

Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: All-in-One PC

Trade Mark: 

Test Model: EV-AIO-185-1

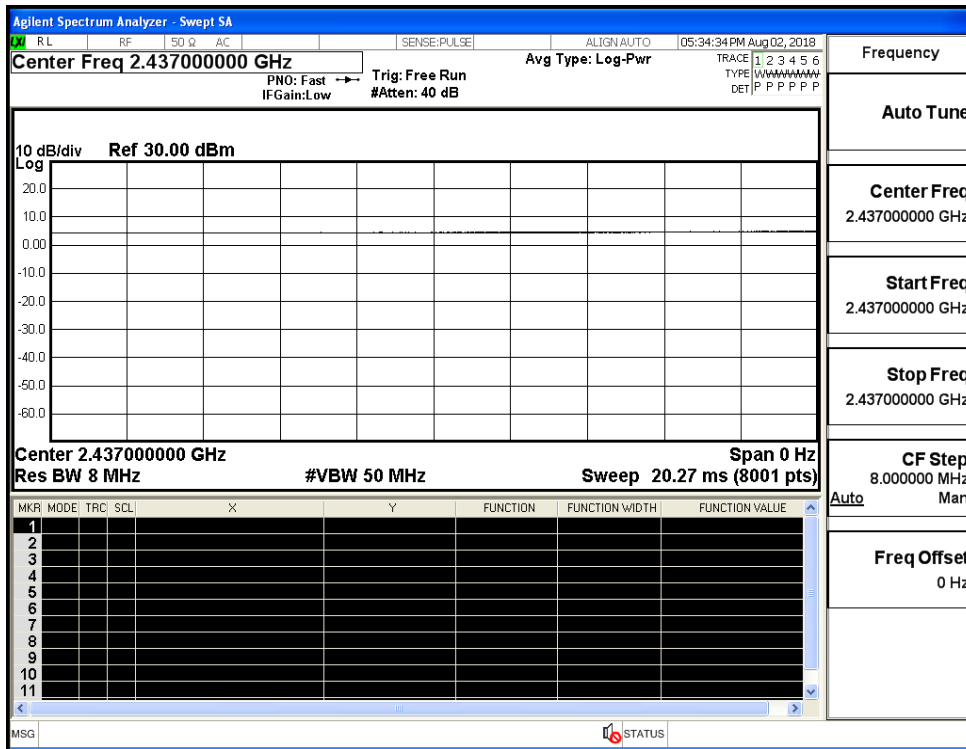
Environmental Conditions

Temperature:	24.6 ° C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Wilson.Hong
Supervised by:	Jayden.Zhuo

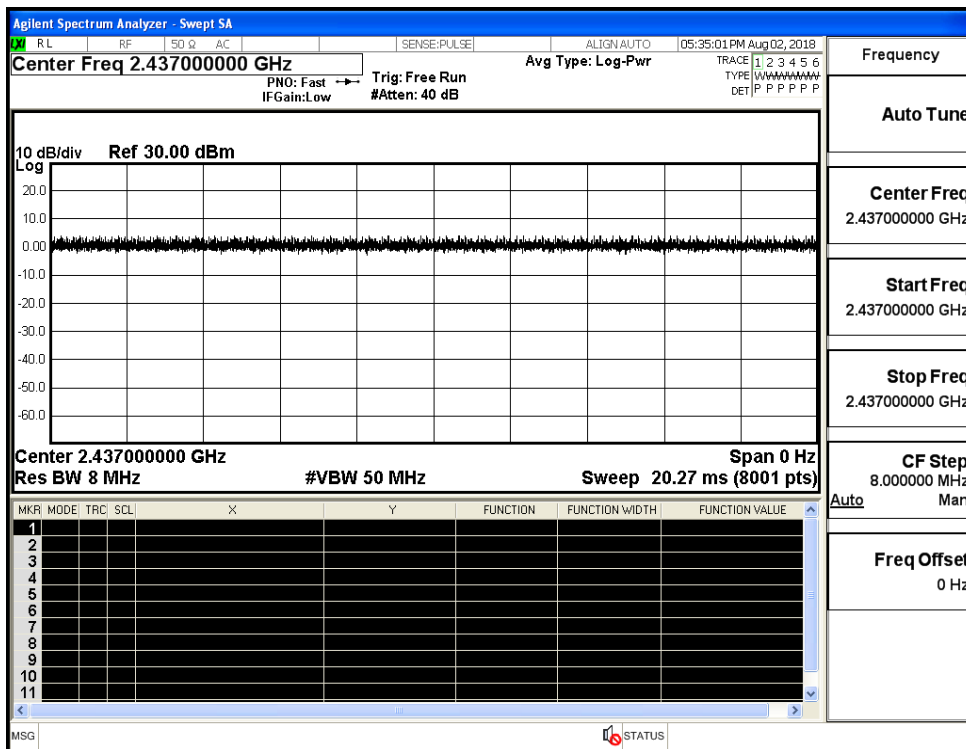
C.1 Duty Cycle

Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2437	Ant1	100	PASS
11G	2437	Ant1	100	PASS
11N20SISO	2437	Ant1	100	PASS
11N40SISO	2437	Ant1	100	PASS

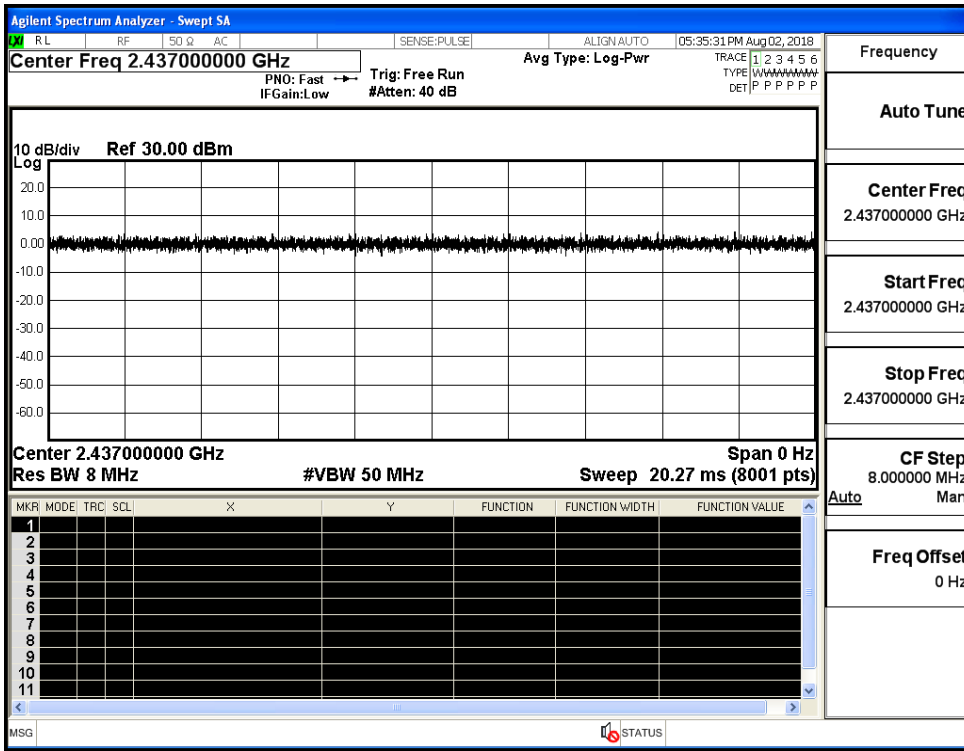
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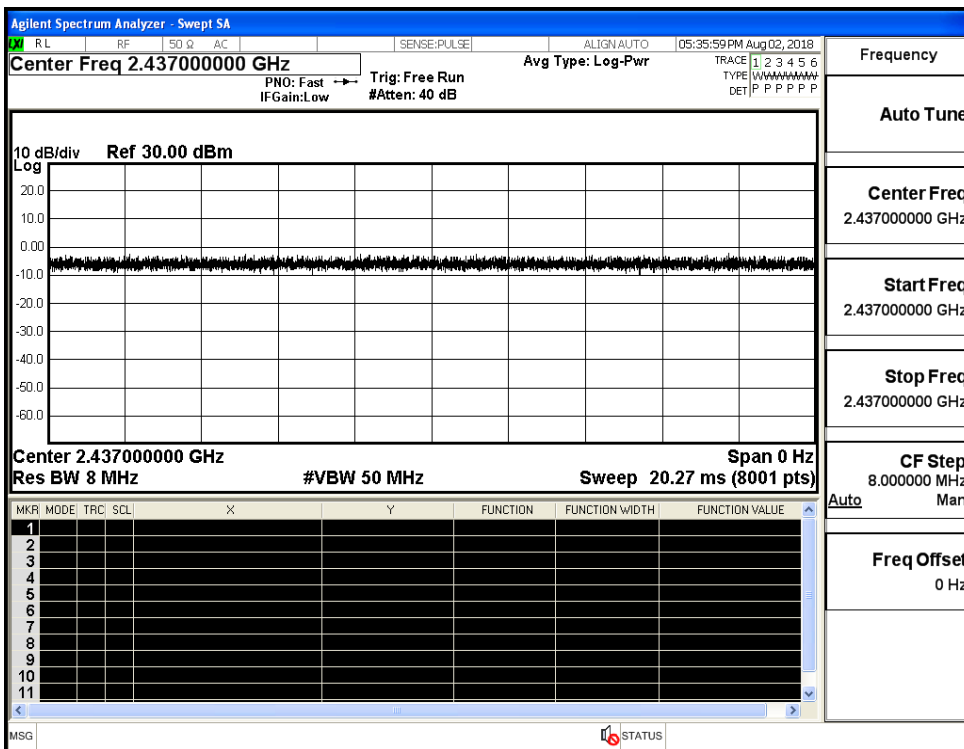
Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



Duty Cycle_11N40SISO_2437_Ant1

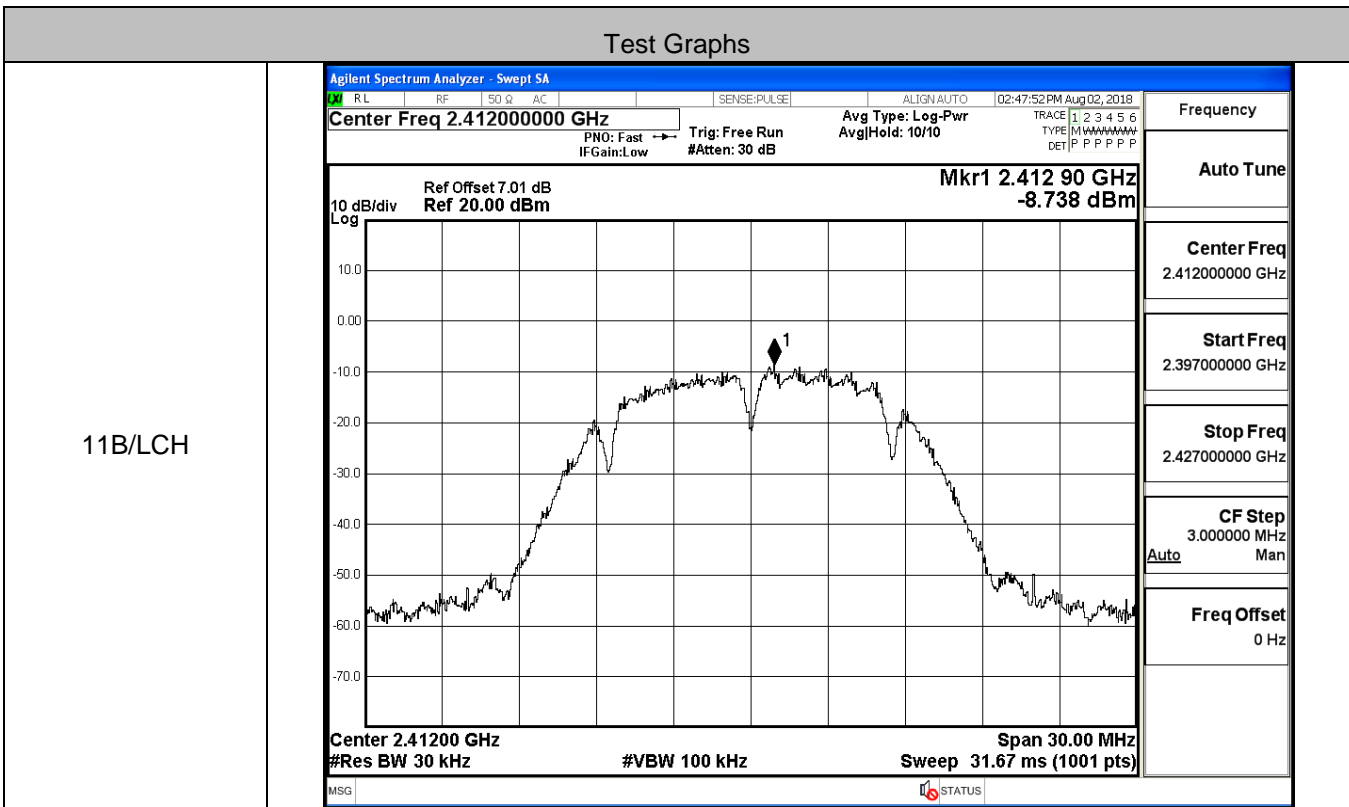


C.2 Maximum Peak Conducted Output Power

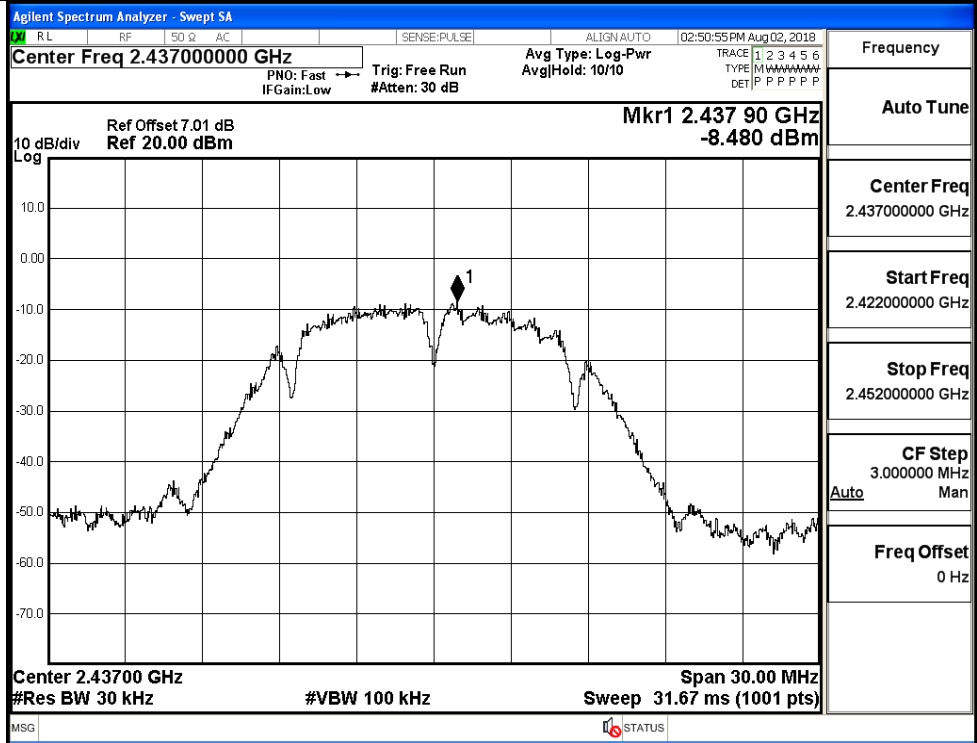
Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	12.35	30	PASS
	MCH	12.77	30	PASS
	HCH	13.55	30	PASS
11G	LCH	14.37	30	PASS
	MCH	14.70	30	PASS
	HCH	14.74	30	PASS
11N20SISO	LCH	16.68	30	PASS
	MCH	16.68	30	PASS
	HCH	17.24	30	PASS
11N40SISO	LCH	17.01	30	PASS
	MCH	18.09	30	PASS
	HCH	17.33	30	PASS

C.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/30KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-8.738	8	PASS
	MCH	-8.480	8	PASS
	HCH	-8.997	8	PASS
11G	LCH	-13.403	8	PASS
	MCH	-13.342	8	PASS
	HCH	-11.531	8	PASS
11N20SISO	LCH	-13.940	8	PASS
	MCH	-12.407	8	PASS
	HCH	-12.814	8	PASS
11N40SISO	LCH	-14.238	8	PASS
	MCH	-16.477	8	PASS
	HCH	-14.037	8	PASS



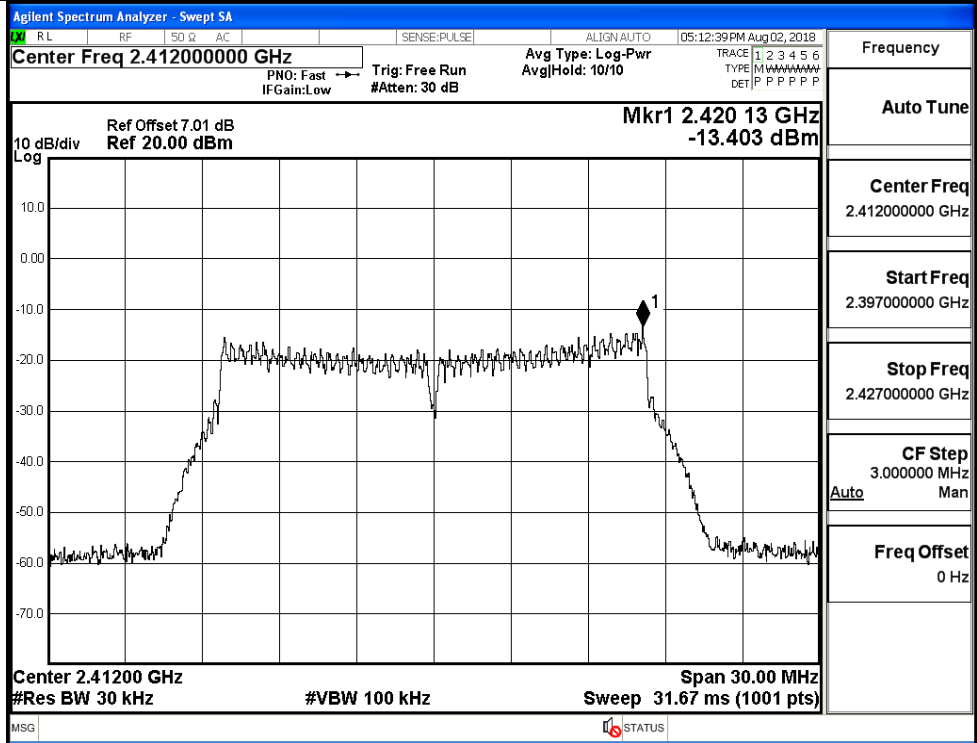
11B/MCH



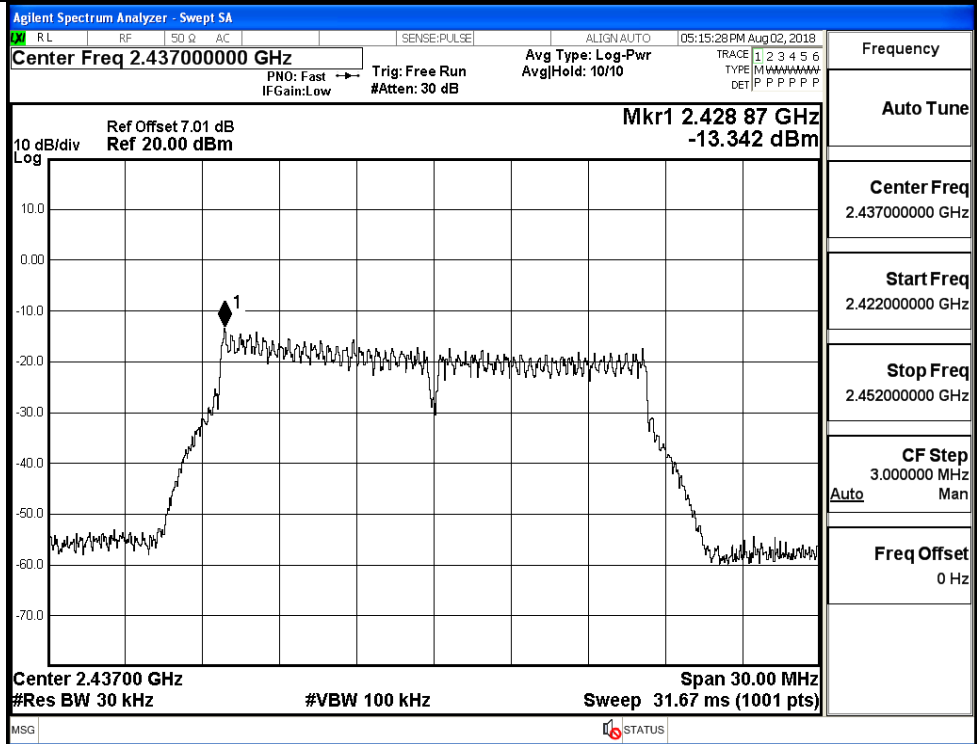
11B/HCH



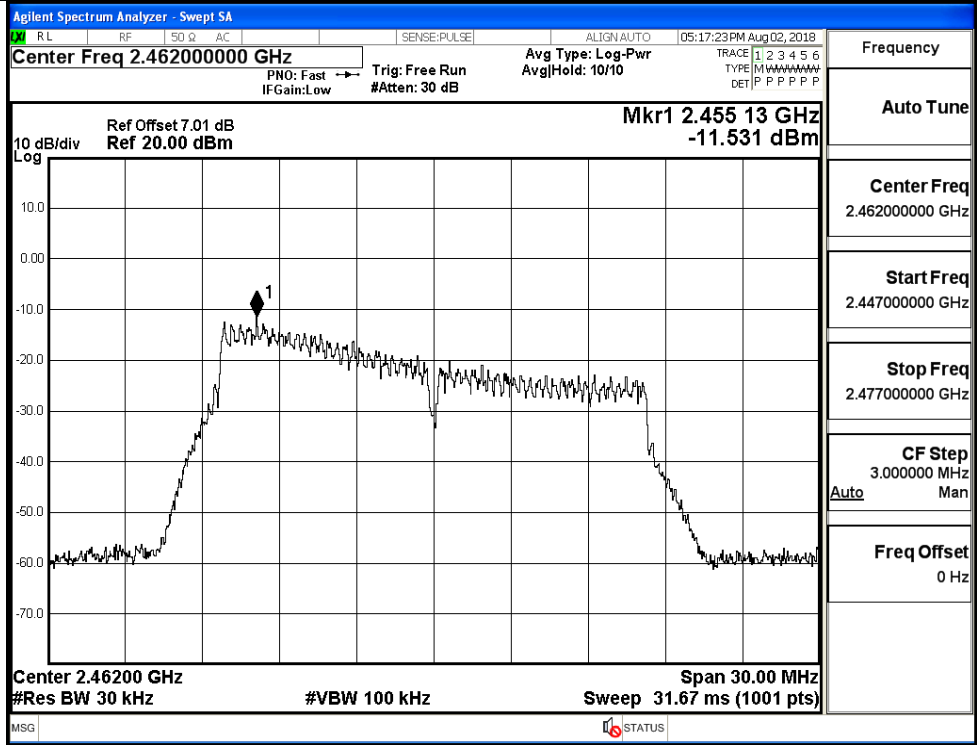
11G/LCH



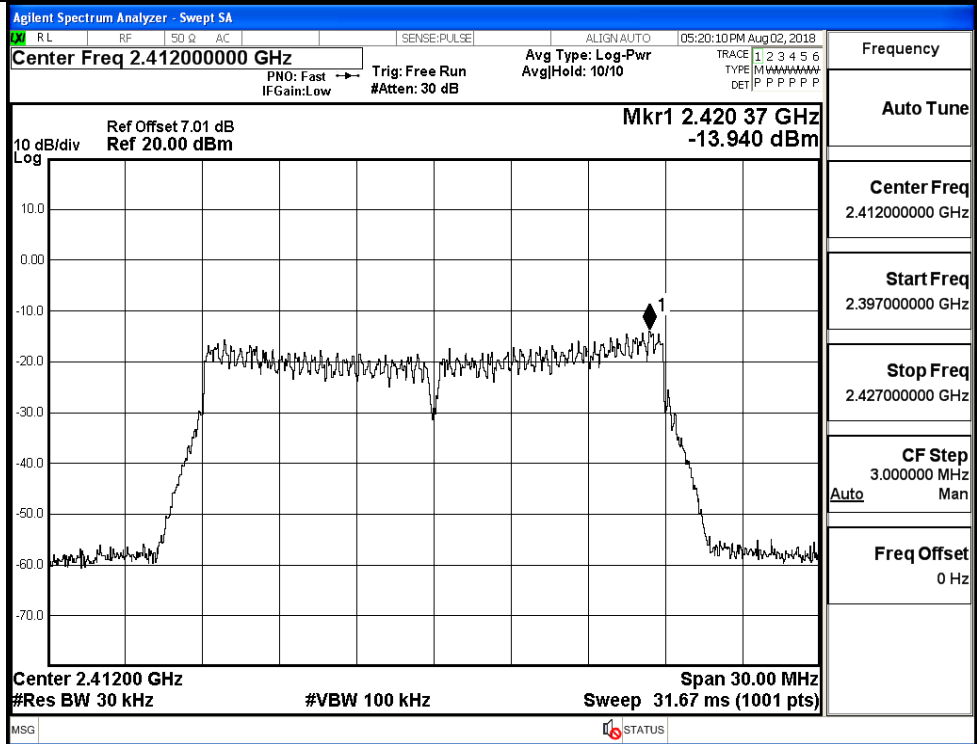
11G/MCH

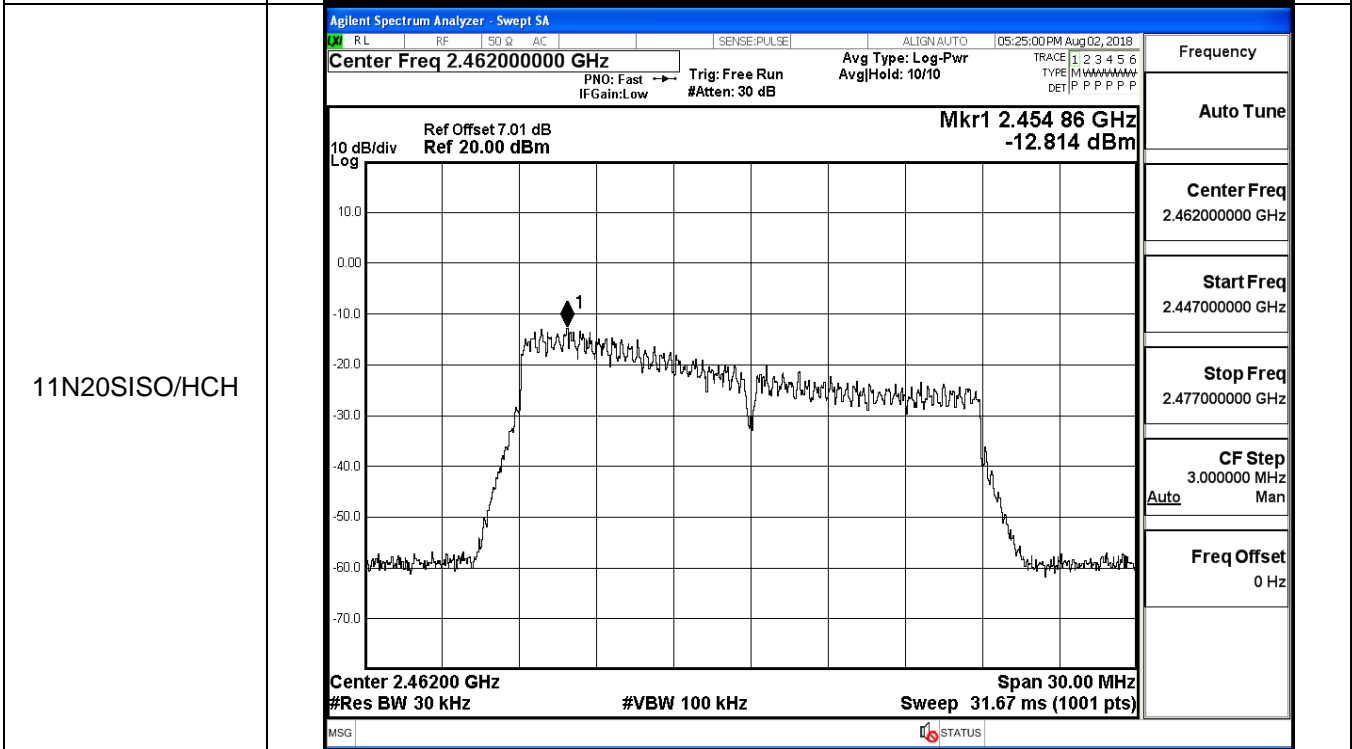
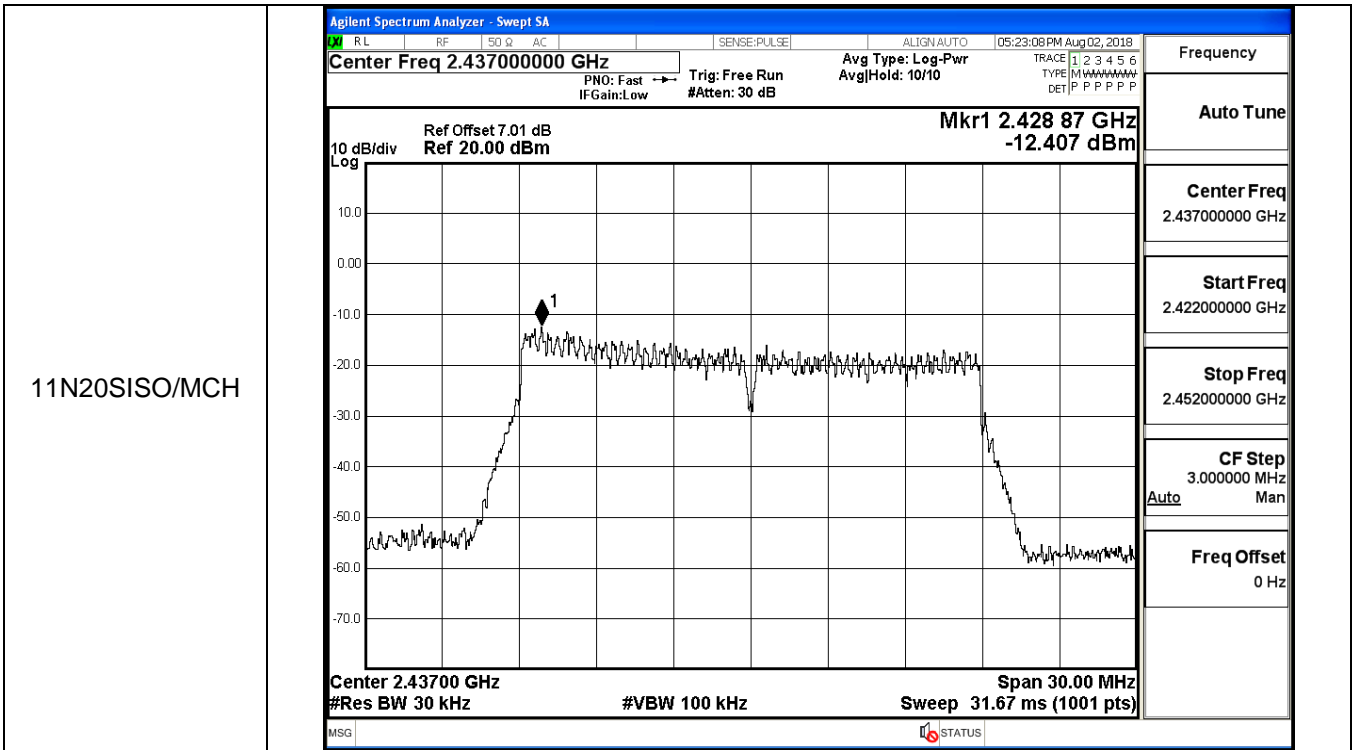


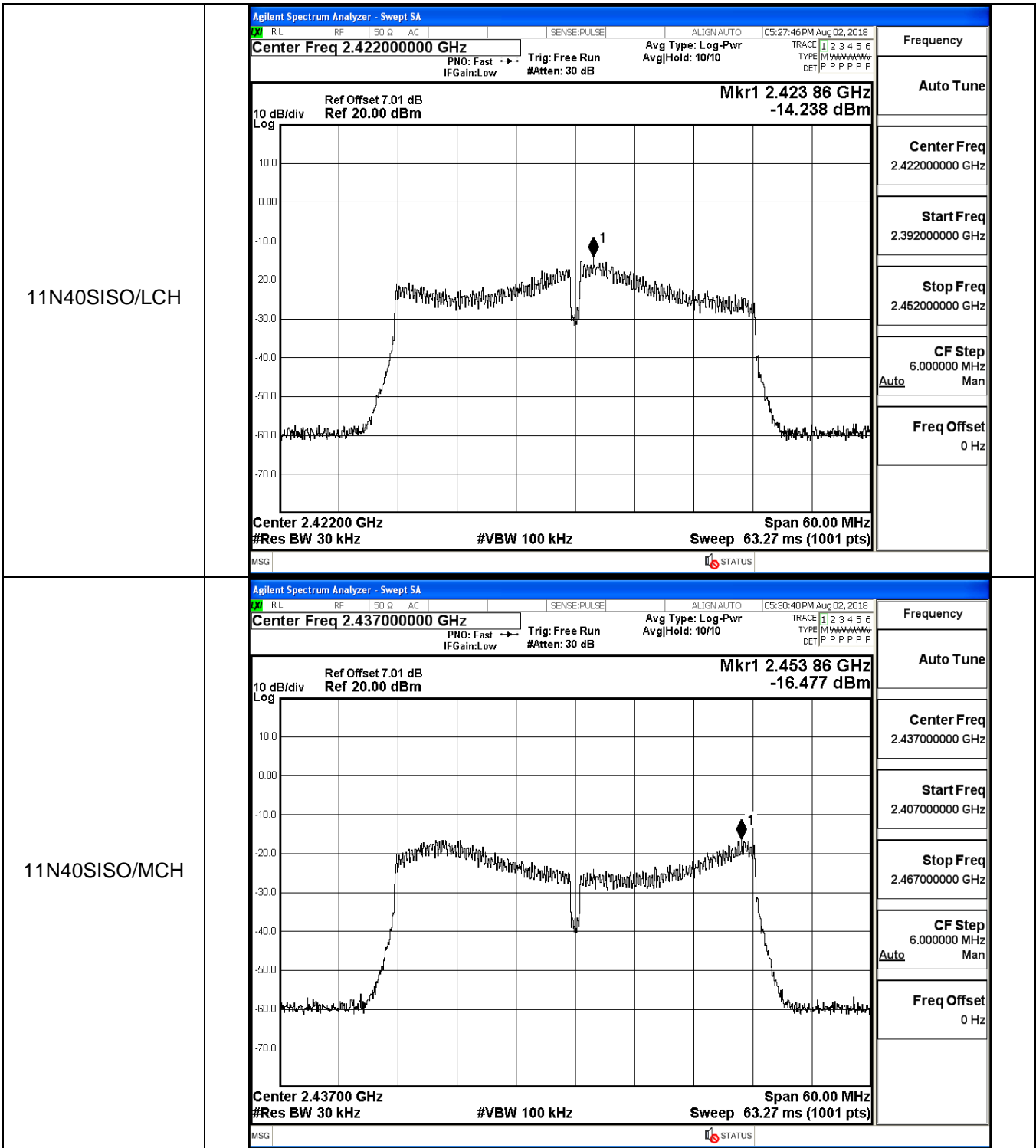
11G/HCH

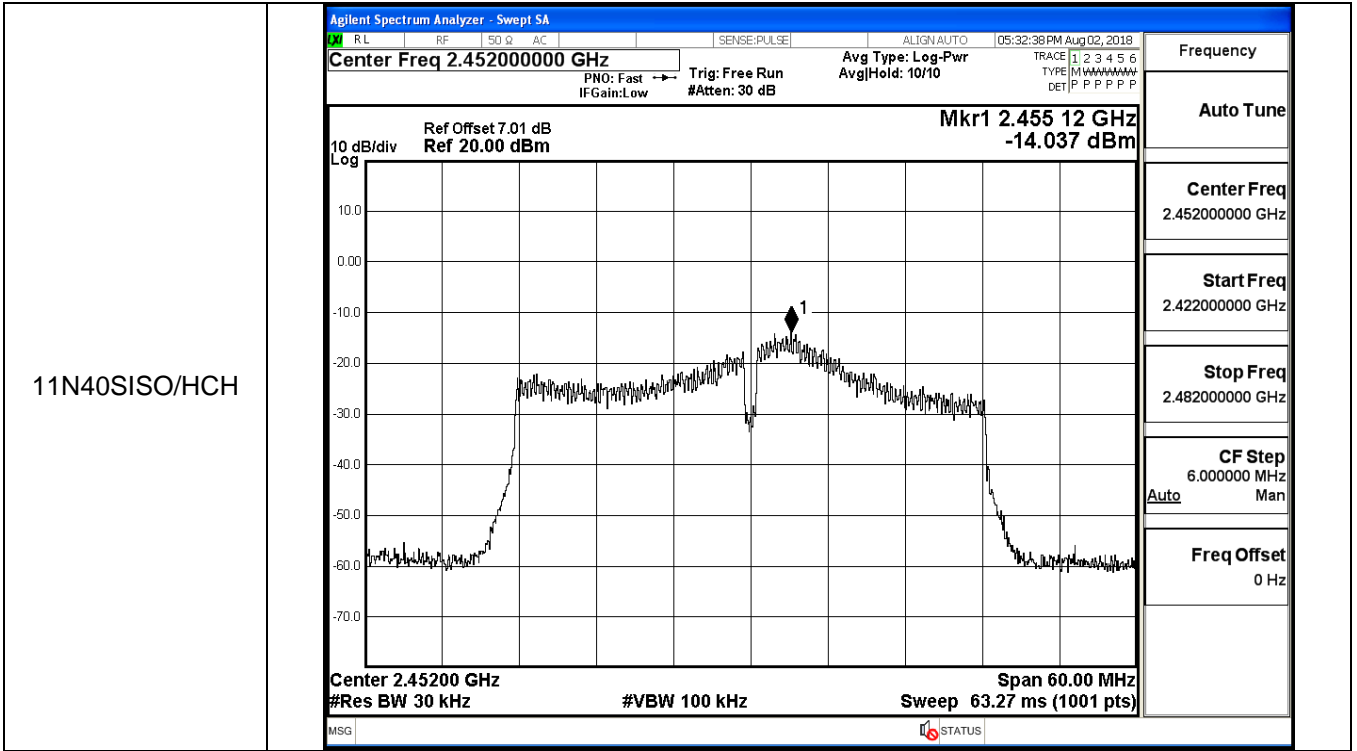


11N20SISO/LCH



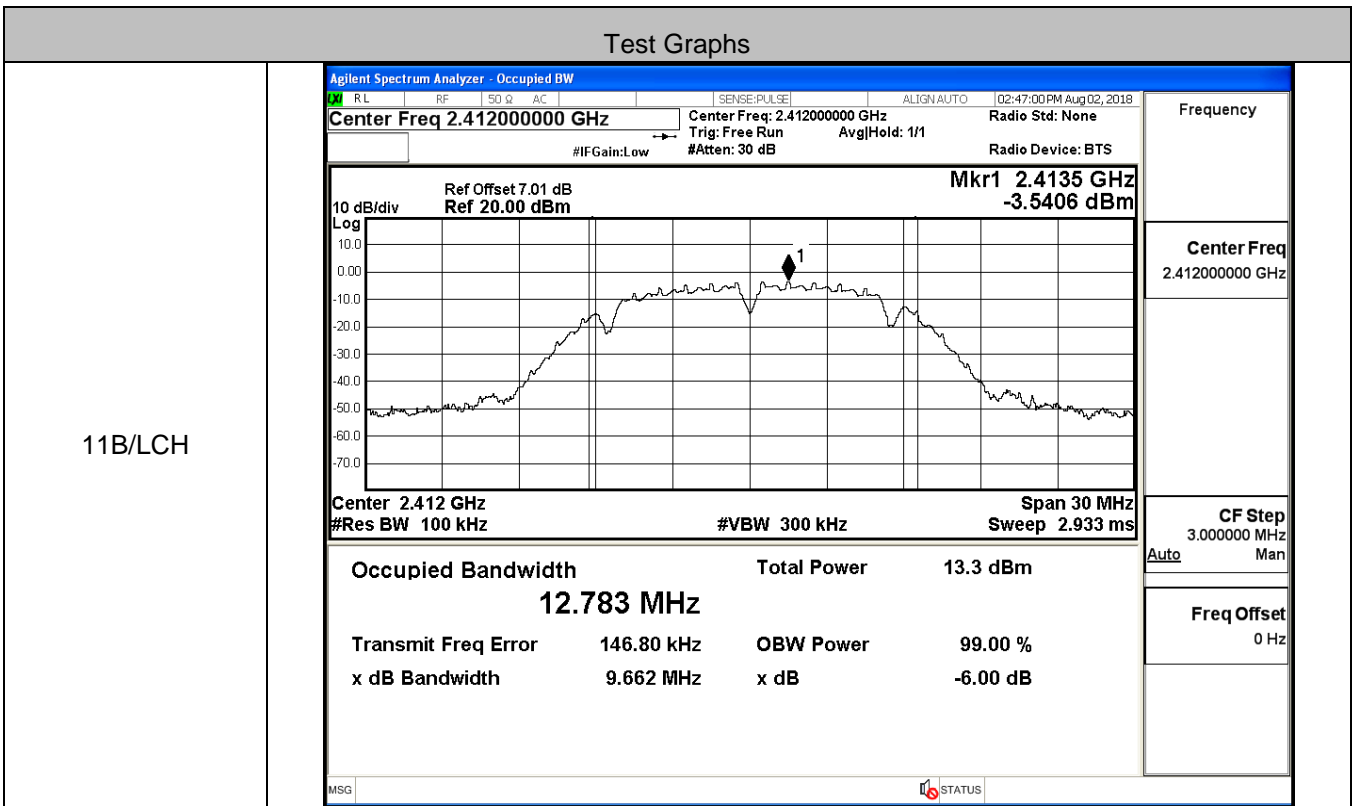




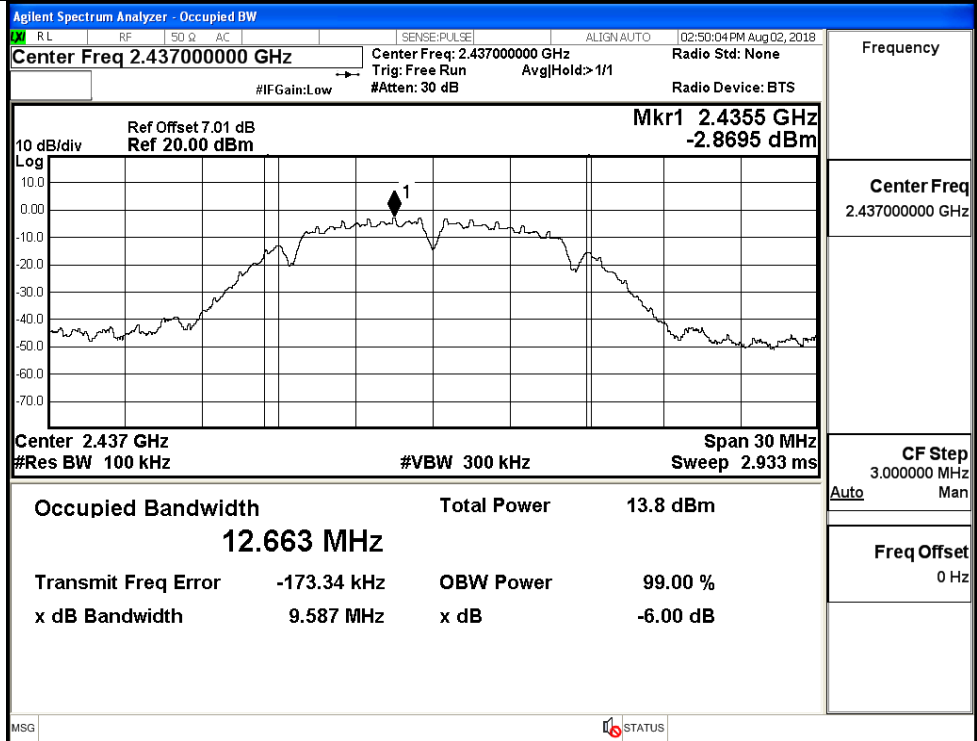


C.4 6dB Bandwidth

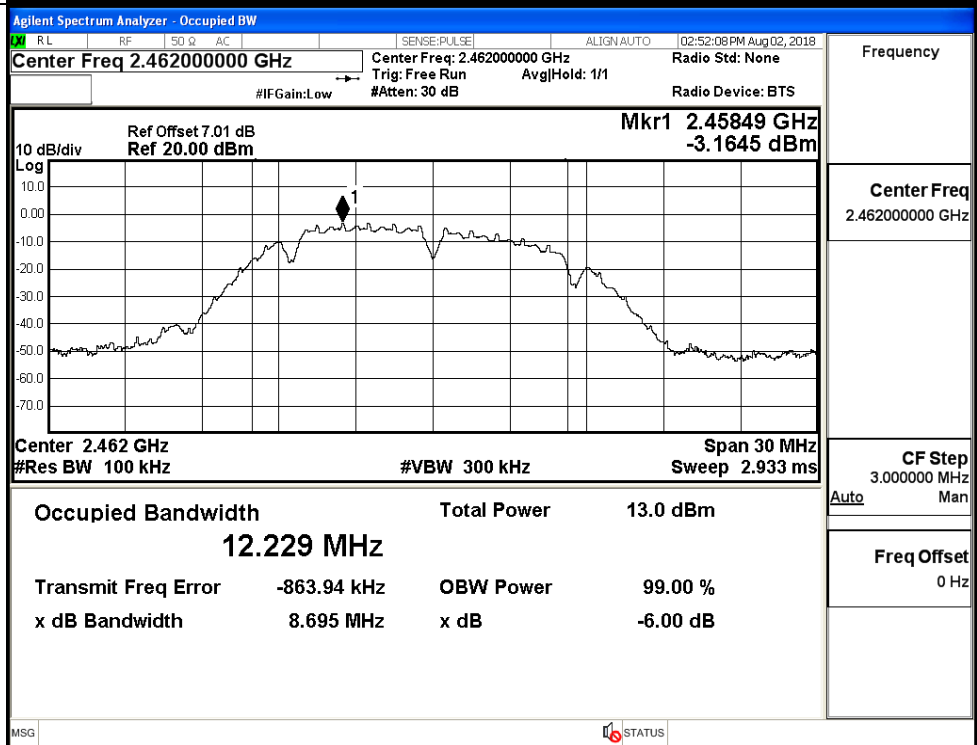
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.662	≥0.5	PASS
	MCH	9.587	≥0.5	PASS
	HCH	8.695	≥0.5	PASS
11G	LCH	16.62	≥0.5	PASS
	MCH	16.51	≥0.5	PASS
	HCH	16.45	≥0.5	PASS
11N20SISO	LCH	17.82	≥0.5	PASS
	MCH	17.75	≥0.5	PASS
	HCH	17.46	≥0.5	PASS
11N40SISO	LCH	35.71	≥0.5	PASS
	MCH	36.44	≥0.5	PASS
	HCH	35.45	≥0.5	PASS



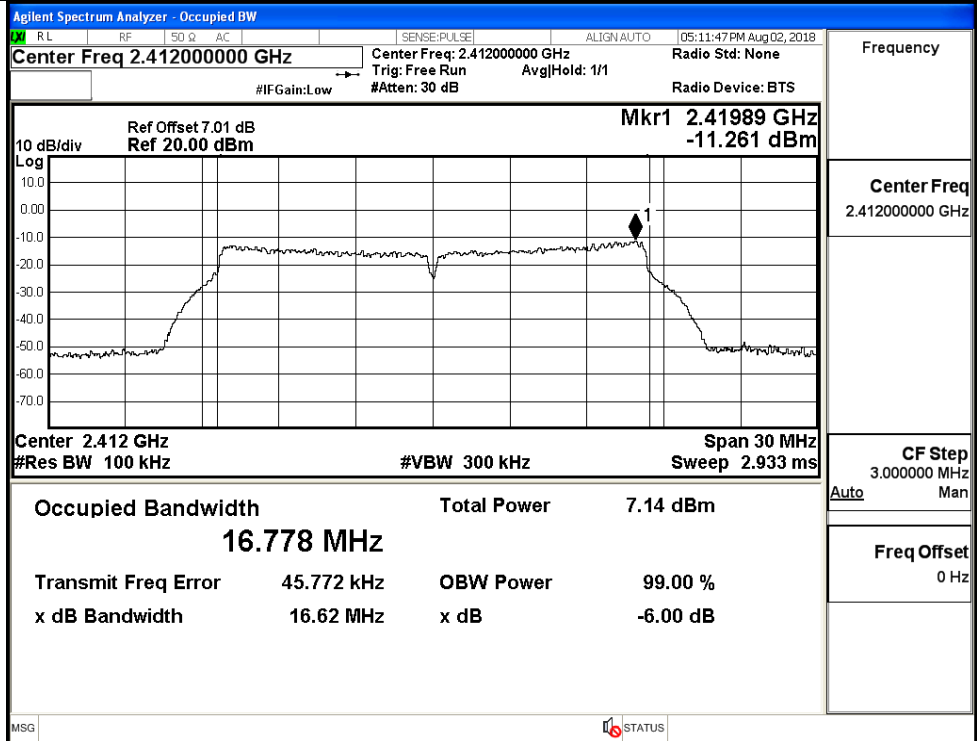
11B/MCH



11B/HCH

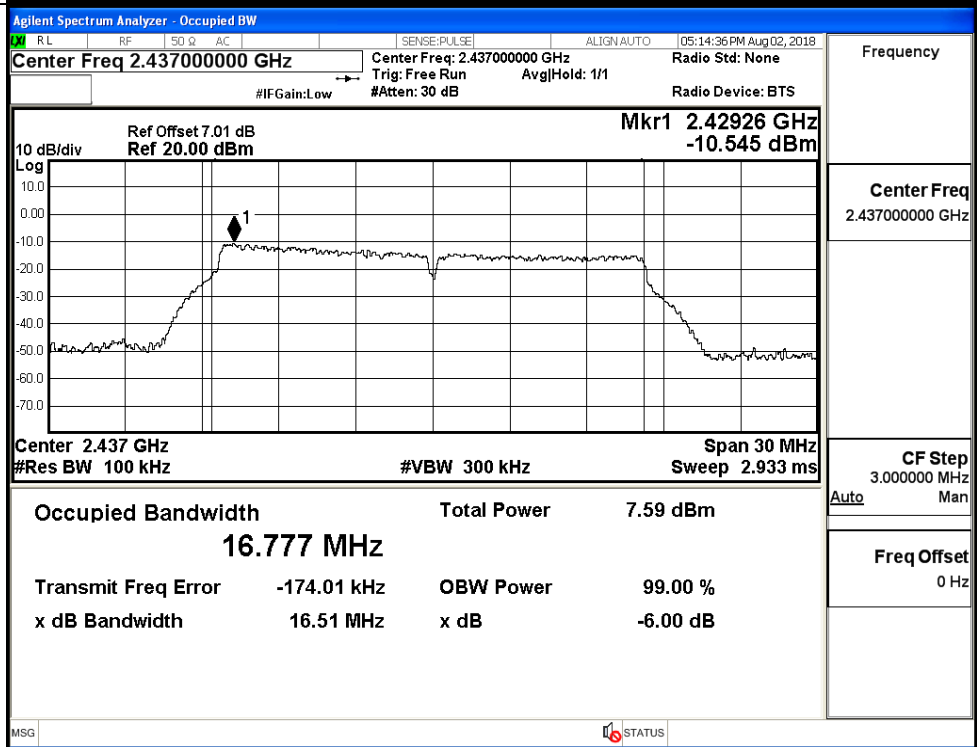


11G/LCH



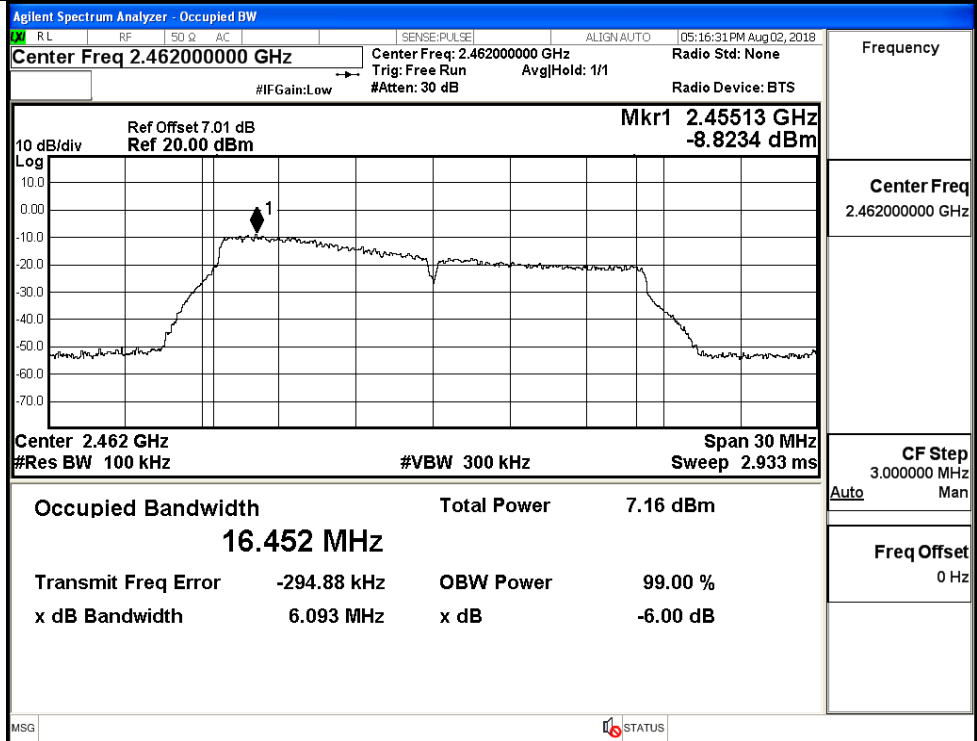
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Center Freq	2.41200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11G/MCH



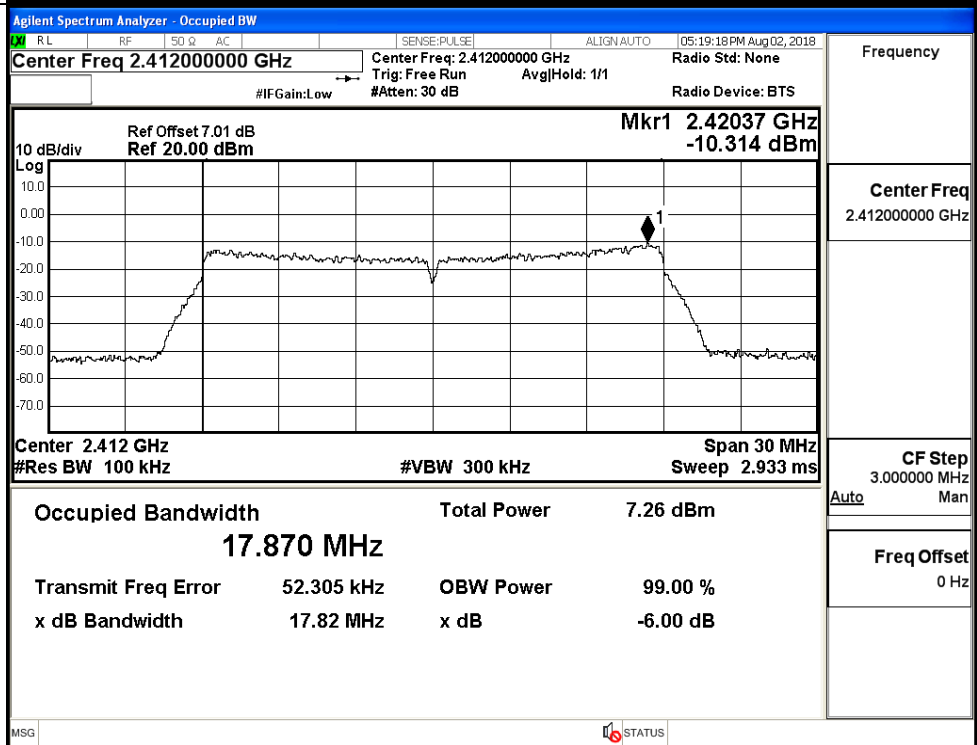
Frequency	2.43700000 GHz
Center Freq	2.43700000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11G/HCH



Frequency	2.46200000 GHz
Center Freq	2.46200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

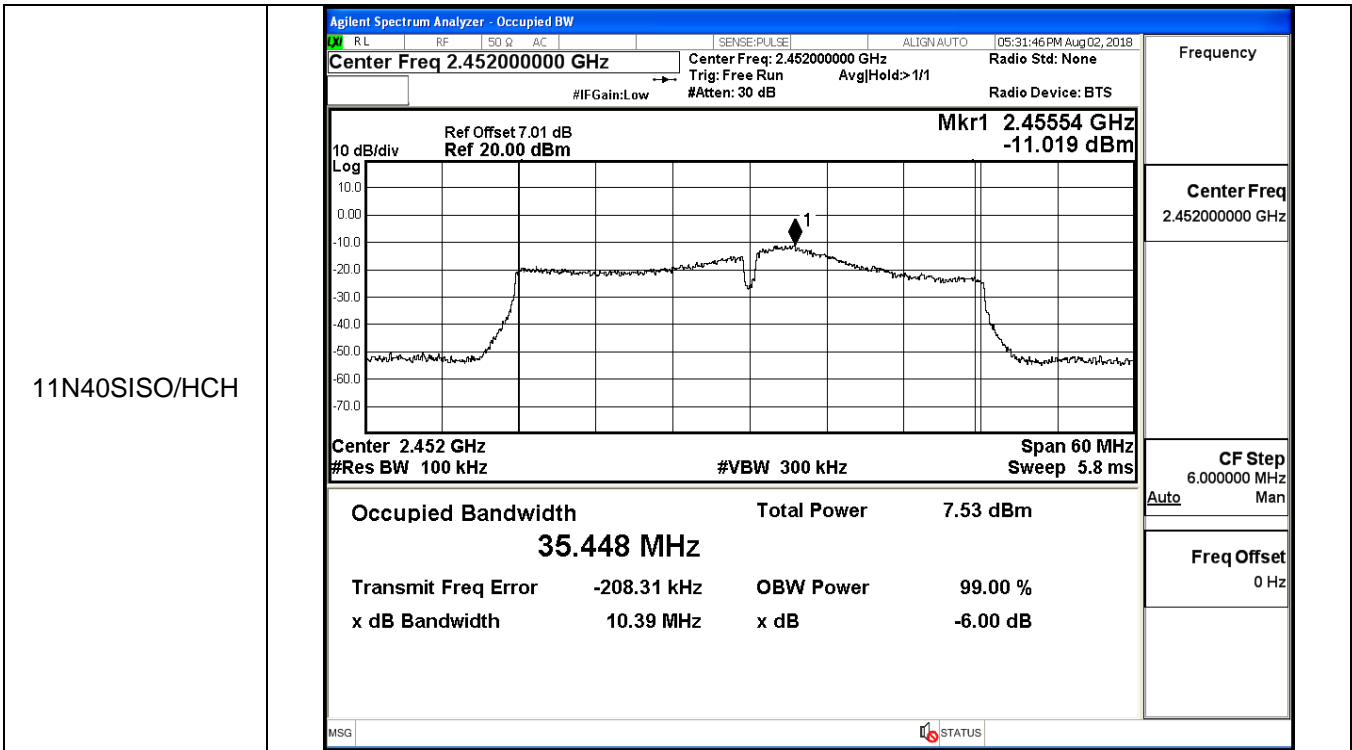
11N20SISO/LCH



Frequency	2.41200000 GHz
Center Freq	2.41200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

<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 Avg Hold: 1/1 Radio Device: BTS</p> <p>10 dB/div Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr1 2.42863 GHz -9.7311 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 17.782 MHz</p> <p>Total Power 8.35 dBm</p> <p>Transmit Freq Error -64.048 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 17.75 MHz</p> <p>x dB -6.00 dB</p>	<p>Frequency</p> <p>Center Freq 2.43700000 GHz</p> <p>CF Step 3.000000 MHz</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 Avg Hold: > 1/1 Radio Device: BTS</p> <p>10 dB/div Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr1 2.45489 GHz -9.9562 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 17.465 MHz</p> <p>Total Power 6.69 dBm</p> <p>Transmit Freq Error -195.81 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 6.452 MHz</p> <p>x dB -6.00 dB</p>	<p>Frequency</p> <p>Center Freq 2.46200000 GHz</p> <p>CF Step 3.000000 MHz</p> <p>Freq Offset 0 Hz</p>

<p>11N40SISO/LCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.42200000 GHz</p> <p>Mkr1 2.42416 GHz -10.952 dBm</p> <p>Center 2.422 GHz #Res BW 100 kHz #VBW 300 kHz Span 60 MHz Sweep 5.8 ms</p> <p>Occupied Bandwidth 35.713 MHz Total Power 7.93 dBm</p> <p>Transmit Freq Error -201.95 kHz OBW Power 99.00 %</p> <p>x dB Bandwidth 11.97 MHz x dB -6.00 dB</p>	<p>Frequency</p> <p>Center Freq 2.42200000 GHz</p> <p>CF Step 6.000000 MHz</p> <p>Freq Offset 0 Hz</p>
<p>11N40SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.437000000 GHz</p> <p>Mkr1 2.42452 GHz -12.786 dBm</p> <p>Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 60 MHz Sweep 5.8 ms</p> <p>Occupied Bandwidth 36.271 MHz Total Power 7.77 dBm</p> <p>Transmit Freq Error 74.341 kHz OBW Power 99.00 %</p> <p>x dB Bandwidth 36.44 MHz x dB -6.00 dB</p>	<p>Frequency</p> <p>Center Freq 2.437000000 GHz</p> <p>CF Step 6.000000 MHz</p> <p>Freq Offset 0 Hz</p>



C.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-3.585	-44.795	-23.585	PASS
	MCH	-2.933	-43.381	-22.933	PASS
	HCH	-3.318	-44.152	-23.318	PASS
11G	LCH	-11.138	-44.645	-31.138	PASS
	MCH	-10.912	-44.661	-30.912	PASS
	HCH	-8.998	-44.967	-28.998	PASS
11N20 SISO	LCH	-10.388	-44.595	-30.388	PASS
	MCH	-9.948	-44.029	-29.948	PASS
	HCH	-10.135	-44.347	-30.135	PASS
11N40 SISO	LCH	-11.605	-45.011	-31.605	PASS
	MCH	-12.988	-44.812	-32.988	PASS
	HCH	-10.987	-43.279	-30.987	PASS

11B_LCH_Graphs

<p>Pref/11B/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.41200000 GHz</p> <p>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr1 2.413 505 GHz -3.585 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>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr2 25.815 GHz -44.795 dBm</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.482 s (8001 pts)</p>

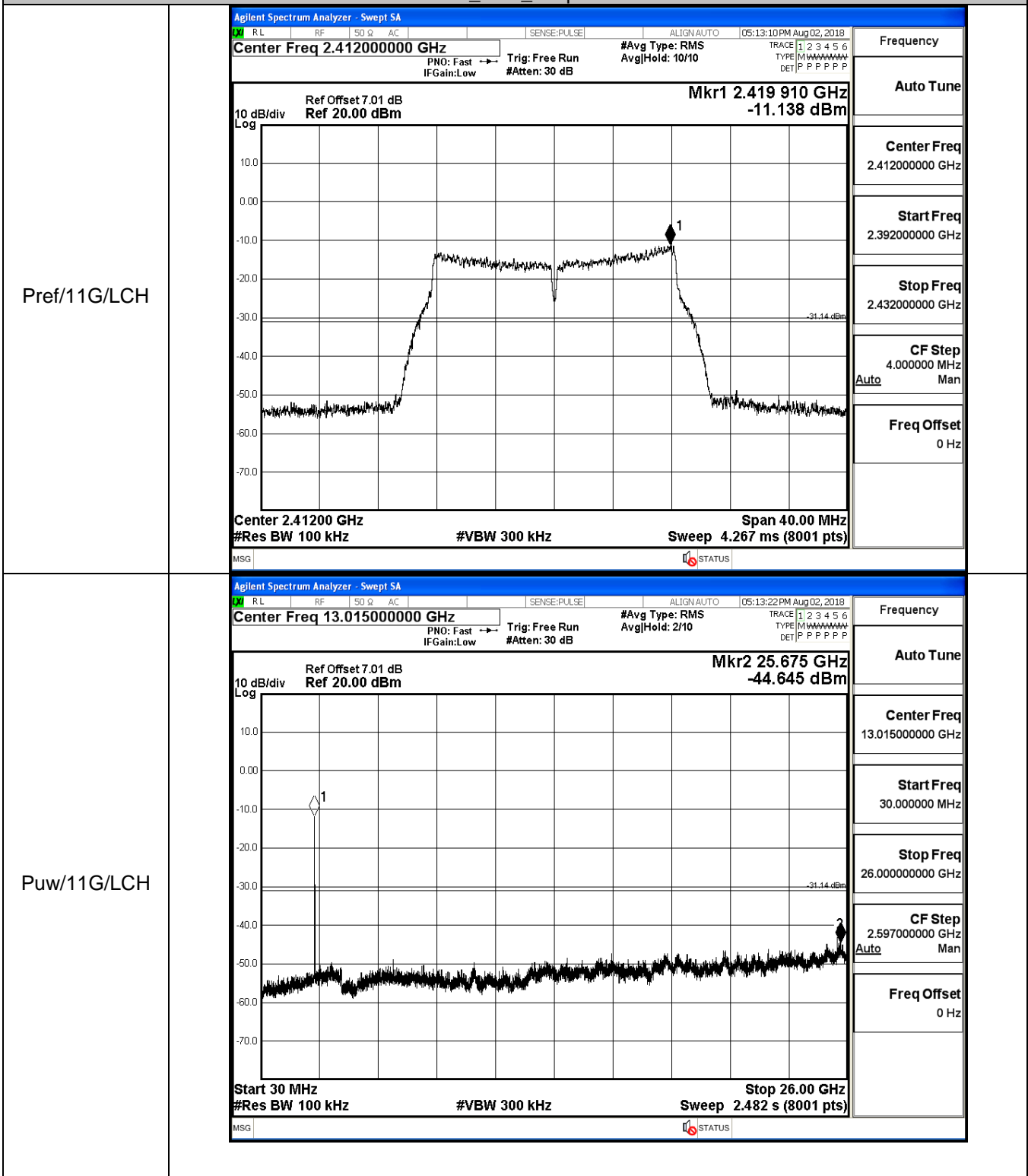
11B_MCH_Graphs

<p>Pref/11B/MCH</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.437000000 GHz</p> <p>Start Freq 2.417000000 GHz</p> <p>Stop Freq 2.457000000 GHz</p> <p>CF Step 4.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
	<p>Puw/11B/MCH</p>	

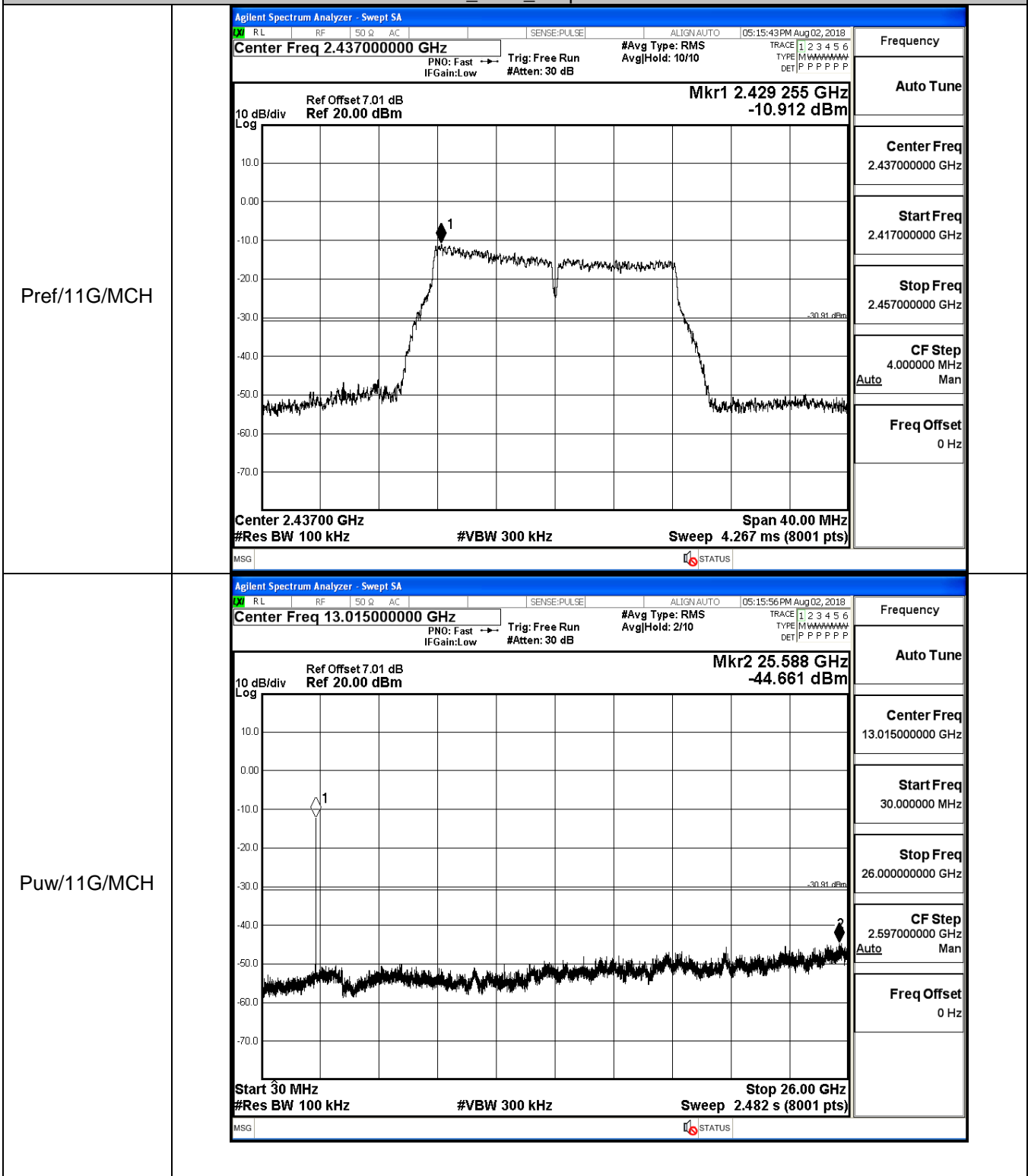
11B_HCH_Graphs

<p>Pref/11B/HCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.46200000 GHz</p> <p>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr1 2.458 505 GHz -3.318 dBm</p> <p>10 dB/div Log</p> <p>Center 2.46200 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 2.462000000 GHz</p> <p>Start Freq 2.442000000 GHz</p> <p>Stop Freq 2.482000000 GHz</p> <p>CF Step 4.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
	<p>Puw/11B/HCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 13.01500000 GHz</p> <p>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr2 25.578 GHz -44.152 dBm</p> <p>10 dB/div Log</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.482 s (8001 pts)</p>

11G_LCH_Graphs



11G_MCH_Graphs

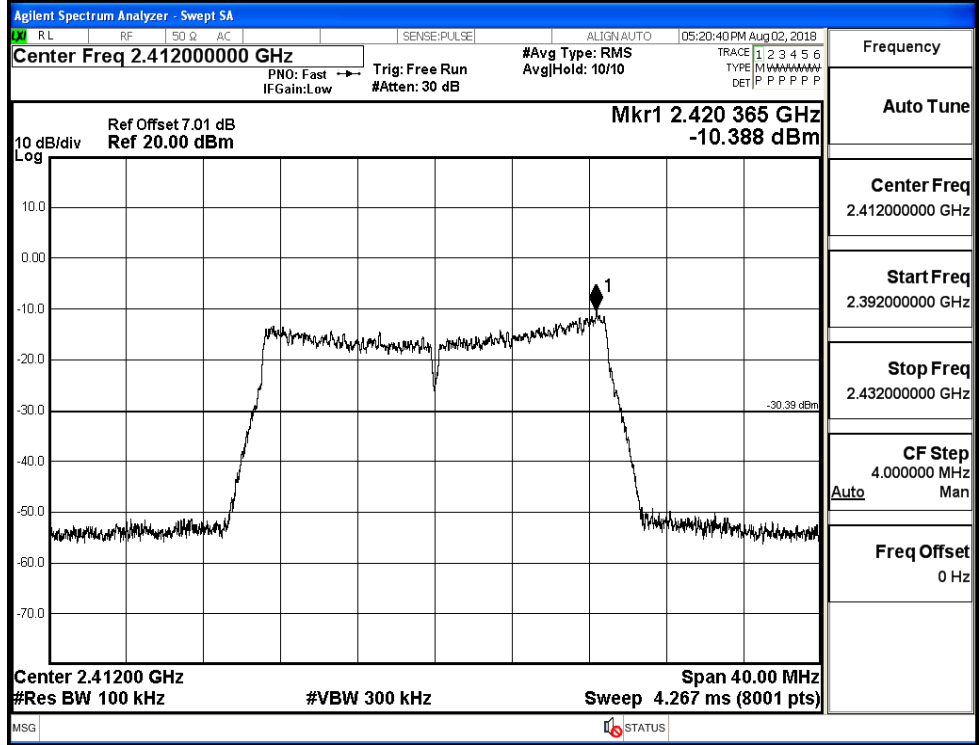


11G_HCH_Graphs

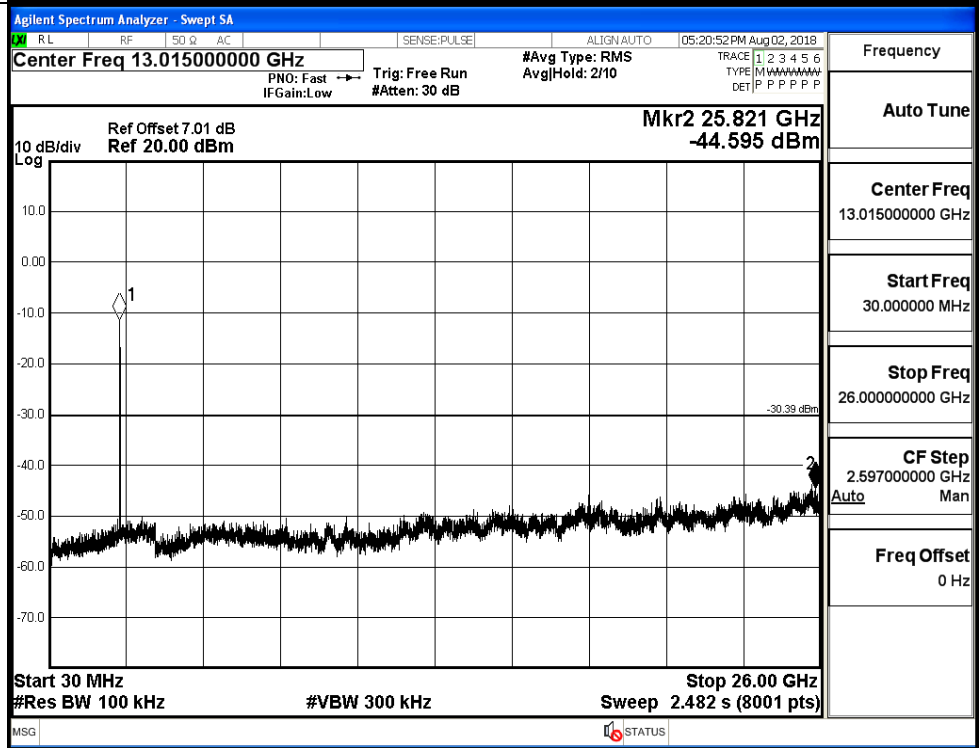
<p>Pref/11G/HCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.46200000 GHz</p> <p>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr1 2.455 130 GHz -8.998 dBm</p> <p>10 dB/div Log</p> <p>Center 2.46200 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 4.267 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.462000000 GHz</p> <p>Start Freq 2.442000000 GHz</p> <p>Stop Freq 2.482000000 GHz</p> <p>CF Step 4.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
	<p>Puw/11G/HCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 13.01500000 GHz</p> <p>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr2 25.974 GHz -44.967 dBm</p> <p>10 dB/div Log</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 26.00 GHz Sweep 2.482 s (8001 pts)</p>

11N20SISO_LCH_Graphs

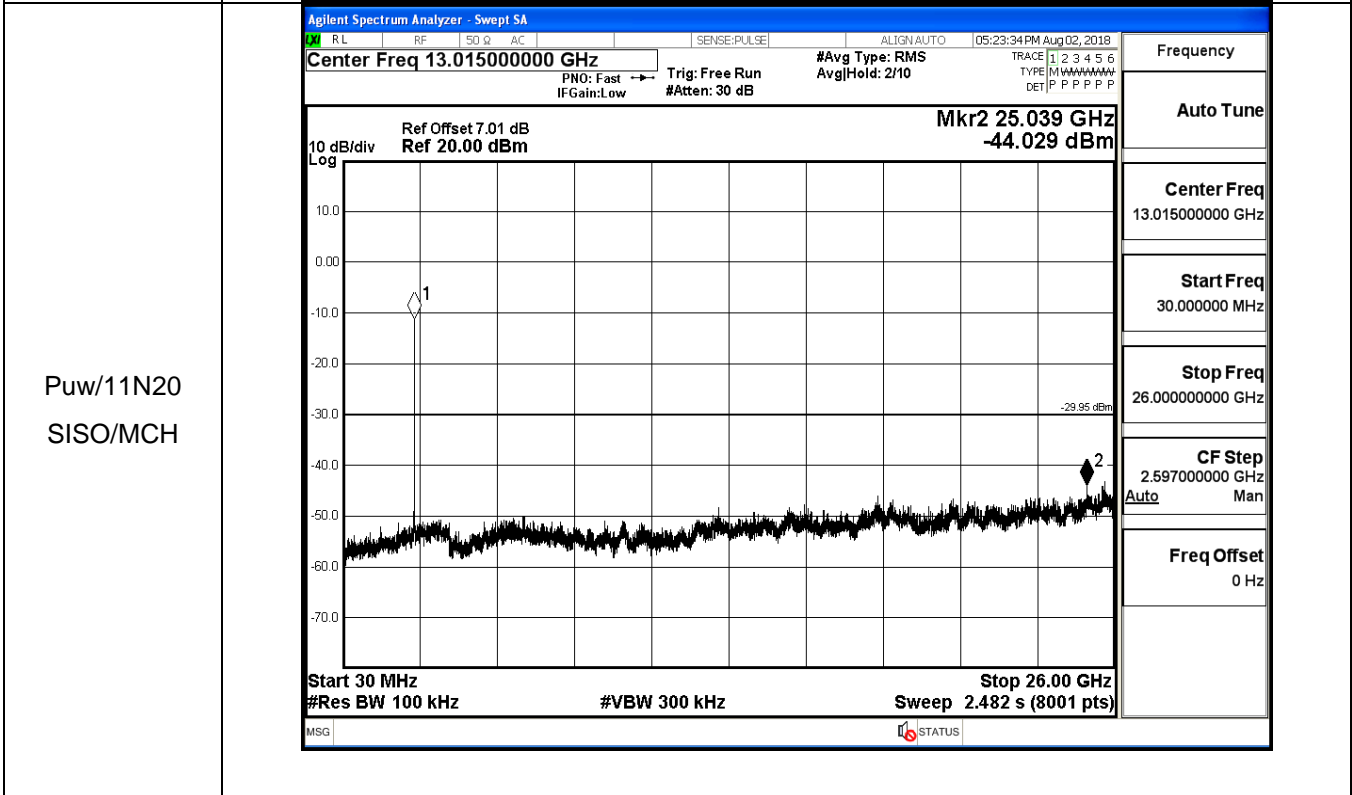
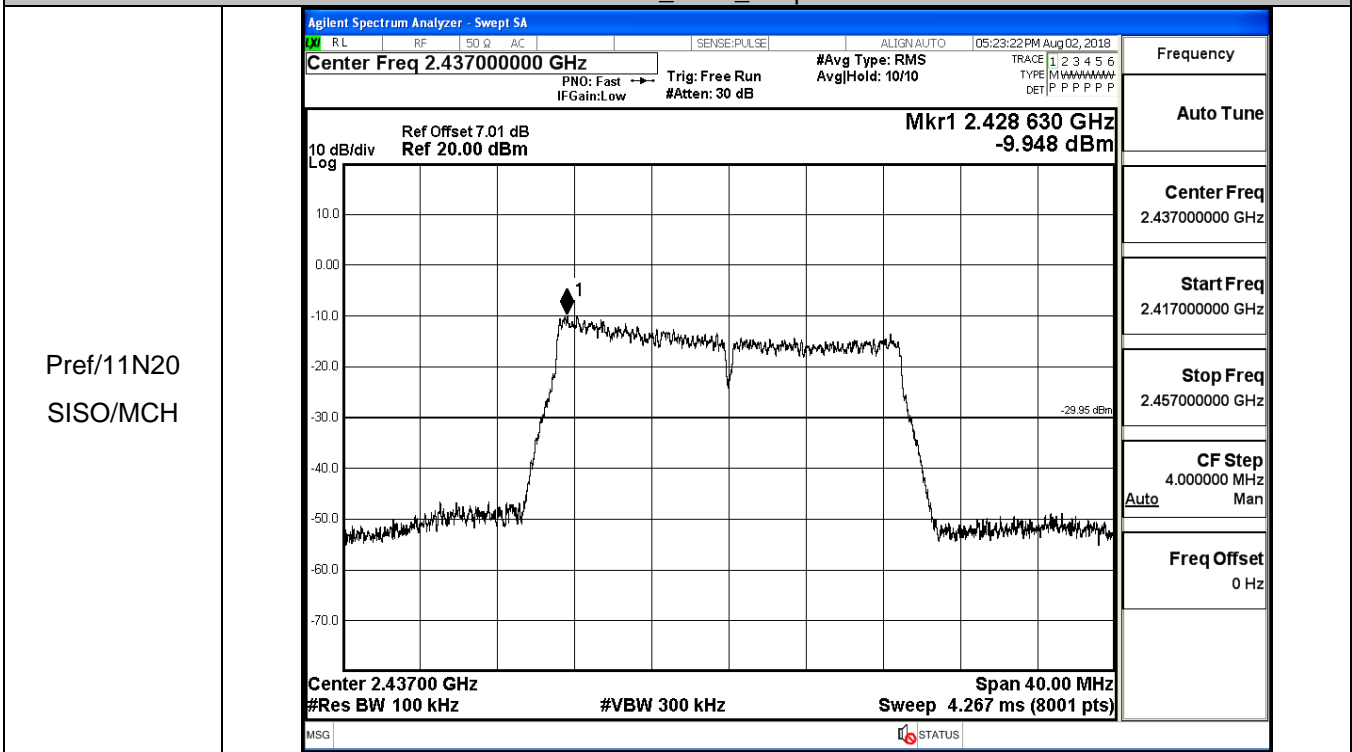
Pref/11N20SIS
O/LCH



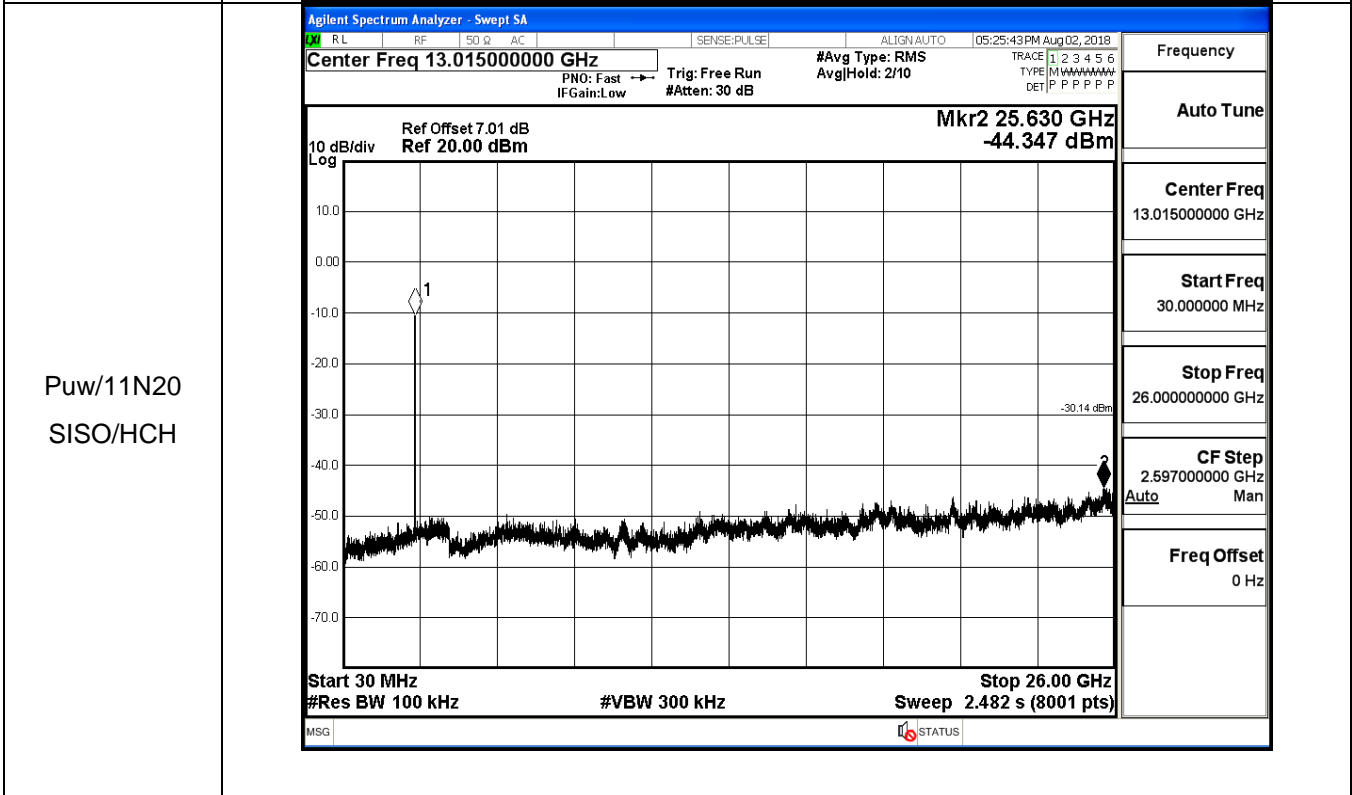
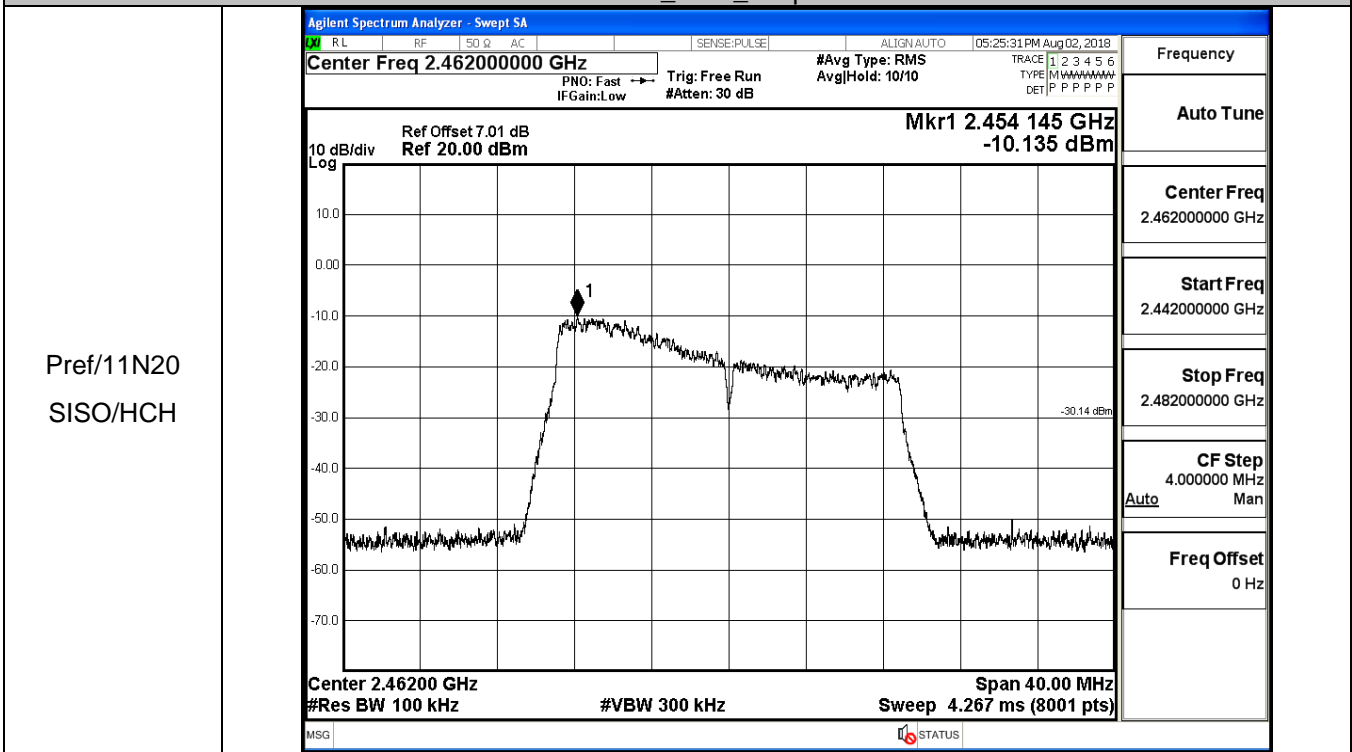
Puw/11N20
SISO/LCH



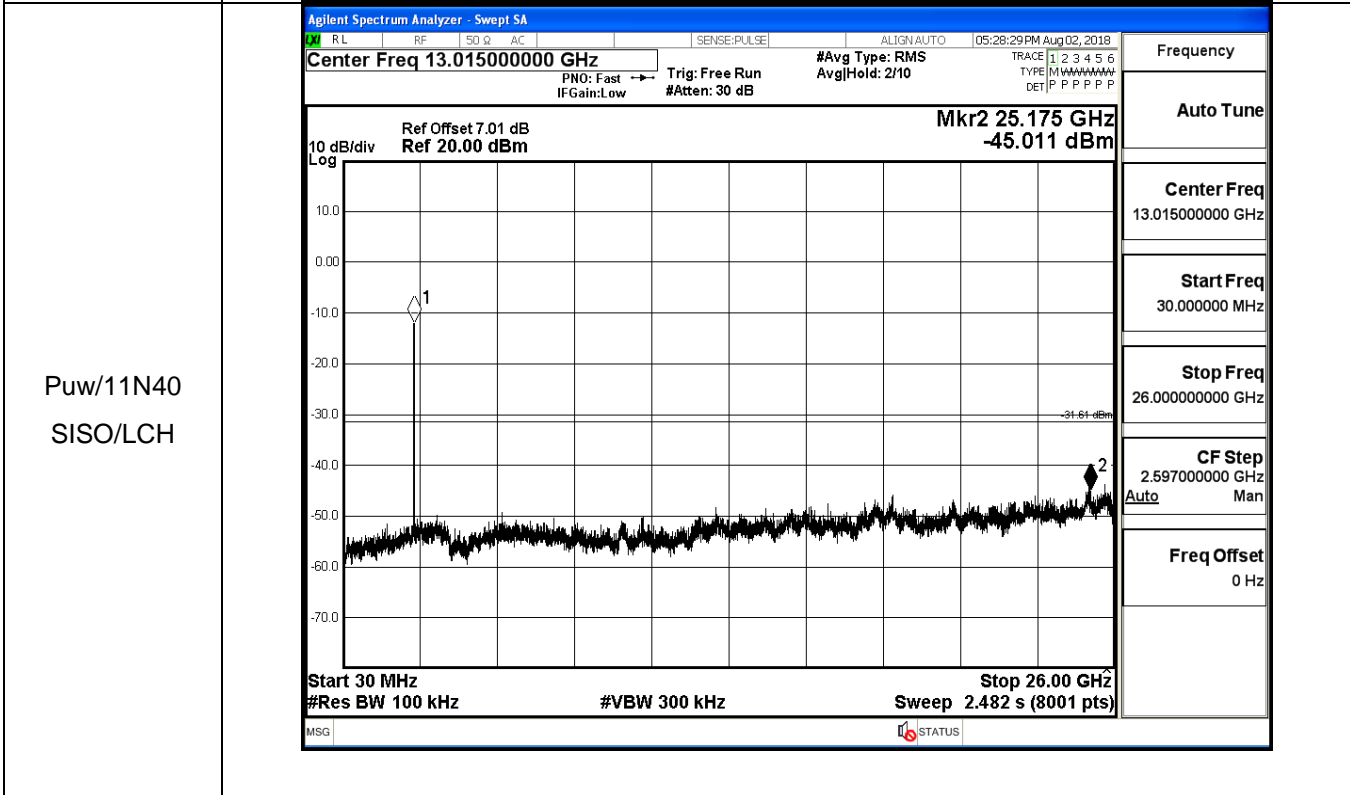
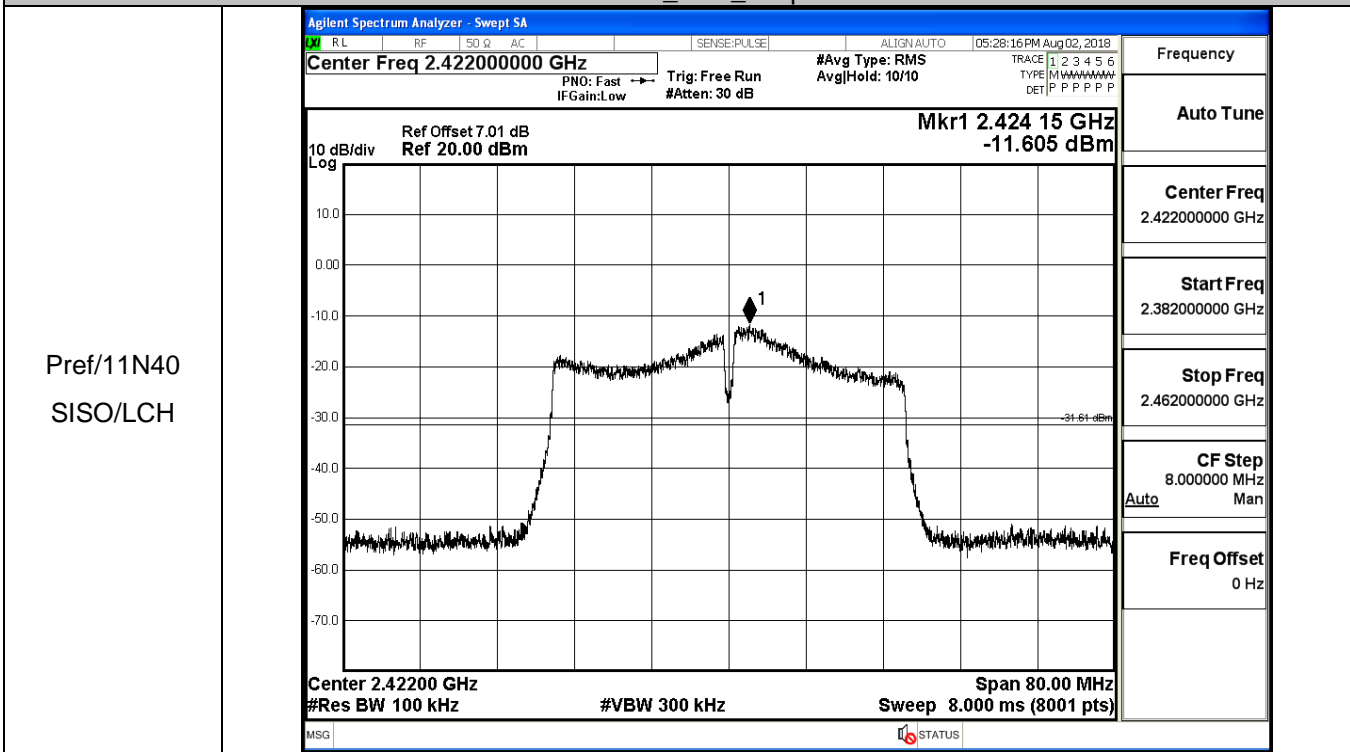
11N20SISO_MCH_Graphs



11N20SISO_HCH_Graphs



11N40SISO_LCH_Graphs

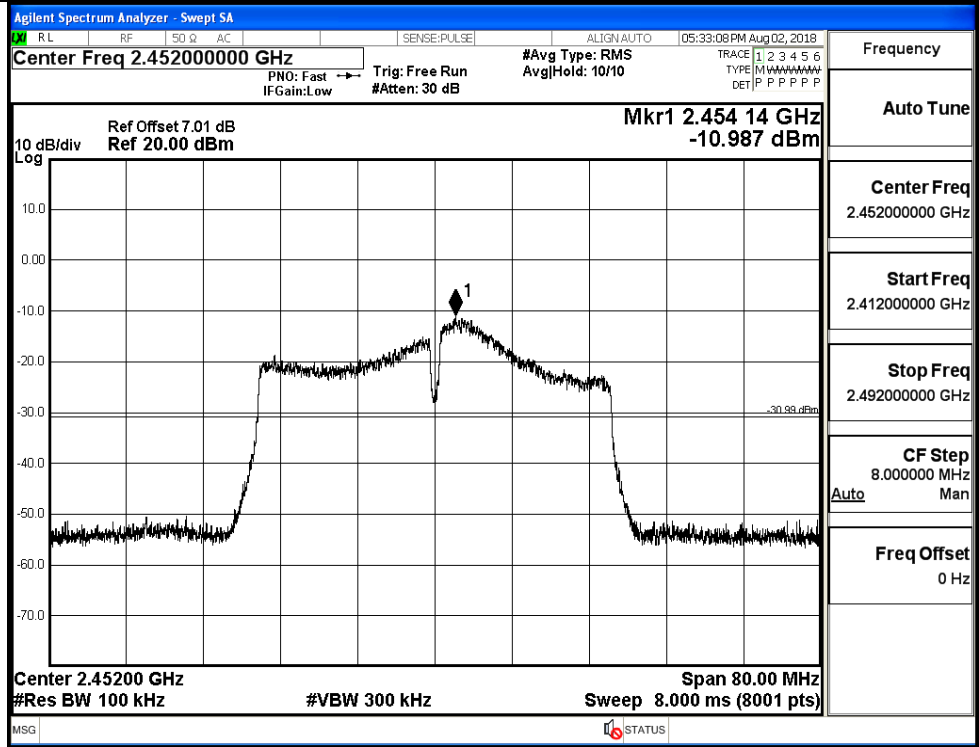


11N40SISO_MCH_Graphs

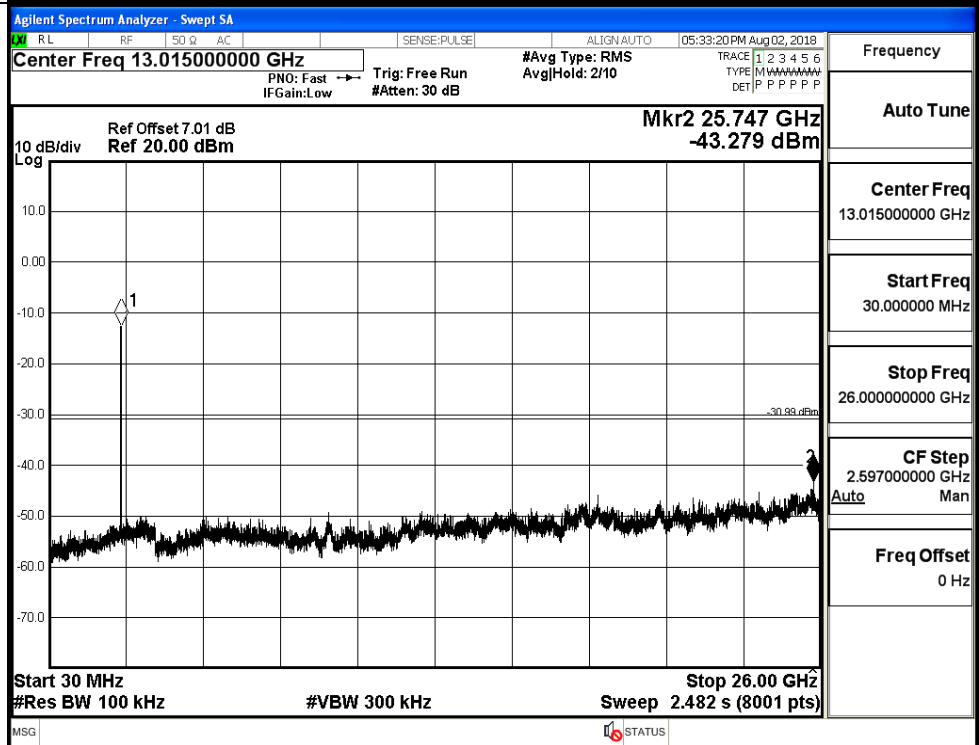
<p>Pref/11N40 SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 05:30:54 PM Aug 02, 2018 Center Freq 2.43700000 GHz PNO: Fast Trig: Free Run #Avg Type: RMS IF Gain: Low #Atten: 30 dB Avg Hold: 10/10 Mkr1 2.422 64 GHz -12.988 dBm Ref Offset 7.01 dB Ref 20.00 dBm 10 dB/div Log Center 2.43700 GHz Span 80.00 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 8.000 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.437000000 GHz</p> <p>Start Freq 2.397000000 GHz</p> <p>Stop Freq 2.477000000 GHz</p> <p>CF Step 8.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>Puw/11N40 SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 05:31:06 PM Aug 02, 2018 Center Freq 13.01500000 GHz PNO: Fast Trig: Free Run #Avg Type: RMS IF Gain: Low #Atten: 30 dB Avg Hold: 2/10 Mkr2 25.656 GHz -44.812 dBm Ref Offset 7.01 dB Ref 20.00 dBm 10 dB/div Log Start 30 MHz Stop 26.00 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.482 s (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 13.015000000 GHz</p> <p>Start Freq 30.000000 MHz</p> <p>Stop Freq 26.000000000 GHz</p> <p>CF Step 2.597000000 GHz Auto Man</p> <p>Freq Offset 0 Hz</p>

11N40SISO_HCH_Graphs

Pref/11N40
SISO/HCH

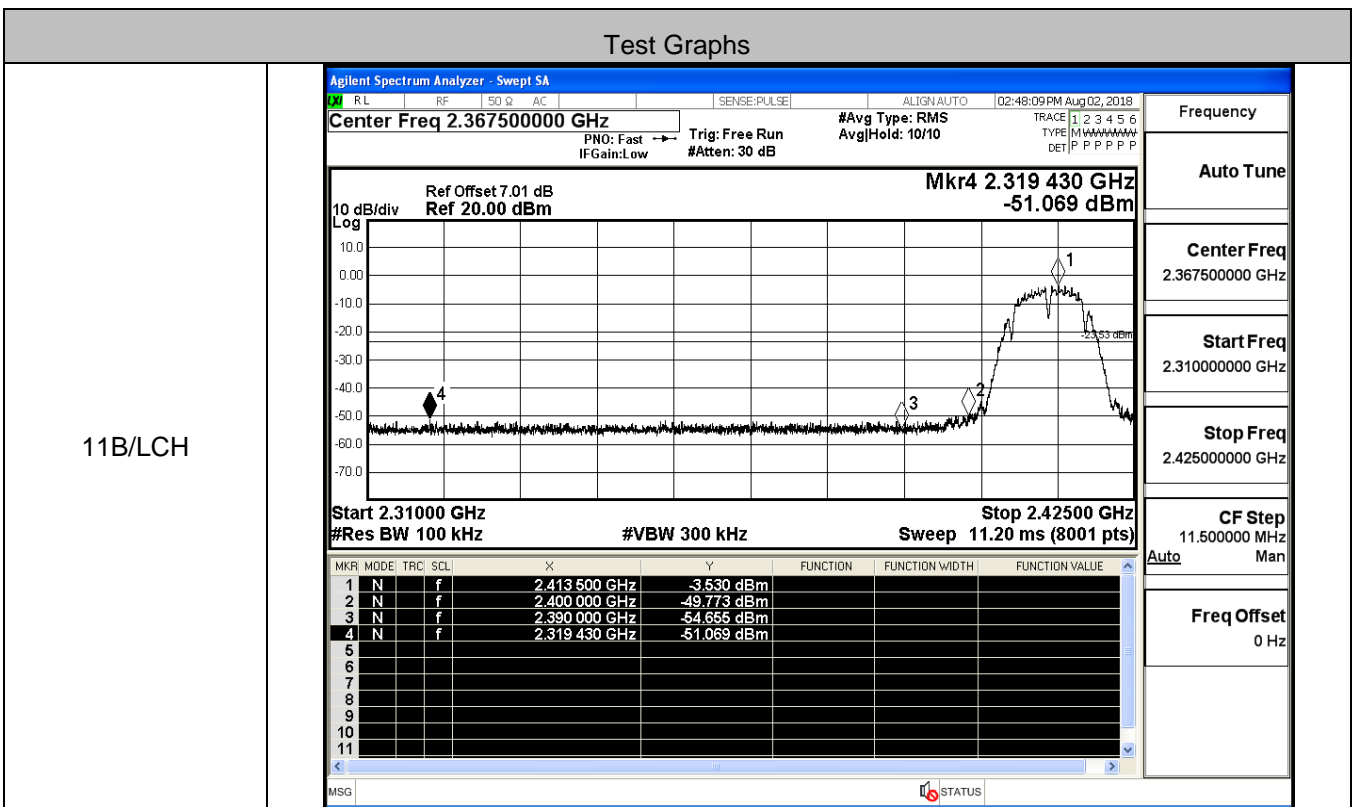


Puw/11N40
SISO/HCH

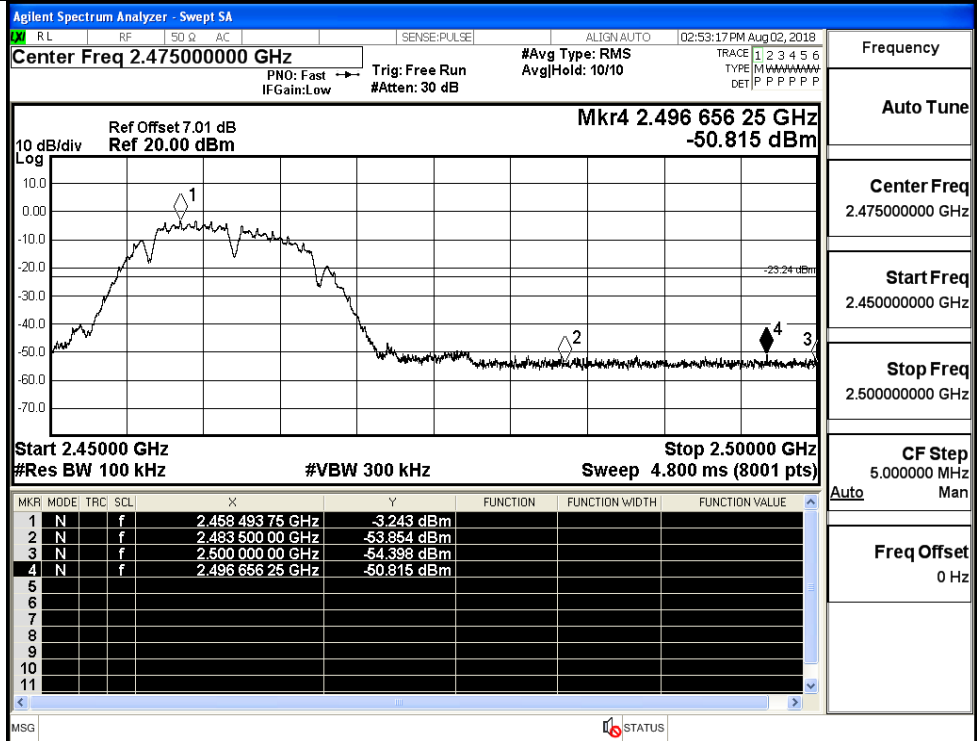


C.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-3.530	-51.069	-23.53	PASS
	HCH	-3.243	-50.815	-23.24	PASS
11G	LCH	-11.058	-51.444	-31.06	PASS
	HCH	-8.943	-50.597	-28.94	PASS
11N20SISO	LCH	-10.251	-51.237	-30.25	PASS
	HCH	-10.015	-51.336	-30.02	PASS
11N40SISO	LCH	-11.576	-51.426	-31.58	PASS
	HCH	-11.259	-51.754	-31.26	PASS



11B/HCH



Frequency

Auto Tune

Center Freq
2.47500000 GHz

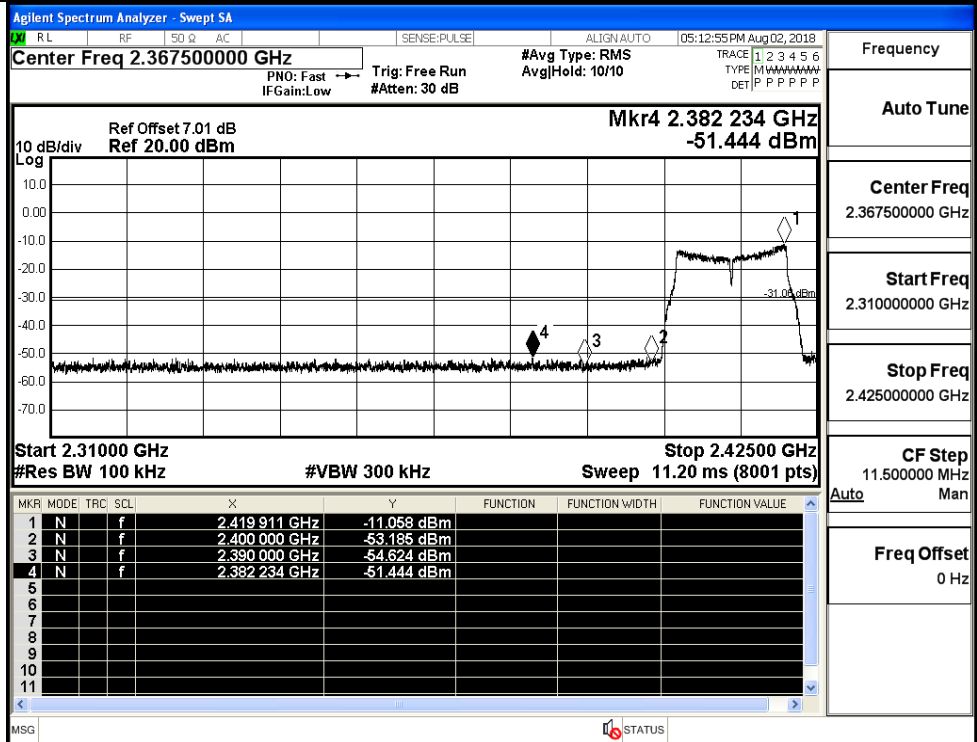
Start Freq
2.45000000 GHz

Stop Freq
2.50000000 GHz

CF Step
5.000000 MHz

Freq Offset
0 Hz

11G/LCH



Frequency

Auto Tune

Center Freq
2.36750000 GHz

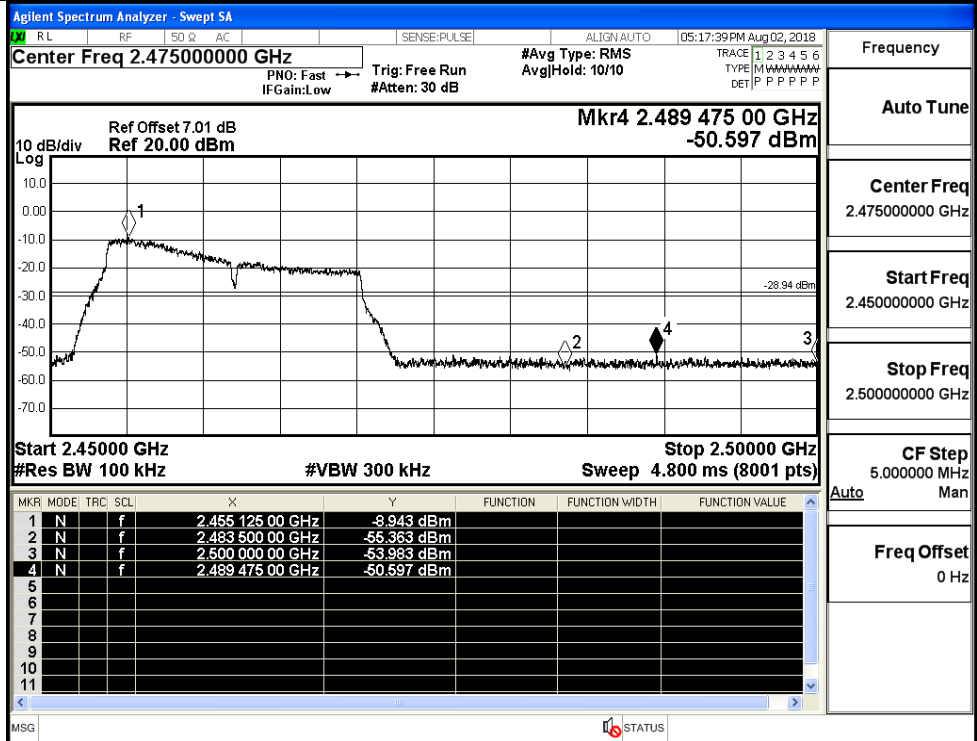
Start Freq
2.31000000 GHz

Stop Freq
2.42500000 GHz

CF Step
11.500000 MHz

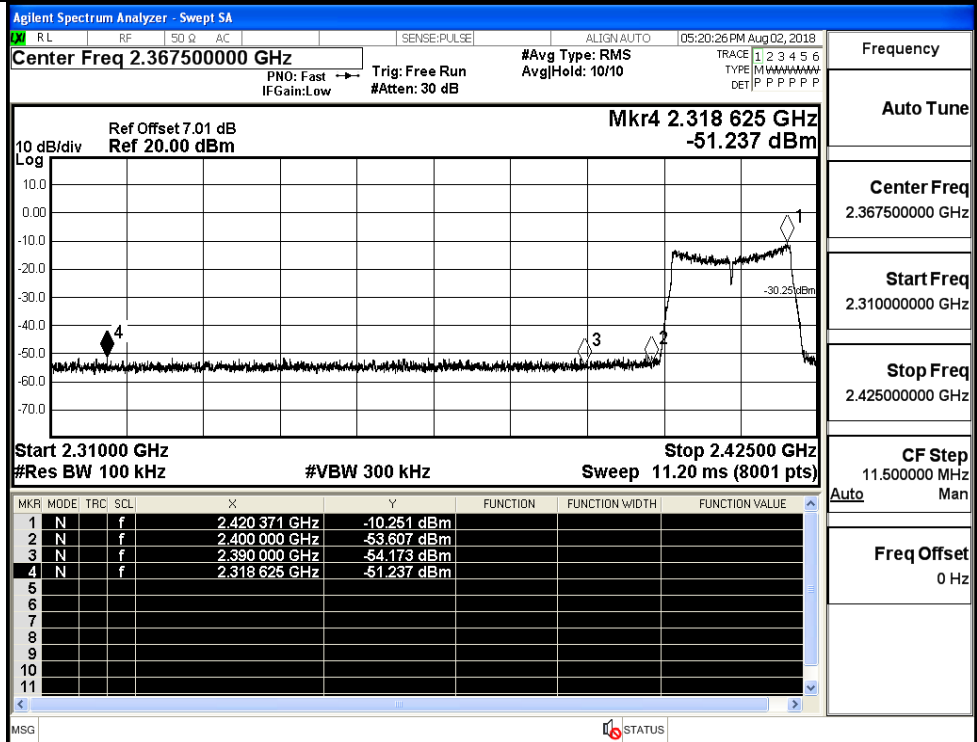
Freq Offset
0 Hz

11G/HCH



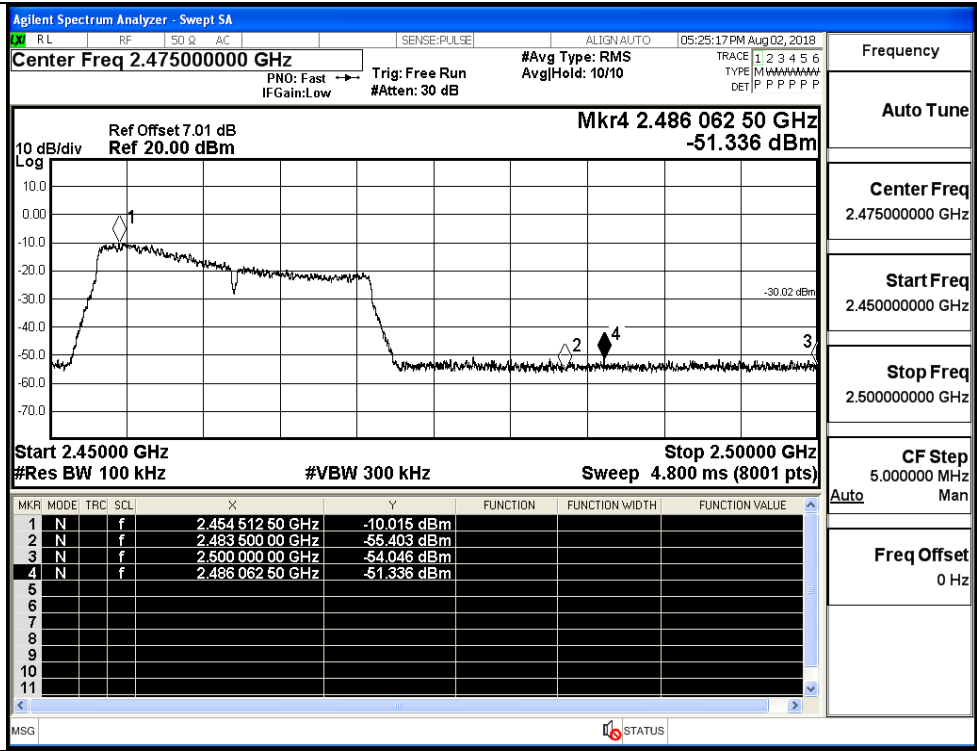
Frequency	2.475000000 GHz
Auto Tune	
Center Freq	2.475000000 GHz
Start Freq	2.450000000 GHz
Stop Freq	2.500000000 GHz
CF Step	5.000000 MHz
Freq Offset	0 Hz

11N20SISO/LCH

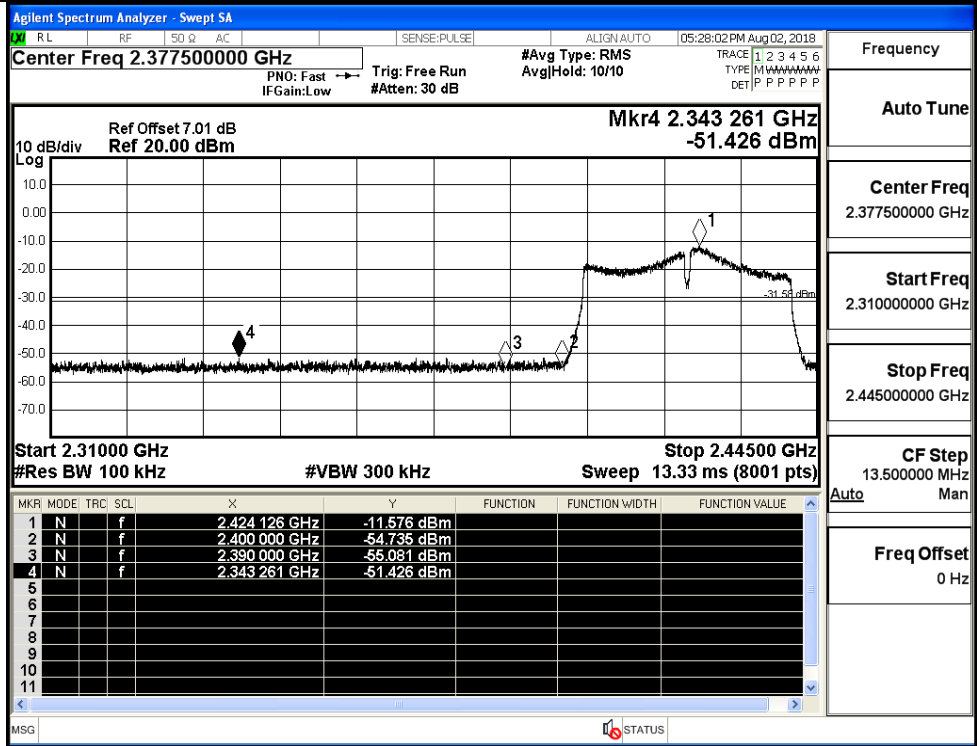


Frequency	2.367500000 GHz
Auto Tune	
Center Freq	2.367500000 GHz
Start Freq	2.310000000 GHz
Stop Freq	2.425000000 GHz
CF Step	11.500000 MHz
Freq Offset	0 Hz

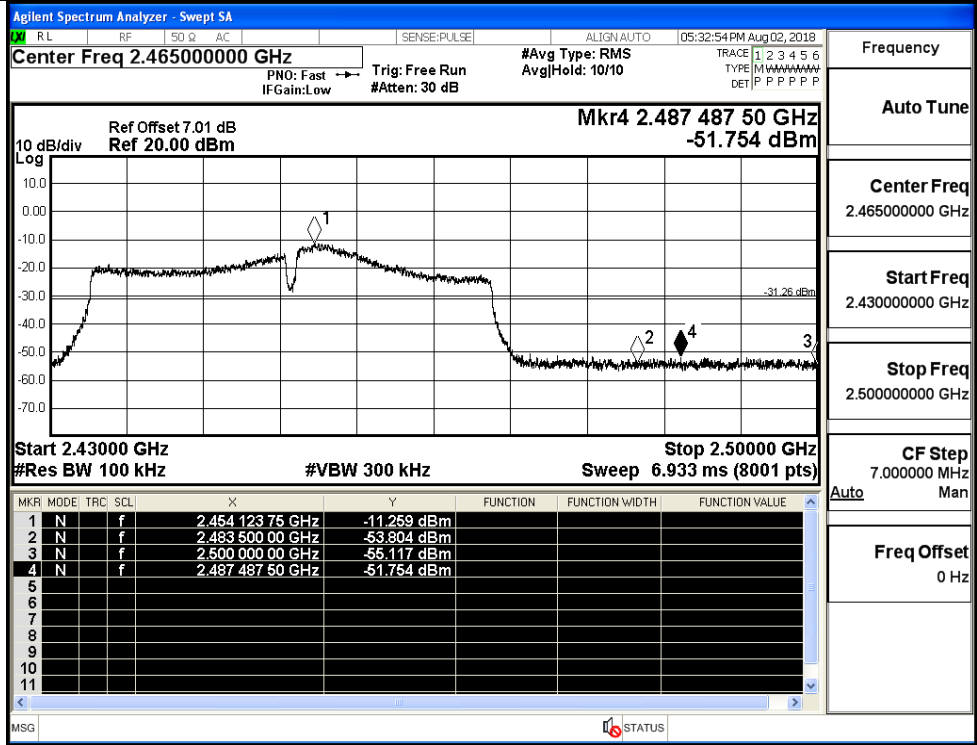
11N20SISO/HCH



11N40SISO/LCH



11N40SISO/HCH

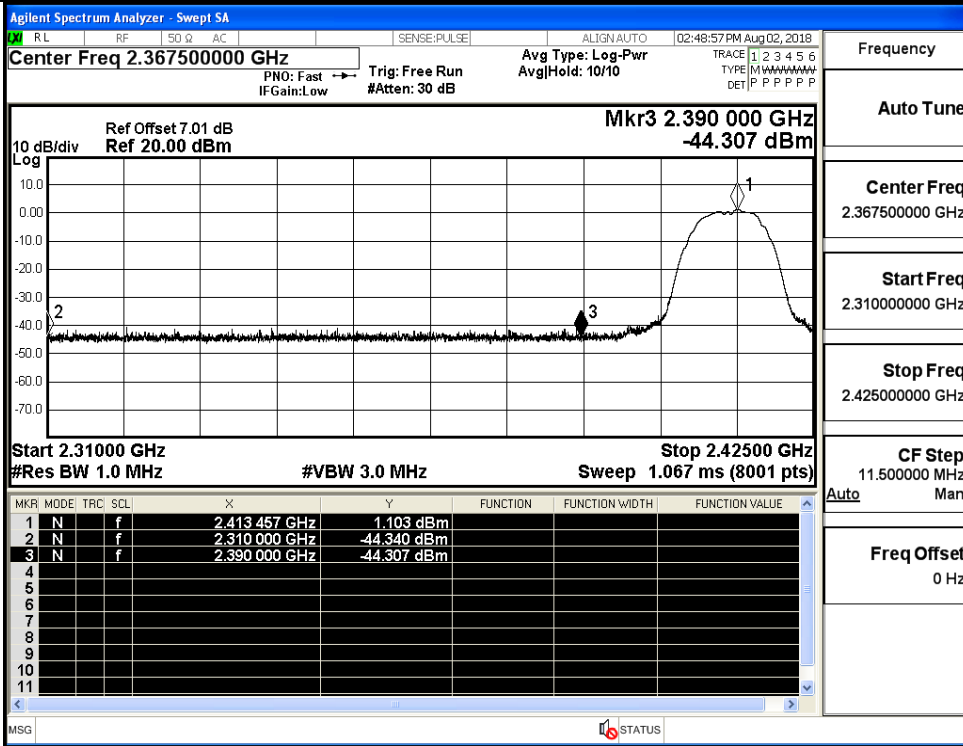


C.7 Restrict-band band-edge measurements

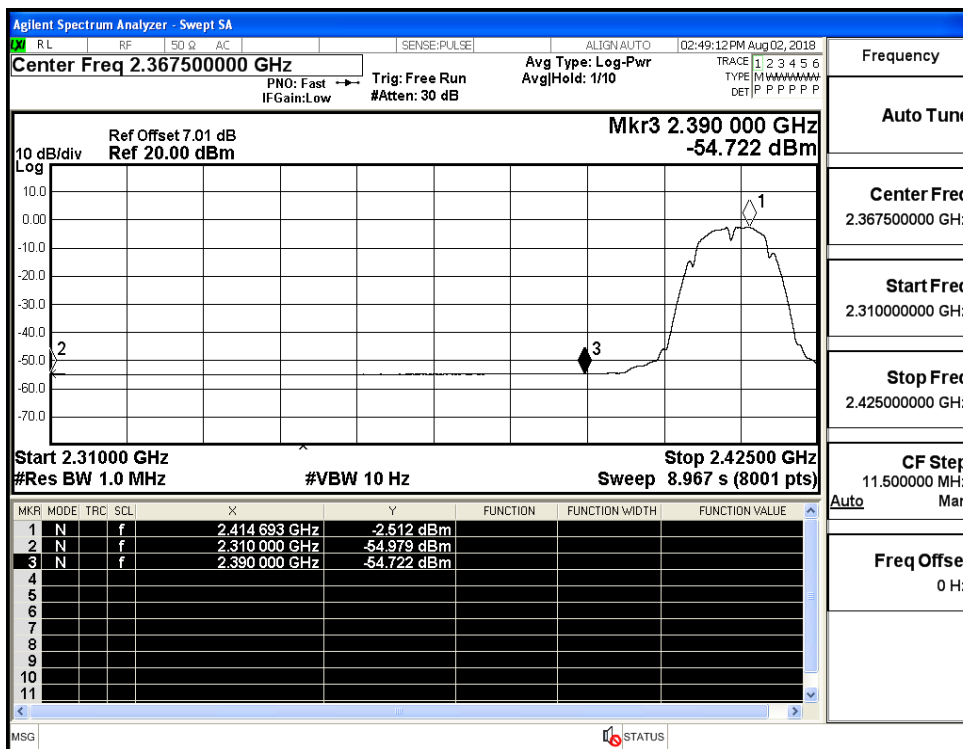
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBu V/m]	Verdict
11B	2412	Ant1	2310.0	-44.34	2.0	0	52.92	PEAK	74	PASS
	2412	Ant1	2310.0	-54.98	2.0	0	42.28	AV	54	PASS
	2412	Ant1	2390.0	-44.31	2.0	0	52.95	PEAK	74	PASS
	2412	Ant1	2390.0	-54.72	2.0	0	42.54	AV	54	PASS
	2462	Ant1	2483.5	-44.48	2.0	0	52.78	PEAK	74	PASS
	2462	Ant1	2483.5	-54.47	2.0	0	42.79	AV	54	PASS
	2462	Ant1	2500.0	-44.26	2.0	0	53.00	PEAK	74	PASS
	2462	Ant1	2500.0	-54.33	2.0	0	42.93	AV	54	PASS
11G	2412	Ant1	2310.0	-44.84	2.0	0	52.42	PEAK	74	PASS
	2412	Ant1	2310.0	-54.93	2.0	0	42.32	AV	54	PASS
	2412	Ant1	2390.0	-44.38	2.0	0	52.87	PEAK	74	PASS
	2412	Ant1	2390.0	-54.70	2.0	0	42.56	AV	54	PASS
	2462	Ant1	2483.5	-44.06	2.0	0	53.20	PEAK	74	PASS
	2462	Ant1	2483.5	-54.51	2.0	0	42.75	AV	54	PASS
	2462	Ant1	2500.0	-43.72	2.0	0	53.54	PEAK	74	PASS
	2462	Ant1	2500.0	-54.35	2.0	0	42.91	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-44.92	2.0	0	52.34	PEAK	74	PASS
	2412	Ant1	2310.0	-54.98	2.0	0	42.28	AV	54	PASS
	2412	Ant1	2390.0	-43.54	2.0	0	53.72	PEAK	74	PASS
	2412	Ant1	2390.0	-54.68	2.0	0	42.57	AV	54	PASS
	2462	Ant1	2483.5	-43.94	2.0	0	53.32	PEAK	74	PASS
	2462	Ant1	2483.5	-54.49	2.0	0	42.77	AV	54	PASS
	2462	Ant1	2500.0	-42.55	2.0	0	54.71	PEAK	74	PASS
	2462	Ant1	2500.0	-54.33	2.0	0	42.93	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-43.40	2.0	0	53.86	PEAK	74	PASS
	2422	Ant1	2310.0	-54.92	2.0	0	42.34	AV	54	PASS

	2422	Ant1	2390.0	-43.27	2.0	0	53.98	PEAK	74	PASS
	2422	Ant1	2390.0	-54.67	2.0	0	42.58	AV	54	PASS
	2452	Ant1	2483.5	-44.11	2.0	0	53.15	PEAK	74	PASS
	2452	Ant1	2483.5	-54.47	2.0	0	42.79	AV	54	PASS
	2452	Ant1	2500.0	-44.89	2.0	0	52.37	PEAK	74	PASS
	2452	Ant1	2500.0	-54.35	2.0	0	42.91	AV	54	PASS

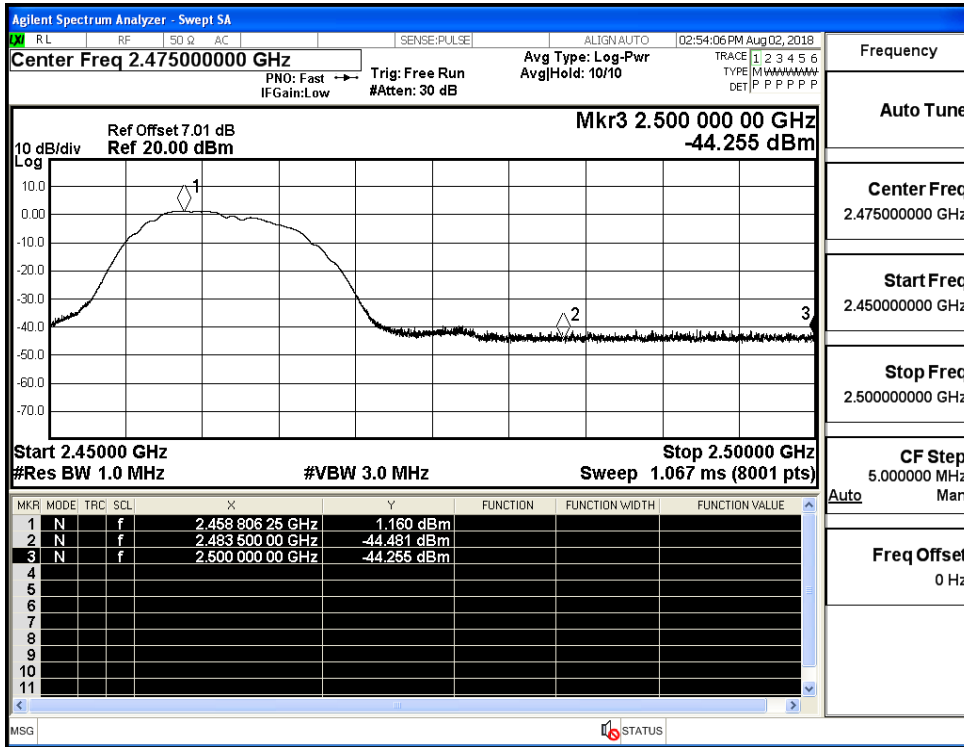
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



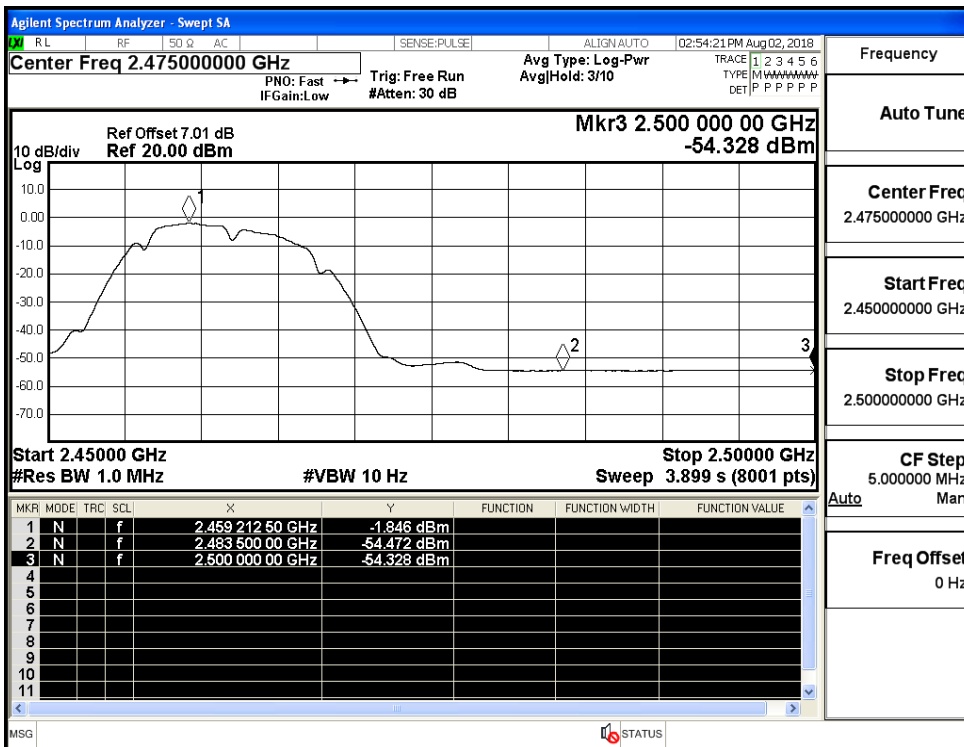
Restrict-band band-edge measurements_11B_2412_Ant1_AV



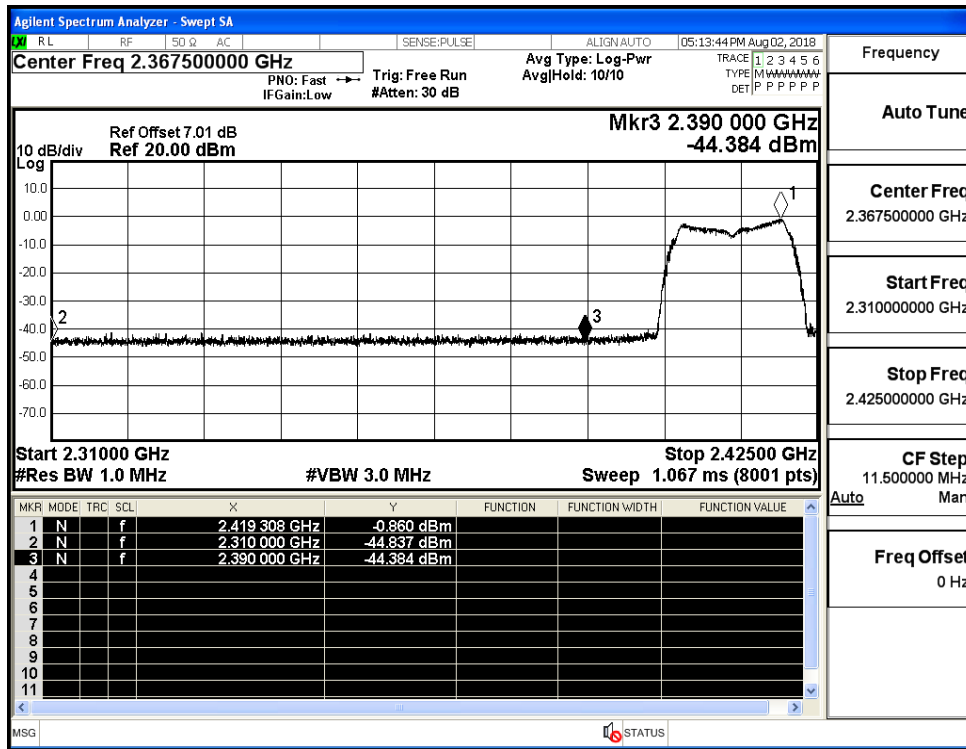
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



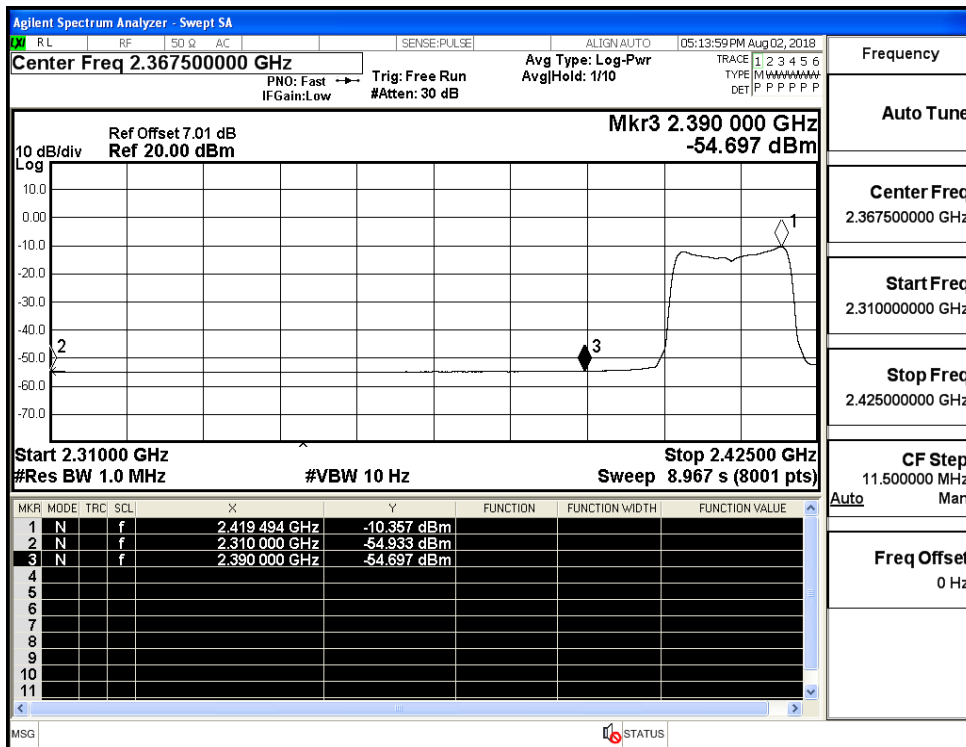
Restrict-band band-edge measurements_11B_2462_Ant1_AV



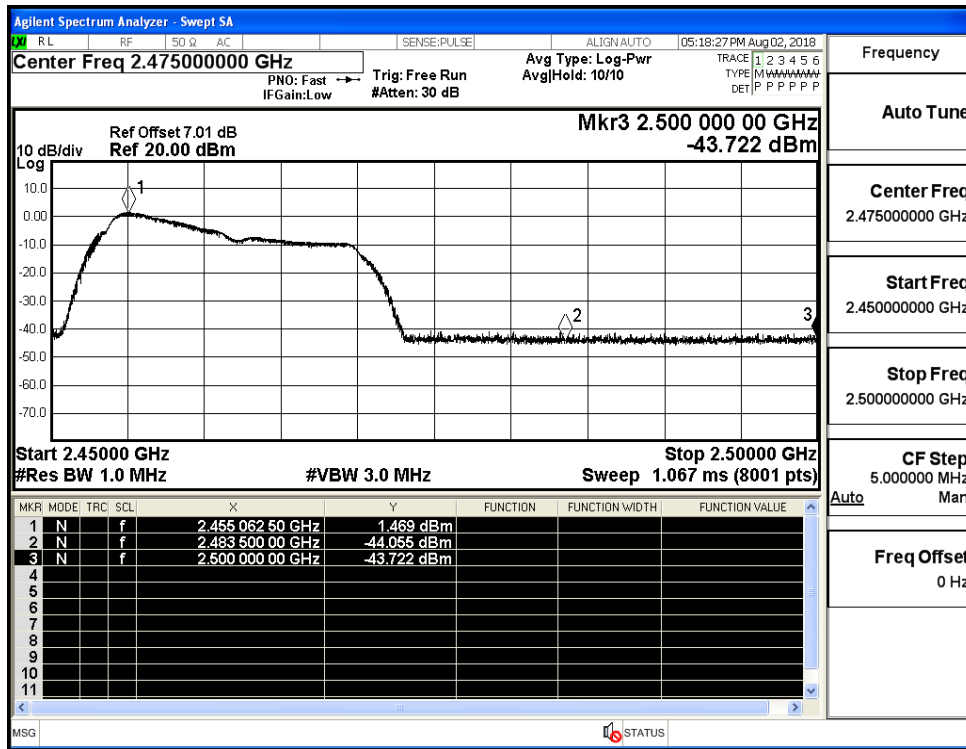
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



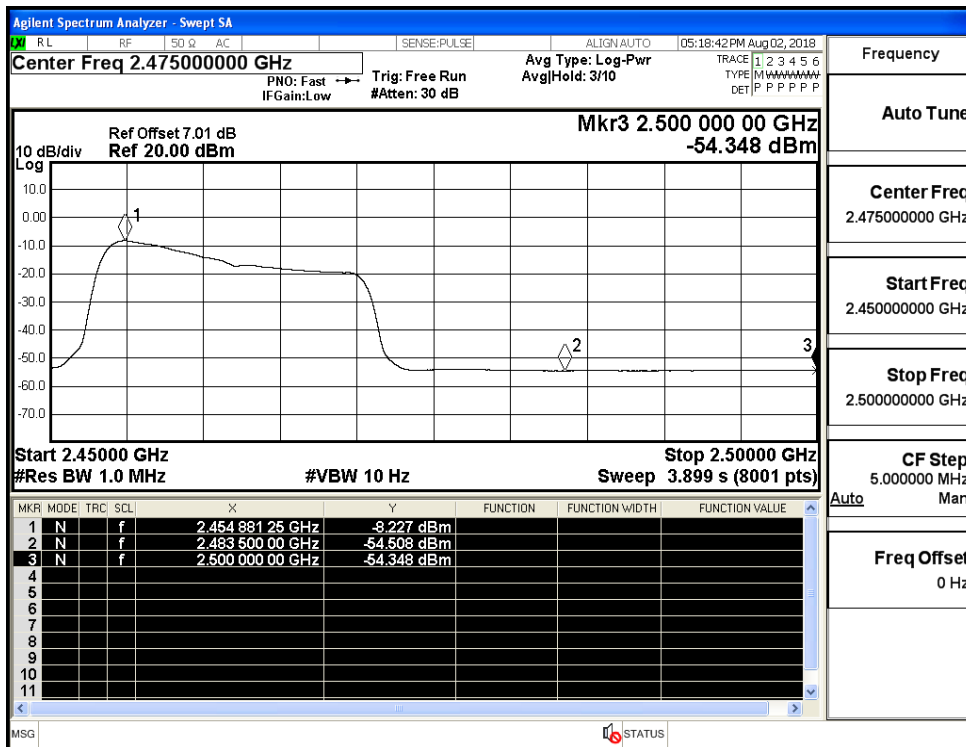
Restrict-band band-edge measurements_11G_2412_Ant1_AV



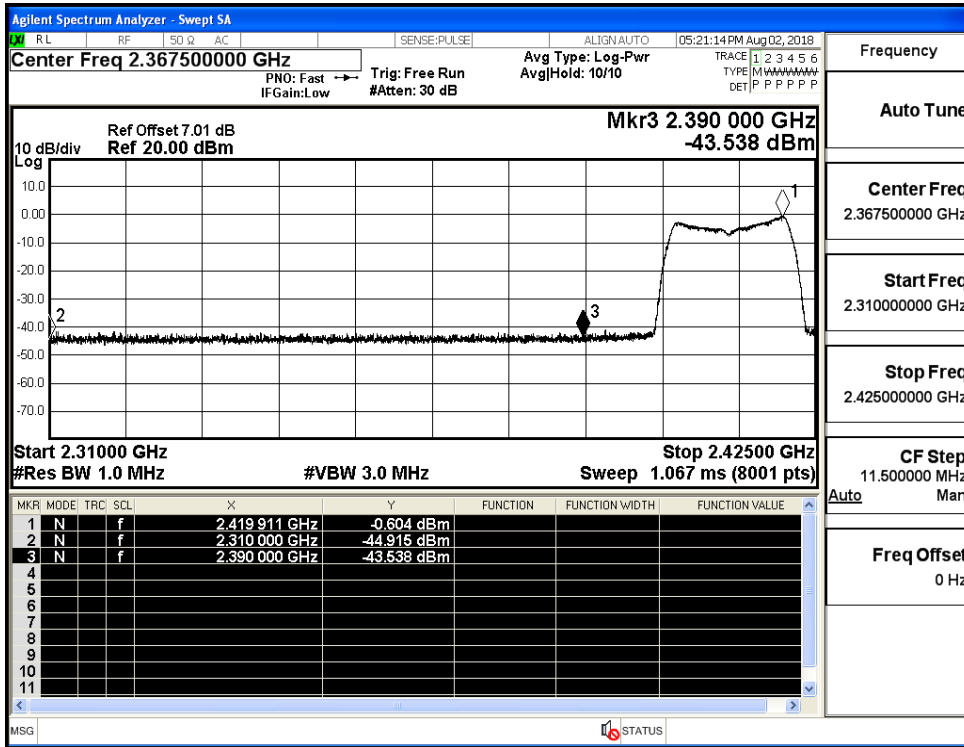
Restrict-band band-edge measurements_11G_2462_Ant1_PEAK



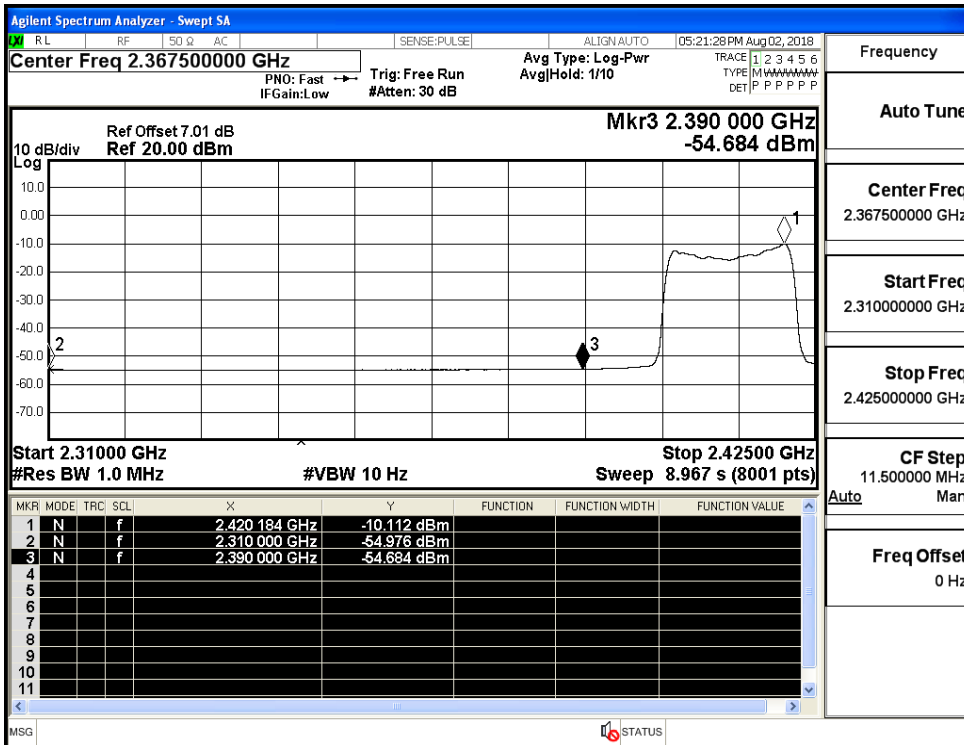
Restrict-band band-edge measurements_11G_2462_Ant1_AV



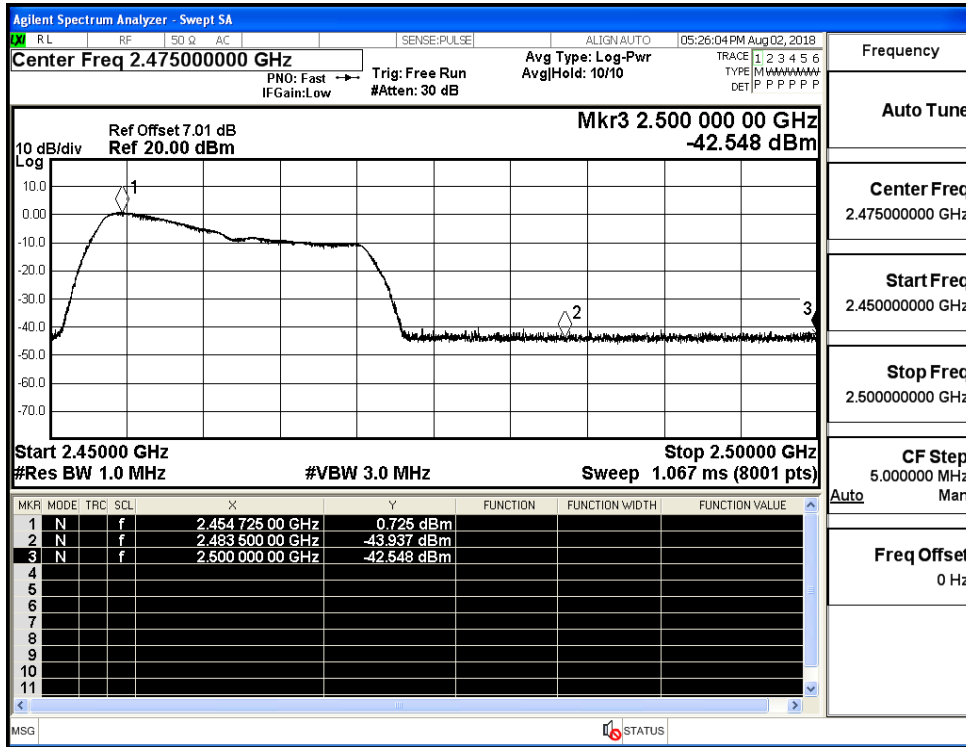
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



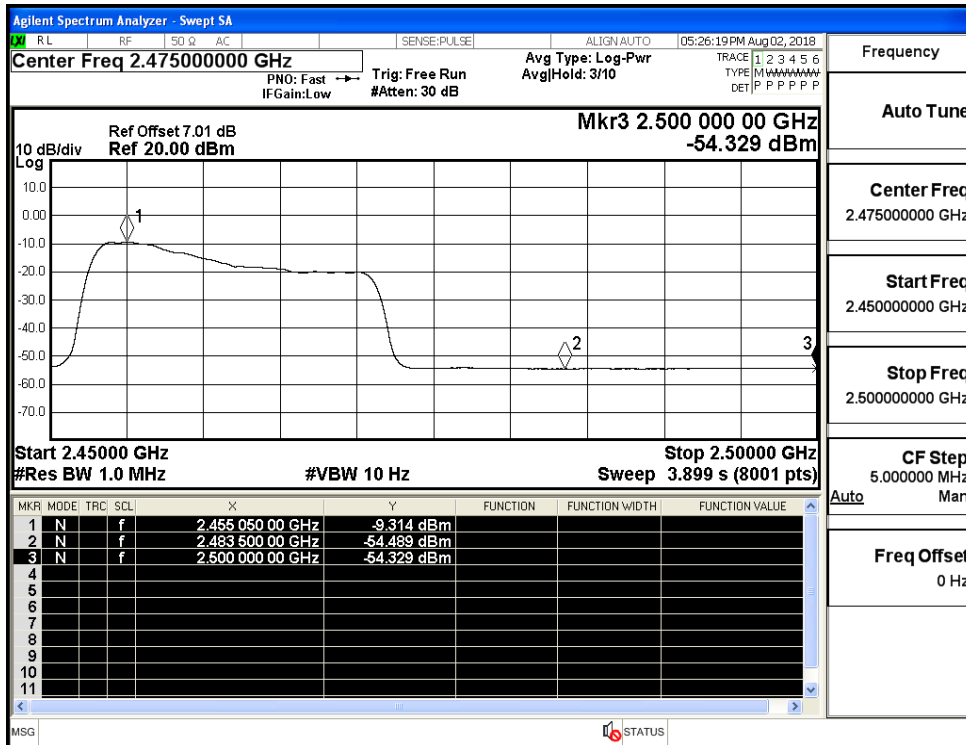
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_AV



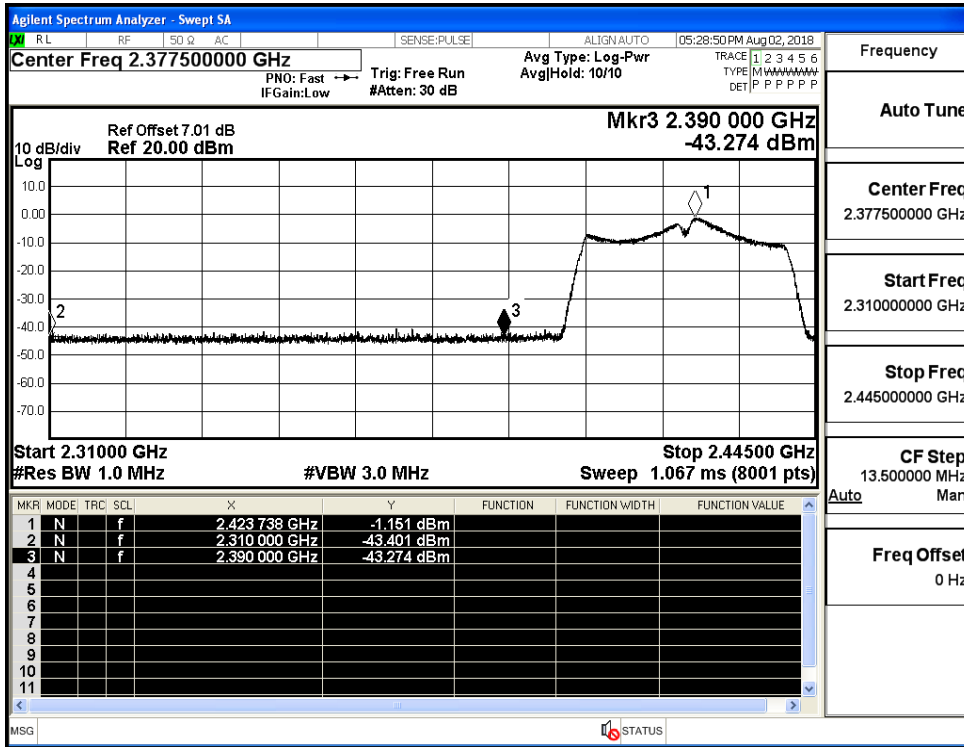
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_PEAK



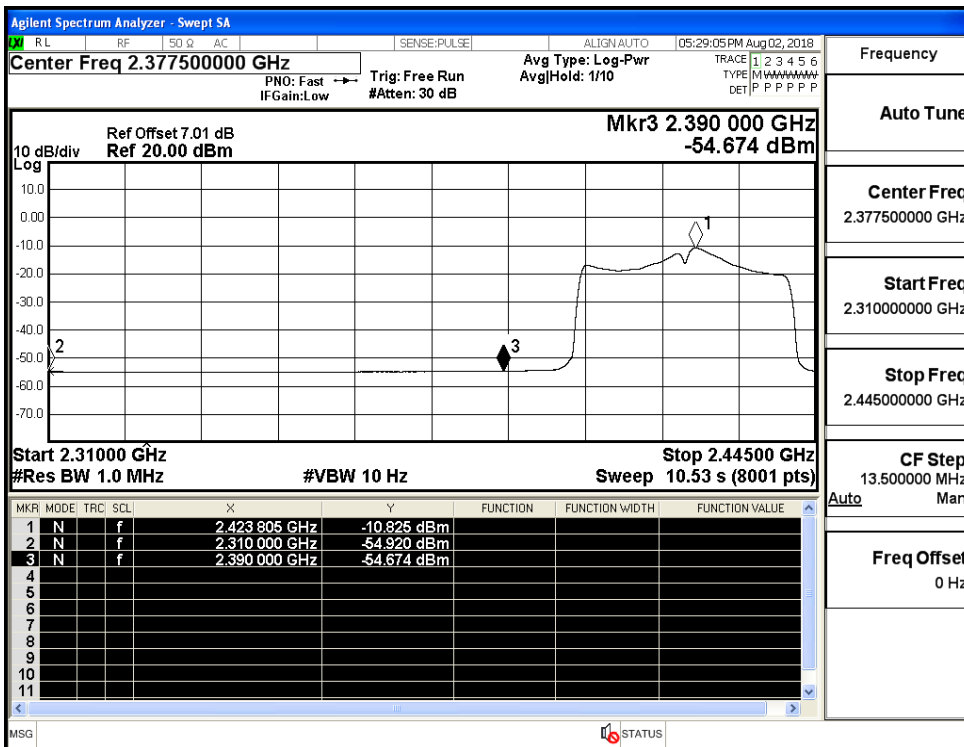
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_AV



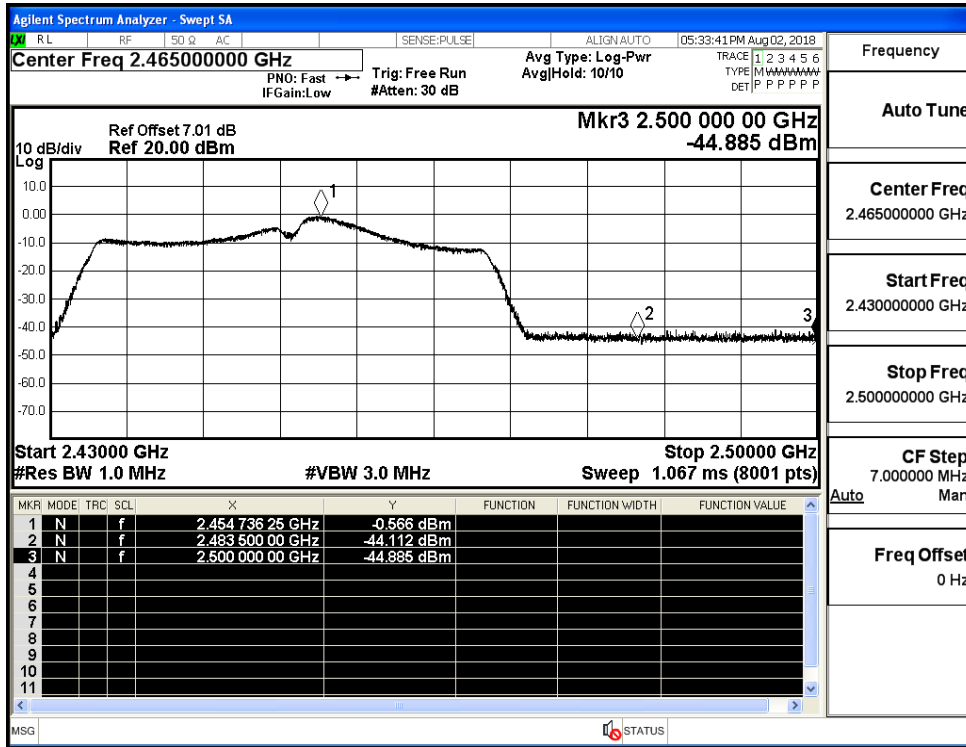
Restrict-band band-edge measurements_11N40SISO_2422_Ant1_PEAK



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

