

Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Sensor
Trade Mark: Feit Electric
Test Model: MOT/PIR/WIFI/BAT

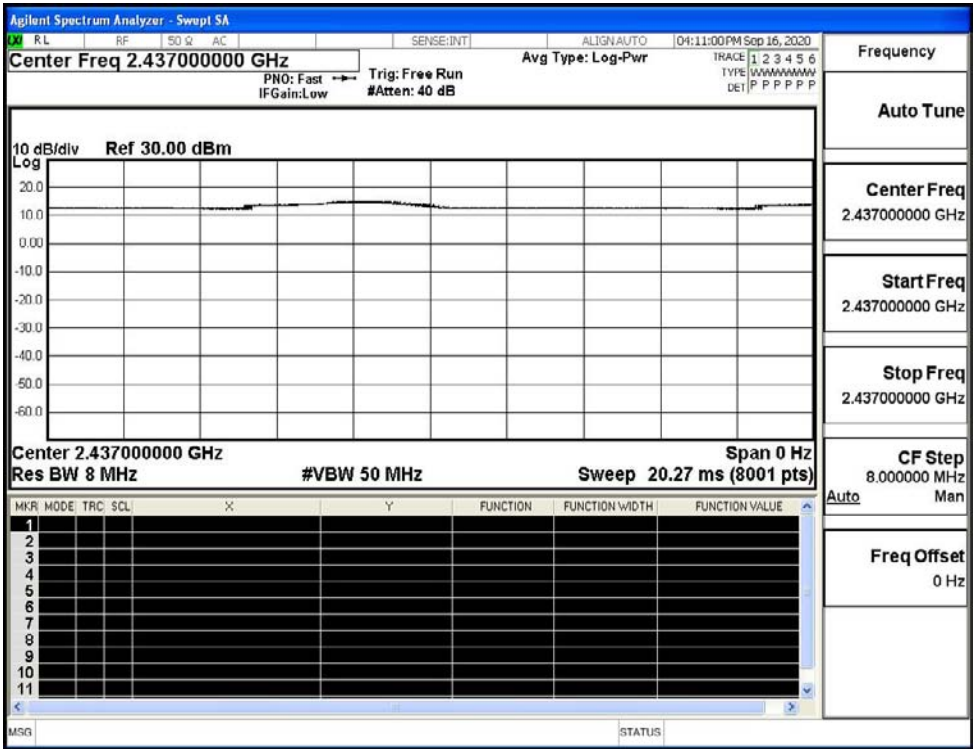
Environmental Conditions

Temperature:	23.5C
Relative Humidity:	54.6
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

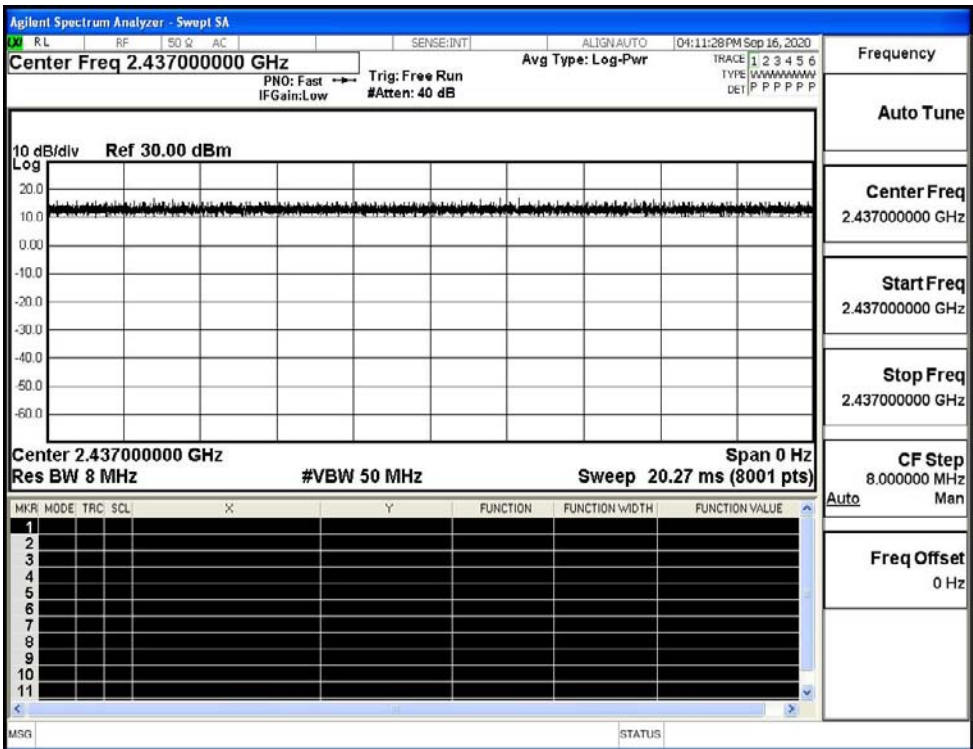
A1 Duty Cycle

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

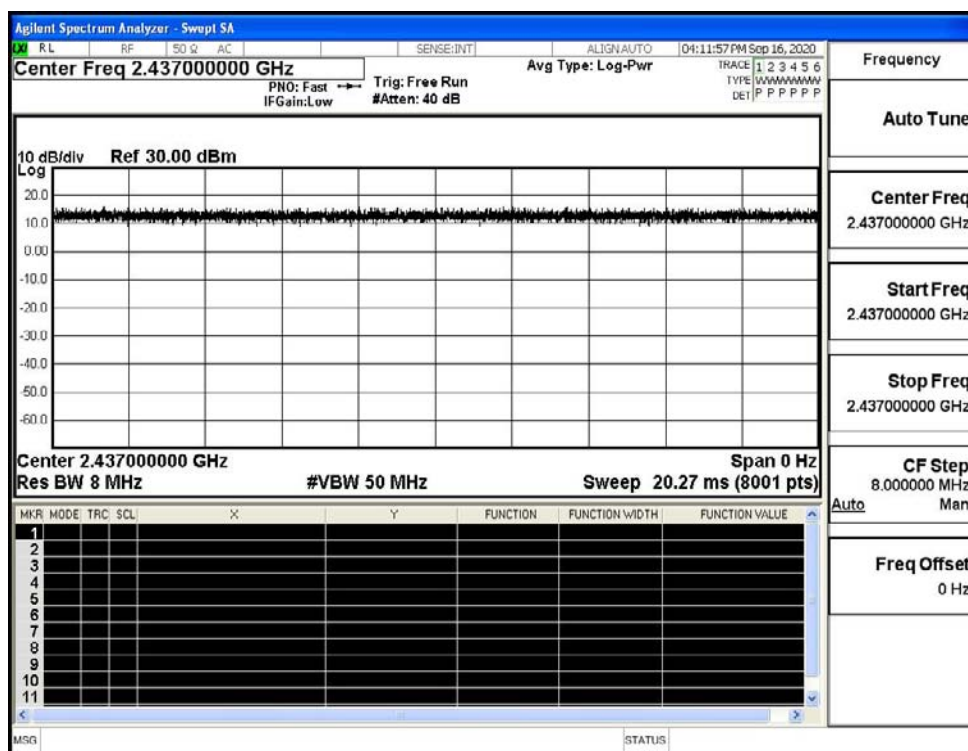
Duty Cycle_11B_2437_Ant1



Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



A2 Maximum Conducted Output Power

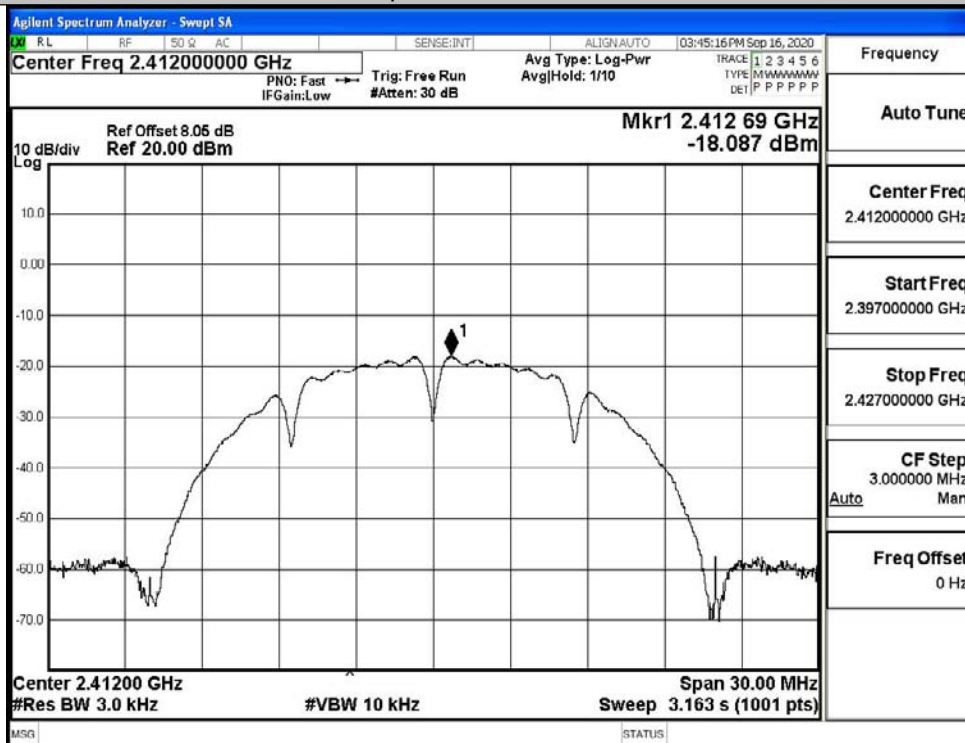
Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	16.78	30	PASS
	MCH	16.59	30	PASS
	HCH	16.43	30	PASS
11G	LCH	14.98	30	PASS
	MCH	14.66	30	PASS
	HCH	14.14	30	PASS
11N20SISO	LCH	12.72	30	PASS
	MCH	12.46	30	PASS
	HCH	12.31	30	PASS

A.3 Maximum Power Spectral Density

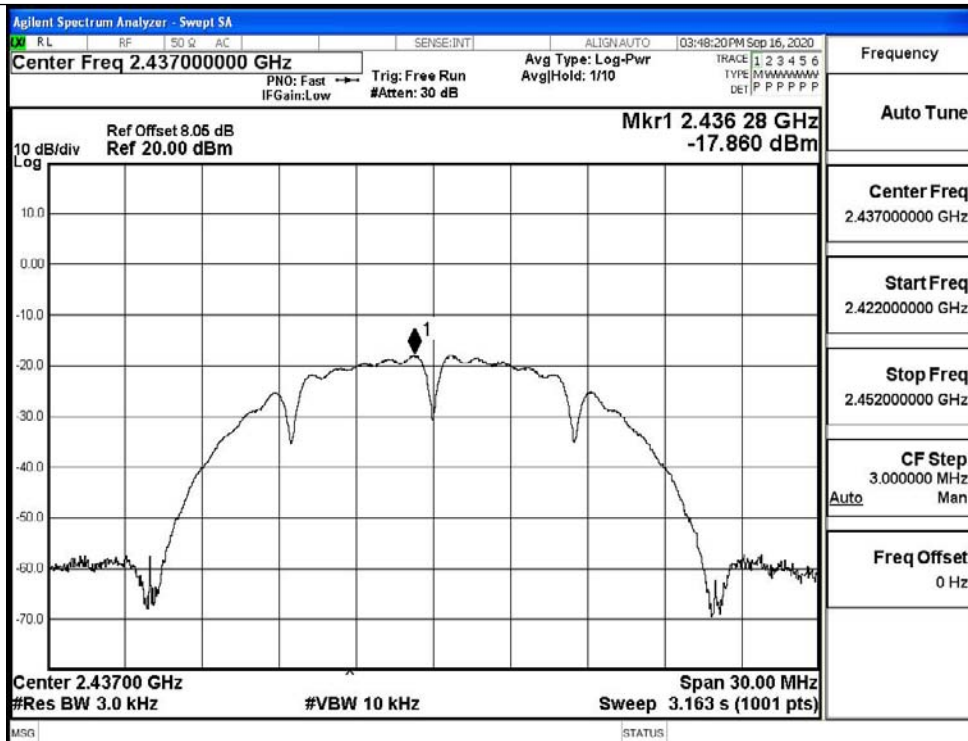
Mode	Channel	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-18.087	8	PASS
	MCH	-17.860	8	PASS
	HCH	-17.898	8	PASS
11G	LCH	-20.949	8	PASS
	MCH	-21.515	8	PASS
	HCH	-20.822	8	PASS
11N20SISO	LCH	-21.060	8	PASS
	MCH	-21.220	8	PASS
	HCH	-21.185	8	PASS

Test Graphs

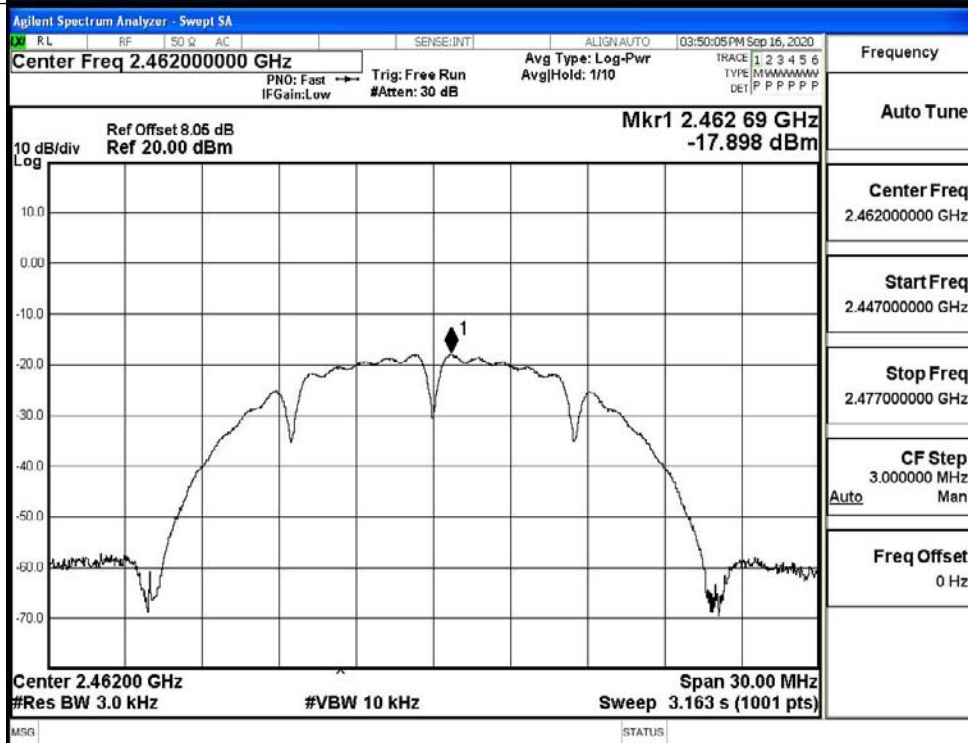
11B/LCH



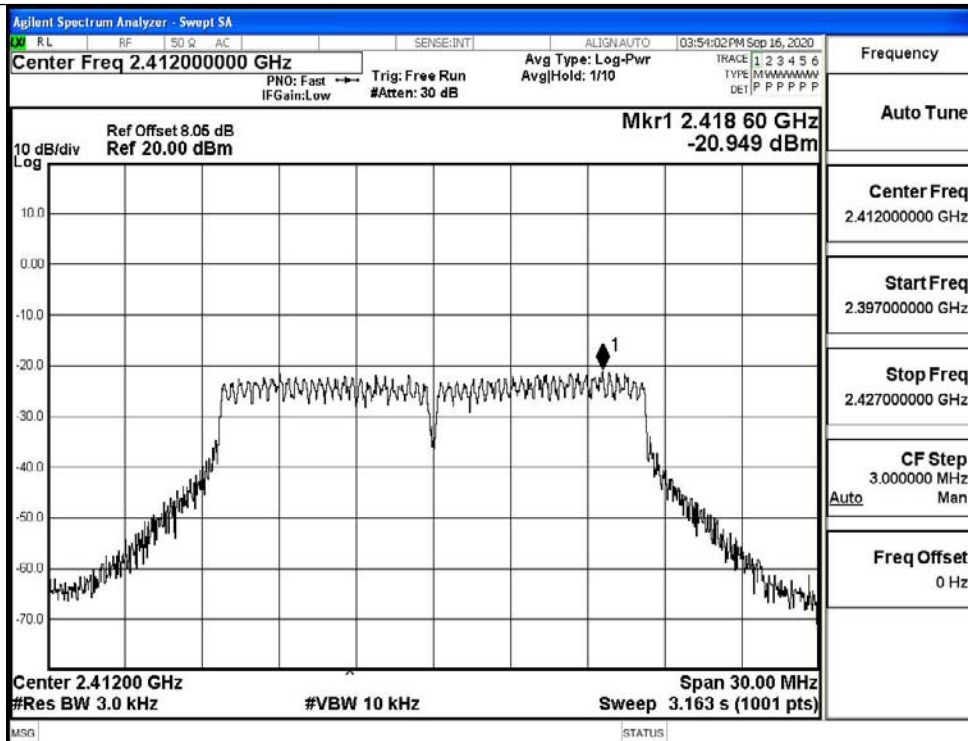
11B/MCH



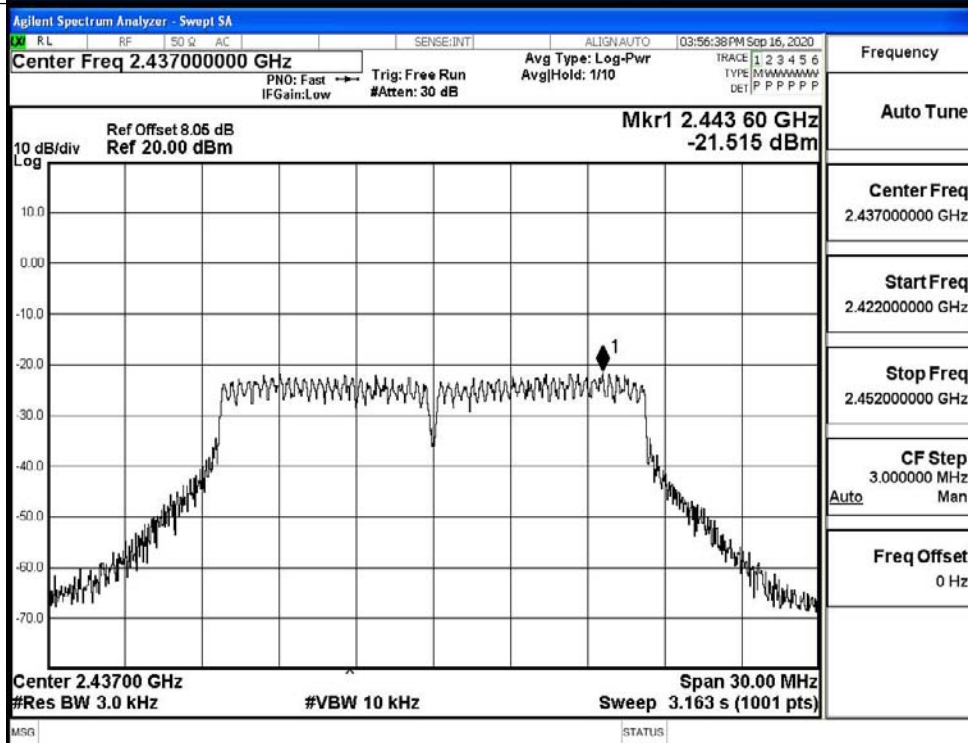
11B/HCH



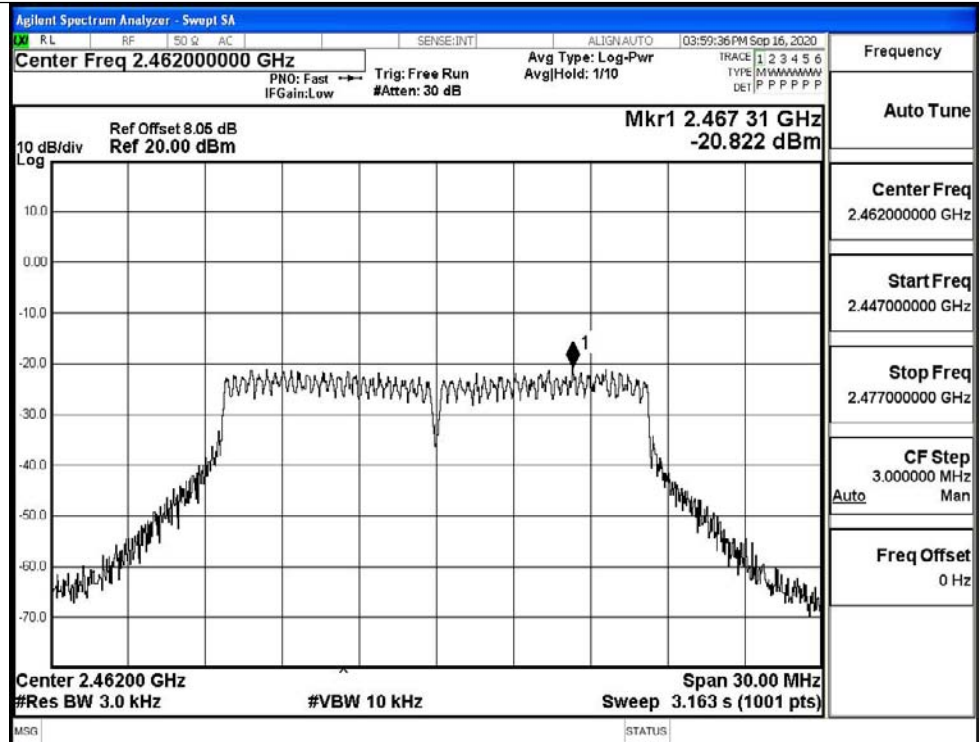
11G/LCH



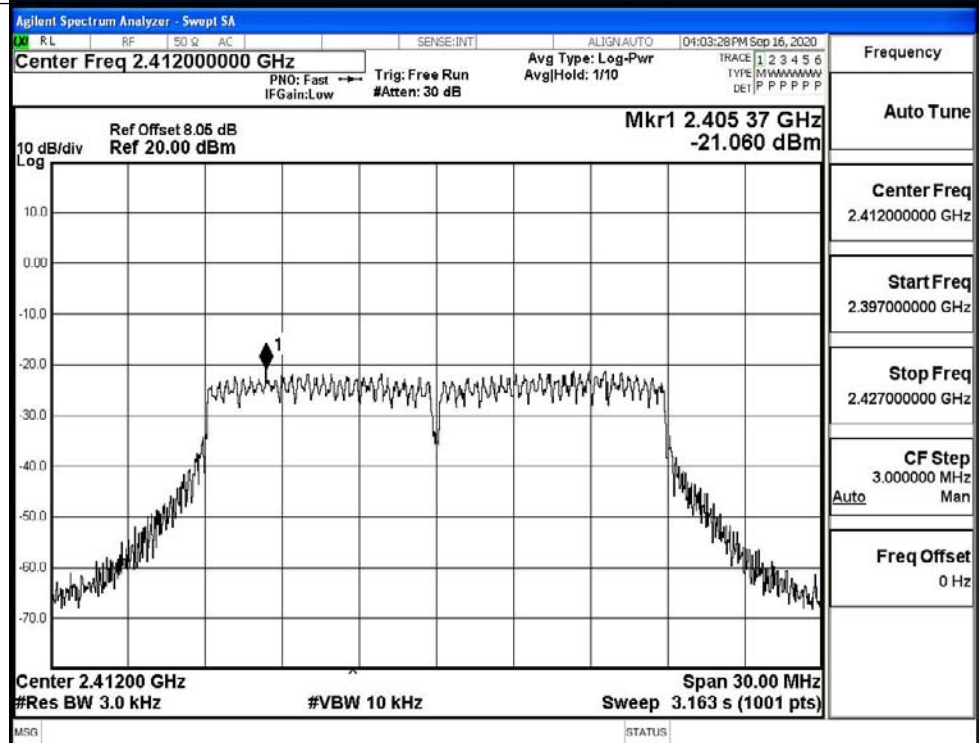
11G/MCH

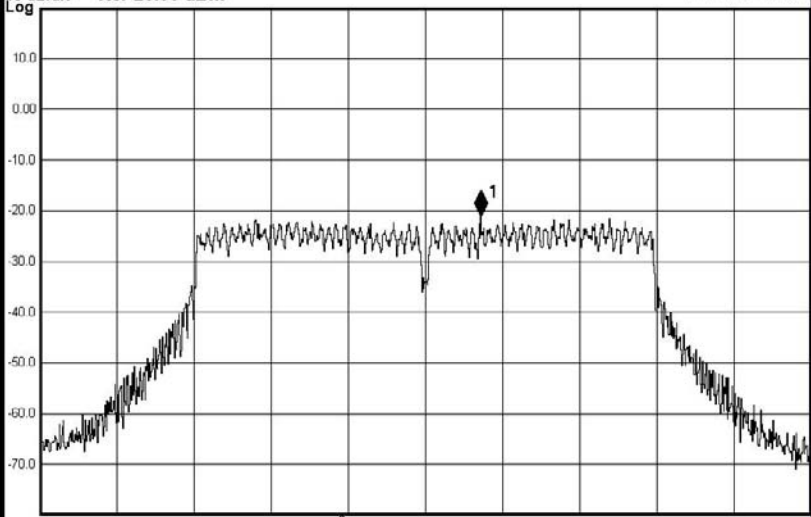
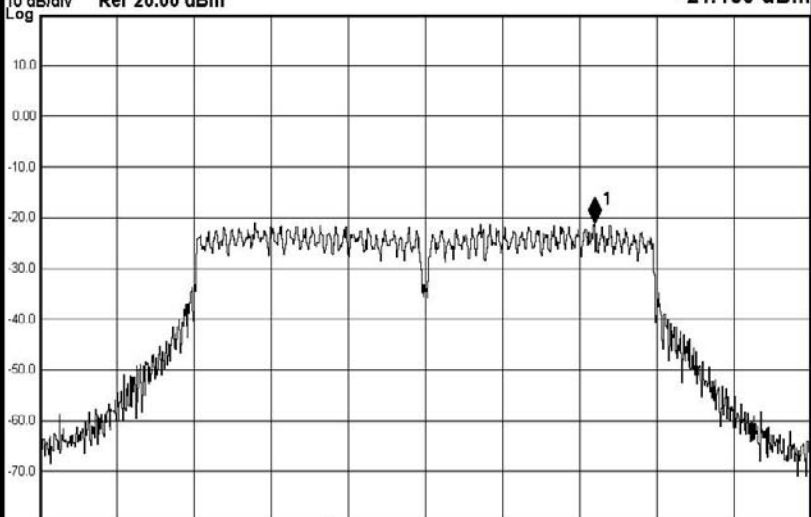


11G/HCH



11N20SISO/LCH

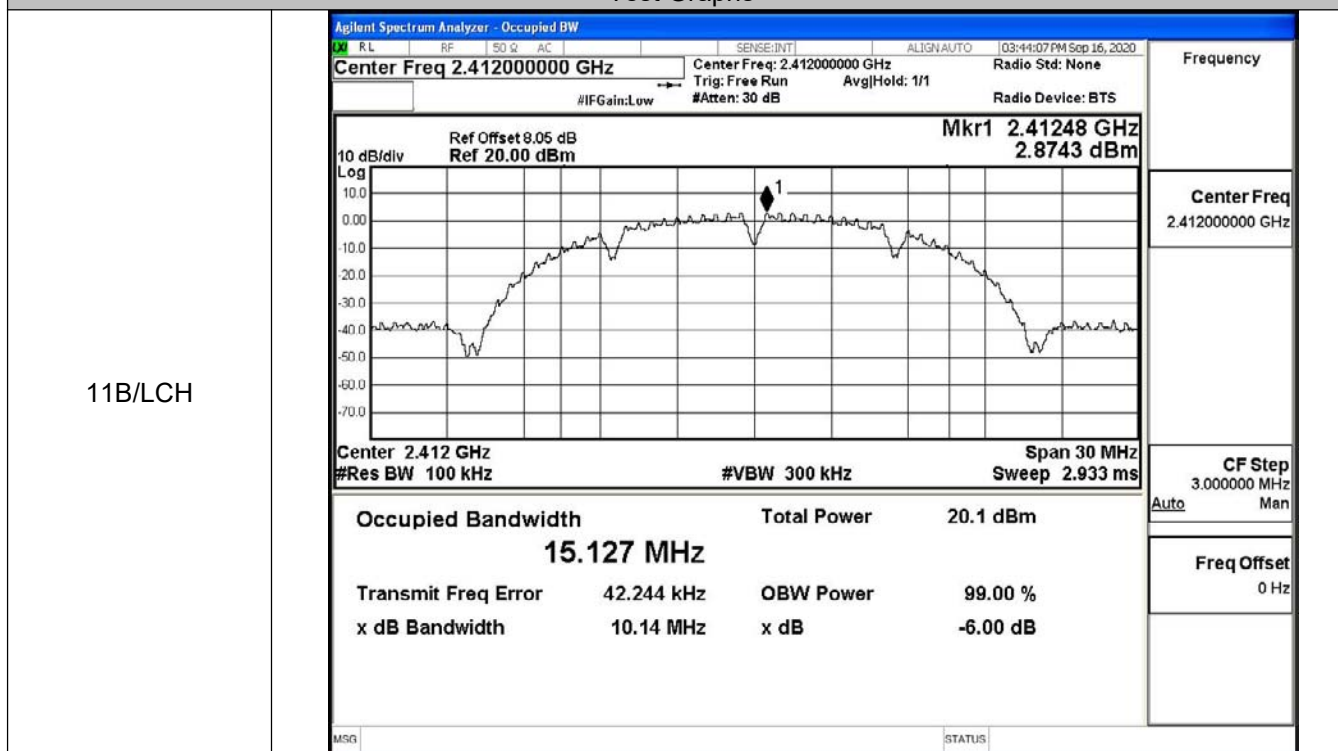


11N20SISO/MCH	Agilent Spectrum Analyzer - Swept SA RL RF SO Q AC SENSE:INT ALIGN: AUTO 04:06:30 PM Sep 16, 2020 Center Freq 2.437000000 GHz PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr AvgHold: 1/10 Ref Offset 8.06 dB Ref 20.00 dBm 10 dB/div Log Mkr1 2.439 16 GHz -21.220 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts) MSG STATUS  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 RL RF SO Q AC SENSE:INT ALIGN: AUTO 04:08:24 PM Sep 16, 2020 Center Freq 2.462000000 GHz PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr AvgHold: 1/10 Ref Offset 8.06 dB Ref 20.00 dBm 10 dB/div Log Mkr1 2.468 60 GHz -21.185 dBm Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts) MSG STATUS  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

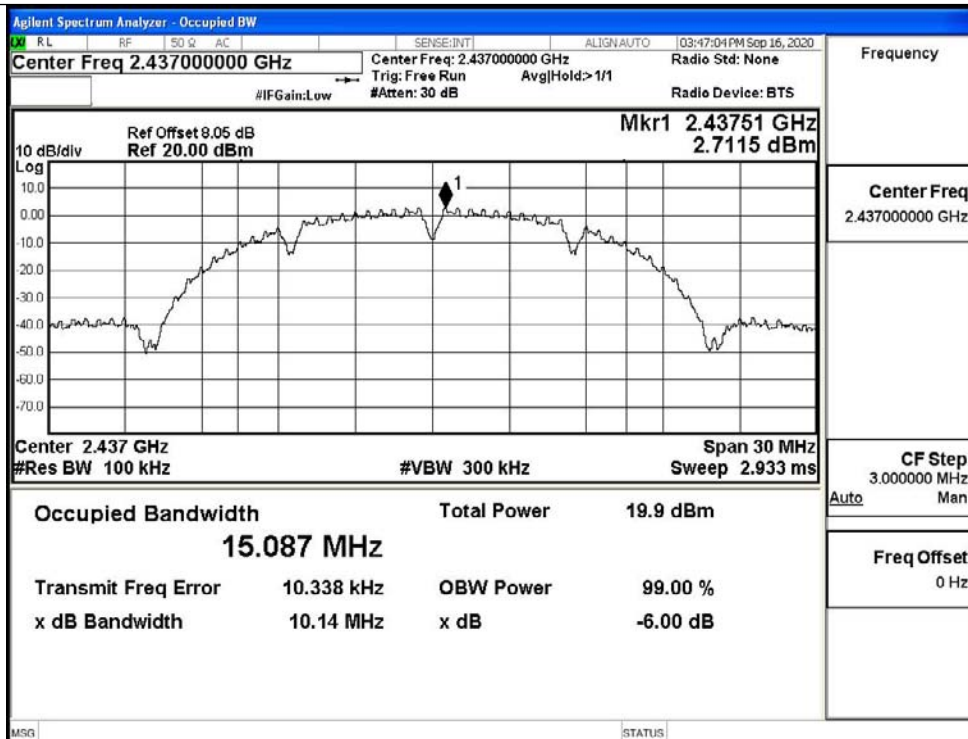
A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	10.14	≥ 0.5	PASS
	MCH	10.14	≥ 0.5	PASS
	HCH	10.14	≥ 0.5	PASS
11G	LCH	16.54	≥ 0.5	PASS
	MCH	16.56	≥ 0.5	PASS
	HCH	16.57	≥ 0.5	PASS
11N20SISO	LCH	17.75	≥ 0.5	PASS
	MCH	17.72	≥ 0.5	PASS
	HCH	17.77	≥ 0.5	PASS

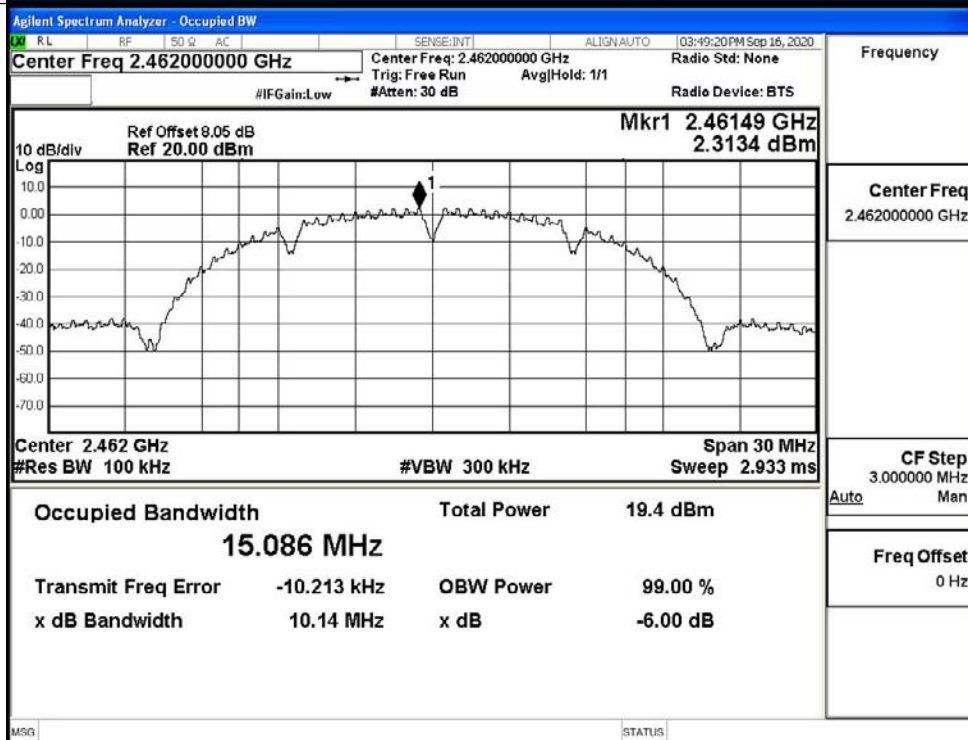
Test Graphs



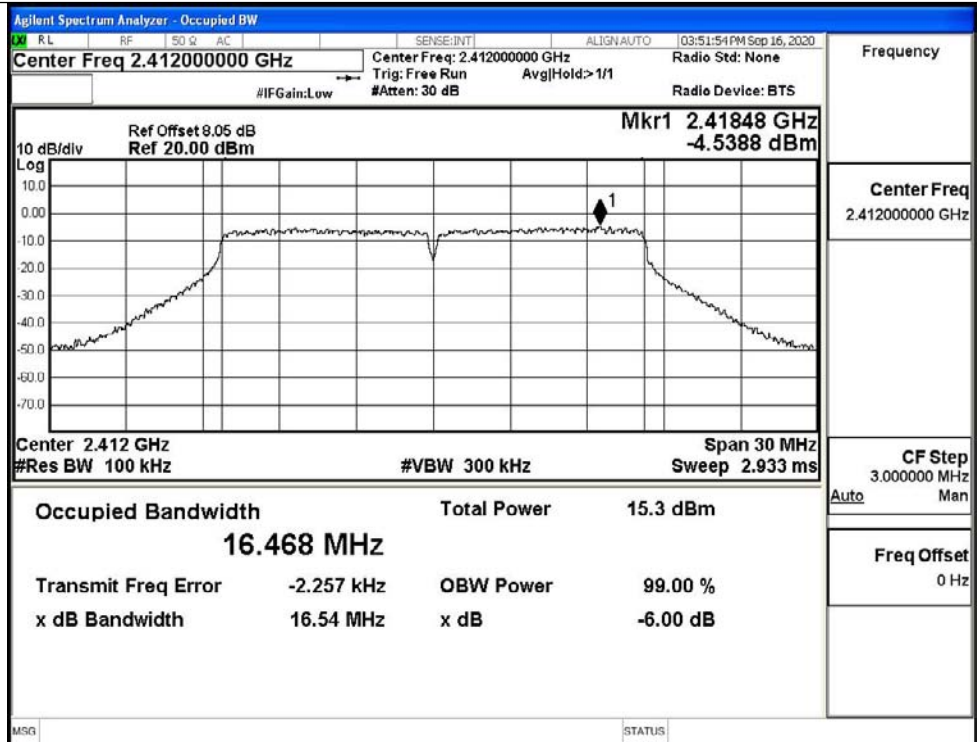
11B/MCH



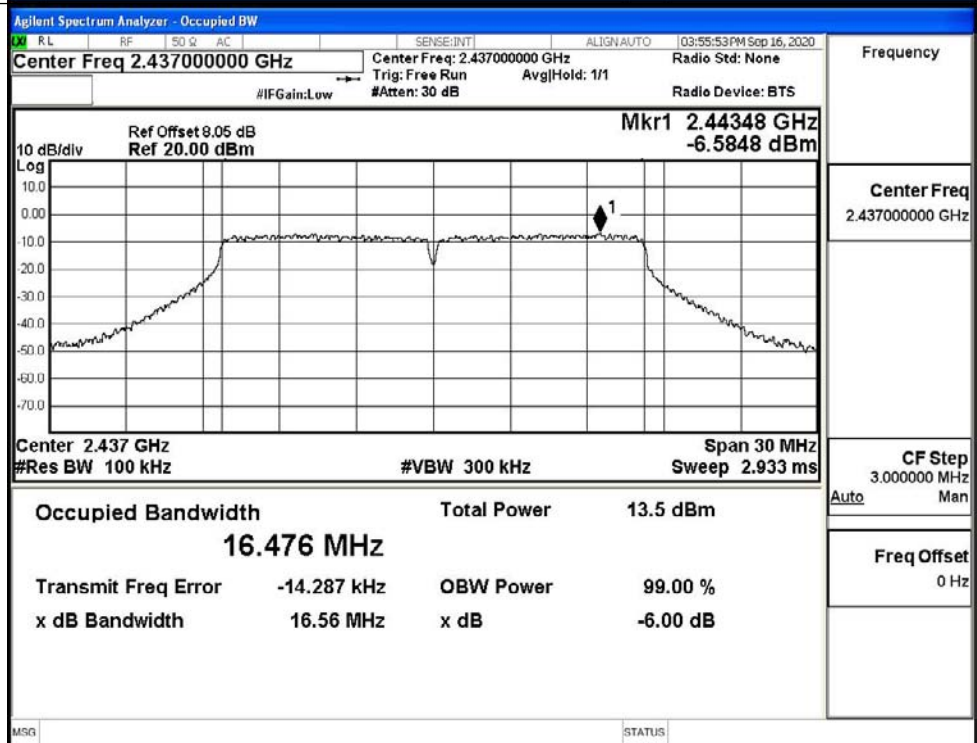
11B/HCH



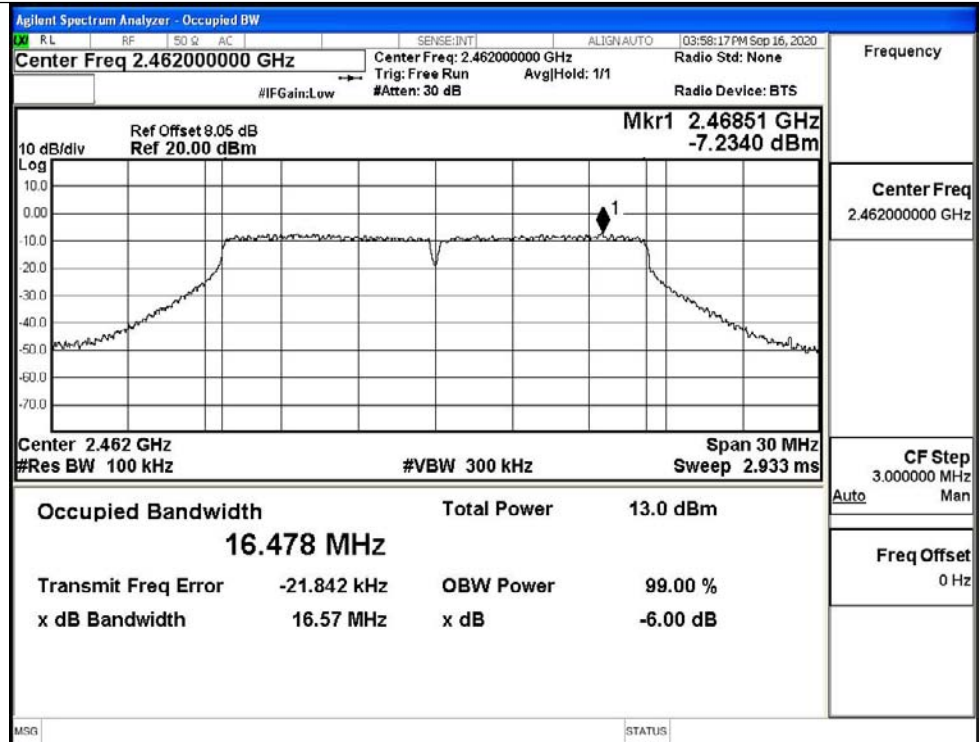
11G/LCH



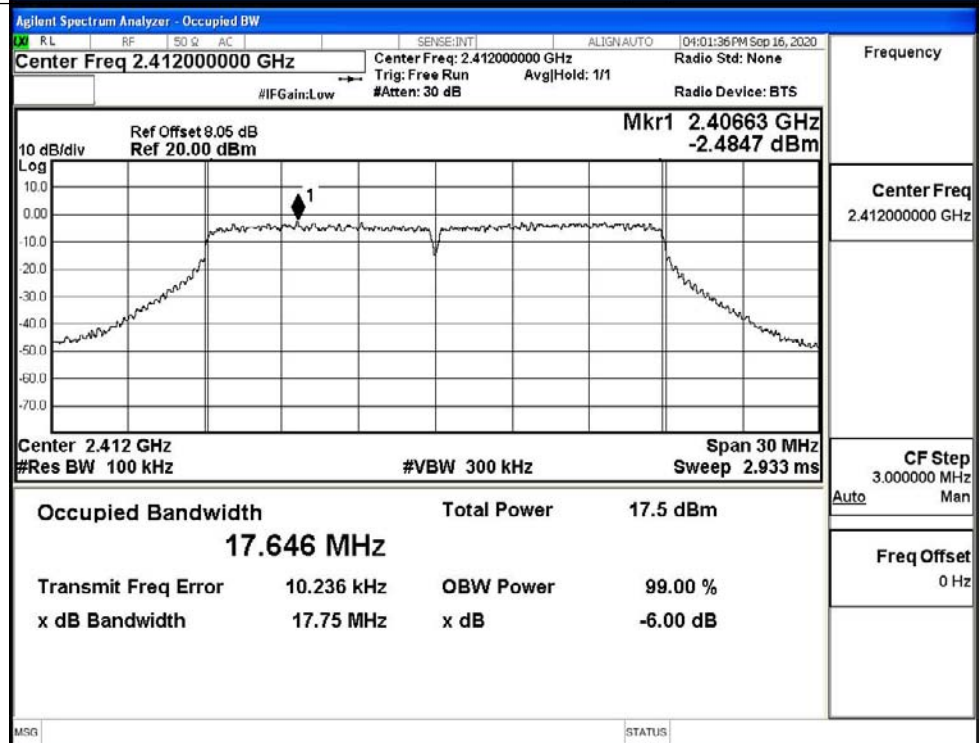
11G/MCH



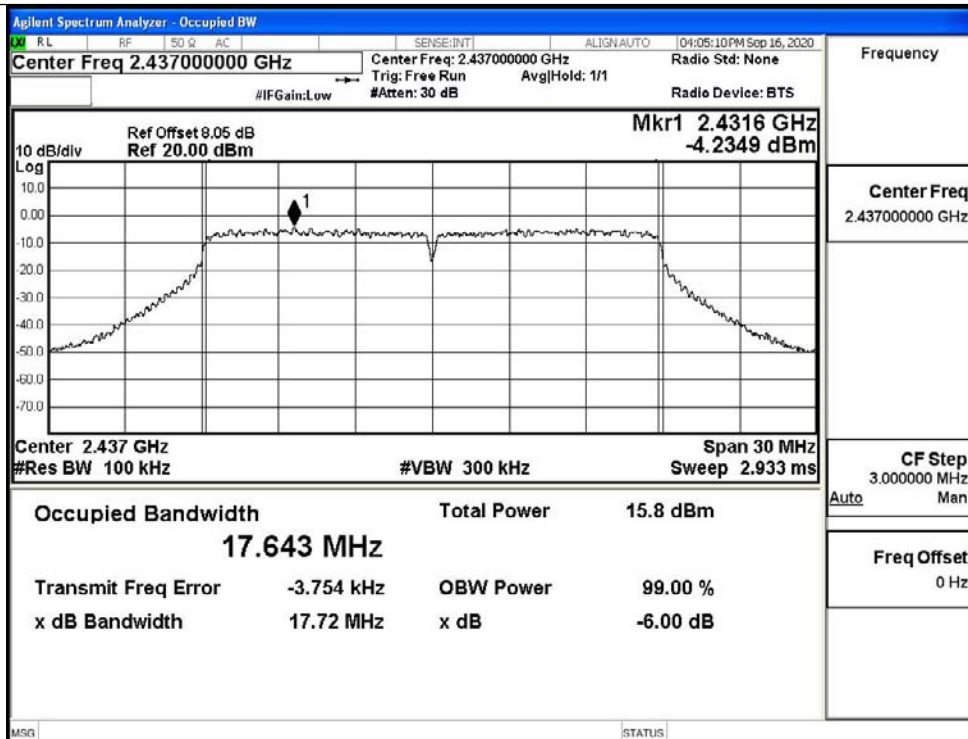
11G/HCH



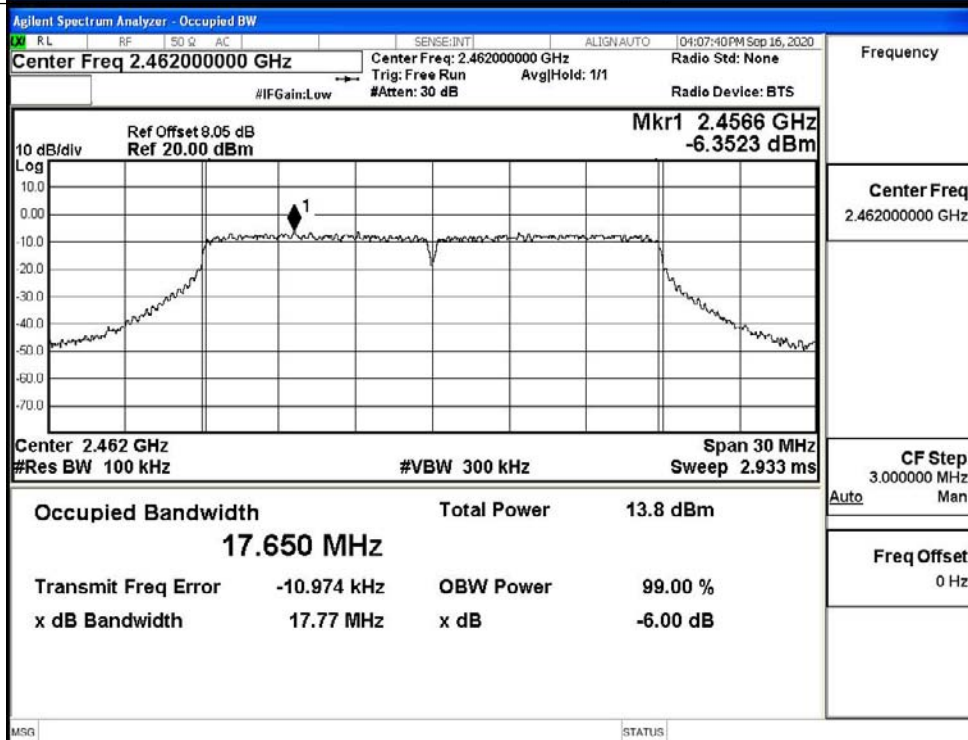
11N20SISO/LCH



11N20SISO/MCH



11N20SISO/HCH

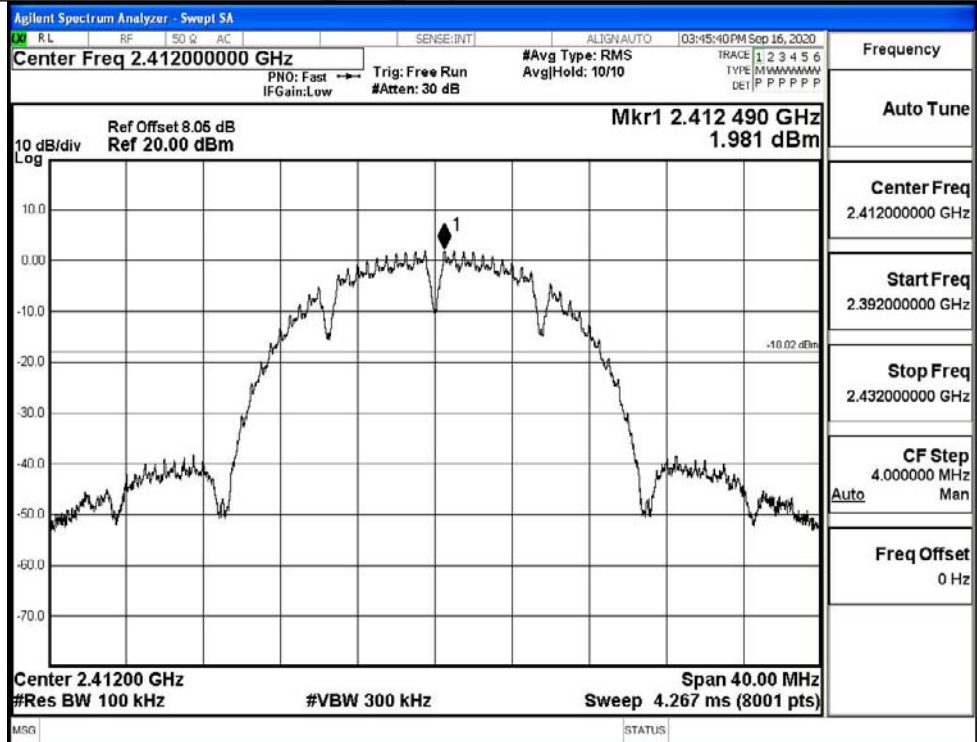


A.5 RF Conducted Spurious Emissions

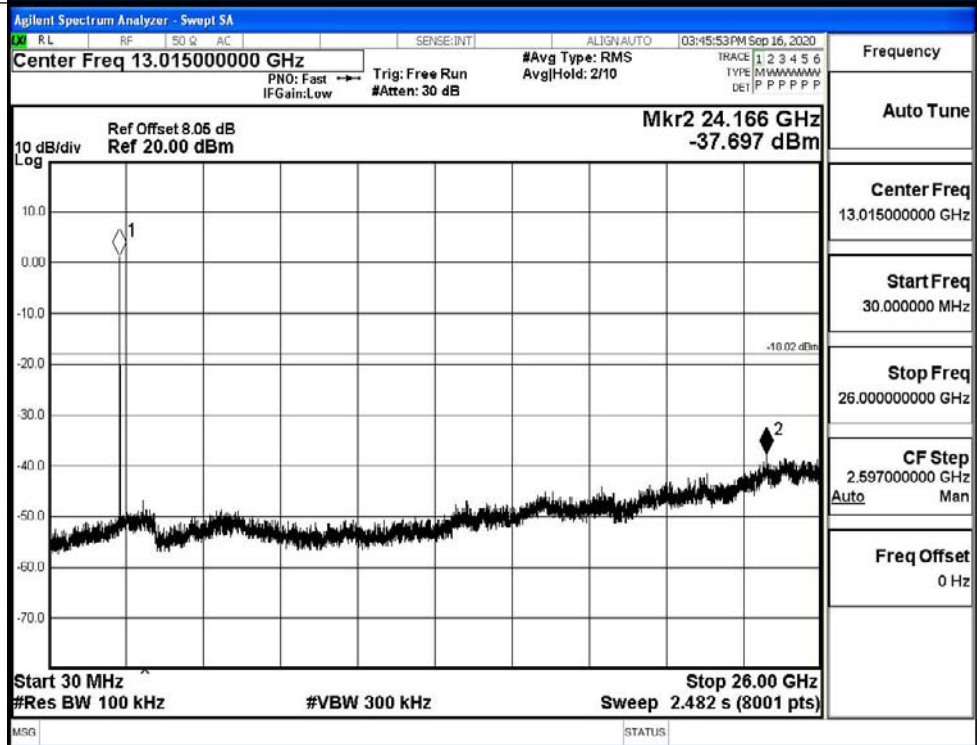
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	1.981	-37.697	-18.019	PASS
	MCH	2.142	-37.563	-17.858	PASS
	HCH	2.123	-37.642	-17.877	PASS
11G	LCH	-6.295	-38.571	-26.295	PASS
	MCH	-6.775	-38.002	-26.775	PASS
	HCH	-6.429	-37.930	-26.429	PASS
11N20 SISO	LCH	-6.902	-38.609	-26.902	PASS
	MCH	-6.76	-37.594	-26.760	PASS
	HCH	-6.545	-38.364	-26.545	PASS

11B LCH Graphs

Pref/11B/LCH

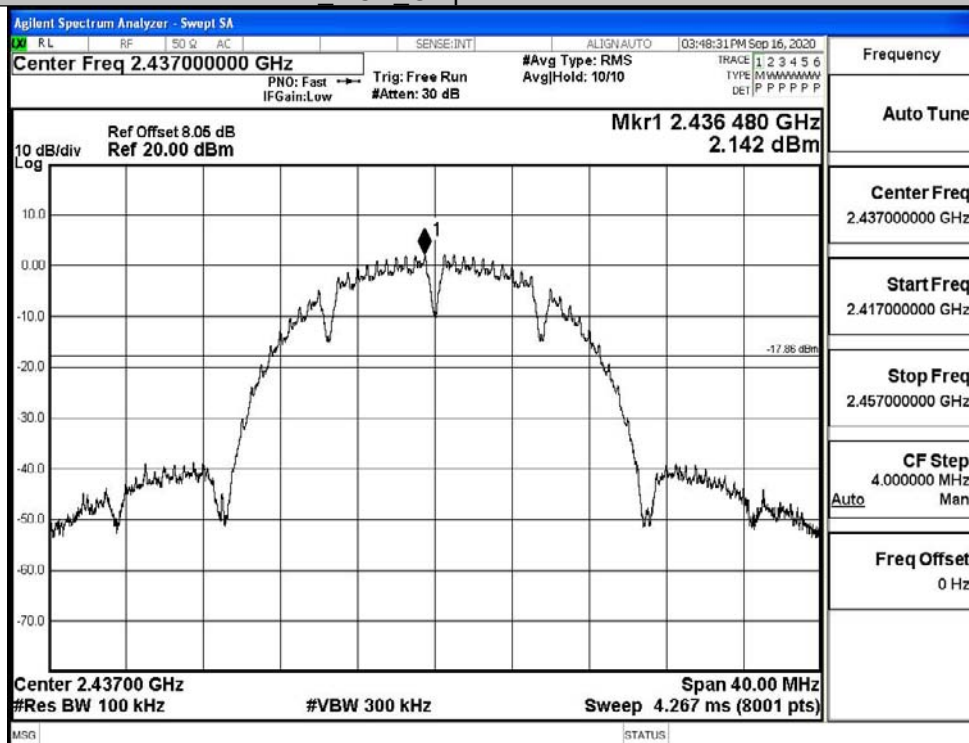


Puw/11B/LCH

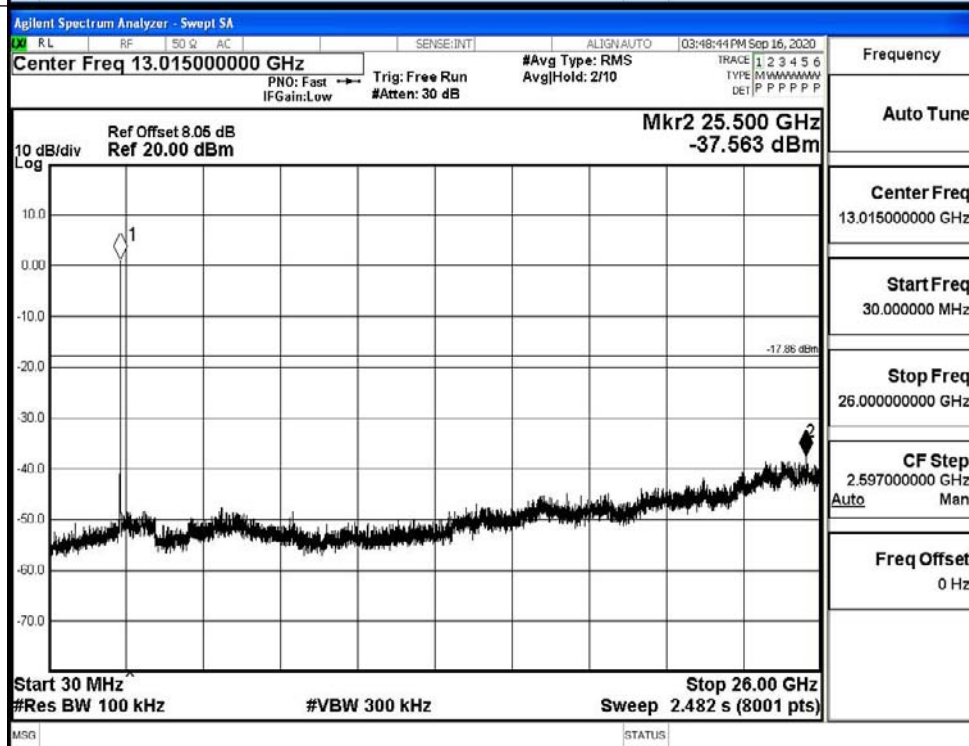


11B MCH Graphs

Pref/11B/MCH

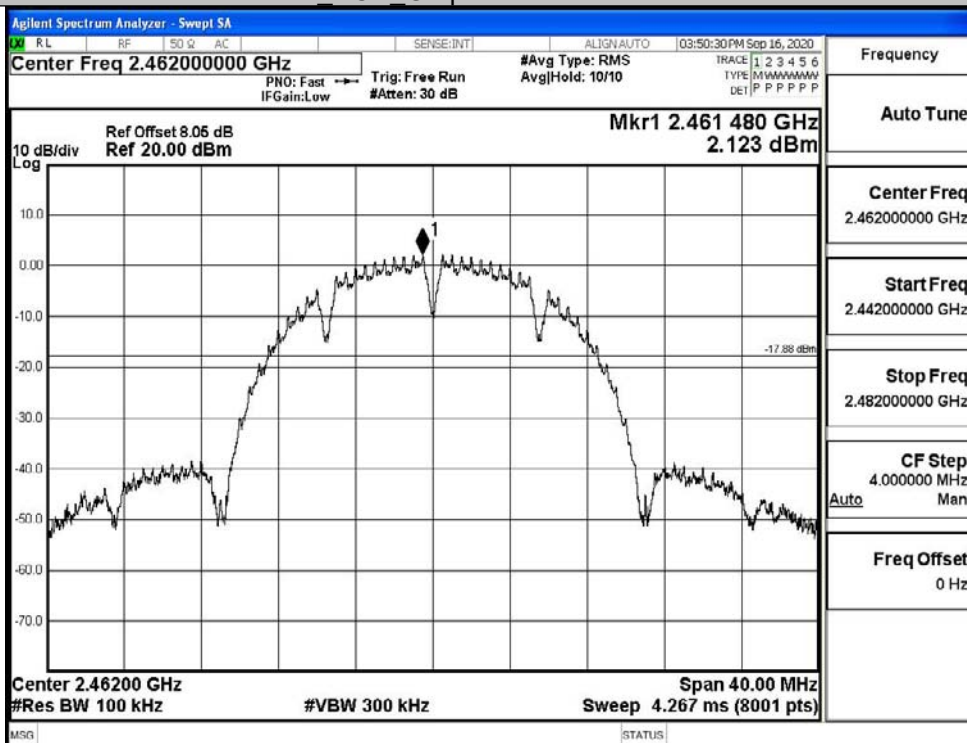


Puw/11B/MCH

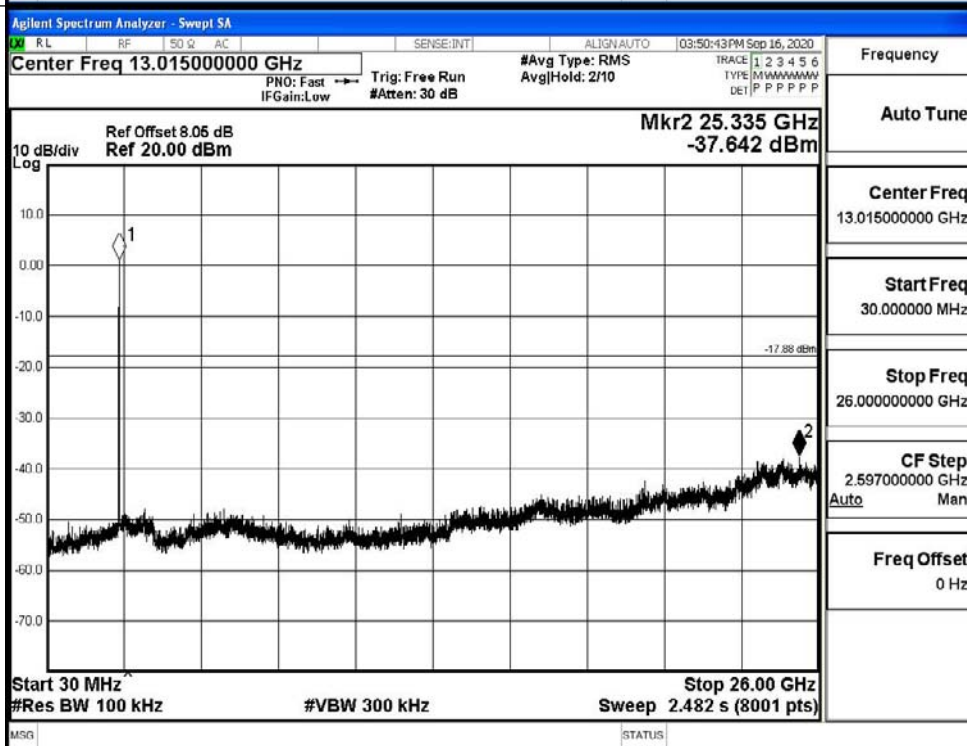


11B HCH Graphs

Pref/11B/HCH

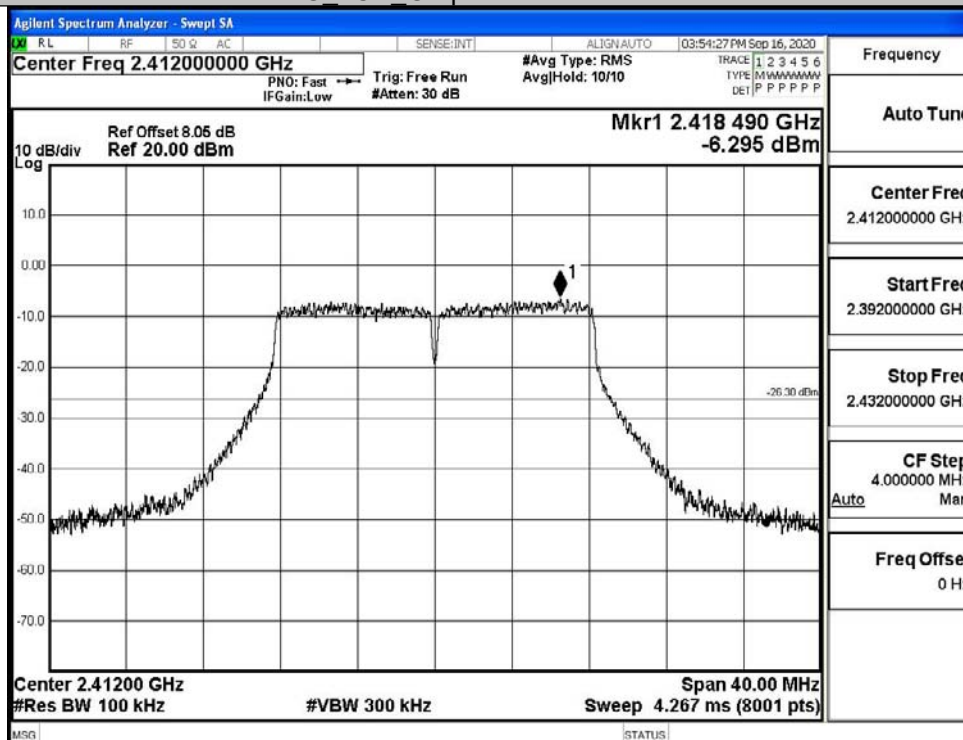


Puw/11B/HCH

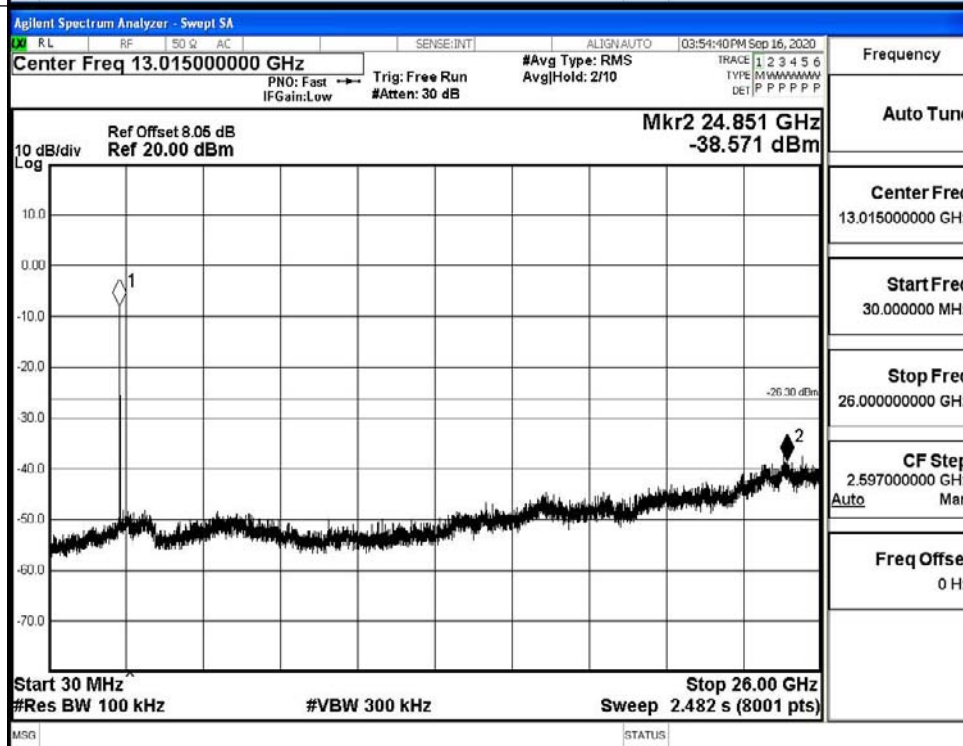


11G LCH Graphs

Pref/11G/LCH

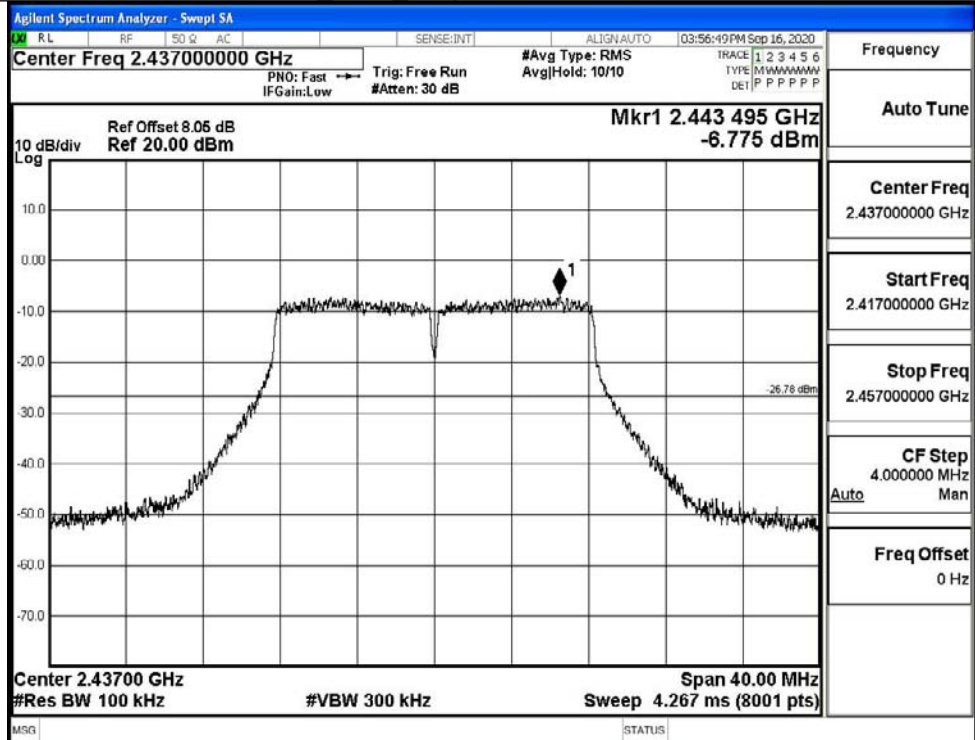


Puw/11G/LCH

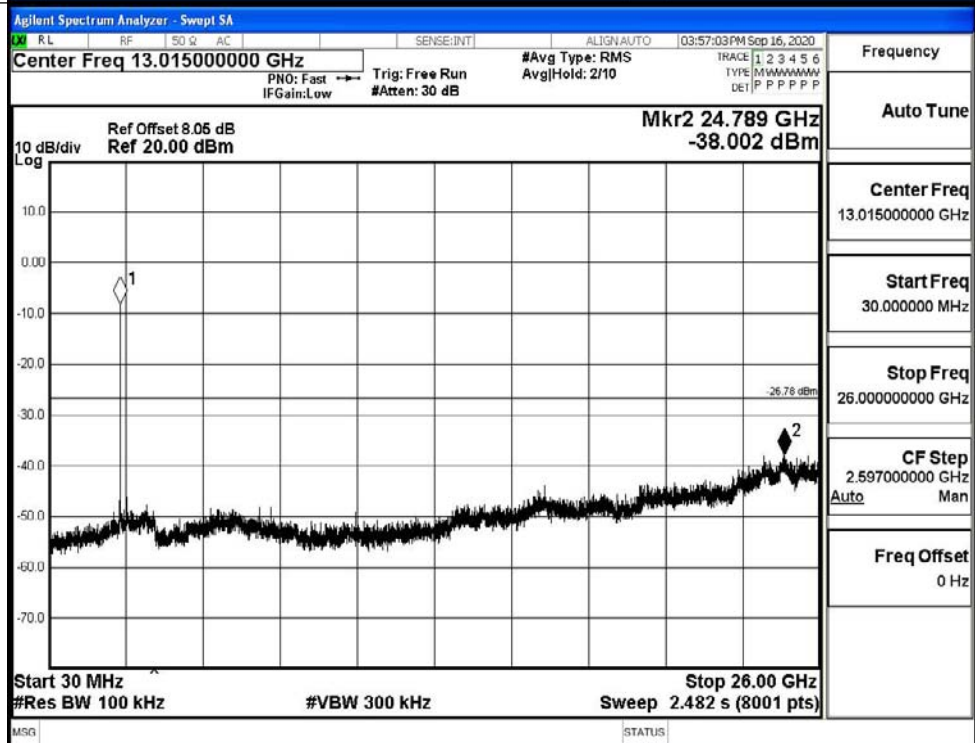


11G MCH Graphs

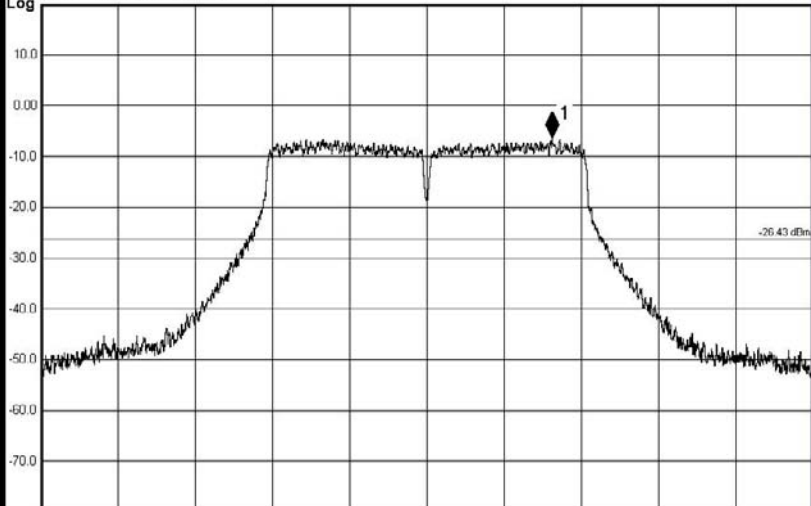
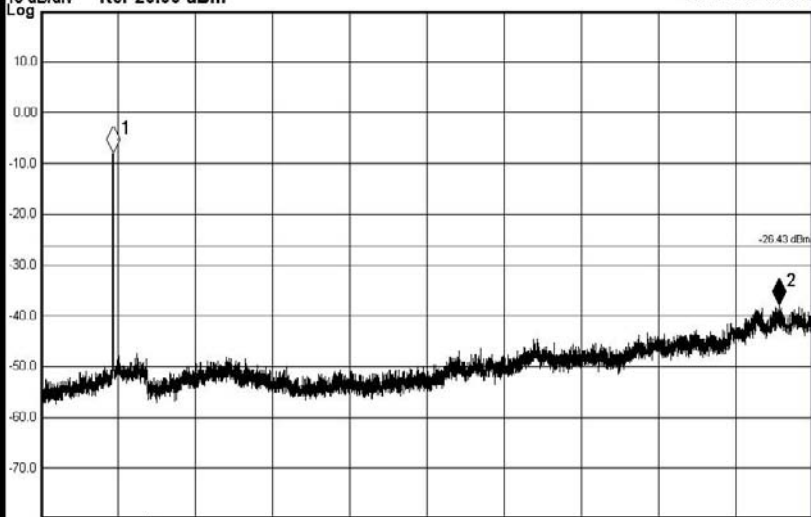
Pref/11G/MCH



Puw/11G/MCH

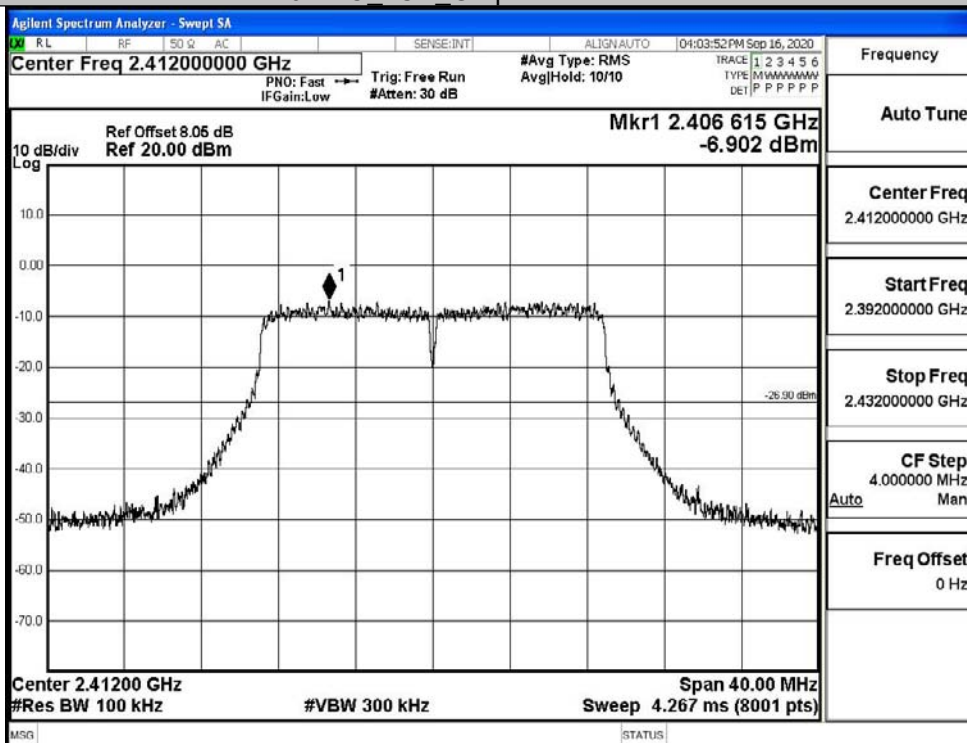


11G HCH Graphs

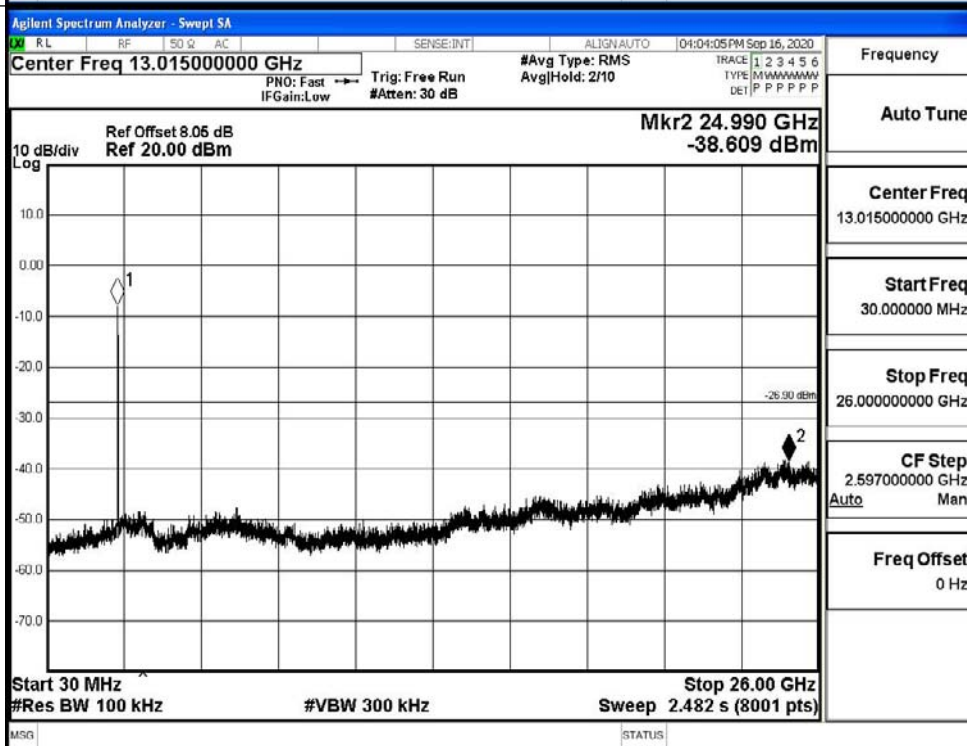
Pref/11G/HCH	Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE:INT ALIGN:AUTO 04:00:00 PM Sep 16, 2020 Center Freq 2.46200000 GHz PN0: Fast IFGain:Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS AvgHold: 10/10 TRACE 1 2 3 4 5 6 TYPE M W W W W W W W DET P P P P P P Ref Offset 8.06 dB Ref 20.00 dBm Mkr1 2.468 490 GHz -6.429 dBm 10 dB/div Log  Center 2.46200 GHz #Res BW 100 kHz #VBW 300 kHz Span 40.00 MHz Sweep 4.267 ms (8001 pts) MSG STATUS Frequency Auto Tune Center Freq 2.462000000 GHz Start Freq 2.442000000 GHz Stop Freq 2.482000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz
Puw/11G/HCH	Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE:INT ALIGN:AUTO 04:00:13 PM Sep 16, 2020 Center Freq 13.015000000 GHz PN0: Fast IFGain:Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS AvgHold: 2/10 TRACE 1 2 3 4 5 6 TYPE M W W W W W W W DET P P P P P P Ref Offset 8.06 dB Ref 20.00 dBm Mkr2 24.874 GHz -37.930 dBm 10 dB/div Log  Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 26.00 GHz Sweep 2.482 s (8001 pts) MSG STATUS Frequency Auto Tune Center Freq 13.015000000 GHz Start Freq 30.000000 MHz Stop Freq 26.000000000 GHz CF Step 2.597000000 GHz Auto Man Freq Offset 0 Hz

11N20SISO LCH Graphs

Pref/11N20SIS
O/LCH

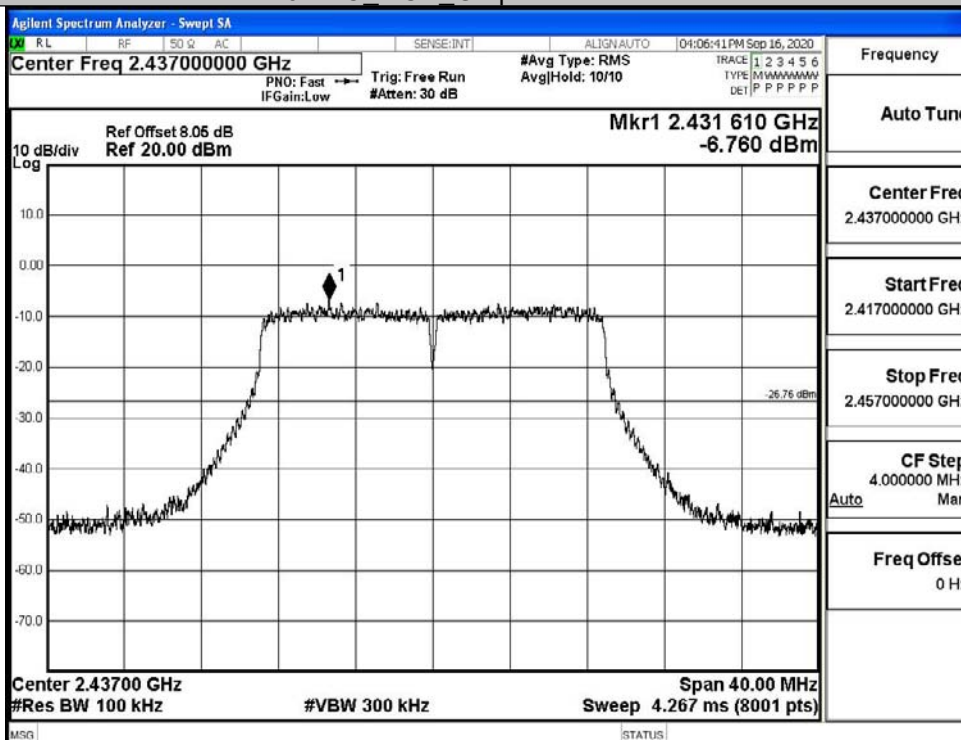


Puw/11N20
SISO/LCH

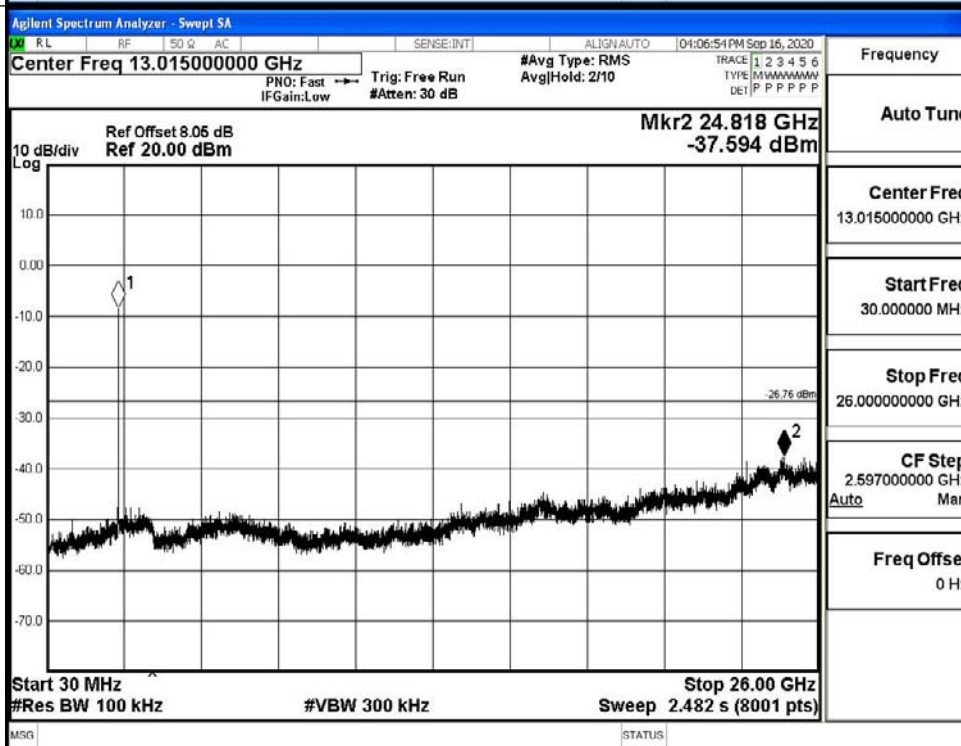


11N20SISO MCH Graphs

Pref/11N20
SISO/MCH

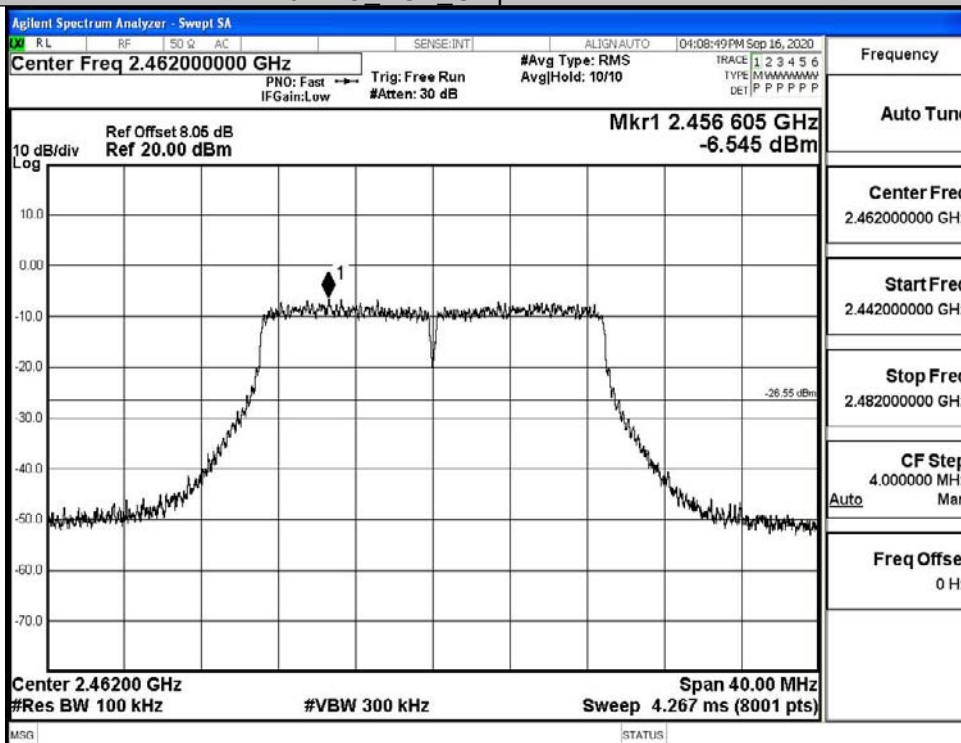


Puw/11N20
SISO/MCH

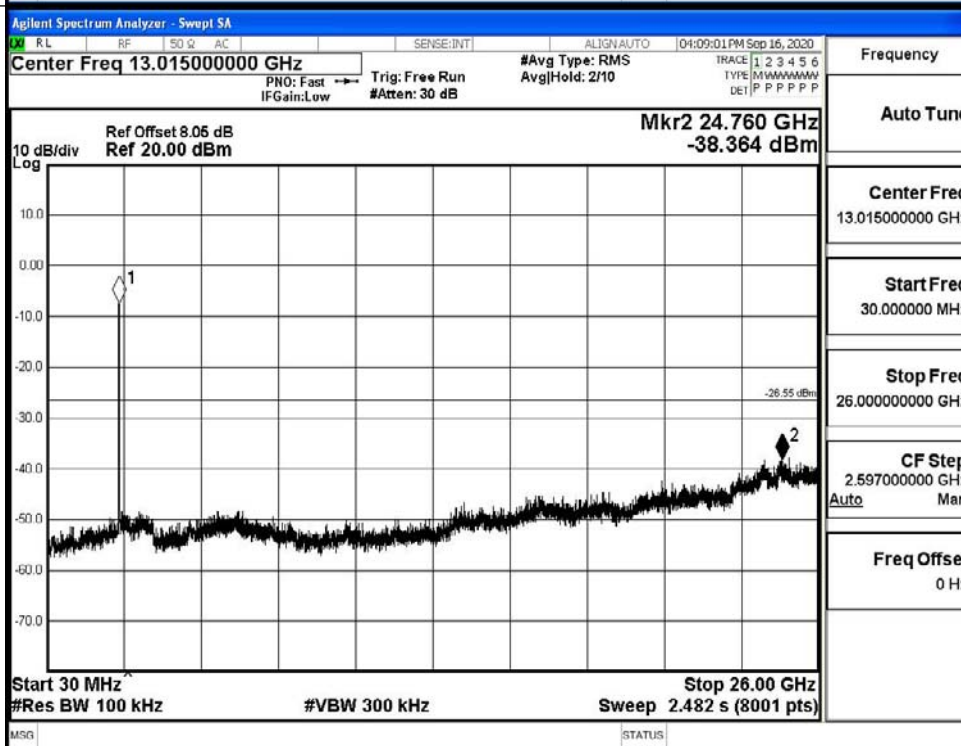


11N20SISO HCH Graphs

Pref/11N20
SISO/HCH



Puw/11N20
SISO/HCH

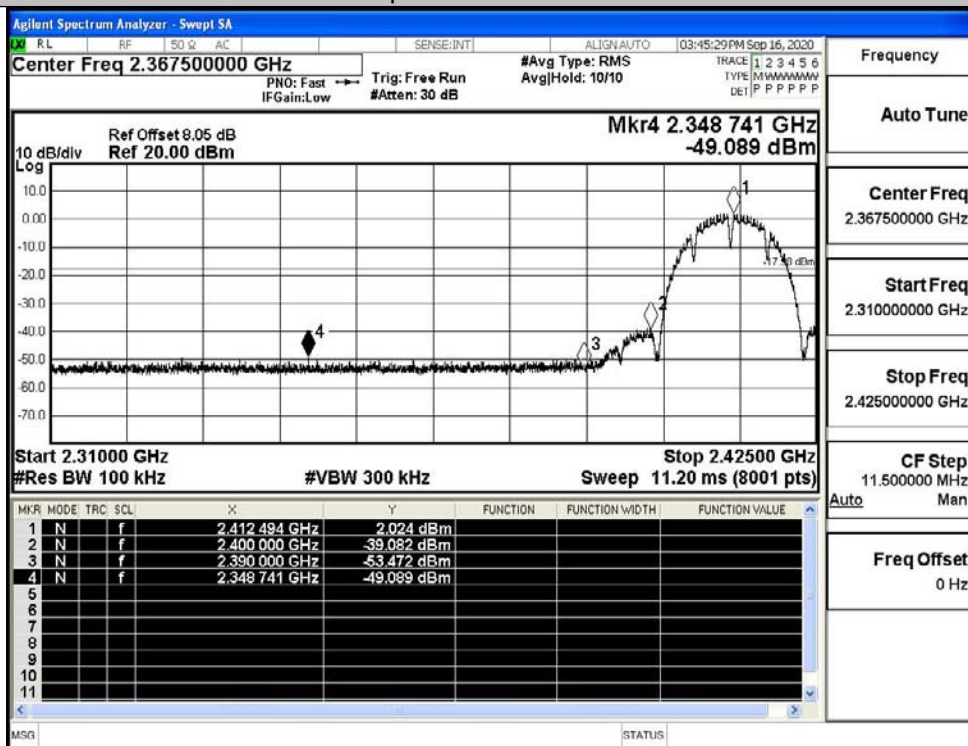


A.6 Band-edge for RF Conducted Emissions

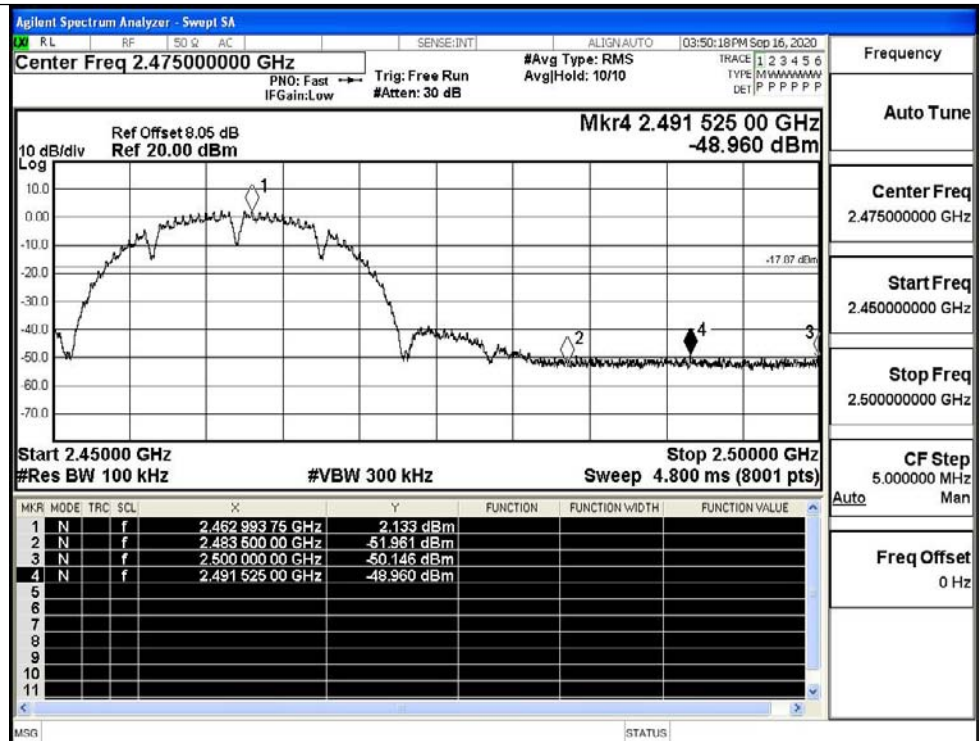
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	2.024	-49.089	-17.98	PASS
	HCH	2.133	-48.960	-17.87	PASS
11G	LCH	-6.385	-49.436	-26.39	PASS
	HCH	-6.717	-48.783	-26.72	PASS
11N20SISO	LCH	-6.847	-49.223	-26.85	PASS
	HCH	-6.514	-49.203	-26.51	PASS

Test Graphs

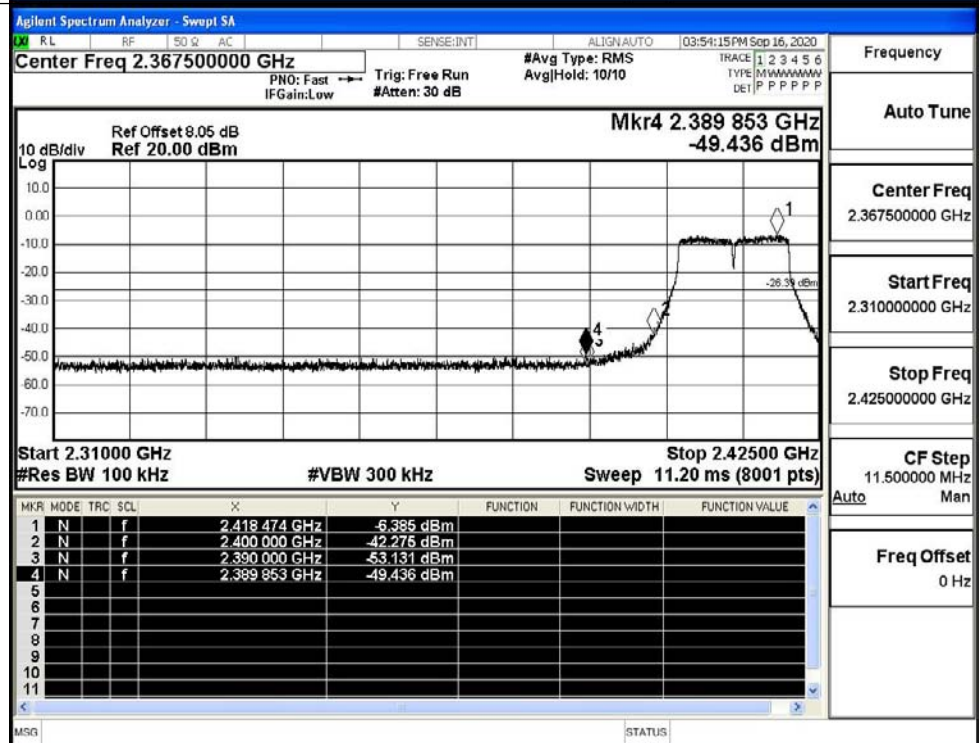
11B/LCH



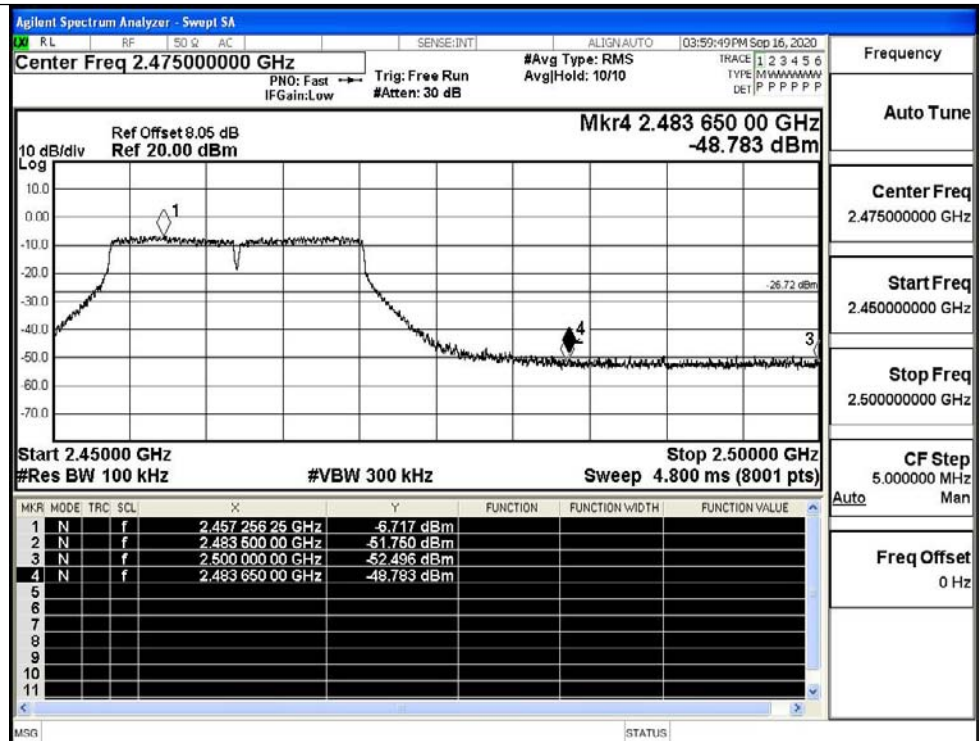
11B/HCH



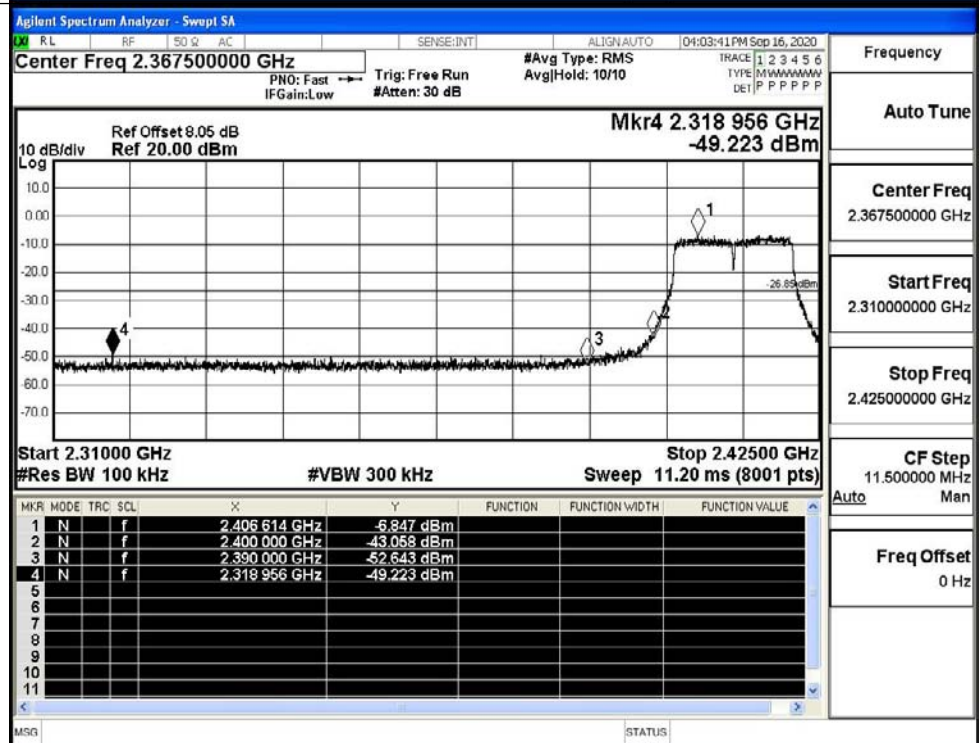
11G/LCH



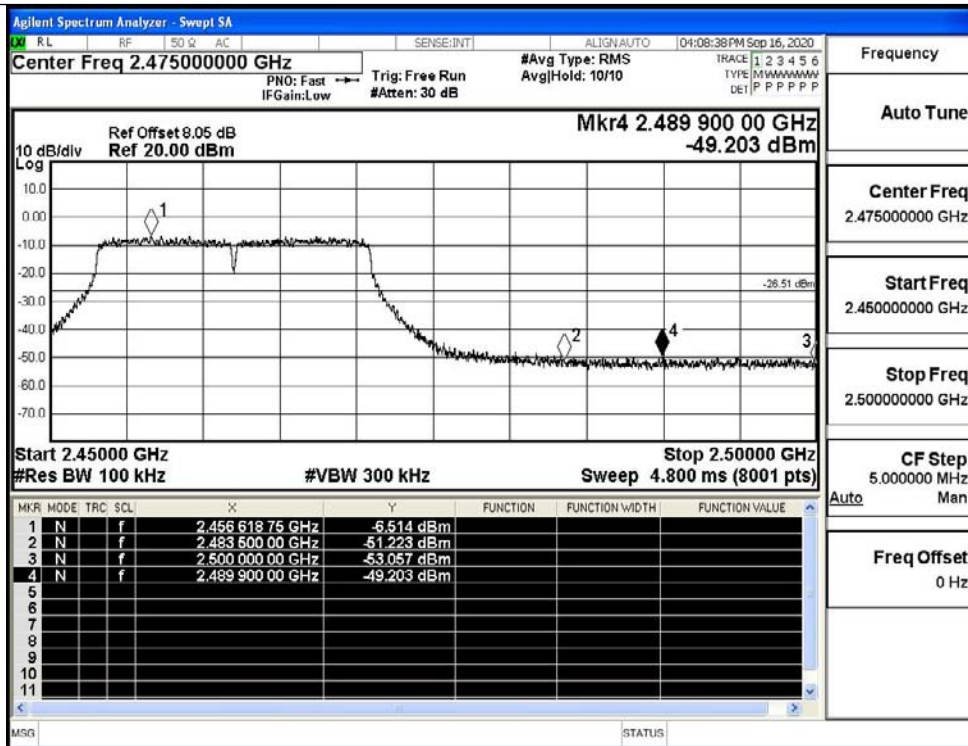
11G/HCH



11N20SISO/LCH



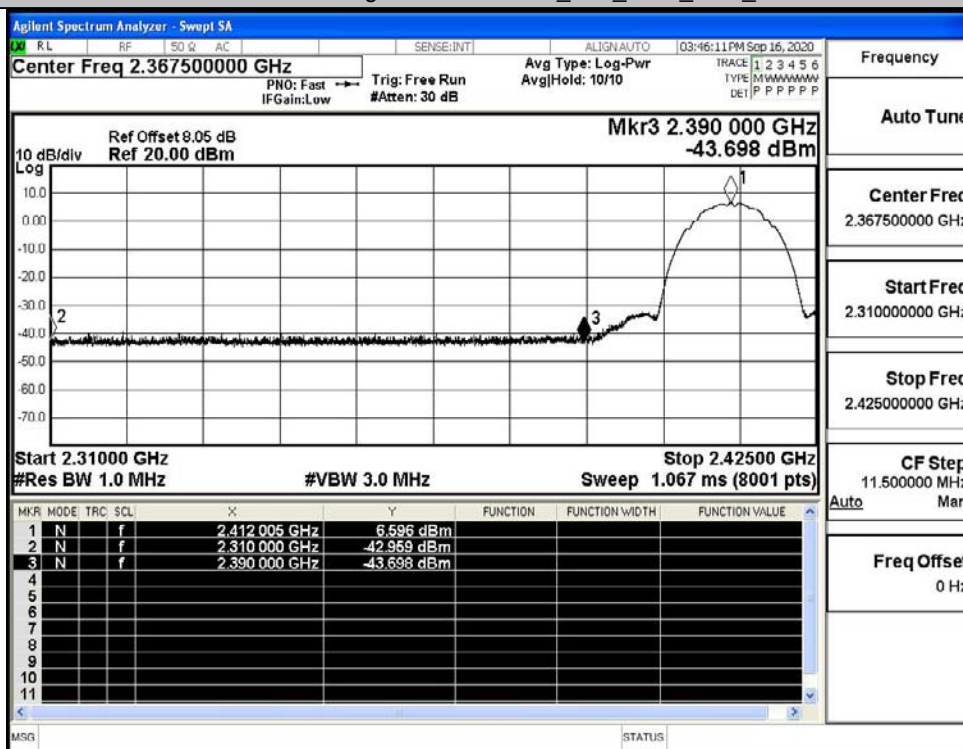
11N20SISO/HCH



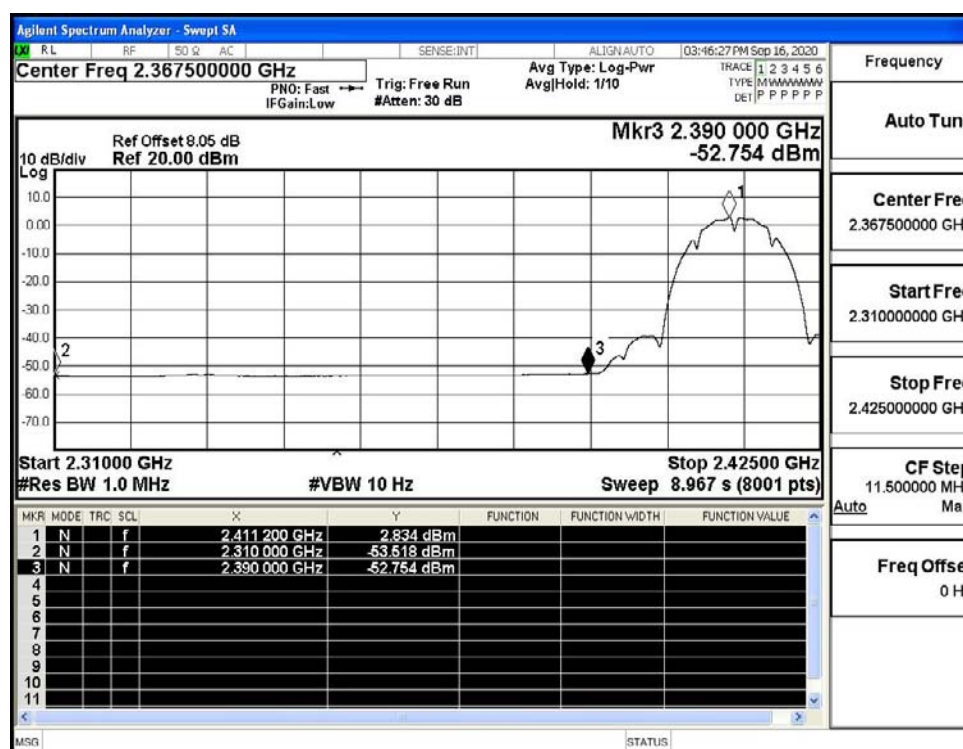
A.7 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-42.96	3.0	0	58.27	PEAK	74	PASS
	2412	Ant1	2310.0	-53.52	3.0	0	47.71	AV	54	PASS
	2412	Ant1	2390.0	-43.70	3.0	0	57.53	PEAK	74	PASS
	2412	Ant1	2390.0	-52.75	3.0	0	48.48	AV	54	PASS
	2462	Ant1	2483.5	-42.75	3.0	0	58.48	PEAK	74	PASS
	2462	Ant1	2483.5	-52.28	3.0	0	48.95	AV	54	PASS
	2462	Ant1	2500.0	-42.84	3.0	0	58.39	PEAK	74	PASS
	2462	Ant1	2500.0	-52.49	3.0	0	48.74	AV	54	PASS
11G	2412	Ant1	2310.0	-42.03	3.0	0	59.20	PEAK	74	PASS
	2412	Ant1	2310.0	-53.54	3.0	0	47.69	AV	54	PASS
	2412	Ant1	2390.0	-41.70	3.0	0	59.53	PEAK	74	PASS
	2412	Ant1	2390.0	-52.59	3.0	0	48.64	AV	54	PASS
	2462	Ant1	2483.5	-41.05	3.0	0	60.18	PEAK	74	PASS
	2462	Ant1	2483.5	-52.19	3.0	0	49.04	AV	54	PASS
	2462	Ant1	2500.0	-41.80	3.0	0	59.43	PEAK	74	PASS
	2462	Ant1	2500.0	-52.51	3.0	0	48.72	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-43.12	3.0	0	58.11	PEAK	74	PASS
	2412	Ant1	2310.0	-53.58	3.0	0	47.65	AV	54	PASS
	2412	Ant1	2390.0	-41.77	3.0	0	59.46	PEAK	74	PASS
	2412	Ant1	2390.0	-52.25	3.0	0	48.98	AV	54	PASS
	2462	Ant1	2483.5	-40.88	3.0	0	60.35	PEAK	74	PASS
	2462	Ant1	2483.5	-52.06	3.0	0	49.17	AV	54	PASS
	2462	Ant1	2500.0	-41.54	3.0	0	59.69	PEAK	74	PASS
	2462	Ant1	2500.0	-52.52	3.0	0	48.71	AV	54	PASS

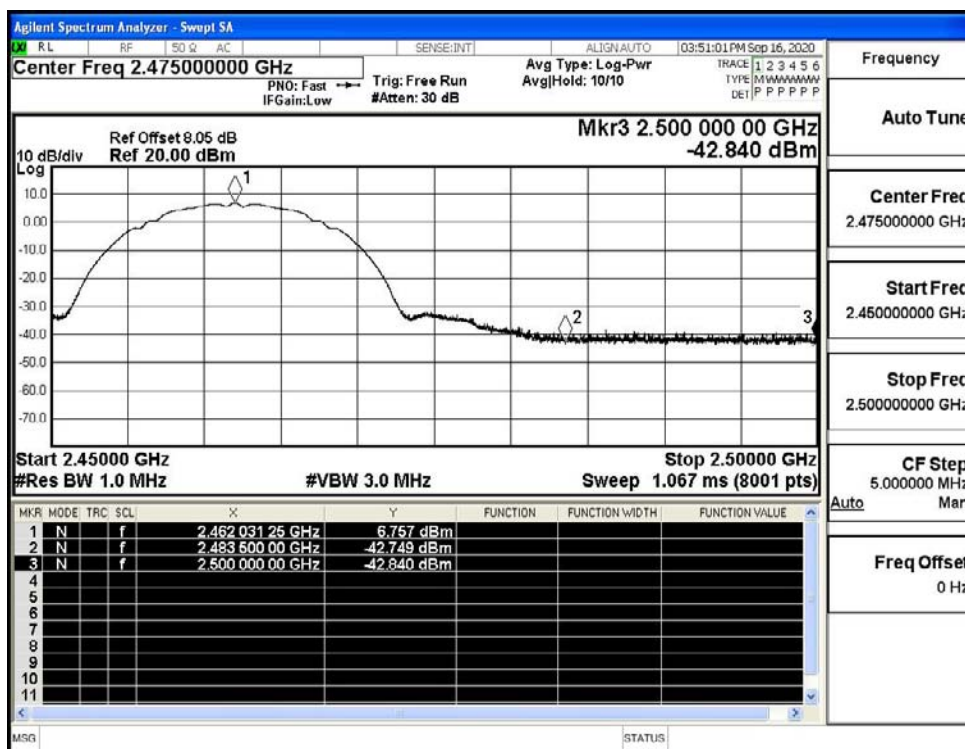
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



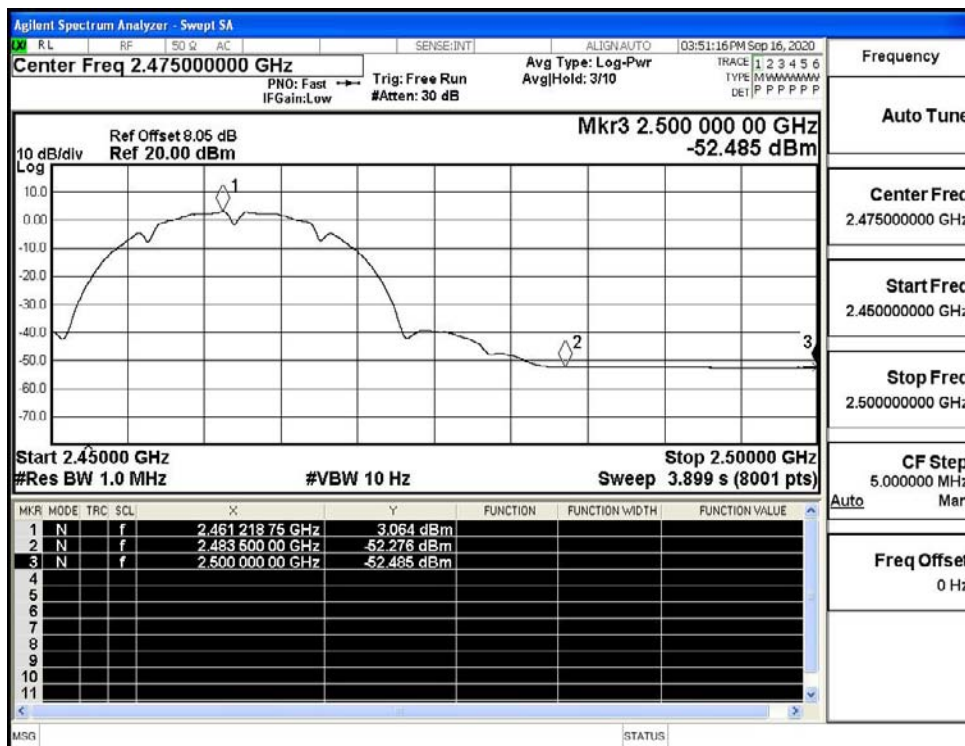
Restrict-band band-edge measurements_11B_2412_Ant1_AV



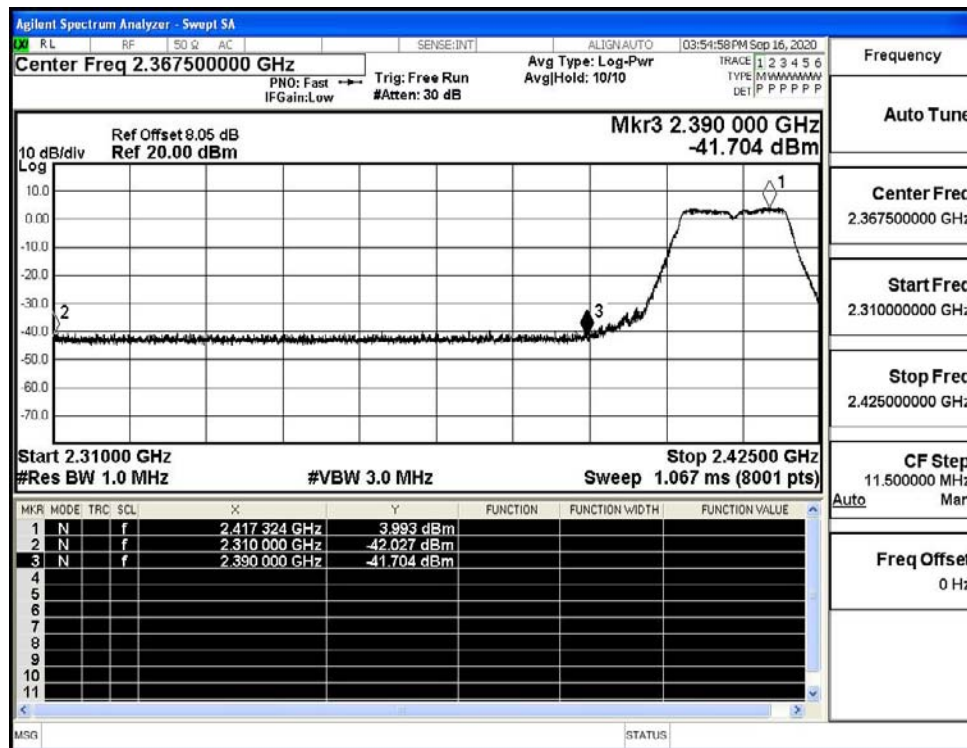
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



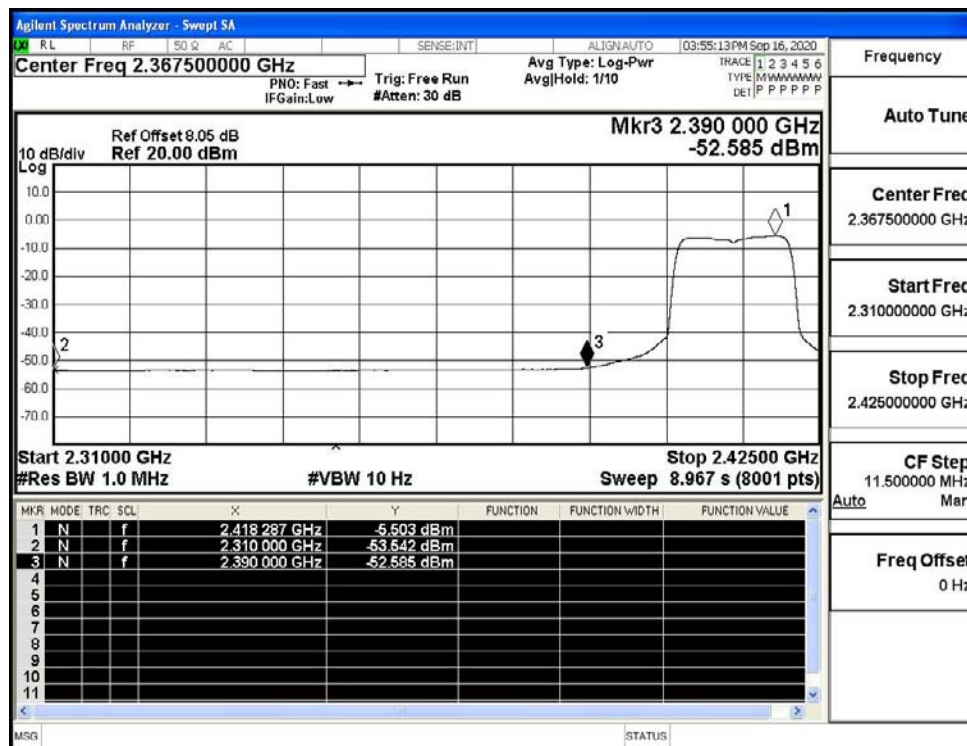
Restrict-band band-edge measurements_11B_2462_Ant1_AV



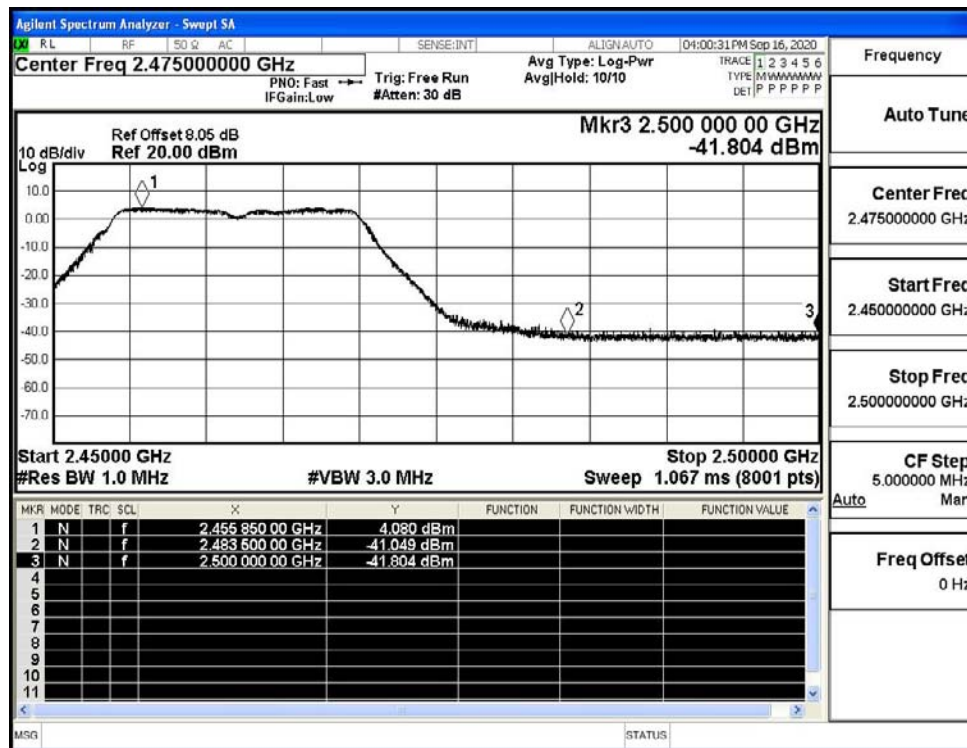
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



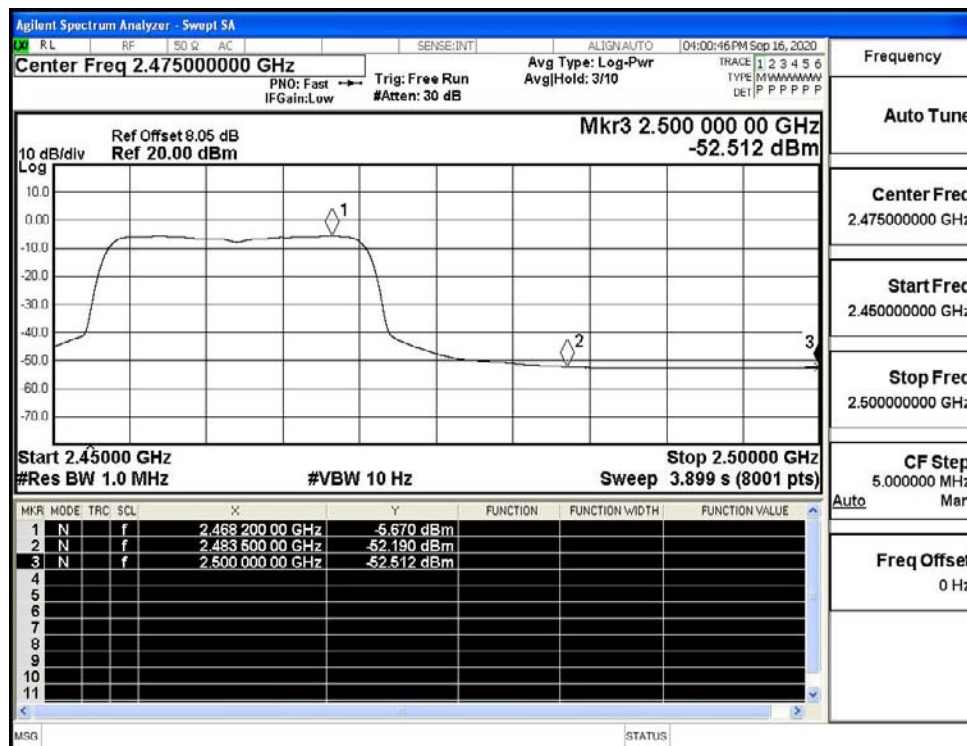
Restrict-band band-edge measurements_11G_2412_Ant1_AV



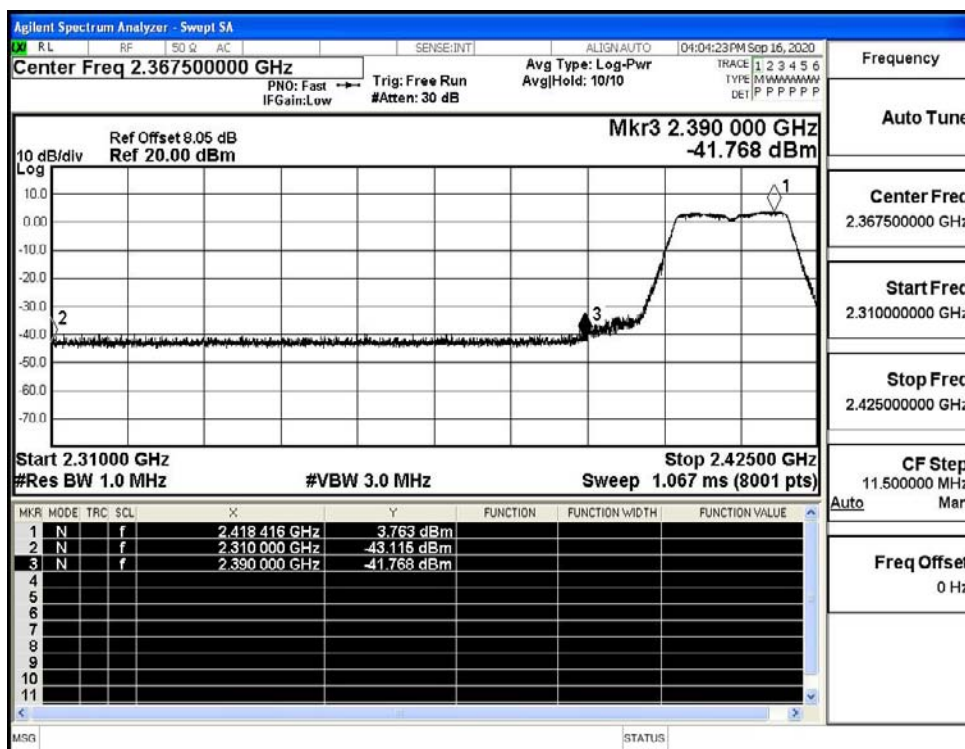
Restrict-band band-edge measurements_11G_2462_Ant1_PEAK



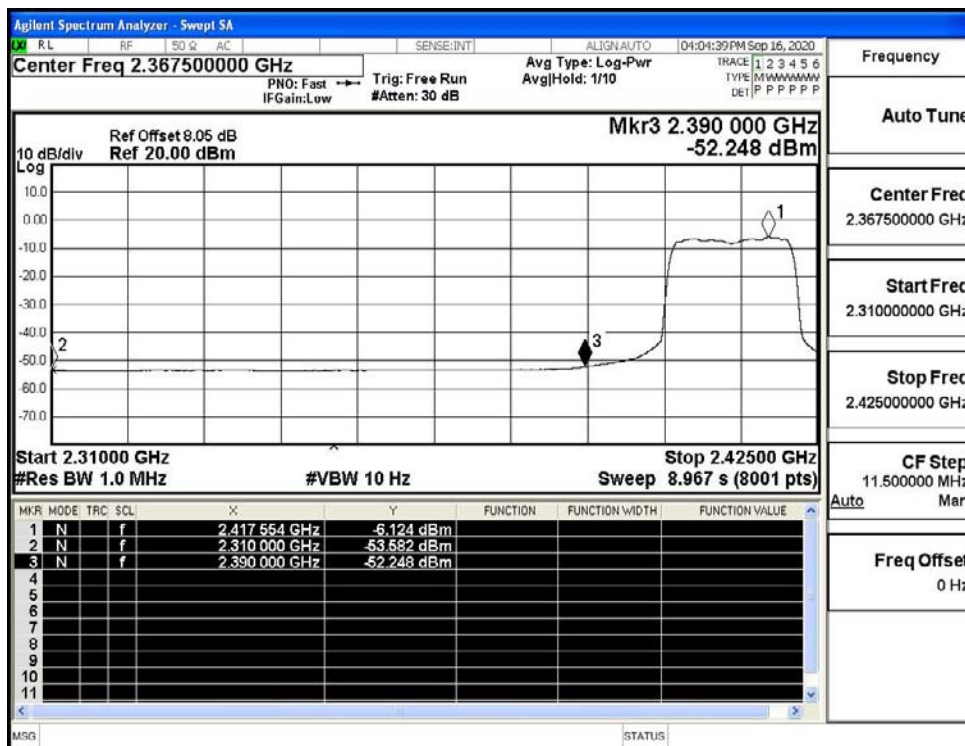
Restrict-band band-edge measurements_11G_2462_Ant1_AV



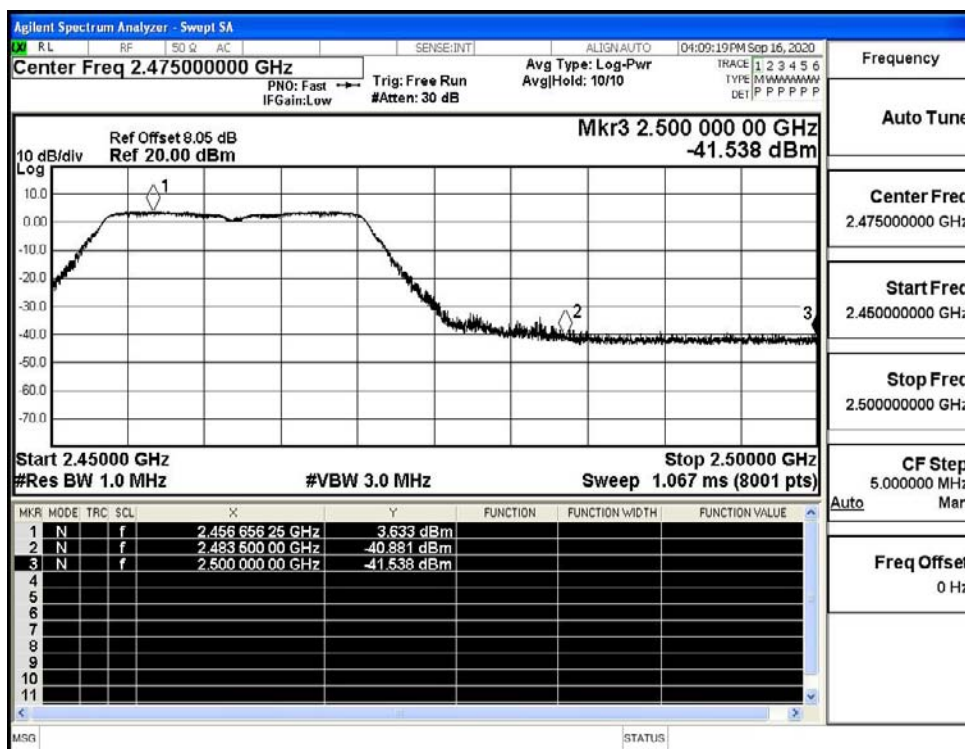
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



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

