

TEST REPORT

Product : Mi Home Security Camera 360° 1080P
Trade mark : MI
Model/Type reference : MJSXJ02CM
Serial Number : N/A
Report Number : EED32K00027001
FCC ID : 2APA9-IPC009A
Date of Issue : Jul. 31, 2018
Test Standards : 47 CFR Part 15 Subpart C
Test result : PASS

Prepared for:

Shanghai Imilab Technology Co., Ltd.
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Prepared by:

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Date:

Jul. 31, 2018

Check No.:3319522918



2 Version

Version No.	Date	Description
00	Jul. 31, 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/ KDB 558074 D01v04	PASS
6dB Occupied Bandwidth	47 CFR Part 15 Subpart C Section 15.247 (a)(2)	ANSI C63.10-2013/ KDB 558074 D01v04	PASS
Power Spectral Density	47 CFR Part 15 Subpart C Section 15.247 (e)	ANSI C63.10-2013/ KDB 558074 D01v04	PASS
Band-edge for RF Conducted Emissions	47 CFR Part 15 Subpart C Section 15.247(d)	ANSI C63.10-2013/ KDB 558074 D01v04	PASS
RF Conducted Spurious Emissions	47 CFR Part 15 Subpart C Section 15.247(d)	ANSI C63.10-2013/ KDB 558074 D01v04	PASS
Radiated Spurious Emissions	47 CFR Part 15 Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS
Restricted bands around fundamental frequency (Radiated Emission)	47 CFR Part 15 Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS

Remark:

Test according to ANSI C63.4-2014 & ANSI C63.10-2013.

The tested sample(s) and the sample information are provided by the client.

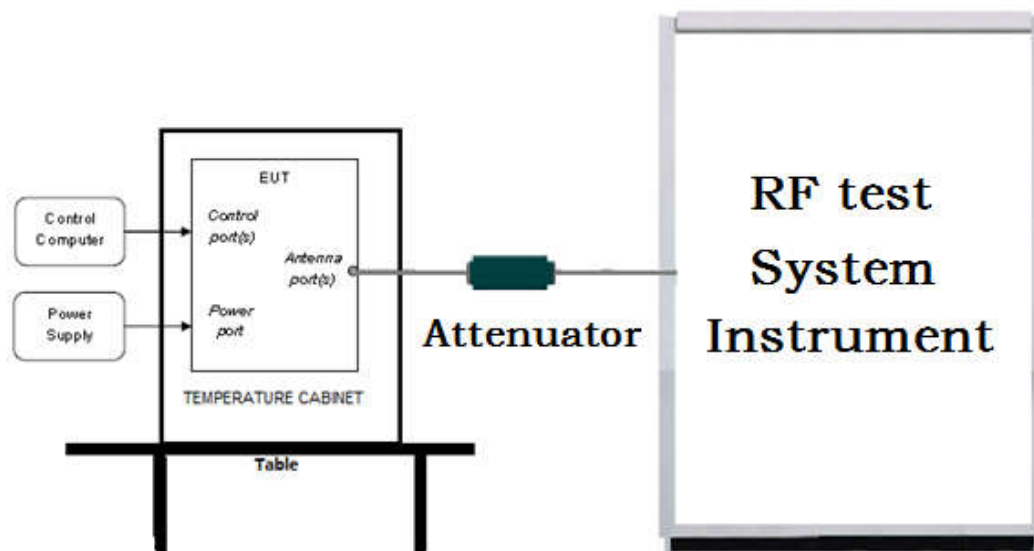
4 Content

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	9
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)	10
7 EQUIPMENT LIST	11
8 RADIO TECHNICAL REQUIREMENTS SPECIFICATION	13
Appendix A): Conducted Peak Output Power	14
Appendix B): 6dB Occupied Bandwidth	19
Appendix C): Band-edge for RF Conducted Emissions	24
Appendix D): RF Conducted Spurious Emissions	28
Appendix E): Power Spectral Density	37
Appendix F): Antenna Requirement	42
Appendix G): AC Power Line Conducted Emission	43
Appendix H): Restricted bands around fundamental frequency (Radiated)	46
Appendix I): Radiated Spurious Emissions	64
PHOTOGRAPHS OF TEST SETUP	74
PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS	76

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:

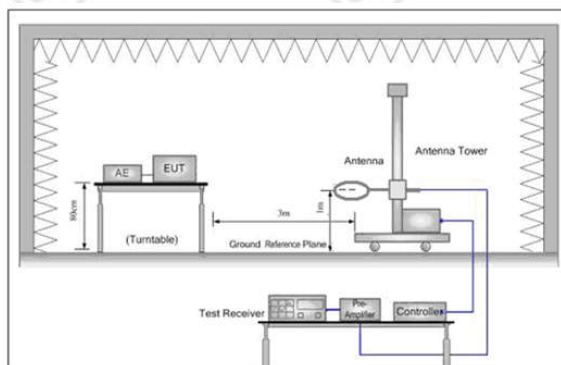


Figure 1. Below 30MHz

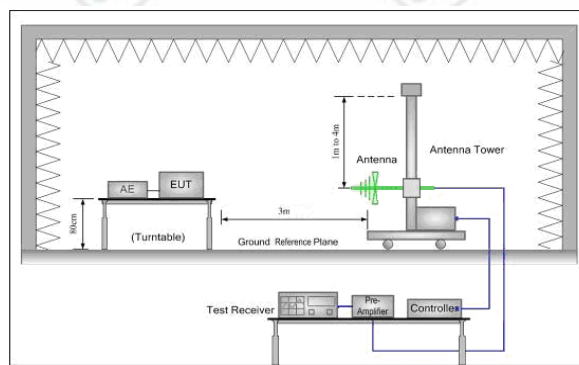


Figure 2. 30MHz to 1GHz

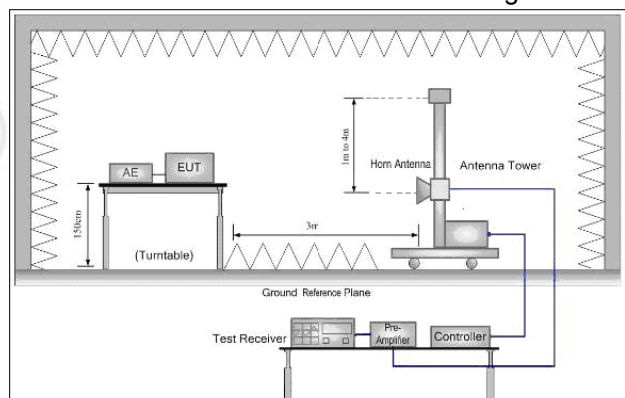
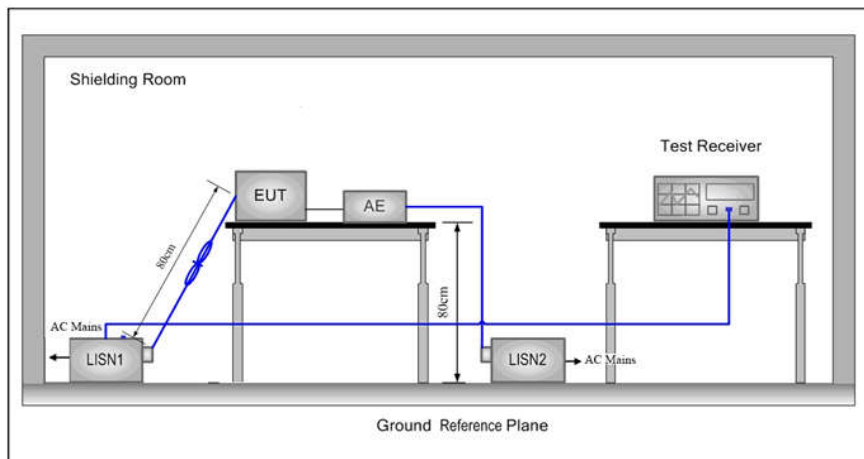


Figure 3. Above 1GHz

5.1.3 For Conducted Emissions test setup

Conducted Emissions setup



5.2 Test Environment

Operating Environment:	
Temperature:	22 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010mbar

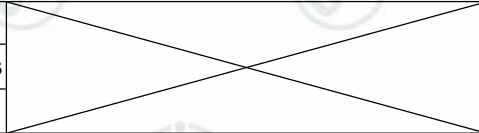
5.3 Test Condition

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:	The EUT transmitted the continuous signal at the specific channel(s).			

Test mode:

Pre-scan under all rate at lowest channel 1

Scan under all rate at 20MHz channel								
Mode	802.11b							
Data Rate	1Mbps	2Mbps	5.5Mbps	11Mbps				
Power(dBm)	18.75	19.21	19.45	19.97				
Mode	802.11g							
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
Power(dBm)	16.80	16.40	16.07	15.85	15.42	15.04	14.84	14.24
Mode	802.11n (HT20)							
Data Rate	6.5Mbps	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps	58.5Mbps	65Mbps
Power(dBm)	15.29	15.01	14.85	14.45	14.20	13.85	13.43	13.21
Mode	802.11n (HT40)							
Data Rate	13.5Mbps	27Mbps	40.5Mbps	54Mbps	81Mbps	108Mbps	121.5Mbps	135Mbps
Power(dBm)	14.29	14.21	13.84	13.45	13.00	12.81	12.24	12.13

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:	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 Sharetronic Data Technology Co., Ltd.
Address of Factory:	Weiqiang Science and Technology Park, Galaxy Industrial Zone, Qingxi, Dongguan, Guangdong province, China

6.2 General Description of EUT

Product Name:	Mi Home Security Camera 360° 1080P
Model No.(EUT):	MJSXJ02CM
Trade Mark:	MI
EUT Supports Radios application:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz
Power Supply:	Adapter Model: MDY-08-EZ Input: 100-240V, 50/60Hz, 0.35A Output: 5.0V --- 2A
USB cable:	200cm(Unshielded)
Sample Received Date:	Feb. 02, 2018
Sample tested Date:	Feb. 02, 2018 to Jul. 27, 2018

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)
Hardware Version:	V1.0(manufacturer declare)
Firmware Version:	V1.0(manufacturer declare)
Antenna Type and Gain:	Type: PIFA Gain: -2dBi
Test Voltage:	AC 120V, 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	Channel	Frequency		
1	2422MHz	4	2437MHz	7	2452MHz		
2	2427MHz	5	2442MHz				
3	2432MHz	6	2447MHz				

6.4 Description of Support Units

The EUT has been tested independently.

6.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 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	03-14-2017 03-13-2018	03-13-2018 03-12-2019
Spectrum Analyzer	Keysight	N9010A	MY54510339	03-14-2017 03-13-2018	03-13-2018 03-12-2019
Signal Generator	Keysight	N5182B	MY53051549	11-16-2017	11-15-2018
High-pass filter	Sinoscite	FL3CX03WG1 8NM12-0398- 002	---	01-10-2018	01-09-2019
High-pass filter	MICRO- TRONICS	SPA-F-63029- 4	---	01-10-2018	01-09-2019
DC Power	Keysight	E3642A	MY54436035	03-14-2017 03-13-2018	03-13-2018 03-12-2019
power meter & power sensor	R&S	OSP120	101374	04-12-2017 04-11-2018	04-11-2018 04-10-2019
RF control unit	JS Tonscend	JS0806-2	2015860006	03-14-2017 03-13-2018	03-13-2018 03-12-2019
BT&WI-FI Automatic test software	JS Tonscend	JSTS1120-2	---	03-30-2017 03-29-2018	03-29-2018 03-28-2019

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	ETS-LINDGREN	FACT-3	3510	06-04-2016	06-03-2019
Spectrum Analyzer	Agilent	E4443A	MY45300910	11-17-2017 11-16-2018	11-16-2018 11-15-2019
Receiver	R&S	ESCI	100435	05-26-2017 05-25-2018	05-25-2018 05-24-2019
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	618	08-15-2017	08-14-2018
Horn Antenna	ETS-LINGREN	3117	00057407	07-12-2015 07-10-2018	07-10-2018 07-08-2021
Spectrum Analyzer	R&S	FSP40	100416	05-12-2017 05-11-2018	05-11-2018 05-10-2019
Preamplifier	JS Tonscend	EMC051845SE	980380	01-19-2018	01-18-2019
Loop Antenna	ETS-LINDGREN	6502	00071730	06-22-2017	06-21-2019
3M Chamber&Accessory Equipment	TDK	SAC-3	---	06-04-2016	06-03-2019
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	617	03-30-2017 03-29-2018	03-29-2018 03-28-2019
Multi device Controller	Maturo	NCD/070/10711 112	---	01-10-2018	01-09-2019
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	484	06-06-2017 06-05-2018	06-05-2018 06-04-2019
Microwave Preamplifier	HP	HP 8447F	2805A03379	06-09-2017 06-08-2018	06-08-2018 06-07-2019
Microwave Preamplifier	CD	PAP-1G18G	2001	09-24-2017 09-23-2018	09-23-2018 09-22-2019
Double ridge horn antenna	A.H.SYSTEMS	SAS-574	6042	06-06-2017 06-05-2018	06-05-2018 06-04-2021

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	05-26-2017 05-25-2018	05-25-2018 05-24-2019
Temperature/ Humidity Indicator	Belida	TT-512	A19	01-24-2018	01-23-2019
LISN	R&S	ENV216	100098	05-12-2017 05-11-2018	05-11-2018 05-10-2019

8 Radio Technical Requirements Specification

Reference documents for testing:

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

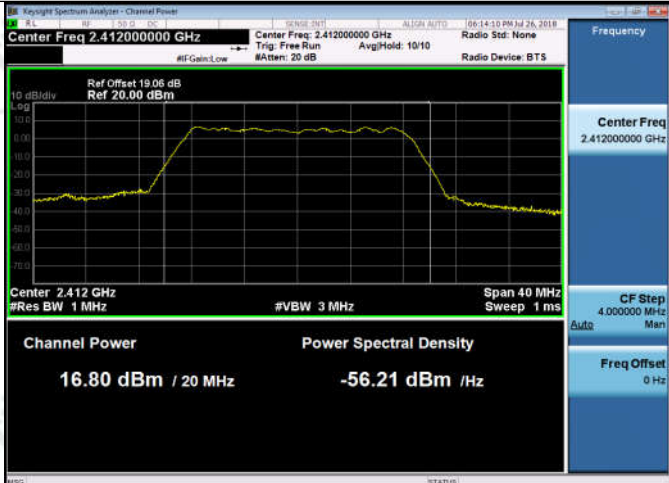
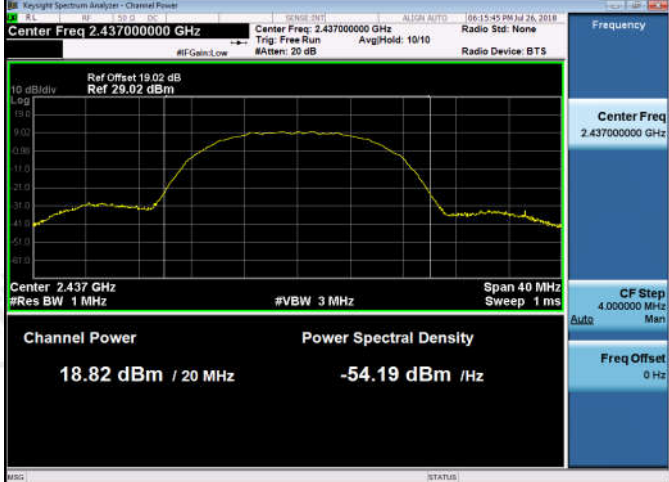
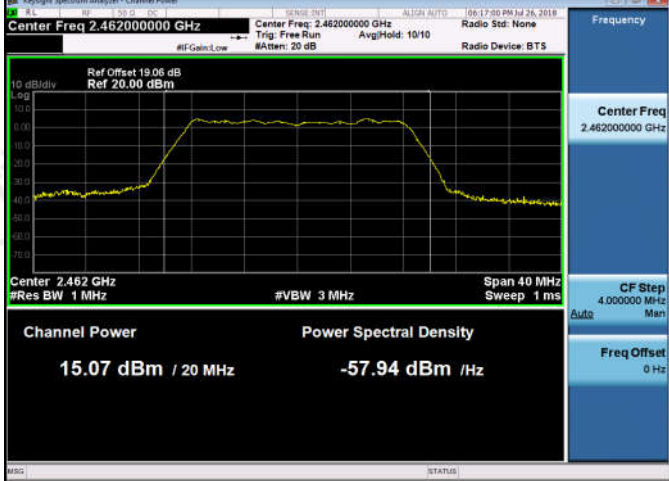
Appendix A): Conducted Peak Output Power

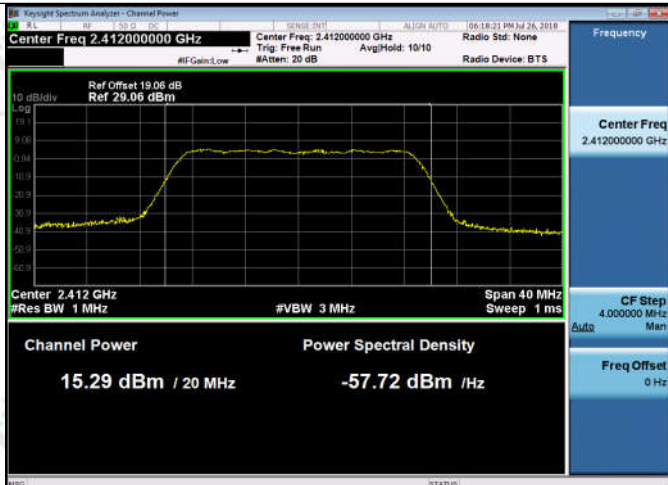
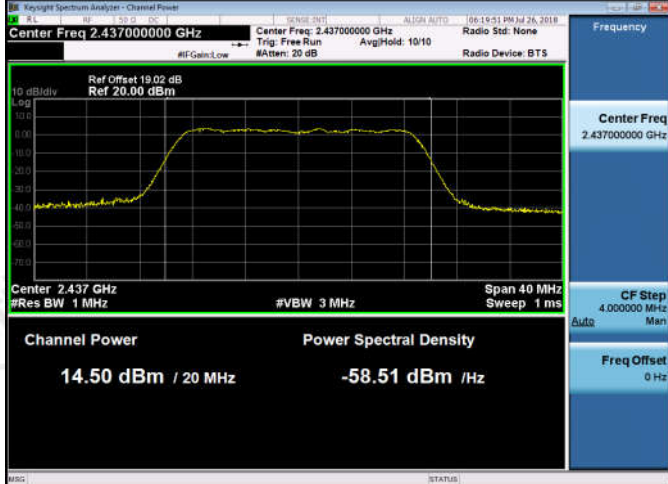
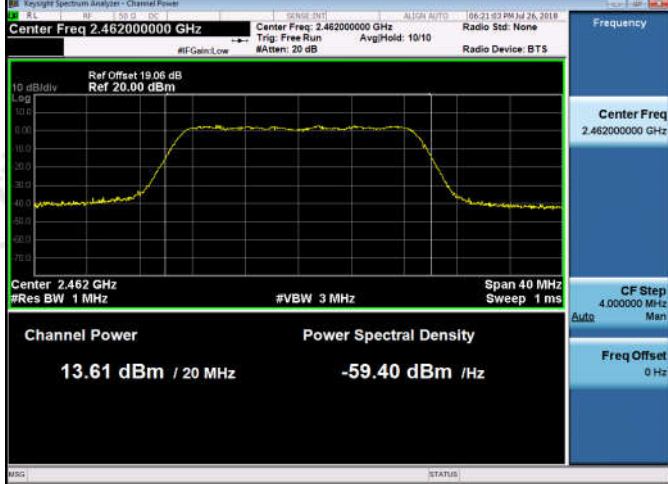
Result Table

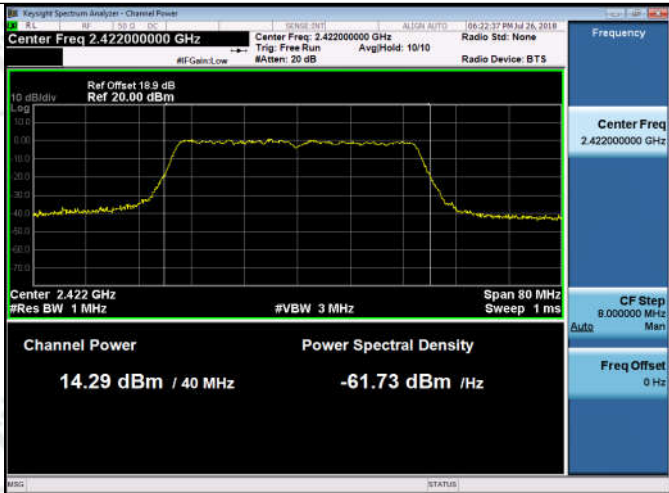
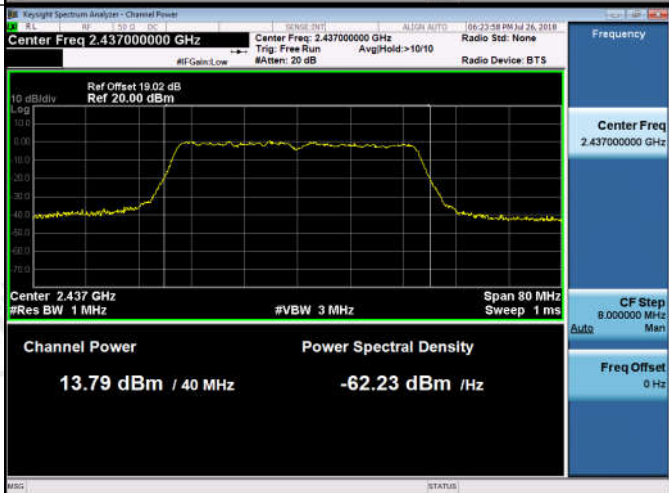
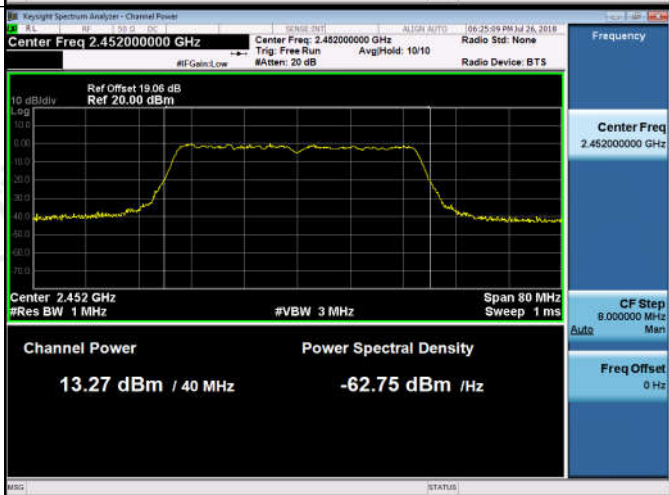
Mode	Channel	Conducted Peak Output Power [dBm]	Verdict
11B	LCH	19.97	PASS
11B	MCH	18.87	PASS
11B	HCH	17.85	PASS
11G	LCH	16.8	PASS
11G	MCH	18.82	PASS
11G	HCH	15.07	PASS
11N20SISO	LCH	15.29	PASS
11N20SISO	MCH	14.5	PASS
11N20SISO	HCH	13.61	PASS
11N40SISO	LCH	14.29	PASS
11N40SISO	MCH	13.79	PASS
11N40SISO	HCH	13.27	PASS

Test Graph

Graphs	
11B/LCH	Keyight Spectrum Analyzer - Channel Power Center Freq: 2.412000000 GHz Ref Offset: 19.06 dB Ref: 30.00 dBm Channel Power: 19.97 dBm / 20 MHz Power Spectral Density: -53.05 dBm / Hz Center: 2.412 GHz #Res BW: 1 MHz #VBW: 3 MHz Span: 40 MHz Sweep: 1 ms
11B/MCH	Keyight Spectrum Analyzer - Channel Power Center Freq: 2.437000000 GHz Ref Offset: 19.02 dB Ref: 30.00 dBm Channel Power: 18.87 dBm / 20 MHz Power Spectral Density: -54.14 dBm / Hz Center: 2.437 GHz #Res BW: 1 MHz #VBW: 3 MHz Span: 40 MHz Sweep: 1 ms
11B/HCH	Keyight Spectrum Analyzer - Channel Power Center Freq: 2.462000000 GHz Ref Offset: 19.06 dB Ref: 30.00 dBm Channel Power: 17.85 dBm / 20 MHz Power Spectral Density: -55.16 dBm / Hz Center: 2.462 GHz #Res BW: 1 MHz #VBW: 3 MHz Span: 40 MHz Sweep: 1 ms

11G/LCH	 Keynote Spectrum Analyzer - Channel Power Center Freq 2.412000000 GHz Ref Offset 19.06 dB Ref 20.00 dBm Center 2.412 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power: 16.80 dBm / 20 MHz Power Spectral Density: -56.21 dBm / Hz
11G/MCH	 Keynote Spectrum Analyzer - Channel Power Center Freq 2.437000000 GHz Ref Offset 19.02 dB Ref 20.02 dBm Center 2.437 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power: 18.82 dBm / 20 MHz Power Spectral Density: -54.19 dBm / Hz
11G/HCH	 Keynote Spectrum Analyzer - Channel Power Center Freq 2.462000000 GHz Ref Offset 19.06 dB Ref 20.00 dBm Center 2.462 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power: 15.07 dBm / 20 MHz Power Spectral Density: -57.94 dBm / Hz

11N20SISO/LCH	 Center Freq 2.412000000 GHz Ref Offset 19.06 dB Ref 29.06 dBm Center 2.412 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power 15.29 dBm / 20 MHz Power Spectral Density -57.72 dBm / Hz
11N20SISO/MCH	 Center Freq 2.437000000 GHz Ref Offset 19.02 dB Ref 20.00 dBm Center 2.437 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power 14.50 dBm / 20 MHz Power Spectral Density -58.51 dBm / Hz
11N20SISO/HCH	 Center Freq 2.462000000 GHz Ref Offset 19.06 dB Ref 20.00 dBm Center 2.462 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power 13.61 dBm / 20 MHz Power Spectral Density -59.40 dBm / Hz

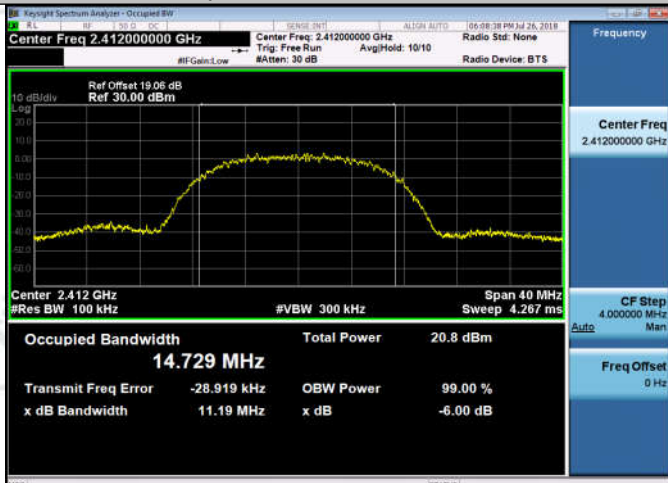
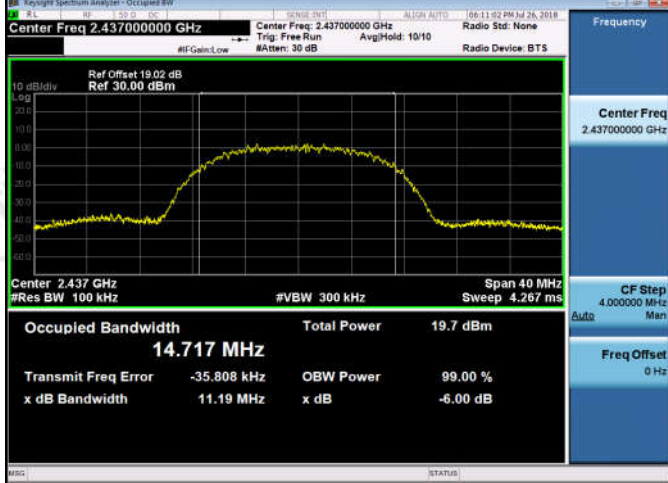
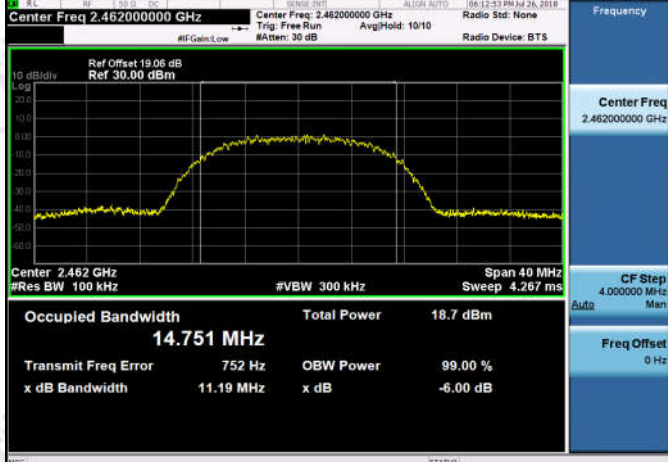
11N40SISO/LCH	 Keyight Spectrum Analyzer - Channel Power Center Freq 2.422000000 GHz Ref Offset 19.9 dB Ref 20.00 dBm Center 2.422 GHz #Res BW 1 MHz #VBW 3 MHz Span 80 MHz Sweep 1 ms Channel Power 14.29 dBm / 40 MHz Power Spectral Density -61.73 dBm / Hz Frequency Center Freq 2.422000000 GHz CF Step 8.000000 MHz Auto Man Freq Offset 0 Hz
11N40SISO/MCH	 Keyight Spectrum Analyzer - Channel Power Center Freq 2.437000000 GHz Ref Offset 19.02 dB Ref 20.00 dBm Center 2.437 GHz #Res BW 1 MHz #VBW 3 MHz Span 80 MHz Sweep 1 ms Channel Power 13.79 dBm / 40 MHz Power Spectral Density -62.23 dBm / Hz Frequency Center Freq 2.437000000 GHz CF Step 8.000000 MHz Auto Man Freq Offset 0 Hz
11N40SISO/HCH	 Keyight Spectrum Analyzer - Channel Power Center Freq 2.452000000 GHz Ref Offset 19.06 dB Ref 20.00 dBm Center 2.452 GHz #Res BW 1 MHz #VBW 3 MHz Span 80 MHz Sweep 1 ms Channel Power 13.27 dBm / 40 MHz Power Spectral Density -62.75 dBm / Hz Frequency Center Freq 2.452000000 GHz CF Step 8.000000 MHz Auto Man Freq Offset 0 Hz

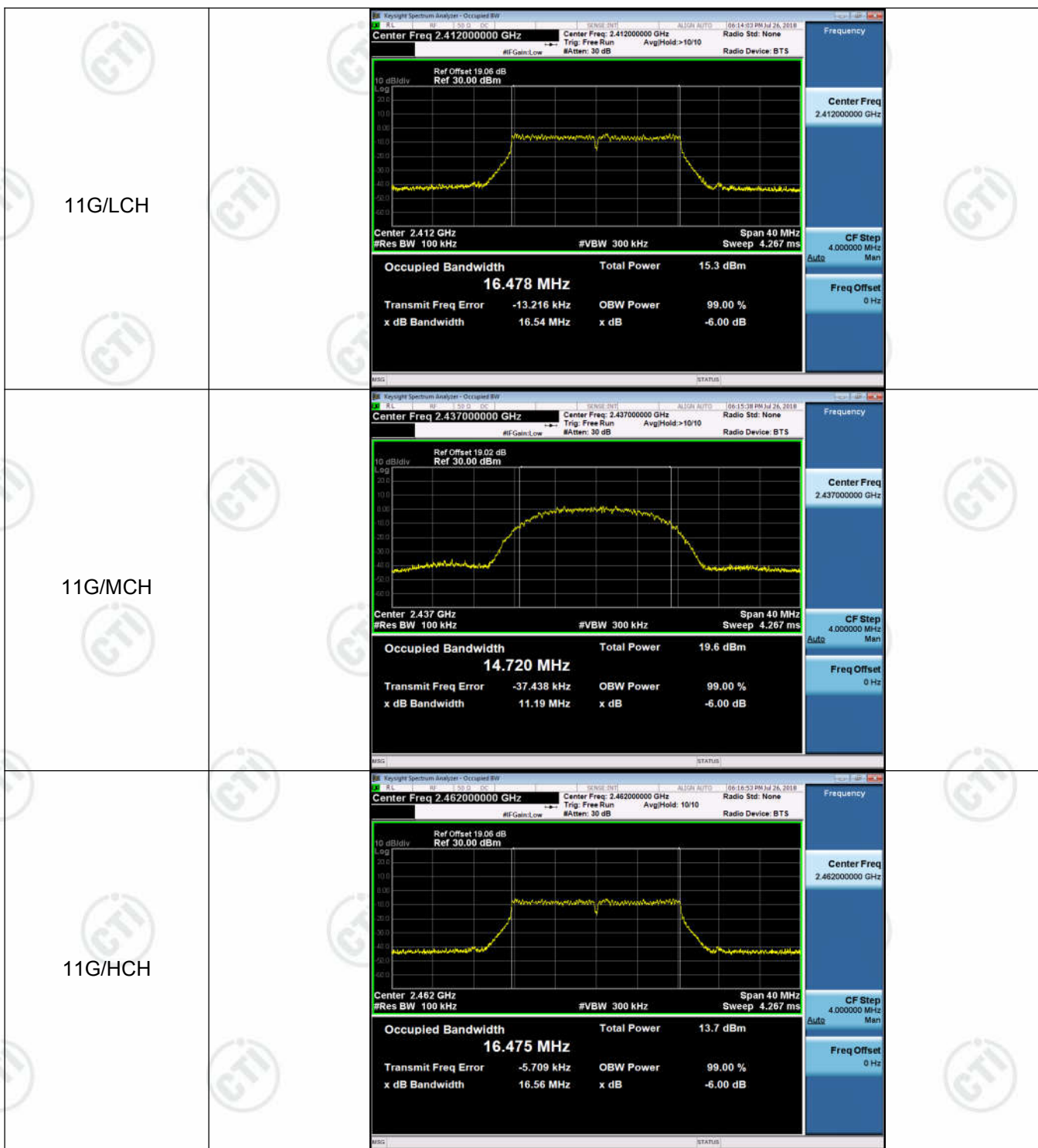
Appendix B): 6dB Occupied Bandwidth

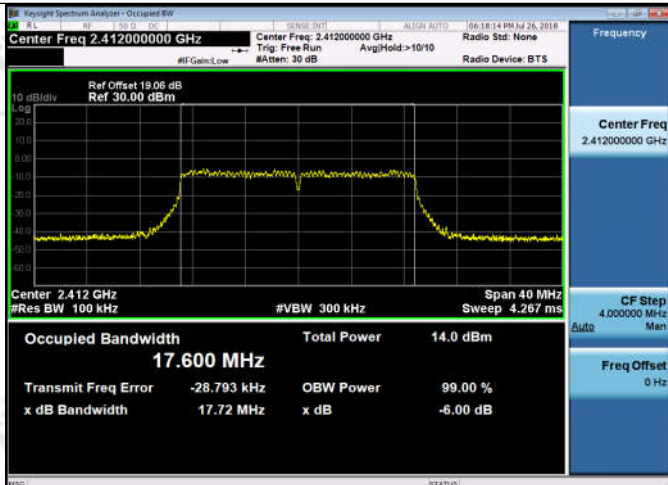
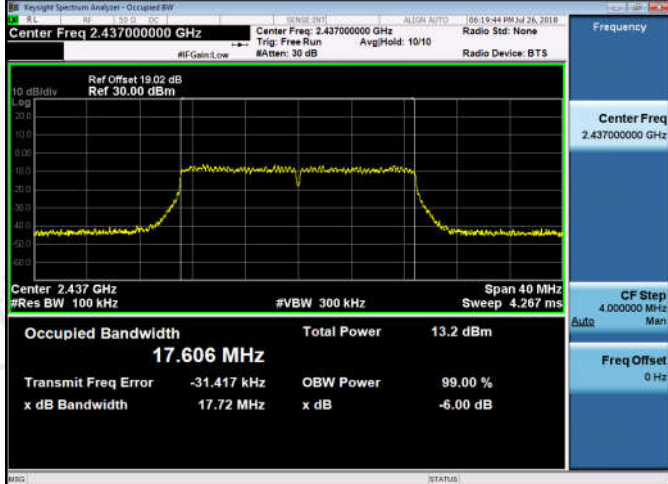
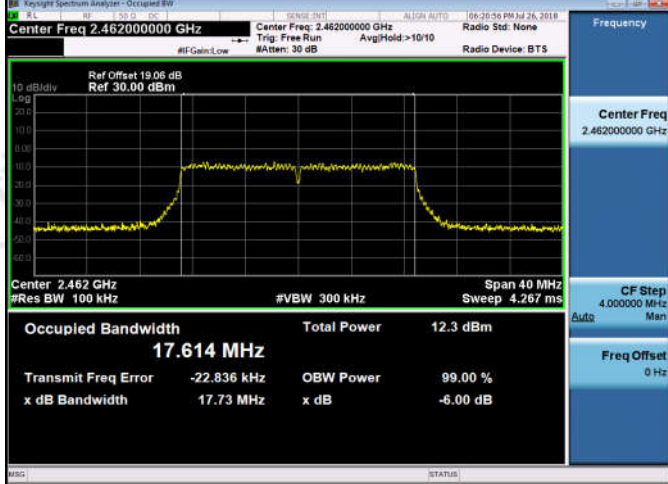
Result Table

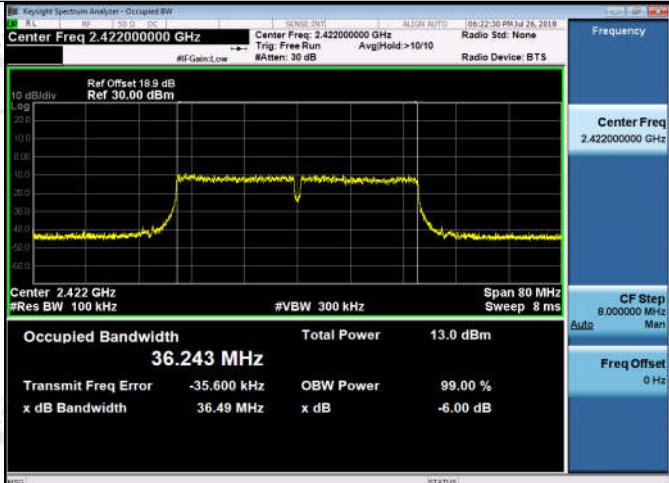
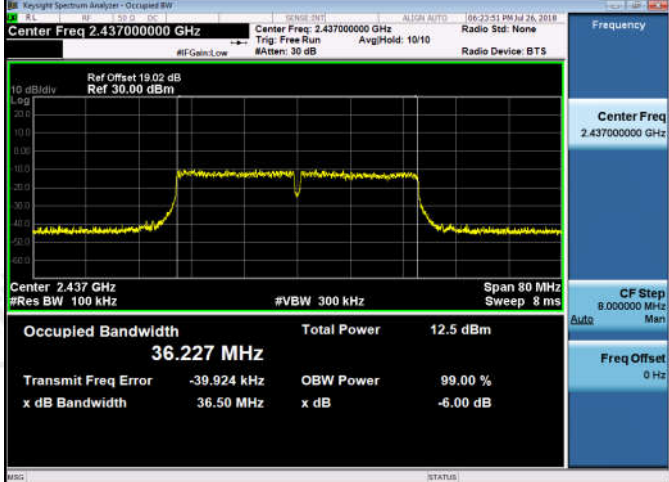
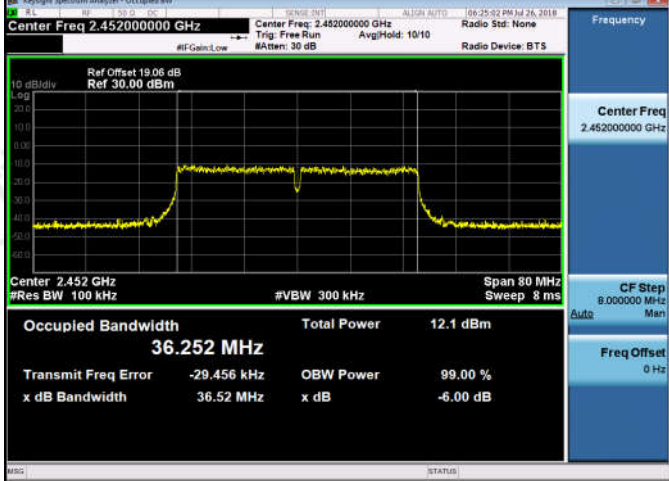
Mode	Channel	6dB Bandwidth [MHz]	99% OBW [MHz]	Verdict	Remark
11B	LCH	11.19	14.729	PASS	Peak detector
11B	MCH	11.19	14.717	PASS	
11B	HCH	11.19	14.751	PASS	
11G	LCH	16.54	16.478	PASS	
11G	MCH	11.19	14.720	PASS	
11G	HCH	16.56	16.475	PASS	
11N20SISO	LCH	17.72	17.600	PASS	
11N20SISO	MCH	17.72	17.606	PASS	
11N20SISO	HCH	17.73	17.614	PASS	
11N40SISO	LCH	36.49	36.243	PASS	
11N40SISO	MCH	36.50	36.227	PASS	
11N40SISO	HCH	36.52	36.252	PASS	

Test Graph

Graphs	
11B/LCH	 Keygraph Spectrum Analyzer - Occupied BW Center Freq 2.41200000 GHz Center Freq: 2.412000000 GHz Radio Std: None Ref Offset 19.06 dB Ref 30.00 dBm Trig: Free Run #Atten: 30 dB Avg/Hold: 10/10 Radio Device: BTS Center 2.412 GHz Span 40 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 4.267 ms Occupied Bandwidth 14.729 MHz Total Power 20.8 dBm Transmit Freq Error -28.919 kHz OBW Power 99.00 % x dB Bandwidth 11.19 MHz x dB -6.00 dB
11B/MCH	 Keygraph Spectrum Analyzer - Occupied BW Center Freq 2.43700000 GHz Center Freq: 2.437000000 GHz Radio Std: None Ref Offset 19.02 dB Ref 30.00 dBm Trig: Free Run #Atten: 30 dB Avg/Hold: 10/10 Radio Device: BTS Center 2.437 GHz Span 40 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 4.267 ms Occupied Bandwidth 14.717 MHz Total Power 19.7 dBm Transmit Freq Error -35.808 kHz OBW Power 99.00 % x dB Bandwidth 11.19 MHz x dB -6.00 dB
11B/HCH	 Keygraph Spectrum Analyzer - Occupied BW Center Freq 2.46200000 GHz Center Freq: 2.462000000 GHz Radio Std: None Ref Offset 19.06 dB Ref 30.00 dBm Trig: Free Run #Atten: 30 dB Avg/Hold: 10/10 Radio Device: BTS Center 2.462 GHz Span 40 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 4.267 ms Occupied Bandwidth 14.751 MHz Total Power 18.7 dBm Transmit Freq Error 752 Hz OBW Power 99.00 % x dB Bandwidth 11.19 MHz x dB -6.00 dB



11N20SISO/LCH	 Keyight Spectrum Analyzer - Occupied BW Center Freq 2.412000000 GHz Ref Offset 19.06 dB Ref 30.00 dBm Center Freq 2.412000000 GHz Trig: Free Run Avg/Hold: >10/10 Radio Std: None Radio Device: BTS Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 17.600 MHz Total Power 14.0 dBm Transmit Freq Error -28.793 kHz OBW Power 99.00 % x dB Bandwidth 17.72 MHz x dB -6.00 dB
11N20SISO/MCH	 Keyight Spectrum Analyzer - Occupied BW Center Freq 2.437000000 GHz Ref Offset 19.02 dB Ref 30.00 dBm Center Freq 2.437000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 17.606 MHz Total Power 13.2 dBm Transmit Freq Error -31.417 kHz OBW Power 99.00 % x dB Bandwidth 17.72 MHz x dB -6.00 dB
11N20SISO/HCH	 Keyight Spectrum Analyzer - Occupied BW Center Freq 2.462000000 GHz Ref Offset 19.06 dB Ref 30.00 dBm Center Freq 2.462000000 GHz Trig: Free Run Avg/Hold: >10/10 Radio Std: None Radio Device: BTS Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 17.614 MHz Total Power 12.3 dBm Transmit Freq Error -22.836 kHz OBW Power 99.00 % x dB Bandwidth 17.73 MHz x dB -6.00 dB

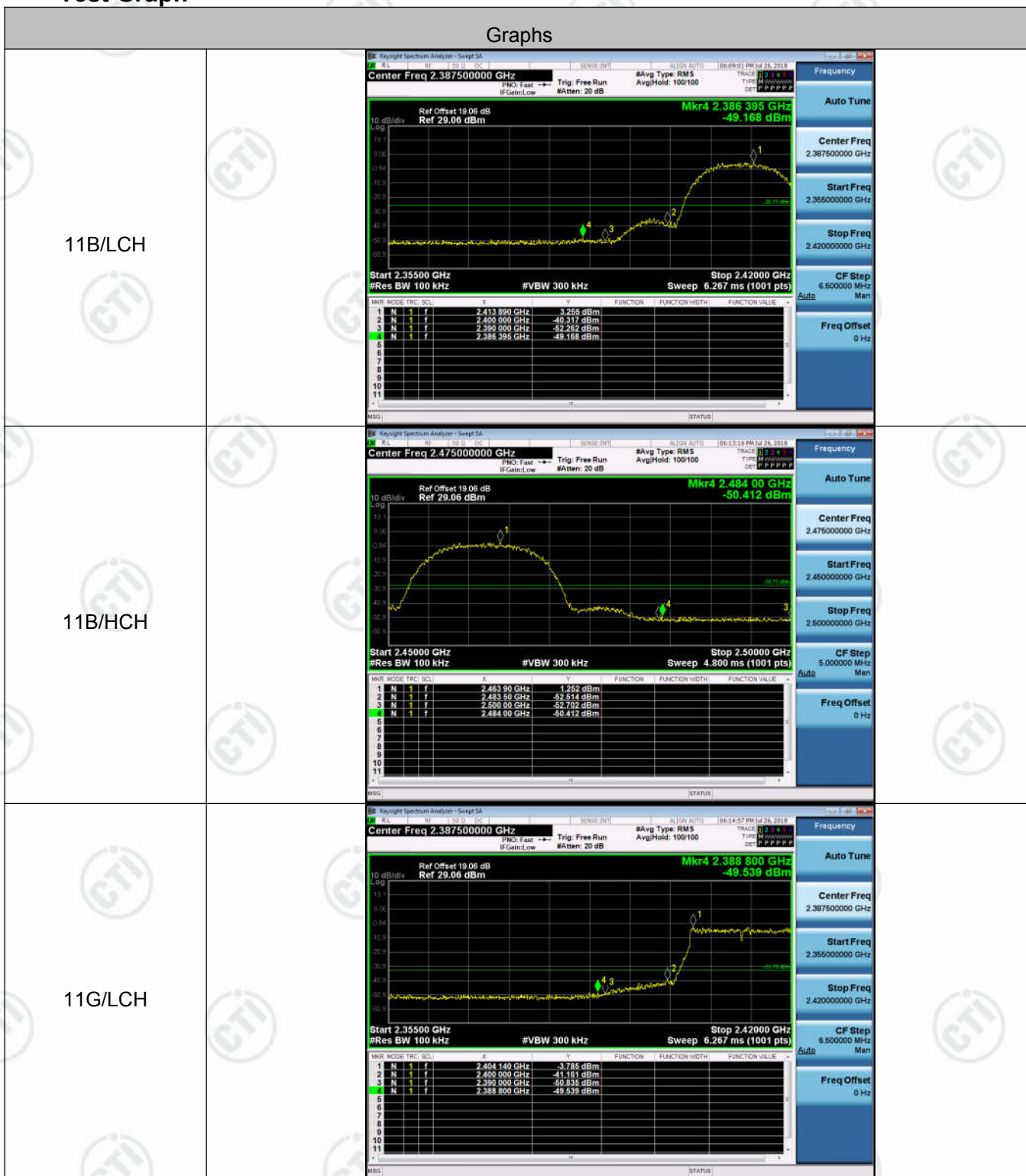
11N40SISO/LCH	 Center Freq 2.422000000 GHz Ref Offset 19.9 dB Ref 30.00 dBm Center 2.422 GHz #Res BW 100 kHz Occupied Bandwidth 36.243 MHz Total Power 13.0 dBm Transmit Freq Error -35.600 kHz OBW Power 99.00 % x dB Bandwidth 36.49 MHz x dB -6.00 dB
11N40SISO/MCH	 Center Freq 2.437000000 GHz Ref Offset 19.02 dB Ref 30.00 dBm Center 2.437 GHz #Res BW 100 kHz Occupied Bandwidth 36.227 MHz Total Power 12.5 dBm Transmit Freq Error -39.924 kHz OBW Power 99.00 % x dB Bandwidth 36.50 MHz x dB -6.00 dB
11N40SISO/HCH	 Center Freq 2.452000000 GHz Ref Offset 19.06 dB Ref 30.00 dBm Center 2.452 GHz #Res BW 100 kHz Occupied Bandwidth 36.252 MHz Total Power 12.1 dBm Transmit Freq Error -29.456 kHz OBW Power 99.00 % x dB Bandwidth 36.52 MHz x dB -6.00 dB

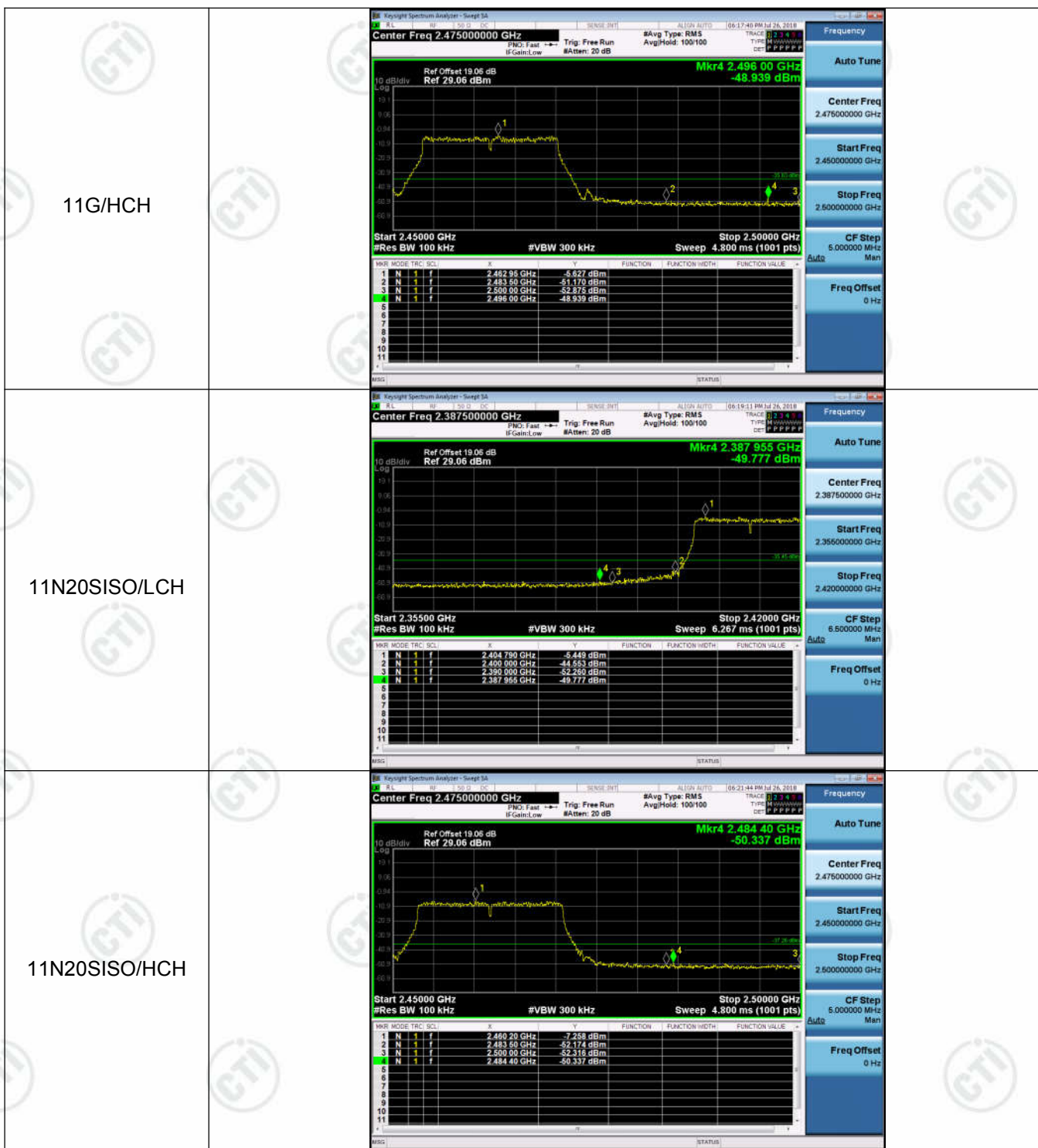
Appendix C): Band-edge for RF Conducted Emissions

Result Table

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	3.255	-49.168	-26.75	PASS
11B	HCH	1.252	-50.412	-28.75	PASS
11G	LCH	-3.785	-49.539	-33.79	PASS
11G	HCH	-5.627	-48.939	-35.63	PASS
11N20SISO	LCH	-5.449	-49.777	-35.45	PASS
11N20SISO	HCH	-7.258	-50.337	-37.26	PASS
11N40SISO	LCH	-9.368	-46.572	-39.37	PASS
11N40SISO	HCH	-11.069	-50.300	-41.07	PASS

Test Graph





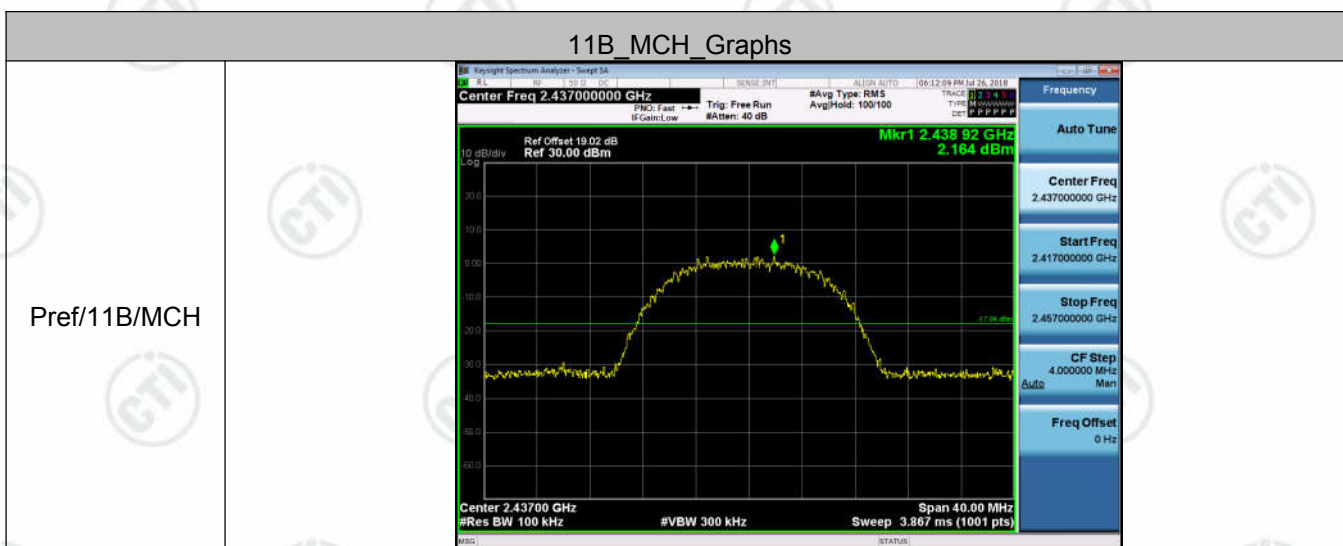


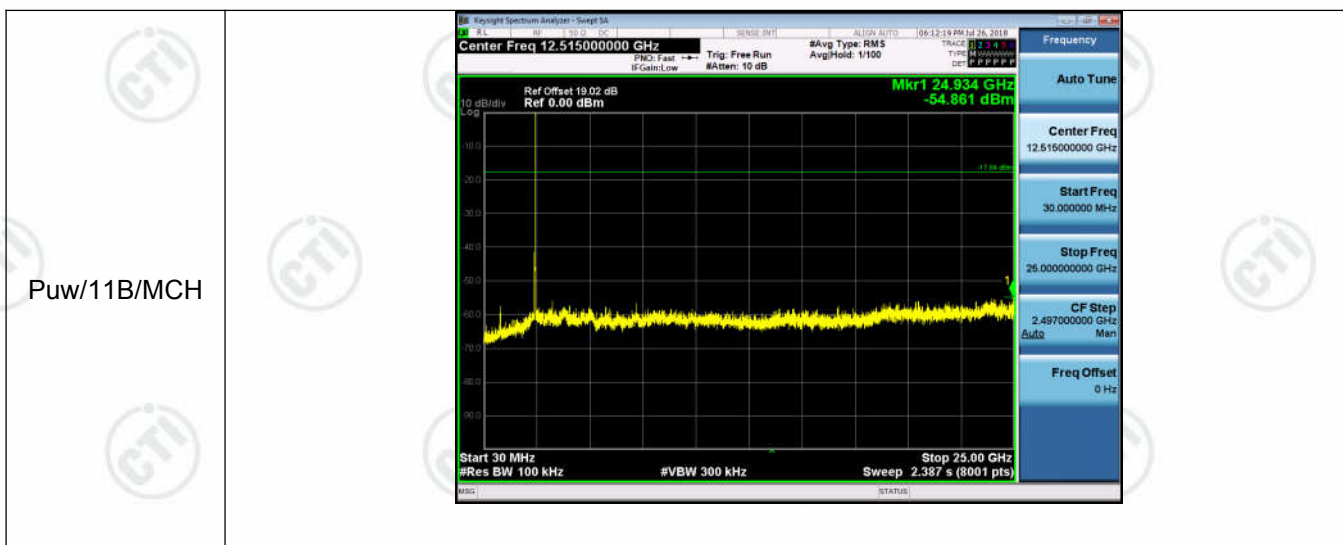
Appendix D): RF Conducted Spurious Emissions

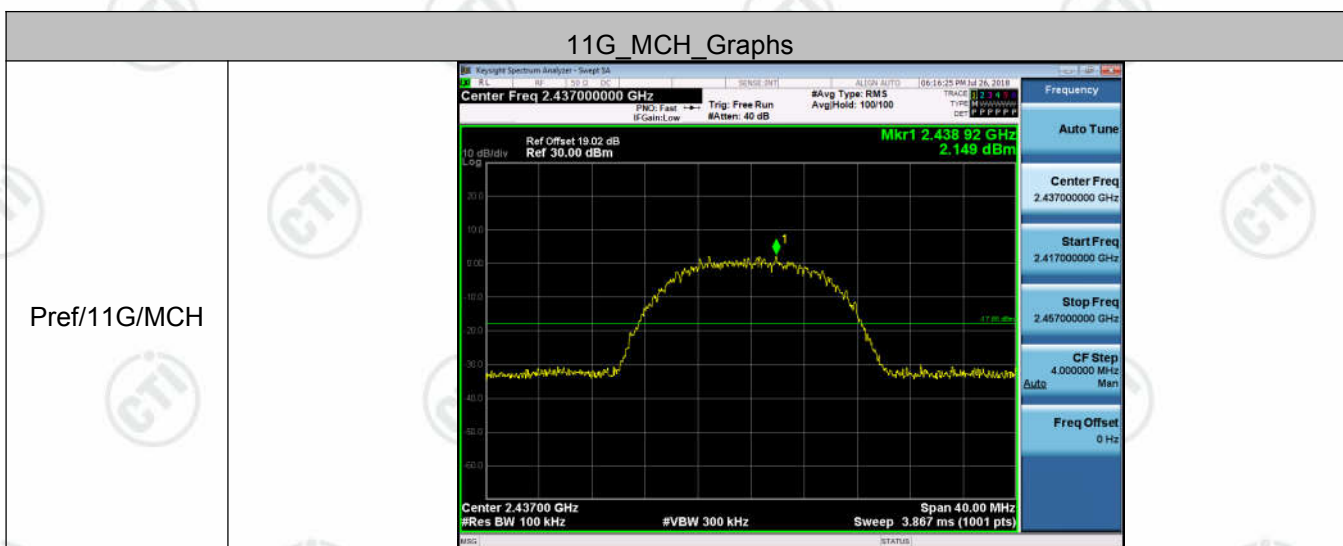
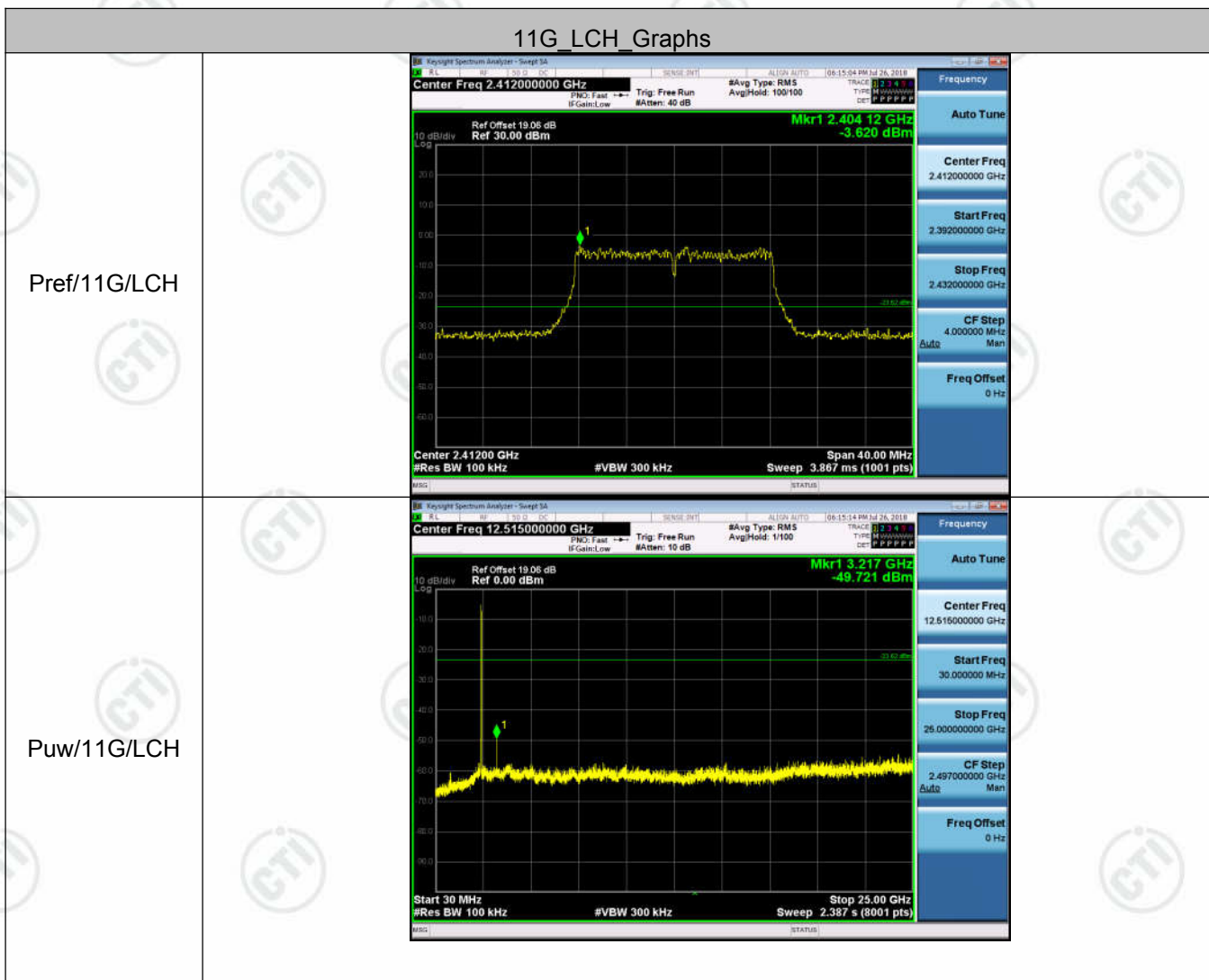
Result Table

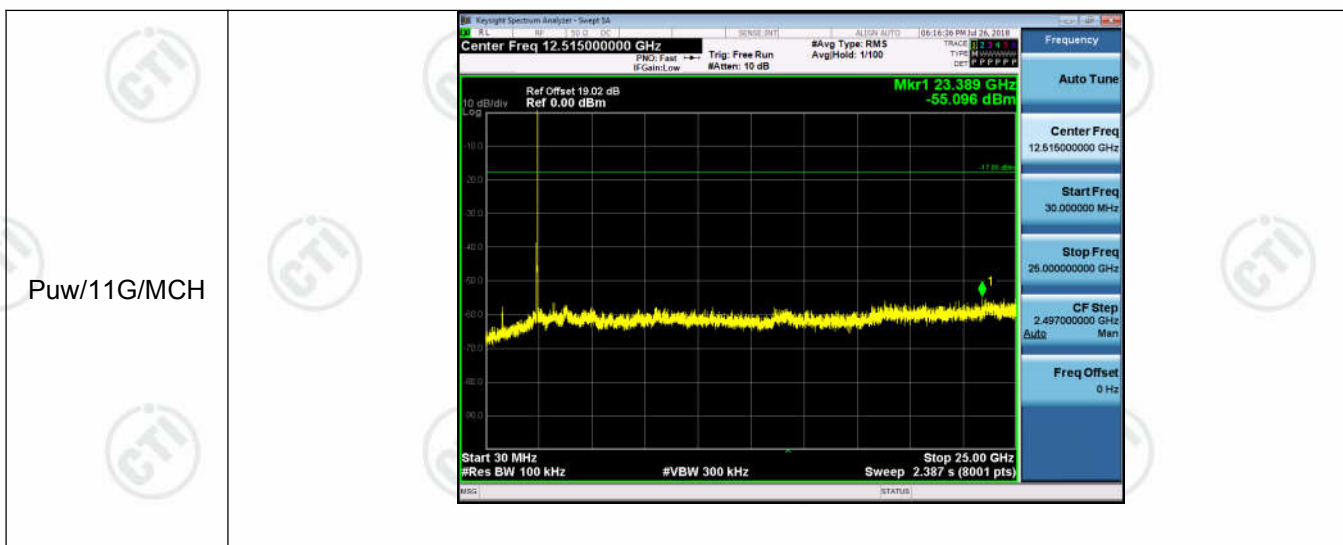
Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
11B	LCH	3.142	<Limit	PASS
11B	MCH	2.164	<Limit	PASS
11B	HCH	1.223	<Limit	PASS
11G	LCH	-3.62	<Limit	PASS
11G	MCH	2.149	<Limit	PASS
11G	HCH	-5.483	<Limit	PASS
11N20SISO	LCH	-5.187	<Limit	PASS
11N20SISO	MCH	-6.064	<Limit	PASS
11N20SISO	HCH	-7.213	<Limit	PASS
11N40SISO	LCH	-9.093	<Limit	PASS
11N40SISO	MCH	-9.575	<Limit	PASS
11N40SISO	HCH	-9.568	<Limit	PASS

Test Graph



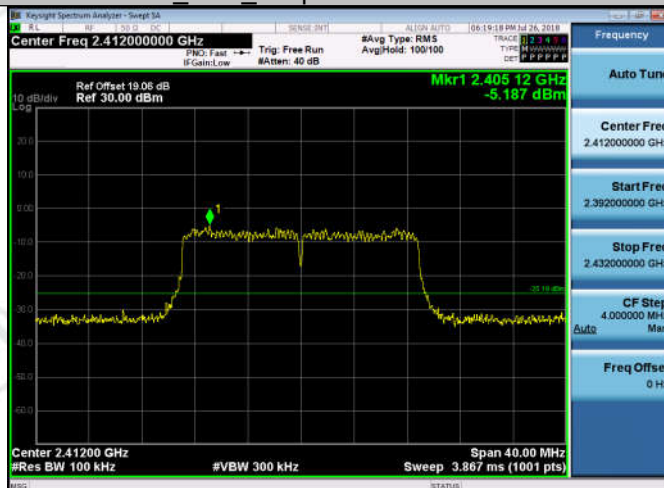




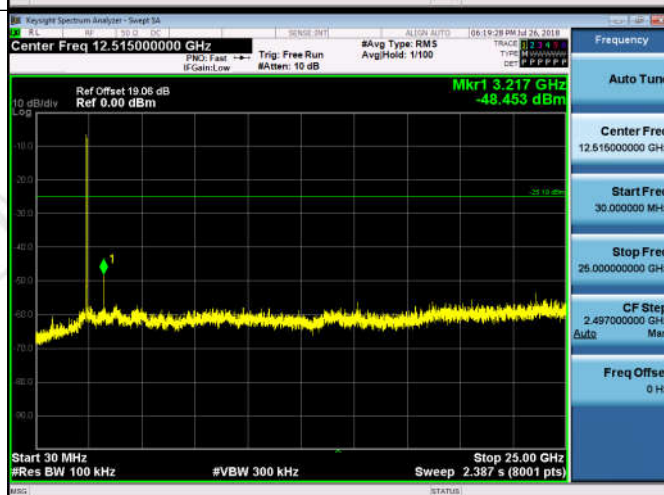


11N20SISO_LCH_Graphs

Pref/11N20SISO/LCH

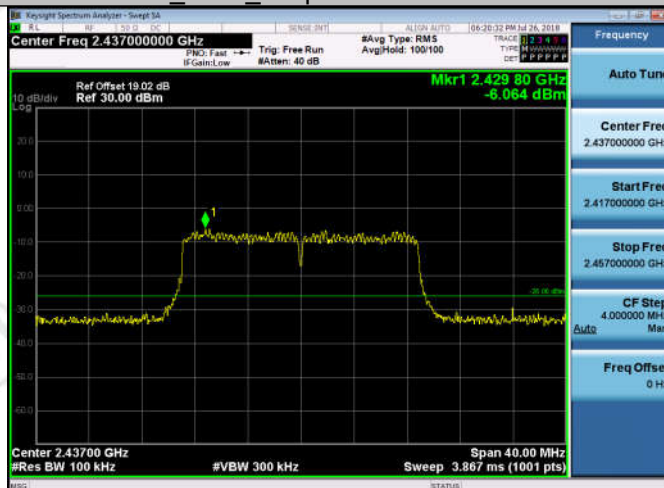


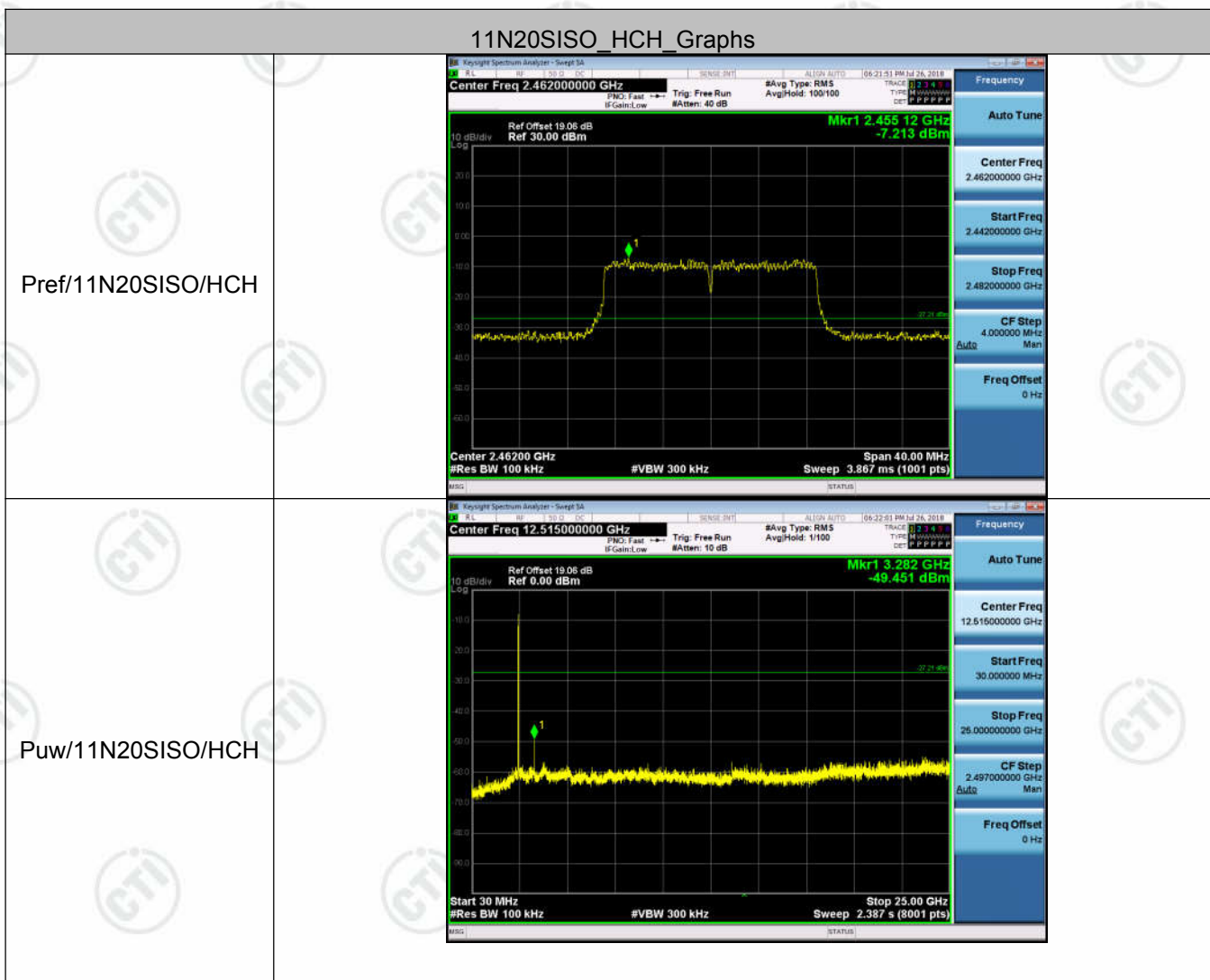
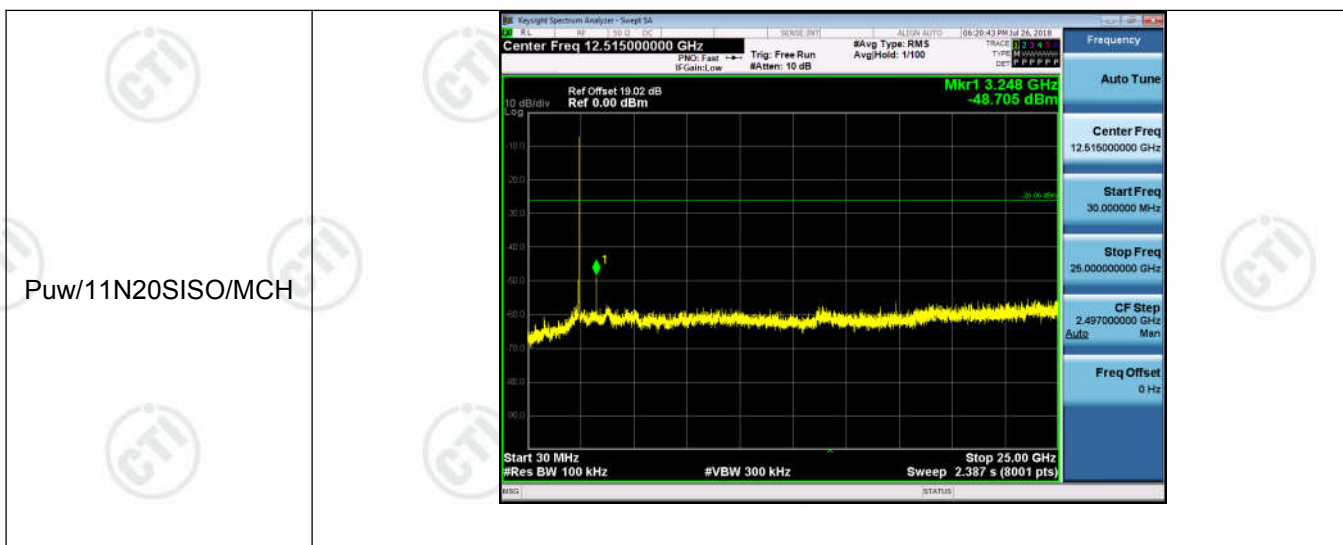
/11N20SISO/LCH



11N20SISO_MCH_Graphs

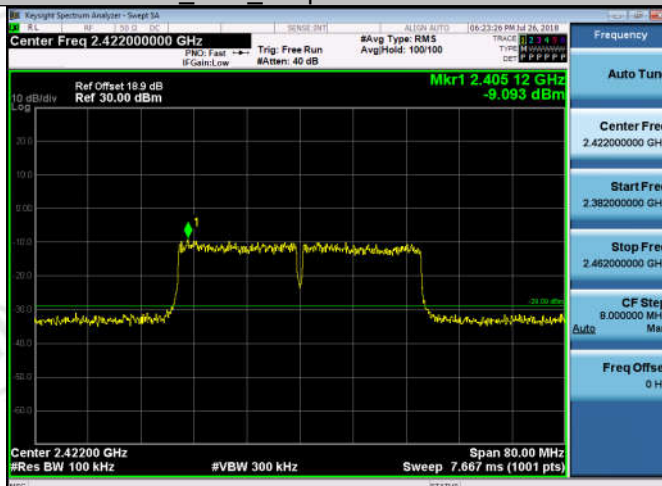
Pref/11N20SISO/MCH



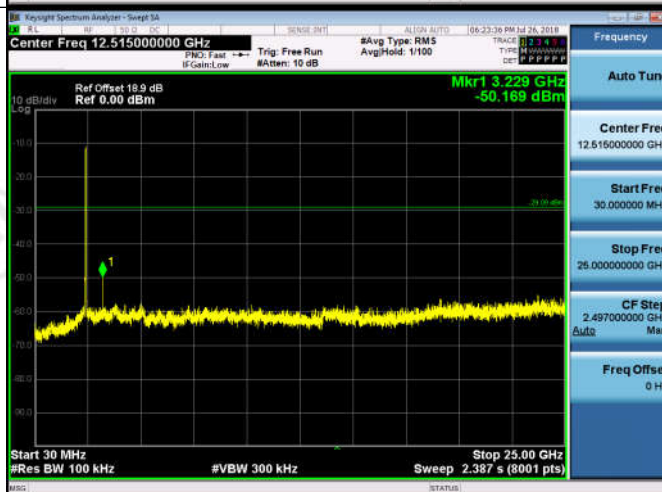


11N40SISO_LCH_Graphs

Pref/11N40SISO/LCH

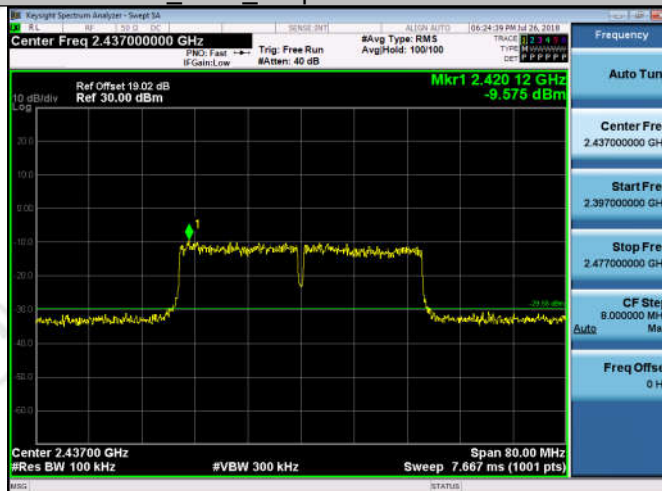


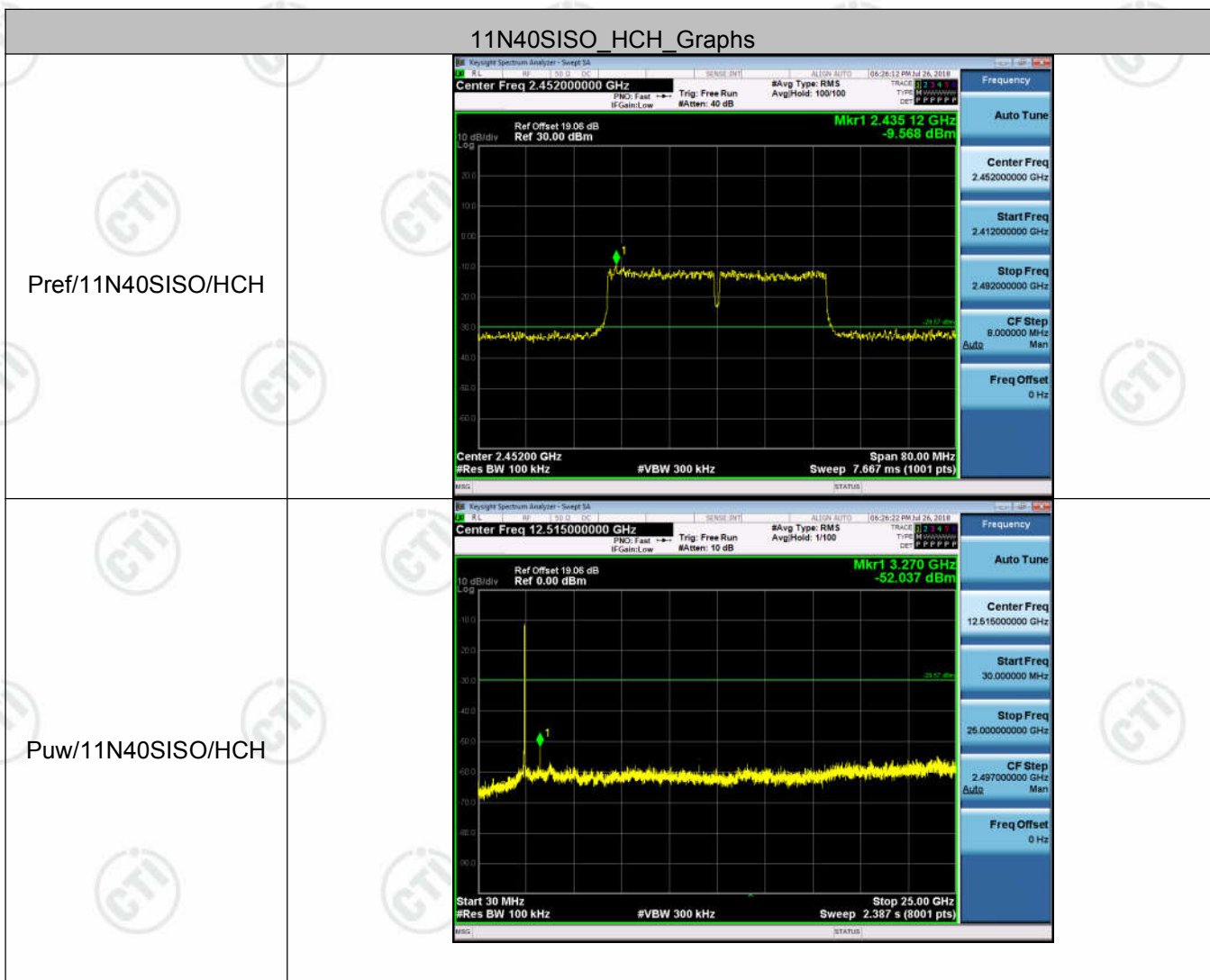
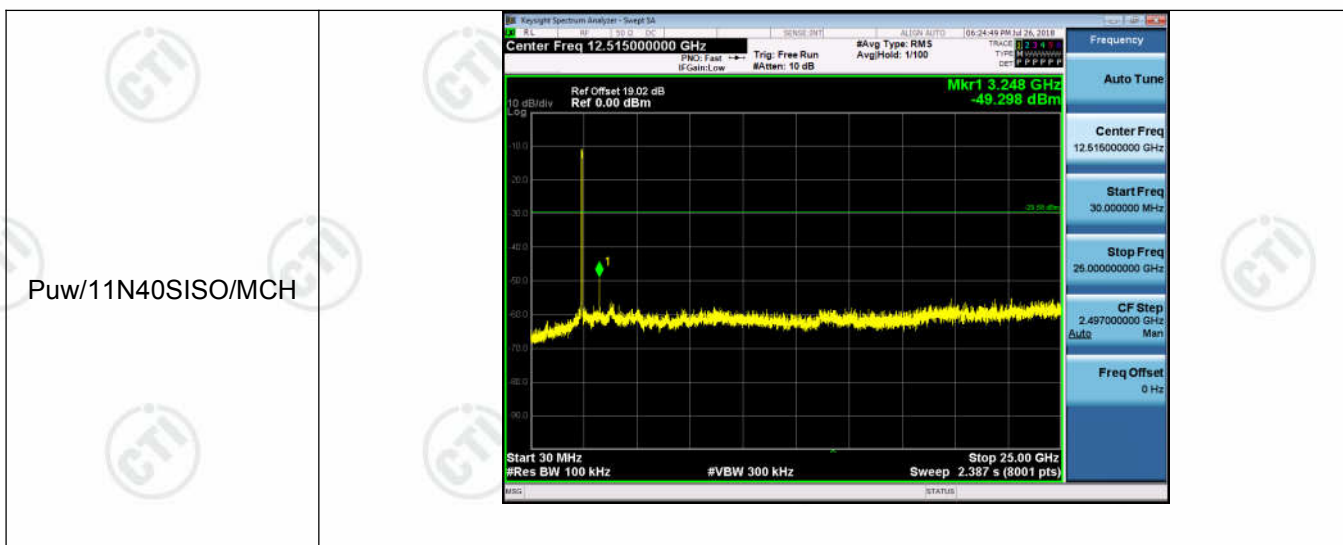
Puw/11N40SISO/LCH



11N40SISO_MCH_Graphs

Pref/11N40SISO/MCH



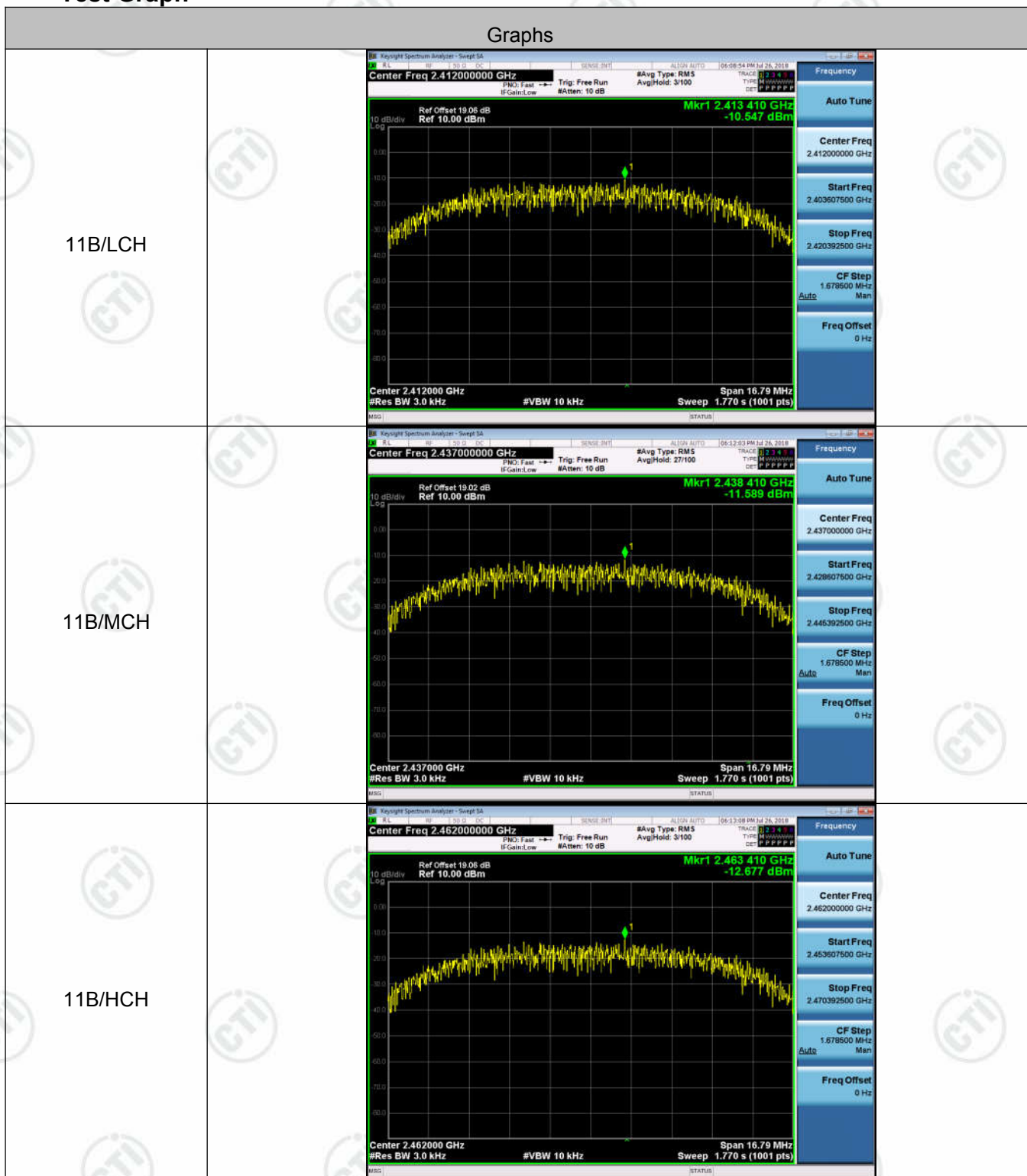


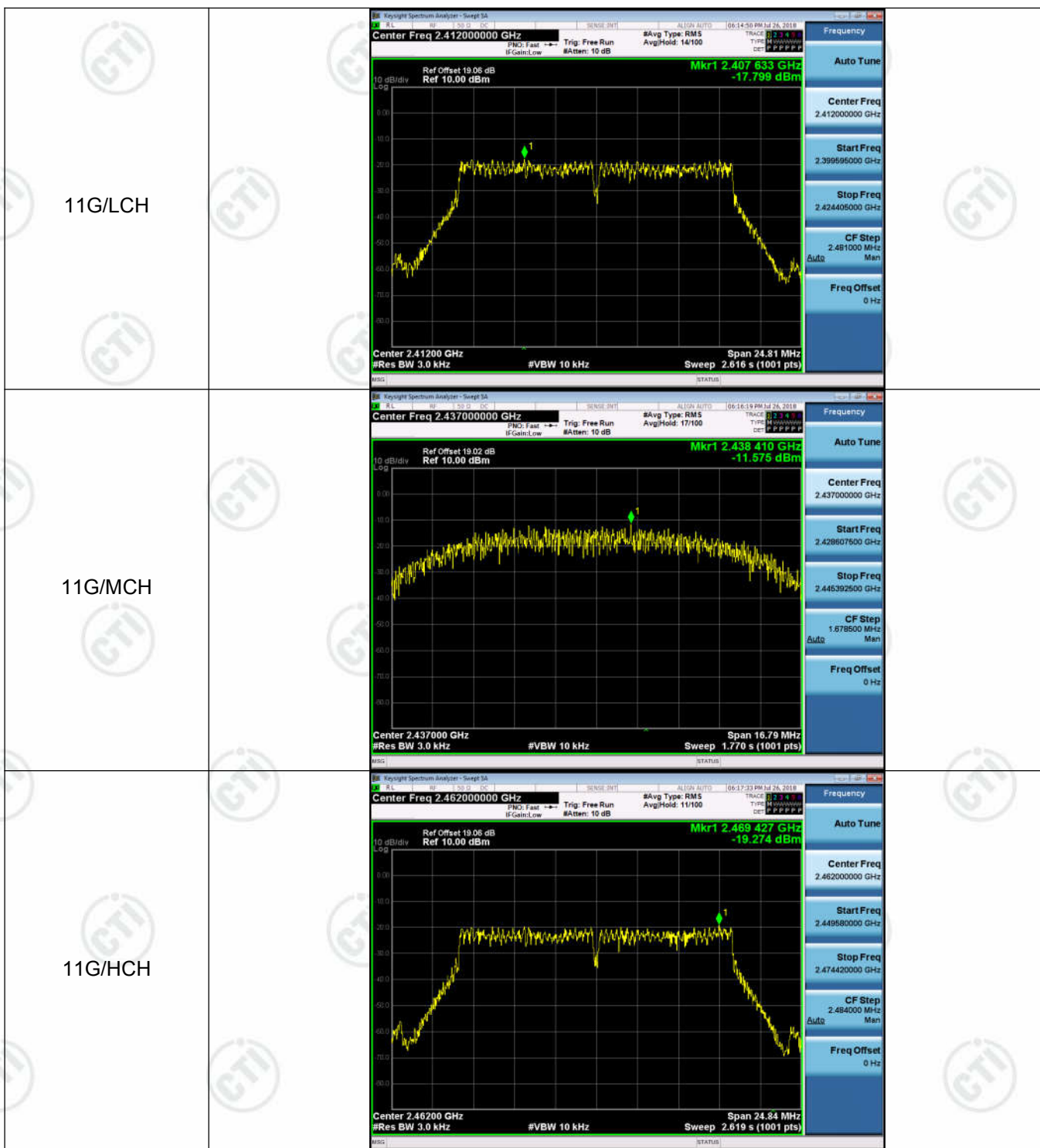
Appendix E): Power Spectral Density

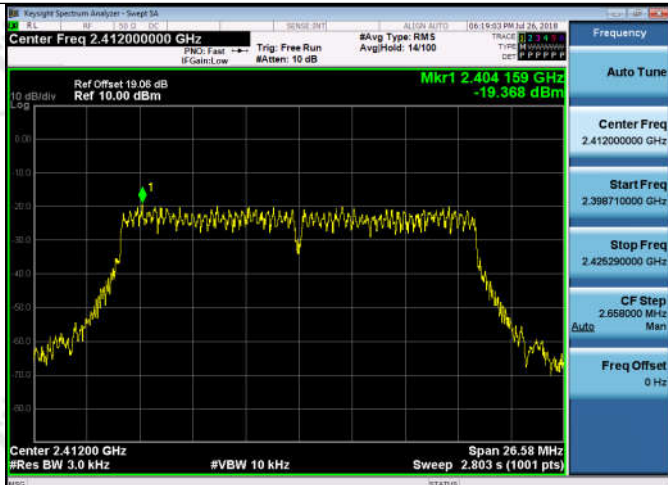
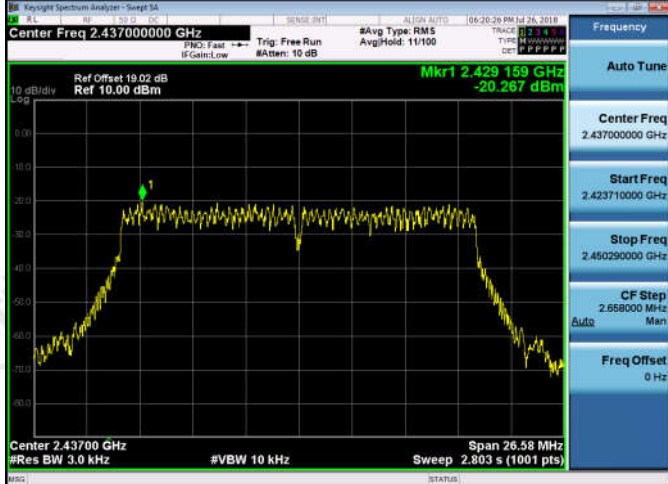
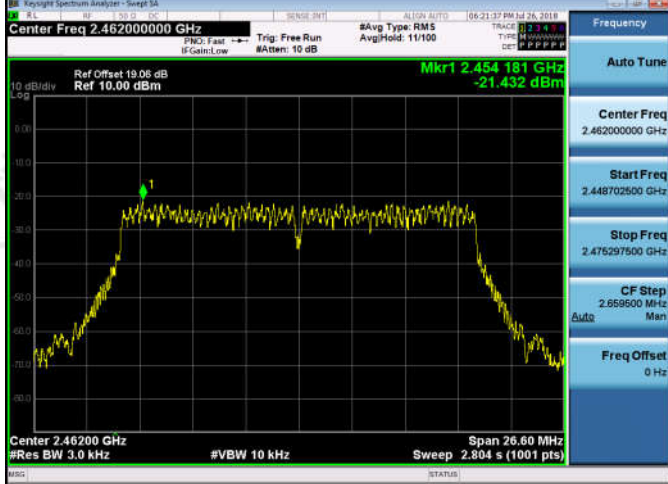
Result Table

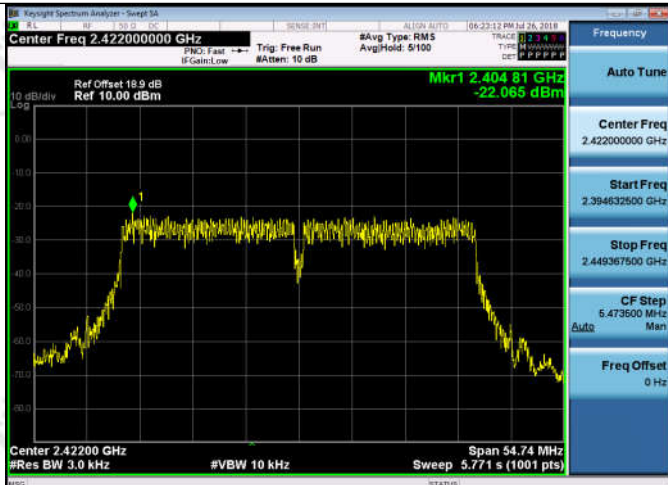
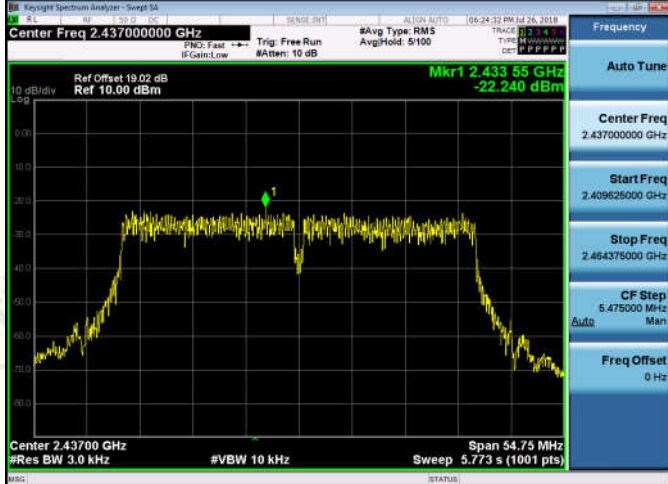
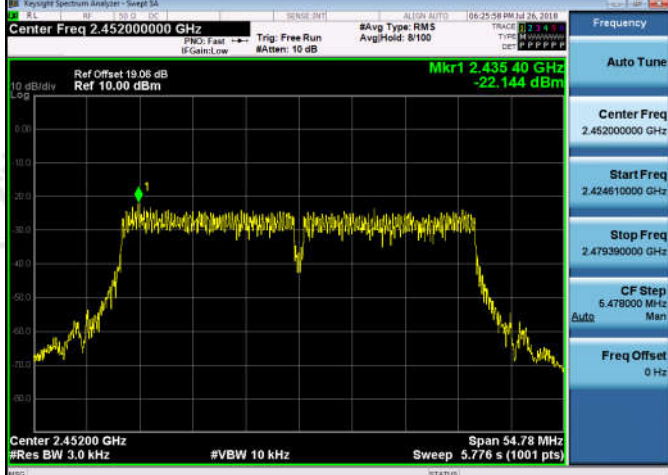
Mode	Channel	Power Spectral Density [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	LCH	-10.547	8	PASS
11B	MCH	-11.589	8	PASS
11B	HCH	-12.677	8	PASS
11G	LCH	-17.799	8	PASS
11G	MCH	-11.575	8	PASS
11G	HCH	-19.274	8	PASS
11N20SISO	LCH	-19.368	8	PASS
11N20SISO	MCH	-20.267	8	PASS
11N20SISO	HCH	-21.432	8	PASS
11N40SISO	LCH	-22.065	8	PASS
11N40SISO	MCH	-22.240	8	PASS
11N40SISO	HCH	-22.144	8	PASS

Test Graph





11N20SISO/LCH	 Keynote Spectrum Analyzer - Sweep SA Center Freq 2.41200000 GHz Ref Offset 19.08 dB Ref 10.00 dBm Mkr1 2.404 159 GHz -19.368 dBm Center 2.41200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 26.58 MHz Sweep 2.803 s (1001 pts) Frequency Auto Tune Center Freq 2.41200000 GHz Start Freq 2.396710000 GHz Stop Freq 2.425290000 GHz CF Step 2.658000 MHz Auto Man Freq Offset 0 Hz
11N20SISO/MCH	 Keynote Spectrum Analyzer - Sweep SA Center Freq 2.43700000 GHz Ref Offset 19.02 dB Ref 10.00 dBm Mkr1 2.429 159 GHz -20.267 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 26.58 MHz Sweep 2.803 s (1001 pts) Frequency Auto Tune Center Freq 2.43700000 GHz Start Freq 2.423710000 GHz Stop Freq 2.450290000 GHz CF Step 2.658000 MHz Auto Man Freq Offset 0 Hz
11N20SISO/HCH	 Keynote Spectrum Analyzer - Sweep SA Center Freq 2.46200000 GHz Ref Offset 19.06 dB Ref 10.00 dBm Mkr1 2.454 181 GHz -21.432 dBm Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 26.60 MHz Sweep 2.804 s (1001 pts) Frequency Auto Tune Center Freq 2.462000000 GHz Start Freq 2.448702500 GHz Stop Freq 2.475297500 GHz CF Step 2.659500 MHz Auto Man Freq Offset 0 Hz

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

Appendix F): Antenna Requirement

15.203 requirement:

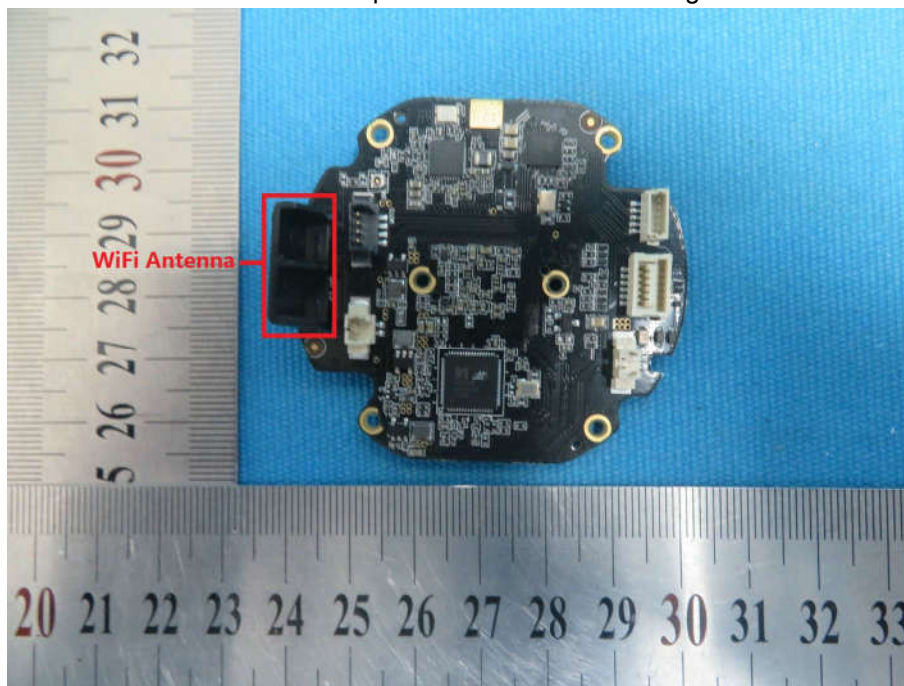
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit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

15.247(b) (4) requirement:

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

EUT Antenna:

The antenna is PIFA and no consideration of replacement. The best case gain of the antenna is -2dBi.



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														

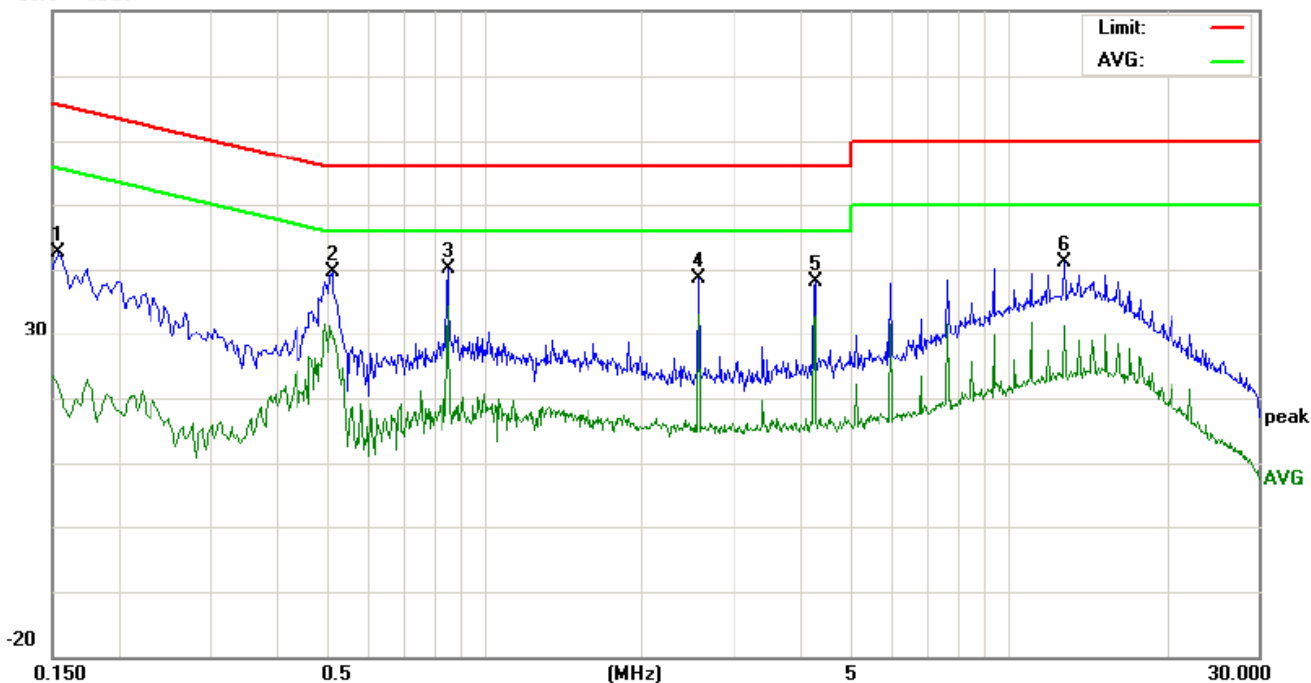
Measurement Data

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:

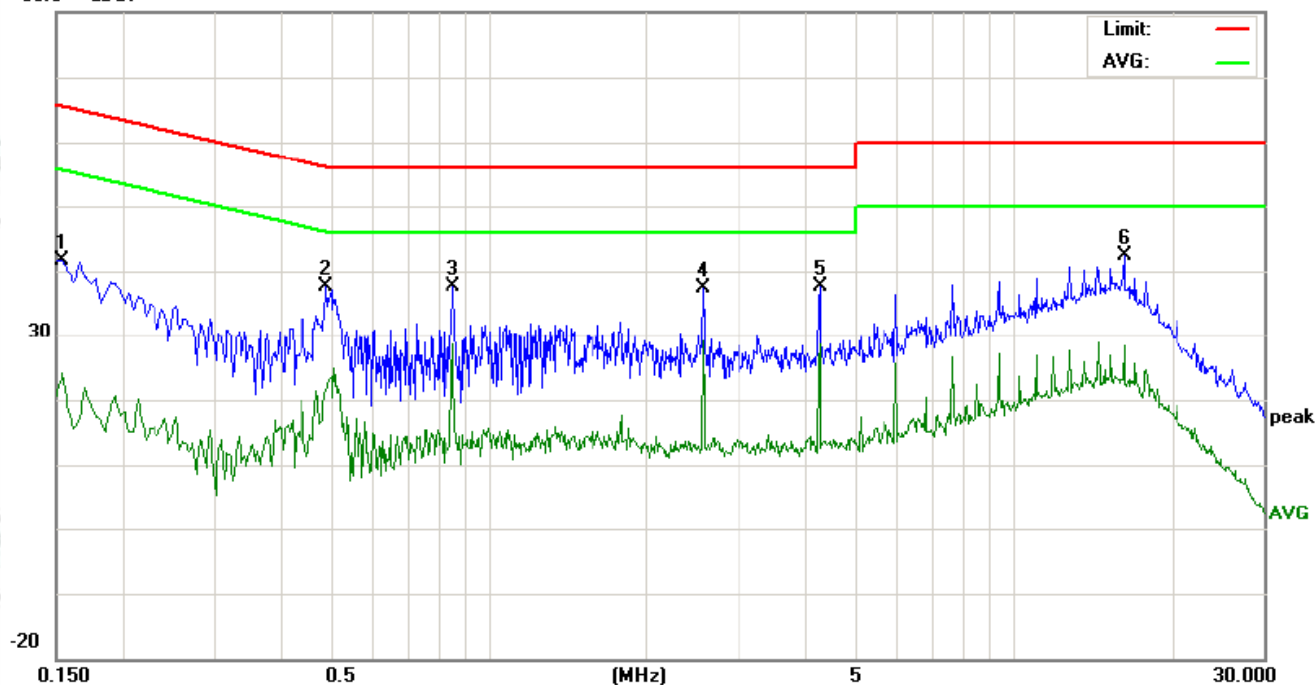
80.0 dBuV



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	0.1539	32.84	28.64	12.15	9.76	42.60	38.40	21.91	65.78	55.78	-27.38	-33.87	P	
2	0.5140	29.98	25.62	19.50	9.72	39.70	35.34	29.22	56.00	46.00	-20.66	-16.78	P	
3	0.8540	30.29	26.85	24.56	9.75	40.04	36.60	34.31	56.00	46.00	-19.40	-11.69	P	
4	2.5620	28.96	25.36	23.39	9.70	38.66	35.06	33.09	56.00	46.00	-20.94	-12.91	P	
5	4.2700	28.61	25.48	23.18	9.64	38.25	35.12	32.82	56.00	46.00	-20.88	-13.18	P	
6	12.8020	31.15	27.69	21.55	9.91	41.06	37.60	31.46	60.00	50.00	-22.40	-18.54	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	0.1539	31.91	27.52	14.36	9.76	41.67	37.28	24.12	65.78	55.78	-28.50	-31.66	P	
2	0.4900	27.96	23.64	11.94	9.71	37.67	33.35	21.65	56.17	46.17	-22.82	-24.52	P	
3	0.8580	27.96	23.84	14.90	9.75	37.71	33.59	24.65	56.00	46.00	-22.41	-21.35	P	
4	2.5620	27.76	23.96	19.41	9.70	37.46	33.66	29.11	56.00	46.00	-22.34	-16.89	P	
5	4.2700	27.93	24.36	19.01	9.64	37.57	34.00	28.65	56.00	46.00	-22.00	-17.35	P	
6	16.2260	32.30	29.55	18.24	10.02	42.32	39.57	28.26	60.00	50.00	-20.43	-21.74	P	

Notes:

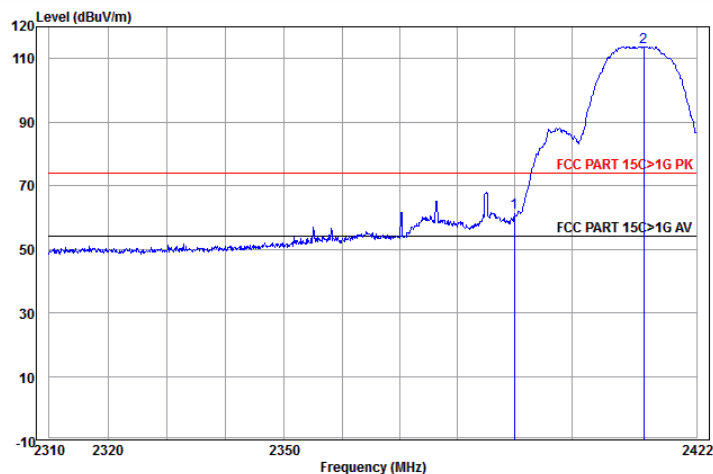
1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

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	

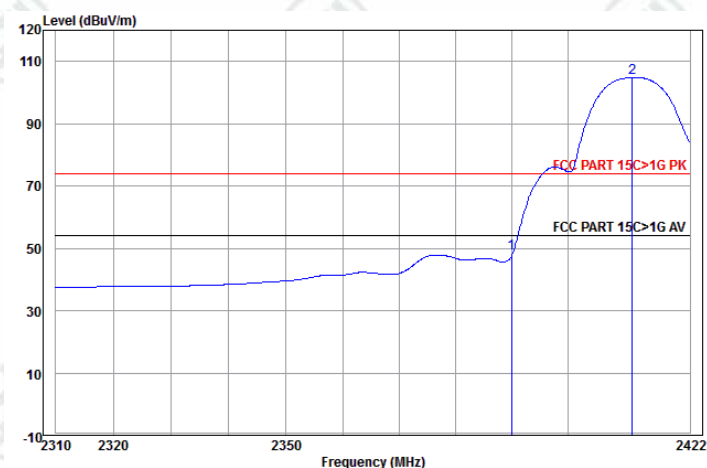
Test plot as follows:

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



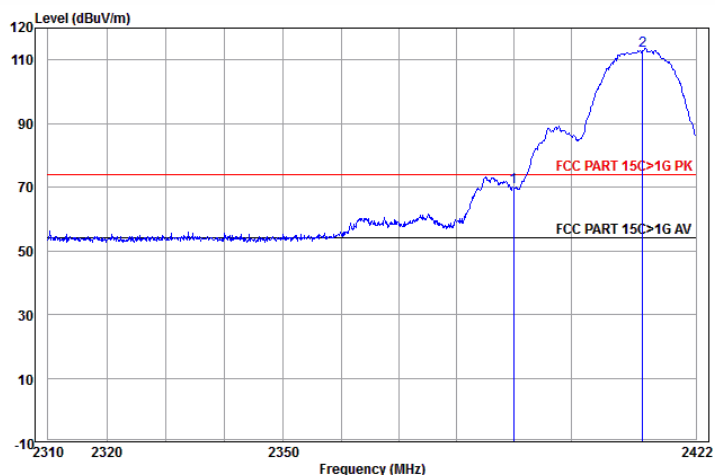
	Ant Freq	Cable Factor	Read Loss	Level	Level	Limit	Over	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	27.64	3.07	30.98	61.69	74.00	-12.31	Horizontal	Peak
2 pp	2412.729	27.61	3.08	82.99	113.68	74.00	39.68	Horizontal	Peak

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



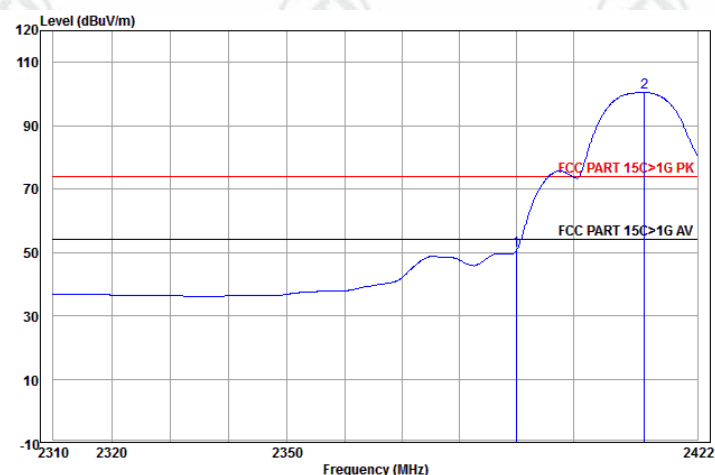
	Ant Freq	Cable Factor	Read Loss	Level	Level	Limit	Over	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	27.64	3.07	17.90	48.61	54.00	-5.39	Horizontal	Average
2 pp	2411.587	27.62	3.08	74.07	104.77	54.00	50.77	Horizontal	Average

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



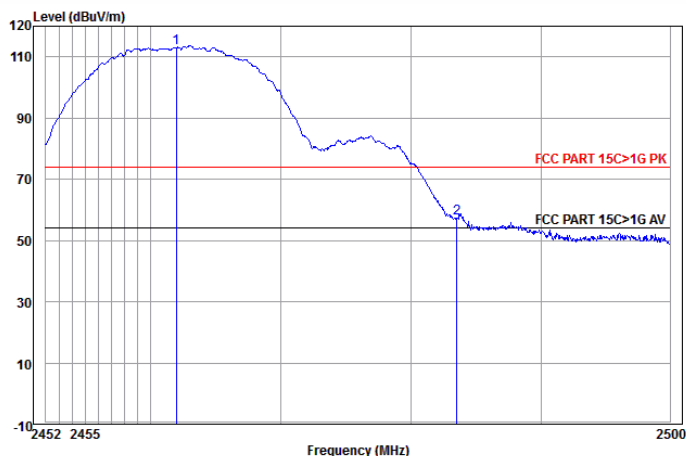
	Ant Freq	Cable Factor	Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	27.64	3.07	39.48	70.19	74.00	-3.81	Vertical	Peak
2 pp	2412.615	27.61	3.08	82.37	113.06	74.00	39.06	Vertical	Peak

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



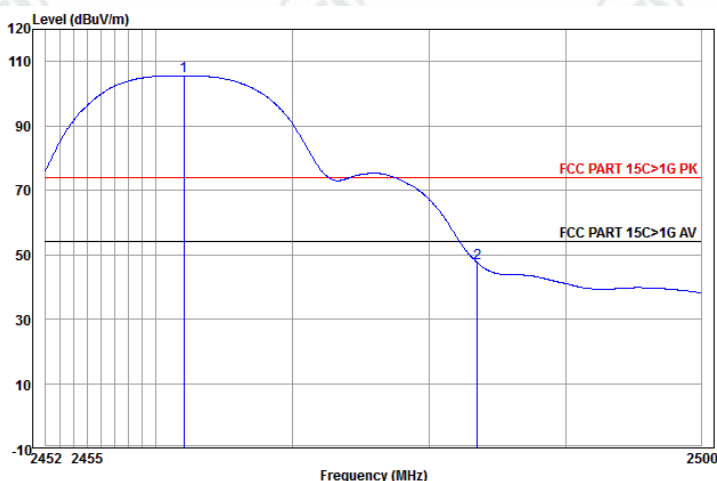
	Ant Freq	Cable Factor	Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	27.64	3.07	19.87	50.58	54.00	-3.42	Vertical	Average
2 pp	2412.615	27.61	3.08	69.75	100.44	54.00	46.44	Vertical	Average

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



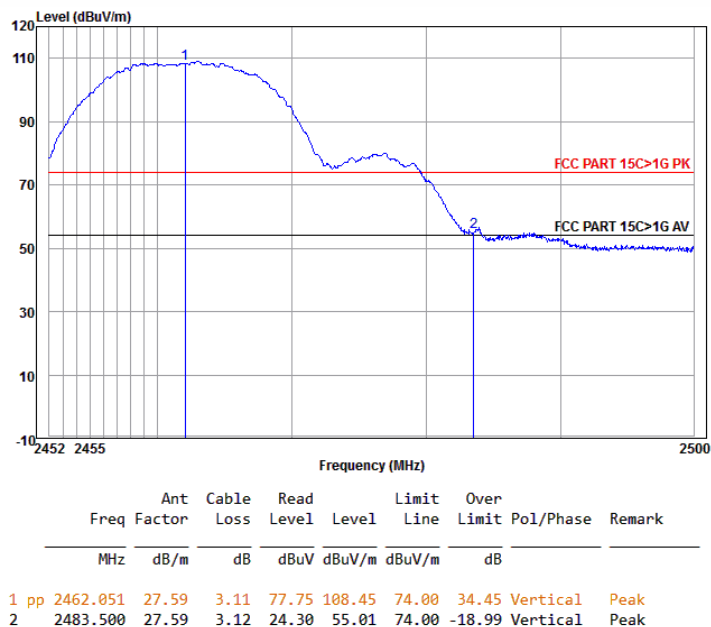
	Ant Freq	Cable Factor	Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz		dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2461.955	27.60	3.11	82.07	112.78	74.00	38.78	Horizontal	Peak
2	2483.500	27.59	3.12	26.54	57.25	74.00	-16.75	Horizontal	Peak

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

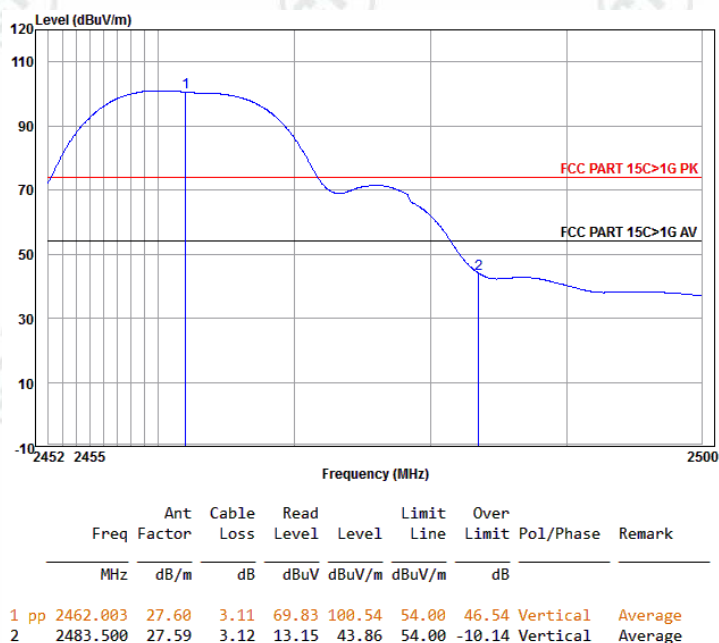


	Ant Freq	Cable Factor	Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz		dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2462.051	27.59	3.11	74.81	105.51	54.00	51.51	Horizontal	Average
2	2483.500	27.59	3.12	16.55	47.26	54.00	-6.74	Horizontal	Average

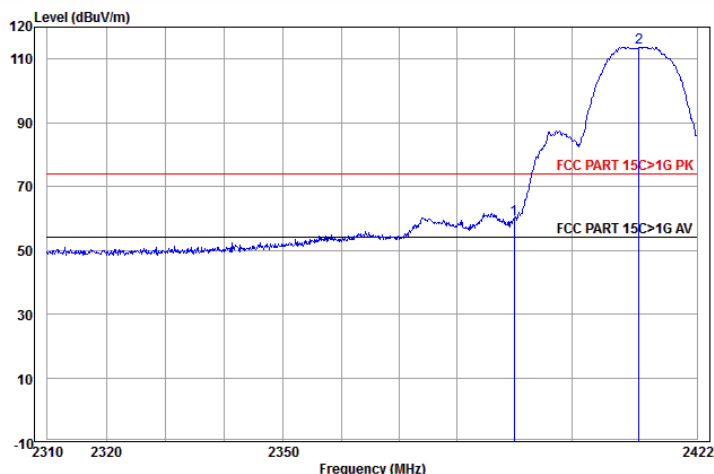
Worse case mode:	802.11b (11Mbps)		
Frequency: 2462MHz	Test channel: Highest	Polarization: Vertical	Remark: Peak



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

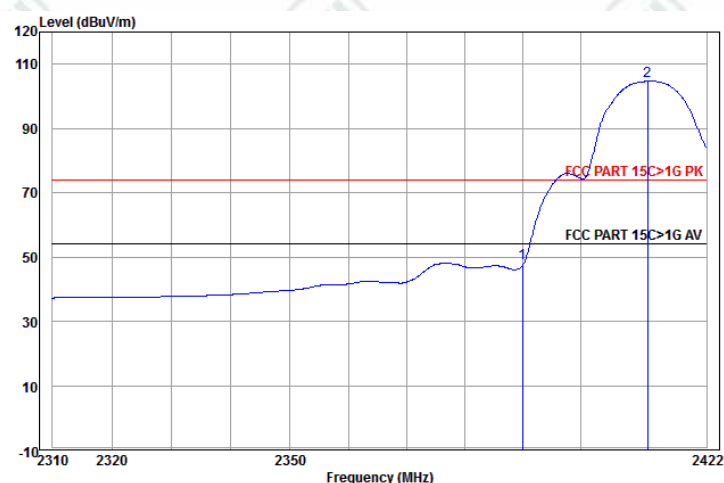


Worse case mode:	802.11g (6Mbps)		
Frequency: 2412MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Peak



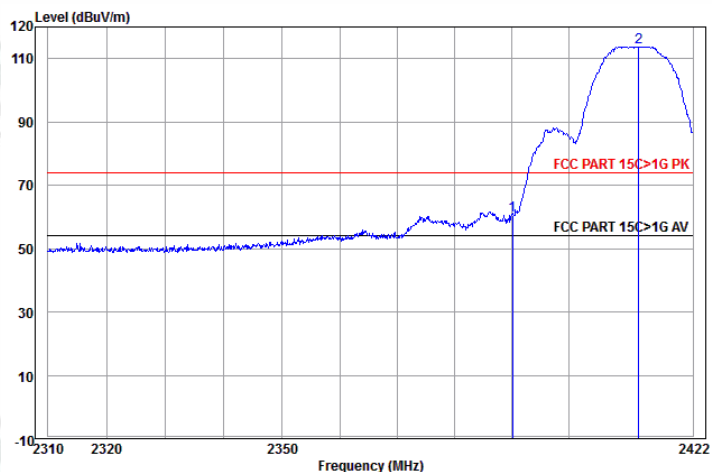
	Ant Freq	Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	27.64	3.07	28.93	59.64	74.00	-14.36	Horizontal Peak	
2 pp	2411.816	27.62	3.08	82.81	113.51	74.00	39.51	Horizontal Peak	

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



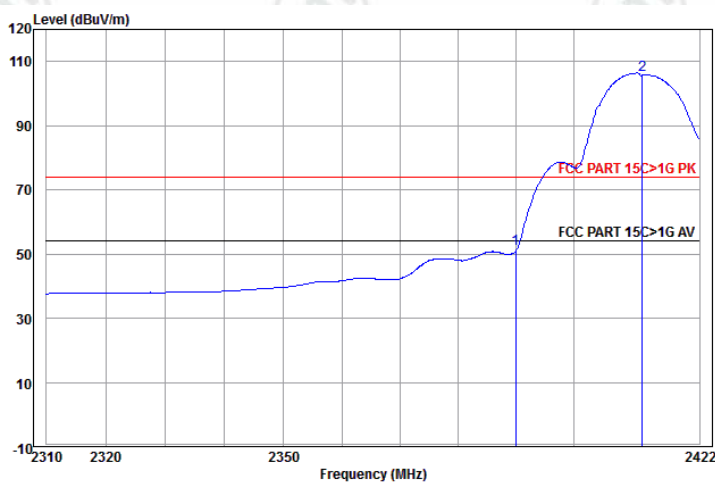
	Ant Freq	Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	27.64	3.07	17.40	48.11	54.00	-5.89	Horizontal Average	
2 pp	2411.701	27.62	3.08	73.92	104.62	54.00	50.62	Horizontal Average	

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



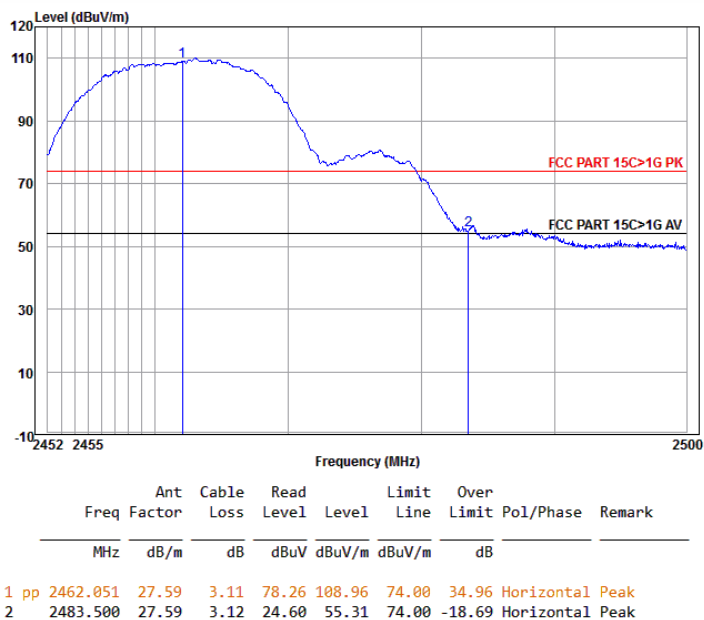
	Ant Freq	Cable Factor	Read Level	Level	Limit	Over	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2390.104	27.64	3.07	29.67	60.38	74.00	-13.62	Vertical Peak
2 pp	2412.387	27.61	3.08	82.79	113.48	74.00	39.48	Vertical Peak

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

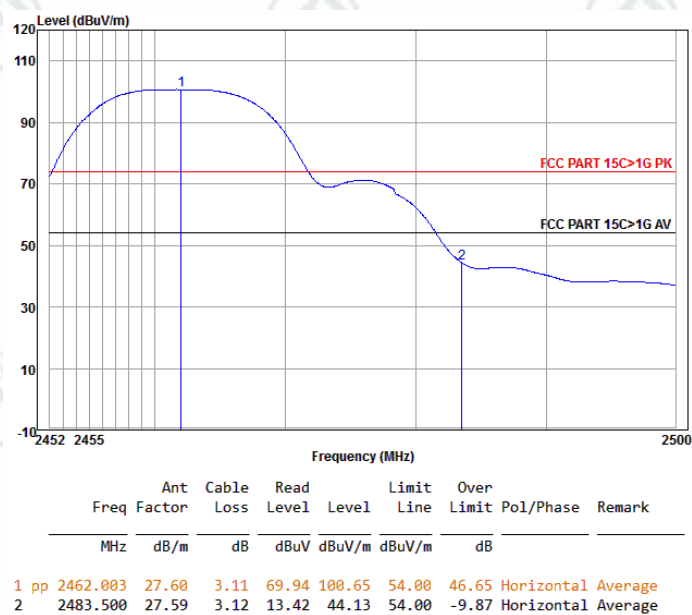


	Ant Freq	Cable Factor	Read Level	Level	Limit	Over	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2390.000	27.64	3.07	21.05	51.76	54.00	-2.24	Vertical Average
2 pp	2412.044	27.62	3.08	75.12	105.82	54.00	51.82	Vertical Average

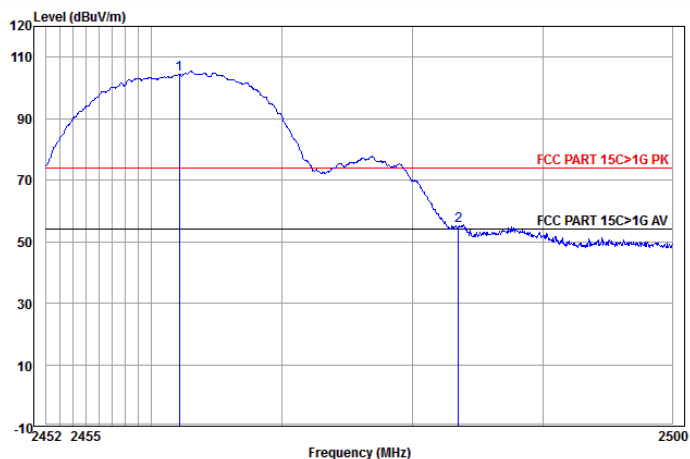
Worse case mode:	802.11g (6Mbps)		
Frequency: 2462MHz	Test channel: Highest	Polarization: Horizontal	Remark: Peak



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

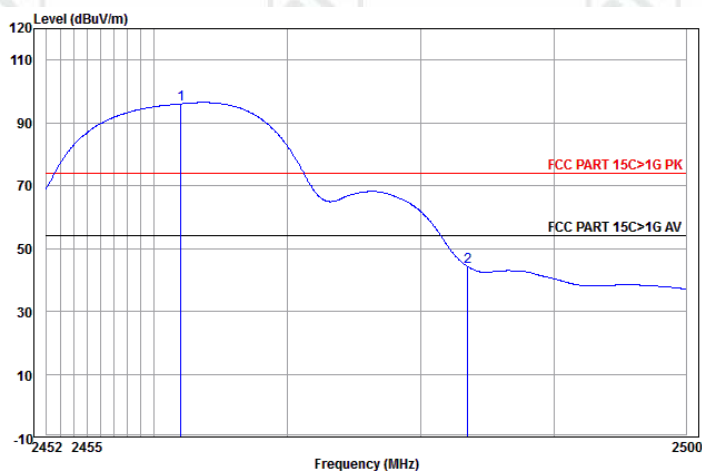


Worse case mode:	802.11g (6Mbps)		
Frequency: 2462MHz	Test channel: Highest	Polarization: Vertical	Remark: Peak



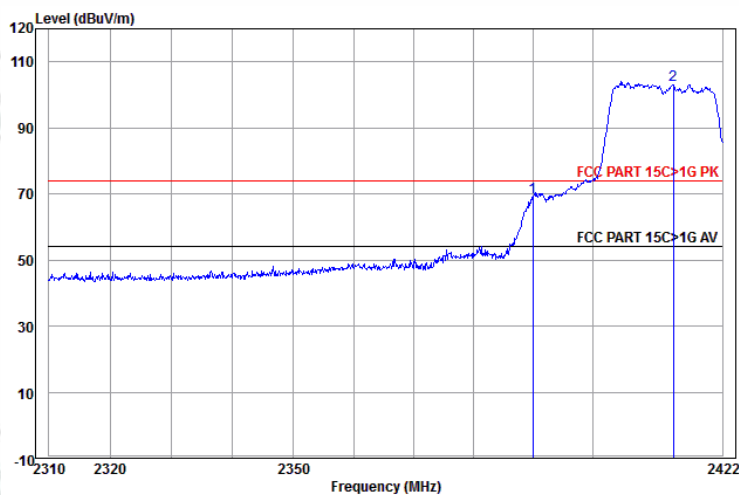
		Ant Freq	Cable Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
		MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	pp	2462.146	27.59	3.11	73.63	104.33	74.00	30.33	Vertical	Peak
2		2483.500	27.59	3.12	24.38	55.09	74.00	-18.91	Vertical	Peak

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



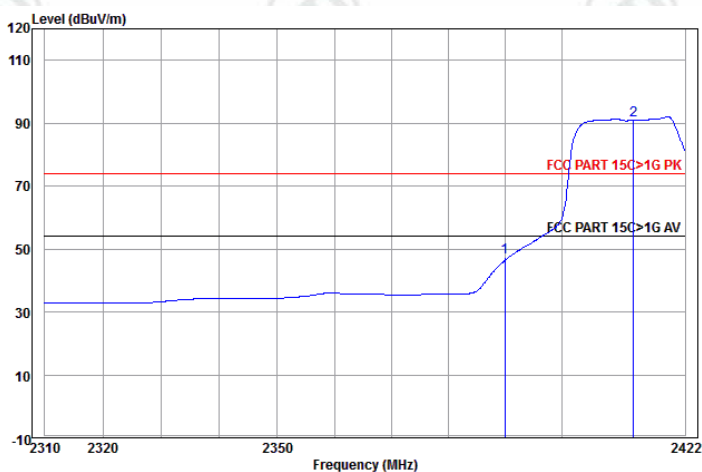
		Ant Freq	Cable Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
		MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	pp	2462.003	27.60	3.11	65.34	96.05	54.00	42.05	Vertical	Average
2		2483.500	27.59	3.12	13.35	44.06	54.00	-9.94	Vertical	Average

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



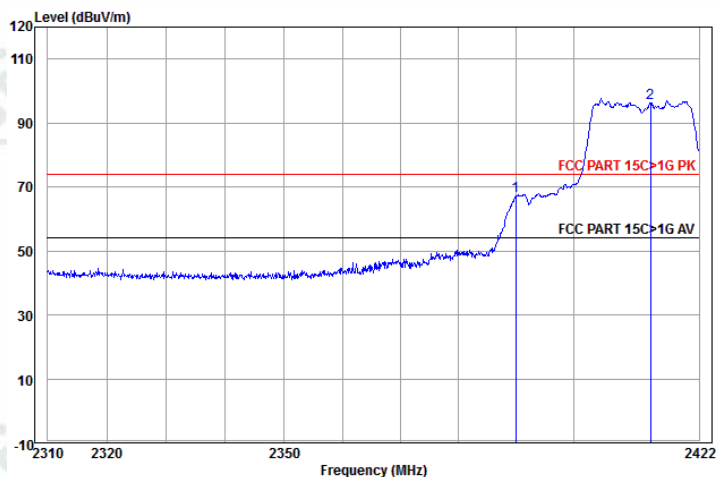
	Ant Freq	Cable Factor	Read Loss	Level	Level	Limit	Over	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	27.64	3.07	38.15	68.86	74.00	-5.14	Horizontal	Peak
2 pp	2413.643	27.61	3.08	72.28	102.97	74.00	28.97	Horizontal	Peak

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



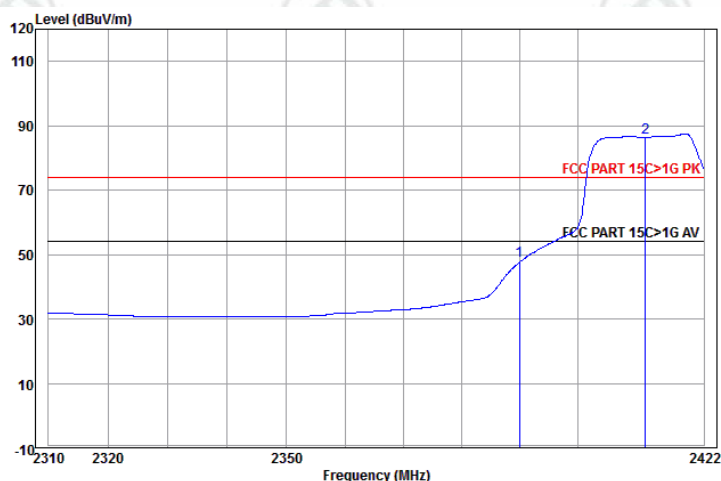
	Ant Freq	Cable Factor	Read Loss	Level	Level	Limit	Over	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	27.64	3.07	16.58	47.29	54.00	-6.71	Horizontal	Average
2 pp	2412.844	27.61	3.08	60.16	90.85	54.00	36.85	Horizontal	Average

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



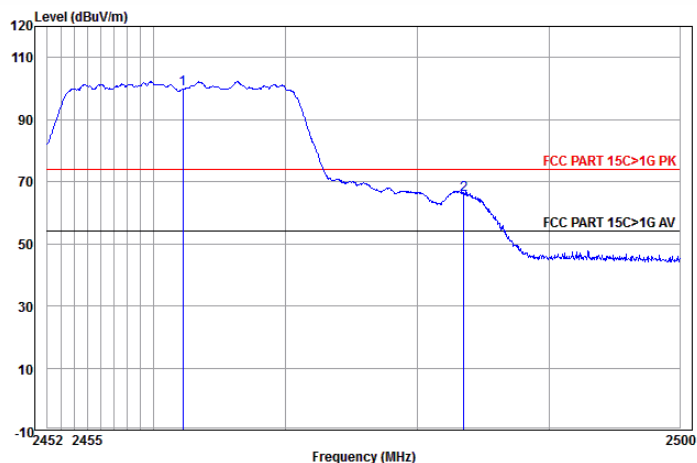
	Ant Freq	Cable Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	27.64	3.07	36.48	67.19	74.00	-6.81	Vertical	Peak
2 pp	2413.529	27.61	3.08	65.60	96.29	74.00	22.29	Vertical	Peak

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



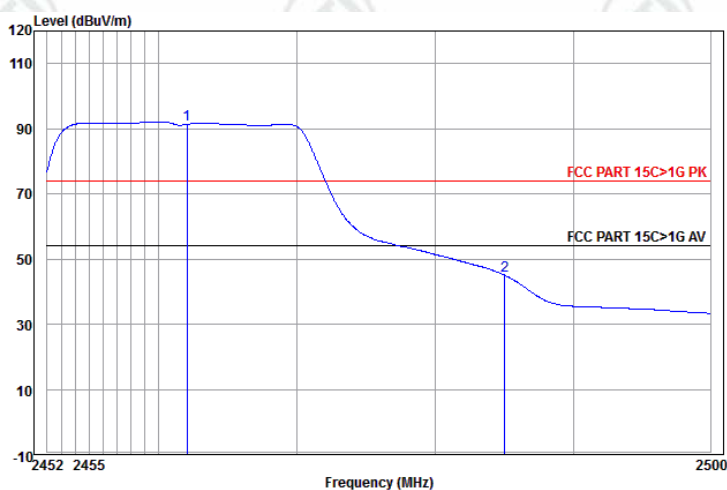
	Ant Freq	Cable Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	27.64	3.07	17.56	48.27	54.00	-5.73	Vertical	Average
2 pp	2411.816	27.62	3.08	55.69	86.39	54.00	32.39	Vertical	Average

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



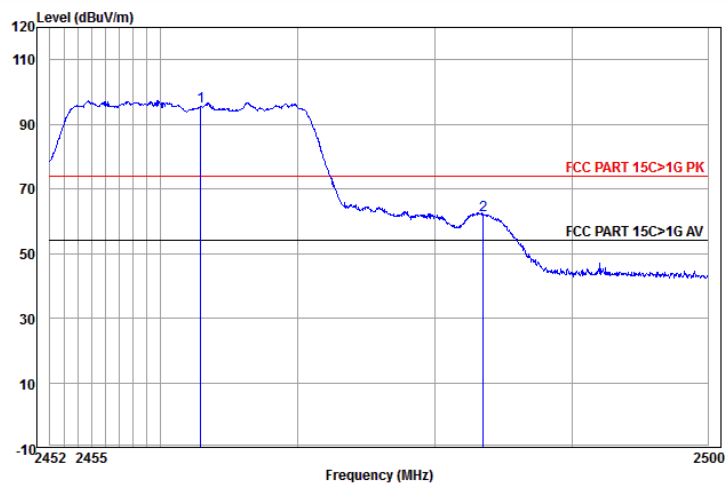
	Ant Freq	Cable Factor	Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2462.194	27.59	3.11	69.16	99.86	74.00	25.86	Horizontal Peak	
2	2483.500	27.59	3.12	35.16	65.87	74.00	-8.13	Horizontal Peak	

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



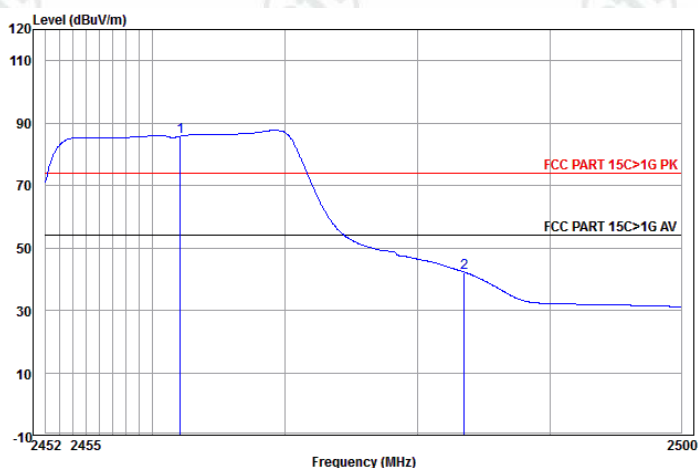
	Ant Freq	Cable Factor	Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp	2462.051	27.59	3.11	60.69	91.39	54.00	37.39	Horizontal Average	
2	2485.000	27.59	3.12	14.19	44.90	54.00	-9.10	Horizontal Average	

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



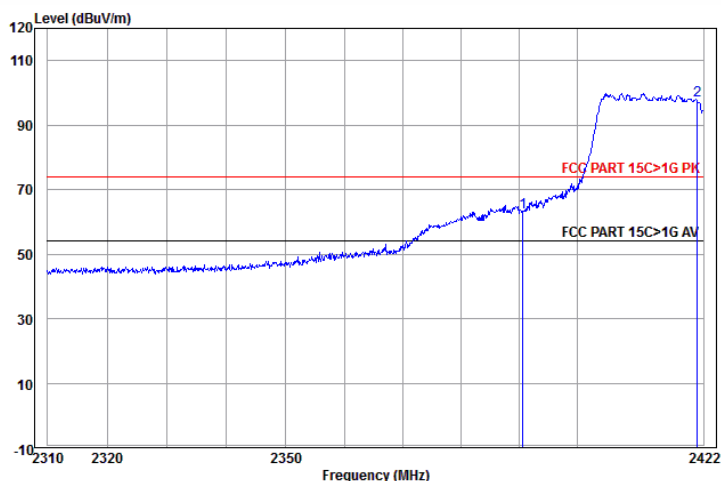
	Ant Freq	Cable Factor	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	pp 2462.910	27.59	3.11	64.88	95.58	74.00	21.58	Vertical Peak
2	2483.500	27.59	3.12	31.14	61.85	74.00	-12.15	Vertical Peak

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



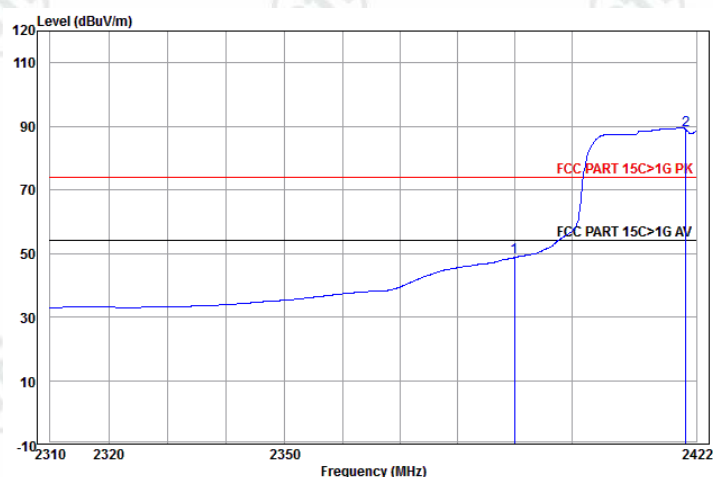
	Ant Freq	Cable Factor	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	pp 2462.098	27.59	3.11	55.12	85.82	54.00	31.82	Vertical Average
2	2483.500	27.59	3.12	11.48	42.19	54.00	-11.81	Vertical Average

Worse case mode:	802.11n(HT40) (13.5Mbps)		
Frequency: 2422MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Peak



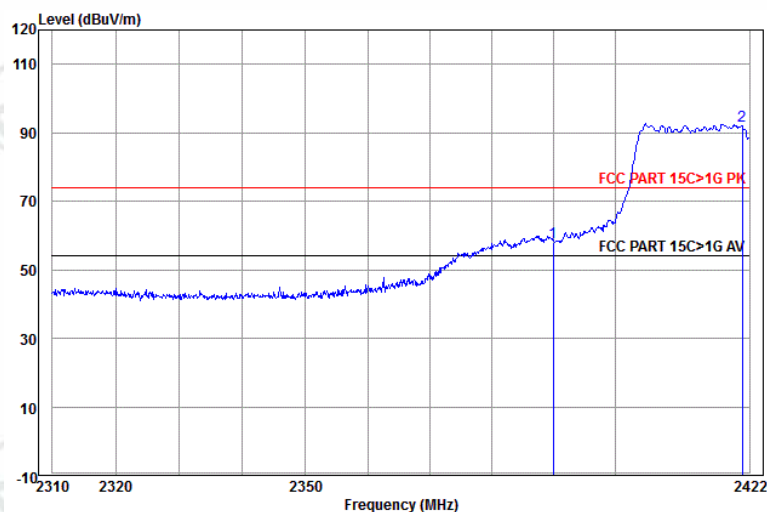
	Ant Freq	Cable Factor	Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.669	27.64	3.07	32.32	63.03	74.00	-10.97	Horizontal	Peak
2 pp	2420.968	27.61	3.08	66.86	97.55	74.00	23.55	Horizontal	Peak

Worse case mode:	802.11n(HT40) (13.5Mbps)		
Frequency: 2422MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Average



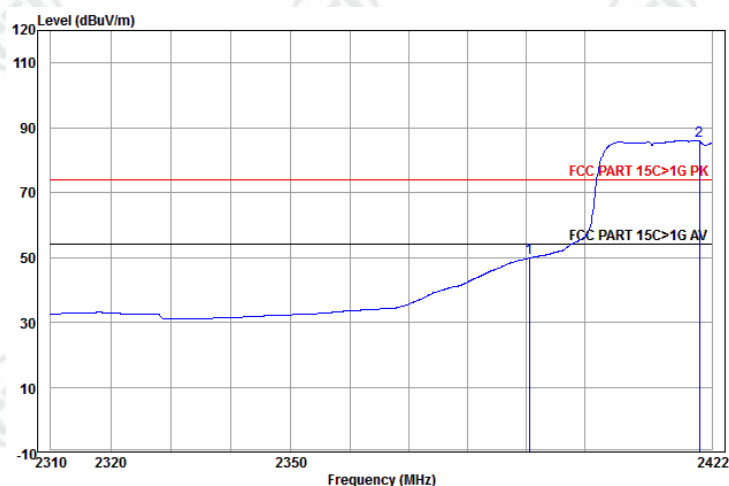
	Ant Freq	Cable Factor	Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	27.64	3.07	18.20	48.91	54.00	-5.09	Horizontal	Average
2 pp	2420.166	27.61	3.08	58.30	88.99	54.00	34.99	Horizontal	Average

Worse case mode:	802.11n(HT40) (13.5Mbps)		
Frequency: 2422MHz	Test channel: Lowest	Polarization: Vertical	Remark: Peak



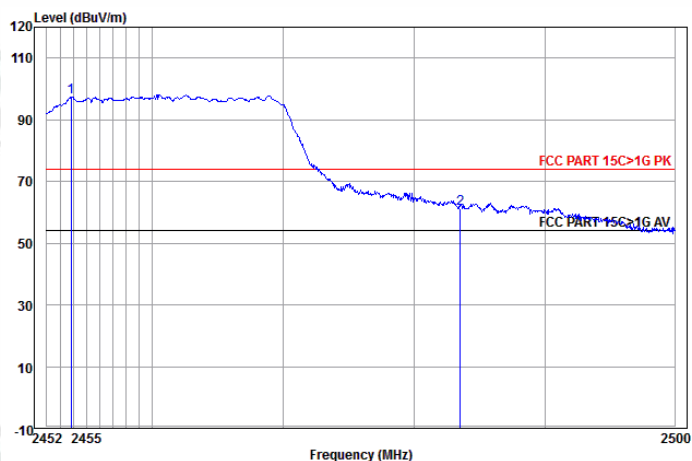
	Ant Freq	Cable Factor	Read Loss	Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.000	27.64	3.07	27.25	57.96	74.00	-16.04	Vertical	Peak
2 pp	2420.854	27.61	3.08	61.19	91.88	74.00	17.88	Vertical	Peak

Worse case mode:	802.11n(HT40) (13.5Mbps)		
Frequency: 2422MHz	Test channel: Lowest	Polarization: Vertical	Remark: Average



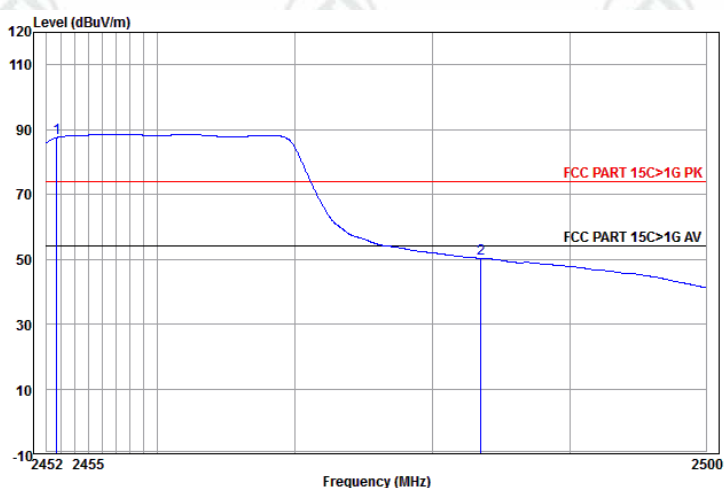
	Ant Freq	Cable Factor	Read Loss	Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	2390.500	27.64	3.07	19.11	49.82	54.00	-4.18	Vertical	Average
2 pp	2419.822	27.61	3.08	55.25	85.94	54.00	31.94	Vertical	Average

Worse case mode:	802.11n(HT40) (13.5Mbps)		
Frequency: 2452MHz	Test channel:Highest	Polarization: Horizontal	Remark: Peak



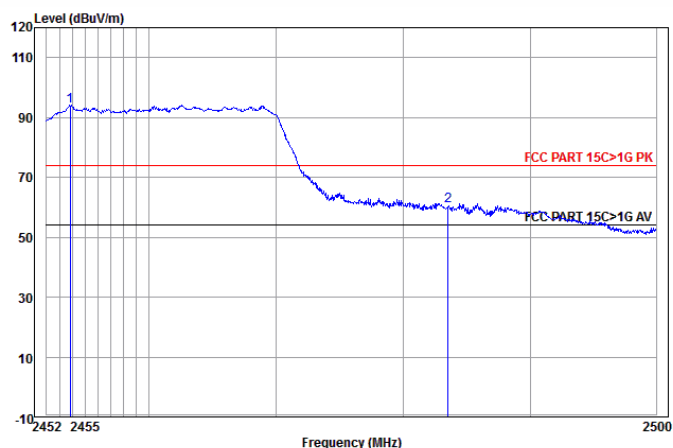
		Ant Freq	Cable Factor	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
		MHz	dB/m	dB	dBuV	dBuV/m	dB		
1	pp	2453.854	27.60	3.10	66.80	97.50	74.00	23.50	Horizontal Peak
2		2483.500	27.59	3.12	30.66	61.37	74.00	-12.63	Horizontal Peak

Worse case mode:	802.11n(HT40) (13.5Mbps)		
Frequency: 2452MHz	Test channel:Highest	Polarization: Horizontal	Remark: Average



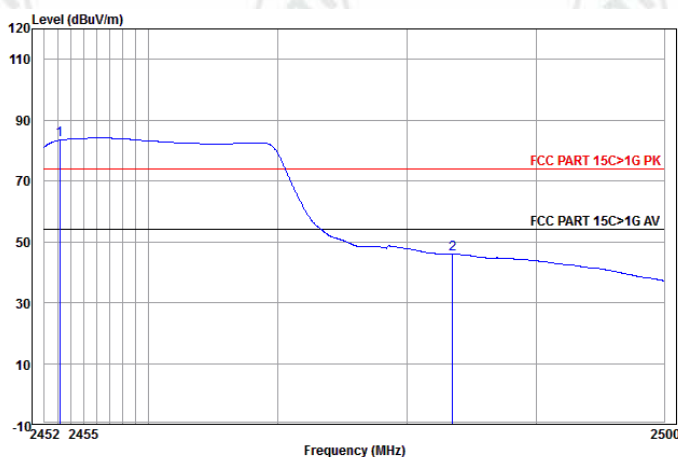
		Ant Freq	Cable Factor	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
		MHz	dB/m	dB	dBuV	dBuV/m	dB		
1	pp	2452.713	27.60	3.10	56.84	87.54	54.00	33.54	Horizontal Average
2		2483.500	27.59	3.12	19.60	50.31	54.00	-3.69	Horizontal Average

Worse case mode:	802.11n(HT40) (13.5Mbps)		
Frequency: 2452MHz	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	2453.854	27.60	3.10	63.16	93.86	74.00	19.86	Vertical	Peak
2	2483.500	27.59	3.12	29.61	60.32	74.00	-13.68	Vertical	Peak

Worse case mode:	802.11n(HT40) (13.5Mbps)		
Frequency: 2452MHz	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	2453.189	27.60	3.10	52.74	83.44	54.00	29.44	Vertical	Average
2	2483.500	27.59	3.12	15.19	45.90	54.00	-8.10	Vertical	Average

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:

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.

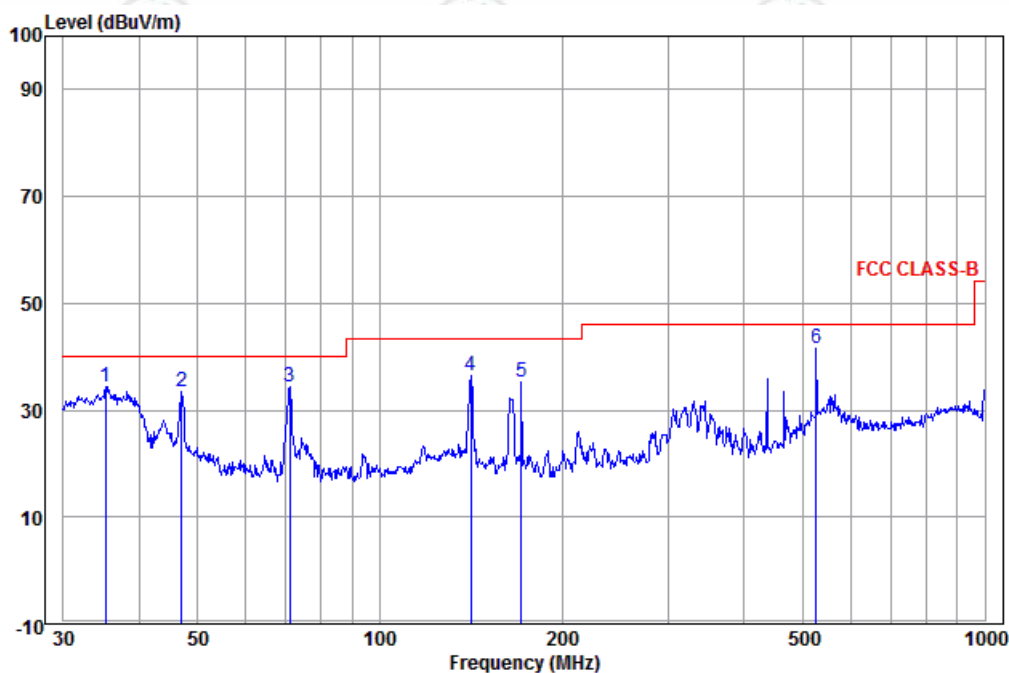
Limit:

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.

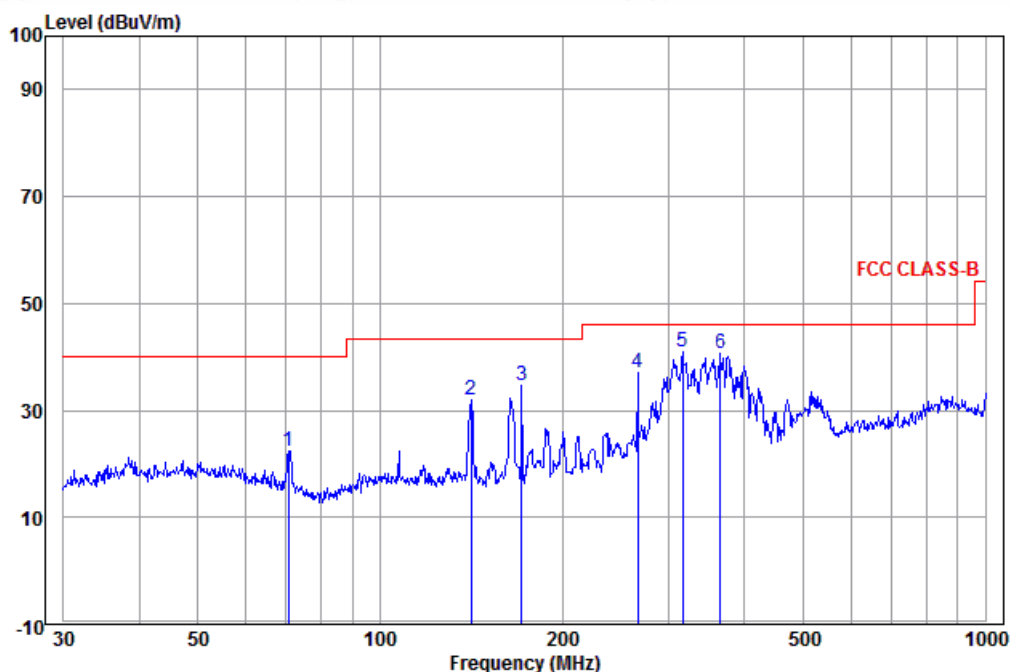
Radiated Spurious Emissions test Data: **Radiated Emission below 1GHz**

30MHz~1GHz (QP)		
Test mode:	Transmitting	Vertical



	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	35.251	12.97	0.07	21.43	34.47	40.00	-5.53	Vertical	QP
2	46.995	14.38	0.09	19.03	33.50	40.00	-6.50	Vertical	QP
3	71.080	10.19	0.27	23.97	34.43	40.00	-5.57	Vertical	QP
4	141.330	9.34	0.61	26.56	36.51	43.50	-6.99	Vertical	QP
5	171.393	10.05	0.84	24.38	35.27	43.50	-8.23	Vertical	QP
6 pp	526.397	17.39	1.53	22.52	41.44	46.00	-4.56	Vertical	QP

Test mode:	Transmitting	Horizontal
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	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	70.584	10.29	0.26	11.97	22.52	40.00	-17.48	Horizontal	QP
2	141.330	9.34	0.61	21.87	31.82	43.50	-11.68	Horizontal	QP
3	171.393	10.05	0.84	23.64	34.53	43.50	-8.97	Horizontal	QP
4	266.609	12.88	1.24	23.02	37.14	46.00	-8.86	Horizontal	QP
5 pp	316.589	13.75	1.16	26.05	40.96	46.00	-5.04	Horizontal	QP
6	365.539	14.66	1.32	24.63	40.61	46.00	-5.39	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
1286.606	30.43	1.99	44.26	48.27	36.43	74.00	-37.57	Pass	Horizontal
1621.985	31.10	2.44	43.86	47.62	37.30	74.00	-36.70	Pass	Horizontal
4824.000	34.73	6.02	44.60	48.93	45.08	74.00	-28.92	Pass	Horizontal
6032.401	35.92	7.43	44.50	48.66	47.51	74.00	-26.49	Pass	Horizontal
7236.000	36.42	6.94	44.80	47.52	46.08	74.00	-27.92	Pass	Horizontal
9648.000	37.93	7.01	45.57	46.28	45.65	74.00	-28.35	Pass	Horizontal
1065.707	29.88	1.63	44.59	49.08	36.00	74.00	-38.00	Pass	Vertical
1545.405	30.96	2.35	43.95	47.79	37.15	74.00	-36.85	Pass	Vertical
4824.000	34.73	6.02	44.60	49.00	45.15	74.00	-28.85	Pass	Vertical
5986.509	35.89	7.43	44.50	48.45	47.27	74.00	-26.73	Pass	Vertical
7236.000	36.42	6.94	44.80	48.28	46.84	74.00	-27.16	Pass	Vertical
9648.000	37.93	7.01	45.57	47.22	46.59	74.00	-27.41	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
1127.091	30.05	1.74	44.49	48.92	36.22	74.00	-37.78	Pass	Horizontal
1646.948	31.14	2.47	43.84	47.40	37.17	74.00	-36.83	Pass	Horizontal
4874.000	34.84	6.12	44.60	49.51	45.87	74.00	-28.13	Pass	Horizontal
6203.700	36.01	7.39	44.52	48.49	47.37	74.00	-26.63	Pass	Horizontal
7311.000	36.43	6.86	44.86	49.38	47.81	74.00	-26.19	Pass	Horizontal
9748.000	38.03	7.10	45.55	47.15	46.73	74.00	-27.27	Pass	Horizontal
1319.777	30.50	2.04	44.22	47.87	36.19	74.00	-37.81	Pass	Vertical
1818.842	31.43	2.66	43.66	47.62	38.05	74.00	-35.95	Pass	Vertical
4874.000	34.84	6.12	44.60	48.75	45.11	74.00	-28.89	Pass	Vertical
6017.064	35.91	7.44	44.50	48.62	47.47	74.00	-26.53	Pass	Vertical
7311.000	36.43	6.86	44.86	47.05	45.48	74.00	-28.52	Pass	Vertical
9748.000	38.03	7.10	45.55	47.68	47.26	74.00	-26.74	Pass	Vertical

Test mode: 802.11b(11Mbps)			Test Frequency: 2462MHz			Remark: Peak			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1118.517	30.02	1.72	44.51	49.26	36.49	74.00	-37.51	Pass	Horizontal
1406.496	30.68	2.16	44.11	48.59	37.32	74.00	-36.68	Pass	Horizontal
4924.000	34.94	6.22	44.60	48.89	45.45	74.00	-28.55	Pass	Horizontal
6017.064	35.91	7.44	44.50	49.93	48.78	74.00	-25.22	Pass	Horizontal
7386.000	36.44	6.78	44.92	48.89	47.19	74.00	-26.81	Pass	Horizontal
9848.000	38.14	7.19	45.53	47.29	47.09	74.00	-26.91	Pass	Horizontal
1198.095	30.22	1.86	44.39	47.29	34.98	74.00	-39.02	Pass	Vertical
1553.293	30.97	2.35	43.94	48.27	37.65	74.00	-36.35	Pass	Vertical
4924.000	34.94	6.22	44.60	47.41	43.97	74.00	-30.03	Pass	Vertical
6594.518	36.21	7.29	44.56	48.53	47.47	74.00	-26.53	Pass	Vertical
7386.000	36.44	6.78	44.92	47.76	46.06	74.00	-27.94	Pass	Vertical
9848.000	38.14	7.19	45.53	46.75	46.55	74.00	-27.45	Pass	Vertical

Test mode: 802.11g(6Mbps)			Test Frequency: 2412MHz			Remark: Peak			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1329.894	30.52	2.06	44.21	47.98	36.35	74.00	-37.65	Pass	Horizontal
1746.251	31.31	2.58	43.73	46.98	37.14	74.00	-36.86	Pass	Horizontal
4824.000	34.73	6.02	44.60	49.02	45.17	74.00	-28.83	Pass	Horizontal
6747.341	36.28	7.25	44.58	48.71	47.66	74.00	-26.34	Pass	Horizontal
7236.000	36.42	6.94	44.80	46.37	44.93	74.00	-29.07	Pass	Horizontal
9648.000	37.93	7.01	45.57	45.52	44.89	74.00	-29.11	Pass	Horizontal
1267.104	30.38	1.96	44.29	48.42	36.47	74.00	-37.53	Pass	Vertical
1553.293	30.97	2.35	43.94	48.19	37.57	74.00	-36.43	Pass	Vertical
4824.000	34.73	6.02	44.60	48.86	45.01	74.00	-28.99	Pass	Vertical
5821.207	35.77	7.26	44.52	49.34	47.85	74.00	-26.15	Pass	Vertical
7236.000	36.42	6.94	44.80	46.76	45.32	74.00	-28.68	Pass	Vertical
9648.000	37.93	7.01	45.57	46.23	45.60	74.00	-28.40	Pass	Vertical

Test mode: 802.11g(6Mbps)			Test Frequency: 2437MHz			Remark: Peak			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1267.104	30.38	1.96	44.29	48.39	36.44	74.00	-37.56	Pass	Horizontal
1410.080	30.69	2.17	44.11	49.24	37.99	74.00	-36.01	Pass	Horizontal
4874.000	34.84	6.12	44.60	48.12	44.48	74.00	-29.52	Pass	Horizontal
6032.401	35.92	7.43	44.50	49.42	48.27	74.00	-25.73	Pass	Horizontal
7311.000	36.43	6.86	44.86	47.78	46.21	74.00	-27.79	Pass	Horizontal
9748.000	38.03	7.10	45.55	46.23	45.81	74.00	-28.19	Pass	Horizontal
1162.051	30.13	1.80	44.44	48.64	36.13	74.00	-37.87	Pass	Vertical
1561.221	30.99	2.36	43.93	47.29	36.71	74.00	-37.29	Pass	Vertical
4874.000	34.84	6.12	44.60	47.93	44.29	74.00	-29.71	Pass	Vertical
6203.700	36.01	7.39	44.52	48.46	47.34	74.00	-26.66	Pass	Vertical
7311.000	36.43	6.86	44.86	47.28	45.71	74.00	-28.29	Pass	Vertical
9748.000	38.03	7.10	45.55	47.23	46.81	74.00	-27.19	Pass	Vertical

Test mode: 802.11g(6Mbps)			Test Frequency: 2462MHz			Remark: Peak			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Final test level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1210.356	30.25	1.88	44.37	48.16	35.92	74.00	-38.08	Pass	Horizontal
1457.523	30.79	2.23	44.05	47.85	36.82	74.00	-37.18	Pass	Horizontal
4924.000	34.94	6.22	44.60	46.84	43.40	74.00	-30.60	Pass	Horizontal
6001.768	35.90	7.44	44.50	48.67	47.51	74.00	-26.49	Pass	Horizontal
7386.000	36.44	6.78	44.92	47.73	46.03	74.00	-27.97	Pass	Horizontal
9848.000	38.14	7.19	45.53	46.70	46.50	74.00	-27.50	Pass	Horizontal
1260.670	30.37	1.95	44.30	49.10	37.12	74.00	-36.88	Pass	Vertical
1561.221	30.99	2.36	43.93	48.23	37.65	74.00	-36.35	Pass	Vertical
4924.000	34.94	6.22	44.60	47.66	44.22	74.00	-29.78	Pass	Vertical
5821.207	35.77	7.26	44.52	49.59	48.10	74.00	-25.90	Pass	Vertical
7386.000	36.44	6.78	44.92	48.91	47.21	74.00	-26.79	Pass	Vertical
9848.000	38.14	7.19	45.53	46.58	46.38	74.00	-27.62	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
1238.405	30.32	1.92	44.33	47.92	35.83	74.00	-38.17	Pass	Horizontal
1545.405	30.96	2.35	43.95	47.54	36.90	74.00	-37.10	Pass	Horizontal
4824.000	34.73	6.02	44.60	48.37	44.52	74.00	-29.48	Pass	Horizontal
6017.064	35.91	7.44	44.50	49.23	48.08	74.00	-25.92	Pass	Horizontal
7236.000	36.42	6.94	44.80	47.44	46.00	74.00	-28.00	Pass	Horizontal
9648.000	37.93	7.01	45.57	45.28	44.65	74.00	-29.35	Pass	Horizontal
1296.469	30.45	2.01	44.25	47.93	36.14	74.00	-37.86	Pass	Vertical
1613.749	31.08	2.43	43.87	47.04	36.68	74.00	-37.32	Pass	Vertical
4824.000	34.73	6.02	44.60	47.54	43.69	74.00	-30.31	Pass	Vertical
5791.646	35.74	7.23	44.52	49.58	48.03	74.00	-25.97	Pass	Vertical
7236.000	36.42	6.94	44.80	46.47	45.03	74.00	-28.97	Pass	Vertical
9648.000	37.93	7.01	45.57	45.89	45.26	74.00	-28.74	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
1060.295	29.87	1.62	44.60	49.18	36.07	74.00	-37.93	Pass	Horizontal
1593.340	31.04	2.40	43.89	47.58	37.13	74.00	-36.87	Pass	Horizontal
4874.000	34.84	6.12	44.60	47.78	44.14	74.00	-29.86	Pass	Horizontal
6017.064	35.91	7.44	44.50	48.39	47.24	74.00	-26.76	Pass	Horizontal
7311.000	36.43	6.86	44.86	47.45	45.88	74.00	-28.12	Pass	Horizontal
9748.000	38.03	7.10	45.55	47.66	47.24	74.00	-26.76	Pass	Horizontal
1254.268	30.35	1.94	44.31	48.33	36.31	74.00	-37.69	Pass	Vertical
1573.189	31.01	2.38	43.92	47.51	36.98	74.00	-37.02	Pass	Vertical
4874.000	34.84	6.12	44.60	47.54	43.90	74.00	-30.10	Pass	Vertical
6017.064	35.91	7.44	44.50	49.56	48.41	74.00	-25.59	Pass	Vertical
7311.000	36.43	6.86	44.86	47.34	45.77	74.00	-28.23	Pass	Vertical
9748.000	38.03	7.10	45.55	47.30	46.88	74.00	-27.12	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
1276.818	30.41	1.98	44.28	47.92	36.03	74.00	-37.97	Pass	Horizontal
1795.839	31.39	2.63	43.69	47.43	37.76	74.00	-36.24	Pass	Horizontal
4924.000	34.94	6.22	44.60	46.22	42.78	74.00	-31.22	Pass	Horizontal
6017.064	35.91	7.44	44.50	49.14	47.99	74.00	-26.01	Pass	Horizontal
7386.000	36.44	6.78	44.92	48.12	46.42	74.00	-27.58	Pass	Horizontal
9848.000	38.14	7.19	45.53	46.69	46.49	74.00	-27.51	Pass	Horizontal
1276.818	30.41	1.98	44.28	49.07	37.18	74.00	-36.82	Pass	Vertical
1553.293	30.97	2.35	43.94	47.59	36.97	74.00	-37.03	Pass	Vertical
4924.000	34.94	6.22	44.60	46.73	43.29	74.00	-30.71	Pass	Vertical
6187.929	36.00	7.39	44.52	48.46	47.33	74.00	-26.67	Pass	Vertical
7386.000	36.44	6.78	44.92	48.04	46.34	74.00	-27.66	Pass	Vertical
9848.000	38.14	7.19	45.53	47.34	47.14	74.00	-26.86	Pass	Vertical

Test mode: 802.11n(HT40)(13.5Mbps)				Test Frequency: 2422MHz			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
1260.670	30.37	1.95	44.30	48.45	36.47	74.00	-37.53	Pass	Horizontal
1601.472	31.06	2.41	43.88	47.80	37.39	74.00	-36.61	Pass	Horizontal
4844.000	34.77	6.06	44.60	46.17	42.40	74.00	-31.60	Pass	Horizontal
6032.401	35.92	7.43	44.50	48.56	47.41	74.00	-26.59	Pass	Horizontal
7266.000	36.43	6.91	44.82	46.99	45.51	74.00	-28.49	Pass	Horizontal
9688.000	37.97	7.05	45.56	45.40	44.86	74.00	-29.14	Pass	Horizontal
1289.885	30.43	2.00	44.26	48.51	36.68	74.00	-37.32	Pass	Vertical
1533.648	30.93	2.33	43.96	48.39	37.69	74.00	-36.31	Pass	Vertical
4844.000	34.77	6.06	44.60	48.64	44.87	74.00	-29.13	Pass	Vertical
6017.064	35.91	7.44	44.50	48.49	47.34	74.00	-26.66	Pass	Vertical
7266.000	36.43	6.91	44.82	46.37	44.89	74.00	-29.11	Pass	Vertical
9688.000	37.97	7.05	45.56	45.56	45.02	74.00	-28.98	Pass	Vertical

Test mode: 802.11n(HT40)(13.5Mbps)				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
1319.777	30.50	2.04	44.22	48.46	36.78	74.00	-37.22	Pass	Horizontal
1593.340	31.04	2.40	43.89	47.69	37.24	74.00	-36.76	Pass	Horizontal
4874.000	34.84	6.12	44.60	48.14	44.50	74.00	-29.50	Pass	Horizontal
6032.401	35.92	7.43	44.50	48.73	47.58	74.00	-26.42	Pass	Horizontal
7311.000	36.43	6.86	44.86	47.27	45.70	74.00	-28.30	Pass	Horizontal
9748.000	38.03	7.10	45.55	46.73	46.31	74.00	-27.69	Pass	Horizontal
1182.943	30.18	1.83	44.41	48.51	36.11	74.00	-37.89	Pass	Vertical
1597.401	31.05	2.41	43.89	47.59	37.16	74.00	-36.84	Pass	Vertical
4874.000	34.84	6.12	44.60	48.09	44.45	74.00	-29.55	Pass	Vertical
6203.700	36.01	7.39	44.52	48.40	47.28	74.00	-26.72	Pass	Vertical
7311.000	36.43	6.86	44.86	47.27	45.70	74.00	-28.30	Pass	Vertical
9748.000	38.03	7.10	45.55	46.52	46.10	74.00	-27.90	Pass	Vertical

Test mode: 802.11n(HT40)(13.5Mbps)				Test Frequency: 2452MHz			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	1.81	44.43	48.96	36.50	74.00	-37.50	Pass	Horizontal
1795.839	31.39	2.63	43.69	47.64	37.97	74.00	-36.03	Pass	Horizontal
4904.000	34.90	6.18	44.60	46.85	43.33	74.00	-30.67	Pass	Horizontal
6032.401	35.92	7.43	44.50	49.09	47.94	74.00	-26.06	Pass	Horizontal
7356.000	36.44	6.81	44.90	47.59	45.94	74.00	-28.06	Pass	Horizontal
9808.000	38.10	7.16	45.54	46.63	46.35	74.00	-27.65	Pass	Horizontal
1263.883	30.38	1.96	44.29	48.70	36.75	74.00	-37.25	Pass	Vertical
1537.557	30.94	2.34	43.96	49.00	38.32	74.00	-35.68	Pass	Vertical
4904.000	34.90	6.18	44.60	46.32	42.80	74.00	-31.20	Pass	Vertical
5821.207	35.77	7.26	44.52	49.63	48.14	74.00	-25.86	Pass	Vertical
7356.000	36.44	6.81	44.90	47.80	46.15	74.00	-27.85	Pass	Vertical
9808.000	38.10	7.16	45.54	48.21	47.93	74.00	-26.07	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:

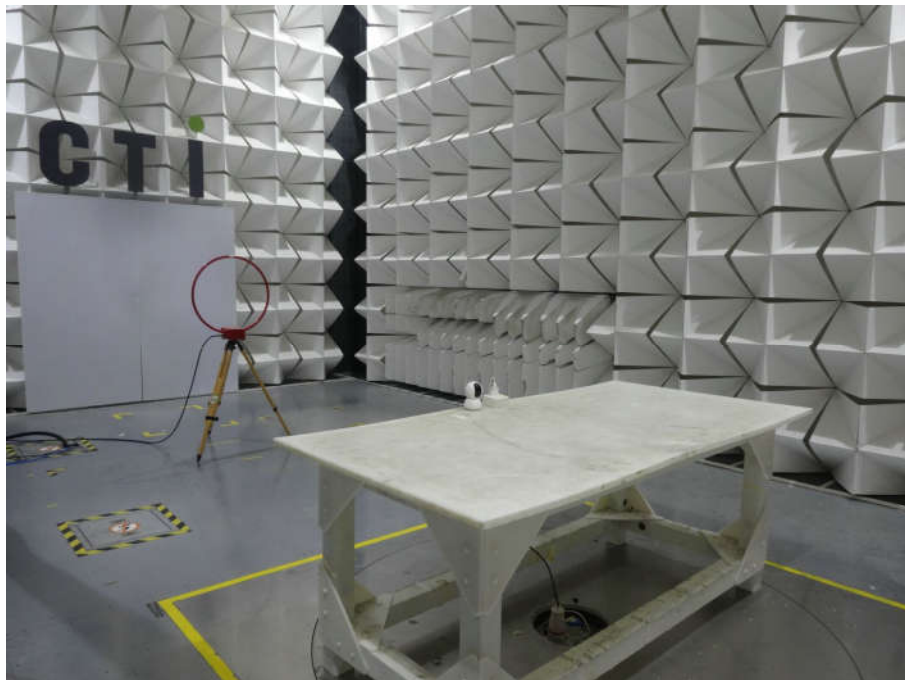
Final Test Level = Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor - Antenna Factor - Cable Factor

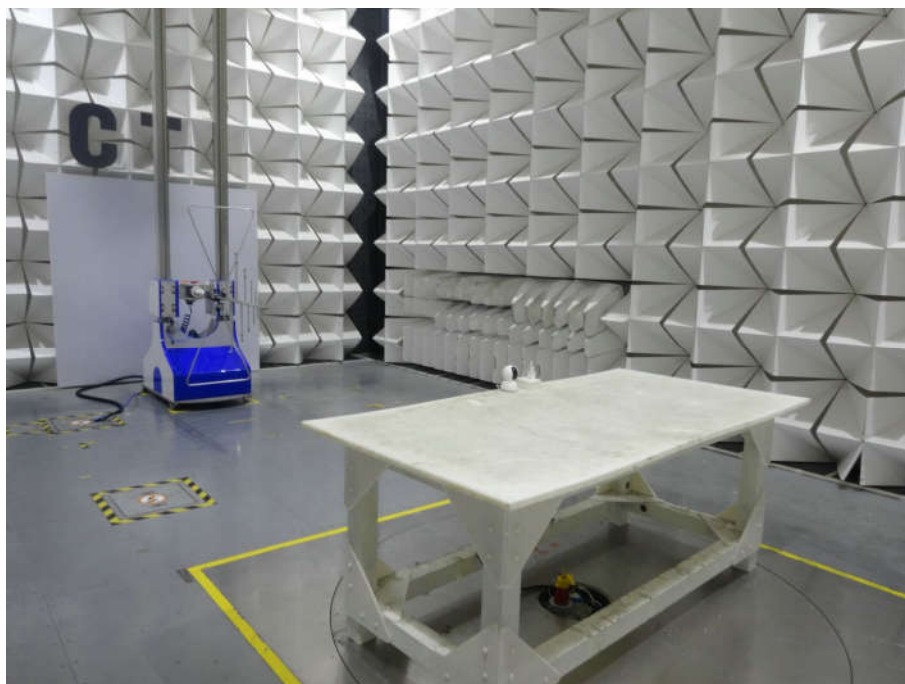
3) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below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

PHOTOGRAPHS OF TEST SETUP

Test Model No.: MJSXJ02CM



Radiated spurious emission Test Setup-1(9K-30M)



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



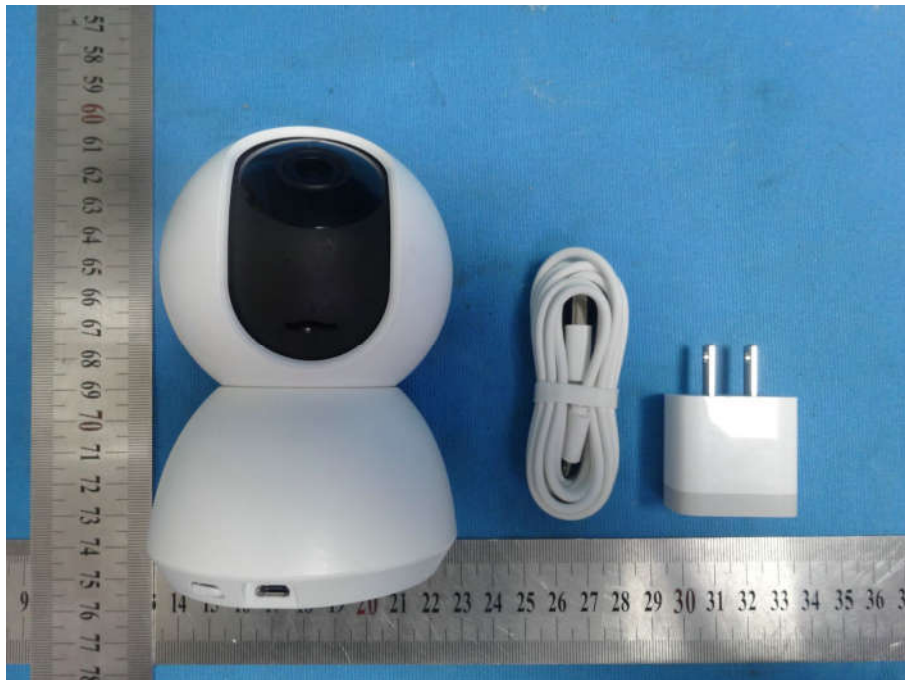
Radiated spurious emission Test Setup-3(Above 1GHz)



Conducted Emissions Test Setup

PHOTOGRAPHS OF EUT Constructional Details

Test model No.: MJSXJ02CM



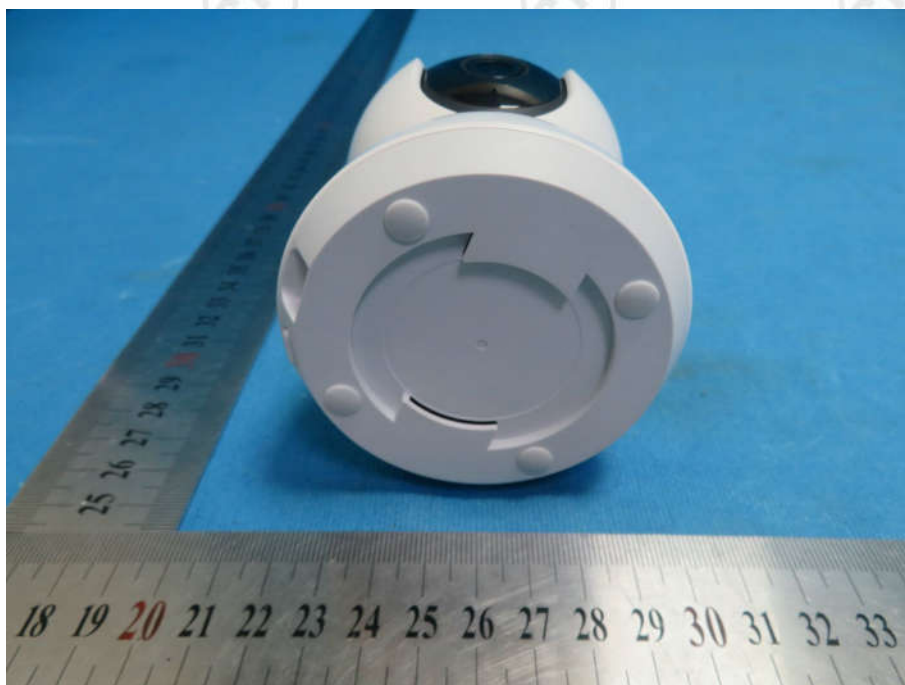
View of Product-1



View of Product-2



View of Product-3



View of Product-4



View of Product-5



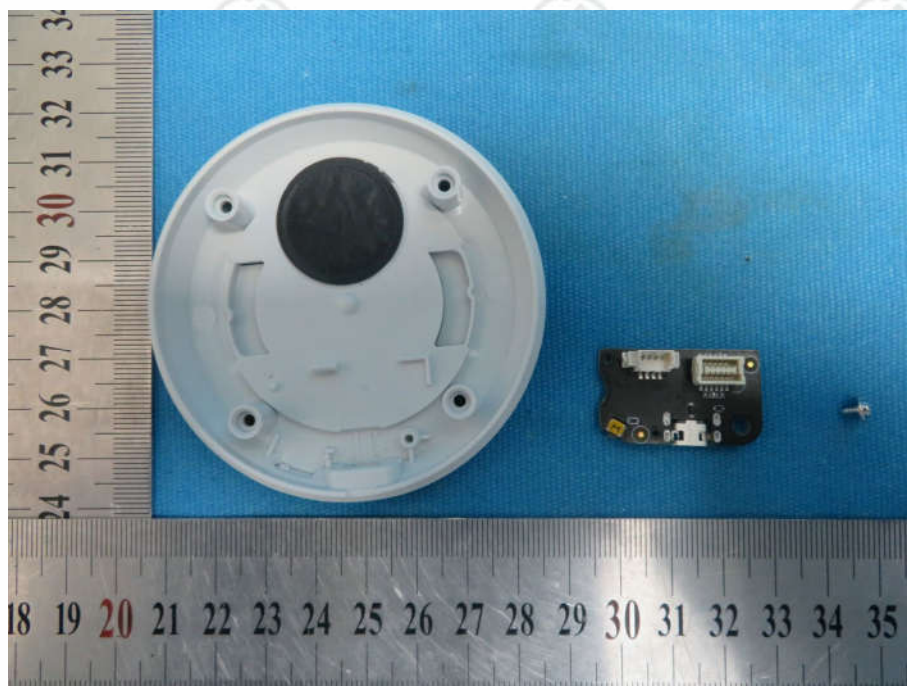
View of Product-6



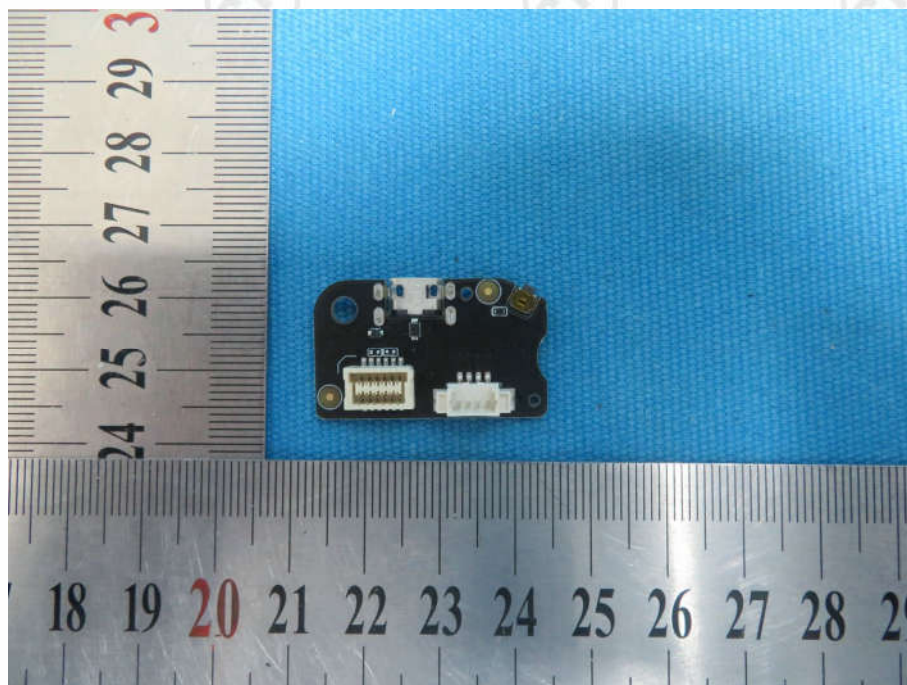
View of Product-7



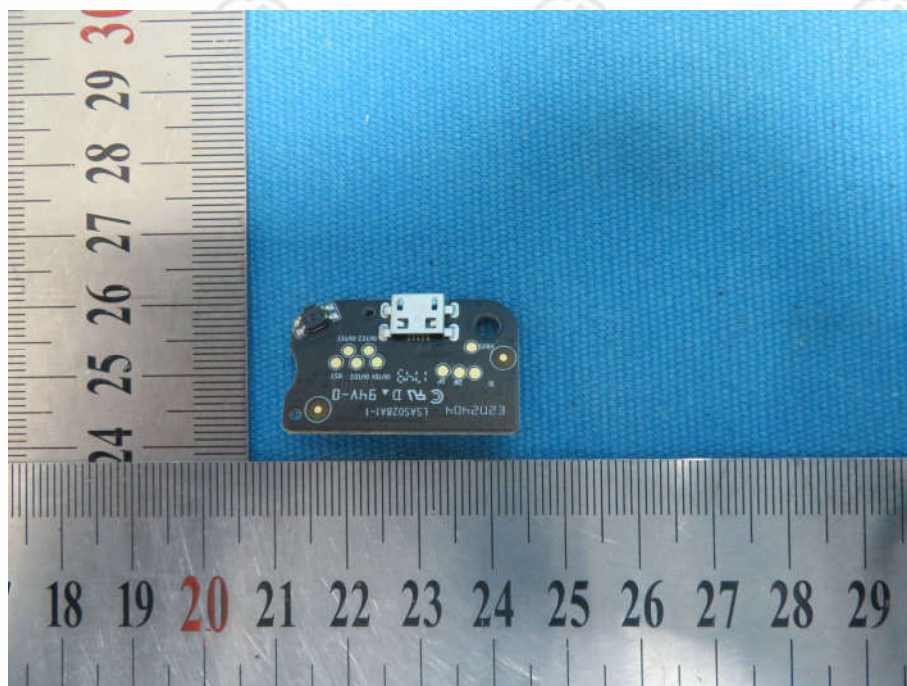
View of Product-8



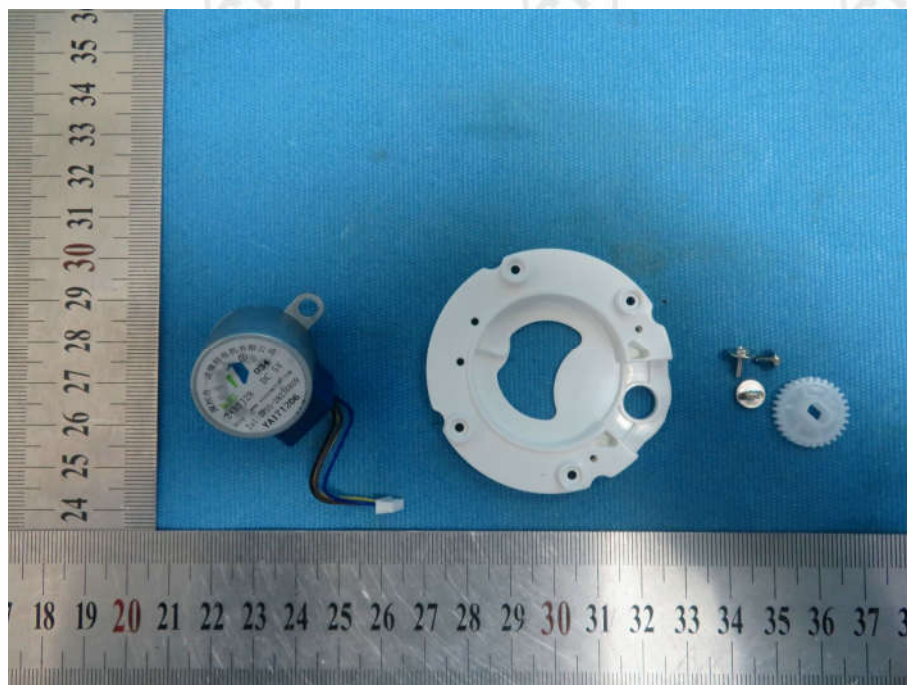
View of Product-9



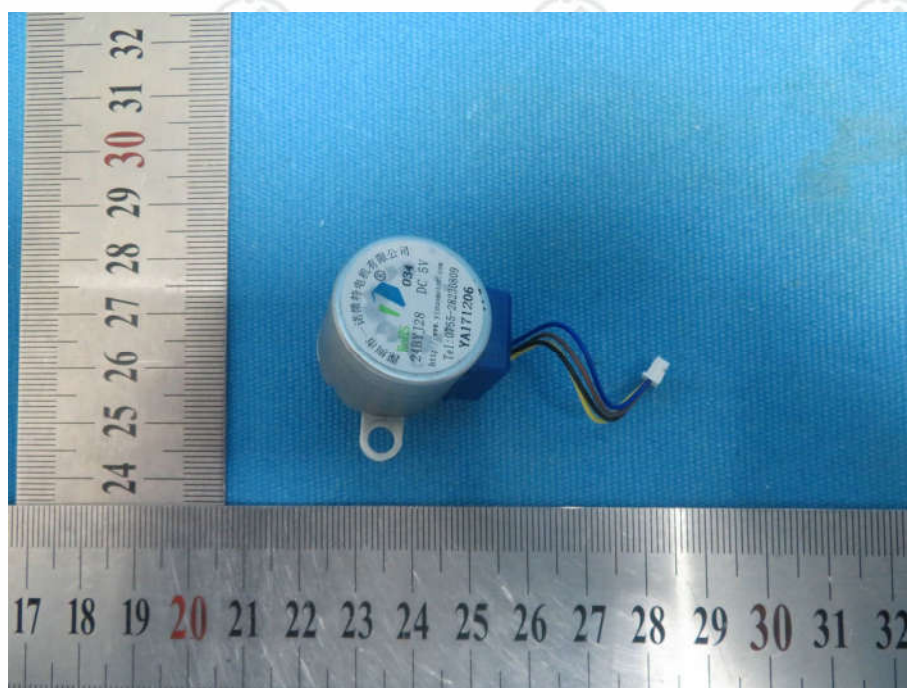
View of Product-10



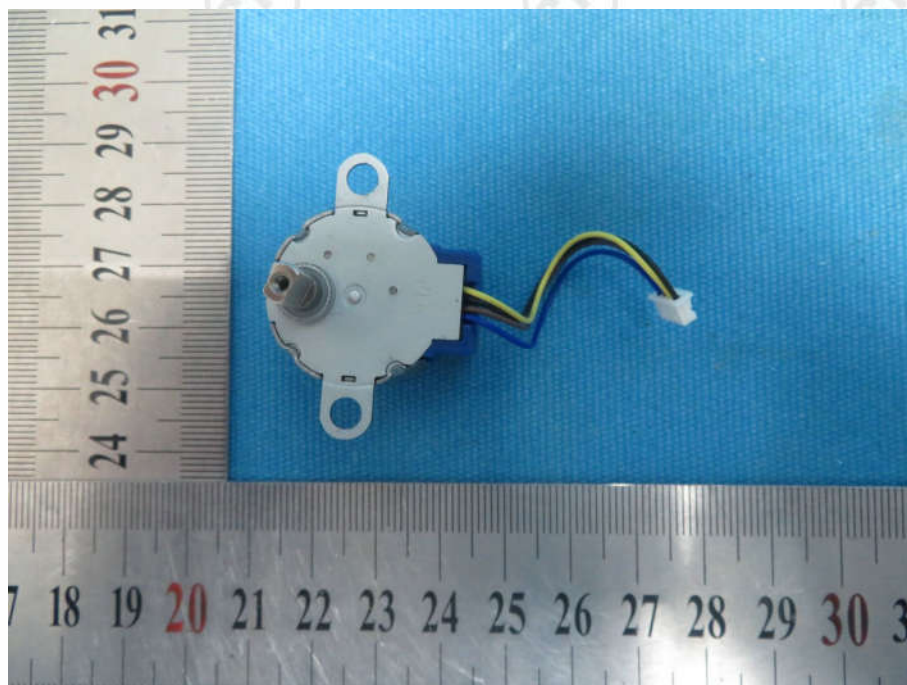
View of Product-11



View of Product-12



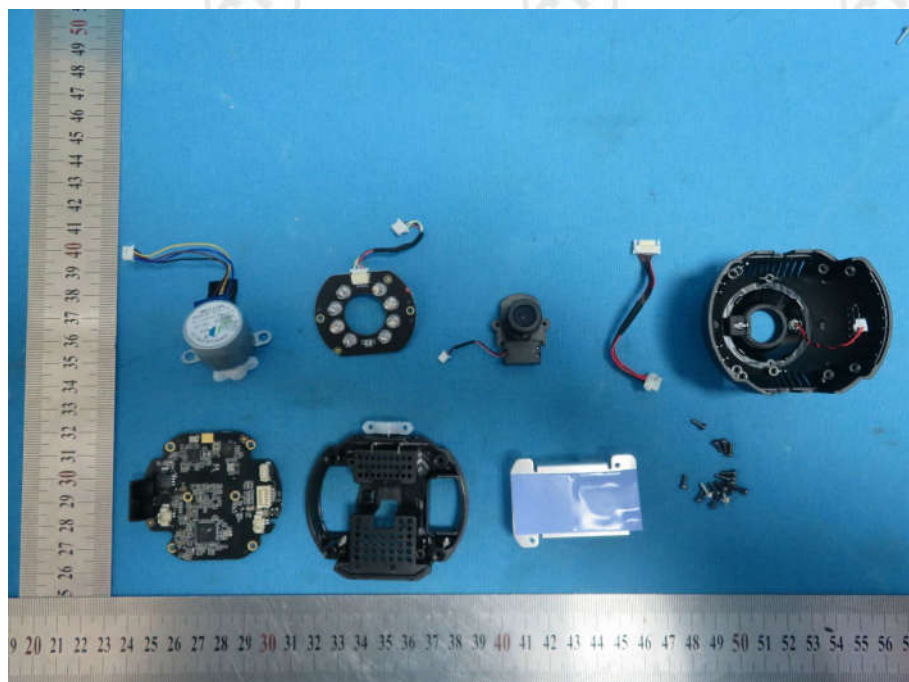
View of Product-13



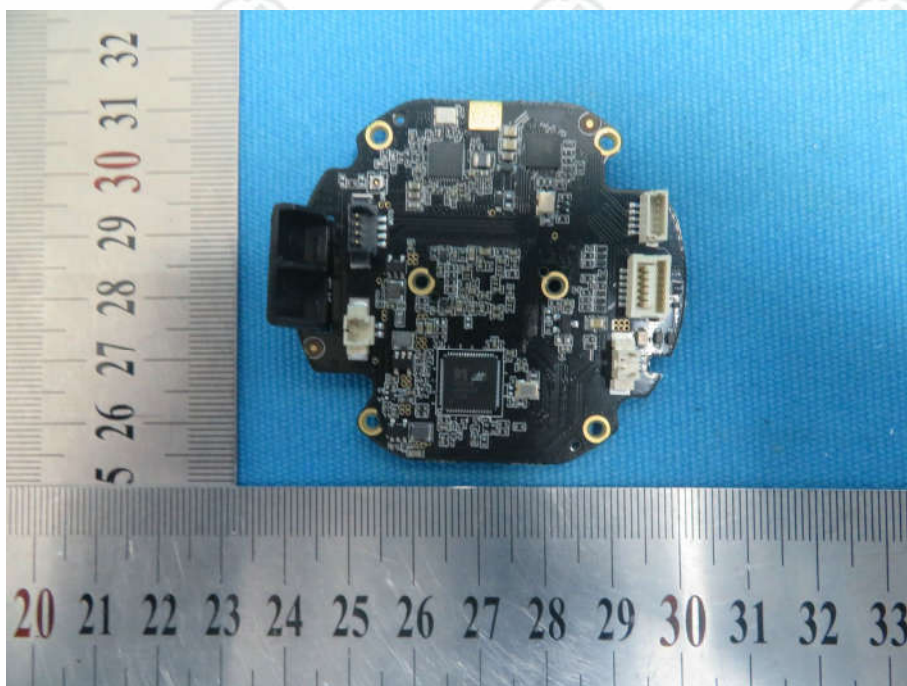
View of Product-14



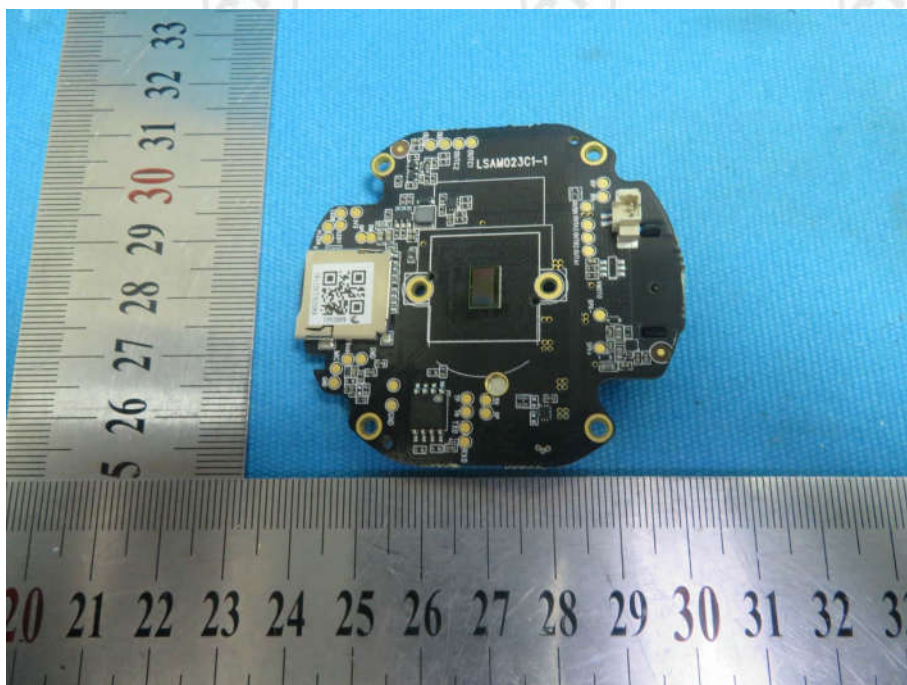
View of Product-15



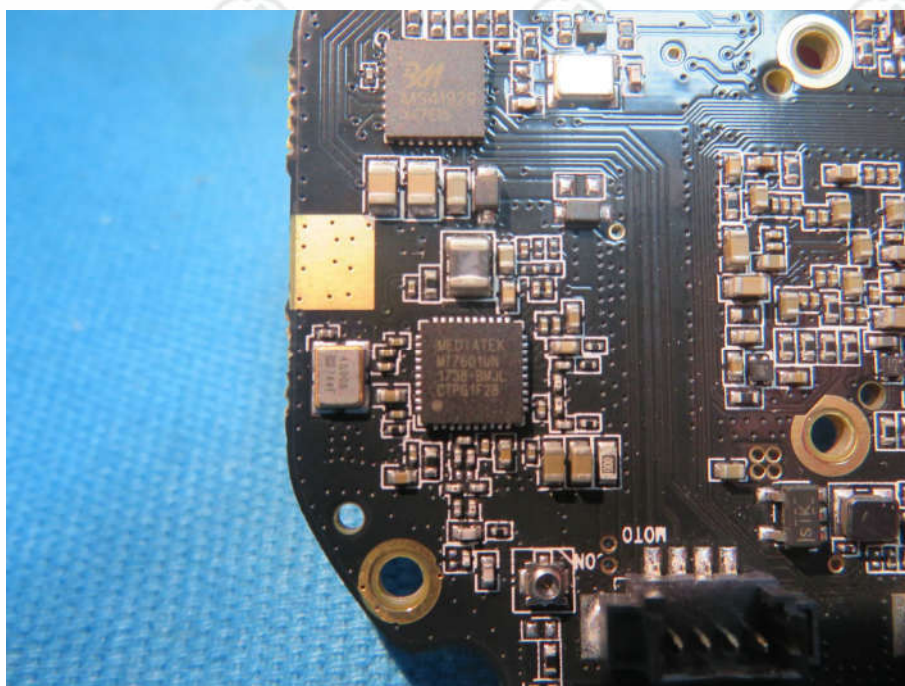
View of Product-16



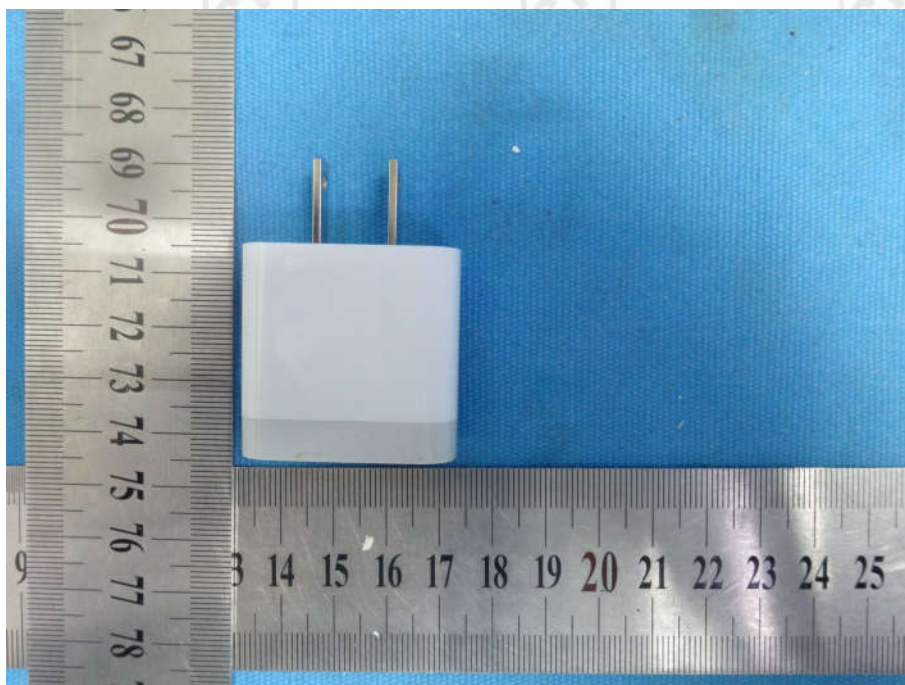
View of Product-17



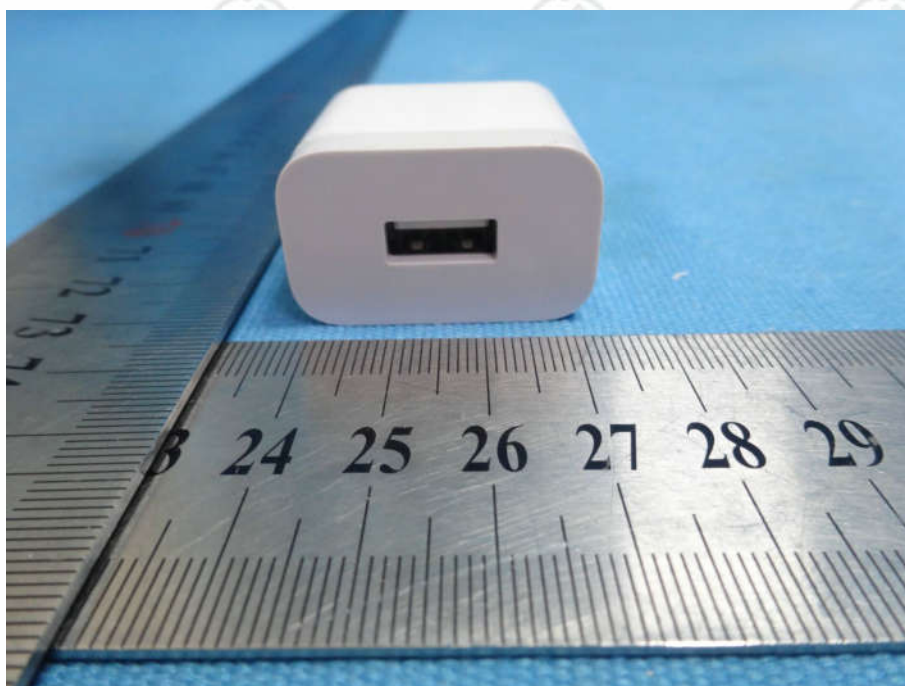
View of Product-18



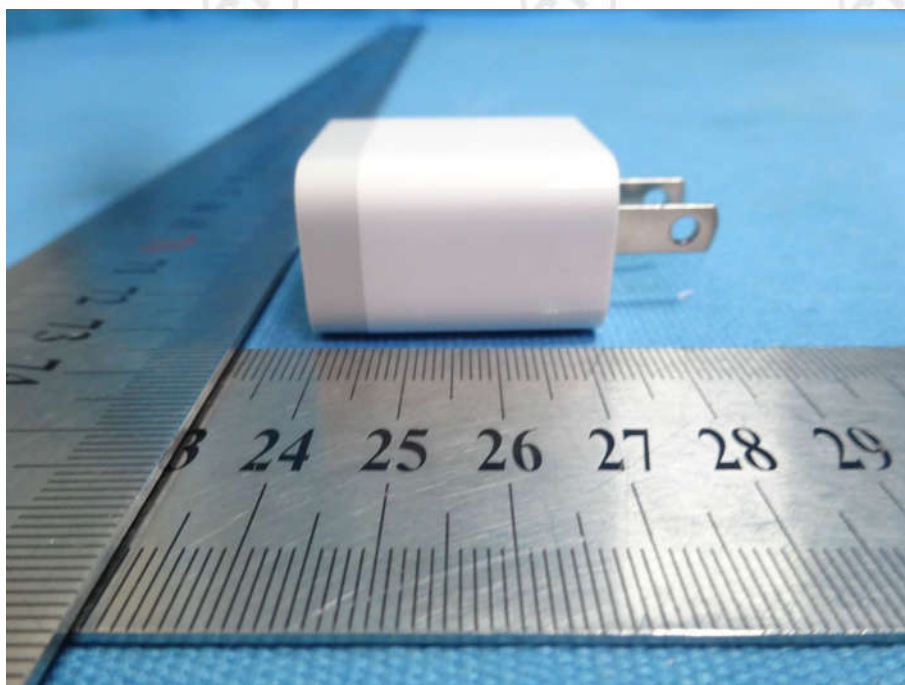
View of Product-19



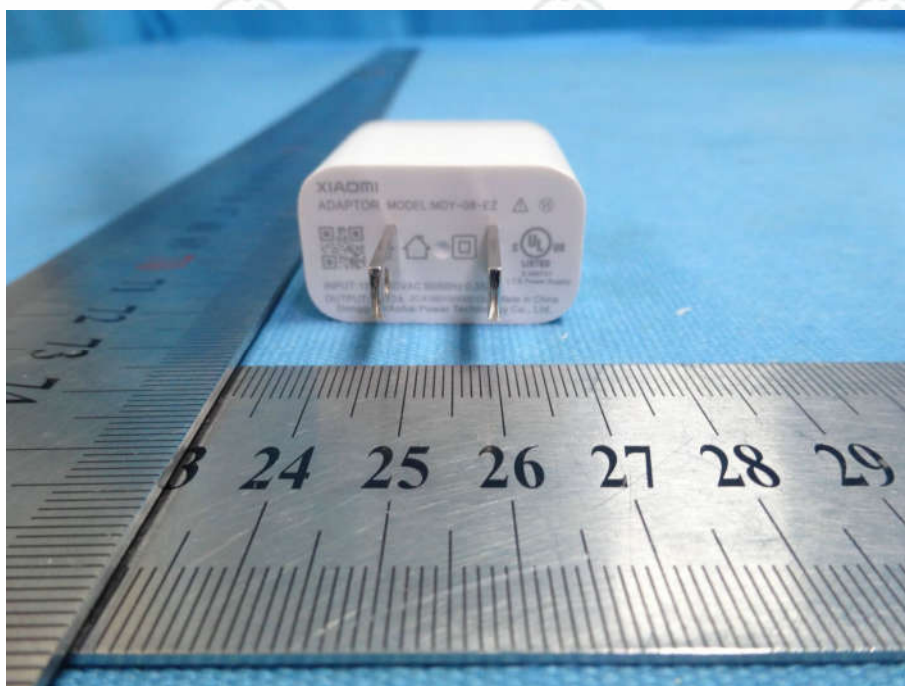
View of Product-20



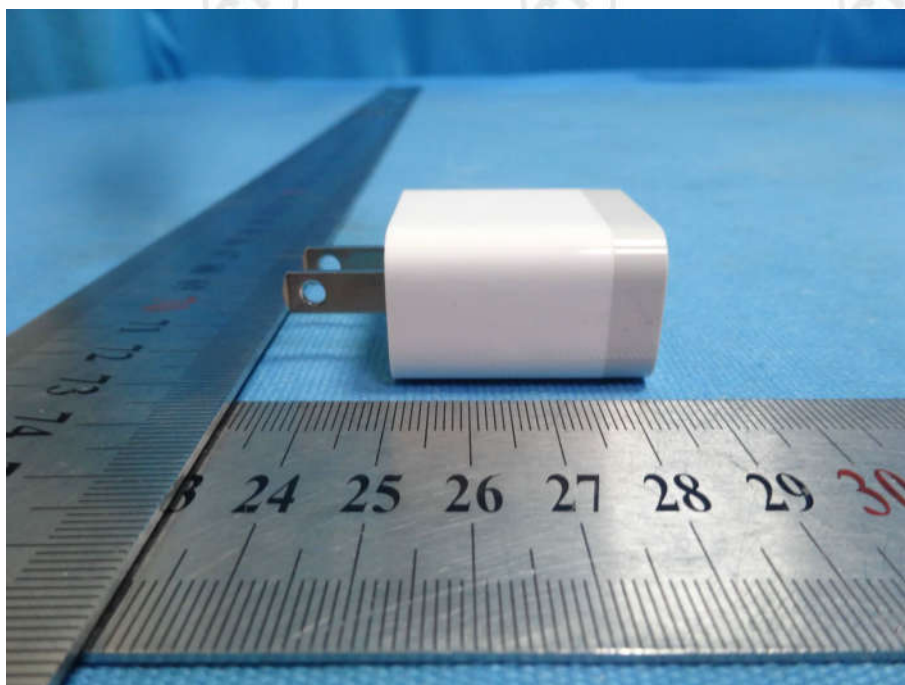
View of Product-21



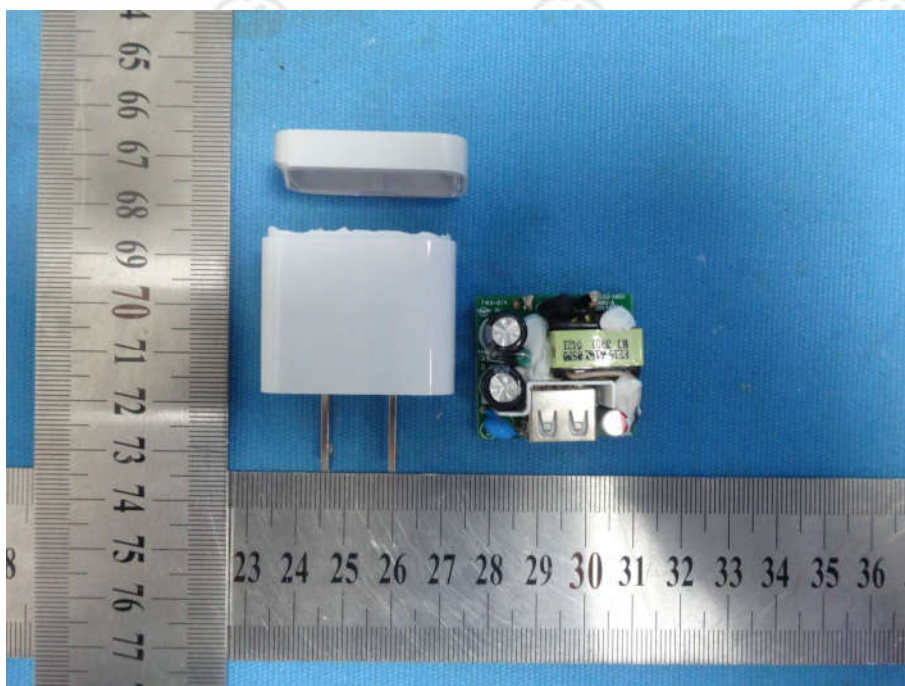
View of Product-22



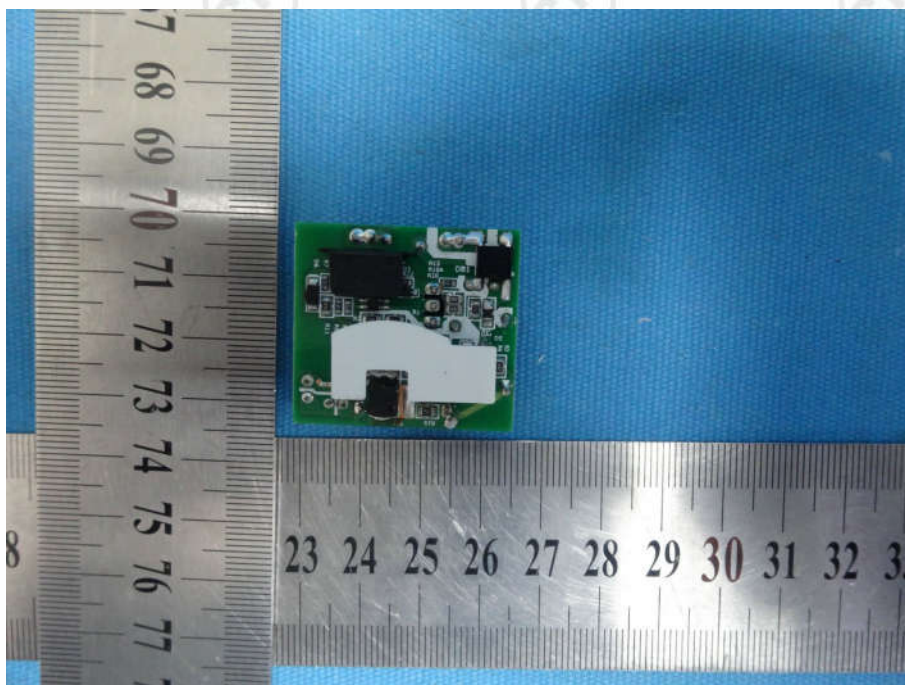
View of Product-23



View of Product-24



View of Product-25



View of Product-26

*** End of Report ***

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