TEST REPORT

Product	:	projector
Trade mark		N/A
Model/Typereference	:	GC003,GC005,GC007,GC333,GC555,GC777,GC111, GC135,GC355,GC357,GC222,GC666,GC888,GC999, GC003A,GC005A,GC007A,GC333A,GC555A,GC777A, GC111A,GC135A,GC355A,GC357A,GC222A,GC666A, GC888A,GC999A,GC003B,GC005B,GC007B,GC333B, GC555B,GC777B,GC111B,GC135B,GC355B,GC357B, GC222B,GC666B,GC888B,GC999B, Macow Ⅰ, Macow Ⅱ ,Parrot Ⅱ ,ParrotⅢ,Leisure 430,Leisure 430W,Leisure 1,Leisure 1W
Serial Number	:	N/A
Report Number		EED32M00113901
FCC ID	:	2AW9Q-JZHAGC3
Date of Issue	:	Sep. 24, 2020
Test Standards	:	47 CFR Part 15Subpart C
Test result	:	PASS

Prepared for:

Golden Coast Technology (shenzhen) Co., Ltd
Room 401, Buildina F Innovation Industrial Park,
Guanhu Street, Lonahua District

Prepared by:

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Approved by: Sam Chuang — Sam Chuang

Date: Sep. 24, 2020

Check No.:4538243193

2 Version

Version No.	Date	Description
00	Sep. 24, 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
Duty cycle	ANSI C63. 10-2013	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.:GC003,GC005,GC007,GC333,GC555,GC777,GC111,GC135,GC355,GC357,GC222,GC666, GC888,GC999,GC003A,GC005A,GC007A,GC333A,GC555A,GC777A,GC111A,GC135A,GC355A, GC357A,GC222A,GC666A,GC888A,GC999A,GC003B,GC005B,GC007B,GC333B,GC555B,GC777B, GC111B,GC135B,GC355B,GC357B,GC222B,GC666B,GC888B,GC999B, Macow Ⅰ, Macow Ⅱ,Parrot Ⅱ,ParrotⅢ,Leisure 430,Leisure 430W,Leisure 1,Leisure 1W

Only the model GC003 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference of model name.

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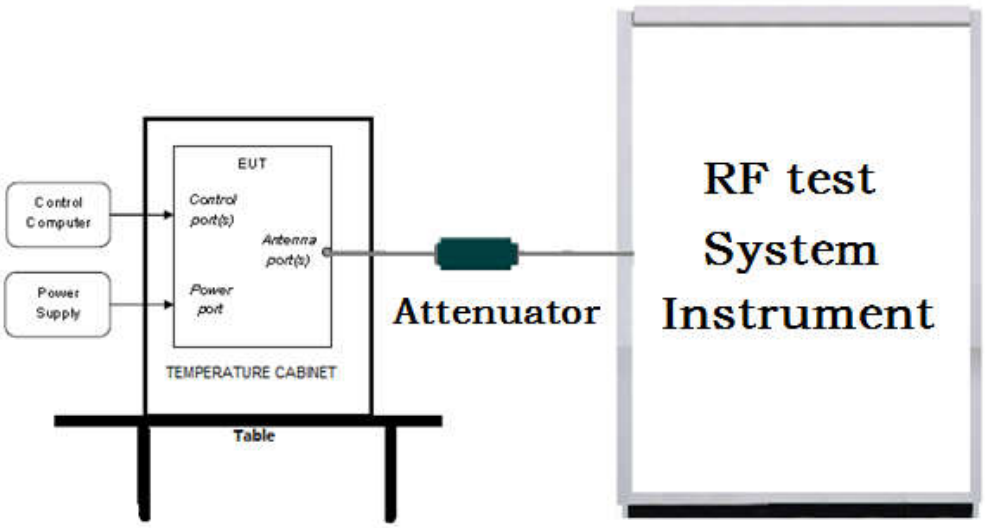
5 Test Requirement

5.1 Test setup

5.1.1 For Conducted test setup



5.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

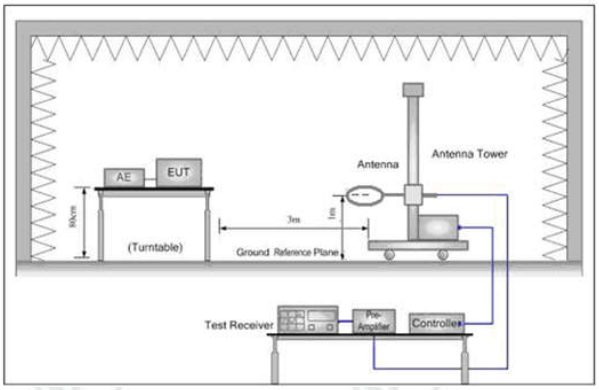


Figure 1. Below 30MHz

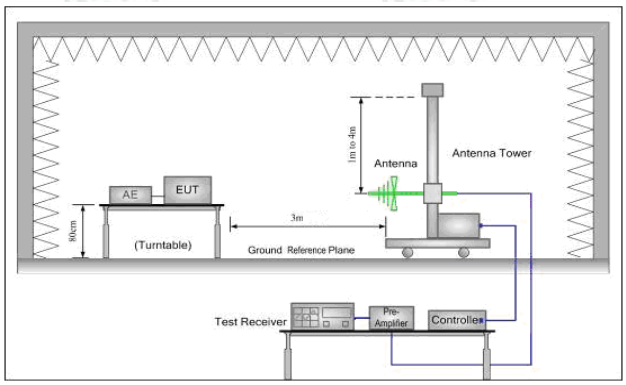


Figure 2. 30MHz to 1GHz

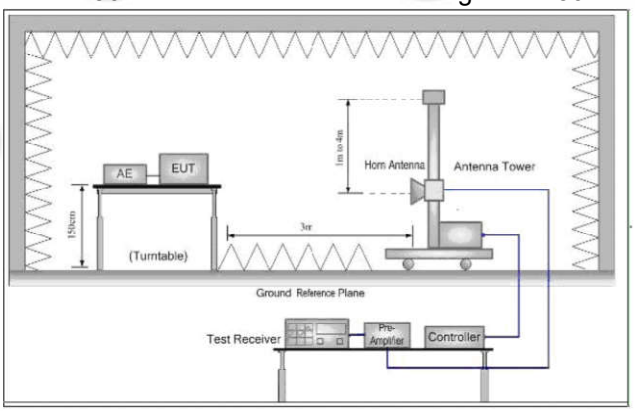
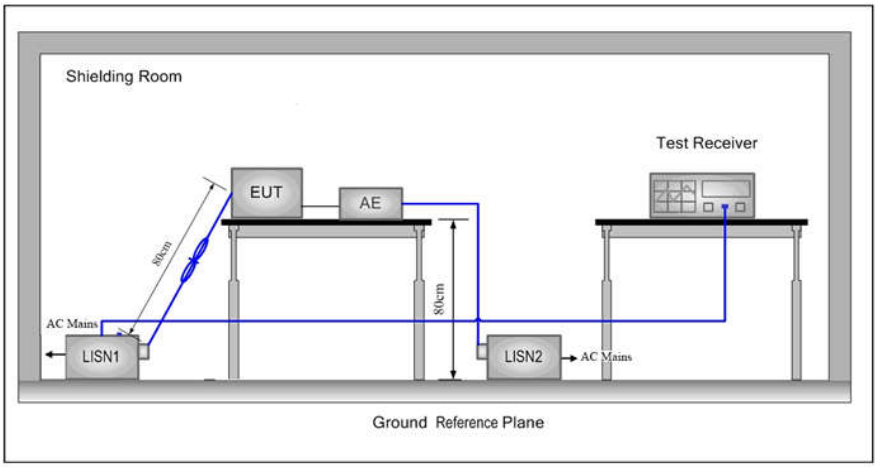


Figure 3. Above 1GHz

5.1.3 For Conducted Emissions test setup

Conducted Emissions setup



5.2 Test Environment

Operating Environment:	
Temperature:	23 °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	Channel 11
		2412MHz	2437MHz	2462MHz
802.11n(HT40)	2422MHz ~2452 MHz	Channel 3	Channel 6	Channel 9
		2422MHz	2437MHz	2452MHz

Test mode:

Pre-scan under all rate at lowest channel 1

Mode	802.11b			
Data Rate	1Mbps	2Mbps	5.5Mbps	11Mbps
Power(dBm)	15.08	15.06	15.04	15.02

Mode	802.11g							
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
Power(dBm)	16.15	16.13	16.11	16.09	16.07	16.05	16.03	16.01

Mode	802.11n (HT20)							
Data Rate	6.5Mbps	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps	58.5Mbps	65Mbps
Power(dBm)	15.13	15.11	15.09	15.07	15.05	15.03	15.01	14.99
Mode	802.11n (HT40)							
Data Rate	13.5Mbps	27Mbps	40.5Mbps	54Mbps	81Mbps	108Mbps	121.5Mbps	135Mbps
Power(dBm)	15.7	15.68	15.66	15.64	15.62	15.60	15.58	15.56

Through Pre-scan, 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20); 13.5Mbps of rate is the worst case of802.11n(HT40).

6 General Information

6.1 Client Information

Applicant:	Golden Coast Technology (shenzhen) Co., Ltd
Address of Applicant:	Room 401, Buildina F Innovation Industrial Park, Guanhu Street, Lonahua District
Manufacturer:	Golden Coast Technology (shenzhen) Co., Ltd
Address of Manufacturer:	Room 401, Buildina F Innovation Industrial Park, Guanhu Street, Lonahua District
Factory:	Golden Coast Technology (shenzhen) Co., Ltd
Address of Factory:	Room 401, Buildina F Innovation Industrial Park, Guanhu Street, Lonahua District

6.2 General Description of EUT

Product Name:	projector
Model No.(EUT):	GC003,GC005,GC007,GC333,GC555,GC777,GC111,GC135,GC355, GC357,GC222,GC666,GC888,GC999,GC003A,GC005A,GC007A, GC333A,GC555A,GC777A,GC111A,GC135A,GC355A,GC357A,GC222A, GC666A,GC888A,GC999A,GC003B,GC005B,GC007B,GC333B,GC555B, GC777B,GC111B,GC135B,GC355B,GC357B,GC222B,GC666B,GC888B, GC999B, Macow Ⅰ, Macow Ⅱ,Parrot Ⅱ,ParrotⅢ,Leisure 430, Leisure 430W,Leisure 1,Leisure 1W
Test Model No.:	GC003
Trade mark:	N/A
Frequency Range of Operation:	IEEE 802.11 b/g/n(HT20)(HT40): 2400MHz to 2483.5MHz
Power Supply:	DC 5V
Sample Received Date:	May. 07, 2020
Sample tested Date:	May. 07, 2020 to Aug. 25, 2020

6.3 Product Specification subjective to this standard

Operating 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:	MP_Kit_RTL11n_8188FU_USB_v1.17_20160616(BETA)
Antenna Type and Gain:	Type: Monopole Antenna Gain: 2dBi
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 with associated equipment below.

Associated equipment name		Manufacture	model	S/N serial number	Supplied by	Certification
AE	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	07-26-2019 06-29-2020	07-25-2020 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	---	---	---

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	07-26-2019 05-16-2020	07-25-2020 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	maturo	NCD/070/107 11112	---	---	---
Temperature/ Humidity Indicator	Shanghai qixiang	HM10	1804298	07-26-2019 06-29-2020	07-25-2020 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	---	---

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 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	05-22-2019 05-20-2020	05-21-2020 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:

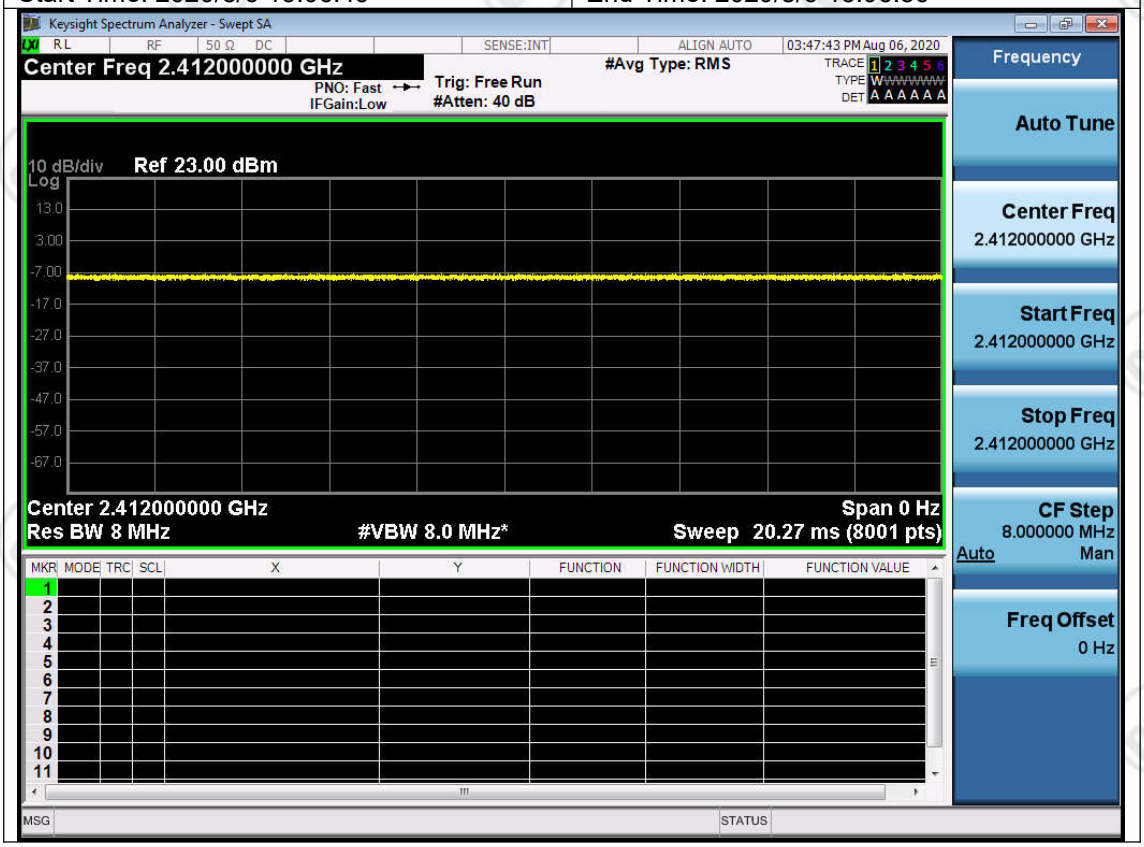
No.	Identity	Document Title
1	FCC Part15C	Subpart C-Intentional Radiators
2	ANSI C63.10-2013	American National Standard for Testing Unlicesed Wireless Devices

Test Results List:

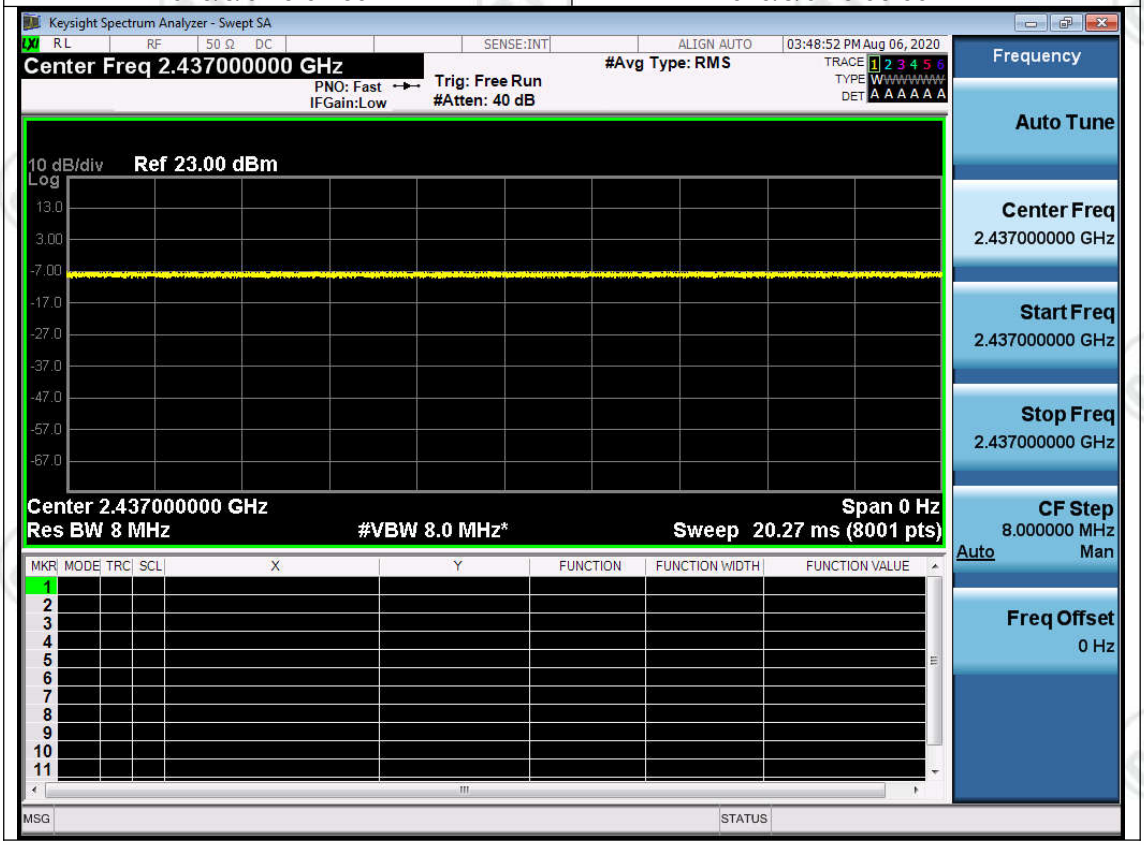
Test Requirement	Test method	Test item	Verdict	Note
Part15C Section 15.247 (b)(3)	ANSI C63.10	Conducted Peak Output Power	PASS	Appendix A)
Part15C Section 15.247 (a)(2)	ANSI C63.10	6dB Occupied Bandwidth	PASS	Appendix B)
Part15C Section 15.247(d)	ANSI C63.10	Band-edge for RF Conducted Emissions	PASS	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

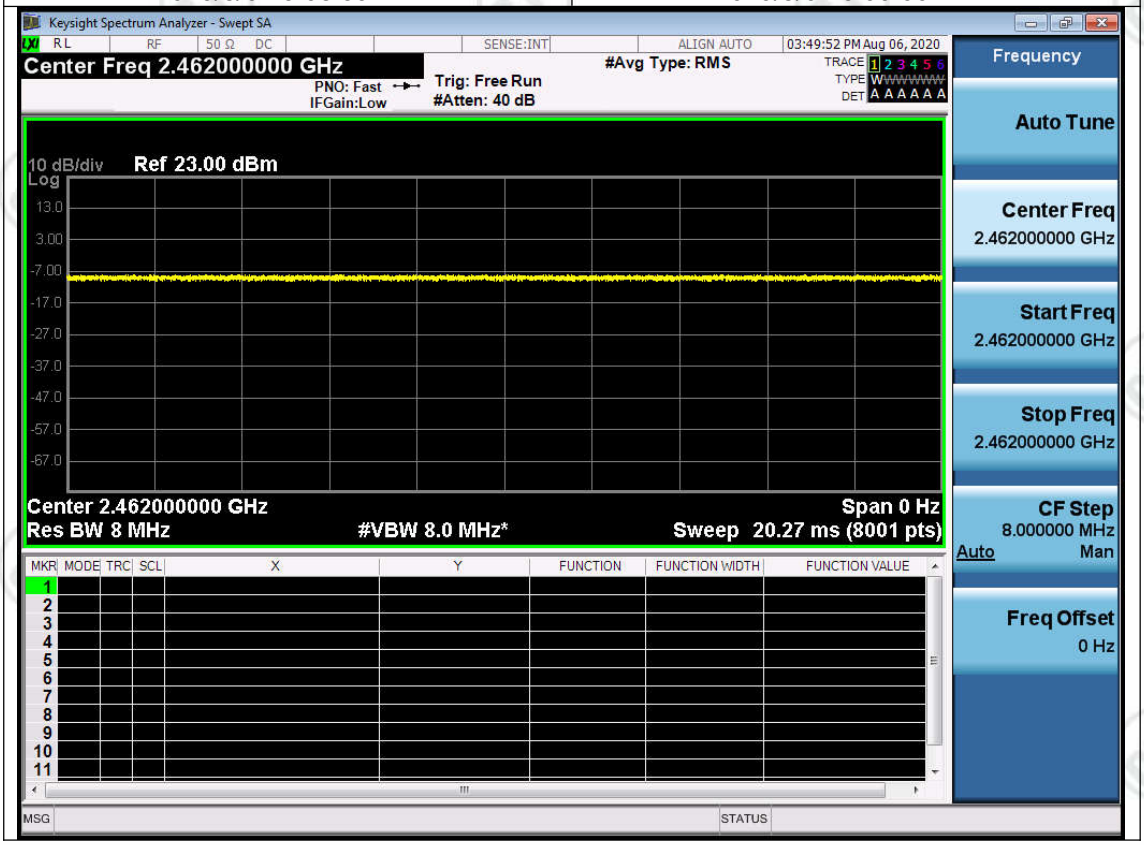
Test Case: Duty Cycle	
Mode: 11B	Ant: Ant1
Channel: LCH	Voltage: VN
Temperature: TN	**Result: PASS Value:100%**
Start Time: 2020/8/6 13:06:49	End Time: 2020/8/6 13:06:56



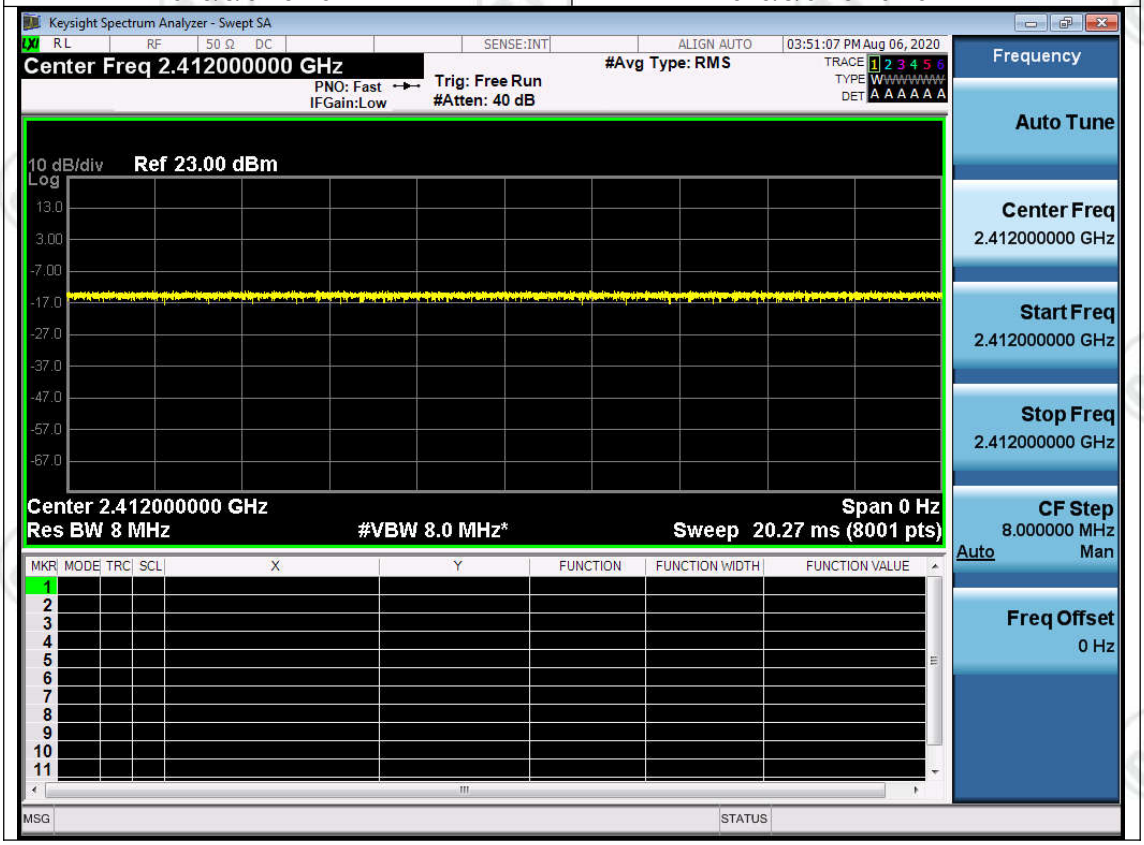
Test Case: Duty Cycle	
Mode: 11B	Ant: Ant1
Channel: MCH	Voltage: VN
Temperature: TN	**Result: PASS Value:100%**
Start Time: 2020/8/6 13:07:59	End Time: 2020/8/6 13:08:06



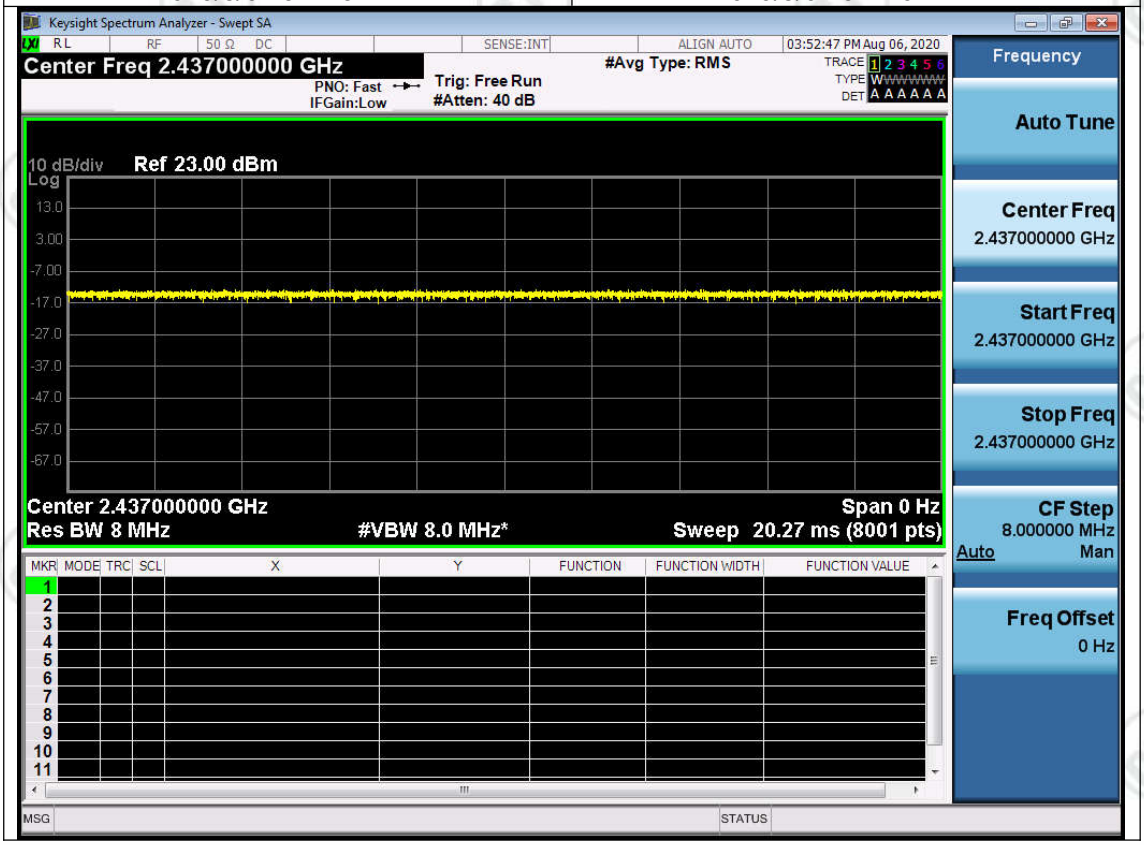
Test Case: Duty Cycle	
Mode: 11B	Ant: Ant1
Channel: HCH	Voltage: VN
Temperature: TN	**Result: PASS Value:100%**
Start Time: 2020/8/6 13:08:59	End Time: 2020/8/6 13:09:06



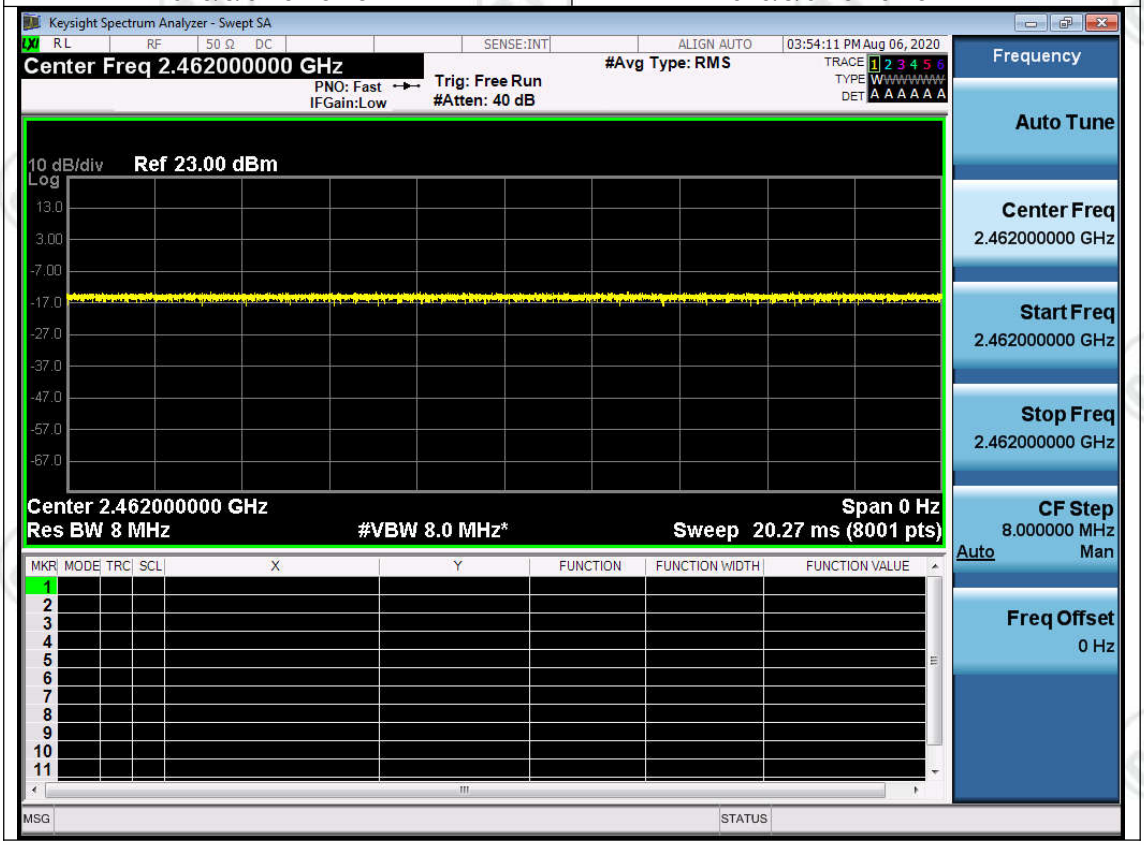
Test Case: Duty Cycle	
Mode: 11G	Ant: Ant1
Channel: LCH	Voltage: VN
Temperature: TN	**Result: PASS Value:100%**
Start Time: 2020/8/6 13:10:14	End Time: 2020/8/6 13:10:20



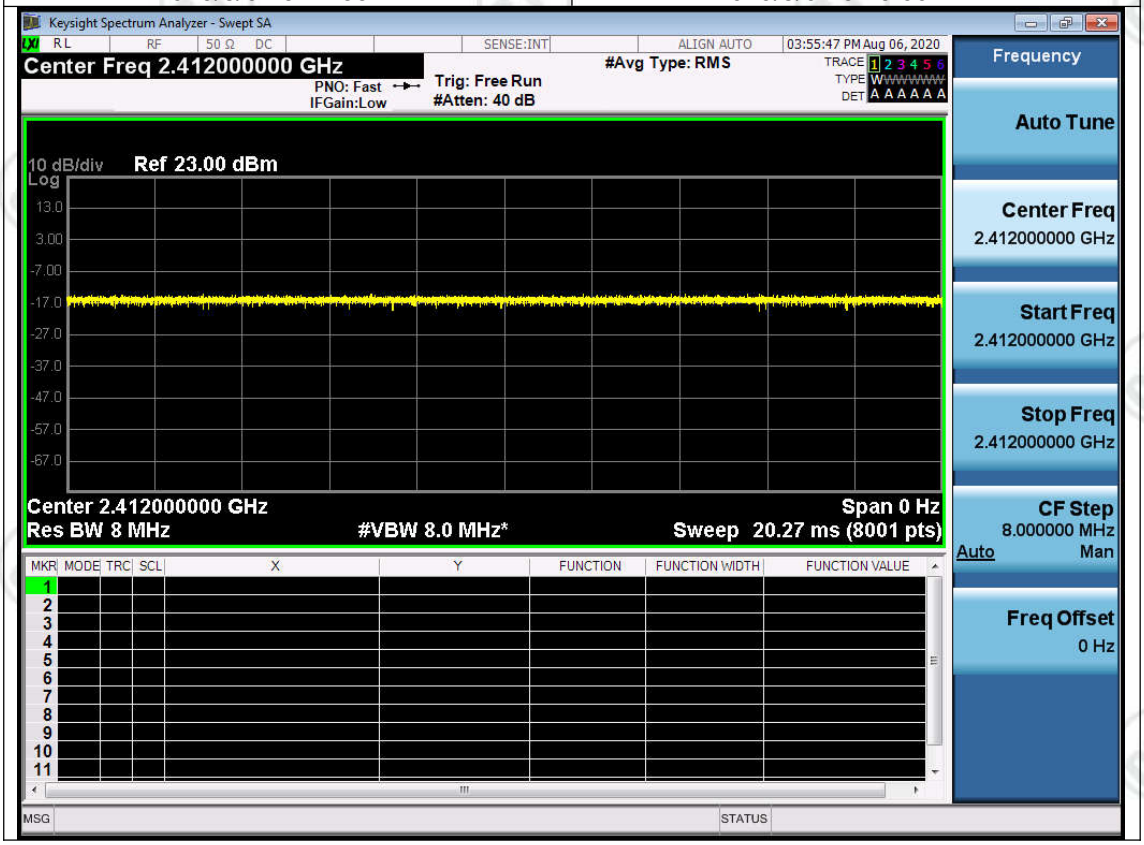
Test Case: Duty Cycle	
Mode: 11G	Ant: Ant1
Channel: MCH	Voltage: VN
Temperature: TN	**Result: PASS Value:100%**
Start Time: 2020/8/6 13:11:54	End Time: 2020/8/6 13:12:01



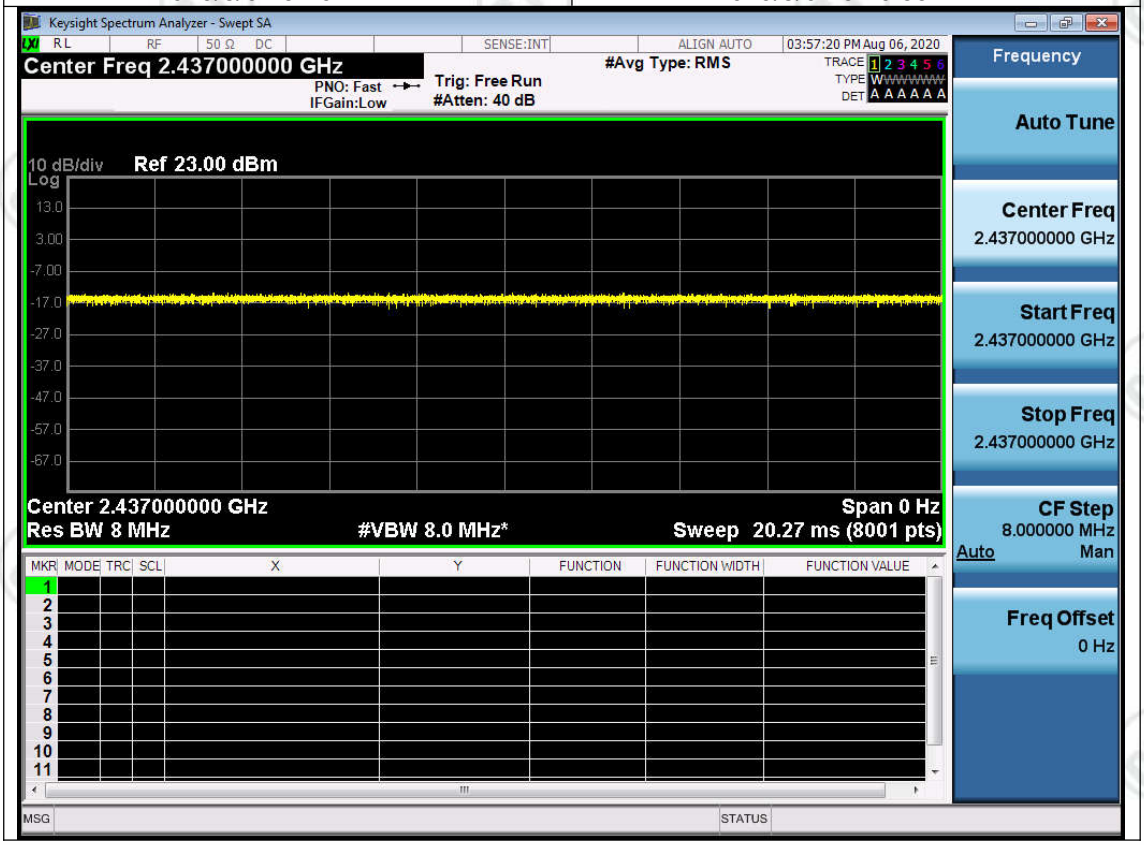
Test Case: Duty Cycle	
Mode: 11G	Ant: Ant1
Channel: HCH	Voltage: VN
Temperature: TN	**Result: PASS Value:100%**
Start Time: 2020/8/6 13:13:18	End Time: 2020/8/6 13:13:25



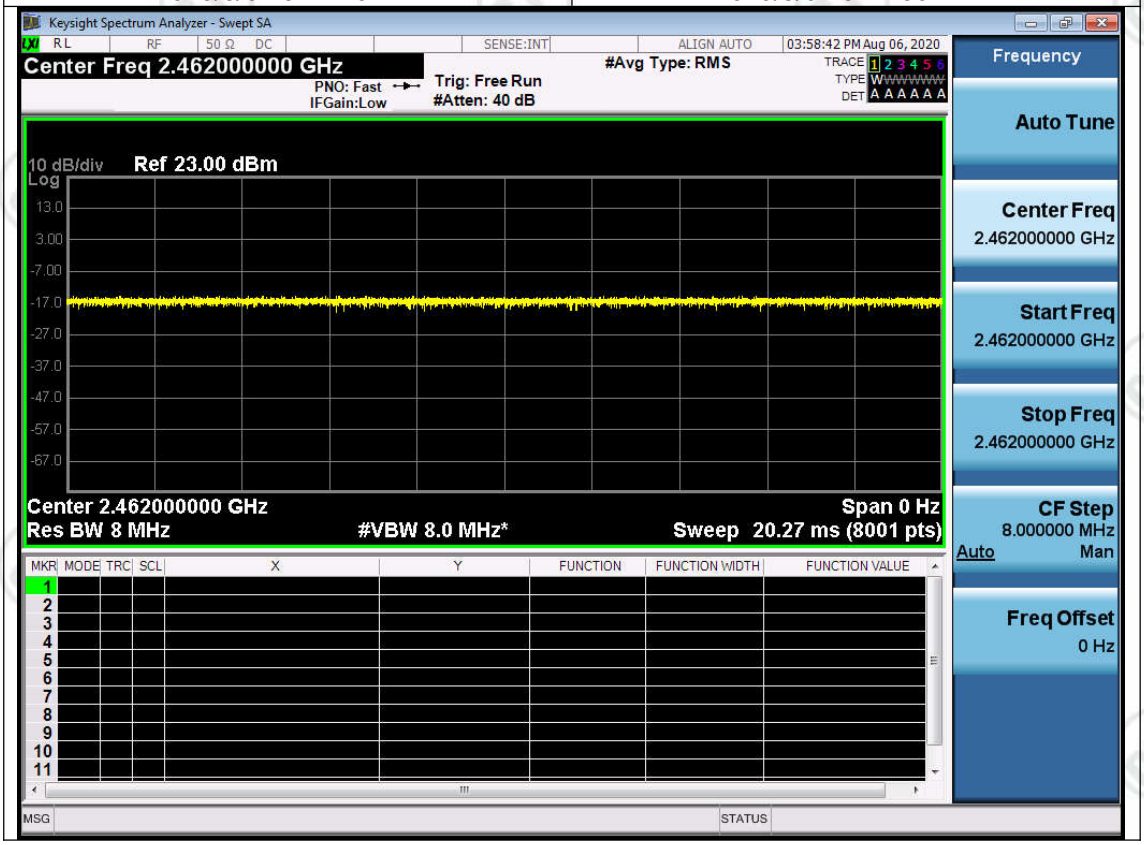
Test Case: Duty Cycle	
Mode: 11N20SISO	Ant: Ant1
Channel: LCH	Voltage: VN
Temperature: TN	**Result: PASS Value:100%**
Start Time: 2020/8/6 13:14:53	End Time: 2020/8/6 13:15:00



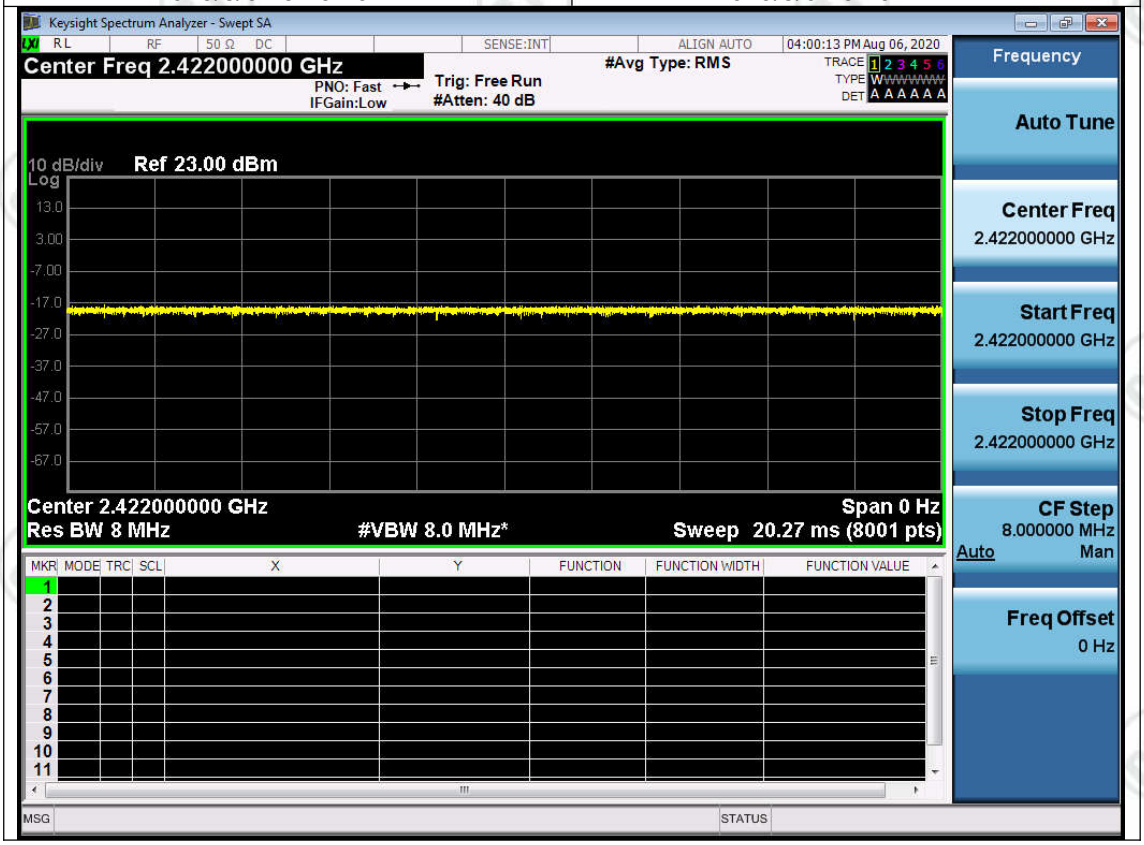
Test Case: Duty Cycle	
Mode: 11N20SISO	Ant: Ant1
Channel: MCH	Voltage: VN
Temperature: TN	**Result: PASS Value:100%**
Start Time: 2020/8/6 13:16:27	End Time: 2020/8/6 13:16:33



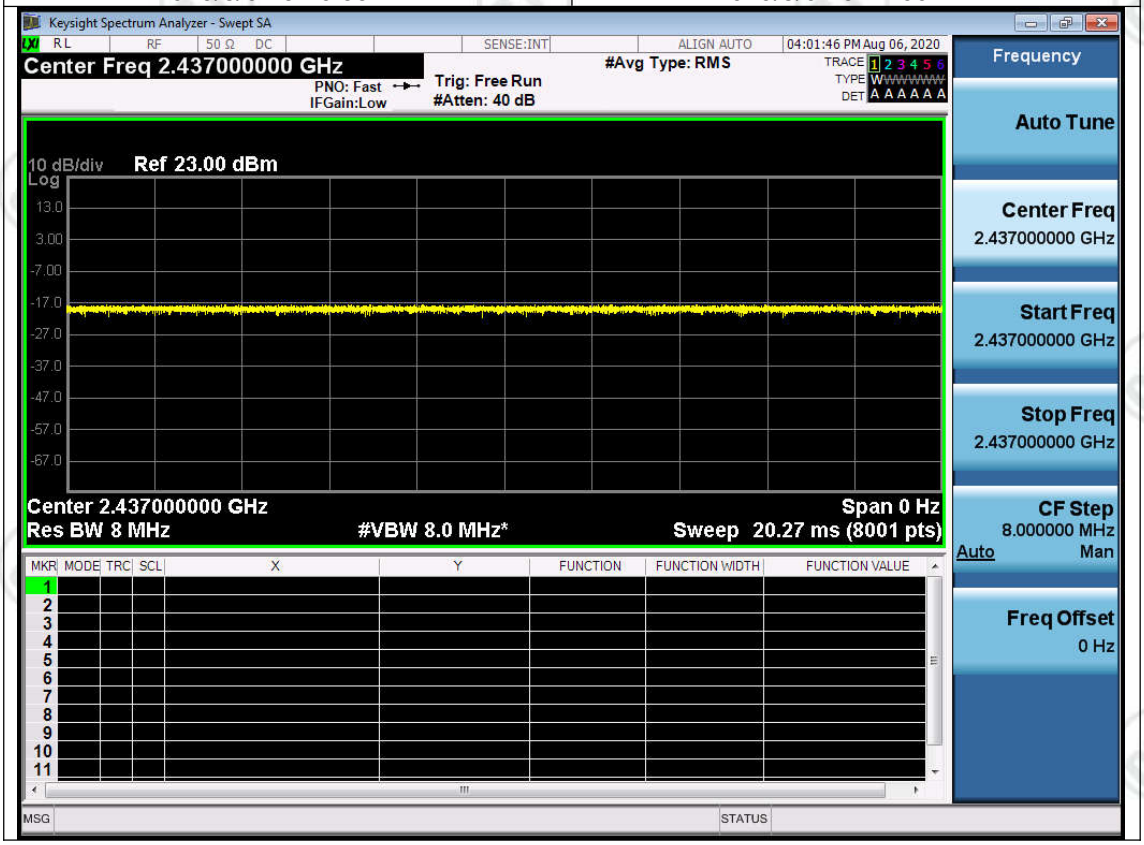
Test Case: Duty Cycle	
Mode: 11N20SISO	Ant: Ant1
Channel: HCH	Voltage: VN
Temperature: TN	**Result: PASS Value:100%**
Start Time: 2020/8/6 13:17:49	End Time: 2020/8/6 13:17:56



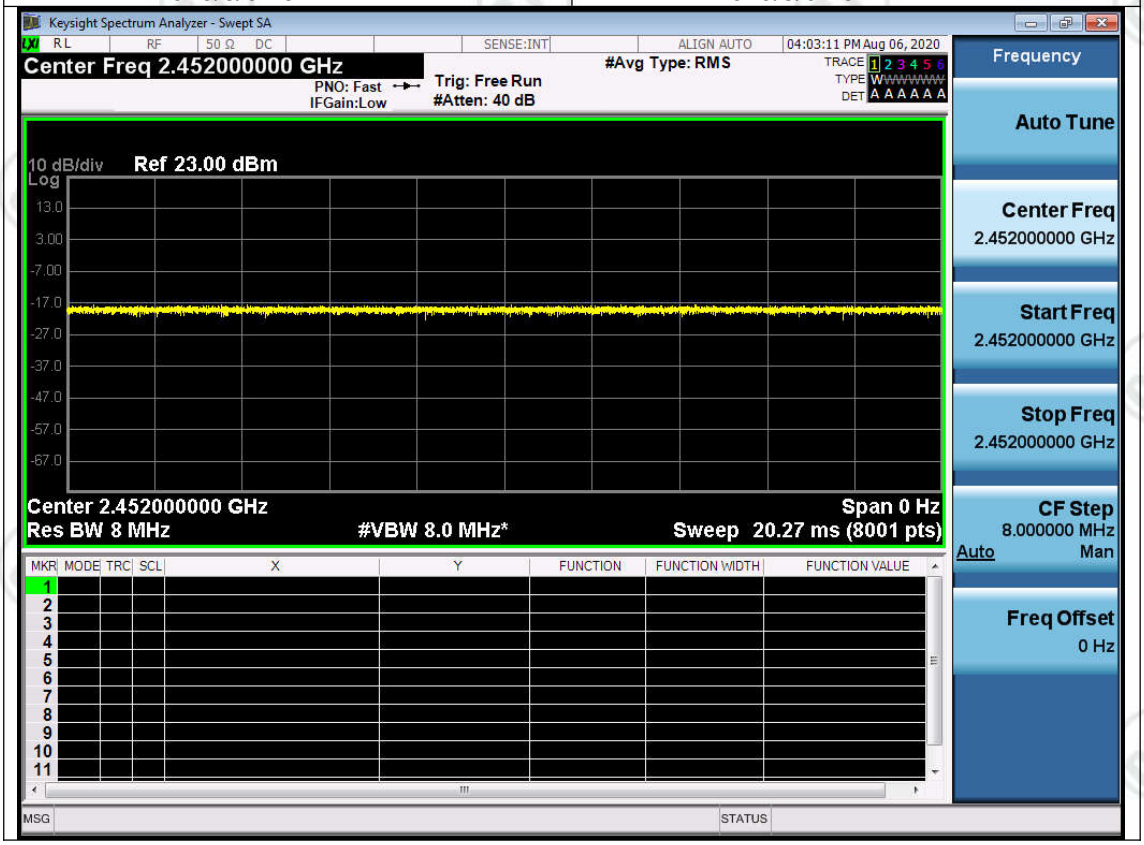
Test Case: Duty Cycle	
Mode: 11N40SISO	Ant: Ant1
Channel: LCH	Voltage: VN
Temperature: TN	**Result: PASS Value:100%**
Start Time: 2020/8/6 13:19:20	End Time: 2020/8/6 13:19:27



Test Case: Duty Cycle	
Mode: 11N40SISO	Ant: Ant1
Channel: MCH	Voltage: VN
Temperature: TN	**Result: PASS Value:100%**
Start Time: 2020/8/6 13:20:53	End Time: 2020/8/6 13:21:00



Test Case: Duty Cycle	
Mode: 11N40SISO	Ant: Ant1
Channel: HCH	Voltage: VN
Temperature: TN	**Result: PASS Value:100%**
Start Time: 2020/8/6 13:22:17	End Time: 2020/8/6 13:22:24



Appendix A): Conducted Peak Output Power

Test Limit

According to §15.247(b)(3)

Peak output power:

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

Limit	☒ Antenna not exceed 6 dBi：30dBm ☐ Antenna with DG greater than 6 dBi： [Limit = 30 – (DG – 6)] ☐ Point-to-point operation：

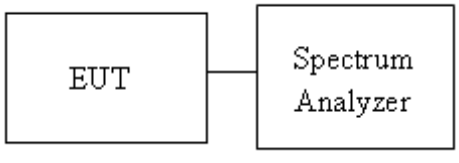
Average output power: For reporting purposes only.

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 ≥ [3 × RBW].
   c) Set the span ≥ [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.

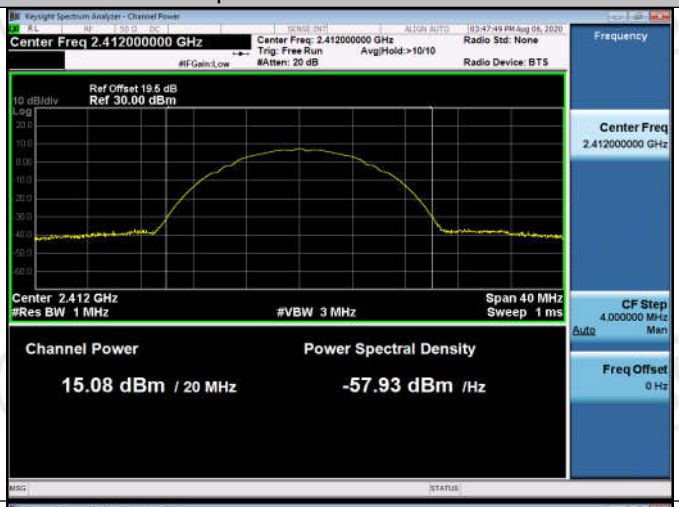
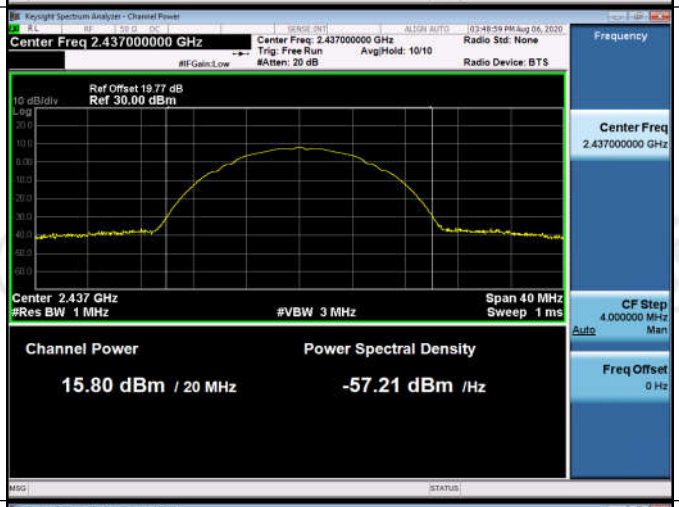
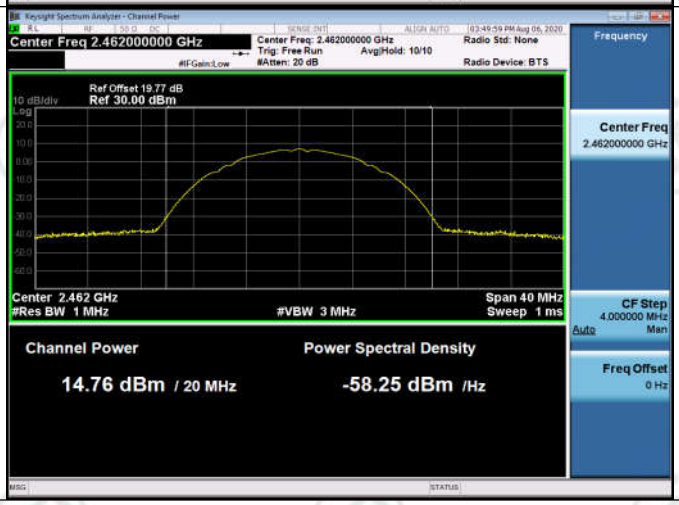
Test Setup

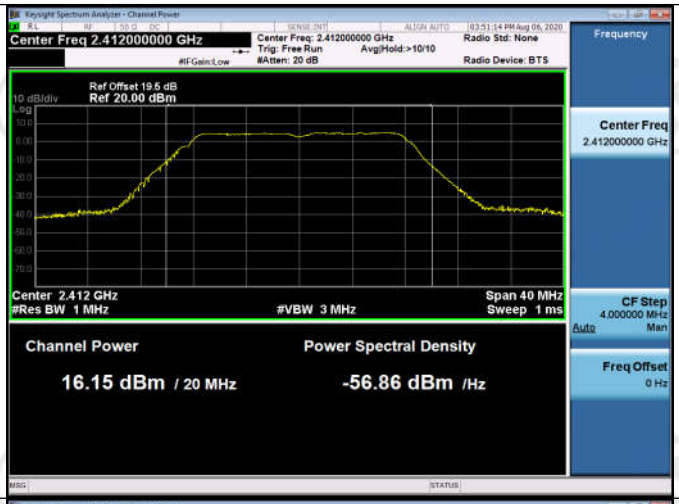
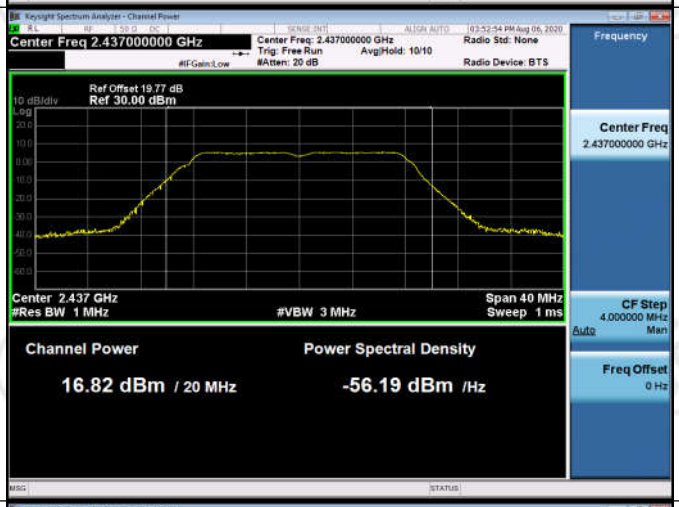
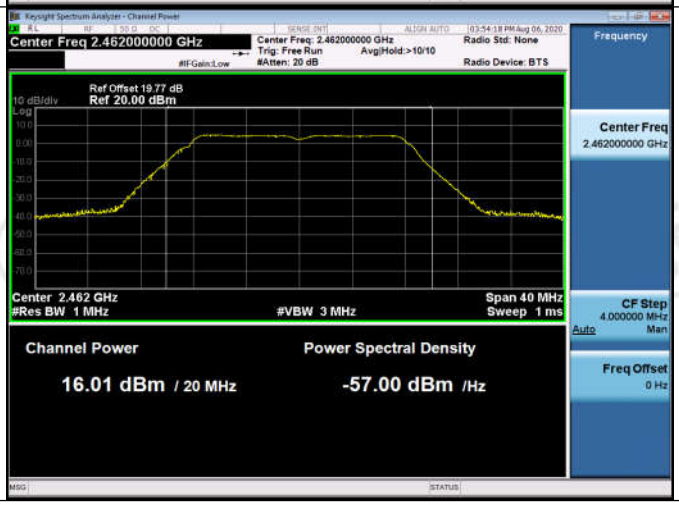


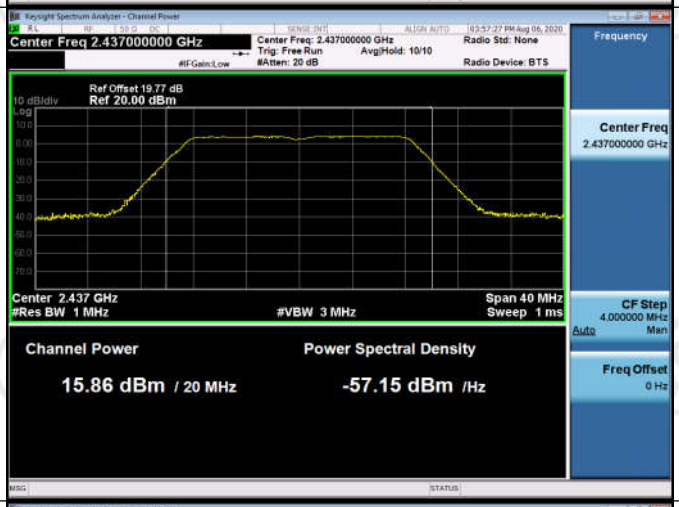
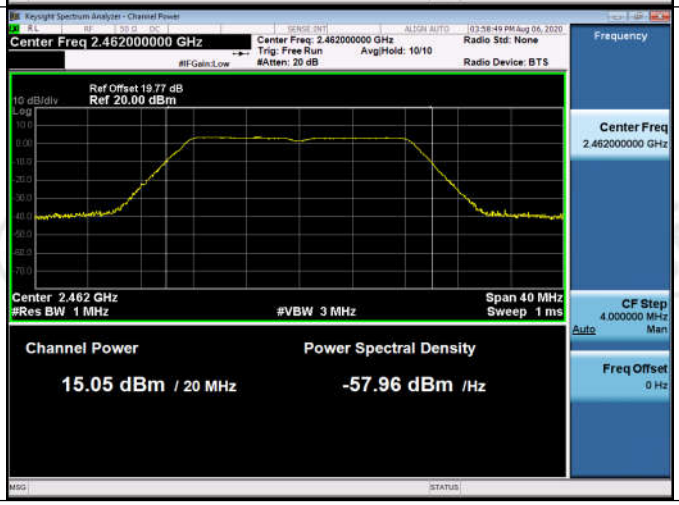
Result Table

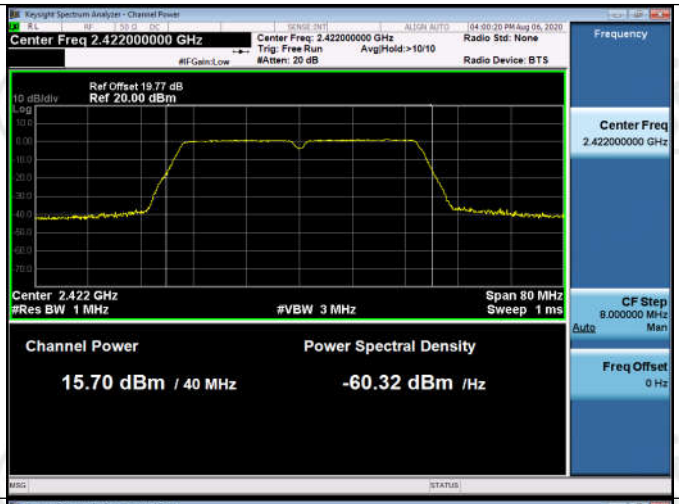
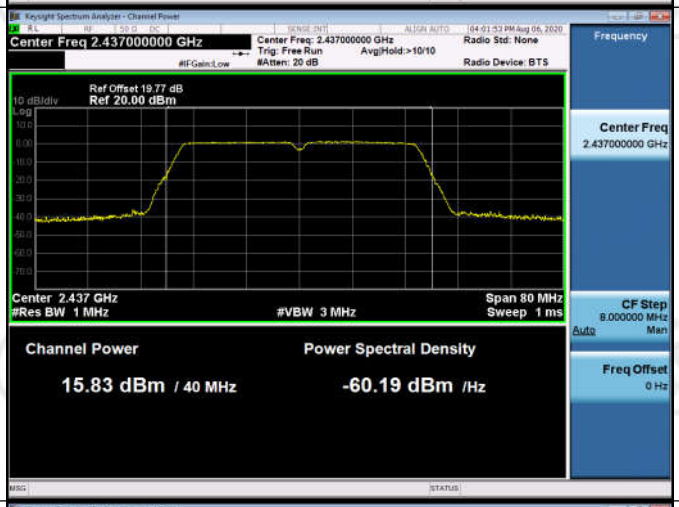
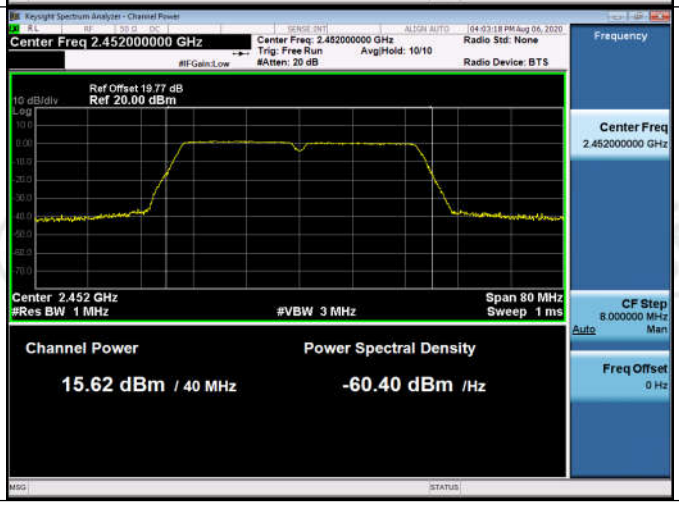
Mode	Channel	Conducted Peak Output Power [dBm]	Verdict
11B	LCH	15.08	PASS
11B	MCH	15.8	PASS
11B	HCH	14.76	PASS
11G	LCH	16.15	PASS
11G	MCH	16.82	PASS
11G	HCH	16.01	PASS
11N20SISO	LCH	15.13	PASS
11N20SISO	MCH	15.86	PASS
11N20SISO	HCH	15.05	PASS
11N40SISO	LCH	15.7	PASS
11N40SISO	MCH	15.83	PASS
11N40SISO	HCH	15.62	PASS

Test Graph

Graphs		
11B/LCH		
11B/MCH		
11B/HCH		

11G/LCH			
11G/MCH			
11G/HCH			

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

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

Appendix B): 6dB Occupied Bandwidth

Test Limit

According to §15.247(a)(2)

6 dB Bandwidth:

Limit	Shall be at least 500kHz

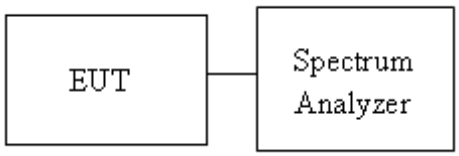
Occupied Bandwidth(99%) : For reporting purposes only.

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



Result Table

6dB Bandwidth

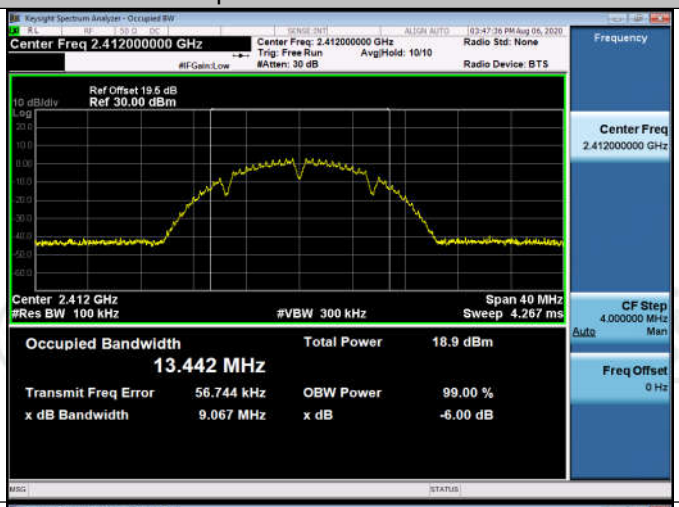
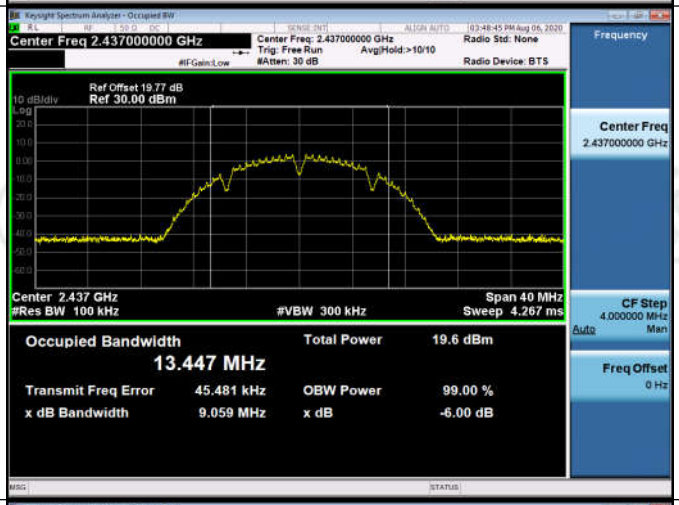
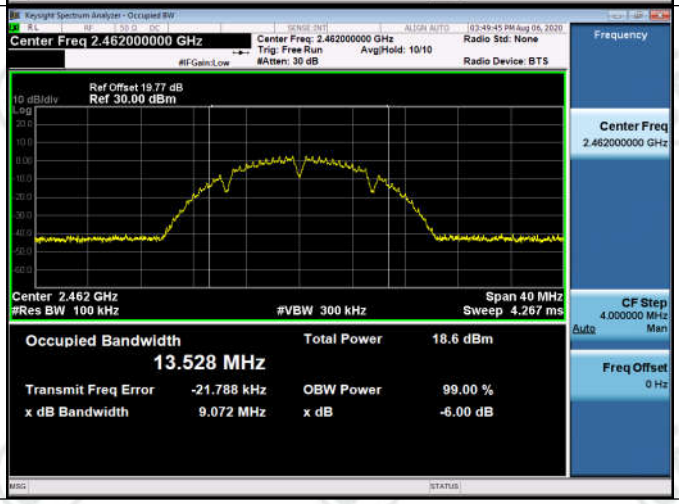
Mode	Channel	6dB Bandwidth [MHz]	Verdict
11B	LCH	9.067	PASS
11B	MCH	9.059	PASS
11B	HCH	9.072	PASS
11G	LCH	16.57	PASS
11G	MCH	16.57	PASS
11G	HCH	16.57	PASS
11N20SISO	LCH	17.76	PASS
11N20SISO	MCH	17.77	PASS
11N20SISO	HCH	17.78	PASS
11N40SISO	LCH	36.48	PASS
11N40SISO	MCH	36.46	PASS
11N40SISO	HCH	36.47	PASS

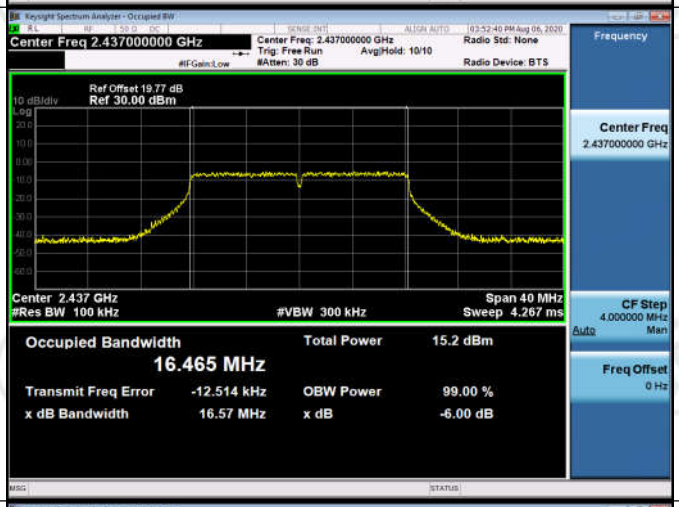
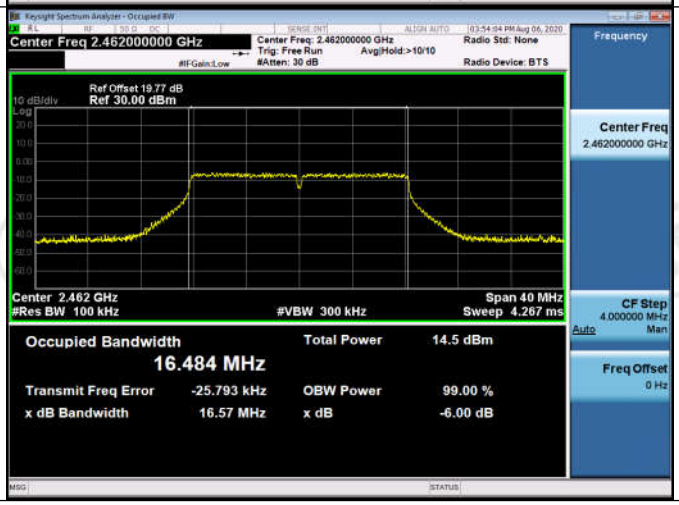
99% OBW

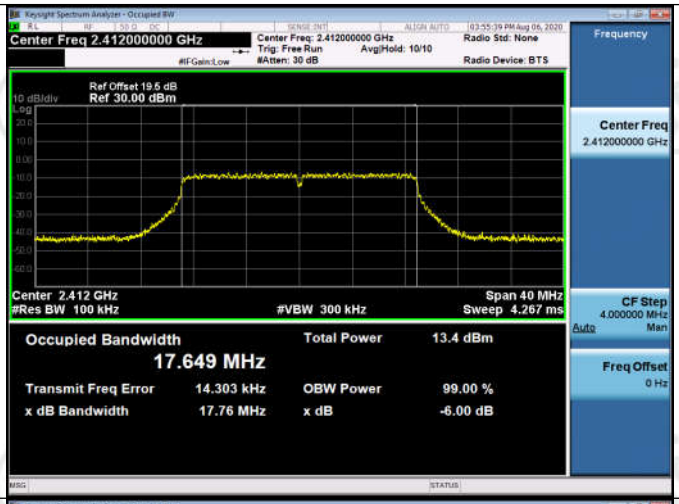
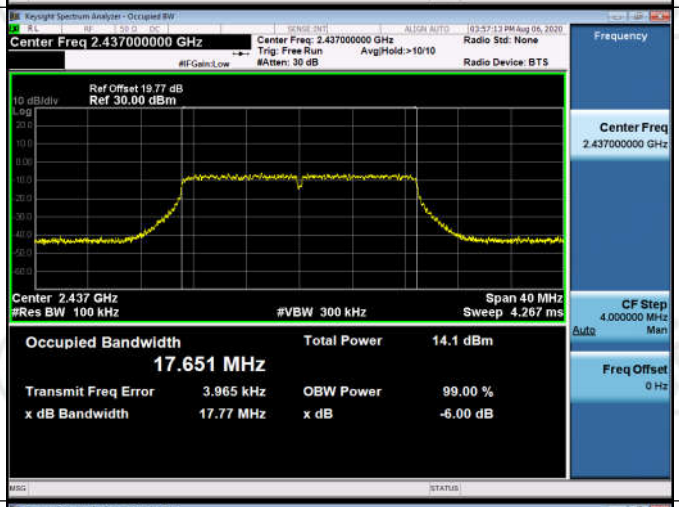
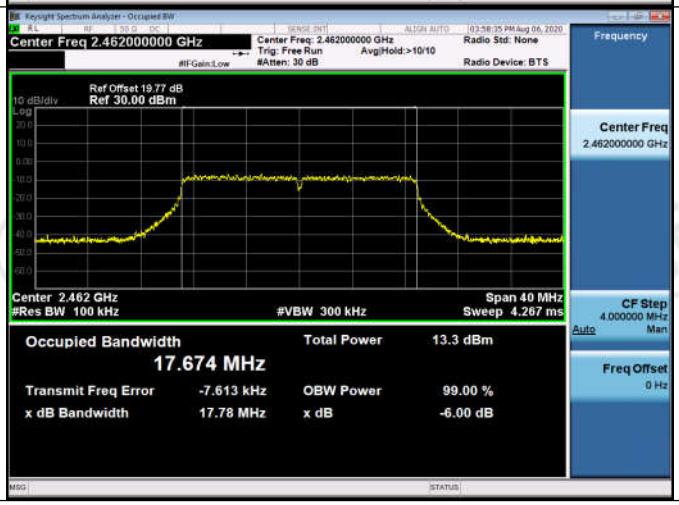
Mode	Channel	99% OBW [MHz]	Verdict
11B	LCH	13.525	PASS
11B	MCH	13.508	PASS
11B	HCH	13.647	PASS
11G	LCH	16.783	PASS
11G	MCH	16.806	PASS
11G	HCH	16.865	PASS
11N20SISO	LCH	17.837	PASS
11N20SISO	MCH	17.842	PASS
11N20SISO	HCH	17.891	PASS
11N40SISO	LCH	36.254	PASS
11N40SISO	MCH	36.191	PASS
11N40SISO	HCH	36.256	PASS

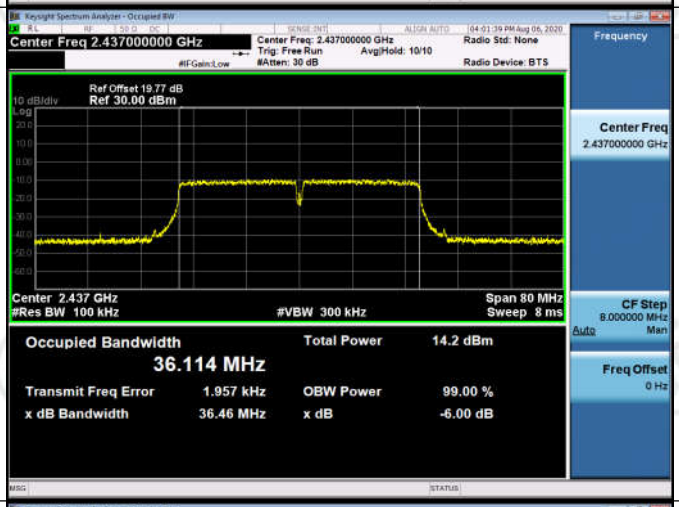
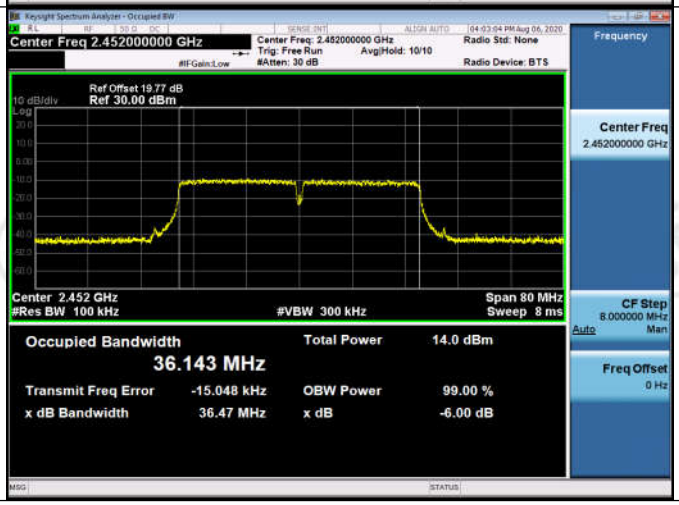
Test Graph

6dB Bandwidth

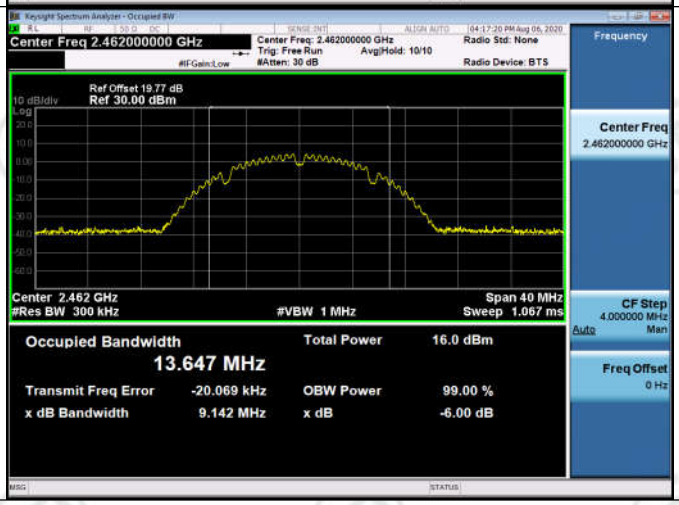
Graphs		
11B/LCH		
11B/MCH		
11B/HCH		

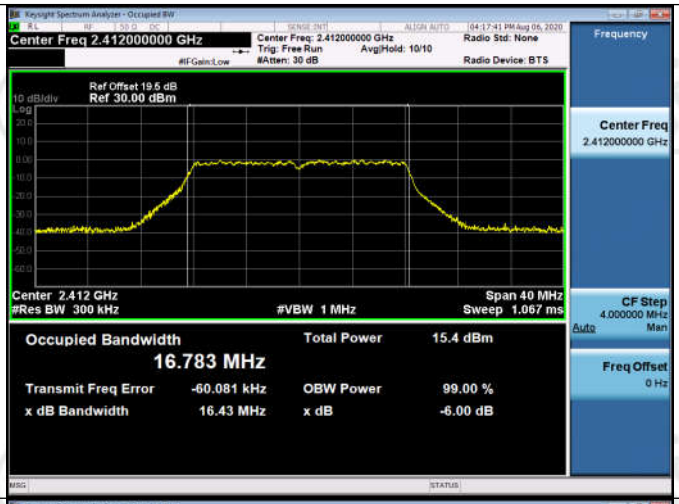
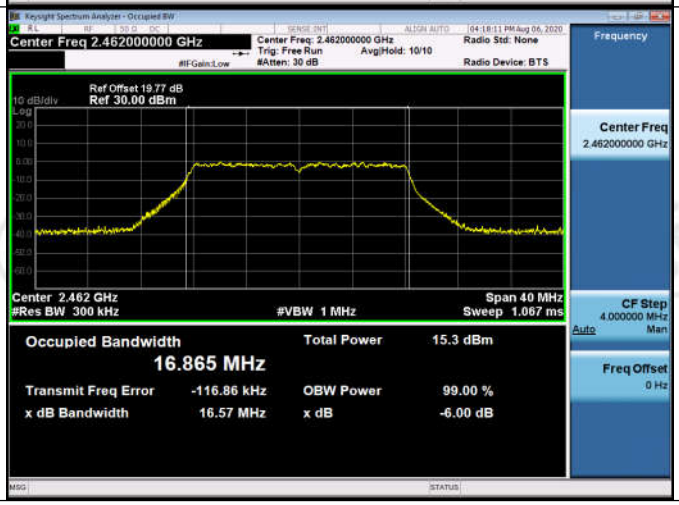
11G/LCH			
11G/MCH			
11G/HCH			

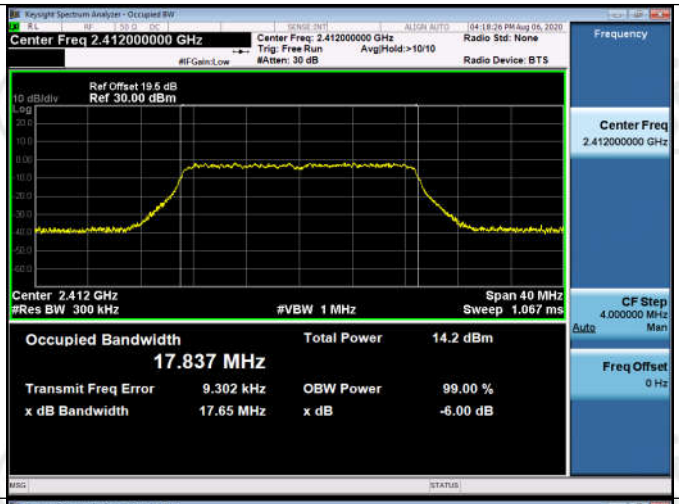
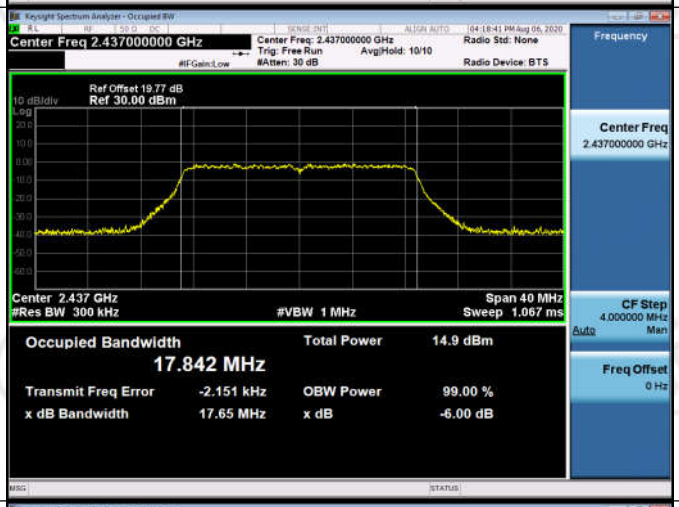
11N20SISO/LCH			
11N20SISO/MCH			
11N20SISO/HCH			

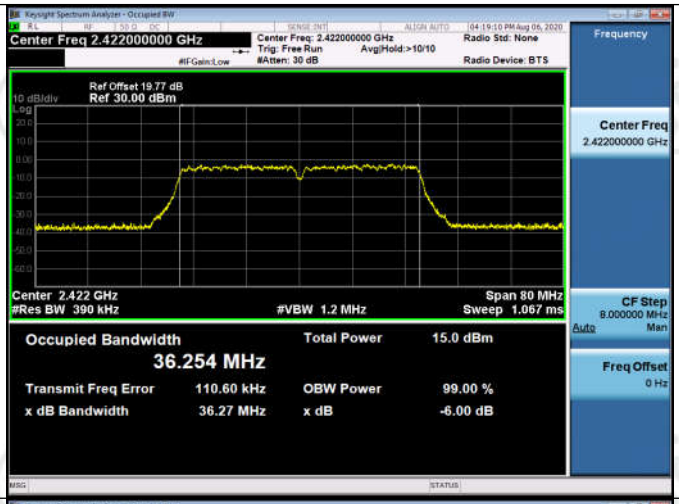
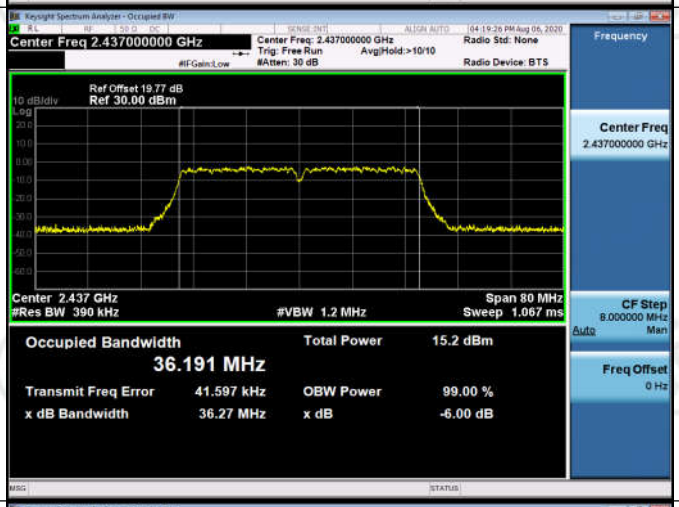
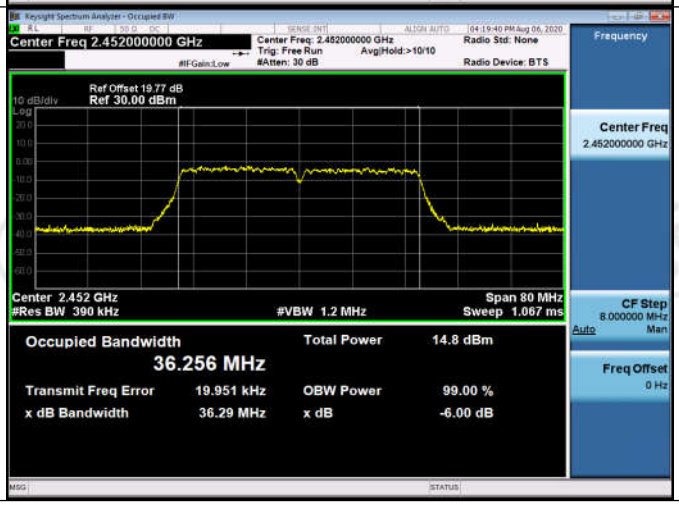
11N40SISO/LCH			
11N40SISO/MCH			
11N40SISO/HCH			

99%OBW

Graphs		
11B/LCH		
11B/MCH		
11B/HCH		

11G/LCH			
11G/MCH			
11G/HCH			

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

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

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

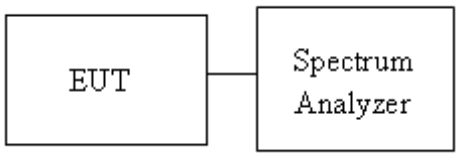
Test method Refer as KDB 558074 D01.

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. f 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.

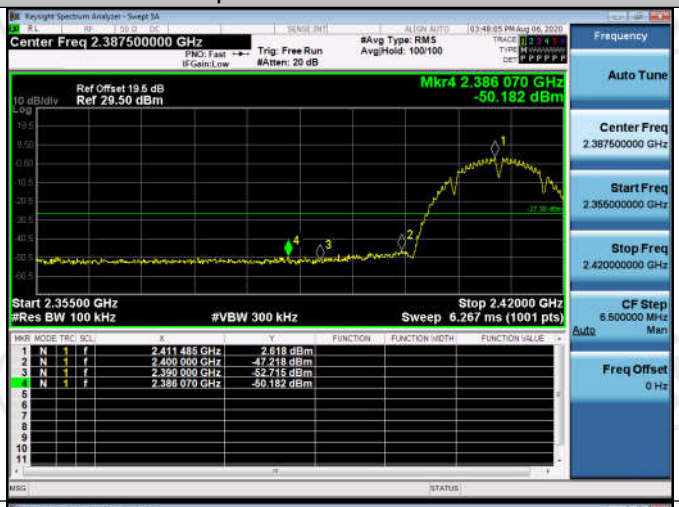
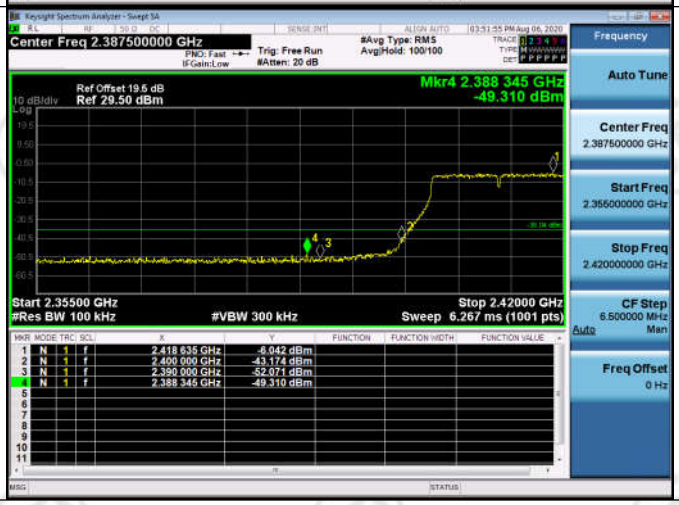
Test Setup

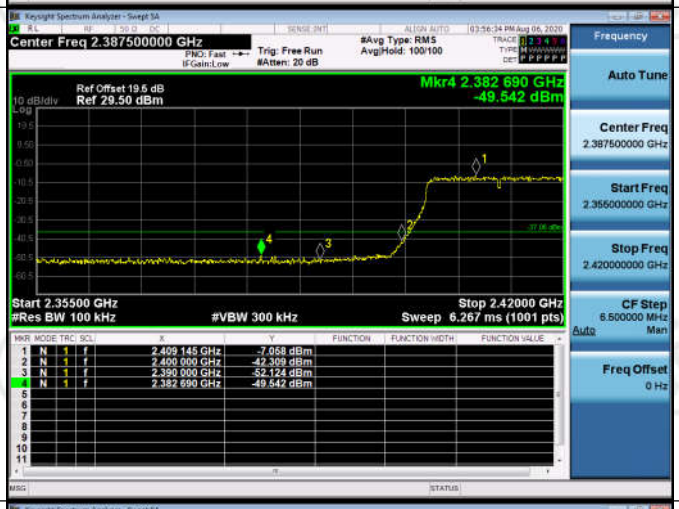


Result Table

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	2.618	-50.182	-27.38	PASS
11B	HCH	2.327	-49.760	-27.67	PASS
11G	LCH	-6.042	-49.310	-36.04	PASS
11G	HCH	-6.193	-49.724	-36.19	PASS
11N20SISO	LCH	-7.058	-49.542	-37.06	PASS
11N20SISO	HCH	-6.907	-49.886	-36.91	PASS
11N40SISO	LCH	-9.728	-49.207	-39.73	PASS
11N40SISO	HCH	-10.164	-48.994	-40.16	PASS

Test Graph

Graphs		
11B/LCH		
11B/HCH		
11G/LCH		

11G/HCH			
11N20SISO/LCH			
11N20SISO/HCH			

11N40SISO/LCH			
11N40SISO/HCH			

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

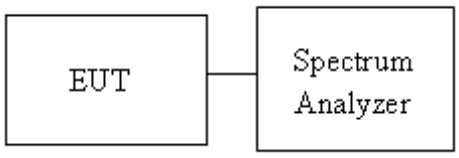
Test method Refer as KDB 558074 D01.

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. f 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.

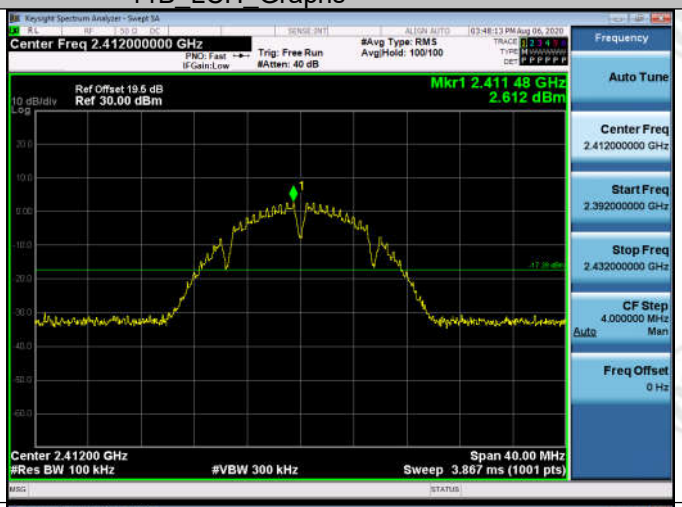
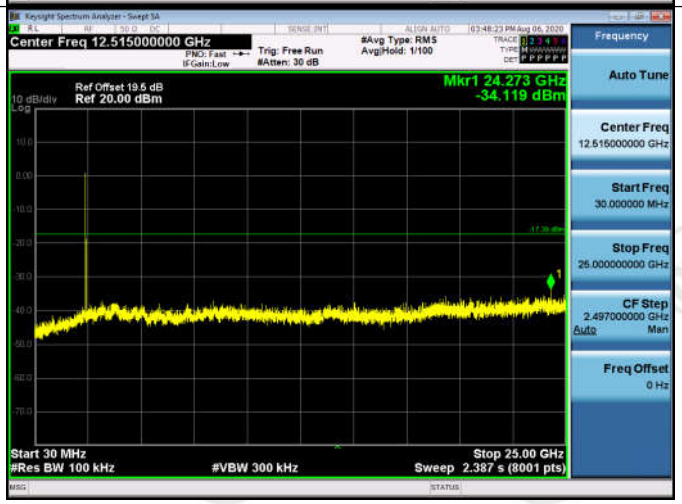
Test Setup

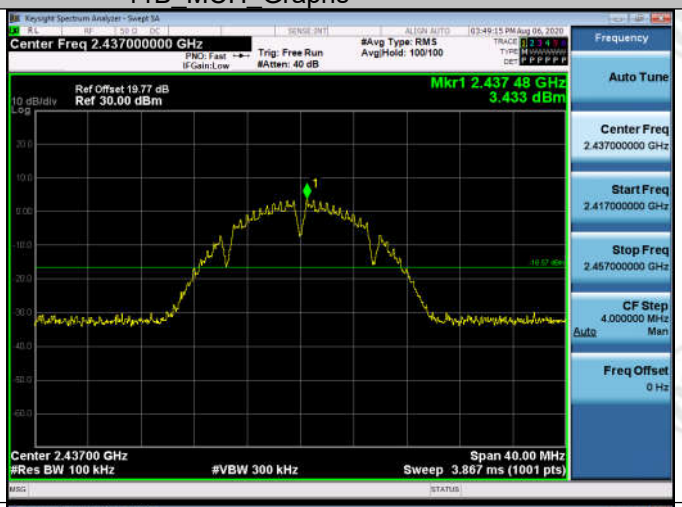
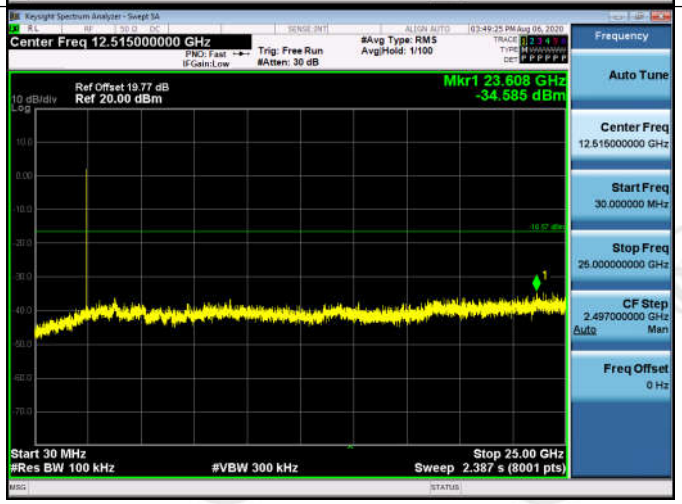


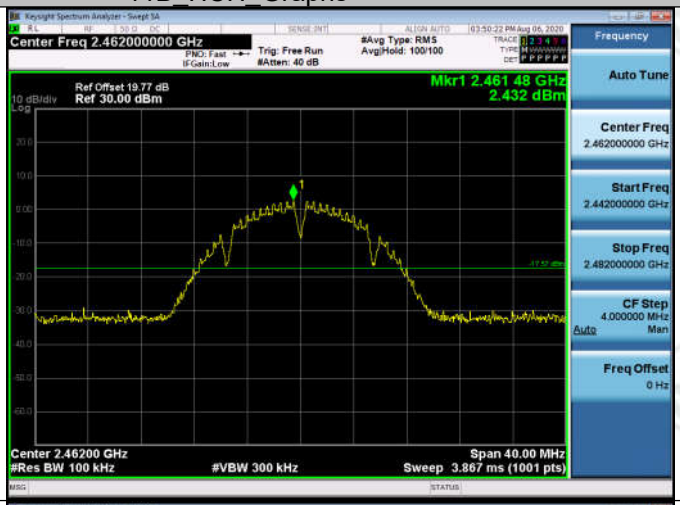
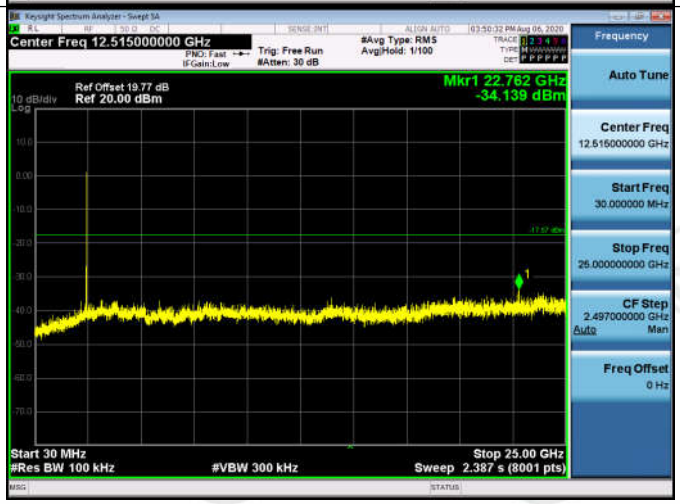
Result Table

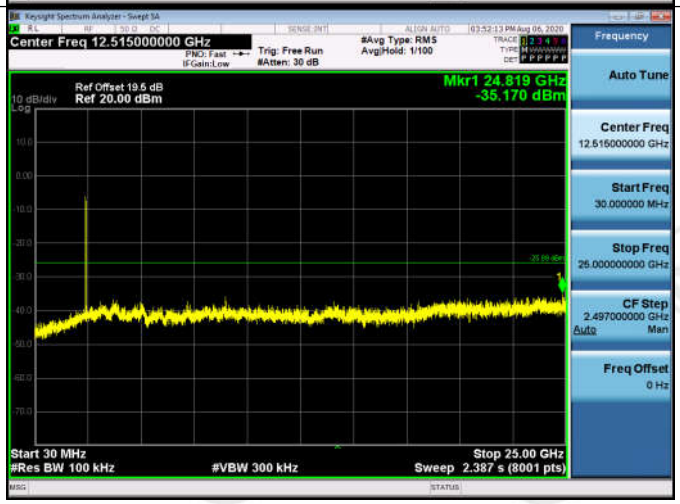
Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
11B	LCH	2.612	<Limit	PASS
11B	MCH	3.433	<Limit	PASS
11B	HCH	2.432	<Limit	PASS
11G	LCH	-5.89	<Limit	PASS
11G	MCH	-5.244	<Limit	PASS
11G	HCH	-6.051	<Limit	PASS
11N20SISO	LCH	-6.706	<Limit	PASS
11N20SISO	MCH	-6.168	<Limit	PASS
11N20SISO	HCH	-6.679	<Limit	PASS
11N40SISO	LCH	-9.294	<Limit	PASS
11N40SISO	MCH	-9.119	<Limit	PASS
11N40SISO	HCH	-9.374	<Limit	PASS

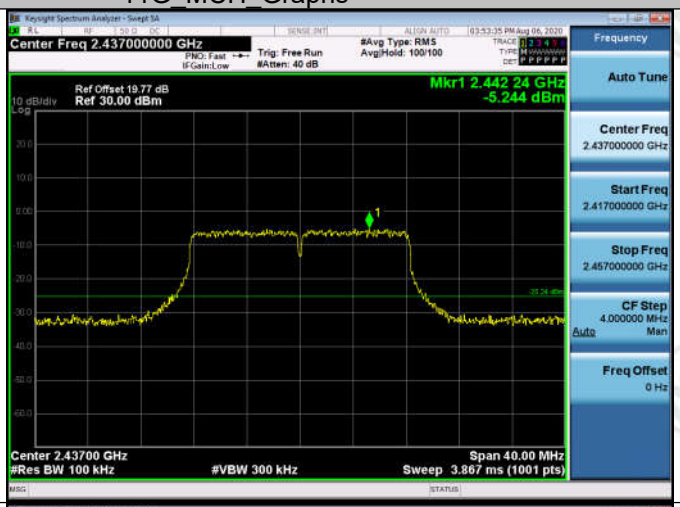
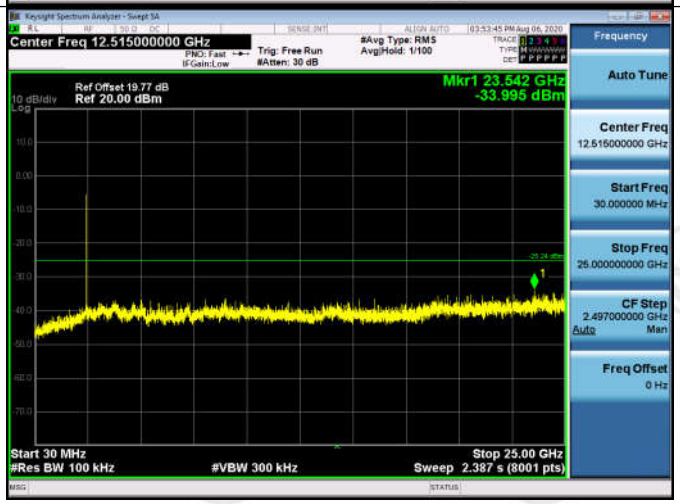
Test Graph

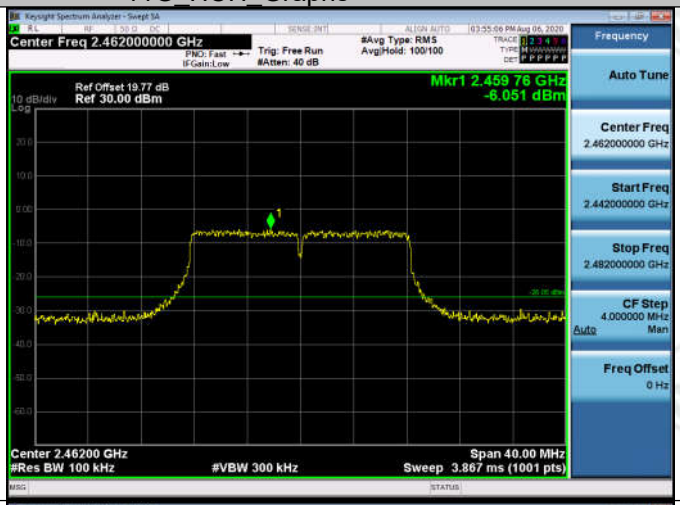
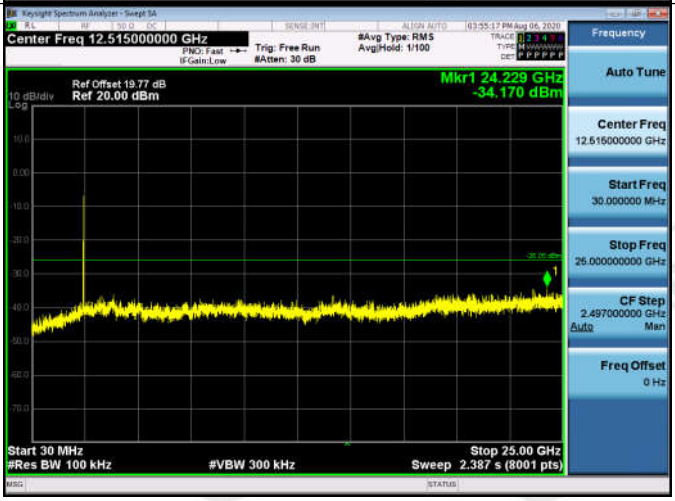
11B_LCH_Graphs	
Pref/11B/LCH	
Puw/11B/LCH	

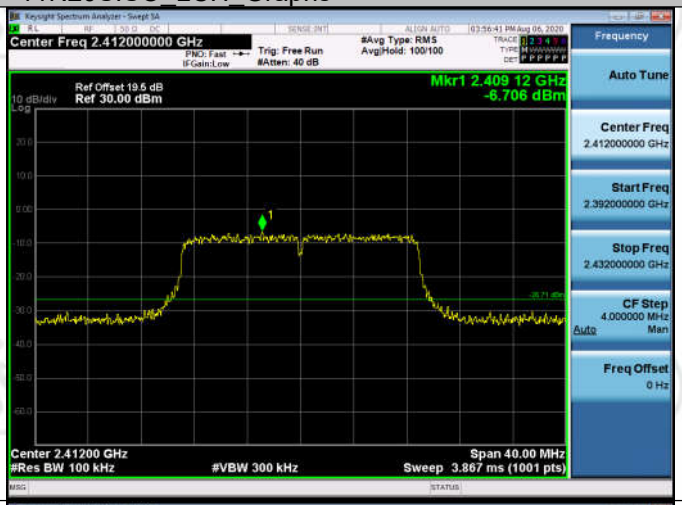
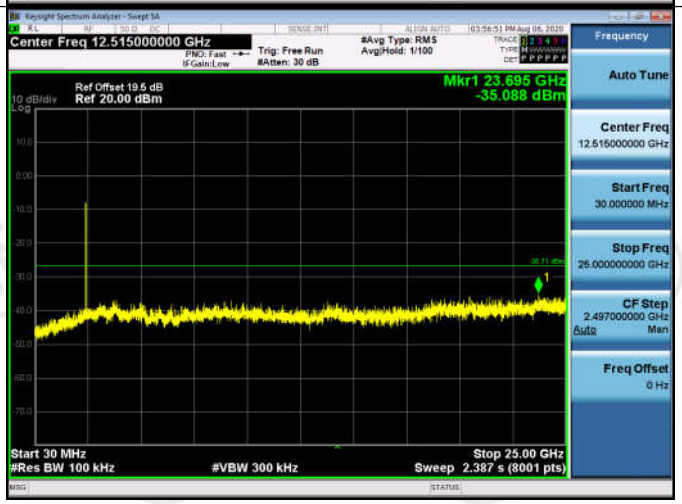
11B_MCH_Graphs		
Pref/11B/MCH		
Puw/11B/MCH		

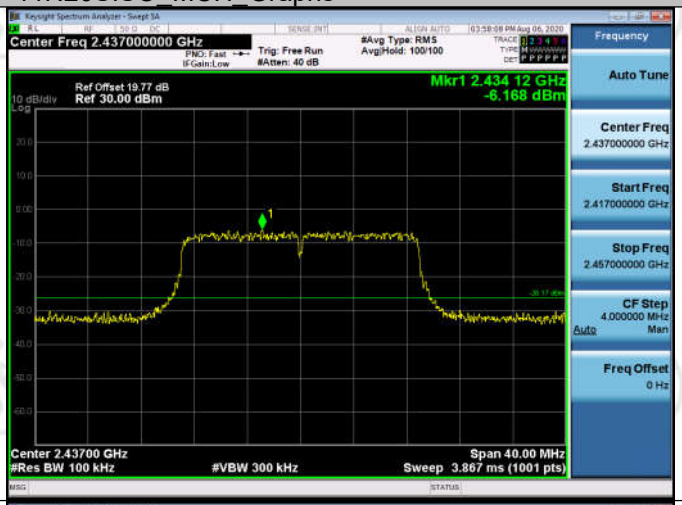
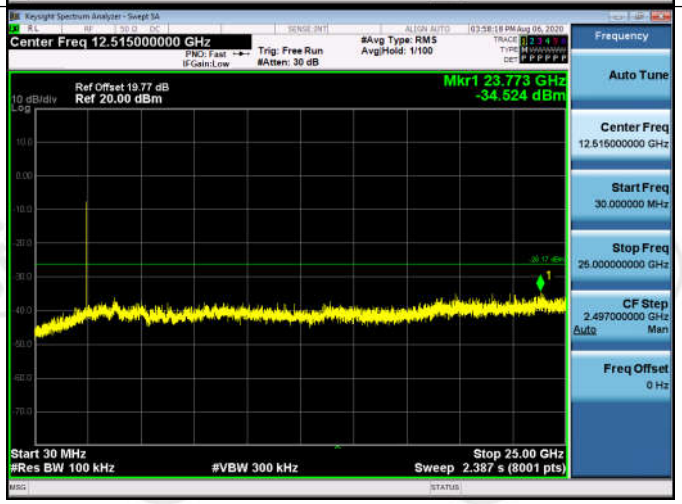
11B_HCH_Graphs		
Pref/11B/HCH		
Puw/11B/HCH		

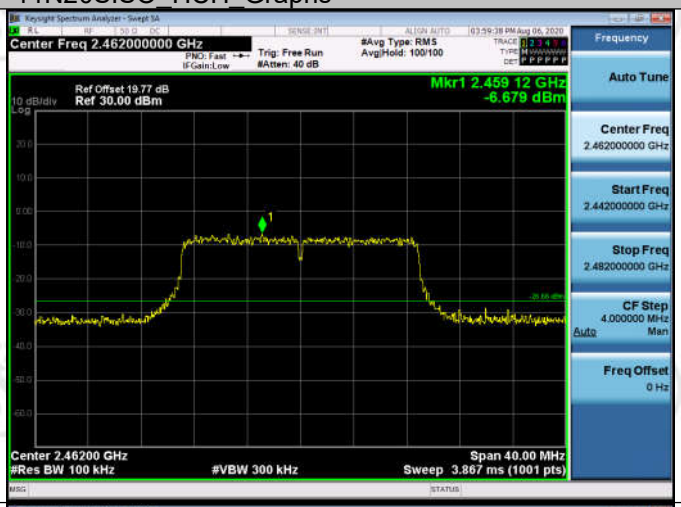
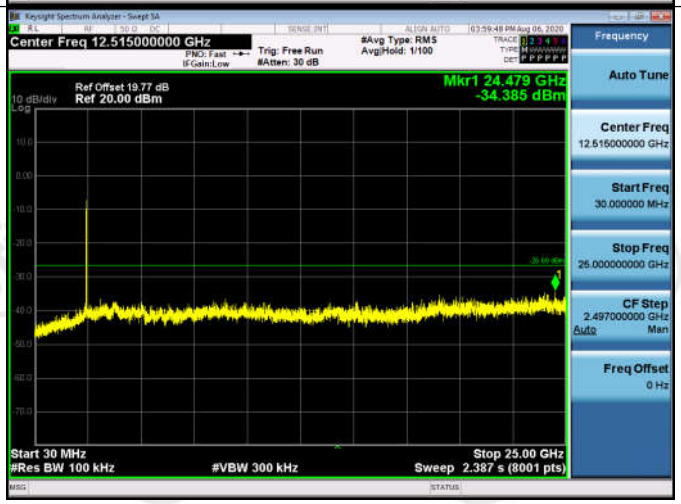
11G_LCH_Graphs		
Pref/11G/LCH		
Puw/11G/LCH		

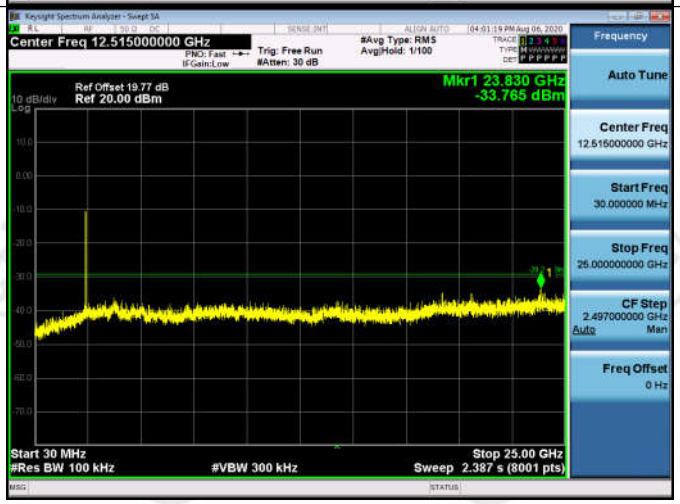
11G_MCH_Graphs		
Pref/11G/MCH		
Puw/11G/MCH		

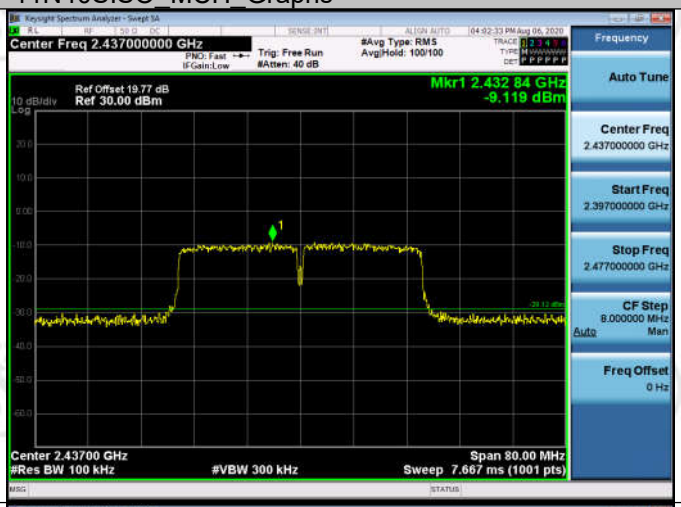
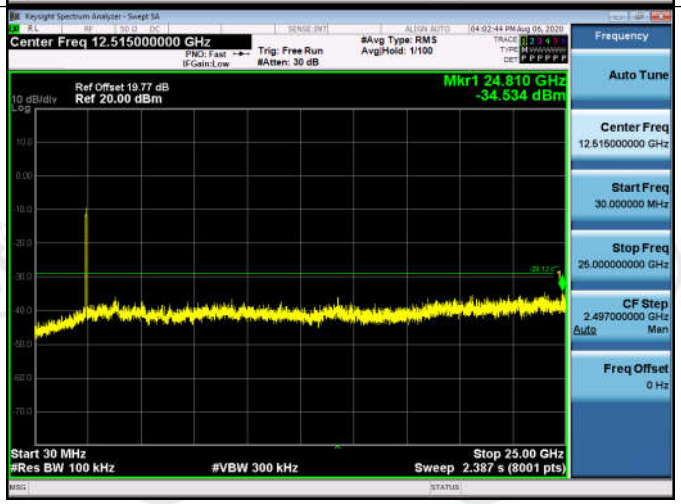
11G_HCH_Graphs		
Pref/11G/HCH		
Puw/11G/HCH		

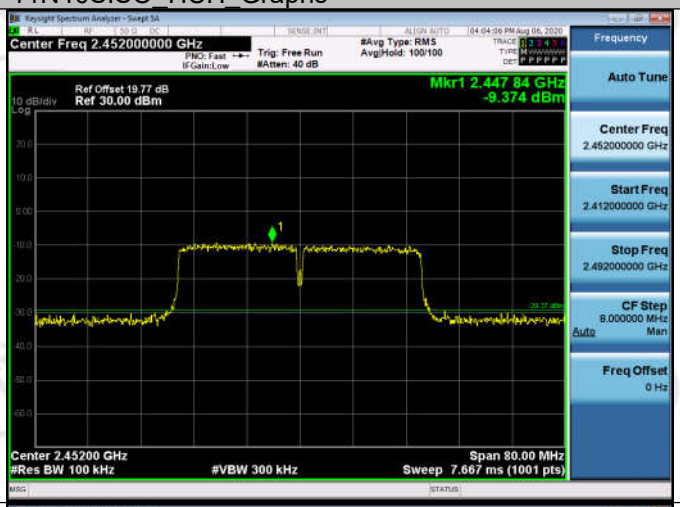
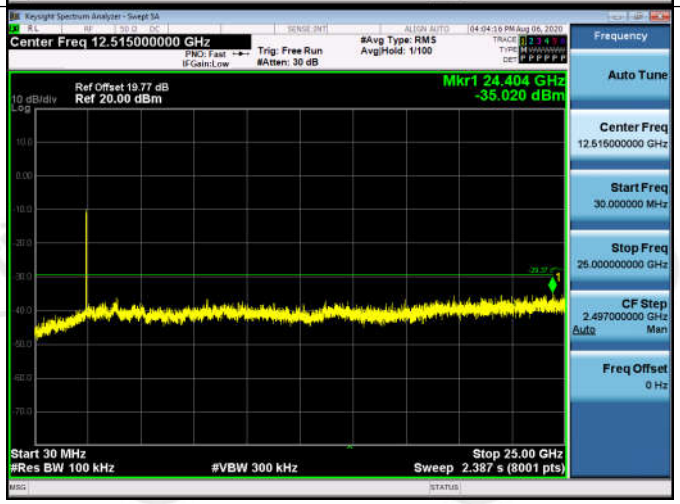
11N20SISO_LCH_Graphs	
Pref/11N20SISO/LCH	
Puw/11N20SISO/LCH	

11N20SISO_MCH_Graphs	
Pref/11N20SISO/MCH	
Puw/11N20SISO/MCH	

11N20SISO_HCH_Graphs	
Pref/11N20SISO/HCH	
Puw/11N20SISO/HCH	

11N40SISO_LCH_Graphs	
Pref/11N40SISO/LCH	
Puw/11N40SISO/LCH	

11N40SISO_MCH_Graphs	
Pref/11N40SISO/MCH	
Puw/11N40SISO/MCH	

11N40SISO_HCH_Graphs	
Pref/11N40SISO/HCH	
Puw/11N40SISO/HCH	

Appendix E): Power Spectral Density

Test Limit

According to §15.247(e)

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

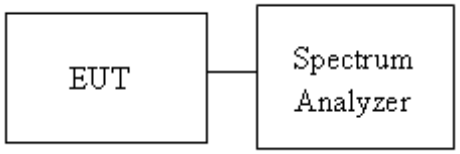
Limit	☒ Antenna not exceed 6 dBi：8dBm ☐ Antenna with DG greater than 6 dBi： [Limit = 8 – (DG – 6)] ☐ Point-to-point operation：

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

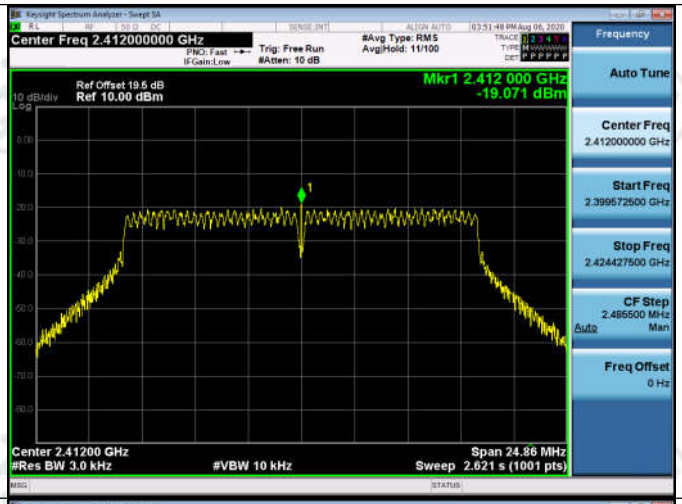
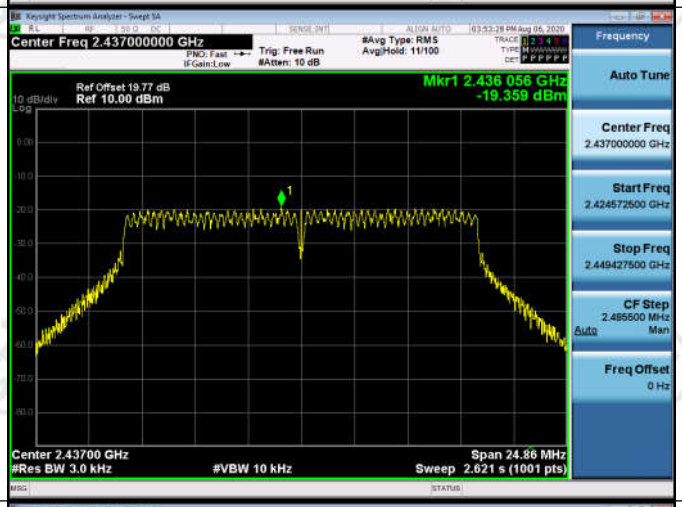
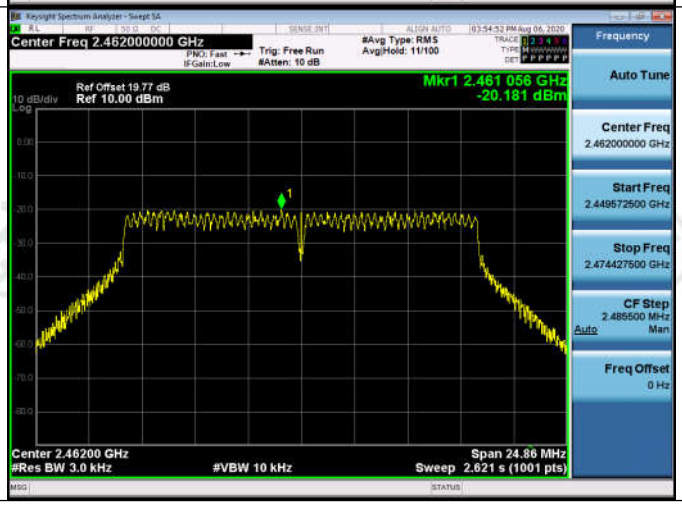


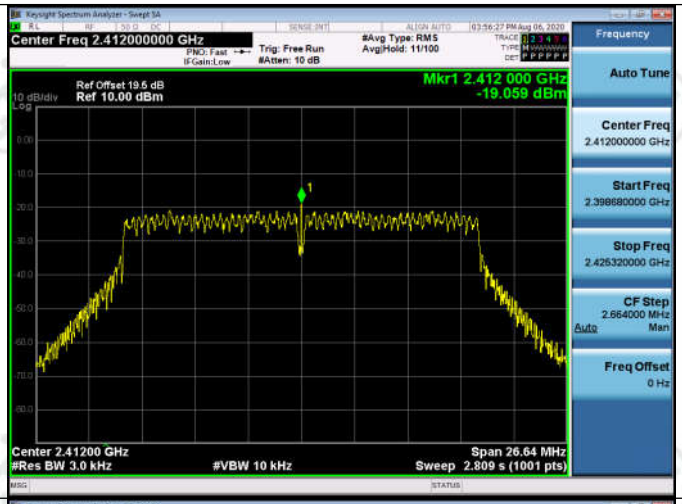
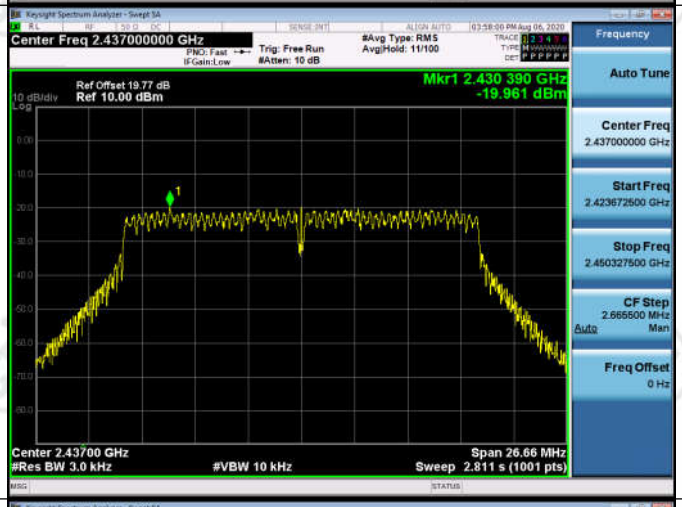
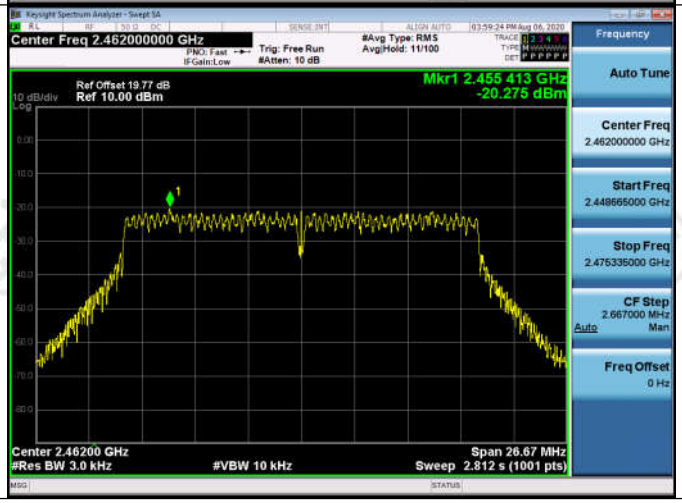
Result Table

Mode	Channel	Power Spectral Density [dBm]	Verdict
11B	LCH	-17.307	PASS
11B	MCH	-16.616	PASS
11B	HCH	-17.697	PASS
11G	LCH	-19.071	PASS
11G	MCH	-19.359	PASS
11G	HCH	-20.181	PASS
11N20SISO	LCH	-19.059	PASS
11N20SISO	MCH	-19.961	PASS
11N20SISO	HCH	-20.275	PASS
11N40SISO	LCH	-20.223	PASS
11N40SISO	MCH	-19.641	PASS
11N40SISO	HCH	-21.150	PASS

Test Graph

Graphs			
11B/LCH			
11B/MCH			
11B/HCH			

11G/LCH			
11G/MCH			
11G/HCH			

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