

TEST REPORT

Product : WIFI+BT Module
Trade mark : GSD
Model/Type reference : WCT0SR2311
Serial Number : N/A
Report Number : EED32L00189803
FCC ID : 2AC23-WCT0S
Date of Issue : Feb. 27, 2020
Test Standards : 47 CFR Part 15Subpart C
Test result : PASS

Prepared for:

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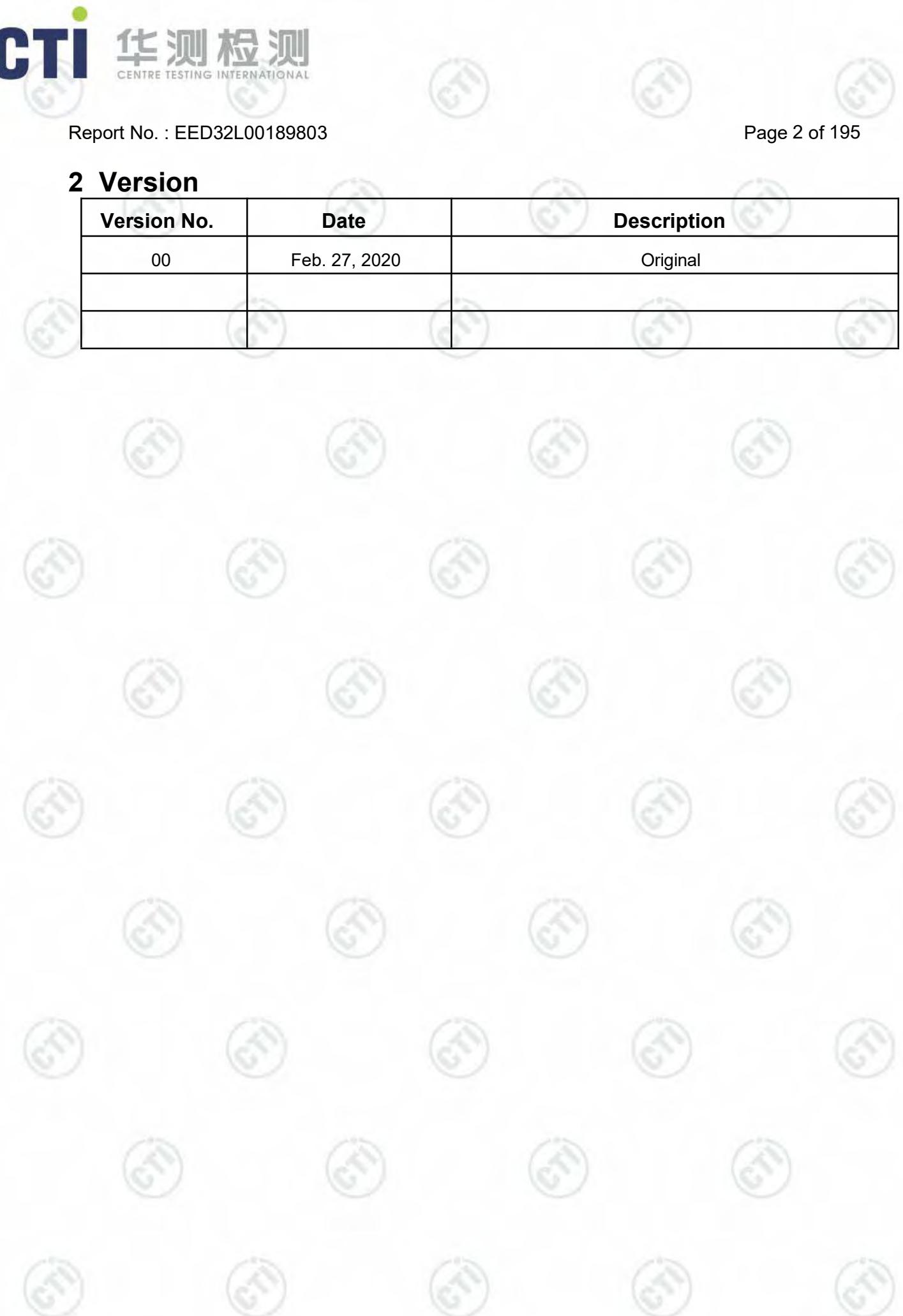
Feb. 27, 2020

Check No.: 3096370616



2 Version

Version No.	Date	Description
00	Feb. 27, 2020	Original



3 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203/15.247 (c)	ANSI C63.10-2013	PASS
AC Power Line Conducted Emission	47 CFR Part 15 Subpart C Section 15.207	ANSI C63.10-2013	PASS
Conducted Peak Output Power	47 CFR Part 15 Subpart C Section 15.247 (b)(3)	ANSI C63.10-2013	PASS
6dB Occupied Bandwidth	47 CFR Part 15 Subpart C Section 15.247 (a)(2)	ANSI C63.10-2013	PASS
Power Spectral Density	47 CFR Part 15 Subpart C Section 15.247 (e)	ANSI C63.10-2013	PASS
Band-edge for RF Conducted Emissions	47 CFR Part 15 Subpart C Section 15.247(d)	ANSI C63.10-2013	PASS
RF Conducted Spurious Emissions	47 CFR Part 15 Subpart C Section 15.247(d)	ANSI C63.10-2013	PASS
Radiated Spurious Emissions	47 CFR Part 15 Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS
Restricted bands around fundamental frequency (Radiated Emission)	47 CFR Part 15 Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS

Remark:

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

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

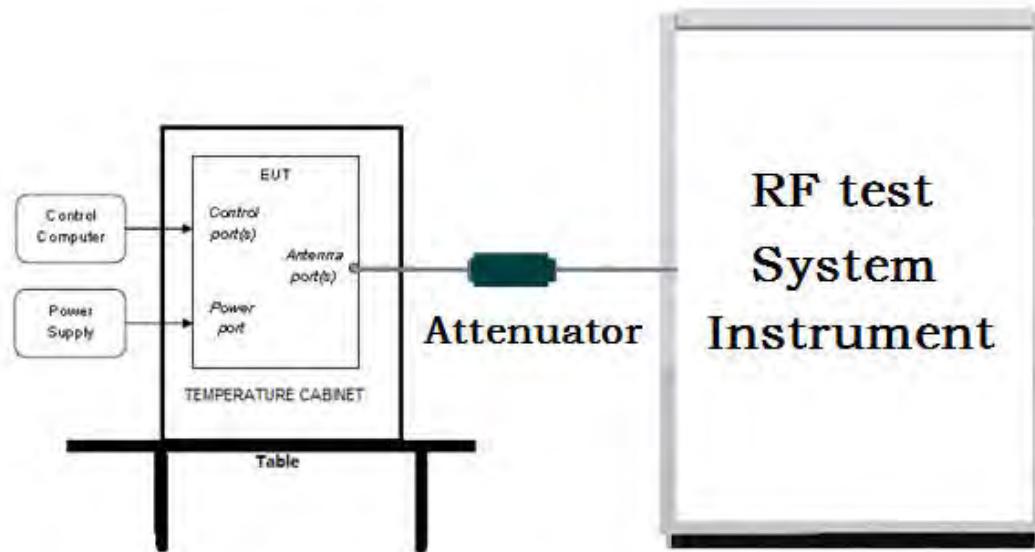
4 Content

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.....	10
6.7 ABNORMALITIES FROM STANDARD CONDITIONS.....	10
6.8 OTHER INFORMATION REQUESTED BY THE CUSTOMER.....	10
6.9 MEASUREMENT UNCERTAINTY (95% CONFIDENCE LEVELS, K=2).....	10
7 EQUIPMENT LIST.....	11
8 RADIO TECHNICAL REQUIREMENTS SPECIFICATION.....	15
Appendix A): Conducted Peak Output Power.....	20
Appendix B): 6dB Occupied Bandwidth.....	34
Appendix C): Band-edge for RF Conducted Emissions.....	51
Appendix D): RF Conducted Spurious Emissions.....	58
Appendix E): Power Spectral Density.....	83
Appendix F): Antenna Requirement.....	97
Appendix G): AC Power Line Conducted Emission.....	98
Appendix H): Restricted bands around fundamental frequency (Radiated).....	101
Appendix I): Radiated Spurious Emissions.....	166
PHOTOGRAPHS OF TEST SETUP.....	192
PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS.....	195

5 Test Requirement

5.1 Test setup

5.1.1 For Conducted test setup



5.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

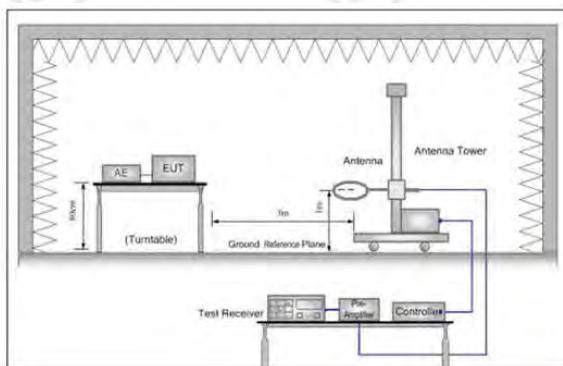


Figure 1. Below 30MHz

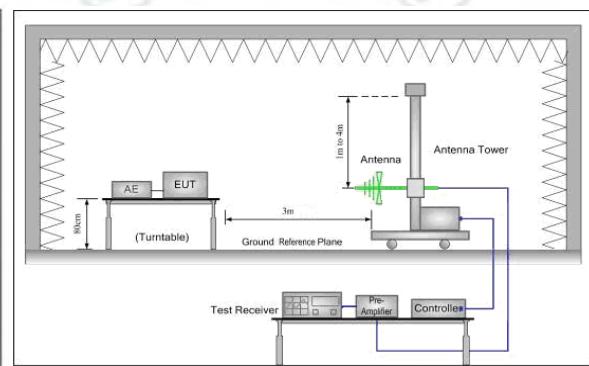


Figure 2. 30MHz to 1GHz

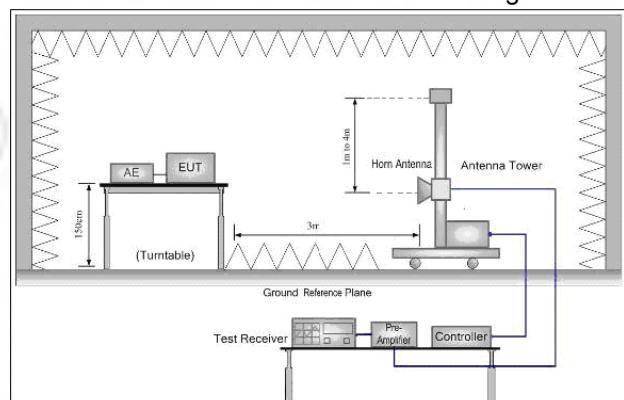
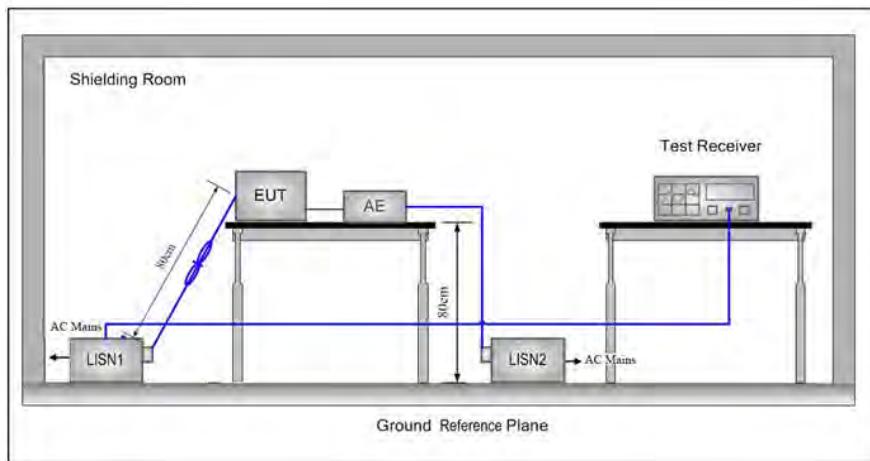


Figure 3. Above 1GHz

5.1.3 For Conducted Emissions test setup

Conducted Emissions setup



5.2 Test Environment

Operating Environment:

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

5.3 Test Condition

Test channel:

Test Mode	Tx/Rx	RF Channel		
		Low(L)	Middle(M)	High(H)
802.11b/g/n(HT20)	2412MHz ~2462 MHz	Channel 1	Channel 6	Channel11
		2412MHz	2437MHz	2462MHz
802.11n(HT40)	2422MHz ~2452 MHz	Channel 1	Channel 4	Channel7
		2422MHz	2437MHz	2452MHz
Transmitting mode:	Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate.			

Test mode:

Pre-scan under all rate at lowest channel 1

Mode	802.11b								
Data Rate	1Mbps	2Mbps	5.5Mbps	11Mbps					
Power(dBm)	19.22	19.24	19.26	19.28					
Mode	802.11g								
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps	
Power(dBm)	22.84	22.82	22.80	22.78	22.76	22.74	22.72	22.70	
Mode	802.11n (HT20)								
Data Rate	6.5Mbps	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps	58.5Mbps	65Mbps	
Power(dBm)	22.14	22.12	22.10	22.08	22.06	22.04	22.02	22.01	
Mode	802.11n (HT40)								
Data Rate	13.5Mbps	27Mbps	40.5Mbps	54Mbps	81Mbps	108Mbps	121.5Mbps	135Mbps	
Power(dBm)	21.81	21.79	21.77	21.75	21.73	21.71	21.69	21.67	

Through Pre-scan, 1Mbps 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:	Hui Zhou Gaoshengda Technology Co.,LTD
Address of Applicant:	NO.75 Zhongkai Development Area,Huizhou,Guangdong, China
Manufacturer:	Hui Zhou Gaoshengda Technology Co.,LTD
Address of Manufacturer:	NO.75 Zhongkai Development Area,Huizhou,Guangdong, China
Factory:	Hui Zhou Gaoshengda Technology Co.,LTD
Address of Factory:	NO.75 Zhongkai Development Area,Huizhou,Guangdong, China

6.2 General Description of EUT

Product Name:	WIFI+BT Module
Model No.(EUT):	WCT0SR2311
Trade Mark:	GSD
EUT Supports Radios application:	IEEE 802.11 b/g/n(HT20)(HT40): 2412MHz to 2462MHz
Power Supply:	DC 5V
Sample Received Date:	Jul. 17, 2019
Sample tested Date:	Jul. 17, 2019 to Sep. 09, 2019

6.3 Product Specification subjective to this standard

Operation Frequency:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz
Channel Numbers:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels IEEE 802.11n HT40: 7 Channels
Channel Separation:	5MHz
Type of Modulation:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20 and HT40) : OFDM (64QAM, 16QAM, QPSK,BPSK)
Test Power Grade:	(manufacturer declare)
Test Software of EUT:	Realtek 11ac 8822B USBWLAN MP
Antenna Type and Gain:	Type: PIFA antenna Gain:2.94dBi
Test Voltage:	DC 5V

Operation Frequency each of channel(802.11b/g/n HT20)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

Operation Frequency each of channel(802.11n HT40)					
Channel	Frequency	Channel	Frequency	Channel	Frequency
3	2422MHz	6	2437MHz	9	2452MHz
4	2427MHz	7	2442MHz		
5	2432MHz	8	2447MHz		

6.4 Description of Support Units

The EUT has been tested independently

6.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

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

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

6.6 Deviation from Standards

None.

6.7 Abnormalities from Standard Conditions

None.

6.8 Other Information Requested by the Customer

None.

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

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.46dB (30MHz-1GHz)
		0.55dB (1GHz-18GHz)
3	Radiated Spurious emission test	4.3dB (30MHz-1GHz)
		4.5dB (1GHz-12.75GHz)
4	Conduction emission	3.5dB (9kHz to 150kHz)
		3.1dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	3.8%
7	DC power voltages	0.026%

7 Equipment List

RF test system					
Equipment	Manufacturer	Mode No.	Serial Number	Cal. Date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Signal Generator	Keysight	E8257D	MY53401106	03-01-2019	02-29-2020
Spectrum Analyzer	Keysight	N9010A	MY54510339	03-01-2019	02-29-2020
Attenuator	HuaXiang	SHX370	15040701	03-01-2019	02-29-2020
Signal Generator	Keysight	N5181A	MY46240094	03-01-2019	02-29-2020
Signal Generator	Keysight	N5182B	MY53051549	03-01-2019	02-29-2020
Temperature/Humidity Indicator	biaozhi	HM10	1804186	10-12-2018	10-11-2019
High-pass filter	Sinoscite	FL3CX03WG18 NM12-0398-002	---	01-09-2019	01-08-2020
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	01-09-2019	01-08-2020
band rejection filter	Sinoscite	FL5CX01CA09 CL12-0395-001	---	01-09-2019	01-08-2020
band rejection filter	Sinoscite	FL5CX01CA08 CL12-0393-001	---	01-09-2019	01-08-2020
band rejection filter	Sinoscite	FL5CX02CA04 CL12-0396-002	---	01-09-2019	01-08-2020
band rejection filter	Sinoscite	FL5CX02CA03 CL12-0394-001	---	01-09-2019	01-08-2020
Communication test set	R&S	CMW500	107929	04-28-2019	04-27-2020
DC Power	Keysight	E3642A	MY54426035	03-01-2019	02-29-2020
PC-1	Lenovo	R4960d	---	03-01-2019	02-29-2020
BT&WI-FI Automatic control	R&S	OSP120	101374	03-01-2019	02-29-2020
RF control unit	JS Tonscend	JS0806-2	15860006	03-01-2019	02-29-2020
RF control unit	JS Tonscend	JS0806-1	15860004	03-01-2019	02-29-2020
RF control unit	JS Tonscend	JS0806-4	158060007	03-01-2019	02-29-2020
BT&WI-FI Automatic test software	JS Tonscend	JSTS1120-2	---	03-01-2019	02-29-2020
high-low temperature test chamber	DongGuangQinZhuo	LK-80GA	QZ20150611 879	03-01-2019	02-29-2020

Conducted disturbance Test					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Receiver	R&S	ESCI	100435	05-20-2019	05-19-2020
Temperature/ Humidity Indicator	Defu	TH128	/	06-14-2019	06-13-2020
Communication test set	Agilent	E5515C	GB47050 534	03-01-2019	02-28-2022
Communication test set	R&S	CMW500	102898	01-18-2019	01-17-2020
LISN	R&S	ENV216	100098	05-08-2019	05-07-2020
LISN	schwarzbeck	NNLK8121	8121-529	05-08-2019	05-07-2020
Voltage Probe	R&S	ESH2-Z3 0299.7810.5 6	100042	06-13-2017	06-12-2020
Current Probe	R&S	EZ-17 816.2063.03	100106	05-20-2019	05-19-2020
ISN	TESEQ	ISN T800	30297	01-16-2019	01-15-2020
Barometer	changchun	DYM3	1188	06-20-2019	06-19-2020

3M Semi/full-anechoic Chamber					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
3M Chamber & Accessory Equipment	TDK	SAC-3	---	05-24-2019	05-23-2022
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-401	12-21-2018	12-20-2019
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-618	07-26-2019	07-25-2020
Microwave Preamplifier	Agilent	8449B	3008A024 25	07-12-2019	07-11-2020
Microwave Preamplifier	Tonscend	EMC051845 SE	980380	01-16-2019	01-15-2020
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-1869	04-25-2018	04-24-2021
Horn Antenna	ETS-LINDGREN	3117	00057410	06-05-2018	06-04-2021
Double ridge horn antenna	A.H.SYSTEMS	SAS-574	374	06-05-2018	06-04-2021
Pre-amplifier	A.H.SYSTEMS	PAP-1840-60	6041.604 2	07-26-2019	07-25-2020
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-076	04-25-2018	04-24-2021
Spectrum Analyzer	R&S	FSP40	100416	04-28-2019	04-27-2020
Receiver	R&S	ESCI	100435	05-20-2019	05-19-2020
Receiver	R&S	ESCI7	100938-003	11-23-2018	11-22-2019
Multi device Controller	maturo	NCD/070/107 11112	---	01-09-2019	01-08-2020
Signal Generator	Agilent	E4438C	MY45095 744	03-01-2019	02-29-2020
Signal Generator	Keysight	E8257D	MY53401 106	03-01-2019	02-29-2020
Temperature/ Humidity Indicator	Shanghai qixiang	HM10	1804298	10-12-2018	10-11-2019
Communication test set	Agilent	E5515C	GB47050 534	03-01-2019	02-28-2022
Cable line	Fulai(7M)	SF106	5219/6A	01-09-2019	01-08-2020
Cable line	Fulai(6M)	SF106	5220/6A	01-09-2019	01-08-2020
Cable line	Fulai(3M)	SF106	5216/6A	01-09-2019	01-08-2020
Cable line	Fulai(3M)	SF106	5217/6A	01-09-2019	01-08-2020
High-pass filter	Sinoscite	FL3CX03WG 18NM12-0398-002	---	01-09-2019	01-08-2020
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	01-09-2019	01-08-2020
band rejection filter	Sinoscite	FL5CX01CA0 9CL12-0395-001	---	01-09-2019	01-08-2020
band rejection filter	Sinoscite	FL5CX01CA0 8CL12-0393-001	---	01-09-2019	01-08-2020
band rejection filter	Sinoscite	FL5CX02CA0 4CL12-0396-002	---	01-09-2019	01-08-2020
band rejection filter	Sinoscite	FL5CX02CA0 3CL12-0394-001	---	01-09-2019	01-08-2020

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

8 Radio Technical Requirements Specification

Reference documents for testing:

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

Test Results List:

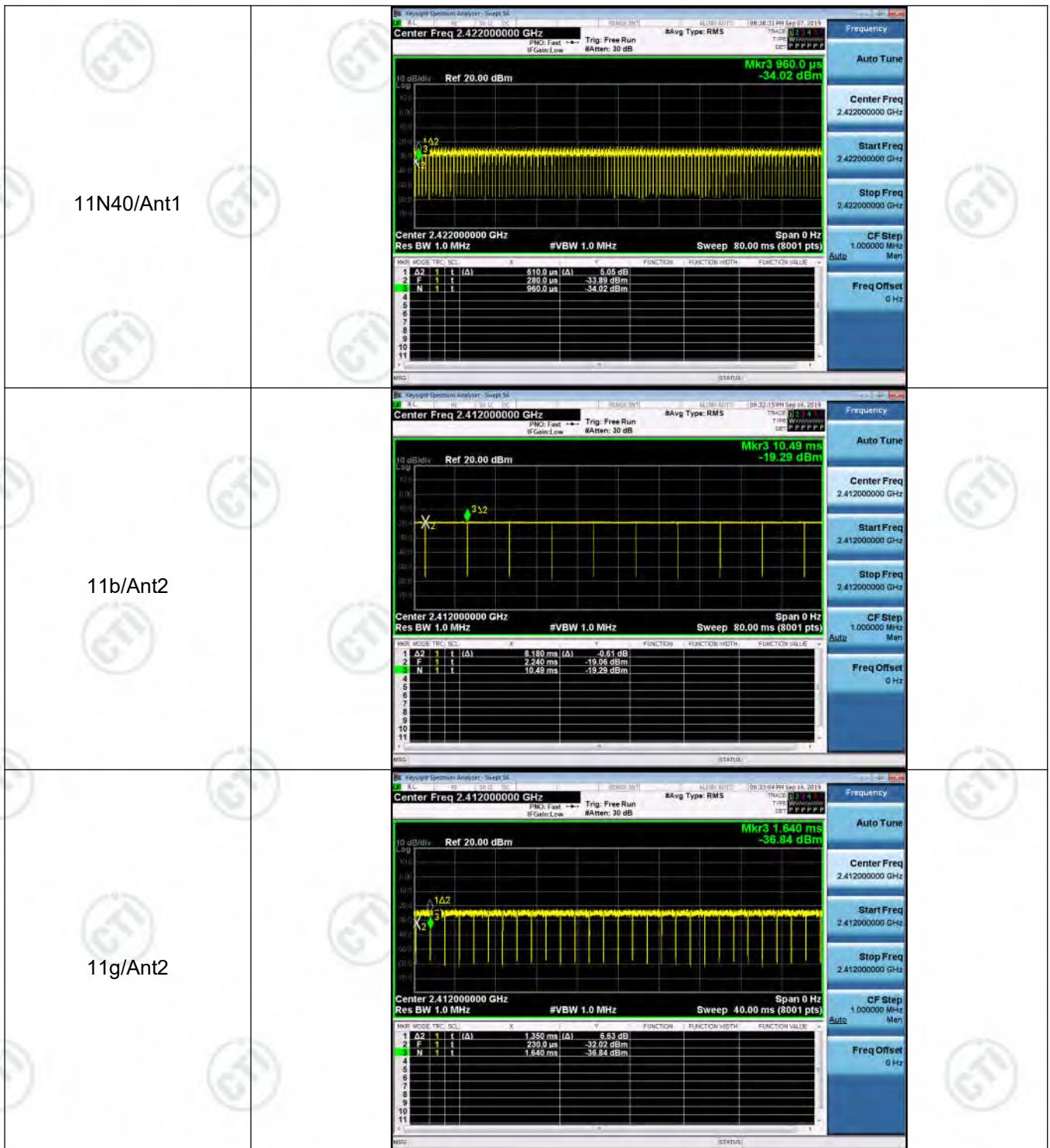
Test Requirement	Test method	Test item	Verdict	Note
Part15C Section 15.247 (b)(3)	ANSI C63.10	Conducted Peak Output Power	PASS	Appendix A)
Part15C Section 15.247 (a)(2)	ANSI C63.10	6dB Occupied Bandwidth	PASS	Appendix B)
Part15C Section 15.247(d)	ANSI C63.10	Band-edge for RF Conducted Emissions	PASS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

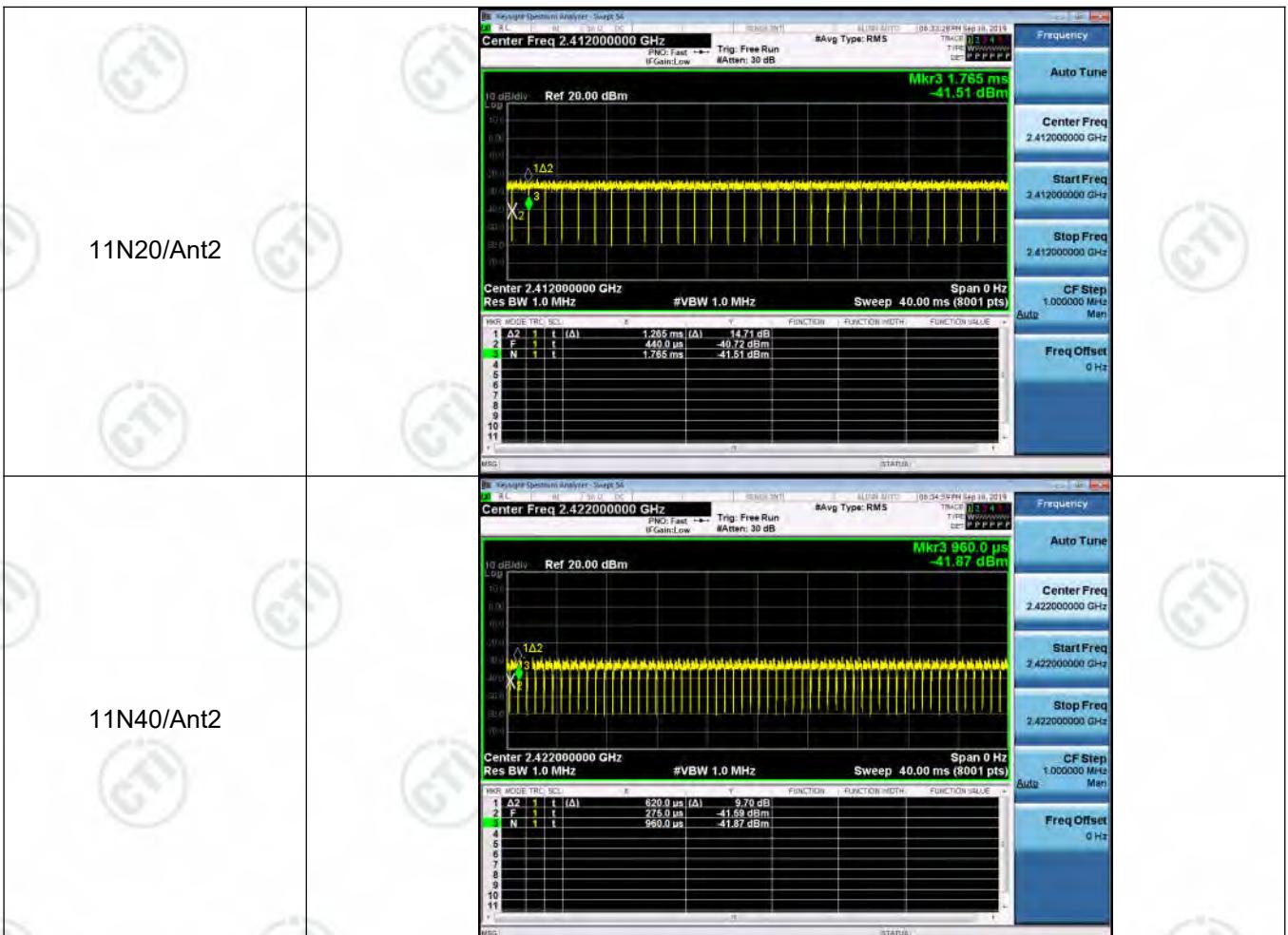
Duty Cycle**Result Table**

Duty Cycle			
Configuration	TX ON(ms)	TX ALL(ms)	Duty Cycle(%)
11b/Ant1	8.180	8.25	99.15%
11g/Ant1	1.355	1.413	95.90%
11N20/Ant1	1.269	1.325	95.77%
11N40/Ant1	0.610	0.680	89.71%
11b/Ant2	8.18	8.25	99.2%
11g/Ant2	1.350	1.41	95.7%
11N20/Ant2	1.265	1.325	95.5%
11N40/Ant2	0.620	0.685	90.5%

Test Graph







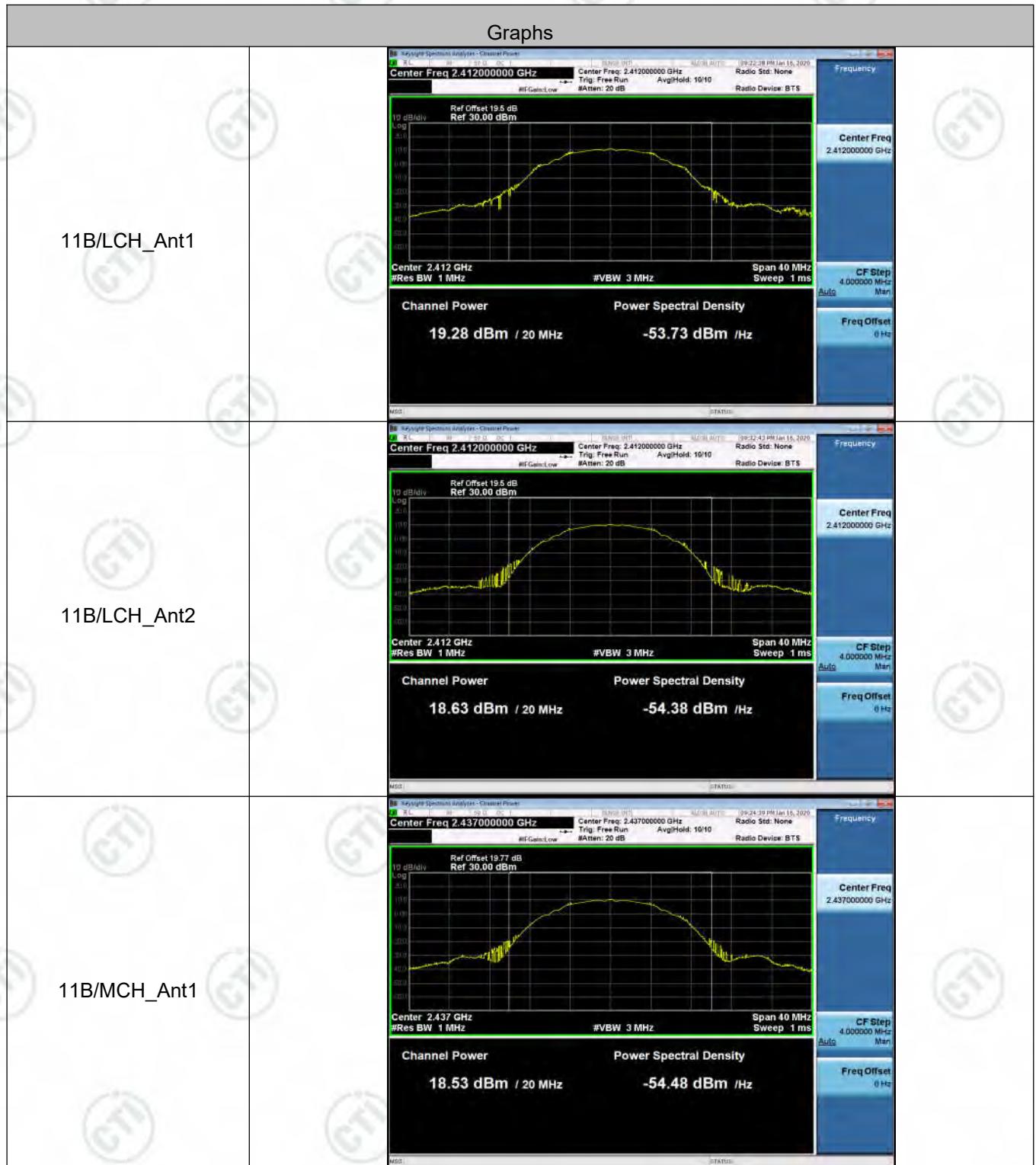
Appendix A): Conducted Peak Output Power Result Table

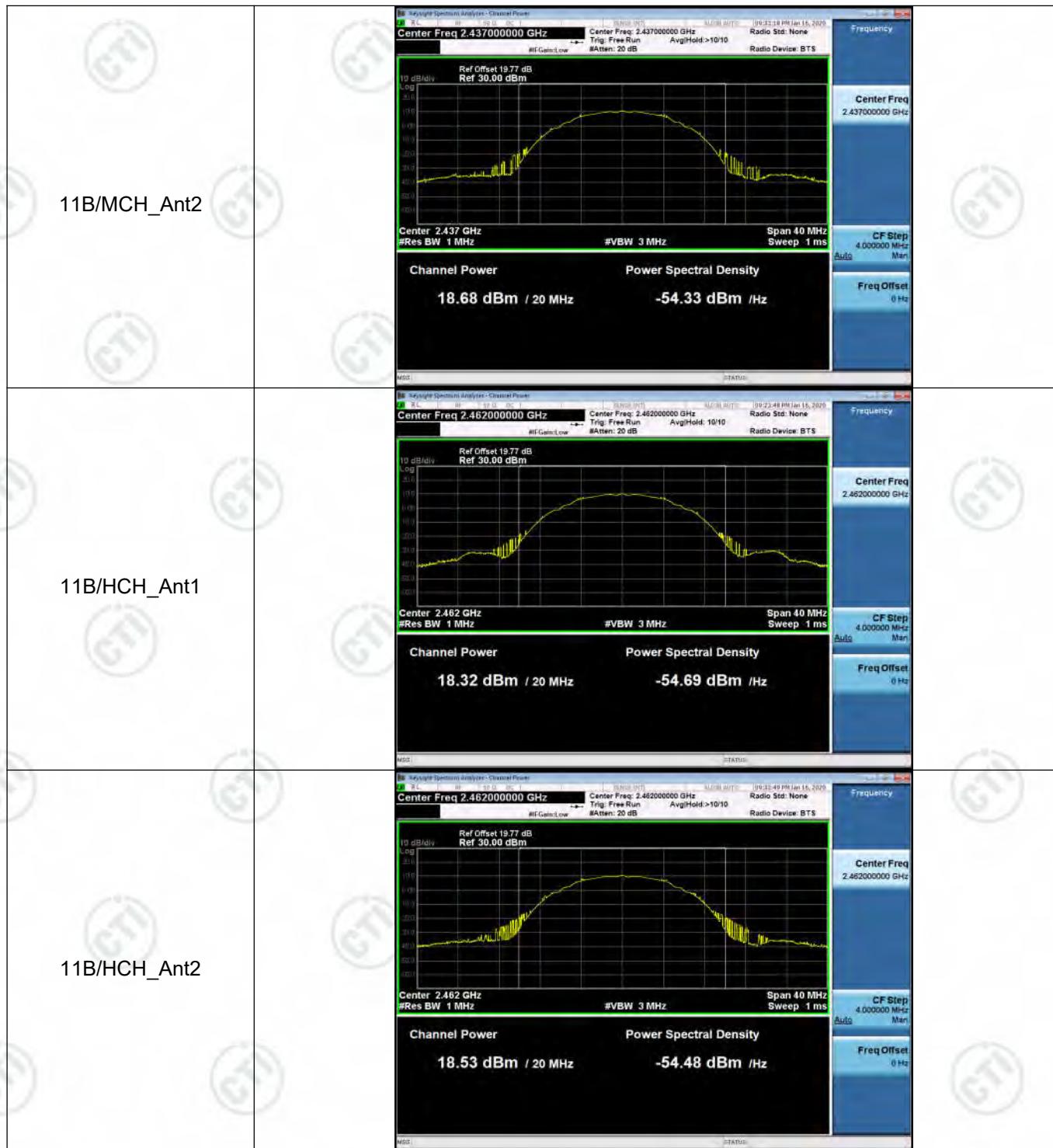
Mode	Antenna	Channel	Conducted Peak Output Power [dBm]	Verdict
11B	Ant1	LCH	19.28	PASS
11B	Ant2	LCH	18.63	PASS
11B	Ant1	MCH	18.53	PASS
11B	Ant2	MCH	18.68	PASS
11B	Ant1	HCH	18.32	PASS
11B	Ant2	HCH	18.53	PASS
11G	Ant1	LCH	22.84	PASS
11G	Ant2	LCH	22.75	PASS
11G	Ant1	MCH	23.01	PASS
11G	Ant2	MCH	22.87	PASS
11G	Ant1	HCH	22.8	PASS
11G	Ant2	HCH	22.72	PASS
11N20SISO	Ant1	LCH	22.14	PASS
11N20SISO	Ant2	LCH	22.02	PASS
11N20SISO	Ant1	MCH	21.46	PASS
11N20SISO	Ant2	MCH	22.1	PASS
11N20SISO	Ant1	HCH	21.93	PASS
11N20SISO	Ant2	HCH	22	PASS
11N20MIMO	Ant1	LCH	19.91	PASS
11N20MIMO	Ant2	LCH	18.73	PASS
11N20MIMO	Ant1+2	LCH	22.37	PASS
11N20MIMO	Ant1	MCH	19.35	PASS
11N20MIMO	Ant2	MCH	18.07	PASS
11N20MIMO	Ant1+2	MCH	21.77	PASS
11N20MIMO	Ant1	HCH	18.77	PASS
11N20MIMO	Ant2	HCH	17.68	PASS
11N20MIMO	Ant1+2	HCH	21.27	PASS
11N40SISO	Ant1	LCH	21.81	PASS
11N40SISO	Ant2	LCH	21.78	PASS
11N40SISO	Ant1	MCH	21.63	PASS
11N40SISO	Ant2	MCH	21.65	PASS
11N40SISO	Ant1	HCH	21.44	PASS

11N40SISO	Ant2	HCH	21.69	PASS
11N40MIMO	Ant1	LCH	19.1	PASS
11N40MIMO	Ant2	LCH	17.82	PASS
11N40MIMO	Ant1+2	LCH	21.52	PASS
11N40MIMO	Ant1	MCH	18.78	PASS
11N40MIMO	Ant2	MCH	17.57	PASS
11N40MIMO	Ant1+2	MCH	21.23	PASS
11N40MIMO	Ant1	HCH	18.51	PASS
11N40MIMO	Ant2	HCH	17.4	PASS
11N40MIMO	Ant1+2	HCH	21.00	PASS



Test Graph



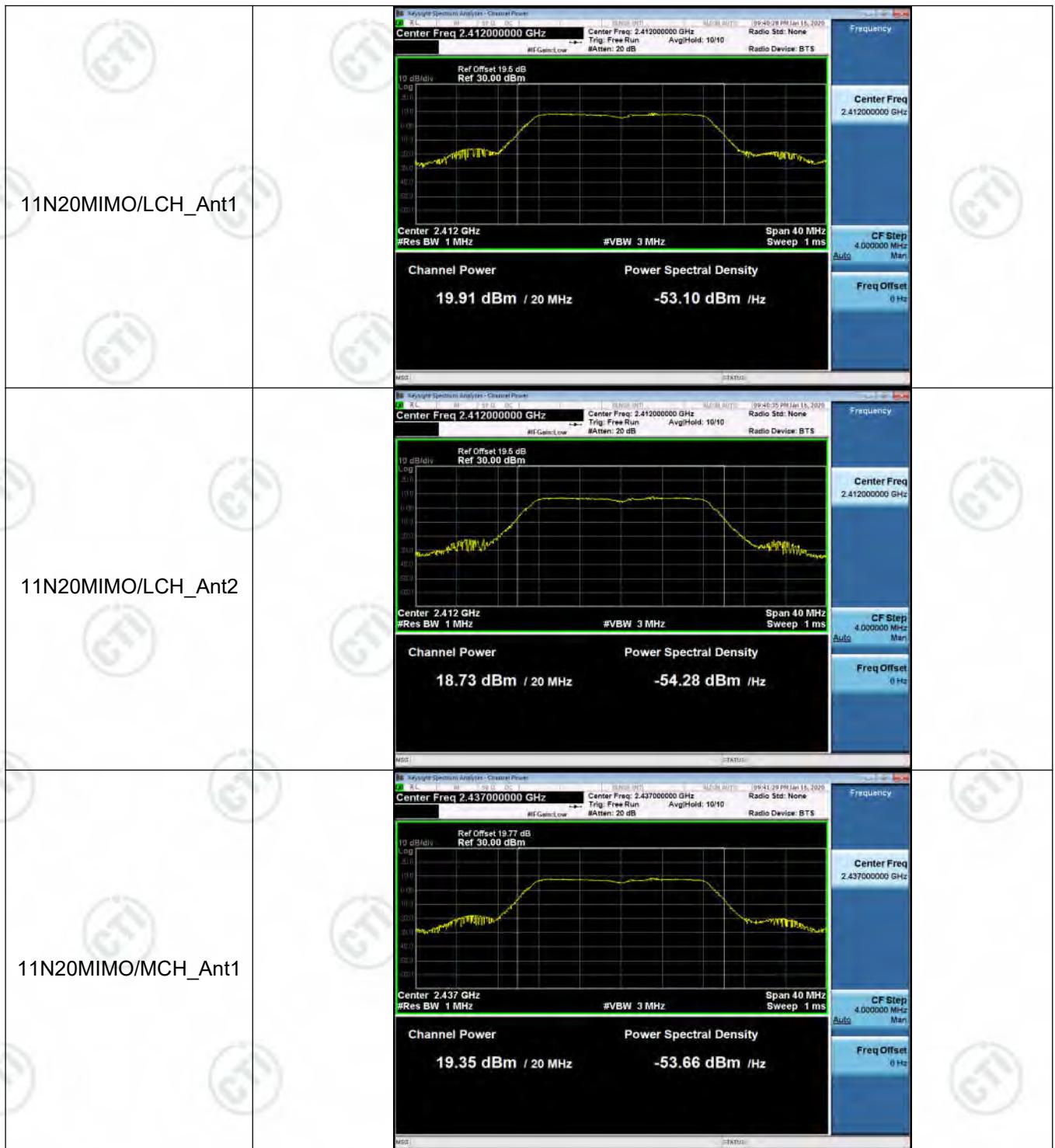












11N20MIMO/MCH_Ant2	
11N20MIMO/HCH_Ant1	
11N20MIMO/HCH_Ant2	









Appendix B): 6dB Occupied Bandwidth

Result Table

Mode	Antenna	Channel	6dB Bandwidth [MHz]	99% OBW [MHz]	Verdict
11B	Ant1	LCH	9.056	13.622	PASS
11B	Ant2	LCH	9.065	13.722	PASS
11B	Ant1	MCH	9.532	13.690	PASS
11B	Ant2	MCH	9.067	13.700	PASS
11B	Ant1	HCH	9.542	13.774	PASS
11B	Ant2	HCH	9.057	13.776	PASS
11G	Ant1	LCH	16.33	16.531	PASS
11G	Ant2	LCH	16.33	16.582	PASS
11G	Ant1	MCH	16.32	16.528	PASS
11G	Ant2	MCH	16.33	16.590	PASS
11G	Ant1	HCH	16.32	16.532	PASS
11G	Ant2	HCH	16.33	16.595	PASS
11N20SISO	Ant1	LCH	17.02	17.614	PASS
11N20SISO	Ant2	LCH	17.35	17.659	PASS
11N20SISO	Ant1	MCH	17.03	17.621	PASS
11N20SISO	Ant2	MCH	17.26	17.667	PASS
11N20SISO	Ant1	HCH	16.84	17.619	PASS
11N20SISO	Ant2	HCH	17.03	17.666	PASS
11N40SISO	Ant1	LCH	36.28	36.525	PASS
11N40SISO	Ant2	LCH	36.03	36.668	PASS
11N40SISO	Ant1	MCH	36.04	36.506	PASS
11N40SISO	Ant2	MCH	36.05	36.614	PASS
11N40SISO	Ant1	HCH	36.05	36.485	PASS
11N40SISO	Ant2	HCH	36.06	36.619	PASS

Test Graph

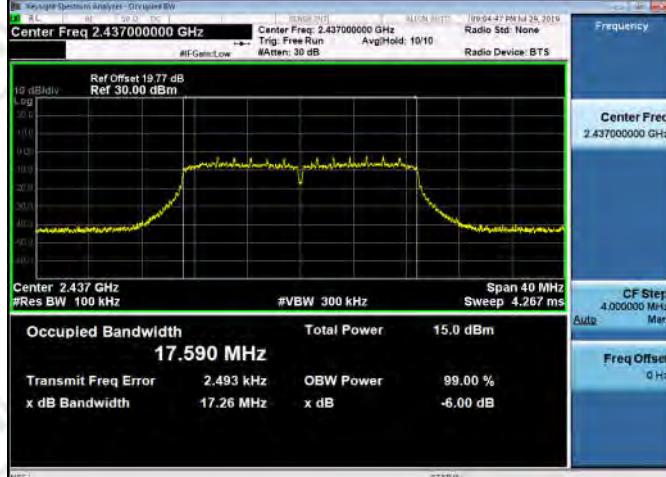
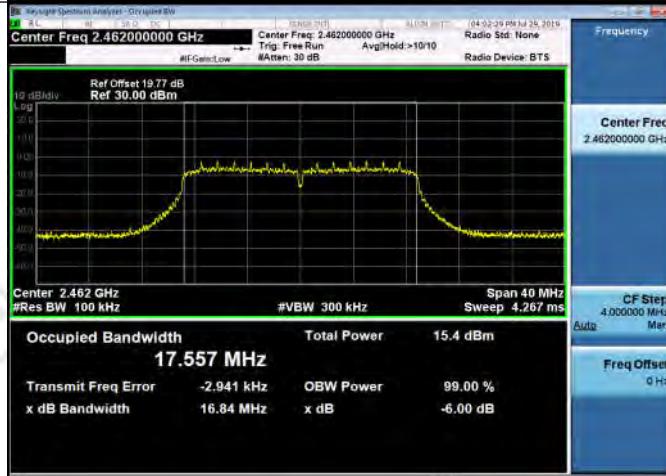
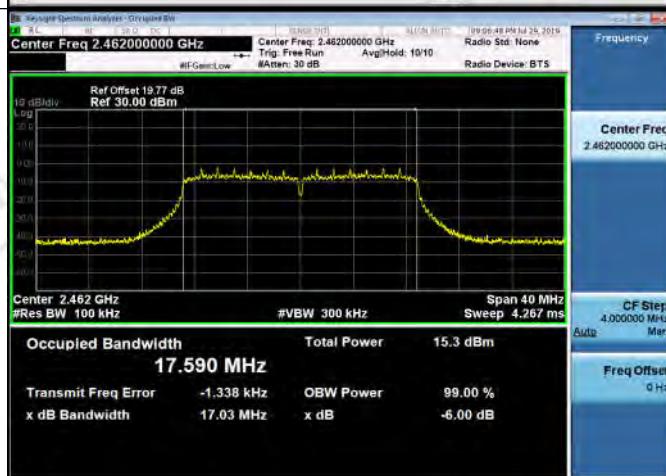


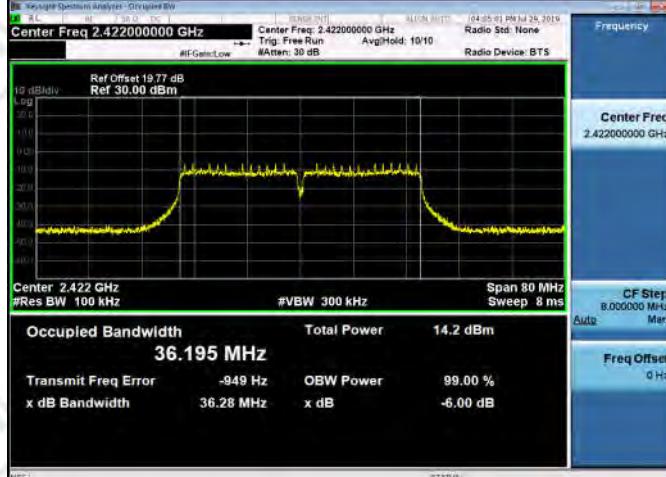
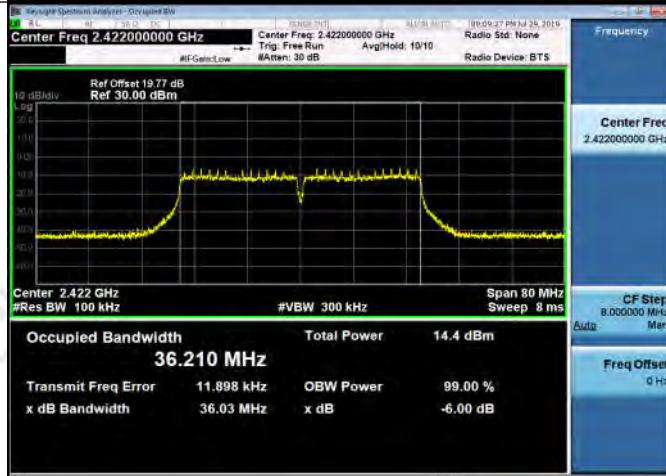
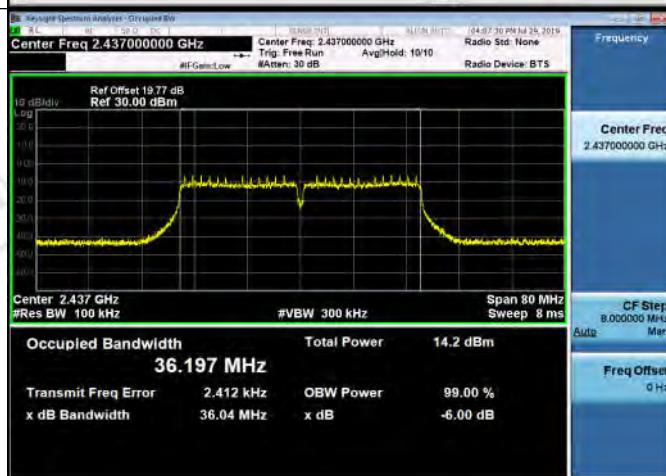


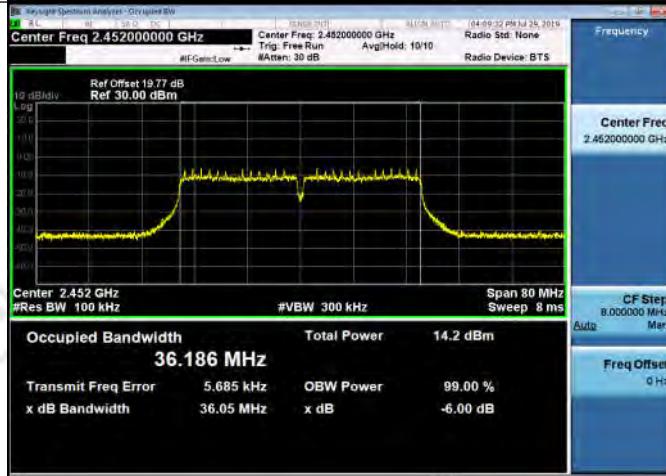
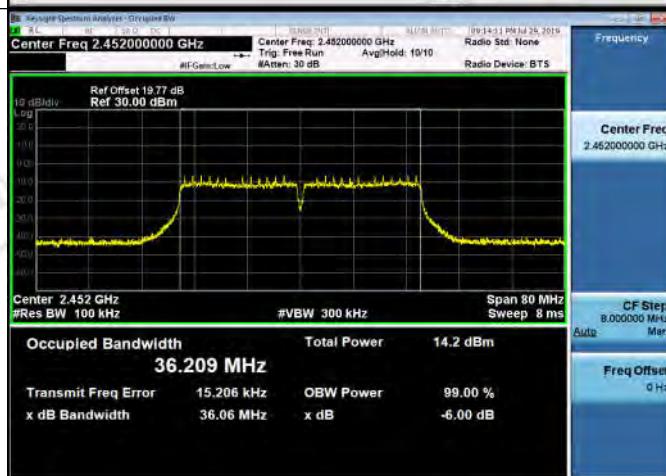




11N20SISO/LCH_Ant1	
11N20SISO/LCH_Ant2	
11N20SISO/MCH_Ant1	

11N20SISO/MCH_Ant2	
11N20SISO/HCH_Ant1	
11N20SISO/HCH_Ant2	

11N40SISO/LCH_Ant1	
11N40SISO/LCH_Ant2	
11N40SISO/MCH_Ant1	

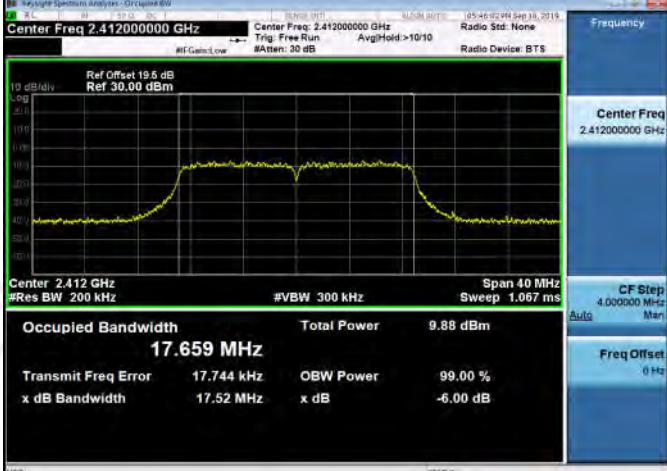
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11N40SISO/HCH_Ant1	
11N40SISO/HCH_Ant2	

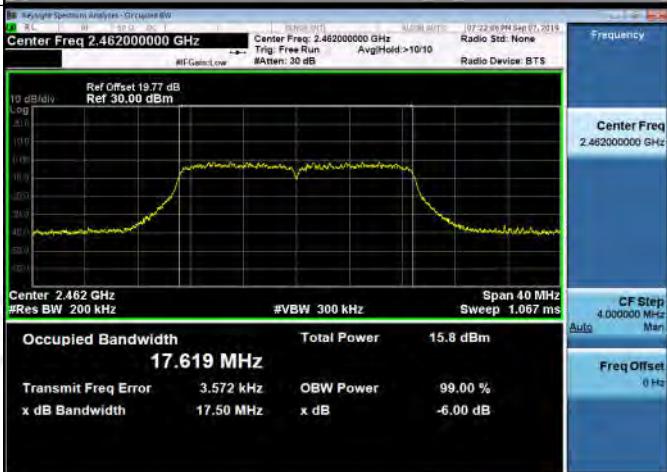
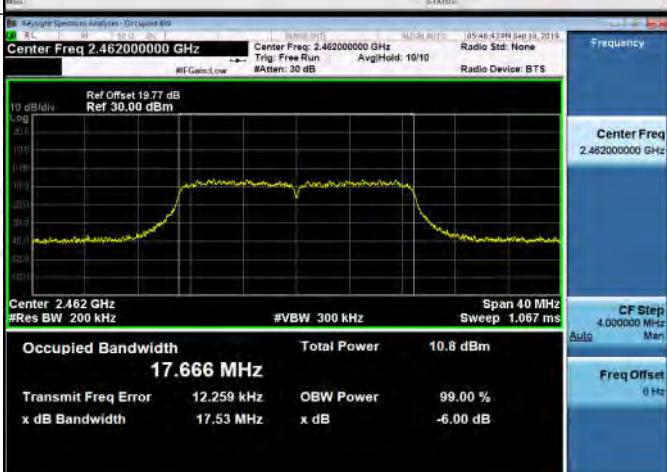




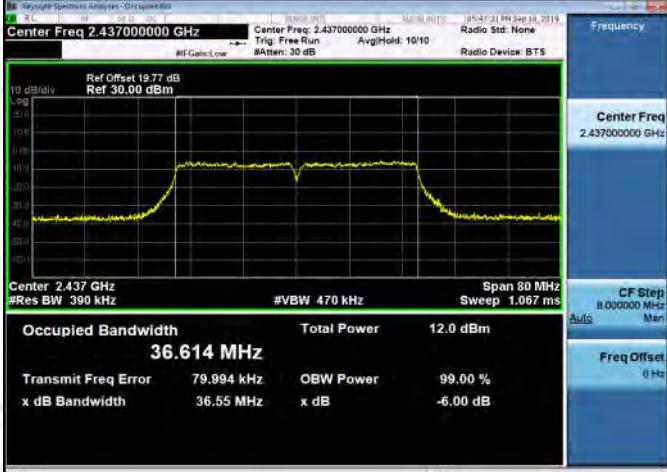
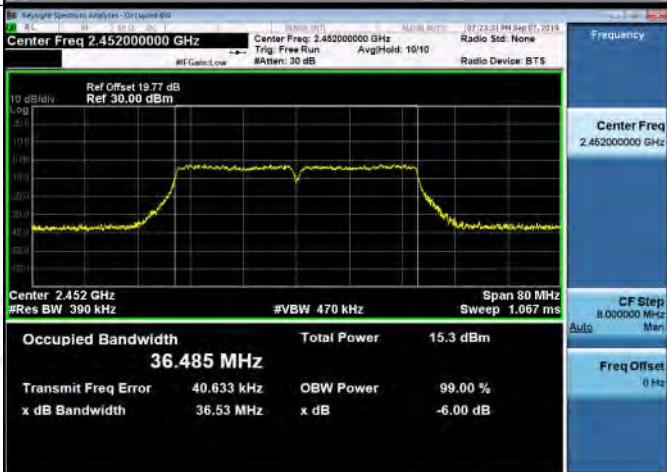




		 <p>11N20SISO/LCH_Ant1</p> <p>KeySpec Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.412000000 GHz</p> <p>Ref Offset 19.5 dB Ref 30.00 dBm</p> <p>10 dB/div Log</p> <p>Occupied Bandwidth 17.614 MHz</p> <p>Total Power 15.5 dBm</p> <p>Transmit Freq Error 2.771 kHz OBW Power 99.00 %</p> <p>x dB Bandwidth 17.54 MHz x dB -6.00 dB</p>
		 <p>11N20SISO/LCH_Ant2</p> <p>KeySpec Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.412000000 GHz</p> <p>Ref Offset 19.5 dB Ref 30.00 dBm</p> <p>10 dB/div Log</p> <p>Occupied Bandwidth 17.659 MHz</p> <p>Total Power 9.88 dBm</p> <p>Transmit Freq Error 17.744 kHz OBW Power 99.00 %</p> <p>x dB Bandwidth 17.52 MHz x dB -6.00 dB</p>
		 <p>11N20SISO/MCH_Ant1</p> <p>KeySpec Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.437000000 GHz</p> <p>Ref Offset 19.77 dB Ref 30.00 dBm</p> <p>10 dB/div Log</p> <p>Occupied Bandwidth 17.621 MHz</p> <p>Total Power 17.7 dBm</p> <p>Transmit Freq Error 8.729 kHz OBW Power 99.00 %</p> <p>x dB Bandwidth 17.49 MHz x dB -6.00 dB</p>

11N20SISO/MCH_Ant2	
11N20SISO/HCH_Ant1	
11N20SISO/HCH_Ant2	

		<p>11N40SISO/LCH_Ant1</p> <p>Key parameters for 11N40SISO/LCH_Ant1:</p> <ul style="list-style-type: none"> Center Freq: 2.422000000 GHz Occupied Bandwidth: 36.525 MHz Total Power: 15.3 dBm Transmit Freq Error: 38.358 kHz x dB Bandwidth: 36.57 MHz OBW Power: 99.00 % x dB: -6.00 dB
		<p>11N40SISO/LCH_Ant2</p> <p>Key parameters for 11N40SISO/LCH_Ant2:</p> <ul style="list-style-type: none"> Center Freq: 2.422000000 GHz Occupied Bandwidth: 36.668 MHz Total Power: 9.75 dBm Transmit Freq Error: 70.856 kHz x dB Bandwidth: 36.52 MHz OBW Power: 99.00 % x dB: -6.00 dB
		<p>11N40SISO/MCH_Ant1</p> <p>Key parameters for 11N40SISO/MCH_Ant1:</p> <ul style="list-style-type: none"> Center Freq: 2.437000000 GHz Occupied Bandwidth: 36.506 MHz Total Power: 17.1 dBm Transmit Freq Error: 37.376 kHz x dB Bandwidth: 36.47 MHz OBW Power: 99.00 % x dB: -6.00 dB

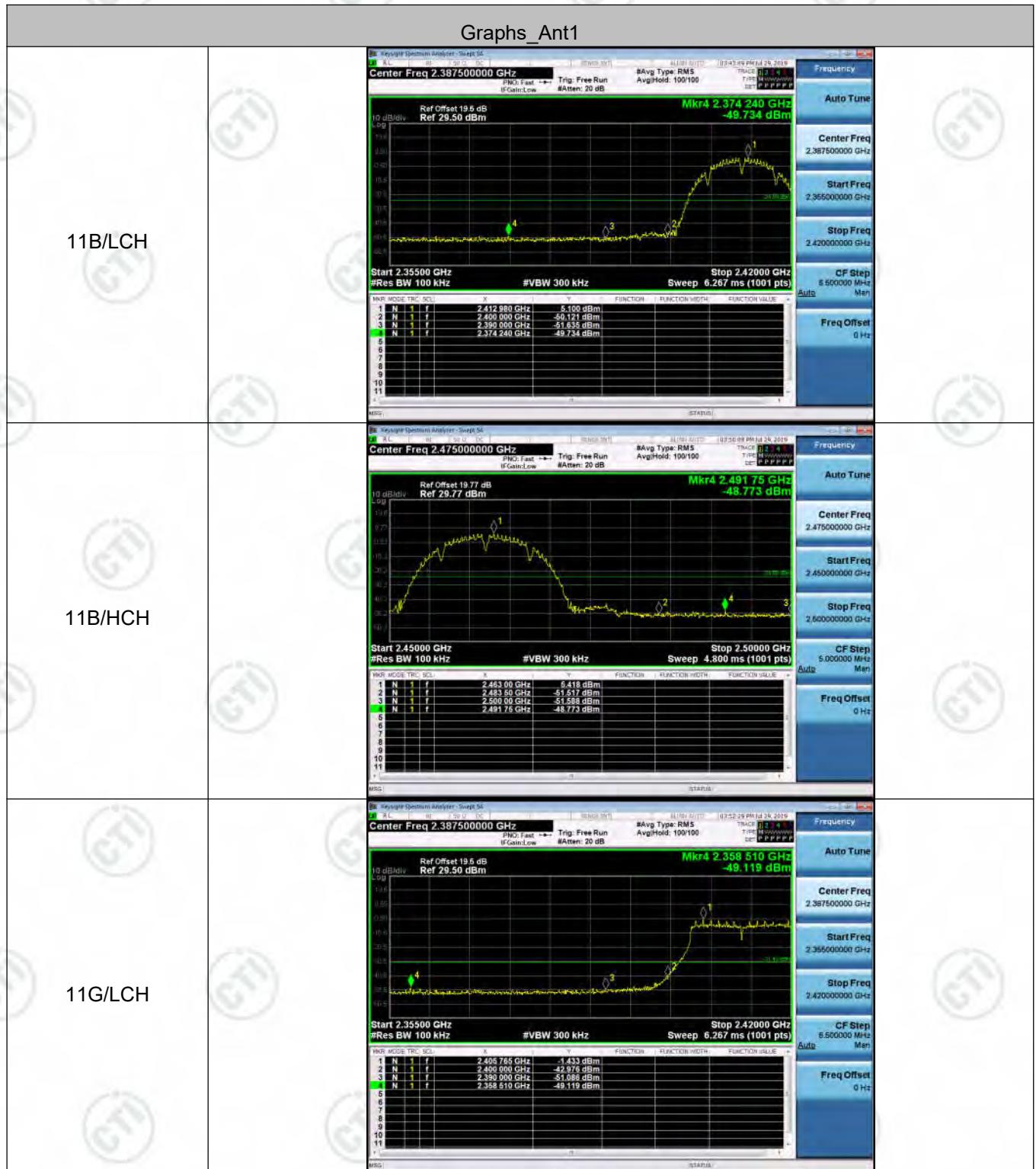
11N40SISO/MCH_Ant2	
11N40SISO/HCH_Ant1	
11N40SISO/HCH_Ant2	

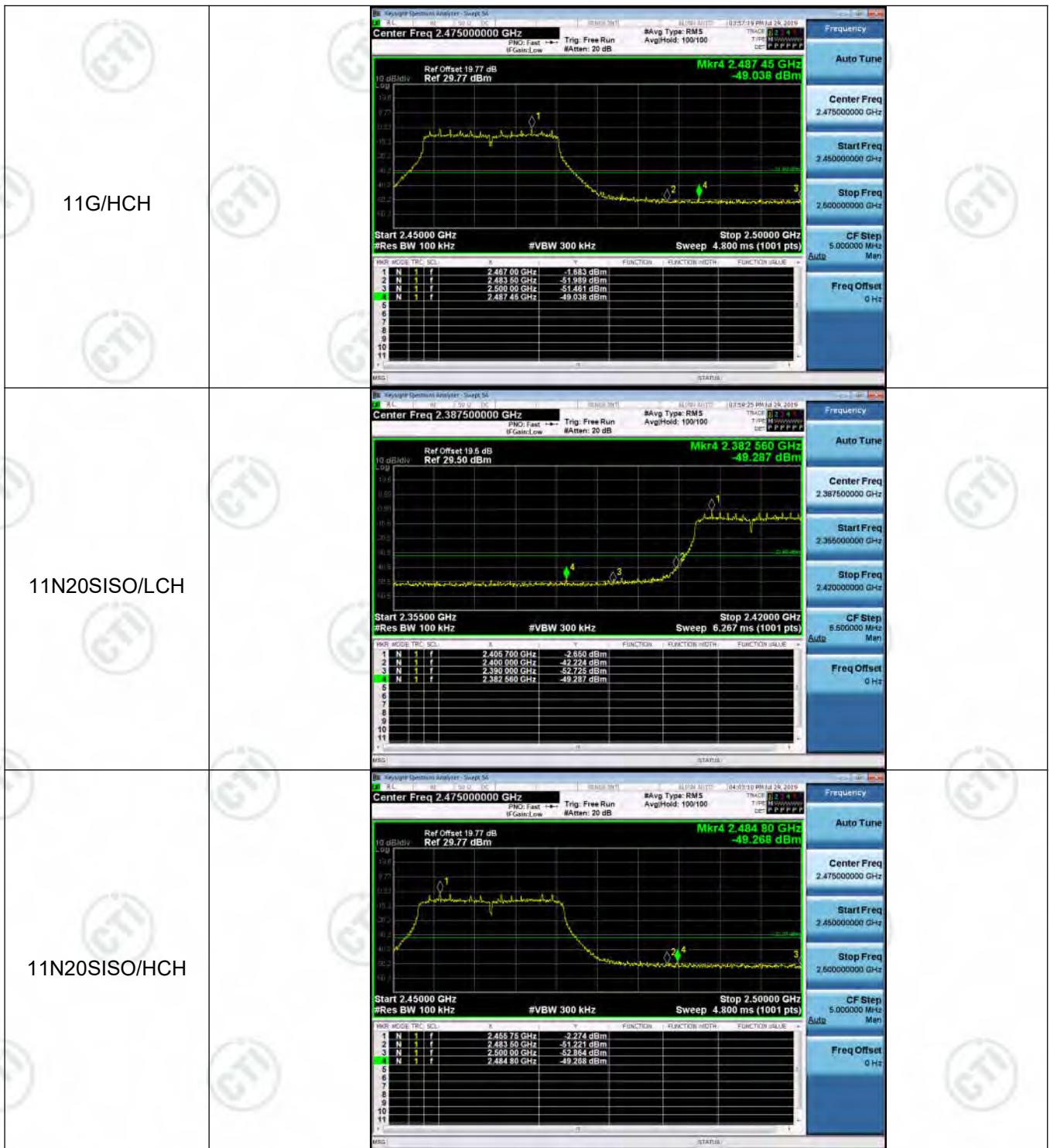
Appendix C): Band-edge for RF Conducted Emissions

Result Table

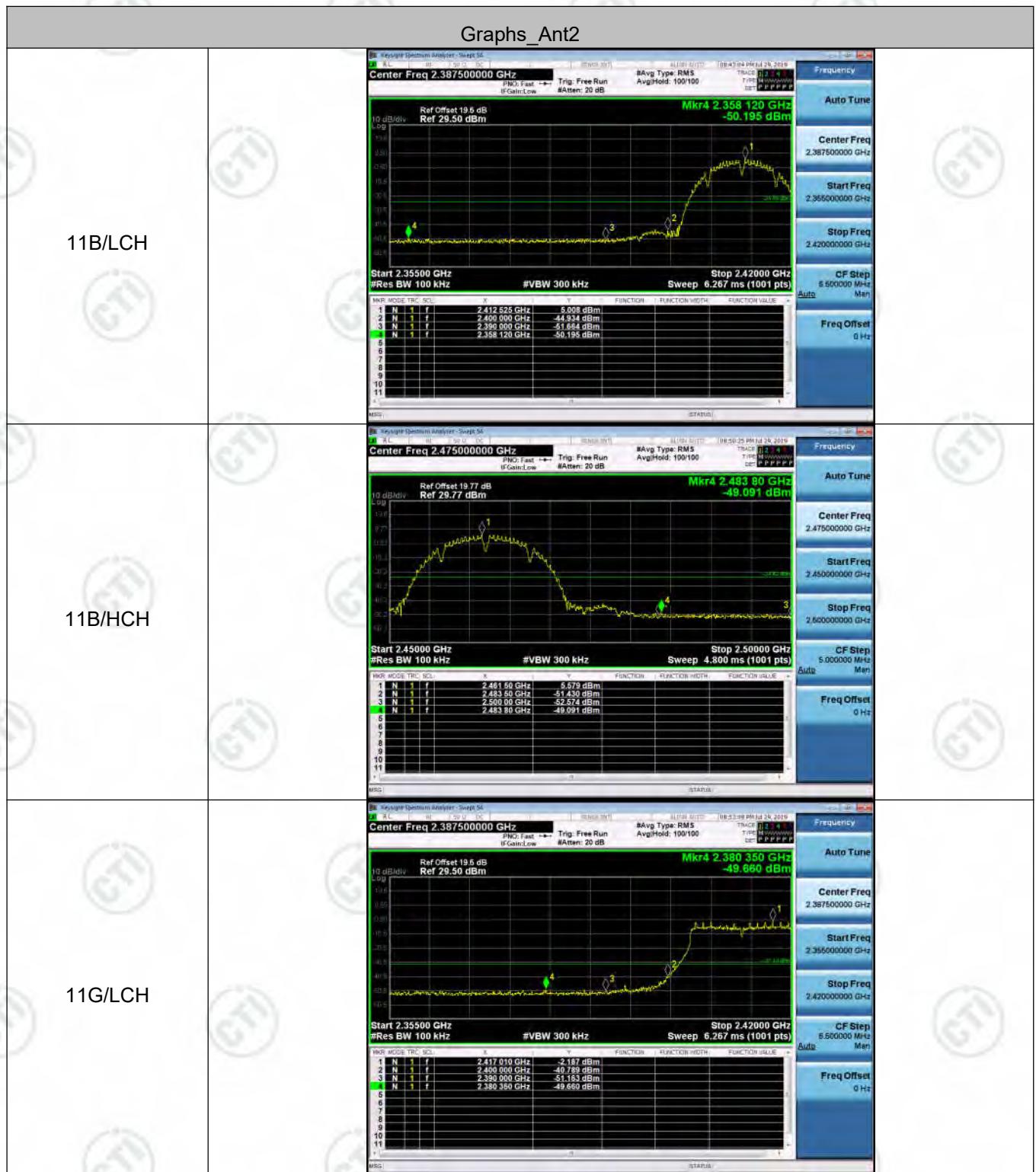
Mode	Antenn a	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	Ant1	LCH	5.100	-49.734	-24.9	PASS
11B	Ant2	LCH	5.008	-50.195	-24.99	PASS
11B	Ant1	HCH	5.418	-48.773	-24.58	PASS
11B	Ant2	HCH	5.579	-49.091	-24.42	PASS
11G	Ant1	LCH	-1.433	-49.119	-31.43	PASS
11G	Ant2	LCH	-2.187	-49.660	-32.19	PASS
11G	Ant1	HCH	-1.683	-49.038	-31.68	PASS
11G	Ant2	HCH	-1.949	-49.279	-31.95	PASS
11N20SISO	Ant1	LCH	-2.650	-49.287	-32.65	PASS
11N20SISO	Ant2	LCH	-2.145	-49.994	-32.15	PASS
11N20SISO	Ant1	HCH	-2.274	-49.268	-32.27	PASS
11N20SISO	Ant2	HCH	-2.454	-48.368	-32.45	PASS
11N40SISO	Ant1	LCH	-6.467	-48.509	-36.47	PASS
11N40SISO	Ant2	LCH	-6.396	-48.335	-36.4	PASS
11N40SISO	Ant1	HCH	-6.125	-48.441	-36.13	PASS
11N40SISO	Ant2	HCH	-6.169	-47.790	-36.17	PASS

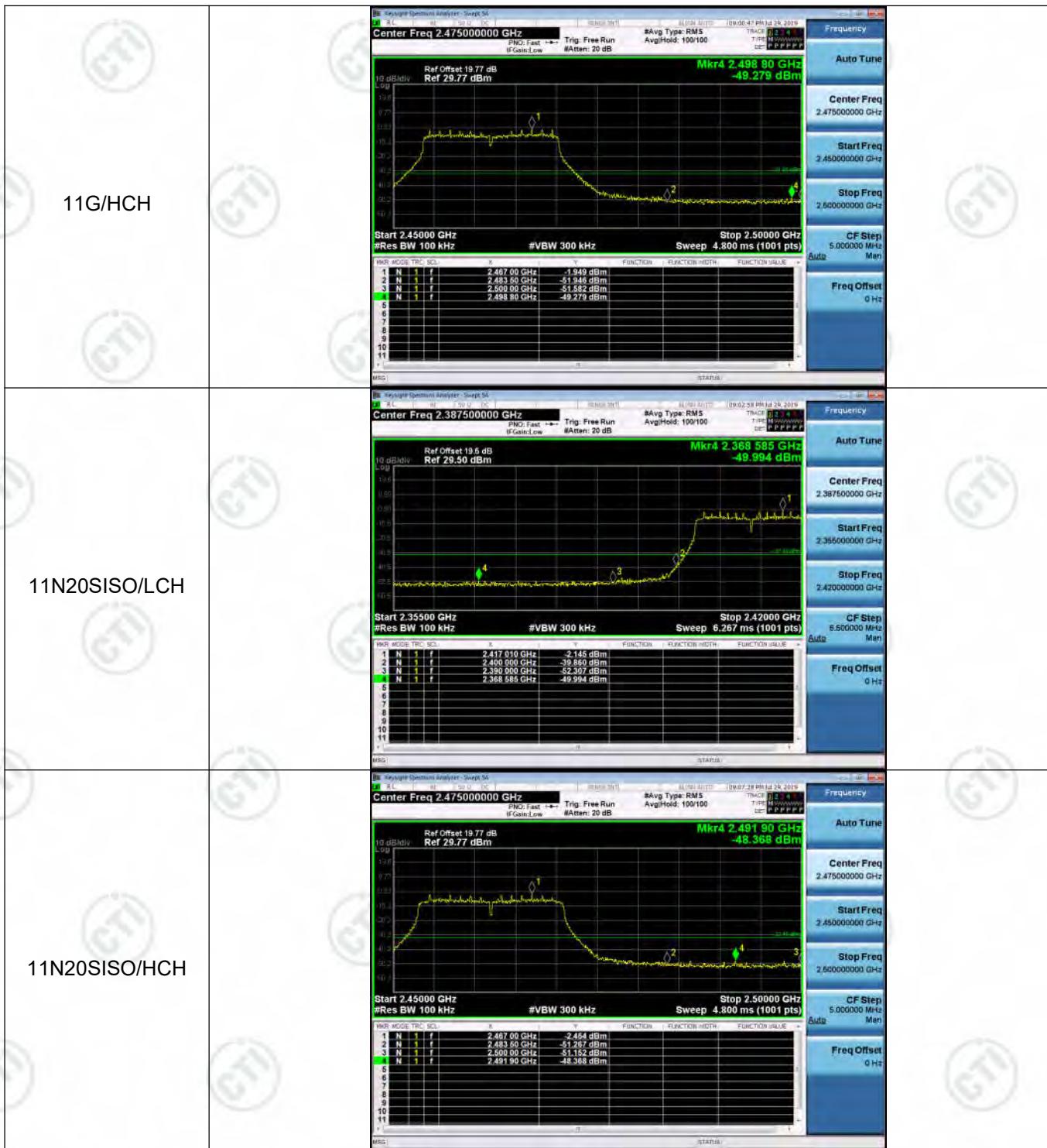
Test Graph











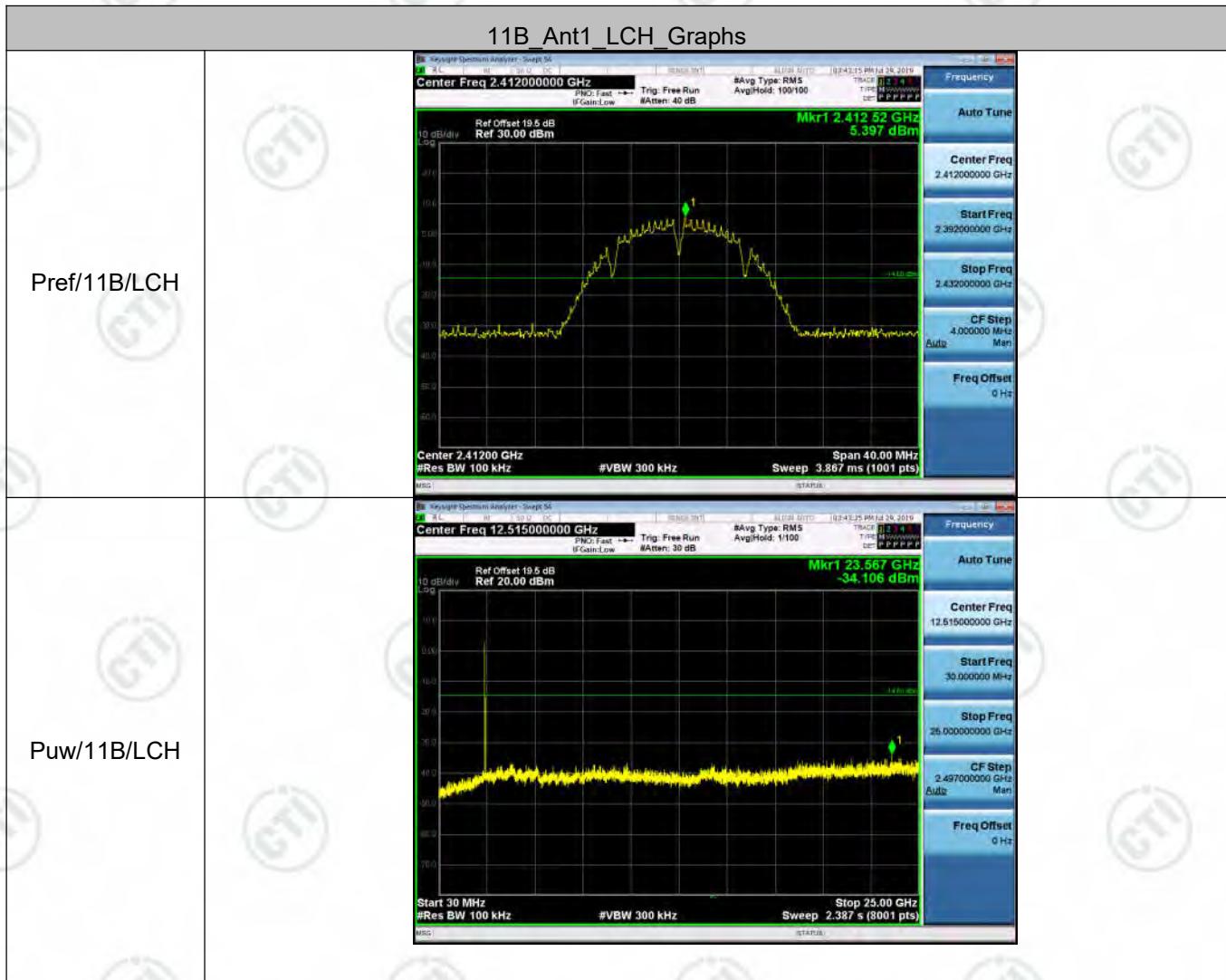


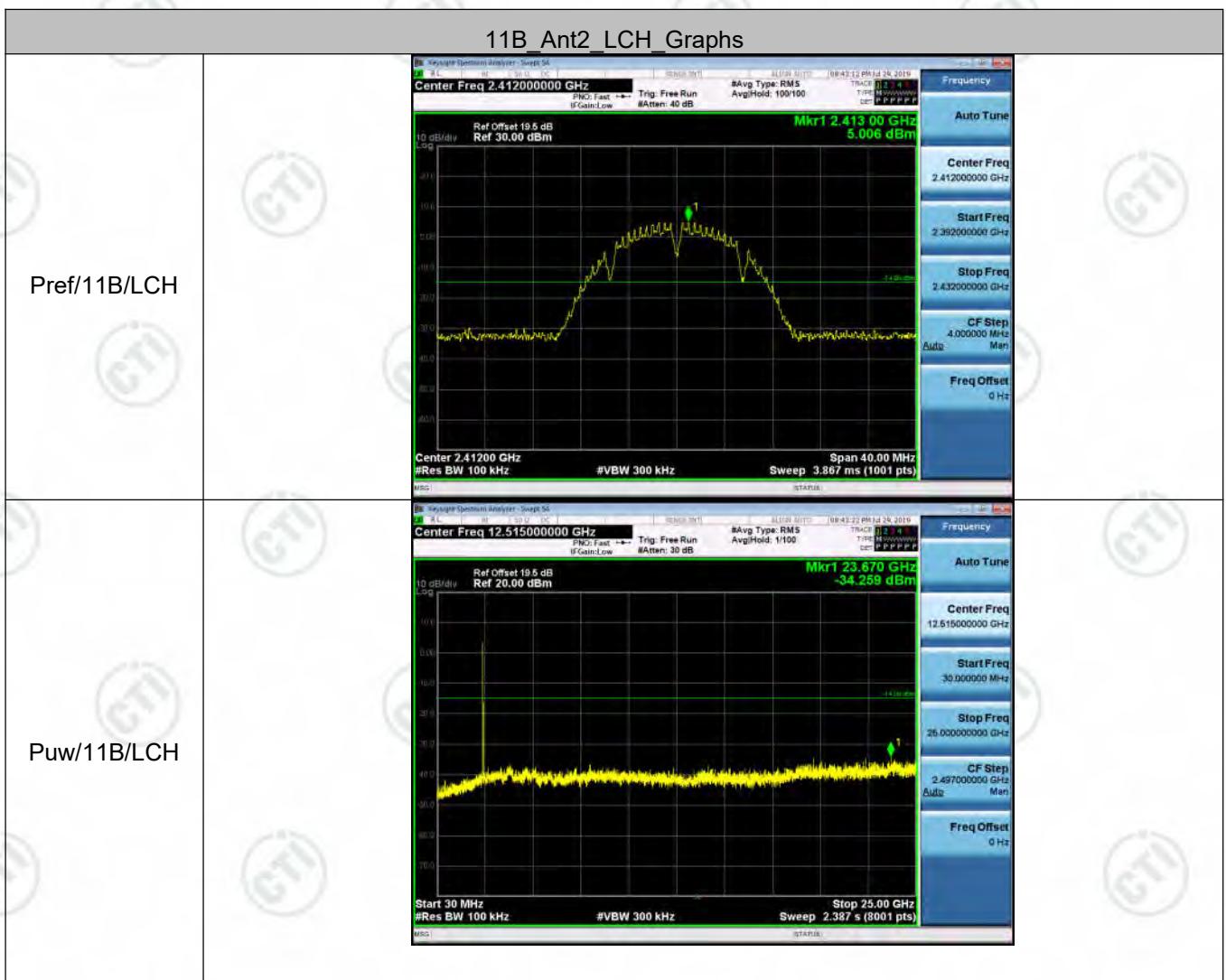
Appendix D): RF Conducted Spurious Emissions

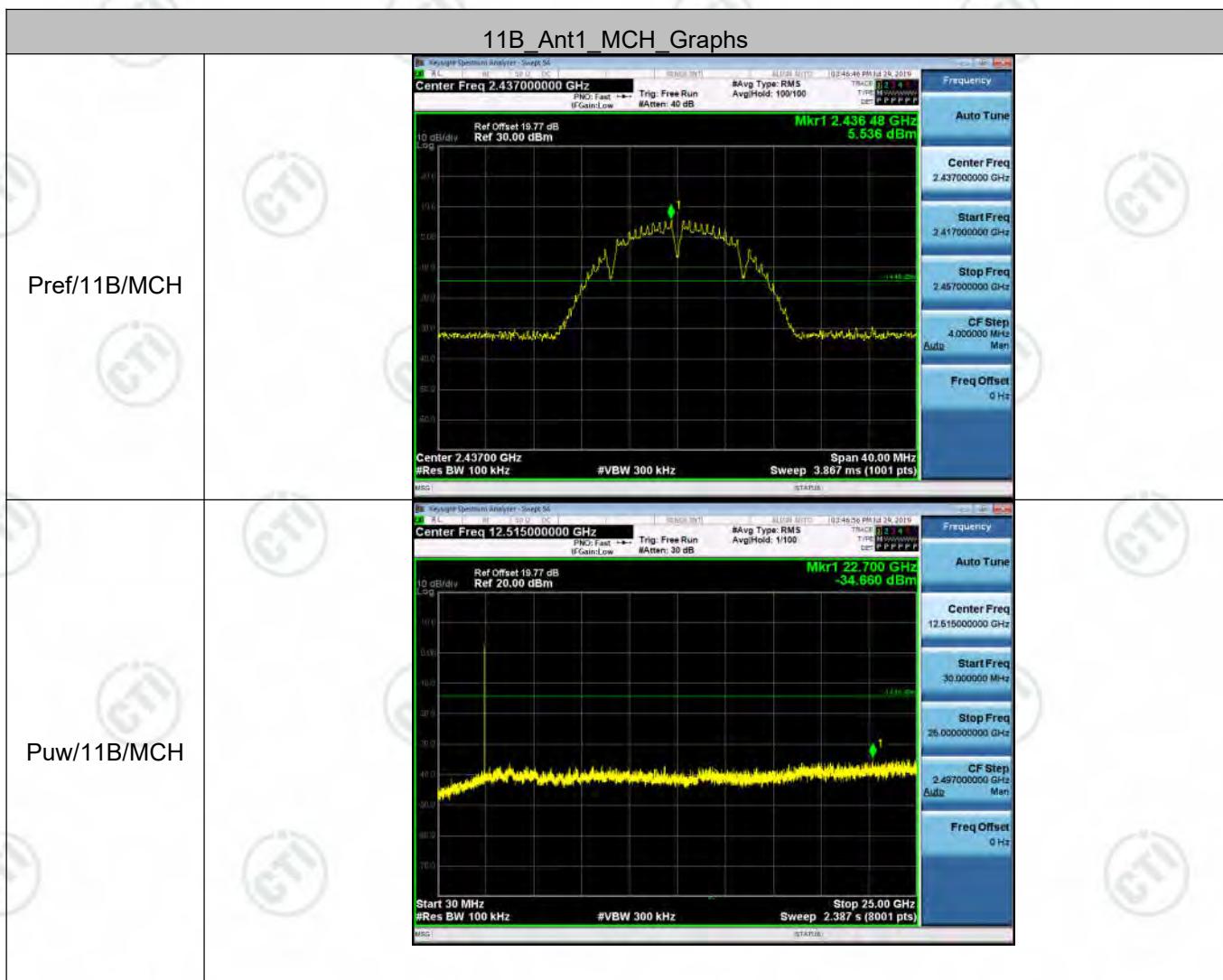
Result Table

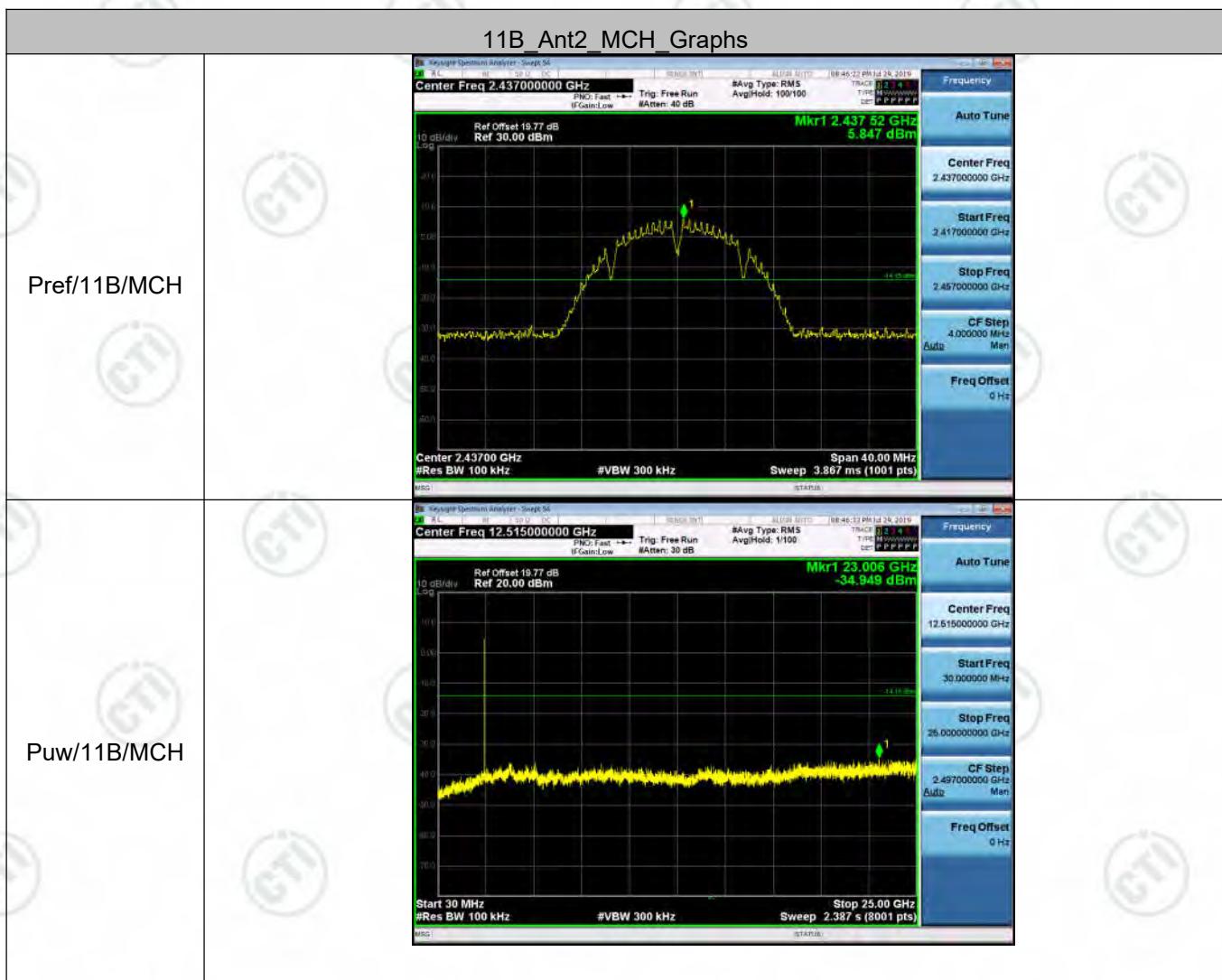
Mode	Antenna	Channel	Pref [dBm]	Puw[dBm]	Verdict
11B	Ant1	LCH	5.397	<Limit	PASS
11B	Ant2	LCH	5.006	<Limit	PASS
11B	Ant1	MCH	5.536	<Limit	PASS
11B	Ant2	MCH	5.847	<Limit	PASS
11B	Ant1	HCH	5.648	<Limit	PASS
11B	Ant2	HCH	5.814	<Limit	PASS
11G	Ant1	LCH	-1.557	<Limit	PASS
11G	Ant2	LCH	-2.11	<Limit	PASS
11G	Ant1	MCH	-1.941	<Limit	PASS
11G	Ant2	MCH	-1.634	<Limit	PASS
11G	Ant1	HCH	-1.975	<Limit	PASS
11G	Ant2	HCH	-2.074	<Limit	PASS
11N20SISO	Ant1	LCH	-2.565	<Limit	PASS
11N20SISO	Ant2	LCH	-2.113	<Limit	PASS
11N20SISO	Ant1	MCH	-2.407	<Limit	PASS
11N20SISO	Ant2	MCH	-2.576	<Limit	PASS
11N20SISO	Ant1	HCH	-2.093	<Limit	PASS
11N20SISO	Ant2	HCH	-2.221	<Limit	PASS
11N40SISO	Ant1	LCH	-6.344	<Limit	PASS
11N40SISO	Ant2	LCH	-6.07	<Limit	PASS
11N40SISO	Ant1	MCH	-6.21	<Limit	PASS
11N40SISO	Ant2	MCH	-5.992	<Limit	PASS
11N40SISO	Ant1	HCH	-6.207	<Limit	PASS
11N40SISO	Ant2	HCH	-6.261	<Limit	PASS

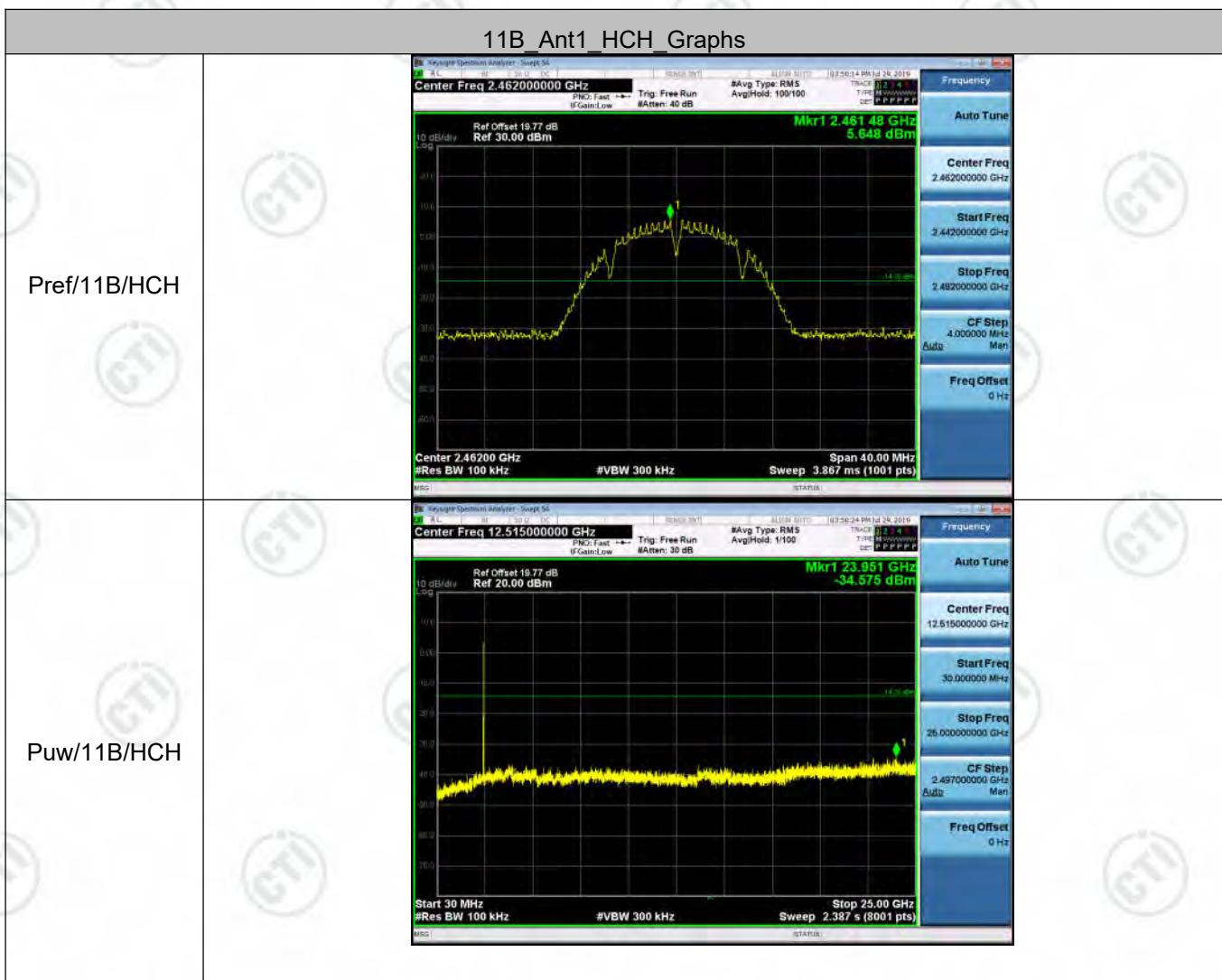
Test Graph

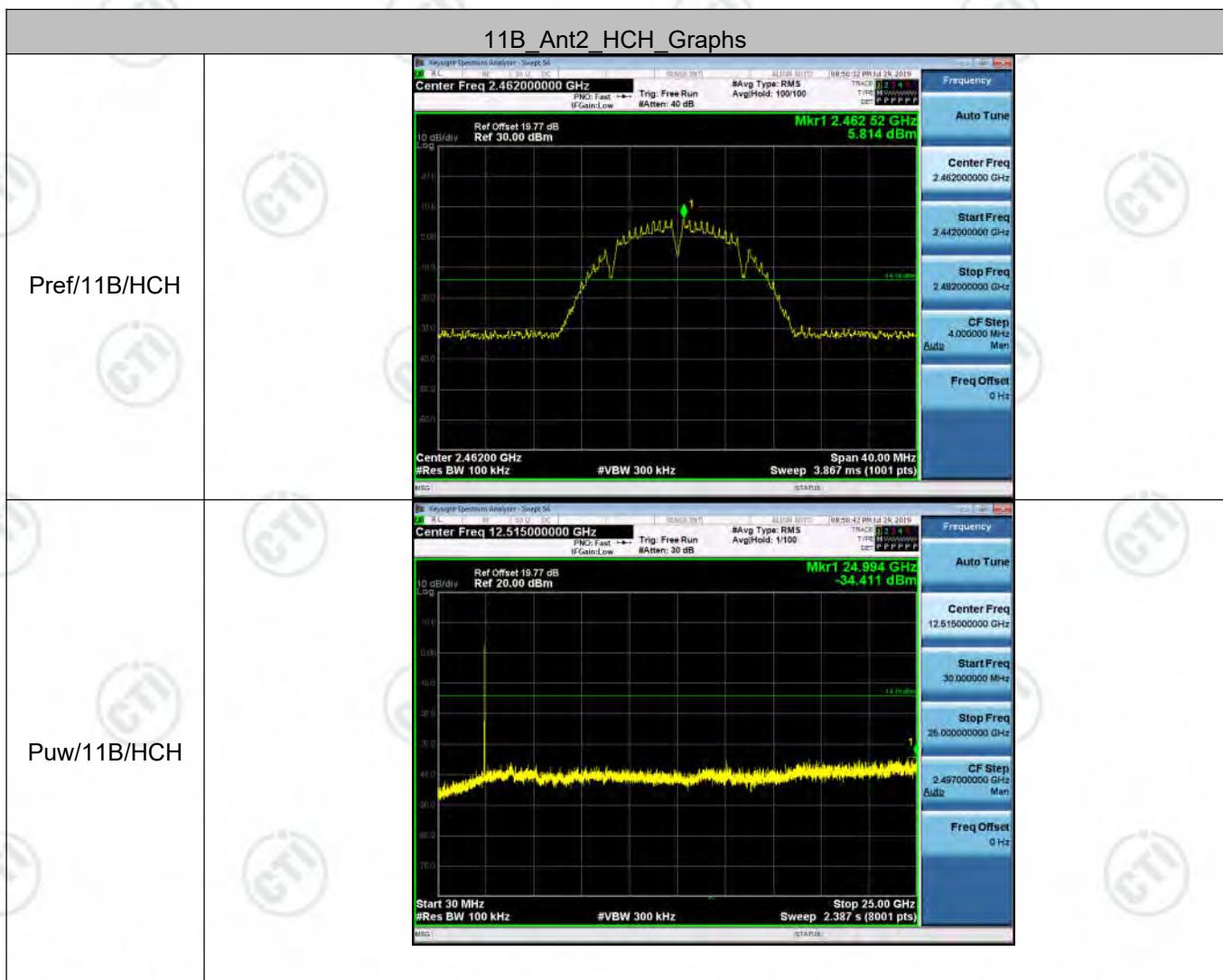


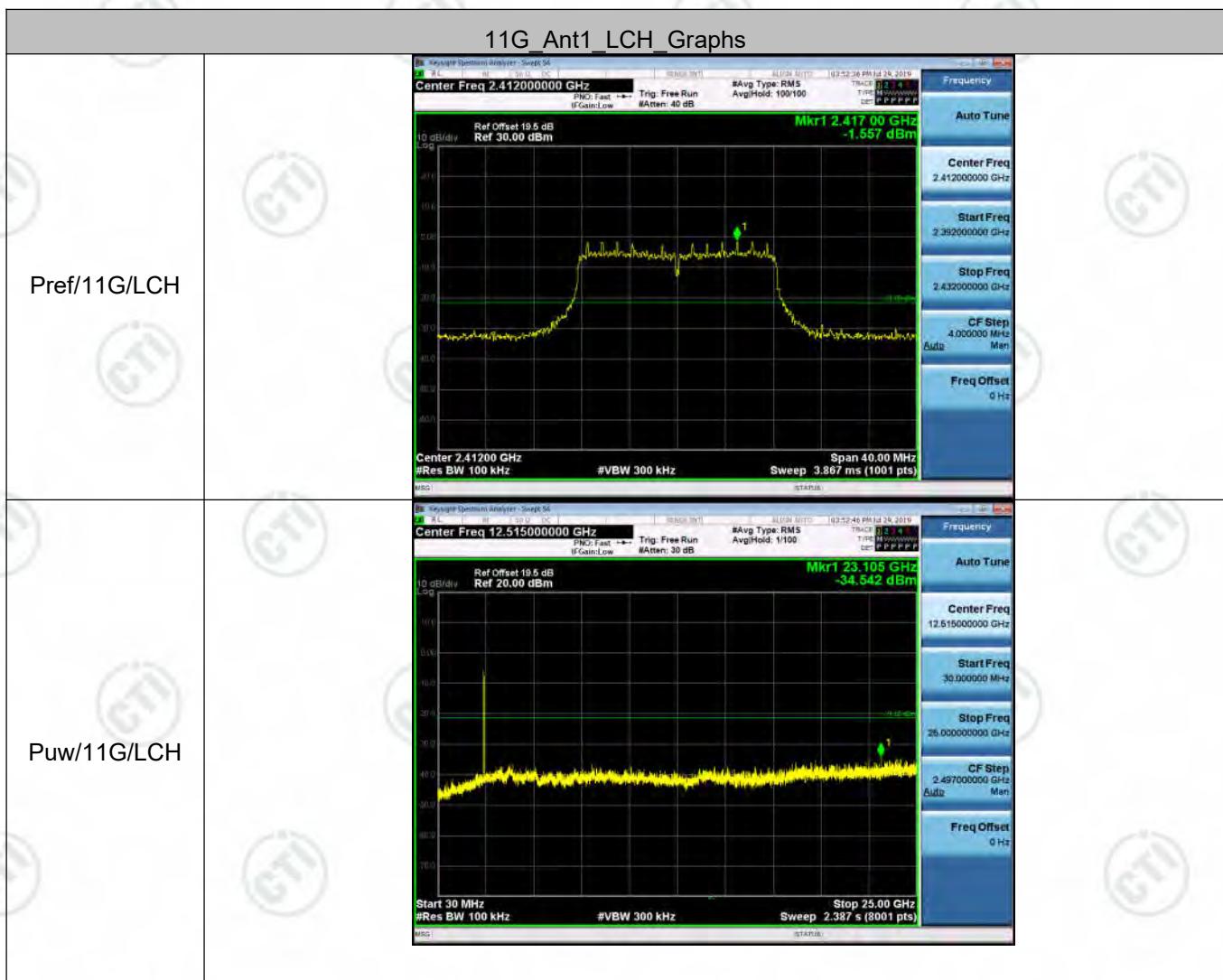


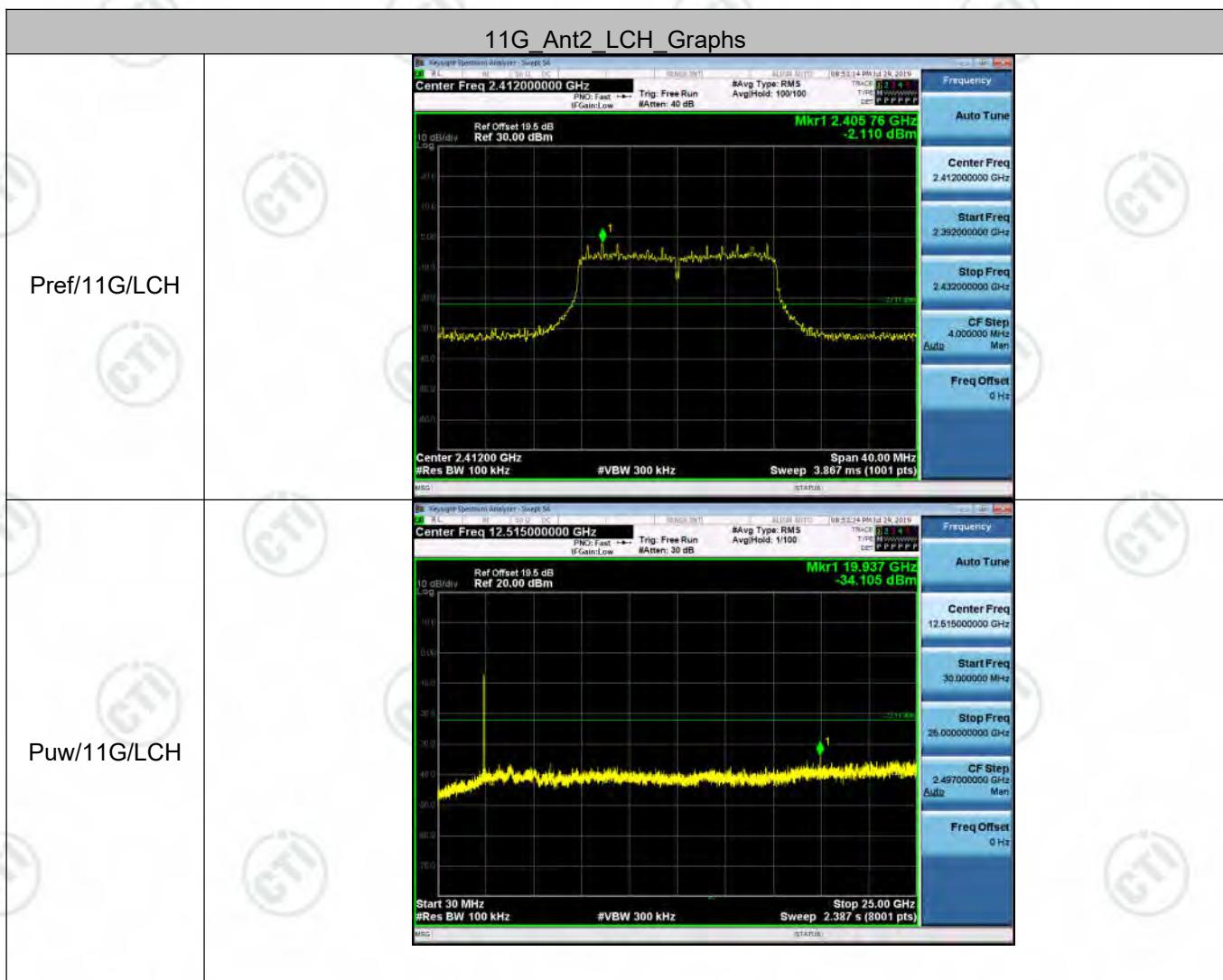


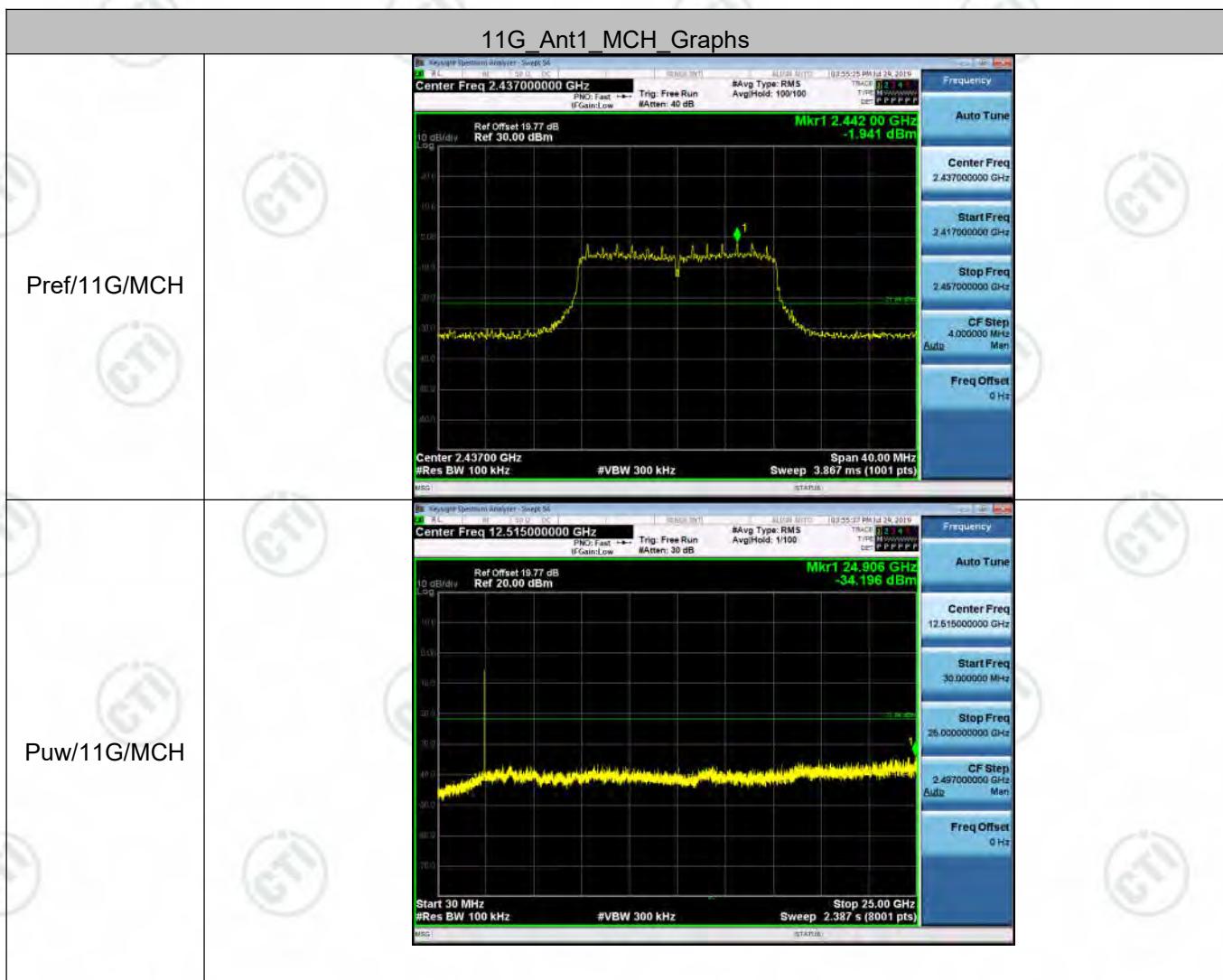


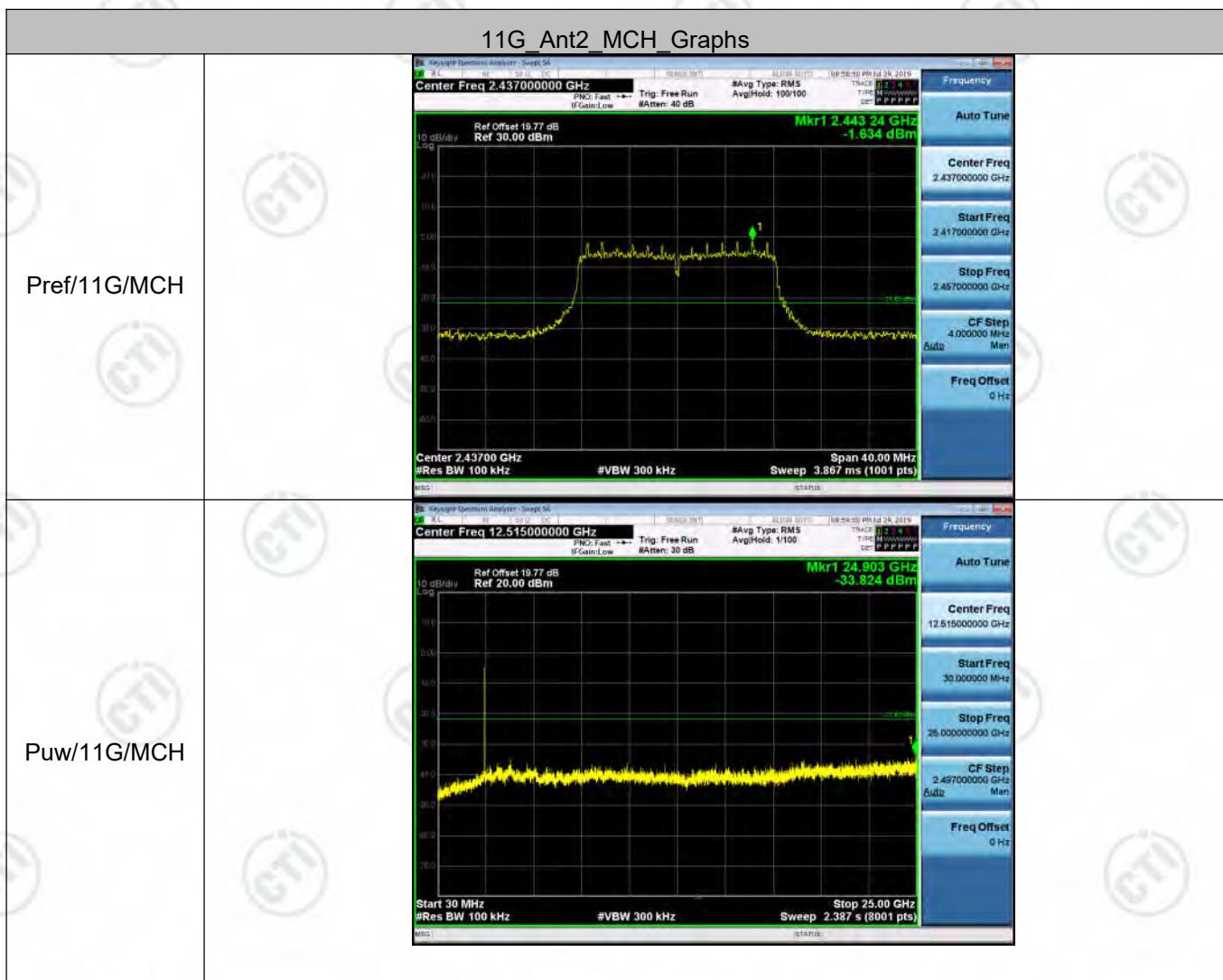


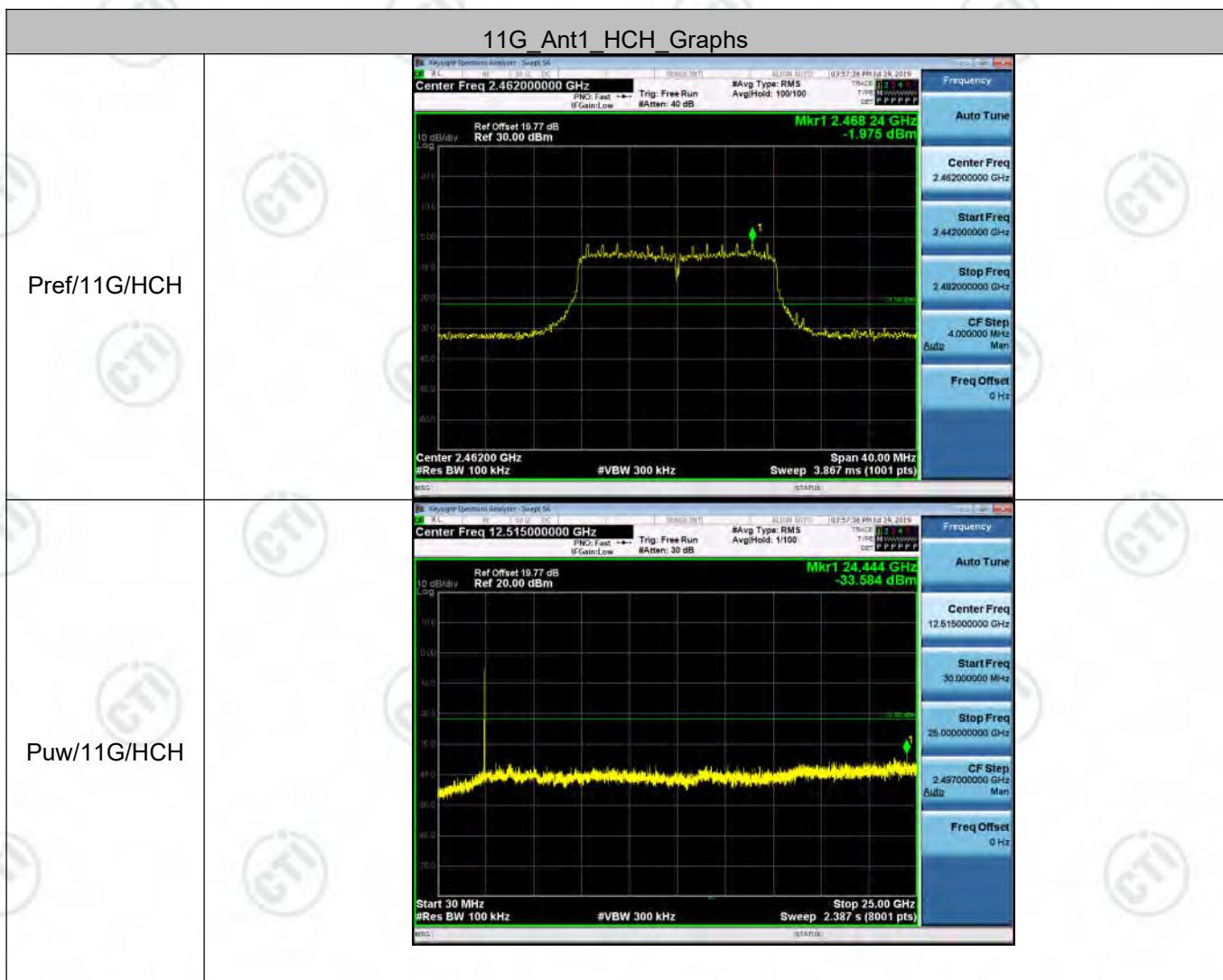


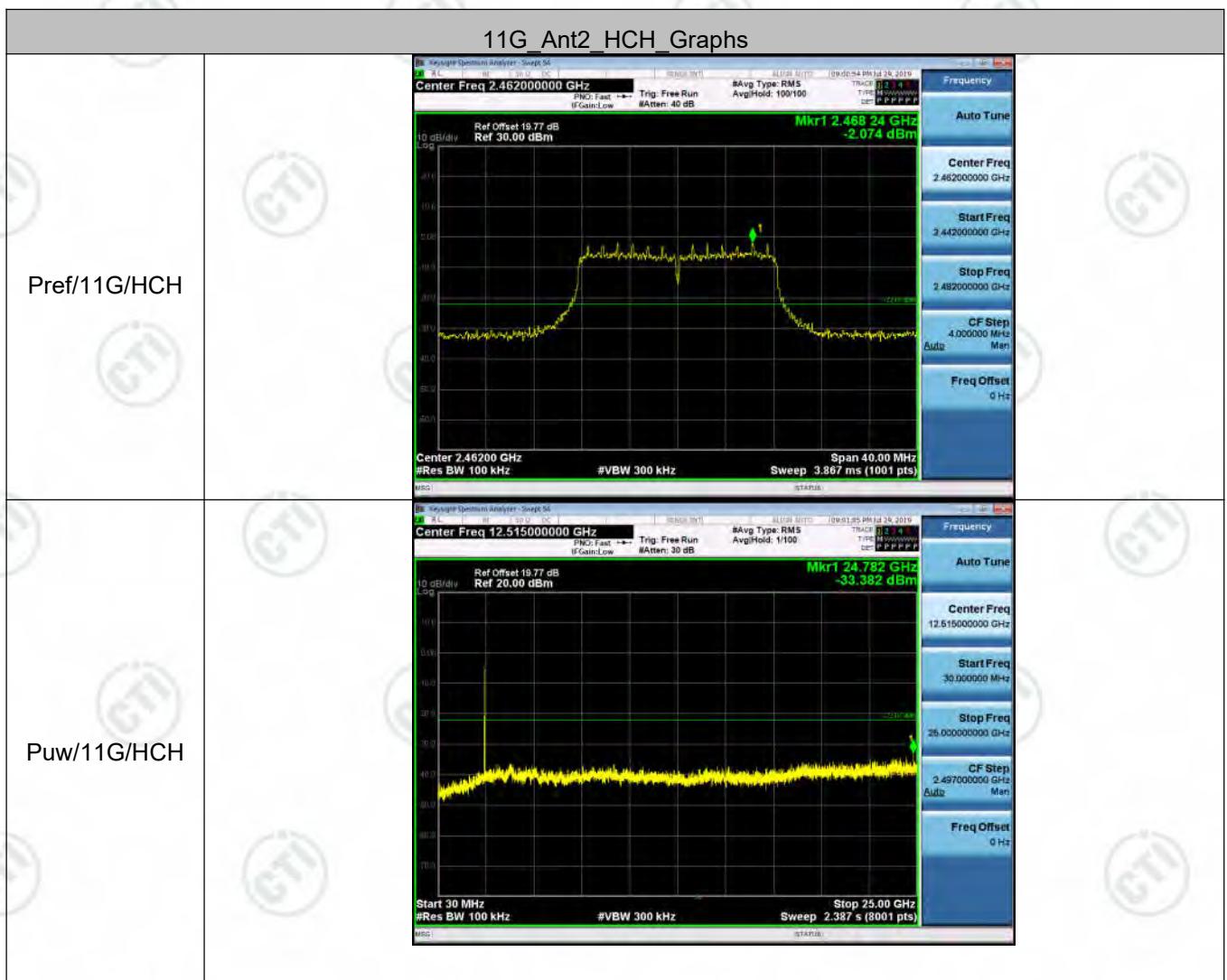


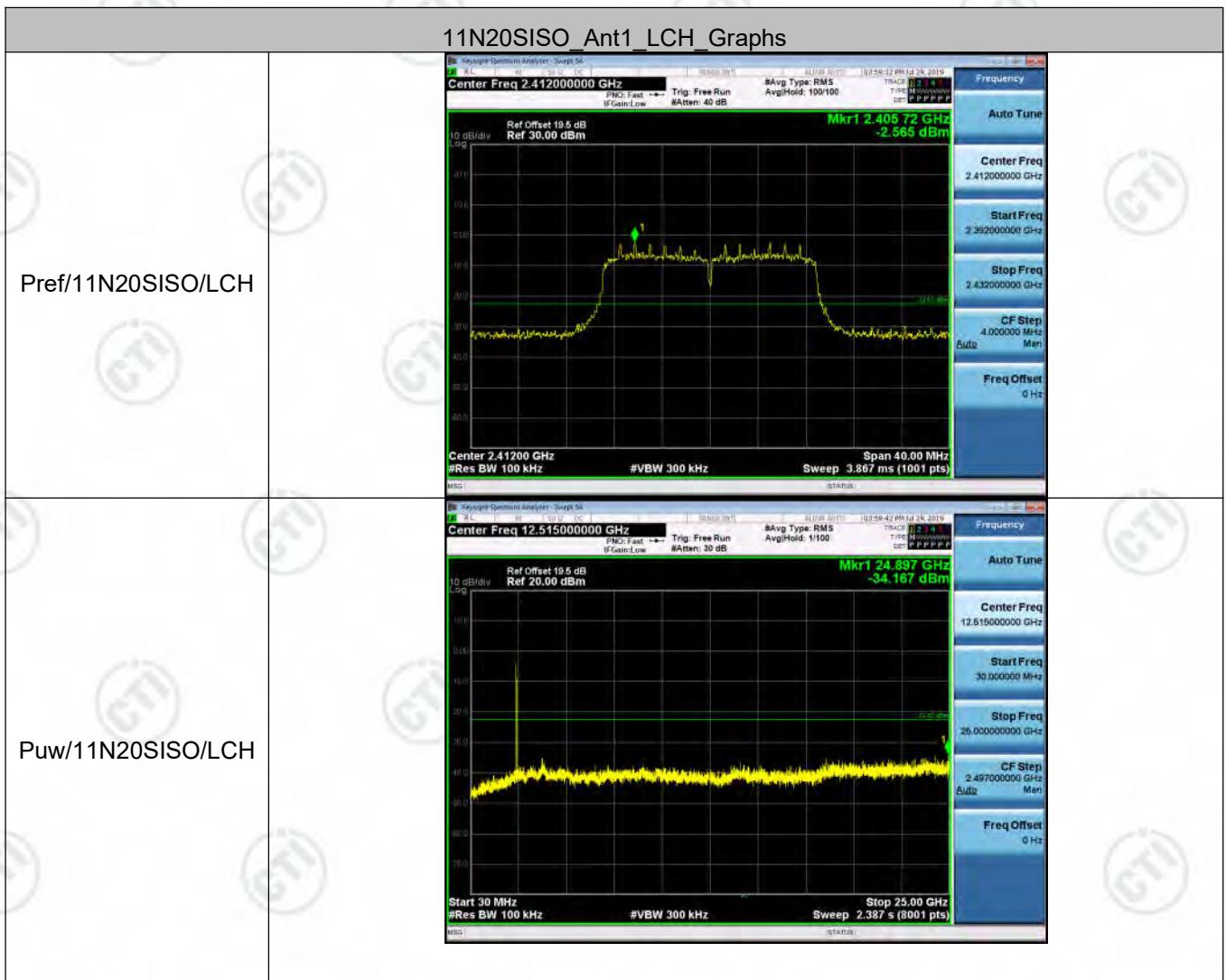


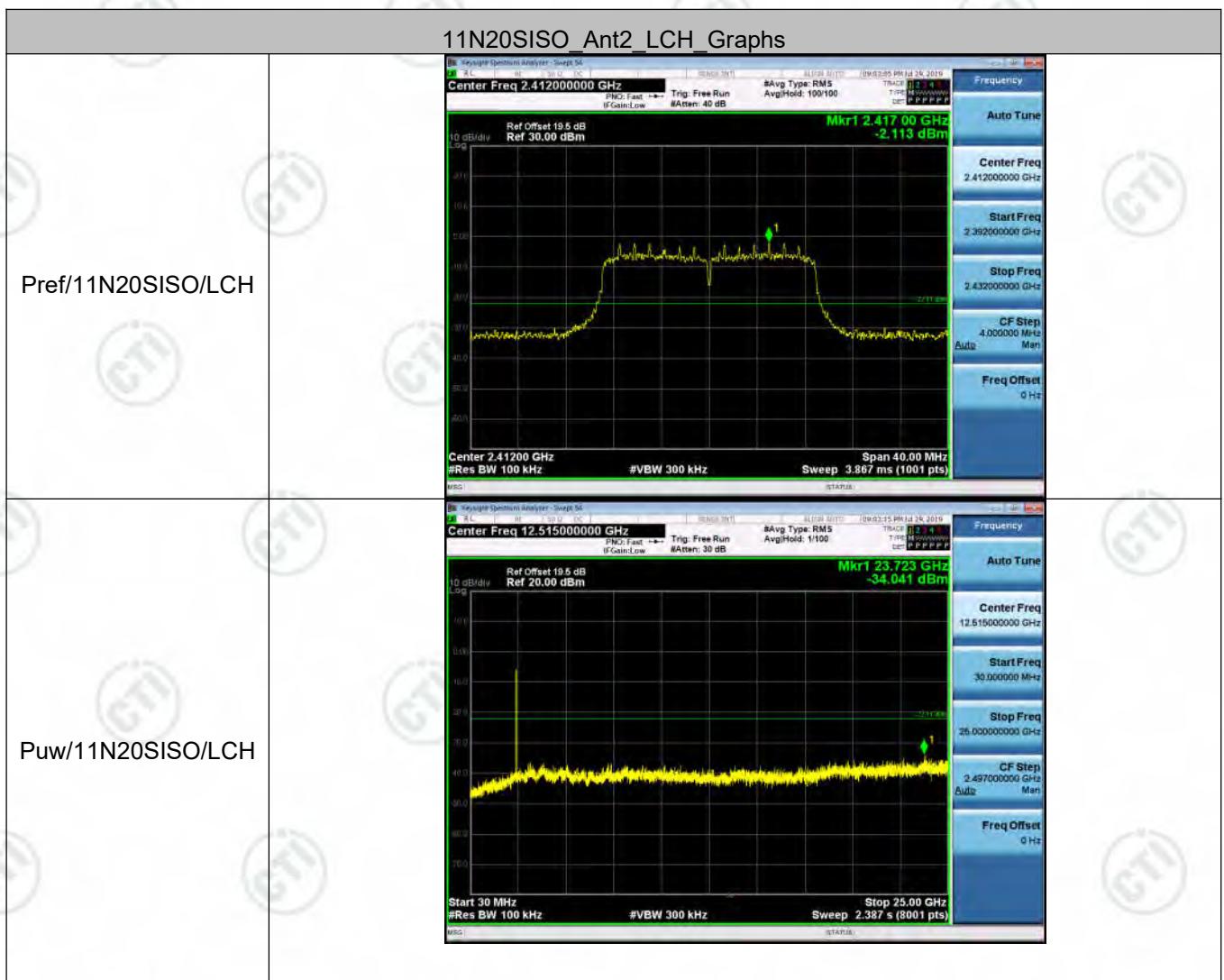


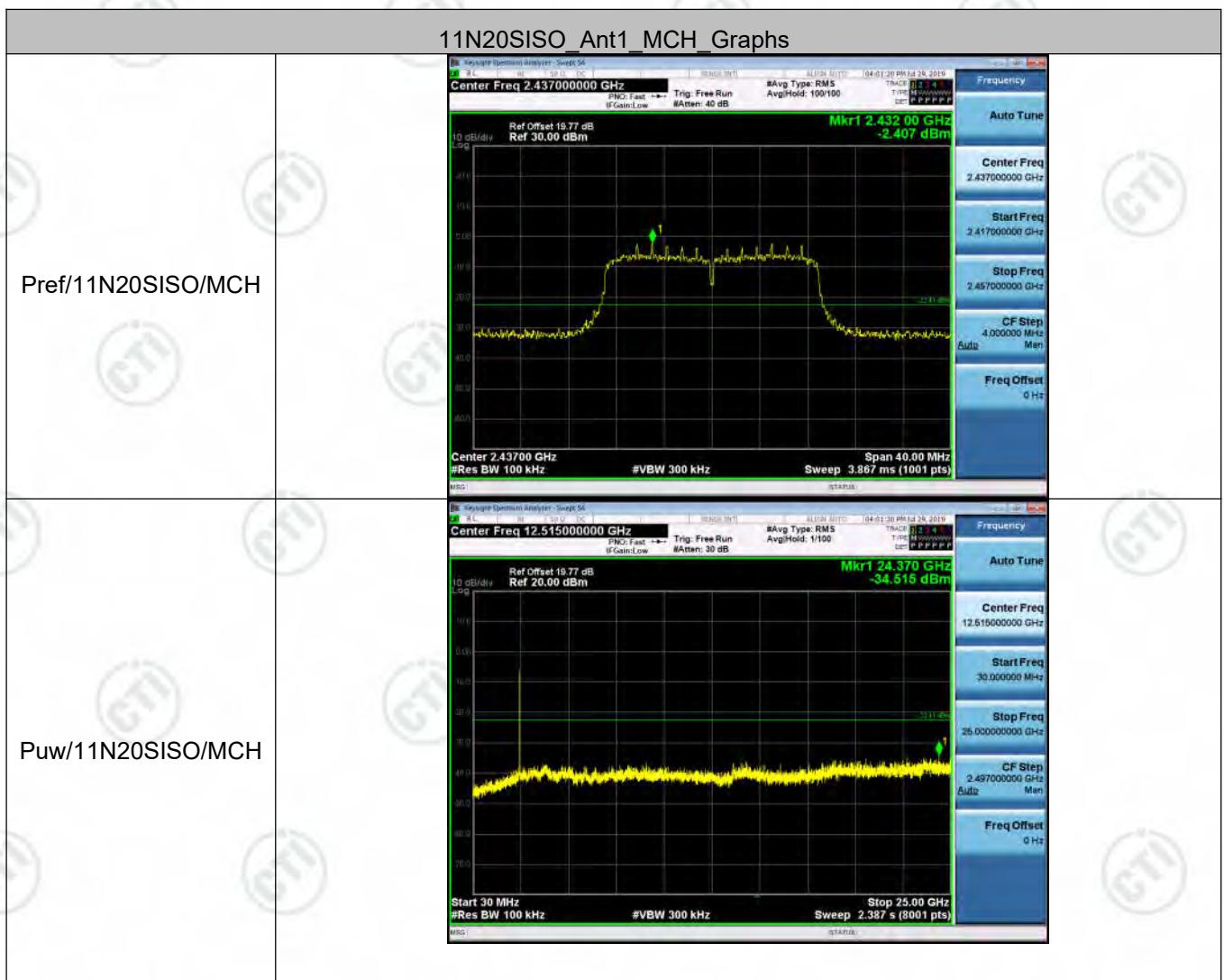


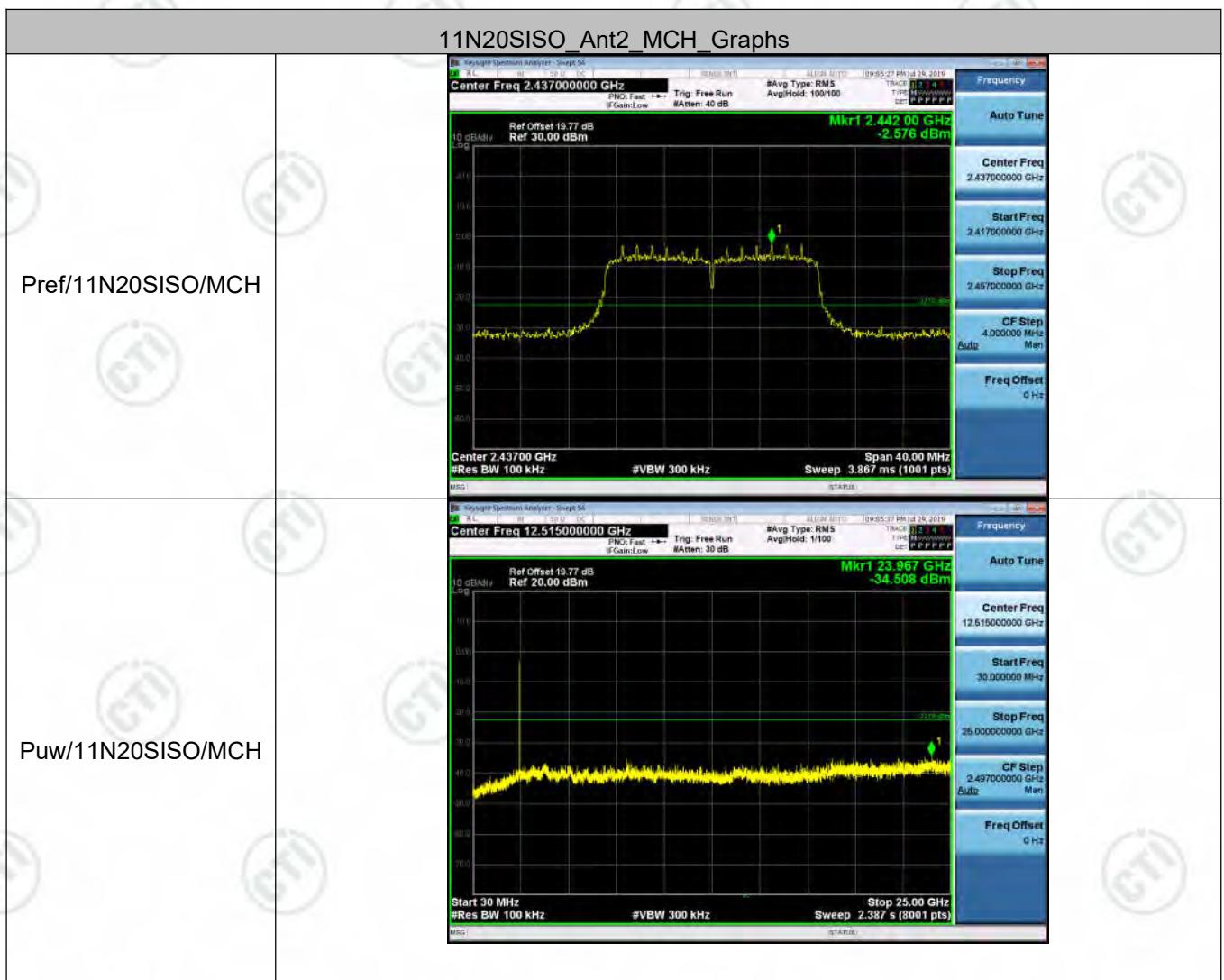


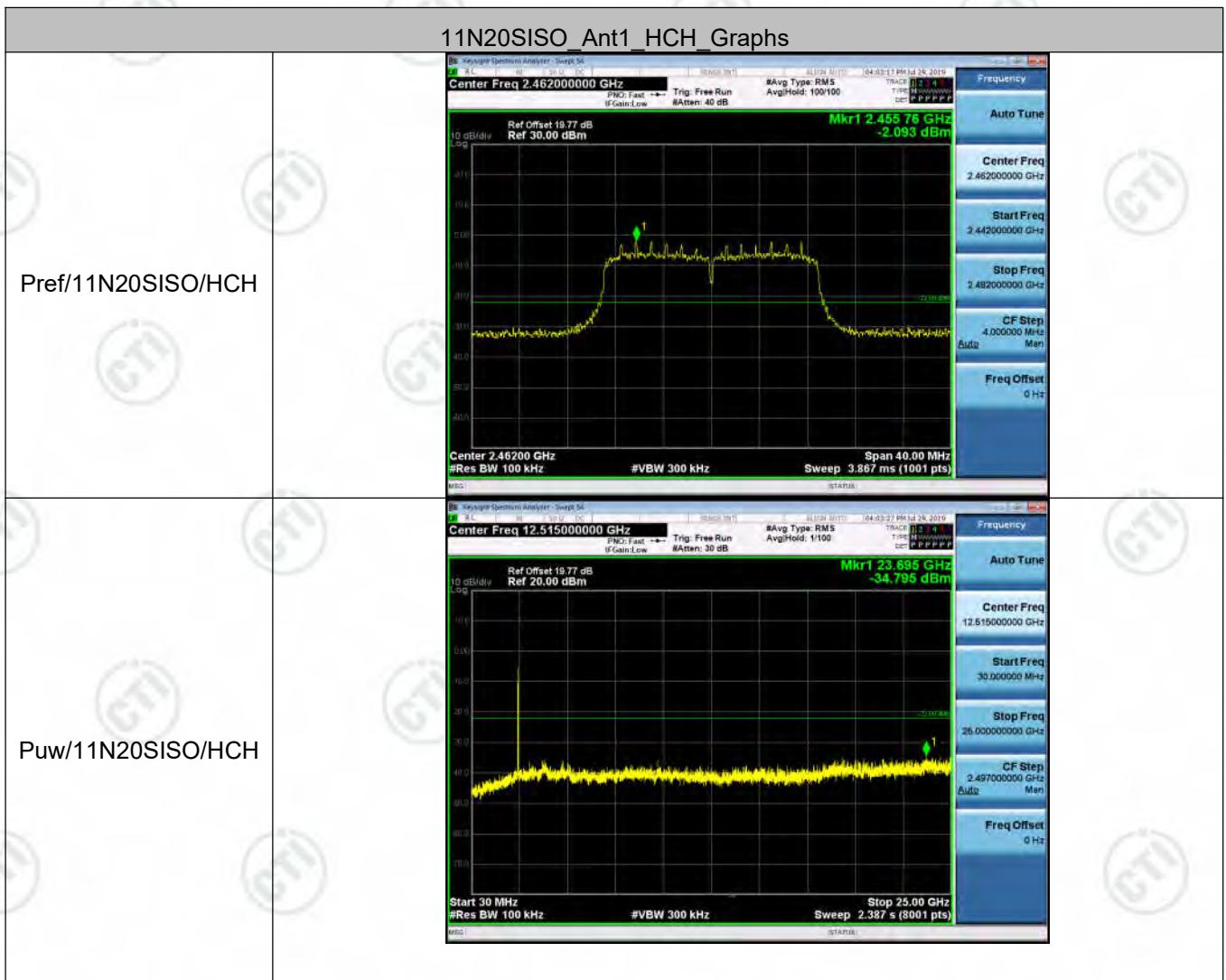


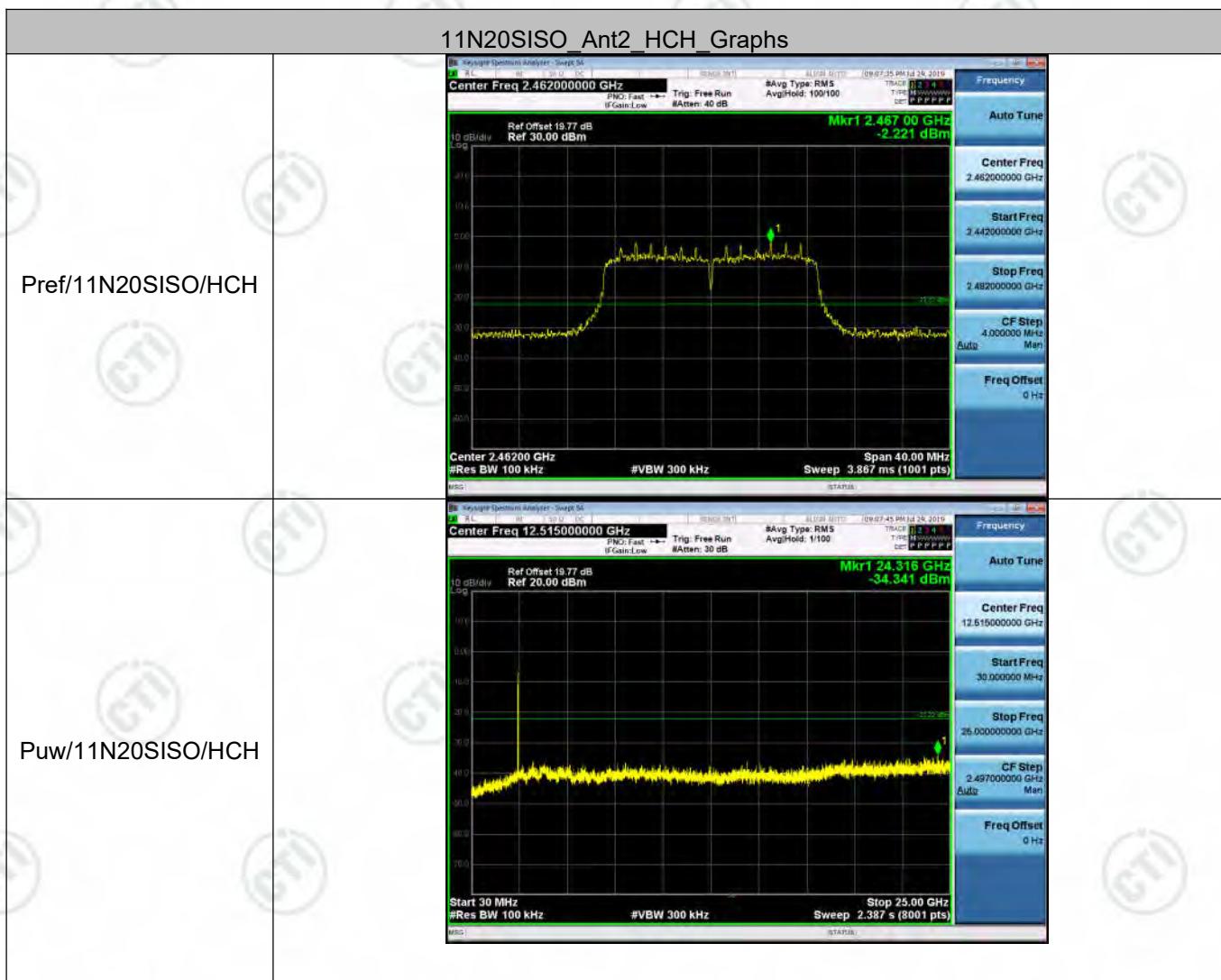


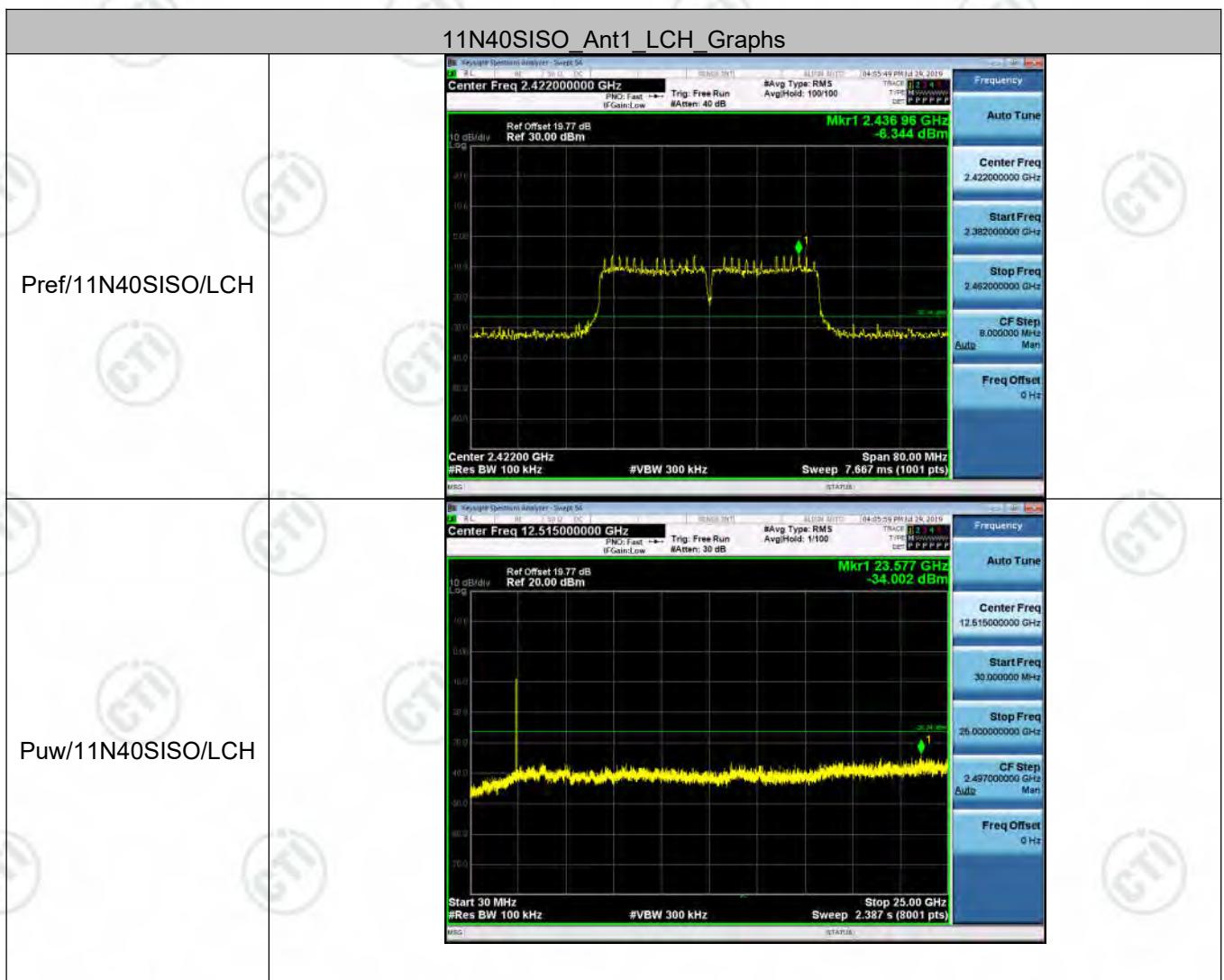


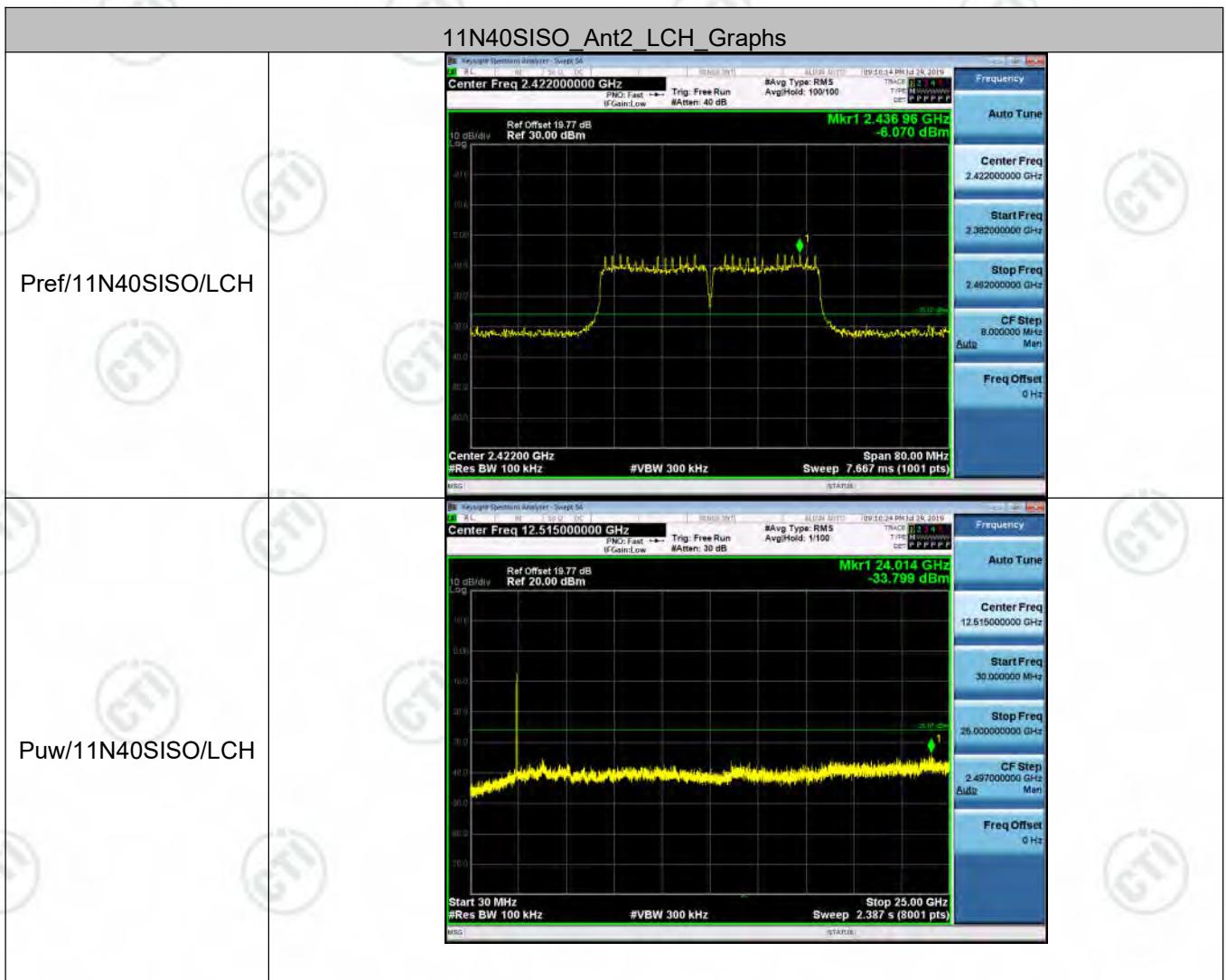


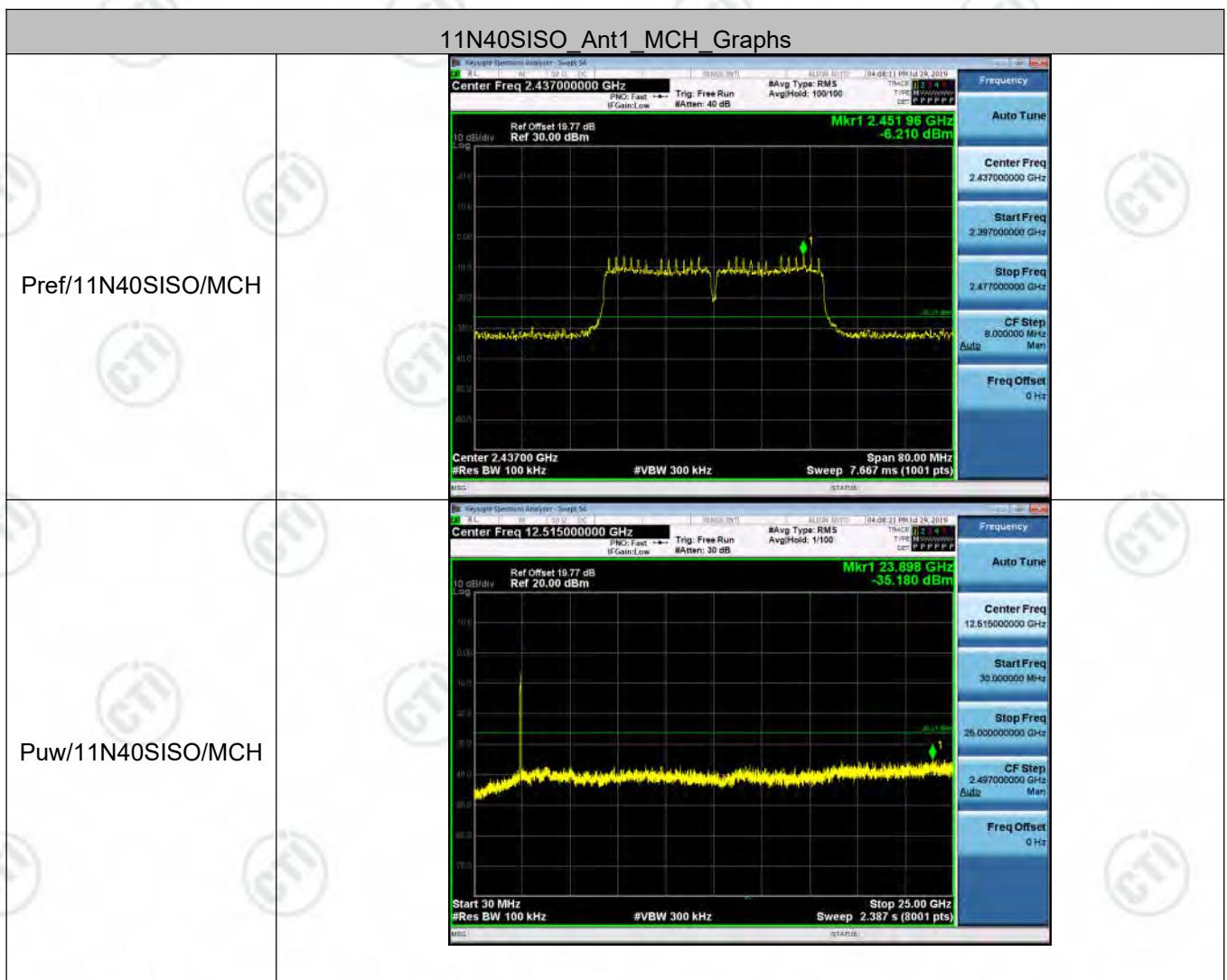


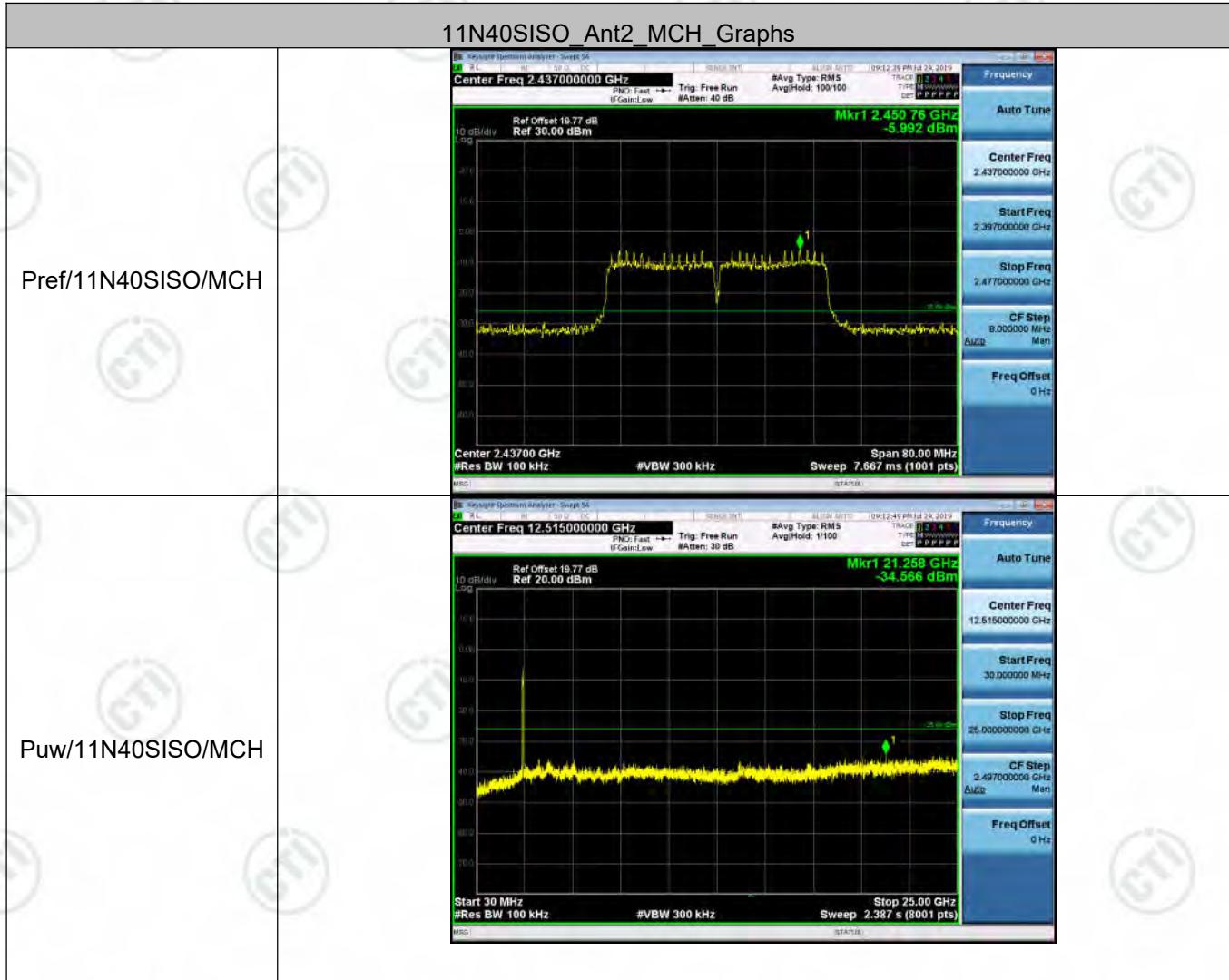


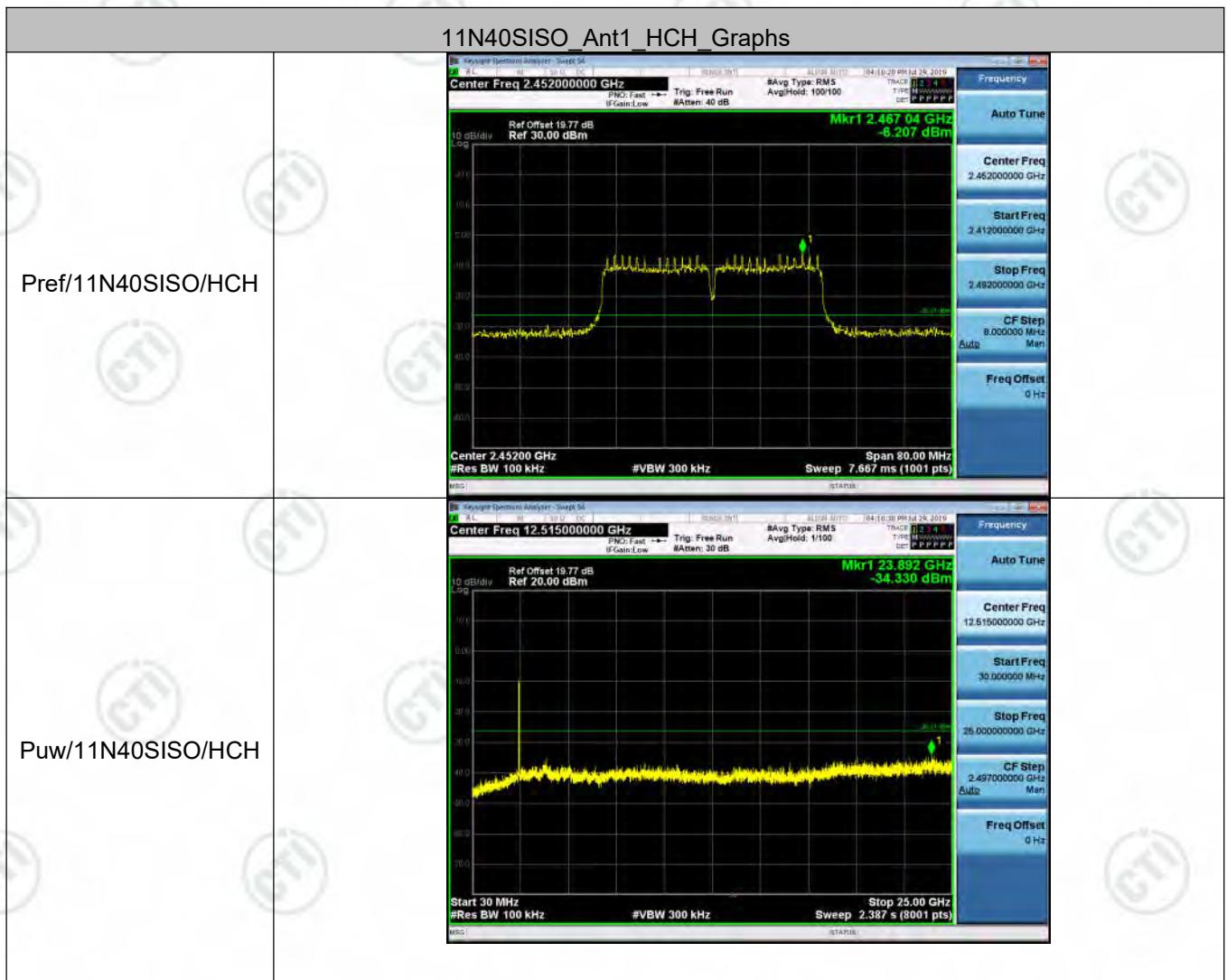


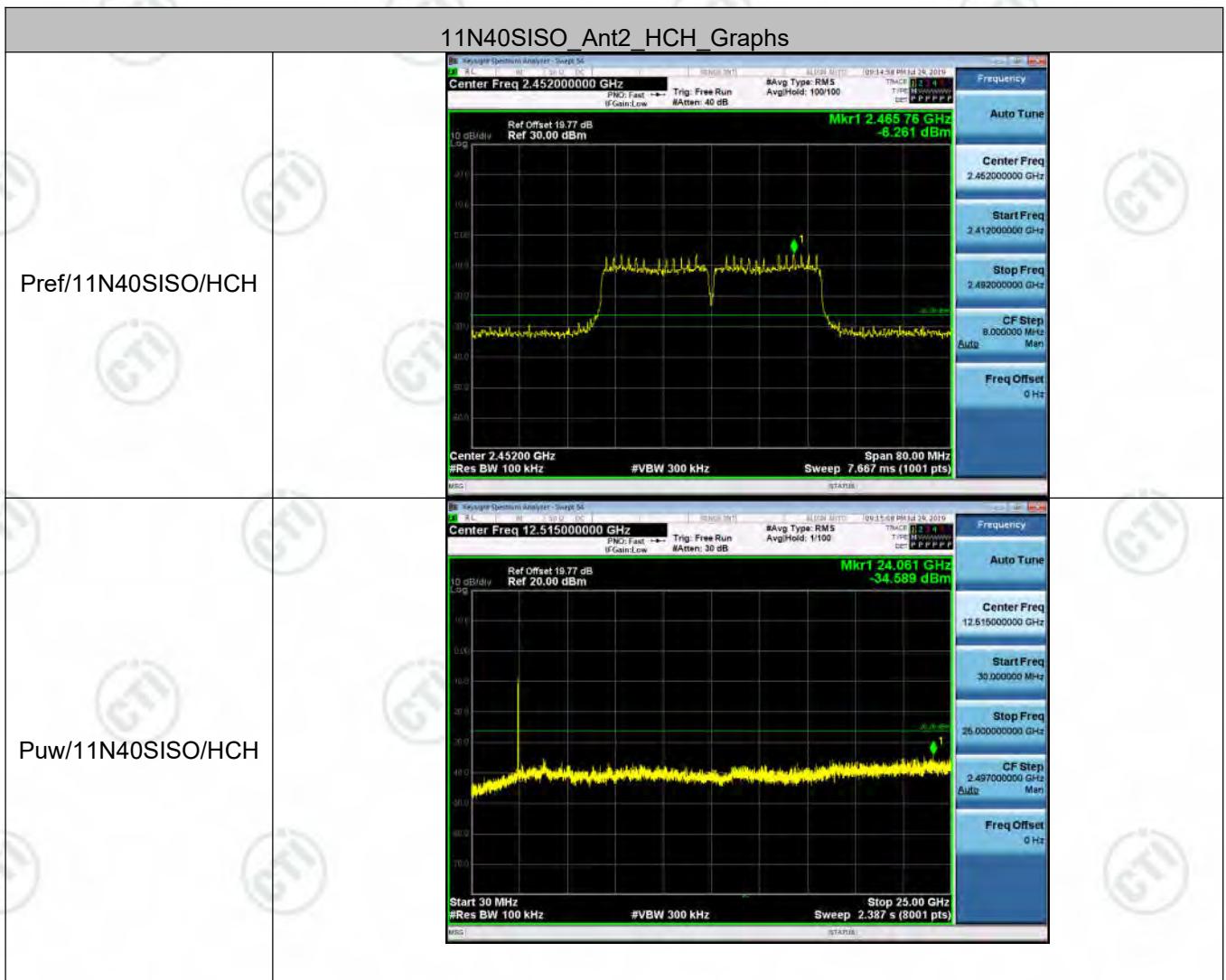












Appendix E): Power Spectral Density

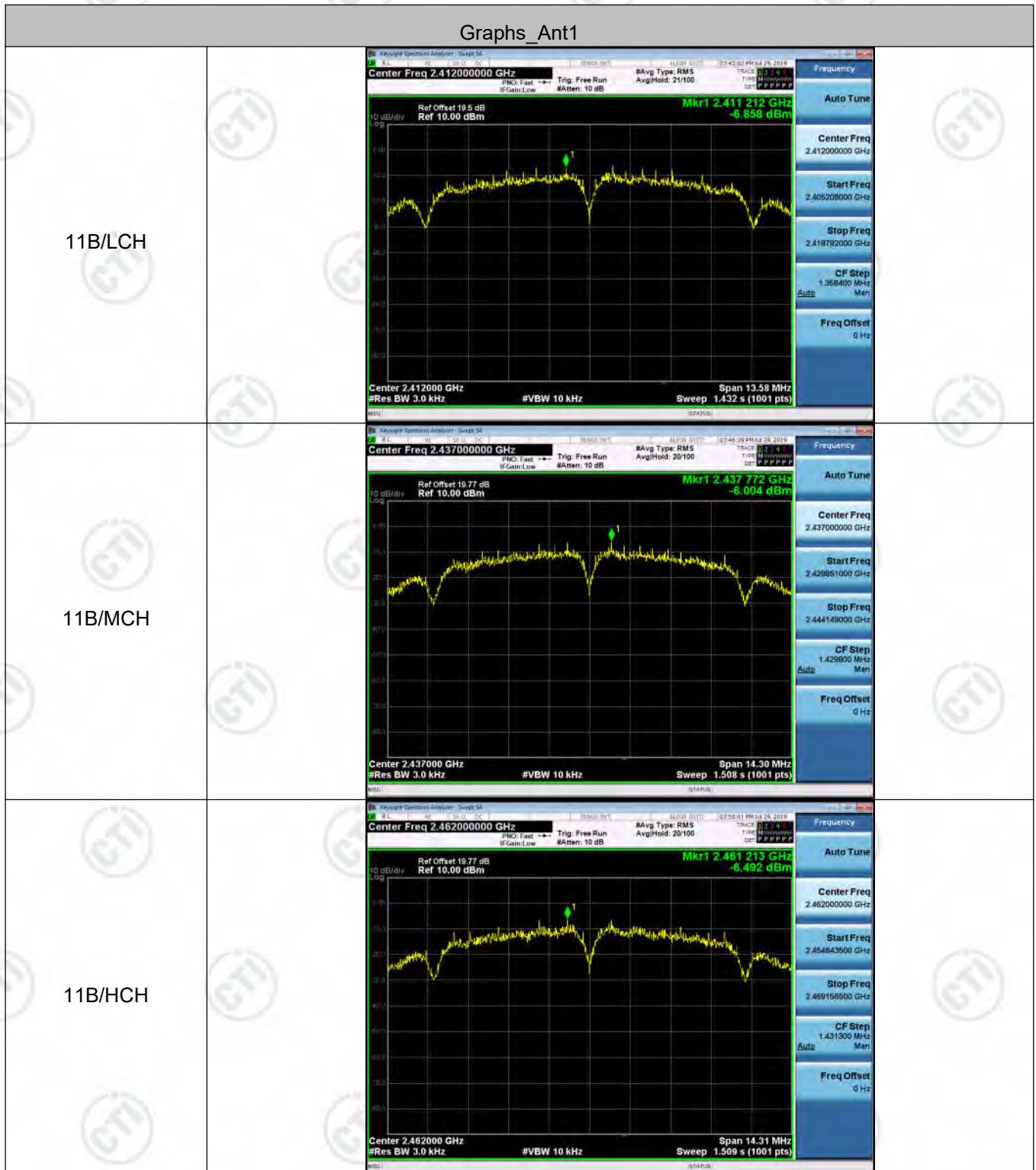
Result Table

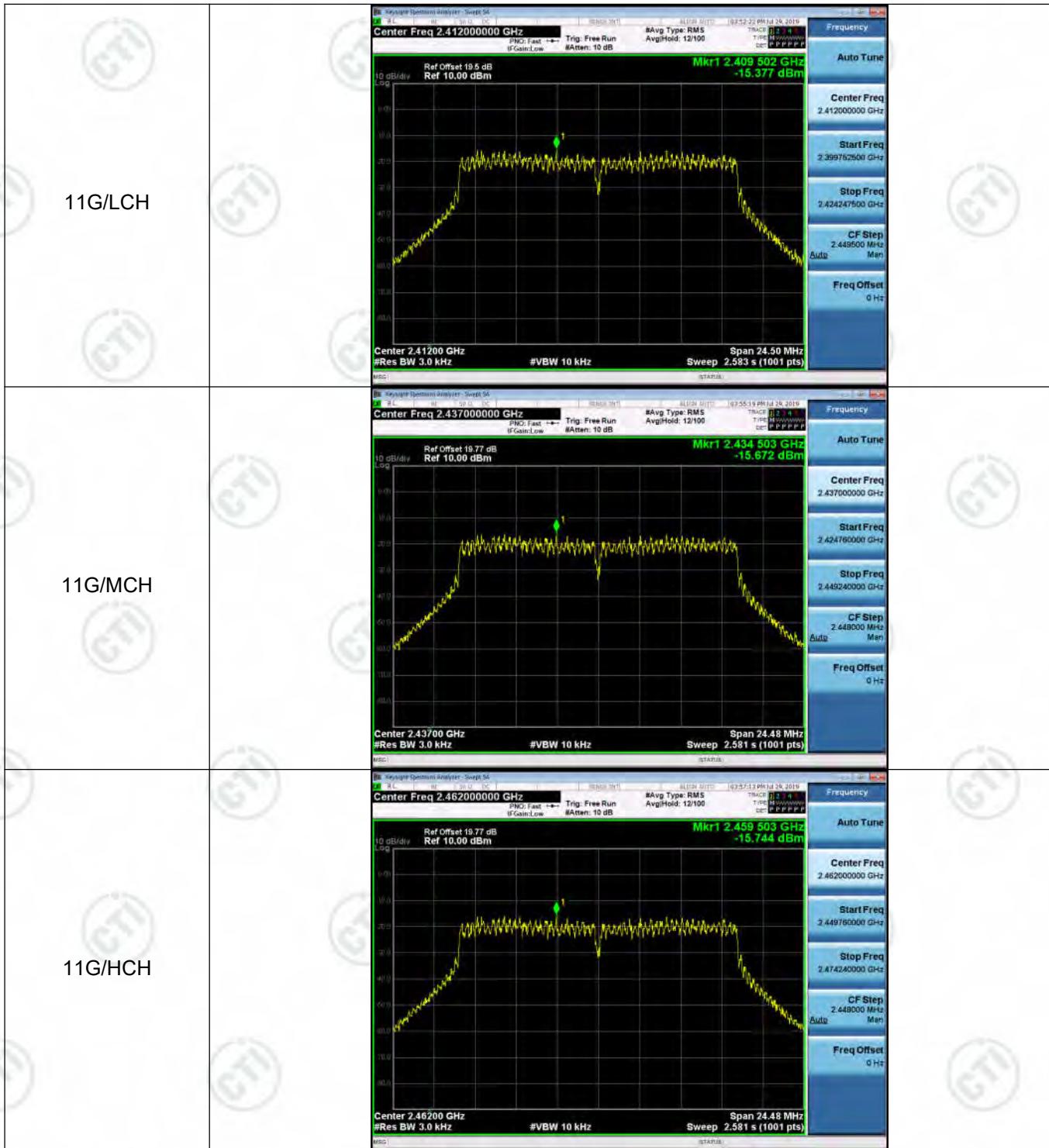
Mode	Antenna	Channel	Power Spectral Density [dBm]	Verdict
11B	Ant1	LCH	-6.858	PASS
11B	Ant2	LCH	-8.613	PASS
11B	Ant1	MCH	-6.004	PASS
11B	Ant2	MCH	-8.103	PASS
11B	Ant1	HCH	-6.492	PASS
11B	Ant2	HCH	-8.547	PASS
11G	Ant1	LCH	-15.377	PASS
11G	Ant2	LCH	-16.454	PASS
11G	Ant1	MCH	-15.672	PASS
11G	Ant2	MCH	-15.384	PASS
11G	Ant1	HCH	-15.744	PASS
11G	Ant2	HCH	-15.671	PASS
11N20SISO	Ant1	LCH	-16.586	PASS
11N20SISO	Ant2	LCH	-16.532	PASS
11N20SISO	Ant1	MCH	-16.033	PASS
11N20SISO	Ant2	MCH	-16.395	PASS
11N20SISO	Ant1	HCH	-15.445	PASS
11N20SISO	Ant2	HCH	-16.488	PASS
11N20MIMO	Ant1	LCH	-20.839	PASS
11N20MIMO	Ant2	LCH	-20.948	PASS
11N20MIMO	Ant1+2	LCH	-17.88	PASS
11N20MIMO	Ant1	MCH	-21.016	PASS
11N20MIMO	Ant2	MCH	-20.487	PASS
11N20MIMO	Ant1+2	MCH	-17.73	PASS
11N20MIMO	Ant1	HCH	-20.029	PASS
11N20MIMO	Ant2	HCH	-20.612	PASS
11N20MIMO	Ant1+2	HCH	-17.30	PASS
11N40SISO	Ant1	LCH	-20.351	PASS
11N40SISO	Ant2	LCH	-20.111	PASS
11N40SISO	Ant1	MCH	-20.644	PASS
11N40SISO	Ant2	MCH	-19.955	PASS

11N40SISO	Ant1	HCH	-20.449	PASS
11N40SISO	Ant2	HCH	-20.146	PASS
11N40MIMO	Ant1	LCH	-24.346	PASS
11N40MIMO	Ant2	LCH	-23.746	PASS
11N40MIMO	Ant1+2	LCH	-21.03	PASS
11N40MIMO	Ant1	MCH	-25.231	PASS
11N40MIMO	Ant2	MCH	-24.103	PASS
11N40MIMO	Ant1+2	MCH	-21.62	PASS
11N40MIMO	Ant1	HCH	-24.037	PASS
11N40MIMO	Ant2	HCH	-23.795	PASS
11N40MIMO	Ant1+2	HCH	-20.90	PASS

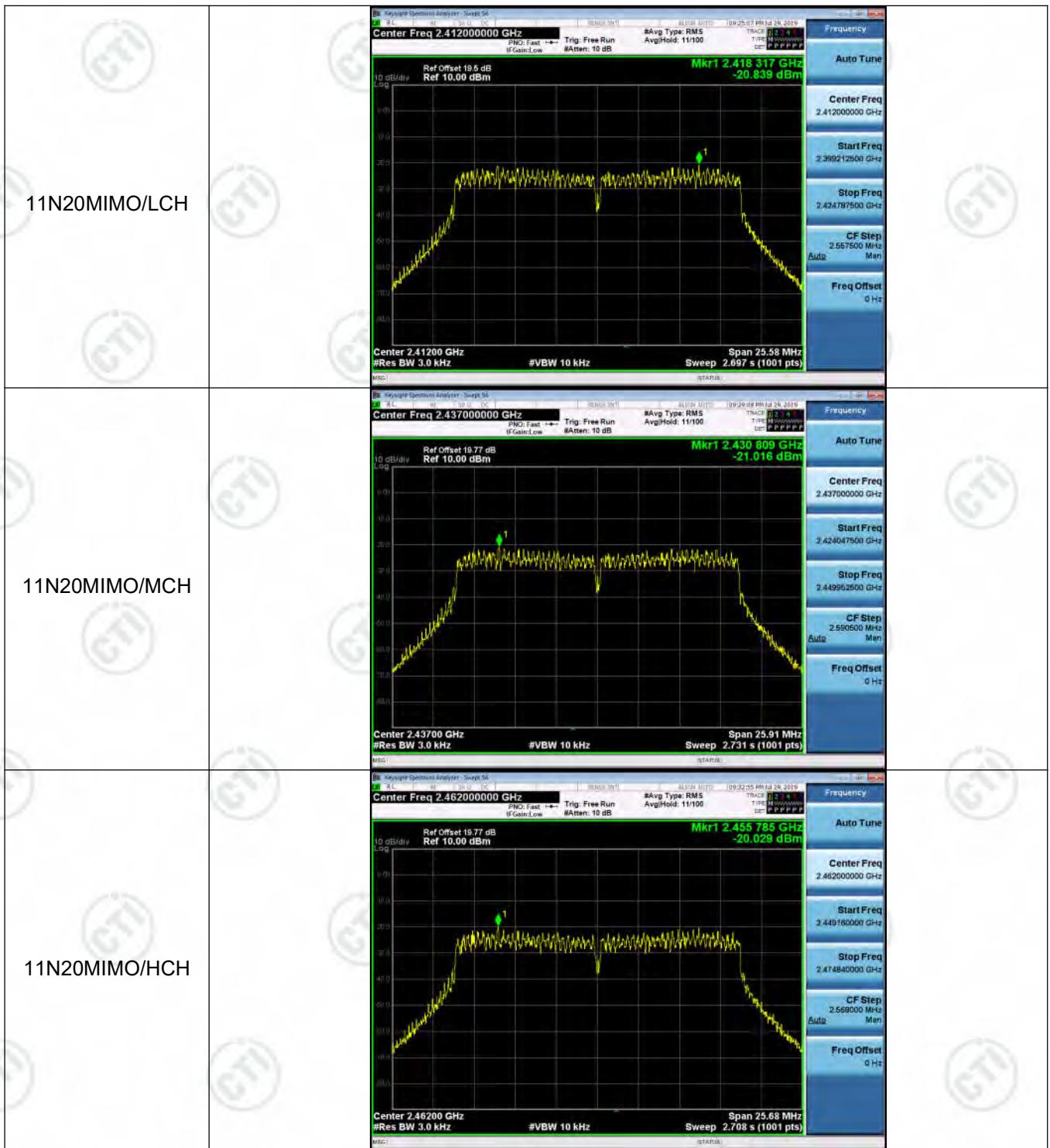


Test Graph

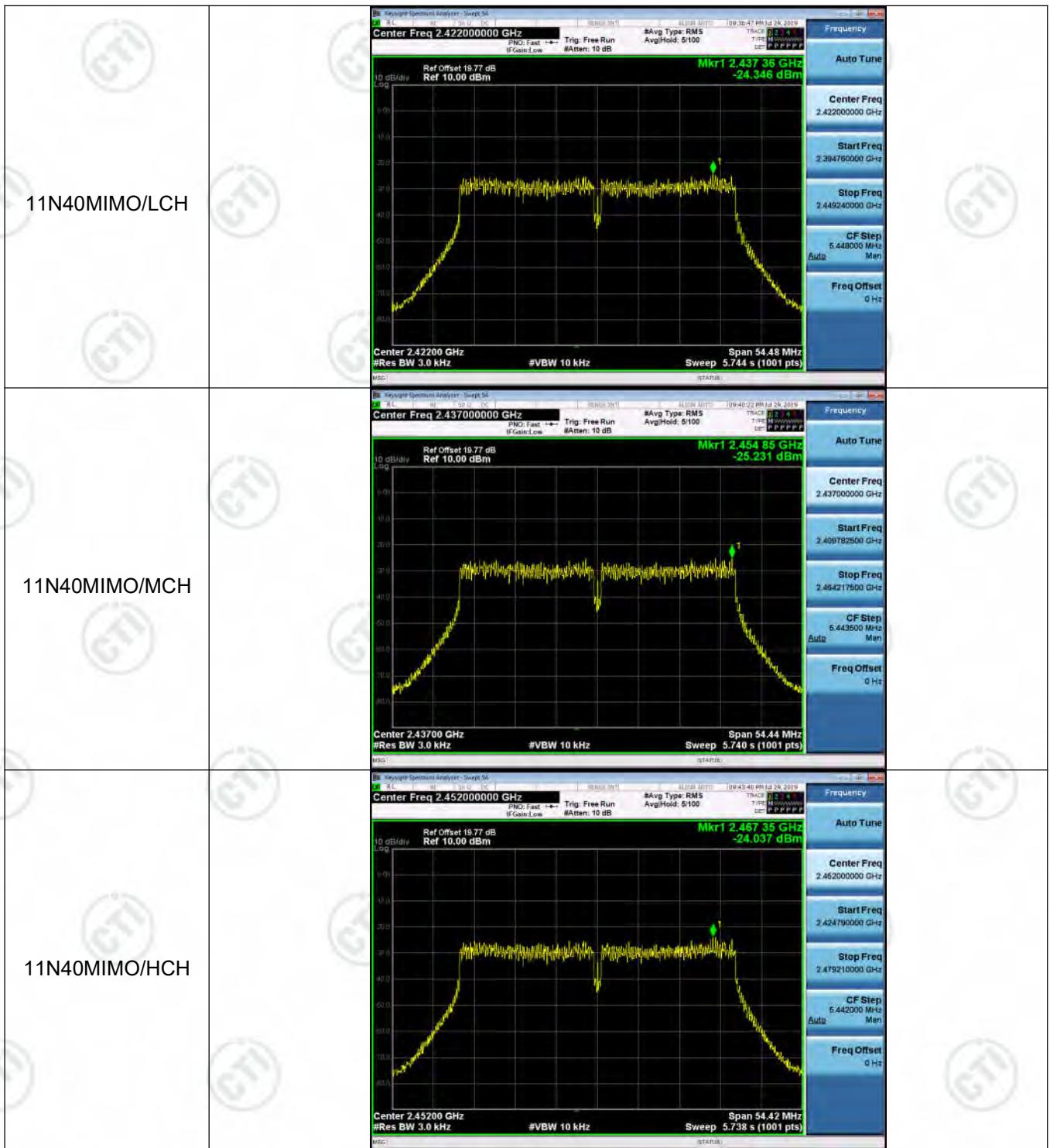








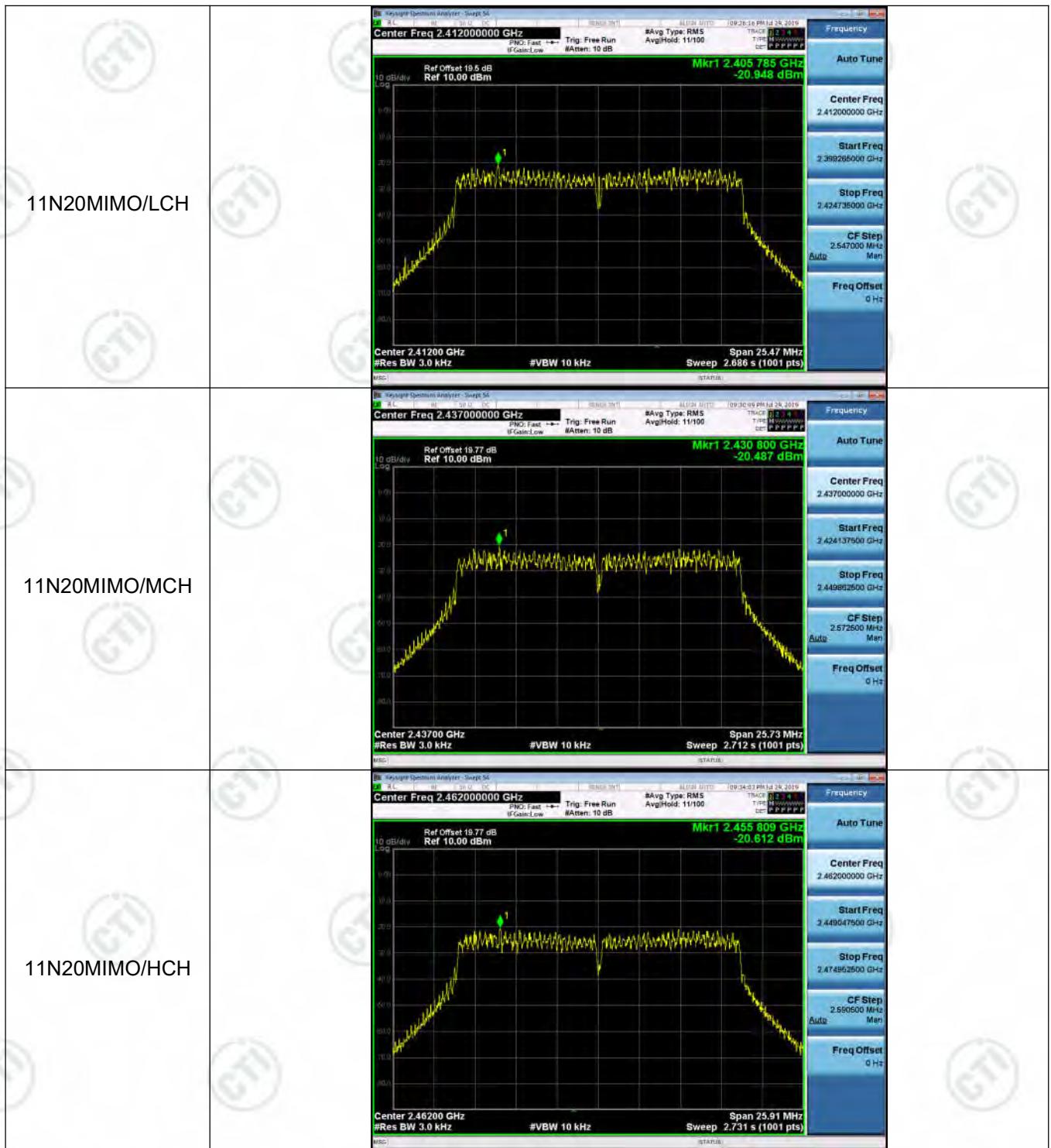




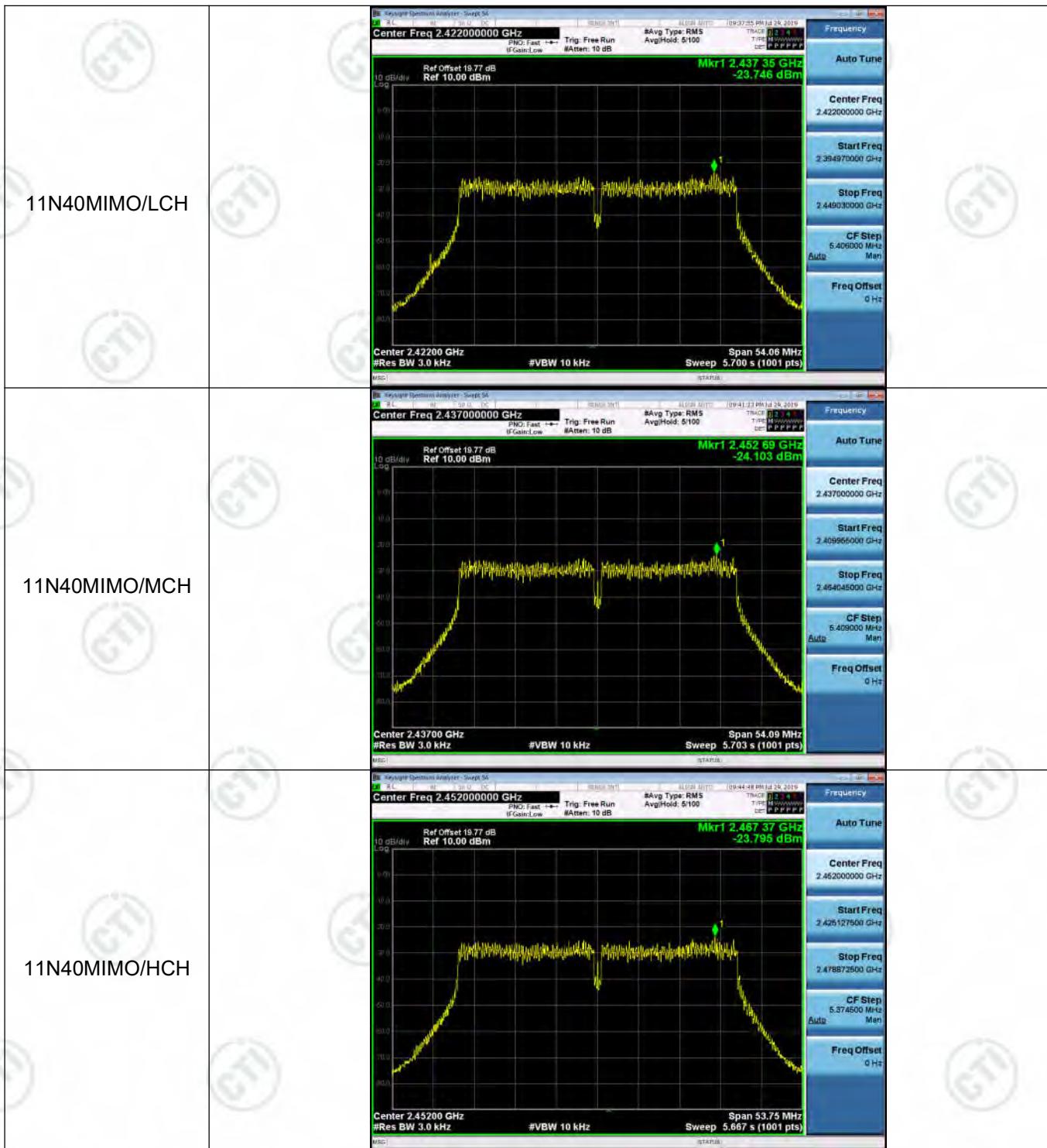












Appendix F): Antenna Requirement

15.203 requirement:

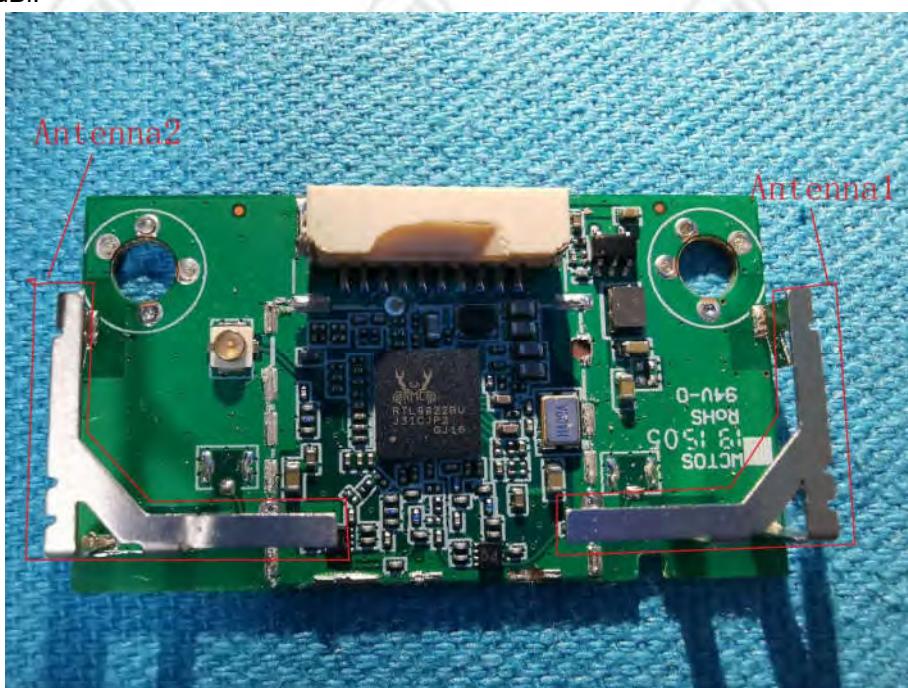
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit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

15.247(b) (4) requirement:

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

EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 2.94dBi.



Appendix G): AC Power Line Conducted Emission

Test Procedure:	<p>Test frequency range :150KHz-30MHz</p> <p>1)The mains terminal disturbance voltage test was conducted in a shielded room.</p> <p>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.</p> <p>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,</p> <p>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.</p> <p>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.</p>														
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> <p>* The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.</p> <p>NOTE : The lower limit is applicable at the transition frequency</p>	Frequency range (MHz)	Limit (dB μ V)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dB μ V)														
	Quasi-peak	Average													
0.15-0.5	66 to 56*	56 to 46*													
0.5-5	56	46													
5-30	60	50													

Measurement Data

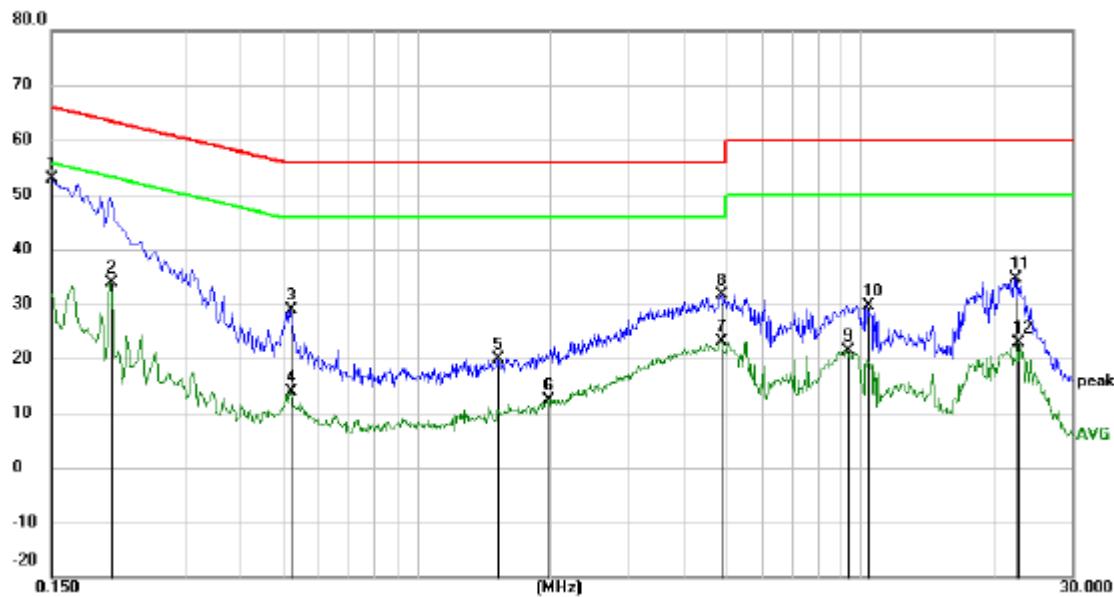
An initial pre-scan was performed on the live and neutral lines with peak detector.

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

Product : WIFI+BT Module
Temperature : 21°C

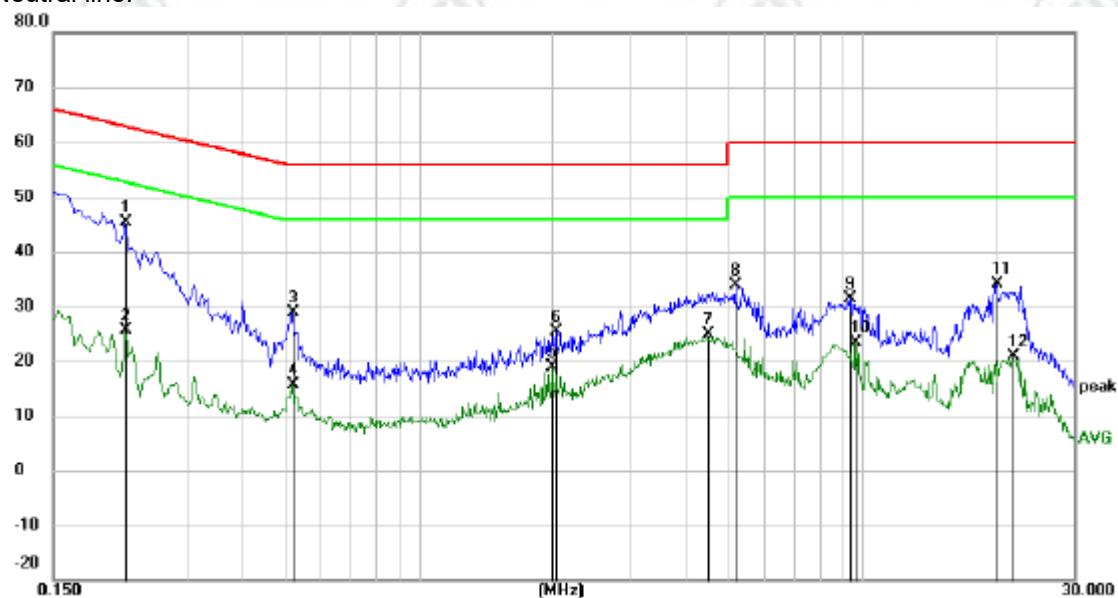
Model/Type reference : WCT0SR2311
Humidity : 51%

Live line:



No.	Mk.	Freq. MHz	Reading	Correct	Measure-	Limit dBuV	Margin dB	Detector	Comment
			Level dBuV	Factor dB	ment dBuV				
1	*	0.1500	43.02	9.97	52.99	66.00	-13.01	peak	
2		0.2040	23.95	10.02	33.97	53.45	-19.48	AVG	
3		0.5190	18.82	10.02	28.84	56.00	-27.16	peak	
4		0.5190	3.89	10.02	13.91	46.00	-32.09	AVG	
5		1.5270	10.07	9.87	19.94	56.00	-36.06	peak	
6		1.9725	2.48	9.83	12.31	46.00	-33.69	AVG	
7		4.8345	13.34	9.83	23.17	46.00	-22.83	AVG	
8		4.8705	21.68	9.83	31.51	56.00	-24.49	peak	
9		9.3075	11.35	9.93	21.28	50.00	-28.72	AVG	
10		10.3425	19.63	9.96	29.59	60.00	-30.41	peak	
11		22.2314	24.64	9.94	34.58	60.00	-25.42	peak	
12		22.5960	12.83	9.94	22.77	50.00	-27.23	AVG	

Neutral line:



No. Mk.	Freq. MHz	Reading Level	Correct Factor	Measure- ment	Limit	Margin	Comment
		dBuV	dB	dBuV	dBuV	dB	
1 *	0.2175	35.30	10.03	45.33	62.91	-17.58	peak
2	0.2175	15.61	10.03	25.64	52.91	-27.27	Avg
3	0.5190	18.74	10.02	28.76	56.00	-27.24	peak
4	0.5190	5.64	10.02	15.66	46.00	-30.34	Avg
5	1.9995	8.98	9.83	18.81	46.00	-27.19	Avg
6	2.0400	15.52	9.83	25.35	56.00	-30.65	peak
7	4.4880	14.96	9.83	24.79	46.00	-21.21	Avg
8	5.1765	23.96	9.83	33.79	60.00	-26.21	peak
9	9.3569	21.43	9.94	31.37	60.00	-28.63	peak
10	9.6090	13.45	9.95	23.40	50.00	-26.60	Avg
11	19.9500	24.12	9.93	34.05	60.00	-25.95	peak
12	21.8265	10.95	9.94	20.89	50.00	-29.11	Avg

Notes:

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

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

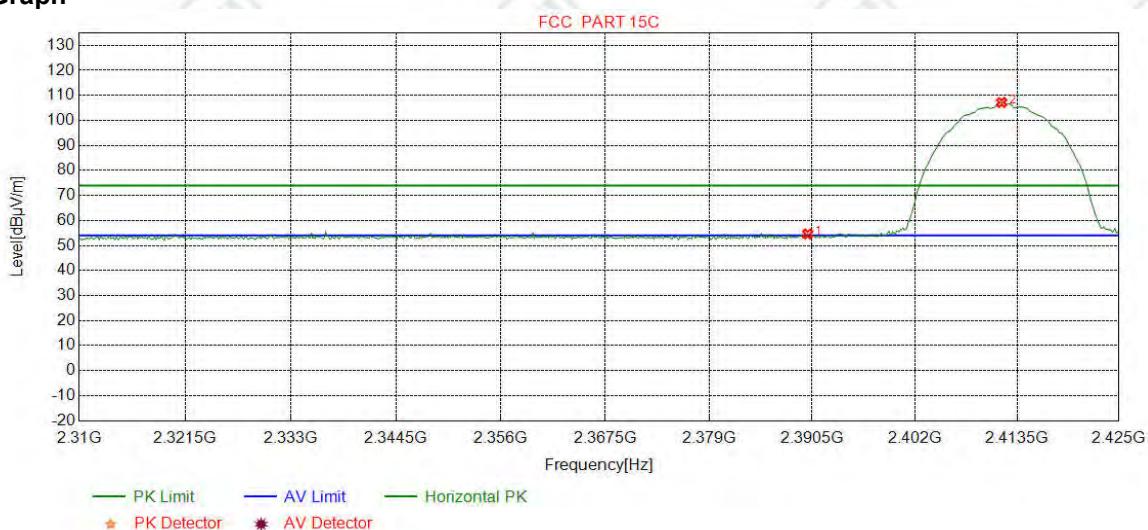
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Test Procedure:	Below 1GHz test procedure as below: Test method Refer as KDB 558074 D01				
	<ol style="list-style-type: none"> The EUT was placed 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: <ol style="list-style-type: none"> 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 (dB μ V/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:

Antenna 1:

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

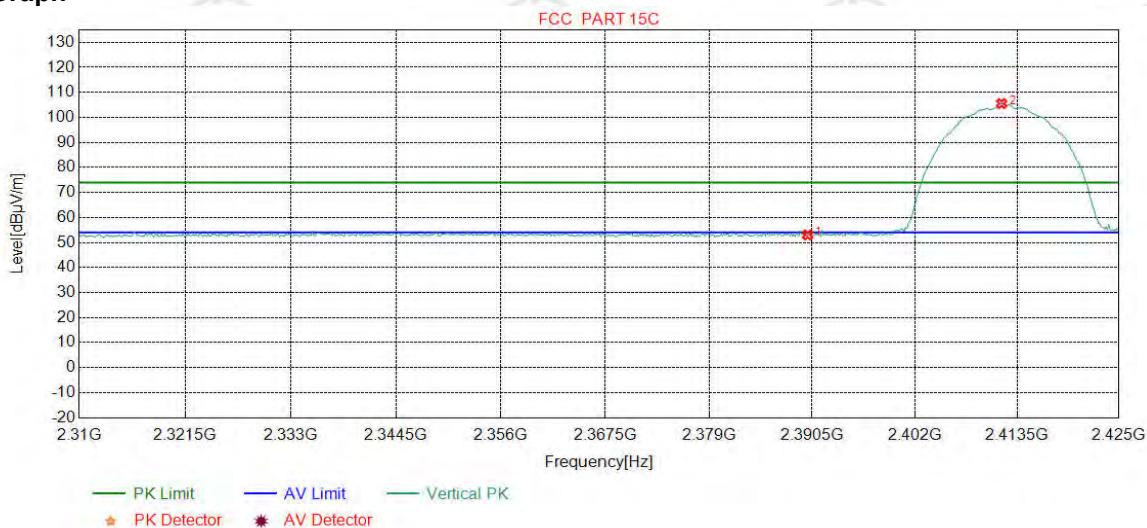
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	51.44	54.62	74.00	19.38	Pass	Horizontal
2	2411.7584	32.28	13.35	-42.43	103.98	107.18	74.00	-33.18	Pass	Horizontal

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

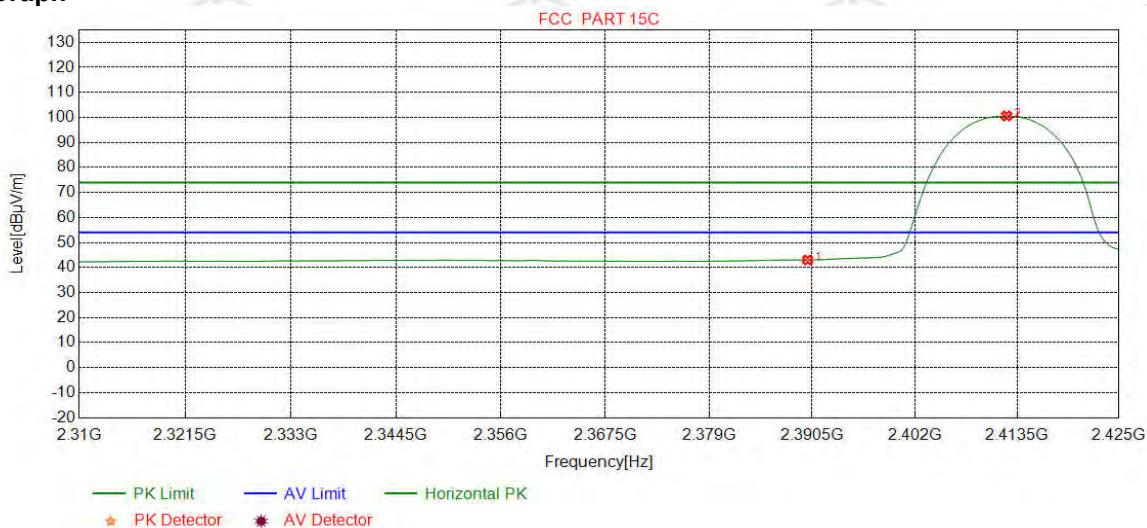
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	49.84	53.02	74.00	20.98	Pass	Vertical
2	2411.7584	32.28	13.35	-42.43	102.32	105.52	74.00	-31.52	Pass	Vertical

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

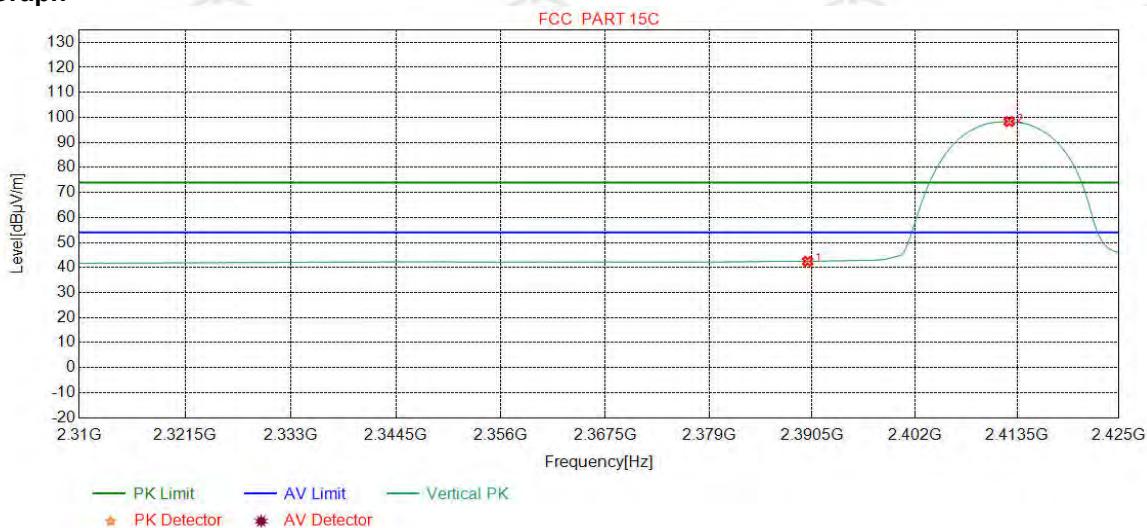
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	39.86	43.04	54.00	10.96	Pass	Horizontal
2	2412.3342	32.28	13.36	-42.43	97.36	100.57	54.00	-46.57	Pass	Horizontal

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

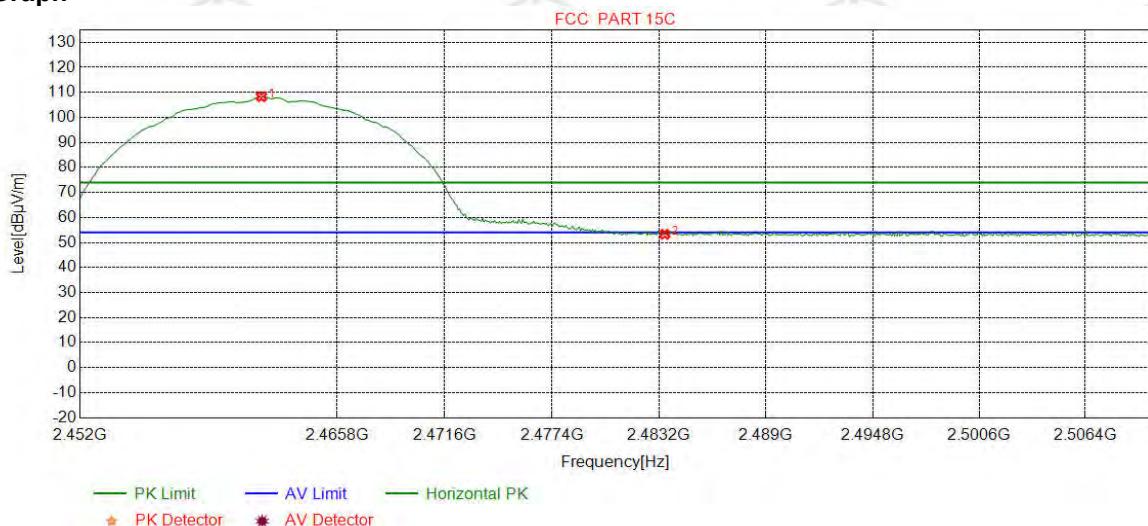
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	39.29	42.47	54.00	11.53	Pass	Vertical
2	2412.6220	32.28	13.36	-42.43	95.12	98.33	54.00	-44.33	Pass	Vertical

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

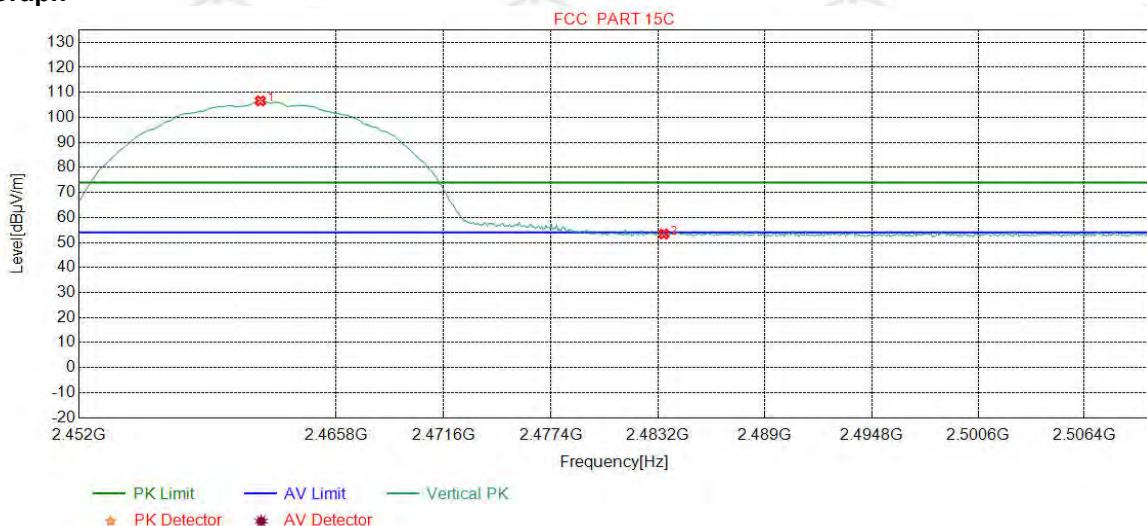
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2461.7272	32.35	13.48	-42.41	104.88	108.30	74.00	-34.30	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	49.91	53.27	74.00	20.73	Pass	Horizontal

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

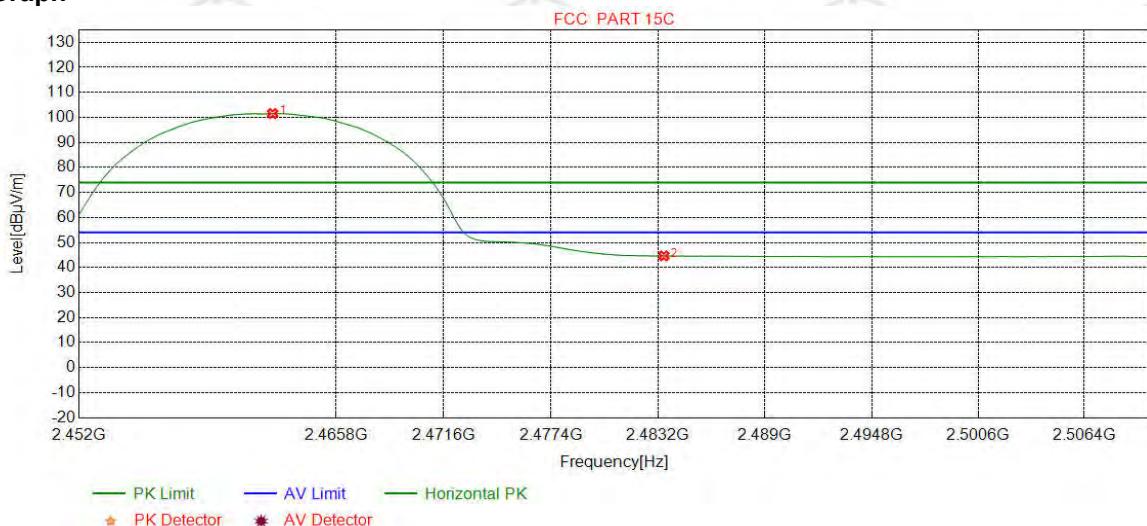
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2461.7272	32.35	13.48	-42.41	103.18	106.60	74.00	-32.60	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	50.03	53.39	74.00	20.61	Pass	Vertical

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

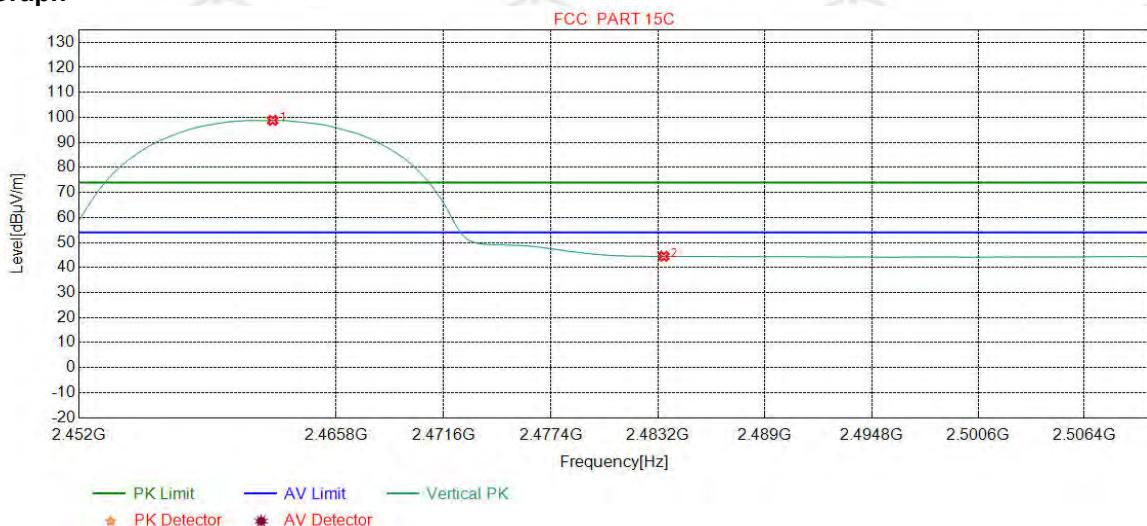
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2462.3805	32.35	13.47	-42.41	98.10	101.51	54.00	-47.51	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	41.28	44.64	54.00	9.36	Pass	Horizontal

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

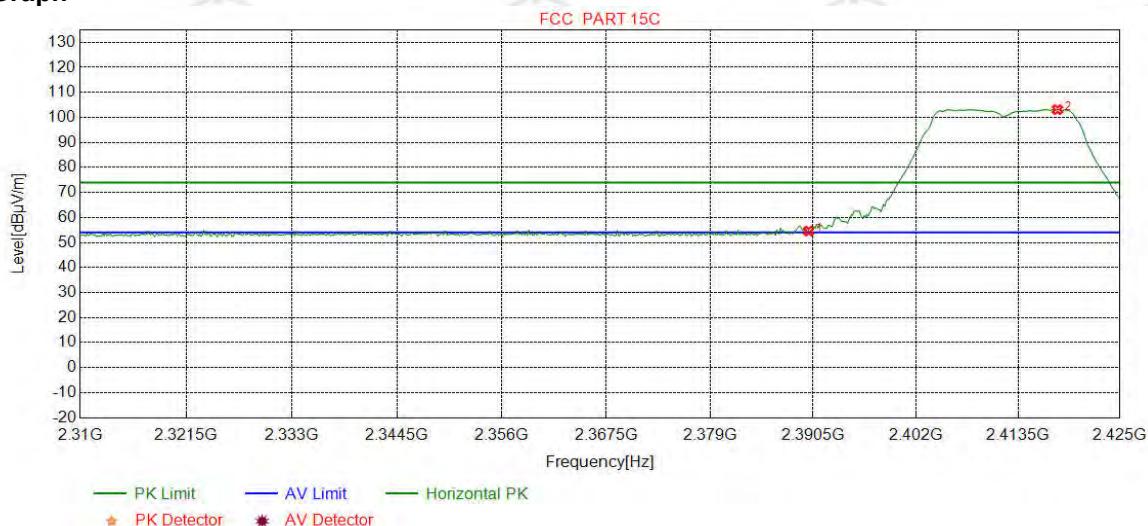
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2462.3805	32.35	13.47	-42.41	95.39	98.80	54.00	-44.80	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	41.12	44.48	54.00	9.52	Pass	Vertical

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

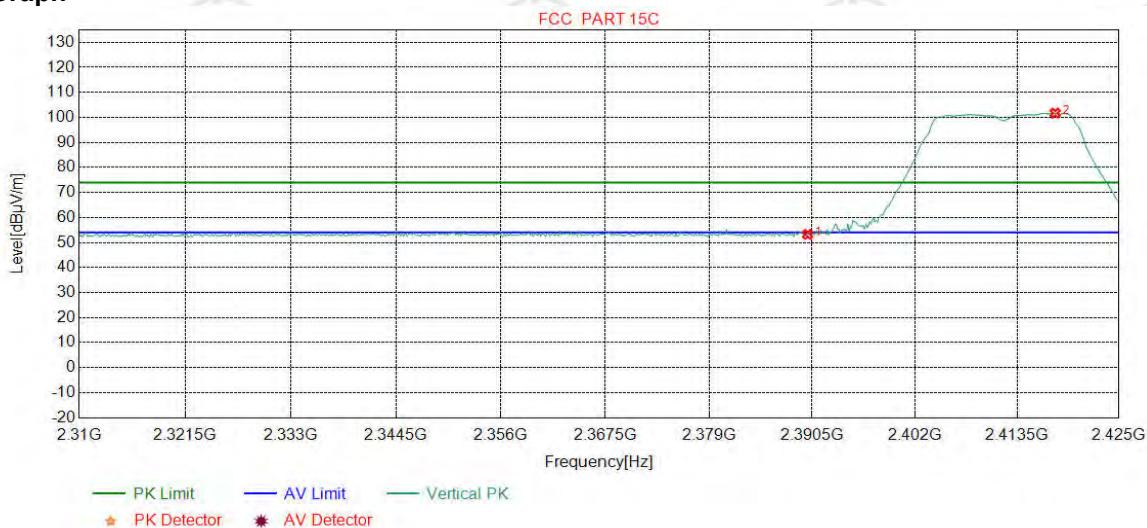
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	51.40	54.58	74.00	19.42	Pass	Horizontal
2	2417.9474	32.29	13.38	-42.43	99.87	103.11	74.00	-29.11	Pass	Horizontal

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

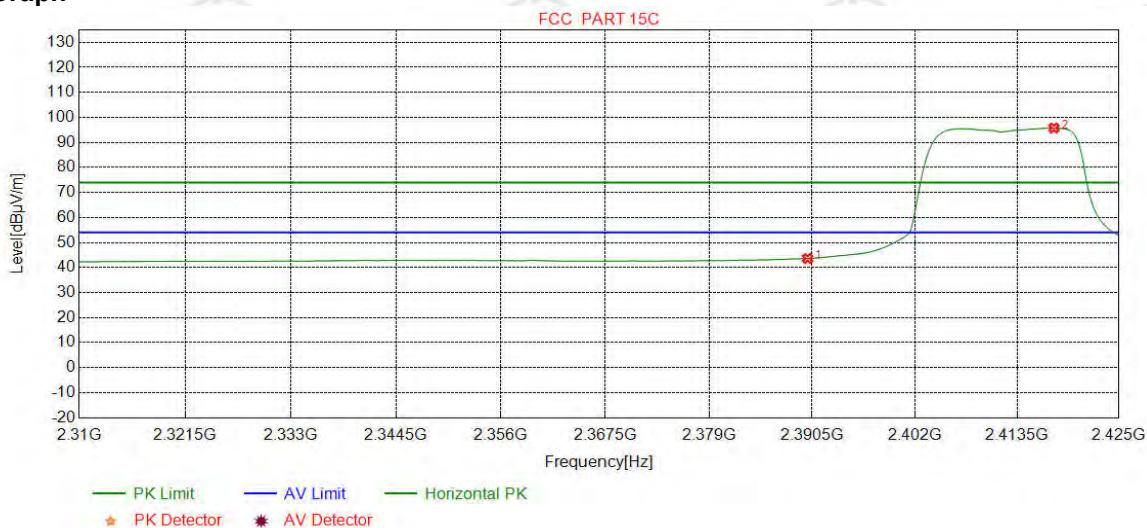
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	50.07	53.25	74.00	20.75	Pass	Vertical
2	2417.8035	32.28	13.38	-42.42	98.44	101.68	74.00	-27.68	Pass	Vertical

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

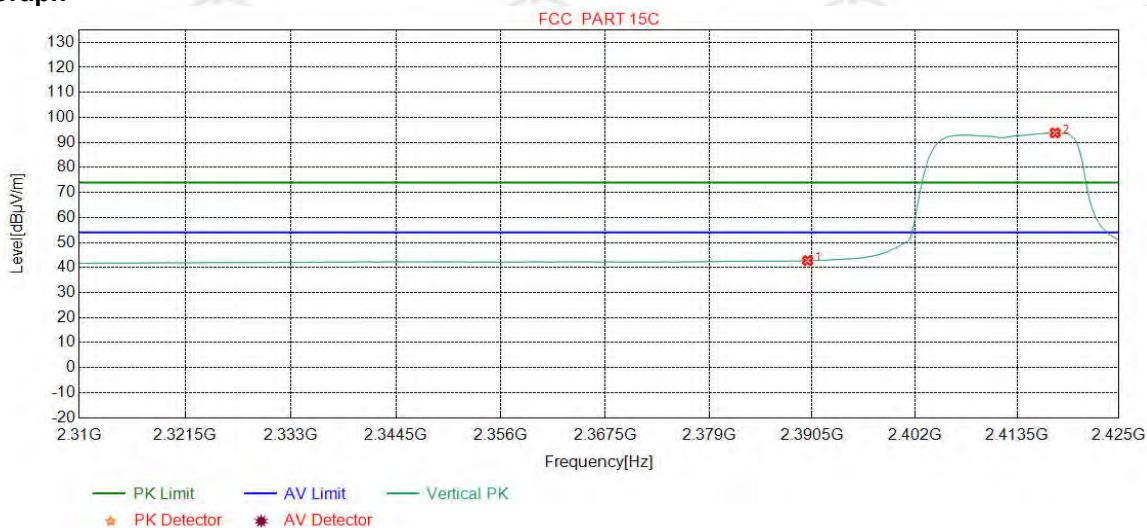
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	40.45	43.63	54.00	10.37	Pass	Horizontal
2	2417.6596	32.28	13.38	-42.42	92.52	95.76	54.00	-41.76	Pass	Horizontal

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

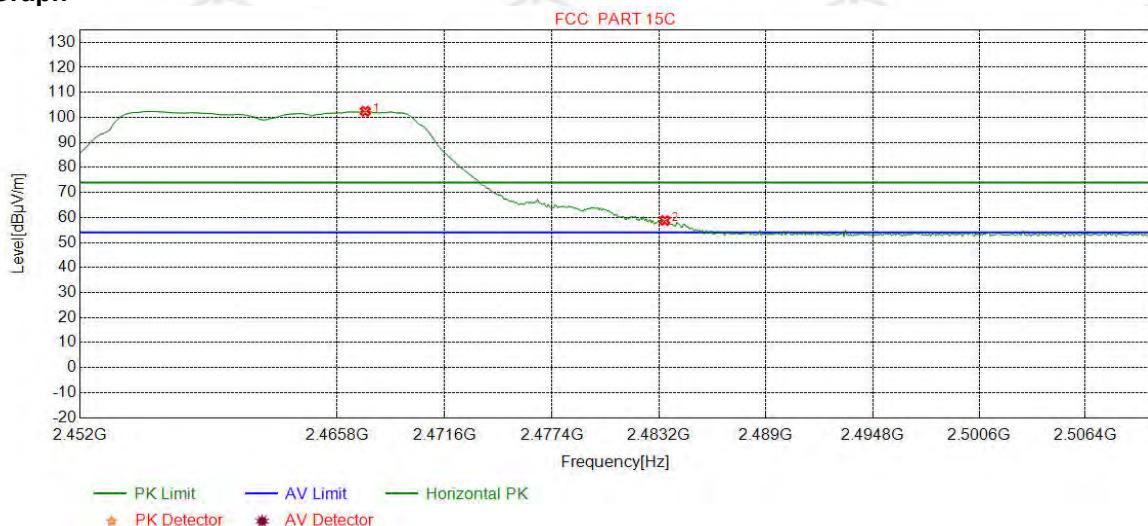
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	39.59	42.77	54.00	11.23	Pass	Vertical
2	2417.8035	32.28	13.38	-42.42	90.59	93.83	54.00	-39.83	Pass	Vertical

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

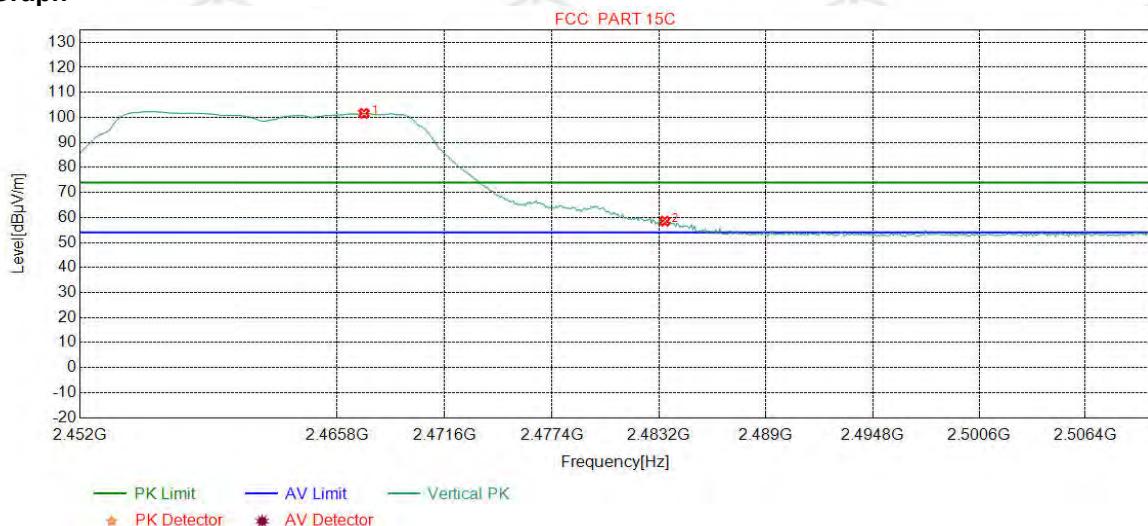
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2467.3166	32.35	13.45	-42.40	99.04	102.44	74.00	-28.44	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	55.43	58.79	74.00	15.21	Pass	Horizontal

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

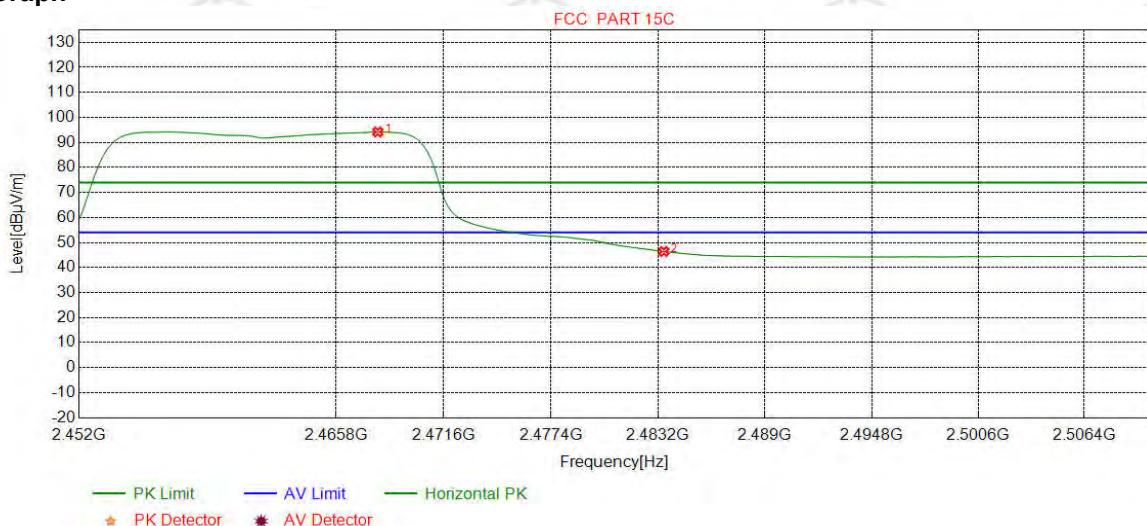
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2467.2441	32.35	13.45	-42.40	98.21	101.61	74.00	-27.61	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	55.18	58.54	74.00	15.46	Pass	Vertical

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

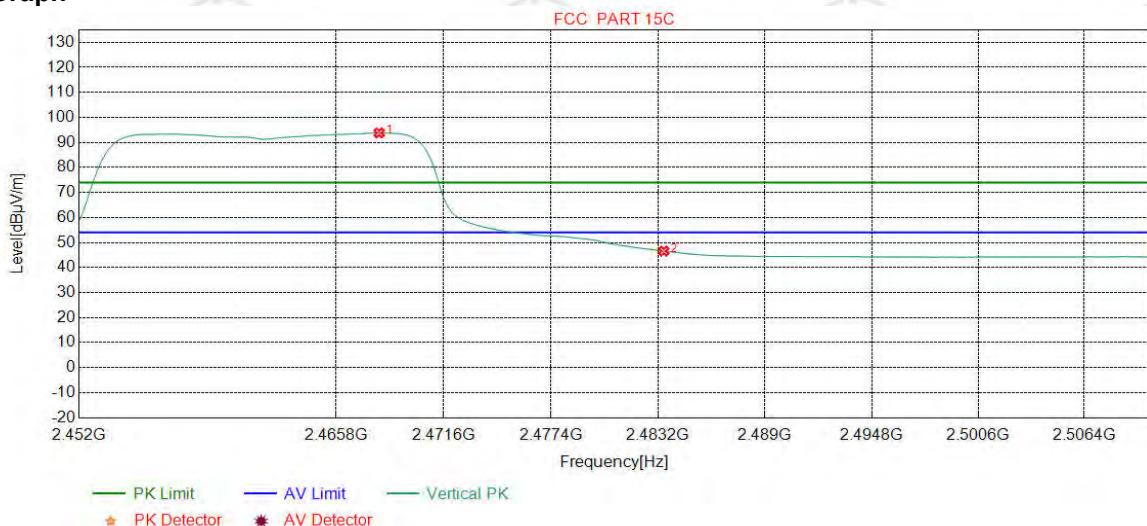
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2468.0426	32.36	13.45	-42.41	90.78	94.18	54.00	-40.18	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	43.04	46.40	54.00	7.60	Pass	Horizontal

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

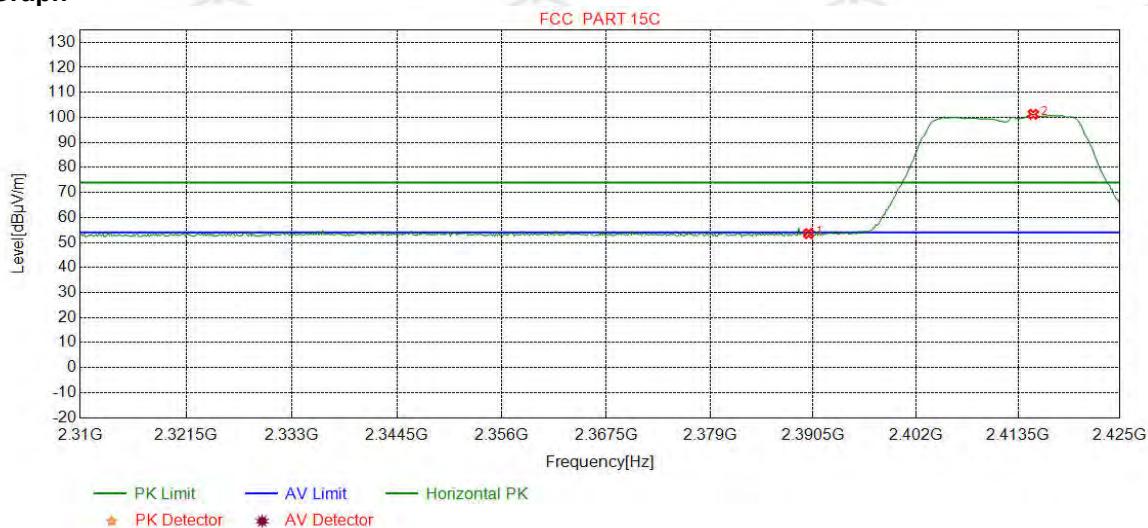
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2468.1151	32.36	13.45	-42.41	90.41	93.81	54.00	-39.81	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	43.20	46.56	54.00	7.44	Pass	Vertical

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

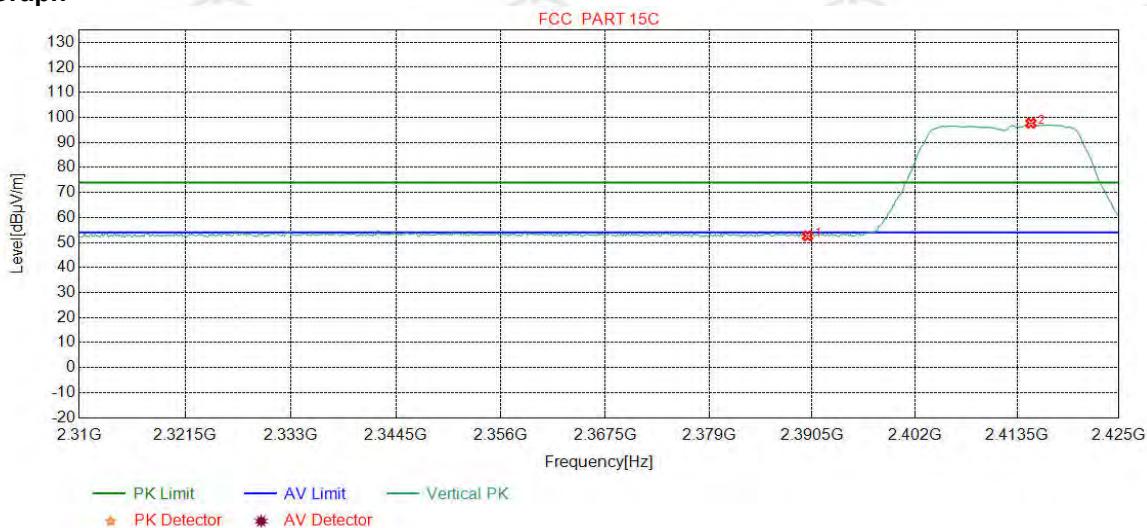
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	50.39	53.57	74.00	20.43	Pass	Horizontal
2	2415.2128	32.28	13.37	-42.43	98.04	101.26	74.00	-27.26	Pass	Horizontal

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

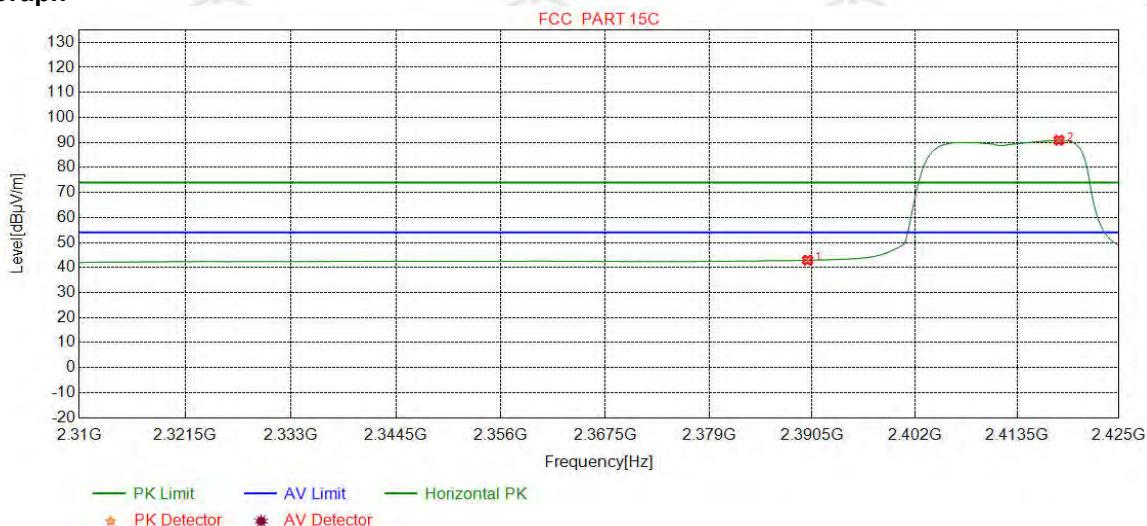
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	49.47	52.65	74.00	21.35	Pass	Vertical
2	2415.0688	32.28	13.37	-42.43	94.45	97.67	74.00	-23.67	Pass	Vertical

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

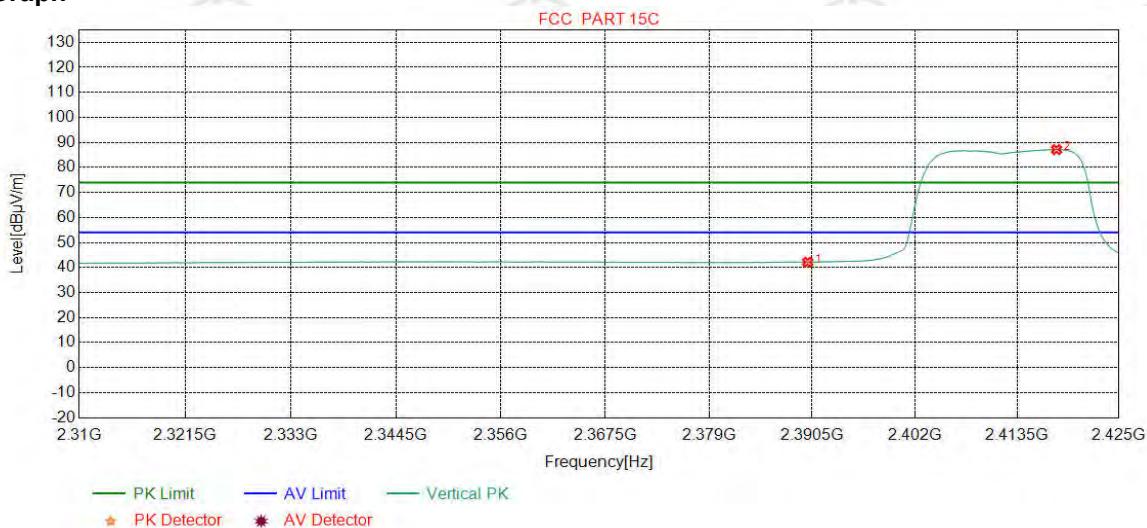
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	39.76	42.94	54.00	11.06	Pass	Horizontal
2	2418.2353	32.29	13.38	-42.43	87.63	90.87	54.00	-36.87	Pass	Horizontal

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

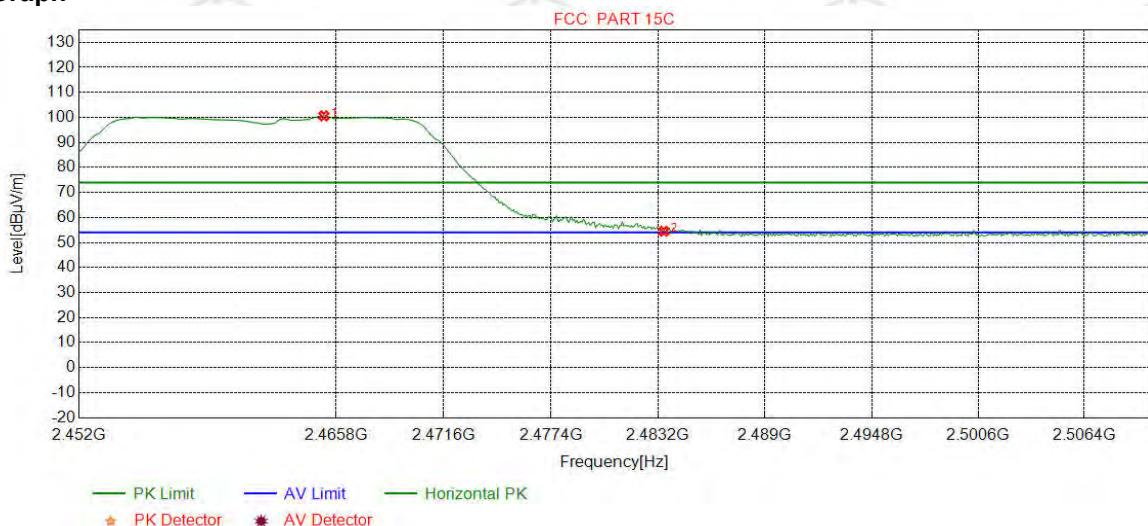
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	38.99	42.17	54.00	11.83	Pass	Vertical
2	2417.9474	32.29	13.38	-42.43	83.90	87.14	54.00	-33.14	Pass	Vertical

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

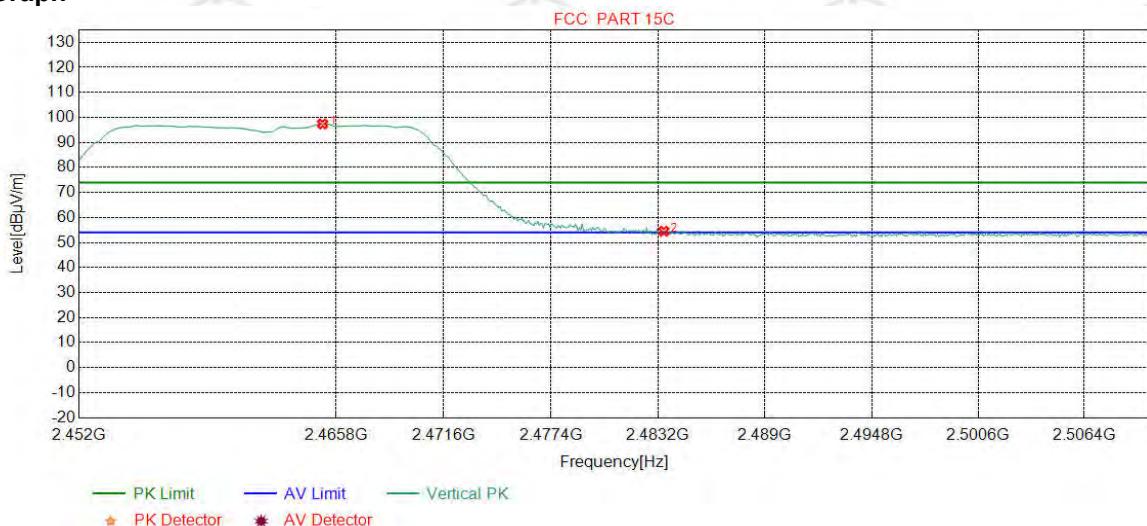
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2465.1389	32.35	13.46	-42.40	97.19	100.60	74.00	-26.60	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	51.15	54.51	74.00	19.49	Pass	Horizontal

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

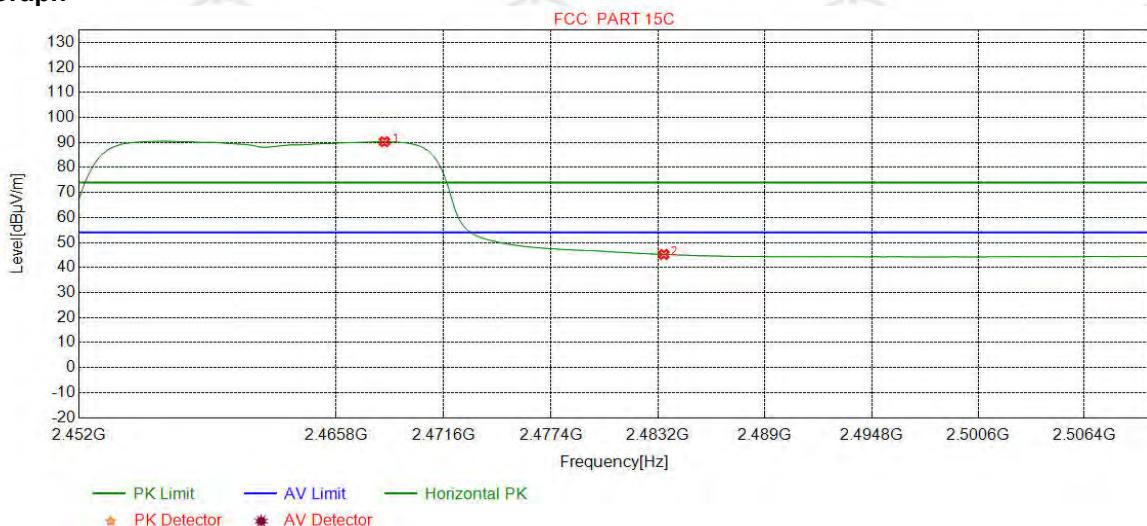
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2465.0663	32.35	13.46	-42.40	94.00	97.41	74.00	-23.41	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	51.15	54.51	74.00	19.49	Pass	Vertical

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

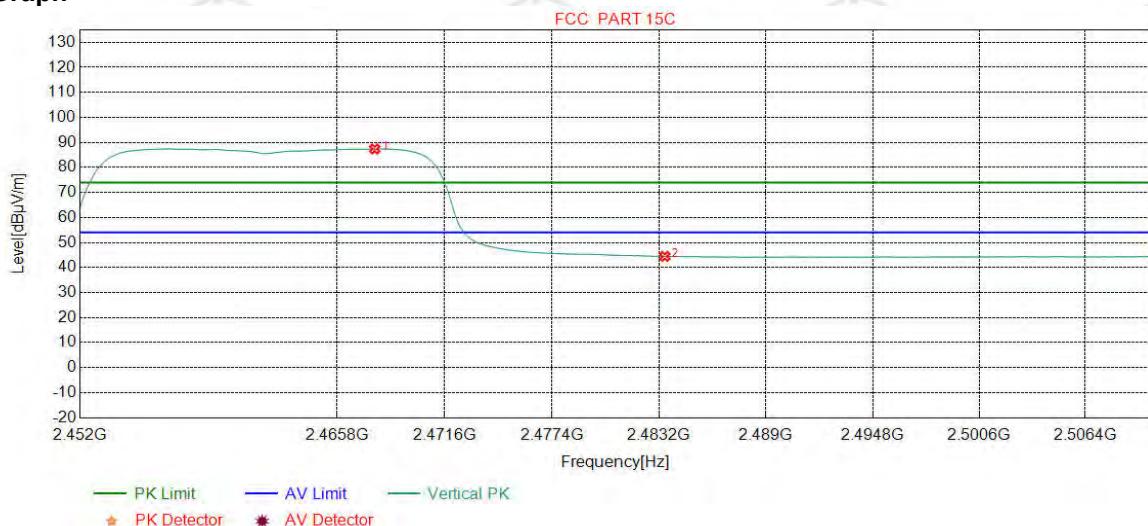
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2468.4055	32.36	13.45	-42.41	86.86	90.26	54.00	-36.26	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	41.88	45.24	54.00	8.76	Pass	Horizontal

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

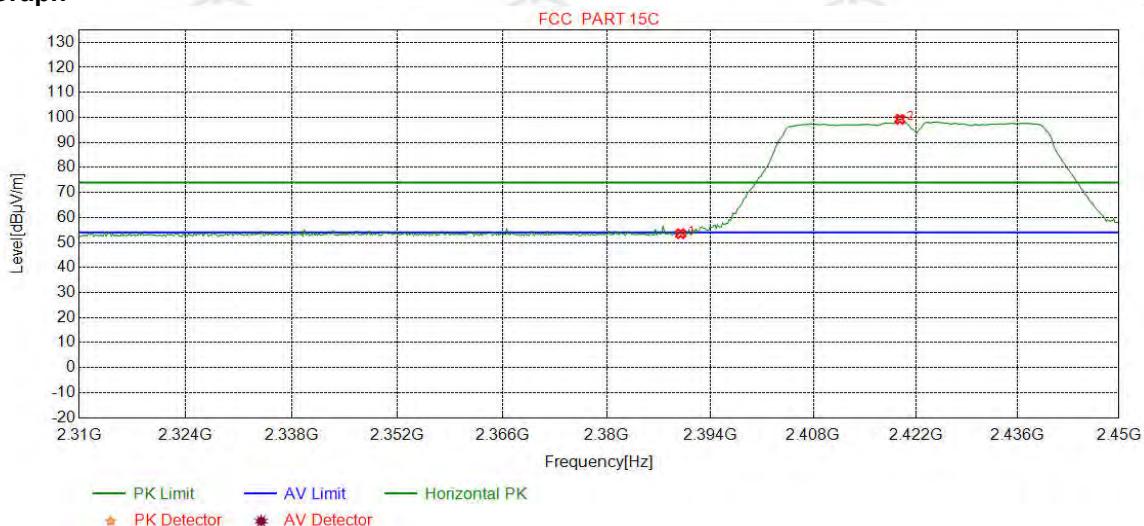
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2467.8248	32.35	13.45	-42.40	83.97	87.37	54.00	-33.37	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	41.10	44.46	54.00	9.54	Pass	Vertical

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

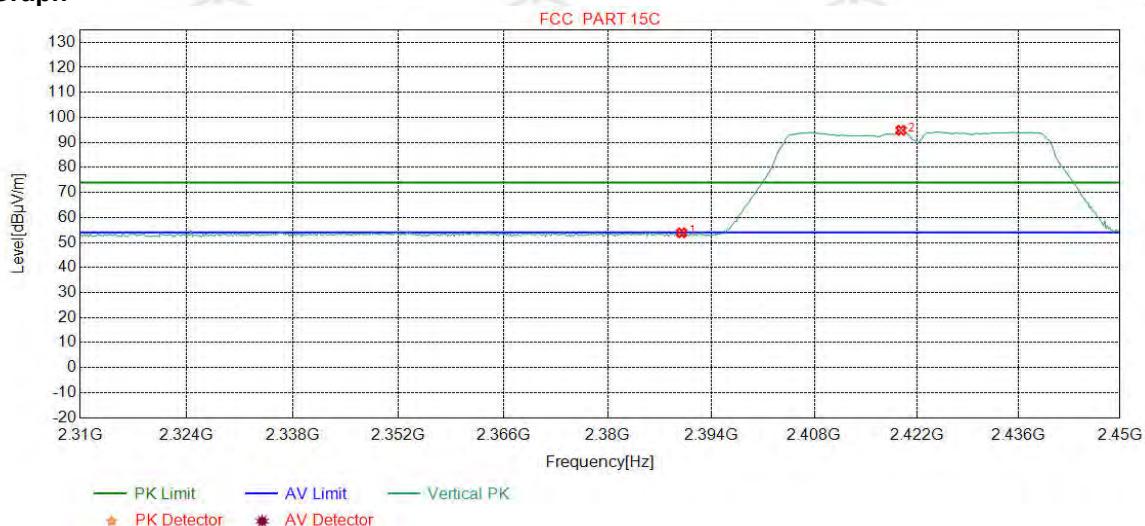
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	50.34	53.52	74.00	20.48	Pass	Horizontal
2	2419.8623	32.29	13.39	-42.43	95.99	99.24	74.00	-25.24	Pass	Horizontal

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

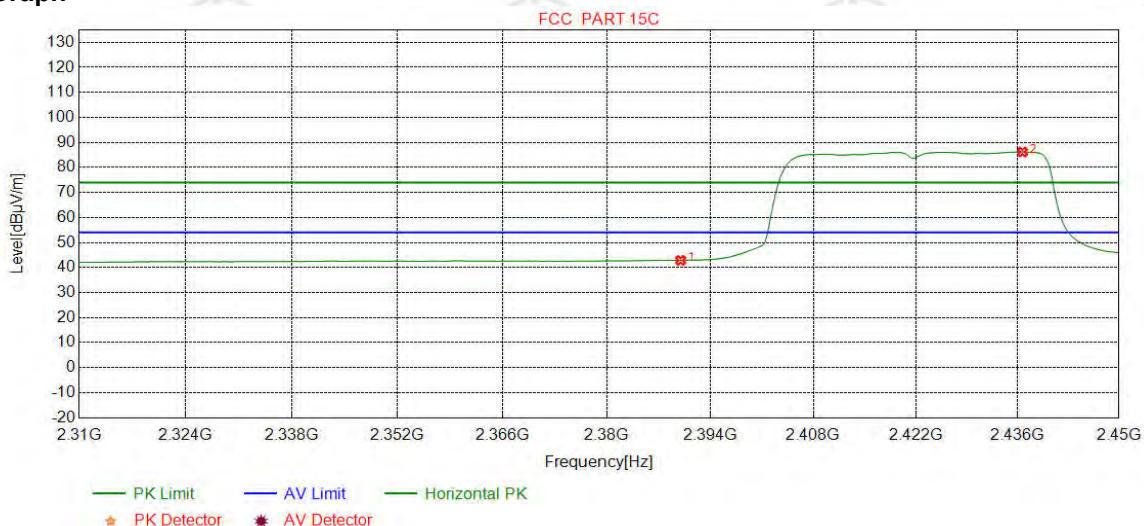
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	50.67	53.85	74.00	20.15	Pass	Vertical
2	2419.8623	32.29	13.39	-42.43	91.60	94.85	74.00	-20.85	Pass	Vertical

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

Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	39.69	42.87	54.00	11.13	Pass	Horizontal
2	2436.6834	32.31	13.47	-42.42	82.82	86.18	54.00	-32.18	Pass	Horizontal