TEST REPORT

Product	:	RestOn Sleep Tracker
Trade mark	:	N/A
Model/Type reference	:	Z400TWP
Serial Number	:	N/A
Report Number	:	EED32L00165001
FCC ID	:	2ADIOZ400TWP
Date of Issue	:	Sep. 06, 2019
Test Standards	:	47 CFR Part 15Subpart C
Test result	:	PASS

Prepared for:

Shenzhen Medica Technology Development Co., Ltd.
2F Building A, Tongfang Information Harbor, No. 11,
East Langshan Road, Nanshan District, Shenzhen, P.R.China

Prepared by:

Centre Testing International Group Co., Ltd.
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Tested By: Jay Zheng — Jay Zheng

Compiled by: Alex Wu — Alex Wu

Reviewed by: Ware Xin — Ware Xin

Approved by: Kevin Yang — Kevin Yang

Date: Sep. 06, 2019

Check No.:3096371167

2 Version

Version No.	Date	Description
00	Sep. 06, 2019	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	N/A
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	PASS
6dB Occupied Bandwidth	47 CFR Part 15 Subpart C Section 15.247 (a)(2)	ANSI C63.10-2013	PASS
Power Spectral Density	47 CFR Part 15 Subpart C Section 15.247 (e)	ANSI C63.10-2013	PASS
Band-edge for RF Conducted Emissions	47 CFR Part 15 Subpart C Section 15.247(d)	ANSI C63.10-2013	PASS
RF Conducted Spurious Emissions	47 CFR Part 15 Subpart C Section 15.247(d)	ANSI C63.10-2013	PASS
Radiated Spurious Emissions	47 CFR Part 15 Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS
Restricted bands around fundamental frequency (Radiated Emission)	47 CFR Part 15 Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS

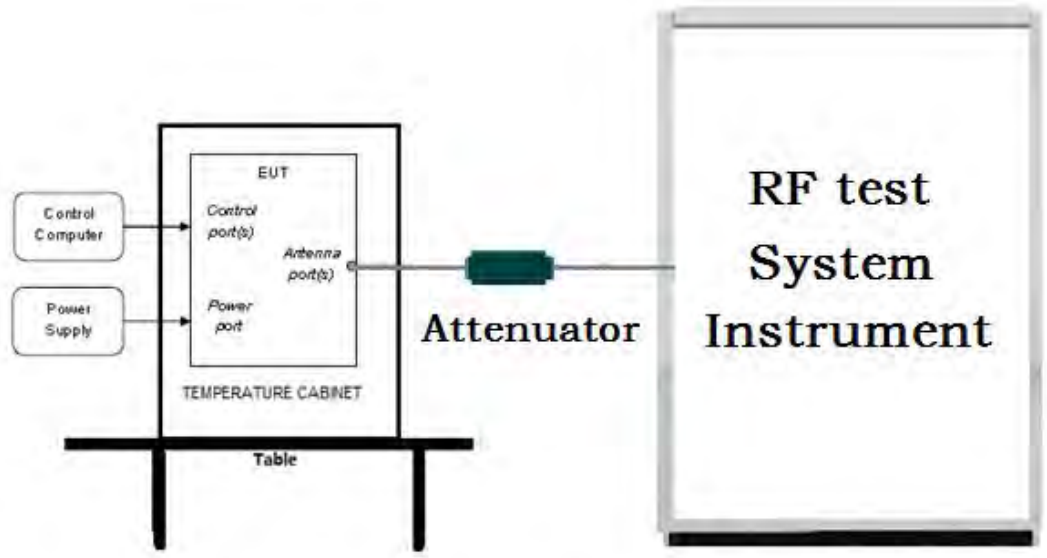
Remark:
Test according to ANSI C63.4-2014 & ANSI C63.10-2013.
The tested sample(s) and the sample information are provided by the client.

4 Content

5 Test Requirement

5.1 Test setup

5.1.1 For Conducted test setup



5.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

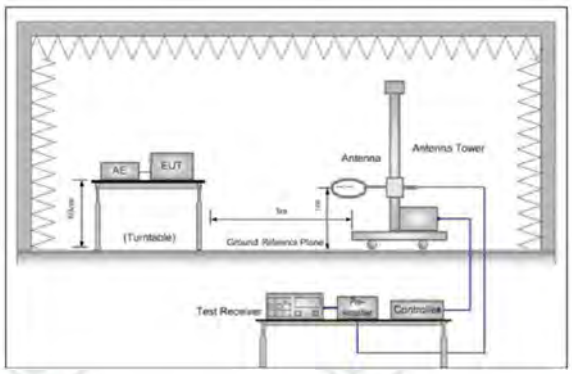


Figure 1. Below 30MHz

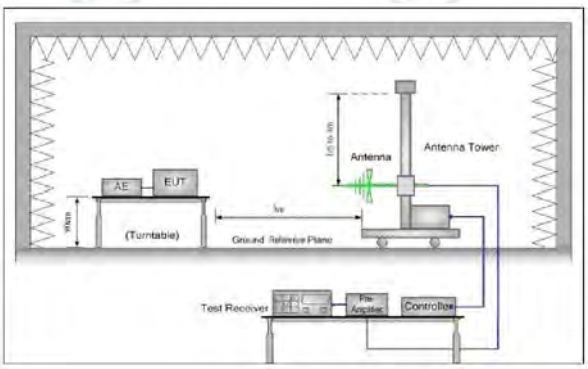


Figure 2. 30MHz to 1GHz

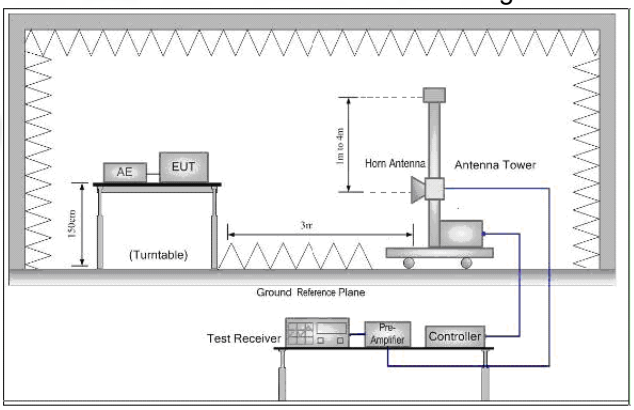
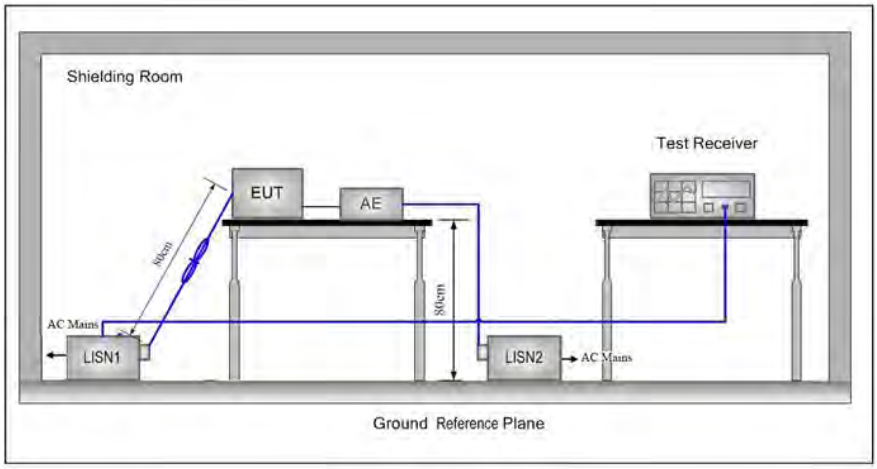


Figure 3. Above 1GHz

5.1.3 For Conducted Emissions test setup

Conducted Emissions setup



5.2 Test Environment

Operating Environment:	
Temperature:	24.0 °C
Humidity:	55 % RH
Atmospheric Pressure:	1010mbar

5.3 Test Condition

Test channel:

Test Mode	Tx/Rx	RF Channel		
		Low(L)	Middle(M)	High(H)
802.11b/g/n(HT20)	2412MHz ~2462 MHz	Channel 1	Channel 6	Channel11
		2412MHz	2437MHz	2462MHz
802.11n(HT40)	2422MHz ~2452 MHz	Channel 1	Channel 4	Channel7
		2422MHz	2437MHz	2452MHz
Transmitting mode:	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)	18.00	18.11	18.2	18.22	

Mode	802.11g							
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
Power(dBm)	17.33	17.30	17.28	17.25	17.24	17.21	17.20	17.19

Mode	802.11n (HT20)							
Data Rate	6.5Mbps	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps	58.5Mbps	65Mbps
Power(dBm)	16.03	16.02	16.00	15.98	15.97	15.95	15.94	15.92
Mode	802.11n (HT40)							
Data Rate	13.5Mbps	27Mbps	40.5Mbps	54Mbps	81Mbps	108Mbps	121.5Mbps	135Mbps
Power(dBm)	15.13	15.12	15.10	15.08	15.05	15.04	15.02	15.00

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); 13.5Mbps of rate is the worst case of 802.11n(HT40).

6 General Information

6.1 Client Information

Applicant:	Shenzhen Medica Technology Development Co., Ltd.
Address of Applicant:	2F Building A, Tongfang Information Harbor, No. 11, East Langshan Road, Nanshan District, Shenzhen, P.R.China
Manufacturer:	Shenzhen Medica Technology Development Co., Ltd.
Address of Manufacturer:	2F Building A, Tongfang Information Harbor, No. 11, East Langshan Road, Nanshan District, Shenzhen, P.R.China
Factory:	Shenzhen Medica Technology Development Co., Ltd.
Address of Factory:	2F Building A, Tongfang Information Harbor, No. 11, East Langshan Road, Nanshan District, Shenzhen, P.R.China

6.2 General Description of EUT

Product Name:	RestOn Sleep Tracker	
Model No.(EUT):	Z400TWP	
Trade Mark:	N/A	
EUT Supports Radios application:	WiFi IEEE 802.11 /b/g/n(HT20)(HT40) 2412MHz to 2462MHz	
Power Supply:	Adapter:	Model：SK01G-0500100J Input：100-240V~50/60Hz 0.2A Max Output：5V⎓1A
Sample Received Date:	Jun. 25, 2019	
Sample tested Date:	Jun. 25, 2019 to Sep. 05, 2019	

6.3 Product Specification subjective to this standard

Operation Frequency:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz
Channel Numbers:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels IEEE 802.11n HT40: 7 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 and HT40) : OFDM (64QAM, 16QAM, QPSK,BPSK)
Test Power Grade:	802.11B:21 802.11G:16 802.11 N20:16 802.11 N40:18
Test Software of EUT:	MT7682
Antenna Type and Gain:	Chip antenna, 2.5 dBi
Test Voltage:	DC 5V

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		

Operation Frequency each of channel(802.11n HT40)

Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2422MHz	4	2437MHz	7	2452MHz
2	2427MHz	5	2442MHz		
3	2432MHz	6	2447MHz		

6.4 Description of Support Units

The EUT has been tested independently

6.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd
Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China
Telephone: +86 (0) 755 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	0.46dB (30MHz-1GHz)
		0.55dB (1GHz-18GHz)
3	Radiated Spurious emission test	4.3dB (30MHz-1GHz)
		4.5dB (1GHz-12.75GHz)
4	Conduction emission	3.5dB (9kHz to 150kHz)
		3.1dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	3.8%
7	DC power voltages	0.026%

7 Equipment List

RF test system					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. Date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
Signal Generator	Keysight	E8257D	MY53401106	03-01-2019	02-29-2020
Spectrum Analyzer	Keysight	N9010A	MY54510339	03-01-2019	02-29-2020
Signal Generator	Keysight	N5182B	MY53051549	03-01-2019	02-29-2020
High-pass filter	Sinoscite	FL3CX03WG18NM12-0398-002	---	01-09-2019	01-08-2020
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	01-09-2019	01-08-2020
DC Power	Keysight	E3642A	MY54426035	03-01-2019	02-29-2020
PC-1	Lenovo	R4960d	---	03-01-2019	02-29-2020
BT&WI-FI Automatic control	R&S	OSP120	101374	03-01-2019	02-29-2020
RF control unit	JS Tonscend	JS0806-2	15860006	03-01-2019	02-29-2020
RF control unit	JS Tonscend	JS0806-1	15860004	03-01-2019	02-29-2020
RF control unit	JS Tonscend	JS0806-4	158060007	03-01-2019	02-29-2020
BT&WI-FI Automatic test software	JS Tonscend	JS1120-2	---	03-01-2019	02-29-2020
Temperature/ Humidity Indicator	biaozhi	HM10	1804186	10-12-2018	10-11-2019

Conducted disturbance Test					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
Receiver	R&S	ESCI	100435	05-20-2019	05-19-2020
Temperature/ Humidity Indicator	Defu	TH128	/	06-14-2019	06-13-2020
Communication test set	Agilent	E5515C	GB47050534	03-01-2019	02-28-2022
Communication test set	R&S	CMW500	102898	01-18-2019	01-17-2020
LISN	R&S	ENV216	100098	05-08-2019	05-07-2020
LISN	schwarzbeck	NNLK8121	8121-529	05-08-2019	05-07-2020
Voltage Probe	R&S	ESH2-Z3 0299.7810.56	100042	06-13-2017	06-12-2020
Current Probe	R&S	EZ-17 816.2063.03	100106	05-20-2019	05-19-2020
ISN	TESEQ	ISN T800	30297	01-16-2019	01-15-2020
Barometer	changchun	DYM3	1188	06-20-2019	06-19-2020

3M Semi/full-anechoic Chamber					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
3M Chamber & Accessory Equipment	TDK	SAC-3	---	05-24-2019	05-23-2022
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-401	12-21-2018	12-20-2019
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-618	07-26-2019	07-25-2020
Microwave Preamplifier	Agilent	8449B	3008A02425	07-12-2019	07-11-2020
Microwave Preamplifier	Tonscend	EMC051845SE	980380	01-16-2019	01-15-2020
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-1869	04-25-2018	04-24-2021
Horn Antenna	ETS-LINDGREN	3117	00057410	06-05-2018	06-04-2021
Double ridge horn antenna	A.H.SYSTEMS	SAS-574	374	06-05-2018	06-04-2021
Pre-amplifier	A.H.SYSTEMS	PAP-1840-60	6041.6042	07-26-2019	07-25-2020
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-076	04-25-2018	04-24-2021
Spectrum Analyzer	R&S	FSP40	100416	04-28-2019	04-27-2020
Receiver	R&S	ESCI	100435	05-20-2019	05-19-2020
Receiver	R&S	ESCI7	100938-003	11-23-2018	11-22-2019
Multi device Controller	maturo	NCD/070/10711112	---	01-09-2019	01-08-2020
Signal Generator	Agilent	E4438C	MY45095744	03-01-2019	02-29-2020
Signal Generator	Keysight	E8257D	MY53401106	03-01-2019	02-29-2020
Temperature/ Humidity Indicator	Shanghai qixiang	HM10	1804298	10-12-2018	10-11-2019
Communication test set	Agilent	E5515C	GB47050534	03-01-2019	02-28-2022
Cable line	Fulai(7M)	SF106	5219/6A	01-09-2019	01-08-2020
Cable line	Fulai(6M)	SF106	5220/6A	01-09-2019	01-08-2020
Cable line	Fulai(3M)	SF106	5216/6A	01-09-2019	01-08-2020
Cable line	Fulai(3M)	SF106	5217/6A	01-09-2019	01-08-2020
High-pass filter	Sinoscite	FL3CX03WG18NM12-0398-002	---	01-09-2019	01-08-2020
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	01-09-2019	01-08-2020
band rejection filter	Sinoscite	FL5CX01CA09CL12-0395-001	---	01-09-2019	01-08-2020
band rejection filter	Sinoscite	FL5CX01CA08CL12-0393-001	---	01-09-2019	01-08-2020
band rejection filter	Sinoscite	FL5CX02CA04CL12-0396-002	---	01-09-2019	01-08-2020
band rejection filter	Sinoscite	FL5CX02CA03CL12-0394-001	---	01-09-2019	01-08-2020

3M full-anechoic Chamber					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
RSE Automatic test software	JS Tonscend	JS36-RSE	10166	06-19-2019	06-18-2020
Receiver	Keysight	N9038A	MY57290136	03-27-2019	03-26-2020
Spectrum Analyzer	Keysight	N9020B	MY57111112	03-27-2019	03-26-2020
Spectrum Analyzer	Keysight	N9030B	MY57140871	03-27-2019	03-26-2020
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-075	04-25-2018	04-24-2021
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-076	04-25-2018	04-24-2021
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	9163-1148	04-25-2018	04-24-2021
Horn Antenna	Schwarzbeck	BBHA 9170	9170-832	04-25-2018	04-24-2021
Horn Antenna	Schwarzbeck	BBHA 9170	9170-829	04-25-2018	04-24-2021
Communication Antenna	Schwarzbeck	CLSA 0110L	1014	02-14-2019	02-13-2020
Biconical antenna	Schwarzbeck	VUBA 9117	9117-381	04-25-2018	04-24-2021
Horn Antenna	ETS-LINDGREN	3117	00057407	07-10-2018	07-09-2021
Preamplifier	EMCI	EMC184055SE	980596	05-22-2019	5-21-2020
Communication test set	R&S	CMW500	102898	01-18-2019	01-17-2020
Preamplifier	EMCI	EMC001330	980563	05-08-2019	05-07-2020
Preamplifier	Agilent	8449B	3008A02425	07-12-2019	07-11-2020
Temperature/ Humidity Indicator	biaozhi	GM1360	EE1186631	04-30-2019	04-29-2020
Signal Generator	KEYSIGHT	E8257D	MY53401106	03-01-2019	02-29-2020
Fully Anechoic Chamber	TDK	FAC-3	---	01-17-2018	01-16-2021
Filter bank	JS Tonscend	JS0806-F	188060094	04-10-2018	04-09-2021
Cable line	Times	SFT205-NMSM-2.50M	394812-0001	01-09-2019	01-08-2020
Cable line	Times	SFT205-NMSM-2.50M	394812-0002	01-09-2019	01-08-2020
Cable line	Times	SFT205-NMSM-2.50M	394812-0003	01-09-2019	01-08-2020
Cable line	Times	SFT205-NMSM-2.50M	393495-0001	01-09-2019	01-08-2020
Cable line	Times	EMC104-NMNM-1000	SN160710	01-09-2019	01-08-2020
Cable line	Times	SFT205-NMSM-3.00M	394813-0001	01-09-2019	01-08-2020
Cable line	Times	SFT205-NMNM-1.50M	381964-0001	01-09-2019	01-08-2020
Cable line	Times	SFT205-NMSM-7.00M	394815-0001	01-09-2019	01-08-2020
Cable line	Times	HF160-KMKM-3.00M	393493-0001	01-09-2019	01-08-2020

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:

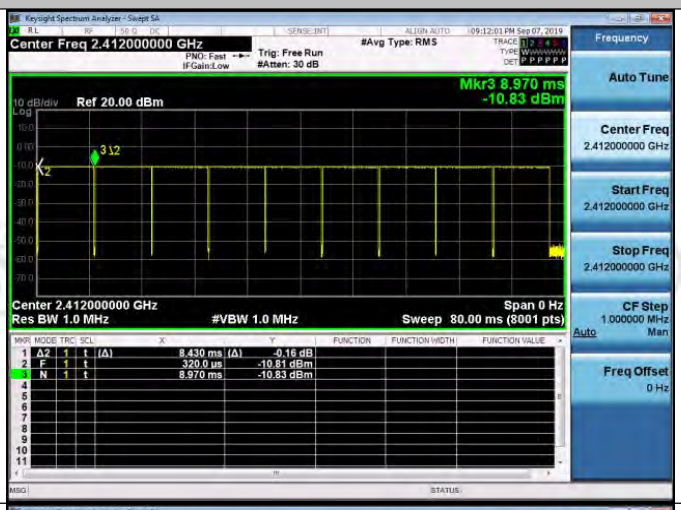
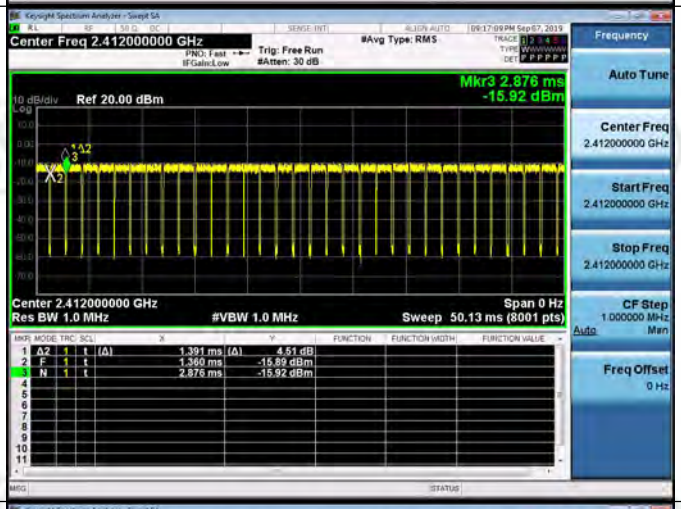
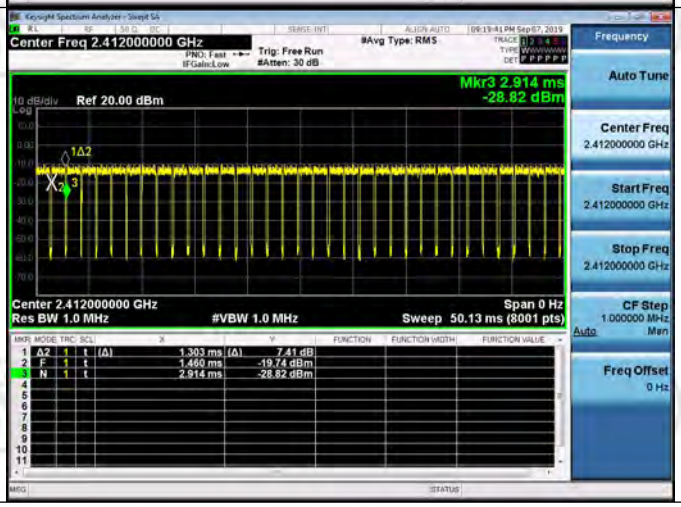
Test Requirement	Test method	Test item	Verdict	Note
Part15C Section 15.247 (b)(3)	ANSI C63.10	Conducted Peak Output Power	PASS	Appendix A)
Part15C Section 15.247 (a)(2)	ANSI C63.10	6dB & 99%Occupied Bandwidth	PASS	Appendix B)
Part15C Section 15.247(d)	ANSI C63.10	Band-edge for RF Conducted Emissions	PASS	Appendix C)
Part15C Section 15.247(d)	ANSI C63.10	RF Conducted Spurious Emissions	PASS	Appendix D)
Part15C Section 15.247 (e)	ANSI C63.10	Power Spectral Density	PASS	Appendix E)
Part15C Section 15.203/15.247 (c)	ANSI C63.10	Antenna Requirement	PASS	Appendix F)
Part15C Section 15.207	ANSI C63.10	AC Power Line Conducted Emission	PASS	Appendix G)
Part15C Section 15.205/15.209	ANSI C63.10	Restricted bands around fundamental frequency	PASS	Appendix H)
Part15C Section 15.205/15.209	ANSI C63.10	Radiated Spurious Emissions	PASS	Appendix I)

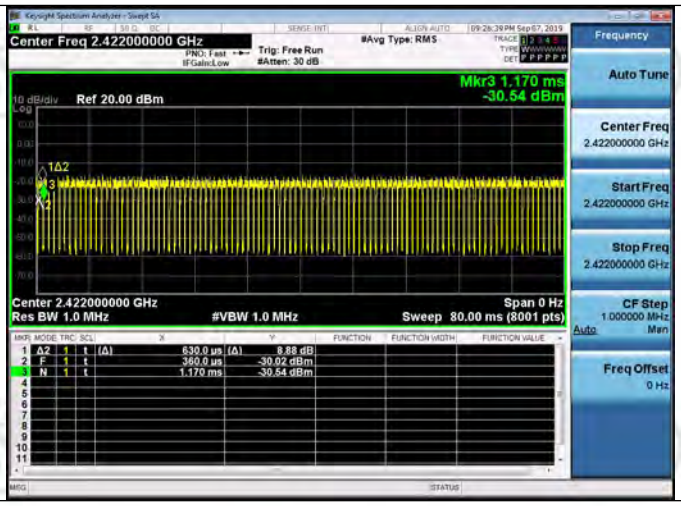
Duty Cycle

Result Table

Configuration	TX ON(ms)	TX ALL(ms)	Duty Cycle(%)
802.11b	8.430	8.650	97.46%
802.11g	1.391	1.516	91.75%
802.11n HT20	1.303	1.454	89.61%
802.11n HT40	0.63	0.81	77.78%

Test Graph

Graphs			
11B			
11G			
11N20SISO			

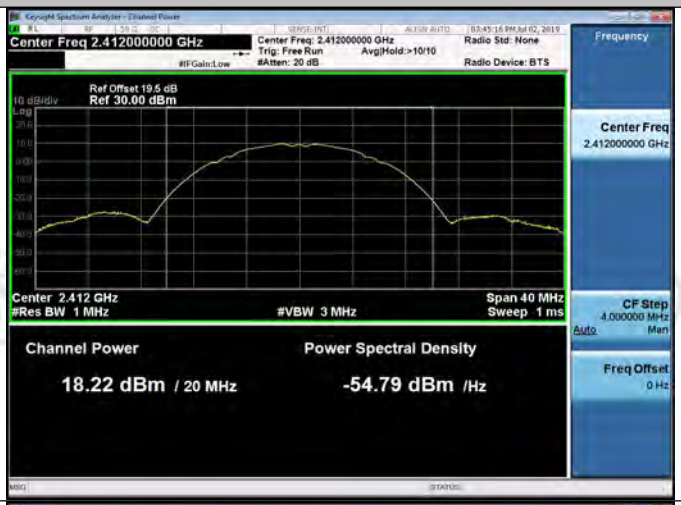
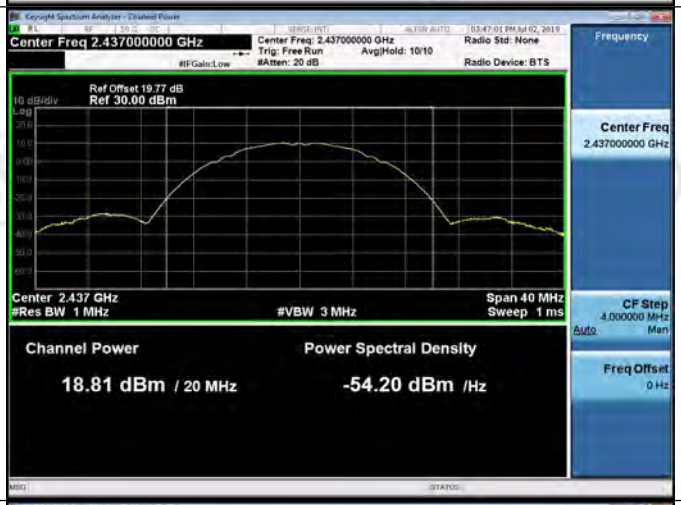
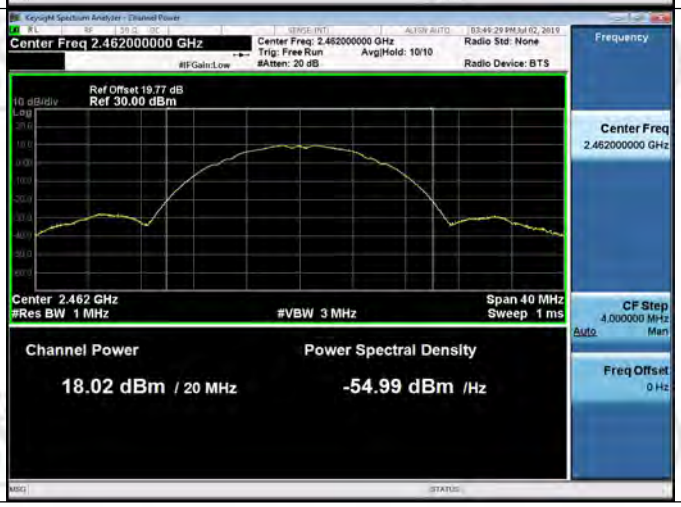
11N40SISO	 Center Freq 2.422000000 GHz PNO: Fast IFGain:Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS Frequency Auto Tune Mkr3 1.170 ms -30.54 dBm 10 dB/div Ref 20.00 dBm Center Freq 2.422000000 GHz Start Freq 2.422000000 GHz Stop Freq 2.422000000 GHz CF Step 1.000000 MHz Auto Man Freq Offset 0 Hz Center 2.422000000 GHz Res BW 1.0 MHz #VBW 1.0 MHz Span 0 Hz Sweep 80.00 ms (8001 pts) 1 Δ2 1 t (Δ) 630.0 µs (Δ) 8.88 dB 2 F 1 t 360.0 µs -30.02 dBm 3 N 1 t 1.170 ms -30.54 dBm	

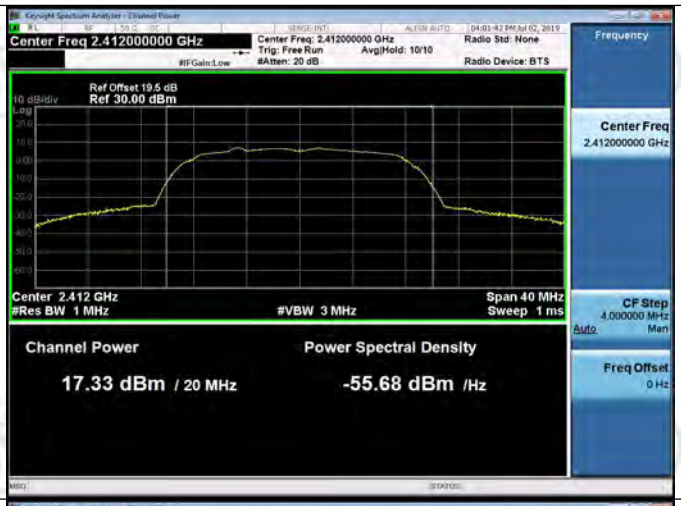
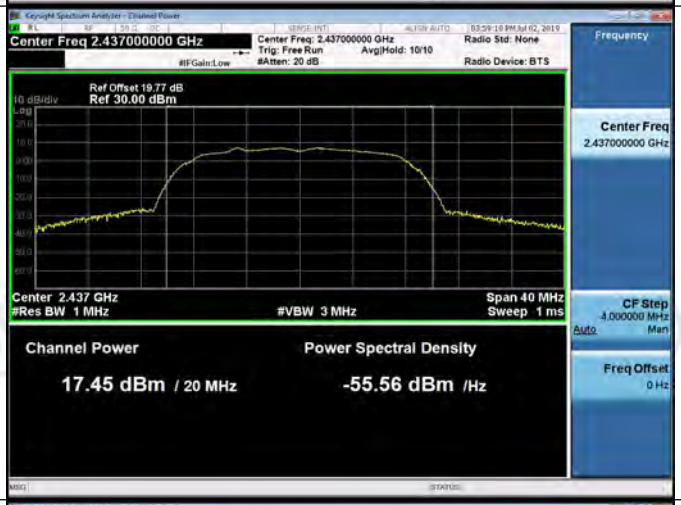
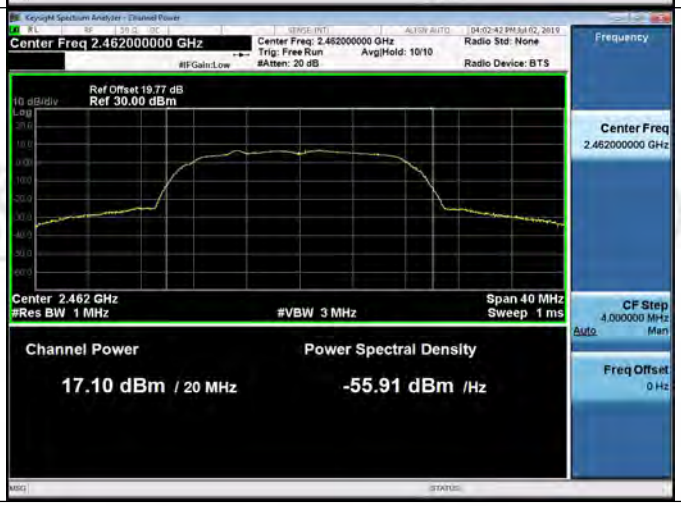
Appendix A): Conducted Peak Output Power

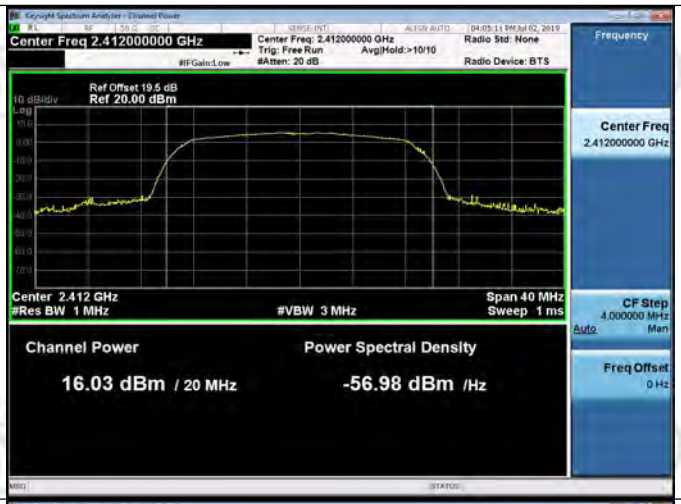
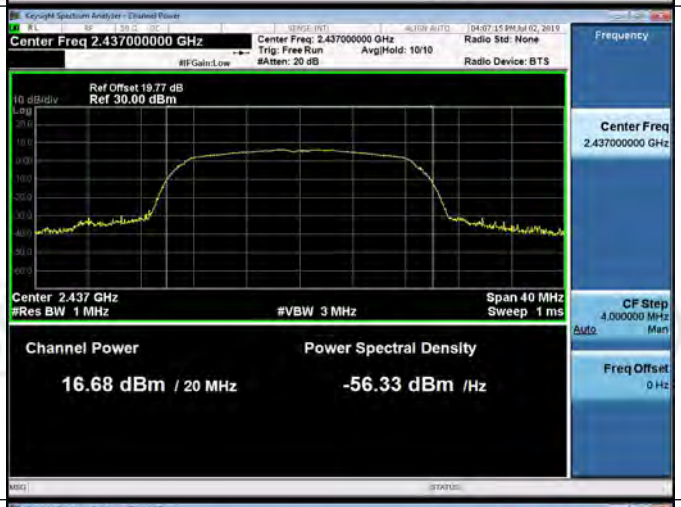
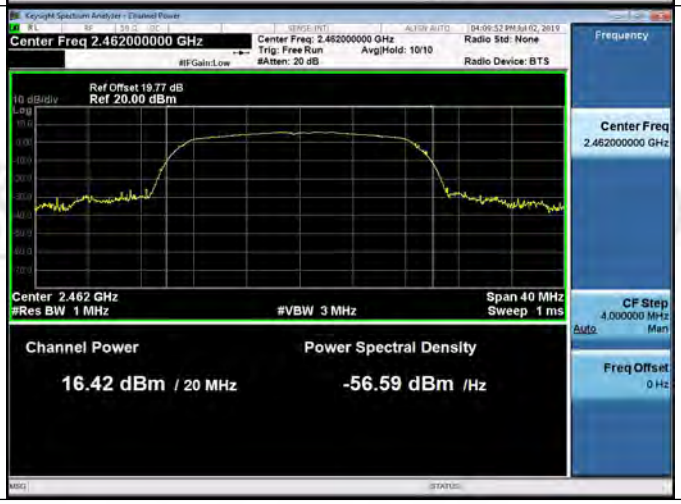
Result Table

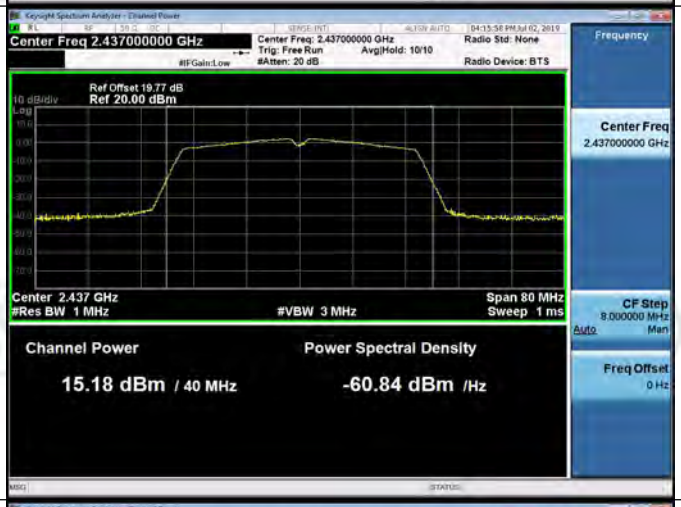
Mode	Channel	Conducted Peak Output Power [dBm]	Verdict
11B	LCH	18.22	PASS
11B	MCH	18.81	PASS
11B	HCH	18.02	PASS
11G	LCH	17.33	PASS
11G	MCH	17.45	PASS
11G	HCH	17.1	PASS
11N20SISO	LCH	16.03	PASS
11N20SISO	MCH	16.68	PASS
11N20SISO	HCH	16.42	PASS
11N40SISO	LCH	15.13	PASS
11N40SISO	MCH	15.18	PASS
11N40SISO	HCH	15.34	PASS

Test Graph

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

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

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

11N40SISO/LCH			
11N40SISO/MCH			
11N40SISO/HCH			

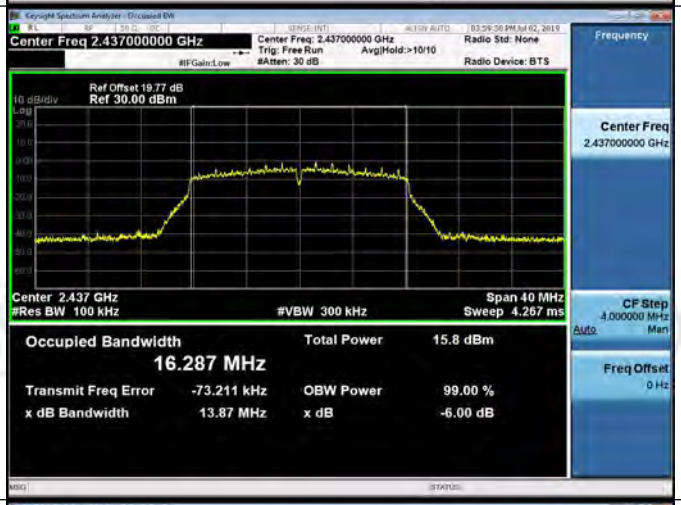
Appendix B): 6dB & 99% OBW Occupied Bandwidth

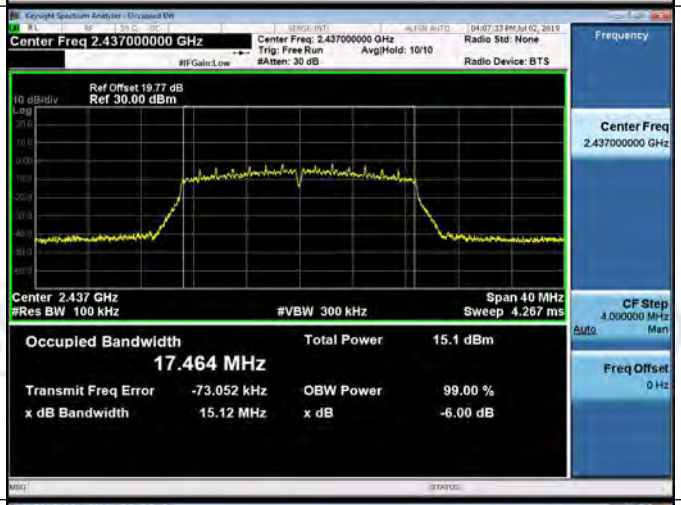
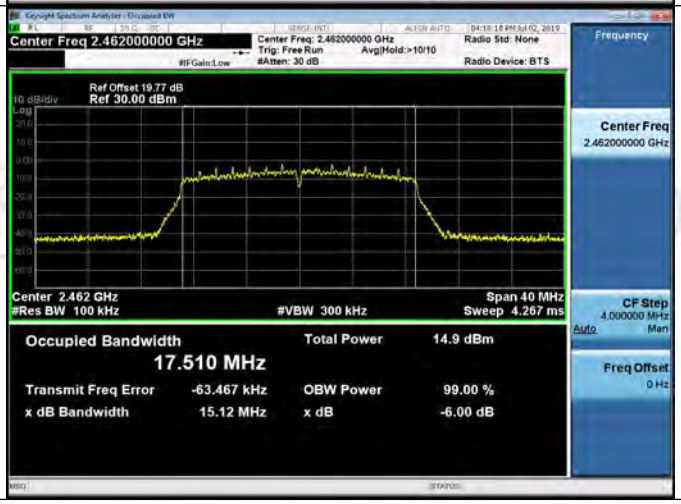
Result Table

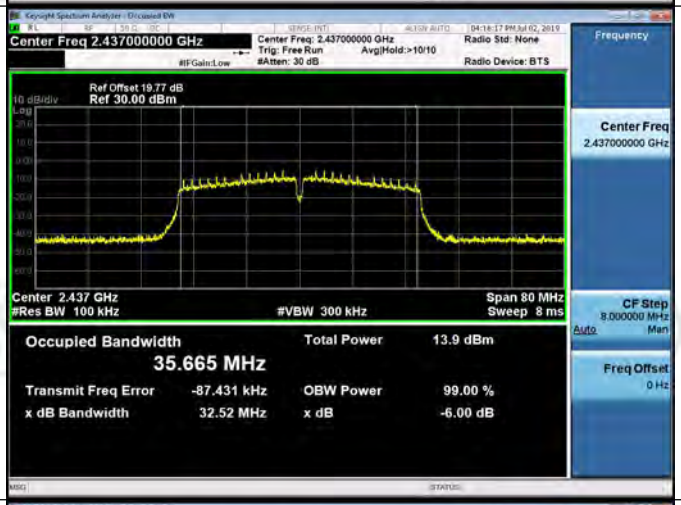
Mode	Channel	6dB Bandwidth [MHz]	99% OBW [MHz]	Verdict
11B	LCH	10.05	14.480	PASS
11B	MCH	9.992	14.440	PASS
11B	HCH	10.03	14.543	PASS
11G	LCH	15.10	16.412	PASS
11G	MCH	13.87	16.429	PASS
11G	HCH	15.07	16.463	PASS
11N20SISO	LCH	15.07	17.515	PASS
11N20SISO	MCH	15.12	17.506	PASS
11N20SISO	HCH	15.12	17.527	PASS
11N40SISO	LCH	35.10	35.934	PASS
11N40SISO	MCH	32.52	35.877	PASS
11N40SISO	HCH	35.11	35.968	PASS

Test Graph

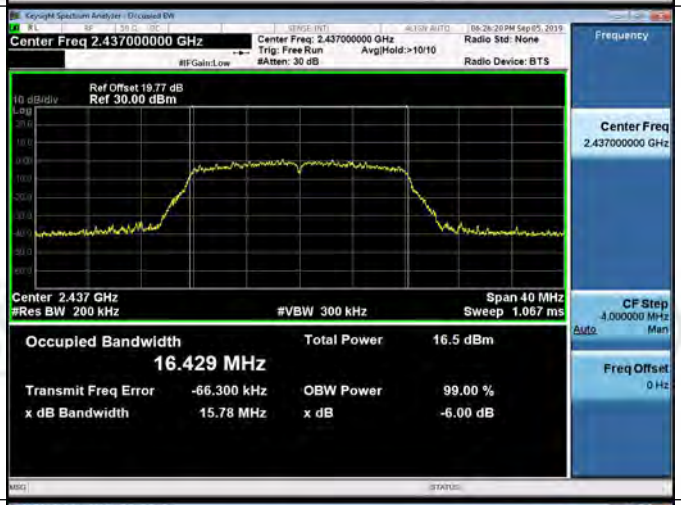
Graphs		
11B/LCH		
11B/MCH		
11B/HCH		

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

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

11N40SISO/LCH			
11N40SISO/MCH			
11N40SISO/HCH			

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

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

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

11N40SISO/LCH			
11N40SISO/MCH			
11N40SISO/HCH			

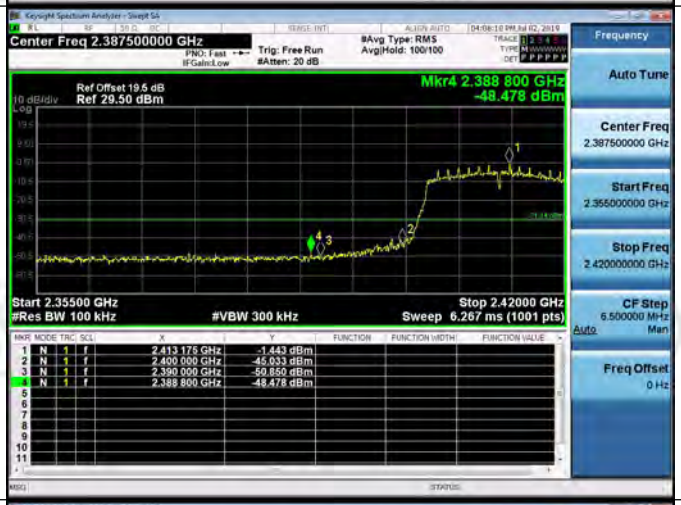
Appendix C): Band-edge for RF Conducted Emissions

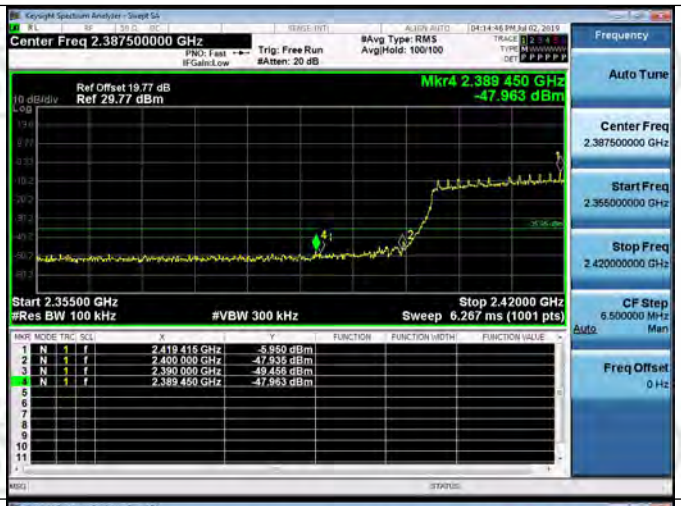
Result Table

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	5.298	-47.887	-24.7	PASS
11B	HCH	5.096	-48.648	-24.9	PASS
11G	LCH	-1.059	-48.042	-31.06	PASS
11G	HCH	-0.753	-47.399	-30.75	PASS
11N20SISO	LCH	-1.443	-48.478	-31.44	PASS
11N20SISO	HCH	-1.227	-48.794	-31.23	PASS
11N40SISO	LCH	-5.950	-47.963	-35.95	PASS
11N40SISO	HCH	-5.663	-49.236	-35.66	PASS

Test Graph

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

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

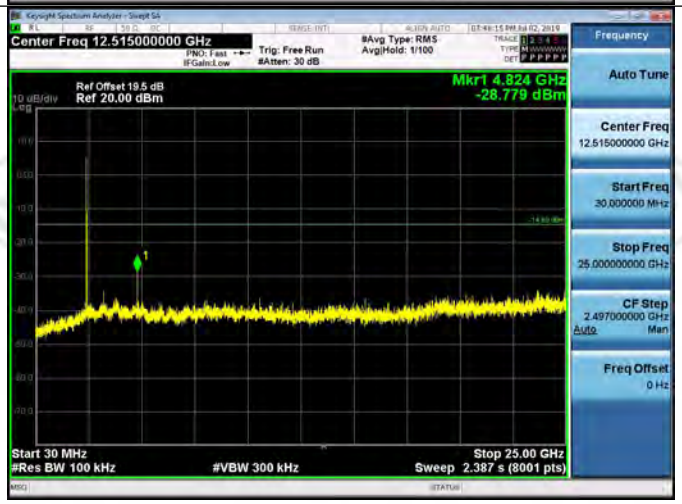
11N40SISO/LCH			
11N40SISO/HCH			

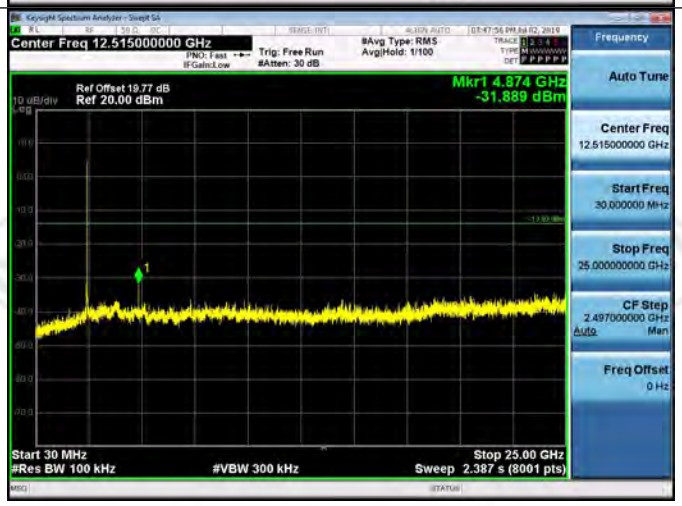
Appendix D): RF Conducted Spurious Emissions

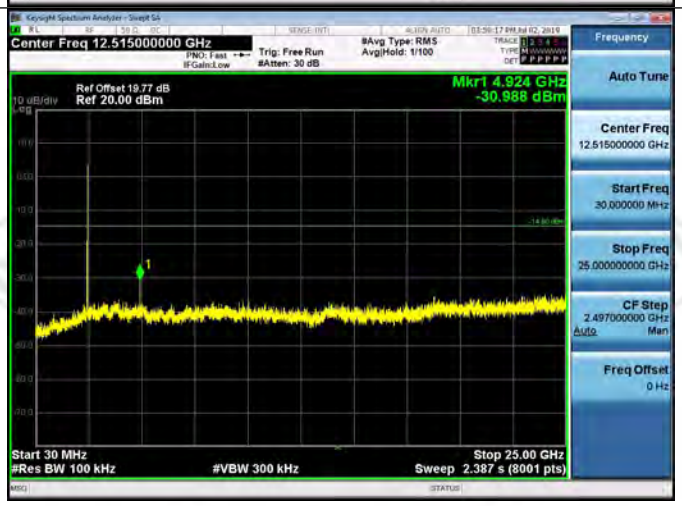
Result Table

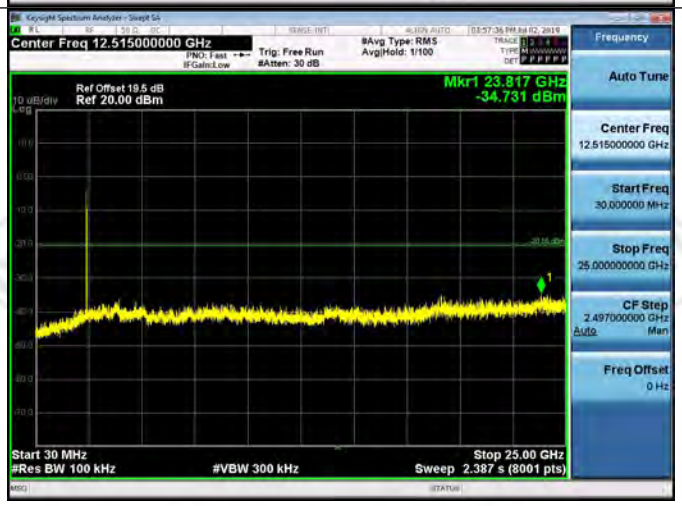
Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
11B	LCH	5.31	<Limit	PASS
11B	MCH	6.073	<Limit	PASS
11B	HCH	5.196	<Limit	PASS
11G	LCH	-0.553	<Limit	PASS
11G	MCH	-0.101	<Limit	PASS
11G	HCH	-0.706	<Limit	PASS
11N20SISO	LCH	-1.467	<Limit	PASS
11N20SISO	MCH	-0.609	<Limit	PASS
11N20SISO	HCH	-1.21	<Limit	PASS
11N40SISO	LCH	-5.518	<Limit	PASS
11N40SISO	MCH	-5.041	<Limit	PASS
11N40SISO	HCH	-5.772	<Limit	PASS

Test Graph

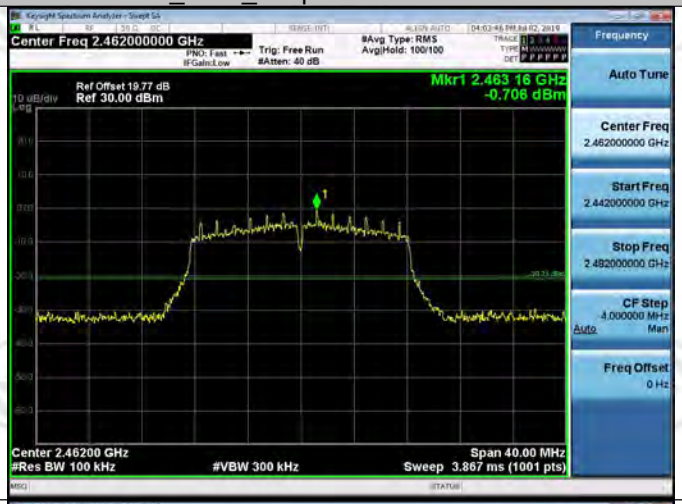
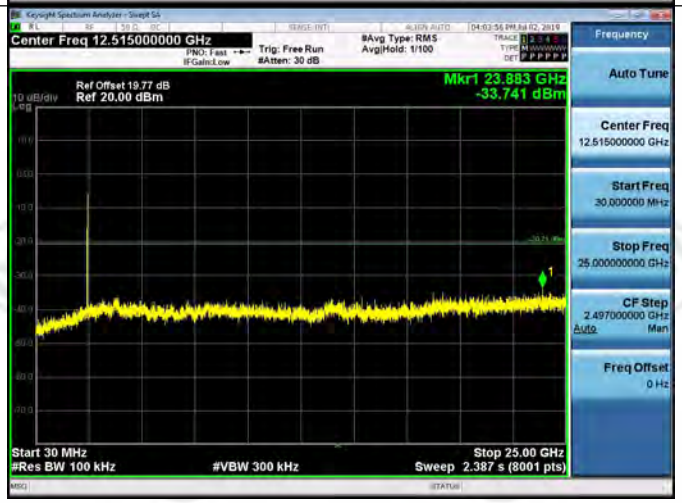
11B_LCH_Graphs		
Pref/11B/LCH		
Puw/11B/LCH		

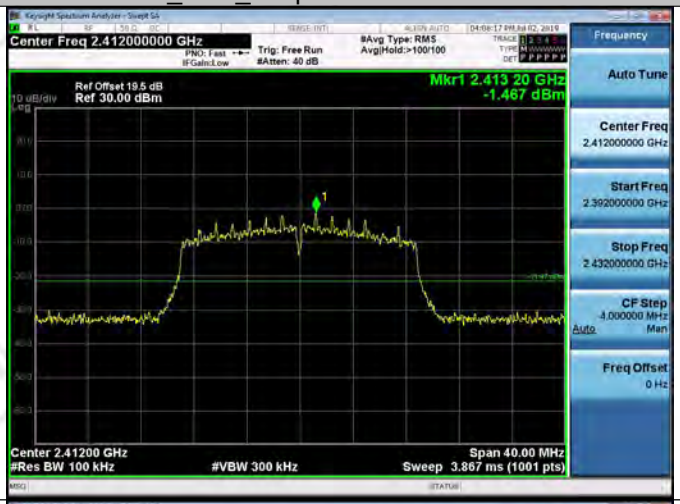
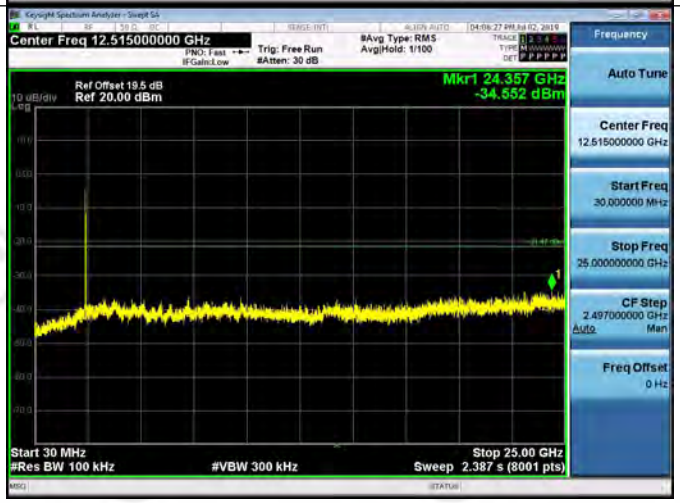
11B_MCH_Graphs		
Pref/11B/MCH		
Puw/11B/MCH		

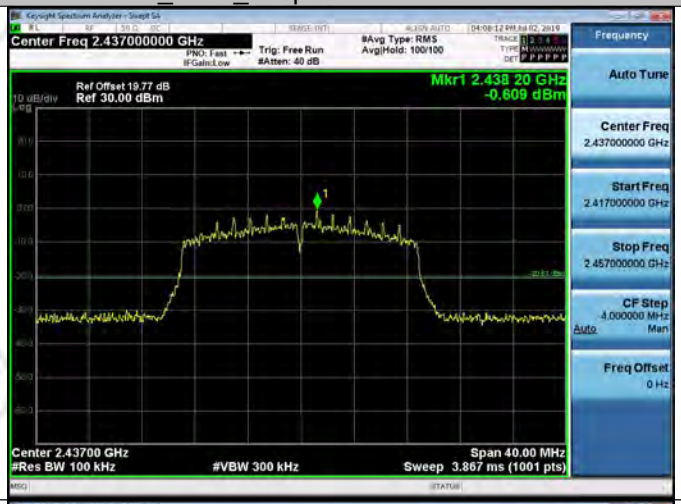
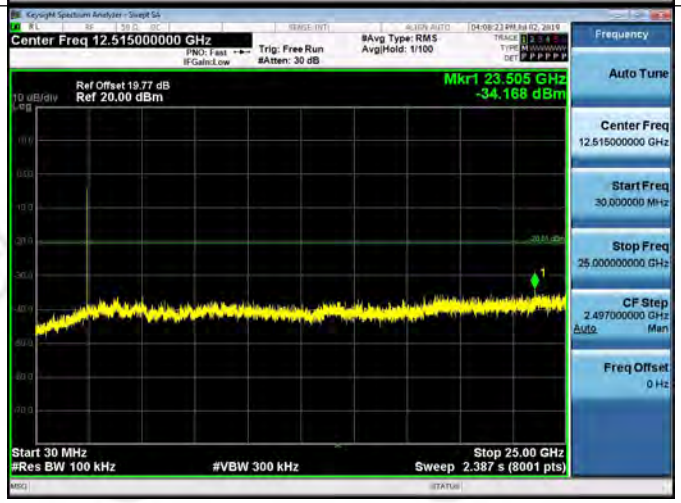
11B_HCH_Graphs		
Pref/11B/HCH		
Puw/11B/HCH		

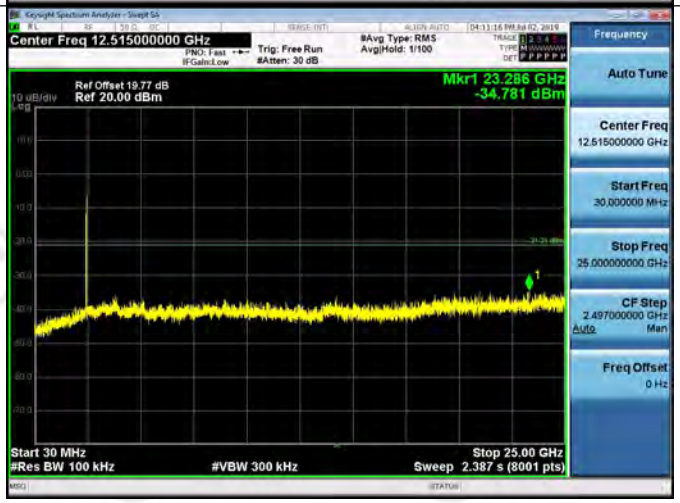
11G_LCH_Graphs		
Pref/11G/LCH		
Puw/11G/LCH		

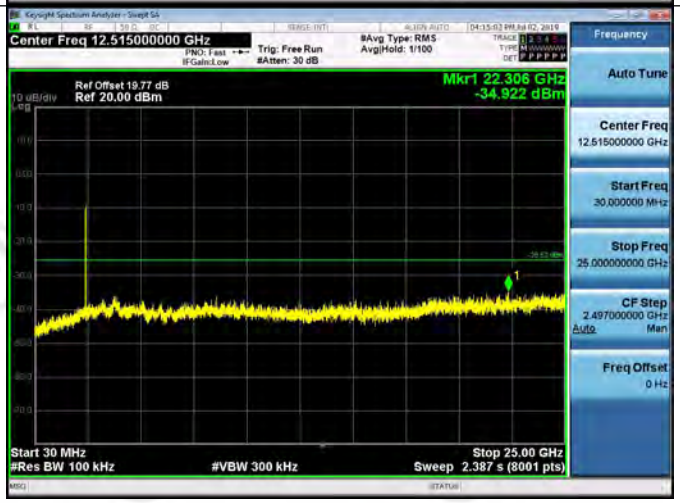
11G_MCH_Graphs		
Pref/11G/MCH		
Puw/11G/MCH		

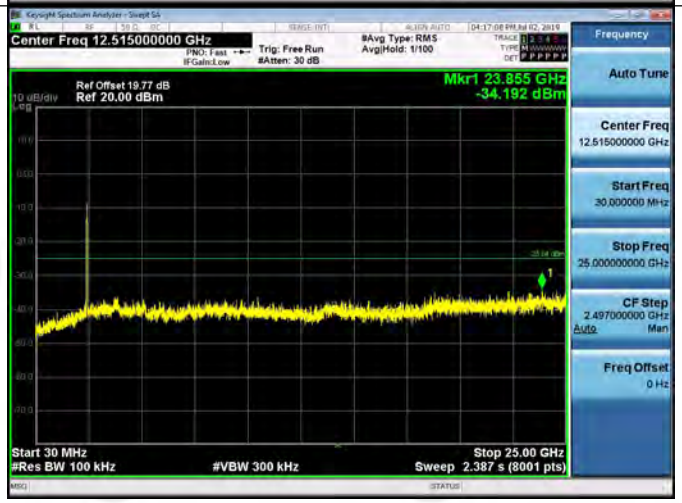
11G_HCH_Graphs	
Pref/11G/HCH	
Puw/11G/HCH	

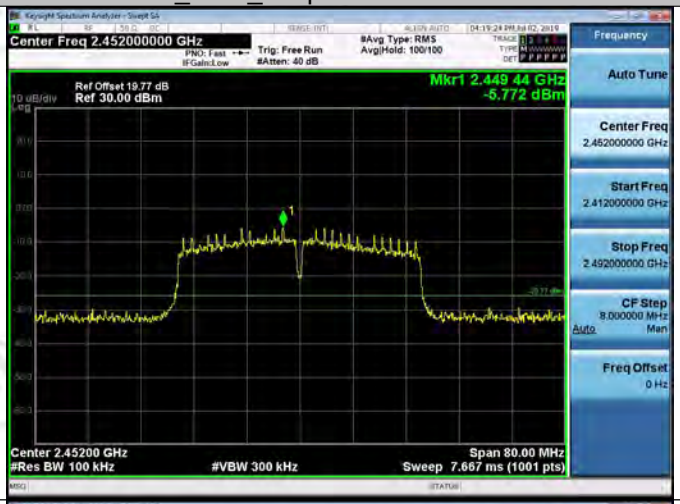
11N20SISO_LCH_Graphs		
Pref/11N20SISO/LCH		
/11N20SISO/LCH		

11N20SISO_MCH_Graphs	
Pref/11N20SISO/MCH	
Puw/11N20SISO/MCH	

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

11N40SISO_LCH_Graphs		
Pref/11N40SISO/LCH		
Puw/11N40SISO/LCH		

11N40SISO_MCH_Graphs		
Pref/11N40SISO/MCH		
Puw/11N40SISO/MCH		

11N40SISO_HCH_Graphs		
Pref/11N40SISO/HCH		
Puw/11N40SISO/HCH		

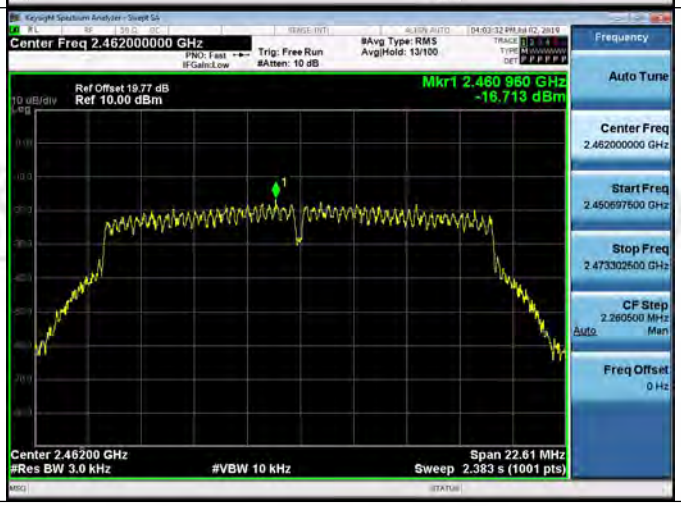
Appendix E): Power Spectral Density

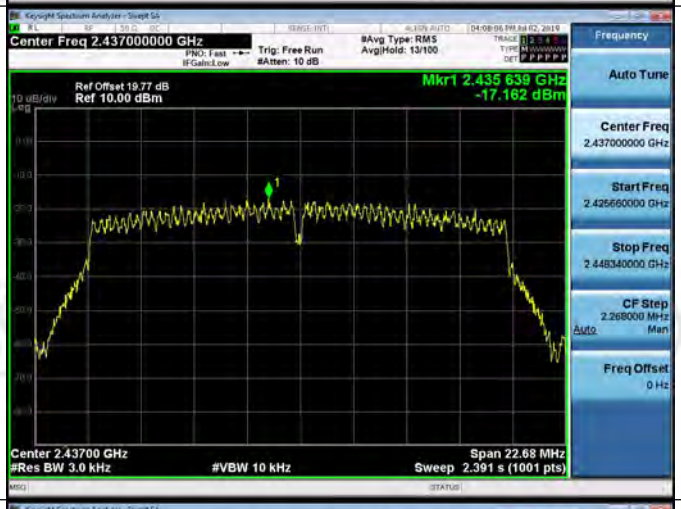
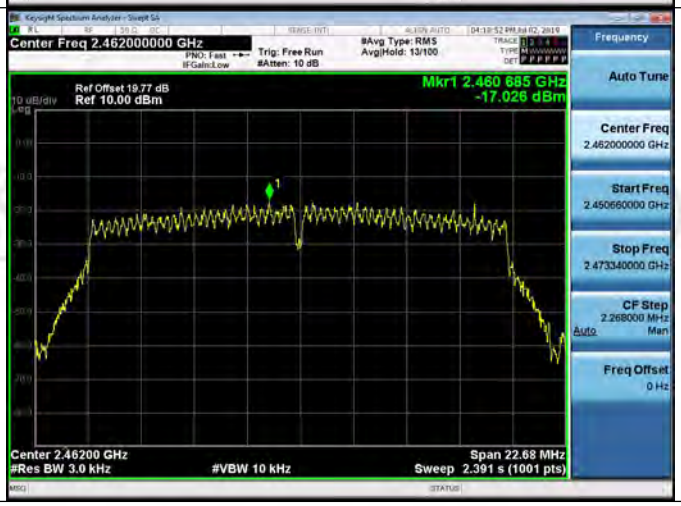
Result Table

Mode	Channel	Power Spectral Density [dBm]	Verdict
11B	LCH	-9.445	PASS
11B	MCH	-9.273	PASS
11B	HCH	-9.161	PASS
11G	LCH	-16.322	PASS
11G	MCH	-15.967	PASS
11G	HCH	-16.713	PASS
11N20SISO	LCH	-17.823	PASS
11N20SISO	MCH	-17.162	PASS
11N20SISO	HCH	-17.026	PASS
11N40SISO	LCH	-21.520	PASS
11N40SISO	MCH	-20.062	PASS
11N40SISO	HCH	-21.798	PASS

Test Graph

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

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

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

11N40SISO/LCH			
11N40SISO/MCH			
11N40SISO/HCH			

Appendix F): Antenna Requirement

15.203 requirement:

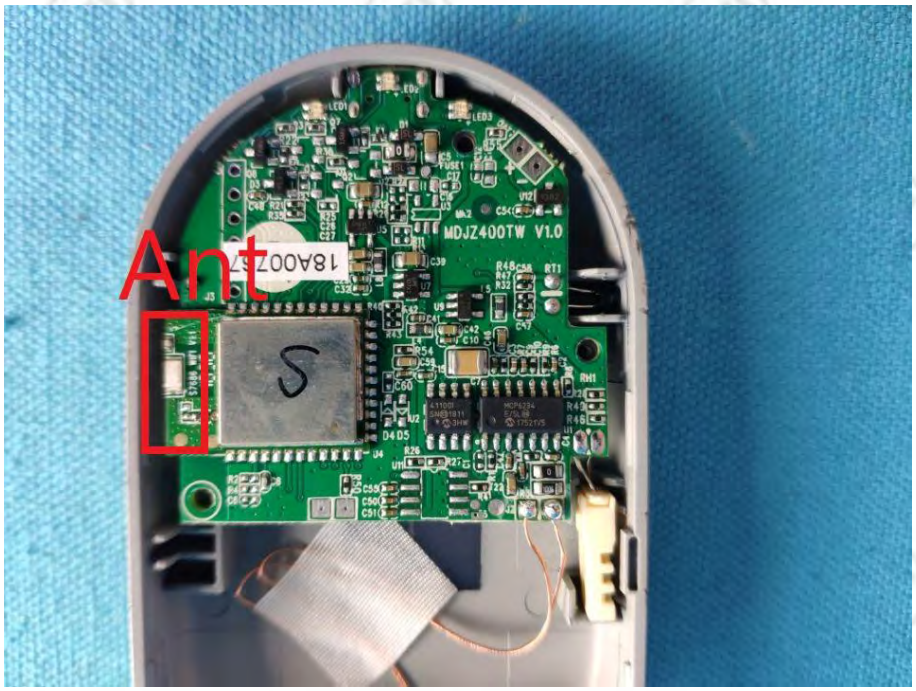
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit 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 2.5 dBi.



Appendix G): AC Power Line Conducted Emission

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

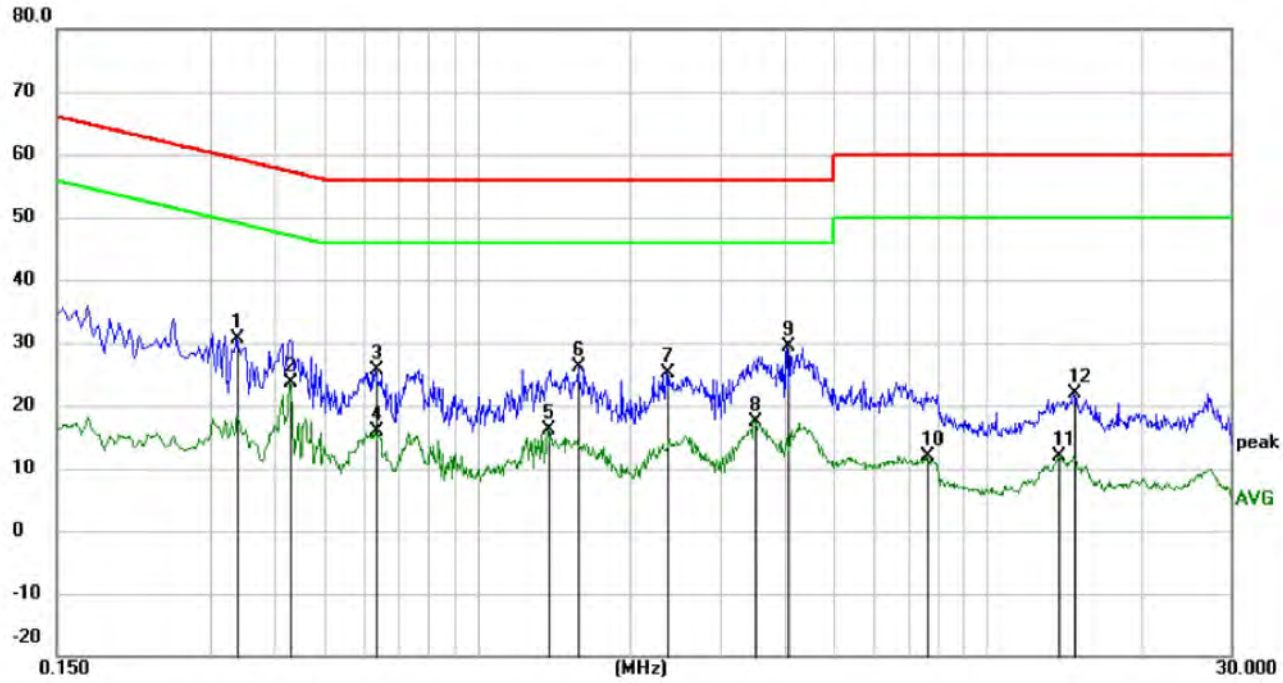
Measurement Data

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

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

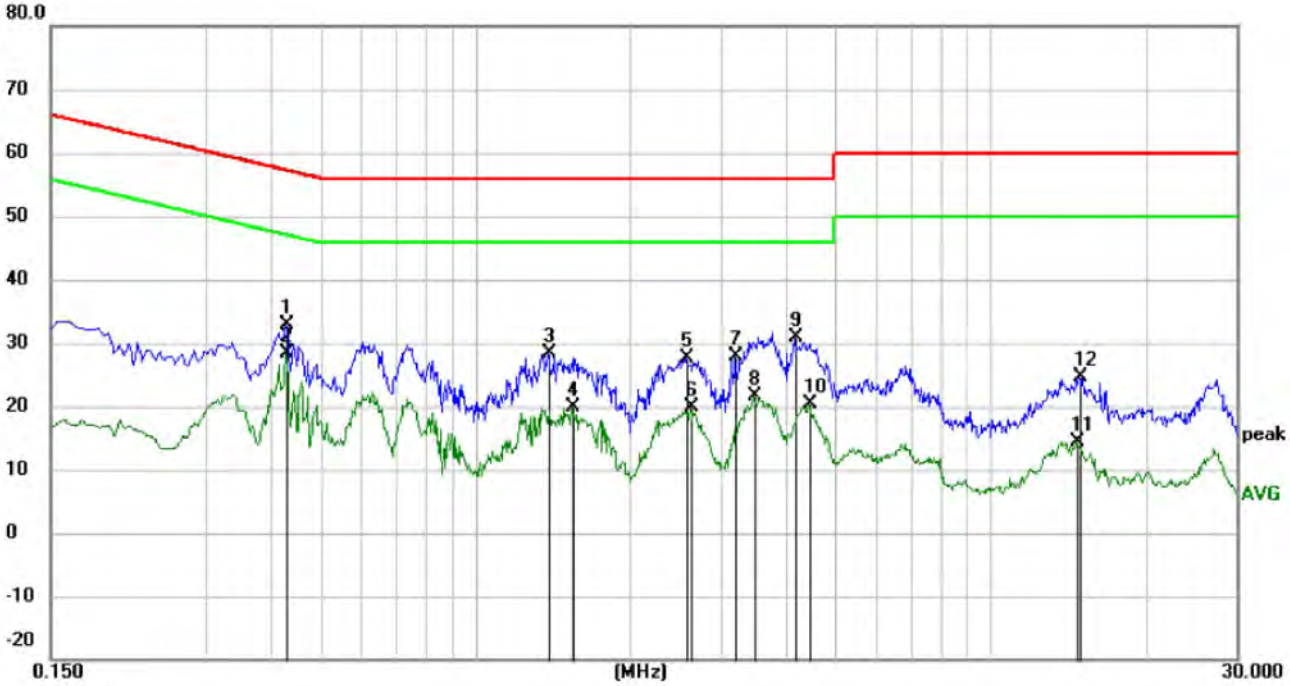
Product	:	RestOn Sleep Tracker	**Model/Type reference**	:	Z400TWP
Temperature	:	24℃	**Humidity**	:	54%

Live line:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.3390	20.51	10.06	30.57	59.23	-28.66	QP	
2	*	0.4290	13.56	10.00	23.56	47.27	-23.71	AVG	
3		0.6315	15.69	9.97	25.66	56.00	-30.34	QP	
4		0.6315	5.88	9.97	15.85	46.00	-30.15	AVG	
5		1.3785	6.19	9.88	16.07	46.00	-29.93	AVG	
6		1.5809	16.30	9.86	26.16	56.00	-29.84	QP	
7		2.3550	15.34	9.83	25.17	56.00	-30.83	QP	
8		3.4935	7.65	9.83	17.48	46.00	-28.52	AVG	
9		4.0650	19.57	9.83	29.40	56.00	-26.60	QP	
10		7.6065	1.94	9.87	11.81	50.00	-38.19	AVG	
11		13.8120	1.97	9.98	11.95	50.00	-38.05	AVG	
12		14.7750	12.01	9.98	21.99	60.00	-38.01	QP	

Neutral line:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.4290	22.95	10.00	32.95	57.27	-24.32	QP	
2	*	0.4290	18.48	10.00	28.48	47.27	-18.79	AVG	
3		1.3829	18.58	9.88	28.46	56.00	-27.54	QP	
4		1.5360	9.98	9.87	19.85	46.00	-26.15	AVG	
5		2.5574	17.85	9.83	27.68	56.00	-28.32	QP	
6		2.6204	9.97	9.83	19.80	46.00	-26.20	AVG	
7		3.2010	18.07	9.83	27.90	56.00	-28.10	QP	
8		3.4755	11.85	9.83	21.68	46.00	-24.32	AVG	
9		4.1640	20.94	9.83	30.77	56.00	-25.23	QP	
10		4.4385	10.58	9.83	20.41	46.00	-25.59	AVG	
11		14.7030	4.47	9.98	14.45	50.00	-35.55	AVG	
12		14.8965	14.54	9.98	24.52	60.00	-35.48	QP	

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.

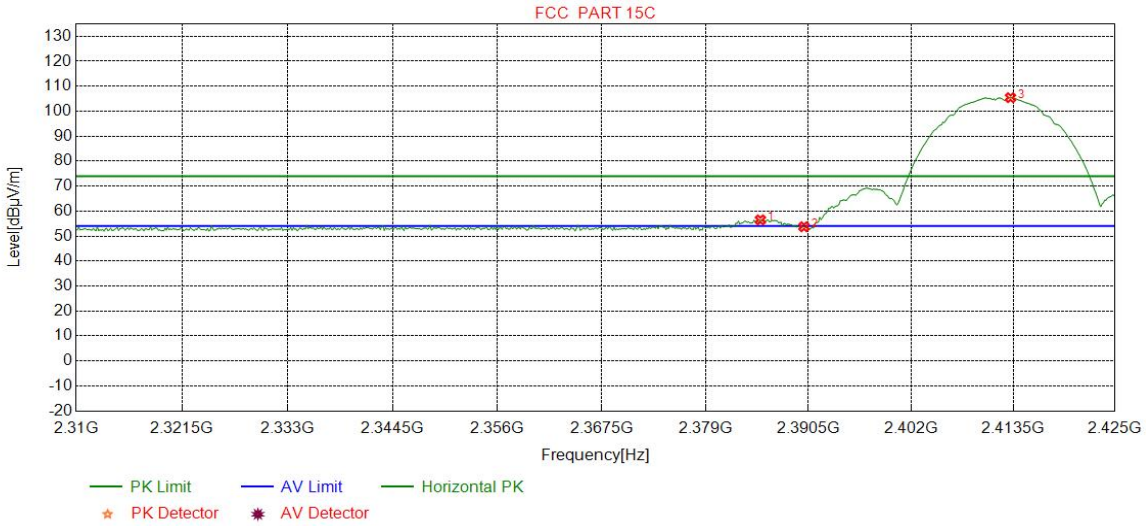
Limit:

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:

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2412
Remark:	PK		

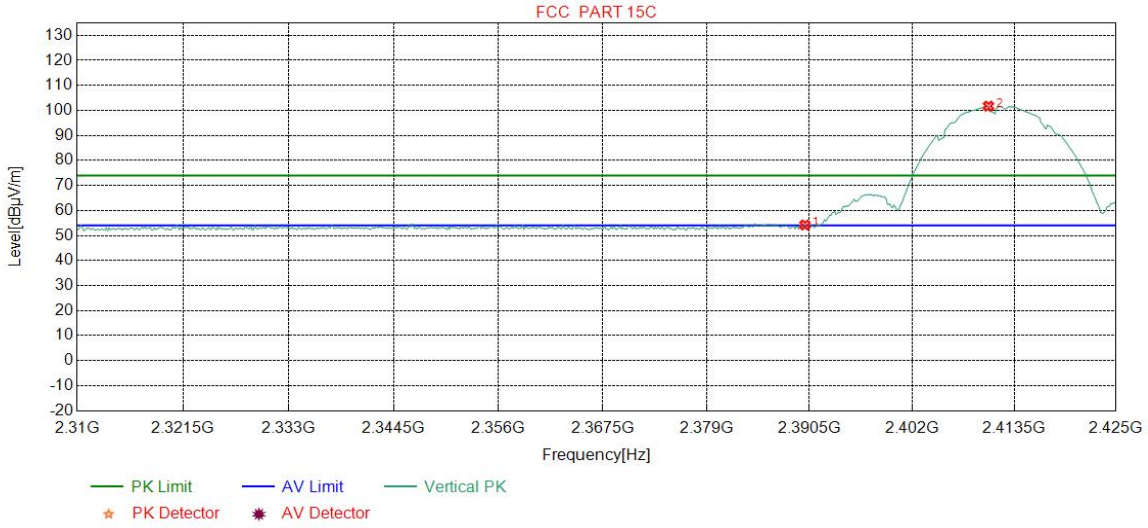
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Preamp gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2385.1314	32.24	13.41	-42.44	53.28	56.49	74.00	17.51	Pass	Horizontal
2	2390.0000	32.25	13.37	-42.44	50.55	53.73	74.00	20.27	Pass	Horizontal
3	2413.1977	32.28	13.36	-42.43	102.21	105.42	74.00	-31.42	Pass	Horizontal

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2412
Remark:	PK		

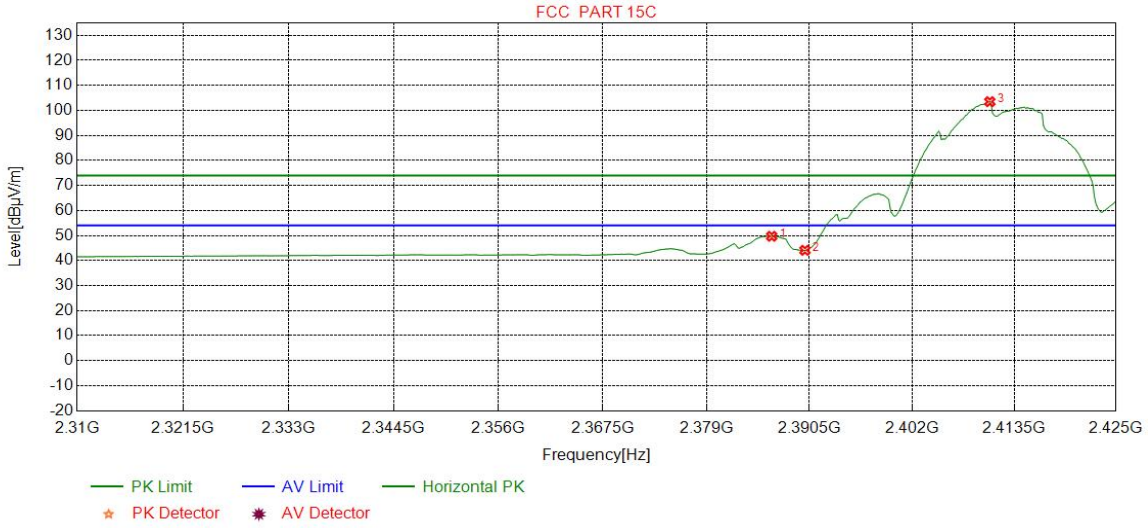
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	51.02	54.20	74.00	19.80	Pass	Vertical
2	2410.6070	32.27	13.35	-42.43	98.53	101.72	74.00	-27.72	Pass	Vertical

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2412
Remark:	AV		

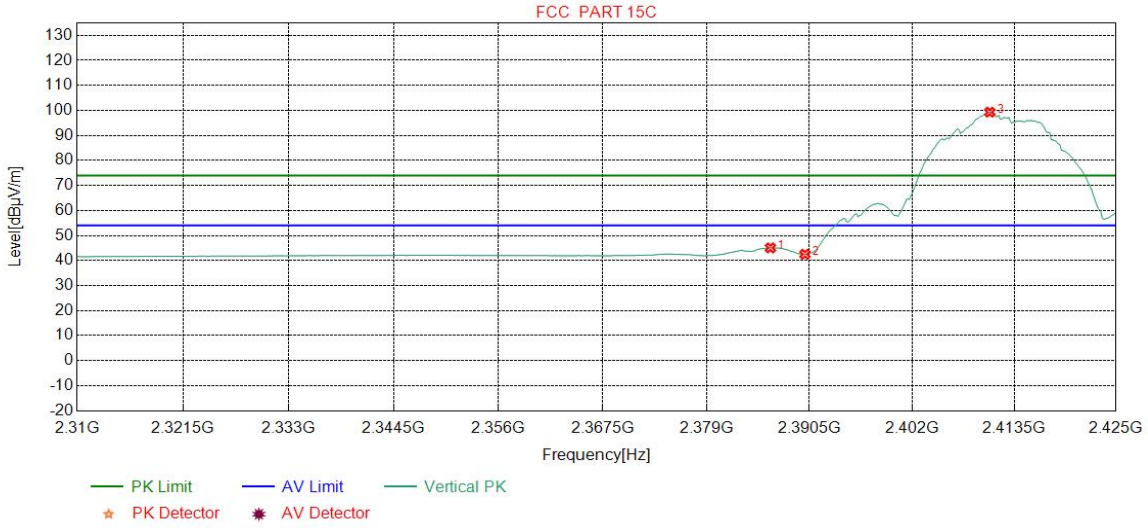
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2386.2829	32.24	13.40	-42.44	46.50	49.70	54.00	4.30	Pass	Horizontal
2	2390.0000	32.25	13.37	-42.44	40.91	44.09	54.00	9.91	Pass	Horizontal
3	2410.7509	32.28	13.35	-42.43	100.29	103.49	54.00	-49.49	Pass	Horizontal

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2412
Remark:	AV		

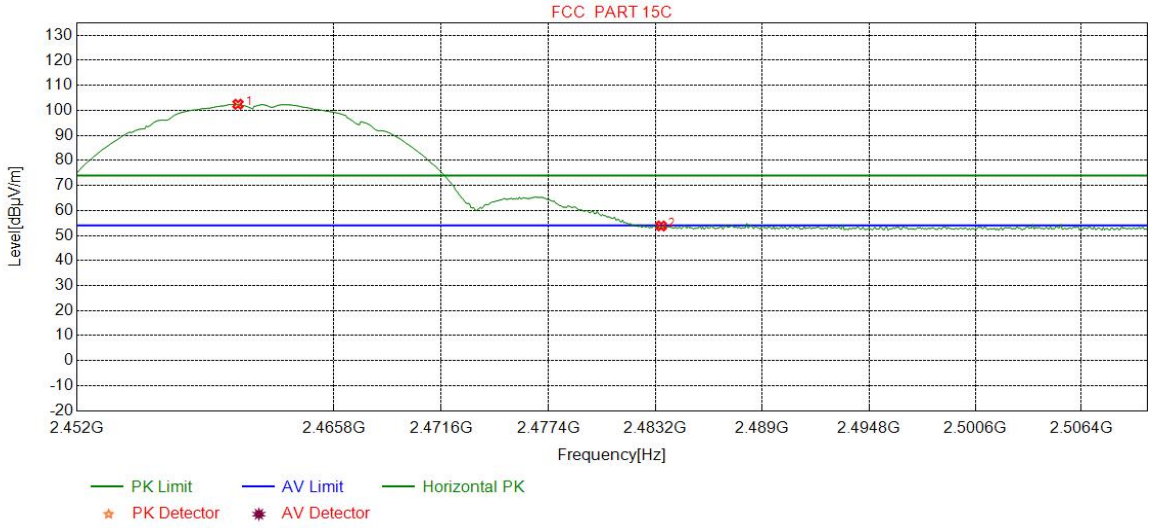
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2386.1389	32.24	13.40	-42.44	41.85	45.05	54.00	8.95	Pass	Vertical
2	2390.0000	32.25	13.37	-42.44	39.32	42.50	54.00	11.50	Pass	Vertical
3	2410.7509	32.28	13.35	-42.43	96.11	99.31	54.00	-45.31	Pass	Vertical

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2462
Remark:	PK		

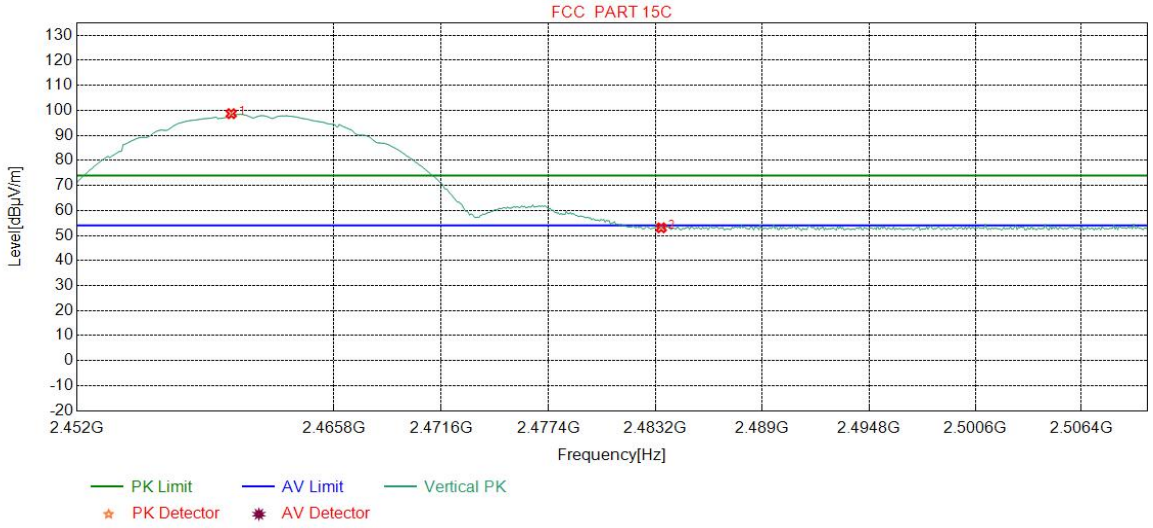
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2460.6383	32.34	13.48	-42.40	99.05	102.47	74.00	-28.47	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	50.45	53.81	74.00	20.19	Pass	Horizontal

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2462
Remark:	PK		

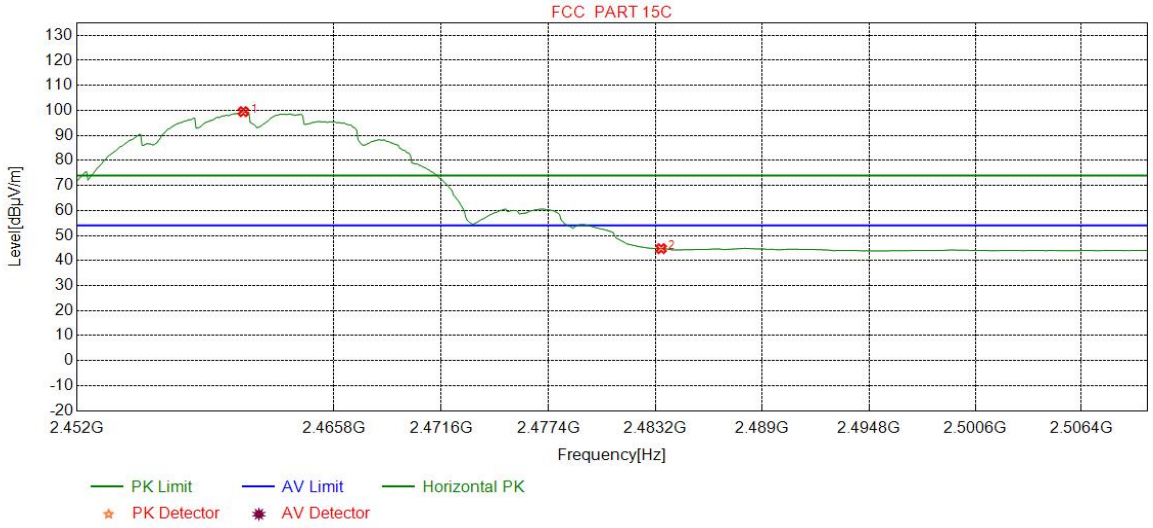
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2460.2753	32.34	13.48	-42.40	95.27	98.69	74.00	-24.69	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	49.71	53.07	74.00	20.93	Pass	Vertical

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2462
Remark:	AV		

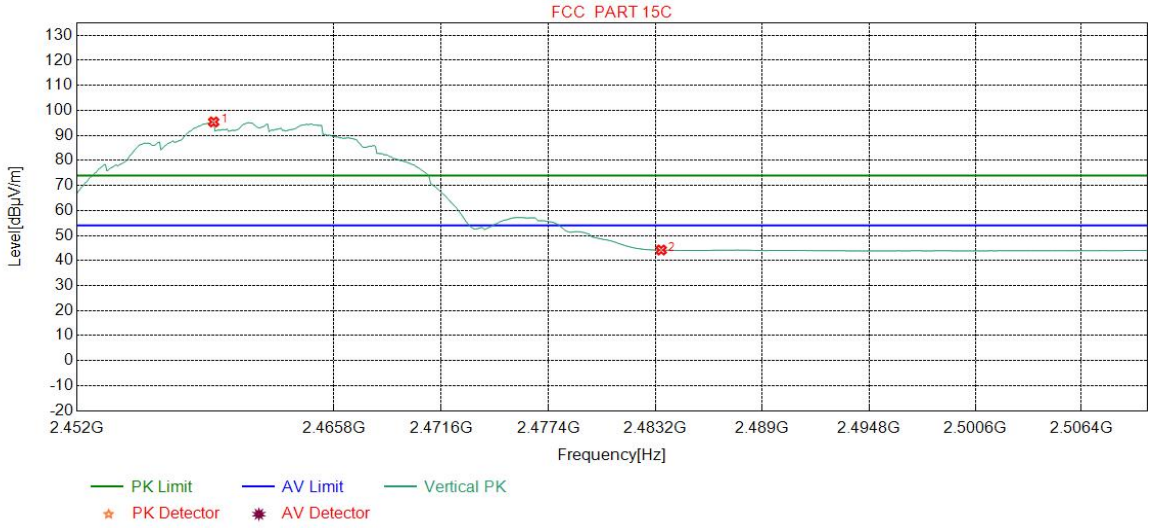
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2460.9287	32.35	13.48	-42.41	96.08	99.50	54.00	-45.50	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	41.39	44.75	54.00	9.25	Pass	Horizontal

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2462
Remark:	AV		

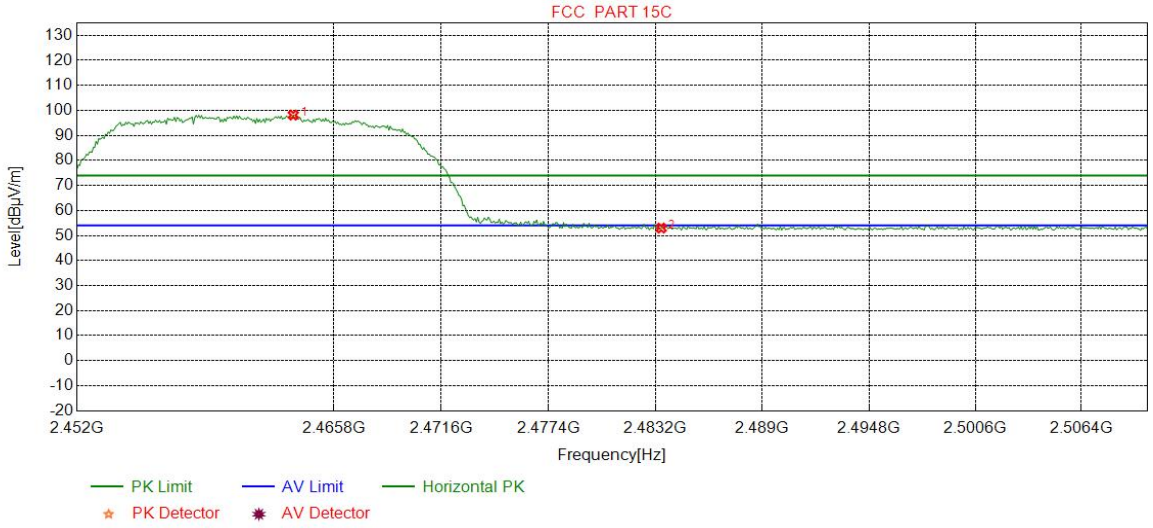
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2459.3317	32.34	13.49	-42.41	91.97	95.39	54.00	-41.39	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	40.84	44.20	54.00	9.80	Pass	Vertical

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2462
Remark:	PK		

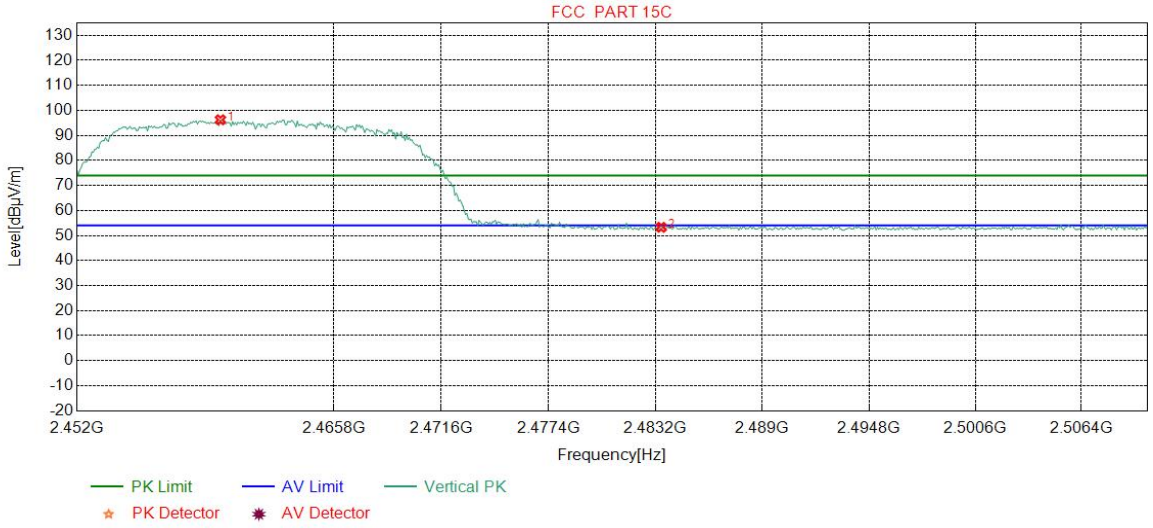
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2463.6145	32.35	13.47	-42.41	94.74	98.15	74.00	-24.15	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	49.61	52.97	74.00	21.03	Pass	Horizontal

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2462
Remark:	PK		

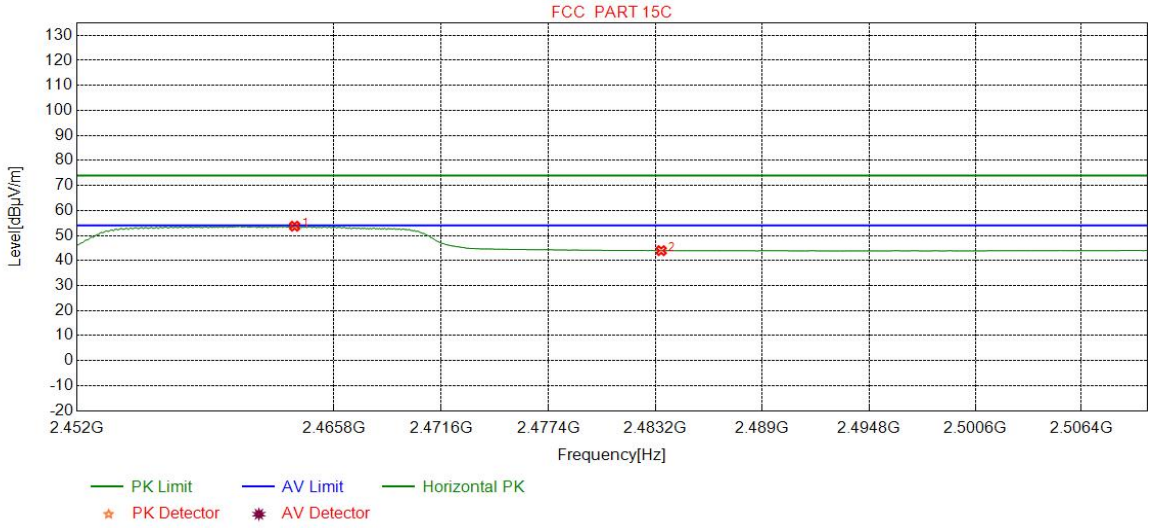
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2459.6946	32.34	13.49	-42.41	92.83	96.25	74.00	-22.25	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	49.92	53.28	74.00	20.72	Pass	Vertical

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2462
Remark:	AV		

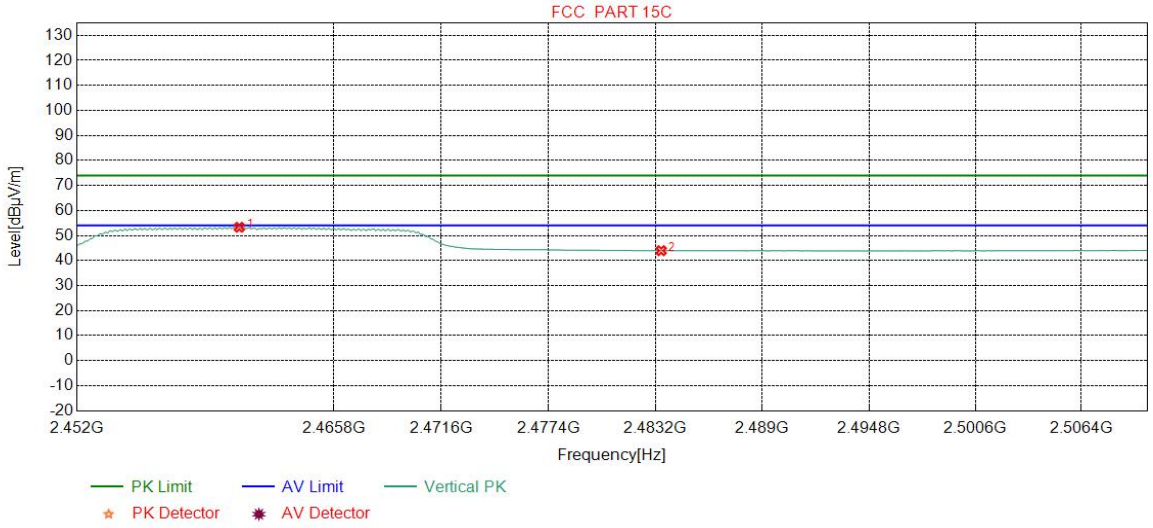
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2463.6871	32.35	13.47	-42.41	50.32	53.73	54.00	0.27	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	40.59	43.95	54.00	10.05	Pass	Horizontal

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2462
Remark:	AV		

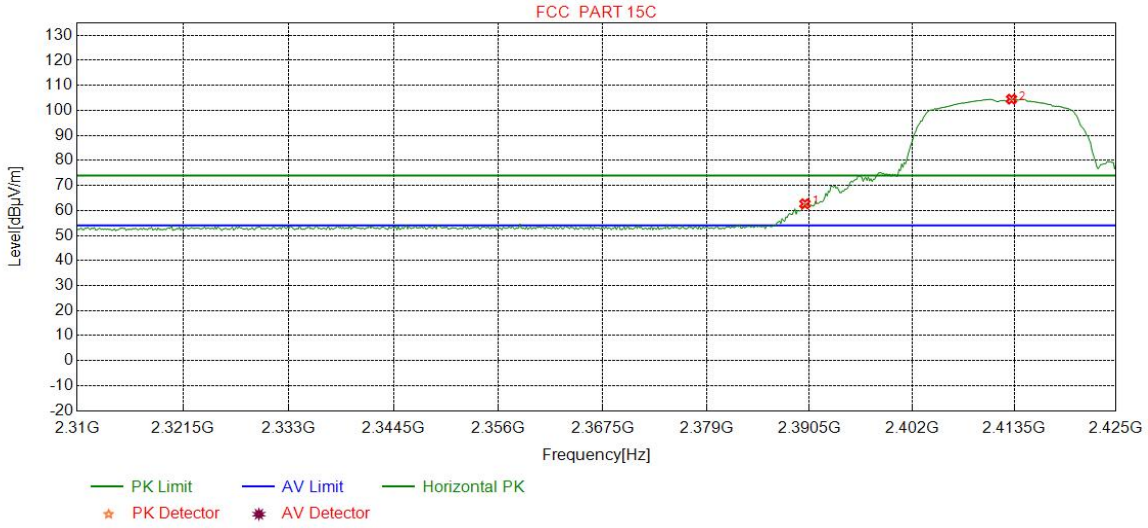
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2460.7109	32.34	13.48	-42.40	49.89	53.31	54.00	0.69	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	40.58	43.94	54.00	10.06	Pass	Vertical

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2412
Remark:	PK		

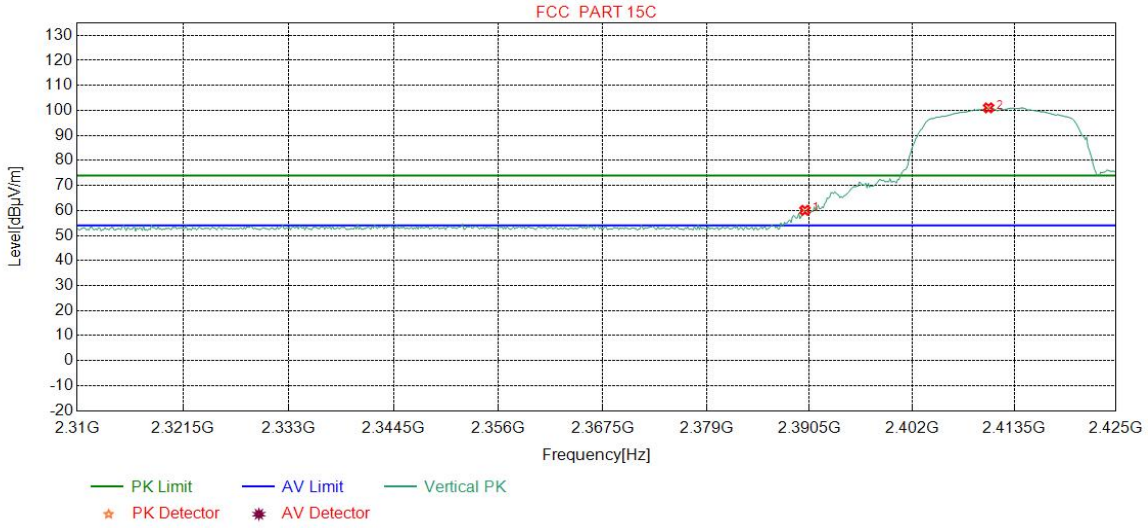
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	59.48	62.66	74.00	11.34	Pass	Horizontal
2	2413.1977	32.28	13.36	-42.43	101.28	104.49	74.00	-30.49	Pass	Horizontal

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2412
Remark:	PK		

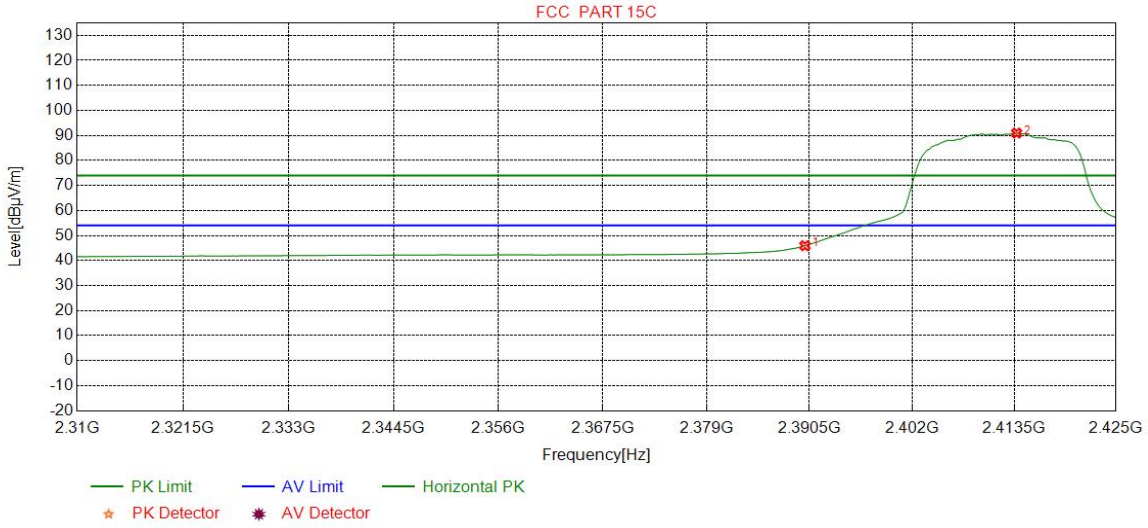
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	56.88	60.06	74.00	13.94	Pass	Vertical
2	2410.6070	32.27	13.35	-42.43	97.84	101.03	74.00	-27.03	Pass	Vertical

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2412
Remark:	AV		

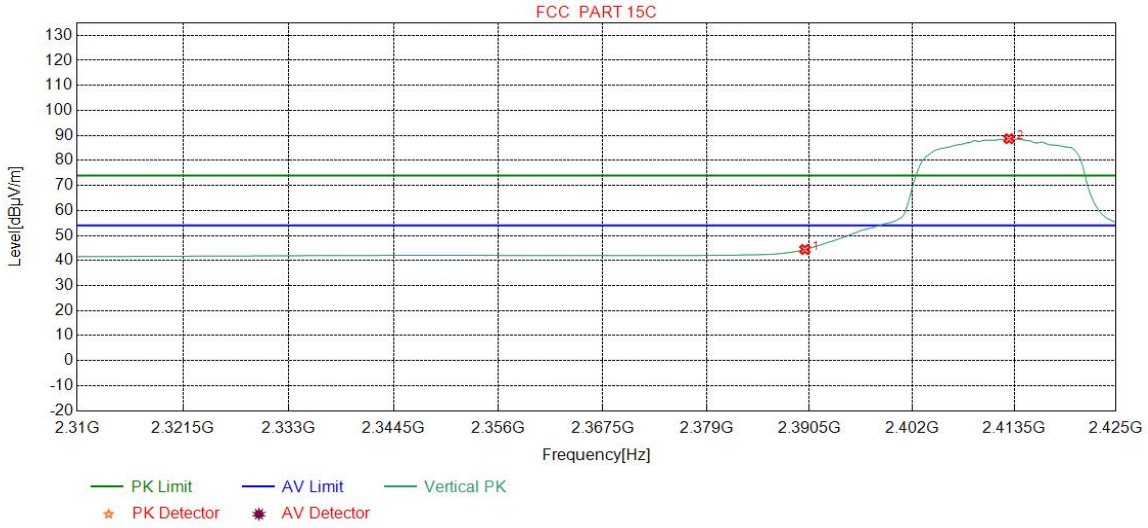
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	42.74	45.92	54.00	8.08	Pass	Horizontal
2	2413.7735	32.28	13.36	-42.43	87.73	90.94	54.00	-36.94	Pass	Horizontal

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2412
Remark:	AV		

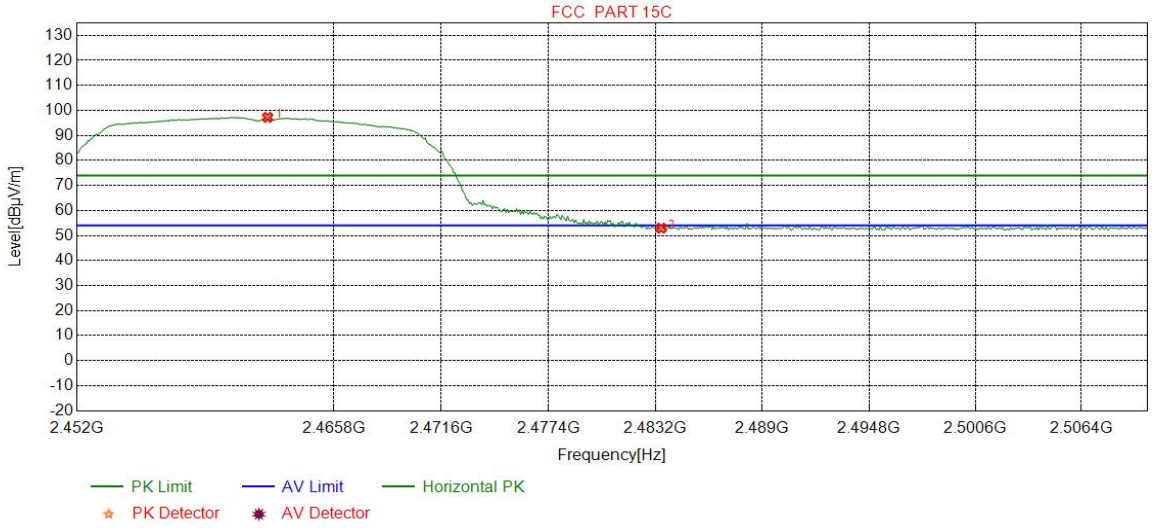
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	41.23	44.41	54.00	9.59	Pass	Vertical
2	2412.9099	32.28	13.36	-42.43	85.48	88.69	54.00	-34.69	Pass	Vertical

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2462
Remark:	PK		

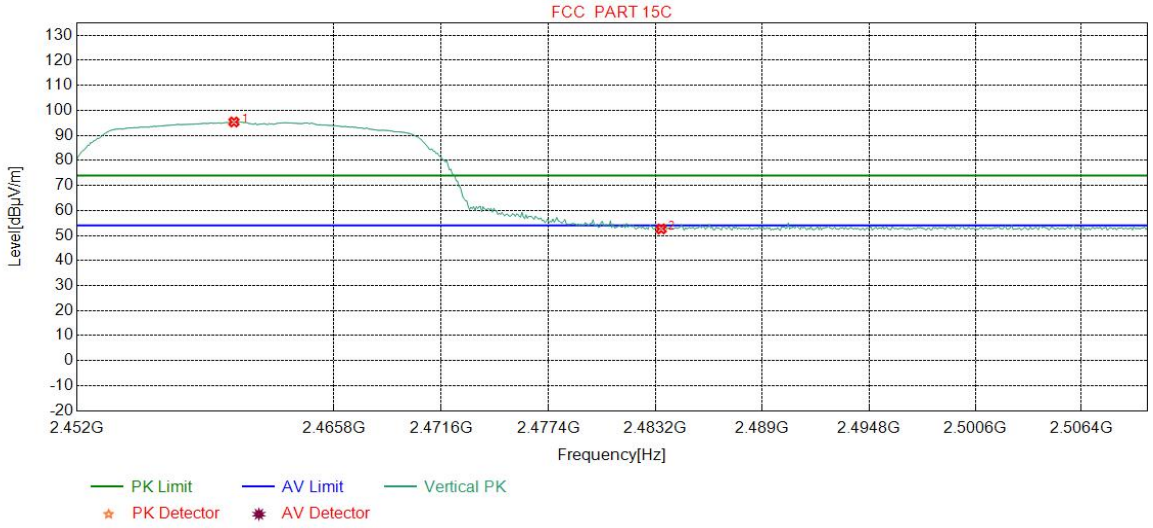
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2462.2353	32.35	13.47	-42.41	93.82	97.23	74.00	-23.23	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	49.55	52.91	74.00	21.09	Pass	Horizontal

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2462
Remark:	PK		

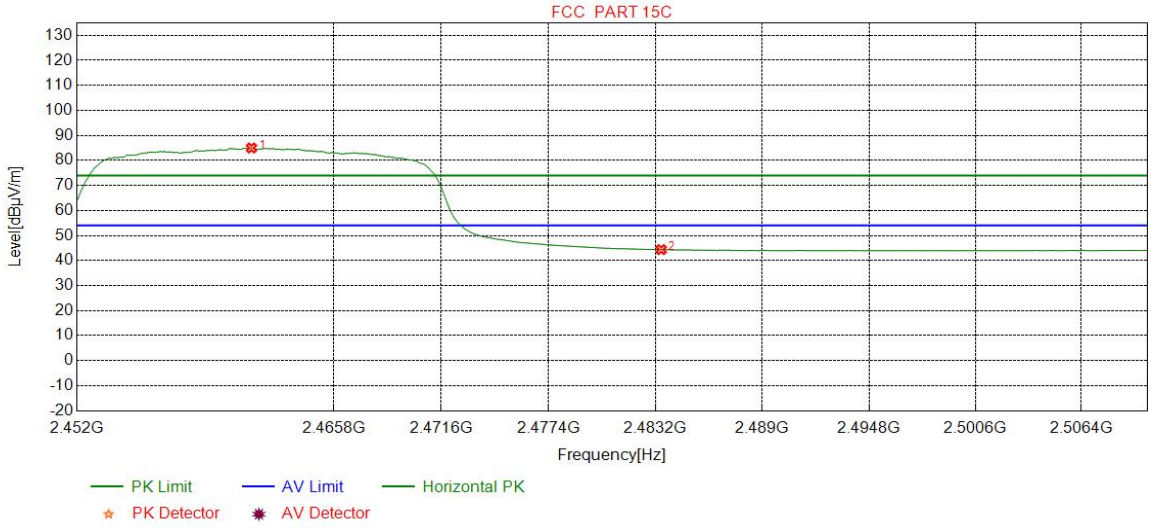
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2460.4205	32.34	13.48	-42.40	91.95	95.37	74.00	-21.37	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	49.27	52.63	74.00	21.37	Pass	Vertical

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2462
Remark:	AV		

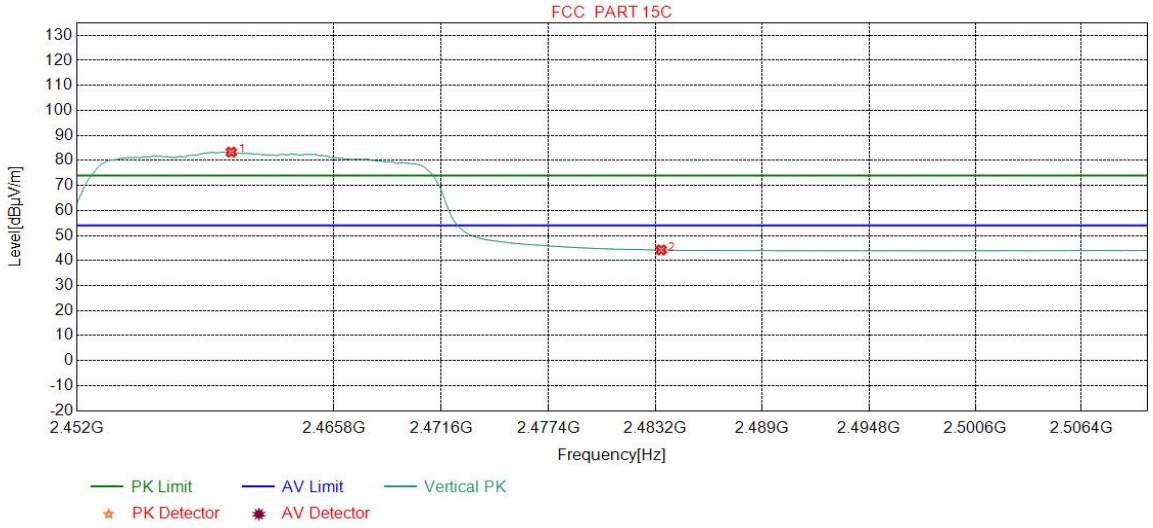
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2461.3642	32.35	13.48	-42.41	81.55	84.97	54.00	-30.97	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	41.01	44.37	54.00	9.63	Pass	Horizontal

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2462
Remark:	AV		

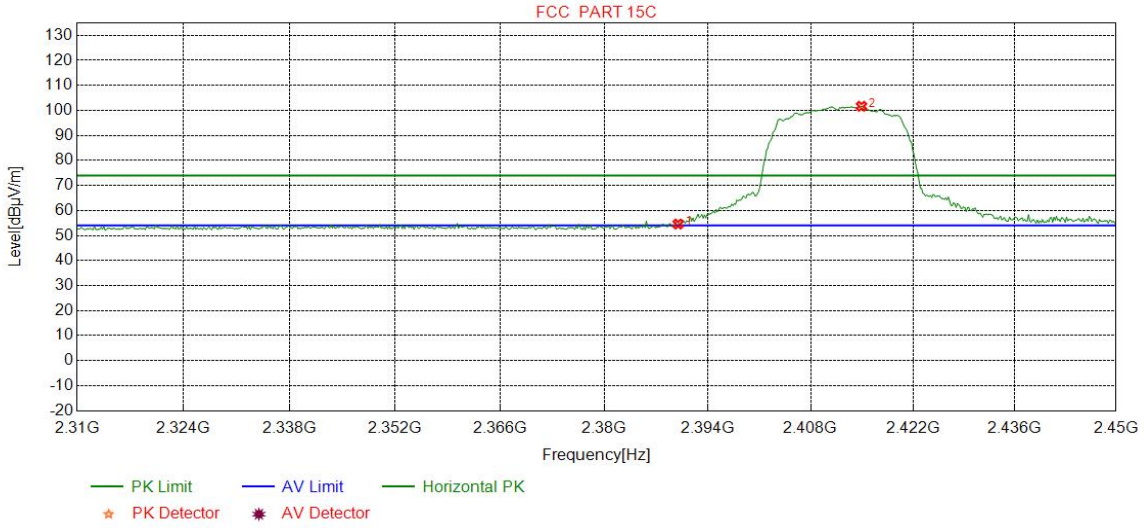
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2460.2753	32.34	13.48	-42.40	79.93	83.35	54.00	-29.35	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	40.88	44.24	54.00	9.76	Pass	Vertical

Mode:	802.11 n(HT40) (13.5Mbps)	Channel:	2422
Remark:	PK		

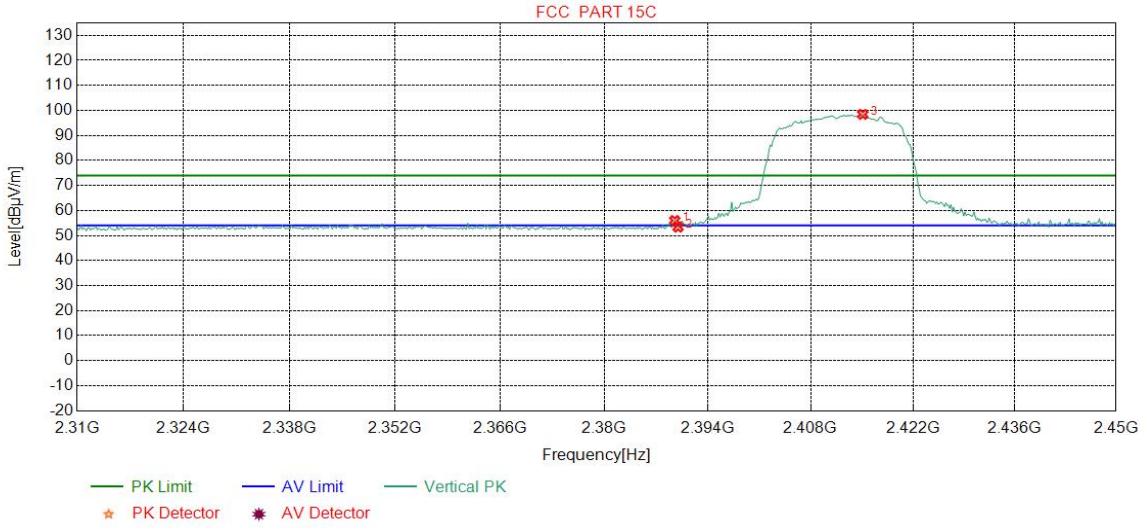
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	51.40	54.58	74.00	19.42	Pass	Horizontal
2	2414.9562	32.28	13.37	-42.43	98.44	101.66	74.00	-27.66	Pass	Horizontal

Mode:	802.11 n(HT40) (13.5Mbps)	Channel:	2422
Remark:	PK		

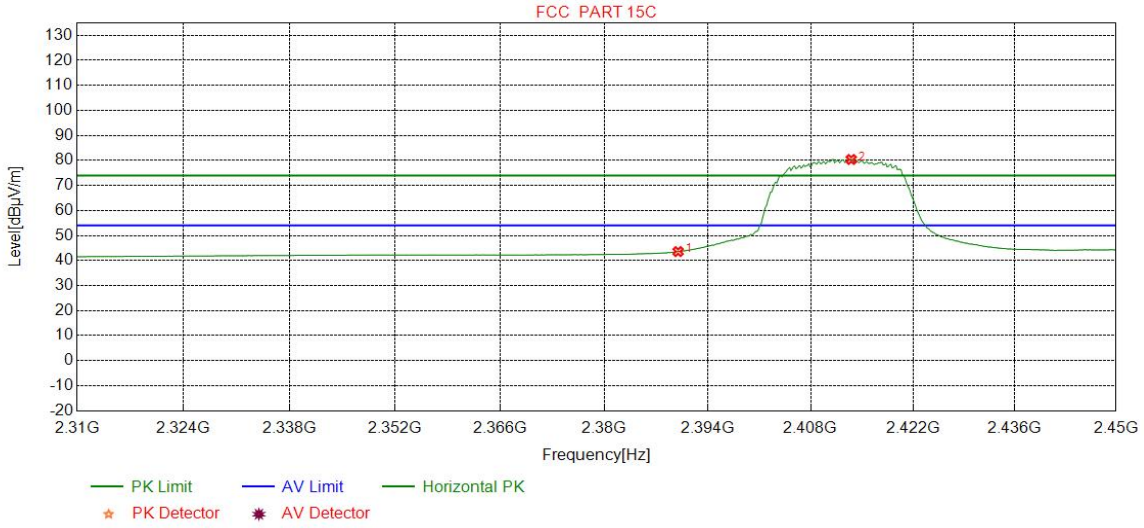
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2389.5494	32.25	13.38	-42.45	52.81	55.99	74.00	18.01	Pass	Vertical
2	2390.0000	32.25	13.37	-42.44	50.17	53.35	74.00	20.65	Pass	Vertical
3	2415.1314	32.28	13.37	-42.43	95.19	98.41	74.00	-24.41	Pass	Vertical

Mode:	802.11 n(HT40) (13.5Mbps)	Channel:	2422
Remark:	AV		

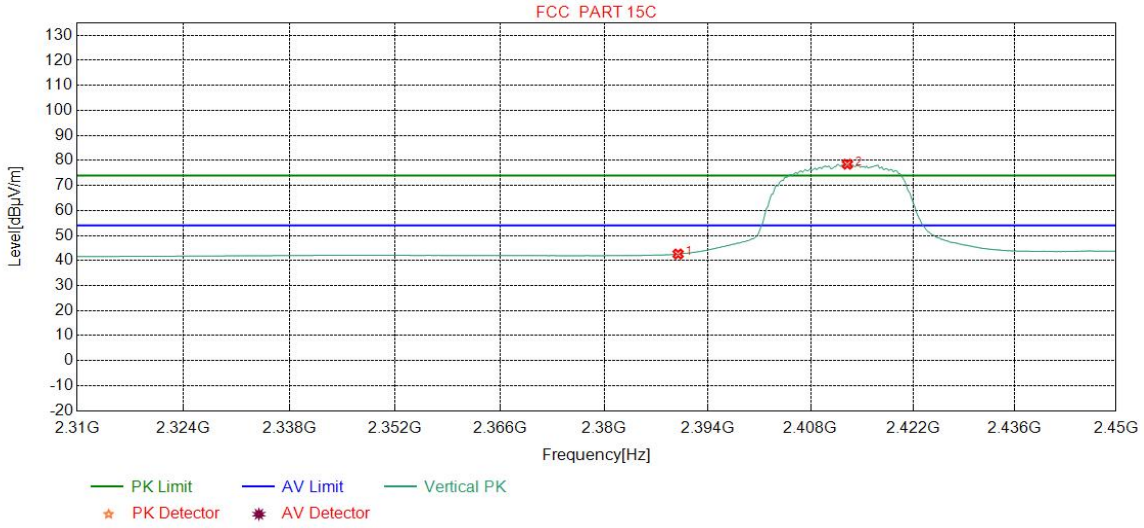
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	40.41	43.59	54.00	10.41	Pass	Horizontal
2	2413.5544	32.28	13.36	-42.43	77.19	80.40	54.00	-26.40	Pass	Horizontal

Mode:	802.11 n(HT40) (13.5Mbps)	Channel:	2422
Remark:	AV		

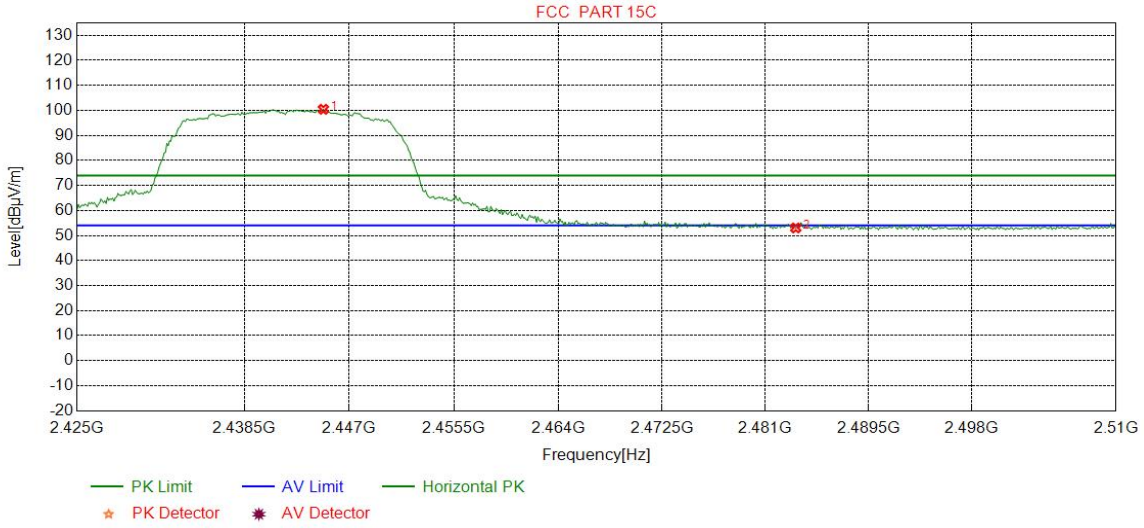
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	39.42	42.60	54.00	11.40	Pass	Vertical
2	2413.0288	32.28	13.36	-42.43	75.28	78.49	54.00	-24.49	Pass	Vertical

Mode:	802.11 n(HT40) (13.5Mbps)	Channel:	2452
Remark:	PK		

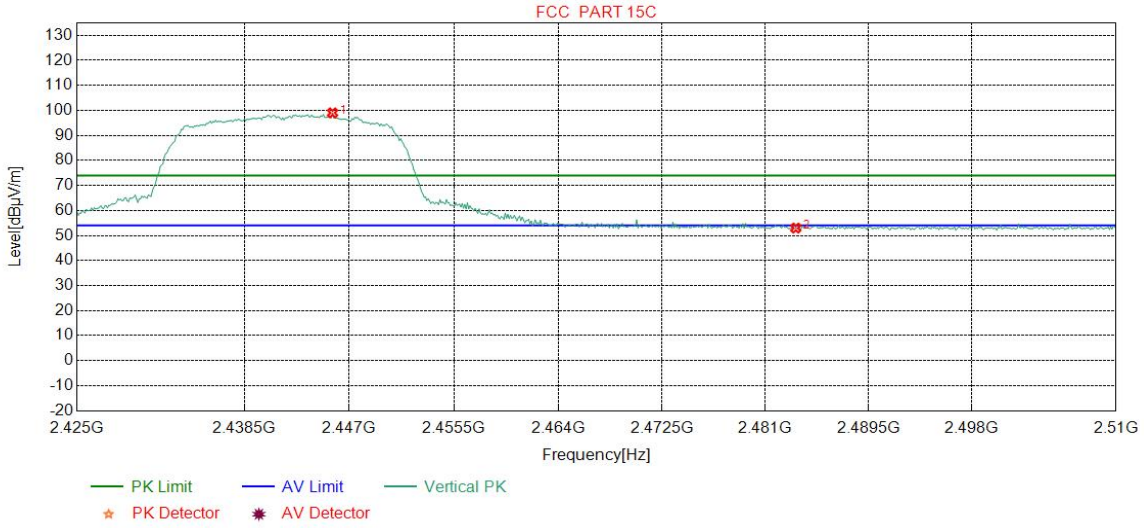
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2444.8936	32.32	13.51	-42.41	97.02	100.44	74.00	-26.44	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	49.66	53.02	74.00	20.98	Pass	Horizontal

Mode:	802.11 n(HT40) (13.5Mbps)	Channel:	2452
Remark:	PK		

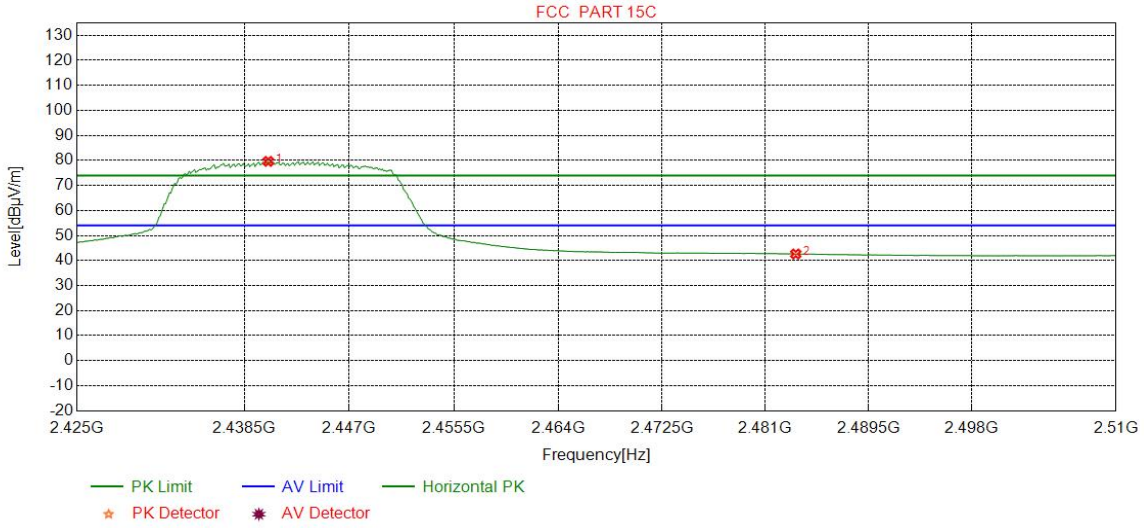
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2445.6383	32.32	13.51	-42.41	95.60	99.02	74.00	-25.02	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	49.60	52.96	74.00	21.04	Pass	Vertical

Mode:	802.11 n(HT40) (13.5Mbps)	Channel:	2452
Remark:	AV		

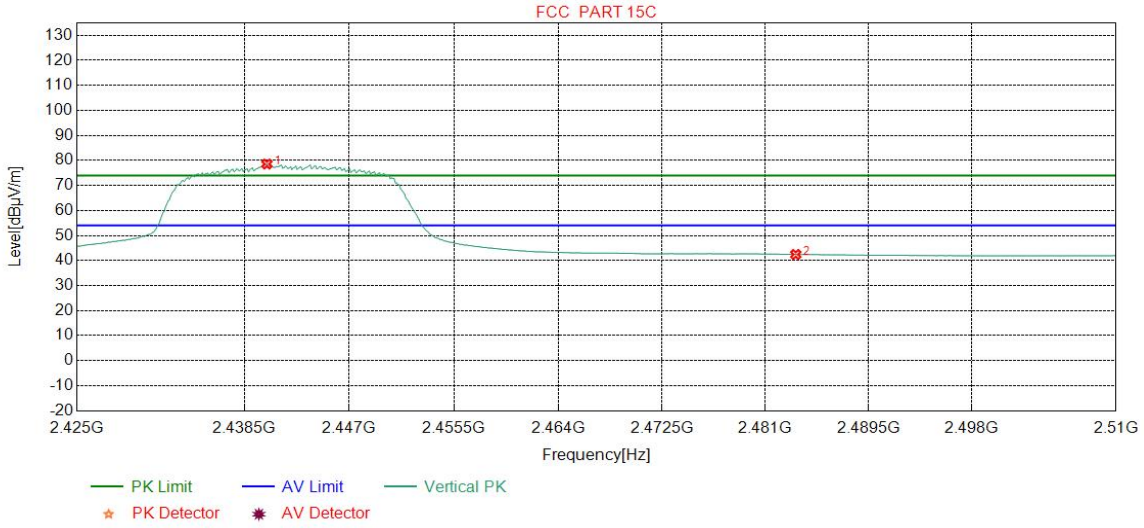
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2440.4255	32.32	13.49	-42.42	76.23	79.62	54.00	-25.62	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	39.25	42.61	54.00	11.39	Pass	Horizontal

Mode:	802.11 n(HT40) (13.5Mbps)	Channel:	2452
Remark:	AV		

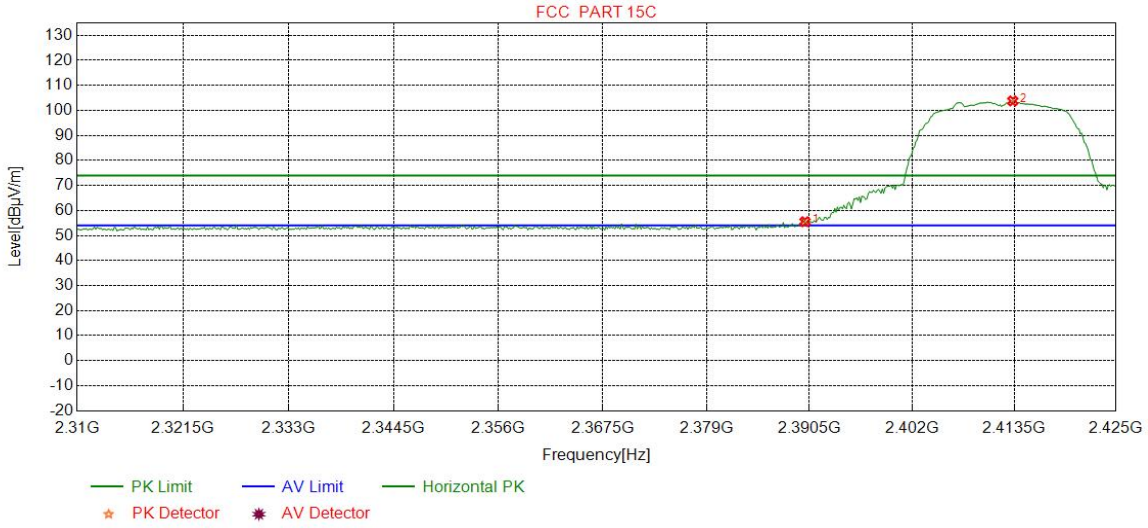
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2440.3191	32.32	13.49	-42.42	75.18	78.57	54.00	-24.57	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	39.06	42.42	54.00	11.58	Pass	Vertical

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2412
Remark:	PK		

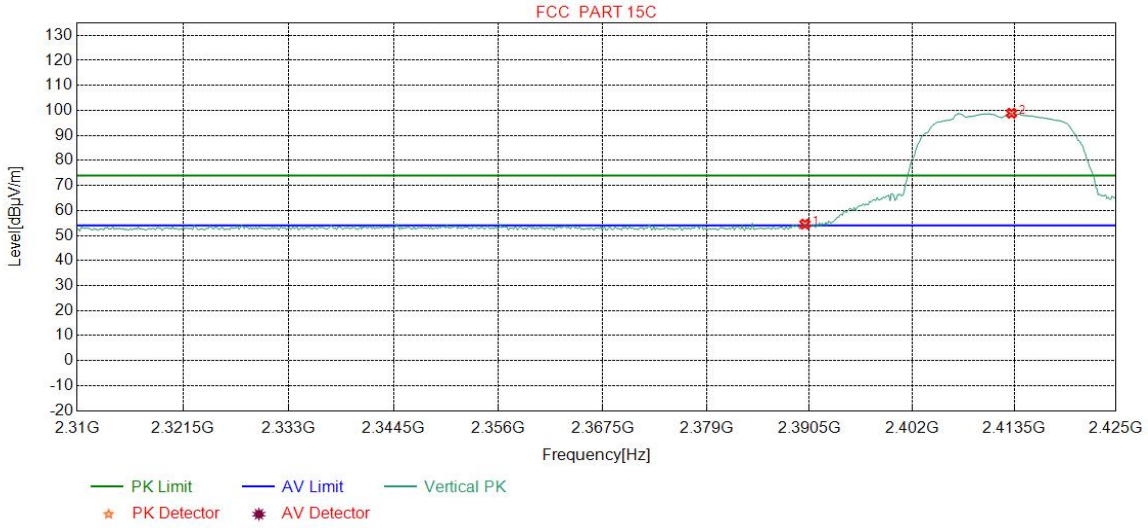
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	52.34	55.52	74.00	18.48	Pass	Horizontal
2	2413.3417	32.28	13.36	-42.43	100.56	103.77	74.00	-29.77	Pass	Horizontal

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2412
Remark:	PK		

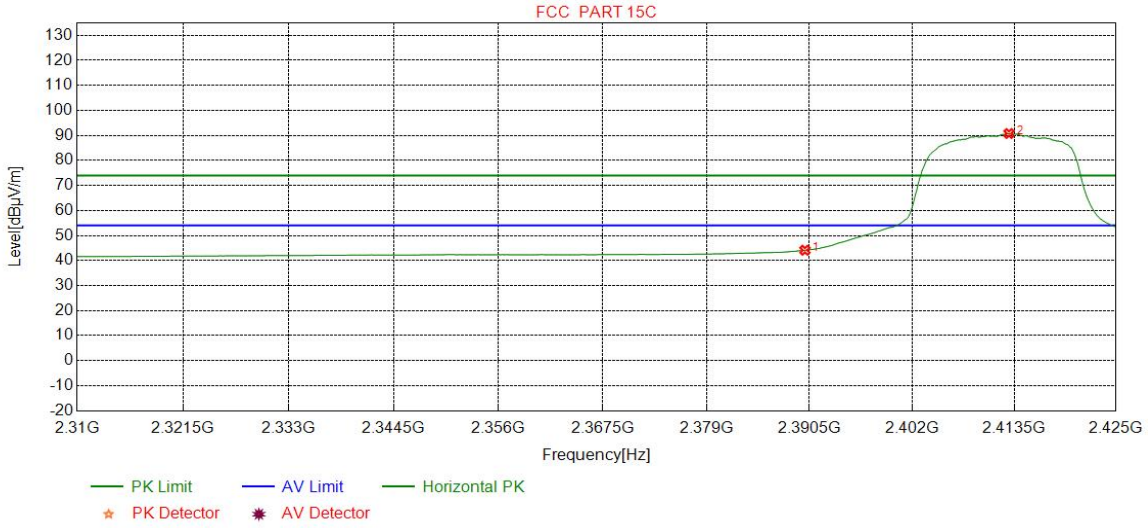
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	51.38	54.56	74.00	19.44	Pass	Vertical
2	2413.1977	32.28	13.36	-42.43	95.66	98.87	74.00	-24.87	Pass	Vertical

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2412
Remark:	AV		

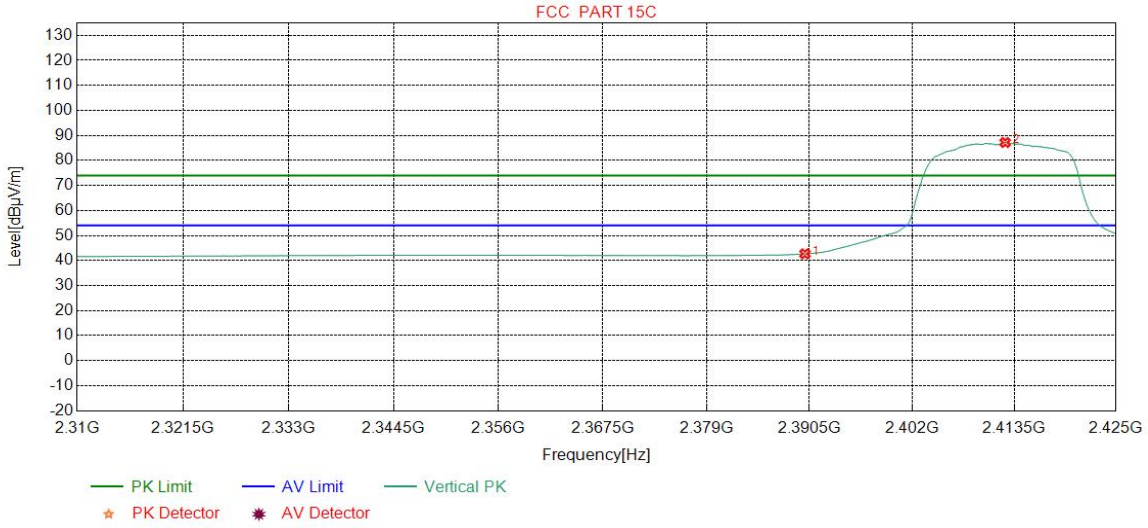
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	40.94	44.12	54.00	9.88	Pass	Horizontal
2	2412.9099	32.28	13.36	-42.43	87.55	90.76	54.00	-36.76	Pass	Horizontal

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2412
Remark:	AV		

Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	39.50	42.68	54.00	11.32	Pass	Vertical
2	2412.4781	32.28	13.36	-42.43	83.95	87.16	54.00	-33.16	Pass	Vertical

Note:

1) Through Pre-scan transmitting mode and charge+transmitter mode with all kind of modulation and data rate, find the 11Mbps of rate is the worst case of 802.11b; 6Mbpsof rate is the worst case of 802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20) ; 13.5Mbps of rate is the worst case of 802.11n(HT40),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

Mode:		802.11 b(11Mbps) Transmitting				Channel:		2412		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	35.5296	10.87	0.66	-32.12	36.87	16.28	40.00	23.72	Pass	H
2	61.9162	11.10	0.91	-32.04	33.48	13.45	40.00	26.55	Pass	H
3	122.3532	8.85	1.31	-32.06	40.10	18.20	43.50	25.30	Pass	H
4	199.1849	10.82	1.67	-31.94	39.48	20.03	43.50	23.47	Pass	H
5	649.9890	19.40	3.10	-32.07	41.33	31.76	46.00	14.24	Pass	H
6	996.5077	22.68	3.79	-30.71	33.44	29.20	54.00	24.80	Pass	H
7	35.5296	10.87	0.66	-32.12	39.32	18.73	40.00	21.27	Pass	V
8	60.8491	11.38	0.90	-32.04	37.74	17.98	40.00	22.02	Pass	V
9	120.0250	9.20	1.30	-32.07	38.12	16.55	43.50	26.95	Pass	V
10	208.8859	11.13	1.71	-31.94	47.18	28.08	43.50	15.42	Pass	V
11	649.9890	19.40	3.10	-32.07	41.54	31.97	46.00	14.03	Pass	V
12	999.7090	22.70	3.80	-30.68	34.97	30.79	54.00	23.21	Pass	V

Mode:		802.11 b(11Mbps) Transmitting				Channel:		2437		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	63.0803	10.80	0.91	-32.04	39.91	19.58	40.00	20.42	Pass	H
2	114.4955	10.14	1.27	-32.08	40.35	19.68	43.50	23.82	Pass	H
3	208.8859	11.13	1.71	-31.94	47.16	28.06	43.50	15.44	Pass	H
4	360.0270	14.52	2.27	-31.84	35.27	20.22	46.00	25.78	Pass	H
5	649.9890	19.40	3.10	-32.07	40.98	31.41	46.00	14.59	Pass	H
6	999.4179	22.70	3.80	-30.68	35.41	31.23	54.00	22.77	Pass	H
7	36.6937	11.24	0.67	-32.11	36.89	16.69	40.00	23.31	Pass	V
8	122.3532	8.85	1.31	-32.06	40.53	18.63	43.50	24.87	Pass	V
9	199.3789	10.84	1.67	-31.94	37.70	18.27	43.50	25.23	Pass	V
10	334.8045	13.97	2.18	-31.80	37.49	21.84	46.00	24.16	Pass	V
11	649.9890	19.40	3.10	-32.07	41.33	31.76	46.00	14.24	Pass	V
12	998.9329	22.69	3.80	-30.68	32.76	28.57	54.00	25.43	Pass	V

Mode:		802.11 b(11Mbps) Transmitting				Channel:		2462		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	56.2896	12.19	0.86	-32.07	39.75	20.73	40.00	19.27	Pass	H
2	123.8084	8.63	1.31	-32.05	42.49	20.38	43.50	23.12	Pass	H
3	208.8859	11.13	1.71	-31.94	47.07	27.97	43.50	15.53	Pass	H
4	649.9890	19.40	3.10	-32.07	41.09	31.52	46.00	14.48	Pass	H
5	995.8286	22.67	3.79	-30.71	36.81	32.56	54.00	21.44	Pass	H
6	56.2896	12.19	0.86	-32.07	39.75	20.73	40.00	19.27	Pass	H
7	52.8943	12.74	0.82	-32.10	32.31	13.77	40.00	26.23	Pass	V
8	123.2263	8.72	1.31	-32.06	40.30	18.27	43.50	25.23	Pass	V
9	208.8859	11.13	1.71	-31.94	38.13	19.03	43.50	24.47	Pass	V
10	649.9890	19.40	3.10	-32.07	40.85	31.28	46.00	14.72	Pass	V
11	879.6110	21.86	3.55	-31.66	33.85	27.60	46.00	18.40	Pass	V
12	52.8943	12.74	0.82	-32.10	32.31	13.77	40.00	26.23	Pass	V

Mode:		802.11 g(6Mbps) Transmitting				Channel:		2412		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	62.6923	10.90	0.91	-32.04	39.71	19.48	40.00	20.52	Pass	H
2	127.1067	8.13	1.32	-32.03	40.40	17.82	43.50	25.68	Pass	H
3	208.8859	11.13	1.71	-31.94	46.89	27.79	43.50	15.71	Pass	H
4	304.0524	13.29	2.07	-31.87	36.94	20.43	46.00	25.57	Pass	H
5	649.9890	19.40	3.10	-32.07	41.18	31.61	46.00	14.39	Pass	H
6	995.5376	22.67	3.79	-30.72	34.01	29.75	54.00	24.25	Pass	H
7	36.6937	11.24	0.67	-32.11	36.63	16.43	40.00	23.57	Pass	V
8	122.9353	8.76	1.31	-32.06	42.34	20.35	43.50	23.15	Pass	V
9	208.8859	11.13	1.71	-31.94	37.65	18.55	43.50	24.95	Pass	V
10	270.0020	12.60	1.96	-31.88	38.04	20.72	46.00	25.28	Pass	V
11	649.9890	19.40	3.10	-32.07	41.69	32.12	46.00	13.88	Pass	V
12	875.0515	21.80	3.55	-31.70	33.37	27.02	46.00	18.98	Pass	V

Mode:		802.11 g(6Mbps) Transmitting				Channel:		2437		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	38.6339	11.86	0.70	-32.11	39.80	20.25	40.00	19.75	Pass	H
2	60.8491	11.38	0.90	-32.04	39.64	19.88	40.00	20.12	Pass	H
3	208.8859	11.13	1.71	-31.94	47.27	28.17	43.50	15.33	Pass	H
4	398.8309	15.37	2.38	-31.77	33.34	19.32	46.00	26.68	Pass	H
5	649.9890	19.40	3.10	-32.07	41.50	31.93	46.00	14.07	Pass	H
6	999.2239	22.70	3.80	-30.69	33.68	29.49	54.00	24.51	Pass	H
7	35.5296	10.87	0.66	-32.12	36.34	15.75	40.00	24.25	Pass	V
8	123.6144	8.66	1.31	-32.05	40.27	18.19	43.50	25.31	Pass	V
9	270.0020	12.60	1.96	-31.88	37.33	20.01	46.00	25.99	Pass	V
10	360.0270	14.52	2.27	-31.84	37.51	22.46	46.00	23.54	Pass	V
11	649.9890	19.40	3.10	-32.07	41.45	31.88	46.00	14.12	Pass	V
12	875.0515	21.80	3.55	-31.70	35.13	28.78	46.00	17.22	Pass	V

Mode:		802.11 g(6Mbps) Transmitting				Channel:		2462		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	62.6923	10.90	0.91	-32.04	39.38	19.15	40.00	20.85	Pass	H
2	163.7764	8.11	1.49	-31.97	39.50	17.13	43.50	26.37	Pass	H
3	208.8859	11.13	1.71	-31.94	47.23	28.13	43.50	15.37	Pass	H
4	270.0020	12.60	1.96	-31.88	37.23	19.91	46.00	26.09	Pass	H
5	649.9890	19.40	3.10	-32.07	41.46	31.89	46.00	14.11	Pass	H
6	997.9628	22.69	3.79	-30.69	35.04	30.83	54.00	23.17	Pass	H
7	44.4544	13.10	0.75	-32.12	32.53	14.26	40.00	25.74	Pass	V
8	122.1592	8.88	1.31	-32.07	40.20	18.32	43.50	25.18	Pass	V
9	270.0020	12.60	1.96	-31.88	37.88	20.56	46.00	25.44	Pass	V
10	360.0270	14.52	2.27	-31.84	36.98	21.93	46.00	24.07	Pass	V
11	649.9890	19.40	3.10	-32.07	41.00	31.43	46.00	14.57	Pass	V
12	902.0202	22.11	3.60	-31.56	38.24	32.39	46.00	13.61	Pass	V

Mode:		802.11 n(HT20) (6.5Mbps) Transmitting				Channel:		2412		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	58.8119	11.79	0.89	-32.05	38.42	19.05	40.00	20.95	Pass	H
2	123.4203	8.69	1.31	-32.06	41.89	19.83	43.50	23.67	Pass	H
3	208.8859	11.13	1.71	-31.94	47.01	27.91	43.50	15.59	Pass	H
4	334.8045	13.97	2.18	-31.80	35.46	19.81	46.00	26.19	Pass	H
5	649.9890	19.40	3.10	-32.07	39.92	30.35	46.00	15.65	Pass	H
6	995.6346	22.67	3.79	-30.72	33.63	29.37	54.00	24.63	Pass	H
7	35.5296	10.87	0.66	-32.12	37.05	16.46	40.00	23.54	Pass	V
8	52.3122	12.83	0.82	-32.10	32.21	13.76	40.00	26.24	Pass	V
9	123.3233	8.70	1.31	-32.05	46.20	24.16	43.50	19.34	Pass	V
10	208.8859	11.13	1.71	-31.94	38.19	19.09	43.50	24.41	Pass	V
11	649.9890	19.40	3.10	-32.07	40.59	31.02	46.00	14.98	Pass	V
12	902.0202	22.11	3.60	-31.56	34.39	28.54	46.00	17.46	Pass	V

Mode:		802.11 n(HT20) (6.5Mbps) Transmitting				Channel:		2437		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	62.3042	11.00	0.91	-32.04	41.05	20.92	40.00	19.08	Pass	H
2	120.0250	9.20	1.30	-32.07	37.40	15.83	43.50	27.67	Pass	H
3	208.8859	11.13	1.71	-31.94	47.31	28.21	43.50	15.29	Pass	H
4	360.0270	14.52	2.27	-31.84	35.01	19.96	46.00	26.04	Pass	H
5	649.9890	19.40	3.10	-32.07	39.79	30.22	46.00	15.78	Pass	H
6	901.9232	22.11	3.60	-31.56	39.85	34.00	46.00	12.00	Pass	H
7	36.6937	11.24	0.67	-32.11	35.76	15.56	40.00	24.44	Pass	V
8	44.4544	13.10	0.75	-32.12	33.09	14.82	40.00	25.18	Pass	V
9	122.7413	8.79	1.31	-32.06	42.66	20.70	43.50	22.80	Pass	V
10	208.8859	11.13	1.71	-31.94	37.57	18.47	43.50	25.03	Pass	V
11	649.9890	19.40	3.10	-32.07	40.15	30.58	46.00	15.42	Pass	V
12	999.4179	22.70	3.80	-30.68	32.44	28.26	54.00	25.74	Pass	V

Mode:		802.11 n(HT20) (6.5Mbps) Transmitting				Channel:		2462		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	30.0000	10.50	0.63	-32.12	40.80	19.81	40.00	20.19	Pass	H
2	59.9760	11.60	0.90	-32.04	37.30	17.76	40.00	22.24	Pass	H
3	208.8859	11.13	1.71	-31.94	47.36	28.26	43.50	15.24	Pass	H
4	398.1518	15.36	2.37	-31.77	37.16	23.12	46.00	22.88	Pass	H
5	649.9890	19.40	3.10	-32.07	40.30	30.73	46.00	15.27	Pass	H
6	997.2837	22.68	3.79	-30.69	34.46	30.24	54.00	23.76	Pass	H
7	36.6937	11.24	0.67	-32.11	37.29	17.09	40.00	22.91	Pass	V
8	129.9200	7.71	1.33	-32.02	40.80	17.82	43.50	25.68	Pass	V
9	208.8859	11.13	1.71	-31.94	38.42	19.32	43.50	24.18	Pass	V
10	360.0270	14.52	2.27	-31.84	35.36	20.31	46.00	25.69	Pass	V
11	649.9890	19.40	3.10	-32.07	40.38	30.81	46.00	15.19	Pass	V
12	995.9256	22.68	3.79	-30.72	32.63	28.38	54.00	25.62	Pass	V

Mode:		802.11 n(HT40) (13.5Mbps)				Channel:		2422		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	60.7521	11.40	0.90	-32.03	38.28	18.55	40.00	21.45	Pass	H
2	105.0855	10.95	1.21	-32.07	37.42	17.51	43.50	25.99	Pass	H
3	208.8859	11.13	1.71	-31.94	46.96	27.86	43.50	15.64	Pass	H
4	360.0270	14.52	2.27	-31.84	35.51	20.46	46.00	25.54	Pass	H
5	649.9890	19.40	3.10	-32.07	40.78	31.21	46.00	14.79	Pass	H
6	999.4179	22.70	3.80	-30.68	35.94	31.76	54.00	22.24	Pass	H
7	35.5296	10.87	0.66	-32.12	36.61	16.02	40.00	23.98	Pass	V
8	44.4544	13.10	0.75	-32.12	31.97	13.70	40.00	26.30	Pass	V
9	123.3233	8.70	1.31	-32.05	40.44	18.40	43.50	25.10	Pass	V
10	270.0020	12.60	1.96	-31.88	37.16	19.84	46.00	26.16	Pass	V
11	649.9890	19.40	3.10	-32.07	40.91	31.34	46.00	14.66	Pass	V
12	996.4106	22.68	3.79	-30.71	32.41	28.17	54.00	25.83	Pass	V

Mode:		802.11 n(HT40) (13.5Mbps) Receiving				Channel:		2437		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	63.0803	10.80	0.91	-32.04	40.15	19.82	40.00	20.18	Pass	H
2	121.9652	8.91	1.31	-32.07	42.20	20.35	43.50	23.15	Pass	H
3	208.8859	11.13	1.71	-31.94	47.17	28.07	43.50	15.43	Pass	H
4	334.8045	13.97	2.18	-31.80	35.73	20.08	46.00	25.92	Pass	H
5	649.9890	19.40	3.10	-32.07	41.36	31.79	46.00	14.21	Pass	H
6	999.8060	22.70	3.80	-30.67	36.96	32.79	54.00	21.21	Pass	H
7	36.1116	11.06	0.67	-32.12	36.80	16.41	40.00	23.59	Pass	V
8	52.2152	12.85	0.82	-32.11	32.68	14.24	40.00	25.76	Pass	V
9	123.4203	8.69	1.31	-32.06	40.02	17.96	43.50	25.54	Pass	V
10	360.0270	14.52	2.27	-31.84	37.48	22.43	46.00	23.57	Pass	V
11	649.9890	19.40	3.10	-32.07	41.32	31.75	46.00	14.25	Pass	V
12	999.4179	22.70	3.80	-30.68	34.68	30.50	54.00	23.50	Pass	V

Mode:		802.11 n(HT40) (13.5Mbps)				Channel:		2452		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	58.8119	11.79	0.89	-32.05	38.58	19.21	40.00	20.79	Pass	H
2	113.9134	10.23	1.26	-32.06	37.76	17.19	43.50	26.31	Pass	H
3	208.8859	11.13	1.71	-31.94	47.09	27.99	43.50	15.51	Pass	H
4	270.0020	12.60	1.96	-31.88	37.30	19.98	46.00	26.02	Pass	H
5	649.9890	19.40	3.10	-32.07	41.46	31.89	46.00	14.11	Pass	H
6	999.3209	22.70	3.80	-30.68	35.88	31.70	54.00	22.30	Pass	H
7	36.6937	11.24	0.67	-32.11	35.89	15.69	40.00	24.31	Pass	V
8	44.5515	13.12	0.75	-32.12	32.58	14.33	40.00	25.67	Pass	V
9	126.5247	8.22	1.32	-32.04	40.22	17.72	43.50	25.78	Pass	V
10	208.8859	11.13	1.71	-31.94	37.51	18.41	43.50	25.09	Pass	V
11	649.9890	19.40	3.10	-32.07	40.73	31.16	46.00	14.84	Pass	V
12	995.6346	22.67	3.79	-30.72	33.99	29.73	54.00	24.27	Pass	V

Transmitter Emission above 1GHz

Mode:		802.11 b(11Mbps) Transmitting				Channel:		2412		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	3076.0051	33.23	4.77	-42.07	50.94	46.87	74.00	27.13	Pass	H
2	4824.0000	34.50	4.61	-40.65	49.25	47.71	74.00	26.29	Pass	H
3	7242.2828	36.34	5.79	-40.99	46.40	47.54	74.00	26.46	Pass	H
4	9648.0000	37.66	6.72	-40.73	42.69	46.34	74.00	27.66	Pass	H
5	12646.6431	39.60	8.17	-41.29	44.80	51.28	74.00	22.72	Pass	H
6	13731.7154	39.54	8.32	-41.21	46.18	52.83	74.00	21.17	Pass	H
7	1597.0597	29.04	3.07	-42.89	58.57	47.79	74.00	26.21	Pass	V
8	3175.0117	33.27	4.61	-42.01	50.62	46.49	74.00	27.51	Pass	V
9	4823.1215	34.50	4.60	-40.64	51.87	50.33	74.00	23.67	Pass	V
10	7240.2827	36.34	5.79	-40.99	47.01	48.15	74.00	25.85	Pass	V
11	9648.0000	37.66	6.72	-40.73	42.39	46.04	74.00	27.96	Pass	V
12	11972.5982	39.28	7.54	-41.22	45.86	51.46	74.00	22.54	Pass	V

Mode:		802.11 b(11Mbps) Transmitting				Channel:		2437		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	1996.8997	31.68	3.47	-42.62	56.44	48.97	74.00	25.03	Pass	H
2	2989.5990	33.18	4.52	-42.12	51.10	46.68	74.00	27.32	Pass	H
3	4873.1249	34.50	4.77	-40.60	52.95	51.62	74.00	22.38	Pass	H
4	7311.0000	36.41	5.85	-40.93	47.41	48.74	74.00	25.26	Pass	H
5	9748.0000	37.70	6.77	-40.63	43.28	47.12	74.00	26.88	Pass	H
6	11904.5936	39.22	7.44	-41.24	45.49	50.91	74.00	23.09	Pass	H
7	1595.2595	29.03	3.07	-42.89	59.37	48.58	74.00	25.42	Pass	V
8	3306.0204	33.32	4.57	-41.93	49.09	45.05	74.00	28.95	Pass	V
9	4874.0000	34.50	4.78	-40.61	52.40	51.07	74.00	22.93	Pass	V
10	7311.0000	36.41	5.85	-40.93	49.38	50.71	74.00	23.29	Pass	V
11	9748.0000	37.70	6.77	-40.63	42.78	46.62	74.00	27.38	Pass	V
12	11601.5734	38.98	7.46	-41.34	44.95	50.05	74.00	23.95	Pass	V

Mode:		802.11 b(11Mbps) Transmitting				Channel:		2462		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	1997.099	31.68	3.47	-42.61	56.48	49.02	74.00	24.98	Pass	H
2	4925.128	34.50	4.85	-40.56	51.23	50.02	74.00	23.98	Pass	H
3	7385.292	36.49	5.85	-40.87	50.25	51.72	74.00	22.28	Pass	H
4	9848.000	37.74	6.83	-40.54	41.78	45.81	74.00	28.19	Pass	H
5	12278.6186	39.47	7.72	-41.15	46.01	52.05	74.00	21.95	Pass	H
6	15018.80	40.42	9.18	-42.34	45.67	52.93	74.00	21.07	Pass	H
7	1594.859	29.03	3.07	-42.90	58.78	47.98	74.00	26.02	Pass	V
8	2998.399	33.20	4.55	-42.13	60.41	56.03	74.00	17.97	Pass	V
9	4924.000	34.50	4.85	-40.56	51.65	50.44	74.00	23.56	Pass	V
10	7391.292	36.49	5.85	-40.86	50.28	51.76	74.00	22.24	Pass	V
11	9848.000	37.74	6.83	-40.54	42.38	46.41	74.00	27.59	Pass	V
12	11697.57	39.06	7.49	-41.32	45.37	50.60	74.00	23.40	Pass	V

Mode:		802.11 g(6Mbps) Transmitting				Channel:		2412		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	1799.8800	30.38	3.32	-42.71	60.63	51.62	74.00	22.38	Pass	H
2	3329.0219	33.33	4.55	-41.93	49.05	45.00	74.00	29.00	Pass	H
3	4924.1283	34.50	4.85	-40.56	54.61	53.40	74.00	20.60	Pass	H
4	7380.2920	36.48	5.85	-40.87	50.25	51.71	74.00	22.29	Pass	H
5	9648.0000	37.66	6.72	-40.73	41.68	45.33	74.00	28.67	Pass	H
6	12468.6312	39.58	7.65	-41.10	45.60	51.73	74.00	22.27	Pass	H
7	2197.9198	31.98	3.65	-42.53	57.94	51.04	74.00	22.96	Pass	V
8	4929.1286	34.50	4.85	-40.56	50.39	49.18	74.00	24.82	Pass	V
9	7382.2922	36.48	5.85	-40.87	50.00	51.46	74.00	22.54	Pass	V
10	9648.0000	37.66	6.72	-40.73	44.00	47.65	74.00	26.35	Pass	V
11	13097.6732	39.56	7.95	-41.63	46.42	52.30	74.00	21.70	Pass	V
12	15508.8339	40.92	9.27	-43.00	46.20	53.39	74.00	20.61	Pass	V

Mode:		802.11 g(6Mbps) Transmitting				Channel:		2437		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	3284.0189	33.31	4.54	-41.95	49.21	45.11	74.00	28.89	Pass	H
2	4876.1251	34.50	4.78	-40.60	53.32	52.00	74.00	22.00	Pass	H
3	7311.0000	36.41	5.85	-40.93	48.31	49.64	74.00	24.36	Pass	H
4	9748.0000	37.70	6.77	-40.63	40.82	44.66	74.00	29.34	Pass	H
5	11531.5688	38.93	7.64	-41.38	44.27	49.46	74.00	24.54	Pass	H
6	14200.7467	39.90	8.66	-41.67	46.26	53.15	74.00	20.85	Pass	H
7	1599.4599	29.06	3.07	-42.90	59.58	48.81	74.00	25.19	Pass	V
8	4876.1251	34.50	4.78	-40.60	48.40	47.08	74.00	26.92	Pass	V
9	7306.2871	36.41	5.85	-40.94	49.22	50.54	74.00	23.46	Pass	V
10	10316.4878	38.24	6.88	-40.89	44.34	48.57	74.00	25.43	Pass	V
11	12878.6586	39.60	7.97	-41.58	45.48	51.47	74.00	22.53	Pass	V
12	15737.8492	41.38	9.74	-43.18	44.81	52.75	74.00	21.25	Pass	V

Mode:		802.11 g(6Mbps) Transmitting				Channel:		2462		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2987.5988	33.18	4.51	-42.12	56.16	51.73	74.00	22.27	Pass	H
2	4914.1276	34.50	4.86	-40.57	51.65	50.44	74.00	23.56	Pass	H
3	7380.2920	36.48	5.85	-40.87	47.89	49.35	74.00	24.65	Pass	H
4	9848.0000	37.74	6.83	-40.54	41.43	45.46	74.00	28.54	Pass	H
5	11546.5698	38.94	7.57	-41.36	44.32	49.47	74.00	24.53	Pass	H
6	13662.7108	39.50	8.19	-41.21	46.68	53.16	74.00	20.84	Pass	H
7	4924.0000	34.50	4.85	-40.56	49.01	47.80	74.00	26.20	Pass	V
8	7380.2920	36.48	5.85	-40.87	47.24	48.70	74.00	25.30	Pass	V
9	8041.3361	36.42	6.08	-40.96	46.16	47.70	74.00	26.30	Pass	V
10	9848.0000	37.74	6.83	-40.54	40.87	44.90	74.00	29.10	Pass	V
11	12153.6102	39.39	7.80	-41.17	44.54	50.56	74.00	23.44	Pass	V
12	13939.7293	39.66	8.55	-41.26	45.19	52.14	74.00	21.86	Pass	V

Mode:		802.11 n(HT20) (6.5Mbps) Transmitting				Channel:		2412		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	3294.0196	33.32	4.56	-41.94	49.45	45.39	74.00	28.61	Pass	H
2	4927.1285	34.50	4.85	-40.56	52.16	50.95	74.00	23.05	Pass	H
3	7236.0000	36.34	5.79	-40.99	43.57	44.71	74.00	29.29	Pass	H
4	9648.0000	37.66	6.72	-40.73	41.84	45.49	74.00	28.51	Pass	H
5	11893.5929	39.21	7.43	-41.24	45.41	50.81	74.00	23.19	Pass	H
6	14315.7544	40.02	8.62	-41.90	46.18	52.92	74.00	21.08	Pass	H
7	3411.0274	33.36	4.53	-41.87	48.61	44.63	74.00	29.37	Pass	V
8	4928.1285	34.50	4.85	-40.56	47.09	45.88	74.00	28.12	Pass	V
9	7236.0000	36.34	5.79	-40.99	43.58	44.72	74.00	29.28	Pass	V
10	9648.0000	37.66	6.72	-40.73	42.16	45.81	74.00	28.19	Pass	V
11	13491.6994	39.40	8.23	-41.16	44.76	51.23	74.00	22.77	Pass	V
12	15049.8033	40.45	9.47	-42.39	45.20	52.73	74.00	21.27	Pass	V

Mode:		802.11 n(HT20) (6.5Mbps) Transmitting				Channel:		2437		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	4876.1251	34.50	4.78	-40.60	54.55	53.23	74.00	20.77	Pass	H
2	7310.2874	36.41	5.85	-40.93	49.18	50.51	74.00	23.49	Pass	H
3	9748.0000	37.70	6.77	-40.63	41.48	45.32	74.00	28.68	Pass	H
4	11815.5877	39.15	7.44	-41.27	46.33	51.65	74.00	22.35	Pass	H
5	13665.7110	39.50	8.20	-41.20	45.88	52.38	74.00	21.62	Pass	H
6	14564.7710	40.23	9.26	-42.28	44.89	52.10	74.00	21.90	Pass	H
7	2025.3025	31.74	3.52	-42.61	52.27	44.92	74.00	29.08	Pass	V
8	4874.0000	34.50	4.78	-40.61	49.33	48.00	74.00	26.00	Pass	V
9	7317.2878	36.42	5.85	-40.93	50.76	52.10	74.00	21.90	Pass	V
10	9748.0000	37.70	6.77	-40.63	41.09	44.93	74.00	29.07	Pass	V
11	11511.5674	38.91	7.72	-41.38	44.37	49.62	74.00	24.38	Pass	V
12	14188.7459	39.89	8.62	-41.65	45.86	52.72	74.00	21.28	Pass	V

Mode:		802.11 n(HT20) (6.5Mbps) Transmitting				Channel:		2462		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	1999.900	31.70	3.47	-42.61	56.91	49.47	74.00	24.53	Pass	H
2	4923.128	34.50	4.85	-40.56	54.47	53.26	74.00	20.74	Pass	H
3	7383.292	36.48	5.85	-40.86	50.19	51.66	74.00	22.34	Pass	H
4	9799.453	37.72	6.54	-40.58	43.41	47.09	74.00	26.91	Pass	H
5	12458.63	39.58	7.65	-41.11	45.44	51.56	74.00	22.44	Pass	H
6	14248.74	39.95	8.58	-41.77	45.88	52.64	74.00	21.36	Pass	H
7	3060.004	33.22	4.81	-42.08	49.62	45.57	74.00	28.43	Pass	V
8	4925.128	34.50	4.85	-40.56	51.56	50.35	74.00	23.65	Pass	V
9	7388.292	36.49	5.85	-40.87	50.71	52.18	74.00	21.82	Pass	V
10	9848.000	37.74	6.83	-40.54	40.92	44.95	74.00	29.05	Pass	V
11	12598.63	39.60	8.30	-41.22	44.44	51.12	74.00	22.88	Pass	V
12	14430.76	40.13	8.89	-42.12	45.08	51.98	74.00	22.02	Pass	V

Mode:		802.11 n(HT40) (13.5Mbps)				Channel:		2422		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	3270.0180	33.31	4.50	-41.96	49.84	45.69	74.00	28.31	Pass	H
2	4828.1219	34.50	4.62	-40.64	49.83	48.31	74.00	25.69	Pass	H
3	7237.2825	36.34	5.79	-40.99	50.98	52.12	74.00	21.88	Pass	H
4	9688.0000	37.68	6.62	-40.69	42.29	45.90	74.00	28.10	Pass	H
5	11836.5891	39.17	7.42	-41.27	45.13	50.45	74.00	23.55	Pass	H
6	14270.7514	39.97	8.60	-41.81	46.26	53.02	74.00	20.98	Pass	H
7	3191.0127	33.28	4.64	-42.01	53.18	49.09	74.00	24.91	Pass	V
8	4829.1219	34.50	4.62	-40.64	52.53	51.01	74.00	22.99	Pass	V
9	7243.2829	36.34	5.79	-40.99	51.10	52.24	74.00	21.76	Pass	V
10	10778.5186	38.56	7.14	-41.14	45.13	49.69	74.00	24.31	Pass	V
11	13667.7112	39.50	8.21	-41.20	45.91	52.42	74.00	21.58	Pass	V
12	15727.8485	41.36	9.69	-43.16	45.10	52.99	74.00	21.01	Pass	V

Mode:		802.11 n(HT40) (13.5Mbps) Receiving				Channel:		2437		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2831.1831	32.93	4.23	-42.21	50.15	45.10	74.00	28.90	Pass	H
2	4856.1237	34.50	4.70	-40.61	48.97	47.56	74.00	26.44	Pass	H
3	7278.2852	36.38	5.82	-40.96	49.48	50.72	74.00	23.28	Pass	H
4	9748.0000	37.70	6.77	-40.63	41.46	45.30	74.00	28.70	Pass	H
5	12001.6001	39.30	7.61	-41.21	44.86	50.56	74.00	23.44	Pass	H
6	14299.7533	40.00	8.62	-41.87	45.90	52.65	74.00	21.35	Pass	H
7	3300.0200	33.32	4.58	-41.94	49.60	45.56	74.00	28.44	Pass	V
8	4856.1237	34.50	4.70	-40.61	50.98	49.57	74.00	24.43	Pass	V
9	7289.2860	36.39	5.84	-40.95	49.60	50.88	74.00	23.12	Pass	V
10	9801.4534	37.72	6.55	-40.58	43.27	46.96	74.00	27.04	Pass	V
11	11757.5838	39.11	7.47	-41.30	46.43	51.71	74.00	22.29	Pass	V
12	14253.7503	39.95	8.58	-41.77	46.28	53.04	74.00	20.96	Pass	V

Mode:		802.11 n(HT40) (13.5Mbps)				Channel:		2452		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	4876.1251	34.50	4.78	-40.60	49.99	48.67	74.00	25.33	Pass	H
2	7330.2887	36.43	5.85	-40.91	50.74	52.11	74.00	21.89	Pass	H
3	9808.0000	37.72	6.59	-40.57	41.28	45.02	74.00	28.98	Pass	H
4	11755.5837	39.10	7.47	-41.29	44.98	50.26	74.00	23.74	Pass	H
5	13154.6770	39.54	7.87	-41.56	45.68	51.53	74.00	22.47	Pass	H
6	14308.7539	40.01	8.62	-41.88	46.07	52.82	74.00	21.18	Pass	H
7	4886.1257	34.50	4.82	-40.59	49.98	48.71	74.00	25.29	Pass	V
8	5626.1751	35.20	5.03	-40.75	45.43	44.91	74.00	29.09	Pass	V
9	7326.2884	36.43	5.85	-40.92	51.72	53.08	74.00	20.92	Pass	V
10	9819.4546	37.73	6.66	-40.57	43.74	47.56	74.00	26.44	Pass	V
11	11752.5835	39.10	7.47	-41.29	45.94	51.22	74.00	22.78	Pass	V
12	13702.7135	39.52	8.35	-41.21	46.09	52.75	74.00	21.25	Pass	V

Note:

1) Through Pre-scan transmitting mode and charge+transmitter mode with all kind of modulation and data rate, find the 11Mbps of rate is the worst case of 802.11b; 6Mbpsof rate is the worst case of 802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20) ; 13.5Mbps of rate is the worst case of 802.11n(HT40),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.