

Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: GNSS RECEIVER

Trade Mark: KOLIDA, SANDING, RUIDE, TIANYU, SOUTH

Test Model: G1Star

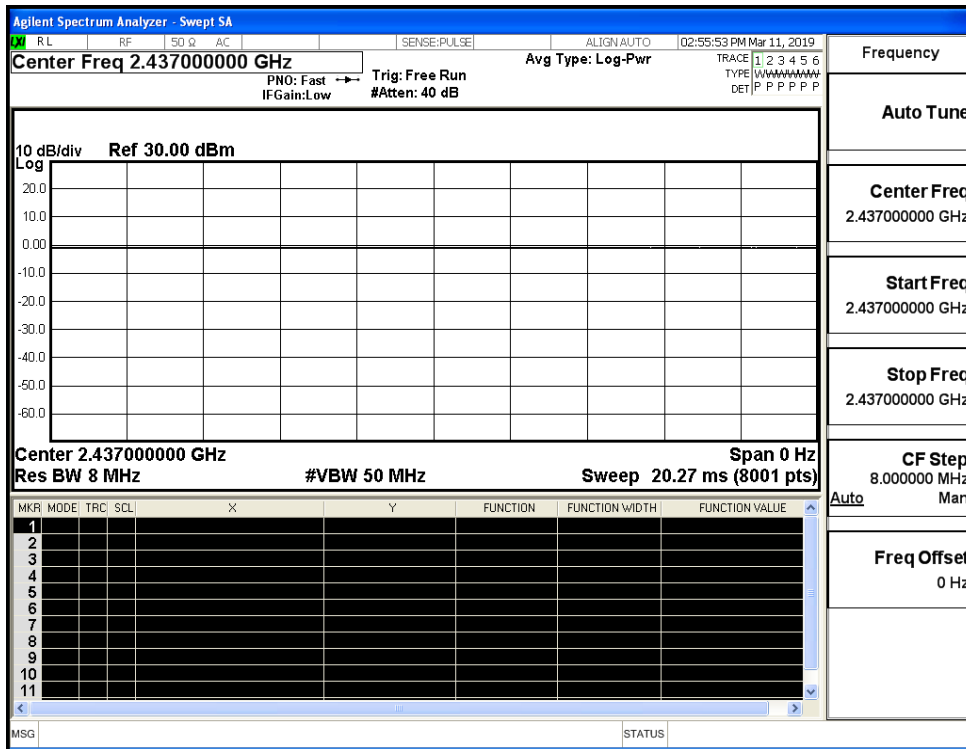
Environmental Conditions

Temperature:	23.2 ° C
Relative Humidity:	53.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Mina.Xu
Supervised by:	Tom.Liu

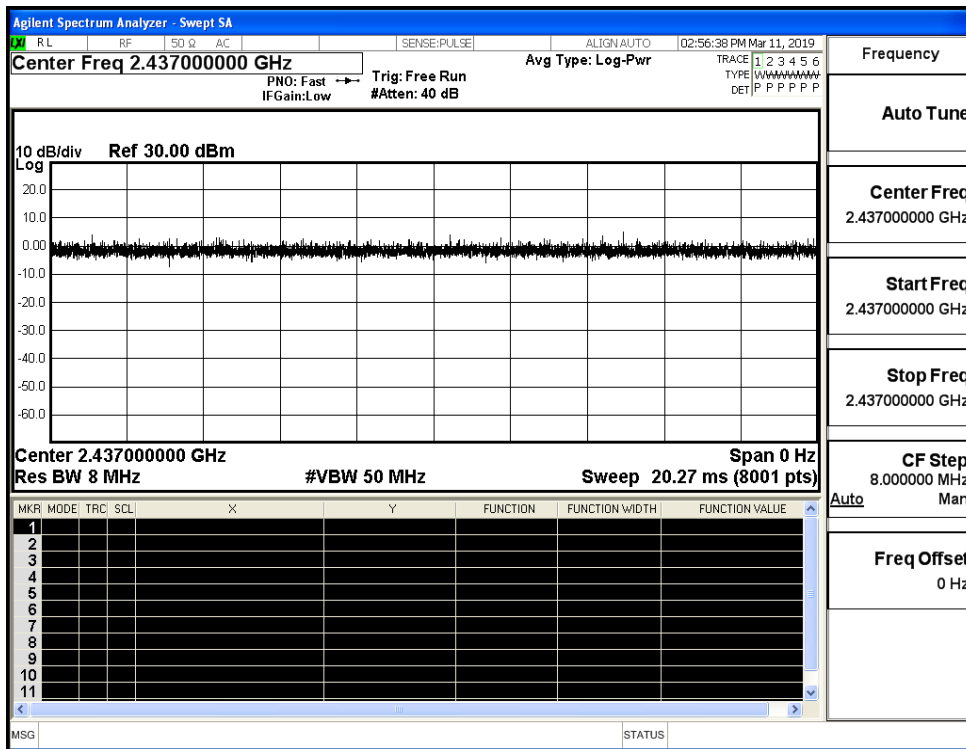
C.1 Duty Cycle

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

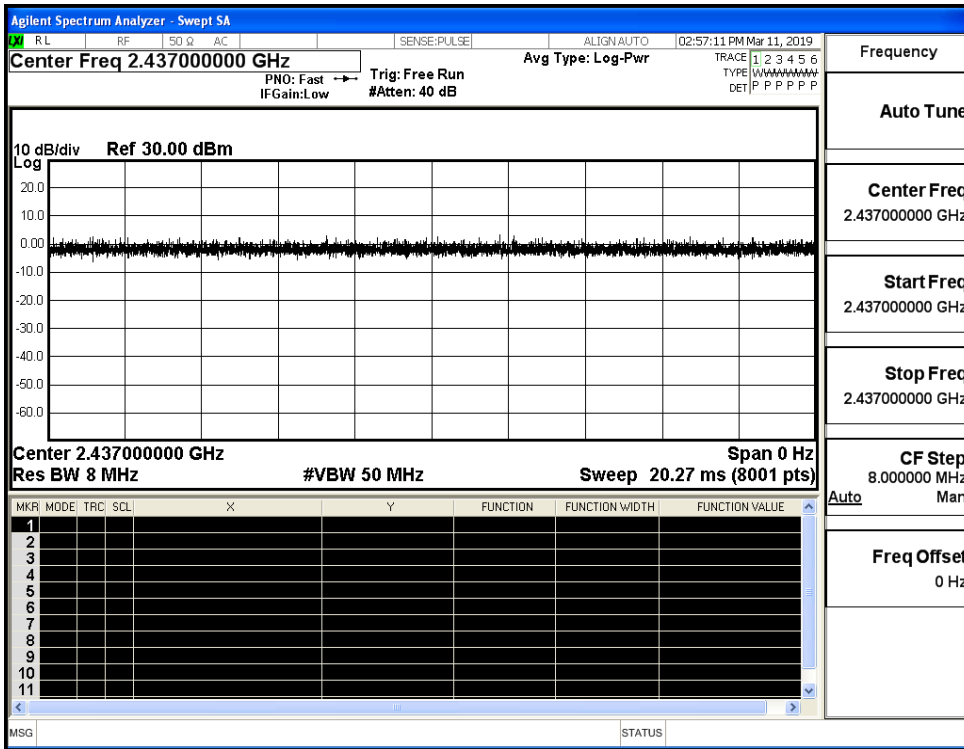
Duty Cycle_11B_2437_Ant1



Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1

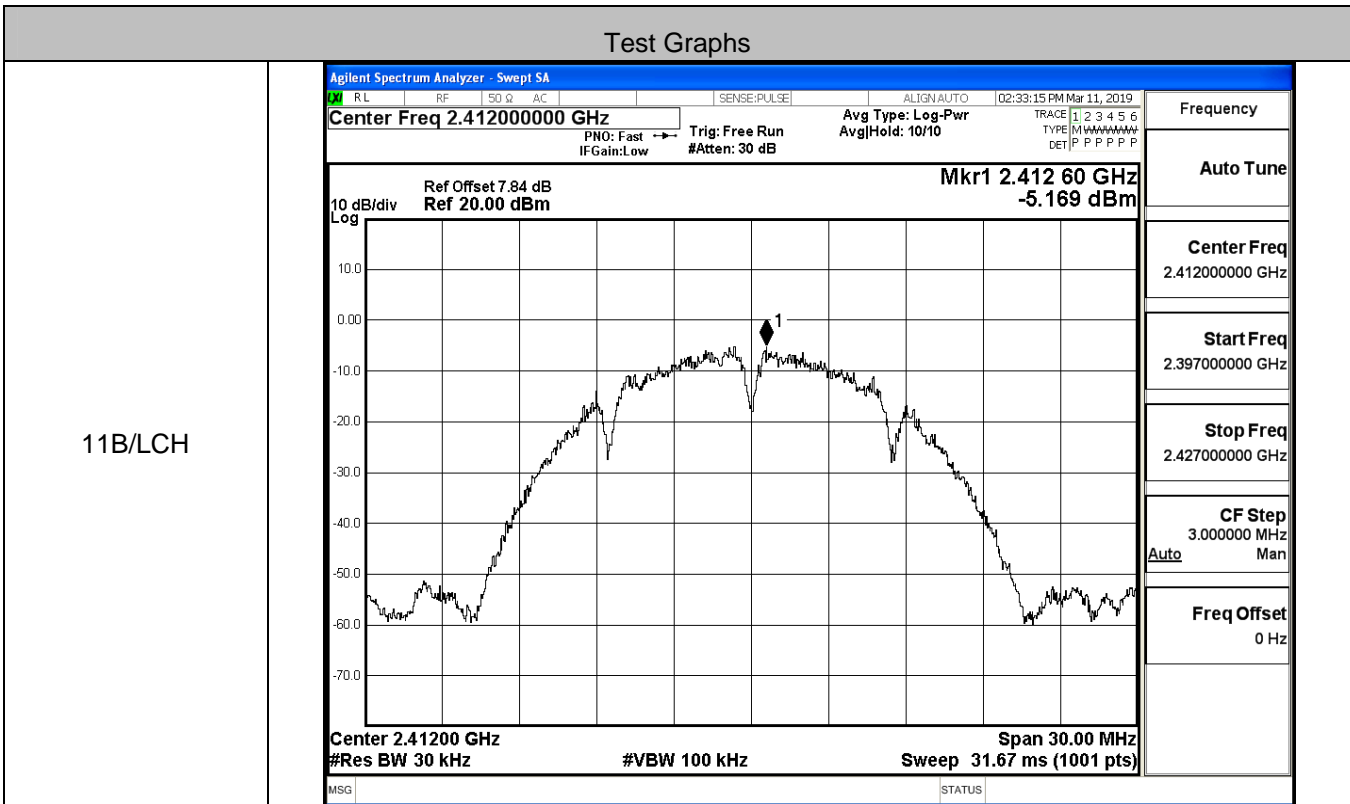


C.2 Maximum Conducted Output Power

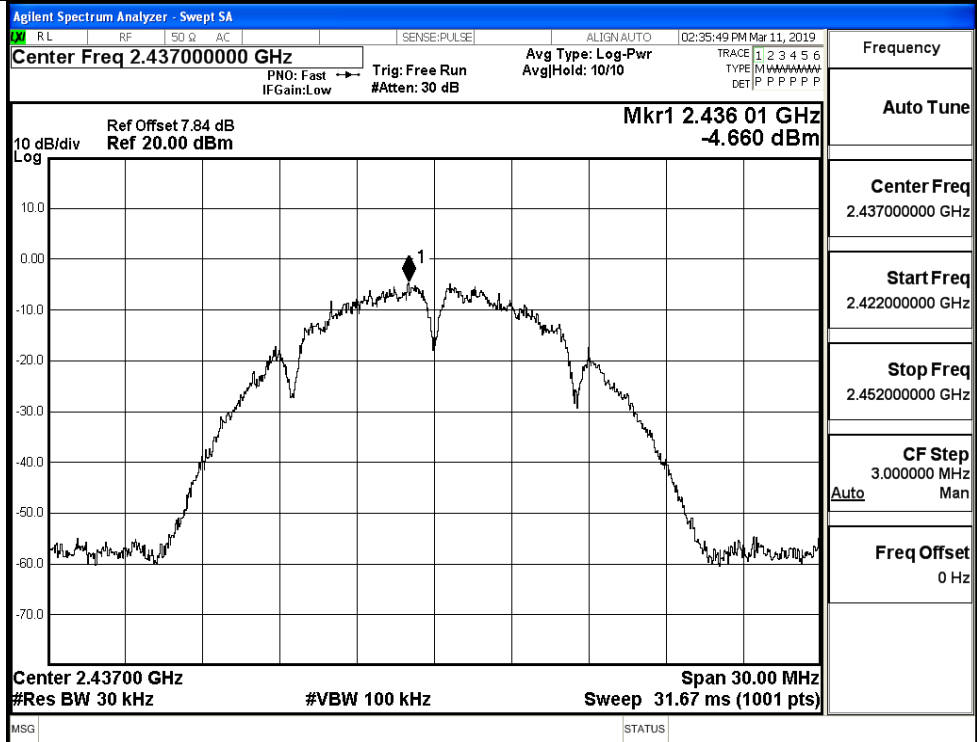
Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	17.26	30	PASS
	MCH	17.49	30	PASS
	HCH	17.52	30	PASS
11G	LCH	16.79	30	PASS
	MCH	16.77	30	PASS
	HCH	16.59	30	PASS
11N20SISO	LCH	16.27	30	PASS
	MCH	16.74	30	PASS
	HCH	16.55	30	PASS

C.3 Maximum Power Spectral Density

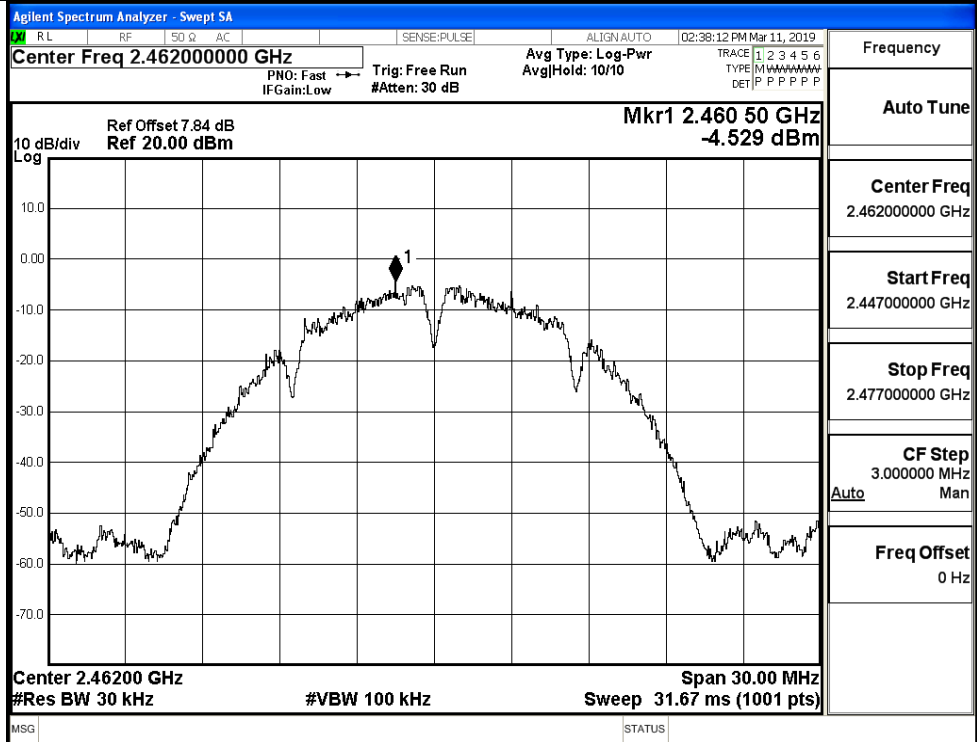
Mode	Channel	Meas.Level [dBm/30KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-5.169	8	PASS
	MCH	-4.660	8	PASS
	HCH	-4.529	8	PASS
11G	LCH	-13.048	8	PASS
	MCH	-11.957	8	PASS
	HCH	-13.432	8	PASS
11N20SISO	LCH	-12.988	8	PASS
	MCH	-11.520	8	PASS
	HCH	-12.212	8	PASS



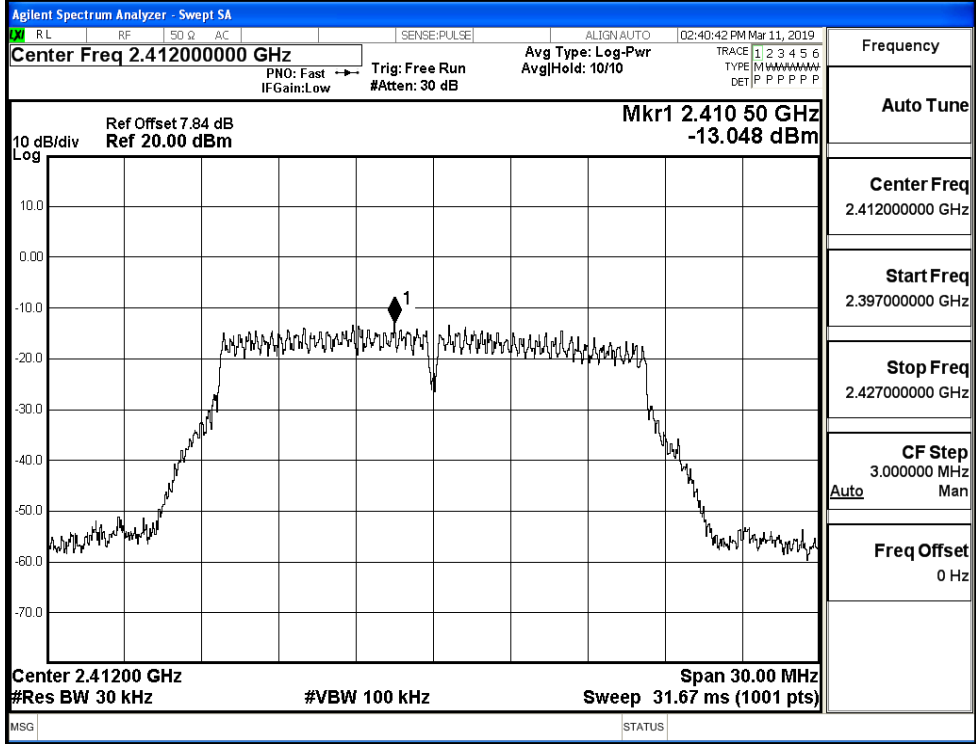
11B/MCH



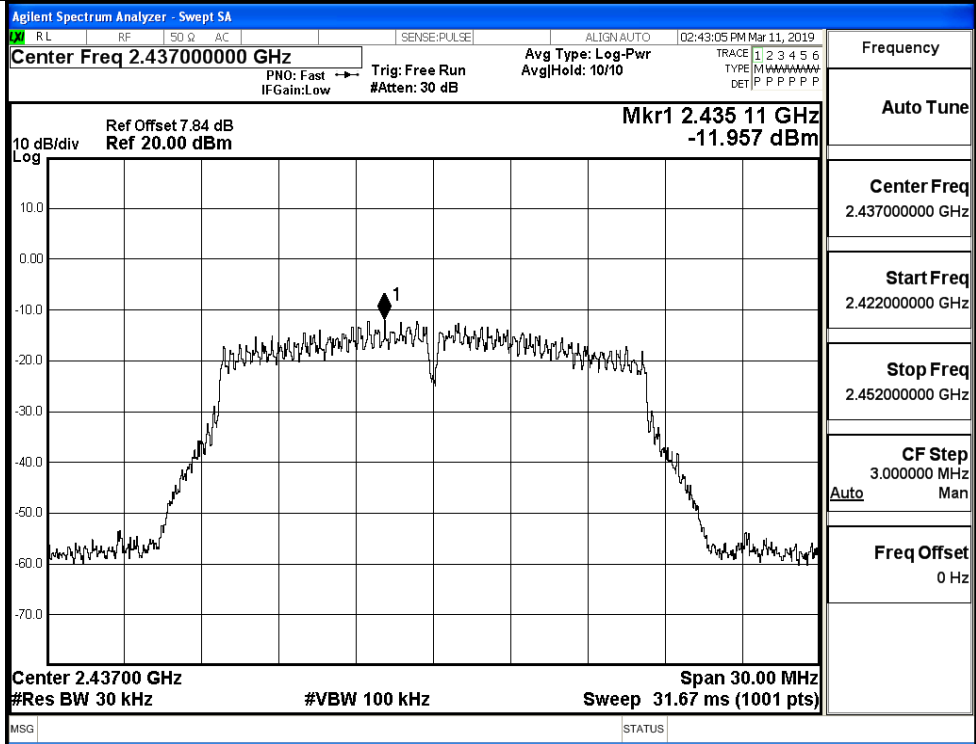
11B/HCH



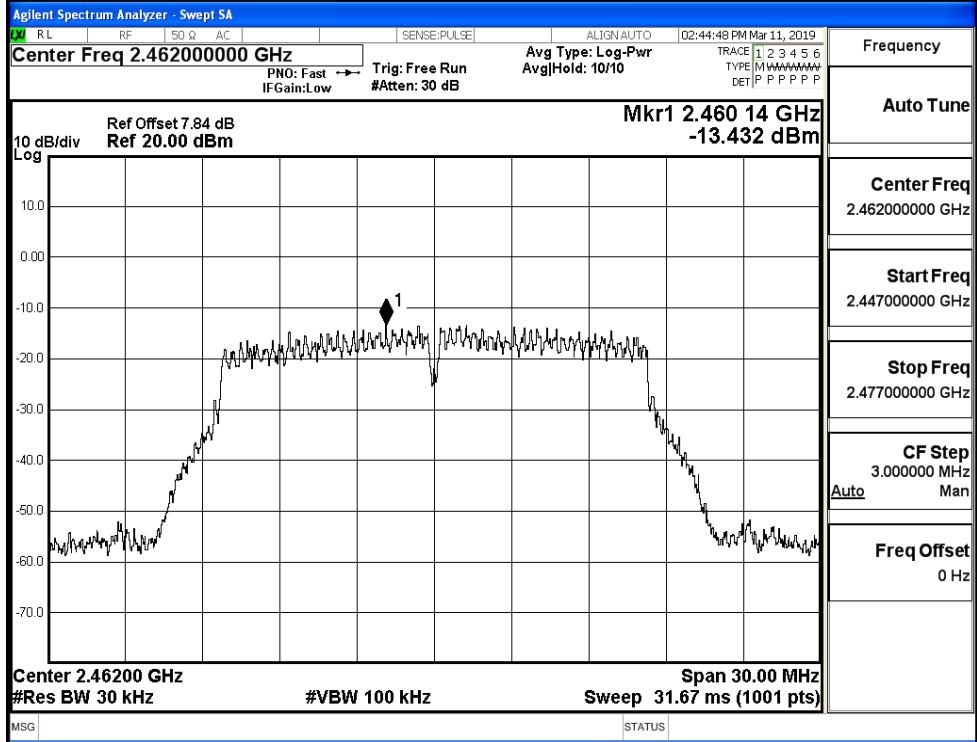
11G/LCH



11G/MCH

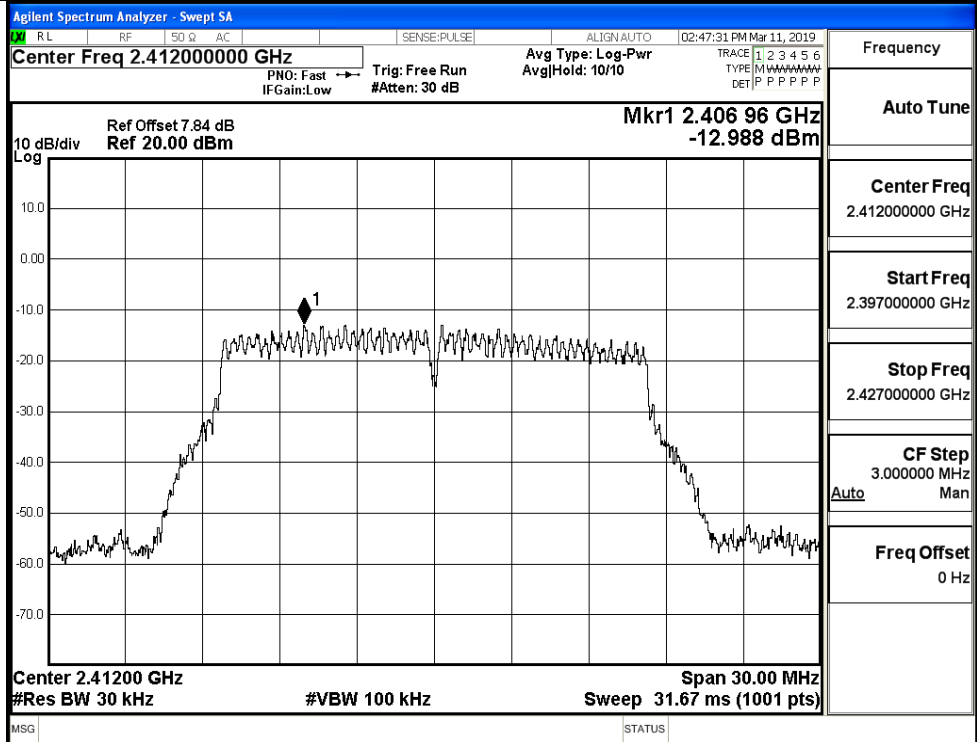


11G/HCH



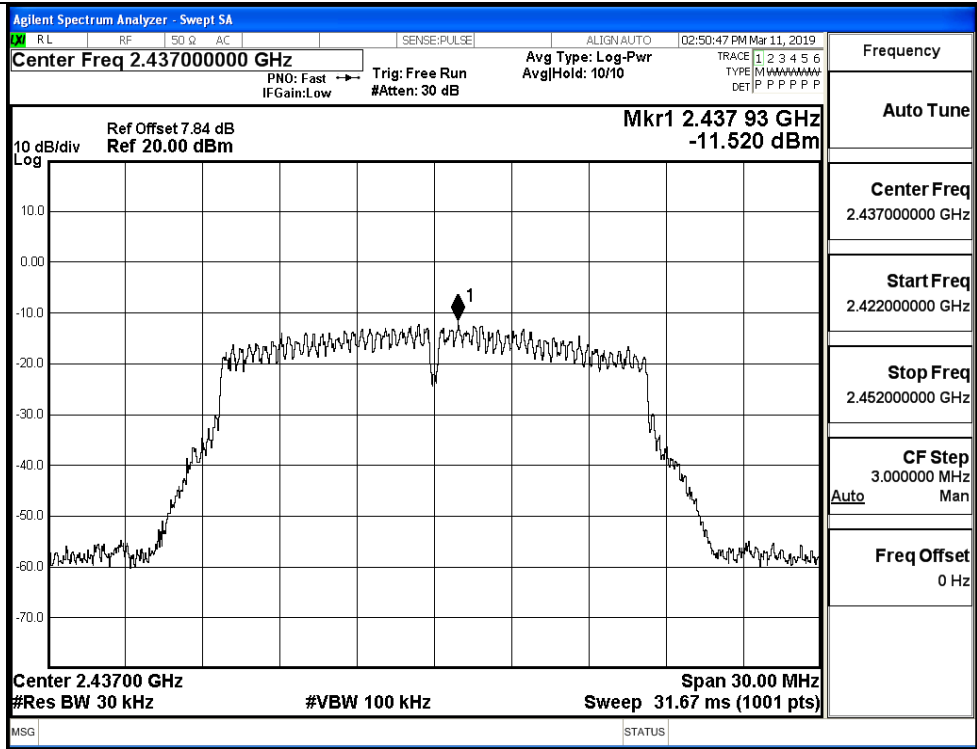
Frequency
Auto Tune
Center Freq 2.462000000 GHz
Start Freq 2.447000000 GHz
Stop Freq 2.477000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

11N20SISO/LCH

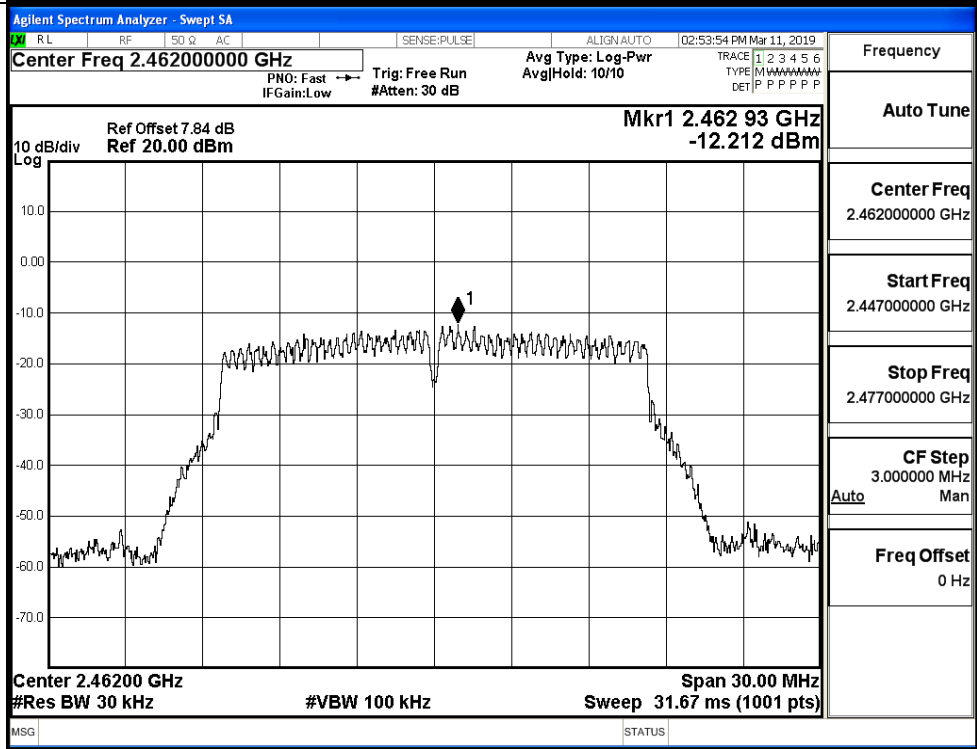


Frequency
Auto Tune
Center Freq 2.412000000 GHz
Start Freq 2.397000000 GHz
Stop Freq 2.427000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

11N20SISO/MCH



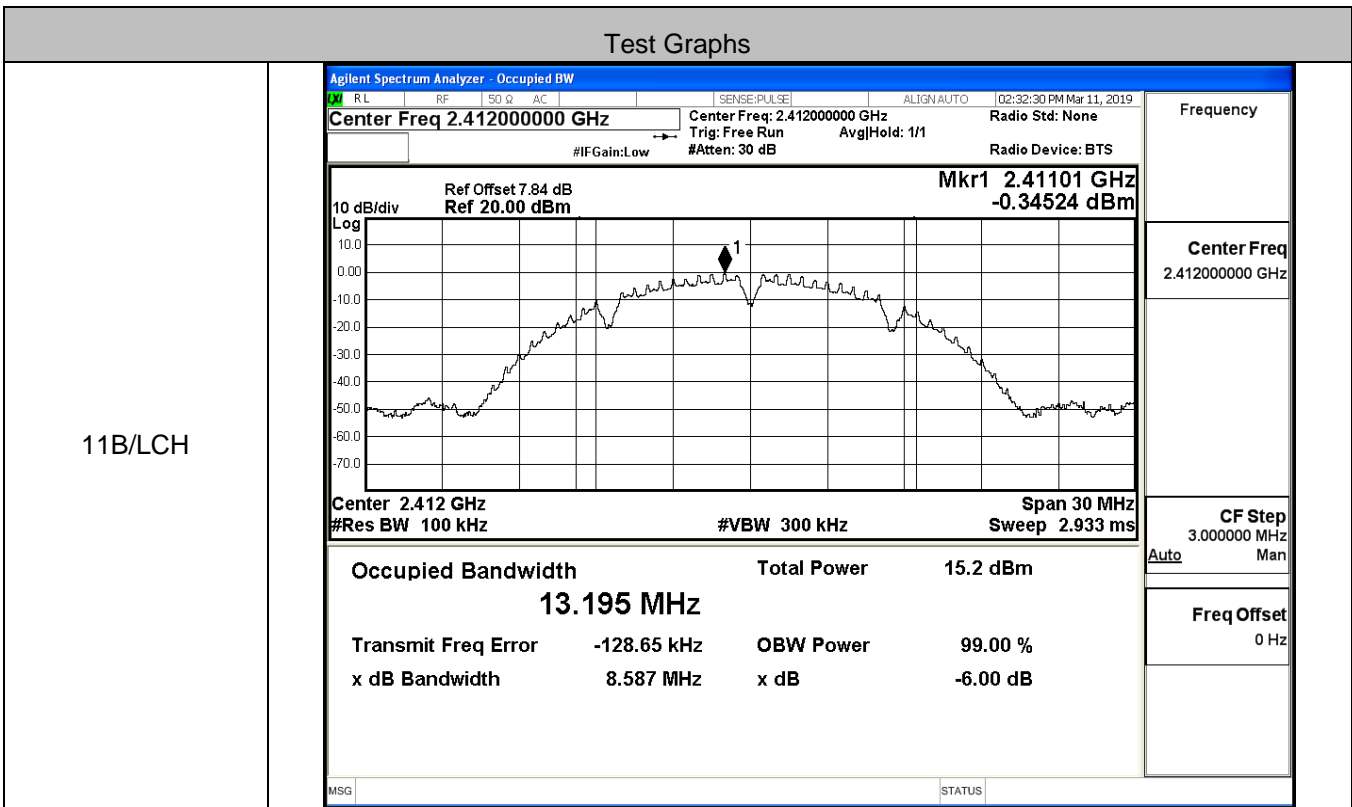
11N20SISO/HCH



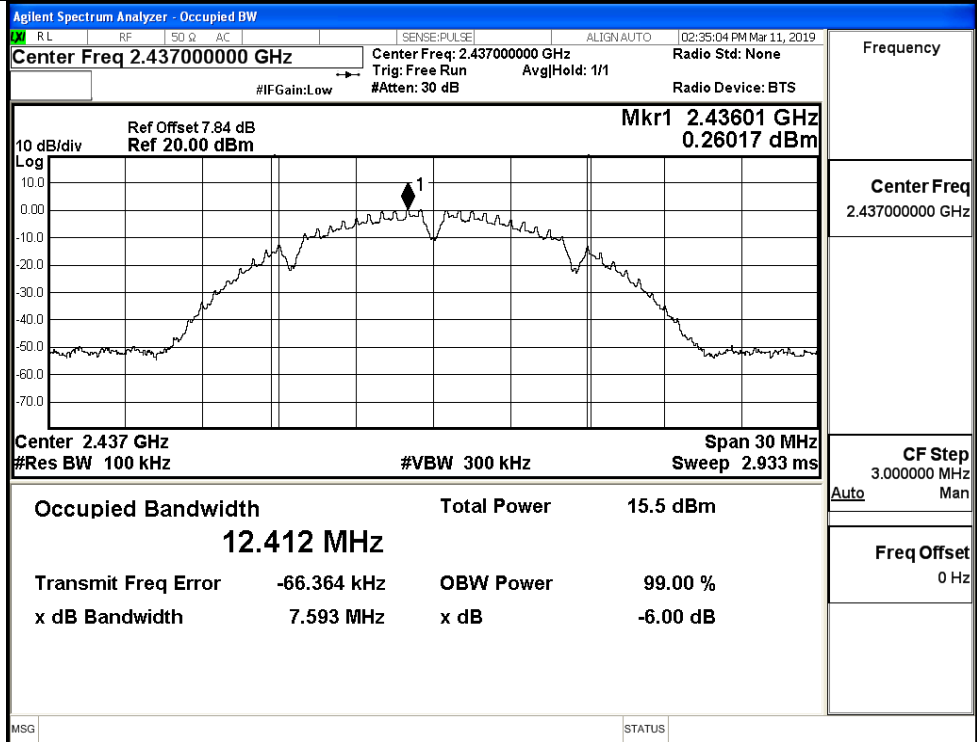
C.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	8.587	≥0.5	PASS
	MCH	7.593	≥0.5	PASS
	HCH	8.563	≥0.5	PASS
11G	LCH	16.47	≥0.5	PASS
	MCH	15.66	≥0.5	PASS
	HCH	16.45	≥0.5	PASS
11N20SISO	LCH	16.47	≥0.5	PASS
	MCH	15.35	≥0.5	PASS
	HCH	16.46	≥0.5	PASS

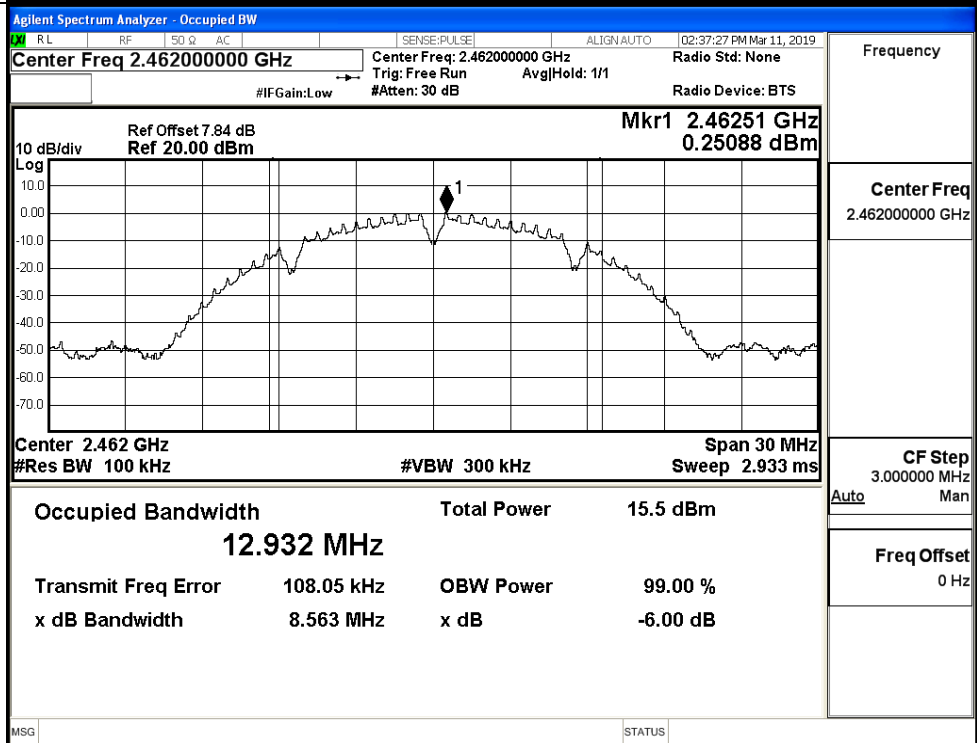
Test Graphs



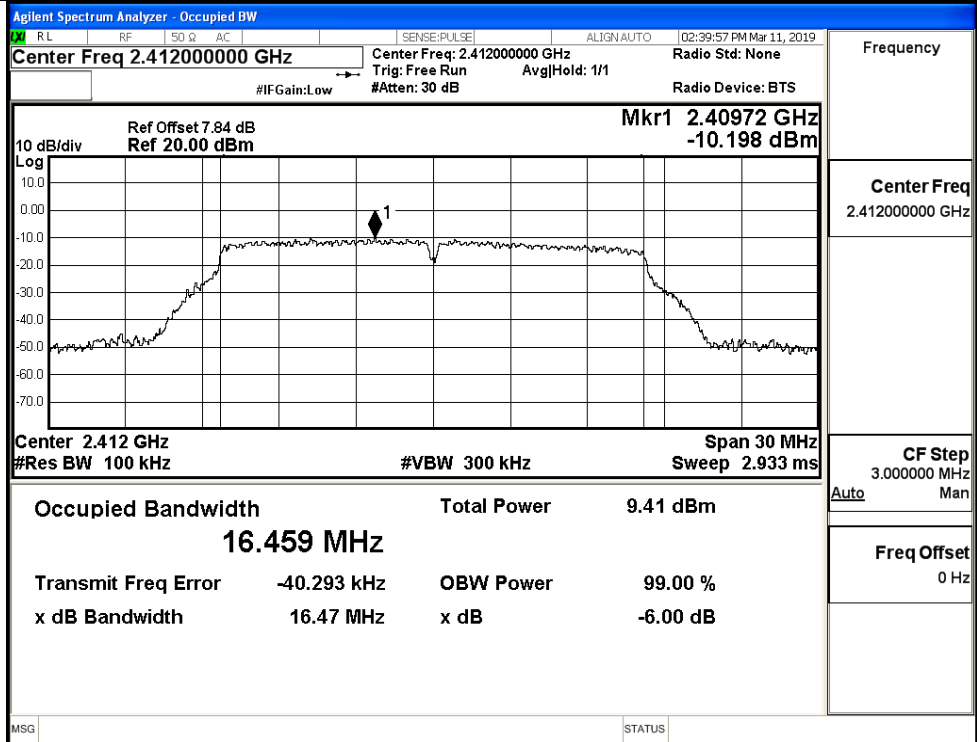
11B/MCH



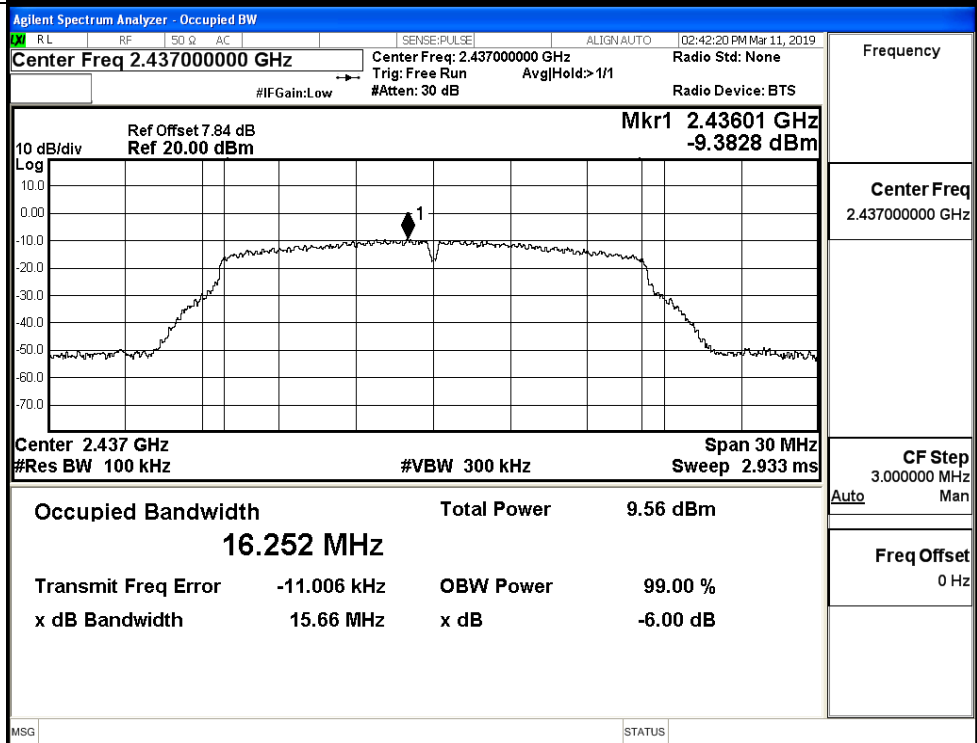
11B/HCH



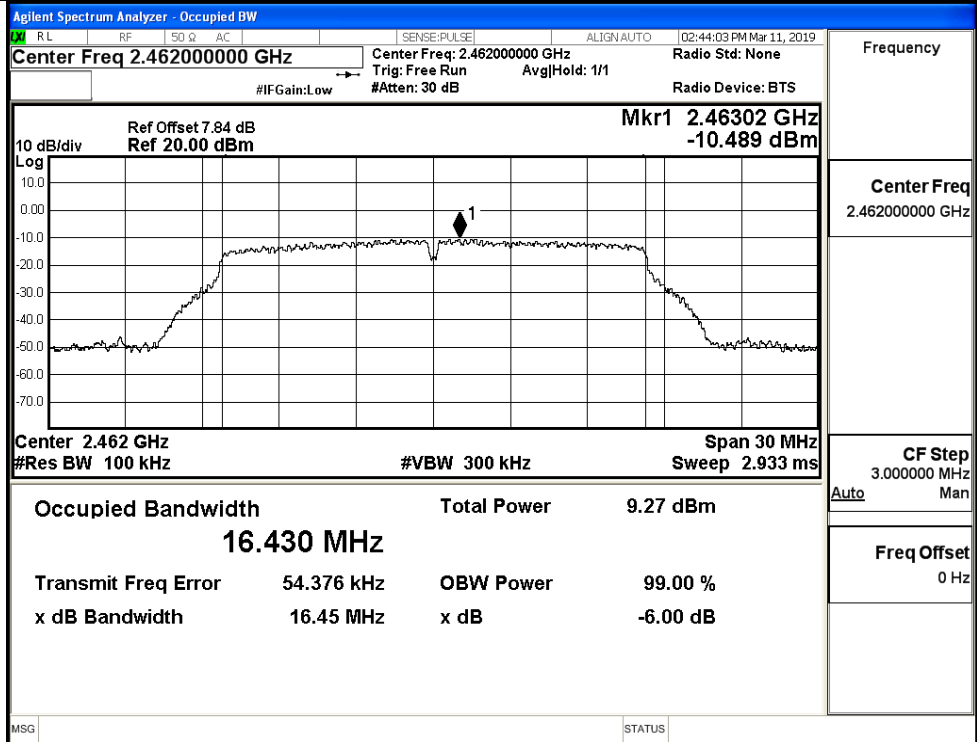
11G/LCH



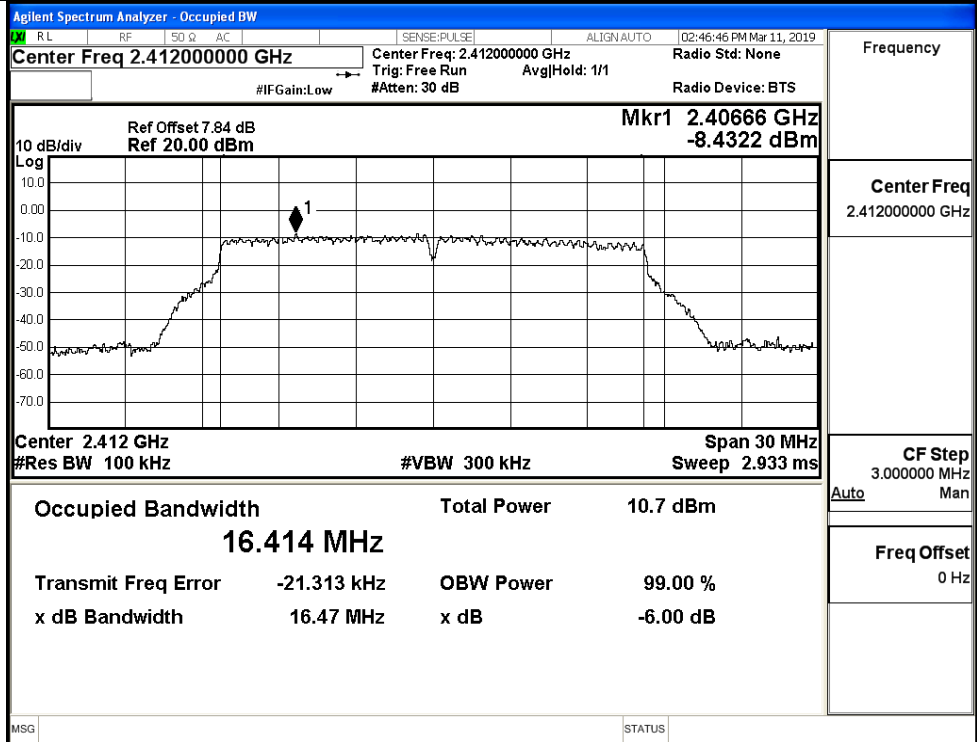
11G/MCH



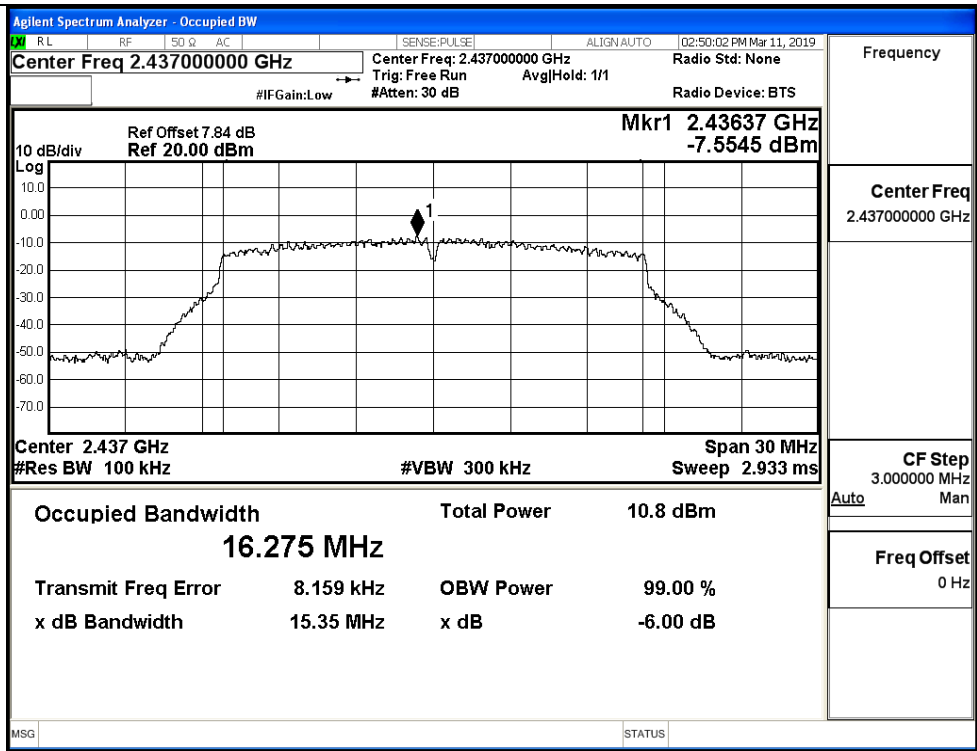
11G/HCH



11N20SISO/LCH



11N20SISO/MCH



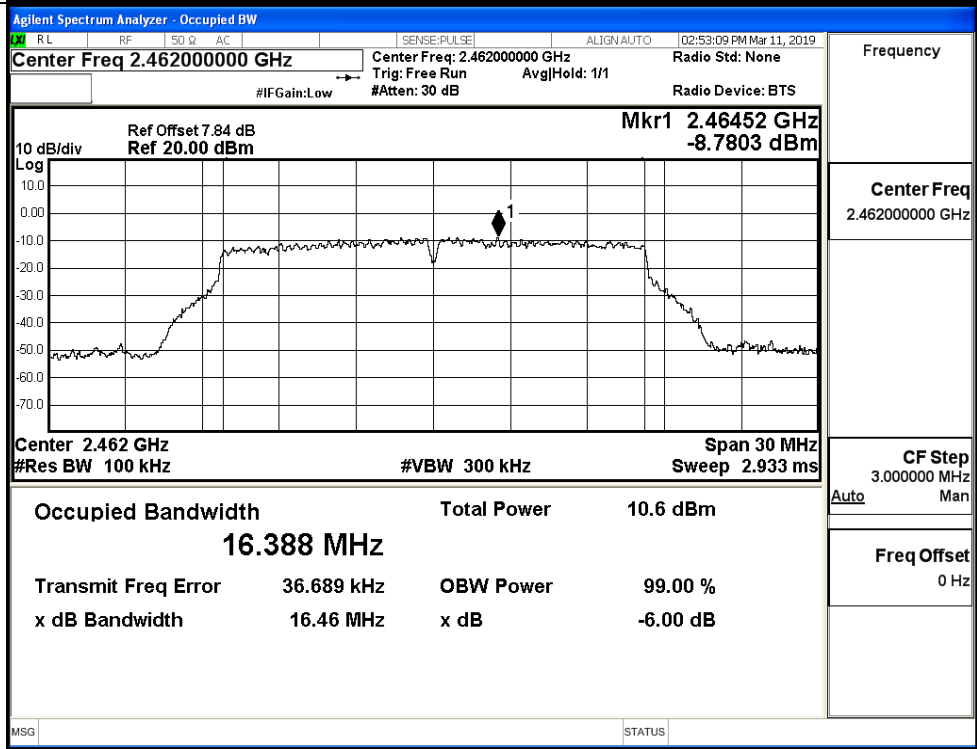
Frequency
2.43700000 GHz

Center Freq
2.43700000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

11N20SISO/HCH



Frequency
2.46200000 GHz

Center Freq
2.46200000 GHz

CF Step
3.000000 MHz
Auto Man

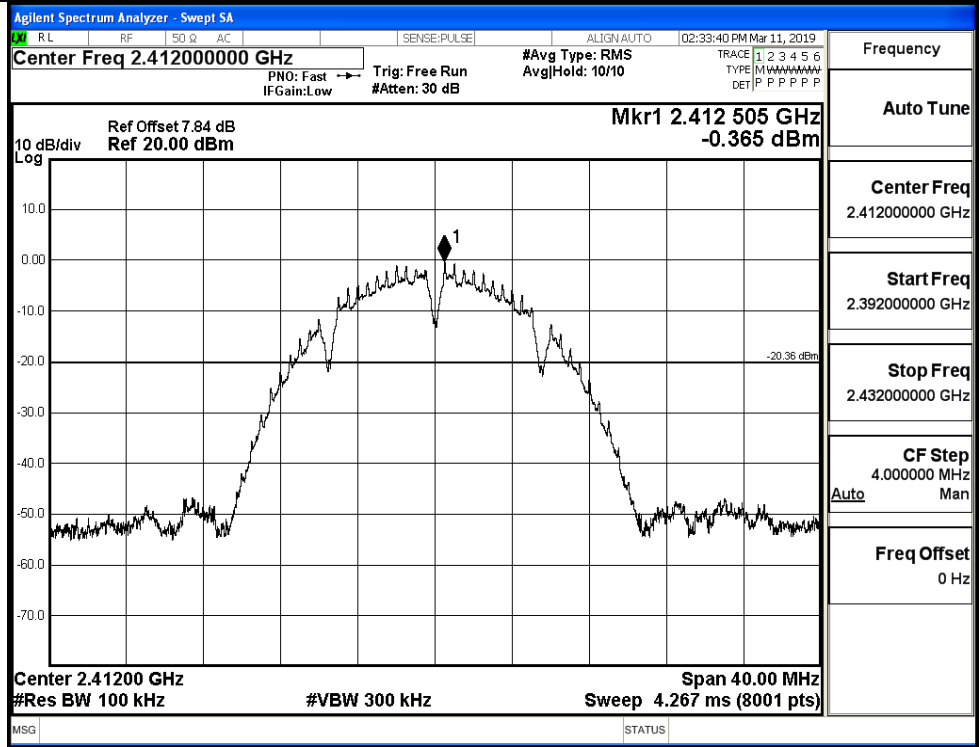
Freq Offset
0 Hz

C.5 RF Conducted Spurious Emissions

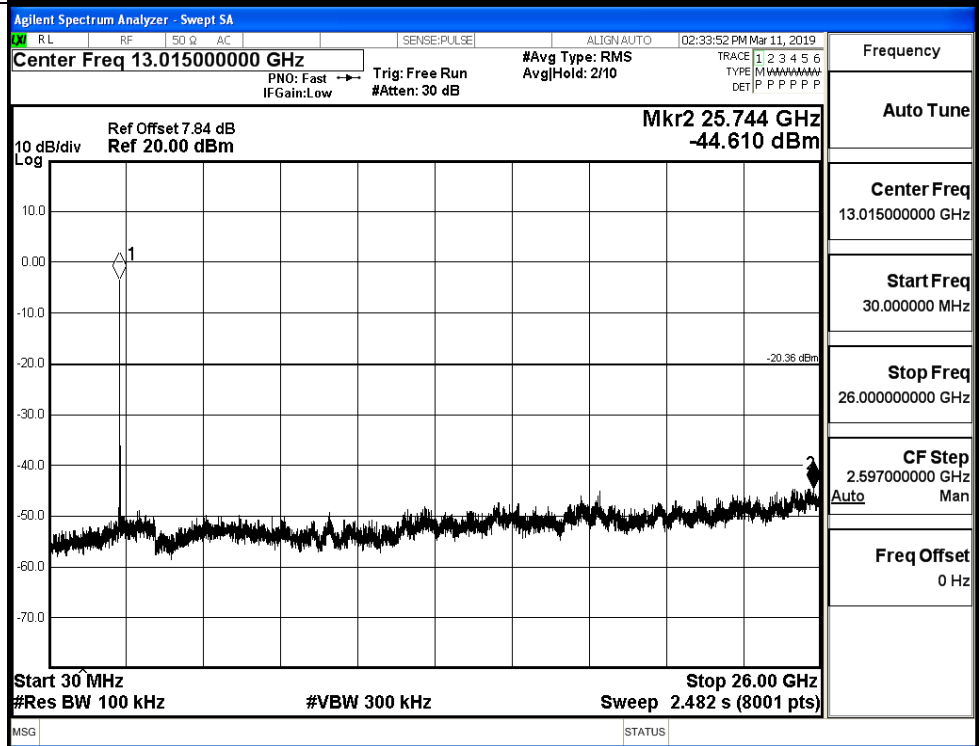
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-0.365	-44.610	-20.365	PASS
	MCH	0.412	-44.239	-19.588	PASS
	HCH	0.187	-44.278	-19.813	PASS
11G	LCH	-10.786	-43.383	-30.786	PASS
	MCH	-9.522	-43.801	-29.522	PASS
	HCH	-10.616	-43.333	-30.616	PASS
11N20 SISO	LCH	-9.058	-44.264	-29.058	PASS
	MCH	-7.901	-43.239	-27.901	PASS
	HCH	-8.835	-44.438	-28.835	PASS

11B_LCH_Graphs

Pref/11B/LCH

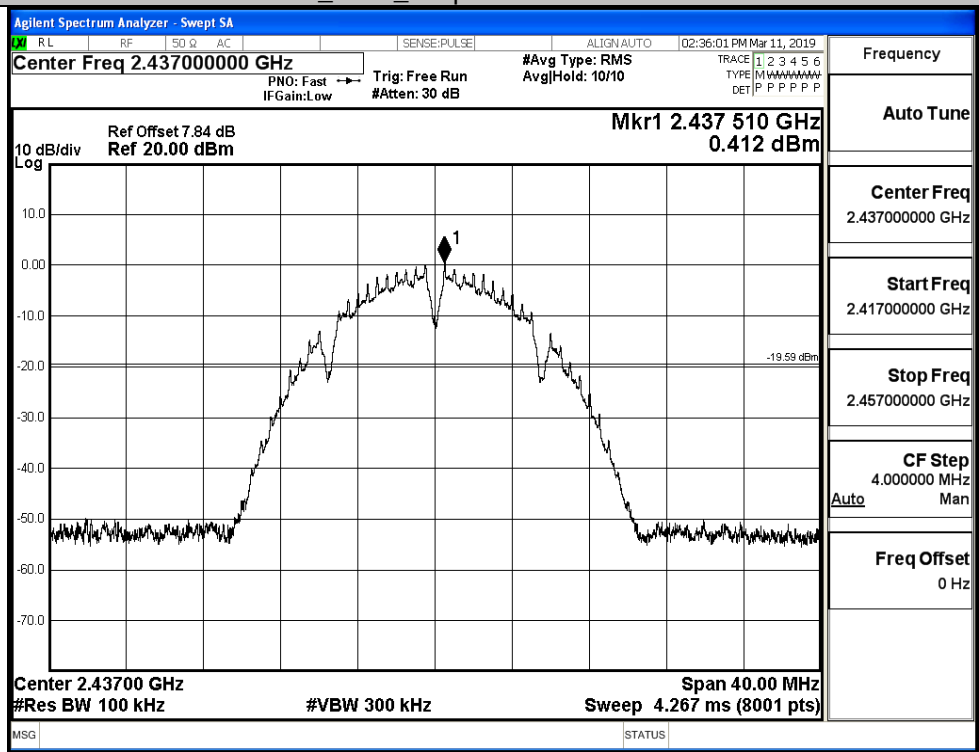


Puw/11B/LCH

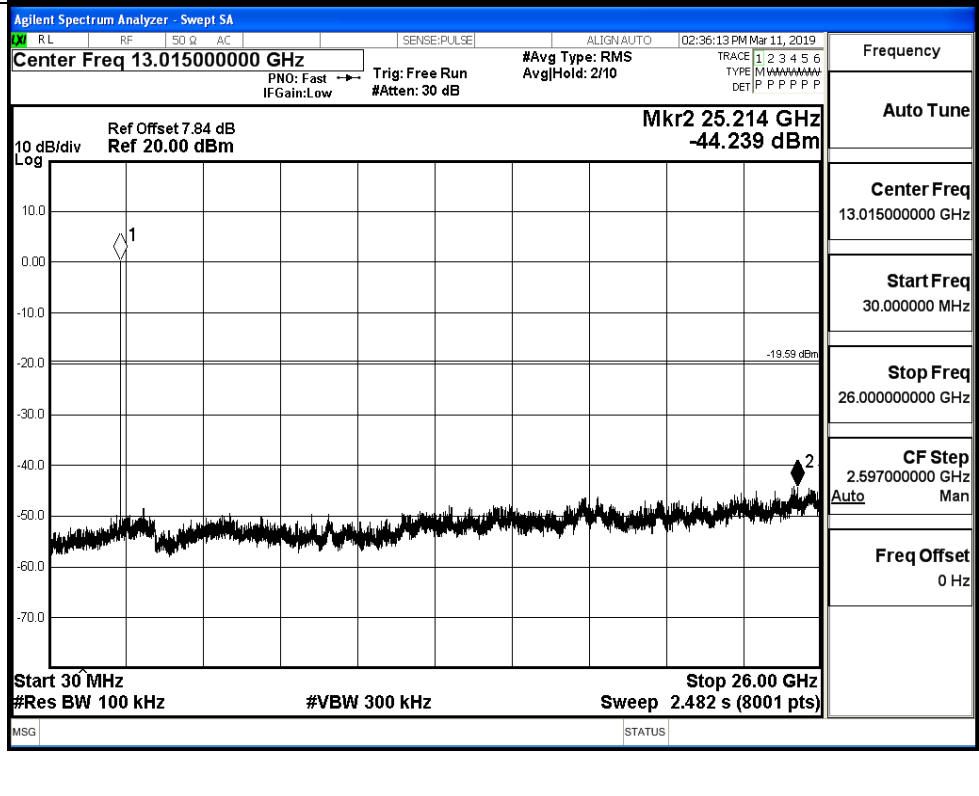


11B_MCH_Graphs

Pref/11B/MCH

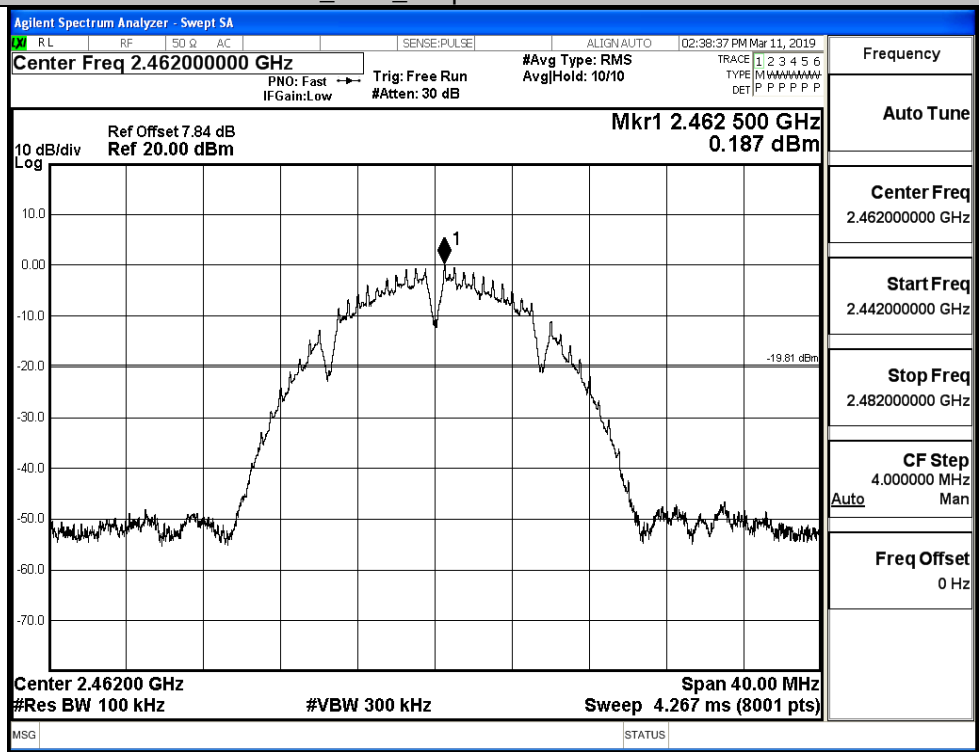


Puw/11B/MCH

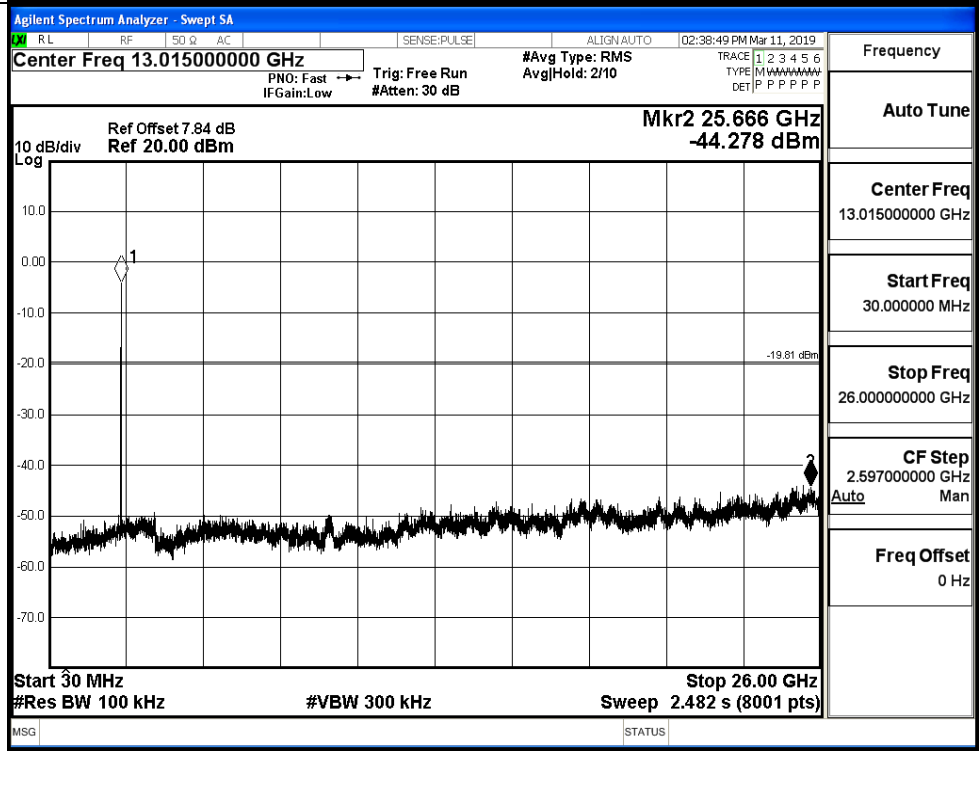


11B_HCH_Graphs

Pref/11B/HCH

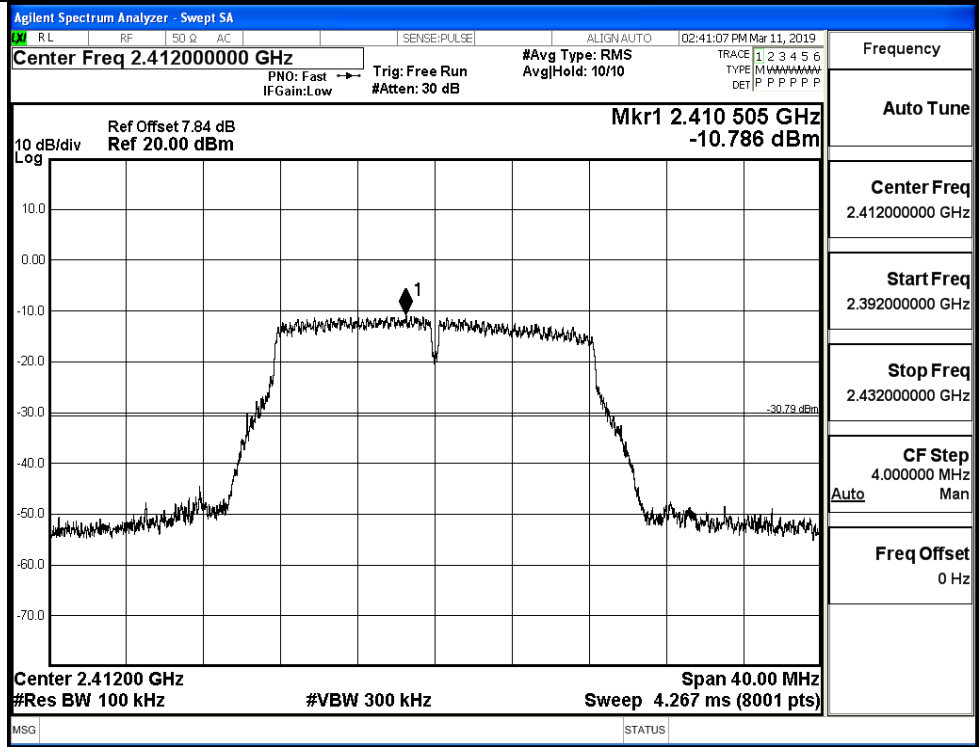


Puw/11B/HCH

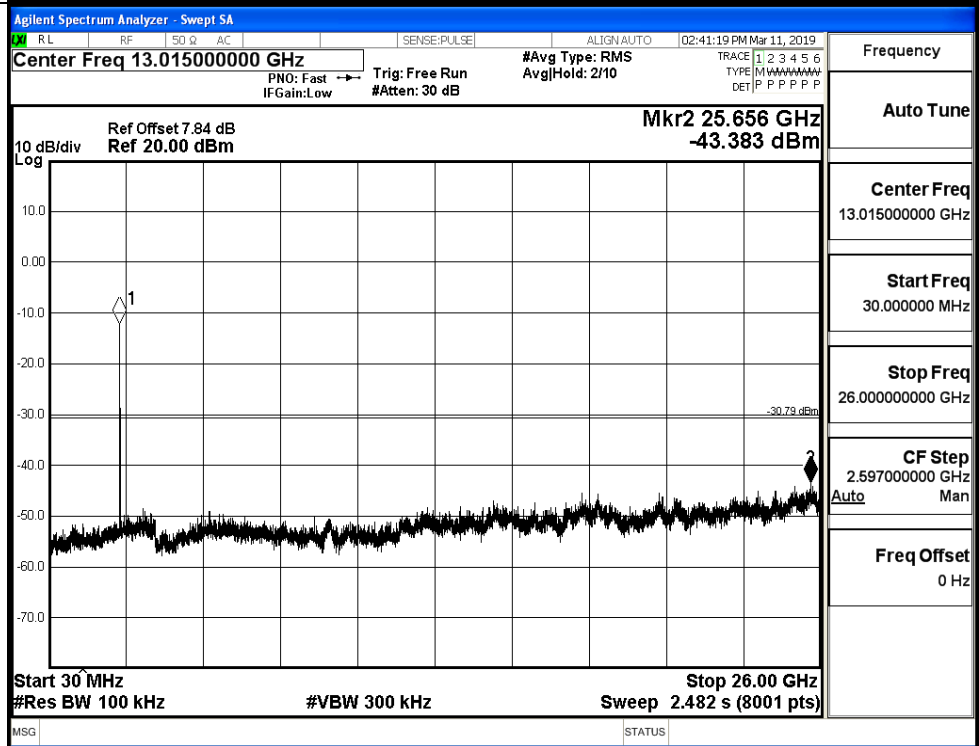


11G_LCH_Graphs

Pref/11G/LCH

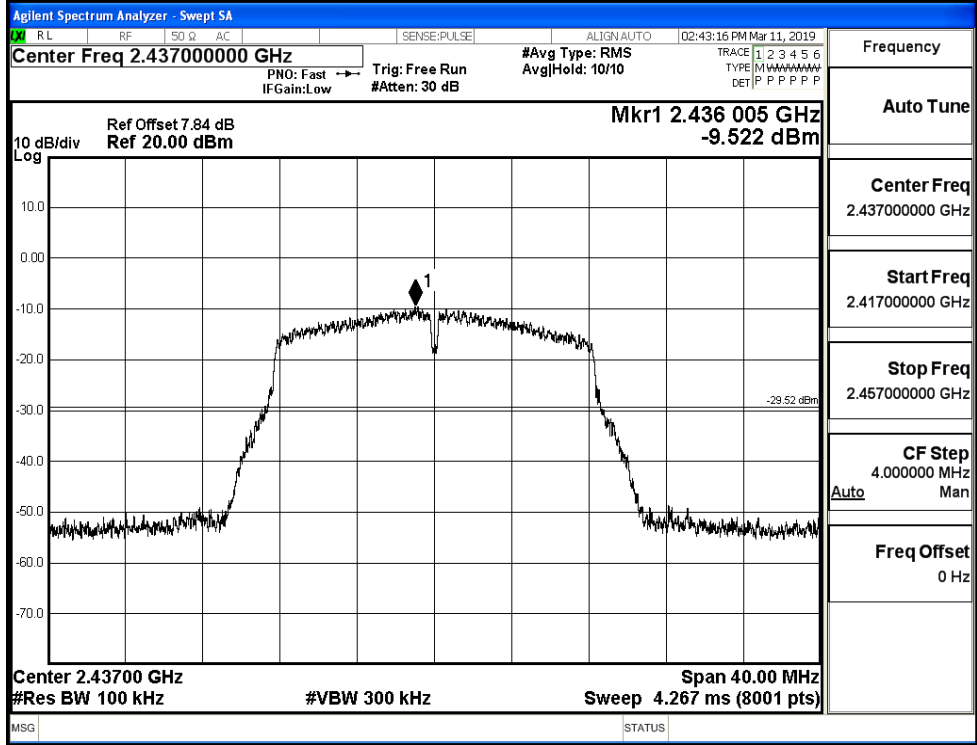


Puw/11G/LCH

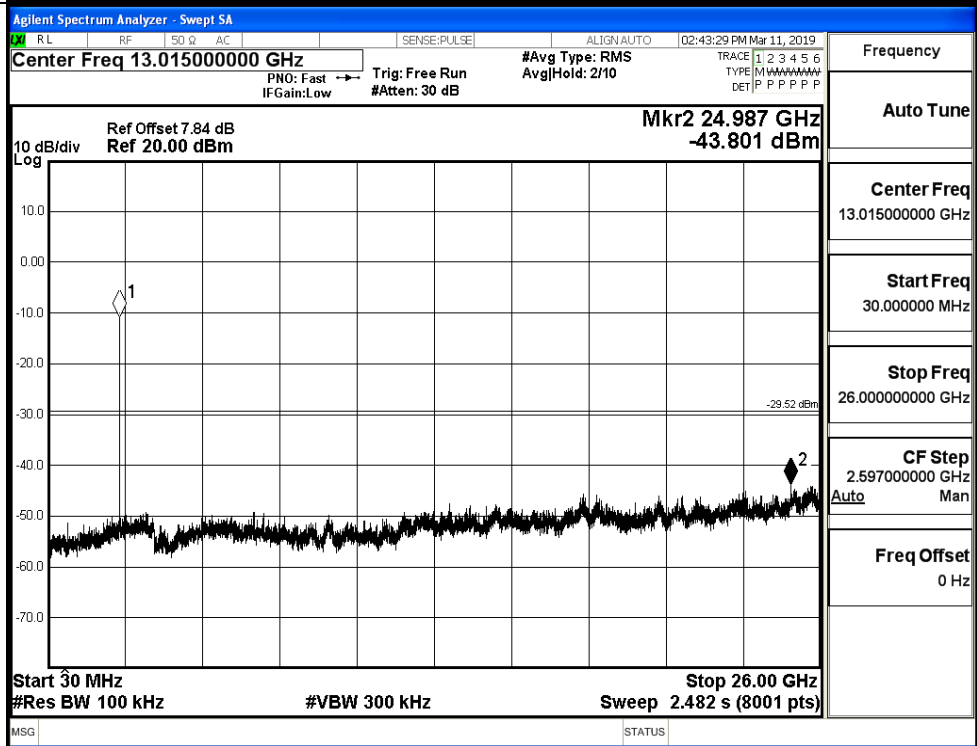


11G_MCH_Graphs

Pref/11G/MCH

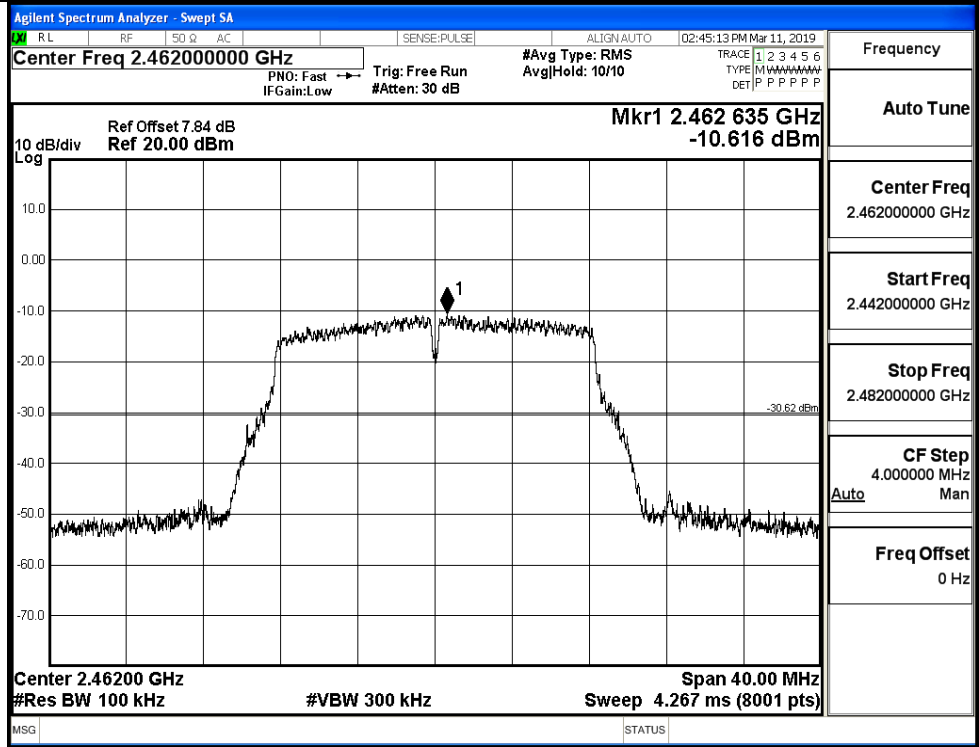


Puw/11G/MCH

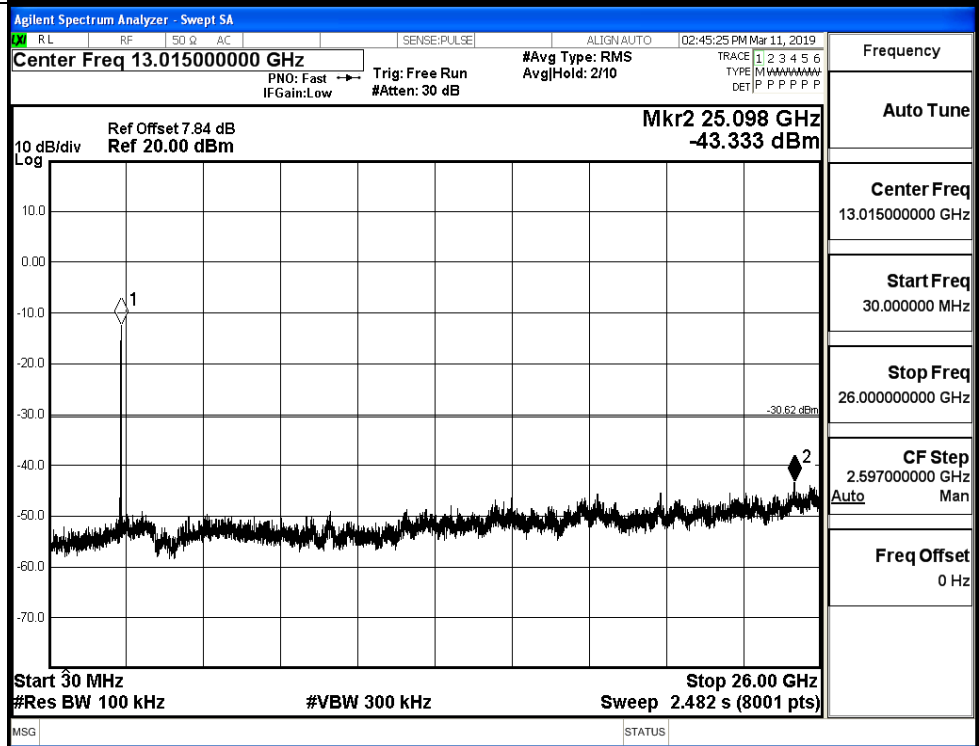


11G_HCH_Graphs

Pref/11G/HCH

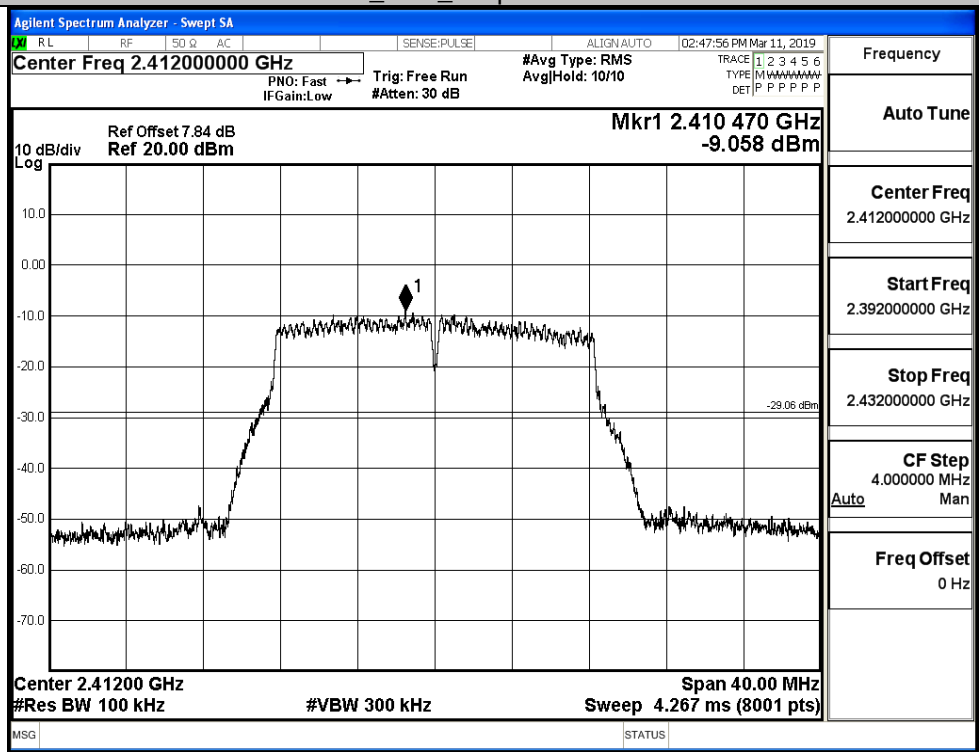


Puw/11G/HCH

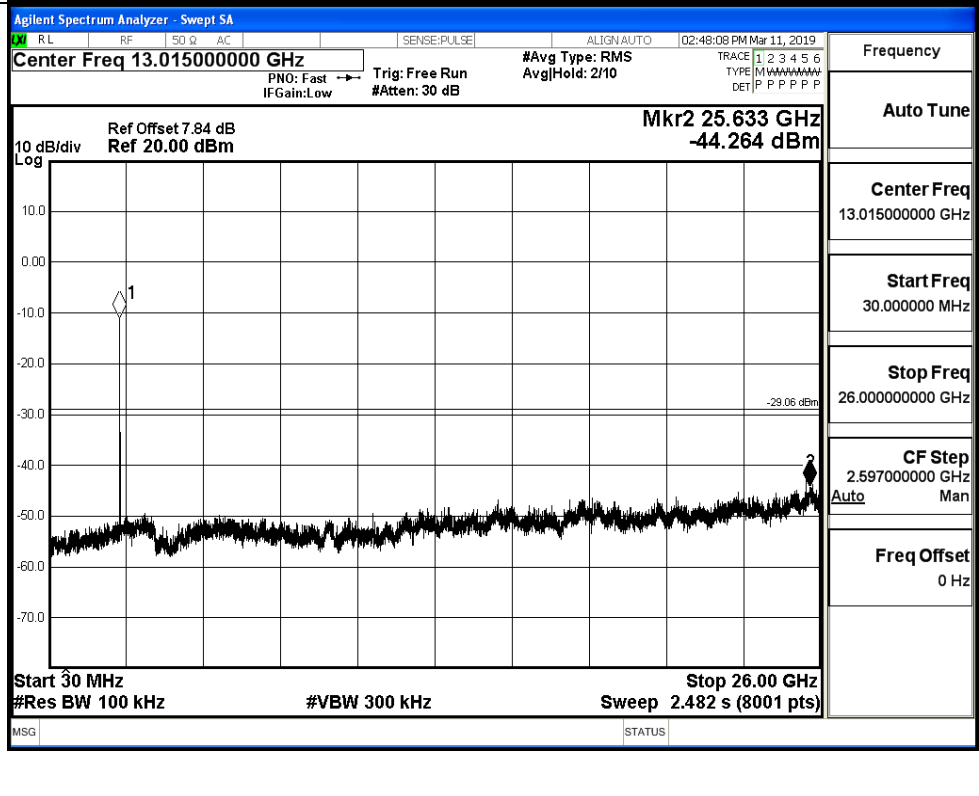


11N20SISO_LCH_Graphs

Pref/11N20SIS
O/LCH

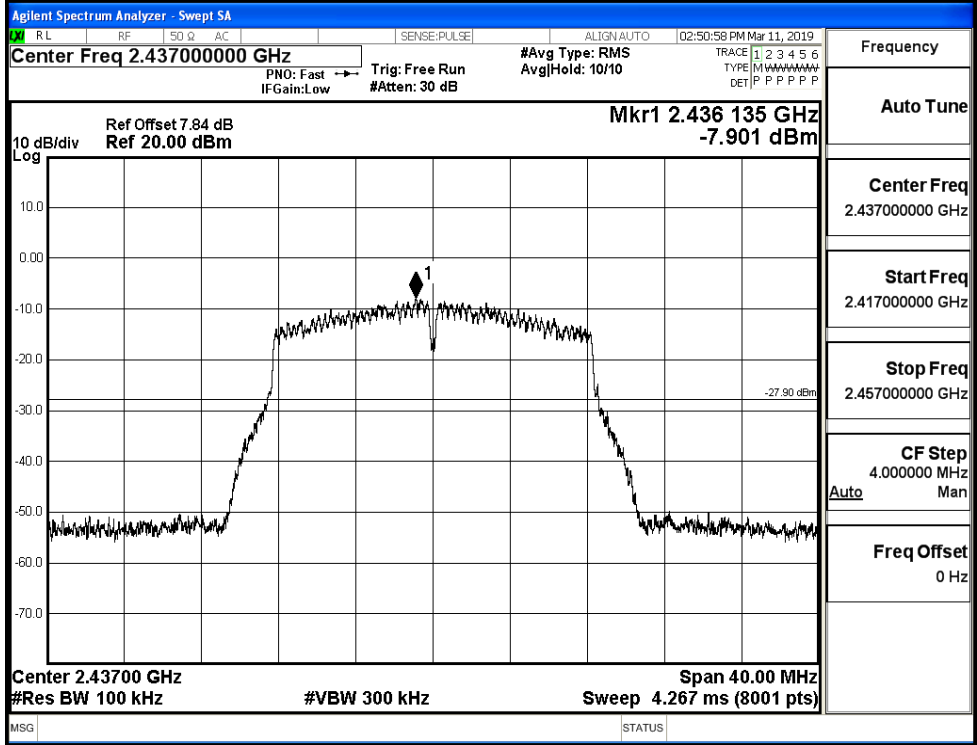


Puw/11N20
SISO/LCH



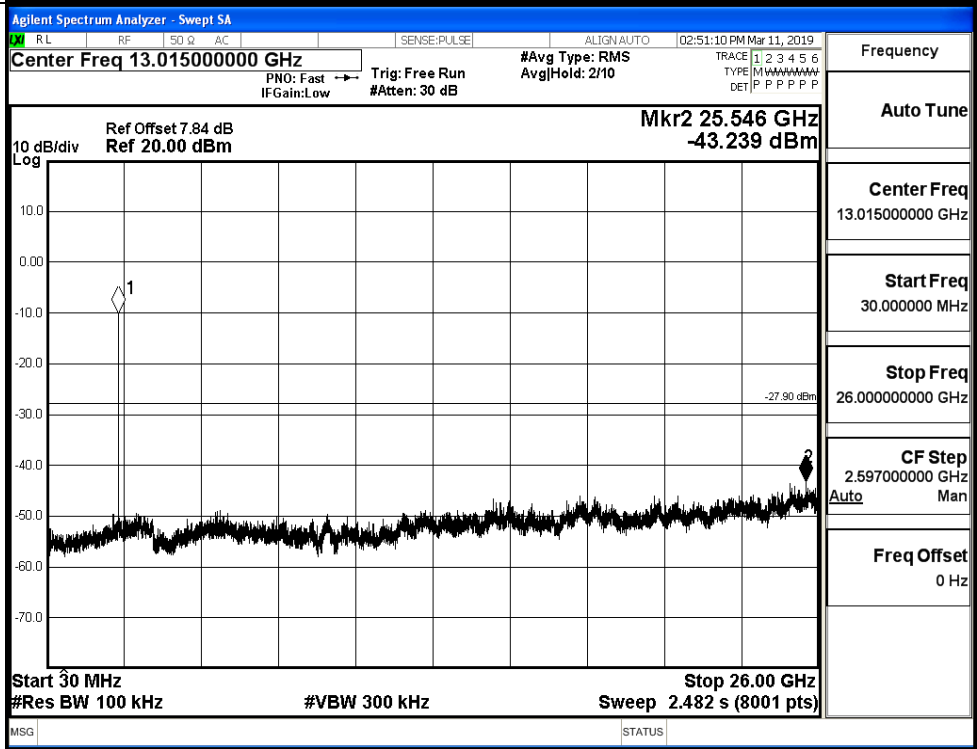
11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCH



Frequency
Auto Tune
Center Freq 2.437000000 GHz
Start Freq 2.417000000 GHz
Stop Freq 2.457000000 GHz
CF Step 4.000000 MHz Auto Man
Freq Offset 0 Hz

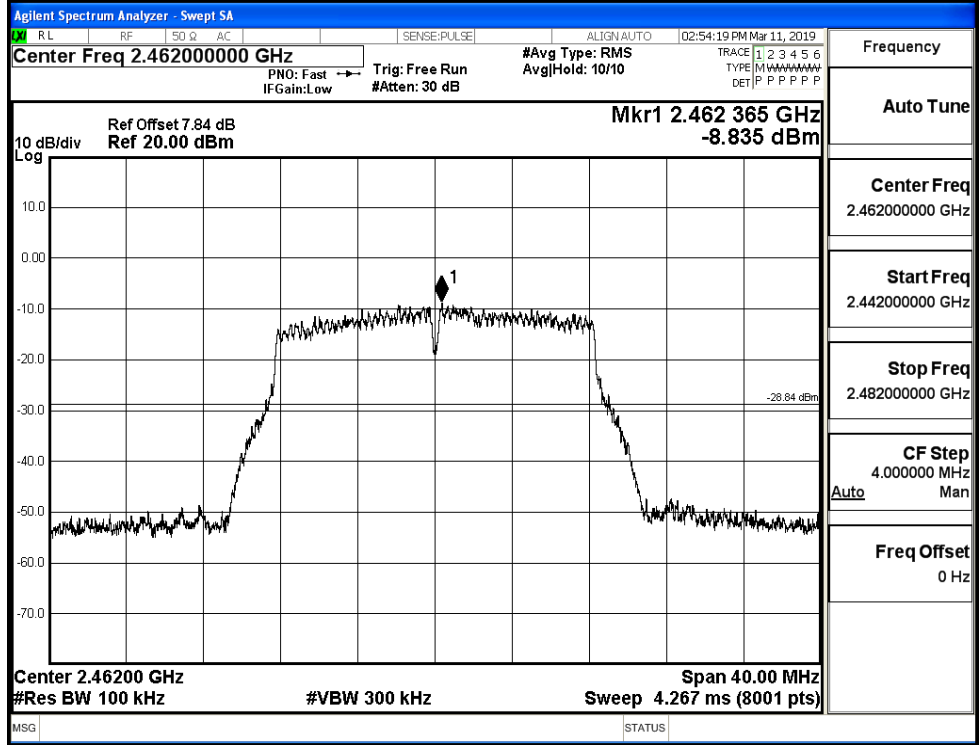
Puw/11N20
SISO/MCH



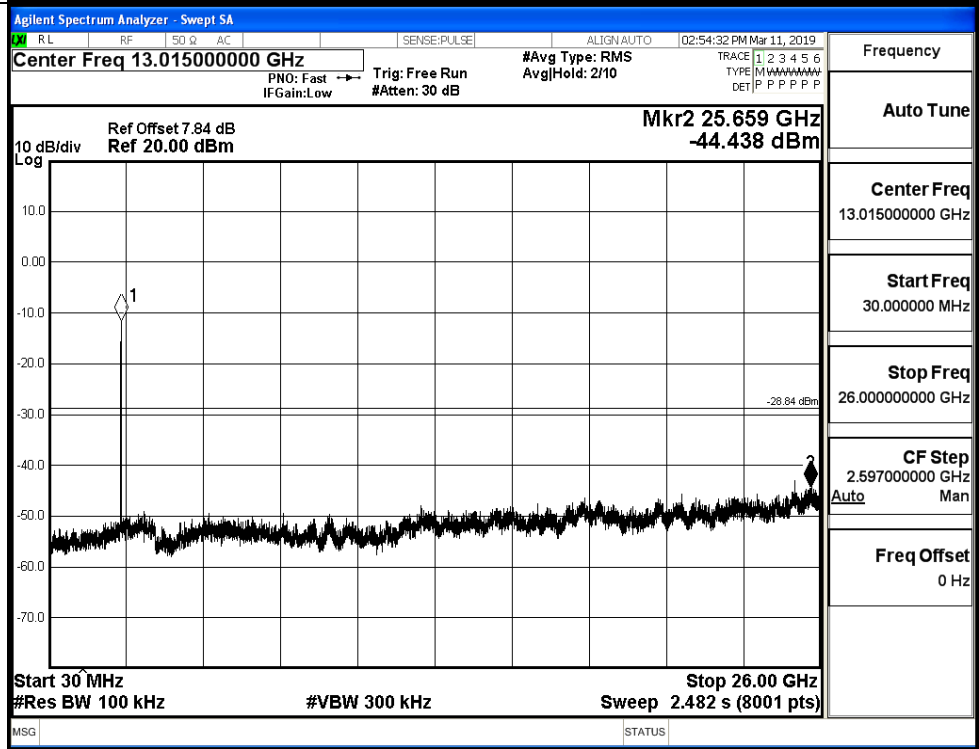
Frequency
Auto Tune
Center Freq 13.015000000 GHz
Start Freq 30.000000 MHz
Stop Freq 26.000000000 GHz
CF Step 2.597000000 GHz Auto Man
Freq Offset 0 Hz

11N20SISO_HCH_Graphs

Pref/11N20
SISO/HCH



Puw/11N20
SISO/HCH

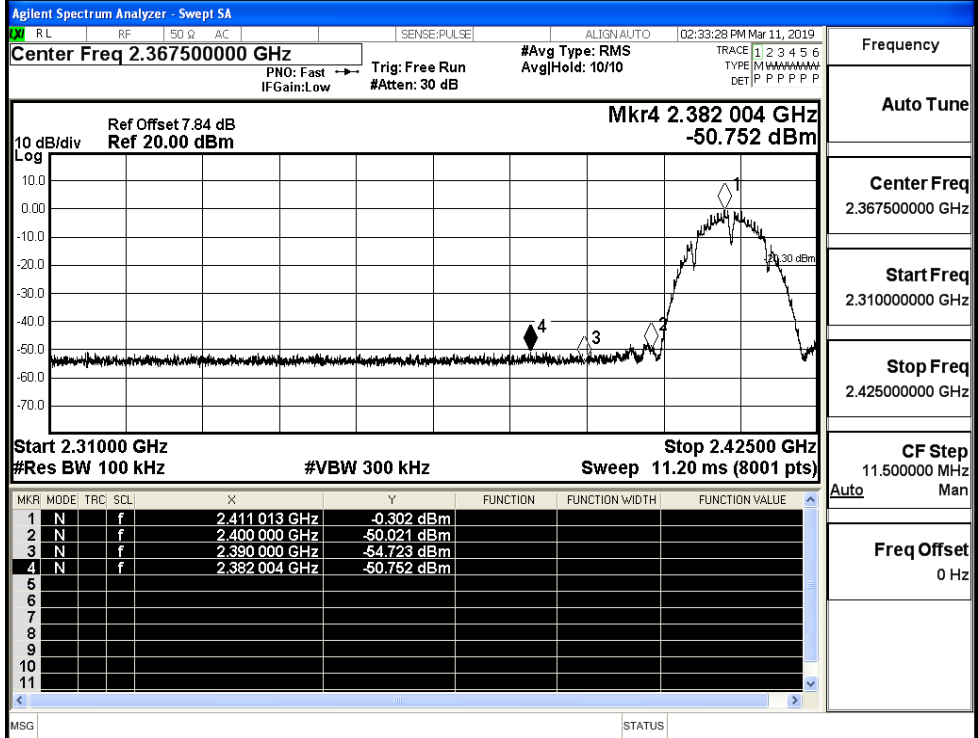


C.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-0.302	-50.752	-20.3	PASS
	HCH	0.076	-50.571	-19.92	PASS
11G	LCH	-10.945	-50.029	-30.95	PASS
	HCH	-10.632	-49.697	-30.63	PASS
11N20SISO	LCH	-9.674	-49.998	-29.67	PASS
	HCH	-8.529	-49.997	-28.53	PASS

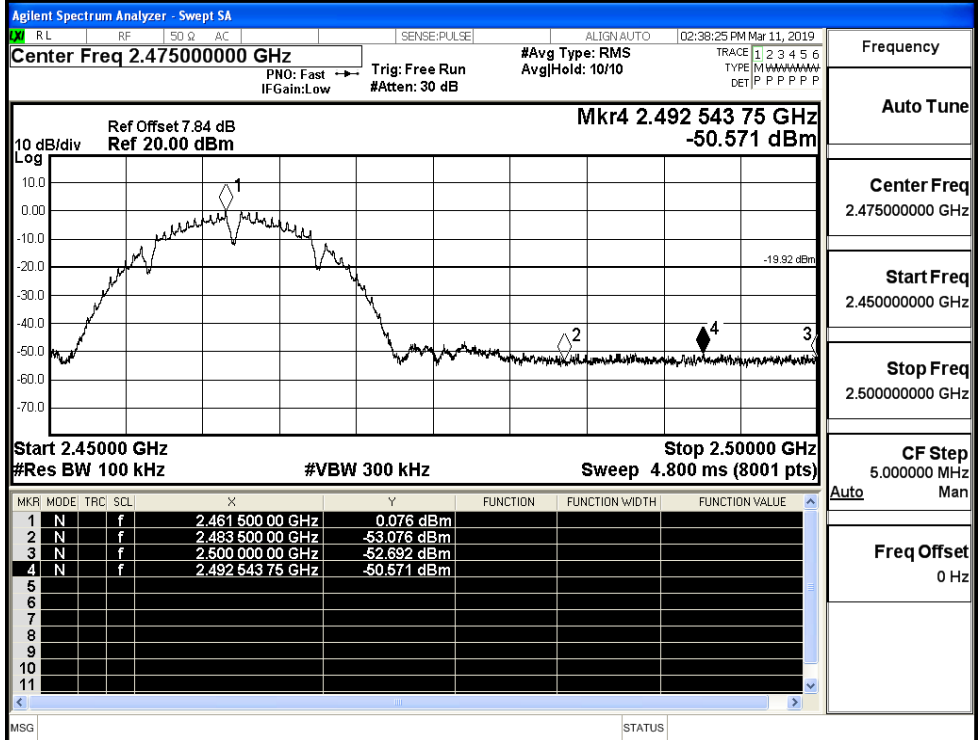
Test Graphs

11B/LCH



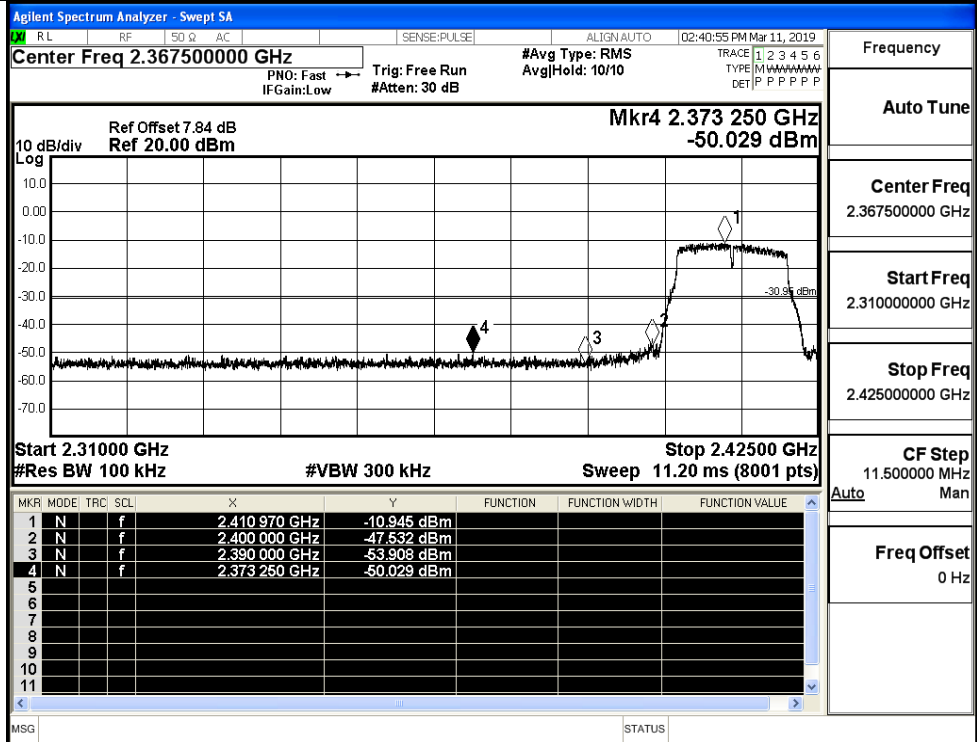
Frequency	
Auto Tune	
Center Freq	2.367500000 GHz
Start Freq	2.310000000 GHz
Stop Freq	2.425000000 GHz
CF Step	11.500000 MHz
Freq Offset	0 Hz

11B/HCH



Frequency	
Auto Tune	
Center Freq	2.475000000 GHz
Start Freq	2.450000000 GHz
Stop Freq	2.500000000 GHz
CF Step	5.000000 MHz
Freq Offset	0 Hz

11G/LCH



Frequency

Auto Tune

Center Freq
2.367500000 GHz

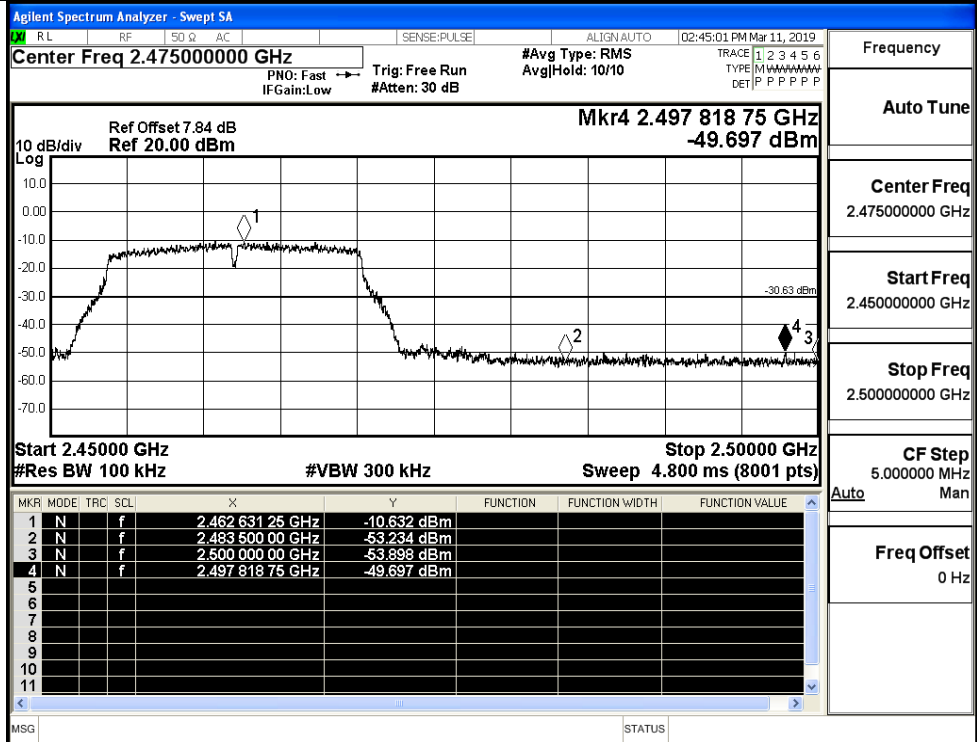
Start Freq
2.310000000 GHz

Stop Freq
2.425000000 GHz

CF Step
11.500000 MHz

Freq Offset
0 Hz

11G/HCH



Frequency

Auto Tune

Center Freq
2.475000000 GHz

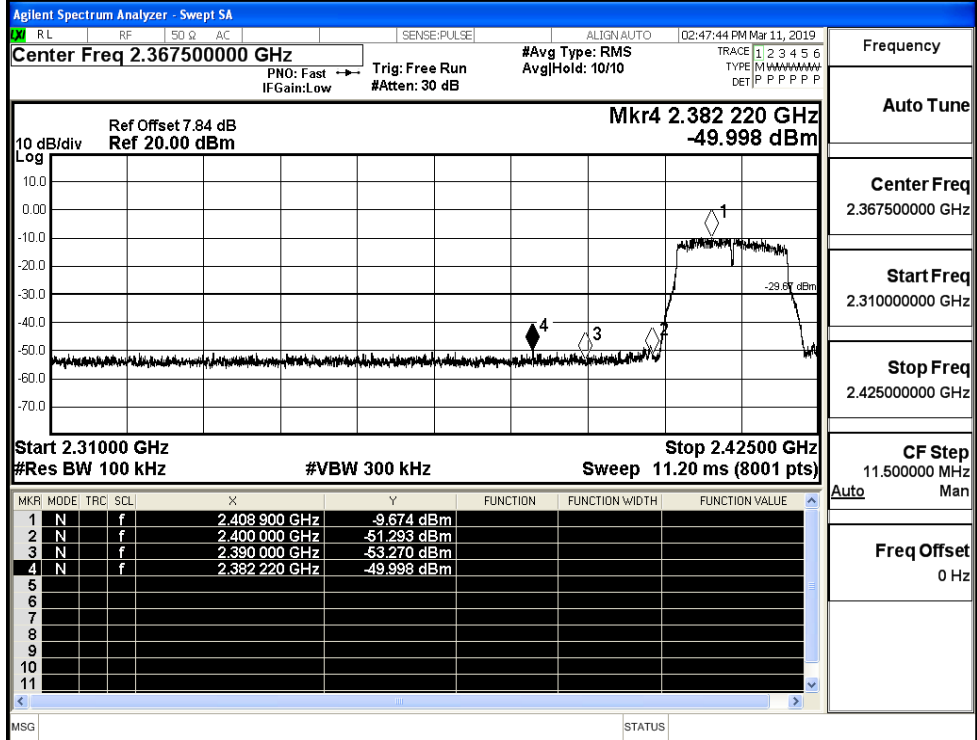
Start Freq
2.450000000 GHz

Stop Freq
2.500000000 GHz

CF Step
5.000000 MHz

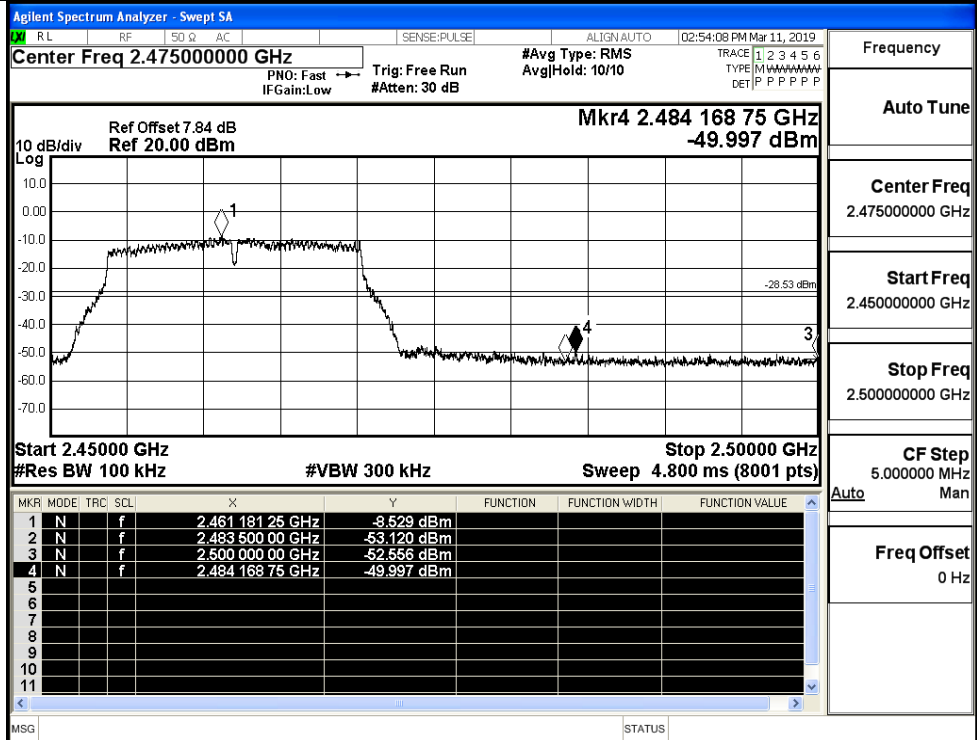
Freq Offset
0 Hz

11N20SISO/LCH



Frequency	
Auto Tune	
Center Freq	2.367500000 GHz
Start Freq	2.310000000 GHz
Stop Freq	2.425000000 GHz
CF Step	11.500000 MHz
Freq Offset	0 Hz

11N20SISO/HCH

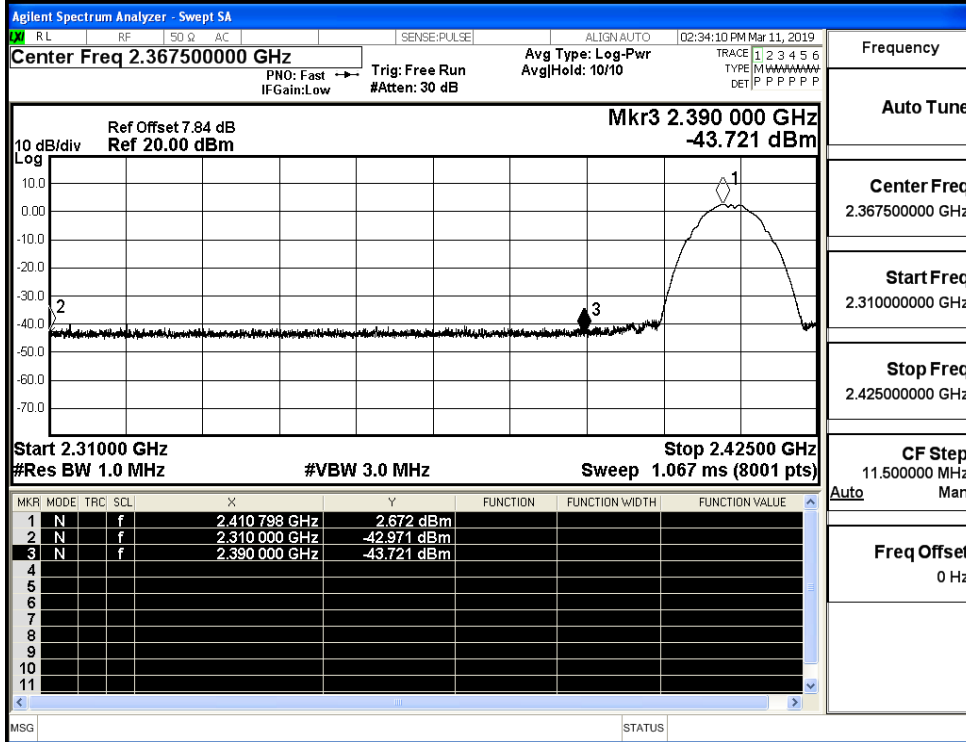


Frequency	
Auto Tune	
Center Freq	2.475000000 GHz
Start Freq	2.450000000 GHz
Stop Freq	2.500000000 GHz
CF Step	5.000000 MHz
Freq Offset	0 Hz

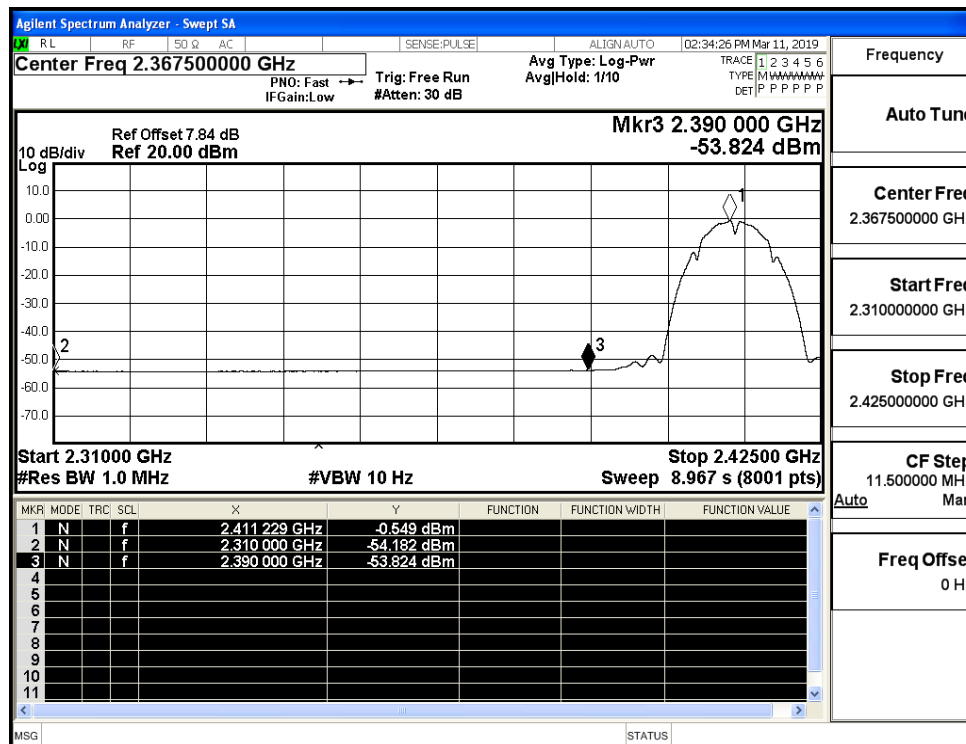
C.7 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-42.97	2.0	0	54.29	PEAK	74	PASS
	2412	Ant1	2310.0	-54.18	2.0	0	43.08	AV	54	PASS
	2412	Ant1	2390.0	-43.72	2.0	0	53.54	PEAK	74	PASS
	2412	Ant1	2390.0	-53.82	2.0	0	43.43	AV	54	PASS
	2462	Ant1	2483.5	-41.76	2.0	0	55.49	PEAK	74	PASS
	2462	Ant1	2483.5	-53.45	2.0	0	43.81	AV	54	PASS
	2462	Ant1	2500.0	-43.71	2.0	0	53.55	PEAK	74	PASS
	2462	Ant1	2500.0	-53.42	2.0	0	43.84	AV	54	PASS
11G	2412	Ant1	2310.0	-42.95	2.0	0	54.30	PEAK	74	PASS
	2412	Ant1	2310.0	-54.16	2.0	0	43.10	AV	54	PASS
	2412	Ant1	2390.0	-43.95	2.0	0	53.31	PEAK	74	PASS
	2412	Ant1	2390.0	-53.78	2.0	0	43.48	AV	54	PASS
	2462	Ant1	2483.5	-42.50	2.0	0	54.76	PEAK	74	PASS
	2462	Ant1	2483.5	-53.39	2.0	0	43.87	AV	54	PASS
	2462	Ant1	2500.0	-43.31	2.0	0	53.95	PEAK	74	PASS
	2462	Ant1	2500.0	-53.44	2.0	0	43.81	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-43.88	2.0	0	53.38	PEAK	74	PASS
	2412	Ant1	2310.0	-54.15	2.0	0	43.10	AV	54	PASS
	2412	Ant1	2390.0	-41.67	2.0	0	55.58	PEAK	74	PASS
	2412	Ant1	2390.0	-53.78	2.0	0	43.48	AV	54	PASS
	2462	Ant1	2483.5	-42.05	2.0	0	55.21	PEAK	74	PASS
	2462	Ant1	2483.5	-53.22	2.0	0	44.03	AV	54	PASS
	2462	Ant1	2500.0	-43.20	2.0	0	54.06	PEAK	74	PASS
	2462	Ant1	2500.0	-53.41	2.0	0	43.85	AV	54	PASS

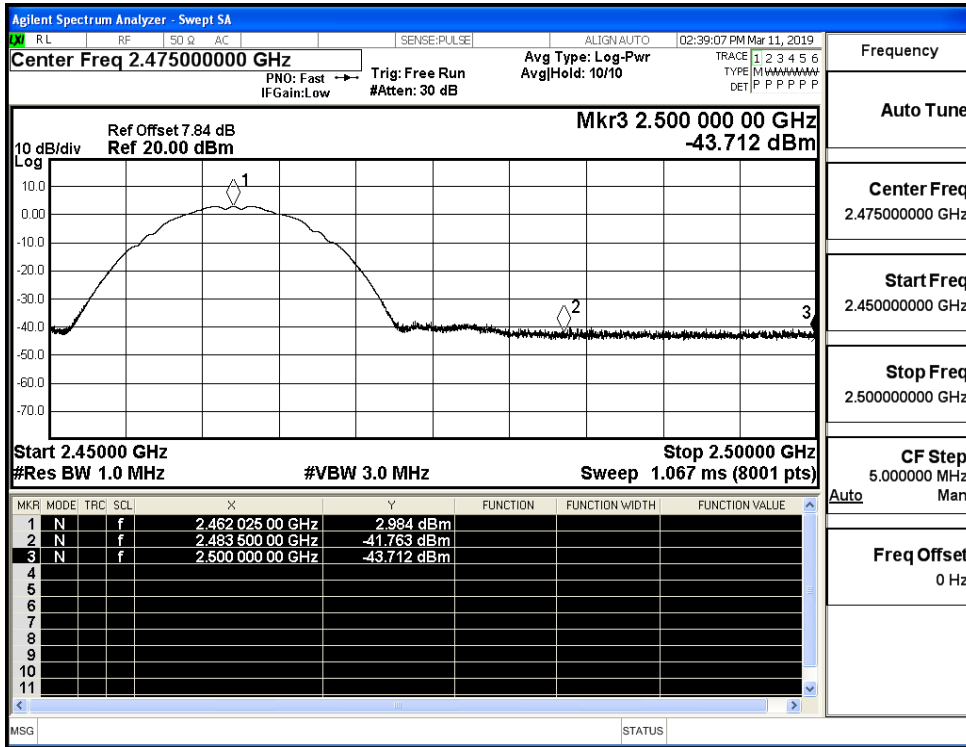
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



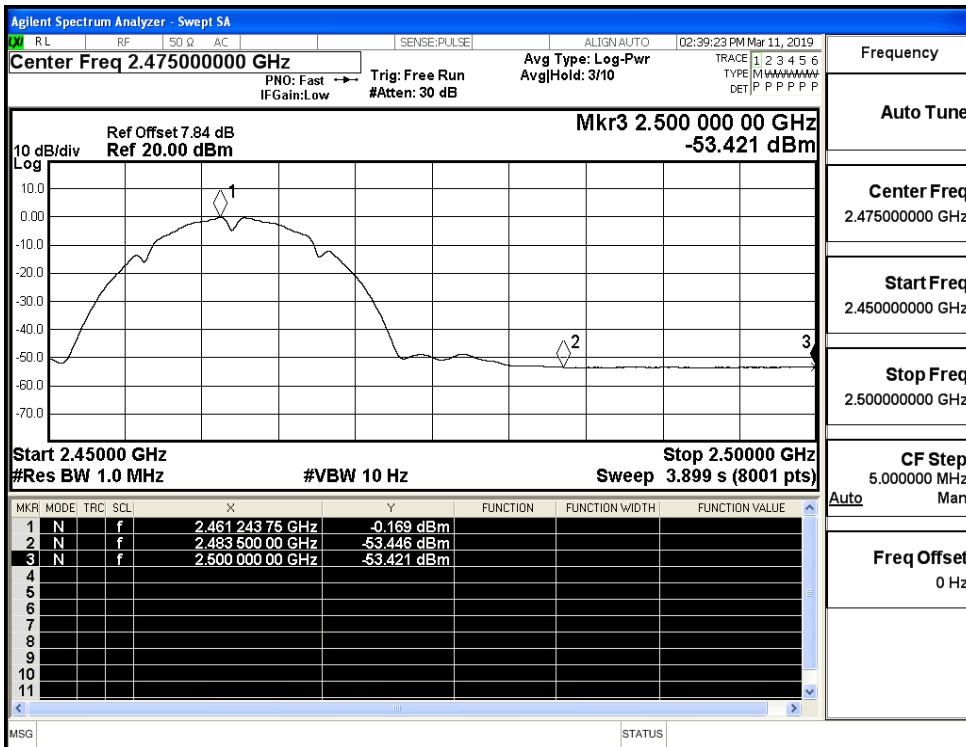
Restrict-band band-edge measurements_11B_2412_Ant1_AV



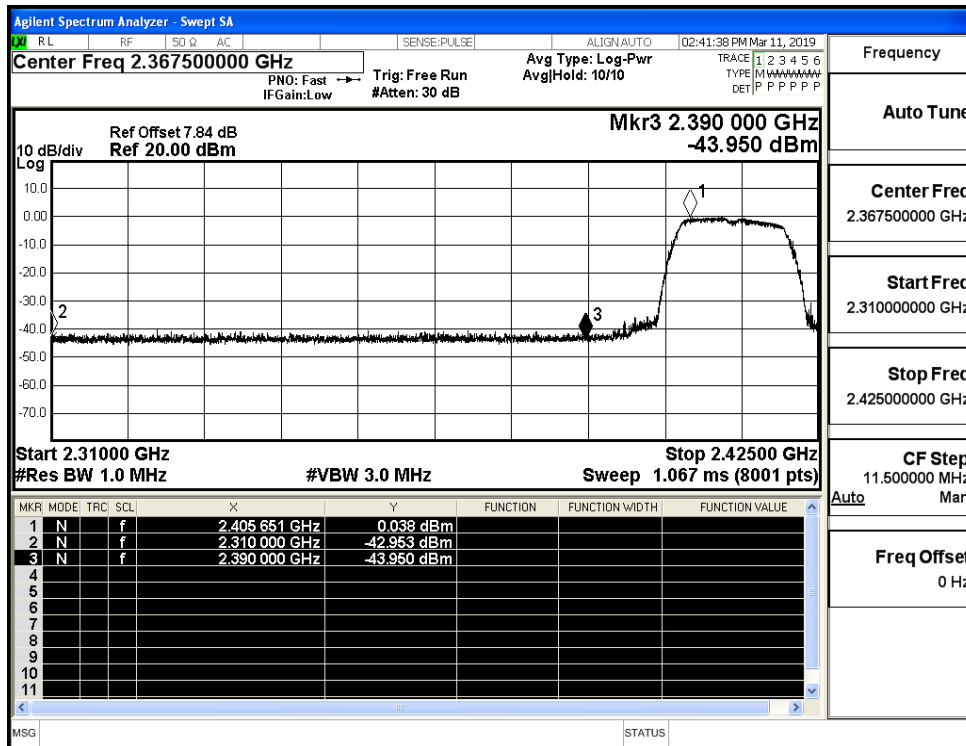
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



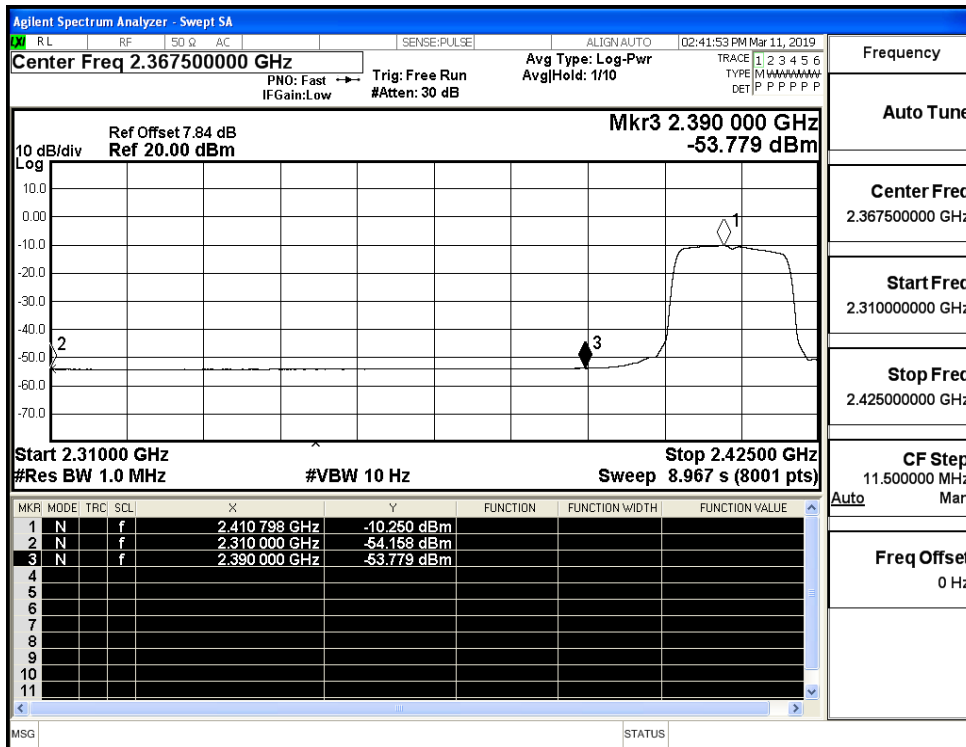
Restrict-band band-edge measurements_11B_2462_Ant1_AV



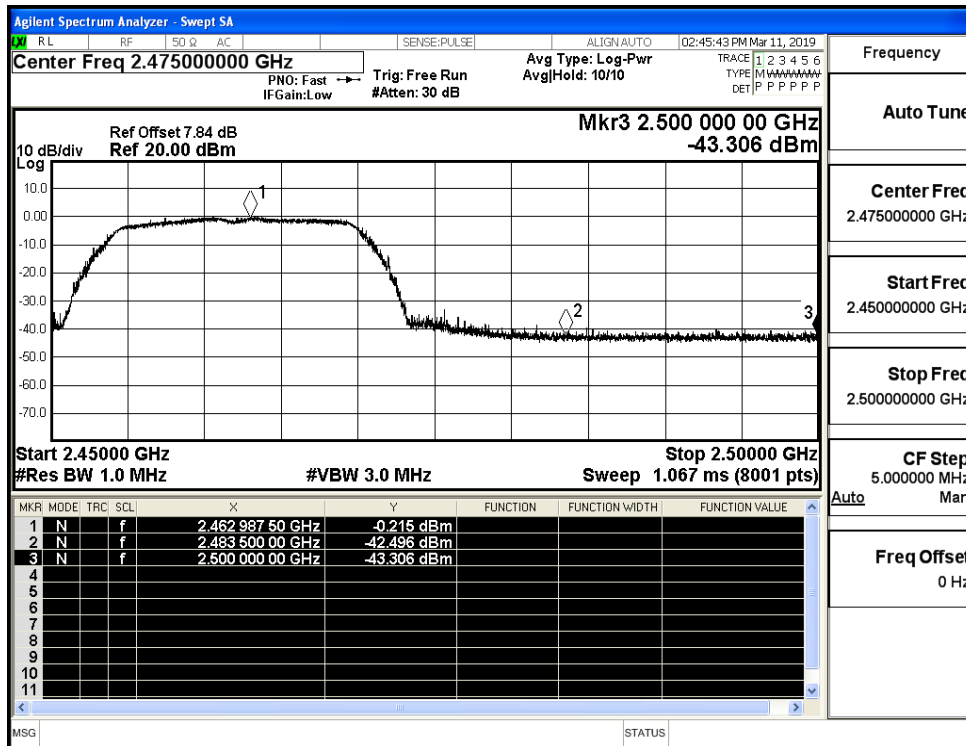
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



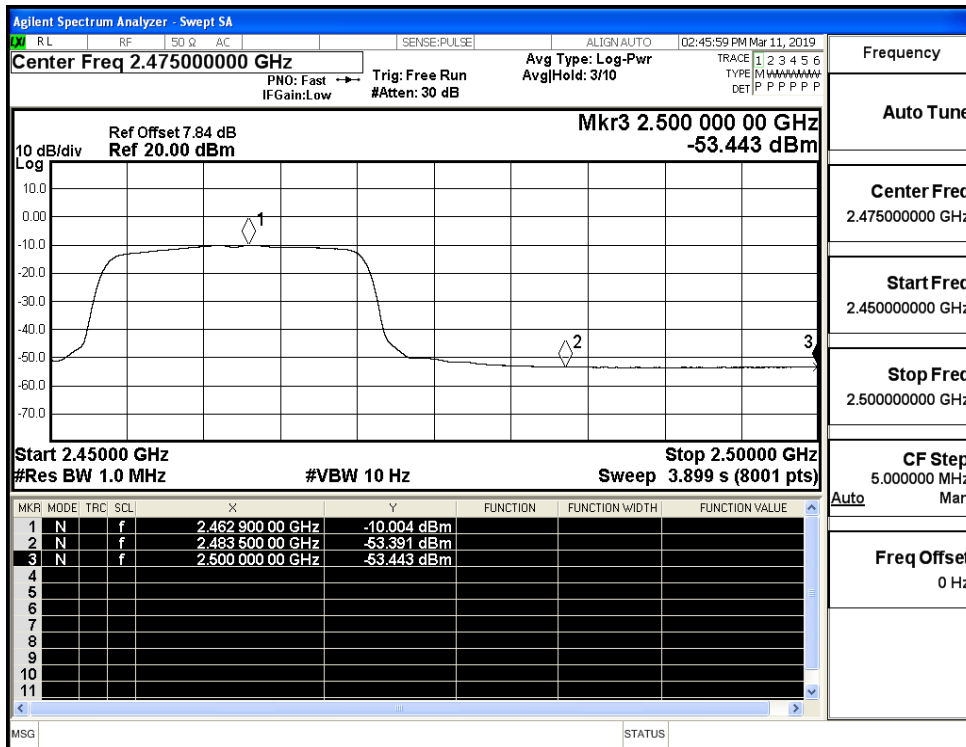
Restrict-band band-edge measurements_11G_2412_Ant1_AV



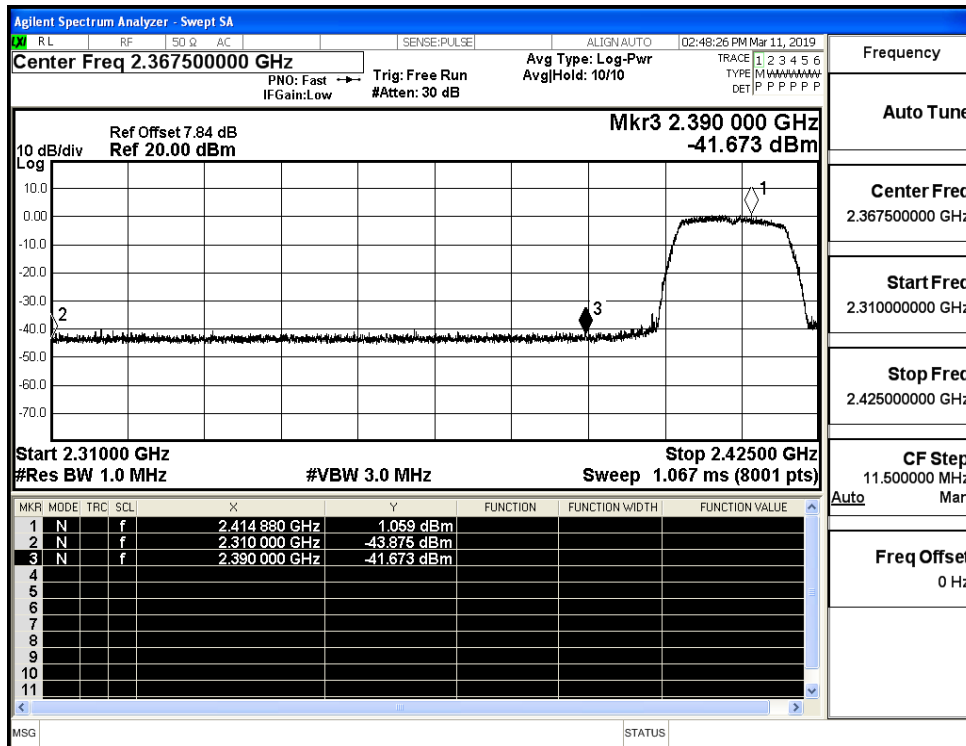
Restrict-band band-edge measurements_11G_2462_Ant1_PEAK



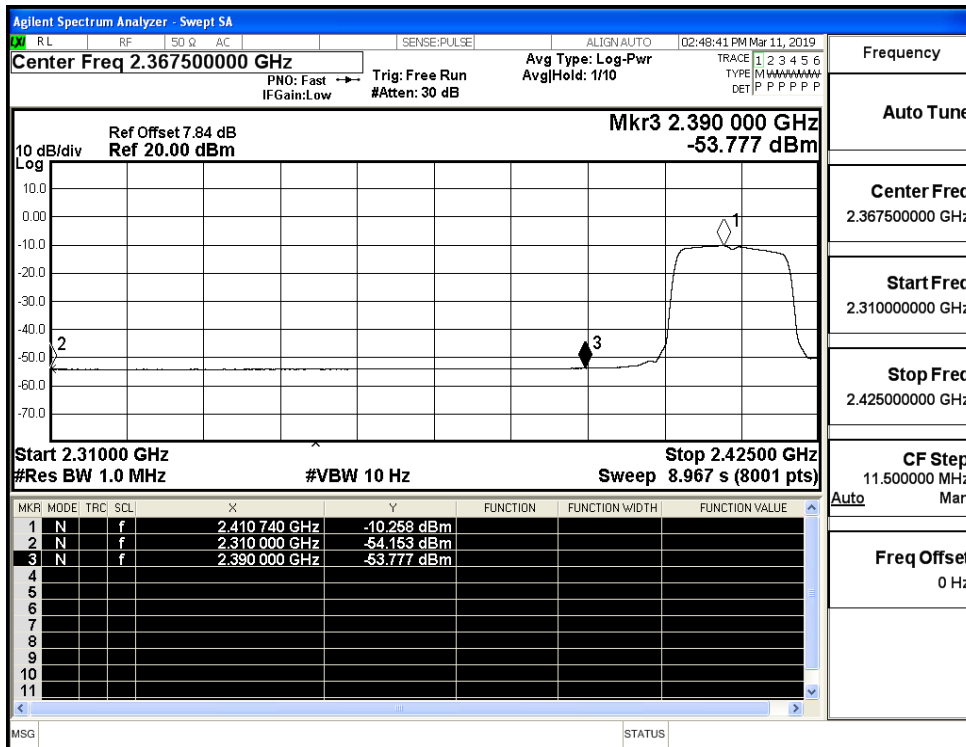
Restrict-band band-edge measurements_11G_2462_Ant1_AV



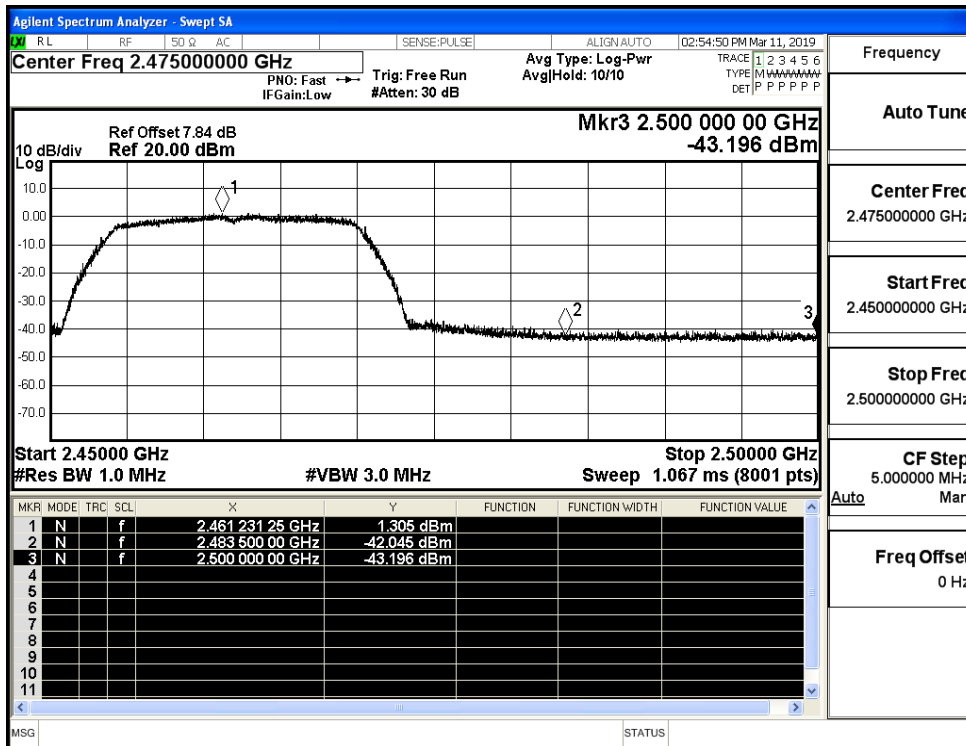
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



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

