

TEST REPORT

Product : Portable Monitor
Trade mark : OWLENZ
Model/Type reference : SPD20,SPD30,SPD40,SPD50,SPD60,
SPD70,SPD80,SPD90,SPD100,
SPD150,SPD200,SPD300,SPD10.
Serial Number : N/A
Report Number : EED32M00266502
FCC ID : 2AXJJ-STAR-2020
Date of Issue : Nov. 02, 2020
Test Standards : 47 CFR Part 15Subpart C
Test result : PASS

Prepared for:

Shenzhen Star Audio-Visual Equipment Co., Ltd
RM 102,1st FL, Building 8, 2nd Industry Zone,
Shajing Street, Baoan District, Shenzhen

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
Shenzhen, Guangdong, China

TEL: +86-755-3368 3668

FAX: +86-755-3368 3385

Compiled by:

Sunlight Sun

Sunlight Sun

Reviewed by:

Jok Yang

Jok Yang

Approved by:

Sam Chuang

Sam Chuang

Date:

Nov. 02, 2020

Check No : 4538210931



2 Version

Version No.	Date	Description
00	Nov. 02, 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.

Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.

Model No.:SPD20,SPD30,SPD40,SPD50,SPD60,SPD70,SPD80,SPD90,SPD100,SPD150,SPD200,SPD300,SPD10.

Only the model SPD10 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference being color and the product model .

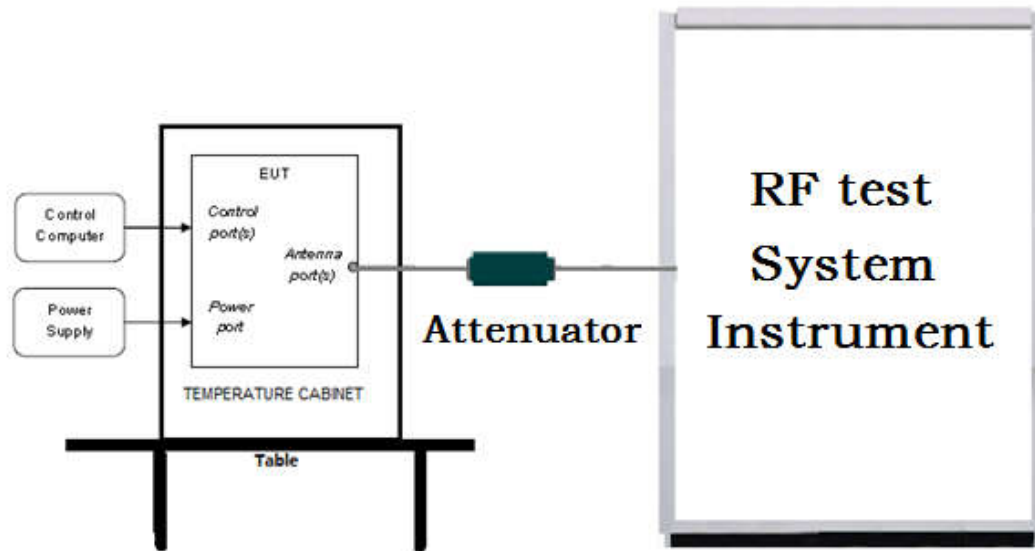
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5 Test Requirement

5.1 Test setup

5.1.1 For Conducted test setup



5.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

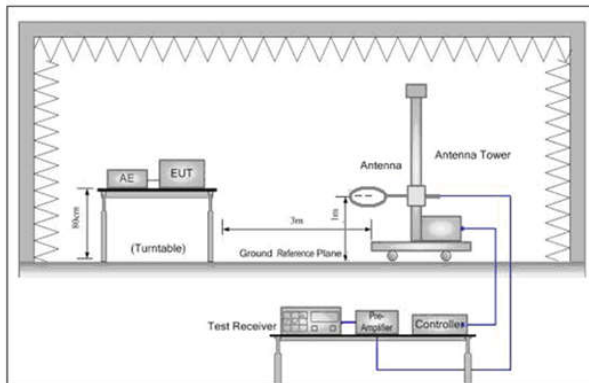


Figure 1. Below 30MHz

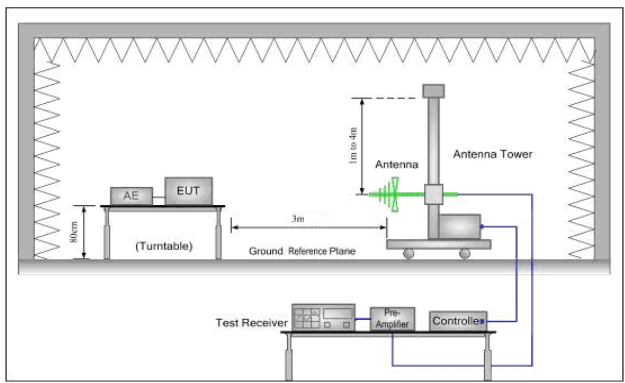


Figure 2. 30MHz to 1GHz

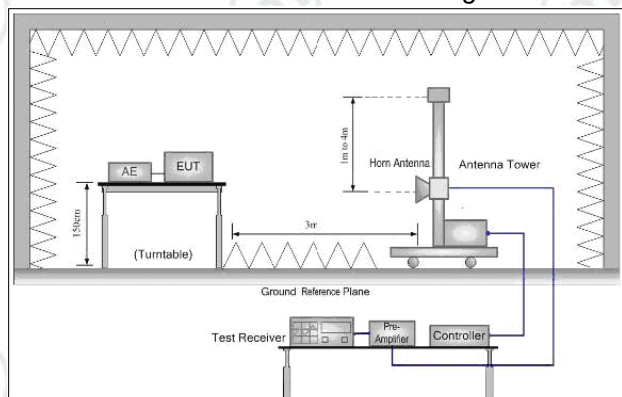
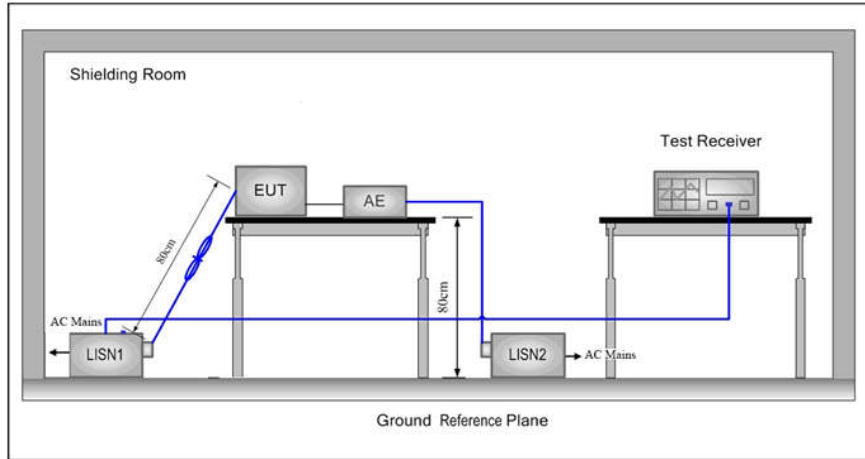


Figure 3. Above 1GHz

5.1.3 For Conducted Emissions test setup Conducted Emissions setup



5.2 Test Environment

Operating Environment:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010mbar

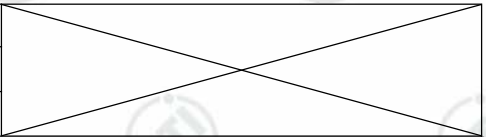
5.3 Test Condition

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 3	Channel 6	Channel 9
		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

Mode	802.11b								
Data Rate	1Mbps	2Mbps	5.5Mbps	11Mbps					
Power(dBm)	6.21	6.18	6.16	6.13					
Mode	802.11g								
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps	
Power(dBm)	6.11	6.09	6.06	6.05	6.03	6.01	5.98	5.95	
Mode	802.11n (HT20)								
Data Rate	6.5Mbps	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps	58.5Mbps	65Mbps	
Power(dBm)	6.34	6.31	6.28	6.25	6.23	6.22	6.2	6.18	
Mode	802.11n (HT40)								
Data Rate	13.5Mbps	27Mbps	40.5Mbps	54Mbps	81Mbps	108Mbps	121.5Mbps	135Mbps	
Power(dBm)	6.32	6.30	6.28	6.25	6.23	6.21	6.18	6.16	

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:	Shenzhen Star Audio-Visual Equipment Co., Ltd
Address of Applicant:	RM 102, 1st FL, Building 8, 2nd Industry Zone, Shajing Street, Baoan District, Shenzhen
Manufacturer:	Shenzhen Star Audio-Visual Equipment Co., Ltd
Address of Manufacturer:	RM 102, 1st FL, Building 8, 2nd Industry Zone, Shajing Street, Baoan District, Shenzhen
Factory:	Shenzhen Zhengtongrenhe Technology Co., Ltd.
Address of Factory:	Room 201, Building E, Weihuada Industrial Park, No. 65, Huaning West Road, Xinwei, Xinshi Community, Dalang Street, Longhua District, Shenzhen

6.2 General Description of EUT

Product Name:	Portable Monitor	
Model No.(EUT):	SPD20,SPD30,SPD40,SPD50,SPD60, SPD70,SPD80,SPD90,SPD100, SPD150,SPD200,SPD300,SPD10.	
Test Model No:	SPD10	
Trade mark:	OWLENZ	
Frequency Range of Operation:	IEEE 802.11b/g/n(HT20)(HT40): 2400MHz to 2483.5MHz	
Power Supply:	Adapter	MODEL:FJ-SW618H-1E INPUT:100-240V~50/60Hz 0.6A Max OUTPUT:5.0V---3.0A,15.0W Max or 9.0V---2.0A,18.0W Max or 12.0V---1.5A,18.0W Max OUTPUT POWER:18.0W Max
	Battery	DQ30100115/2S 7.6V 5000mAh 38Wh
Sample Received Date:	Aug. 28, 2020	
Sample tested Date:	Aug. 28, 2020 to Oct.16, 2020	

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:	Default
Test Software of EUT:	REALTEK
Antenna Type and Gain:	Type: Built-in dual-band antenna Gain:3.0 dBi
Test Voltage:	Battery 7.6V

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 with associated equipment below

Associated equipment name		Manufacture	model	S/N serial number	Supplied by	Certification
AE1	Notebook	DELL	DELL 3490	D245DX2	DELL	CE&FCC

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)
Spectrum Analyzer	Keysight	N9010A	MY54510339	02-17-2020	02-16-2021
Signal Generator	Keysight	N5182B	MY53051549	02-17-2020	02-16-2021
Temperature/ Humidity Indicator	biaozhi	HM10	1804186	06-29-2020	06-28-2021
High-pass filter	Sinoscite	FL3CX03WG18N M12-0398-002	---	---	---
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	---	---
DC Power	Keysight	E3642A	MY56376072	02-17-2020	02-16-2021
PC-1	Lenovo	R4960d	---	---	---
BT&WI-FI Automatic control	R&S	OSP120	101374	02-17-2020	02-16-2021
RF control unit	JS Tonscend	JS0806-2	158060006	02-17-2020	02-16-2021
BT&WI-FI Automatic test software	JS Tonscend	JS1120-3	---	---	---

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	04-28-2020	04-27-2021
Temperature/ Humidity Indicator	Defu	TH128	/	---	---
LISN	R&S	ENV216	100098	03-05-2020	03-04-2021
Barometer	changchun	DYM3	1188	---	---

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	9163-618	05-16-2020	05-15-2021
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-076	04-25-2018	04-24-2021
Receiver	R&S	ESCI7	100938-003	10-21-2019	10-20-2020
Multi device Controller	matturo	NCD/070/107 11112	---	---	---
Temperature/ Humidity Indicator	Shanghai qixiang	HM10	1804298	06-29-2020	06-28-2021
Cable line	Fulai(7M)	SF106	5219/6A	---	---
Cable line	Fulai(6M)	SF106	5220/6A	---	---
Cable line	Fulai(3M)	SF106	5216/6A	---	---
Cable line	Fulai(3M)	SF106	5217/6A	---	---

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	---	---
Receiver	Keysight	N9038A	MY57290136	03-05-2020	03-04-2021
Spectrum Analyzer	Keysight	N9020B	MY57111112	03-05-2020	03-04-2021
Spectrum Analyzer	Keysight	N9030B	MY57140871	03-05-2020	03-04-2021
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	ETS-LINDGREN	3117	00057407	07-10-2018	07-09-2021
Preamplifier	EMCI	EMC184055SE	980596	05-20-2020	05-19-2021
Preamplifier	EMCI	EMC001330	980563	04-22-2020	04-21-2021
Preamplifier	JS Tonscend	980380	EMC051845 SE	01-09-2020	01-08-2021
Temperature/ Humidity Indicator	biaozhi	GM1360	EE1186631	04-27-2020	04-26-2021
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	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0002	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0003	---	---
Cable line	Times	SFT205-NMSM-2.50M	393495-0001	---	---
Cable line	Times	EMC104-NMNM-1000	SN160710	---	---
Cable line	Times	SFT205-NMSM-3.00M	394813-0001	---	---
Cable line	Times	SFT205-NMNM-1.50M	381964-0001	---	---
Cable line	Times	SFT205-NMSM-7.00M	394815-0001	---	---
Cable line	Times	HF160-KMKM-3.00M	393493-0001	---	---

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)

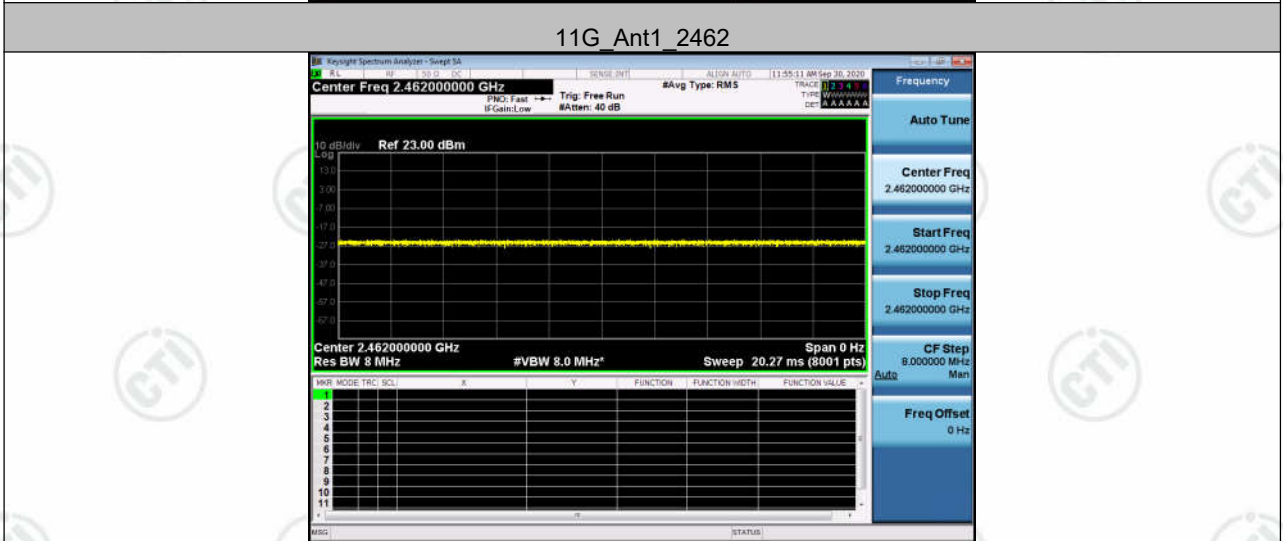
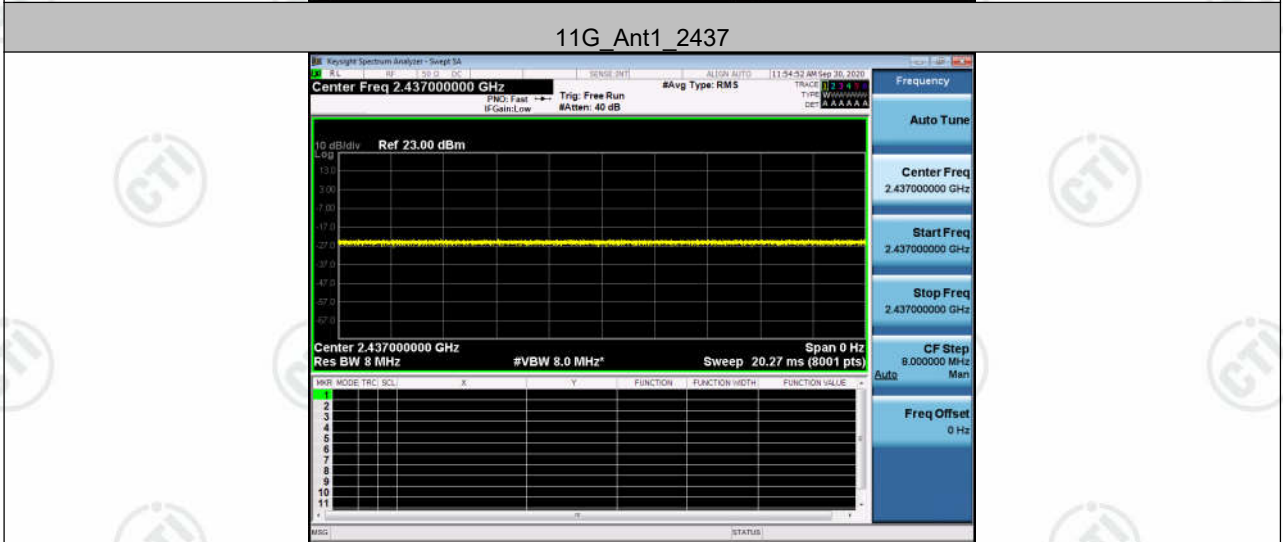
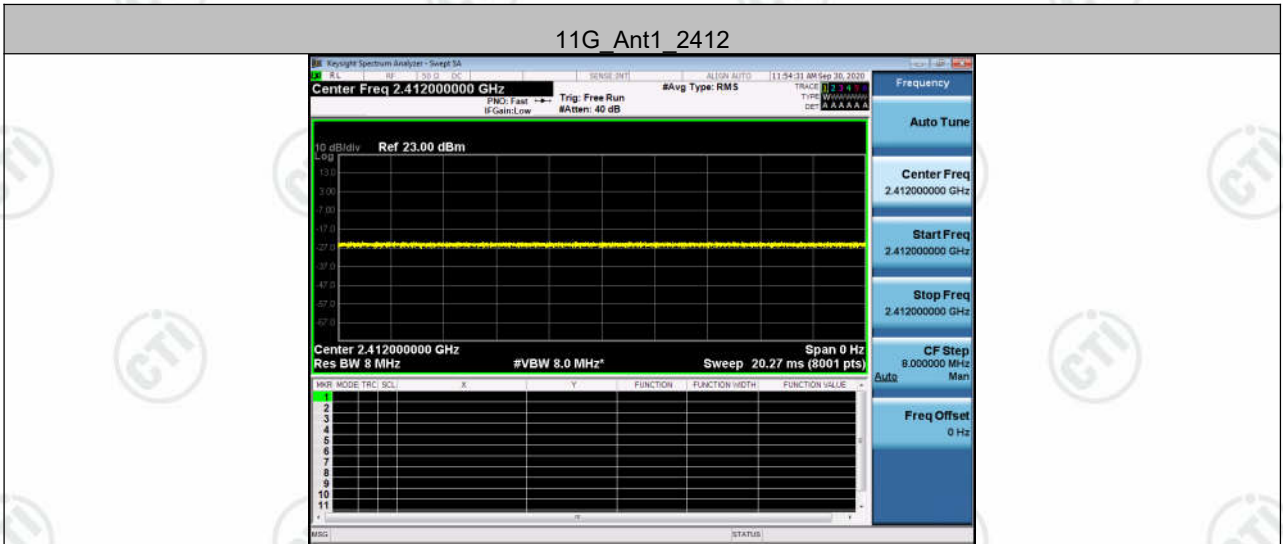
EUT DUTY CYCLE

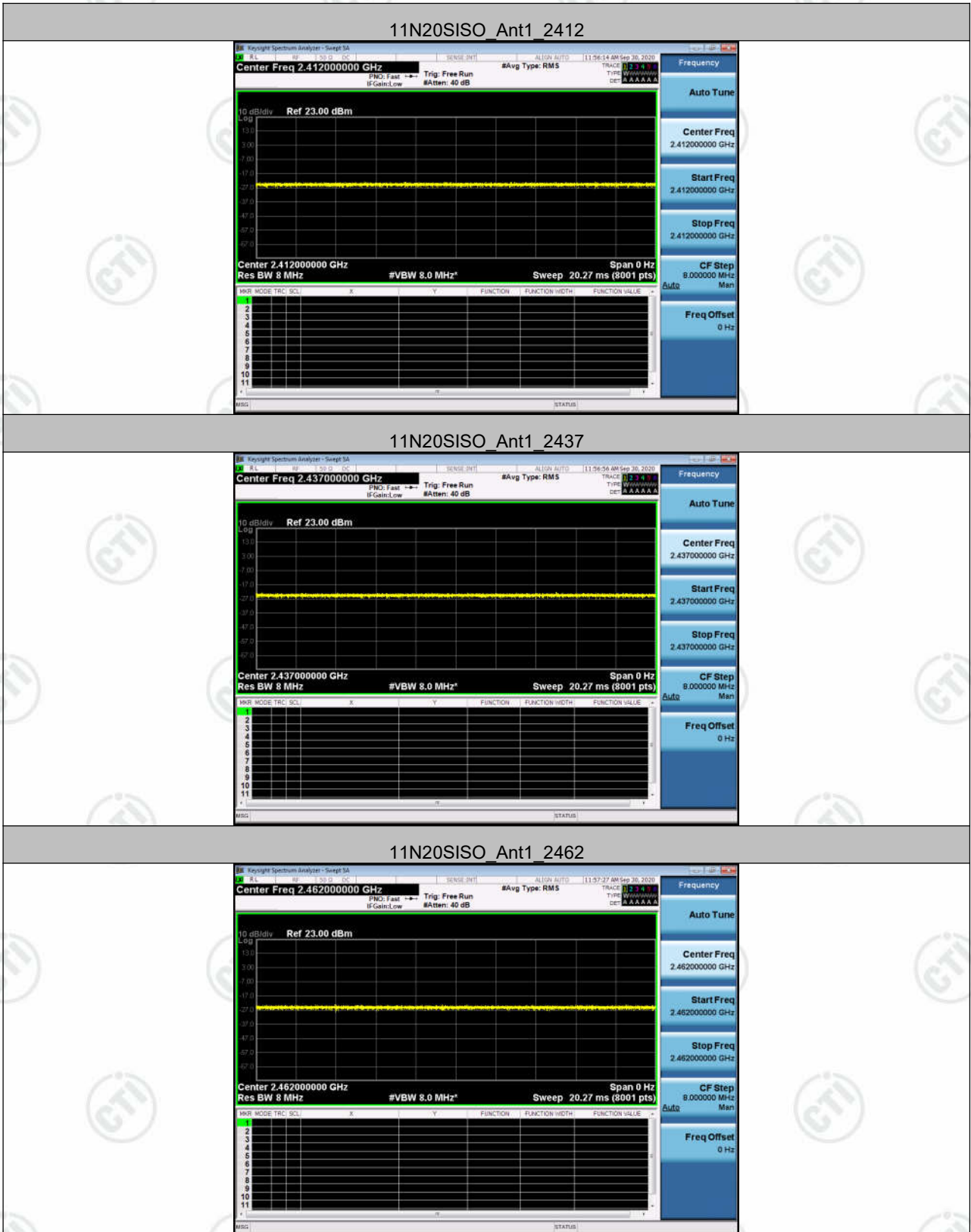
Result Table

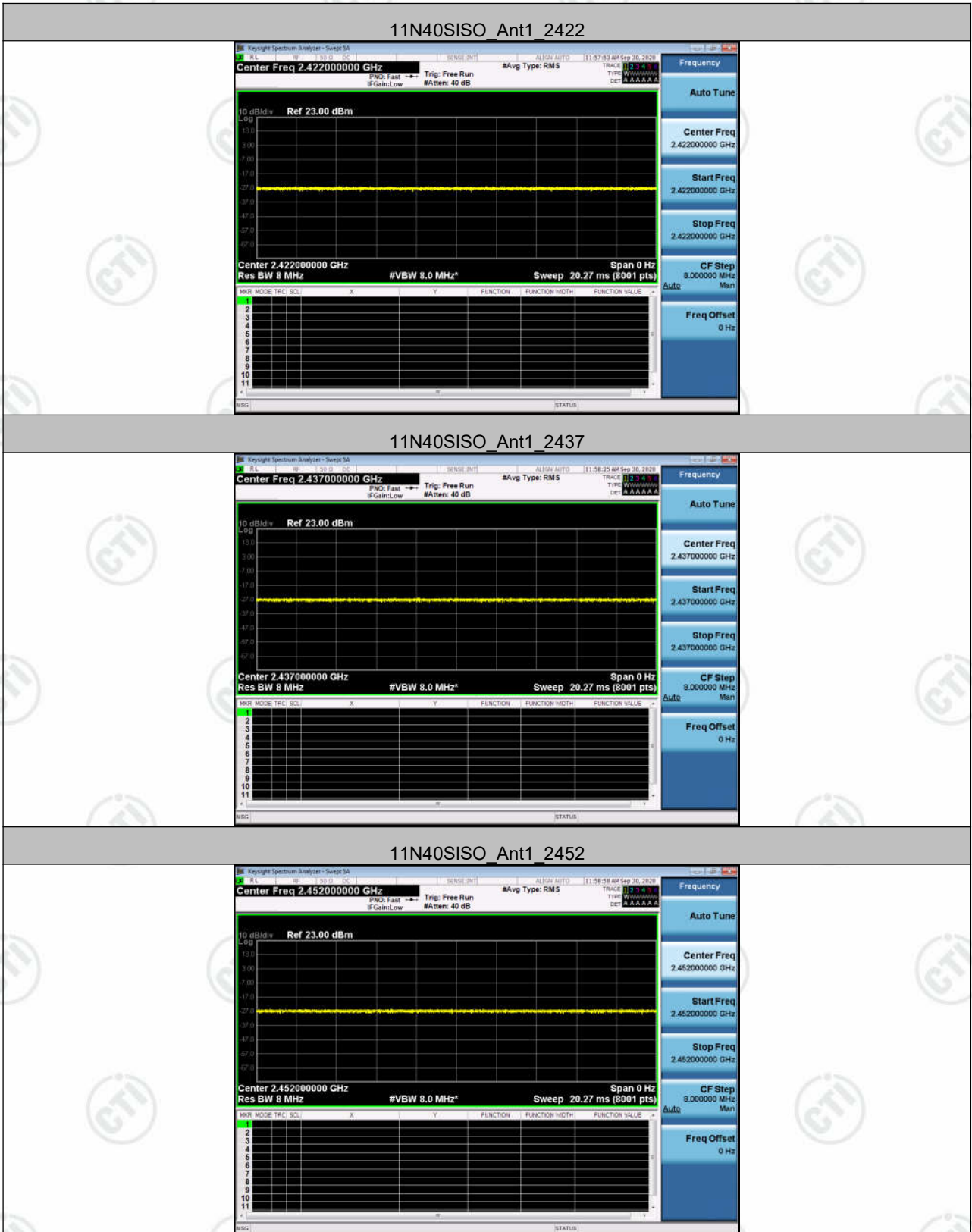
Test Mode	Antenna	Channel	Duty Cycle [%]	Limit	Verdict
11B	Ant1	2412	100	---	PASS
	Ant1	2437	100	---	PASS
	Ant1	2462	100	---	PASS
11G	Ant1	2412	100	---	PASS
	Ant1	2437	100	---	PASS
	Ant1	2462	100	---	PASS
11N20SISO	Ant1	2412	100	---	PASS
	Ant1	2437	100	---	PASS
	Ant1	2462	100	---	PASS
11N40SISO	Ant1	2422	100	---	PASS
	Ant1	2437	100	---	PASS
	Ant1	2452	100	---	PASS

Test Graph









Appendix A): Conducted Peak Output Power

Test Limit

According to §15.247(b)(3),

Peak output power :

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

Limit	<input checked="" type="checkbox"/> Antenna not exceed 6 dBi : 30dBm <input type="checkbox"/> Antenna with DG greater than 6 dBi : [Limit = 30 – (DG – 6)] <input type="checkbox"/> Point-to-point operation :
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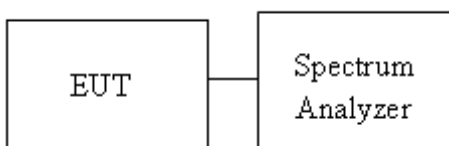
Average output power : For reporting purposes only.

Test Procedure

Test method Refer as KDB 558074 D01.

1. The EUT RF output connected to spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT.
3. Spectrum analyzer settings are as follows :
 - a) Set the RBW = 1 MHz.
 - b) Set the VBW \geq [3 × RBW].
 - c) Set the span \geq [1.5 × DTS bandwidth].
 - d) Detector = peak.
 - e) Sweep time = auto couple.
 - f) Trace mode = max hold.
 - g) Allow trace to fully stabilize.
 - h) Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges
4. Measure and record the result in the test report.

Test Setup

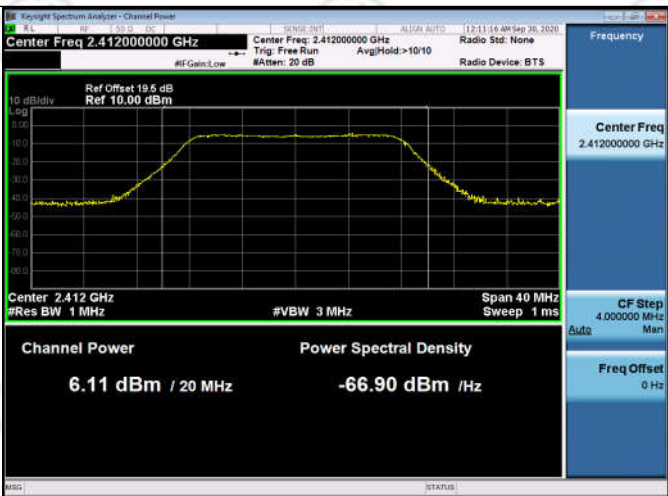
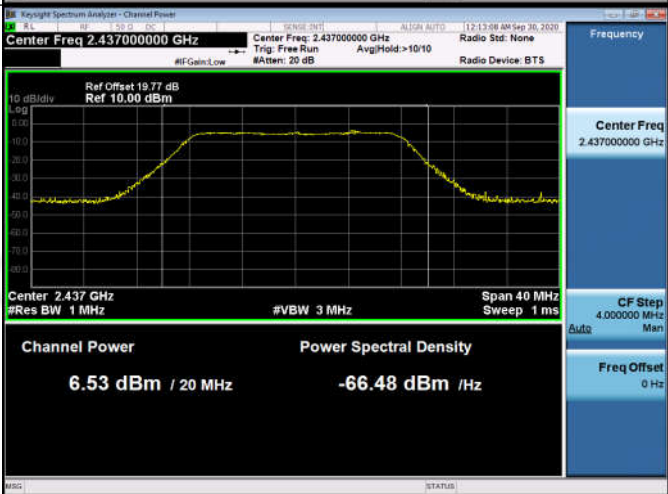
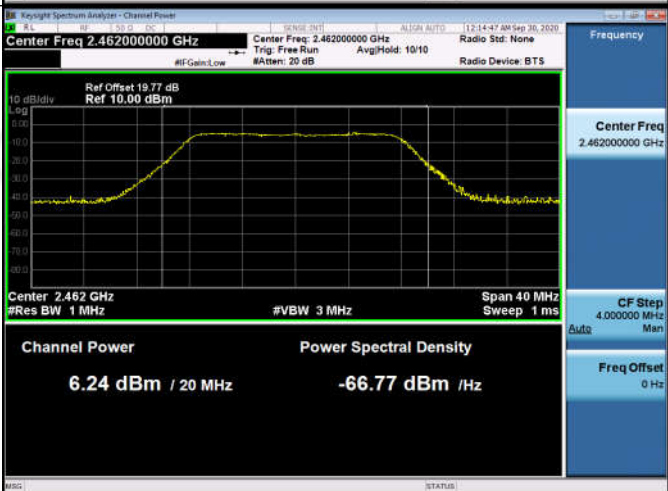


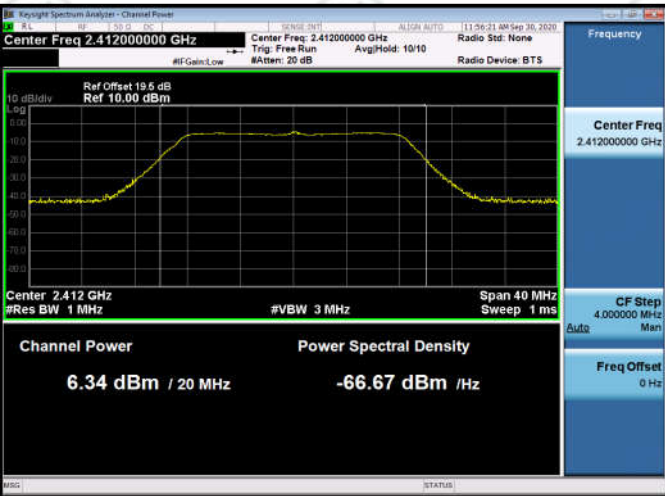
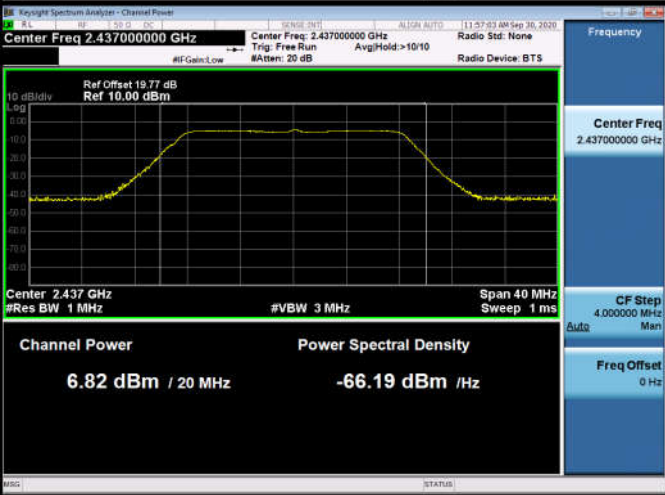
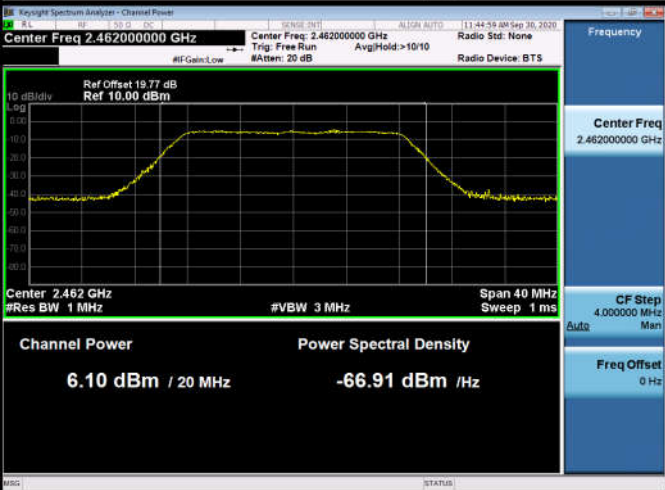
Test Result

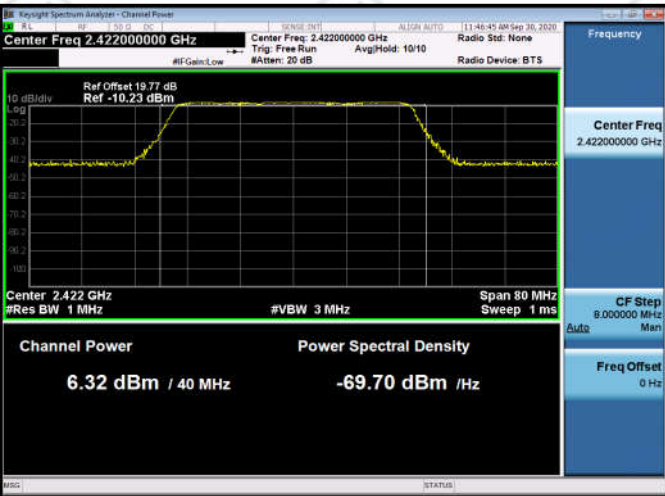
Mode	Channel	Conducted Peak Output Power [dBm]	Verdict
11B	LCH	6.21	PASS
11B	MCH	6.91	PASS
11B	HCH	6.56	PASS
11G	LCH	6.11	PASS
11G	MCH	6.53	PASS
11G	HCH	6.24	PASS
11N20SISO	LCH	6.34	PASS
11N20SISO	MCH	6.82	PASS
11N20SISO	HCH	6.1	PASS
11N40SISO	LCH	6.32	PASS
11N40SISO	MCH	6.39	PASS
11N40SISO	HCH	6.36	PASS

Test Graph



<p>11G/LCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq 2.412000000 GHz</p> <p>Channel Power: 6.11 dBm / 20 MHz</p> <p>Power Spectral Density: -66.90 dBm / Hz</p>
<p>11G/MCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq 2.437000000 GHz</p> <p>Channel Power: 6.53 dBm / 20 MHz</p> <p>Power Spectral Density: -66.48 dBm / Hz</p>
<p>11G/HCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq 2.462000000 GHz</p> <p>Channel Power: 6.24 dBm / 20 MHz</p> <p>Power Spectral Density: -66.77 dBm / Hz</p>

<p>11N20SISO/LCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq 2.412000000 GHz</p> <p>Ref Offset 19.5 dB Ref 10.00 dBm</p> <p>Channel Power: 6.34 dBm / 20 MHz</p> <p>Power Spectral Density: -66.67 dBm / Hz</p>
<p>11N20SISO/MCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq 2.437000000 GHz</p> <p>Ref Offset 19.77 dB Ref 10.00 dBm</p> <p>Channel Power: 6.82 dBm / 20 MHz</p> <p>Power Spectral Density: -66.19 dBm / Hz</p>
<p>11N20SISO/HCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq 2.462000000 GHz</p> <p>Ref Offset 19.77 dB Ref 10.00 dBm</p> <p>Channel Power: 6.10 dBm / 20 MHz</p> <p>Power Spectral Density: -66.91 dBm / Hz</p>

<p>11N40SISO/LCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq: 2.422000000 GHz</p> <p>Channel Power: 6.32 dBm / 40 MHz</p> <p>Power Spectral Density: -69.70 dBm / Hz</p>
<p>11N40SISO/MCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq: 2.437000000 GHz</p> <p>Channel Power: 6.39 dBm / 40 MHz</p> <p>Power Spectral Density: -69.63 dBm / Hz</p>
<p>11N40SISO/HCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq: 2.452000000 GHz</p> <p>Channel Power: 6.36 dBm / 40 MHz</p> <p>Power Spectral Density: -69.66 dBm / Hz</p>

Appendix B): 6dB Occupied Bandwidth

Test Limit

According to §15.247(a)(2),

6 dB Bandwidth :

Limit	Shall be at least 500kHz
-------	--------------------------

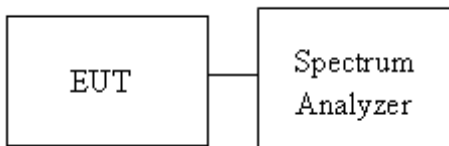
Occupied Bandwidth(99%) : For reporting purposes only.

Test Procedure

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

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

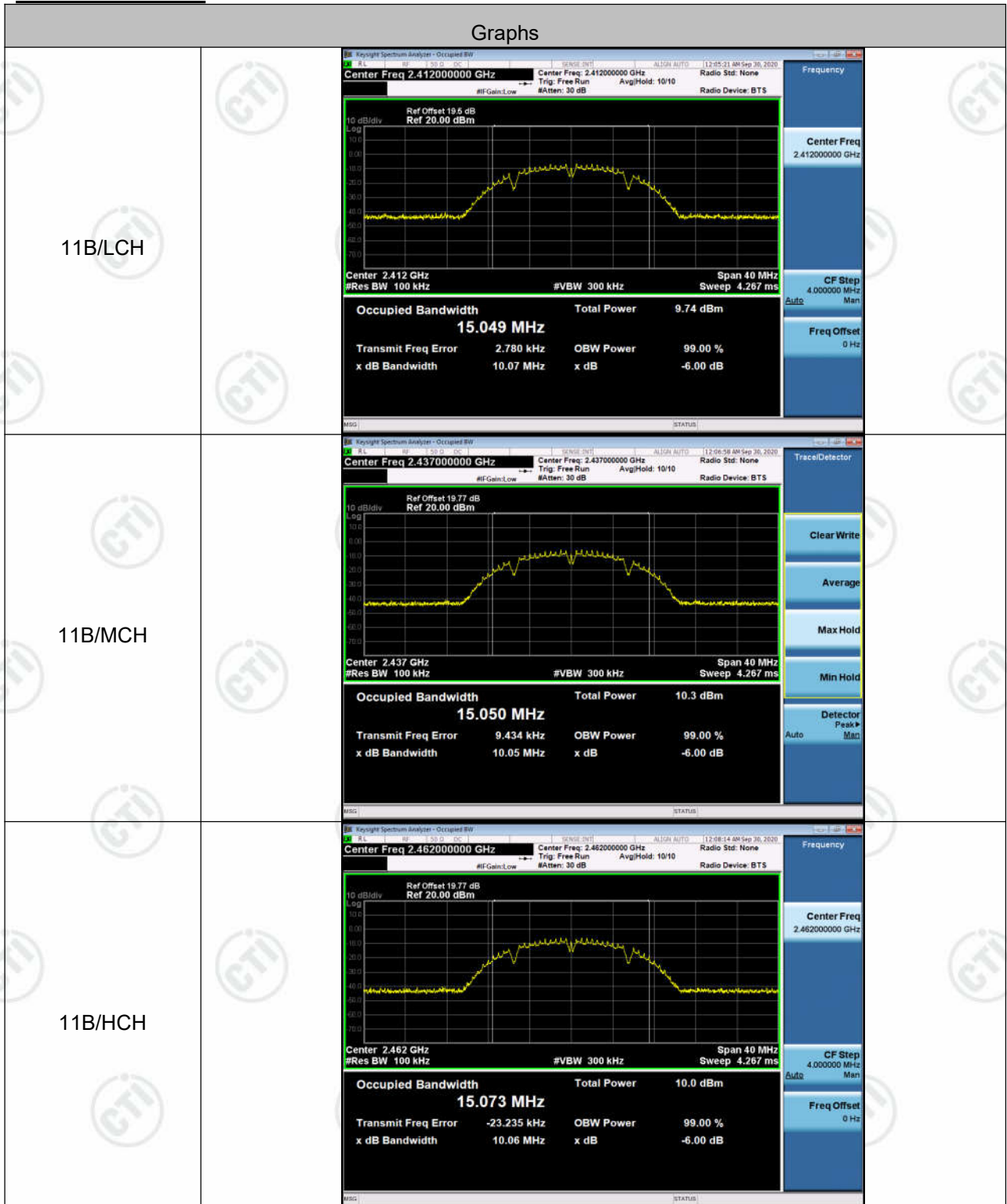
Test Setup



Test Result

Mode	Channel	6dB Bandwidth [MHz]	99% OBW [MHz]	Verdict
11B	LCH	10.07	15.470	PASS
11B	MCH	10.05	15.394	PASS
11B	HCH	10.06	15.485	PASS
11G	LCH	16.29	17.022	PASS
11G	MCH	16.27	16.994	PASS
11G	HCH	16.31	17.045	PASS
11N20SISO	LCH	16.64	18.038	PASS
11N20SISO	MCH	16.74	18.045	PASS
11N20SISO	HCH	16.86	17.934	PASS
11N40SISO	LCH	33.87	37.041	PASS
11N40SISO	MCH	35.06	36.981	PASS
11N40SISO	HCH	35.07	36.973	PASS

Test Graph
6 dB Bandwidth



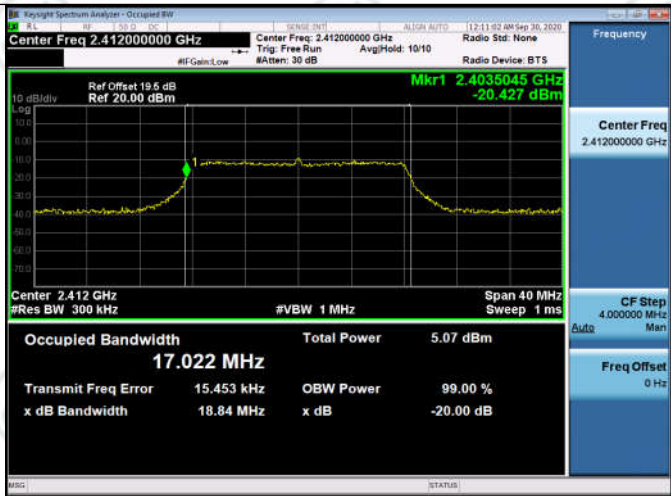
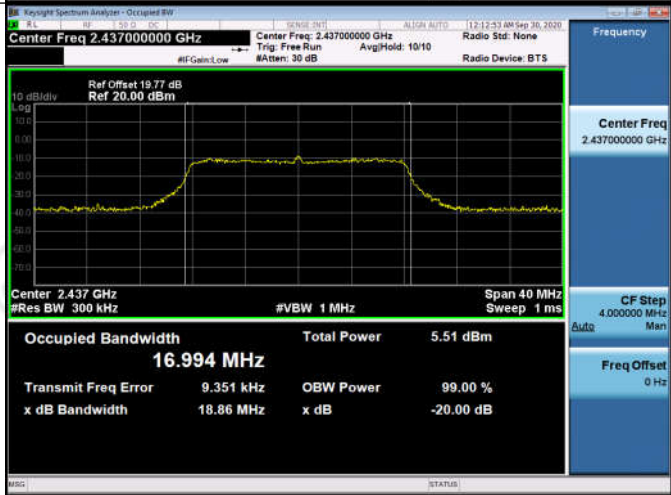

<p>11G/LCH</p>	<p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.412000000 GHz</p> <p>Occupied Bandwidth: 16.535 MHz</p> <p>Total Power: 4.44 dBm</p> <p>Transmit Freq Error: -15.046 kHz</p> <p>x dB Bandwidth: 16.29 MHz</p>
<p>11G/MCH</p>	<p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.437000000 GHz</p> <p>Occupied Bandwidth: 16.536 MHz</p> <p>Total Power: 4.83 dBm</p> <p>Transmit Freq Error: -13.034 kHz</p> <p>x dB Bandwidth: 16.27 MHz</p>
<p>11G/HCH</p>	<p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.462000000 GHz</p> <p>Occupied Bandwidth: 16.539 MHz</p> <p>Total Power: 4.67 dBm</p> <p>Transmit Freq Error: -21.811 kHz</p> <p>x dB Bandwidth: 16.31 MHz</p>

<p>11N20SISO/LCH</p>	<p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.412000000 GHz</p> <p>Occupied Bandwidth: 17.699 MHz</p> <p>Total Power: 4.17 dBm</p> <p>Transmit Freq Error: -6.885 kHz</p> <p>x dB Bandwidth: 16.64 MHz</p>
<p>11N20SISO/MCH</p>	<p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.437000000 GHz</p> <p>Occupied Bandwidth: 17.713 MHz</p> <p>Total Power: 4.51 dBm</p> <p>Transmit Freq Error: -9.477 kHz</p> <p>x dB Bandwidth: 16.74 MHz</p>
<p>11N20SISO/HCH</p>	<p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.462000000 GHz</p> <p>Occupied Bandwidth: 17.659 MHz</p> <p>Total Power: 6.07 dBm</p> <p>Transmit Freq Error: -26.096 kHz</p> <p>x dB Bandwidth: 16.86 MHz</p>

<p>11N40SISO/LCH</p>	<p>Keyight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.422000000 GHz</p> <p>Occupied Bandwidth: 36.386 MHz</p> <p>Total Power: 4.65 dBm</p> <p>Transmit Freq Error: -5.861 kHz</p> <p>x dB Bandwidth: 33.87 MHz</p> <p>OBW Power: 99.00 %</p> <p>x dB: -6.00 dB</p>
<p>11N40SISO/MCH</p>	<p>Keyight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.437000000 GHz</p> <p>Occupied Bandwidth: 36.385 MHz</p> <p>Total Power: 4.79 dBm</p> <p>Transmit Freq Error: -9.660 kHz</p> <p>x dB Bandwidth: 35.06 MHz</p> <p>OBW Power: 99.00 %</p> <p>x dB: -6.00 dB</p>
<p>11N40SISO/HCH</p>	<p>Keyight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.452000000 GHz</p> <p>Occupied Bandwidth: 36.379 MHz</p> <p>Total Power: 4.75 dBm</p> <p>Transmit Freq Error: -14.989 kHz</p> <p>x dB Bandwidth: 35.07 MHz</p> <p>OBW Power: 99.00 %</p> <p>x dB: -6.00 dB</p>

Occupied Bandwidth(99%)

Graphs	
11B/LCH	<p>Key Screenshot Data for 11B/LCH:</p> <ul style="list-style-type: none"> Center Freq: 2.41200000 GHz Occupied Bandwidth: 15.470 MHz Total Power: 6.96 dBm Transmit Freq Error: -6.030 kHz x dB Bandwidth: 17.33 MHz OBW Power: 99.00 % x dB: -20.00 dB
11B/MCH	<p>Key Screenshot Data for 11B/MCH:</p> <ul style="list-style-type: none"> Center Freq: 2.43700000 GHz Occupied Bandwidth: 15.394 MHz Total Power: 7.60 dBm Transmit Freq Error: 23.103 kHz x dB Bandwidth: 17.35 MHz OBW Power: 99.00 % x dB: -20.00 dB
11B/HCH	<p>Key Screenshot Data for 11B/HCH:</p> <ul style="list-style-type: none"> Center Freq: 2.46200000 GHz Occupied Bandwidth: 15.485 MHz Total Power: 7.30 dBm Transmit Freq Error: -39.041 kHz x dB Bandwidth: 17.34 MHz OBW Power: 99.00 % x dB: -20.00 dB

11G/LCH	 <p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.412000000 GHz Center Freq: 2.412000000 GHz Radio Std: None</p> <p>Ref Offset 19.6 dB Ref 20.00 dB Mkr1 2.4035045 GHz -20.427 dBm</p> <p>Center 2.412 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 17.022 MHz Total Power 5.07 dBm</p> <p>Transmit Freq Error 15.453 kHz OBW Power 99.00 %</p> <p>x dB Bandwidth 18.84 MHz x dB -20.00 dB</p>
11G/MCH	 <p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Radio Std: None</p> <p>Ref Offset 19.77 dB Ref 20.00 dB</p> <p>Center 2.437 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 16.994 MHz Total Power 5.51 dBm</p> <p>Transmit Freq Error 9.351 kHz OBW Power 99.00 %</p> <p>x dB Bandwidth 18.86 MHz x dB -20.00 dB</p>
11G/HCH	 <p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.462000000 GHz Center Freq: 2.462000000 GHz Radio Std: None</p> <p>Ref Offset 19.77 dB Ref 20.00 dB Mkr1 2.4705214 GHz -20.480 dBm</p> <p>Center 2.462 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 17.045 MHz Total Power 5.24 dBm</p> <p>Transmit Freq Error -1.077 kHz OBW Power 99.00 %</p> <p>x dB Bandwidth 19.15 MHz x dB -20.00 dB</p>

<p>11N20SISO/LCH</p>	 <p>Center Freq 2.412000000 GHz</p> <p>Center Freq: 2.412000000 GHz</p> <p>Mkr1 2.4029744 GHz -20.822 dBm</p> <p>Center 2.412 GHz #Res BW 300 kHz</p> <p>Span 40 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 18.038 MHz</p> <p>Total Power 4.75 dBm</p> <p>Transmit Freq Error -6.615 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 19.64 MHz</p> <p>x dB -20.00 dB</p>
<p>11N20SISO/MCH</p>	 <p>Center Freq 2.437000000 GHz</p> <p>Center Freq: 2.437000000 GHz</p> <p>Center 2.437 GHz #Res BW 300 kHz</p> <p>Span 40 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 18.045 MHz</p> <p>Total Power 5.13 dBm</p> <p>Transmit Freq Error -104 Hz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 19.76 MHz</p> <p>x dB -20.00 dB</p>
<p>11N20SISO/HCH</p>	 <p>Center Freq 2.462000000 GHz</p> <p>Center Freq: 2.462000000 GHz</p> <p>Mkr1 2.470937 GHz -17.786 dBm</p> <p>Center 2.462 GHz #Res BW 300 kHz</p> <p>Span 40 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 17.934 MHz</p> <p>Total Power 6.68 dBm</p> <p>Transmit Freq Error -29.973 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 20.05 MHz</p> <p>x dB -20.00 dB</p>

<p>11N40SISO/LCH</p>	 <p>Center Freq 2.422000000 GHz</p> <p>Center Freq: 2.422000000 GHz</p> <p>Mkr1 2.4035273 GHz -21.957 dBm</p> <p>Ref Offset 19.77 dB Ref 20.00 dBm</p> <p>Center 2.422 GHz #Res BW 390 kHz</p> <p>#VBW 1.2 MHz</p> <p>Span 80 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 37.041 MHz</p> <p>Total Power 5.33 dBm</p> <p>Transmit Freq Error 47.824 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 39.85 MHz</p> <p>x dB -20.00 dB</p>
<p>11N40SISO/MCH</p>	 <p>Center Freq 2.437000000 GHz</p> <p>Center Freq: 2.437000000 GHz</p> <p>Ref Offset 19.77 dB Ref 20.00 dBm</p> <p>Center 2.437 GHz #Res BW 390 kHz</p> <p>#VBW 1.2 MHz</p> <p>Span 80 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 36.981 MHz</p> <p>Total Power 5.41 dBm</p> <p>Transmit Freq Error 8.737 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 39.37 MHz</p> <p>x dB -20.00 dB</p>
<p>11N40SISO/HCH</p>	 <p>Center Freq 2.452000000 GHz</p> <p>Center Freq: 2.452000000 GHz</p> <p>Mkr1 2.4705122 GHz -21.477 dBm</p> <p>Ref Offset 19.77 dB Ref 20.00 dBm</p> <p>Center 2.452 GHz #Res BW 390 kHz</p> <p>#VBW 1.2 MHz</p> <p>Span 80 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 36.973 MHz</p> <p>Total Power 5.48 dBm</p> <p>Transmit Freq Error 25.680 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 39.42 MHz</p> <p>x dB -20.00 dB</p>

Appendix C): Band-edge for RF Conducted Emissions

Test Limit

According to §15.247(d),

In any 100 kHz bandwidth outside the authorized frequency band,

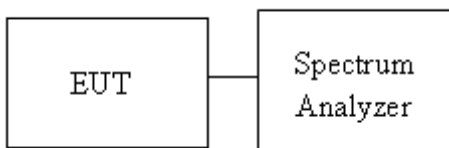
Non-restricted bands shall be attenuated at least 20 dB/30 dB relative to the maximum PSD level in 100 kHz by RF conducted or a radiated measurement which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

Test Procedure

Test method Refer as KDB 558074 D01.

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

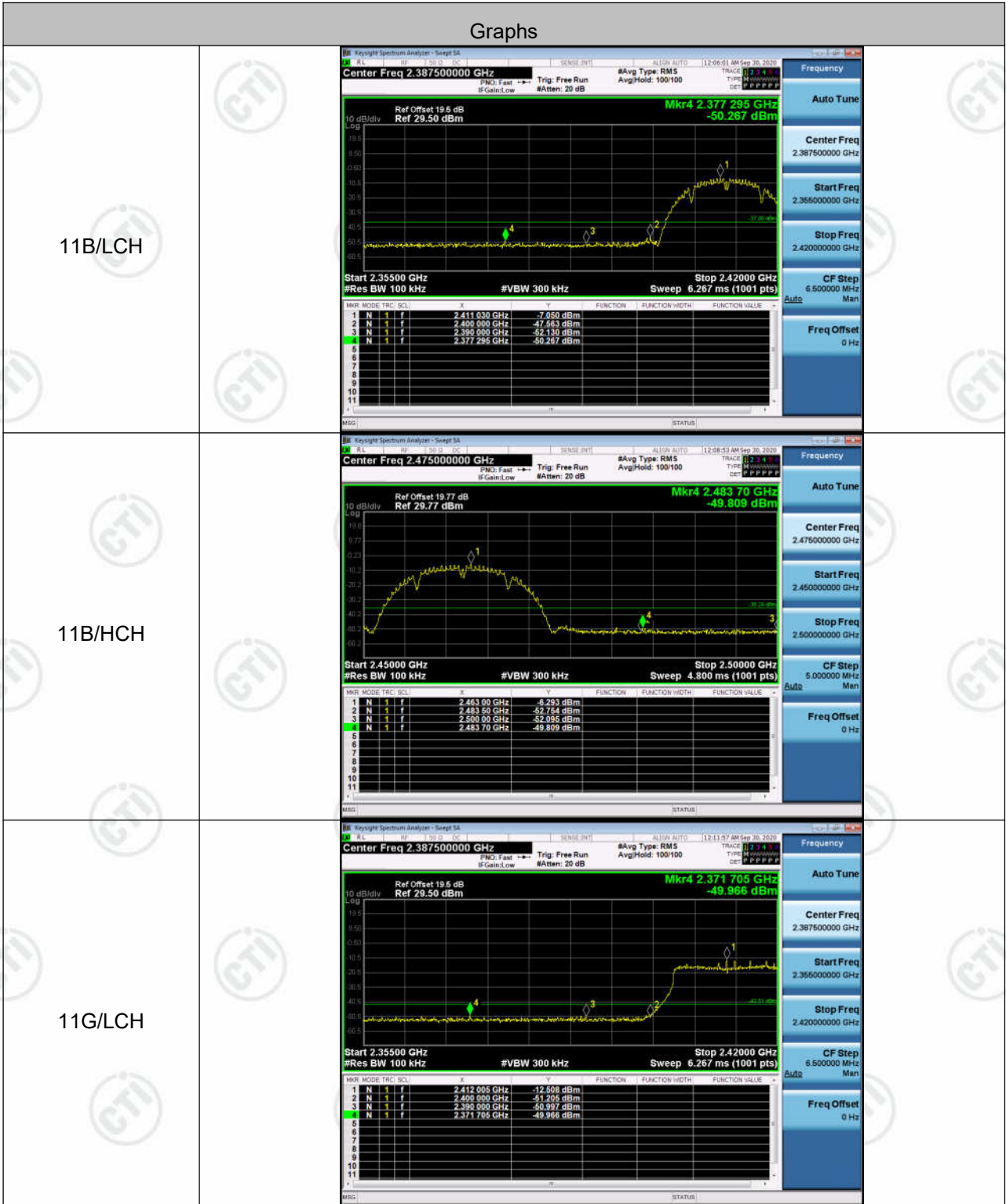
Test Setup


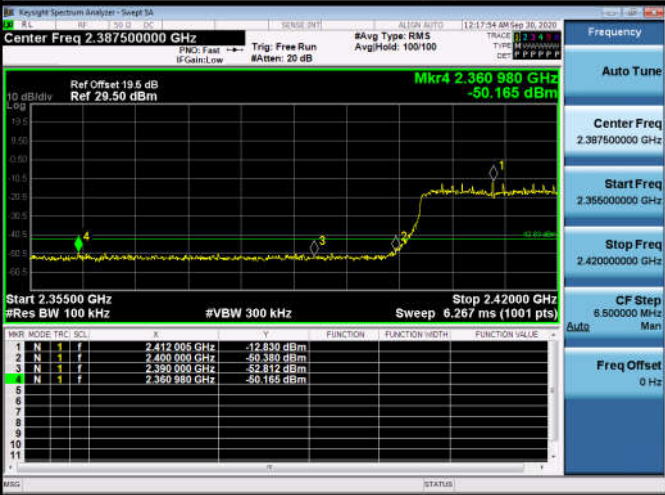
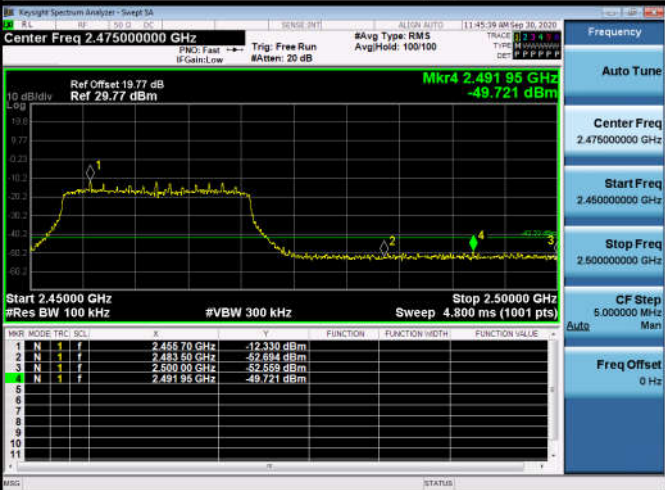


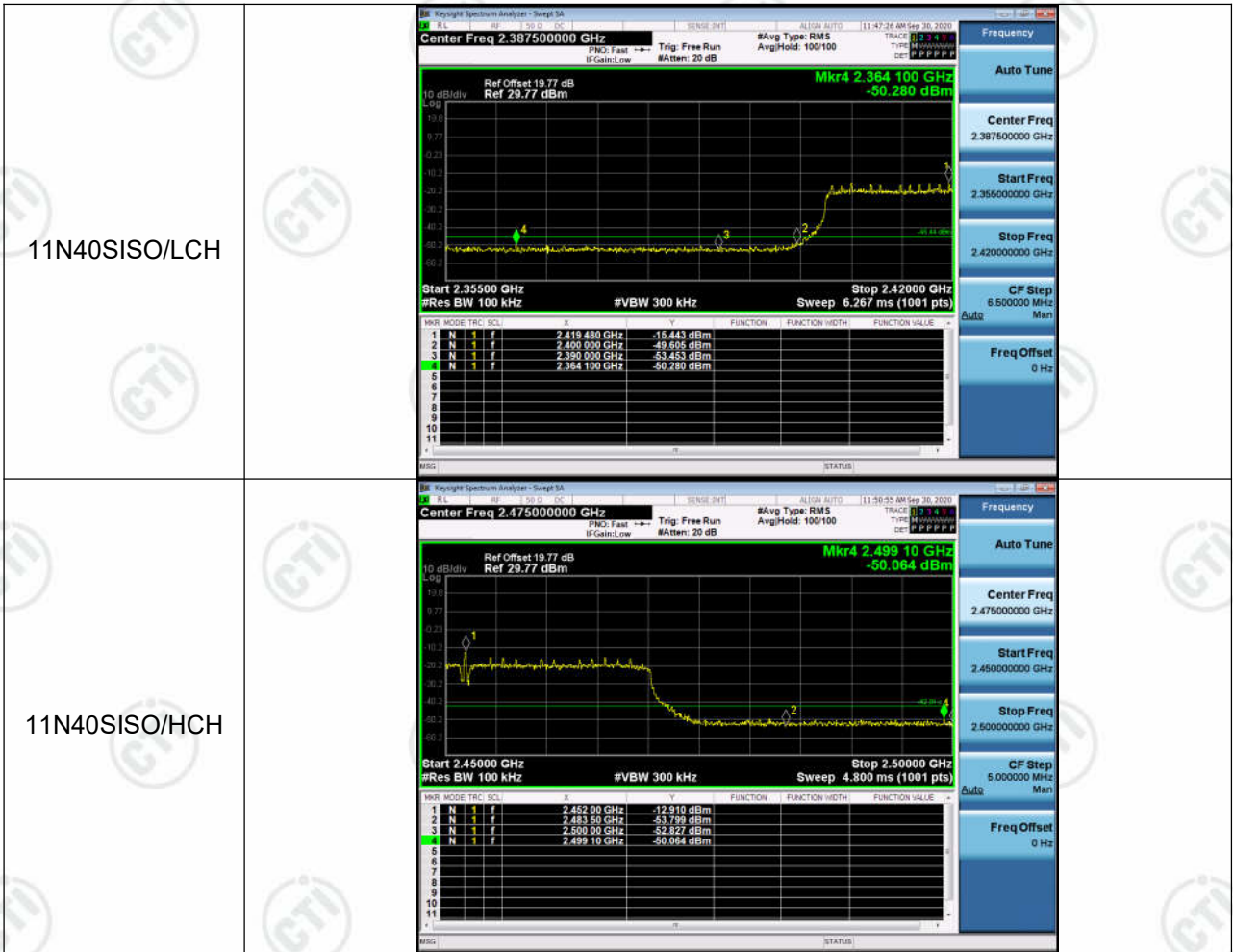
Result Table

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-7.050	-50.267	-37.05	PASS
11B	HCH	-6.293	-49.809	-36.29	PASS
11G	LCH	-12.508	-49.966	-42.51	PASS
11G	HCH	-12.281	-49.090	-42.28	PASS
11N20SISO	LCH	-12.830	-50.165	-42.83	PASS
11N20SISO	HCH	-12.330	-49.721	-42.33	PASS
11N40SISO	LCH	-15.443	-50.280	-45.44	PASS
11N40SISO	HCH	-12.910	-50.064	-42.91	PASS

Test Graph



<p>11G/HCH</p>	
<p>11N20SISO/LCH</p>	
<p>11N20SISO/HCH</p>	



Appendix D): RF Conducted Spurious Emissions

Test Limit

According to §15.247(d),

In any 100 kHz bandwidth outside the authorized frequency band,

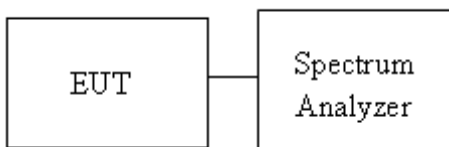
Non-restricted bands shall be attenuated at least 20 dB/30 dB relative to the maximum PSD level in 100 kHz by RF conducted or a radiated measurement which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

Test Procedure

Test method Refer as KDB 558074 D01.

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

Test Setup



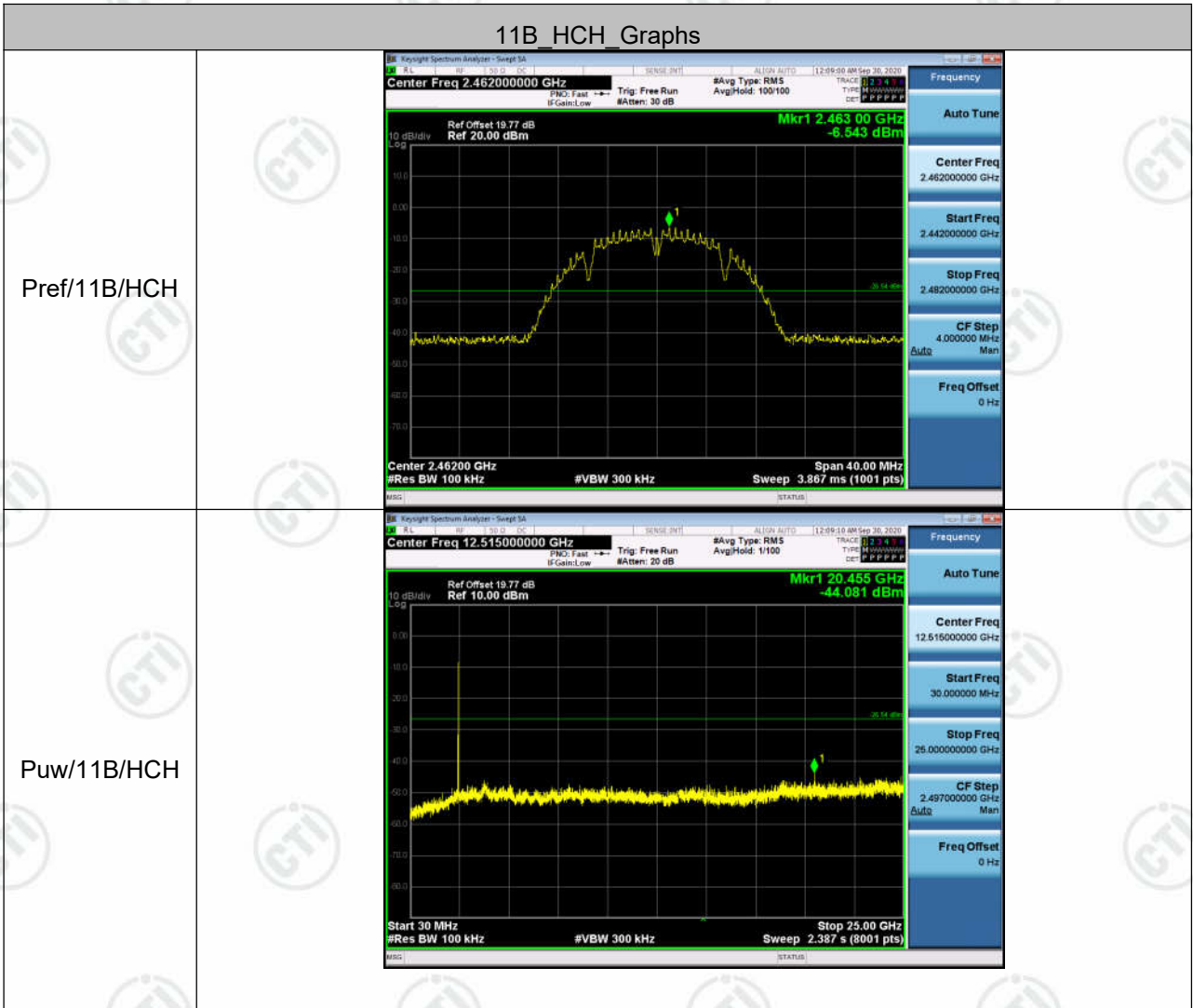
Result Table

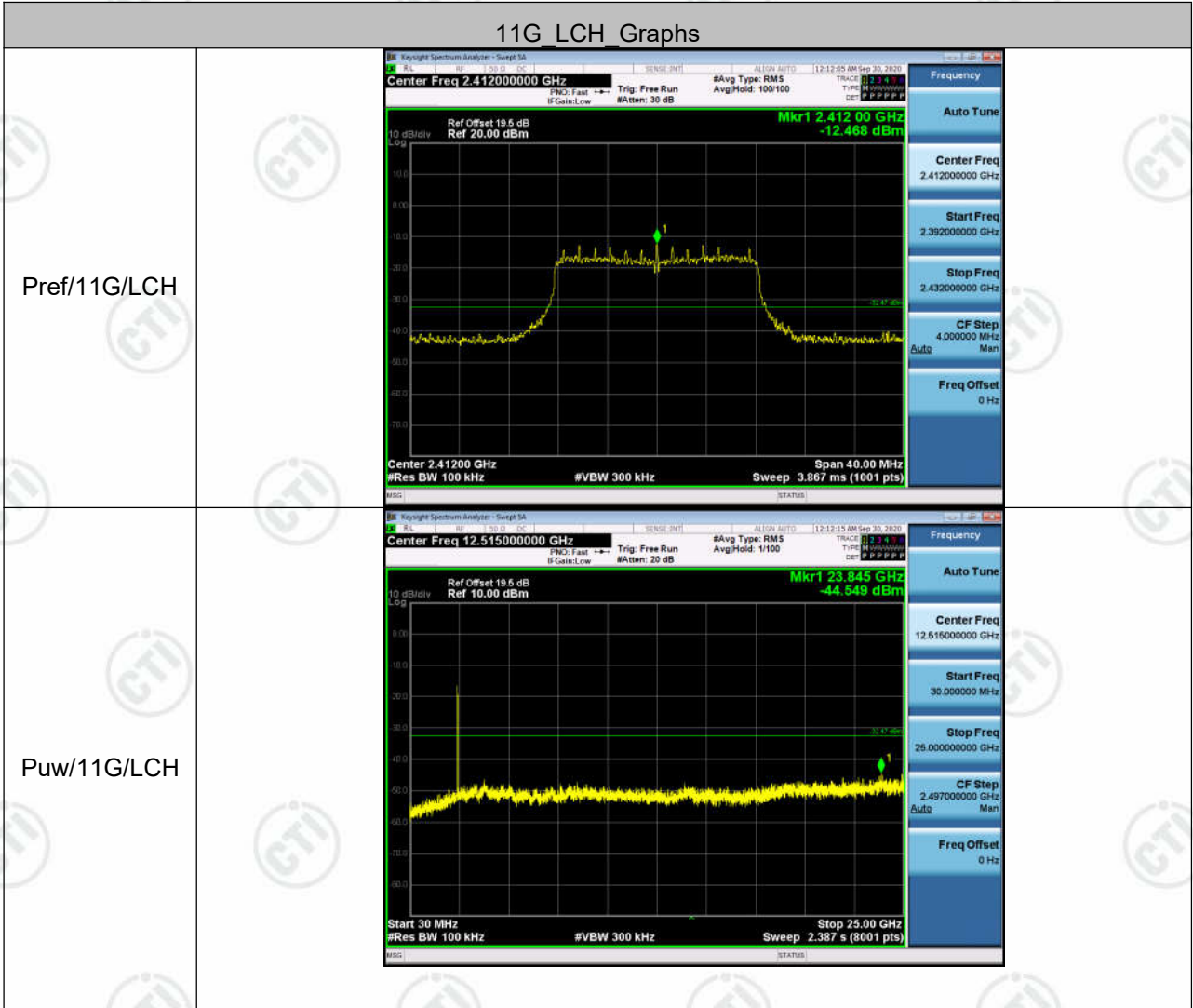
Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
11B	LCH	-6.957	<Limit	PASS
11B	MCH	-5.933	<Limit	PASS
11B	HCH	-6.543	<Limit	PASS
11G	LCH	-12.468	<Limit	PASS
11G	MCH	-12.094	<Limit	PASS
11G	HCH	-12.499	<Limit	PASS
11N20SISO	LCH	-12.871	<Limit	PASS
11N20SISO	MCH	-12.331	<Limit	PASS
11N20SISO	HCH	-12.586	<Limit	PASS
11N40SISO	LCH	-13.317	<Limit	PASS
11N40SISO	MCH	-12.97	<Limit	PASS
11N40SISO	HCH	-13.071	<Limit	PASS

Test Graph

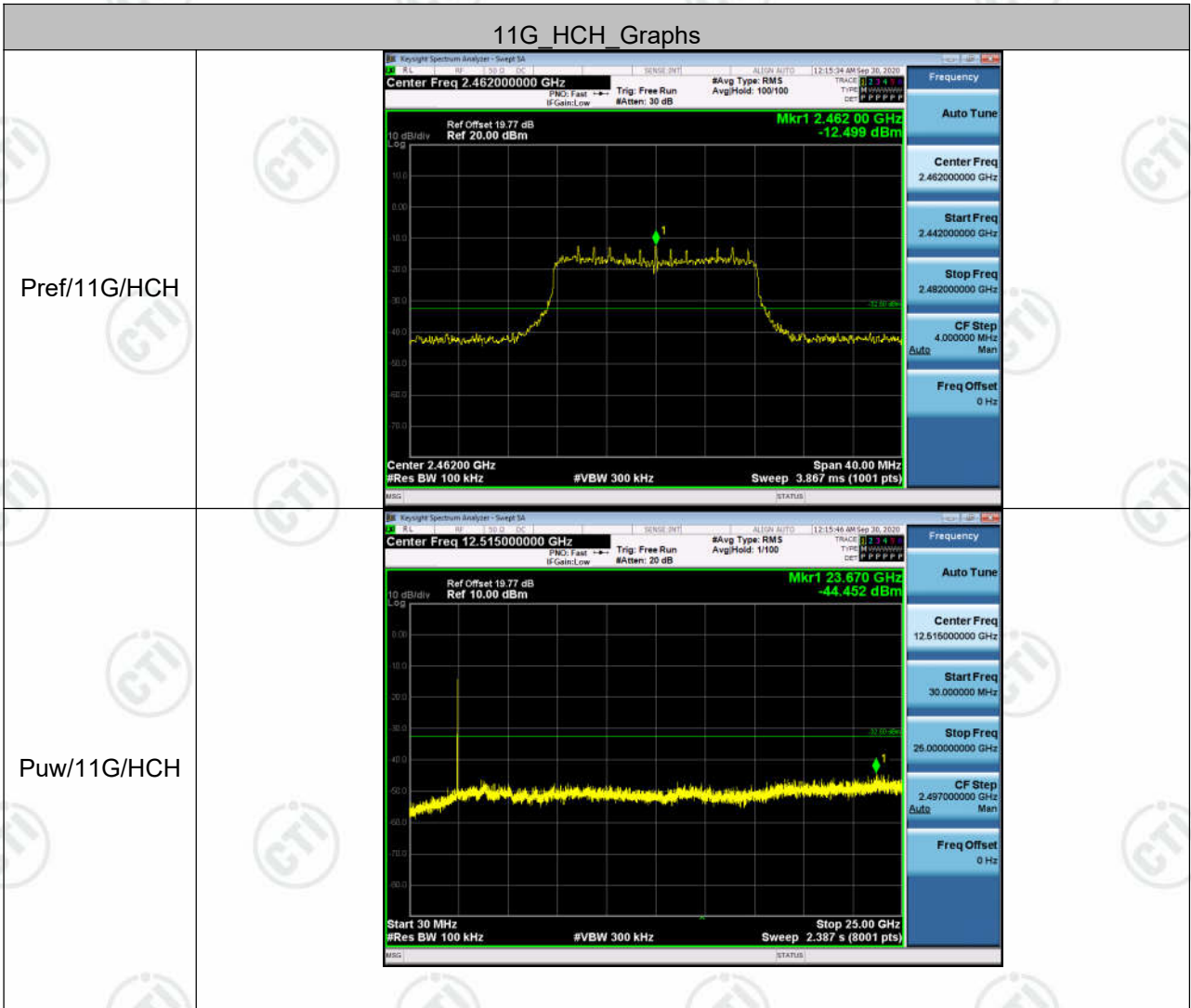


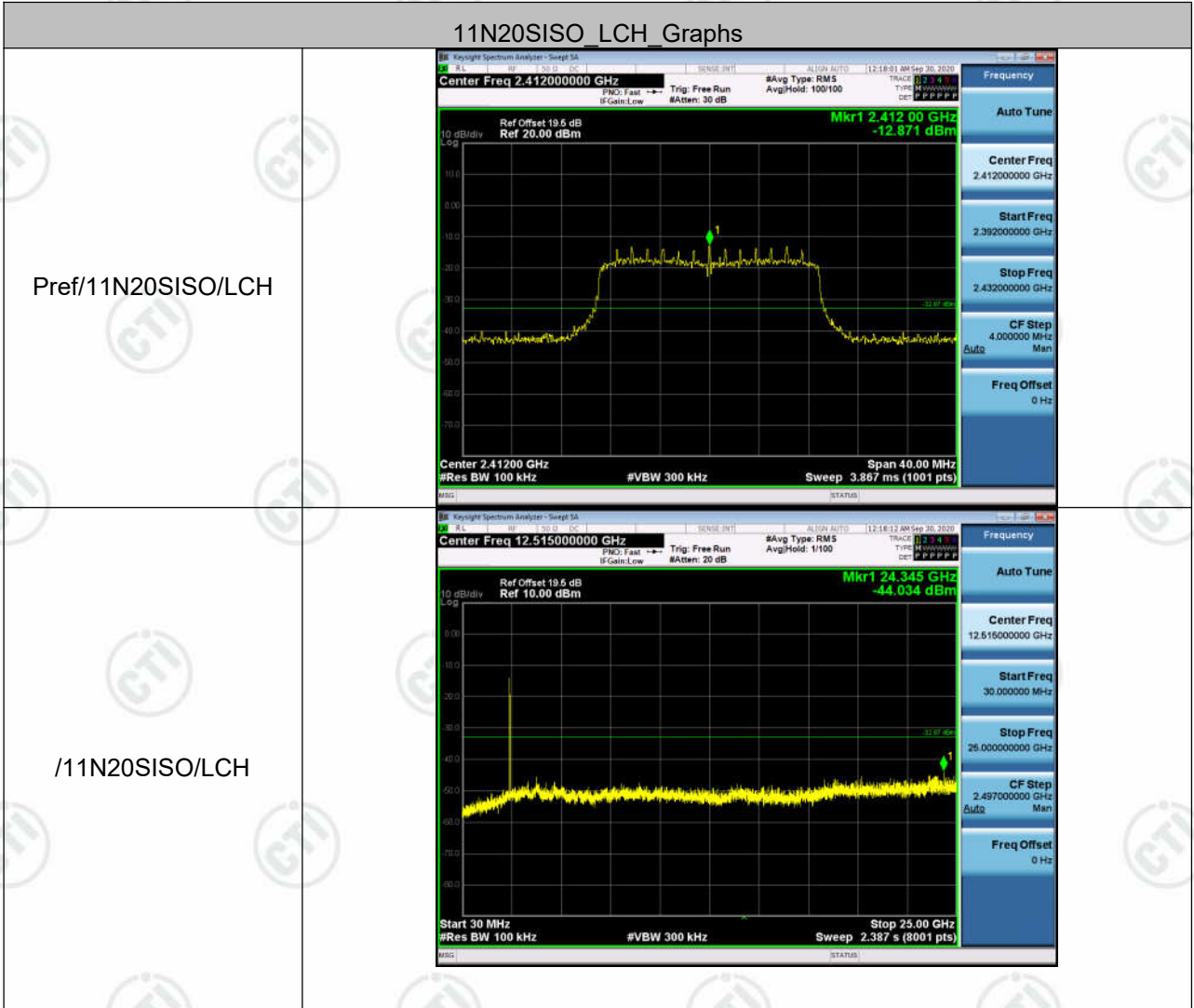


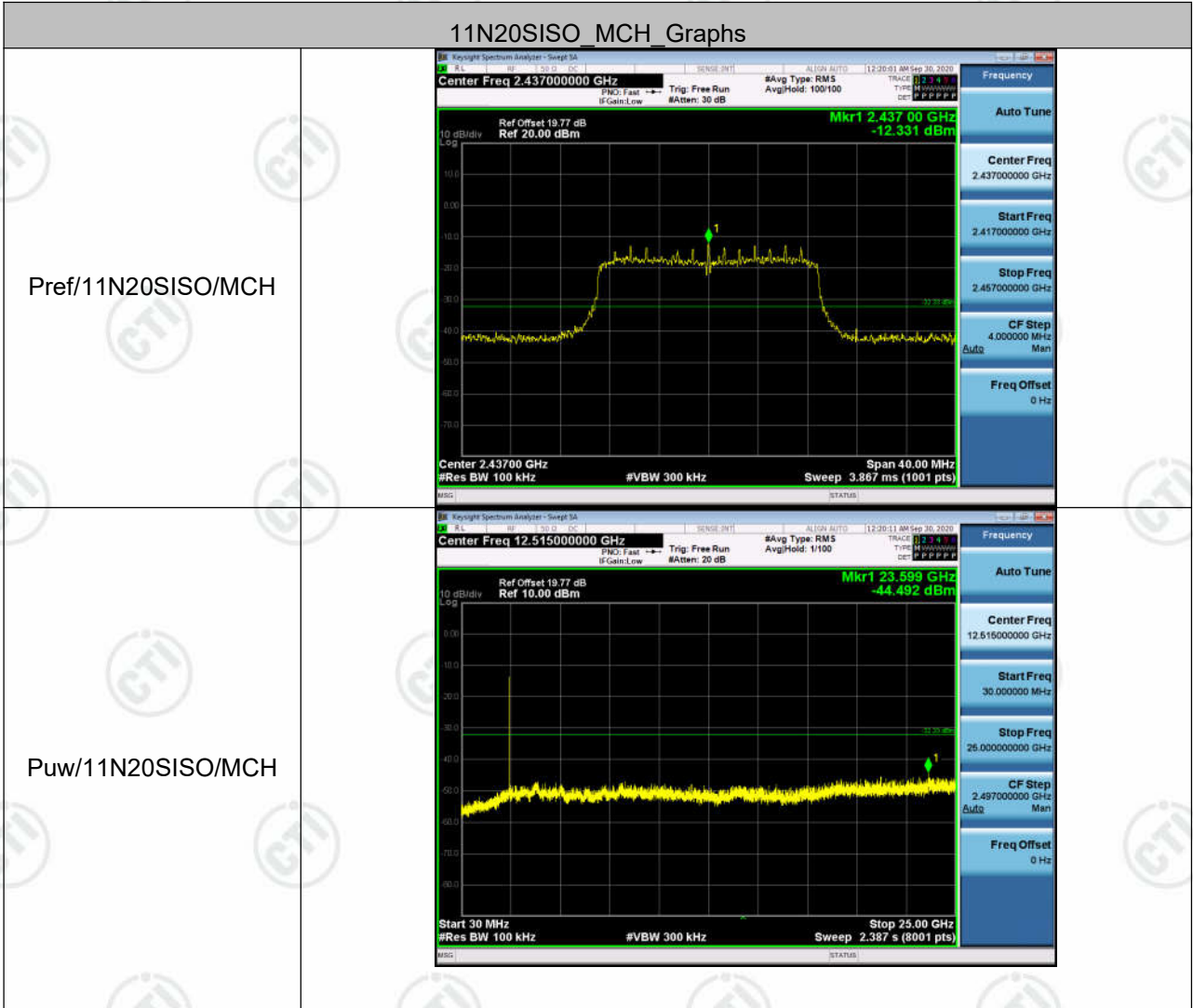


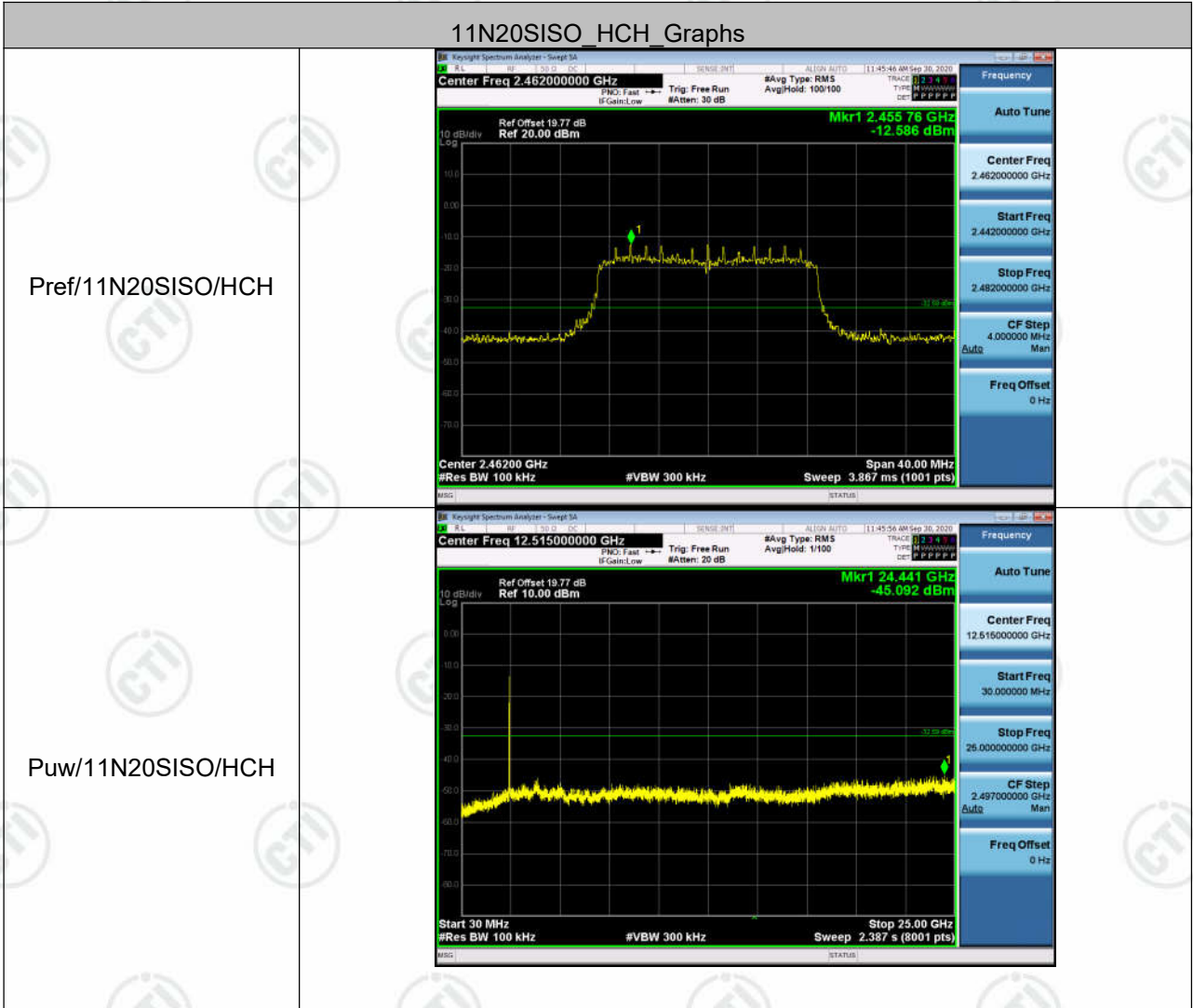


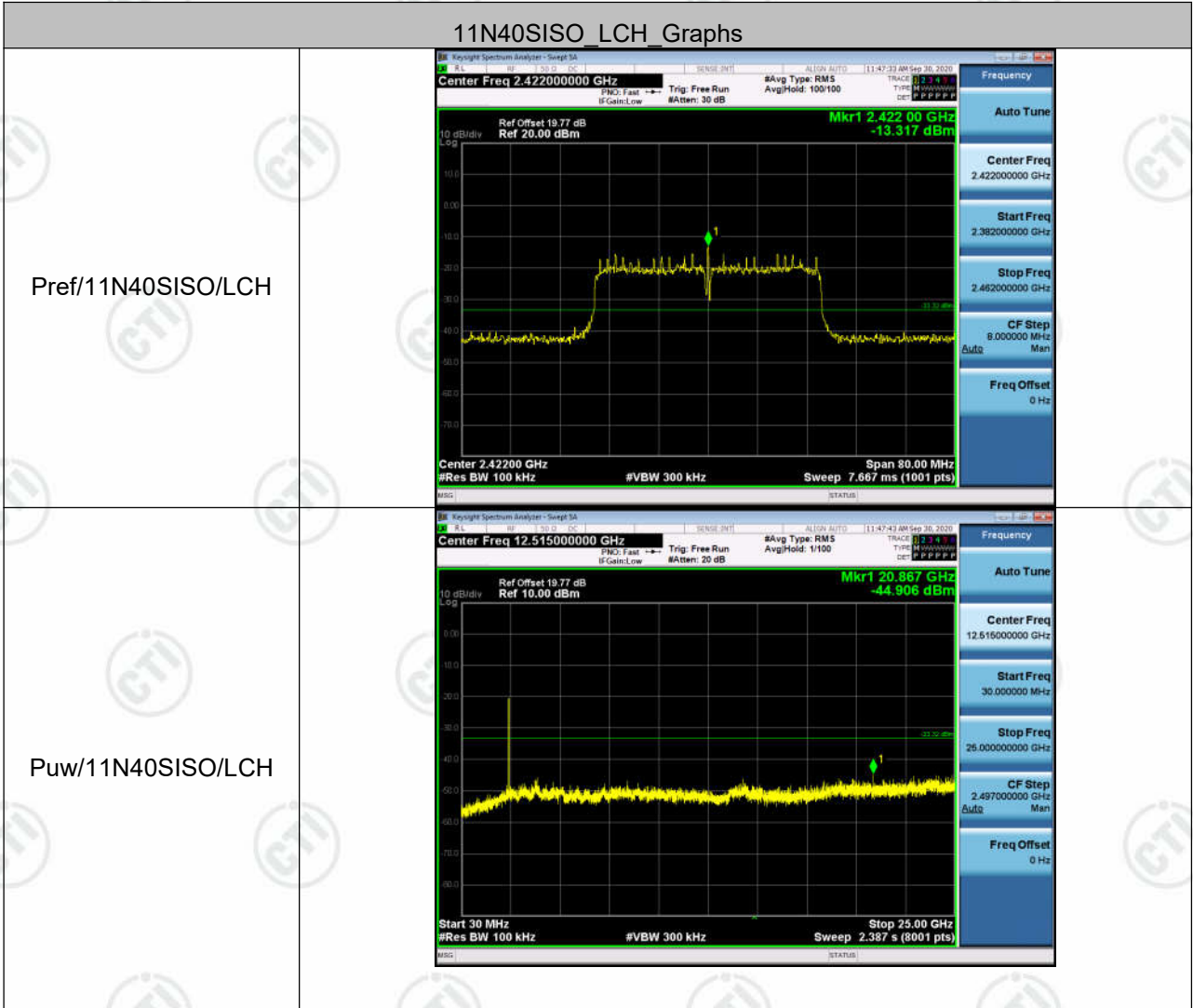


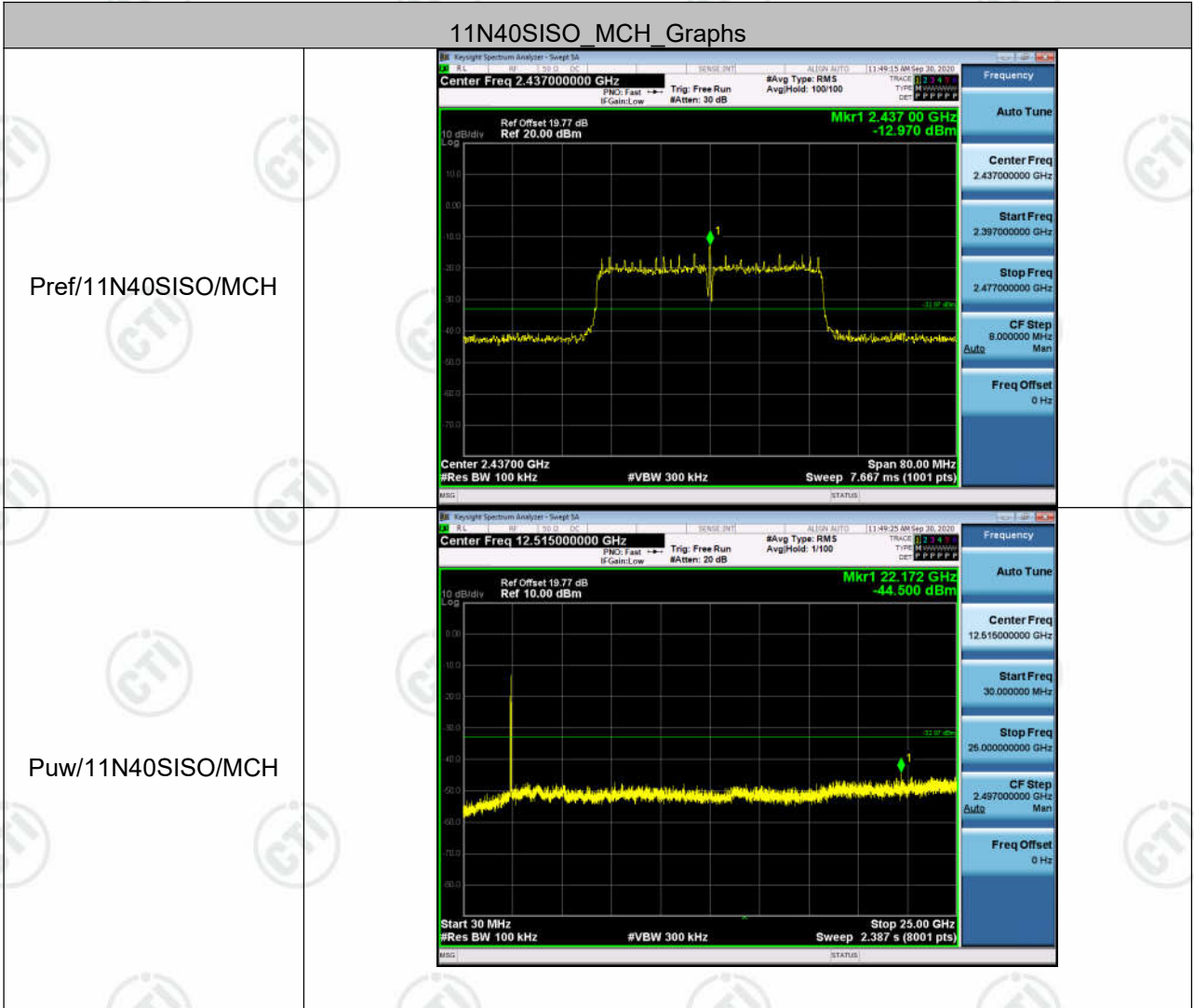


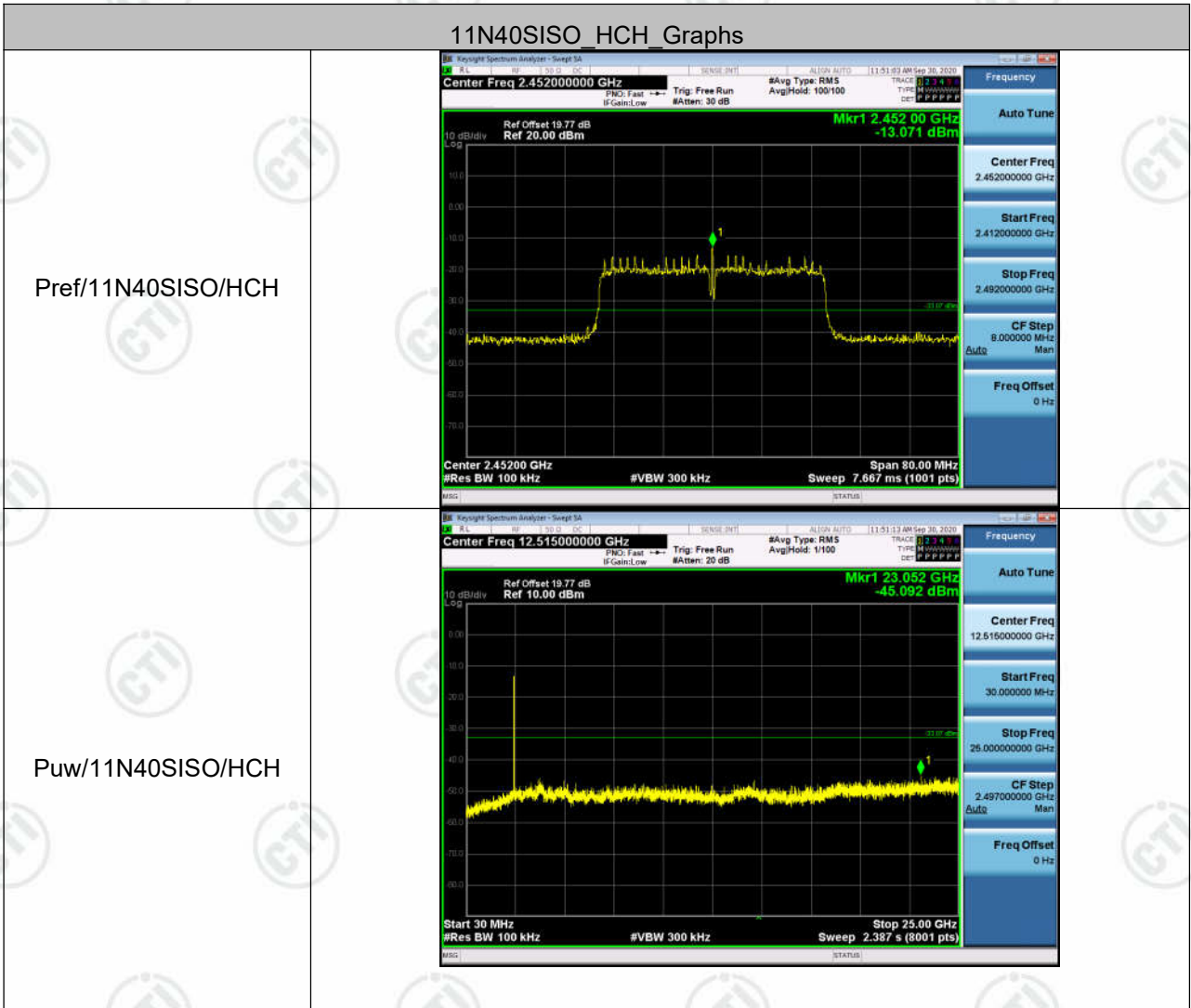












Appendix E): Power Spectral Density

Test Limit

According to §15.247(e),

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

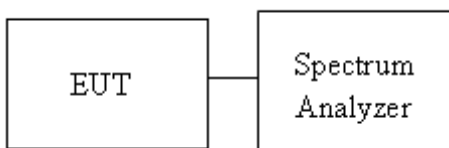
Limit	<input checked="" type="checkbox"/> Antenna not exceed 6 dBi : 8dBm <input type="checkbox"/> Antenna with DG greater than 6 dBi : [Limit = 8 – (DG – 6)] <input type="checkbox"/> Point-to-point operation :
-------	---

Test Procedure

Test method Refer as KDB 558074 D01.

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. SA set RBW = 3kHz, VBW = 10kHz, Span = 1.5 times DTS Bandwidth (6 dB BW), Detector = Peak, Sweep Time = Auto and Trace = Max hold.
4. The path loss was compensated to the results for each measurement by SA.
5. Mark the maximum level.
6. Measure and record the result of power spectral density. in the test report.

Test Setup

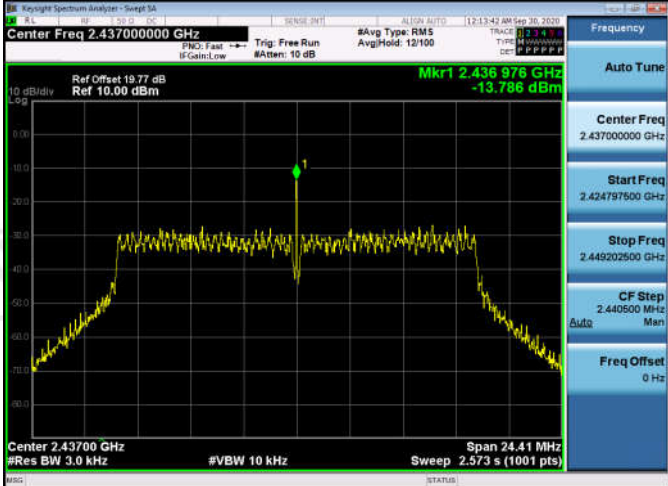


Result Table

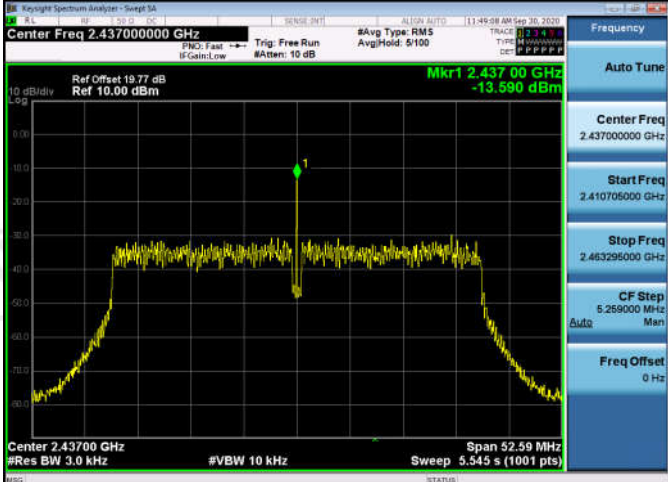
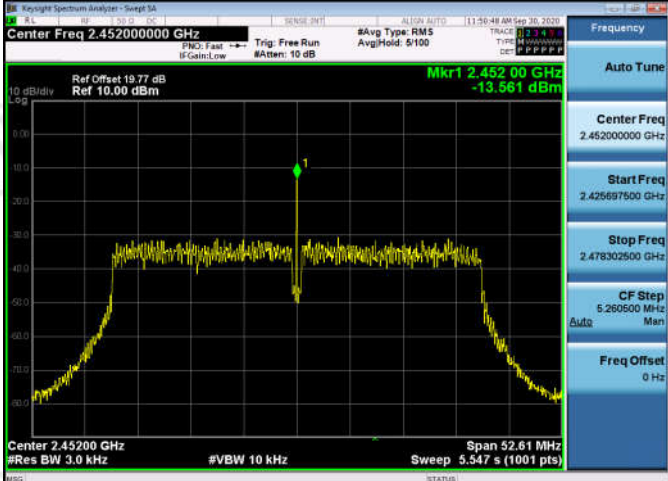
Mode	Channel	Power Spectral Density [dBm]	Verdict
11B	LCH	-13.265	PASS
11B	MCH	-12.860	PASS
11B	HCH	-13.193	PASS
11G	LCH	-14.068	PASS
11G	MCH	-13.786	PASS
11G	HCH	-13.961	PASS
11N20SISO	LCH	-14.048	PASS
11N20SISO	MCH	-13.626	PASS
11N20SISO	HCH	-13.917	PASS
11N40SISO	LCH	-14.834	PASS
11N40SISO	MCH	-13.590	PASS
11N40SISO	HCH	-13.561	PASS

Test Graph



<p>11G/LCH</p>	
<p>11G/MCH</p>	
<p>11G/HCH</p>	

<p>11N20SISO/LCH</p>	
<p>11N20SISO/MCH</p>	
<p>11N20SISO/HCH</p>	

<p>11N40SISO/LCH</p>	
<p>11N40SISO/MCH</p>	
<p>11N40SISO/HCH</p>	

Appendix F): Antenna Requirement

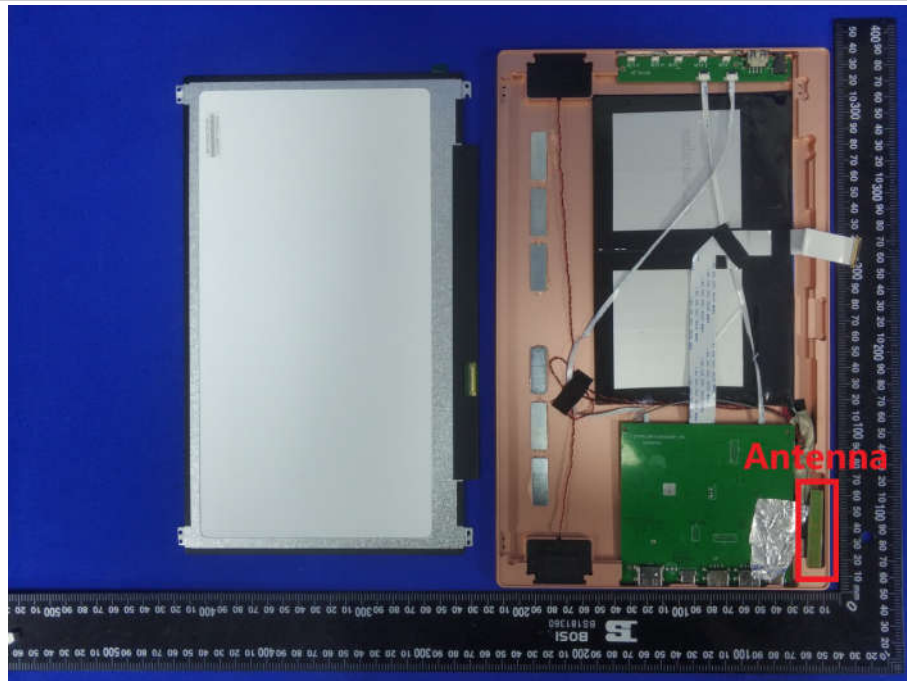
15.203 requirement:

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 Built-in dual-band antenna. The best case gain of the antenna is 3.0 dBi.

Appendix G): AC Power Line Conducted Emission

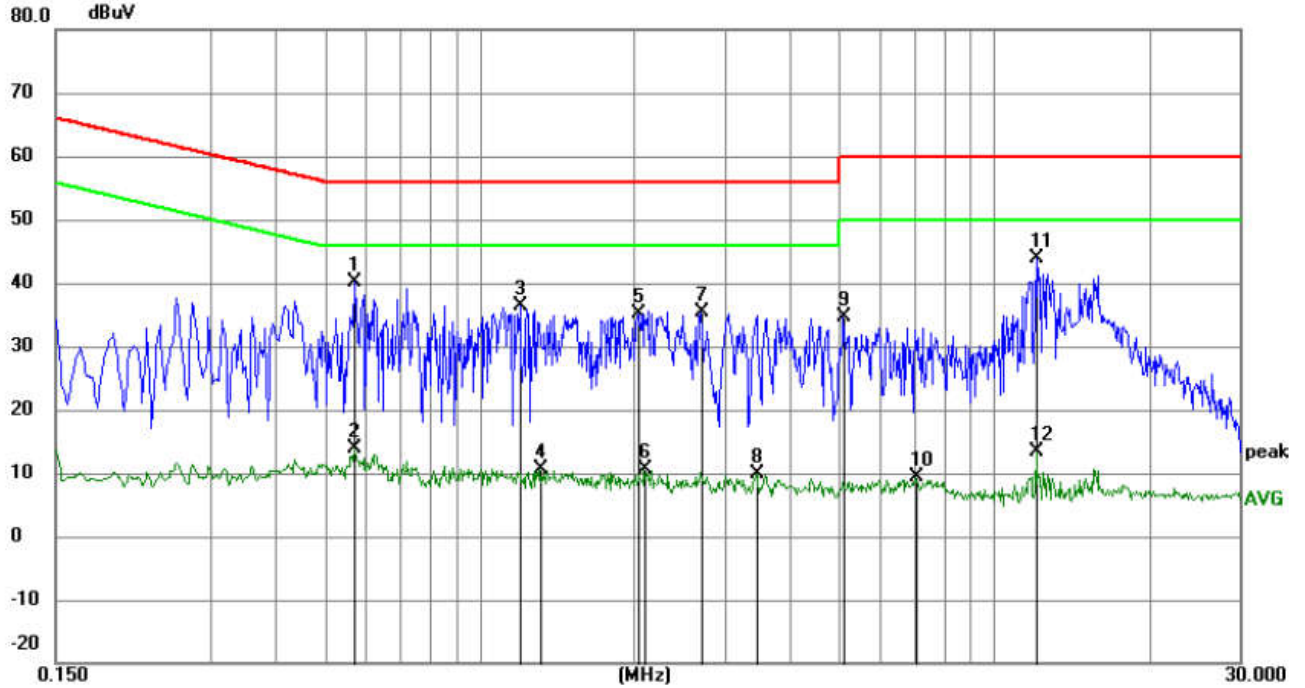
<p>Test Procedure:</p>	<p>Test frequency range :150KHz-30MHz</p> <ol style="list-style-type: none"> 1) The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ 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. 														
<p>Limit:</p>	<table border="1" data-bbox="464 1167 1331 1384"> <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. 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.

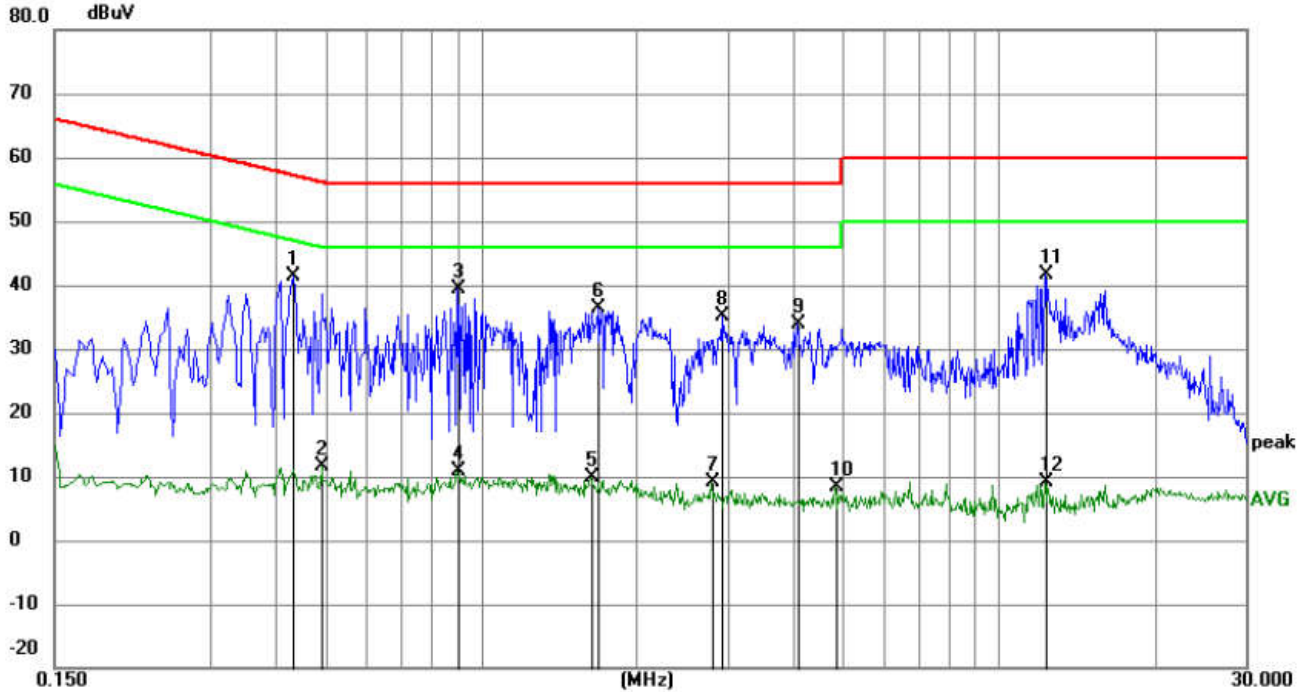
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Live line:



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.5725	30.04	10.04	40.08	56.00	-15.92	QP	
2		0.5725	3.85	10.04	13.89	46.00	-32.11	AVG	
3		1.1979	26.64	9.82	36.46	56.00	-19.54	QP	
4		1.3149	0.93	9.82	10.75	46.00	-35.25	AVG	
5		2.0354	25.33	9.79	35.12	56.00	-20.88	QP	
6		2.0939	0.85	9.79	10.64	46.00	-35.36	AVG	
7		2.6970	25.60	9.79	35.39	56.00	-20.61	QP	
8		3.4620	0.16	9.78	9.94	46.00	-36.06	AVG	
9		5.1089	24.78	9.78	34.56	60.00	-25.44	QP	
10		7.0438	-0.36	9.79	9.43	50.00	-40.57	AVG	
11		12.0615	34.07	9.84	43.91	60.00	-16.09	QP	
12		12.0615	3.54	9.84	13.38	50.00	-36.62	AVG	

Neutral line:



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.4334	31.44	9.96	41.40	57.19	-15.79	QP	
2		0.4919	1.76	9.95	11.71	46.14	-34.43	AVG	
3		0.9012	29.43	9.85	39.28	56.00	-16.72	QP	
4		0.9012	1.11	9.85	10.96	46.00	-35.04	AVG	
5		1.6304	0.11	9.80	9.91	46.00	-36.09	AVG	
6		1.6839	26.46	9.80	36.26	56.00	-19.74	QP	
7		2.7915	-0.58	9.79	9.21	46.00	-36.79	AVG	
8		2.9264	25.44	9.79	35.23	56.00	-20.77	QP	
9		4.0739	24.20	9.78	33.98	56.00	-22.02	QP	
10		4.8300	-1.31	9.78	8.47	46.00	-37.53	AVG	
11		12.2728	31.66	9.85	41.51	60.00	-18.49	QP	
12		12.2728	-0.77	9.85	9.08	50.00	-40.92	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:	<table border="1"> <thead> <tr> <th>Frequency</th> <th>Detector</th> <th>RBW</th> <th>VBW</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>30MHz-1GHz</td> <td>Quasi-peak</td> <td>120kHz</td> <td>300kHz</td> <td>Quasi-peak</td> </tr> <tr> <td rowspan="2">Above 1GHz</td> <td>Peak</td> <td>1MHz</td> <td>3MHz</td> <td>Peak</td> </tr> <tr> <td>Peak</td> <td>1MHz</td> <td>10Hz</td> <td>Average</td> </tr> </tbody> </table>	Frequency	Detector	RBW	VBW	Remark	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak	Above 1GHz	Peak	1MHz	3MHz	Peak	Peak	1MHz	10Hz	Average	
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:	<p>Below 1GHz test procedure as below:</p> <p>Test method Refer as KDB 558074 D01</p> <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 <p>Above 1GHz test procedure as below:</p> <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:	<table border="1"> <thead> <tr> <th>Frequency</th> <th>Limit (dBμV/m @3m)</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>30MHz-88MHz</td> <td>40.0</td> <td>Quasi-peak Value</td> </tr> <tr> <td>88MHz-216MHz</td> <td>43.5</td> <td>Quasi-peak Value</td> </tr> <tr> <td>216MHz-960MHz</td> <td>46.0</td> <td>Quasi-peak Value</td> </tr> <tr> <td>960MHz-1GHz</td> <td>54.0</td> <td>Quasi-peak Value</td> </tr> <tr> <td rowspan="2">Above 1GHz</td> <td>54.0</td> <td>Average Value</td> </tr> <tr> <td>74.0</td> <td>Peak Value</td> </tr> </tbody> </table>	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
Frequency	Limit (dB μ V/m @3m)	Remark																			
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