

Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: 4G Smartphones

Trade Mark: Kenxinda, Ken mobile, KXD, E&L, EL

Test Model: Y50

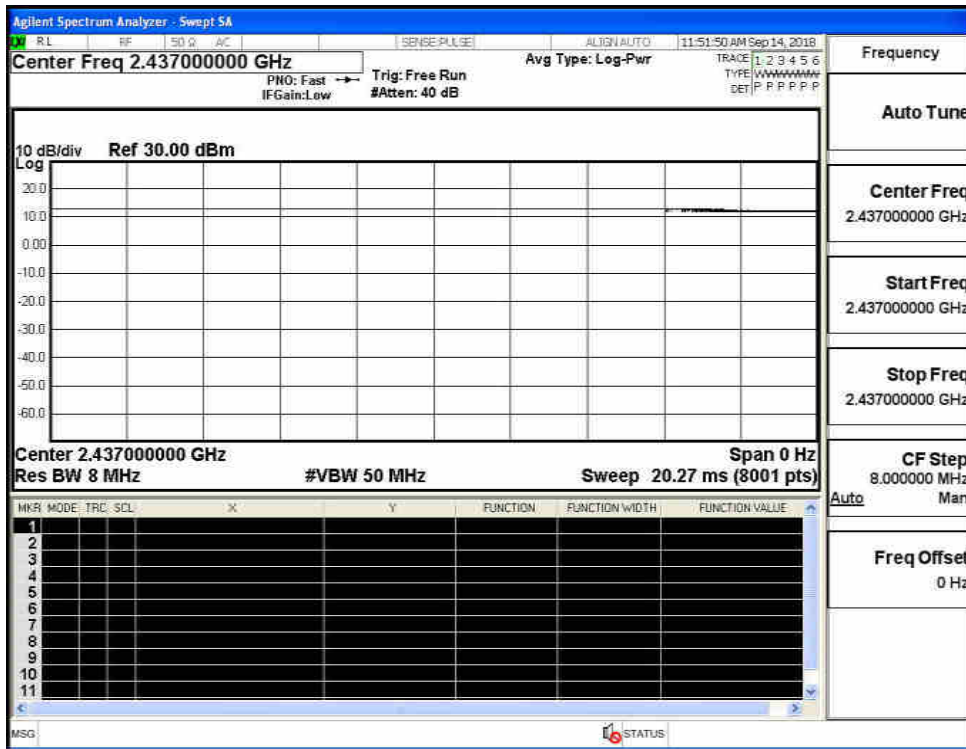
Environmental Conditions

Temperature:	24.6 ° C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Mina.Xu
Supervised by:	Jayden.Zhuo

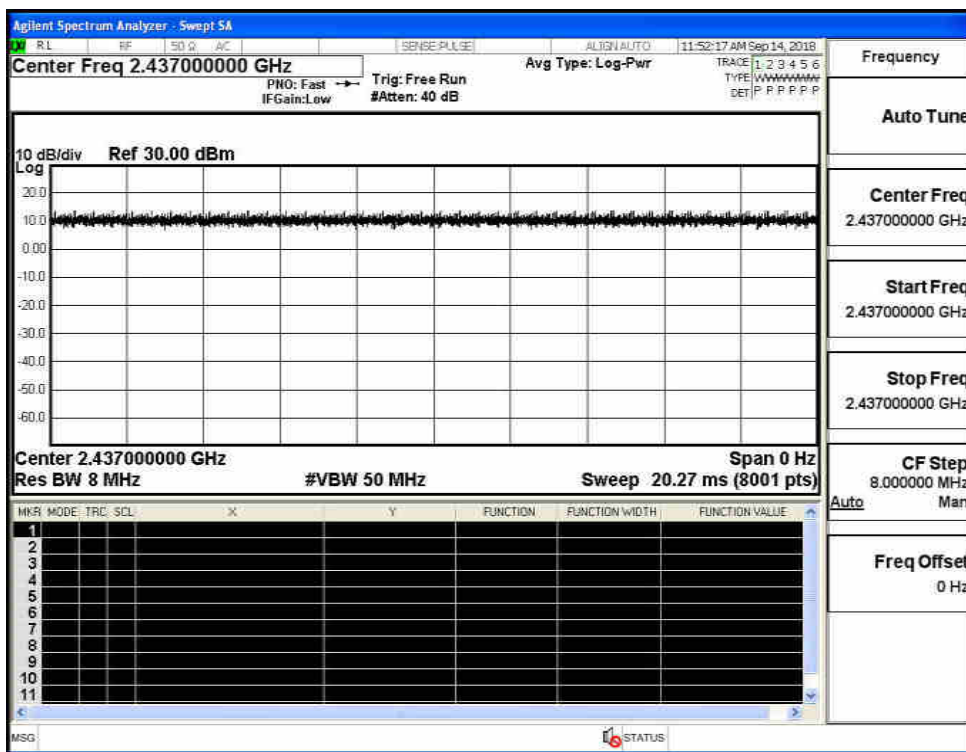
C.1 Duty Cycle

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

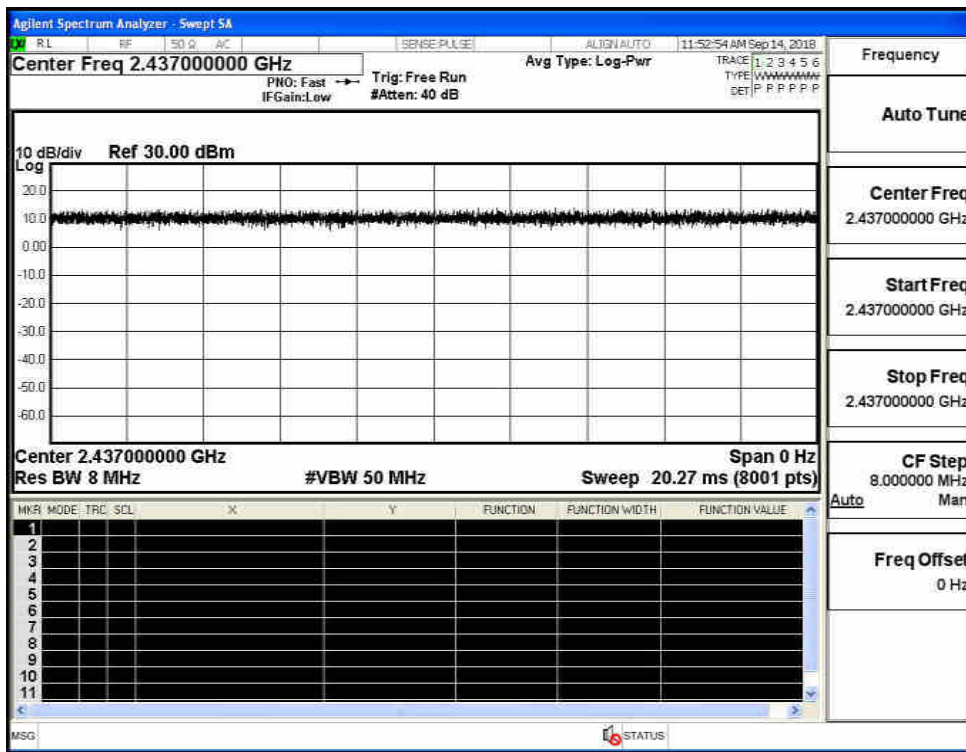
Duty Cycle_11B_2437_Ant1



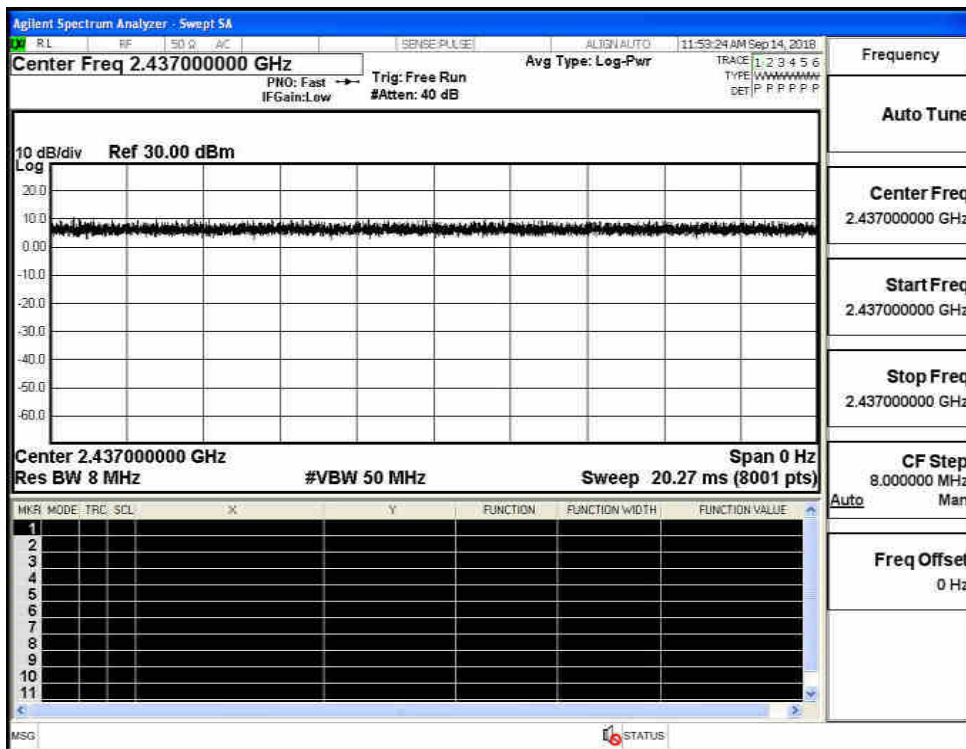
Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



Duty Cycle_11N40SISO_2437_Ant1



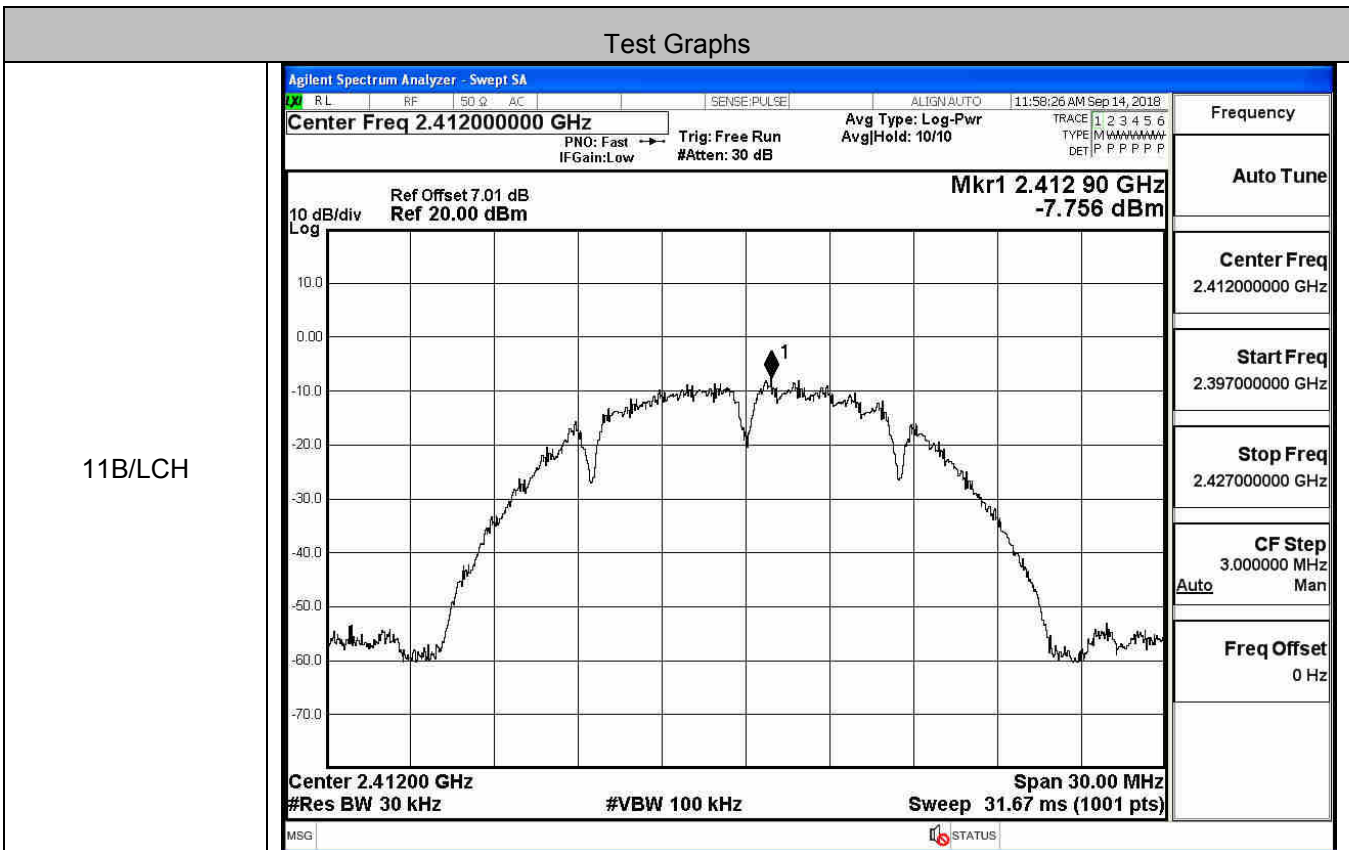
C.2 Maximum Conducted Output Power

Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	9.84	30	PASS
	MCH	10.93	30	PASS
	HCH	11.14	30	PASS
11G	LCH	11.06	30	PASS
	MCH	11.99	30	PASS
	HCH	12.46	30	PASS
11N20SISO	LCH	11.08	30	PASS
	MCH	12.21	30	PASS
	HCH	12.35	30	PASS
11N40SISO	LCH	11.21	30	PASS
	MCH	12.04	30	PASS
	HCH	12.48	30	PASS

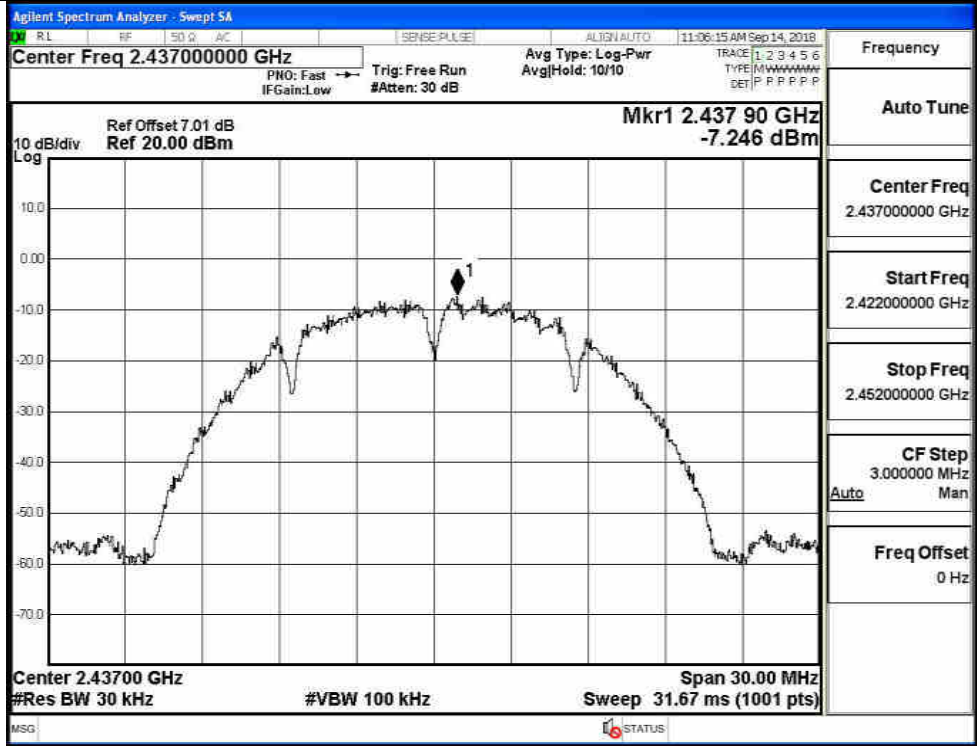
C.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/30KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-7.756	8	PASS
	MCH	-7.246	8	PASS
	HCH	-7.009	8	PASS
11G	LCH	-13.708	8	PASS
	MCH	-12.805	8	PASS
	HCH	-12.507	8	PASS
11N20SISO	LCH	-13.502	8	PASS
	MCH	-12.287	8	PASS
	HCH	-12.272	8	PASS
11N40SISO	LCH	-16.871	8	PASS
	MCH	-15.225	8	PASS
	HCH	-15.550	8	PASS

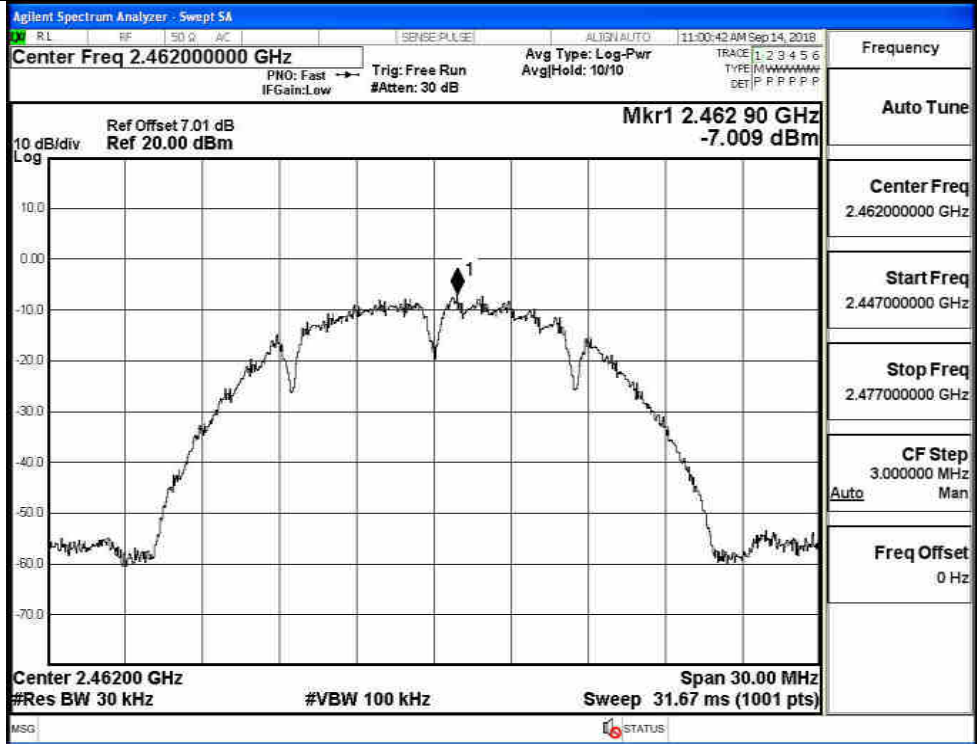
Test Graphs



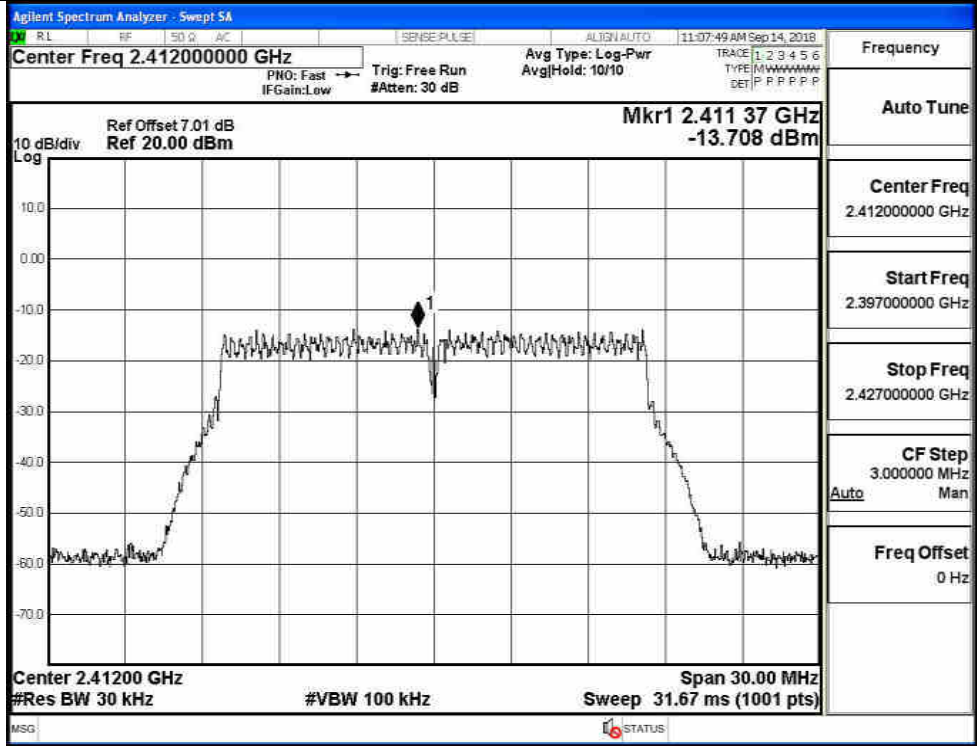
11B/MCH



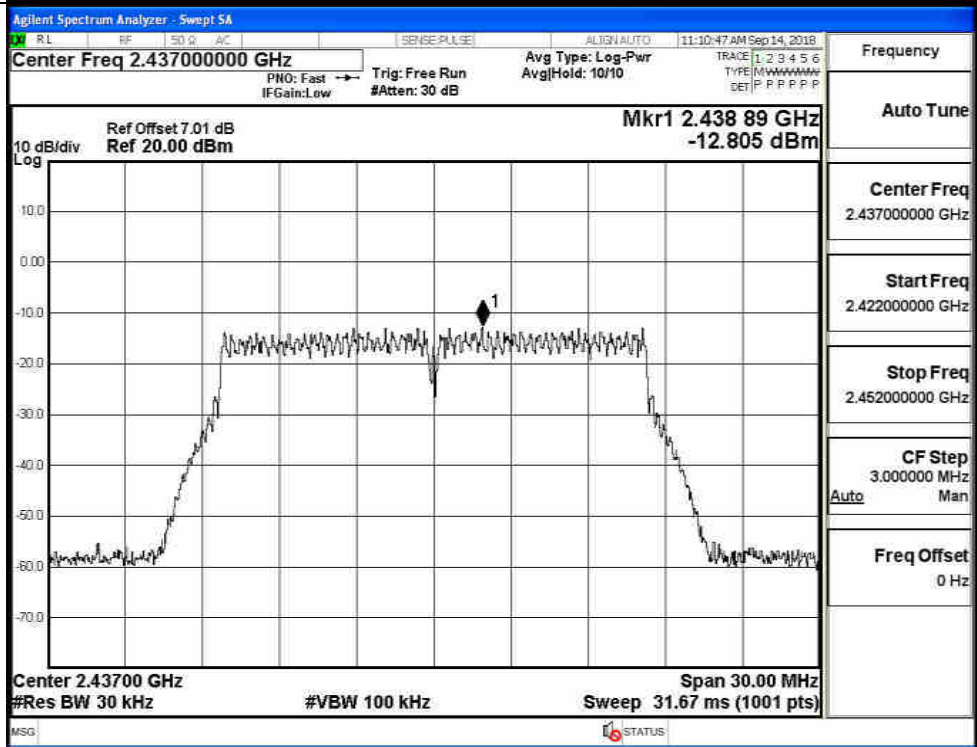
11B/HCH



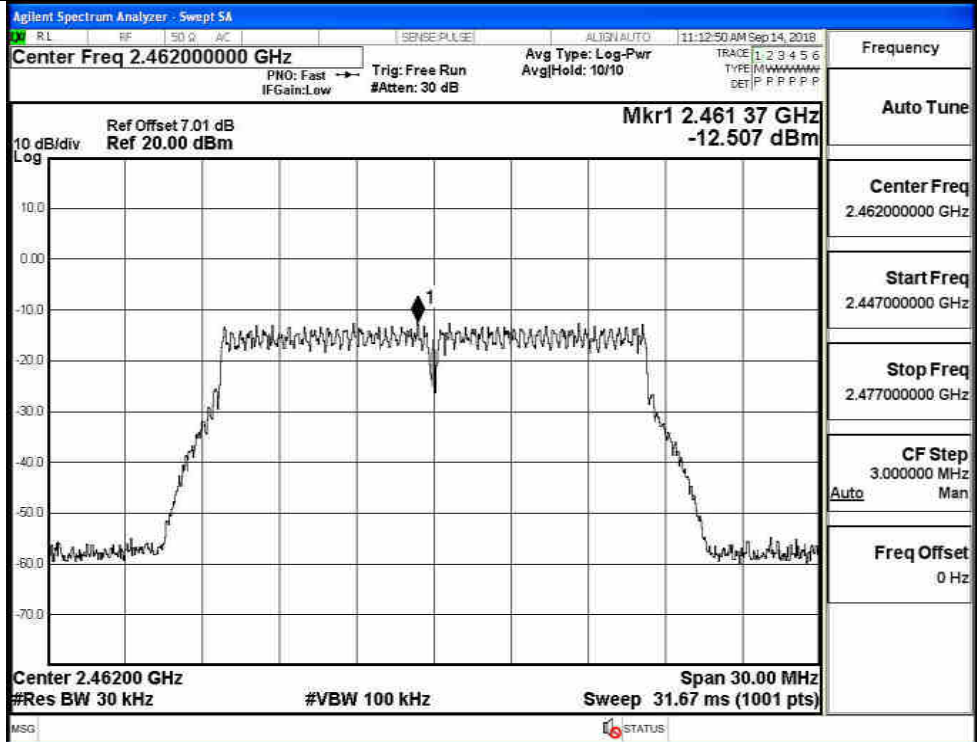
11G/LCH



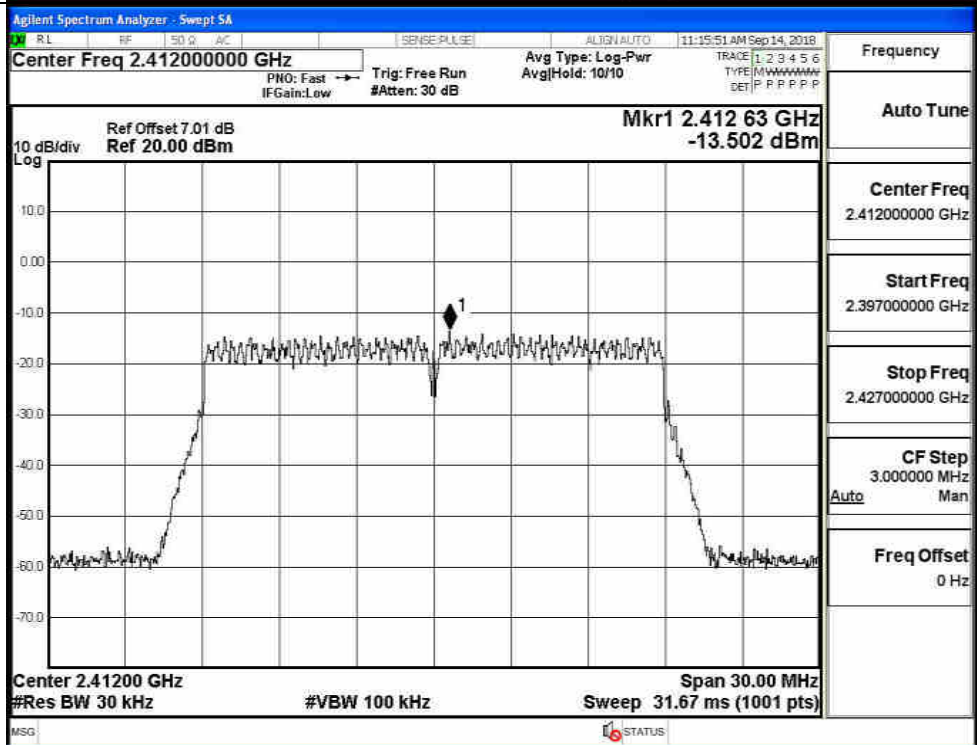
11G/MCH



11G/HCH



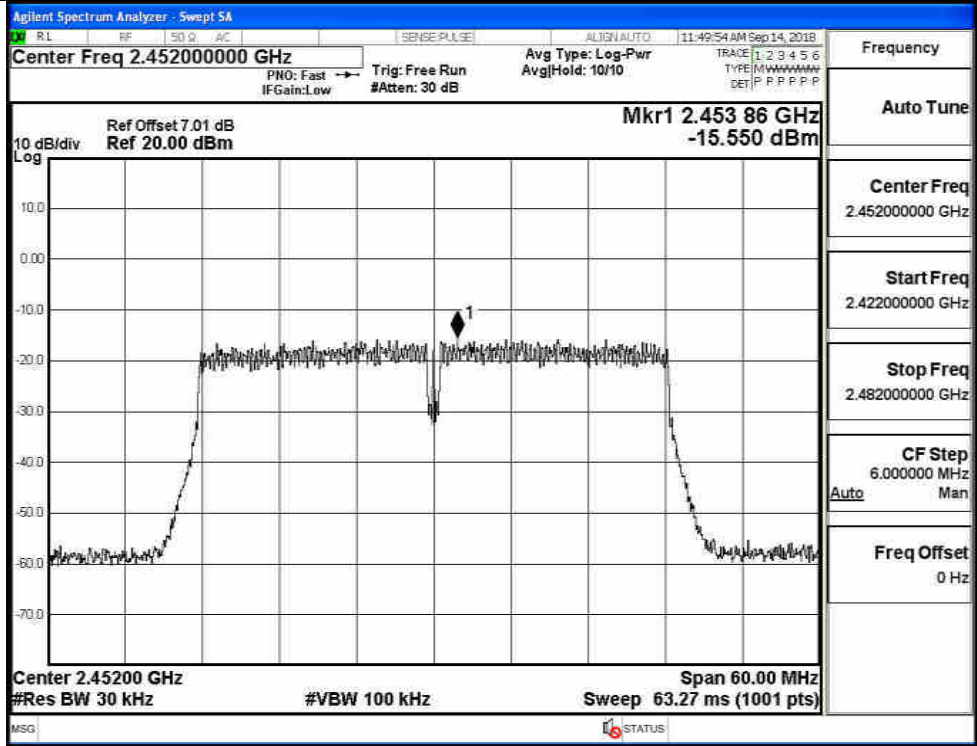
11N20SISO/LCH



<p>11N20SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.43700000 GHz</p> <p>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr1 2.437 63 GHz -12.287 dBm</p> <p>10 dB/div Log</p> <p>Center 2.43700 GHz #Res BW 30 kHz #VBW 100 kHz Span 30.00 MHz Sweep 31.67 ms (1001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.437000000 GHz</p> <p>Start Freq 2.422000000 GHz</p> <p>Stop Freq 2.452000000 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 - Swept SA</p> <p>Center Freq 2.46200000 GHz</p> <p>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr1 2.462 63 GHz -12.272 dBm</p> <p>10 dB/div Log</p> <p>Center 2.46200 GHz #Res BW 30 kHz #VBW 100 kHz Span 30.00 MHz Sweep 31.67 ms (1001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.462000000 GHz</p> <p>Start Freq 2.447000000 GHz</p> <p>Stop Freq 2.477000000 GHz</p> <p>CF Step 3.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>

<p>11N40SISO/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.42200000 GHz</p> <p>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr1 2.43160 GHz -16.871 dBm</p> <p>10 dB/div Log</p> <p>Center 2.42200 GHz #Res BW 30 kHz #VBW 100 kHz Sweep 63.27 ms (1001 pts)</p> <p>Span 60.00 MHz</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.42200000 GHz</p> <p>Start Freq 2.39200000 GHz</p> <p>Stop Freq 2.45200000 GHz</p> <p>CF Step 6.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>11N40SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.43700000 GHz</p> <p>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr1 2.44036 GHz -15.225 dBm</p> <p>10 dB/div Log</p> <p>Center 2.43700 GHz #Res BW 30 kHz #VBW 100 kHz Sweep 63.27 ms (1001 pts)</p> <p>Span 60.00 MHz</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.43700000 GHz</p> <p>Start Freq 2.40700000 GHz</p> <p>Stop Freq 2.46700000 GHz</p> <p>CF Step 6.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>

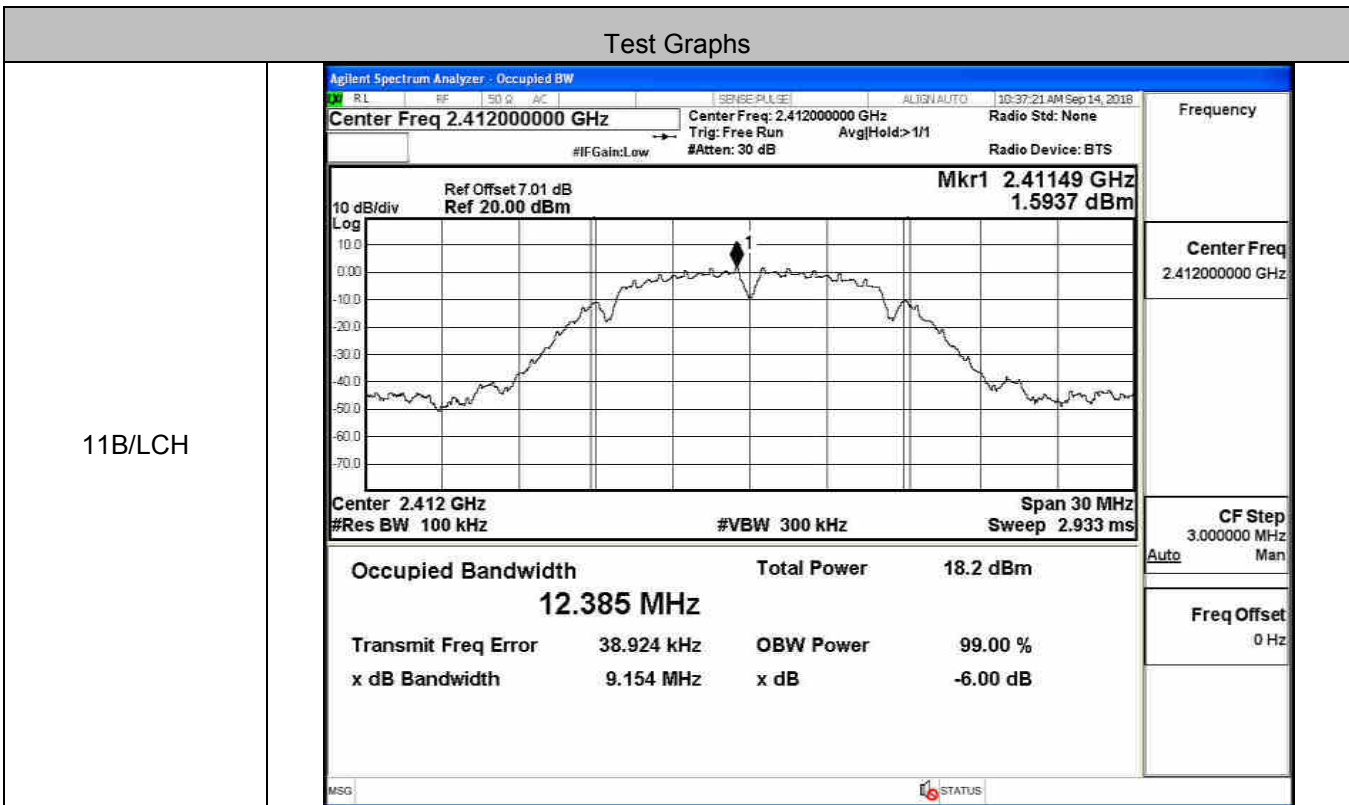
11N40SISO/HCH



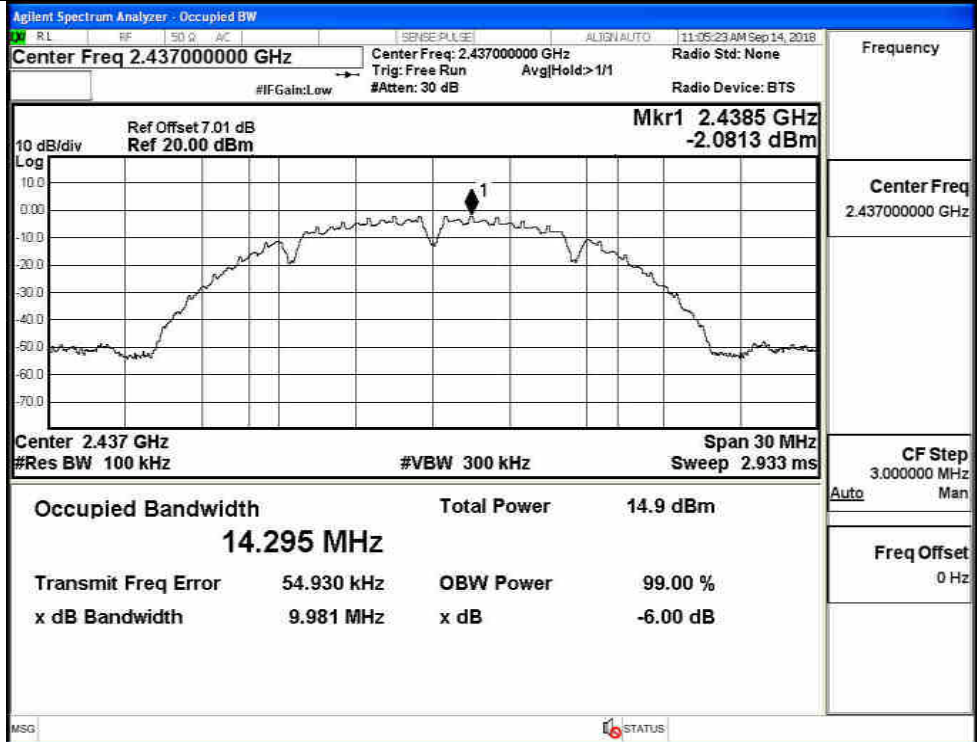
C.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.154	≥0.5	PASS
	MCH	9.981	≥0.5	PASS
	HCH	9.984	≥0.5	PASS
11G	LCH	16.61	≥0.5	PASS
	MCH	16.61	≥0.5	PASS
	HCH	16.62	≥0.5	PASS
11N20SISO	LCH	17.84	≥0.5	PASS
	MCH	17.83	≥0.5	PASS
	HCH	17.82	≥0.5	PASS
11N40SISO	LCH	36.49	≥0.5	PASS
	MCH	36.51	≥0.5	PASS
	HCH	36.49	≥0.5	PASS

Test Graphs



11B/MCH



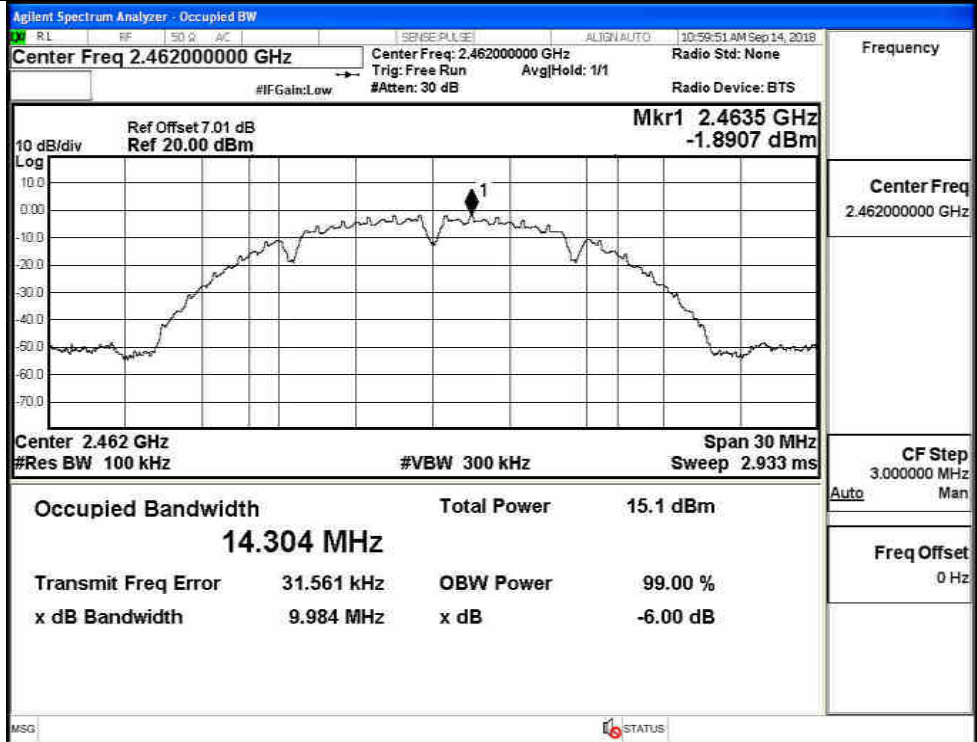
Frequency

Center Freq
2.437000000 GHz

CF Step
3.000000 MHz

Freq Offset
0 Hz

11B/HCH



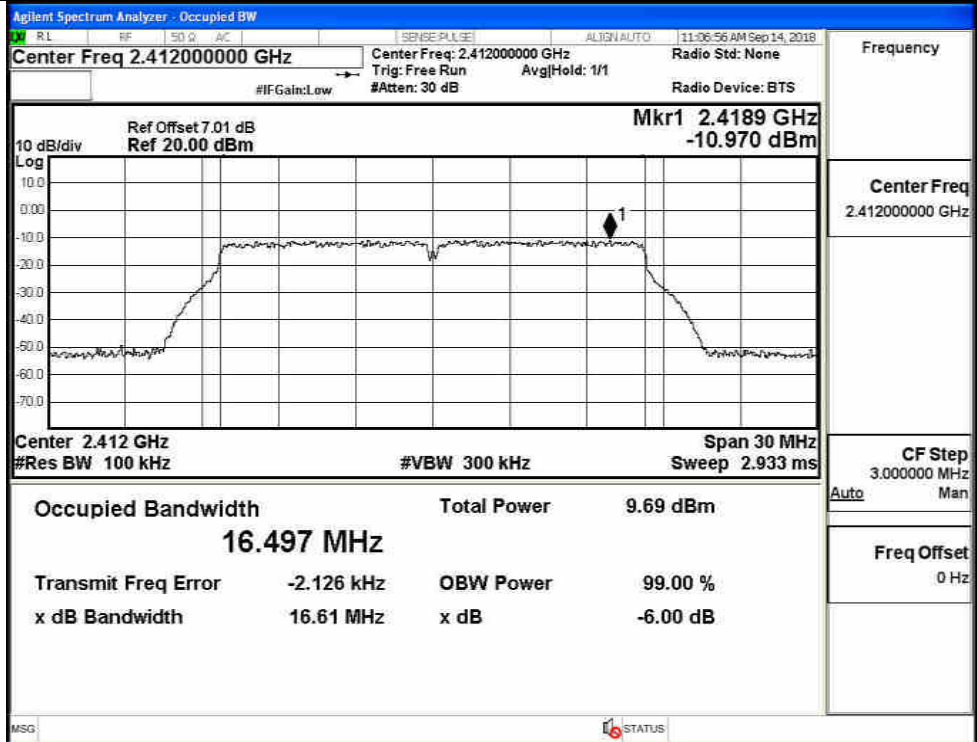
Frequency

Center Freq
2.462000000 GHz

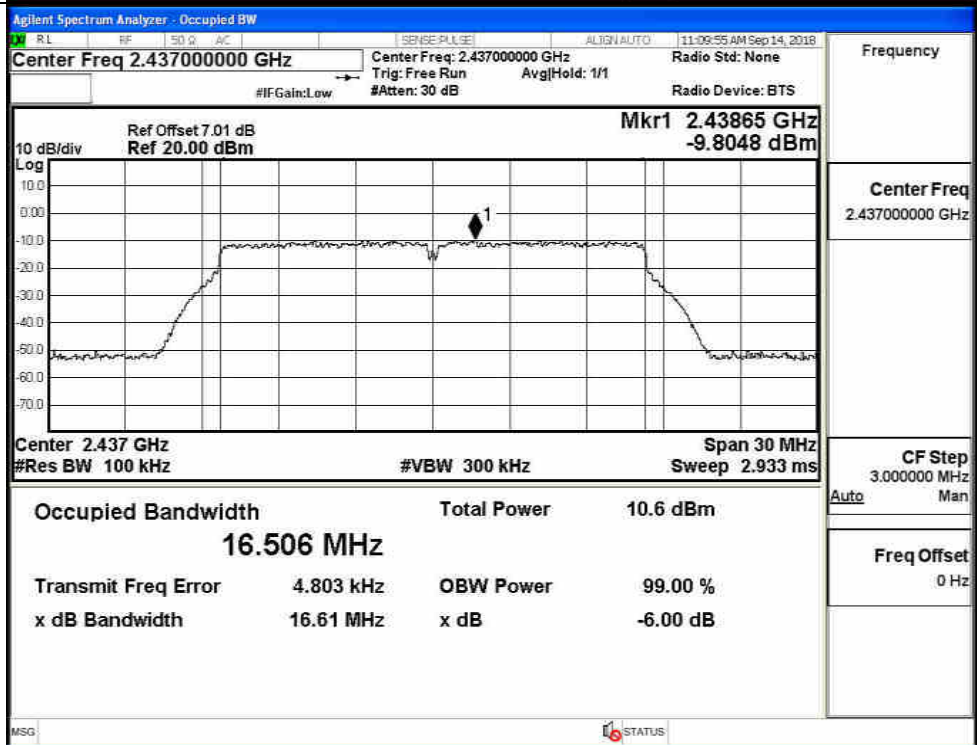
CF Step
3.000000 MHz

Freq Offset
0 Hz

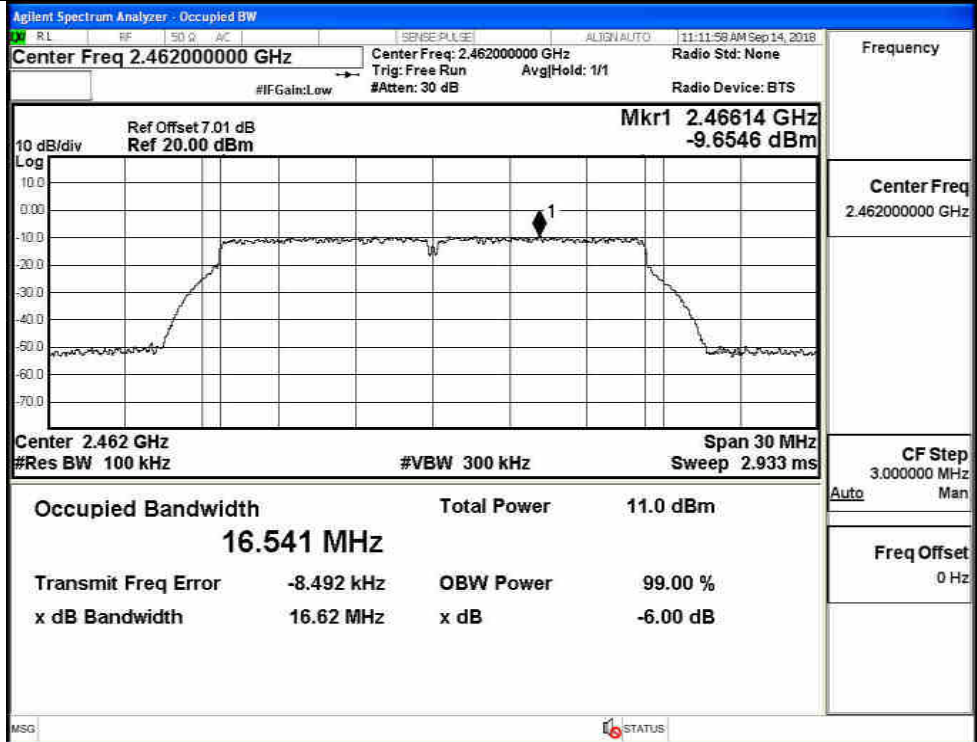
11G/LCH



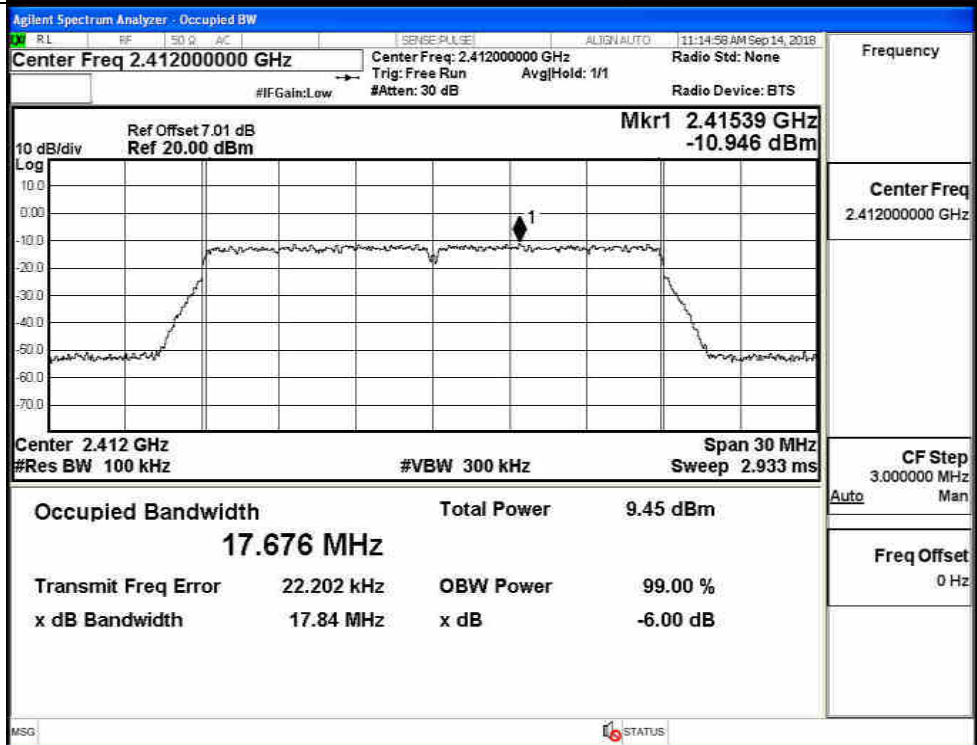
11G/MCH



11G/HCH

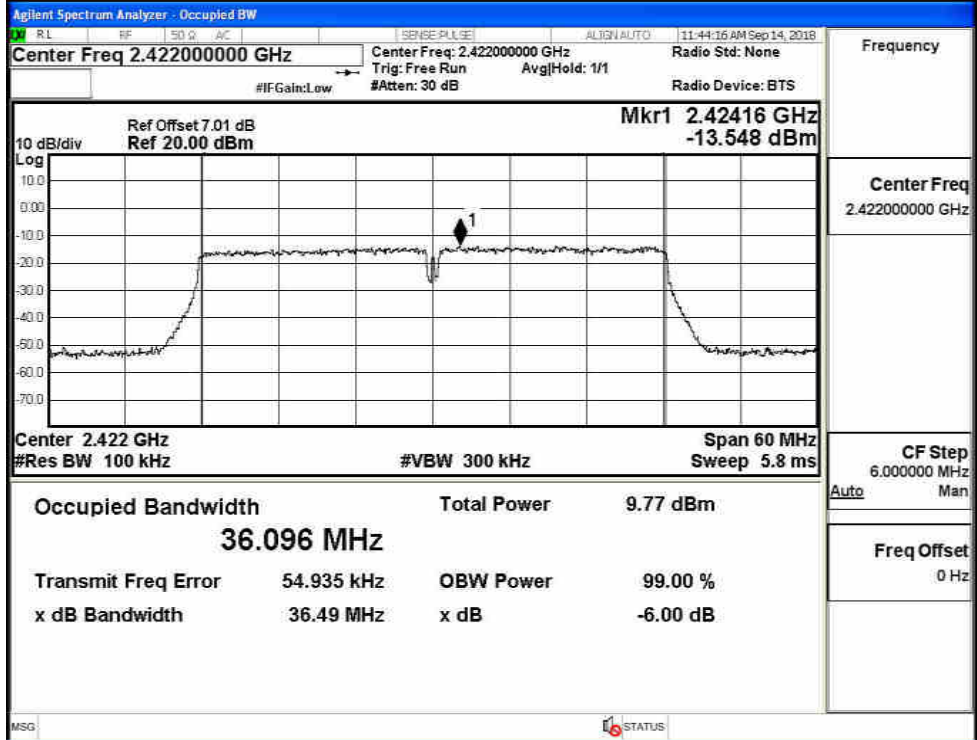


11N20SISO/LCH



<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 2.43415 GHz -9.8365 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 17.666 MHz</p> <p>Total Power 10.6 dBm</p> <p>Transmit Freq Error 21.679 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 17.83 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 2.45912 GHz -9.4328 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 17.677 MHz</p> <p>Total Power 10.7 dBm</p> <p>Transmit Freq Error 19.171 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 17.82 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>

11N40SISO/LCH



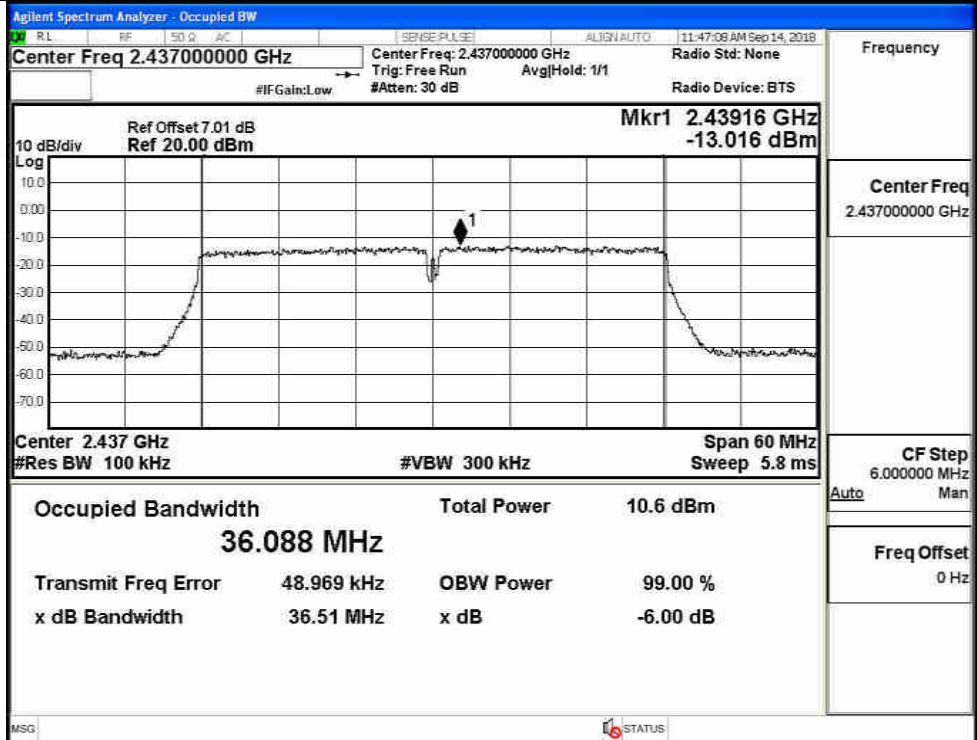
Frequency
2.42200000 GHz

Center Freq
2.42200000 GHz

CF Step
6.000000 MHz
Auto Man

Freq Offset
0 Hz

11N40SISO/MCH



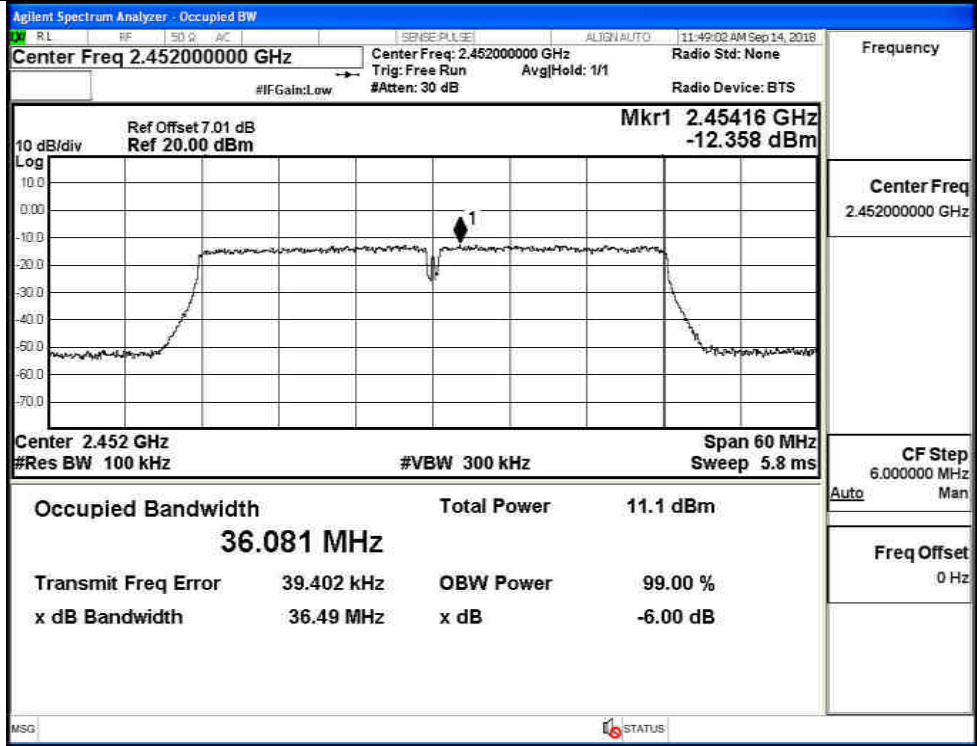
Frequency
2.43700000 GHz

Center Freq
2.43700000 GHz

CF Step
6.000000 MHz
Auto Man

Freq Offset
0 Hz

11N40SISO/HCH

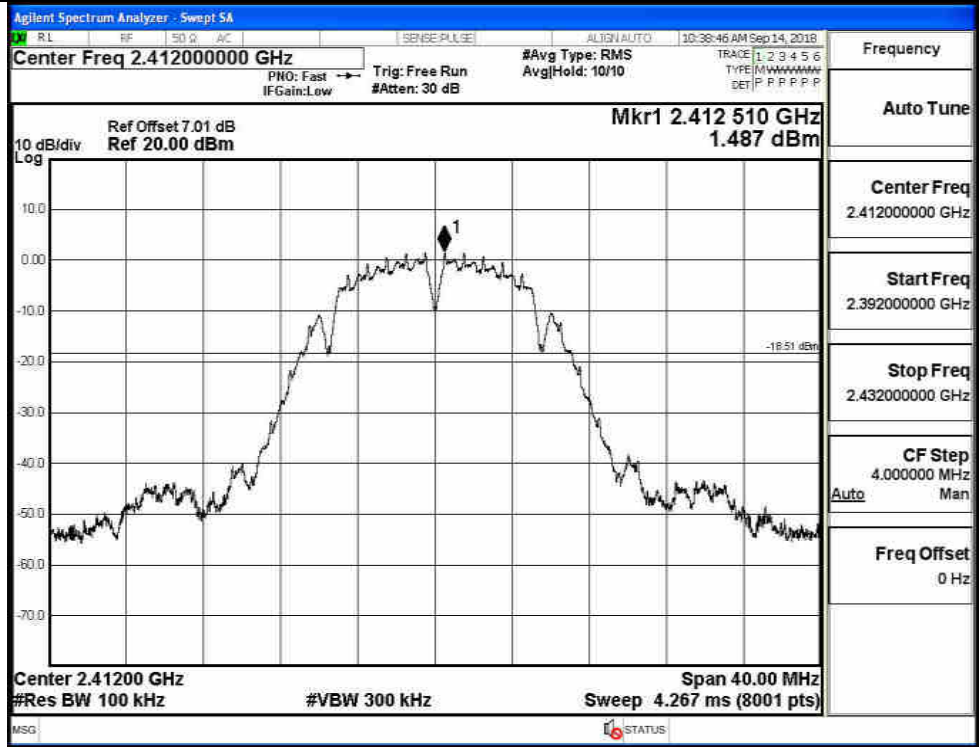


C.5 RF Conducted Spurious Emissions

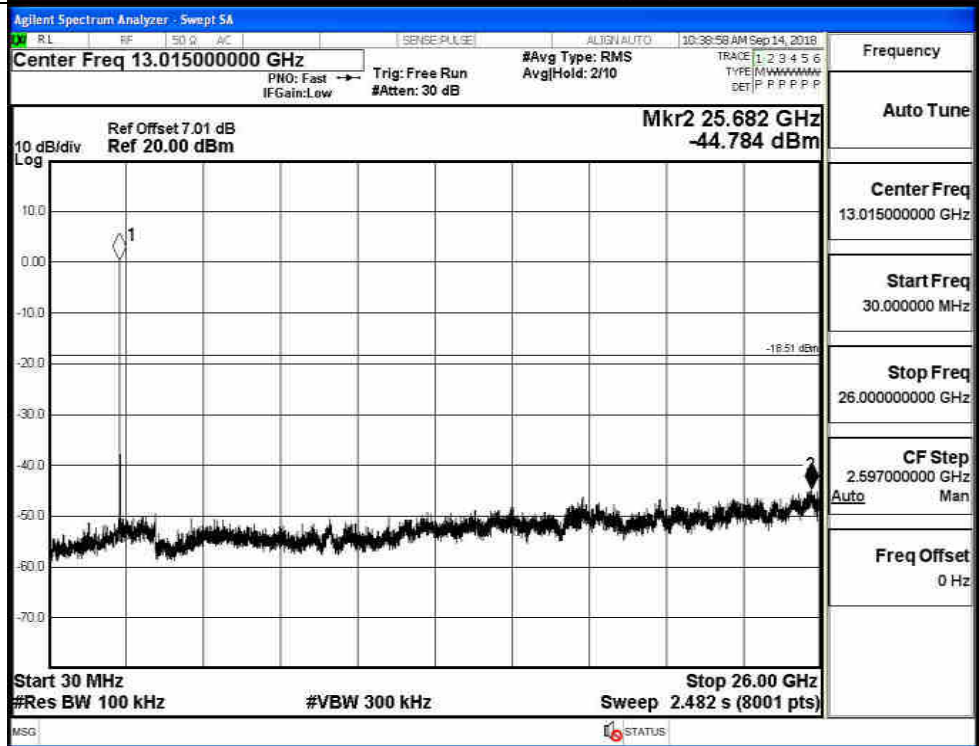
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	1.487	-44.784	-18.513	PASS
	MCH	-2.133	-45.100	-22.133	PASS
	HCH	-1.952	-43.193	-21.952	PASS
11G	LCH	-11.032	-44.922	-31.032	PASS
	MCH	-9.883	-44.387	-29.883	PASS
	HCH	-9.593	-44.298	-29.593	PASS
11N20 SISO	LCH	-11.02	-44.811	-31.020	PASS
	MCH	-9.752	-43.918	-29.752	PASS
	HCH	-9.846	-45.050	-29.846	PASS
11N40 SISO	LCH	-13.781	-44.544	-33.781	PASS
	MCH	-12.617	-45.011	-32.617	PASS
	HCH	-12.401	-44.291	-32.401	PASS

11B_LCH_Graphs

Pref/11B/LCH

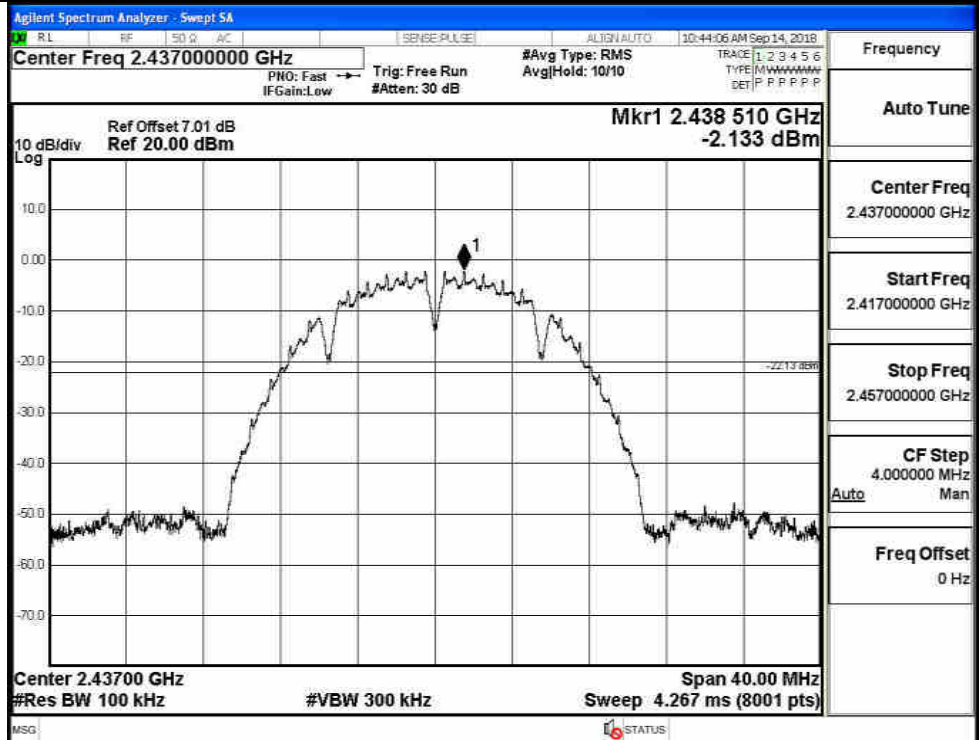


Puw/11B/LCH

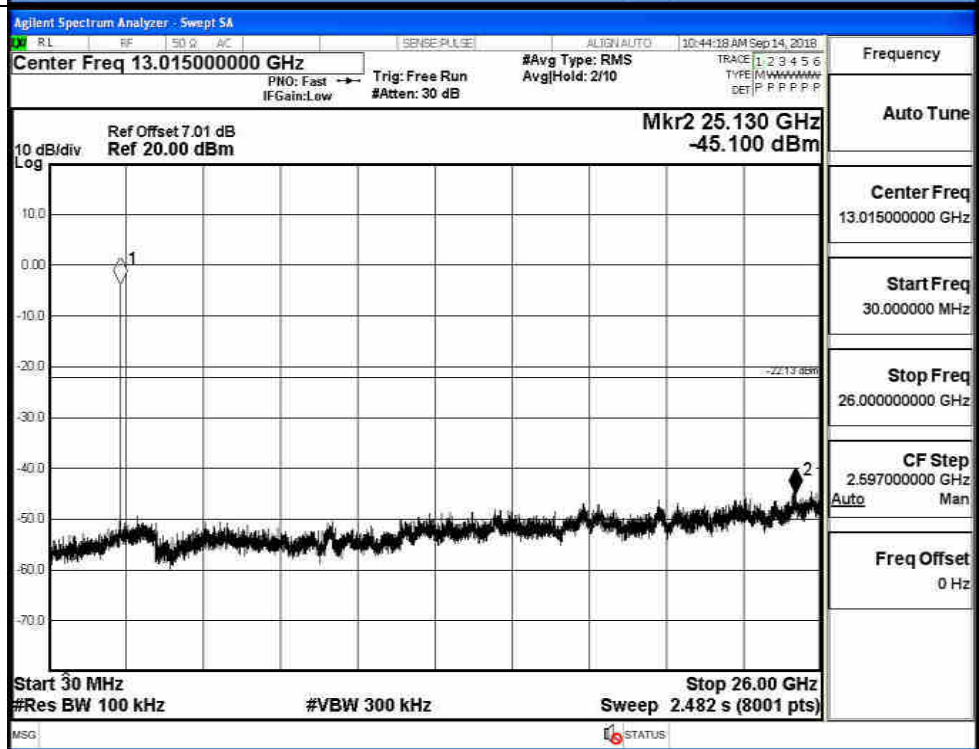


11B_MCH_Graphs

Pref/11B/MCH

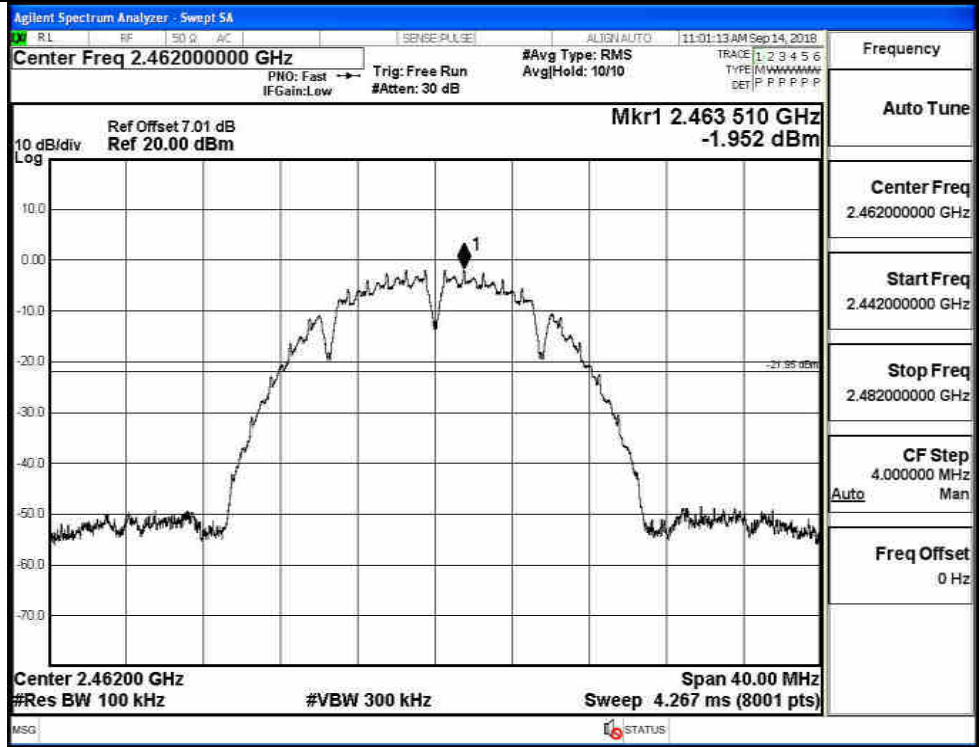


Puw/11B/MCH

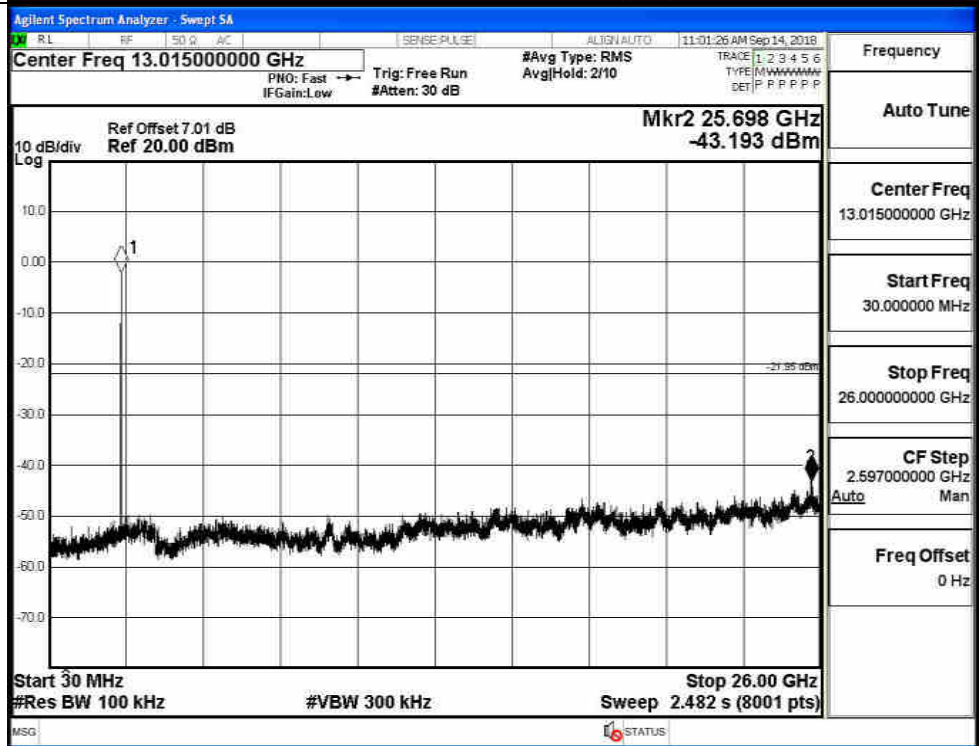


11B HCH Graphs

Pref/11B/HCH

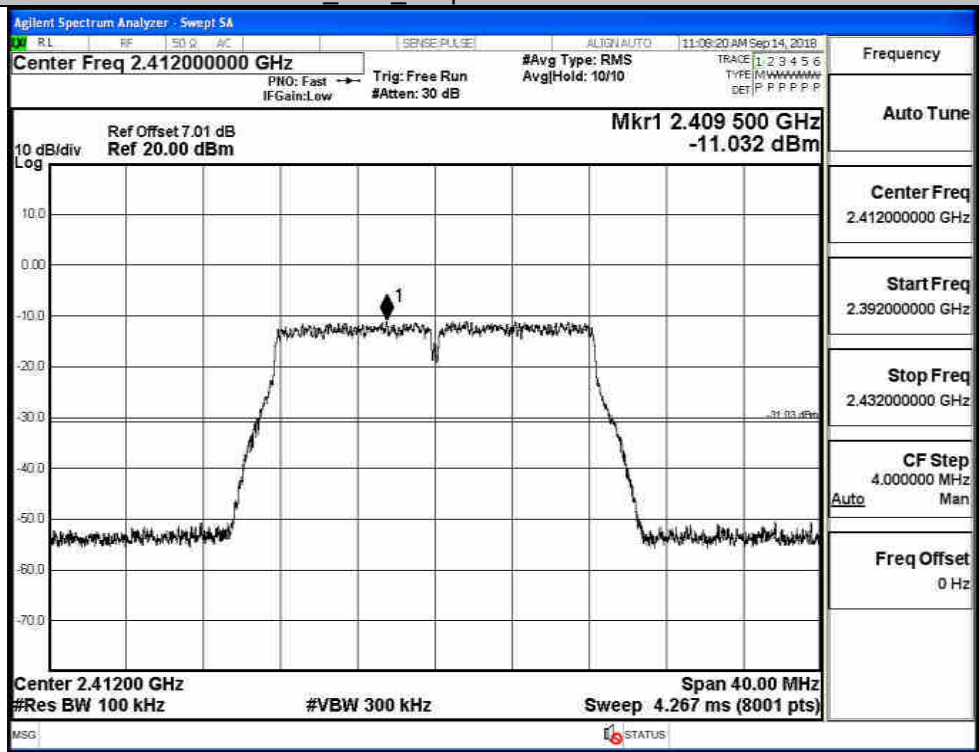


Puw/11B/HCH

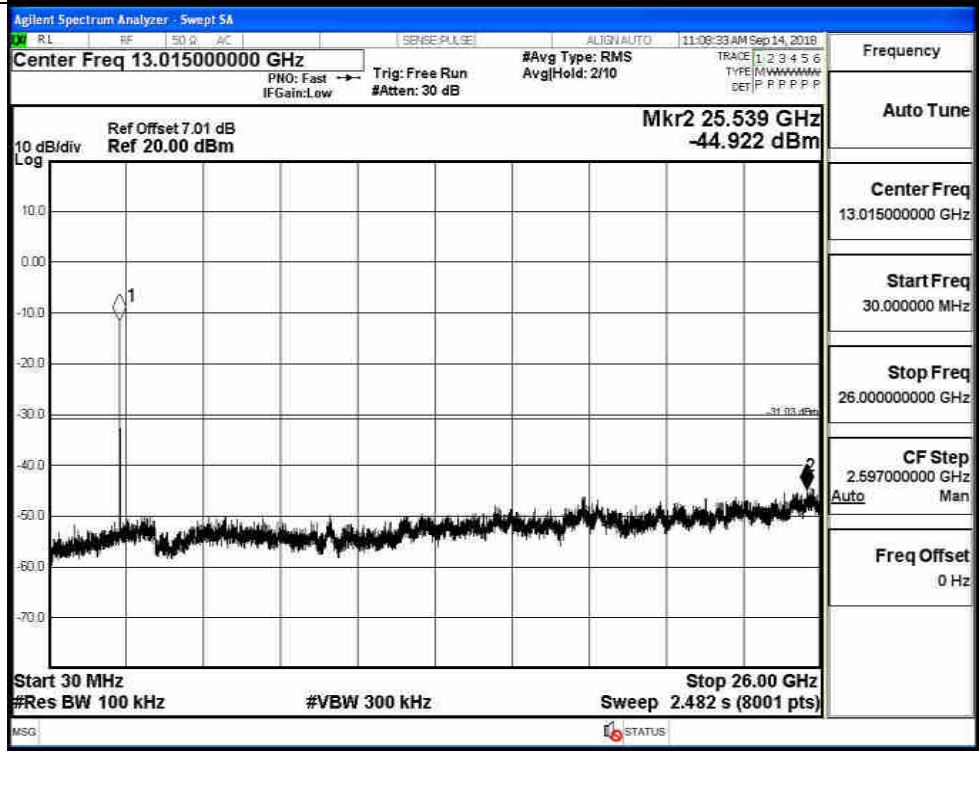


11G_LCH_Graphs

Pref/11G/LCH

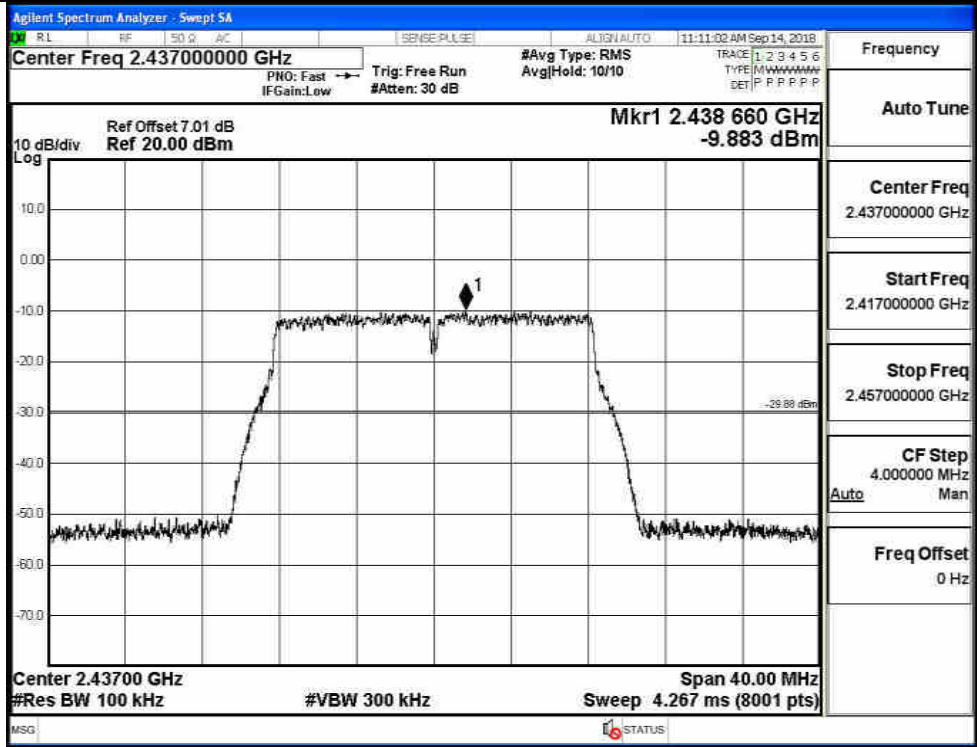


Puw/11G/LCH

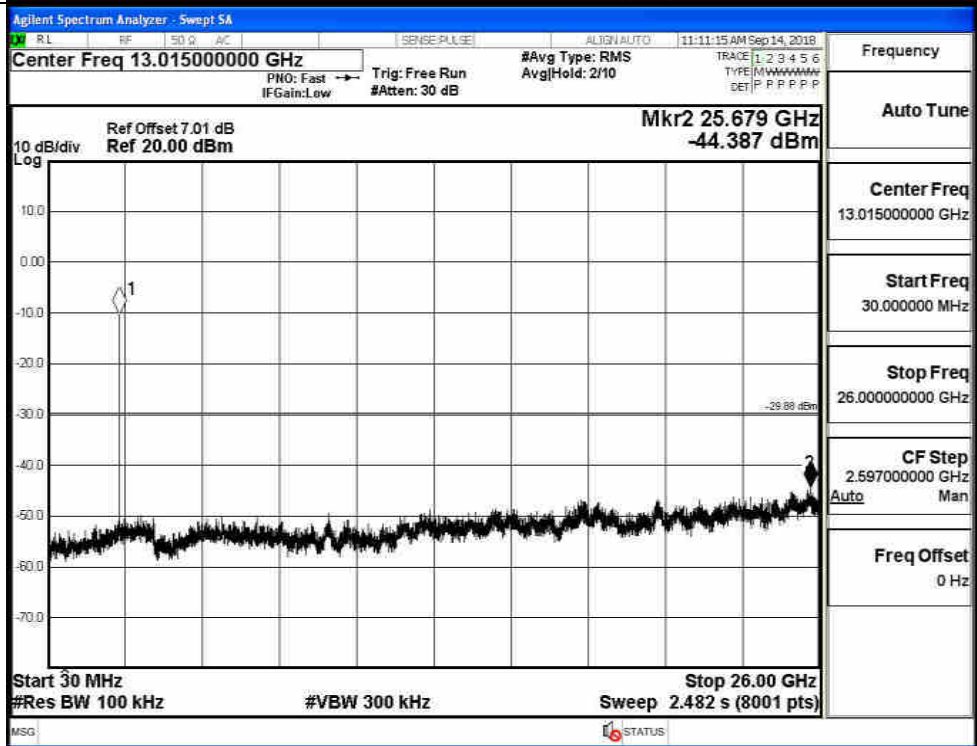


11G MCH Graphs

Pref/11G/MCH

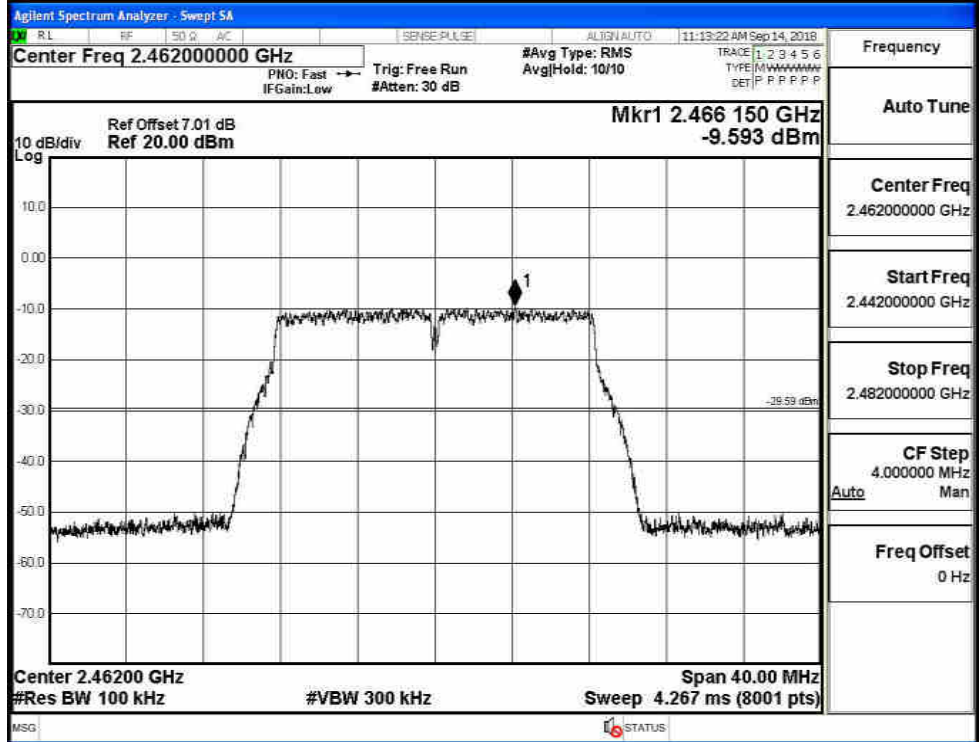


Puw/11G/MCH

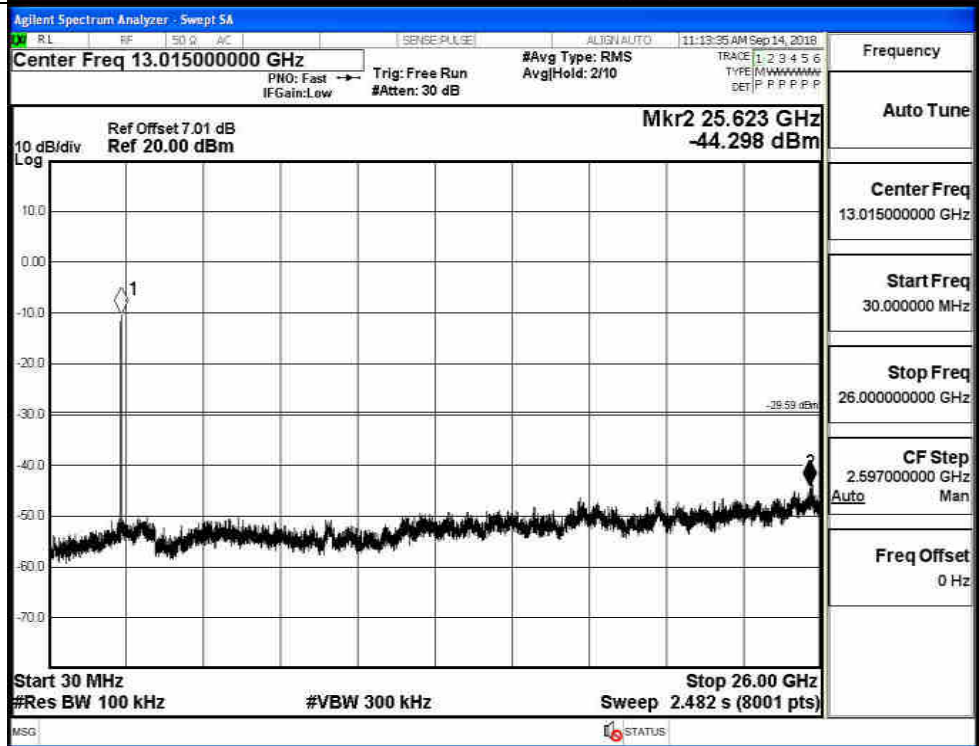


11G HCH Graphs

Pref/11G/HCH

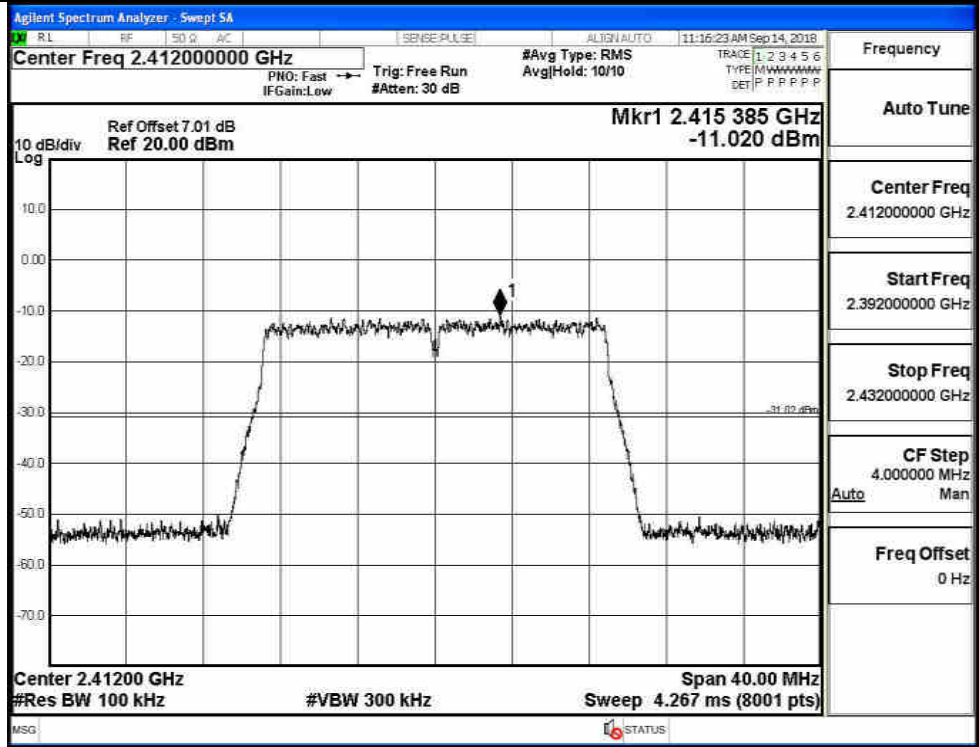


Puw/11G/HCH

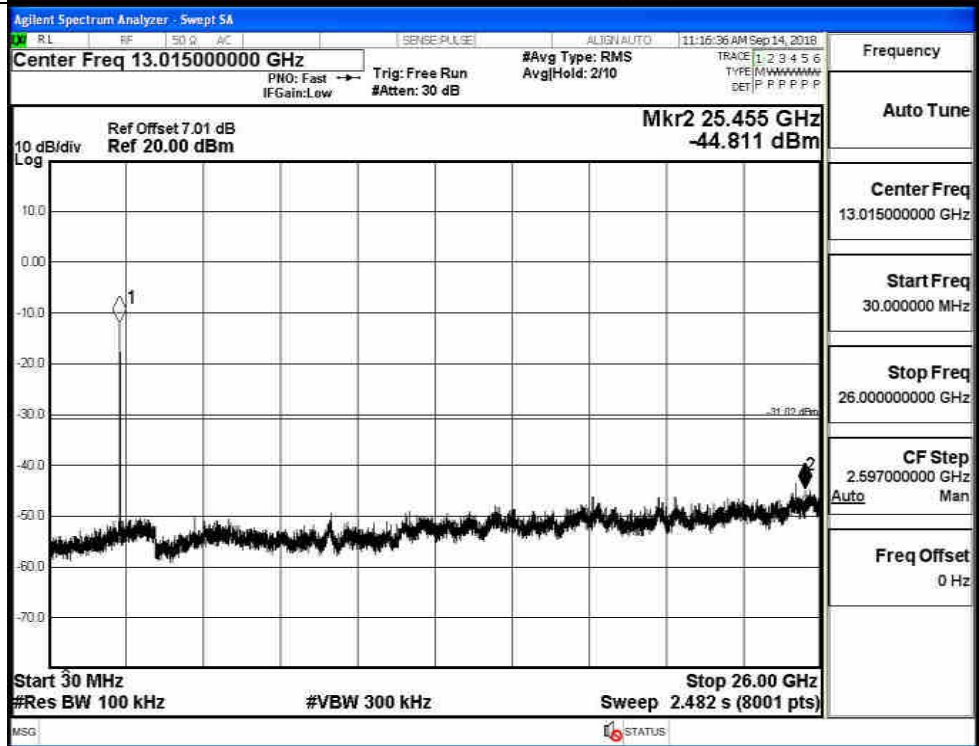


11N20SISO LCH_Graphs

Pref/11N20SISO
O/LCH



Puw/11N20
SISO/LCH



11N20SISO_MCH_Graphs

<p>Pref/11N20 SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.437000000 GHz Mkr1 2.434 140 GHz -9.752 dBm Ref Offset 7.01 dB Ref 20.00 dBm 10 dB/div Log Center 2.43700 GHz #Res BW 100 kHz #VBW 300 kHz Span 40.00 MHz Sweep 4.267 ms (8001 pts)</p>	<p>Frequency Auto Tune Center Freq 2.437000000 GHz Start Freq 2.417000000 GHz Stop Freq 2.457000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz</p>
<p>Puw/11N20 SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 13.015000000 GHz Mkr2 25.630 GHz -43.918 dBm Ref Offset 7.01 dB Ref 20.00 dBm 10 dB/div Log Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 26.00 GHz Sweep 2.482 s (8001 pts)</p>	<p>Frequency Auto Tune Center Freq 13.015000000 GHz Start Freq 30.000000 MHz Stop Freq 26.000000000 GHz CF Step 2.597000000 GHz Auto Man Freq Offset 0 Hz</p>

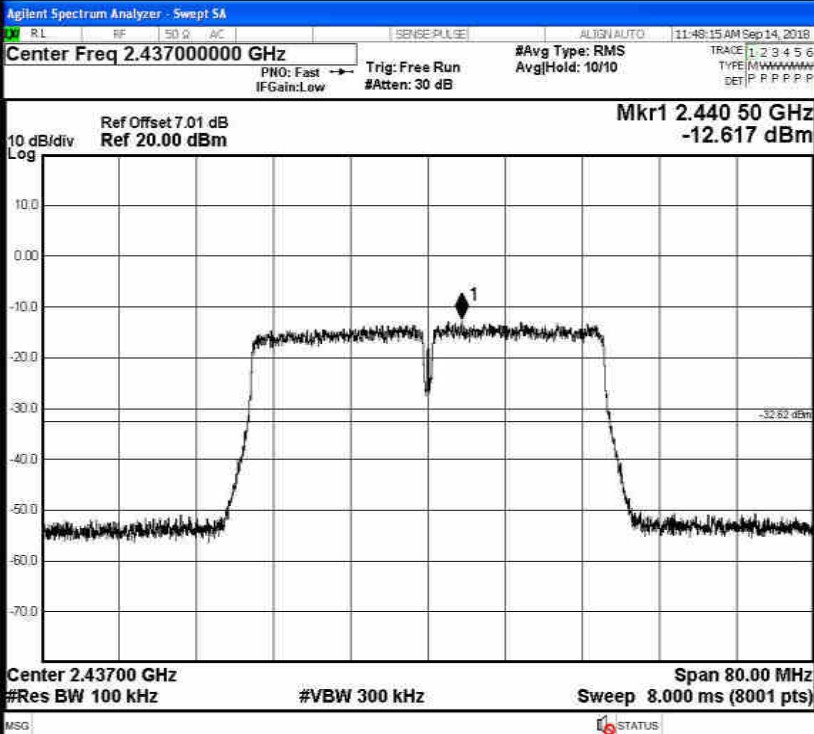
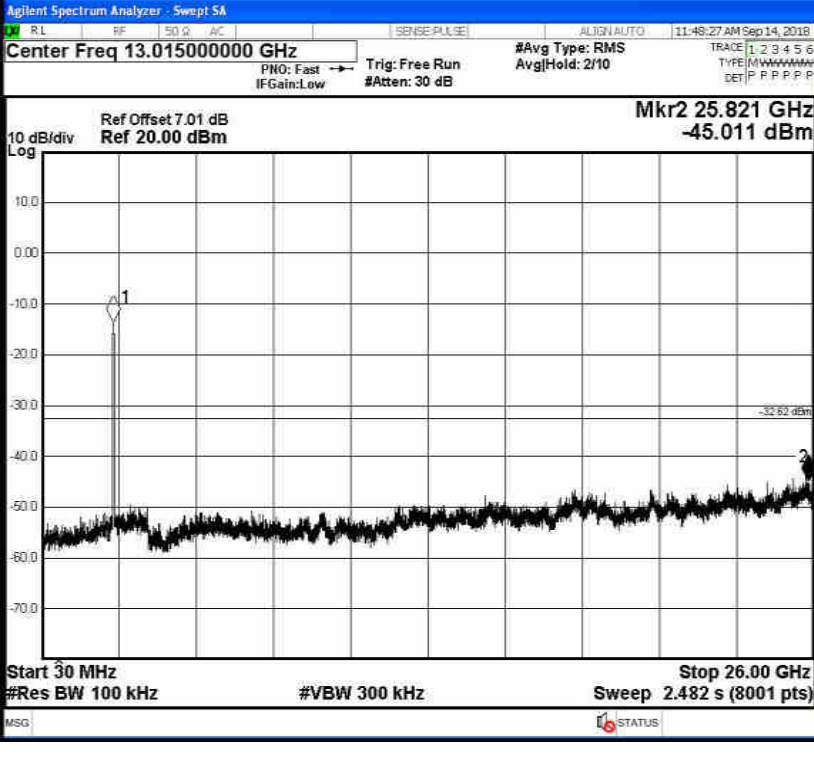
11N20SISO_HCH_Graphs

<p>Pref/11N20 SISO/HCH</p>		<p>Frequency Auto Tune Center Freq 2.462000000 GHz Start Freq 2.442000000 GHz Stop Freq 2.482000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz</p>
<p>Puw/11N20 SISO/HCH</p>		<p>Frequency Auto Tune Center Freq 13.015000000 GHz Start Freq 30.000000 MHz Stop Freq 26.000000000 GHz CF Step 2.597000000 GHz Auto Man Freq Offset 0 Hz</p>

11N40SISO_LCH_Graphs

<p>Pref/11N40 SISO/LCH</p>		<p>Frequency Auto Tune Center Freq 2.422000000 GHz Start Freq 2.382000000 GHz Stop Freq 2.462000000 GHz CF Step 8.000000 MHz Auto Man Freq Offset 0 Hz</p>
<p>Puw/11N40 SISO/LCH</p>		<p>Frequency Auto Tune Center Freq 13.015000000 GHz Start Freq 30.000000 MHz Stop Freq 26.000000000 GHz CF Step 2.597000000 GHz Auto Man Freq Offset 0 Hz</p>

11N40SISO_MCH_Graphs

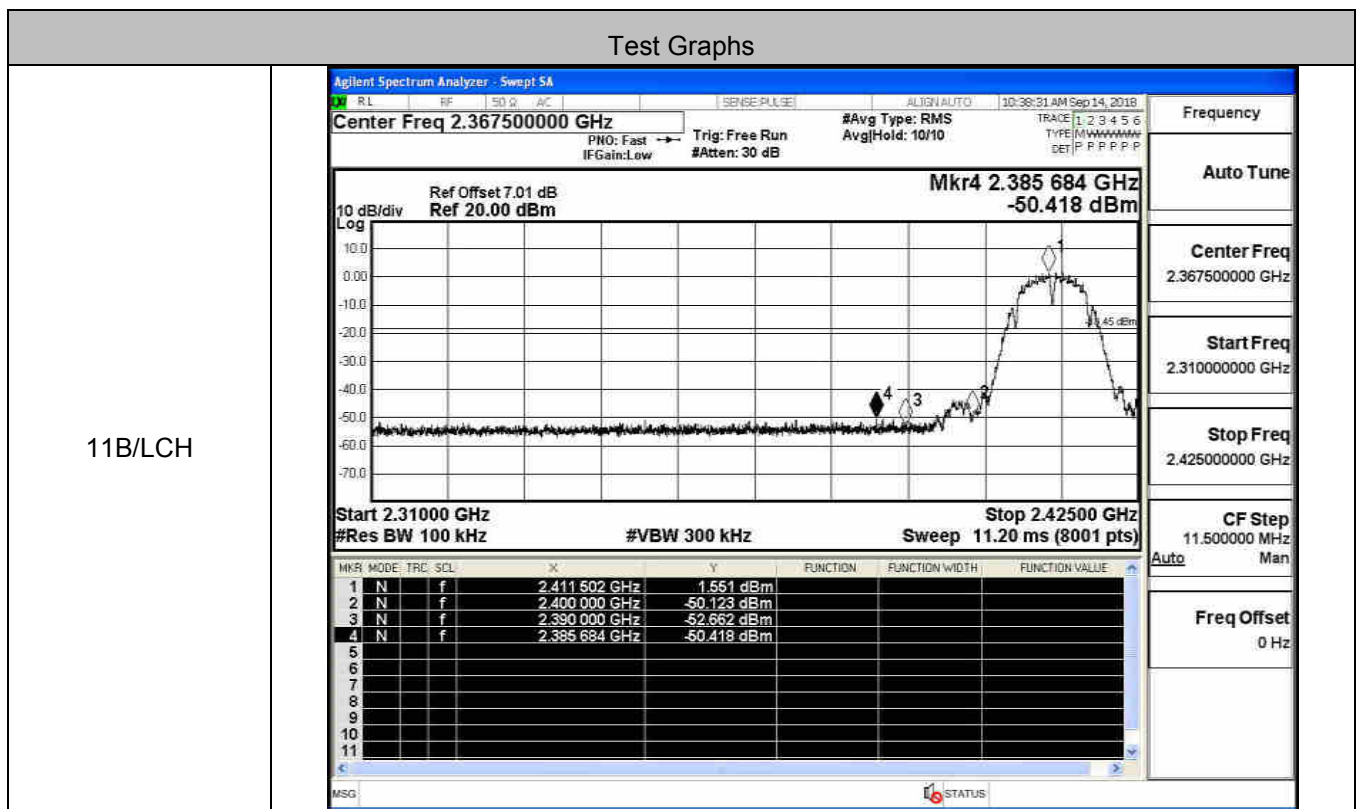
<p>Pref/11N40 SISO/MCH</p>	 <table border="1" data-bbox="1244 264 1394 949"> <tr><td>Frequency</td></tr> <tr><td>Auto Tune</td></tr> <tr><td>Center Freq 2.437000000 GHz</td></tr> <tr><td>Start Freq 2.397000000 GHz</td></tr> <tr><td>Stop Freq 2.477000000 GHz</td></tr> <tr><td>CF Step 8.000000 MHz Auto Man</td></tr> <tr><td>Freq Offset 0 Hz</td></tr> </table>	Frequency	Auto Tune	Center Freq 2.437000000 GHz	Start Freq 2.397000000 GHz	Stop Freq 2.477000000 GHz	CF Step 8.000000 MHz Auto Man	Freq Offset 0 Hz
Frequency								
Auto Tune								
Center Freq 2.437000000 GHz								
Start Freq 2.397000000 GHz								
Stop Freq 2.477000000 GHz								
CF Step 8.000000 MHz Auto Man								
Freq Offset 0 Hz								
<p>Puw/11N40 SISO/MCH</p>	 <table border="1" data-bbox="1244 1012 1394 1697"> <tr><td>Frequency</td></tr> <tr><td>Auto Tune</td></tr> <tr><td>Center Freq 13.015000000 GHz</td></tr> <tr><td>Start Freq 30.000000 MHz</td></tr> <tr><td>Stop Freq 26.000000000 GHz</td></tr> <tr><td>CF Step 2.597000000 GHz Auto Man</td></tr> <tr><td>Freq Offset 0 Hz</td></tr> </table>	Frequency	Auto Tune	Center Freq 13.015000000 GHz	Start Freq 30.000000 MHz	Stop Freq 26.000000000 GHz	CF Step 2.597000000 GHz Auto Man	Freq Offset 0 Hz
Frequency								
Auto Tune								
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Start Freq 30.000000 MHz								
Stop Freq 26.000000000 GHz								
CF Step 2.597000000 GHz Auto Man								
Freq Offset 0 Hz								

11N40SISO_HCH_Graphs

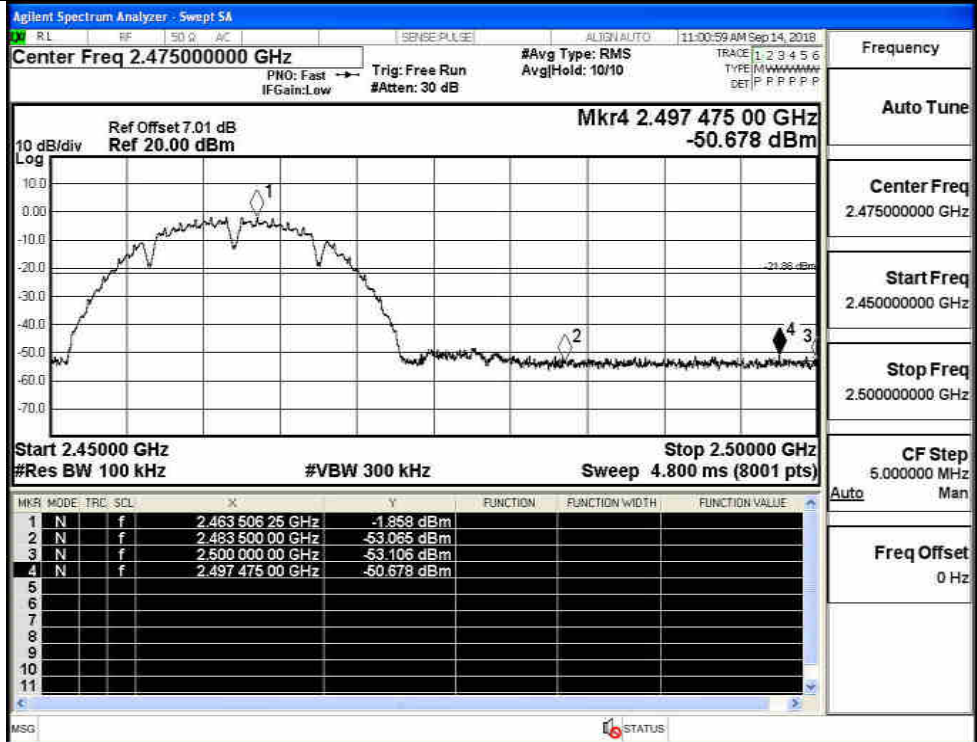
<p>Pref/11N40 SISO/HCH</p>		<p>Frequency Auto Tune Center Freq 2.452000000 GHz Start Freq 2.412000000 GHz Stop Freq 2.492000000 GHz CF Step 8.000000 MHz Auto Man Freq Offset 0 Hz</p>
<p>Puw/11N40 SISO/HCH</p>		<p>Frequency Auto Tune Center Freq 13.015000000 GHz Start Freq 30.000000 MHz Stop Freq 26.000000000 GHz CF Step 2.597000000 GHz Auto Man Freq Offset 0 Hz</p>

C.6 Band-edge for RF Conducted Emissions

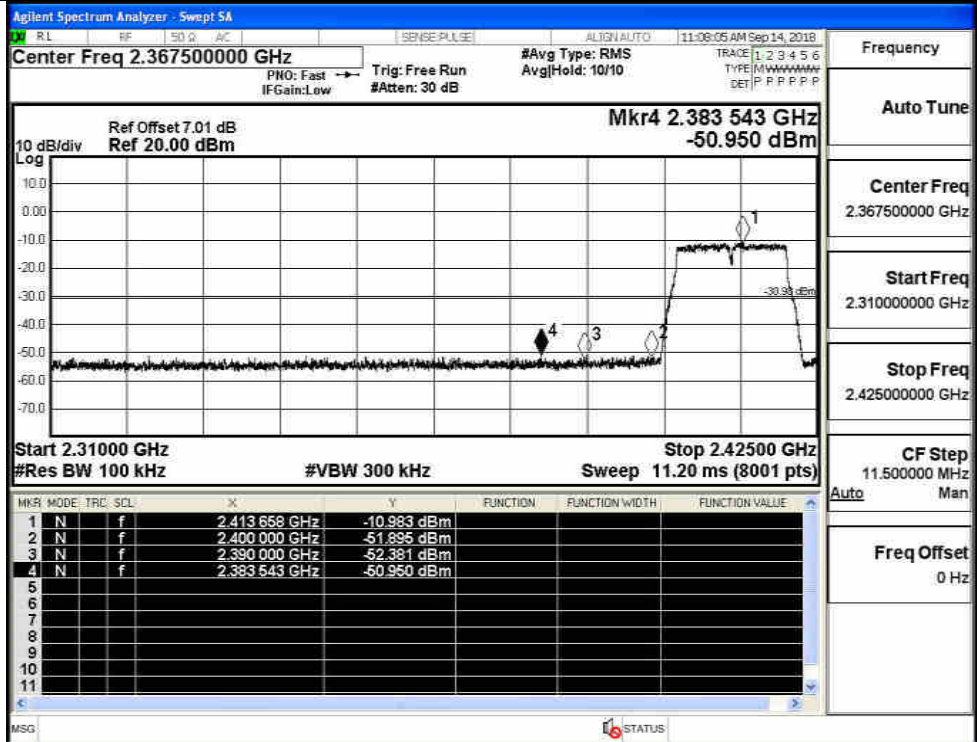
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	1.551	-50.418	-18.45	PASS
	HCH	-1.858	-50.678	-21.86	PASS
11G	LCH	-10.983	-50.950	-30.98	PASS
	HCH	-9.759	-50.267	-29.76	PASS
11N20SISO	LCH	-10.971	-50.297	-30.97	PASS
	HCH	-9.581	-50.641	-29.58	PASS
11N40SISO	LCH	-13.900	-50.766	-33.9	PASS
	HCH	-12.516	-49.435	-32.52	PASS



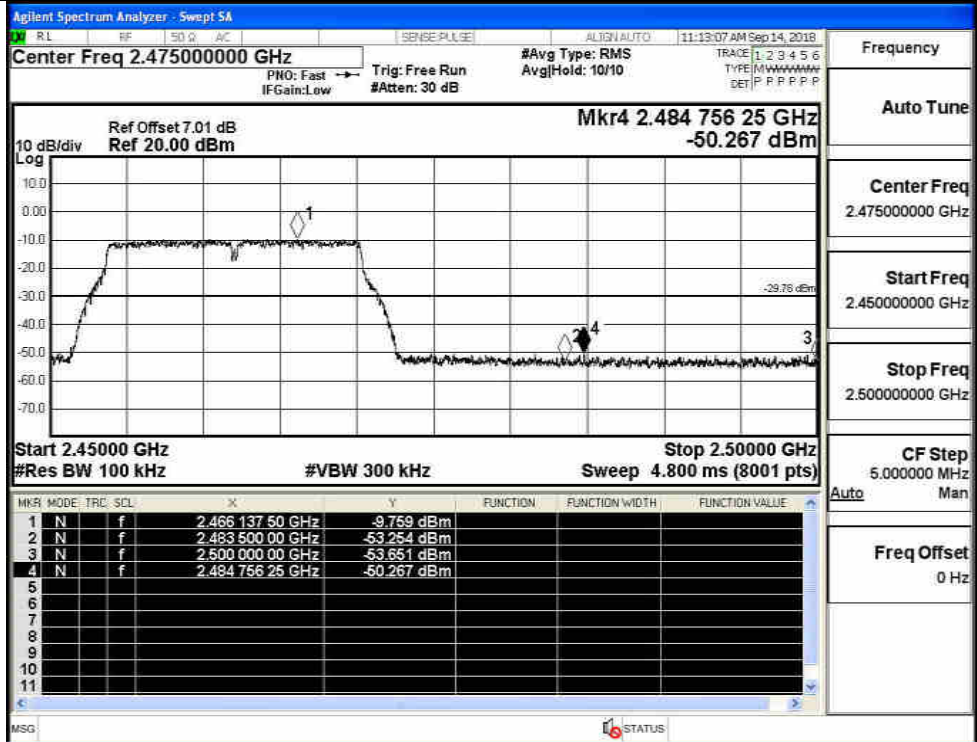
11B/HCH



11G/LCH

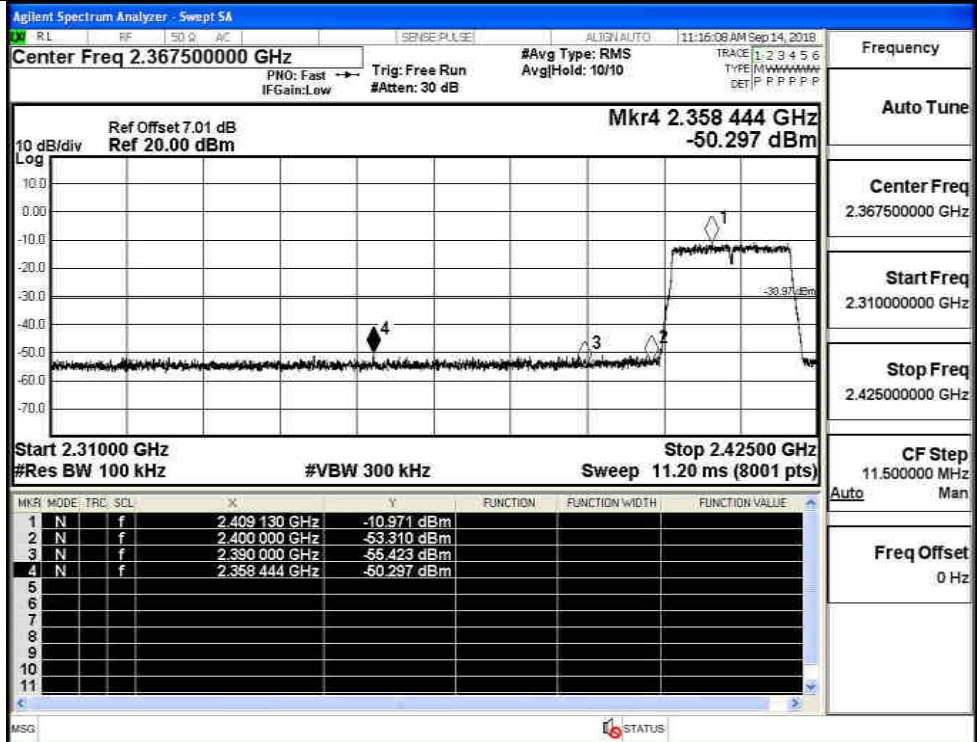


11G/HCH



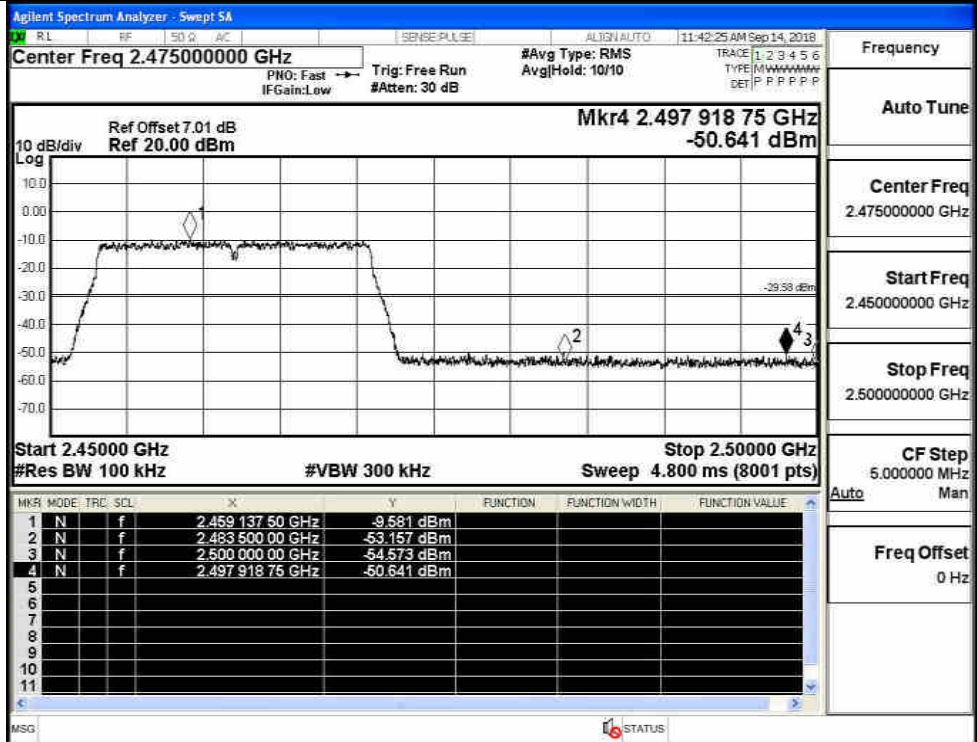
Frequency	2.475000000 GHz
Auto Tune	
Center Freq	2.475000000 GHz
Start Freq	2.450000000 GHz
Stop Freq	2.500000000 GHz
CF Step	5.000000 MHz
Auto	Man
Freq Offset	0 Hz

11N20SISO/LCH

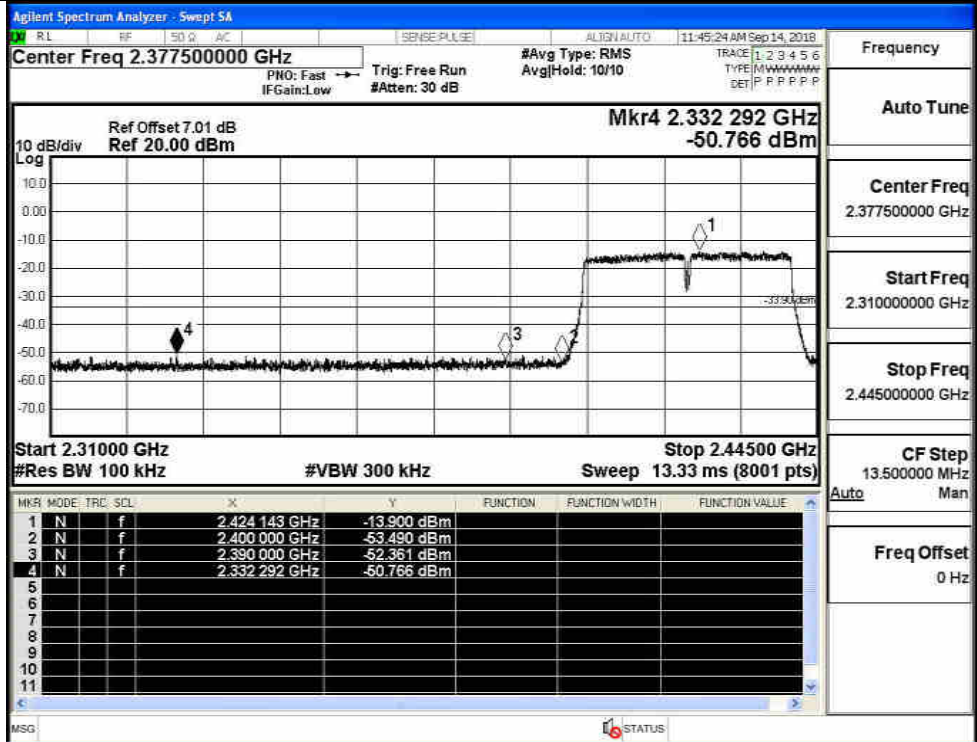


Frequency	2.367500000 GHz
Auto Tune	
Center Freq	2.367500000 GHz
Start Freq	2.310000000 GHz
Stop Freq	2.425000000 GHz
CF Step	11.500000 MHz
Auto	Man
Freq Offset	0 Hz

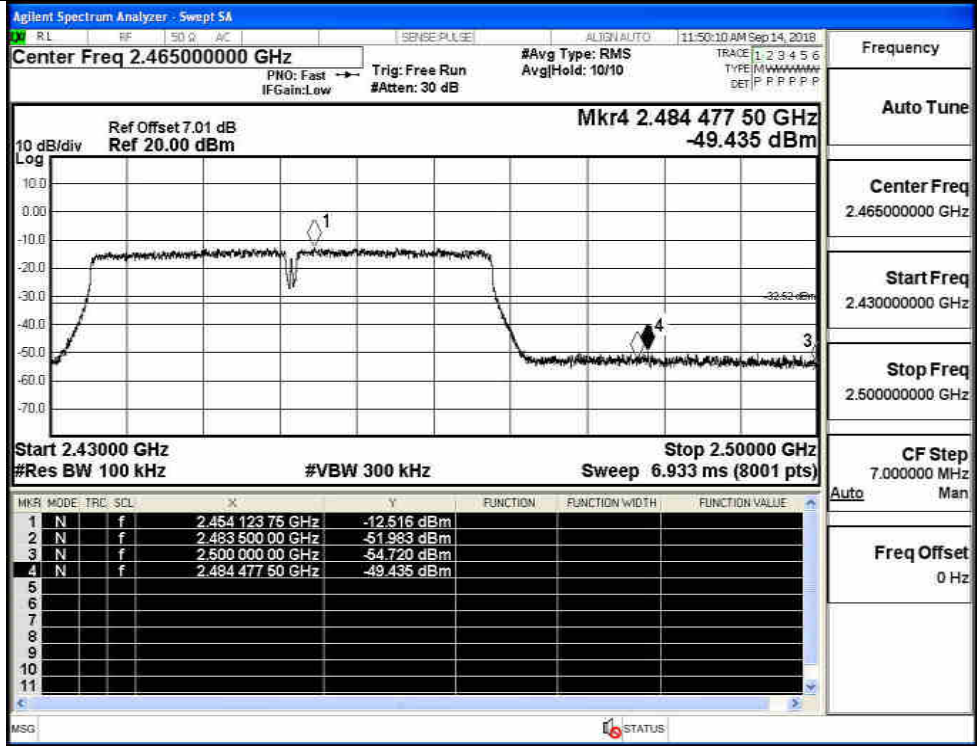
11N20SISO/HCH



11N40SISO/LCH



11N40SISO/HCH

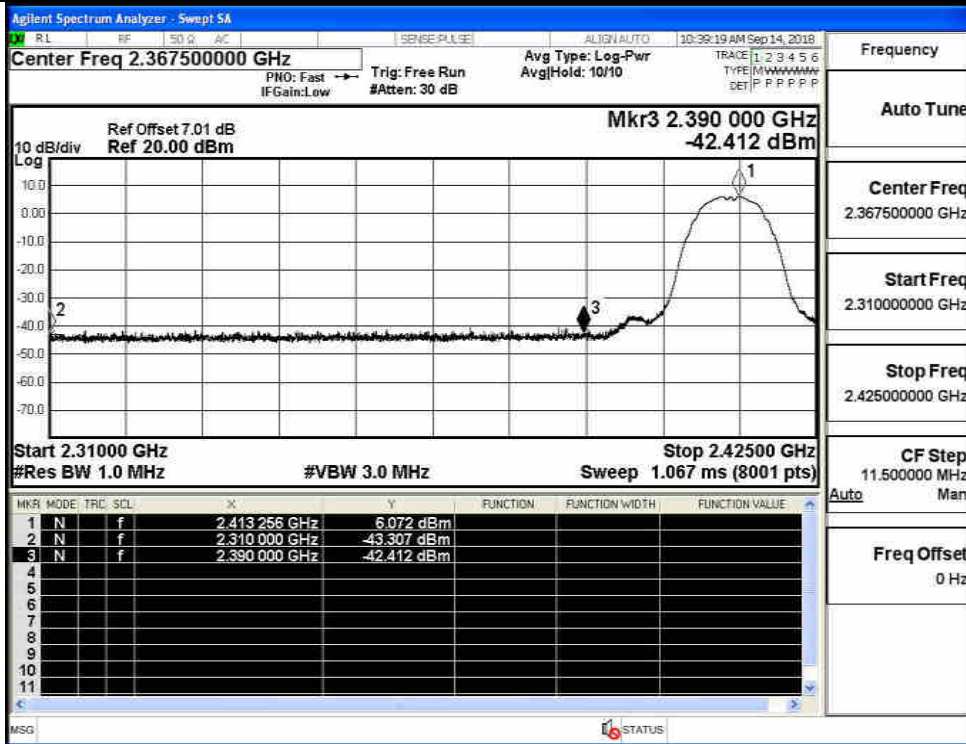


C.7 Restrict-band band-edge measurements

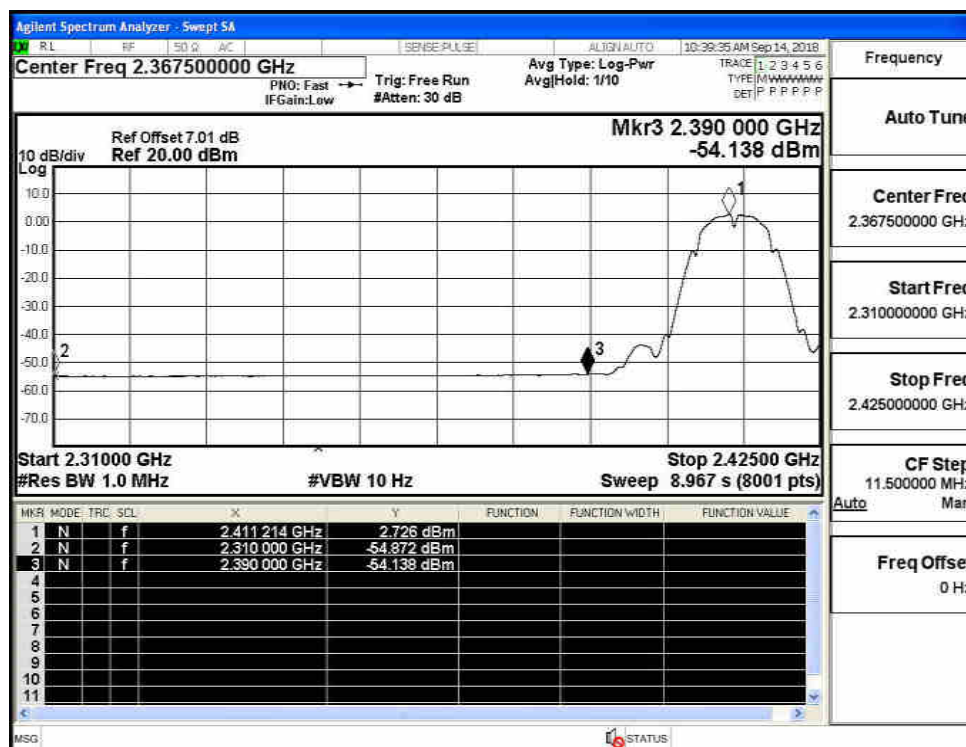
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBu V/m]	Verdict
11B	2412	Ant1	2310.0	-43.31	2.0	0	53.92	PEAK	74	PASS
	2412	Ant1	2310.0	-54.87	2.0	0	42.36	AV	54	PASS
	2412	Ant1	2390.0	-42.41	2.0	0	54.82	PEAK	74	PASS
	2412	Ant1	2390.0	-54.14	2.0	0	43.09	AV	54	PASS
	2462	Ant1	2483.5	-43.85	2.0	0	53.38	PEAK	74	PASS
	2462	Ant1	2483.5	-54.22	2.0	0	43.01	AV	54	PASS
	2462	Ant1	2500.0	-44.53	2.0	0	52.70	PEAK	74	PASS
	2462	Ant1	2500.0	-54.14	2.0	0	43.09	AV	54	PASS
11G	2412	Ant1	2310.0	-44.98	2.0	0	52.25	PEAK	74	PASS
	2412	Ant1	2310.0	-54.86	2.0	0	42.37	AV	54	PASS
	2412	Ant1	2390.0	-44.71	2.0	0	52.52	PEAK	74	PASS
	2412	Ant1	2390.0	-54.29	2.0	0	42.94	AV	54	PASS
	2462	Ant1	2483.5	-43.00	2.0	0	54.23	PEAK	74	PASS
	2462	Ant1	2483.5	-53.76	2.0	0	43.47	AV	54	PASS
	2462	Ant1	2500.0	-42.76	2.0	0	54.47	PEAK	74	PASS
	2462	Ant1	2500.0	-53.87	2.0	0	43.36	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-44.72	2.0	0	52.51	PEAK	74	PASS
	2412	Ant1	2310.0	-54.85	2.0	0	42.38	AV	54	PASS
	2412	Ant1	2390.0	-43.68	2.0	0	53.55	PEAK	74	PASS
	2412	Ant1	2390.0	-54.28	2.0	0	42.95	AV	54	PASS
	2462	Ant1	2483.5	-43.03	2.0	0	54.20	PEAK	74	PASS
	2462	Ant1	2483.5	-53.67	2.0	0	43.56	AV	54	PASS
	2462	Ant1	2500.0	-44.24	2.0	0	52.99	PEAK	74	PASS
	2462	Ant1	2500.0	-53.89	2.0	0	43.34	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-45.27	2.0	0	51.96	PEAK	74	PASS
	2422	Ant1	2310.0	-54.88	2.0	0	42.35	AV	54	PASS

	2422	Ant1	2390.0	-43.42	2.0	0	53.81	PEAK	74	PASS
	2422	Ant1	2390.0	-54.15	2.0	0	43.08	AV	54	PASS
	2452	Ant1	2483.5	-42.01	2.0	0	55.22	PEAK	74	PASS
	2452	Ant1	2483.5	-52.87	2.0	0	44.36	AV	54	PASS
	2452	Ant1	2500.0	-42.78	2.0	0	54.45	PEAK	74	PASS
	2452	Ant1	2500.0	-53.83	2.0	0	43.40	AV	54	PASS

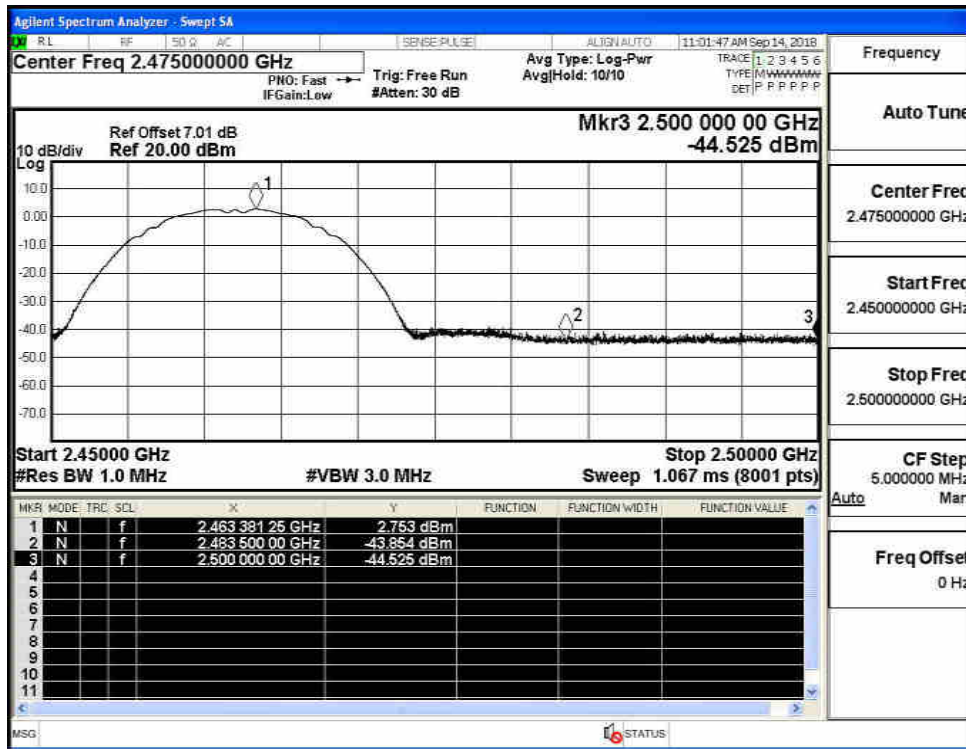
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



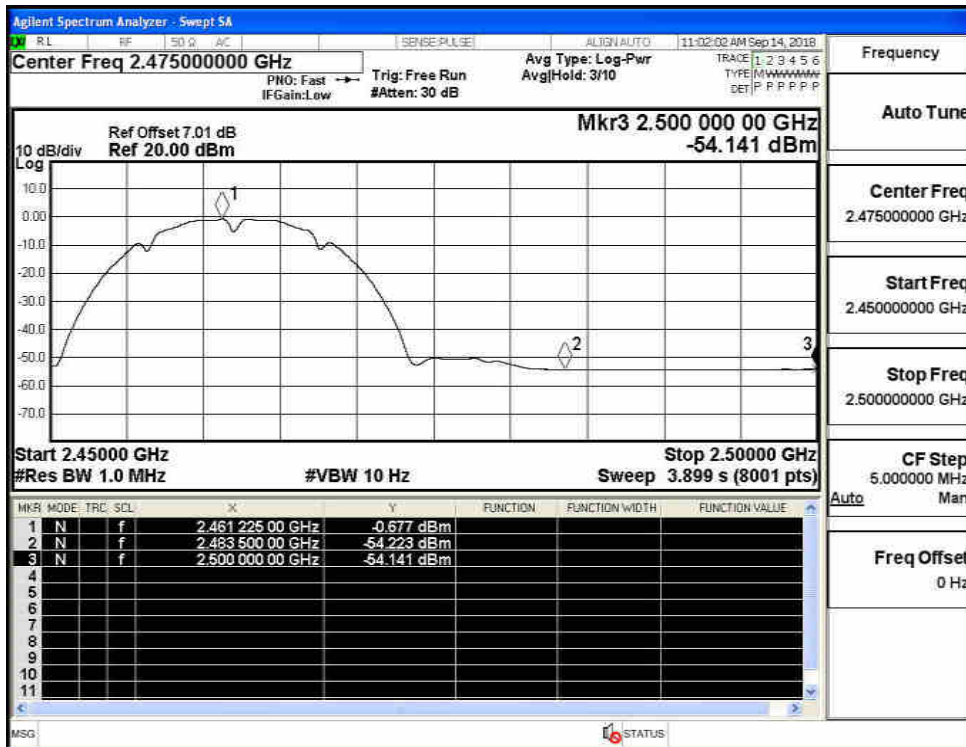
Restrict-band band-edge measurements_11B_2412_Ant1_AV



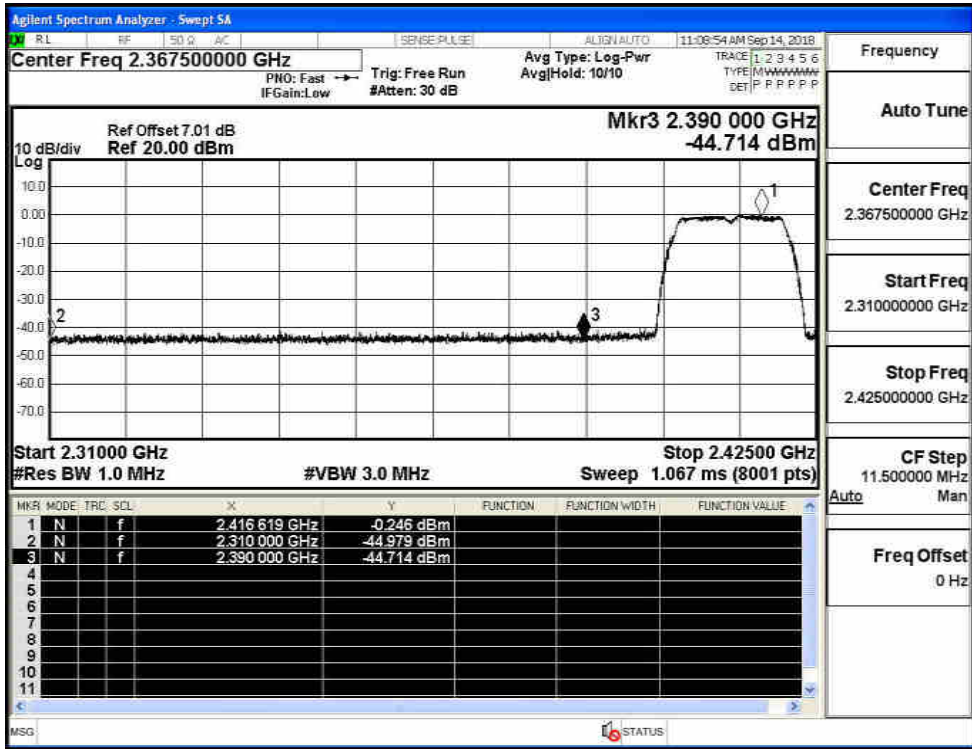
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



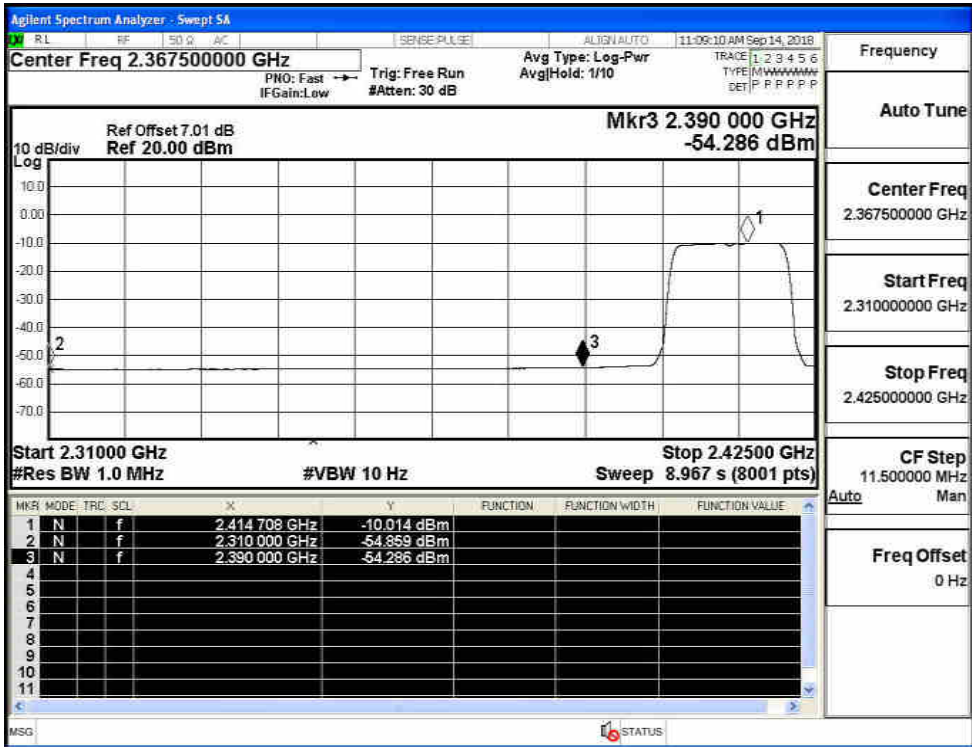
Restrict-band band-edge measurements_11B_2462_Ant1_AV



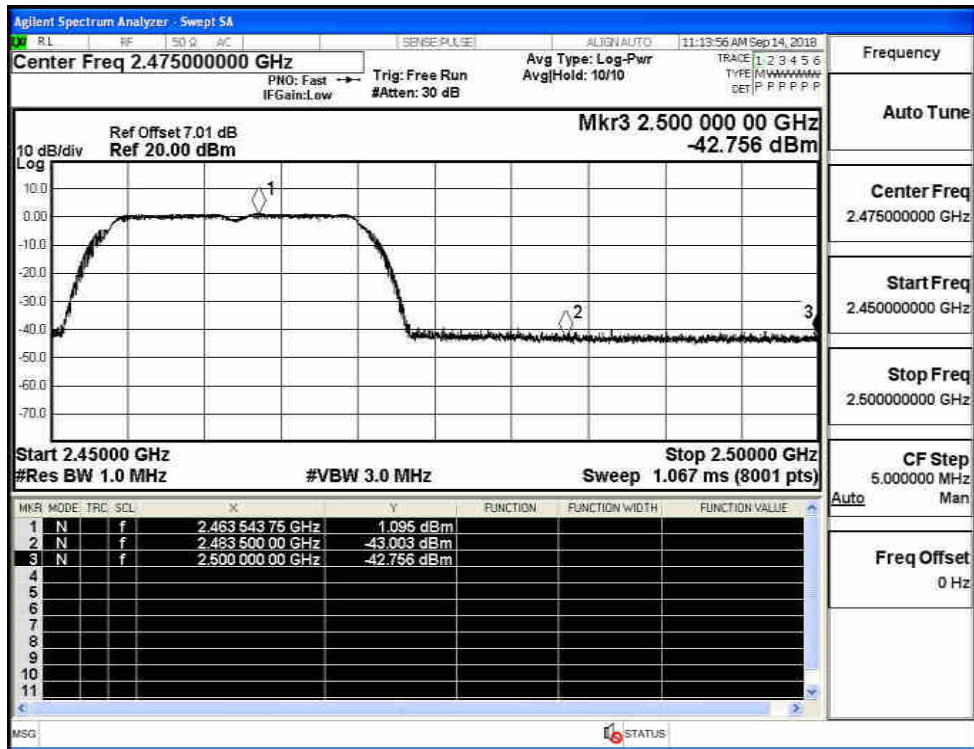
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



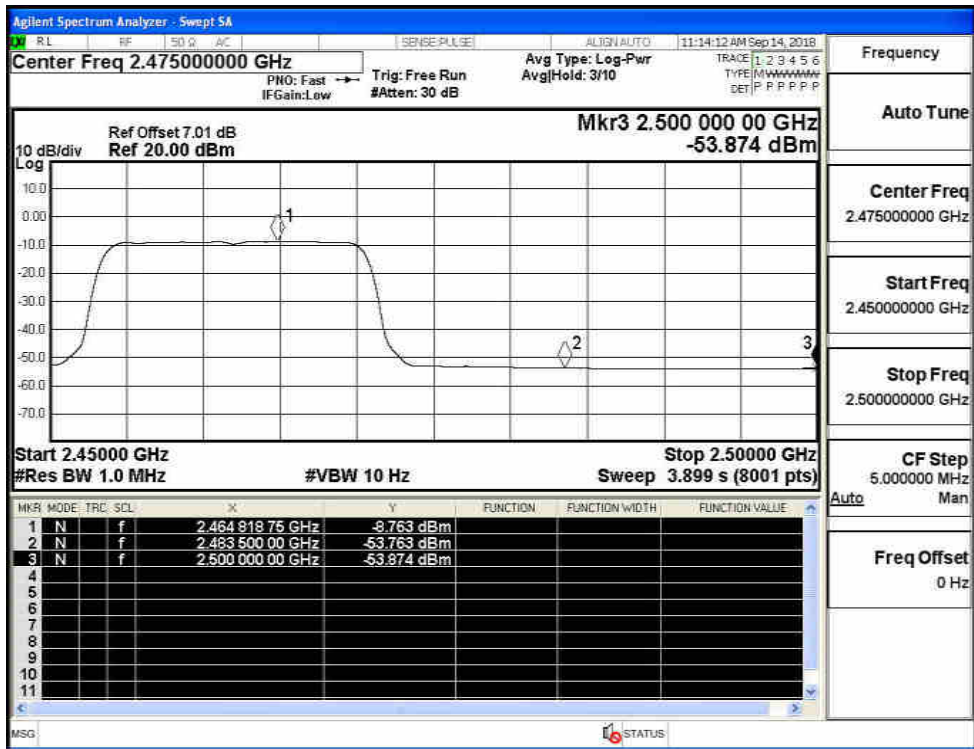
Restrict-band band-edge measurements_11G_2412_Ant1_AV



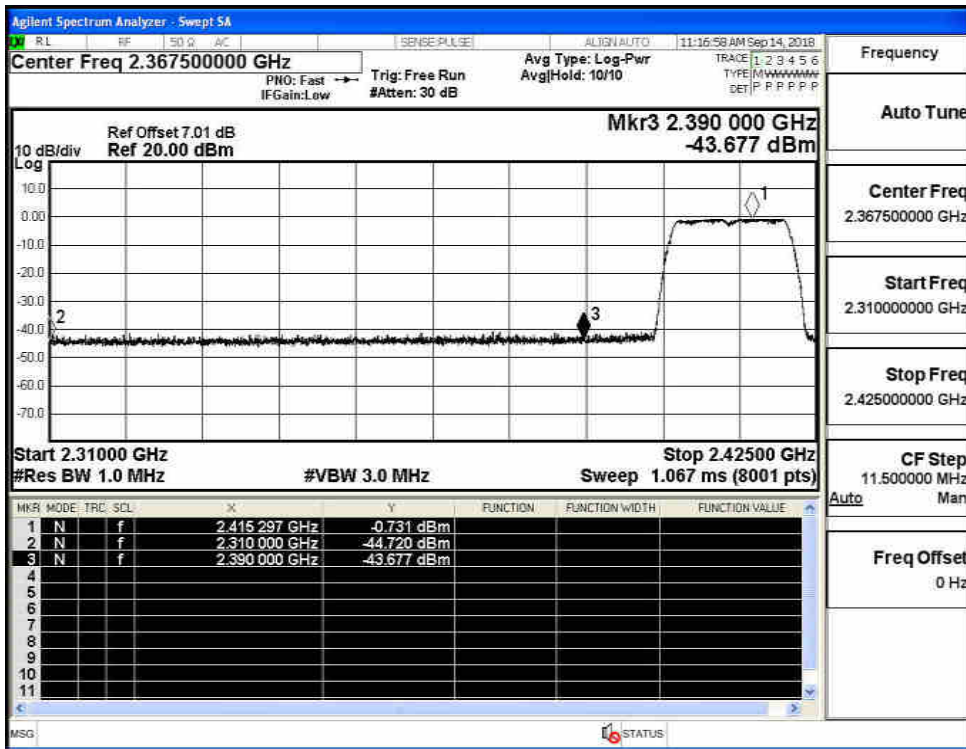
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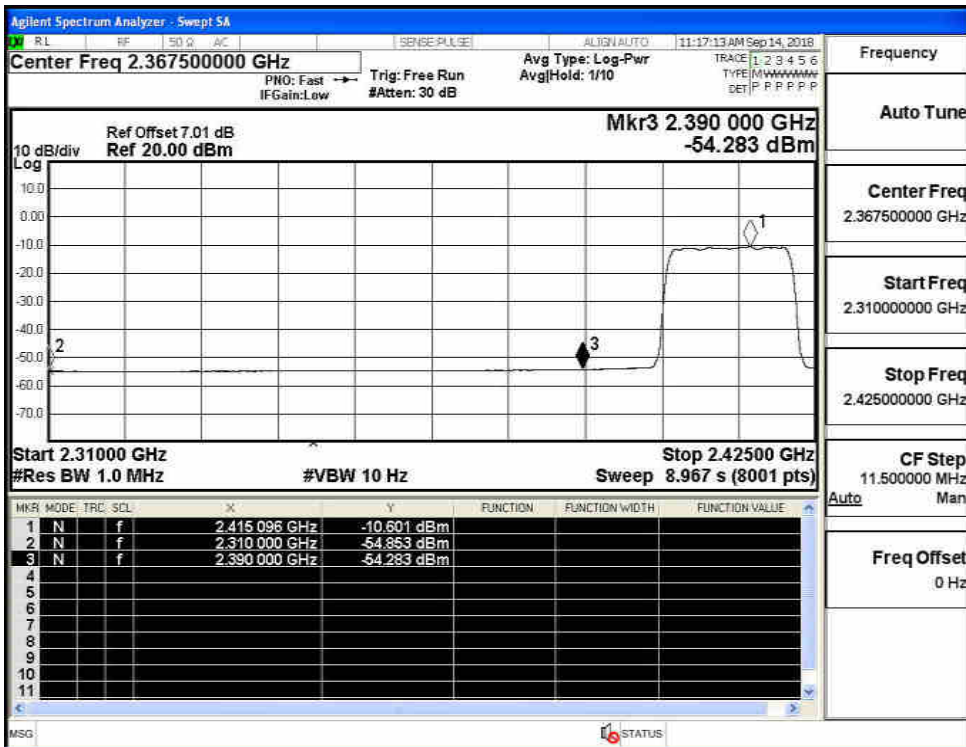
Restrict-band band-edge measurements_11G_2462_Ant1_AV



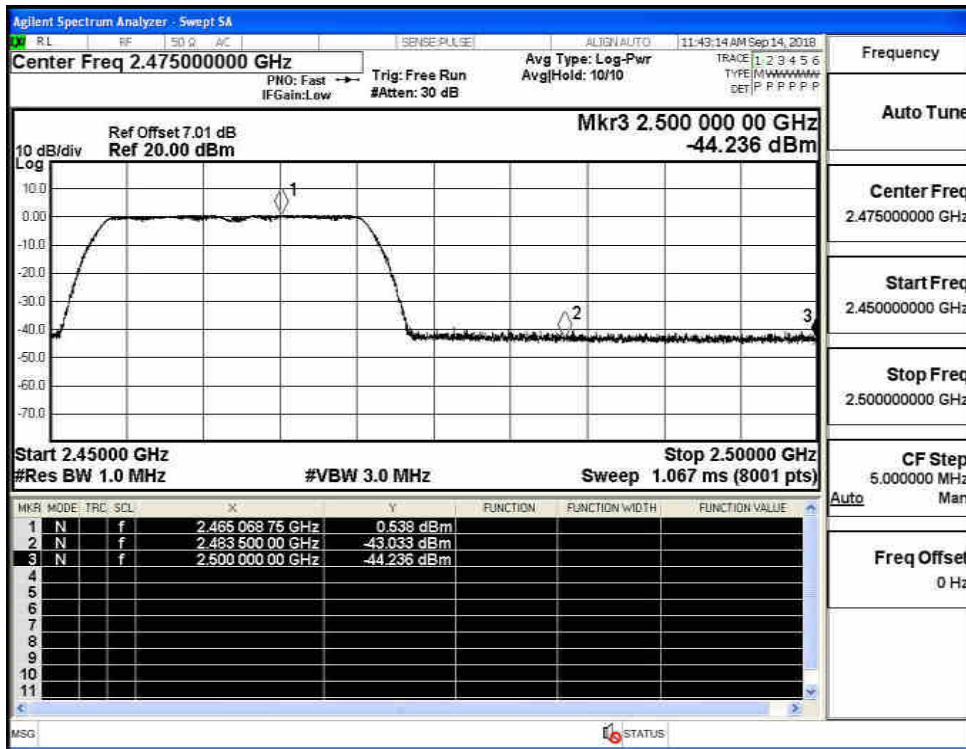
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



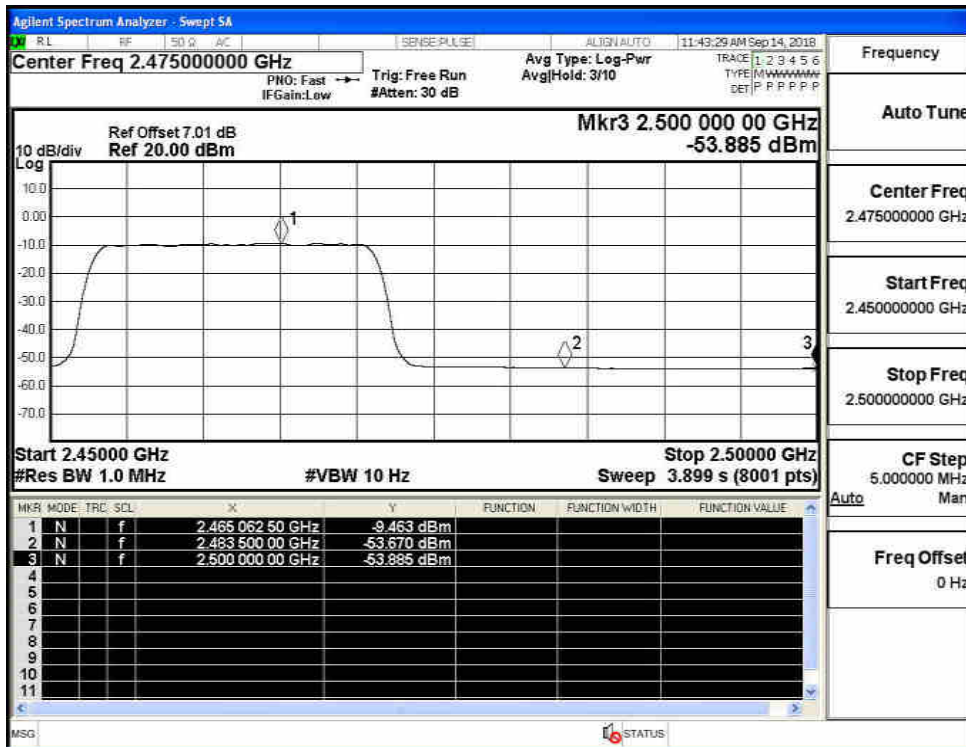
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_AV



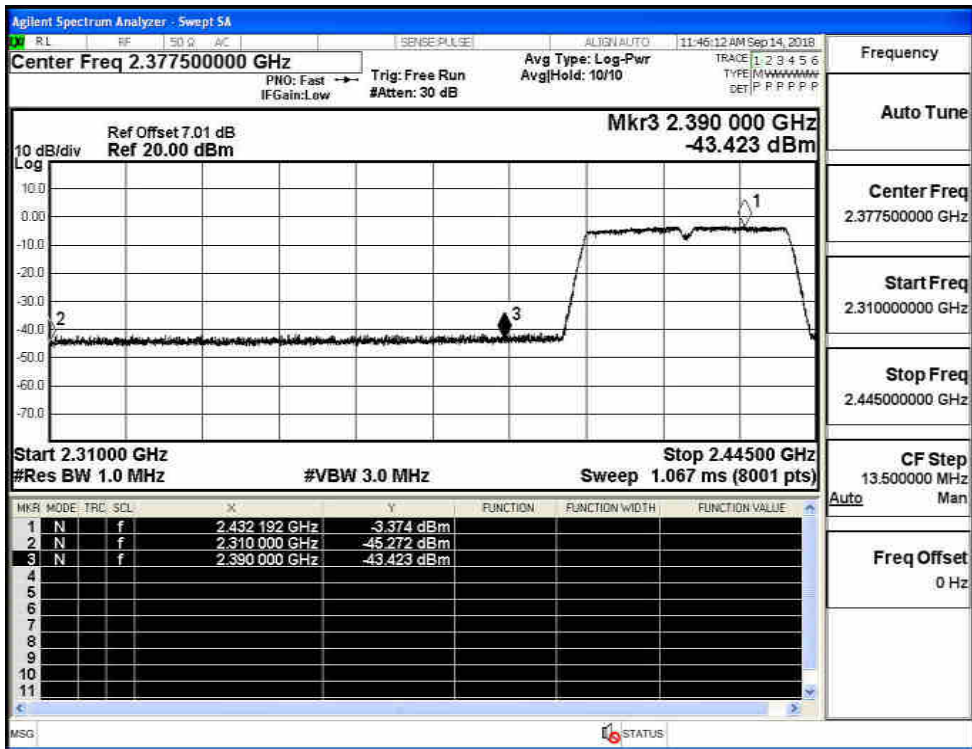
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_PEAK



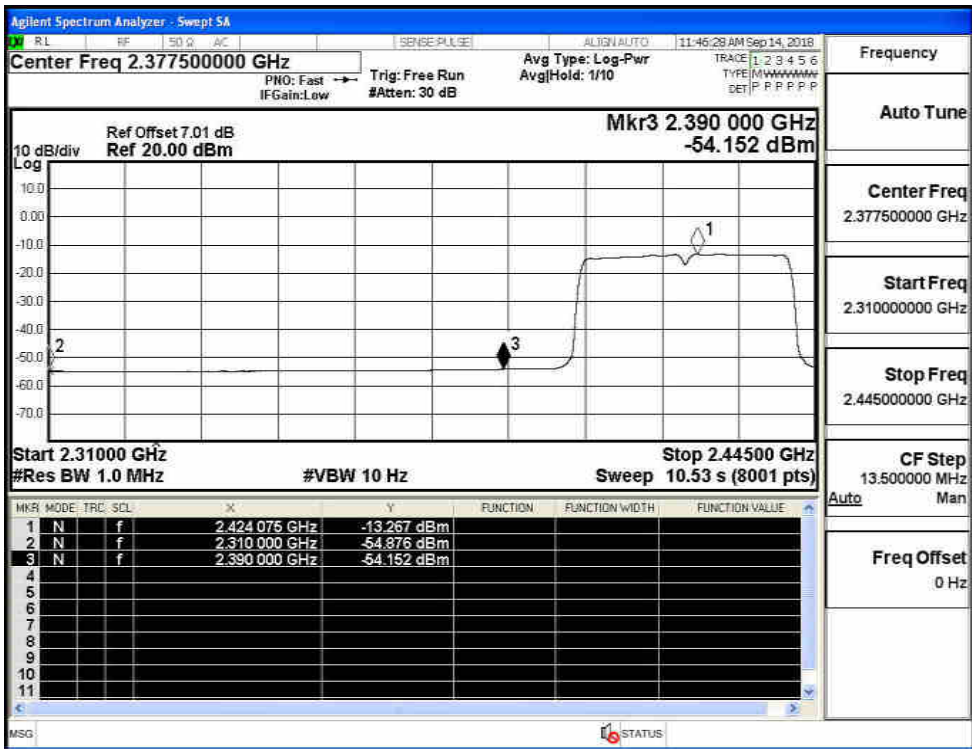
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_AV



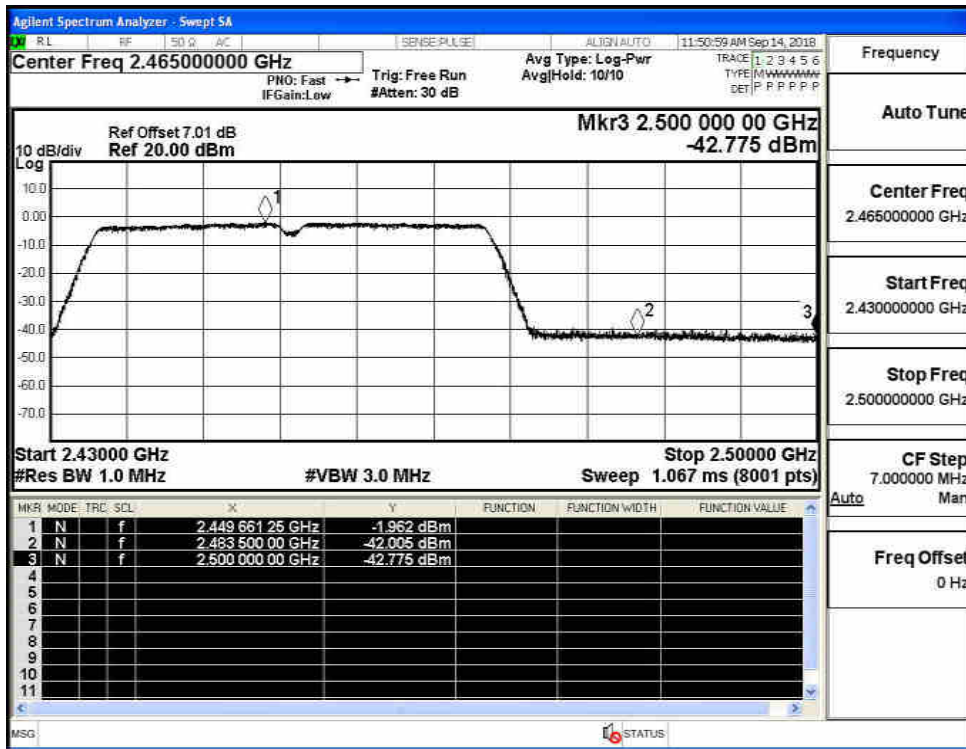
Restrict-band band-edge measurements_11N40SISO_2422_Ant1_PEAK



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

