

Appendix B

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: 300 Mbps Wireless Broadband Router

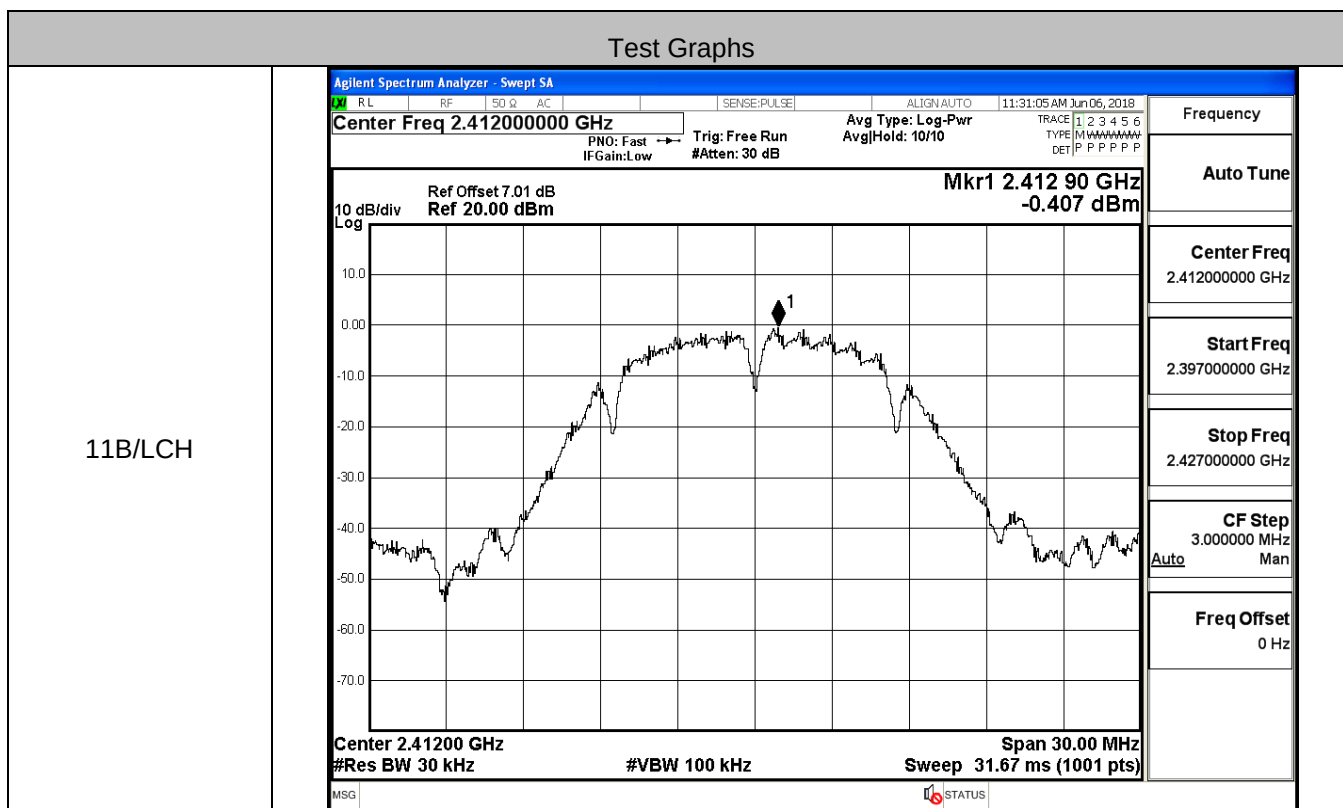
Trade Mark: Perfect

Test Model: PFTP-WR300

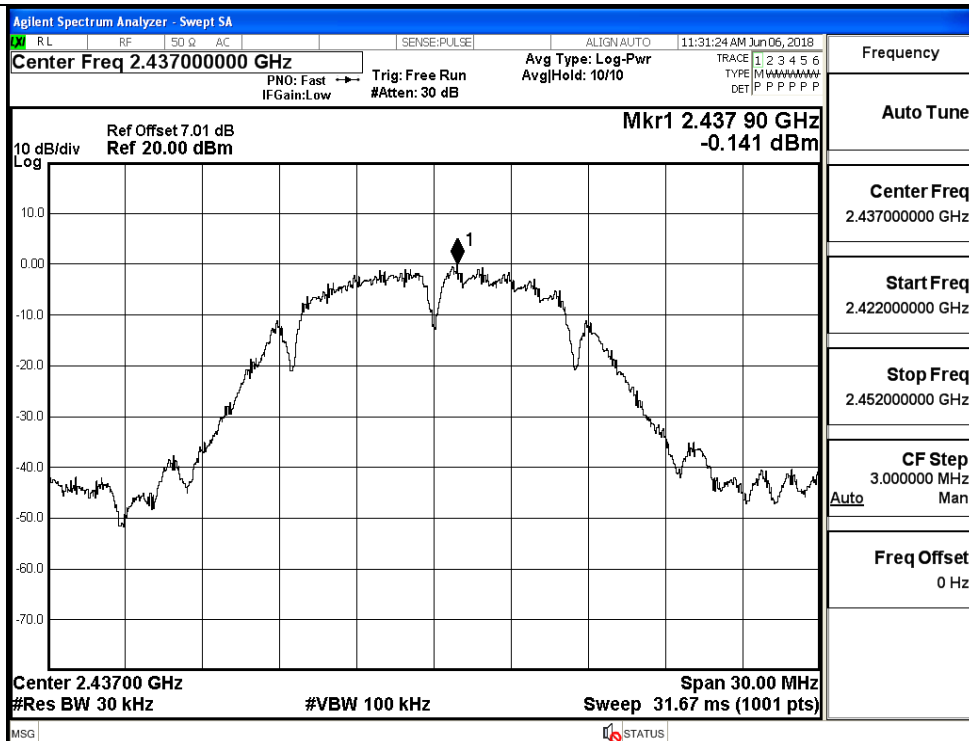
Environmental Conditions

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

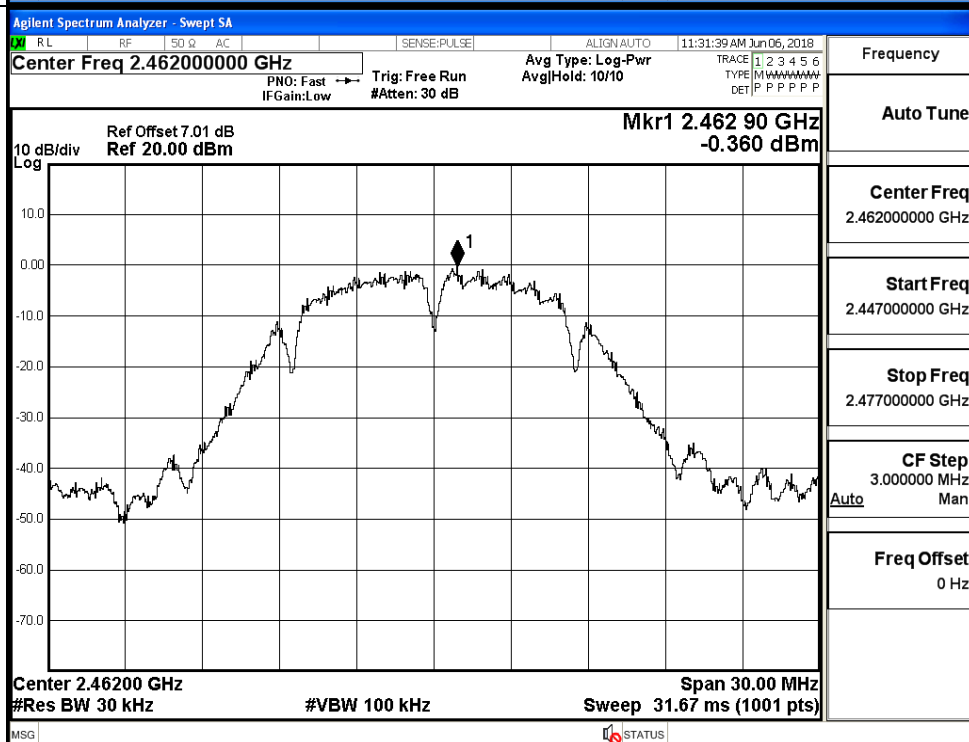
B.1 Maximum Power Spectral Density



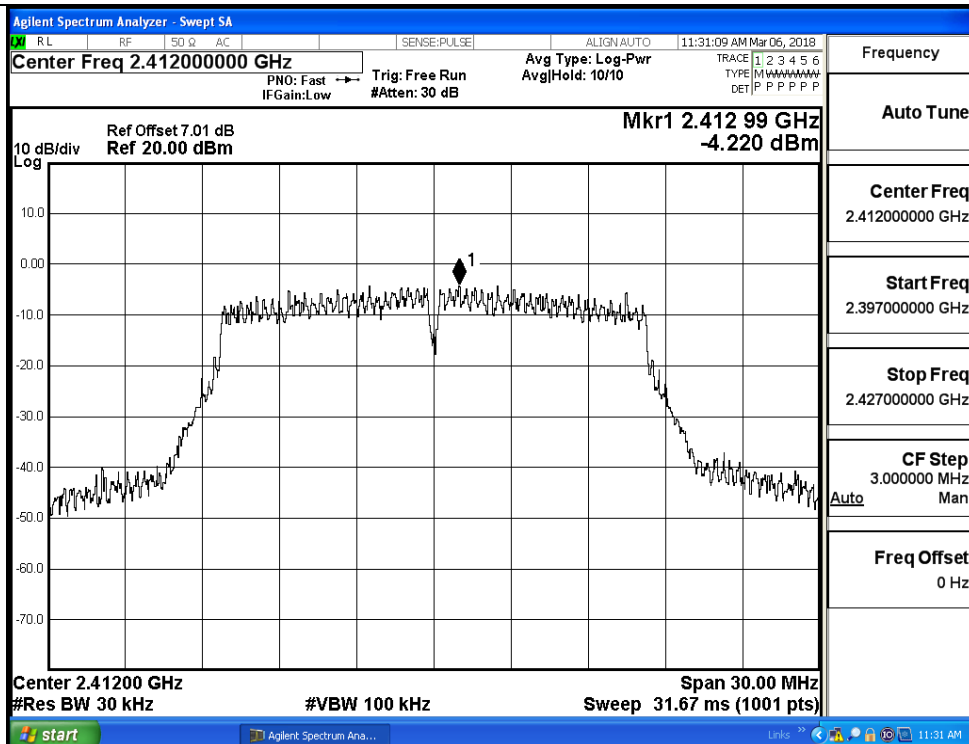
11B/MCH



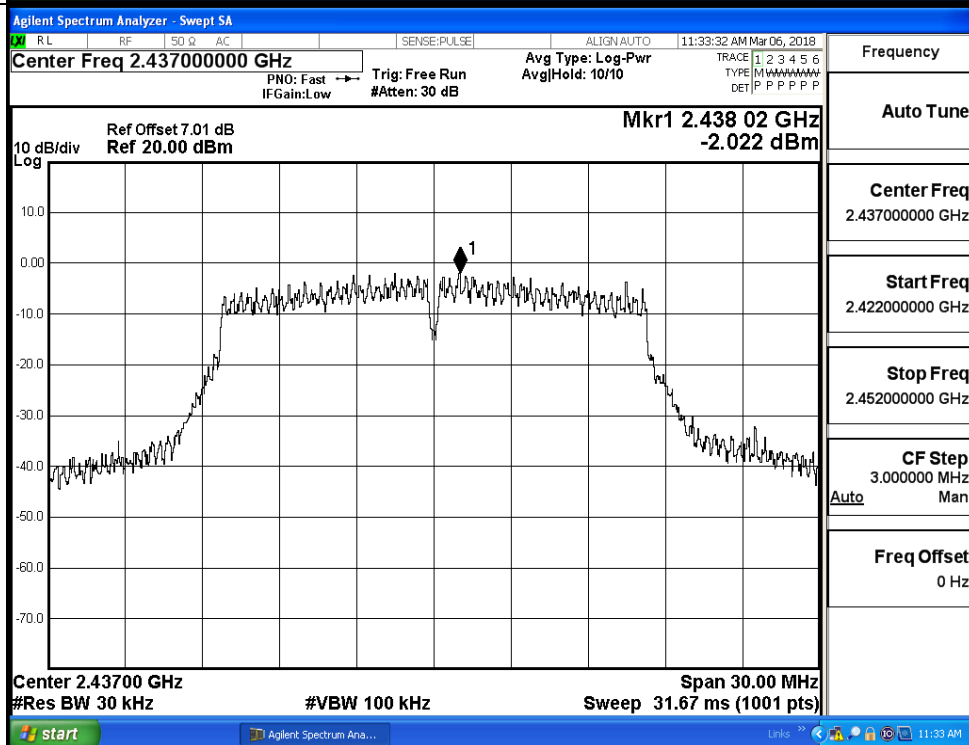
11B/HCH



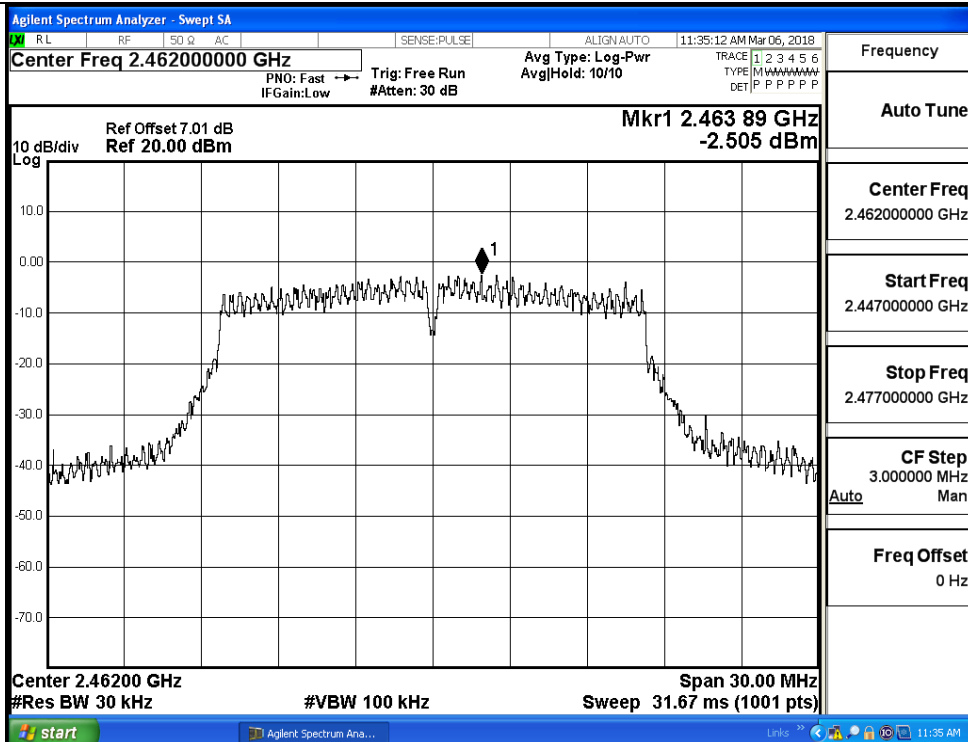
11G/LCH



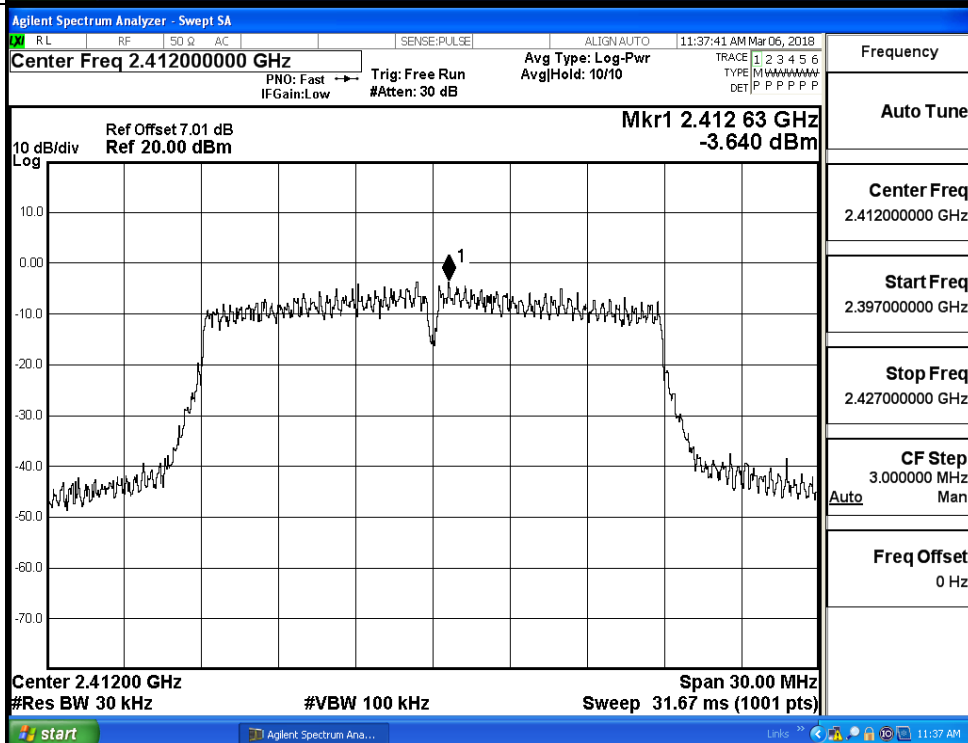
11G/MCH

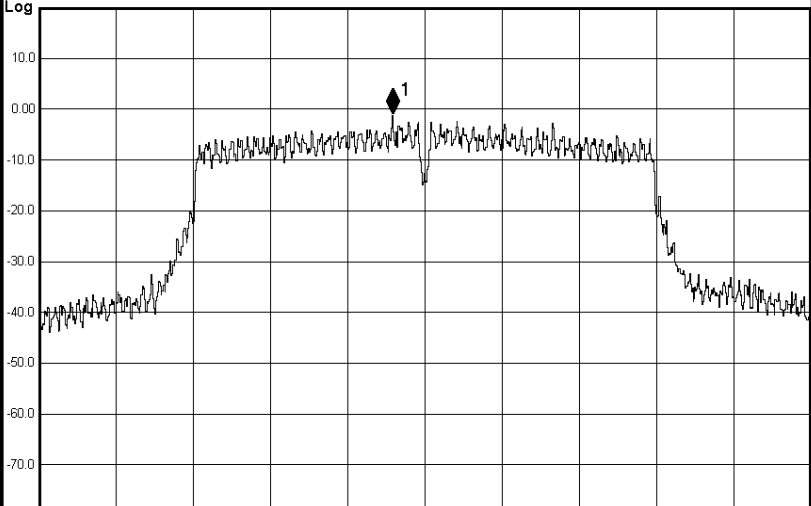
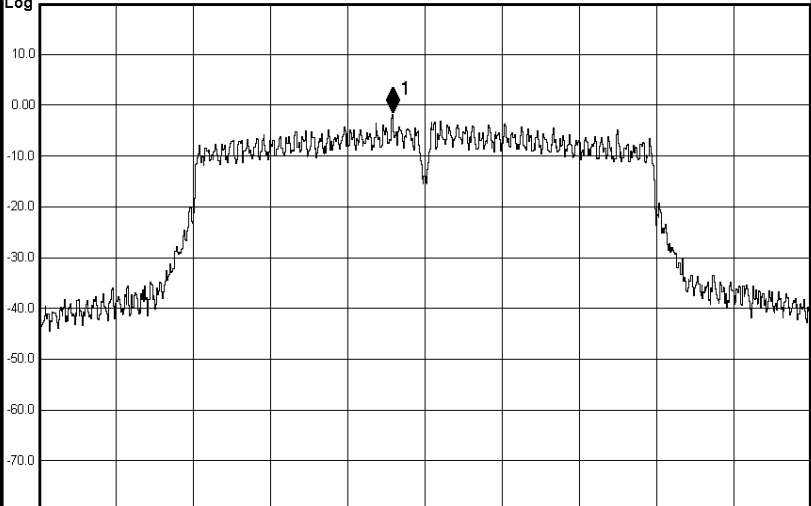


11G/HCH

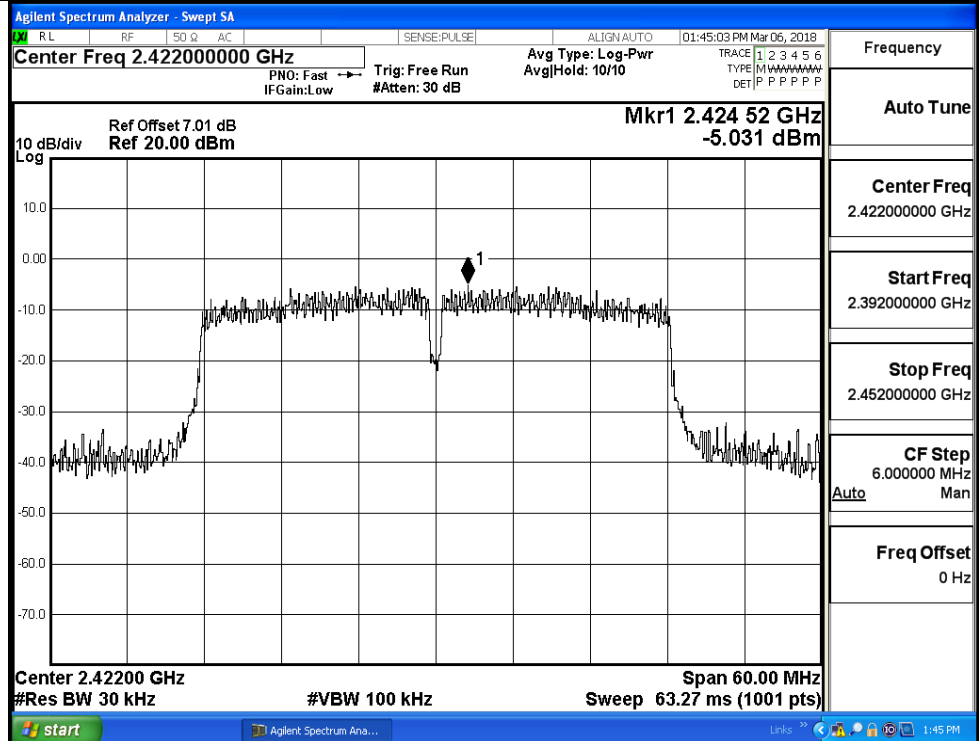


11N20SISO/LCH

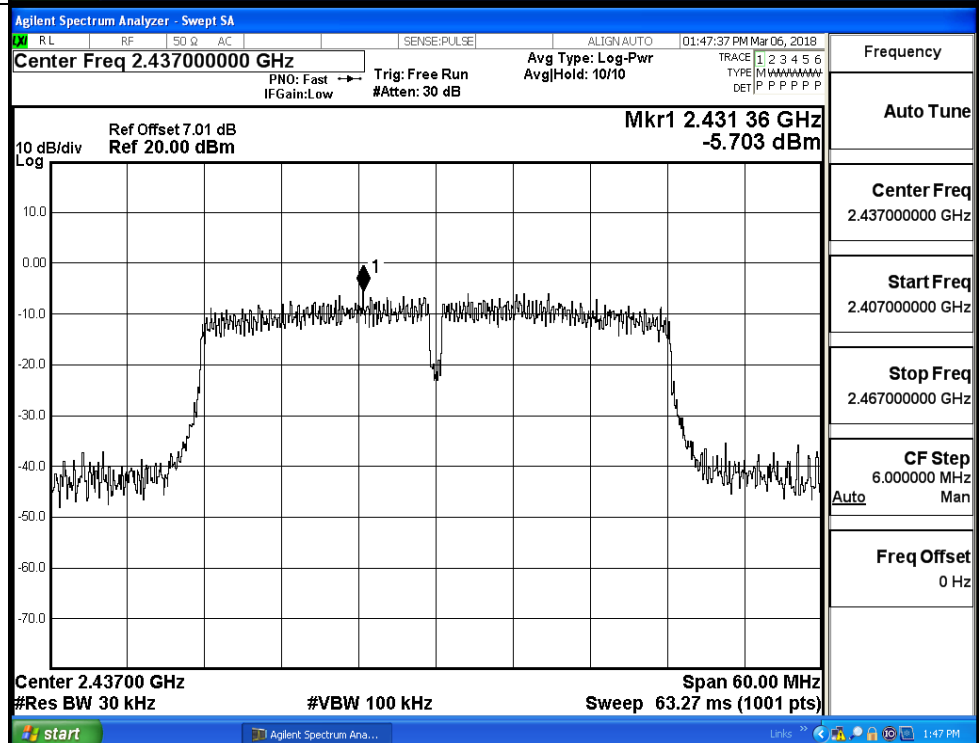


11N20SISO/MCH	Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE: PULSE ALIGN: AUTO 11:41:01 AM Mar 06, 2018 Center Freq 2.437000000 GHz PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr Avg/Hold: 10/10 TRACE 1 1 2 3 4 5 6 TYPE [M W A W A W A W A W] DET [P P P P P P P P] Ref Offset 7.01 dB Ref 20.00 dBm Mkr1 2.435 74 GHz -1.207 dBm 10 dB/div Log  Center 2.43700 GHz #Res BW 30 kHz #VBW 100 kHz Span 30.00 MHz Sweep 31.67 ms (1001 pts) start Agilent Spectrum Ana... Links 11:41 AM 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
11N20SISO/HCH	Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE: PULSE ALIGN: AUTO 11:42:46 AM Mar 06, 2018 Center Freq 2.462000000 GHz PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr Avg/Hold: 10/10 TRACE 1 1 2 3 4 5 6 TYPE [M W A W A W A W A W] DET [P P P P P P P P] Ref Offset 7.01 dB Ref 20.00 dBm Mkr1 2.460 74 GHz -1.788 dBm 10 dB/div Log  Center 2.46200 GHz #Res BW 30 kHz #VBW 100 kHz Span 30.00 MHz Sweep 31.67 ms (1001 pts) start Agilent Spectrum Ana... Links 11:42 AM 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

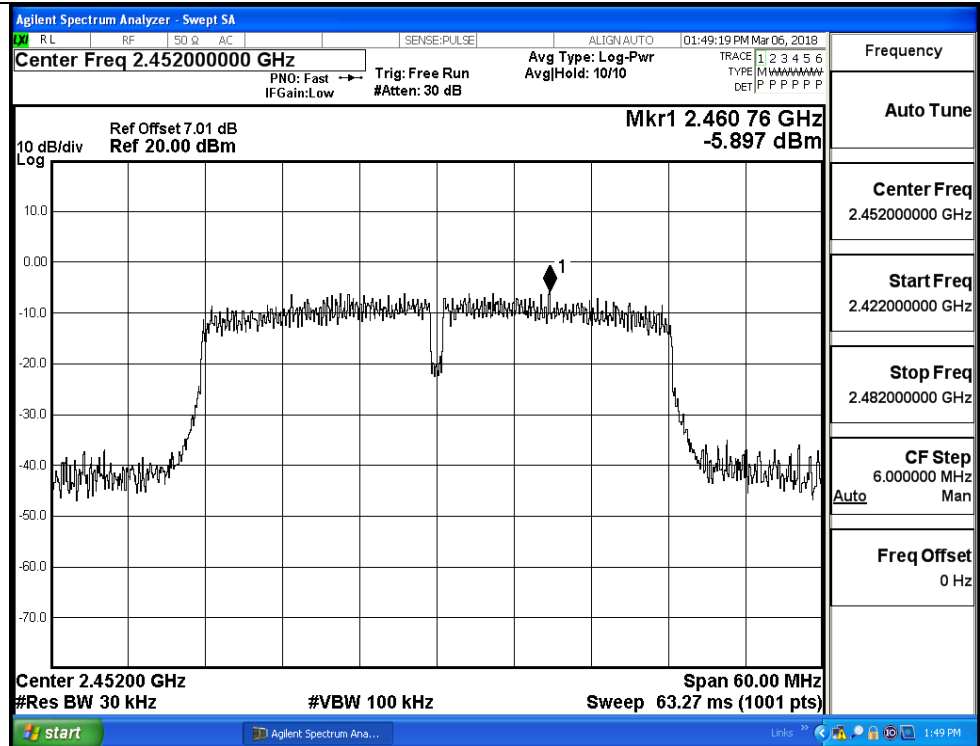
11N40SISO/LCH



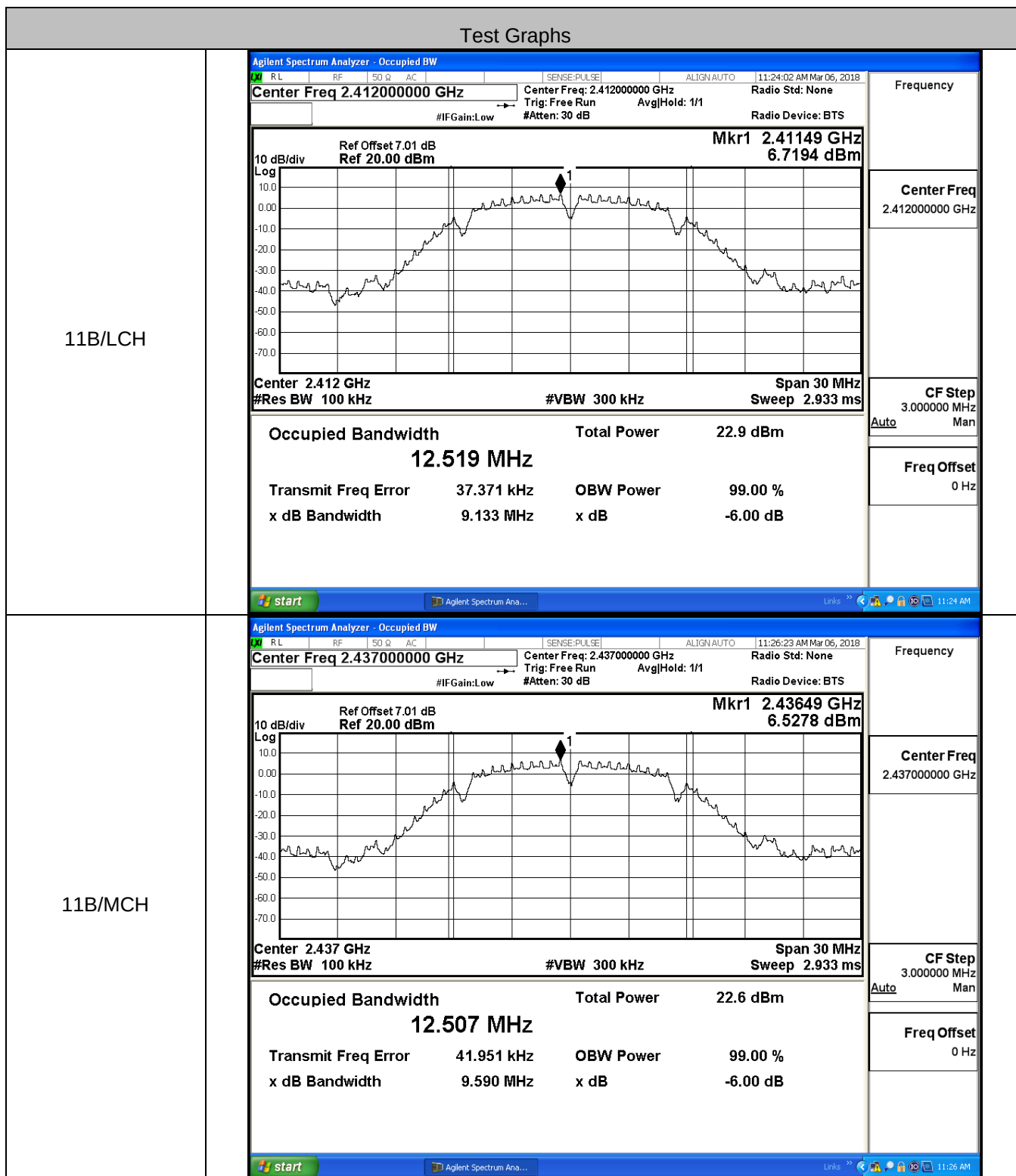
11N40SISO/MCH



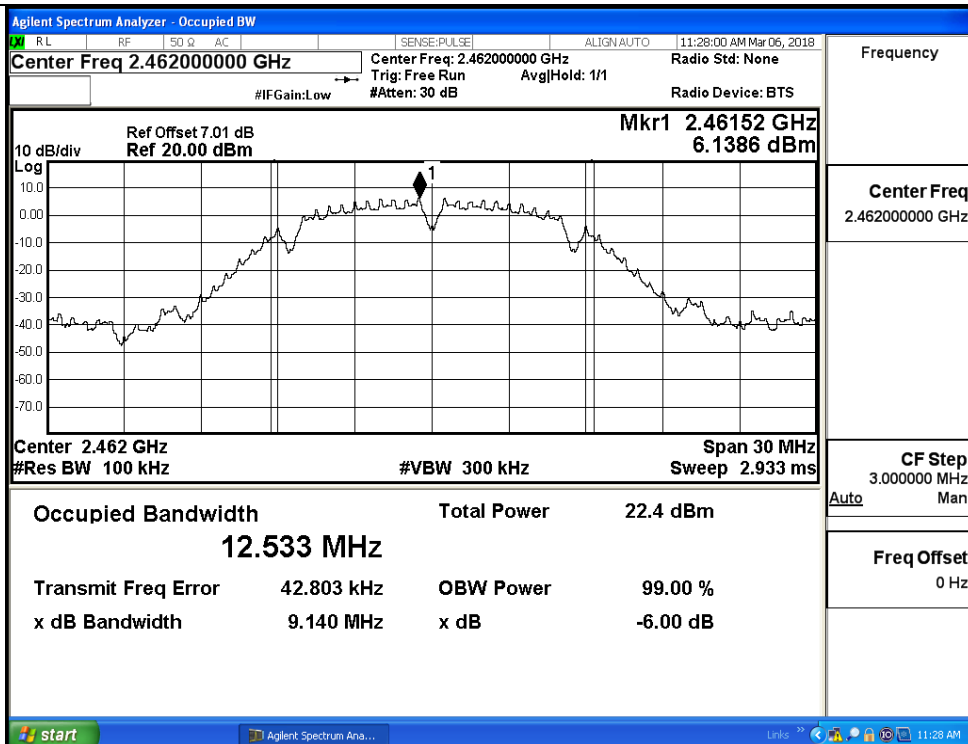
11N40SISO/HCH



B.2 6dB Bandwidth



11B/HCH



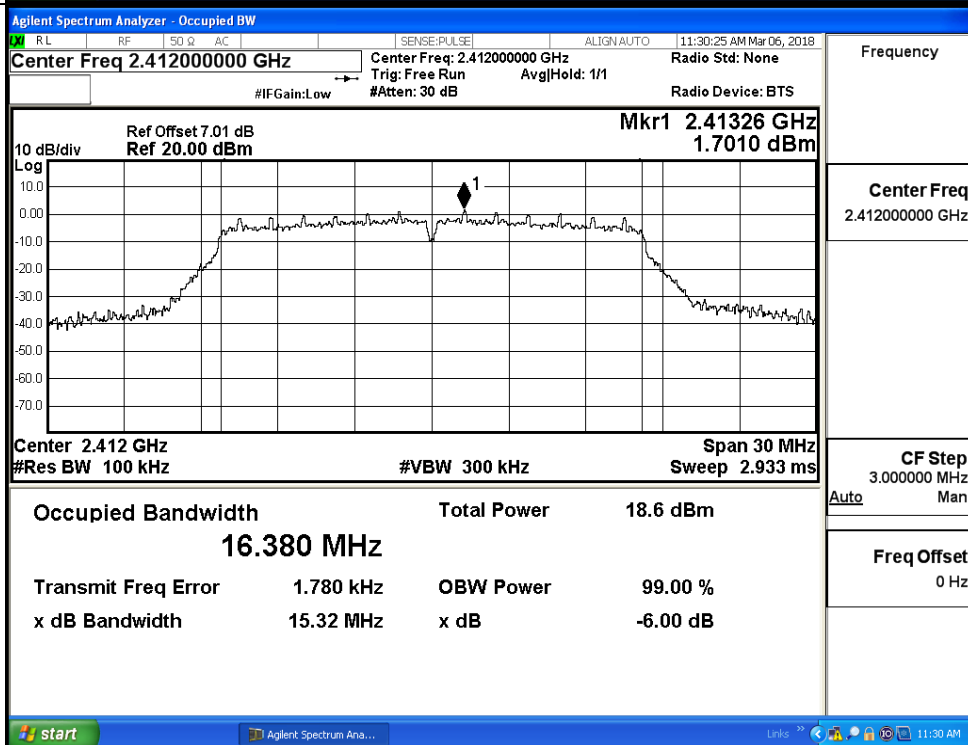
Frequency

Center Freq
2.462000000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

11G/LCH



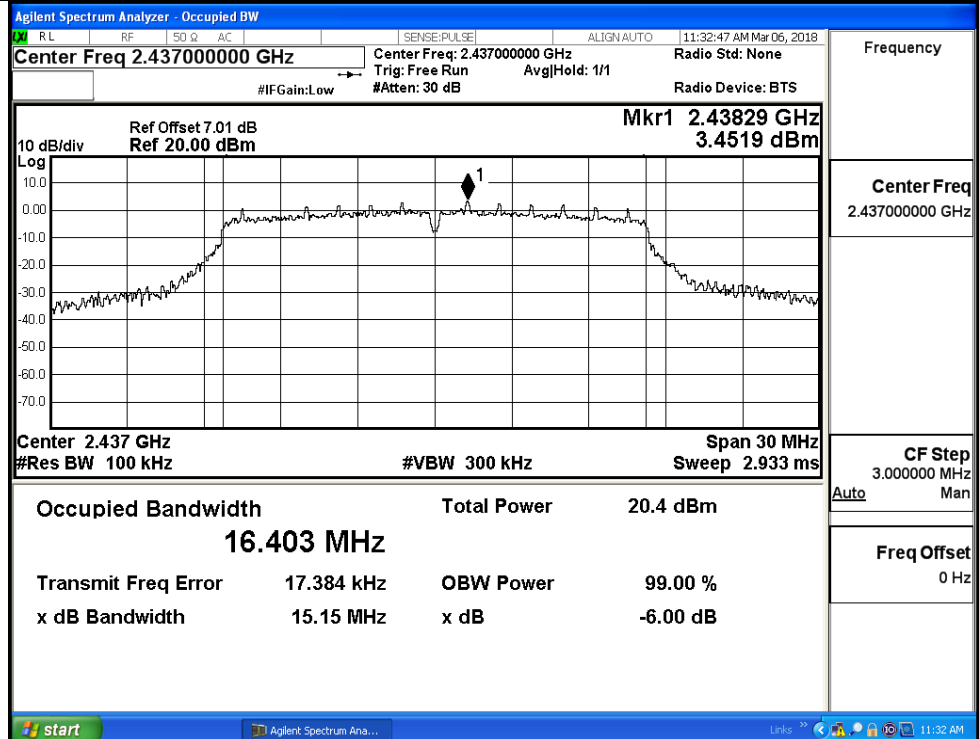
Frequency

Center Freq
2.412000000 GHz

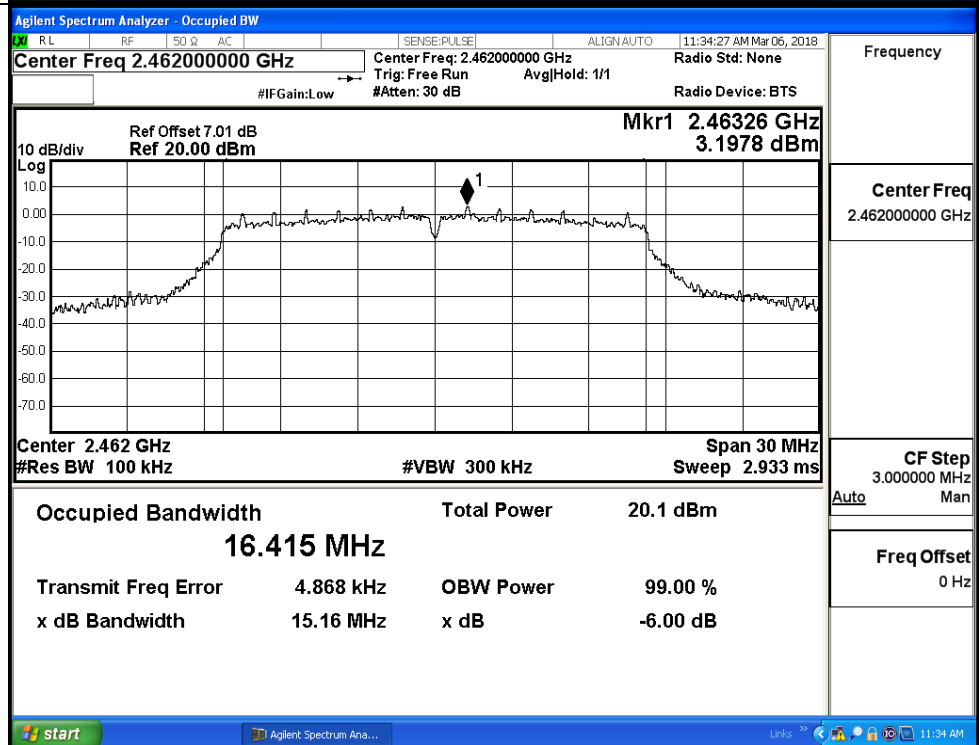
CF Step
3.000000 MHz
Auto Man

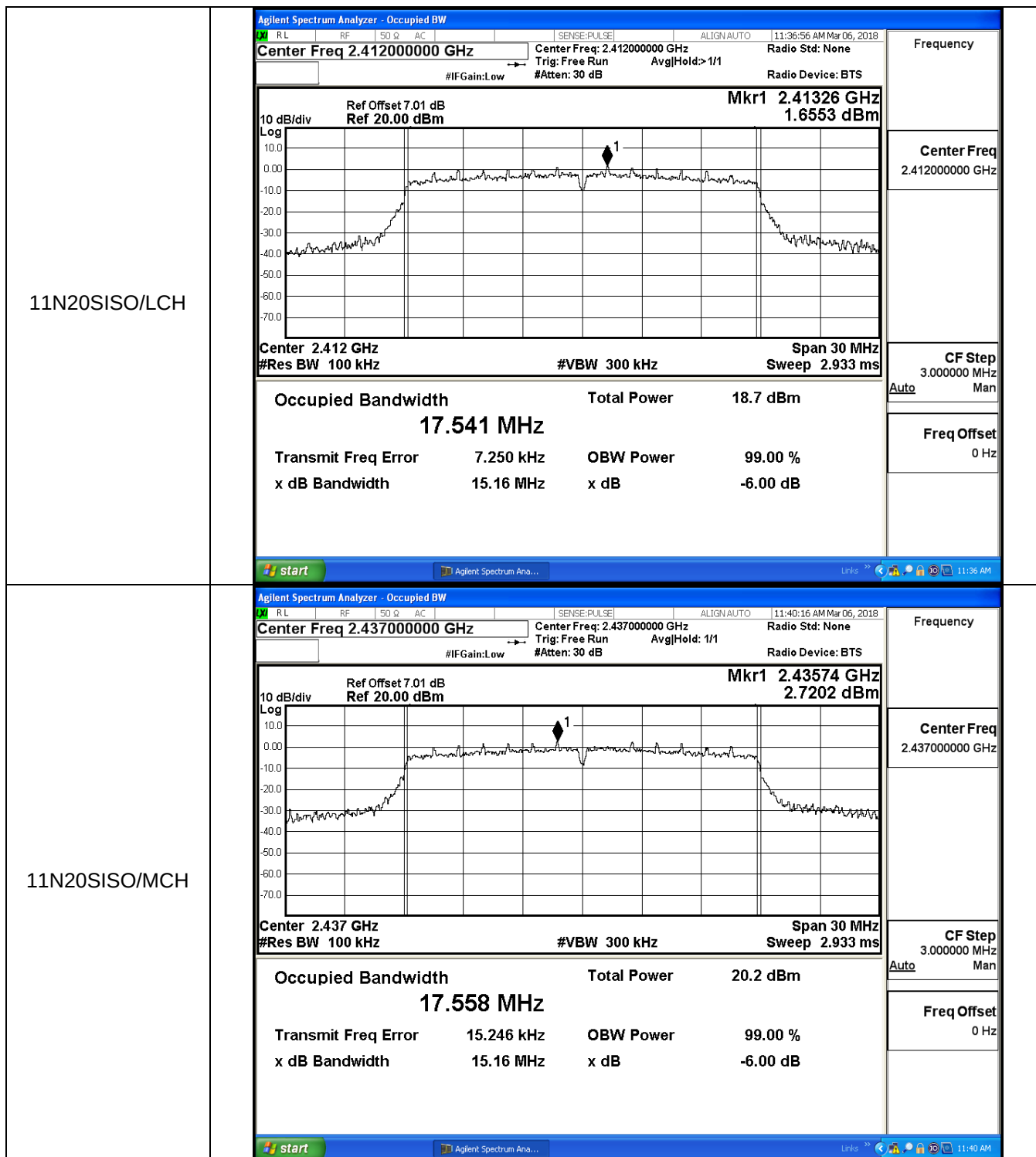
Freq Offset
0 Hz

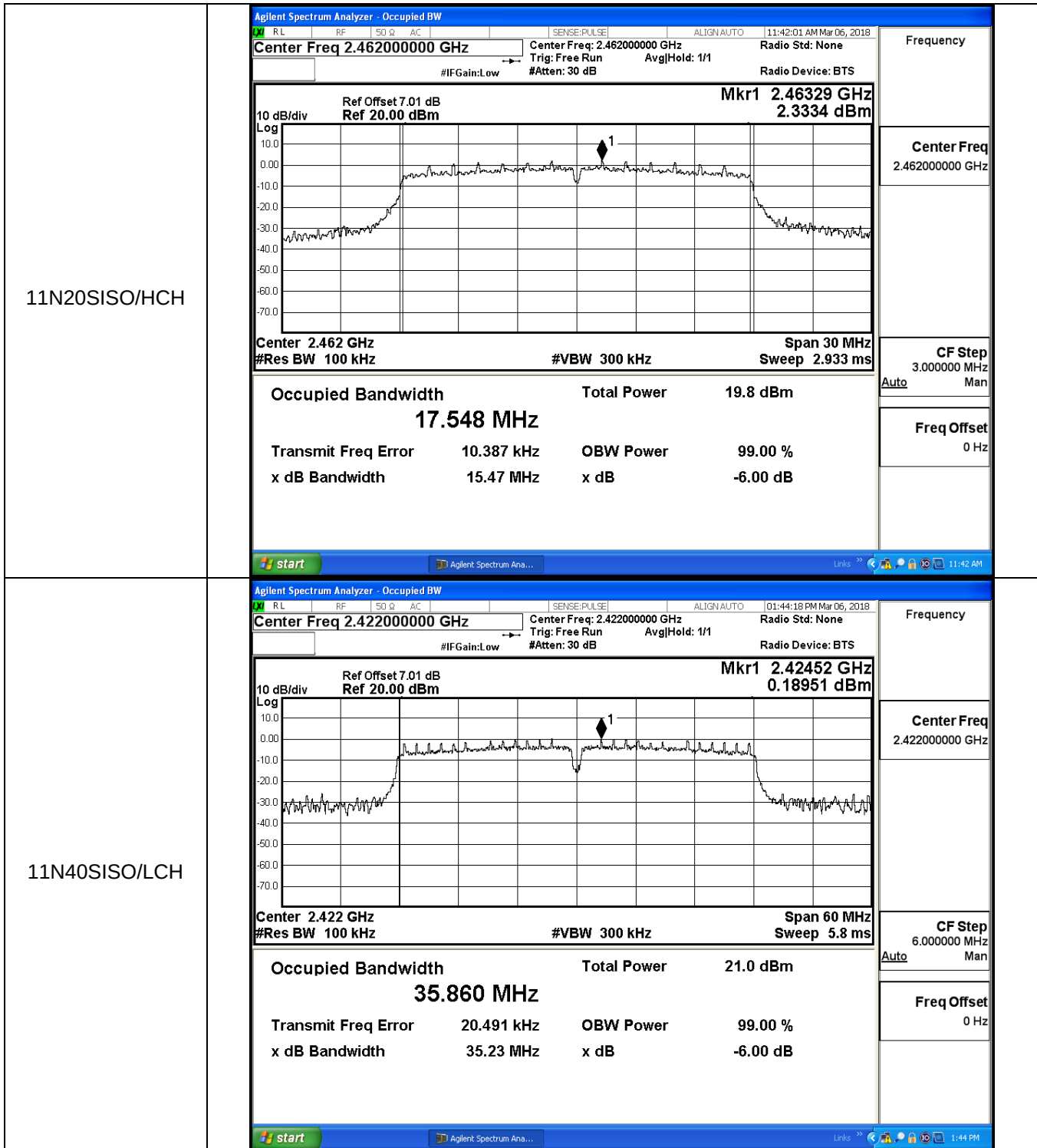
11G/MCH



11G/HCH







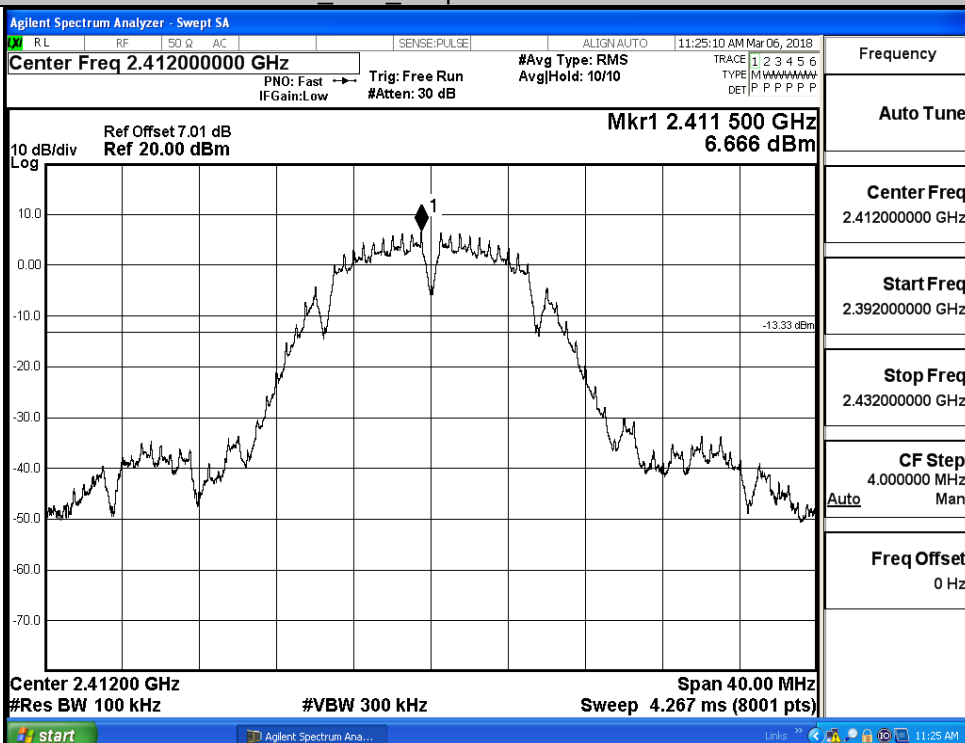
11N40SISO/MCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 01:46:53 PM Mar 06, 2018 Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None #IFGain:Low #Atten: 30 dB Radio Device: BTS 10 dB/div Ref Offset 7.01 dB Ref 20.00 dBm Mkr1 2.43448 GHz -0.57899 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 60 MHz Sweep 5.8 ms Occupied Bandwidth Total Power 20.2 dBm 35.820 MHz Transmit Freq Error 41.047 kHz OBW Power 99.00 % x dB Bandwidth 35.22 MHz x dB -6.00 dB start Agilent Spectrum Ana... Links 1:46 PM	Frequency Center Freq 2.437000000 GHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz
11N40SISO/HCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 01:48:34 PM Mar 06, 2018 Center Freq 2.452000000 GHz Center Freq: 2.452000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None #IFGain:Low #Atten: 30 dB Radio Device: BTS 10 dB/div Ref Offset 7.01 dB Ref 20.00 dBm Mkr1 2.45452 GHz -0.37522 dBm Center 2.452 GHz #Res BW 100 kHz #VBW 300 kHz Span 60 MHz Sweep 5.8 ms Occupied Bandwidth Total Power 20.4 dBm 35.794 MHz Transmit Freq Error 16.722 kHz OBW Power 99.00 % x dB Bandwidth 35.23 MHz x dB -6.00 dB start Agilent Spectrum Ana... Links 1:48 PM	Frequency Center Freq 2.452000000 GHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz

B.3 RF Conducted Spurious Emissions

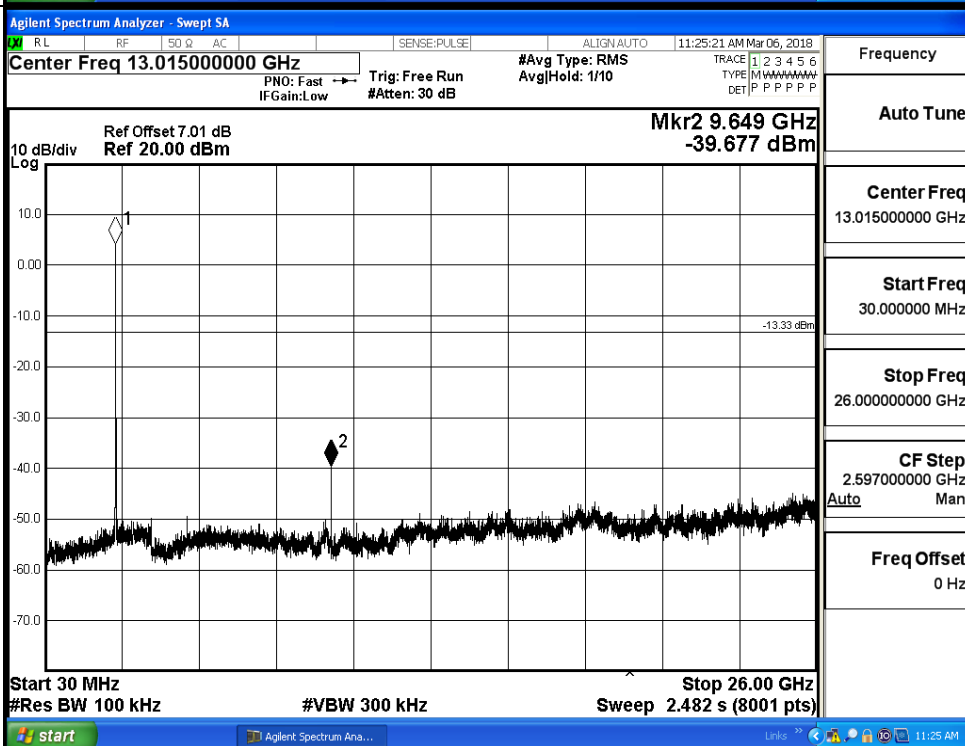
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	6.666	-39.677	-13.334	PASS
	MCH	6.648	-41.547	-13.352	PASS
	HCH	6.354	-44.379	-13.646	PASS
11G	LCH	1.343	-44.645	-18.657	PASS
	MCH	3.369	-44.655	-16.631	PASS
	HCH	2.613	-44.607	-17.387	PASS
11N20 SISO	LCH	1.235	-44.833	-18.765	PASS
	MCH	3.197	-44.633	-16.803	PASS
	HCH	2.781	-44.615	-17.219	PASS
11N40 SISO	LCH	0.333	-45.259	-19.667	PASS
	MCH	-0.527	-44.937	-20.527	PASS
	HCH	-0.359	-44.543	-20.359	PASS

11B LCH Graphs

Pref/11B/LCH

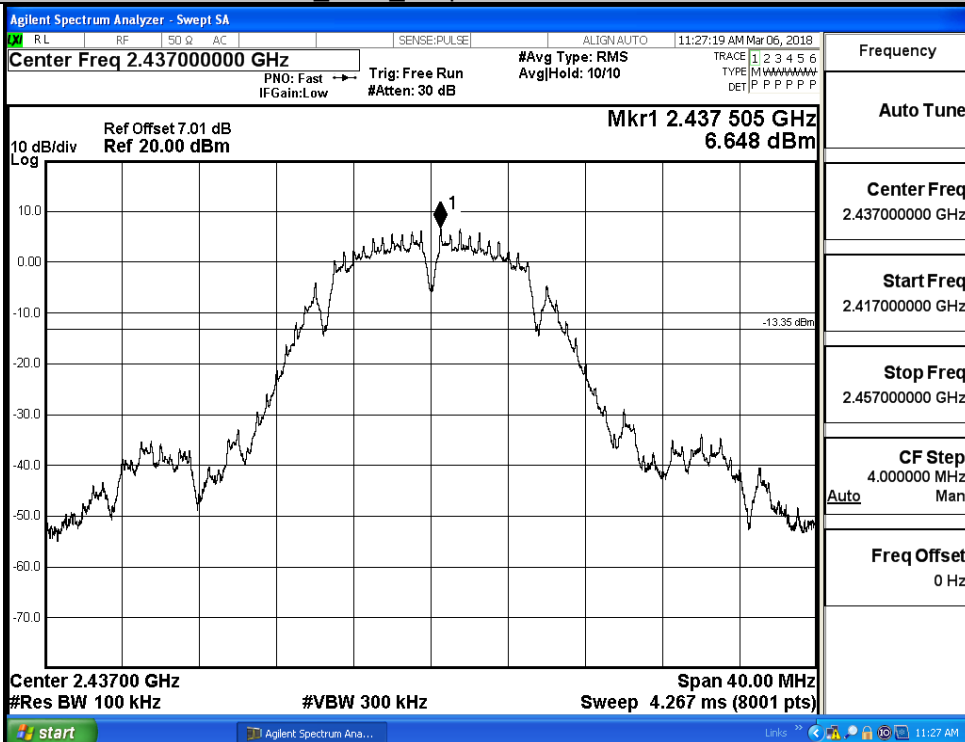


Puw/11B/LCH

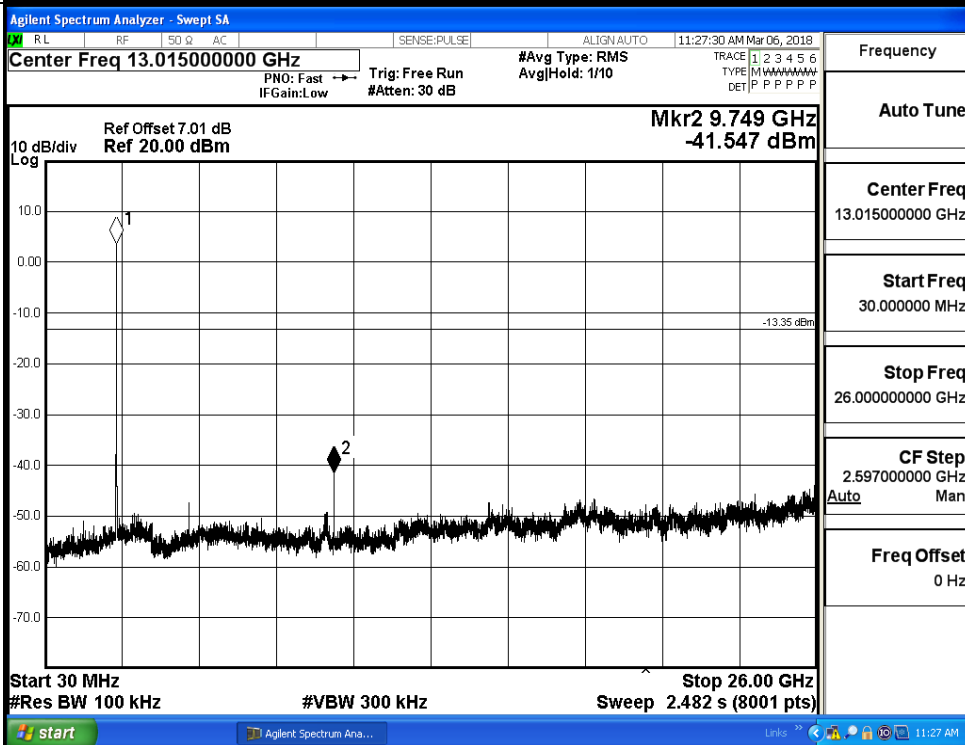


11B MCH Graphs

Pref/11B/MCH

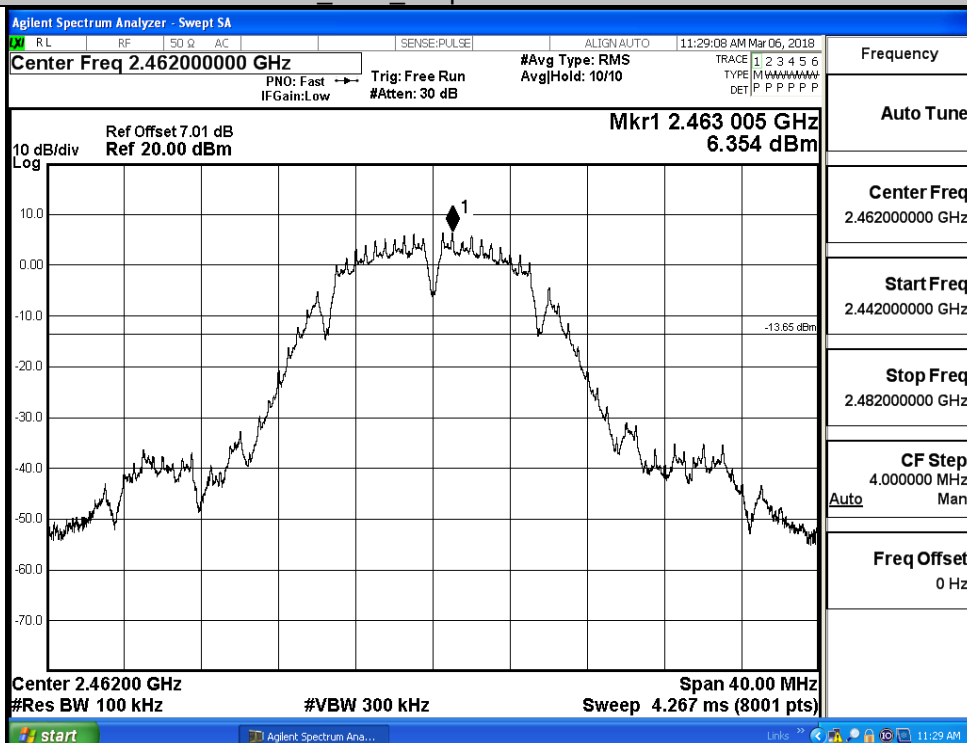


Puw/11B/MCH

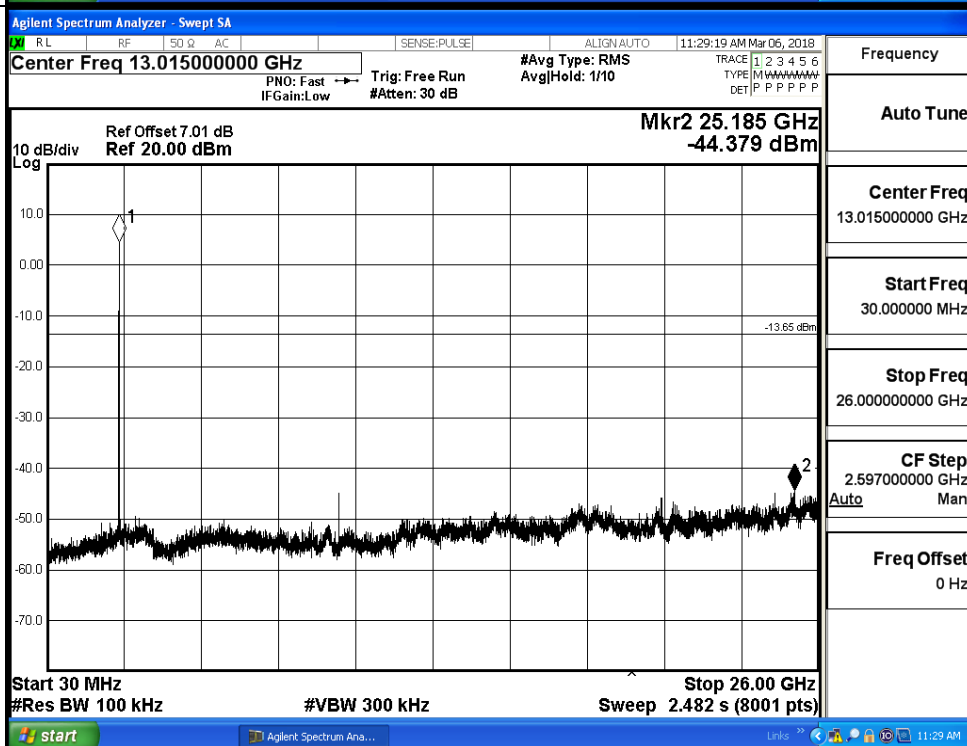


11B HCH Graphs

Pref/11B/HCH

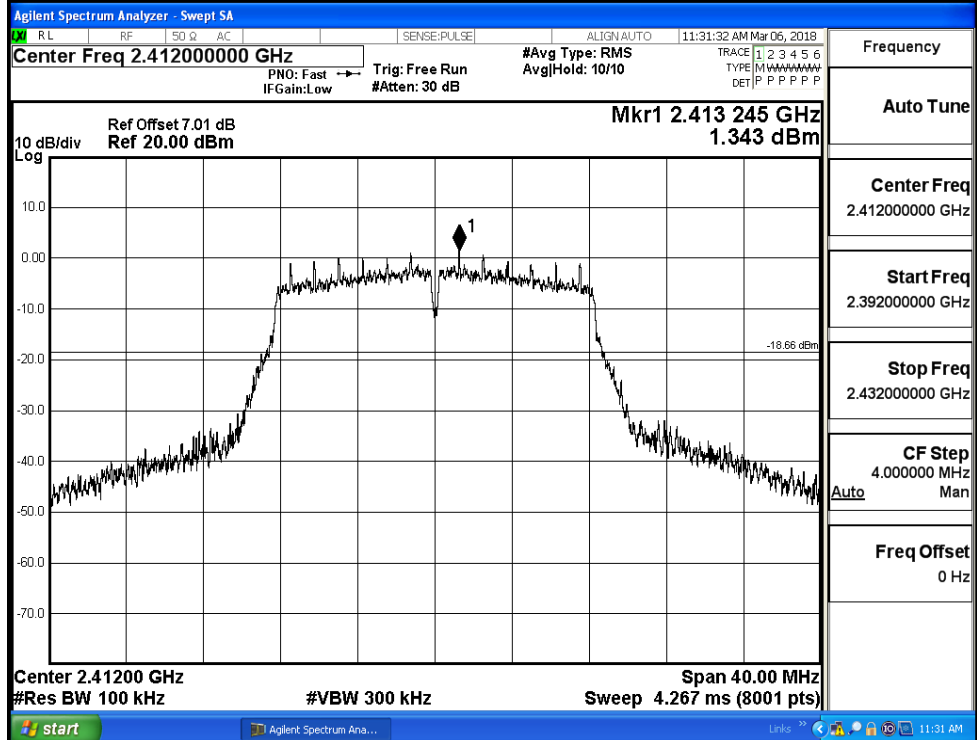


Puw/11B/HCH

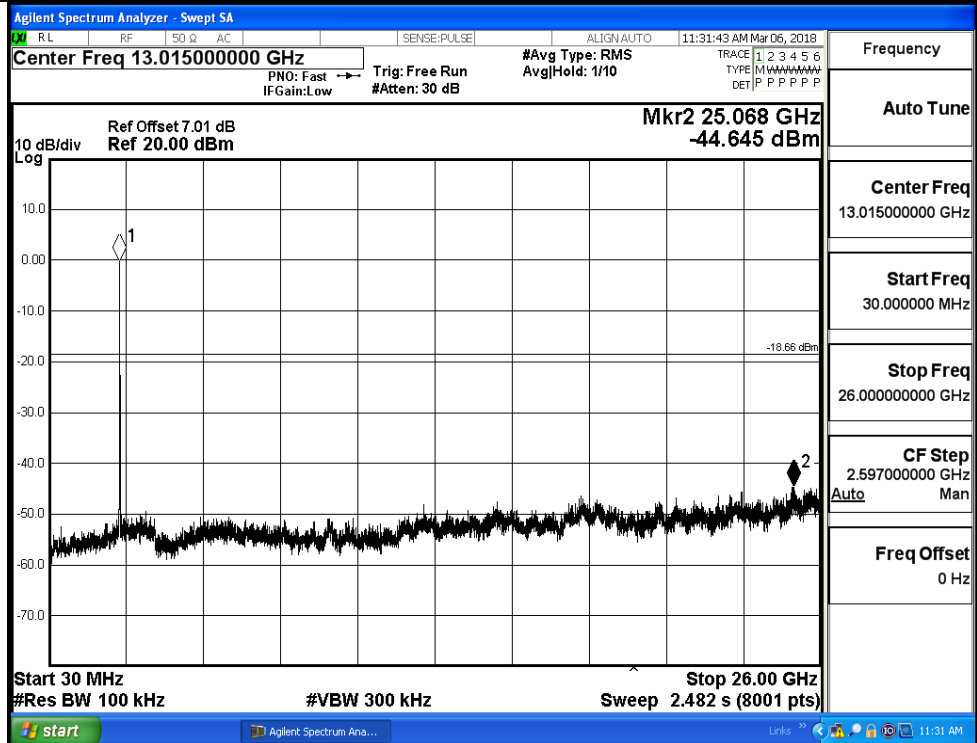


11G LCH Graphs

Pref/11G/LCH

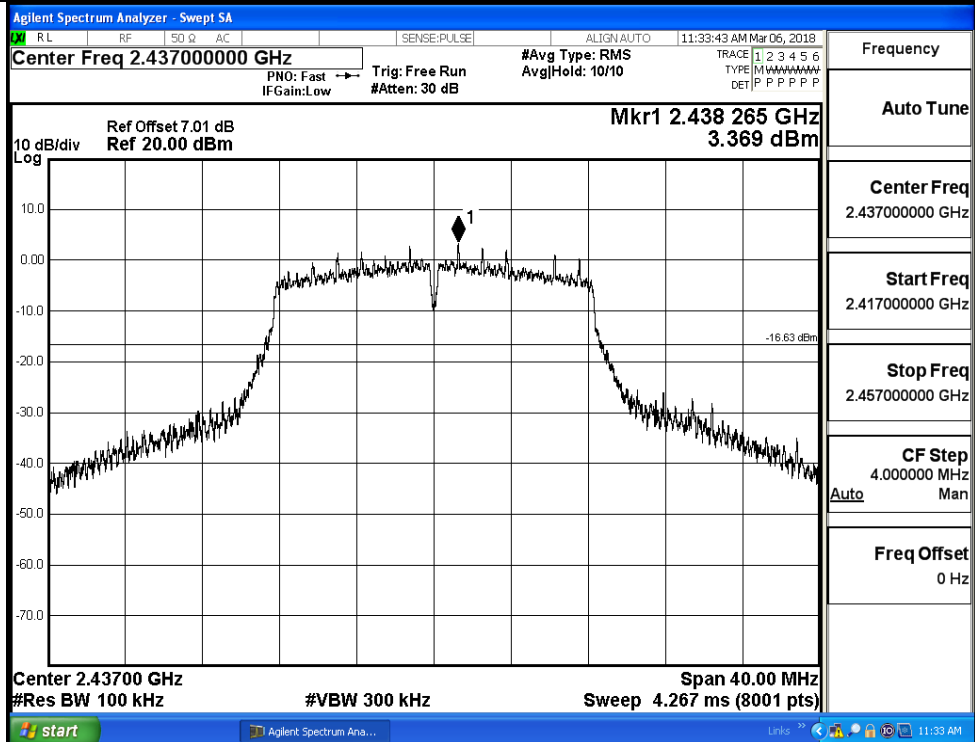


Puw/11G/LCH

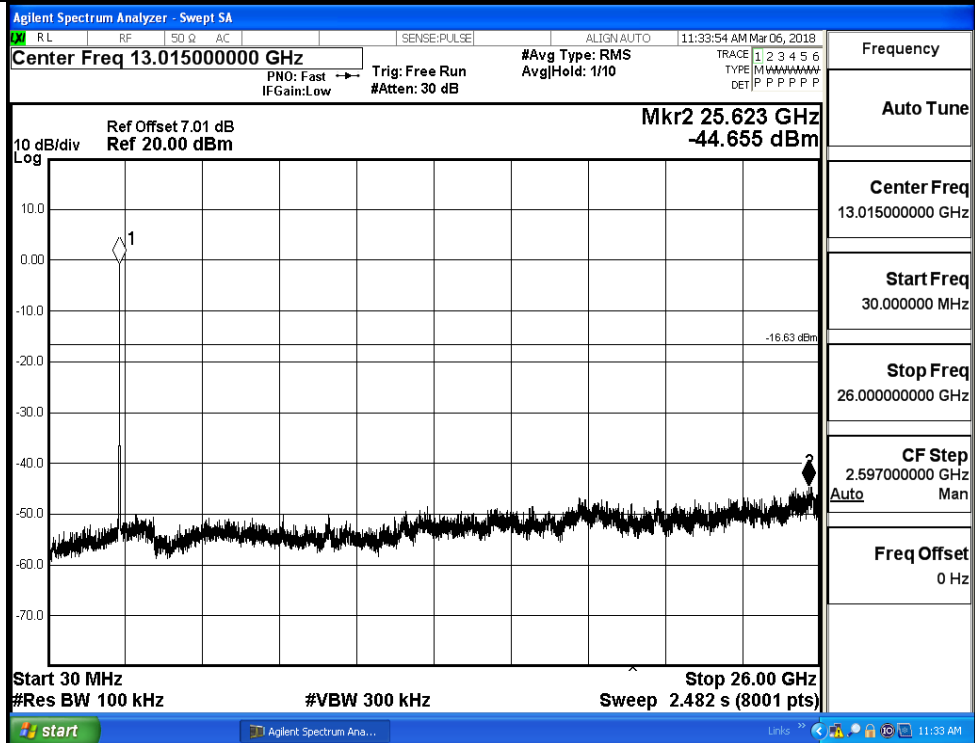


11G MCH Graphs

Pref/11G/MCH

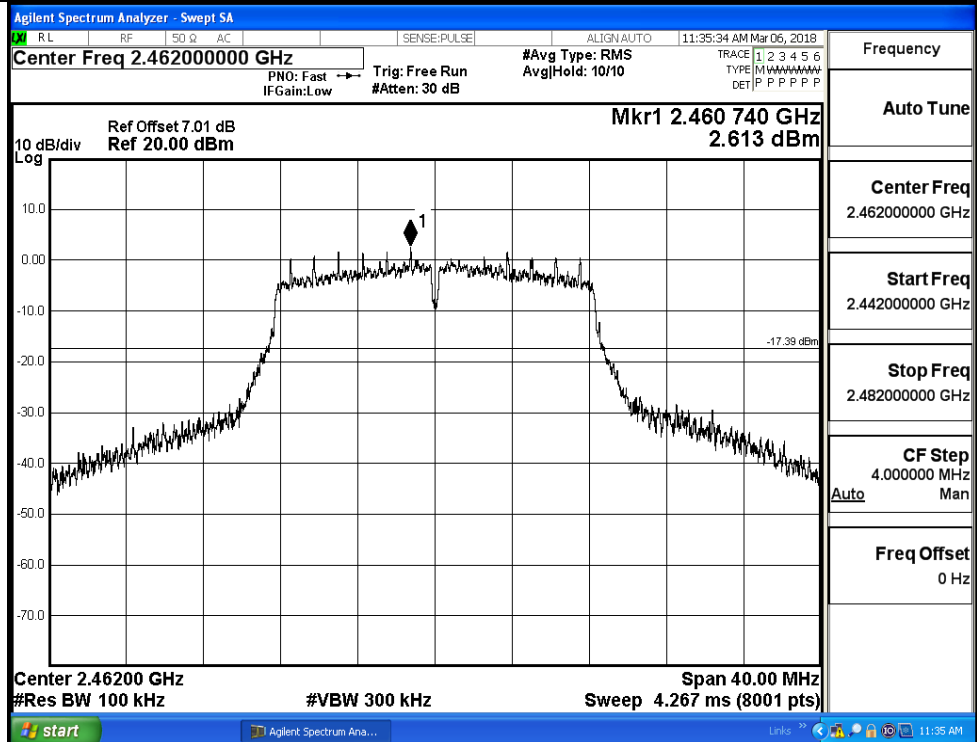


Puw/11G/MCH

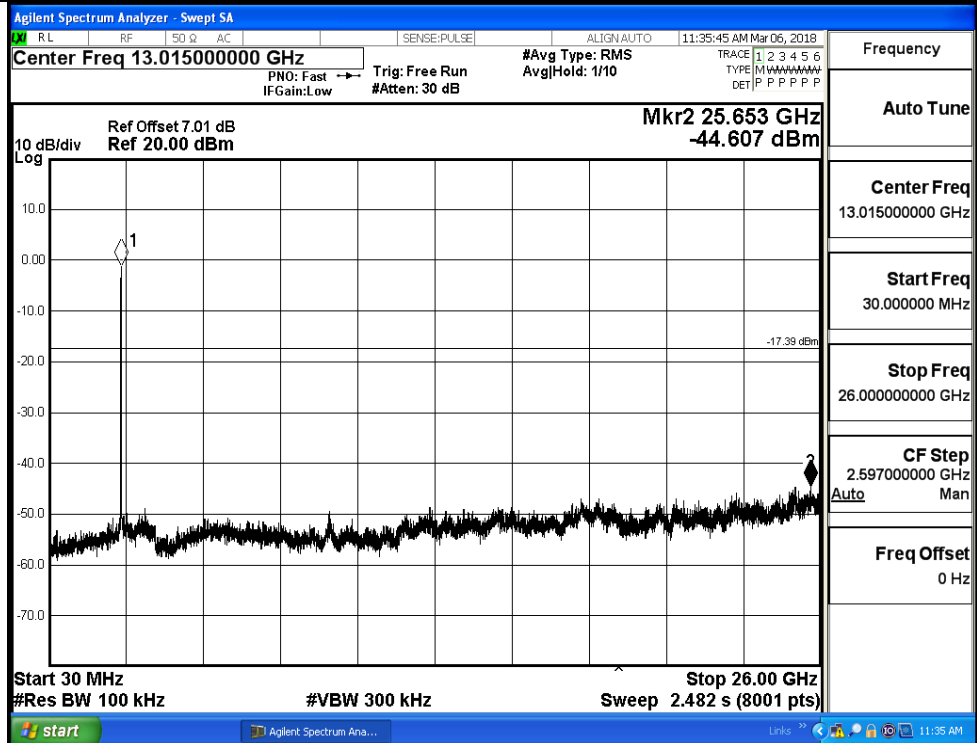


11G HCH Graphs

Pref/11G/HCH

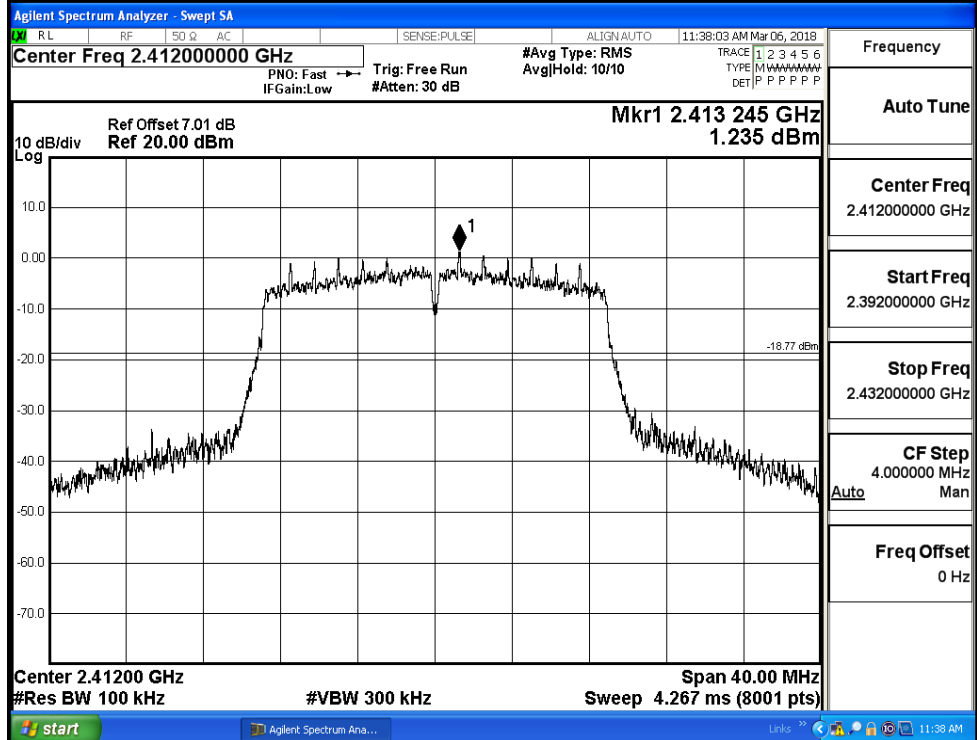


Puw/11G/HCH

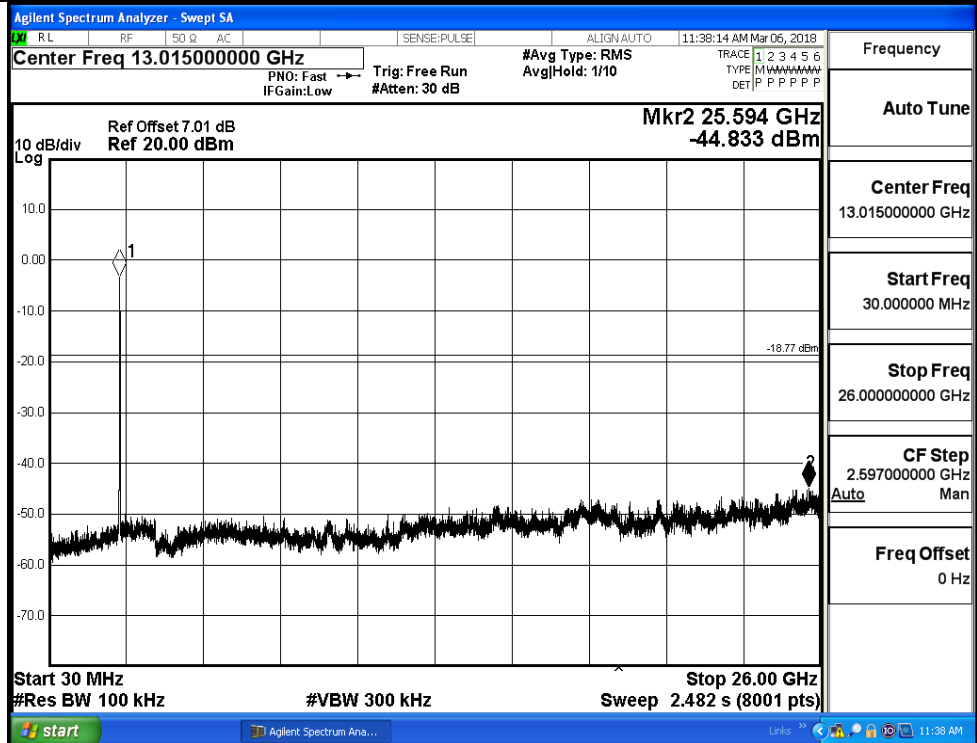


11N20SISO LCH Graphs

Pref/11N20SIS
O/LCH

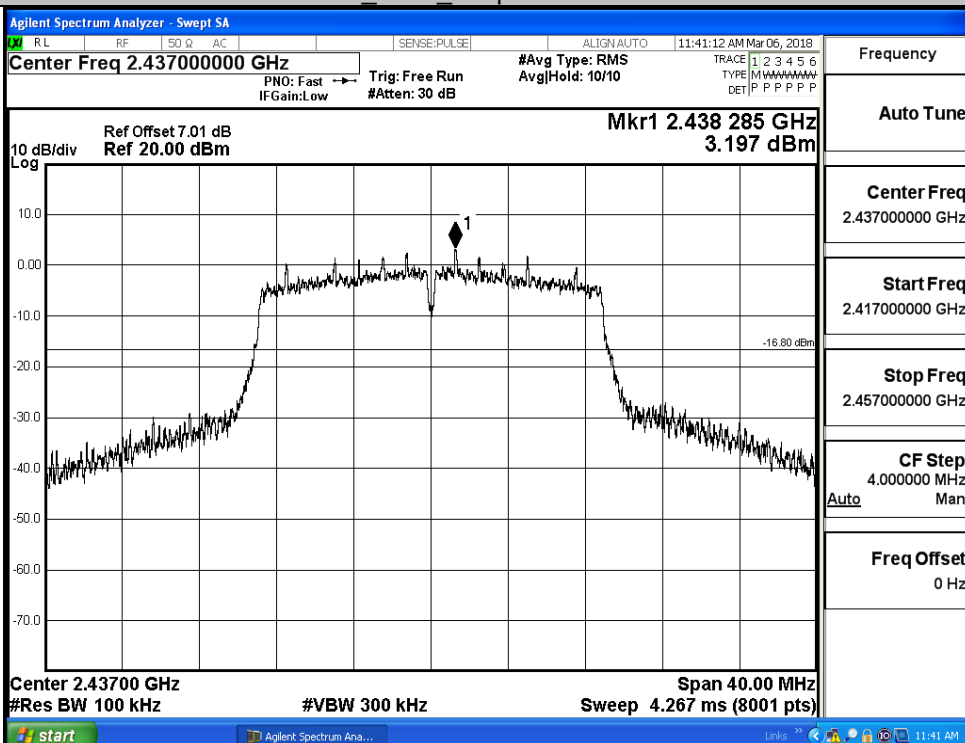


Puw/11N20
SISO/LCH

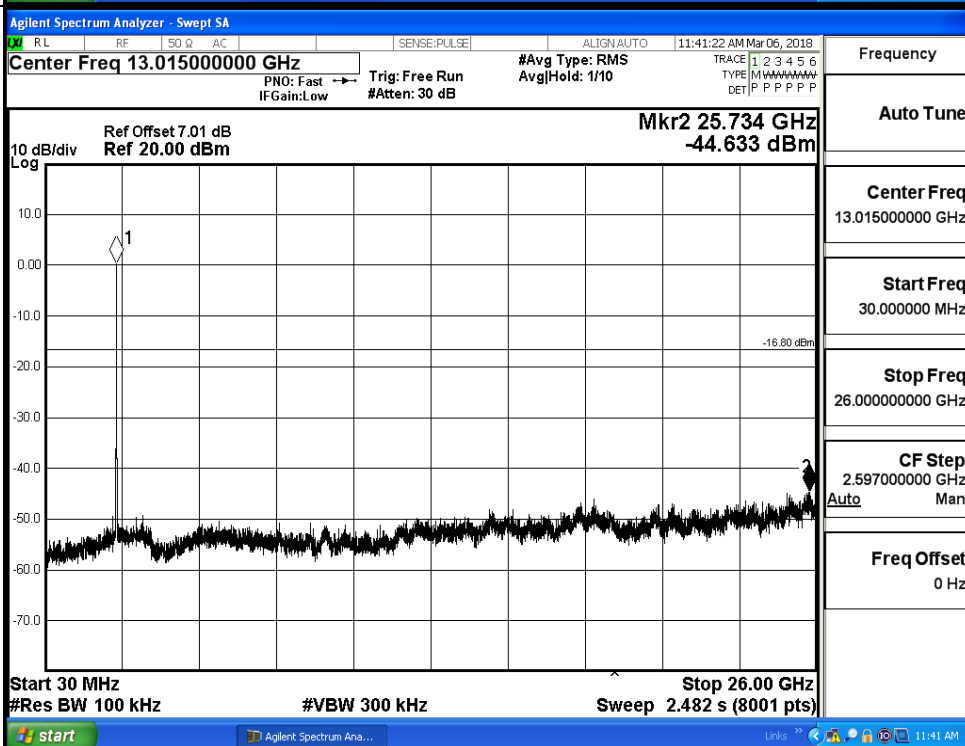


11N20SISO MCH Graphs

Pref/11N20
SISO/MCH

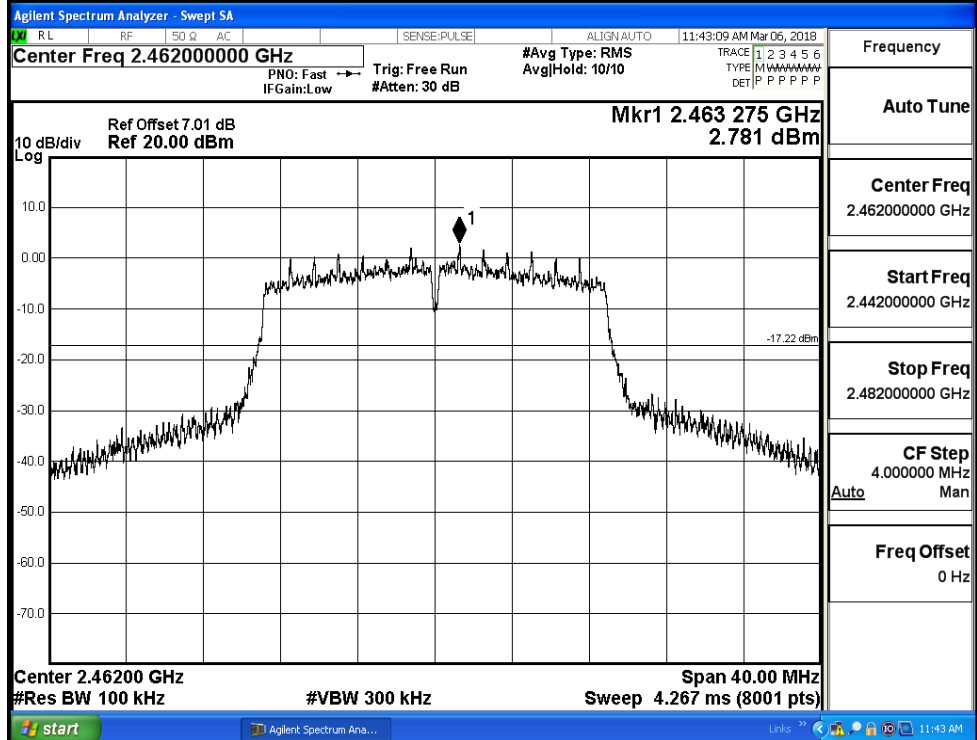


Puw/11N20
SISO/MCH

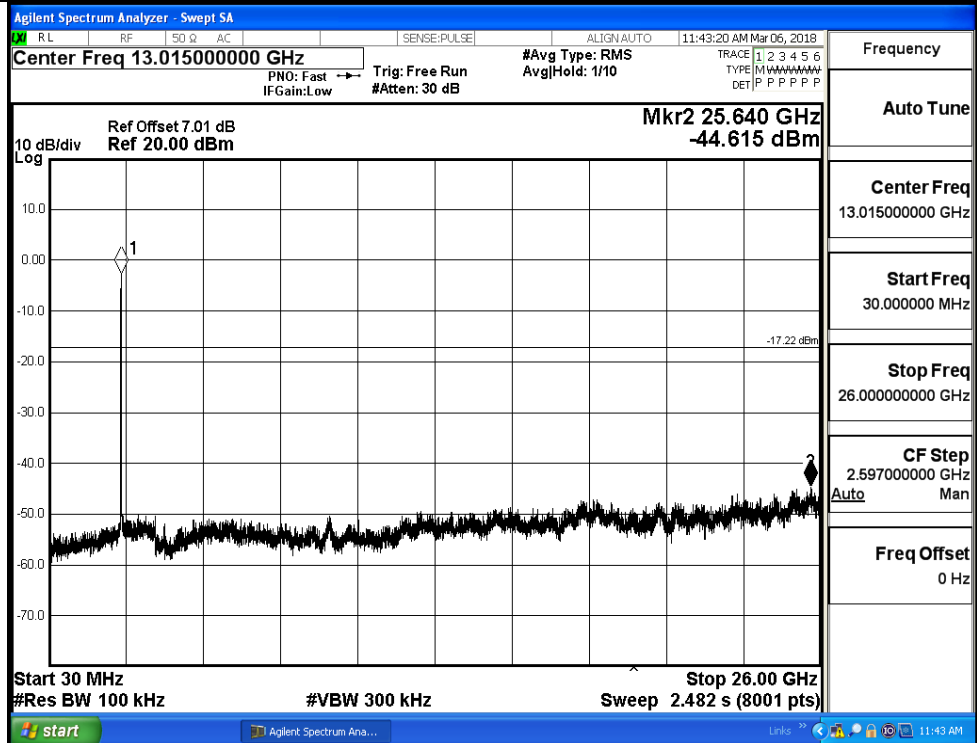


11N20SISO HCH Graphs

Pref/11N20
SISO/HCH

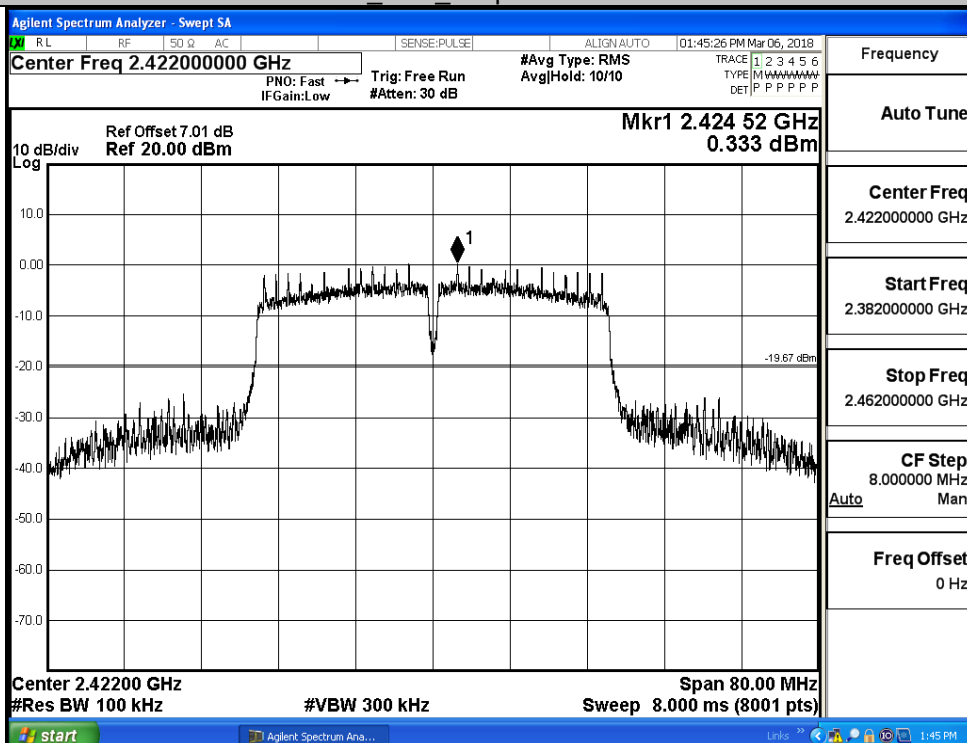


Puw/11N20
SISO/HCH

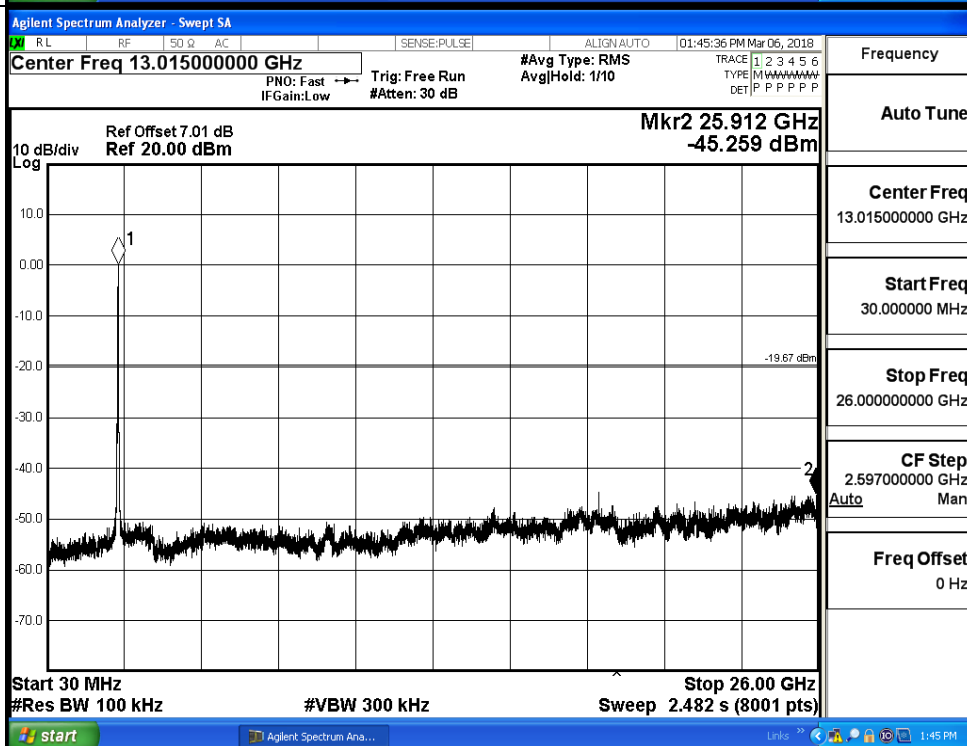


11N40SISO LCH Graphs

Pref/11N40
SISO/LCH

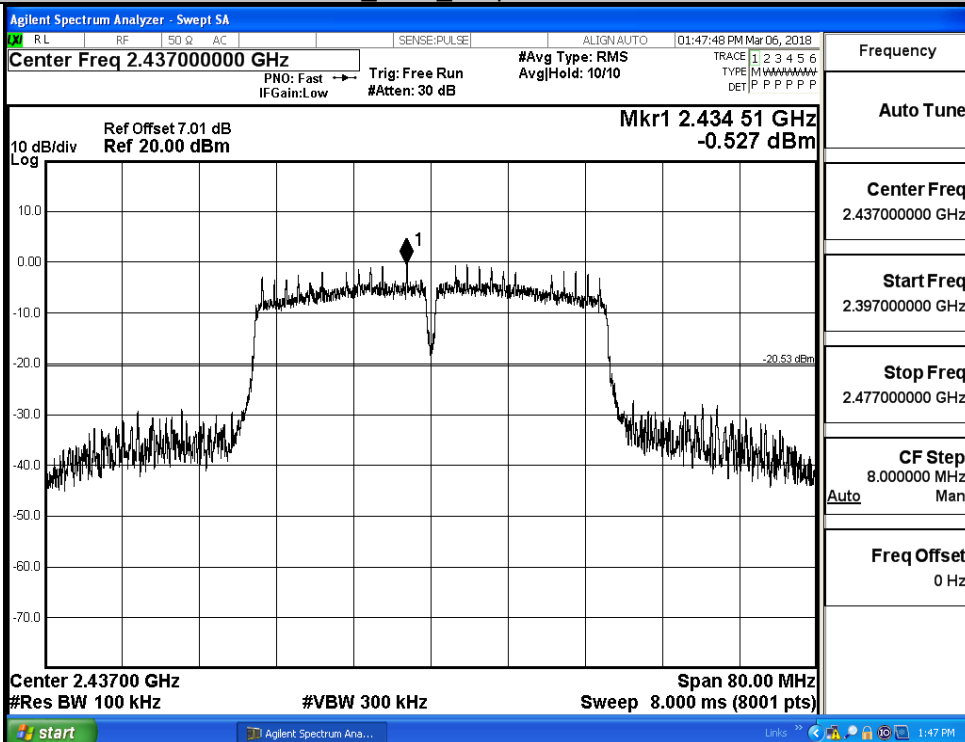


Puw/11N40
SISO/LCH

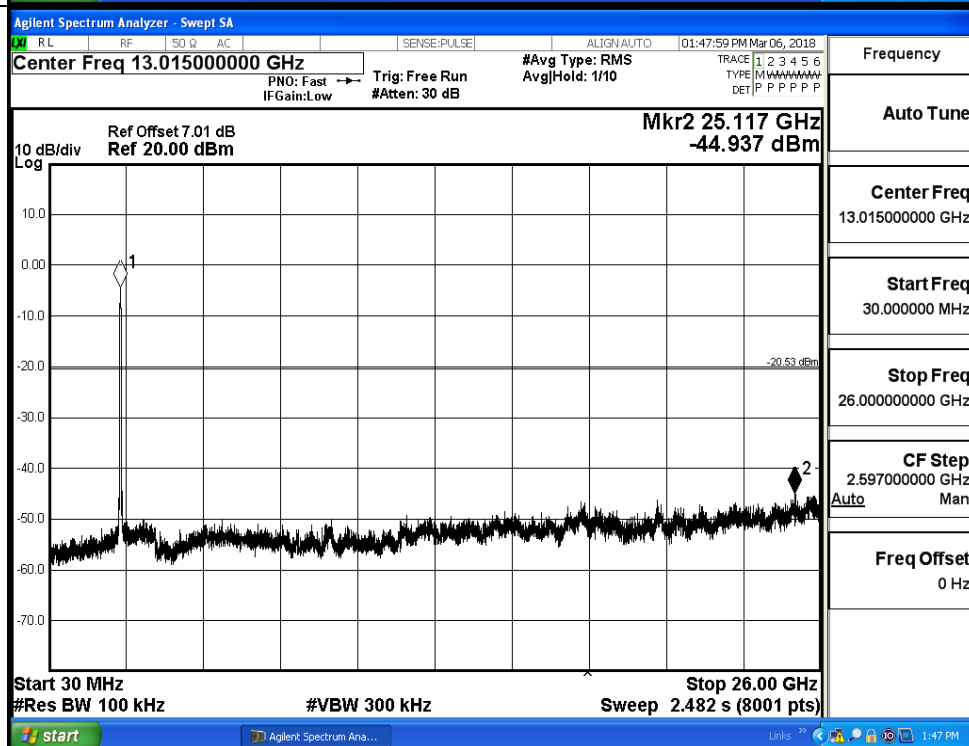


11N40SISO MCH_Graphs

Pref/11N40
SISO/MCH

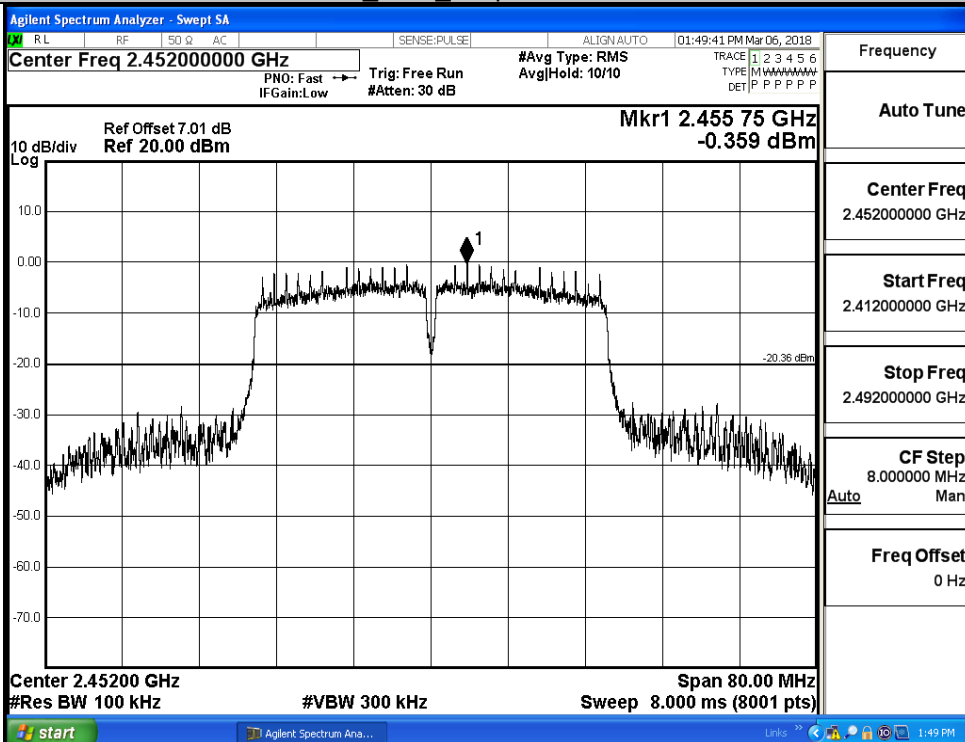


Puw/11N40
SISO/MCH

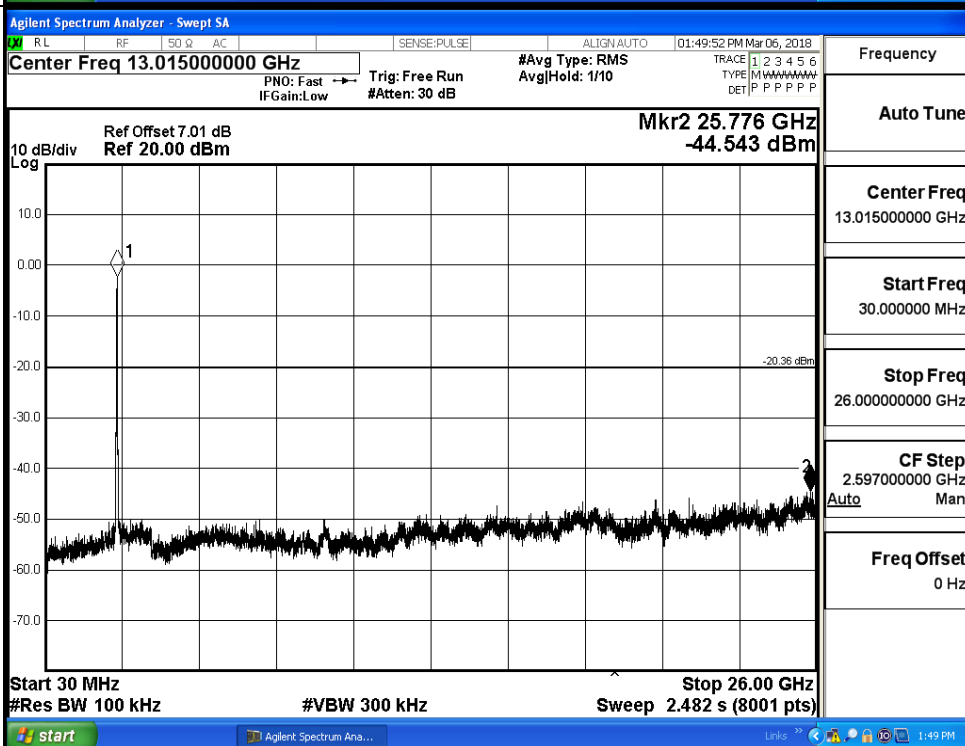


11N40SISO HCH Graphs

Pref/11N40
SISO/HCH

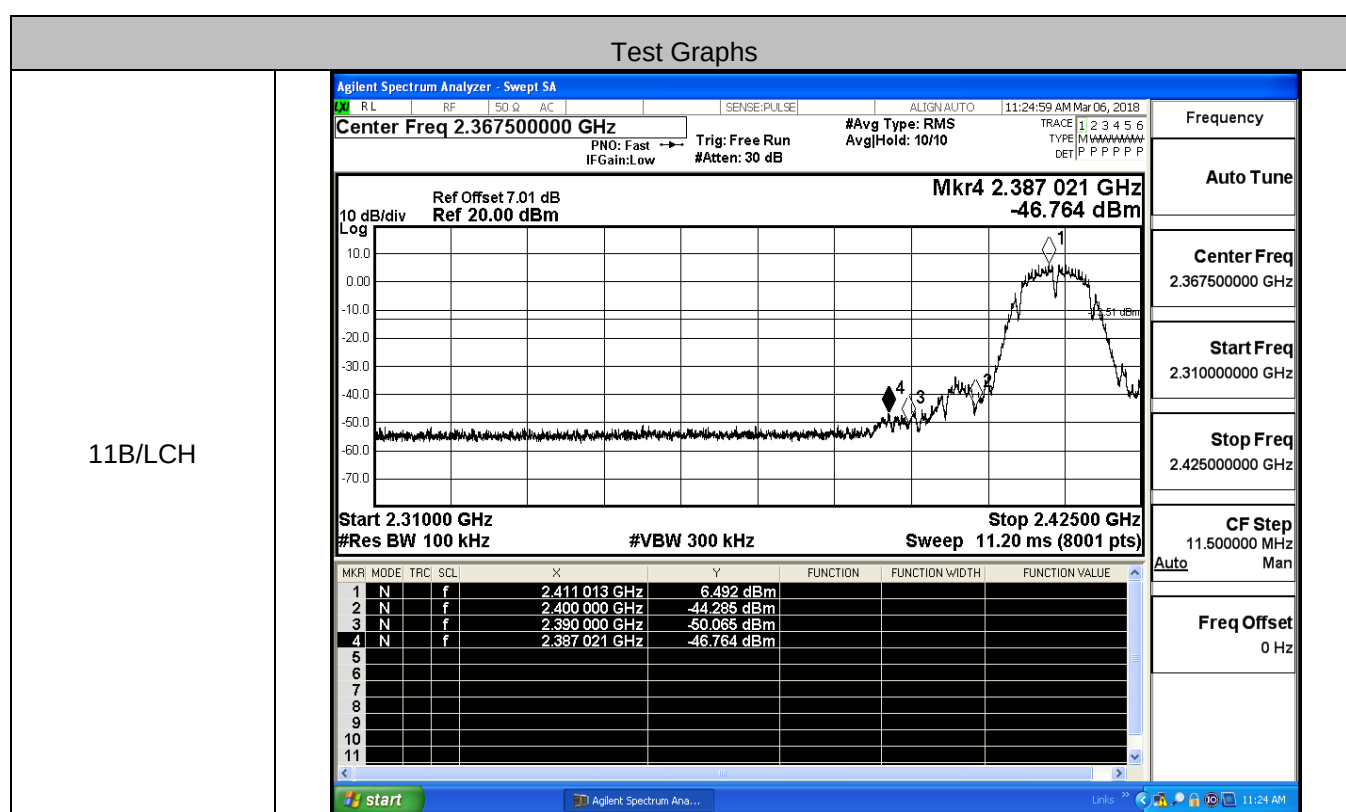


Puw/11N40
SISO/HCH

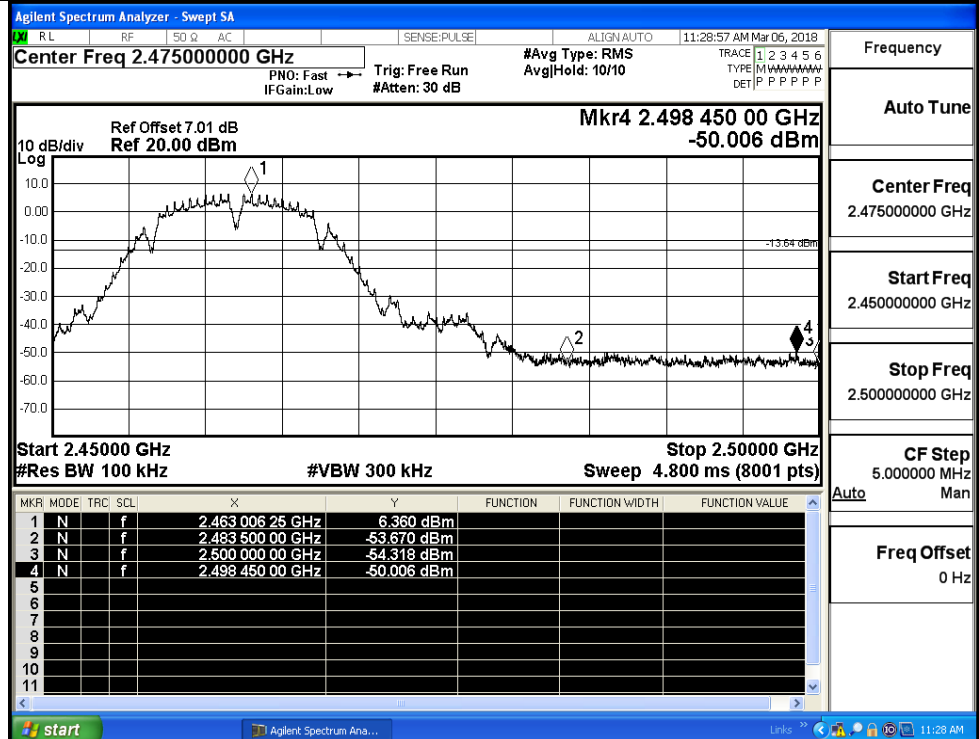


B.4 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	6.492	-46.764	-13.51	PASS
	HCH	6.360	-50.006	-13.64	PASS
11G	LCH	0.767	-46.097	-19.23	PASS
	HCH	3.030	-42.930	-16.97	PASS
11N20SISO	LCH	1.671	-45.705	-18.33	PASS
	HCH	2.024	-41.697	-17.98	PASS
11N40SISO	LCH	0.349	-30.482	-19.65	PASS
	HCH	-0.399	-31.118	-20.4	PASS



11B/HCH

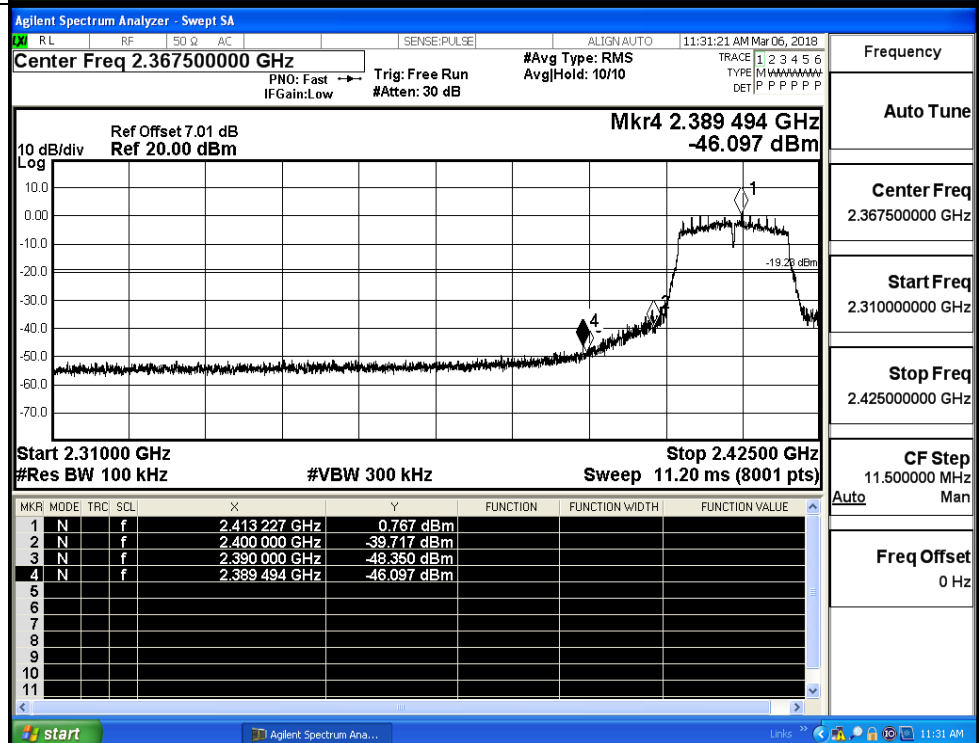


Frequency

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

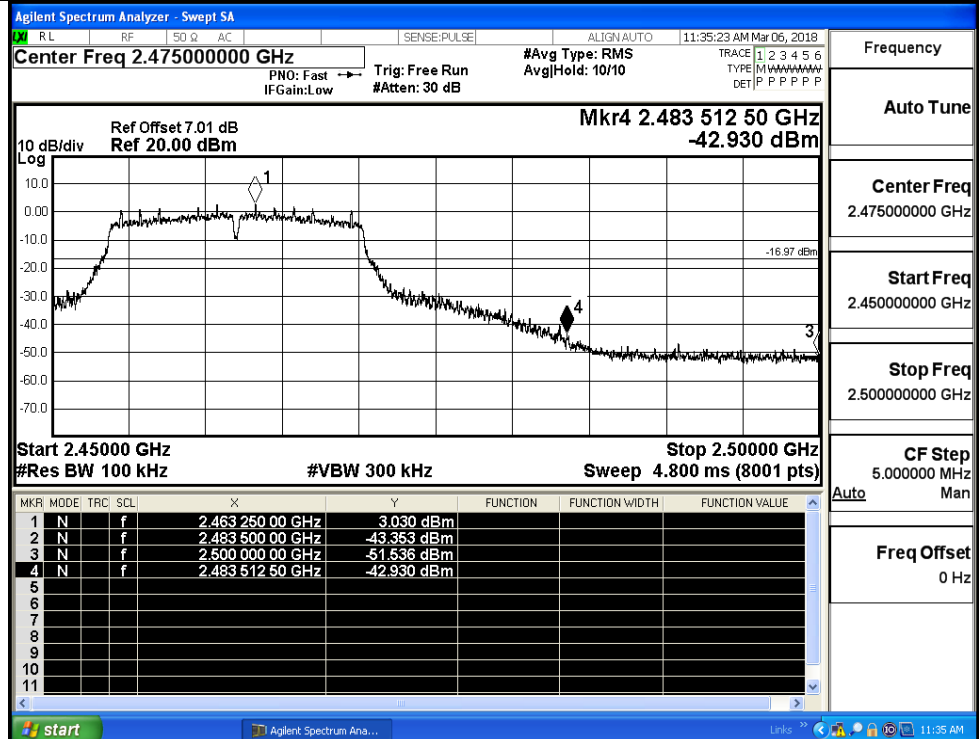


Frequency

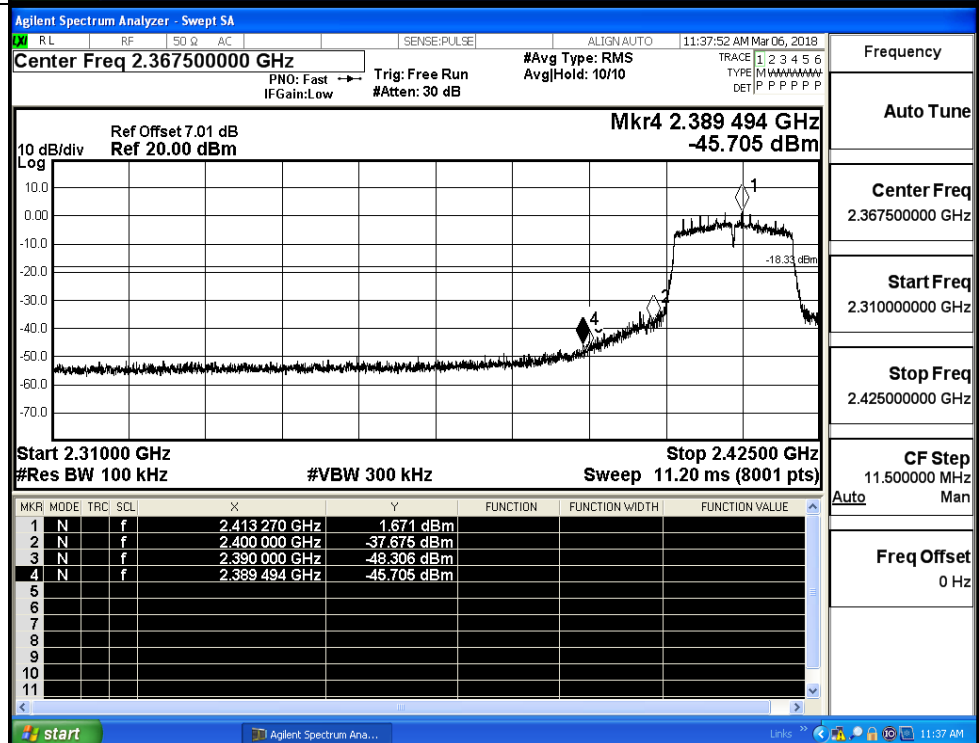
Auto Tune

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

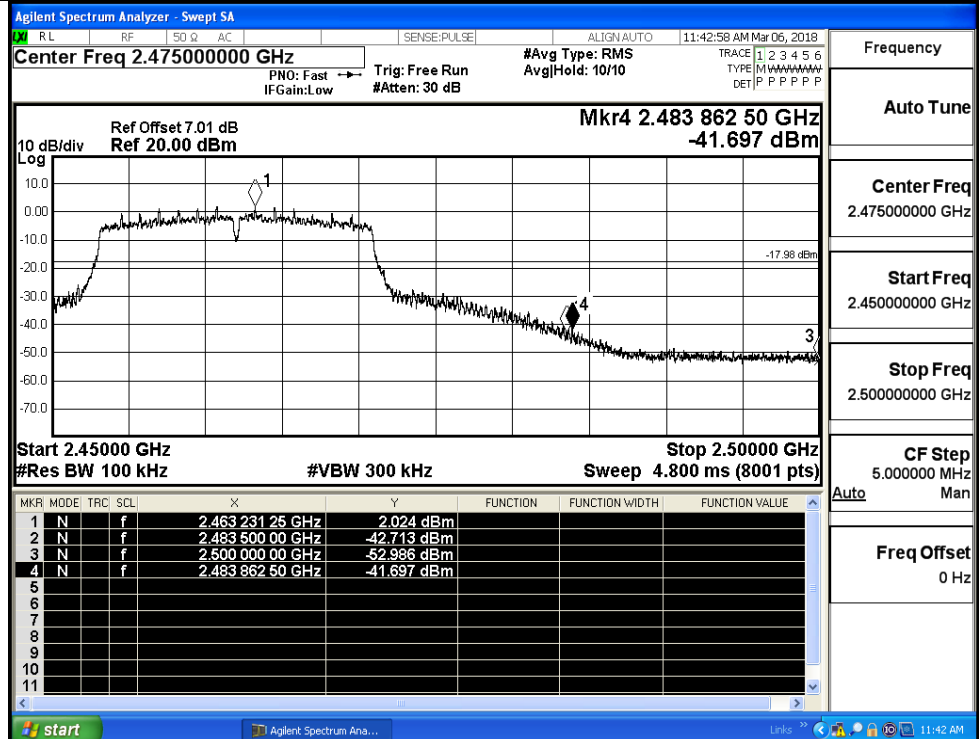
11G/HCH



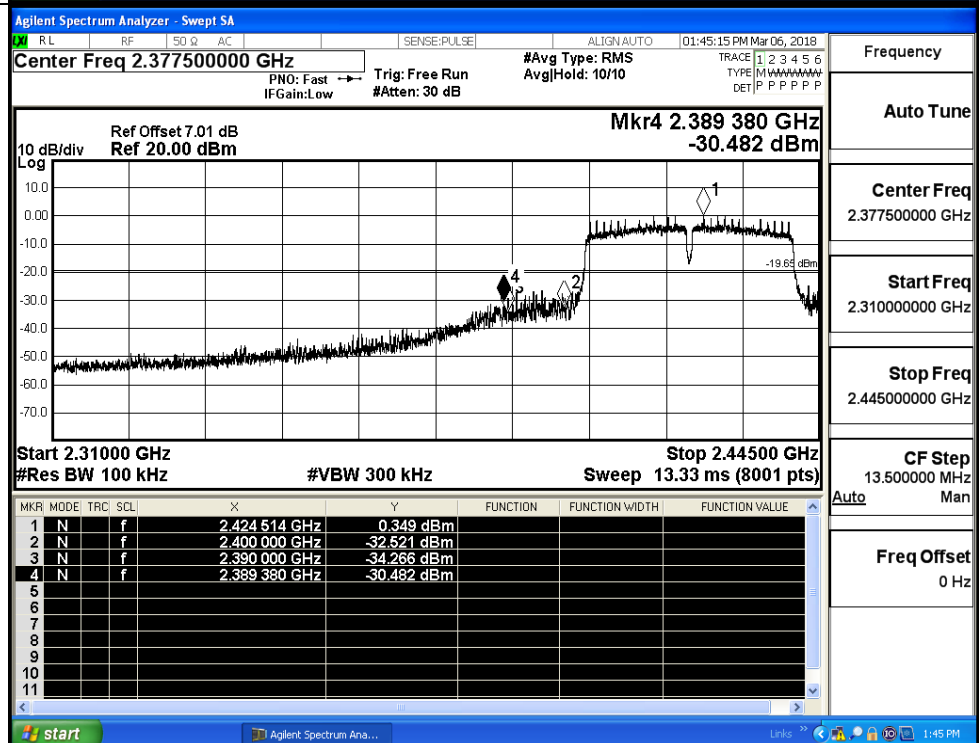
11N20SISO/LCH



11N20SISO/HCH



11N40SISO/LCH



Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE: PULSE ALIGN: AUTO 01:49:30 PM Mar 06, 2018

Center Freq 2.465000000 GHz PNO: Fast Trg: Free Run #Avg Type: RMS Avg|Hold: 10/10 TYPE 1 2 3 4 5 6
IF Gain: Low #Atten: 30 dB DET P P P P P P

Frequency

Auto Tune

Center Freq 2.465000000 GHz

Start Freq 2.430000000 GHz

Stop Freq 2.500000000 GHz

CF Step 7.000000 MHz

Auto Man

Freq Offset 0 Hz

Ref Offset 7.01 dB
Ref 20.00 dBm

Mkr4 2.484 600 00 GHz
-31.118 dBm

10 dB/div
Log

1

4

-20.40 dBm

Start 2.43000 GHz
#Res BW 100 kHz

Stop 2.50000 GHz
Sweep 6.933 ms (8001 pts)

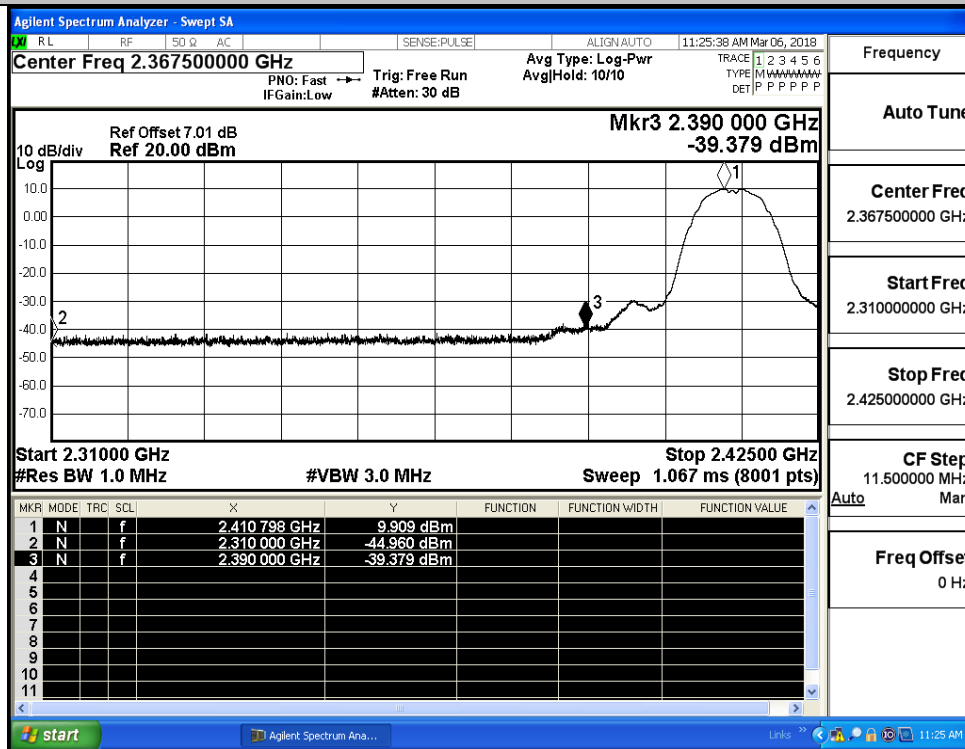
#VBW 300 kHz

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N		f	2.449 503 75 GHz	-0.399 dBm			
2	N		f	2.483 500 00 GHz	-37.219 dBm			
3	N		f	2.500 000 00 GHz	-49.773 dBm			
4	N		f	2.484 600 00 GHz	-31.118 dBm			
5								
6								
7								
8								
9								
10								
11								

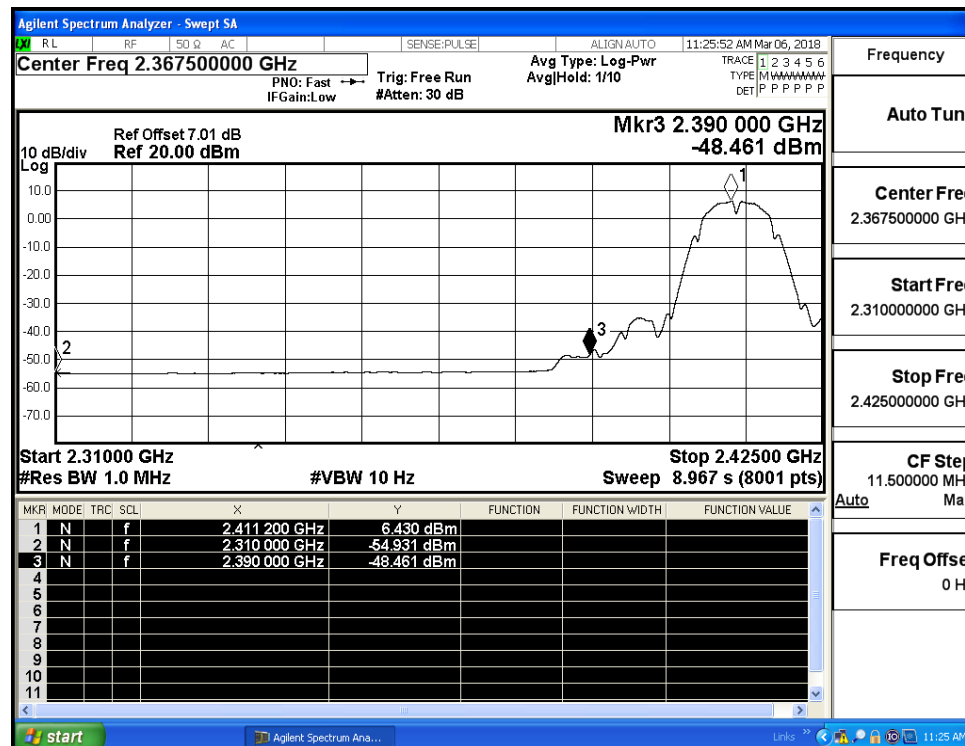
start Agilent Spectrum Ana... Links 1:49 PM

B.5 Restrict-band band-edge measurements

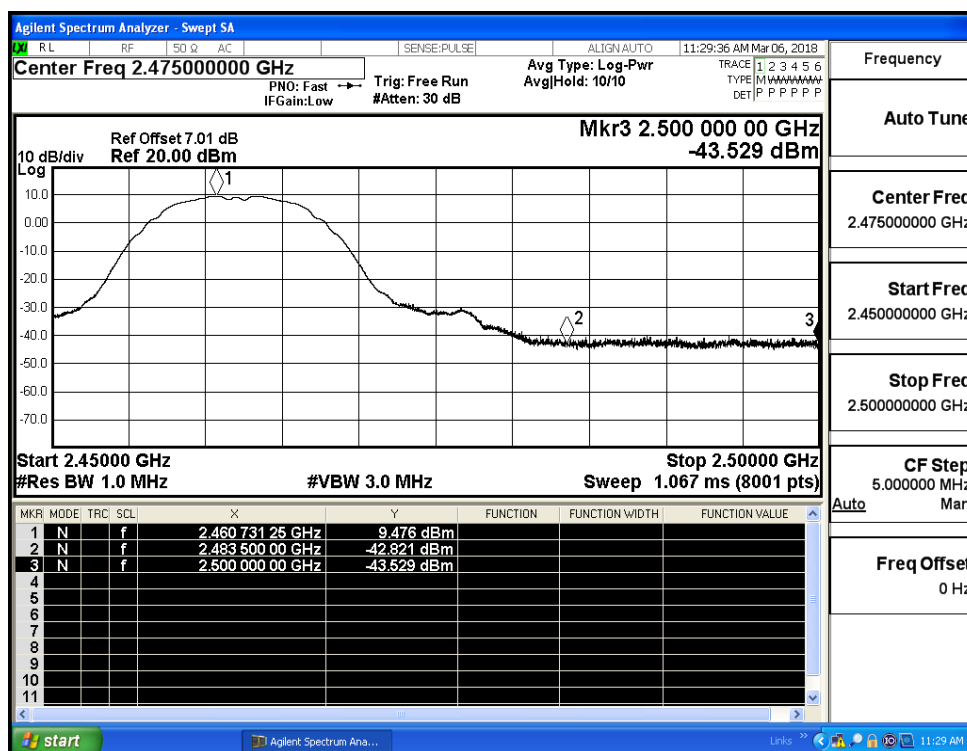
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



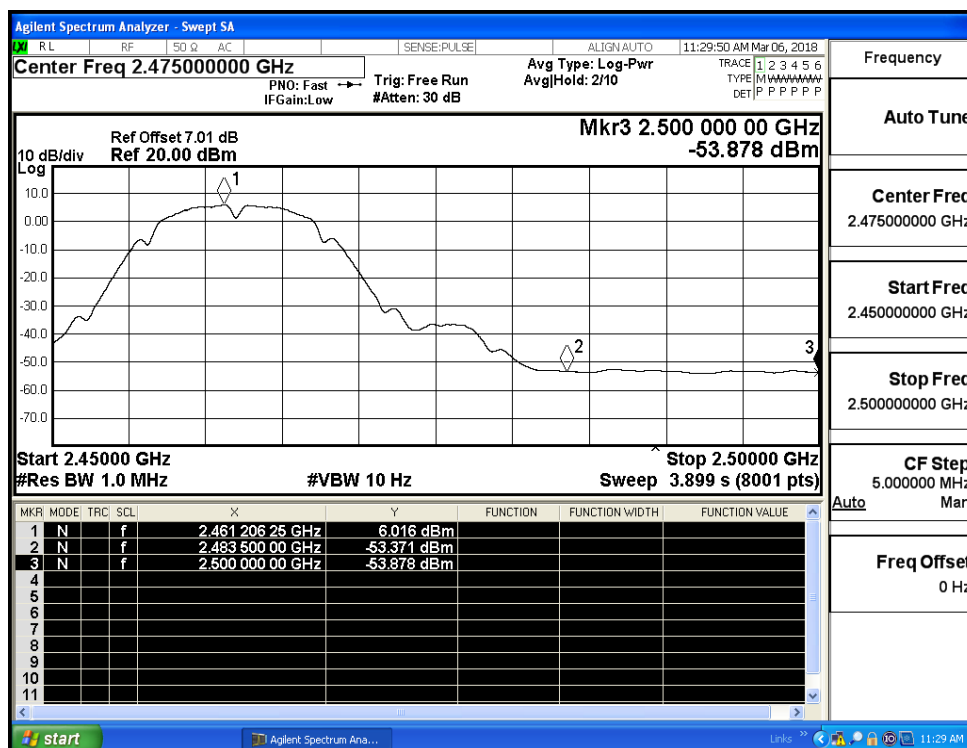
Restrict-band band-edge measurements_11B_2412_Ant1_AV



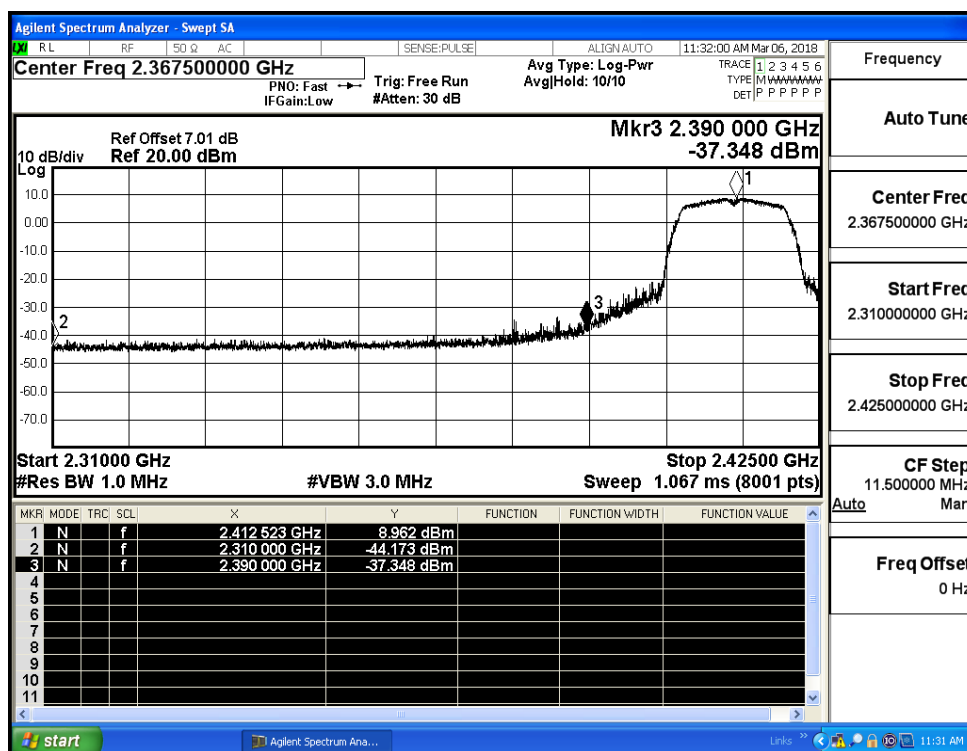
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



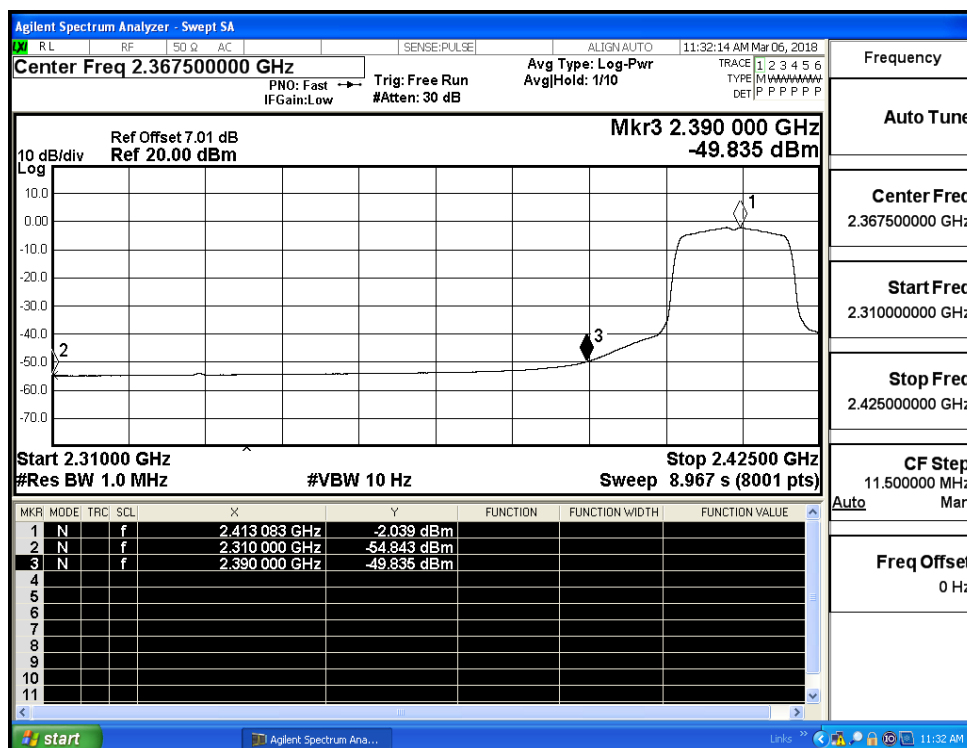
Restrict-band band-edge measurements_11B_2462_Ant1_AV



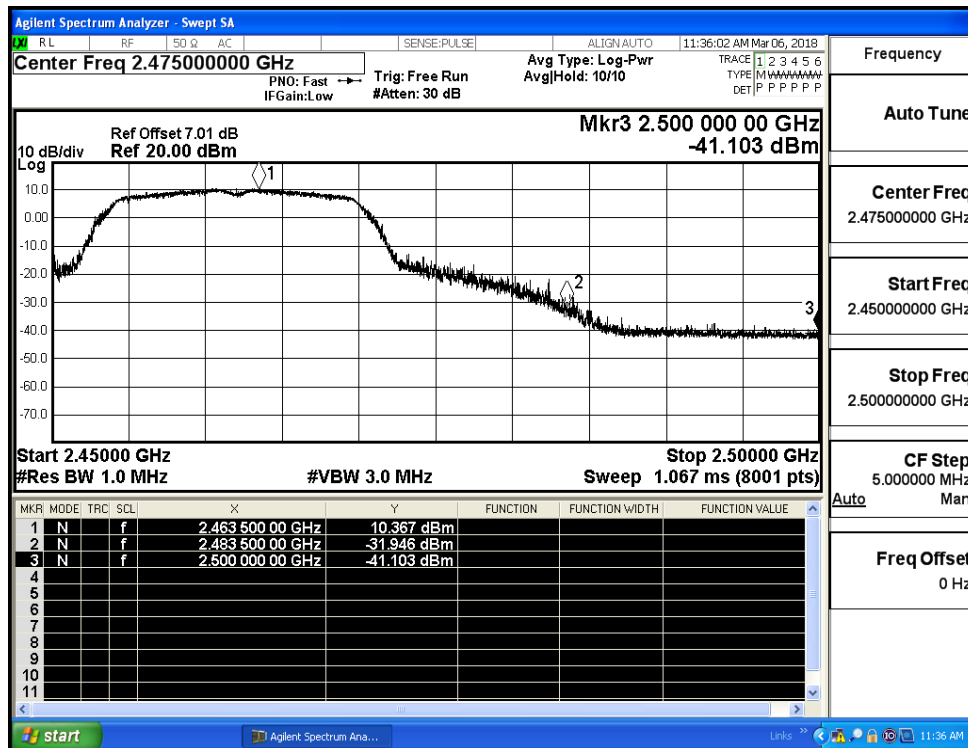
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



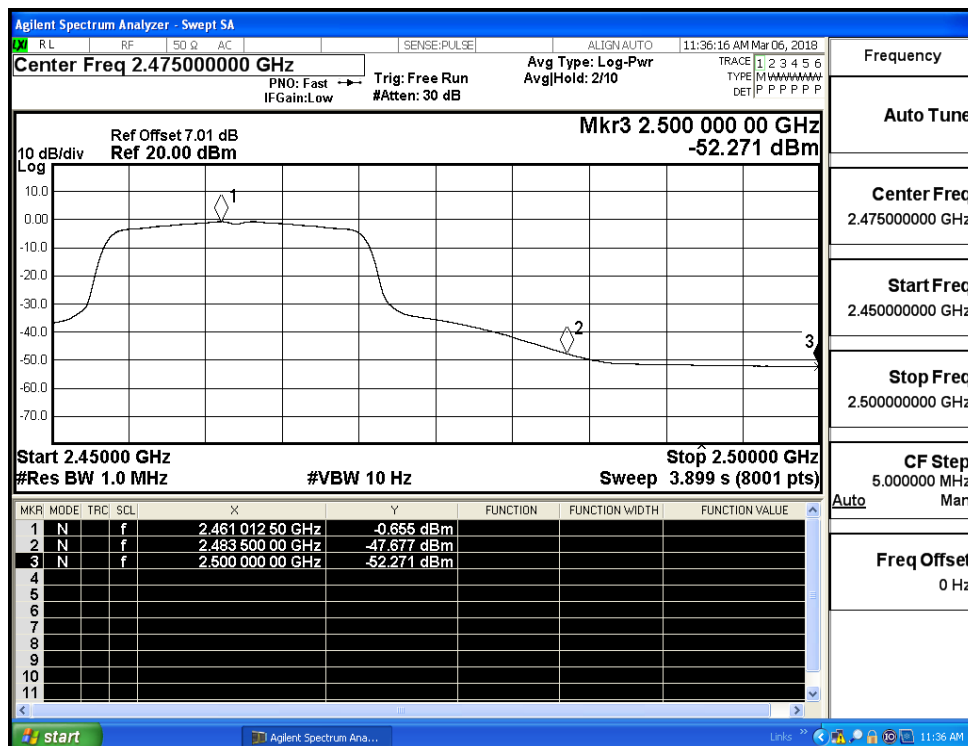
Restrict-band band-edge measurements_11G_2412_Ant1_AV



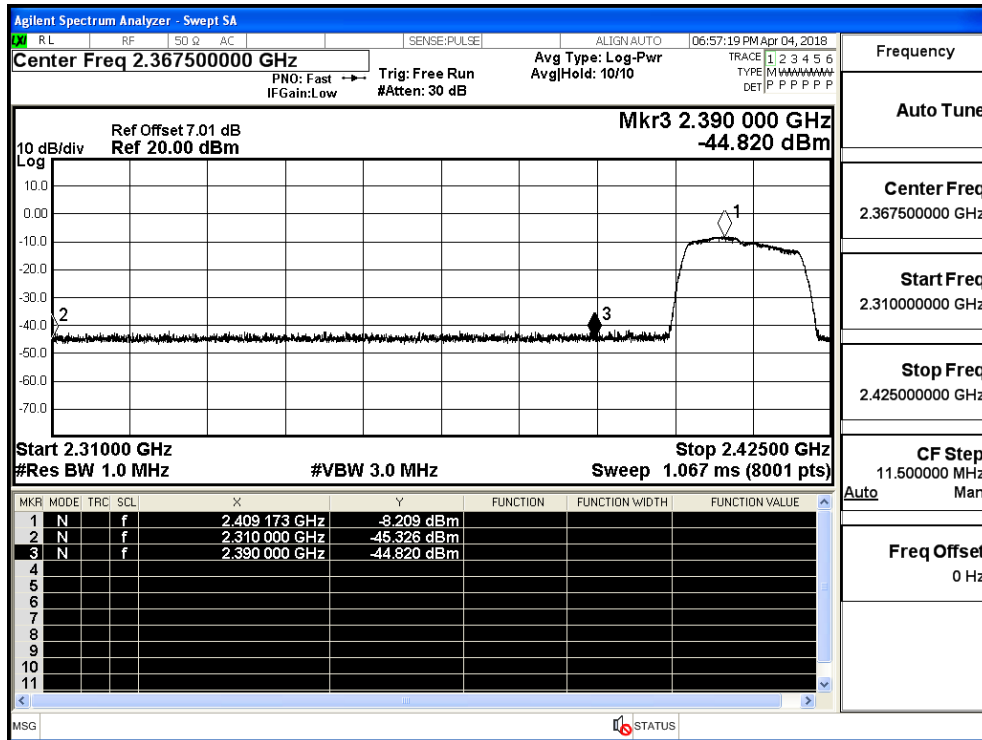
Restrict-band band-edge measurements_11G_2462_Ant1_PEAK



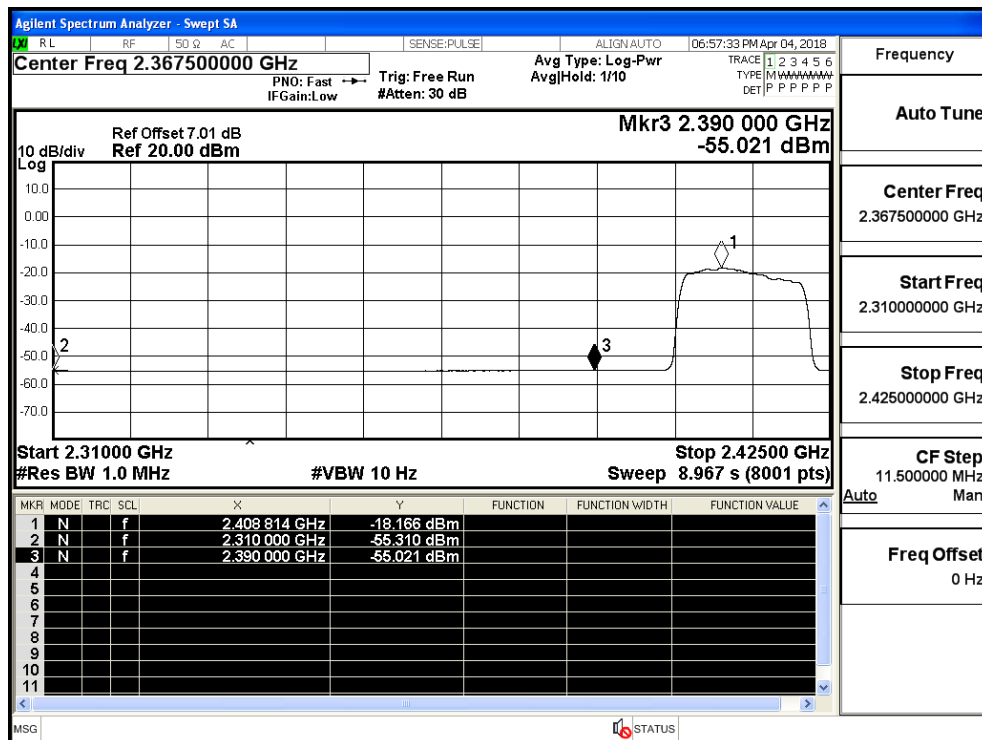
Restrict-band band-edge measurements_11G_2462_Ant1_AV



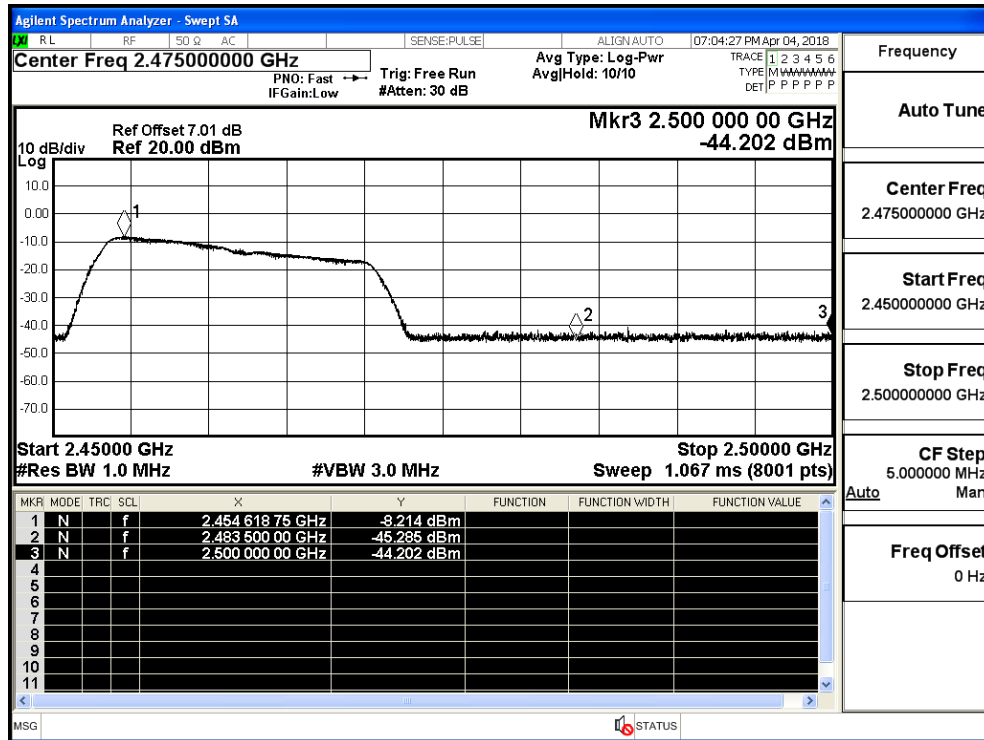
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



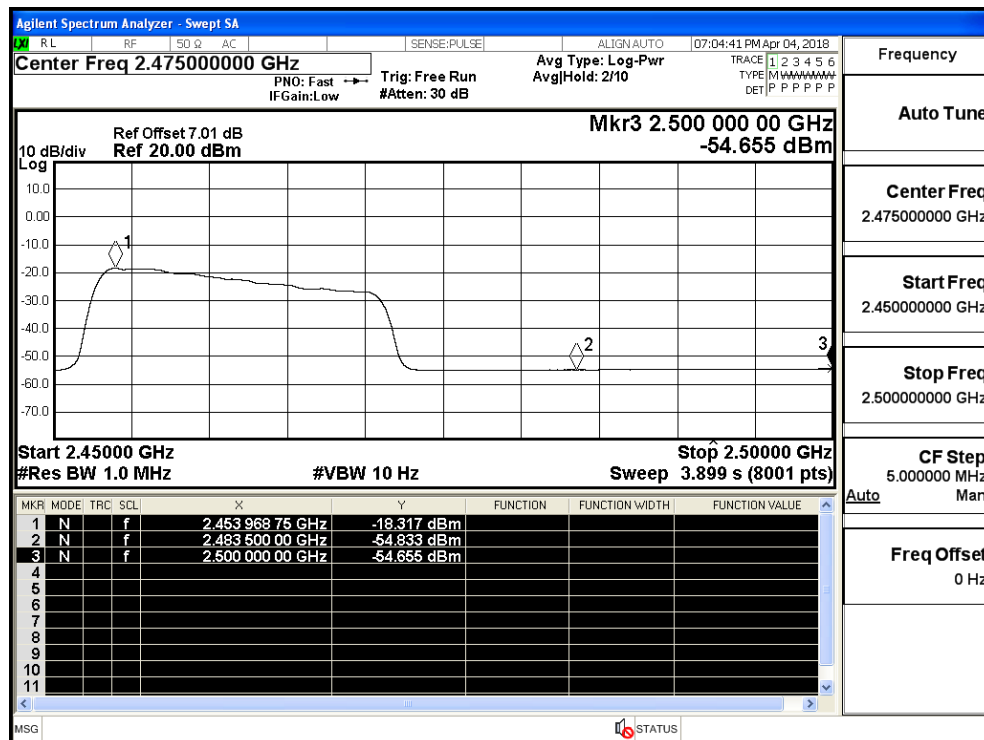
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_AV



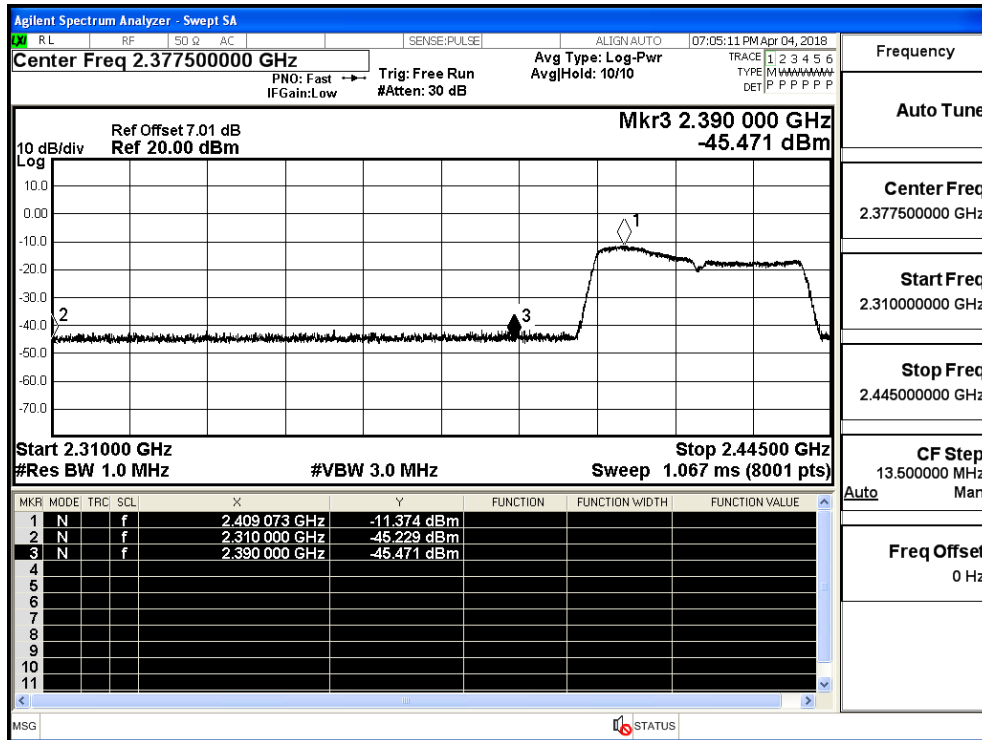
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_PEAK



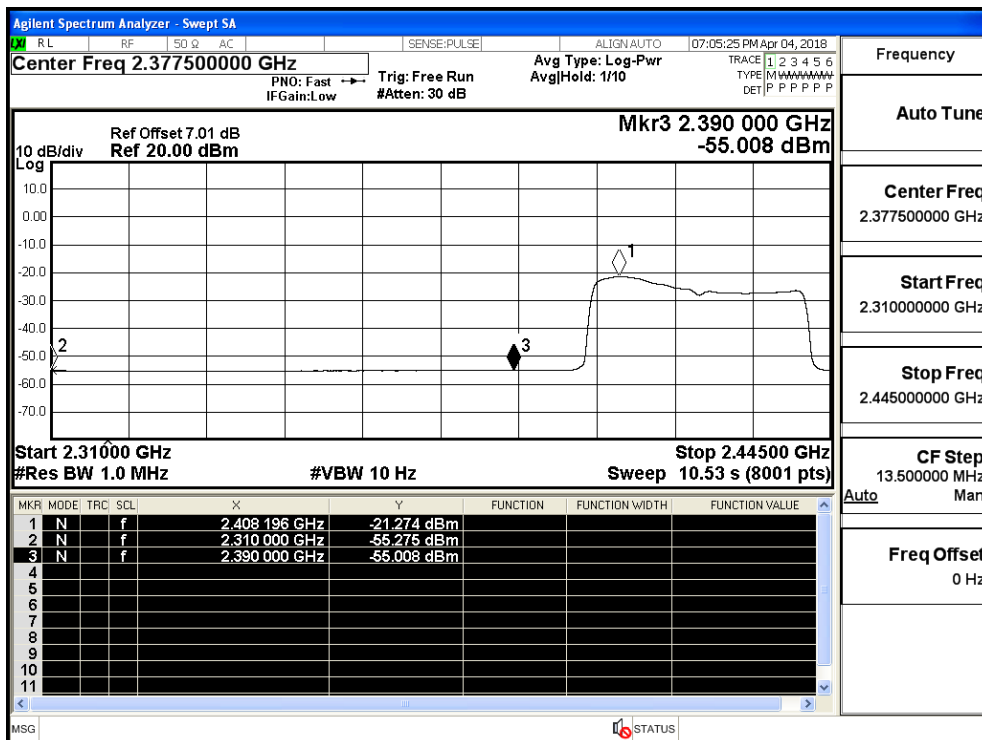
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_AV



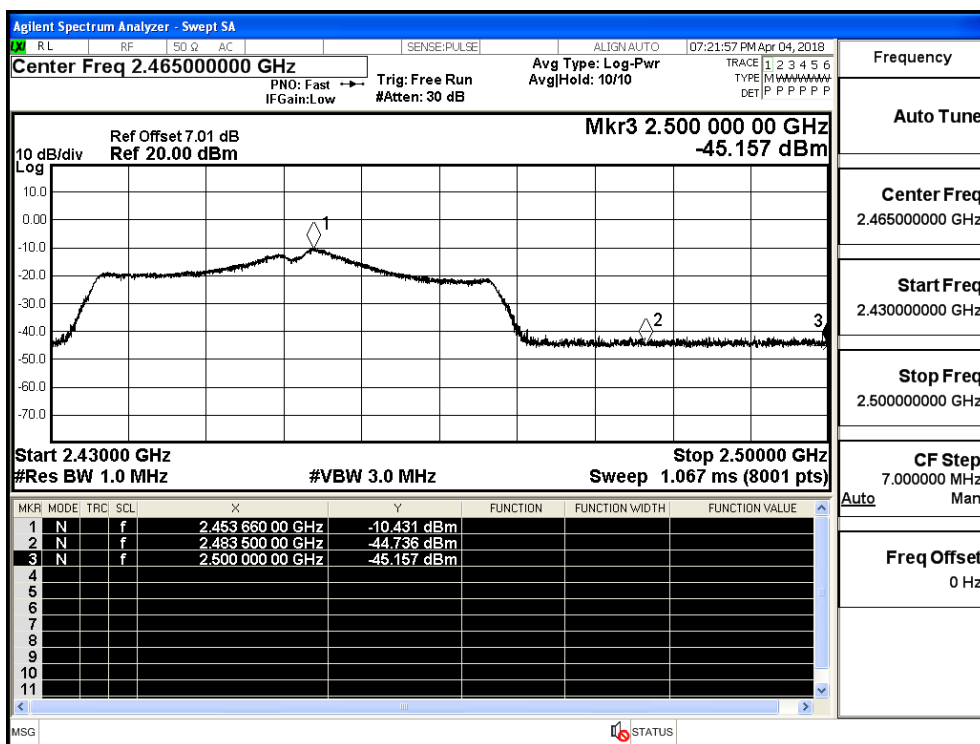
Restrict-band band-edge measurements_11N40SISO_2422_Ant1_PEAK



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

