

Appendix B

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: LCD Advertising Player

Trade Mark: N/A

Test Model: ADV4331T

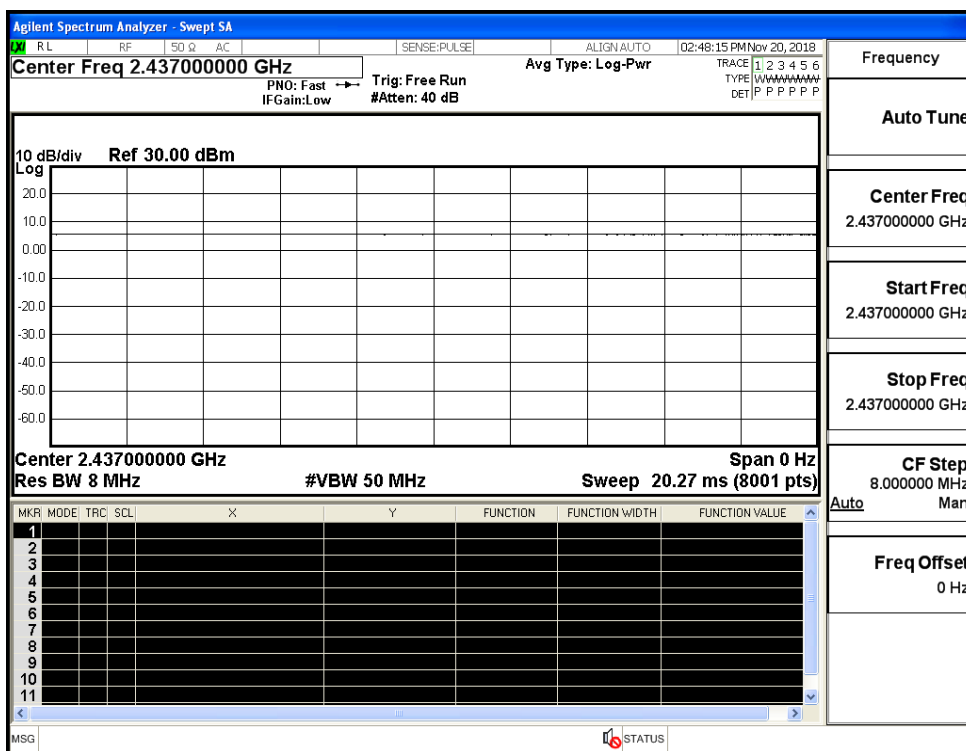
Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	54.2%
ATM Pressure:	100.0 kPa
Test Engineer:	WANGCHUANG
Supervised by:	Jayden.Zhuo

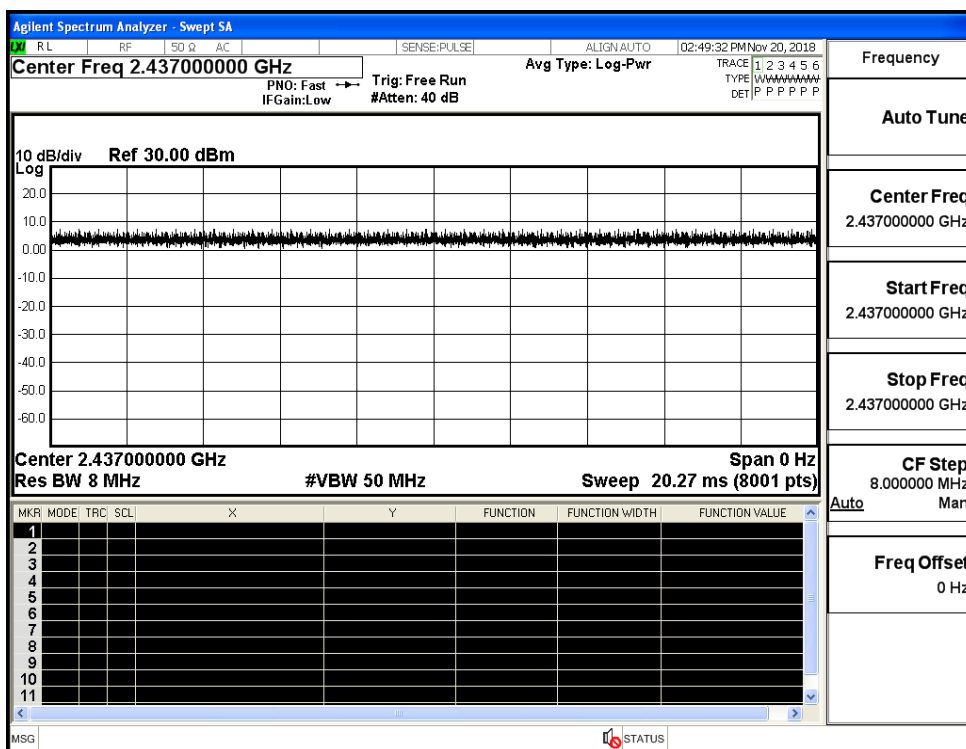
B.1 Duty Cycle

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

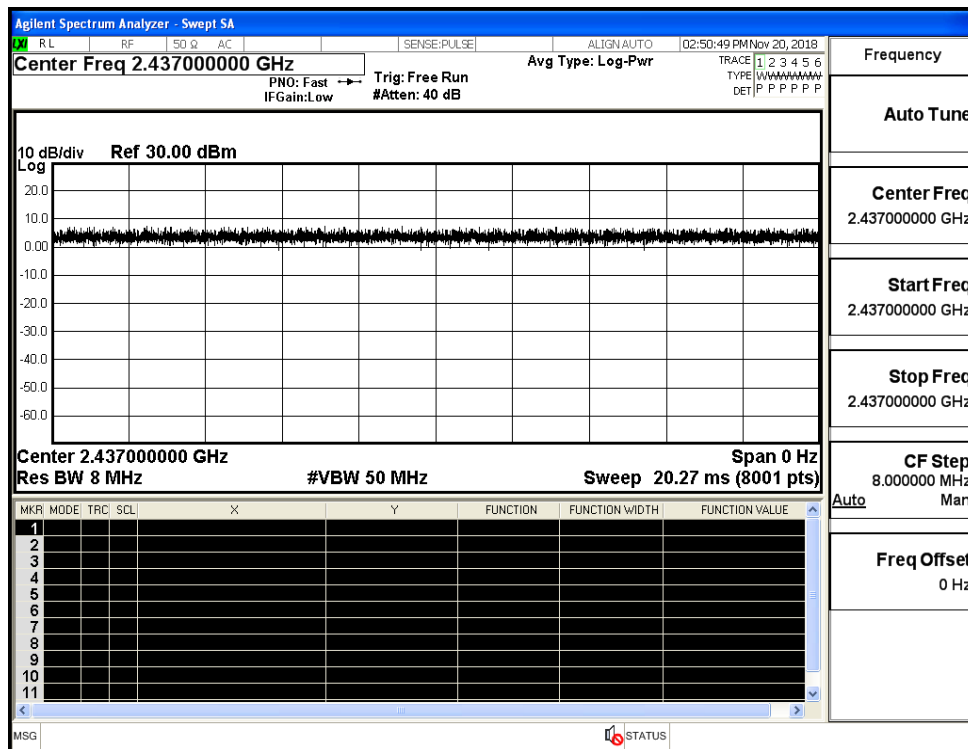
Duty Cycle_11B_2437_Ant1



Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



B.2 Maximum Conducted Output Power

Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	12.66	30	PASS
	MCH	13.28	30	PASS
	HCH	12.62	30	PASS
11G	LCH	16.07	30	PASS
	MCH	15.54	30	PASS
	HCH	14.97	30	PASS
11N20SISO	LCH	15.64	30	PASS
	MCH	15.73	30	PASS
	HCH	15.2	30	PASS

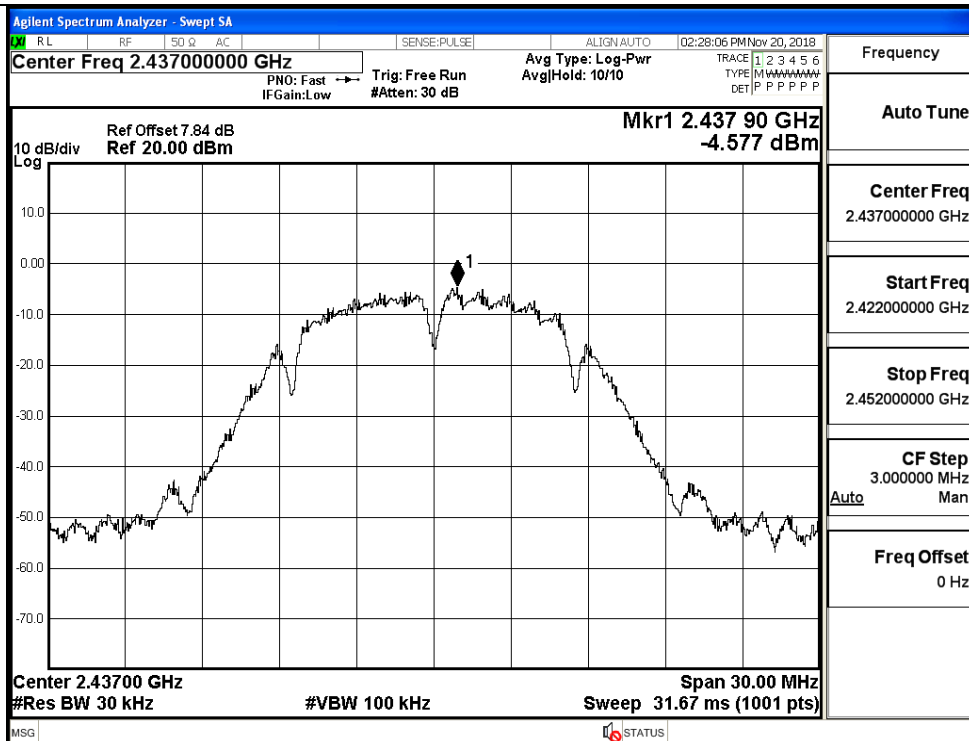
B.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/30KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-5.271	8	PASS
	MCH	-4.577	8	PASS
	HCH	-5.332	8	PASS
11G	LCH	-7.684	8	PASS
	MCH	-8.152	8	PASS
	HCH	-8.694	8	PASS
11N20SISO	LCH	-7.581	8	PASS
	MCH	-7.437	8	PASS
	HCH	-7.713	8	PASS

Test Graphs



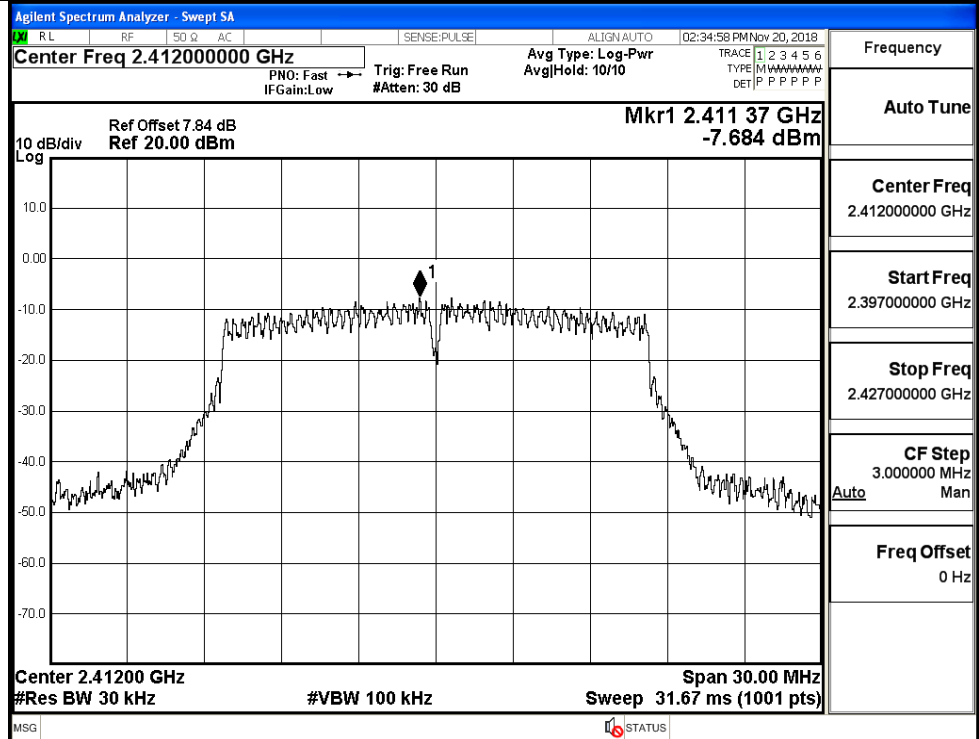
11B/MCH



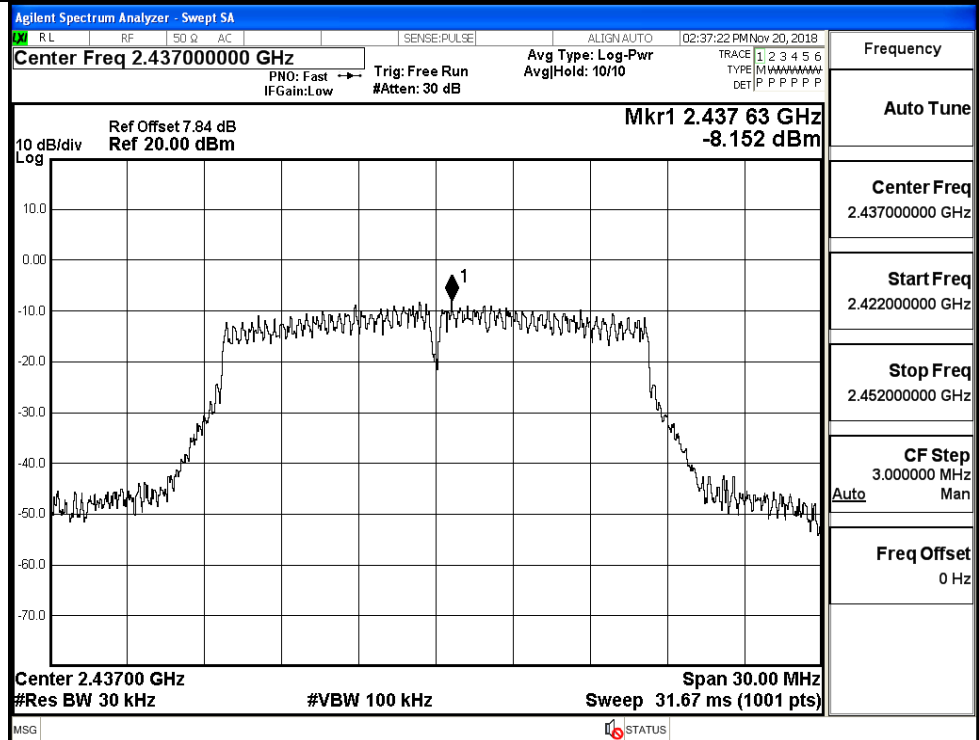
11B/HCH



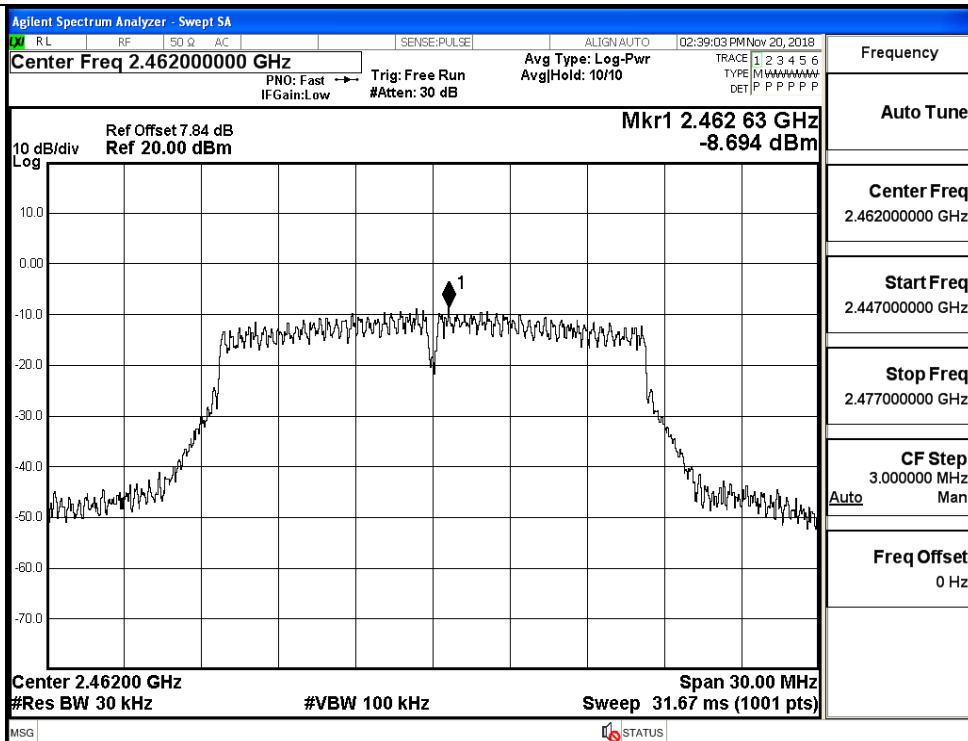
11G/LCH



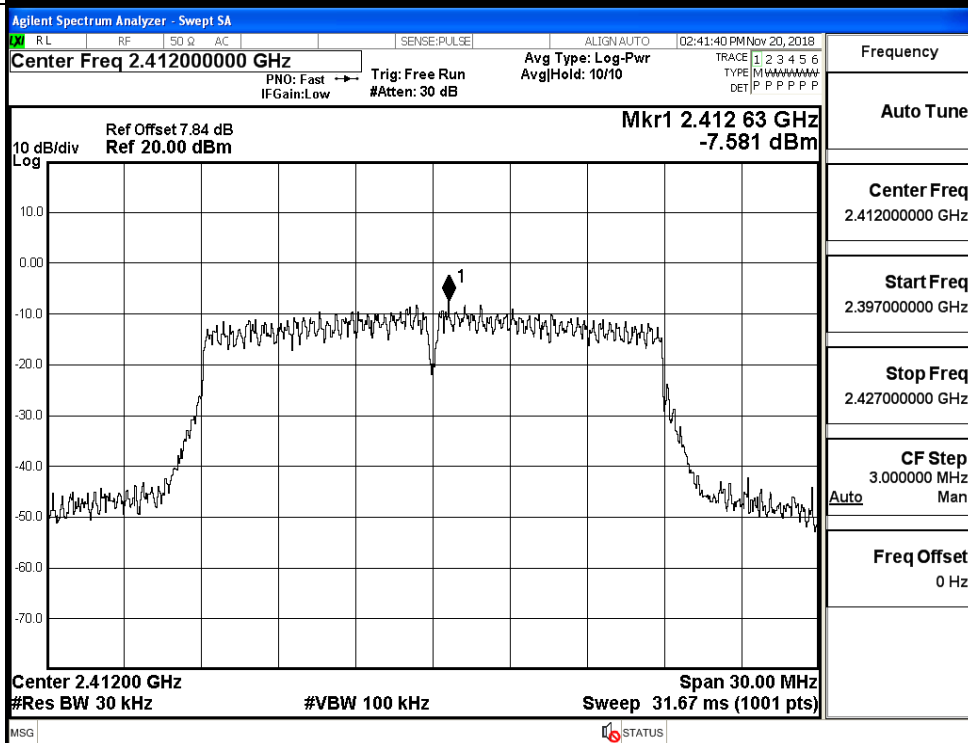
11G/MCH

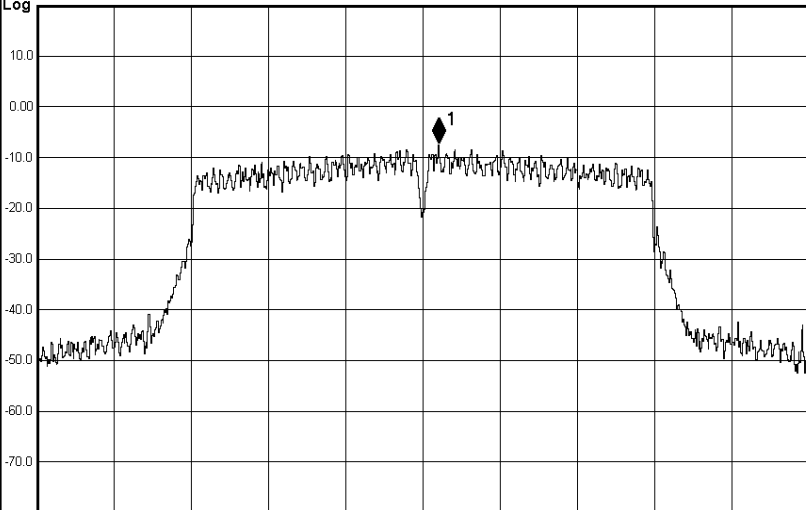
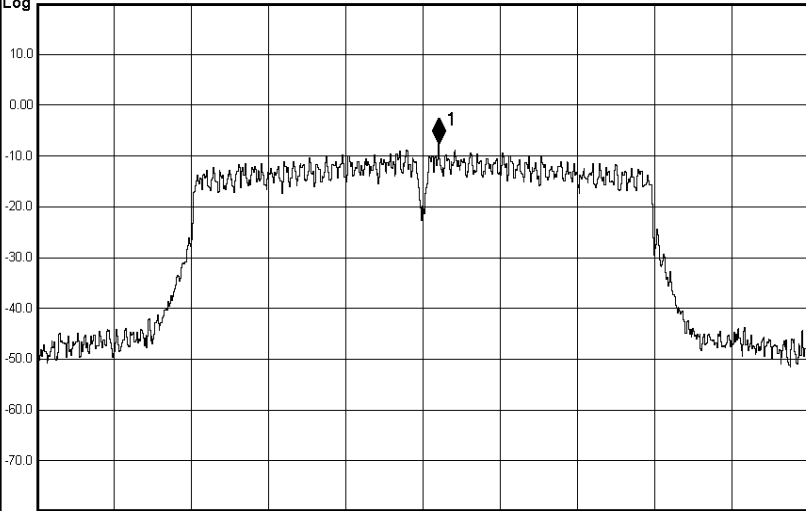


11G/HCH



11N20SISO/LCH

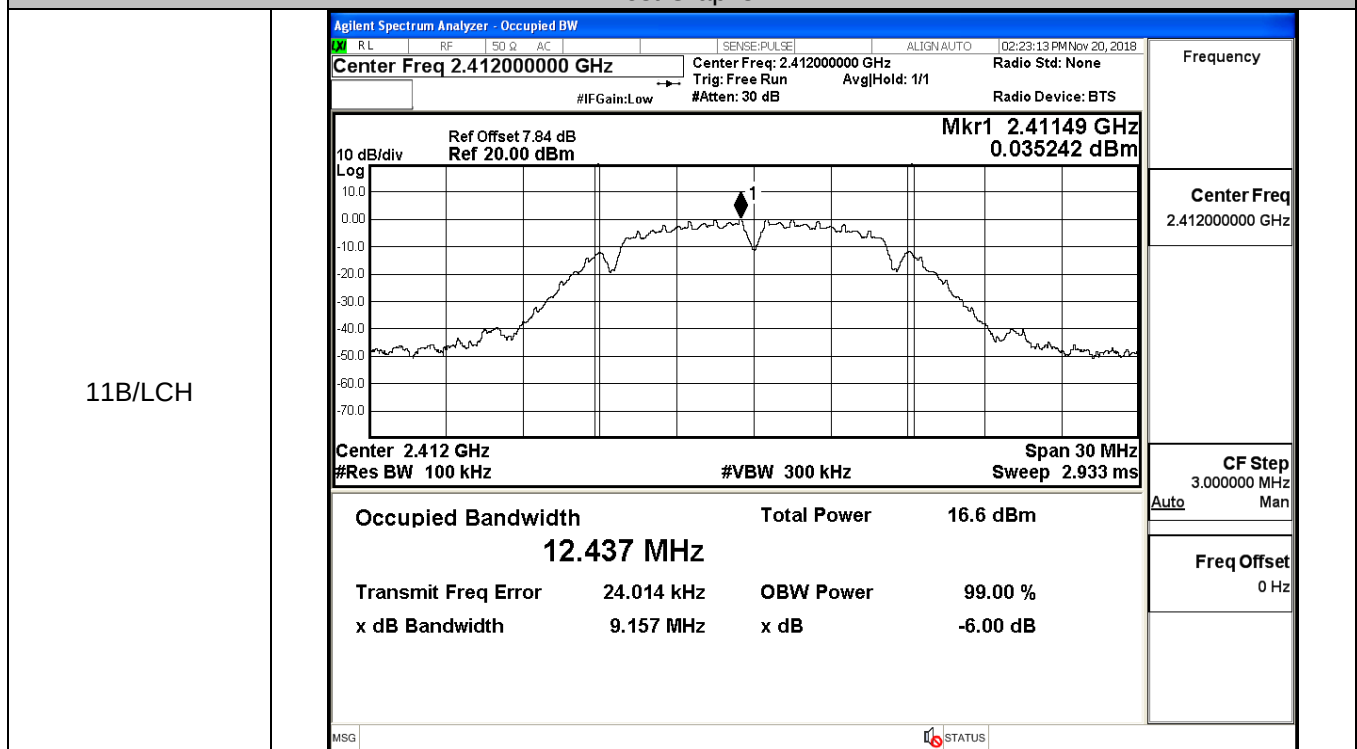


11N20SISO/MCH	Agilent Spectrum Analyzer - Swept SA Center Freq 2.43700000 GHz Ref Offset 7.84 dB Ref 20.00 dBm Mkr1 2.437 63 GHz -7.437 dBm  Center 2.43700 GHz #Res BW 30 kHz #VBW 100 kHz Span 30.00 MHz Sweep 31.67 ms (1001 pts) Frequency Auto Tune Center Freq 2.437000000 GHz Start Freq 2.422000000 GHz Stop Freq 2.452000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
11N20SISO/HCH	Agilent Spectrum Analyzer - Swept SA Center Freq 2.46200000 GHz Ref Offset 7.84 dB Ref 20.00 dBm Mkr1 2.462 63 GHz -7.713 dBm  Center 2.46200 GHz #Res BW 30 kHz #VBW 100 kHz Span 30.00 MHz Sweep 31.67 ms (1001 pts) Frequency Auto Tune Center Freq 2.462000000 GHz Start Freq 2.447000000 GHz Stop Freq 2.477000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
11N40SISO/LCH	#imgppsd11n40siso1lchnn

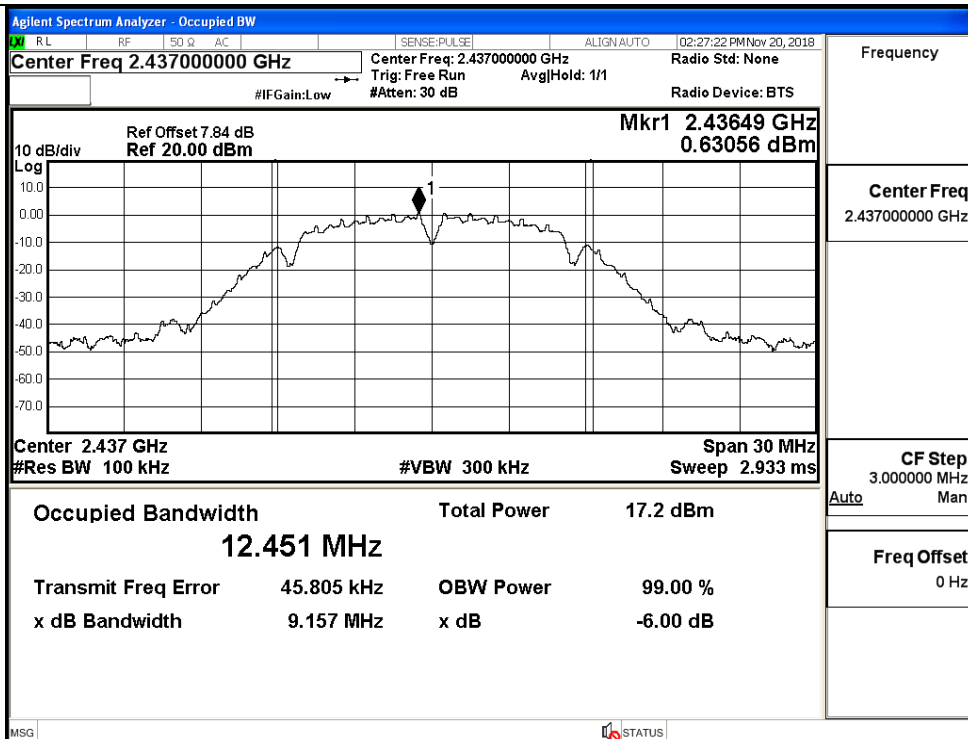
B.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.157	≥ 0.5	PASS
	MCH	9.157	≥ 0.5	PASS
	HCH	9.157	≥ 0.5	PASS
11G	LCH	16.44	≥ 0.5	PASS
	MCH	16.43	≥ 0.5	PASS
	HCH	16.40	≥ 0.5	PASS
11N20SISO	LCH	17.64	≥ 0.5	PASS
	MCH	17.63	≥ 0.5	PASS
	HCH	17.62	≥ 0.5	PASS

Test Graphs



11B/MCH



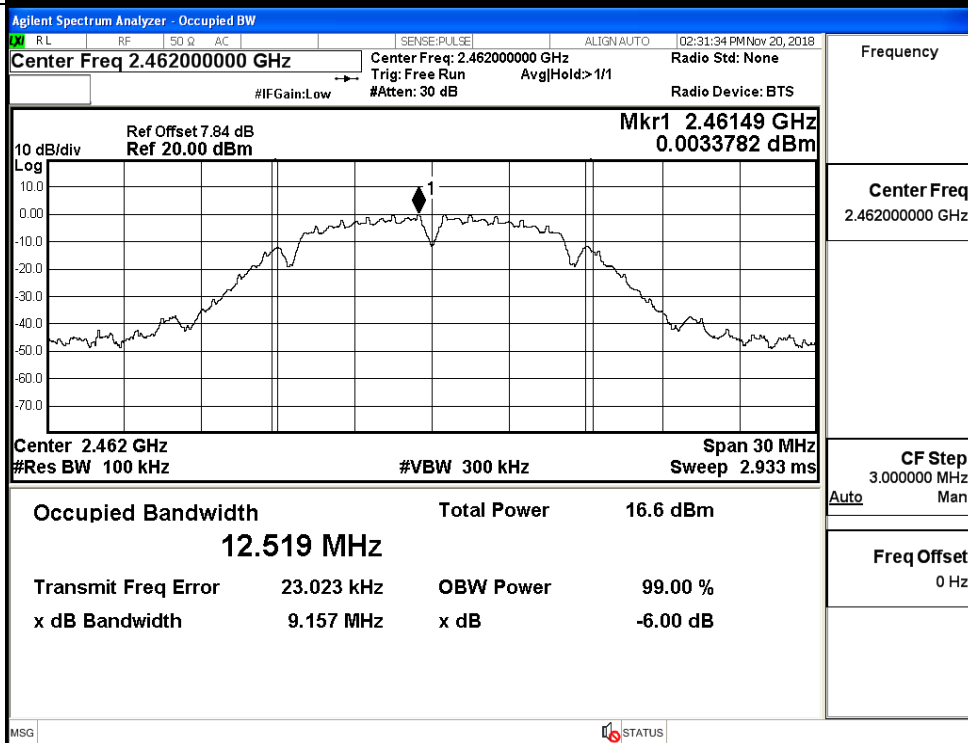
Frequency

Center Freq
2.437000000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

11B/HCH



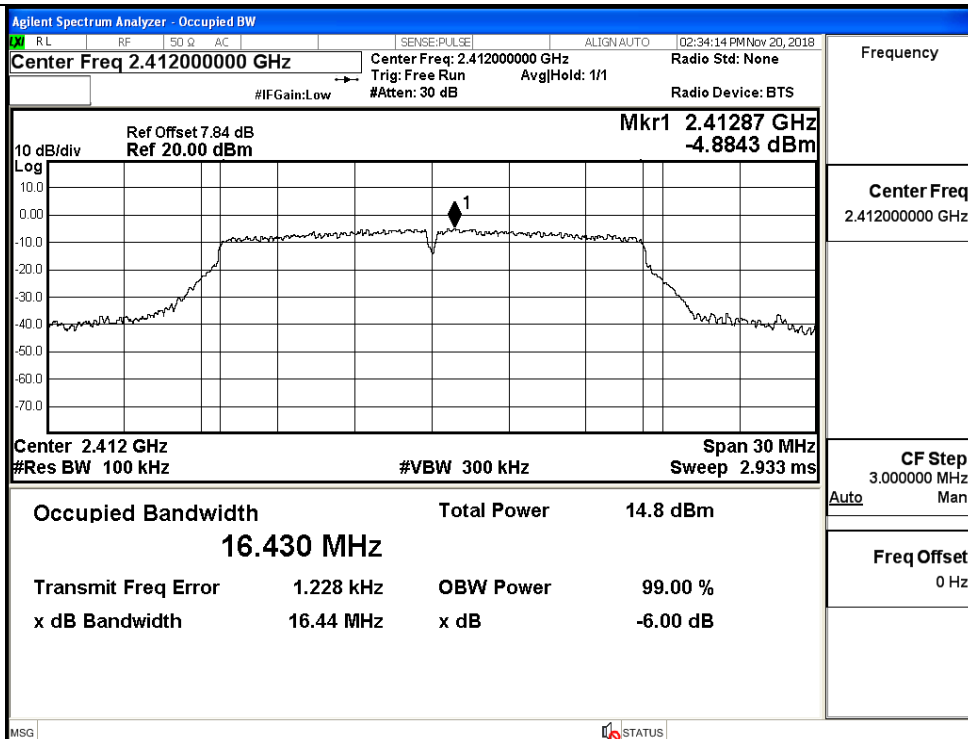
Frequency

Center Freq
2.462000000 GHz

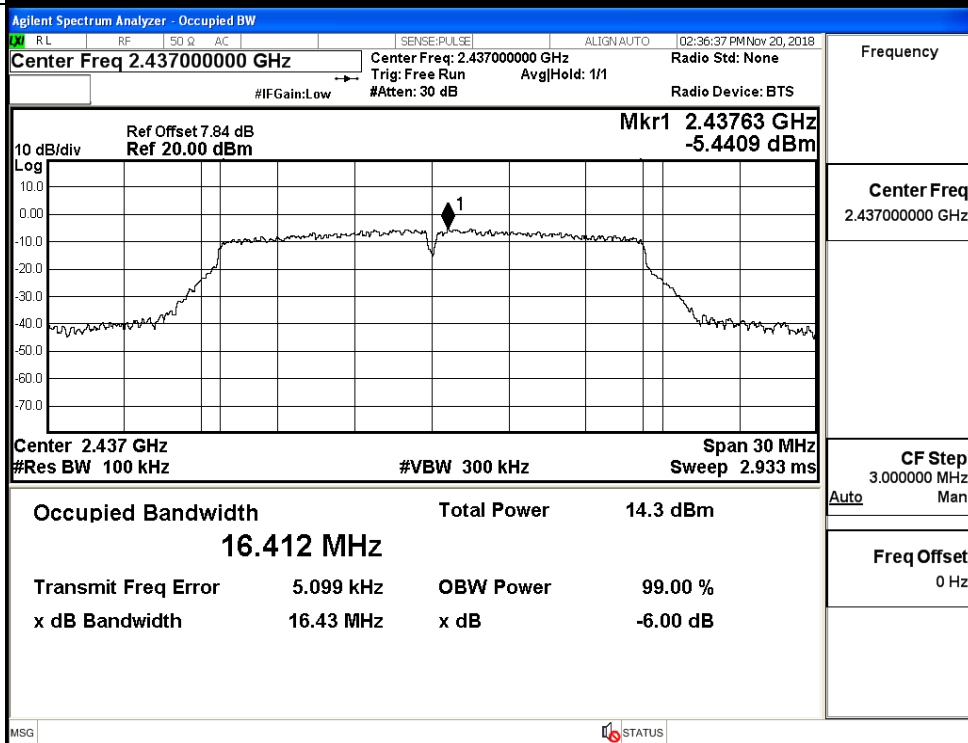
CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

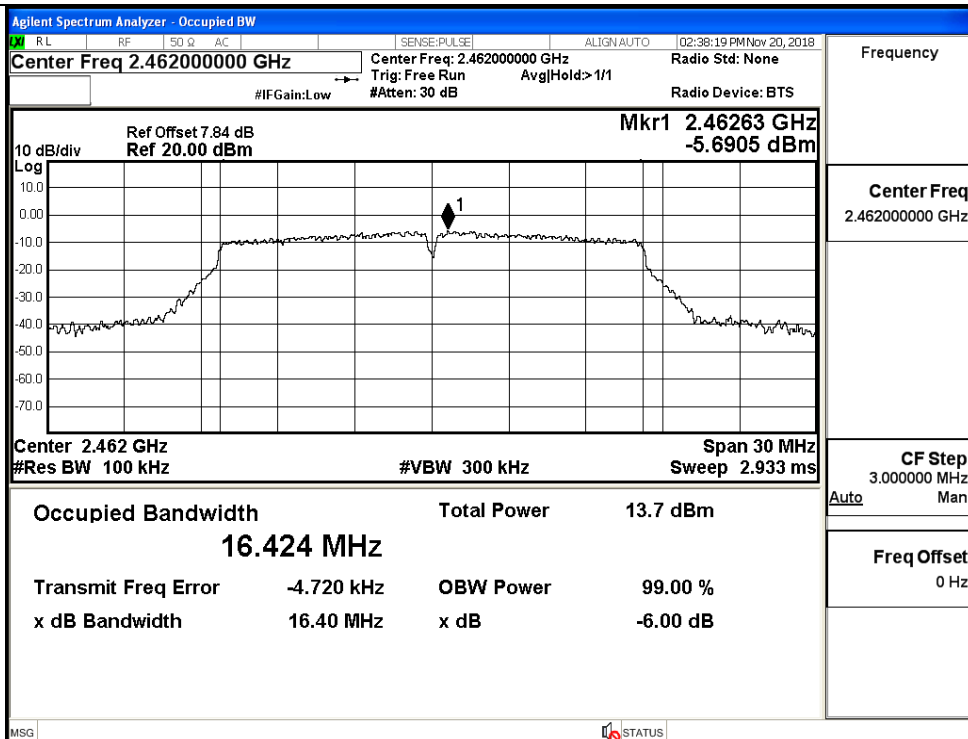
11G/LCH



11G/MCH



11G/HCH



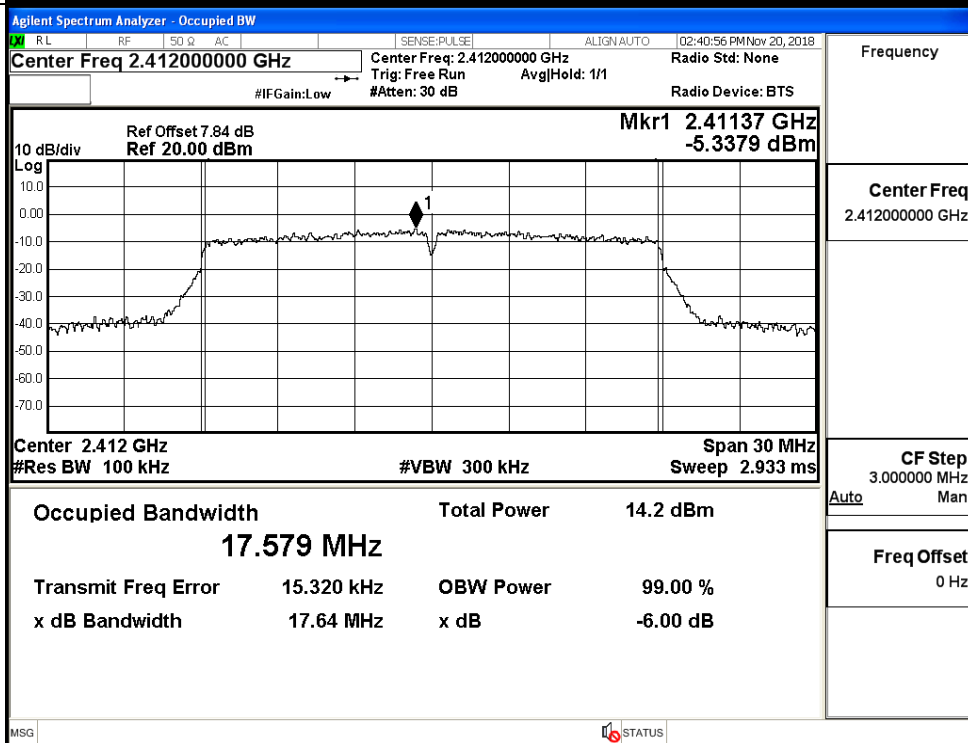
Frequency

Center Freq
2.46200000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

11N20SISO/LCH

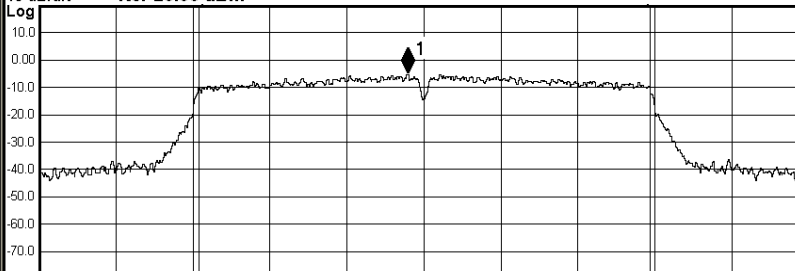
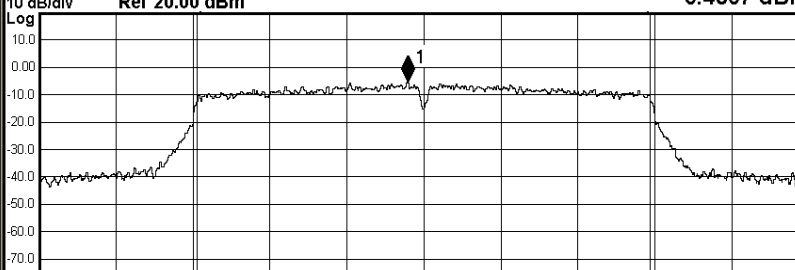


Frequency

Center Freq
2.41200000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

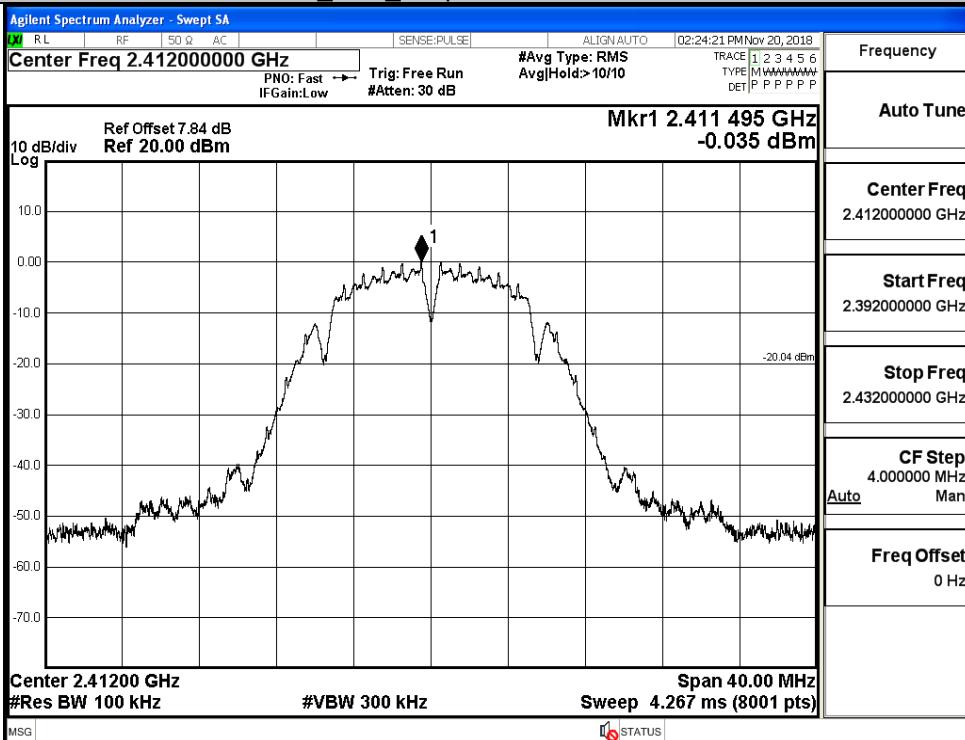
11N20SISO/MCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 02:43:21 PM Nov 20, 2018 Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None #IFGain:Low #Atten: 30 dB Radio Device: BTS 10 dB/div Ref Offset 7.84 dB Ref 20.00 dBm Mkr1 2.43637 GHz -5.1857 dBm  Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.569 MHz Total Power 14.3 dBm Transmit Freq Error 19.724 kHz OBW Power 99.00 % x dB Bandwidth 17.63 MHz x dB -6.00 dB MSG STATUS	Frequency Center Freq 2.437000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
11N20SISO/HCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 02:45:05 PM Nov 20, 2018 Center Freq 2.462000000 GHz Center Freq: 2.462000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None #IFGain:Low #Atten: 30 dB Radio Device: BTS 10 dB/div Ref Offset 7.84 dB Ref 20.00 dBm Mkr1 2.46137 GHz -5.4807 dBm  Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.579 MHz Total Power 13.8 dBm Transmit Freq Error 16.243 kHz OBW Power 99.00 % x dB Bandwidth 17.62 MHz x dB -6.00 dB MSG STATUS	Frequency Center Freq 2.462000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz

B.5 RF Conducted Spurious Emissions

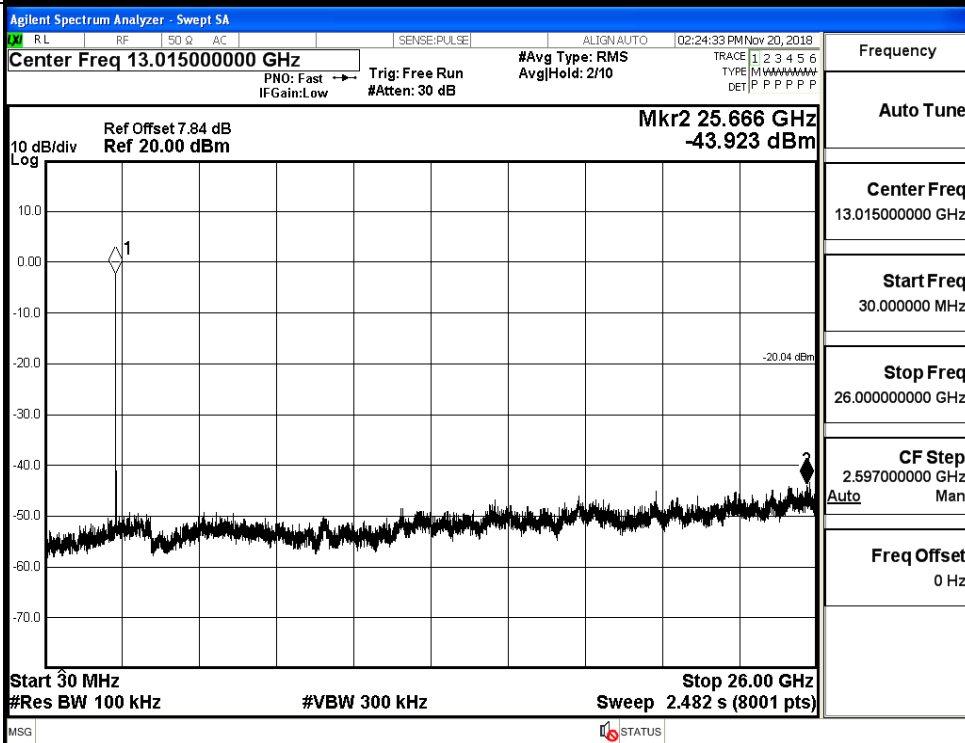
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-0.035	-43.923	-20.035	PASS
	MCH	0.58	-44.108	-19.420	PASS
	HCH	-0.099	-43.381	-20.099	PASS
11G	LCH	-4.977	-44.243	-24.977	PASS
	MCH	-5.502	-43.274	-25.502	PASS
	HCH	-5.843	-44.046	-25.843	PASS
11N20 SISO	LCH	-5.385	-42.432	-25.385	PASS
	MCH	-5.415	-42.637	-25.415	PASS
	HCH	-5.684	-44.576	-25.684	PASS

11B LCH Graphs

Pref/11B/LCH

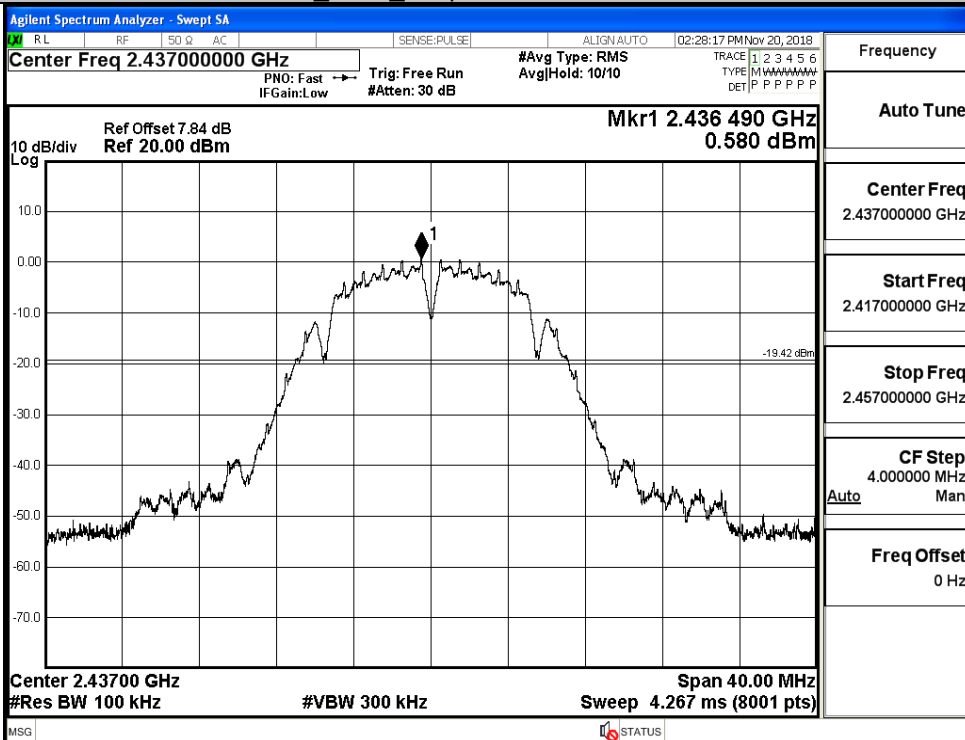


Puw/11B/LCH

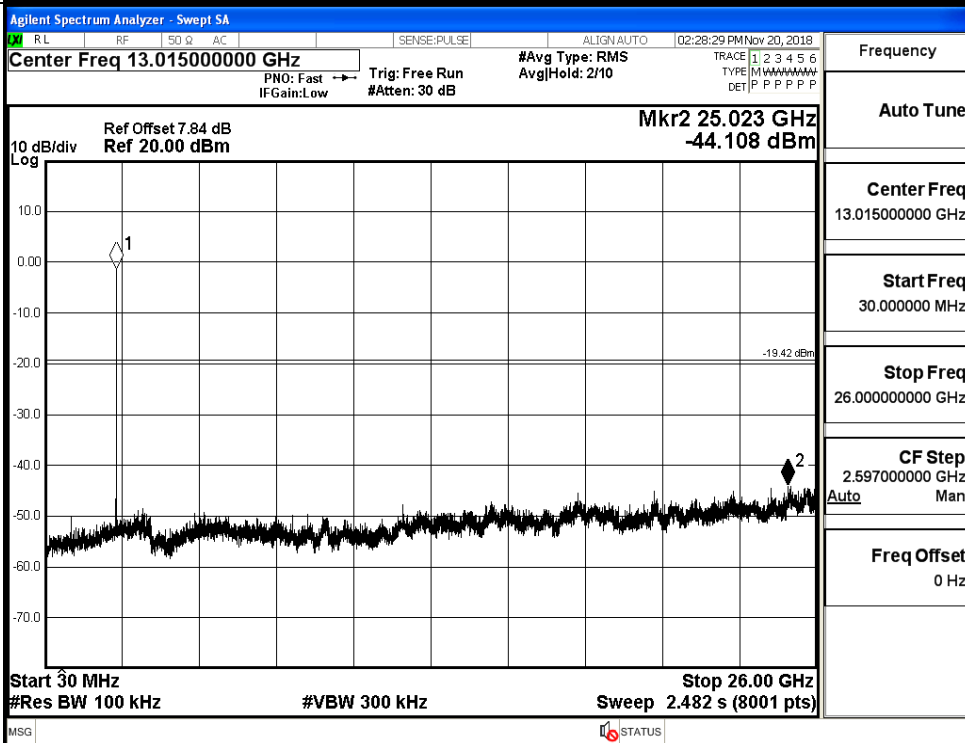


11B MCH Graphs

Pref/11B/MCH

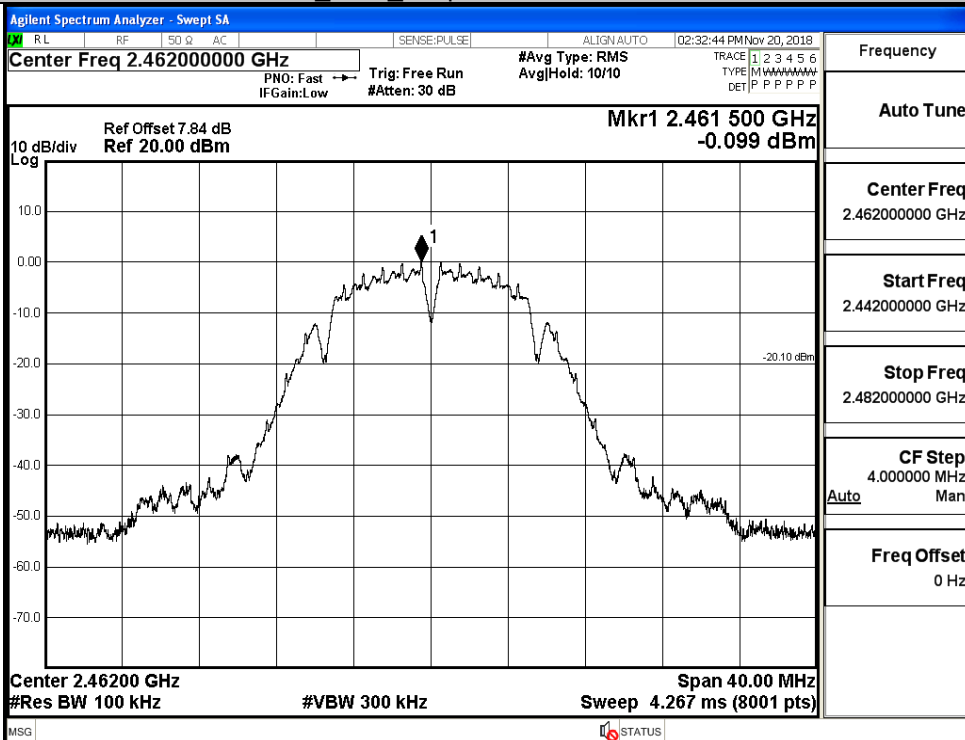


Puw/11B/MCH

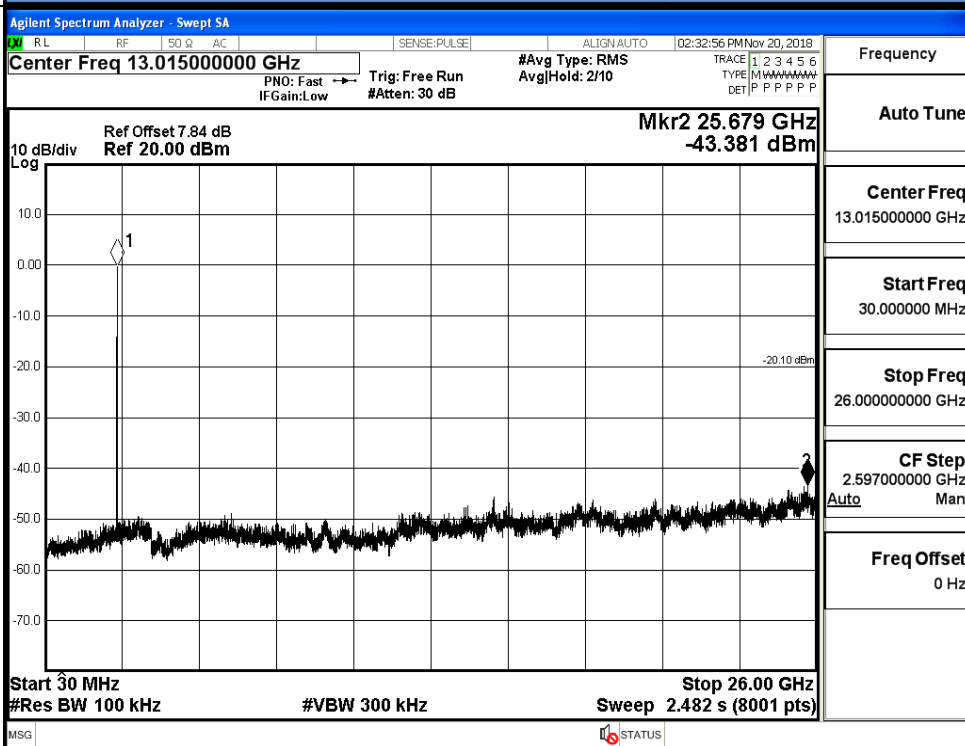


11B HCH Graphs

Pref/11B/HCH

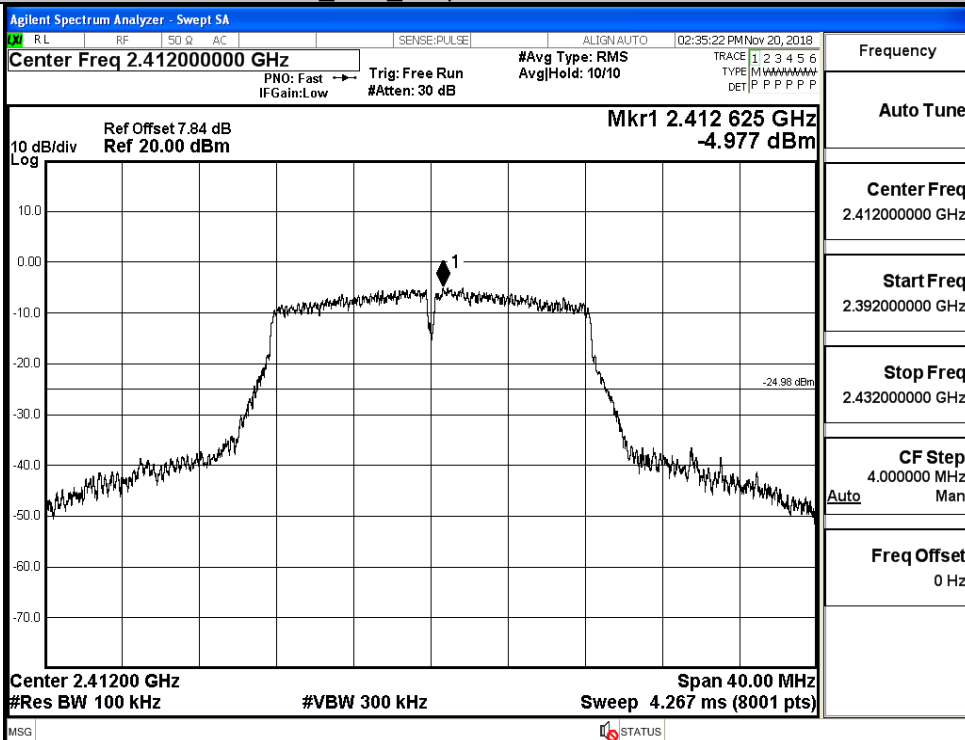


Puw/11B/HCH

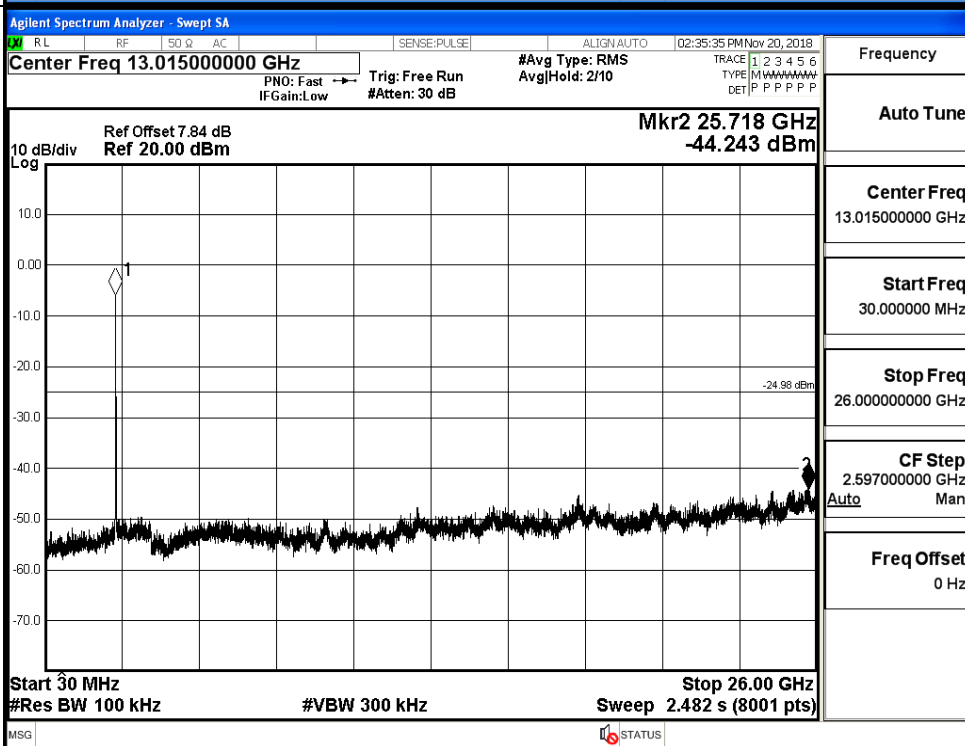


11G LCH Graphs

Pref/11G/LCH

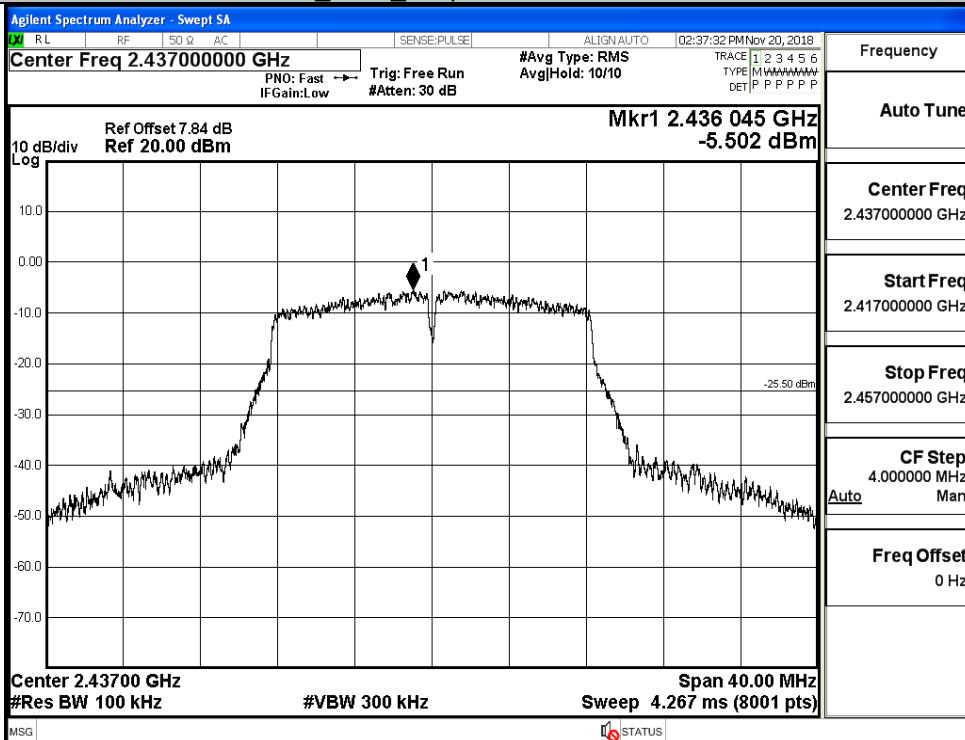


Puw/11G/LCH

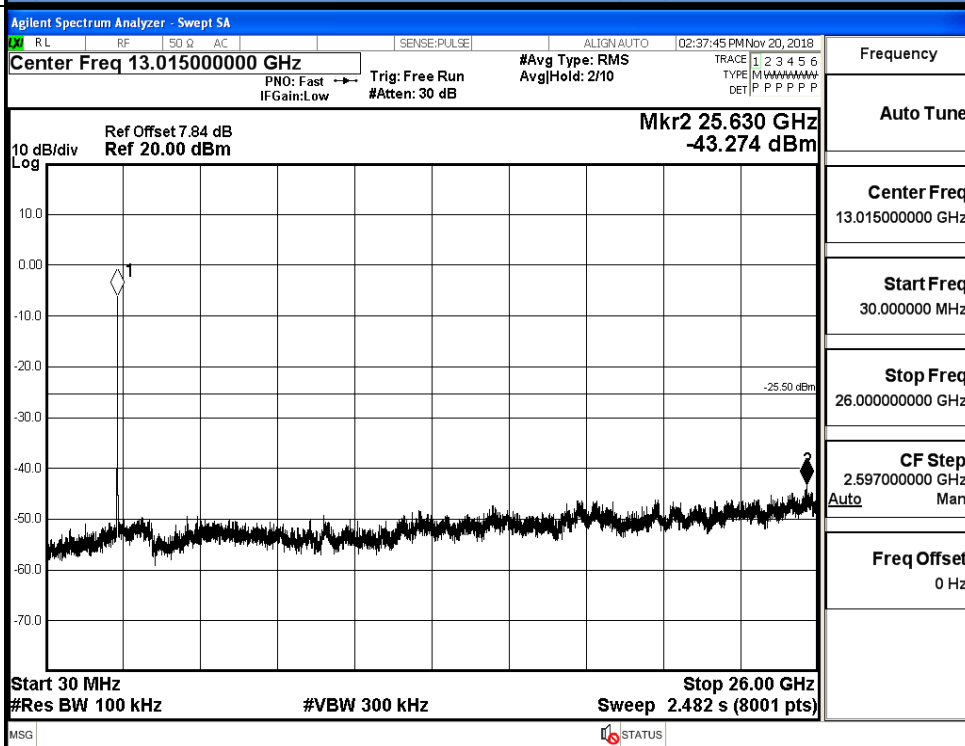


11G MCH Graphs

Pref/11G/MCH

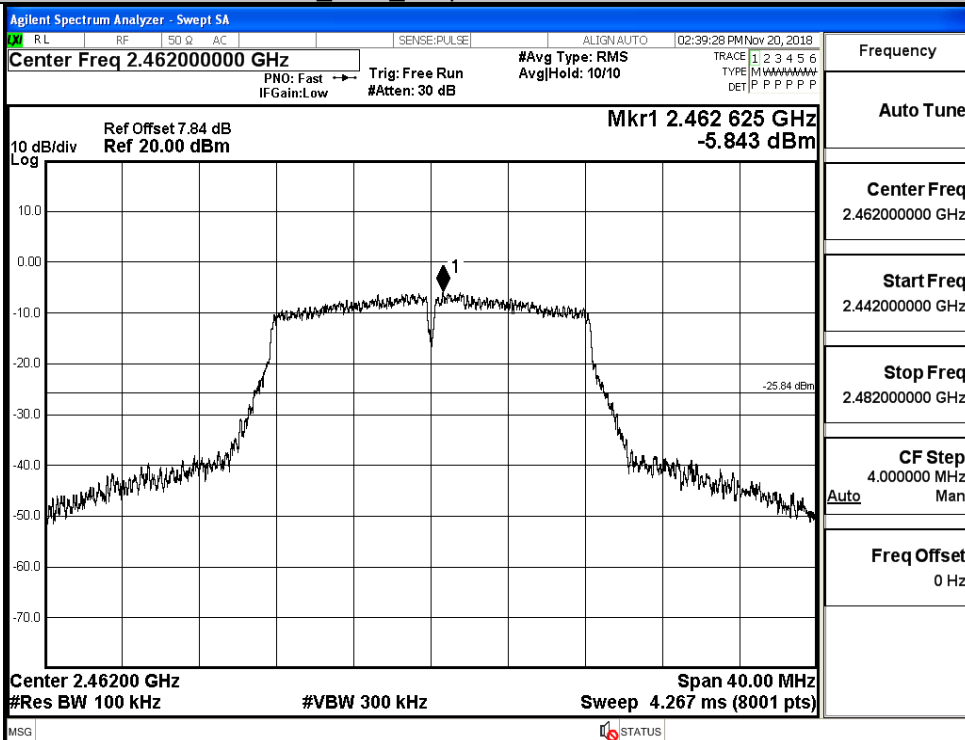


Puw/11G/MCH

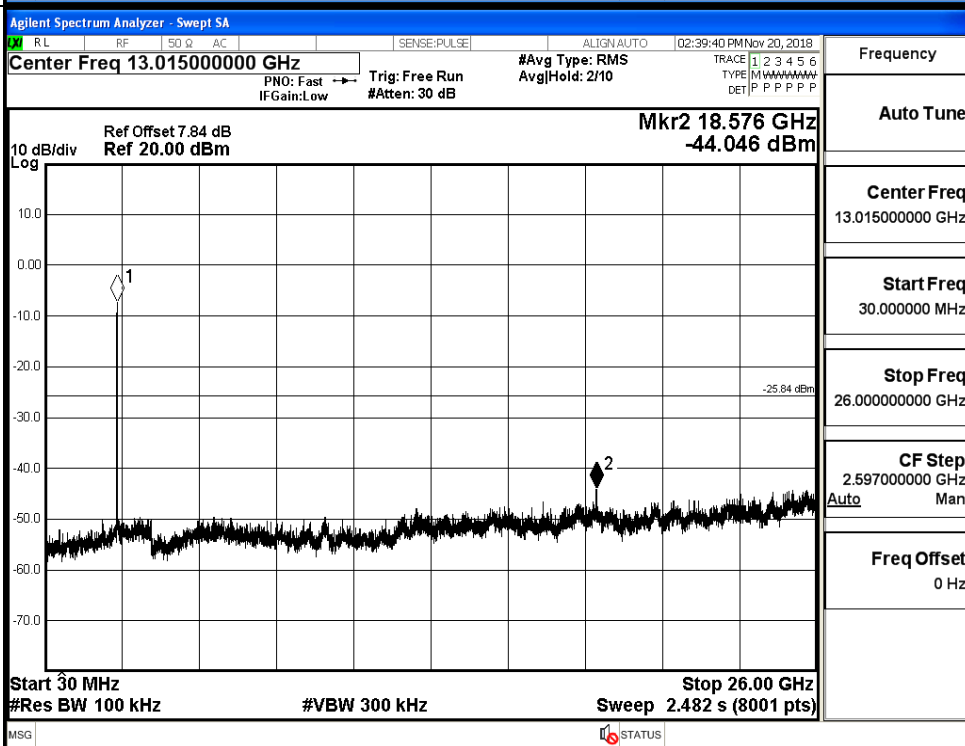


11G HCH Graphs

Pref/11G/HCH

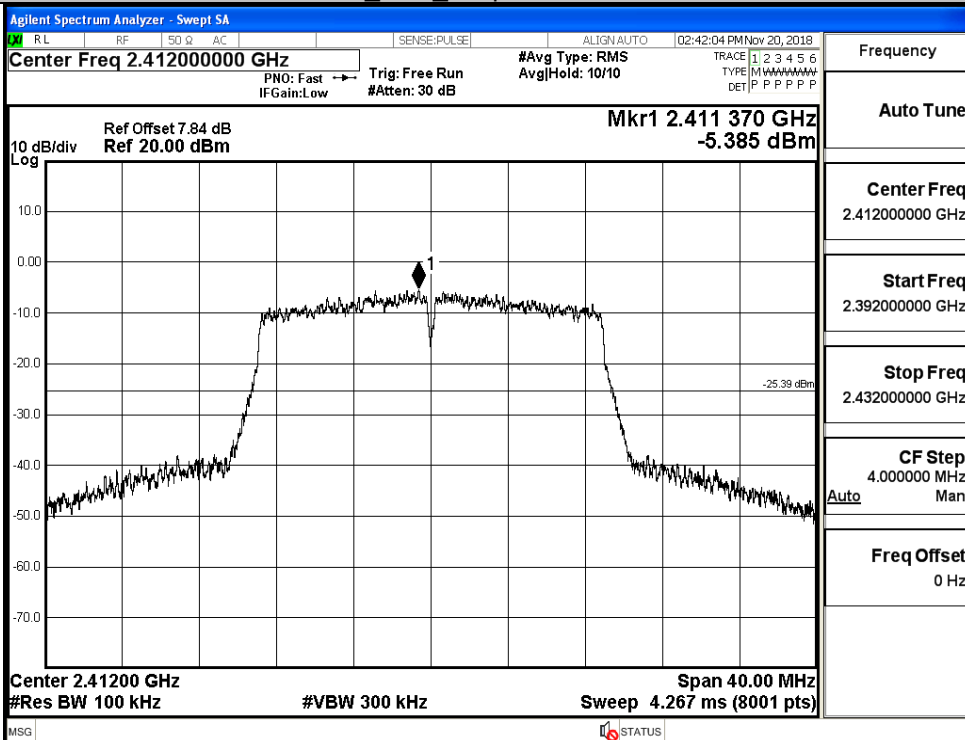


Puw/11G/HCH

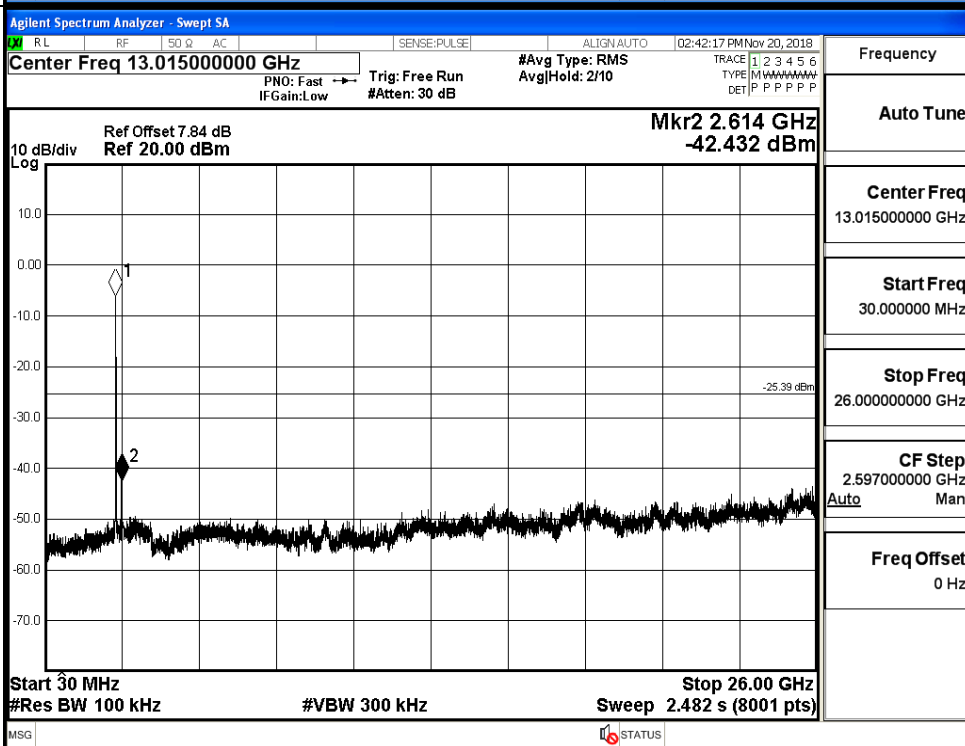


11N20SISO LCH Graphs

Pref/11N20SIS
O/LCH

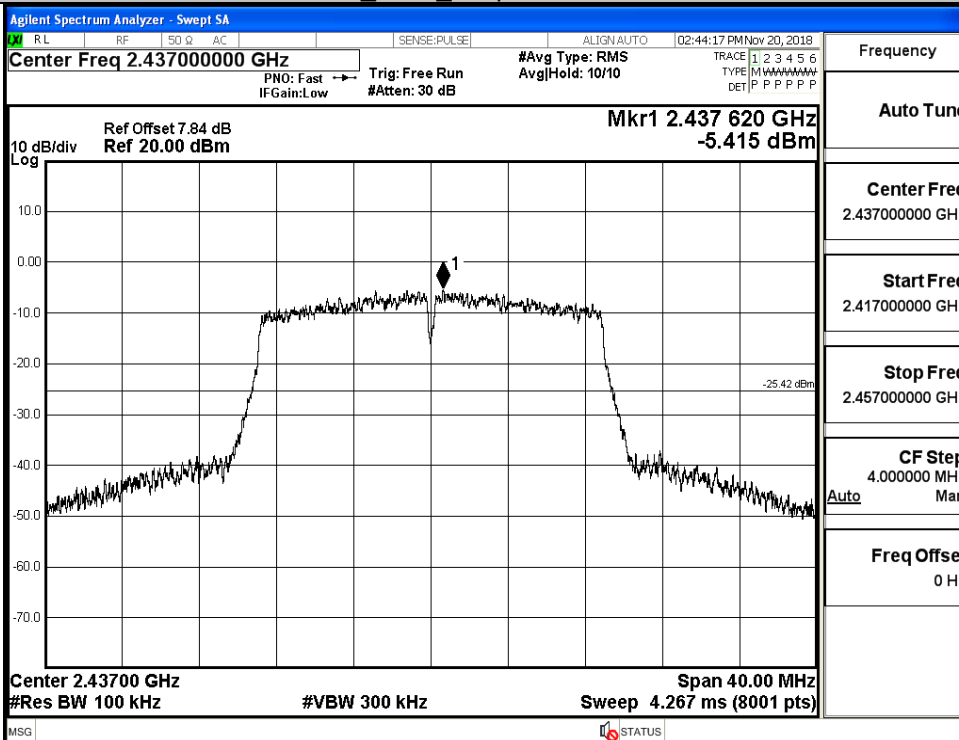


Puw/11N20
SISO/LCH

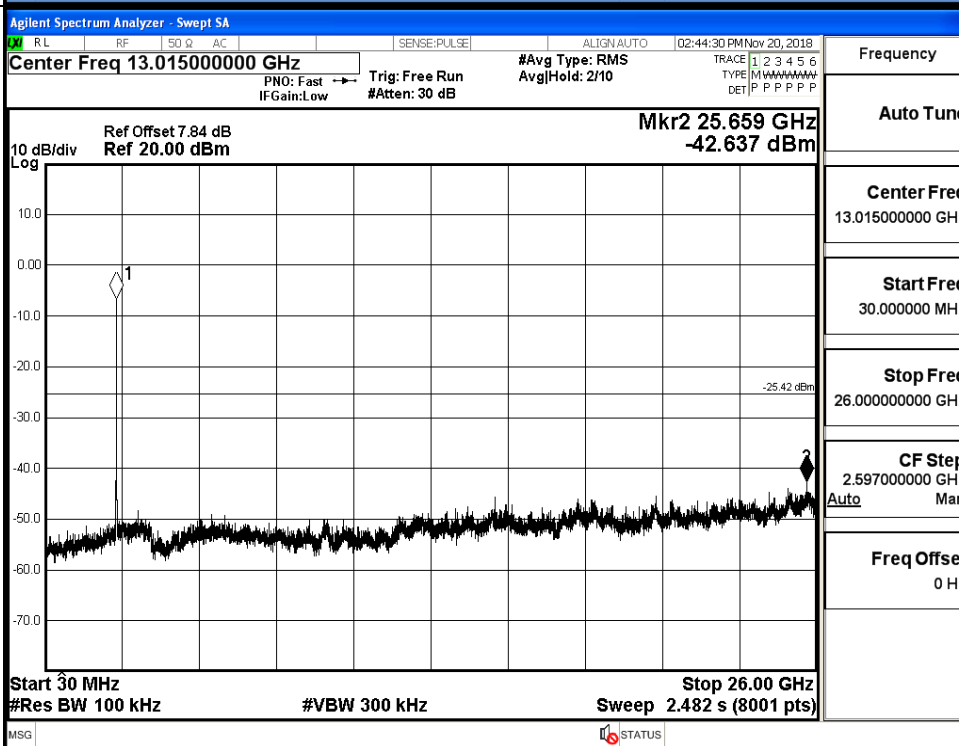


11N20SISO_MCH_Graphs

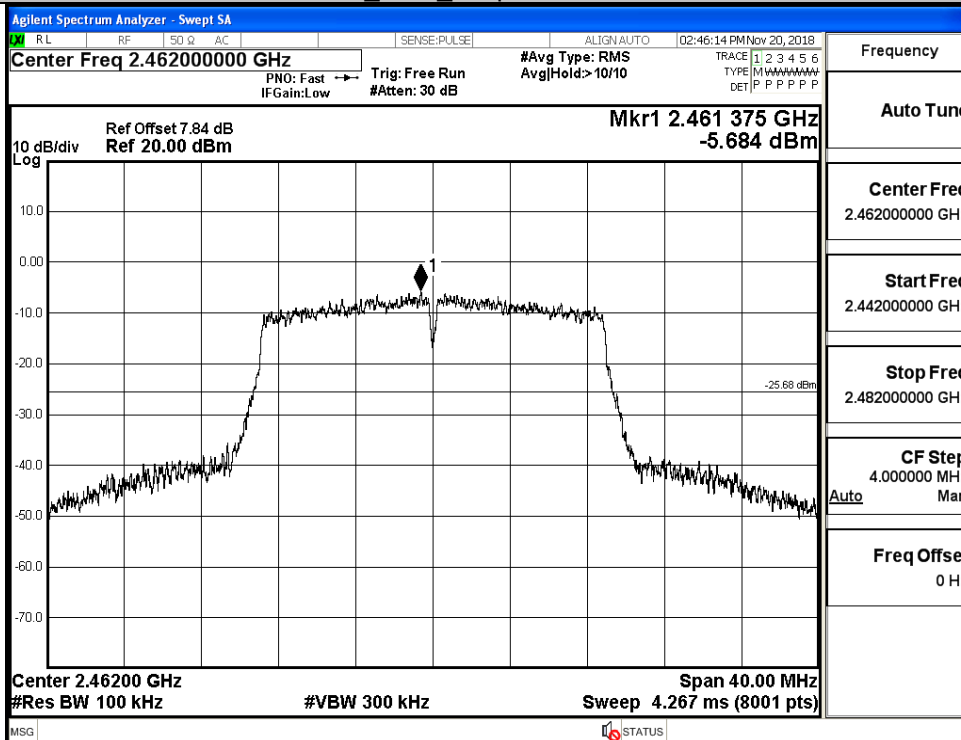
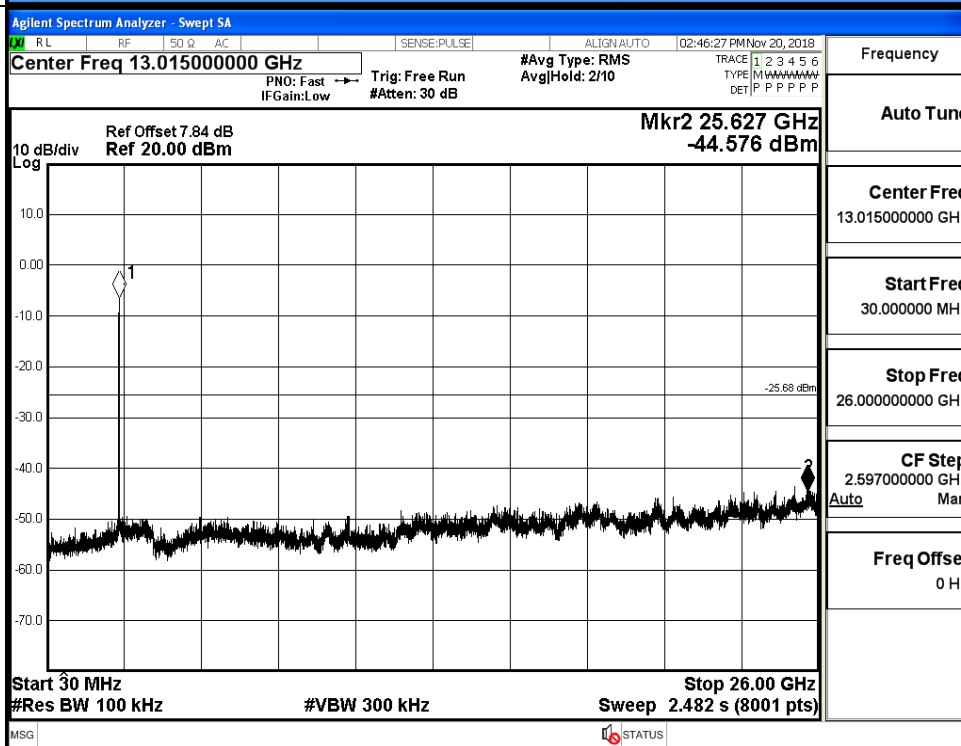
Pref/11N20
SISO/MCH



Puw/11N20
SISO/MCH

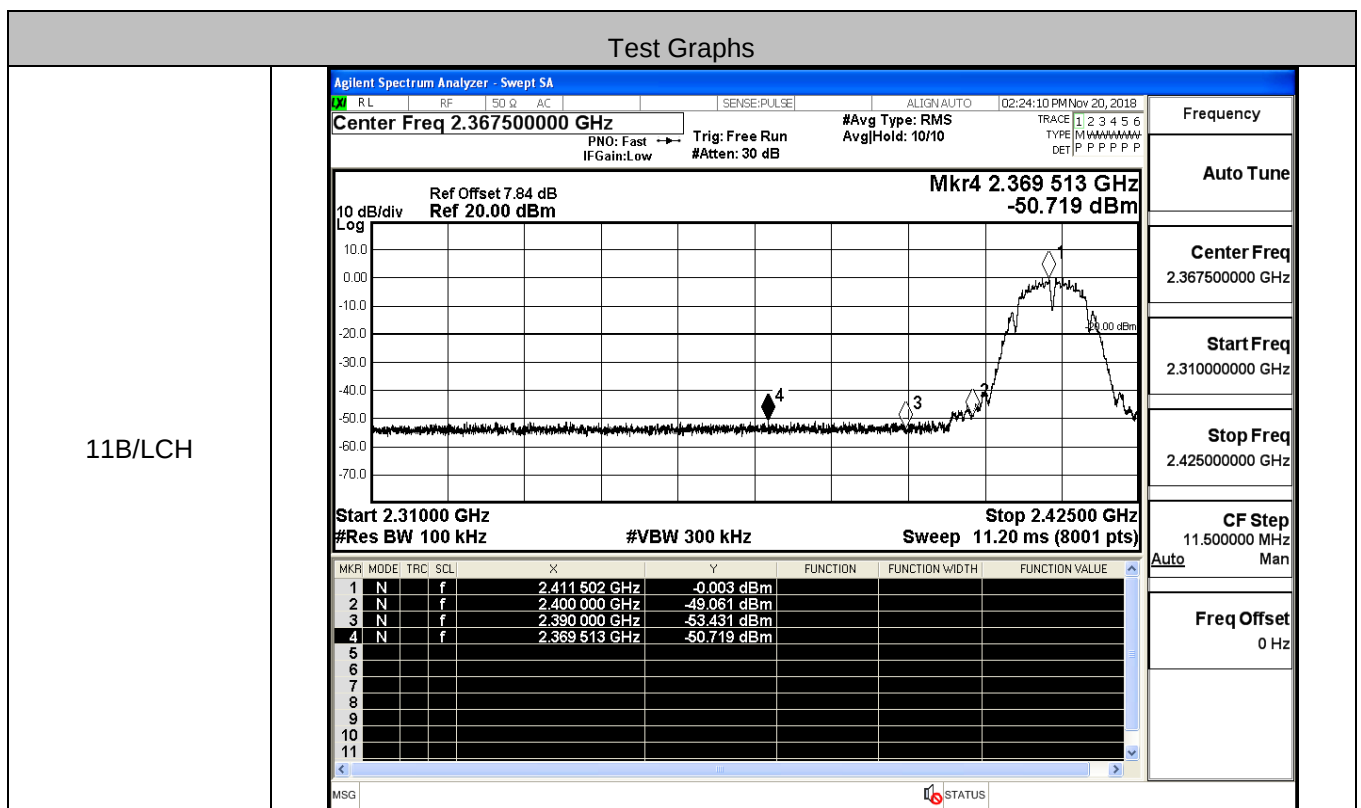


11N20SISO HCH Graphs

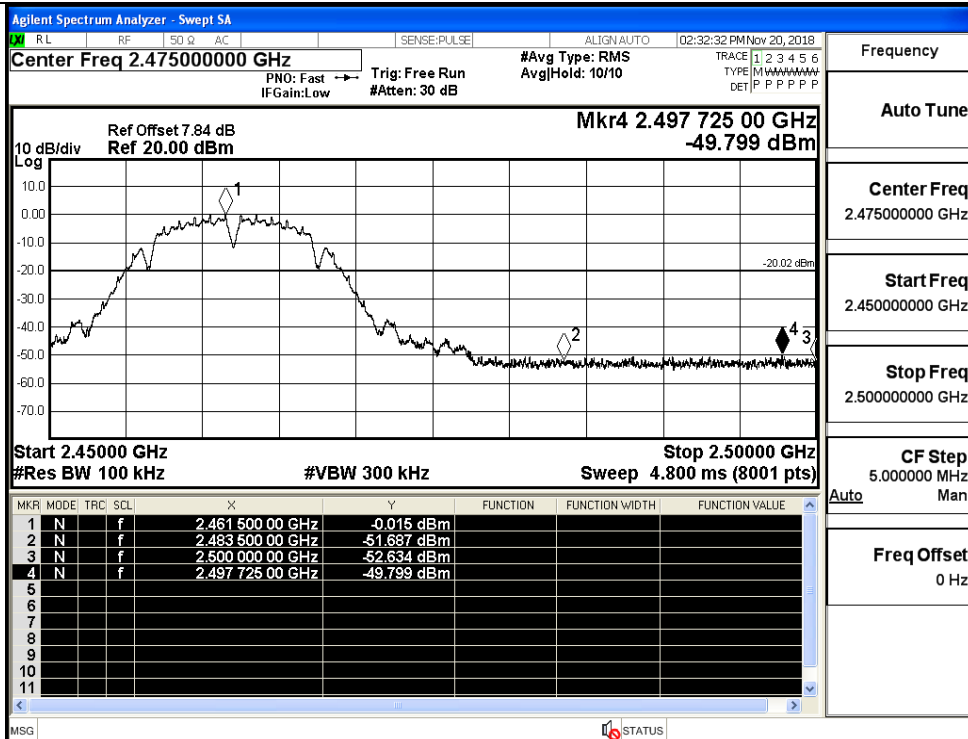
Pref/11N20
SISO/HCHPuw/11N20
SISO/HCH

B.6 Band-edge for RF Conducted Emissions

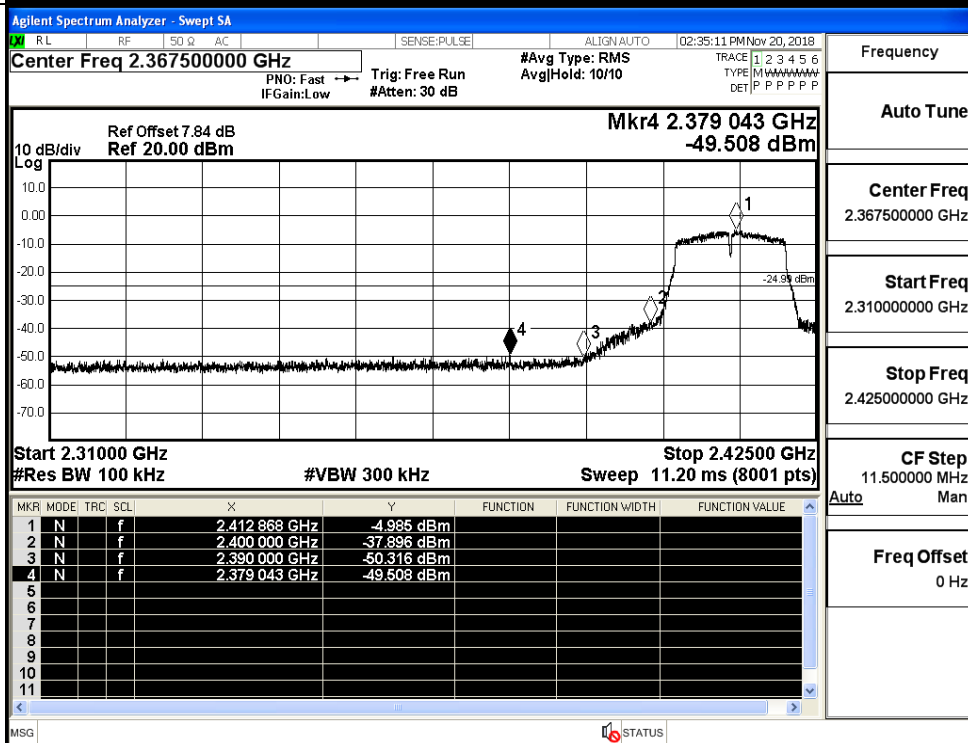
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-0.003	-50.719	-20	PASS
	HCH	-0.015	-49.799	-20.02	PASS
11G	LCH	-4.985	-49.508	-24.99	PASS
	HCH	-5.801	-48.690	-25.8	PASS
11N20SISO	LCH	-5.479	-47.313	-25.48	PASS
	HCH	-5.696	-47.404	-25.7	PASS



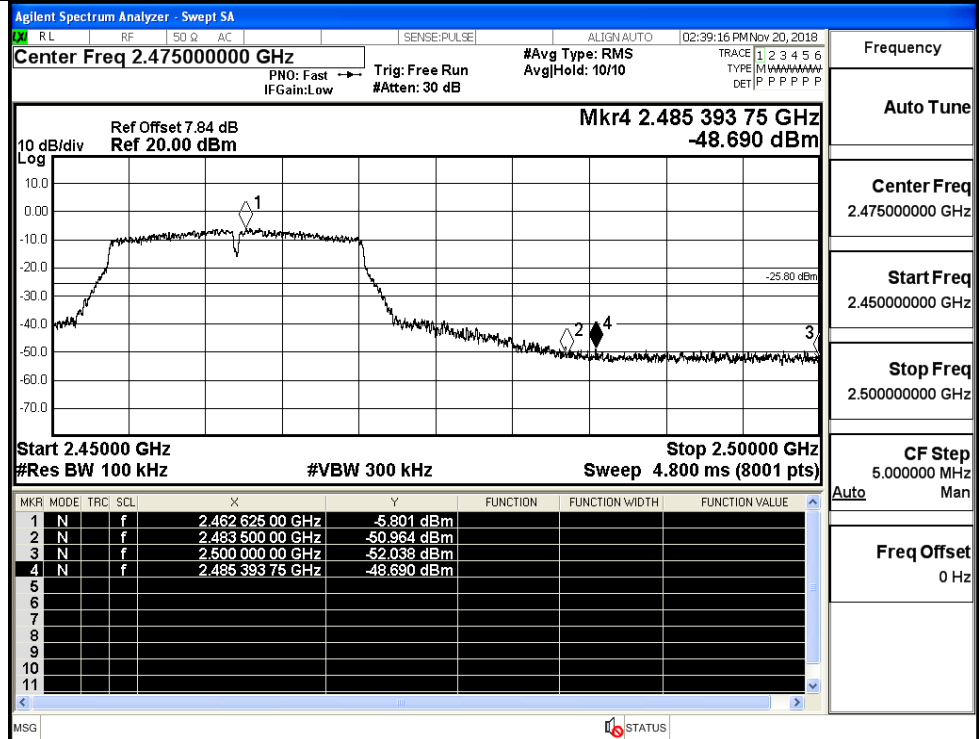
11B/HCH



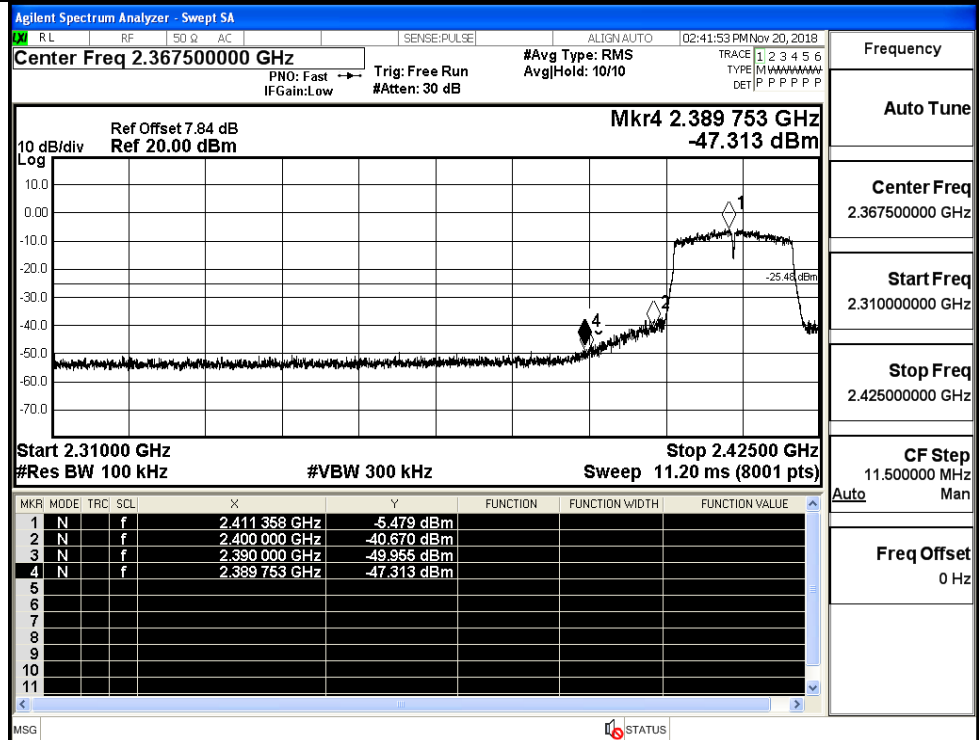
11G/LCH



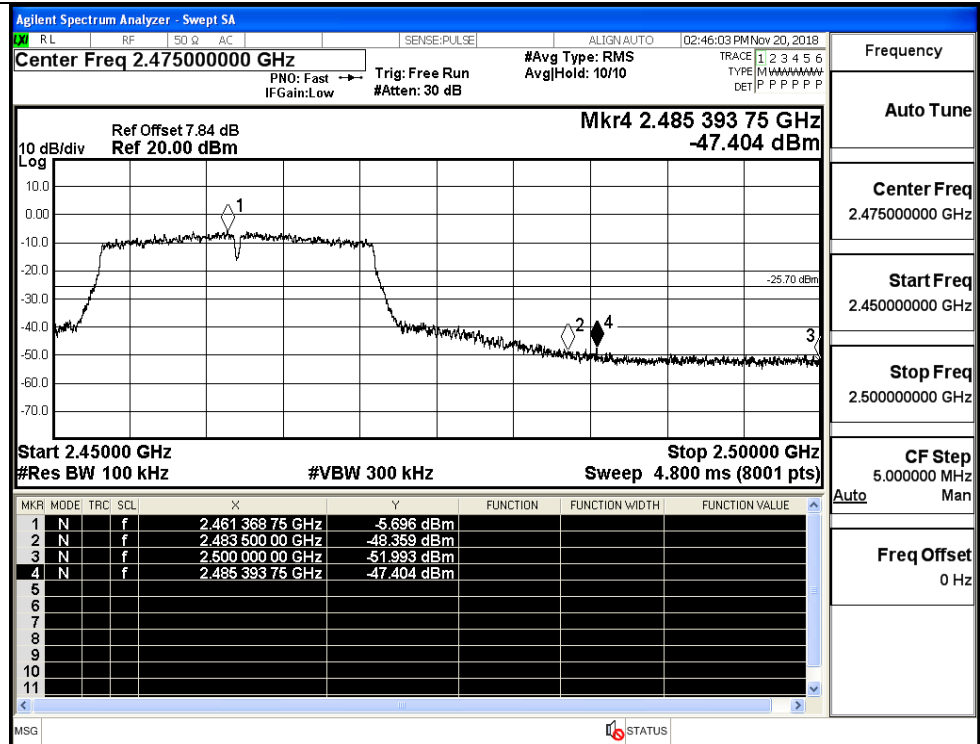
11G/HCH



11N20SISO/LCH



11N20SISO/HCH



Frequency

Auto Tune

Center Freq
2.475000000 GHz

Start Freq
2.450000000 GHz

Stop Freq
2.500000000 GHz

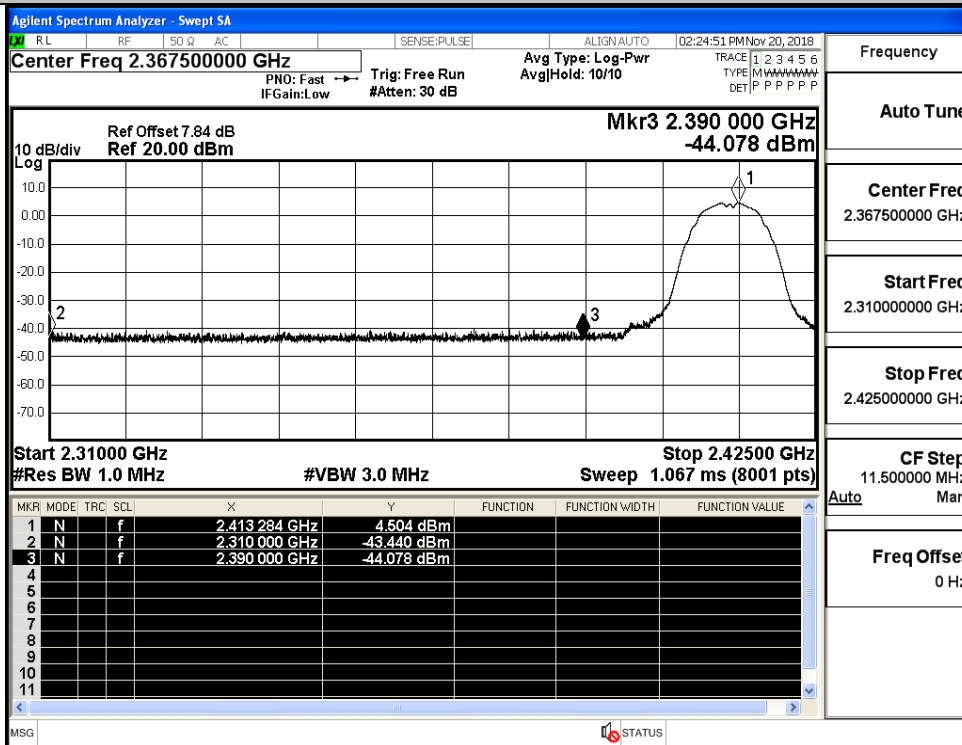
CF Step
5.000000 MHz
Auto Man

Freq Offset
0 Hz

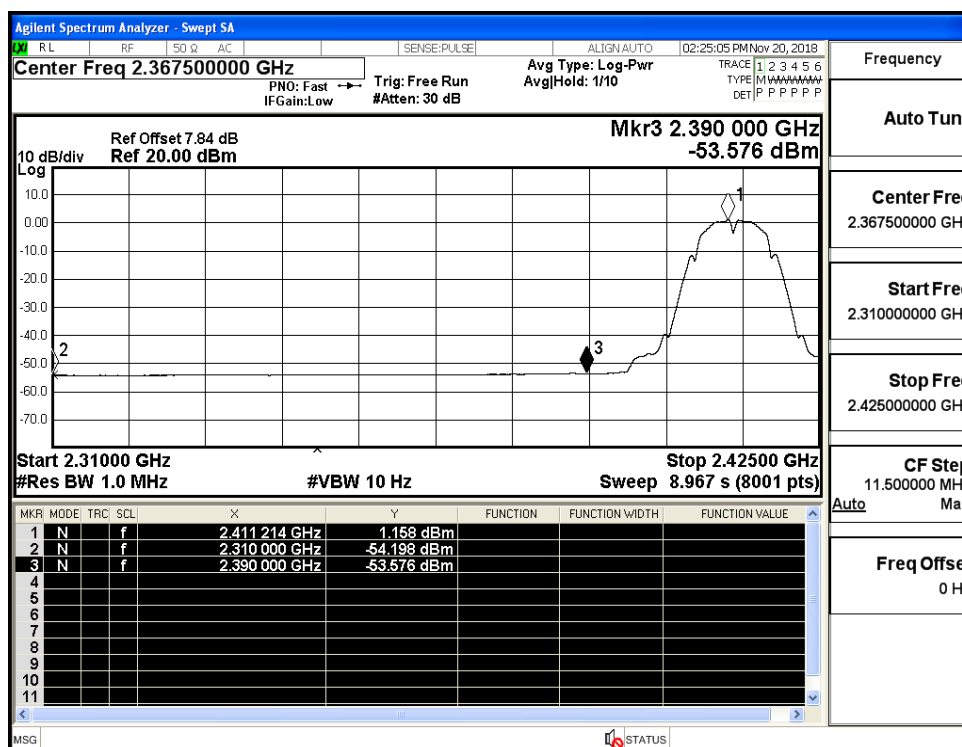
B.7 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-43.44	2.0	0	53.82	PEAK	74	PASS
	2412	Ant1	2310.0	-54.20	2.0	0	43.06	AV	54	PASS
	2412	Ant1	2390.0	-44.08	2.0	0	53.18	PEAK	74	PASS
	2412	Ant1	2390.0	-53.58	2.0	0	43.68	AV	54	PASS
	2462	Ant1	2483.5	-40.76	2.0	0	56.49	PEAK	74	PASS
	2462	Ant1	2483.5	-53.01	2.0	0	44.25	AV	54	PASS
	2462	Ant1	2500.0	-43.10	2.0	0	54.16	PEAK	74	PASS
	2462	Ant1	2500.0	-53.35	2.0	0	43.90	AV	54	PASS
11G	2412	Ant1	2310.0	-44.60	2.0	0	52.66	PEAK	74	PASS
	2412	Ant1	2310.0	-54.10	2.0	0	43.16	AV	54	PASS
	2412	Ant1	2390.0	-38.24	2.0	0	59.01	PEAK	74	PASS
	2412	Ant1	2390.0	-51.44	2.0	0	45.82	AV	54	PASS
	2462	Ant1	2483.5	-40.22	2.0	0	57.03	PEAK	74	PASS
	2462	Ant1	2483.5	-51.04	2.0	0	46.22	AV	54	PASS
	2462	Ant1	2500.0	-42.08	2.0	0	55.18	PEAK	74	PASS
	2462	Ant1	2500.0	-52.52	2.0	0	44.74	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-42.36	2.0	0	54.89	PEAK	74	PASS
	2412	Ant1	2310.0	-54.12	2.0	0	43.14	AV	54	PASS
	2412	Ant1	2390.0	-37.62	2.0	0	59.63	PEAK	74	PASS
	2412	Ant1	2390.0	-50.93	2.0	0	46.33	AV	54	PASS
	2462	Ant1	2483.5	-35.05	2.0	0	62.21	PEAK	74	PASS
	2462	Ant1	2483.5	-50.54	2.0	0	46.72	AV	54	PASS
	2462	Ant1	2500.0	-42.45	2.0	0	54.80	PEAK	74	PASS
	2462	Ant1	2500.0	-52.52	2.0	0	44.74	AV	54	PASS

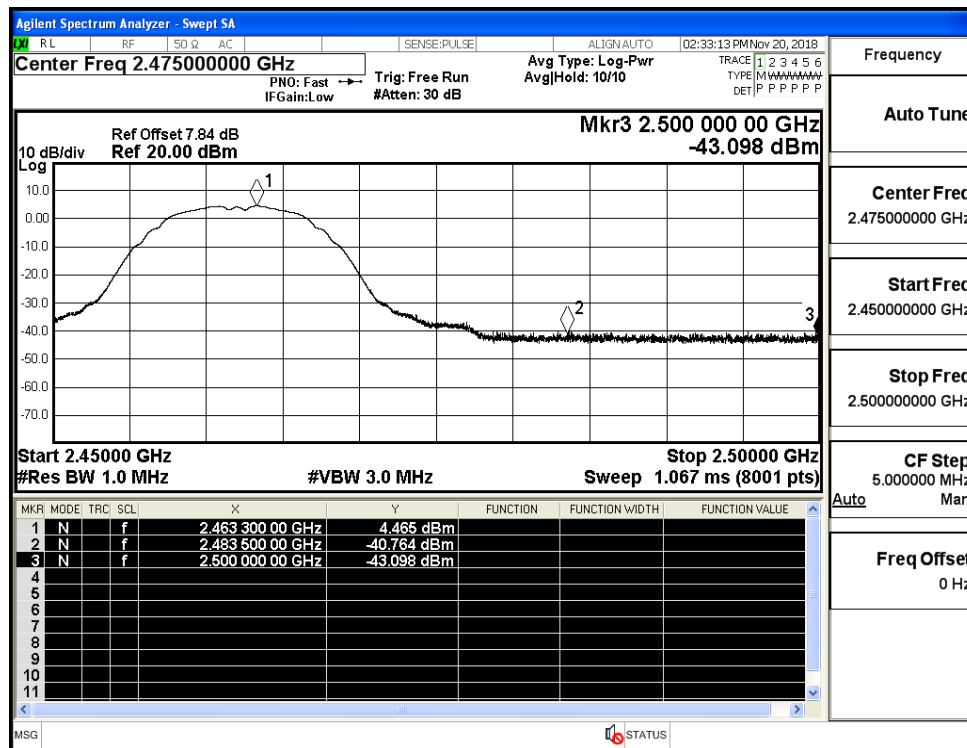
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



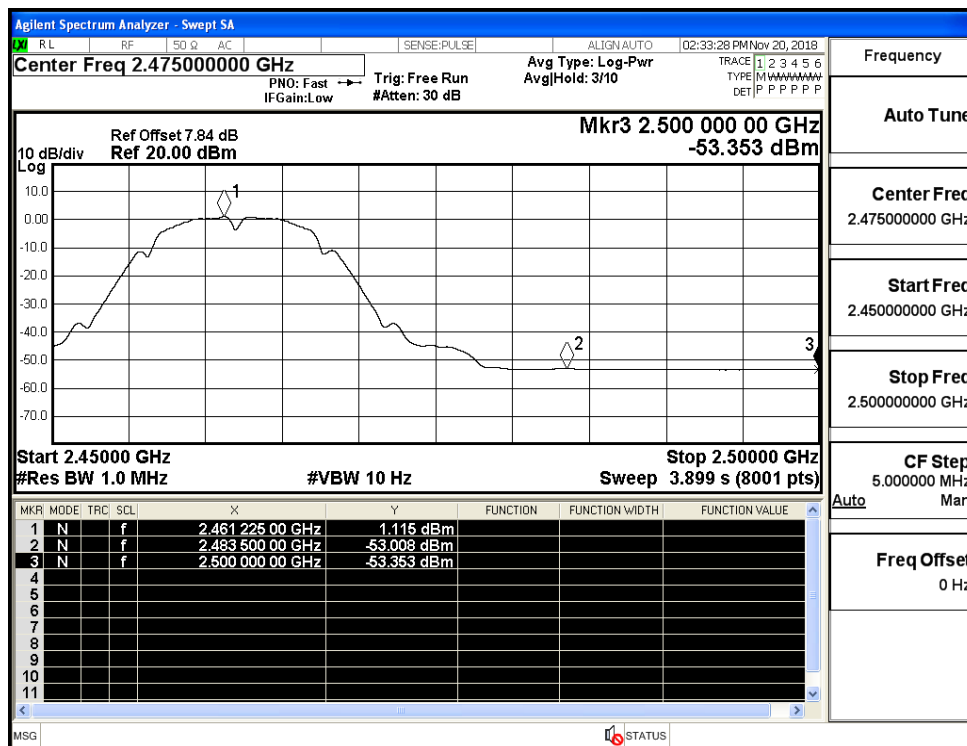
Restrict-band band-edge measurements_11B_2412_Ant1_AV



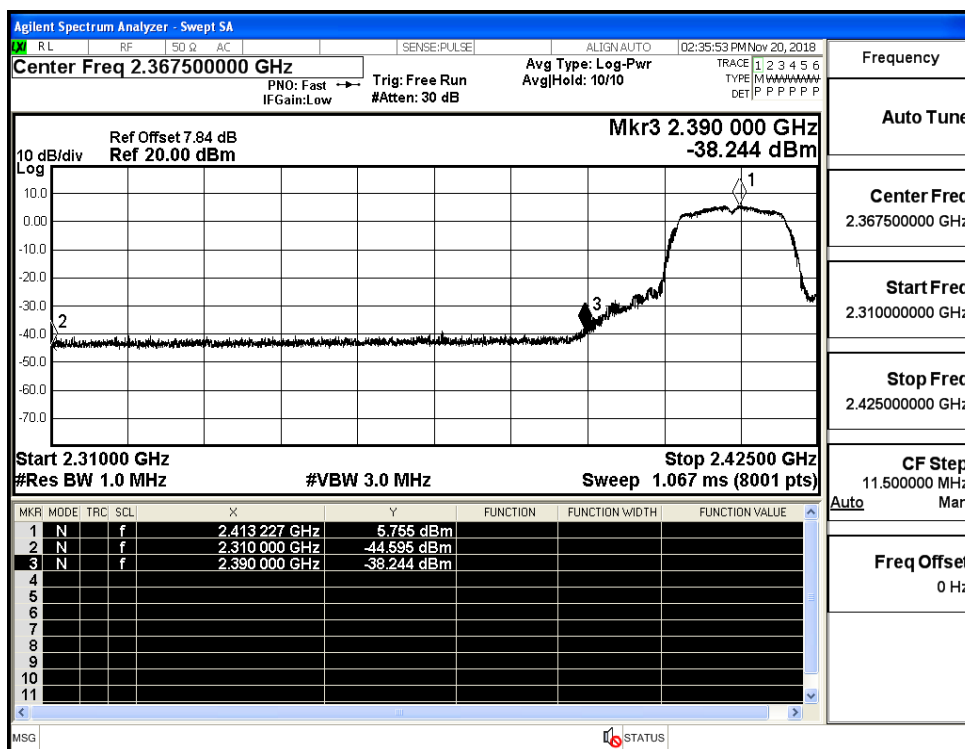
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



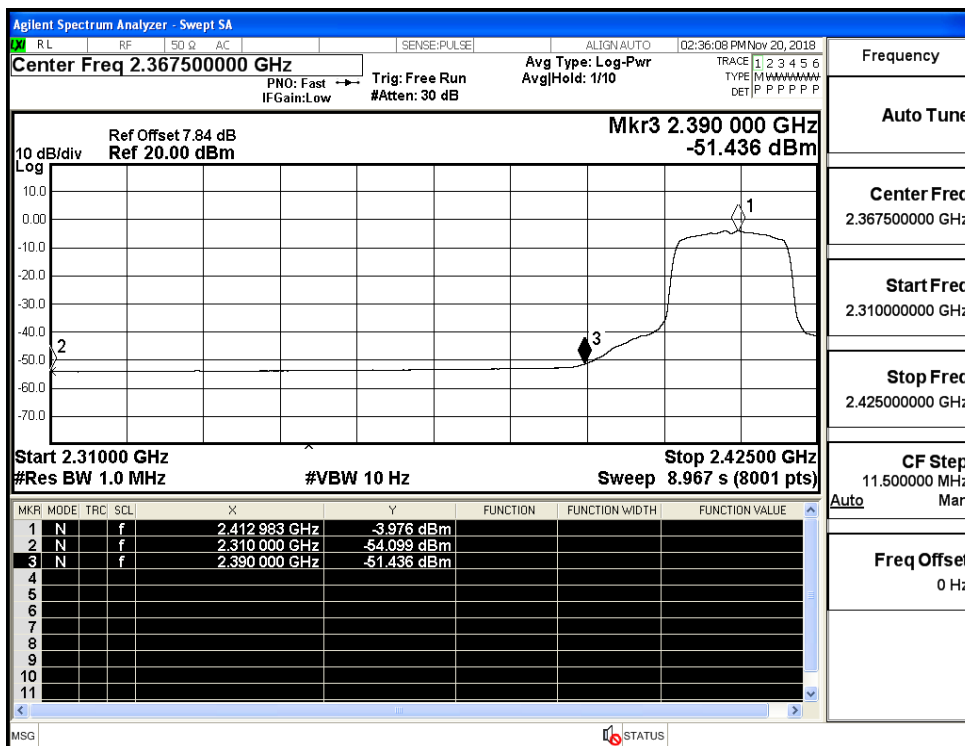
Restrict-band band-edge measurements_11B_2462_Ant1_AV



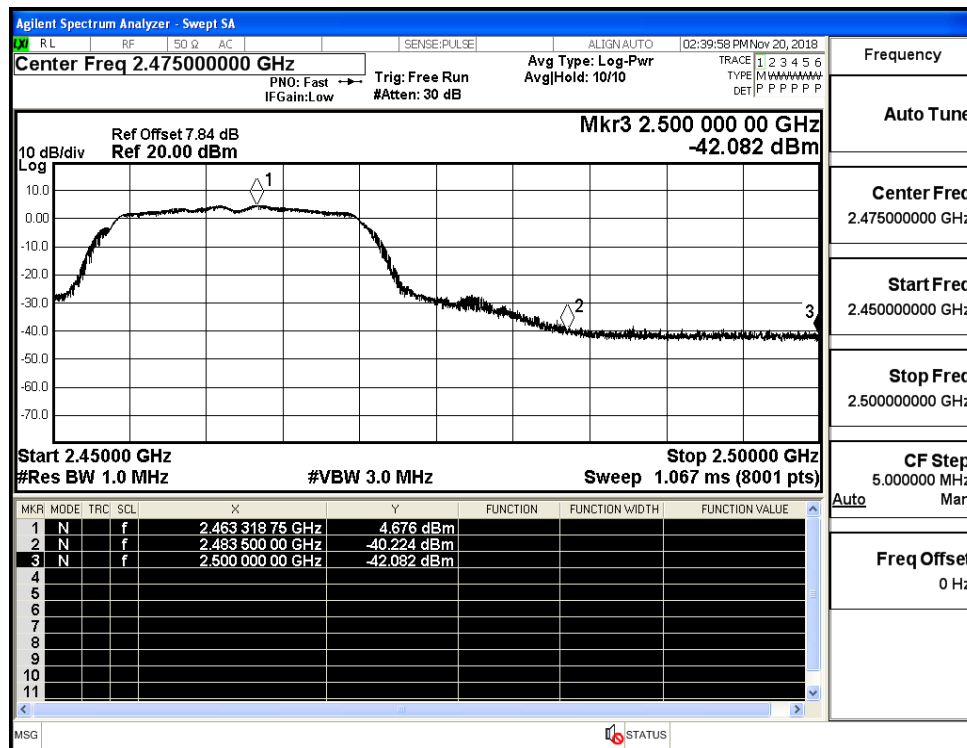
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



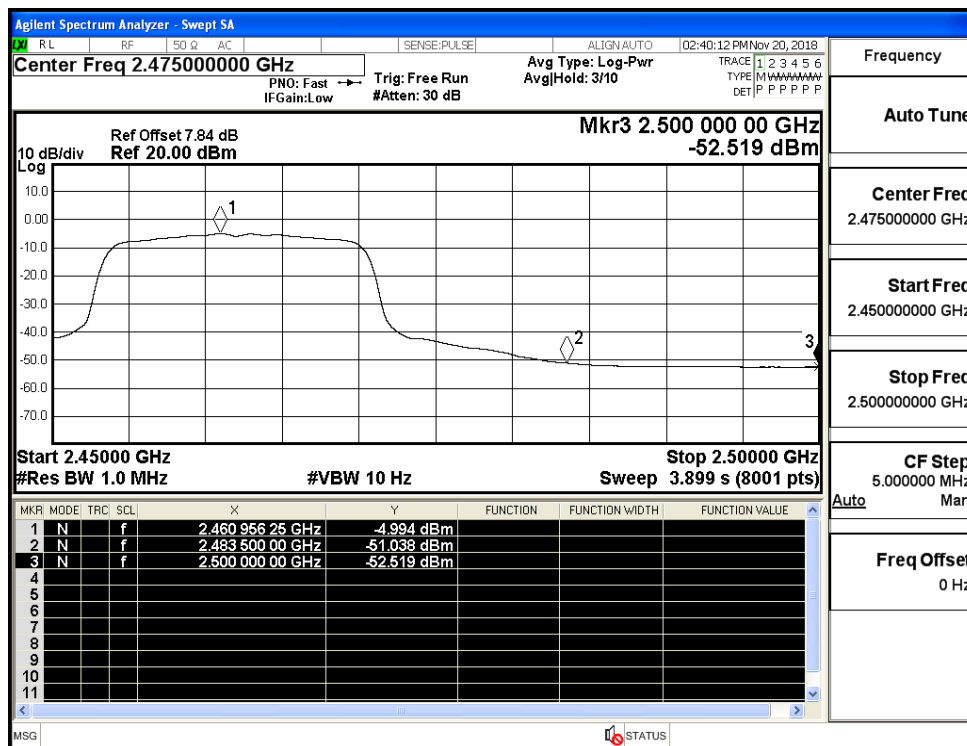
Restrict-band band-edge measurements_11G_2412_Ant1_AV



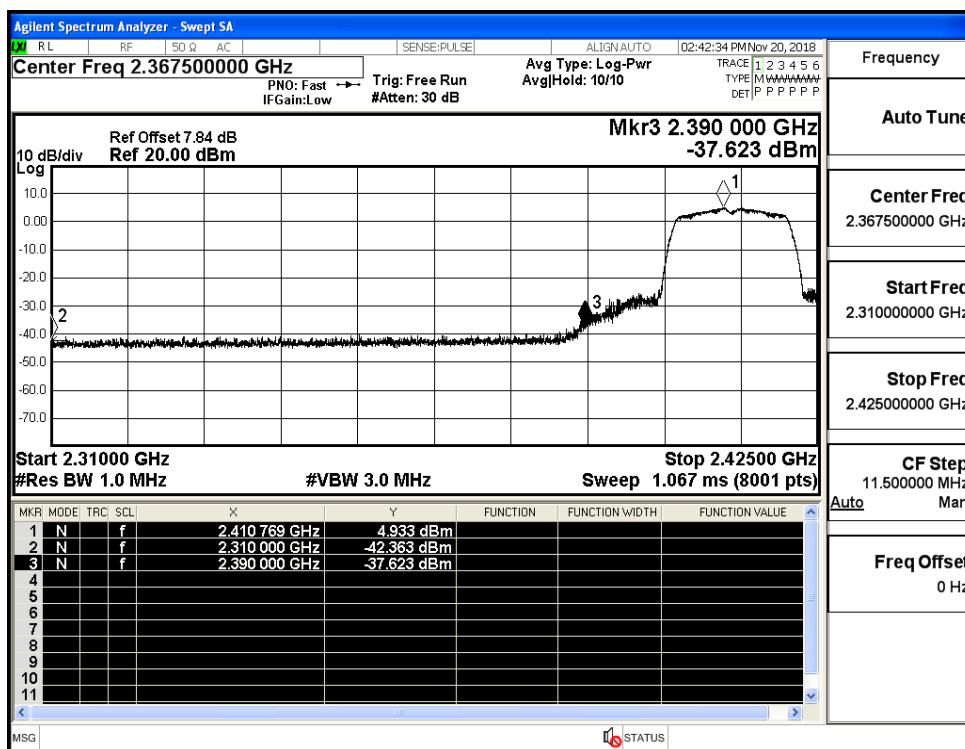
Restrict-band band-edge measurements_11G_2462_Ant1_PEAK



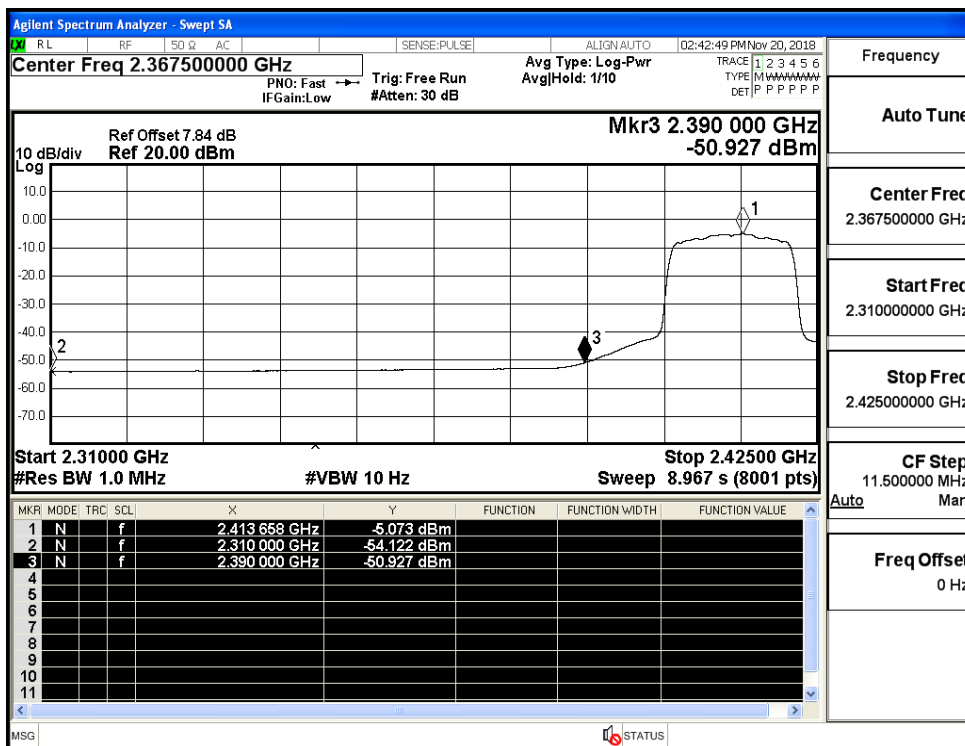
Restrict-band band-edge measurements_11G_2462_Ant1_AV



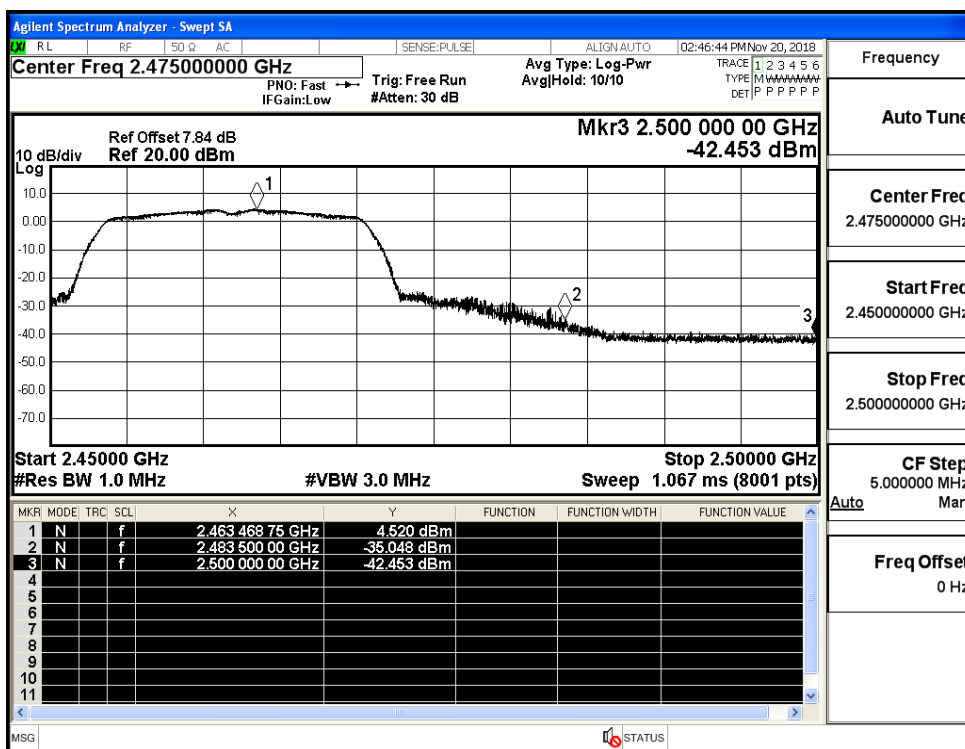
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



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

