

Appendix A
RF Test Data for 2.4G WIFI (Conducted Measurement)
Product Name: WIFI CLOUD DIGITAL PHOTO FRAME
Trade Mark: SYLVANIA
Test Model: SDPF1095-C

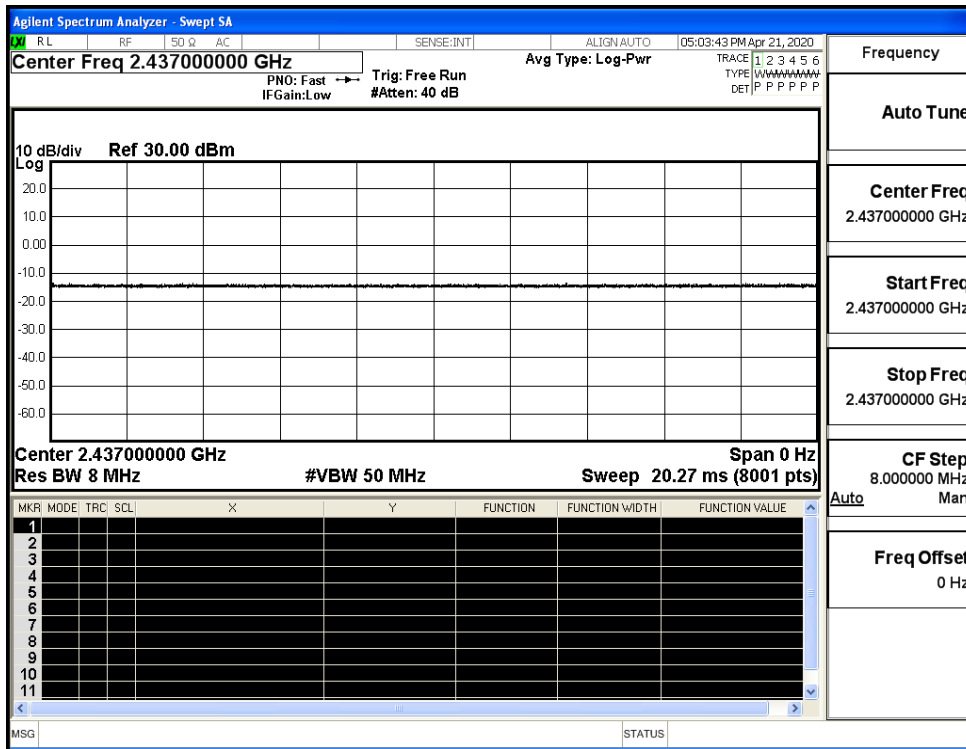
Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	53.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Qu Xin
Supervised by:	Li Huan

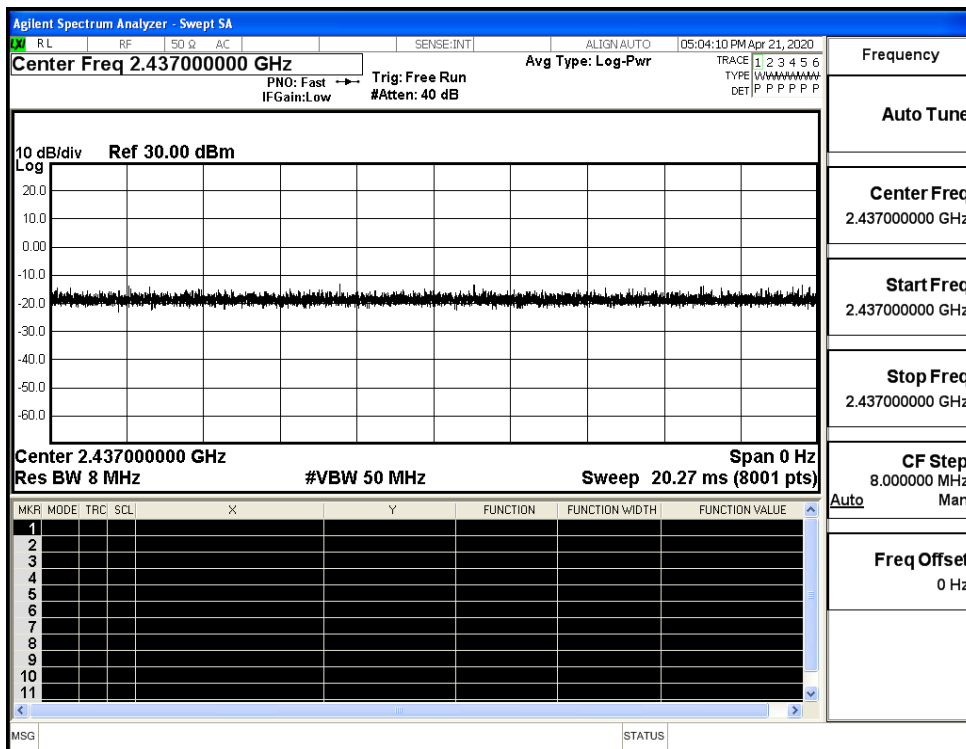
A.1 Duty Cycle

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

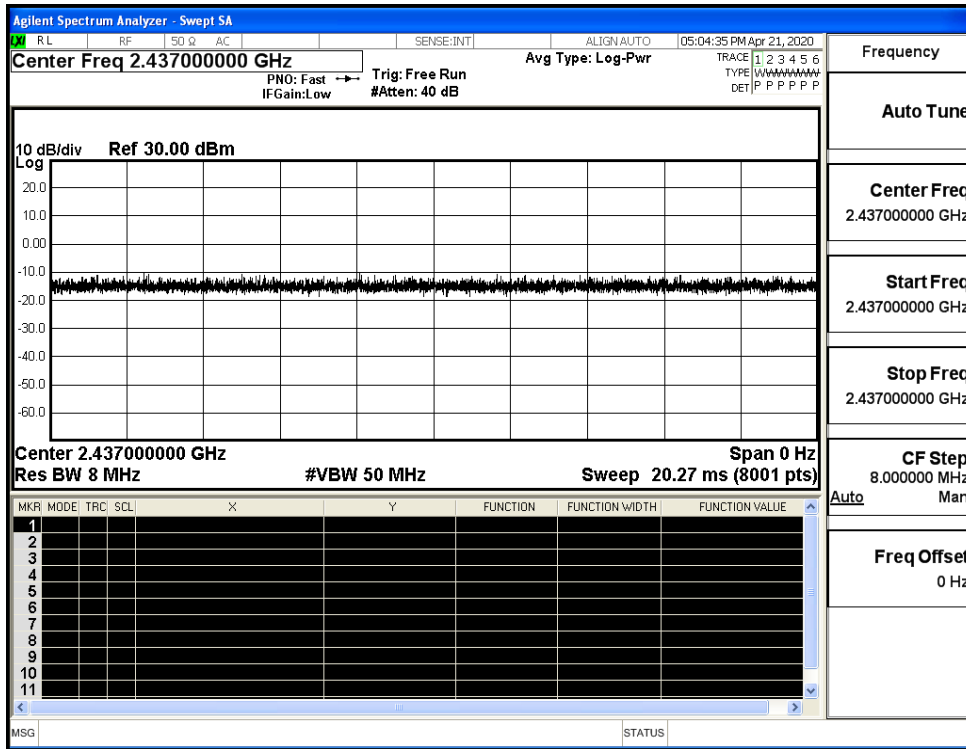
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Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1

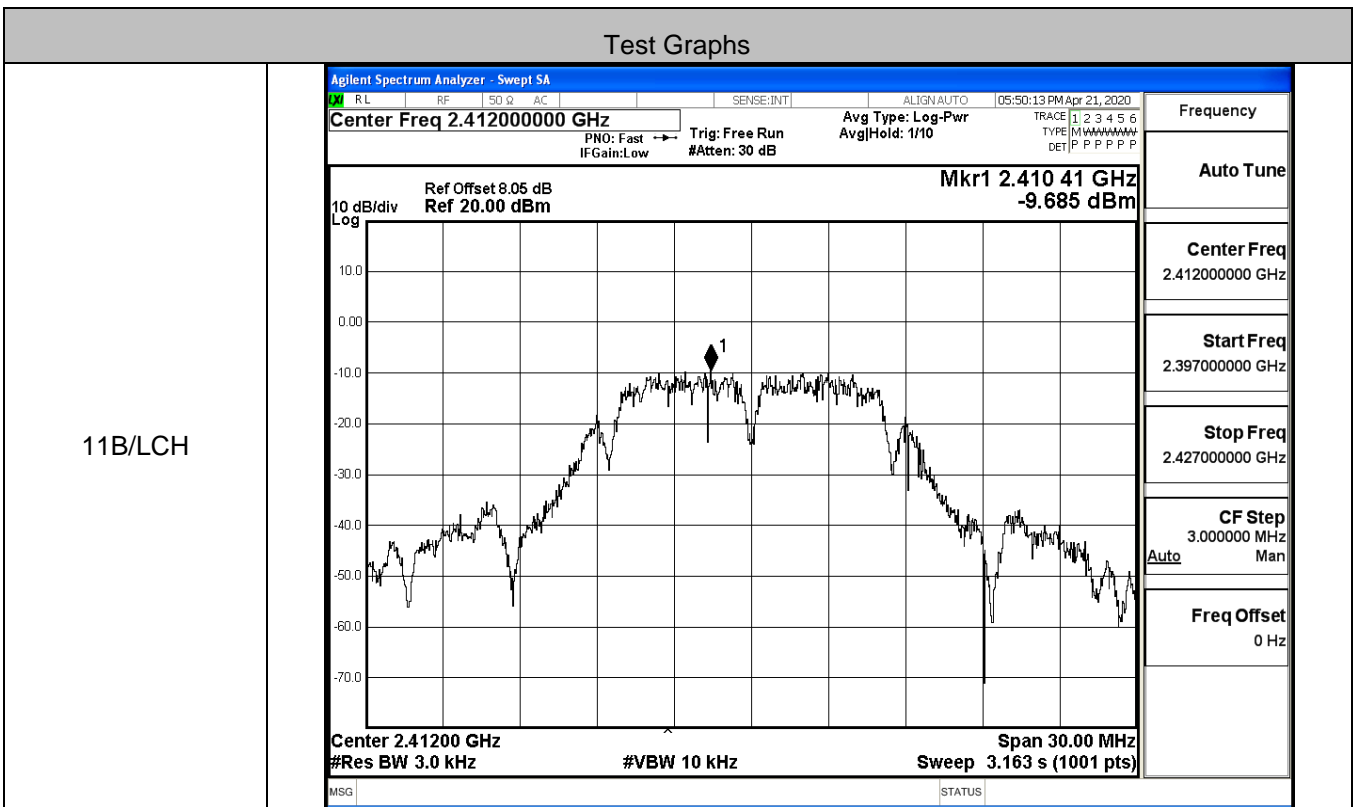


A.2 Maximum Conducted Output Power

Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	9.73	30	PASS
	MCH	10.56	30	PASS
	HCH	10.82	30	PASS
11G	LCH	11.53	30	PASS
	MCH	11.19	30	PASS
	HCH	11.47	30	PASS
11N20SISO	LCH	11.86	30	PASS
	MCH	11.53	30	PASS
	HCH	11.66	30	PASS

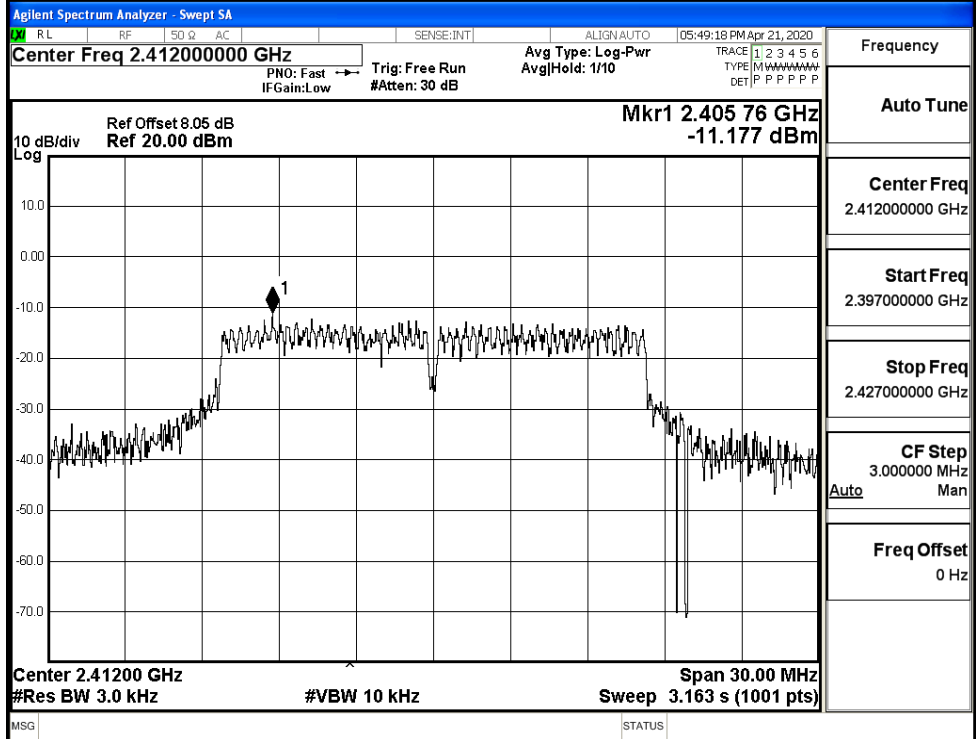
A.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-9.685	8	PASS
	MCH	-9.590	8	PASS
	HCH	-9.188	8	PASS
11G	LCH	-11.177	8	PASS
	MCH	-11.774	8	PASS
	HCH	-11.484	8	PASS
11N20SISO	LCH	-9.883	8	PASS
	MCH	-10.126	8	PASS
	HCH	-11.236	8	PASS

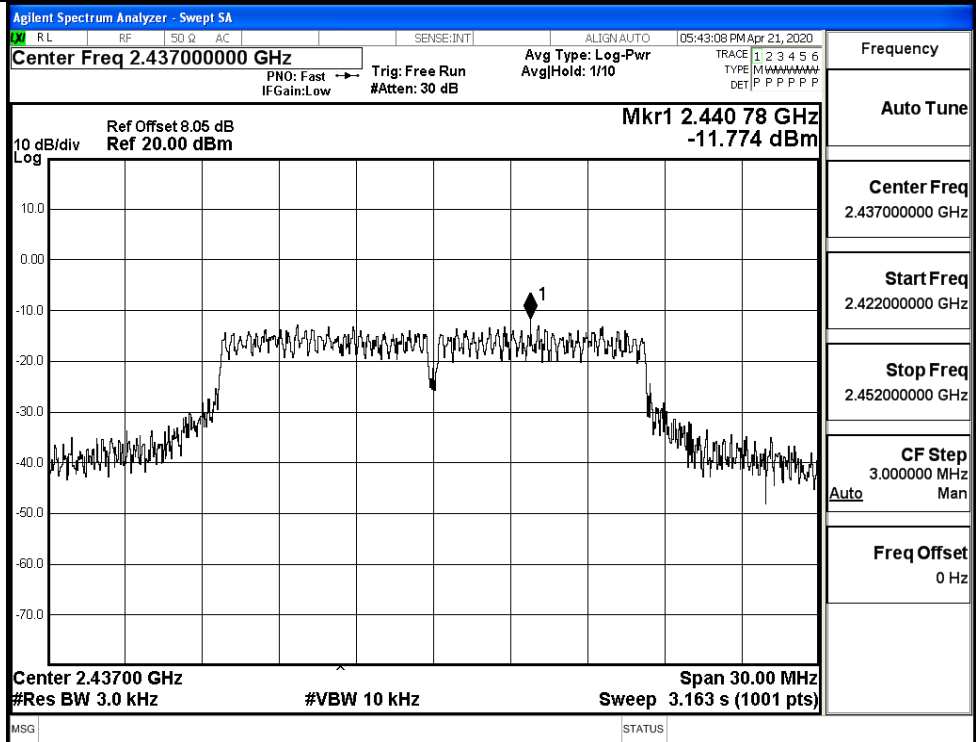


<p>11B/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.43700000 GHz</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Mkr1 2.438 71 GHz -9.590 dBm</p> <p>10 dB/div Log</p> <p>Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 3.163 s (1001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <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</p> <p>Freq Offset 0 Hz</p>
<p>11B/HCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.46200000 GHz</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Mkr1 2.463 71 GHz -9.188 dBm</p> <p>10 dB/div Log</p> <p>Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 3.163 s (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</p> <p>Freq Offset 0 Hz</p>

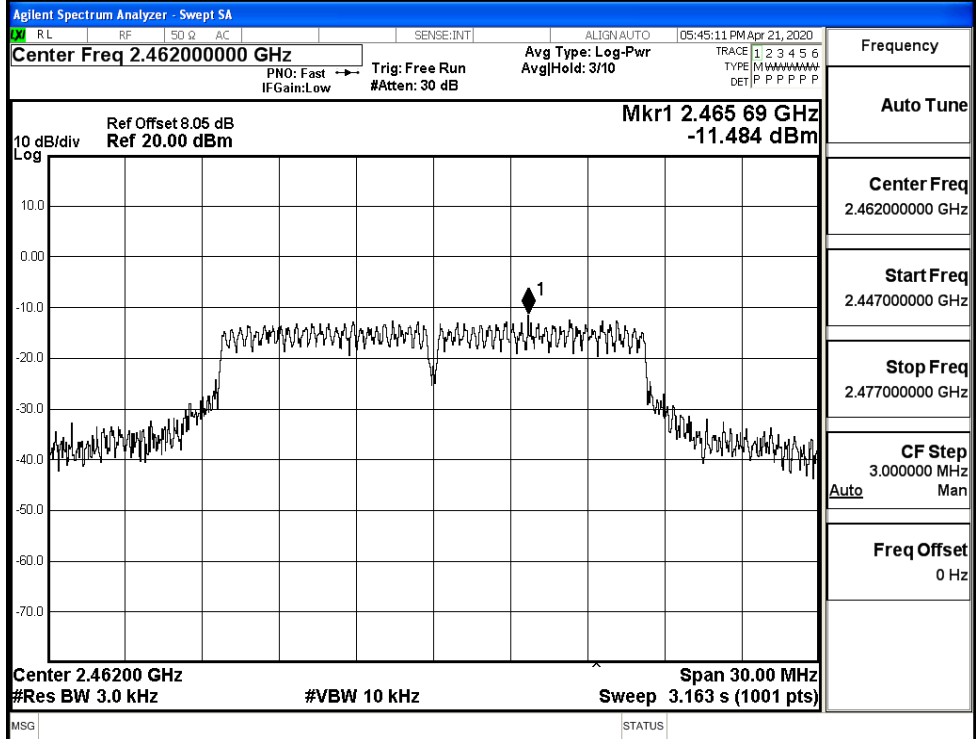
11G/LCH



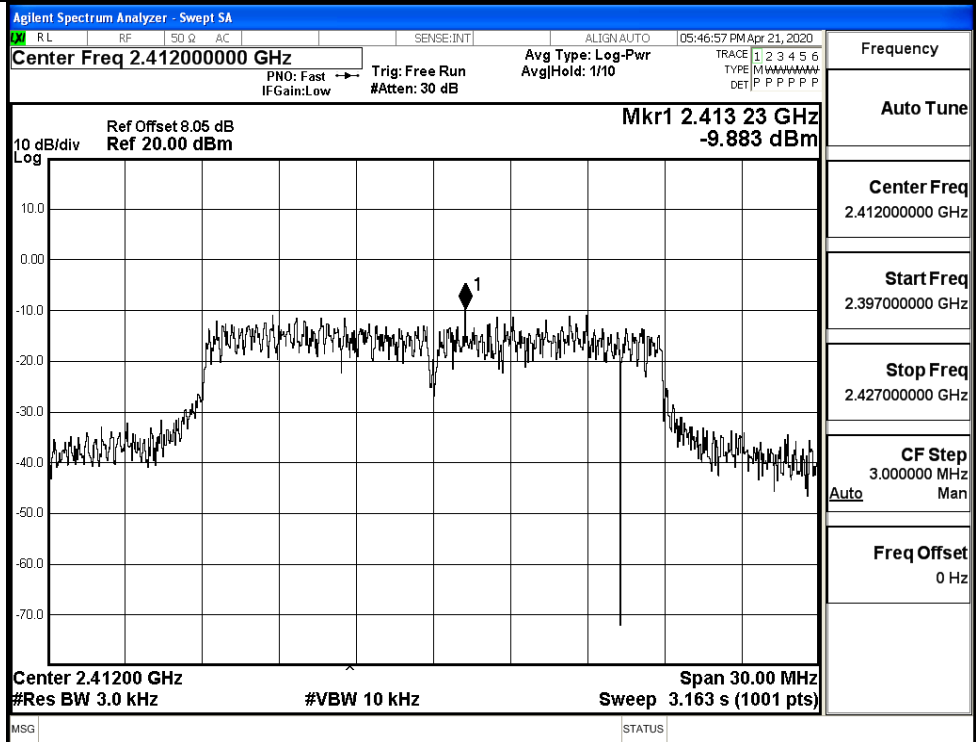
11G/MCH

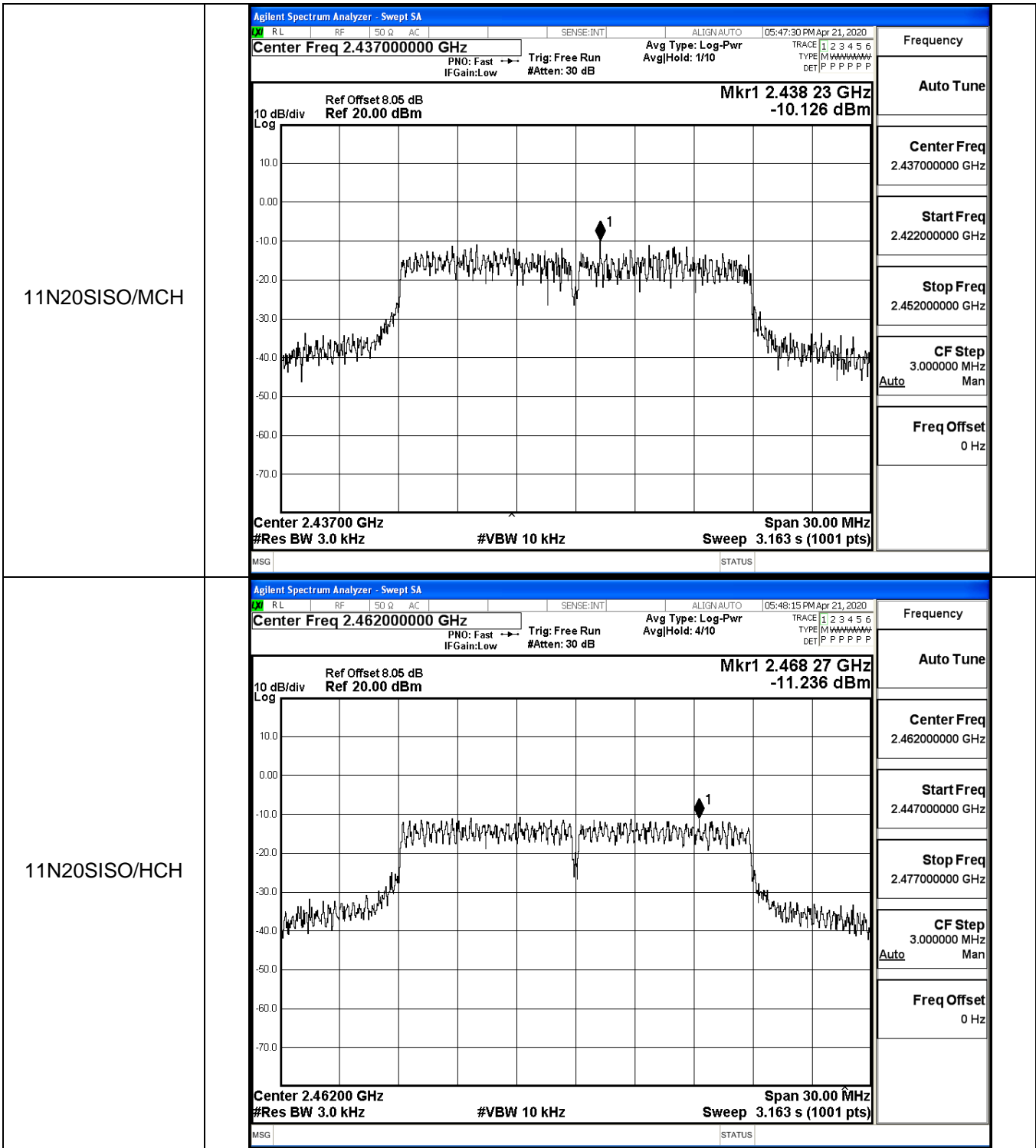


11G/HCH



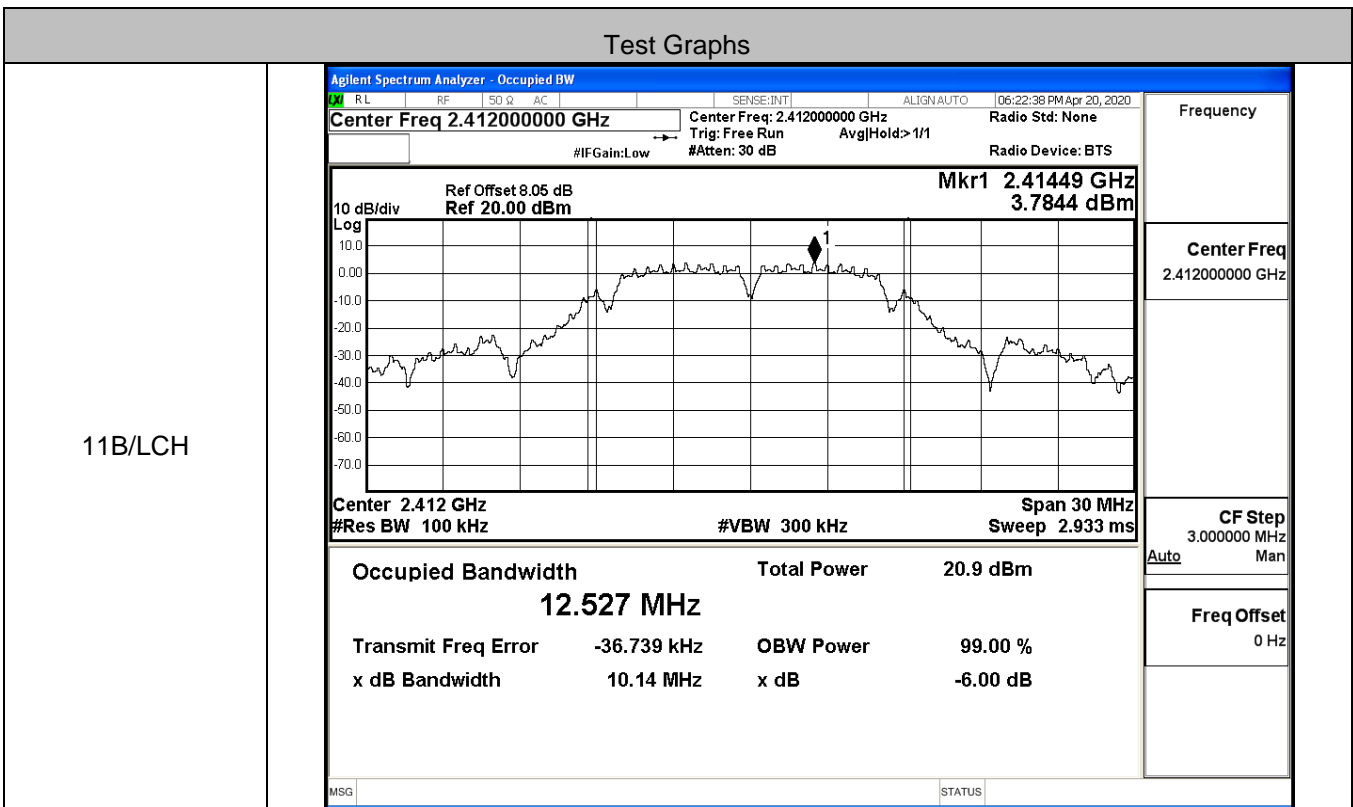
11N20SISO/LCH

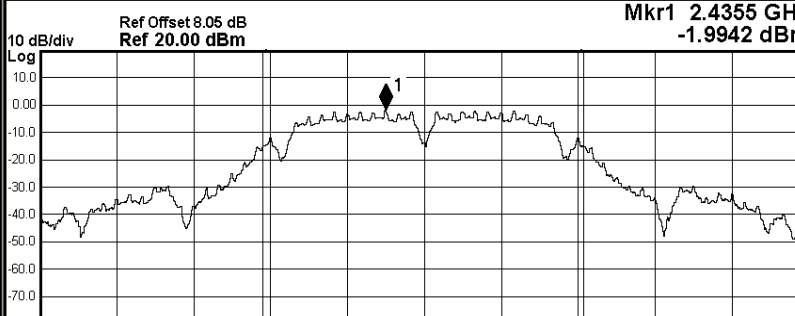
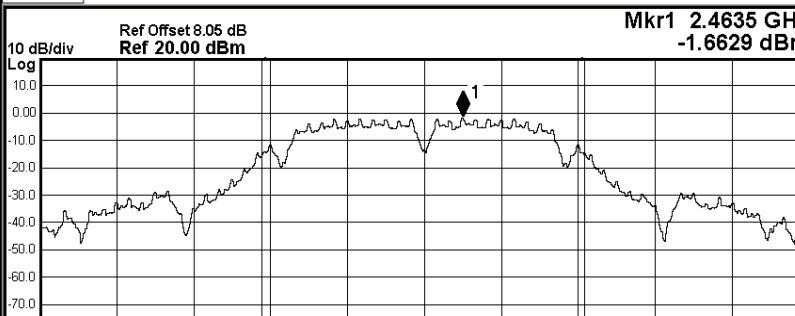




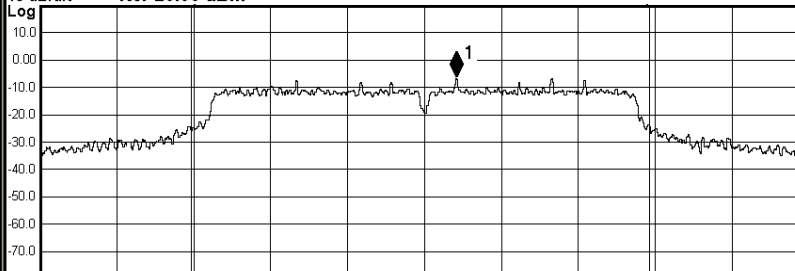
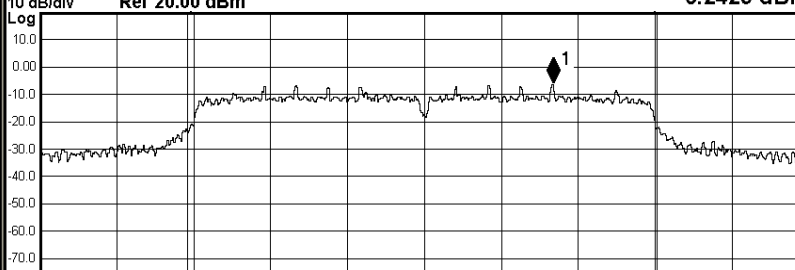
A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	10.14	≥0.5	PASS
	MCH	10.13	≥0.5	PASS
	HCH	10.13	≥0.5	PASS
11G	LCH	16.33	≥0.5	PASS
	MCH	16.33	≥0.5	PASS
	HCH	16.34	≥0.5	PASS
11N20SISO	LCH	17.18	≥0.5	PASS
	MCH	17.30	≥0.5	PASS
	HCH	17.10	≥0.5	PASS



<p>11B/MCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>RL RF SQ AC SENSE:INT ALIGN AUTO 06:35:24 PM Apr 20, 2020</p> <p>Center Freq 2.43700000 GHz Center Freq: 2.43700000 GHz Radio Std: None Trig: Free Run Avg Hold: 1/1 #IFGain:Low #Atten: 30 dB Radio Device: BTS</p>  <p>10 dB/div Ref Offset 8.05 dB Mkr1 2.4355 GHz Ref 20.00 dBm -1.9942 dBm</p> <p>Center 2.437 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 12.470 MHz Total Power 14.9 dBm</p> <p>Transmit Freq Error -21.259 kHz OBW Power 99.00 % x dB Bandwidth 10.13 MHz 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>11B/HCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>RL RF SQ AC SENSE:INT ALIGN AUTO 06:38:58 PM Apr 20, 2020</p> <p>Center Freq 2.46200000 GHz Center Freq: 2.46200000 GHz Radio Std: None Trig: Free Run Avg Hold: >1/1 #IFGain:Low #Atten: 30 dB Radio Device: BTS</p>  <p>10 dB/div Ref Offset 8.05 dB Mkr1 2.4635 GHz Ref 20.00 dBm -1.6629 dBm</p> <p>Center 2.462 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 12.531 MHz Total Power 15.2 dBm</p> <p>Transmit Freq Error -30.513 kHz OBW Power 99.00 % x dB Bandwidth 10.13 MHz 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>

<p>11G/LCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.41200000 GHz</p> <p>Center Freq: 2.41200000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB</p> <p>Mkr1 2.41701 GHz -3.4680 dBm</p> <p>10 dB/div Log Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Center 2.412 GHz #Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 17.248 MHz</p> <p>Total Power 13.7 dBm</p> <p>Transmit Freq Error -127.37 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 16.33 MHz</p> <p>x dB -6.00 dB</p>	<p>Frequency</p> <p>Center Freq 2.41200000 GHz</p> <p>CF Step 3.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>11G/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>Mkr1 2.43073 GHz -3.8174 dBm</p> <p>10 dB/div Log Ref Offset 8.05 dB Ref 20.00 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 17.272 MHz</p> <p>Total Power 13.4 dBm</p> <p>Transmit Freq Error -66.556 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 16.33 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 Auto Man</p> <p>Freq Offset 0 Hz</p>

<p>11G/HCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>RL RF 50 Ω AC SENSE:INT ALIGN AUTO 06:50:13 PM Apr 20, 2020</p> <p>Center Freq 2.46200000 GHz Center Freq: 2.46200000 GHz Radio Std: None Trig: Free Run Avg/Hold: 1/1 #IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <p>10 dB/div Ref Offset 8.05 dB Mkr1 2.46326 GHz Ref 20.00 dBm -6.6600 dBm</p>  <p>Center 2.462 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 17.778 MHz Total Power 10.5 dBm</p> <p>Transmit Freq Error -130.60 kHz OBW Power 99.00 % x dB Bandwidth 16.34 MHz 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>
	<p>11N20SISO/LCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>RL RF 50 Ω AC SENSE:INT ALIGN AUTO 06:55:02 PM Apr 20, 2020</p> <p>Center Freq 2.41200000 GHz Center Freq: 2.41200000 GHz Radio Std: None Trig: Free Run Avg/Hold: 1/1 #IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <p>10 dB/div Ref Offset 8.05 dB Mkr1 2.41701 GHz Ref 20.00 dBm -6.2429 dBm</p>  <p>Center 2.412 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 18.215 MHz Total Power 11.0 dBm</p> <p>Transmit Freq Error -62.677 kHz OBW Power 99.00 % x dB Bandwidth 17.18 MHz x dB -6.00 dB</p> <p>MSG STATUS</p>

<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 Avg Hold: 1/1 Radio Std: None Radio Device: BTS</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Mkr1 2.44198 GHz -6.6050 dBm</p> <p>10 dB/div Log</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 18.130 MHz</p> <p>Total Power 10.7 dBm</p> <p>Transmit Freq Error -30.606 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 17.30 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 Avg Hold: 1/1 Radio Std: None Radio Device: BTS</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Mkr1 2.46701 GHz -6.3709 dBm</p> <p>10 dB/div Log</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 18.340 MHz</p> <p>Total Power 10.8 dBm</p> <p>Transmit Freq Error -32.045 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 17.10 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>

A.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	3.92	-37.980	-16.080	PASS
	MCH	-2.002	-38.436	-22.002	PASS
	HCH	-2.645	-38.394	-22.645	PASS
11G	LCH	-3.806	-38.206	-23.806	PASS
	MCH	-7.041	-37.755	-27.041	PASS
	HCH	-6.397	-38.470	-26.397	PASS
11N20 SISO	LCH	-7.077	-37.930	-27.077	PASS
	MCH	-6.436	-37.715	-26.436	PASS
	HCH	-6.834	-38.151	-26.834	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 8.05 dB Ref 20.00 dBm</p> <p>Mkr1 2.410 505 GHz 3.920 dBm</p> <p>10 dB/div Log</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 8.05 dB Ref 20.00 dBm</p> <p>Mkr2 25.351 GHz -37.980 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>

11B_MCH_Graphs

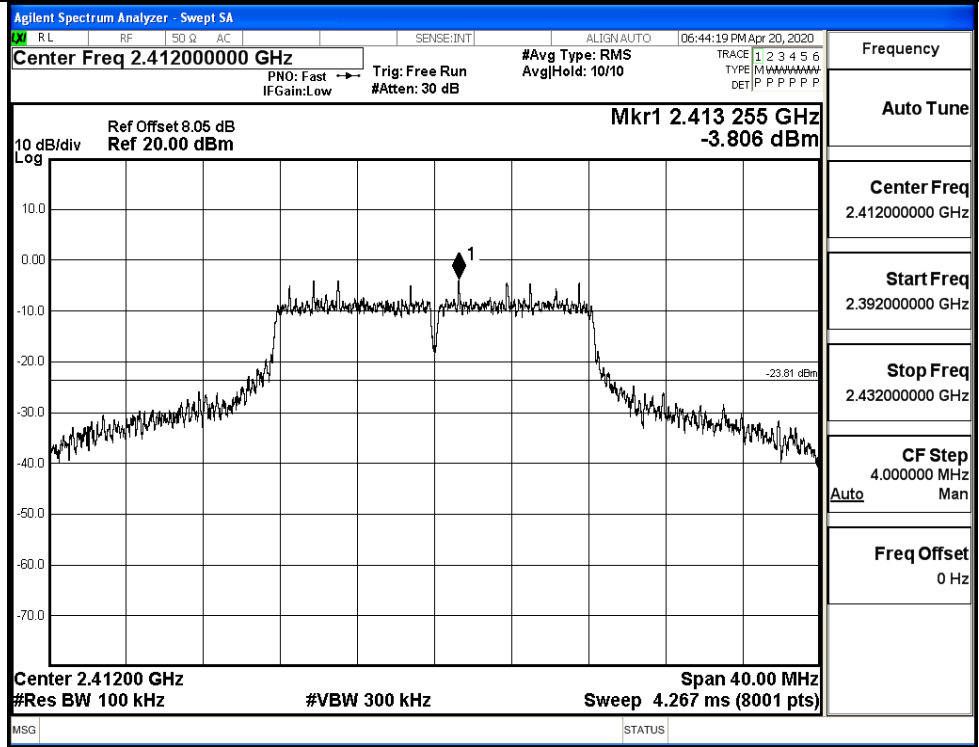
<p>Pref/11B/MCH</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.437000000 GHz</p> <p>Start Freq 2.417000000 GHz</p> <p>Stop Freq 2.457000000 GHz</p> <p>CF Step 4.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
	<p>Puw/11B/MCH</p>	

11B_HCH_Graphs

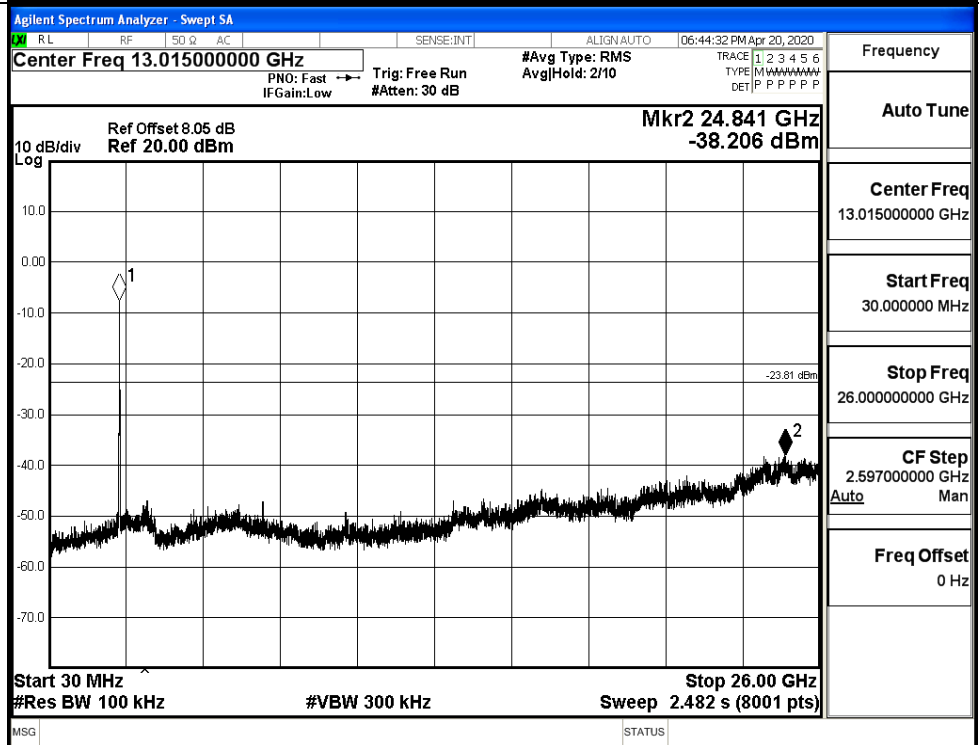
<p>Pref/11B/HCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.46200000 GHz</p> <p>Mkr1 2.463 500 GHz -2.645 dBm</p> <p>10 dB/div Log</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Center 2.46200 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 4.267 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto 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/11B/HCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 13.01500000 GHz</p> <p>Mkr2 24.724 GHz -38.394 dBm</p> <p>10 dB/div Log</p> <p>Ref Offset 8.05 dB Ref 20.00 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>

11G_LCH_Graphs

Pref/11G/LCH



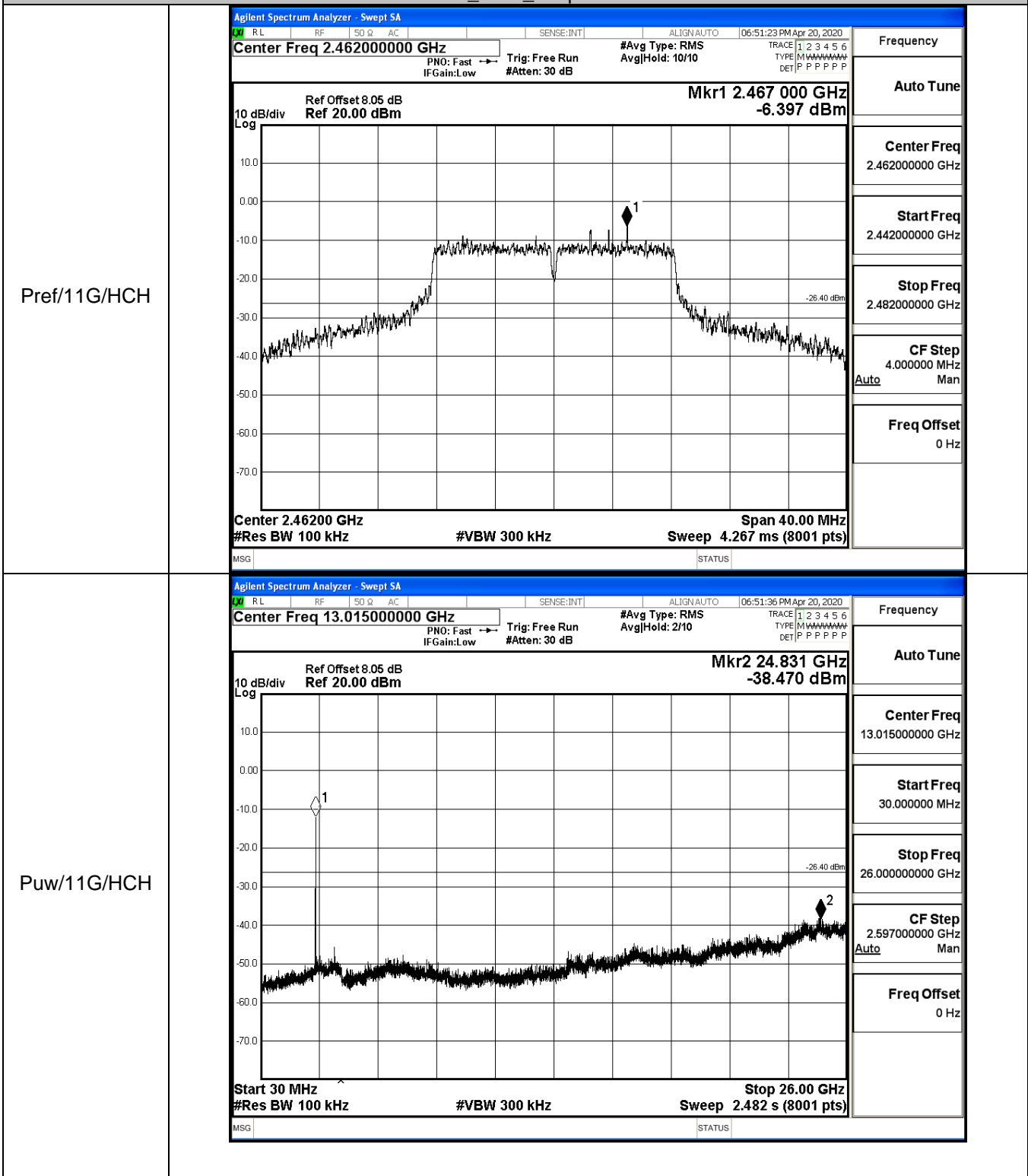
Puw/11G/LCH



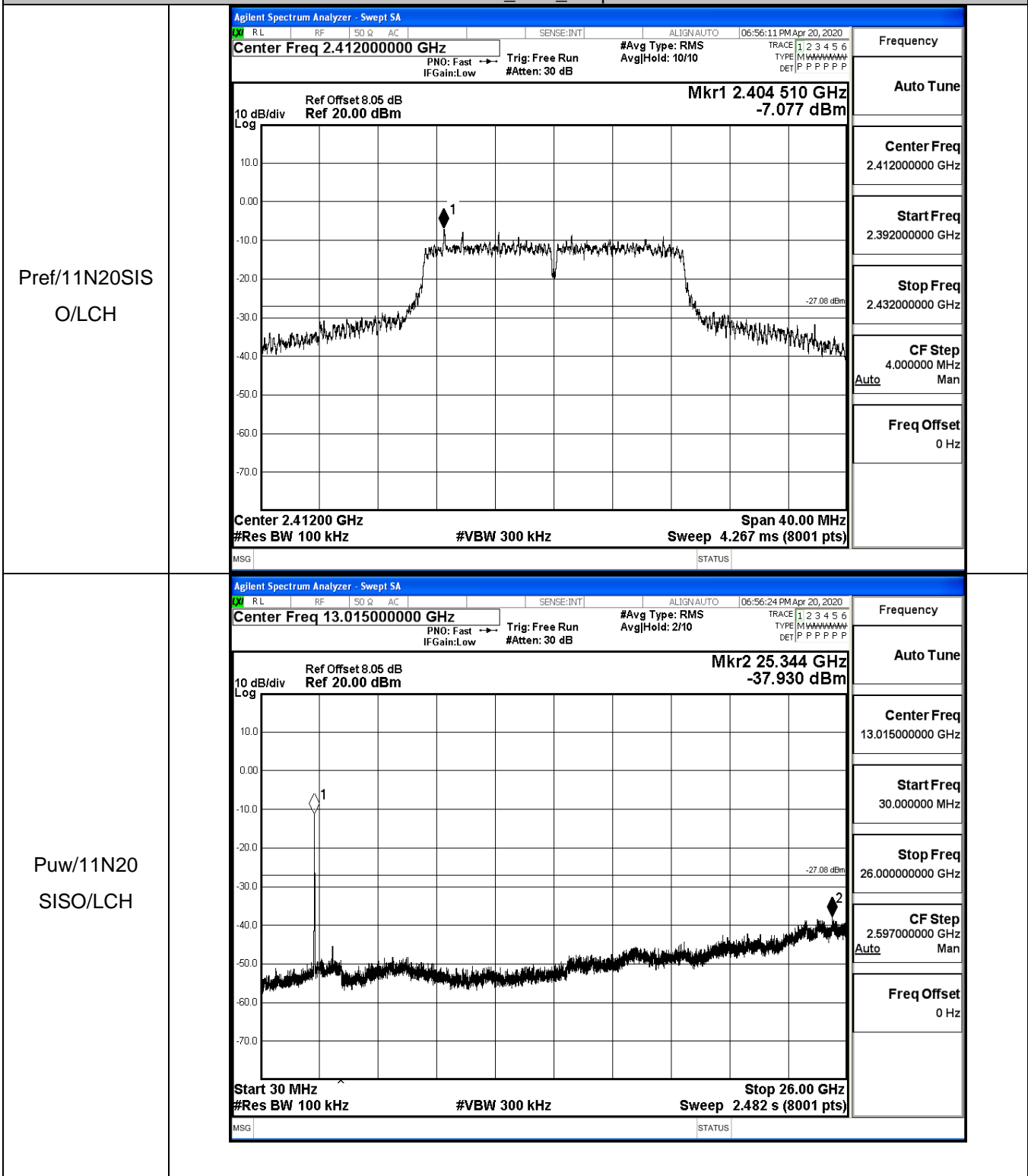
11G_MCH_Graphs

<p>Pref/11G/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/11G/MCH</p>	

11G_HCH_Graphs



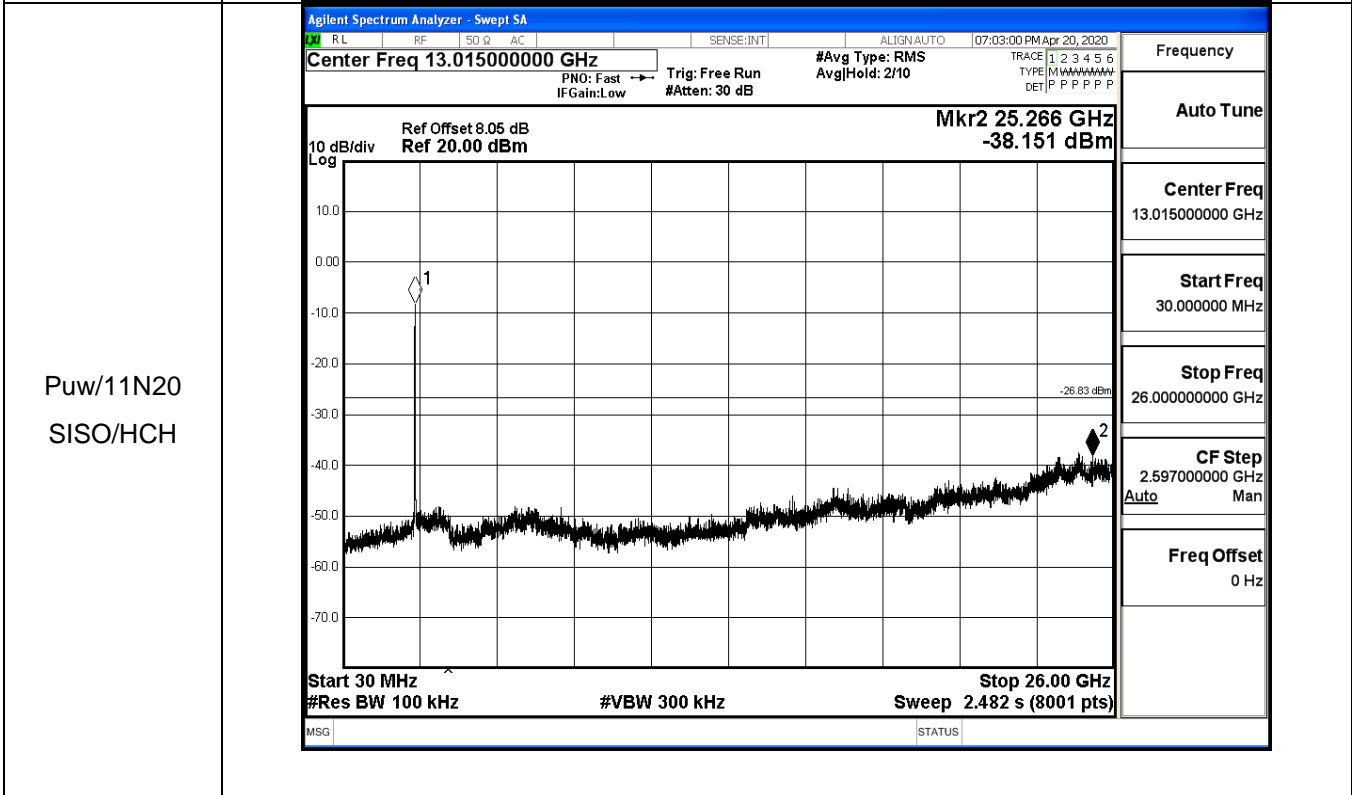
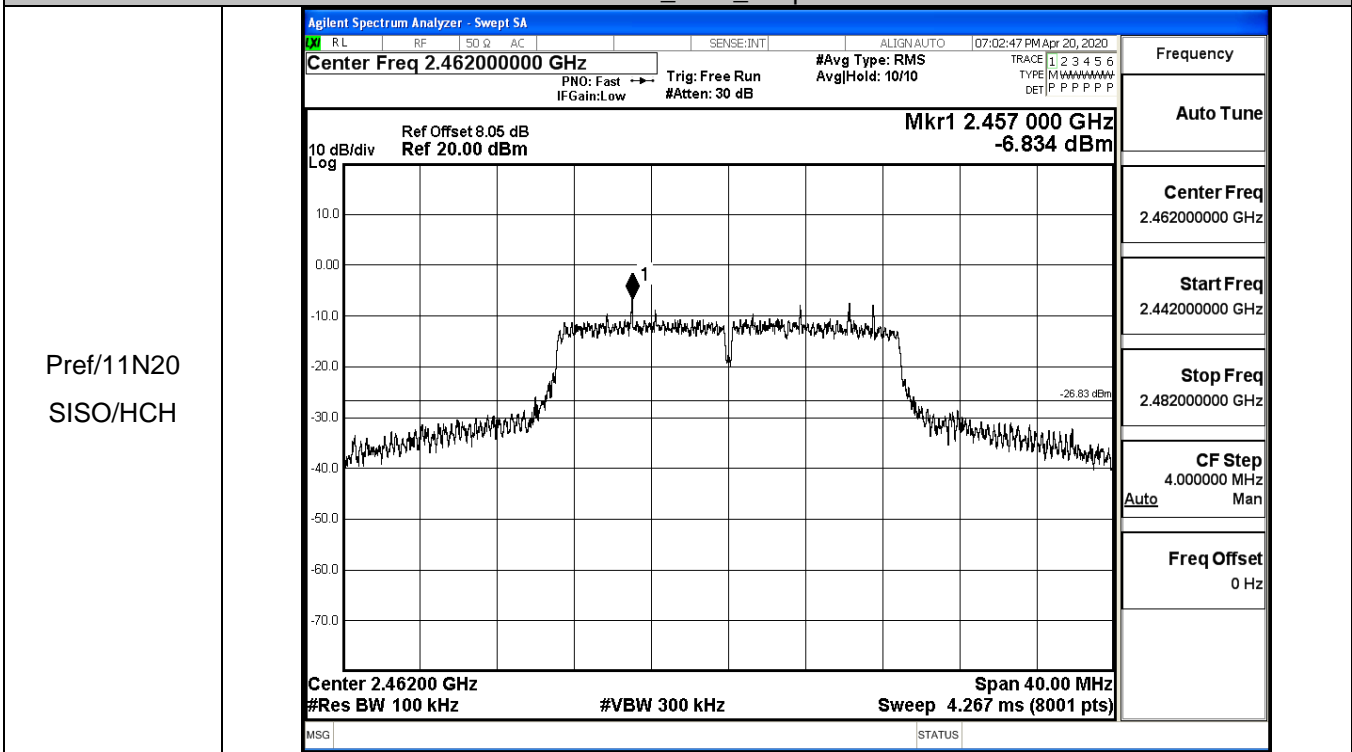
11N20SISO_LCH_Graphs



11N20SISO_MCH_Graphs

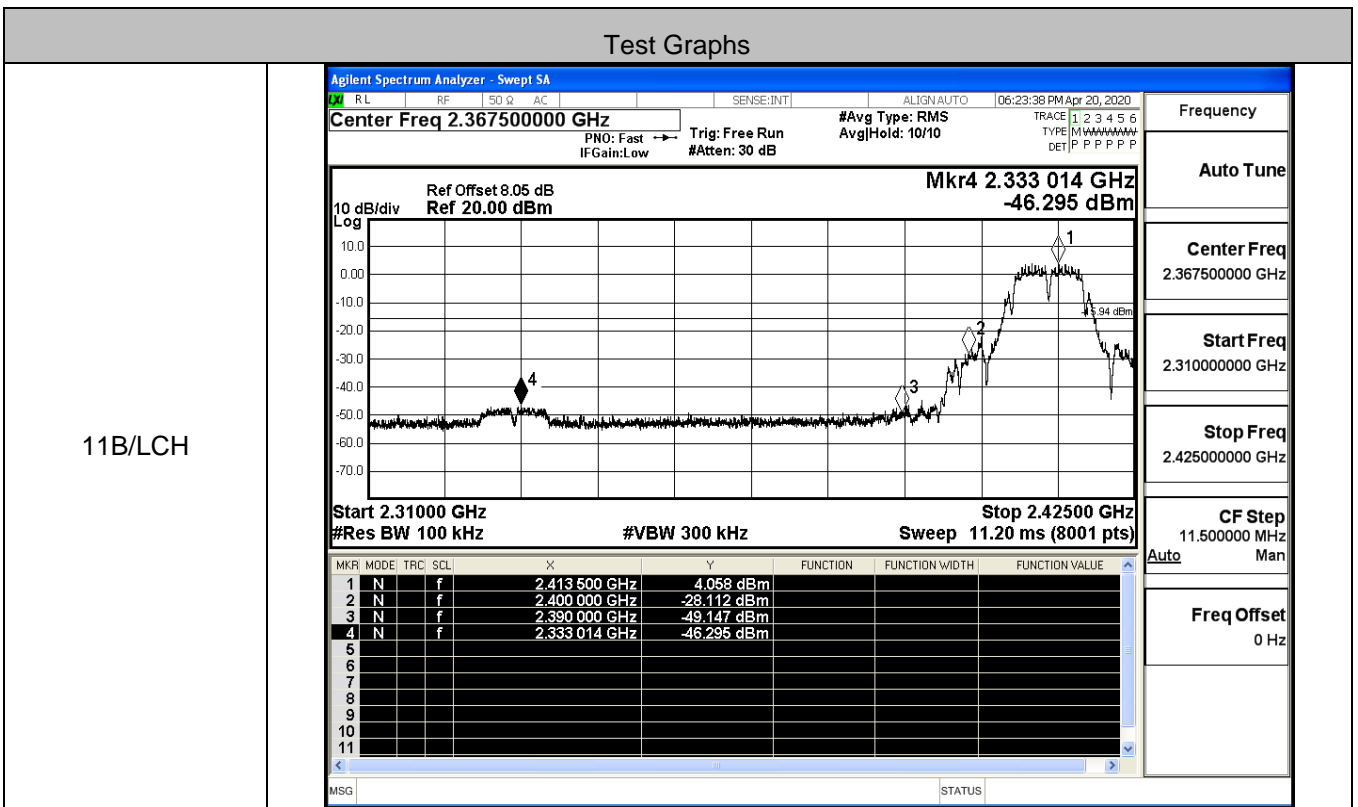
<p>Pref/11N20 SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.43700000 GHz</p> <p>Mkr1 2.441985 GHz -6.436 dBm</p> <p>Center 2.43700 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 4.267 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.437000000 GHz</p> <p>Start Freq 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/11N20 SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 13.01500000 GHz</p> <p>Mkr2 24.727 GHz -37.715 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_HCH_Graphs

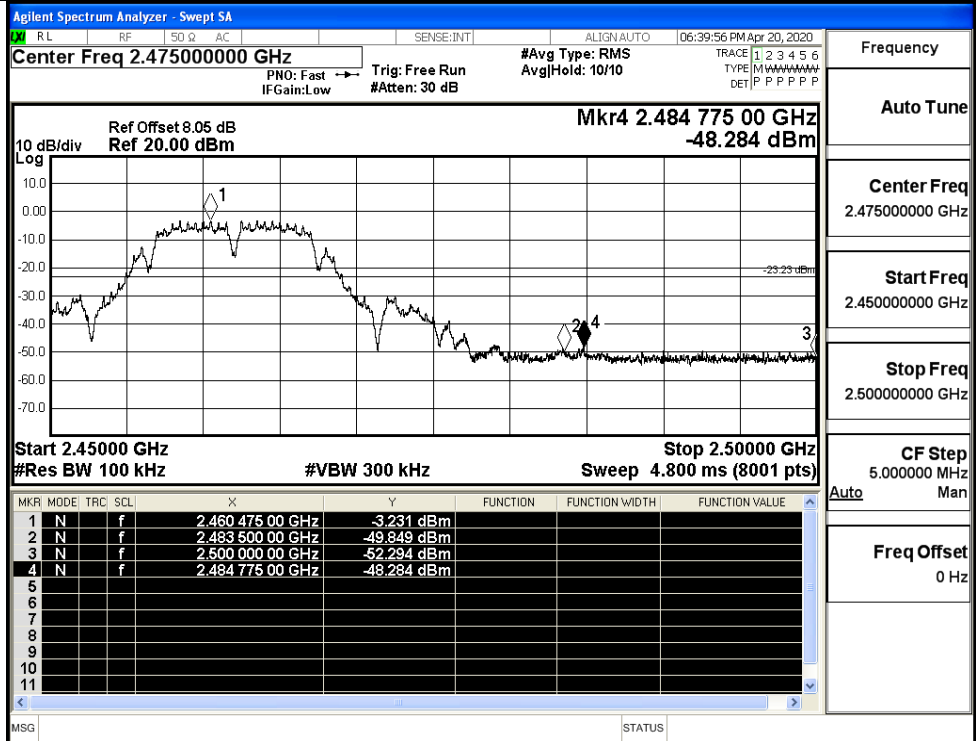


A.6 Band-edge for RF Conducted Emissions

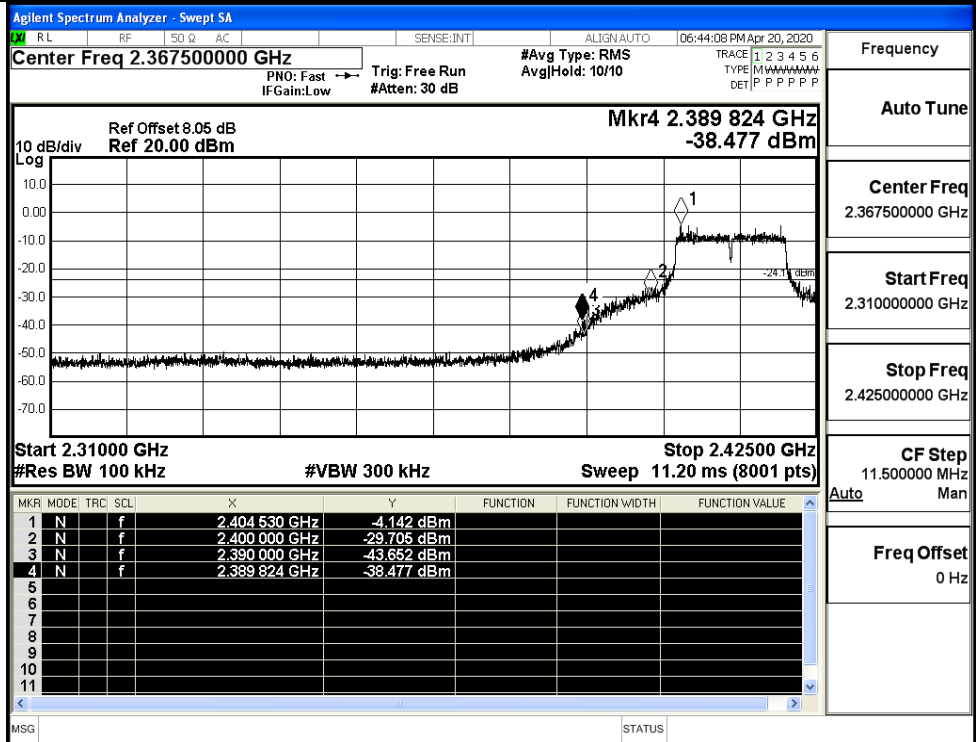
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	4.058	-46.295	-15.94	PASS
	HCH	-3.231	-48.284	-23.23	PASS
11G	LCH	-4.142	-38.477	-24.14	PASS
	HCH	-6.777	-40.011	-26.78	PASS
11N20SISO	LCH	-7.223	-39.533	-27.22	PASS
	HCH	-6.640	-38.578	-26.64	PASS



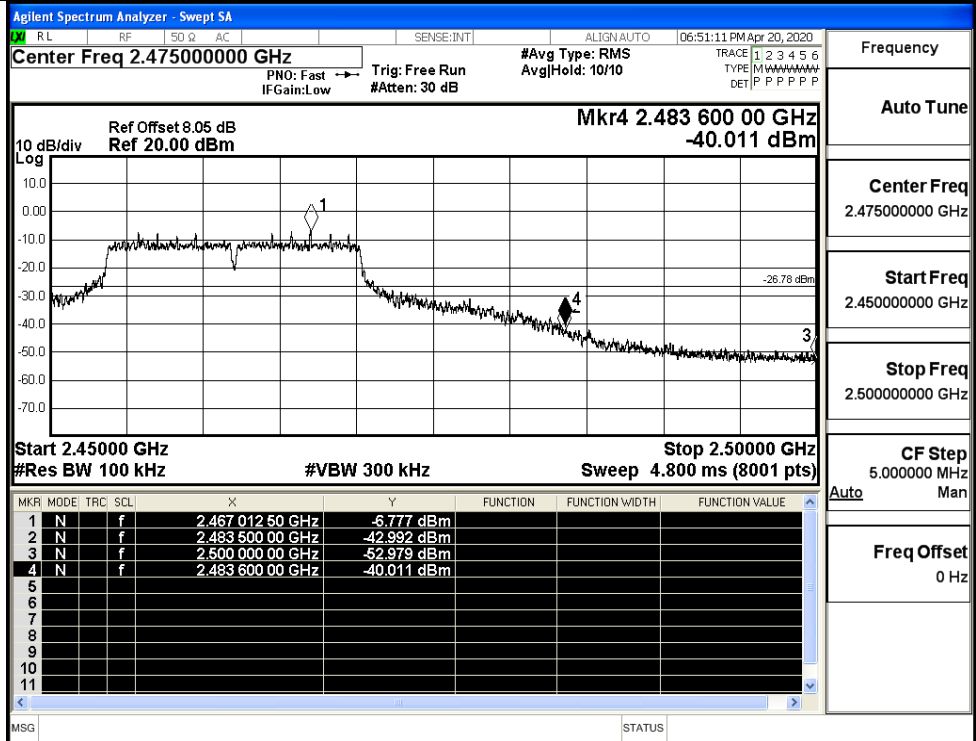
11B/HCH



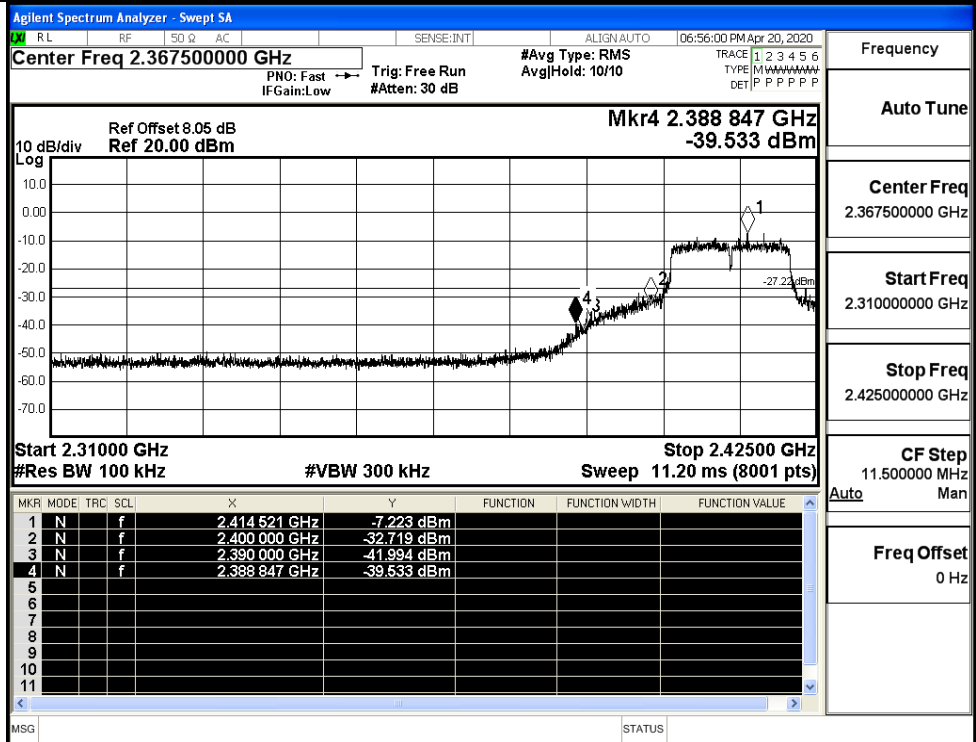
11G/LCH

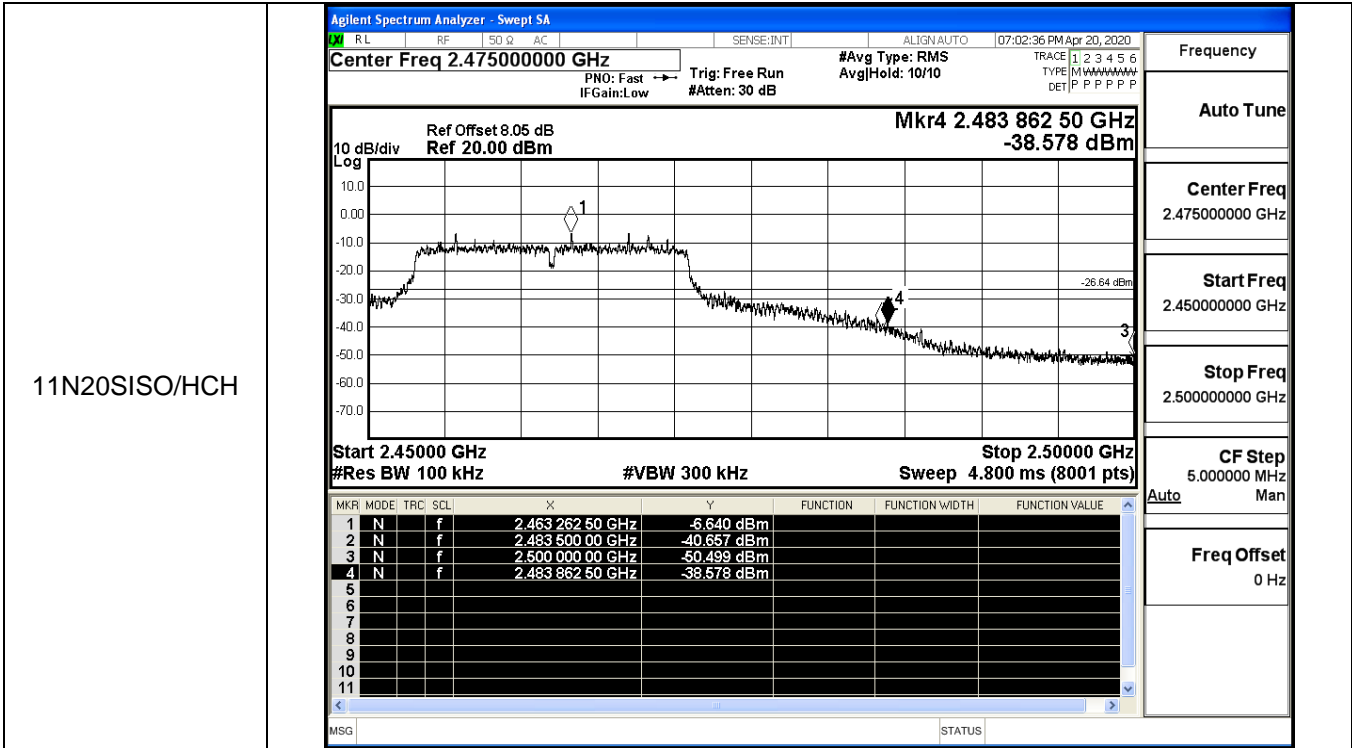


11G/HCH



11N20SISO/LCH

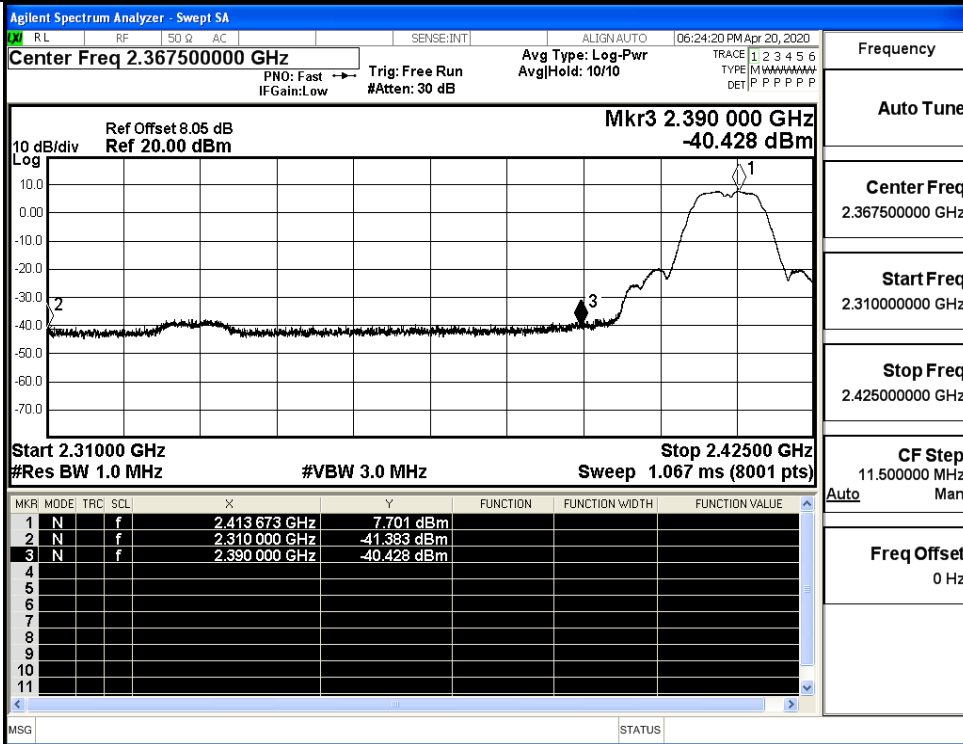




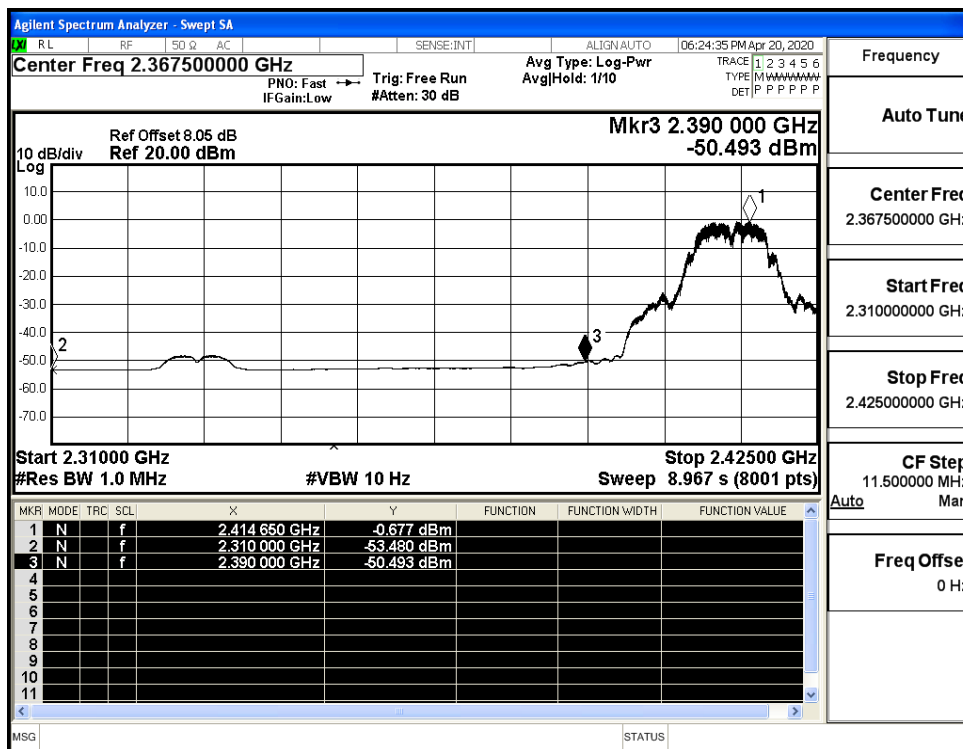
A.7 Restrict-band band-edge measurements

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	-41.38	2.0	0	55.85	PEAK	74	PASS
	2412	Ant1	2310.0	-53.48	2.0	0	43.75	AV	54	PASS
	2412	Ant1	2390.0	-40.43	2.0	0	56.80	PEAK	74	PASS
	2412	Ant1	2390.0	-50.49	2.0	0	46.74	AV	54	PASS
	2462	Ant1	2483.5	-39.55	2.0	0	57.68	PEAK	74	PASS
	2462	Ant1	2483.5	-50.76	2.0	0	46.47	AV	54	PASS
	2462	Ant1	2500.0	-41.24	2.0	0	55.99	PEAK	74	PASS
	2462	Ant1	2500.0	-52.59	2.0	0	44.64	AV	54	PASS
11G	2412	Ant1	2310.0	-43.41	2.0	0	53.82	PEAK	74	PASS
	2412	Ant1	2310.0	-53.64	2.0	0	43.59	AV	54	PASS
	2412	Ant1	2390.0	-27.10	2.0	0	70.13	PEAK	74	PASS
	2412	Ant1	2390.0	-47.17	2.0	0	50.06	AV	54	PASS
	2462	Ant1	2483.5	-29.52	2.0	0	67.71	PEAK	74	PASS
	2462	Ant1	2483.5	-47.10	2.0	0	50.13	AV	54	PASS
	2462	Ant1	2500.0	-41.86	2.0	0	55.37	PEAK	74	PASS
	2462	Ant1	2500.0	-52.46	2.0	0	44.77	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-42.44	2.0	0	54.79	PEAK	74	PASS
	2412	Ant1	2310.0	-53.71	2.0	0	43.52	AV	54	PASS
	2412	Ant1	2390.0	-26.82	2.0	0	70.41	PEAK	74	PASS
	2412	Ant1	2390.0	-47.55	2.0	0	49.68	AV	54	PASS
	2462	Ant1	2483.5	-29.37	2.0	0	67.86	PEAK	74	PASS
	2462	Ant1	2483.5	-45.84	2.0	0	51.39	AV	54	PASS
	2462	Ant1	2500.0	-42.75	2.0	0	54.48	PEAK	74	PASS
	2462	Ant1	2500.0	-52.39	2.0	0	44.84	AV	54	PASS

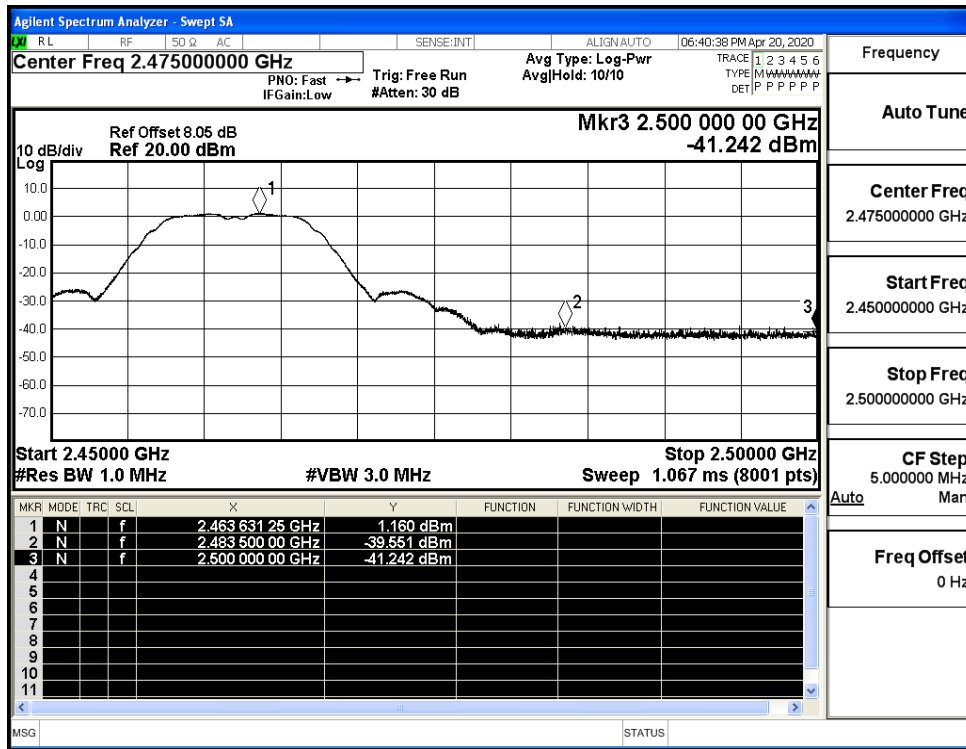
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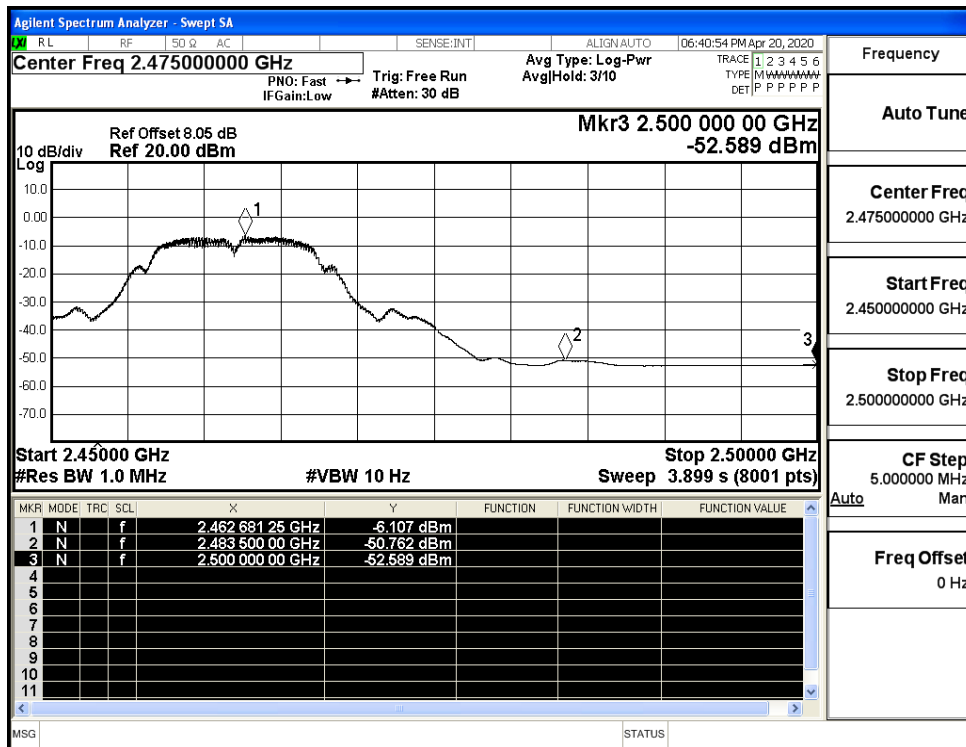
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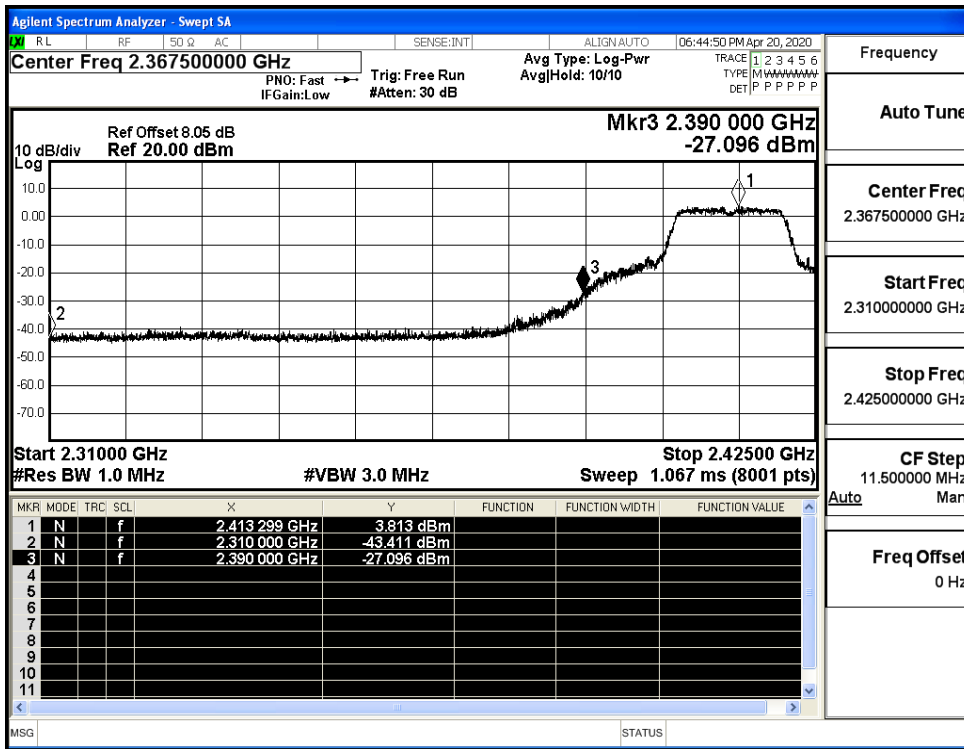
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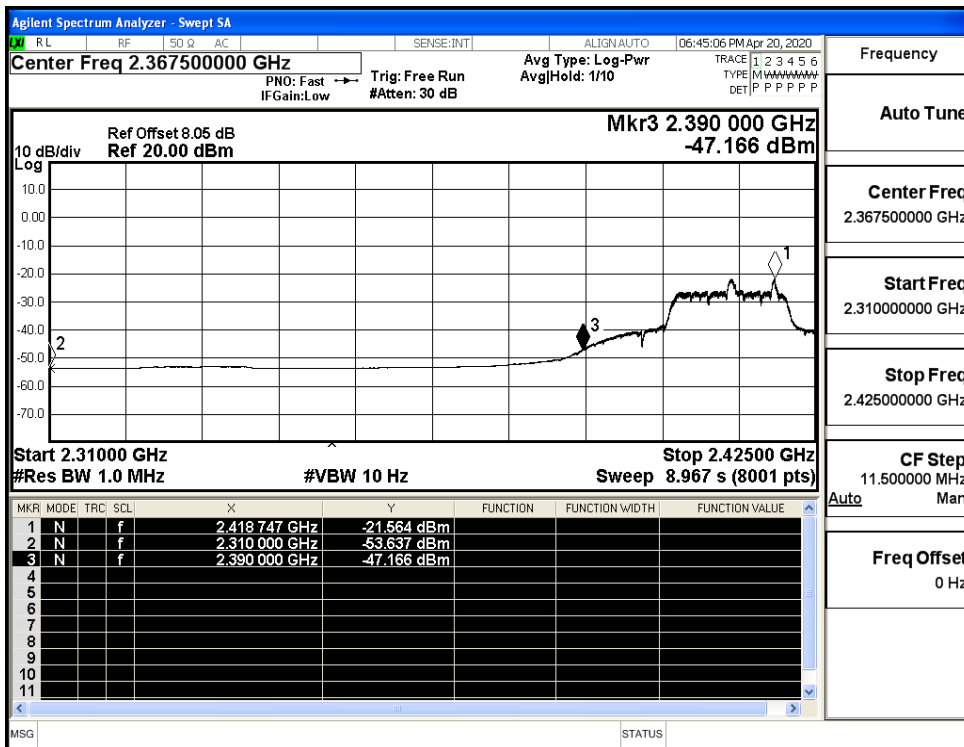
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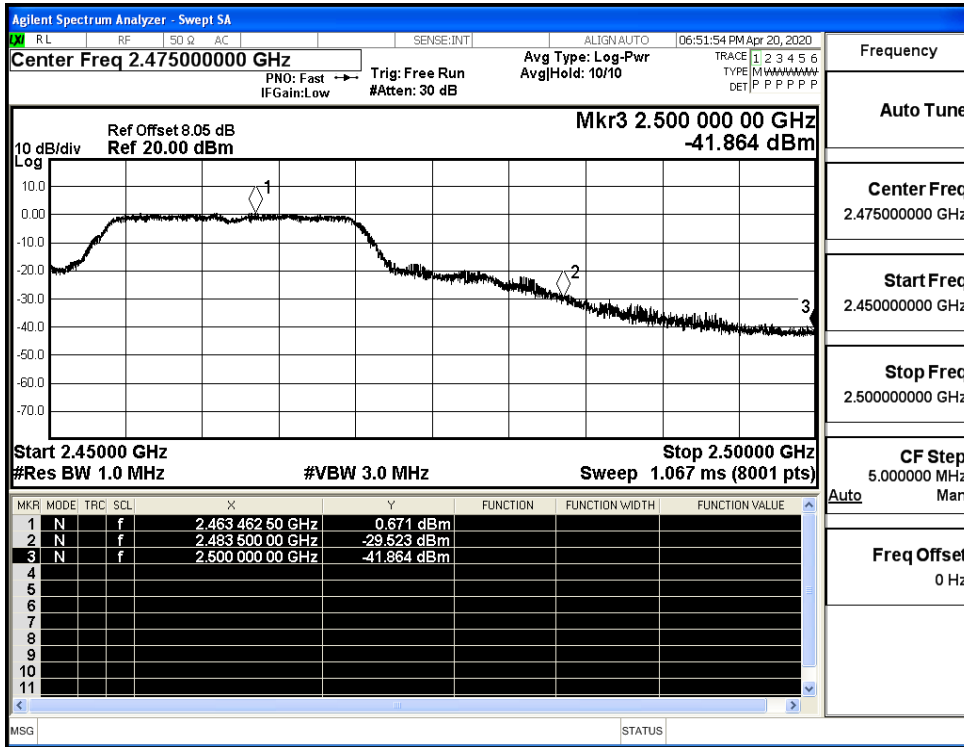
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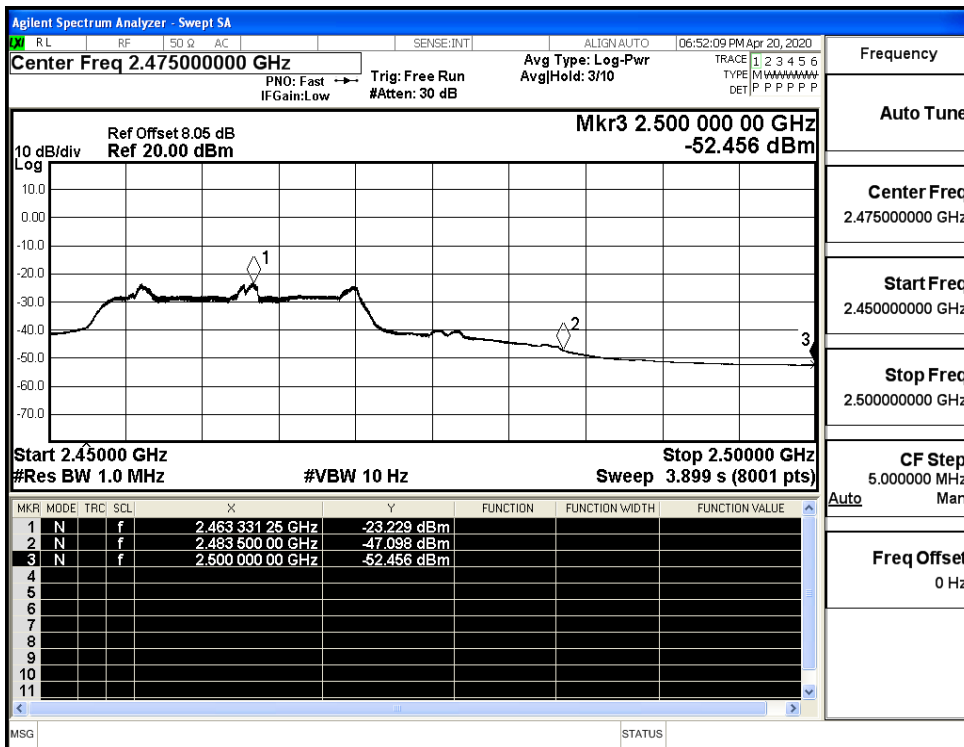
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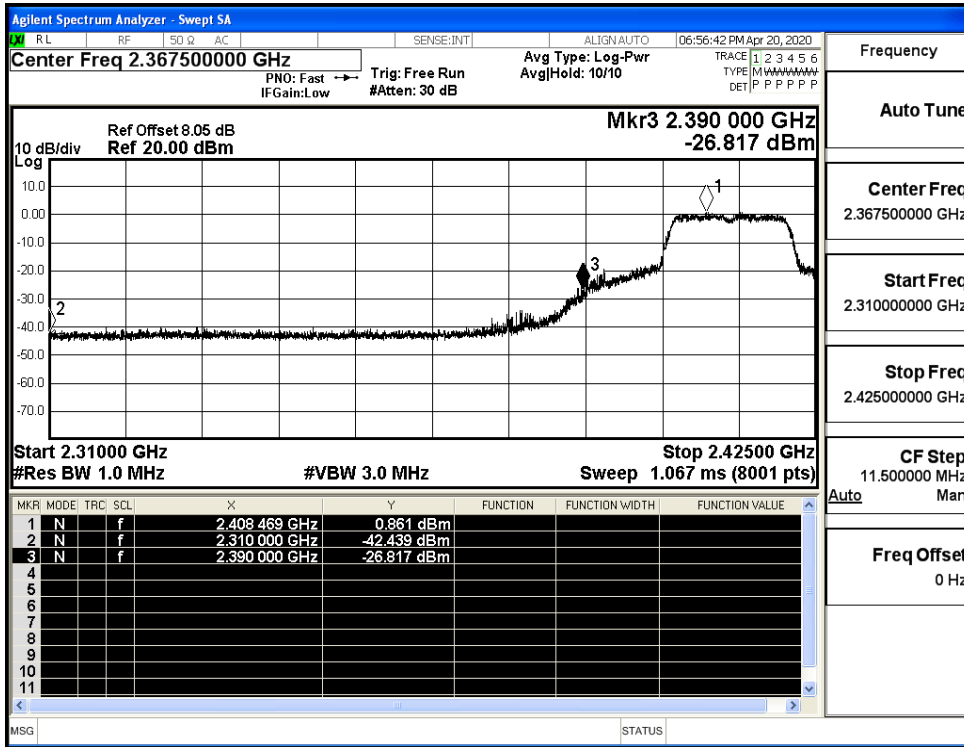
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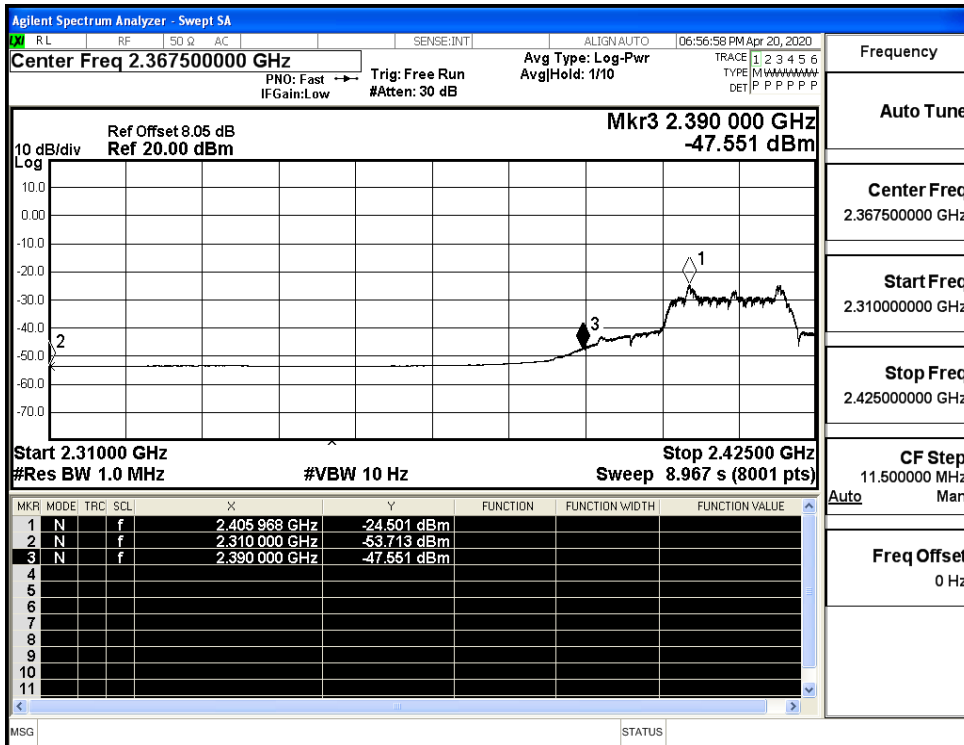
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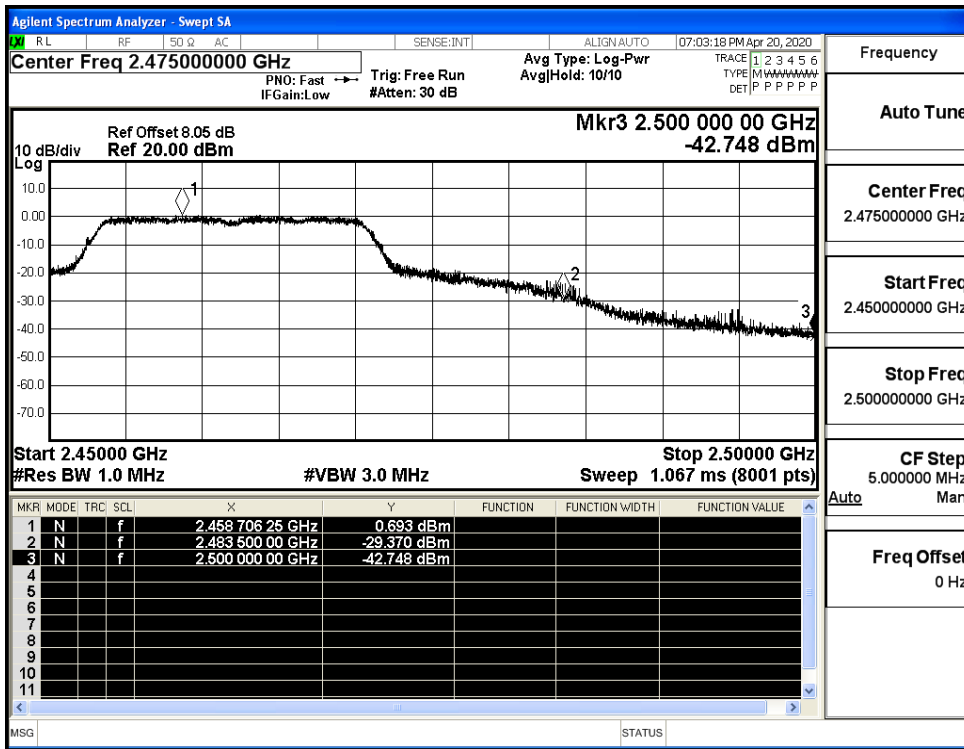
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Restrict-band band-edge measurements_11N20SISO_2462_Ant1_PEAK



Restrict-band band-edge measurements_11N20SISO_2462_Ant1_AV

