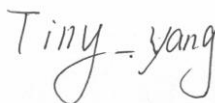



FCC RF Test Report

For

Beijing Inhand Networks Technology Co., Ltd.

Test Standards:	<u>Part 15C Subpart C §15.247</u>
Product Description:	<u>Edge computing gateway</u>
Tested Model:	<u>IG902</u>
Brand Name:	<u>InHand</u>
FCC ID:	<u>2AANYIG9</u>
Classification	<u>(DTS) Digital Transmission System</u>
Report No.:	<u>EC1902004RF01</u>
Tested Date:	<u>2019-03-18 to 2020-01-08</u>
Issued Date:	<u>2020-01-08</u>
Prepared By:	<u></u> Tiny Yang/ Engineer
Approved By:	<u></u> Bacon Wu / RF Manager

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Note: The test results in this report apply exclusively to the tested model / sample. Without written approval of

Hunan Ecloud Testing Technology Co., Ltd., the test report shall not be reproduced except in full.

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	2020.01.08	Valid	Original Report

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Summary Of Test Result

FCC Rule	Description	Limit	Result	Remark
15.247(a)(2)	6dB Bandwidth	$\geq 0.5\text{MHz}$	Pass	-
-	99% Bandwidth	-	Pass	-
15.247(b)(3)	Peak Output Power	$\leq 30\text{dBm}$	Pass	-
15.247(e)	Power Spectral Density	$\leq 8\text{dBm}/3\text{kHz}$	Pass	-
15.247(d)	Conducted Band Edges and Spurious Emission	$\leq 20\text{dBc}$	Pass	-
15.247(d)	Radiated Band Edges and Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 3.24 dB at 875.840 MHz
15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 12.74 dB at 0.538 MHz
15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-

1 Test Laboratory

1.1 Test facility

CNAS (accreditation number: L11138)

Hunan Ecloud Testing Technology Co., Ltd. has obtained the accreditation of China National Accreditation Service for Conformity Assessment (CNAS).

FCC (Designation number: CN1244 , Test Firm Registration Number: 793308)

Hunan Ecloud Testing Technology Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

ISED(CAB identifier: CN0012, ISED# :24347)

Hunan Ecloud Testing Technology Co., Ltd. has been listed on the Wireless Device Testing Laboratories list of innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements.

A2LA (Certificate Code : 4895.01)

Hunan Ecloud Testing Technology Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

2 General Description

2.1 Applicant

Beijing Inhand Networks Technology Co., Ltd.

Room 501, floor 5, building 3, yard 18, ziyue road, chaoyang district, Beijing

2.2 Manufacturer

Beijing Inhand Networks Technology Co., Ltd.

Room 501, floor 5, building 3, yard 18, ziyue road, chaoyang district, Beijing

2.3 General Description Of EUT

Product	Edge computing gateway
Model No.	IG902
Additional No.	IG912,IG952,IG962,IG992,IG903,IG913,IG953,IG963,IG993,IG904,IG914,IG954,IG964,IG994,IG905,IG915,IG955,IG965,IG995,IG906,IG916,IG956,IG966,IG996
Difference Description	The only difference is that the different models are used in different markets.
FCC ID	2AANYIG9
HW Version	V13
SW Version	V1.0.0
Power Supply	12Vdc (adapter or host equipment)
Modulation Technology	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Type	802.11b : DSSS 802.11g/n : OFDM
Operating Frequency	2412-2462MHz
Number Of Channel	11
Max. Average Output Power	802.11b : 14.07 dBm (0.0255 W) 802.11g : 14.21 dBm (0.0264 W) 802.11n HT20 : 14.05 dBm (0.0254 W) 802.11n HT40 : 14.28 dBm (0.0268 W)
Antenna Type	Sucker Antenna with 2dBi gain
I/O Ports	Refer to user's manual
Cable Transmitting Supplied	Refer to user's manual

NOTE:

- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

3. Each model has two part number. The part number names begin with “H” is the high level version, The part number names begin with “B” is the basic version, The difference between the two versions is that the high level version has one more industrial protocol board which is mainly used for serial communication than the basic version. This two version products have been tested, and found that the high level version is worse than basic version. So only reported the high level version.

4. Antenna listed as below

Cable No.	Description	Connector	Length	Supplied by
1	WIFI Antenna	RP-SMA-J	2.5m	Applicant
2	GPS Antenna	SMA-J	3.0m	Applicant
3	4G Antenna	SMA-J	2.0m	Applicant
4	4G Antenna	SMA-J	2.0m	Applicant

2.4 Modification of EUT

No modifications are made to the EUT during all test items.

2.5 Applicable Transmitting Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- ANSI C63.10-2013
- KDB 558074 D01 15.247 Meas Guidance v05r02

Remark:

1. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B recorded in a separate test report.

3 Test Configuration of Equipment Under Test

3.1 Descriptions of Test Mode

11 channels are provided for 802.11b, 802.11g and 802.11n(HT20):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

7 channels are provided for 802.11n(HT40):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
		7	2442 MHz
		8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz		
5	2432 MHz		
6	2437 MHz		

- a. Radiated emission and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.
- b. The fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z it was determined that Y orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Y orientation.
- c. Based on the baseline scan, the worst-case data rates were:
 - 802.11b mode: 1 Mbps
 - 802.11g mode: 6 Mbps
 - 802.11n HT20 mode: MCS0
 - 802.11n HT40 mode: MCS0

3.2 Test Mode

3.2.1 Antenna Port Conducted Measurement

Summary table Transmitting of Test Cases				
Test Item	Modulation			
	802.11 b	802.11 g	802.11n HT20	802.11n HT40
Conducted Test Cases	Mode 1: CH01	Mode 1: CH01	Mode 1: CH01	Mode 1: CH03
	Mode 2: CH06	Mode 2: CH06	Mode 2: CH06	Mode 2: CH06
	Mode 3: CH11	Mode 3: CH11	Mode 3: CH11	Mode 3: CH09

3.2.2 Radiated Emission Test (Below 1GHz)

Radiated Test Cases	Modulation
	802.11 b CH01

Note : 1. Pre-Scan has been conducted to determine the worst-case mode from all possible

Transmitting combinations between available Transmitting modulations, XYZ axis, antenna ports (if EUT with antenna diversity architecture) and packet type.

2. Following channel(s) was (were) selected for the final test as listed above

3.2.3 Radiated Emission Test (Above 1GHz)

Test Item	Modulation			
	802.11 b	802.11 g	802.11n HT20	802.11n HT40
Radiated Test Cases	Mode 1: CH01	Mode 1: CH01	Mode 1: CH01	Mode 1: CH03
	Mode 2: CH06	Mode 2: CH06	Mode 2: CH06	Mode 2: CH06
	Mode 3: CH11	Mode 3: CH11	Mode 3: CH11	Mode 3: CH09

Note : 1. Pre-Scan has been conducted to determine the worst-case mode from all possible

Transmitting combinations between available Transmitting modulations, XYZ axis, antenna ports (if EUT with antenna diversity architecture) and packet type.

2. Following channel(s) was (were) selected for the final test as listed above

3.2.4 Power Line Conducted Emission Test:

AC Conducted Emission	Mode 1 : SD Card +RJ45(LAN) Link + WLAN Link + Adapter
-----------------------	--

3.3 Support Equipment

Support equipment

Manufacturer	Description	Model	Serial Number	Certificate	Supplied by
Lenovo	PC	Xiaoxinchao5000	PF0QPQMH	DOC	Ecloud

Support adapter

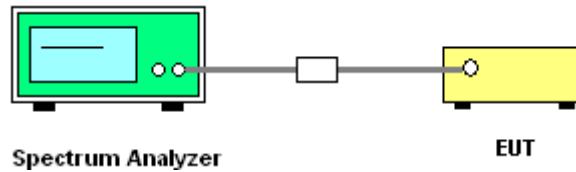
Adapter	
Brand:	KUANTEN
Model:	KT10W120100USD
Input:	AC 100-240V, 50/60Hz, 0.4A
Output:	DC 12V, 1A
Supplied by	Applicant

3.4 Test Setup

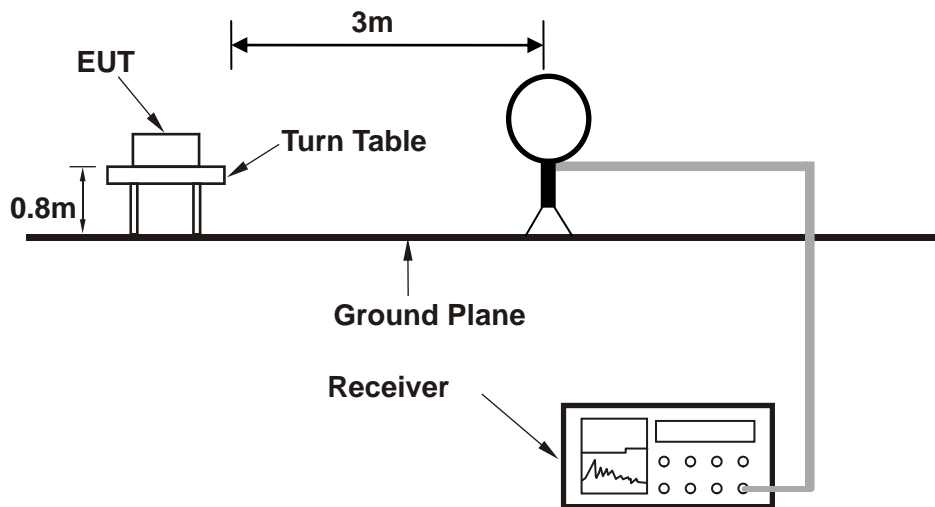
The EUT is continuously communicating to the Wifi tester during the tests.

EUT was set in the Hidden menu mode to enable Transmitting Ble communications.

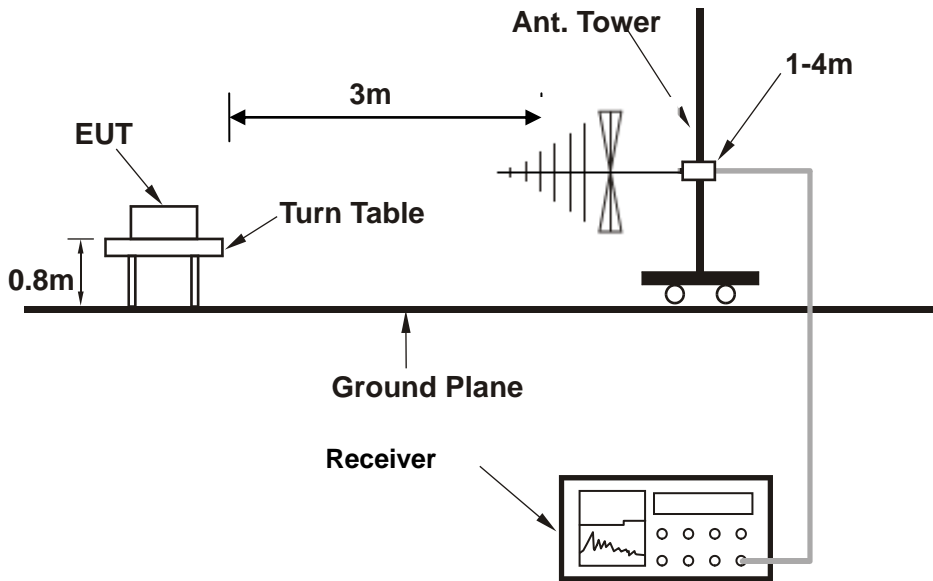
Setup diagram for Conducted Test



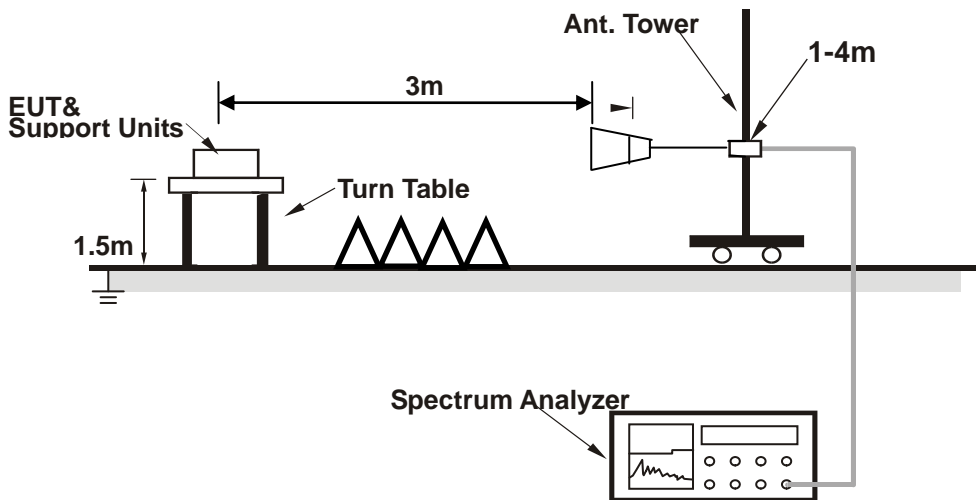
Setup diagram for Radiation(9KHz~30MHz) Test



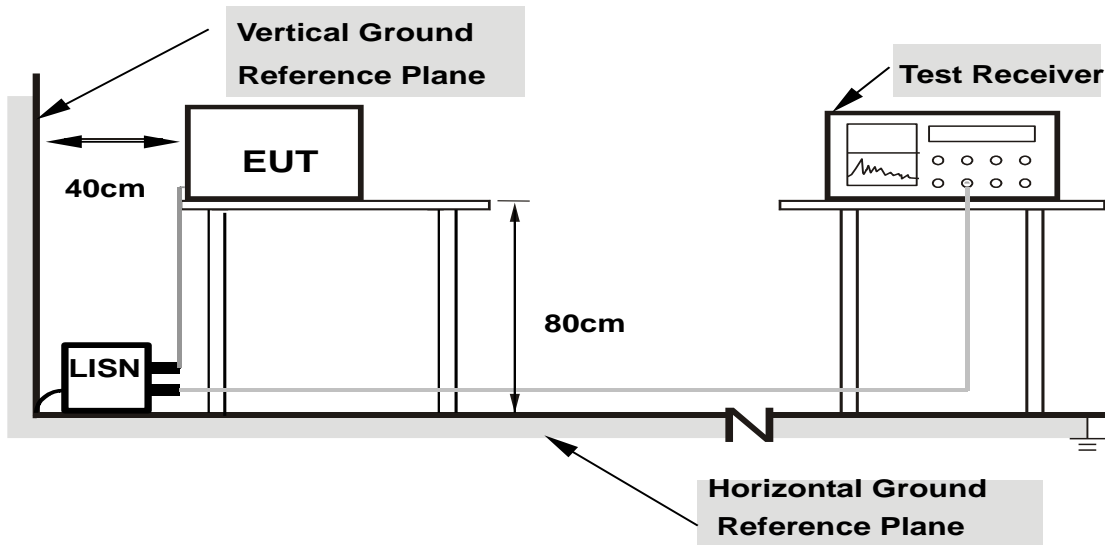
Setup diagram for Radiation(Below 1G) Test



Setup diagram for Radiation(Above 1G) Test



Setup diagram for AC Conducted Emission Test



- Note: 1.Support units were connected to second LISN.**
- 2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes**

3.5 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable Transmitting loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable Transmitting loss and attenuator factor.

Offset = RF cable Transmitting loss + attenuator factor.

Following shows an offset computation example with cable Transmitting loss 5 dB and 10dB attenuator.

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable Transmitting loss(dB)} + \text{attenuator factor(dB)}. \\ &= 5 + 10 = 15 \text{ (dB)} \end{aligned}$$

4 Test Result

4.1 6dB and 99% Bandwidth Measurement

4.1.1 Limit of 6dB and 99% Bandwidth

FCC §15.247 (a) (2)

IC RSS-247 5.2(1)

The minimum 6 dB bandwidth shall be at least 500 kHz.

4.1.2 Test Procedures

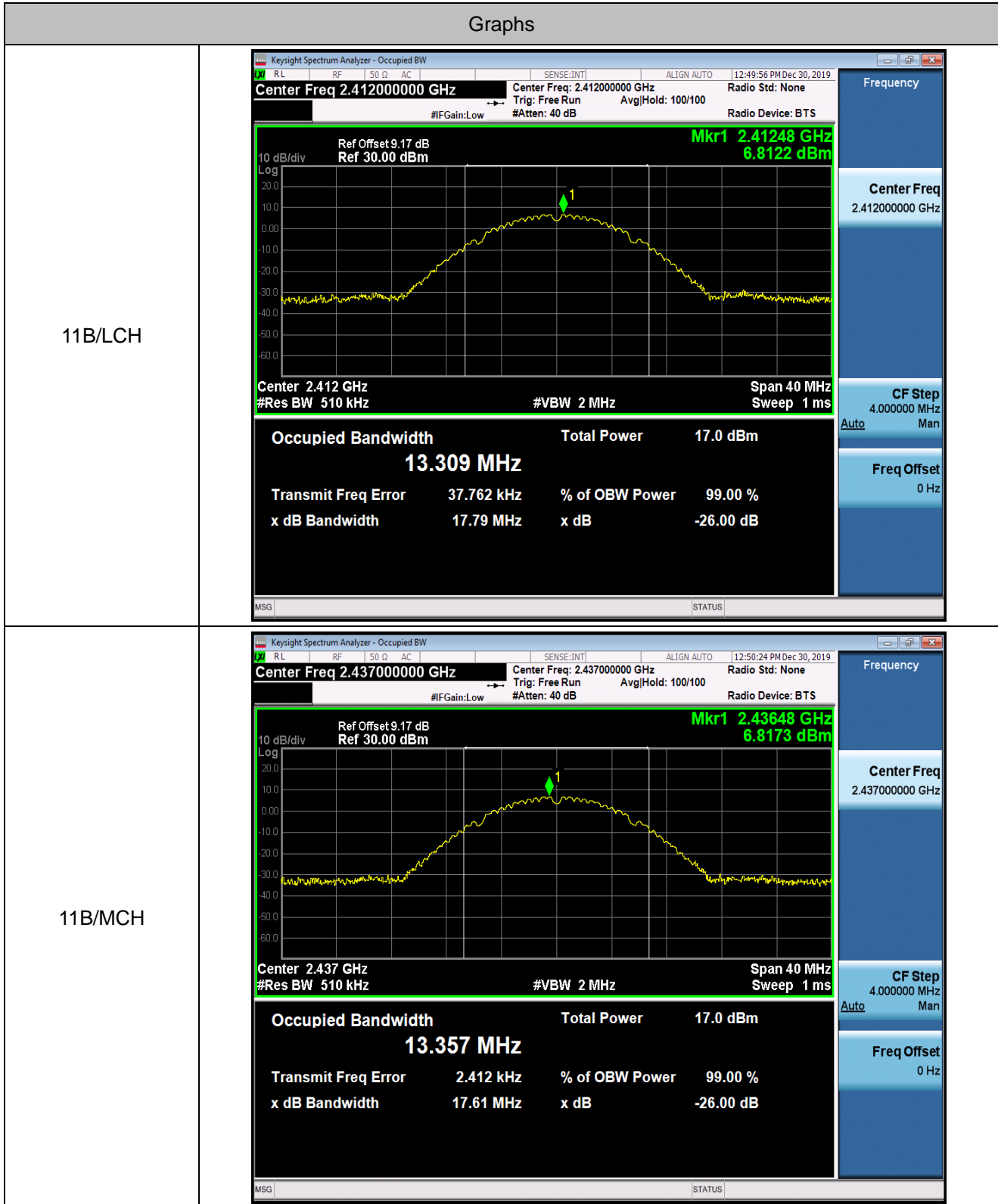
1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v05r02.
2. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
3. Turn on the EUT and connect it to measurement instrument.
4. Set to the maximum power setting and enable Transmitting the EUT transmit continuously
5. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
6. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) = 510KHz and set the Video bandwidth (VBW) = 2MHz.

4.1.3 Test Result of 6dB and 99% Bandwidth

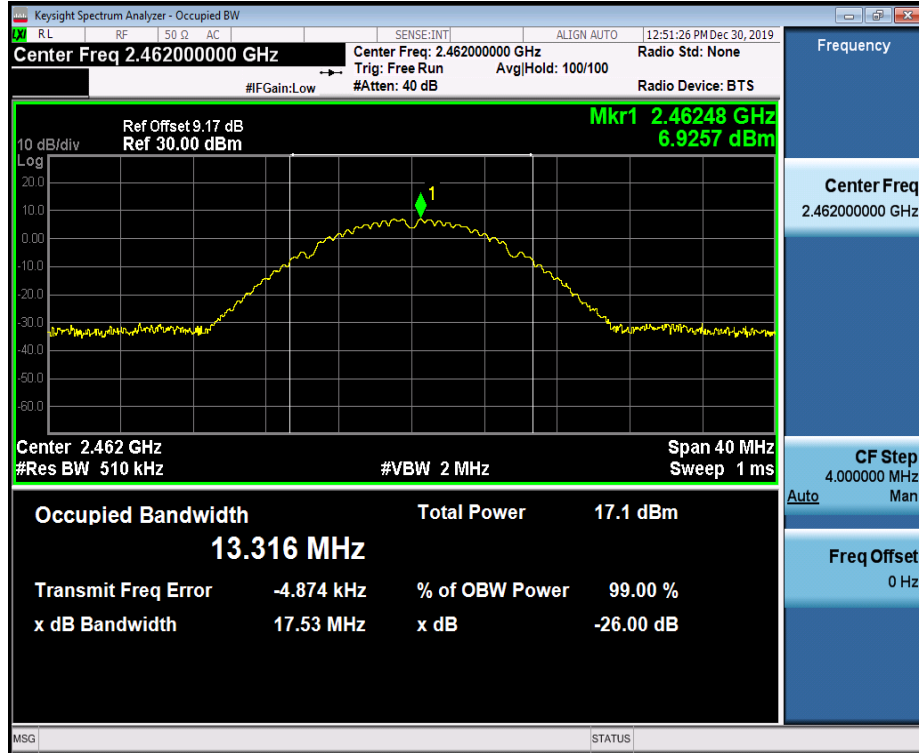
99% Bandwidth

Test Mode :		TX Mode		Temperature :		24~26℃	
Test Engineer :		Victorique Gao		Relative Humidity :		50~53%	
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.309	2405.383	2418.692	---	PASS
		2437	13.357	2430.324	2443.681	---	PASS
		2462	13.316	2455.337	2468.653	---	PASS
11G	Ant1	2412	16.495	2403.785	2420.280	---	PASS
		2437	16.526	2428.748	2445.274	---	PASS
		2462	16.464	2453.786	2470.250	---	PASS
11N20SISO	Ant1	2412	17.585	2403.239	2420.824	---	PASS
		2437	17.571	2428.229	2445.800	---	PASS
		2462	17.583	2453.206	2470.789	---	PASS
11N40SISO	Ant1	2422	35.897	2404.119	2440.016	---	PASS
		2437	35.972	2419.069	2455.041	---	PASS
		2452	35.911	2434.095	2470.006	---	PASS

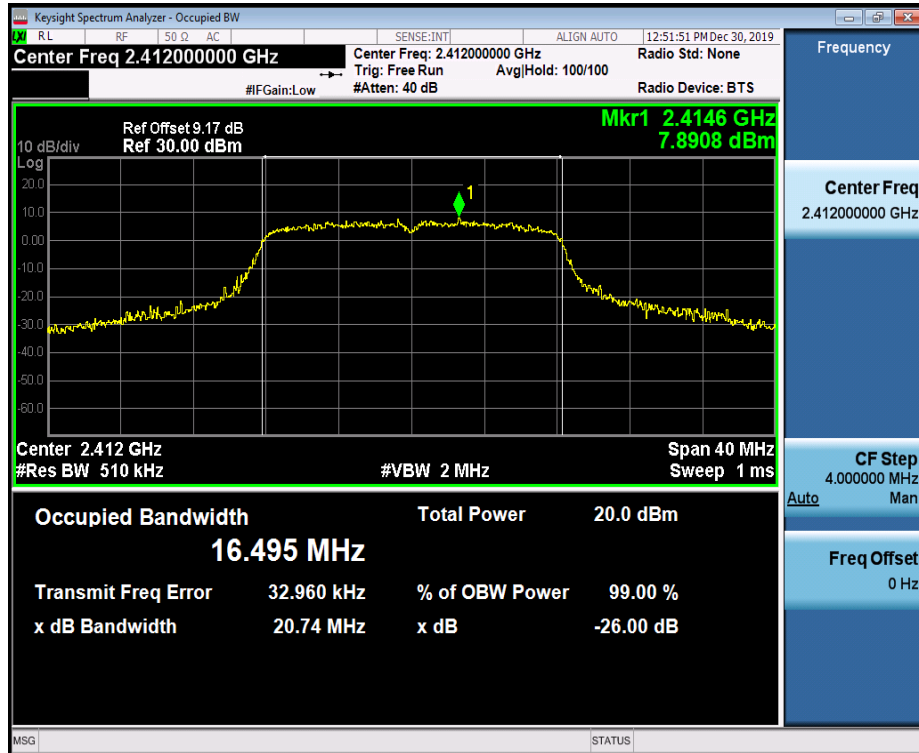
99% Bandwidth Plot



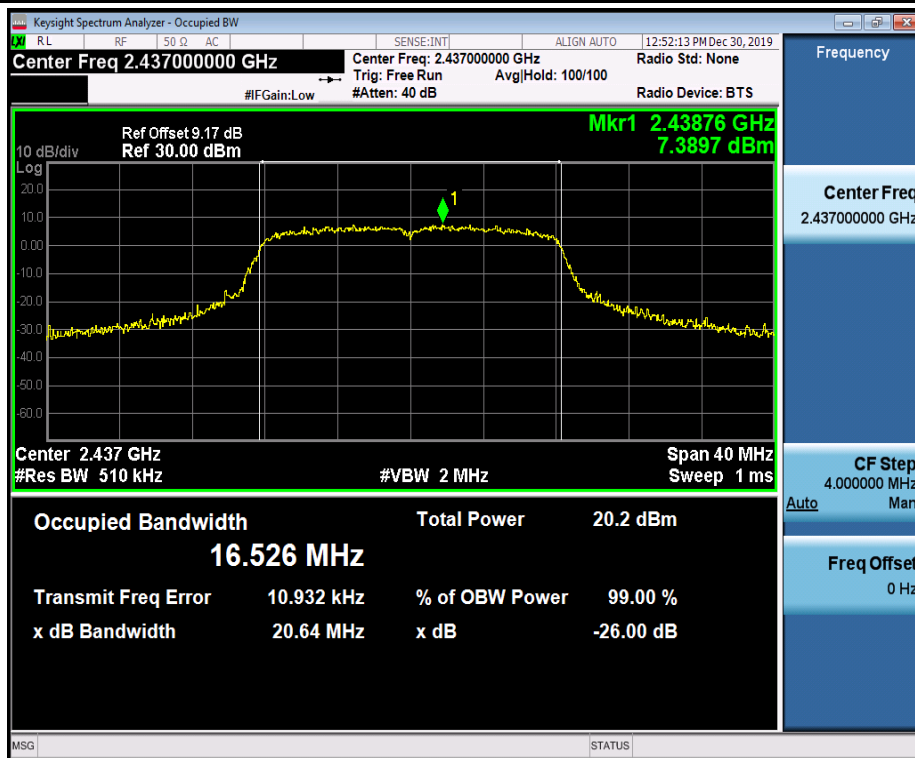
11B/HCH



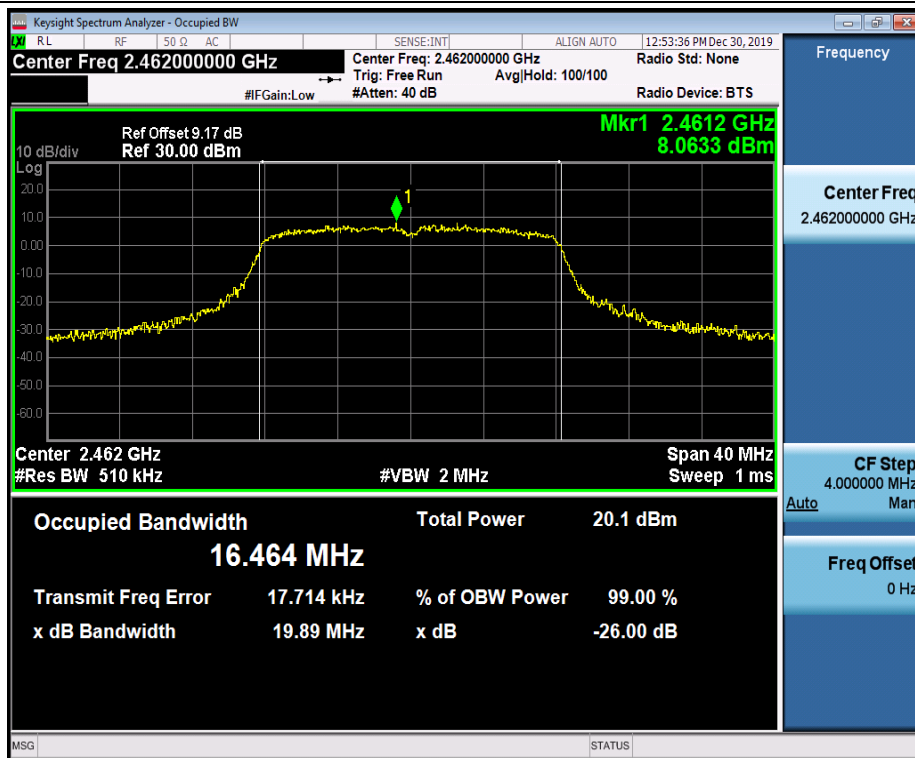
11G/LCH



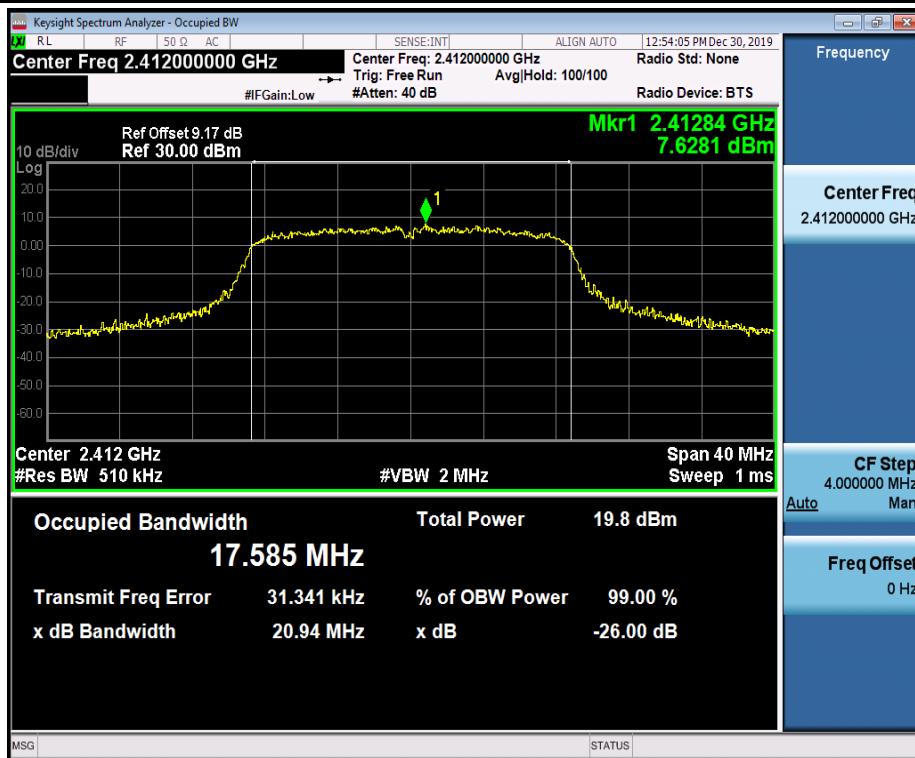
11G/MCH



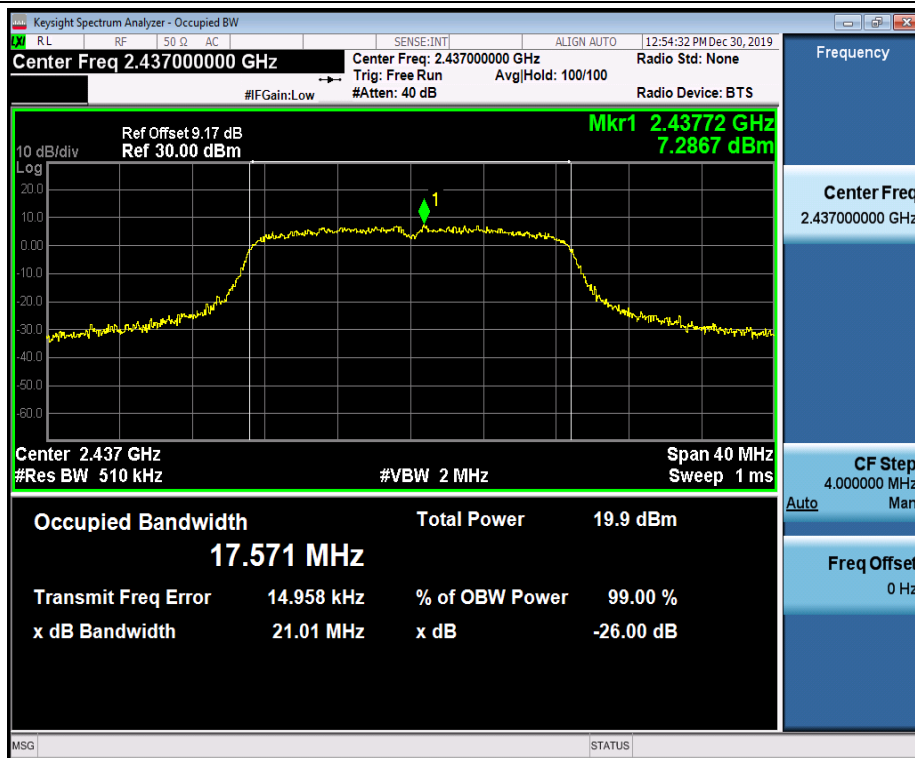
11G/HCH



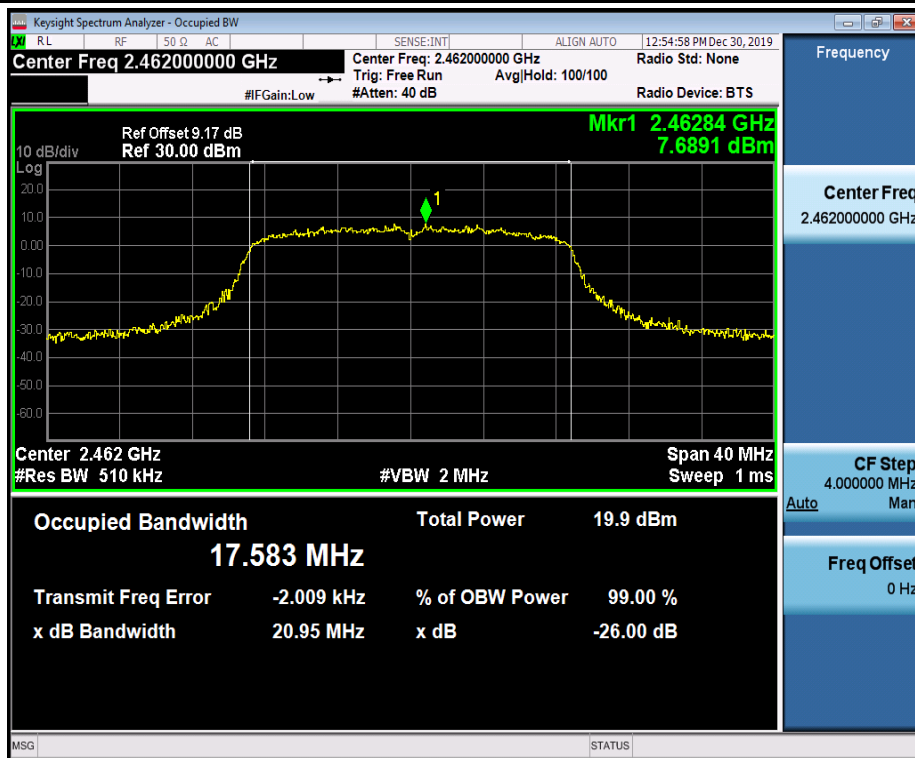
11N20/LCH



11N20/MCH

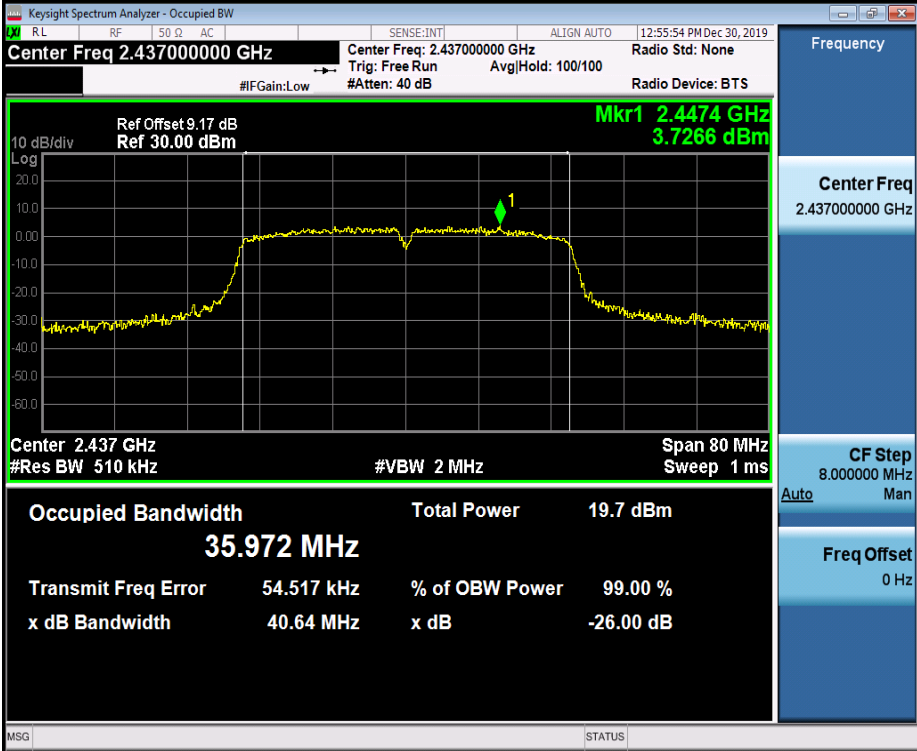
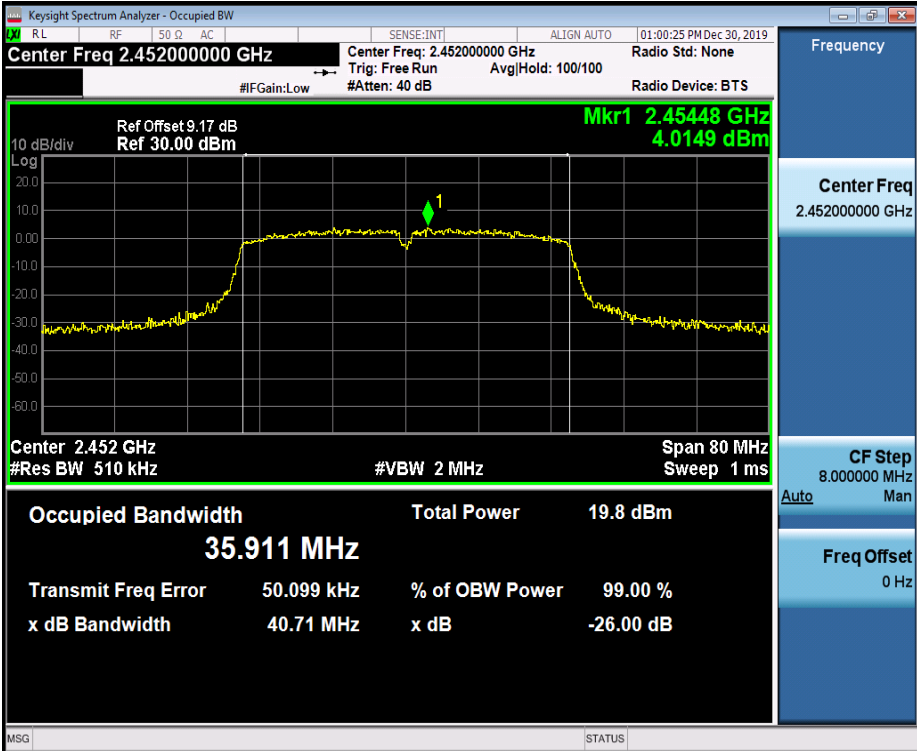


11N20/HCH



11N40/LCH

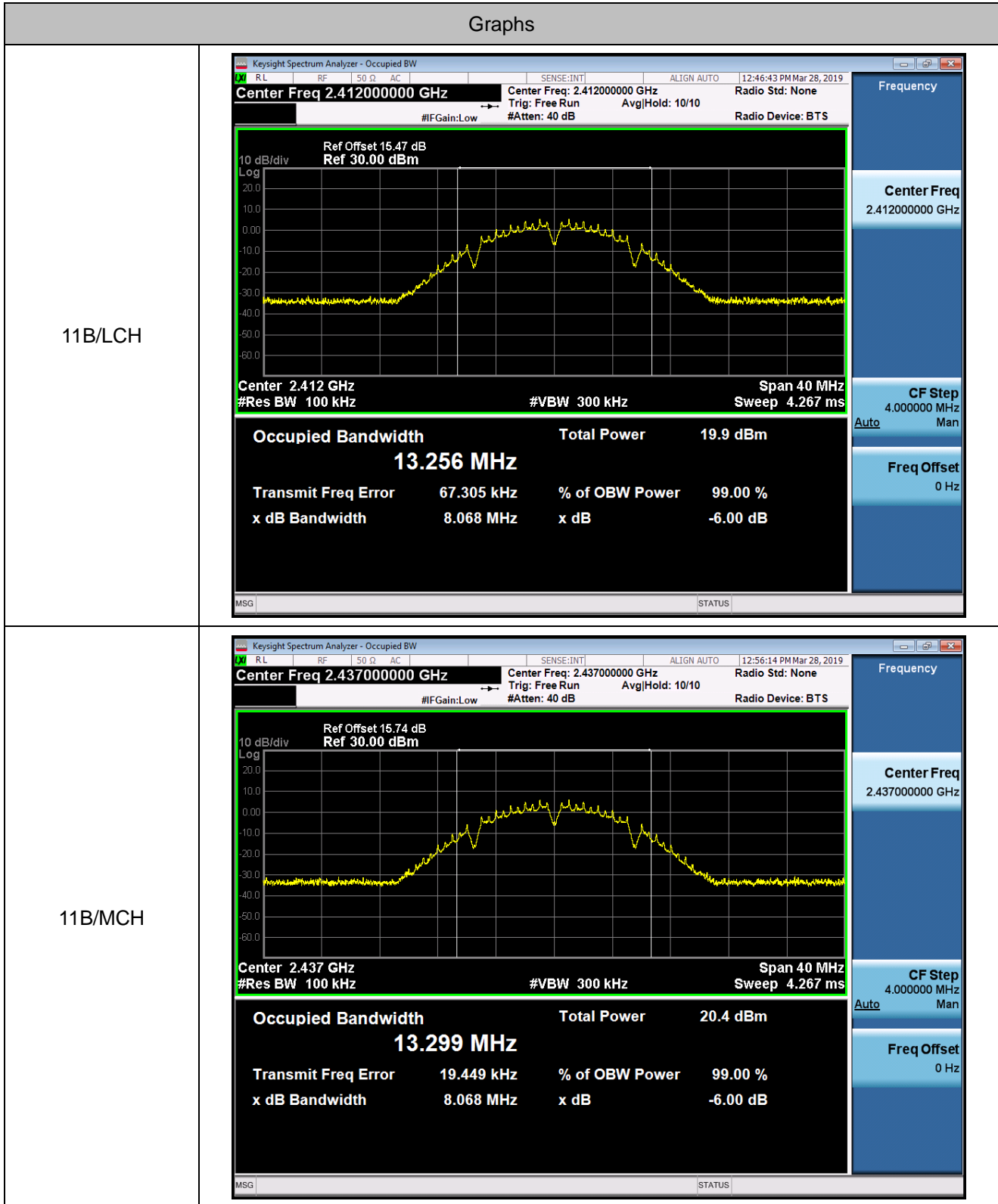


<p>11N40/MCH</p>	 <p>Keysight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.43700000 GHz</p> <p>Center Freq: 2.43700000 GHz</p> <p>Trig: Free Run AvgJHold: 100/100</p> <p>#FGain:Low #Atten: 40 dB</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset 9.17 dB</p> <p>Ref 30.00 dBm</p> <p>Mkr1 2.4474 GHz 3.7266 dBm</p> <p>10 dB/div</p> <p>Log</p> <p>Center 2.437 GHz</p> <p>#Res BW 510 kHz #VBW 2 MHz</p> <p>Span 80 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 35.972 MHz</p> <p>Total Power 19.7 dBm</p> <p>Transmit Freq Error 54.517 kHz % of OBW Power 99.00 %</p> <p>x dB Bandwidth 40.64 MHz x dB -26.00 dB</p> <p>MSG STATUS</p>
<p>11N40/HCH</p>	 <p>Keysight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.45200000 GHz</p> <p>Center Freq: 2.45200000 GHz</p> <p>Trig: Free Run AvgJHold: 100/100</p> <p>#FGain:Low #Atten: 40 dB</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset 9.17 dB</p> <p>Ref 30.00 dBm</p> <p>Mkr1 2.45448 GHz 4.0149 dBm</p> <p>10 dB/div</p> <p>Log</p> <p>Center 2.452 GHz</p> <p>#Res BW 510 kHz #VBW 2 MHz</p> <p>Span 80 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 35.911 MHz</p> <p>Total Power 19.8 dBm</p> <p>Transmit Freq Error 50.099 kHz % of OBW Power 99.00 %</p> <p>x dB Bandwidth 40.71 MHz x dB -26.00 dB</p> <p>MSG STATUS</p>

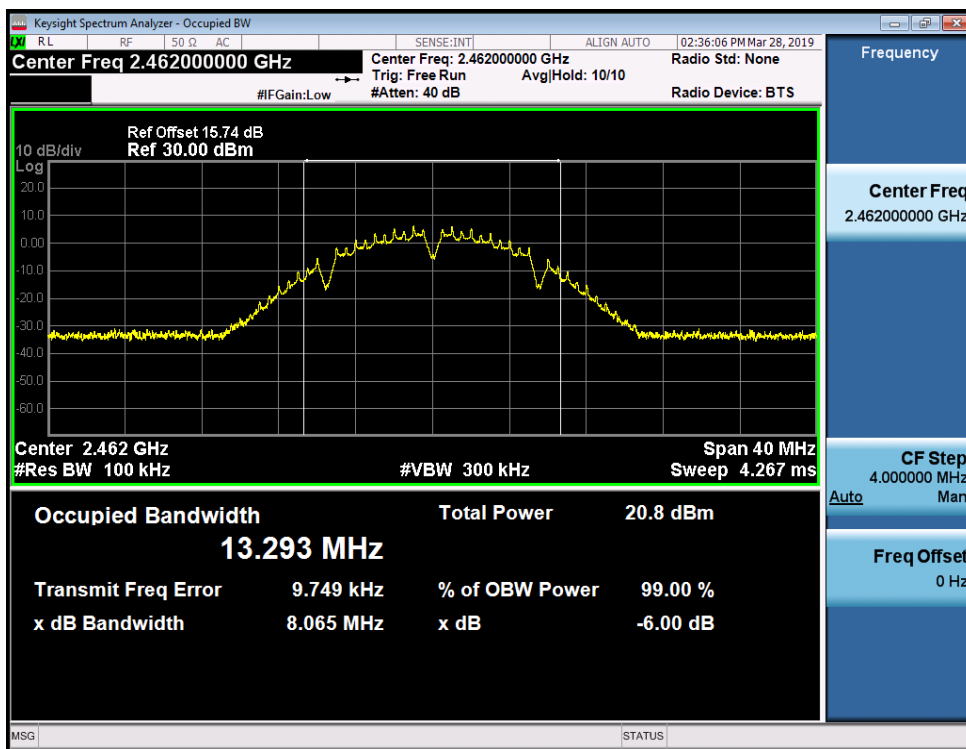
6dB Bandwidth

Test Mode :		TX Mode	Temperature :	24~26℃	
Test Engineer :		Victorique Gao	Relative Humidity :	50~53%	
Mode	Channel	6dB Bandwidth [MHz]	99% OBW [MHz]	Verdict	
11B	LCH	8.068	13.256	PASS	
11B	MCH	8.068	13.299	PASS	
11B	HCH	8.065	13.293	PASS	
11G	LCH	15.13	16.257	PASS	
11G	MCH	15.04	16.252	PASS	
11G	HCH	15.13	16.247	PASS	
11N20	LCH	15.06	17.426	PASS	
11N20	MCH	15.02	17.427	PASS	
11N20	HCH	15.12	17.424	PASS	
11N40	LCH	35.04	35.736	PASS	
11N40	MCH	35.06	35.743	PASS	
11N40	HCH	35.12	35.750	PASS	

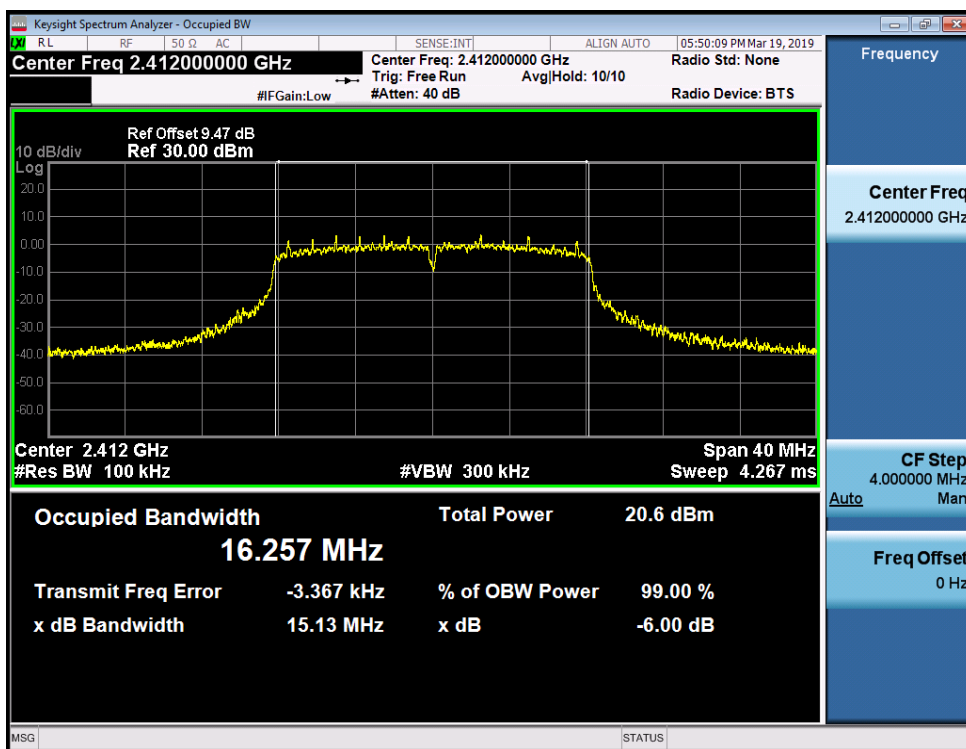
6dB Bandwidth Plot



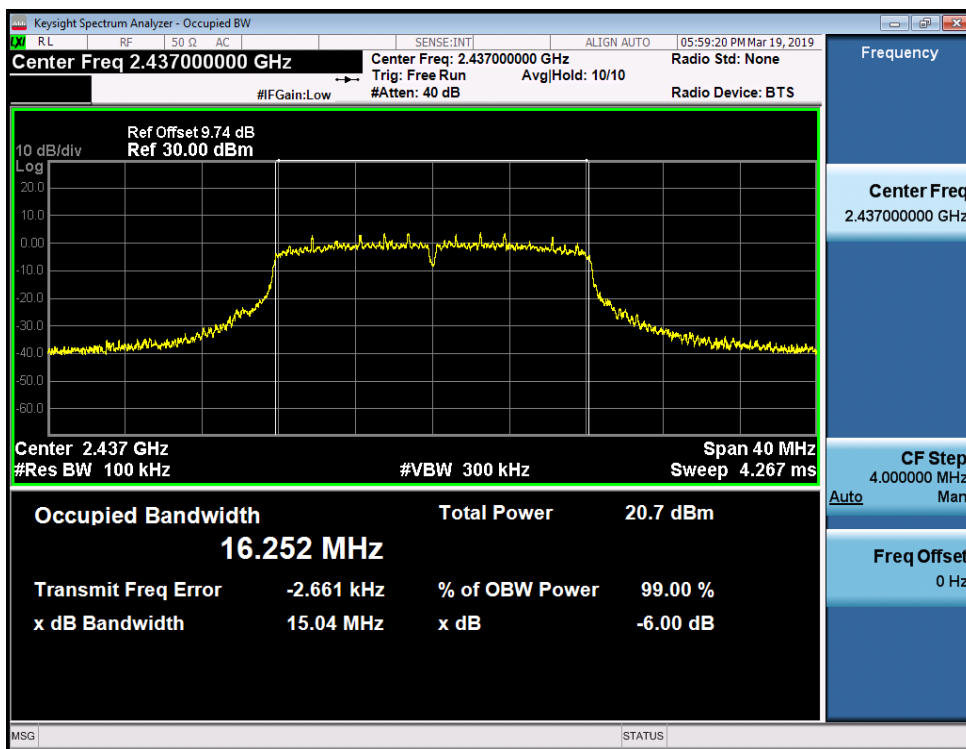
11B/HCH



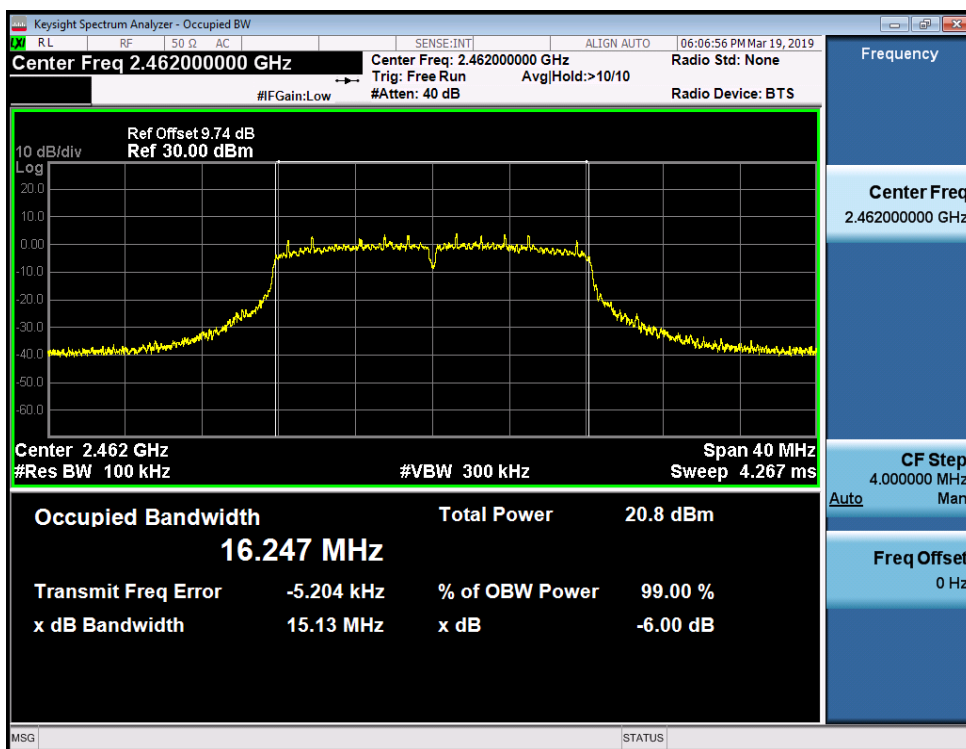
11G/LCH



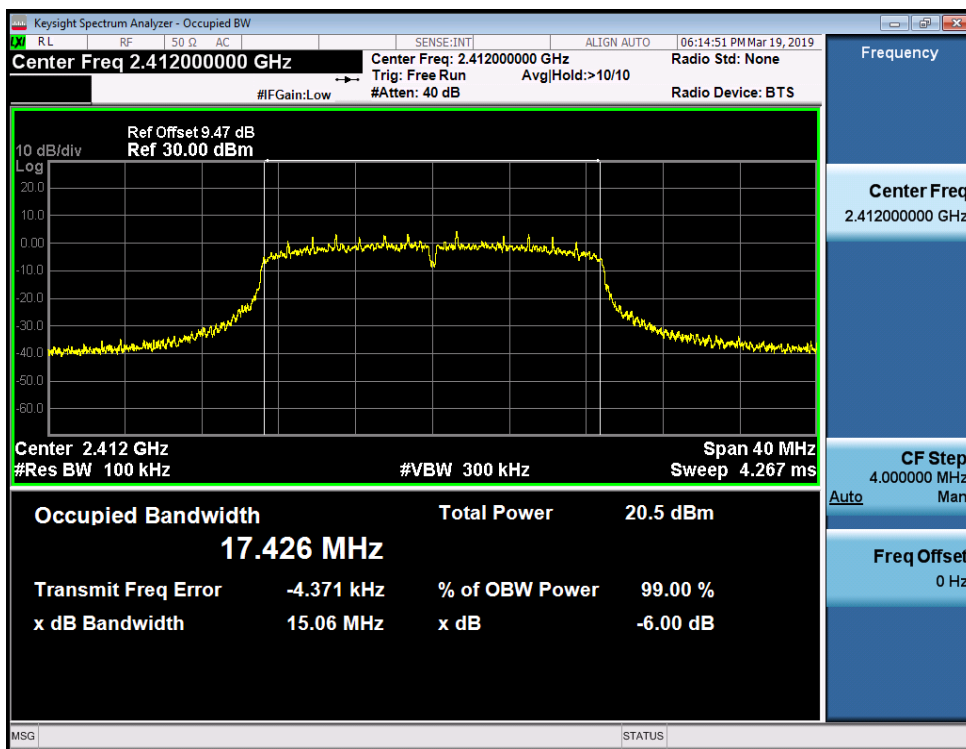
11G/MCH



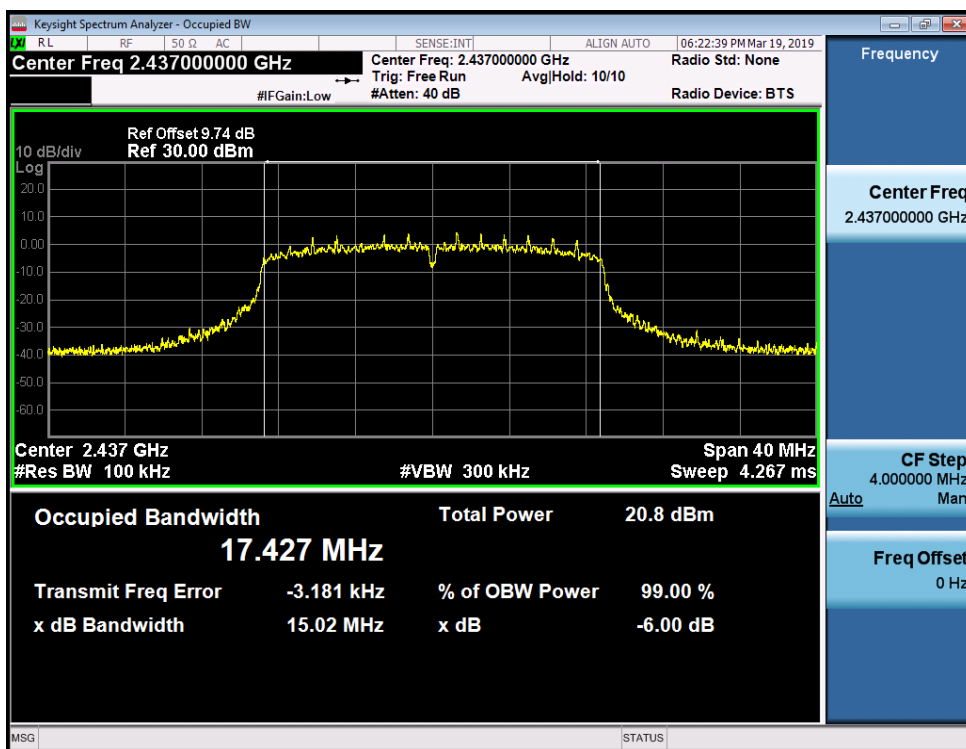
11G/HCH



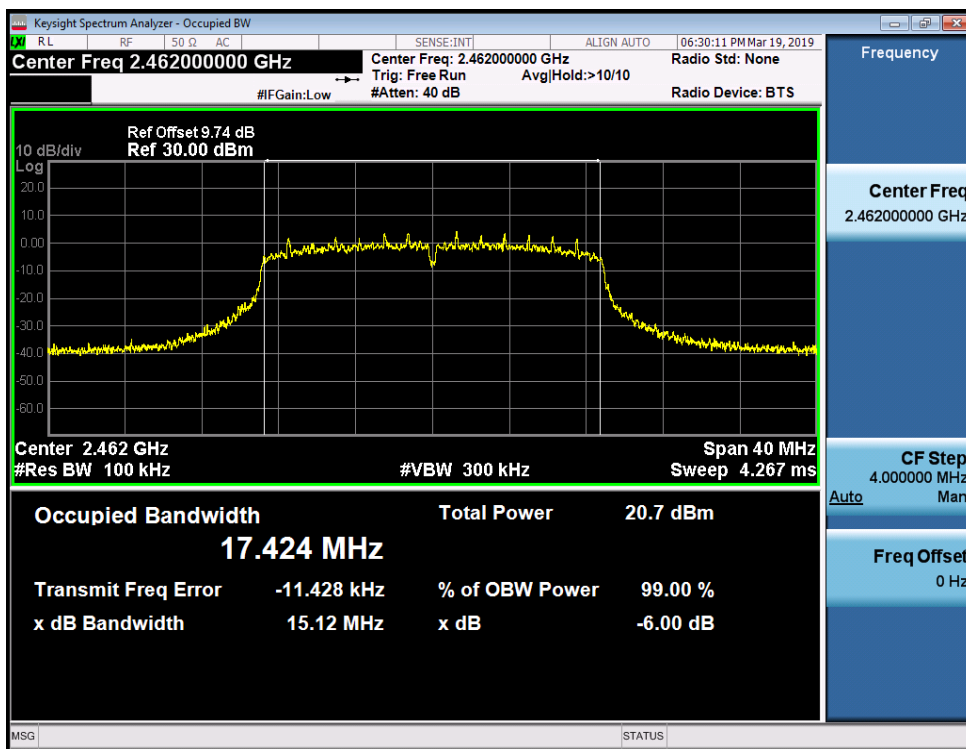
11N20/LCH



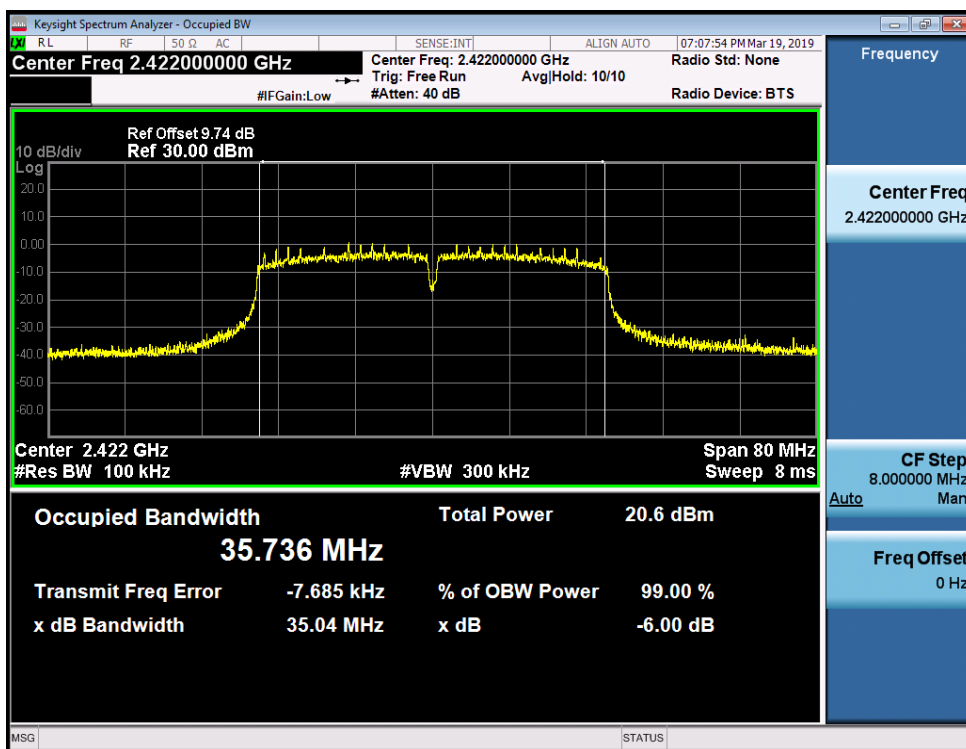
11N20/MCH



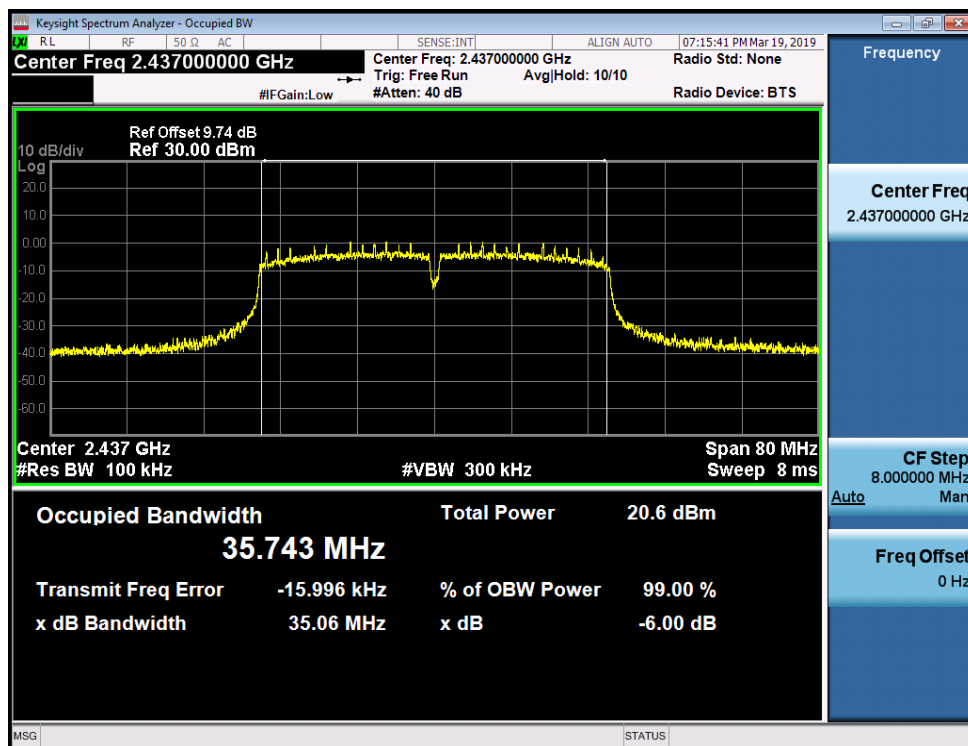
11N20/HCH



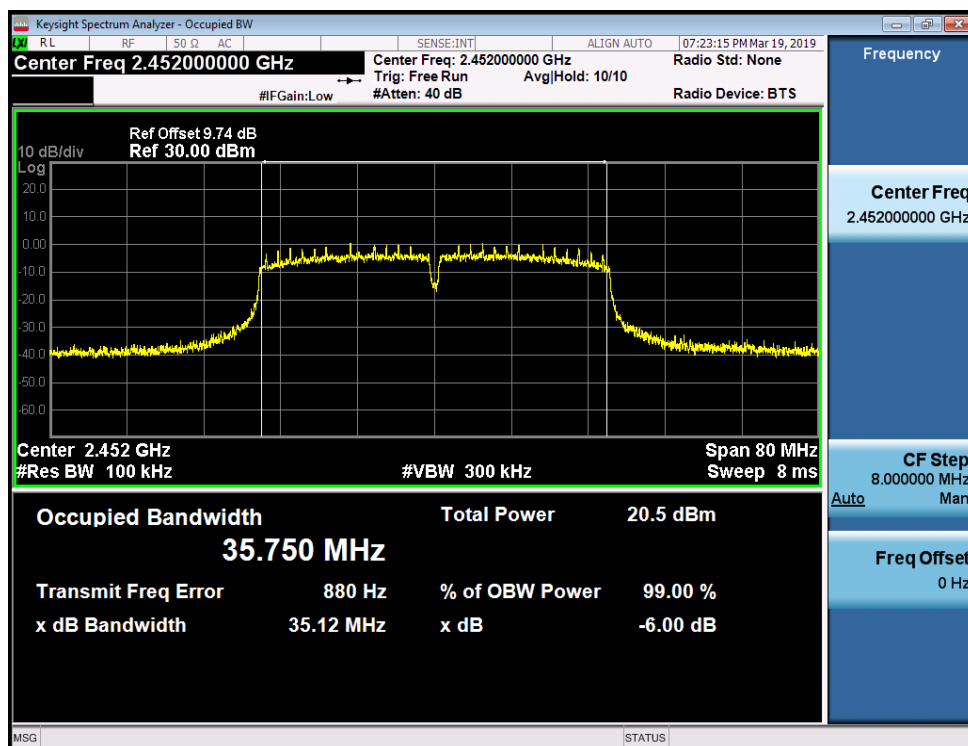
11N40/LCH



11N40/MCH



11N40/HCH



4.2 Output Power Measurement

4.2.1 Limit of Output Power

FCC §15.247 (b)(3)

IC RSS-247 A5.4(4)

For systems using digital modulation in the 2400-2483.5 MHz bands: 30dBm.

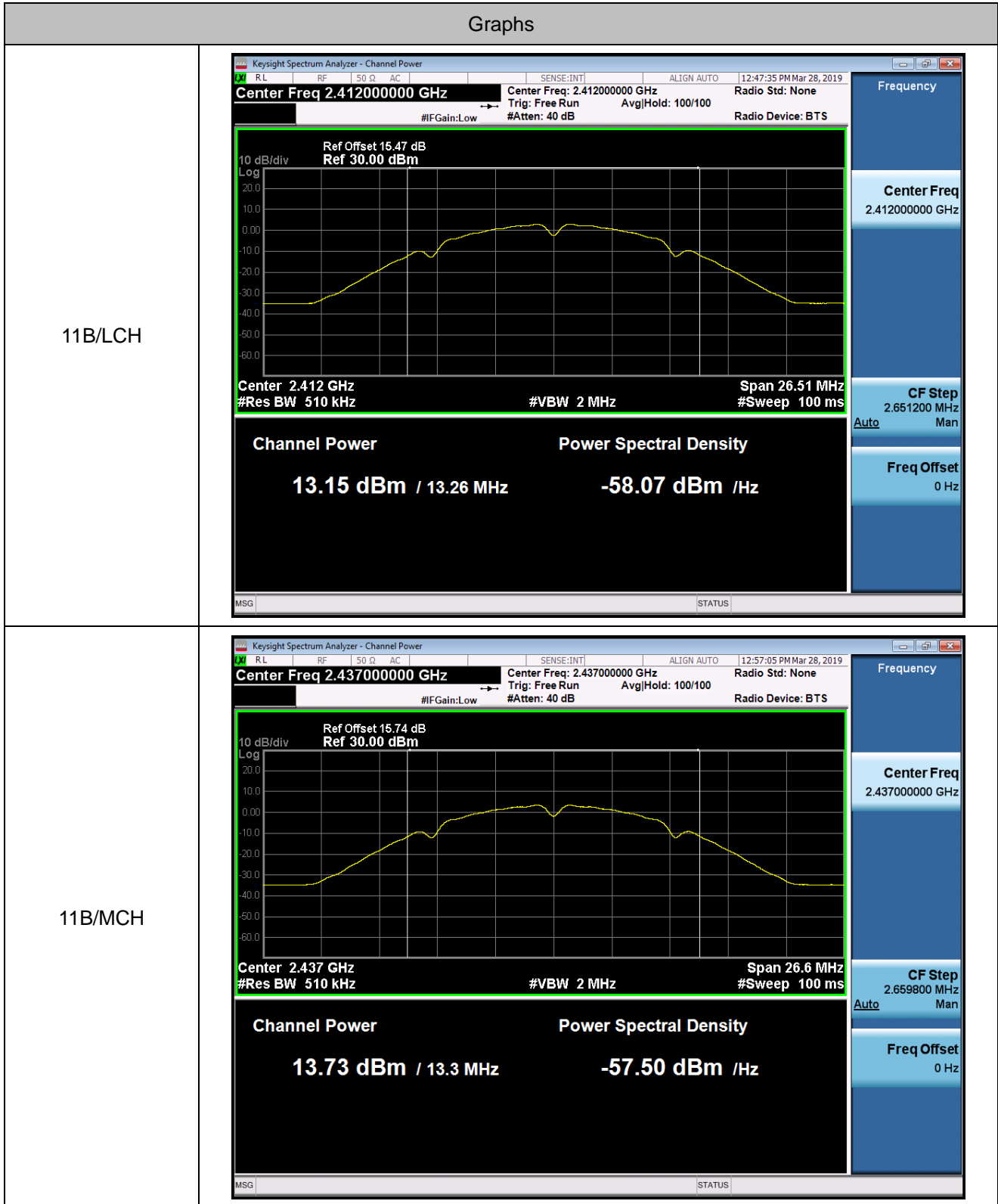
4.2.2 Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB 558074 D01 15.247 Meas Guidance v05r02 section 8.3.2.2 Measurement using a spectrum analyzer.
2. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
3. Turn on the EUT and connect it to spectrum analyzer.
4. Set to the maximum power setting and enable Transmitting the EUT transmit continuously
5. Measure the duty cycle, x , of the transmitter output signal as described in below:
 - a. Set the center frequency of the instrument to the center frequency of the transmission.
 - b. Set RBW to the largest available Transmitting value.
 - c. Set detector = peak
6. Set span to at least $1.5 \times \text{OBW}$. Set RBW=510KHz, VBW=2MHz, Number of points in sweep $\geq 2/3 \times$ span, Sweep time = auto. Detector = RMS
7. Allow the sweep to "free run". Trace average 100 traces in RMS mode
8. Compute power by integrating the spectrum across the OBW of the signal using the instrument's Channel power measurement function with band limits set equal to the OBW band edges.
9. Add $10 \log (1/x)$, where x is the duty cycle. The duty cycle factor has been compensated to the 'offset' of the spectrum analyser.

4.2.3 Test Result of Output Power

Test Mode :		Tx Mode	Temperature :		24~26°C	
Test Engineer :		Victorique Gao	Relative Humidity :		50~53%	
Mode	Channel	Meas.Level [dBm]	DT	10 log (1/x)	AV.Power [dBm]	Verdict
11B	LCH	13.15	99.07 %	0.04	13.19	PASS
11B	MCH	13.73	99.07 %	0.04	13.77	PASS
11B	HCH	14.03	99.15 %	0.04	14.07	PASS
11G	LCH	13.79	94.87 %	0.23	14.02	PASS
11G	MCH	13.85	93.66 %	0.28	14.13	PASS
11G	HCH	13.91	93.23 %	0.30	14.21	PASS
11N20	LCH	13.61	91.33 %	0.39	14	PASS
11N20	MCH	13.78	94.04 %	0.27	14.05	PASS
11N20	HCH	13.71	94.51 %	0.25	13.96	PASS
11N40	LCH	13.65	86.51 %	0.63	14.28	PASS
11N40	MCH	13.47	89.42 %	0.49	13.96	PASS
11N40	HCH	13.4	89.42 %	0.49	13.89	PASS

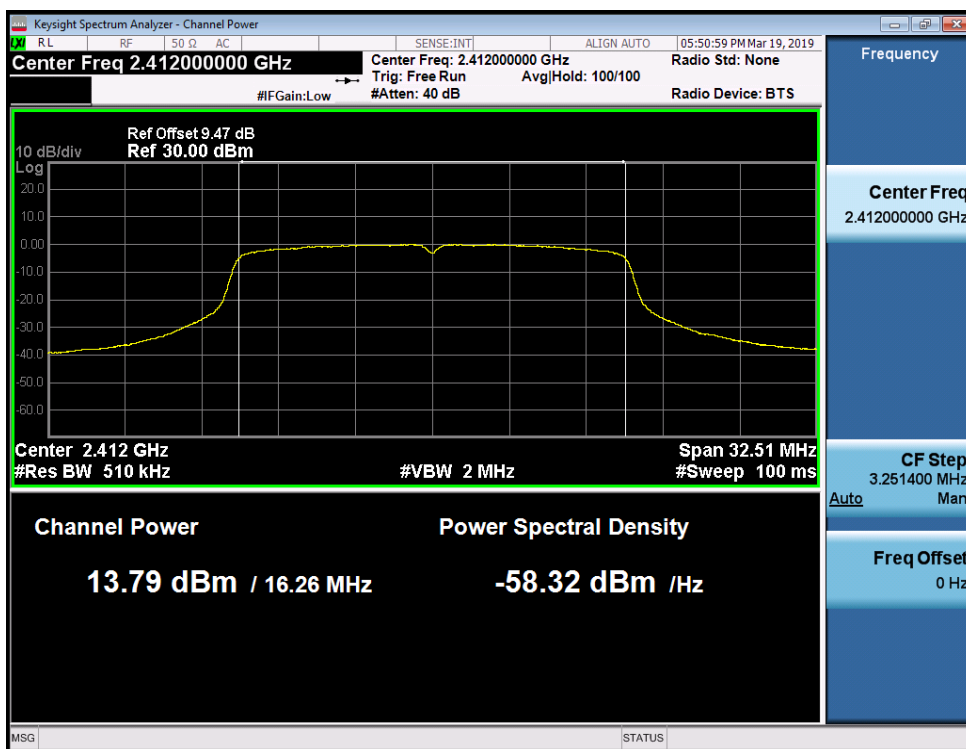
Meas.Level Plot



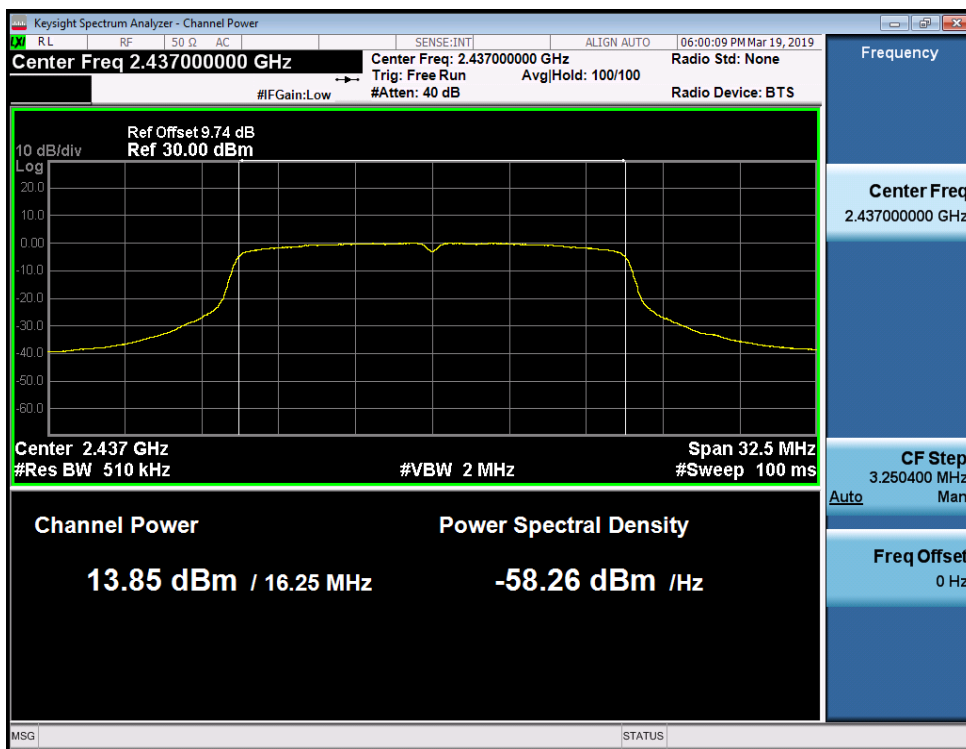
11B/HCH



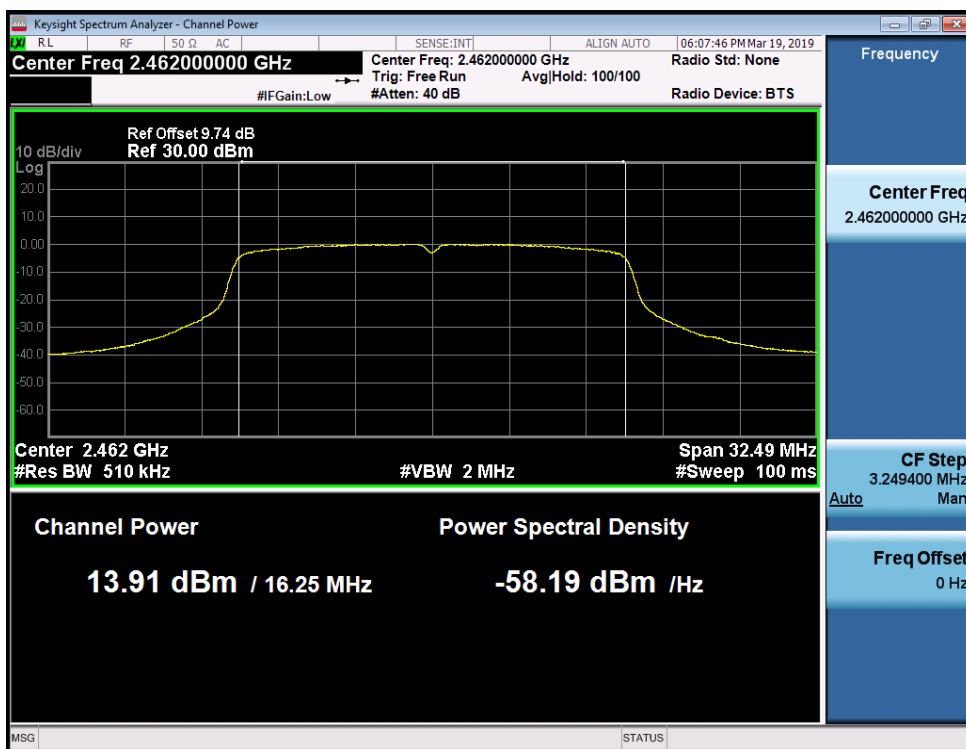
11G/LCH



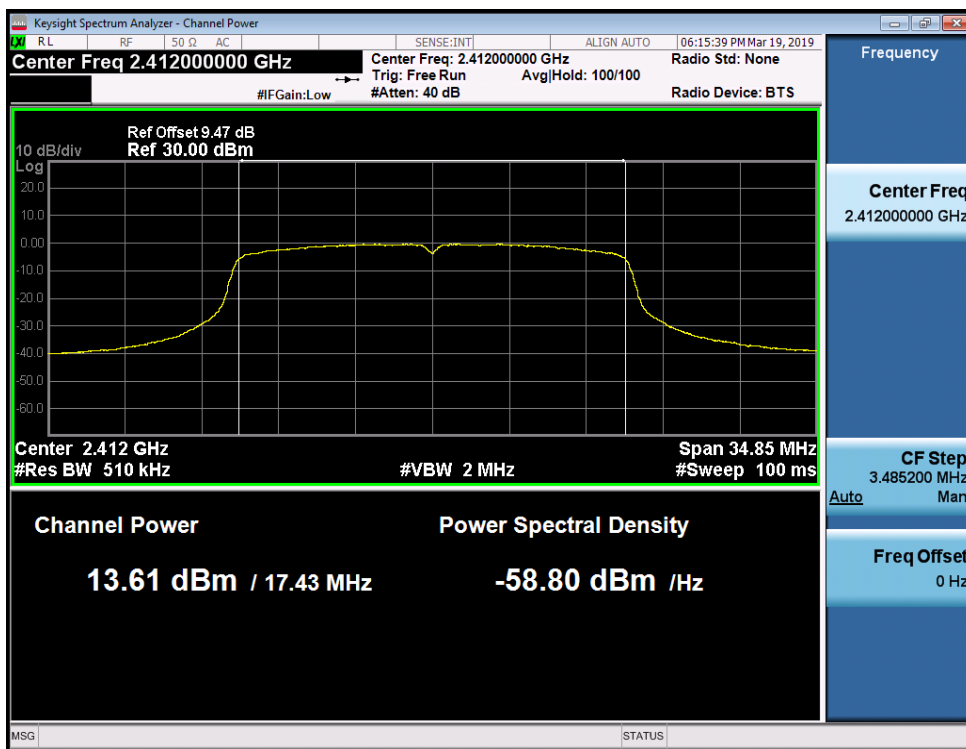
11G/MCH



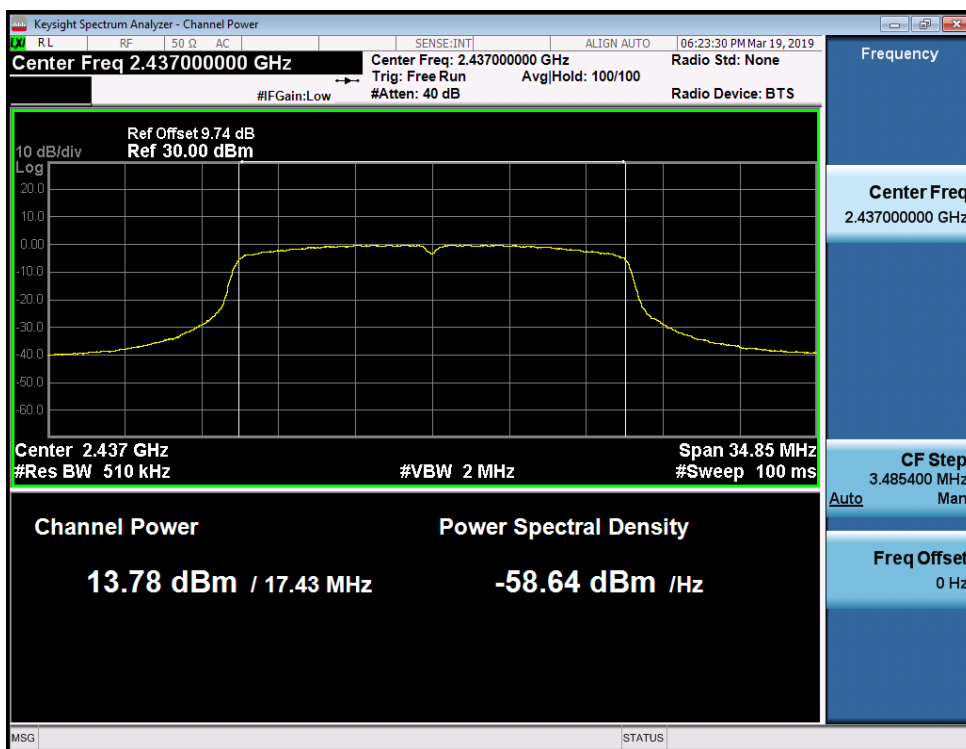
11G/HCH



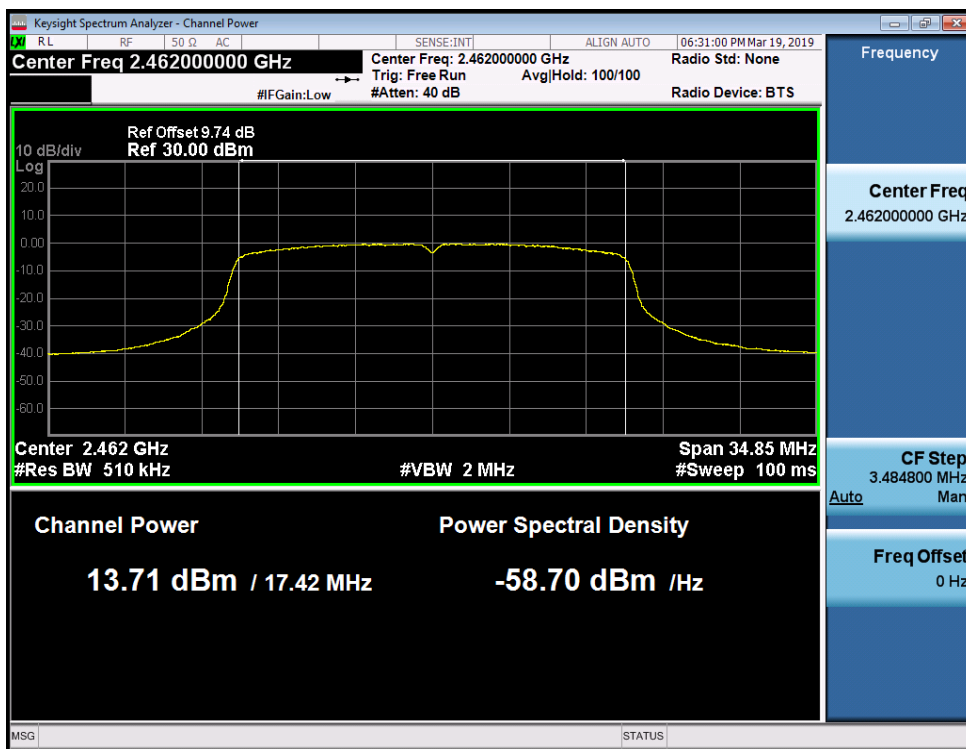
11N20/LCH



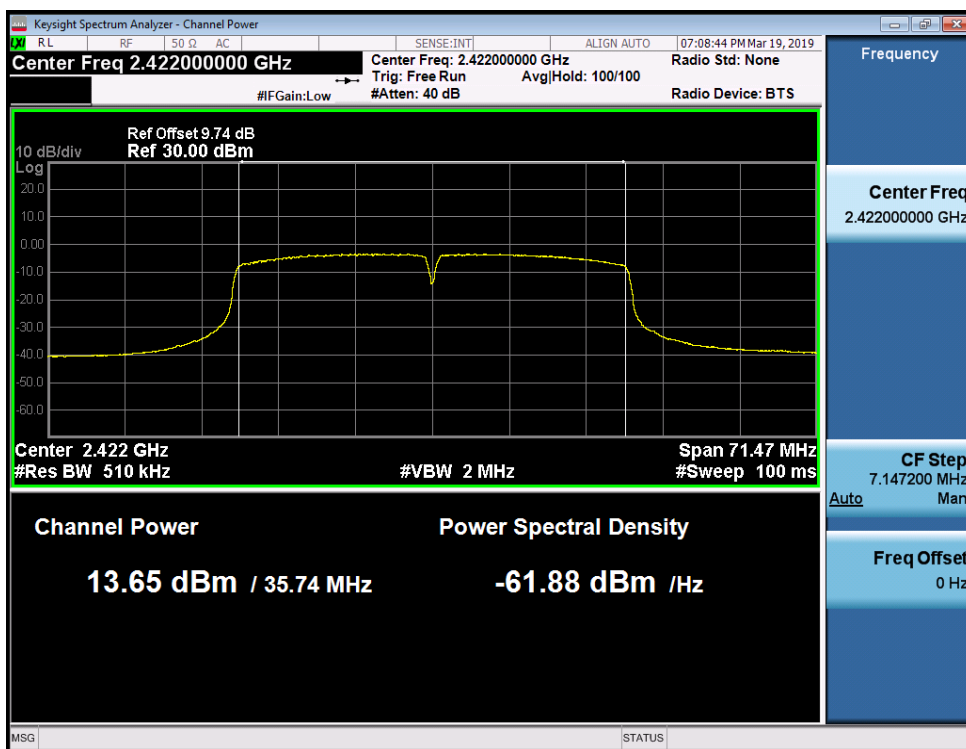
11N20/MCH



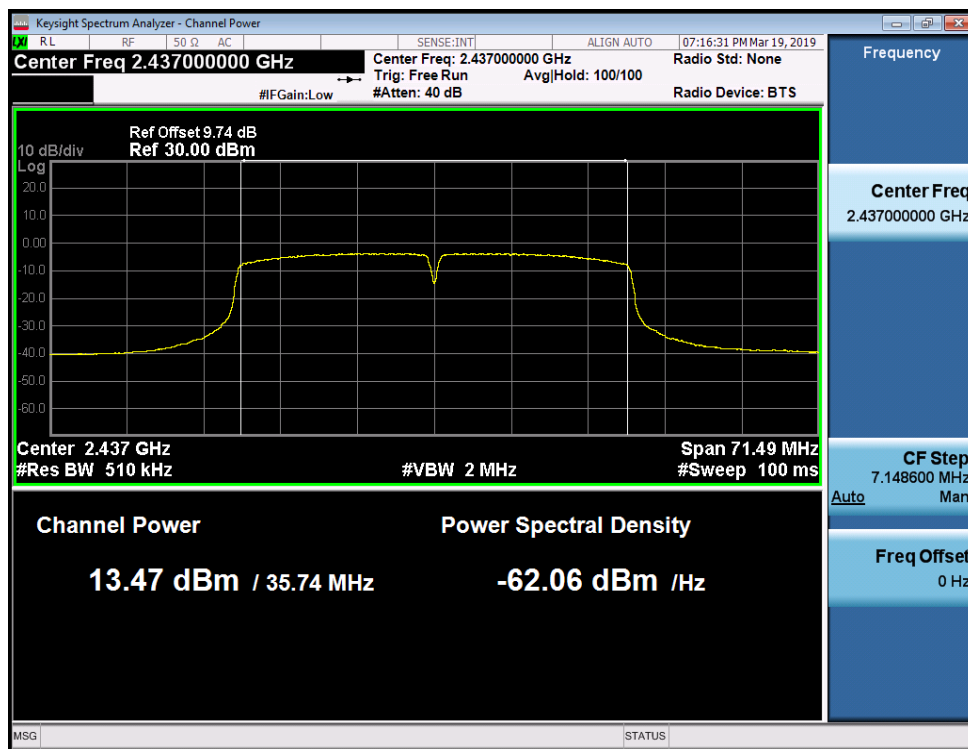
11N20/HCH



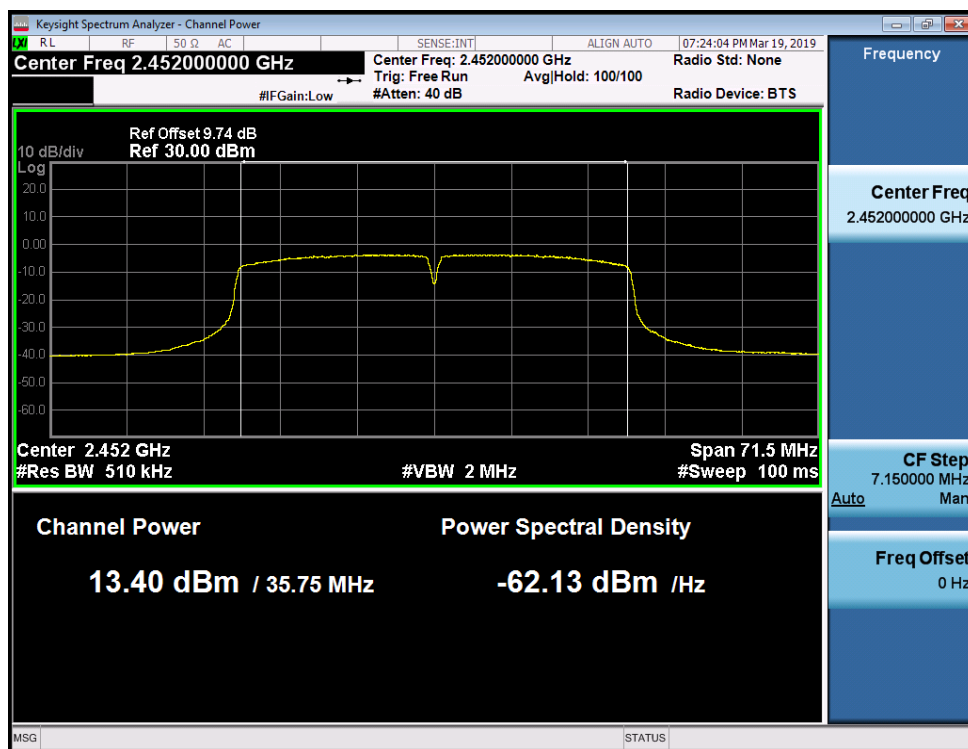
11N40/LCH



11N40/MCH



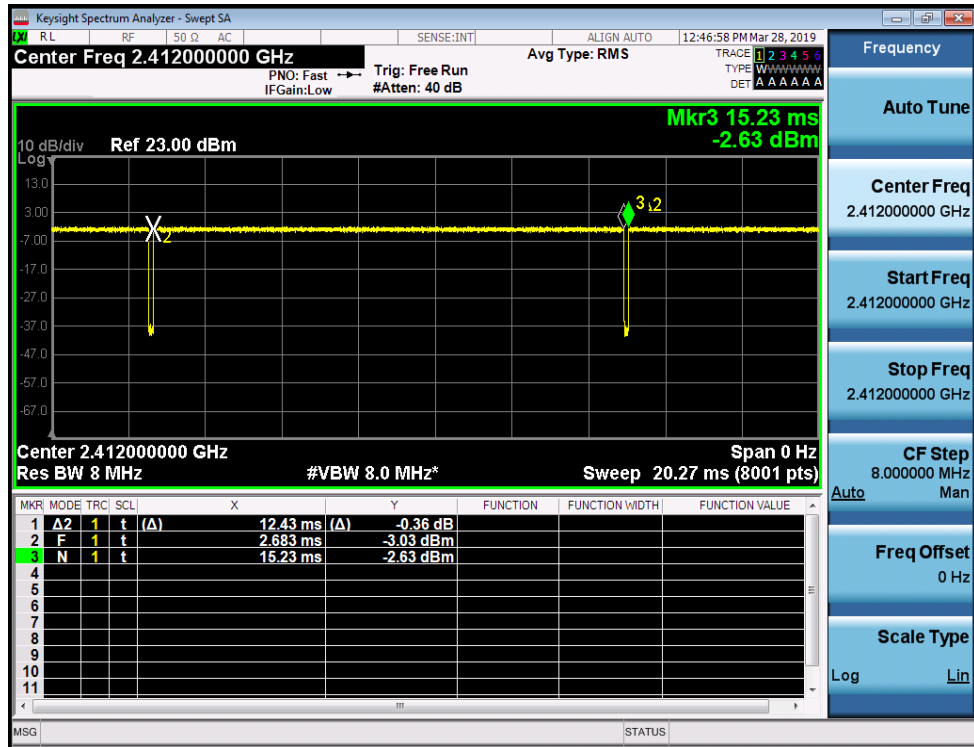
11N40/HCH



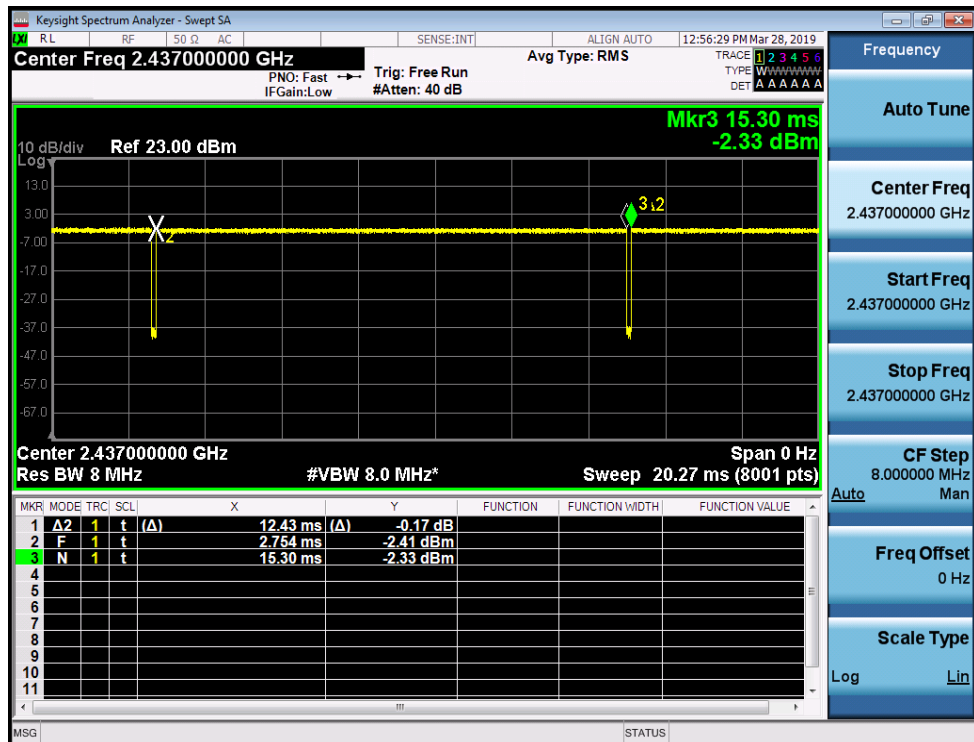
Duty cycle Plot

Graphs

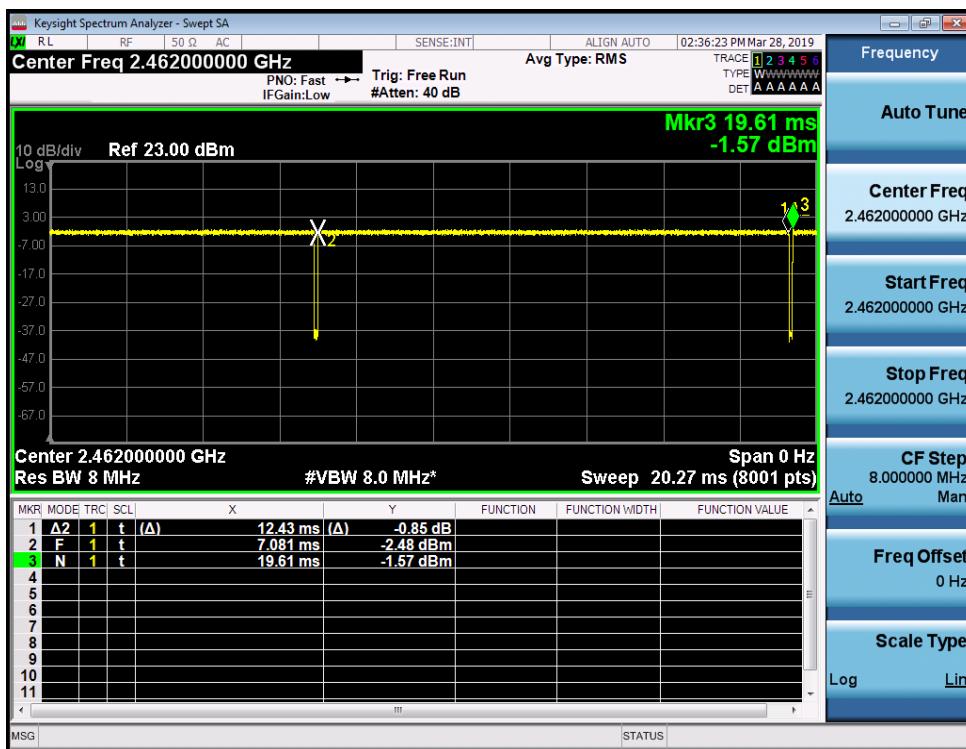
11B/LCH



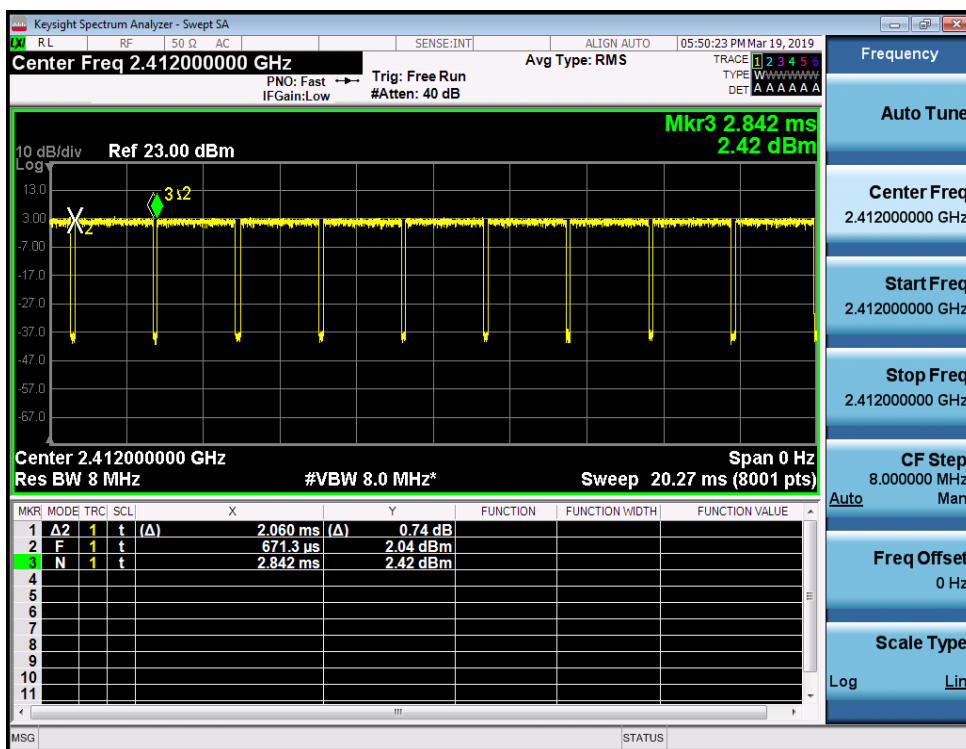
11B/MCH



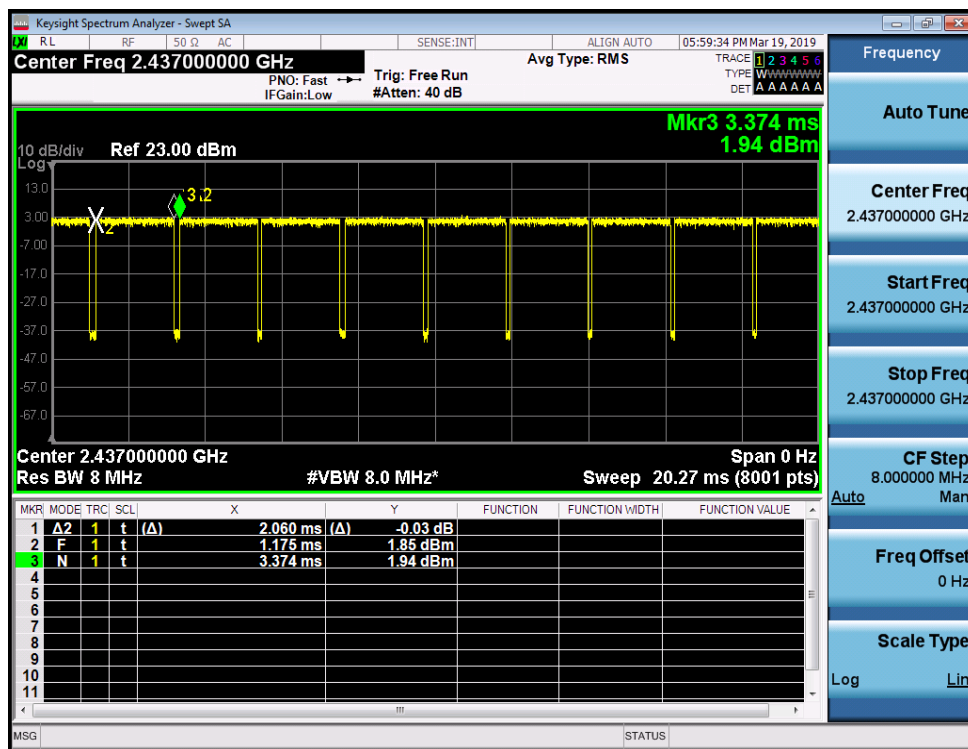
11B/HCH



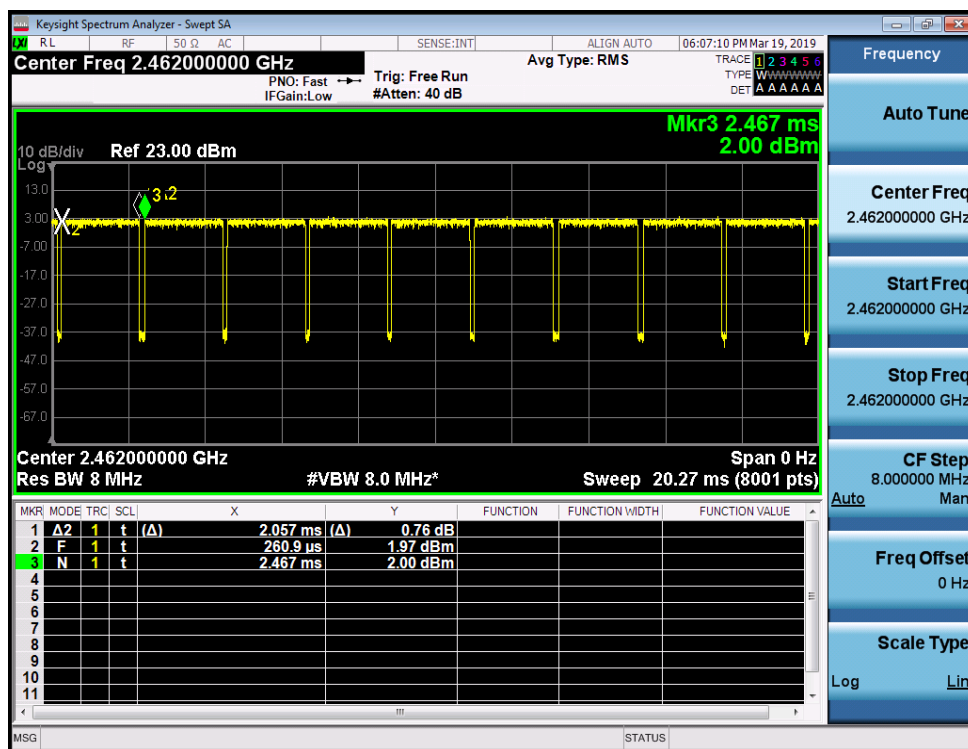
11G/LCH



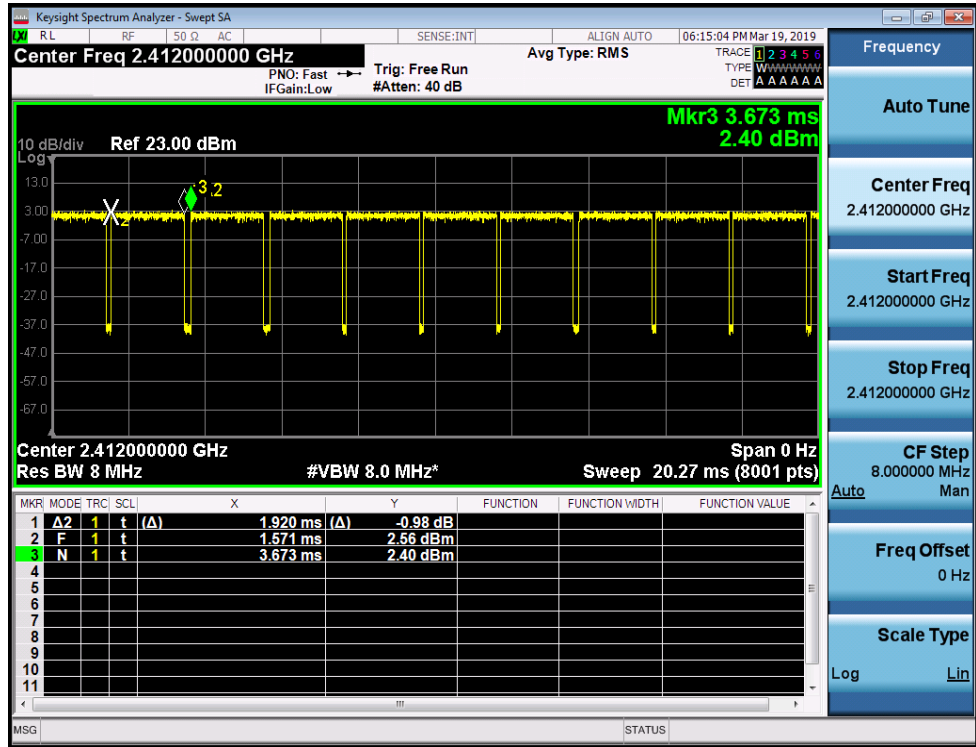
11G/MCH



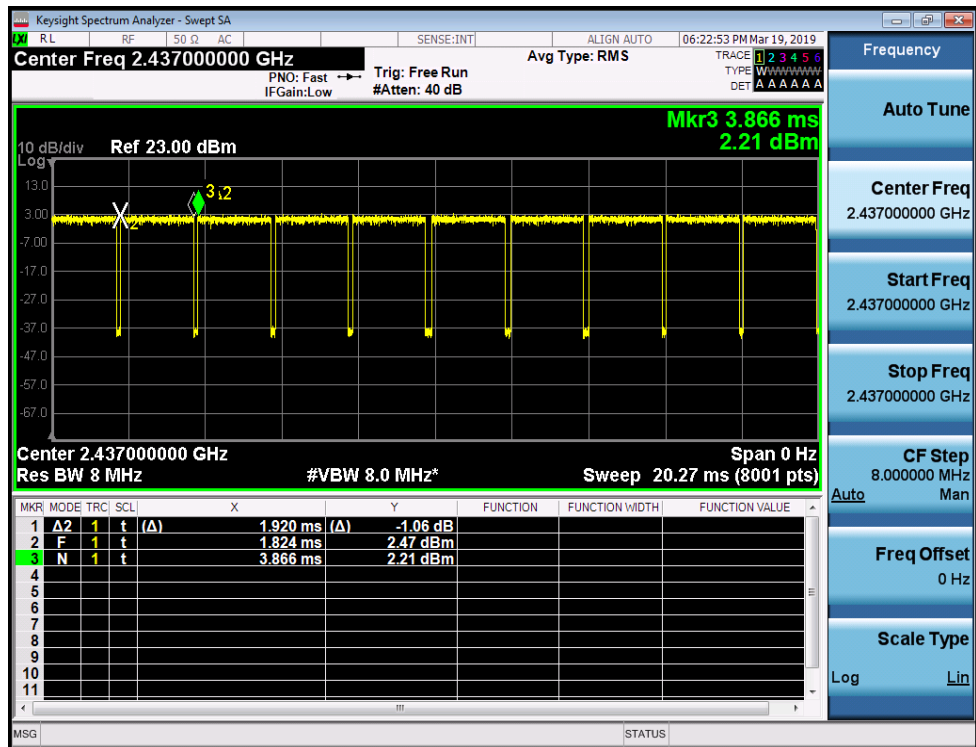
11G/HCH



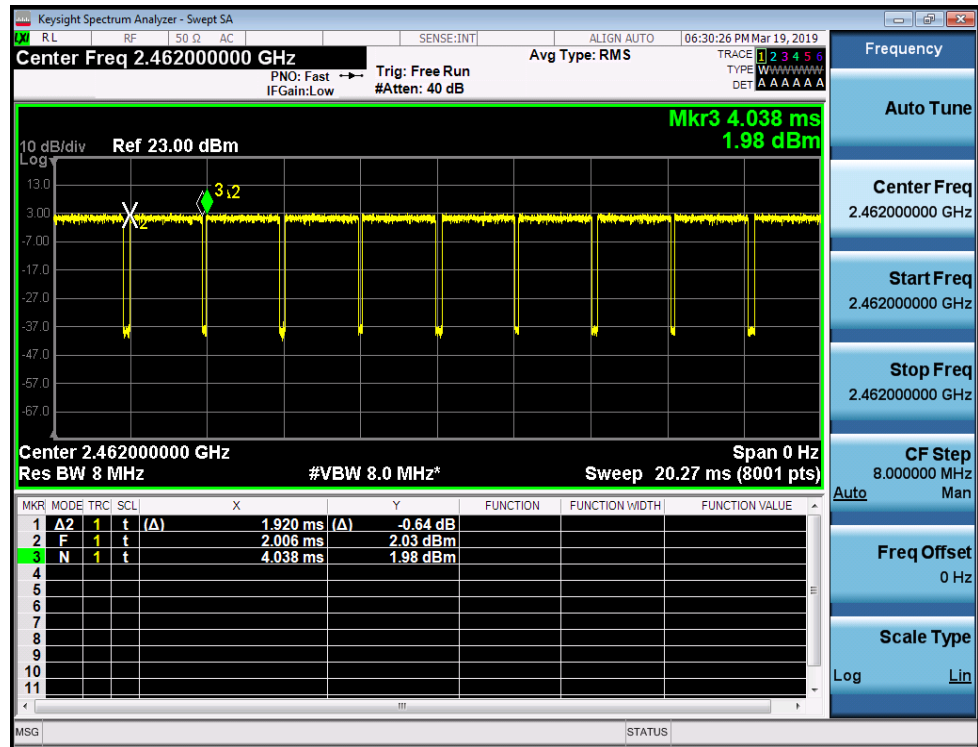
11N20/LCH



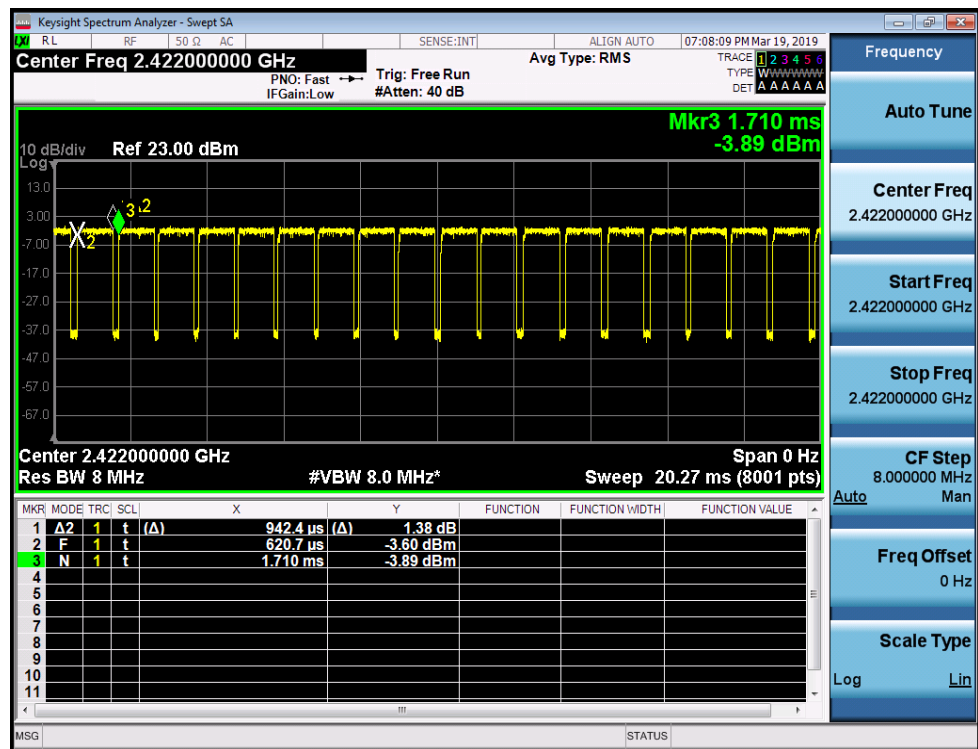
11N20/MCH



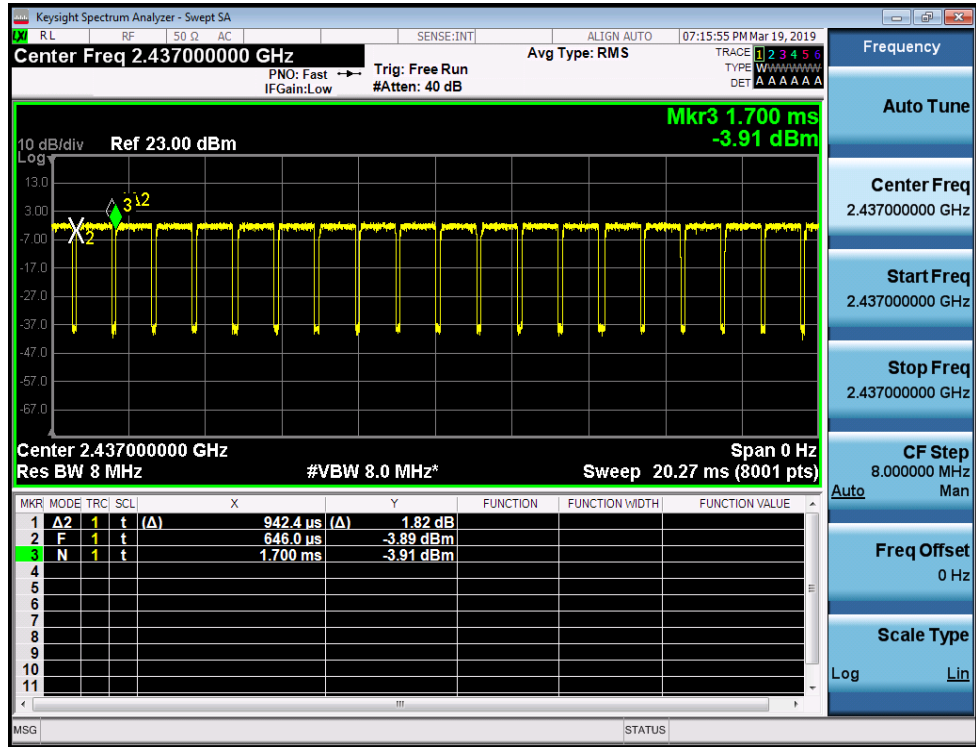
11N20/HCH



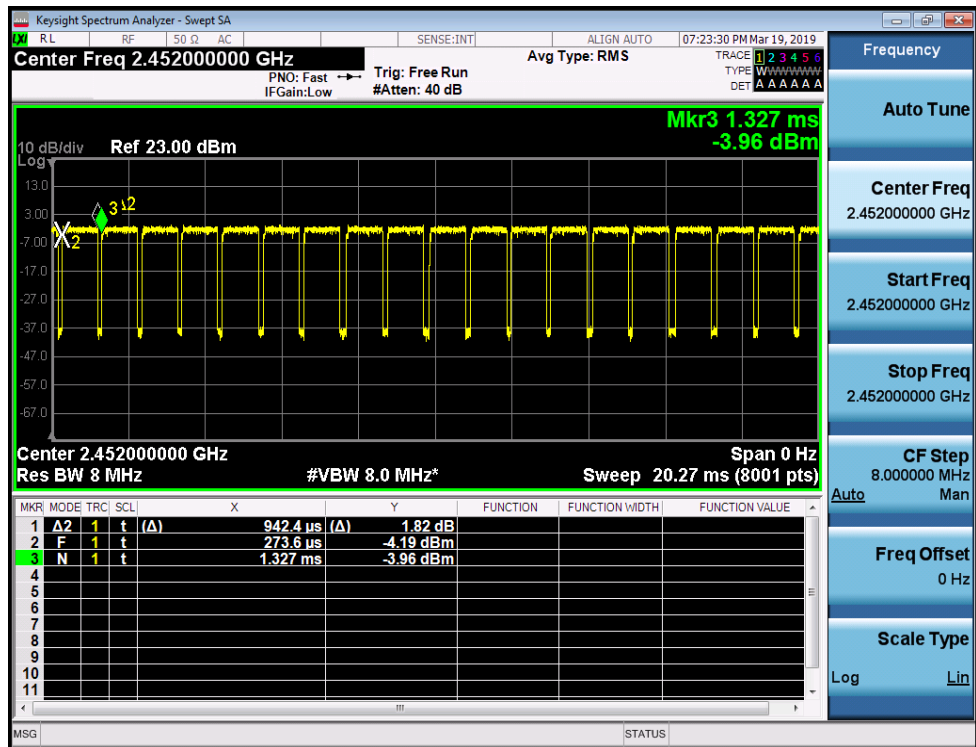
11N40/LCH



11N40/MCH



11N40/HCH



4.3 Power Spectral Density Measurement

4.3.1 Limits of Power Spectral Density

FCC § 15.247(e)

IC RSS-247 5.2(2)

The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.

4.3.2 Test Procedure

1. The testing follows Measurement Procedure 8.4 DTS maximum power spectral density level in the fundamental emission of ANSI C63.10-2013 section 11.9.2.2.4
2. Turn on the EUT and connect it to measurement instrument.
3. Measure the duty cycle, x , of the transmitter output signal as described in below:
 - a. Set the center frequency of the instrument to the center frequency of the transmission.
 - b. Set RBW to the largest available Transmitting value.
 - c. Set detector = peak
4. Set span to at least $1.5 \times \text{OBW}$. Set RBW= 30 KHz, VBW=100 KHz, Number of points in sweep $\geq 2/3 \times \text{span}$, Sweep time = auto.
5. Detector = power averaging (rms), Sweep time = auto couple, Trace mode = averaging (rms) mode over a minimum of 100 traces. Use the peak marker function to determine the maximum power level.
6. Add $10 \log (1/x)$, where x is the duty cycle. The duty cycle factor has been compensated to the "offset" of spectrum analyzer.
7. Measure and record the results in the test report.
8. The Measured power density (dBm)/ 100kHz is a reference level and used as 30dBc down limit line for Conducted Band Edges and Conducted Spurious Emission.
9. Add $10 \log(1/x)$, where x is the duty cycle. The duty cycle factor has been compensated to the "offset" of the spectrum analyser.

4.3.3 Test Result of Power Spectral Density

Test Mode :		Tx Mode		Temperature :	
				24~26℃	
Test Engineer :		Victorique Gao		Relative Humidity :	
				50~53%	
Mode	Channel	Meas.Level [dBm]/30KHz	Meas.Level [dBm]/3KHz	Av.PSD [dBm]/3KHz	Limit [dBm]/3KHz
11B	LCH	-8.436	-18.436	-18.396	8
11B	MCH	-7.554	-17.554	-17.514	8
11B	HCH	-7.145	-17.145	-17.105	8
11G	LCH	-9.809	-19.809	-19.579	8
11G	MCH	-10.242	-20.242	-19.962	8
11G	HCH	-10.276	-20.276	-19.976	8
11N20	LCH	-10.410	-20.41	-20.02	8
11N20	MCH	-10.370	-20.37	-20.1	8
11N20	HCH	-10.165	-20.165	-19.915	8
11N40	LCH	-12.525	-22.525	-21.895	8
11N40	MCH	-13.224	-23.224	-22.734	8
11N40	HCH	-13.241	-23.241	-22.751	8

Power Spectral Density Plot

Graphs

11B/LCH



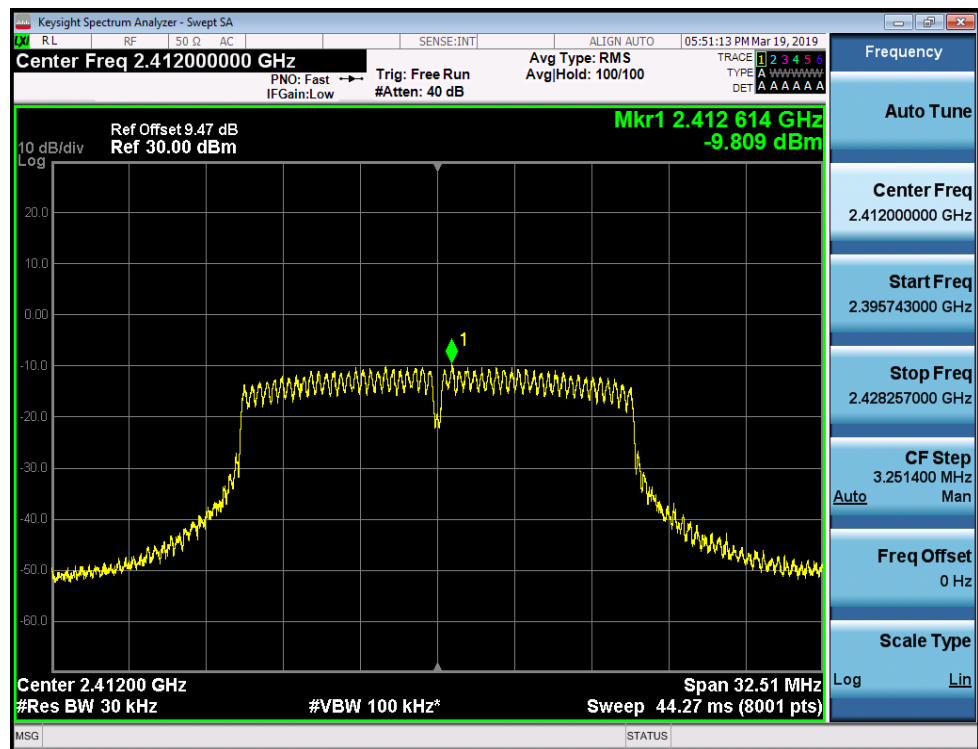
11B/MCH



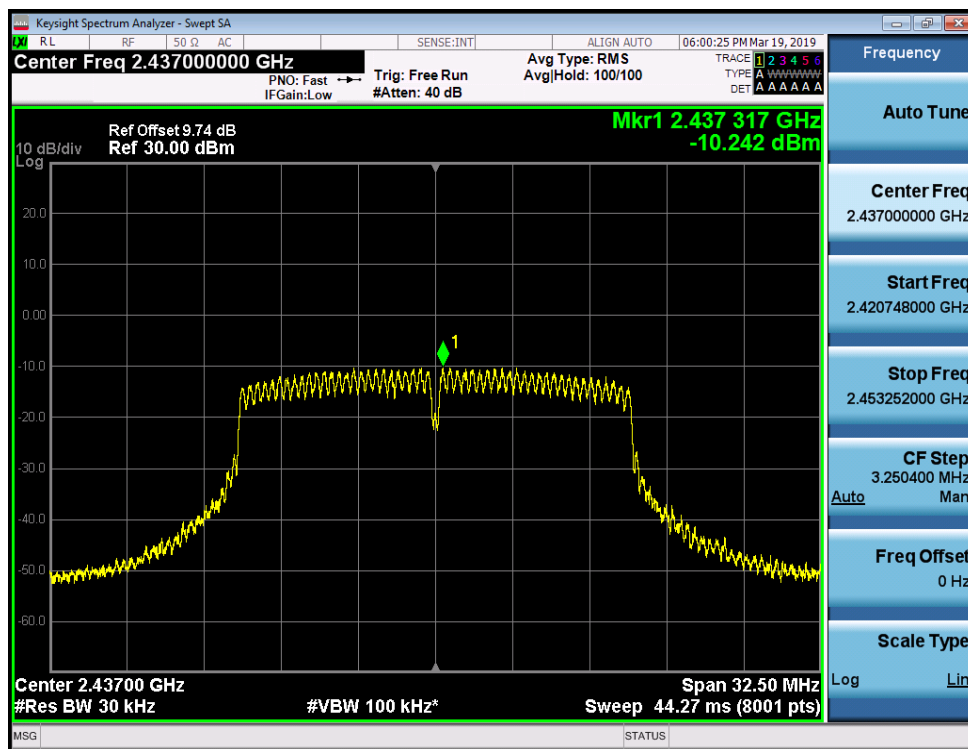
11B/HCH



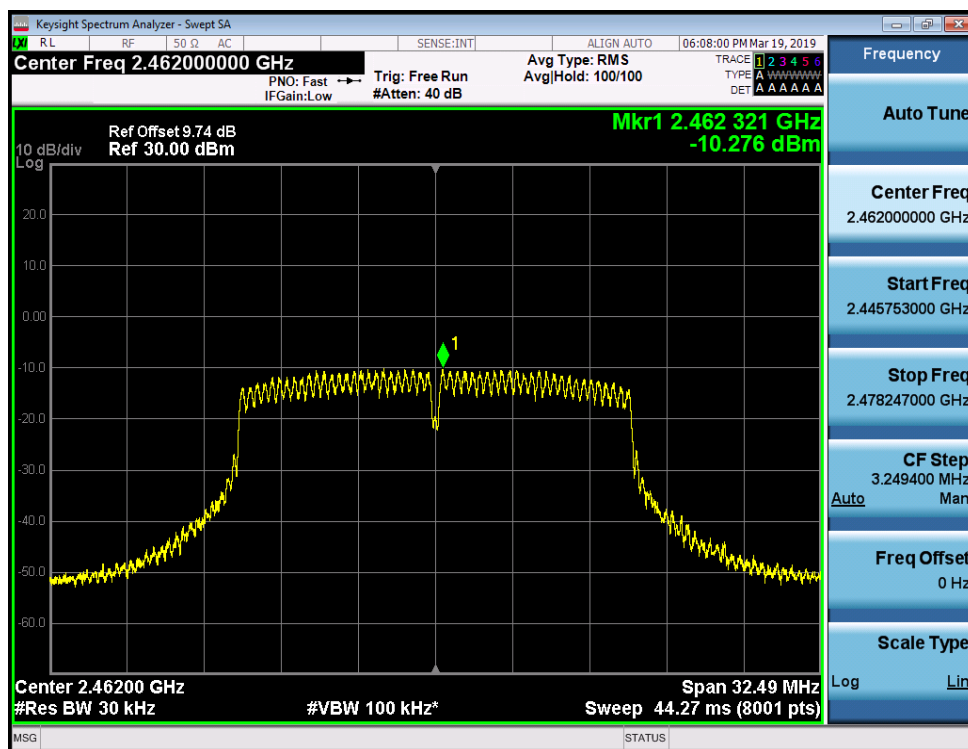
11G/LCH



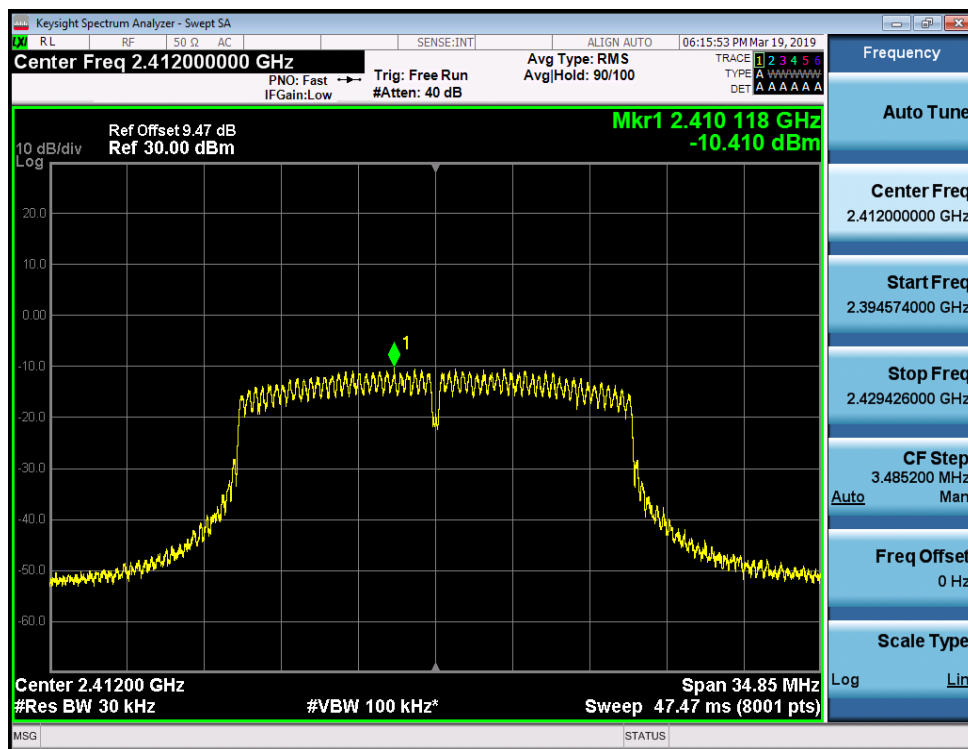
11G/MCH



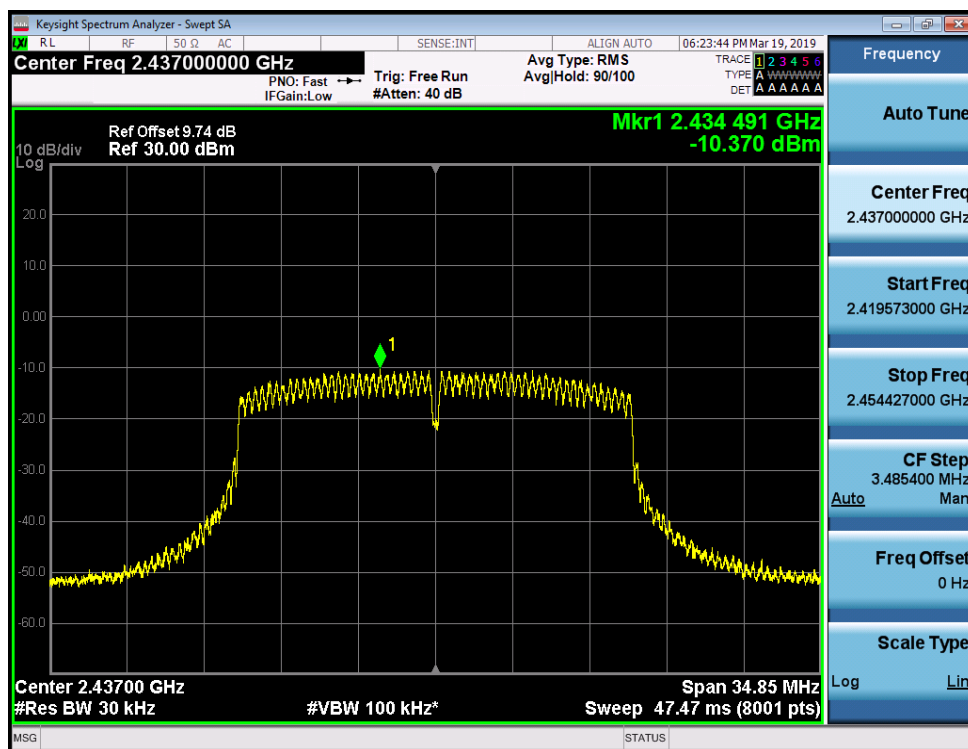
11G/HCH



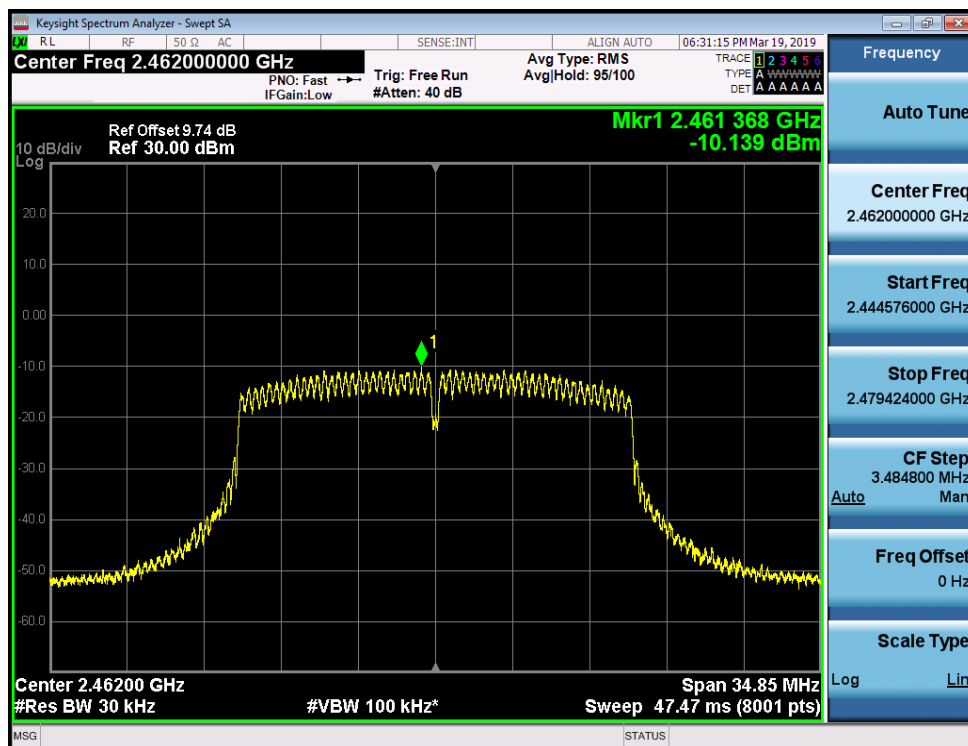
11N20/LCH



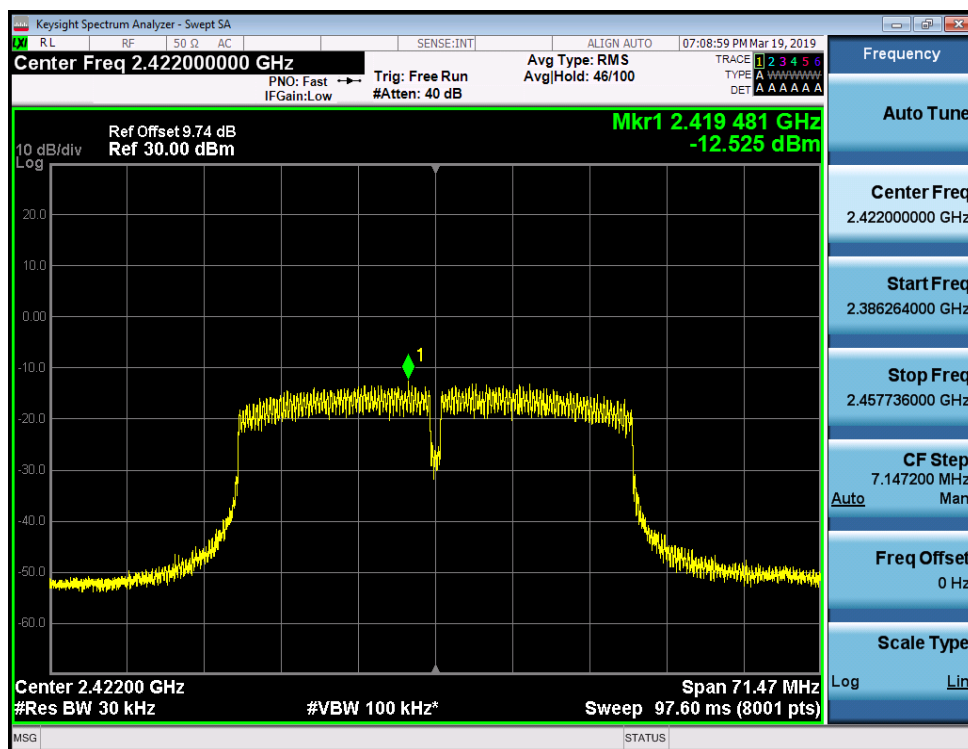
11N20/MCH



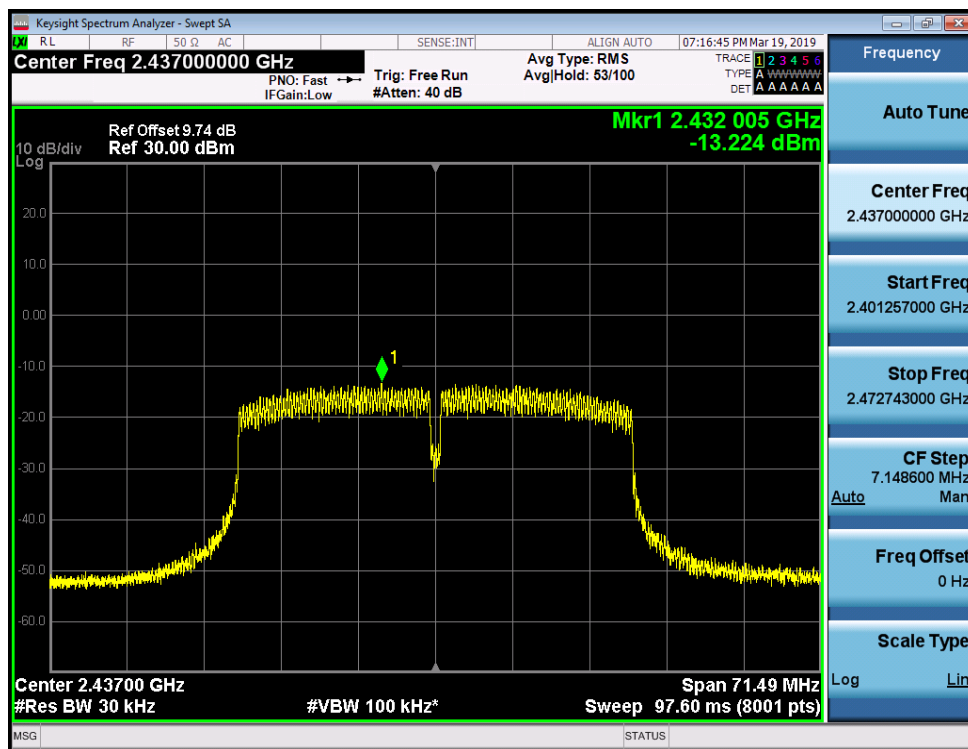
11N20/HCH



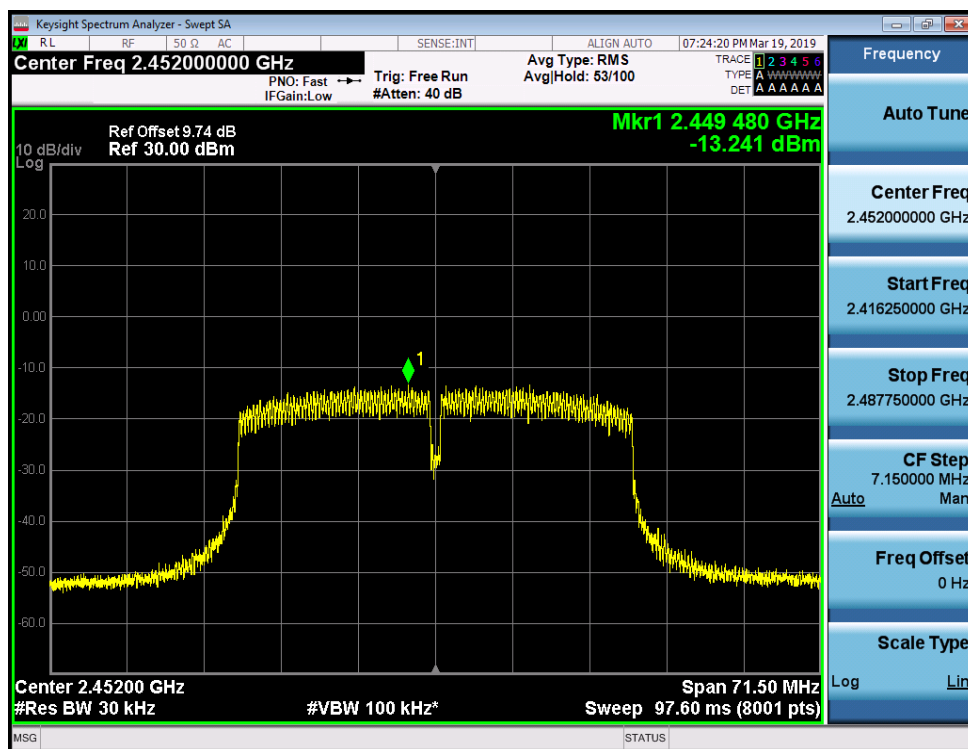
11N40/LCH



11N40/MCH



11N40/HCH



4.4 Conducted Band Edges and Spurious Emission Measurement

4.4.1 Limit of Conducted Band Edges and Spurious Emission

FCC §15.247 (d)

IC RSS-247 5.5

All harmonics/spurious must be at least 20 dB down from the highest emission level within the authorized band.

4.4.2 Test Procedures

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Turn on the EUT and connect it to measurement instrument.
3. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output 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 per 15.247(d).
4. Measure and record the results in the test report.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

4.4.3 Test Result of Conducted Band Edges and Spurious Emission

Conducted Band Edges

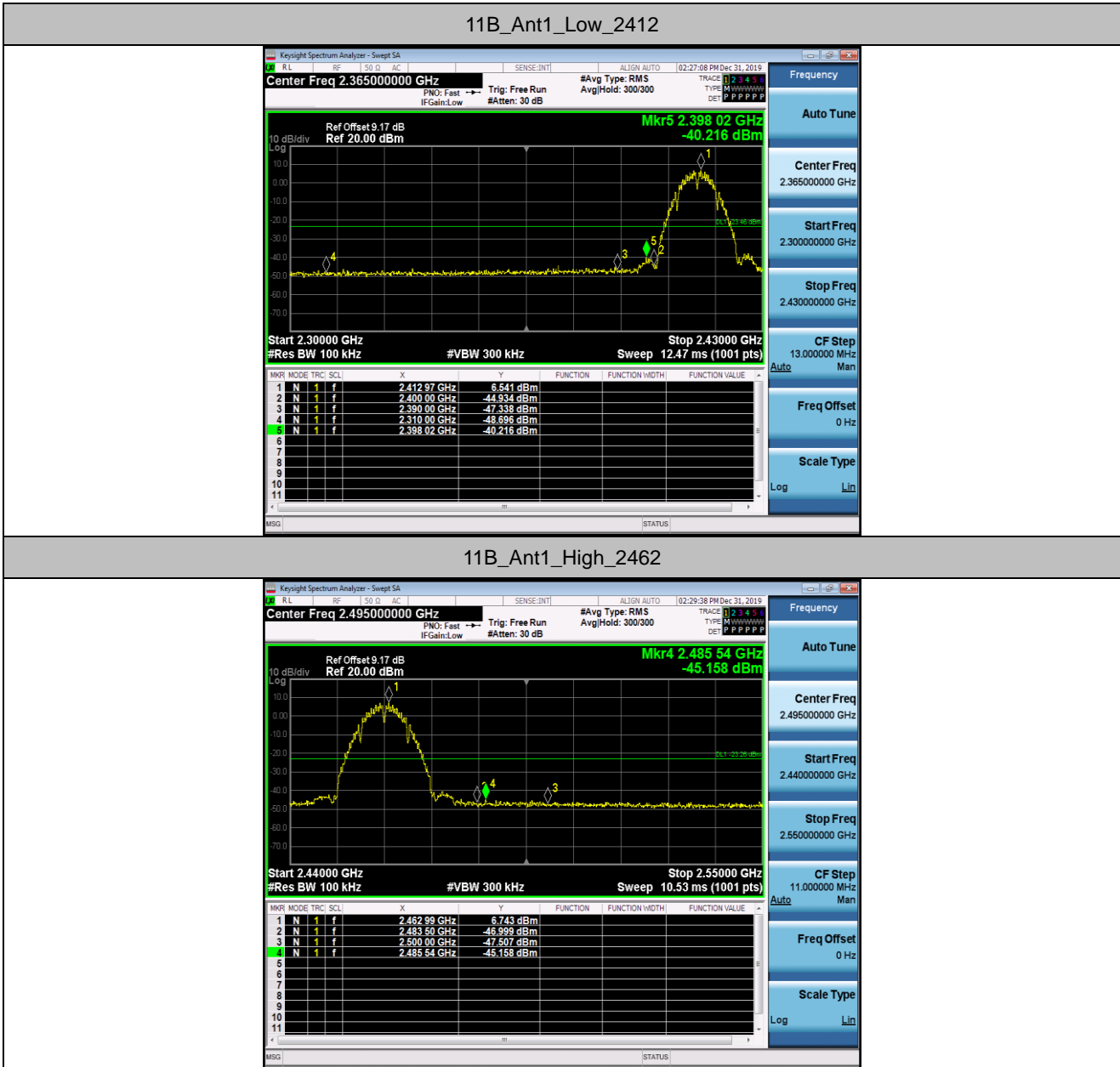
Test Mode :		Tx MODE			Temperature :		24~26°C
Test Engineer :		Victorique Gao			Relative Humidity :		50~53%
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	6.54	-40.22	<=-23.46	PASS
		High	2462	6.74	-45.16	<=-23.26	PASS
11G	Ant1	Low	2412	3.43	-30.4	<=-26.57	PASS
		High	2462	4.09	-43.09	<=-25.91	PASS
11N20SISO	Ant1	Low	2412	3.81	-29.34	<=-26.19	PASS
		High	2462	3.83	-43.83	<=-26.17	PASS
11N40SISO	Ant1	Low	2422	0.41	-30.88	<=-29.59	PASS
		High	2452	0.19	-33.95	<=-29.81	PASS

Conducted Spurious Emission

Test Mode :		Tx MODE		Temperature :		24~26°C	
Test Engineer :		Victorique Gao		Relative Humidity :		50~53%	
TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	5.44	5.44	---	PASS
			30~1000	30~1000	-64.092	<=-24.564	PASS
			1000~26500	1000~26500	-43.095	<=-24.564	PASS
		2437	Reference	6.55	6.55	---	PASS
			30~1000	30~1000	-65.789	<=-23.455	PASS
			1000~26500	1000~26500	-41.175	<=-23.455	PASS
		2462	Reference	6.75	6.75	---	PASS
			30~1000	30~1000	-65.425	<=-23.25	PASS
			1000~26500	1000~26500	-38.988	<=-23.25	PASS
11G	Ant1	2412	Reference	3.52	3.52	---	PASS
			30~1000	30~1000	-65.464	<=-26.485	PASS
			1000~26500	1000~26500	-47.491	<=-26.485	PASS
		2437	Reference	3.30	3.30	---	PASS
			30~1000	30~1000	-66.123	<=-26.701	PASS
			1000~26500	1000~26500	-45.871	<=-26.701	PASS
		2462	Reference	3.23	3.23	---	PASS
			30~1000	30~1000	-65.977	<=-26.773	PASS
			1000~26500	1000~26500	-45.697	<=-26.773	PASS
11N20SISO	Ant1	2412	Reference	3.63	3.63	---	PASS
			30~1000	30~1000	-66.294	<=-26.373	PASS
			1000~26500	1000~26500	-47.348	<=-26.373	PASS
		2437	Reference	3.21	3.21	---	PASS
			30~1000	30~1000	-65.599	<=-26.788	PASS
			1000~26500	1000~26500	-46.146	<=-26.788	PASS
		2462	Reference	3.17	3.17	---	PASS
			30~1000	30~1000	-66.254	<=-26.833	PASS
			1000~26500	1000~26500	-45.996	<=-26.833	PASS
11N40SISO	Ant1	2422	Reference	0.09	0.09	---	PASS
			30~1000	30~1000	-65.792	<=-29.908	PASS
			1000~26500	1000~26500	-46.973	<=-29.908	PASS

		2437	Reference	0.21	0.21	---	PASS
			30~1000	30~1000	-66.24	<=-29.793	PASS
			1000~26500	1000~26500	-47.159	<=-29.793	PASS
		2452	Reference	0.37	0.37	---	PASS
			30~1000	30~1000	-65.306	<=-29.634	PASS
			1000~26500	1000~26500	-47.186	<=-29.634	PASS

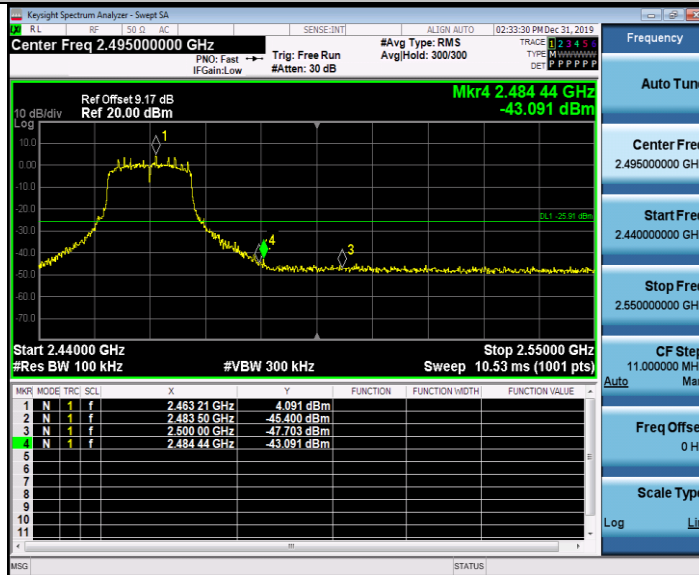
Conducted Band Edges Plot


11B_Ant1_High_2462

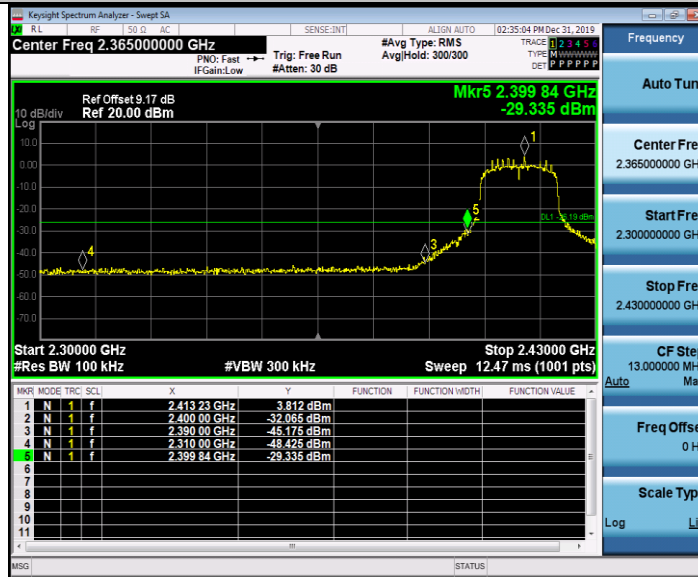
11G_Ant1_Low_2412



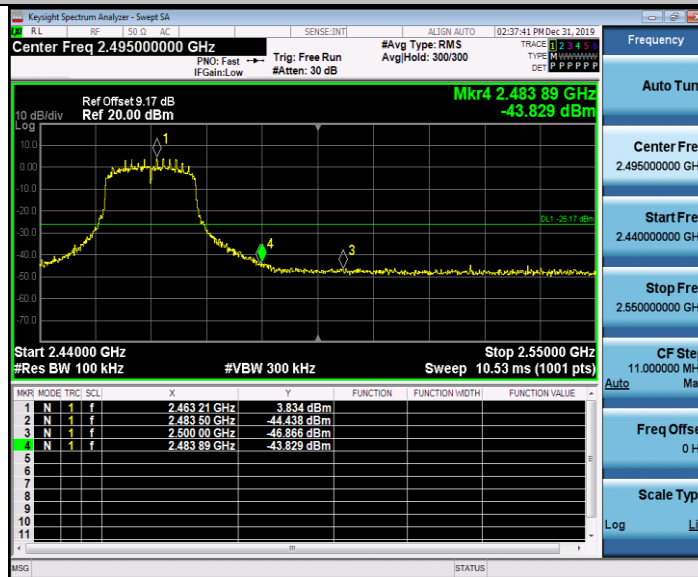
11G_Ant1_High_2462



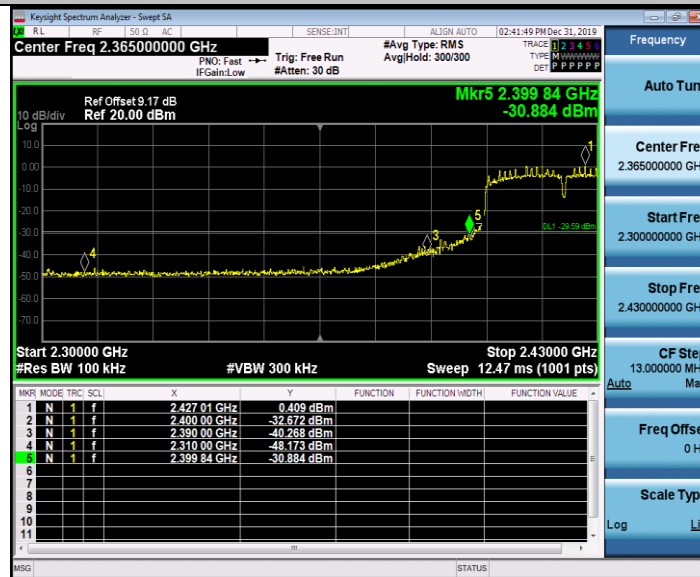
11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452

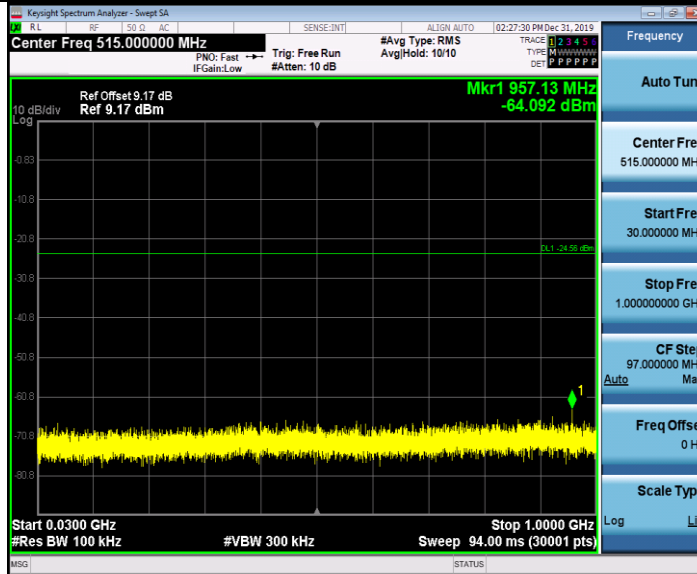


Conducted Spurious Emission Plot

11B_Ant1_2412_0~Reference



11B_Ant1_2412_30~1000



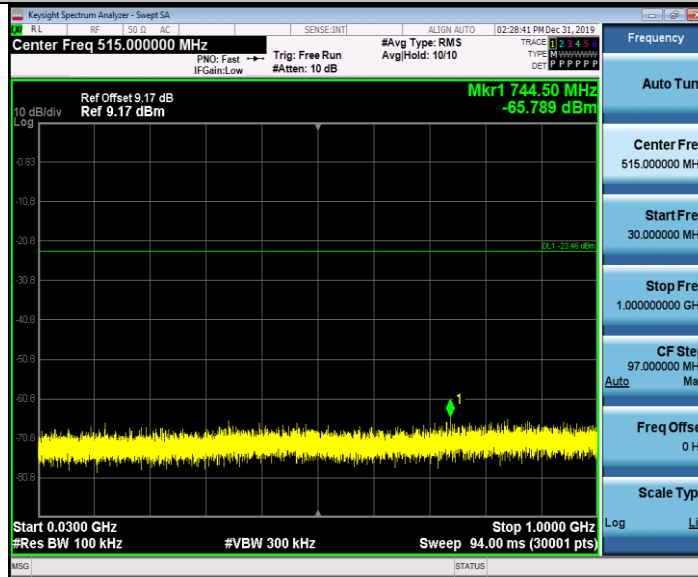
11B_Ant1_2412_1000~26500



11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



11B_Ant1_2437_1000~26500

