

## Appendix C

### RF Test Data for 2.4G WIFI (Conducted Measurement)

**Product Name: Portable Internet Radio**

**Trade Mark: N/A**

**Test Model: MA-26D**

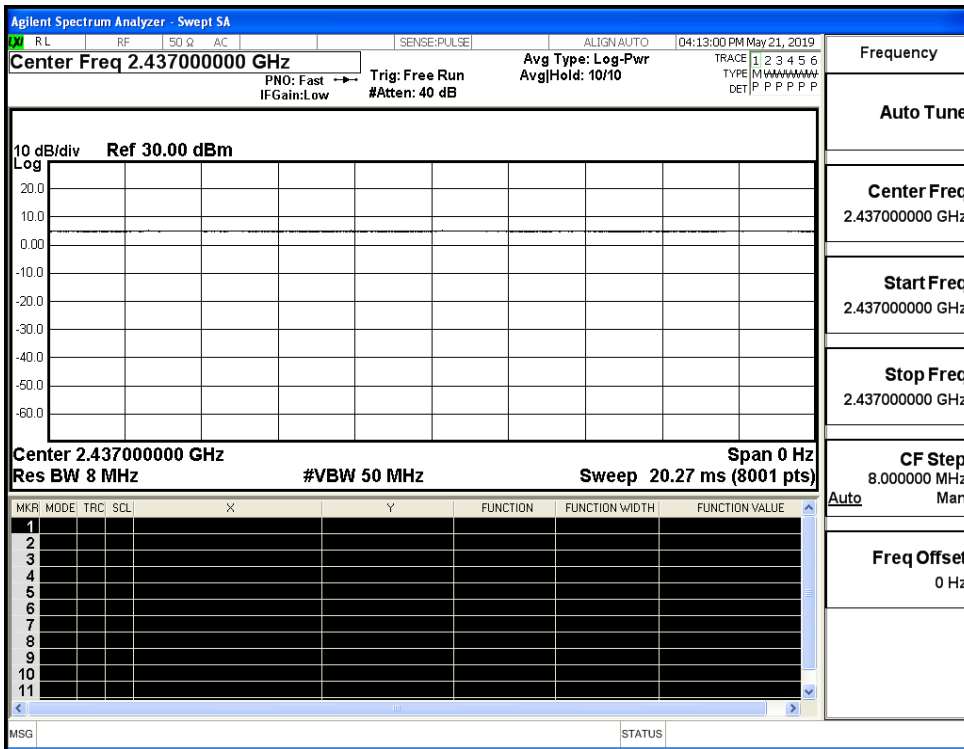
#### Environmental Conditions

Temperature:	23.9 ° C
Relative Humidity:	54.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Tom.Liu
Supervised by:	Aking Jin

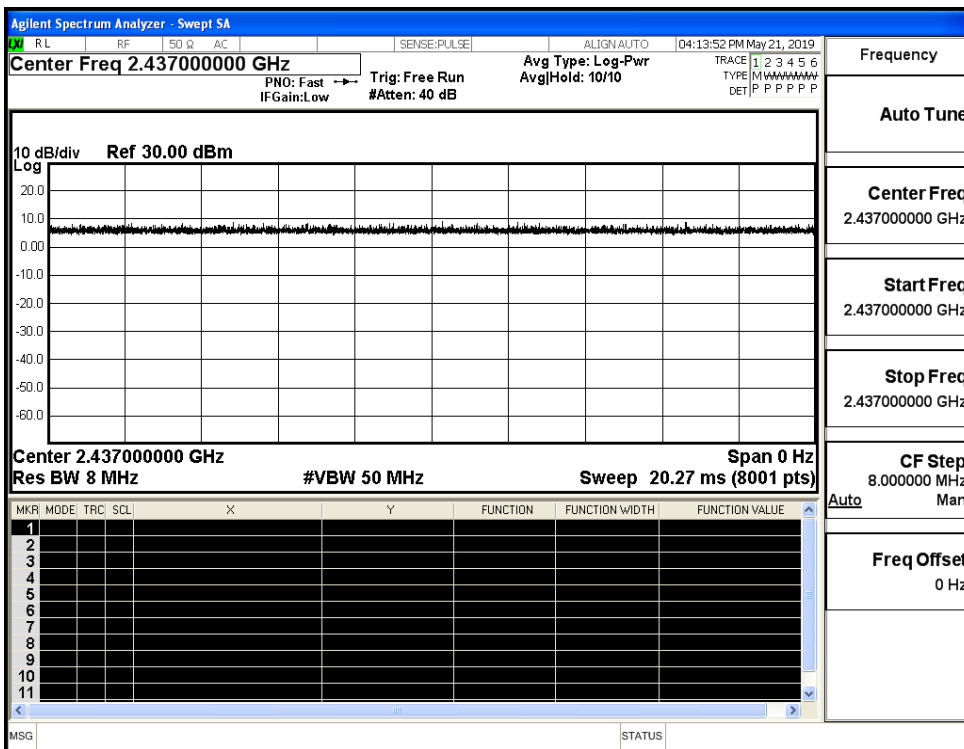
#### C.1 Duty Cycle

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

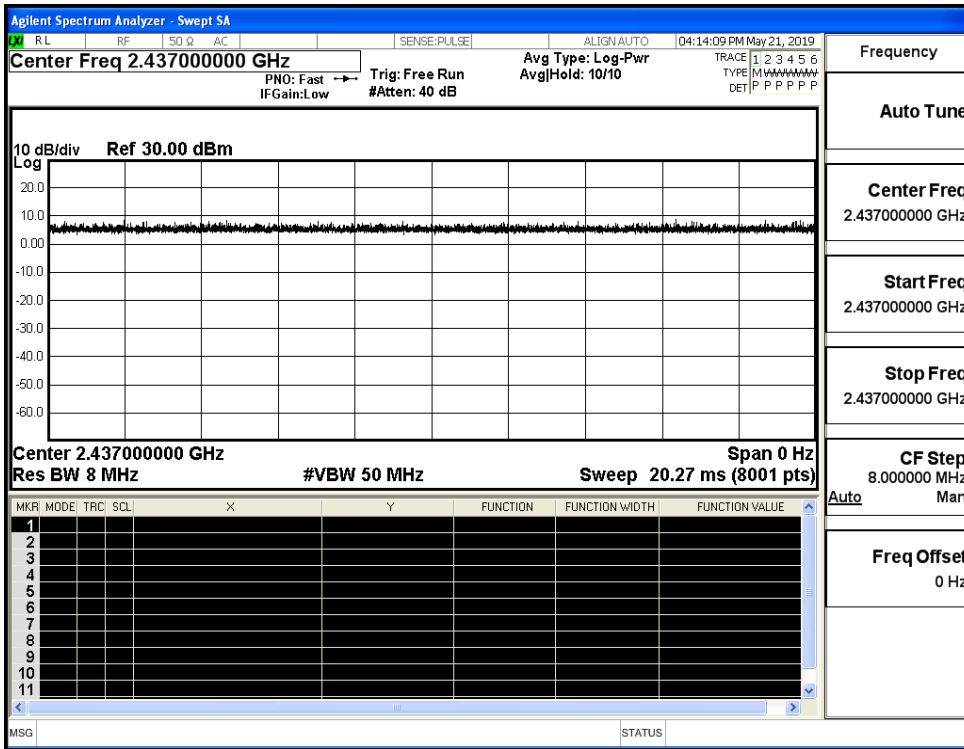
Duty Cycle\_11B\_2437\_Ant1



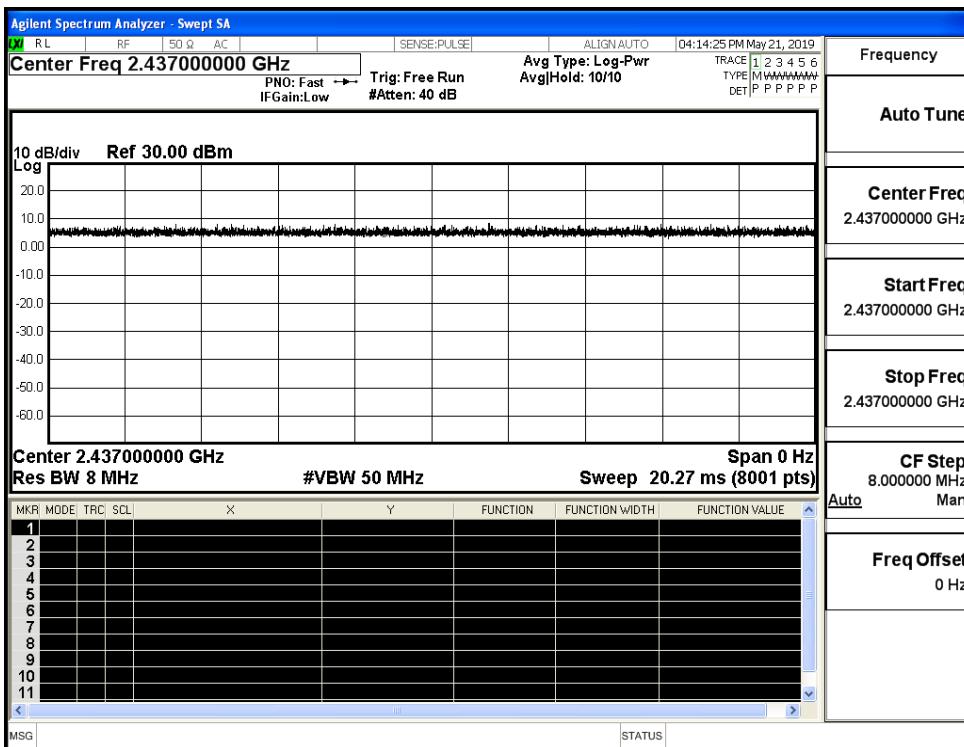
Duty Cycle\_11G\_2437\_Ant1



Duty Cycle\_11N20SISO\_2437\_Ant1



Duty Cycle\_11N40SISO\_2437\_Ant1

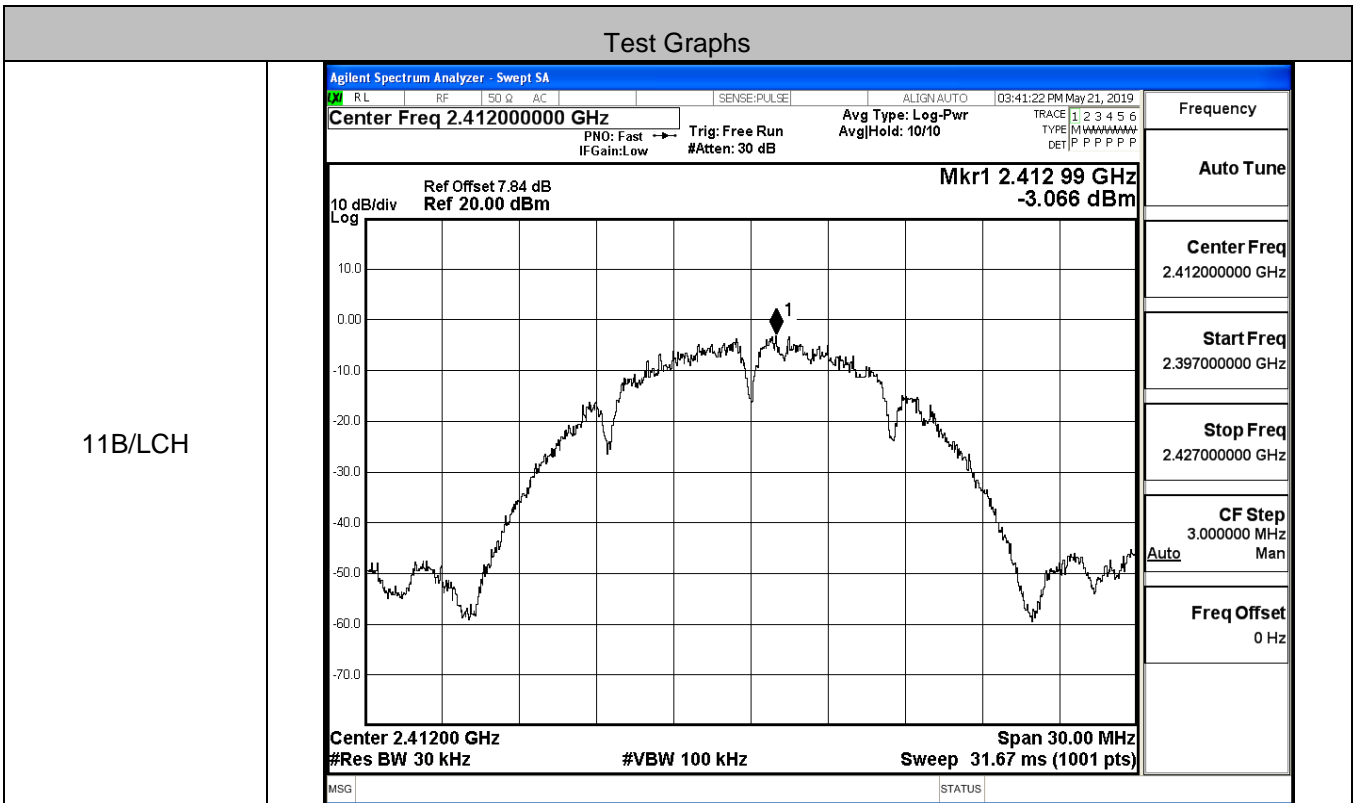


### C.2 Maximum Conducted Output Power

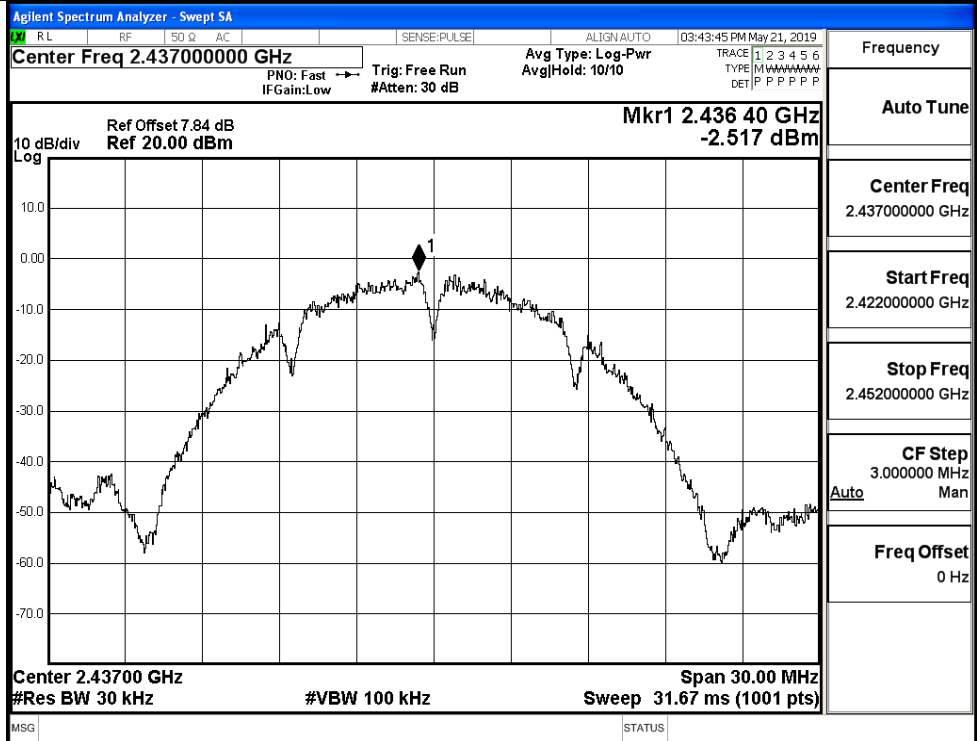
Mode	Channel	Peak Meas.Level [dBm]	Average Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	11.45	8.57	30	PASS
	MCH	11.10	8.32	30	PASS
	HCH	10.78	8.11	30	PASS
11G	LCH	10.68	8.13	30	PASS
	MCH	11.20	8.24	30	PASS
	HCH	11.15	8.15	30	PASS
11N20SIS O	LCH	10.75	6.48	30	PASS
	MCH	11.22	6.75	30	PASS
	HCH	10.87	6.53	30	PASS
11N40SIS O	LCH	9.87	5.21	30	PASS
	MCH	11.08	6.29	30	PASS
	HCH	11.05	6.31	30	PASS

### C.3 Maximum Power Spectral Density

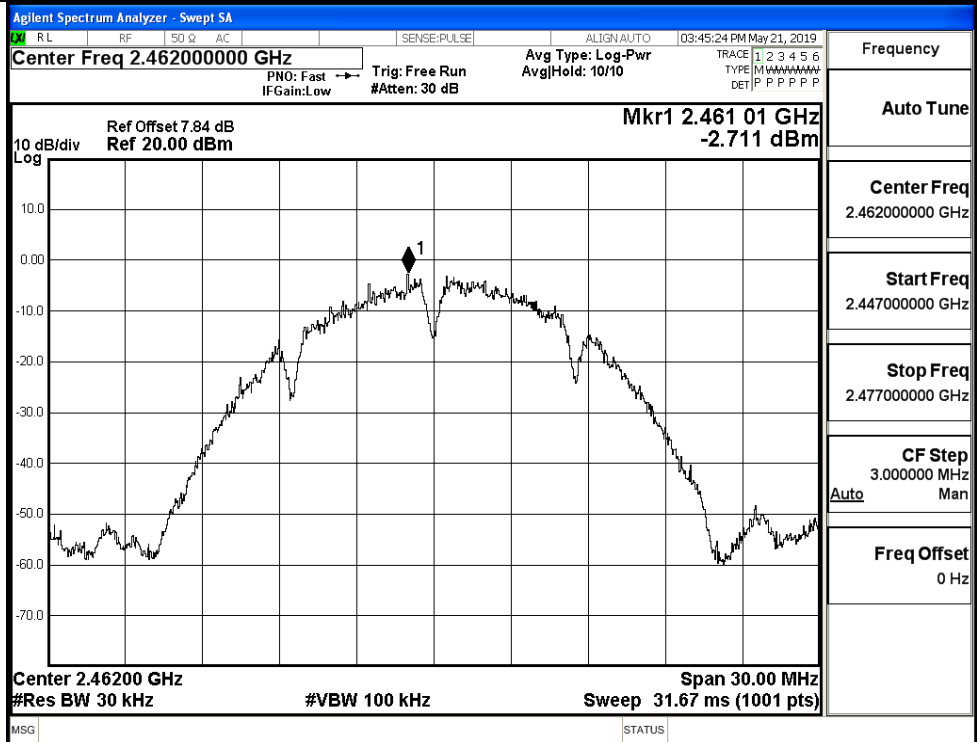
Mode	Channel	Meas.Level [dBm/30KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-3.066	8	PASS
	MCH	-2.517	8	PASS
	HCH	-2.711	8	PASS
11G	LCH	-5.525	8	PASS
	MCH	-5.956	8	PASS
	HCH	-5.361	8	PASS
11N20SISO	LCH	-6.647	8	PASS
	MCH	-5.804	8	PASS
	HCH	-6.087	8	PASS
11N40SISO	LCH	-6.519	8	PASS
	MCH	-7.610	8	PASS
	HCH	-7.922	8	PASS



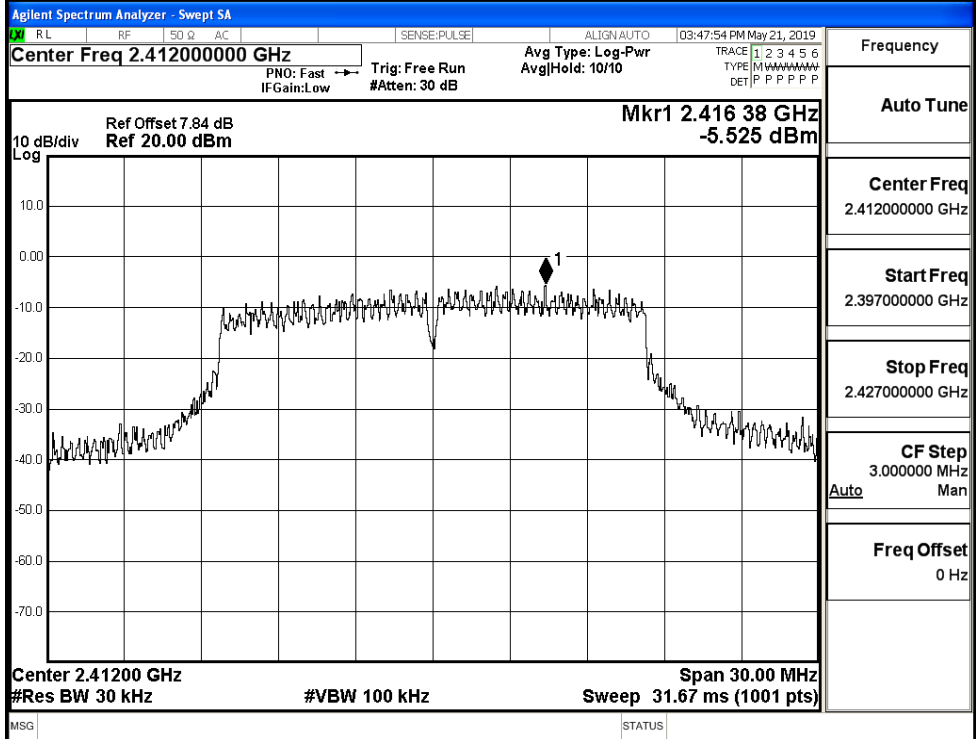
11B/MCH



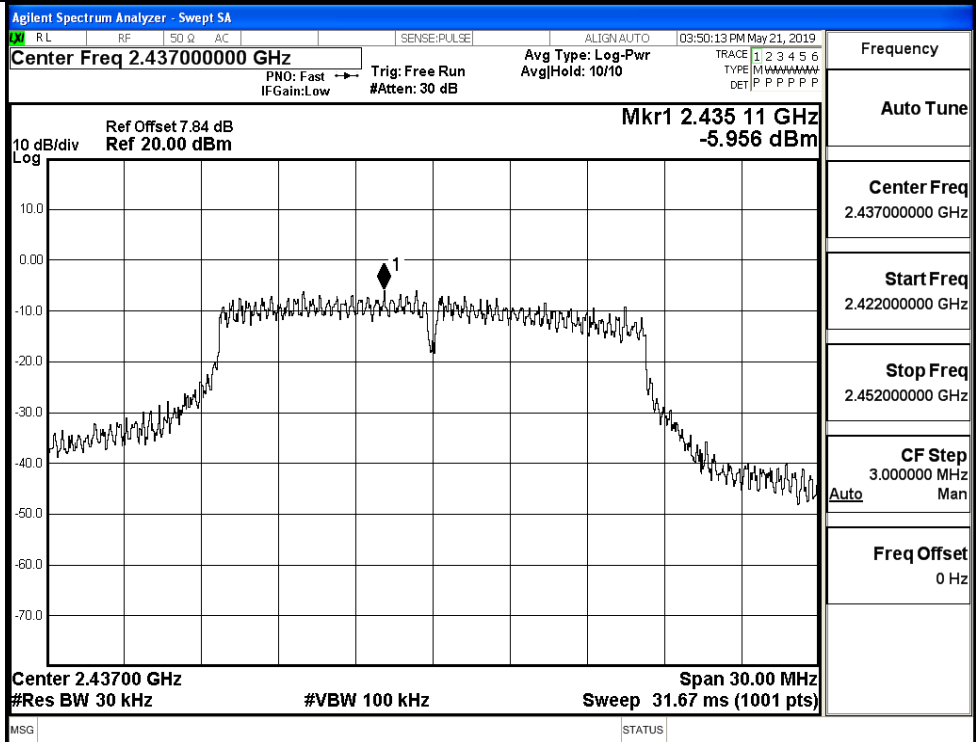
11B/HCH



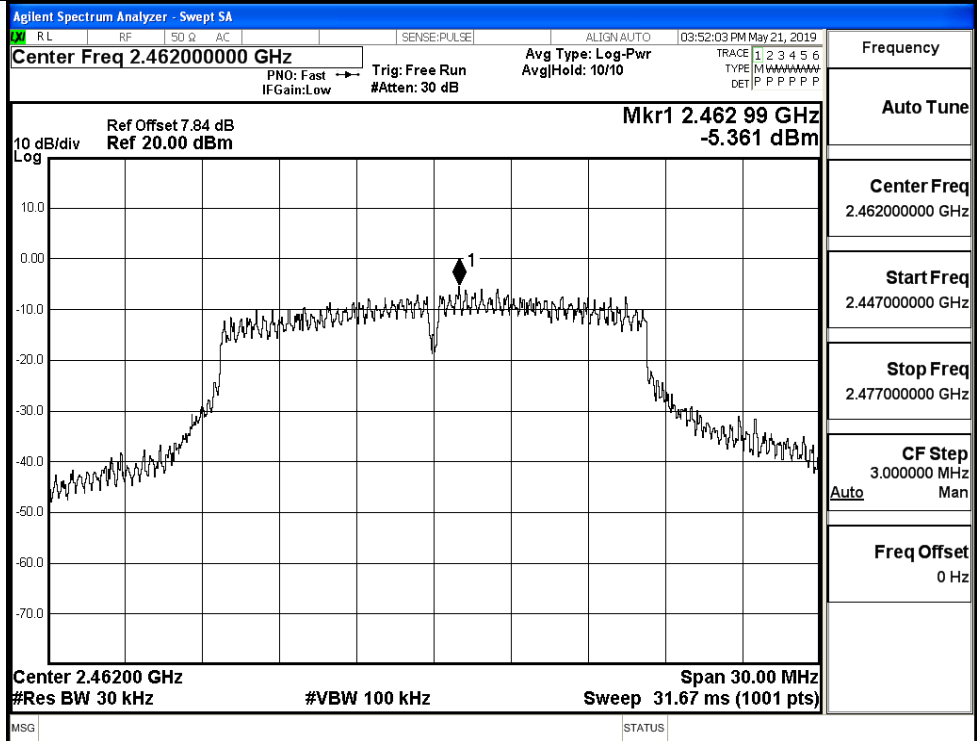
11G/LCH



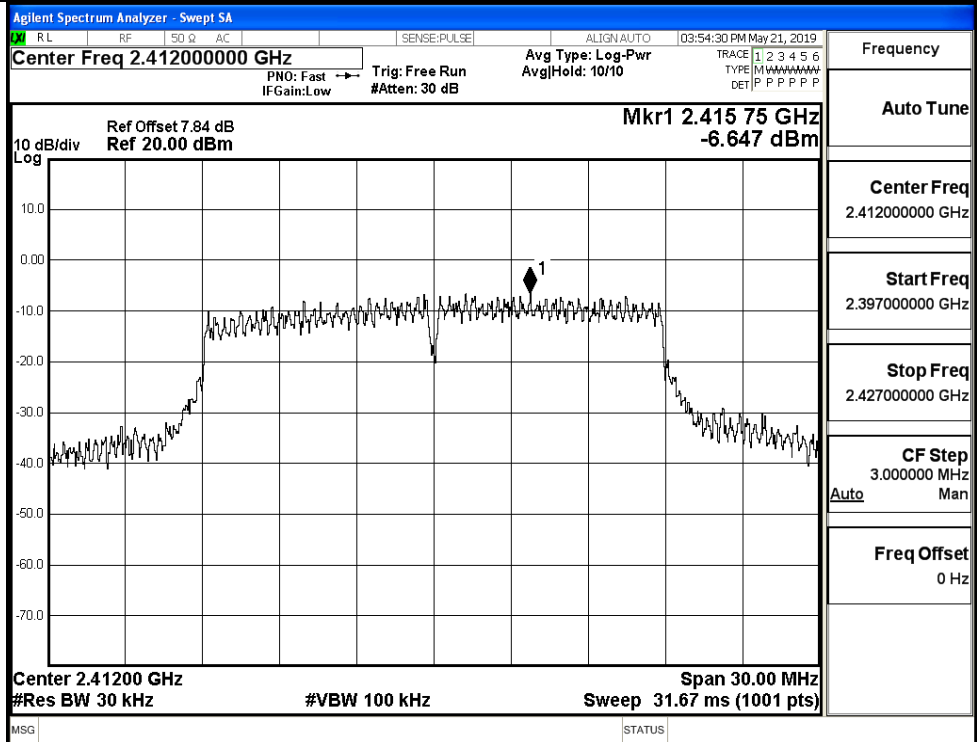
11G/MCH



11G/HCH

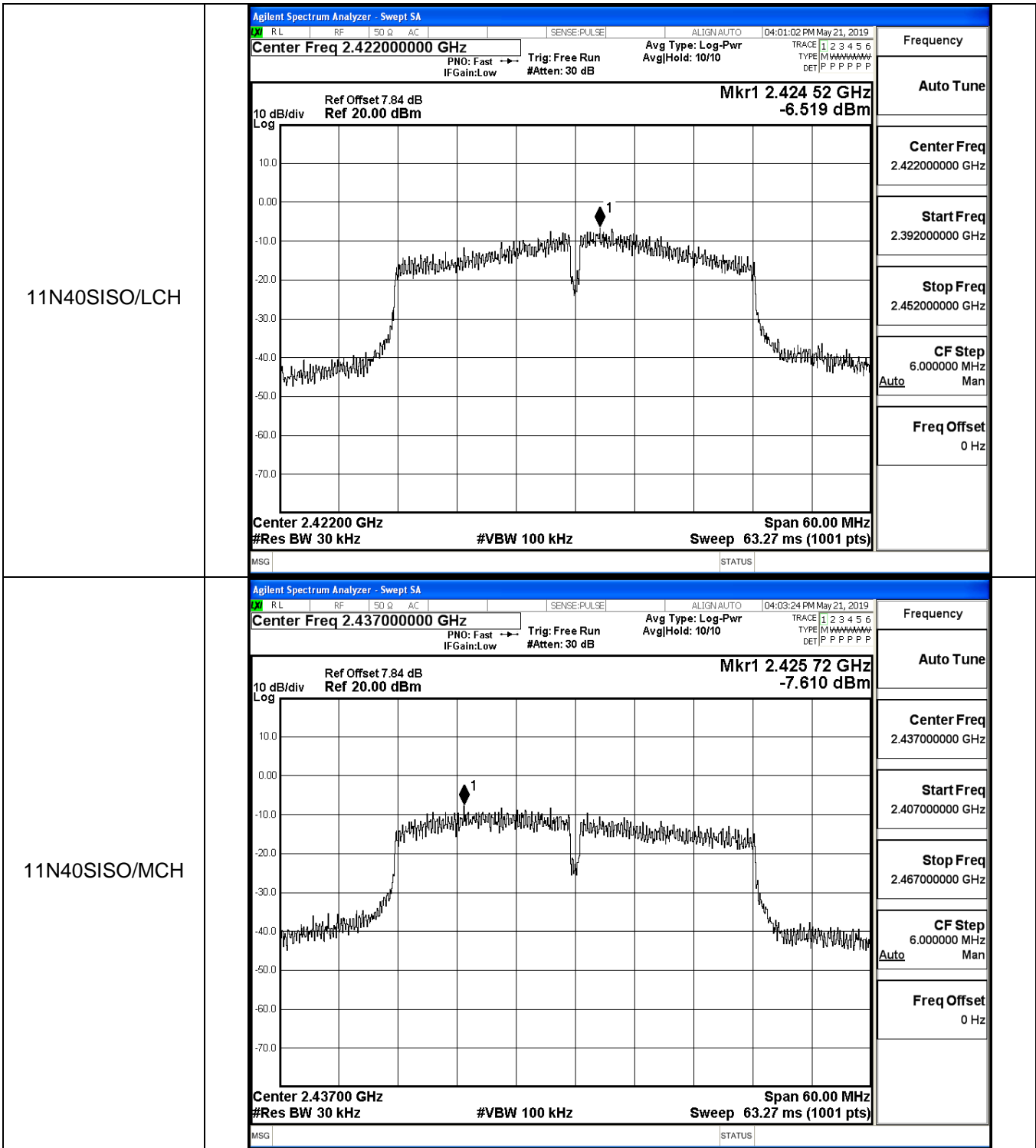


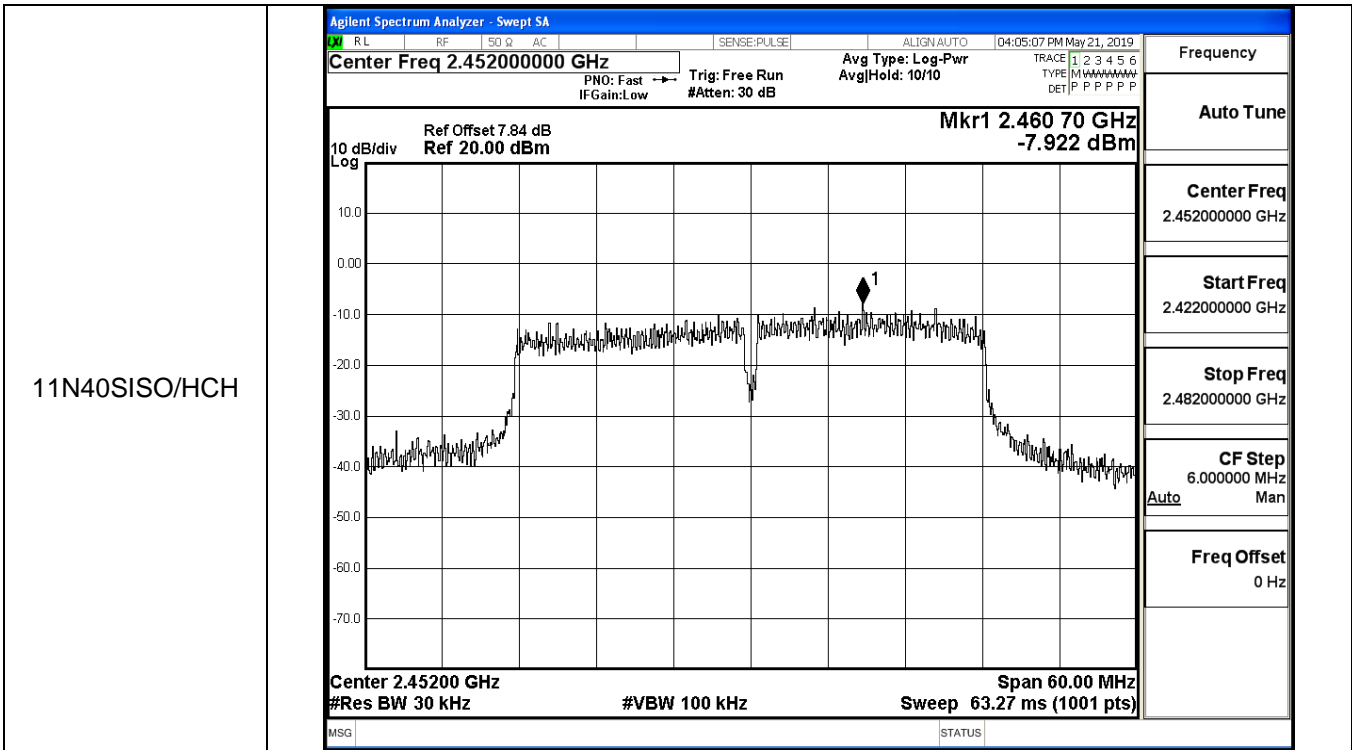
11N20SISO/LCH





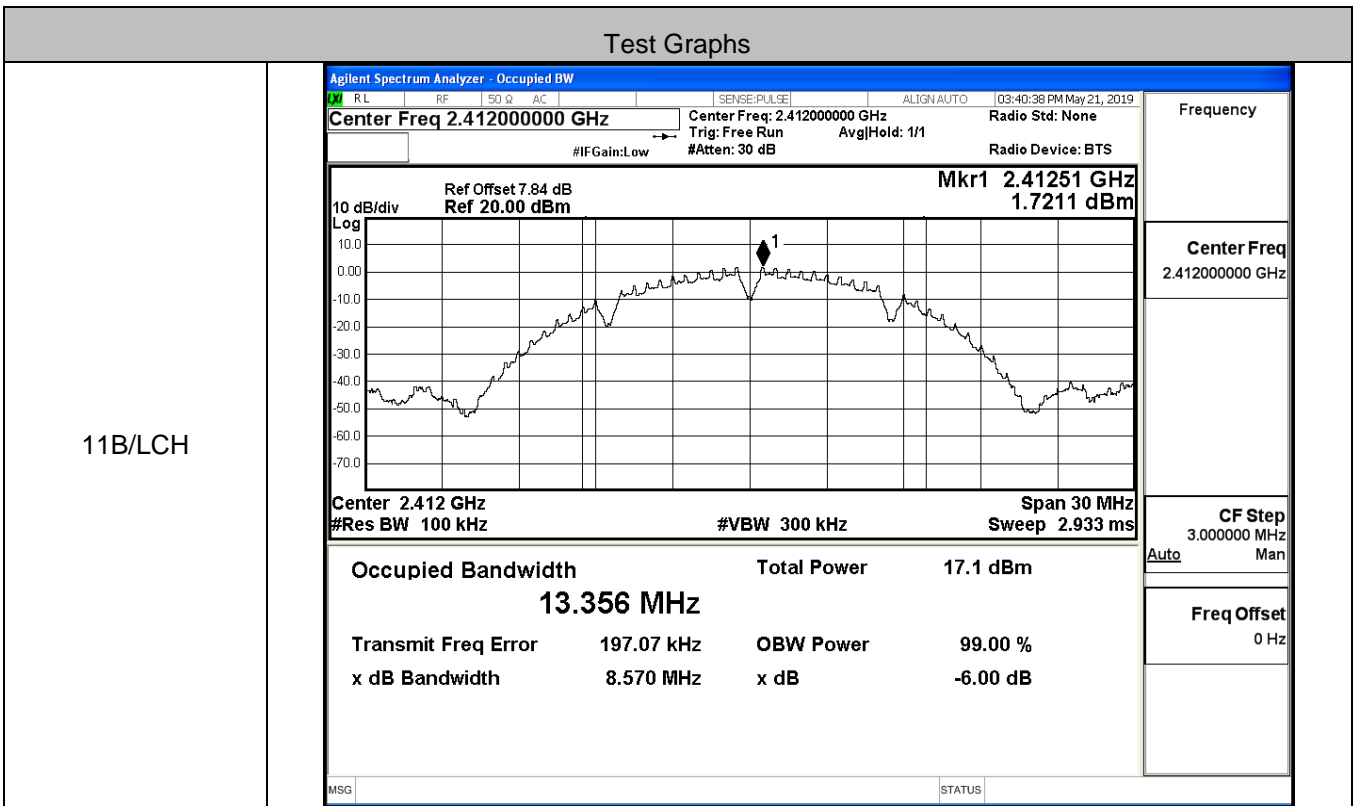
<p>11N20SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA          Center Freq 2.43700000 GHz          PNO: Fast IFGain:Low Trig: Free Run #Atten: 30 dB          Avg Type: Log-Pwr AvgHold: 10/10          Ref Offset 7.84 dB Ref 20.00 dBm          Mkr1 2.43196 GHz -5.804 dBm          10 dB/div Log          Center 2.43700 GHz #Res BW 30 kHz #VBW 100 kHz Span 30.00 MHz Sweep 31.67 ms (1001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.43700000 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          Center Freq 2.46200000 GHz          PNO: Fast IFGain:Low Trig: Free Run #Atten: 30 dB          Avg Type: Log-Pwr AvgHold: 10/10          Ref Offset 7.84 dB Ref 20.00 dBm          Mkr1 2.46386 GHz -6.087 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)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.46200000 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>



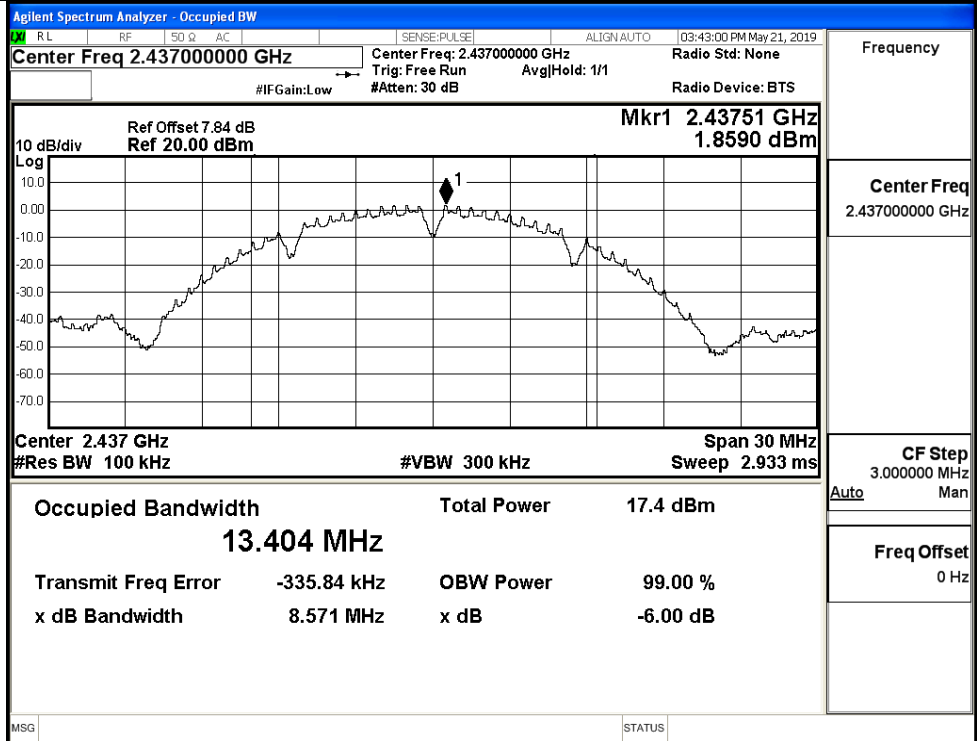


**C.4 6dB Bandwidth**

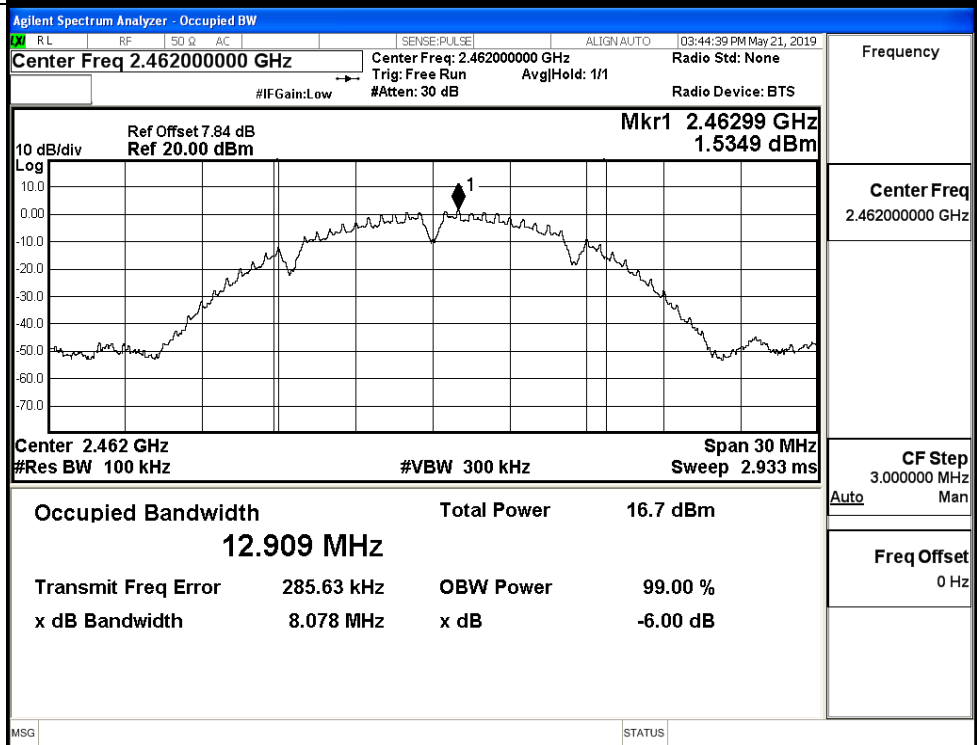
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	8.570	≥0.5	PASS
	MCH	8.571	≥0.5	PASS
	HCH	8.078	≥0.5	PASS
11G	LCH	15.75	≥0.5	PASS
	MCH	15.75	≥0.5	PASS
	HCH	15.38	≥0.5	PASS
11N20SISO	LCH	16.36	≥0.5	PASS
	MCH	16.35	≥0.5	PASS
	HCH	15.12	≥0.5	PASS
11N40SISO	LCH	23.84	≥0.5	PASS
	MCH	35.14	≥0.5	PASS
	HCH	35.34	≥0.5	PASS



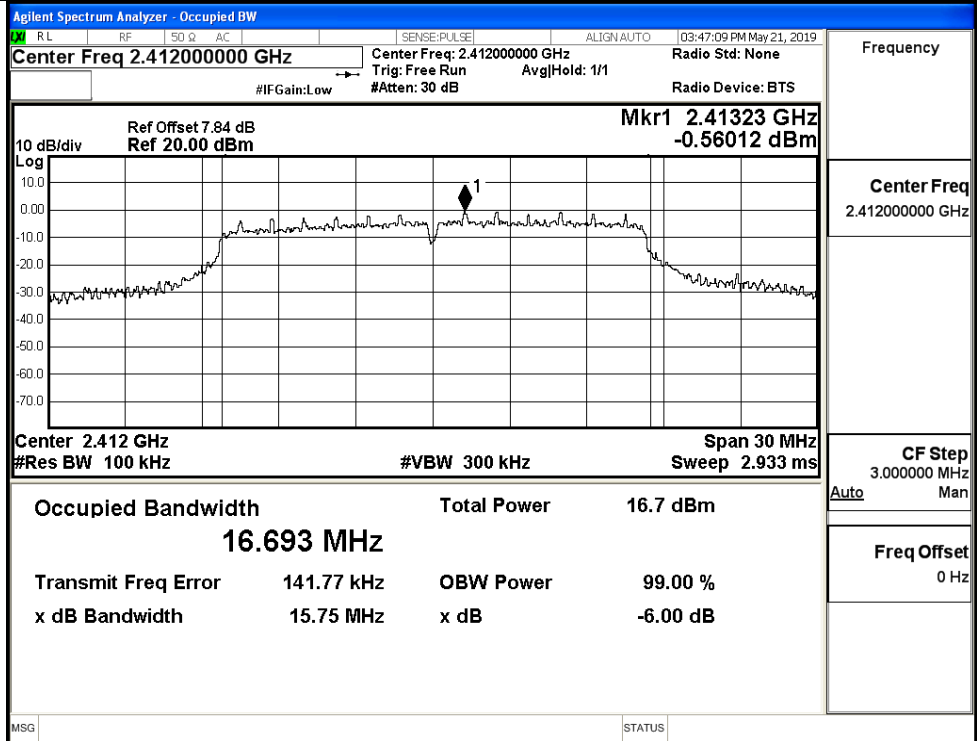
11B/MCH



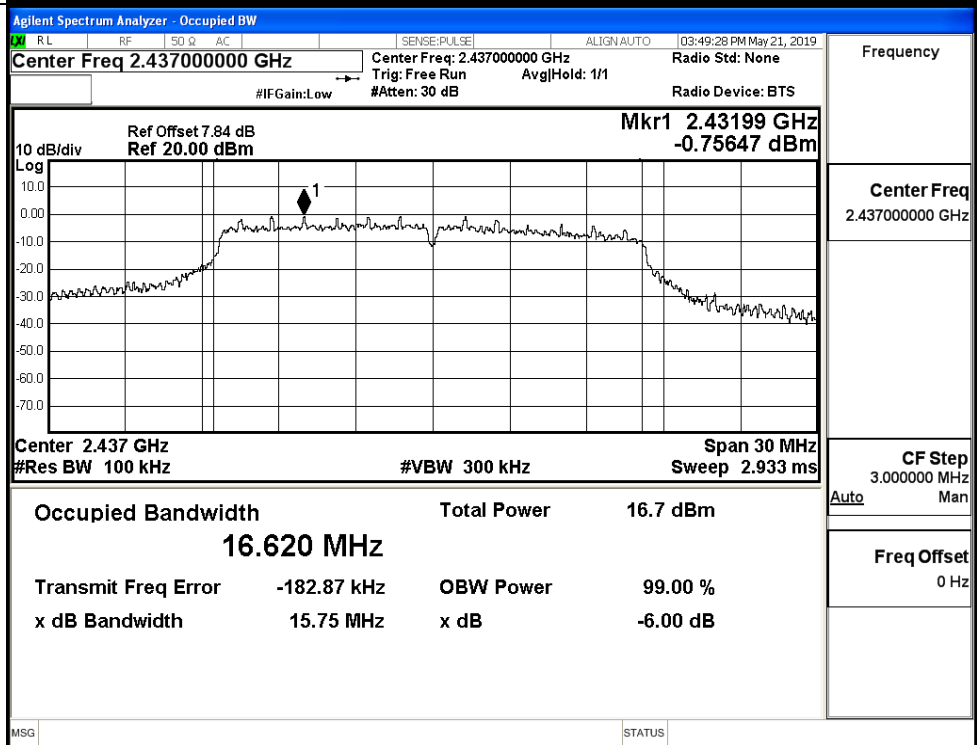
11B/HCH



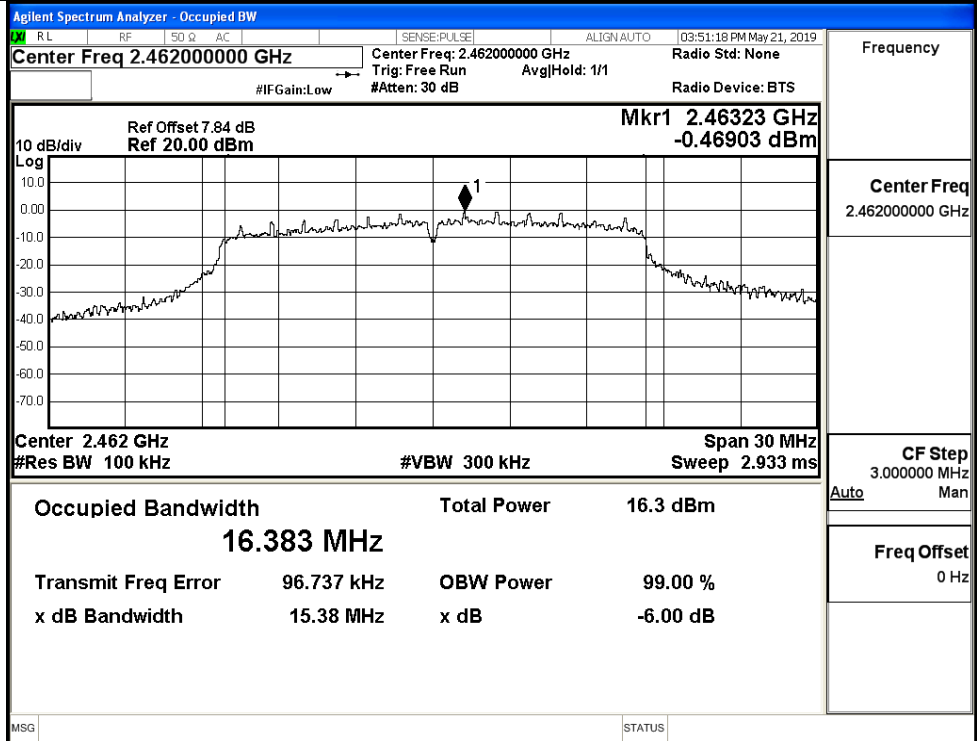
11G/LCH



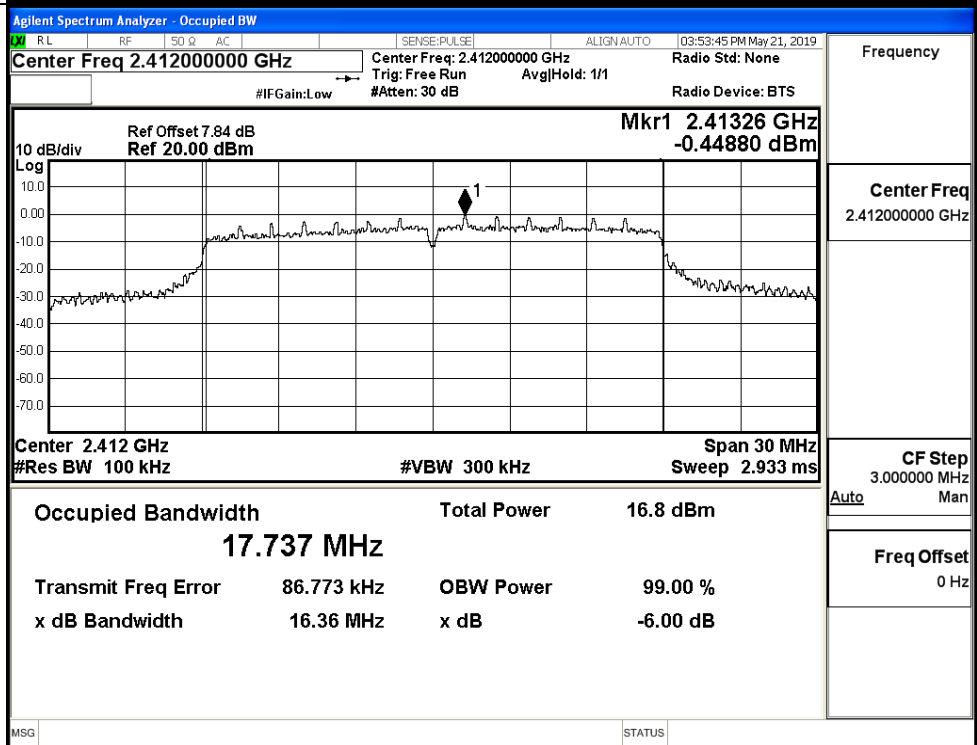
11G/MCH



11G/HCH



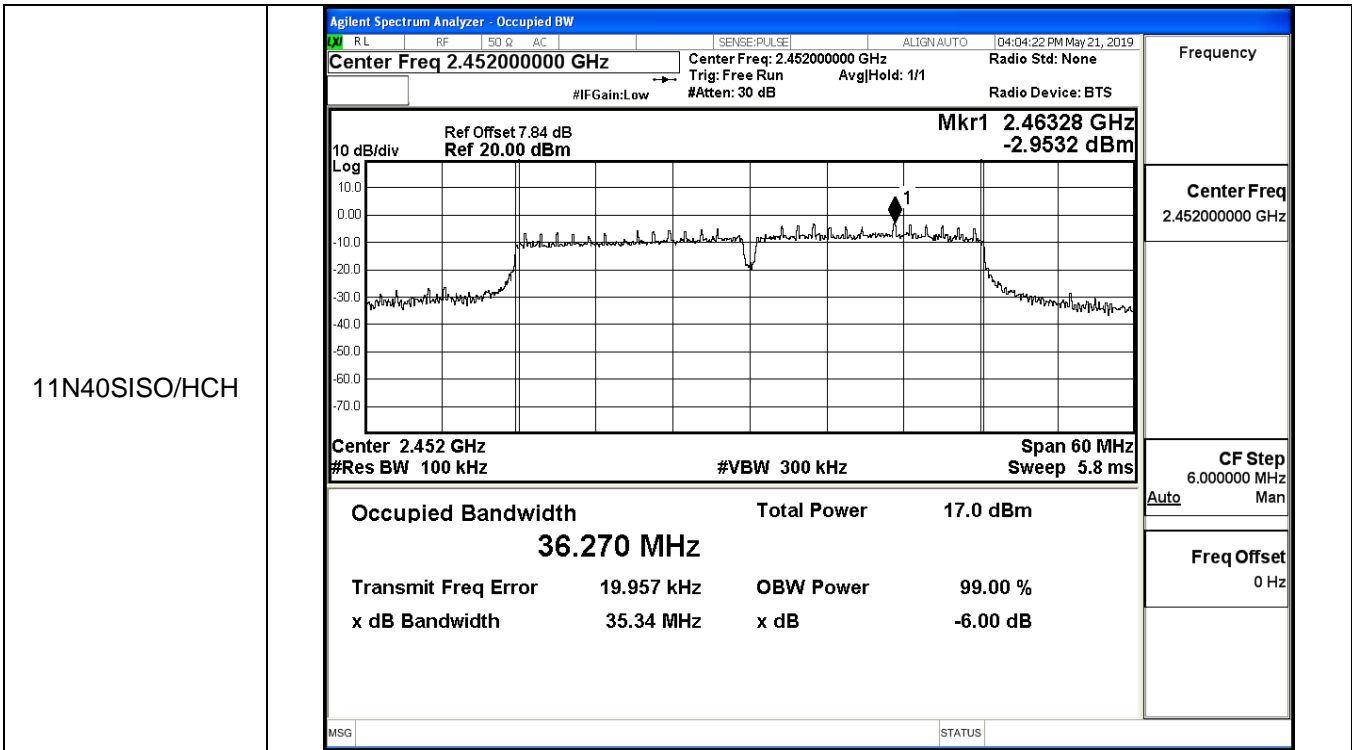
11N20SISO/LCH



<p>11N20SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.43700000 GHz</p> <p>Mkr1 2.43199 GHz</p> <p>Center 2.437 GHz</p> <p>Occupied Bandwidth 17.679 MHz</p> <p>Total Power 16.6 dBm</p> <p>Transmit Freq Error -131.45 kHz</p> <p>x dB Bandwidth 16.35 MHz</p> <p>OBW Power 99.00 %</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>Mkr1 2.46329 GHz</p> <p>Center 2.462 GHz</p> <p>Occupied Bandwidth 17.502 MHz</p> <p>Total Power 16.0 dBm</p> <p>Transmit Freq Error 93.960 kHz</p> <p>x dB Bandwidth 15.12 MHz</p> <p>OBW Power 99.00 %</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 2.42452 GHz -0.98540 dBm</p> <p>Occupied Bandwidth 35.594 MHz</p> <p>Total Power 17.6 dBm</p> <p>Transmit Freq Error 40.062 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 23.84 MHz</p> <p>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 2.43700000 GHz</p> <p>Mkr1 2.4295 GHz -2.5752 dBm</p> <p>Occupied Bandwidth 35.989 MHz</p> <p>Total Power 17.1 dBm</p> <p>Transmit Freq Error -89.697 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 35.14 MHz</p> <p>x dB -6.00 dB</p>	<p>Frequency</p> <p>Center Freq 2.43700000 GHz</p> <p>CF Step 6.000000 MHz</p> <p>Freq Offset 0 Hz</p>



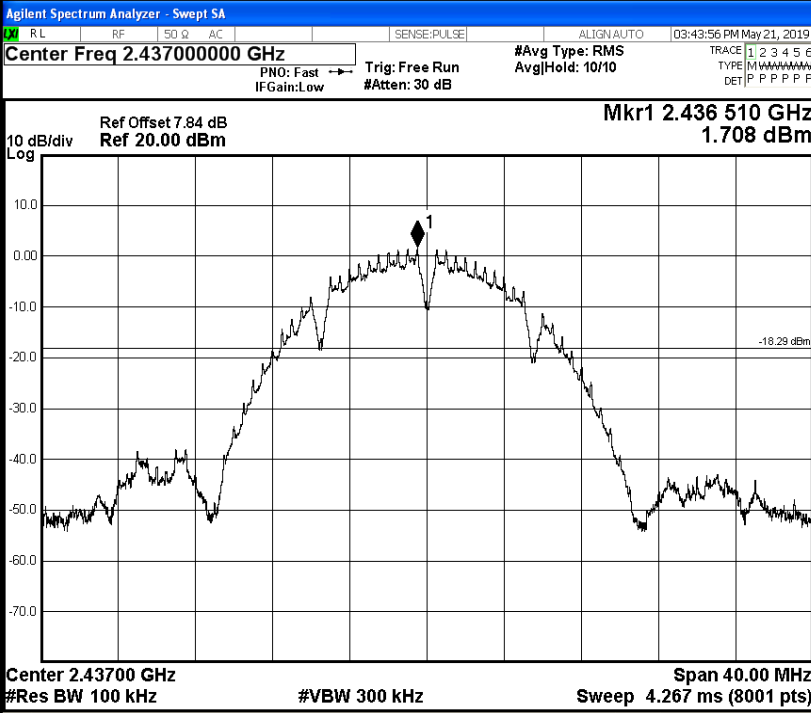
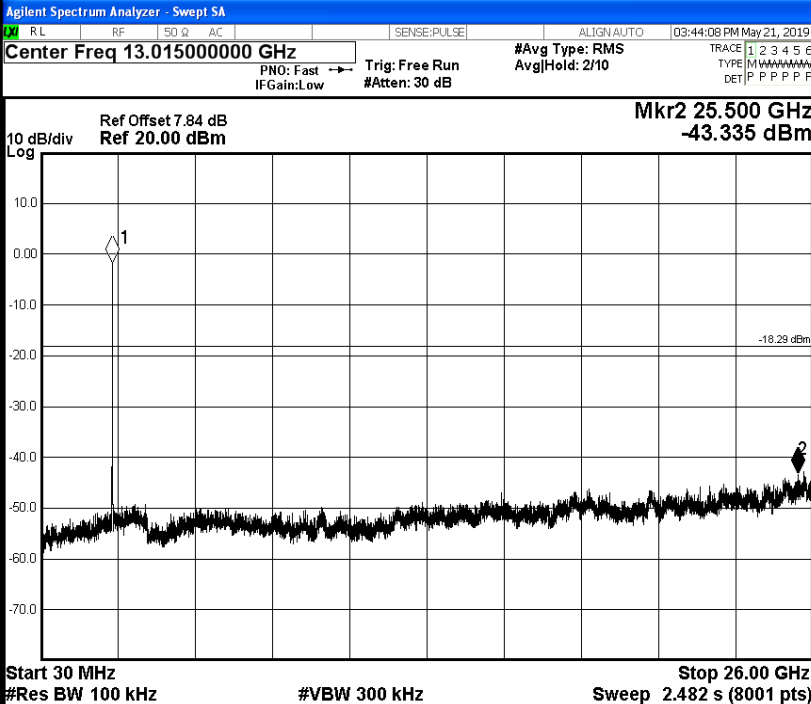
### C.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	1.289	-43.815	-18.711	PASS
	MCH	1.708	-43.335	-18.292	PASS
	HCH	1.555	-43.951	-18.445	PASS
11G	LCH	-0.902	-43.549	-20.902	PASS
	MCH	-0.825	-44.059	-20.825	PASS
	HCH	-0.534	-43.700	-20.534	PASS
11N20 SISO	LCH	-0.506	-44.087	-20.506	PASS
	MCH	-0.904	-43.146	-20.904	PASS
	HCH	-0.596	-43.245	-20.596	PASS
11N40 SISO	LCH	-1.237	-42.448	-21.237	PASS
	MCH	-2.497	-43.170	-22.497	PASS
	HCH	-3.223	-42.892	-23.223	PASS

11B\_LCH\_Graphs

<p>Pref/11B/LCH</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>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>

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>	

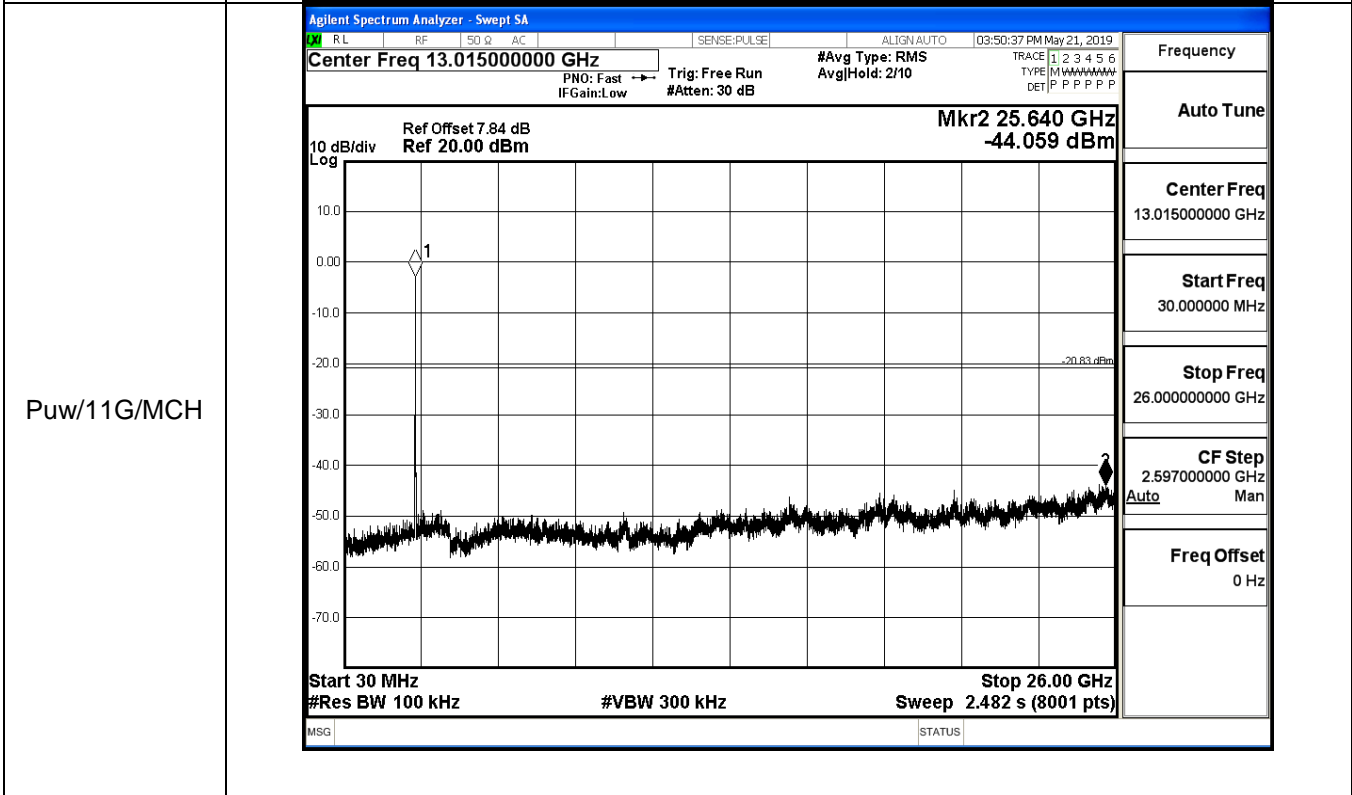
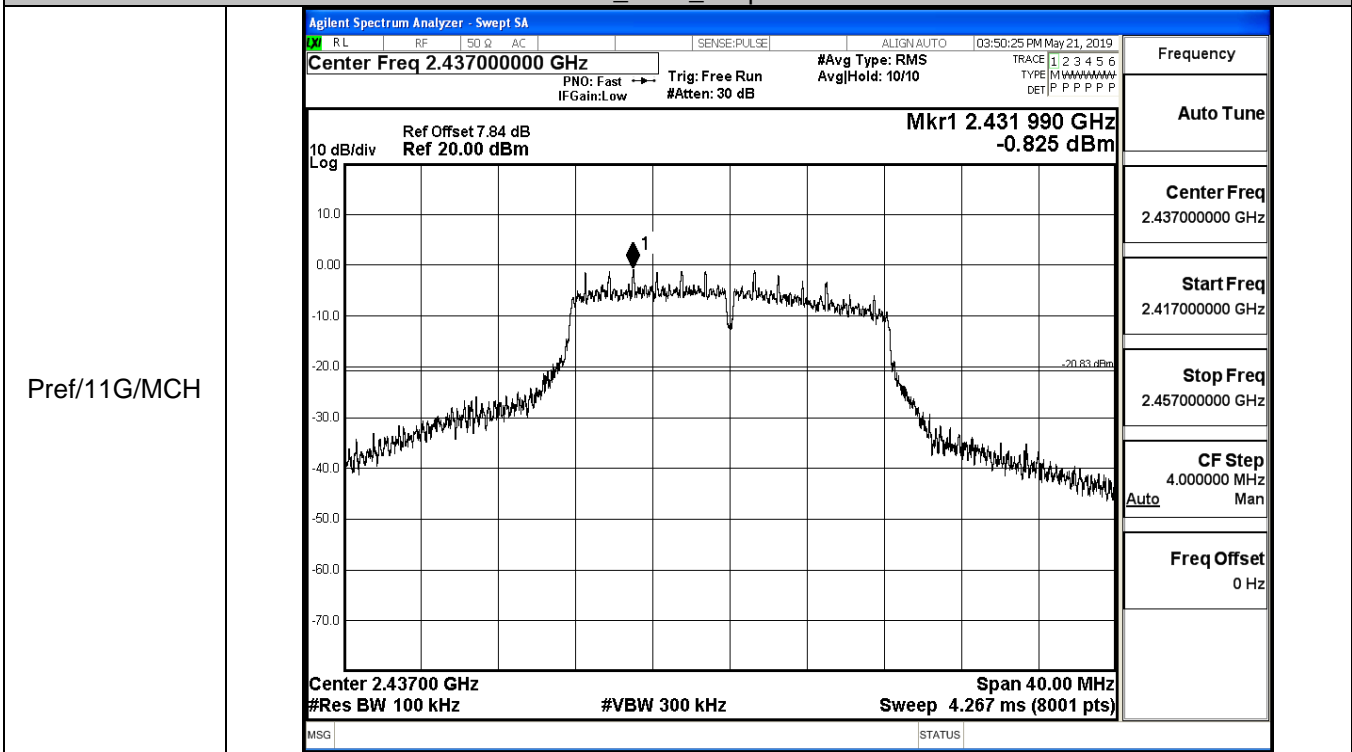
11B\_HCH\_Graphs

<p>Pref/11B/HCH</p>		<p>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>	

11G\_LCH\_Graphs

<p>Pref/11G/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA          Center Freq 2.41200000 GHz          #Res BW 100 kHz #VBW 300 kHz Sweep 4.267 ms (8001 pts)          Mkr1 2.416 995 GHz -0.902 dBm          Ref Offset 7.84 dB Ref 20.00 dBm</p>	<p>Frequency          Auto Tune          Center Freq 2.412000000 GHz          Start Freq 2.392000000 GHz          Stop Freq 2.432000000 GHz          CF Step 4.000000 MHz          Freq Offset 0 Hz</p>
<p>Puw/11G/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA          Center Freq 13.01500000 GHz          #Res BW 100 kHz #VBW 300 kHz Sweep 2.482 s (8001 pts)          Mkr2 25.656 GHz -43.549 dBm          Ref Offset 7.84 dB Ref 20.00 dBm</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          Freq Offset 0 Hz</p>

11G\_MCH\_Graphs



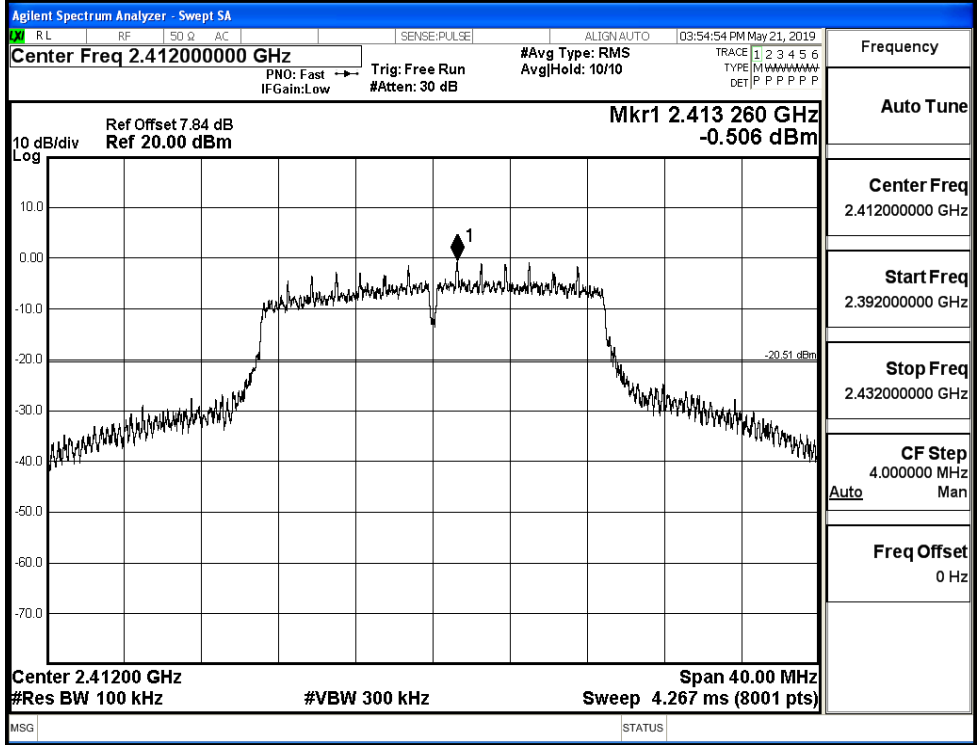


11G\_HCH\_Graphs

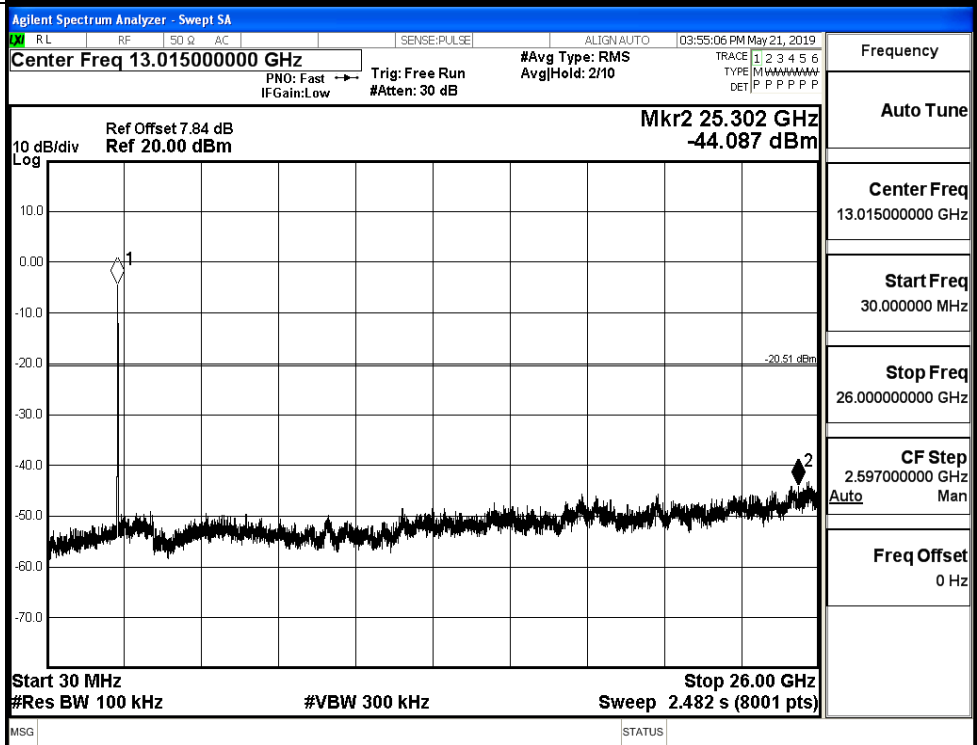
<p>Pref/11G/HCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.46200000 GHz</p> <p>Mkr1 2.463 285 GHz -0.534 dBm</p> <p>Center 2.46200 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 4.267 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.462000000 GHz</p> <p>Start Freq 2.442000000 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>Mkr2 25.851 GHz -43.700 dBm</p> <p>Start 30 MHz #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>

11N20SISO\_LCH\_Graphs

Pref/11N20SIS  
O/LCH



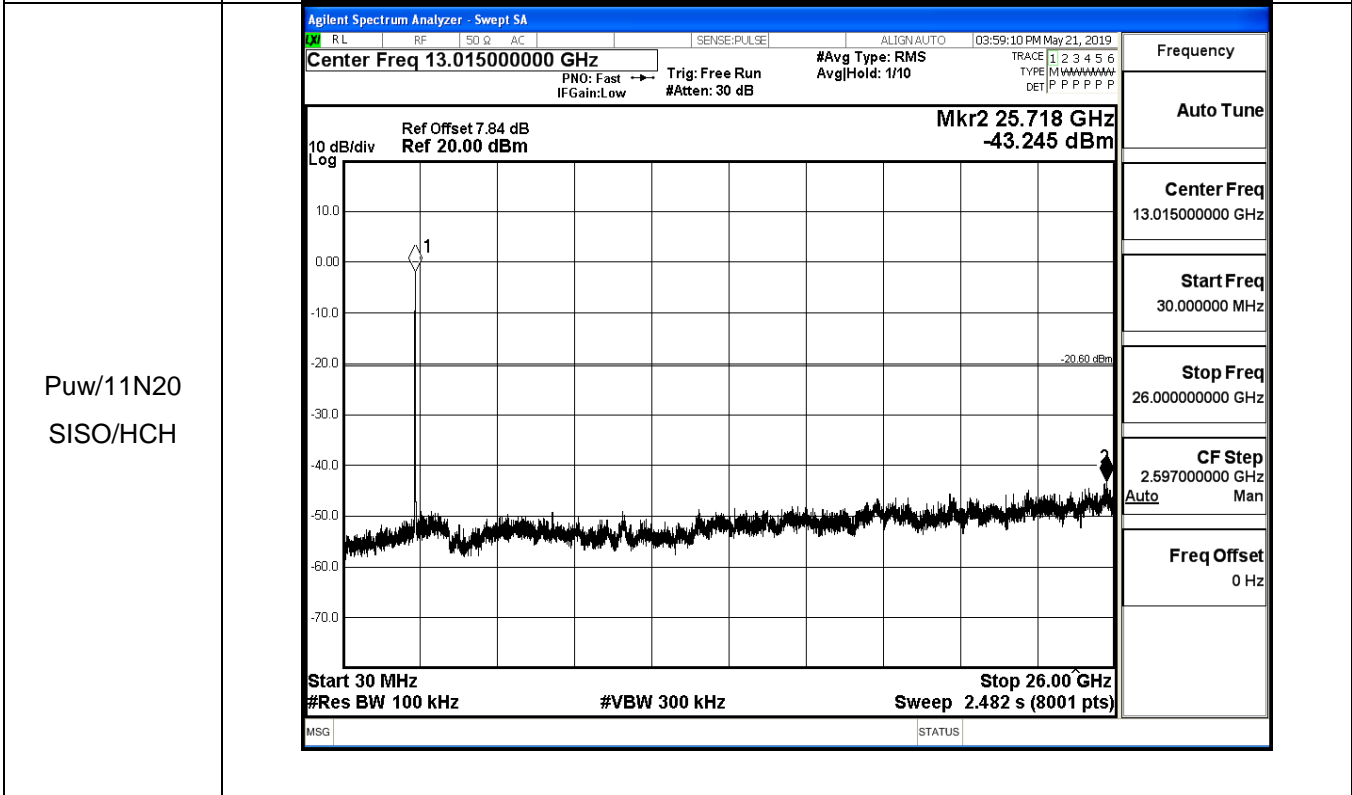
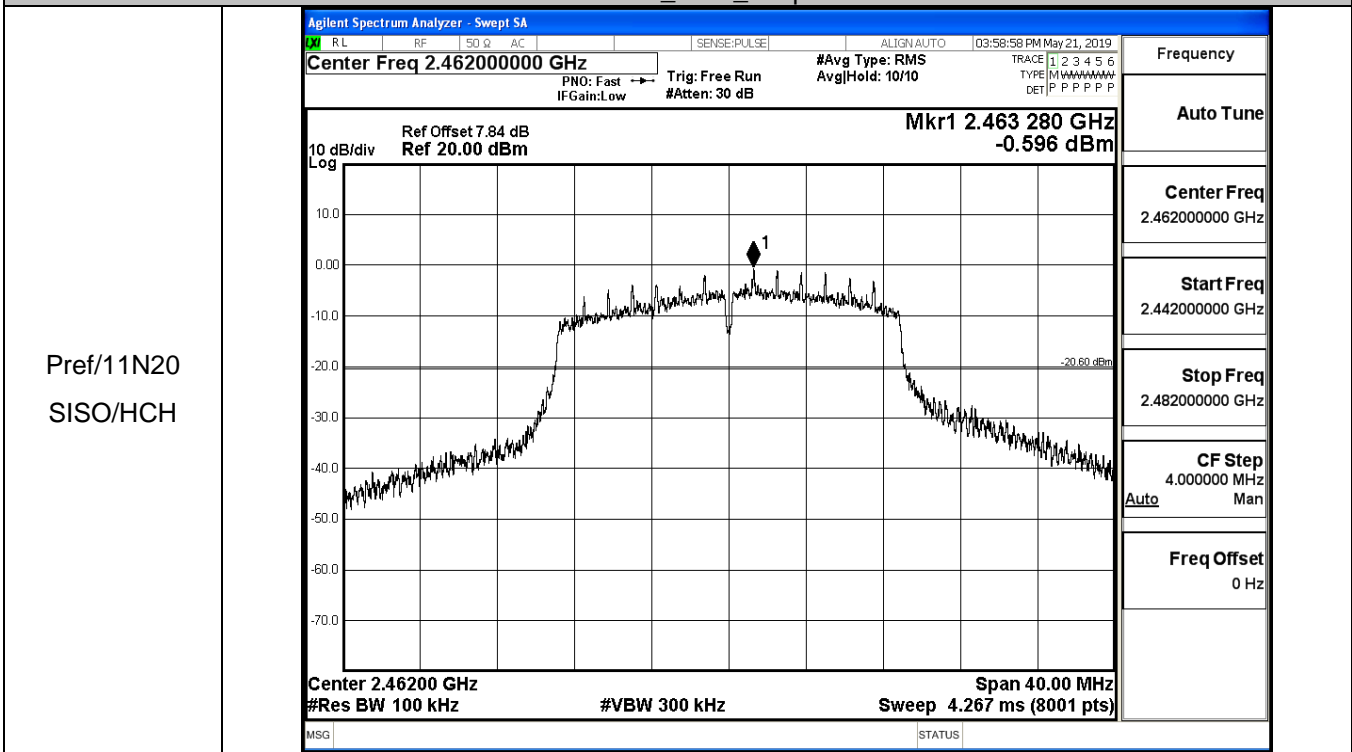
Puw/11N20  
SISO/LCH



11N20SISO\_MCH\_Graphs

<p>Pref/11N20 SISO/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</p> <p>Freq Offset 0 Hz</p>
	<p>Puw/11N20 SISO/MCH</p>	

11N20SISO\_HCH\_Graphs



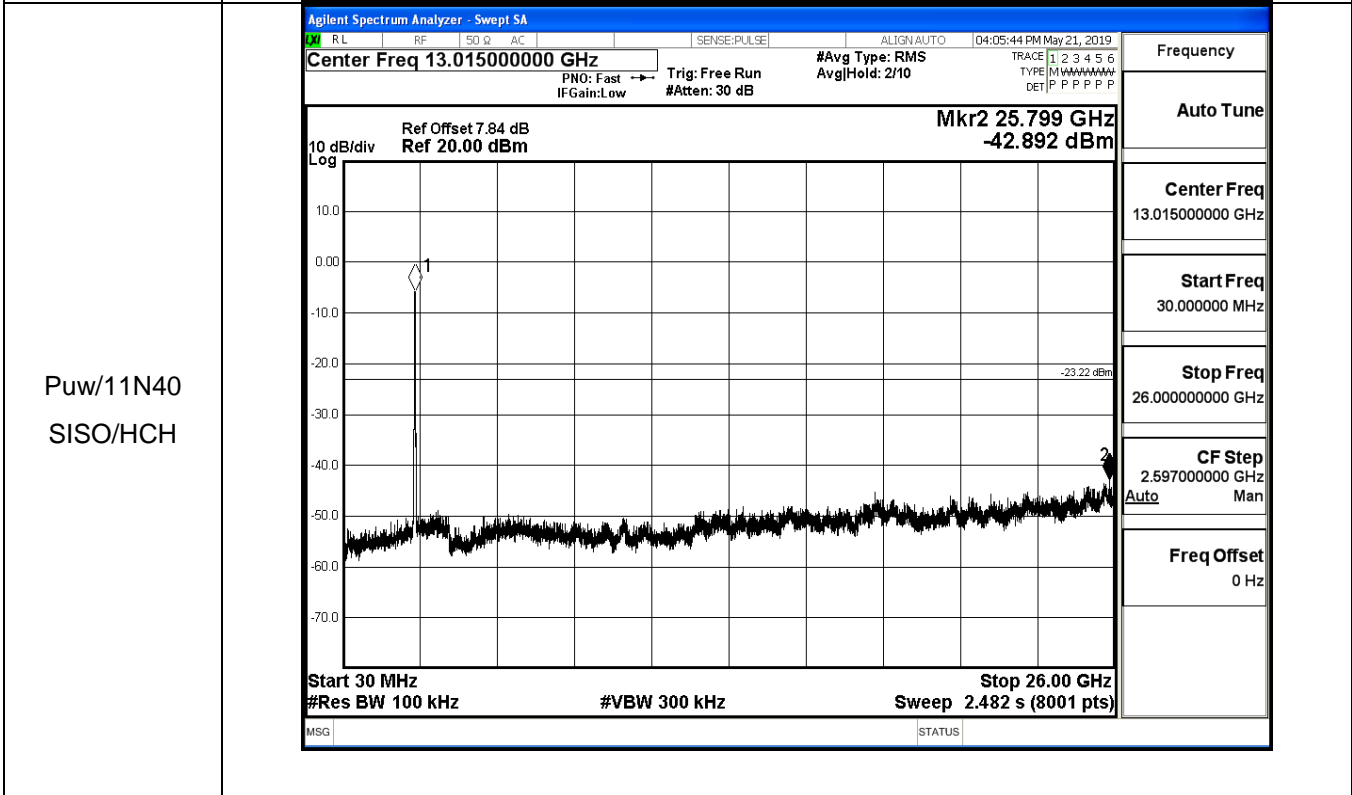
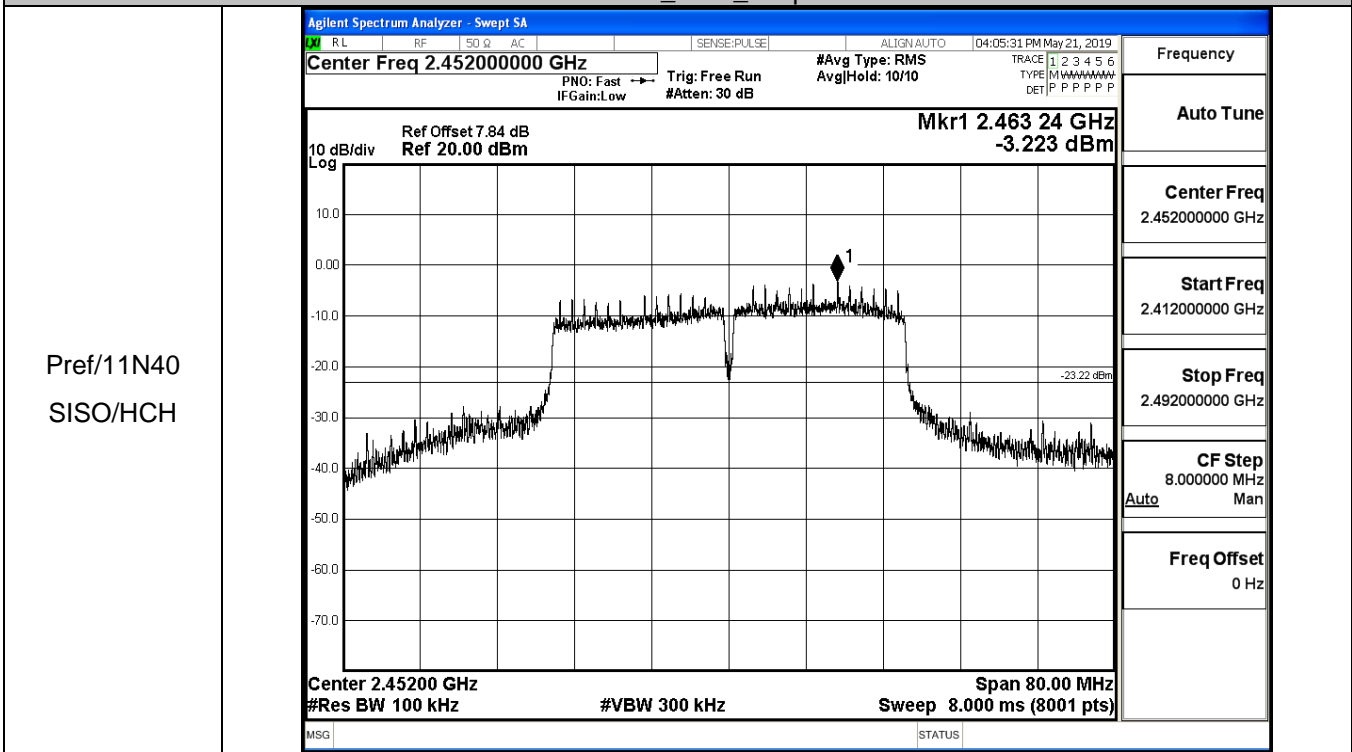
11N40SISO\_LCH\_Graphs

<p>Pref/11N40 SISO/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.42200000 GHz</p> <p>Mkr1 2.425 74 GHz -1.237 dBm</p> <p>Center 2.42200 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 8.000 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.422000000 GHz</p> <p>Start Freq 2.382000000 GHz</p> <p>Stop Freq 2.462000000 GHz</p> <p>CF Step 8.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>Puw/11N40 SISO/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 13.01500000 GHz</p> <p>Mkr2 25.753 GHz -42.448 dBm</p> <p>Start 30 MHz #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\_MCH\_Graphs

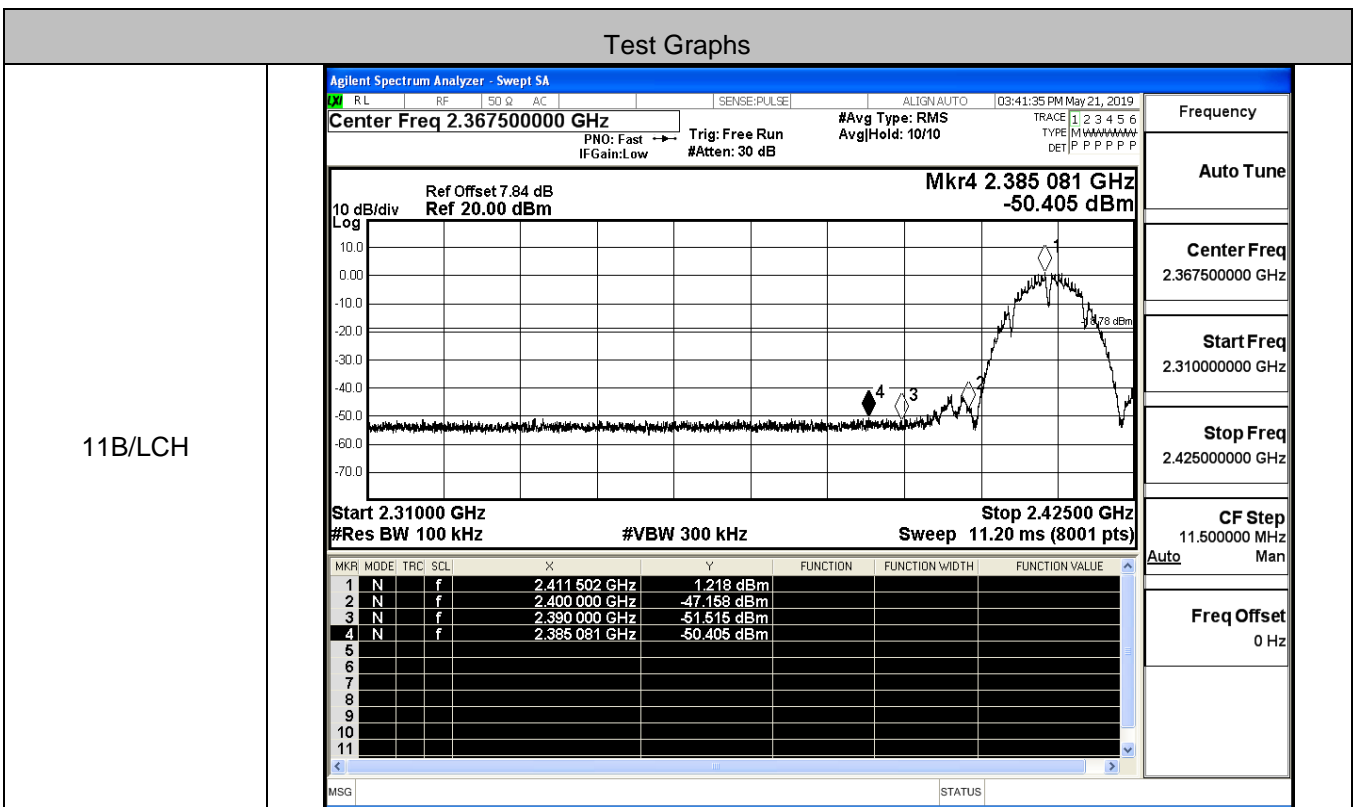
<p>Pref/11N40 SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA          Center Freq 2.43700000 GHz          Ref Offset 7.84 dB          Ref 20.00 dBm          Mkr1 2.428 28 GHz          -2.497 dBm          Center 2.43700 GHz          #Res BW 100 kHz          #VBW 300 kHz          Span 80.00 MHz          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          Center Freq 13.01500000 GHz          Ref Offset 7.84 dB          Ref 20.00 dBm          Mkr2 25.062 GHz          -43.170 dBm          Start 30 MHz          #Res BW 100 kHz          #VBW 300 kHz          Stop 26.00 GHz          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



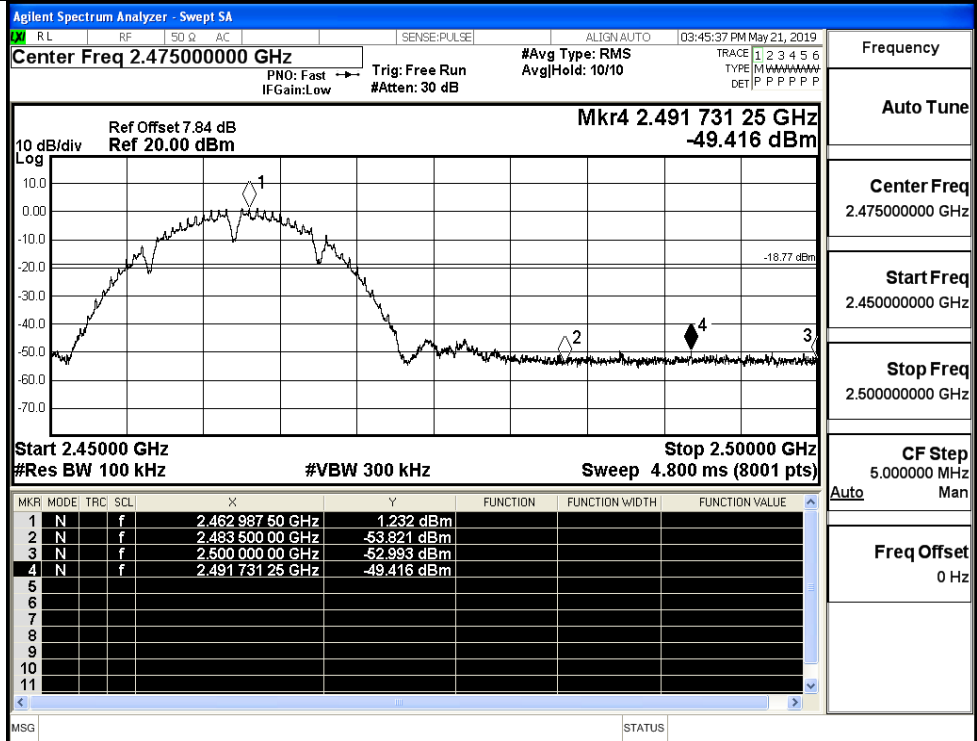
### C.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	1.218	-50.405	-18.78	PASS
	HCH	1.232	-49.416	-18.77	PASS
11G	LCH	-0.514	-41.874	-20.51	PASS
	HCH	-0.030	-42.105	-20.03	PASS
11N20SISO	LCH	-0.997	-41.207	-21	PASS
	HCH	-1.710	-41.549	-21.71	PASS
11N40SISO	LCH	-1.113	-38.248	-21.11	PASS
	HCH	-2.984	-30.646	-22.98	PASS

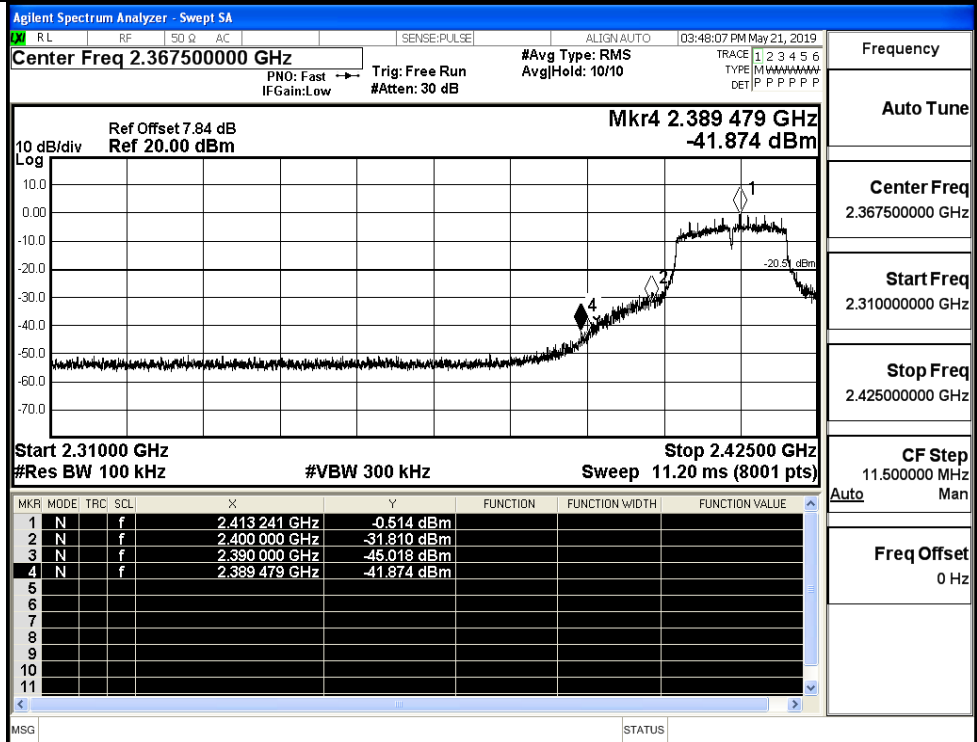




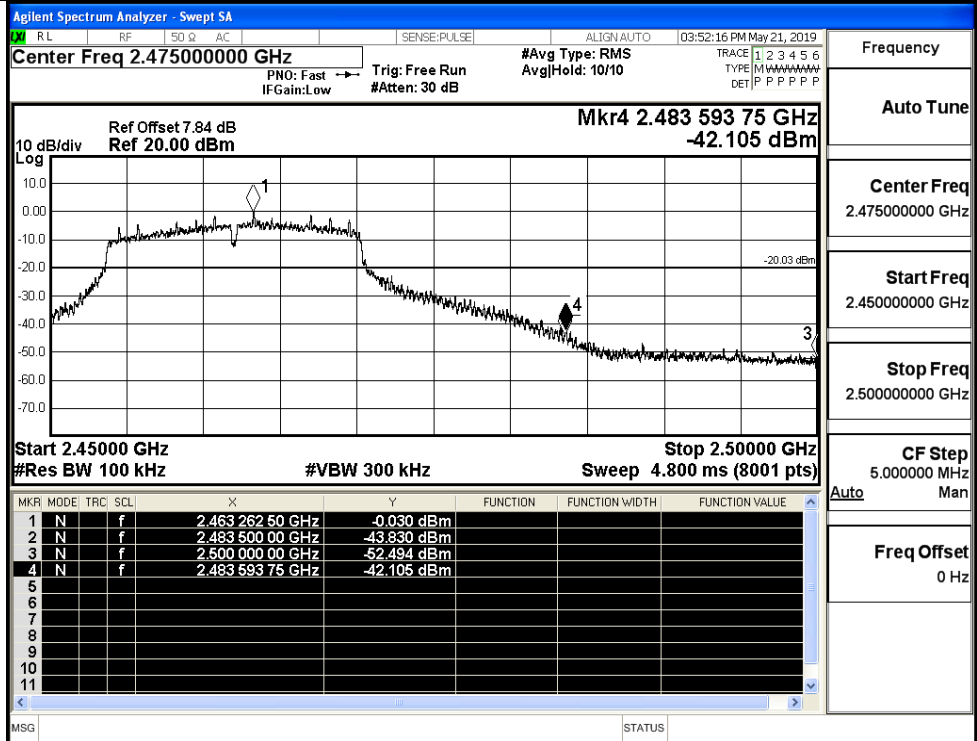
11B/HCH



11G/LCH

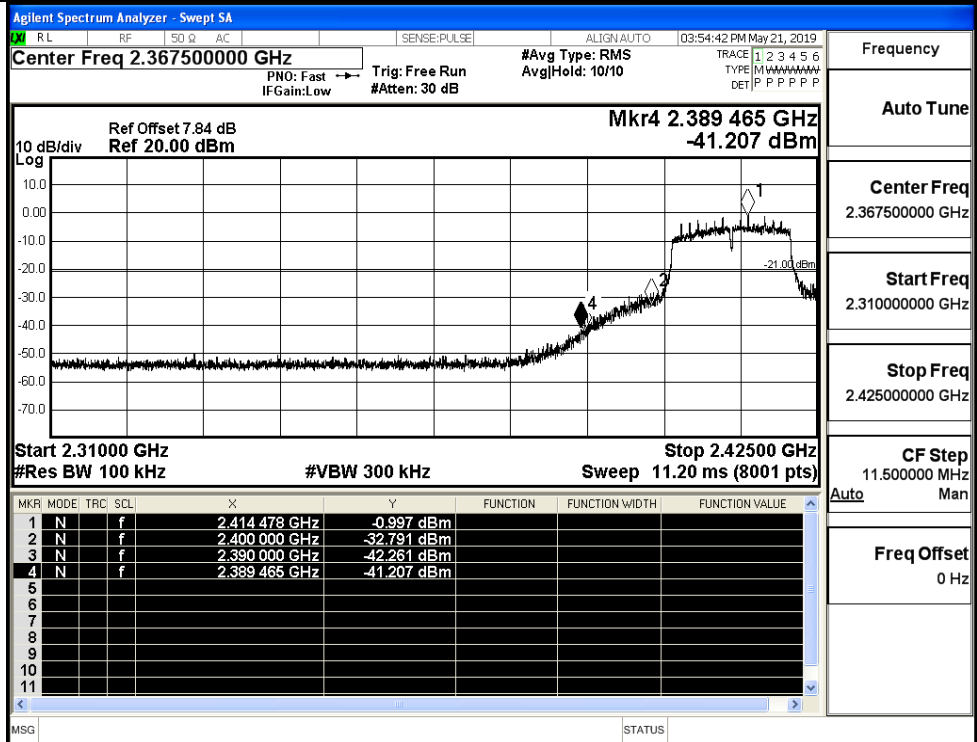


11G/HCH



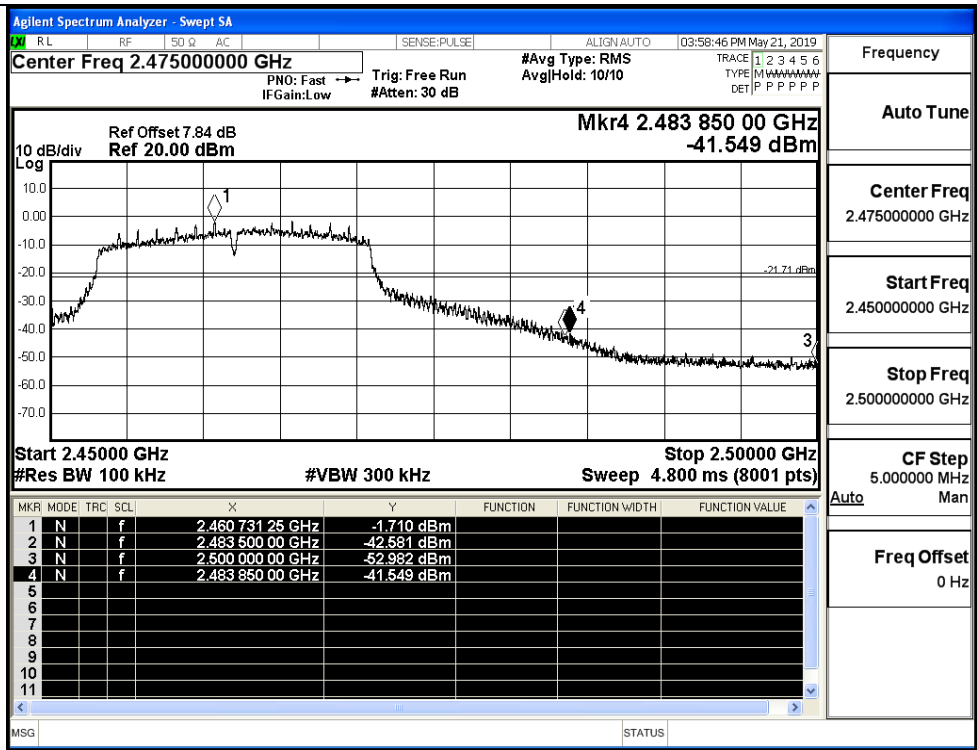
Frequency	2.47500000 GHz
Auto Tune	
Center Freq	2.47500000 GHz
Start Freq	2.45000000 GHz
Stop Freq	2.50000000 GHz
CF Step	5.000000 MHz
Freq Offset	0 Hz

11N20SISO/LCH

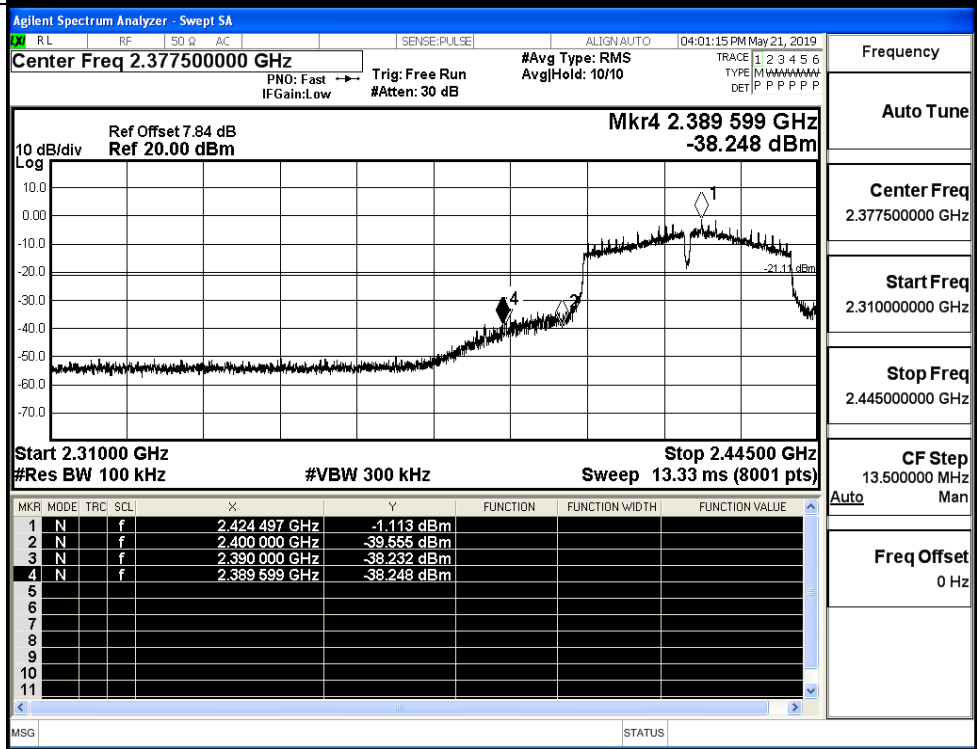


Frequency	2.36750000 GHz
Auto Tune	
Center Freq	2.36750000 GHz
Start Freq	2.31000000 GHz
Stop Freq	2.42500000 GHz
CF Step	11.500000 MHz
Freq Offset	0 Hz

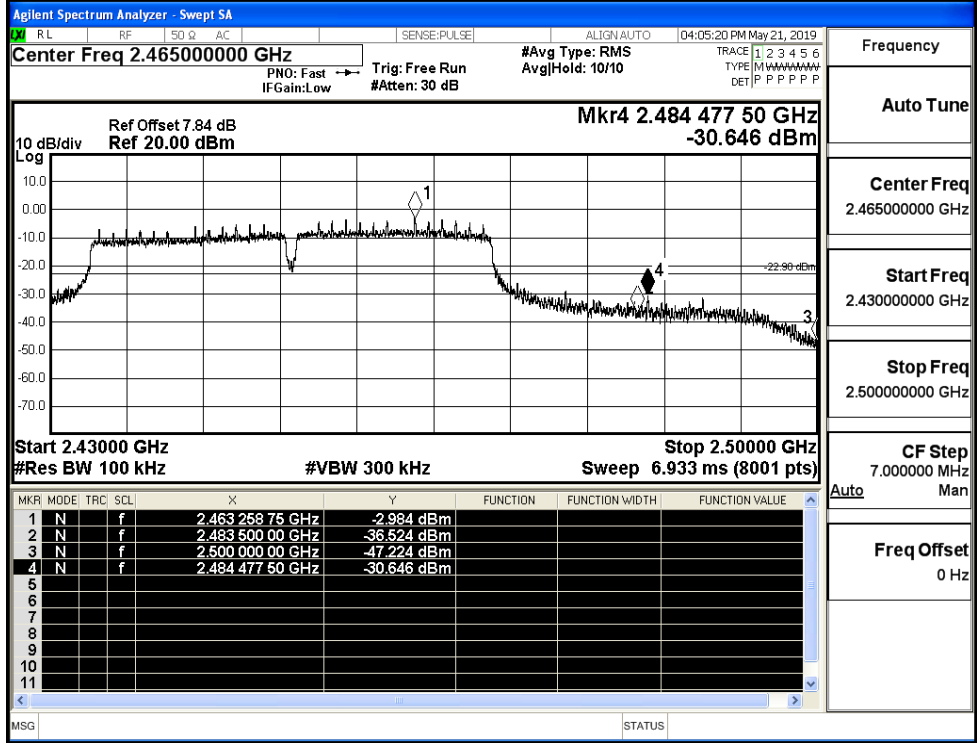
11N20SISO/HCH



11N40SISO/LCH



11N40SISO/HCH

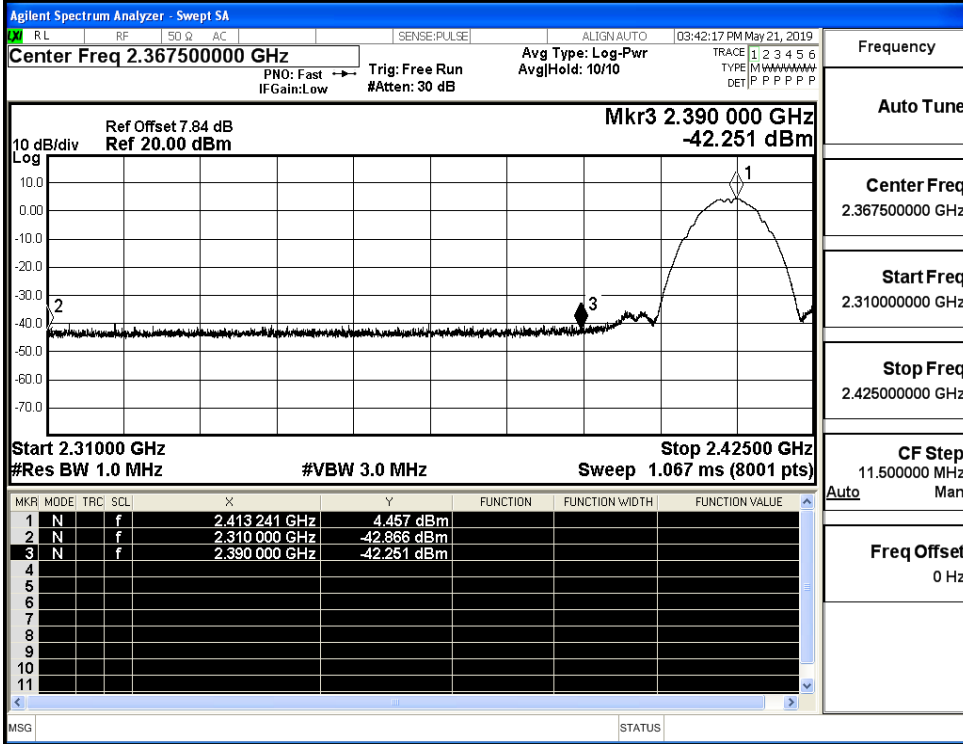


**C.7 Restrict-band band-edge measurements**

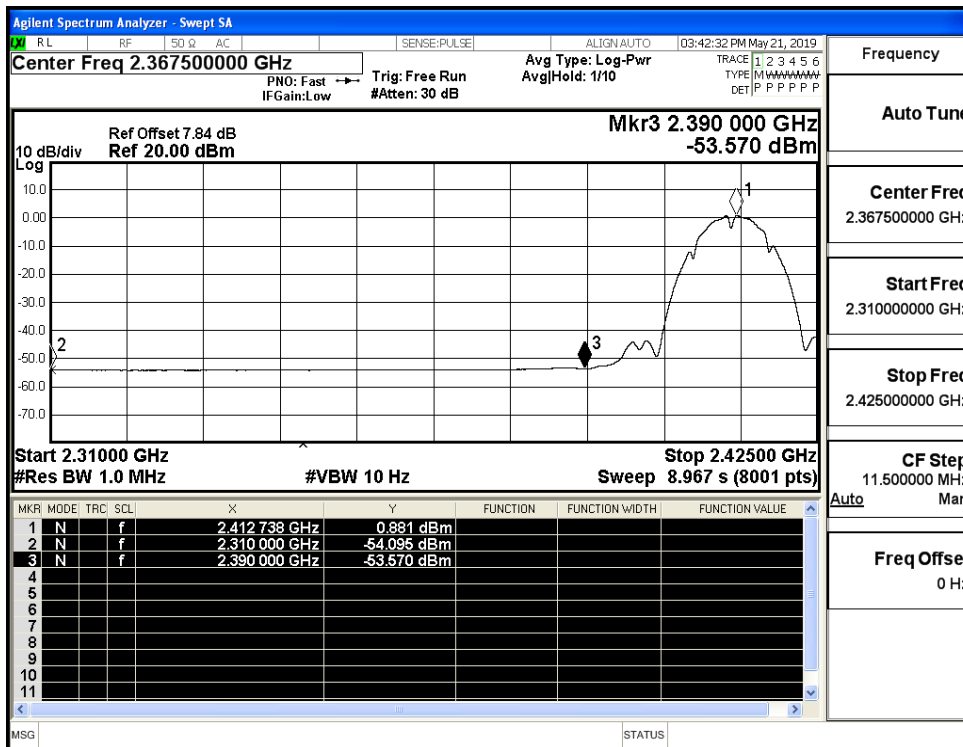
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBu V/m]	Verdict
11B	2412	Ant1	2310.0	-42.87	3.3	0	55.63	PEAK	74	PASS
	2412	Ant1	2310.0	-54.10	3.3	0	44.40	AV	54	PASS
	2412	Ant1	2390.0	-42.25	3.3	0	56.25	PEAK	74	PASS
	2412	Ant1	2390.0	-53.57	3.3	0	44.93	AV	54	PASS
	2462	Ant1	2483.5	-43.10	3.3	0	55.40	PEAK	74	PASS
	2462	Ant1	2483.5	-53.35	3.3	0	45.15	AV	54	PASS
	2462	Ant1	2500.0	-43.04	3.3	0	55.46	PEAK	74	PASS
	2462	Ant1	2500.0	-53.45	3.3	0	45.05	AV	54	PASS
11G	2412	Ant1	2310.0	-44.52	3.3	0	53.98	PEAK	74	PASS
	2412	Ant1	2310.0	-54.12	3.3	0	44.38	AV	54	PASS
	2412	Ant1	2390.0	-31.52	3.3	0	66.98	PEAK	74	PASS
	2412	Ant1	2390.0	-46.29	3.3	0	52.21	AV	54	PASS
	2462	Ant1	2483.5	-28.85	3.3	0	69.65	PEAK	74	PASS
	2462	Ant1	2483.5	-46.88	3.3	0	51.62	AV	54	PASS
	2462	Ant1	2500.0	-42.38	3.3	0	56.12	PEAK	74	PASS
	2462	Ant1	2500.0	-53.31	3.3	0	45.19	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-42.50	3.3	0	56.00	PEAK	74	PASS
	2412	Ant1	2310.0	-54.10	3.3	0	44.40	AV	54	PASS
	2412	Ant1	2390.0	-27.39	3.3	0	71.11	PEAK	74	PASS
	2412	Ant1	2390.0	-44.51	3.3	0	53.99	AV	54	PASS
	2462	Ant1	2483.5	-28.94	3.3	0	69.56	PEAK	74	PASS
	2462	Ant1	2483.5	-45.66	3.3	0	52.84	AV	54	PASS
	2462	Ant1	2500.0	-43.71	3.3	0	54.79	PEAK	74	PASS
	2462	Ant1	2500.0	-53.34	3.3	0	45.16	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-42.98	3.3	0	55.52	PEAK	74	PASS
	2422	Ant1	2310.0	-54.13	3.3	0	44.37	AV	54	PASS

	2422	Ant1	2390.0	-29.33	3.3	0	69.17	PEAK	74	PASS
	2422	Ant1	2390.0	-47.36	3.3	0	51.14	AV	54	PASS
	2452	Ant1	2483.5	-40.65	3.3	0	57.85	PEAK	74	PASS
	2452	Ant1	2483.5	-52.94	3.3	0	45.56	AV	54	PASS
	2452	Ant1	2500.0	-42.82	3.3	0	55.68	PEAK	74	PASS
	2452	Ant1	2500.0	-53.42	3.3	0	45.08	AV	54	PASS

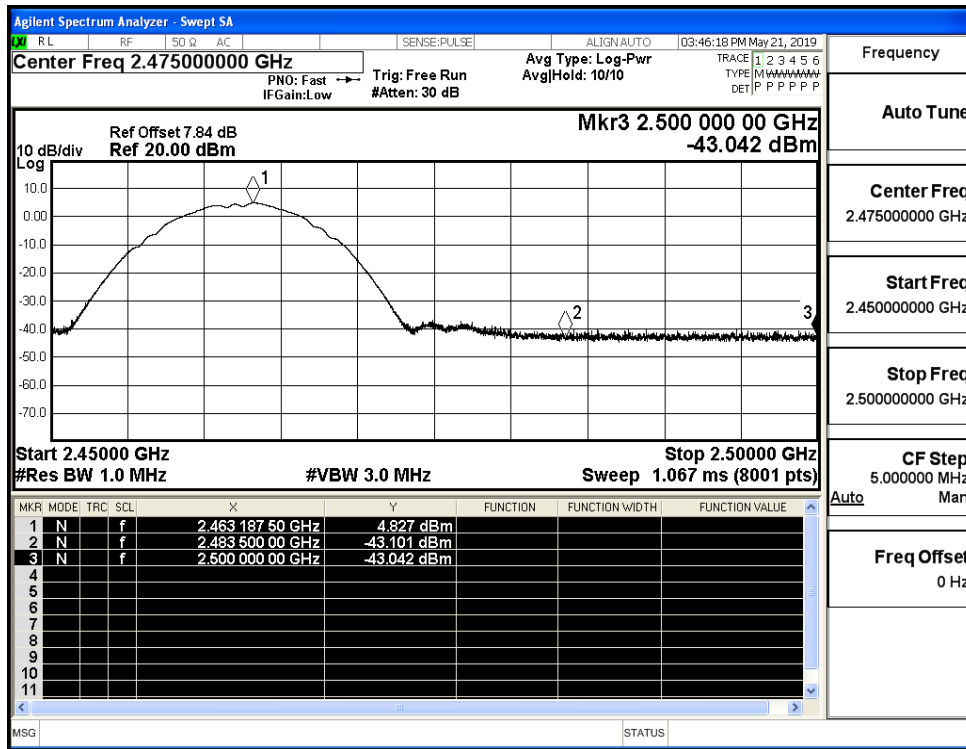
Restrict-band band-edge measurements\_11B\_2412\_Ant1\_PEAK



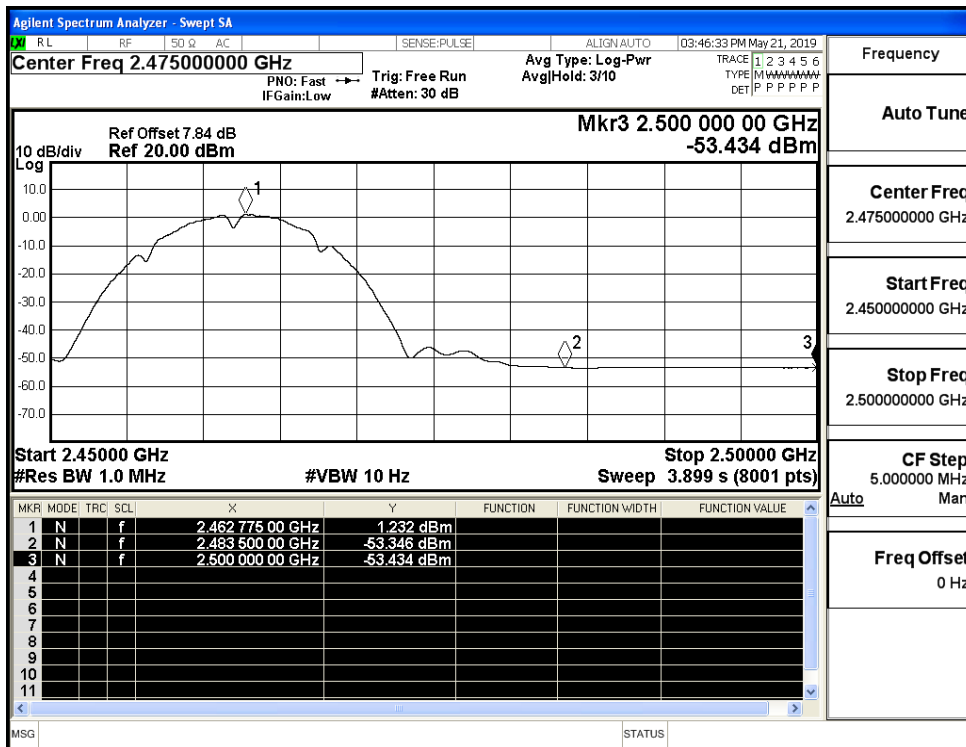
Restrict-band band-edge measurements\_11B\_2412\_Ant1\_AV



Restrict-band band-edge measurements\_11B\_2462\_Ant1\_PEAK

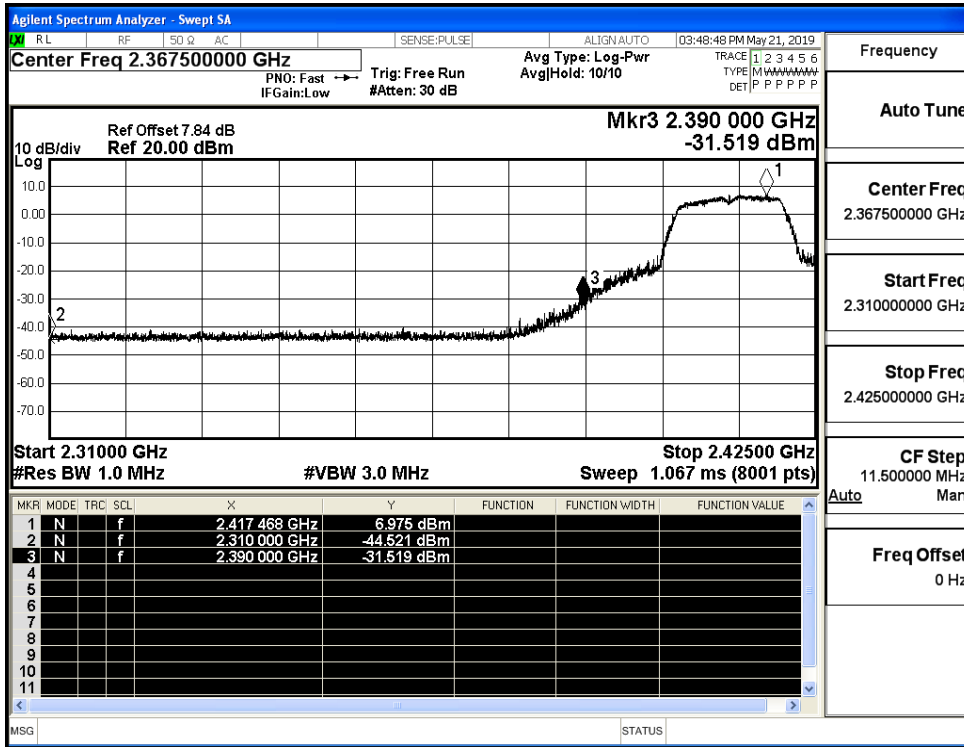


Restrict-band band-edge measurements\_11B\_2462\_Ant1\_AV

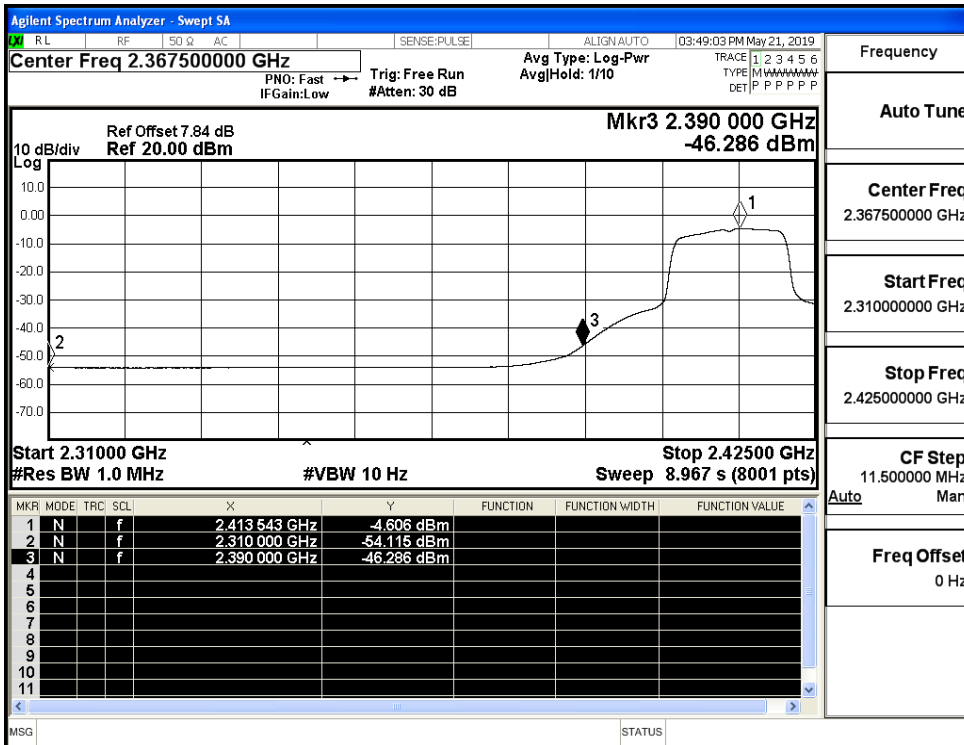




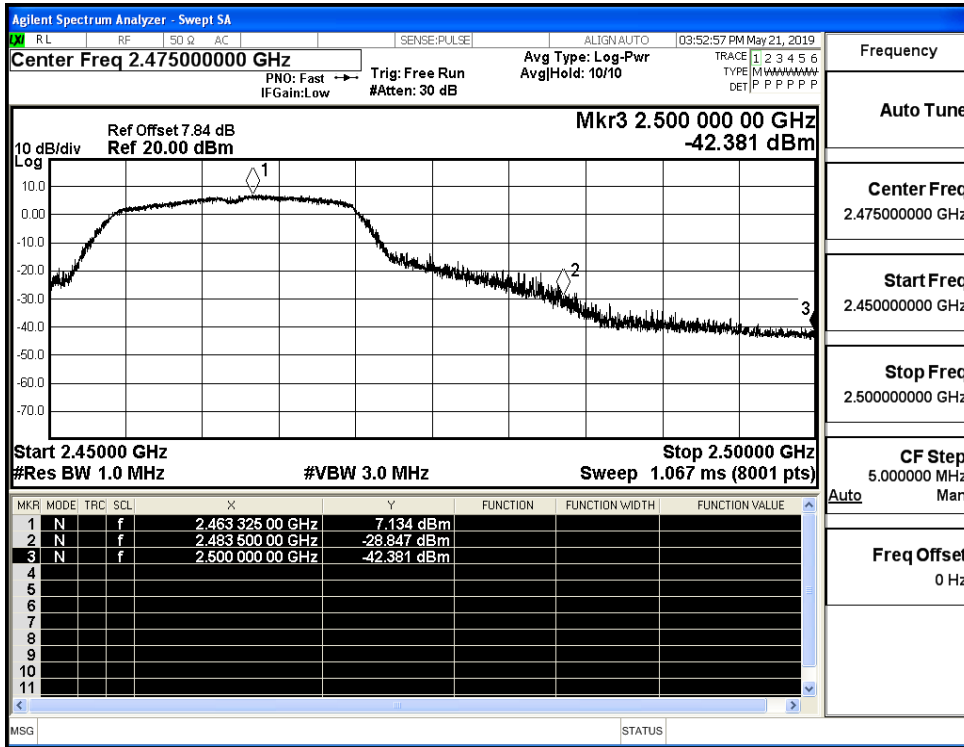
Restrict-band band-edge measurements\_11G\_2412\_Ant1\_PEAK



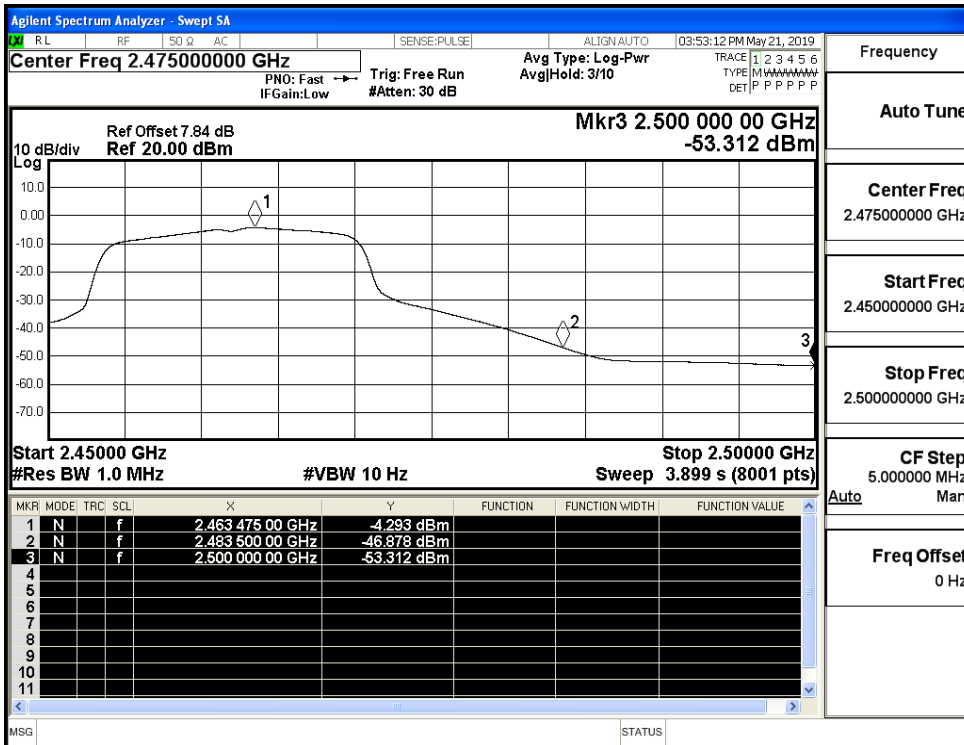
Restrict-band band-edge measurements\_11G\_2412\_Ant1\_AV



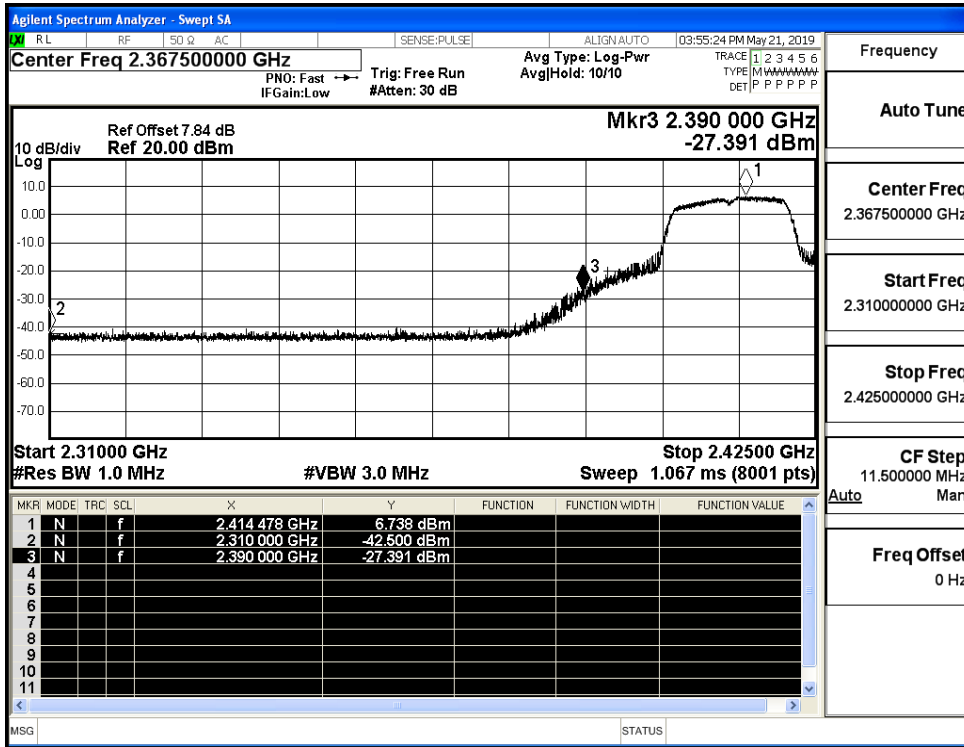
Restrict-band band-edge measurements\_11G\_2462\_Ant1\_PEAK



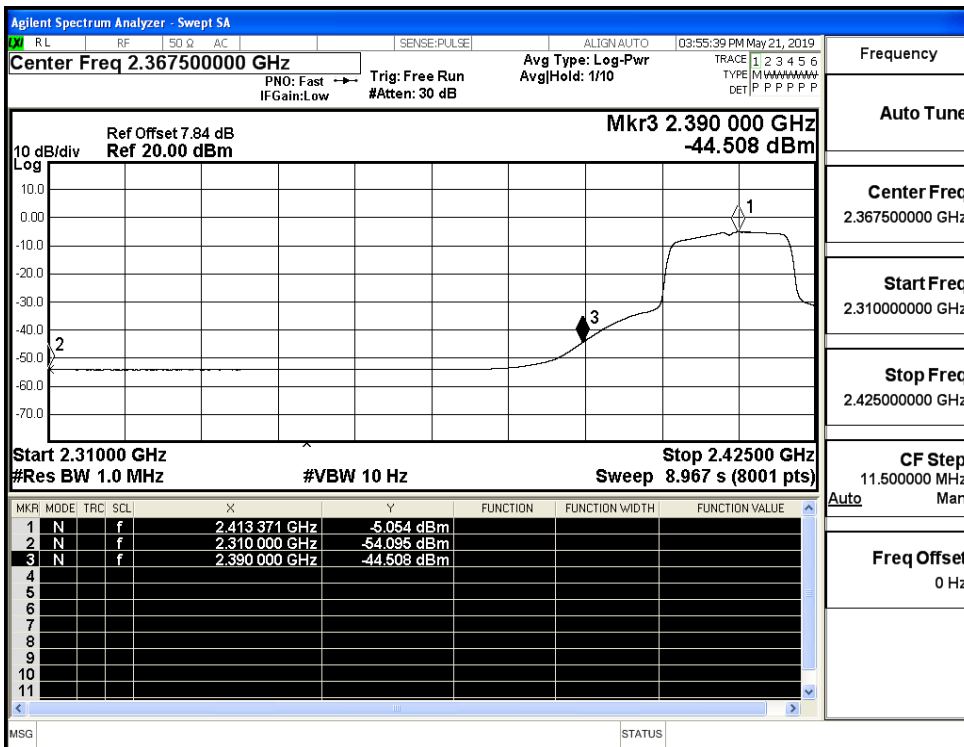
Restrict-band band-edge measurements\_11G\_2462\_Ant1\_AV



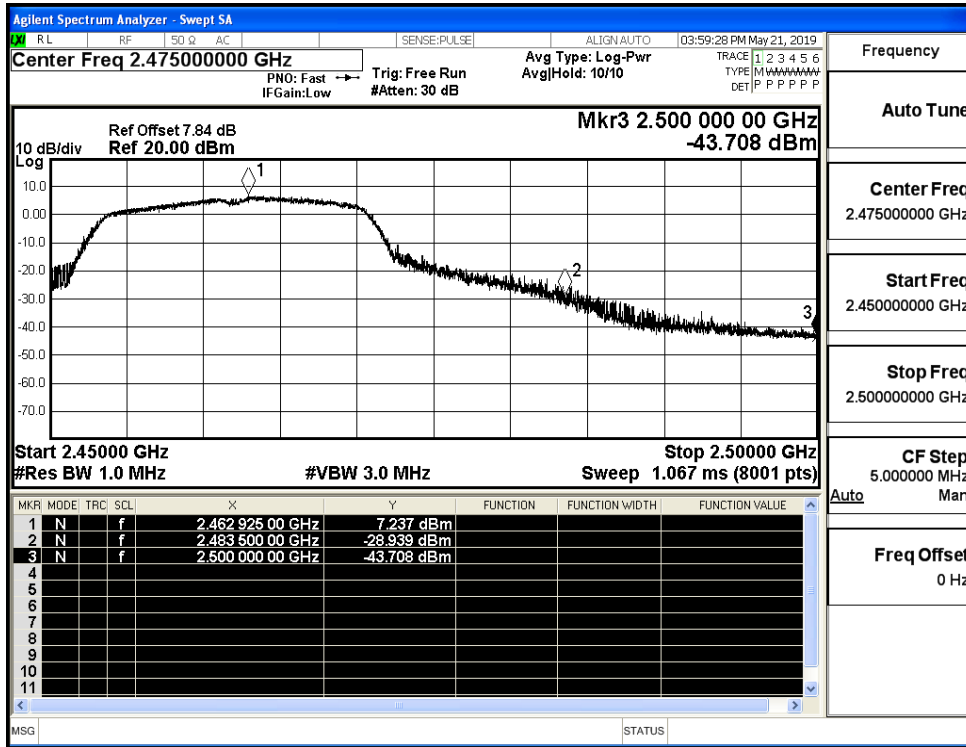
Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_PEAK



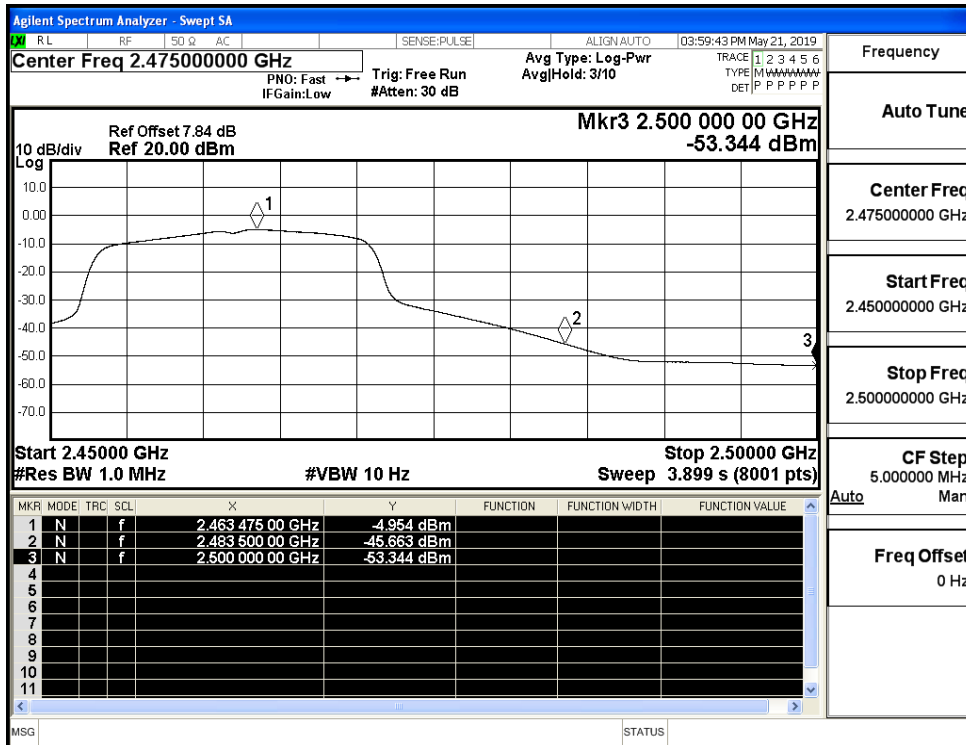
Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_AV



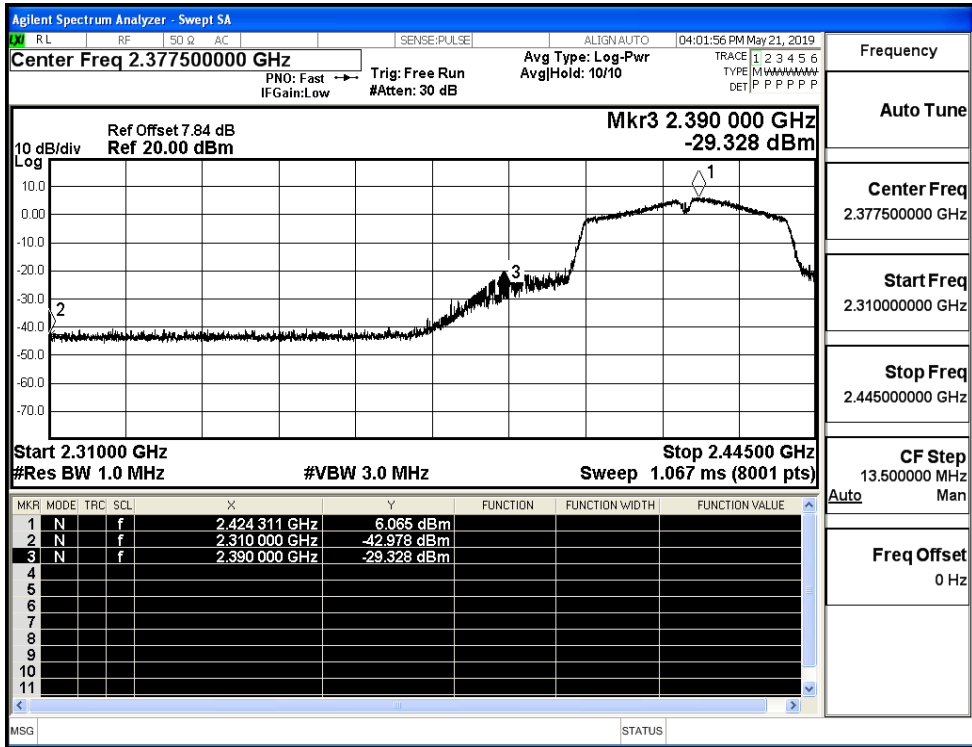
Restrict-band band-edge measurements\_11N20SISO\_2462\_Ant1\_PEAK



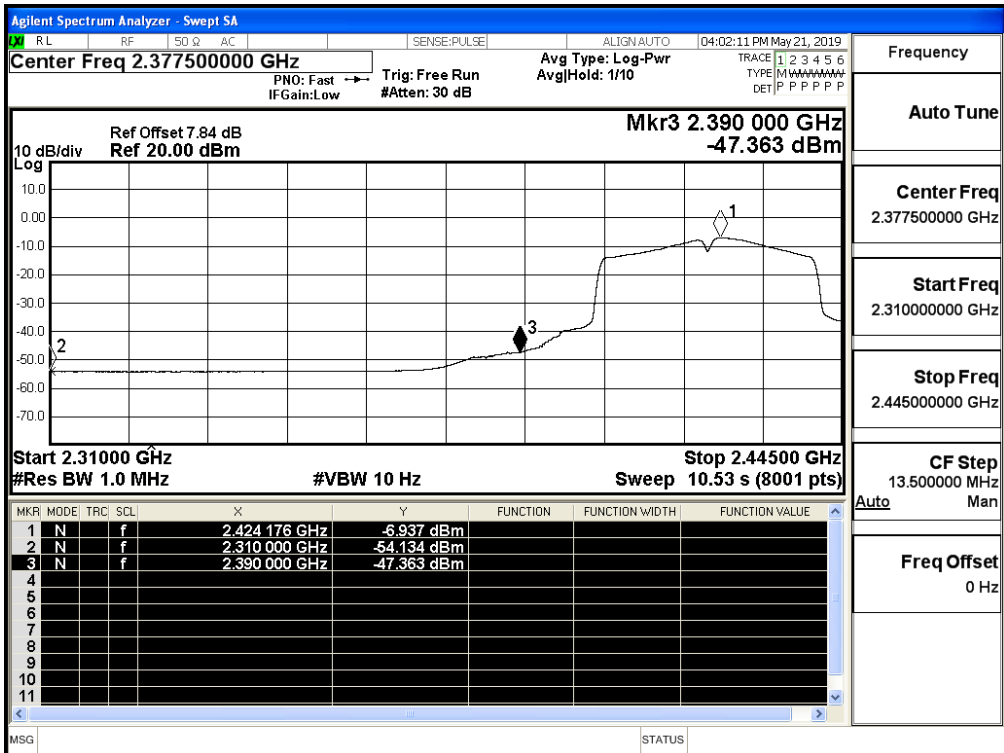
Restrict-band band-edge measurements\_11N20SISO\_2462\_Ant1\_AV



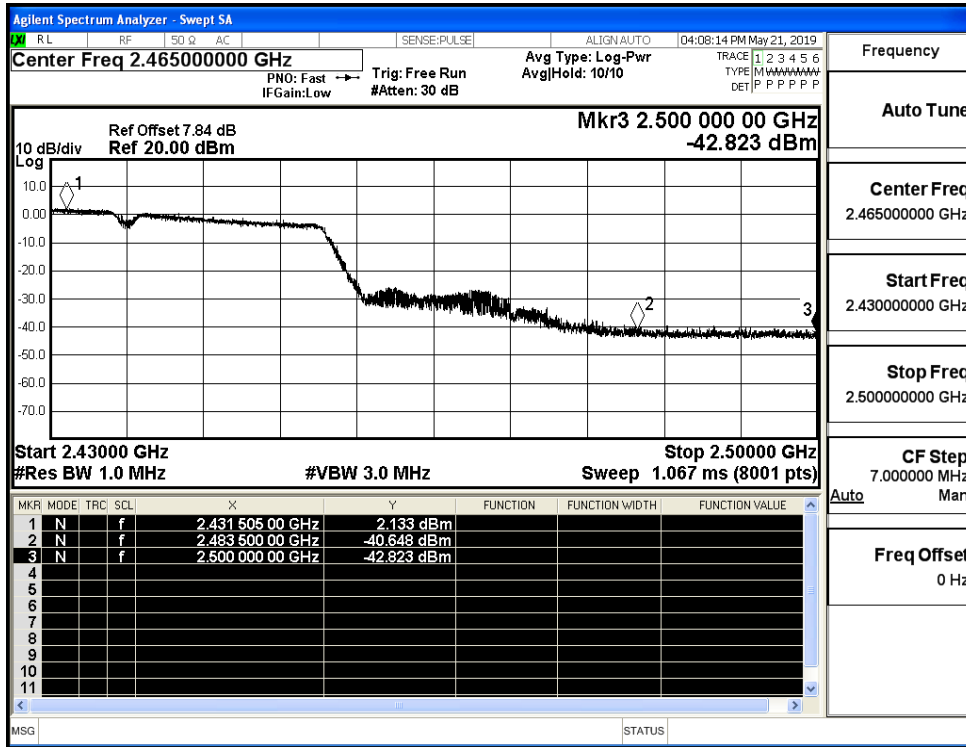
Restrict-band band-edge measurements\_11N40SISO\_2422\_Ant1\_PEAK



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

