

Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: 300 Mbps Wireless Broadband Router

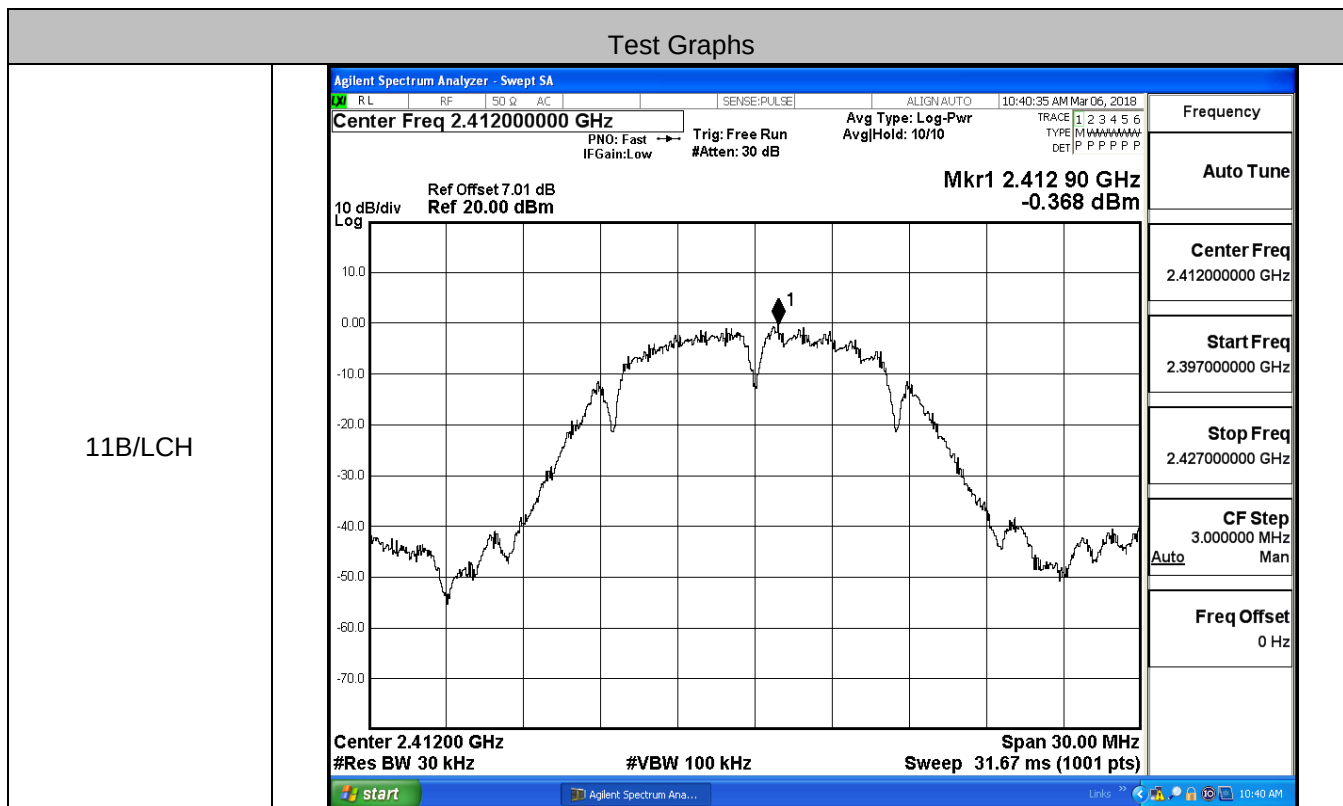
Trade Mark: Perfect

Test Model: PFTP-WR300

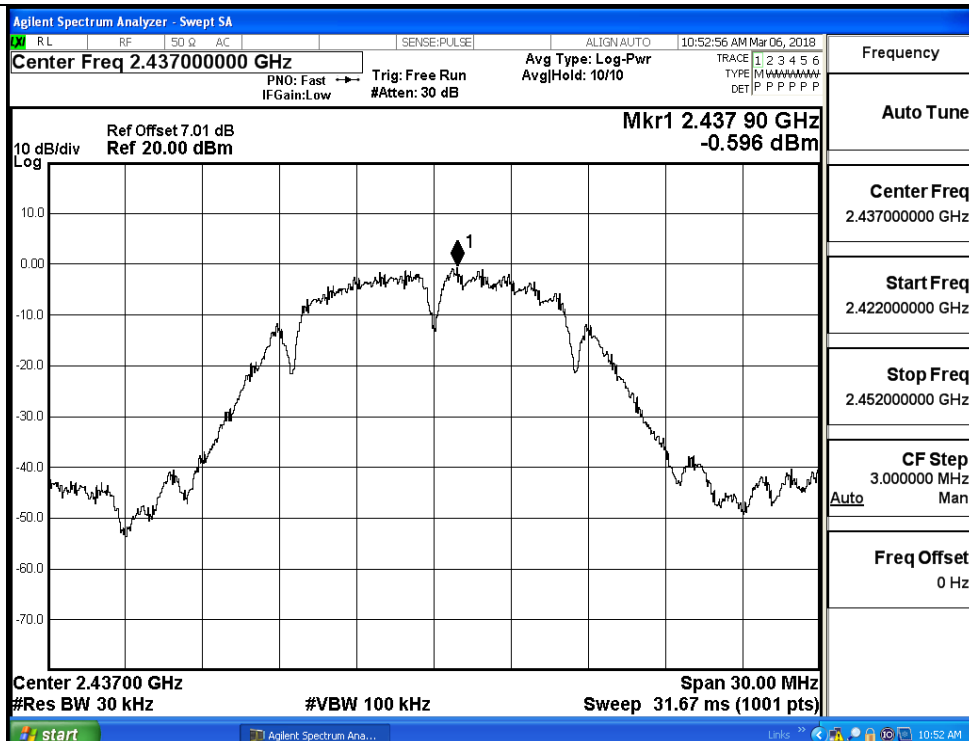
Environmental Conditions

Temperature:	23.4 ° C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Mina.xu
Supervised by:	Tom.Liu

A.1 Maximum Power Spectral Density



11B/MCH



Frequency

Auto Tune

Center Freq
2.437000000 GHz

Start Freq
2.422000000 GHz

Stop Freq
2.452000000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

11B/HCH



Frequency

Auto Tune

Center Freq
2.462000000 GHz

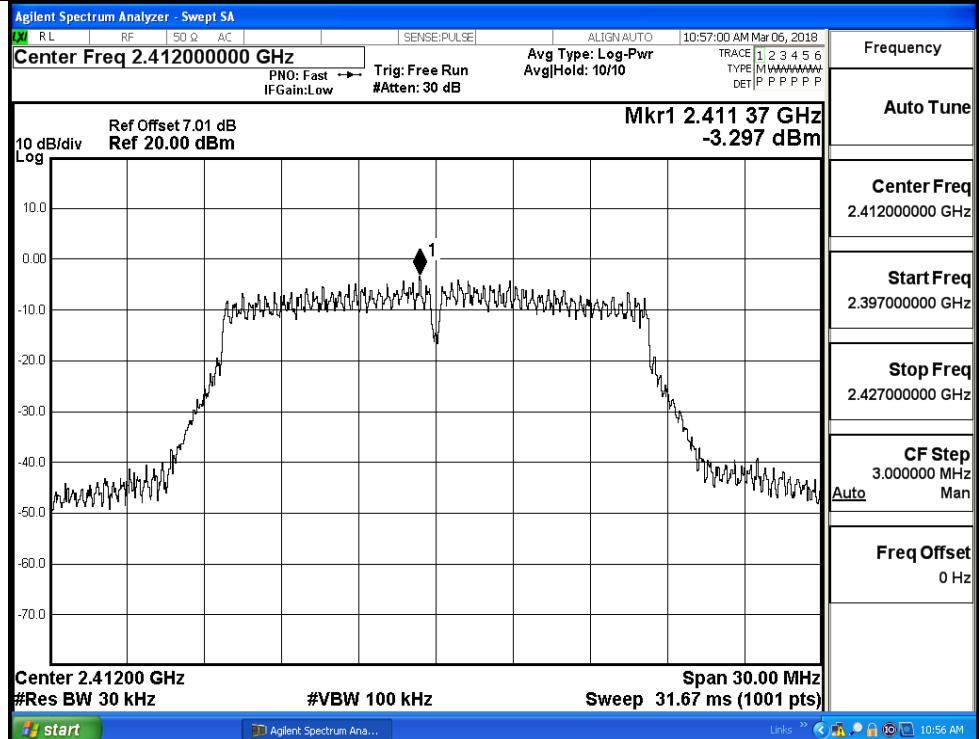
Start Freq
2.447000000 GHz

Stop Freq
2.477000000 GHz

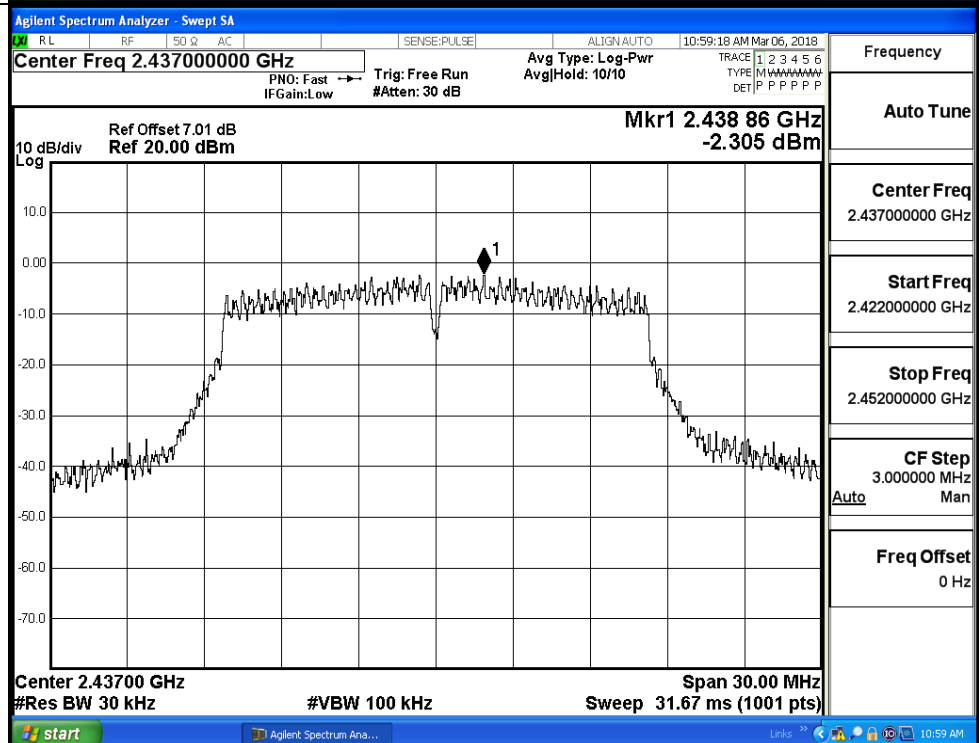
CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

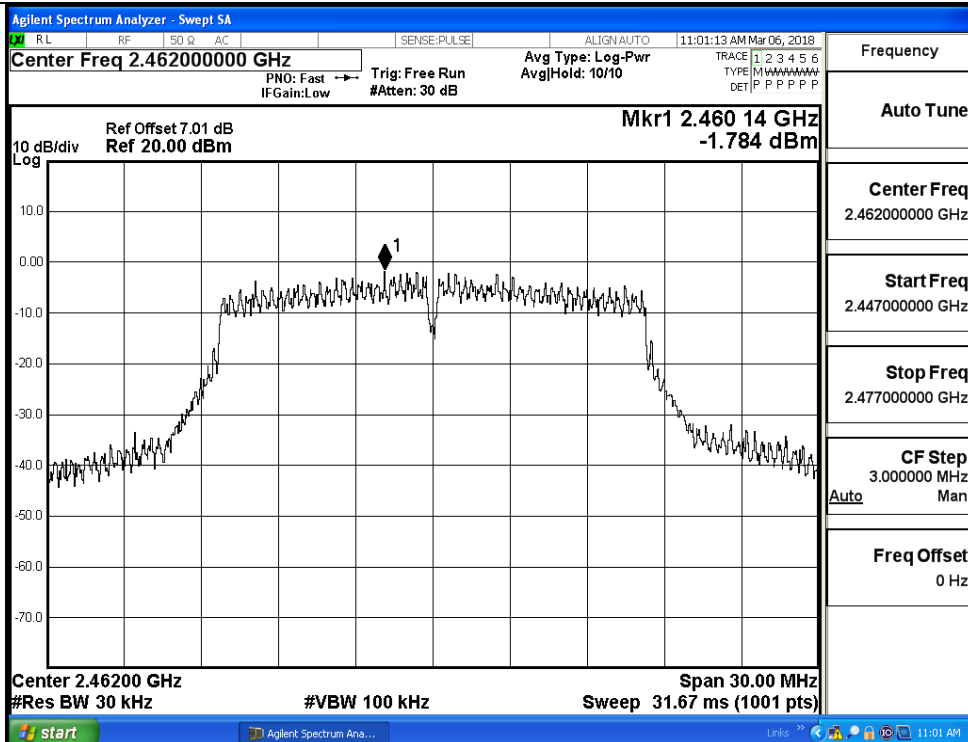
11G/LCH



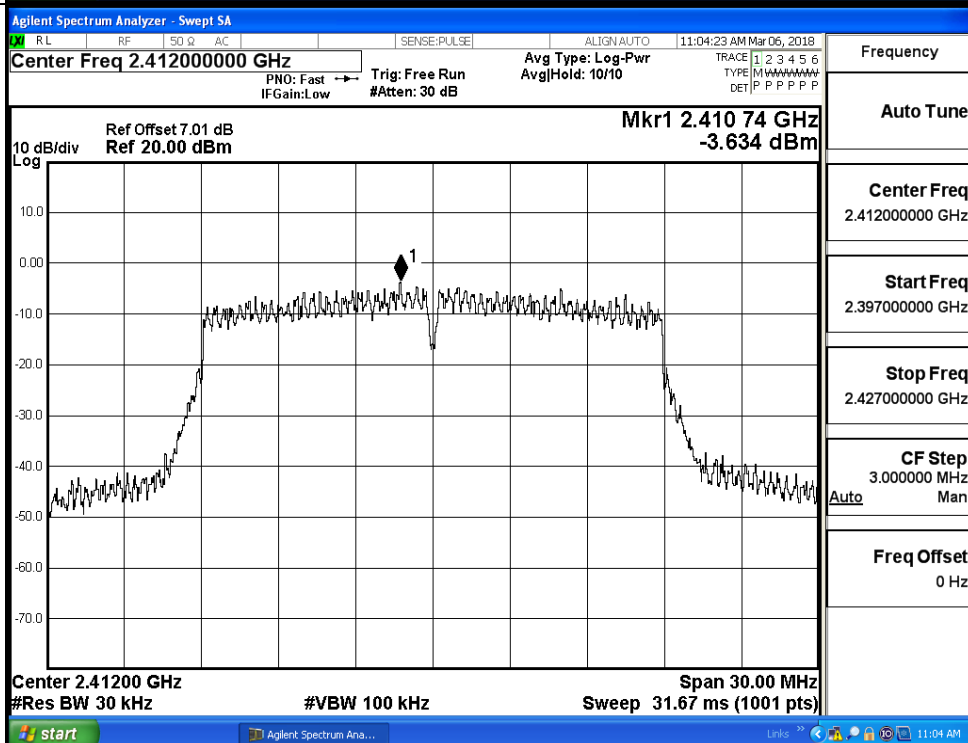
11G/MCH



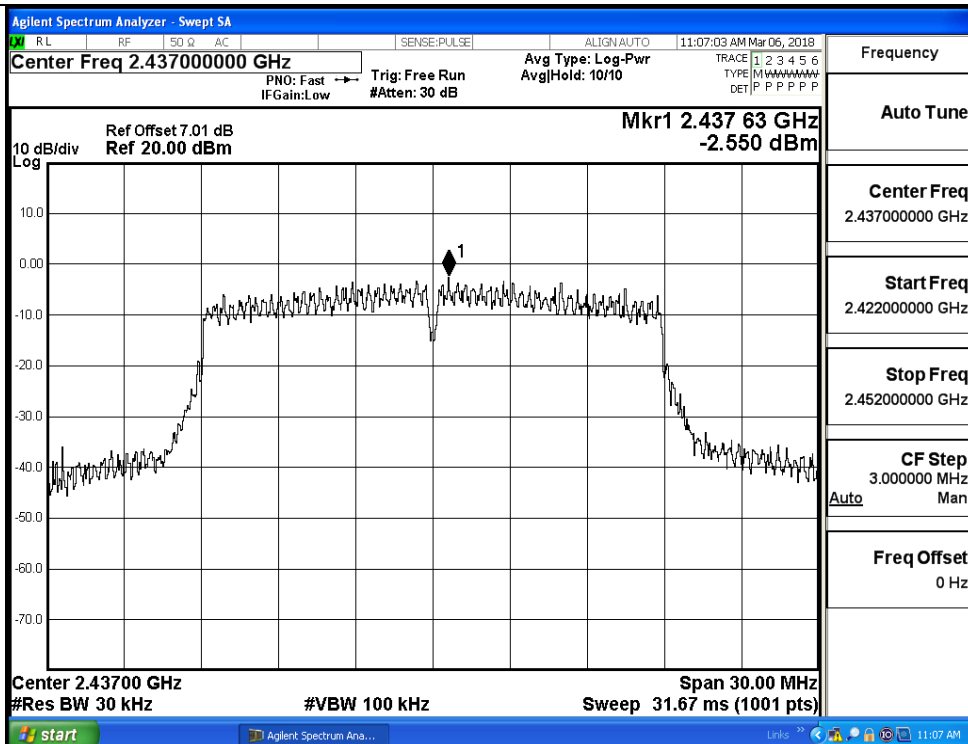
11G/HCH



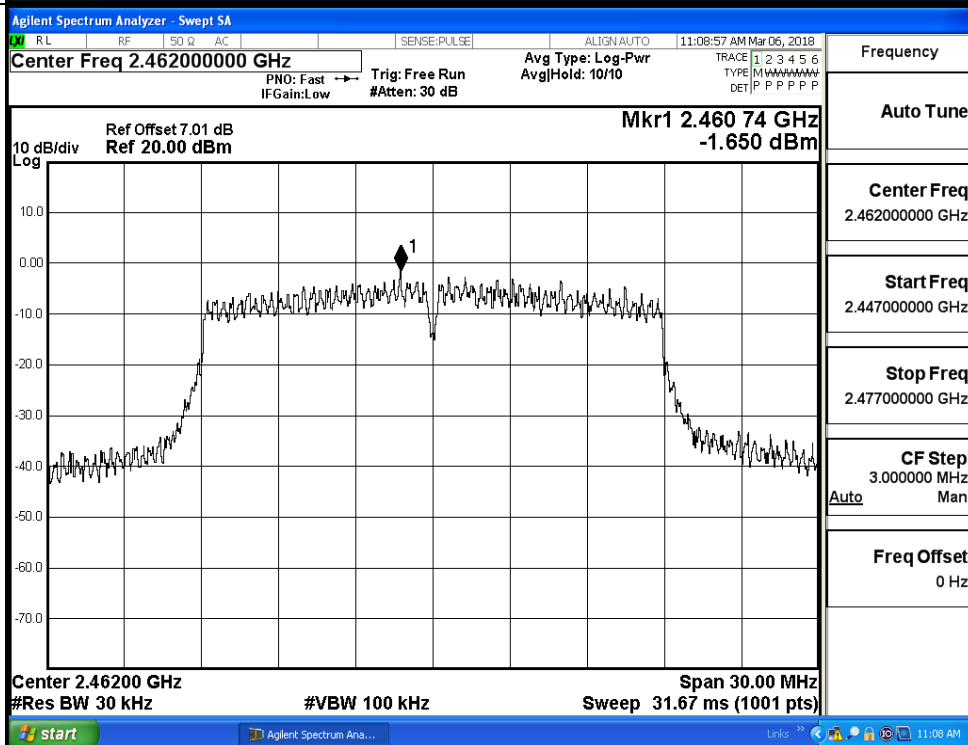
11N20SISO/LCH

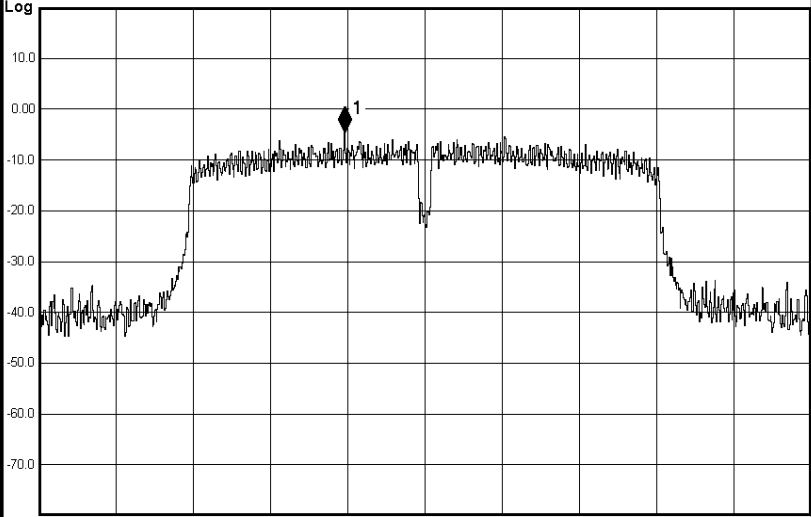
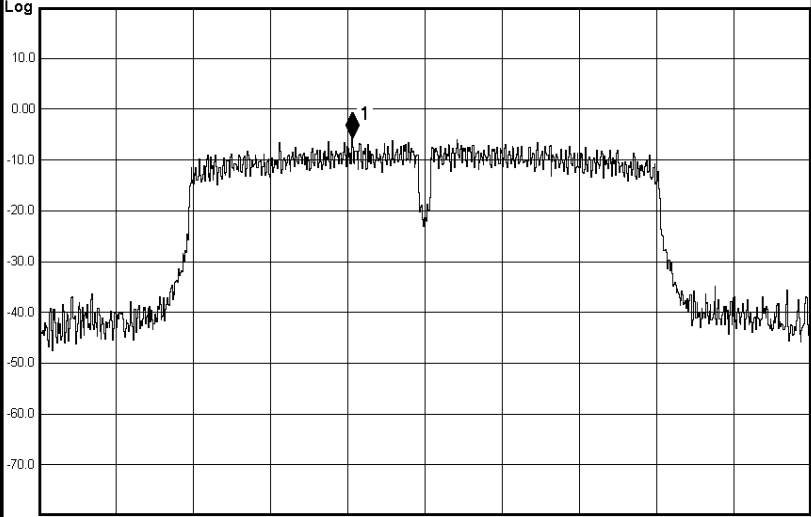


11N20SISO/MCH



11N20SISO/HCH



11N40SISO/LCH	Agilent Spectrum Analyzer - Swept SA Center Freq 2.422000000 GHz Ref Offset 7.01 dB Ref 20.00 dBm Mkr1 2.415 76 GHz -4.734 dBm  Center 2.42200 GHz #Res BW 30 kHz #VBW 100 kHz Sweep 63.27 ms (1001 pts) Frequency Auto Tune Center Freq 2.422000000 GHz Start Freq 2.392000000 GHz Stop Freq 2.452000000 GHz CF Step 6.000000 MHz Auto Freq Offset 0 Hz
11N40SISO/MCH	Agilent Spectrum Analyzer - Swept SA Center Freq 2.437000000 GHz Ref Offset 7.01 dB Ref 20.00 dBm Mkr1 2.431 36 GHz -5.823 dBm  Center 2.43700 GHz #Res BW 30 kHz #VBW 100 kHz Sweep 63.27 ms (1001 pts) Frequency Auto Tune Center Freq 2.437000000 GHz Start Freq 2.407000000 GHz Stop Freq 2.467000000 GHz CF Step 6.000000 MHz Auto Freq Offset 0 Hz

Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 11:15:58 AM Mar 05, 2018

Center Freq 2.45200000 GHz

PNO: Fast → Trg: Free Run Avg Type: Log-Pwr
IFGain: Low #Atten: 30 dB AvgHld: 10/10

TRACE 1 2 3 4 5 6 TYPE [M] W I M M M M M M DET P P P P P P

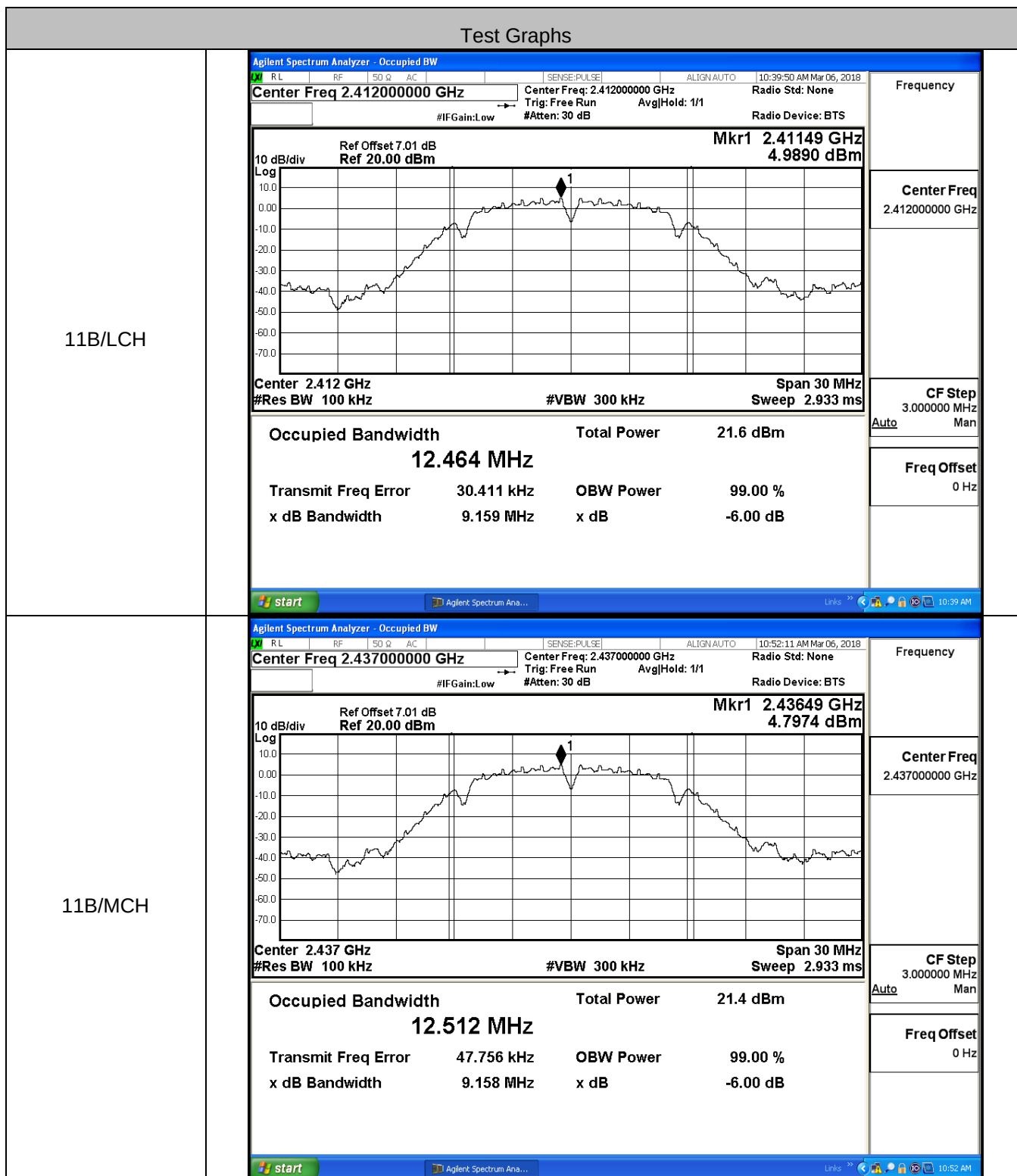
Ref Offset 7.01 dB Mkr1 2.460 76 GHz
Ref 20.00 dBm -5.882 dBm

10 dB/div Log

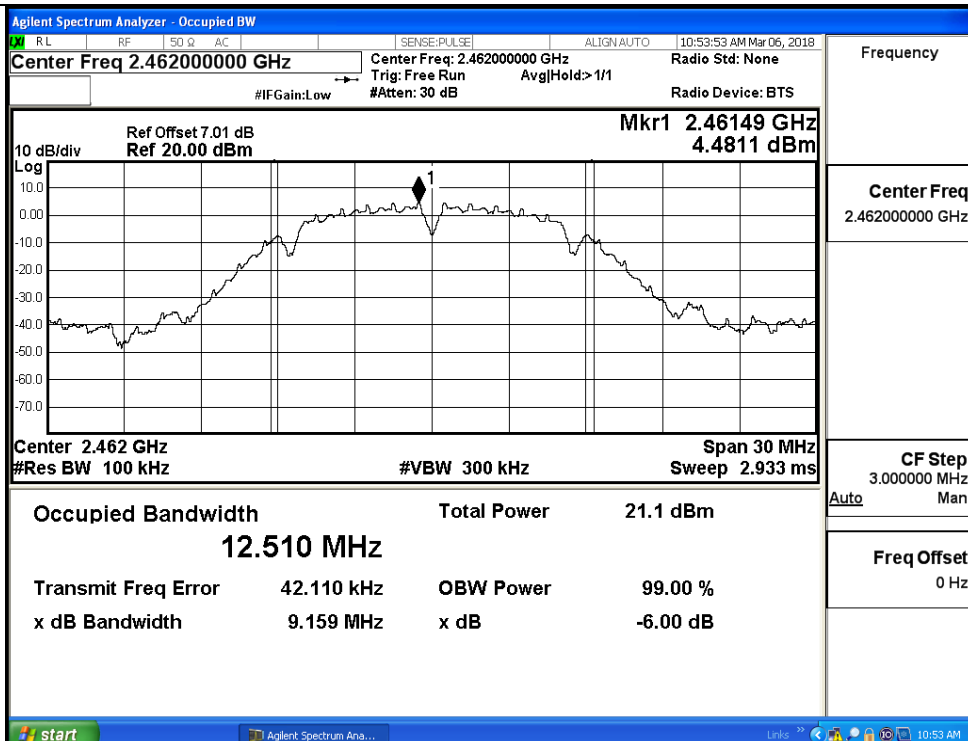
Center 2.45200 GHz Span 60.00 MHz
#Res BW 30 kHz #VBW 100 kHz Sweep 63.27 ms (1001 pts)

Frequency	Auto Tune
Center Freq	2.45200000 GHz
Start Freq	2.42200000 GHz
Stop Freq	2.48200000 GHz
CF Step	6.000000 MHz Auto Man
Freq Offset	0 Hz

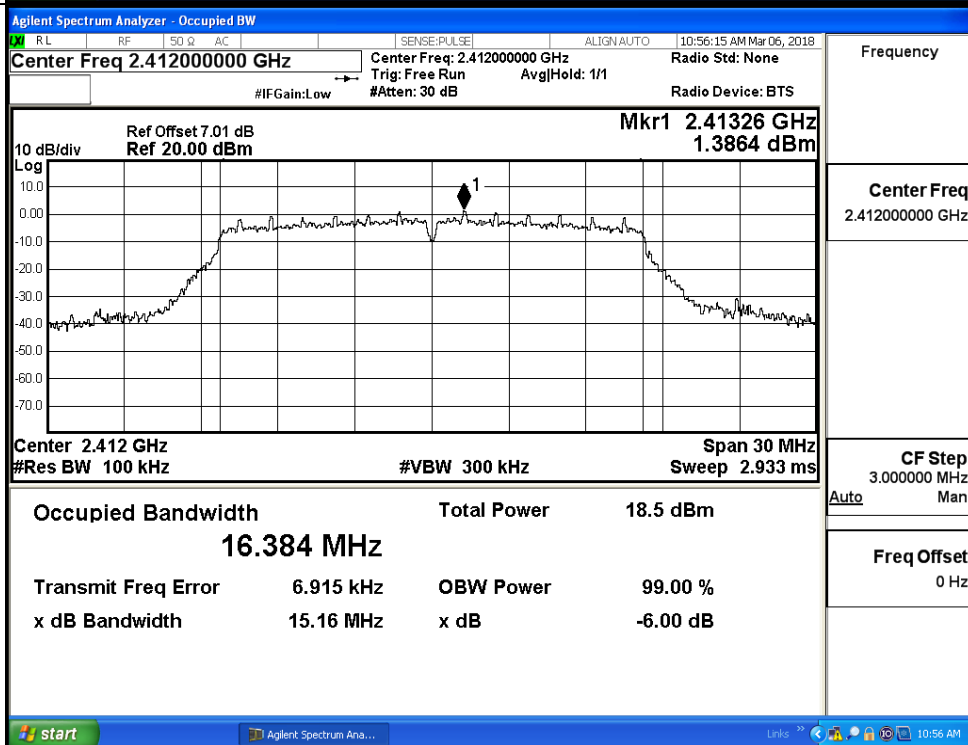
A.2 6dB Bandwidth



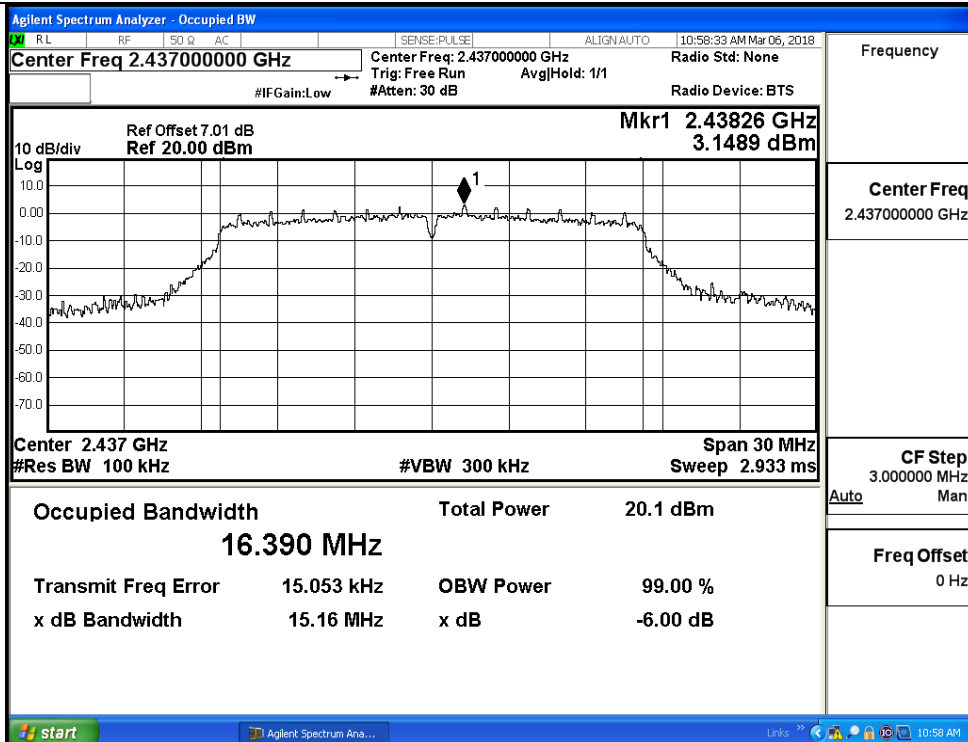
11B/HCH



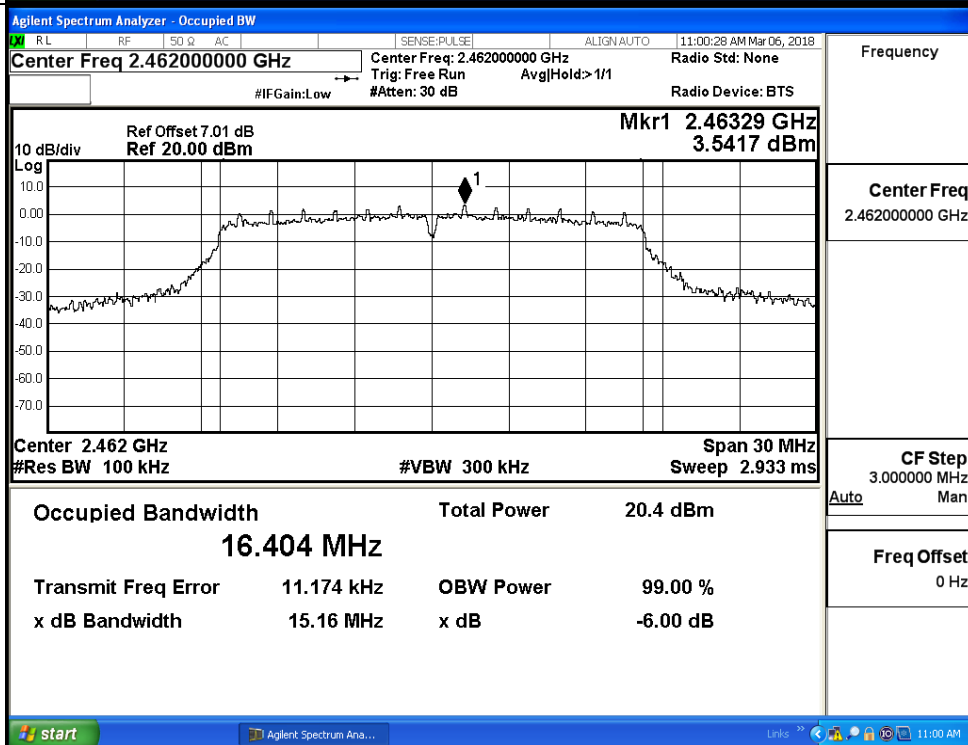
11G/LCH

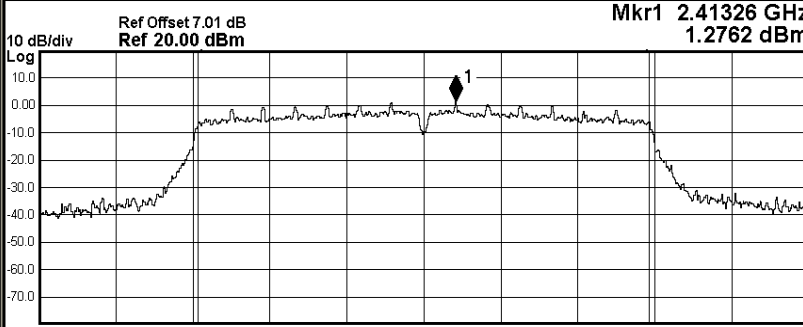
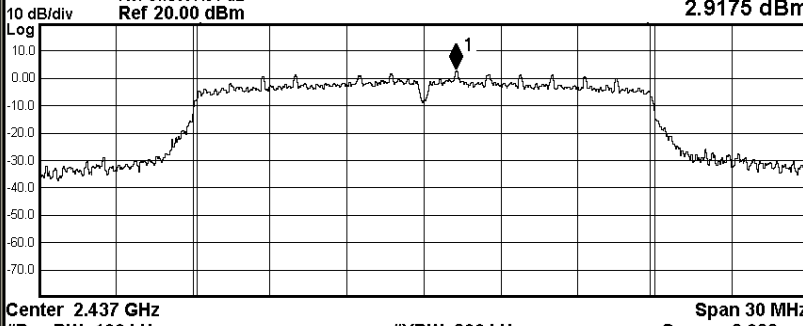


11G/MCH

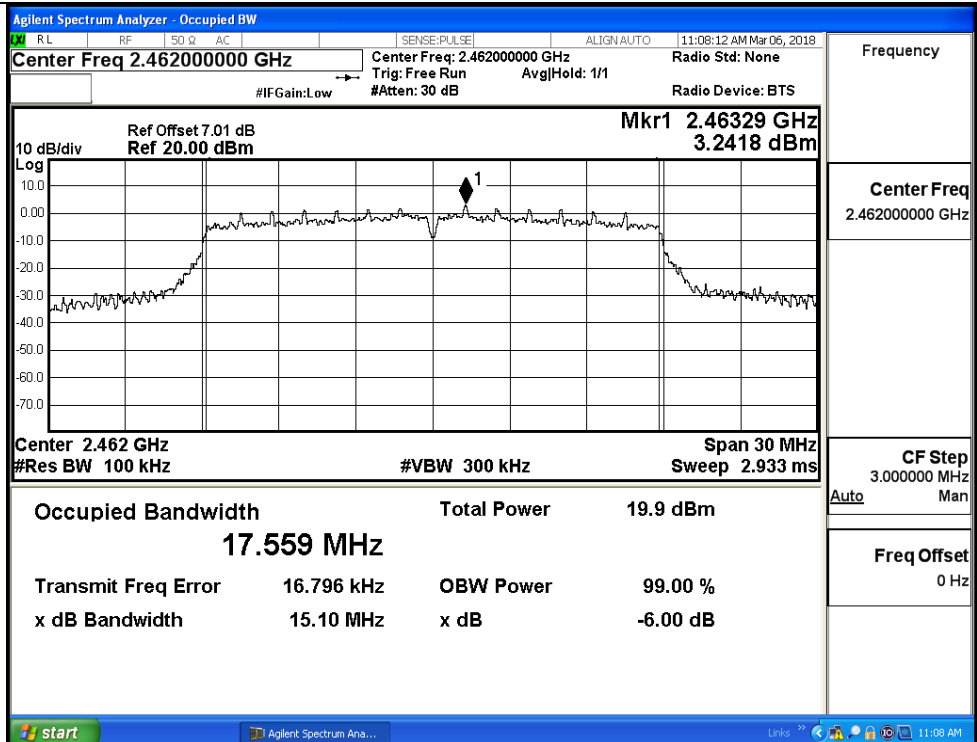


11G/HCH



11N20SISO/LCH	Agilent Spectrum Analyzer - Occupied BW RL RF SO Q AC SENSE:PULSE ALIGN: AUTO 11:03:36 AM Mar 06, 2018 Center Freq 2.412000000 GHz Center Freq: 2.412000000 GHz Radio Std: None Trig: Free Run Avg Hold: 1/1 #IFGain: Low #Atten: 30 dB Radio Device: BTS Ref Offset 7.01 dB Mkr1 2.41326 GHz Ref 20.00 dBm 1.2762 dBm  Center 2.412 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms Occupied Bandwidth Total Power 18.5 dBm 17.543 MHz Transmit Freq Error 8.160 kHz OBW Power 99.00 % x dB Bandwidth 15.15 MHz x dB -6.00 dB start Agilent Spectrum Ana... Links 11:03 AM	Frequency Center Freq 2.412000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
11N20SISO/MCH	Agilent Spectrum Analyzer - Occupied BW RL RF SO Q AC SENSE:PULSE ALIGN: AUTO 11:06:18 AM Mar 06, 2018 Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Radio Std: None Trig: Free Run Avg Hold: 1/1 #IFGain: Low #Atten: 30 dB Radio Device: BTS Ref Offset 7.01 dB Mkr1 2.43826 GHz Ref 20.00 dBm 2.9175 dBm  Center 2.437 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms Occupied Bandwidth Total Power 19.8 dBm 17.559 MHz Transmit Freq Error 17.232 kHz OBW Power 99.00 % x dB Bandwidth 15.16 MHz x dB -6.00 dB start Agilent Spectrum Ana... Links 11:06 AM	Frequency Center Freq 2.437000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz

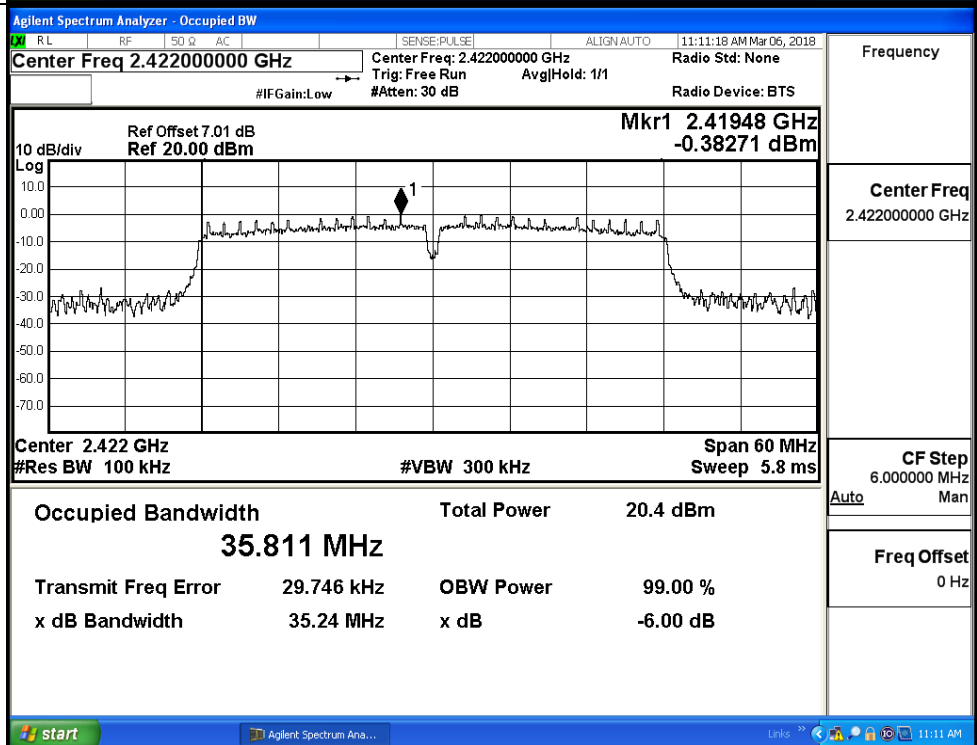
11N20SISO/HCH



Frequency

Center Freq
2.462000000 GHzCF Step
3.000000 MHz
Auto ManFreq Offset
0 Hz

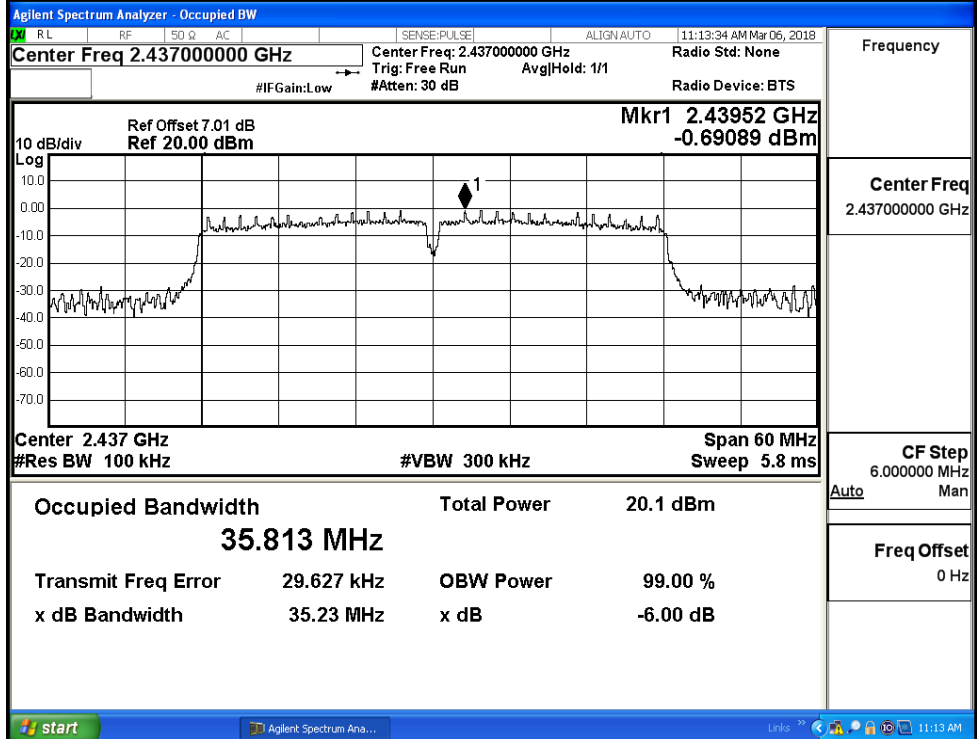
11N40SISO/LCH



Frequency

Center Freq
2.422000000 GHzCF Step
6.000000 MHz
Auto ManFreq Offset
0 Hz

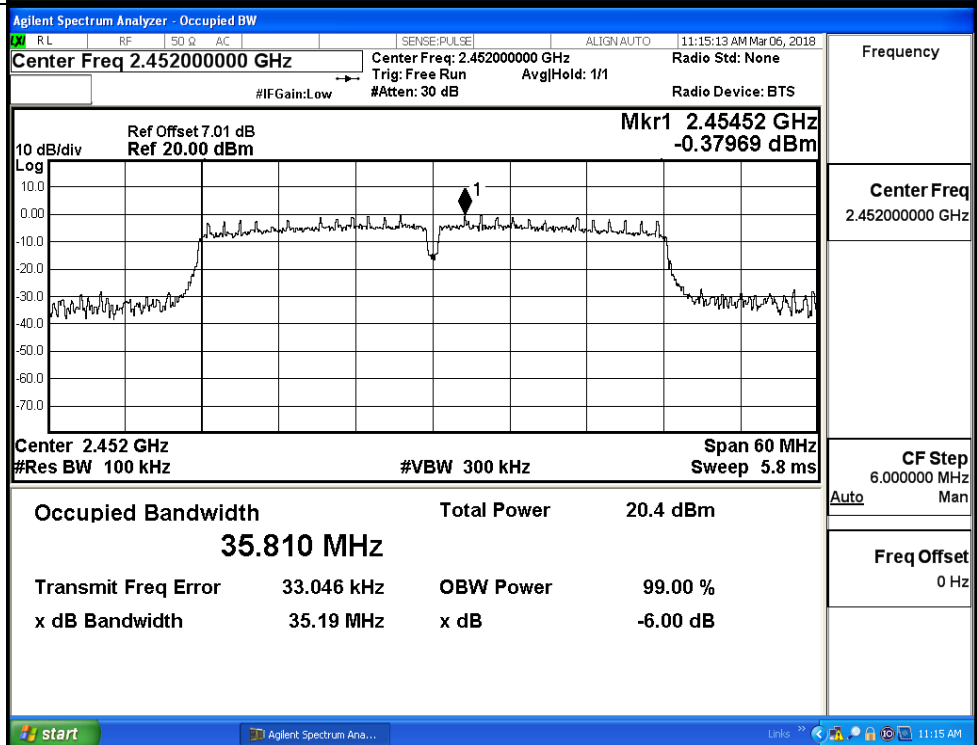
11N40SISO/MCH



Frequency

Center Freq
2.437000000 GHzCF Step
6.000000 MHz
Auto ManFreq Offset
0 Hz

11N40SISO/HCH



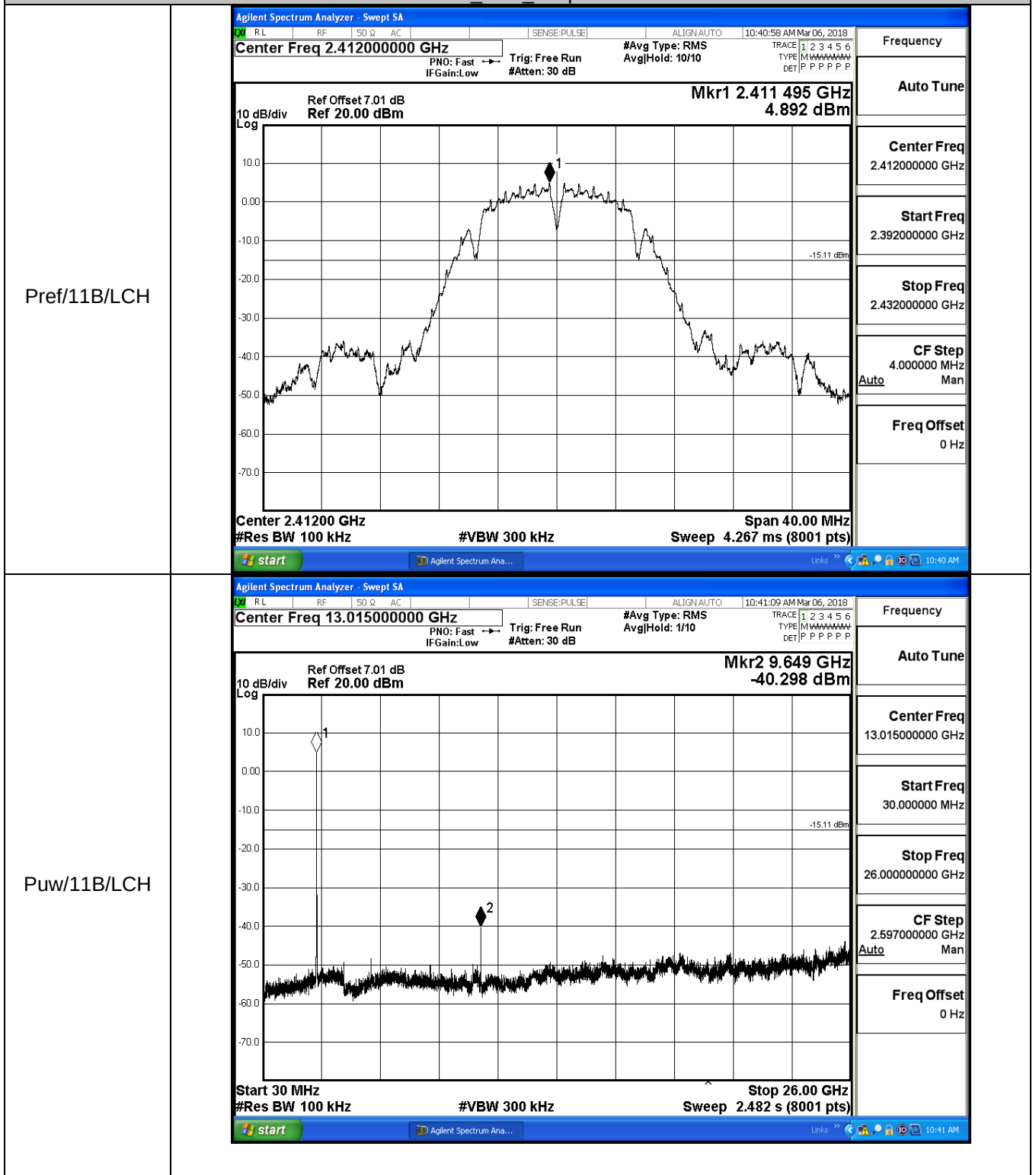
Frequency

Center Freq
2.452000000 GHzCF Step
6.000000 MHz
Auto ManFreq Offset
0 Hz

A.3 RF Conducted Spurious Emissions

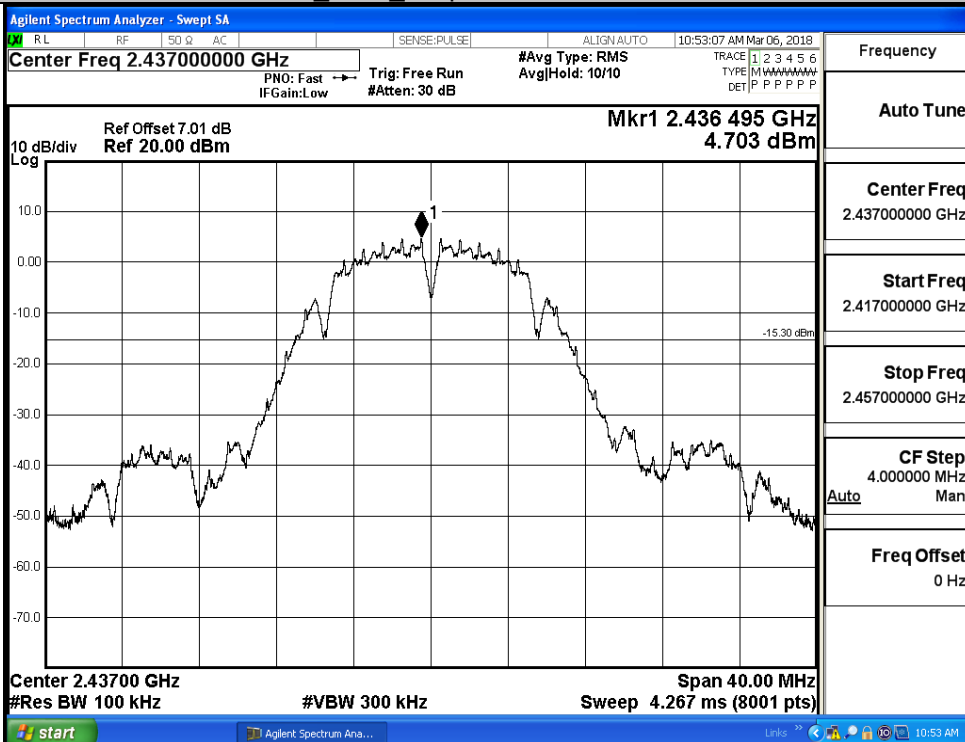
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	4.892	-40.298	-15.108	PASS
	MCH	4.703	-43.174	-15.297	PASS
	HCH	4.508	-44.538	-15.492	PASS
11G	LCH	0.804	-44.517	-19.196	PASS
	MCH	1.86	-45.377	-18.140	PASS
	HCH	3.045	-44.226	-16.955	PASS
11N20 SISO	LCH	1.4	-44.919	-18.600	PASS
	MCH	2.697	-44.062	-17.303	PASS
	HCH	2.541	-44.326	-17.459	PASS
11N40 SISO	LCH	-0.196	-44.488	-20.196	PASS
	MCH	-0.762	-44.854	-20.762	PASS
	HCH	-0.407	-45.198	-20.407	PASS

11B LCH Graphs

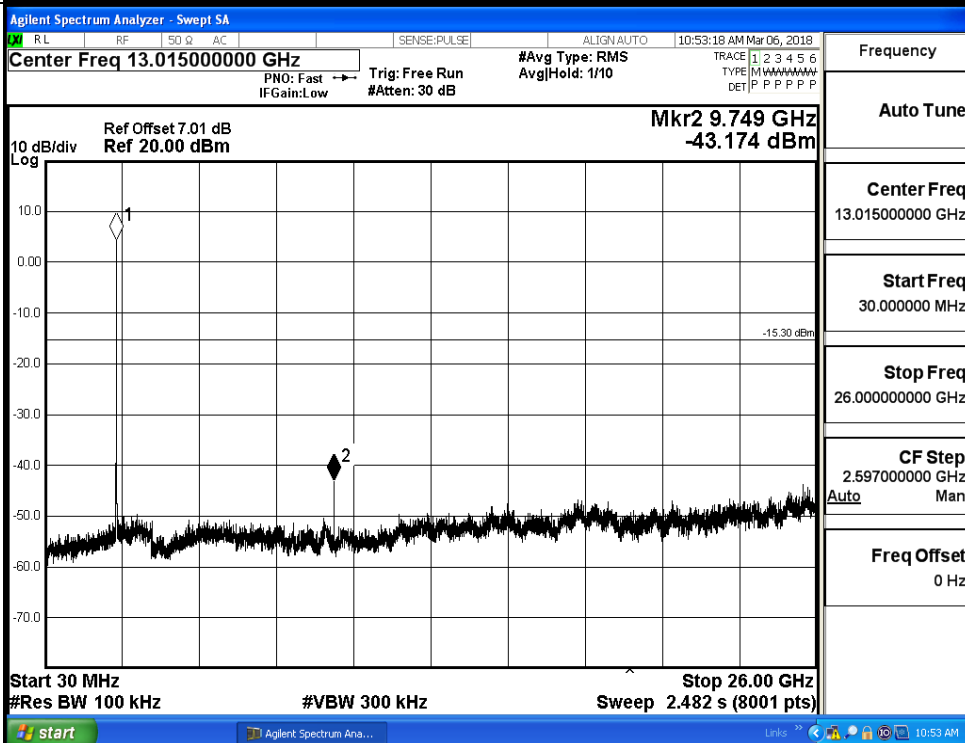


11B MCH Graphs

Pref/11B/MCH

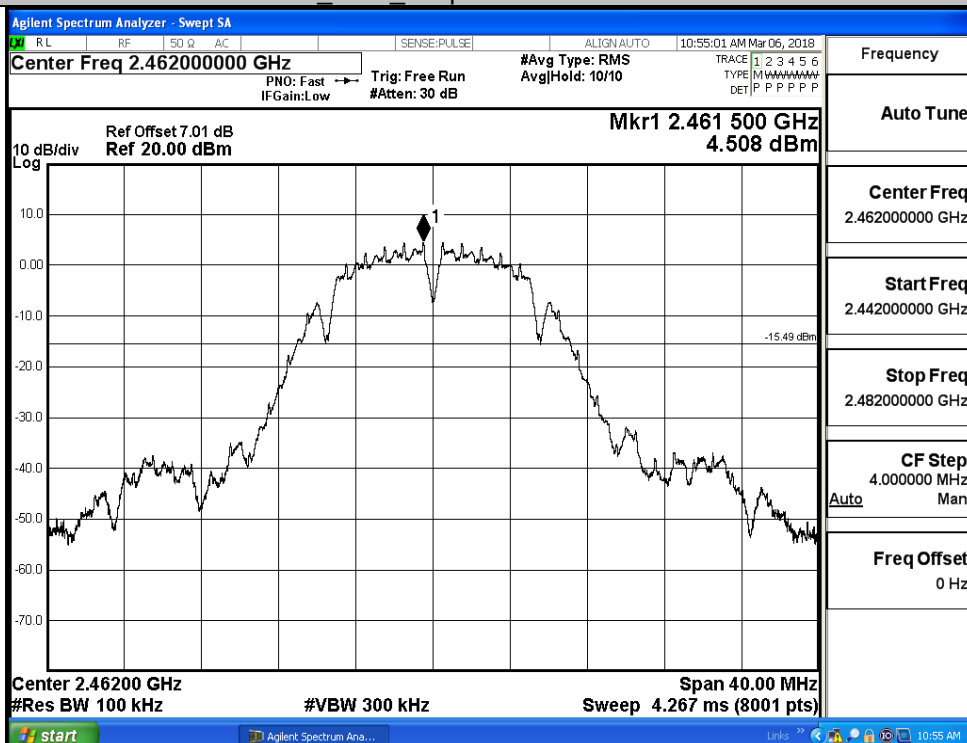


Puw/11B/MCH

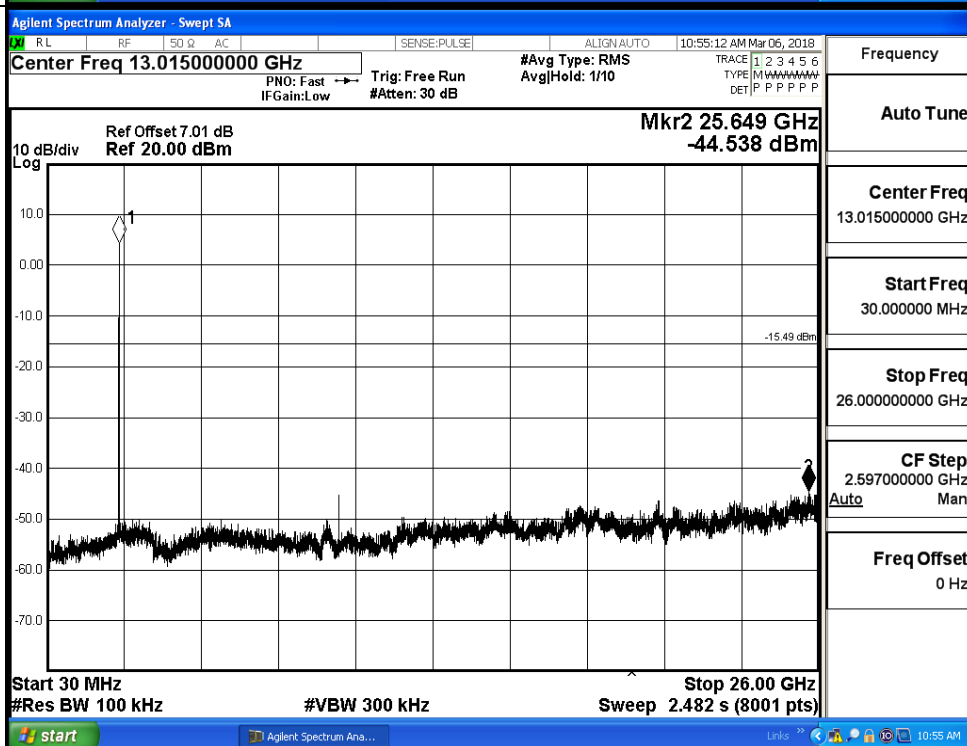


11B HCH Graphs

Pref/11B/HCH

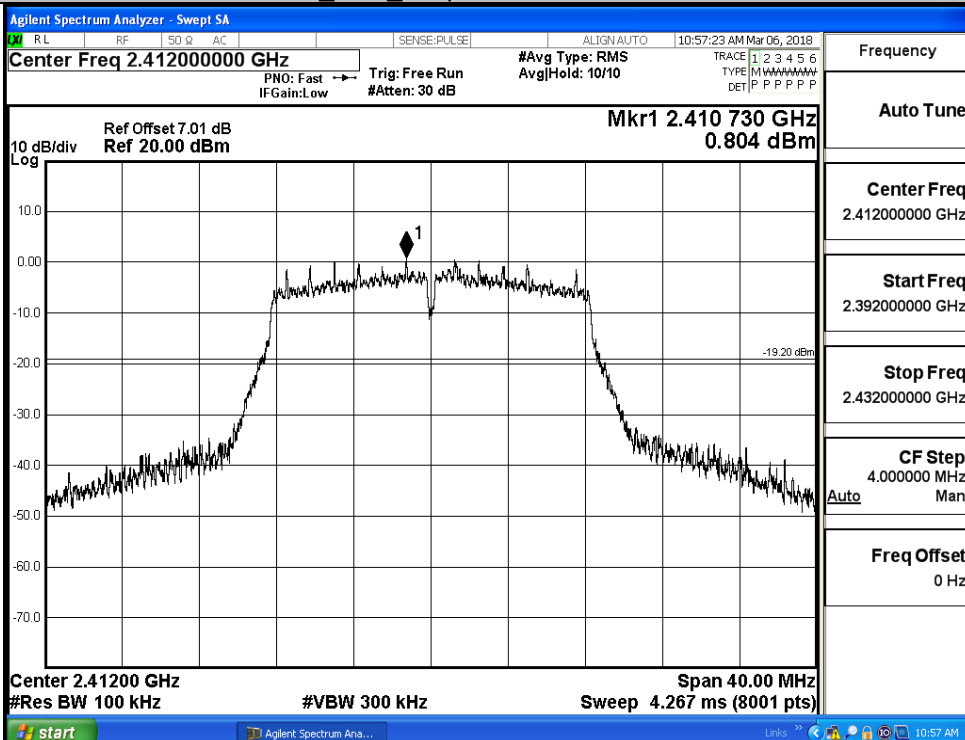


Puw/11B/HCH

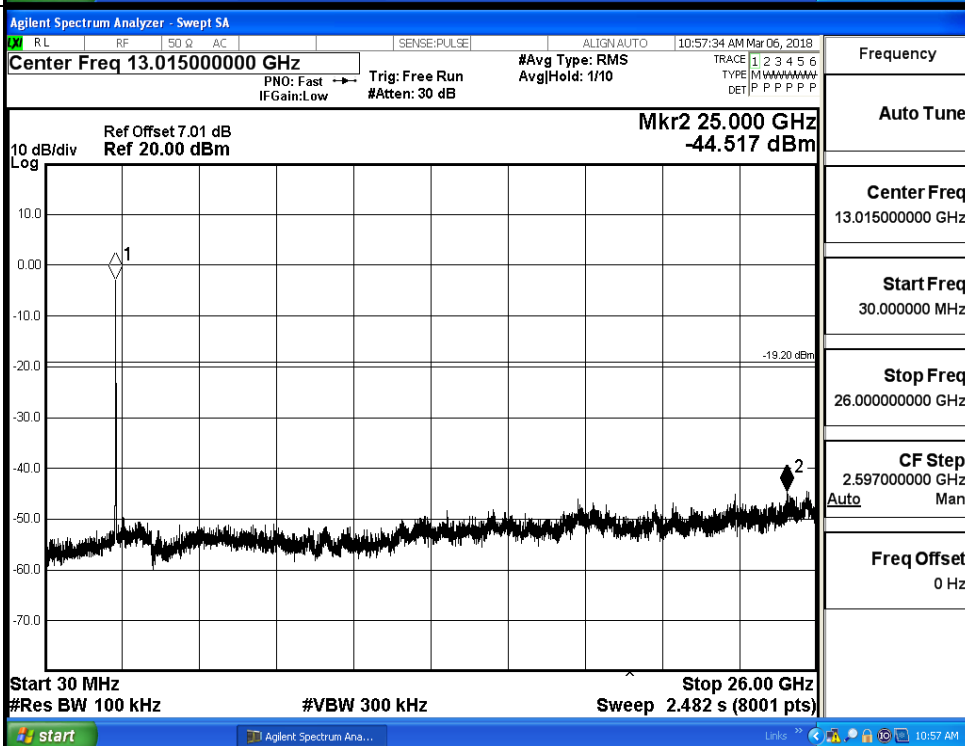


11G LCH Graphs

Pref/11G/LCH

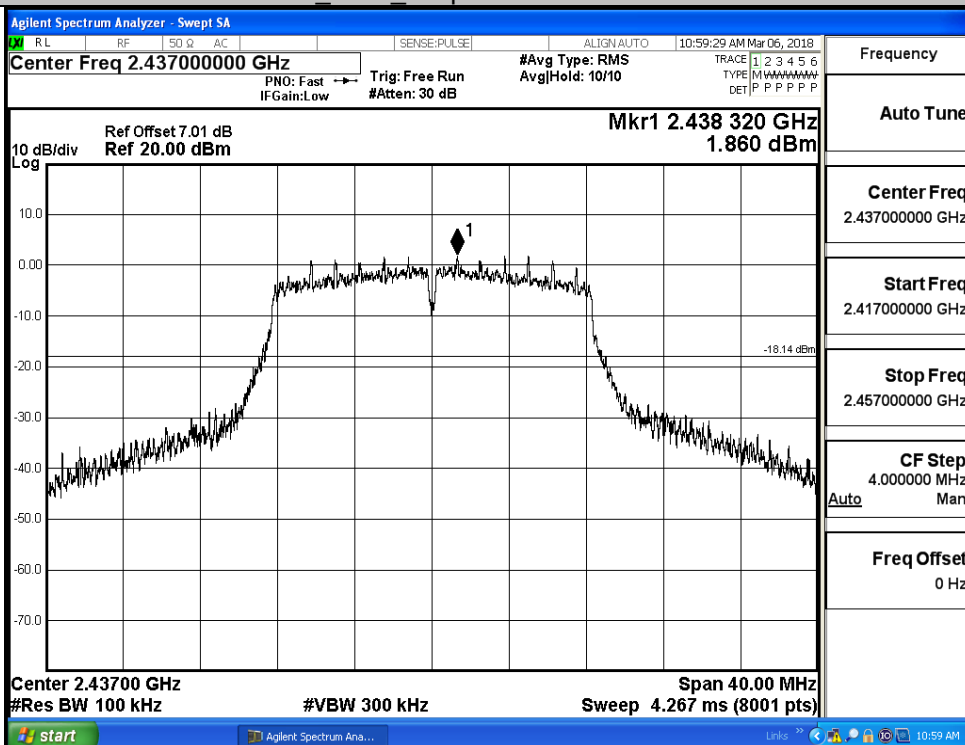


Puw/11G/LCH

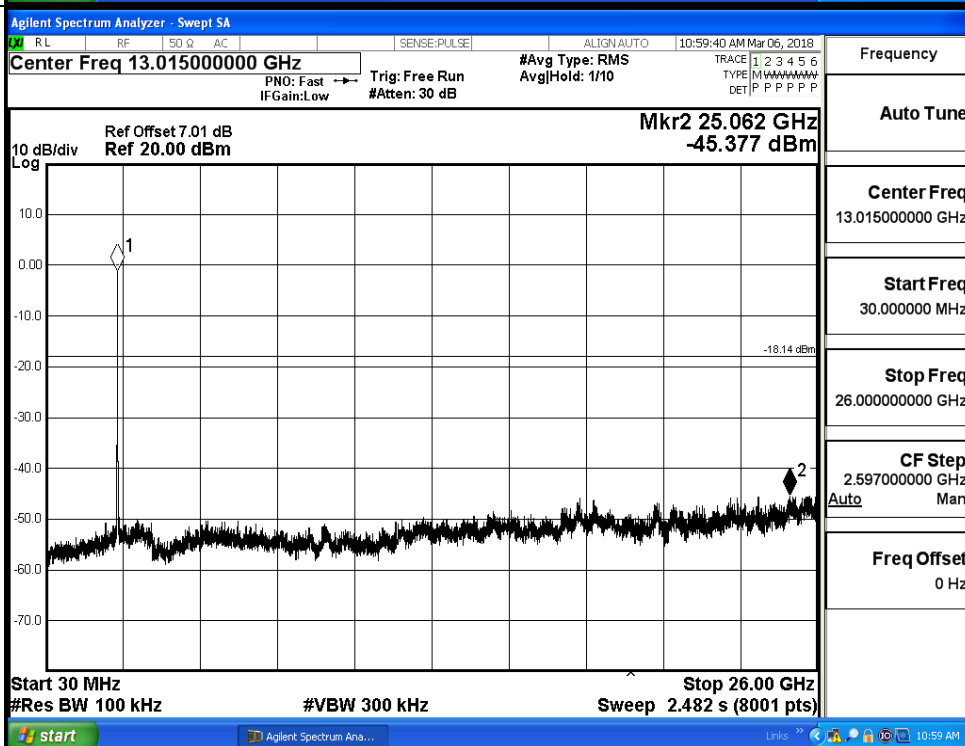


11G MCH Graphs

Pref/11G/MCH

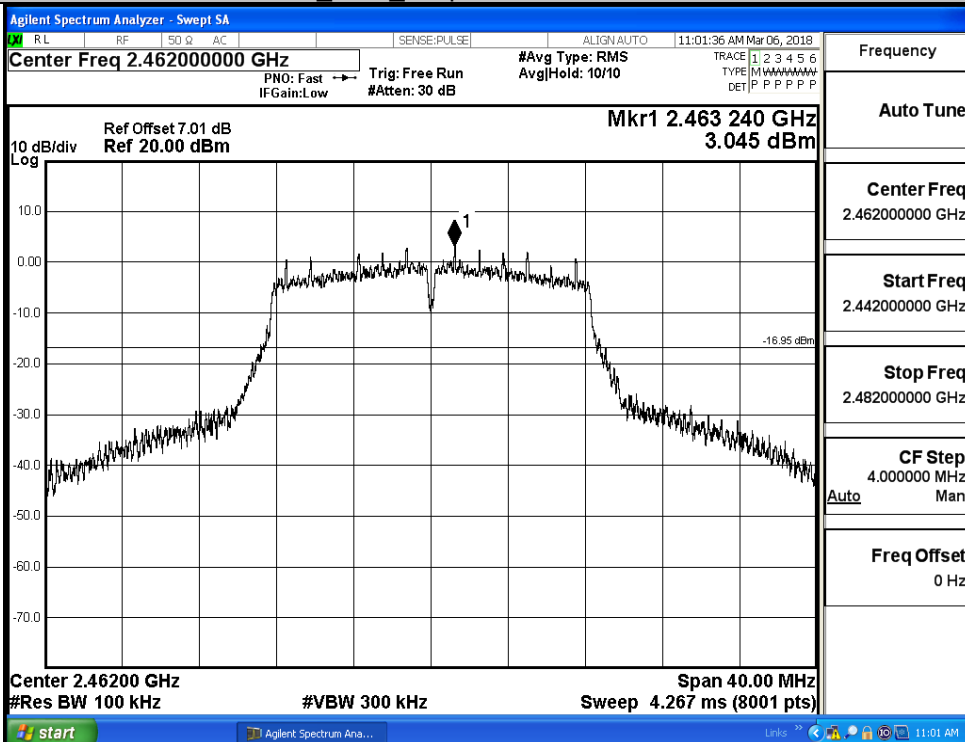


Puw/11G/MCH

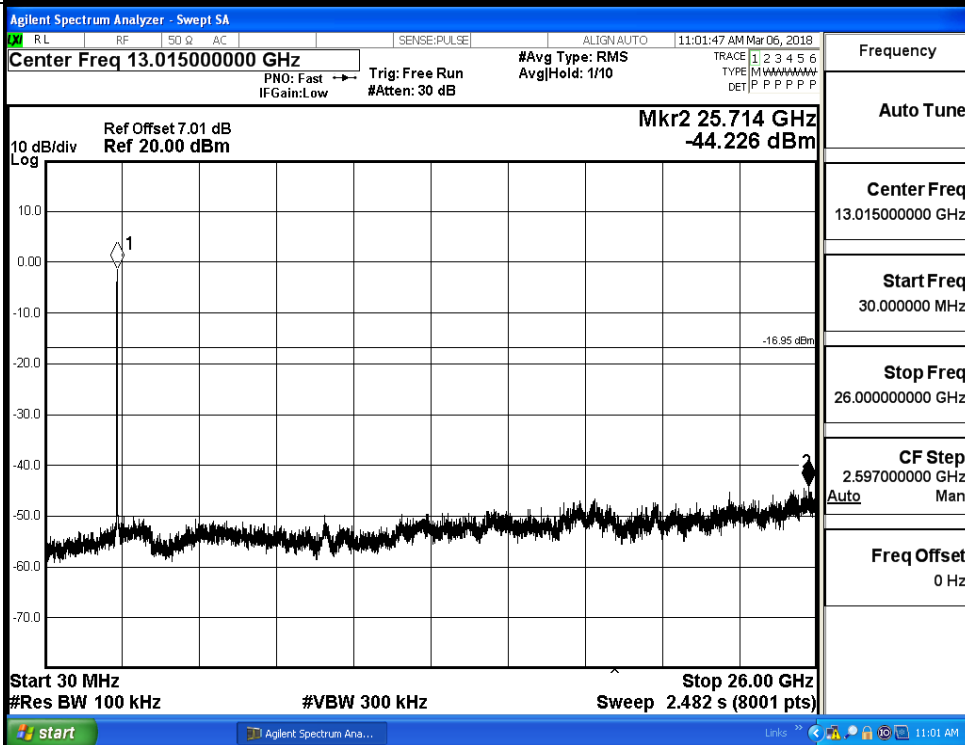


11G HCH Graphs

Pref/11G/HCH

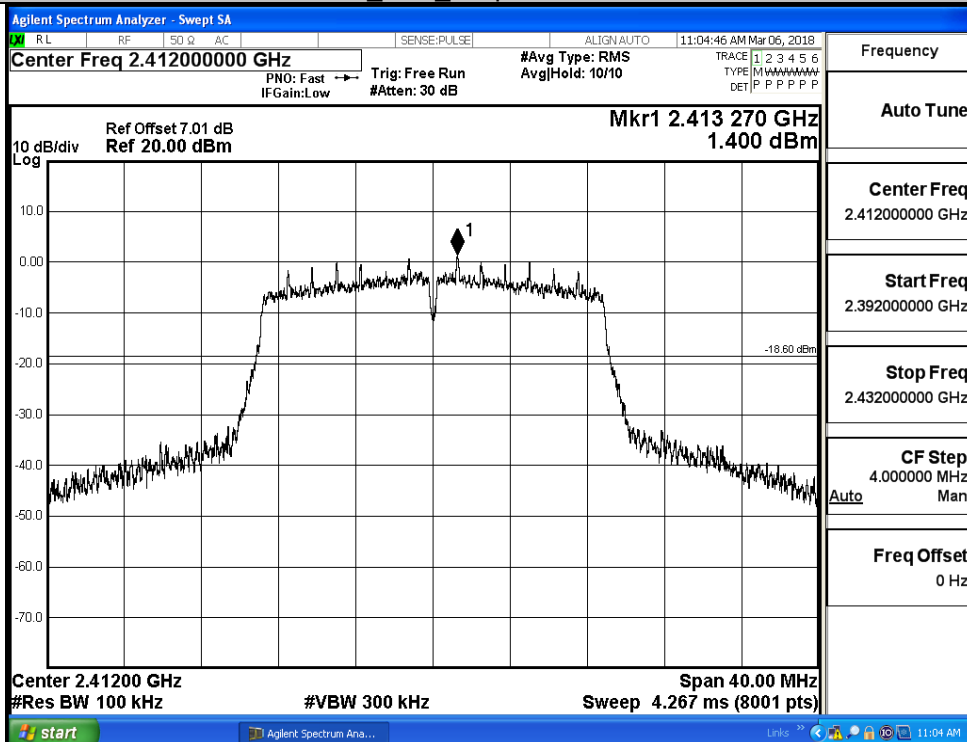


Puw/11G/HCH

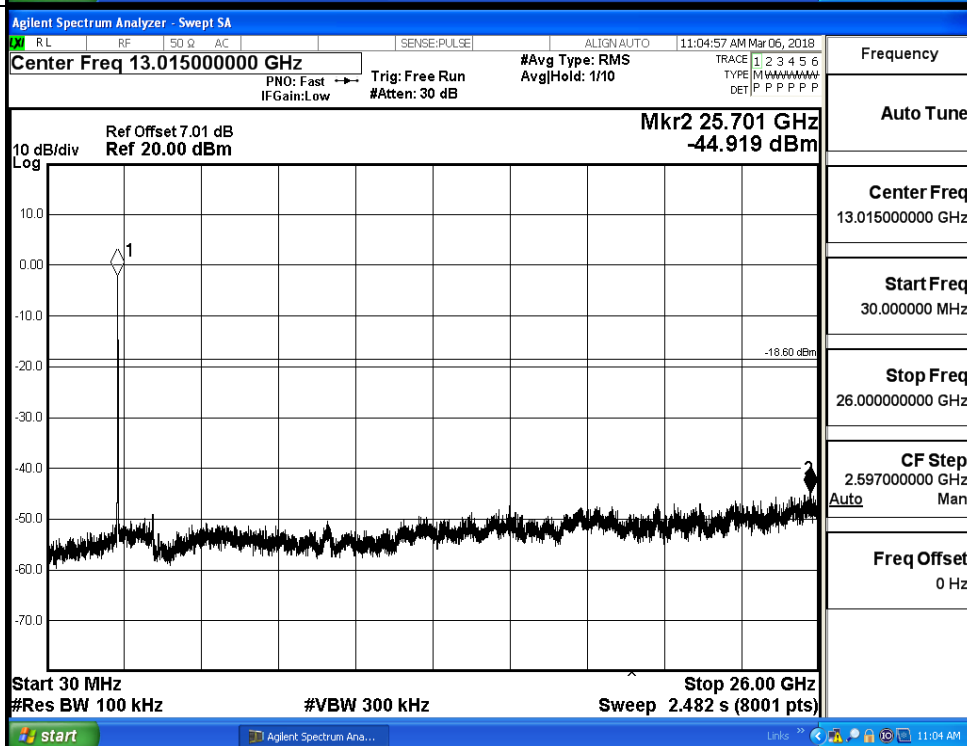


11N20SISO LCH Graphs

Pref/11N20SIS
O/LCH

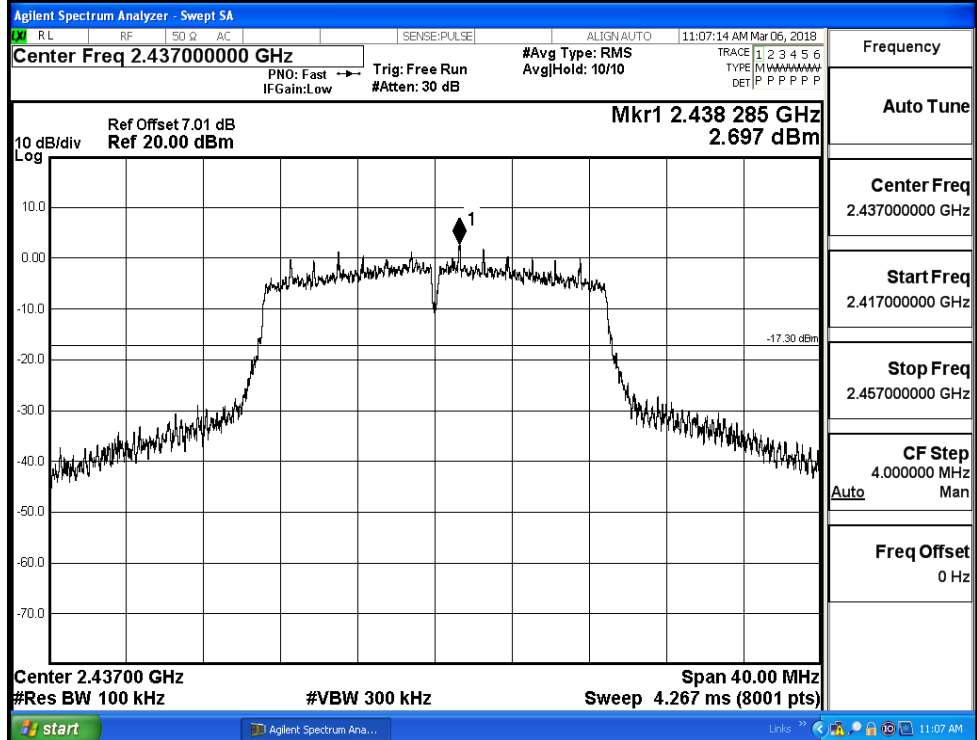


Puw/11N20
SISO/LCH

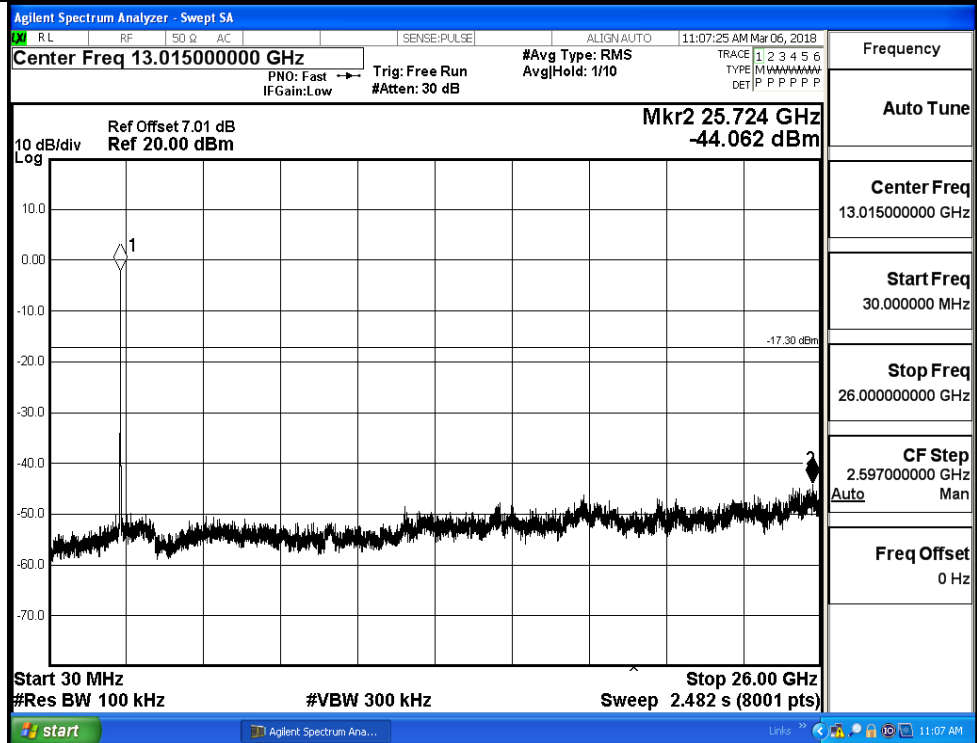


11N20SISO MCH Graphs

Pref/11N20
SISO/MCH

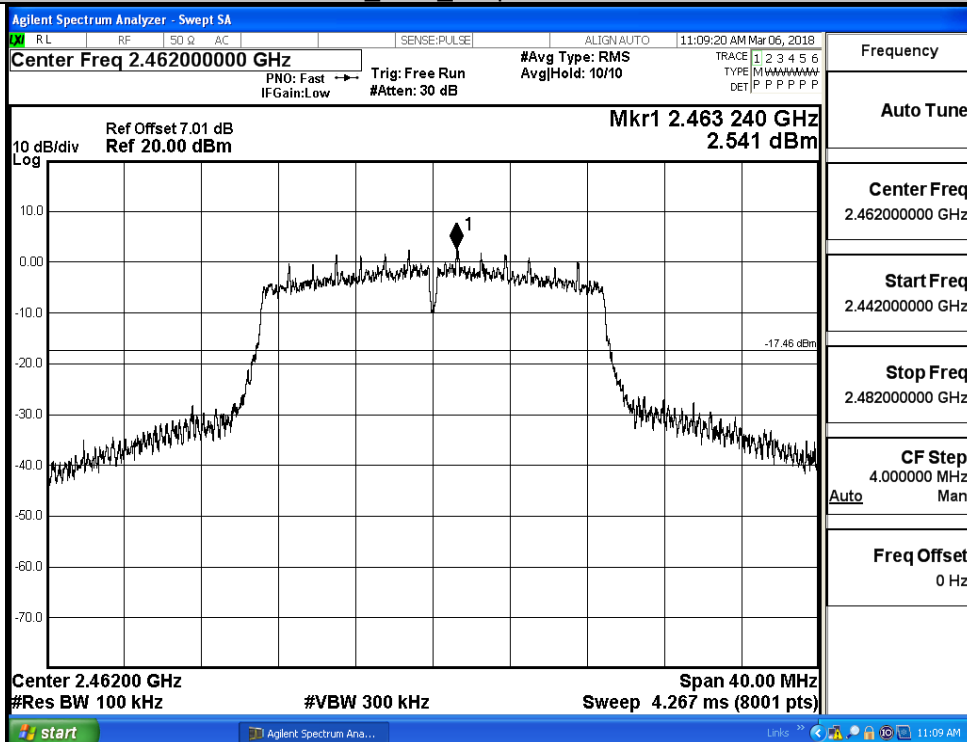


Puw/11N20
SISO/MCH

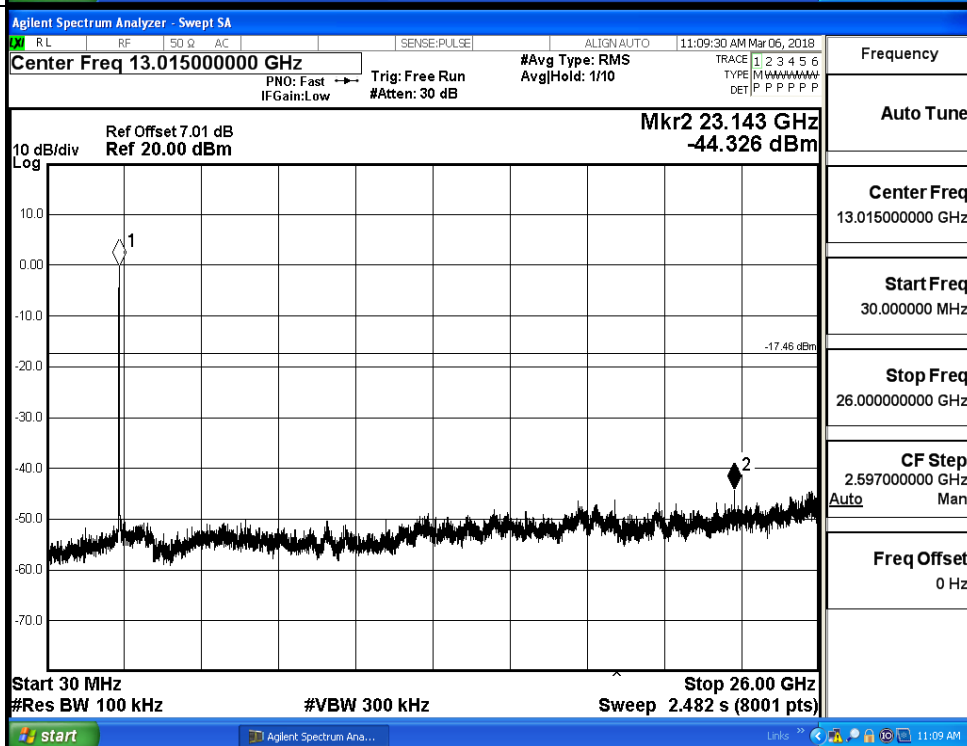


11N20SISO HCH Graphs

Pref/11N20
SISO/HCH

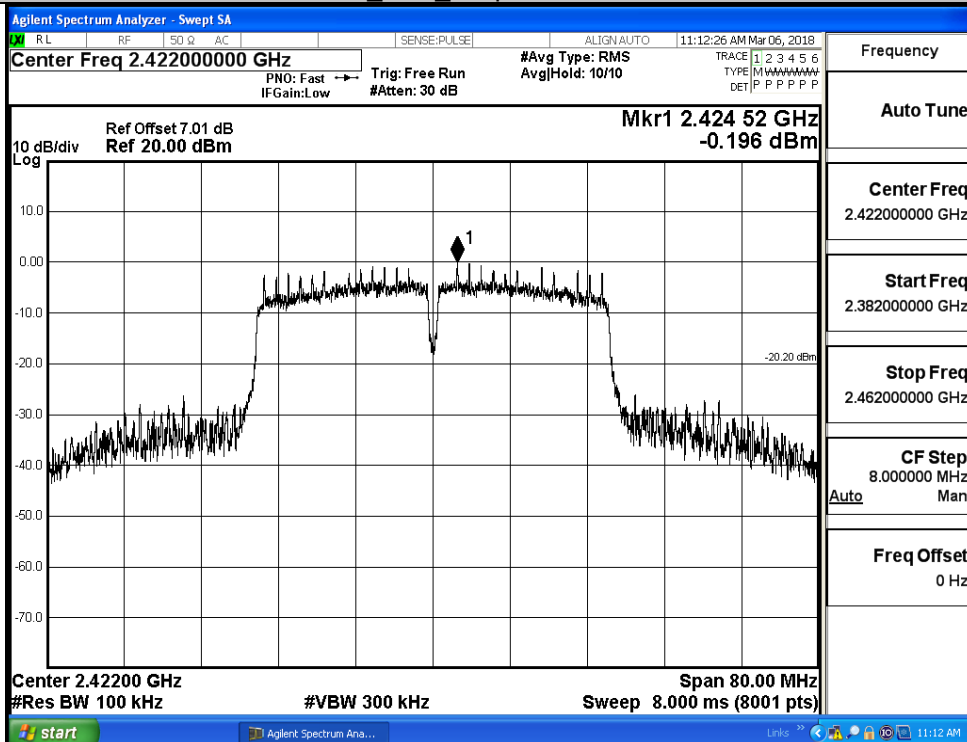


Puw/11N20
SISO/HCH

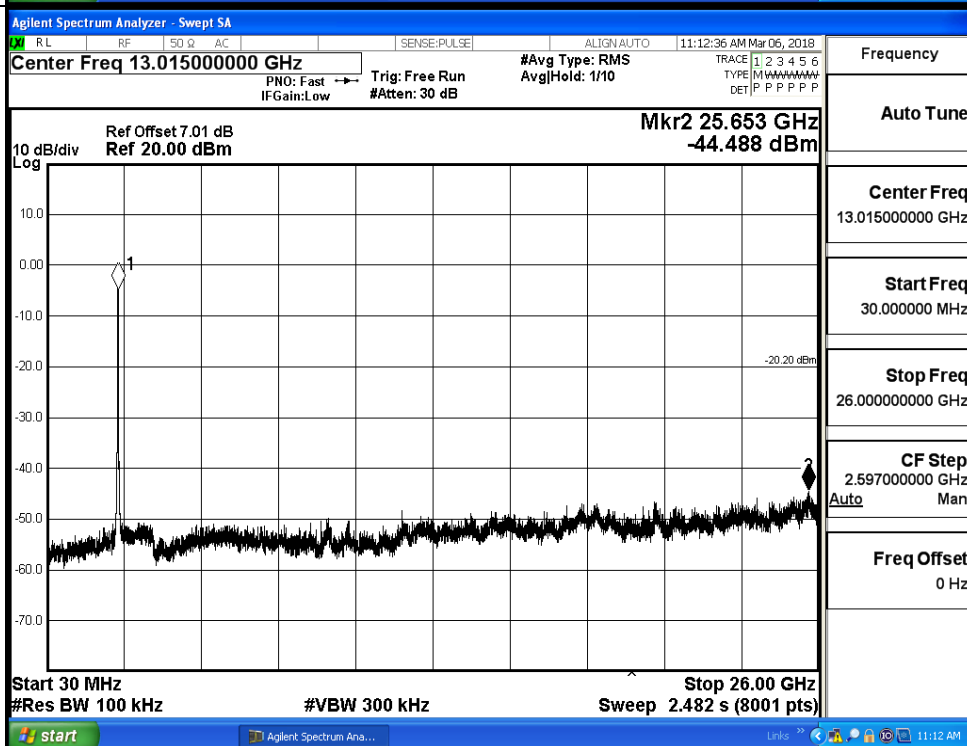


11N40SISO LCH Graphs

Pref/11N40
SISO/LCH

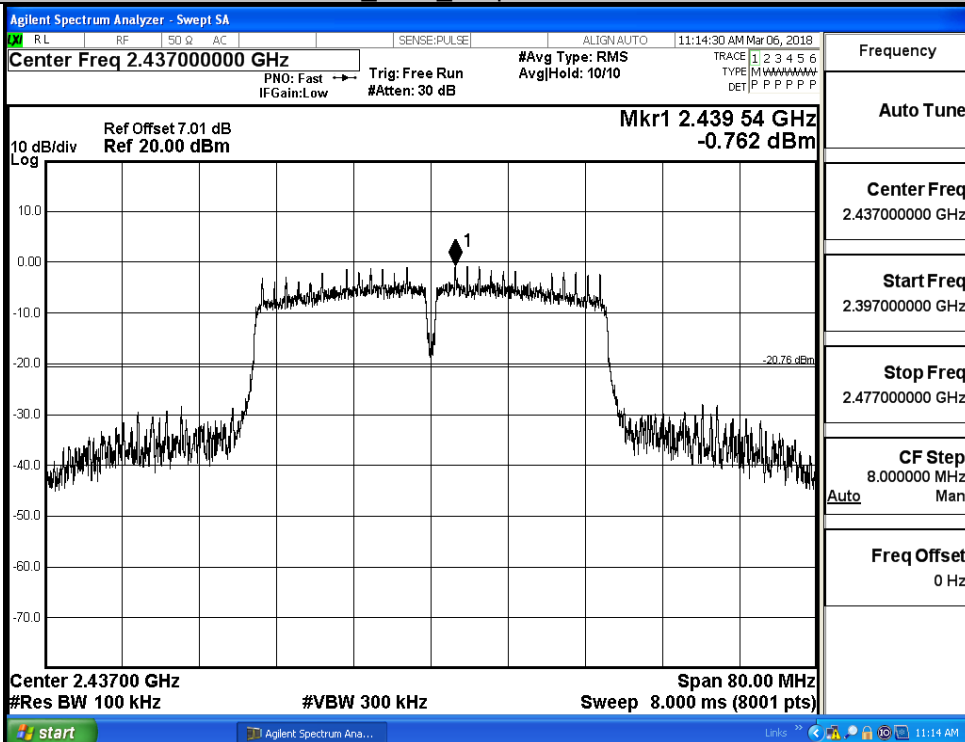


Puw/11N40
SISO/LCH



11N40SISO MCH_Graphs

Pref/11N40
SISO/MCH



Frequency

Auto Tune

Center Freq
2.437000000 GHz

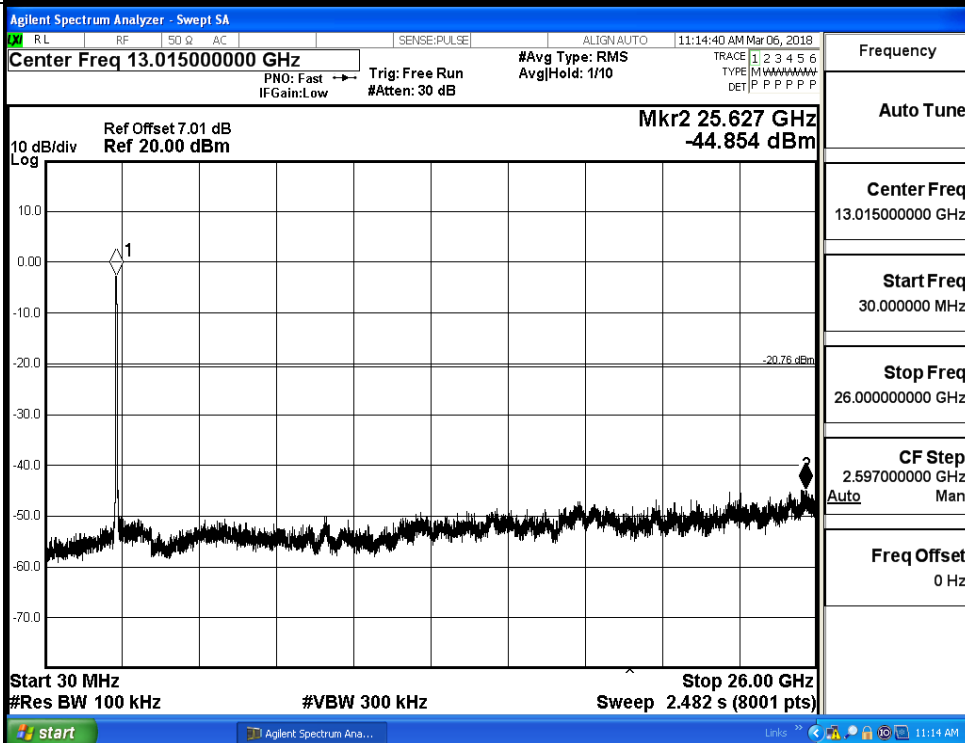
Start Freq
2.397000000 GHz

Stop Freq
2.477000000 GHz

CF Step
8.000000 MHz
Auto

Freq Offset
0 Hz

Puw/11N40
SISO/MCH



Frequency

Auto Tune

Center Freq
13.015000000 GHz

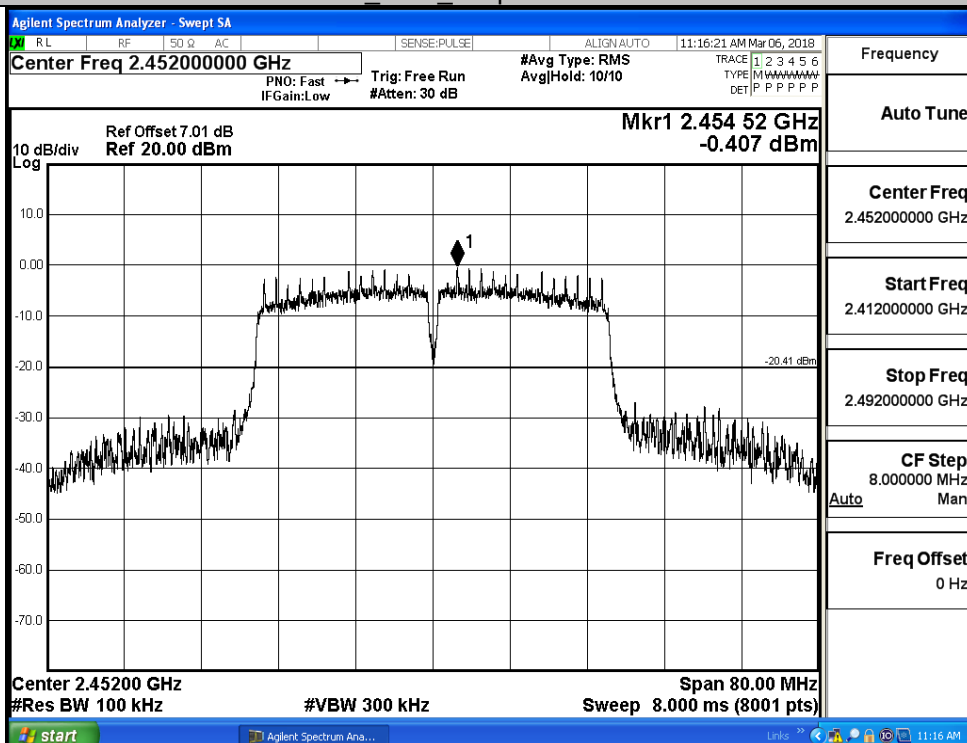
Start Freq
30.000000 MHz

Stop Freq
26.000000000 GHz

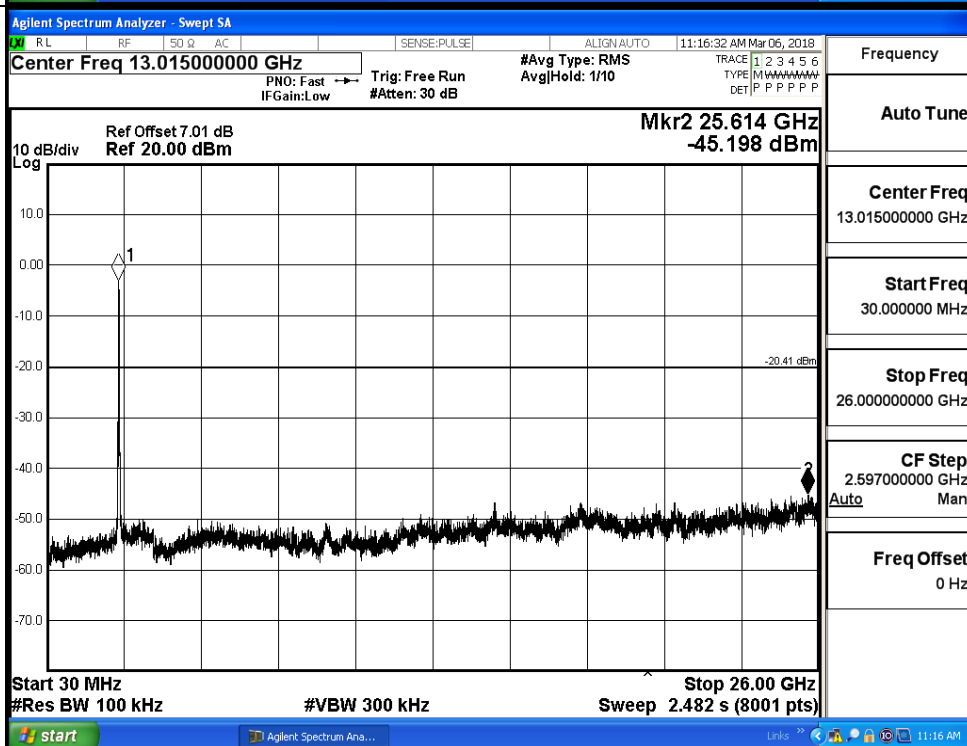
CF Step
2.597000000 GHz
Auto

Freq Offset
0 Hz

Pref/11N40
SISO/HCH



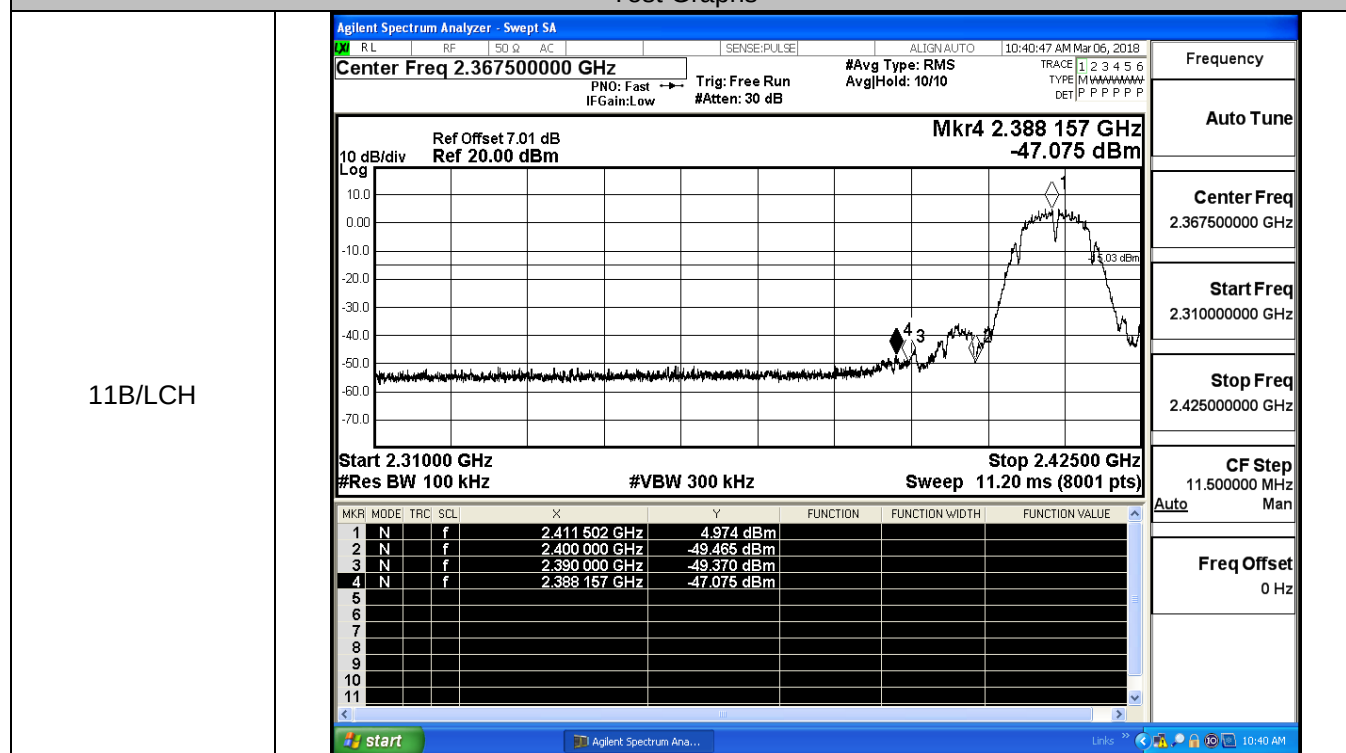
Puw/11N40
SISO/HCH



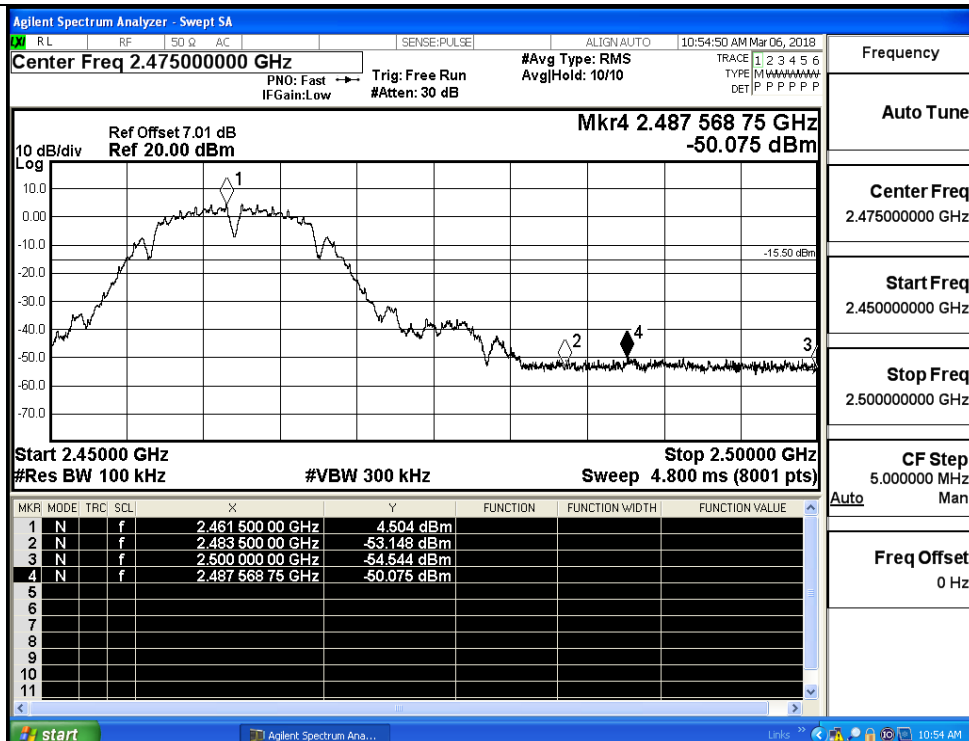
A.4 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	4.974	-47.075	-15.03	PASS
	HCH	4.504	-50.075	-15.5	PASS
11G	LCH	1.308	-47.424	-18.69	PASS
	HCH	3.205	-41.052	-16.8	PASS
11N20SISO	LCH	0.510	-44.938	-19.49	PASS
	HCH	2.318	-40.925	-17.68	PASS
11N40SISO	LCH	-0.185	-31.201	-20.19	PASS
	HCH	-0.427	-30.693	-20.43	PASS

Test Graphs



11B/HCH

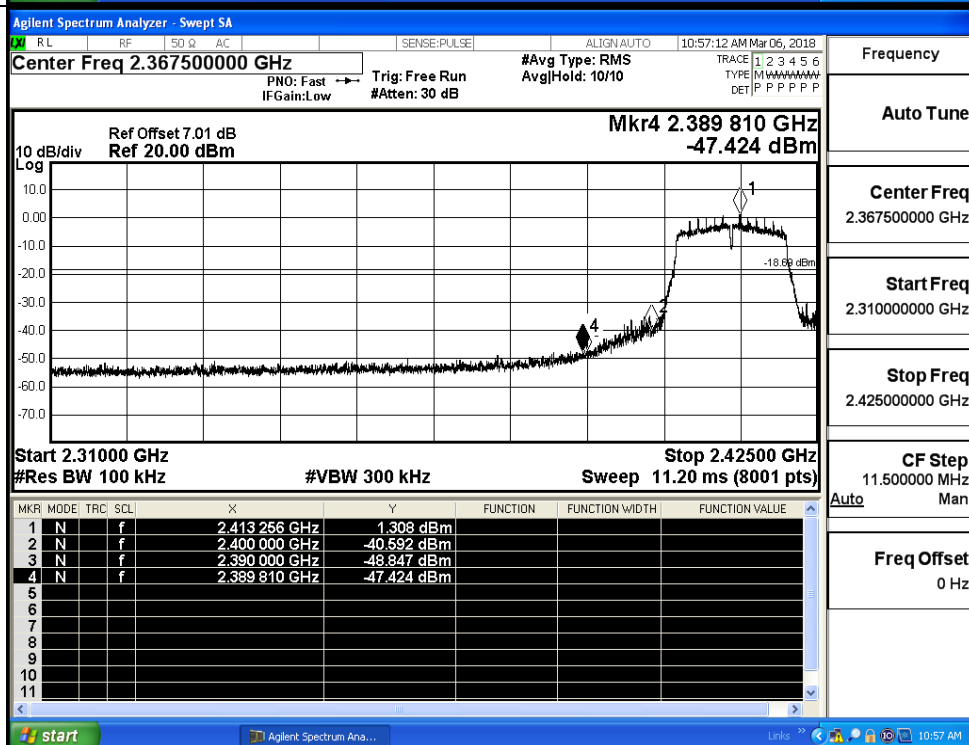


Frequency

Auto Tune

Center Freq
2.475000000 GHzStart Freq
2.450000000 GHzStop Freq
2.500000000 GHzCF Step
5.000000 MHz
Auto ManFreq Offset
0 Hz

11G/LCH

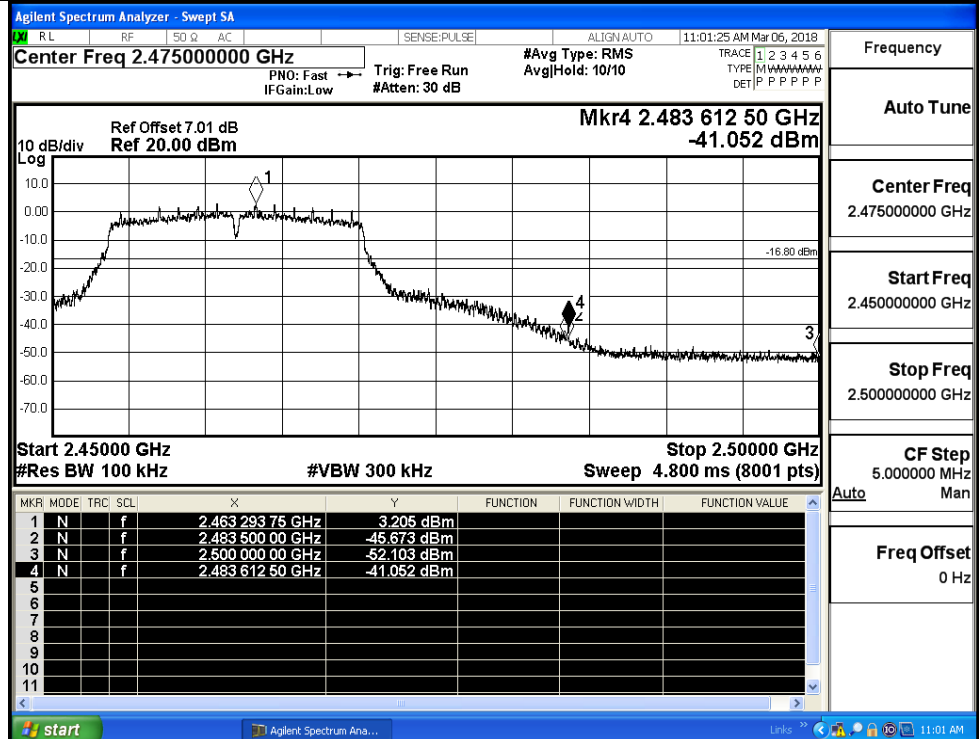


Frequency

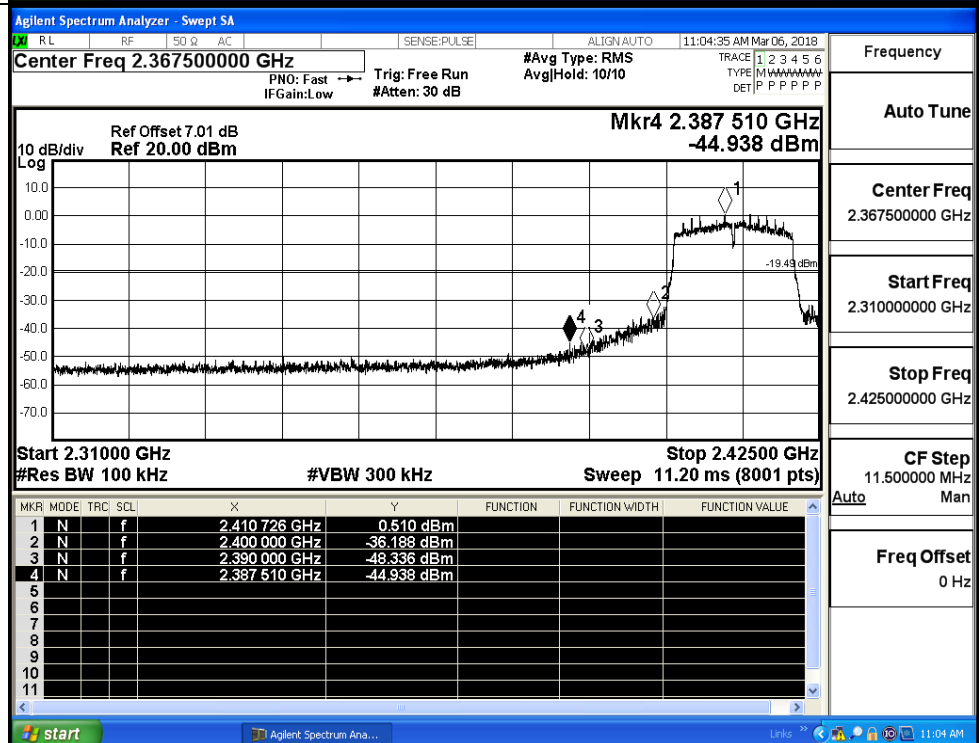
Auto Tune

Center Freq
2.367500000 GHzStart Freq
2.310000000 GHzStop Freq
2.425000000 GHzCF Step
11.500000 MHz
Auto ManFreq Offset
0 Hz

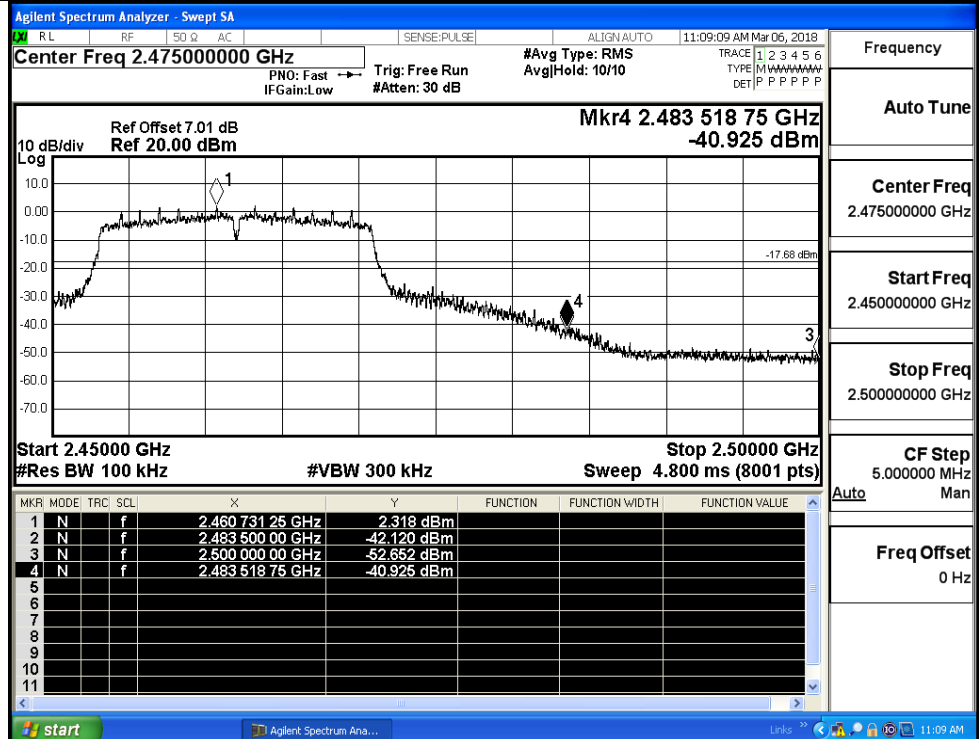
11G/HCH



11N20SISO/LCH



11N20SISO/HCH



Frequency

Auto Tune

Center Freq

2.475000000 GHz

Start Freq

2.450000000 GHz

Stop Freq

2.500000000 GHz

CF Step

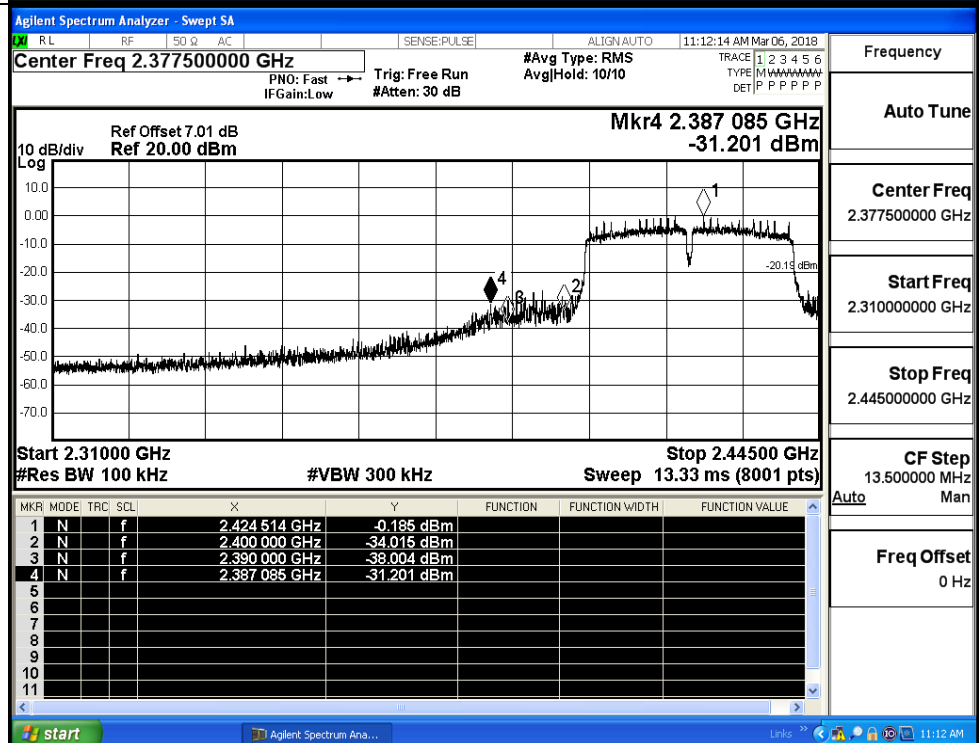
5.000000 MHz

Auto Man

Freq Offset

0 Hz

11N40SISO/LCH



Frequency

Auto Tune

Center Freq

2.377500000 GHz

Start Freq

2.310000000 GHz

Stop Freq

2.445000000 GHz

CF Step

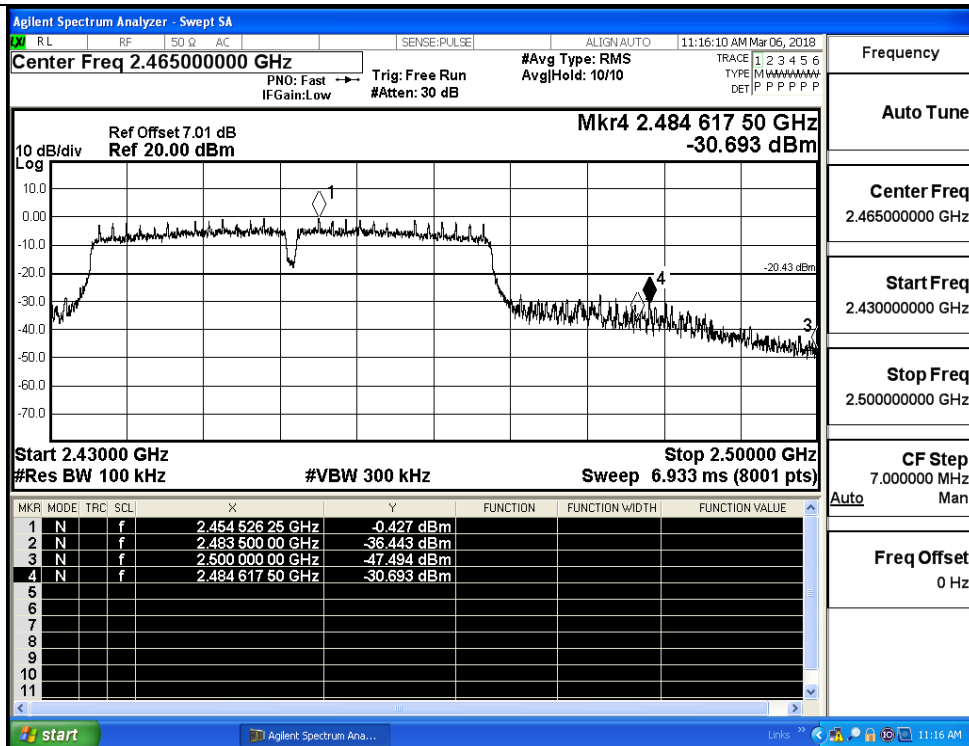
13.500000 MHz

Auto Man

Freq Offset

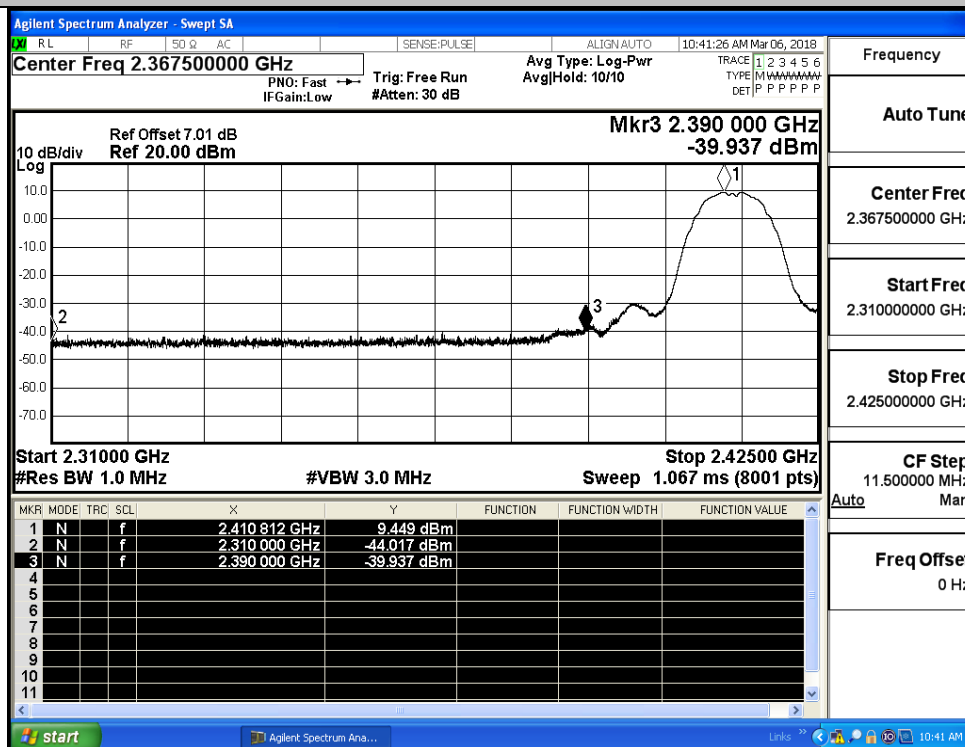
0 Hz

11N40SISO/HCH

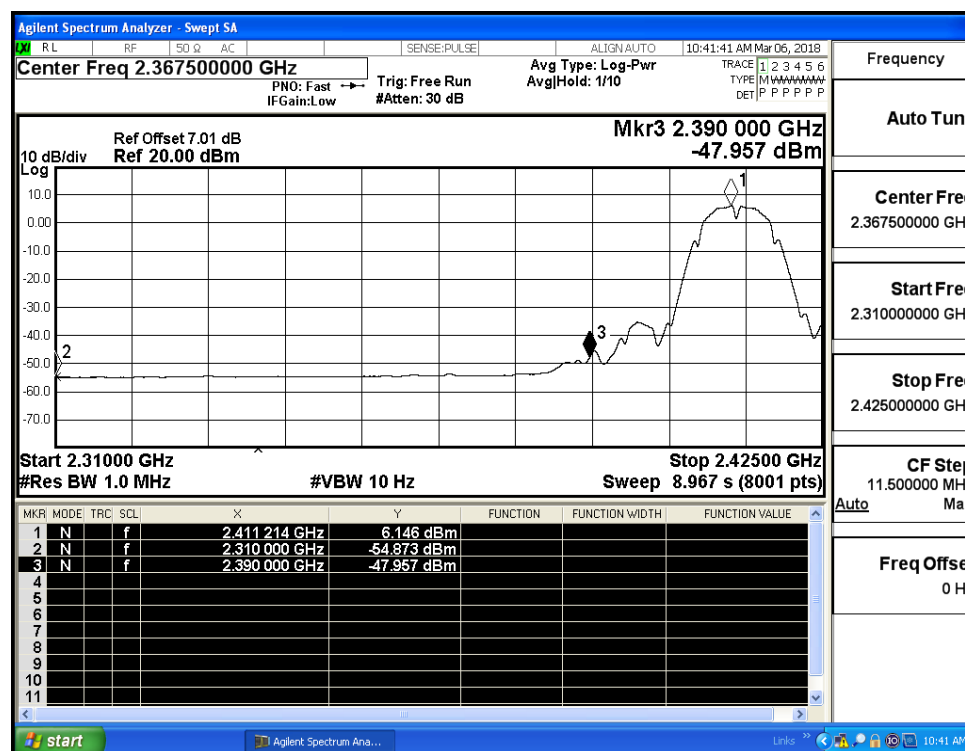


A.5 Restrict-band band-edge measurements

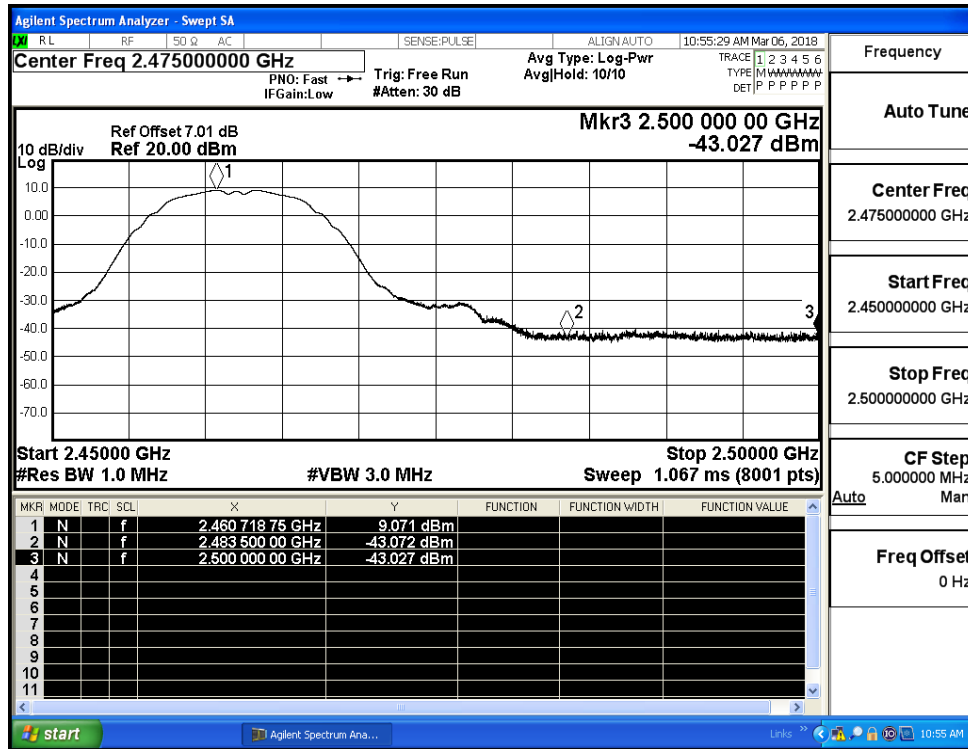
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



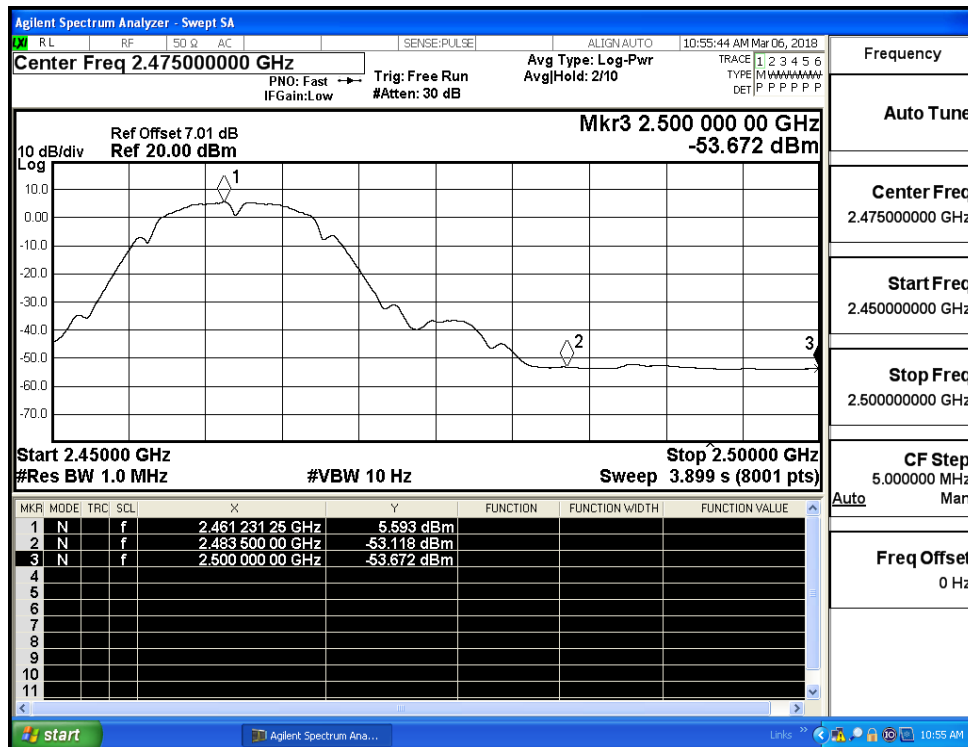
Restrict-band band-edge measurements_11B_2412_Ant1_AV



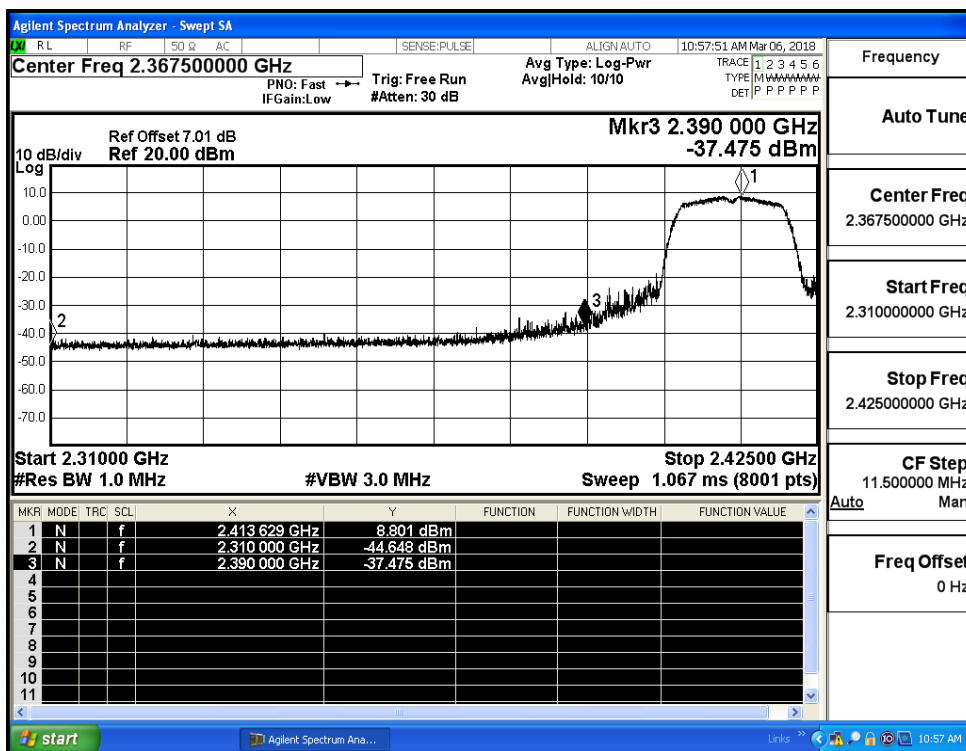
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



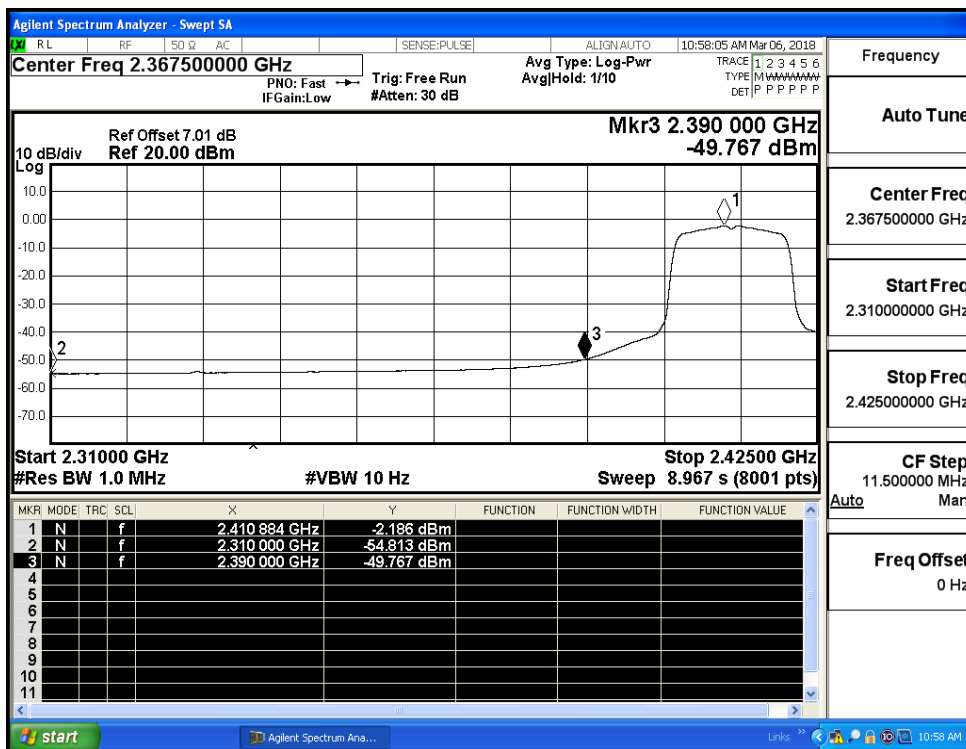
Restrict-band band-edge measurements_11B_2462_Ant1_AV



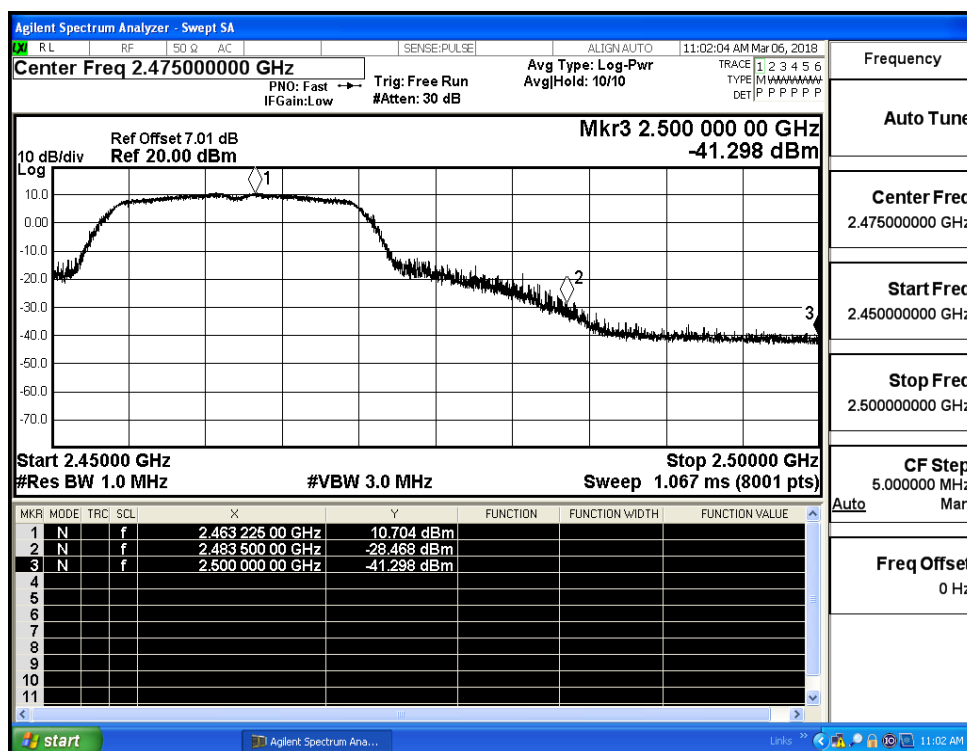
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



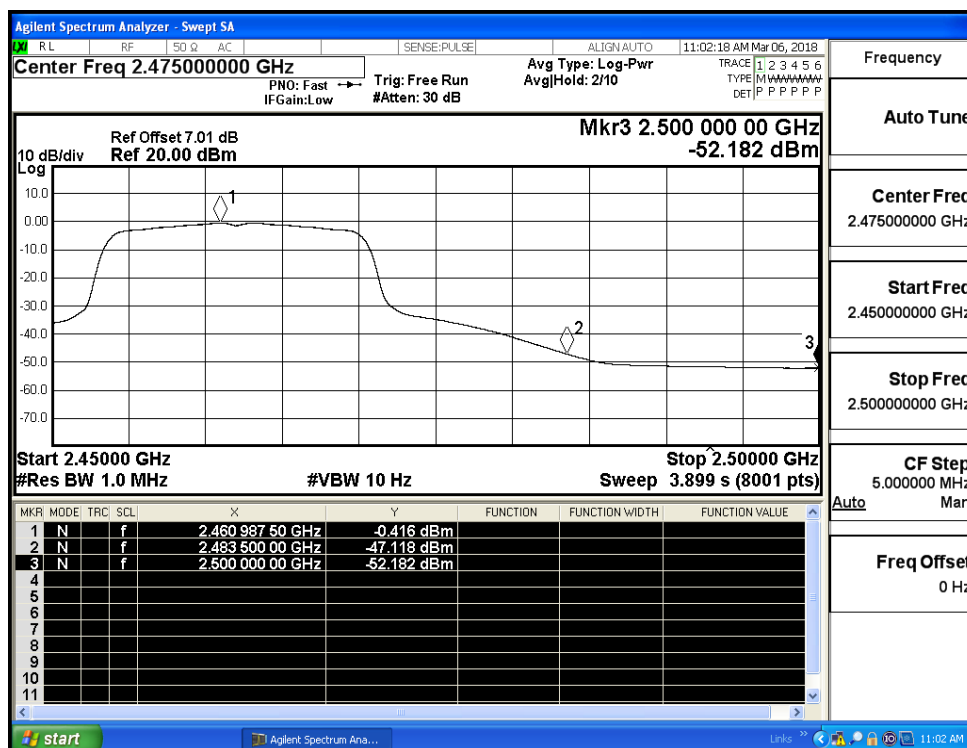
Restrict-band band-edge measurements_11G_2412_Ant1_AV



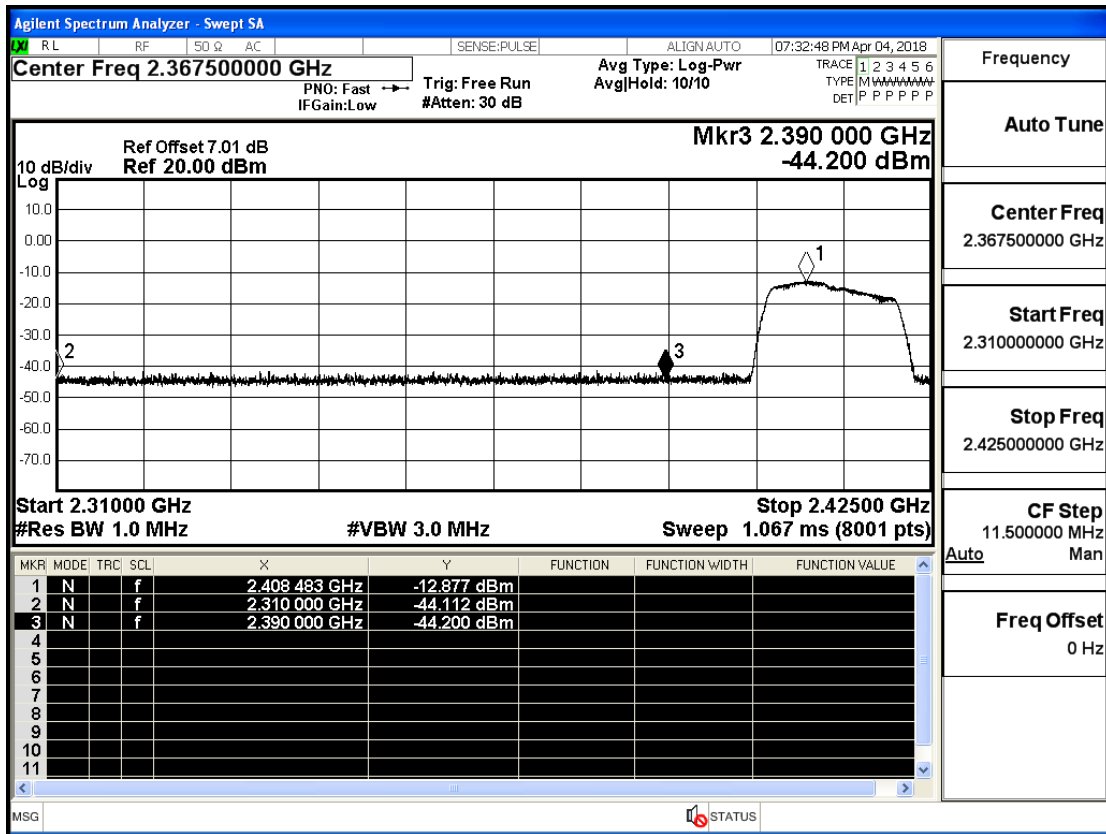
Restrict-band band-edge measurements_11G_2462_Ant1_PEAK



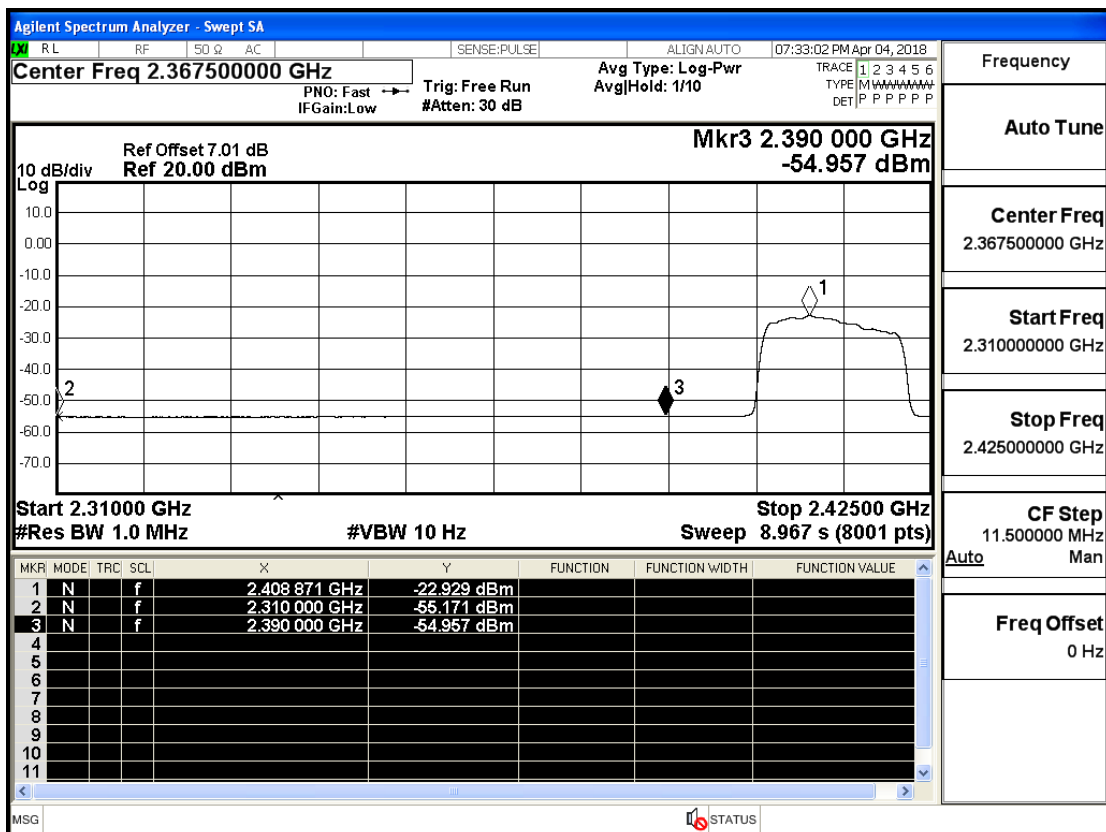
Restrict-band band-edge measurements_11G_2462_Ant1_AV



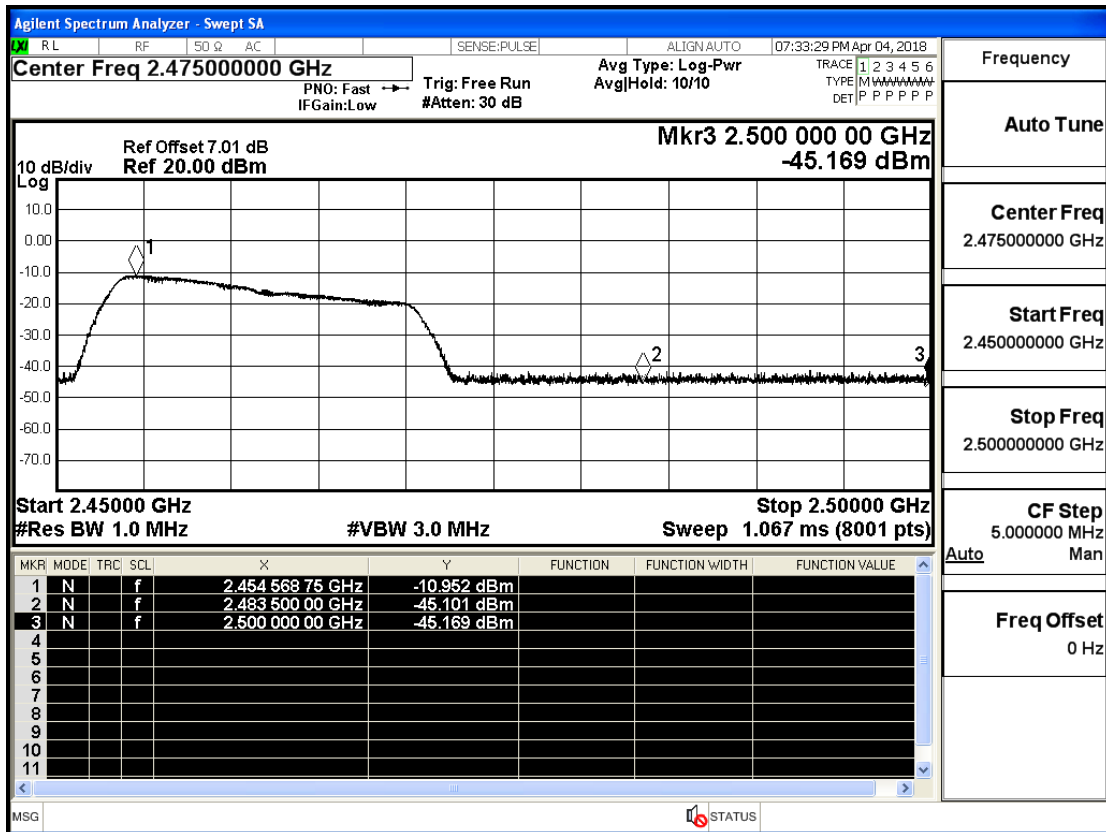
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



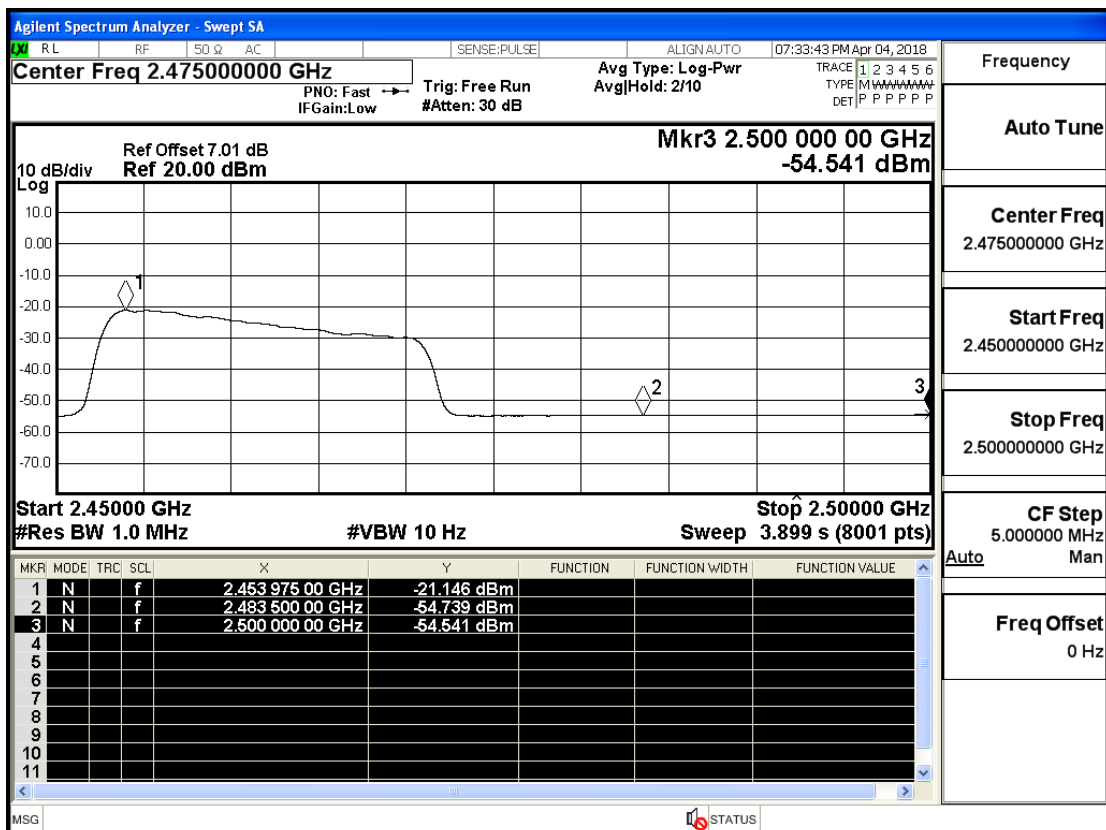
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_AV



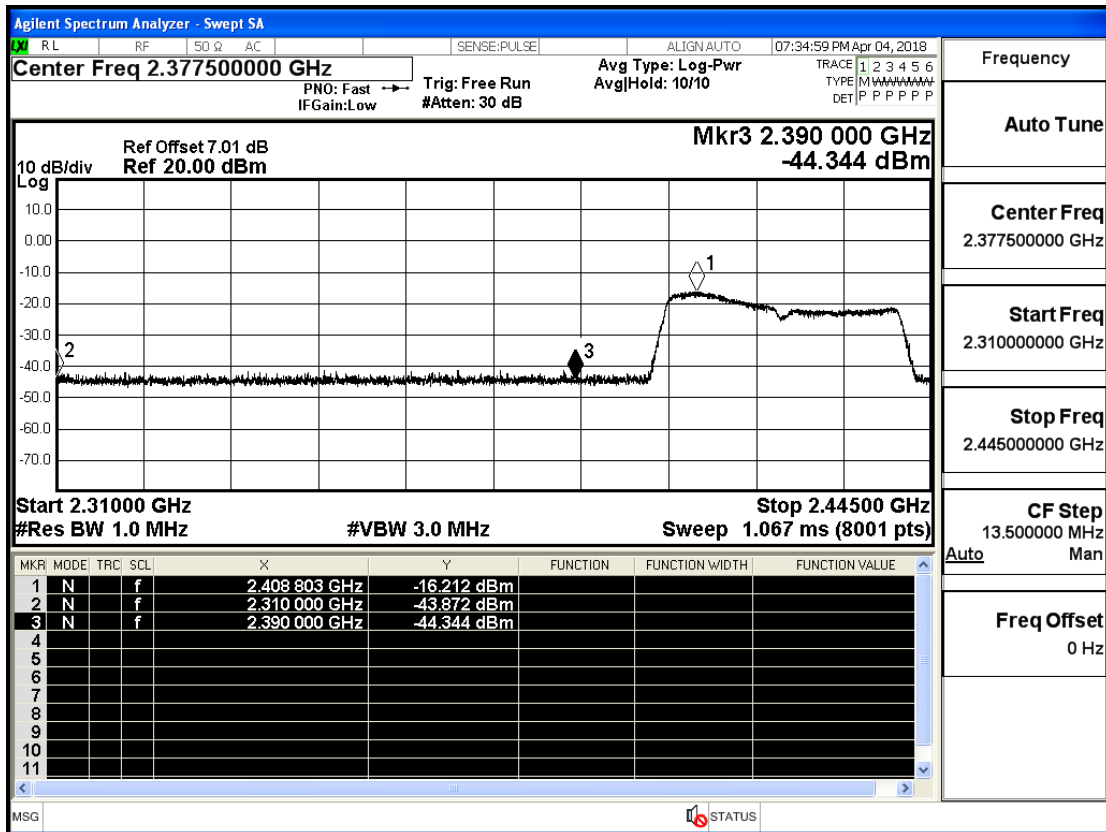
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_PEAK



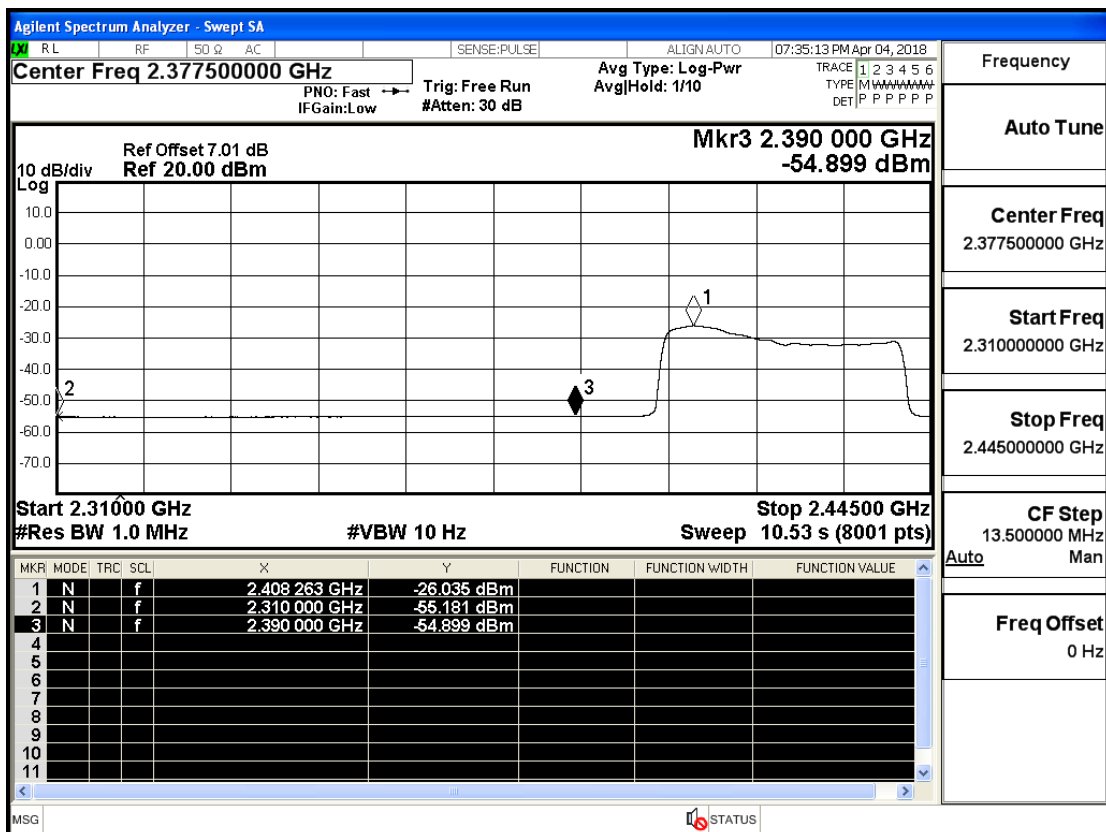
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_AV



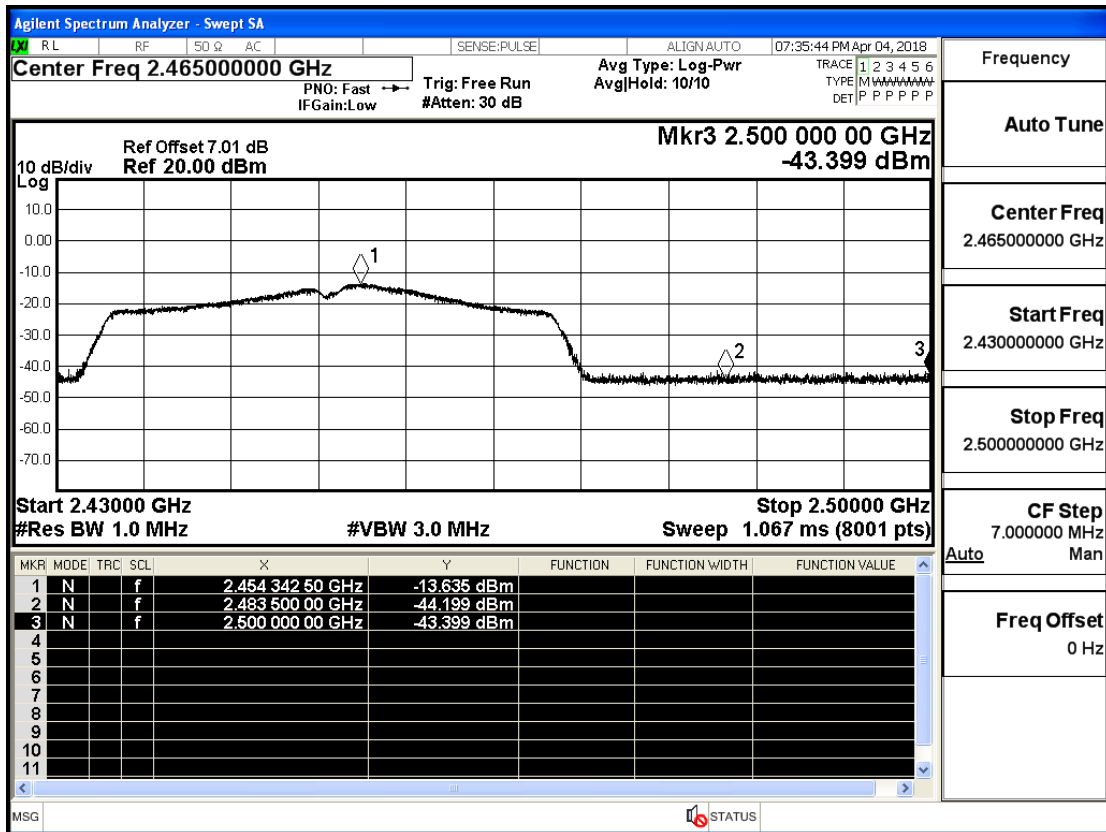
Restrict-band band-edge measurements_11N40SISO_2422_Ant1_PEAK



Restrict-band band-edge measurements_11N40SISO_2422_Ant1_AV



Restrict-band band-edge measurements_11N40SISO_2452_Ant1_PEAK



Restrict-band band-edge measurements_11N40SISO_2452_Ant1_AV

