

Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Battery Camera

Trade Mark: N/A

Test Model: S1

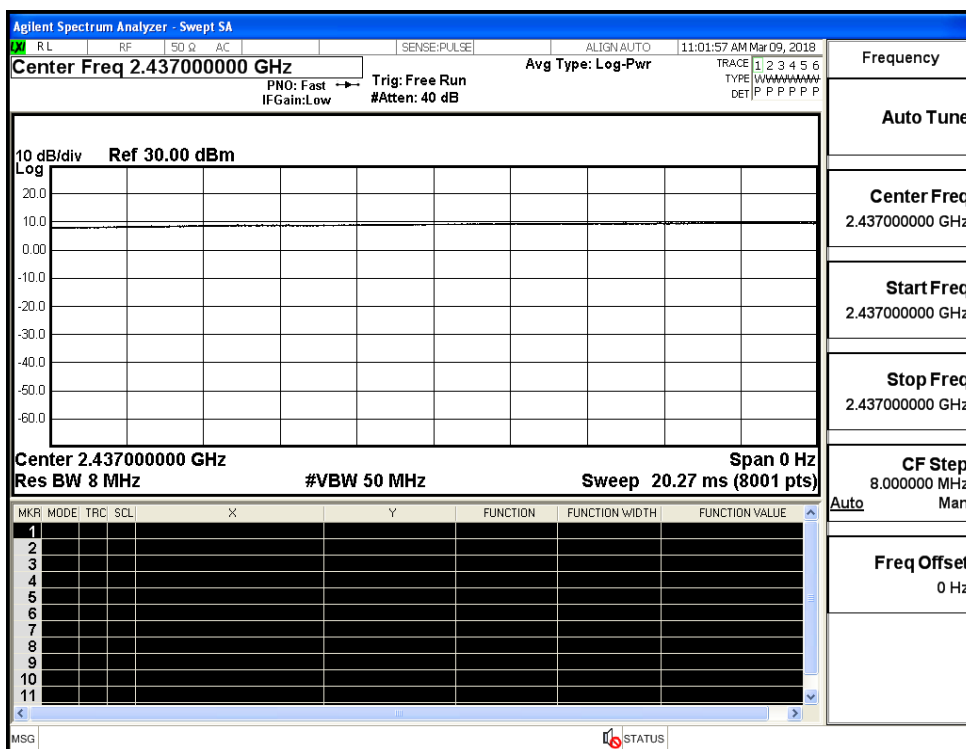
Environmental Conditions

Temperature:	22.5 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Wilson Hong
Supervised by:	Jayden Zhuo

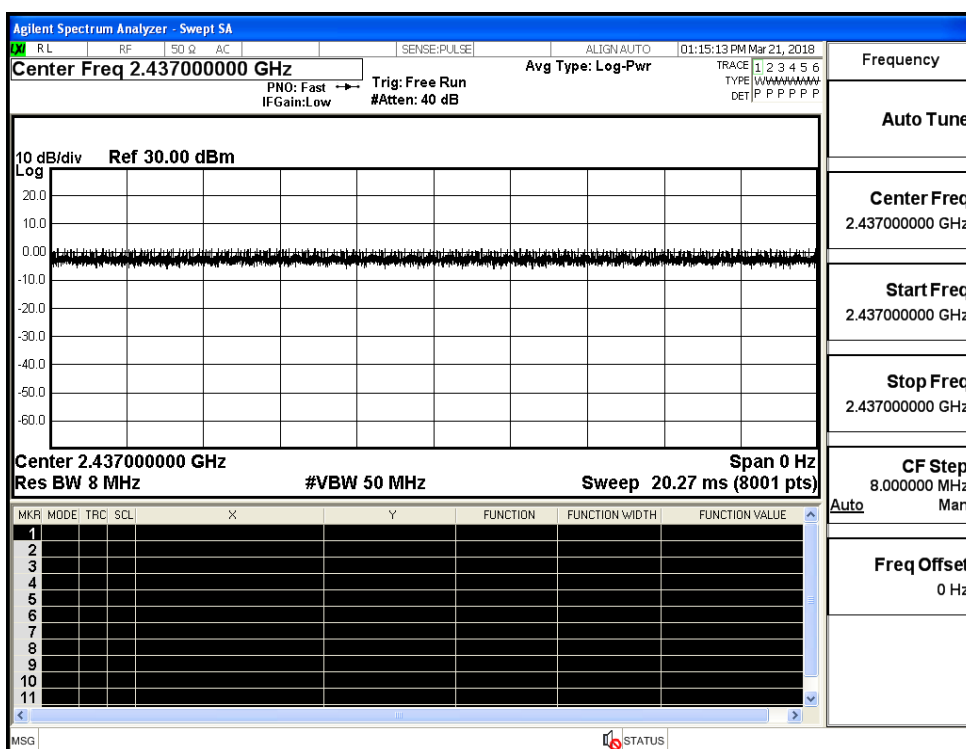
A.1 Duty Cycle

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

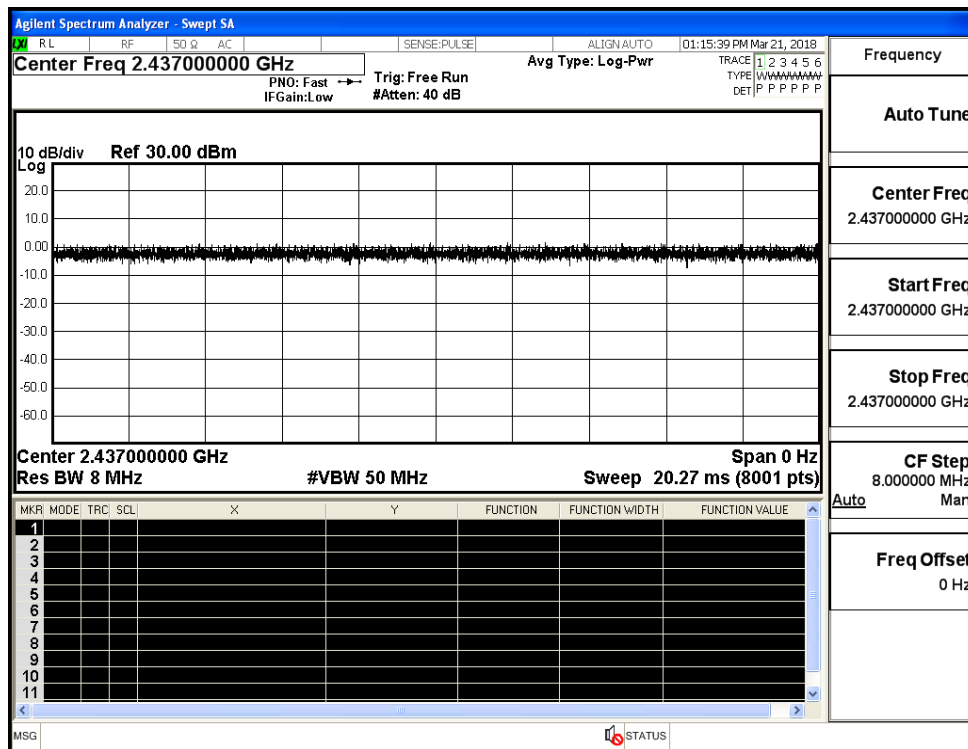
Duty Cycle_11B_2437_Ant1



Duty Cycle_11G_2437_Ant1



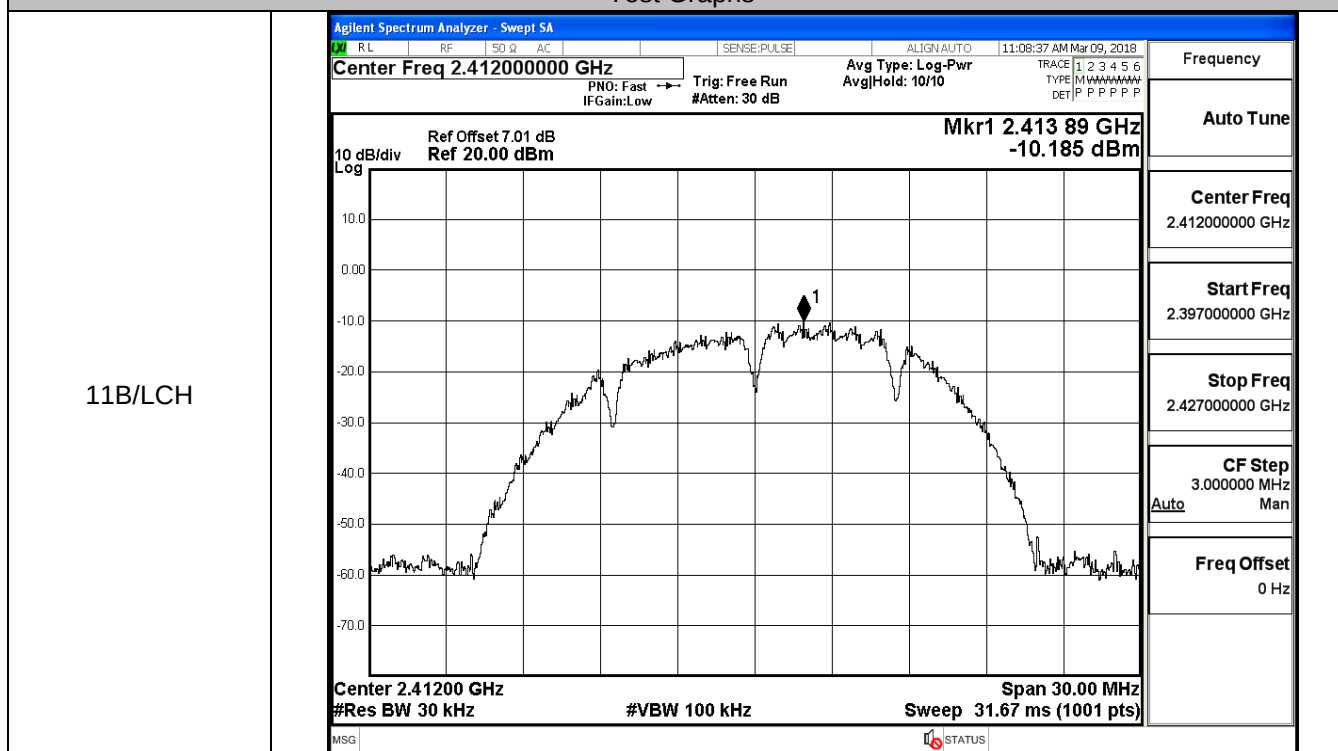
Duty Cycle_11N20SISO_2437_Ant1



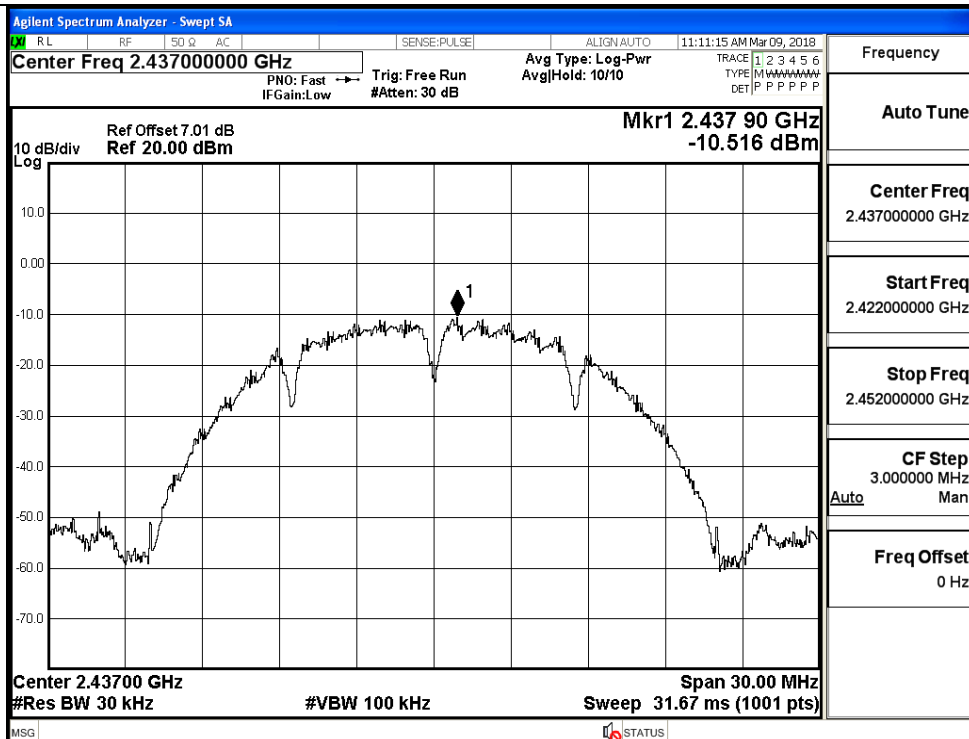
A.2 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/30KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-10.185	8	PASS
	MCH	-10.516	8	PASS
	HCH	-11.433	8	PASS
11G	LCH	-14.719	8	PASS
	MCH	-14.927	8	PASS
	HCH	-14.947	8	PASS
11N20SISO	LCH	-14.602	8	PASS
	MCH	-15.010	8	PASS
	HCH	-14.783	8	PASS

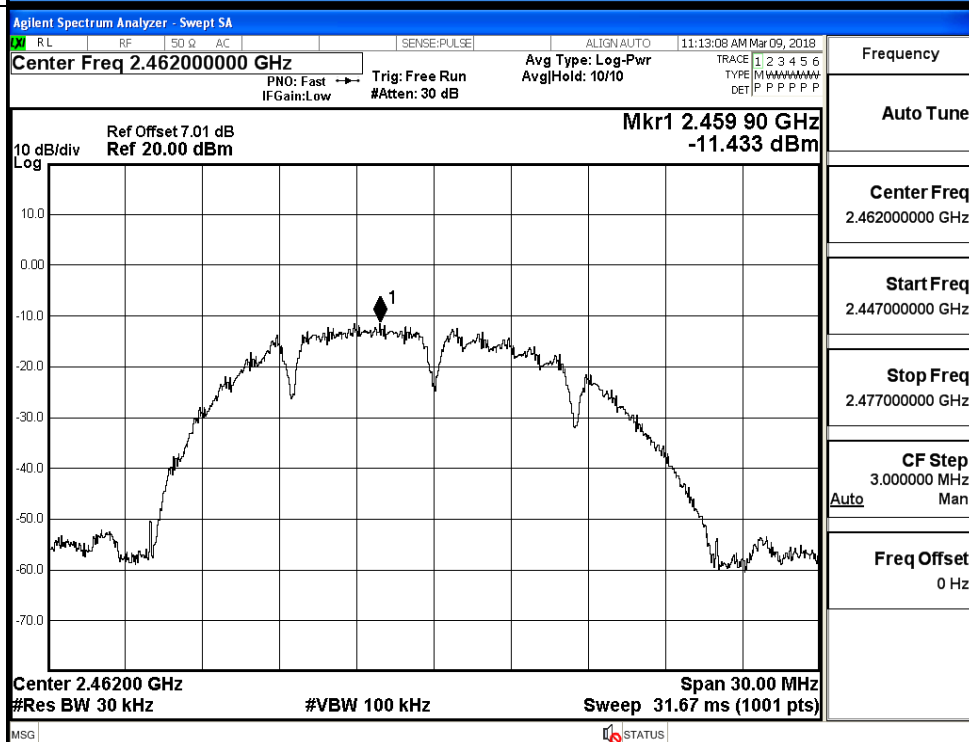
Test Graphs



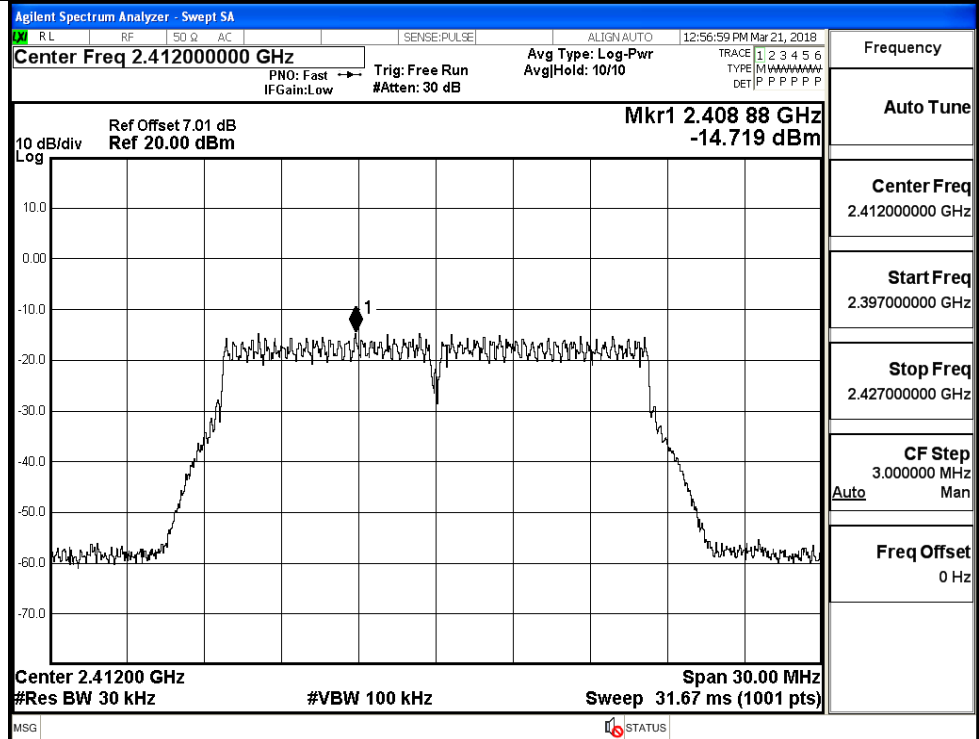
11B/MCH



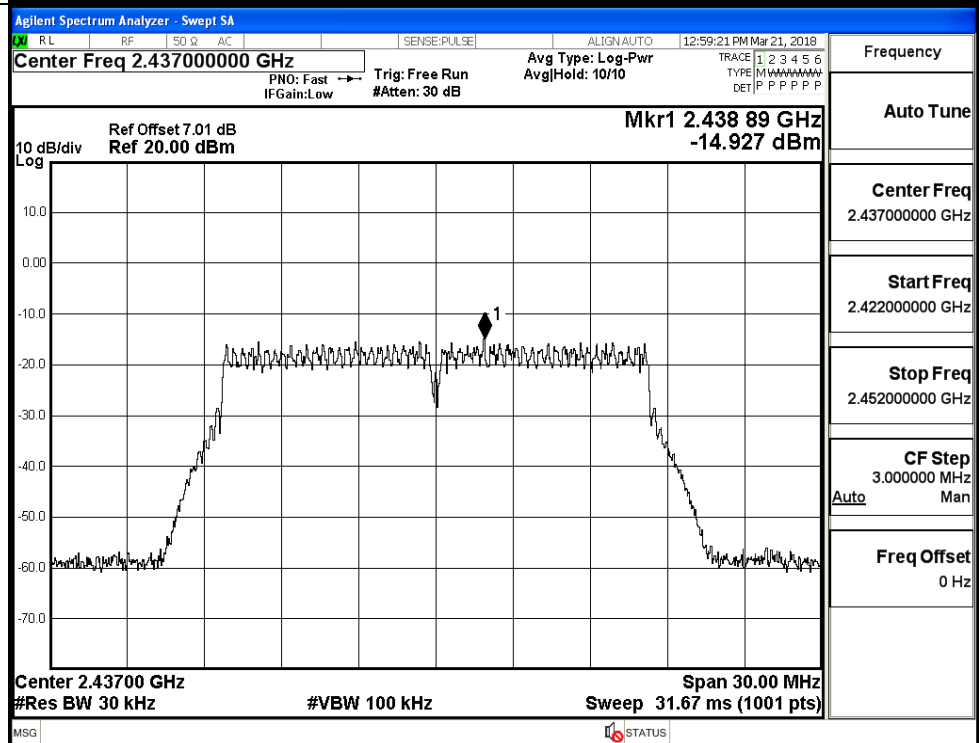
11B/HCH



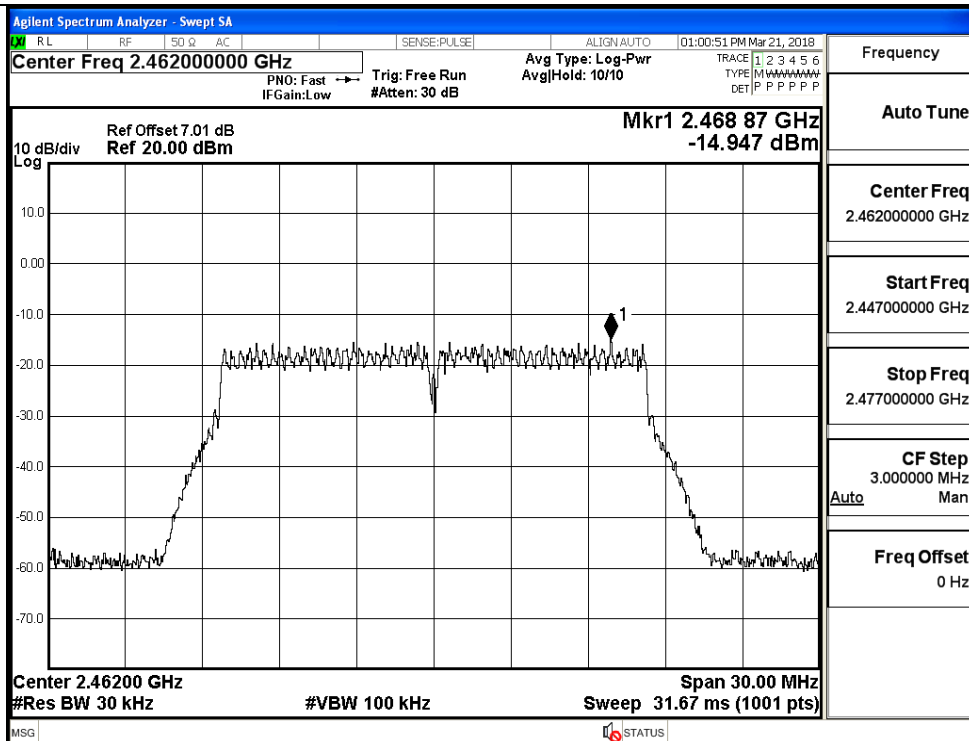
11G/LCH



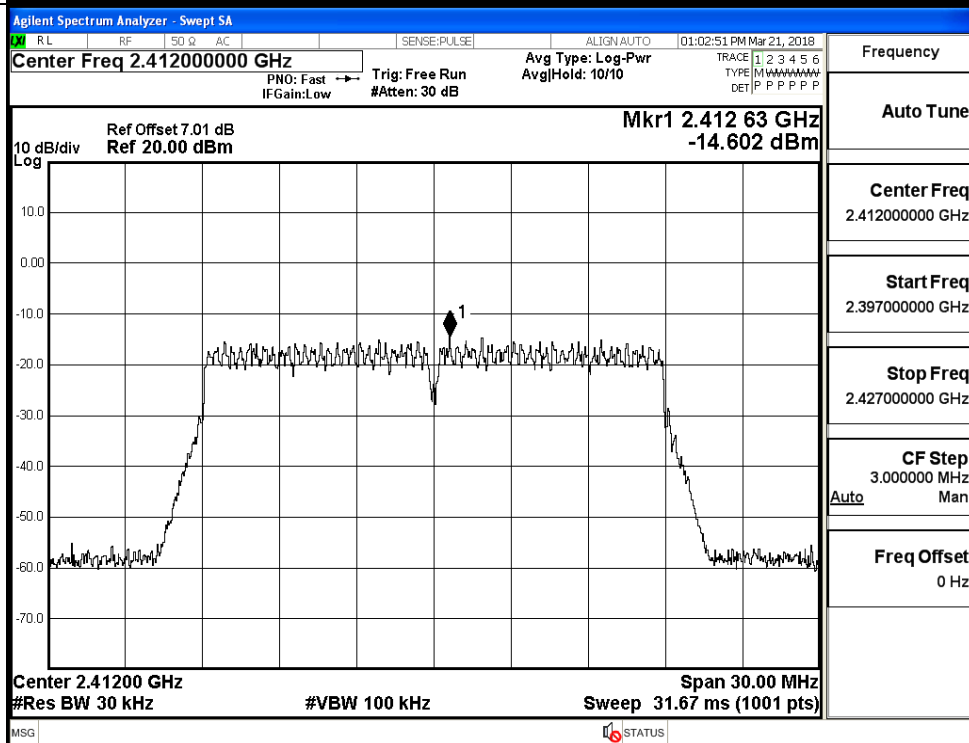
11G/MCH

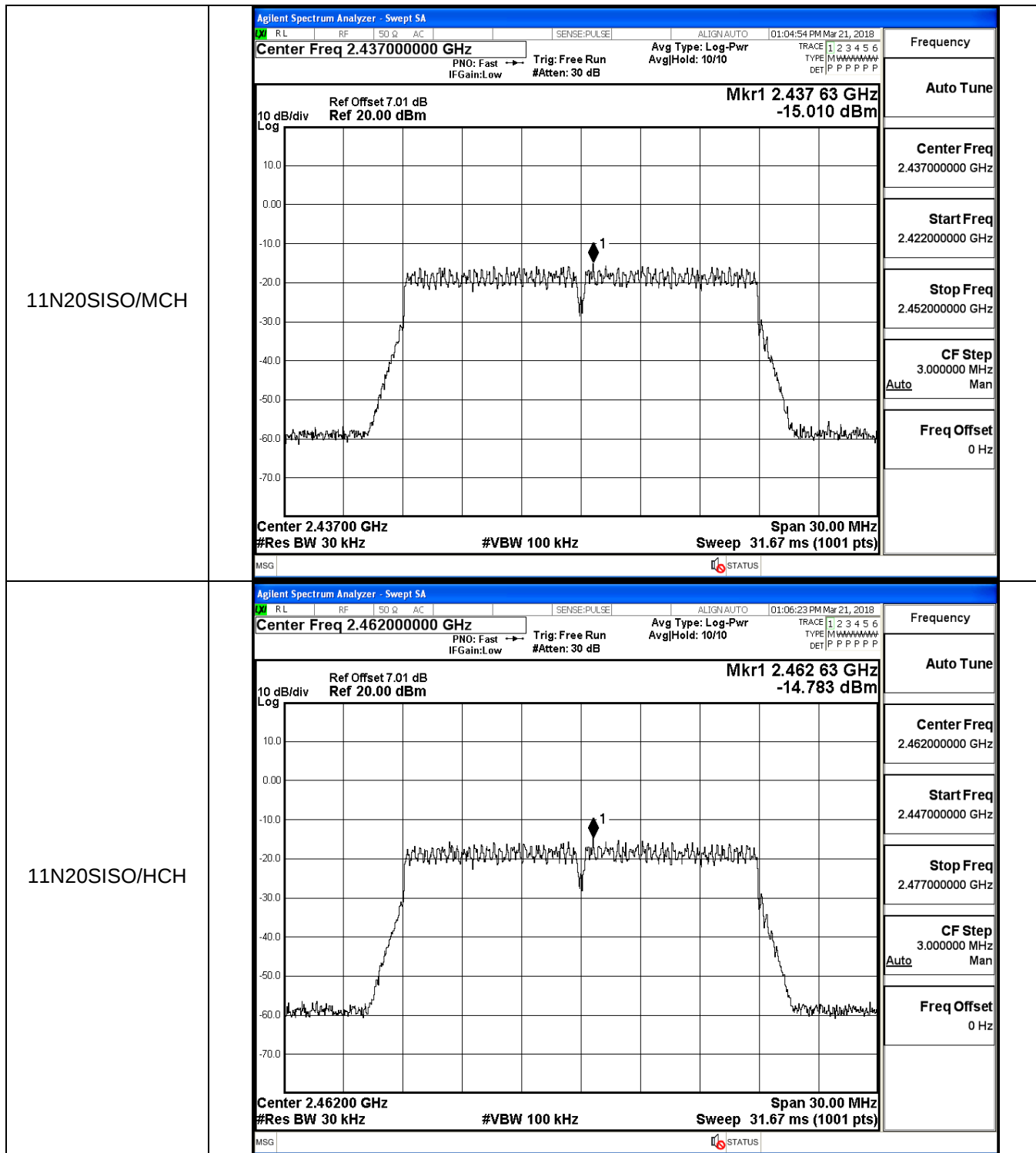


11G/HCH



11N20SISO/LCH

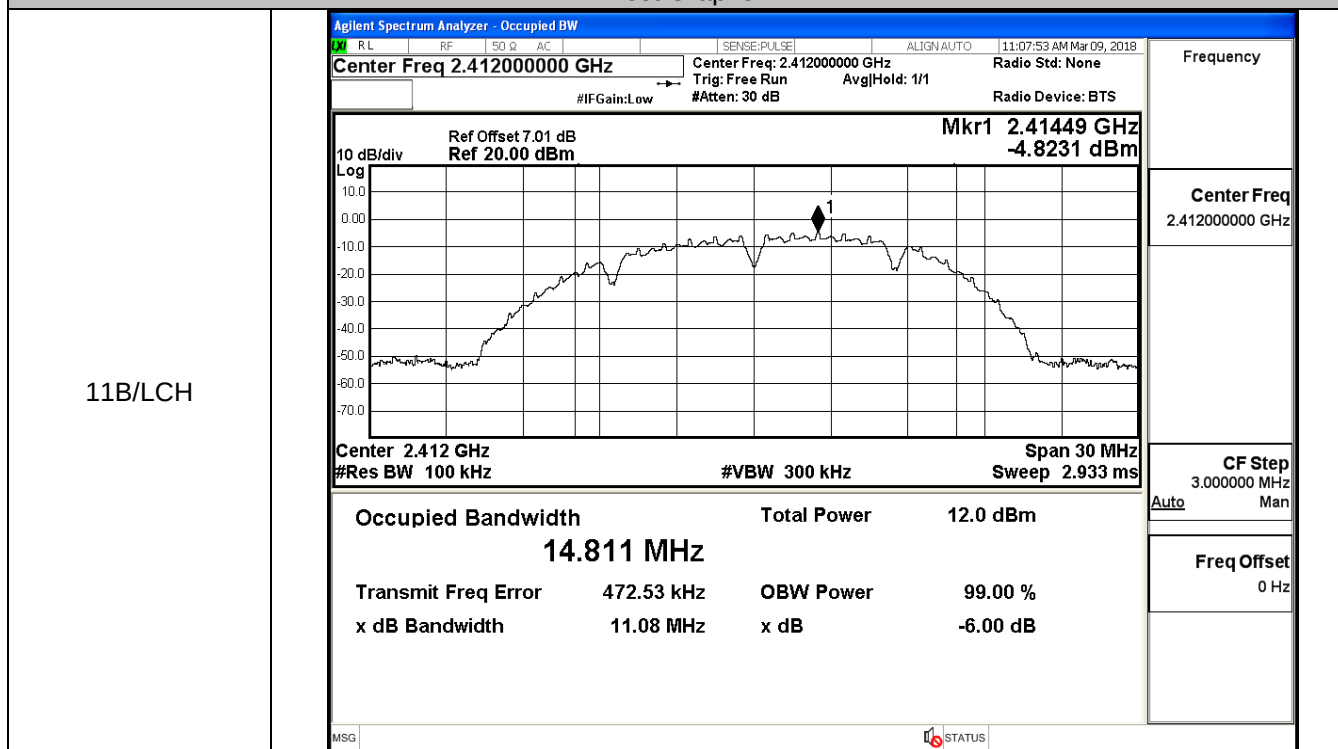




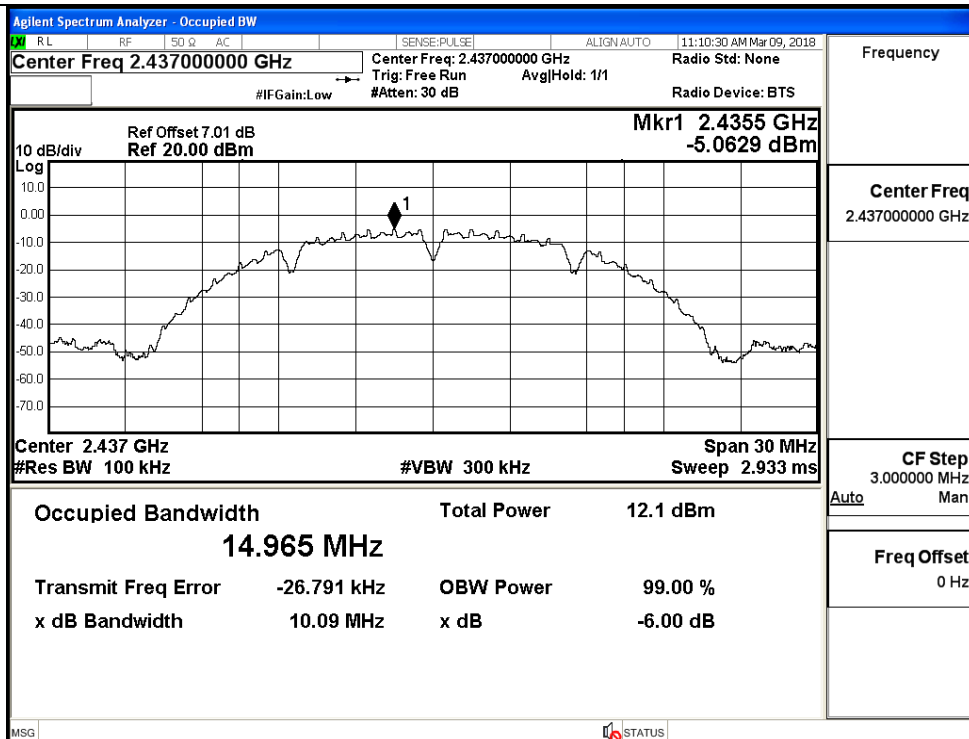
A.3 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	11.08	≥ 0.5	PASS
	MCH	10.09	≥ 0.5	PASS
	HCH	10.15	≥ 0.5	PASS
11G	LCH	16.61	≥ 0.5	PASS
	MCH	16.61	≥ 0.5	PASS
	HCH	16.62	≥ 0.5	PASS
11N20SISO	LCH	17.82	≥ 0.5	PASS
	MCH	17.83	≥ 0.5	PASS
	HCH	17.83	≥ 0.5	PASS

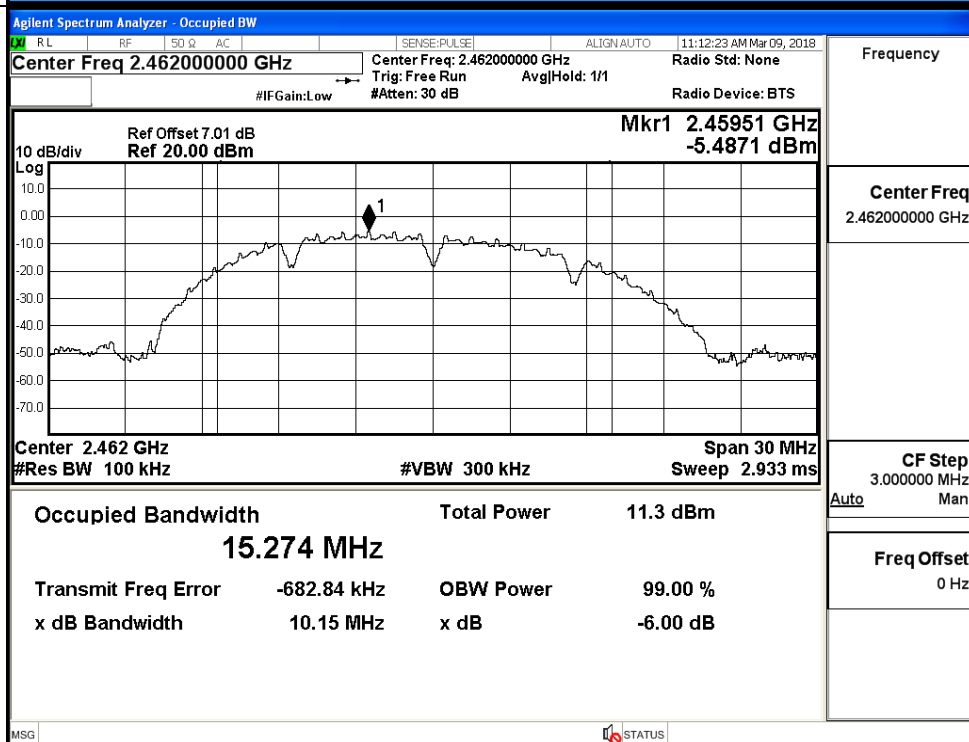
Test Graphs



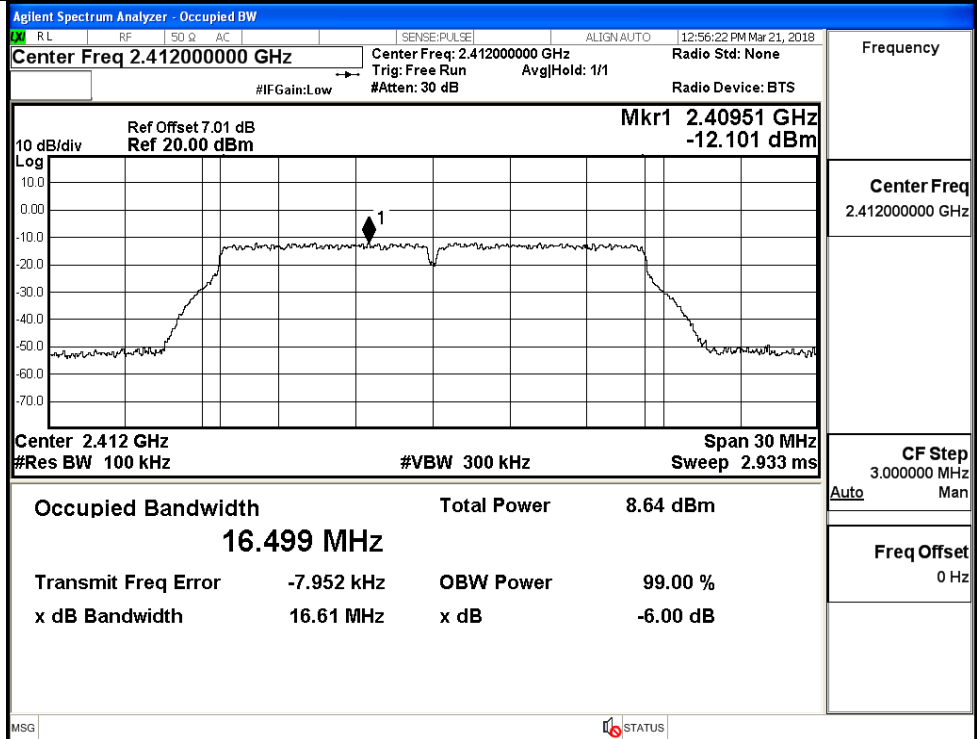
11B/MCH



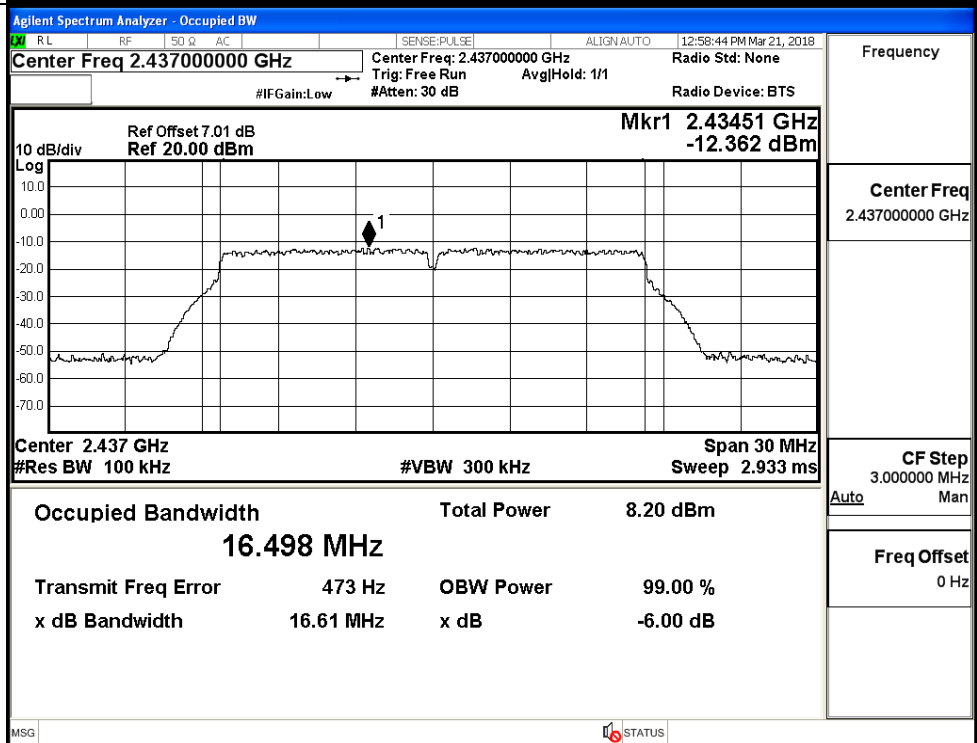
11B/HCH



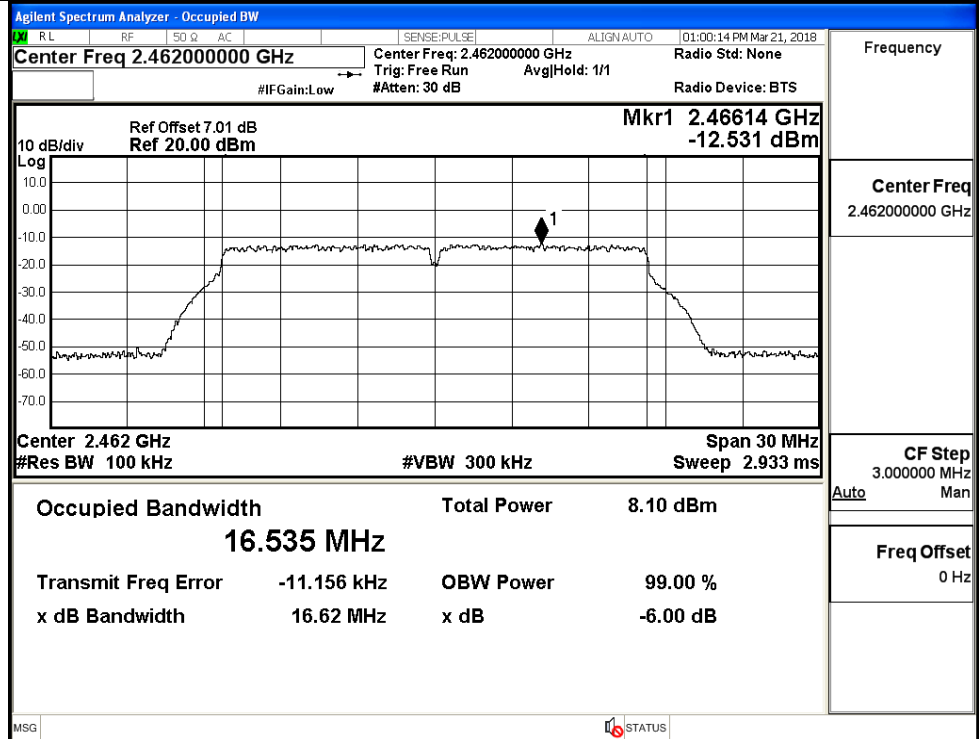
11G/LCH



11G/MCH



11G/HCH



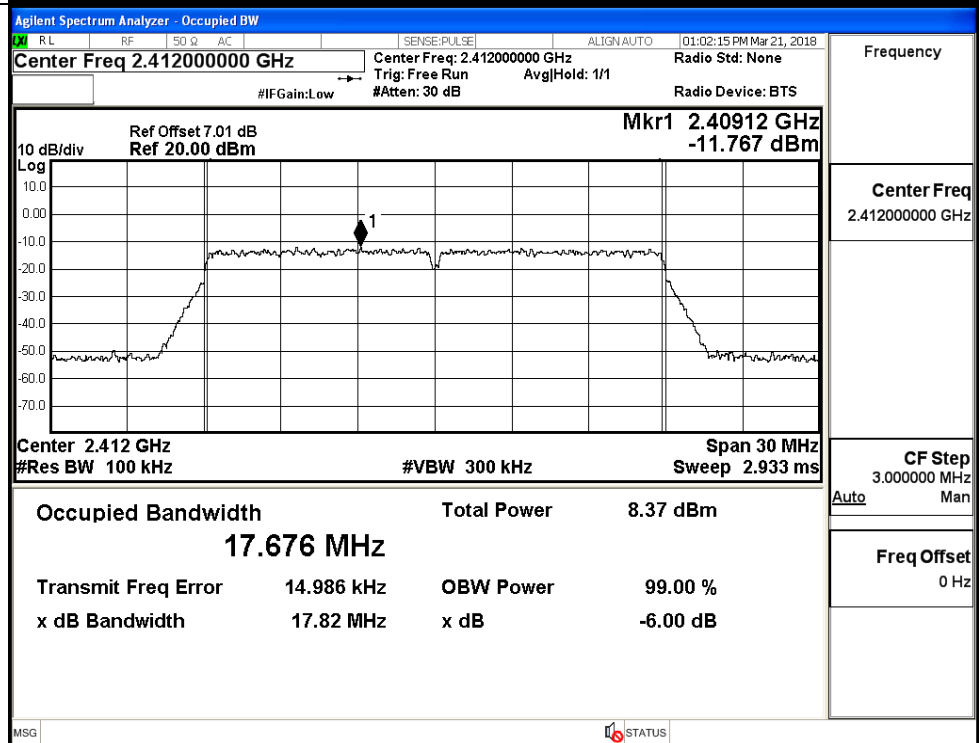
Frequency

Center Freq
2.46200000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

11N20SISO/LCH

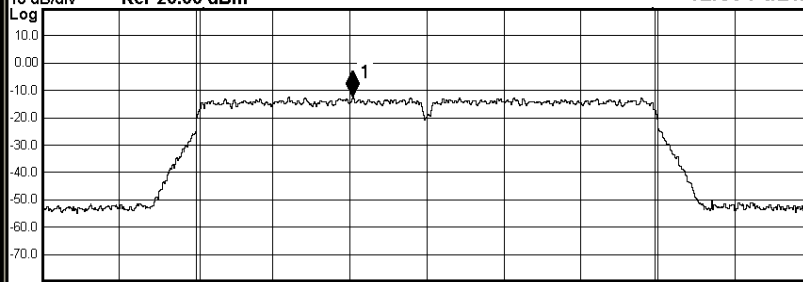
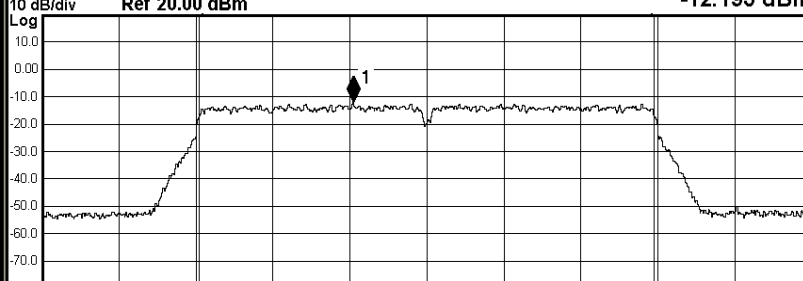


Frequency

Center Freq
2.41200000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

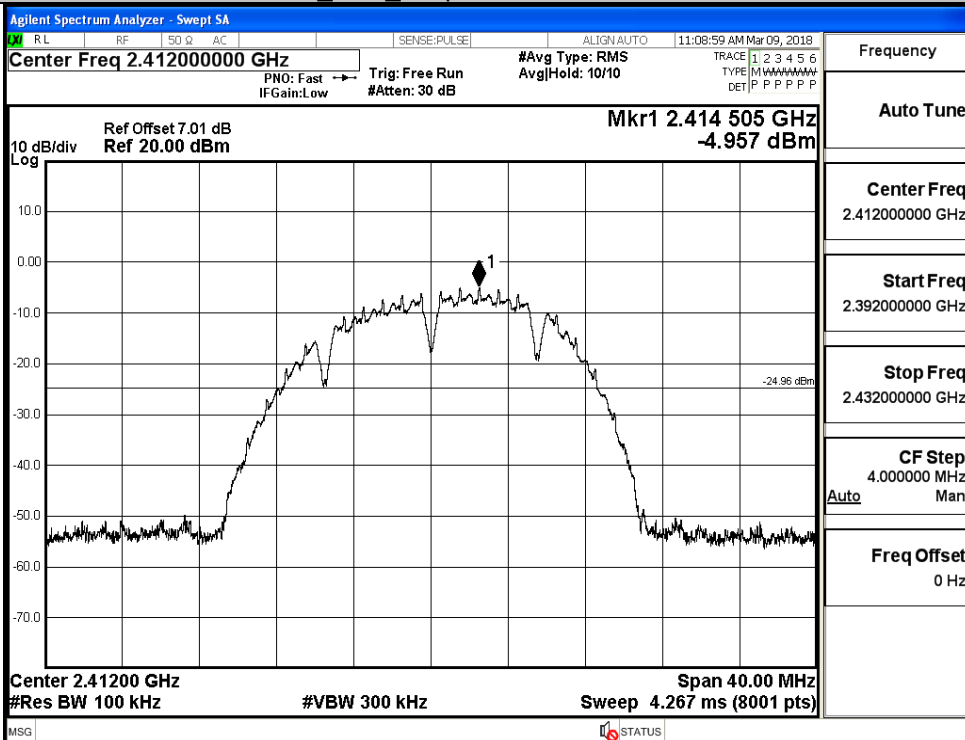
11N20SISO/MCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Q AC SENSE:PULSE ALIGN:AUTO 01:04:17 PM Mar 21, 2018 Center Freq 2.437000000 GHz #IFGain:Low Trig: Free Run Avg Hold: 1/1 Radio Std: None #Atten: 30 dB Radio Device: BTS			Frequency
	10 dB/div Ref Offset 7.01 dB Ref 20.00 dBm Mkr1 2.43412 GHz -12.394 dBm 			Center Freq 2.437000000 GHz
	Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms			CF Step 3.000000 MHz Auto Man
	Occupied Bandwidth 17.675 MHz Total Power 7.98 dBm Transmit Freq Error 19.677 kHz OBW Power 99.00 % x dB Bandwidth 17.83 MHz x dB -6.00 dB			Freq Offset 0 Hz
	MSG STATUS			
11N20SISO/HCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Q AC SENSE:PULSE ALIGN:AUTO 01:05:47 PM Mar 21, 2018 Center Freq 2.462000000 GHz #IFGain:Low Trig: Free Run Avg Hold: 1/1 Radio Std: None #Atten: 30 dB Radio Device: BTS			Frequency
	10 dB/div Ref Offset 7.01 dB Ref 20.00 dBm Mkr1 2.45915 GHz -12.195 dBm 			Center Freq 2.462000000 GHz
	Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms			CF Step 3.000000 MHz Auto Man
	Occupied Bandwidth 17.673 MHz Total Power 8.04 dBm Transmit Freq Error 14.698 kHz OBW Power 99.00 % x dB Bandwidth 17.83 MHz x dB -6.00 dB			Freq Offset 0 Hz
	MSG STATUS			

A.4 RF Conducted Spurious Emissions

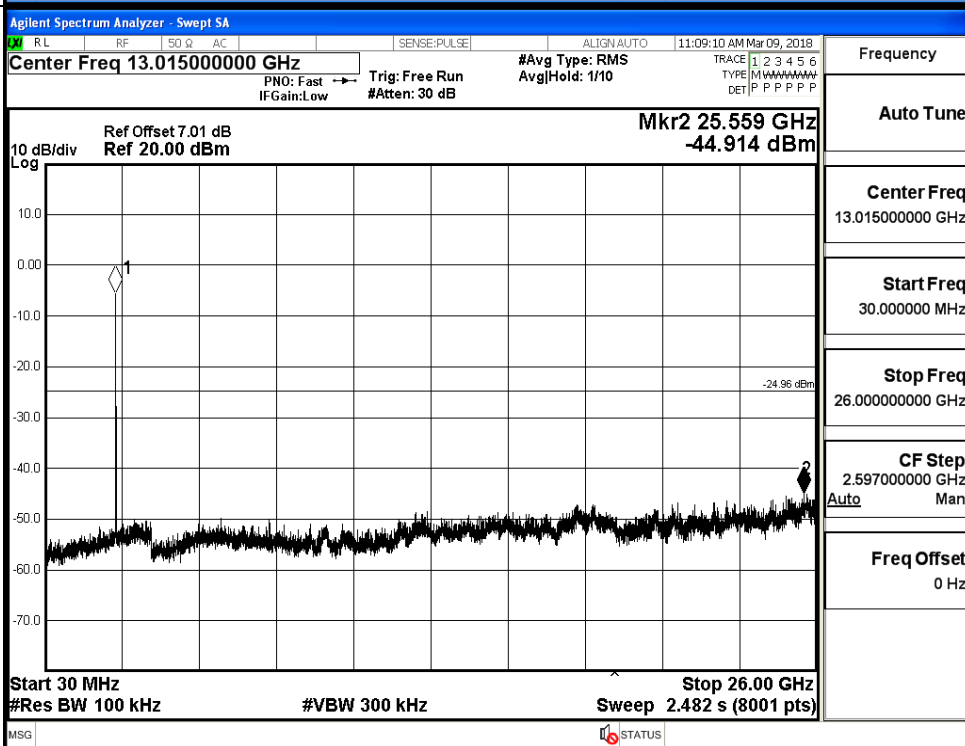
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-4.957	-44.914	-23.137	PASS
	MCH	-5.19	-45.292	-23.092	PASS
	HCH	-5.664	-44.801	-23.273	PASS
11G	LCH	-12.185	-44.182	-32.185	PASS
	MCH	-12.436	-43.965	-32.436	PASS
	HCH	-12.53	-44.868	-32.530	PASS
11N20 SISO	LCH	-11.839	-44.911	-31.839	PASS
	MCH	-12.516	-42.793	-32.516	PASS
	HCH	-12.366	-44.304	-32.366	PASS

11B LCH Graphs

Pref/11B/LCH

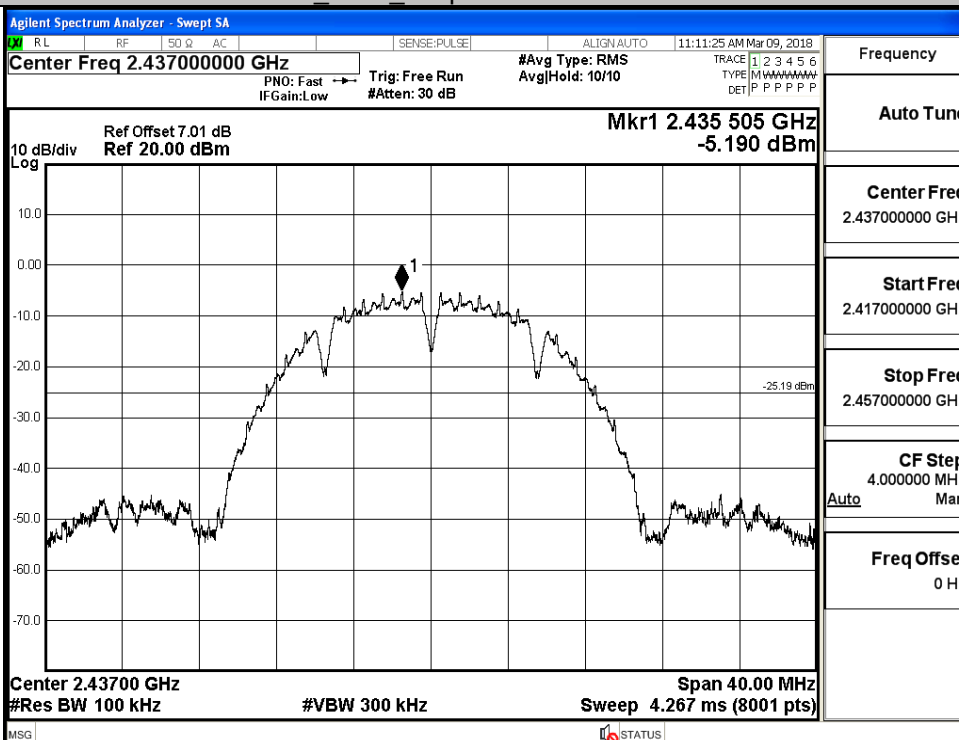


Puw/11B/LCH

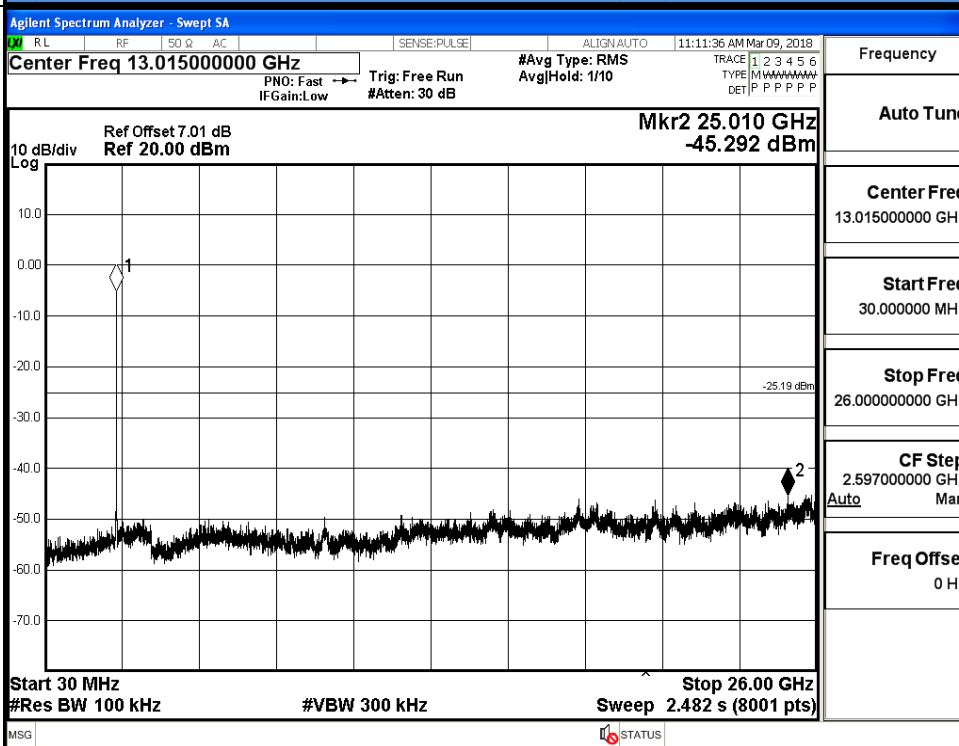


11B MCH Graphs

Pref/11B/MCH

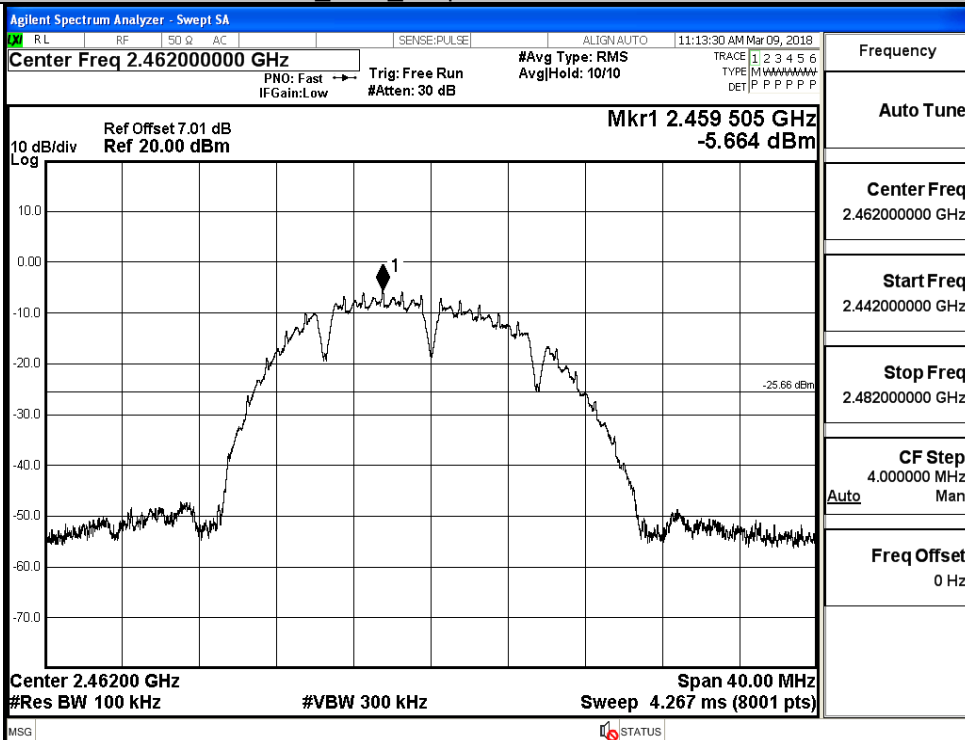


Puw/11B/MCH

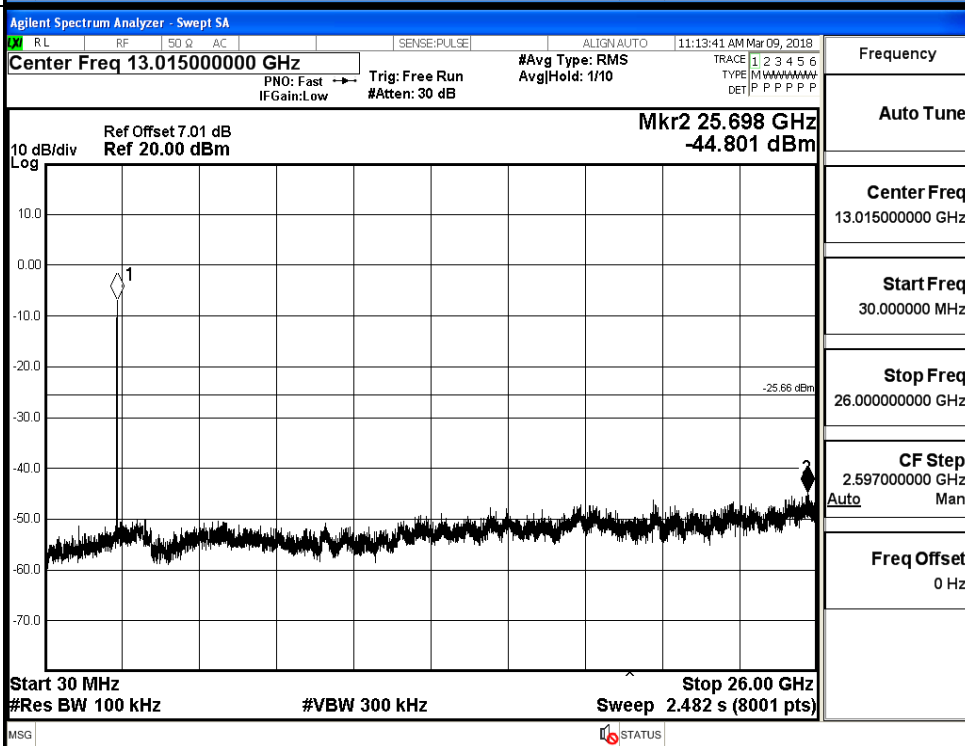


11B HCH Graphs

Pref/11B/HCH

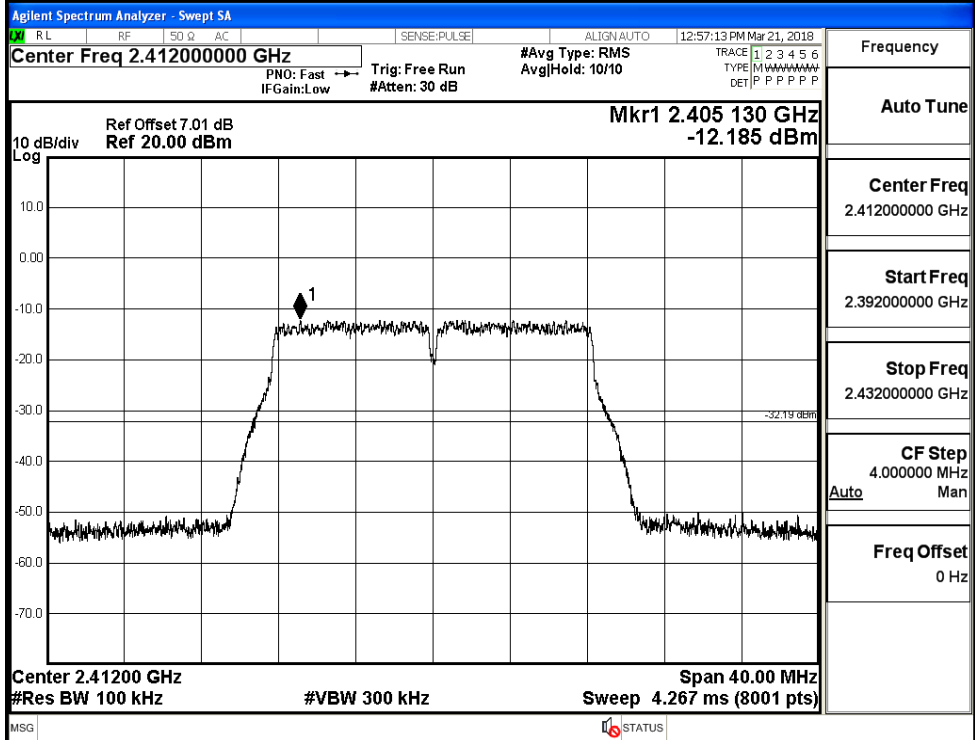


Puw/11B/HCH

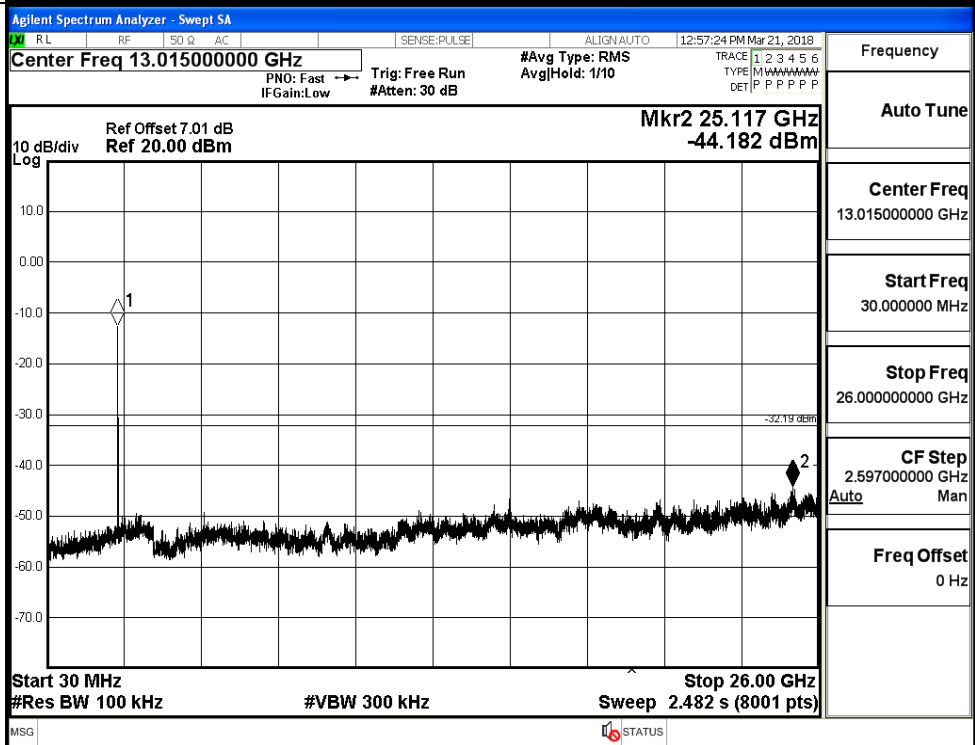


11G LCH Graphs

Pref/11G/LCH

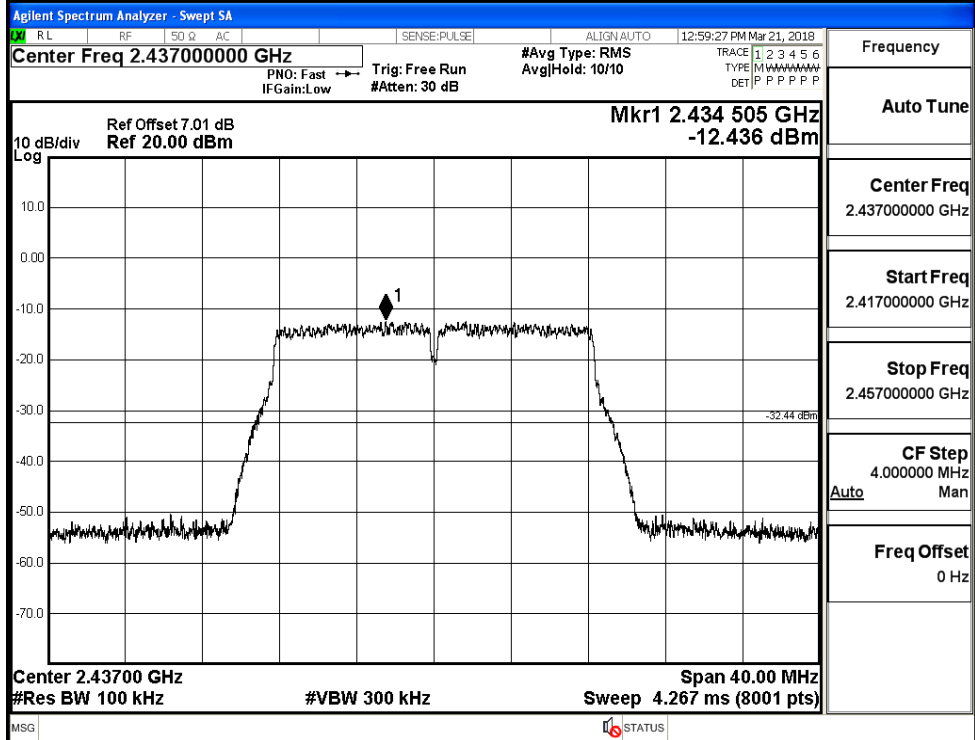


Puw/11G/LCH

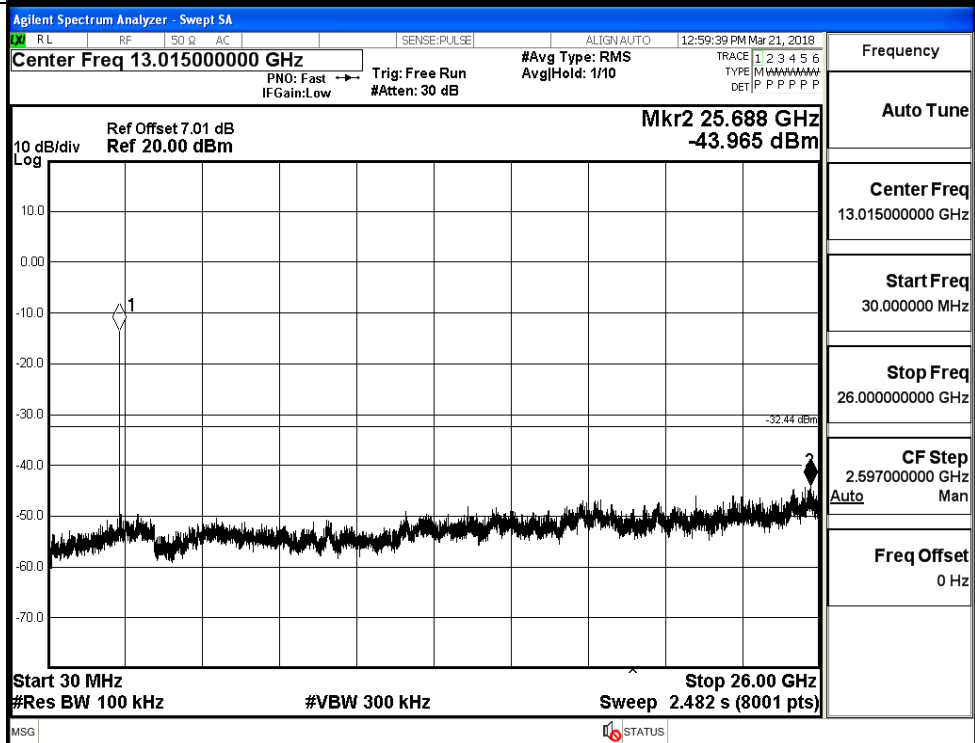


11G MCH Graphs

Pref/11G/MCH

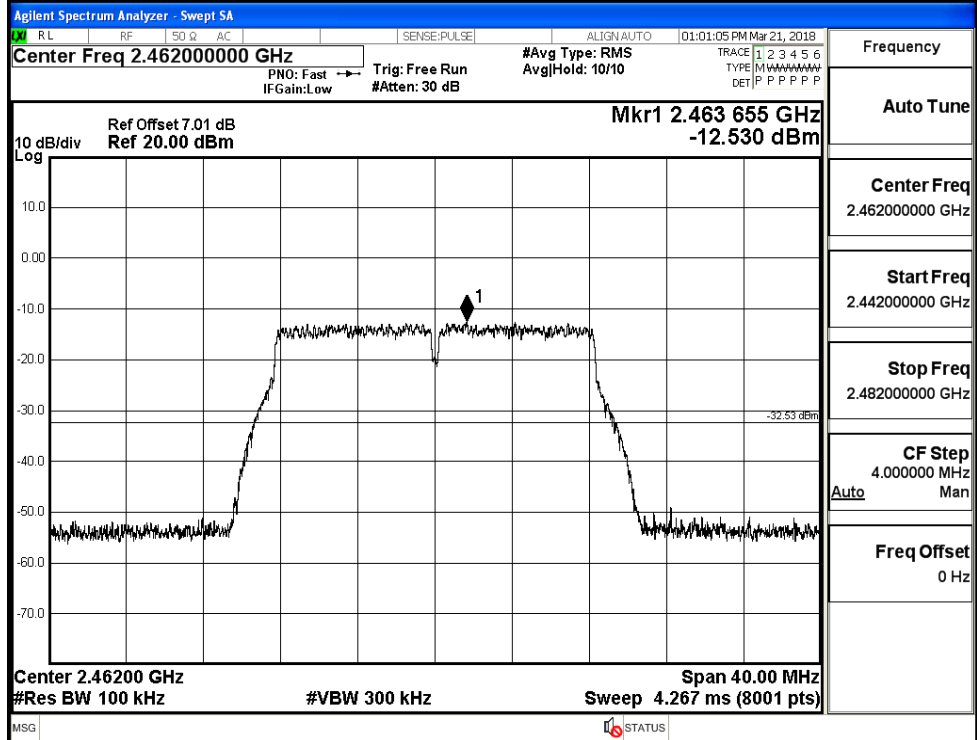


Puw/11G/MCH

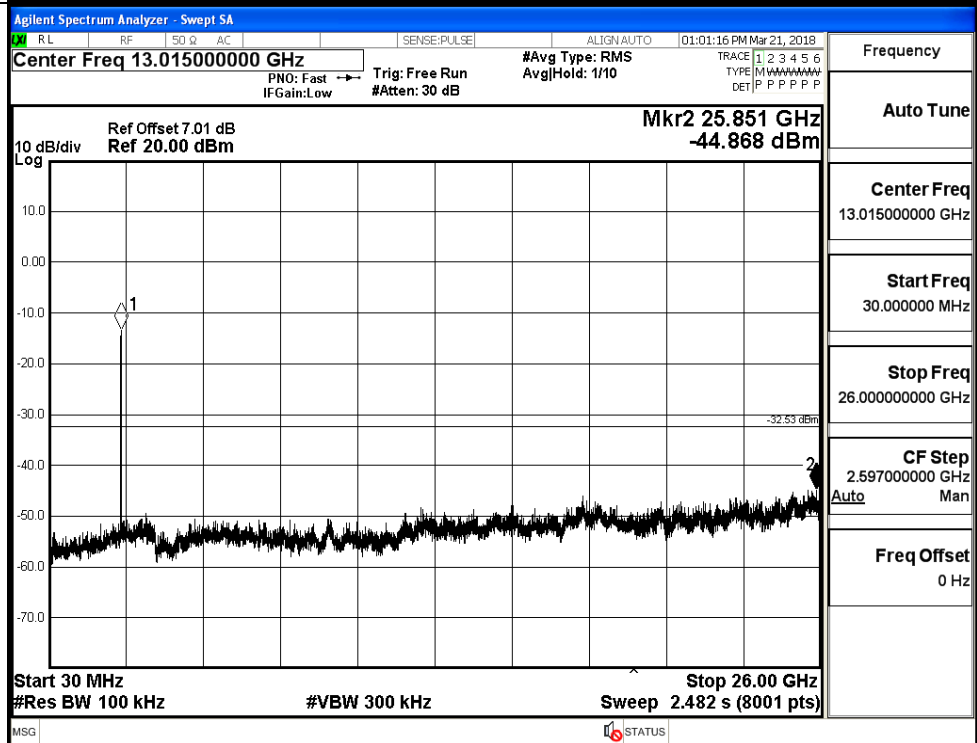


11G HCH Graphs

Pref/11G/HCH

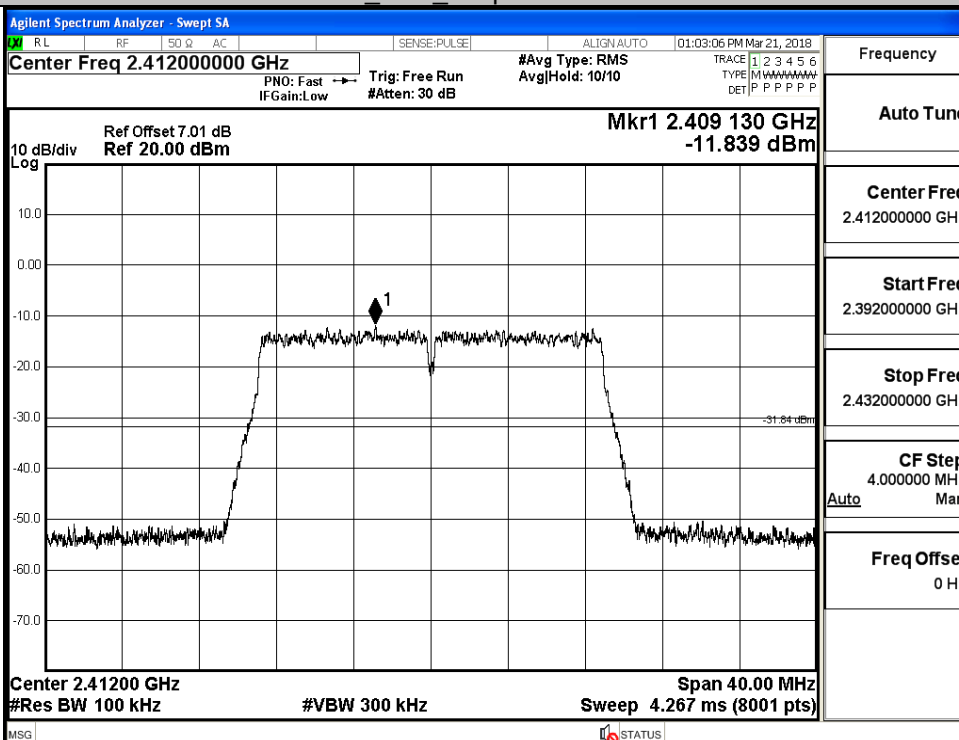


Puw/11G/HCH

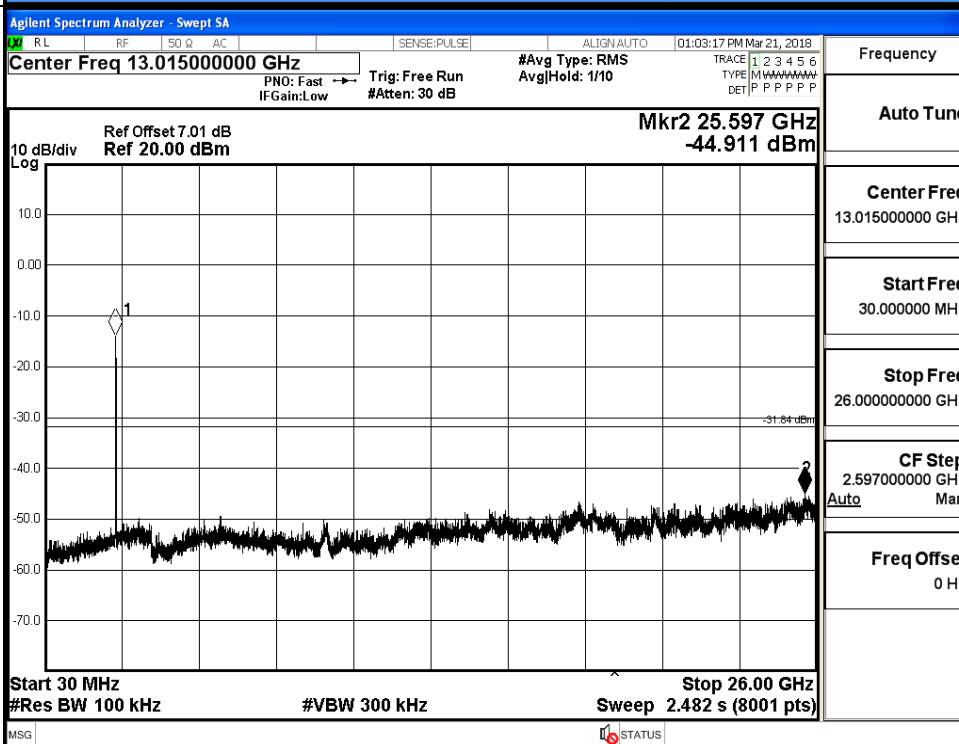


11N20SISO LCH Graphs

Pref/11N20SIS
O/LCH

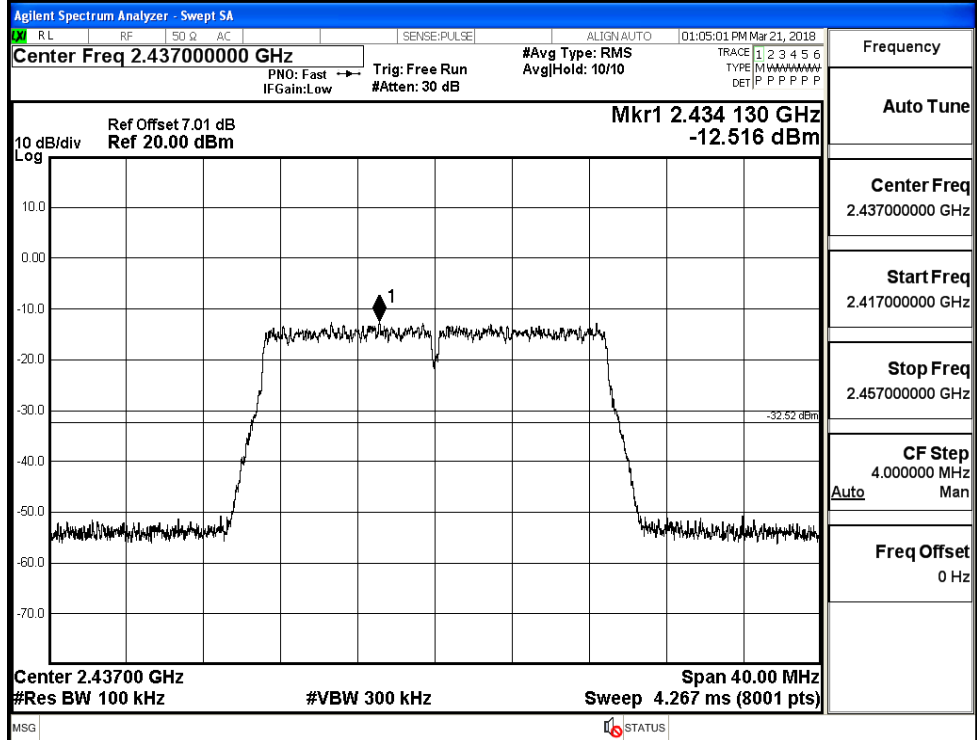


Puw/11N20
SISO/LCH

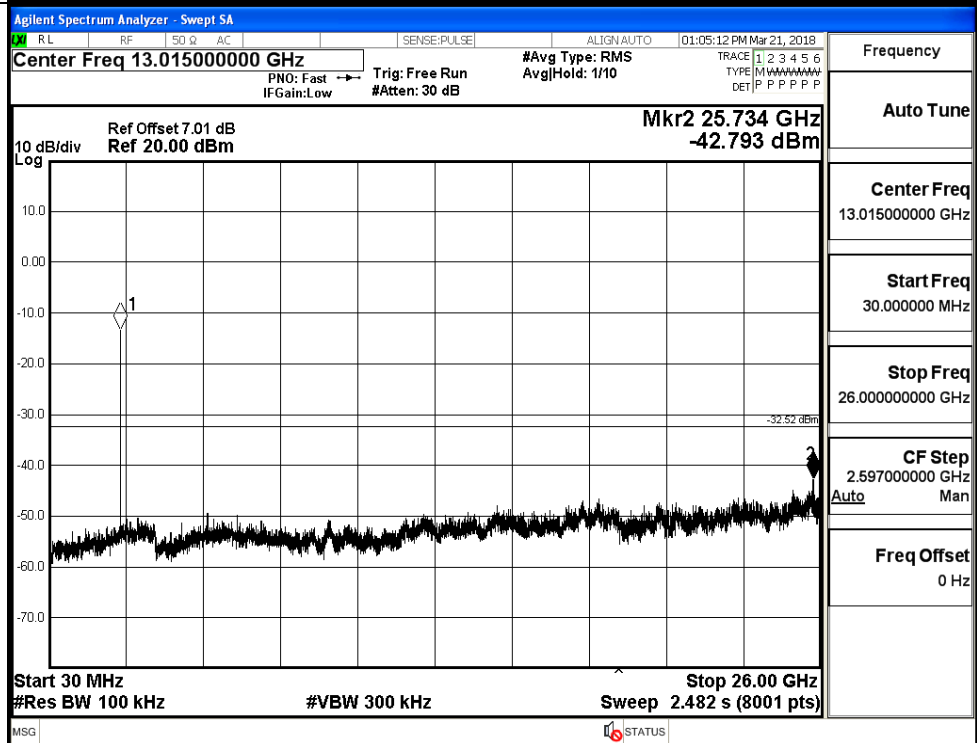


11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCH

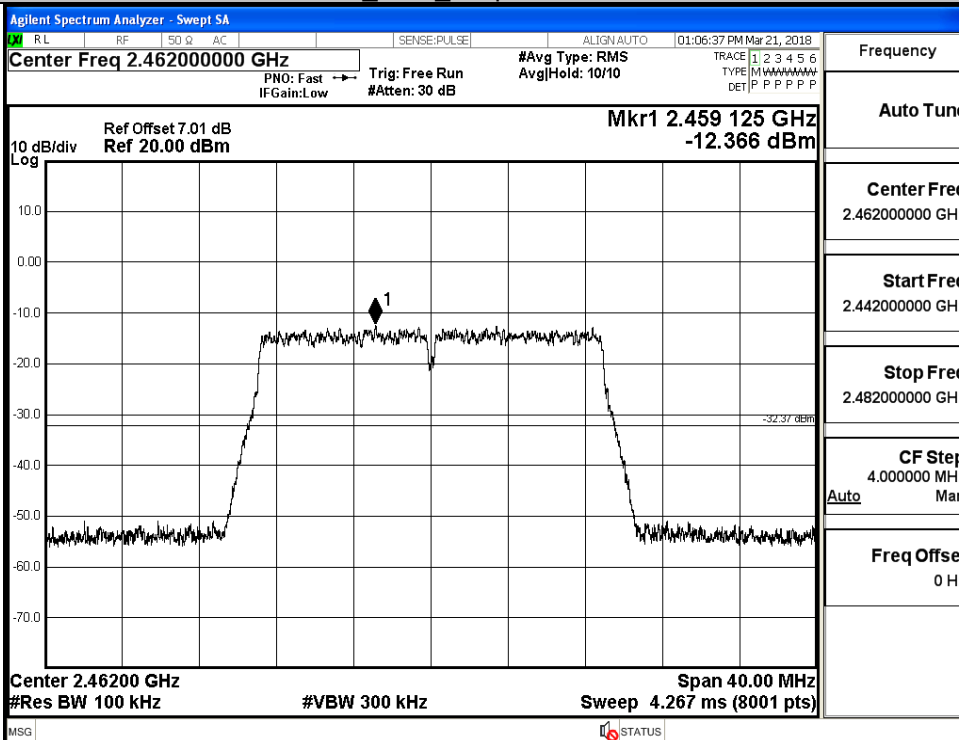


Puw/11N20
SISO/MCH

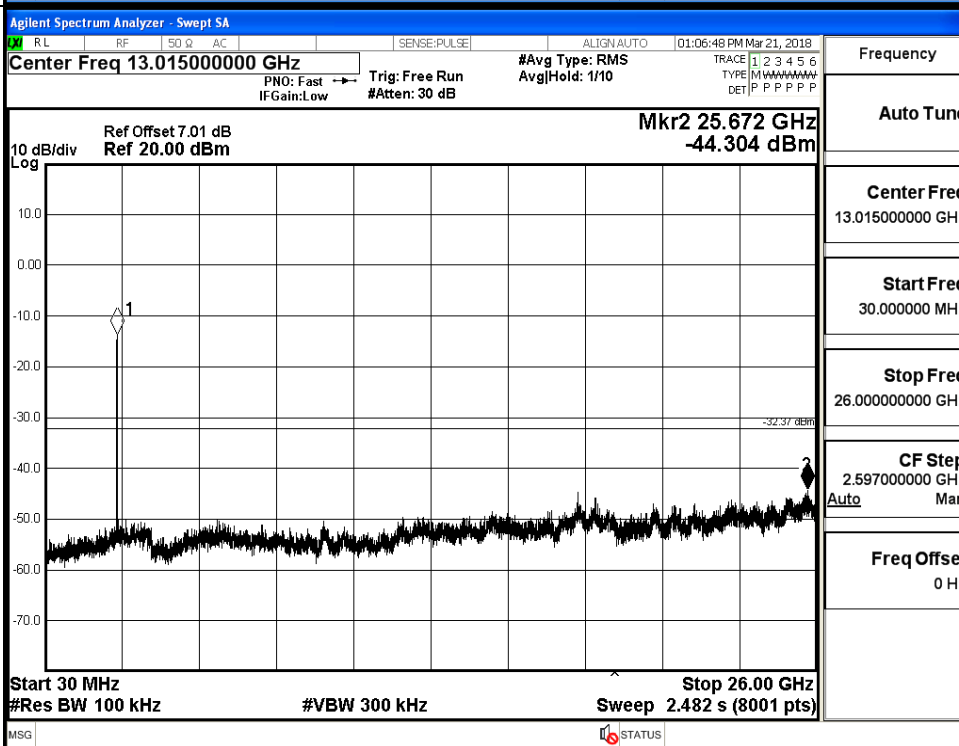


11N20SISO HCH Graphs

Pref/11N20
SISO/HCH



Puw/11N20
SISO/HCH

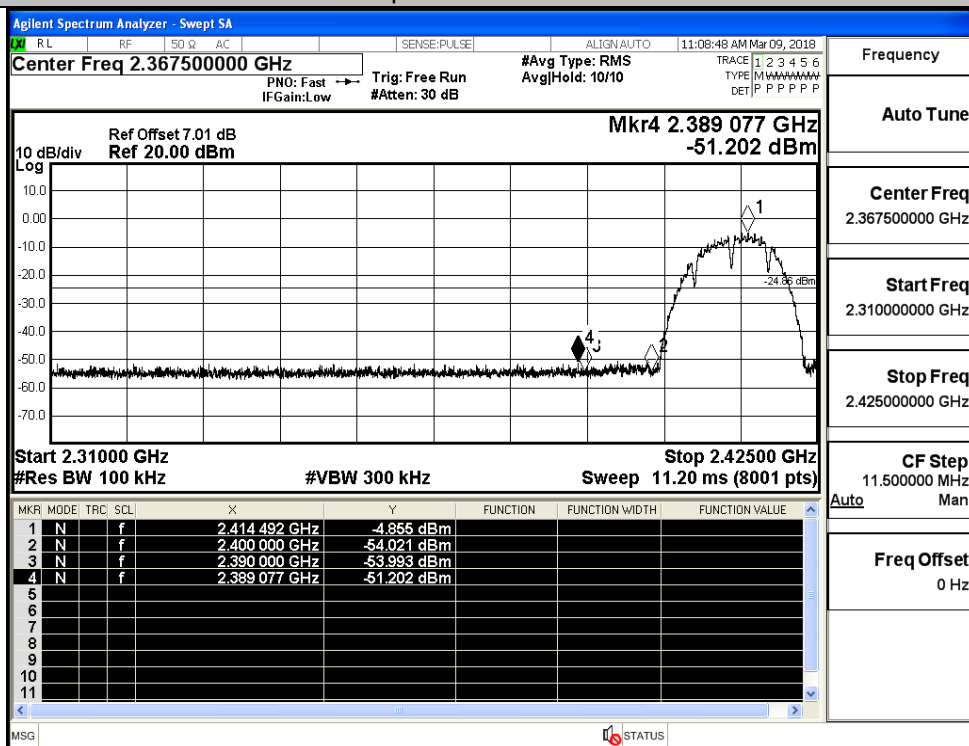


A.5 Band-edge for RF Conducted Emissions

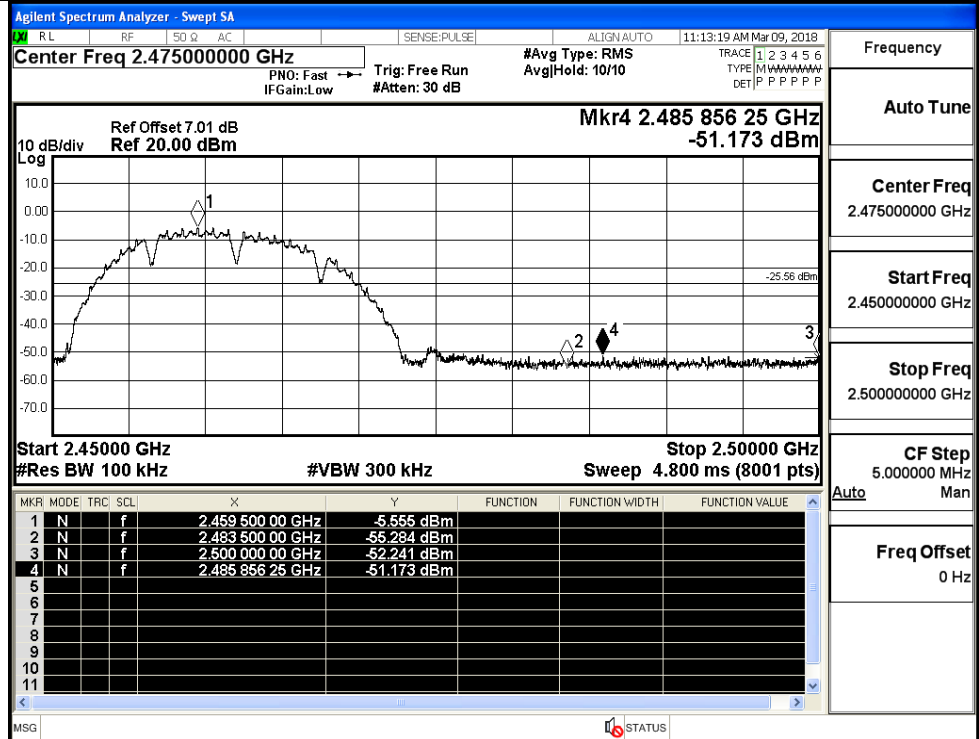
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-4.855	-51.202	-24.86	PASS
	HCH	-5.555	-51.173	-25.56	PASS
11G	LCH	-12.128	-51.131	-32.13	PASS
	HCH	-12.418	-50.929	-32.42	PASS
11N20SISO	LCH	-12.108	-50.895	-32.11	PASS
	HCH	-12.403	-49.981	-32.4	PASS

Test Graphs

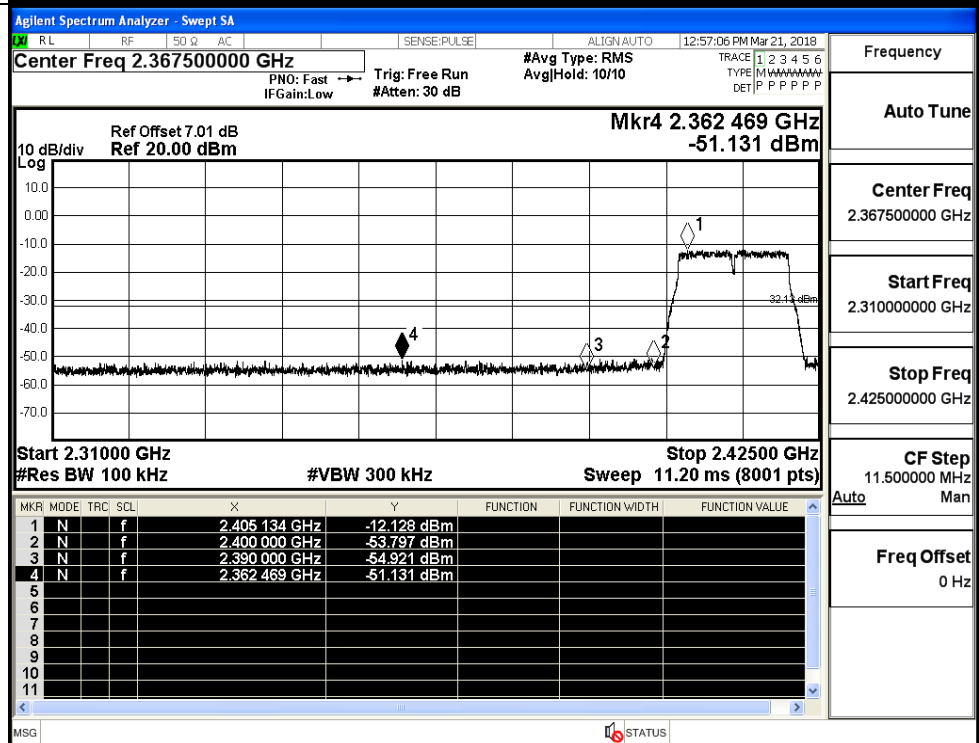
11B/LCH



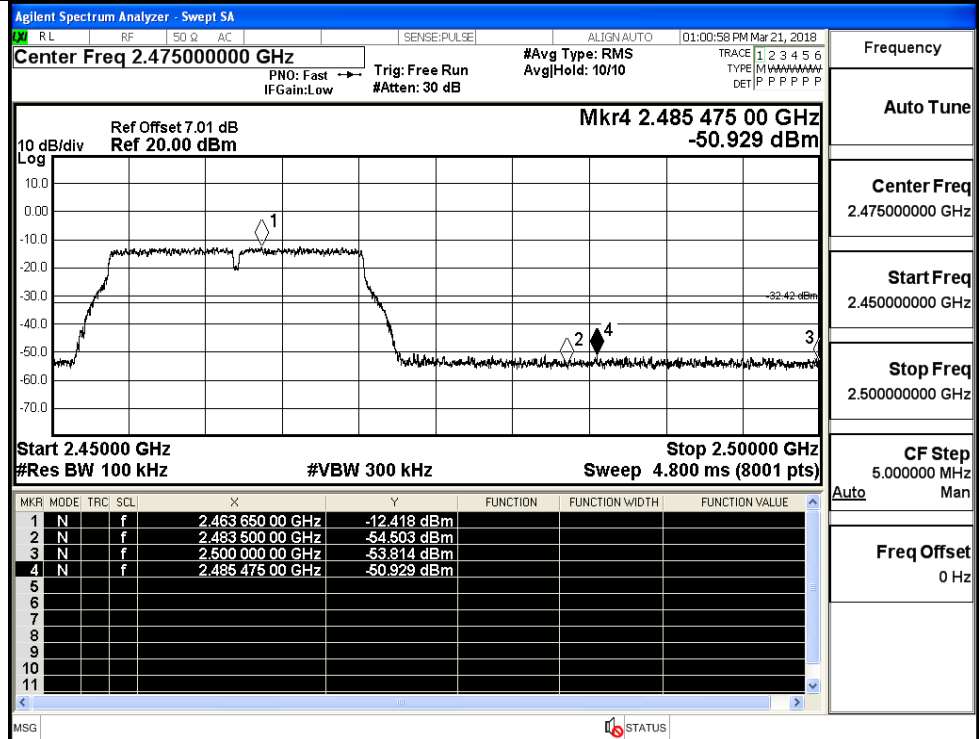
11B/HCH



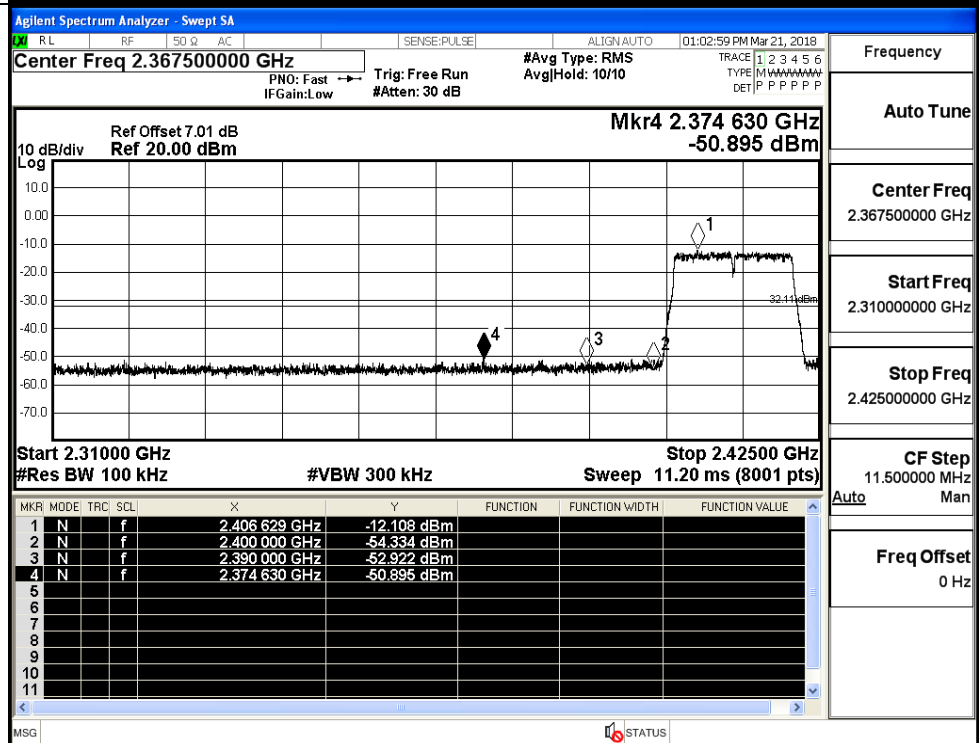
11G/LCH



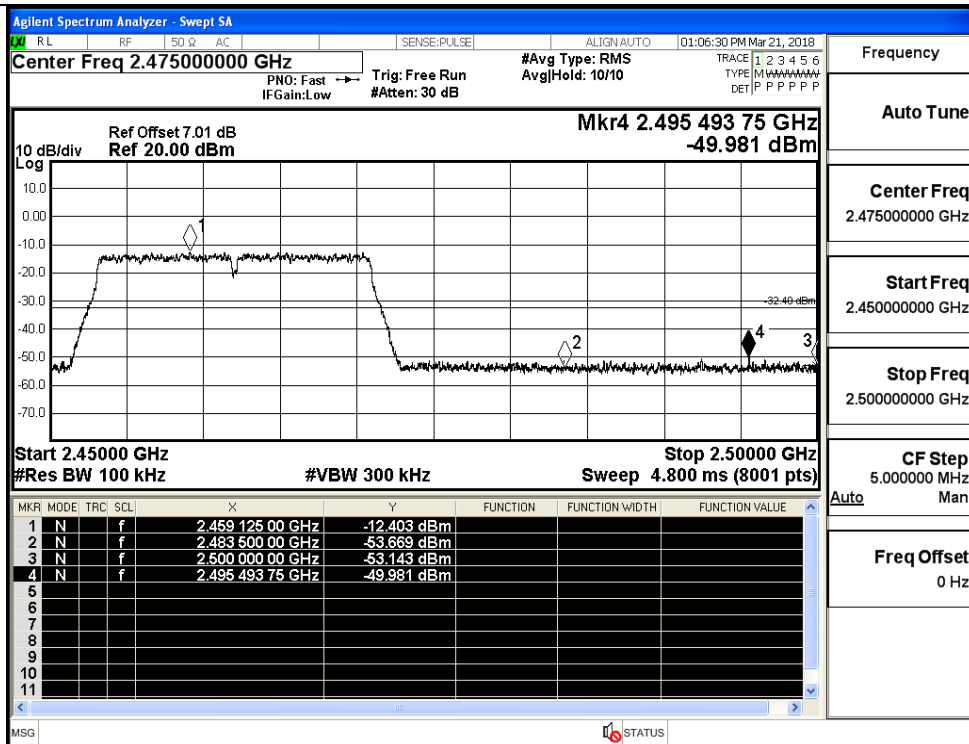
11G/HCH



11N20SISO/LCH



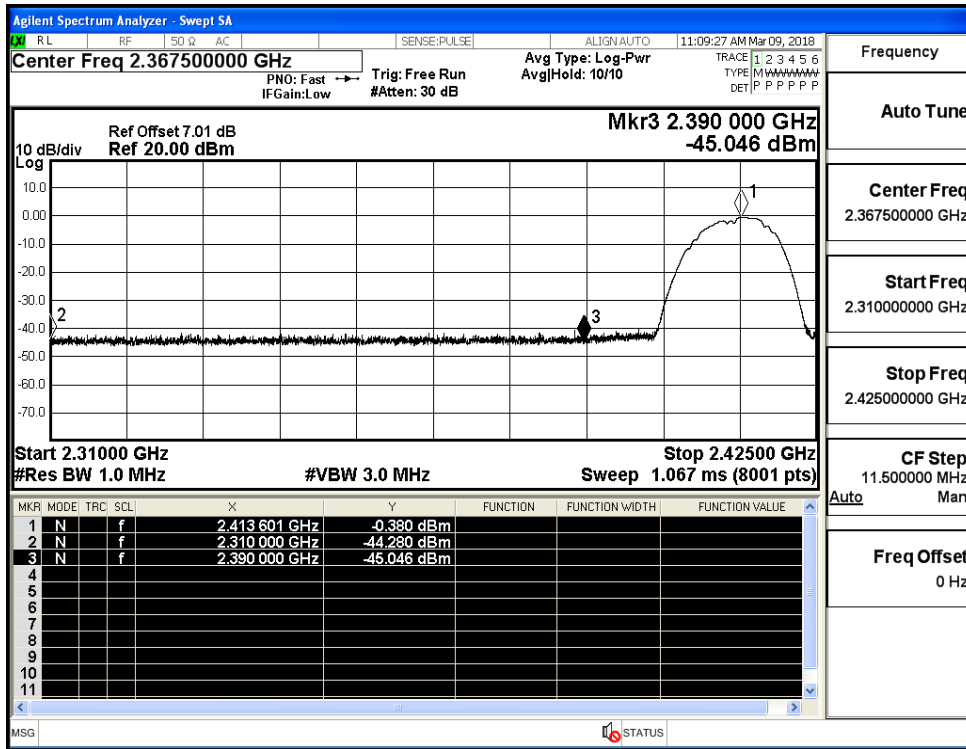
11N20SISO/HCH



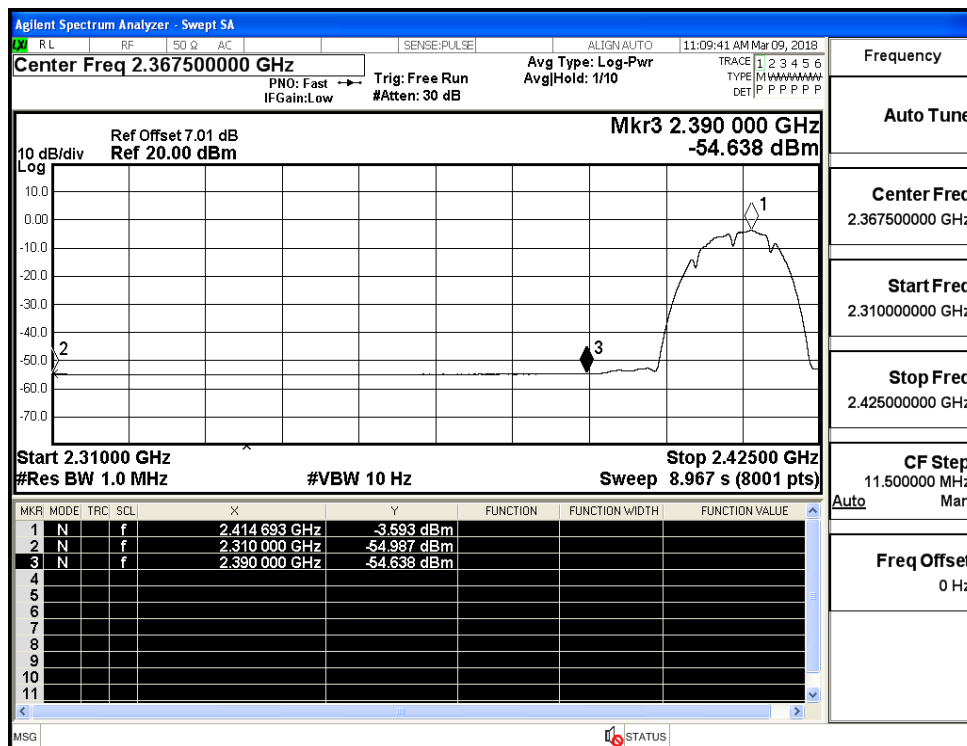
A.6 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-44.28	2.64	0	53.56	PEAK	74	PASS
	2412	Ant1	2310.0	-54.99	2.64	0	42.85	AV	54	PASS
	2412	Ant1	2390.0	-45.05	2.64	0	52.79	PEAK	74	PASS
	2412	Ant1	2390.0	-54.64	2.64	0	43.20	AV	54	PASS
	2462	Ant1	2483.5	-43.51	2.64	0	54.33	PEAK	74	PASS
	2462	Ant1	2483.5	-54.44	2.64	0	43.40	AV	54	PASS
	2462	Ant1	2500.0	-43.74	2.64	0	54.10	PEAK	74	PASS
	2462	Ant1	2500.0	-54.39	2.64	0	43.45	AV	54	PASS
11G	2412	Ant1	2310.0	-44.84	2.64	0	53.00	PEAK	74	PASS
	2412	Ant1	2310.0	-55.13	2.64	0	42.71	AV	54	PASS
	2412	Ant1	2390.0	-43.41	2.64	0	54.43	PEAK	74	PASS
	2412	Ant1	2390.0	-54.48	2.64	0	43.36	AV	54	PASS
	2462	Ant1	2483.5	-42.76	2.64	0	55.08	PEAK	74	PASS
	2462	Ant1	2483.5	-54.26	2.64	0	43.58	AV	54	PASS
	2462	Ant1	2500.0	-42.55	2.64	0	55.29	PEAK	74	PASS
	2462	Ant1	2500.0	-54.29	2.64	0	43.55	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-43.40	2.64	0	54.44	PEAK	74	PASS
	2412	Ant1	2310.0	-55.12	2.64	0	42.72	AV	54	PASS
	2412	Ant1	2390.0	-42.66	2.64	0	55.18	PEAK	74	PASS
	2412	Ant1	2390.0	-54.36	2.64	0	43.48	AV	54	PASS
	2462	Ant1	2483.5	-43.80	2.64	0	54.04	PEAK	74	PASS
	2462	Ant1	2483.5	-54.25	2.64	0	43.59	AV	54	PASS
	2462	Ant1	2500.0	-43.86	2.64	0	53.98	PEAK	74	PASS
	2462	Ant1	2500.0	-54.27	2.64	0	43.57	AV	54	PASS

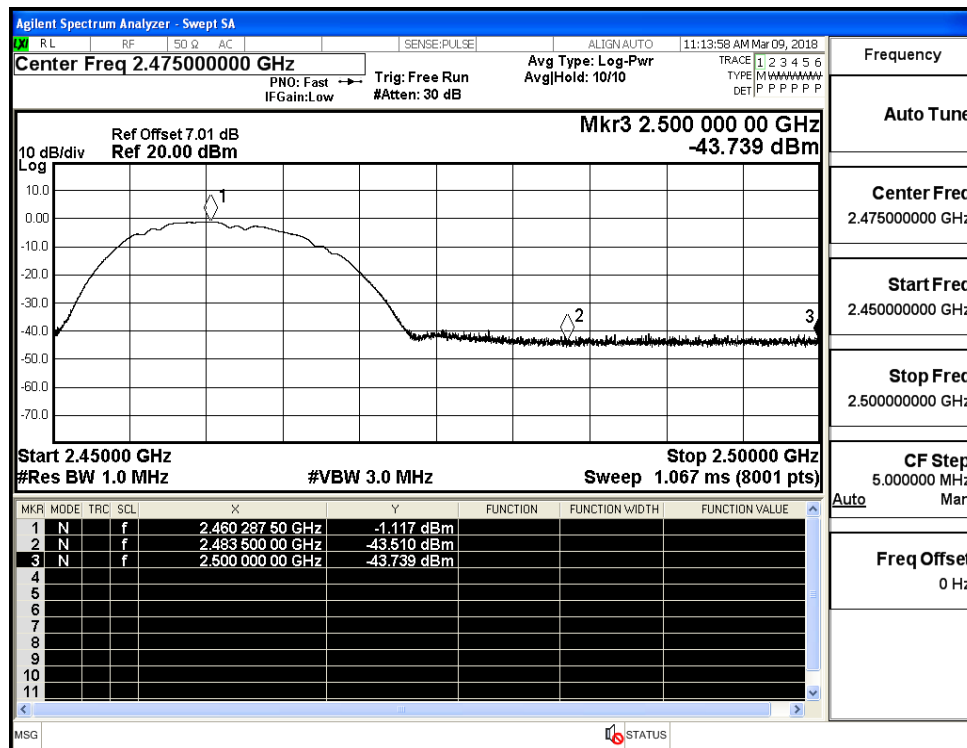
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



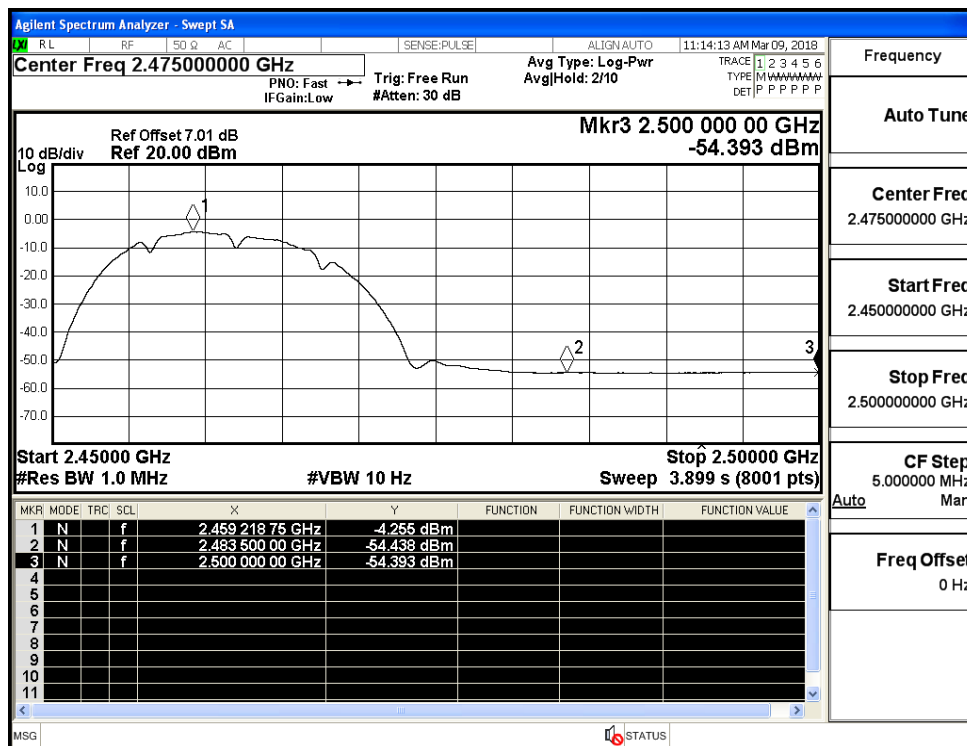
Restrict-band band-edge measurements_11B_2412_Ant1_AV



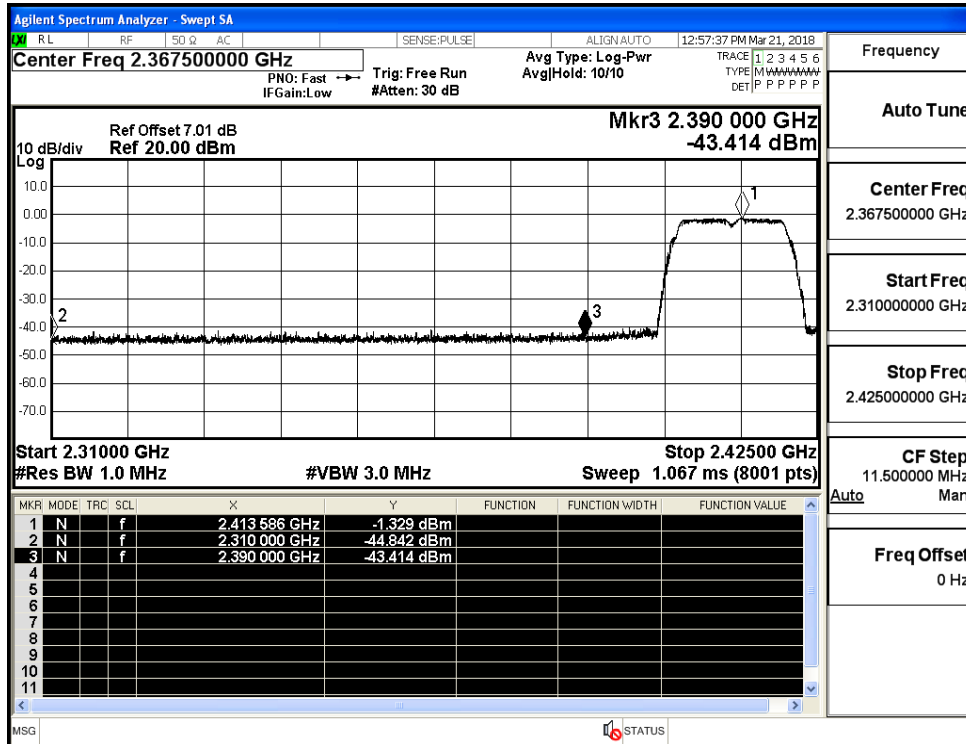
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



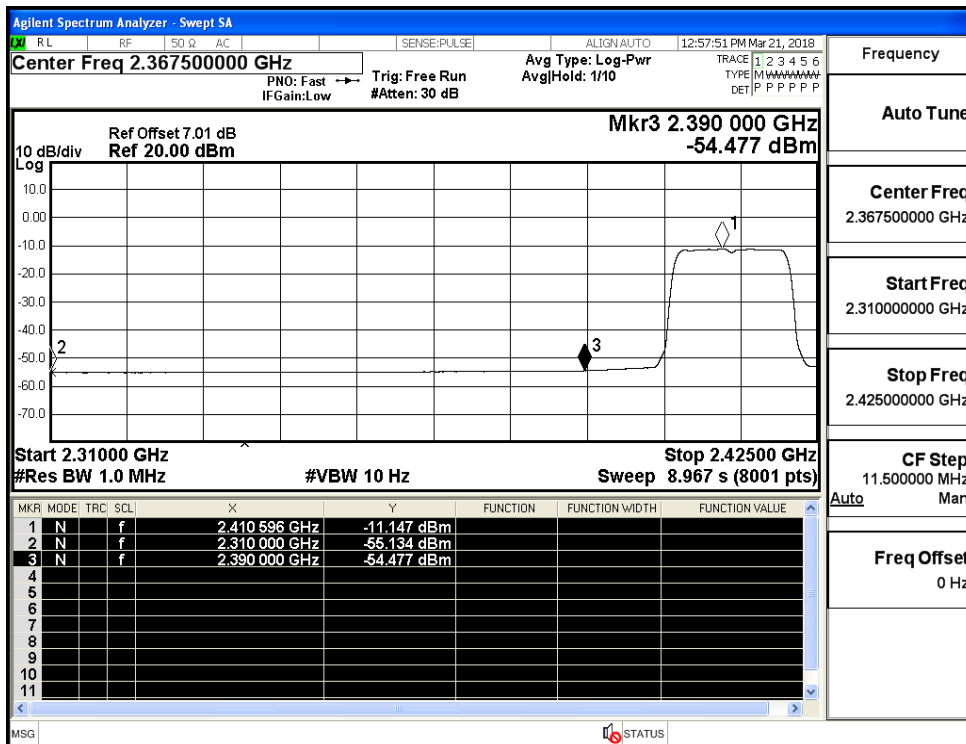
Restrict-band band-edge measurements_11B_2462_Ant1_AV



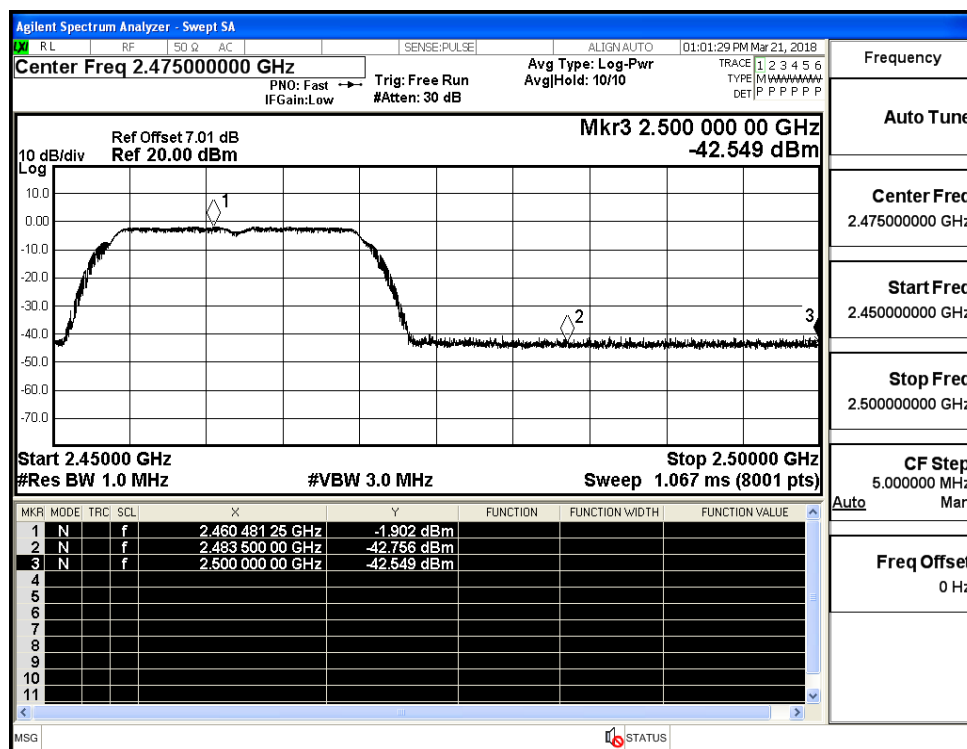
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



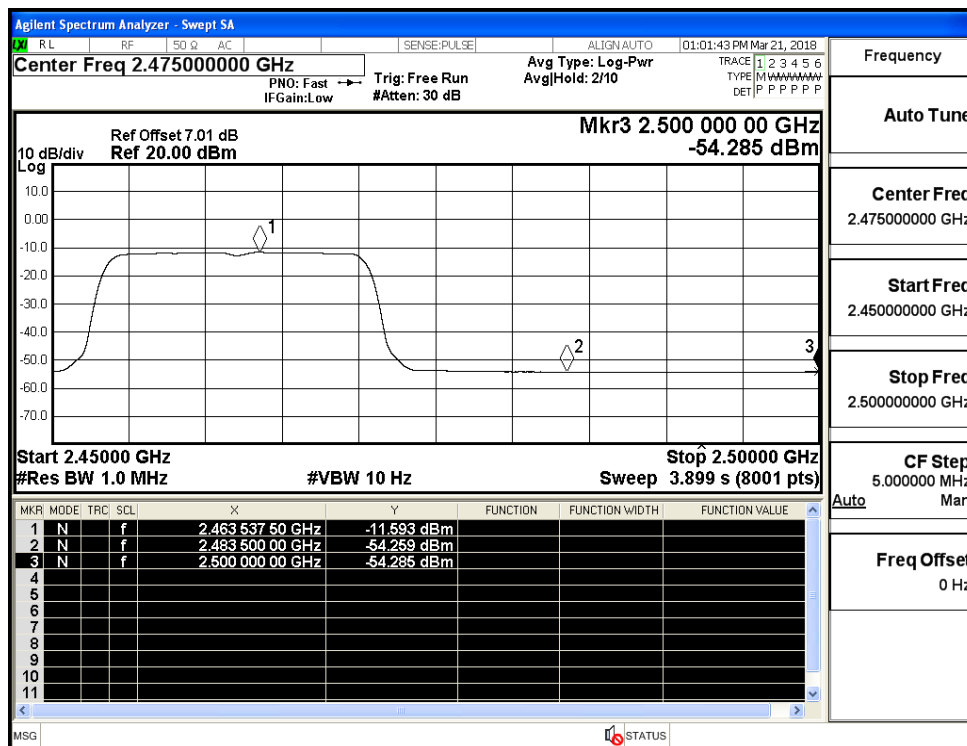
Restrict-band band-edge measurements_11G_2412_Ant1_AV



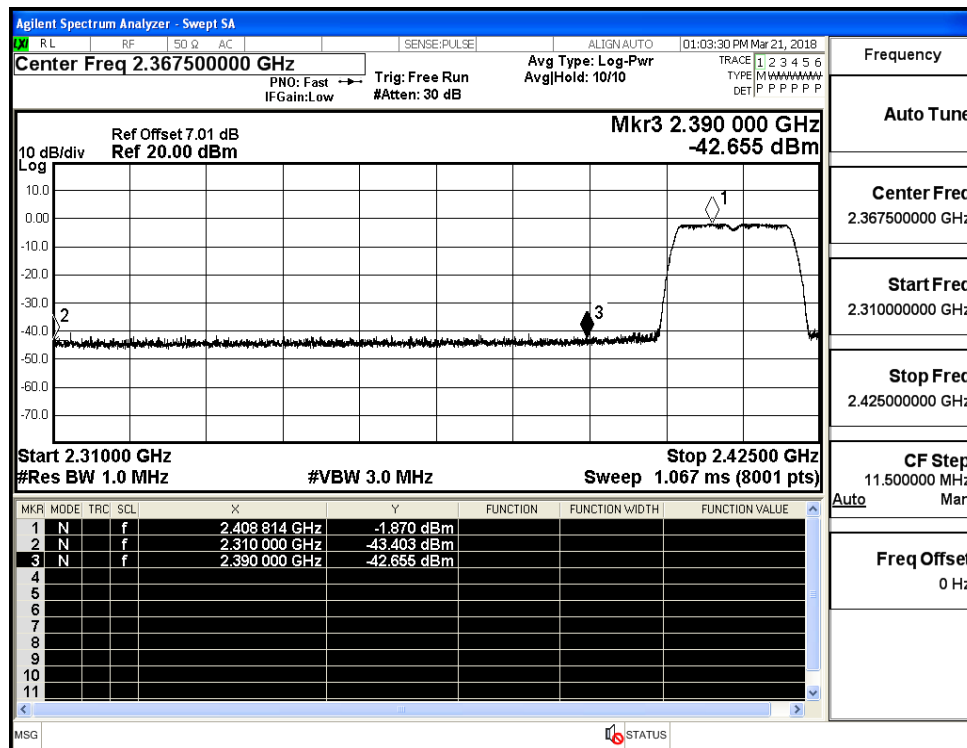
Restrict-band band-edge measurements_11G_2462_Ant1_PEAK



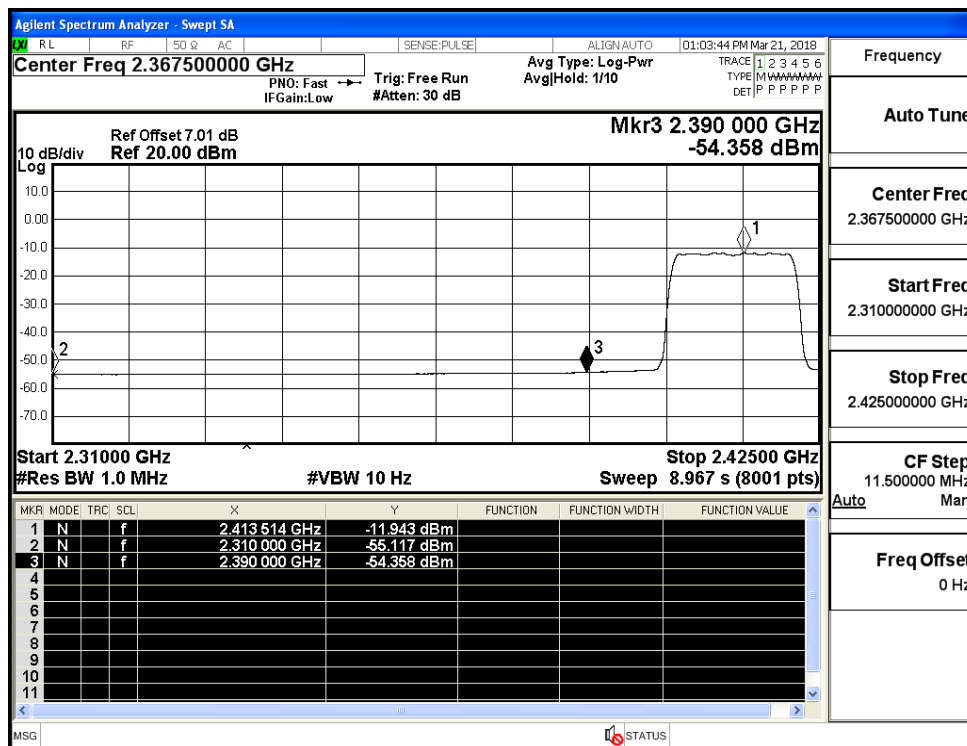
Restrict-band band-edge measurements_11G_2462_Ant1_AV



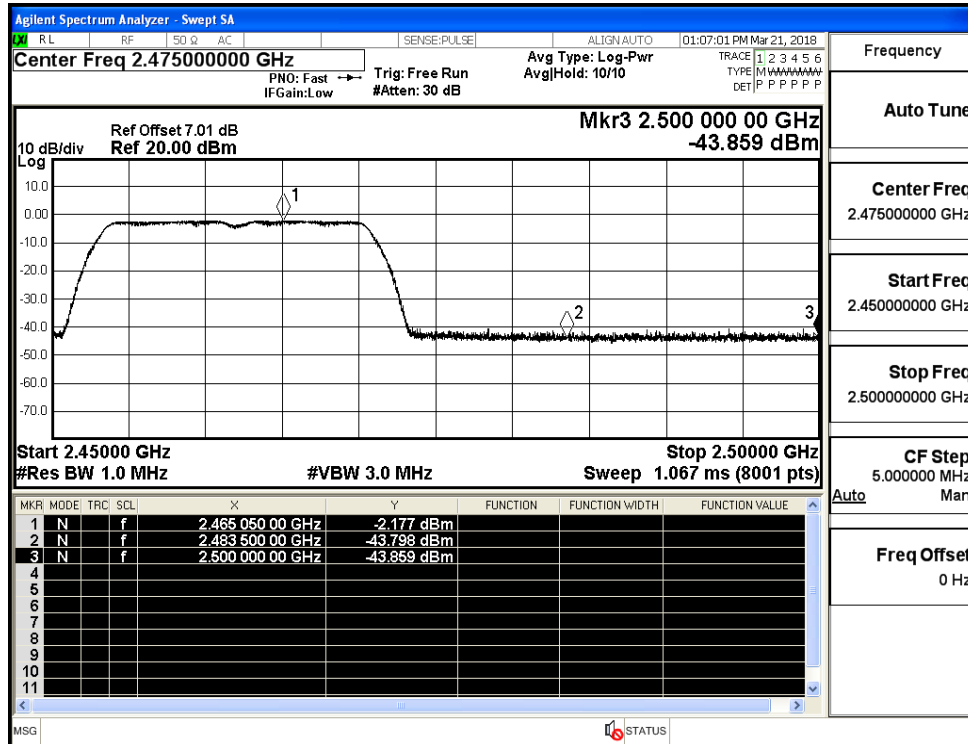
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



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

