

TEST REPORT

Product : Mi Smart Plug (Wi-Fi)
Trade mark : MI
Model/Type reference : ZNCZ03CM
Serial Number : N/A
Report Number : EED32K00049901
FCC ID : 2APA9-HMI205A
Date of Issue : Apr. 03, 2018
Test Standards : 47 CFR Part 15 Subpart C
Test result : PASS

Prepared for:

Shanghai Imilab Technology co., LTD
F5, Building 3, No. 401, Caobao Rd, Xuhui Dist,
Shanghai, P.R. China.

Prepared by:

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

Tested By:

Tom - chen
Tom chen (Test Project)

Reviewed by:

Kevin Yang
Kevin yang (Reviewer)

Date:

Apr. 03, 2018

Compiled by:

Kevin lan
Kevin lan (Project Engineer)

Approved by:

Sheek Luo
Sheek Luo (Lab supervisor)



Check No.: 3319521119

2 Version

Version No.	Date	Description
00	Apr. 03, 2018	Original

3 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203/15.247 (c)	ANSI C63.10-2013	PASS
AC Power Line Conducted Emission	47 CFR Part 15 Subpart C Section 15.207	ANSI C63.10-2013	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 samples and the sample information are provided by the client.

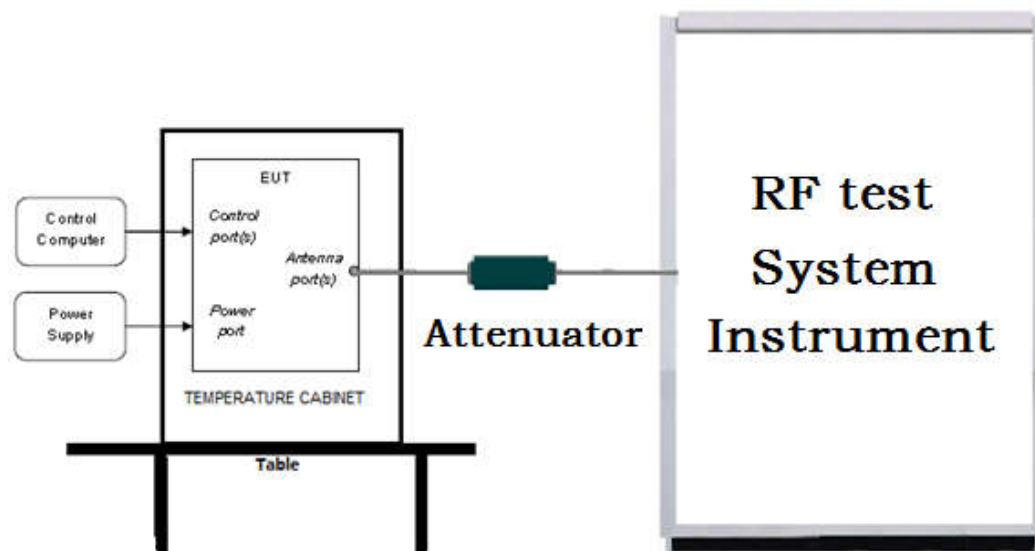
4 Content

1 COVER PAGE	1
2 VERSION	2
3 TEST SUMMARY	3
4 CONTENT	4
5 TEST REQUIREMENT	5
5.1 TEST SETUP	5
5.1.1 For Conducted test setup	5
5.1.2 For Radiated Emissions test setup	5
5.1.3 For Conducted Emissions test setup	6
5.2 TEST ENVIRONMENT	6
5.3 TEST CONDITION	6
6 GENERAL INFORMATION	8
6.1 CLIENT INFORMATION	8
6.2 GENERAL DESCRIPTION OF EUT	8
6.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD	8
6.4 DESCRIPTION OF SUPPORT UNITS	8
6.5 TEST LOCATION	9
6.6 DEVIATION FROM STANDARDS	9
6.7 ABNORMALITIES FROM STANDARD CONDITIONS	9
6.8 OTHER INFORMATION REQUESTED BY THE CUSTOMER	9
6.9 MEASUREMENT UNCERTAINTY (95% CONFIDENCE LEVELS, K=2)	9
7 EQUIPMENT LIST	10
8 RADIO TECHNICAL REQUIREMENTS SPECIFICATION	12
Appendix A): Conducted Peak Output Power	13
Appendix B): 6dB Occupied Bandwidth	17
Appendix C): Band-edge for RF Conducted Emissions	21
Appendix D): RF Conducted Spurious Emissions	24
Appendix E): Power Spectral Density	31
Appendix F): Antenna Requirement	35
Appendix G): AC Power Line Conducted Emission	36
Appendix H): Restricted bands around fundamental frequency (Radiated)	39
Appendix I): Radiated Spurious Emissions	52
PHOTOGRAPHS OF TEST SETUP	60
PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS	62

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:

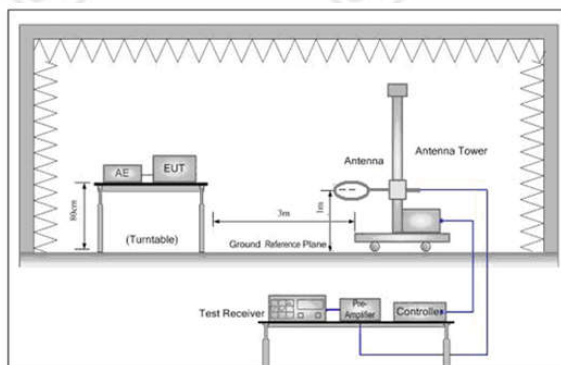


Figure 1. Below 30MHz

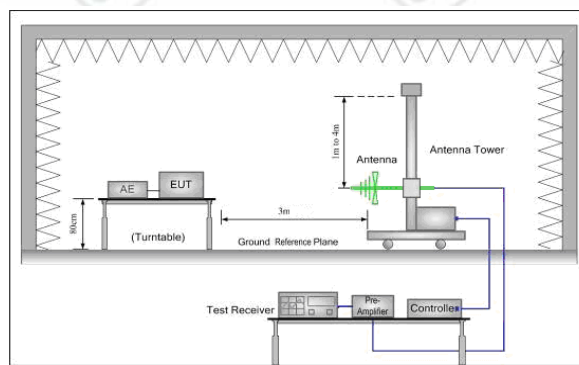


Figure 2. 30MHz to 1GHz

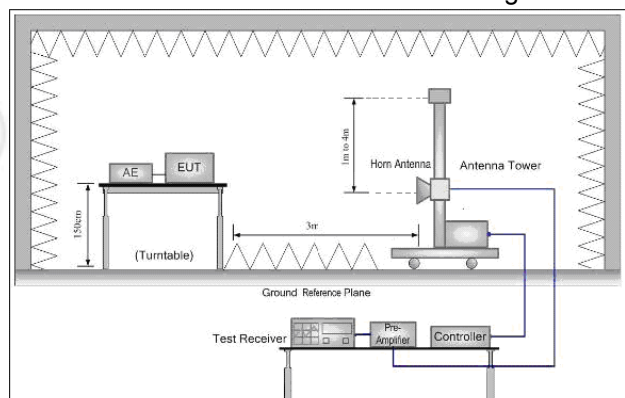
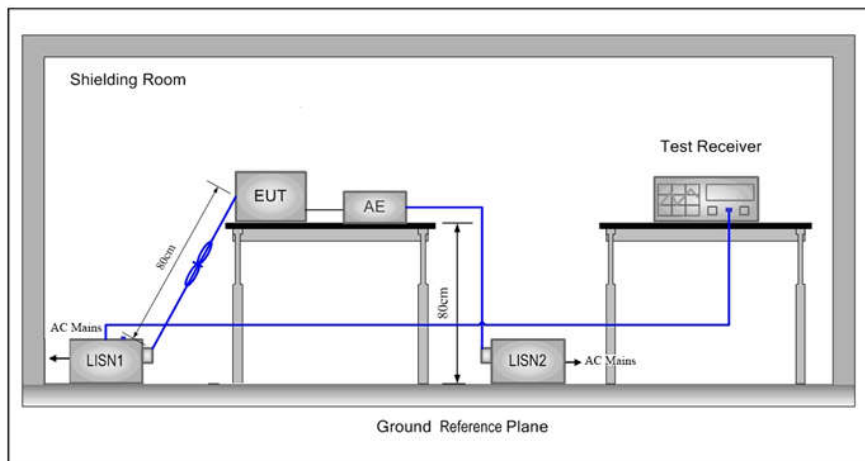


Figure 3. Above 1GHz

5.1.3 For Conducted Emissions test setup

Conducted Emissions setup



5.2 Test Environment

Operating Environment:

Temperature:	24.6 °C
Humidity:	47 % 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
Transmitting mode:	Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate.			

Test mode:

Pre-scan under all rate at lowest channel 1

Mode	802.11b							
Data Rate	1Mbps	2Mbps	5.5Mbps	11Mbps				
Power(dBm)	20.85	20.11	21.03	21.73				
Mode	802.11g							
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
Power(dBm)	25.54	25.18	24.83	24.21	24.99	24.65	25.00	24.85
Mode	802.11n (HT20)							
Data Rate	6.5Mbps	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps	58.5Mbps	65Mbps
Power(dBm)	25.69	24.96	25.35	25.11	24.87	25.25	24.89	24.76

Through Pre-scan, 11Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20)

6 General Information

6.1 Client Information

Applicant:	Shanghai Imilab Technology co., LTD
Address of Applicant:	F5, Building 3, No. 401, Caobao Rd, Xuhui Dist, Shanghai, P.R. China.
Manufacturer:	Shanghai Imilab Technology co., LTD
Address of Manufacturer:	F5, Building 3, No. 401, Caobao Rd, Xuhui Dist, Shanghai, P.R. China.
Factory:	Dongguan Aohai Power Technology Co., Ltd
Address of Factory:	Aohai Technology Park, No.6 Zhenlong Road East, Jiaoyitang, Tangxia, Dongguan, China

6.2 General Description of EUT

Product Name:	Mi Smart Plug (Wi-Fi)
Model No.(EUT):	ZNCZ03CM
Trade Mark:	MI
EUT Supports Radios application:	WiFi 802.11b/g/n(20MHz), 2412-2462MHz
Power Supply:	AC 120V, 60Hz
Sample Received Date:	Mar. 14, 2018
Sample tested Date:	Mar. 14, 2018 to Apr. 03, 2018

6.3 Product Specification subjective to this standard

Operation Frequency:	WiFi 802.11b/g/n(20MHz), 2412-2462MHz
Channel Separation:	5MHz
Type of Modulation:	DSSS; OFDM
Sample Type:	Fixed production
Test Power Grade:	(manufacturer declare)Backoff:0.00db
Test Software of EUT:	(manufacturer declare) ESP Series Modules FCC&CE Test Tool V2.2.2.0.exe
Antenna Type and Gain:	Type: PCB Antenna ; Gain: -3dBi
Test Voltage:	AC 120V, 60Hz
Hardware version of the sample:	(manufacturer declare) B
Firmware version of the sample:	(manufacturer declare) 1.3

6.4 Description of Support Units

The EUT has been tested independently.

6.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd.

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

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

No tests were sub-contracted.

FCC Designation No.: CN1164

6.6 Deviation from Standards

None.

6.7 Abnormalities from Standard Conditions

None.

6.8 Other Information Requested by the Customer

None.

6.9 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.31dB (30MHz-1GHz)
		0.57dB (1GHz-18GHz)
3	Radiated Spurious emission test	4.5dB (30MHz-1GHz)
		4.8dB (1GHz-12.75GHz)
4	Conduction emission	3.6dB (9kHz to 150kHz)
		3.2dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	2.8%
7	DC power voltages	0.025%

7 Equipment List

RF test system					
Equipment	Manufacturer	Model No.	Serial Number	Cal. Date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Signal Generator	Keysight	E8257D	MY53401106	03-13-2018	03-12-2019
Spectrum Analyzer	Keysight	N9010A	MY54510339	03-13-2018	03-12-2019
Signal Generator	Keysight	N5182B	MY53051549	03-13-2018	03-12-2019
High-pass filter	Sinoscite	FL3CX03WG18 NM12-0398-002	---	01-10-2018	01-09-2019
DC Power	Keysight	E3642A	MY54426035	03-13-2018	03-12-2019
power meter & power sensor	R&S	OSP120	101374	03-13-2018	03-12-2019
RF control unit	JS Tonscend	JS0806-2	158060006	03-13-2018	03-12-2019
Temperature / Humidity Indicator	Defu	TH128	---	07-08-2017	07-07-2018

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	---	06-04-2016	06-03-2019
Spectrum Analyzer	Agilent	E4443A	MY45300910	11-16-2017	11-15-2018
Receiver	R&S	ESCI	100435	06-14-2017	06-13-2018
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	9163-618	08-15-2017	08-14-2018
Horn Antenna	ETS-LINGREN	3117	00057407	07-20-2015	07-18-2018
Spectrum Analyzer	R&S	FSP40	100416	06-13-2017	06-12-2018
Microwave Preamplifier	JS Tonscend	EMC051845S E	980380	01-19-2018	01-18-2019
Loop Antenna	ETS-LINDGREN	6502	00071730	06-22-2017	06-21-2019
Double ridge horn antenna	A.H.SYSTEMS	SAS-574	6042	06-30-2015	06-28-2018
Pre-amplifier	A.H.SYSTEMS	PAP-1840-60	6041	06-30-2015	06-28-2018
Temperature/ Humidity Indicator	TAYLOR	1451	1905	05-08-2017	05-07-2018

Conducted disturbance Test					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Receiver	R&S	ESCI	100009	06-14-2017	06-13-2018
Temperature/ Humidity Indicator	TAYLOR	1451	1905	06-14-2017	06-13-2018
LISN	schwarzbeck	NNLK8121	8121-529	06-13-2017	06-12-2018

8 Radio Technical Requirements Specification

Reference documents for testing:

No.	Identity	Document Title
1	FCC Part15C	Subpart C-Intentional Radiators
2	ANSI C63.10-2013	American National Standard for Testing 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)

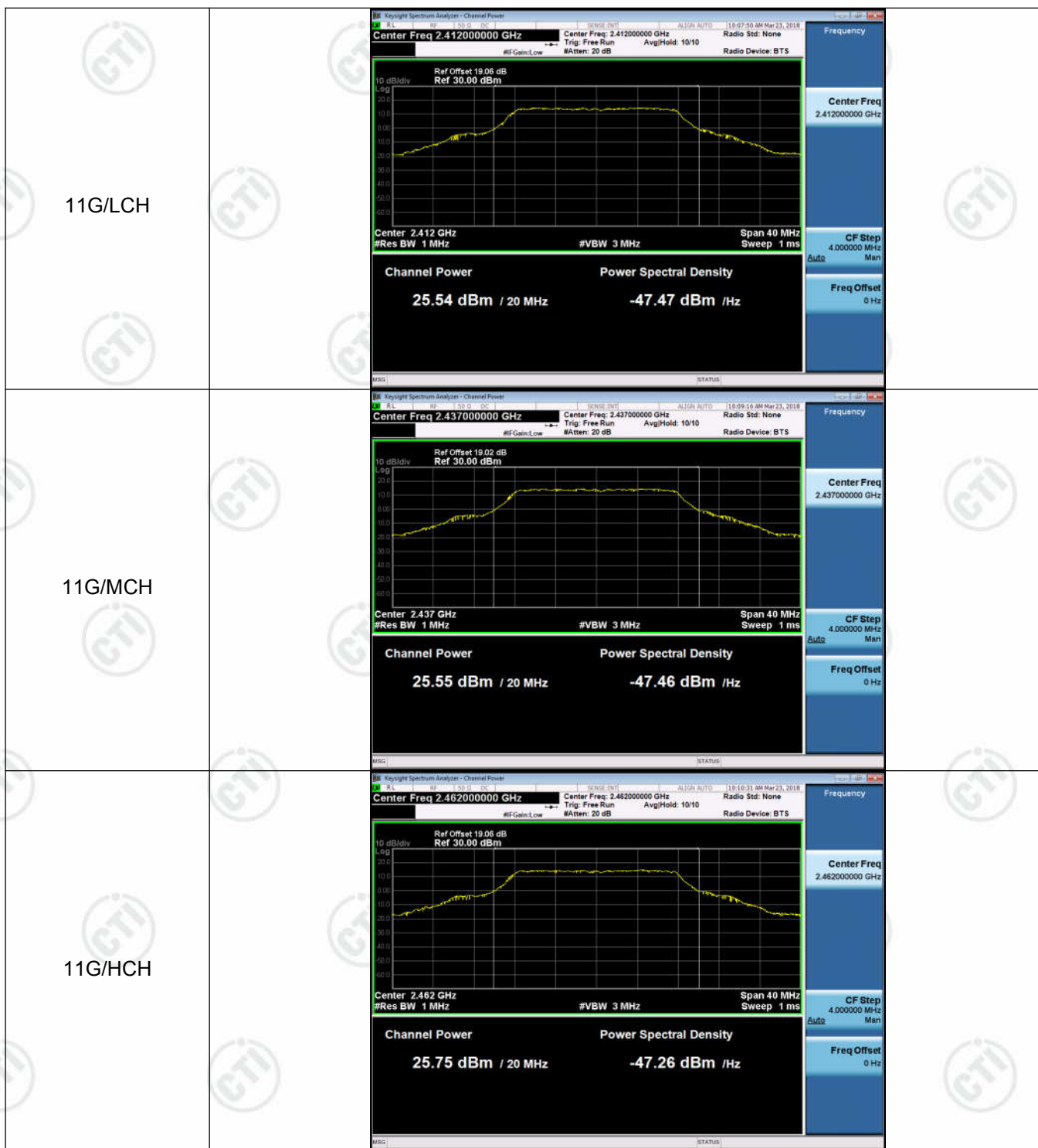
Appendix A): Conducted Peak Output Power

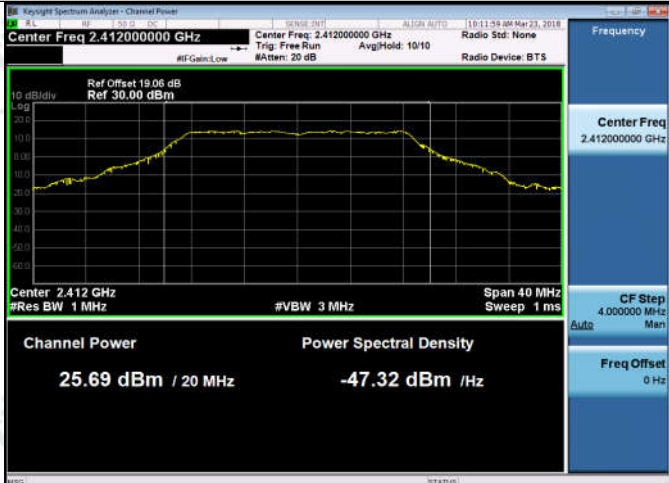
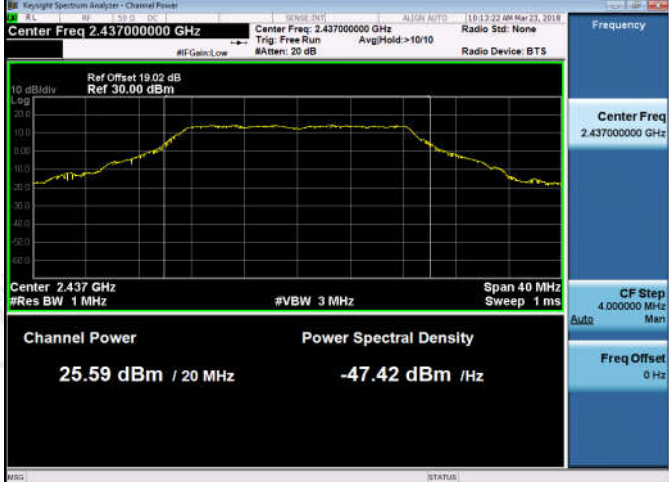
Result Table

Mode	Channel	Conducted Peak Output Power [dBm]	Verdict
11B	LCH	21.73	PASS
11B	MCH	21.14	PASS
11B	HCH	21.06	PASS
11G	LCH	25.54	PASS
11G	MCH	25.55	PASS
11G	HCH	25.75	PASS
11N20SISO	LCH	25.69	PASS
11N20SISO	MCH	25.59	PASS
11N20SISO	HCH	25.70	PASS

Test Graph

Graphs	
11B/LCH	Keygraph Spectrum Analyzer - Channel Power Center Freq 2.412000000 GHz Center Freq: 2.412000000 GHz Radio Std: None Trig: Free Run Avg/Hold: 10/10 #IF Gain: Low #Atten: 20 dB Radio Device: BTS Ref Offset 19.06 dB Ref 30.00 dBm 10 dB/div Center 2.412 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 1 ms Channel Power Power Spectral Density 21.73 dBm / 20 MHz -51.28 dBm / Hz Frequency Center Freq 2.412000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz
11B/MCH	Keygraph Spectrum Analyzer - Channel Power Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Radio Std: None Trig: Free Run Avg/Hold: 10/10 #IF Gain: Low #Atten: 20 dB Radio Device: BTS Ref Offset 19.02 dB Ref 20.00 dBm 10 dB/div Center 2.437 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 1 ms Channel Power Power Spectral Density 21.14 dBm / 20 MHz -51.87 dBm / Hz Frequency Center Freq 2.437000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz
11B/HCH	Keygraph Spectrum Analyzer - Channel Power Center Freq 2.462000000 GHz Center Freq: 2.462000000 GHz Radio Std: None Trig: Free Run Avg/Hold: 10/10 #IF Gain: Low #Atten: 20 dB Radio Device: BTS Ref Offset 19.06 dB Ref 20.00 dBm 10 dB/div Center 2.462 GHz Span 40 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 1 ms Channel Power Power Spectral Density 21.06 dBm / 20 MHz -51.95 dBm / Hz Frequency Center Freq 2.462000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz



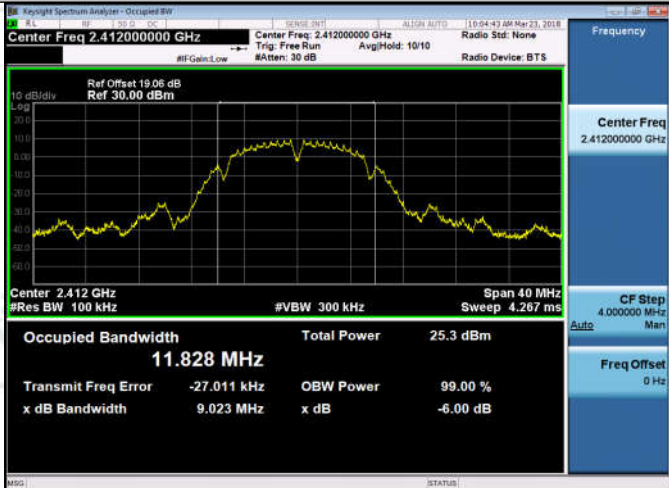
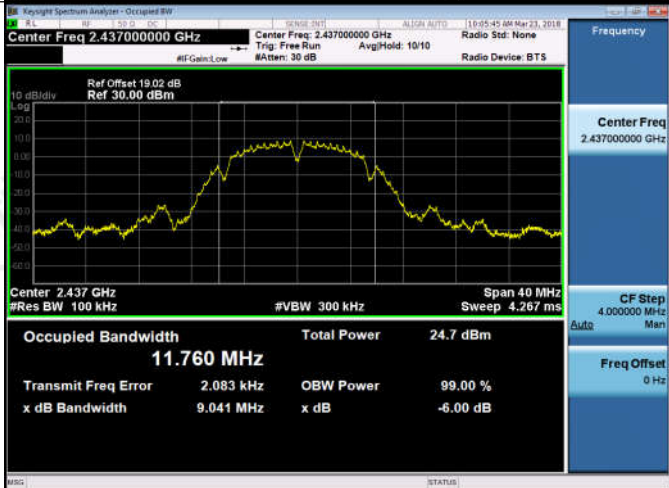
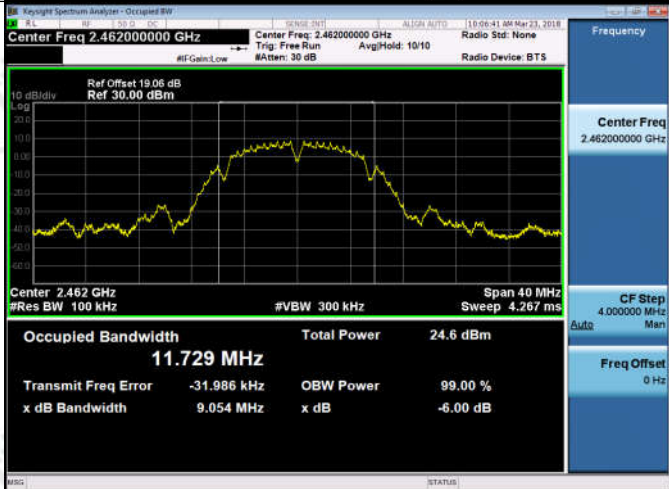
11N20SISO/LCH	 Center Freq 2.41200000 GHz Ref Offset 19.06 dB Ref 30.00 dBm Center 2.412 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power 25.69 dBm / 20 MHz Power Spectral Density -47.32 dBm / Hz
11N20SISO/MCH	 Center Freq 2.437000000 GHz Ref Offset 19.02 dB Ref 30.00 dBm Center 2.437 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power 25.59 dBm / 20 MHz Power Spectral Density -47.42 dBm / Hz
11N20SISO/HCH	 Center Freq 2.462000000 GHz Ref Offset 19.06 dB Ref 30.00 dBm Center 2.462 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power 25.70 dBm / 20 MHz Power Spectral Density -47.31 dBm / Hz

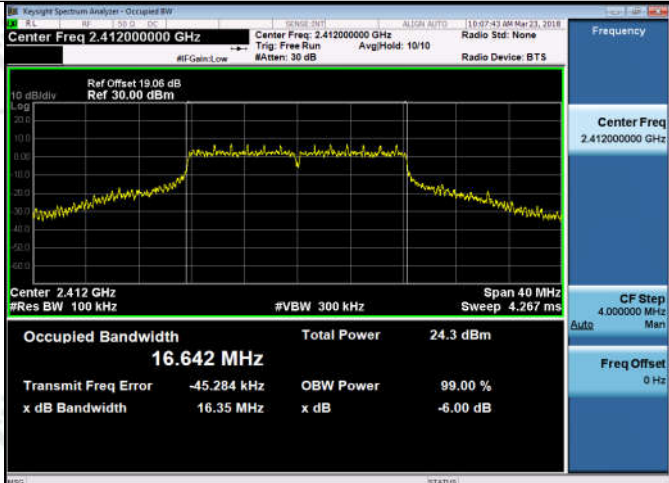
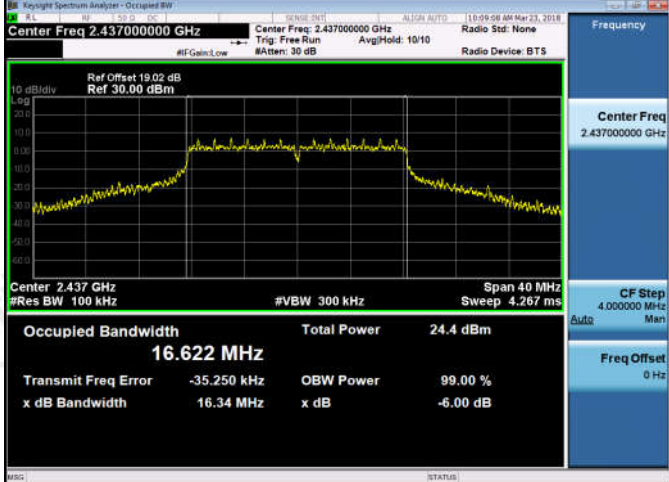
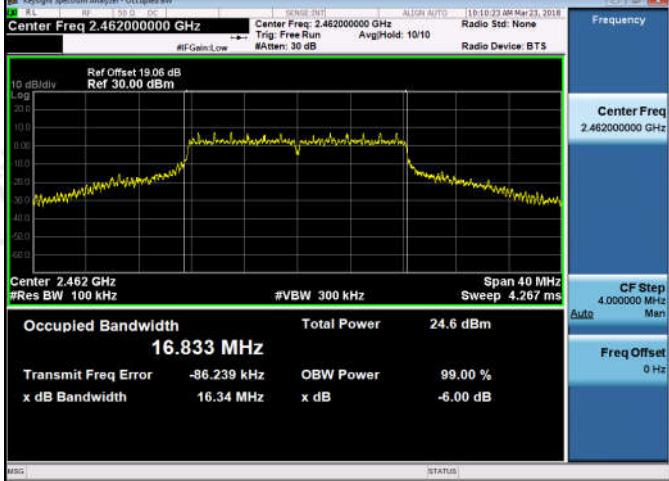
Appendix B): 6dB Occupied Bandwidth

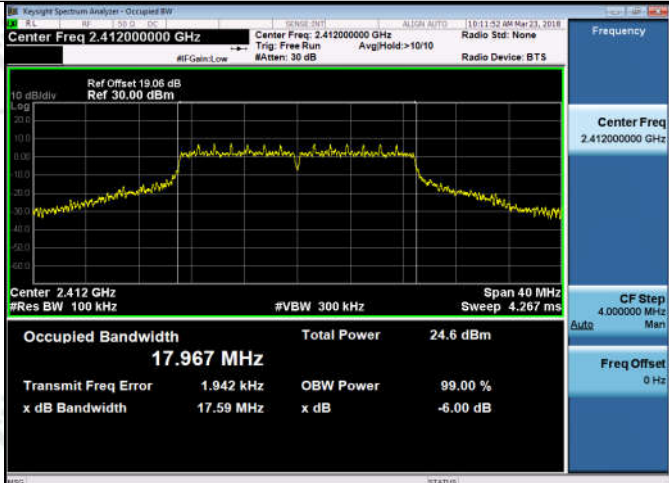
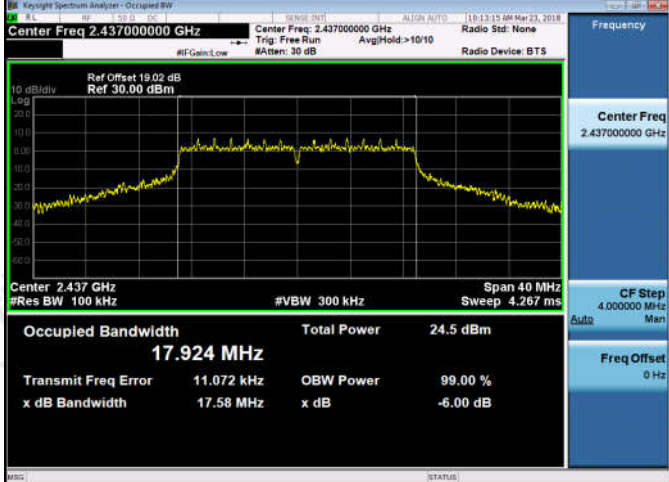
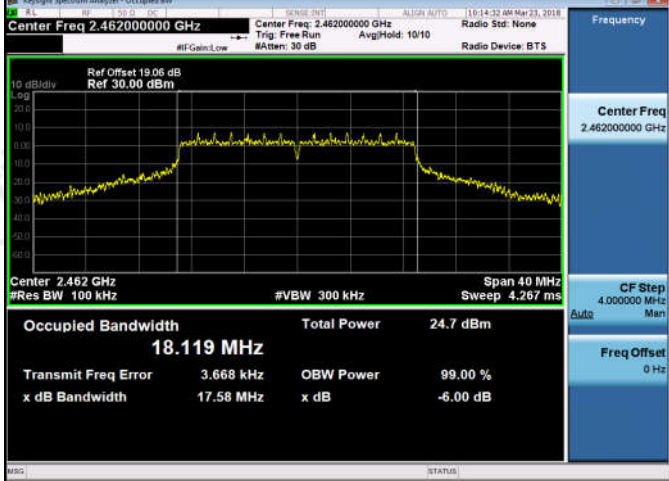
Result Table

Mode	Channel	6dB Bandwidth [MHz]	99% OBW [MHz]	Verdict
11B	LCH	9.023	11.828	PASS
11B	MCH	9.041	11.760	PASS
11B	HCH	9.054	11.729	PASS
11G	LCH	16.35	16.642	PASS
11G	MCH	16.34	16.622	PASS
11G	HCH	16.34	16.833	PASS
11N20SISO	LCH	17.59	17.967	PASS
11N20SISO	MCH	17.58	17.924	PASS
11N20SISO	HCH	17.58	18.119	PASS

Test Graph

Graphs	
11B/LCH	 Keygraph Spectrum Analyzer - Occupied BW Center Freq 2.412000000 GHz Center Freq: 2.412000000 GHz Radio Std: None Ref Offset 19.06 dB Ref 30.00 dBm Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 11.828 MHz Total Power 25.3 dBm Transmit Freq Error -27.011 kHz OBW Power 99.00 % x dB Bandwidth 9.023 MHz x dB -6.00 dB
11B/MCH	 Keygraph Spectrum Analyzer - Occupied BW Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Radio Std: None Ref Offset 19.02 dB Ref 30.00 dBm Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 11.760 MHz Total Power 24.7 dBm Transmit Freq Error 2.083 kHz OBW Power 99.00 % x dB Bandwidth 9.041 MHz x dB -6.00 dB
11B/HCH	 Keygraph Spectrum Analyzer - Occupied BW Center Freq 2.462000000 GHz Center Freq: 2.462000000 GHz Radio Std: None Ref Offset 19.06 dB Ref 30.00 dBm Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 11.729 MHz Total Power 24.6 dBm Transmit Freq Error -31.986 kHz OBW Power 99.00 % x dB Bandwidth 9.054 MHz x dB -6.00 dB

11G/LCH	 Keyight Spectrum Analyzer - Occupied BW Center Freq 2.412000000 GHz Ref Offset 19.06 dB Ref 30.00 dBm Center 2.412 GHz #Res BW 100 kHz Occupied Bandwidth 16.642 MHz Total Power 24.3 dBm Transmit Freq Error -45.284 kHz OBW Power 99.00 % x dB Bandwidth 16.35 MHz x dB -6.00 dB
11G/MCH	 Keyight Spectrum Analyzer - Occupied BW Center Freq 2.437000000 GHz Ref Offset 19.02 dB Ref 30.00 dBm Center 2.437 GHz #Res BW 100 kHz Occupied Bandwidth 16.622 MHz Total Power 24.4 dBm Transmit Freq Error -35.250 kHz OBW Power 99.00 % x dB Bandwidth 16.34 MHz x dB -6.00 dB
11G/HCH	 Keyight Spectrum Analyzer - Occupied BW Center Freq 2.462000000 GHz Ref Offset 19.06 dB Ref 30.00 dBm Center 2.462 GHz #Res BW 100 kHz Occupied Bandwidth 16.833 MHz Total Power 24.6 dBm Transmit Freq Error -86.239 kHz OBW Power 99.00 % x dB Bandwidth 16.34 MHz x dB -6.00 dB

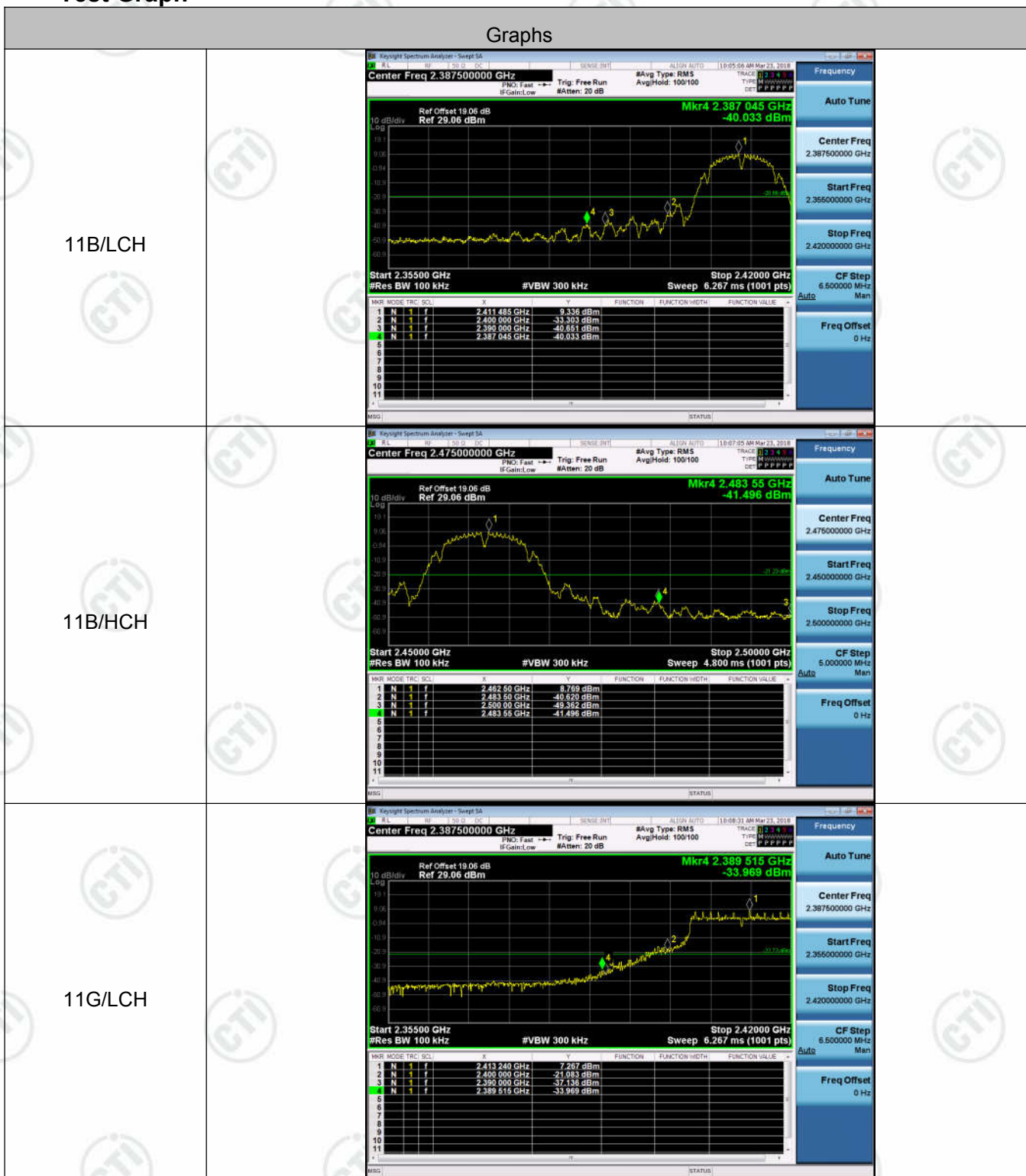
11N20SISO/LCH	 Keynote Spectrum Analyzer - Occupied BW Center Freq 2.412000000 GHz Ref Offset 19.06 dB Ref 30.00 dBm Center 2.412 GHz #Res BW 100 kHz Occupied Bandwidth 17.967 MHz Total Power 24.6 dBm Transmit Freq Error 1.942 kHz OBW Power 99.00 % x dB Bandwidth 17.59 MHz x dB -6.00 dB
11N20SISO/MCH	 Keynote Spectrum Analyzer - Occupied BW Center Freq 2.437000000 GHz Ref Offset 19.02 dB Ref 30.00 dBm Center 2.437 GHz #Res BW 100 kHz Occupied Bandwidth 17.924 MHz Total Power 24.5 dBm Transmit Freq Error 11.072 kHz OBW Power 99.00 % x dB Bandwidth 17.58 MHz x dB -6.00 dB
11N20SISO/HCH	 Keynote Spectrum Analyzer - Occupied BW Center Freq 2.462000000 GHz Ref Offset 19.06 dB Ref 30.00 dBm Center 2.462 GHz #Res BW 100 kHz Occupied Bandwidth 18.119 MHz Total Power 24.7 dBm Transmit Freq Error 3.668 kHz OBW Power 99.00 % x dB Bandwidth 17.58 MHz x dB -6.00 dB

Appendix C): Band-edge for RF Conducted Emissions

Result Table

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	9.336	-40.033	-20.66	PASS
11B	HCH	8.769	-41.496	-21.23	PASS
11G	LCH	7.267	-33.969	-22.73	PASS
11G	HCH	7.255	-32.365	-22.75	PASS
11N20SISO	LCH	7.387	-31.769	-22.61	PASS
11N20SISO	HCH	7.220	-29.448	-22.78	PASS

Test Graph



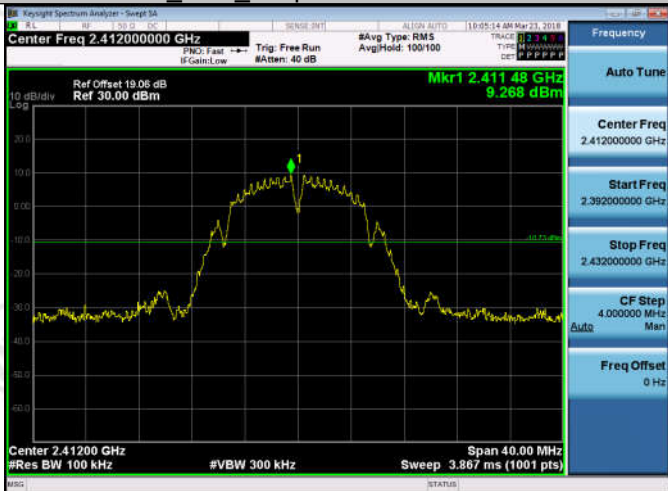
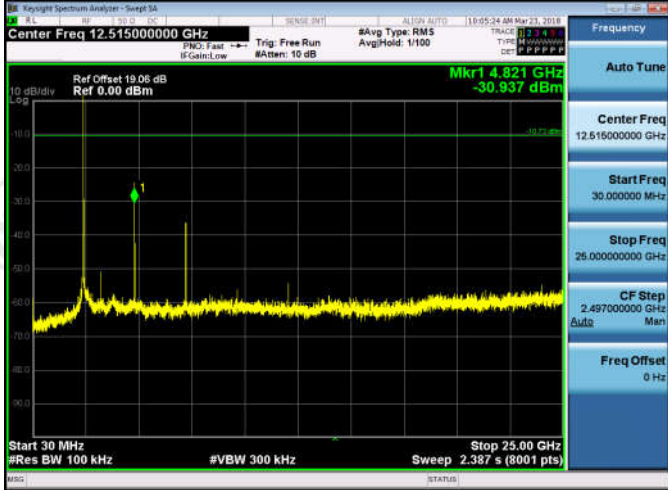
11G/HCH	 <table><tr><th>MNR</th><th>MODE</th><th>TRC</th><th>SOL</th><th>F</th><th>F</th><th>F</th><th>FUNCTION</th><th>FUNCTION WIDTH</th><th>FUNCTION VALUE</th></tr><tr><td>1</td><td>N</td><td>1</td><td>f</td><td>2.45700</td><td>GHz</td><td>7.255</td><td>dBm</td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td>2.48360</td><td>GHz</td><td>-32.191</td><td>dBm</td><td></td><td></td></tr><tr><td>3</td><td>N</td><td>1</td><td>f</td><td>2.50000</td><td>GHz</td><td>-40.858</td><td>dBm</td><td></td><td></td></tr><tr><td>4</td><td>N</td><td>1</td><td>f</td><td>2.48360</td><td>GHz</td><td>-32.365</td><td>dBm</td><td></td><td></td></tr></table>	MNR	MODE	TRC	SOL	F	F	F	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.45700	GHz	7.255	dBm			2	N	1	f	2.48360	GHz	-32.191	dBm			3	N	1	f	2.50000	GHz	-40.858	dBm			4	N	1	f	2.48360	GHz	-32.365	dBm		
MNR	MODE	TRC	SOL	F	F	F	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																																										
1	N	1	f	2.45700	GHz	7.255	dBm																																												
2	N	1	f	2.48360	GHz	-32.191	dBm																																												
3	N	1	f	2.50000	GHz	-40.858	dBm																																												
4	N	1	f	2.48360	GHz	-32.365	dBm																																												
11N20SISO/LCH	 <table><tr><th>MNR</th><th>MODE</th><th>TRC</th><th>SOL</th><th>F</th><th>F</th><th>F</th><th>FUNCTION</th><th>FUNCTION WIDTH</th><th>FUNCTION VALUE</th></tr><tr><td>1</td><td>N</td><td>1</td><td>f</td><td>2.413240</td><td>GHz</td><td>7.387</td><td>dBm</td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td>2.400000</td><td>GHz</td><td>-39.765</td><td>dBm</td><td></td><td></td></tr><tr><td>3</td><td>N</td><td>1</td><td>f</td><td>2.390000</td><td>GHz</td><td>-32.301</td><td>dBm</td><td></td><td></td></tr><tr><td>4</td><td>N</td><td>1</td><td>f</td><td>2.388605</td><td>GHz</td><td>-31.769</td><td>dBm</td><td></td><td></td></tr></table>	MNR	MODE	TRC	SOL	F	F	F	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.413240	GHz	7.387	dBm			2	N	1	f	2.400000	GHz	-39.765	dBm			3	N	1	f	2.390000	GHz	-32.301	dBm			4	N	1	f	2.388605	GHz	-31.769	dBm		
MNR	MODE	TRC	SOL	F	F	F	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																																										
1	N	1	f	2.413240	GHz	7.387	dBm																																												
2	N	1	f	2.400000	GHz	-39.765	dBm																																												
3	N	1	f	2.390000	GHz	-32.301	dBm																																												
4	N	1	f	2.388605	GHz	-31.769	dBm																																												
11N20SISO/HCH	 <table><tr><th>MNR</th><th>MODE</th><th>TRC</th><th>SOL</th><th>F</th><th>F</th><th>F</th><th>FUNCTION</th><th>FUNCTION WIDTH</th><th>FUNCTION VALUE</th></tr><tr><td>1</td><td>N</td><td>1</td><td>f</td><td>2.46700</td><td>GHz</td><td>7.220</td><td>dBm</td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td>2.48350</td><td>GHz</td><td>-30.338</td><td>dBm</td><td></td><td></td></tr><tr><td>3</td><td>N</td><td>1</td><td>f</td><td>2.50000</td><td>GHz</td><td>-42.092</td><td>dBm</td><td></td><td></td></tr><tr><td>4</td><td>N</td><td>1</td><td>f</td><td>2.48510</td><td>GHz</td><td>-29.448</td><td>dBm</td><td></td><td></td></tr></table>	MNR	MODE	TRC	SOL	F	F	F	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.46700	GHz	7.220	dBm			2	N	1	f	2.48350	GHz	-30.338	dBm			3	N	1	f	2.50000	GHz	-42.092	dBm			4	N	1	f	2.48510	GHz	-29.448	dBm		
MNR	MODE	TRC	SOL	F	F	F	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																																										
1	N	1	f	2.46700	GHz	7.220	dBm																																												
2	N	1	f	2.48350	GHz	-30.338	dBm																																												
3	N	1	f	2.50000	GHz	-42.092	dBm																																												
4	N	1	f	2.48510	GHz	-29.448	dBm																																												

Appendix D): RF Conducted Spurious Emissions

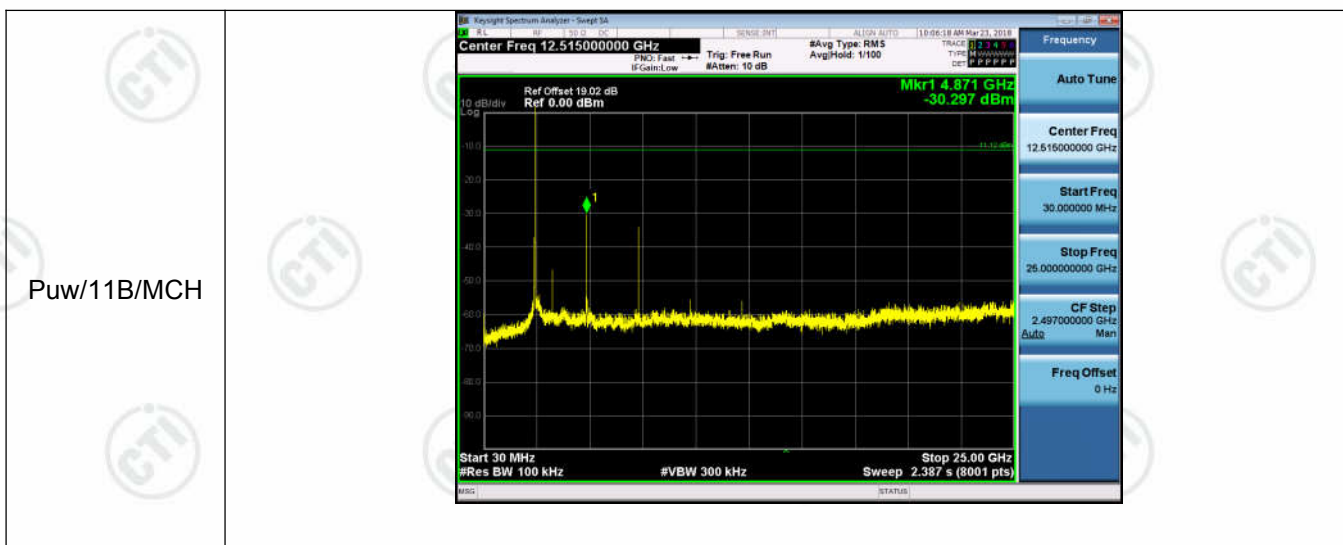
Result Table

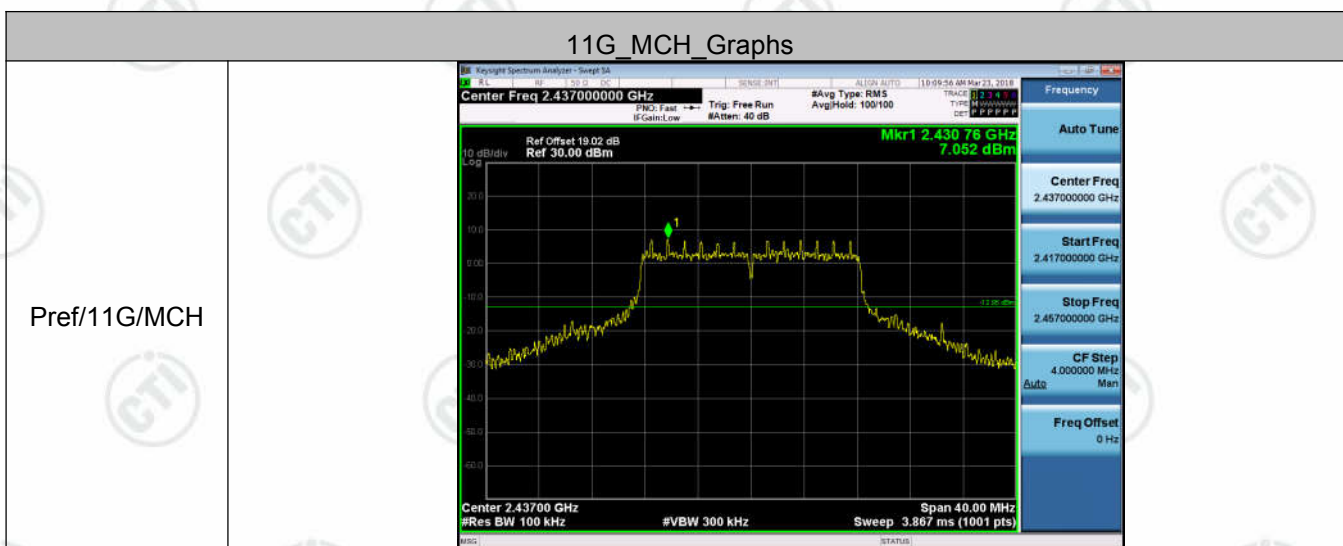
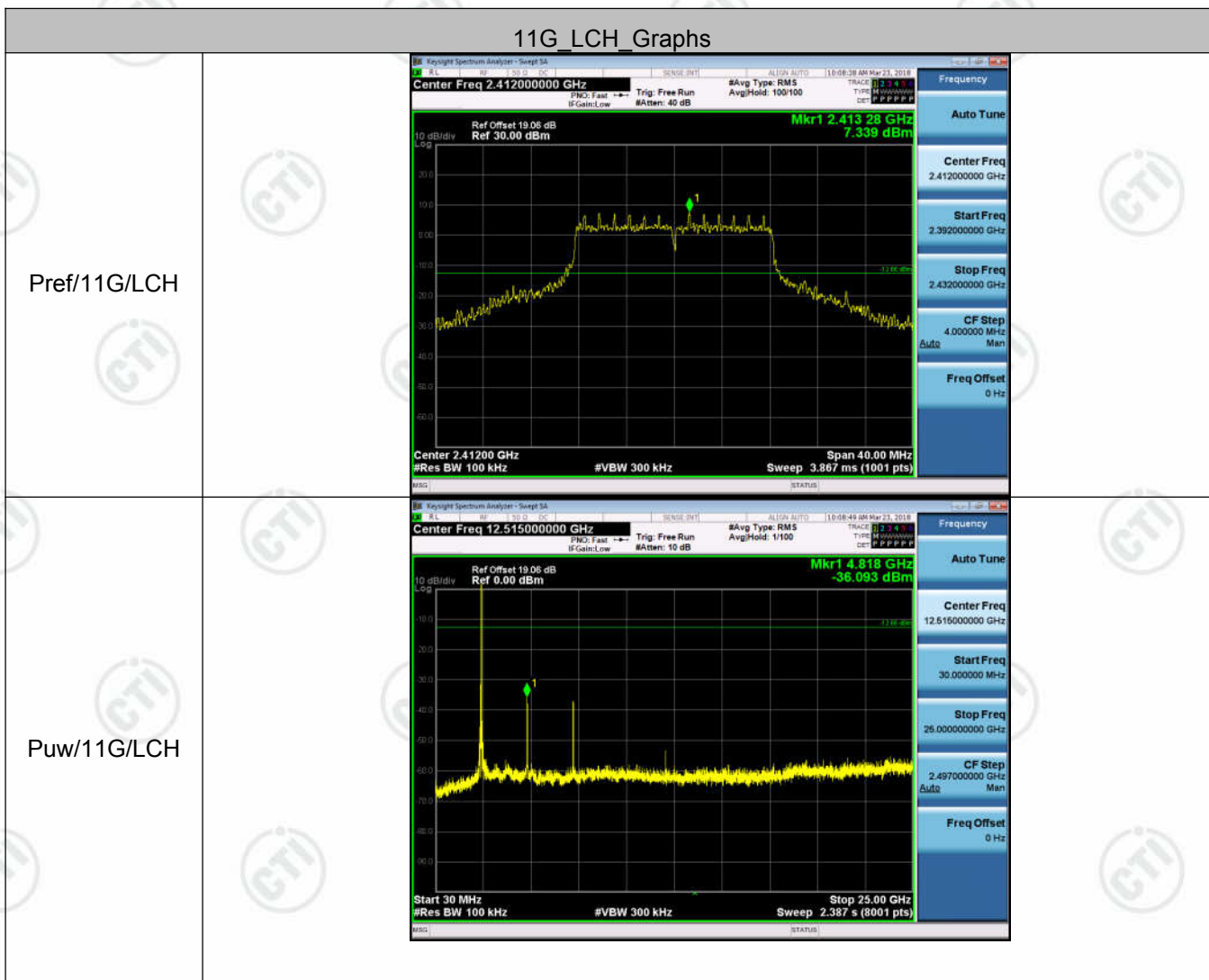
Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
11B	LCH	9.268	<Limit	PASS
11B	MCH	8.878	<Limit	PASS
11B	HCH	8.828	<Limit	PASS
11G	LCH	7.339	<Limit	PASS
11G	MCH	7.052	<Limit	PASS
11G	HCH	7.515	<Limit	PASS
11N20SISO	LCH	7.426	<Limit	PASS
11N20SISO	MCH	7.320	<Limit	PASS
11N20SISO	HCH	7.449	<Limit	PASS

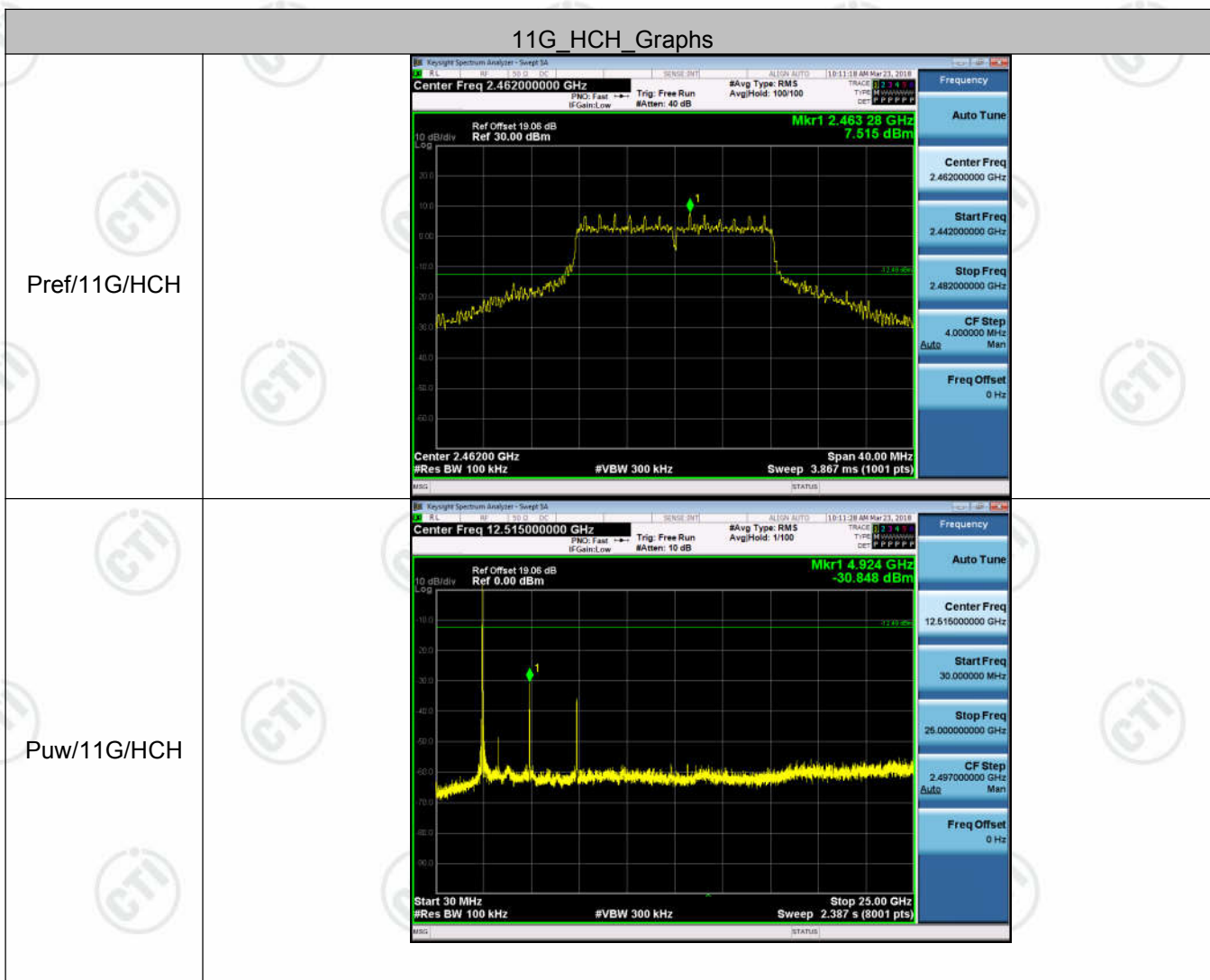
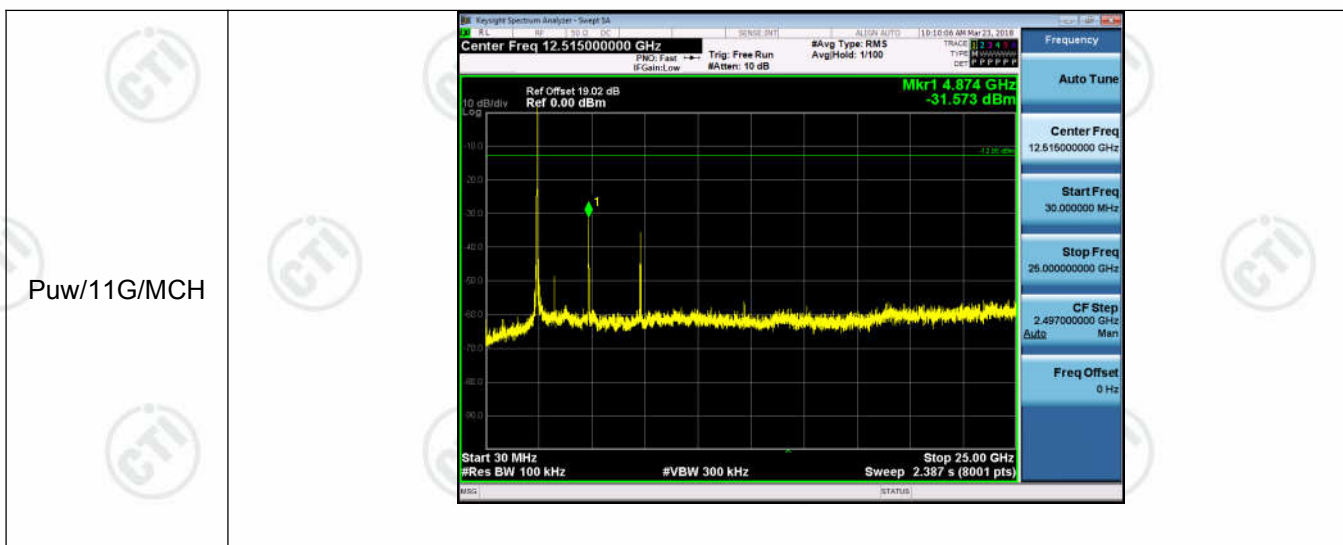
Test Graph

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

11B_MCH_Graphs	
Pref/11B/MCH	

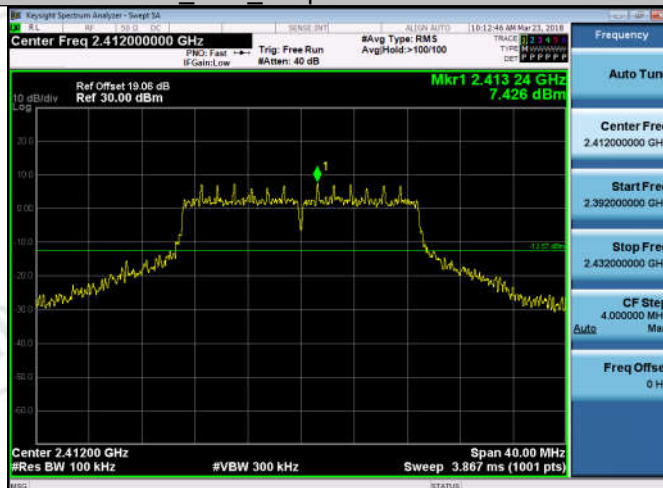




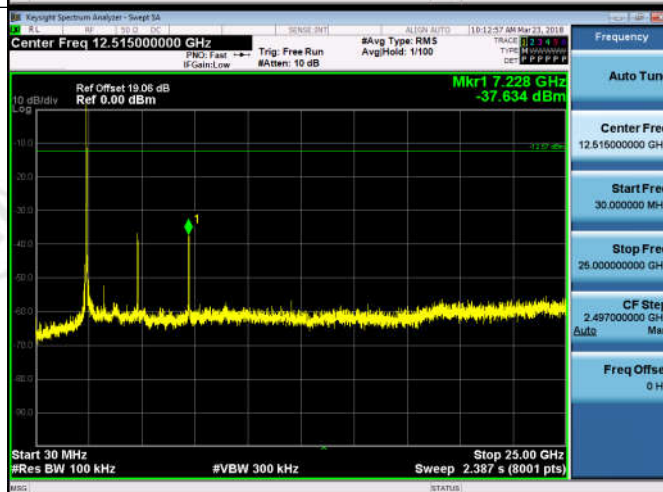


11N20SISO_LCH_Graphs

Pref/11N20SISO/LCH

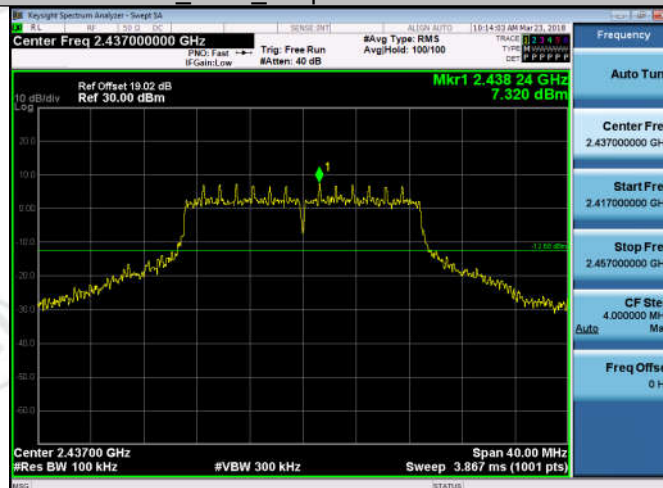


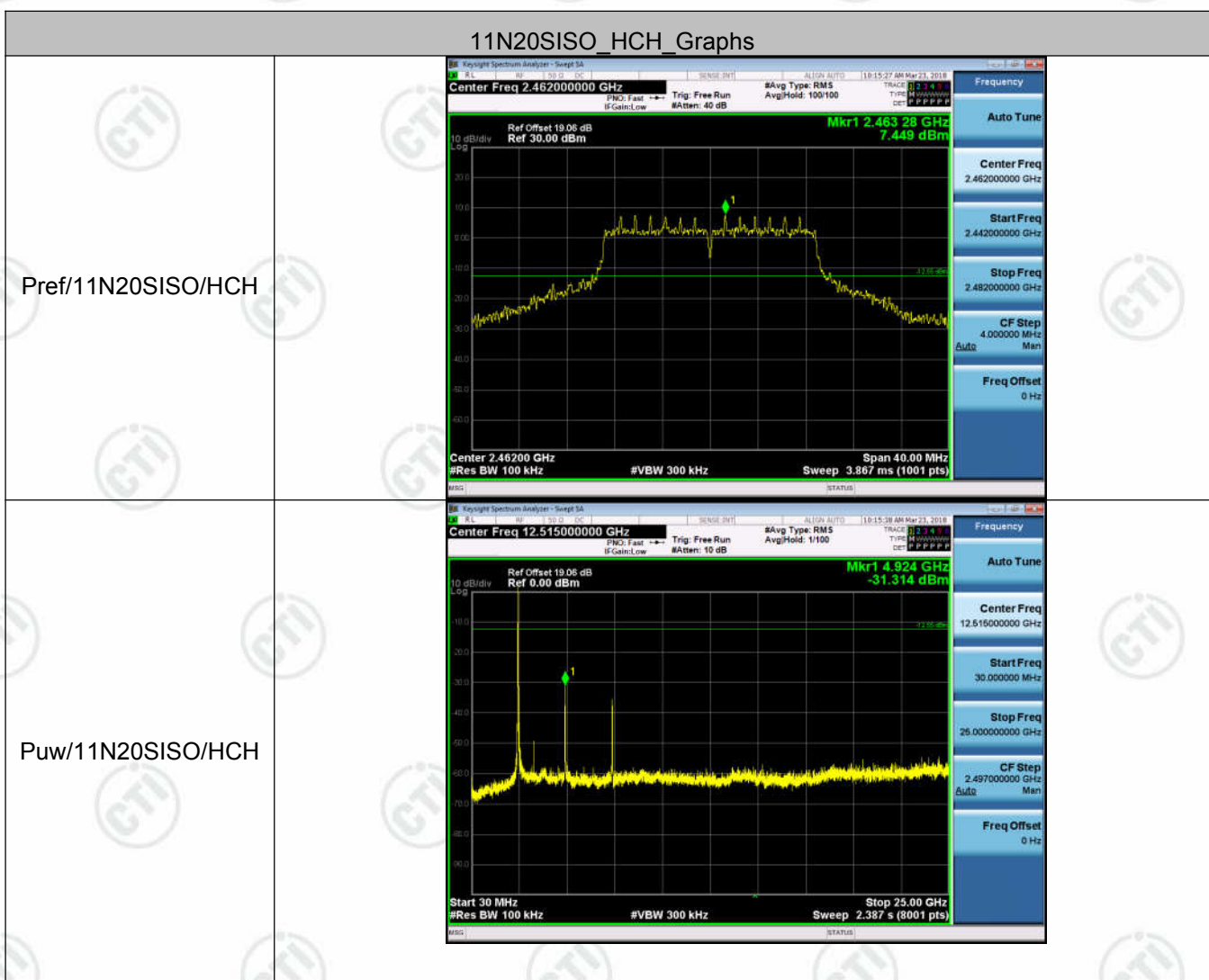
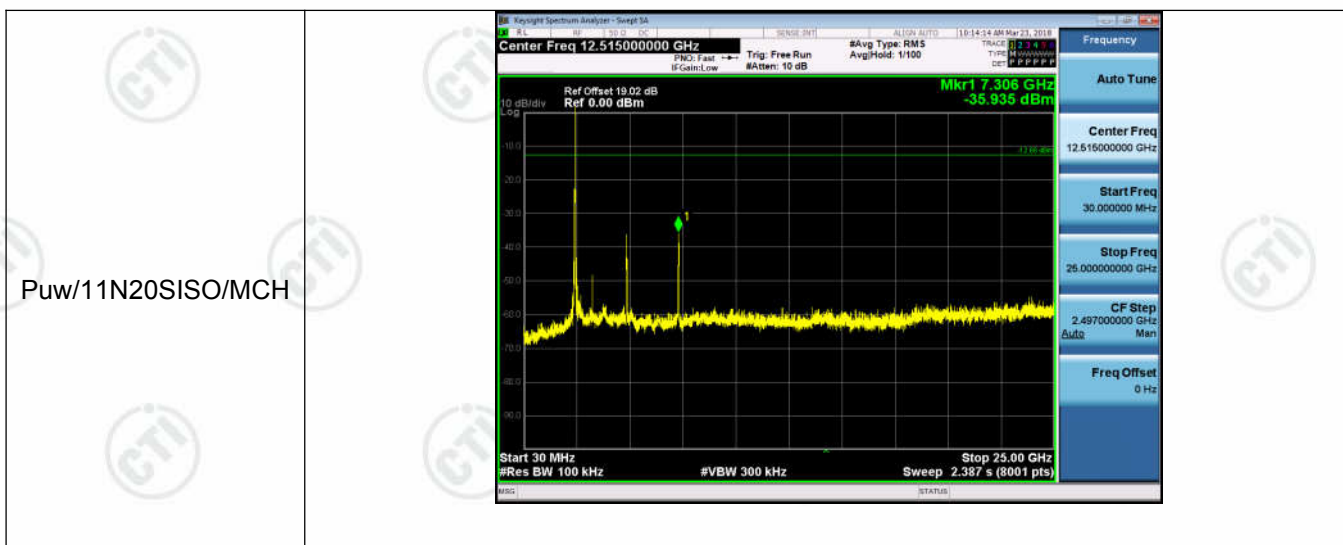
/11N20SISO/LCH



11N20SISO_MCH_Graphs

Pref/11N20SISO/MCH





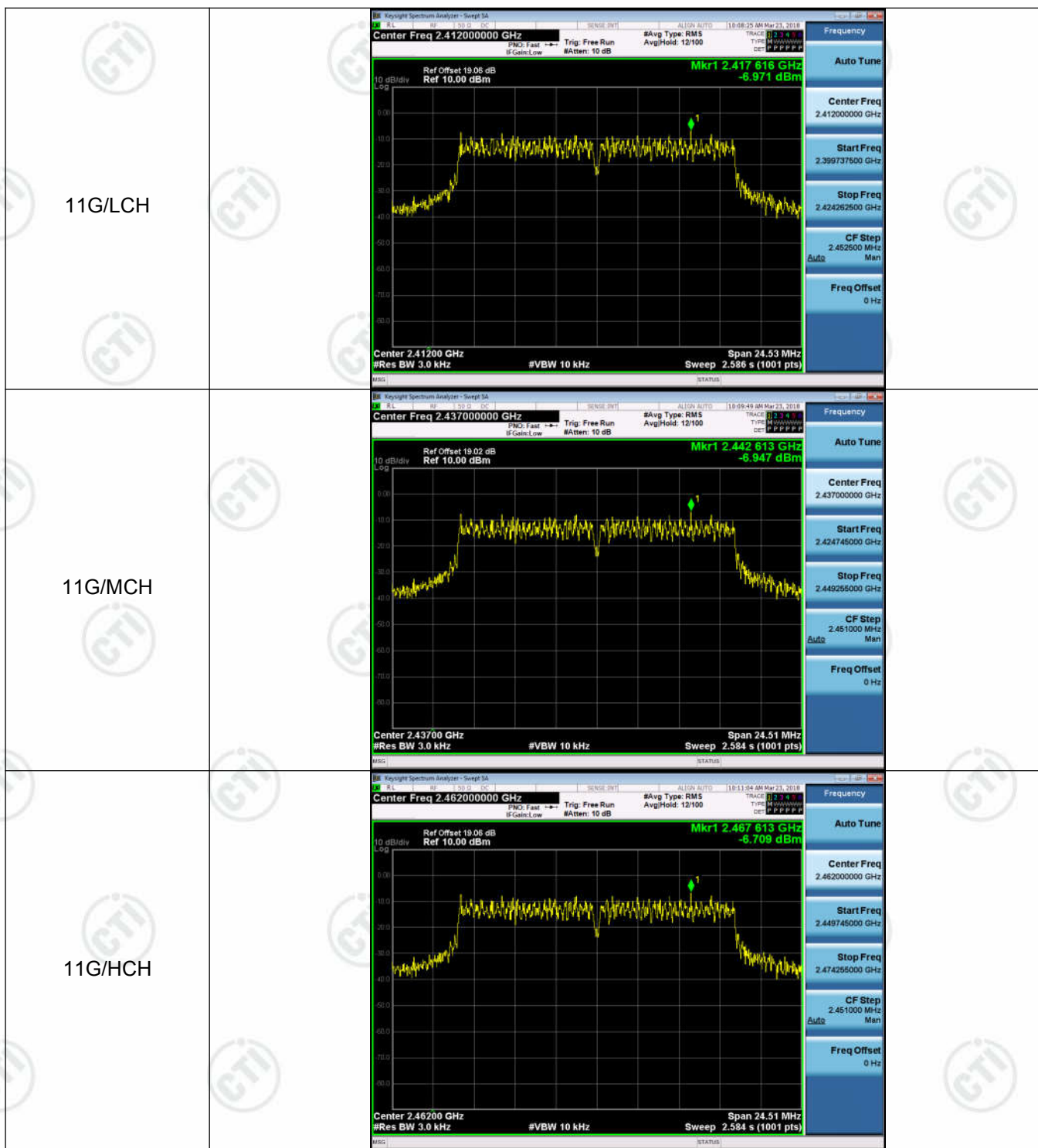
Appendix E): Power Spectral Density

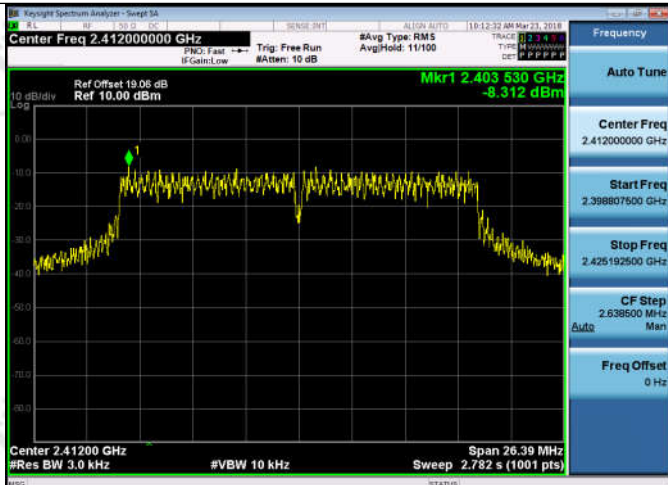
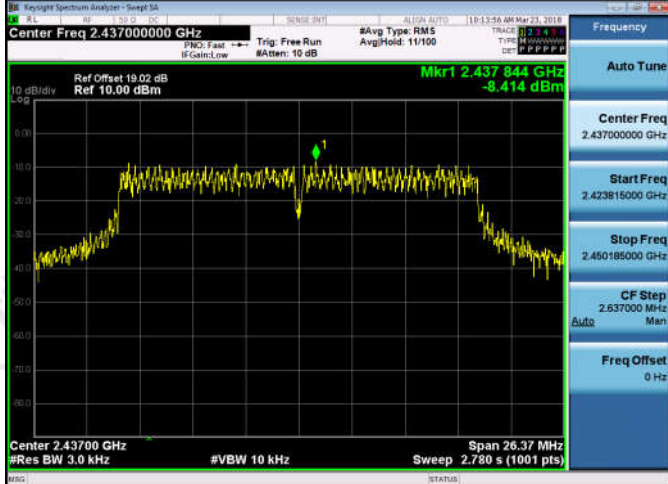
Result Table

Mode	Channel	Power Spectral Density [dBm]	Limit [dBm/3kHz]	Verdict
11B	LCH	-5.526	8	PASS
11B	MCH	-6.079	8	PASS
11B	HCH	-6.319	8	PASS
11G	LCH	-6.971	8	PASS
11G	MCH	-6.947	8	PASS
11G	HCH	-6.709	8	PASS
11N20SISO	LCH	-8.312	8	PASS
11N20SISO	MCH	-8.414	8	PASS
11N20SISO	HCH	-8.351	8	PASS

Test Graph

Graphs	
11B/LCH	Keygraph Spectrum Analyzer - Swept SA Center Freq 2.41200000 GHz Ref Offset 19.06 dB Ref 10.00 dBm Mkr1 2.412 863 GHz -5.526 dBm Center 2.412000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 1.427 s (1001 pts) Frequency Auto Tune Center Freq 2.41200000 GHz Start Freq 2.405232750 GHz Stop Freq 2.418767250 GHz CF Step 1.353450 MHz Auto Man Freq Offset 0 Hz
11B/MCH	Keygraph Spectrum Analyzer - Swept SA Center Freq 2.43700000 GHz Ref Offset 19.02 dB Ref 10.00 dBm Mkr1 2.437 665 GHz -6.079 dBm Center 2.437000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 1.430 s (1001 pts) Frequency Auto Tune Center Freq 2.43700000 GHz Start Freq 2.430219250 GHz Stop Freq 2.443780750 GHz CF Step 1.356150 MHz Auto Man Freq Offset 0 Hz
11B/HCH	Keygraph Spectrum Analyzer - Swept SA Center Freq 2.46200000 GHz Ref Offset 19.06 dB Ref 10.00 dBm Mkr1 2.462 679 GHz -6.319 dBm Center 2.462000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 1.432 s (1001 pts) Frequency Auto Tune Center Freq 2.46200000 GHz Start Freq 2.455209500 GHz Stop Freq 2.468790500 GHz CF Step 1.358100 MHz Auto Man Freq Offset 0 Hz



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

Appendix F): Antenna Requirement

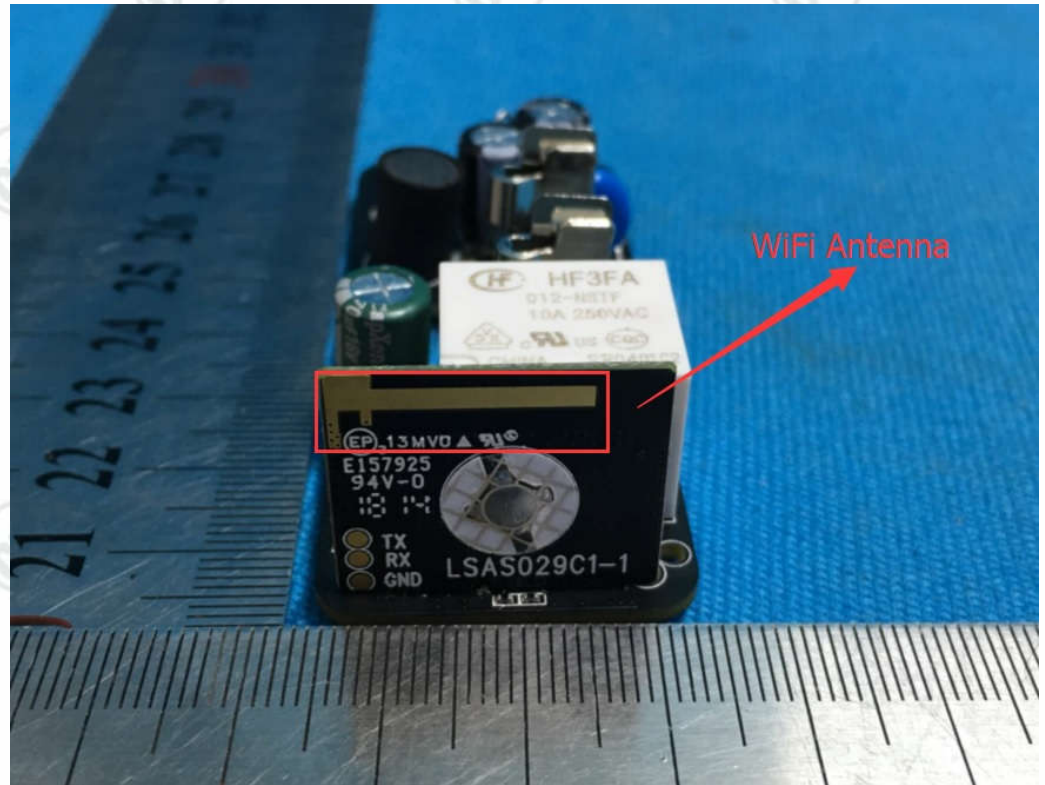
15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:



The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is -3dBi.

Appendix G): AC Power Line Conducted Emission

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														

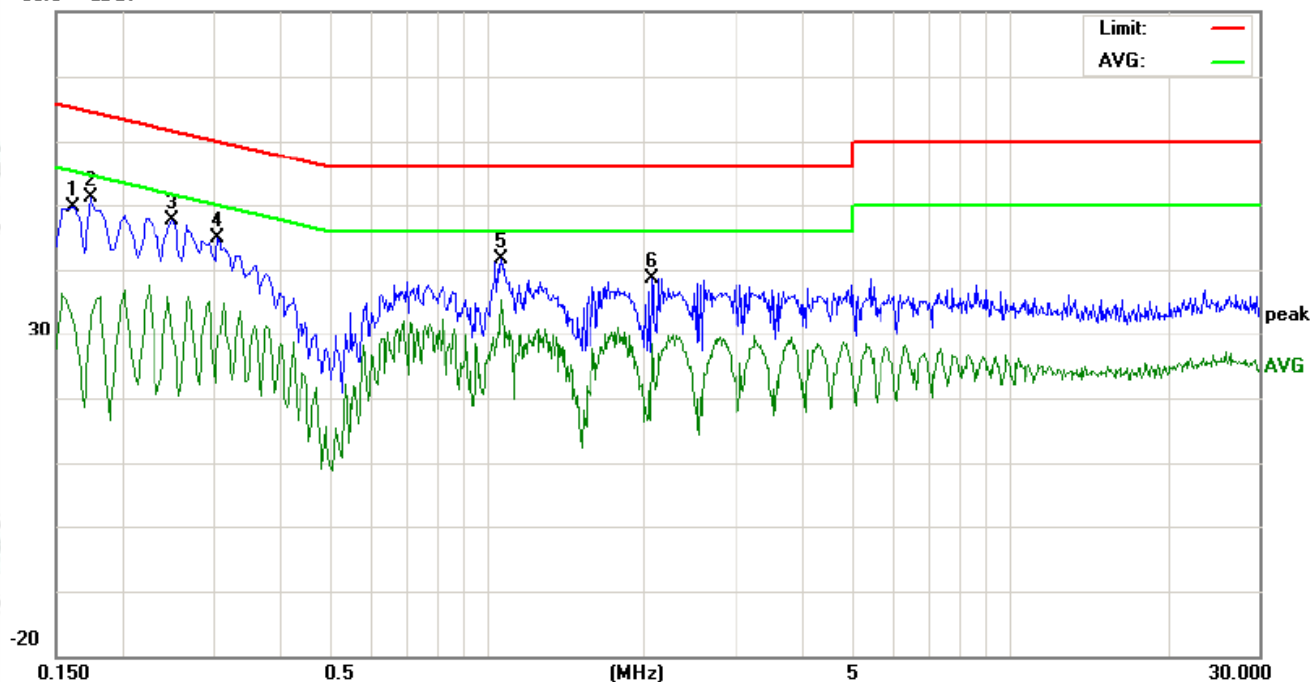
Measurement Data

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.

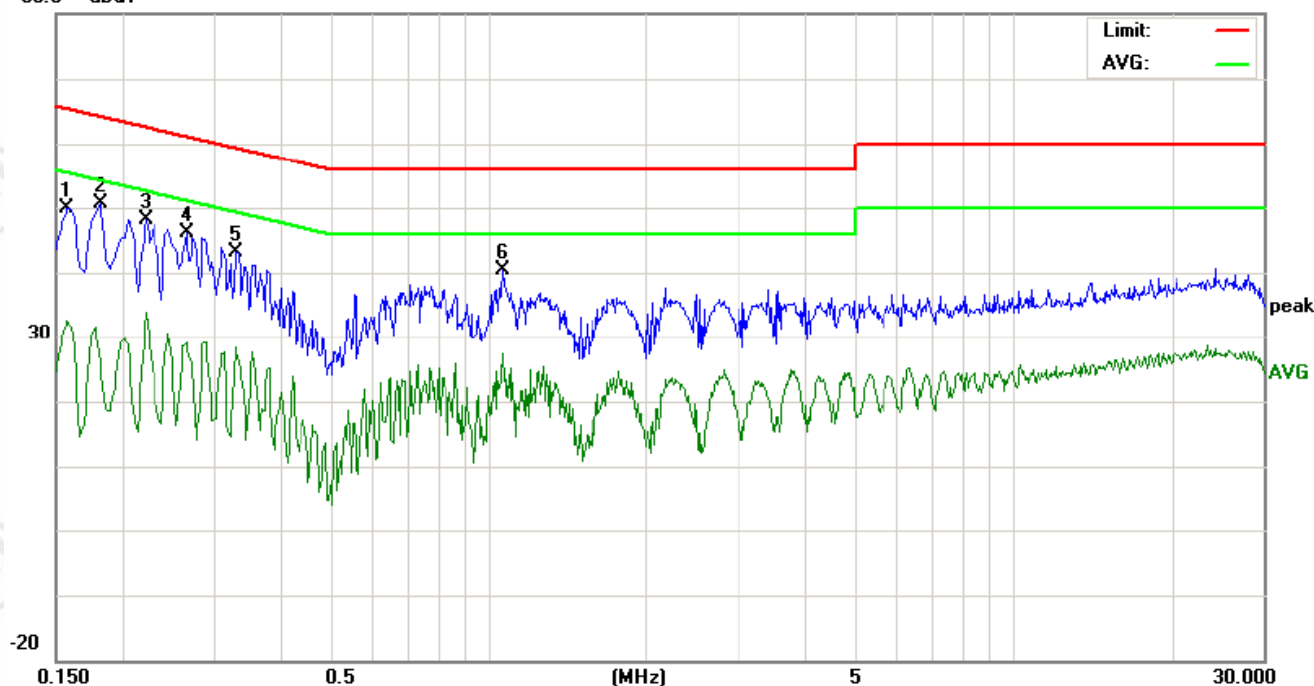
Live line:

80.0 dBuV



No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1620	39.92	35.81	18.55	9.75	49.67	45.56	28.30	65.36	55.36	-19.80	-27.06	P	
2	0.1740	41.28	35.66	21.61	9.74	51.02	45.40	31.35	64.76	54.76	-19.36	-23.41	P	
3	0.2500	37.96	32.78	20.74	9.74	47.70	42.52	30.48	61.75	51.75	-19.23	-21.27	P	
4	0.3067	33.76	29.68	18.83	9.78	43.54	39.46	28.61	60.06	50.06	-20.60	-21.45	P	
5	1.0700	31.94	29.92	24.36	9.72	41.66	39.64	34.08	56.00	46.00	-16.36	-11.92	P	
6	2.0750	29.01	20.01	7.38	9.72	38.73	29.73	17.10	56.00	46.00	-26.27	-28.90	P	

Neutral line:
80.0 dBuV



No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1580	40.21	37.76	21.58	9.76	49.97	47.52	31.34	65.56	55.56	-18.04	-24.22	P	
2	0.1819	40.98	34.94	18.03	9.73	50.71	44.67	27.76	64.39	54.39	-19.72	-26.63	P	
3	0.2220	38.46	36.85	21.67	9.73	48.19	46.58	31.40	62.74	52.74	-16.16	-21.34	P	
4	0.2660	36.33	34.60	19.84	9.76	46.09	44.36	29.60	61.24	51.24	-16.88	-21.64	P	
5	0.3303	33.93	30.60	15.74	9.77	43.70	40.37	25.51	59.44	49.44	-19.07	-23.93	P	
6	1.0660	30.57	27.64	17.11	9.72	40.29	37.36	26.83	56.00	46.00	-18.64	-19.17	P	

Notes:

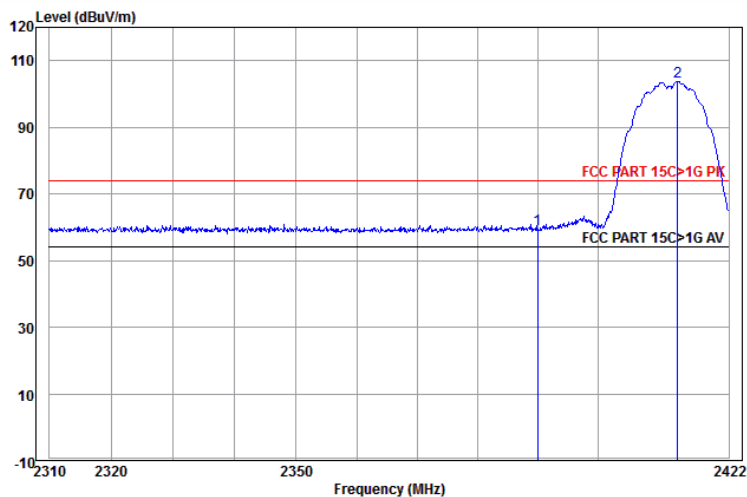
1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.

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

Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Test Procedure:	Below 1GHz test procedure as below: - 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	

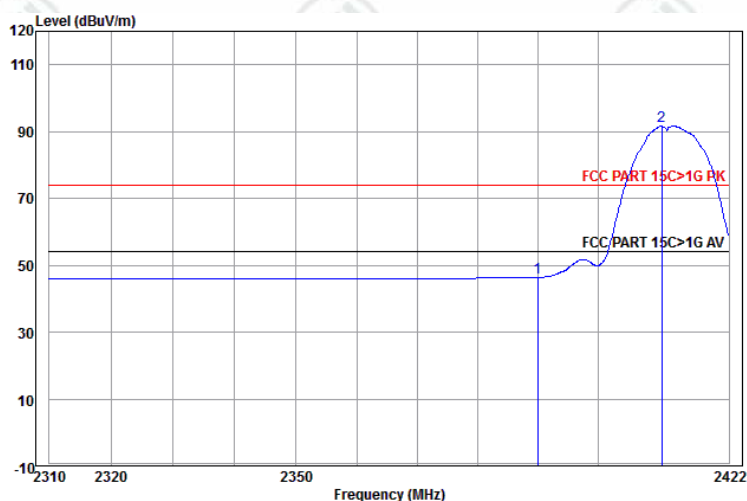
Test plot as follows:

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



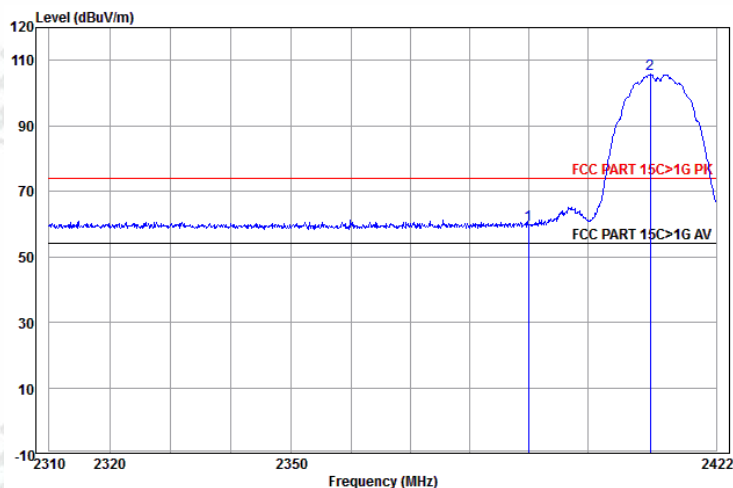
	Ant Freq	Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	23.78	59.38	74.00	-14.62	Horizontal	
2 pp	2413.415	32.58	3.08	68.05	103.71	74.00	29.71	Horizontal	

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



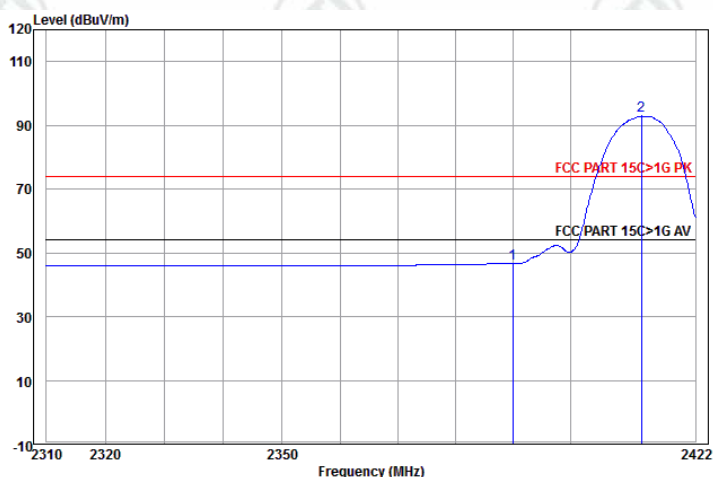
	Ant Freq	Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	10.83	46.43	54.00	-7.57	Horizontal	Average
2 pp	2410.674	32.58	3.08	55.90	91.56	54.00	37.56	Horizontal	Average

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



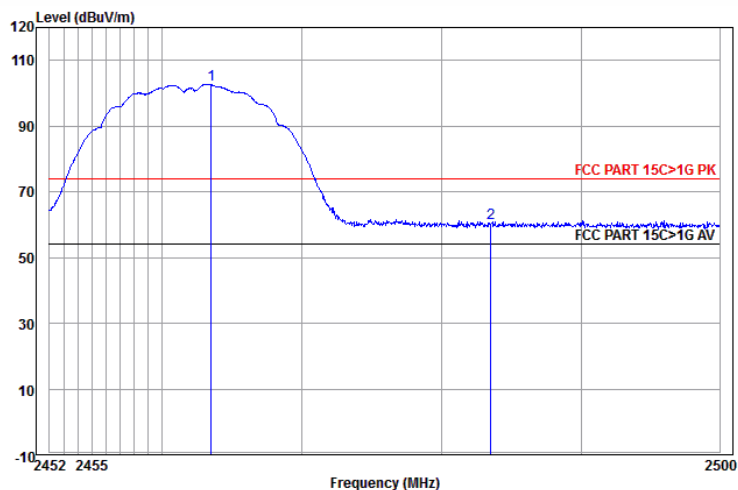
	Ant Freq	Cable Factor	Read Level	Cable Loss	Read Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	24.25	59.85	74.00	-14.15	Vertical	
2 pp	2410.674	32.58	3.08	70.09	105.75	74.00	31.75	Vertical	

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



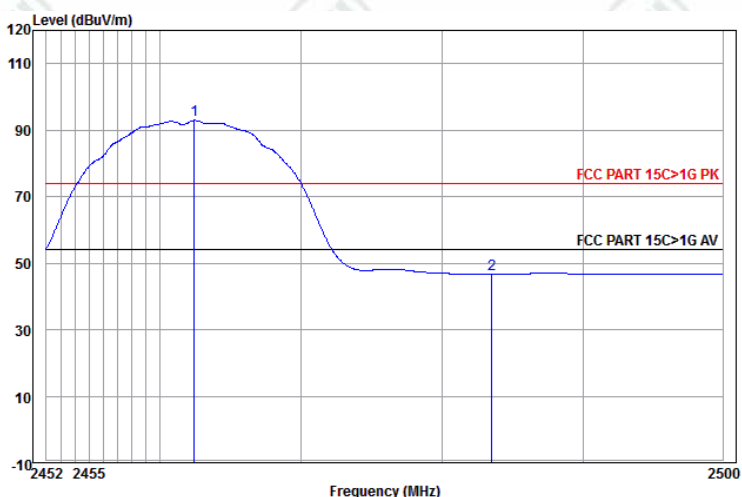
	Ant Freq	Cable Factor	Read Level	Cable Loss	Read Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	10.99	46.59	54.00	-7.41	Vertical	Average
2 pp	2412.501	32.58	3.08	57.25	92.91	54.00	38.91	Vertical	Average

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



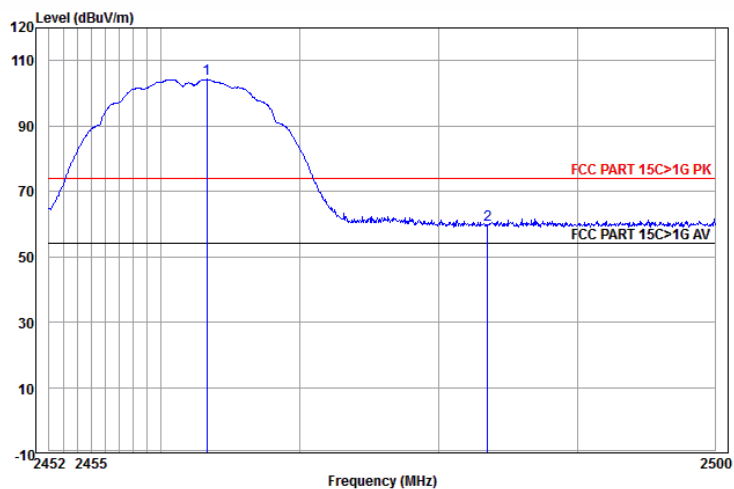
	Ant Freq	Cable Factor	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dB		
1 pp	2463.483	32.68	3.11	66.95	102.74	74.00	28.74	Horizontal
2	2483.500	32.71	3.12	24.59	60.42	74.00	-13.58	Horizontal

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



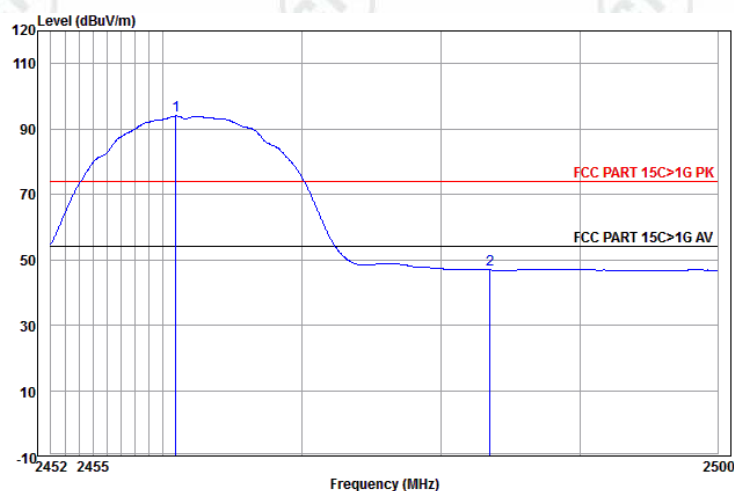
	Ant Freq	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dB		
1 pp	2462.433	32.67	3.11	57.13	92.91	54.00	38.91	Horizontal Average
2	2483.500	32.71	3.12	10.91	46.74	54.00	-7.26	Horizontal Average

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



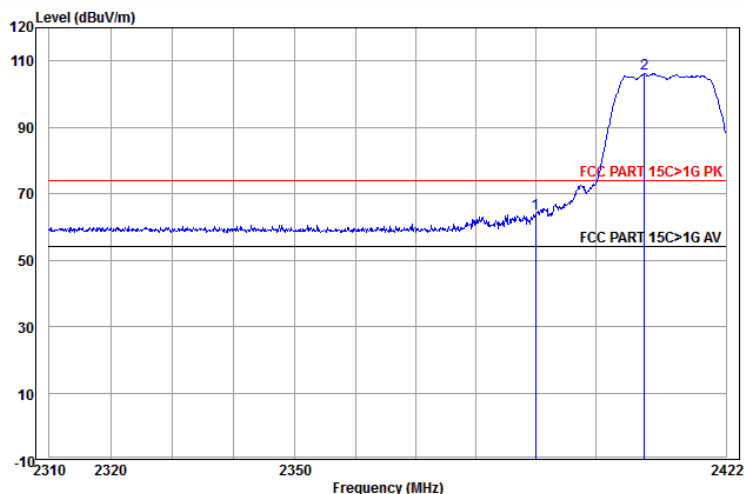
	Ant Freq	Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2463.292	32.68	3.11	68.47	104.26	74.00	30.26	Vertical	
2	2483.500	32.71	3.12	23.86	59.69	74.00	-14.31	Vertical	

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



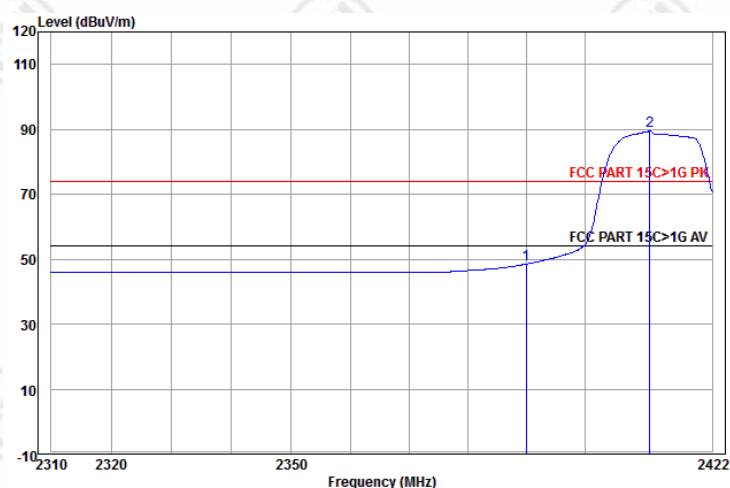
	Ant Freq	Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2460.906	32.67	3.11	58.24	94.02	54.00	40.02	Vertical	Average
2	2483.500	32.71	3.12	11.03	46.86	54.00	-7.14	Vertical	Average

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



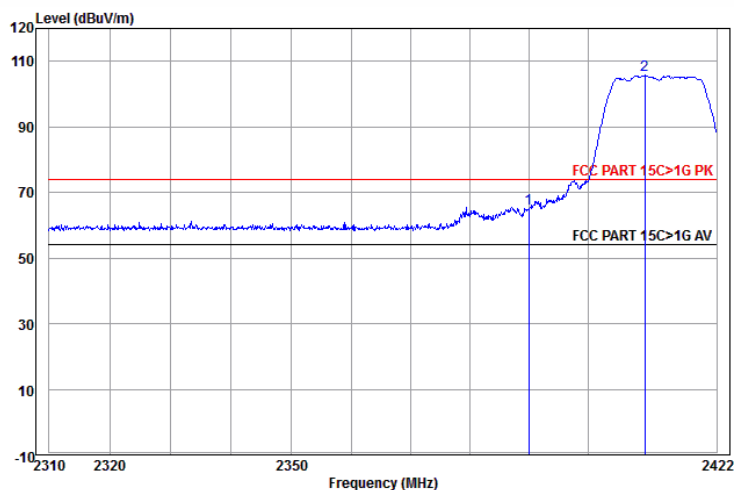
	Ant Freq	Cable Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	28.41	64.01	74.00	-9.99	Horizontal	
2 pp	2408.278	32.57	3.08	70.43	106.08	74.00	32.08	Horizontal	

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



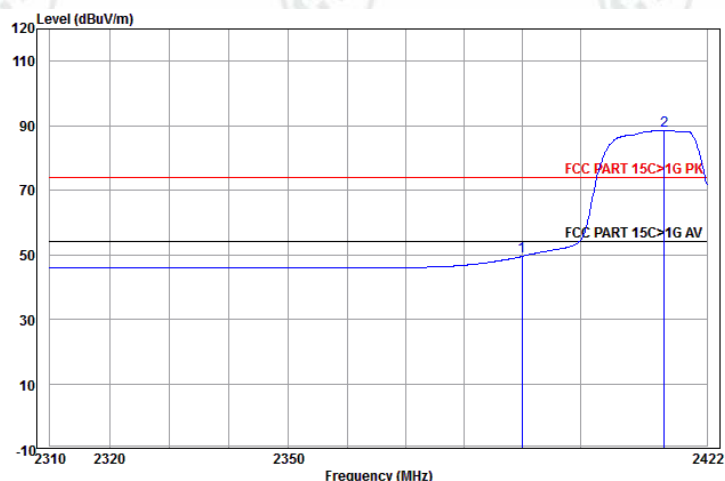
	Ant Freq	Cable Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	12.97	48.57	54.00	-5.43	Horizontal	Average
2 pp	2411.245	32.58	3.08	53.80	89.46	54.00	35.46	Horizontal	Average

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



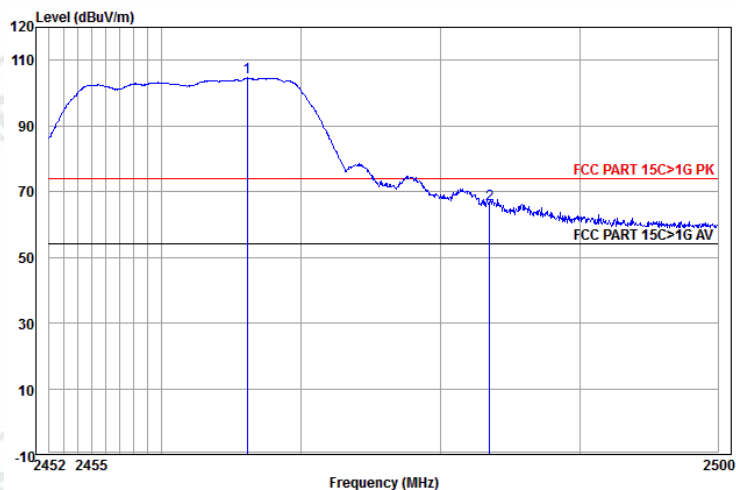
	Ant Freq	Cable Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	29.66	65.26	74.00	-8.74	Vertical	
2	2409.761	32.57	3.08	70.01	105.66	74.00	31.66	Vertical	

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



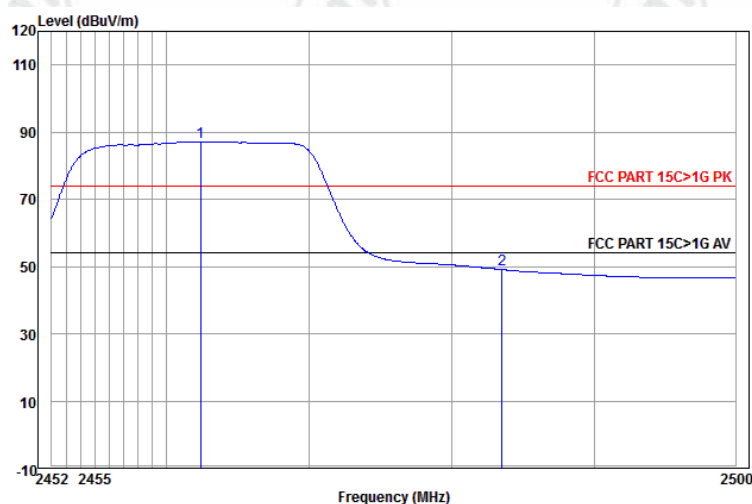
	Ant Freq	Cable Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	13.97	49.57	54.00	-4.43	Vertical	Average
2	2414.558	32.58	3.08	52.82	88.48	54.00	34.48	Vertical	Average

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



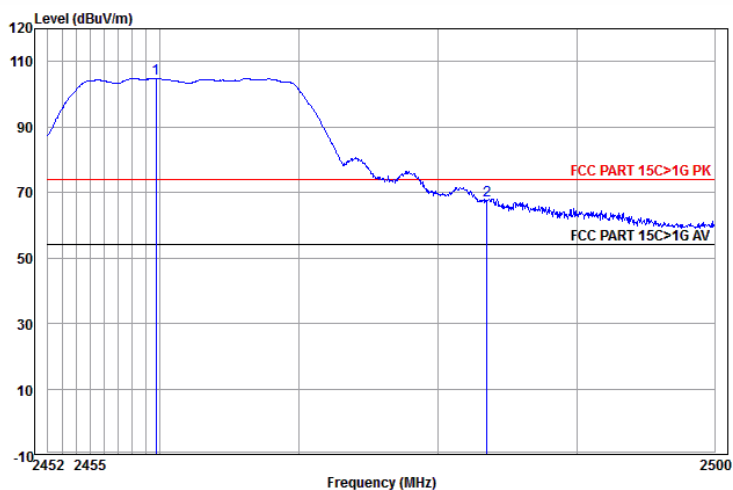
	Ant Freq	Cable Factor	Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	pp 2466.111	32.68	3.11	68.81	104.60	74.00	30.60	Horizontal	
2	2483.500	32.71	3.12	30.31	66.14	74.00	-7.86	Horizontal	

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



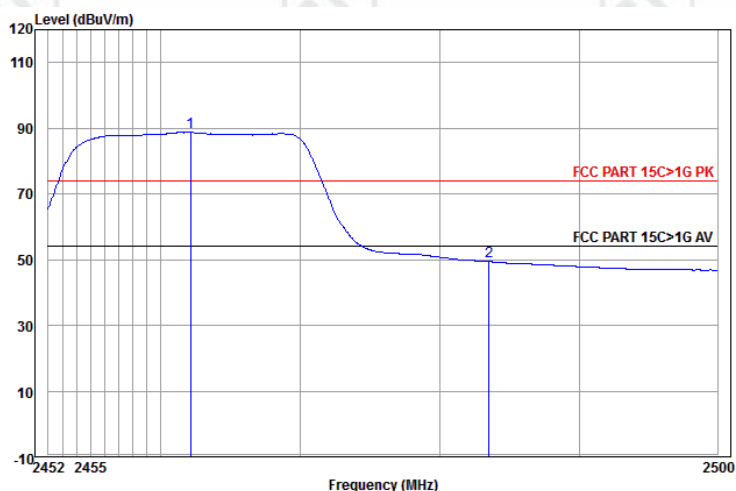
	Ant Freq	Cable Factor	Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	pp 2462.385	32.67	3.11	51.40	87.18	54.00	33.18	Horizontal	Average
2	2483.500	32.71	3.12	13.30	49.13	54.00	-4.87	Horizontal	Average

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



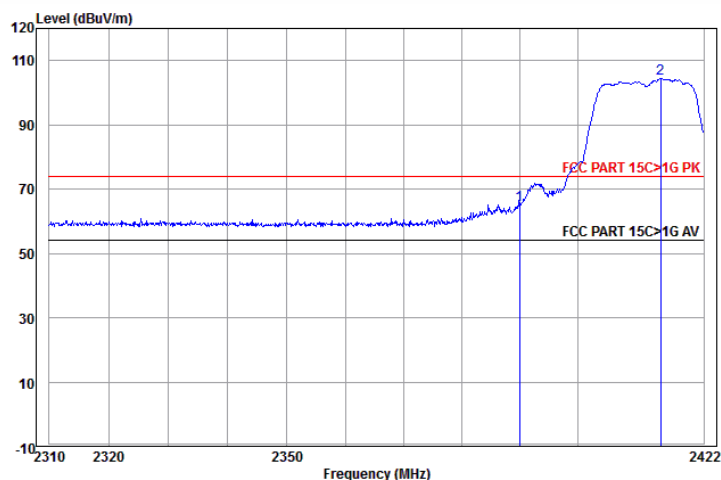
	Ant Freq	Cable Factor	Read Loss	Level	Level	Limit	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2459.713	32.67	3.11	69.10	104.88	74.00	30.88	Vertical	
2	2483.500	32.71	3.12	31.89	67.72	74.00	-6.28	Vertical	

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



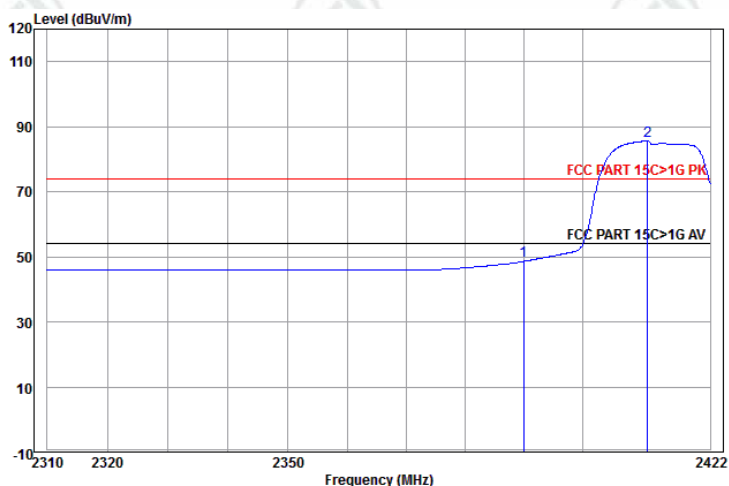
	Ant Freq	Cable Factor	Read Loss	Level	Level	Limit	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2462.146	32.67	3.11	52.99	88.77	54.00	34.77	Vertical	Average
2	2483.500	32.71	3.12	13.60	49.43	54.00	-4.57	Vertical	Average

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



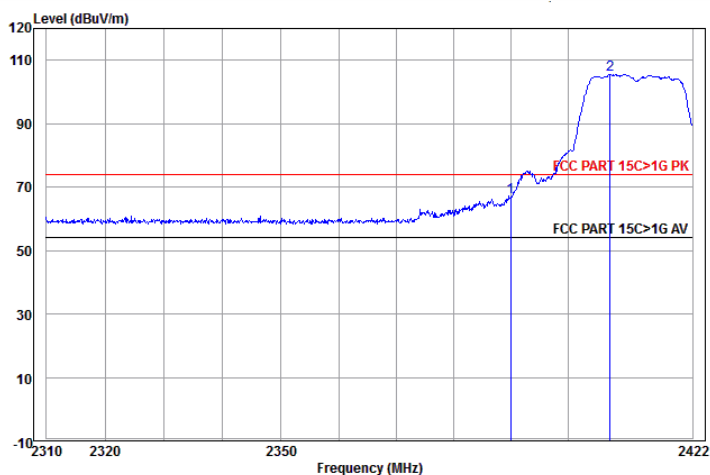
	Ant Freq	Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	29.42	65.02	74.00	-8.98	Horizontal	
2 pp	2414.443	32.58	3.08	68.67	104.33	74.00	30.33	Horizontal	

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



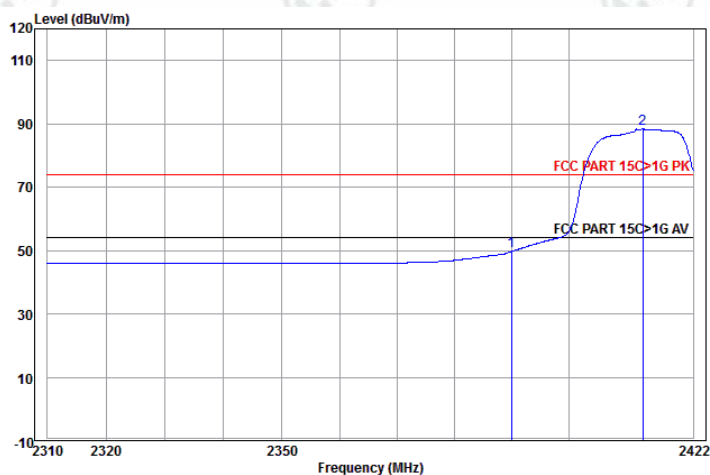
	Ant Freq	Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	13.06	48.66	54.00	-5.34	Horizontal	Average
2 pp	2411.245	32.58	3.08	50.02	85.68	54.00	31.68	Horizontal	Average

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



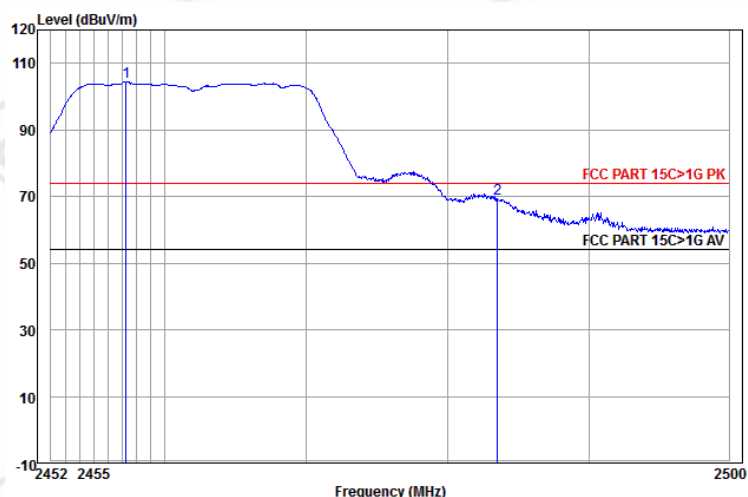
	Ant Freq	Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	31.26	66.86	74.00	-7.14	Vertical	
2 pp	2407.480	32.57	3.08	69.98	105.63	74.00	31.63	Vertical	

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



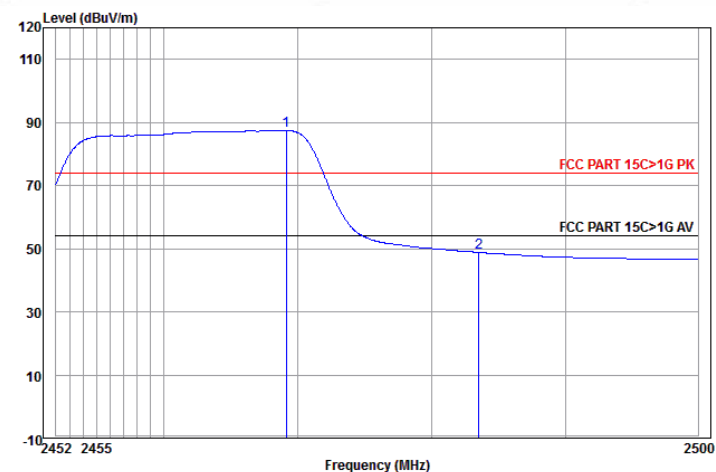
	Ant Freq	Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	32.53	3.07	14.19	49.79	54.00	-4.21	Vertical	Average
2 pp	2413.072	32.58	3.08	52.68	88.34	54.00	34.34	Vertical	Average

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



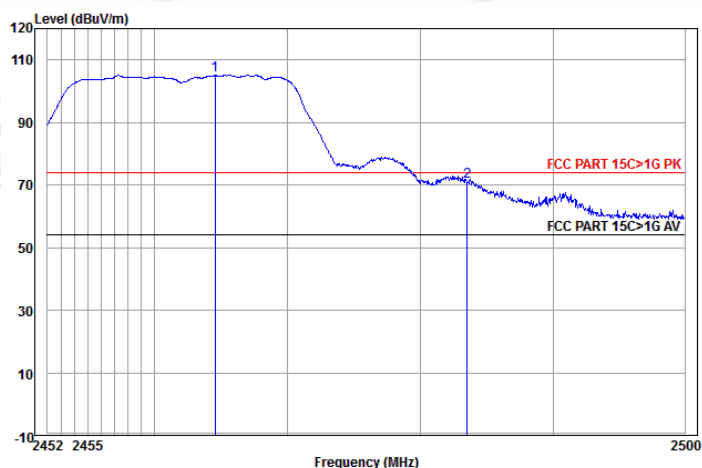
	Ant Freq	Cable Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz		dB	dBuV	dBuV/m	dBuV/m	dB		
1	pp 2457.282	32.66	3.10	68.72	104.48	74.00	30.48	Horizontal	
2	2483.500	32.71	3.12	33.42	69.25	74.00	-4.75	Horizontal	

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



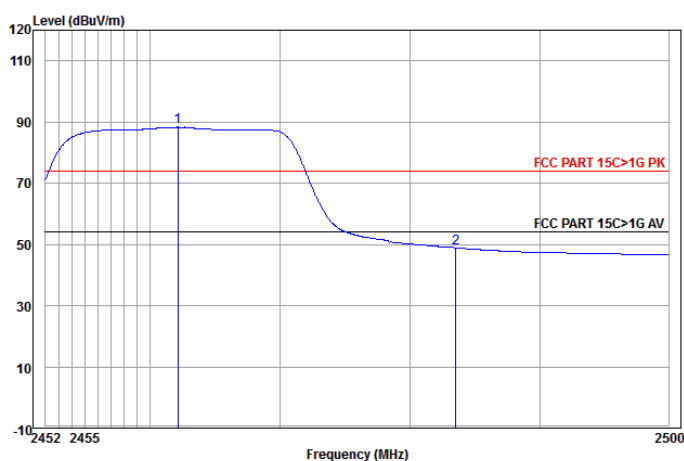
	Ant Freq	Cable Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz		dB	dBuV	dBuV/m	dBuV/m	dB		
1	pp 2469.125	32.69	3.11	51.61	87.41	54.00	33.41	Horizontal	Average
2	2483.500	32.71	3.12	13.01	48.84	54.00	-5.16	Horizontal	Average

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



	Ant Freq	Cable Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	pp 2464.534	32.68	3.11	69.24	105.03	74.00	31.03	Vertical	
2	2483.500	32.71	3.12	35.12	70.95	74.00	-3.05	Vertical	

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



	Ant Freq	Cable Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	pp 2462.146	32.67	3.11	52.53	88.31	54.00	34.31	Vertical	Average
2	2483.500	32.71	3.12	13.08	48.91	54.00	-5.09	Vertical	Average

Note:

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

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

Final Test Level =Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

Appendix I): Radiated Spurious Emissions

Receiver Setup:

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

Test Procedure:

Below 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic 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:

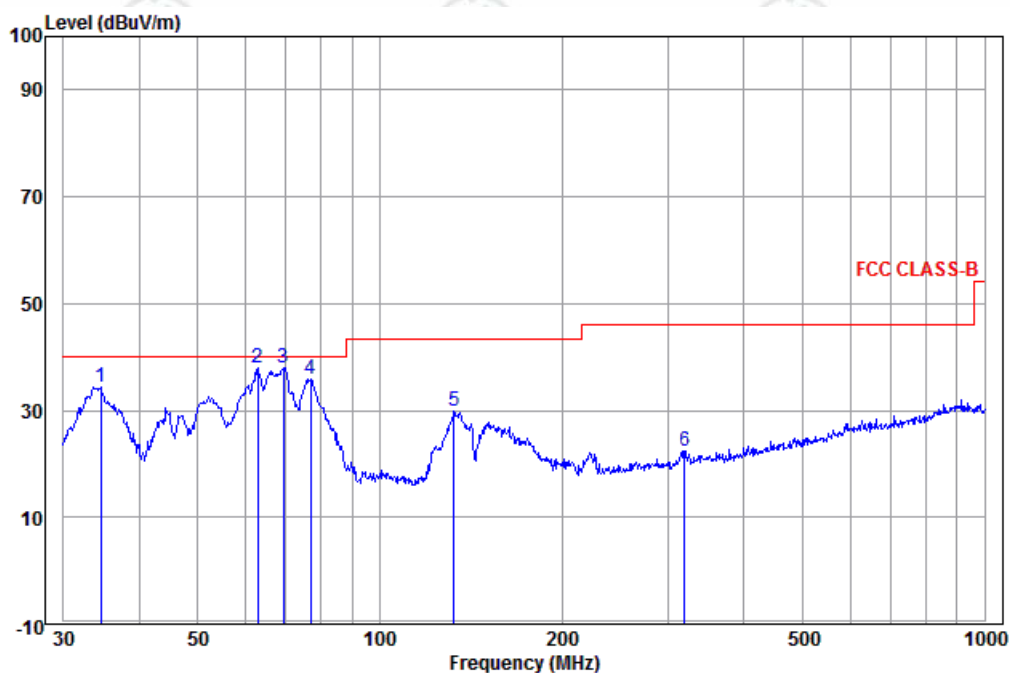
Frequency	Field strength (microvolt/meter)	Limit (dBμV/m)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz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

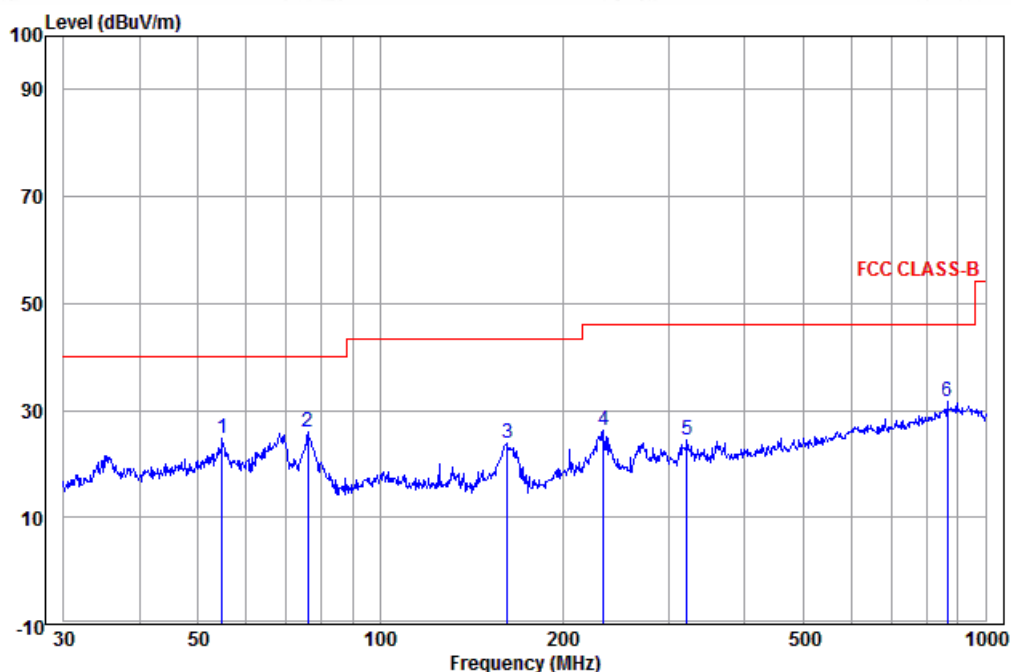
30MHz~1GHz (QP)

Test mode:	Transmitting	Vertical
------------	--------------	----------



	Ant Freq	Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	34.517	12.83	0.07	21.35	34.25	40.00	-5.75	Vertical	QP
2 pp	62.871	12.28	0.22	25.34	37.84	40.00	-2.16	Vertical	QP
3	69.357	10.56	0.25	27.00	37.81	40.00	-2.19	Vertical	QP
4	76.781	9.15	0.37	26.33	35.85	40.00	-4.15	Vertical	QP
5	132.685	9.92	0.60	19.20	29.72	43.50	-13.78	Vertical	QP
6	318.817	13.79	1.17	7.56	22.52	46.00	-23.48	Vertical	QP

Test mode:	Transmitting	Horizontal
------------	--------------	------------



	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	54.835	13.84	0.16	10.79	24.79	40.00	-15.21	Horizontal	QP
2	75.977	9.30	0.35	16.35	26.00	40.00	-14.00	Horizontal	QP
3	162.041	9.52	0.74	13.56	23.82	43.50	-19.68	Horizontal	QP
4	234.168	12.28	1.27	12.61	26.16	46.00	-19.84	Horizontal	QP
5	321.061	13.84	1.18	9.34	24.36	46.00	-21.64	Horizontal	QP
6	866.088	21.56	2.46	7.72	31.74	46.00	-14.26	Horizontal	QP

Transmitter Emission above 1GHz

Test mode: 802.11b(11Mbps)			Test Frequency: 2412MHz			Remark: Peak			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1273.572	30.40	2.46	44.28	48.25	36.83	74.00	-37.17	Pass	Horizontal
1557.252	30.98	2.64	43.93	48.35	38.04	74.00	-35.96	Pass	Horizontal
4824.000	34.73	6.72	44.60	52.51	49.36	74.00	-24.64	Pass	Horizontal
6001.768	35.90	5.97	44.50	48.48	45.85	74.00	-28.15	Pass	Horizontal
7236.000	36.42	8.38	44.80	50.67	50.67	74.00	-23.33	Pass	Horizontal
9648.000	37.93	7.63	45.57	44.27	44.26	74.00	-29.74	Pass	Horizontal
1182.943	30.18	2.39	44.41	48.19	36.35	74.00	-37.65	Pass	Vertical
1569.189	31.00	2.64	43.92	48.54	38.26	74.00	-35.74	Pass	Vertical
4824.000	34.73	6.72	44.60	52.31	49.16	74.00	-24.84	Pass	Vertical
6156.505	35.98	6.34	44.52	48.18	45.98	74.00	-28.02	Pass	Vertical
7236.000	36.42	8.38	44.80	50.00	50.00	74.00	-24.00	Pass	Vertical
9648.000	37.93	7.63	45.57	42.68	42.67	74.00	-31.33	Pass	Vertical

Test mode: 802.11b(11Mbps)			Test Frequency: 2437MHz			Remark: Peak			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1270.334	30.39	2.45	44.29	49.09	37.64	74.00	-36.36	Pass	Horizontal
1557.252	30.98	2.64	43.93	48.98	38.67	74.00	-35.33	Pass	Horizontal
4874.000	34.84	6.73	44.60	53.34	50.31	74.00	-23.69	Pass	Horizontal
6764.538	36.29	7.68	44.58	47.67	47.06	74.00	-26.94	Pass	Horizontal
7311.000	36.43	8.44	44.86	50.45	50.46	74.00	-23.54	Pass	Horizontal
9748.000	38.03	7.55	45.55	41.41	41.44	74.00	-32.56	Pass	Horizontal
1225.860	30.29	2.42	44.35	48.17	36.53	74.00	-37.47	Pass	Vertical
1609.646	31.07	2.67	43.88	47.90	37.76	74.00	-36.24	Pass	Vertical
4874.000	34.84	6.73	44.60	53.76	50.73	74.00	-23.27	Pass	Vertical
6172.197	35.99	6.37	44.52	48.20	46.04	74.00	-27.96	Pass	Vertical
7311.000	36.43	8.44	44.86	50.62	50.63	74.00	-23.37	Pass	Vertical
9748.000	38.03	7.55	45.55	41.75	41.78	74.00	-32.22	Pass	Vertical

Test mode: 802.11b(11Mbps)			Test Frequency: 2462MHz			Remark: Peak			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1176.935	30.17	2.39	44.42	48.67	36.81	74.00	-37.19	Pass	Horizontal
1518.111	30.90	2.61	43.98	48.32	37.85	74.00	-36.15	Pass	Horizontal
4924.000	34.94	6.74	44.60	51.04	48.12	74.00	-25.88	Pass	Horizontal
6078.644	35.94	6.16	44.51	48.08	45.67	74.00	-28.33	Pass	Horizontal
7386.000	36.44	8.50	44.92	50.10	50.12	74.00	-23.88	Pass	Horizontal
9848.000	38.14	7.47	45.53	42.73	42.81	74.00	-31.19	Pass	Horizontal
1232.117	30.30	2.43	44.34	49.08	37.47	74.00	-36.53	Pass	Vertical
1589.289	31.04	2.65	43.90	48.08	37.87	74.00	-36.13	Pass	Vertical
4924.000	34.94	6.74	44.60	52.03	49.11	74.00	-24.89	Pass	Vertical
6172.197	35.99	6.37	44.52	48.82	46.66	74.00	-27.34	Pass	Vertical
7386.000	36.44	8.50	44.92	50.20	50.22	74.00	-23.78	Pass	Vertical
9848.000	38.14	7.47	45.53	41.98	42.06	74.00	-31.94	Pass	Vertical

Test mode: 802.11g(6Mbps)			Test Frequency: 2412MHz			Remark: Peak			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1176.935	30.17	2.39	44.42	49.21	37.35	74.00	-36.65	Pass	Horizontal
1549.344	30.96	2.63	43.94	48.11	37.76	74.00	-36.24	Pass	Horizontal
4824.000	34.73	6.72	44.60	52.51	49.36	74.00	-24.64	Pass	Horizontal
5986.509	35.89	5.98	44.50	48.16	45.53	74.00	-28.47	Pass	Horizontal
7236.000	36.42	8.38	44.80	50.50	50.50	74.00	-23.50	Pass	Horizontal
9648.000	37.93	7.63	45.57	42.12	42.11	74.00	-31.89	Pass	Horizontal
1340.089	30.54	2.50	44.19	47.80	36.65	74.00	-37.35	Pass	Vertical
3933.367	32.85	6.36	44.61	49.09	43.69	74.00	-30.31	Pass	Vertical
4824.000	34.73	6.72	44.60	52.68	49.53	74.00	-24.47	Pass	Vertical
6001.768	35.90	5.97	44.50	49.30	46.67	74.00	-27.33	Pass	Vertical
7236.000	36.42	8.38	44.80	50.20	50.20	74.00	-23.80	Pass	Vertical
9648.000	37.93	7.63	45.57	41.93	41.92	74.00	-32.08	Pass	Vertical

Test mode: 802.11g(6Mbps)			Test Frequency: 2437MHz			Remark: Peak			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1228.984	30.29	2.42	44.34	48.96	37.33	74.00	-36.67	Pass	Horizontal
1545.405	30.96	2.63	43.95	49.28	38.92	74.00	-35.08	Pass	Horizontal
4874.000	34.84	6.73	44.6	52.07	49.04	74.00	-24.96	Pass	Horizontal
6156.505	35.98	6.34	44.52	47.74	45.54	74.00	-28.46	Pass	Horizontal
7311.000	36.43	8.44	44.86	50.07	50.08	74.00	-23.92	Pass	Horizontal
9748.000	38.03	7.55	45.55	42.82	42.85	74.00	-31.15	Pass	Horizontal
1182.943	30.18	2.39	44.41	48.77	36.93	74.00	-37.07	Pass	Vertical
1502.732	30.88	2.60	43.99	48.25	37.74	74.00	-36.26	Pass	Vertical
4874.000	34.84	6.73	44.60	53.01	49.98	74.00	-24.02	Pass	Vertical
6594.518	36.21	7.32	44.56	47.44	46.41	74.00	-27.59	Pass	Vertical
7311.000	36.43	8.44	44.86	50.40	50.41	74.00	-23.59	Pass	Vertical
9748.000	38.03	7.55	45.55	41.94	41.97	74.00	-32.03	Pass	Vertical

Test mode: 802.11g(6Mbps)			Test Frequency: 2462MHz			Remark: Peak			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1170.959	30.16	2.38	44.43	48.28	36.39	74.00	-37.61	Pass	Horizontal
1553.293	30.97	2.63	43.94	47.89	37.55	74.00	-36.45	Pass	Horizontal
4924.000	34.94	6.74	44.60	50.21	47.29	74.00	-26.71	Pass	Horizontal
5821.207	35.77	6.10	44.52	48.15	45.50	74.00	-28.50	Pass	Horizontal
7386.000	36.44	8.50	44.92	50.23	50.25	74.00	-23.75	Pass	Horizontal
9848.000	38.14	7.47	45.53	43.09	43.17	74.00	-30.83	Pass	Horizontal
1273.572	30.40	2.46	44.28	47.87	36.45	74.00	-37.55	Pass	Vertical
1541.476	30.95	2.63	43.95	48.82	38.45	74.00	-35.55	Pass	Vertical
4924.000	34.94	6.74	44.60	51.68	48.76	74.00	-25.24	Pass	Vertical
5986.509	35.89	5.98	44.50	48.55	45.92	74.00	-28.08	Pass	Vertical
7386.000	36.44	8.50	44.92	50.56	50.58	74.00	-23.42	Pass	Vertical
9848.000	38.14	7.47	45.53	42.50	42.58	74.00	-31.42	Pass	Vertical

Test mode: 802.11n(HT20)(6.5Mbps)				Test Frequency: 2412MHz			Remark: Peak		
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1296.469	30.45	2.47	44.25	47.99	36.66	74.00	-37.34	Pass	Horizontal
1865.735	31.50	2.80	43.62	47.64	38.32	74.00	-35.68	Pass	Horizontal
4824.000	34.73	6.72	44.60	51.88	48.73	74.00	-25.27	Pass	Horizontal
5420.742	35.45	6.41	44.56	48.81	46.11	74.00	-27.89	Pass	Horizontal
7236.000	36.42	8.38	44.80	50.44	50.44	74.00	-23.56	Pass	Horizontal
9648.000	37.93	7.63	45.57	42.25	42.24	74.00	-31.76	Pass	Horizontal
1270.334	30.39	2.45	44.29	48.31	36.86	74.00	-37.14	Pass	Vertical
1573.189	31.01	2.65	43.92	48.27	38.01	74.00	-35.99	Pass	Vertical
4824.000	34.73	6.72	44.60	51.97	48.82	74.00	-25.18	Pass	Vertical
5603.126	35.60	6.27	44.54	48.52	45.85	74.00	-28.15	Pass	Vertical
7236.000	36.42	8.38	44.80	50.30	50.30	74.00	-23.70	Pass	Vertical
9648.000	37.93	7.63	45.57	45.41	45.40	74.00	-28.60	Pass	Vertical

Test mode: 802.11n(HT20)(6.5Mbps)				Test Frequency: 2437MHz			Remark: Peak		
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1167.982	30.15	2.38	44.43	48.92	37.02	74.00	-36.98	Pass	Horizontal
1529.749	30.93	2.62	43.96	48.90	38.49	74.00	-35.51	Pass	Horizontal
4874.000	34.84	6.73	44.60	51.57	48.54	74.00	-25.46	Pass	Horizontal
5406.961	35.44	6.42	44.56	48.24	45.54	74.00	-28.46	Pass	Horizontal
7311.000	36.43	8.44	44.86	50.40	50.41	74.00	-23.59	Pass	Horizontal
9748.000	38.03	7.55	45.55	41.66	41.69	74.00	-32.31	Pass	Horizontal
1257.465	30.36	2.44	44.30	48.82	37.32	74.00	-36.68	Pass	Vertical
1545.405	30.96	2.63	43.95	48.36	38.00	74.00	-36.00	Pass	Vertical
4874.000	34.84	6.73	44.60	53.39	50.36	74.00	-23.64	Pass	Vertical
5806.408	35.76	6.11	44.52	48.83	46.18	74.00	-27.82	Pass	Vertical
7311.000	36.43	8.44	44.86	50.50	50.51	74.00	-23.49	Pass	Vertical
9748.000	38.03	7.55	45.55	41.88	41.91	74.00	-32.09	Pass	Vertical

Test mode: 802.11n(HT20)(6.5Mbps)				Test Frequency: 2462MHz			Remark: Peak		
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1280.072	30.41	2.46	44.27	48.87	37.47	74.00	-36.53	Pass	Horizontal
1549.344	30.96	2.63	43.94	48.35	38.00	74.00	-36.00	Pass	Horizontal
4924.000	34.94	6.74	44.60	50.07	47.15	74.00	-26.85	Pass	Horizontal
6577.752	36.20	7.28	44.56	48.36	47.28	74.00	-26.72	Pass	Horizontal
7386.000	36.44	8.50	44.92	50.40	50.42	74.00	-23.58	Pass	Horizontal
9848.000	38.14	7.47	45.53	41.06	41.14	74.00	-32.86	Pass	Horizontal
1132.844	30.06	2.35	44.48	48.84	36.77	74.00	-37.23	Pass	Vertical
1498.912	30.87	2.60	44.00	48.64	38.11	74.00	-35.89	Pass	Vertical
4924.000	34.94	6.74	44.60	51.38	48.46	74.00	-25.54	Pass	Vertical
6017.064	35.91	6.01	44.50	48.10	45.52	74.00	-28.48	Pass	Vertical
7386.000	36.44	8.50	44.92	50.40	50.42	74.00	-23.58	Pass	Vertical
9848.000	38.14	7.47	45.53	42.01	42.09	74.00	-31.91	Pass	Vertical

Note:

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

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

Final Test Level =Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor- Antenna Factor-Cable Factor

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

PHOTOGRAPHS OF TEST SETUP

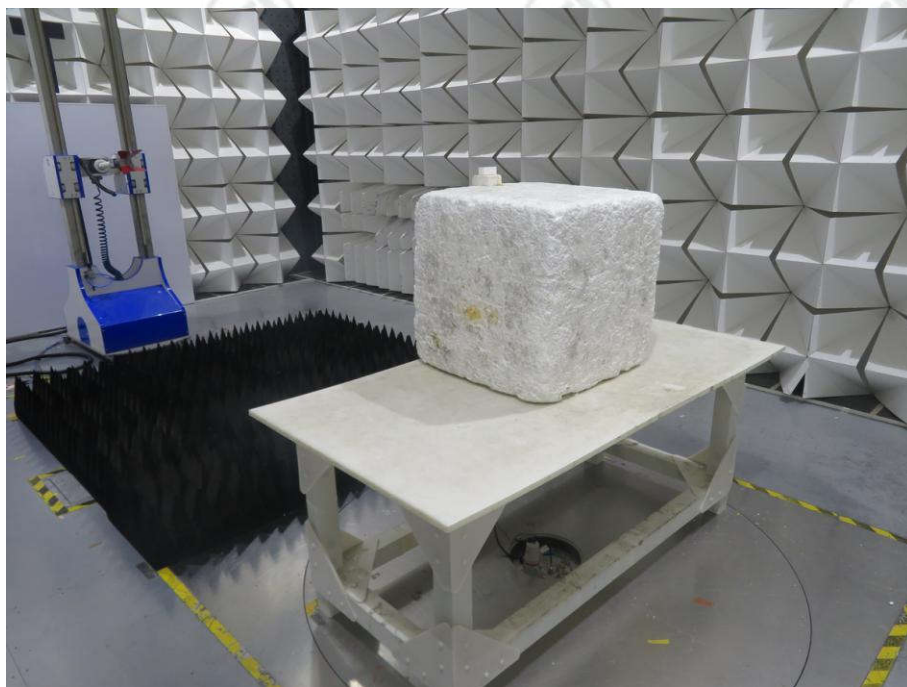
Test Model No.: ZNCZ03CM



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



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



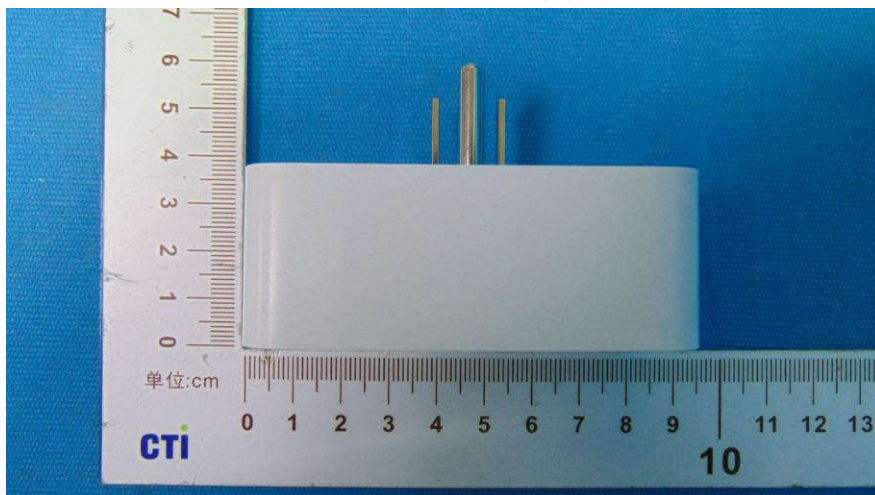
Radiated spurious emission Test Setup-3(Above 1GHz)



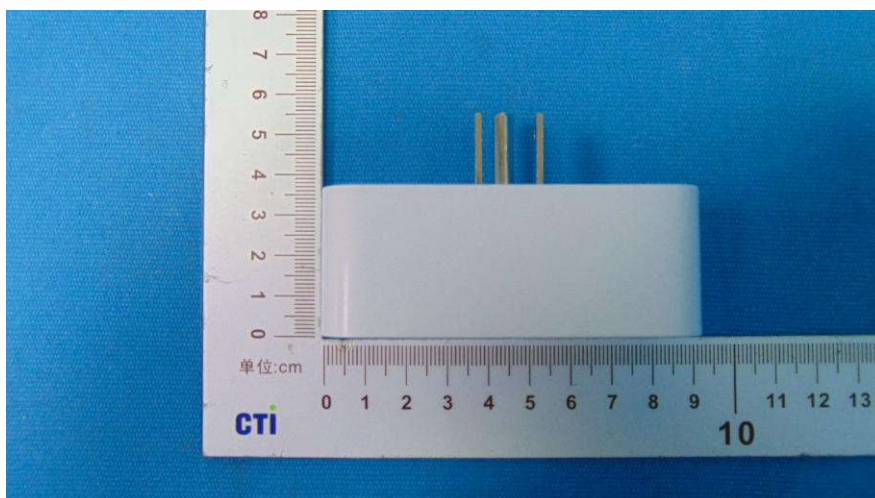
Conducted Emissions Test Setup

PHOTOGRAPHS OF EUT Constructional Details

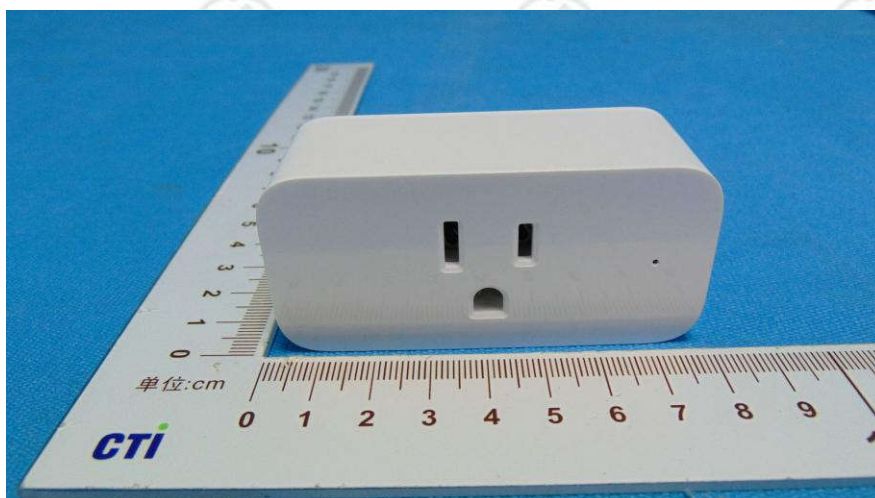
Test model No.: ZNCZ03CM



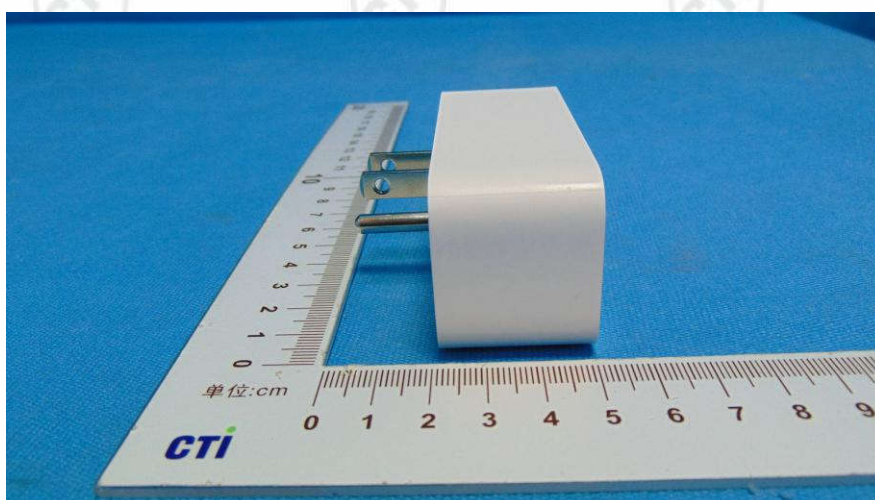
View of Product-1



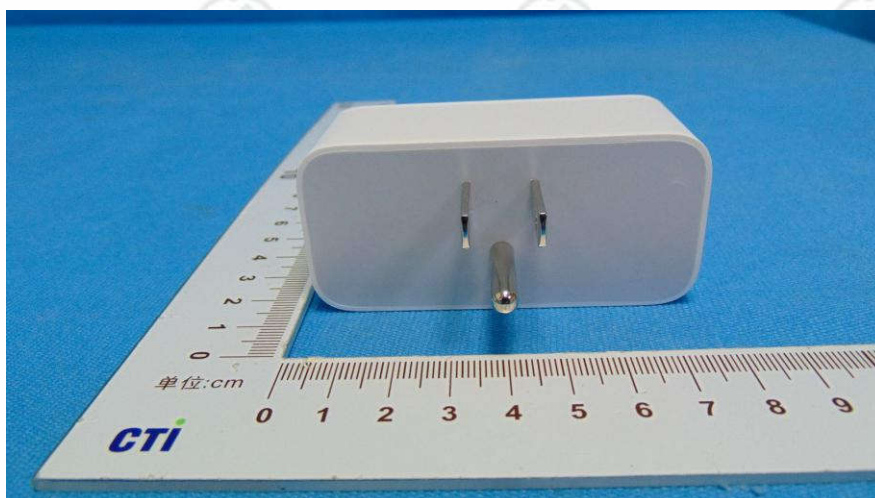
View of Product-2



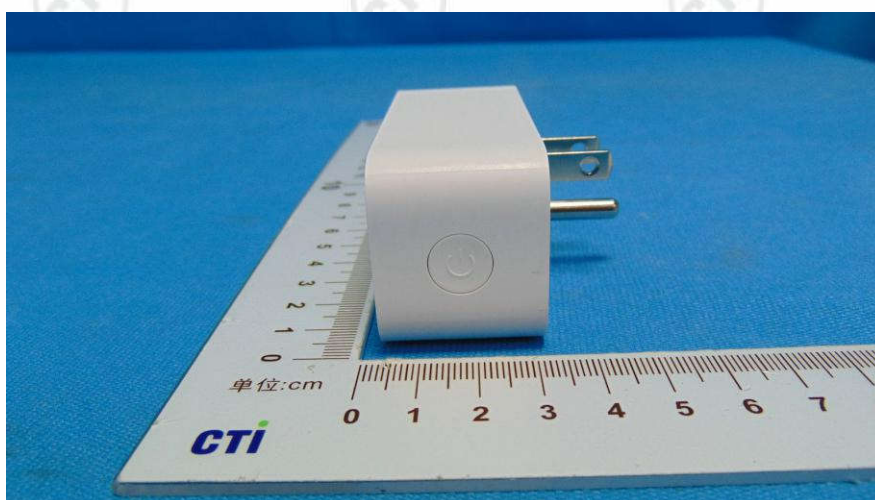
View of Product-3



View of Product-4



View of Product-5



View of Product-6



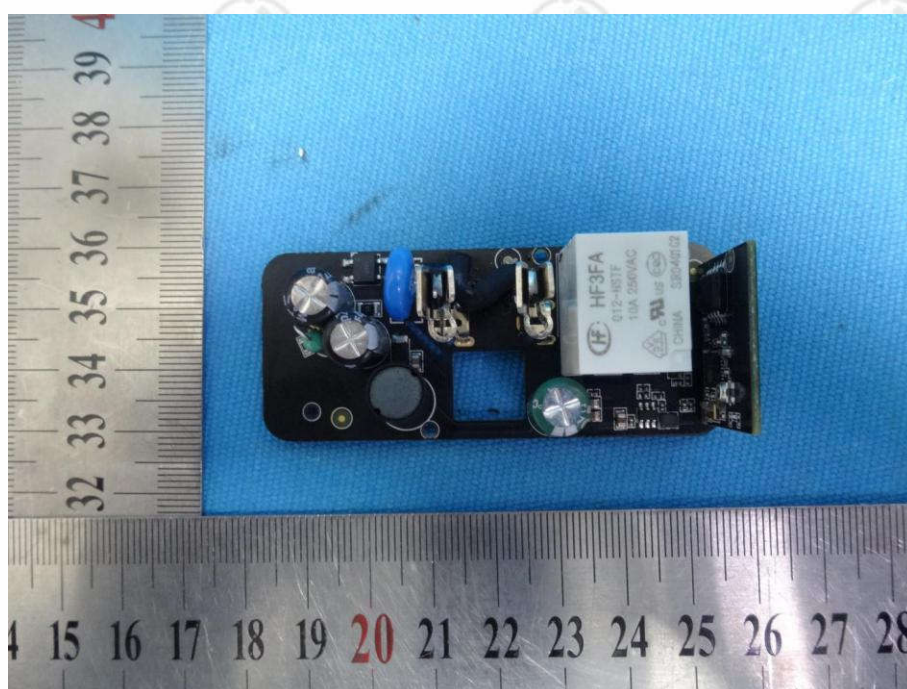
View of Product-7



View of Product-8



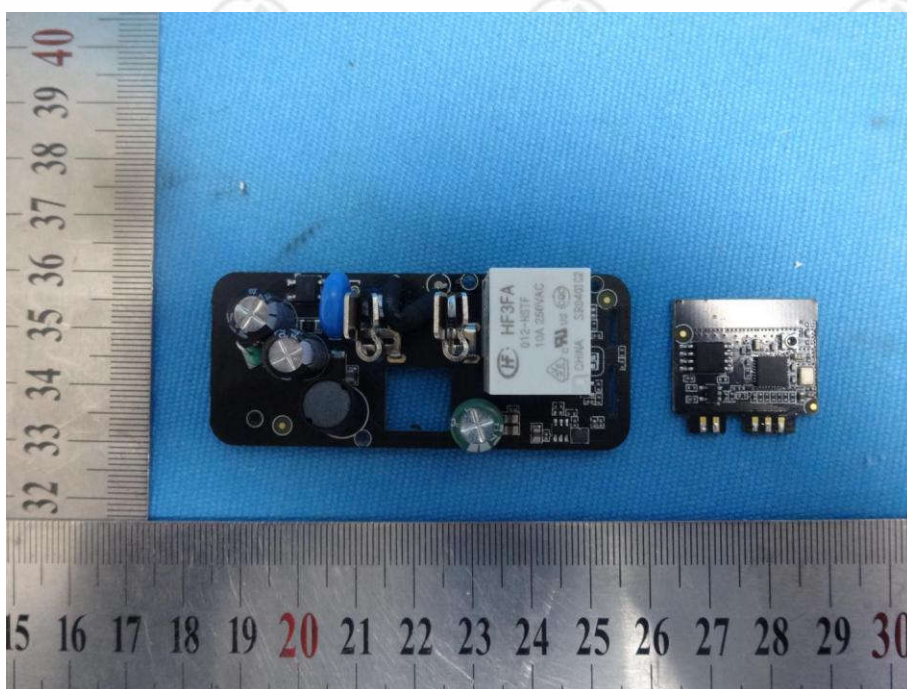
View of Product-9



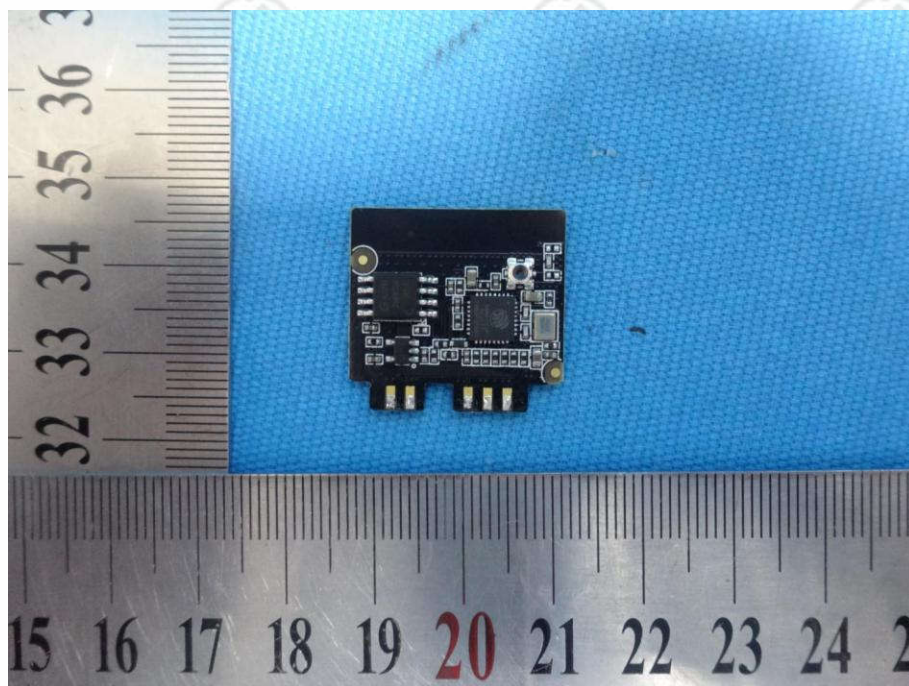
View of Product-10



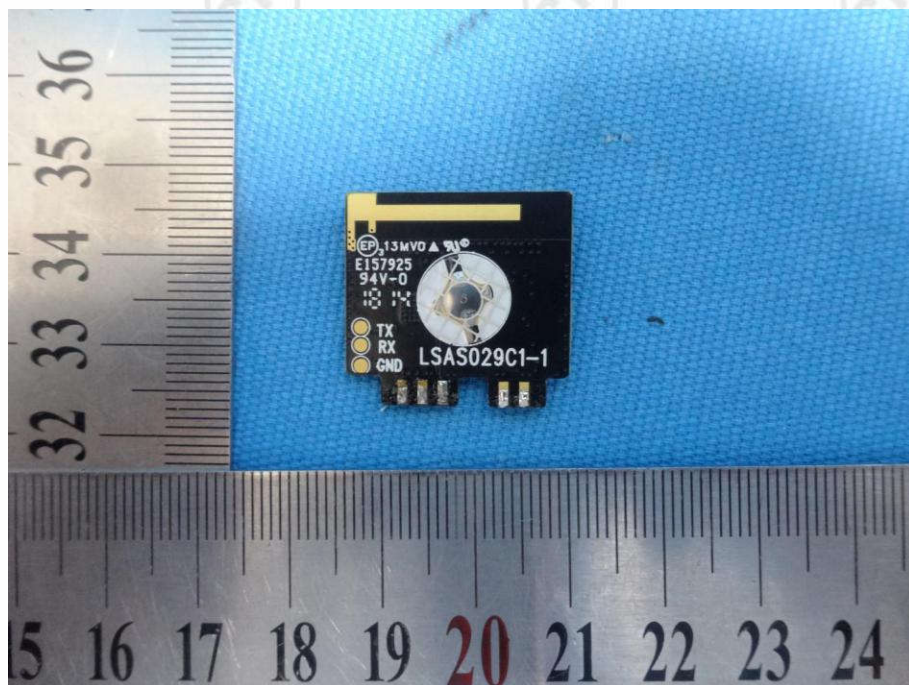
View of Product-11



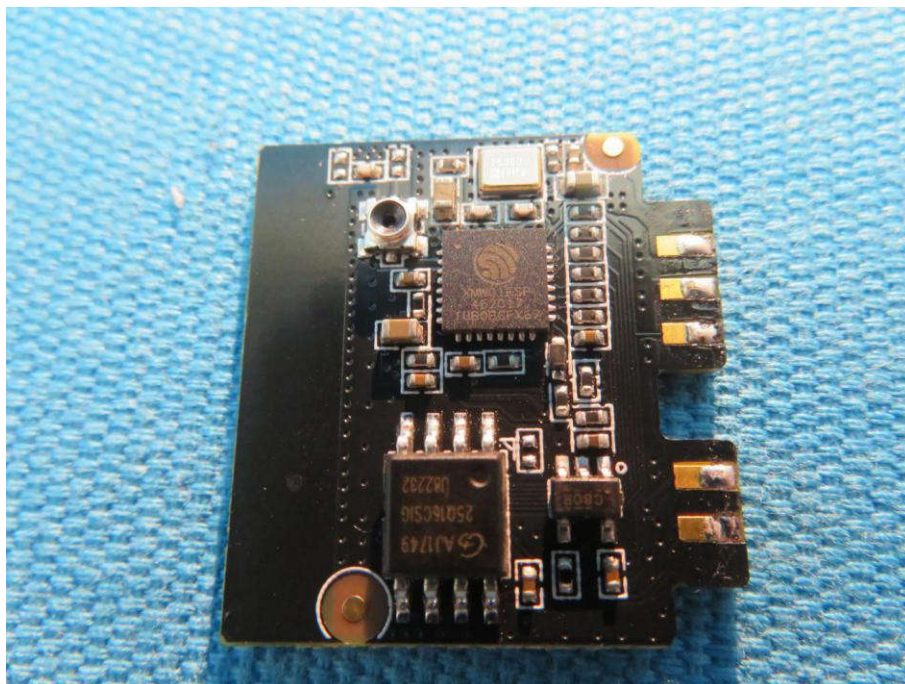
View of Product-12



View of Product-13



View of Product-14



View of Product-15

*** End of Report ***

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.