

## Appendix A

### RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Smart Aroma Diffuser

Trade Mark: atomi

Test Model: AT1359

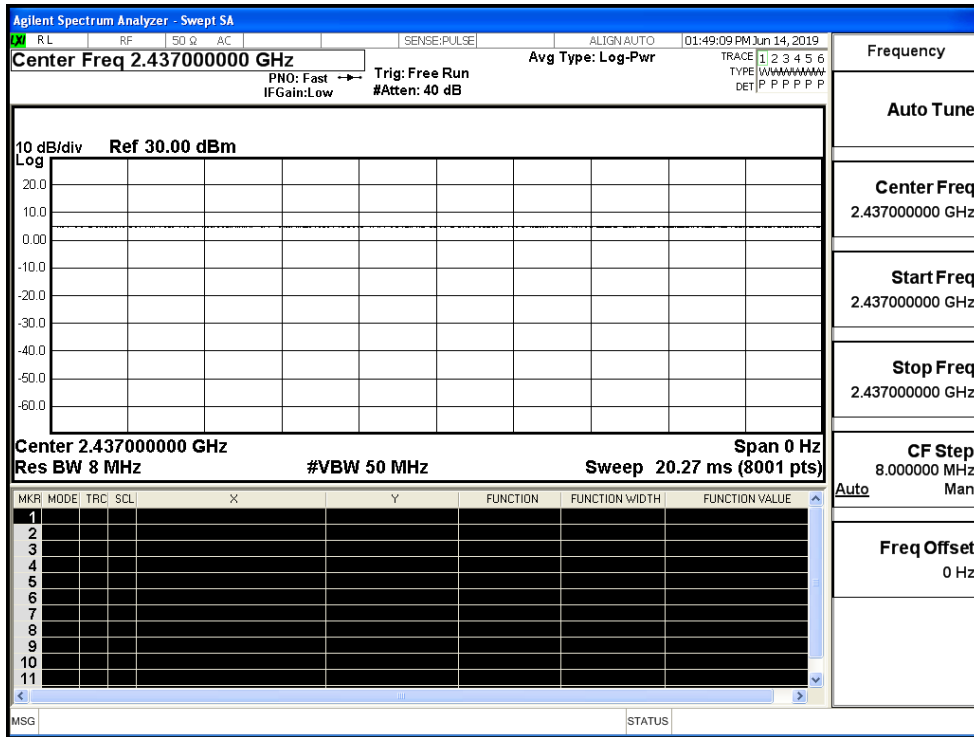
#### Environmental Conditions

Temperature:	24.5 ° C
Relative Humidity:	54.1 %
ATM Pressure:	100.0 kPa
Test Engineer:	SCENT HU
Supervised by:	WANGCHUANG

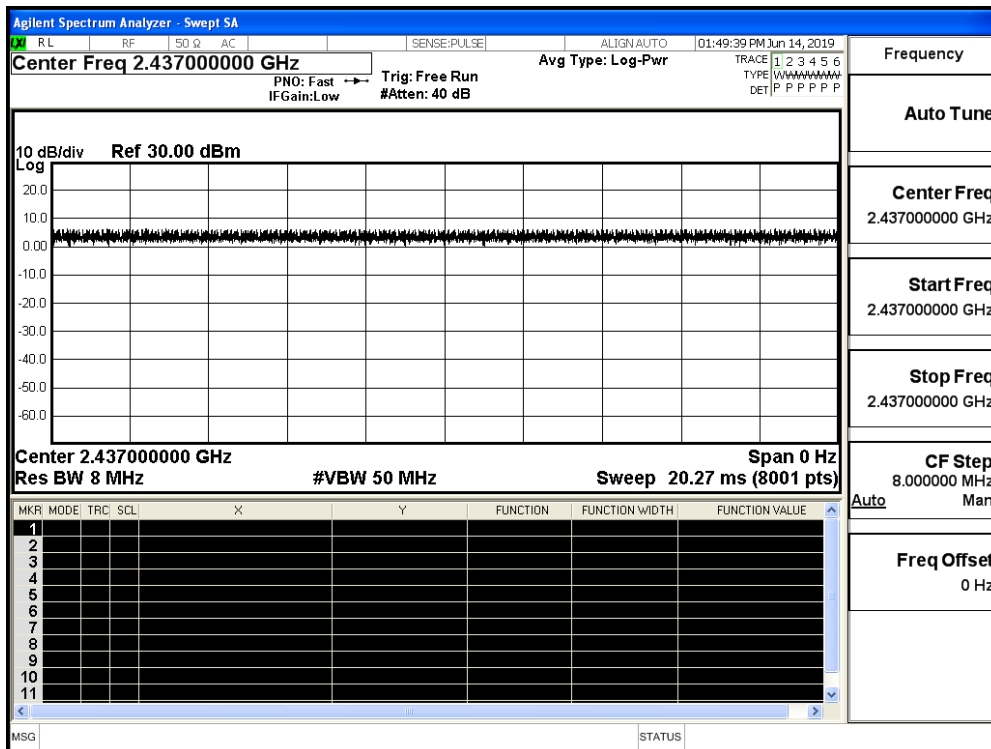
#### A.1 Duty Cycle

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

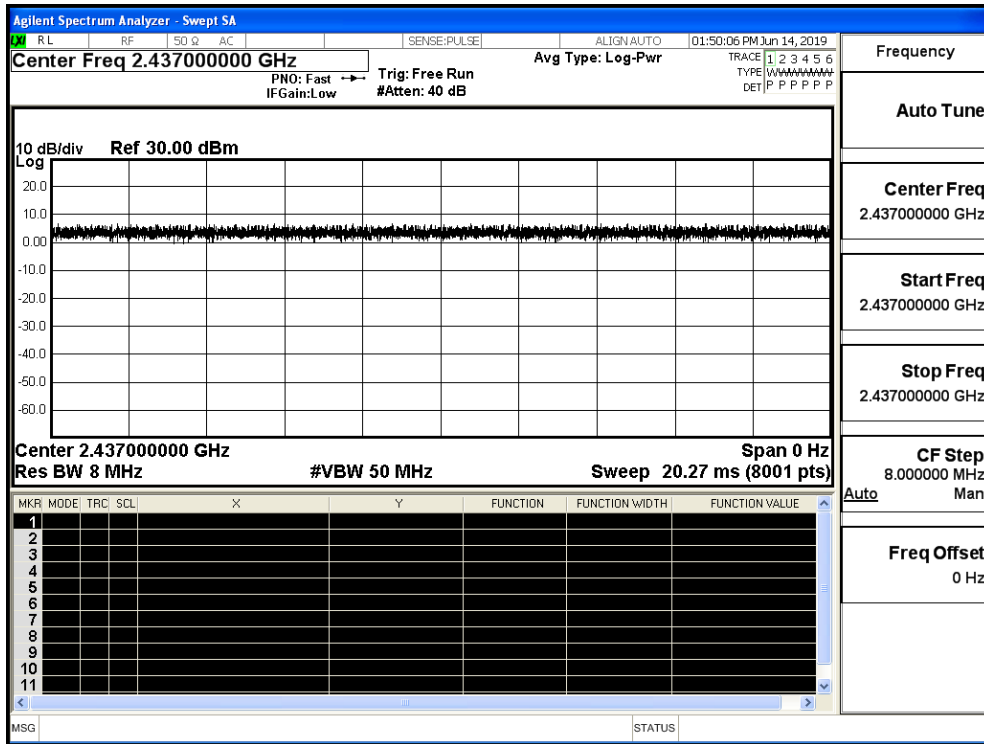
Duty Cycle\_11B\_2437\_Ant1



Duty Cycle\_11G\_2437\_Ant1



Duty Cycle\_11N20SISO\_2437\_Ant1

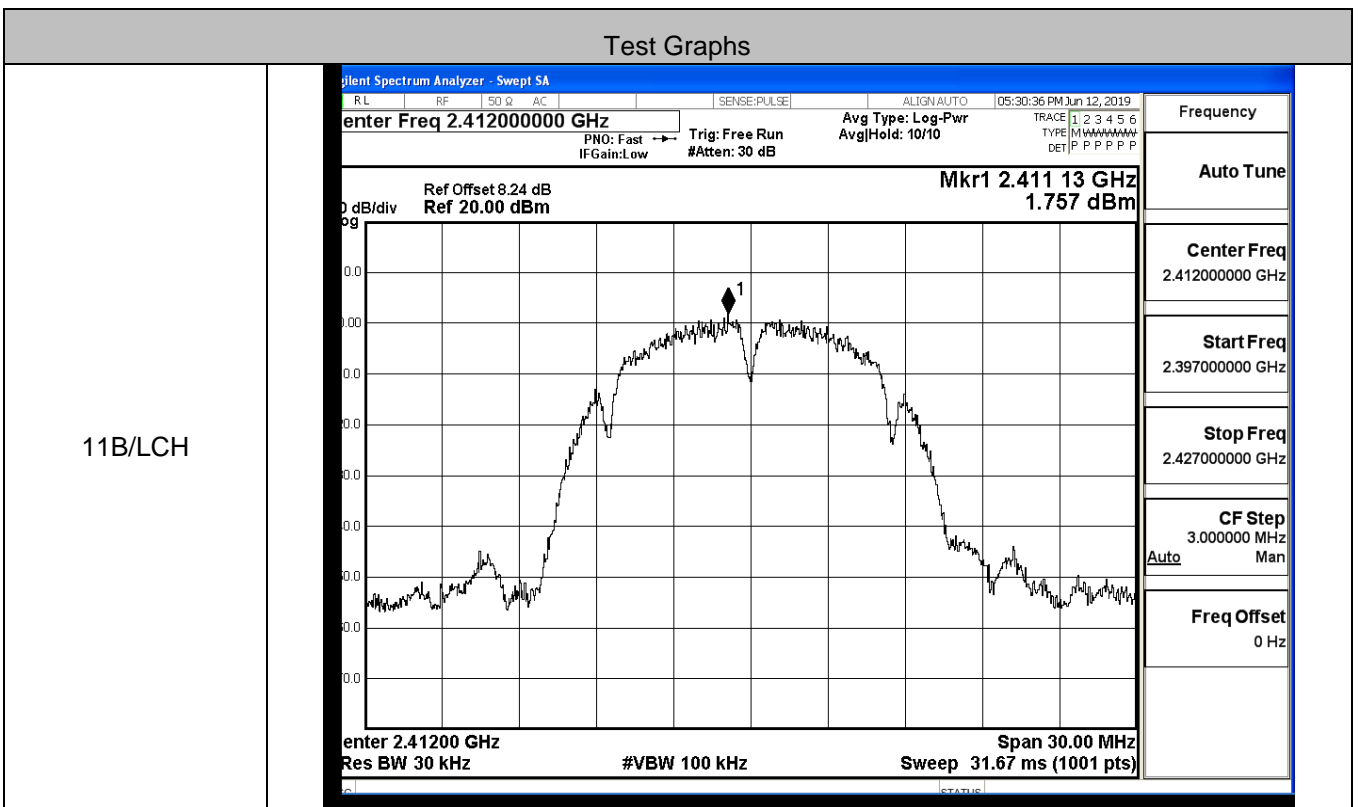


**A.2 Maximum Conducted Output Power**

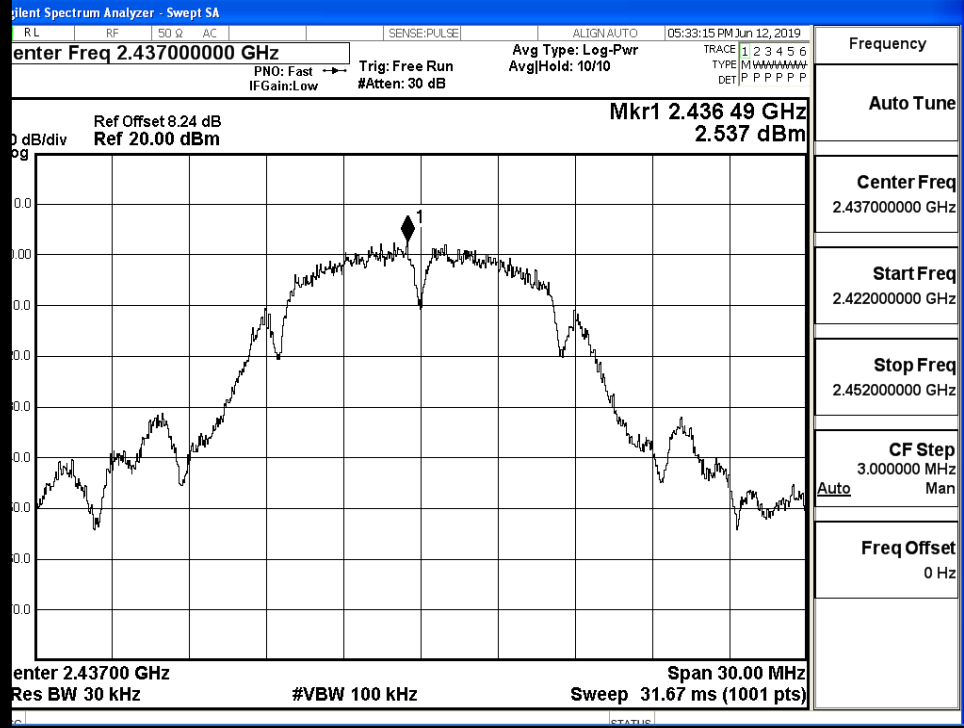
Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	17.15	30	PASS
	MCH	17.85	30	PASS
	HCH	17.23	30	PASS
11G	LCH	19.62	30	PASS
	MCH	19.66	30	PASS
	HCH	20.50	30	PASS
11N20SISO	LCH	19.39	30	PASS
	MCH	19.37	30	PASS
	HCH	20.15	30	PASS

**A.3 Maximum Power Spectral Density**

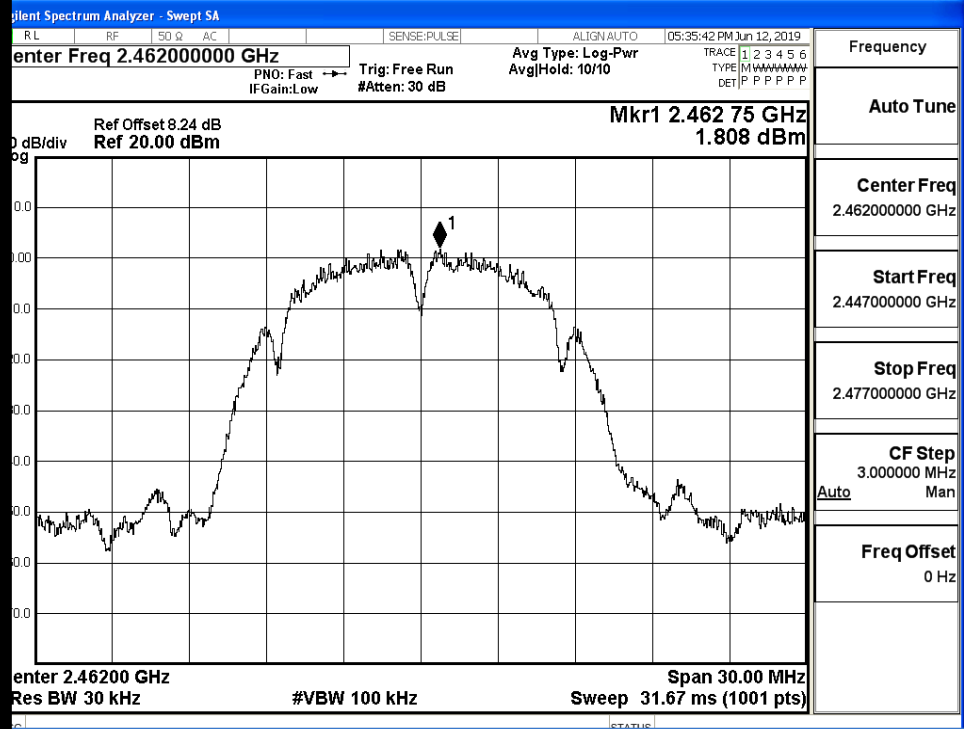
Mode	Channel	Meas.Level [dBm/30KHz]	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	1.757	-8.243	8	PASS
	MCH	2.537	-7.463	8	PASS
	HCH	1.808	-8.192	8	PASS
11G	LCH	-3.188	-13.188	8	PASS
	MCH	-3.133	-13.133	8	PASS
	HCH	-3.225	-13.225	8	PASS
11N20SISO	LCH	-3.399	-13.399	8	PASS
	MCH	-3.246	-13.246	8	PASS
	HCH	-2.513	-12.513	8	PASS



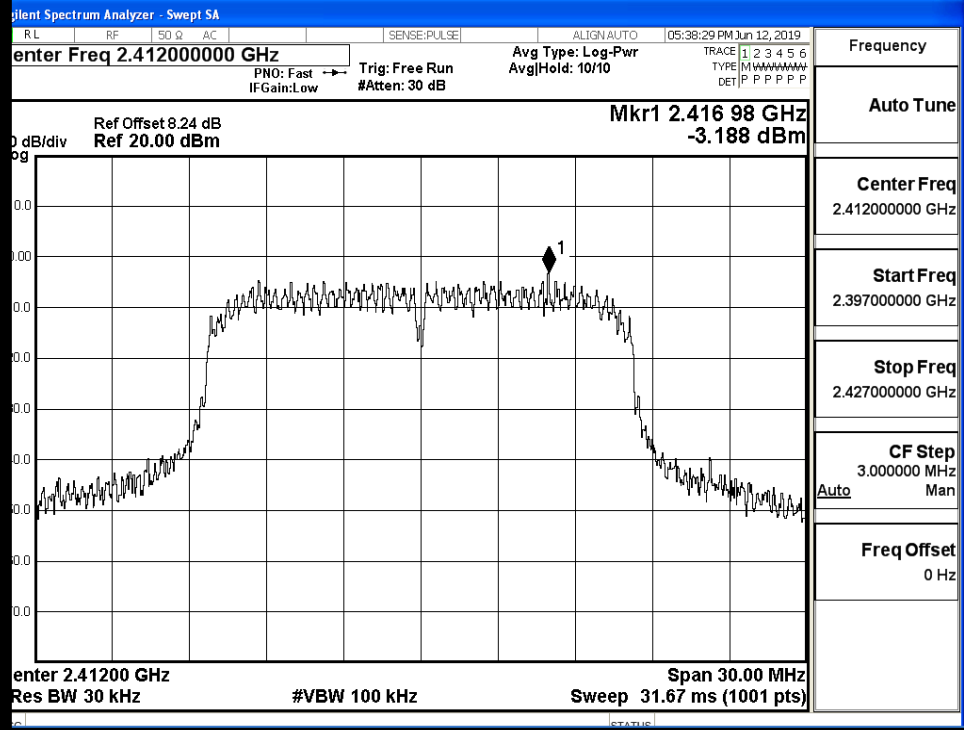
11B/MCH



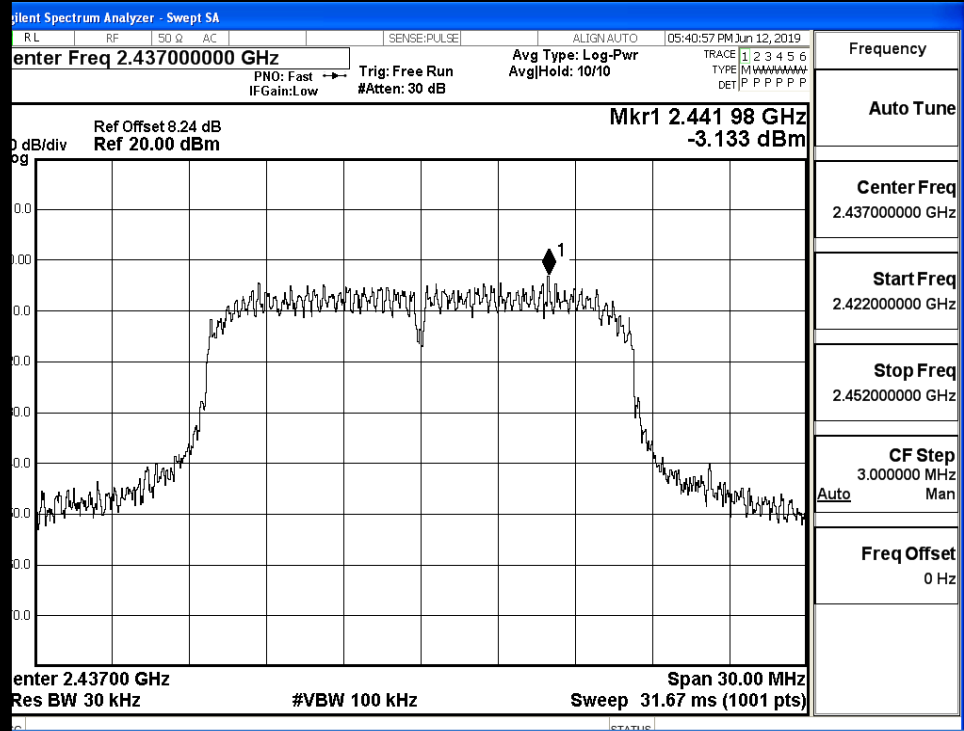
11B/HCH



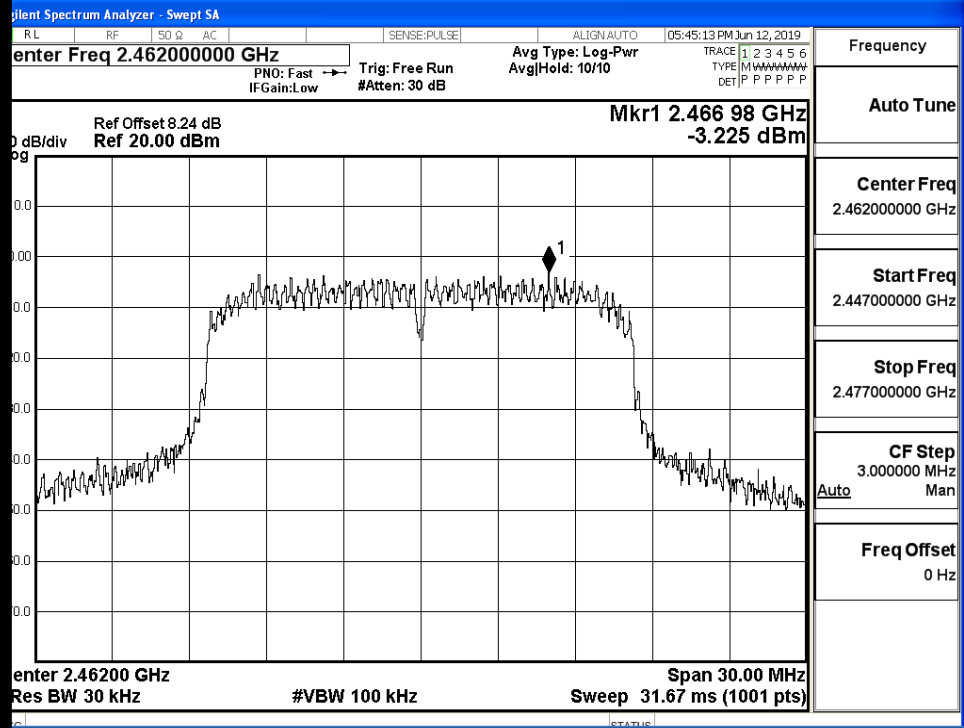
11G/LCH



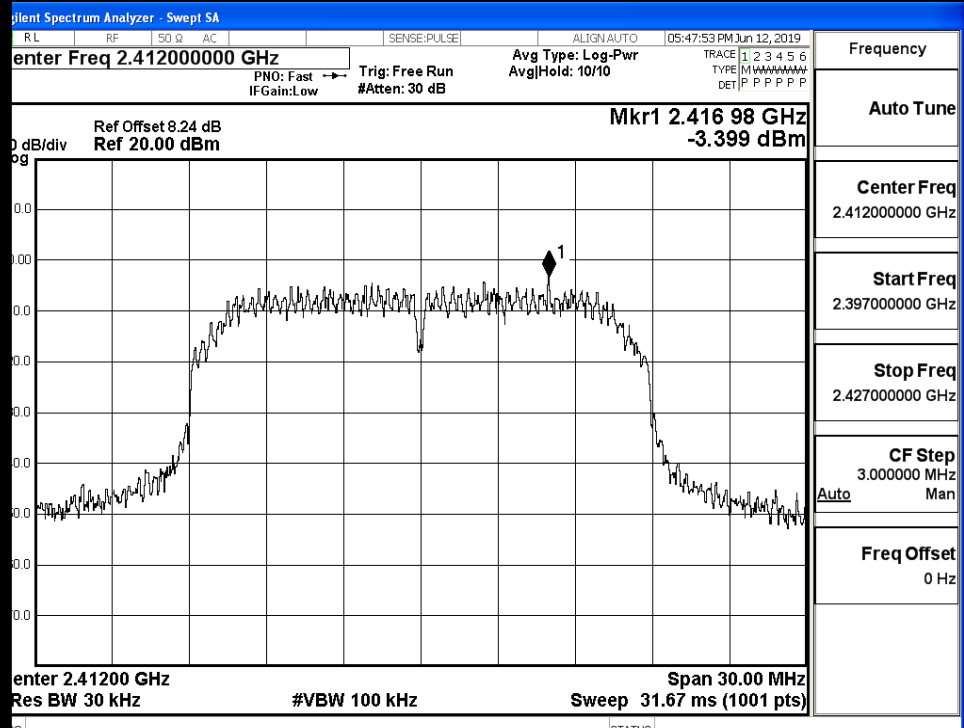
11G/MCH



11G/HCH



11N20SISO/LCH

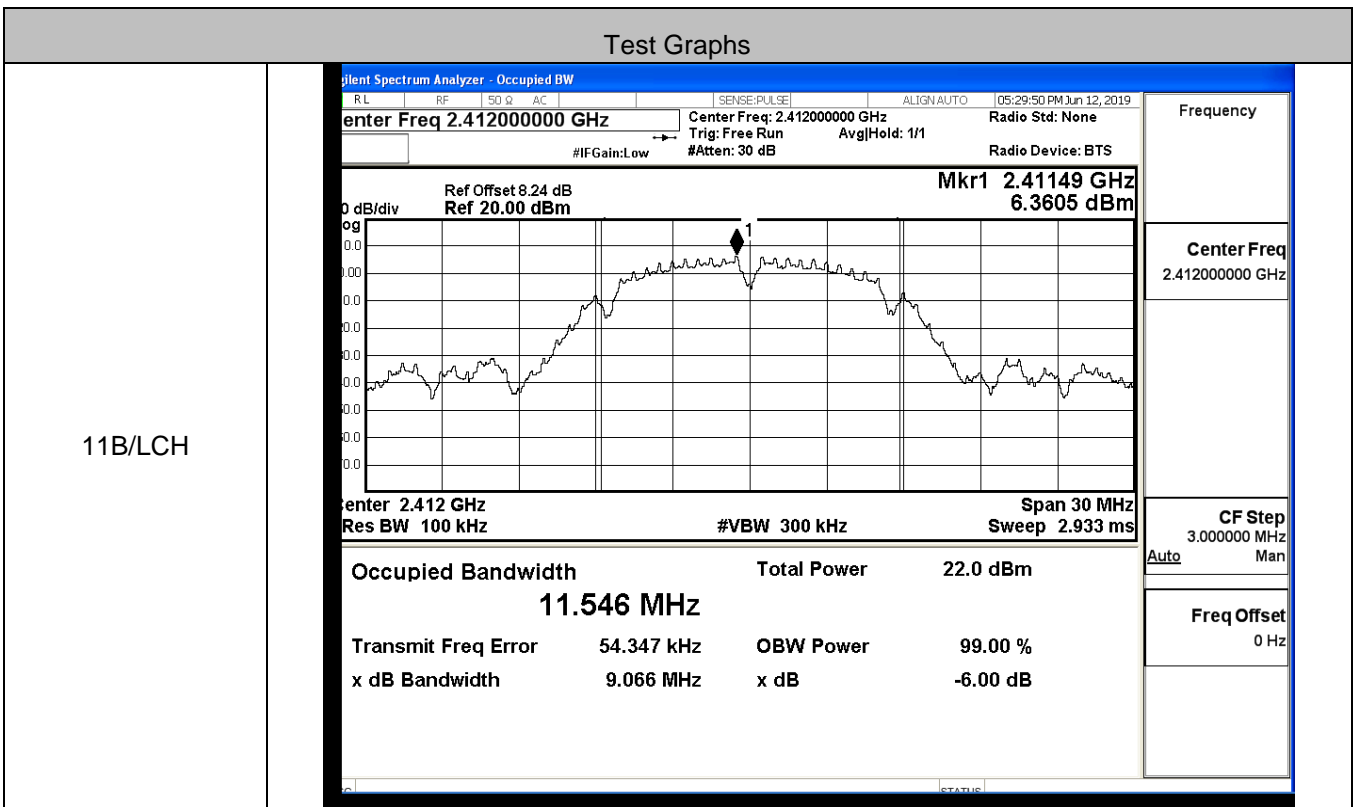




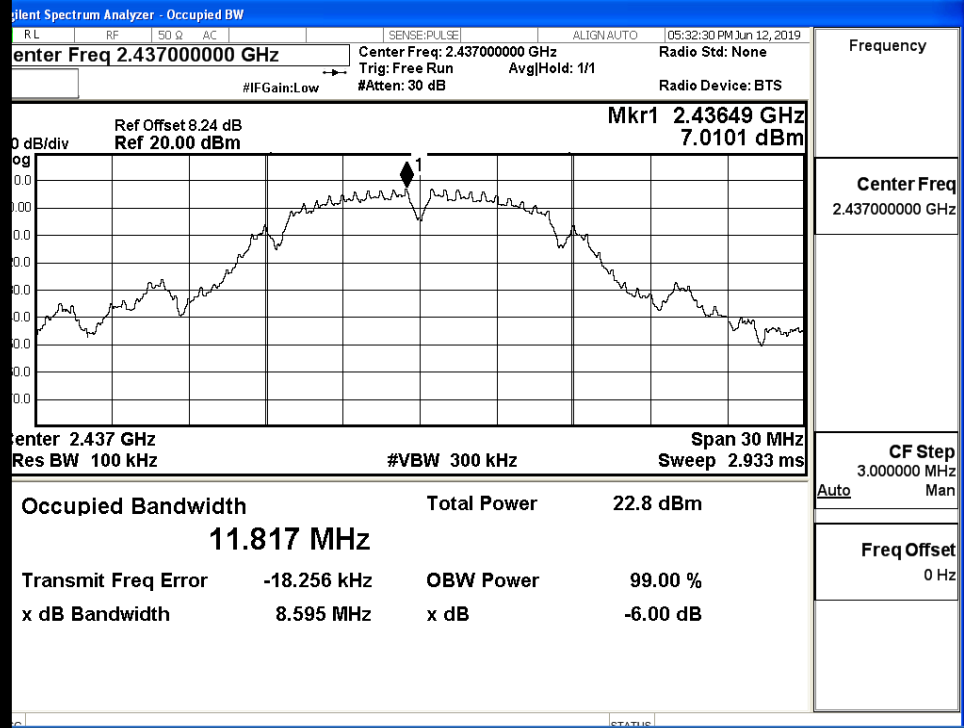


**A.4 6dB Bandwidth**

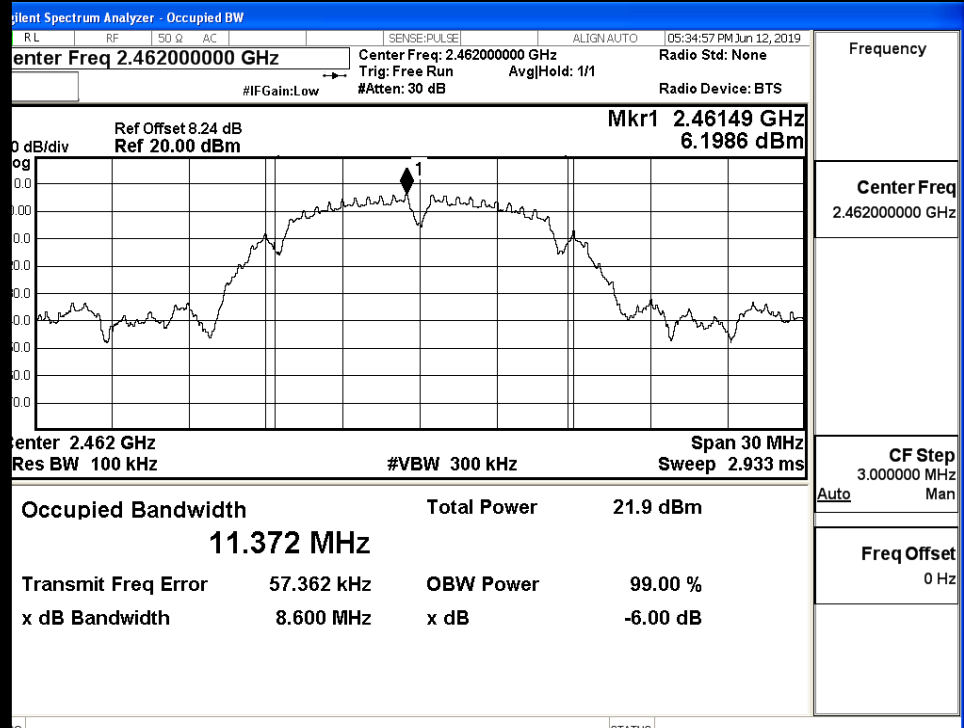
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.066	≥0.5	PASS
	MCH	8.595	≥0.5	PASS
	HCH	8.600	≥0.5	PASS
11G	LCH	15.12	≥0.5	PASS
	MCH	15.13	≥0.5	PASS
	HCH	15.13	≥0.5	PASS
11N20SISO	LCH	15.13	≥0.5	PASS
	MCH	15.12	≥0.5	PASS
	HCH	15.13	≥0.5	PASS



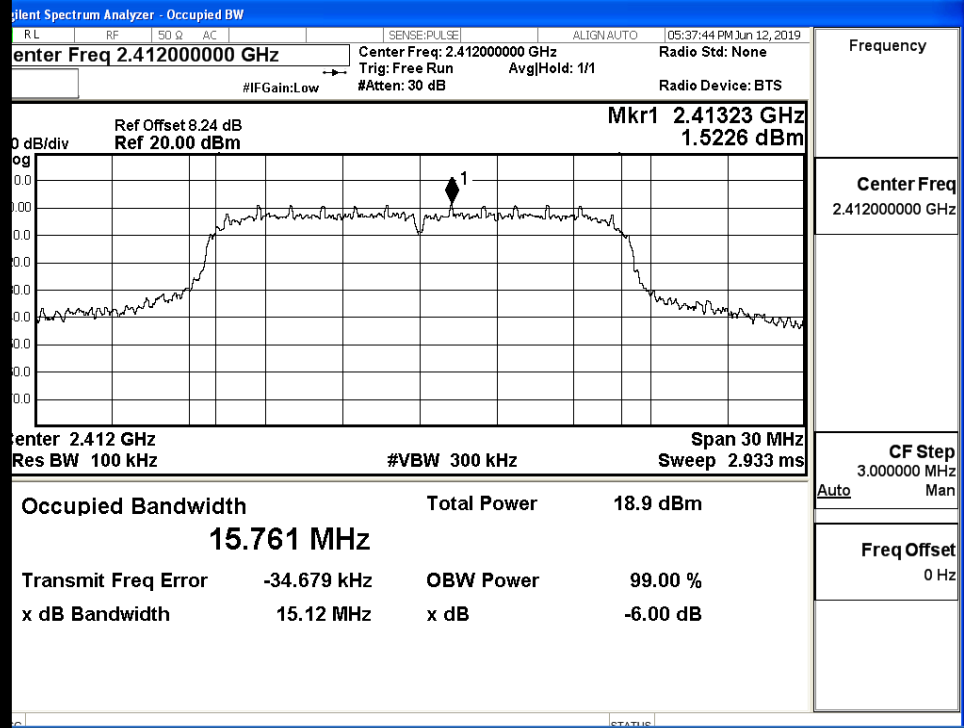
11B/MCH



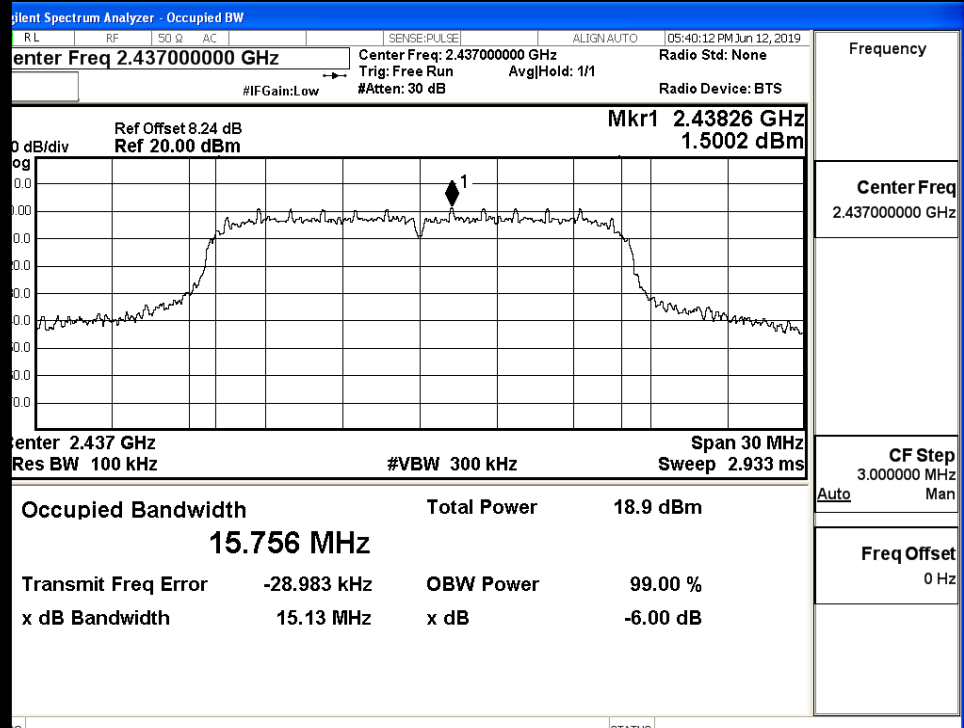
11B/HCH



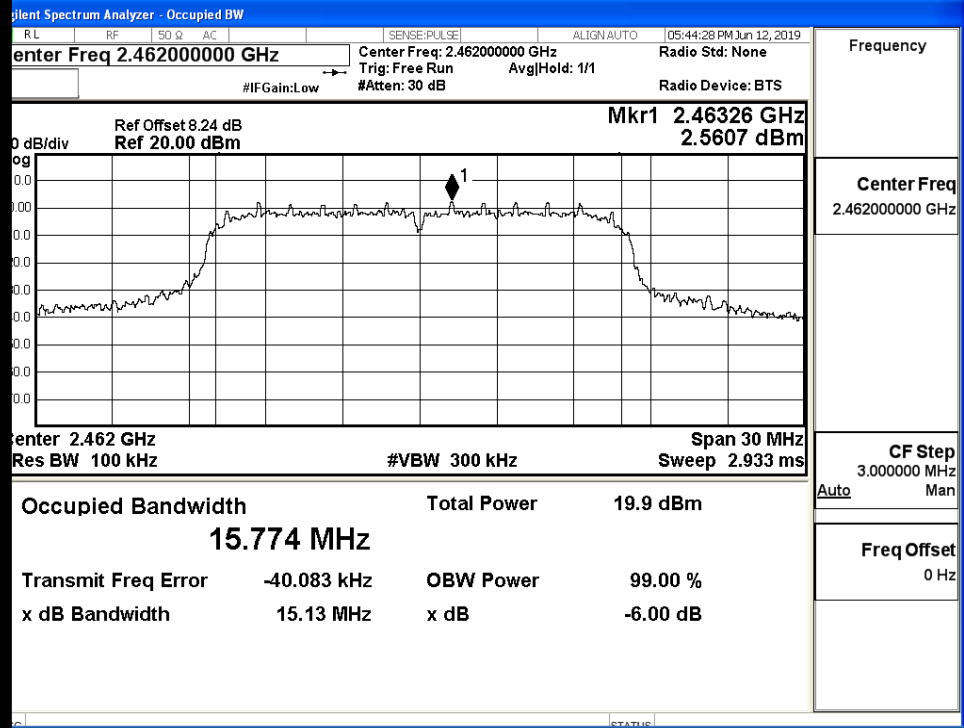
11G/LCH



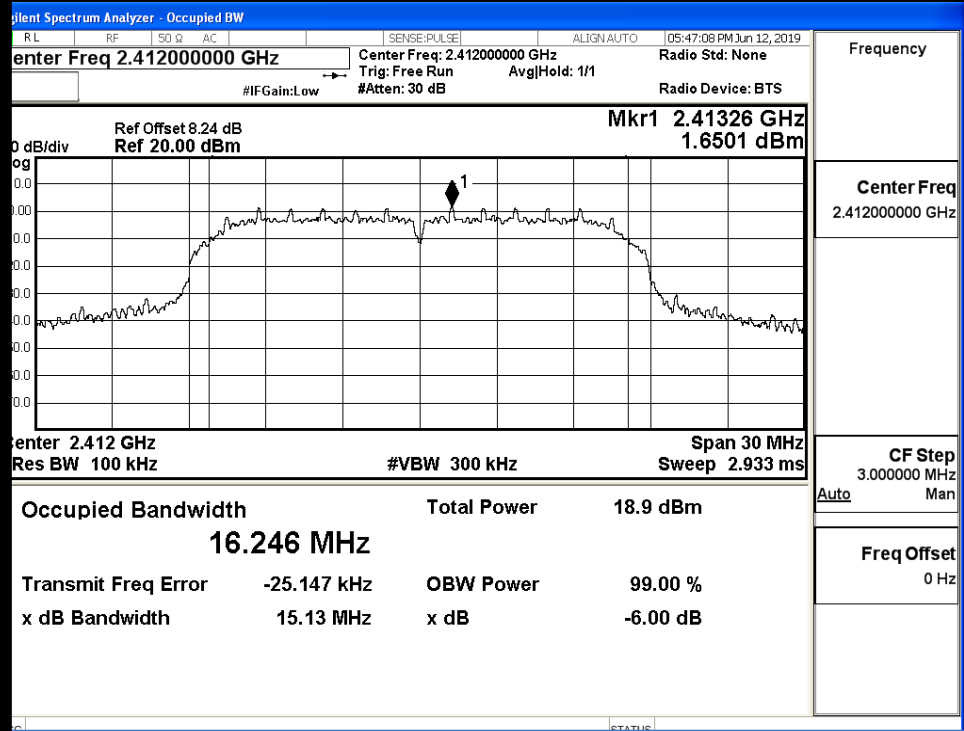
11G/MCH



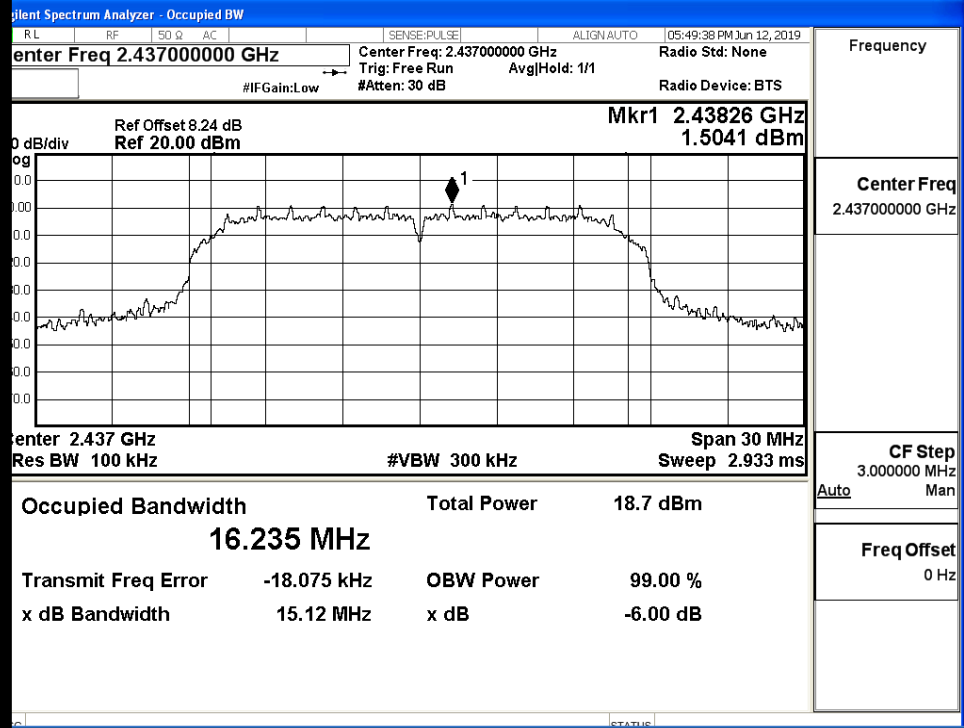
11G/HCH



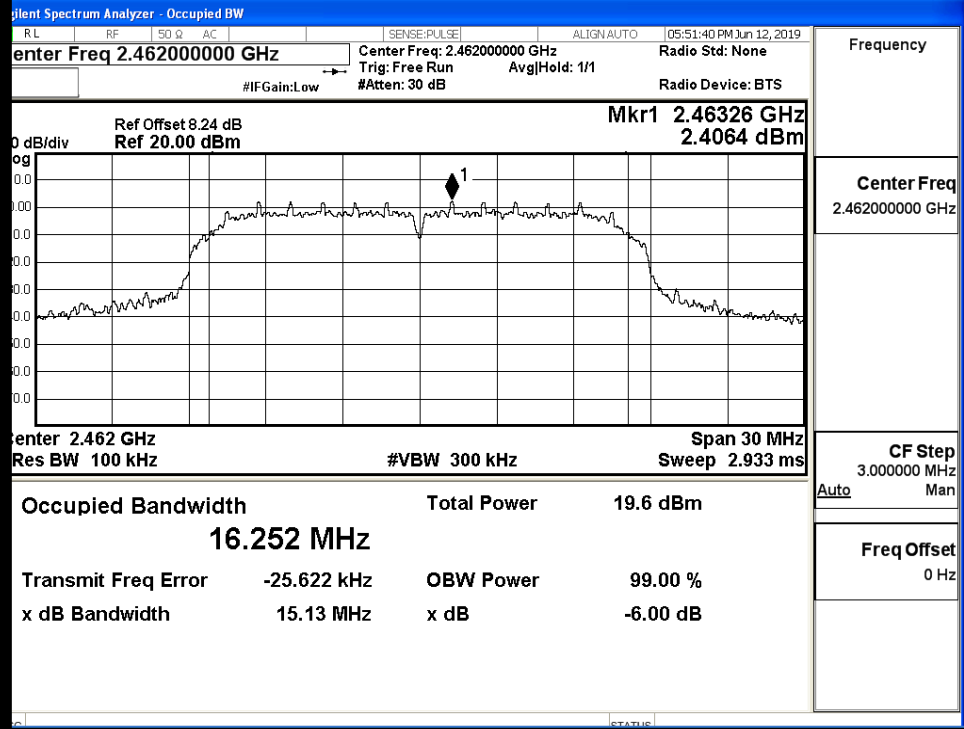
11N20SISO/LCH



11N20SISO/MCH



11N20SISO/HCH

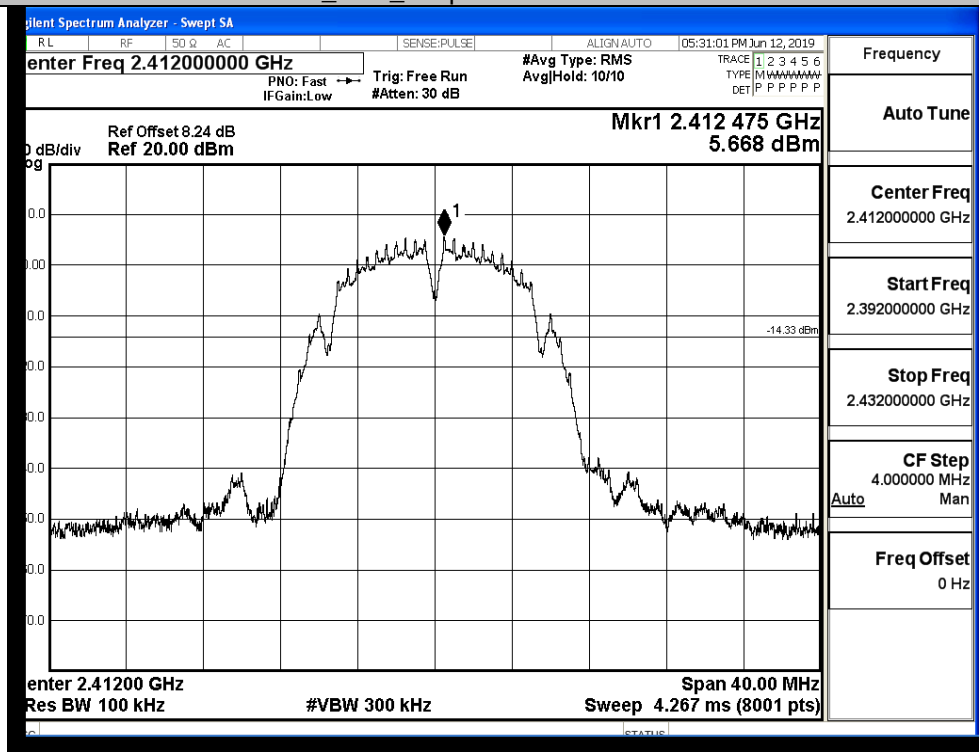


**A.5 RF Conducted Spurious Emissions**

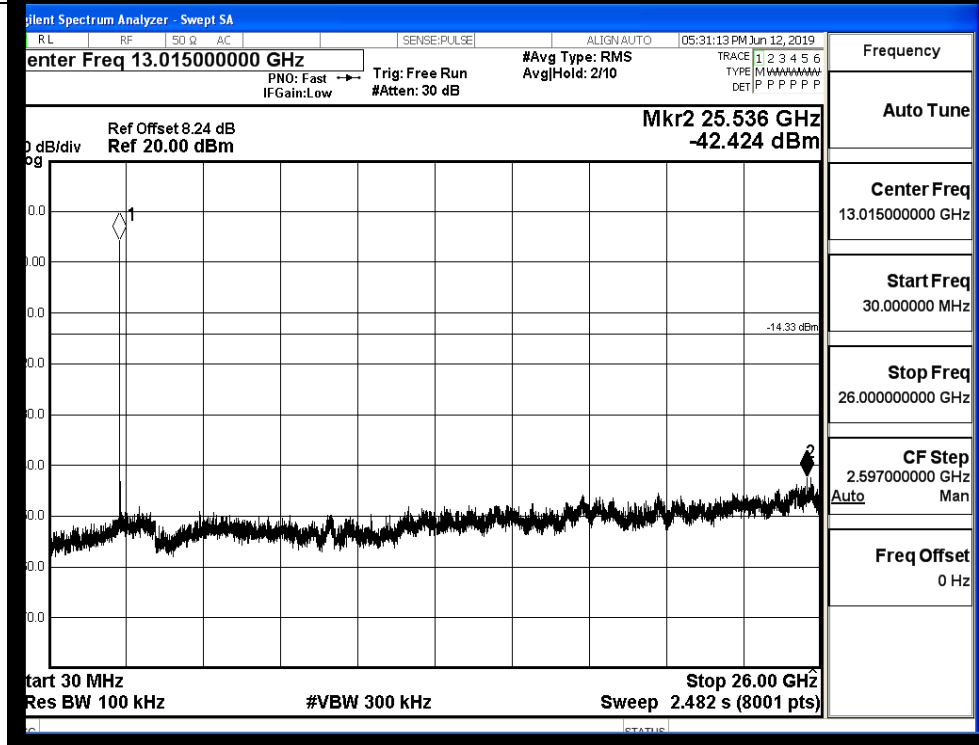
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	5.668	-42.424	-14.332	PASS
	MCH	6.984	-43.286	-13.016	PASS
	HCH	6.307	-43.553	-13.693	PASS
11G	LCH	1.11	-38.793	-18.890	PASS
	MCH	1.104	-43.335	-18.896	PASS
	HCH	2.012	-43.535	-17.988	PASS
11N20 SISO	LCH	1.041	-42.490	-18.959	PASS
	MCH	1.208	-43.057	-18.792	PASS
	HCH	2.047	-43.528	-17.953	PASS

### 11B\_LCH\_Graphs

Pref/11B/LCH



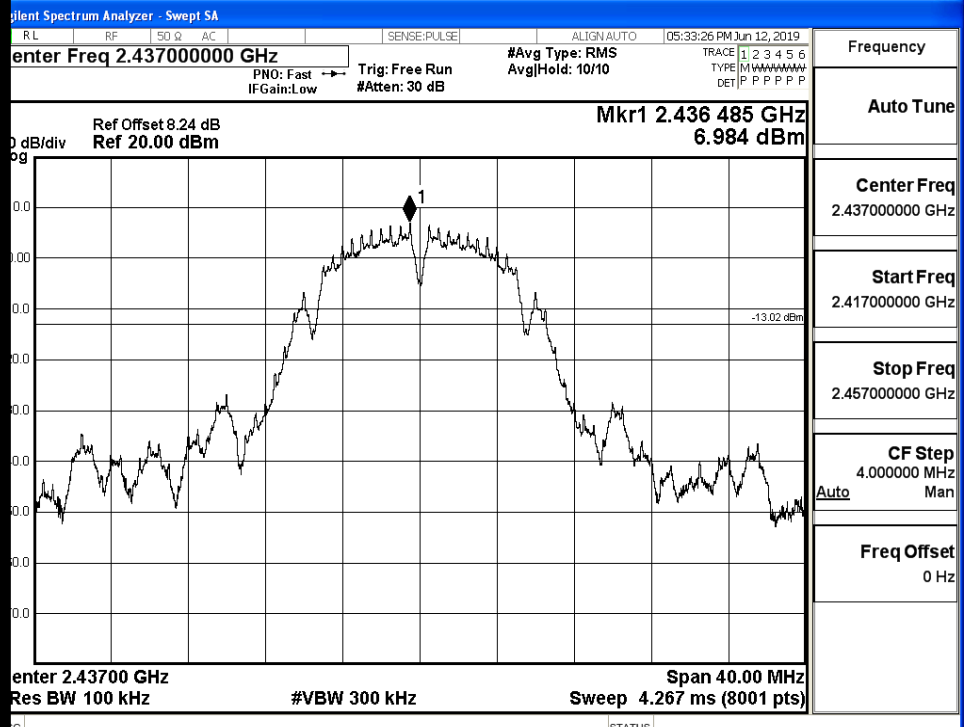
Puw/11B/LCH



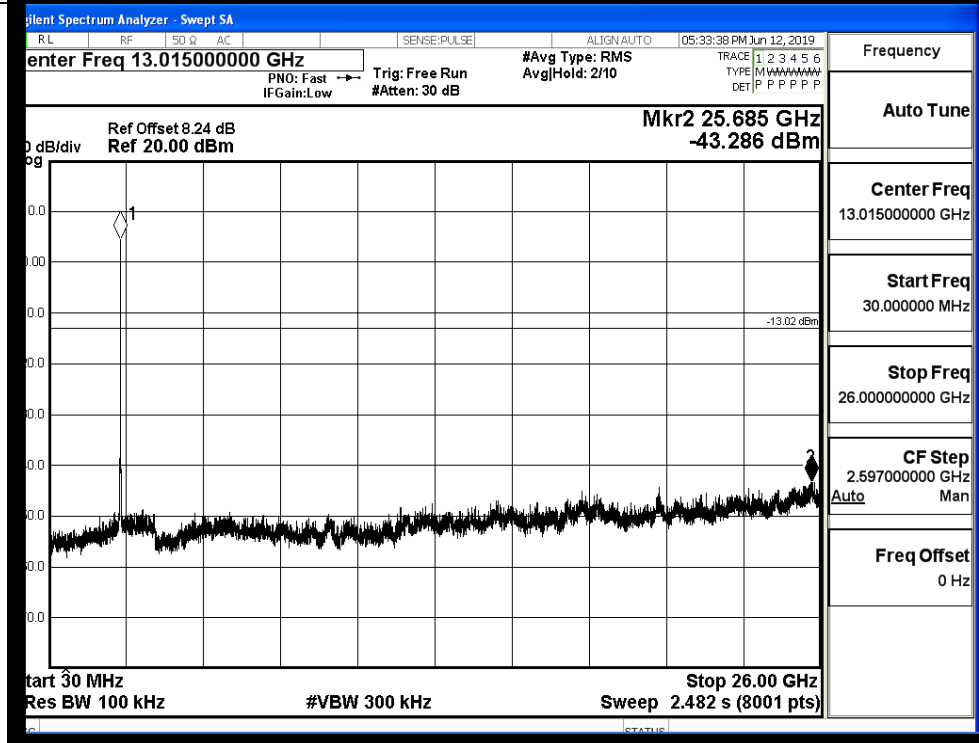


11B\_MCH\_Graphs

Pref/11B/MCH

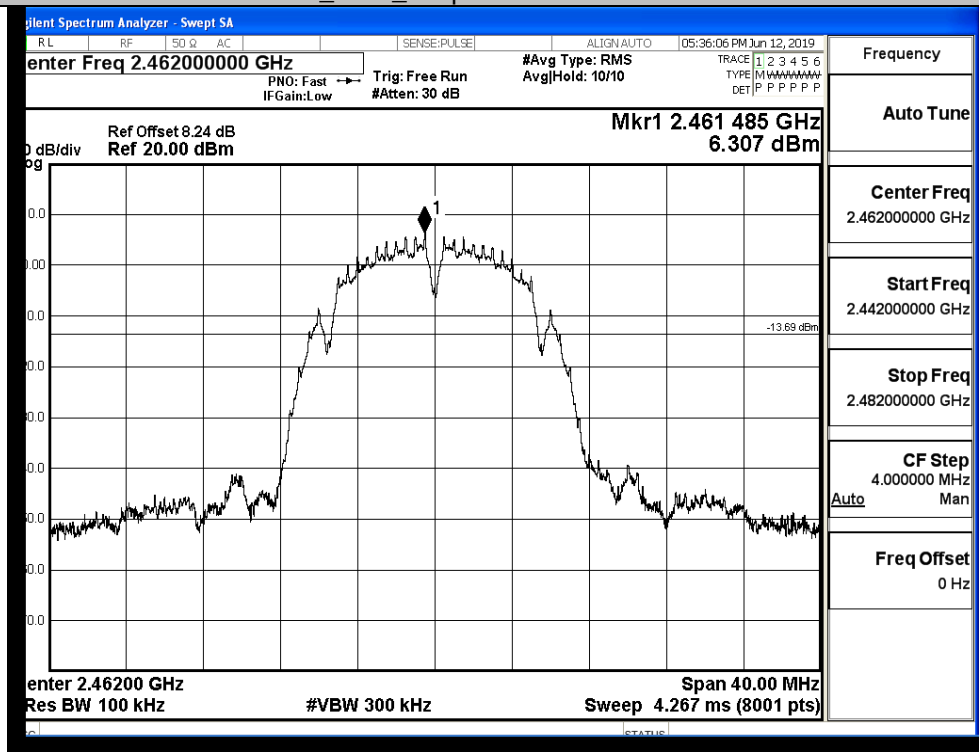


Puw/11B/MCH

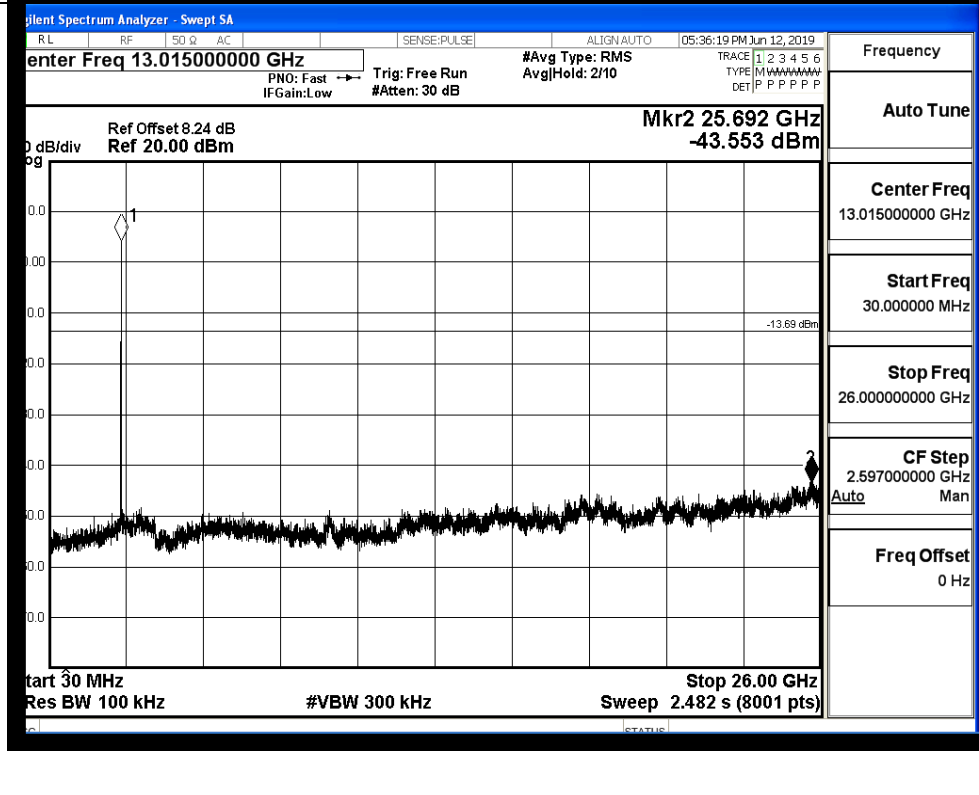


11B\_HCH\_Graphs

Pref/11B/HCH

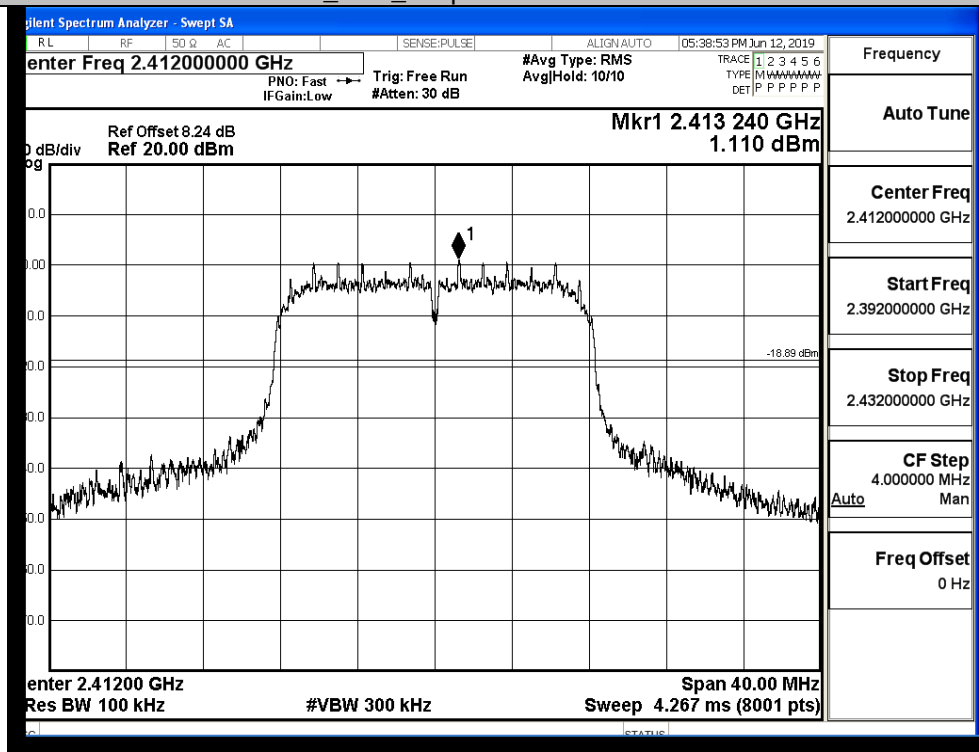


Puw/11B/HCH

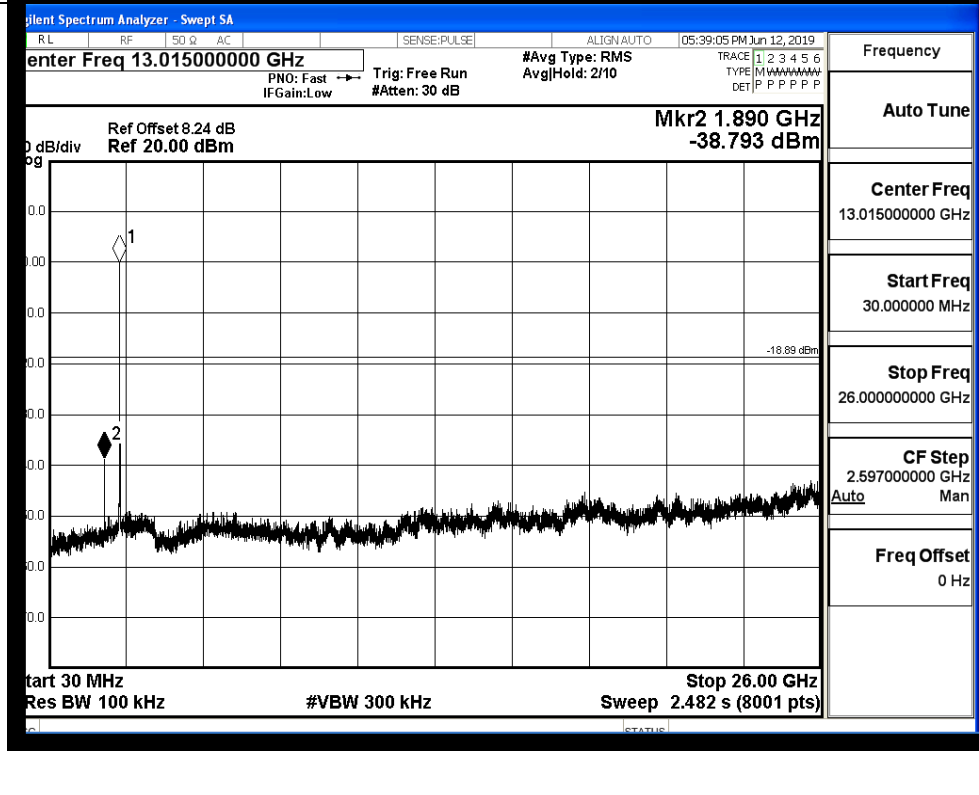


11G\_LCH\_Graphs

Pref/11G/LCH

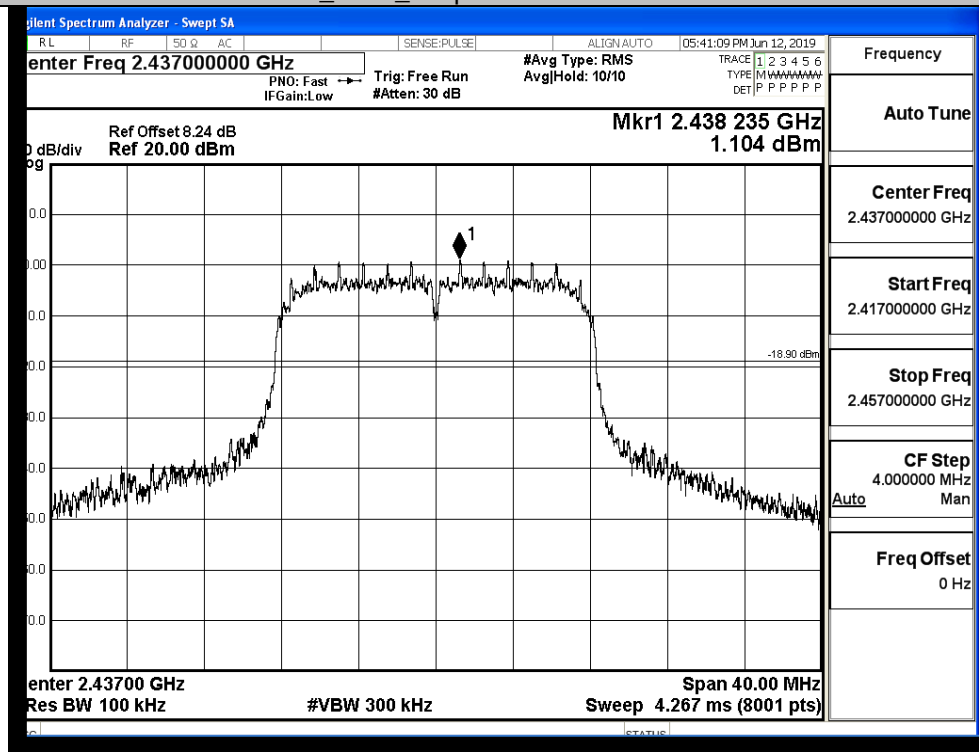


Puw/11G/LCH

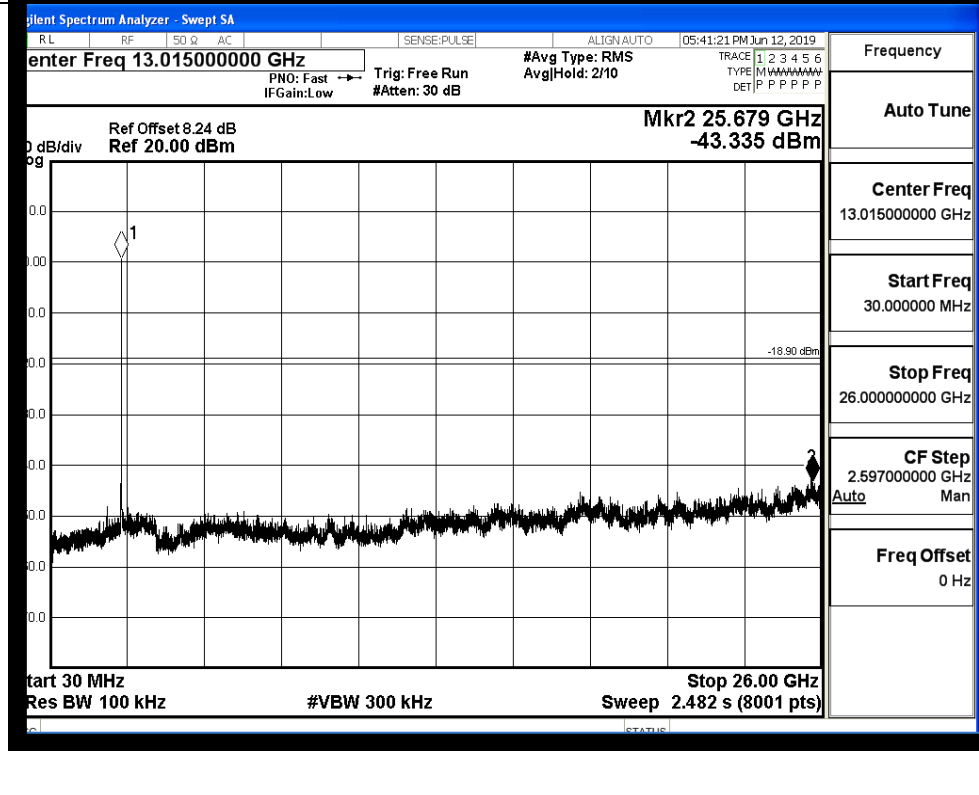


### 11G\_MCH\_Graphs

Pref/11G/MCH

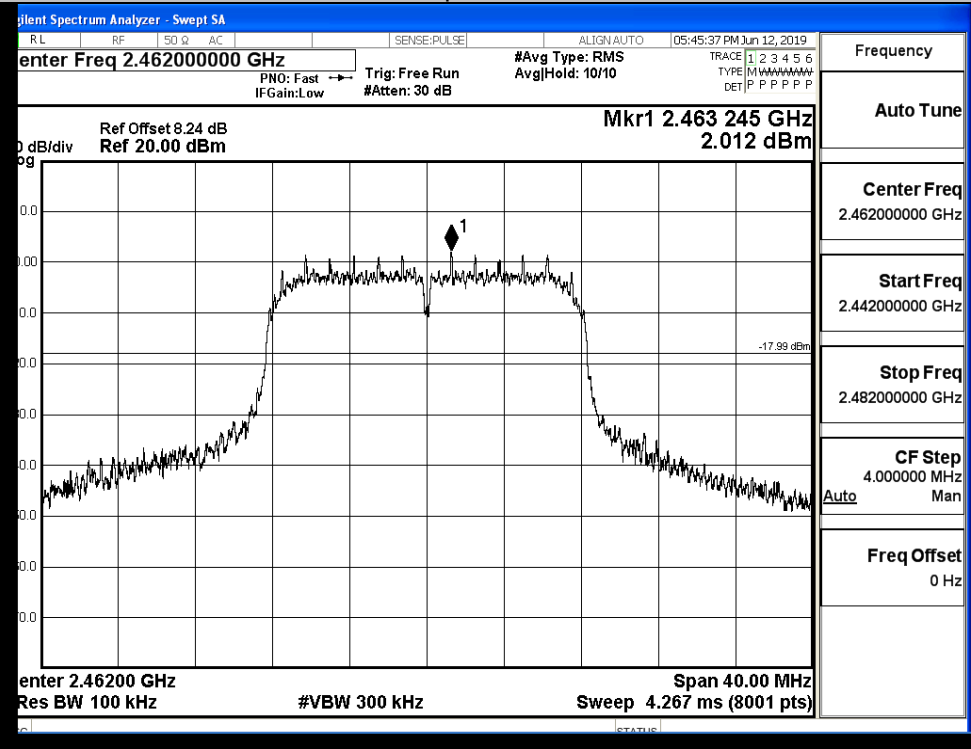


Puw/11G/MCH

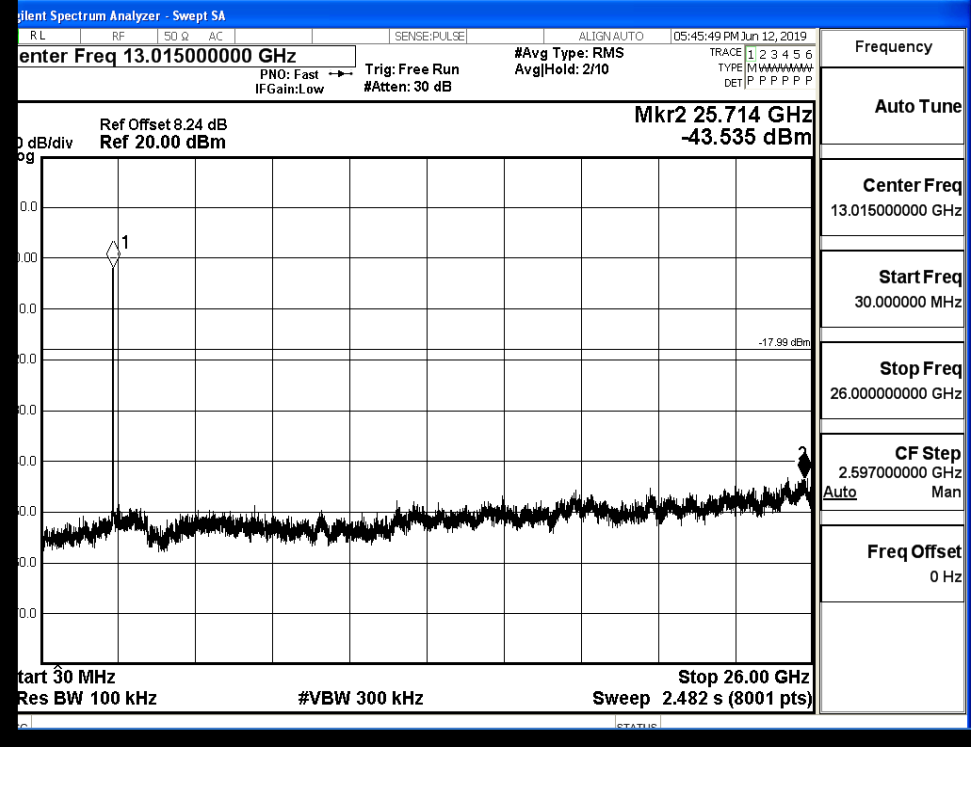


11G\_HCH\_Graphs

Pref/11G/HCH

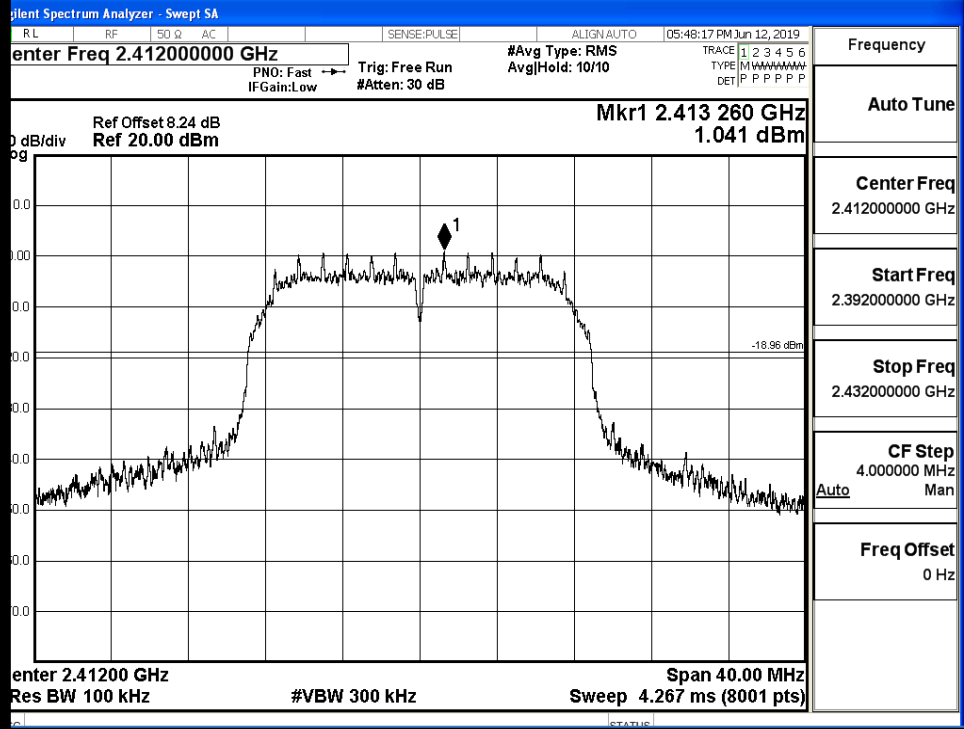


Puw/11G/HCH

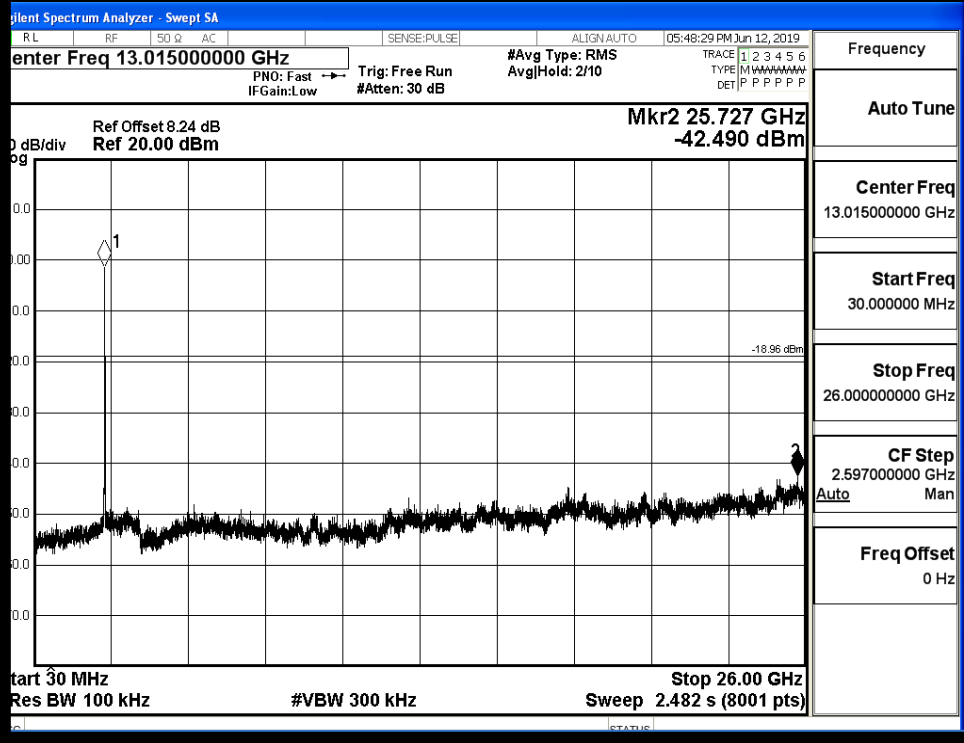


11N20SISO\_LCH\_Graphs

Pref/11N20SIS  
O/LCH

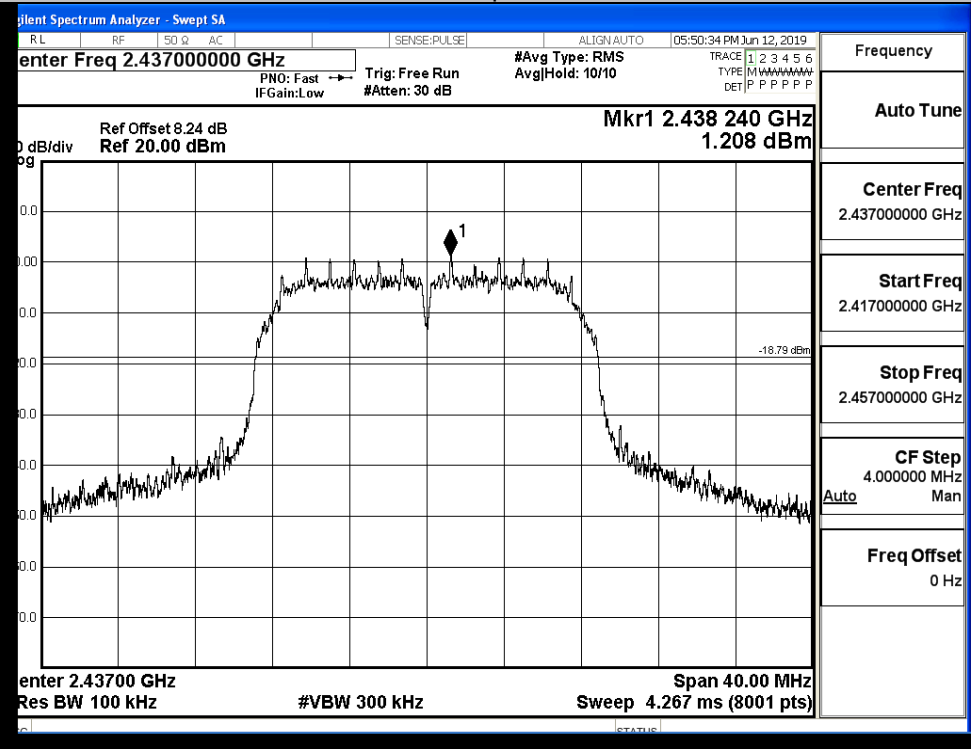


Puw/11N20  
SISO/LCH

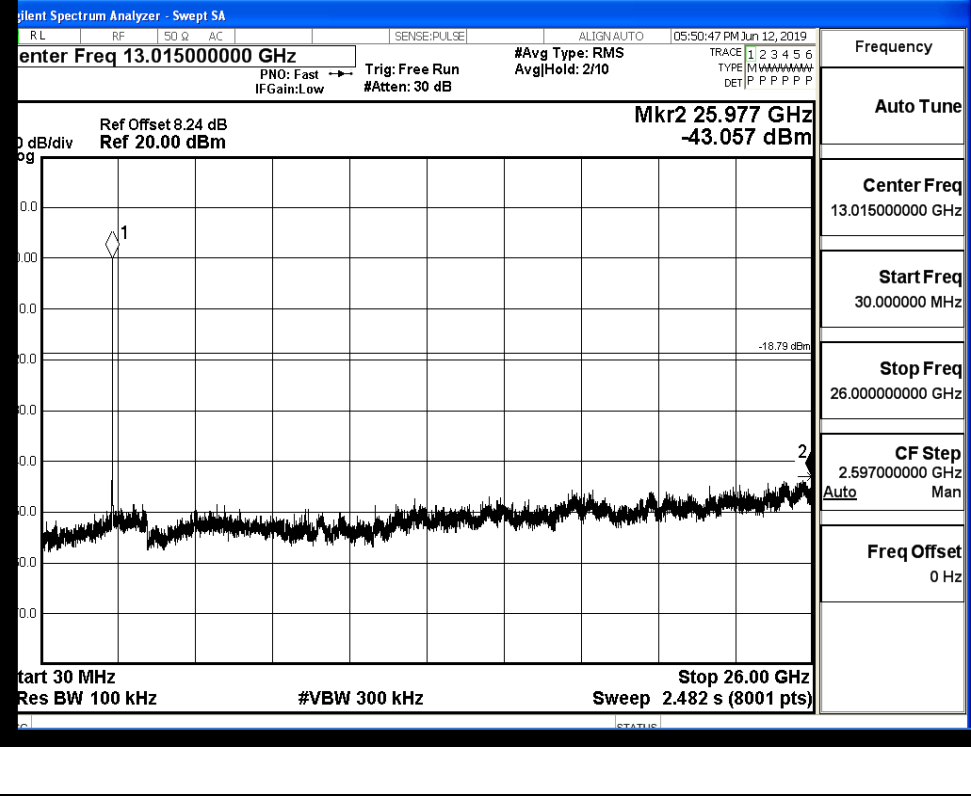


11N20SISO\_MCH\_Graphs

Pref/11N20  
SISO/MCH

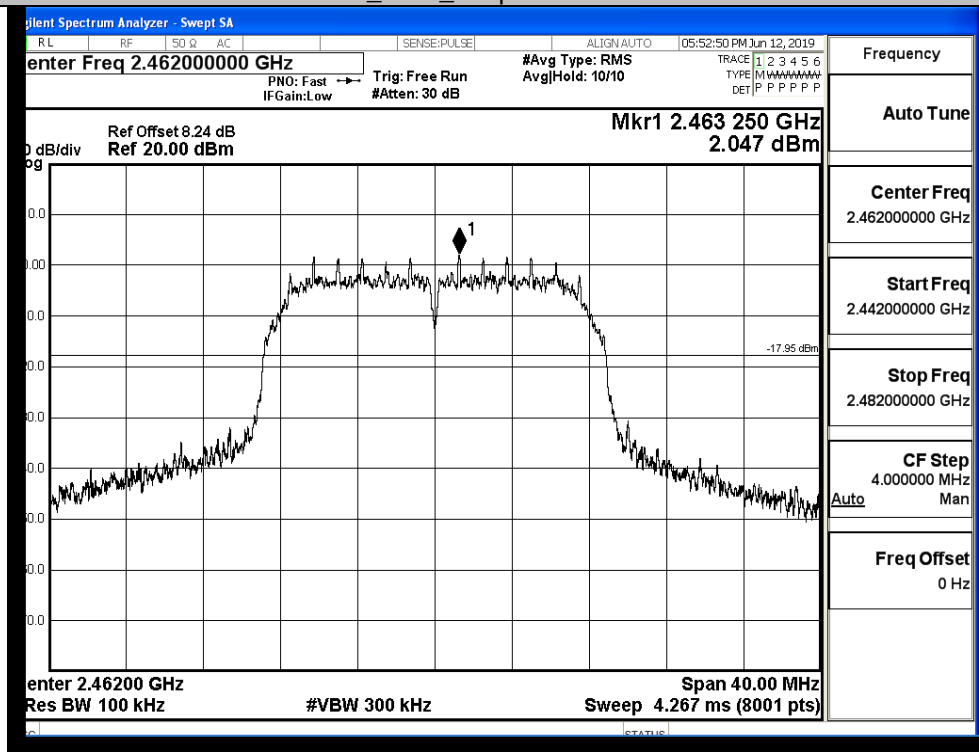


Puw/11N20  
SISO/MCH

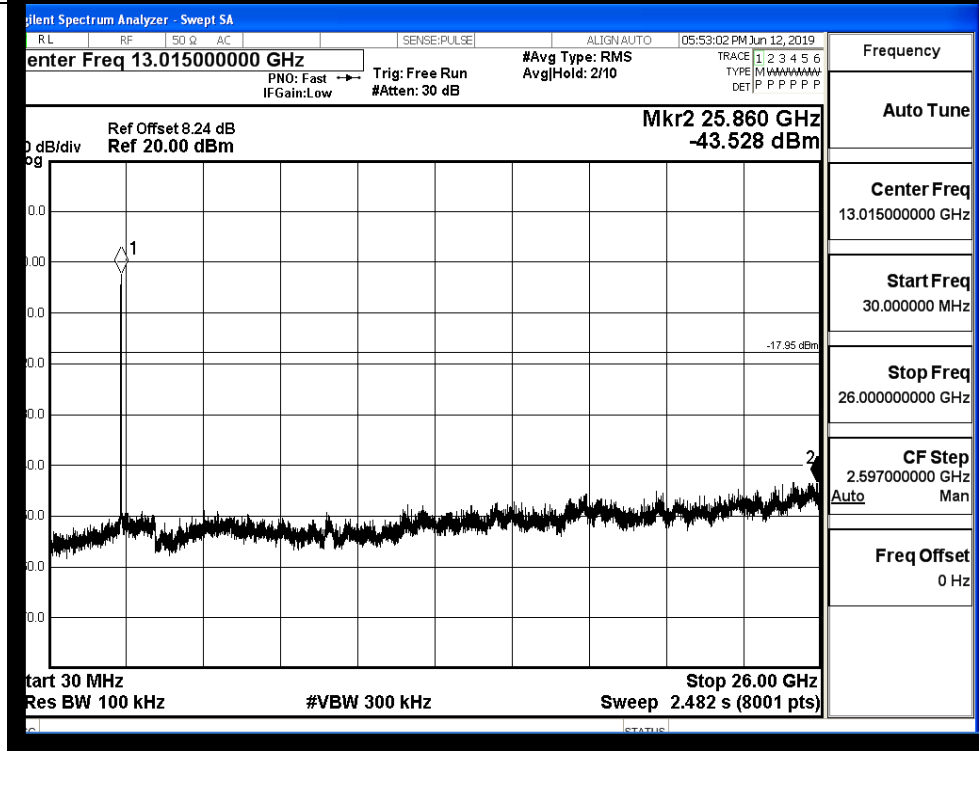


11N20SISO\_HCH\_Graphs

Pref/11N20  
SISO/HCH



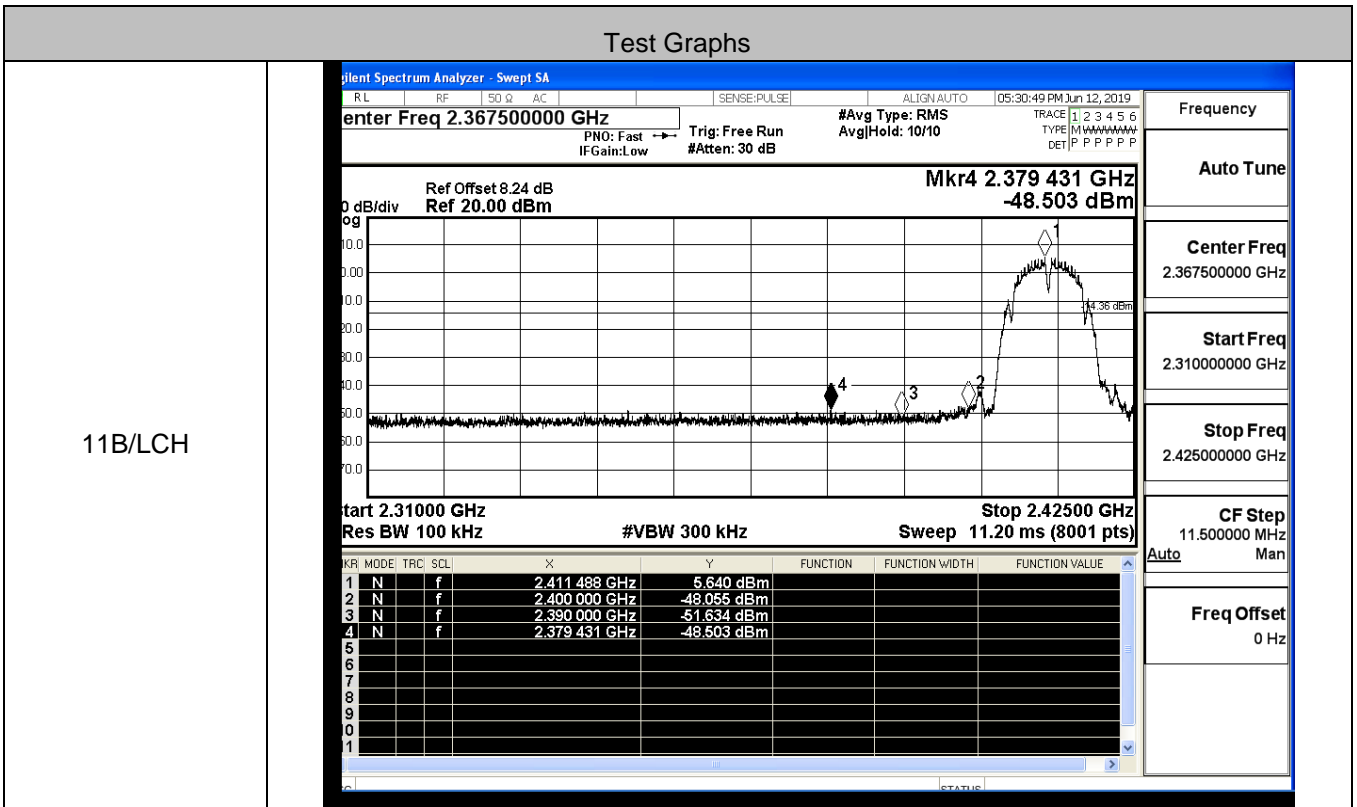
Puw/11N20  
SISO/HCH



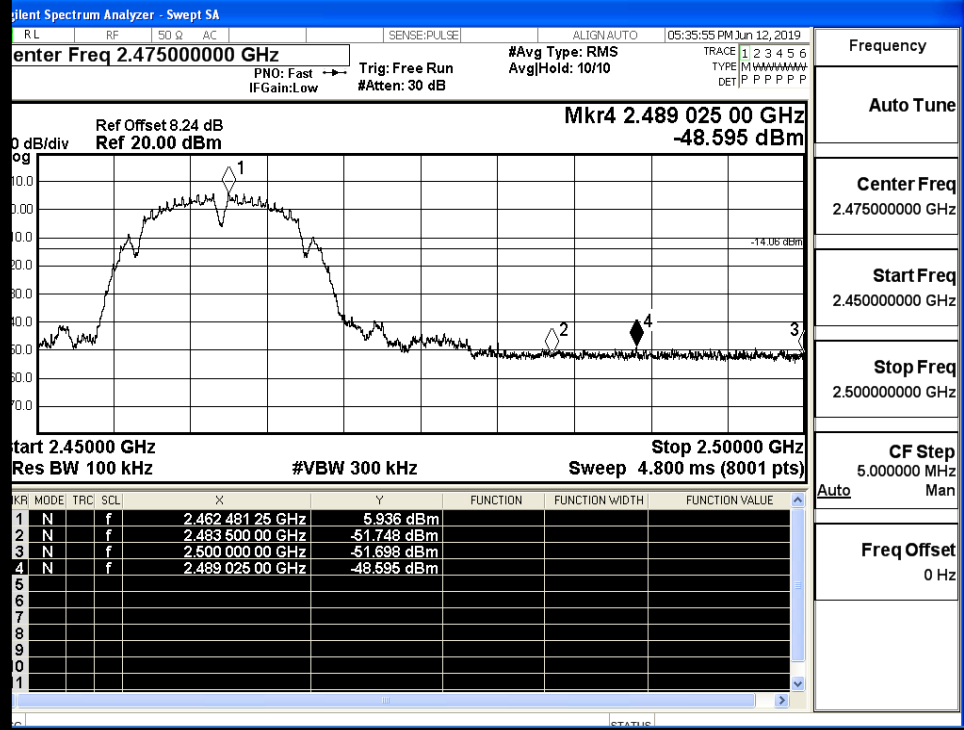


**A.6 Band-edge for RF Conducted Emissions**

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	5.640	-48.503	-14.36	PASS
	HCH	5.936	-48.595	-14.06	PASS
11G	LCH	0.631	-46.404	-19.37	PASS
	HCH	1.687	-45.295	-18.31	PASS
11N20SISO	LCH	0.804	-46.732	-19.2	PASS
	HCH	2.013	-45.840	-17.99	PASS

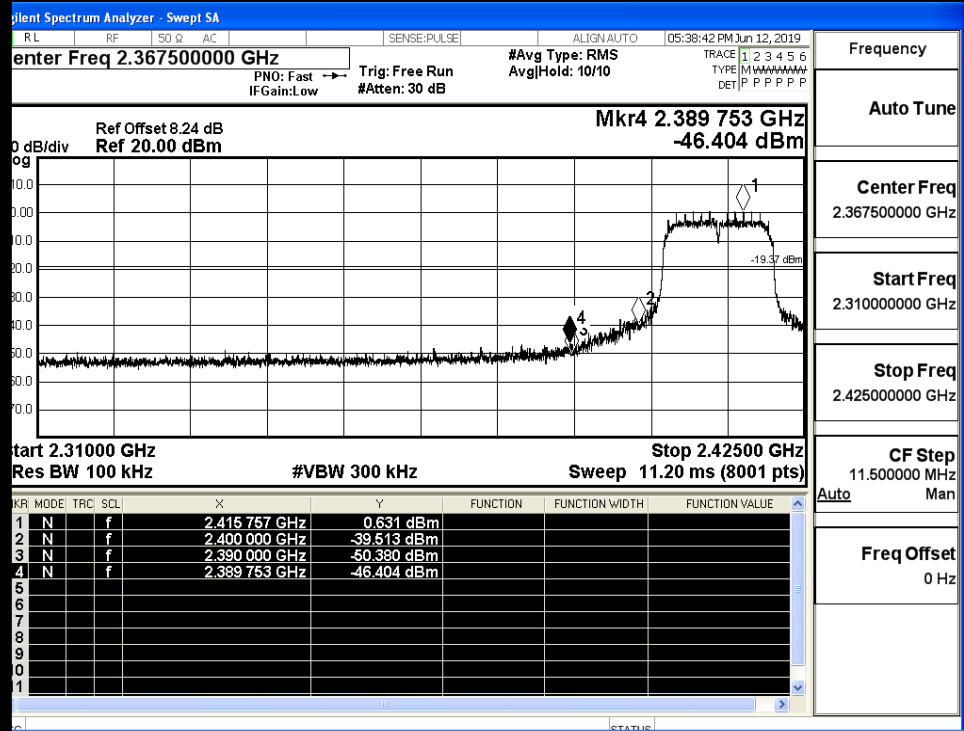


11B/HCH



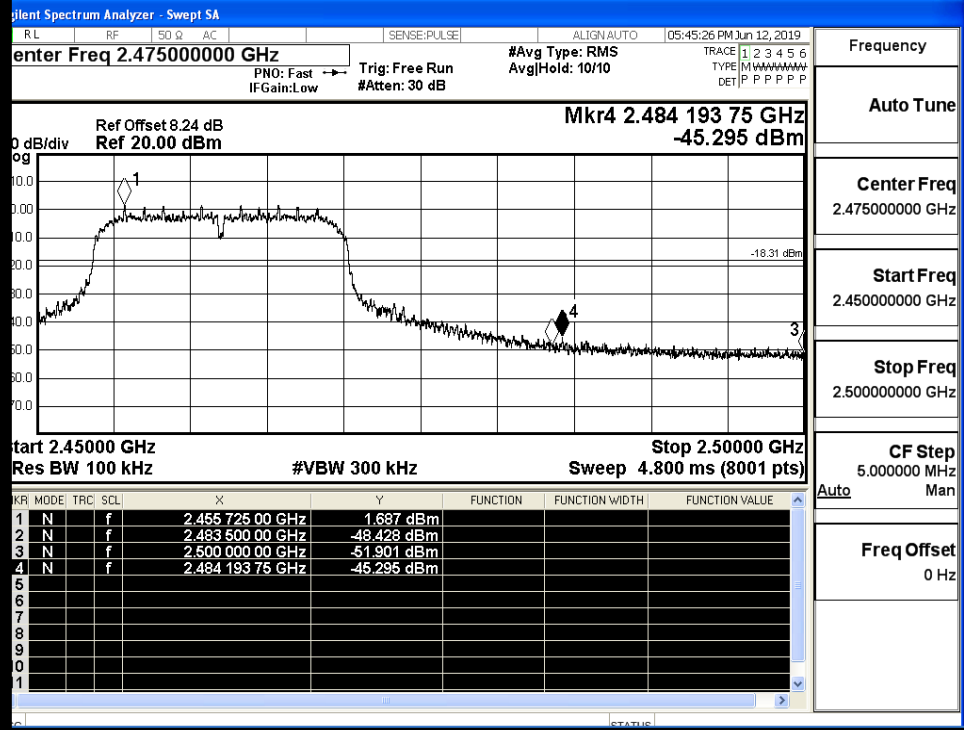
Frequency
Auto Tune
Center Freq 2.47500000 GHz
Start Freq 2.45000000 GHz
Stop Freq 2.50000000 GHz
CF Step 5.000000 MHz
Freq Offset 0 Hz

11G/LCH

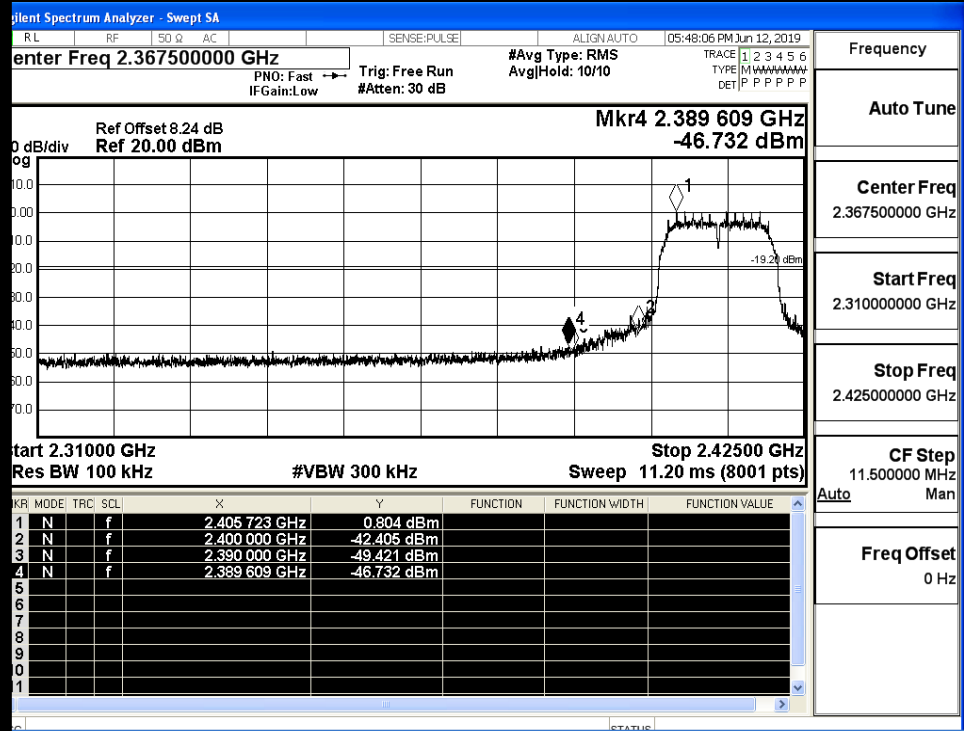


Frequency
Auto Tune
Center Freq 2.36750000 GHz
Start Freq 2.31000000 GHz
Stop Freq 2.42500000 GHz
CF Step 11.500000 MHz
Freq Offset 0 Hz

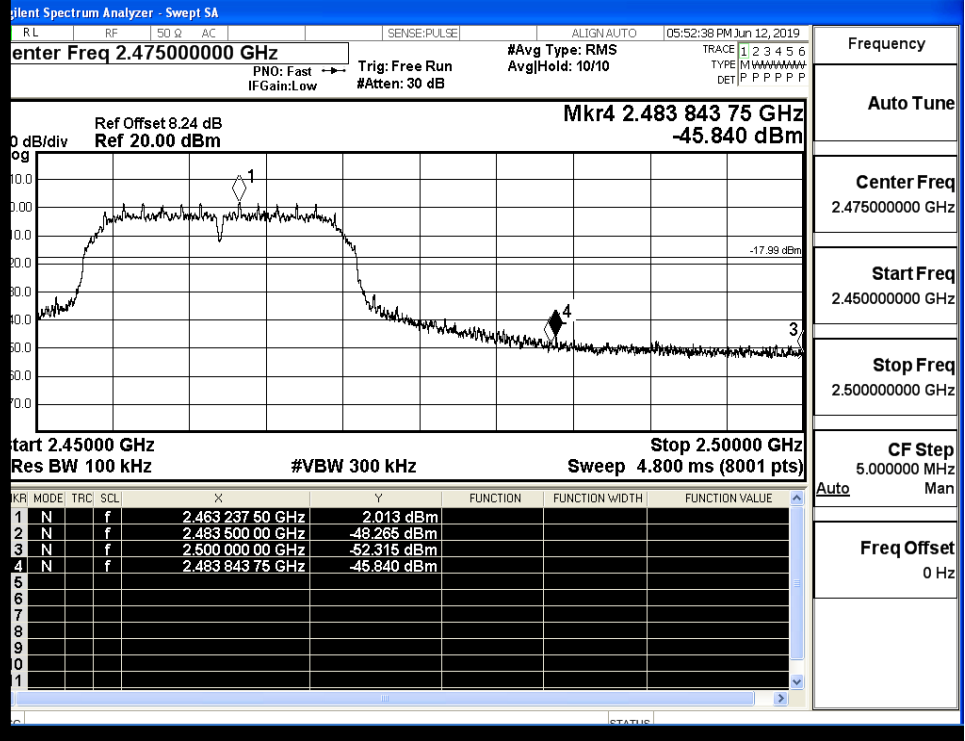
11G/HCH



11N20SISO/LCH



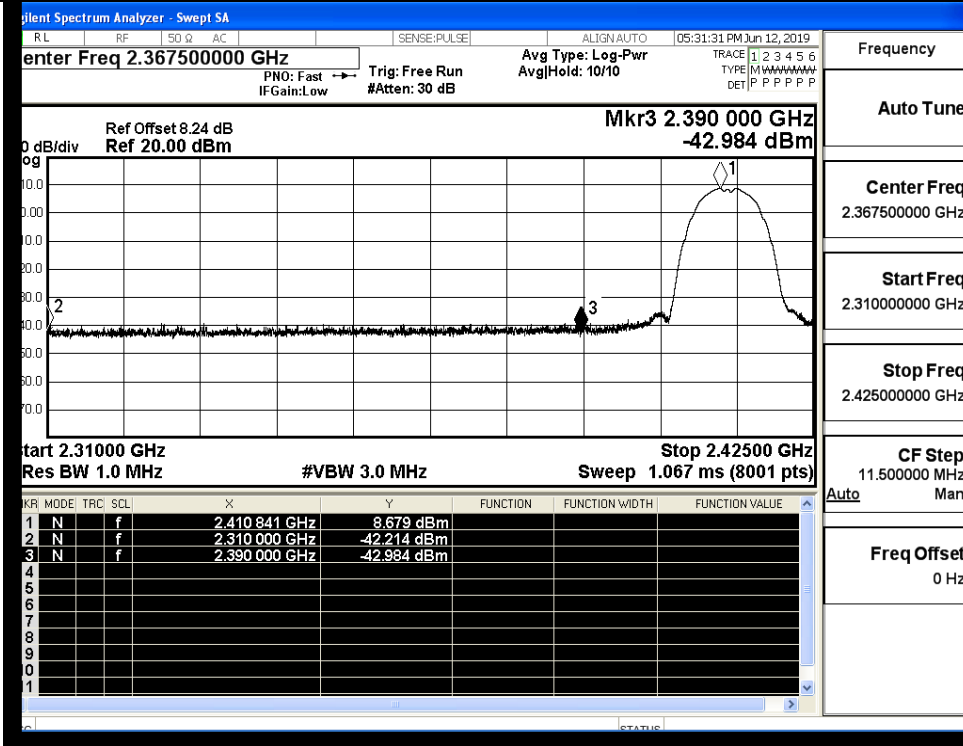
11N20SISO/HCH



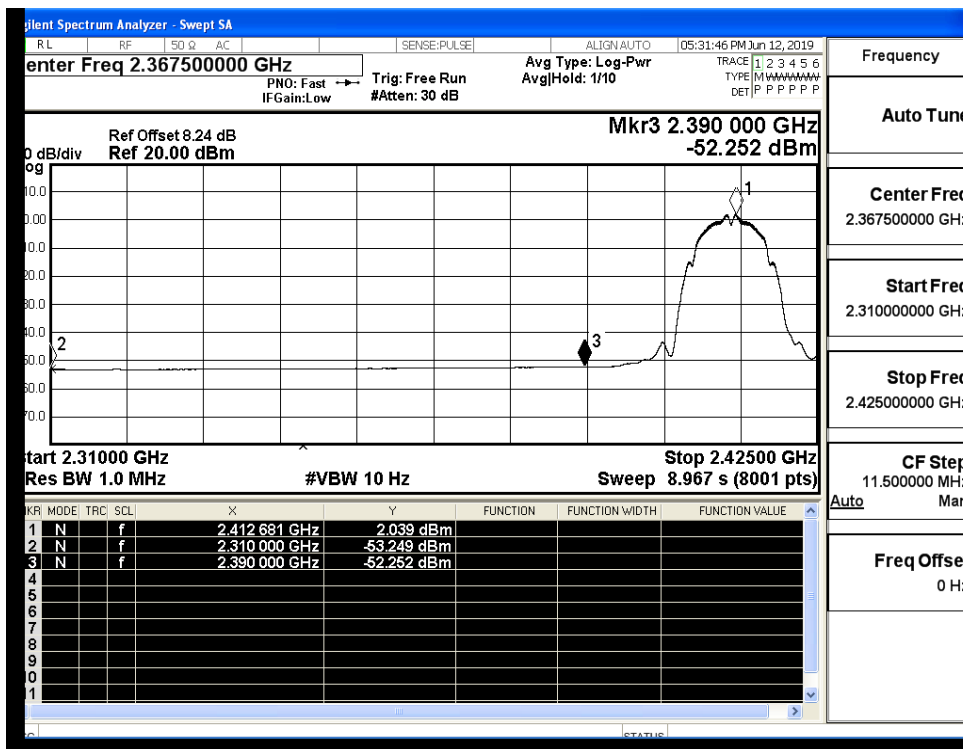
## A.7 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBu V/m]	Verdict
11B	2412	Ant1	2310.0	-42.21	2.5	0	55.49	PEAK	74	PASS
	2412	Ant1	2310.0	-53.25	2.5	0	44.45	AV	54	PASS
	2412	Ant1	2390.0	-42.98	2.5	0	54.72	PEAK	74	PASS
	2412	Ant1	2390.0	-52.25	2.5	0	45.45	AV	54	PASS
	2462	Ant1	2483.5	-41.91	2.5	0	55.79	PEAK	74	PASS
	2462	Ant1	2483.5	-51.59	2.5	0	46.11	AV	54	PASS
	2462	Ant1	2500.0	-41.66	2.5	0	56.04	PEAK	74	PASS
	2462	Ant1	2500.0	-52.25	2.5	0	45.45	AV	54	PASS
11G	2412	Ant1	2310.0	-43.01	2.5	0	54.69	PEAK	74	PASS
	2412	Ant1	2310.0	-53.25	2.5	0	44.45	AV	54	PASS
	2412	Ant1	2390.0	-33.52	2.5	0	64.18	PEAK	74	PASS
	2412	Ant1	2390.0	-50.81	2.5	0	46.89	AV	54	PASS
	2462	Ant1	2483.5	-35.45	2.5	0	62.25	PEAK	74	PASS
	2462	Ant1	2483.5	-50.14	2.5	0	47.56	AV	54	PASS
	2462	Ant1	2500.0	-41.72	2.5	0	55.98	PEAK	74	PASS
	2462	Ant1	2500.0	-51.94	2.5	0	45.76	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-41.93	2.5	0	55.77	PEAK	74	PASS
	2412	Ant1	2310.0	-53.21	2.5	0	44.49	AV	54	PASS
	2412	Ant1	2390.0	-36.82	2.5	0	60.88	PEAK	74	PASS
	2412	Ant1	2390.0	-51.14	2.5	0	46.56	AV	54	PASS
	2462	Ant1	2483.5	-36.07	2.5	0	61.63	PEAK	74	PASS
	2462	Ant1	2483.5	-50.27	2.5	0	47.43	AV	54	PASS
	2462	Ant1	2500.0	-42.26	2.5	0	55.44	PEAK	74	PASS
	2462	Ant1	2500.0	-52.03	2.5	0	45.67	AV	54	PASS

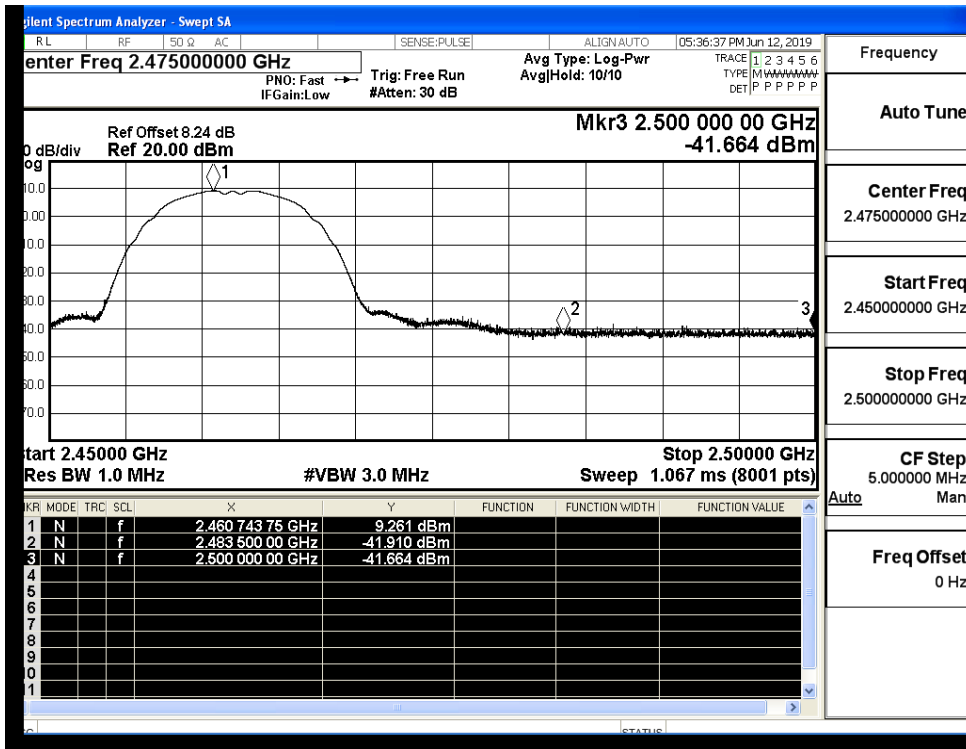
Restrict-band band-edge measurements\_11B\_2412\_Ant1\_PEAK



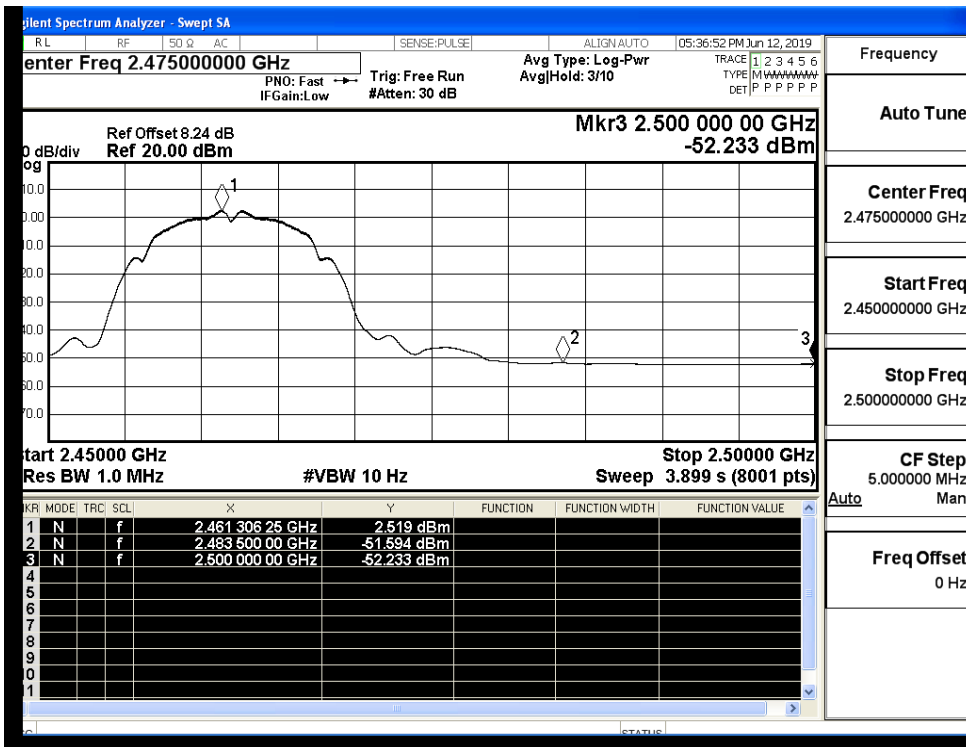
Restrict-band band-edge measurements\_11B\_2412\_Ant1\_AV



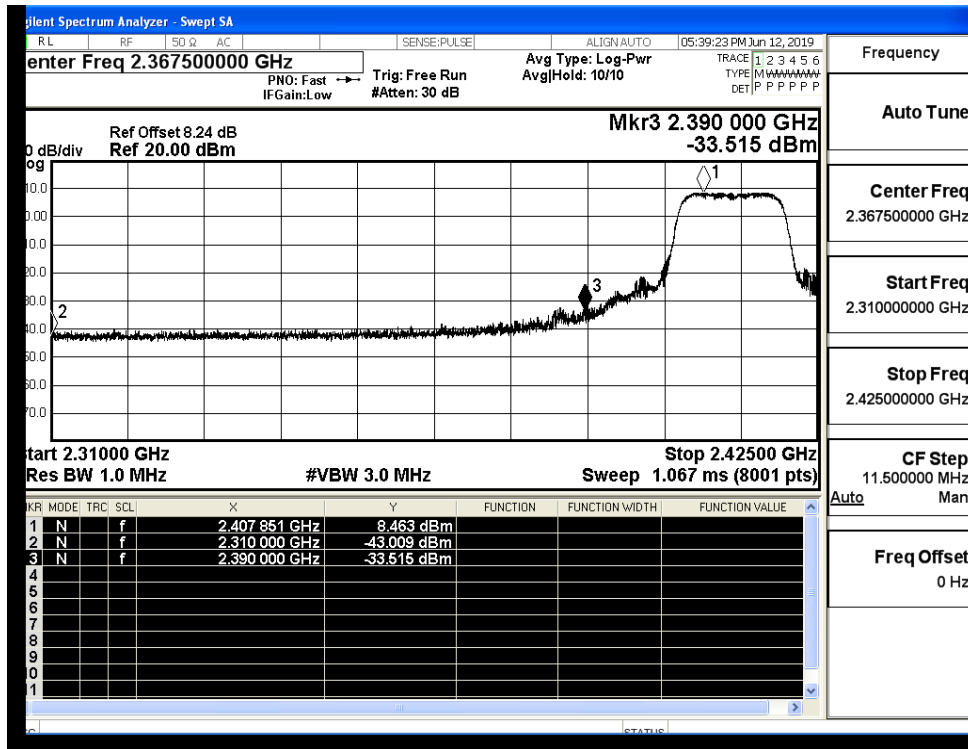
Restrict-band band-edge measurements\_11B\_2462\_Ant1\_PEAK



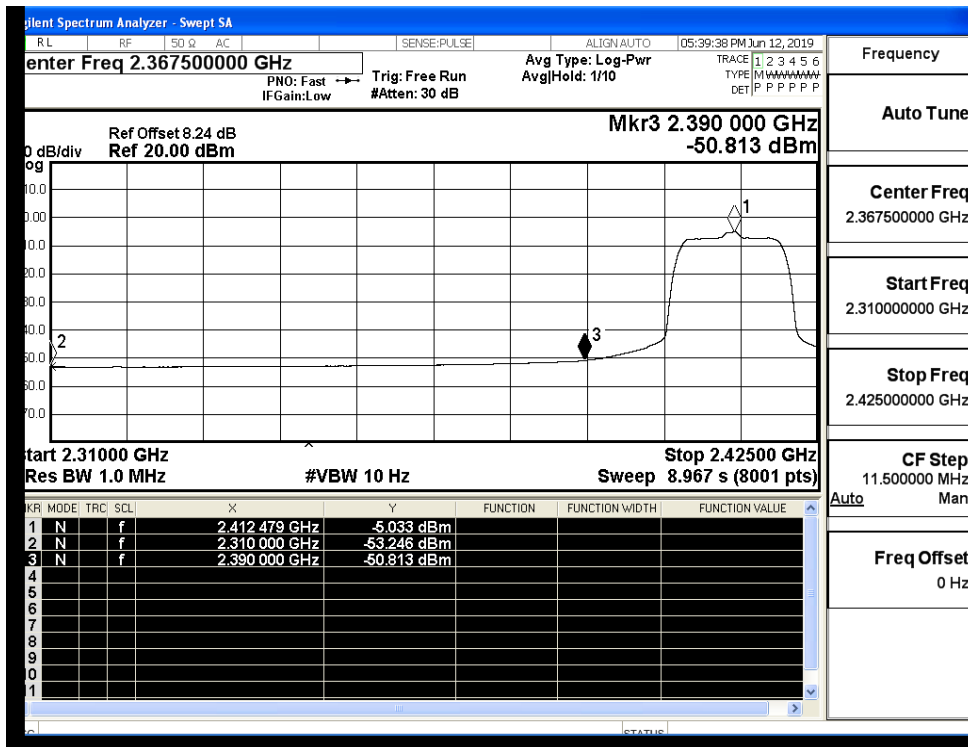
Restrict-band band-edge measurements\_11B\_2462\_Ant1\_AV



Restrict-band band-edge measurements\_11G\_2412\_Ant1\_PEAK

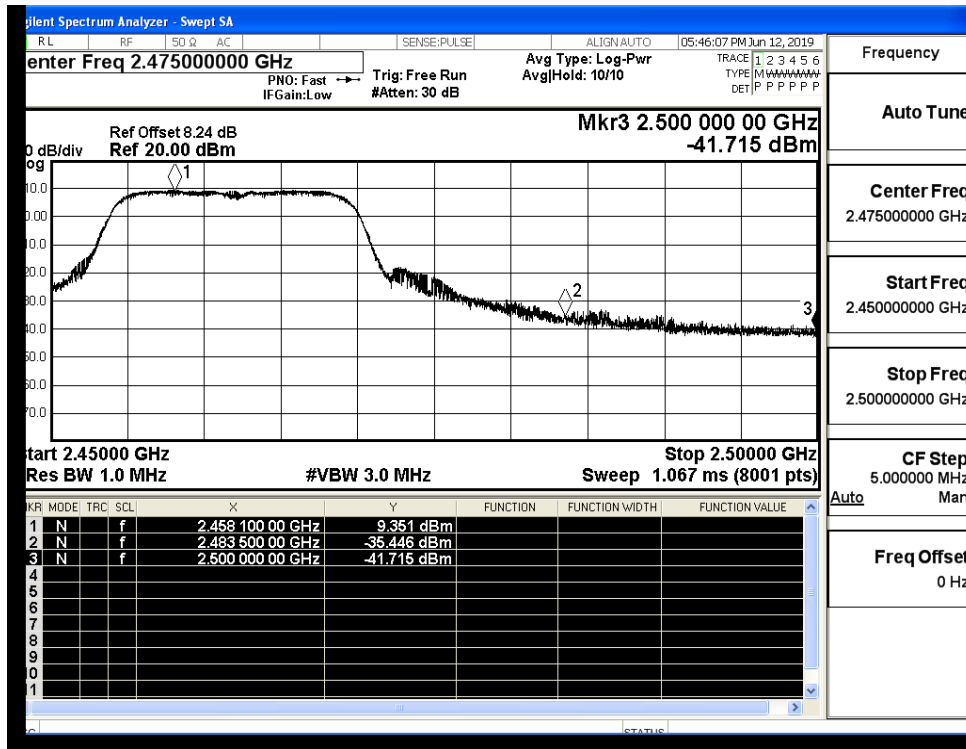


Restrict-band band-edge measurements\_11G\_2412\_Ant1\_AV

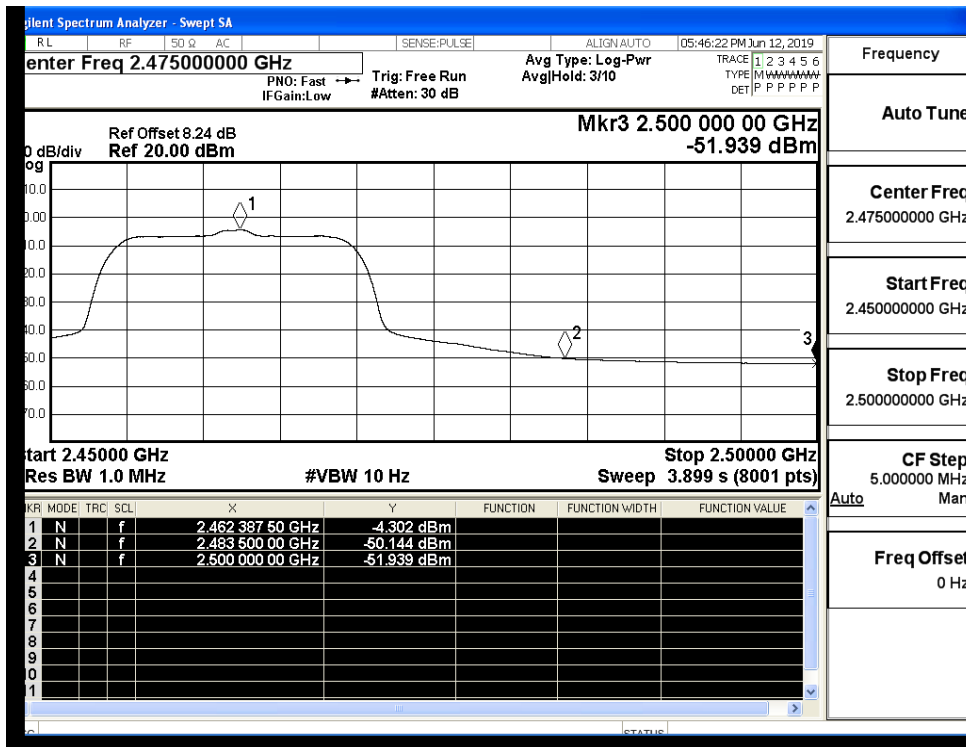




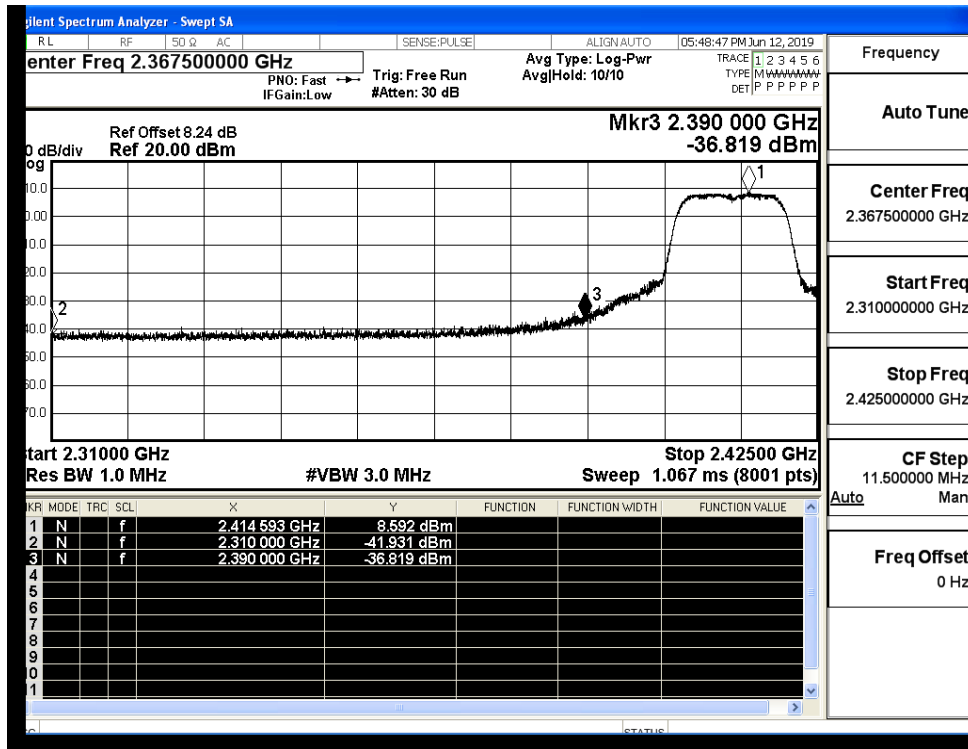
Restrict-band band-edge measurements\_11G\_2462\_Ant1\_PEAK



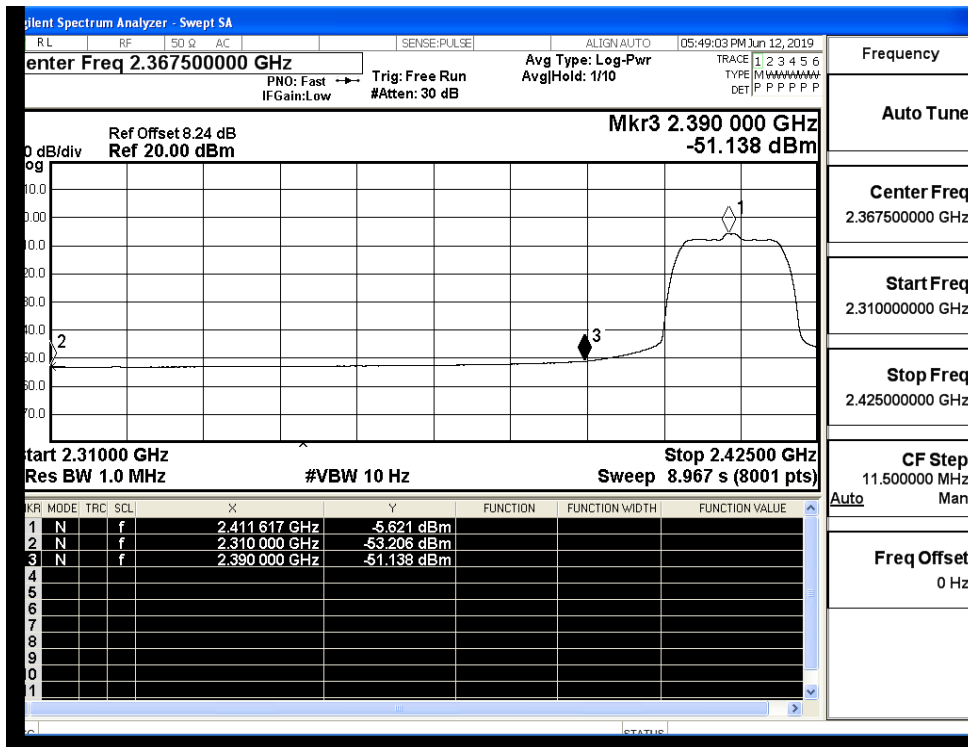
Restrict-band band-edge measurements\_11G\_2462\_Ant1\_AV



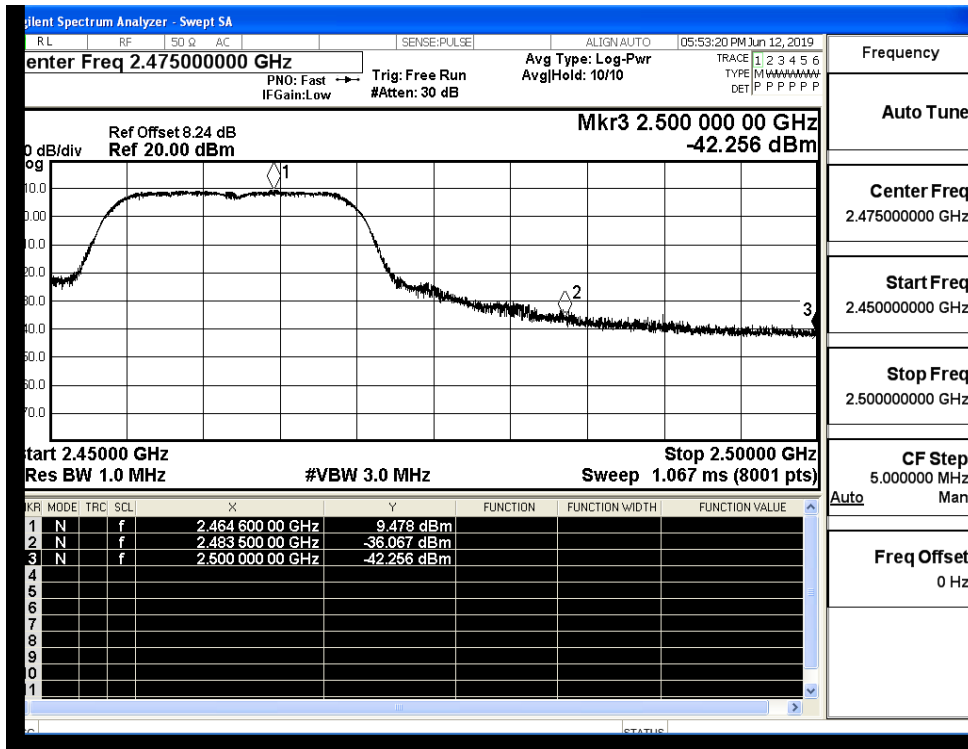
Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_PEAK



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

