TEST REPORT

Product Name	:	reMarkable paper tablet
Trade mark	:	reMarkable
Model/Type reference	:	RM100
Serial Number	:	N/A
Report Number	:	EED32J00094001
FCC ID	:	2AMK2-RM100
Date of Issue	:	Jul. 31, 2017
Test Standards	:	47 CFR Part 15 Subpart C
Test result	:	PASS

Prepared for:

reMarkable AS
Pilestredet 75C, 0354, Oslo, Norway

Prepared by:

Centre Testing International Group Co., Ltd.
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Reviewed by:	Kevin Ian (Reviewer)	Approved by:	Sheek Luo (Lab supervisor)
Date:	Jul. 31, 2017		Check No.:2496527073

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2 Version

Version No.	Date	Description
00	Jul. 31, 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

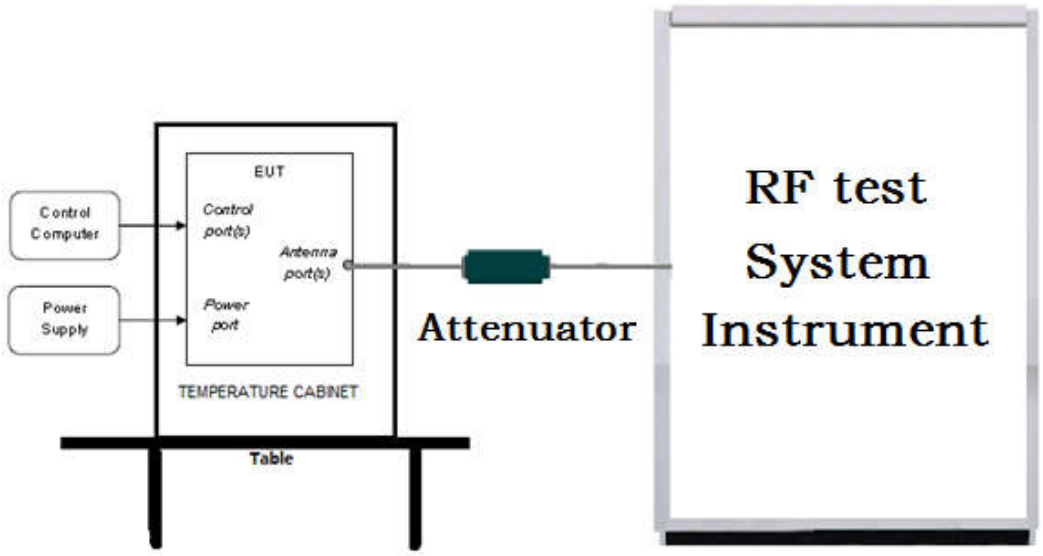
Remark:
Test according to ANSI C63.4-2014 & ANSI C63.10-2013.
The tested sample and the sample information are provided by the client.

4 Content

5 Test Requirement

5.1 Test setup

5.1.1 For Conducted test setup



5.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

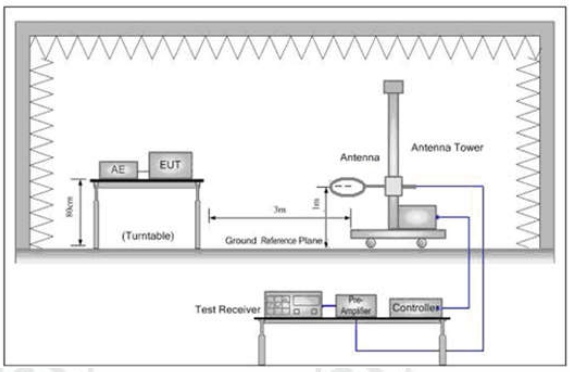


Figure 1. Below 30MHz

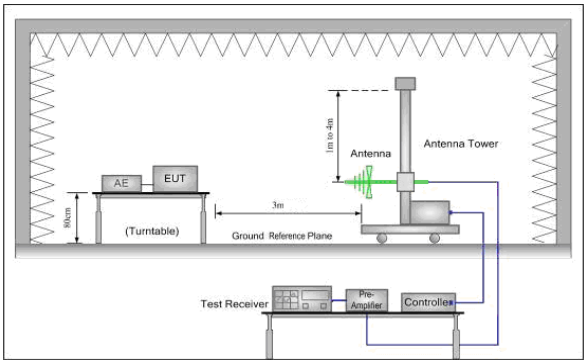


Figure 2. 30MHz to 1GHz

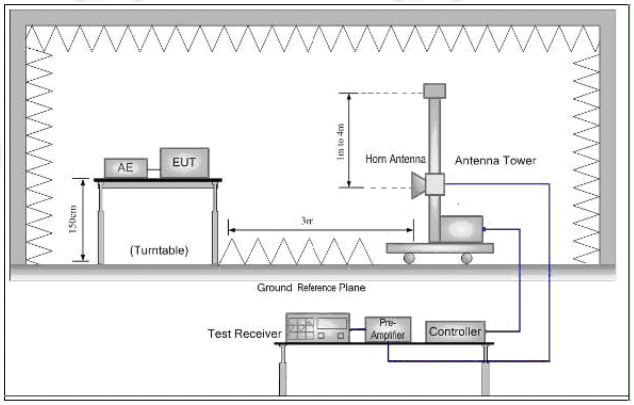
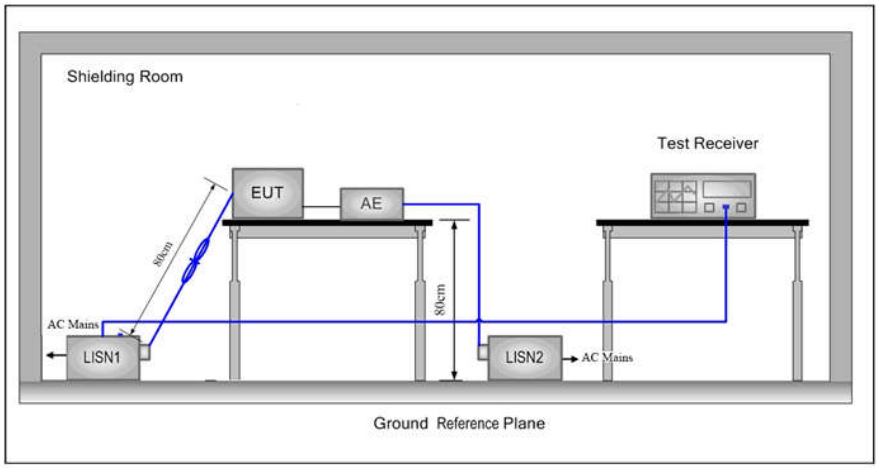


Figure 3. Above 1GHz

5.1.3 For Conducted Emissions test setup

Conducted Emissions setup



5.2 Test Environment

Operating Environment:	
Temperature:	25°C
Humidity:	52% 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)	18.71	18.80	18.87	18.93

Mode	802.11g							
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
Power(dBm)	20.06	19.98	19.91	19.85	19.80	19.74	19.68	19.59

Mode	802.11n (HT20)							
Data Rate	6.5Mbps	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps	58.5Mbps	65Mbps
Power(dBm)	18.74	18.69	18.61	18.58	18.51	18.44	18.36	18.29

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:	reMarkable AS
Address of Applicant:	Pilestredet 75C, 0354, Oslo, Norway
Manufacturer:	reMarkable AS
Address of Manufacturer:	Pilestredet 75C, 0354, Oslo, Norway
Factory:	Dongguang Kaifa Technology Co., Ltd
Address of Factory:	Kaifa Park of CEC Industry Base, Humen town, Dongguan City, Guangdong Province

6.2 General Description of EUT

Product Name:	reMarkable paper tablet
Model No.:	RM100
Trade Mark:	reMarkable
EUT Supports Radios application:	Wlan 2.4GHz 802.11b/g/n(HT20): 2412MHz ~2462 MHz ; 5G: U-NII-1: 5.15-5.25GHz; U-NII-3: 5.725-5.850GHz; 802.11a
Power Supply:	DC5V by USB port
Battery:	DC 3.7V, 3000mAh
Sample Received Date:	May 16, 2017
Sample tested Date:	May 16, 2017 to Jun. 19, 2017

6.3 Product Specification subjective to this standard

Operation Frequency:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz
Channel Numbers:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels
Channel Separation:	5MHz
Type of Modulation:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20) : OFDM (64QAM, 16QAM, QPSK,BPSK)
Test Power Grade:	b:14, g:13, n(HT20) :12 (manufacturer declare)
Test Software of EUT:	Secure CRT 6.5.0 (manufacturer declare)
Antenna Type and Gain:	PIFA Antenna
Antenna Gain:	2.22dBi
Test Voltage:	DC 5V by USB port

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.

Test Ancillary equipment		Model	Type	Remark
EUT B	Adapter	CAA-0002016-C	---	CTI

6.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd.

Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China 518101

Telephone: +86 (0) 755 3368 3668 Fax:+86 (0) 755 3368 3385

No tests were sub-contracted.

6.6 Deviation from Standards

None.

6.7 Abnormalities from Standard Conditions

None.

6.8 Other Information Requested by the Customer

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%

None.

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
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
3	KDB 558074 D01v04	DTS Meas Guidance

Test Results List:

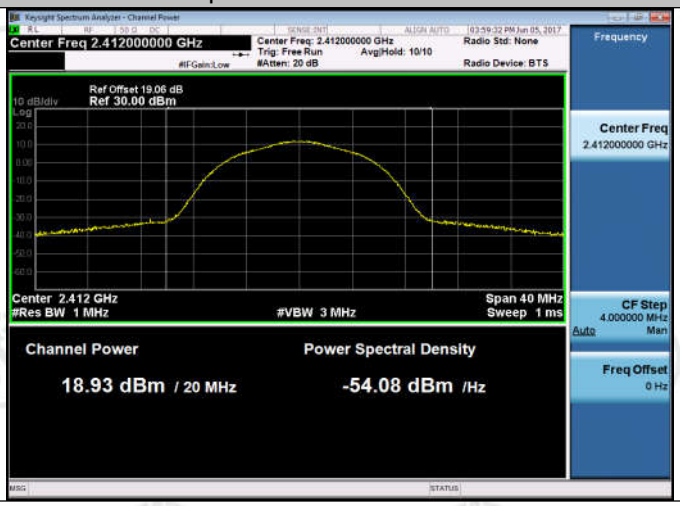
Test Requirement	Test method	Test item	Verdict	Note
Part15C Section 15.247 (b)(3)	ANSI C63.10/ KDB 558074	Conducted Peak Output Power	PASS	Appendix A)
Part15C Section 15.247 (a)(2)	ANSI C63.10/ KDB 558074	6dB Occupied Bandwidth	PASS	Appendix B)
Part15C Section 15.247(d)	ANSI C63.10/ KDB 558074	Band-edge 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)

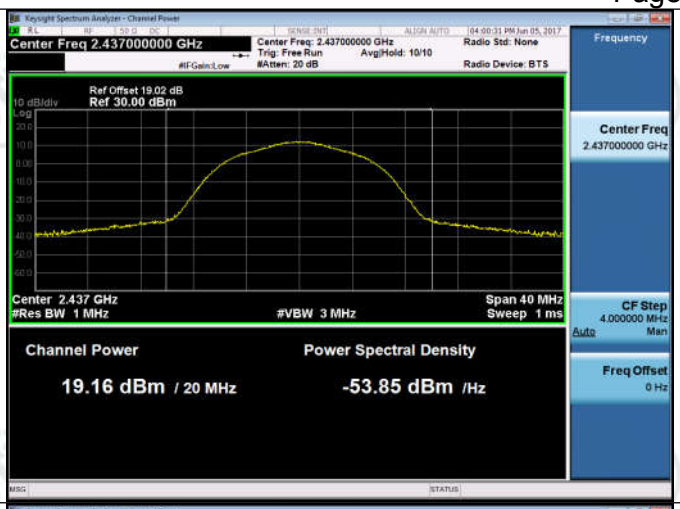
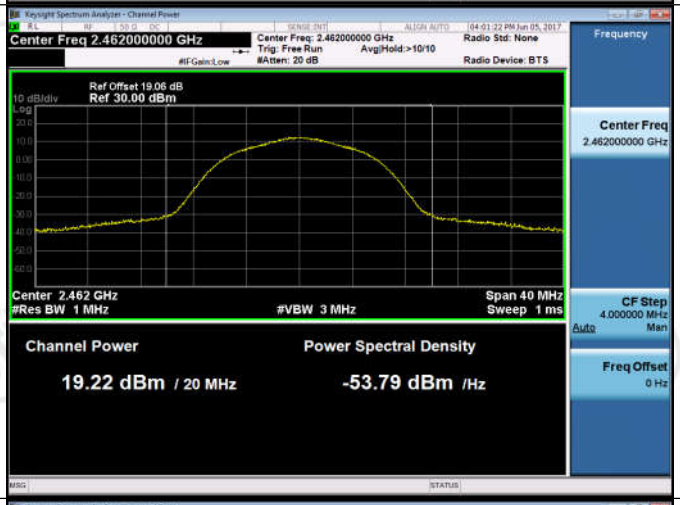
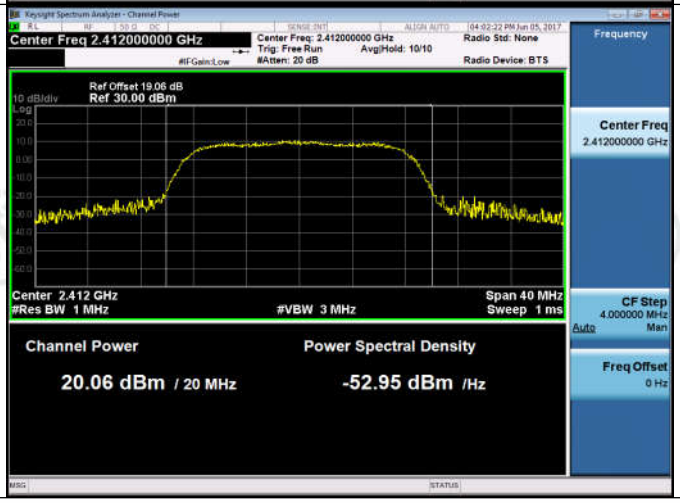
Appendix A): Conducted Peak Output Power

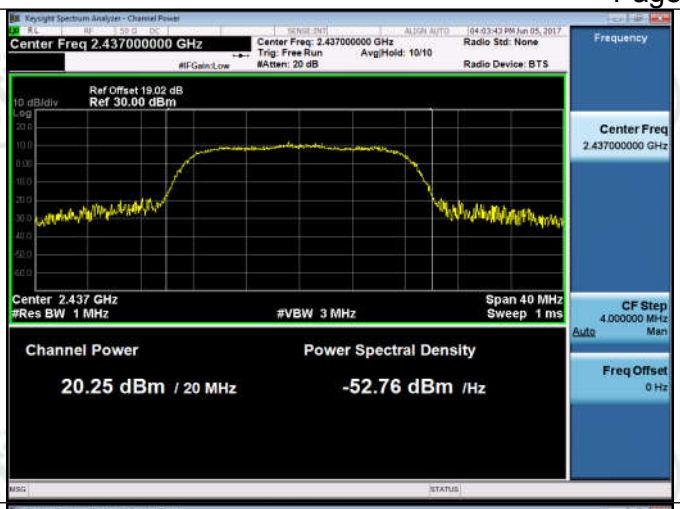
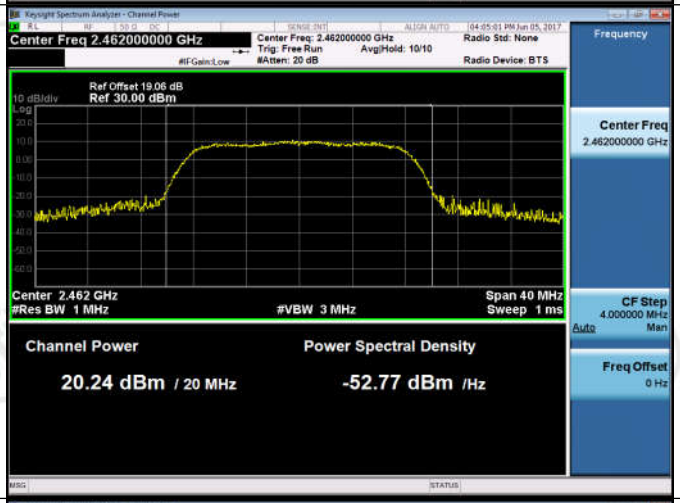
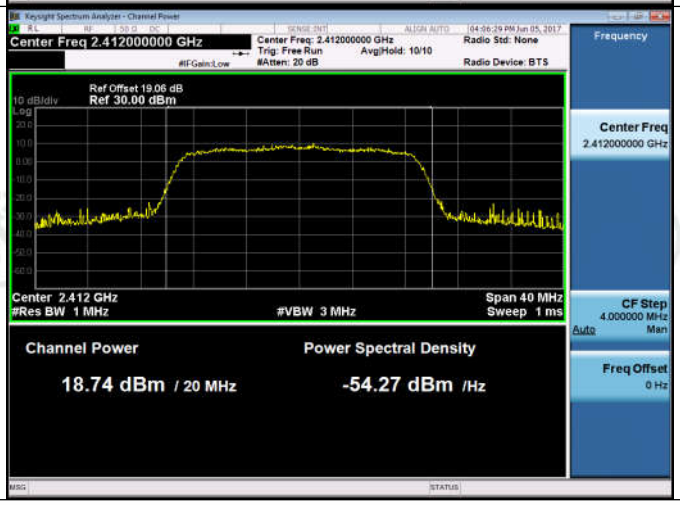
Result Table

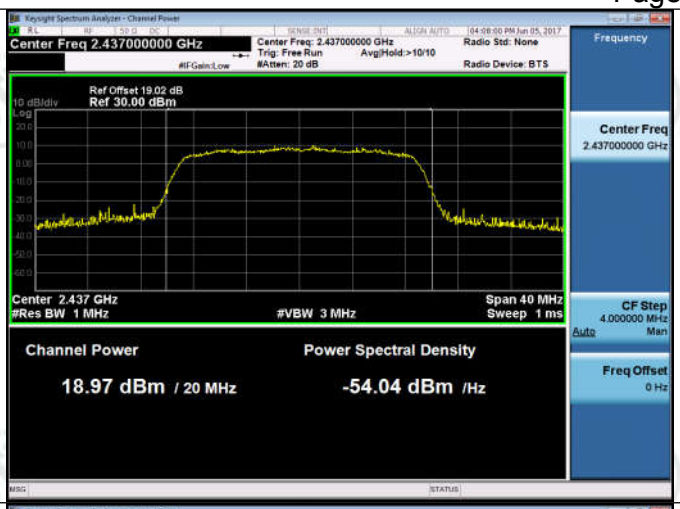
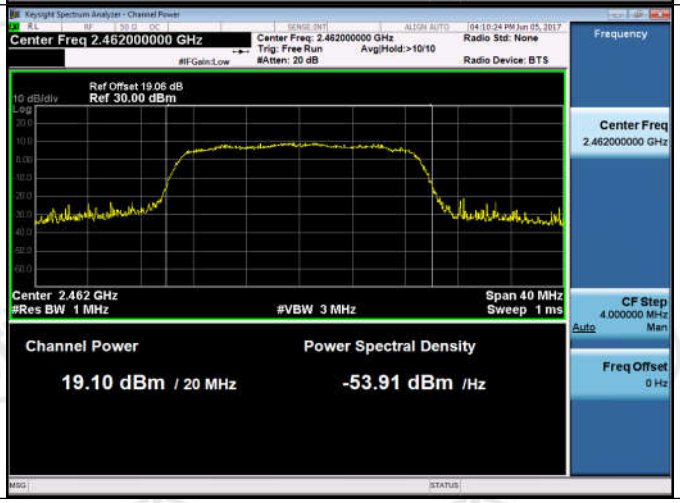
Mode	Channel	Conducted Peak Output Power [dBm]	Verdict	Remark
11B	LCH	18.93	PASS	RMS detector
11B	MCH	19.16	PASS	
11B	HCH	19.22	PASS	
11G	LCH	20.06	PASS	
11G	MCH	20.25	PASS	
11G	HCH	20.24	PASS	
11N20SISO	LCH	18.74	PASS	
11N20SISO	MCH	18.97	PASS	
11N20SISO	HCH	19.10	PASS	

Test Graph

Graphs			
11B/LCH			

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

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

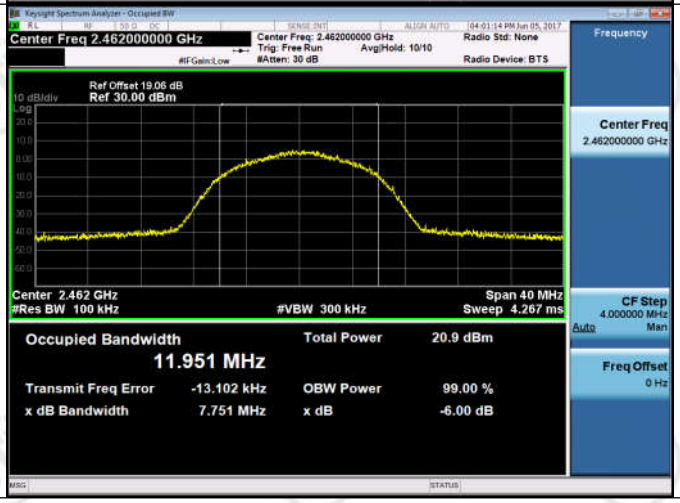
11N20SISO/MCH			
11N20SISO/HCH			

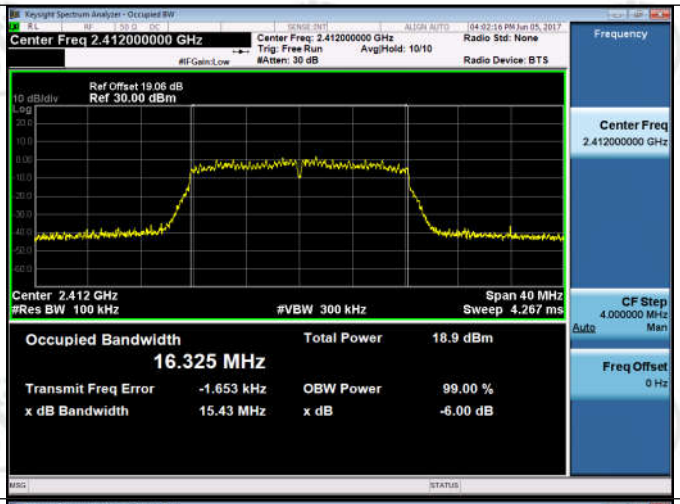
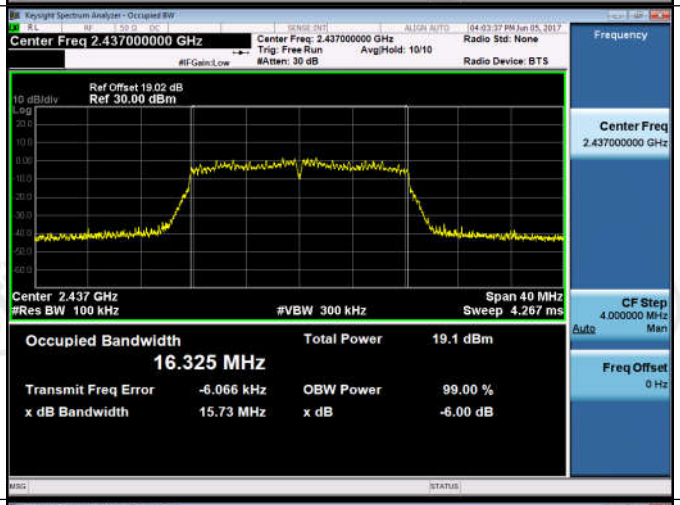
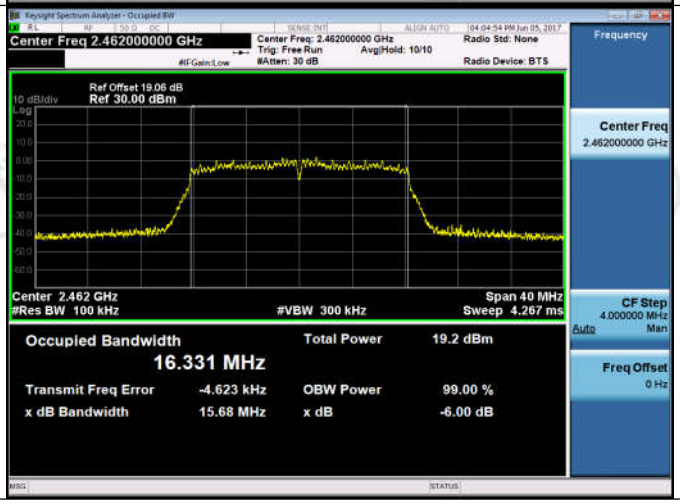
Appendix B): 6dB Occupied Bandwidth

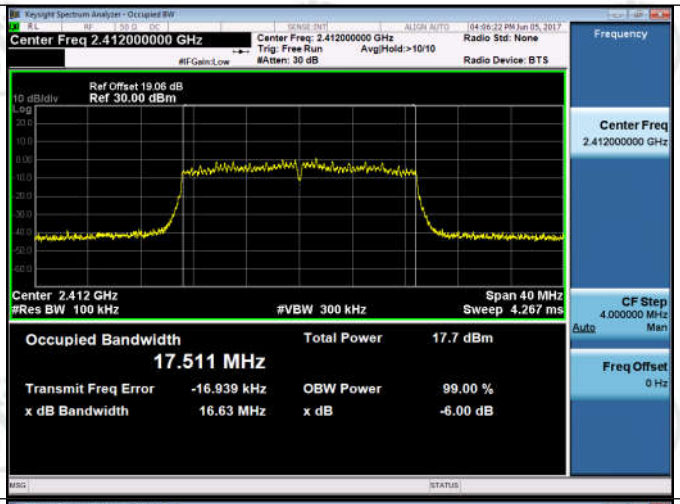
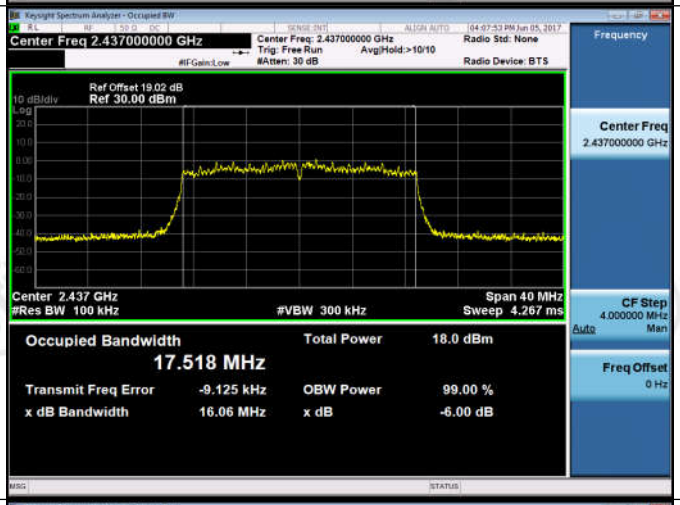
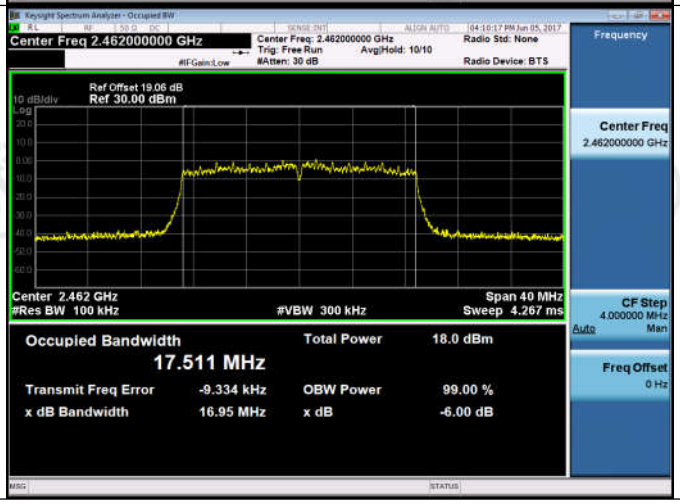
Result Table

Mode	Channel	6dB Bandwidth [MHz]	99% OBW [MHz]	Verdict	Remark
11B	LCH	6.953	11.880	PASS	Peak detector
11B	MCH	7.572	11.894	PASS	
11B	HCH	7.751	11.951	PASS	
11G	LCH	15.43	16.325	PASS	
11G	MCH	15.73	16.325	PASS	
11G	HCH	15.68	16.331	PASS	
11N20SISO	LCH	16.63	17.511	PASS	
11N20SISO	MCH	16.06	17.518	PASS	
11N20SISO	HCH	16.95	17.511	PASS	

Test Graph

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

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

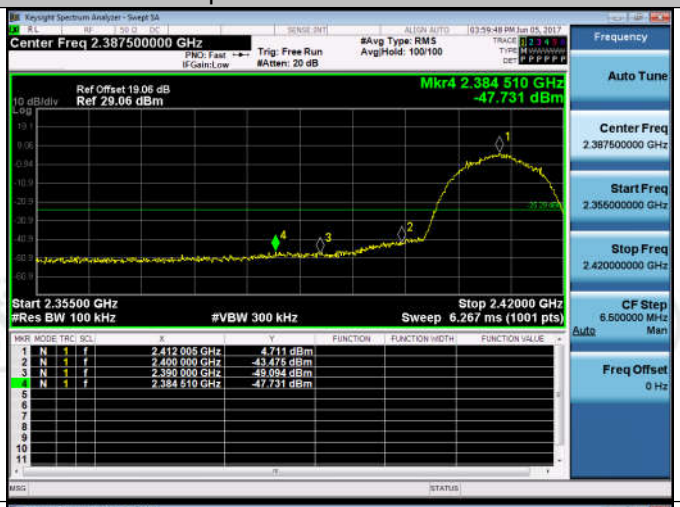
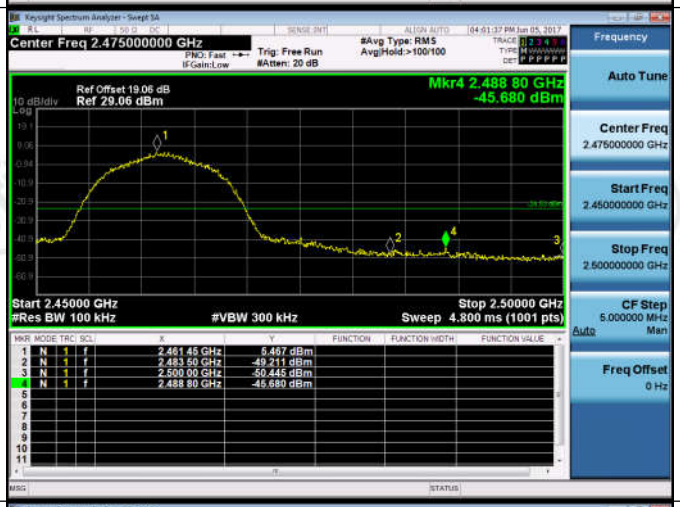
11N20SISO/LCH			
11N20SISO/MCH			
11N20SISO/HCH			

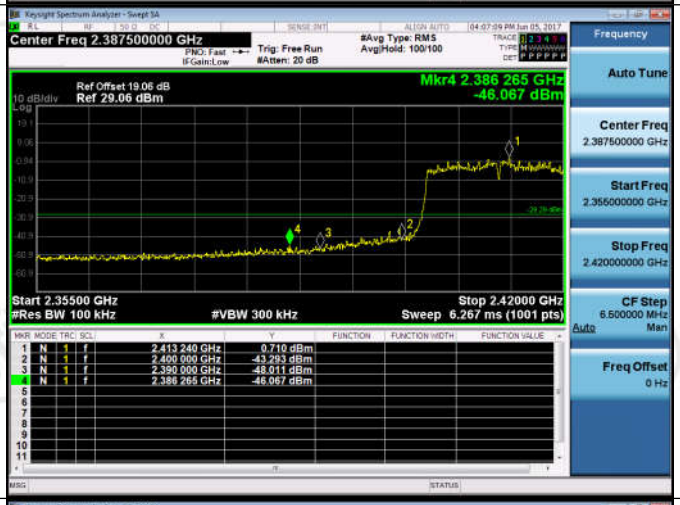
Appendix C): Band-edge for RF Conducted Emissions

Result Table

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	4.711	-47.731	-25.29	PASS
11B	HCH	5.467	-45.680	-24.53	PASS
11G	LCH	1.615	-45.933	-28.39	PASS
11G	HCH	2.149	-44.782	-27.85	PASS
11N20SISO	LCH	0.710	-46.067	-29.29	PASS
11N20SISO	HCH	1.096	-45.091	-28.90	PASS

Test Graph

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

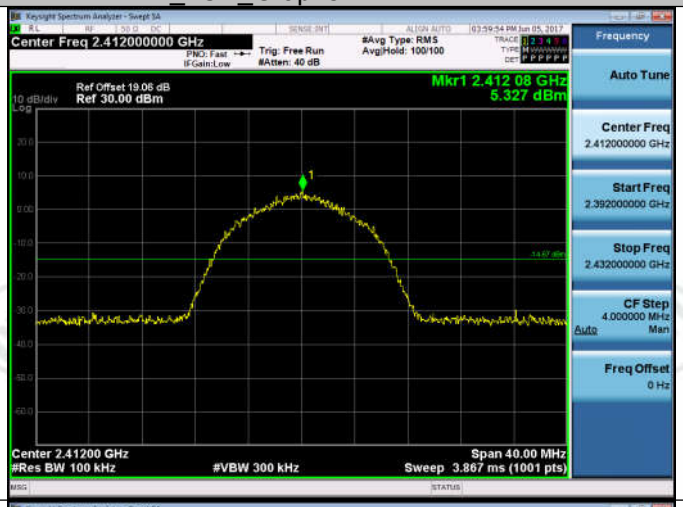
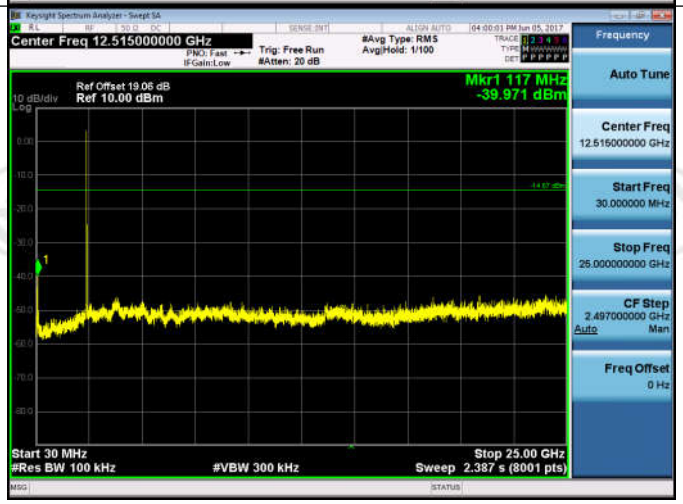
11G/HCH		
11N20SISO/LCH		
11N20SISO/HCH		

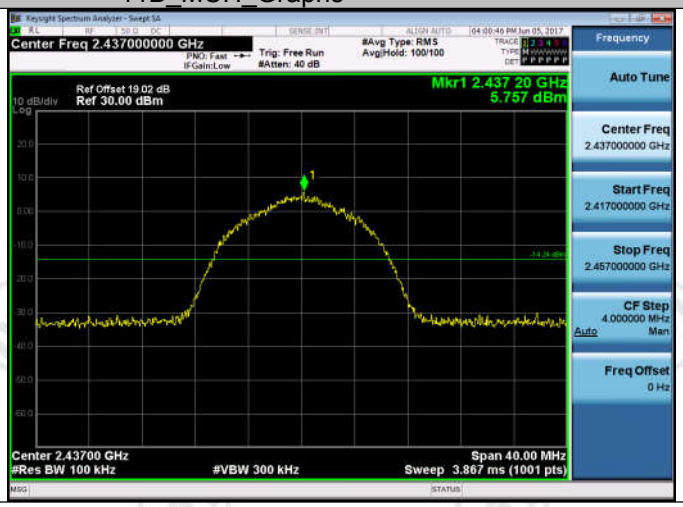
Appendix D): RF Conducted Spurious Emissions

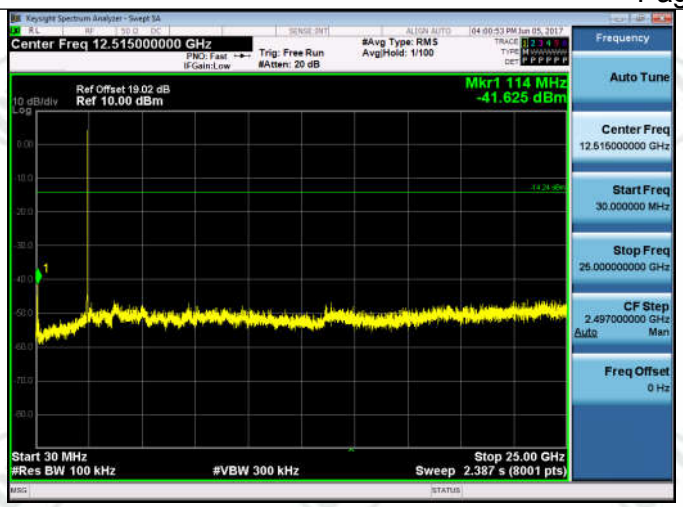
Result Table

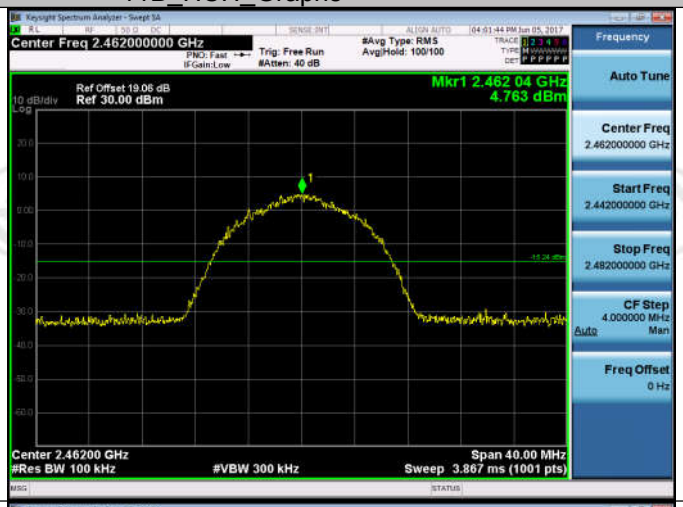
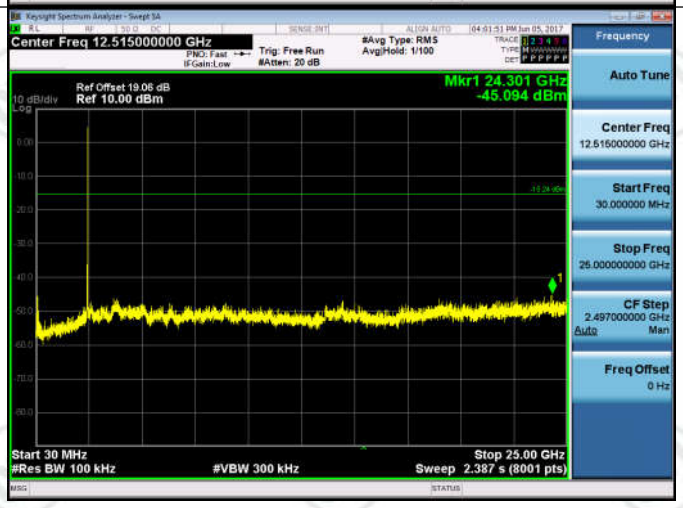
Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
11B	LCH	5.327	<Limit	PASS
11B	MCH	5.757	<Limit	PASS
11B	HCH	4.763	<Limit	PASS
11G	LCH	1.737	<Limit	PASS
11G	MCH	1.832	<Limit	PASS
11G	HCH	2.142	<Limit	PASS
11N20SISO	LCH	0.693	<Limit	PASS
11N20SISO	MCH	0.928	<Limit	PASS
11N20SISO	HCH	0.995	<Limit	PASS

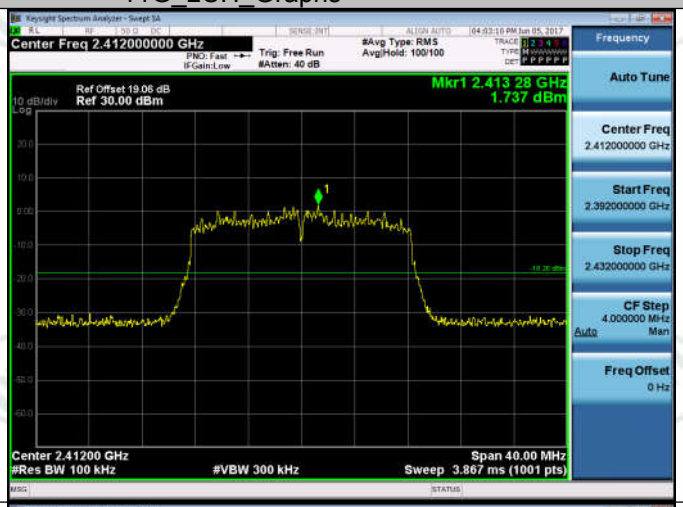
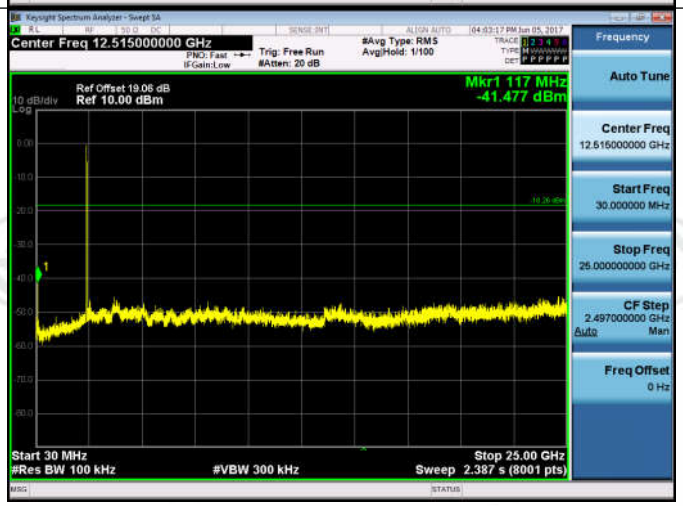
Test Graph

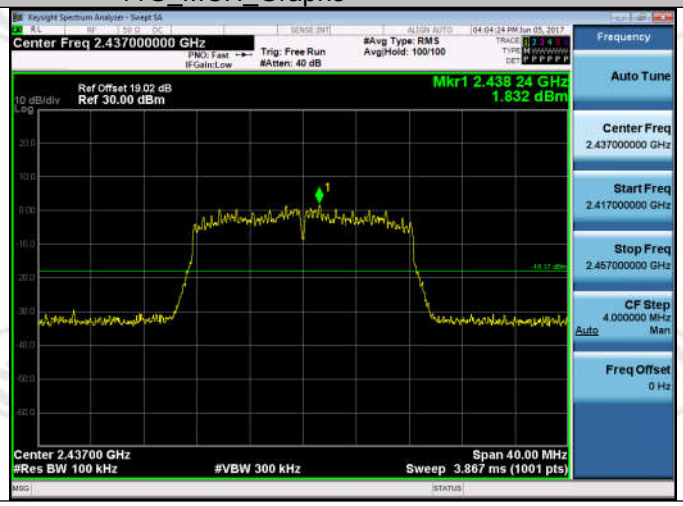
11B_LCH_Graphs	
Pref/11B/LCH	
Puw/11B/LCH	

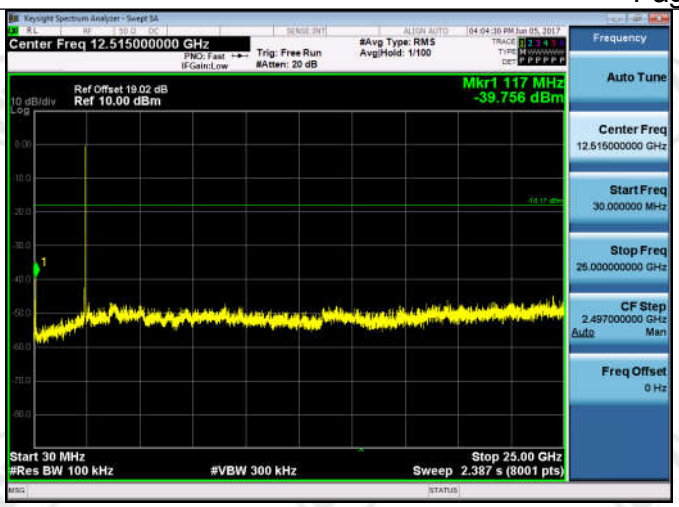
11B_MCH_Graphs	
Pref/11B/MCH	

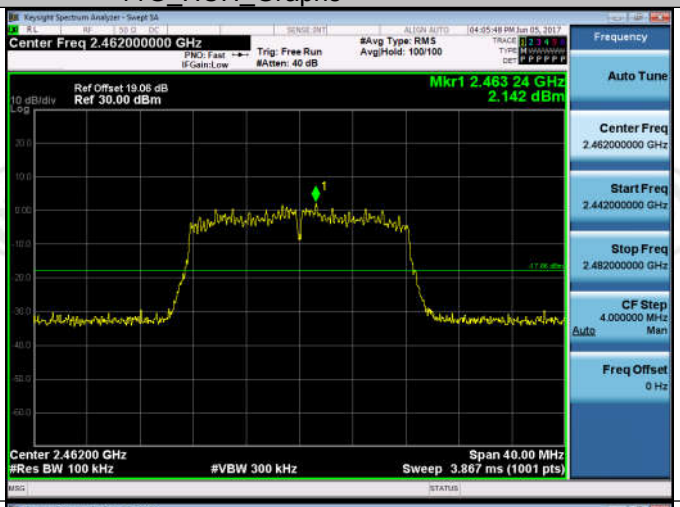
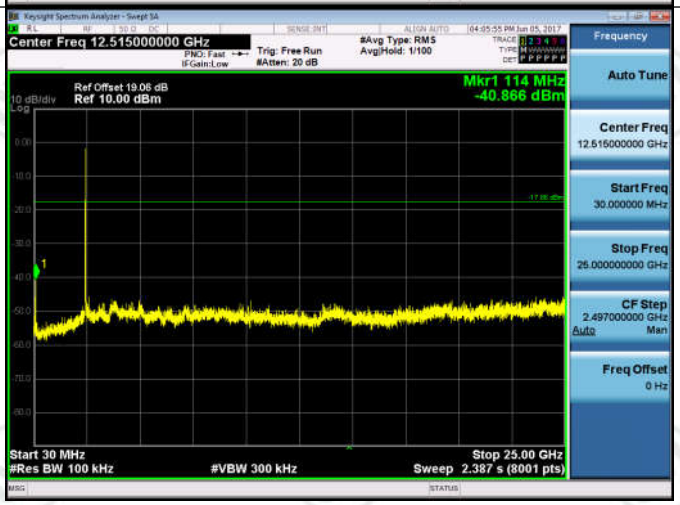
Puw/11B/MCH	

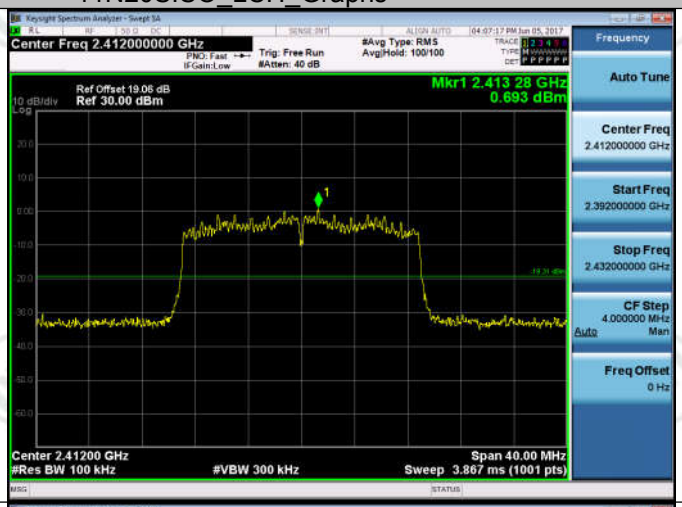
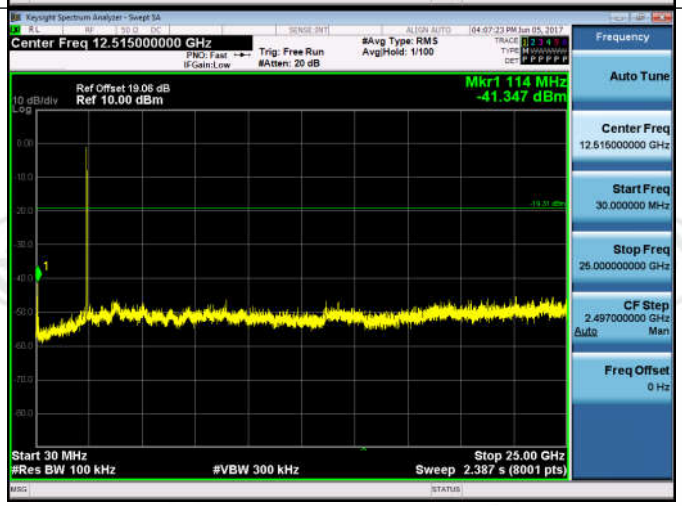
11B_HCH_Graphs	
Pref/11B/HCH	
Puw/11B/HCH	

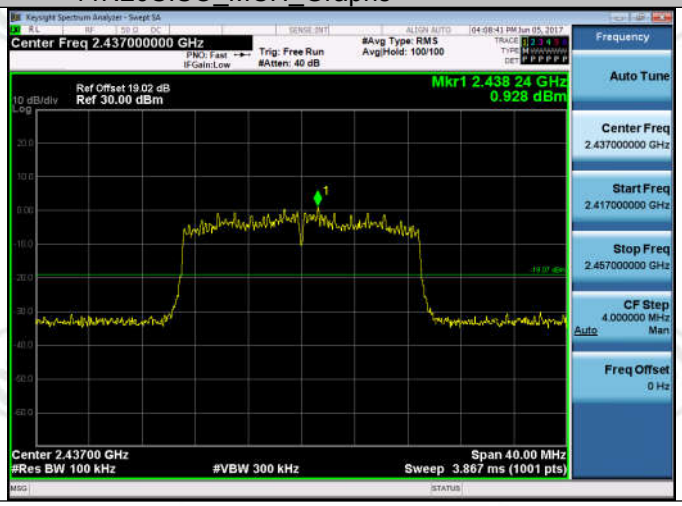
11G_LCH_Graphs	
Pref/11G/LCH	
Puw/11G/LCH	

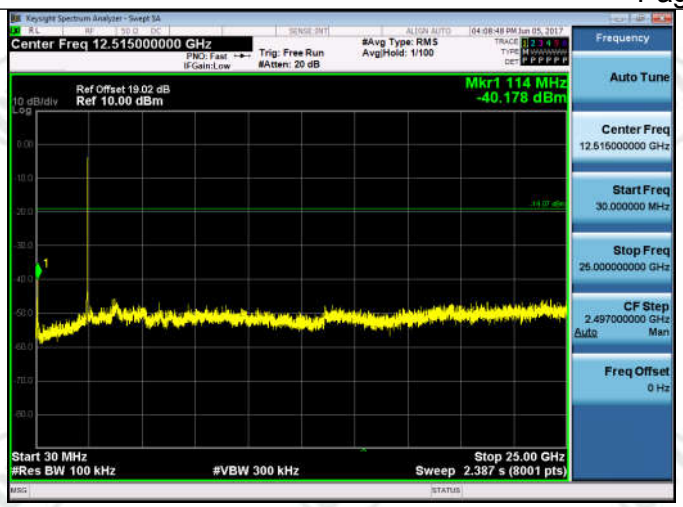
11G_MCH_Graphs	
Pref/11G/MCH	

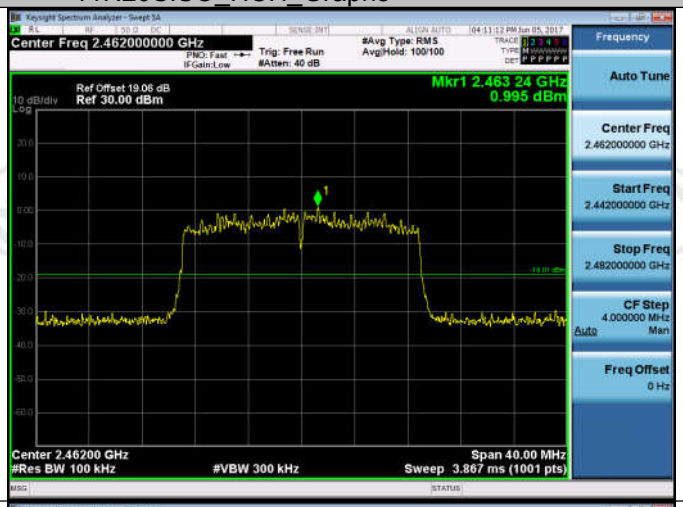
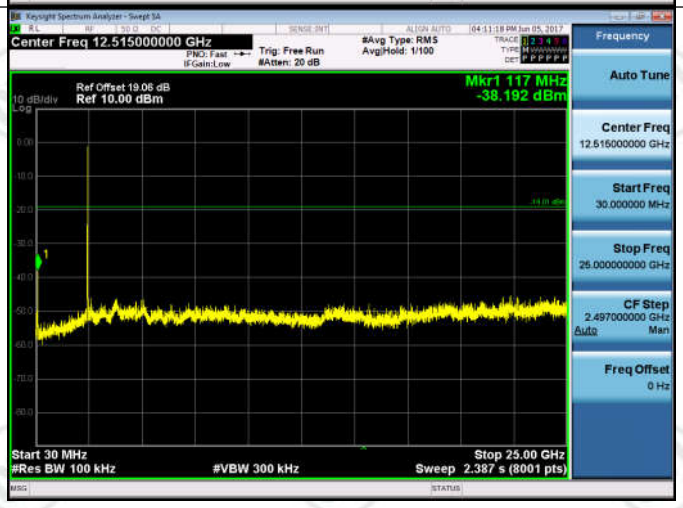
Puw/11G/MCH	

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

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

11N20SISO_MCH_Graphs	
Pref/11N20SISO/MCH	

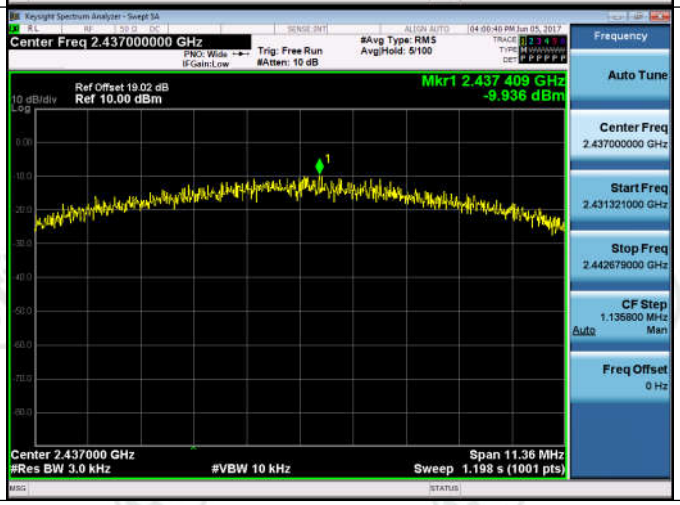
Puw/11N20SISO/MCH	

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

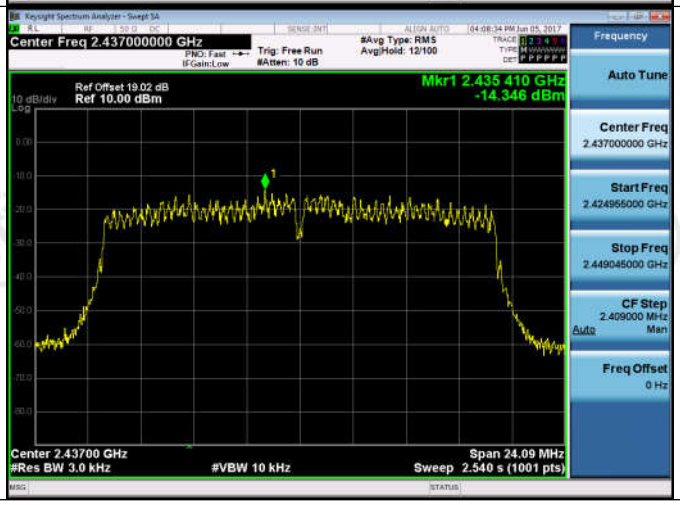
Appendix E): Power Spectral Density

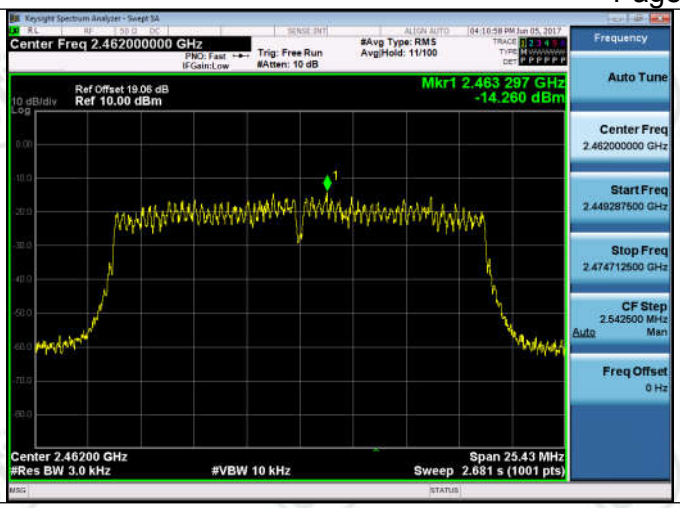
Result Table

Mode	Channel	Power Spectral Density [dBm]	Verdict
11B	LCH	-11.022	PASS
11B	MCH	-9.936	PASS
11B	HCH	-9.503	PASS
11G	LCH	-12.033	PASS
11G	MCH	-13.258	PASS
11G	HCH	-12.717	PASS
11N20SISO	LCH	-15.438	PASS
11N20SISO	MCH	-14.346	PASS
11N20SISO	HCH	-14.260	PASS

Graphs		
11B/LCH		
11B/MCH		

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

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

11N20SISO/HCH		

Appendix F): Antenna Requirement

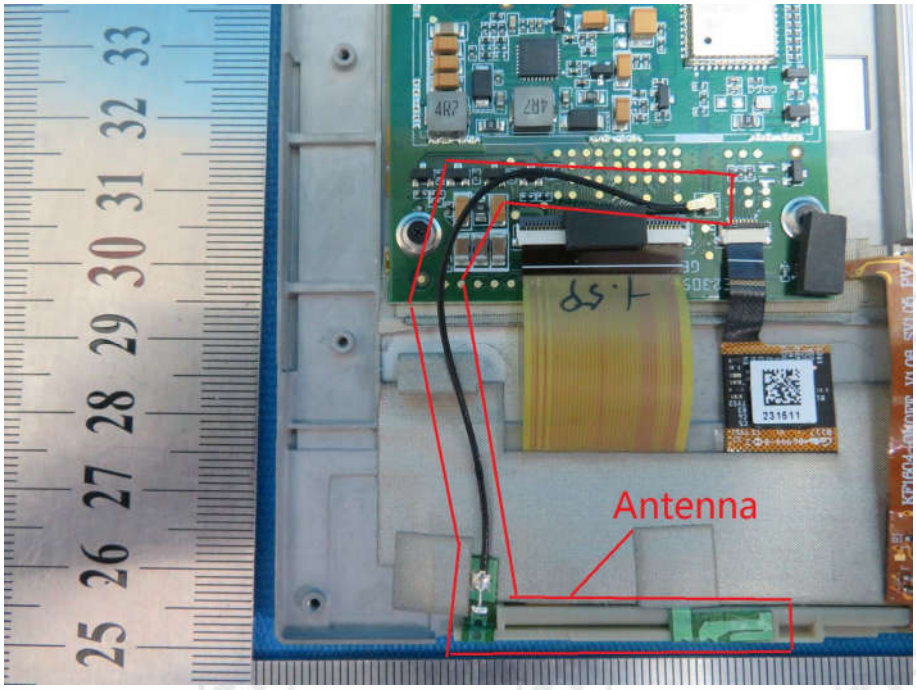
15.203 requirement:

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 WIFI antenna is 2.22Bi.

Appendix G): AC Power Line Conducted Emission

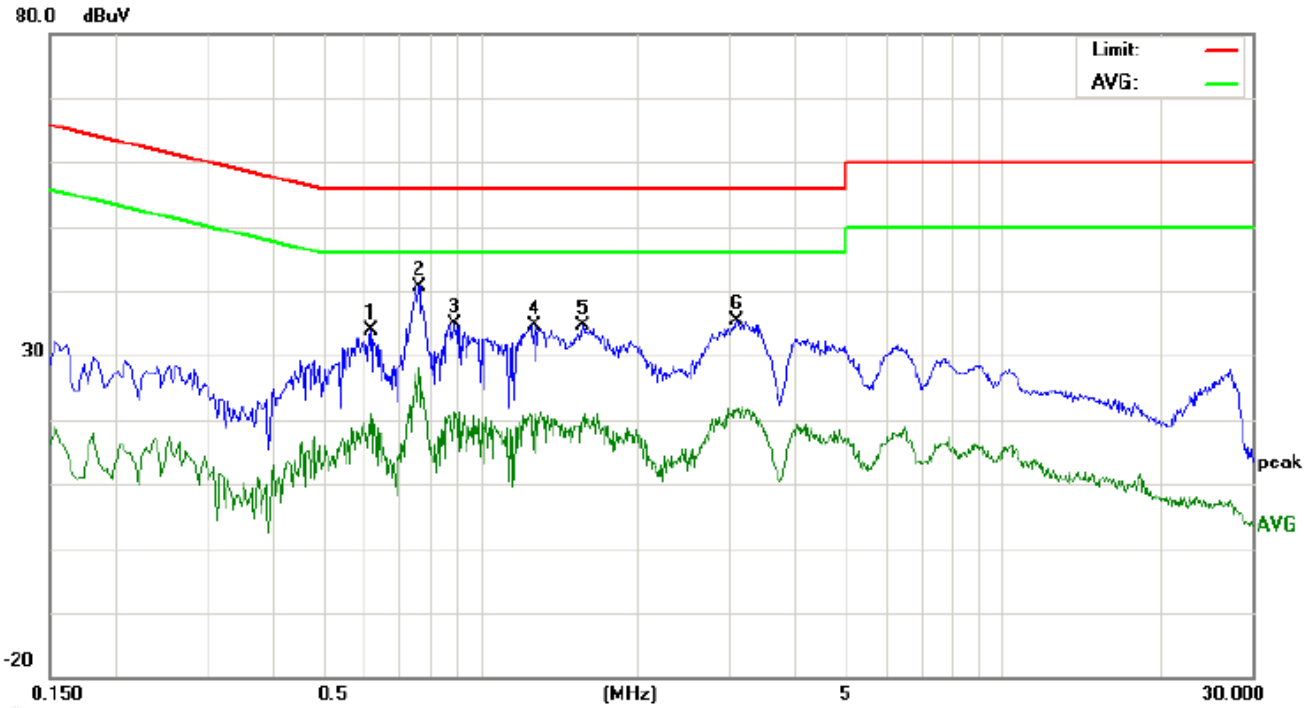
<table>
<tr><td>Test Procedure:</td><td>Test frequency range :150KHz-30MHz
1)The mains terminal disturbance voltage test was conducted in a shielded room.
2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance.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

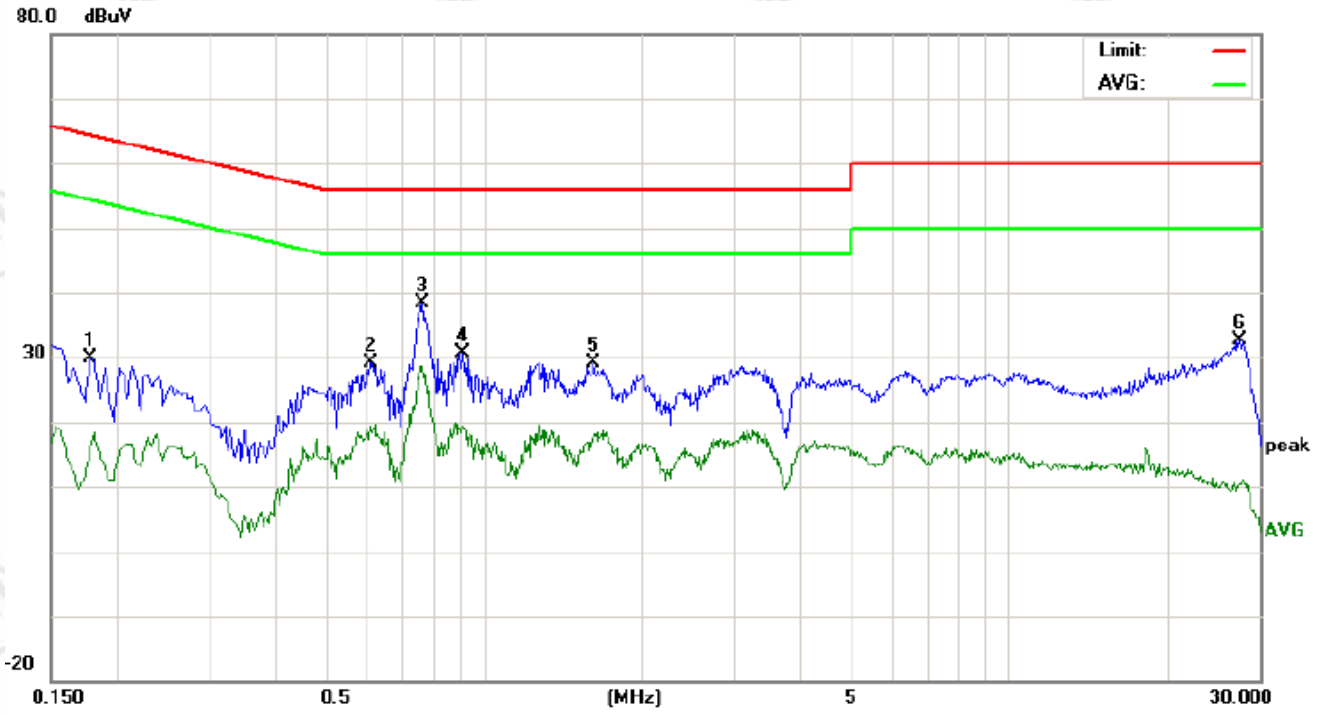
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

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	0.6180	24.07	21.55	11.16	9.75	33.82	31.30	20.91	56.00	46.00	-24.70	-25.09	P	
2	0.7660	30.96	27.48	18.32	9.74	40.70	37.22	28.06	56.00	46.00	-18.78	-17.94	P	
3	0.8980	25.10	22.17	11.46	9.75	34.85	31.92	21.21	56.00	46.00	-24.08	-24.79	P	
4	1.2700	25.05	22.69	11.12	9.65	34.70	32.34	20.77	56.00	46.00	-23.66	-25.23	P	
5	1.5740	24.84	21.08	10.52	9.68	34.52	30.76	20.20	56.00	46.00	-25.24	-25.80	P	
6	3.0980	25.78	22.47	11.81	9.68	35.46	32.15	21.49	56.00	46.00	-23.85	-24.51	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	0.1780	20.09	17.58	5.72	9.73	29.82	27.31	15.45	64.57	54.57	-37.26	-39.12	P	
2	0.6100	19.45	16.54	9.65	9.75	29.20	26.29	19.40	56.00	46.00	-29.71	-26.60	P	
3	0.7660	28.52	25.66	18.78	9.74	38.26	35.40	28.52	56.00	46.00	-20.60	-17.48	P	
4	0.9140	20.91	17.28	9.60	9.73	30.64	27.01	19.33	56.00	46.00	-28.99	-26.67	P	
5	1.6260	19.57	16.75	7.60	9.68	29.25	26.43	17.28	56.00	46.00	-29.57	-28.72	P	
6	27.4700	22.49	19.93	0.13	10.19	32.68	30.12	10.32	60.00	50.00	-29.88	-39.68	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:

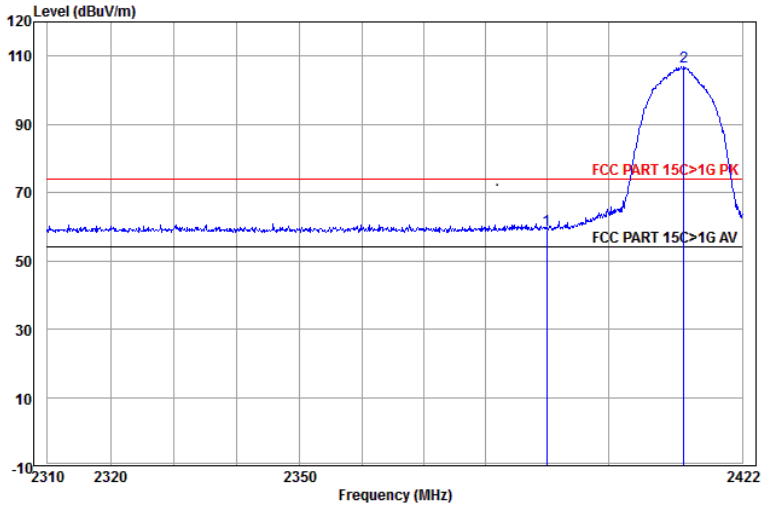
g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter).
h. Test the EUT in the lowest channel , the Highest channel
i. The radiation measurements are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

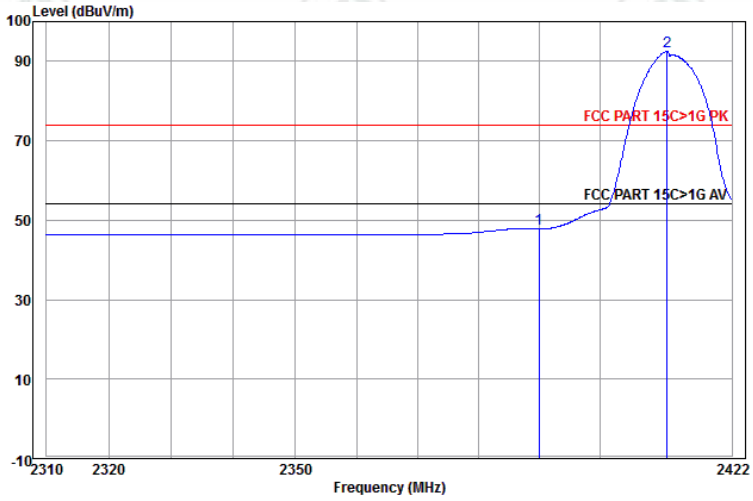
Test plot as follows:

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



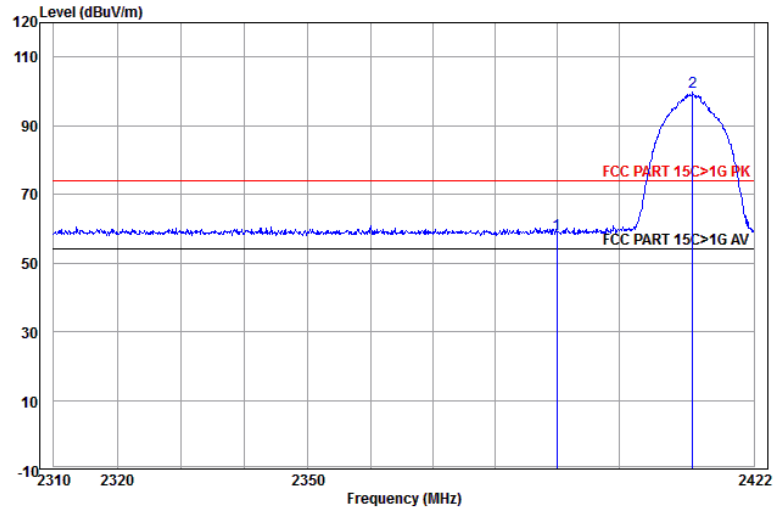
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	22.19	59.00	74.00	-15.00	Horizontal	
2 pp	2412.387	32.58	4.34	69.86	106.78	74.00	32.78	Horizontal	

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



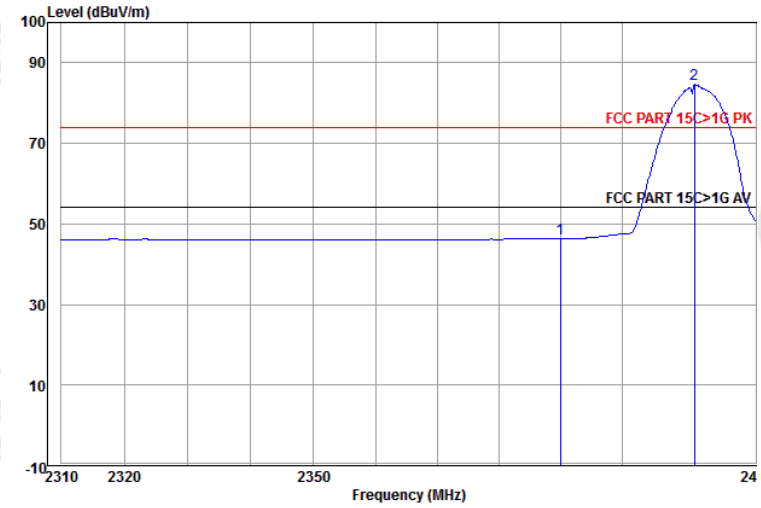
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	10.96	47.77	54.00	-6.23	Horizontal	Average
2 pp	2411.245	32.58	4.33	55.69	92.60	54.00	38.60	Horizontal	Average

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



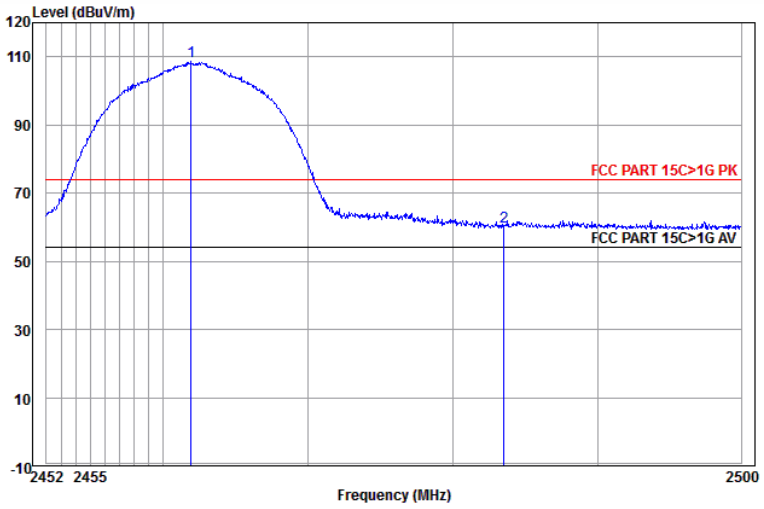
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	21.69	58.50	74.00	-15.50	Vertical	
2 pp	2412.044	32.58	4.33	62.82	99.73	74.00	25.73	Vertical	

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



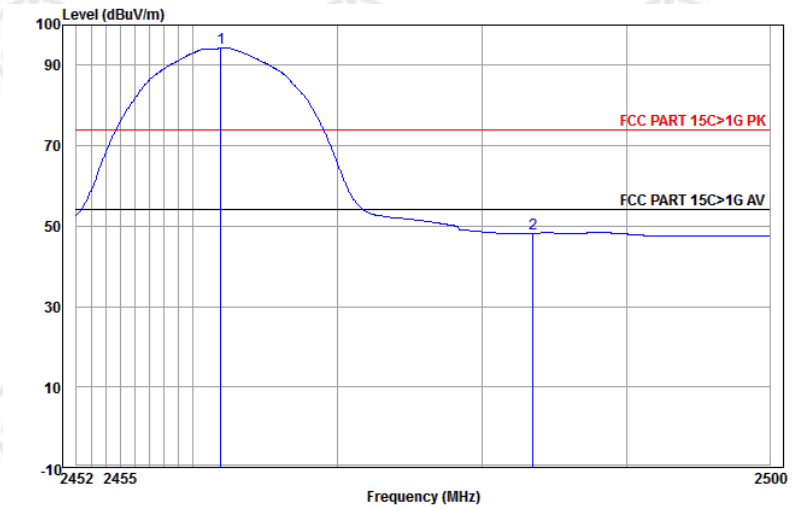
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	9.54	46.35	54.00	-7.65	Vertical	Average
2 pp	2411.930	32.58	4.33	47.73	84.64	54.00	30.64	Vertical	Average

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



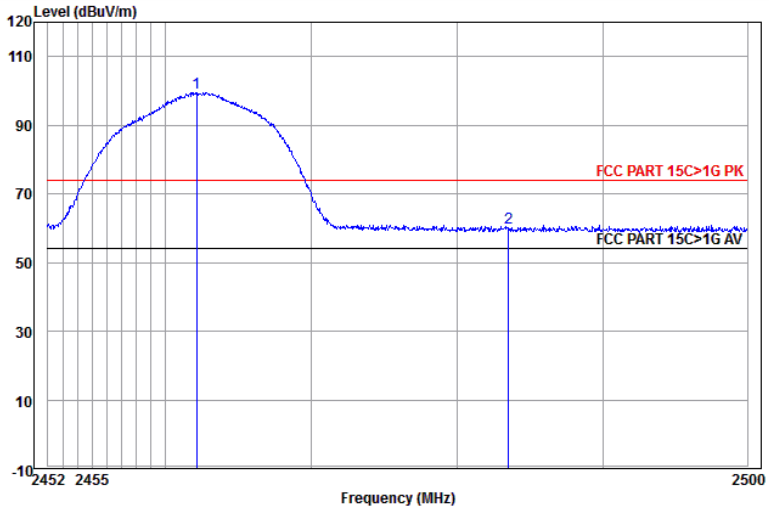
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2461.907	32.67	4.45	71.52	108.64	54.00	54.64	Horizontal	Average
2 *	2483.500	32.71	4.51	22.91	60.13	54.00	6.13	Horizontal	Average

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



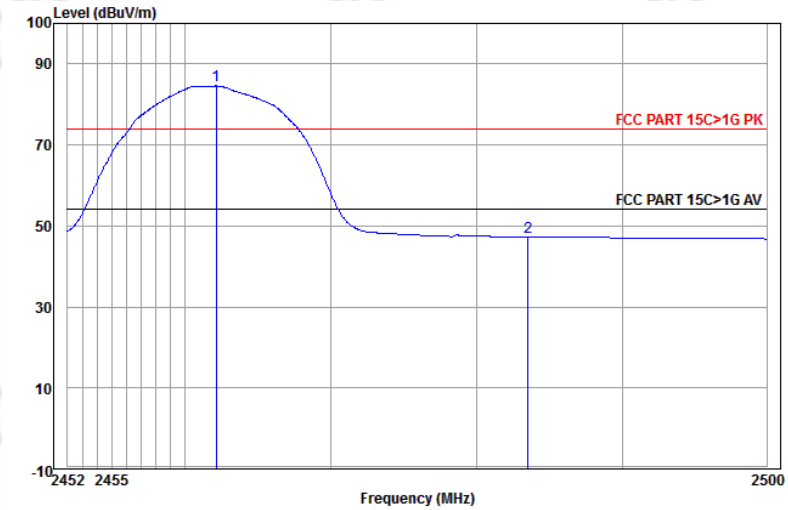
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2461.907	32.67	4.45	57.22	94.34	54.00	40.34	Horizontal	Average
2	2483.500	32.71	4.51	10.91	48.13	54.00	-5.87	Horizontal	Average

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



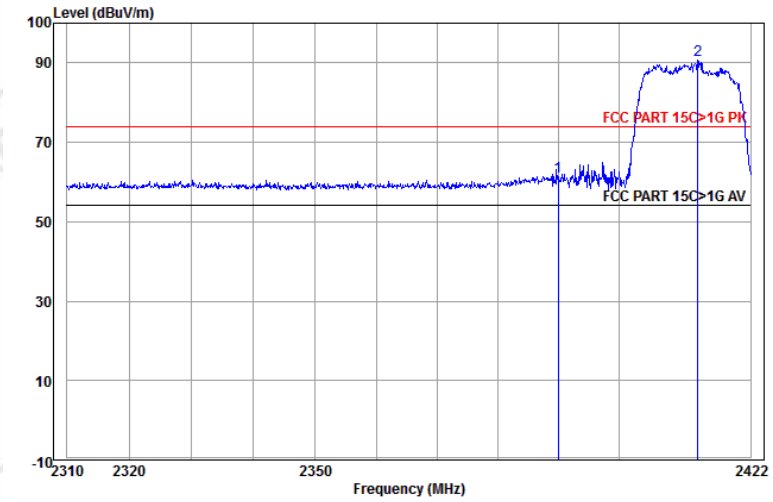
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2462.146	32.67	4.46	62.43	99.56	74.00	25.56	Vertical	
2	2483.500	32.71	4.51	23.09	60.31	74.00	-13.69	Vertical	

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



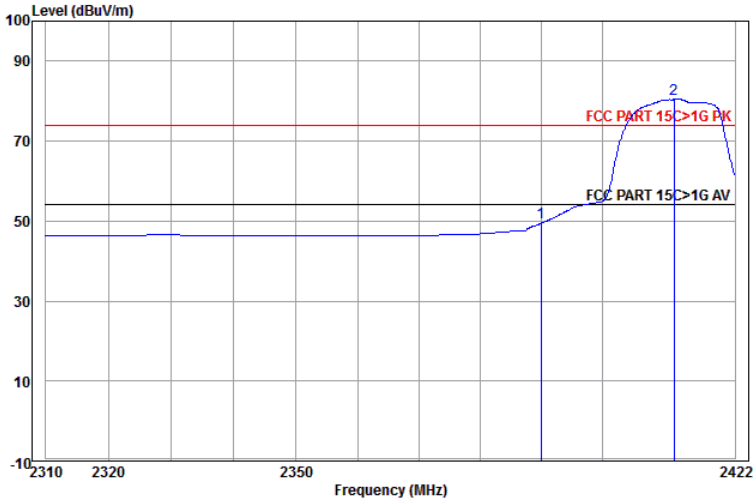
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2462.146	32.67	4.46	47.44	84.57	54.00	30.57	Vertical	Average
2	2483.500	32.71	4.51	10.00	47.22	54.00	-6.78	Vertical	Average

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



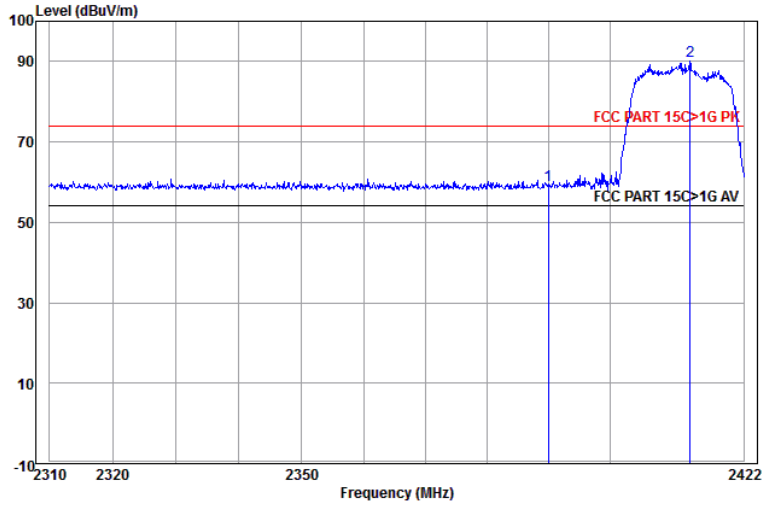
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	24.39	61.20	74.00	-12.80	Horizontal	
2 pp	2413.186	32.58	4.34	53.80	90.72	74.00	16.72	Horizontal	

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



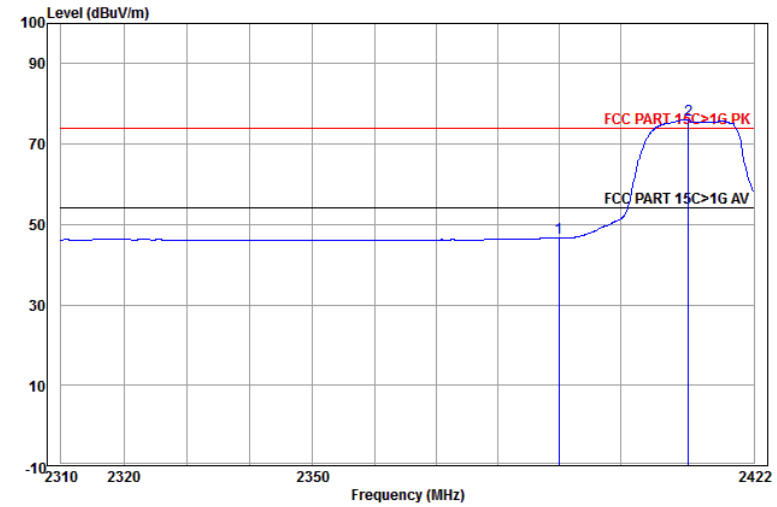
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	12.95	49.76	54.00	-4.24	Horizontal	Average
2 pp	2411.930	32.58	4.33	43.69	80.60	54.00	26.60	Horizontal	Average

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



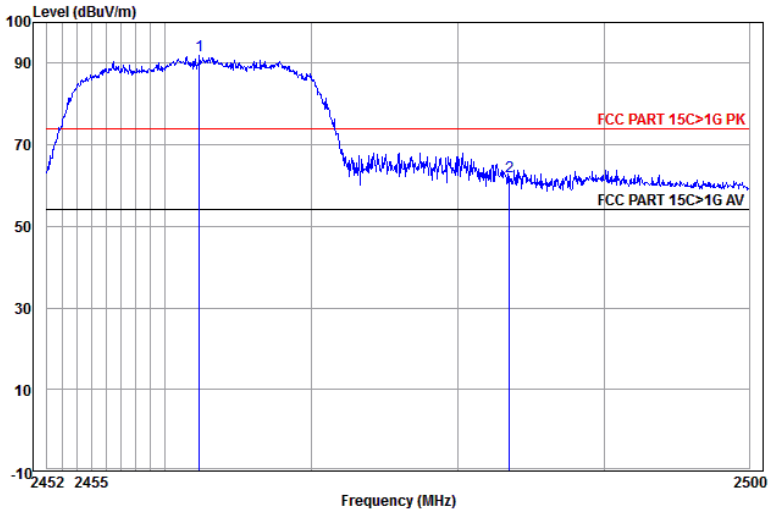
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	22.48	59.29	74.00	-14.71	Vertical	
2 pp	2413.186	32.58	4.34	53.06	89.98	74.00	15.98	Vertical	

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



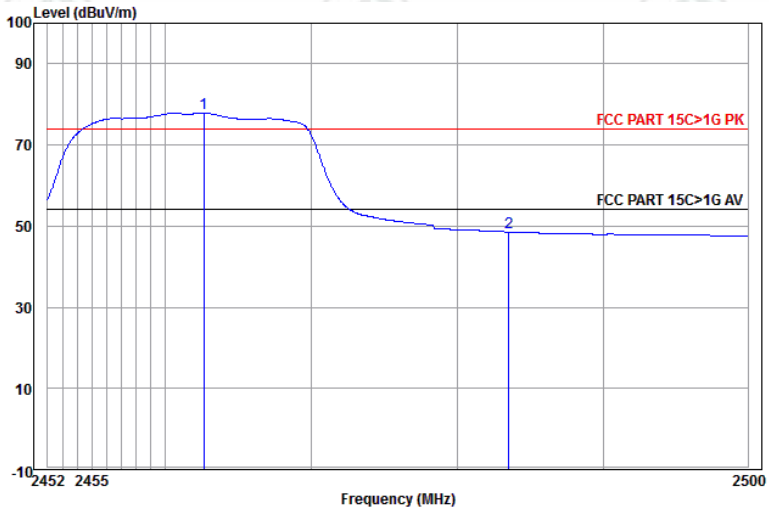
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	9.78	46.59	54.00	-7.41	Vertical	Average
2 pp	2411.245	32.58	4.33	39.14	76.05	54.00	22.05	Vertical	Average

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



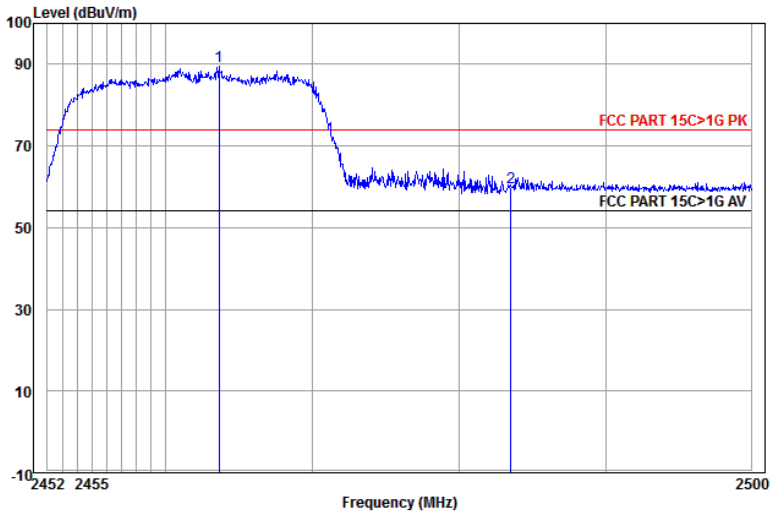
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2462.337	32.67	4.46	54.65	91.78	74.00	17.78	Horizontal	
2	2483.500	32.71	4.51	25.01	62.23	74.00	-11.77	Horizontal	

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



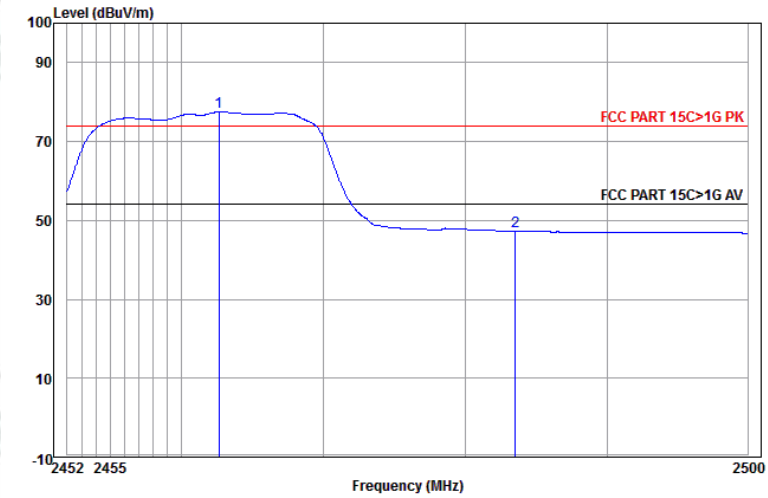
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2462.624	32.68	4.46	40.73	77.87	54.00	23.87	Horizontal	Average
2	2483.500	32.71	4.51	11.33	48.55	54.00	-5.45	Horizontal	Average

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



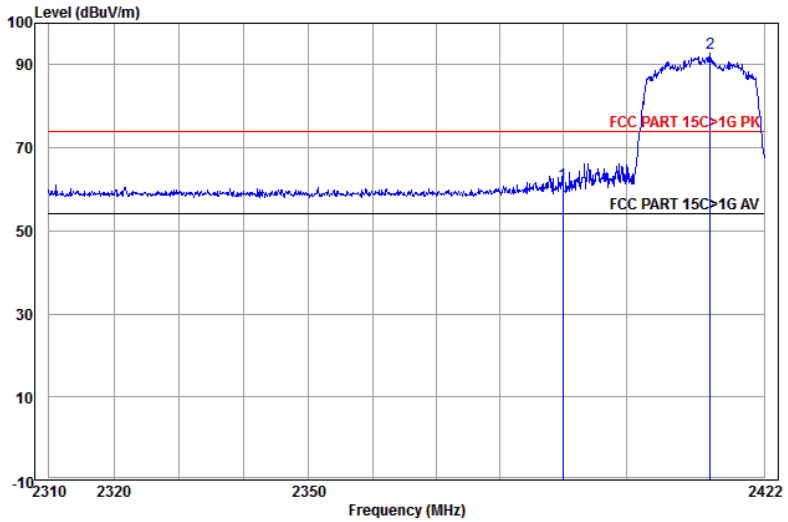
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2463.626	32.68	4.46	52.26	89.40	74.00	15.40	Vertical	
2	2483.500	32.71	4.51	22.72	59.94	74.00	-14.06	Vertical	

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



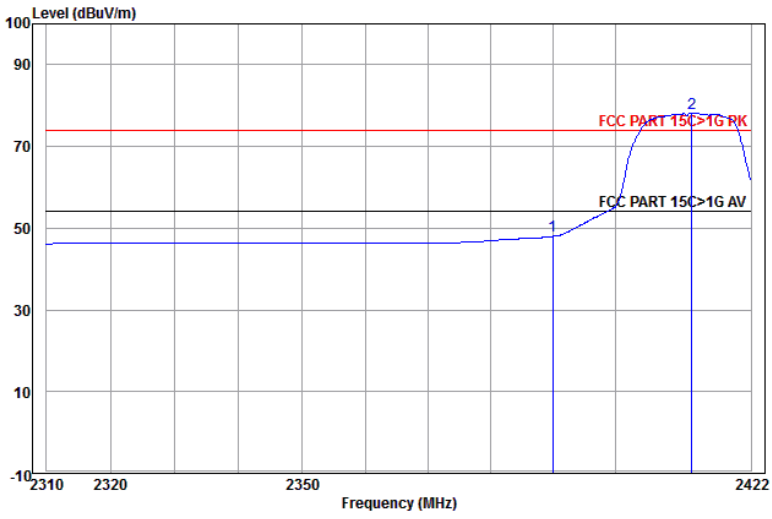
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2462.624	32.68	4.46	40.33	77.47	54.00	23.47	Vertical	Average
2	2483.500	32.71	4.51	10.00	47.22	54.00	-6.78	Vertical	Average

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



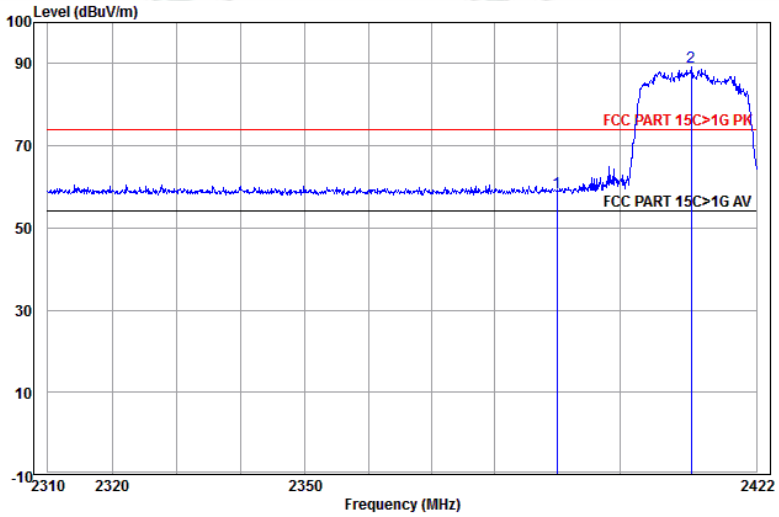
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	24.56	61.37	74.00	-12.63	Horizontal	
2 pp	2413.415	32.58	4.34	55.79	92.71	74.00	18.71	Horizontal	

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



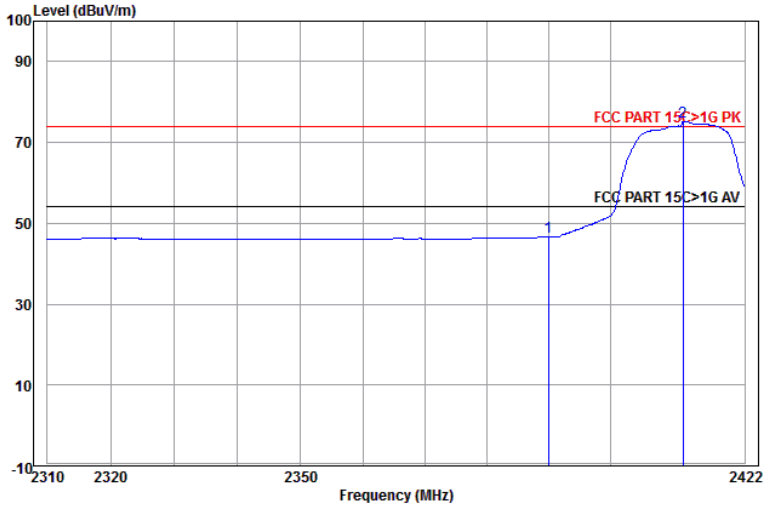
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	11.45	48.26	54.00	-5.74	Horizontal	Average
2 pp	2412.387	32.58	4.34	41.20	78.12	54.00	24.12	Horizontal	Average

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



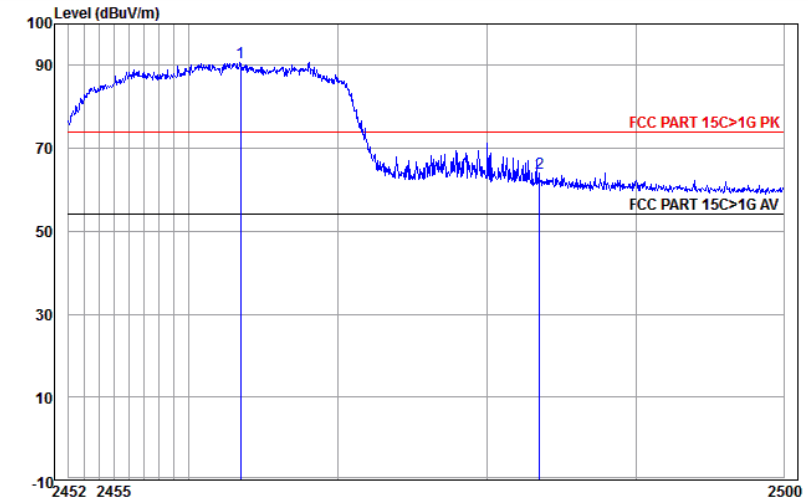
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	21.92	58.73	74.00	-15.27	Vertical	
2 pp	2411.473	32.58	4.33	52.24	89.15	74.00	15.15	Vertical	

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



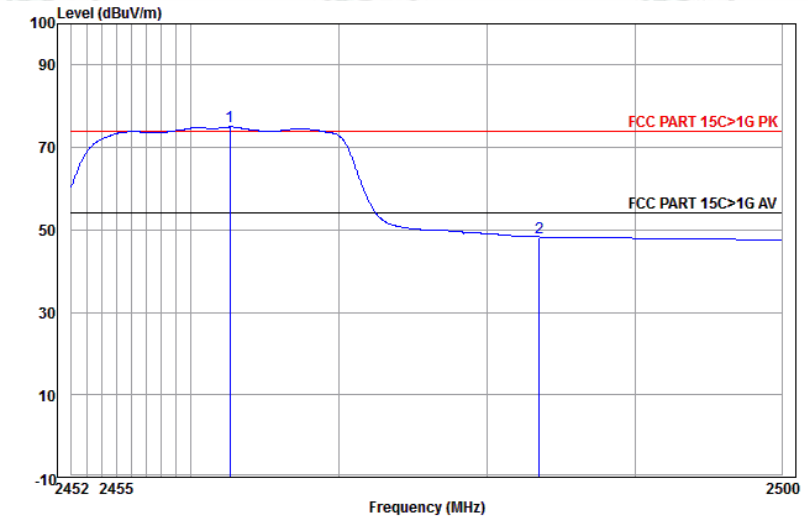
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	4.28	9.88	46.69	54.00	-7.31	Vertical	Average
2 pp	2411.930	32.58	4.33	38.26	75.17	54.00	21.17	Vertical	Average

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



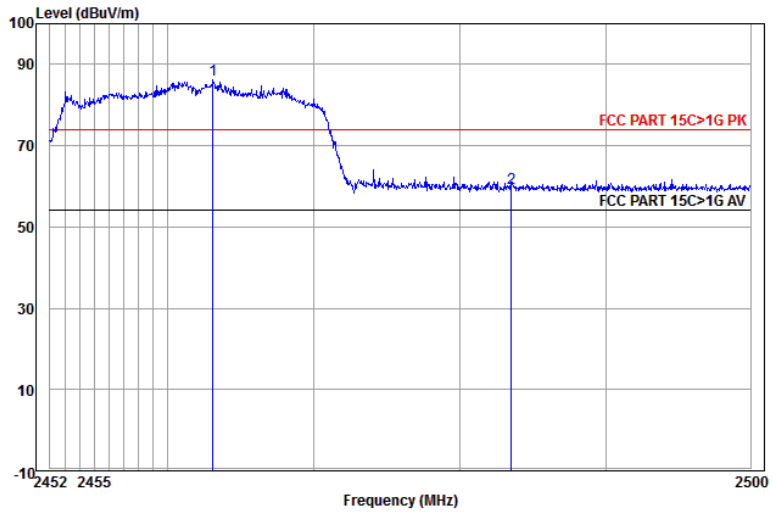
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2463.435	32.68	4.46	53.71	90.85	74.00	16.85	Horizontal	
2	2483.500	32.71	4.51	26.72	63.94	74.00	-10.06	Horizontal	

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



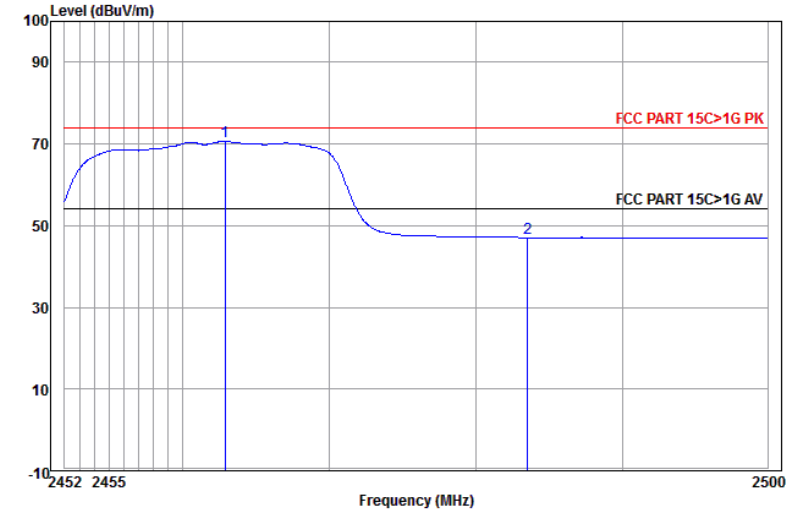
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2462.624	32.68	4.46	37.86	75.00	54.00	21.00	Horizontal	Average
2	2483.500	32.71	4.51	11.08	48.30	54.00	-5.70	Horizontal	Average

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



	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2463.101	32.68	4.46	49.09	86.23	74.00	12.23	Vertical	
2	2483.500	32.71	4.51	22.22	59.44	74.00	-14.56	Vertical	

Worse case mode:	802.11n(HT20) (6.5Mbps)		
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	2462.862	32.68	4.46	33.53	70.67	54.00	16.67	Vertical	Average
2	2483.500	32.71	4.51	9.82	47.04	54.00	-6.96	Vertical	Average

Note:

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

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

Final Test Level =Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

Appendix I): Radiated Spurious Emissions

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

Test Procedure:

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:

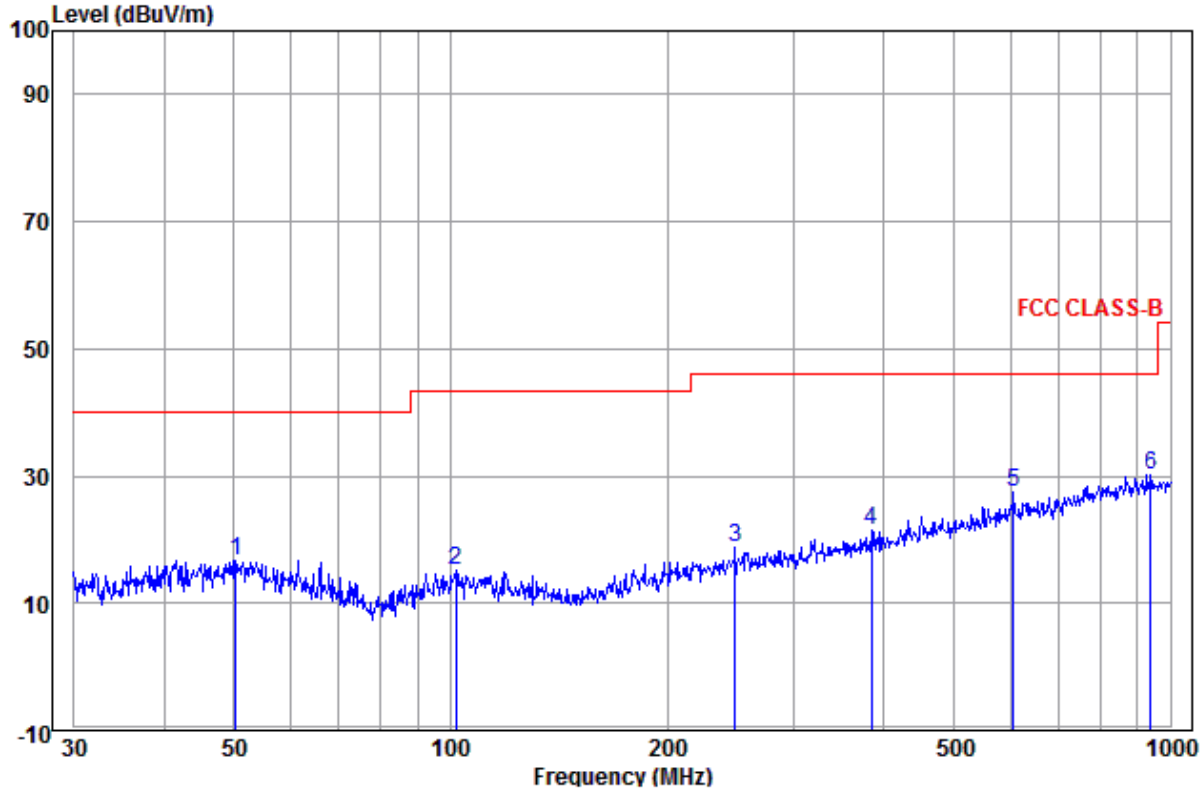
Frequency	Field strength (microvolt/meter)	Limit (dBμV/m)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz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

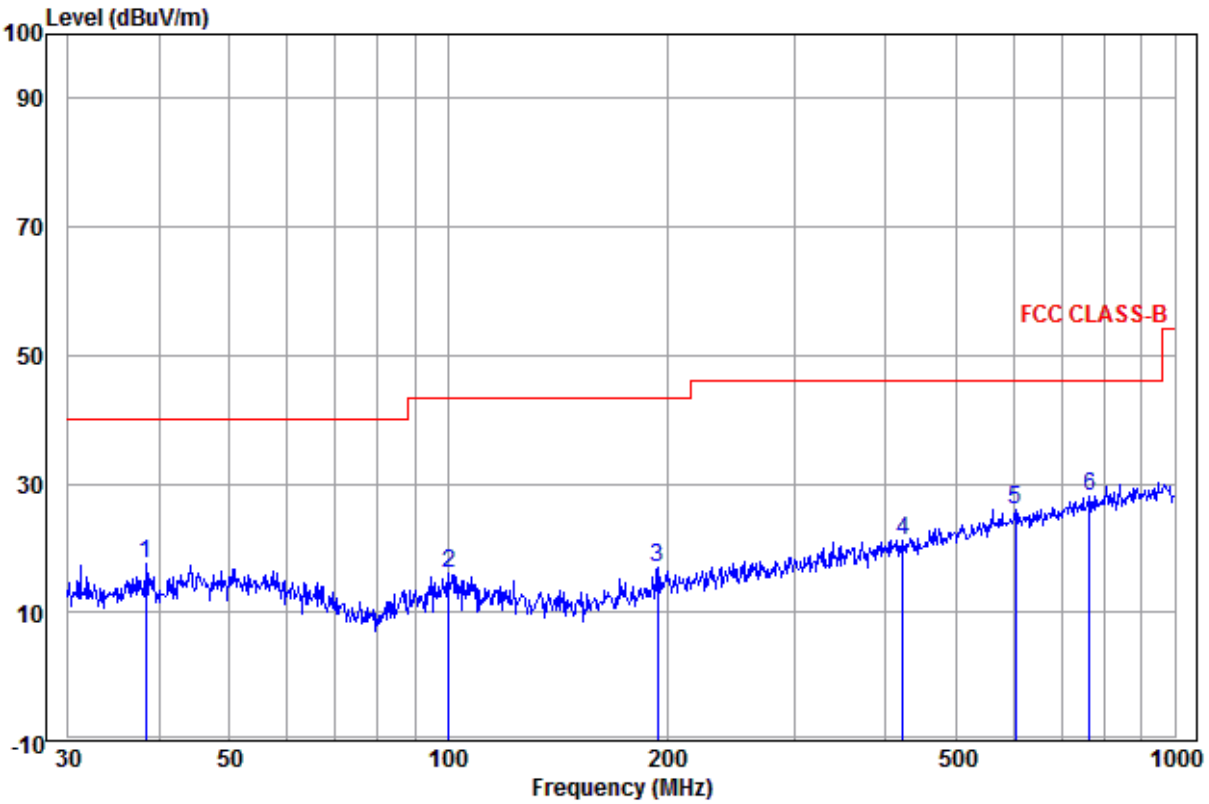
Radiated Emission below 1GHz

30MHz~1GHz (QP)			
Worse case mode:802.11b (11Mbps)	Test Frequency: 2412MHz	Transmitting	Horizontal



	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	50.232	13.25	0.11	3.42	16.78	40.00	-23.22	Horizontal	
2	101.644	10.97	0.59	3.54	15.10	43.50	-28.40	Horizontal	
3	248.552	11.97	1.33	5.36	18.66	46.00	-27.34	Horizontal	
4	383.932	15.19	1.32	5.11	21.62	46.00	-24.38	Horizontal	
5	605.659	18.91	1.83	6.63	27.37	46.00	-18.63	Horizontal	
6 pp	938.833	22.39	2.38	5.52	30.29	46.00	-15.71	Horizontal	

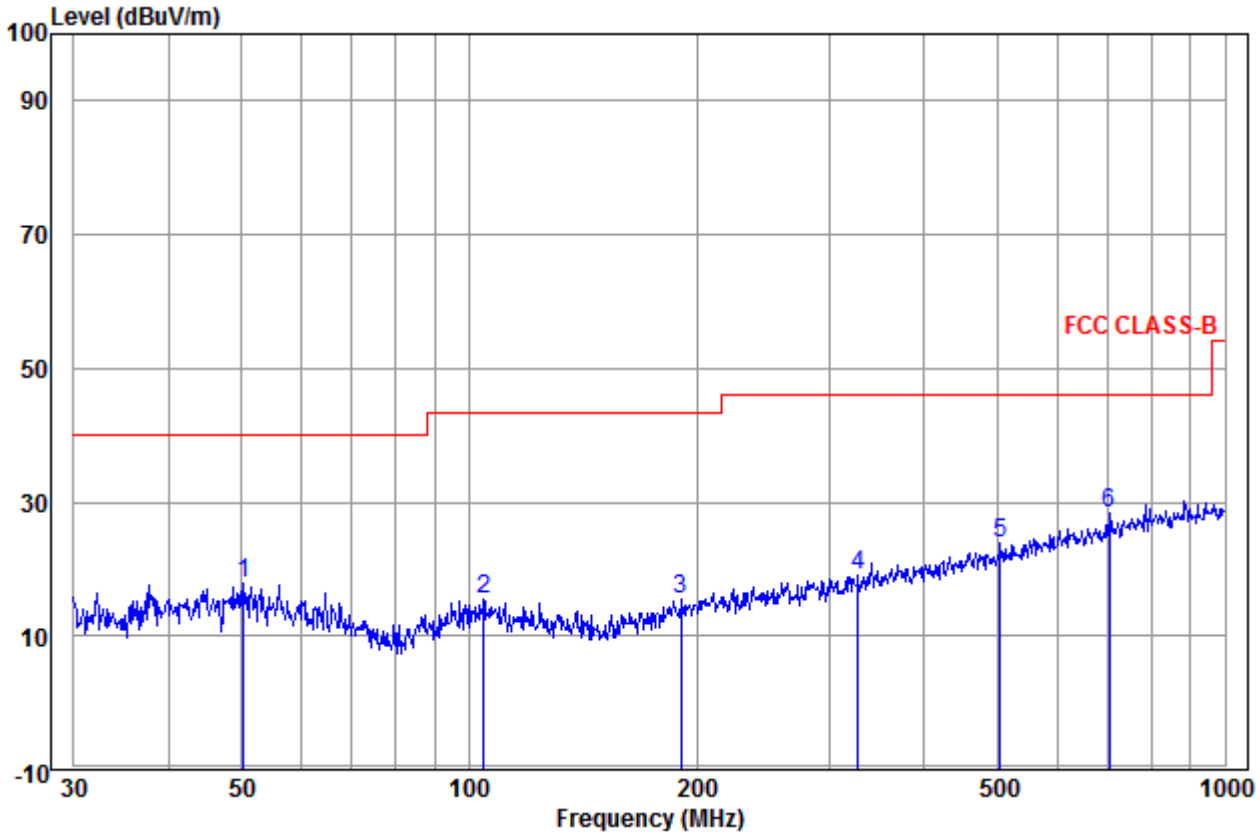
Worse case mode:802.11b (11Mbps)	Test Frequency: 2412MHz	Transmitting	Vertical



	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	38.346	12.14	0.06	5.35	17.55	40.00	-22.45	Vertical	
2	100.229	11.08	0.59	4.39	16.06	43.50	-27.44	Vertical	
3	194.453	10.69	1.05	5.26	17.00	43.50	-26.50	Vertical	
4	422.058	15.86	1.39	4.01	21.26	46.00	-24.74	Vertical	
5	603.539	18.91	1.83	5.28	26.02	46.00	-19.98	Vertical	
6 pp	763.376	20.25	2.50	5.26	28.01	46.00	-17.99	Vertical	

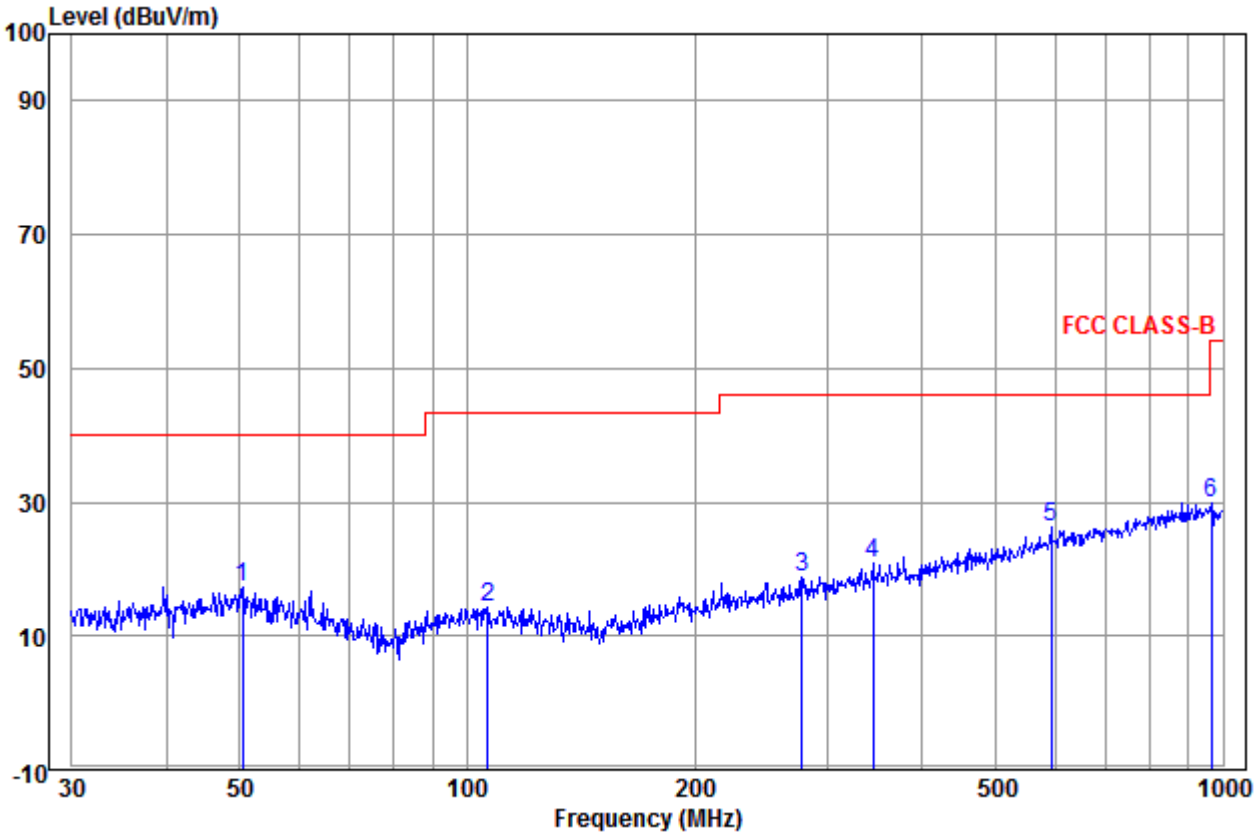
Remark: for 30MHz~1GHz test, low middle highest channel are tested, only show worst data in the report.

30MHz~1GHz (QP)			
Worse case mode:802.11g(6Mbps)	Test Frequency: 2412MHz	Transmitting	Horizontal



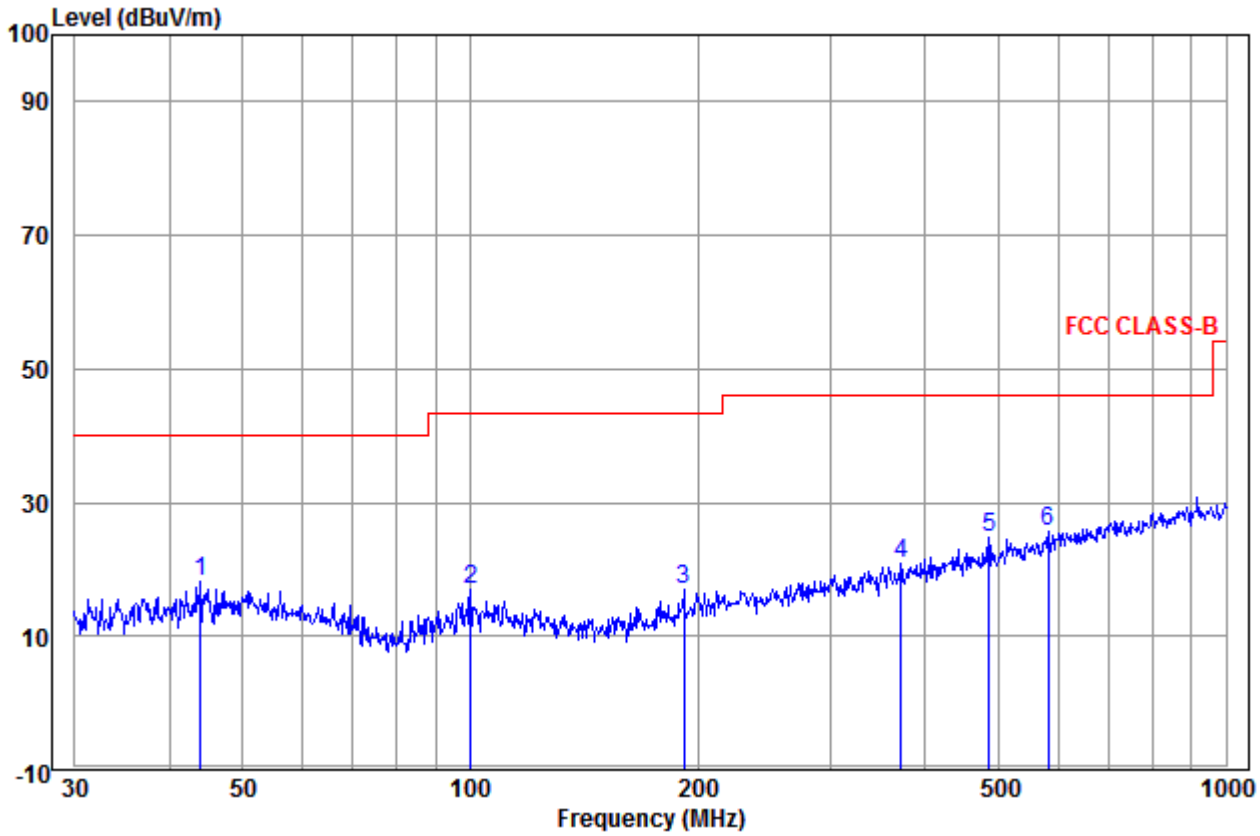
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	50.232	13.25	0.11	4.61	17.97	40.00	-22.03	Horizontal	
2	104.536	10.74	0.59	4.07	15.40	43.50	-28.10	Horizontal	
3	190.405	10.45	1.02	4.15	15.62	43.50	-27.88	Horizontal	
4	326.740	14.05	1.21	3.68	18.94	46.00	-27.06	Horizontal	
5	504.706	17.28	1.52	5.21	24.01	46.00	-21.99	Horizontal	
6 pp	704.226	19.91	2.06	6.27	28.24	46.00	-17.76	Horizontal	

Worse case mode:802.11g(6Mbps)	Test Frequency: 2412MHz	Transmitting	Vertical



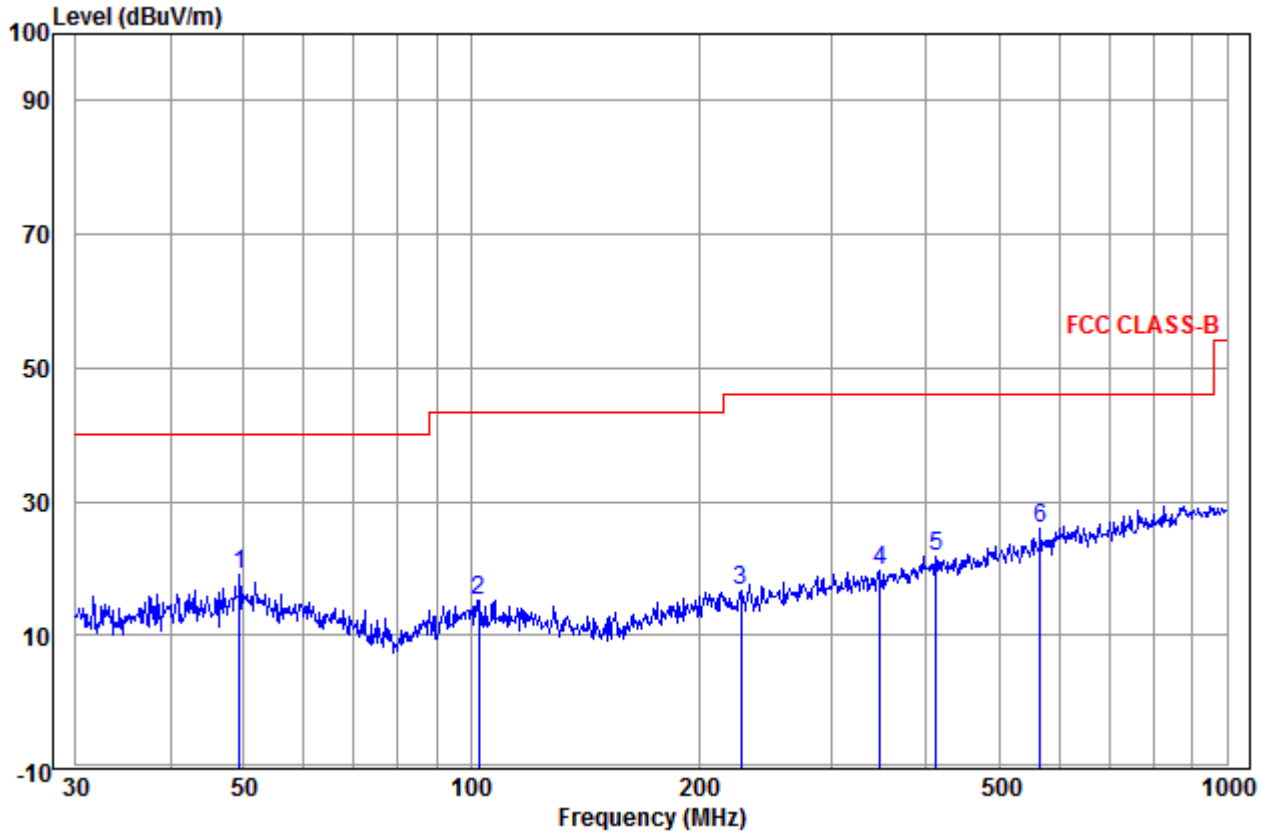
	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	50.409	13.22	0.11	4.08	17.41	40.00	-22.59	Vertical	
2	106.385	10.60	0.59	3.11	14.30	43.50	-29.20	Vertical	
3	277.094	12.85	1.19	4.72	18.76	46.00	-27.24	Vertical	
4	344.386	14.40	1.29	5.32	21.01	46.00	-24.99	Vertical	
5 pp	593.050	18.78	1.79	5.71	26.28	46.00	-19.72	Vertical	
6	965.542	22.63	2.08	5.23	29.94	54.00	-24.06	Vertical	

30MHz~1GHz (QP)			
Worse case mode: 802.11n(HT20)(6.5Mbps)	Test Frequency: 2412MHz	Transmitting	Horizontal



	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	43.966	12.78	0.08	5.41	18.27	40.00	-21.73	Horizontal	
2	100.229	11.08	0.59	5.19	16.86	43.50	-26.64	Horizontal	
3	191.745	10.53	1.03	5.30	16.86	43.50	-26.64	Horizontal	
4	372.005	14.96	1.32	4.55	20.83	46.00	-25.17	Horizontal	
5	485.609	16.95	1.51	6.22	24.68	46.00	-21.32	Horizontal	
6 pp	582.743	18.60	1.73	5.39	25.72	46.00	-20.28	Horizontal	

Worse case mode: 802.11n(HT20)(6.5Mbps)	Test Frequency: 2412MHz	Transmitting	Vertical



	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	49.359	13.25	0.11	5.57	18.93	40.00	-21.07	Vertical	
2	102.360	10.91	0.59	3.79	15.29	43.50	-28.21	Vertical	
3	227.691	11.58	1.24	3.85	16.67	46.00	-29.33	Vertical	
4	348.027	14.46	1.31	3.82	19.59	46.00	-26.41	Vertical	
5	411.824	15.70	1.36	4.66	21.72	46.00	-24.28	Vertical	
6 pp	566.622	18.31	1.64	5.98	25.93	46.00	-20.07	Vertical	

Remark: for 30MHz~1GHz test, low middle highest channel are tested, only show worst data in the report.

Transmitter Emission above 1GHz

Test mode: 802.11b(11Mbps)	Test Frequency: 2412MHz	Remark: Peak

Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1228.984	30.29	2.55	44.34	48.92	37.42	74.00	-36.58	Pass	Horizontal
1860.992	31.49	3.13	43.62	48.80	39.80	74.00	-34.20	Pass	Horizontal
4824.000	34.73	5.10	44.60	48.28	43.51	74.00	-30.49	Pass	Horizontal
6063.190	35.93	7.36	44.51	48.35	47.13	74.00	-26.87	Pass	Horizontal
7236.000	36.42	6.69	44.80	46.62	44.93	74.00	-29.07	Pass	Horizontal
9648.000	37.93	7.70	45.57	47.85	47.91	74.00	-26.09	Pass	Horizontal
1357.254	30.58	2.69	44.17	49.53	38.63	74.00	-35.37	Pass	Vertical
1553.293	30.97	2.88	43.94	49.38	39.29	74.00	-34.71	Pass	Vertical
4824.000	34.73	5.10	44.60	47.33	42.56	74.00	-31.44	Pass	Vertical
6063.190	35.93	7.36	44.51	48.84	47.62	74.00	-26.38	Pass	Vertical
7236.000	36.42	6.69	44.80	46.69	45.00	74.00	-29.00	Pass	Vertical
9648.000	37.93	7.70	45.57	48.16	48.22	74.00	-25.78	Pass	Vertical

Test mode: 802.11b(11Mbps)	Test Frequency: 2437MHz	Remark: Peak

Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1095.969	29.96	2.39	44.54	50.31	38.12	74.00	-35.88	Pass	Horizontal
1521.981	30.91	2.85	43.97	49.25	39.04	74.00	-34.96	Pass	Horizontal
4874.000	34.84	5.09	44.60	49.78	45.11	74.00	-28.89	Pass	Horizontal
5895.771	35.82	7.20	44.51	48.99	47.50	74.00	-26.50	Pass	Horizontal
7311.000	36.43	6.76	44.86	46.81	45.14	74.00	-28.86	Pass	Horizontal
9748.000	38.03	7.61	45.55	47.01	47.10	74.00	-26.90	Pass	Horizontal
1110.008	30.00	2.41	44.52	49.08	36.97	74.00	-37.03	Pass	Vertical
1495.101	30.86	2.82	44.00	49.09	38.77	74.00	-35.23	Pass	Vertical
4874.000	34.84	5.09	44.60	48.20	43.53	74.00	-30.47	Pass	Vertical
5971.290	35.88	7.37	44.50	49.54	48.29	74.00	-25.71	Pass	Vertical
7311.000	36.43	6.76	44.86	46.95	45.28	74.00	-28.72	Pass	Vertical
9748.000	38.03	7.61	45.55	46.87	46.96	74.00	-27.04	Pass	Vertical

Test mode: 802.11b(11Mbps)	Test Frequency: 2462MHz	Remark: Peak

Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1241.562	30.32	2.56	44.33	49.61	38.16	74.00	-35.84	Pass	Horizontal
1545.405	30.96	2.87	43.95	49.41	39.29	74.00	-34.71	Pass	Horizontal
2086.856	31.90	3.48	43.63	48.30	40.05	74.00	-33.95	Pass	Horizontal
4924.000	34.94	5.07	44.60	49.60	45.01	74.00	-28.99	Pass	Horizontal
7386.000	36.44	6.83	44.92	47.45	45.80	74.00	-28.20	Pass	Horizontal
9848.000	38.14	7.53	45.53	47.55	47.69	74.00	-26.31	Pass	Horizontal
1176.935	30.17	2.49	44.42	49.29	37.53	74.00	-36.47	Pass	Vertical
1634.419	31.12	2.95	43.85	48.85	39.07	74.00	-34.93	Pass	Vertical
4377.195	33.73	5.28	44.60	50.72	45.13	74.00	-28.87	Pass	Vertical
4924.000	34.94	5.07	44.60	49.27	44.68	74.00	-29.32	Pass	Vertical
7386.000	36.44	6.83	44.92	47.23	45.58	74.00	-28.42	Pass	Vertical
9848.000	38.14	7.53	45.53	46.79	46.93	74.00	-27.07	Pass	Vertical

Test mode: 802.11g(6Mbps)	Test Frequency: 2412MHz	Remark: Peak

Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1346.929	30.56	2.68	44.18	48.99	38.05	74.00	-35.95	Pass	Horizontal
1659.574	31.16	2.97	43.82	48.66	38.97	74.00	-35.03	Pass	Horizontal
4824.000	34.73	5.10	44.60	48.27	43.50	74.00	-30.50	Pass	Horizontal
6078.644	35.94	7.35	44.51	48.65	47.43	74.00	-26.57	Pass	Horizontal
7236.000	36.42	6.69	44.80	46.92	45.23	74.00	-28.77	Pass	Horizontal
9648.000	37.93	7.70	45.57	47.40	47.46	74.00	-26.54	Pass	Horizontal
1553.293	30.97	2.88	43.94	49.23	39.14	74.00	-34.86	Pass	Vertical
1800.416	31.40	3.08	43.68	48.77	39.57	74.00	-34.43	Pass	Vertical
4824.000	34.73	5.10	44.60	47.53	42.76	74.00	-31.24	Pass	Vertical
6001.768	35.90	7.43	44.50	48.46	47.29	74.00	-26.71	Pass	Vertical
7236.000	36.42	6.69	44.80	47.53	45.84	74.00	-28.16	Pass	Vertical
9648.000	37.93	7.70	45.57	47.91	47.97	74.00	-26.03	Pass	Vertical

Test mode: 802.11g(6Mbps)	Test Frequency: 2437MHz	Remark: Peak

Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1346.929	30.56	2.68	44.18	49.41	38.47	74.00	-35.53	Pass	Horizontal
1569.189	31.00	2.89	43.92	49.80	39.77	74.00	-34.23	Pass	Horizontal
4874.000	34.84	5.09	44.60	48.72	44.05	74.00	-29.95	Pass	Horizontal
5546.364	35.56	6.40	44.54	49.27	46.69	74.00	-27.31	Pass	Horizontal
7311.000	36.43	6.76	44.86	46.20	44.53	74.00	-29.47	Pass	Horizontal
9748.000	38.03	7.61	45.55	47.86	47.95	74.00	-26.05	Pass	Horizontal
1329.894	30.52	2.66	44.21	50.08	39.05	74.00	-34.95	Pass	Vertical
1809.605	31.41	3.09	43.67	48.87	39.70	74.00	-34.30	Pass	Vertical
4874.000	34.84	5.09	44.60	48.81	44.14	74.00	-29.86	Pass	Vertical
5895.771	35.82	7.20	44.51	49.00	47.51	74.00	-26.49	Pass	Vertical
7311.000	36.43	6.76	44.86	46.51	44.84	74.00	-29.16	Pass	Vertical
9748.000	38.03	7.61	45.55	47.11	47.20	74.00	-26.80	Pass	Vertical

Test mode: 802.11g(6Mbps)	Test Frequency: 2462MHz	Remark: Peak

Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1238.405	30.32	2.56	44.33	49.63	38.18	74.00	-35.82	Pass	Horizontal
1904.119	31.56	3.16	43.59	48.53	39.66	74.00	-34.34	Pass	Horizontal
4924.000	34.94	5.07	44.60	49.88	45.29	74.00	-28.71	Pass	Horizontal
6428.771	36.12	7.00	44.54	48.75	47.33	74.00	-26.67	Pass	Horizontal
7386.000	36.44	6.83	44.92	46.37	44.72	74.00	-29.28	Pass	Horizontal
9848.000	38.14	7.53	45.53	47.59	47.73	74.00	-26.27	Pass	Horizontal
1232.117	30.30	2.55	44.34	49.75	38.26	74.00	-35.74	Pass	Vertical
1795.839	31.39	3.08	43.69	49.34	40.12	74.00	-33.88	Pass	Vertical
4924.000	34.94	5.07	44.60	49.10	44.51	74.00	-29.49	Pass	Vertical
6001.768	35.90	7.43	44.50	48.51	47.34	74.00	-26.66	Pass	Vertical
7386.000	36.44	6.83	44.92	47.23	45.58	74.00	-28.42	Pass	Vertical
9848.000	38.14	7.53	45.53	49.01	49.15	74.00	-24.85	Pass	Vertical

Test mode: 802.11n(HT20)(6.5Mbps)	Test Frequency: 2412MHz	Remark: Peak

Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1263.883	30.38	2.59	44.29	49.20	37.88	74.00	-36.12	Pass	Horizontal
1479.955	30.83	2.81	44.02	49.87	39.49	74.00	-34.51	Pass	Horizontal
4824.000	34.73	5.10	44.60	48.03	43.26	74.00	-30.74	Pass	Horizontal
5462.297	35.49	6.20	44.55	49.70	46.84	74.00	-27.16	Pass	Horizontal
7236.000	36.42	6.69	44.80	46.63	44.94	74.00	-29.06	Pass	Horizontal
9648.000	37.93	7.70	45.57	46.96	47.02	74.00	-26.98	Pass	Horizontal
1241.562	30.32	2.56	44.33	49.15	37.70	74.00	-36.30	Pass	Vertical
1577.198	31.01	2.90	43.91	48.75	38.75	74.00	-35.25	Pass	Vertical
4824.000	34.73	5.10	44.60	48.32	43.55	74.00	-30.45	Pass	Vertical
5925.863	35.85	7.27	44.51	48.71	47.32	74.00	-26.68	Pass	Vertical
7236.000	36.42	6.69	44.80	46.68	44.99	74.00	-29.01	Pass	Vertical
9648.000	37.93	7.70	45.57	47.08	47.14	74.00	-26.86	Pass	Vertical

Test mode: 802.11n(HT20)(6.5Mbps)	Test Frequency: 2437MHz	Remark: Peak

Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1263.883	30.38	2.59	44.29	49.46	38.14	74.00	-35.86	Pass	Horizontal
1659.574	31.16	2.97	43.82	49.17	39.48	74.00	-34.52	Pass	Horizontal
3766.785	32.97	5.48	44.62	50.58	44.41	74.00	-29.59	Pass	Horizontal
4874.000	34.84	5.09	44.60	48.33	43.66	74.00	-30.34	Pass	Horizontal
7311.000	36.43	6.76	44.86	47.75	46.08	74.00	-27.92	Pass	Horizontal
9748.000	38.03	7.61	45.55	46.85	46.94	74.00	-27.06	Pass	Horizontal
1198.095	30.22	2.51	44.39	48.44	36.78	74.00	-37.22	Pass	Vertical
1676.558	31.19	2.98	43.81	49.41	39.77	74.00	-34.23	Pass	Vertical
4874.000	34.84	5.09	44.60	48.51	43.84	74.00	-30.16	Pass	Vertical
6001.768	35.90	7.43	44.50	49.44	48.27	74.00	-25.73	Pass	Vertical
7311.000	36.43	6.76	44.86	47.15	45.48	74.00	-28.52	Pass	Vertical
9748.000	38.03	7.61	45.55	46.99	47.08	74.00	-26.92	Pass	Vertical

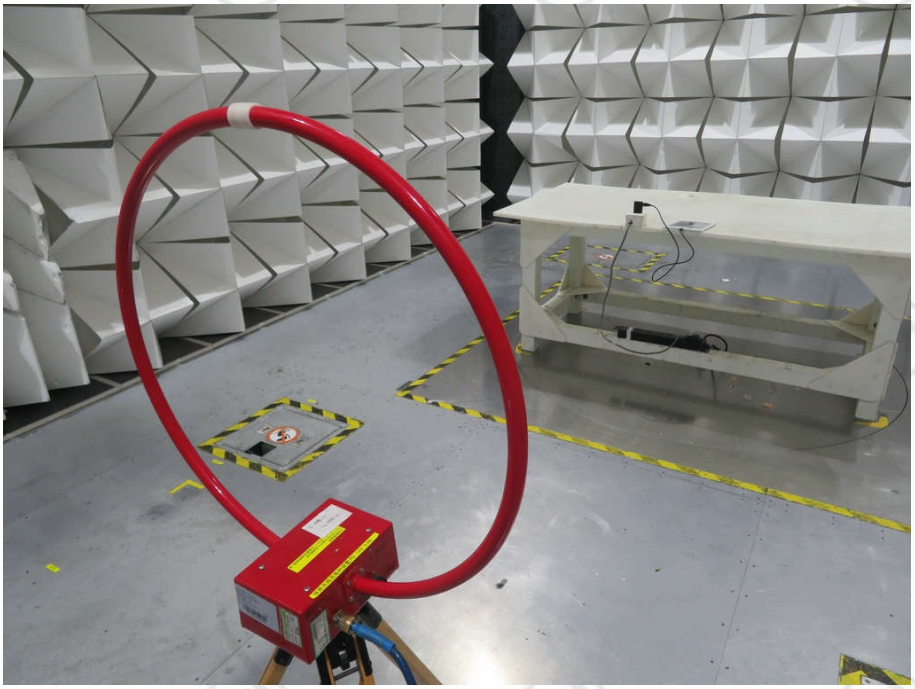
Test mode: 802.11n(HT20)(6.5Mbps)	Test Frequency: 2462MHz	Remark: Peak

Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1313.075	30.49	2.64	44.23	48.95	37.85	74.00	-36.15	Pass	Horizontal
1832.785	31.45	3.11	43.65	49.05	39.96	74.00	-34.04	Pass	Horizontal
4924.000	34.94	5.07	44.60	49.13	44.54	74.00	-29.46	Pass	Horizontal
5971.290	35.88	7.37	44.50	48.96	47.71	74.00	-26.29	Pass	Horizontal
7386.000	36.44	6.83	44.92	47.25	45.60	74.00	-28.40	Pass	Horizontal
9848.000	38.14	7.53	45.53	46.88	47.02	74.00	-26.98	Pass	Horizontal
1276.818	30.41	2.60	44.28	50.03	38.76	74.00	-35.24	Pass	Vertical
1746.251	31.31	3.04	43.73	48.71	39.33	74.00	-34.67	Pass	Vertical
4924.000	34.94	5.07	44.60	49.81	45.22	74.00	-28.78	Pass	Vertical
6412.427	36.12	7.02	44.54	49.41	48.01	74.00	-25.99	Pass	Vertical
7386.000	36.44	6.83	44.92	47.62	45.97	74.00	-28.03	Pass	Vertical
9848.000	38.14	7.53	45.53	47.59	47.73	74.00	-26.27	Pass	Vertical

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

PHOTOGRAPHS OF TEST SETUP

Test Model No.: RM100



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

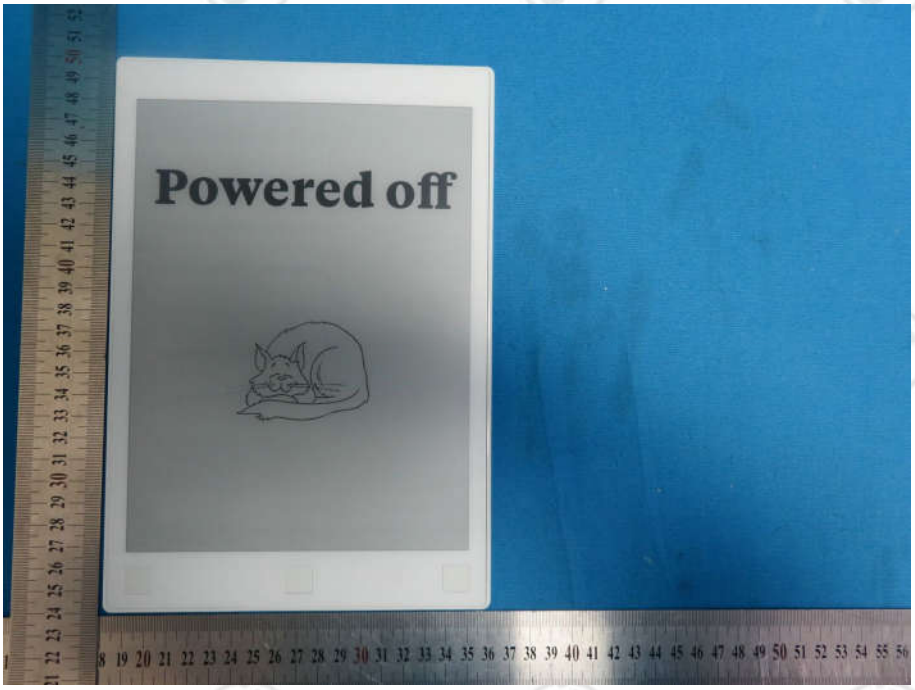
Radiated spurious emission Test Setup-2(30MHz-1GHz)

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

Conducted Emissions Test Setup

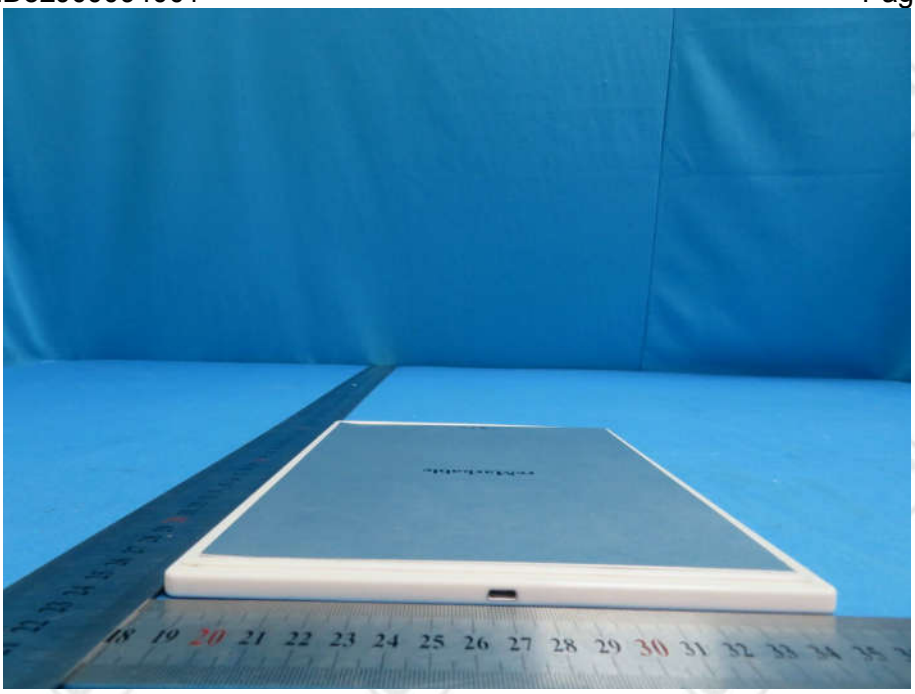
PHOTOGRAPHS OF EUT Constructional Details

Test Model No.: RM100

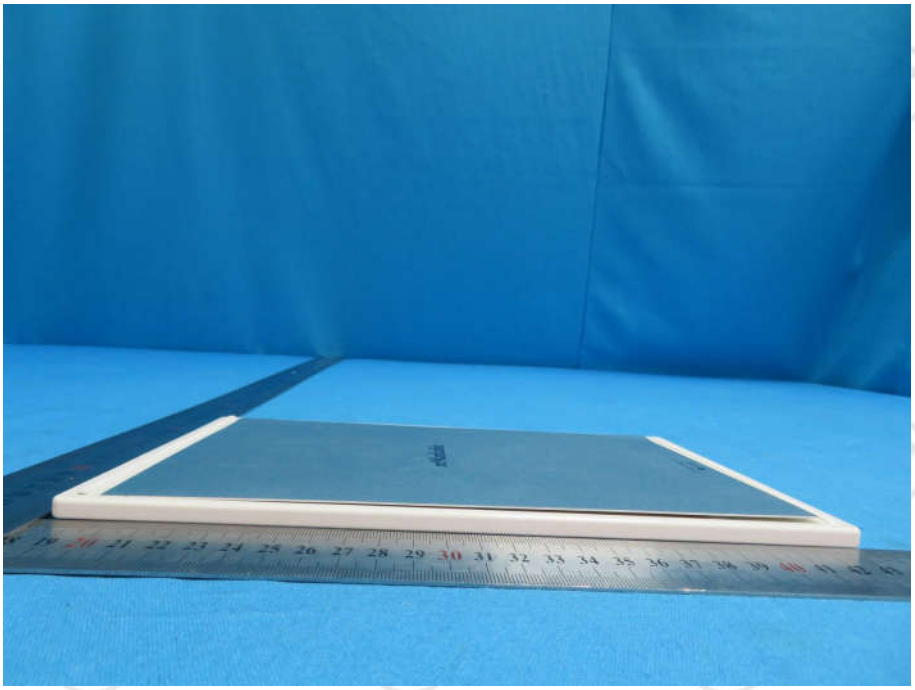


View of Product-1

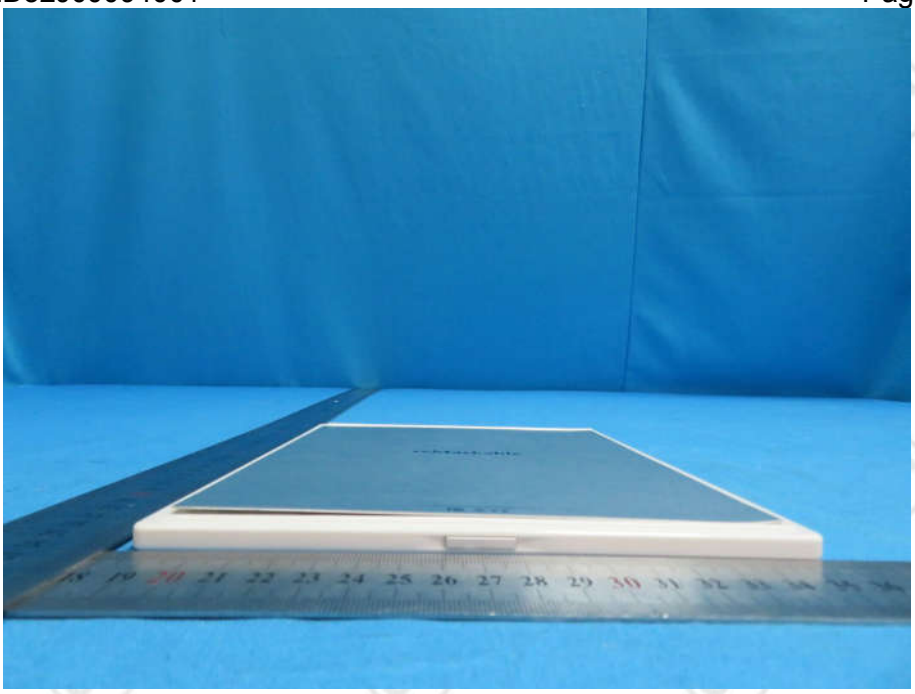
View of Product-2



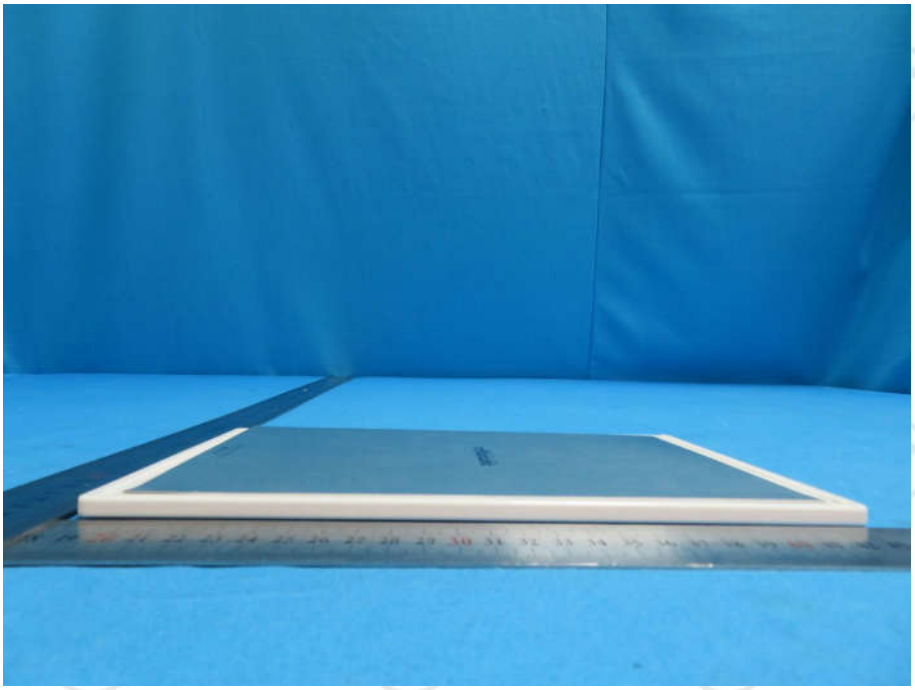
View of Product-3



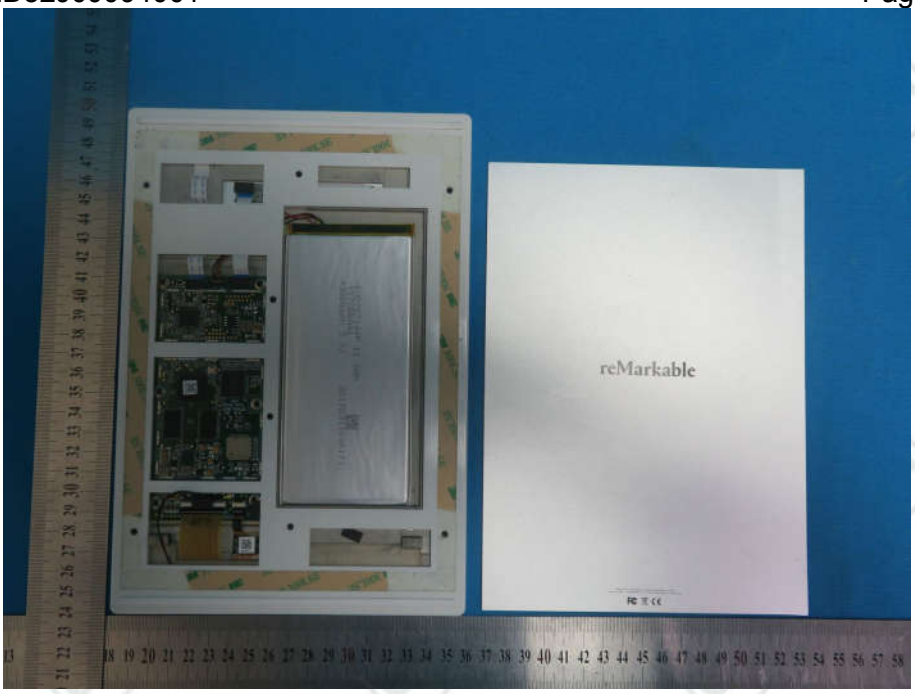
View of Product-4



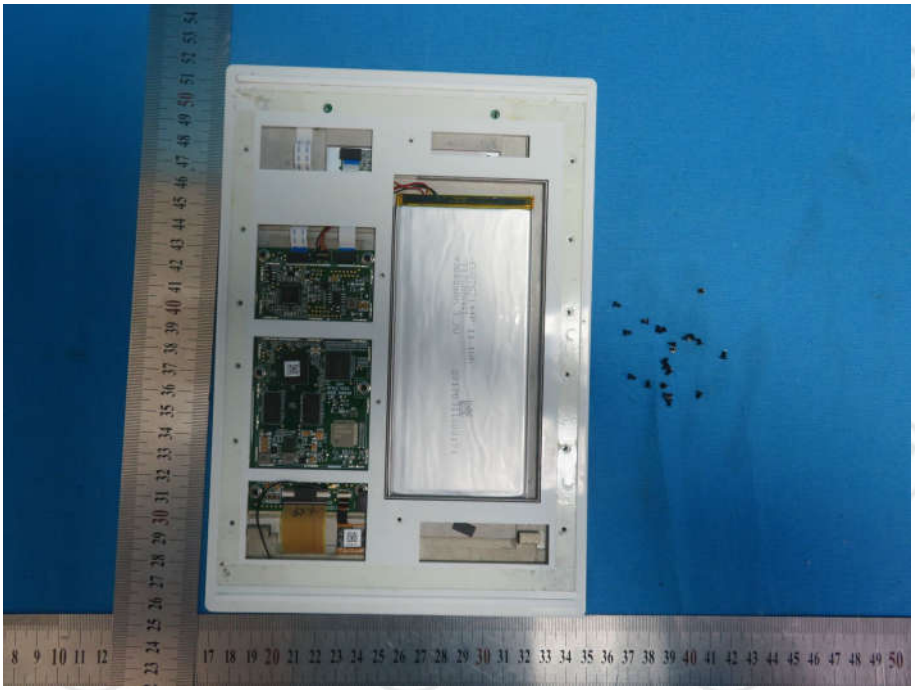
View of Product-5



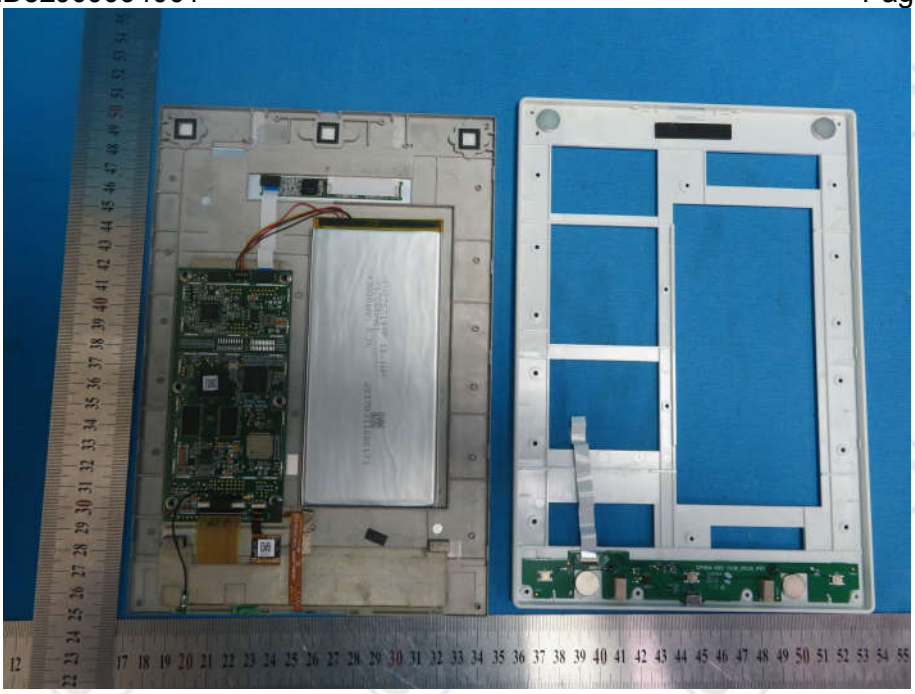
View of Product-6



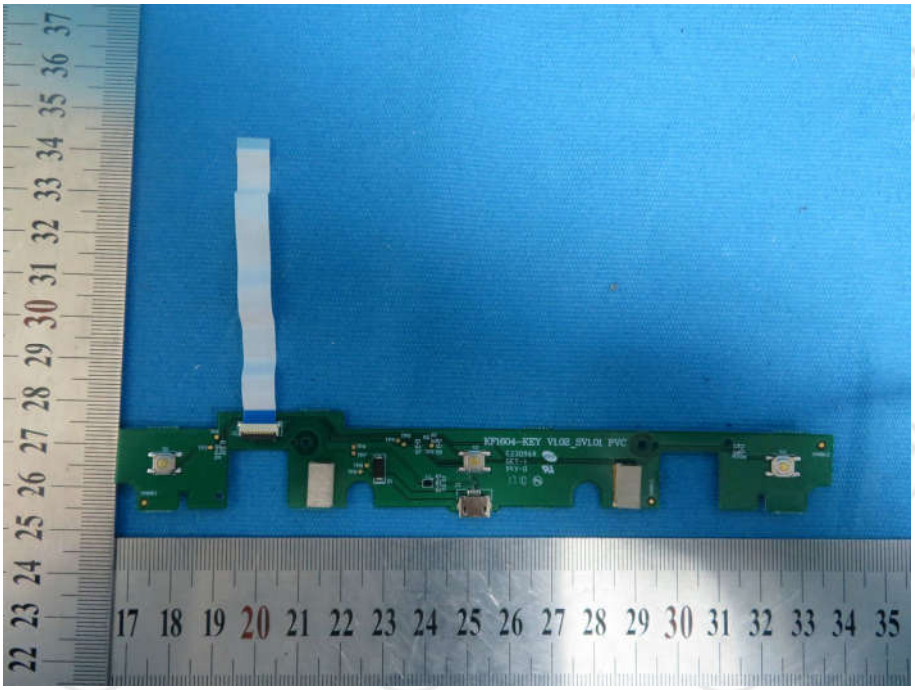
View of Product-7



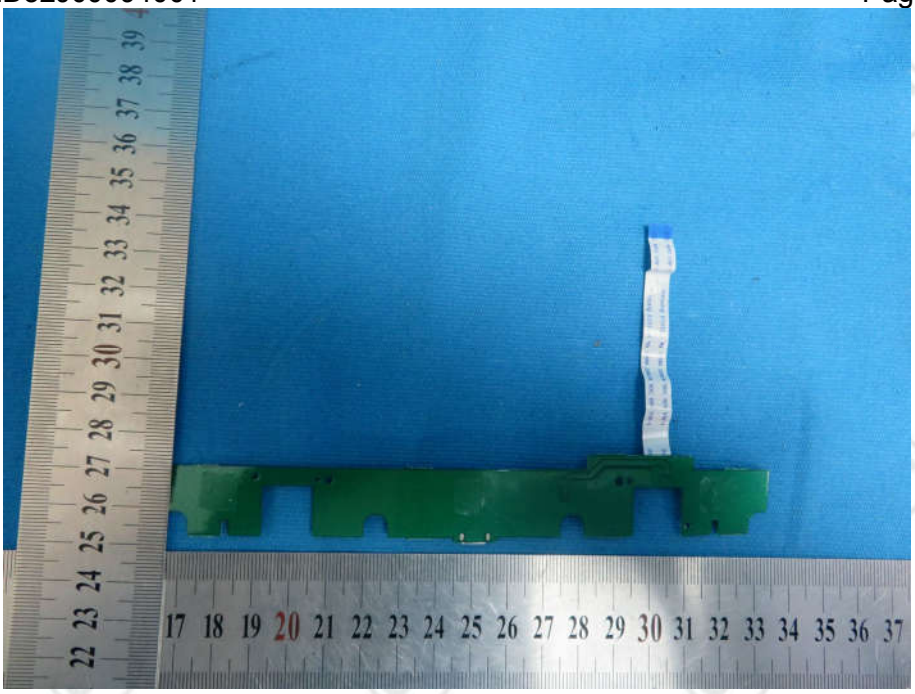
View of Product-8



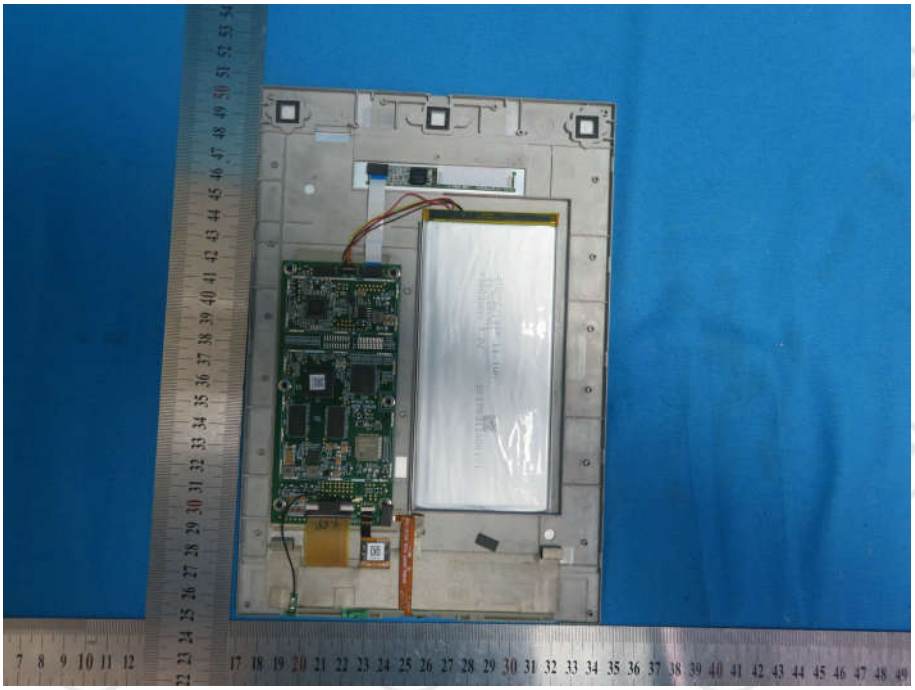
View of Product-9



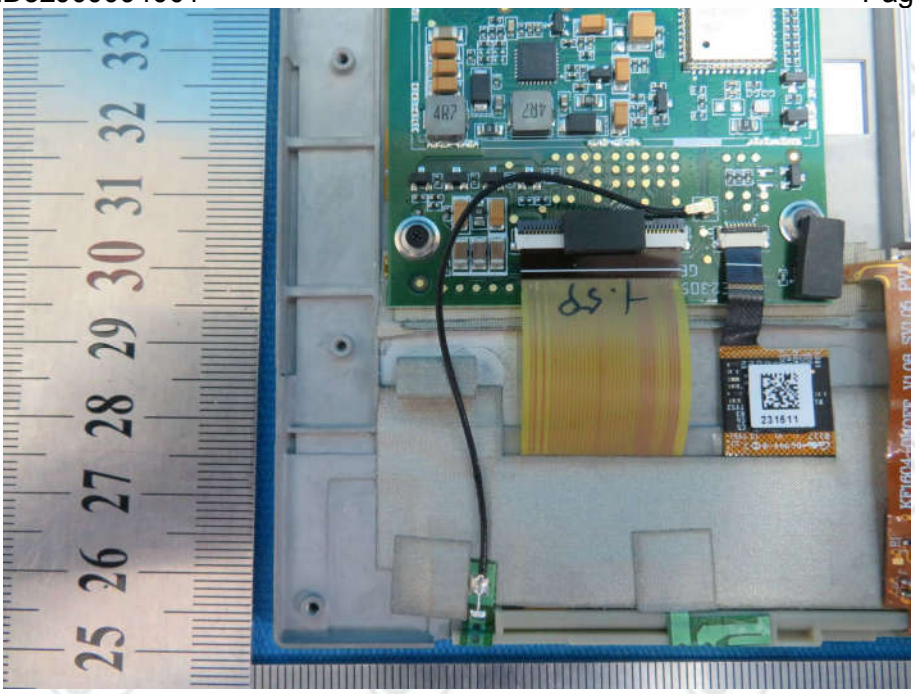
View of Product-10



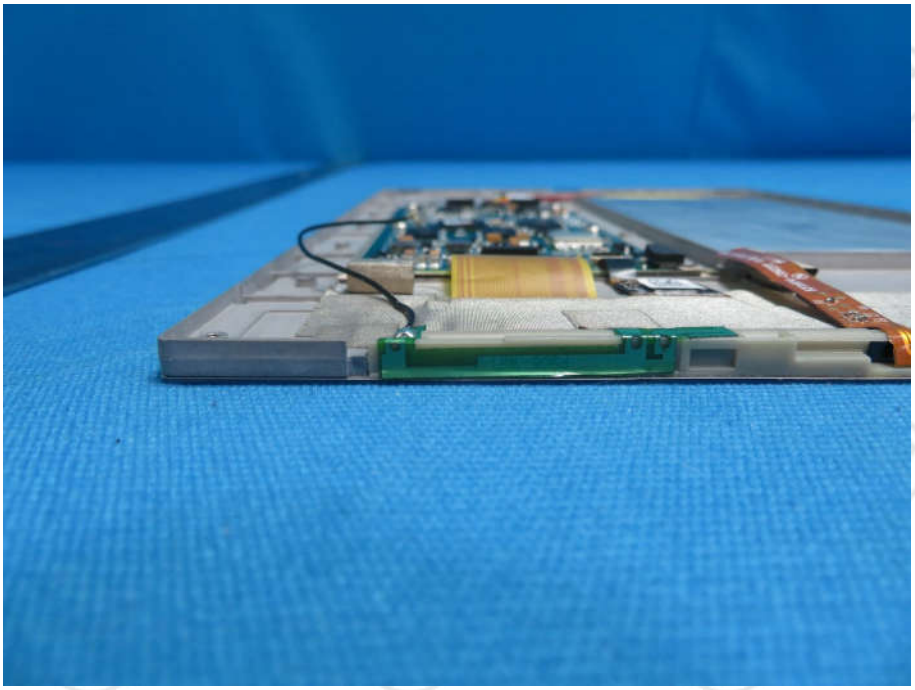
View of Product-11



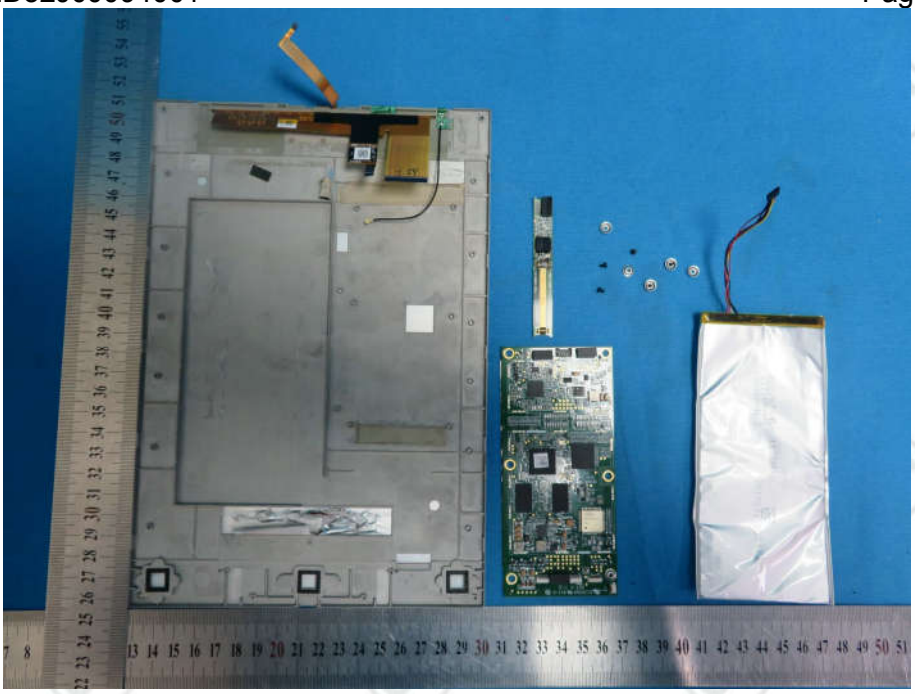
View of Product-12



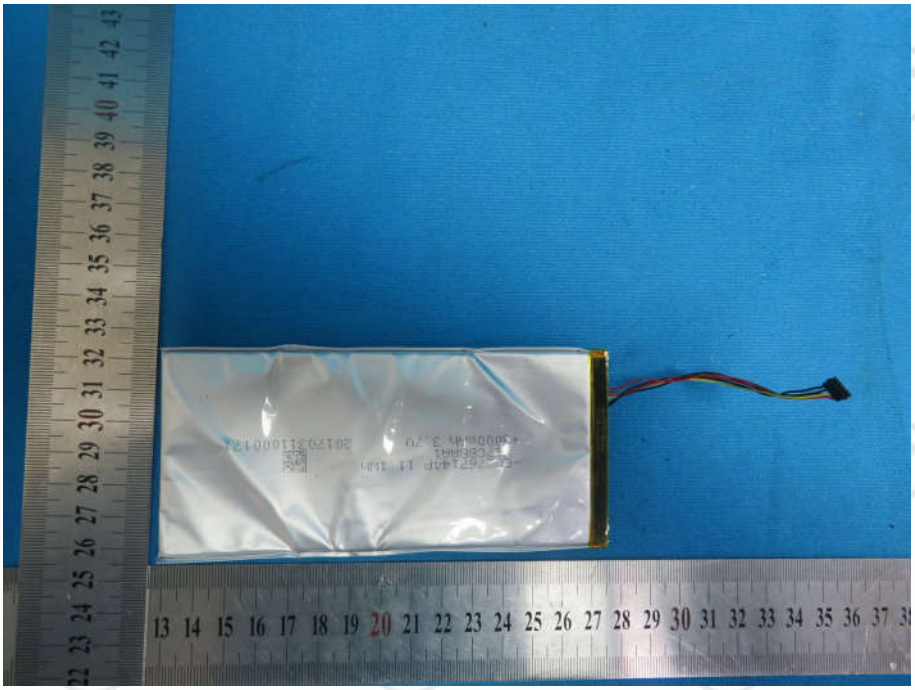
View of Product-13



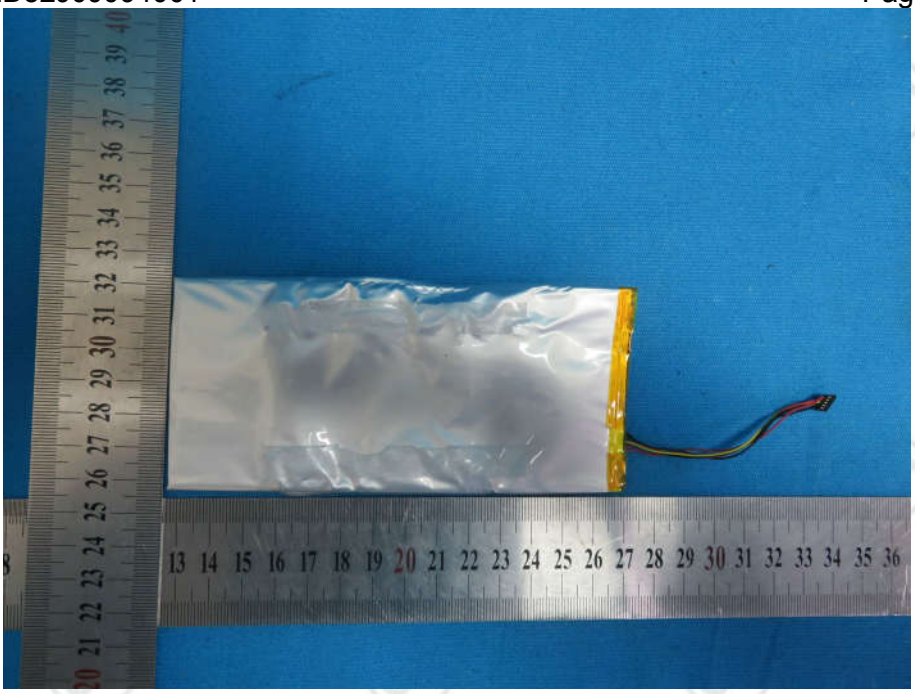
View of Product-14



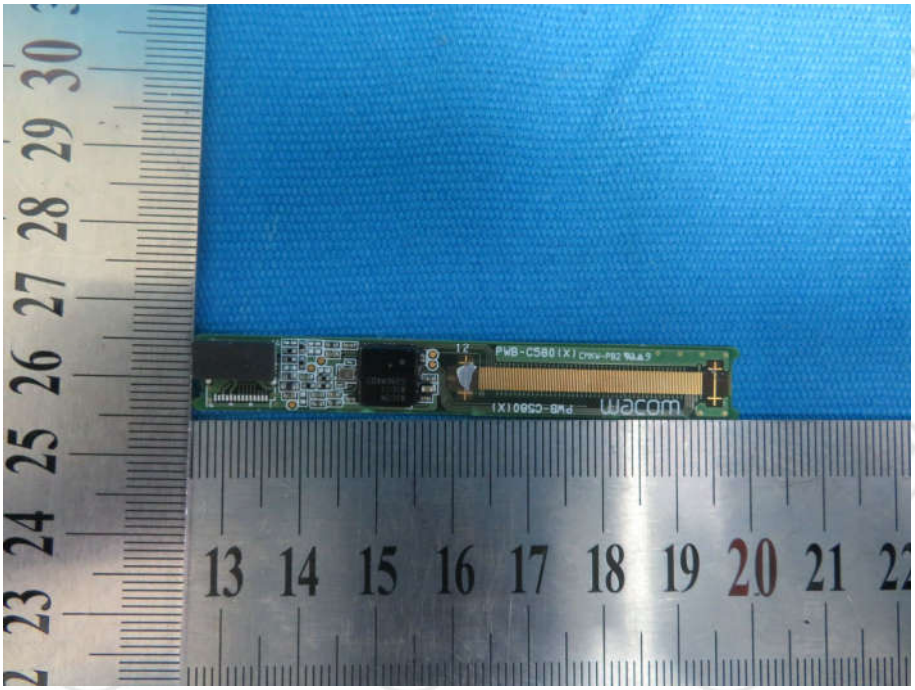
View of Product-15



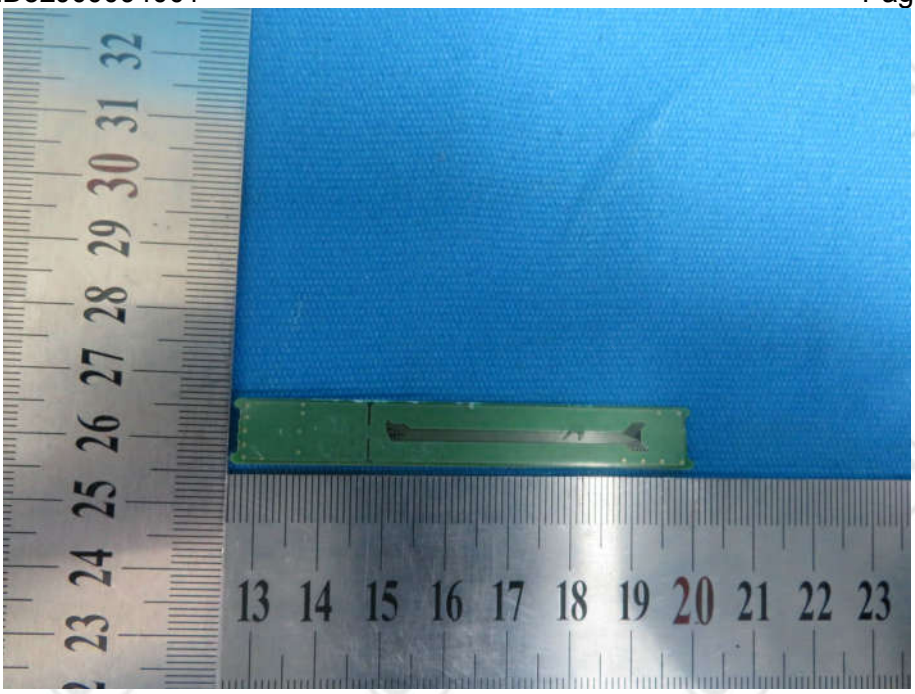
View of Product-16



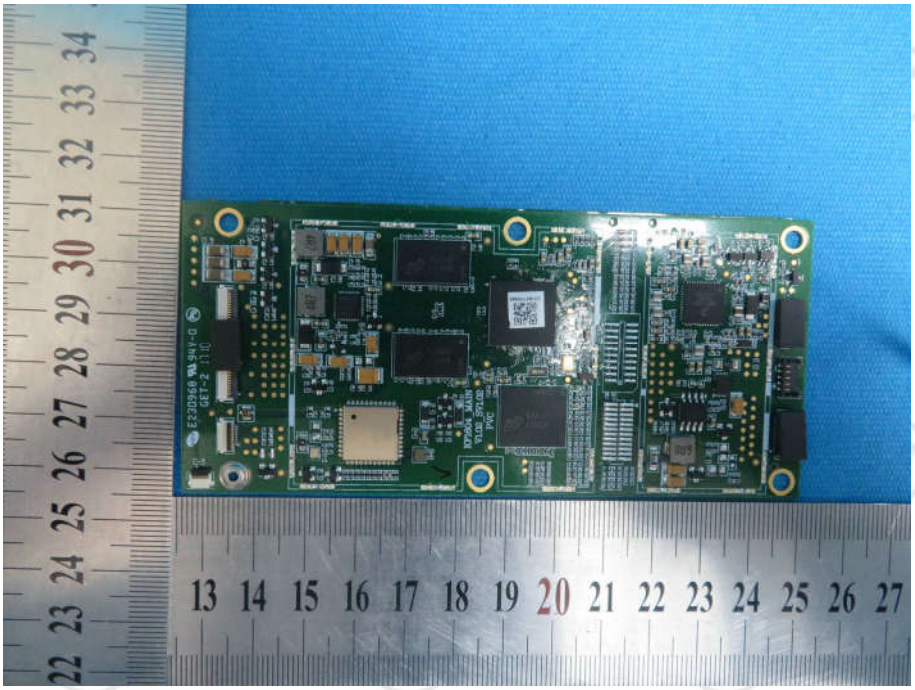
View of Product-17



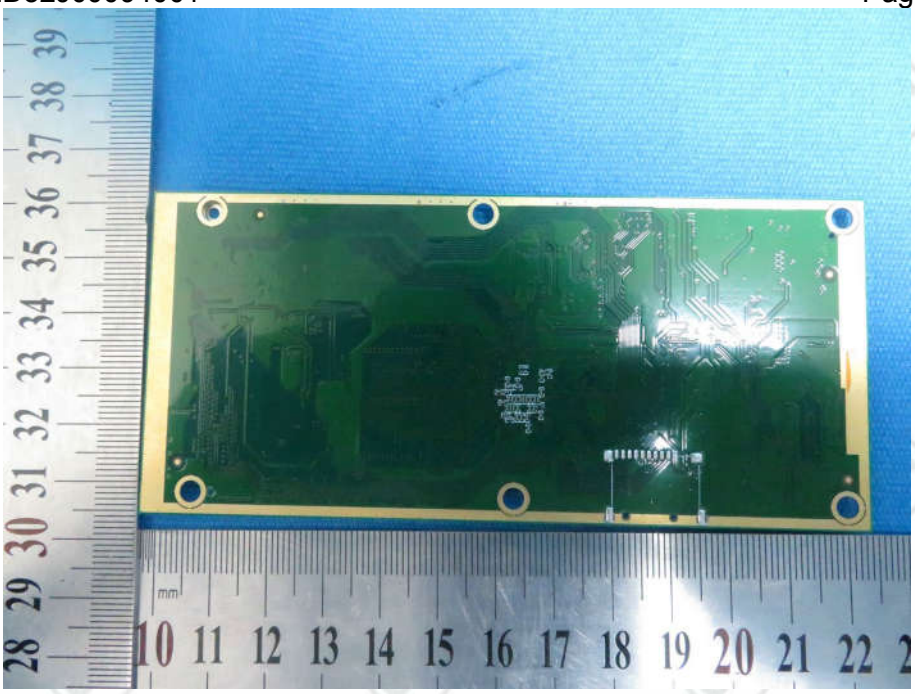
View of Product-18



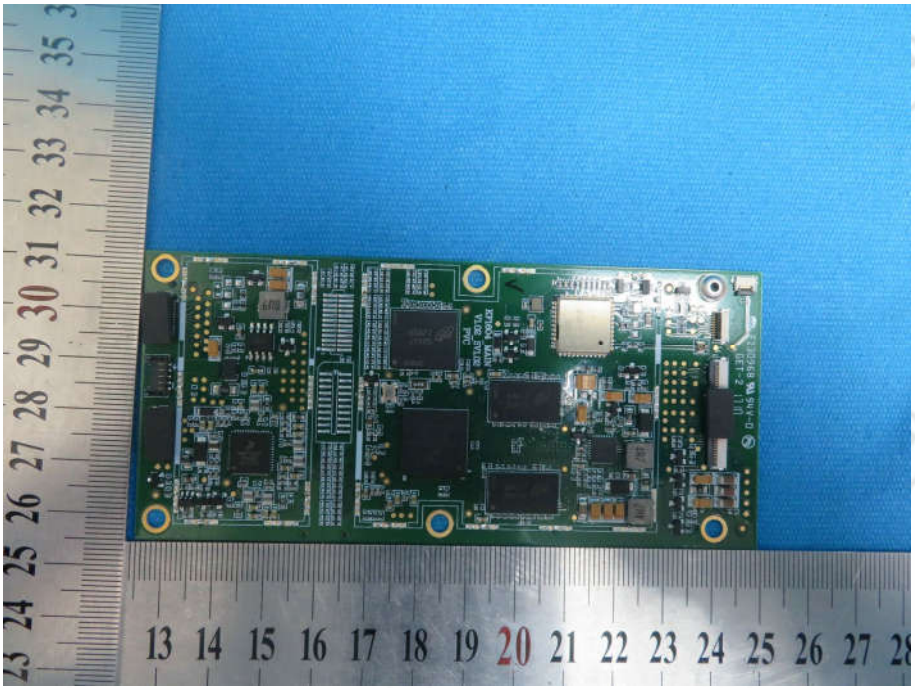
View of Product-19



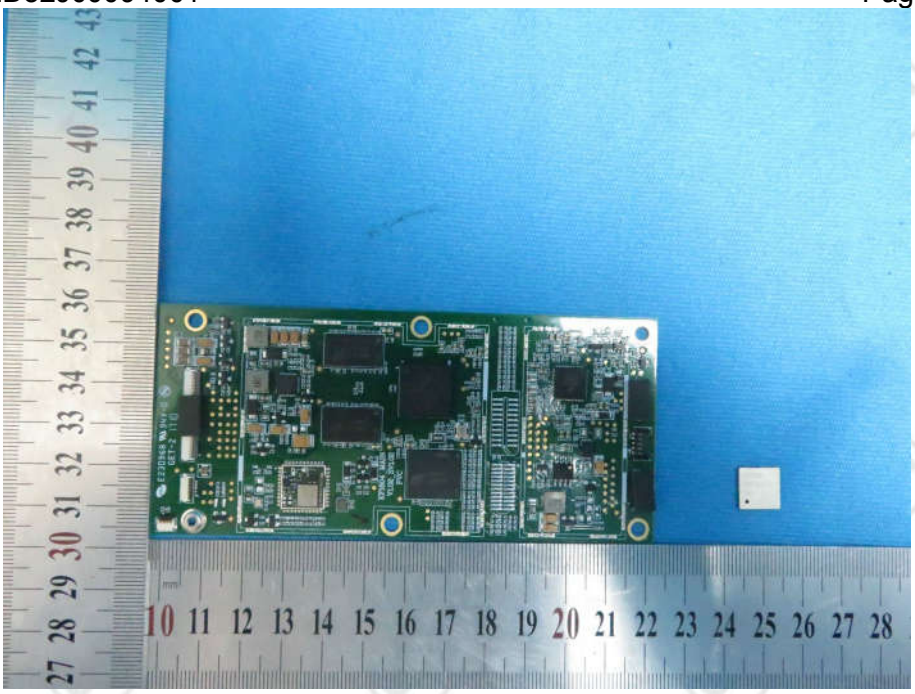
View of Product-20



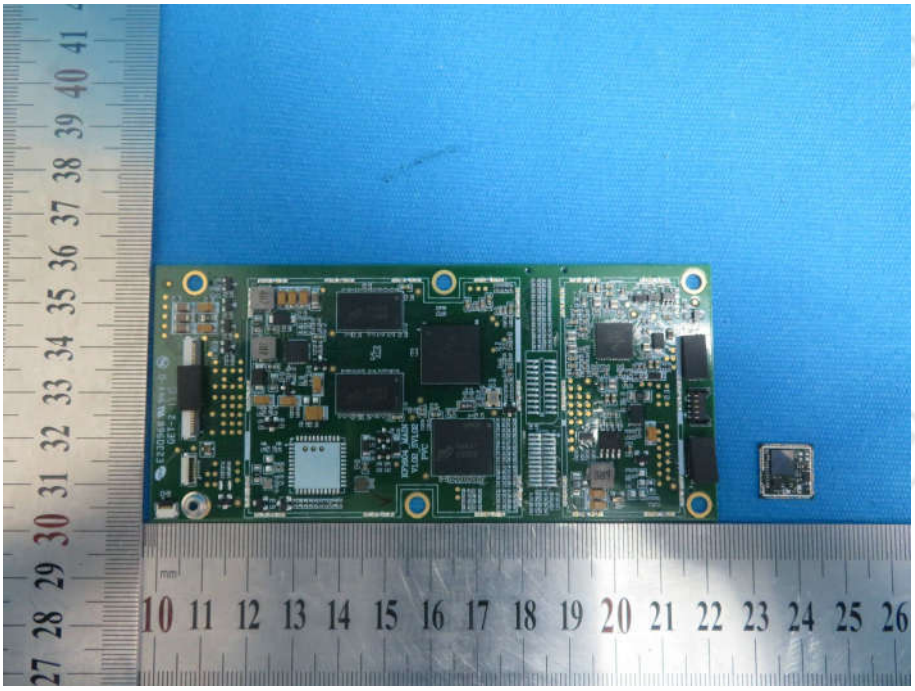
View of Product-21



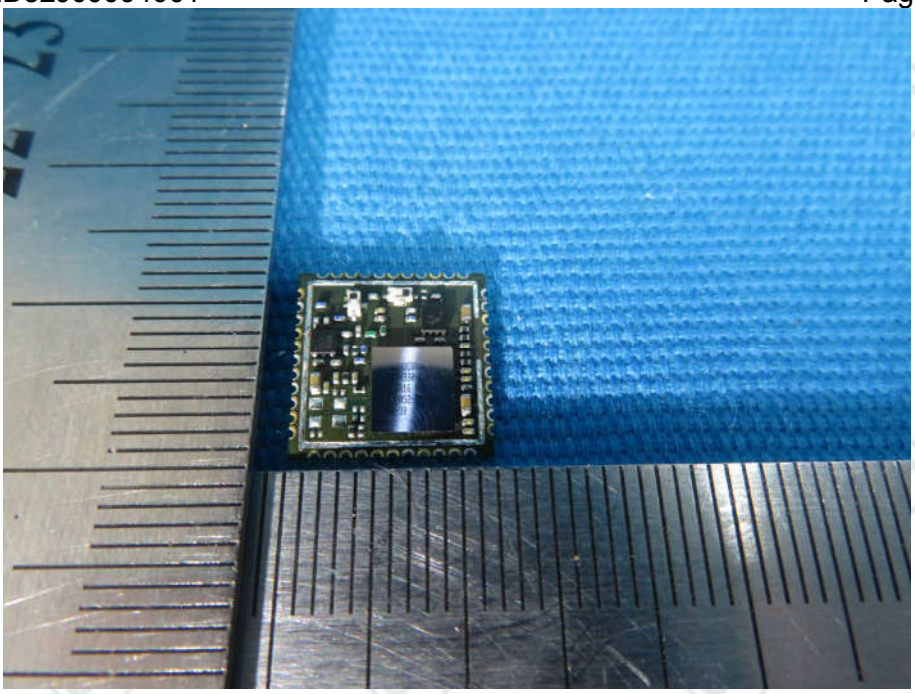
View of Product-22



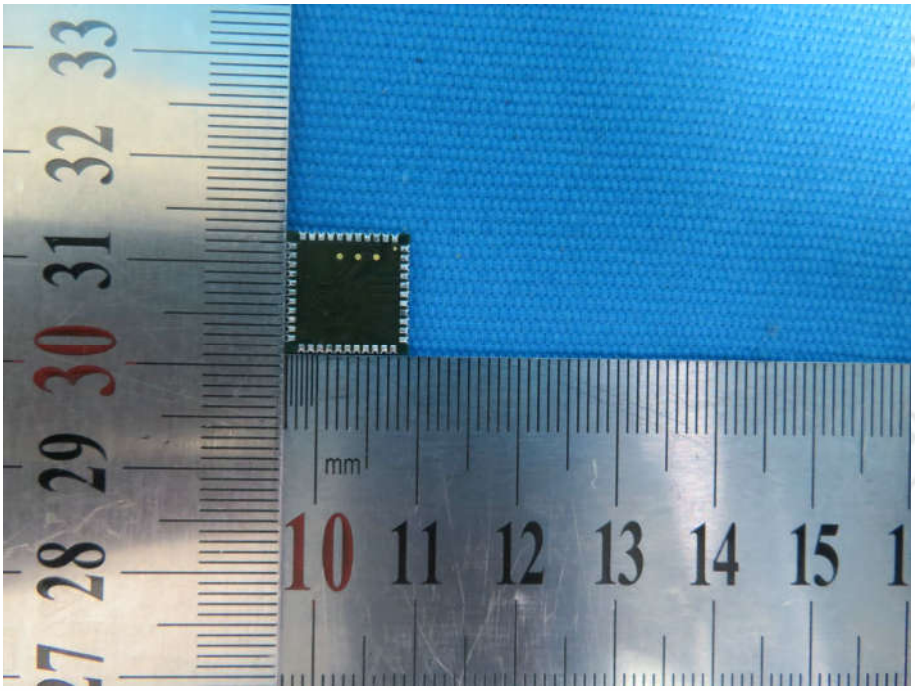
View of Product-23



View of Product-24



View of Product-25



View of Product-26

*** End of Report ***