	
2	2483.500	32.71	3.12	21.05	56.88	74.00	-17.12	Vertical	

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	2460.190	32.67	3.11	57.69	93.47	54.00	39.47	Vertical	Average
2	2483.500	32.71	3.12	4.83	40.66	54.00	-13.34	Vertical	Average

1) Through Pre-scan 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) , and then Only the worst case is recorded in the report.
2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
Final Test Level =Receiver Reading - Correct Factor
Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

Appendix H): 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

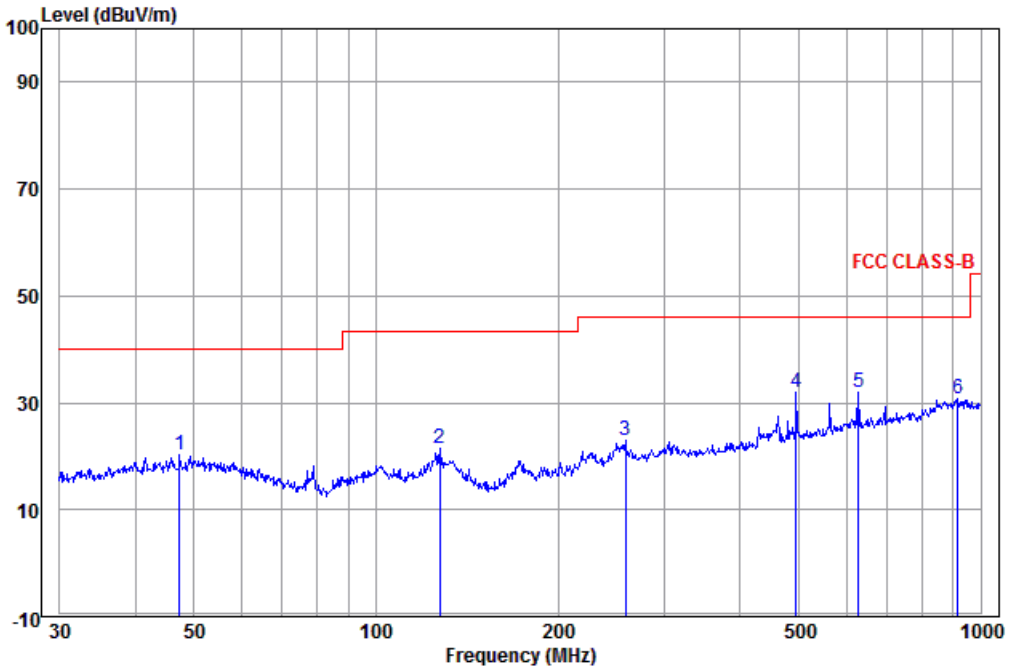
Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

Radiated Spurious Emissions test Data:

Radiated Emission below 1GHz

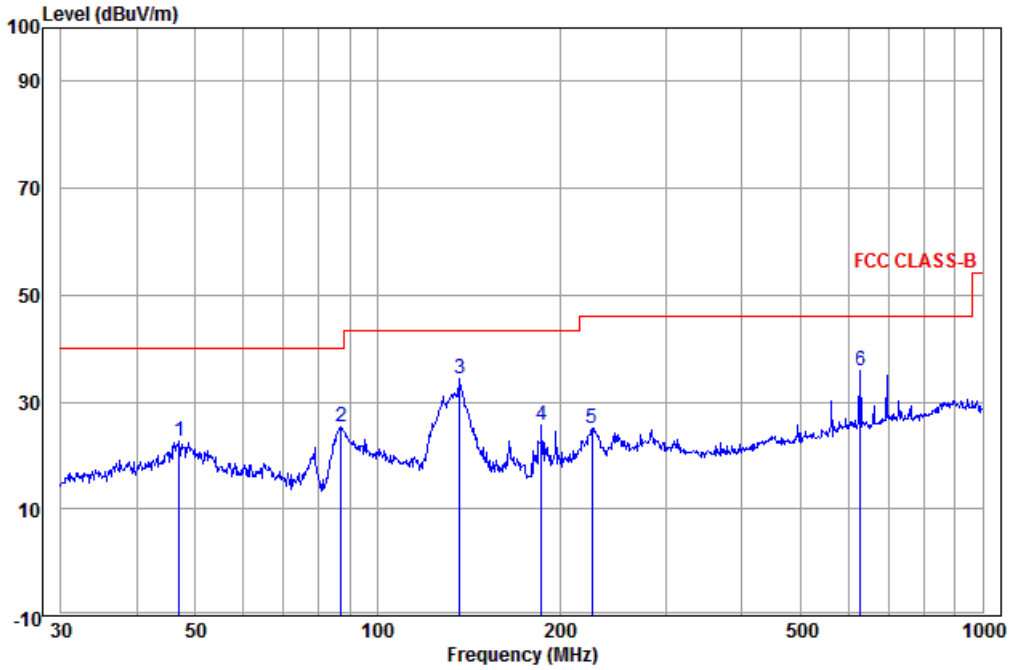
30MHz~1GHz (QP)

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	47.326	14.40	0.10	5.76	20.26	40.00	-19.74	Horizontal	QP
2	127.665	10.27	0.60	10.62	21.49	43.50	-22.01	Horizontal	QP
3	258.326	12.74	1.29	8.80	22.83	46.00	-23.17	Horizontal	QP
4	495.934	16.85	1.52	13.55	31.92	46.00	-14.08	Horizontal	QP
5 pp	627.274	18.81	1.83	11.30	31.94	46.00	-14.06	Horizontal	QP
6	916.069	22.07	2.44	6.12	30.63	46.00	-15.37	Horizontal	QP

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	46.995	14.38	0.09	8.12	22.59	40.00	-17.41	Vertical	QP
2	87.112	10.26	0.41	14.84	25.51	40.00	-14.49	Vertical	QP
3 pp	136.939	9.63	0.61	24.19	34.43	43.50	-9.07	Vertical	QP
4	186.441	10.84	0.98	13.90	25.72	43.50	-17.78	Vertical	QP
5	226.099	12.10	1.23	11.87	25.20	46.00	-20.80	Vertical	QP
6	627.274	18.81	1.83	15.19	35.83	46.00	-10.17	Vertical	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)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1173.943	30.16	1.82	44.42	47.00	34.56	74.00	-39.44	Pass	Horizontal
1577.198	31.01	2.38	43.91	46.40	35.88	74.00	-38.12	Pass	Horizontal
4824.000	34.73	6.02	44.60	47.56	43.71	74.00	-30.29	Pass	Horizontal
6412.427	36.12	7.33	44.54	47.34	46.25	74.00	-27.75	Pass	Horizontal
7236.000	36.42	6.94	44.80	46.66	45.22	74.00	-28.78	Pass	Horizontal
9648.000	37.93	7.01	45.57	45.46	44.83	74.00	-29.17	Pass	Horizontal
1280.072	30.41	1.98	44.27	46.71	34.83	74.00	-39.17	Pass	Vertical
1814.218	31.42	2.65	43.67	47.24	37.64	74.00	-36.36	Pass	Vertical
4824.000	34.73	6.02	44.60	49.16	45.31	74.00	-28.69	Pass	Vertical
6032.401	35.92	7.43	44.50	47.96	46.81	74.00	-27.19	Pass	Vertical
7236.000	36.42	6.94	44.80	46.72	45.28	74.00	-28.72	Pass	Vertical
9648.000	37.93	7.01	45.57	44.96	44.33	74.00	-29.67	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)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1241.562	30.32	1.93	44.33	47.21	35.13	74.00	-38.87	Pass	Horizontal
1549.344	30.96	2.35	43.94	46.90	36.27	74.00	-37.73	Pass	Horizontal
4874.000	34.84	6.12	44.60	47.61	43.97	74.00	-30.03	Pass	Horizontal
6219.512	36.02	7.38	44.52	47.00	45.88	74.00	-28.12	Pass	Horizontal
7311.000	36.43	6.86	44.86	46.26	44.69	74.00	-29.31	Pass	Horizontal
9748.000	38.03	7.10	45.55	45.19	44.77	74.00	-29.23	Pass	Horizontal
1299.773	30.46	2.01	44.25	47.11	35.33	74.00	-38.67	Pass	Vertical
1870.490	31.51	2.71	43.62	46.53	37.13	74.00	-36.87	Pass	Vertical
4874.000	34.84	6.12	44.60	47.69	44.05	74.00	-29.95	Pass	Vertical
6001.768	35.90	7.44	44.50	47.19	46.03	74.00	-27.97	Pass	Vertical
7311.000	36.43	6.86	44.86	45.12	43.55	74.00	-30.45	Pass	Vertical
9748.000	38.03	7.10	45.55	45.85	45.43	74.00	-28.57	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)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1346.929	30.56	2.08	44.18	46.37	34.83	74.00	-39.17	Pass	Horizontal
1613.749	31.08	2.43	43.87	46.59	36.23	74.00	-37.77	Pass	Horizontal
4924.000	34.94	6.22	44.60	45.52	42.08	74.00	-31.92	Pass	Horizontal
6063.190	35.93	7.42	44.51	47.18	46.02	74.00	-27.98	Pass	Horizontal
7386.000	36.44	6.78	44.92	46.29	44.59	74.00	-29.41	Pass	Horizontal
9848.000	38.14	7.19	45.53	44.86	44.66	74.00	-29.34	Pass	Horizontal
1273.572	30.40	1.97	44.28	47.14	35.23	74.00	-38.77	Pass	Vertical
1549.344	30.96	2.35	43.94	46.30	35.67	74.00	-38.33	Pass	Vertical
4924.000	34.94	6.22	44.60	46.48	43.04	74.00	-30.96	Pass	Vertical
5821.207	35.77	7.26	44.52	48.23	46.74	74.00	-27.26	Pass	Vertical
7386.000	36.44	6.78	44.92	45.85	44.15	74.00	-29.85	Pass	Vertical
9848.000	38.14	7.19	45.53	45.38	45.18	74.00	-28.82	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)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1260.670	30.37	1.95	44.30	46.77	34.79	74.00	-39.21	Pass	Horizontal
1800.416	31.40	2.64	43.68	46.69	37.05	74.00	-36.95	Pass	Horizontal
4824.000	34.73	6.02	44.60	51.77	47.92	74.00	-26.08	Pass	Horizontal
6047.776	35.93	7.43	44.51	46.87	45.72	74.00	-28.28	Pass	Horizontal
7236.000	36.42	6.94	44.80	45.91	44.47	74.00	-29.53	Pass	Horizontal
9648.000	37.93	7.01	45.57	44.26	43.63	74.00	-30.37	Pass	Horizontal
1263.883	30.38	1.96	44.29	46.09	34.14	74.00	-39.86	Pass	Vertical
1828.125	31.44	2.67	43.66	46.30	36.75	74.00	-37.25	Pass	Vertical
4824.000	34.73	6.02	44.60	46.47	42.62	74.00	-31.38	Pass	Vertical
6396.125	36.11	7.34	44.54	47.59	46.50	74.00	-27.50	Pass	Vertical
7236.000	36.42	6.94	44.80	45.74	44.30	74.00	-29.70	Pass	Vertical
9648.000	37.93	7.01	45.57	44.40	43.77	74.00	-30.23	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)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1228.984	30.29	1.91	44.34	46.74	34.60	74.00	-39.40	Pass	Horizontal
1814.218	31.42	2.65	43.67	47.02	37.42	74.00	-36.58	Pass	Horizontal
4874.000	34.84	6.12	44.60	46.98	43.34	74.00	-30.66	Pass	Horizontal
6379.864	36.10	7.34	44.54	47.12	46.02	74.00	-27.98	Pass	Horizontal
7311.000	36.43	6.86	44.86	45.32	43.75	74.00	-30.25	Pass	Horizontal
9748.000	38.03	7.10	45.55	44.92	44.50	74.00	-29.50	Pass	Horizontal
1173.943	30.16	1.82	44.42	46.49	34.05	74.00	-39.95	Pass	Vertical
1609.646	31.07	2.42	43.88	46.61	36.22	74.00	-37.78	Pass	Vertical
4874.000	34.84	6.12	44.60	50.89	47.25	74.00	-26.75	Pass	Vertical
6032.401	35.92	7.43	44.50	46.99	45.84	74.00	-28.16	Pass	Vertical
7311.000	36.43	6.86	44.86	45.11	43.54	74.00	-30.46	Pass	Vertical
9748.000	38.03	7.10	45.55	45.96	45.54	74.00	-28.46	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)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1263.883	30.38	1.96	44.29	47.54	35.59	74.00	-38.41	Pass	Horizontal
1832.785	31.45	2.67	43.65	45.67	36.14	74.00	-37.86	Pass	Horizontal
4924.000	34.94	6.22	44.60	48.48	45.04	74.00	-28.96	Pass	Horizontal
6017.064	35.91	7.44	44.50	47.26	46.11	74.00	-27.89	Pass	Horizontal
7386.000	36.44	6.78	44.92	45.46	43.76	74.00	-30.24	Pass	Horizontal
9848.000	38.14	7.19	45.53	45.39	45.19	74.00	-28.81	Pass	Horizontal
1306.407	30.47	2.02	44.24	46.23	34.48	74.00	-39.52	Pass	Vertical
1823.477	31.43	2.66	43.66	47.54	37.97	74.00	-36.03	Pass	Vertical
4924.000	34.94	6.22	44.60	45.81	42.37	74.00	-31.63	Pass	Vertical
5850.919	35.79	7.29	44.51	47.53	46.10	74.00	-27.90	Pass	Vertical
7386.000	36.44	6.78	44.92	46.39	44.69	74.00	-29.31	Pass	Vertical
9848.000	38.14	7.19	45.53	45.66	45.46	74.00	-28.54	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)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1364.182	30.60	2.11	44.16	46.89	35.44	74.00	-38.56	Pass	Horizontal
1851.542	31.48	2.69	43.63	46.78	37.32	74.00	-36.68	Pass	Horizontal
4824.000	34.73	6.02	44.60	51.42	47.57	74.00	-26.43	Pass	Horizontal
5821.207	35.77	7.26	44.52	47.84	46.35	74.00	-27.65	Pass	Horizontal
7236.000	36.42	6.94	44.80	45.53	44.09	74.00	-29.91	Pass	Horizontal
9648.000	37.93	7.01	45.57	45.33	44.70	74.00	-29.30	Pass	Horizontal
1107.186	29.99	1.71	44.52	47.22	34.40	74.00	-39.60	Pass	Vertical
1521.981	30.91	2.32	43.97	46.44	35.70	74.00	-38.30	Pass	Vertical
4824.000	34.73	6.02	44.60	46.72	42.87	74.00	-31.13	Pass	Vertical
6219.512	36.02	7.38	44.52	47.49	46.37	74.00	-27.63	Pass	Vertical
7236.000	36.42	6.94	44.80	46.72	45.28	74.00	-28.72	Pass	Vertical
9648.000	37.93	7.01	45.57	44.31	43.68	74.00	-30.32	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)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1273.572	30.40	1.97	44.28	46.59	34.68	74.00	-39.32	Pass	Horizontal
1549.344	30.96	2.35	43.94	46.70	36.07	74.00	-37.93	Pass	Horizontal
4874.000	34.84	6.12	44.60	47.57	43.93	74.00	-30.07	Pass	Horizontal
5836.044	35.78	7.28	44.52	47.96	46.50	74.00	-27.50	Pass	Horizontal
7311.000	36.43	6.86	44.86	45.14	43.57	74.00	-30.43	Pass	Horizontal
9748.000	38.03	7.10	45.55	44.46	44.04	74.00	-29.96	Pass	Horizontal
1319.777	30.50	2.04	44.22	46.01	34.33	74.00	-39.67	Pass	Vertical
1557.252	30.98	2.36	43.93	47.13	36.54	74.00	-37.46	Pass	Vertical
4874.000	34.84	6.12	44.60	50.55	46.91	74.00	-27.09	Pass	Vertical
6047.776	35.93	7.43	44.51	47.13	45.98	74.00	-28.02	Pass	Vertical
7311.000	36.43	6.86	44.86	45.45	43.88	74.00	-30.12	Pass	Vertical
9748.000	38.03	7.10	45.55	45.30	44.88	74.00	-29.12	Pass	Vertical

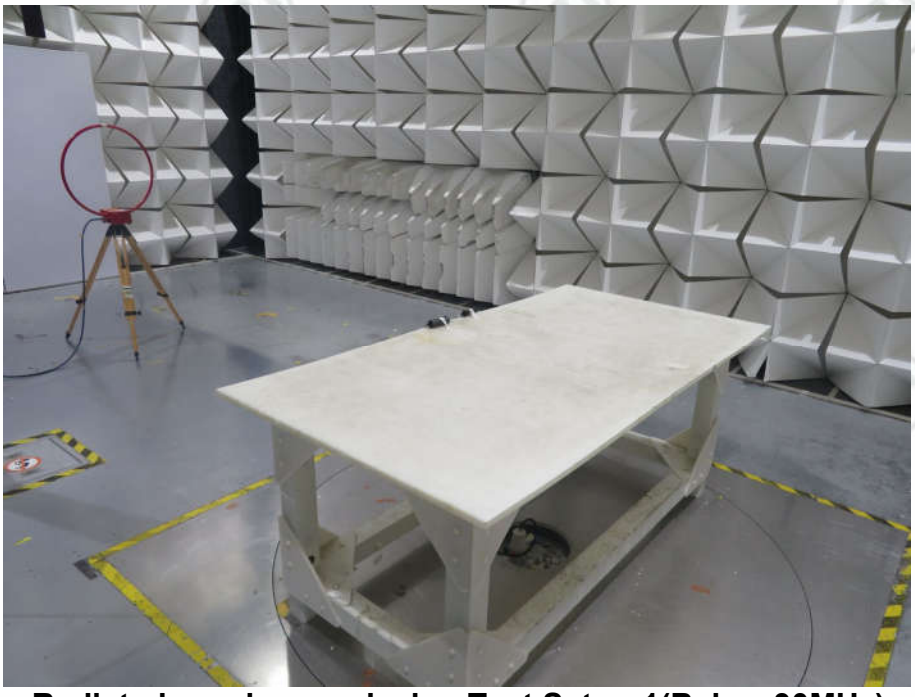
Test mode: 802.11n(HT20)(6.5Mbps)	Test Frequency: 2462MHz	Remark: Peak

Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1228.984	30.29	1.91	44.34	47.14	35.00	74.00	-39.00	Pass	Horizontal
1818.842	31.43	2.66	43.66	46.17	36.60	74.00	-37.40	Pass	Horizontal
4924.000	34.94	6.22	44.60	46.25	42.81	74.00	-31.19	Pass	Horizontal
6017.064	35.91	7.44	44.50	47.86	46.71	74.00	-27.29	Pass	Horizontal
7386.000	36.44	6.78	44.92	46.26	44.56	74.00	-29.44	Pass	Horizontal
9848.000	38.14	7.19	45.53	45.27	45.07	74.00	-28.93	Pass	Horizontal
1159.096	30.13	1.79	44.44	47.98	35.46	74.00	-38.54	Pass	Vertical
1557.252	30.98	2.36	43.93	46.58	35.99	74.00	-38.01	Pass	Vertical
4924.000	34.94	6.22	44.60	45.94	42.50	74.00	-31.50	Pass	Vertical
6032.401	35.92	7.43	44.50	47.19	46.04	74.00	-27.96	Pass	Vertical
7386.000	36.44	6.78	44.92	46.29	44.59	74.00	-29.41	Pass	Vertical
9848.000	38.14	7.19	45.53	45.30	45.10	74.00	-28.90	Pass	Vertical

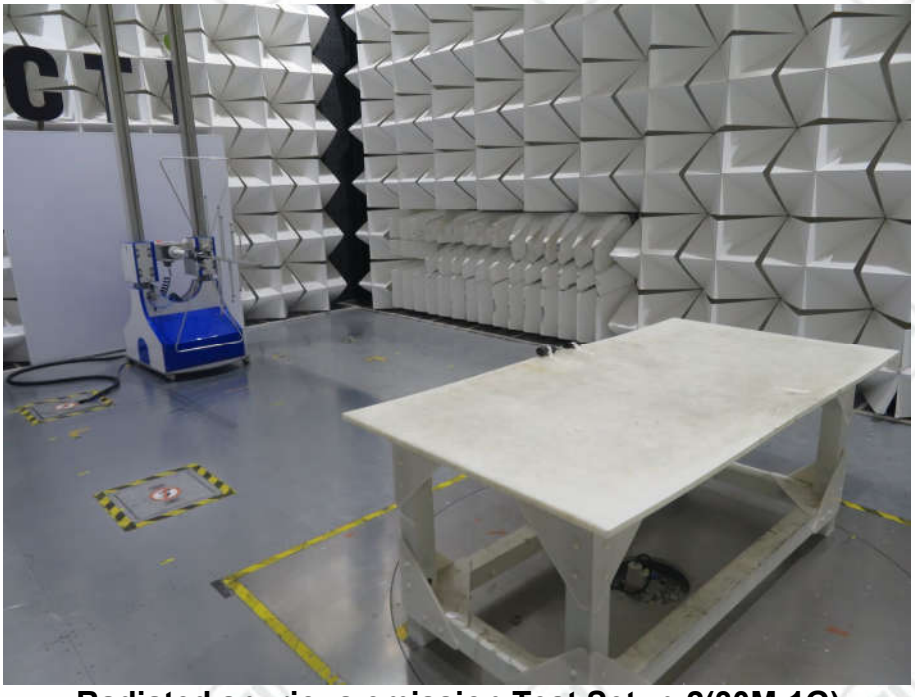
Remark:
1) Through Pre-scan transmitting mode with all kind of modulation and data rate, find the 11Mbps of rate is the worst case of 802.11b; 6Mbpsof rate is the worst case of 802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20) ,and then Only the worst case is recorded in the report.
2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
Final Test Level =Receiver Reading - Correct Factor
Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor
3) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

PHOTOGRAPHS OF TEST SETUP

Test mode No.: Midrive D01



Radiated spurious emission Test Setup-1(Below 30MHz)



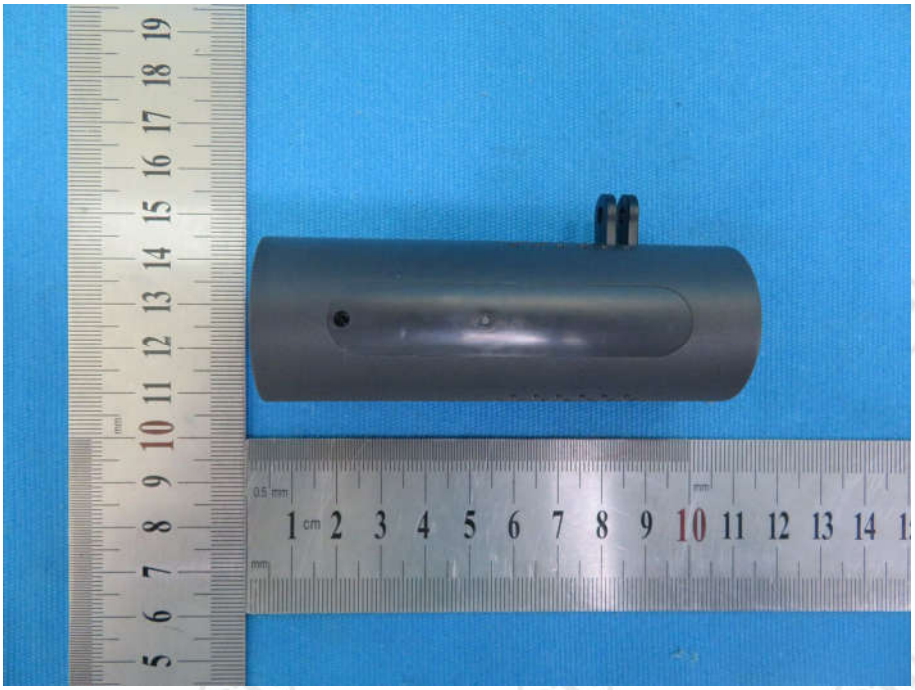
Radiated spurious emission Test Setup-2(30M-1G)

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

PHOTOGRAPHS OF EUT Constructional Details

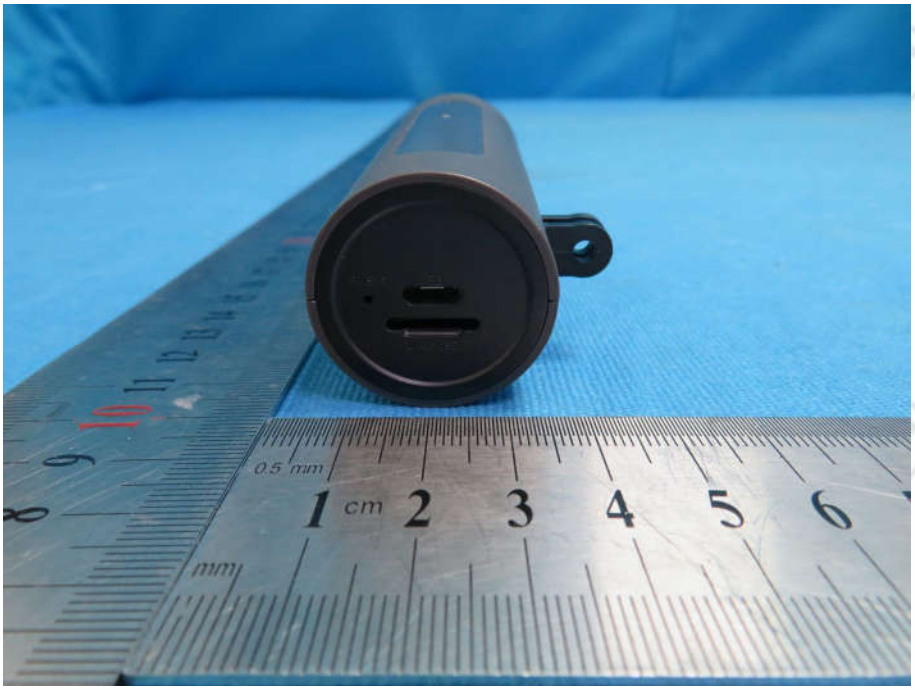
Test model No.: Midrive D01

View of Product-1



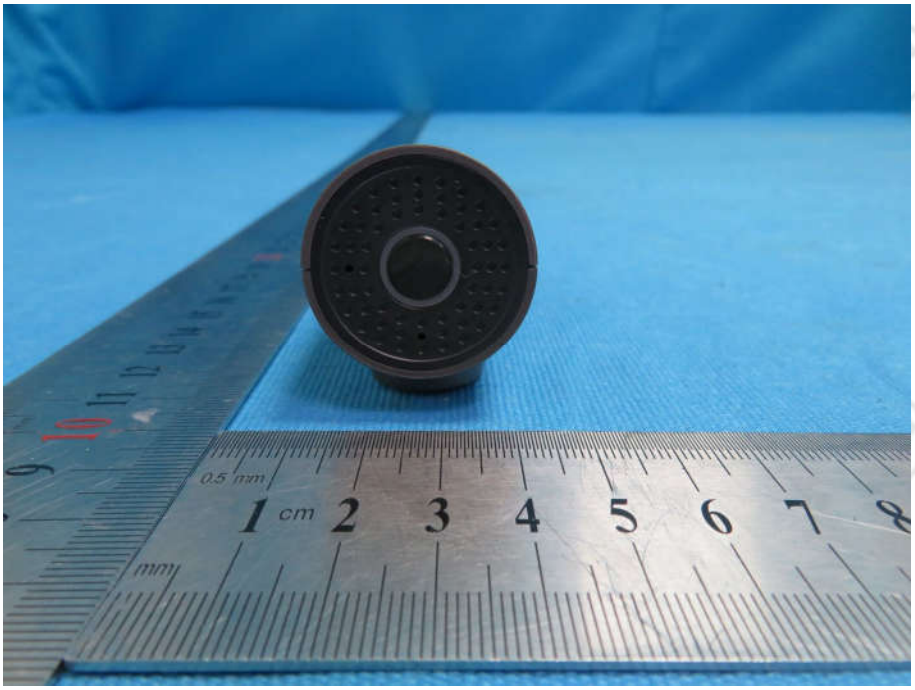
View of Product-2

View of Product-3



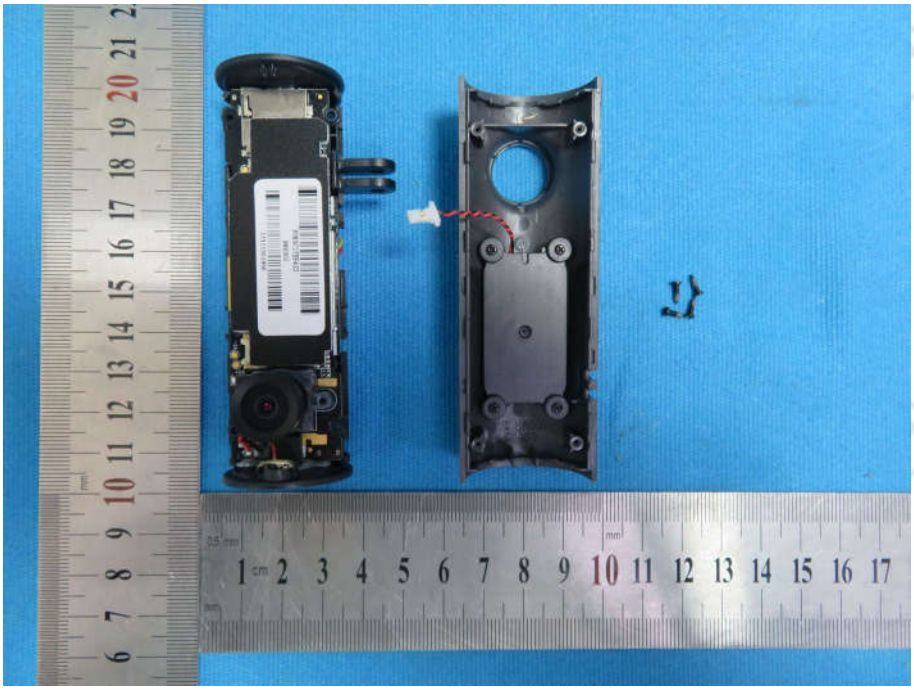
View of Product-4

View of Product-5

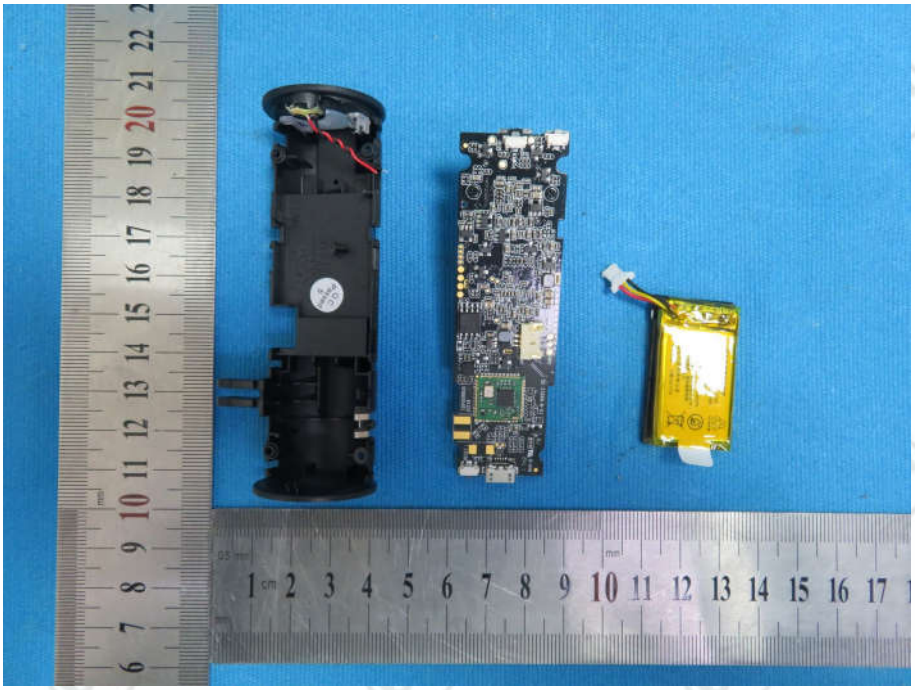


View of Product-6

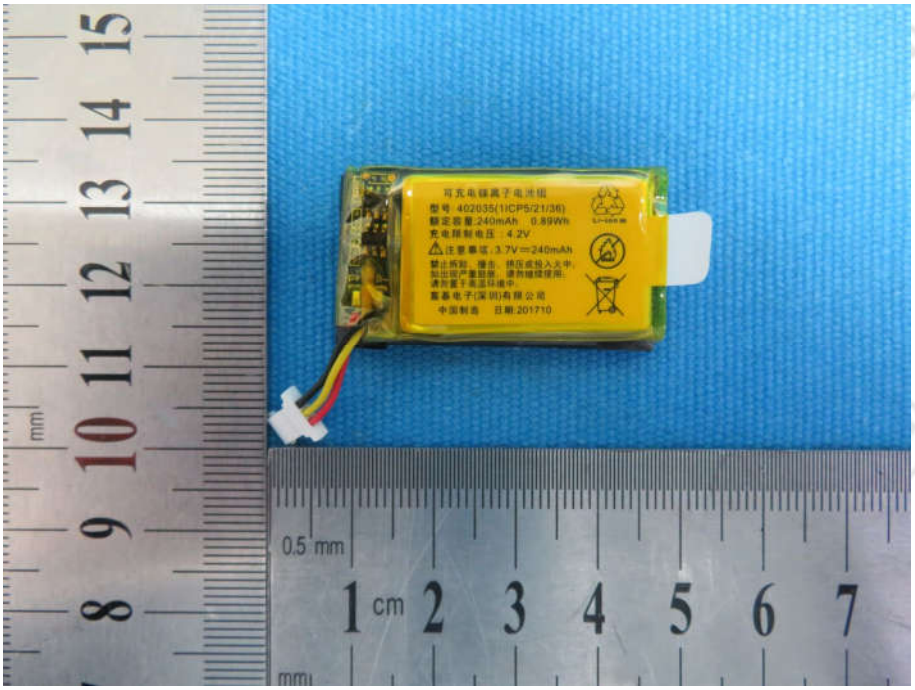
View of Product-7



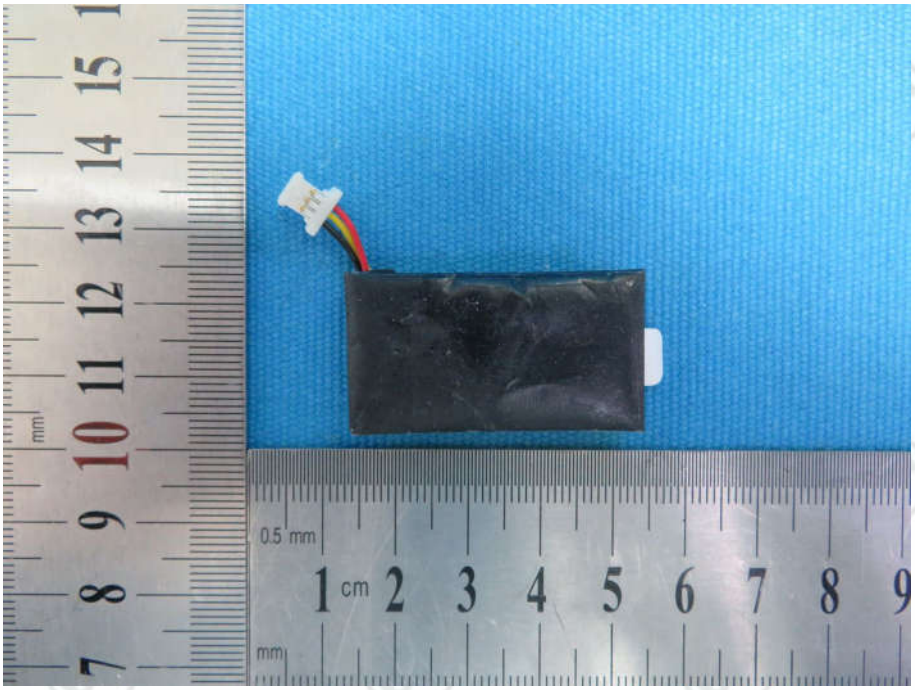
View of Product-8



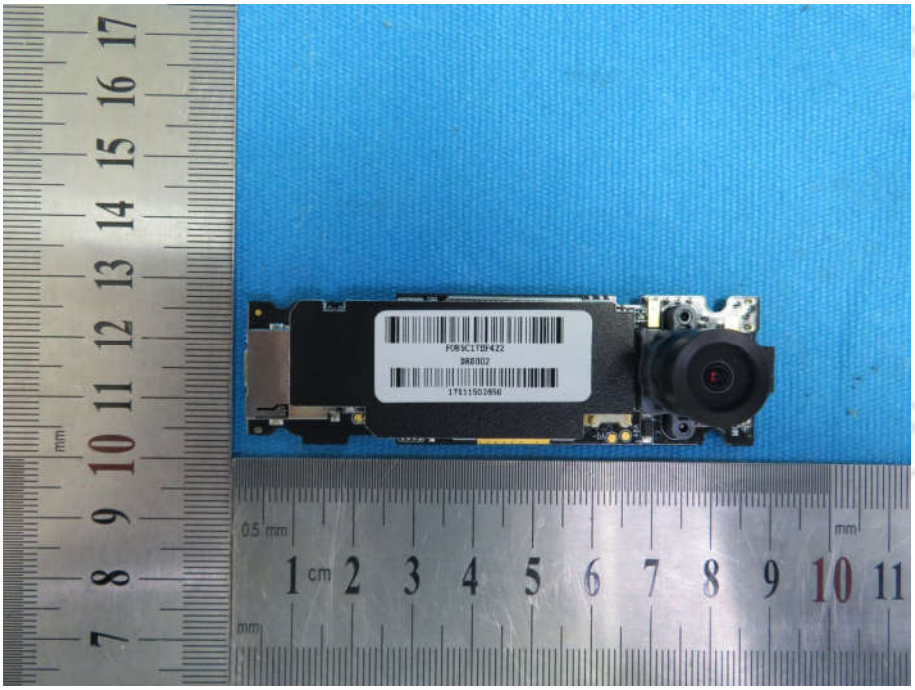
View of Product-9



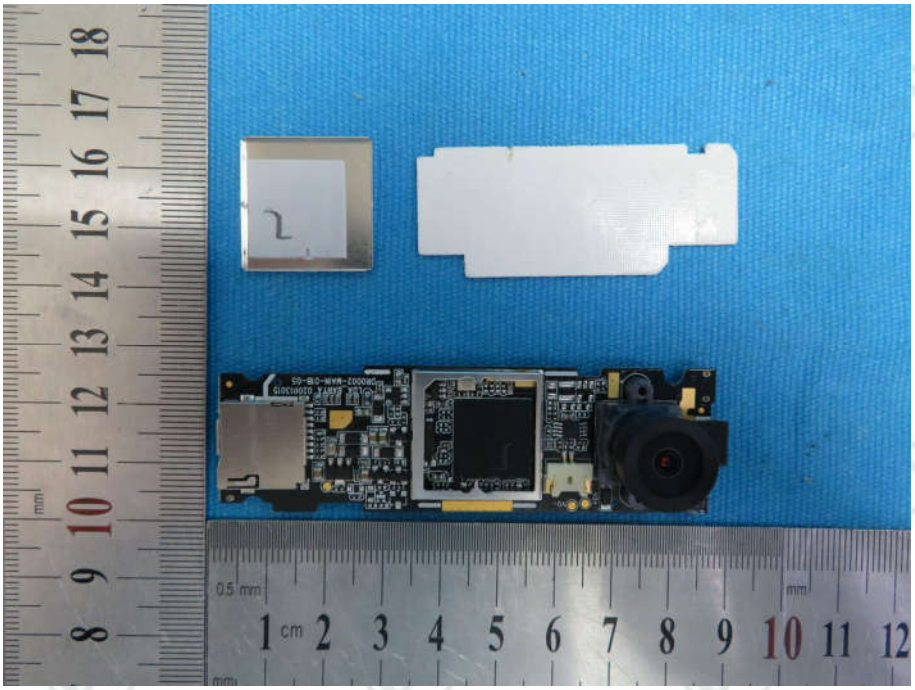
View of Product-10



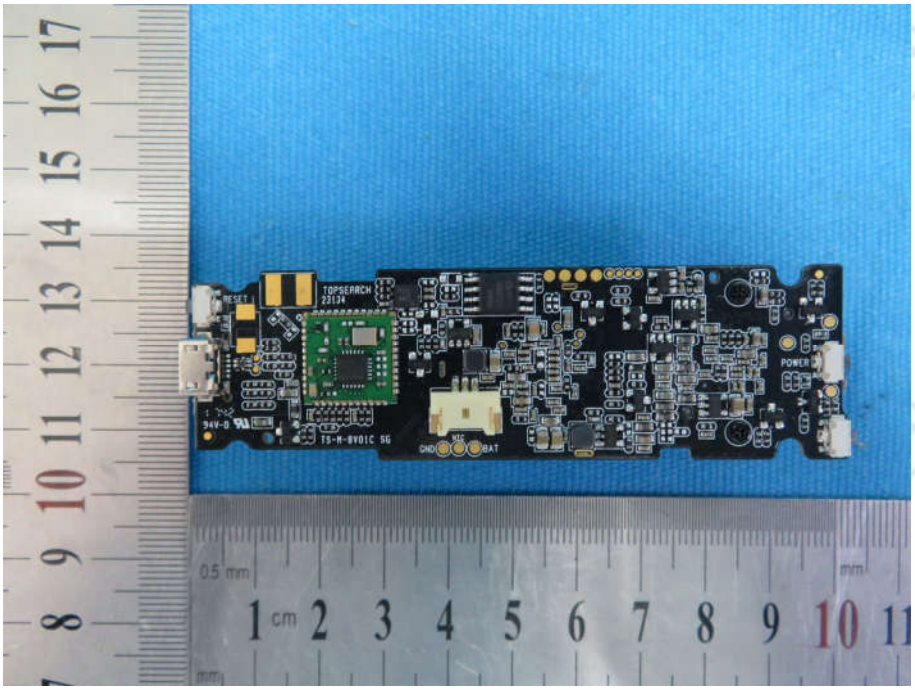
View of Product-11



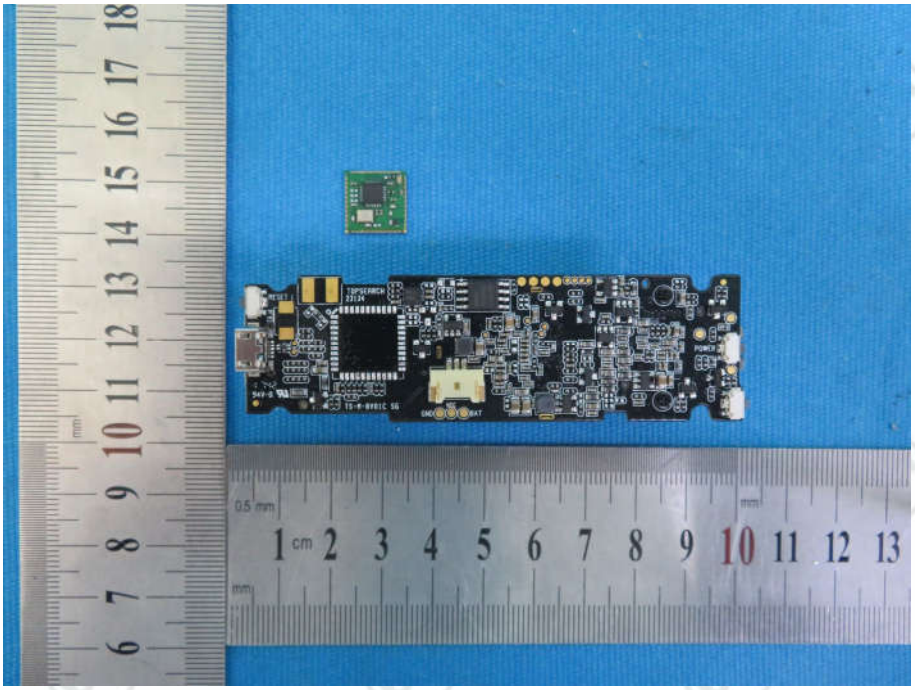
View of Product-12



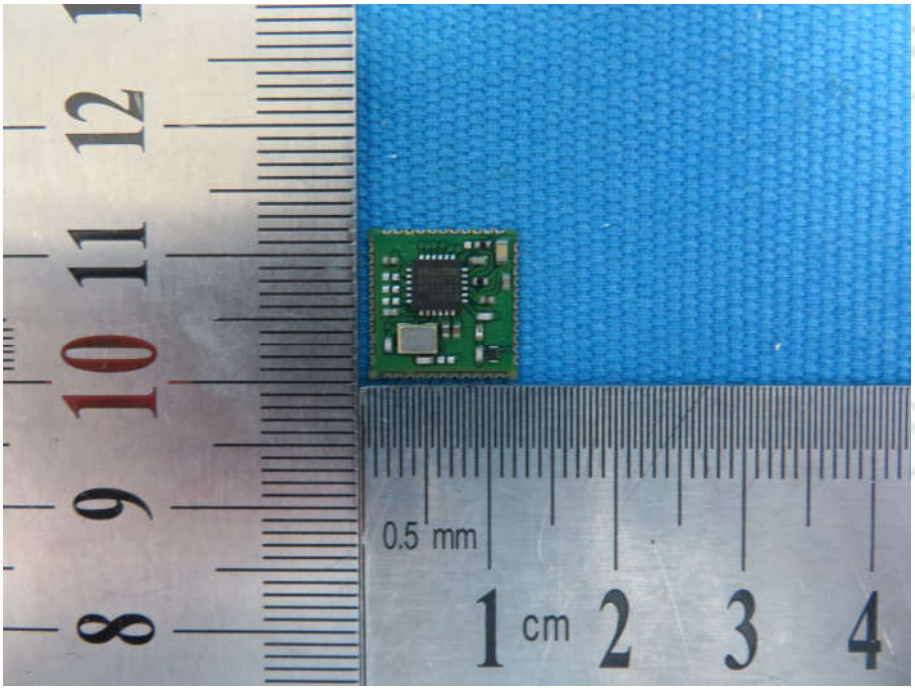
View of Product-13



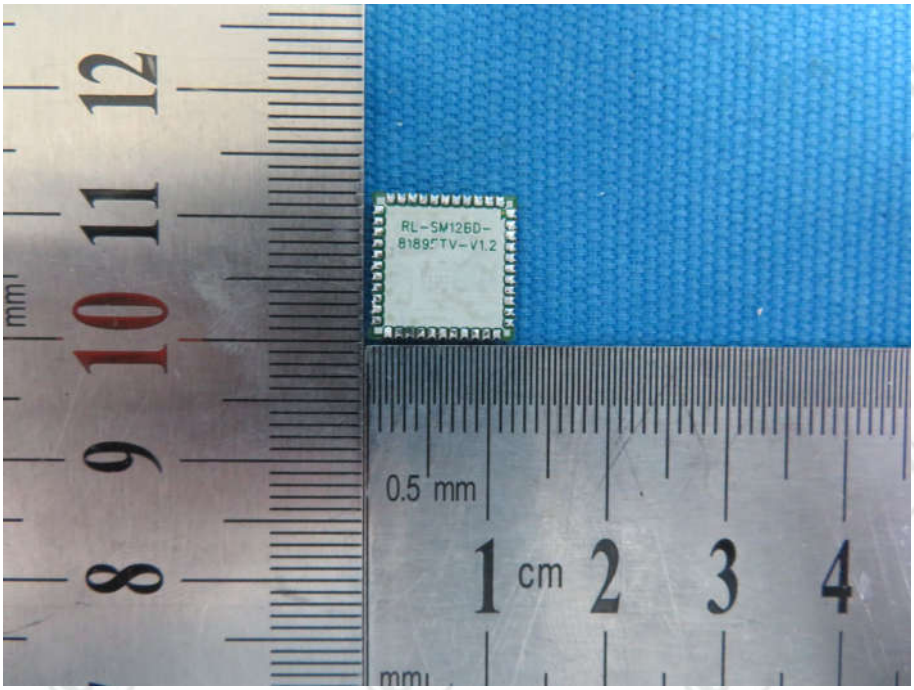
View of Product-14



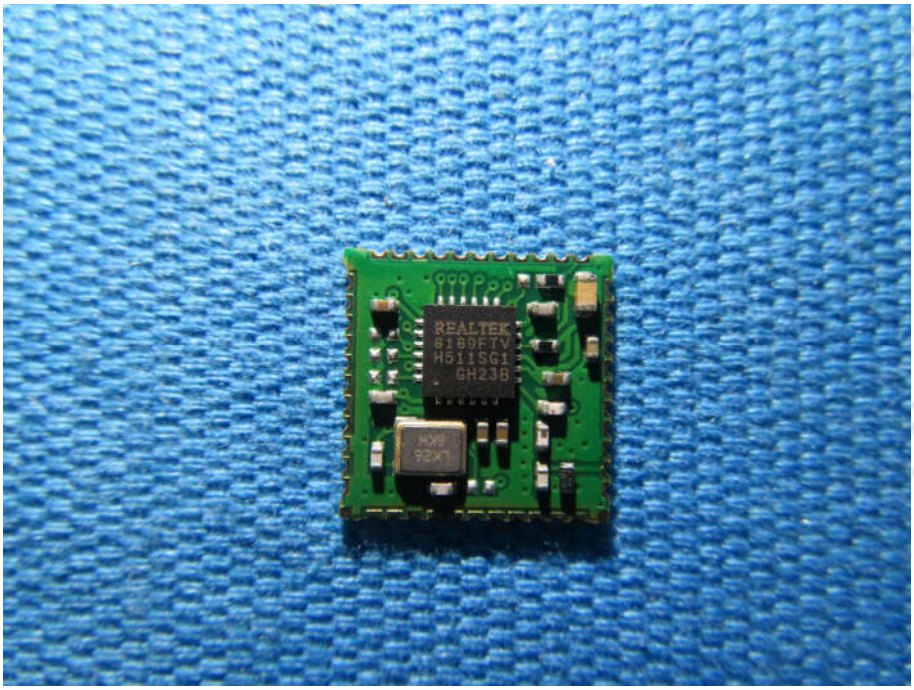
View of Product-15



View of Product-16



View of Product-17



View of Product-18

*** End of Report ***

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