

TEST REPORT

Product : Smart Wi-Fi Outdoor Plug
Trade mark : meross
Model/Type reference : MSS620
Serial Number : N/A
Report Number : EED32L00157501
FCC ID : 2AMUU-MSS620V3
Date of Issue : Sep. 16, 2019
Test Standards : 47 CFR Part 15Subpart C
Test result : PASS

Prepared for:

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Check No.: 4038879347



2 Version

Version No.	Date	Description
00	Sep. 16, 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	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	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.

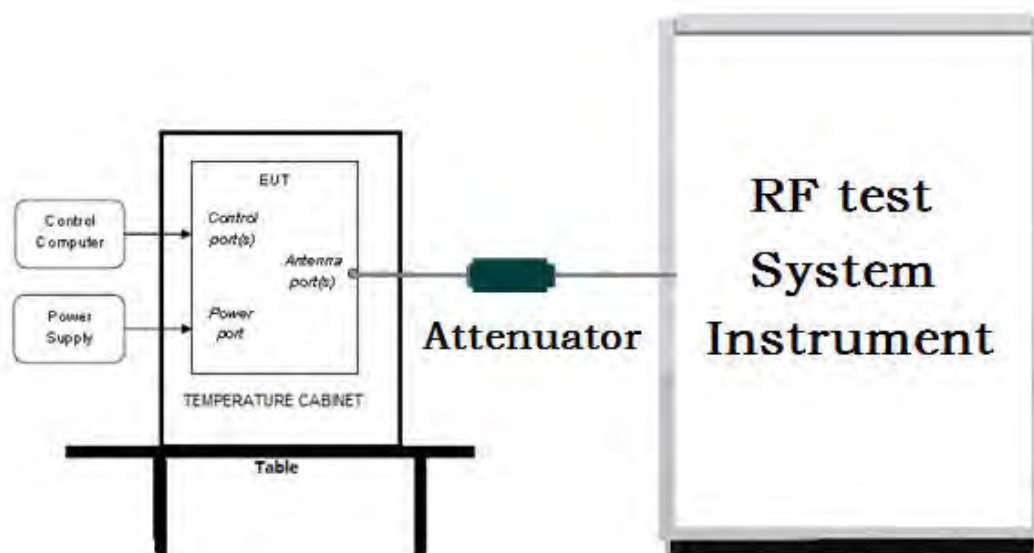
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5 Test Requirement

5.1 Test setup

5.1.1 For Conducted test setup



5.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

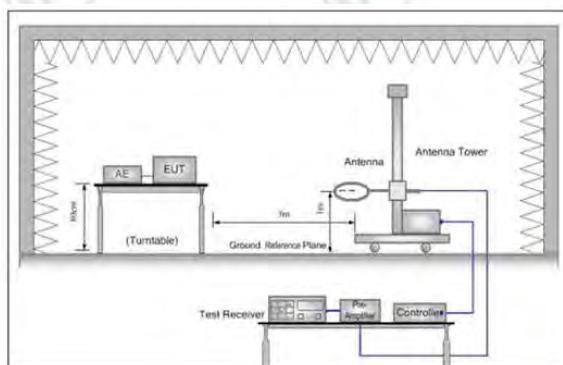


Figure 1. Below 30MHz

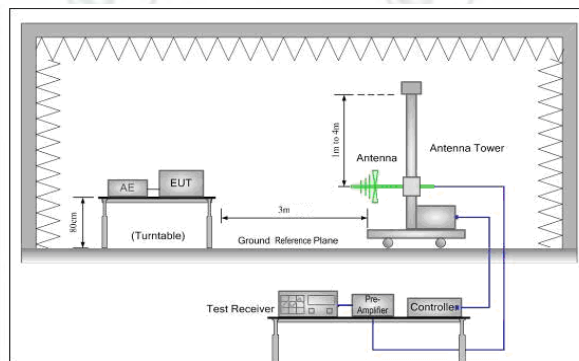


Figure 2. 30MHz to 1GHz

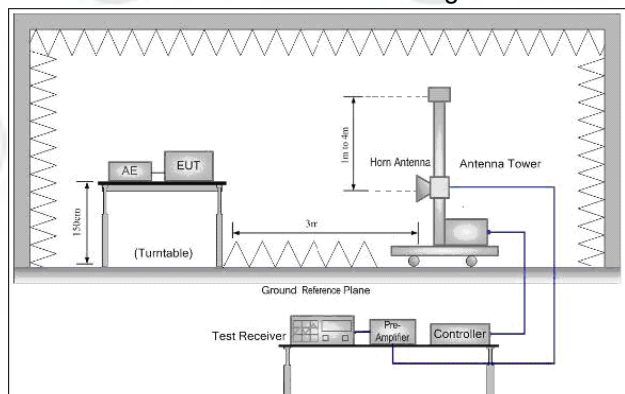
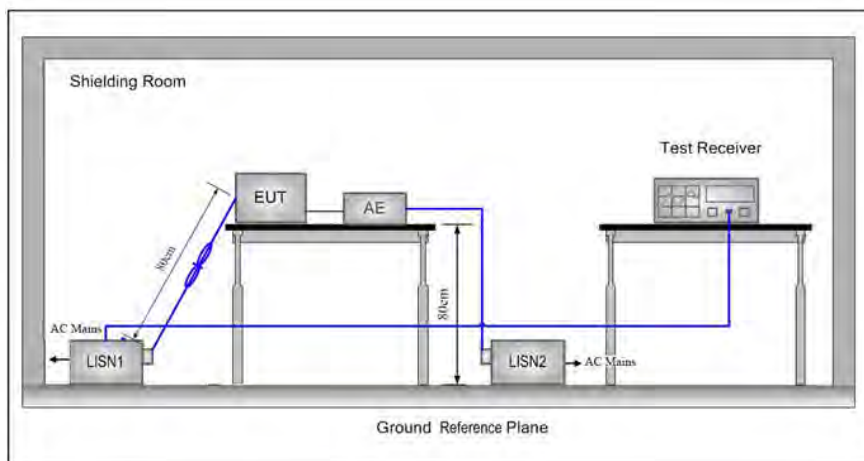


Figure 3. Above 1GHz

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)	11.01	11.03	11.05	11.07				
Mode	802.11g							
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
Power(dBm)	17.95	17.93	17.92	17.89	17.85	17.83	17.81	17.79
Mode	802.11n (HT20)							
Data Rate	6.5Mbps	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps	58.5Mbps	65Mbps
Power(dBm)	14.29	14.27	14.25	14.23	14.21	14.19	14.17	14.15
Mode	802.11n (HT40)							
Data Rate	13.5Mbps	27Mbps	40.5Mbps	54Mbps	81Mbps	108Mbps	121.5Mbps	135Mbps
Power(dBm)	17.44	17.42	17.40	17.38	17.35	17.33	17.30	17.28

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:	Chengdu Meross Technology Co.,Ltd.
Address of Applicant:	Room 1312, Floor 13, Building 6-1, Zone E, TianFu Software Park, GaoXin District, ChengDu, SiChuan, China.
Manufacturer:	Chengdu Meross Technology Co.,Ltd.
Address of Manufacturer:	Room 1312, Floor 13, Building 6-1, Zone E, TianFu Software Park, GaoXin District, ChengDu, SiChuan, China.
Factory:	Shenzhen Shenan Yangguang Electronics Co.,Ltd.
Address of Factory:	Building 9, No.18 of Makan Rd, Xili, Nanshan, Shenzhen City, Guangdong Province 518055

6.2 General Description of EUT

Product Name:	Smart Wi-Fi Outdoor Plug
Model No.(EUT):	MSS620
Trade Mark:	meross
EUT Supports Radios application:	WiFi IEEE 802.11 /b/g/n(HT20)(HT40) 2412MHz to 2462MHz
Power Supply:	AC120V/60Hz
Sample Received Date:	Jun 17, 2019
Sample tested Date:	Jun 17, 2019 to Sep 12, 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:	Refence Table 1 (manufacturer declare)
Test Software of EUT:	QATool_Dbg (manufacturer declare)
Antenna Type and Gain:	Type: PCB antenna Gain:1.5dBi
Test Voltage:	AC120V/60Hz

Operation Frequency each of channel(802.11b/g/n HT20)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		
Operation Frequency each of channel(802.11n HT40)							
Channel		Frequency		Channel		Frequency	
1		2422MHz		4		2437MHz	
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	Mode 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
Attenuator	HuaXiang	SHX370	15040701	03-01-2019	02-29-2020
Signal Generator	Keysight	N5181A	MY46240094	03-01-2019	02-29-2020
Signal Generator	Keysight	N5182B	MY53051549	03-01-2019	02-29-2020
Temperature/ Humidity Indicator	biaozi	HM10	1804186	10-12-2018	10-11-2019
High-pass filter	Sinoscite	FL3CX03WG18 NM12-0398-002	---	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	FL5CX01CA09 CL12-0395-001	---	01-09-2019	01-08-2020
band rejection filter	Sinoscite	FL5CX01CA08 CL12-0393-001	---	01-09-2019	01-08-2020
band rejection filter	Sinoscite	FL5CX02CA04 CL12-0396-002	---	01-09-2019	01-08-2020
band rejection filter	Sinoscite	FL5CX02CA03 CL12-0394-001	---	01-09-2019	01-08-2020
Communication test set	R&S	CMW500	107929	04-28-2019	04-27-2020
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	JSTS1120-2	---	03-01-2019	02-29-2020
high-low temperature test chamber	DongGuangQinZhuo	LK-80GA	QZ20150611879	03-01-2019	02-29-2020

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	GB47050 534	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 0299.7810.5 6	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	EMC051845 SE	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 Unlicensed Wireless Devices

Test Results List:

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

DUTY CYCLE

Duty Cycle			
Configuration	TX ON(ms)	TX ALL(ms)	Duty Cycle(%)
802.11b	8.444	8.601	98.17%
802.11g	1.395	1.5692	88.90%
802.11n HT20	1.297	1.4418	89.96%
802.11n HT40	0.6392	0.7645	83.61%



Appendix A): Conducted Peak Output Power

Test Limit

According to §15.247(b)(3),

Peak output power:

For systems using digital modulation in the 2400-2483.5 MHz: 1 Watt(30 dBm), base on the use of antennas with directional gain not exceed 6 dBi. If transmitting antennas of directional gain greater than 6dBi are used the peak output power the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Limit	☒ Antenna not exceed 6 dBi: 30dBm ☐ Antenna with DG greater than 6 dBi: [Limit = 30 – (DG – 6)] ☐ Point-to-point operation:
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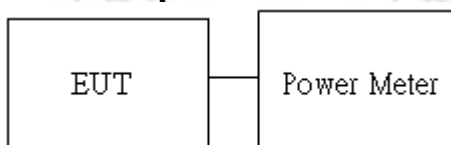
Average output power: For reporting purposes only.

Test Procedure

Test method Refer as KDB 558074 D01.

1. The EUT RF output connected to the power meter by RF cable.
2. Setting maximum power transmit of EUT.
3. The path loss was compensated to the results for each measurement.
4. Measure and record the result of Peak output power and Average output power. in the test report.

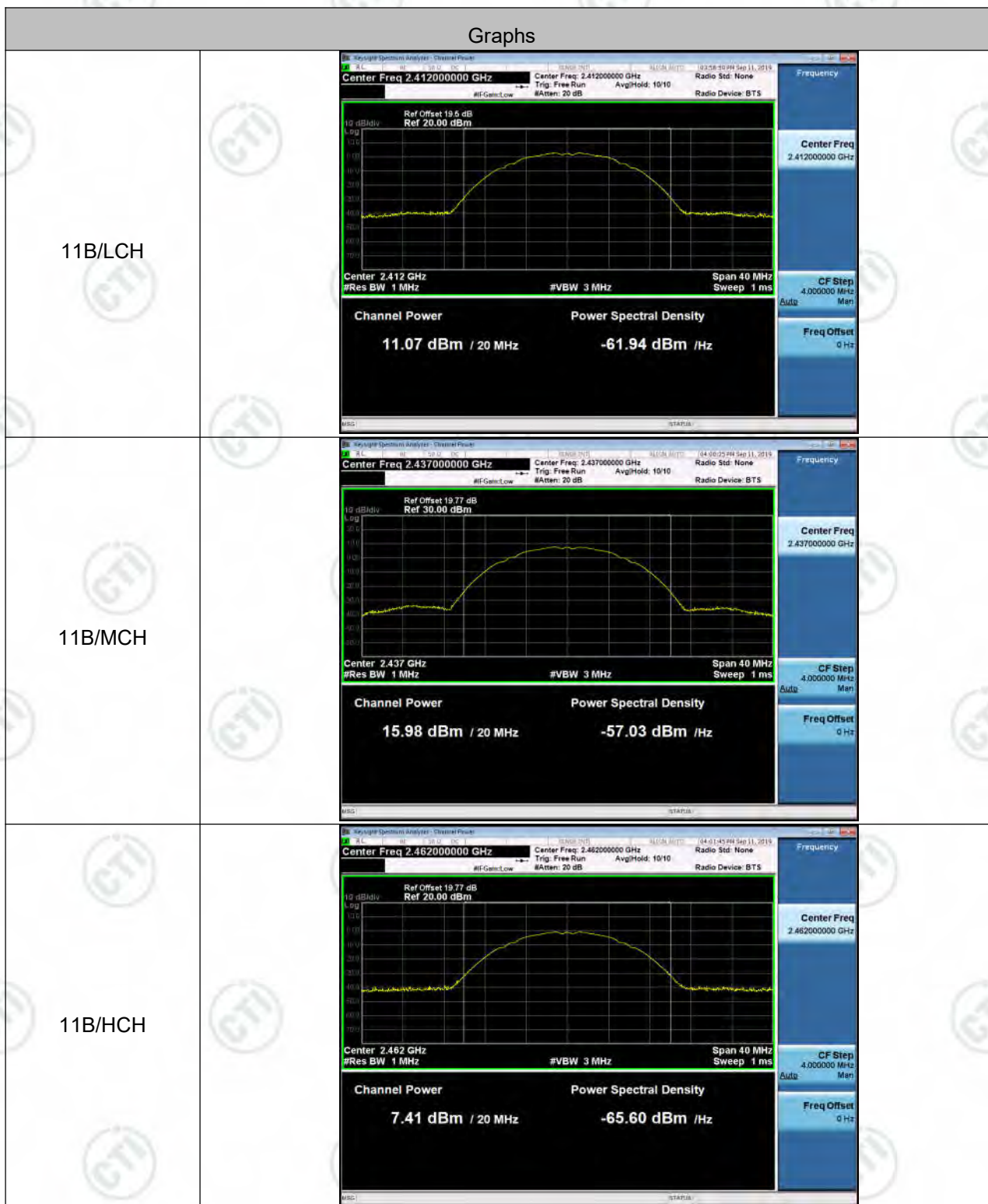
Test Setup

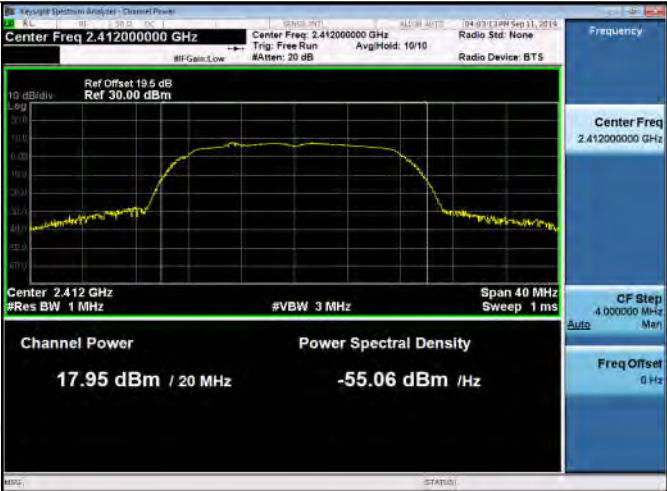
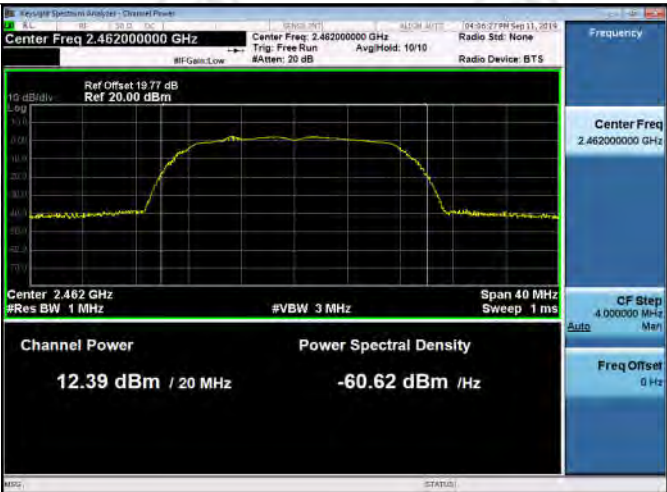


Result Table

Mode	Channel	Conducted Peak Output Power [dBm]	Verdict
11B	LCH	11.07	PASS
11B	MCH	15.98	PASS
11B	HCH	7.41	PASS
11G	LCH	17.95	PASS
11G	MCH	19.26	PASS
11G	HCH	12.39	PASS
11N20SISO	LCH	14.29	PASS
11N20SISO	MCH	18.24	PASS
11N20SISO	HCH	13.33	PASS
11N40SISO	LCH	17.44	PASS
11N40SISO	MCH	17.34	PASS
11N40SISO	HCH	16.21	PASS

Test Graph



11G/LCH	 Frequency Center Freq 2.41200000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz Channel Power 17.95 dBm / 20 MHz Power Spectral Density -55.06 dBm / Hz
11G/MCH	 Frequency Center Freq 2.43700000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz Channel Power 19.26 dBm / 20 MHz Power Spectral Density -53.75 dBm / Hz
11G/HCH	 Frequency Center Freq 2.46200000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz Channel Power 12.39 dBm / 20 MHz Power Spectral Density -60.62 dBm / Hz

11N20SISO/LCH	 Frequency Center Freq 2.412000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz Channel Power 14.29 dBm / 20 MHz Power Spectral Density -58.72 dBm / Hz
11N20SISO/MCH	 Frequency Center Freq 2.437000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz Channel Power 18.24 dBm / 20 MHz Power Spectral Density -54.77 dBm / Hz
11N20SISO/HCH	 Frequency Center Freq 2.462000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz Channel Power 13.33 dBm / 20 MHz Power Spectral Density -59.68 dBm / Hz

11N40SISO/LCH	 Frequency Center Freq 2.42200000 GHz CF Step 8.000000 MHz Freq Offset 0 Hz Channel Power 17.44 dBm / 40 MHz Power Spectral Density -58.58 dBm / Hz
11N40SISO/MCH	 Frequency Center Freq 2.43700000 GHz CF Step 8.000000 MHz Freq Offset 0 Hz Channel Power 17.34 dBm / 40 MHz Power Spectral Density -58.68 dBm / Hz
11N40SISO/HCH	 Frequency Center Freq 2.45200000 GHz CF Step 8.000000 MHz Freq Offset 0 Hz Channel Power 16.21 dBm / 40 MHz Power Spectral Density -59.81 dBm / Hz

Appendix B): 6dB Occupied Bandwidth

Test Limit

According to §15.247(a)(2),

6 dB Bandwidth :

Limit	Shall be at least 500kHz
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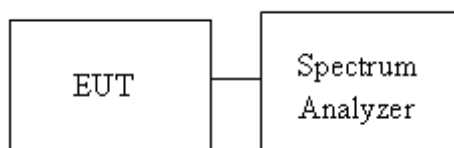
Occupied Bandwidth(99%) : For reporting purposes only.

Test Procedure

Test method Refer as KDB 558074 D01 and ANSI C63.10: 2013 clause 6.9.2,

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. SA set RBW =100KHz , VBW = 300KHz and Detector = Peak, to measurement 6dB Bandwidth
4. SA set RBW = 1% ~ 5% OBW, VBW = three times the RBW and Detector = Peak, to measurement 99% Bandwidth
5. Measure and record the result of 6 dB Bandwidth and 99% Bandwidth. in the test report.

Test Setup

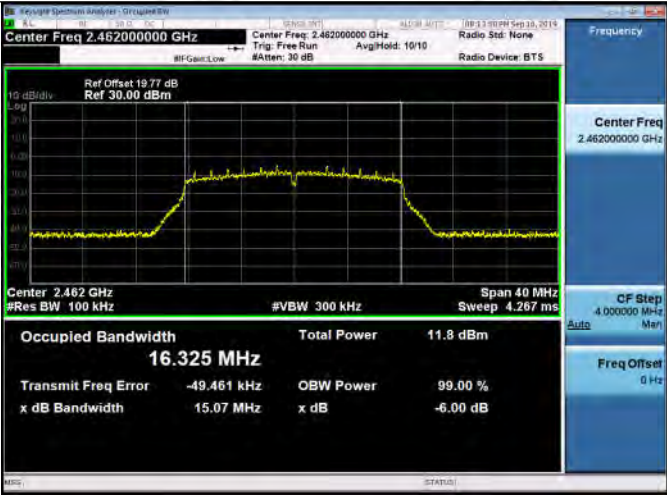


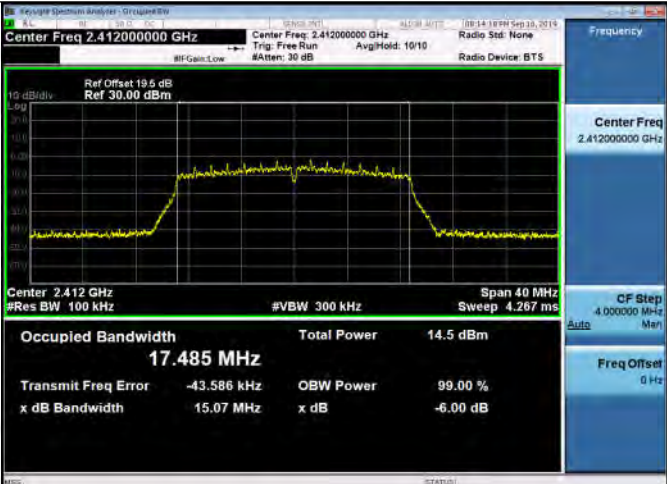
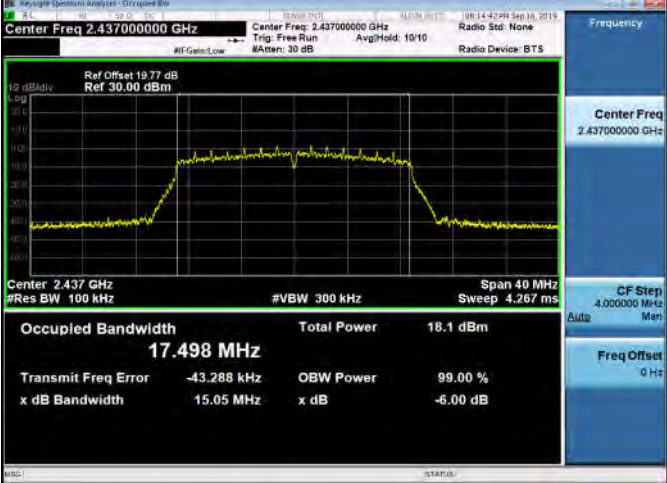
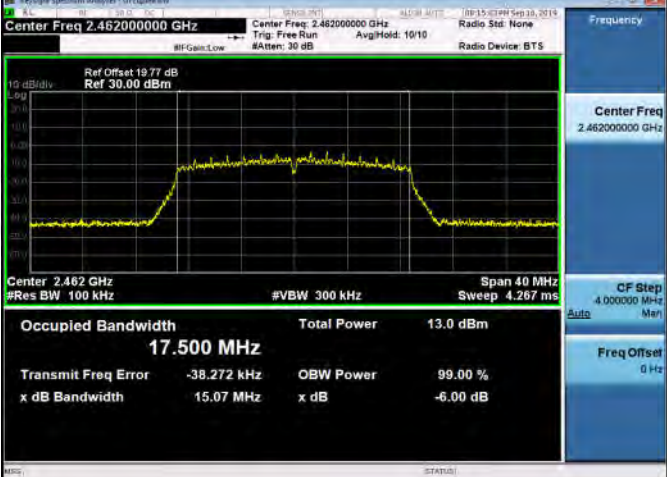
Result Table

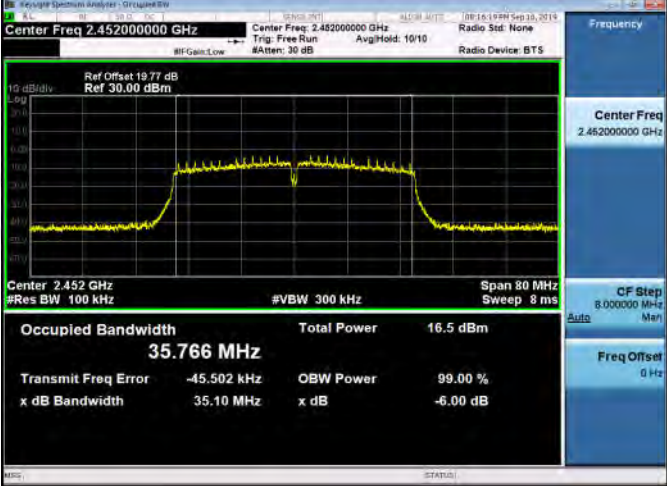
Mode	Channel	6dB Bandwidth [MHz]	Verdict
11B	LCH	9.115	PASS
11B	MCH	9.560	PASS
11B	HCH	9.548	PASS
11G	LCH	15.12	PASS
11G	MCH	15.10	PASS
11G	HCH	15.07	PASS
11N20SISO	LCH	15.07	PASS
11N20SISO	MCH	15.05	PASS
11N20SISO	HCH	15.07	PASS
11N40SISO	LCH	35.05	PASS
11N40SISO	MCH	35.08	PASS
11N40SISO	HCH	35.10	PASS

Test Graph



11G/LCH	 Center Freq 2.41200000 GHz Center Freq 2.41200000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 19.5 dB Ref 30.00 dBm Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 16.316 MHz Total Power 17.9 dBm Transmit Freq Error -48.822 kHz OBW Power 99.00 % x dB Bandwidth 15.12 MHz x dB -6.00 dB Frequency Center Freq 2.41200000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz
11G/MCH	 Center Freq 2.43700000 GHz Center Freq 2.43700000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 19.77 dB Ref 30.00 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 16.309 MHz Total Power 19.2 dBm Transmit Freq Error -50.885 kHz OBW Power 99.00 % x dB Bandwidth 15.10 MHz x dB -6.00 dB Frequency Center Freq 2.43700000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz
11G/HCH	 Center Freq 2.46200000 GHz Center Freq 2.46200000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 19.77 dB Ref 30.00 dBm Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 16.325 MHz Total Power 11.8 dBm Transmit Freq Error -49.461 kHz OBW Power 99.00 % x dB Bandwidth 15.07 MHz x dB -6.00 dB Frequency Center Freq 2.46200000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz

11N20SISO/LCH	 Center Freq 2.412000000 GHz Center Freq 2.412000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 19.5 dB Ref 30.00 dBm Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 17.485 MHz Total Power 14.5 dBm Transmit Freq Error -43.586 kHz OBW Power 99.00 % x dB Bandwidth 15.07 MHz x dB -6.00 dB Frequency Center Freq 2.412000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz
11N20SISO/MCH	 Center Freq 2.437000000 GHz Center Freq 2.437000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 19.77 dB Ref 30.00 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 17.498 MHz Total Power 18.1 dBm Transmit Freq Error -43.288 kHz OBW Power 99.00 % x dB Bandwidth 15.05 MHz x dB -6.00 dB Frequency Center Freq 2.437000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz
11N20SISO/HCH	 Center Freq 2.462000000 GHz Center Freq 2.462000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 19.77 dB Ref 30.00 dBm Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 17.500 MHz Total Power 13.0 dBm Transmit Freq Error -38.272 kHz OBW Power 99.00 % x dB Bandwidth 15.07 MHz x dB -6.00 dB Frequency Center Freq 2.462000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz

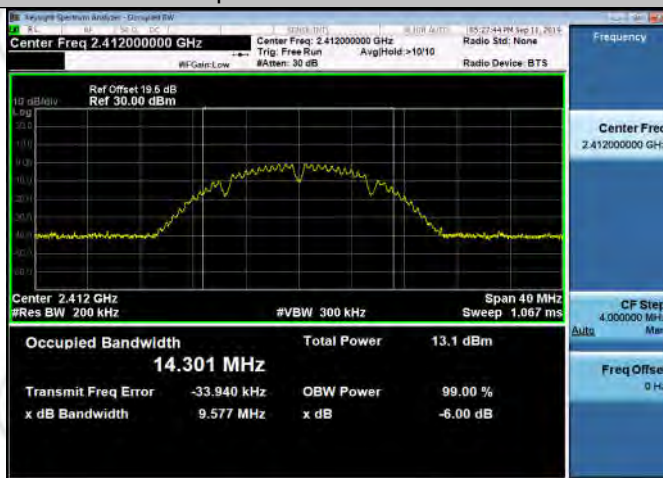
11N40SISO/LCH	 Center Freq 2.42200000 GHz Center Freq 2.42200000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 19.77 dB Ref 30.00 dBm Center 2.422 GHz #Res BW 100 kHz #VBW 300 kHz Span 80 MHz Sweep 8 ms Occupied Bandwidth 35.753 MHz Total Power 17.5 dBm Transmit Freq Error -57.358 kHz OBW Power 99.00 % x dB Bandwidth 35.05 MHz x dB -6.00 dB Center Freq 2.42200000 GHz CF Step 8.000000 MHz Freq Offset 0 Hz
11N40SISO/MCH	 Center Freq 2.43700000 GHz Center Freq 2.43700000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 19.77 dB Ref 30.00 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 80 MHz Sweep 8 ms Occupied Bandwidth 35.756 MHz Total Power 17.4 dBm Transmit Freq Error -38.880 kHz OBW Power 99.00 % x dB Bandwidth 35.08 MHz x dB -6.00 dB Center Freq 2.43700000 GHz CF Step 8.000000 MHz Freq Offset 0 Hz
11N40SISO/HCH	 Center Freq 2.45200000 GHz Center Freq 2.45200000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 19.77 dB Ref 30.00 dBm Center 2.452 GHz #Res BW 100 kHz #VBW 300 kHz Span 80 MHz Sweep 8 ms Occupied Bandwidth 35.766 MHz Total Power 16.5 dBm Transmit Freq Error -45.502 kHz OBW Power 99.00 % x dB Bandwidth 35.10 MHz x dB -6.00 dB Center Freq 2.45200000 GHz CF Step 8.000000 MHz Freq Offset 0 Hz

Result Table

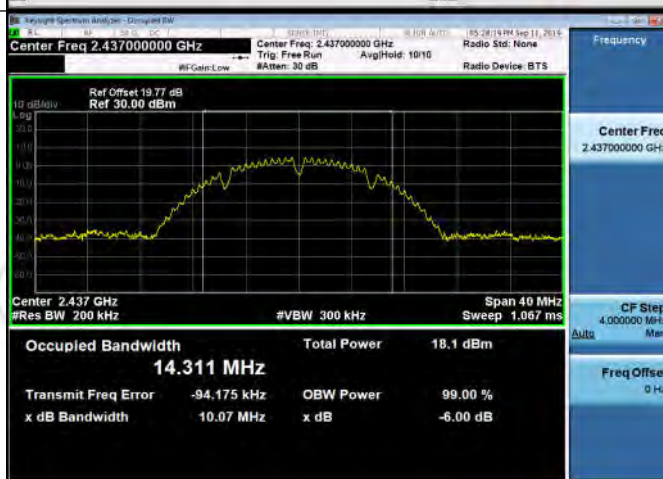
Mode	Channel	99% OBW [MHz]	Verdict
11B	LCH	14.301	PASS
11B	MCH	14.311	PASS
11B	HCH	14.384	PASS
11G	LCH	16.456	PASS
11G	MCH	16.434	PASS
11G	HCH	16.404	PASS
11N20SISO	LCH	17.578	PASS
11N20SISO	MCH	17.564	PASS
11N20SISO	HCH	17.547	PASS
11N40SISO	LCH	35.889	PASS
11N40SISO	MCH	35.938	PASS
11N40SISO	HCH	35.938	PASS

Graphs

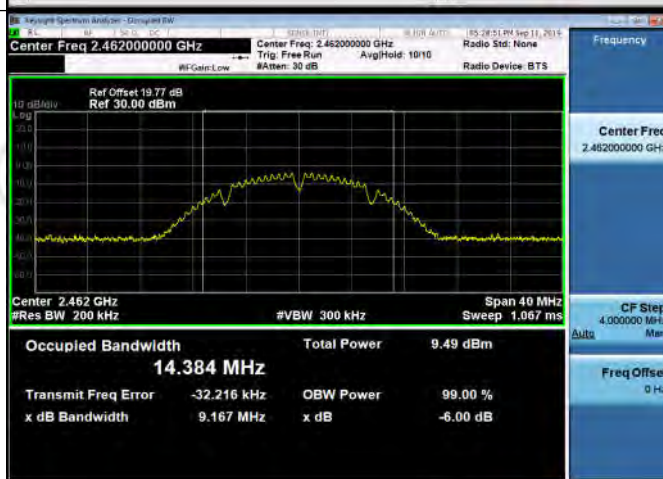
11B/LCH

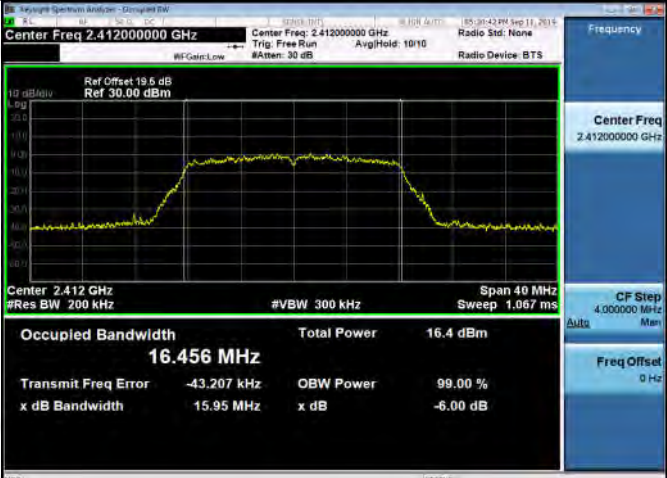
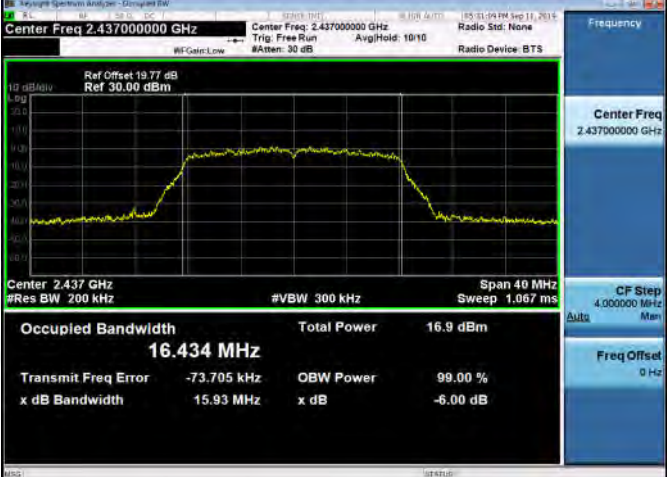
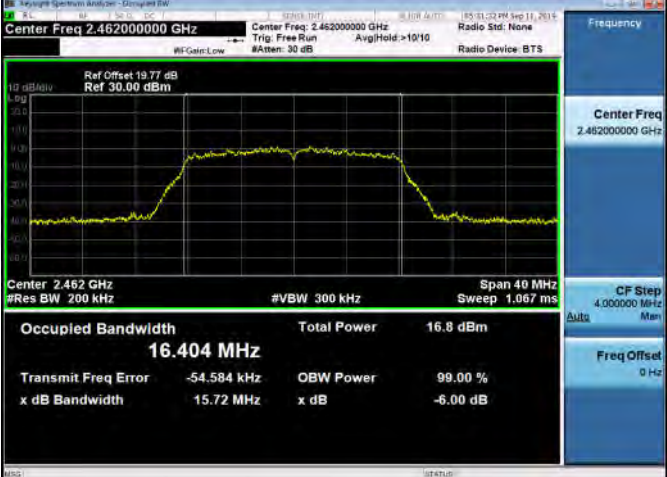


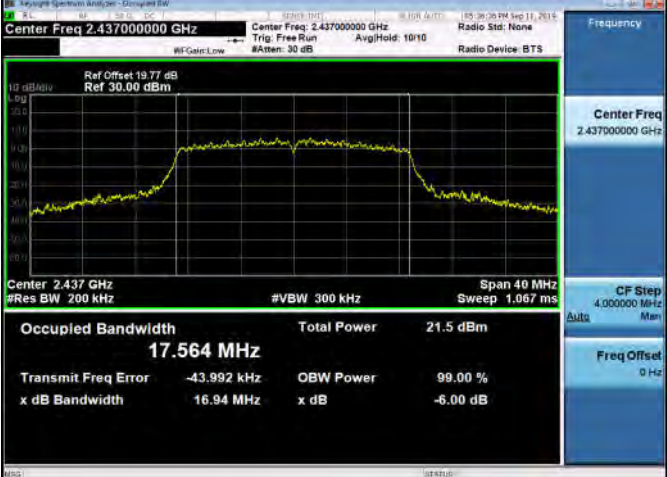
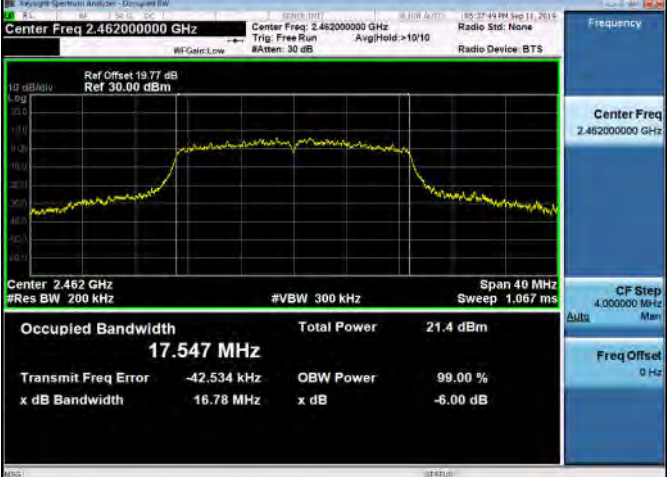
11B/MCH

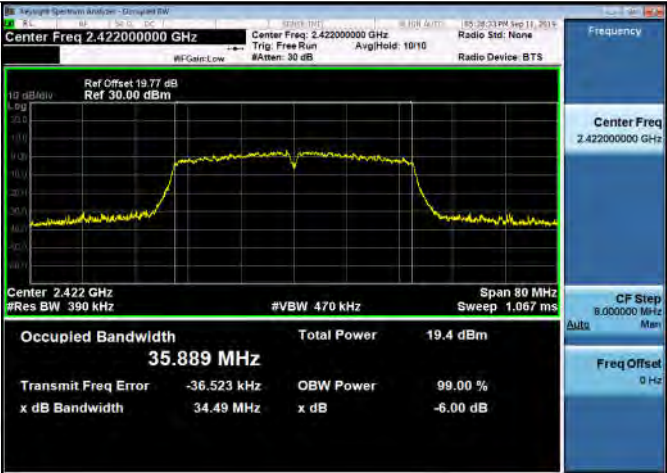
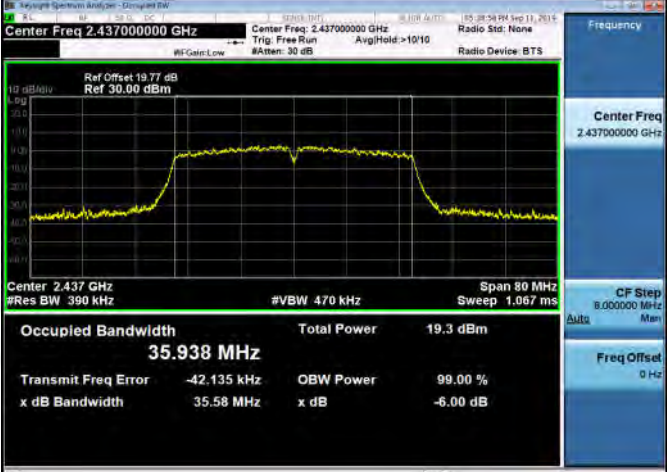
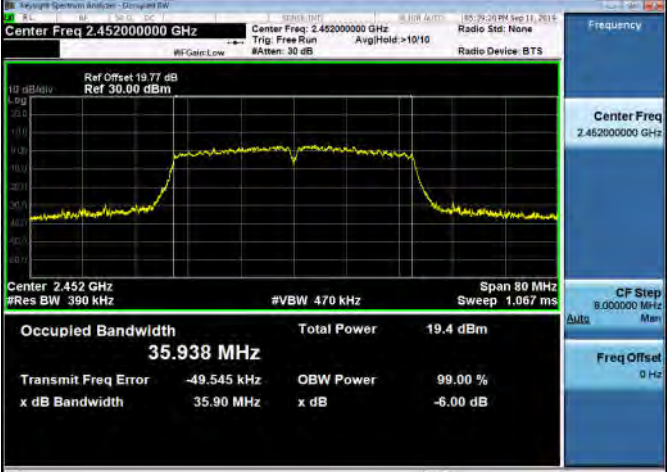


11B/HCH



11G/LCH	 Key parameters for 11G/LCH: - Center Freq: 2.412000000 GHz - Occupied Bandwidth: 16.456 MHz - Total Power: 16.4 dBm - Transmit Freq Error: -43.207 kHz - x dB Bandwidth: 15.95 MHz - OBW Power: 99.00 % - x dB: -6.00 dB
11G/MCH	 Key parameters for 11G/MCH: - Center Freq: 2.437000000 GHz - Occupied Bandwidth: 16.434 MHz - Total Power: 16.9 dBm - Transmit Freq Error: -73.705 kHz - x dB Bandwidth: 15.93 MHz - OBW Power: 99.00 % - x dB: -6.00 dB
11G/HCH	 Key parameters for 11G/HCH: - Center Freq: 2.462000000 GHz - Occupied Bandwidth: 16.404 MHz - Total Power: 16.8 dBm - Transmit Freq Error: -54.584 kHz - x dB Bandwidth: 15.72 MHz - OBW Power: 99.00 % - x dB: -6.00 dB

11N20SISO/LCH	 Key parameters for 11N20SISO/LCH: - Center Freq: 2.41200000 GHz - Occupied Bandwidth: 17.578 MHz - Total Power: 21.0 dBm - Transmit Freq Error: -24.130 kHz - OBW Power: 99.00 %
11N20SISO/MCH	 Key parameters for 11N20SISO/MCH: - Center Freq: 2.43700000 GHz - Occupied Bandwidth: 17.564 MHz - Total Power: 21.5 dBm - Transmit Freq Error: -43.992 kHz - OBW Power: 99.00 %
11N20SISO/HCH	 Key parameters for 11N20SISO/HCH: - Center Freq: 2.46200000 GHz - Occupied Bandwidth: 17.547 MHz - Total Power: 21.4 dBm - Transmit Freq Error: -42.534 kHz - OBW Power: 99.00 %

11N40SISO/LCH	 Key parameters for 11N40SISO/LCH: - Center Freq: 2.42200000 GHz - Occupied Bandwidth: 35.889 MHz - Total Power: 19.4 dBm - Transmit Freq Error: -36.523 kHz - x dB Bandwidth: 34.49 MHz - OBW Power: 99.00 % - x dB: -6.00 dB
11N40SISO/MCH	 Key parameters for 11N40SISO/MCH: - Center Freq: 2.43700000 GHz - Occupied Bandwidth: 35.938 MHz - Total Power: 19.3 dBm - Transmit Freq Error: -42.135 kHz - x dB Bandwidth: 35.58 MHz - OBW Power: 99.00 % - x dB: -6.00 dB
11N40SISO/HCH	 Key parameters for 11N40SISO/HCH: - Center Freq: 2.45200000 GHz - Occupied Bandwidth: 35.938 MHz - Total Power: 19.4 dBm - Transmit Freq Error: -49.545 kHz - x dB Bandwidth: 35.90 MHz - OBW Power: 99.00 % - x dB: -6.00 dB

Appendix C): Band-edge for RF Conducted Emissions

Test Limit

According to §15.247(d),

In any 100 kHz bandwidth outside the authorized frequency band,

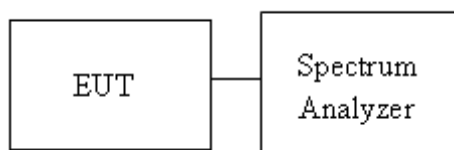
Non-restricted bands shall be attenuated at least 20 dB/30 dB relative to the maximum PSD level in 100 kHz by RF conducted or a radiated measurement which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

Test Procedure

Test method Refer as KDB 558074 D01.

1. EUT RF output port connected to the SA by RF cable, and the path loss was compensated to result.
2. SA setting, RBW=100kHz, VBW=300kHz, Detector=Peak, Trace mode = max hold, SWT = Auto.
3. In any 100 kHz bandwidth outside the authorized frequency band, shall be attenuated at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when conducted power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

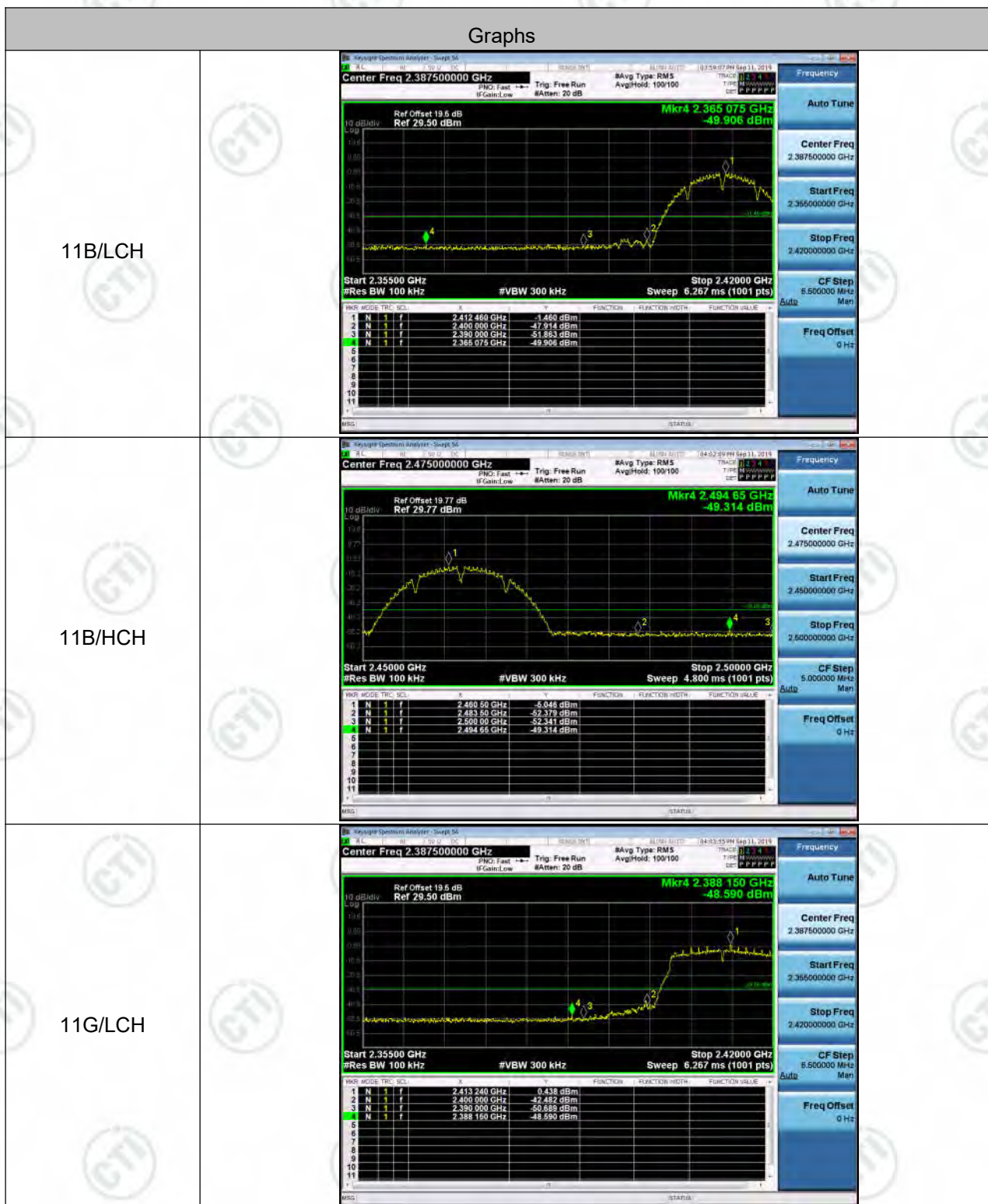
Test Setup

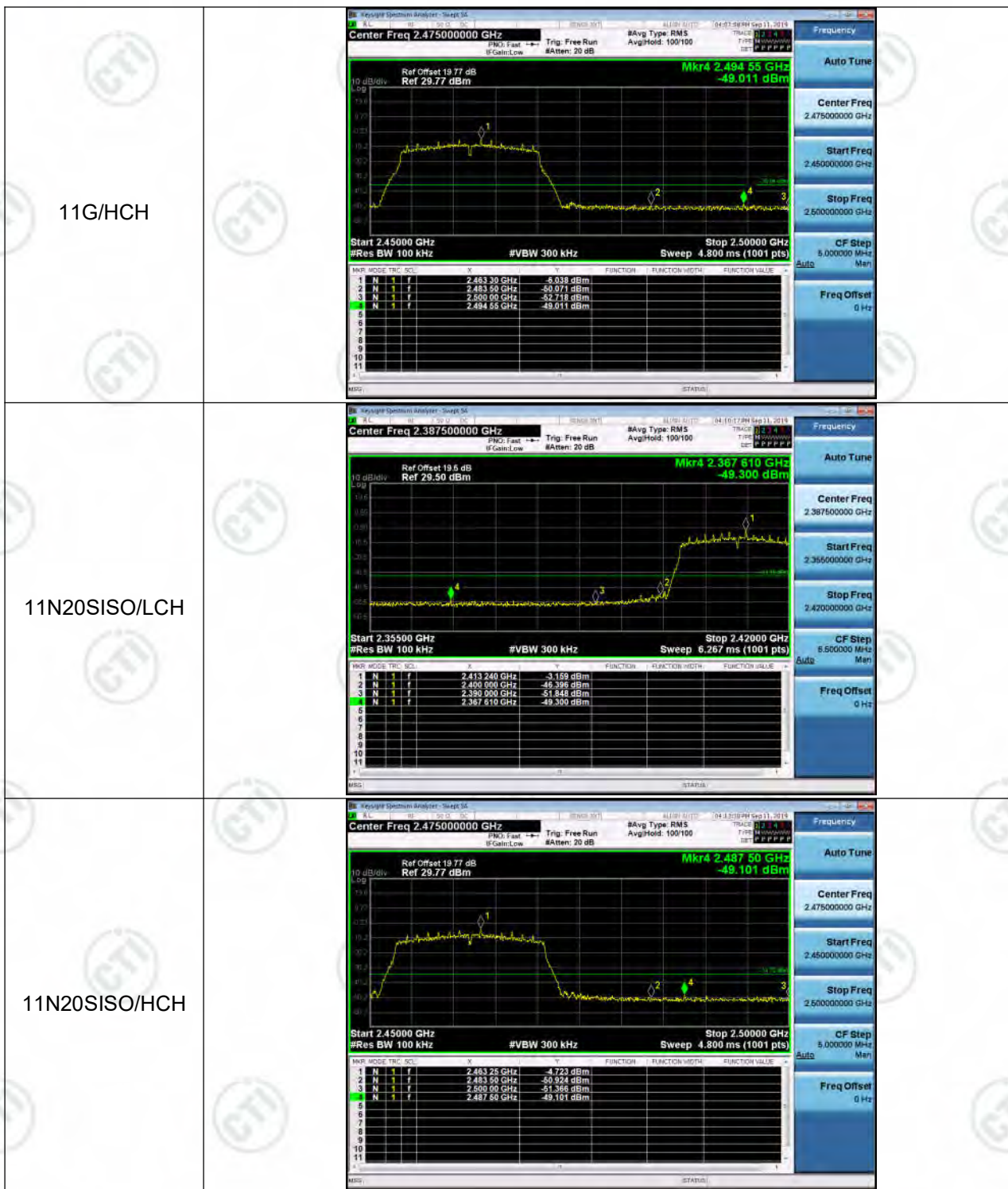


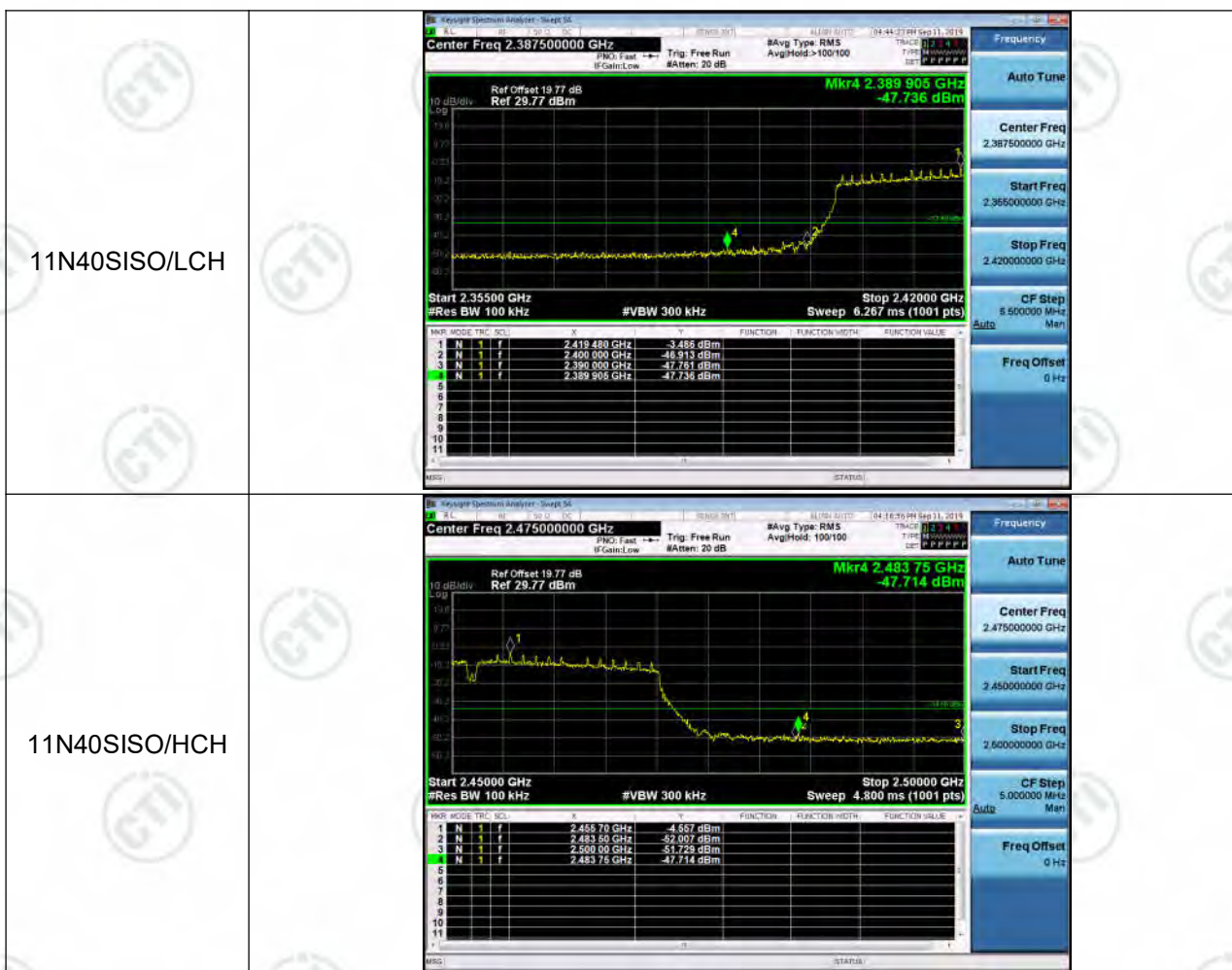
Result Table

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-1.460	-49.906	-31.46	PASS
11B	HCH	-5.046	-49.314	-35.05	PASS
11G	LCH	0.438	-48.590	-29.56	PASS
11G	HCH	-6.038	-49.011	-36.04	PASS
11N20SISO	LCH	-3.159	-49.300	-33.16	PASS
11N20SISO	HCH	-4.723	-49.101	-34.72	PASS
11N40SISO	LCH	-3.486	-47.736	-33.49	PASS
11N40SISO	HCH	-4.557	-47.714	-34.56	PASS

Test Graph







Appendix D): RF Conducted Spurious Emissions

Test Limit

According to §15.247(d),

In any 100 kHz bandwidth outside the authorized frequency band,

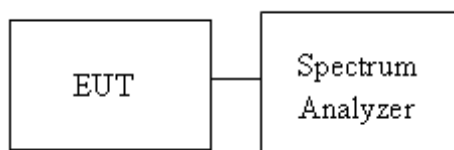
Non-restricted bands shall be attenuated at least 20 dB/30 dB relative to the maximum PSD level in 100 kHz by RF conducted or a radiated measurement which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

Test Procedure

Test method Refer as KDB 558074 D01.

1. EUT RF output port connected to the SA by RF cable, and the path loss was compensated to result.
2. SA setting, RBW=100kHz, VBW=300kHz, Detector=Peak, Trace mode = max hold, SWT = Auto.
3. In any 100 kHz bandwidth outside the authorized frequency band, shall be attenuated at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when conducted power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

Test Setup



Result Table

Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
11B	LCH	-1.539	<Limit	PASS
11B	MCH	3.379	<Limit	PASS
11B	HCH	-5.168	<Limit	PASS
11G	LCH	0.353	<Limit	PASS
11G	MCH	1.268	<Limit	PASS
11G	HCH	-5.185	<Limit	PASS
11N20SISO	LCH	-4.131	<Limit	PASS
11N20SISO	MCH	0.671	<Limit	PASS
11N20SISO	HCH	-4.566	<Limit	PASS
11N40SISO	LCH	-2.977	<Limit	PASS
11N40SISO	MCH	-3.458	<Limit	PASS
11N40SISO	HCH	-4.375	<Limit	PASS

Test Graph



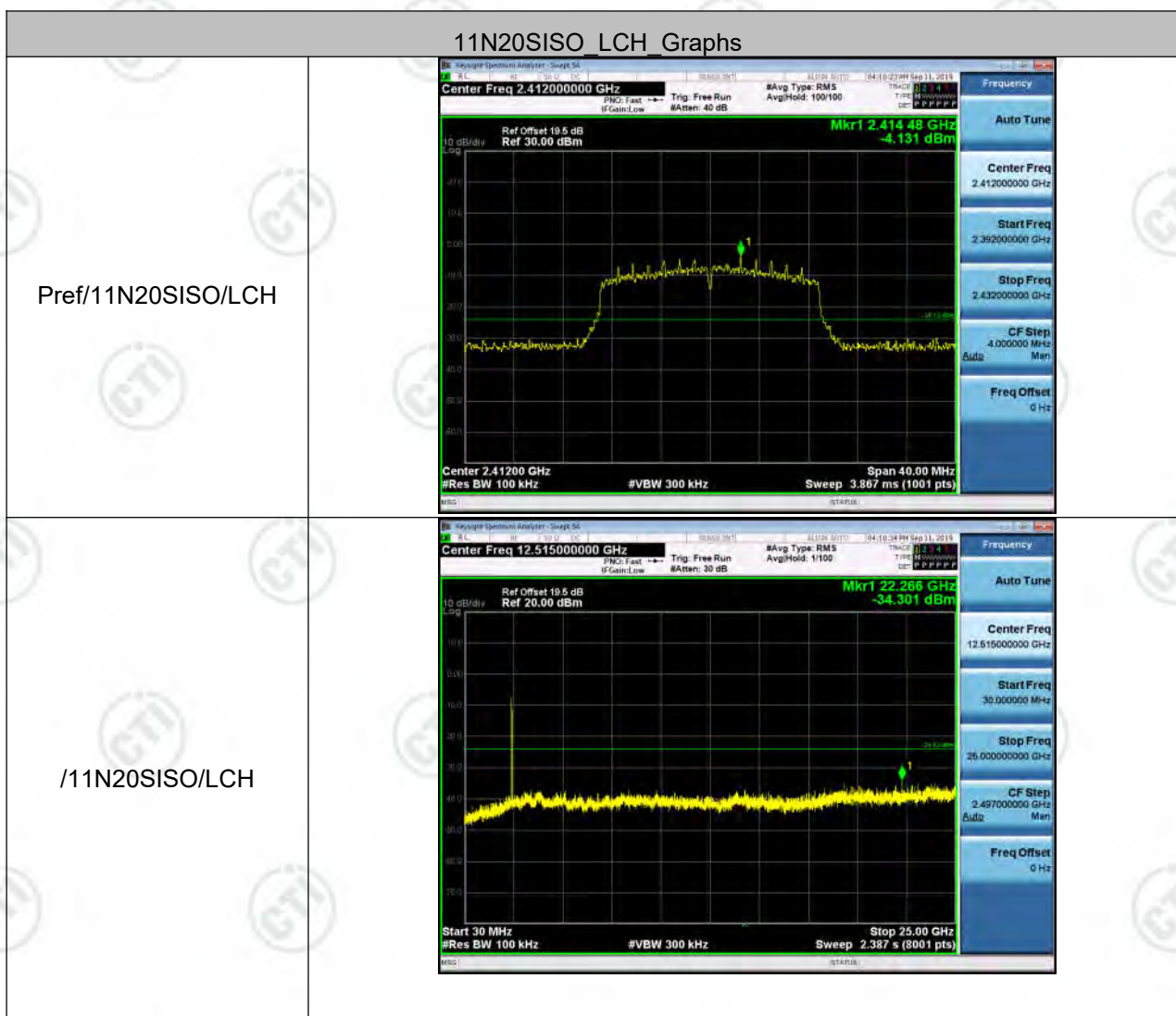


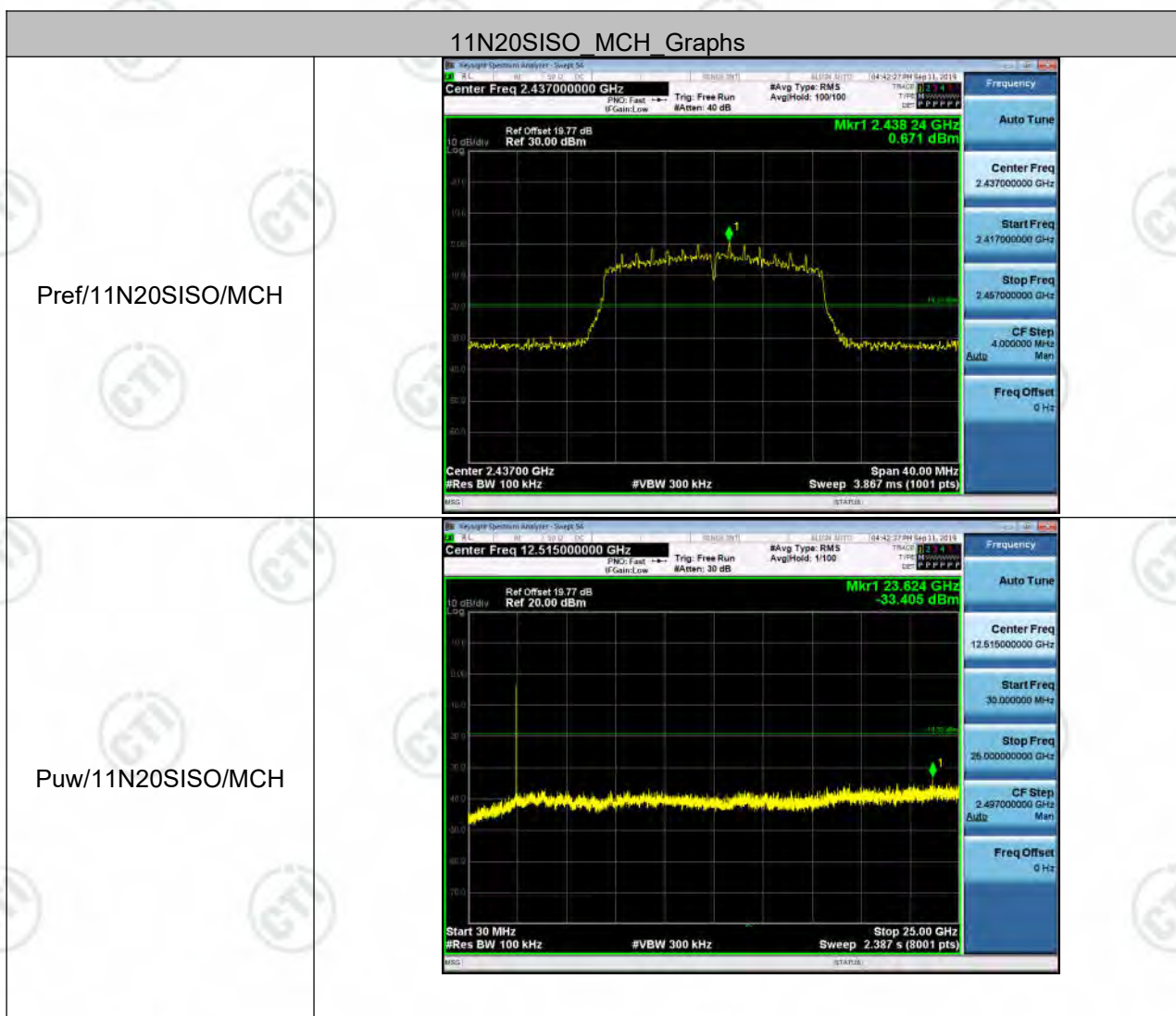


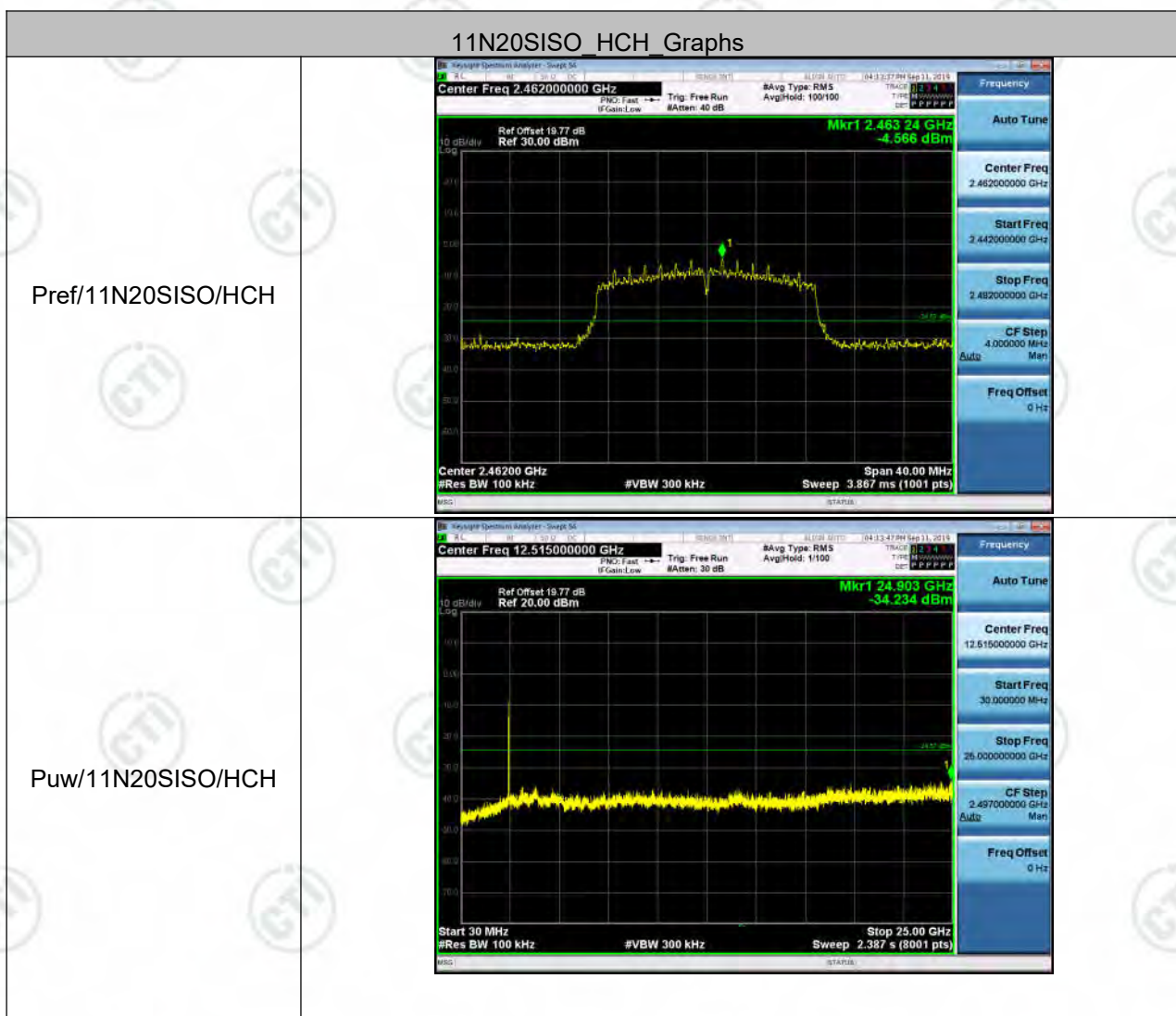


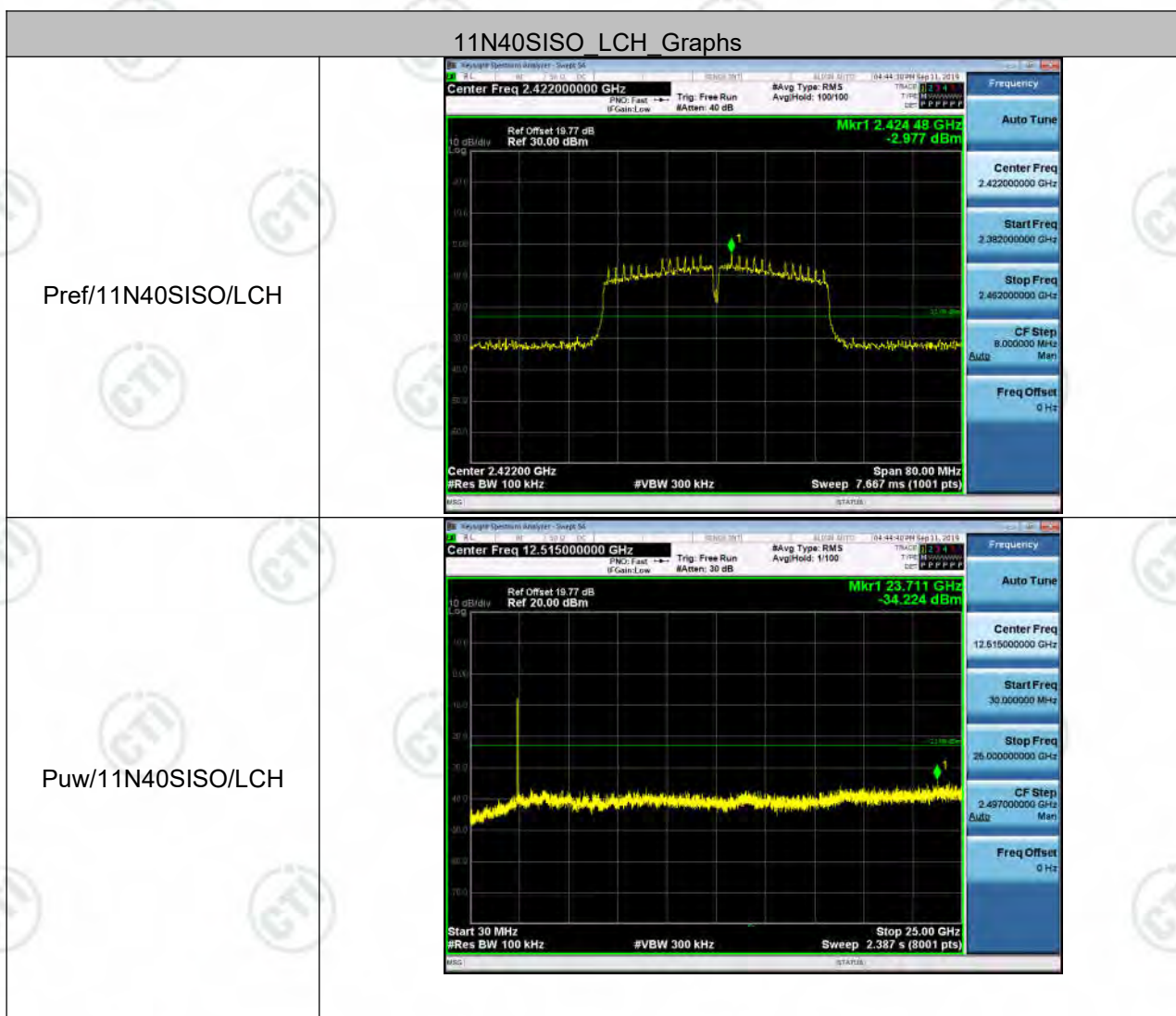


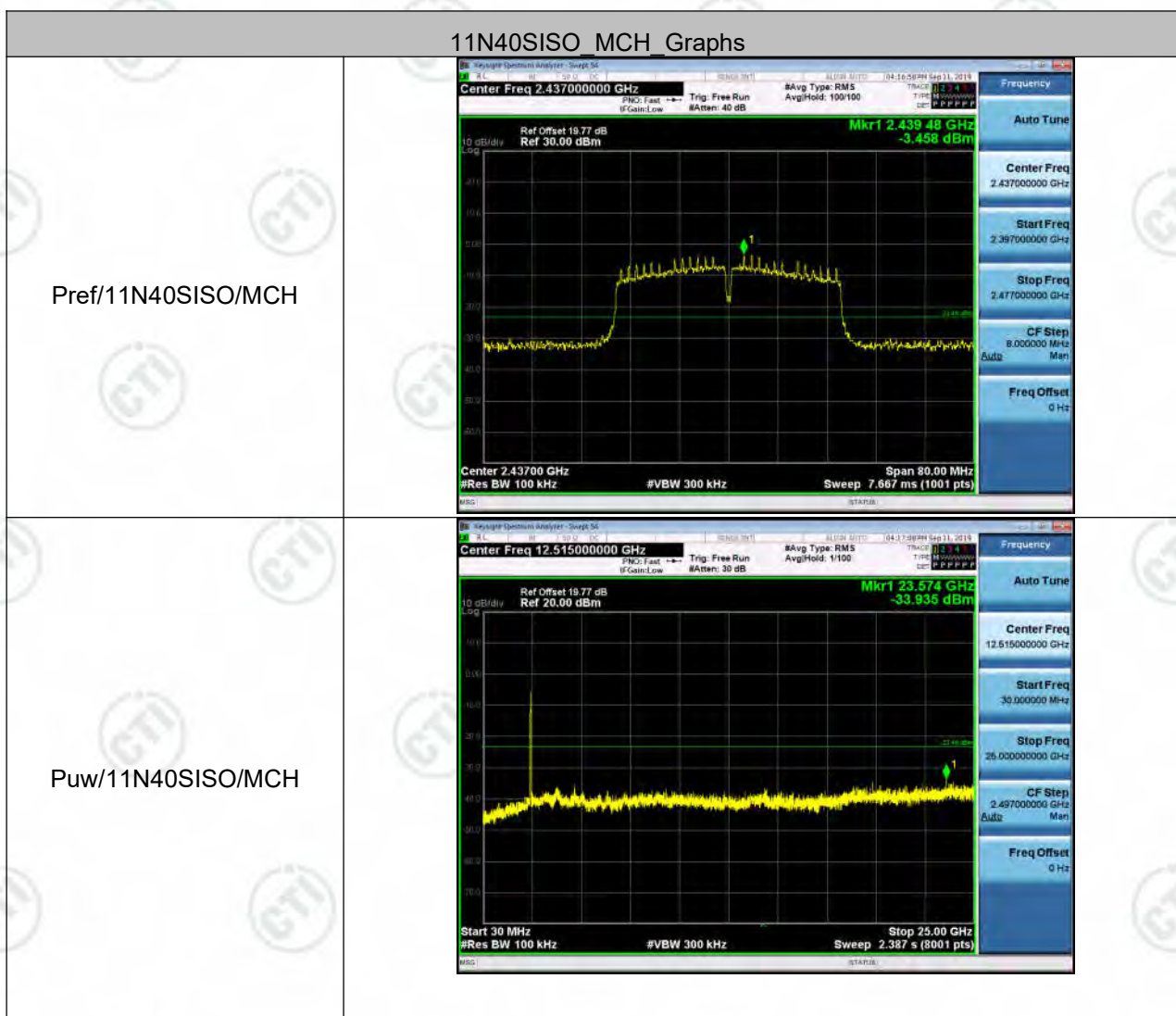


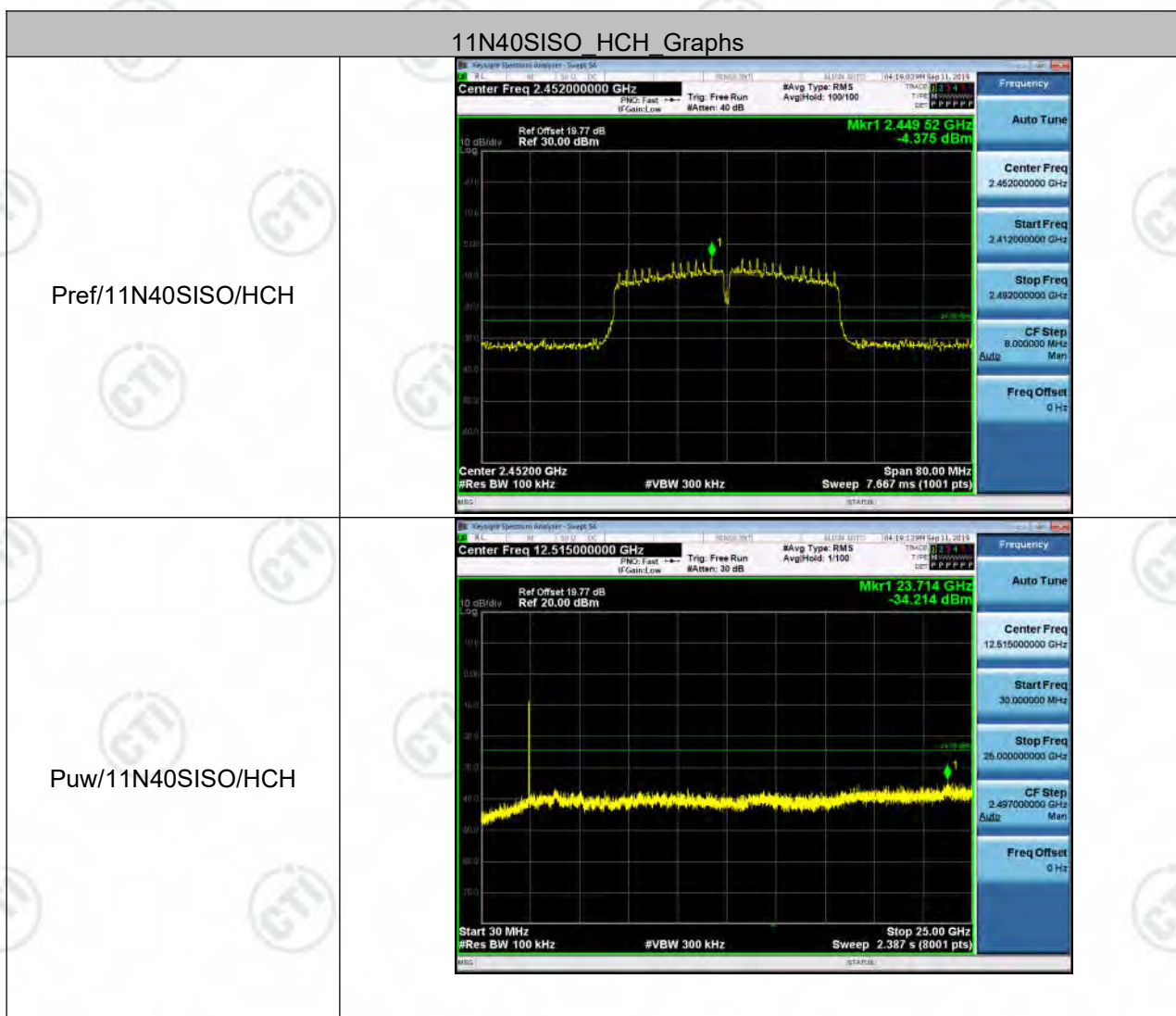












Appendix E): Power Spectral Density

Test Limit

According to §15.247(e),

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

Limit	☒ Antenna not exceed 6 dBi: 8dBm ☐ Antenna with DG greater than 6 dBi: [Limit = 8 – (DG – 6)] ☐ Point-to-point operation:
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Test Procedure

Test method Refer as KDB 558074 D01.

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. SA set RBW = 3kHz, VBW = 30kHz, Span = 1.5 times DTS Bandwidth (6 dB BW), Detector = Peak, Sweep Time = Auto and Trace = Max hold.
4. The path loss was compensated to the results for each measurement by SA.
5. Mark the maximum level.
6. Measure and record the result of power spectral density. in the test report.

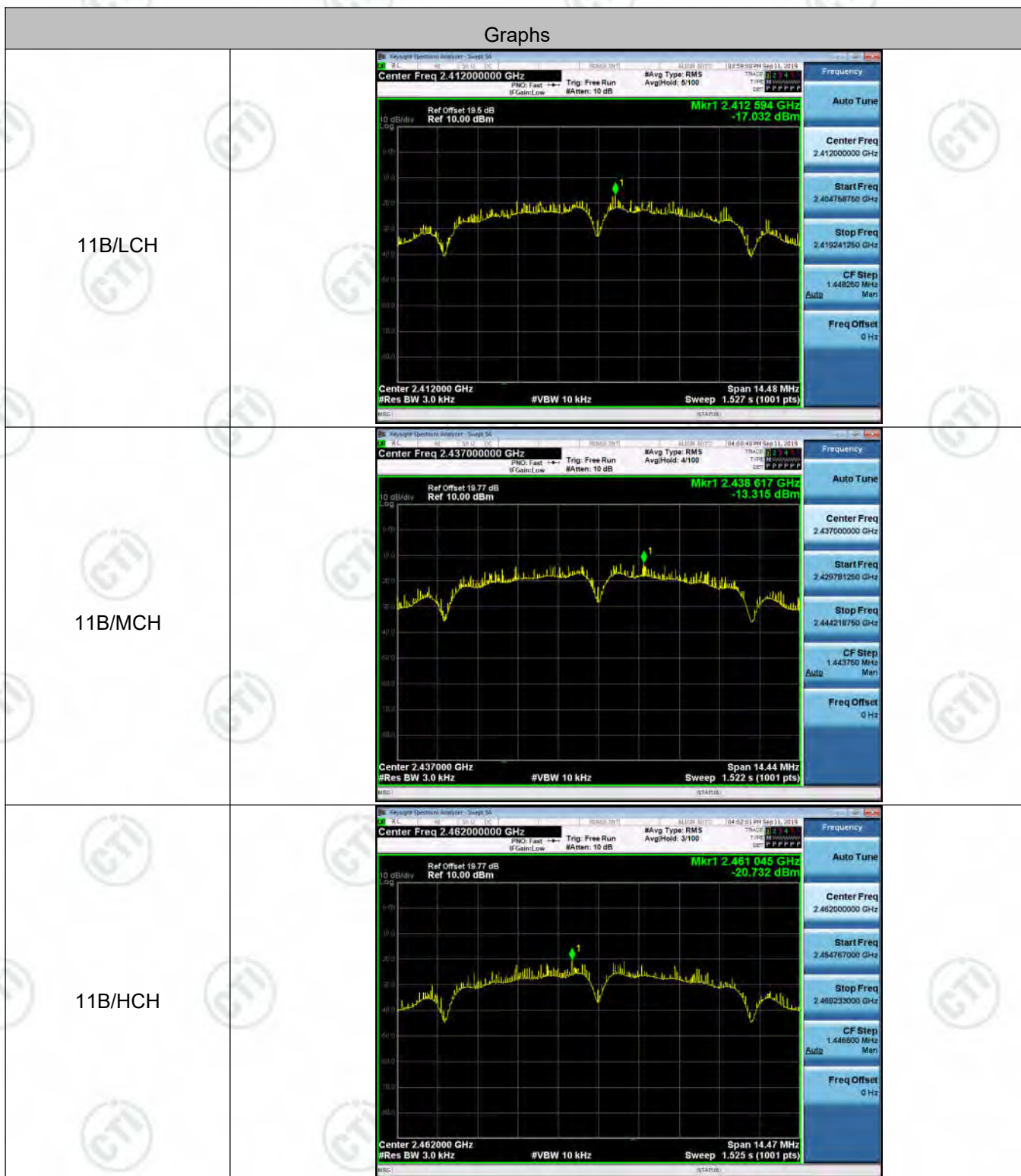
Test Setup



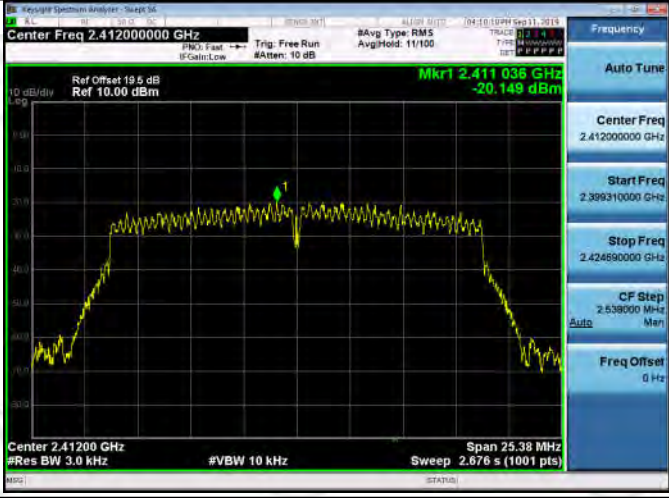
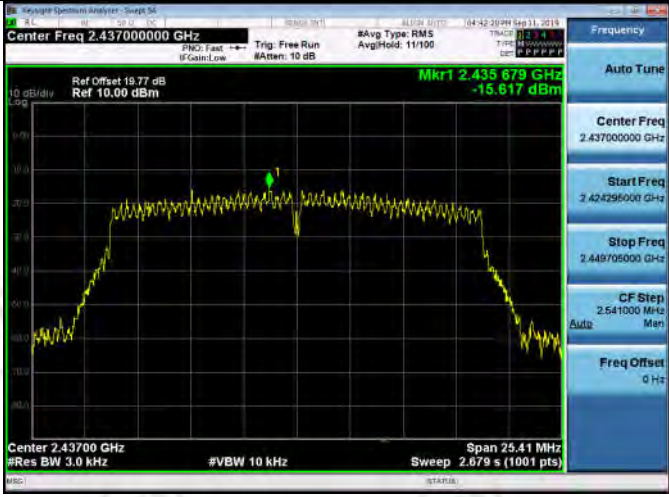
Result Table

Mode	Channel	Power Spectral Density [dBm]	Verdict
11B	LCH	-17.032	PASS
11B	MCH	-13.315	PASS
11B	HCH	-20.732	PASS
11G	LCH	-15.658	PASS
11G	MCH	-14.283	PASS
11G	HCH	-21.366	PASS
11N20SISO	LCH	-20.149	PASS
11N20SISO	MCH	-15.617	PASS
11N20SISO	HCH	-21.098	PASS
11N40SISO	LCH	-19.273	PASS
11N40SISO	MCH	-17.544	PASS
11N40SISO	HCH	-20.518	PASS

Test Graph



11G/LCH	 Center Freq 2.412000000 GHz Mkr1 2.412 284 GHz -15.658 dBm Ref Offset 19.5 dB Ref 10.00 dBm Span 23.67 MHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 2.498 s (1001 pts)
11G/MCH	 Center Freq 2.437000000 GHz Mkr1 2.436 013 GHz -14.283 dBm Ref Offset 19.77 dB Ref 10.00 dBm Span 23.49 MHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 2.477 s (1001 pts)
11G/HCH	 Center Freq 2.462000000 GHz Mkr1 2.460 739 GHz -21.366 dBm Ref Offset 19.77 dB Ref 10.00 dBm Span 23.36 MHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 2.463 s (1001 pts)

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

11N40SISO/LCH	 Center Freq 2.422000000 GHz Mkr1 2.41948 GHz -19.273 dBm Center 2.42200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 52.85 MHz Sweep 5.593 s (1001 pts)
11N40SISO/MCH	 Center Freq 2.437000000 GHz Mkr1 2.43445 GHz -17.544 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 53.04 MHz Sweep 5.593 s (1001 pts)
11N40SISO/HCH	 Center Freq 2.452000000 GHz Mkr1 2.45544 GHz -20.518 dBm Center 2.45200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 53.00 MHz Sweep 5.588 s (1001 pts)

Appendix F): Antenna Requirement

15.203 requirement:

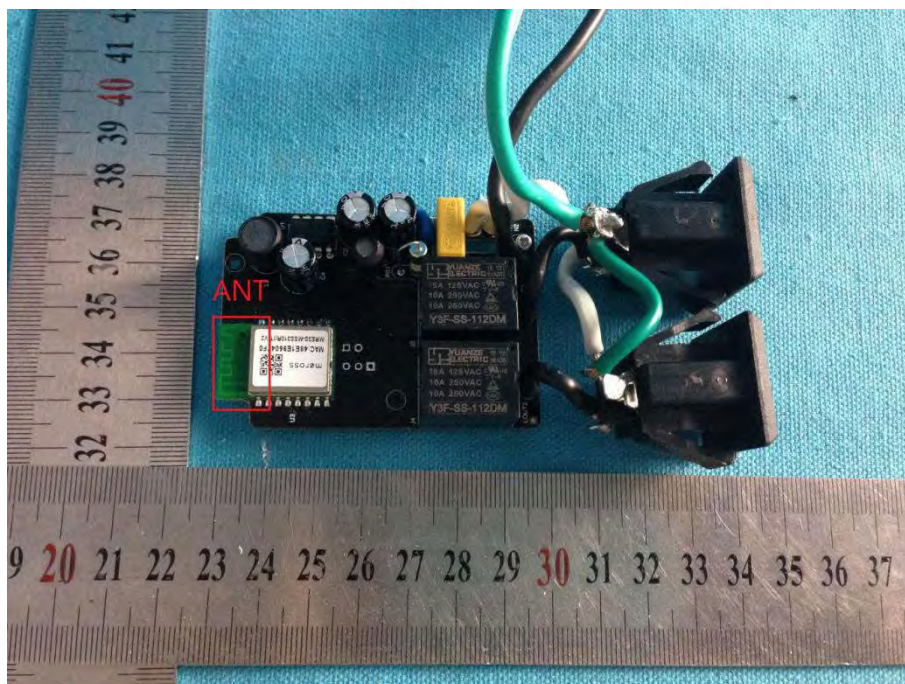
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit 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 1.5dBi.



Appendix G): AC Power Line Conducted Emission

Test Procedure:	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 $50\Omega/50\mu\text{H} + 5\Omega$ 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.															
Limit:	<table border="1"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBμV)</th></tr> <tr> <th>Quasi-peak</th><th>Average</th></tr> </thead> <tbody> <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> </tbody> </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		Frequency range (MHz)	Limit (dB μ V)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dB μ V)															
	Quasi-peak	Average														
0.15-0.5	66 to 56*	56 to 46*														
0.5-5	56	46														
5-30	60	50														

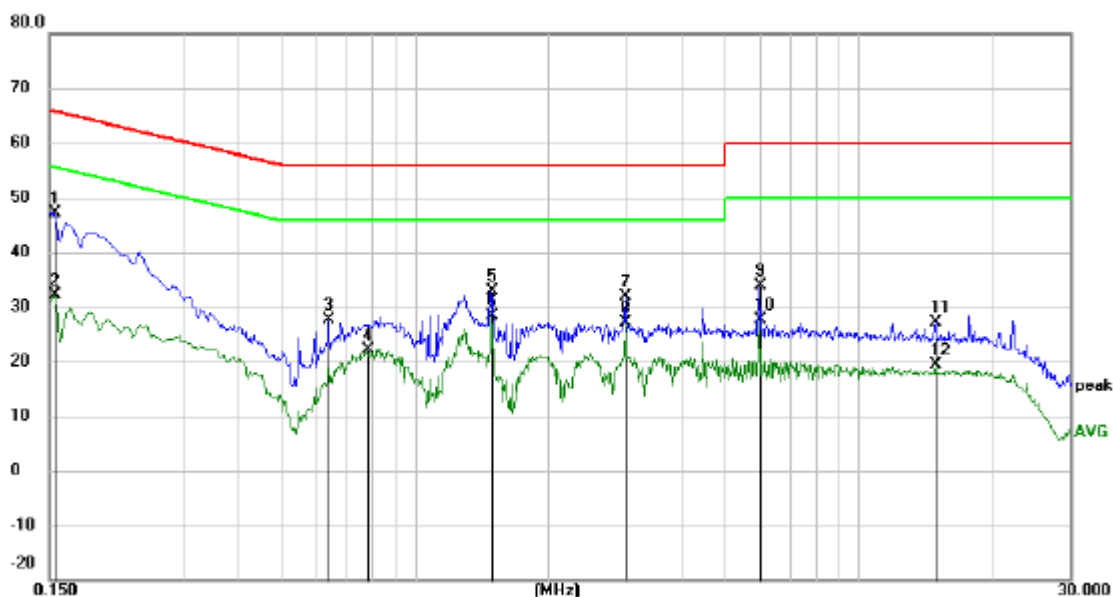
Measurement Data

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.

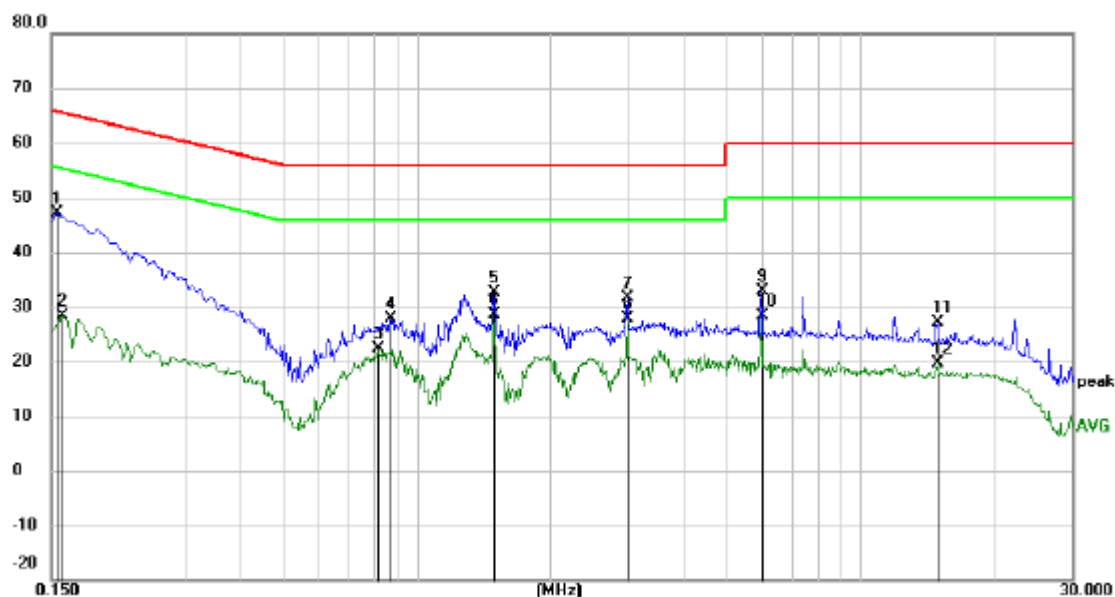
Product	: Smart Wi-Fi Outdoor Plug	Model/Type reference	: MSS620
Temperature	: 21°C	Humidity	: 51%

Live line:



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.1545	37.07	9.98	47.05	65.75	-18.70	peak	
2	0.1545	22.05	9.98	32.03	55.75	-23.72	AVG	
3	0.6405	17.69	9.93	27.62	56.00	-28.38	peak	
4	0.7799	12.19	9.86	22.05	46.00	-23.95	AVG	
5	1.4910	23.00	9.87	32.87	56.00	-23.13	peak	
6 *	1.4910	18.43	9.87	28.30	46.00	-17.70	AVG	
7	2.9849	21.95	9.83	31.78	56.00	-24.22	peak	
8	2.9849	17.21	9.83	27.04	46.00	-18.96	AVG	
9	5.9685	24.01	9.84	33.85	60.00	-26.15	peak	
10	5.9685	17.83	9.84	27.67	50.00	-22.33	AVG	
11	14.9415	17.27	9.98	27.25	60.00	-32.75	peak	
12	14.9415	9.52	9.98	19.50	50.00	-30.50	AVG	

Neutral line:



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1548	37.04	9.98	47.02	65.74	-18.72	peak	
2		0.1590	18.51	9.98	28.49	55.52	-27.03	AVG	
3		0.8205	12.42	9.91	22.33	46.00	-23.67	AVG	
4		0.8700	17.89	9.92	27.81	56.00	-28.19	peak	
5		1.4910	22.77	9.87	32.64	56.00	-23.36	peak	
6	*	1.4910	18.72	9.87	28.59	46.00	-17.41	AVG	
7		2.9849	21.91	9.83	31.74	56.00	-24.26	peak	
8		2.9849	18.15	9.83	27.98	46.00	-18.02	AVG	
9		5.9685	23.13	9.84	32.97	60.00	-27.03	peak	
10		5.9685	18.56	9.84	28.40	50.00	-21.60	AVG	
11		14.9325	17.22	9.98	27.20	60.00	-32.80	peak	
12		14.9325	9.64	9.98	19.62	50.00	-30.38	AVG	

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.

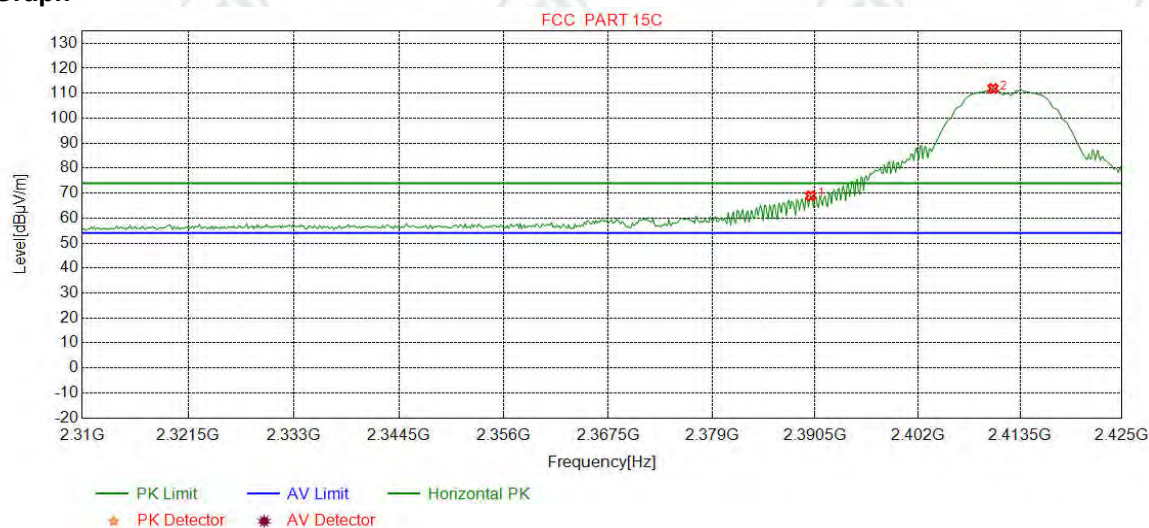
Appendix H): Restricted bands around fundamental frequency (Radiated)

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: Test method Refer as KDB 558074 D01 - The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. - The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. - 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. - 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. - The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. - 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: - 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). - Test the EUT in the lowest channel , the Highest channel - 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. - 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		

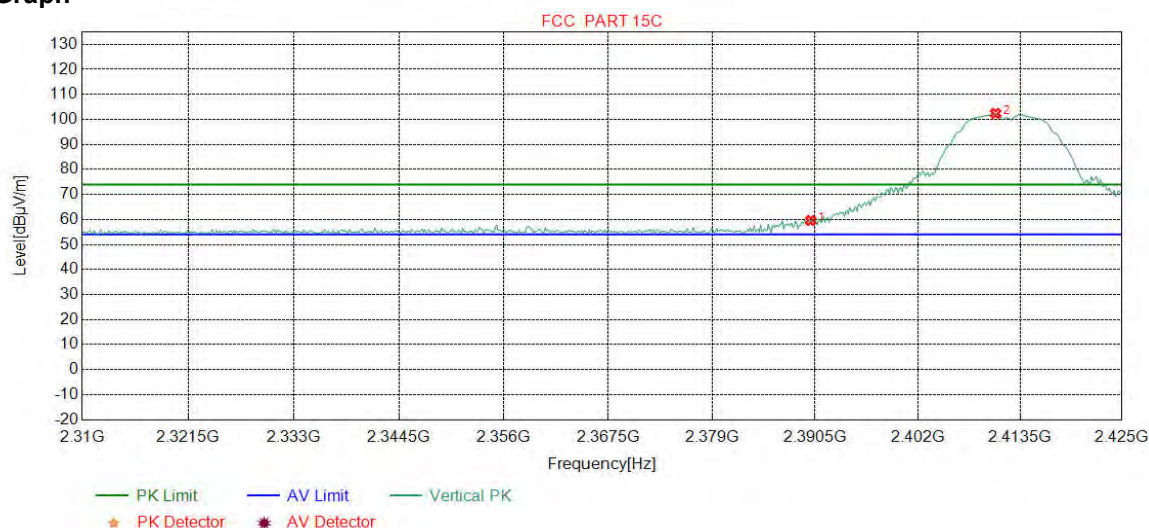
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	65.73	68.91	74.00	5.09	Pass	Horizontal
2	2410.4631	32.27	13.35	-42.43	108.72	111.91	74.00	-37.91	Pass	Horizontal

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

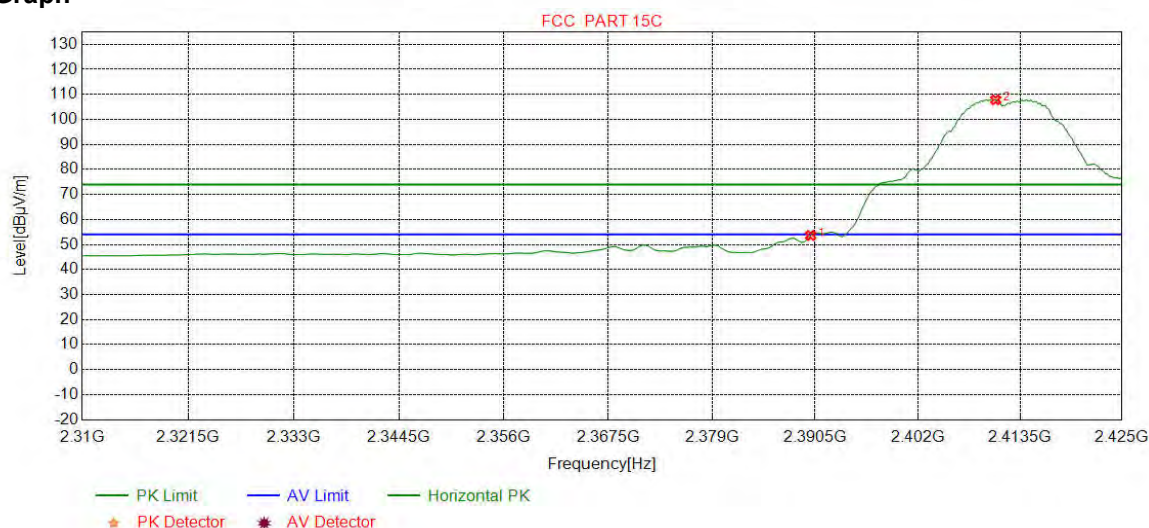
Test Graph



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	56.42	59.60	74.00	14.40	Pass	Vertical
2	2410.7509	32.28	13.35	-42.43	99.22	102.42	74.00	-28.42	Pass	Vertical

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

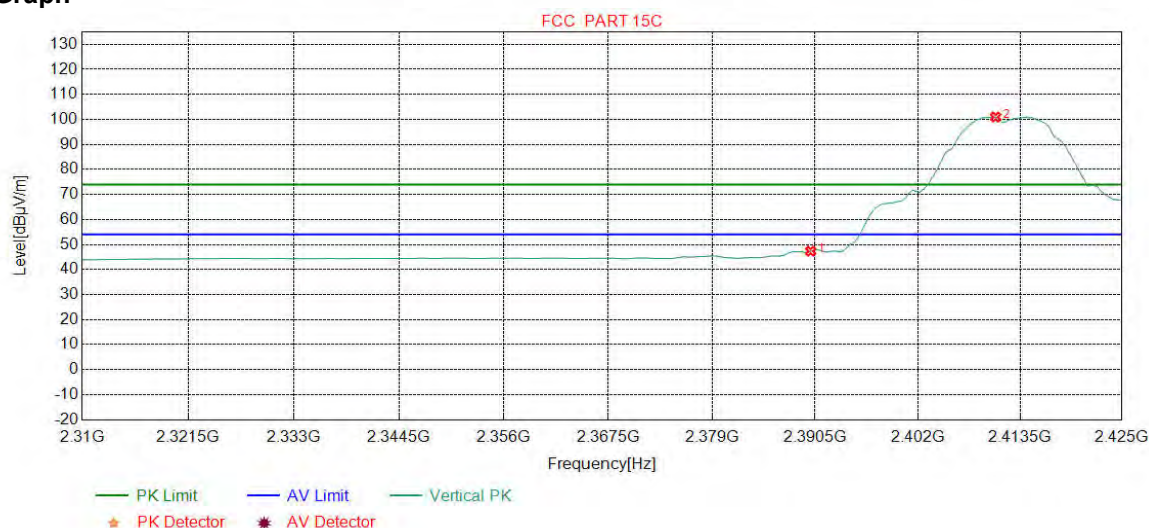
Test Graph



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	2390.0000	32.25	13.37	-42.44	50.44	53.62	54.00	0.38	Pass	Horizontal
2	2410.7509	32.28	13.35	-42.43	104.62	107.82	54.00	-53.82	Pass	Horizontal

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

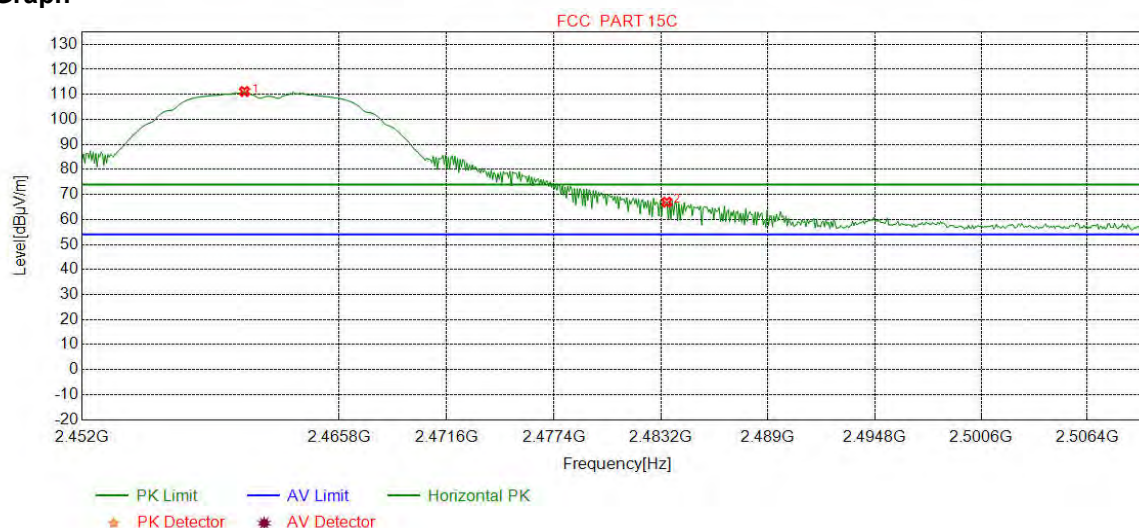
Test Graph



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	2390.0000	32.25	13.37	-42.44	44.16	47.34	54.00	6.66	Pass	Vertical
2	2410.7509	32.28	13.35	-42.43	97.75	100.95	54.00	-46.95	Pass	Vertical

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

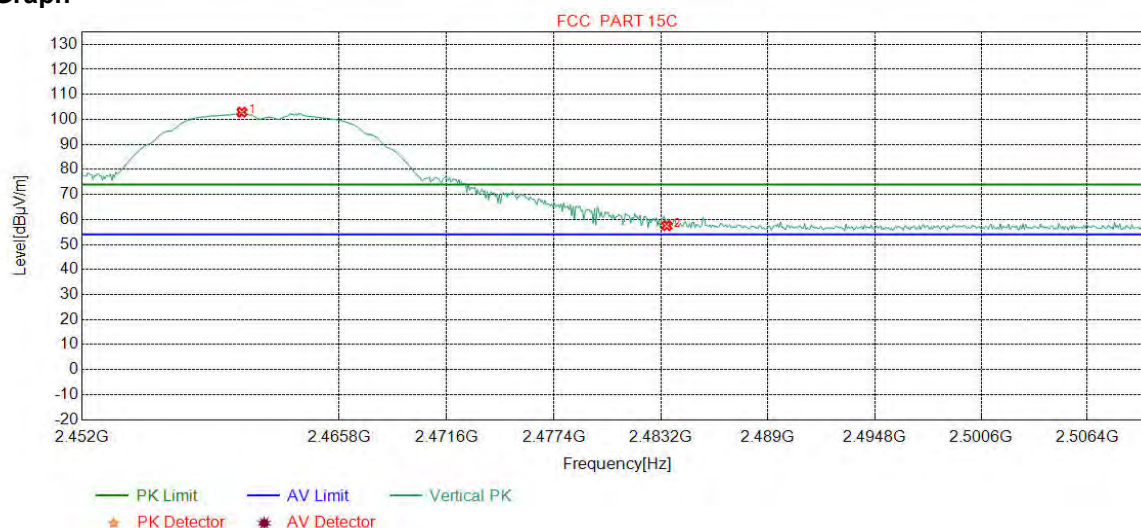
Test Graph



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	2460.7109	32.34	13.48	-42.40	107.74	111.16	74.00	-37.16	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	63.59	66.95	74.00	7.05	Pass	Horizontal

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

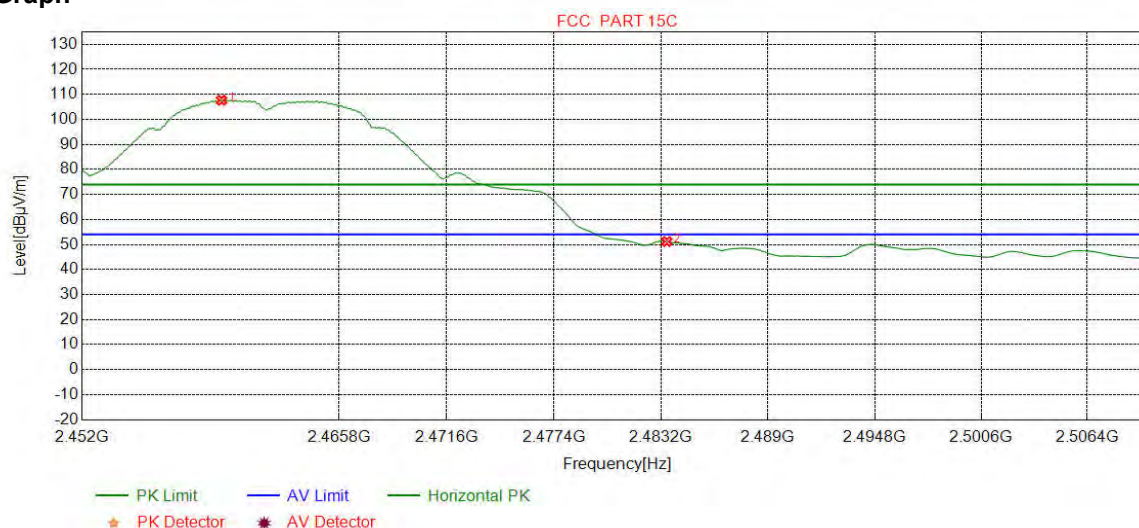
Test Graph



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	2460.5657	32.34	13.48	-42.40	99.46	102.88	74.00	-28.88	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	54.16	57.52	74.00	16.48	Pass	Vertical

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

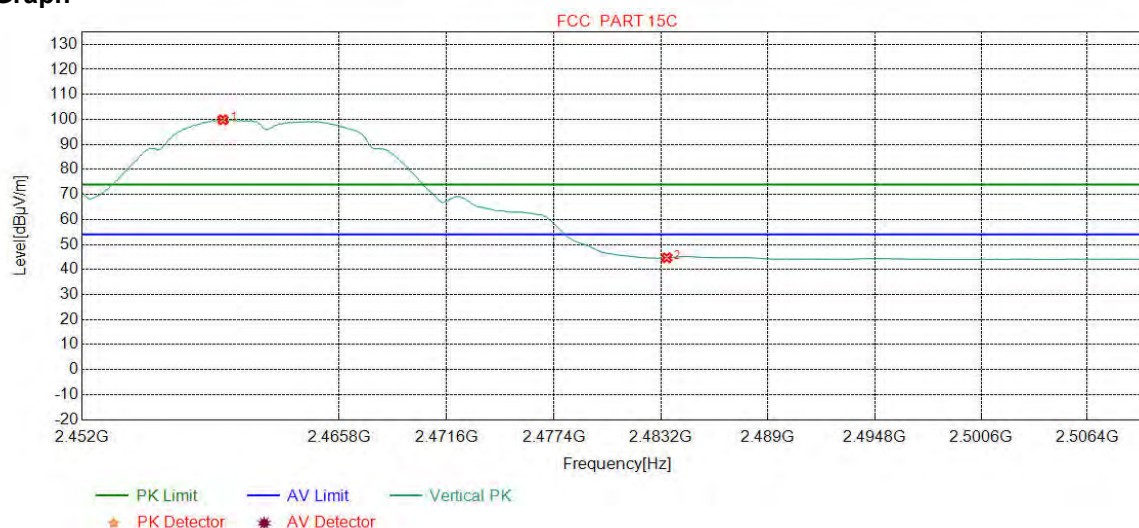
Test Graph



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	2459.4768	32.34	13.49	-42.41	104.24	107.66	54.00	-53.66	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	47.84	51.20	54.00	2.80	Pass	Horizontal

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

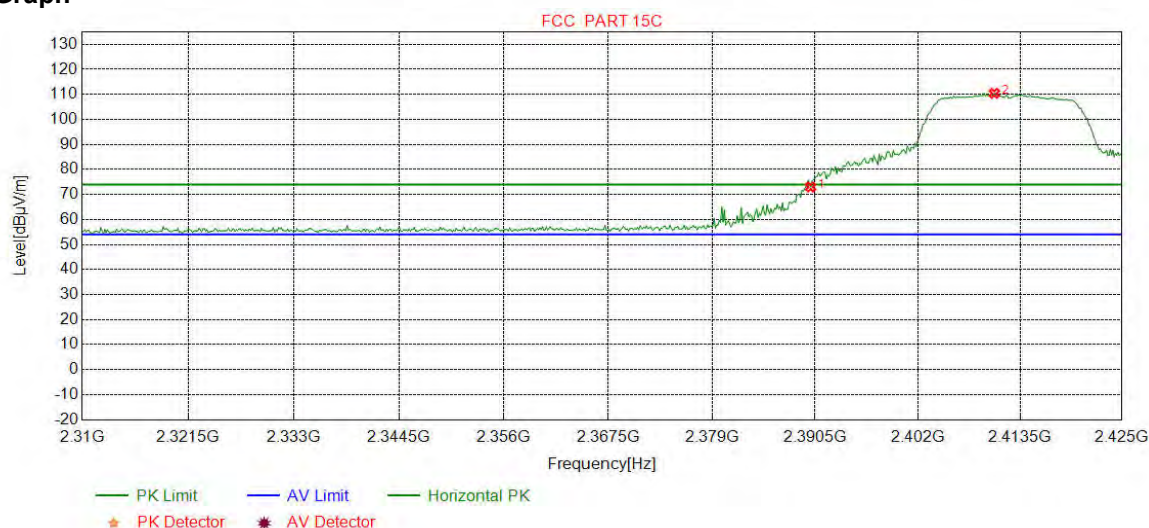
Test Graph



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	2459.5494	32.34	13.49	-42.41	96.41	99.83	54.00	-45.83	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	41.34	44.70	54.00	9.30	Pass	Vertical

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

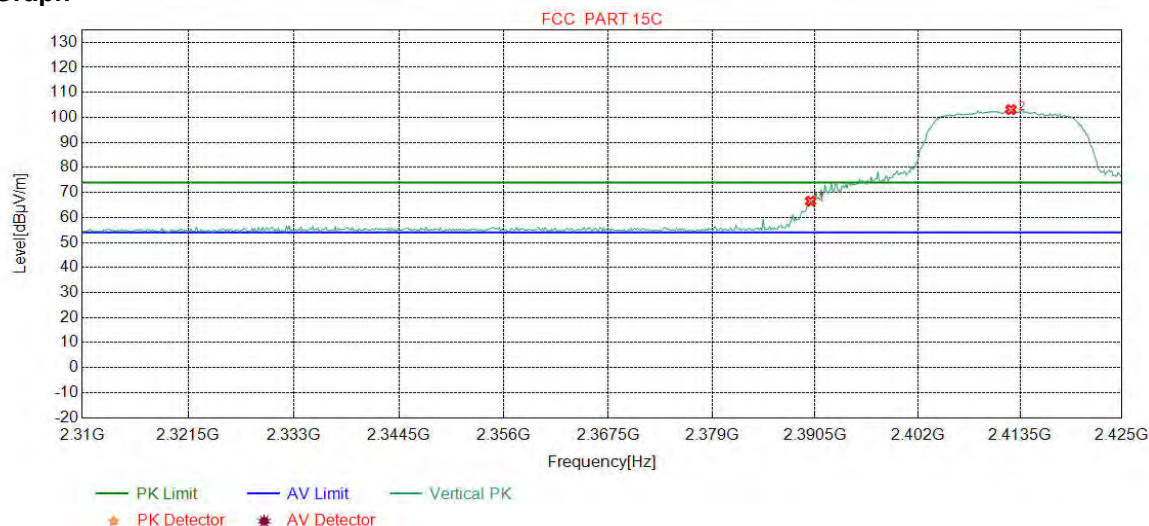
Test Graph



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	69.80	72.98	74.00	1.02	Pass	Horizontal
2	2410.6070	32.27	13.35	-42.43	107.24	110.43	74.00	-36.43	Pass	Horizontal

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

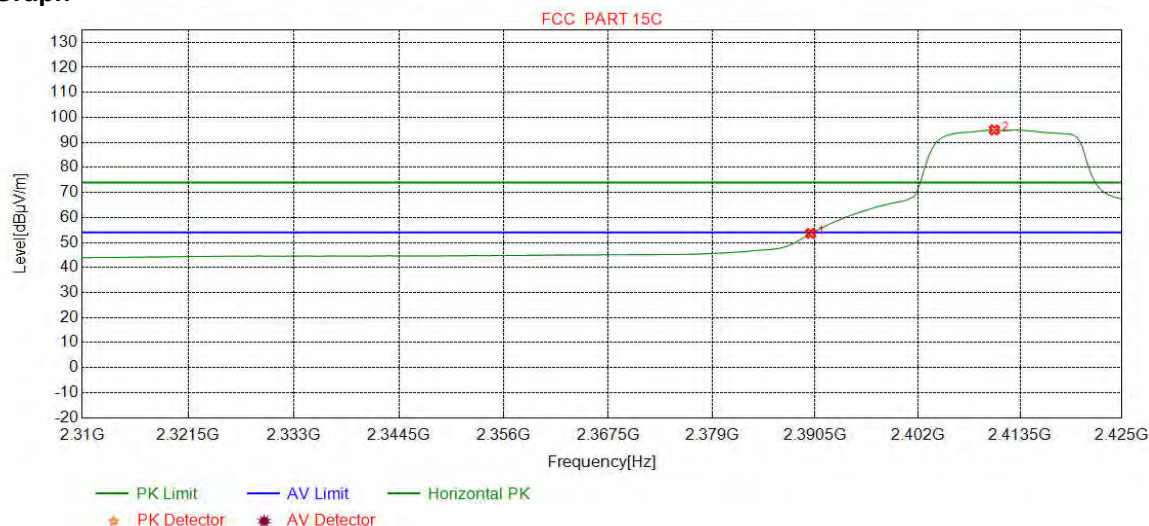
Test Graph



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	63.36	66.54	74.00	7.46	Pass	Vertical
2	2412.4781	32.28	13.36	-42.43	99.90	103.11	74.00	-29.11	Pass	Vertical

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

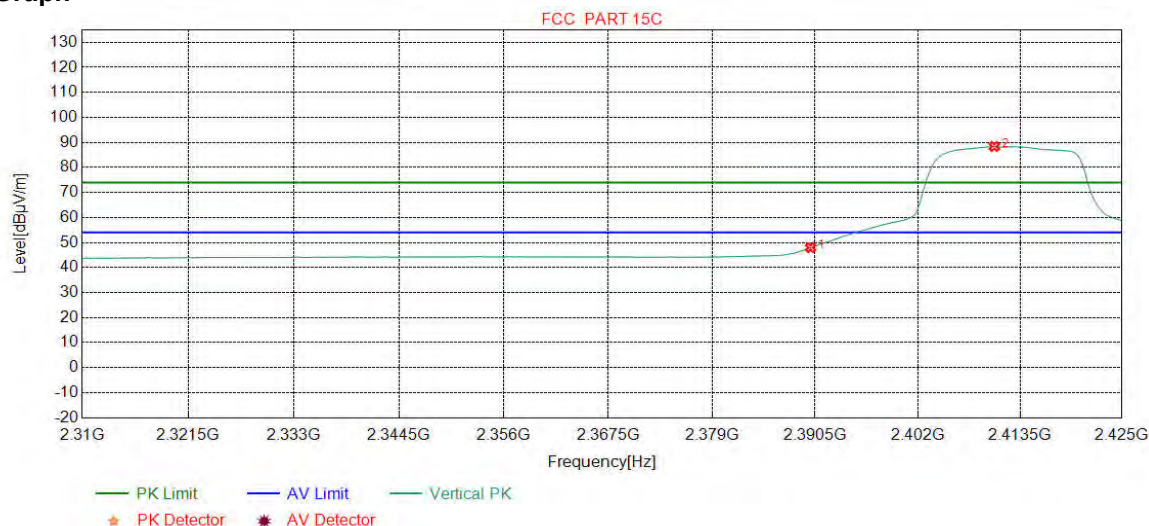
Test Graph



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	50.45	53.63	54.00	0.37	Pass	Horizontal
2	2410.6070	32.27	13.35	-42.43	91.81	95.00	54.00	-41.00	Pass	Horizontal

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

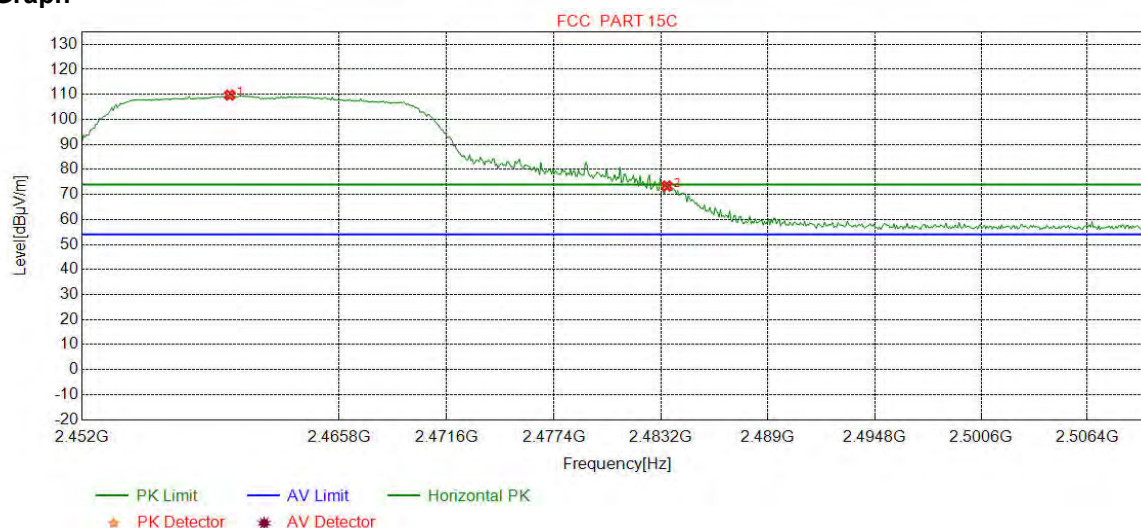
Test Graph



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	44.82	48.00	54.00	6.00	Pass	Vertical
2	2410.6070	32.27	13.35	-42.43	85.18	88.37	54.00	-34.37	Pass	Vertical

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

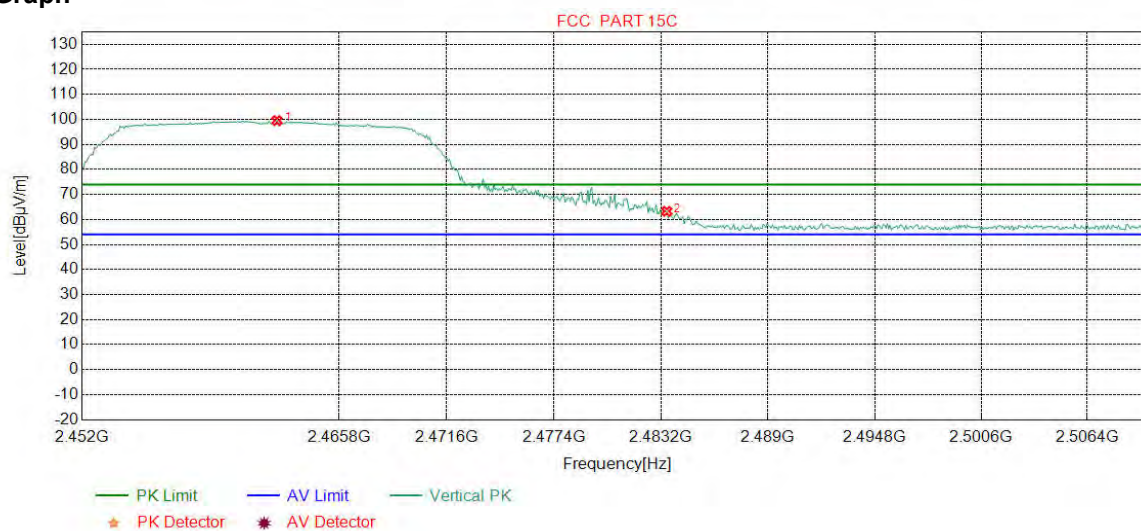
Test Graph



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	2459.9124	32.34	13.48	-42.40	106.31	109.73	74.00	-35.73	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	70.05	73.41	74.00	0.59	Pass	Horizontal

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

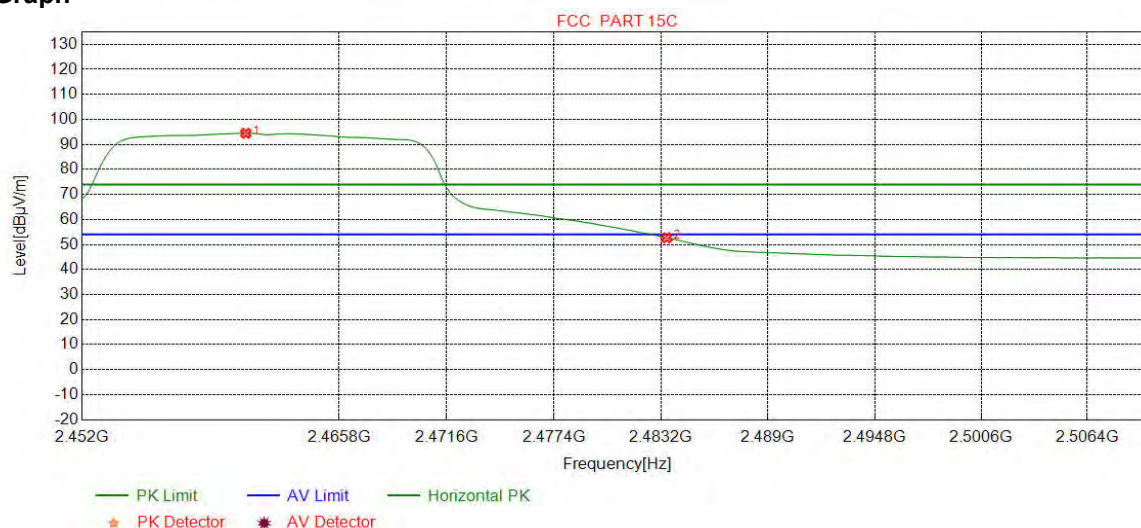
Test Graph



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	2462.4531	32.35	13.47	-42.41	96.12	99.53	74.00	-25.53	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	59.89	63.25	74.00	10.75	Pass	Vertical

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

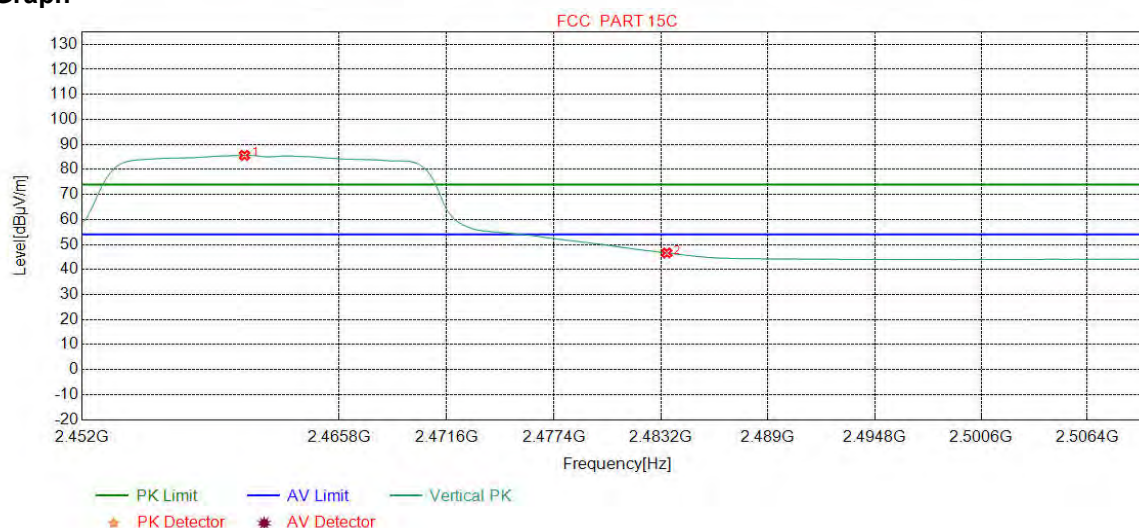
Test Graph



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	2460.7835	32.35	13.48	-42.41	91.04	94.46	54.00	-40.46	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	49.29	52.65	54.00	1.35	Pass	Horizontal

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

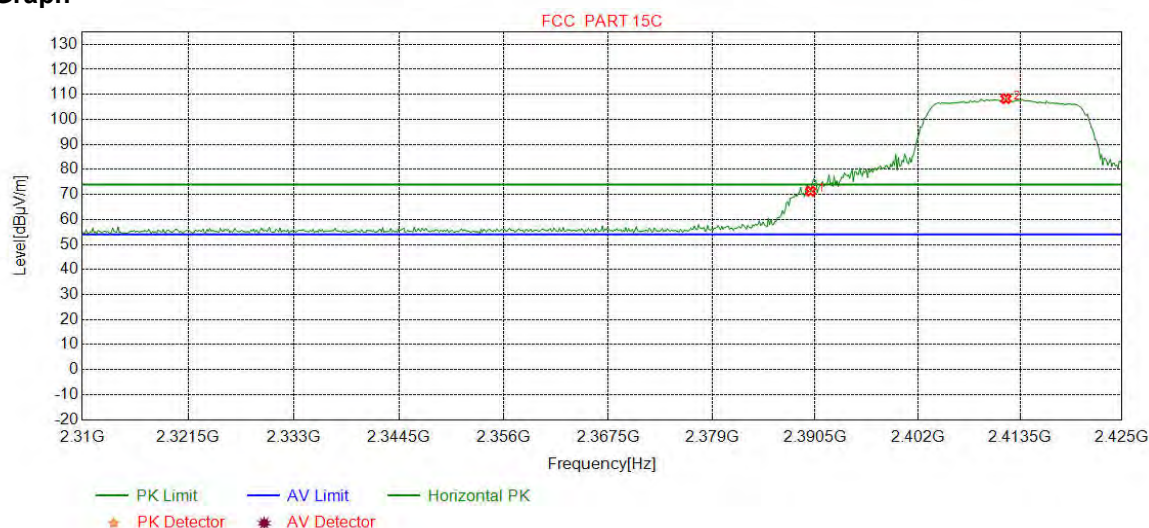
Test Graph



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	82.20	85.62	54.00	-31.62	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	43.24	46.60	54.00	7.40	Pass	Vertical

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

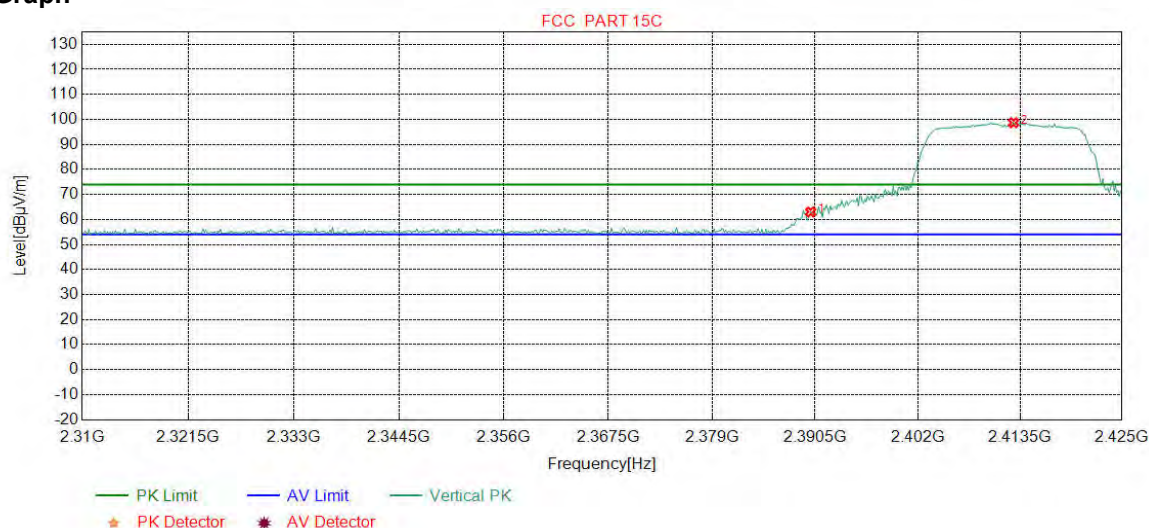
Test Graph



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	68.09	71.27	74.00	2.73	Pass	Horizontal
2	2411.9024	32.28	13.35	-42.43	105.12	108.32	74.00	-34.32	Pass	Horizontal

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

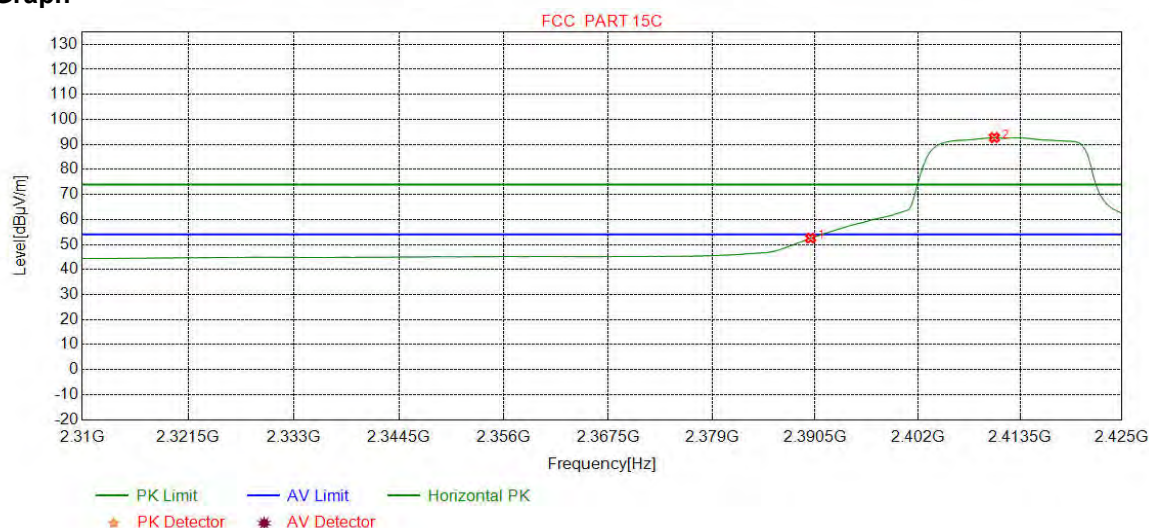
Test Graph



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	59.85	63.03	74.00	10.97	Pass	Vertical
2	2412.7660	32.28	13.36	-42.43	95.46	98.67	74.00	-24.67	Pass	Vertical

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

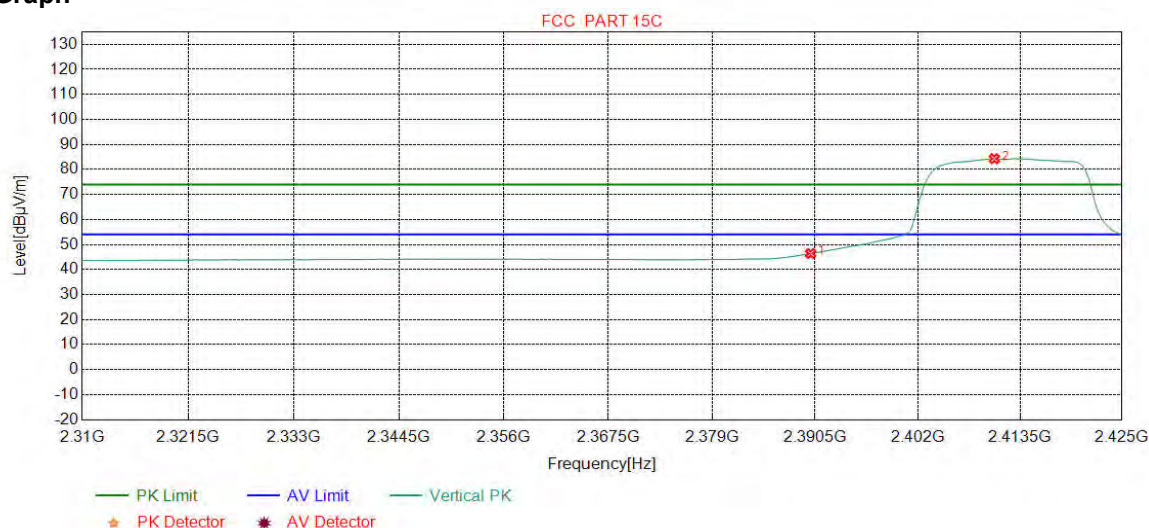
Test Graph



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	49.38	52.56	54.00	1.44	Pass	Horizontal
2	2410.6070	32.27	13.35	-42.43	89.53	92.72	54.00	-38.72	Pass	Horizontal

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

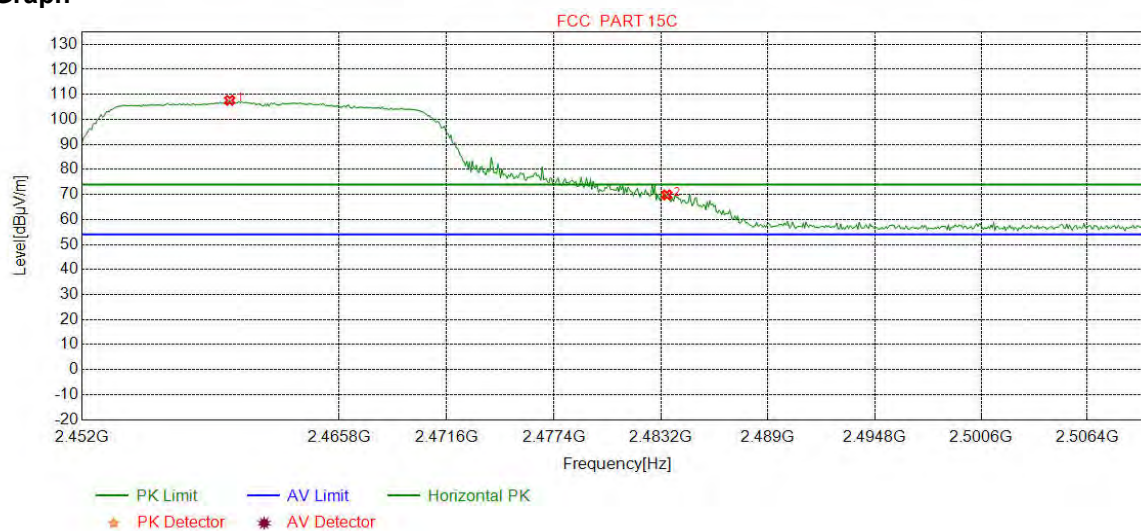
Test Graph



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	43.21	46.39	54.00	7.61	Pass	Vertical
2	2410.6070	32.27	13.35	-42.43	81.10	84.29	54.00	-30.29	Pass	Vertical

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

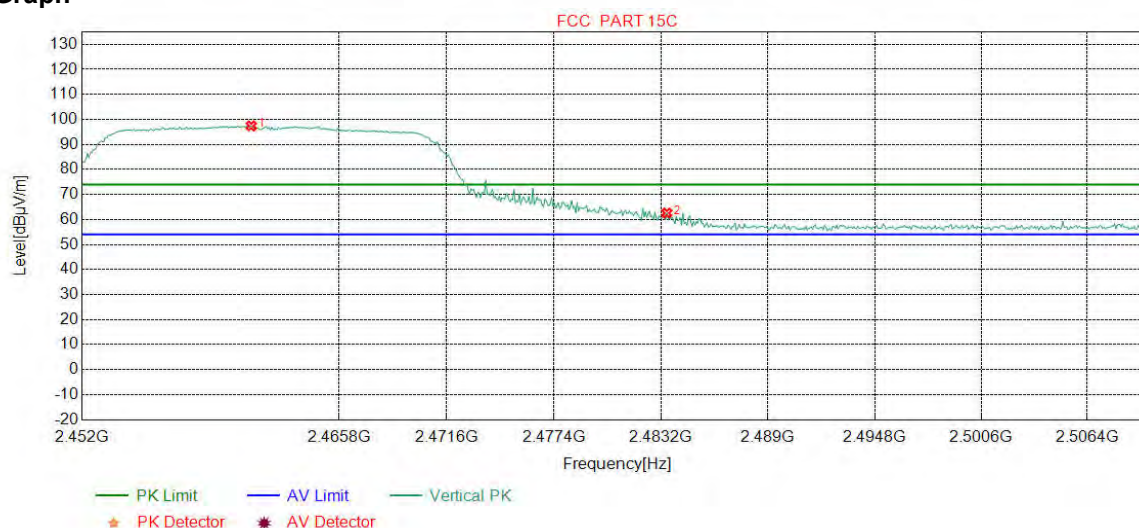
Test Graph



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	2459.9124	32.34	13.48	-42.40	104.19	107.61	74.00	-33.61	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	66.46	69.82	74.00	4.18	Pass	Horizontal

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

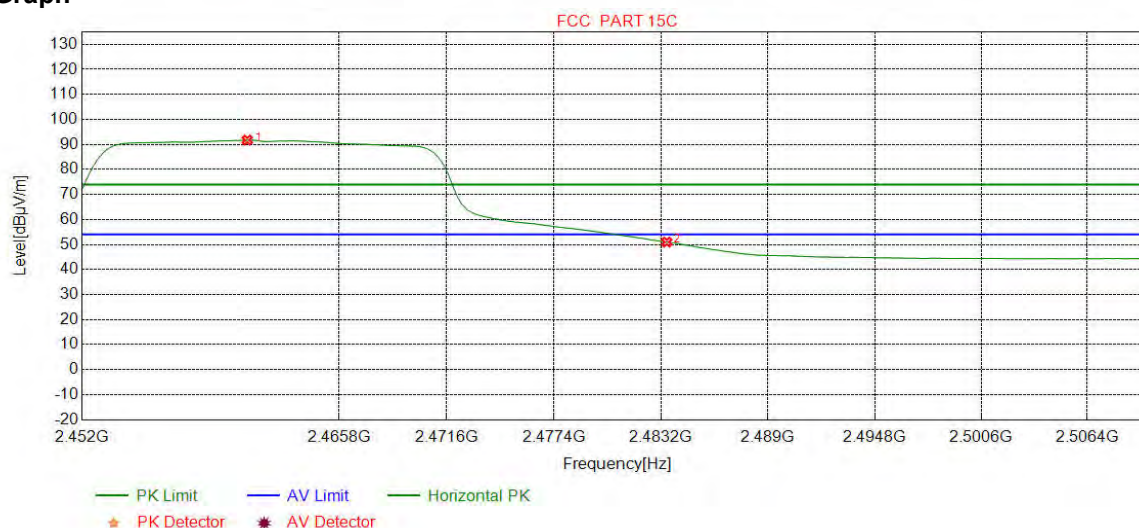
Test Graph



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	2461.0738	32.35	13.48	-42.41	93.99	97.41	74.00	-23.41	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	59.22	62.58	74.00	11.42	Pass	Vertical

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

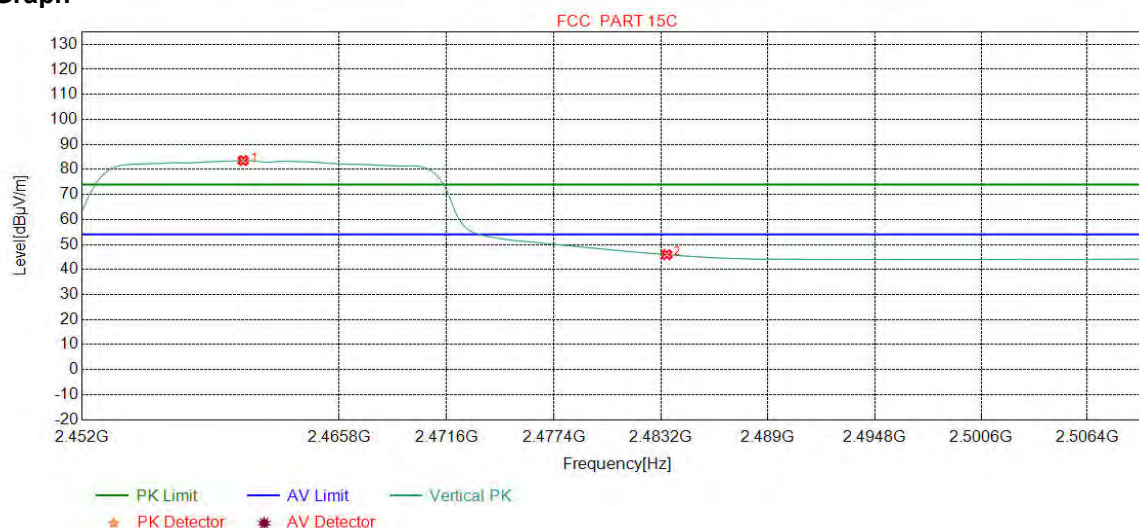
Test Graph



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	2460.8561	32.35	13.48	-42.41	88.30	91.72	54.00	-37.72	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	47.61	50.97	54.00	3.03	Pass	Horizontal

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

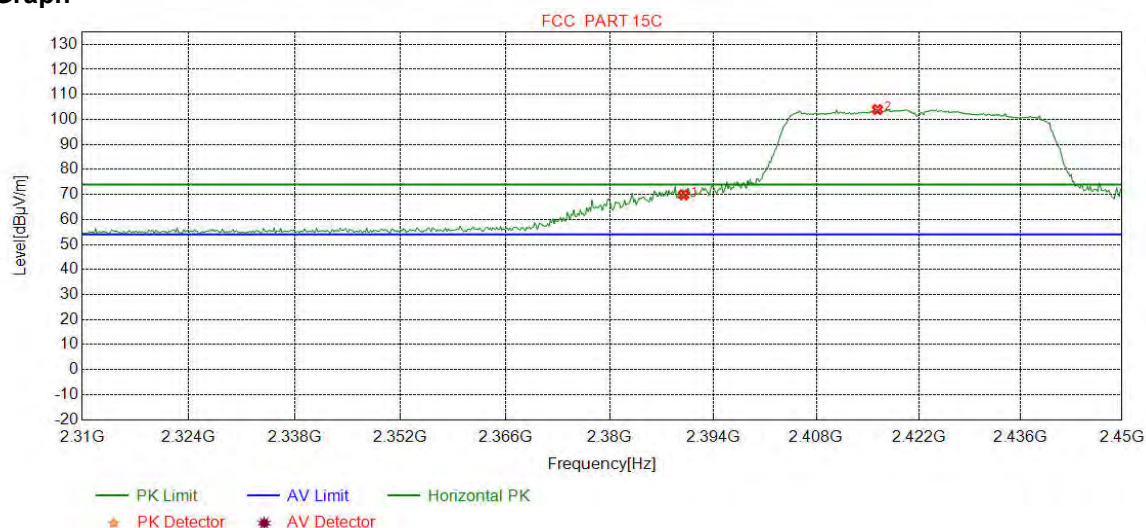
Test Graph



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	2460.6383	32.34	13.48	-42.40	80.12	83.54	54.00	-29.54	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	42.59	45.95	54.00	8.05	Pass	Vertical

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

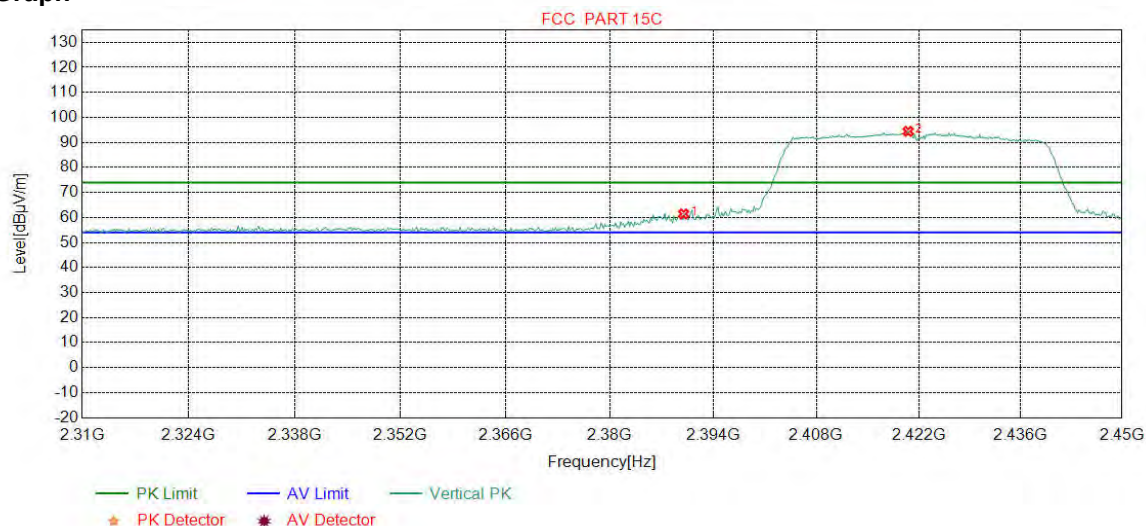
Test Graph



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	66.67	69.85	74.00	4.15	Pass	Horizontal
2	2416.3579	32.28	13.38	-42.43	100.72	103.95	74.00	-29.95	Pass	Horizontal

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

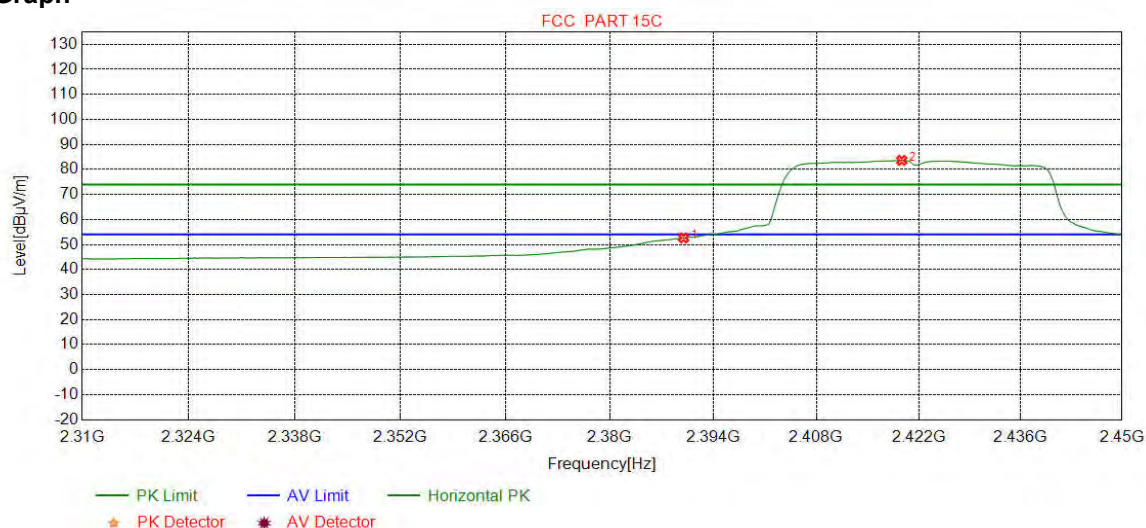
Test Graph



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	58.24	61.42	74.00	12.58	Pass	Vertical
2	2420.5632	32.29	13.39	-42.42	91.16	94.42	74.00	-20.42	Pass	Vertical

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

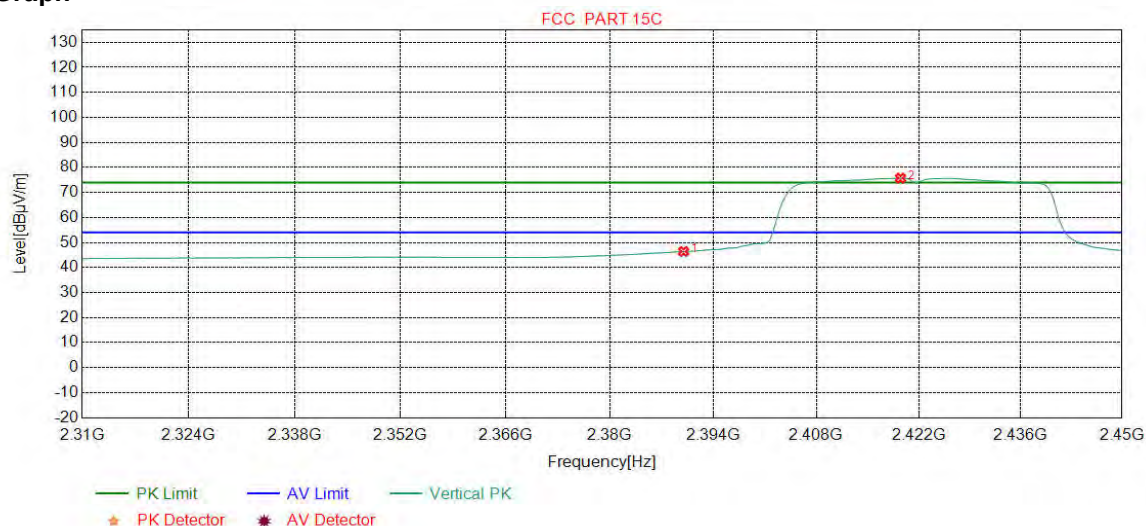
Test Graph



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	49.46	52.64	54.00	1.36	Pass	Horizontal
2	2419.6871	32.29	13.39	-42.43	80.37	83.62	54.00	-29.62	Pass	Horizontal

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

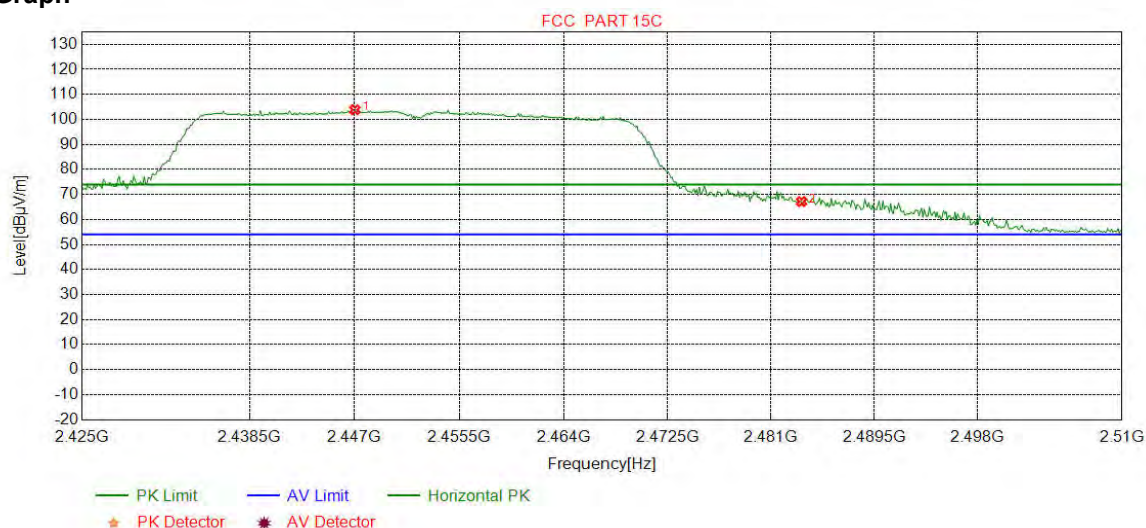
Test Graph



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	43.22	46.40	54.00	7.60	Pass	Vertical
2	2419.5119	32.29	13.39	-42.43	72.47	75.72	54.00	-21.72	Pass	Vertical

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

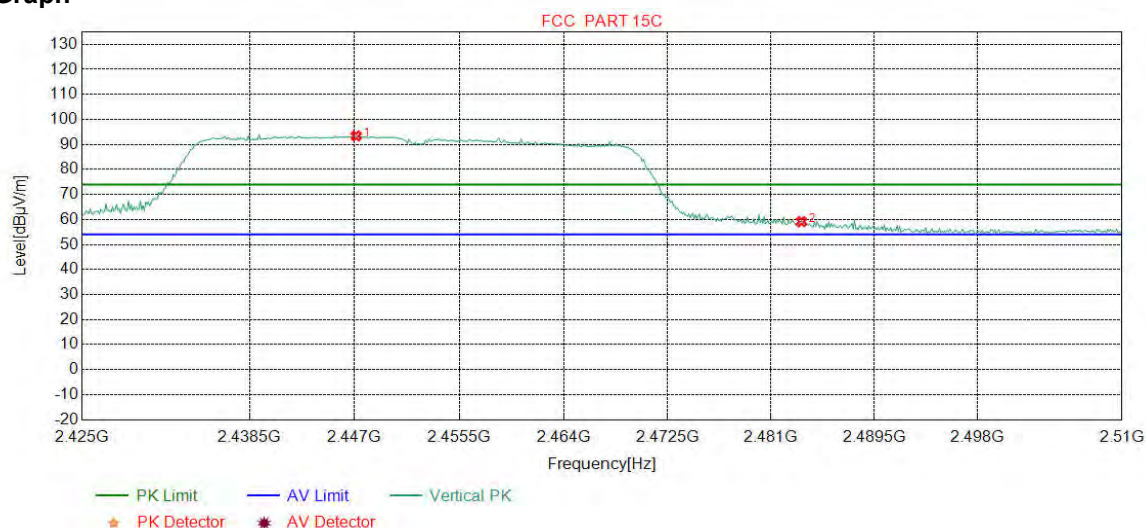
Test Graph



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	2447.0213	32.33	13.52	-42.42	100.42	103.85	74.00	-29.85	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	63.79	67.15	74.00	6.85	Pass	Horizontal

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

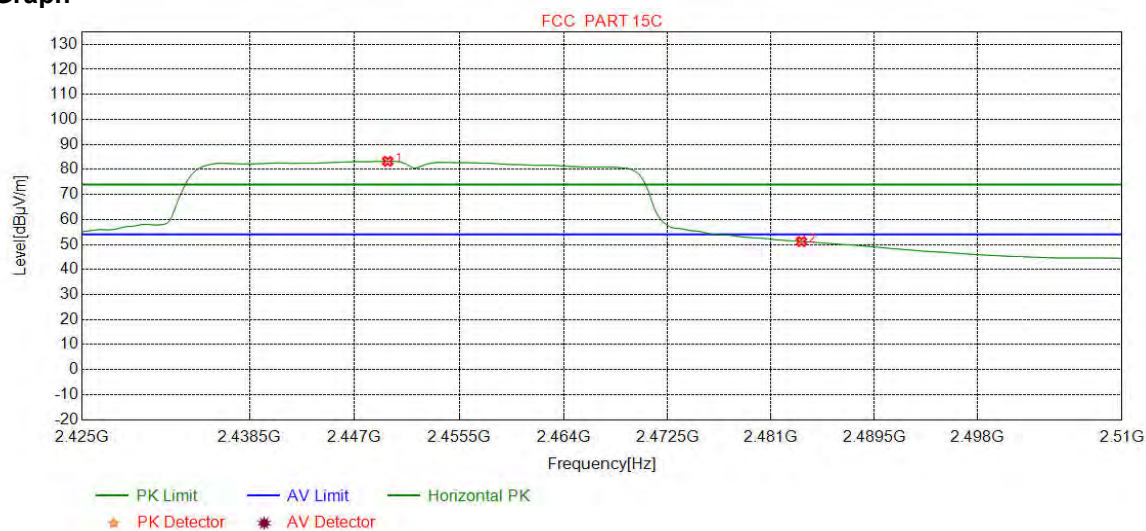
Test Graph



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	2447.1277	32.33	13.52	-42.42	89.95	93.38	74.00	-19.38	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	55.80	59.16	74.00	14.84	Pass	Vertical

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

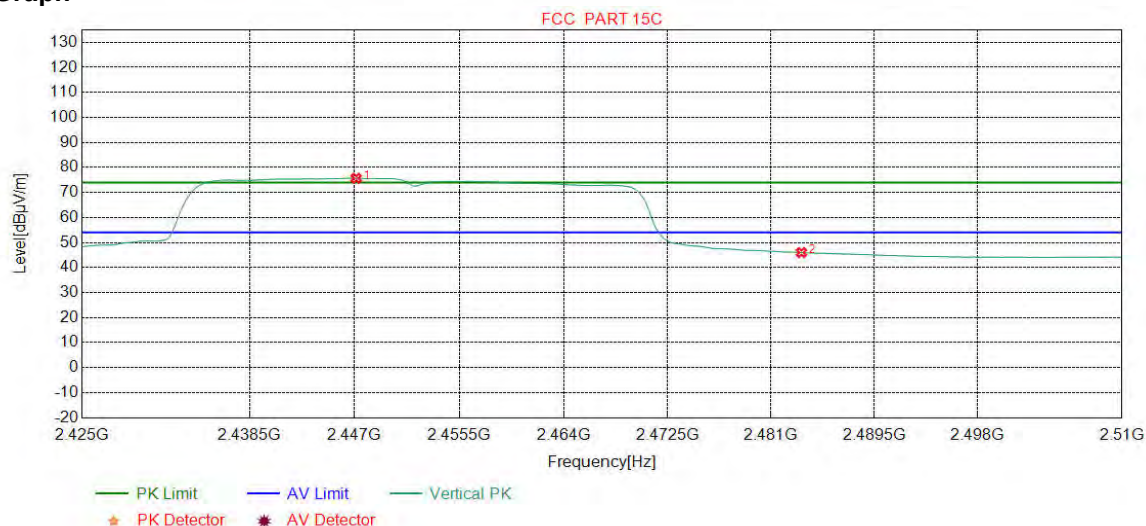
Test Graph



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	2449.6809	32.33	13.53	-42.41	79.79	83.24	54.00	-29.24	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	47.82	51.18	54.00	2.82	Pass	Horizontal

Mode:	802.11 n(HT40) (13.5Mbps) Transmitting	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	2447.1277	32.33	13.52	-42.42	72.24	75.67	54.00	-21.67	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	42.62	45.98	54.00	8.02	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; 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), 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:

Test method Refer as KDB 558074 D01

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. 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	Remark
1	36.8877	11.30	0.68	-32.11	55.34	35.21	40.00	4.79	Pass	H	PK
2	74.0424	8.23	1.00	-32.06	60.89	38.06	40.00	1.94	Pass	H	PK
3	201.6102	10.94	1.68	-31.94	57.10	37.78	43.50	5.72	Pass	H	PK
4	328.7899	13.83	2.16	-31.77	50.83	35.05	46.00	10.95	Pass	H	PK
5	649.9890	19.40	3.10	-32.07	39.10	29.53	46.00	16.47	Pass	H	PK
6	875.0515	21.80	3.55	-31.70	32.48	26.13	46.00	19.87	Pass	H	PK
7	36.6937	11.24	0.67	-32.11	55.35	35.15	40.00	4.85	Pass	V	PK
8	72.4902	8.53	0.98	-32.06	61.08	38.53	40.00	1.47	Pass	V	PK
9	127.2037	8.12	1.32	-32.03	60.76	38.17	43.50	5.33	Pass	V	PK
10	210.7291	11.18	1.72	-31.95	56.64	37.59	43.50	5.91	Pass	V	PK
11	329.8570	13.86	2.16	-31.76	51.13	35.39	46.00	10.61	Pass	V	PK
12	480.0280	16.68	2.61	-31.90	43.75	31.14	46.00	14.86	Pass	V	PK

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	Remark
1	36.8877	11.30	0.68	-32.11	55.67	35.54	40.00	4.46	Pass	H	PK
2	53.1853	12.69	0.83	-32.10	55.31	36.73	40.00	3.27	Pass	H	PK
3	72.3932	8.55	0.98	-32.06	61.02	38.49	40.00	1.51	Pass	H	PK
4	143.9864	7.34	1.41	-31.99	61.48	38.24	43.50	5.26	Pass	H	PK
5	209.6620	11.15	1.72	-31.95	59.74	40.66	43.50	2.84	Pass	H	PK
6	330.6331	13.87	2.16	-31.76	51.54	35.81	46.00	10.19	Pass	H	PK
7	36.7907	11.27	0.68	-32.12	52.82	32.65	40.00	7.35	Pass	V	PK
8	67.8338	9.56	0.94	-32.05	57.80	36.25	40.00	3.75	Pass	V	PK
9	76.7587	7.72	1.02	-32.07	60.19	36.86	40.00	3.14	Pass	V	PK
10	124.8755	8.47	1.31	-32.04	58.92	36.66	43.50	6.84	Pass	V	PK
11	220.4300	11.43	1.77	-31.95	57.58	38.83	46.00	7.17	Pass	V	PK
12	276.3076	12.73	1.98	-31.92	52.06	34.85	46.00	11.15	Pass	V	PK

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	Remark
1	36.8877	11.30	0.68	-32.11	55.46	35.33	40.00	4.67	Pass	H	PK
2	51.5362	12.95	0.81	-32.10	54.88	36.54	40.00	3.46	Pass	H	PK
3	76.6617	7.73	1.02	-32.06	62.04	38.73	40.00	1.27	Pass	H	PK
4	125.2635	8.41	1.32	-32.05	58.15	35.83	43.50	7.67	Pass	H	PK
5	218.5869	11.38	1.76	-31.94	58.51	39.71	46.00	6.29	Pass	H	PK
6	275.3375	12.71	1.98	-31.91	53.39	36.17	46.00	9.83	Pass	H	PK
7	36.6937	11.24	0.67	-32.11	52.75	32.55	40.00	7.45	Pass	V	PK
8	76.5647	7.75	1.02	-32.06	60.93	37.64	40.00	2.36	Pass	V	PK
9	125.2635	8.41	1.32	-32.05	58.94	36.62	43.50	6.88	Pass	V	PK
10	216.7437	11.34	1.75	-31.95	58.57	39.71	46.00	6.29	Pass	V	PK
11	338.8789	14.06	2.20	-31.83	49.75	34.18	46.00	11.82	Pass	V	PK
12	480.0280	16.68	2.61	-31.90	41.99	29.38	46.00	16.62	Pass	V	PK

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	Remark
1	36.6937	11.24	0.67	-32.11	53.87	33.67	40.00	6.33	Pass	H	PK
2	54.6405	12.46	0.84	-32.09	51.42	32.63	40.00	7.37	Pass	H	PK
3	73.8484	8.27	1.00	-32.06	59.47	36.68	40.00	3.32	Pass	H	PK
4	143.9864	7.34	1.41	-31.99	58.94	35.70	43.50	7.80	Pass	H	PK
5	203.8414	11.00	1.69	-31.94	54.91	35.66	43.50	7.84	Pass	H	PK
6	316.0816	13.55	2.11	-31.86	45.17	28.97	46.00	17.03	Pass	H	PK
7	36.6937	11.24	0.67	-32.11	55.36	35.16	40.00	4.84	Pass	V	PK
8	63.4683	10.70	0.91	-32.04	54.72	34.29	40.00	5.71	Pass	V	PK
9	73.8484	8.27	1.00	-32.06	60.15	37.36	40.00	2.64	Pass	V	PK
10	143.9864	7.34	1.41	-31.99	60.34	37.10	43.50	6.40	Pass	V	PK
11	217.1317	11.35	1.76	-31.96	58.25	39.40	46.00	6.60	Pass	V	PK
12	282.2252	12.84	2.00	-31.92	50.35	33.27	46.00	12.73	Pass	V	PK

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	Remark
1	36.6937	11.24	0.67	-32.11	53.91	33.71	40.00	6.29	Pass	H	PK
2	54.6405	12.46	0.84	-32.09	52.36	33.57	40.00	6.43	Pass	H	PK
3	73.8484	8.27	1.00	-32.06	58.54	35.75	40.00	4.25	Pass	H	PK
4	143.9864	7.34	1.41	-31.99	59.25	36.01	43.50	7.49	Pass	H	PK
5	211.5052	11.20	1.73	-31.95	56.16	37.14	43.50	6.36	Pass	H	PK
6	319.1859	13.62	2.12	-31.84	46.38	30.28	46.00	15.72	Pass	H	PK
7	36.9847	11.34	0.68	-32.12	51.82	31.72	40.00	8.28	Pass	V	PK
8	73.8484	8.27	1.00	-32.06	59.49	36.70	40.00	3.30	Pass	V	PK
9	143.9864	7.34	1.41	-31.99	58.95	35.71	43.50	7.79	Pass	V	PK
10	224.8925	11.55	1.78	-31.93	55.60	37.00	46.00	9.00	Pass	V	PK
11	312.1042	13.47	2.10	-31.89	47.04	30.72	46.00	15.28	Pass	V	PK
12	444.0374	16.10	2.49	-31.88	46.35	33.06	46.00	12.94	Pass	V	PK

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	Remark
1	36.6937	11.24	0.67	-32.11	55.82	35.62	40.00	4.38	Pass	H	PK
2	54.6405	12.46	0.84	-32.09	53.49	34.70	40.00	5.30	Pass	H	PK
3	73.8484	8.27	1.00	-32.06	60.67	37.88	40.00	2.12	Pass	H	PK
4	143.9864	7.34	1.41	-31.99	60.70	37.46	43.50	6.04	Pass	H	PK
5	218.4898	11.38	1.76	-31.95	56.99	38.18	46.00	7.82	Pass	H	PK
6	320.6411	13.65	2.12	-31.82	48.50	32.45	46.00	13.55	Pass	H	PK
7	36.6937	11.24	0.67	-32.11	54.15	33.95	40.00	6.05	Pass	V	PK
8	73.8484	8.27	1.00	-32.06	60.36	37.57	40.00	2.43	Pass	V	PK
9	143.9864	7.34	1.41	-31.99	60.00	36.76	43.50	6.74	Pass	V	PK
10	220.5271	11.43	1.77	-31.94	57.92	39.18	46.00	6.82	Pass	V	PK
11	282.2252	12.84	2.00	-31.92	49.21	32.13	46.00	13.87	Pass	V	PK
12	324.3274	13.74	2.14	-31.81	47.04	31.11	46.00	14.89	Pass	V	PK

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	Remark
1	36.5967	11.21	0.67	-32.11	53.20	32.97	40.00	7.03	Pass	H	PK
2	54.6405	12.46	0.84	-32.09	51.78	32.99	40.00	7.01	Pass	H	PK
3	73.8484	8.27	1.00	-32.06	59.01	36.22	40.00	3.78	Pass	H	PK
4	143.9864	7.34	1.41	-31.99	58.87	35.63	43.50	7.87	Pass	H	PK
5	211.4081	11.20	1.73	-31.96	55.05	36.02	43.50	7.48	Pass	H	PK
6	334.0284	13.95	2.18	-31.79	44.53	28.87	46.00	17.13	Pass	H	PK
7	36.6937	11.24	0.67	-32.11	53.79	33.59	40.00	6.41	Pass	V	PK
8	78.3108	7.42	1.03	-32.07	60.93	37.31	40.00	2.69	Pass	V	PK
9	143.9864	7.34	1.41	-31.99	59.18	35.94	43.50	7.56	Pass	V	PK
10	219.5570	11.41	1.77	-31.95	55.75	36.98	46.00	9.02	Pass	V	PK
11	281.6432	12.83	2.00	-31.92	48.88	31.79	46.00	14.21	Pass	V	PK
12	319.1859	13.62	2.12	-31.84	45.33	29.23	46.00	16.77	Pass	V	PK

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	Remark
1	36.6937	11.24	0.67	-32.11	55.11	34.91	40.00	5.09	Pass	H	PK
2	54.6405	12.46	0.84	-32.09	51.39	32.60	40.00	7.40	Pass	H	PK
3	73.8484	8.27	1.00	-32.06	59.06	36.27	40.00	3.73	Pass	H	PK
4	143.9864	7.34	1.41	-31.99	59.32	36.08	43.50	7.42	Pass	H	PK
5	214.3184	11.27	1.74	-31.95	54.08	35.14	43.50	8.36	Pass	H	PK
6	310.2610	13.43	2.09	-31.90	47.31	30.93	46.00	15.07	Pass	H	PK
7	36.6937	11.24	0.67	-32.11	53.33	33.13	40.00	6.87	Pass	V	PK
8	73.8484	8.27	1.00	-32.06	59.89	37.10	40.00	2.90	Pass	V	PK
9	96.0636	10.37	1.13	-32.07	57.16	36.59	43.50	6.91	Pass	V	PK
10	143.9864	7.34	1.41	-31.99	59.14	35.90	43.50	7.60	Pass	V	PK
11	219.1689	11.40	1.77	-31.96	56.37	37.58	46.00	8.42	Pass	V	PK
12	276.3076	12.73	1.98	-31.92	49.06	31.85	46.00	14.15	Pass	V	PK

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	Remark
1	36.6937	11.24	0.67	-32.11	54.80	34.60	40.00	5.40	Pass	H	PK
2	54.6405	12.46	0.84	-32.09	51.85	33.06	40.00	6.94	Pass	H	PK
3	73.8484	8.27	1.00	-32.06	60.34	37.55	40.00	2.45	Pass	H	PK
4	143.9864	7.34	1.41	-31.99	60.27	37.03	43.50	6.47	Pass	H	PK
5	204.0354	11.00	1.69	-31.94	56.37	37.12	43.50	6.38	Pass	H	PK
6	276.3076	12.73	1.98	-31.92	48.68	31.47	46.00	14.53	Pass	H	PK
7	36.5967	11.21	0.67	-32.11	53.68	33.45	40.00	6.55	Pass	V	PK
8	59.1029	11.74	0.89	-32.04	53.19	33.78	40.00	6.22	Pass	V	PK
9	73.8484	8.27	1.00	-32.06	60.54	37.75	40.00	2.25	Pass	V	PK
10	125.5546	8.37	1.32	-32.05	59.80	37.44	43.50	6.06	Pass	V	PK
11	217.7138	11.36	1.76	-31.95	56.85	38.02	46.00	7.98	Pass	V	PK
12	280.6731	12.81	1.99	-31.92	49.05	31.93	46.00	14.07	Pass	V	PK

Mode:		802.11 n(HT40) (13.5Mbps) Transmitting						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	Remark
1	36.6937	11.24	0.67	-32.11	54.59	34.39	40.00	5.61	Pass	H	PK
2	59.1029	11.74	0.89	-32.04	54.05	34.64	40.00	5.36	Pass	H	PK
3	73.9454	8.25	1.00	-32.06	59.55	36.74	40.00	3.26	Pass	H	PK
4	143.9864	7.34	1.41	-31.99	60.44	37.20	43.50	6.30	Pass	H	PK
5	199.8640	10.89	1.67	-31.94	56.36	36.98	43.50	6.52	Pass	H	PK
6	320.8351	13.66	2.12	-31.82	46.23	30.19	46.00	15.81	Pass	H	PK
7	36.6937	11.24	0.67	-32.11	54.08	33.88	40.00	6.12	Pass	V	PK
8	73.9454	8.25	1.00	-32.06	60.25	37.44	40.00	2.56	Pass	V	PK
9	124.0994	8.59	1.31	-32.05	58.45	36.30	43.50	7.20	Pass	V	PK
10	217.7138	11.36	1.76	-31.95	56.15	37.32	46.00	8.68	Pass	V	PK
11	287.1727	12.94	2.02	-31.89	49.00	32.07	46.00	13.93	Pass	V	PK
12	319.0889	13.62	2.12	-31.84	46.89	30.79	46.00	15.21	Pass	V	PK

Mode:		802.11 n(HT40) (13.5Mbps) 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	Remark
1	36.6937	11.24	0.67	-32.11	55.77	35.57	40.00	4.43	Pass	H	PK
2	65.0205	10.29	0.92	-32.04	56.96	36.13	40.00	3.87	Pass	H	PK
3	73.9454	8.25	1.00	-32.06	59.16	36.35	40.00	3.65	Pass	H	PK
4	143.9864	7.34	1.41	-31.99	60.30	37.06	43.50	6.44	Pass	H	PK
5	211.8932	11.21	1.73	-31.95	55.64	36.63	43.50	6.87	Pass	H	PK
6	320.7381	13.66	2.12	-31.83	46.63	30.58	46.00	15.42	Pass	H	PK
7	36.6937	11.24	0.67	-32.11	53.88	33.68	40.00	6.32	Pass	V	PK
8	44.4544	13.10	0.75	-32.12	48.88	30.61	40.00	9.39	Pass	V	PK
9	73.8484	8.27	1.00	-32.06	60.65	37.86	40.00	2.14	Pass	V	PK
10	125.6516	8.35	1.32	-32.04	59.44	37.07	43.50	6.43	Pass	V	PK
11	226.1536	11.58	1.78	-31.92	58.07	39.51	46.00	6.49	Pass	V	PK
12	273.4943	12.67	1.97	-31.90	48.65	31.39	46.00	14.61	Pass	V	PK

Mode:		802.11 n(HT40) (13.5Mbps) Transmitting						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	Remark
1	36.6937	11.24	0.67	-32.11	56.15	35.95	40.00	4.05	Pass	H	PK
2	73.9454	8.25	1.00	-32.06	59.40	36.59	40.00	3.41	Pass	H	PK
3	143.9864	7.34	1.41	-31.99	59.68	36.44	43.50	7.06	Pass	H	PK
4	214.5125	11.28	1.74	-31.95	56.01	37.08	43.50	6.42	Pass	H	PK
5	266.2186	12.52	1.94	-31.87	48.06	30.65	46.00	15.35	Pass	H	PK
6	324.0364	13.73	2.14	-31.81	46.10	30.16	46.00	15.84	Pass	H	PK
7	36.6937	11.24	0.67	-32.11	54.31	34.11	40.00	5.89	Pass	V	PK
8	72.3932	8.55	0.98	-32.06	60.56	38.03	40.00	1.97	Pass	V	PK
9	125.6516	8.35	1.32	-32.04	57.49	35.12	43.50	8.38	Pass	V	PK
10	143.9864	7.34	1.41	-31.99	58.71	35.47	43.50	8.03	Pass	V	PK
11	216.2586	11.32	1.75	-31.95	56.63	37.75	46.00	8.25	Pass	V	PK
12	304.7315	13.30	2.07	-31.87	46.20	29.70	46.00	16.30	Pass	V	PK

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	Remark
1	2993.1993	33.19	4.53	-42.12	53.66	49.26	74.00	24.74	Pass	H	PK
2	4824.0000	34.50	4.61	-40.65	59.39	57.85	74.00	16.15	Pass	H	PK
3	7236.0000	36.34	5.79	-40.99	43.23	44.37	74.00	29.63	Pass	H	PK
4	9648.0000	37.66	6.72	-40.73	41.73	45.38	74.00	28.62	Pass	H	PK
5	11694.579	39.06	7.48	-41.31	45.45	50.68	74.00	23.32	Pass	H	PK
6	13660.710	39.50	8.18	-41.21	45.86	52.33	74.00	21.67	Pass	H	PK
7	4823.2816	34.50	4.61	-40.64	52.42	50.89	54.00	3.11	Pass	H	AV
8	3199.0133	33.28	4.65	-42.00	52.89	48.82	74.00	25.18	Pass	V	PK
9	4824.1216	34.50	4.61	-40.65	57.75	56.21	74.00	17.79	Pass	V	PK
10	7236.0000	36.34	5.79	-40.99	42.97	44.11	74.00	29.89	Pass	V	PK
11	9648.0000	37.66	6.72	-40.73	41.35	45.00	74.00	29.00	Pass	V	PK
12	11605.573	38.98	7.46	-41.34	45.48	50.58	74.00	23.42	Pass	V	PK
13	13798.719	39.58	8.46	-41.24	45.75	52.55	74.00	21.45	Pass	V	PK
14	4823.3316	34.50	4.61	-40.64	51.67	50.14	54.00	3.86	Pass	V	AV

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	Remark
1	3450.0300	33.38	4.43	-41.85	49.35	45.31	74.00	28.69	Pass	H	PK
2	4874.1249	34.50	4.78	-40.61	58.03	56.70	74.00	17.30	Pass	H	PK
3	7311.0000	36.41	5.85	-40.93	42.58	43.91	74.00	30.09	Pass	H	PK
4	9748.0000	37.70	6.77	-40.63	41.25	45.09	74.00	28.91	Pass	H	PK
5	12263.617	39.46	7.72	-41.16	45.16	51.18	74.00	22.82	Pass	H	PK
6	14316.754	40.02	8.62	-41.90	46.01	52.75	74.00	21.25	Pass	H	PK
7	4873.1449	34.50	4.77	-40.60	51.31	49.98	54.00	4.02	Pass	H	AV
8	3249.0166	33.30	4.45	-41.97	49.69	45.47	74.00	28.53	Pass	V	PK
9	4874.0000	34.50	4.78	-40.61	56.57	55.24	74.00	18.76	Pass	V	PK
10	7311.0000	36.41	5.85	-40.93	42.92	44.25	74.00	29.75	Pass	V	PK
11	9748.0000	37.70	6.77	-40.63	41.62	45.46	74.00	28.54	Pass	V	PK
12	11673.578	39.04	7.46	-41.32	45.90	51.08	74.00	22.92	Pass	V	PK
13	13634.709	39.48	8.14	-41.19	45.36	51.79	74.00	22.21	Pass	V	PK
14	4874.0000	34.50	4.78	-40.61	46.12	44.79	54.00	9.21	Pass	V	AV

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	Remark
1	3197.0131	33.28	4.65	-42.01	49.21	45.13	74.00	28.87	Pass	H	PK
2	4924.1283	34.50	4.85	-40.56	59.94	58.73	74.00	15.27	Pass	H	PK
3	7386.0000	36.49	5.85	-40.87	44.21	45.68	74.00	28.32	Pass	H	PK
4	9848.0000	37.74	6.83	-40.54	41.05	45.08	74.00	28.92	Pass	H	PK
5	11917.594	39.23	7.45	-41.23	44.67	50.12	74.00	23.88	Pass	H	PK
6	14319.754	40.02	8.62	-41.90	45.65	52.39	74.00	21.61	Pass	H	PK
7	4924.3783	34.50	4.85	-40.56	54.20	52.99	54.00	1.01	Pass	H	AV
8	3199.0133	33.28	4.65	-42.00	50.06	45.99	74.00	28.01	Pass	V	PK
9	4924.0000	34.50	4.85	-40.56	57.03	55.82	74.00	18.18	Pass	V	PK
10	7386.0000	36.49	5.85	-40.87	42.30	43.77	74.00	30.23	Pass	V	PK
11	9848.0000	37.74	6.83	-40.54	41.17	45.20	74.00	28.80	Pass	V	PK
12	12324.621	39.49	7.69	-41.13	45.61	51.66	74.00	22.34	Pass	V	PK
13	13696.713	39.52	8.34	-41.21	45.27	51.92	74.00	22.08	Pass	V	PK
14	4924.0000	34.50	4.85	-40.56	46.32	45.11	54.00	8.89	Pass	V	AV

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	Remark
1	1795.8796	30.35	3.31	-42.70	56.61	47.57	74.00	26.43	Pass	H	PK
2	2902.9903	33.04	4.38	-42.17	50.87	46.12	74.00	27.88	Pass	H	PK
3	4817.1211	34.50	4.59	-40.65	63.16	61.60	74.00	12.40	Pass	H	PK
4	7236.0000	36.34	5.79	-40.99	44.35	45.49	74.00	28.51	Pass	H	PK
5	9648.0000	37.66	6.72	-40.73	41.44	45.09	74.00	28.91	Pass	H	PK
6	14232.748	39.93	8.61	-41.74	45.53	52.33	74.00	21.67	Pass	H	PK
7	4821.8311	34.50	4.60	-40.65	35.30	33.75	54.00	20.25	Pass	H	AV
8	1597.2597	29.04	3.07	-42.89	57.53	46.75	74.00	27.25	Pass	V	PK
9	2991.3991	33.19	4.52	-42.12	54.70	50.29	74.00	23.71	Pass	V	PK
10	4824.0000	34.50	4.61	-40.65	59.92	58.38	74.00	15.62	Pass	V	PK
11	7236.0000	36.34	5.79	-40.99	44.84	45.98	74.00	28.02	Pass	V	PK
12	9648.0000	37.66	6.72	-40.73	42.69	46.34	74.00	27.66	Pass	V	PK
13	15297.819	40.70	9.61	-42.72	45.43	53.02	74.00	20.98	Pass	V	PK
14	4824	34.50	4.61	-40.65	48.62	47.08	54.00	6.92	Pass	V	AV

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	Remark
1	1597.6598	29.04	3.07	-42.89	53.35	42.57	74.00	31.43	Pass	H	PK
2	3059.0039	33.22	4.81	-42.08	49.73	45.68	74.00	28.32	Pass	H	PK
3	4872.1248	34.50	4.77	-40.61	60.14	58.80	74.00	15.20	Pass	H	PK
4	7311.0000	36.41	5.85	-40.93	43.86	45.19	74.00	28.81	Pass	H	PK
5	9748.0000	37.70	6.77	-40.63	42.07	45.91	74.00	28.09	Pass	H	PK
6	14989.799	40.40	9.02	-42.32	45.63	52.73	74.00	21.27	Pass	H	PK
7	4875.2348	34.50	4.78	-40.60	45.36	44.04	54.00	9.96	Pass	H	AV
8	1398.8399	28.30	2.90	-42.68	58.06	46.58	74.00	27.42	Pass	V	PK
9	2979.1979	33.17	4.49	-42.14	50.82	46.34	74.00	27.66	Pass	V	PK
10	4872.1248	34.50	4.77	-40.61	56.85	55.51	74.00	18.49	Pass	V	PK
11	7311.0000	36.41	5.85	-40.93	42.45	43.78	74.00	30.22	Pass	V	PK
12	9748.0000	37.70	6.77	-40.63	41.95	45.79	74.00	28.21	Pass	V	PK
13	13896.726	39.64	8.38	-41.26	45.11	51.87	74.00	22.13	Pass	V	PK
14	4872.1248	34.50	4.77	-40.61	47.66	46.32	54.00	7.68	Pass	V	AV

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	Remark
1	1593.8594	29.02	3.07	-42.89	54.68	43.88	74.00	30.12	Pass	H	PK
2	3194.0129	33.28	4.64	-42.01	49.57	45.48	74.00	28.52	Pass	H	PK
3	4922.1281	34.50	4.85	-40.56	54.62	53.41	74.00	20.59	Pass	H	PK
4	7386.0000	36.49	5.85	-40.87	42.25	43.72	74.00	30.28	Pass	H	PK
5	9848.0000	37.74	6.83	-40.54	41.23	45.26	74.00	28.74	Pass	H	PK
6	14879.792	40.35	9.16	-42.31	45.33	52.53	74.00	21.47	Pass	H	PK
7	1495.8496	28.40	2.99	-42.68	56.97	45.68	74.00	28.32	Pass	V	PK
8	2955.7956	33.13	4.42	-42.15	50.31	45.71	74.00	28.29	Pass	V	PK
9	4926.1284	34.50	4.85	-40.56	52.76	51.55	74.00	22.45	Pass	V	PK
10	7386.0000	36.49	5.85	-40.87	43.08	44.55	74.00	29.45	Pass	V	PK
11	9848.0000	37.74	6.83	-40.54	41.00	45.03	74.00	28.97	Pass	V	PK
12	14915.794	40.37	9.15	-42.31	45.84	53.05	74.00	20.95	Pass	V	PK

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	Remark
1	1812.0812	30.46	3.33	-42.70	51.65	42.74	74.00	31.26	Pass	H	PK
2	2997.1997	33.20	4.54	-42.12	50.16	45.78	74.00	28.22	Pass	H	PK
3	4874.0000	34.50	4.78	-40.61	60.06	58.73	74.00	15.27	Pass	H	PK
4	7311.0000	36.41	5.85	-40.93	43.07	44.40	74.00	29.60	Pass	H	PK
5	9748.0000	37.70	6.77	-40.63	41.77	45.61	74.00	28.39	Pass	H	PK
6	14089.739	39.79	8.23	-41.46	45.94	52.50	74.00	21.50	Pass	H	PK
7	4873.6749	34.50	4.77	-40.60	43.47	42.14	54.00	11.86	Pass	H	AV
8	1499.0499	28.40	2.99	-42.67	54.80	43.52	74.00	30.48	Pass	V	PK
9	2938.5939	33.10	4.40	-42.16	51.29	46.63	74.00	27.37	Pass	V	PK
10	4876.1251	34.50	4.78	-40.60	56.90	55.58	74.00	18.42	Pass	V	PK
11	7311.0000	36.41	5.85	-40.93	43.44	44.77	74.00	29.23	Pass	V	PK
12	9748.0000	37.70	6.77	-40.63	42.03	45.87	74.00	28.13	Pass	V	PK
13	14270.751	39.97	8.60	-41.81	46.44	53.20	74.00	20.80	Pass	V	PK
14	4872.1251	34.50	4.77	-40.60	47.55	46.22	54.00	7.78	Pass	V	AV

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	Remark
1	1498.6499	28.40	2.99	-42.67	52.60	41.32	74.00	32.68	Pass	H	PK
2	3243.0162	33.30	4.48	-41.98	48.99	44.79	74.00	29.21	Pass	H	PK
3	4872.1248	34.50	4.77	-40.61	59.89	58.55	74.00	15.45	Pass	H	PK
4	7311.0000	36.41	5.85	-40.93	43.60	44.93	74.00	29.07	Pass	H	PK
5	9748.0000	37.70	6.77	-40.63	41.74	45.58	74.00	28.42	Pass	H	PK
6	13593.706	39.46	8.15	-41.19	45.39	51.81	74.00	22.19	Pass	H	PK
7	4875.8548	34.50	4.78	-40.60	45.20	43.88	54.00	10.12	Pass	H	AV
8	1663.8664	29.48	3.16	-42.75	53.11	43.00	74.00	31.00	Pass	V	PK
9	3060.0040	33.22	4.81	-42.08	50.09	46.04	74.00	27.96	Pass	V	PK
10	4872.1248	34.50	4.77	-40.61	59.85	58.51	74.00	15.49	Pass	V	PK
11	7311.0000	36.41	5.85	-40.93	43.90	45.23	74.00	28.77	Pass	V	PK
12	9748.0000	37.70	6.77	-40.63	41.96	45.80	74.00	28.20	Pass	V	PK
13	13678.711	39.51	8.26	-41.21	46.07	52.63	74.00	21.37	Pass	V	PK
14	4872.1248	34.50	4.77	-40.61	47.66	46.32	54.00	7.68	Pass	V	AV

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	Remark
1	1331.8332	28.23	2.79	-42.75	53.59	41.86	74.00	32.14	Pass	H	PK
2	2939.5940	33.10	4.40	-42.15	51.09	46.44	74.00	27.56	Pass	H	PK
3	4874.1249	34.50	4.78	-40.61	50.85	49.52	74.00	24.48	Pass	H	PK
4	7386.0000	36.49	5.85	-40.87	43.56	45.03	74.00	28.97	Pass	H	PK
5	9848.0000	37.74	6.83	-40.54	41.71	45.74	74.00	28.26	Pass	H	PK
6	12290.619	39.47	7.73	-41.15	45.06	51.11	74.00	22.89	Pass	H	PK
7	1496.4496	28.40	2.99	-42.68	54.26	42.97	74.00	31.03	Pass	V	PK
8	3003.0002	33.20	4.92	-42.11	50.31	46.32	74.00	27.68	Pass	V	PK
9	4874.1249	34.50	4.78	-40.61	50.24	48.91	74.00	25.09	Pass	V	PK
10	7386.0000	36.49	5.85	-40.87	43.28	44.75	74.00	29.25	Pass	V	PK
11	9848.0000	37.74	6.83	-40.54	41.50	45.53	74.00	28.47	Pass	V	PK
12	13077.671	39.57	8.04	-41.65	46.45	52.41	74.00	21.59	Pass	V	PK

Mode:		802.11 n(HT40) (13.5Mbps) Transmitting						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	Remark
1	1195.6391	28.10	2.66	-42.88	59.61	47.49	74.00	26.51	Pass	H	PK
2	3577.2577	33.46	4.39	-41.66	49.19	45.38	74.00	28.62	Pass	H	PK
3	4844.0000	34.50	4.67	-40.63	45.35	43.89	74.00	30.11	Pass	H	PK
4	6502.5503	35.90	5.46	-41.19	48.05	48.22	74.00	25.78	Pass	H	PK
5	7266.0000	36.37	5.80	-40.97	46.05	47.25	74.00	26.75	Pass	H	PK
6	9688.0000	37.68	6.62	-40.69	45.40	49.01	74.00	24.99	Pass	H	PK
7	1395.2791	28.30	2.89	-42.69	61.07	49.57	74.00	24.43	Pass	V	PK
8	3190.1440	33.28	4.63	-42.01	52.70	48.60	74.00	25.40	Pass	V	PK
9	4844.0000	34.50	4.67	-40.63	45.09	43.63	74.00	30.37	Pass	V	PK
10	6506.4506	35.90	5.45	-41.18	48.09	48.26	74.00	25.74	Pass	V	PK
11	7266.0000	36.37	5.80	-40.97	45.93	47.13	74.00	26.87	Pass	V	PK
12	9688.0000	37.68	6.62	-40.69	45.74	49.35	74.00	24.65	Pass	V	PK

Mode:		802.11 n(HT40) (13.5Mbps) 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	Remark
1	1198.8398	28.10	2.66	-42.89	61.93	49.80	74.00	24.20	Pass	H	PK
2	3058.5059	33.22	4.81	-42.08	49.73	45.68	74.00	28.32	Pass	H	PK
3	4874.0000	34.50	4.78	-40.61	46.19	44.86	74.00	29.14	Pass	H	PK
4	5947.7198	35.72	5.31	-41.05	48.23	48.21	74.00	25.79	Pass	H	PK
5	7311.0000	36.41	5.85	-40.93	45.72	47.05	74.00	26.95	Pass	H	PK
6	9748.0000	37.70	6.77	-40.63	45.20	49.04	74.00	24.96	Pass	H	PK
7	1395.6791	28.30	2.89	-42.69	59.35	47.85	74.00	26.15	Pass	V	PK
8	3782.0282	33.63	4.36	-41.23	49.42	46.18	74.00	27.82	Pass	V	PK
9	4874.0000	34.50	4.78	-40.61	44.95	43.62	74.00	30.38	Pass	V	PK
10	6379.6880	35.88	5.37	-41.17	47.95	48.03	74.00	25.97	Pass	V	PK
11	7311.0000	36.41	5.85	-40.93	44.79	46.12	74.00	27.88	Pass	V	PK
12	9748.0000	37.70	6.77	-40.63	45.87	49.71	74.00	24.29	Pass	V	PK

Mode:		802.11 n(HT40) (13.5Mbps) Transmitting						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	Remark
1	1198.8398	28.10	2.66	-42.89	60.21	48.08	74.00	25.92	Pass	H	PK
2	3017.5518	33.21	4.89	-42.11	51.20	47.19	74.00	26.81	Pass	H	PK
3	4904.0000	34.50	4.87	-40.57	45.76	44.56	74.00	29.44	Pass	H	PK
4	6495.7246	35.90	5.47	-41.19	48.40	48.58	74.00	25.42	Pass	H	PK
5	7356.0000	36.46	5.85	-40.89	45.80	47.22	74.00	26.78	Pass	H	PK
6	9808.0000	37.72	6.59	-40.57	45.44	49.18	74.00	24.82	Pass	H	PK
7	1978.9958	31.56	3.45	-42.62	57.57	49.96	74.00	24.04	Pass	V	PK
8	3190.1440	33.28	4.63	-42.01	51.39	47.29	74.00	26.71	Pass	V	PK
9	4904.0000	34.50	4.87	-40.57	46.32	45.12	74.00	28.88	Pass	V	PK
10	6101.7852	35.82	5.26	-41.11	48.54	48.51	74.00	25.49	Pass	V	PK
11	7356.0000	36.46	5.85	-40.89	45.01	46.43	74.00	27.57	Pass	V	PK
12	9808.0000	37.72	6.59	-40.57	45.87	49.61	74.00	24.39	Pass	V	PK

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; 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), 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.