

Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: WIFI Storage

Trade Mark: N/A

Test Model: UD-4267

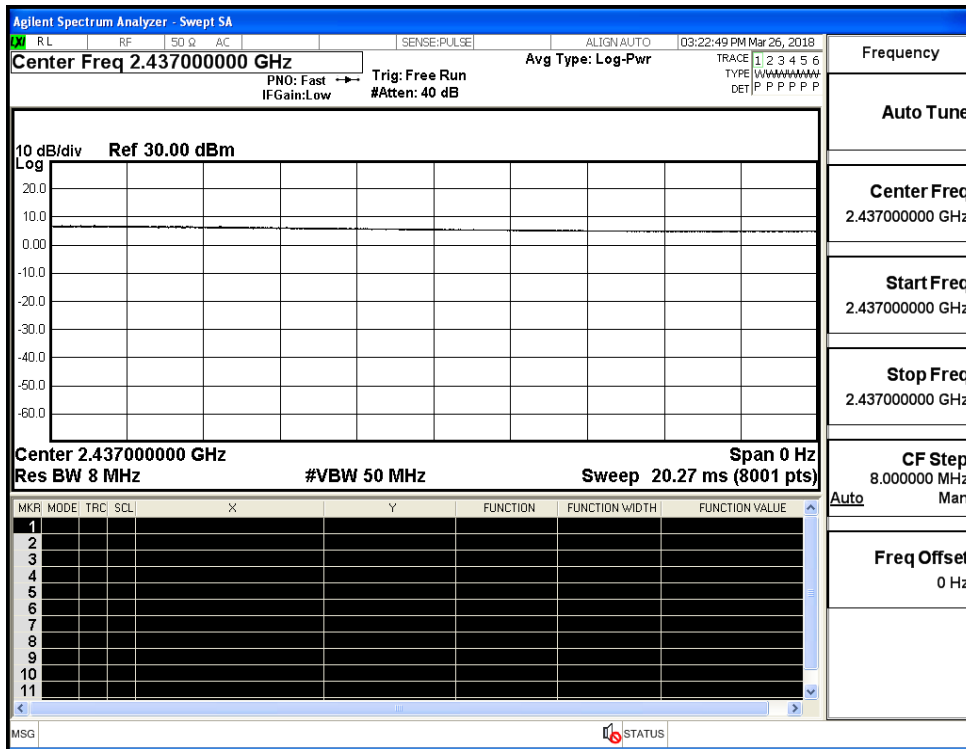
Environmental Conditions

Temperature:	20.8 ° C
Relative Humidity:	50.6%
ATM Pressure:	100.0 kPa
Test Engineer:	WC Wang
Supervised by:	Dick.Su

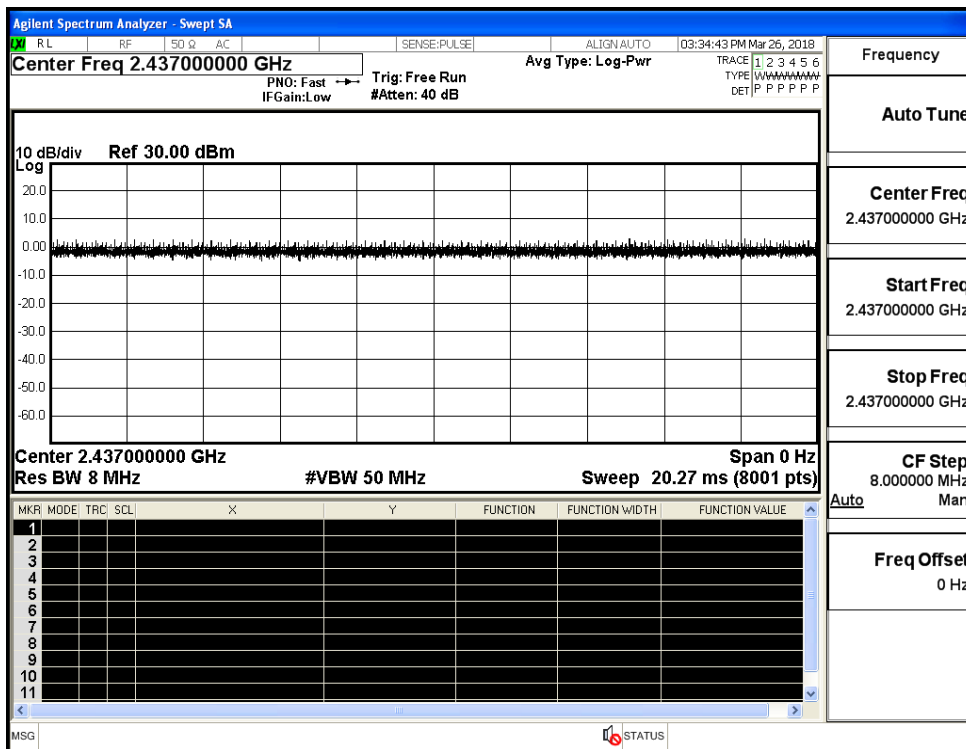
C.1 Duty Cycle

Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2437	Ant1	100	PASS
11G	2437	Ant1	100	PASS
11N20SISO	2437	Ant1	100	PASS

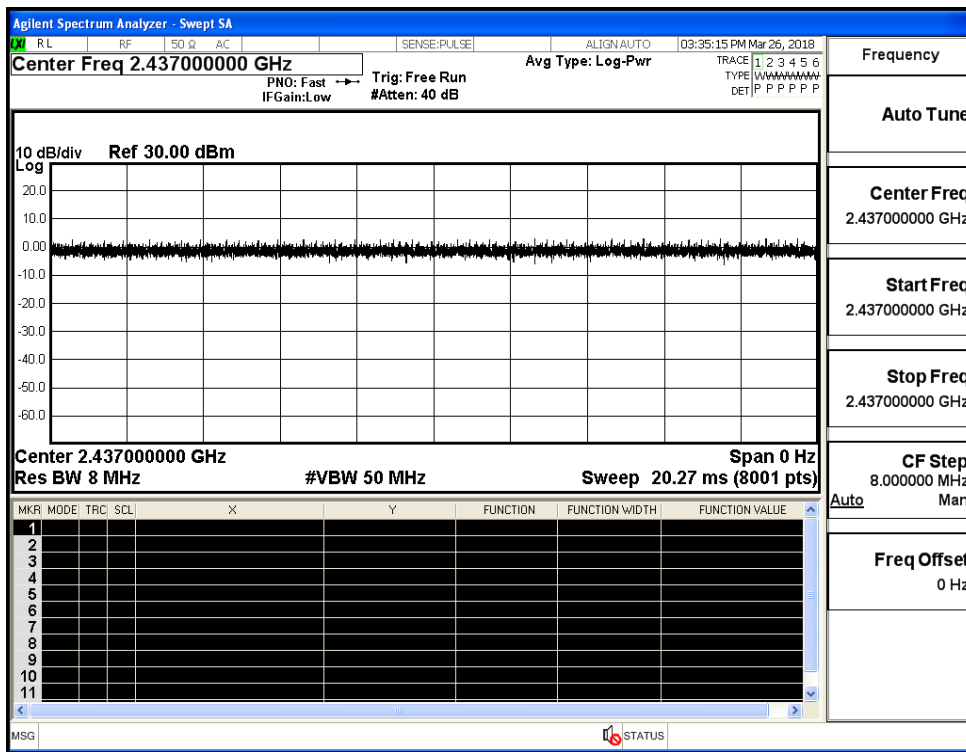
Duty Cycle_11B_2437_Ant1



Duty Cycle_11G_2437_Ant1



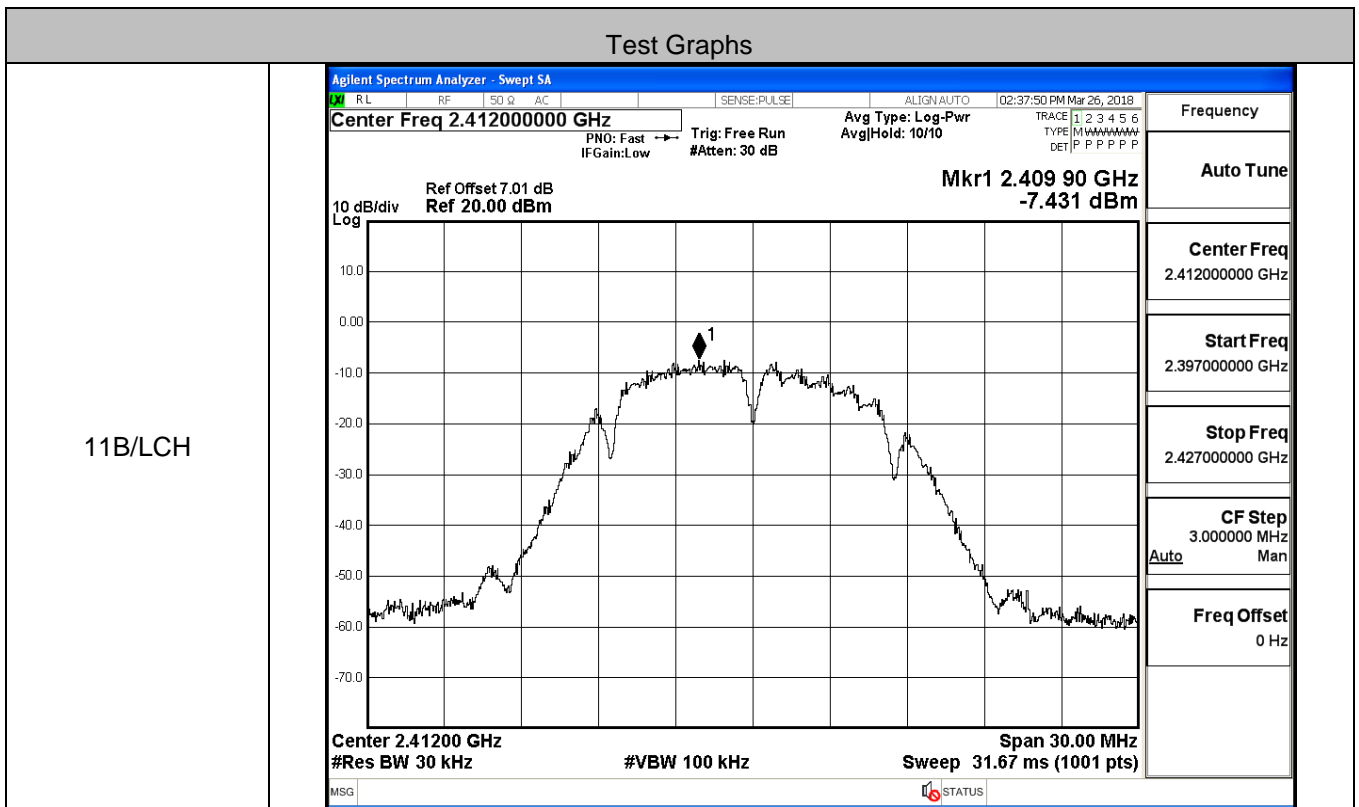
Duty Cycle_11N20SISO_2437_Ant1



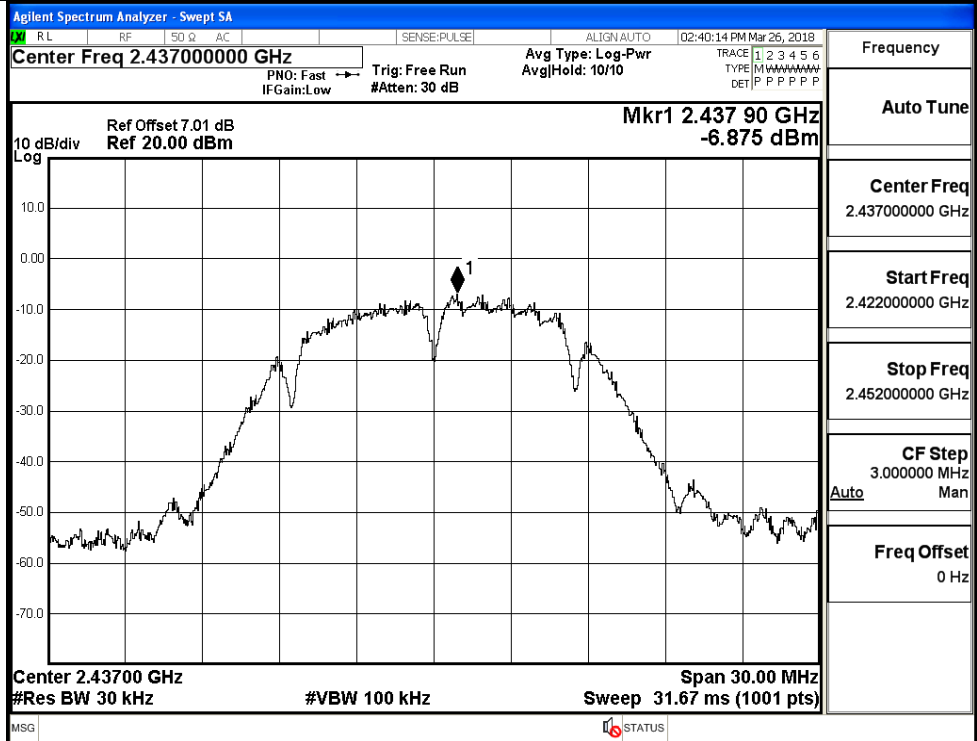
C.2 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/30KHz]	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-7.431	-17.431	8	PASS
	MCH	-6.875	-16.875	8	PASS
	HCH	-8.078	-18.078	8	PASS
11G	LCH	-12.972	-22.972	8	PASS
	MCH	-12.120	-22.120	8	PASS
	HCH	-11.205	-21.205	8	PASS
11N20SISO	LCH	-13.262	-23.262	8	PASS
	MCH	-12.484	-22.484	8	PASS
	HCH	-10.716	-20.716	8	PASS

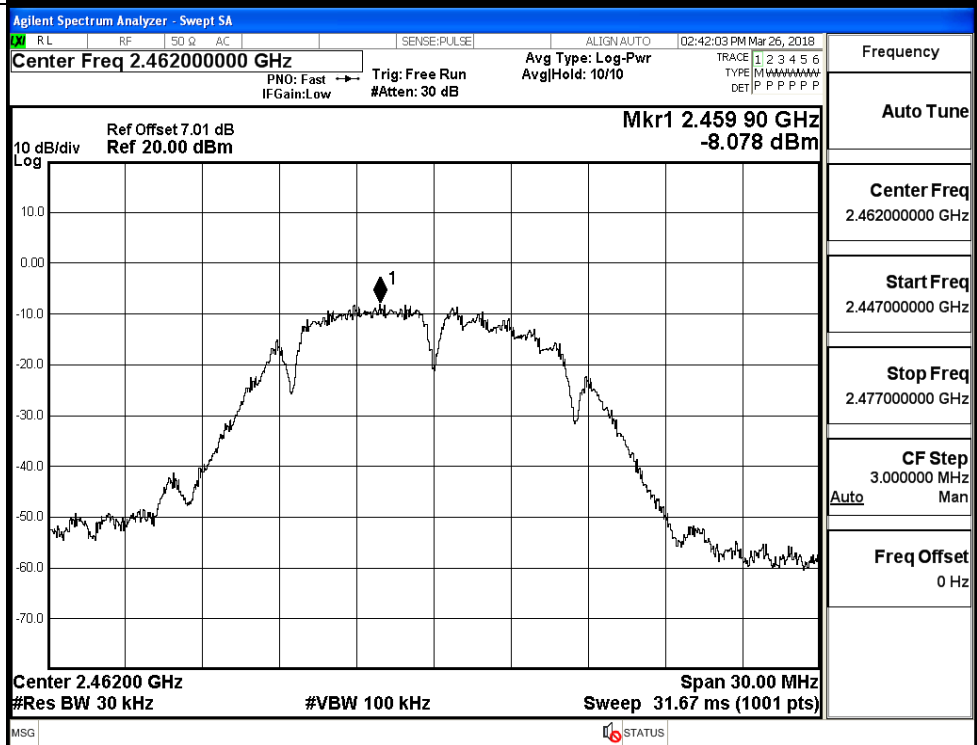
Test Graphs



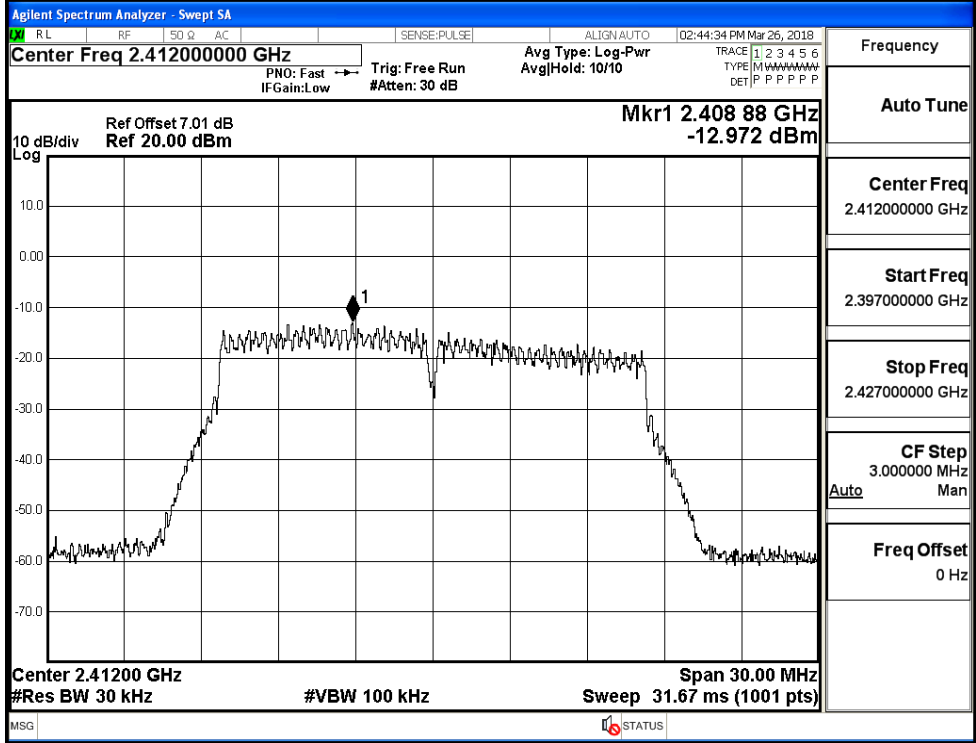
11B/MCH



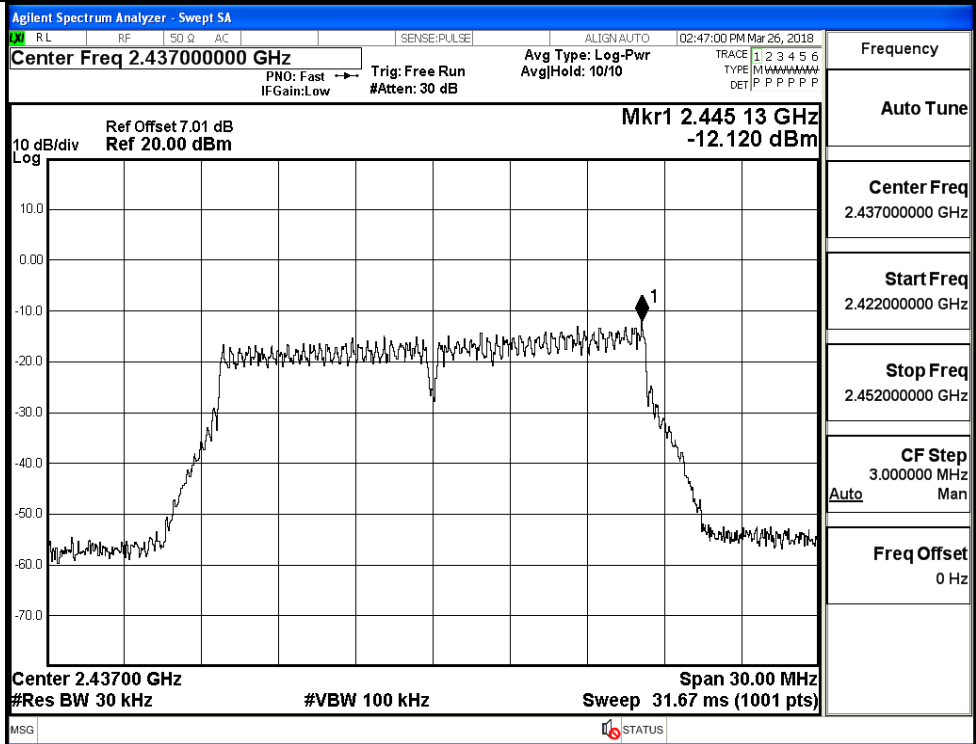
11B/HCH



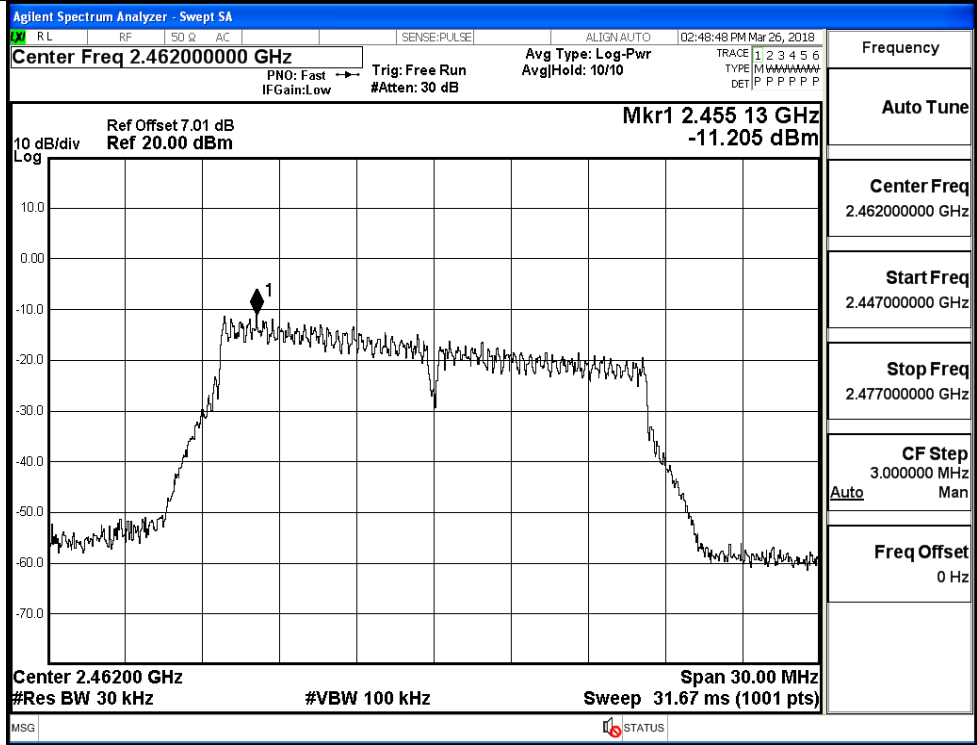
11G/LCH



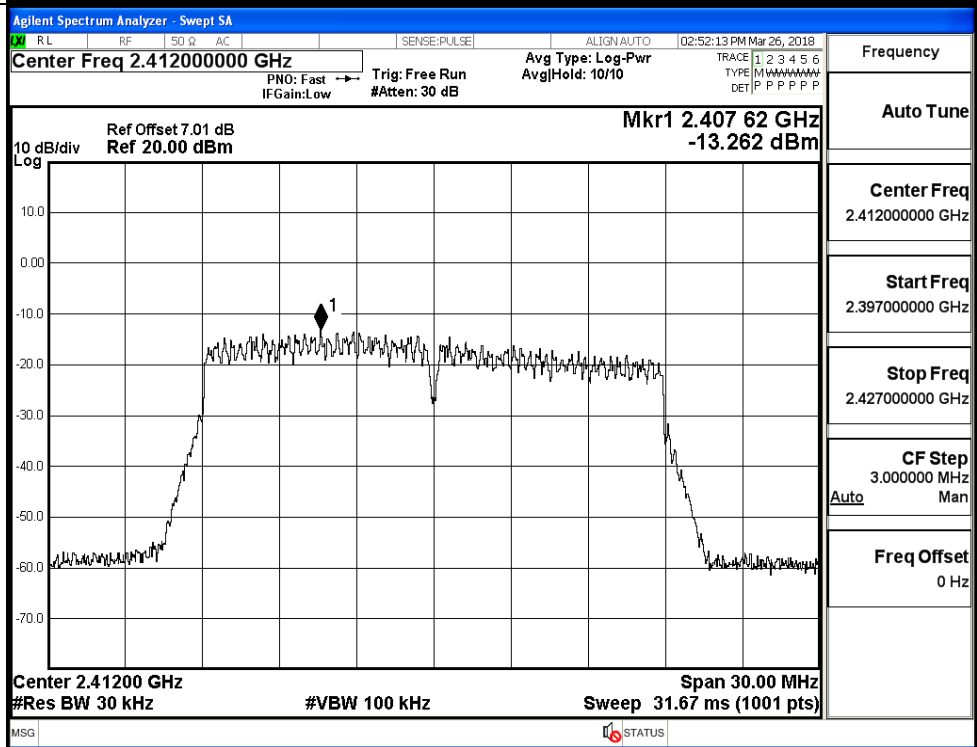
11G/MCH

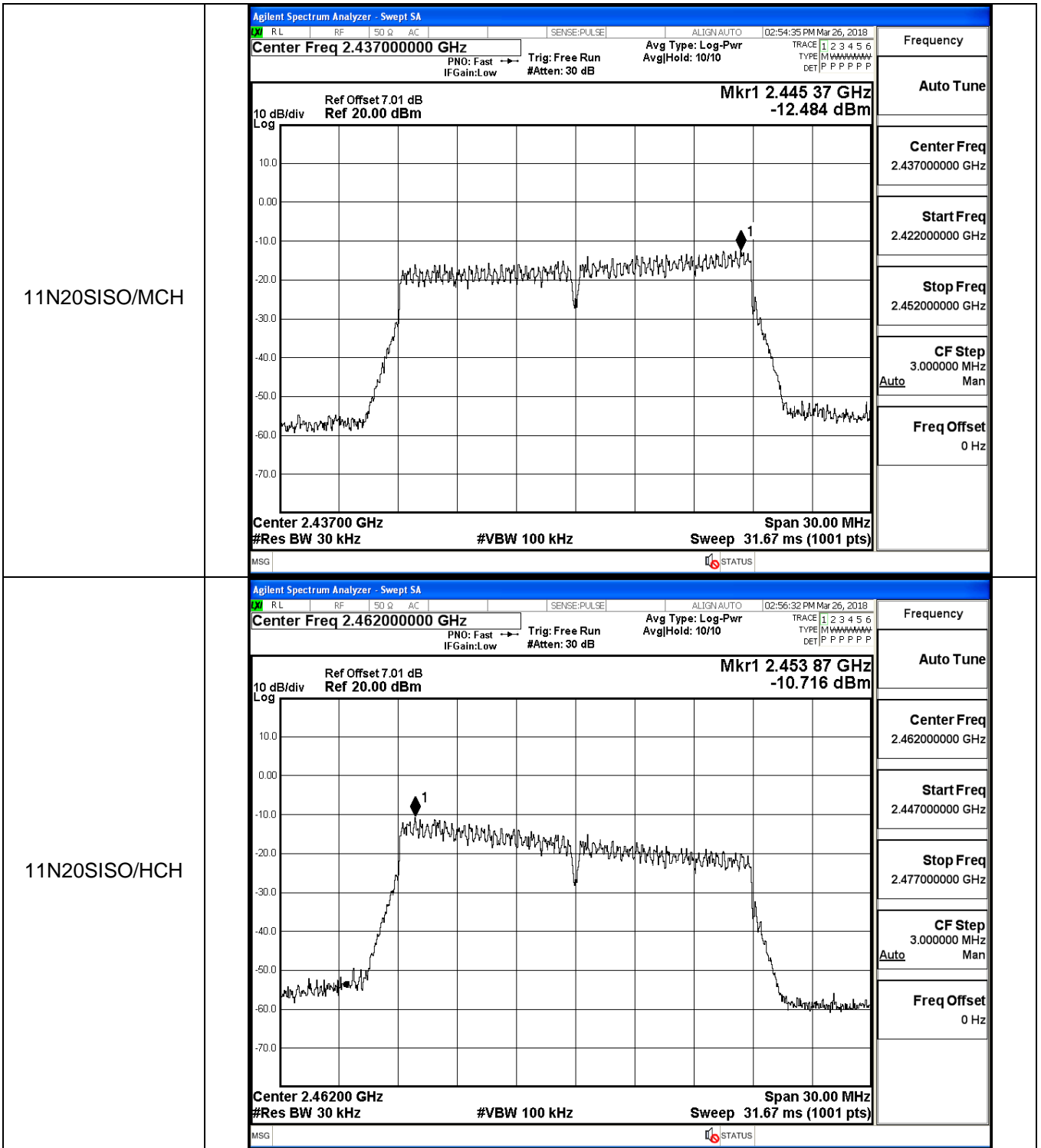


11G/HCH



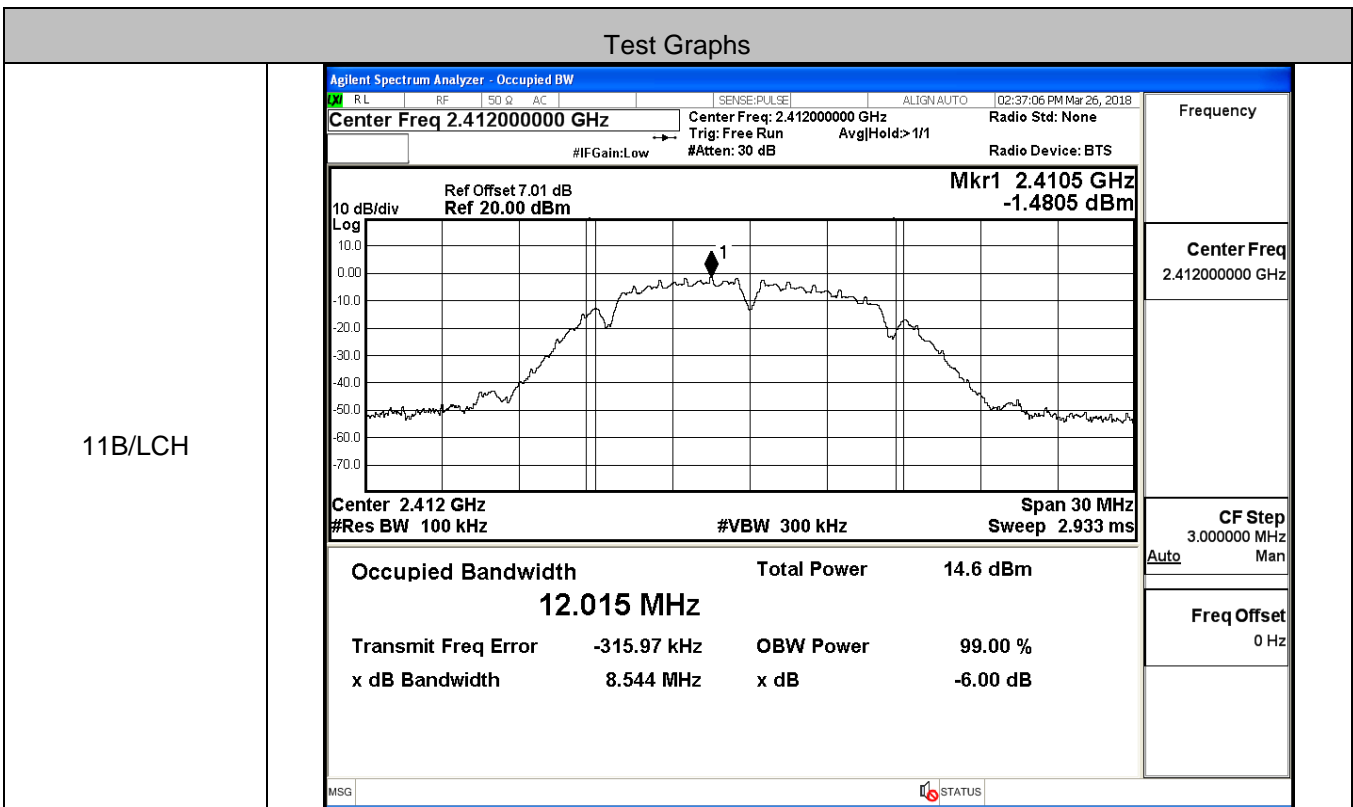
11N20SISO/LCH



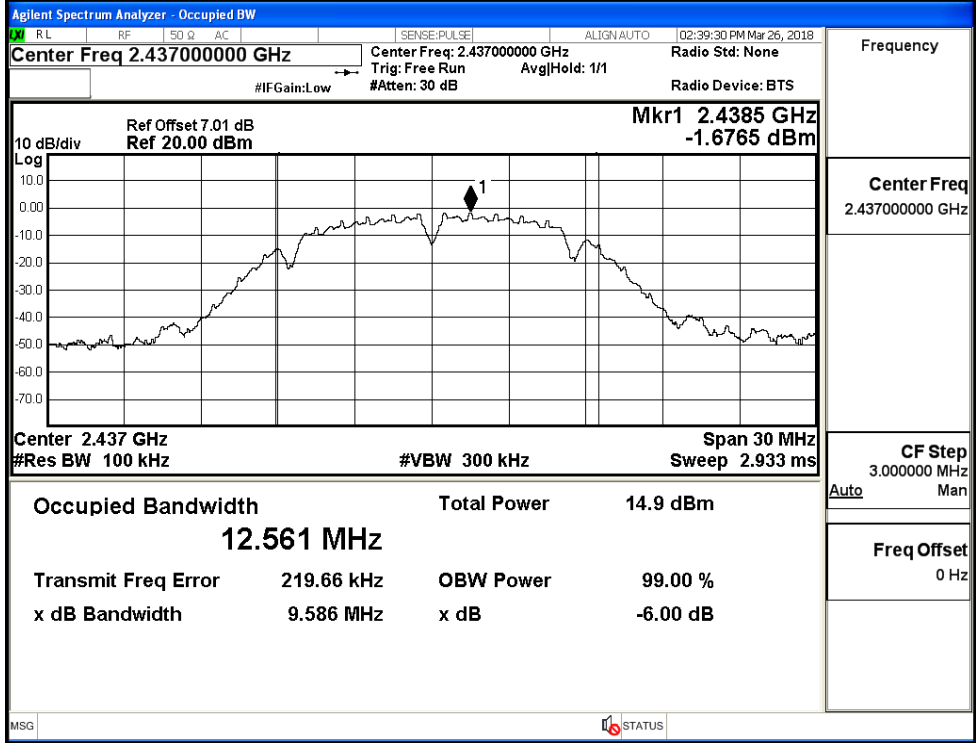


C.3 6dB Bandwidth

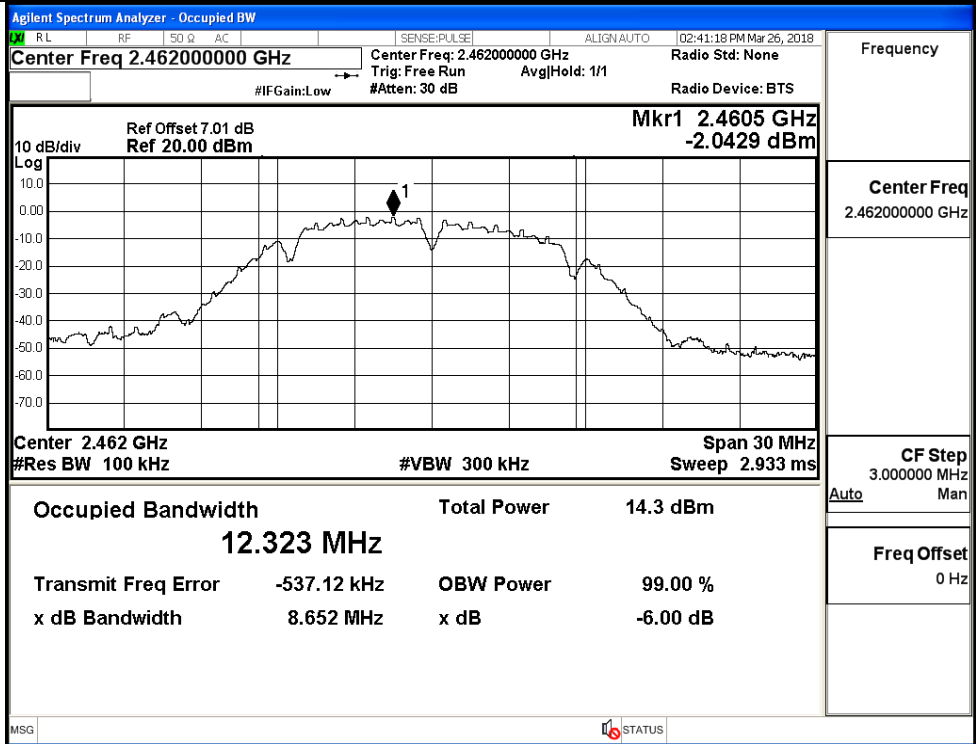
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	8.544	≥0.5	PASS
	MCH	9.586	≥0.5	PASS
	HCH	8.652	≥0.5	PASS
11G	LCH	16.25	≥0.5	PASS
	MCH	16.51	≥0.5	PASS
	HCH	16.54	≥0.5	PASS
11N20SISO	LCH	17.23	≥0.5	PASS
	MCH	17.72	≥0.5	PASS
	HCH	17.56	≥0.5	PASS



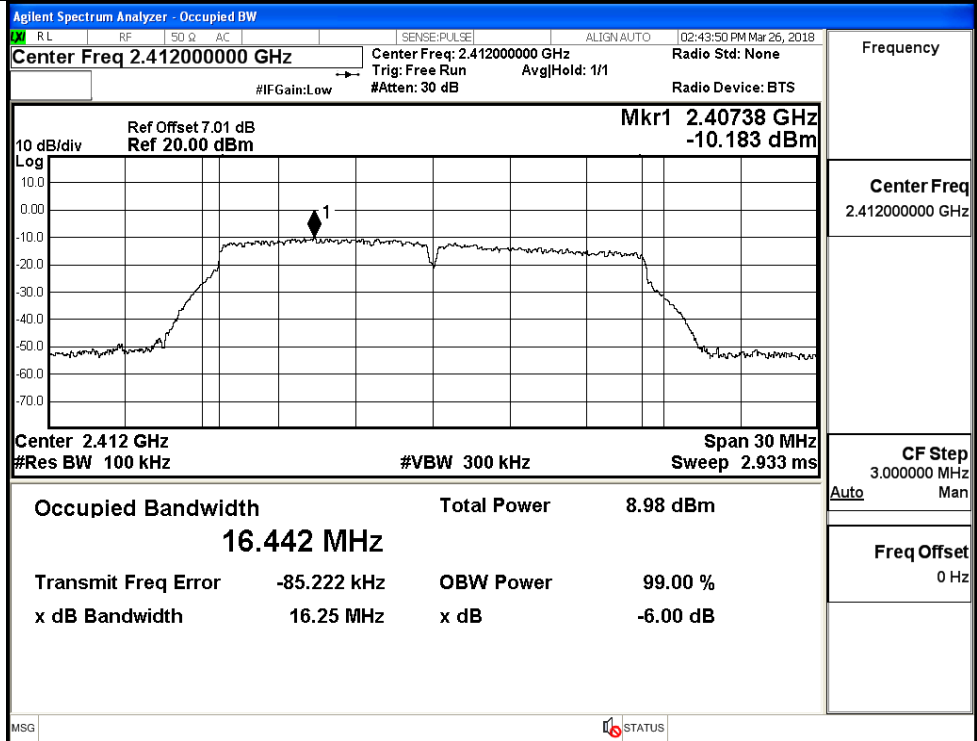
11B/MCH



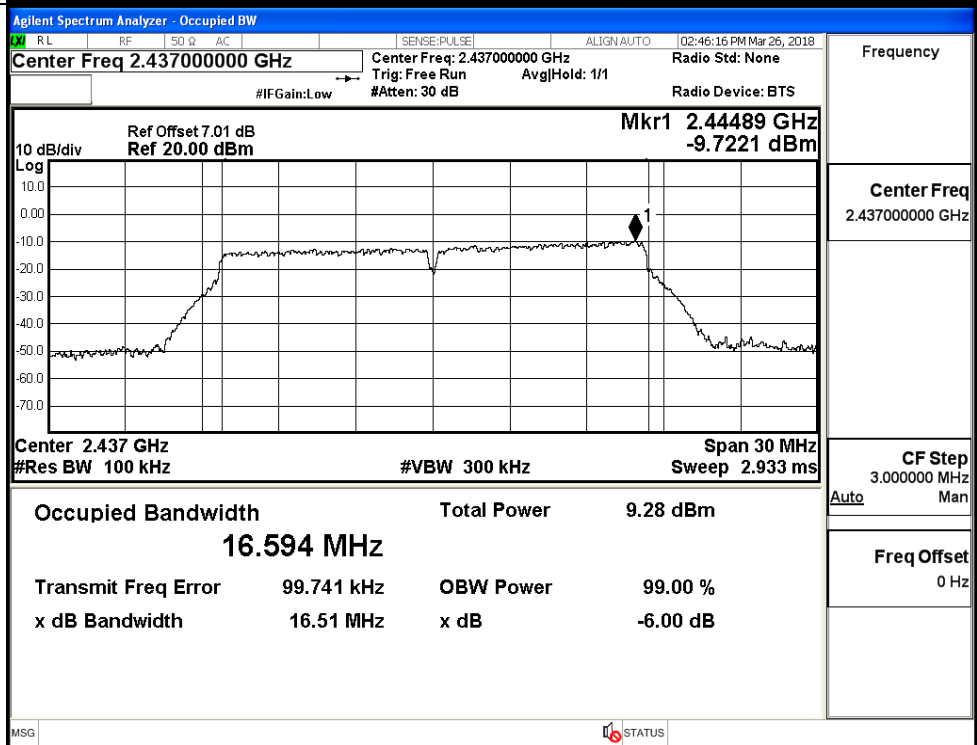
11B/HCH



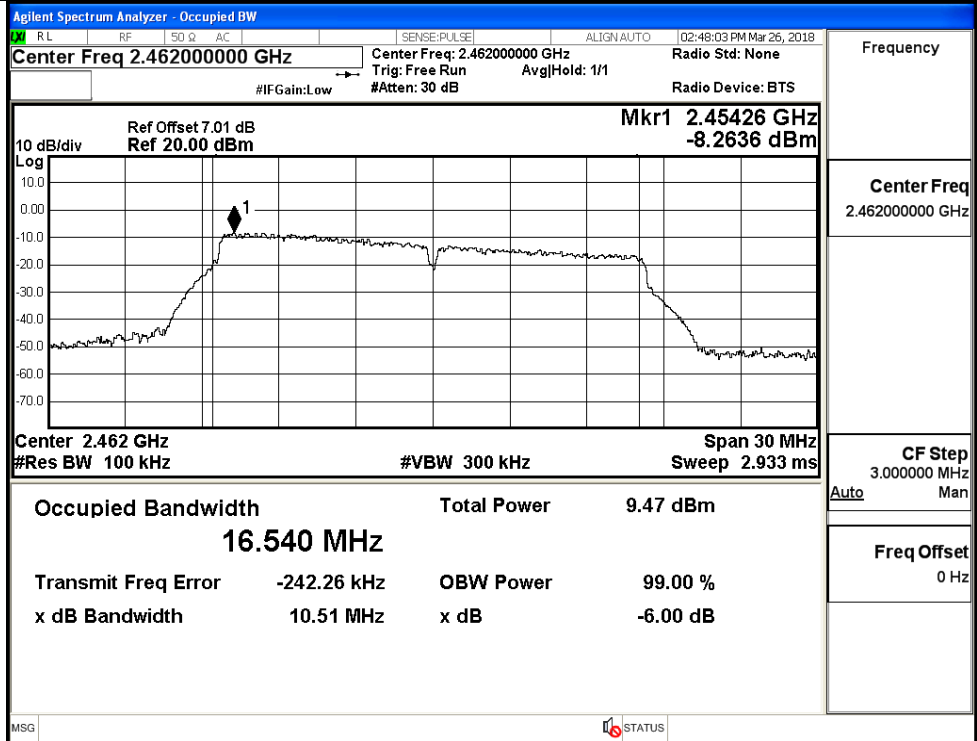
11G/LCH



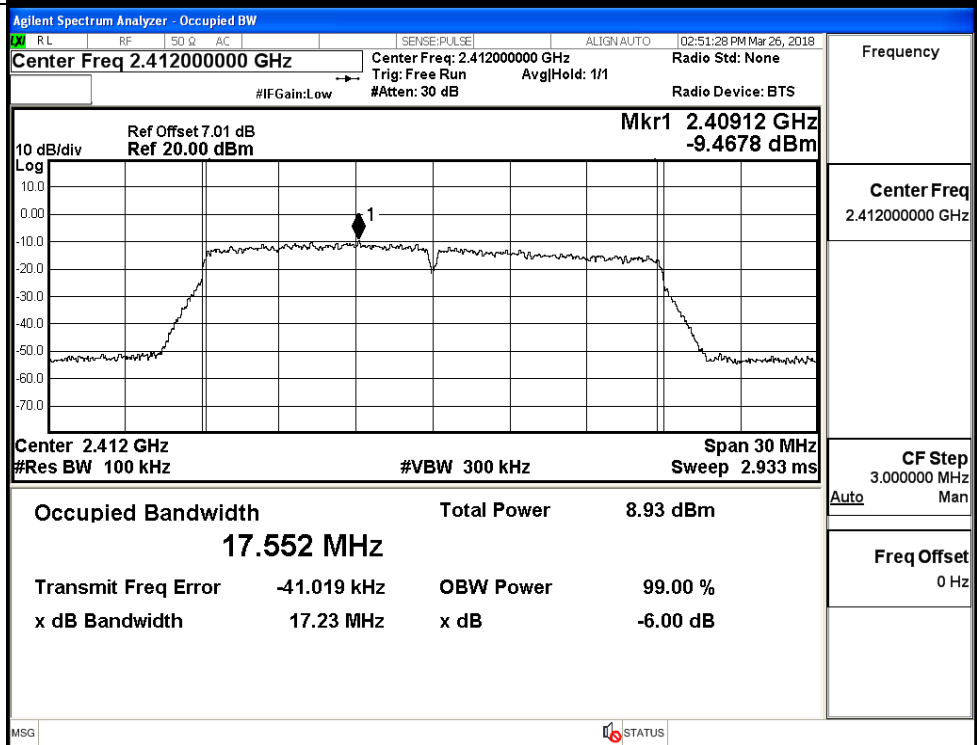
11G/MCH



11G/HCH



11N20SISO/LCH



<p>11N20SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.43700000 GHz</p> <p>Center Freq: 2.43700000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB</p> <p>Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr1 2.44537 GHz -8.8254 dBm</p> <p>Center 2.437 GHz #Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 17.726 MHz</p> <p>Total Power 9.45 dBm</p> <p>Transmit Freq Error 89.076 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 17.72 MHz</p> <p>x dB -6.00 dB</p> <p>MSG STATUS</p>	<p>Frequency</p> <p>Center Freq 2.43700000 GHz</p> <p>CF Step 3.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>11N20SISO/HCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.46200000 GHz</p> <p>Center Freq: 2.46200000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB</p> <p>Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr1 2.45414 GHz -8.0646 dBm</p> <p>Center 2.462 GHz #Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 17.558 MHz</p> <p>Total Power 9.56 dBm</p> <p>Transmit Freq Error -156.07 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 10.43 MHz</p> <p>x dB -6.00 dB</p> <p>MSG STATUS</p>	<p>Frequency</p> <p>Center Freq 2.46200000 GHz</p> <p>CF Step 3.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>

C.4 RF Conducted Spurious Emissions

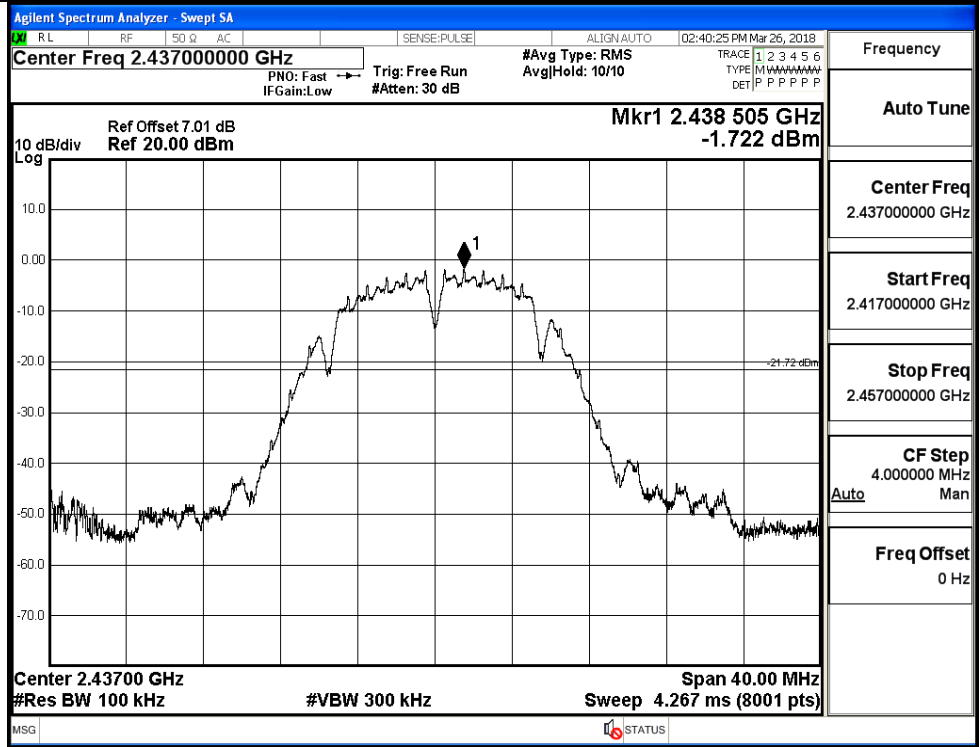
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-1.63	-44.421	-21.630	PASS
	MCH	-1.722	-44.457	-21.722	PASS
	HCH	-2.198	-35.626	-22.198	PASS
11G	LCH	-10.133	-44.472	-30.133	PASS
	MCH	-9.684	-43.613	-29.684	PASS
	HCH	-8.531	-42.893	-28.531	PASS
11N20 SISO	LCH	-10.293	-30.635	-30.293	PASS
	MCH	-8.797	-44.579	-28.797	PASS
	HCH	-8.185	-44.749	-28.185	PASS

11B_LCH_Graphs

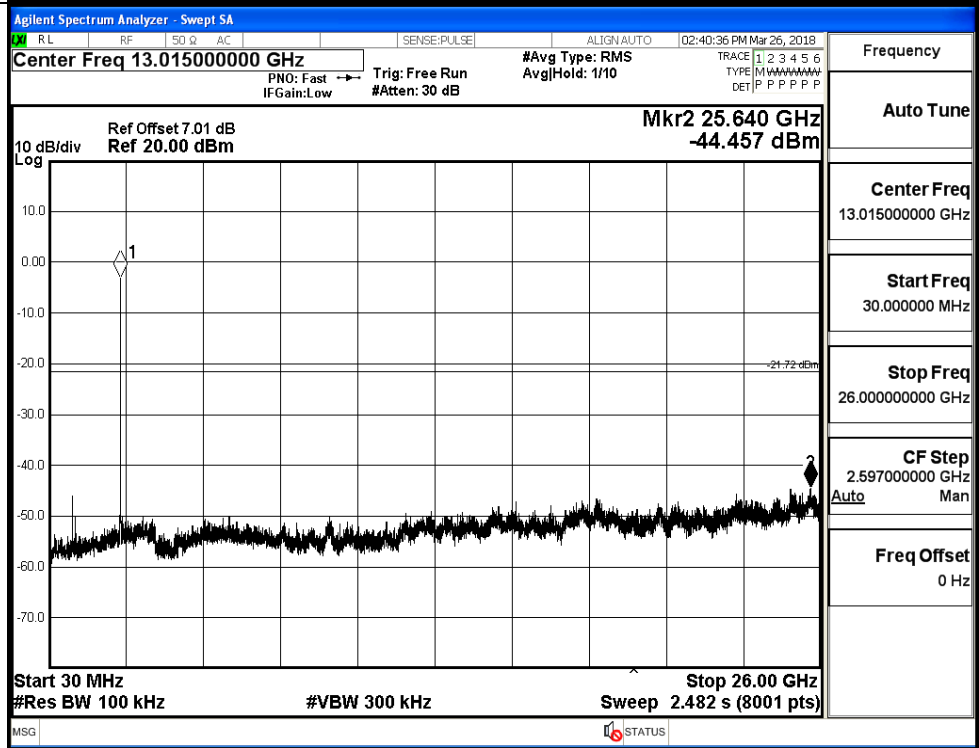
<p>Pref/11B/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.41200000 GHz</p> <p>Mkr1 2.410 495 GHz -1.630 dBm</p> <p>Center 2.41200 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 4.267 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.412000000 GHz</p> <p>Start Freq 2.392000000 GHz</p> <p>Stop Freq 2.432000000 GHz</p> <p>CF Step 4.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
	<p>Puw/11B/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 13.01500000 GHz</p> <p>Mkr2 25.500 GHz -44.421 dBm</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.482 s (8001 pts)</p>

11B_MCH_Graphs

Pref/11B/MCH

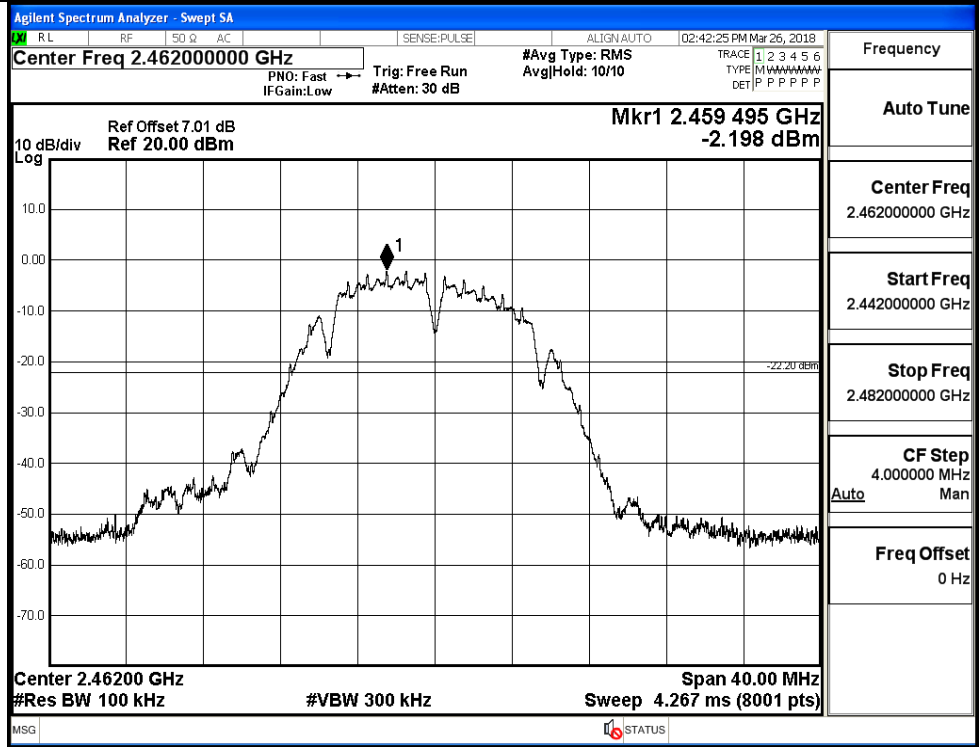


Puw/11B/MCH

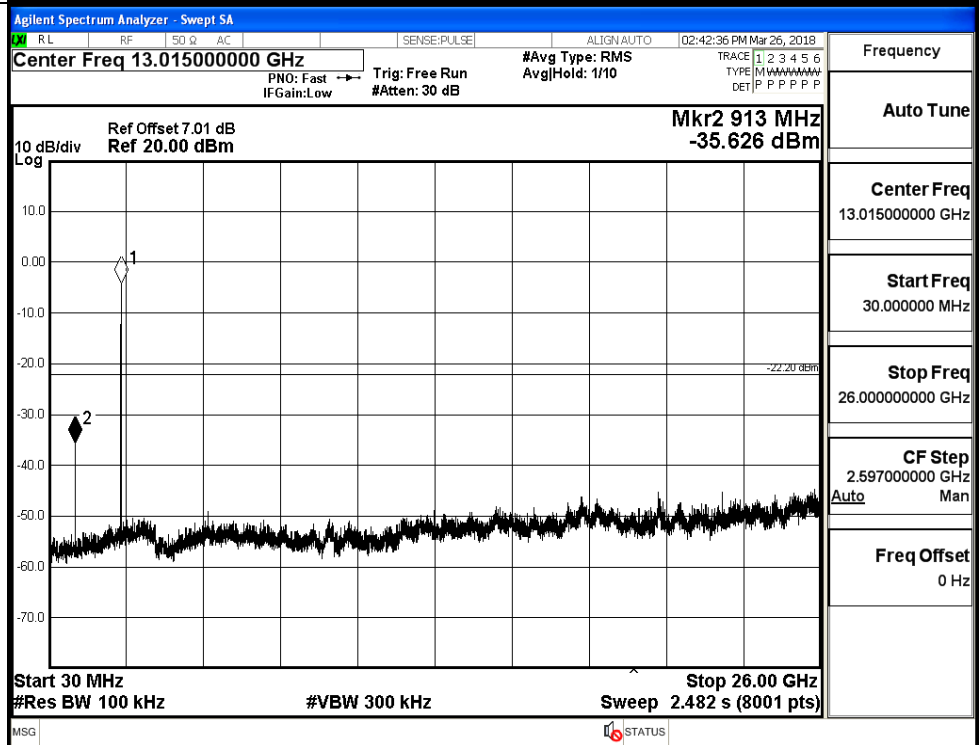


11B_HCH_Graphs

Pref/11B/HCH



Puw/11B/HCH

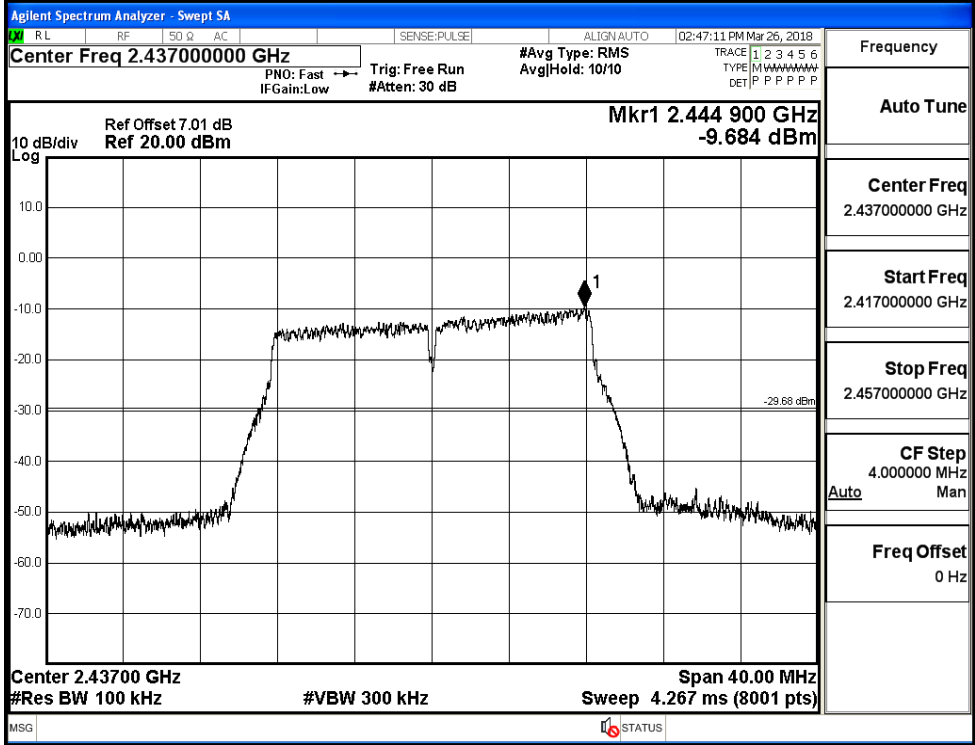


11G_LCH_Graphs

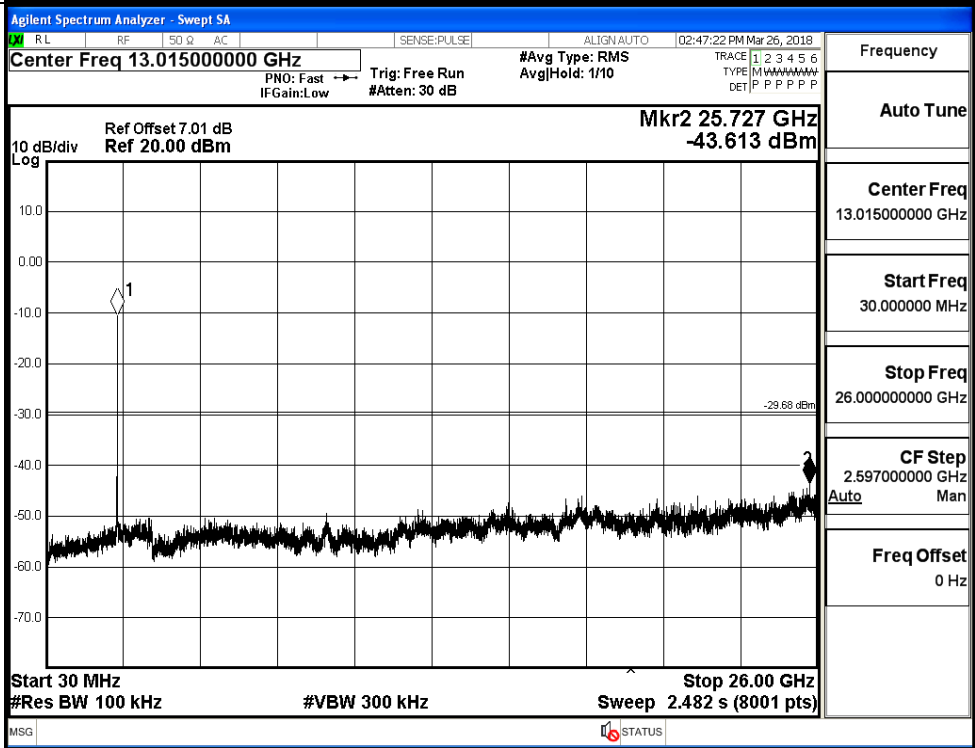
<p>Pref/11G/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.41200000 GHz</p> <p>Mkr1 2.407 395 GHz -10.133 dBm</p> <p>10 dB/div Log</p> <p>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Center 2.41200 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 4.267 ms (8001 pts) Span 40.00 MHz</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.412000000 GHz</p> <p>Start Freq 2.392000000 GHz</p> <p>Stop Freq 2.432000000 GHz</p> <p>CF Step 4.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
	<p>Puw/11G/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 13.01500000 GHz</p> <p>Mkr2 25.292 GHz -44.472 dBm</p> <p>10 dB/div Log</p> <p>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.482 s (8001 pts) Stop 26.00 GHz</p>

11G_MCH_Graphs

Pref/11G/MCH

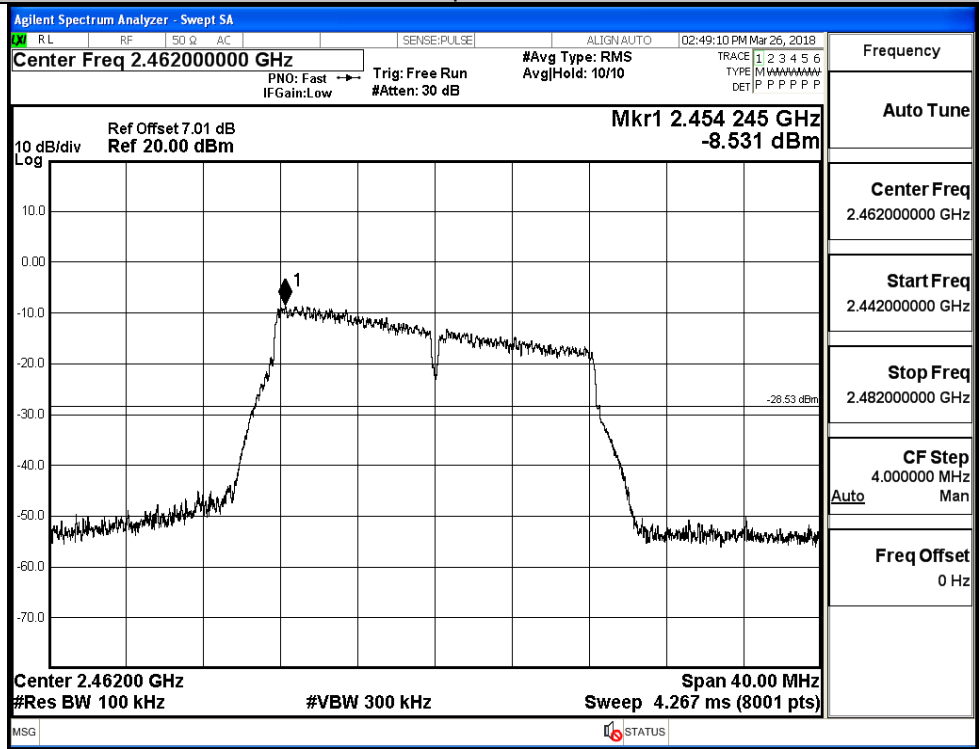


Puw/11G/MCH

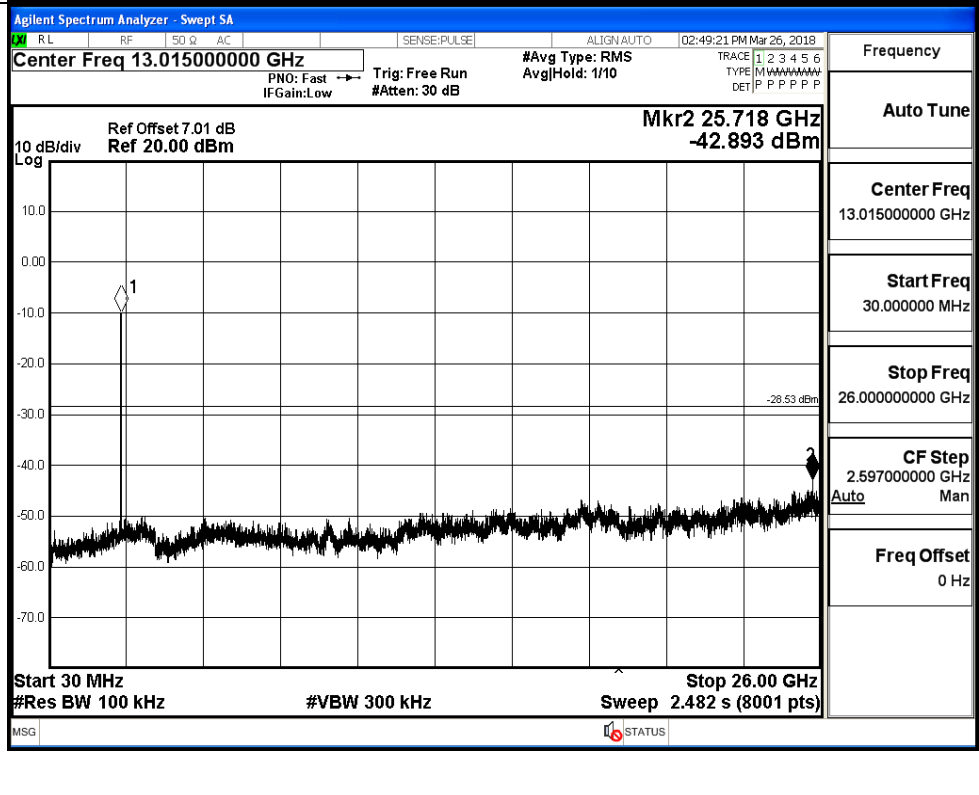


11G_HCH_Graphs

Pref/11G/HCH

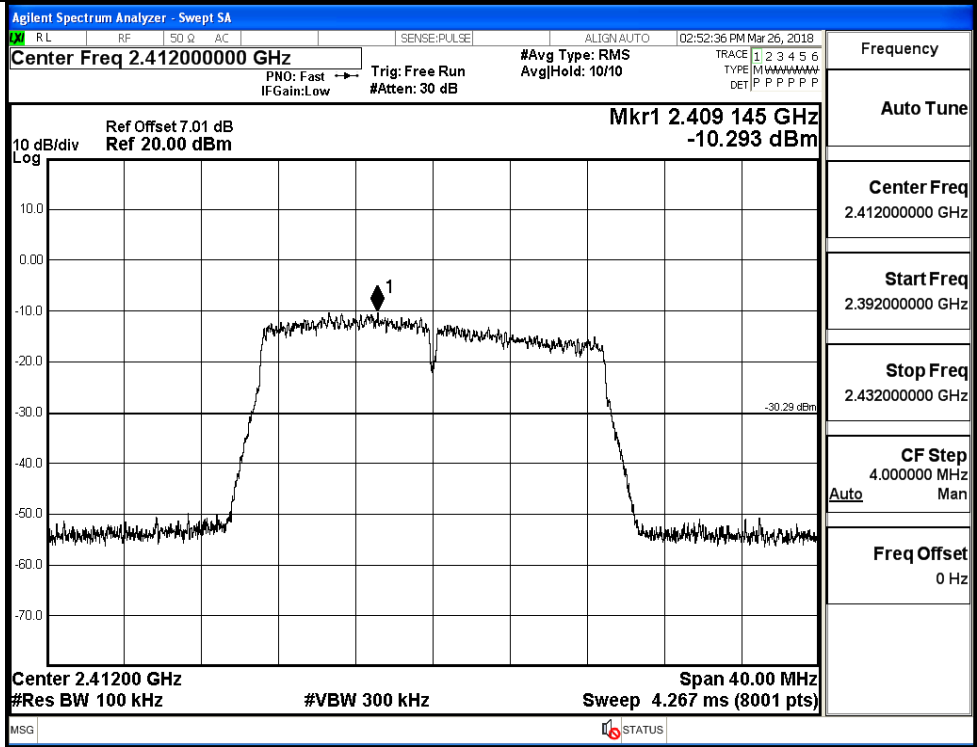


Puw/11G/HCH

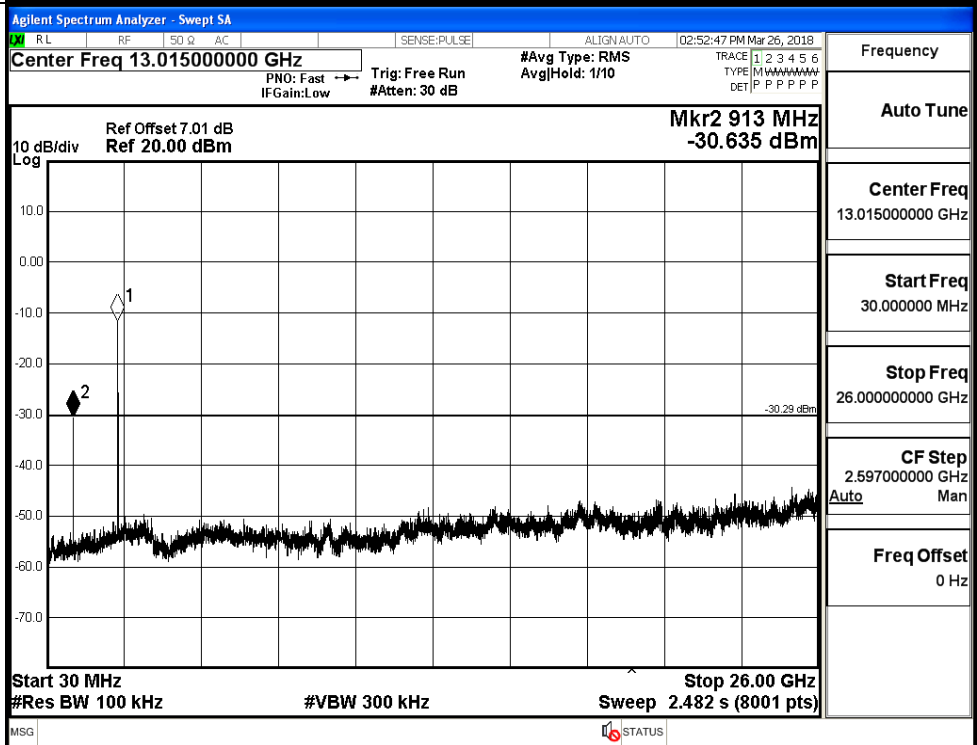


11N20SISO_LCH_Graphs

Pref/11N20SIS
O/LCH

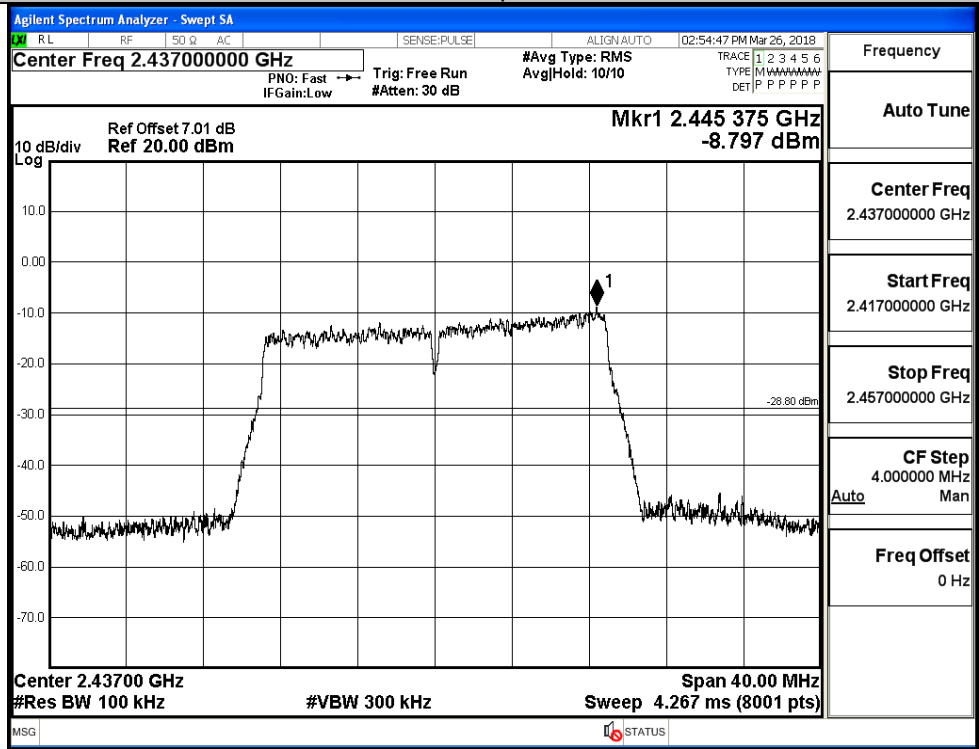


Puw/11N20
SISO/LCH

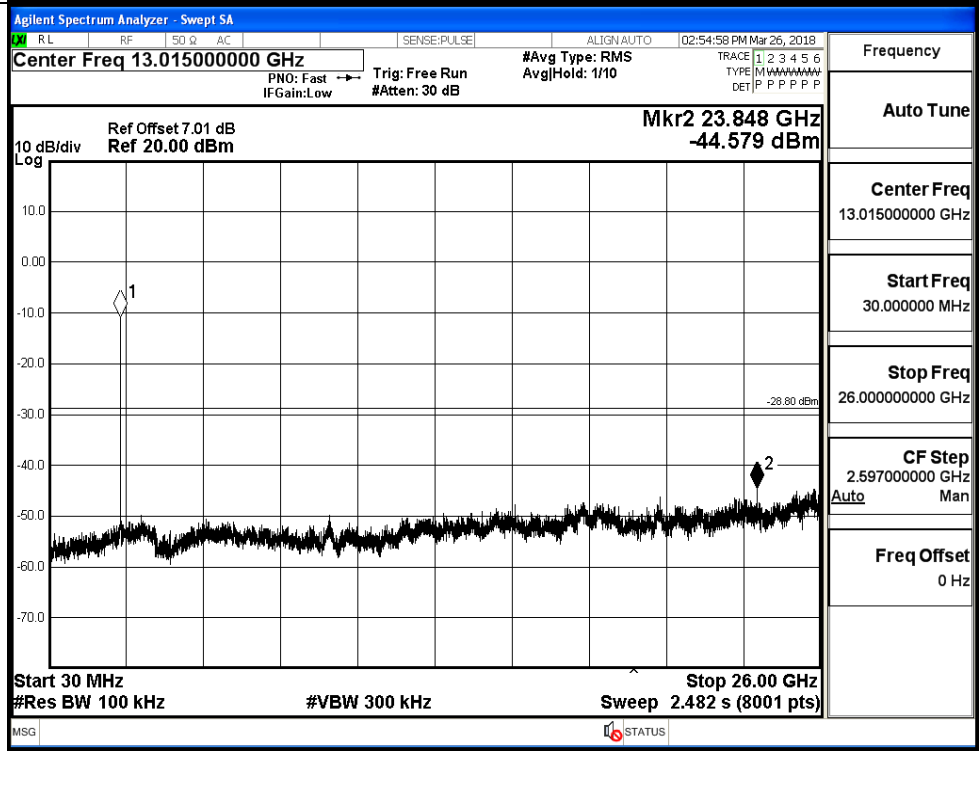


11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCH

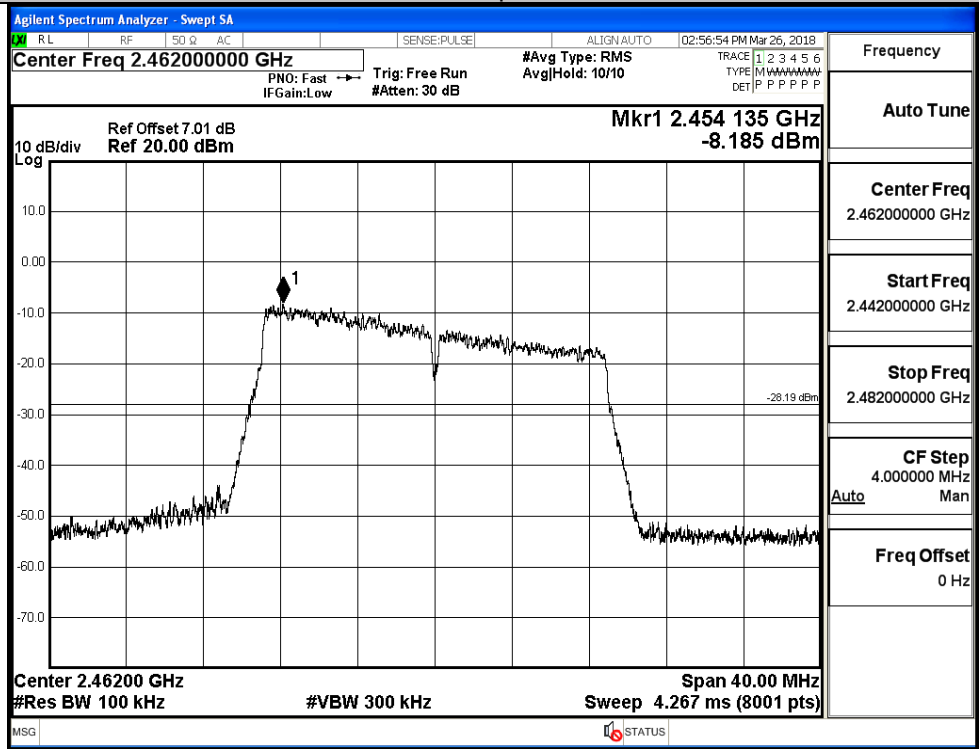


Puw/11N20
SISO/MCH

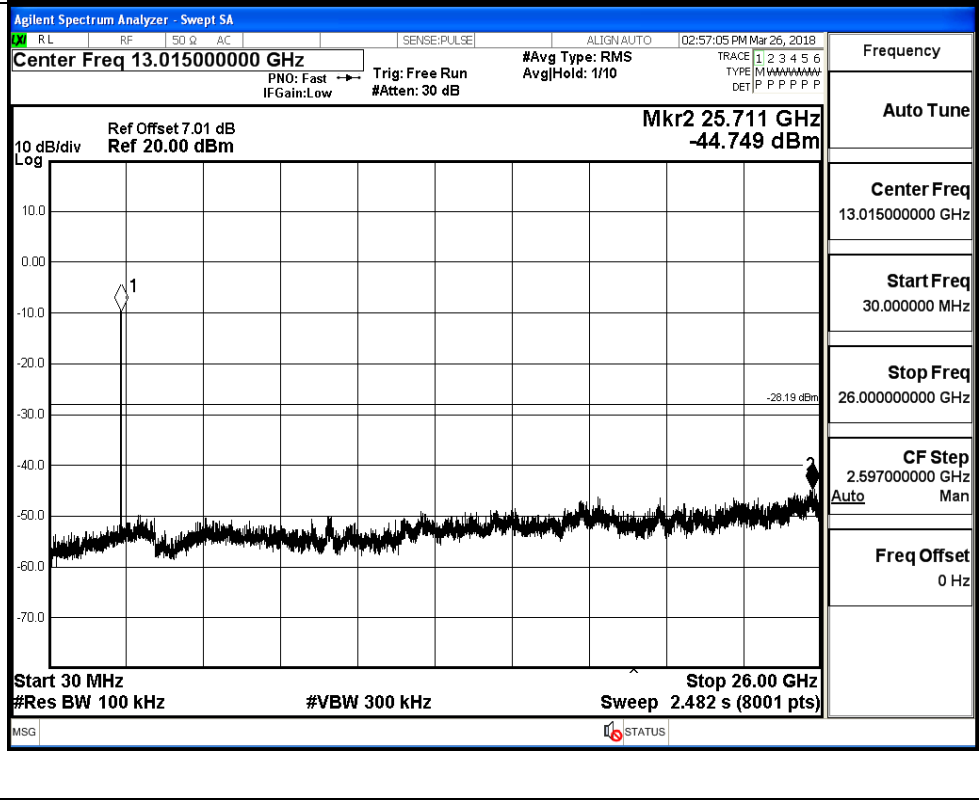


11N20SISO_HCH_Graphs

Pref/11N20
SISO/HCH

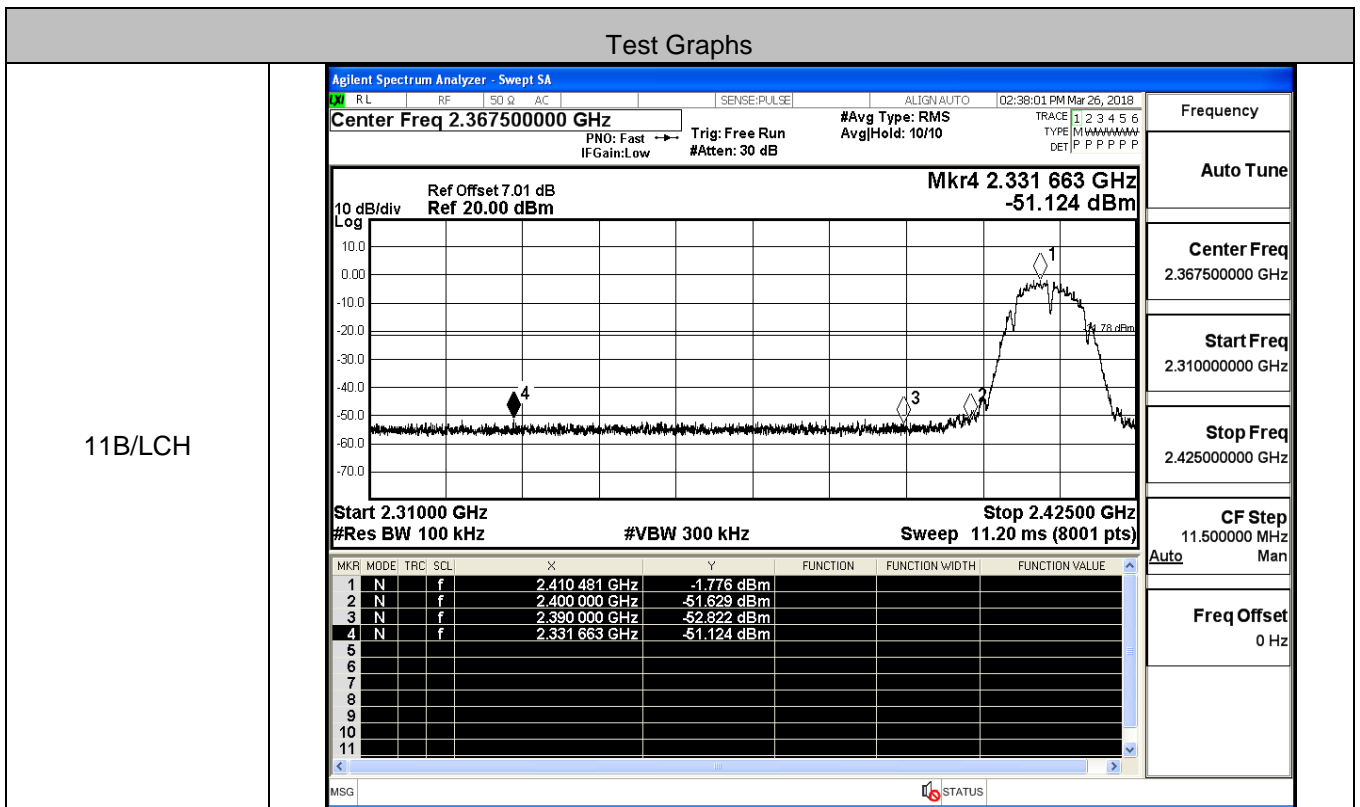


Puw/11N20
SISO/HCH

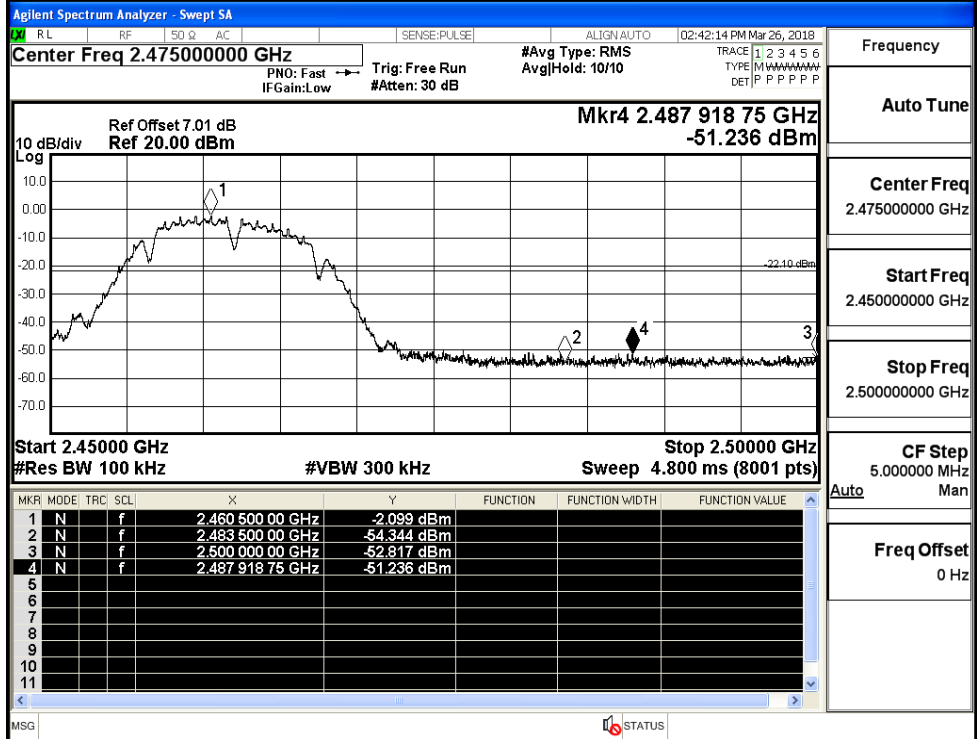


C.5 Band-edge for RF Conducted Emissions

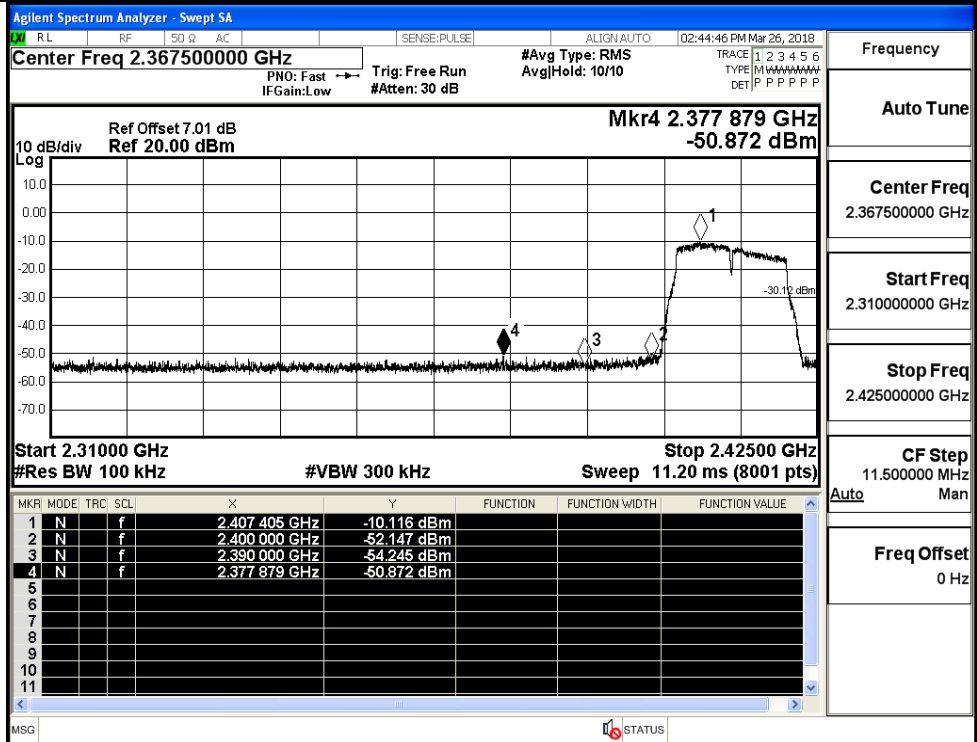
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-1.776	-51.124	-21.78	PASS
	HCH	-2.099	-51.236	-22.1	PASS
11G	LCH	-10.116	-50.872	-30.12	PASS
	HCH	-8.494	-51.259	-28.49	PASS
11N20SISO	LCH	-9.937	-51.238	-29.94	PASS
	HCH	-8.427	-51.109	-28.43	PASS



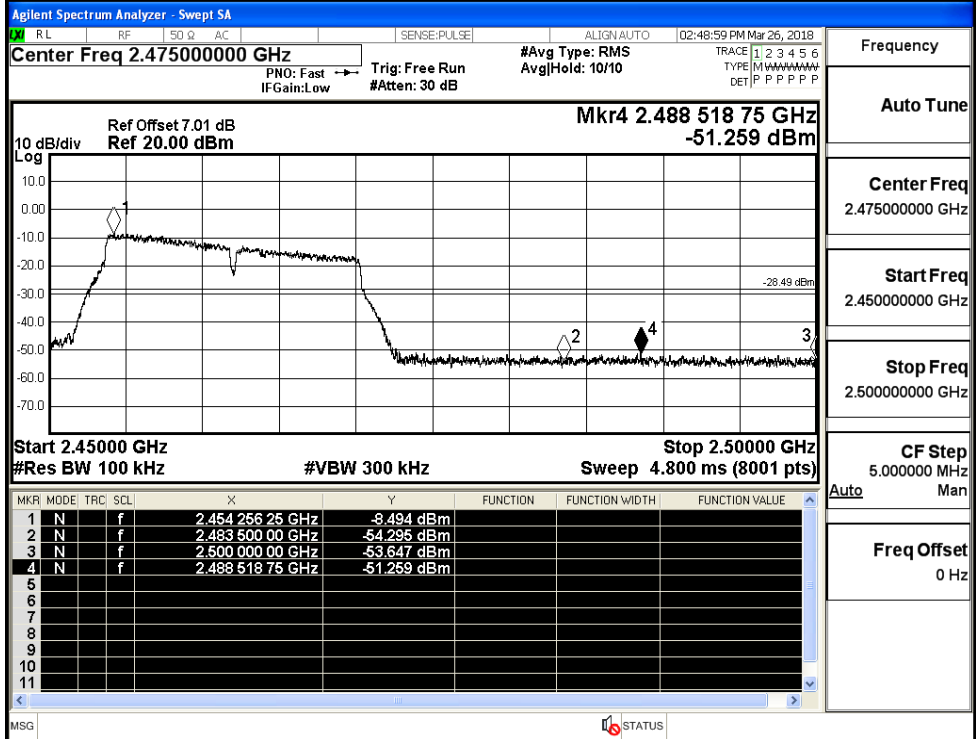
11B/HCH



11G/LCH



11G/HCH



Frequency

Auto Tune

Center Freq
2.47500000 GHz

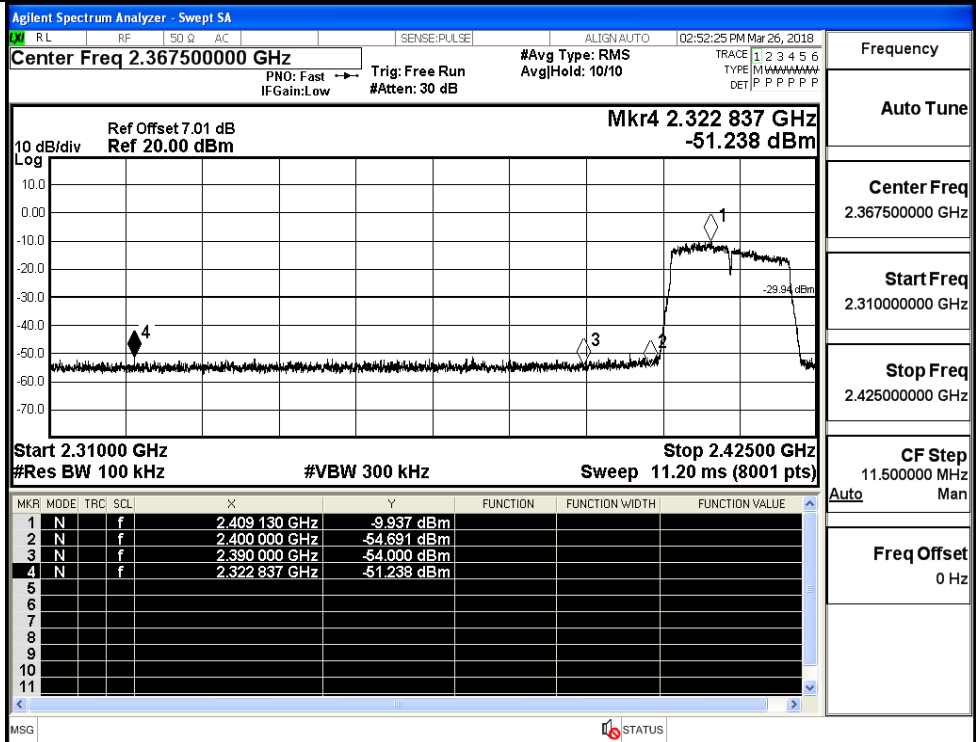
Start Freq
2.45000000 GHz

Stop Freq
2.50000000 GHz

CF Step
5.000000 MHz

Freq Offset
0 Hz

11N20SISO/LCH



Frequency

Auto Tune

Center Freq
2.36750000 GHz

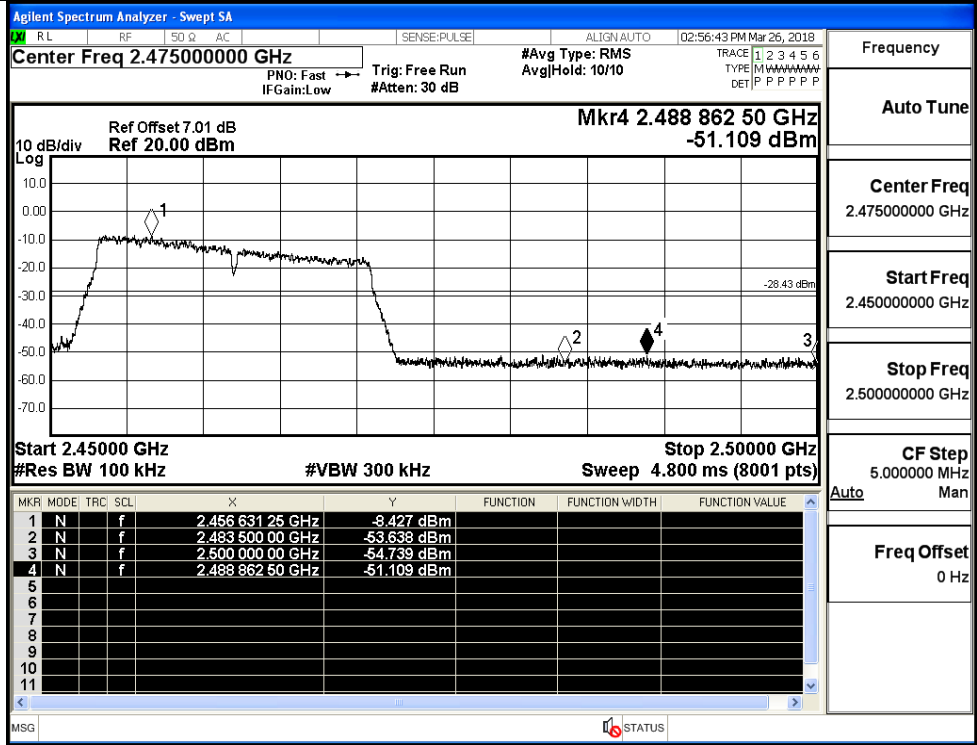
Start Freq
2.31000000 GHz

Stop Freq
2.42500000 GHz

CF Step
11.500000 MHz

Freq Offset
0 Hz

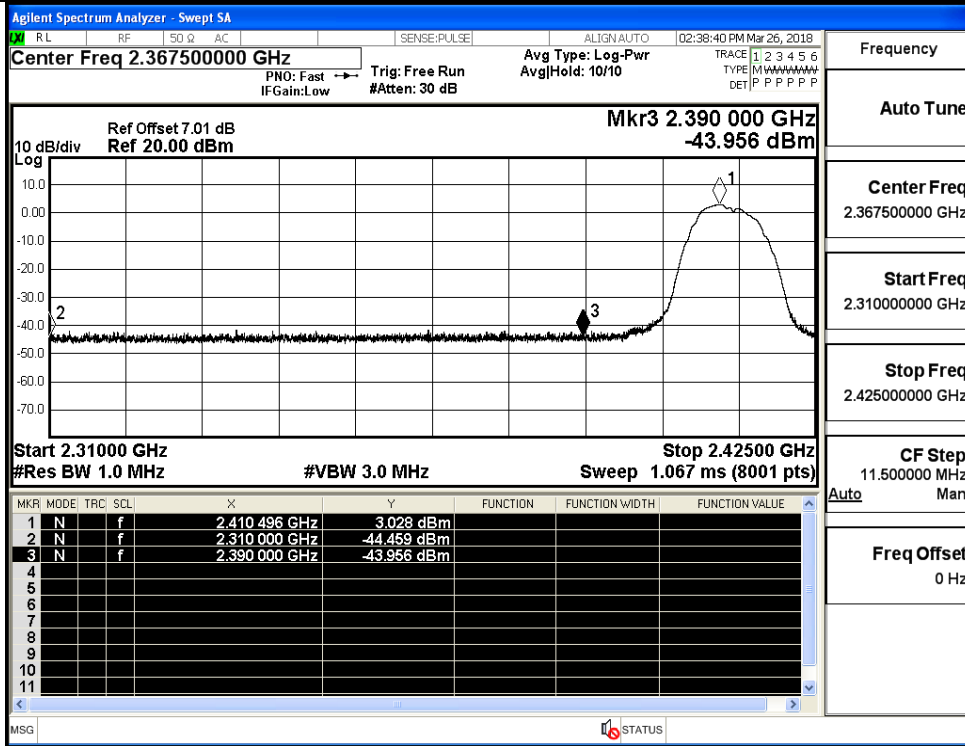
11N20SISO/HCH



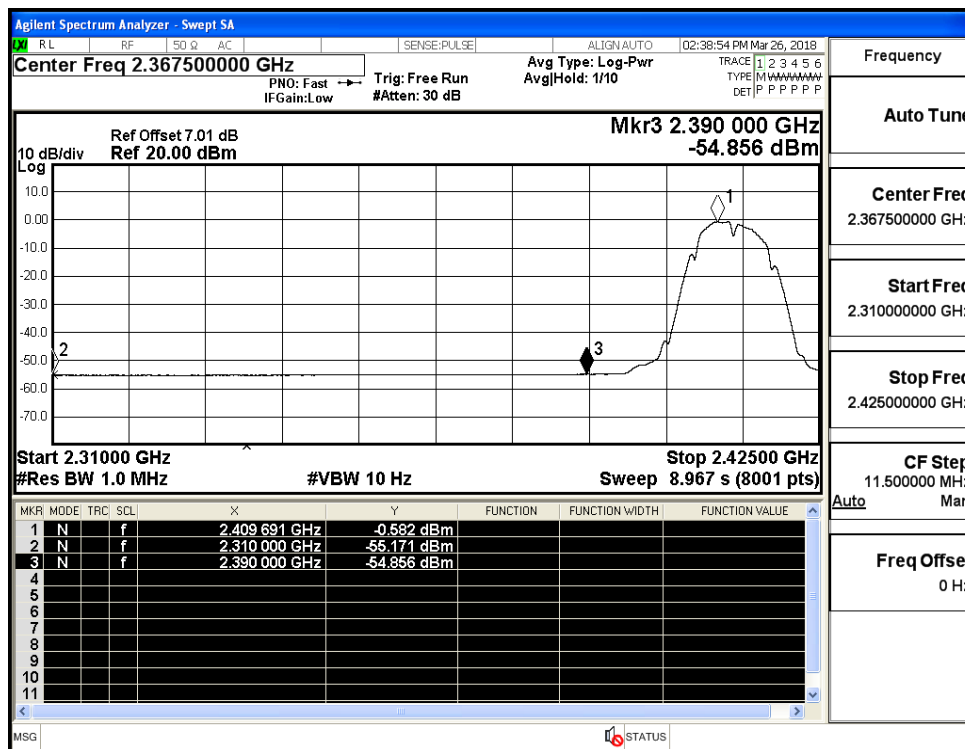
C.6 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBu V/m]	Verdict
11B	2412	Ant1	2310.0	-44.46	2.0	0	52.80	PEAK	74	PASS
	2412	Ant1	2310.0	-55.17	2.0	0	42.09	AV	54	PASS
	2412	Ant1	2390.0	-43.96	2.0	0	53.30	PEAK	74	PASS
	2412	Ant1	2390.0	-54.86	2.0	0	42.40	AV	54	PASS
	2462	Ant1	2483.5	-44.20	2.0	0	53.06	PEAK	74	PASS
	2462	Ant1	2483.5	-54.45	2.0	0	42.81	AV	54	PASS
	2462	Ant1	2500.0	-44.93	2.0	0	52.33	PEAK	74	PASS
	2462	Ant1	2500.0	-54.59	2.0	0	42.67	AV	54	PASS
11G	2412	Ant1	2310.0	-43.88	2.0	0	53.38	PEAK	74	PASS
	2412	Ant1	2310.0	-55.13	2.0	0	42.13	AV	54	PASS
	2412	Ant1	2390.0	-43.83	2.0	0	53.43	PEAK	74	PASS
	2412	Ant1	2390.0	-54.68	2.0	0	42.58	AV	54	PASS
	2462	Ant1	2483.5	-44.86	2.0	0	52.40	PEAK	74	PASS
	2462	Ant1	2483.5	-54.29	2.0	0	42.97	AV	54	PASS
	2462	Ant1	2500.0	-44.38	2.0	0	52.88	PEAK	74	PASS
	2462	Ant1	2500.0	-54.55	2.0	0	42.71	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-45.32	2.0	0	51.94	PEAK	74	PASS
	2412	Ant1	2310.0	-55.16	2.0	0	42.10	AV	54	PASS
	2412	Ant1	2390.0	-45.03	2.0	0	52.23	PEAK	74	PASS
	2412	Ant1	2390.0	-54.70	2.0	0	42.56	AV	54	PASS
	2462	Ant1	2483.5	-44.01	2.0	0	53.25	PEAK	74	PASS
	2462	Ant1	2483.5	-54.23	2.0	0	43.03	AV	54	PASS
	2462	Ant1	2500.0	-43.45	2.0	0	53.81	PEAK	74	PASS
	2462	Ant1	2500.0	-54.53	2.0	0	42.73	AV	54	PASS

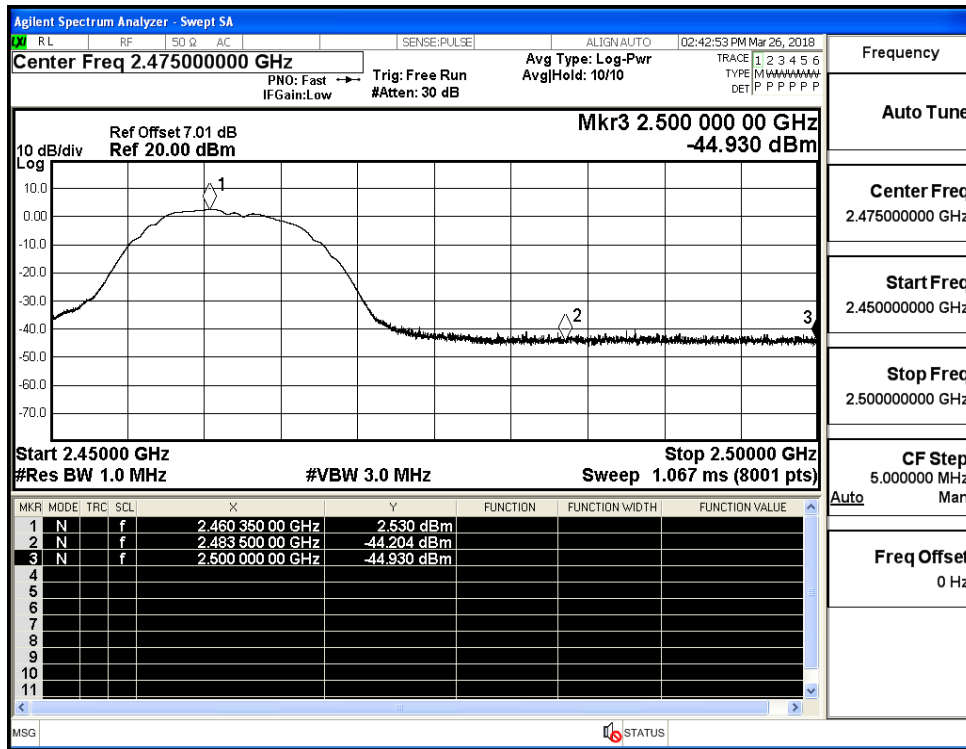
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



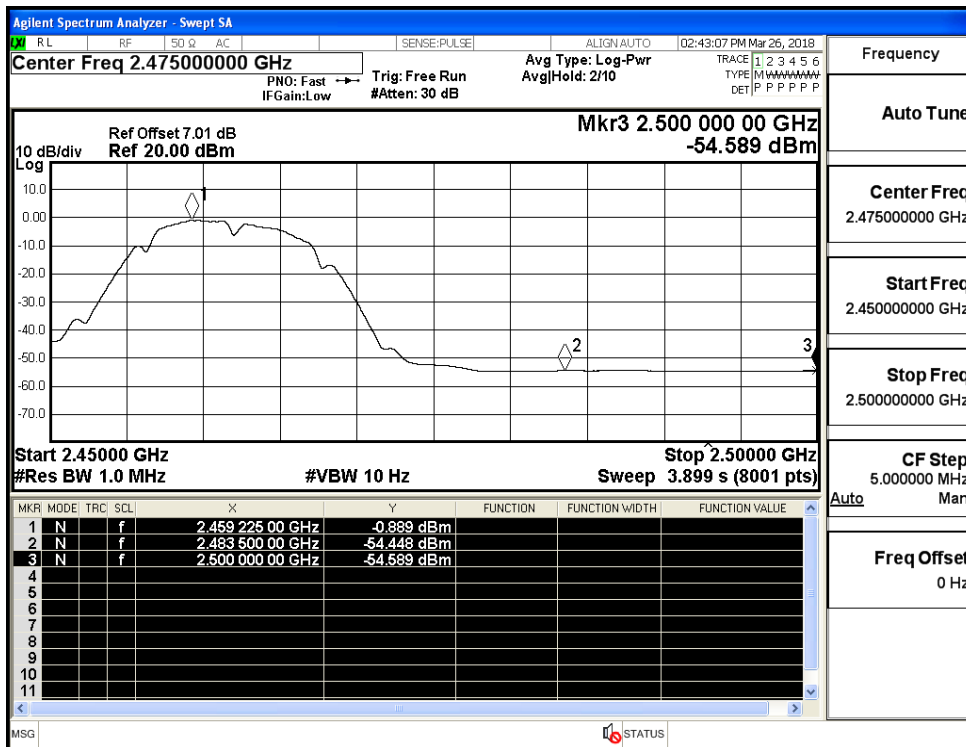
Restrict-band band-edge measurements_11B_2412_Ant1_AV



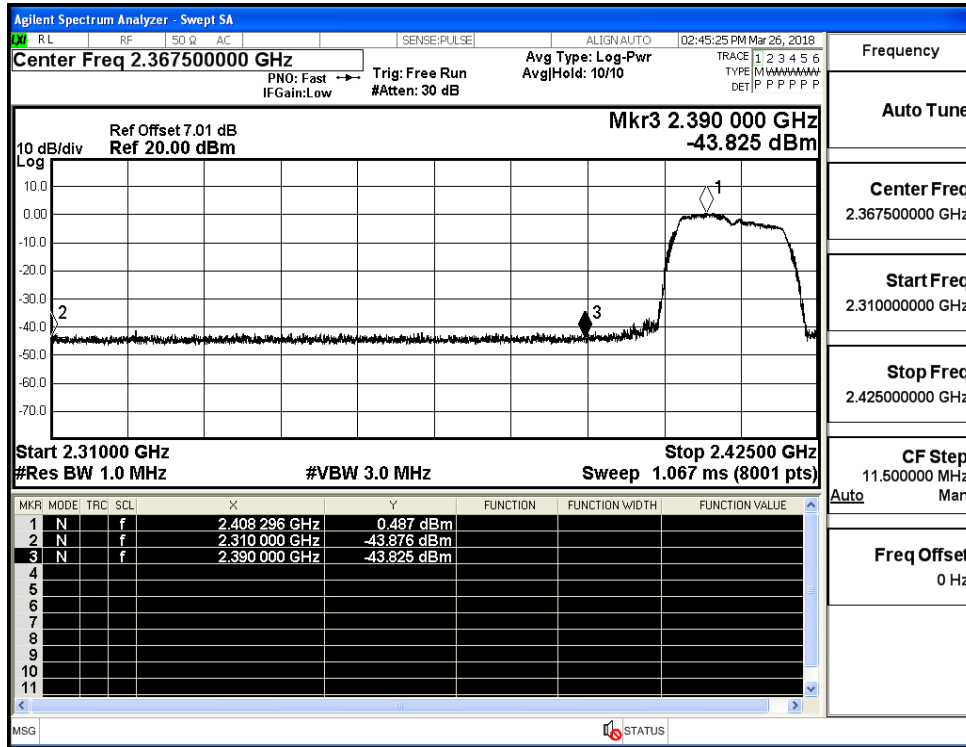
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



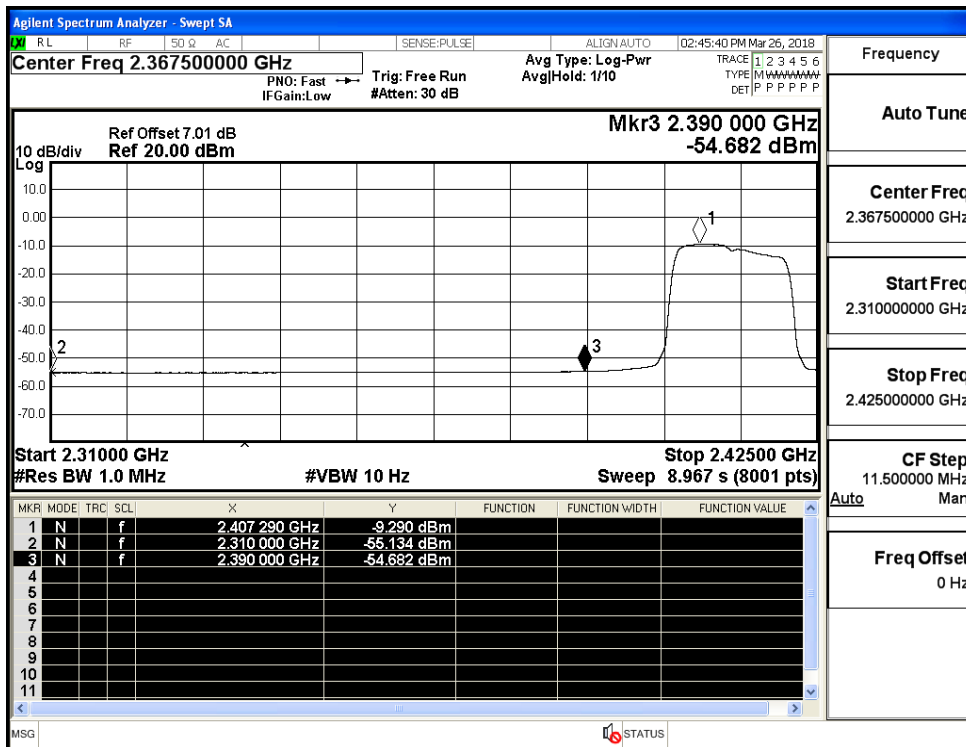
Restrict-band band-edge measurements_11B_2462_Ant1_AV



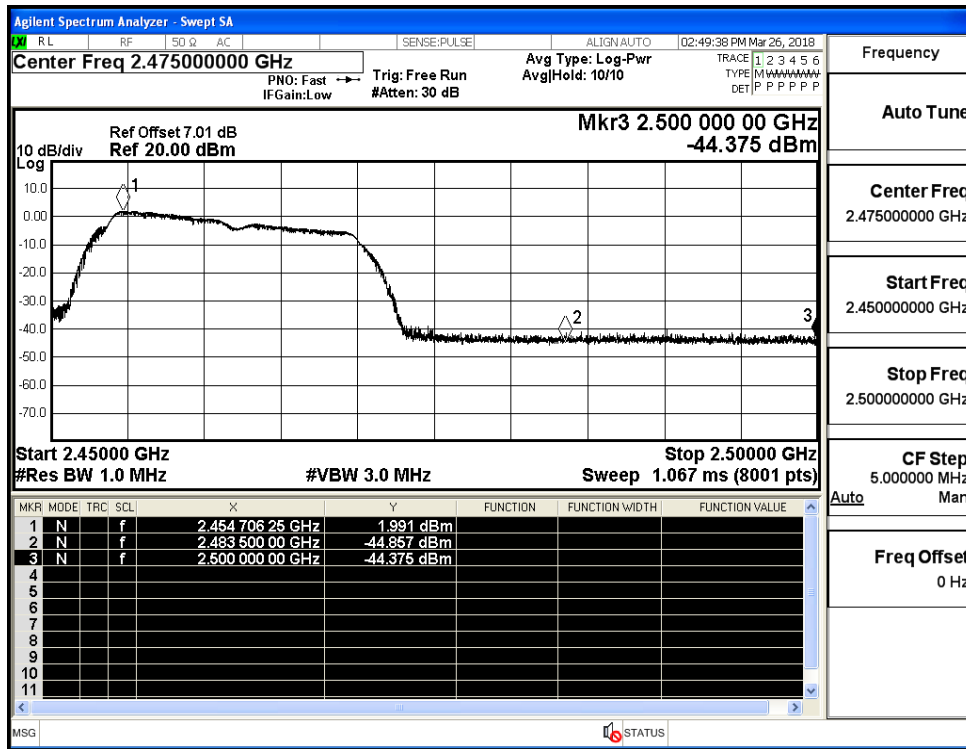
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



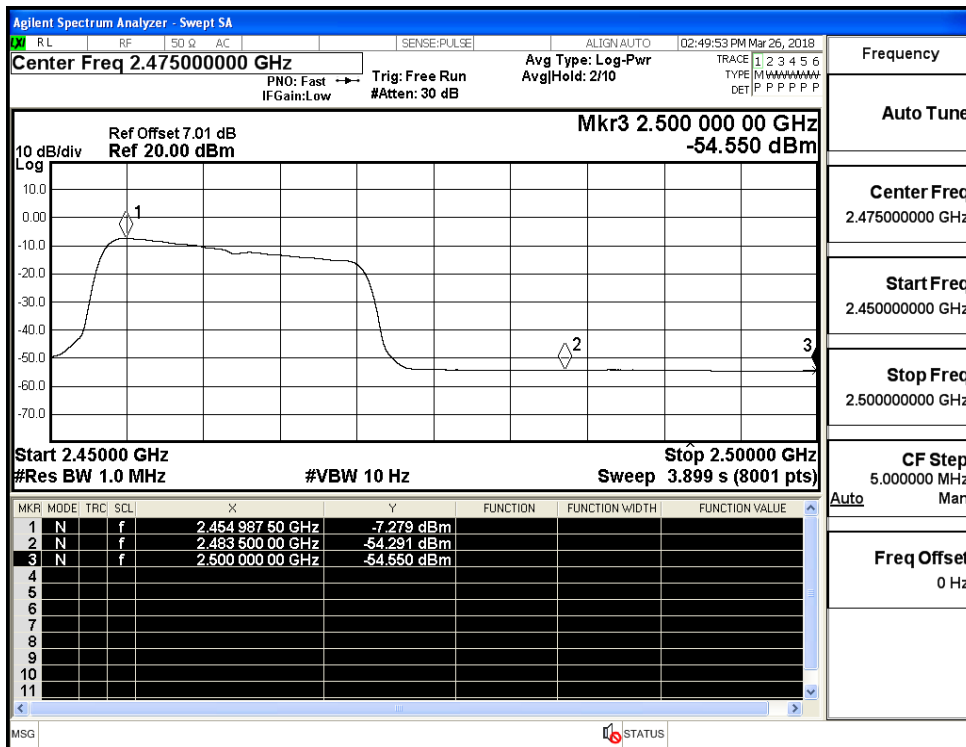
Restrict-band band-edge measurements_11G_2412_Ant1_AV



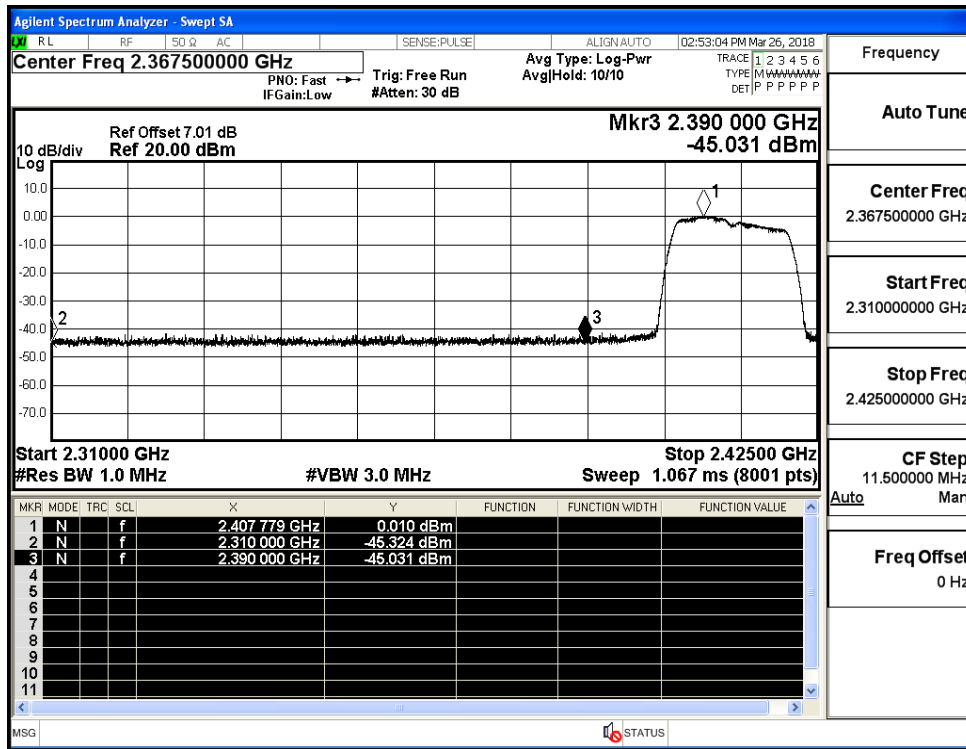
Restrict-band band-edge measurements_11G_2462_Ant1_PEAK



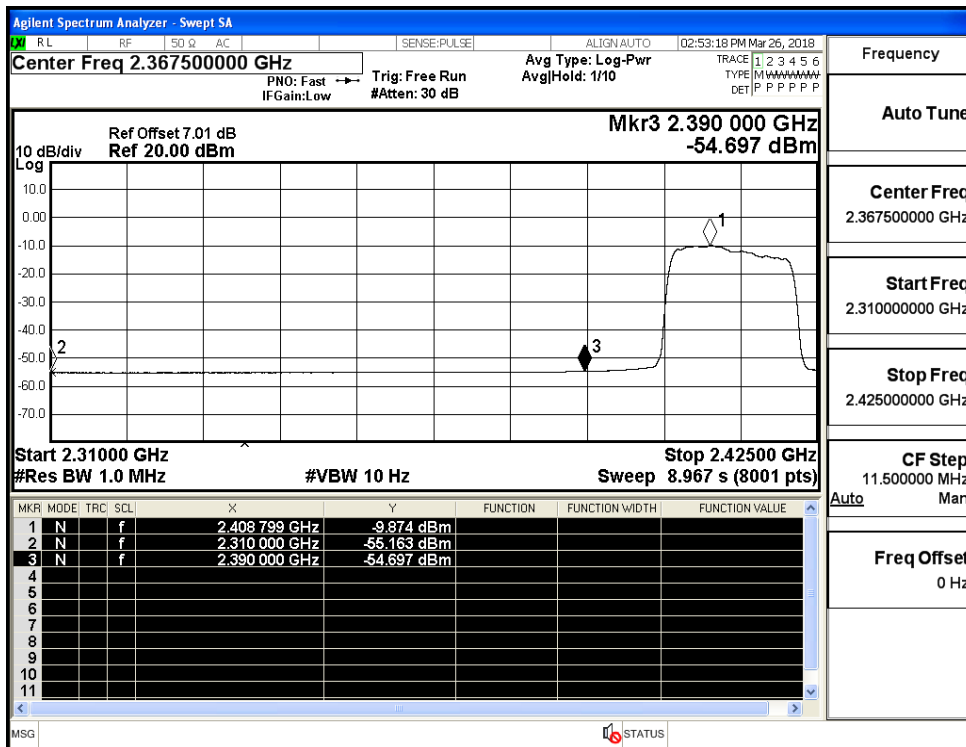
Restrict-band band-edge measurements_11G_2462_Ant1_AV



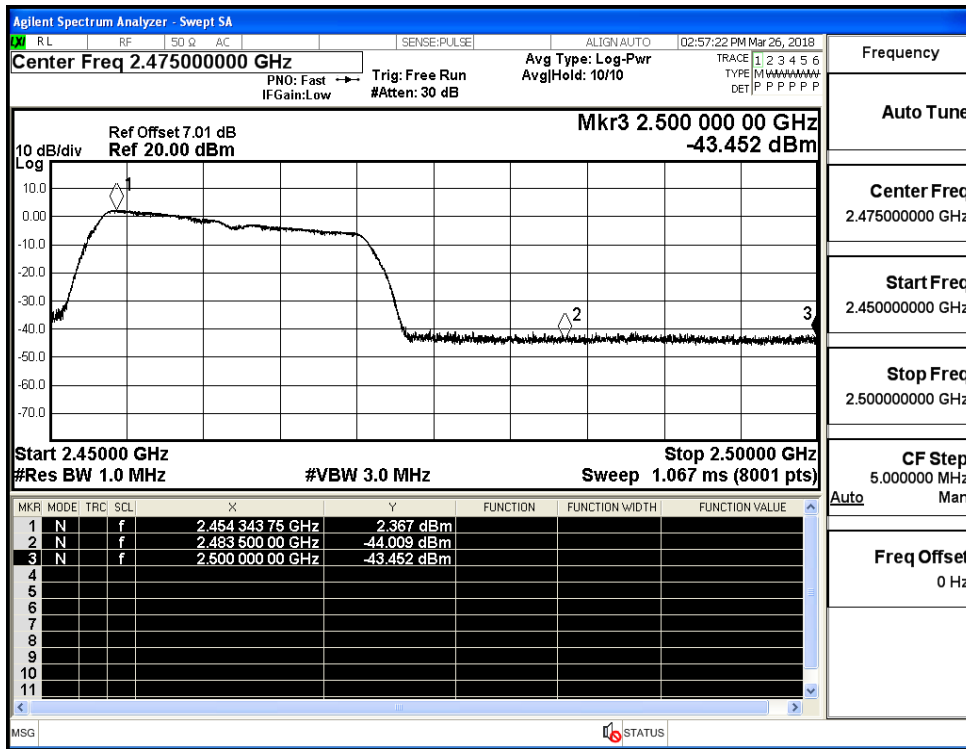
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



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

