



Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Smart visual ear-clean Rod

Trade Mark: BEBIRD

Test Model: MI3

Environmental Conditions

Temperature:	21.6° C
Relative Humidity:	52.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Carl Fu
Supervised by:	Li Huan

A.1 Duty Cycle

Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2437	Ant1	100.00	PASS
11G	2437	Ant1	100.00	PASS
11N20SISO	2437	Ant1	100.00	PASS
11N40SISO	2437	Ant1	100.00	PASS



A.2 Maximum Conducted Output Power

Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	8.23	30	PASS
	MCH	8.10	30	PASS
	HCH	8.84	30	PASS
11G	LCH	8.13	30	PASS
	MCH	8.45	30	PASS
	HCH	8.24	30	PASS
11N20SISO	LCH	8.95	30	PASS
	MCH	8.12	30	PASS
	HCH	8.95	30	PASS
11N40SISO	LCH	8.89	30	PASS
	MCH	8.51	30	PASS
	HCH	8.16	30	PASS

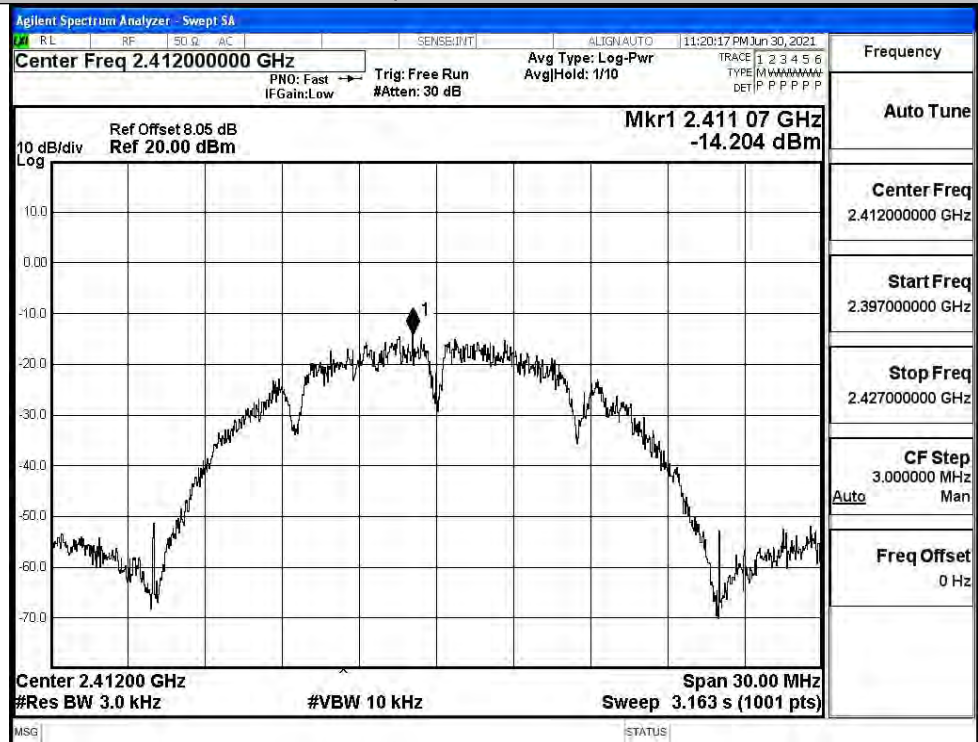


A.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-14.204	8	PASS
	MCH	-13.026	8	PASS
	HCH	-11.832	8	PASS
11G	LCH	-19.519	8	PASS
	MCH	-18.370	8	PASS
	HCH	-17.411	8	PASS
11N20SISO	LCH	-19.931	8	PASS
	MCH	-17.576	8	PASS
	HCH	-17.587	8	PASS
11N40SISO	LCH	-21.521	8	PASS
	MCH	-19.995	8	PASS
	HCH	-20.065	8	PASS

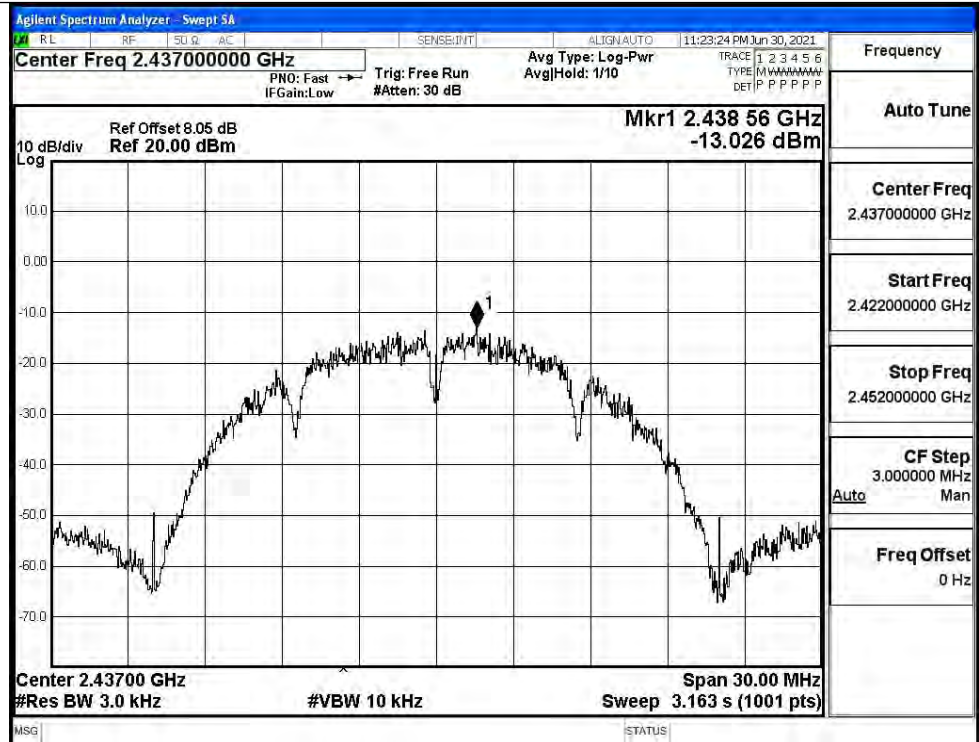
Test Graphs

11B/LCH

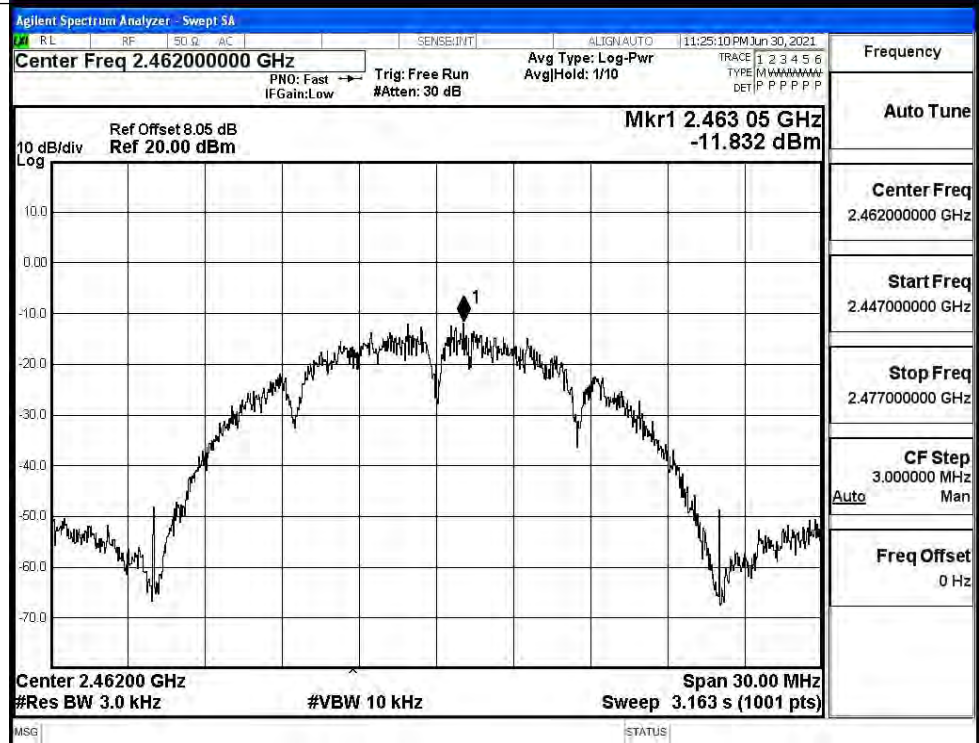




11B/MCH

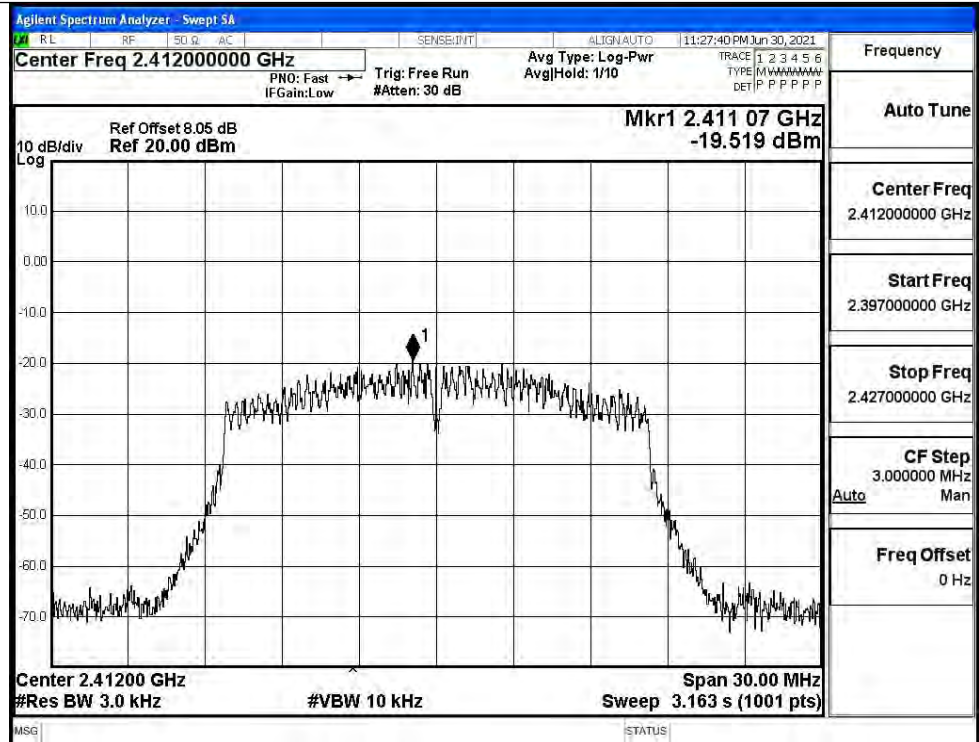


11B/HCH

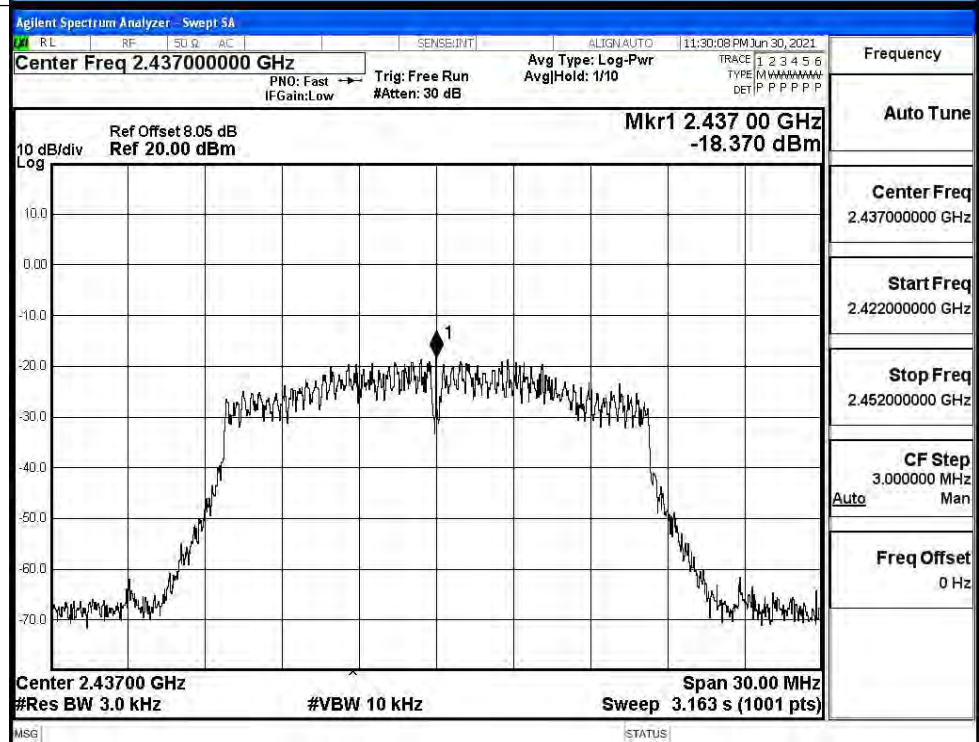




11G/LCH

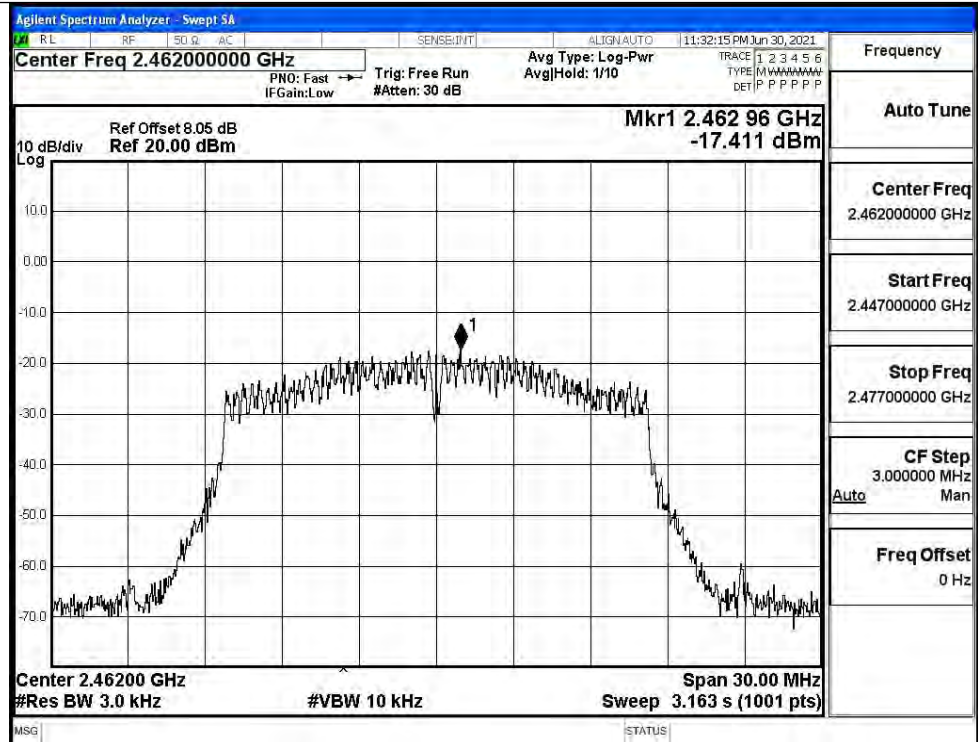


11G/MCH

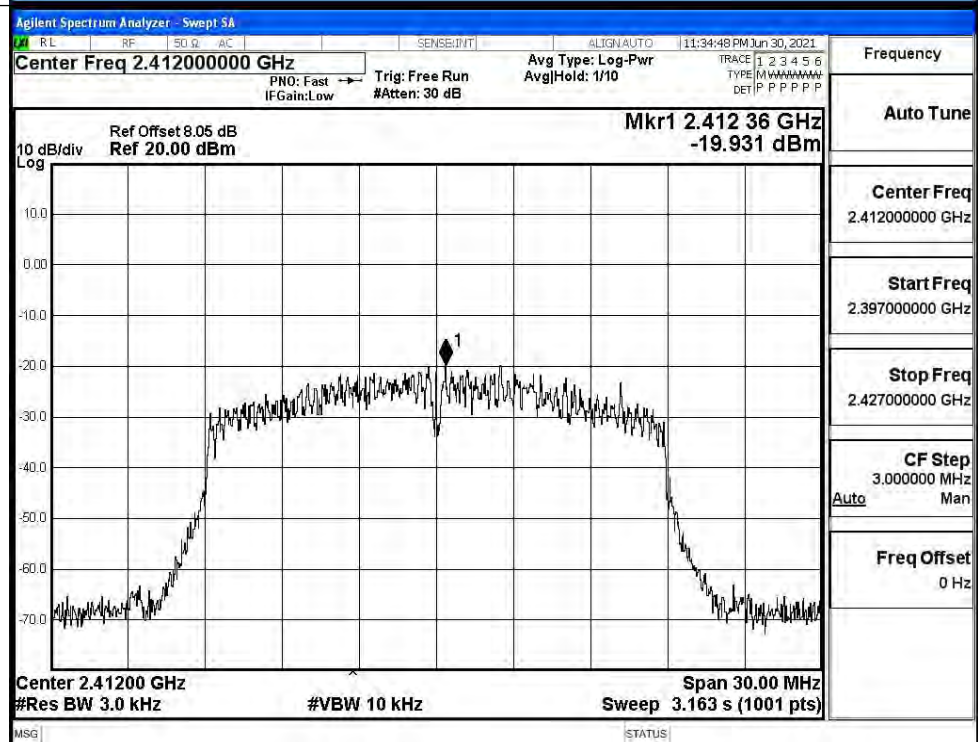




11G/HCH

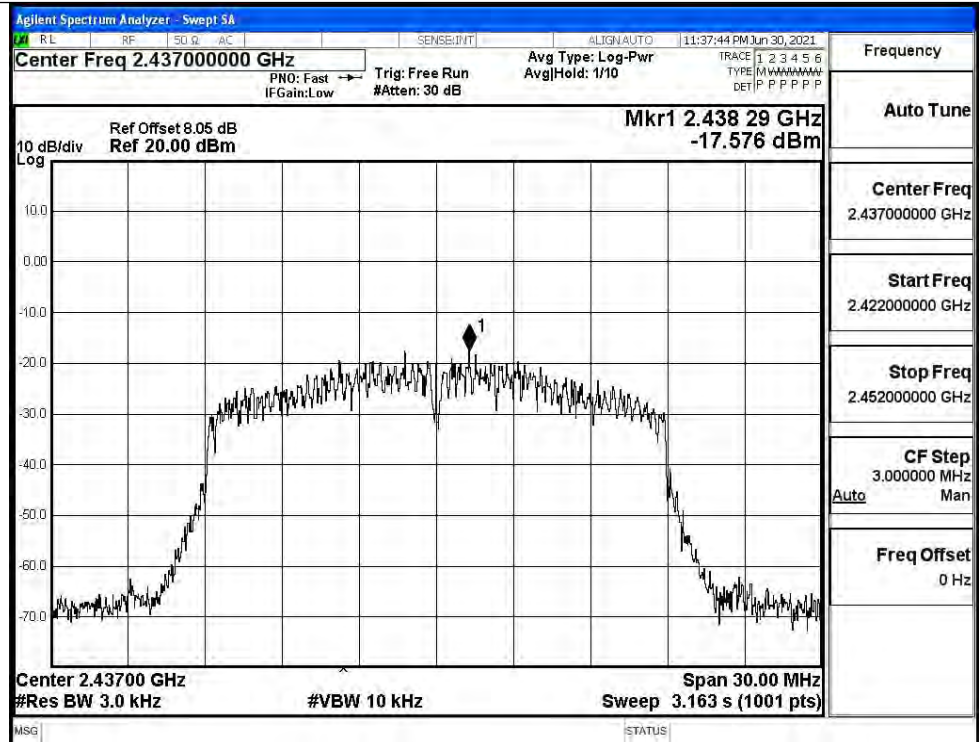


11N20SISO/LCH

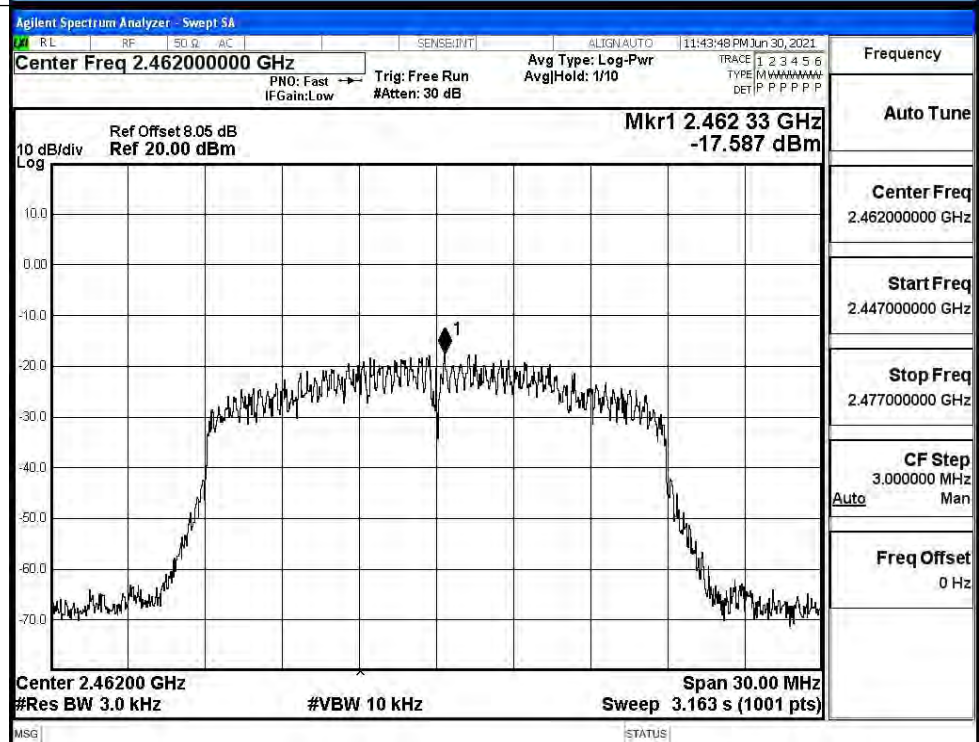




11N20SISO/MCH

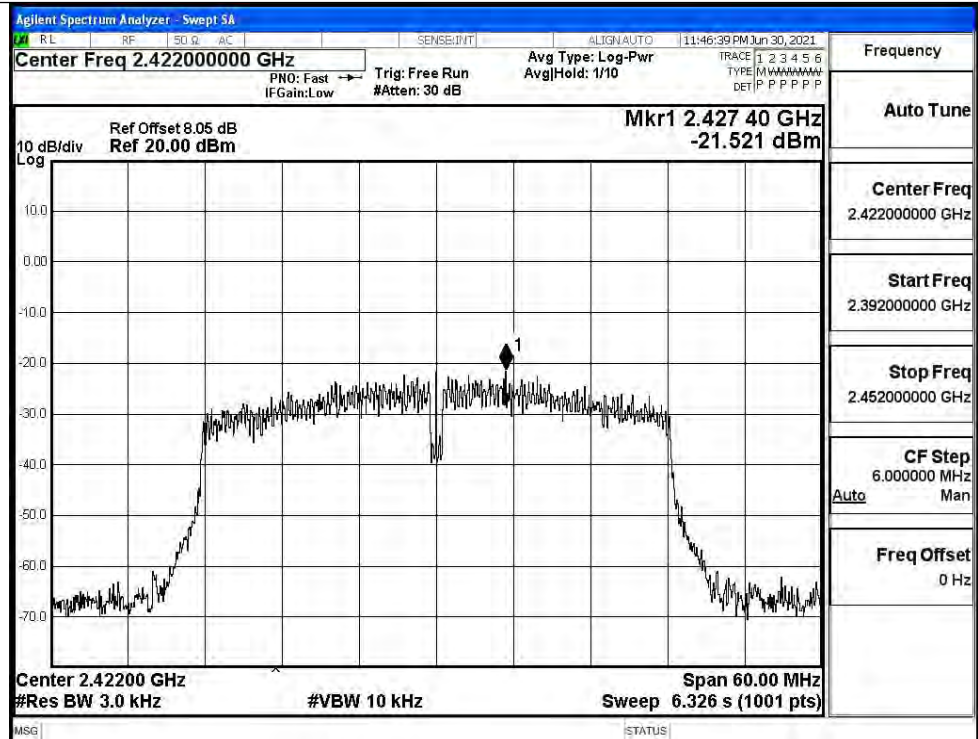


11N20SISO/HCH

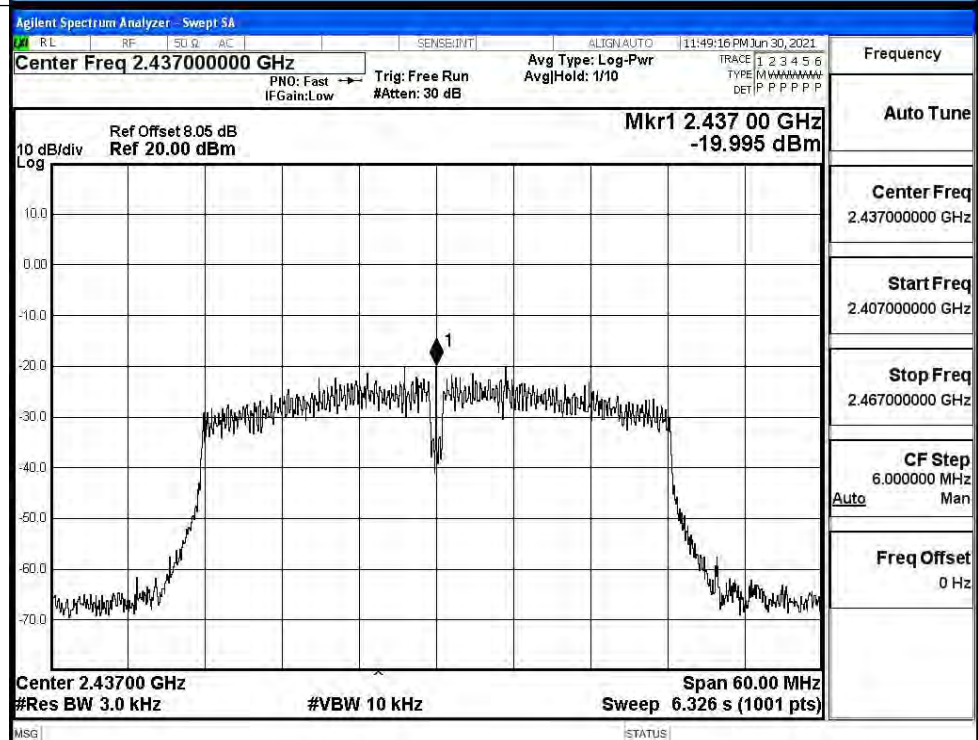




11N40SISO/LCH

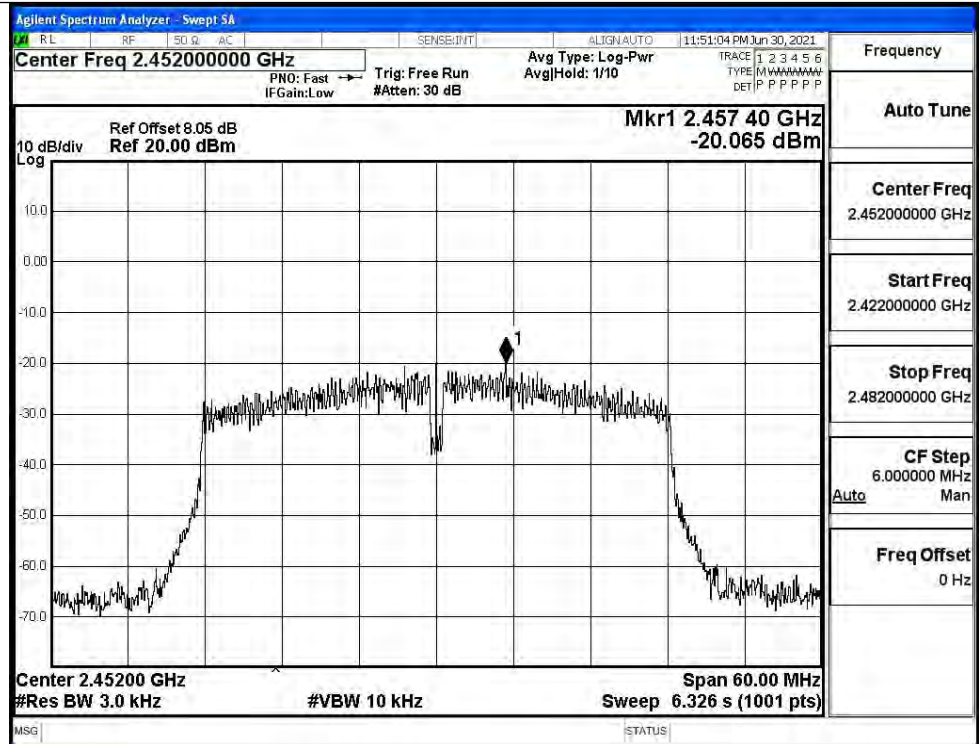


11N40SISO/MCH





11N40SISO/HCH



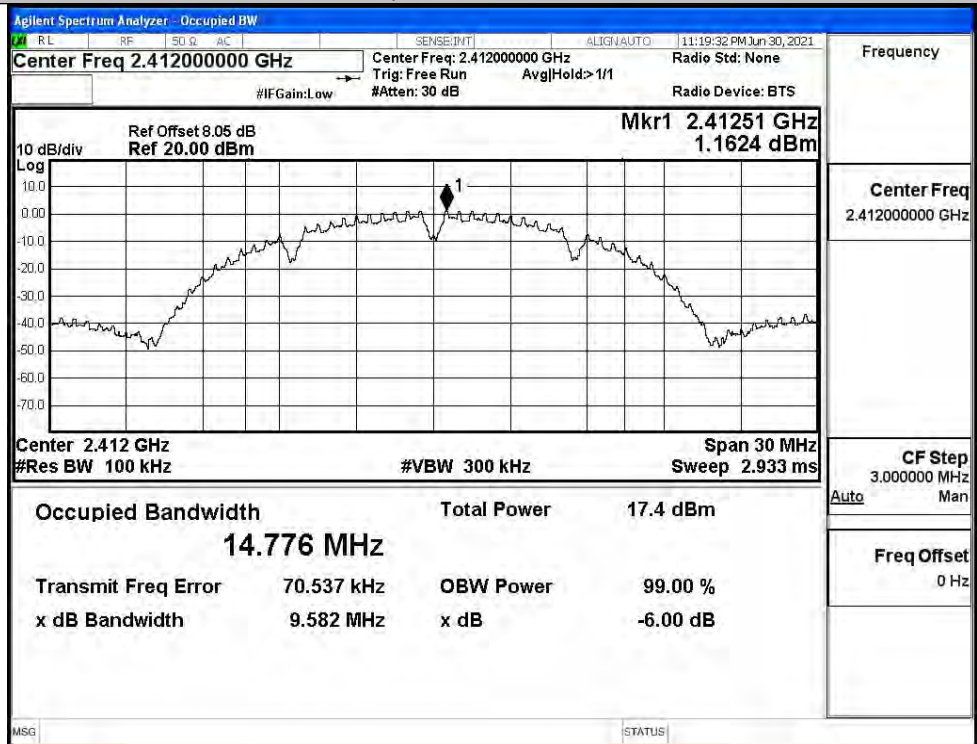


A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.582	≥ 0.5	PASS
	MCH	9.133	≥ 0.5	PASS
	HCH	9.599	≥ 0.5	PASS
11G	LCH	12.52	≥ 0.5	PASS
	MCH	12.51	≥ 0.5	PASS
	HCH	11.34	≥ 0.5	PASS
11N20SISO	LCH	15.06	≥ 0.5	PASS
	MCH	13.79	≥ 0.5	PASS
	HCH	12.57	≥ 0.5	PASS
11N40SISO	LCH	33.83	≥ 0.5	PASS
	MCH	32.60	≥ 0.5	PASS
	HCH	33.85	≥ 0.5	PASS

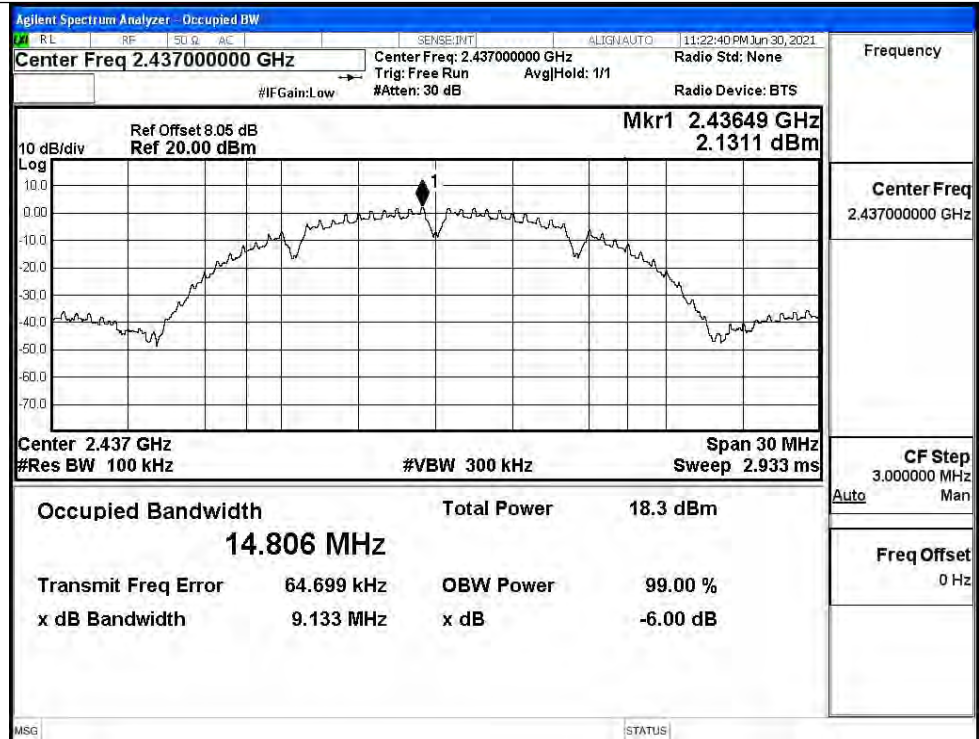
Test Graphs

11B/LCH

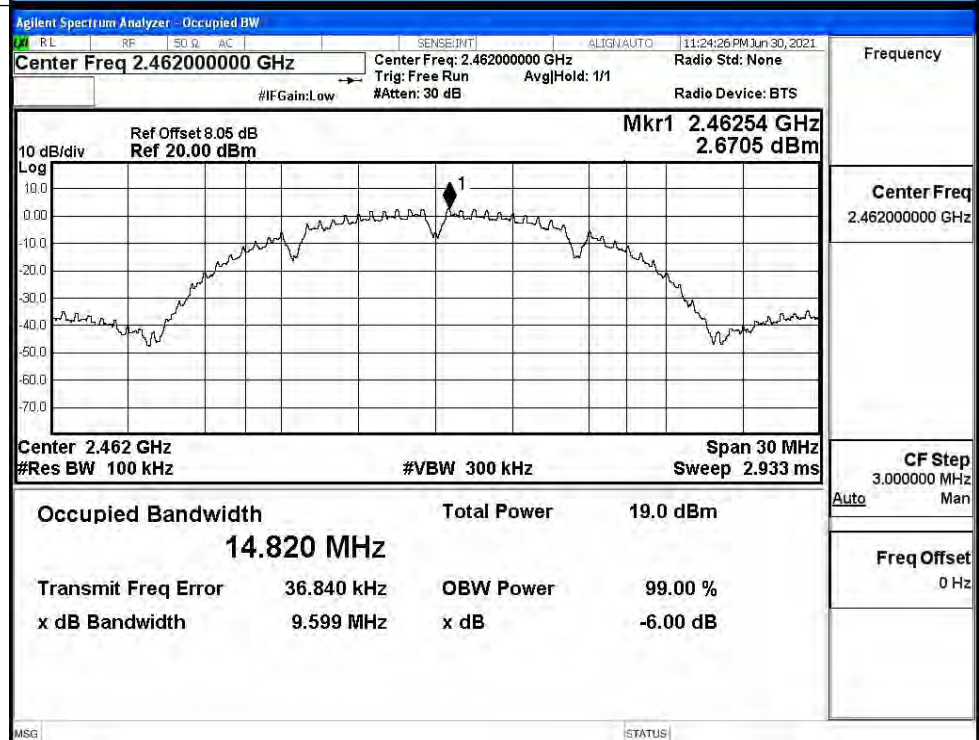




11B/MCH

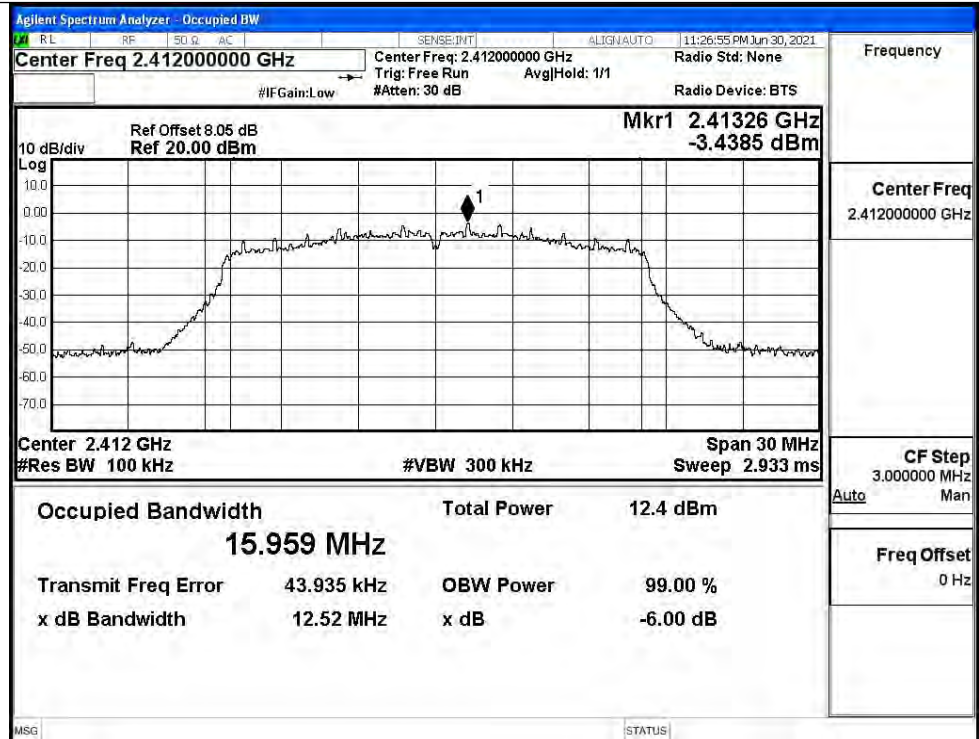


11B/HCH

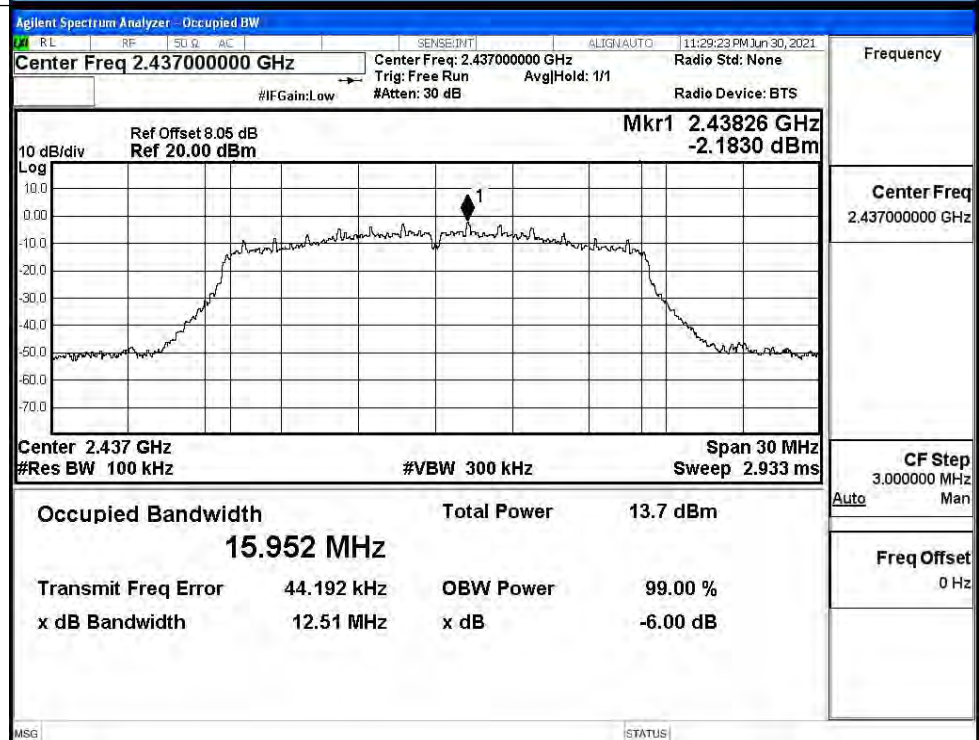




11G/LCH

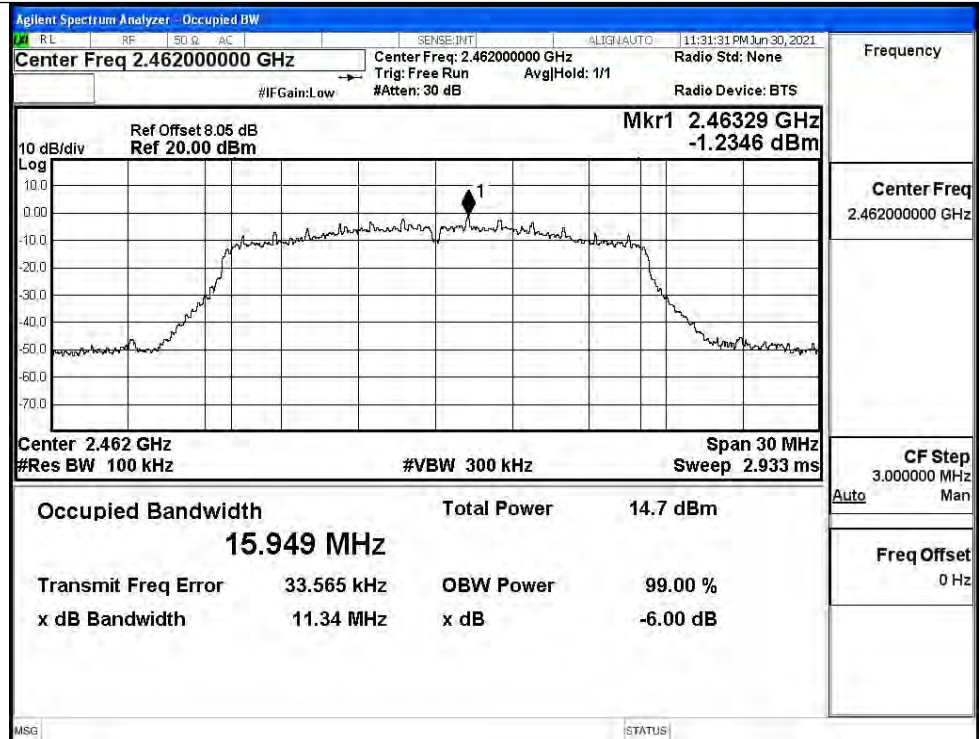


11G/MCH

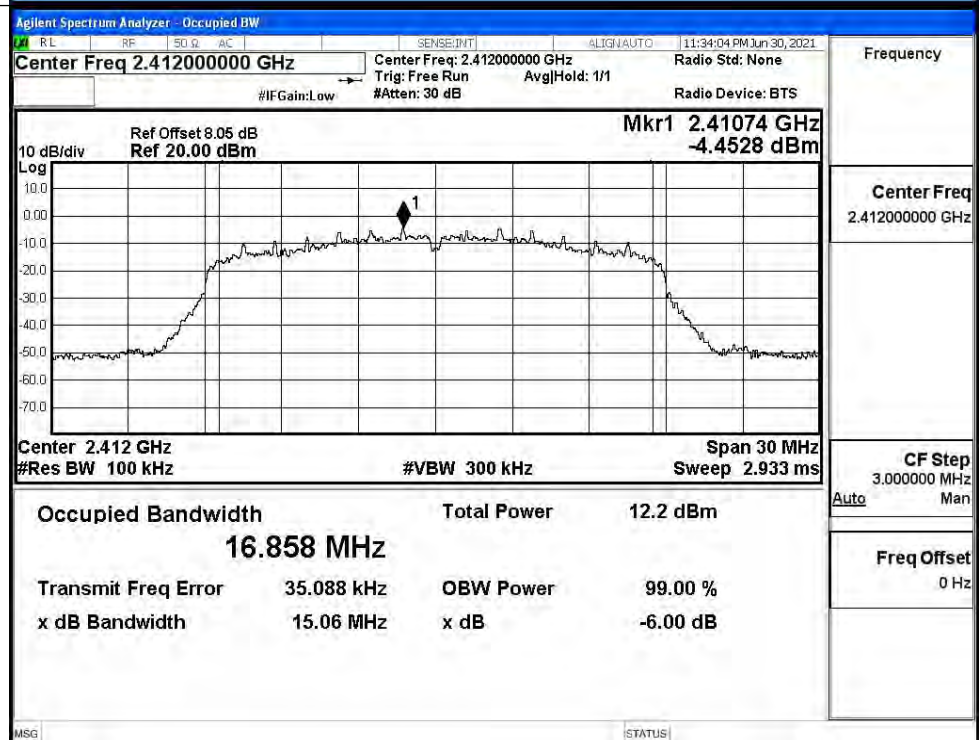




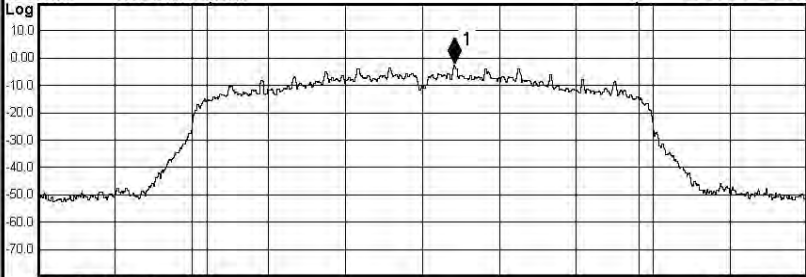
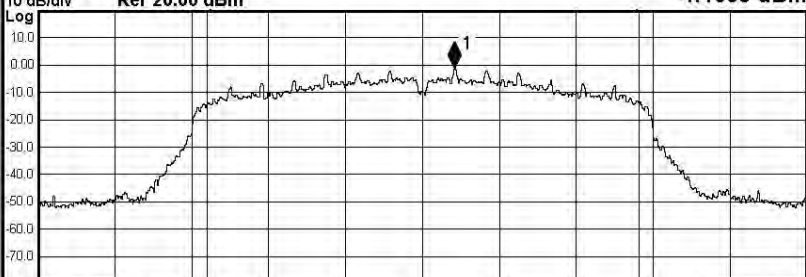
11G/HCH



11N20SISO/LCH

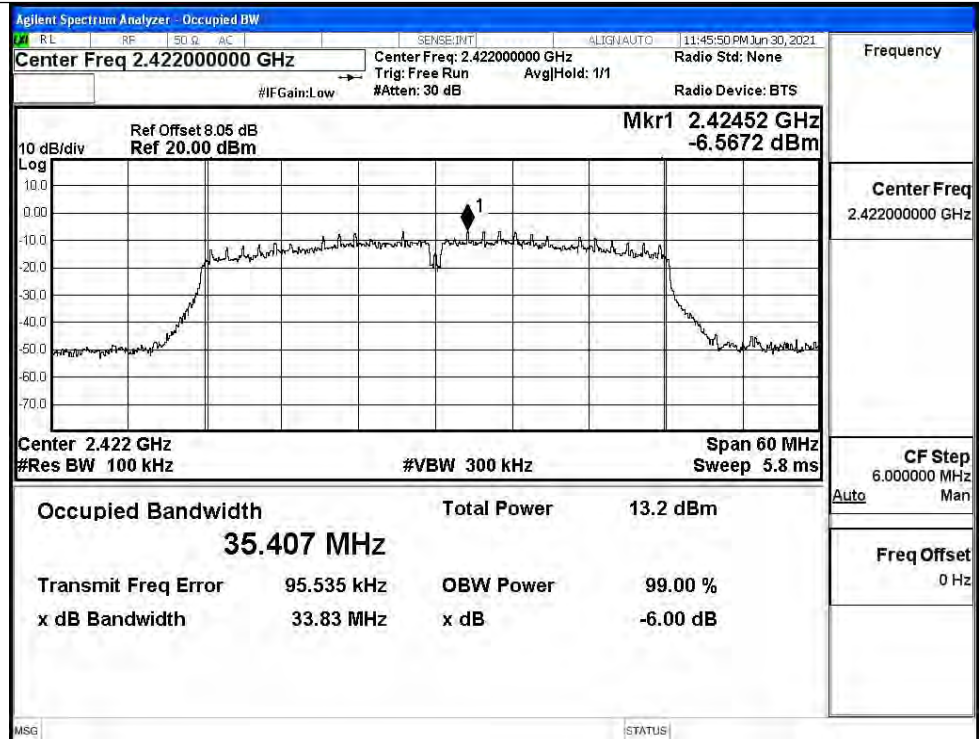




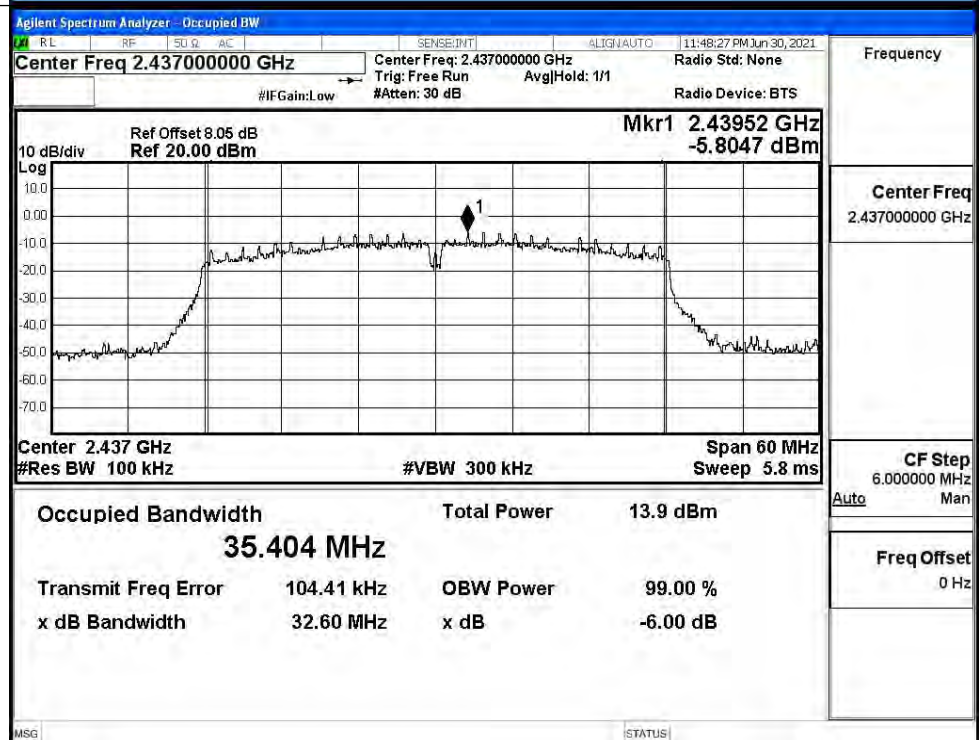
11N20SISO/MCH	Agilent Spectrum Analyzer - Occupied BW RLRF50ΩACSENSE: [INT]ALIGN: [AUTO]11:36:59 PM Jun 30, 2021 Center Freq 2.437000000 GHzCenter Freq: 2.437000000 GHzRadio Std: None #IF Gain: Low#Atten: 30 dBAvg Hold: 1/1Radio Device: BTS 10 dB/divRef Offset 8.05 dBRef 20.00 dBm Mkr1 2.43826 GHz-2.4794 dBm  Center 2.437 GHzSpan 30 MHz#Res BW 100 kHz#VBW 300 kHzSweep 2.933 ms Occupied BandwidthTotal Power13.5 dBm 16.826 MHz Transmit Freq Error32.062 kHzOBW Power99.00 % x dB Bandwidth13.79 MHzx dB-6.00 dB MSGSTATUS Frequency Center Freq2.437000000 GHz CF Step3.000000 MHzAutoMan Freq Offset0 Hz
11N20SISO/HCH	Agilent Spectrum Analyzer - Occupied BW RLRF50ΩACSENSE: [INT]ALIGN: [AUTO]11:43:04 PM Jun 30, 2021 Center Freq 2.462000000 GHzCenter Freq: 2.462000000 GHzRadio Std: None #IF Gain: Low#Atten: 30 dBAvg Hold: 1/1Radio Device: BTS 10 dB/divRef Offset 8.05 dBRef 20.00 dBm Mkr1 2.46326 GHz-1.1538 dBm  Center 2.462 GHzSpan 30 MHz#Res BW 100 kHz#VBW 300 kHzSweep 2.933 ms Occupied BandwidthTotal Power14.6 dBm 16.818 MHz Transmit Freq Error21.690 kHzOBW Power99.00 % x dB Bandwidth12.57 MHzx dB-6.00 dB MSGSTATUS Frequency Center Freq2.462000000 GHz CF Step3.000000 MHzAutoMan Freq Offset0 Hz



11N40SISO/LCH

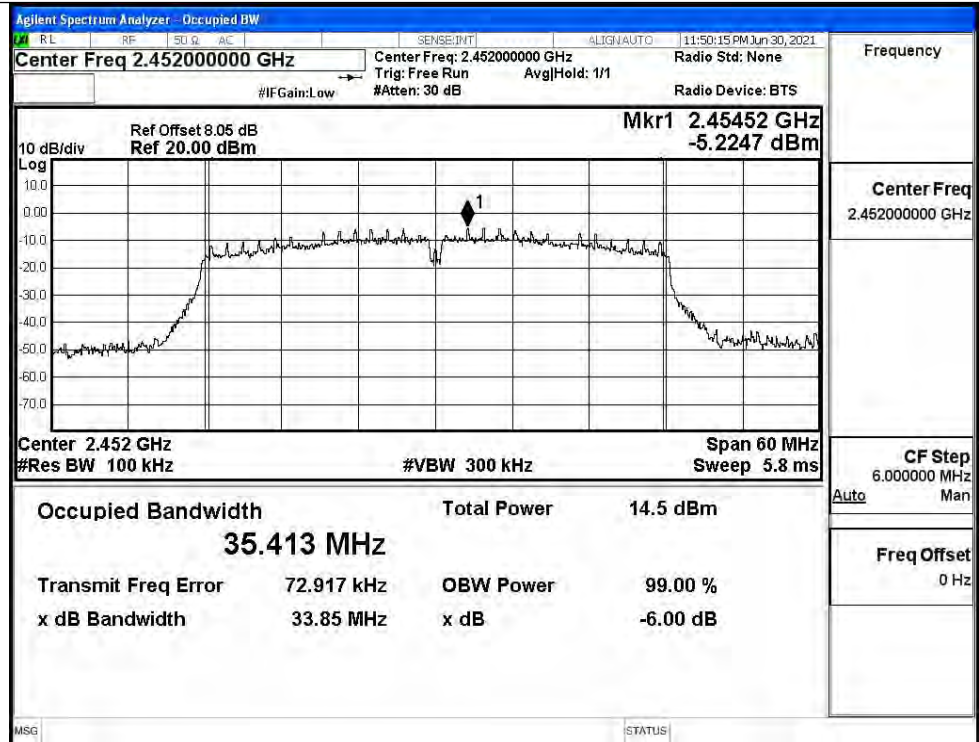


11N40SISO/MCH





11N40SISO/HCH





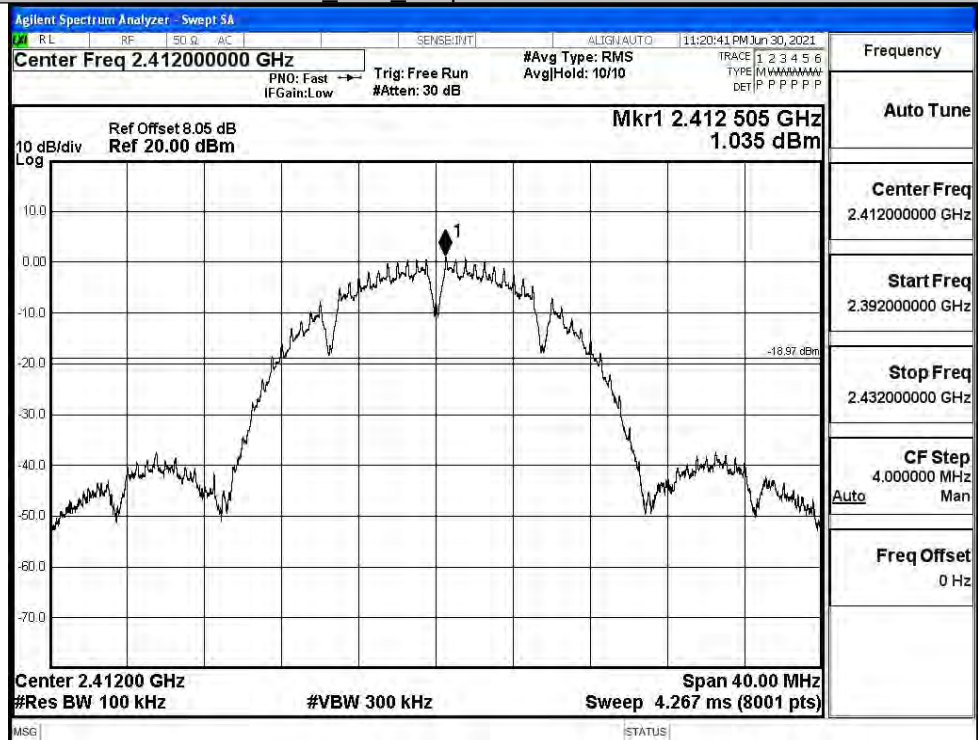
A.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	1.035	-37.395	-18.965	PASS
	MCH	1.996	-38.197	-18.004	PASS
	HCH	2.773	-37.399	-17.227	PASS
11G	LCH	-4.33	-38.298	-24.330	PASS
	MCH	-2.311	-39.011	-22.311	PASS
	HCH	-1.649	-38.029	-21.649	PASS
11N20 SISO	LCH	-3.607	-38.454	-23.607	PASS
	MCH	-2.246	-37.986	-22.246	PASS
	HCH	-1.237	-37.853	-21.237	PASS
11N40 SISO	LCH	-6.688	-38.290	-26.688	PASS
	MCH	-6.107	-38.522	-26.107	PASS
	HCH	-5.574	-37.830	-25.574	PASS

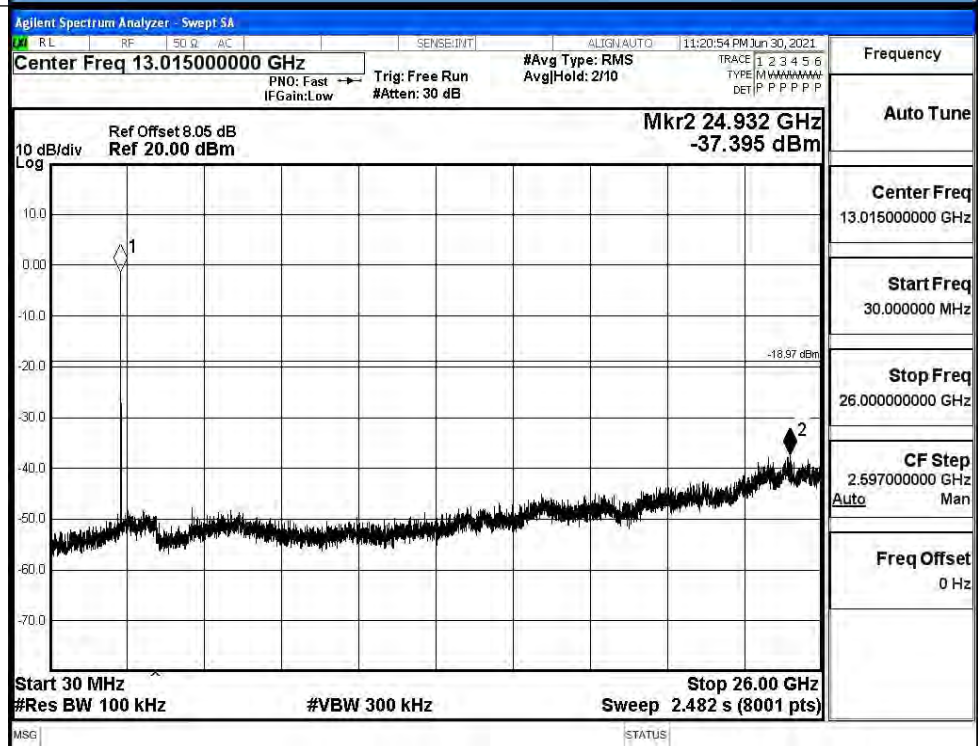


11B LCH Graphs

Pref/11B/LCH



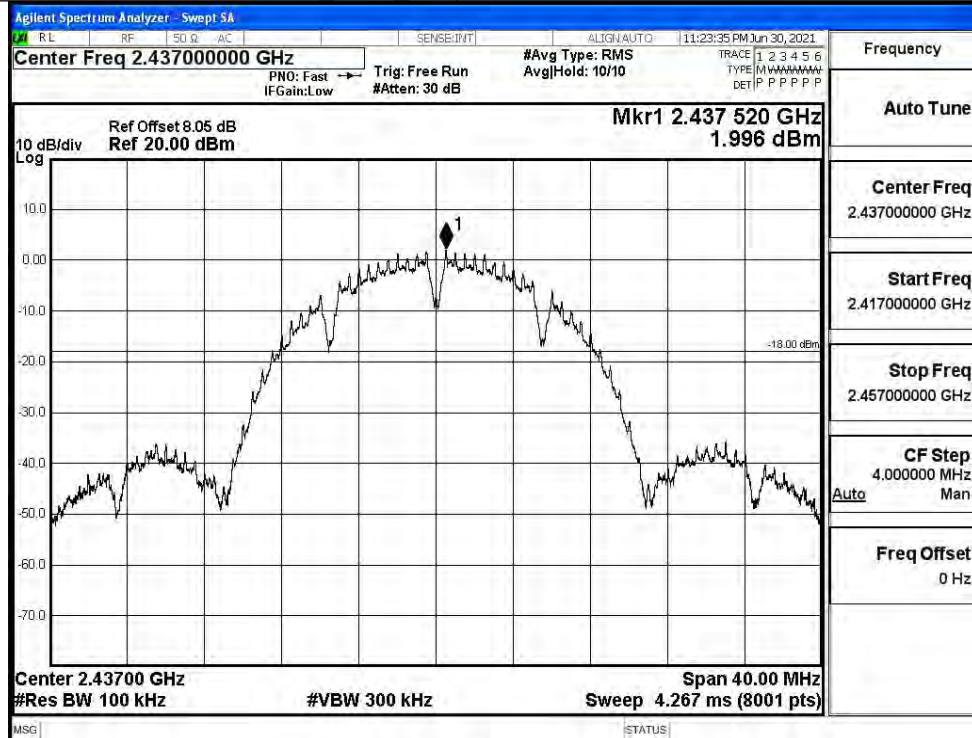
Puw/11B/LCH



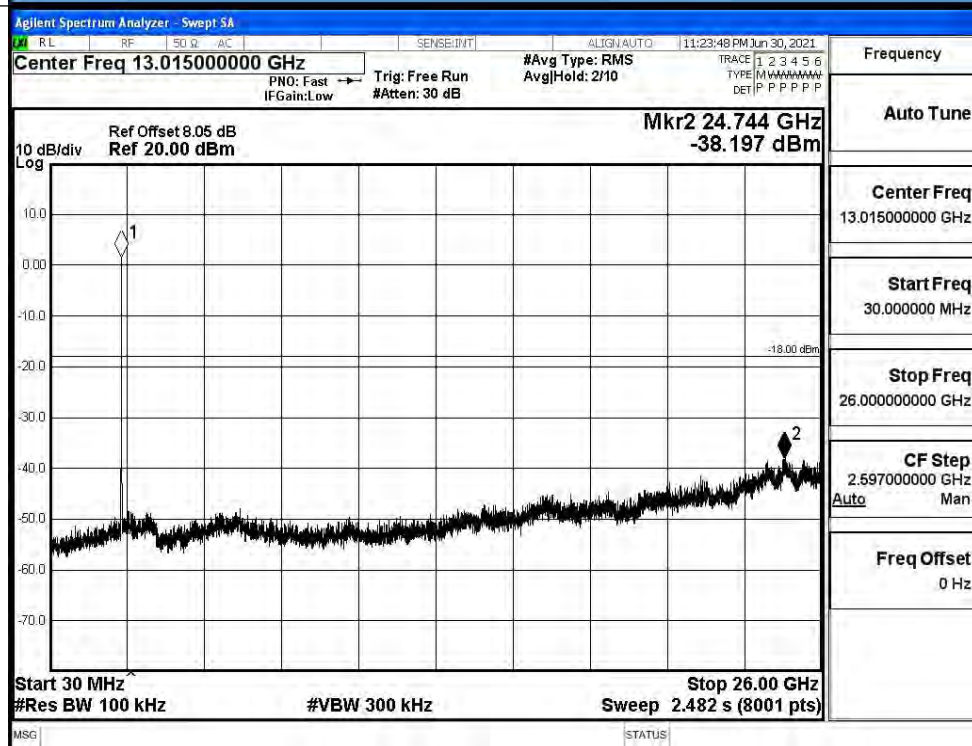


11B MCH Graphs

Pref/11B/MCH



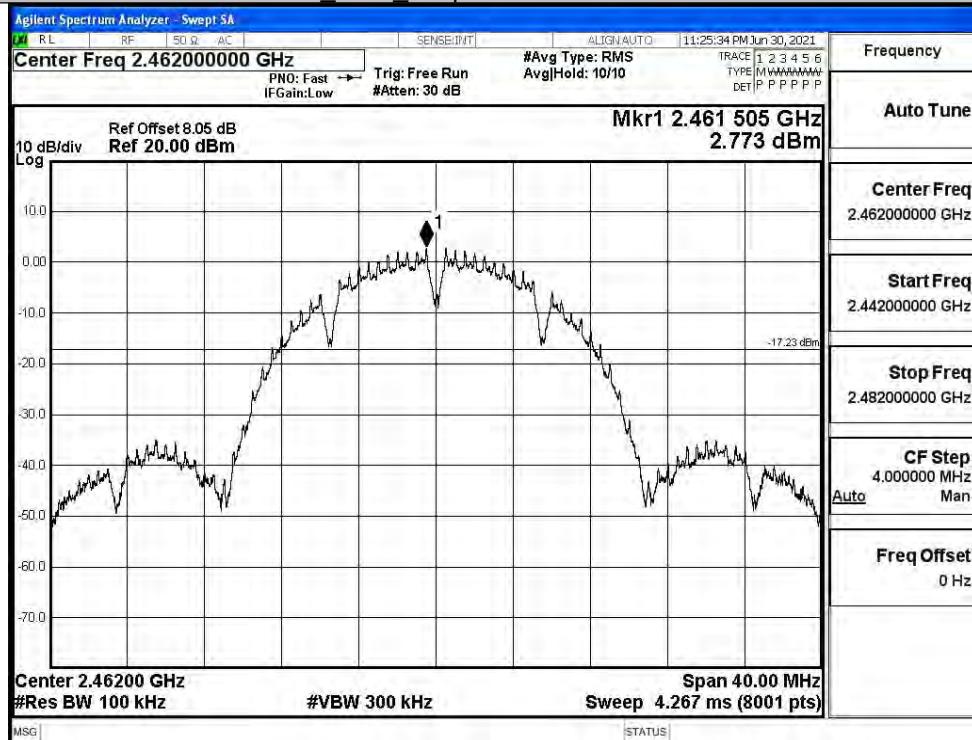
Puw/11B/MCH



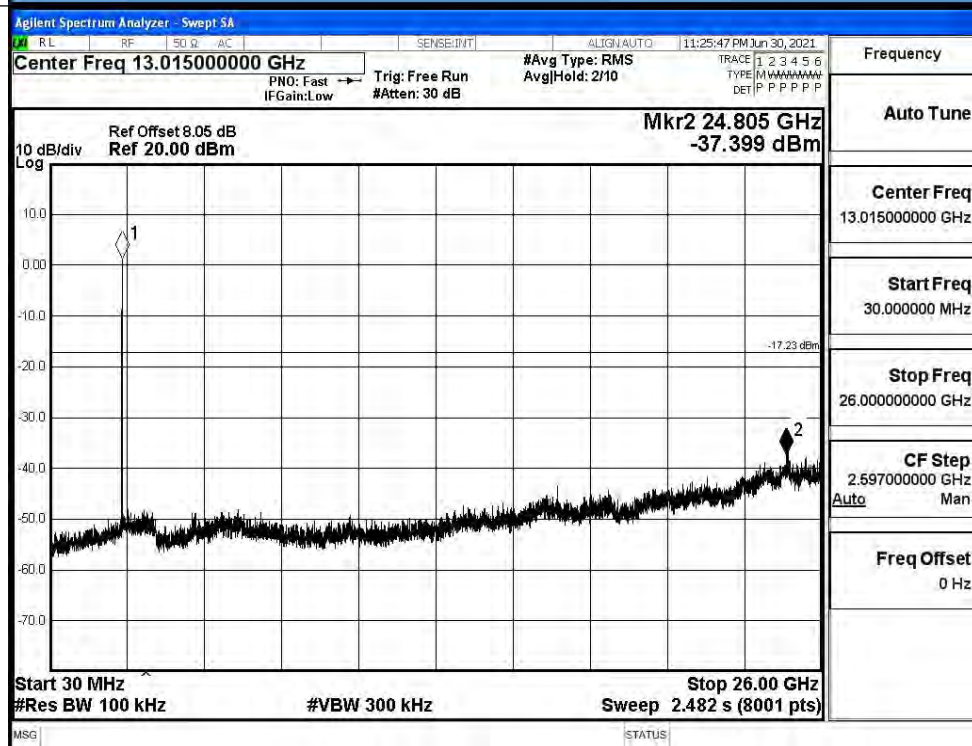


11B HCH Graphs

Pref/11B/HCH



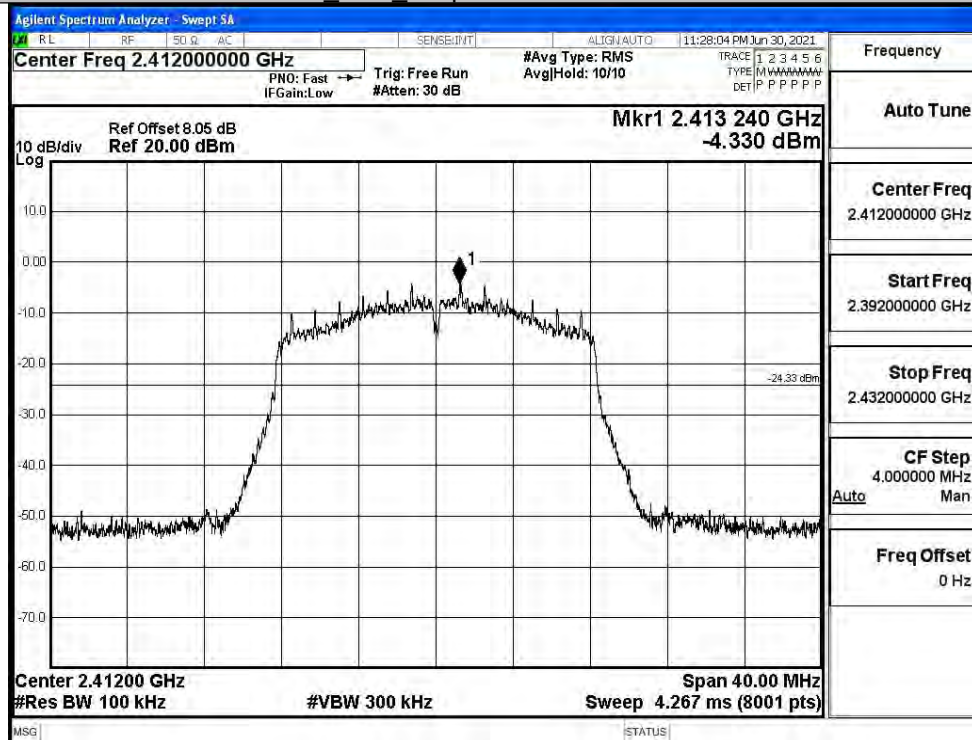
Puw/11B/HCH



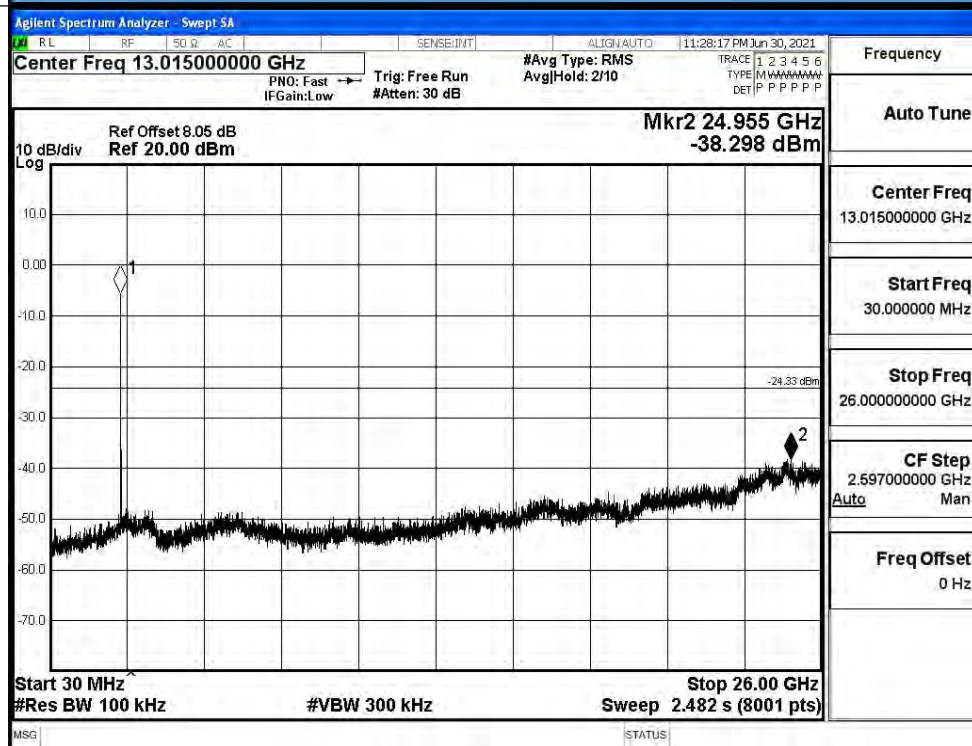


11G LCH Graphs

Pref/11G/LCH



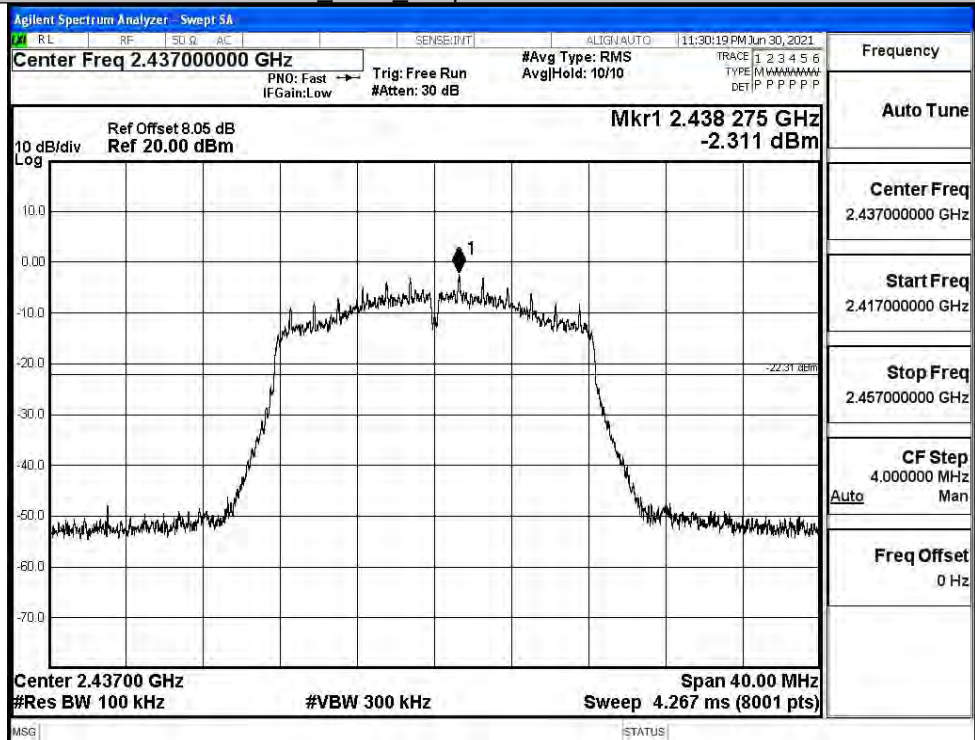
Puw/11G/LCH



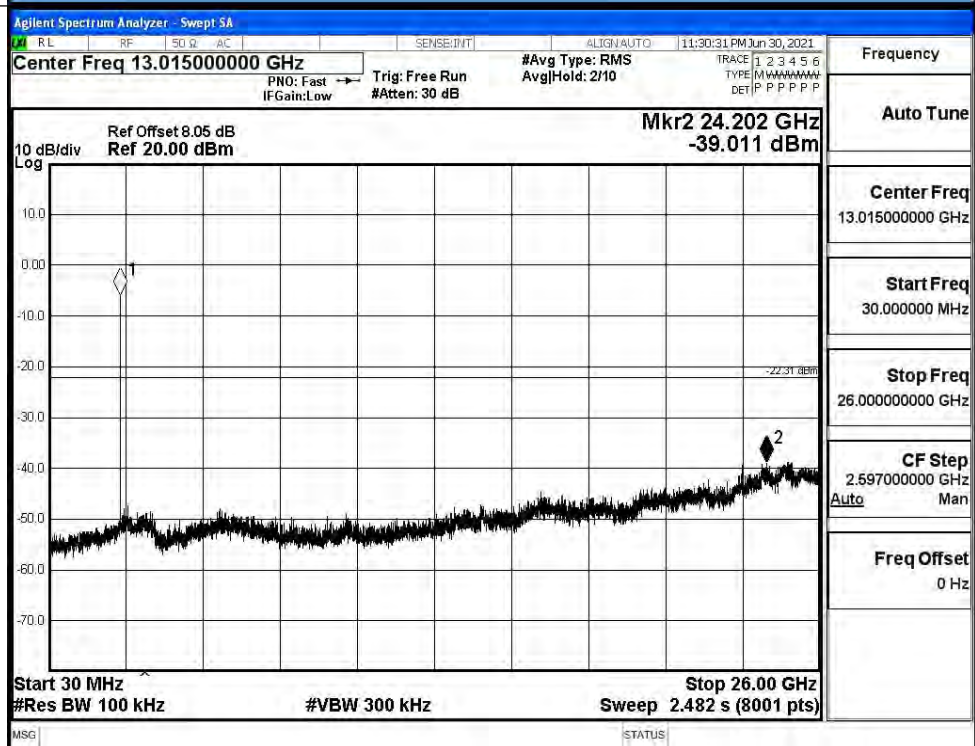


11G MCH Graphs

Pref/11G/MCH



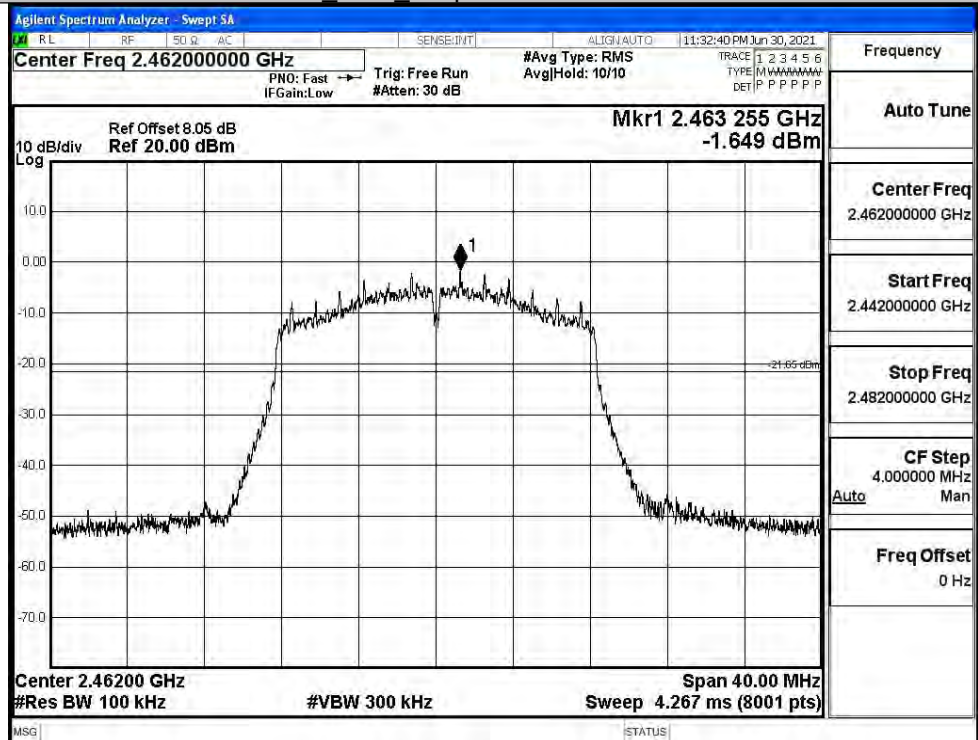
Puw/11G/MCH



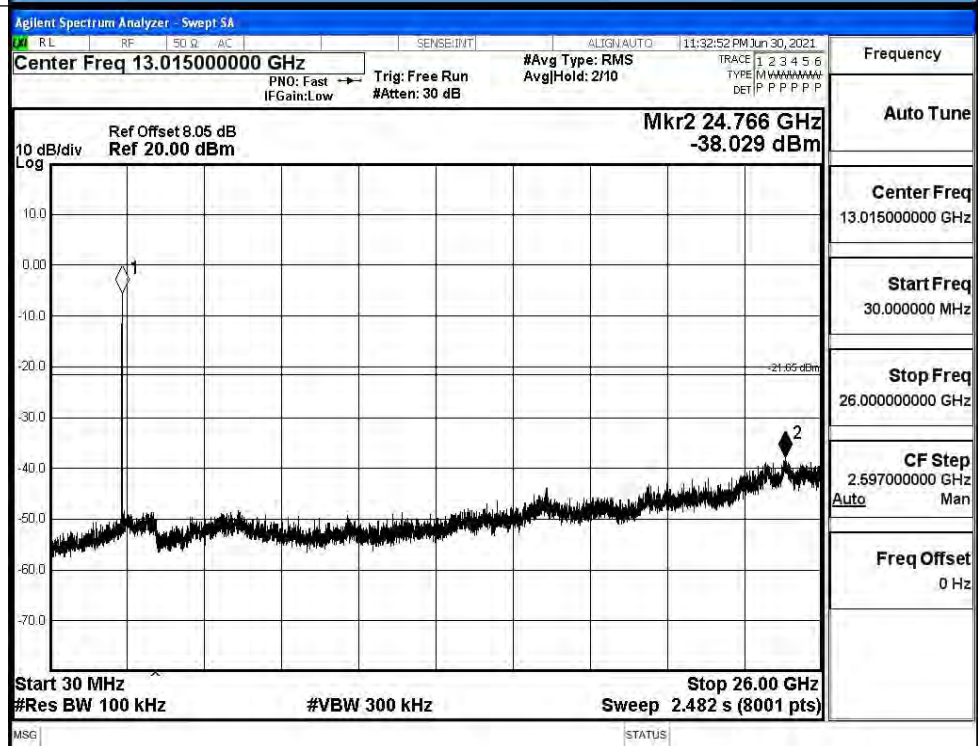


11G HCH Graphs

Pref/11G/HCH

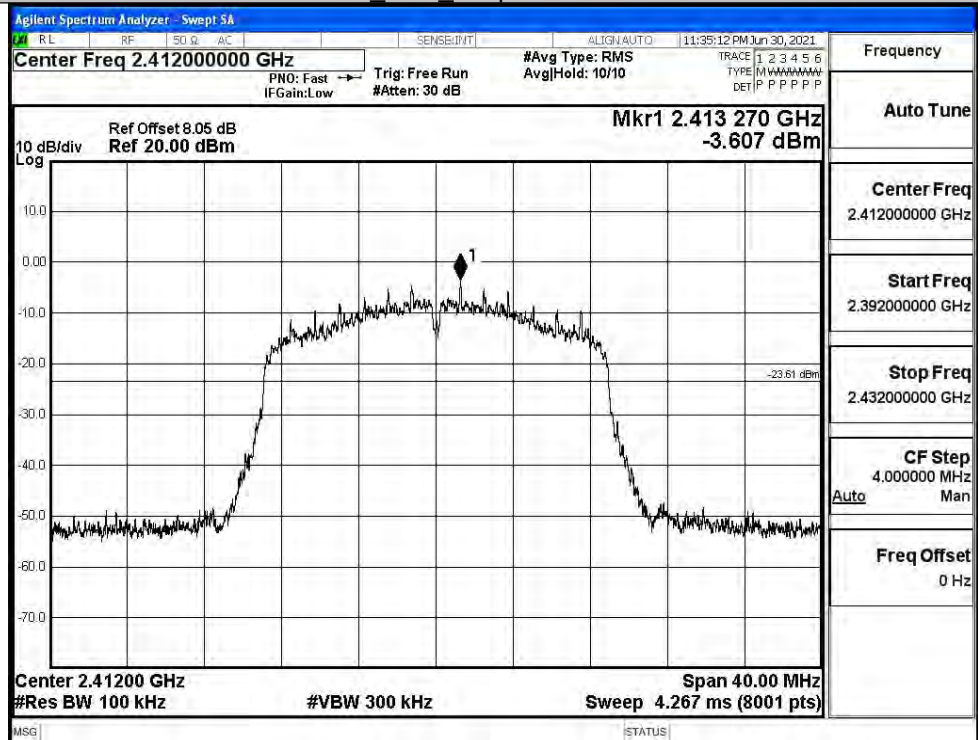
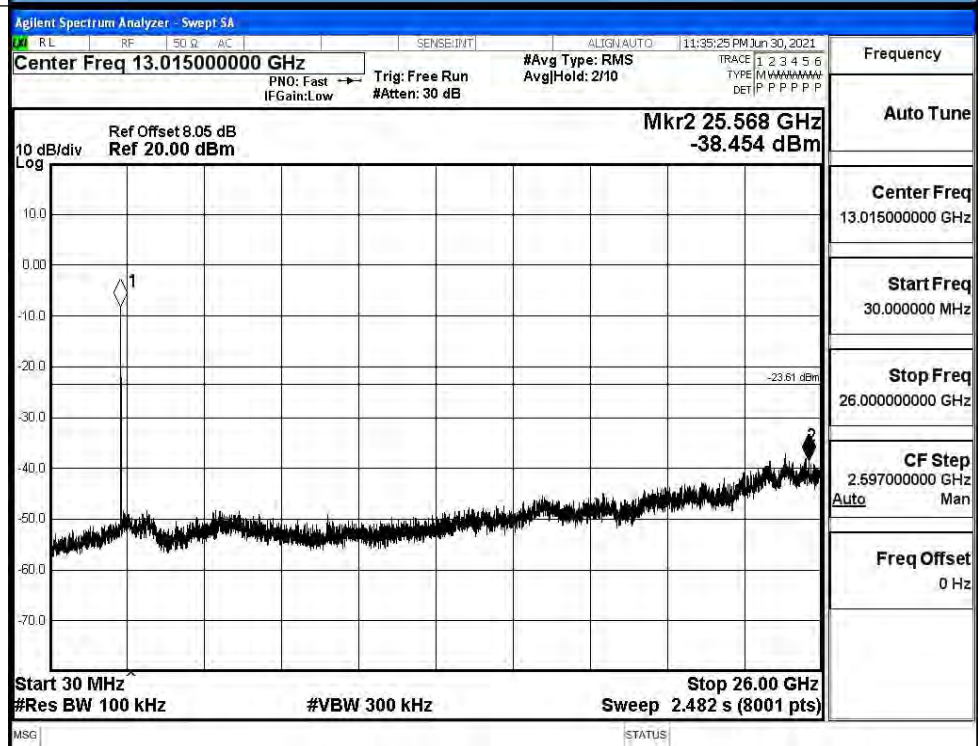


Puw/11G/HCH



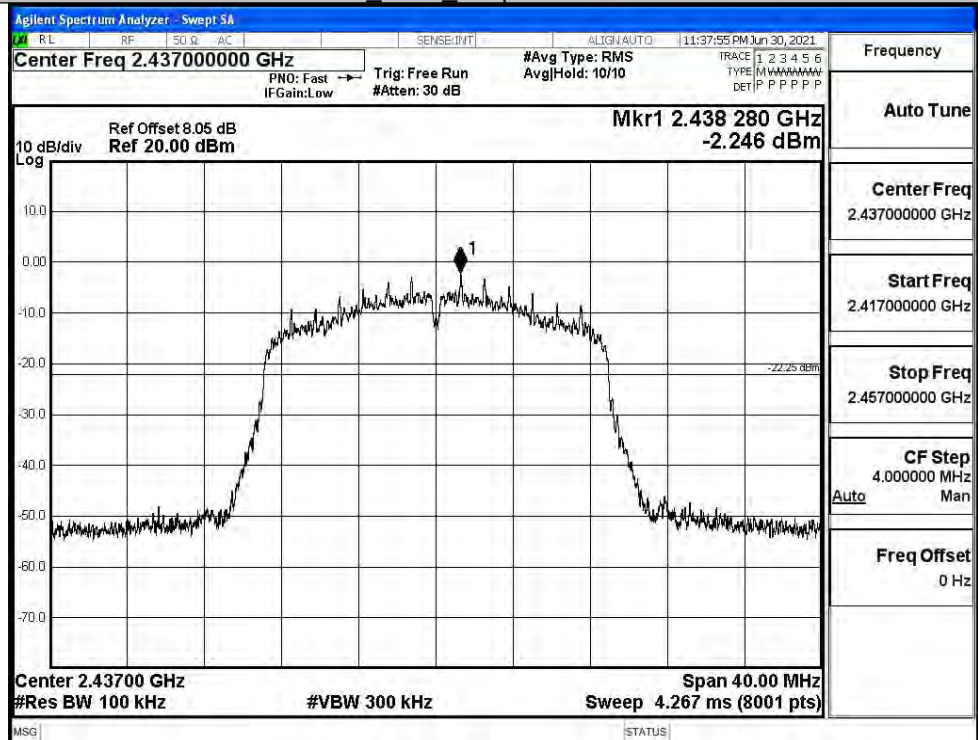
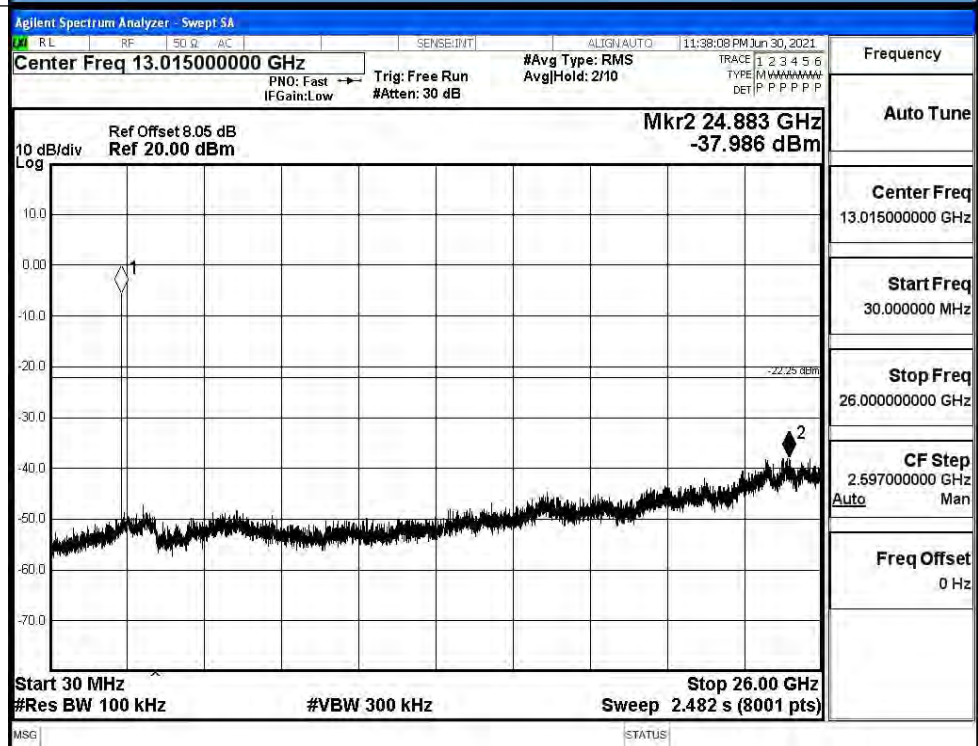


11N20SISO LCH Graphs

Pref/11N20SIS
O/LCHPuw/11N20
SISO/LCH

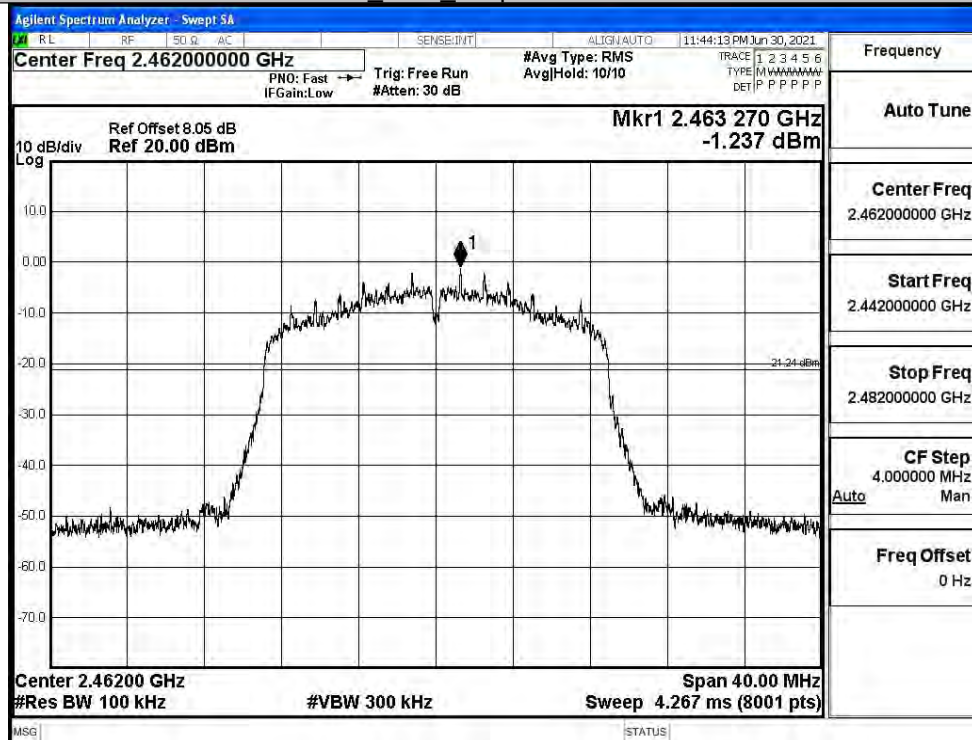
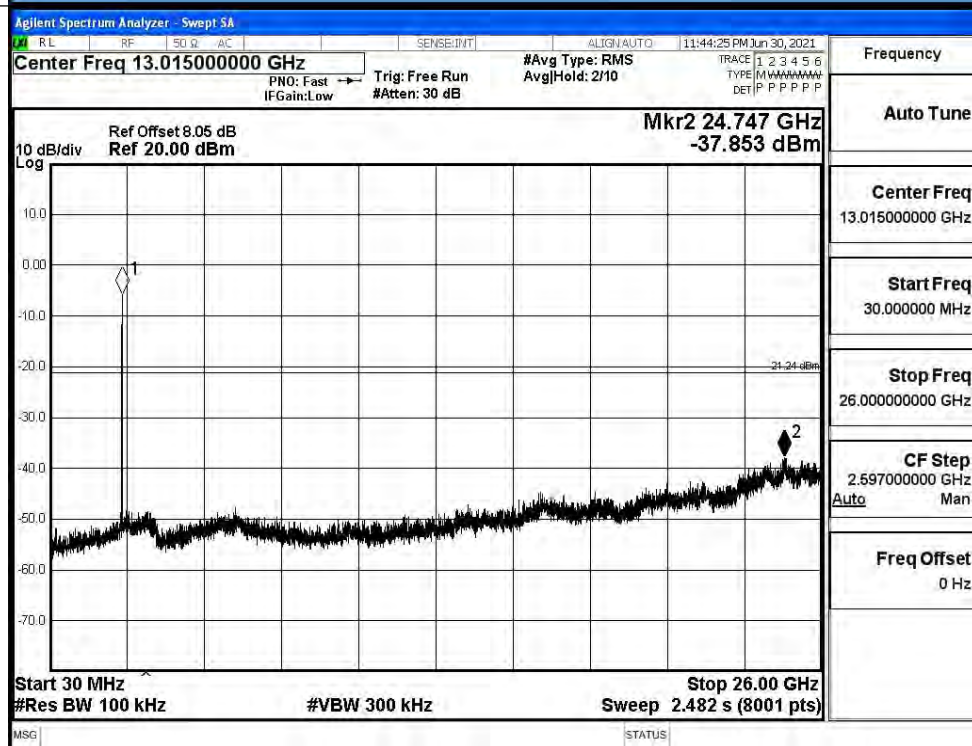


11N20SISO MCH_Graphs

Pref/11N20
SISO/MCHPuw/11N20
SISO/MCH

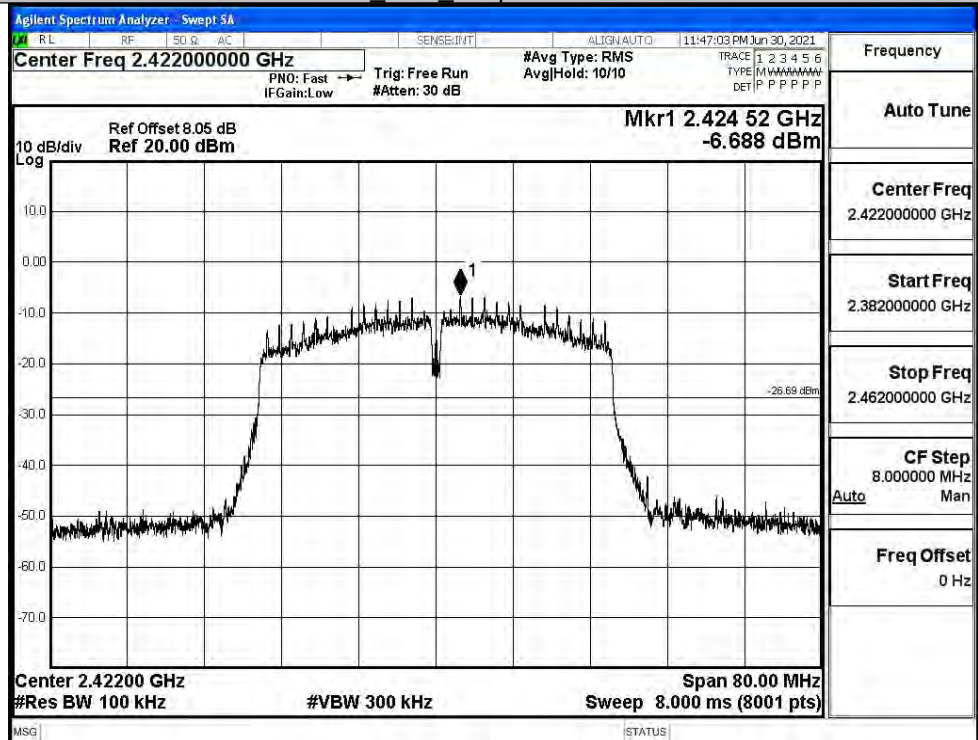
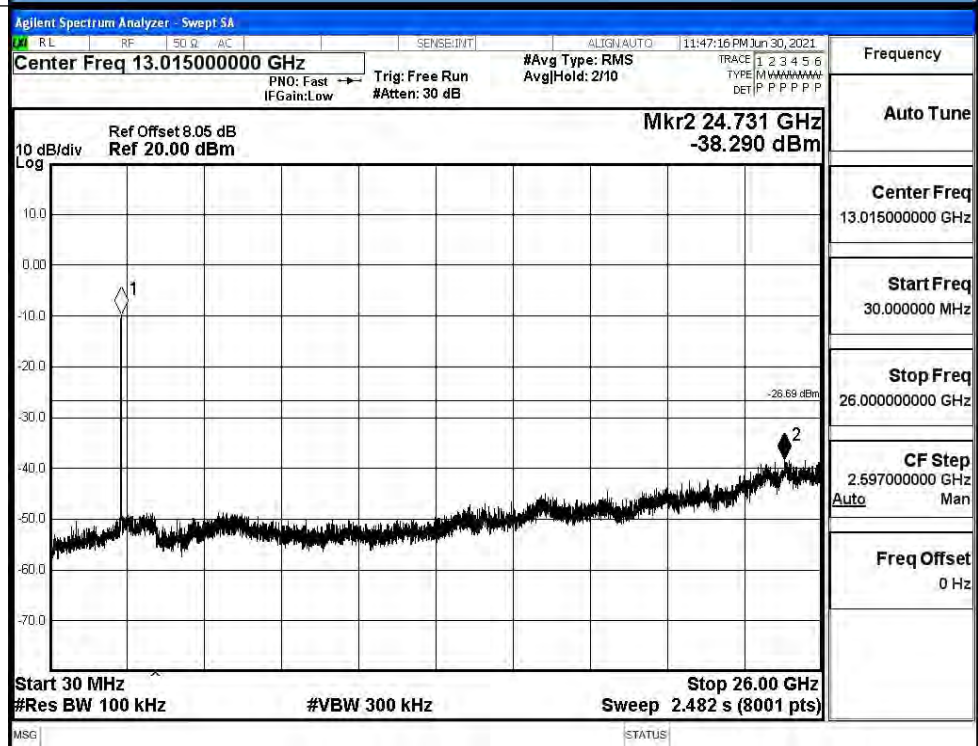


11N20ISO HCH Graphs

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

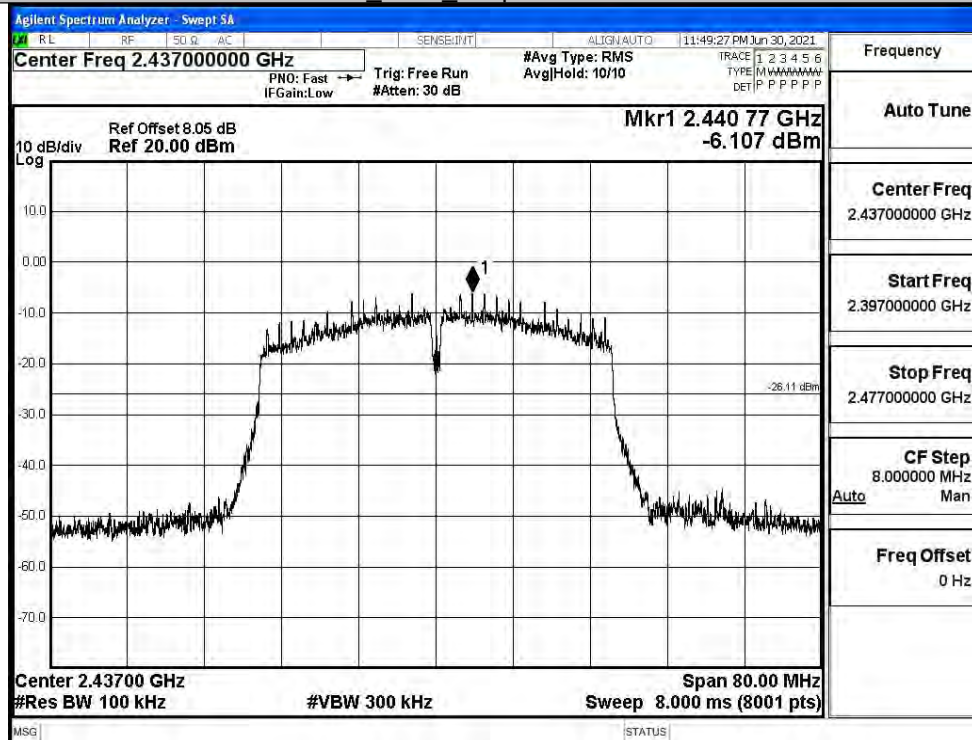
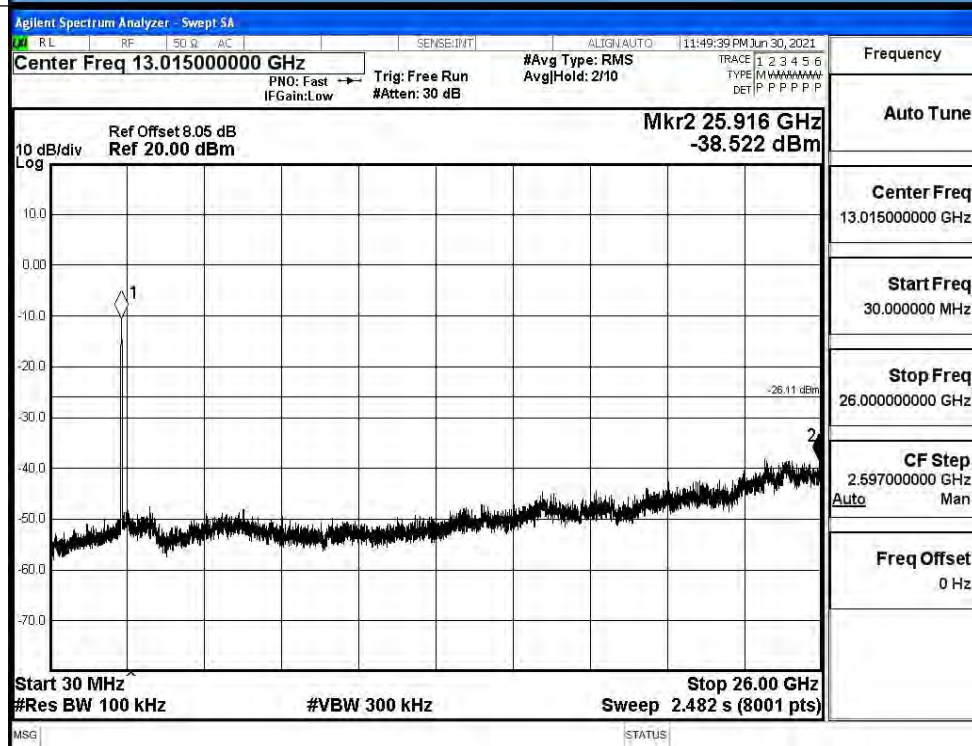


11N40SISO LCH Graphs

Pref/11N40
SISO/LCHPuw/11N40
SISO/LCH

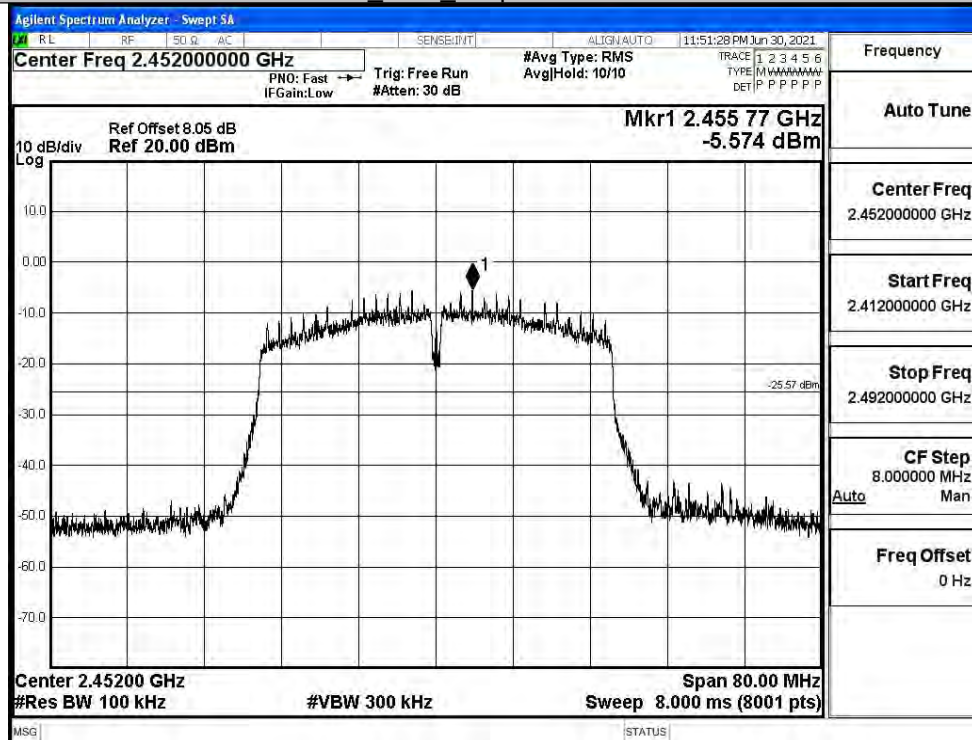
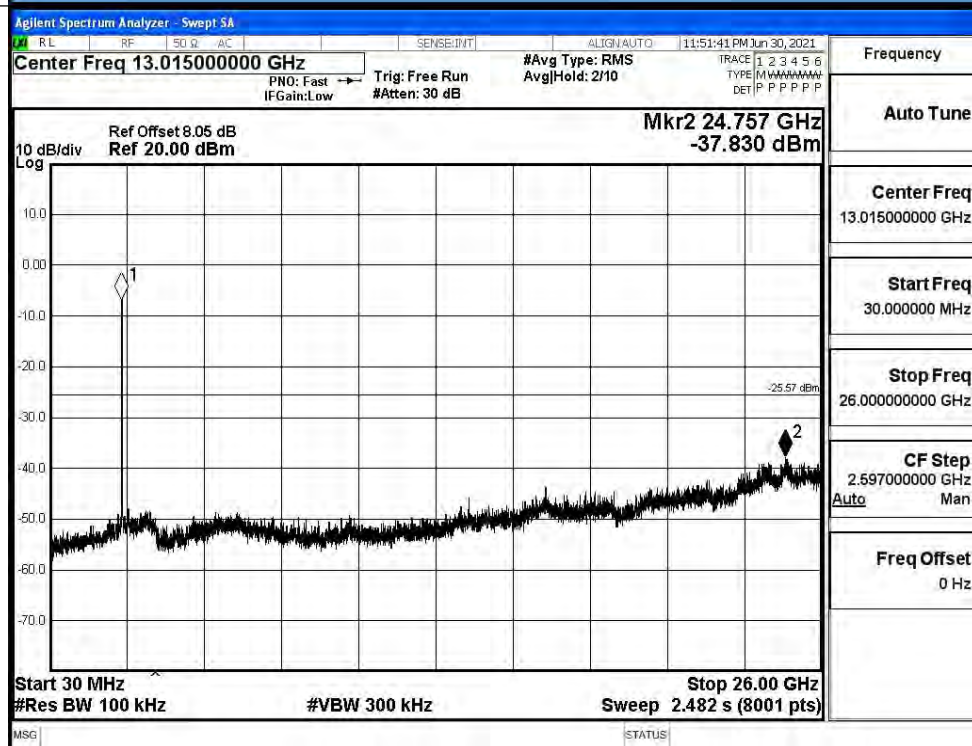


11N40SISO MCH_Graphs

Pref/11N40
SISO/MCHPuw/11N40
SISO/MCH



11N40SISO HCH Graphs

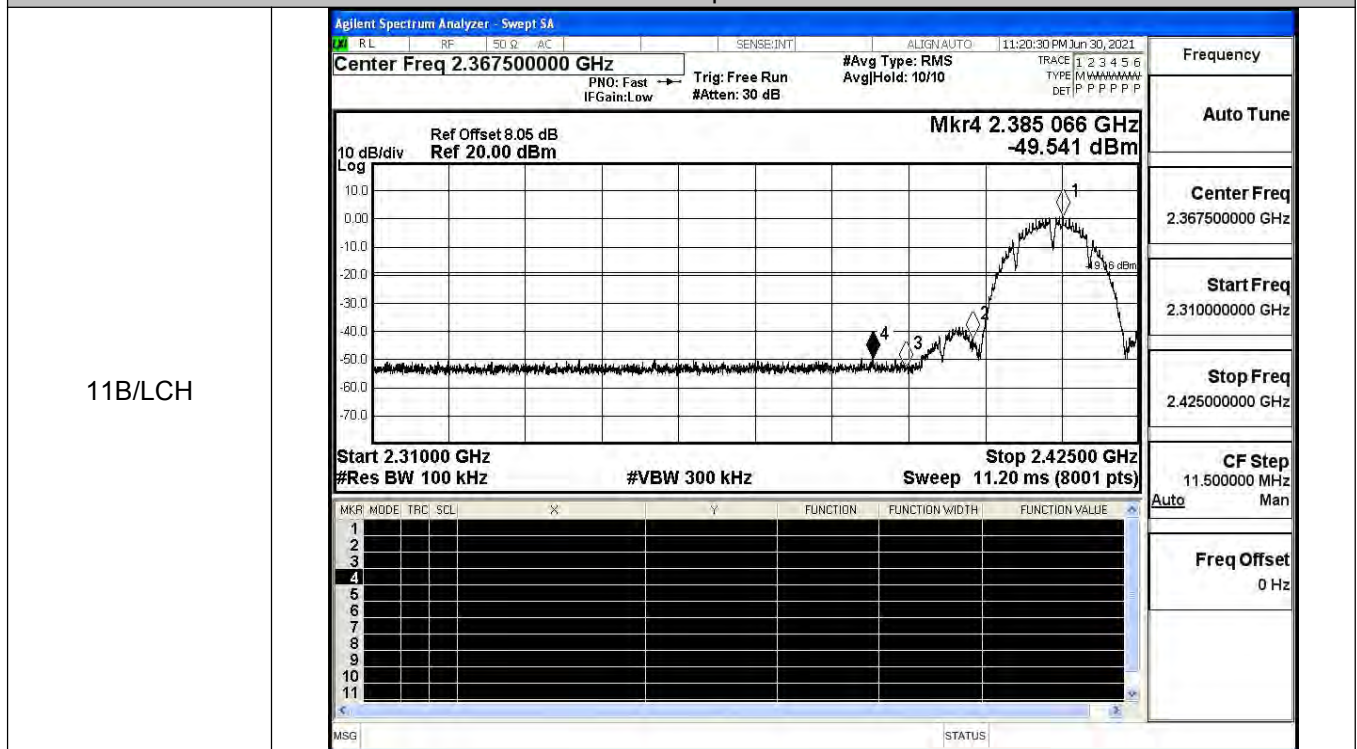
Pref/11N40
SISO/HCHPuw/11N40
SISO/HCH



A.6 Band-edge for RF Conducted Emissions

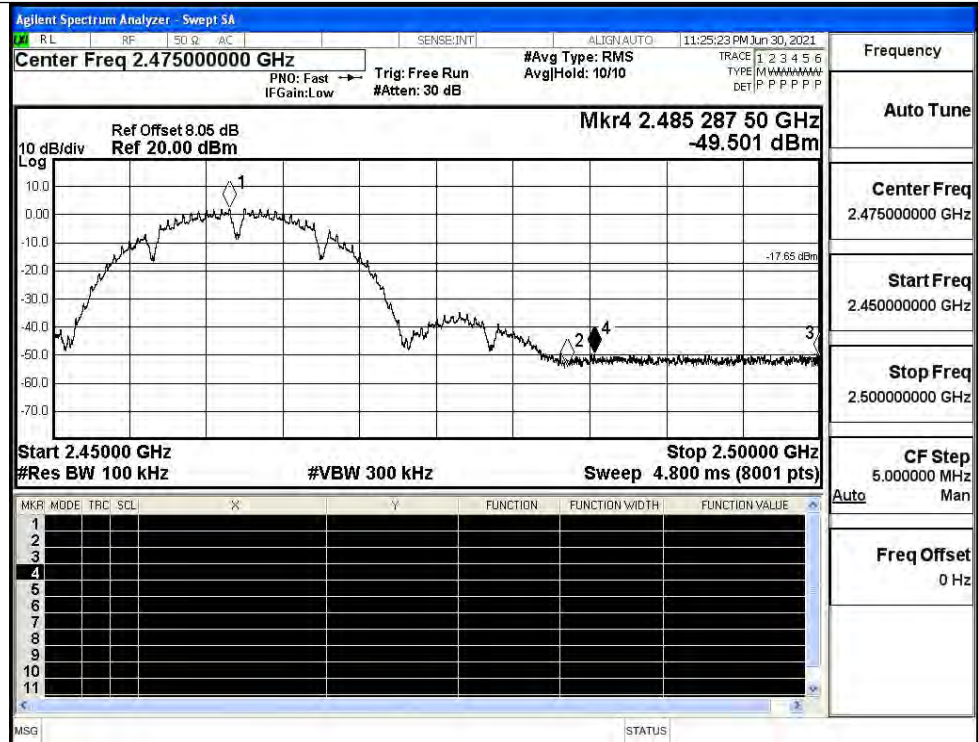
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	0.842	-49.541	-19.16	PASS
	HCH	2.352	-49.501	-17.65	PASS
11G	LCH	-3.698	-49.581	-23.7	PASS
	HCH	-1.503	-49.276	-21.5	PASS
11N20SISO	LCH	-3.477	-49.419	-23.48	PASS
	HCH	-1.924	-49.218	-21.92	PASS
11N40SISO	LCH	-6.570	-49.207	-26.57	PASS
	HCH	-5.379	-45.606	-25.38	PASS

Test Graphs

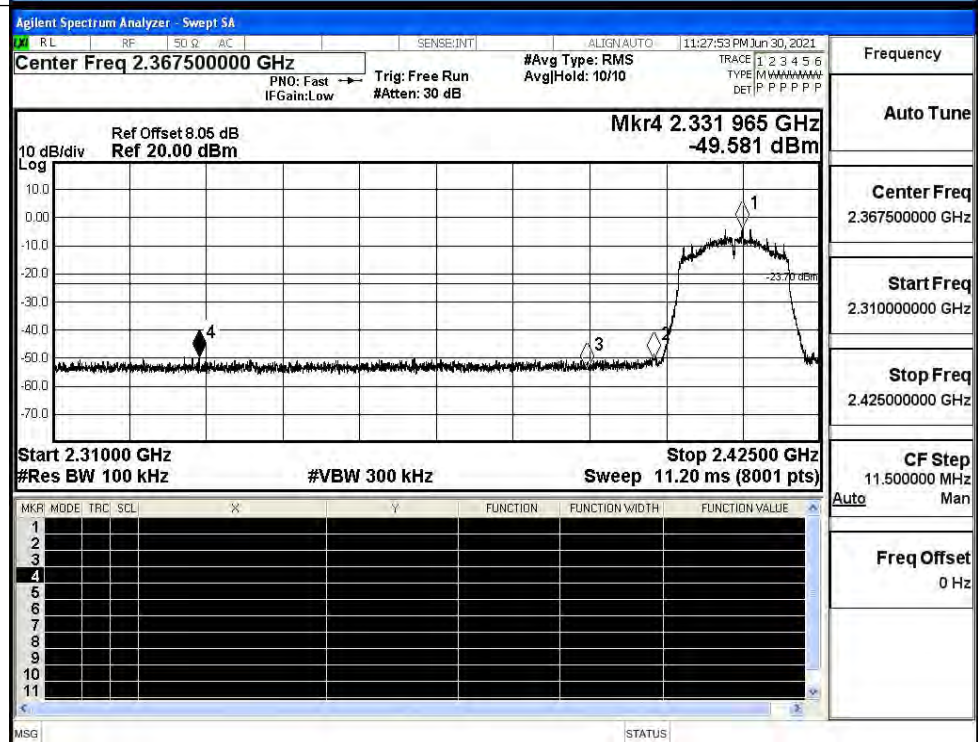




11B/HCH

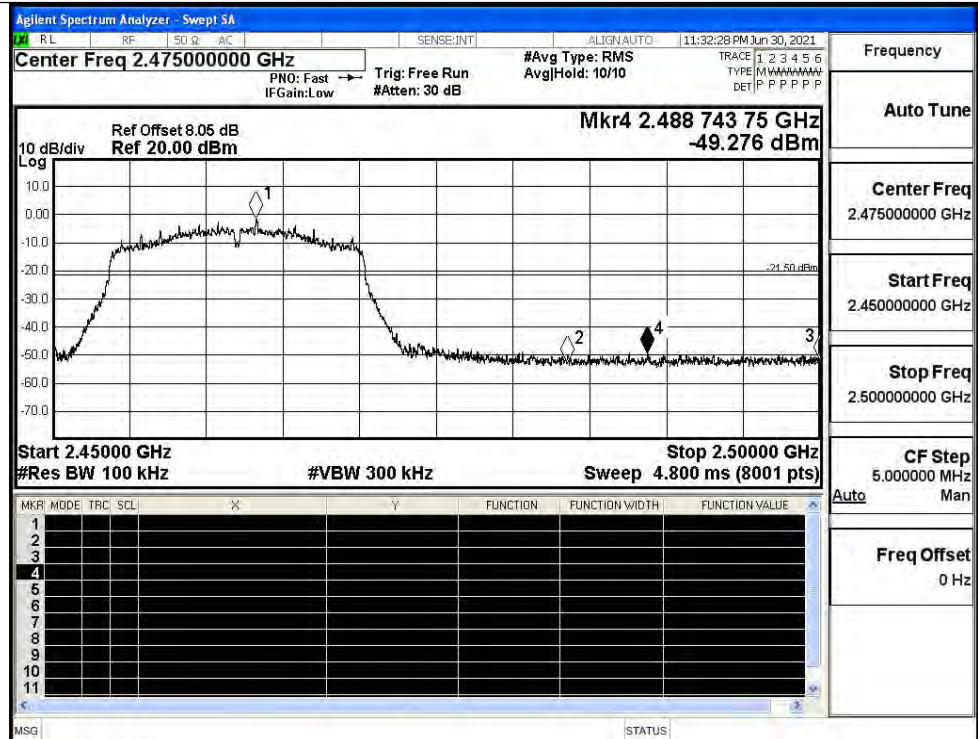


11G/LCH

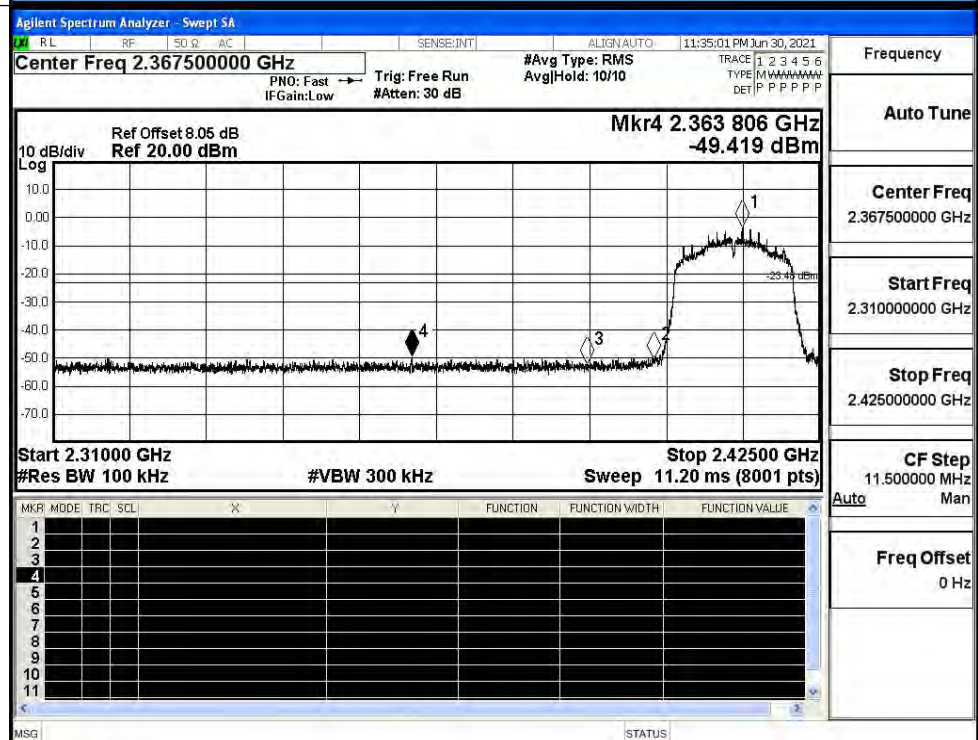


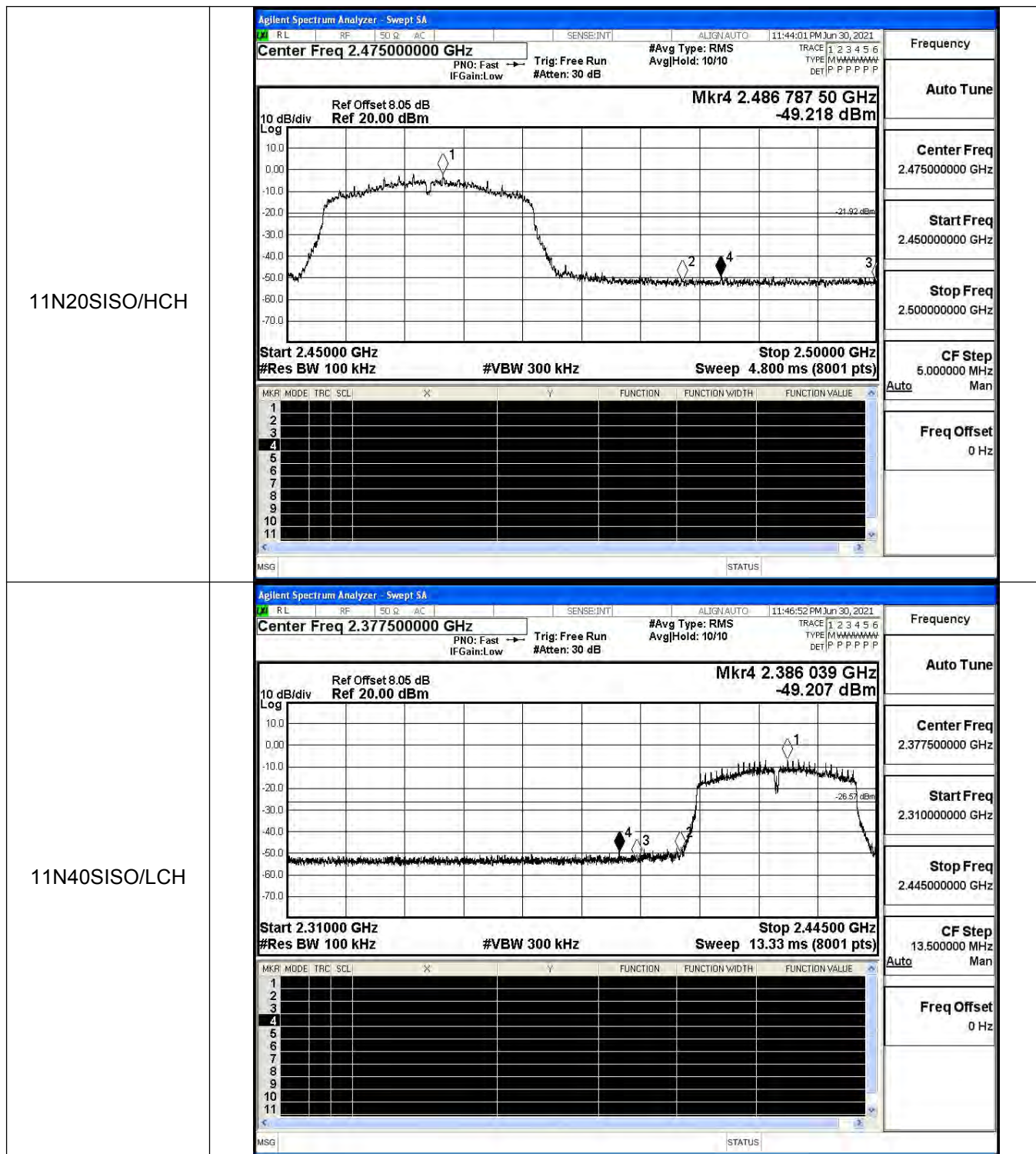


11G/HCH



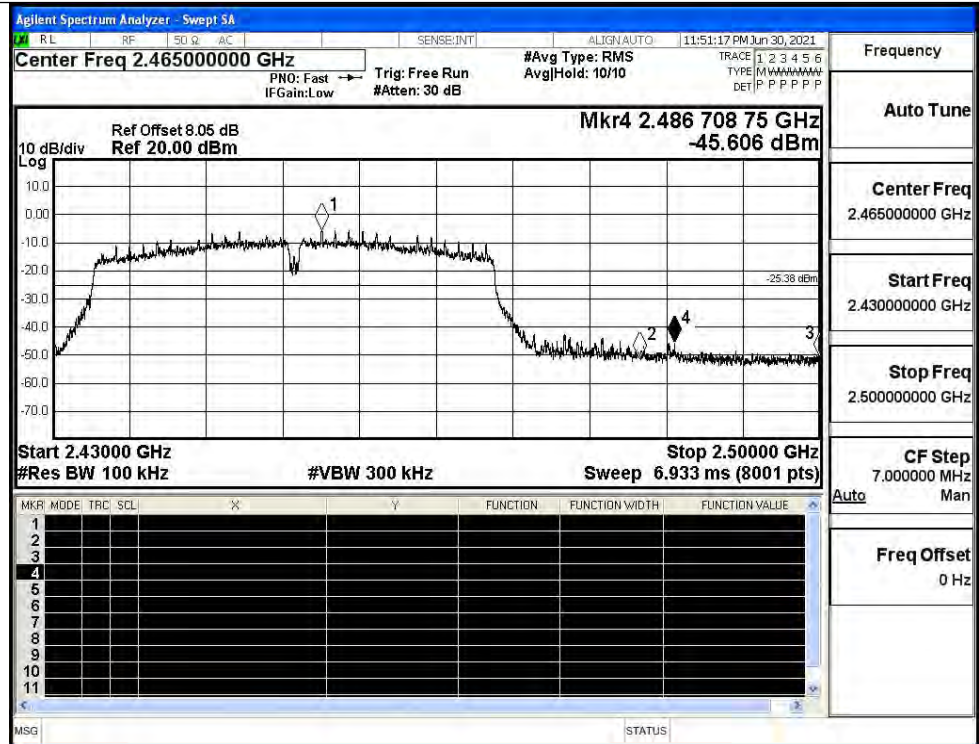
11N20SISO/LCH







11N40SISO/HCH



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

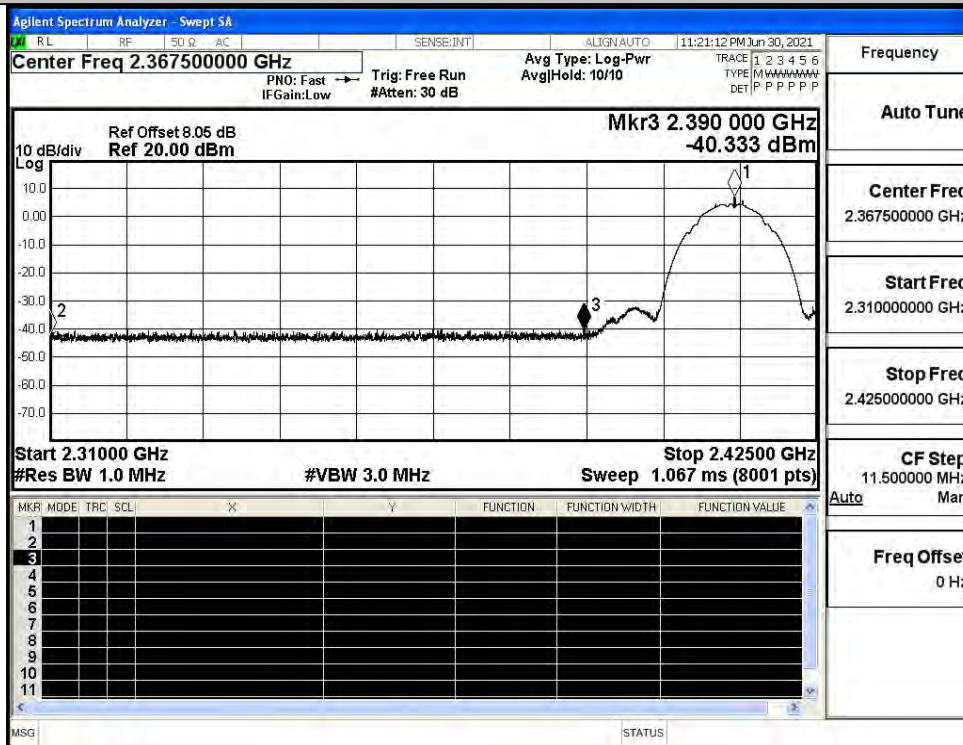
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-42.35	2.0	0	54.88	PEAK	74	PASS
	2412	Ant1	2310.0	-53.65	2.0	0	43.58	AV	54	PASS
	2412	Ant1	2390.0	-40.33	2.0	0	56.90	PEAK	74	PASS
	2412	Ant1	2390.0	-53.01	2.0	0	44.22	AV	54	PASS
	2462	Ant1	2483.5	-42.26	2.0	0	54.97	PEAK	74	PASS
	2462	Ant1	2483.5	-52.34	2.0	0	44.89	AV	54	PASS
	2462	Ant1	2500.0	-41.41	2.0	0	55.82	PEAK	74	PASS
	2462	Ant1	2500.0	-52.20	2.0	0	45.03	AV	54	PASS
11G	2412	Ant1	2310.0	-41.12	2.0	0	56.11	PEAK	74	PASS
	2412	Ant1	2310.0	-53.60	2.0	0	43.63	AV	54	PASS
	2412	Ant1	2390.0	-43.35	2.0	0	53.88	PEAK	74	PASS
	2412	Ant1	2390.0	-53.06	2.0	0	44.17	AV	54	PASS
	2462	Ant1	2483.5	-41.55	2.0	0	55.68	PEAK	74	PASS
	2462	Ant1	2483.5	-52.38	2.0	0	44.85	AV	54	PASS
	2462	Ant1	2500.0	-41.50	2.0	0	55.73	PEAK	74	PASS
	2462	Ant1	2500.0	-52.05	2.0	0	45.18	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-42.64	2.0	0	54.59	PEAK	74	PASS
	2412	Ant1	2310.0	-53.59	2.0	0	43.64	AV	54	PASS
	2412	Ant1	2390.0	-42.20	2.0	0	55.03	PEAK	74	PASS
	2412	Ant1	2390.0	-53.10	2.0	0	44.13	AV	54	PASS
	2462	Ant1	2483.5	-42.38	2.0	0	54.85	PEAK	74	PASS
	2462	Ant1	2483.5	-52.40	2.0	0	44.83	AV	54	PASS
	2462	Ant1	2500.0	-42.26	2.0	0	54.97	PEAK	74	PASS
	2462	Ant1	2500.0	-52.10	2.0	0	45.13	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-42.60	2.0	0	54.63	PEAK	74	PASS
	2422	Ant1	2310.0	-53.64	2.0	0	43.59	AV	54	PASS



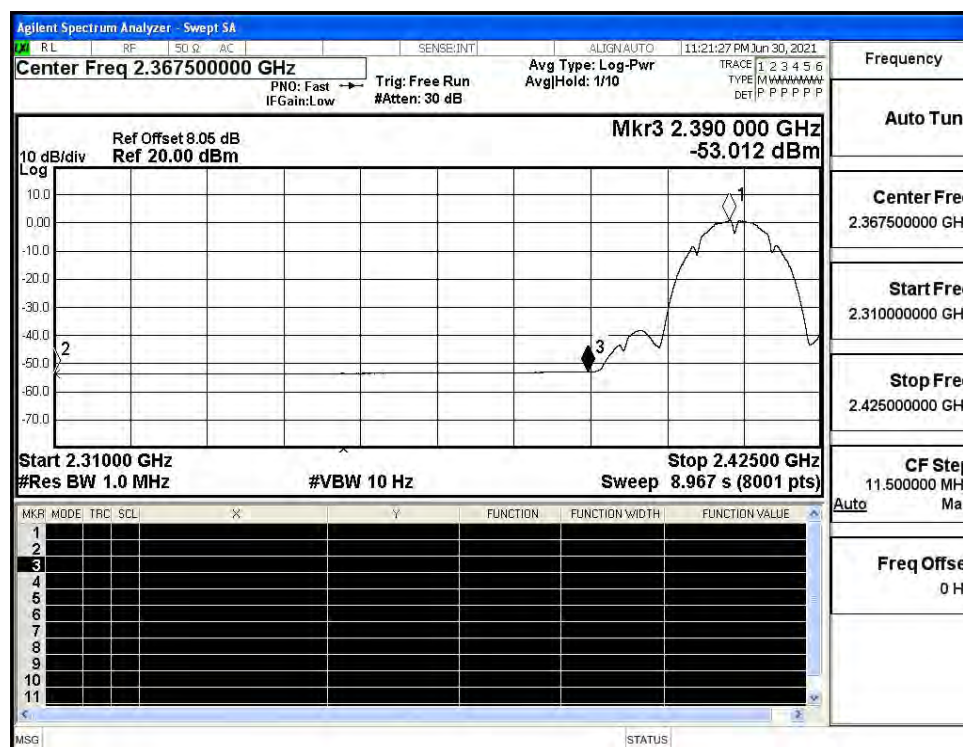
	2422	Ant1	2390.0	-40.86	2.0	0	56.37	PEAK	74	PASS
	2422	Ant1	2390.0	-52.34	2.0	0	44.89	AV	54	PASS
	2452	Ant1	2483.5	-34.57	2.0	0	62.66	PEAK	74	PASS
	2452	Ant1	2483.5	-50.35	2.0	0	46.88	AV	54	PASS
	2452	Ant1	2500.0	-41.27	2.0	0	55.96	PEAK	74	PASS
	2452	Ant1	2500.0	-52.09	2.0	0	45.14	AV	54	PASS



Restrict-band band-edge measurements_11B_2412_Ant1_PEAK

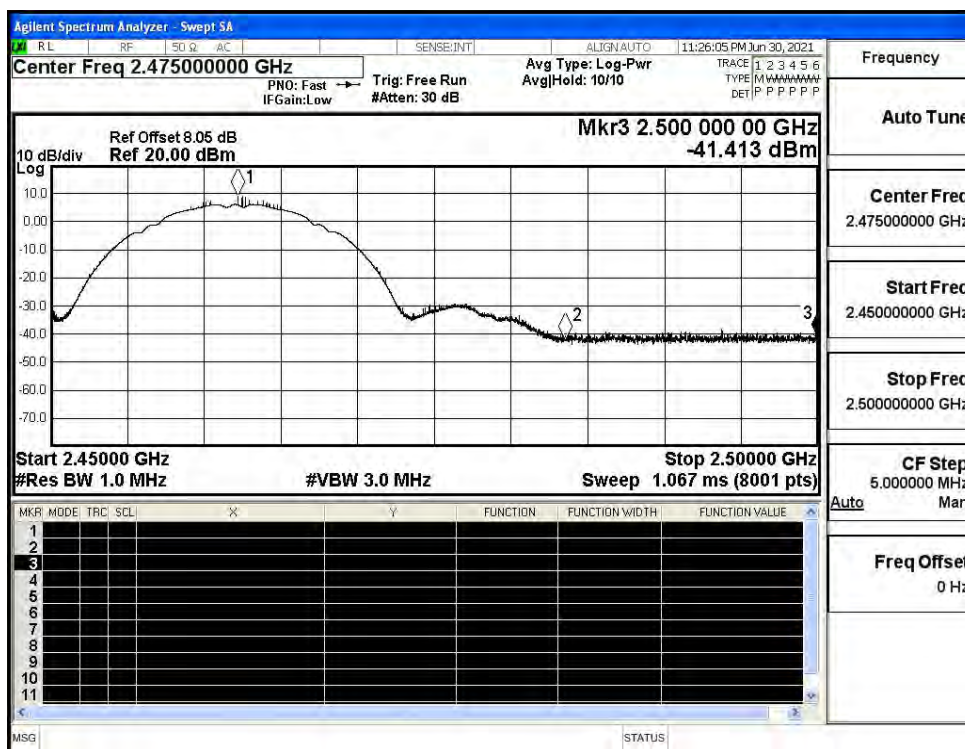


Restrict-band band-edge measurements_11B_2412_Ant1_AV

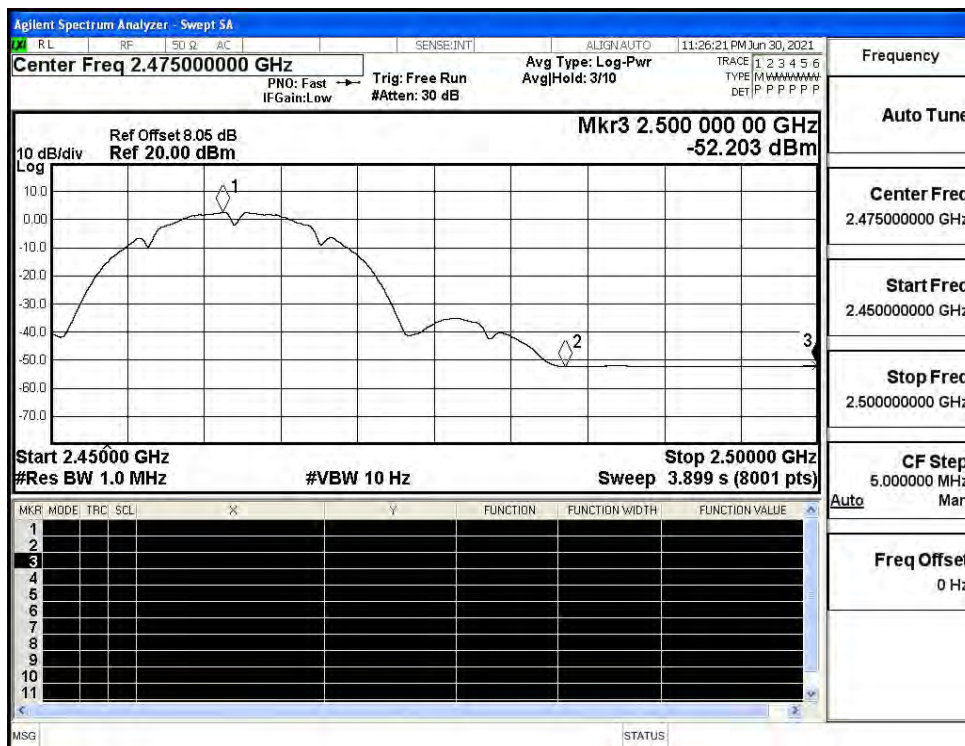




Restrict-band band-edge measurements_11B_2462_Ant1_PEAK

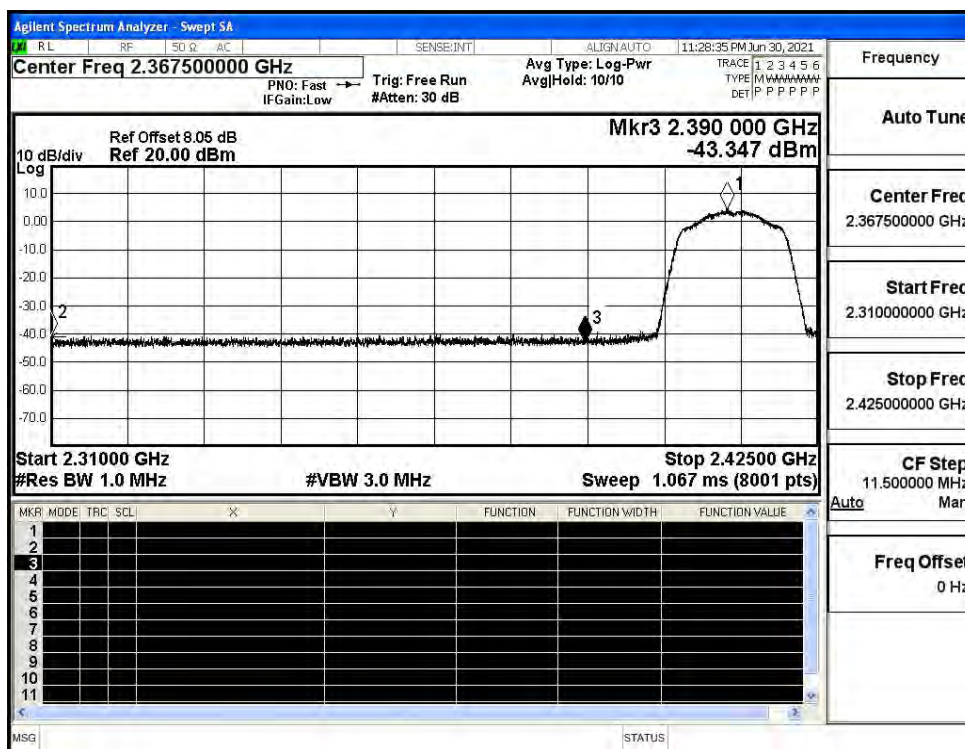


Restrict-band band-edge measurements_11B_2462_Ant1_AV

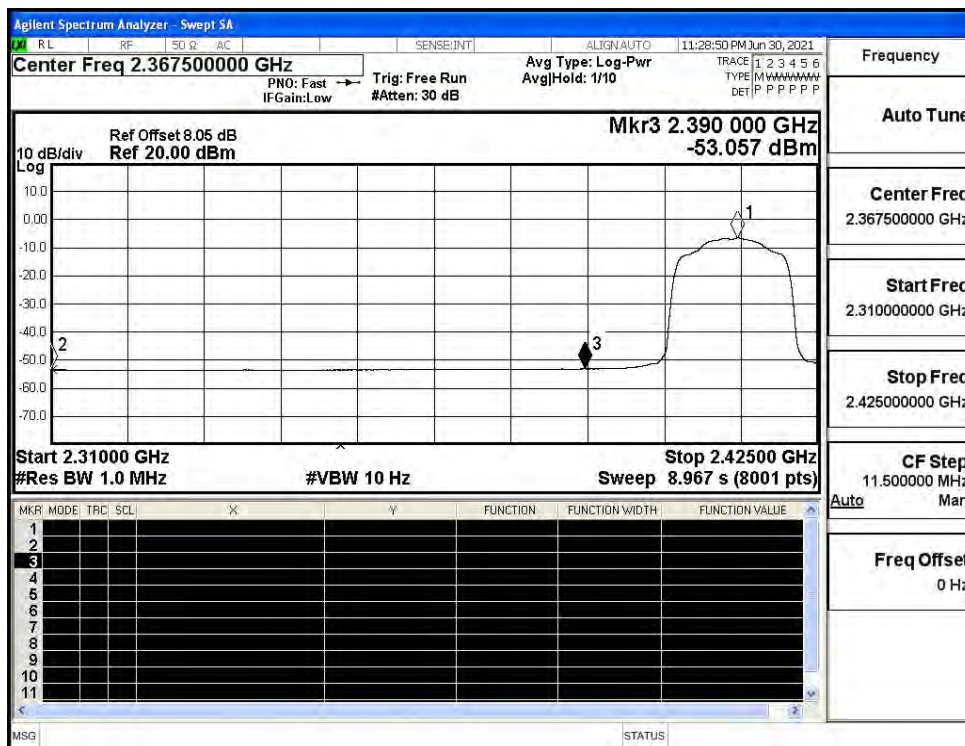




Restrict-band band-edge measurements_11G_2412_Ant1_PEAK

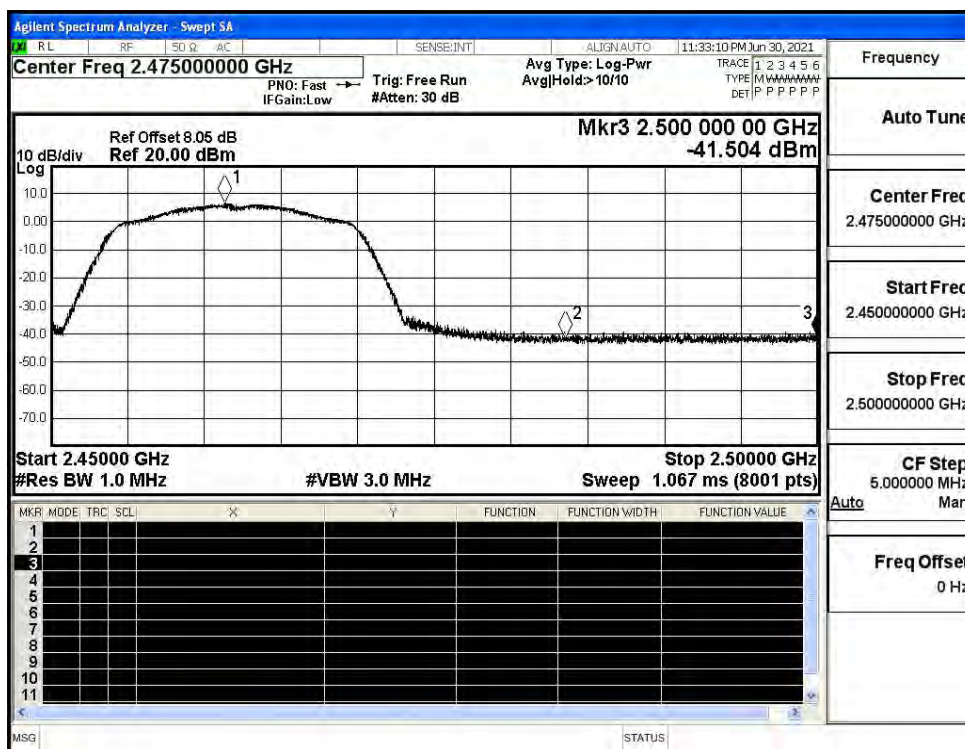


Restrict-band band-edge measurements_11G_2412_Ant1_AV

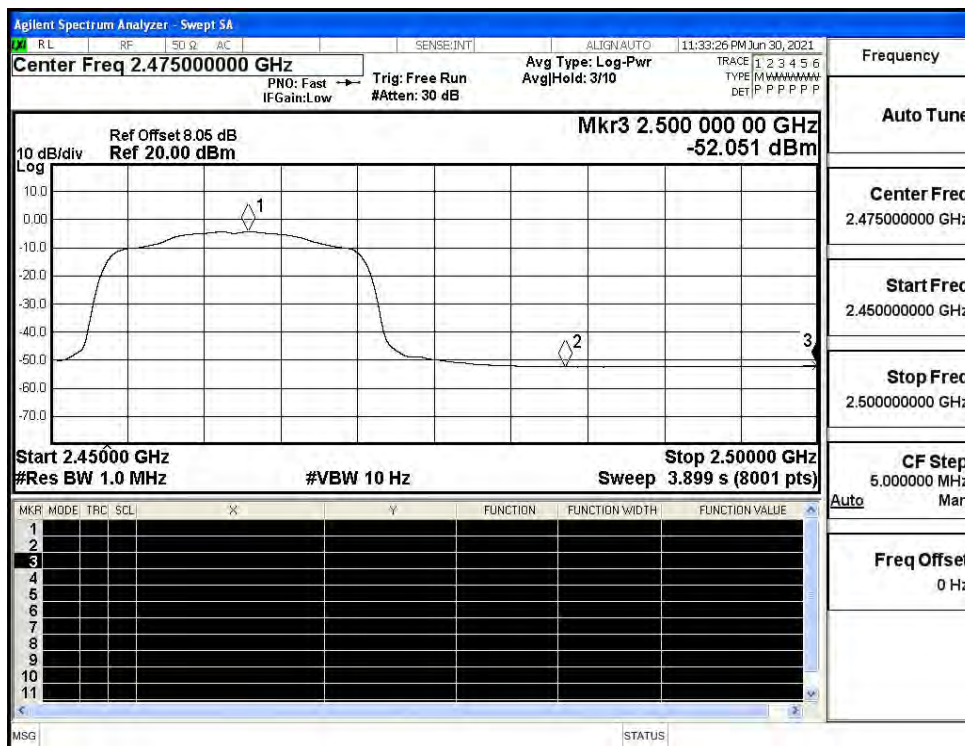




Restrict-band band-edge measurements_11G_2462_Ant1_PEAK

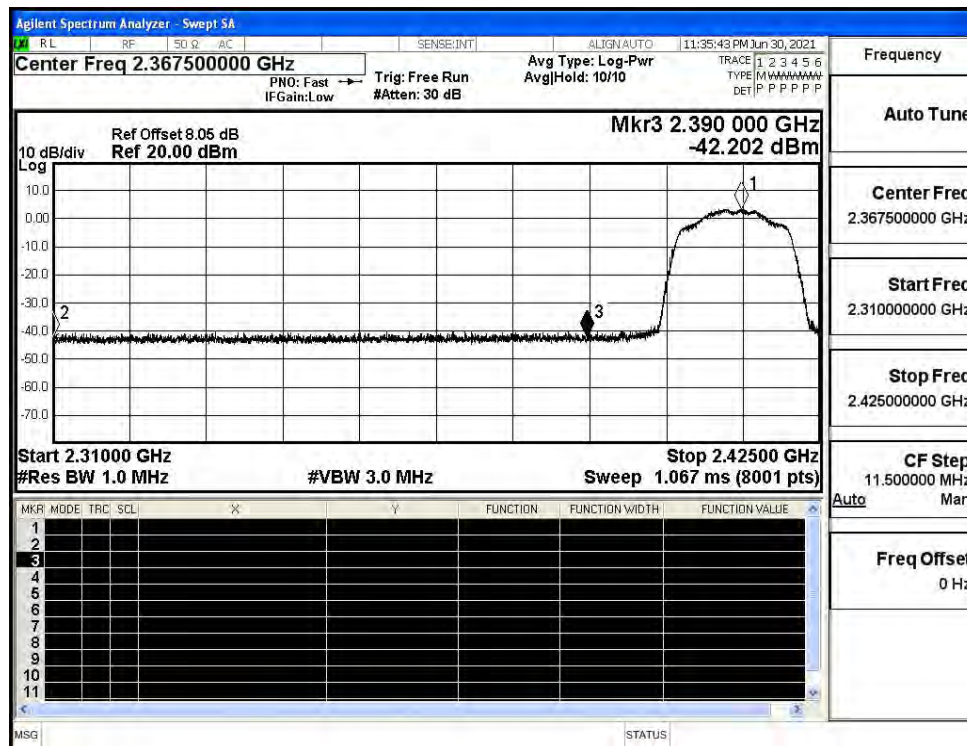


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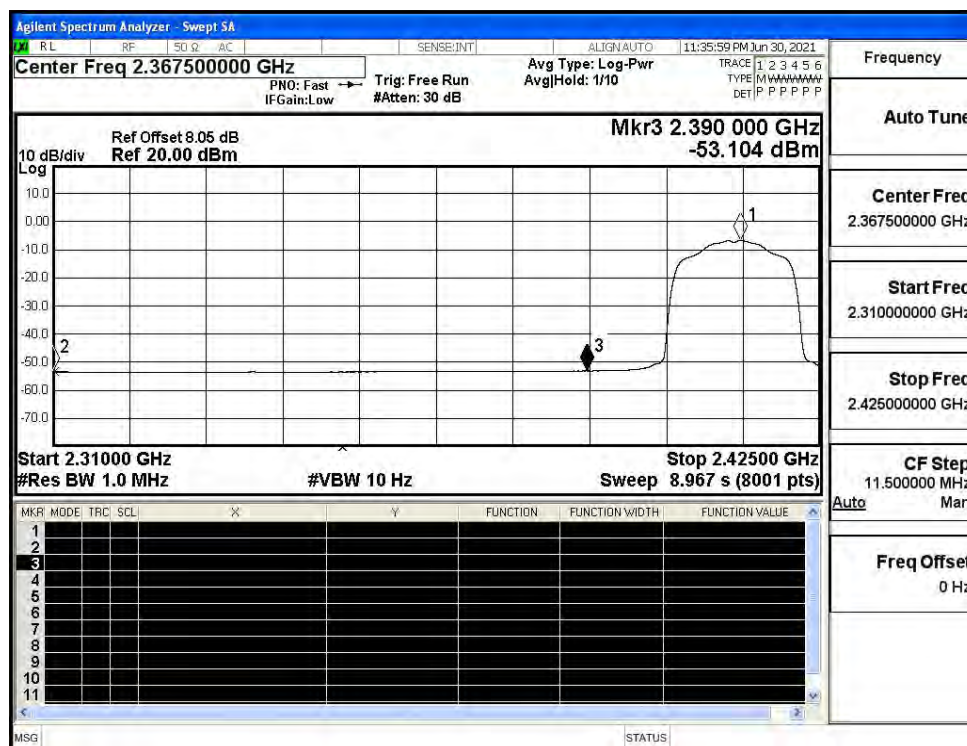




Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK

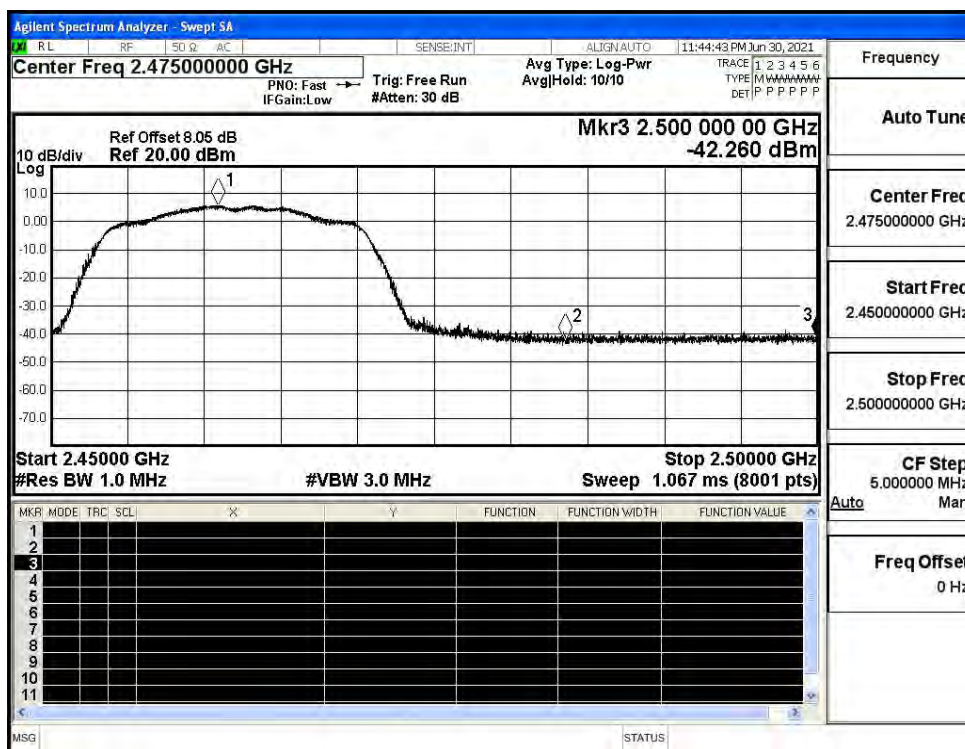


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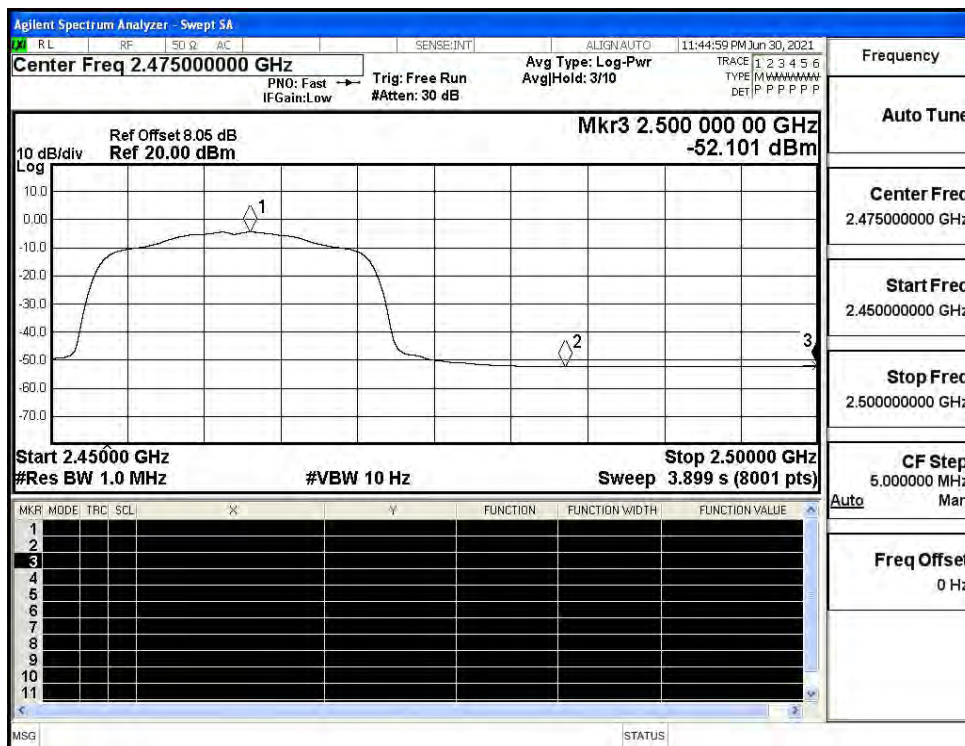




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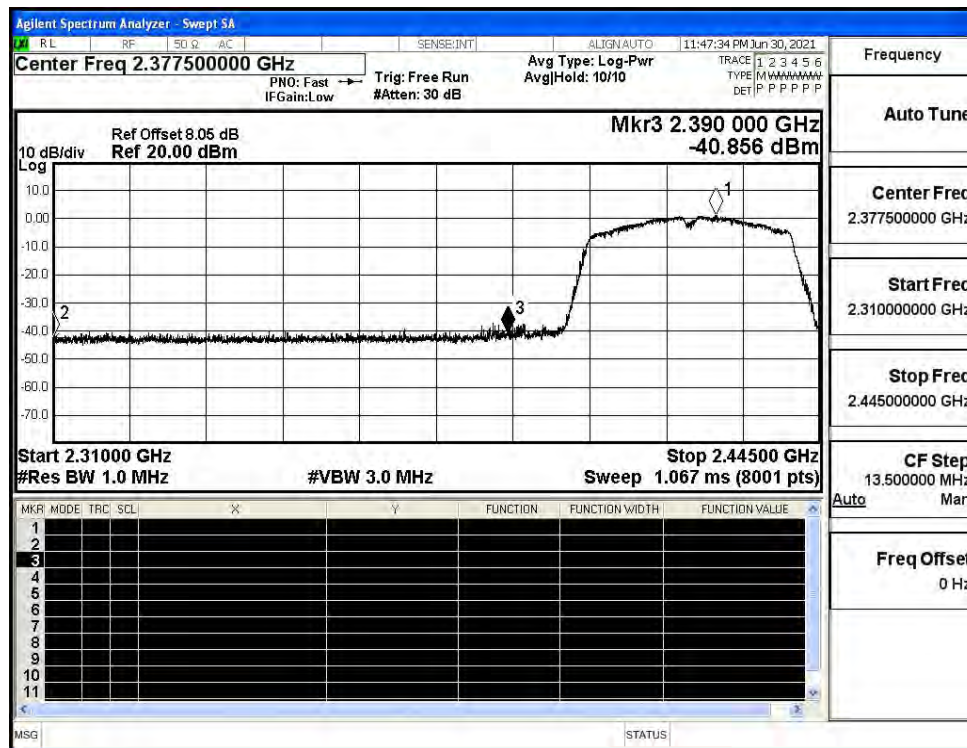


Restrict-band band-edge measurements_11N20SISO_2462_Ant1_AV

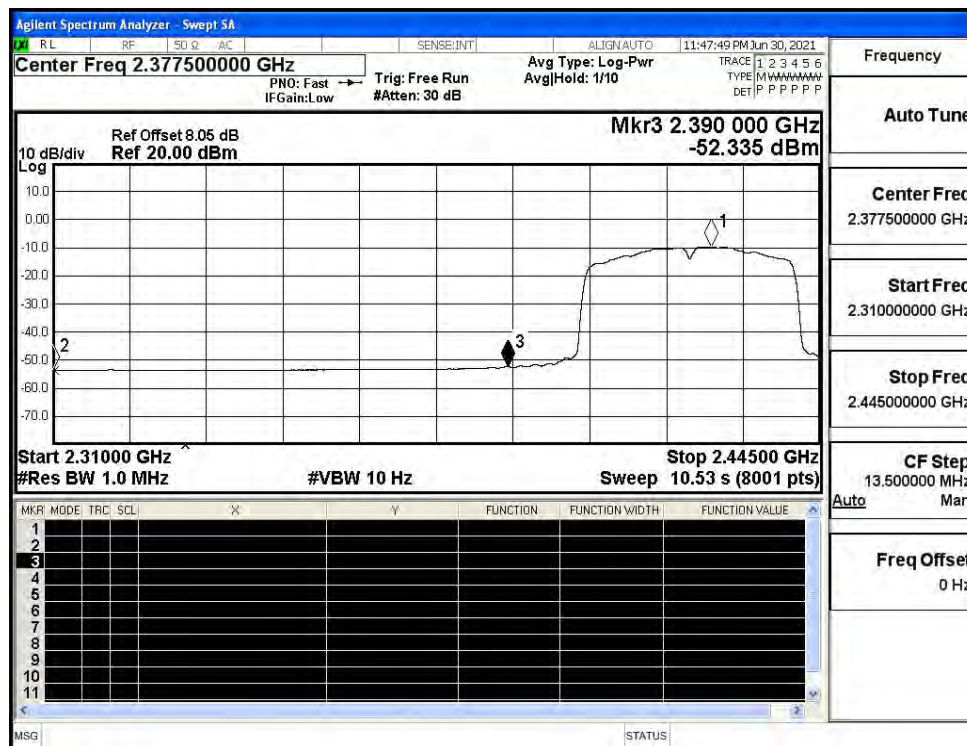




Restrict-band band-edge measurements_11N40SISO_2422_Ant1_PEAK

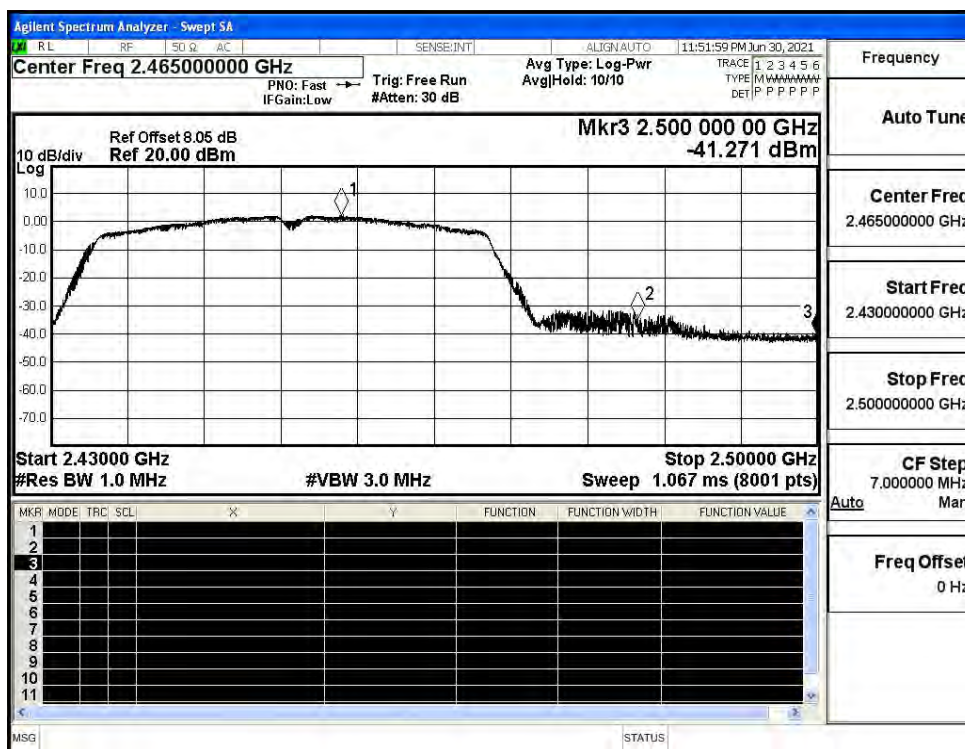


Restrict-band band-edge measurements_11N40SISO_2422_Ant1_AV





Restrict-band band-edge measurements_11N40SISO_2452_Ant1_PEAK



Restrict-band band-edge measurements_11N40SISO_2452_Ant1_AV

