

Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: ALL-IN-ONE HD Wi-Fi CAMERA

Trade Mark: Guardzilla

Test Model: GZ180

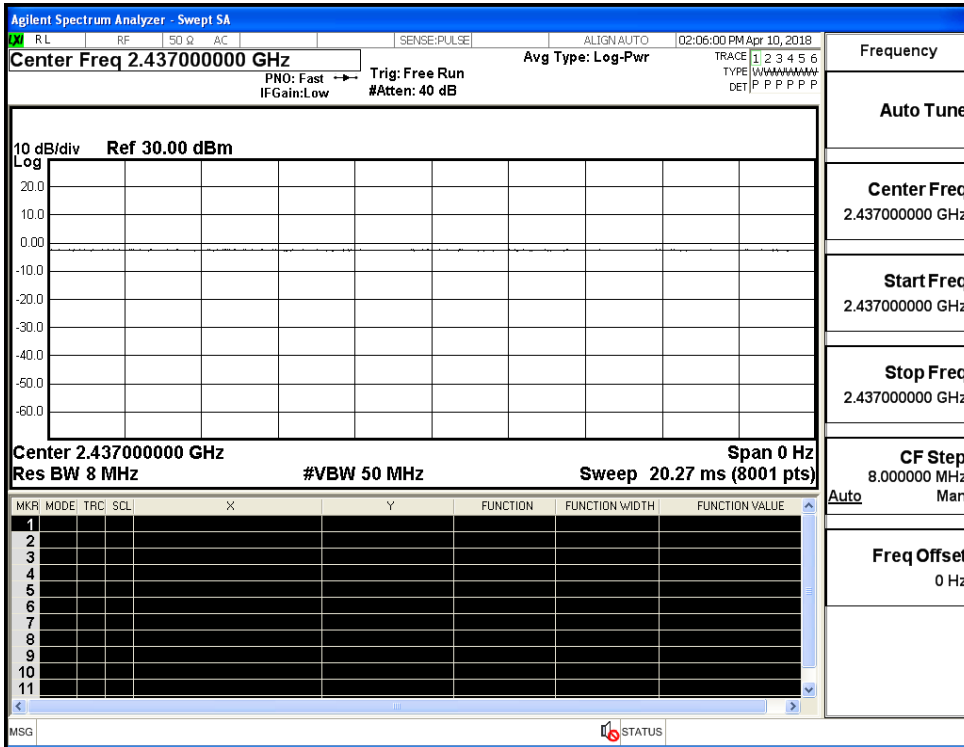
Environmental Conditions

Temperature:	21.5 ° C
Relative Humidity:	52.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Mina.xu
Supervised by:	Jayden Zhuo

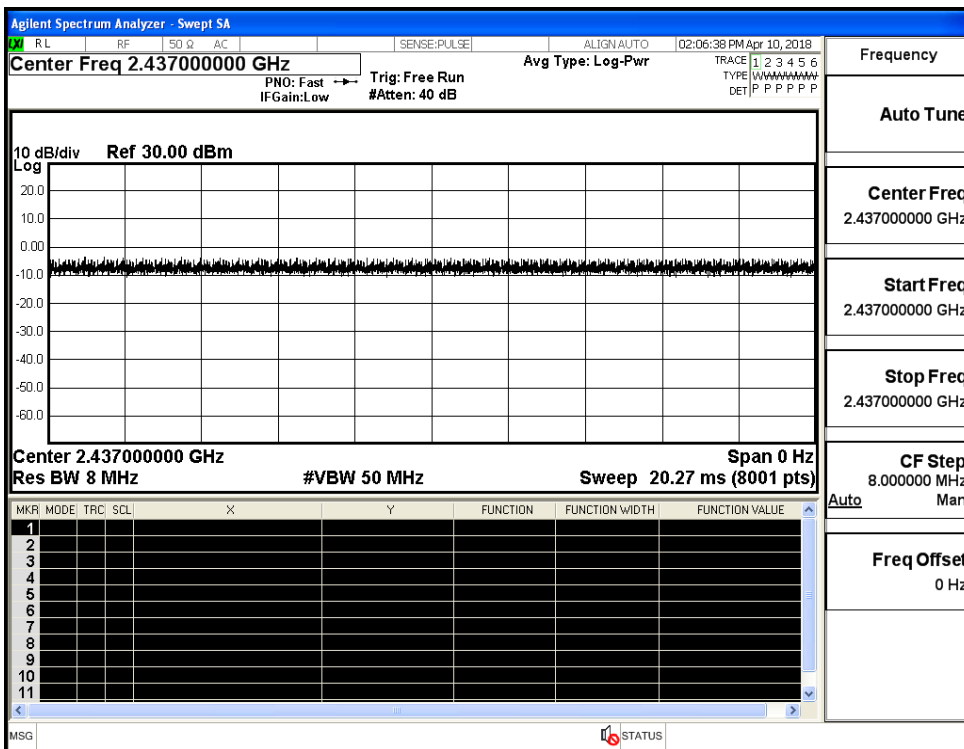
A.1 Duty Cycle

Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2437	Ant1	100	PASS
11G	2437	Ant1	100	PASS
11N20SISO	2437	Ant1	100	PASS
11N40SISO	2437	Ant1	100	PASS

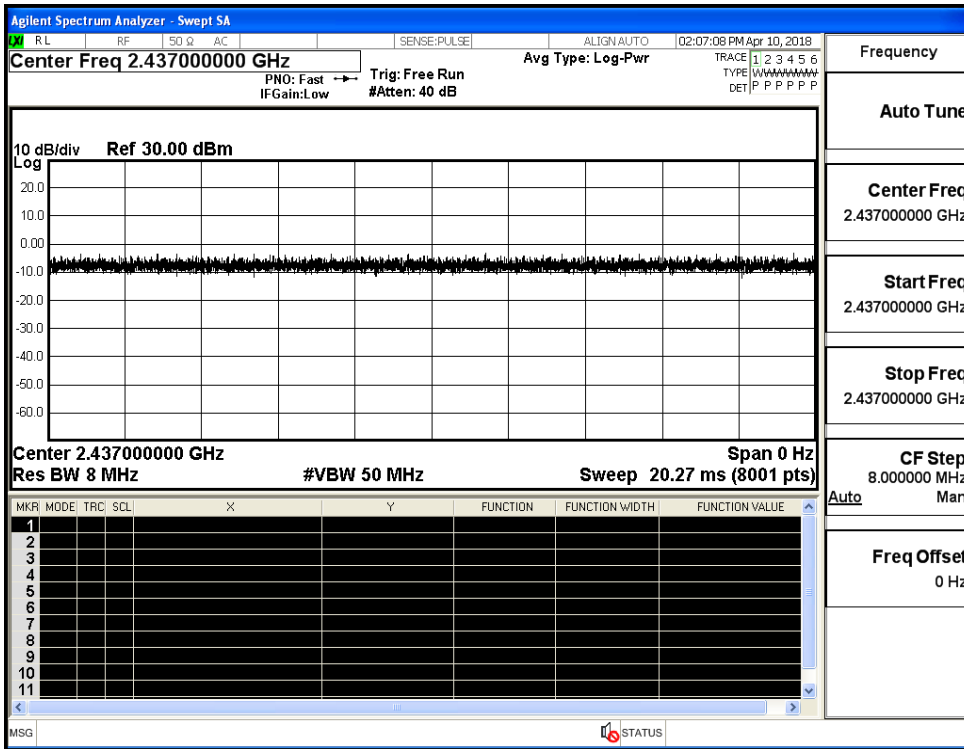
Duty Cycle_11B_2437_Ant1



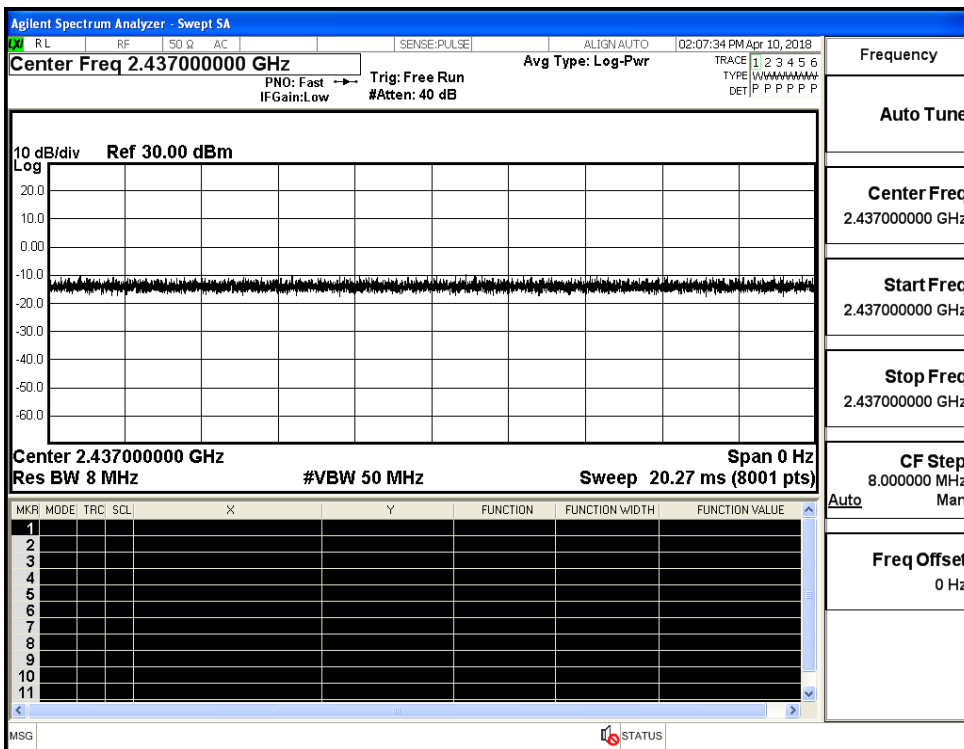
Duty Cycle_11G_2437_Ant1



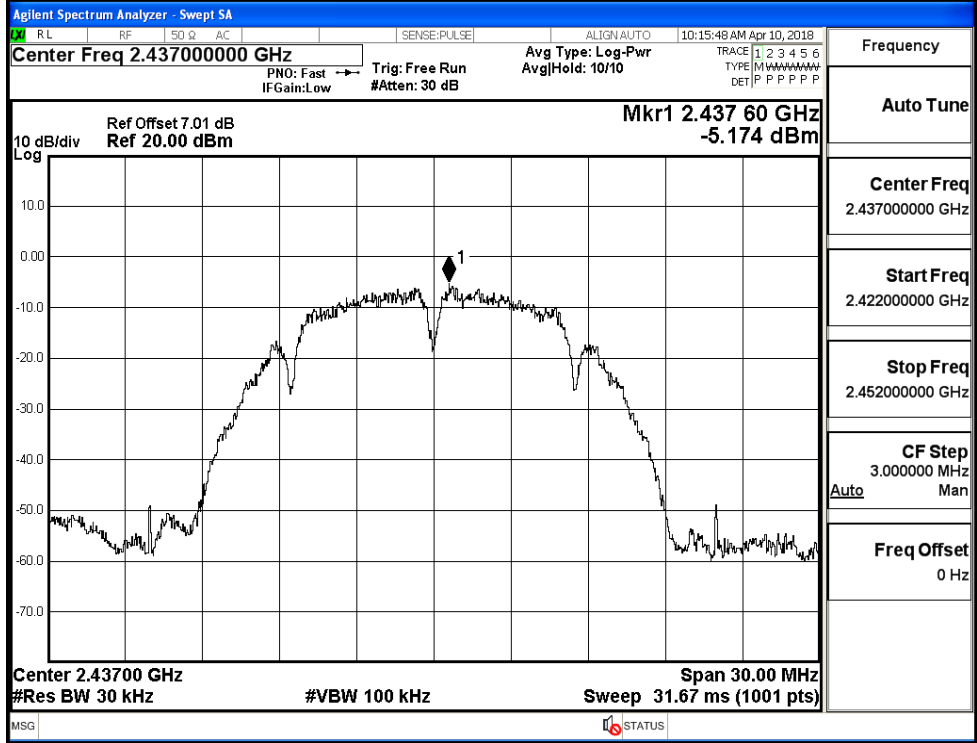
Duty Cycle_11N20SISO_2437_Ant1



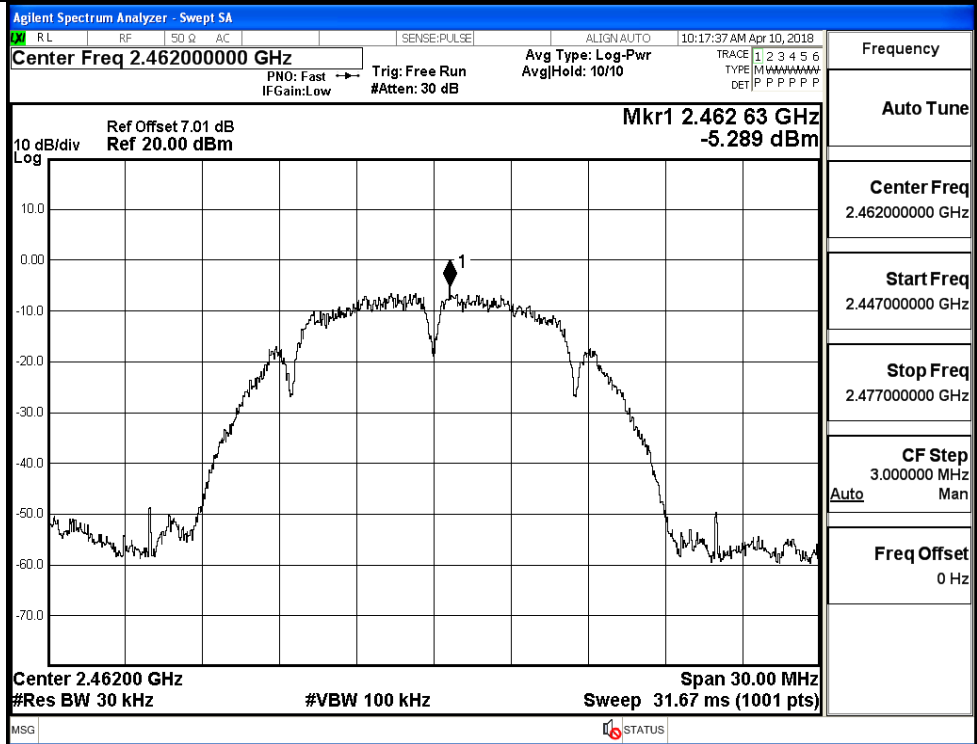
Duty Cycle_11N40SISO_2437_Ant1



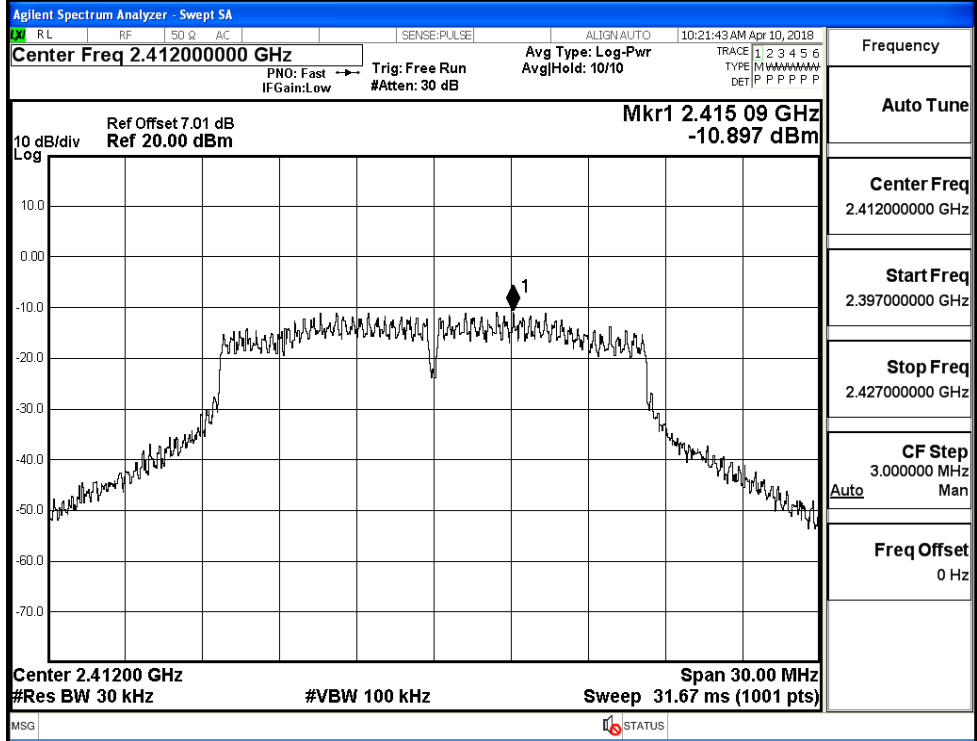
11B/MCH



11B/HCH

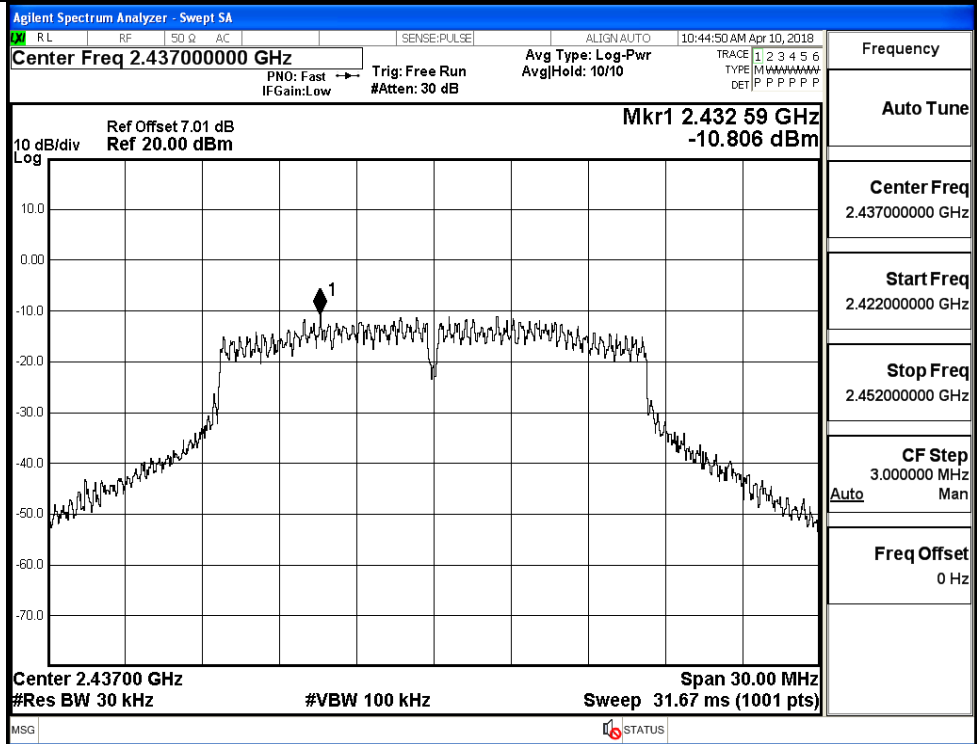


11G/LCH



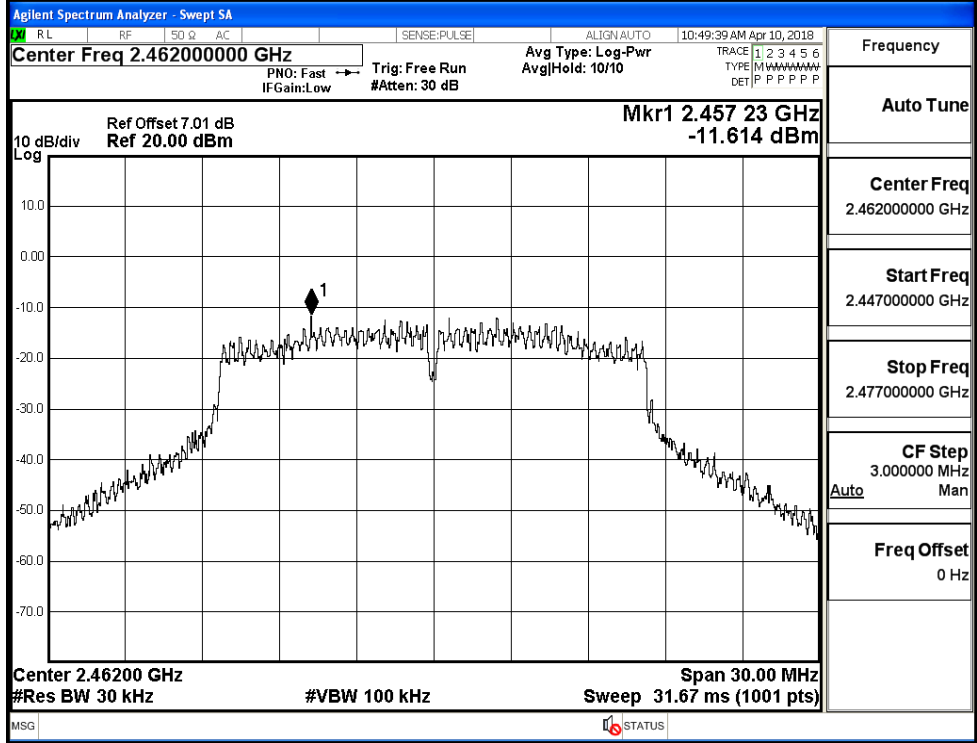
Frequency
Auto Tune
Center Freq 2.41200000 GHz
Start Freq 2.397000000 GHz
Stop Freq 2.427000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

11G/MCH

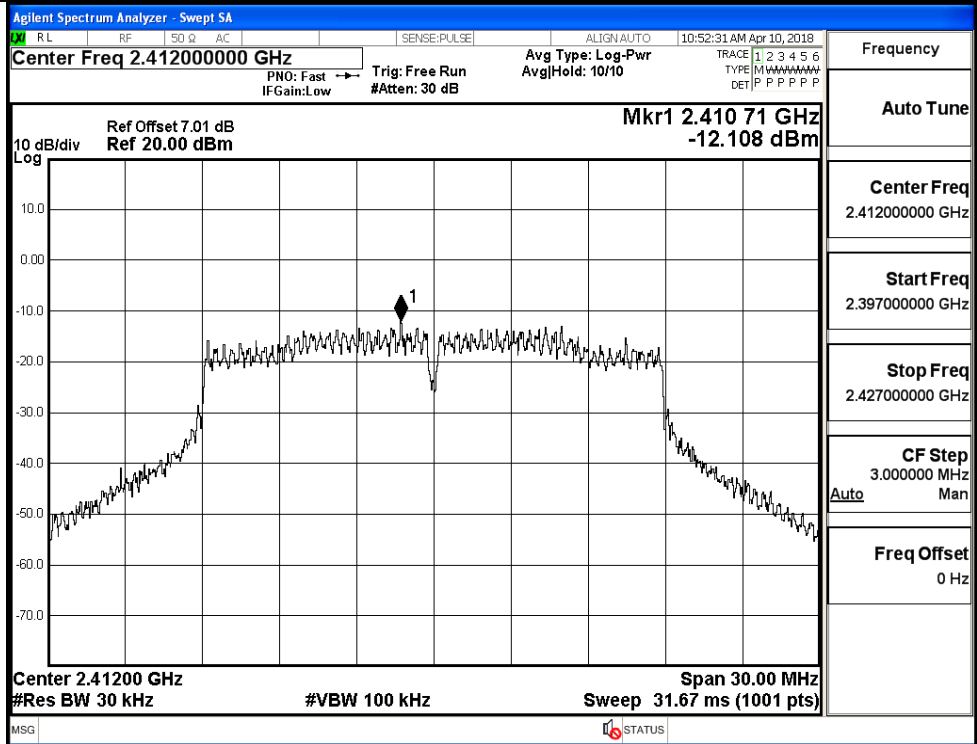


Frequency
Auto Tune
Center Freq 2.437000000 GHz
Start Freq 2.422000000 GHz
Stop Freq 2.452000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

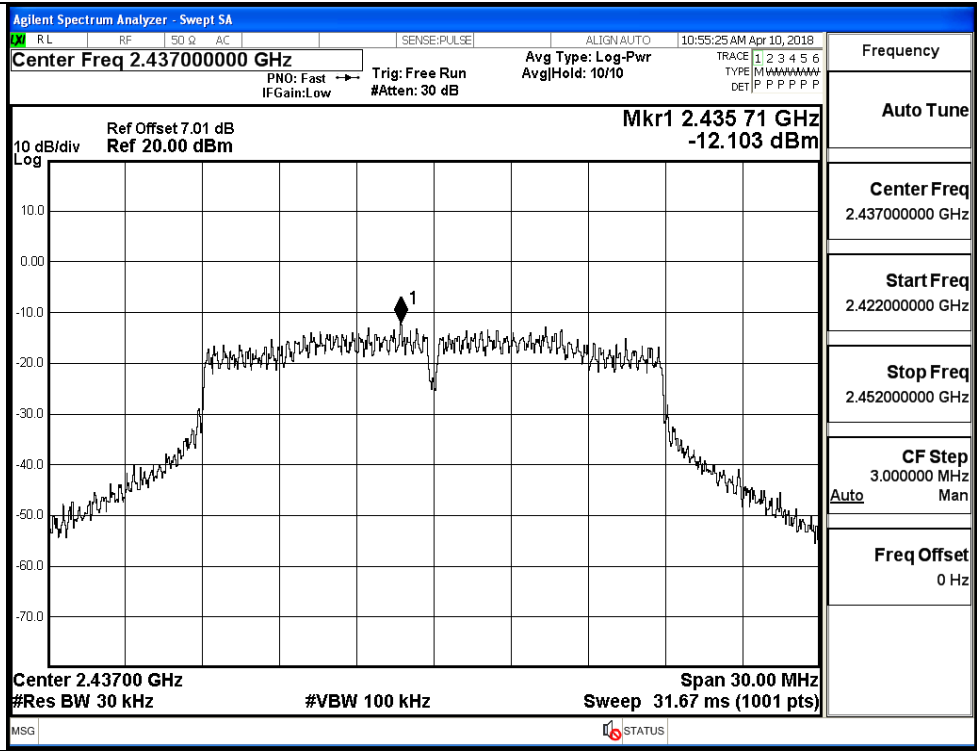
11G/HCH



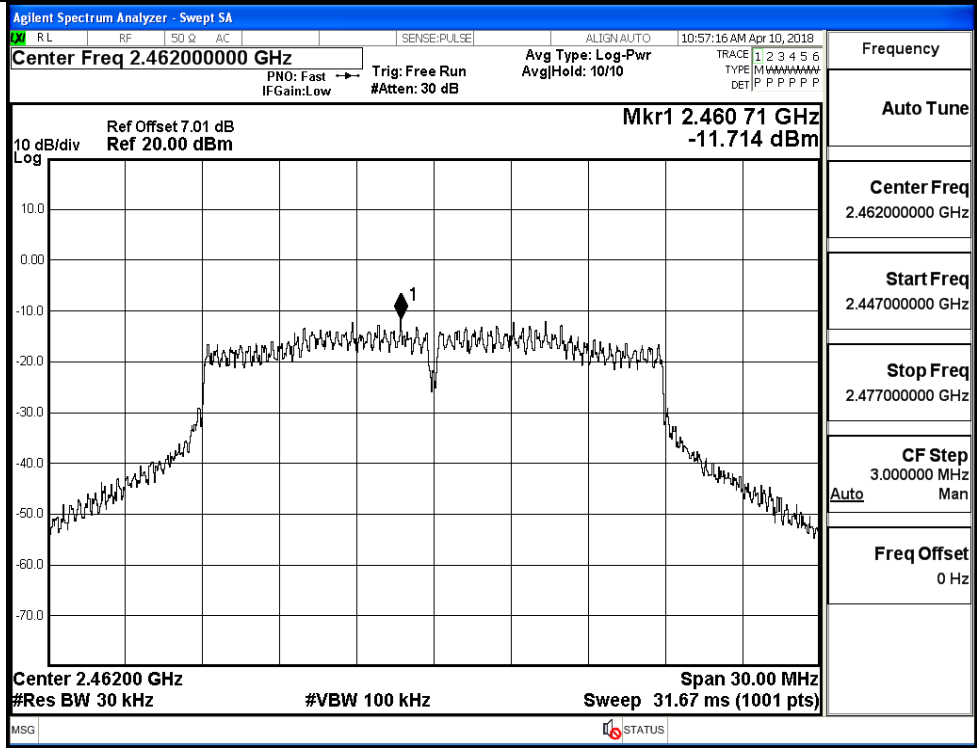
11N20SISO/LCH



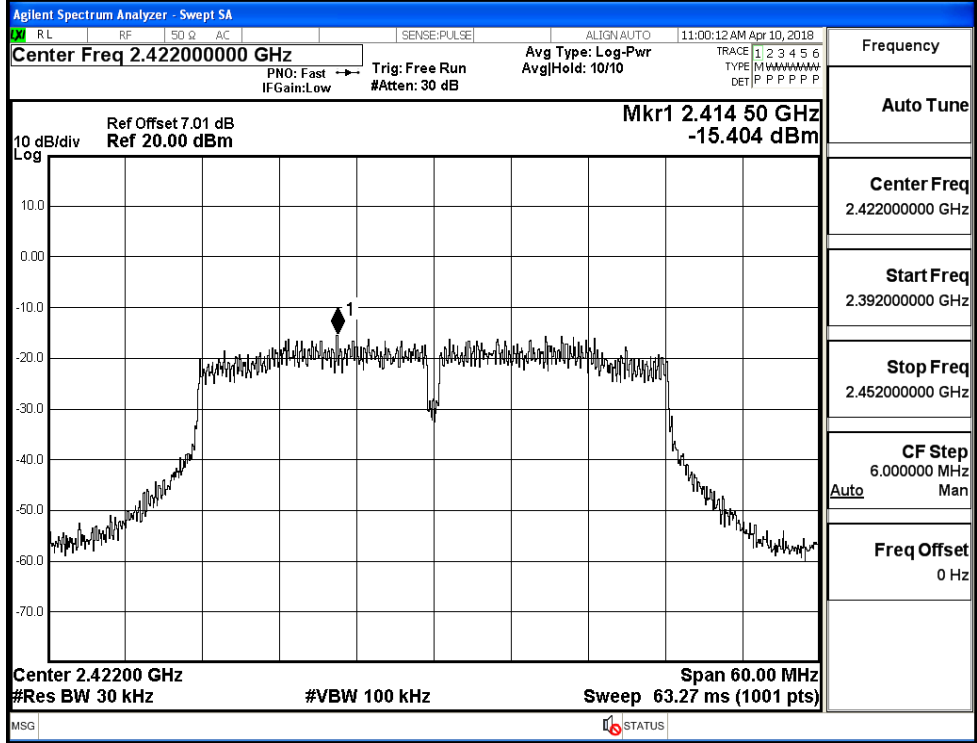
11N20SISO/MCH



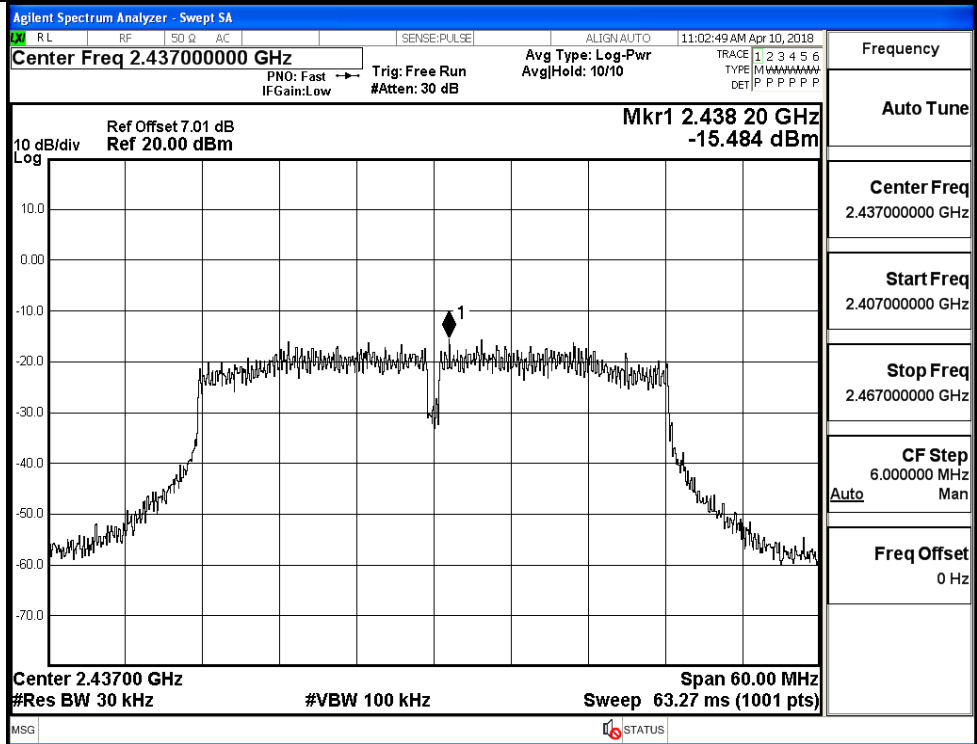
11N20SISO/HCH



11N40SISO/LCH

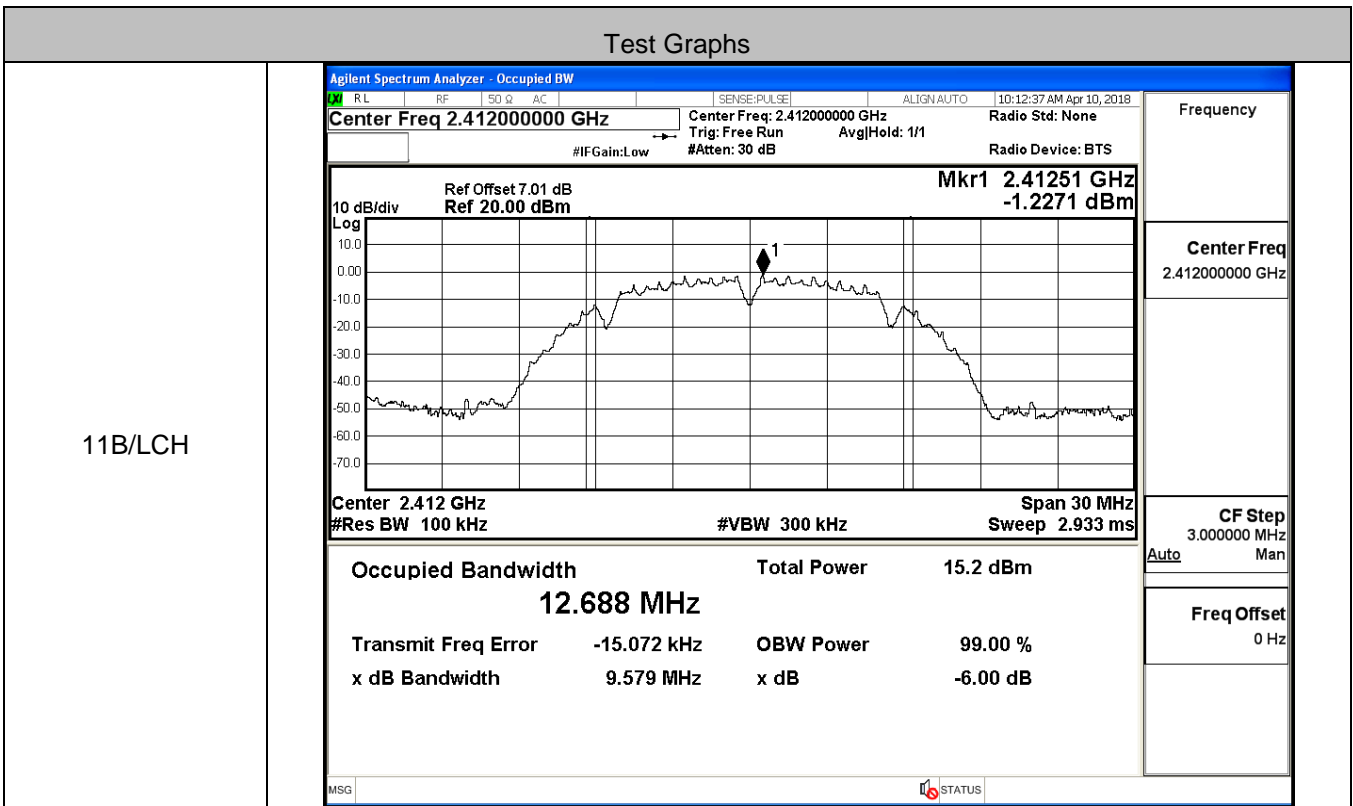


11N40SISO/MCH

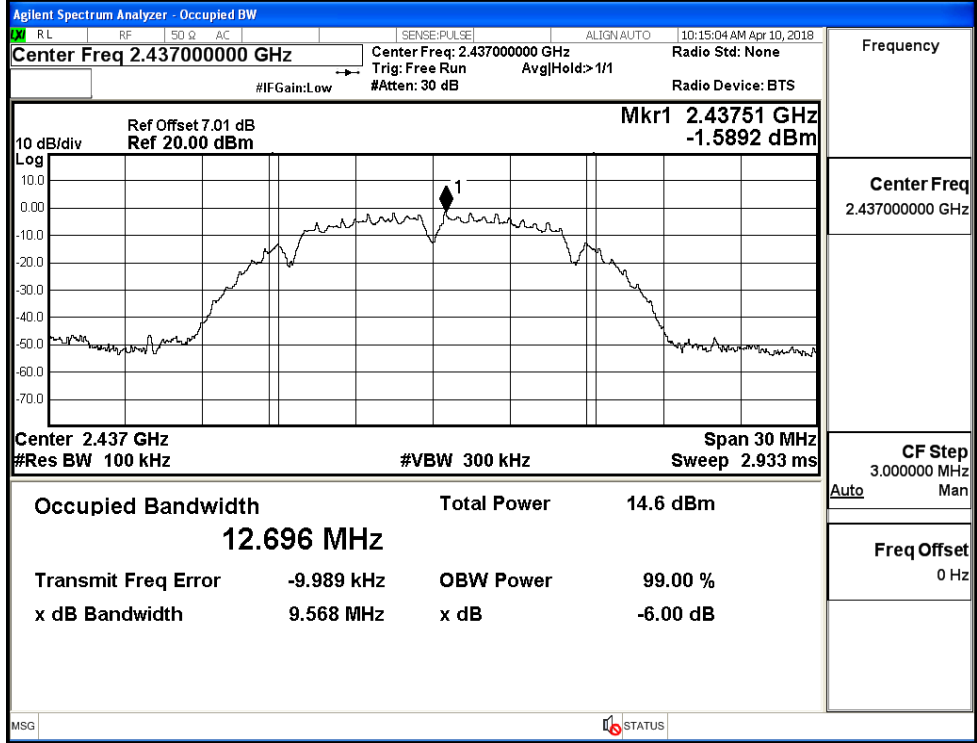


A.3 6dB Bandwidth

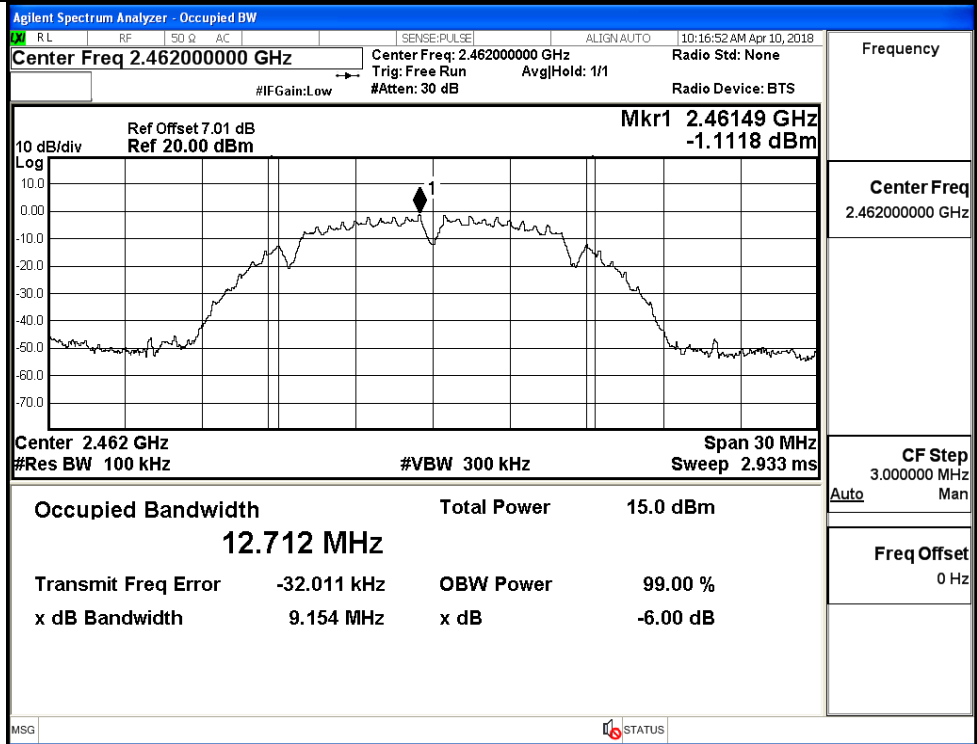
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.579	≥0.5	PASS
	MCH	9.568	≥0.5	PASS
	HCH	9.154	≥0.5	PASS
11G	LCH	15.15	≥0.5	PASS
	MCH	15.09	≥0.5	PASS
	HCH	15.45	≥0.5	PASS
11N20SISO	LCH	15.13	≥0.5	PASS
	MCH	15.15	≥0.5	PASS
	HCH	15.11	≥0.5	PASS
11N40SISO	LCH	35.16	≥0.5	PASS
	MCH	35.15	≥0.5	PASS
	HCH	35.17	≥0.5	PASS



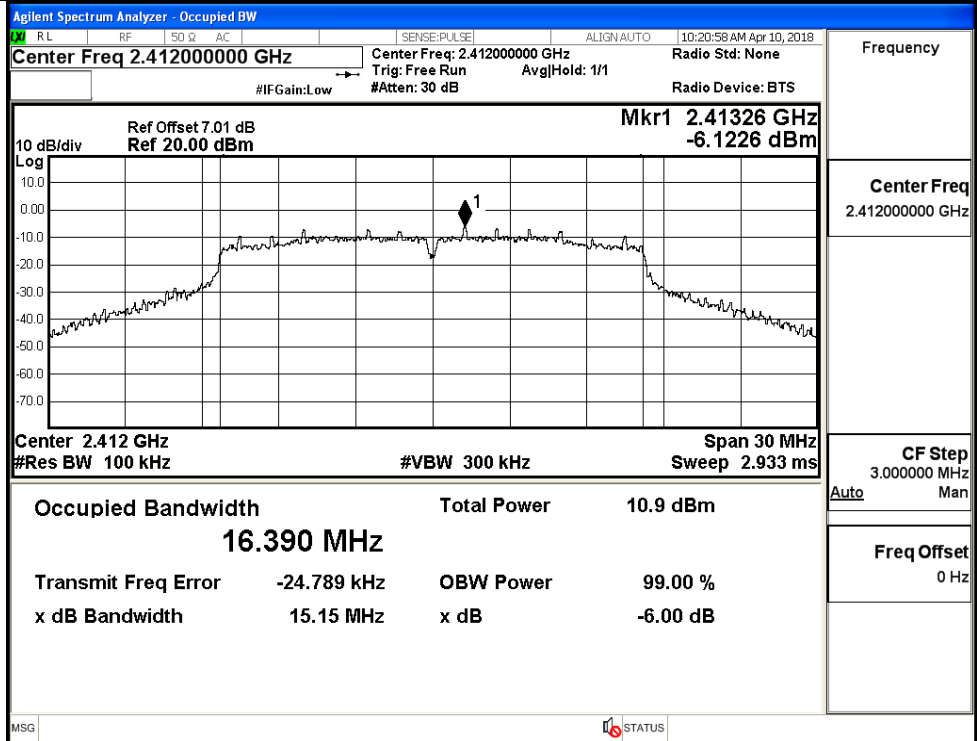
11B/MCH



11B/HCH



11G/LCH



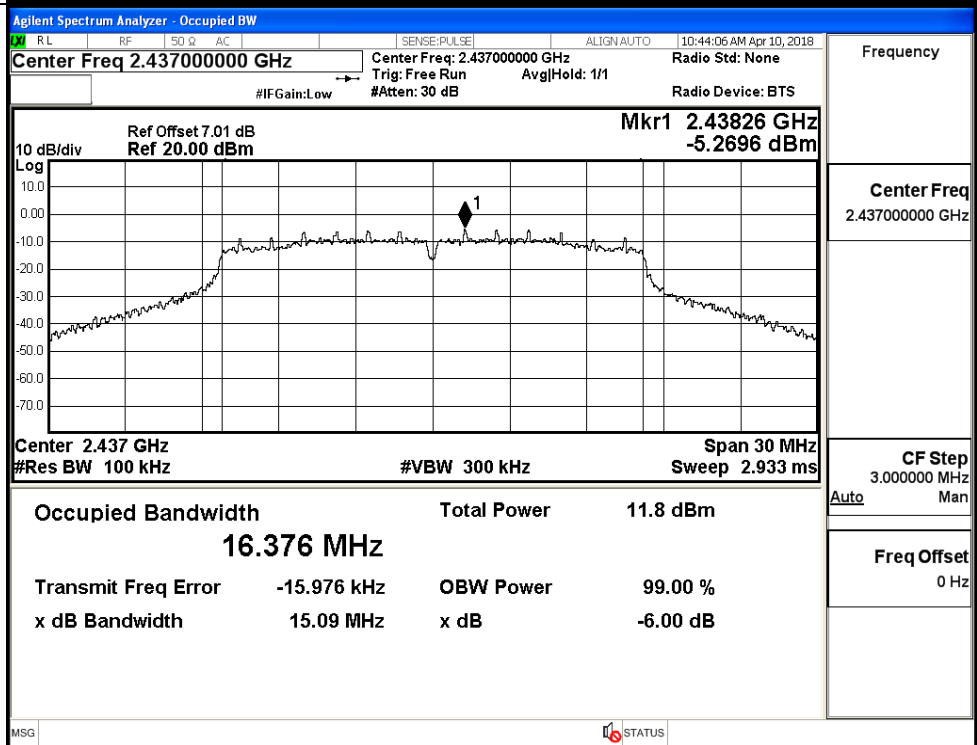
Frequency

Center Freq
2.41200000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

11G/MCH



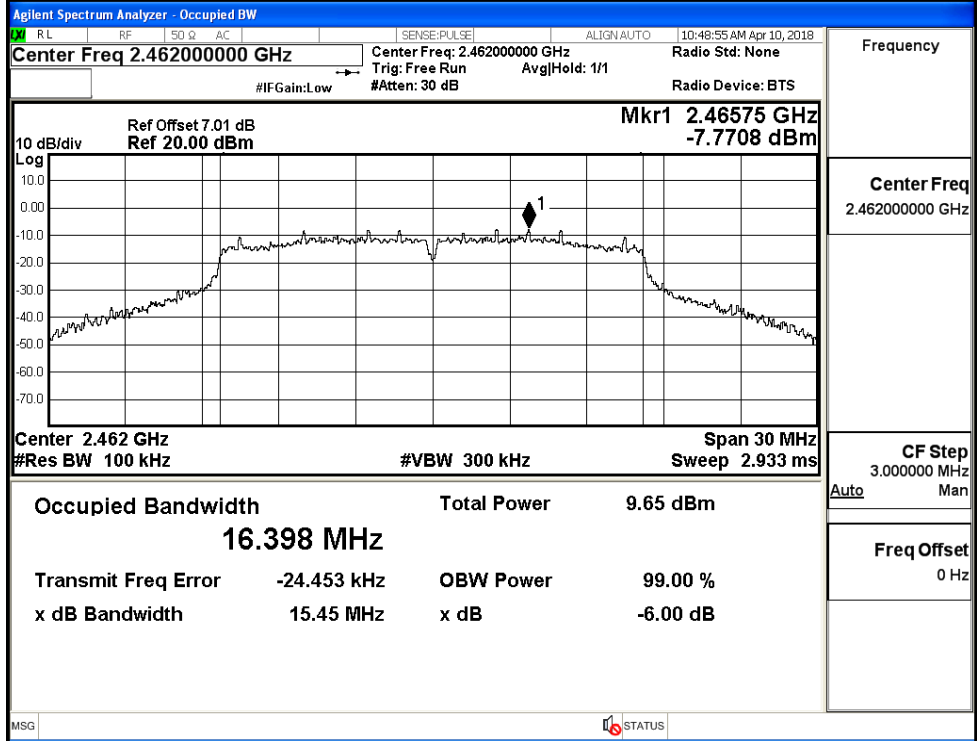
Frequency

Center Freq
2.43700000 GHz

CF Step
3.000000 MHz
Auto Man

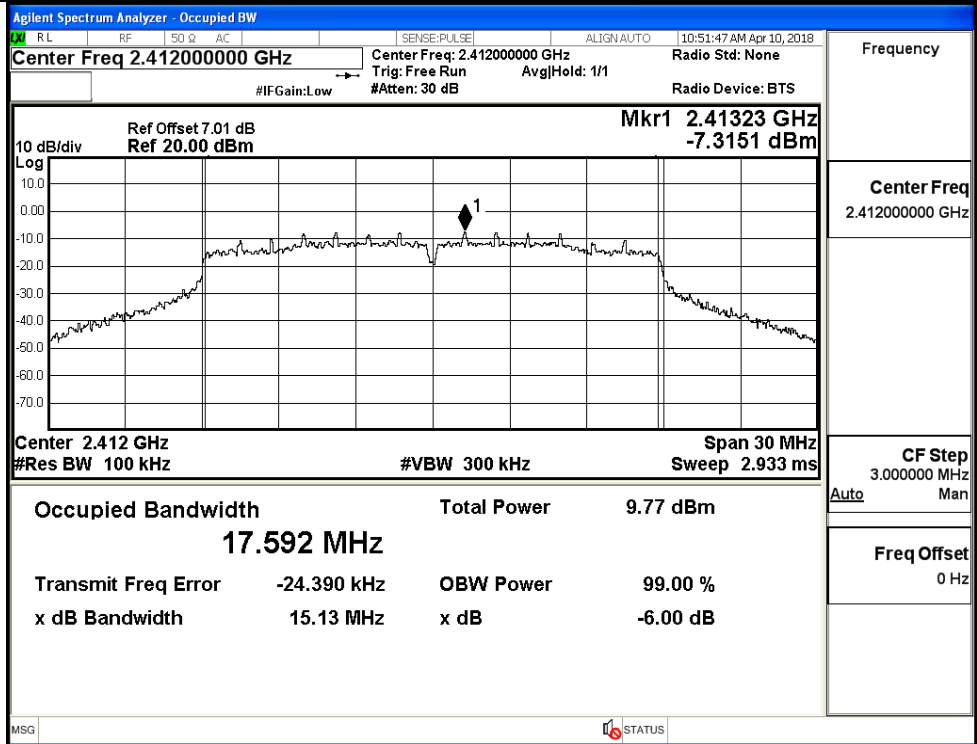
Freq Offset
0 Hz

11G/HCH



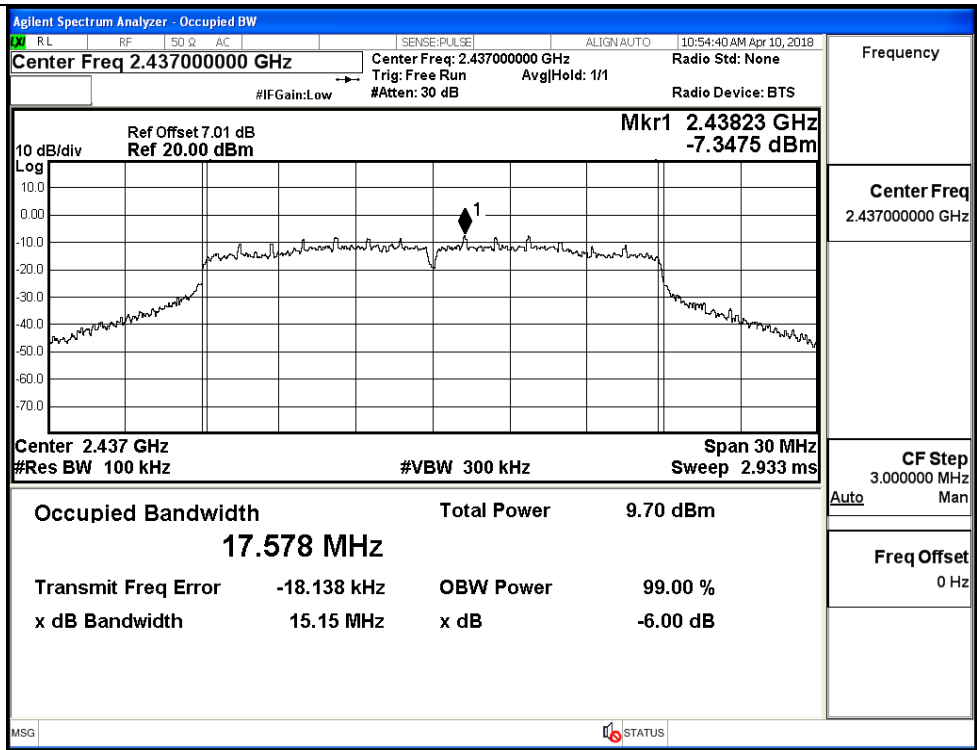
Frequency	2.46200000 GHz
Center Freq	2.46200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11N20SISO/LCH

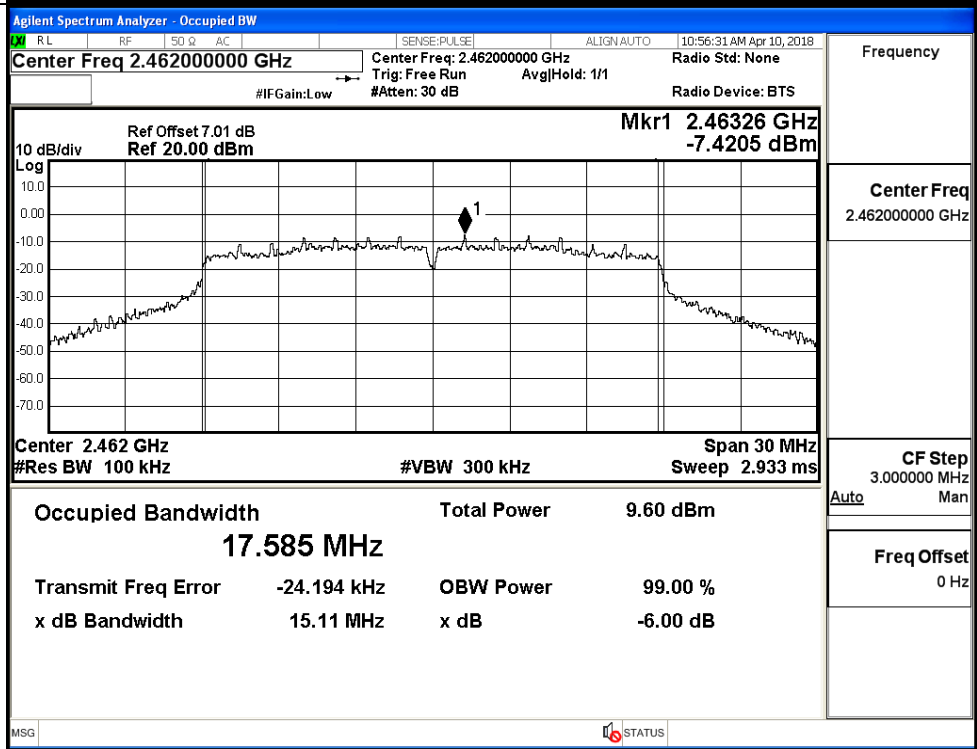


Frequency	2.41200000 GHz
Center Freq	2.41200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

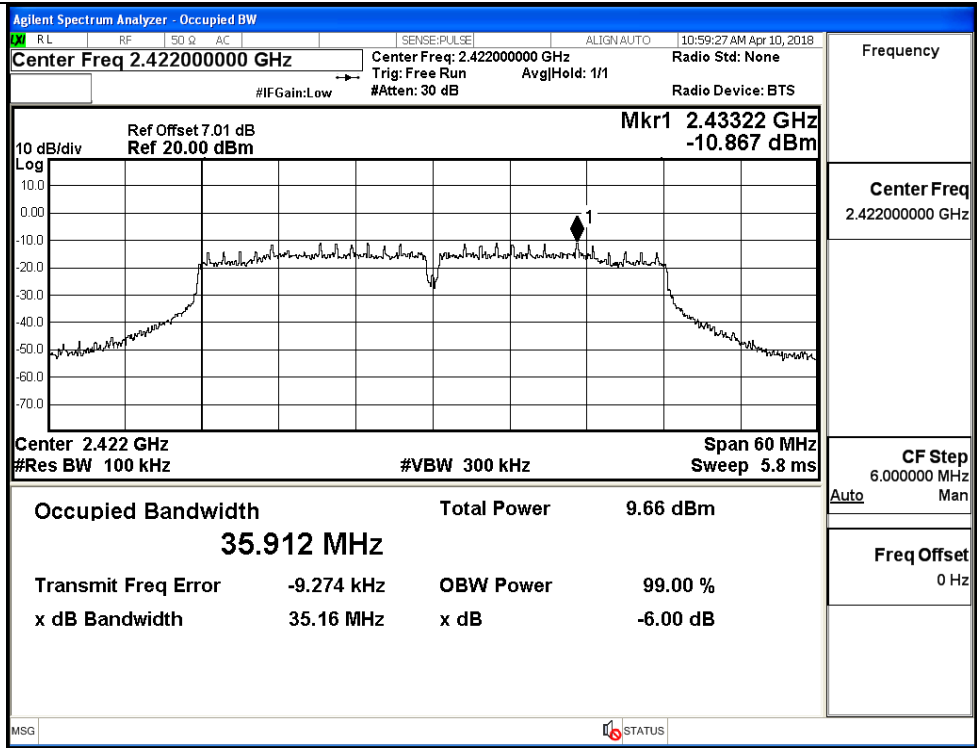
11N20SISO/MCH



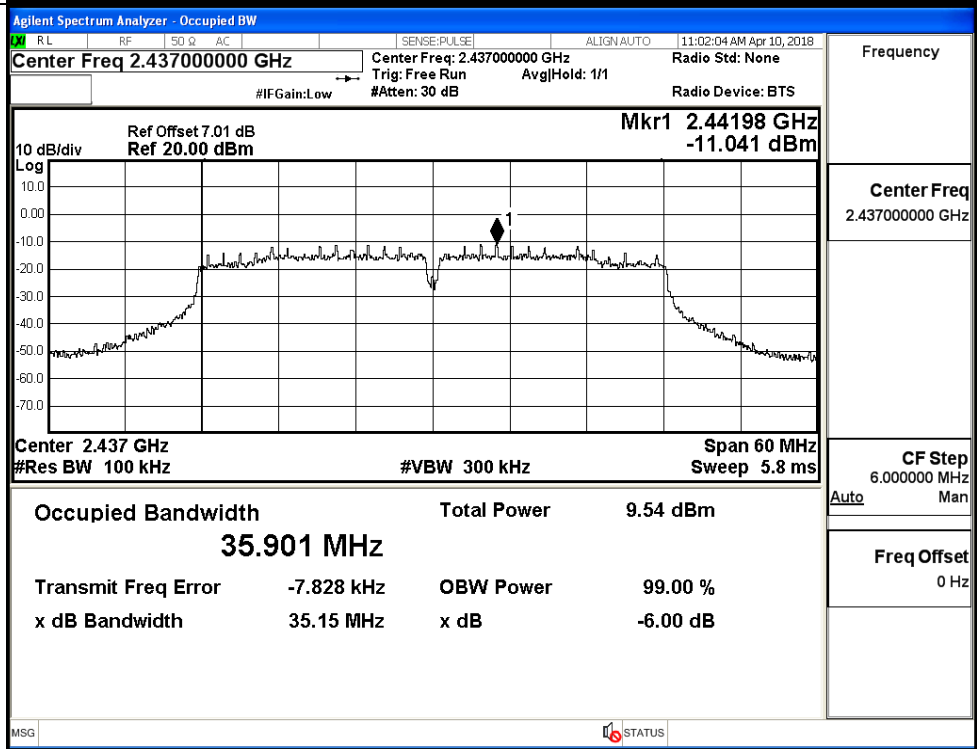
11N20SISO/HCH



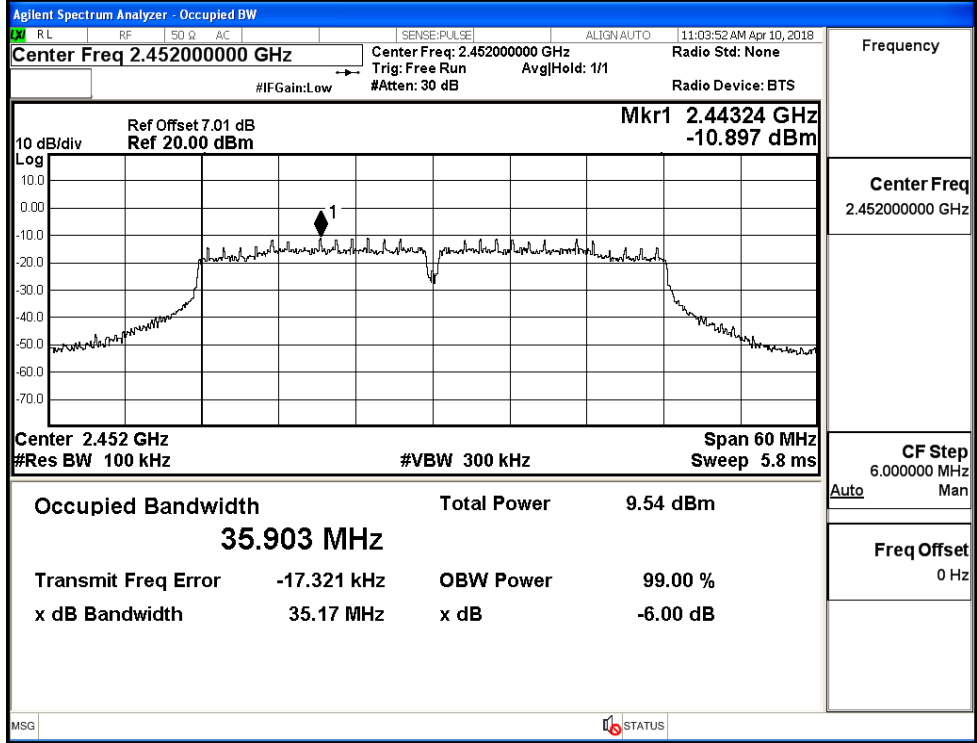
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

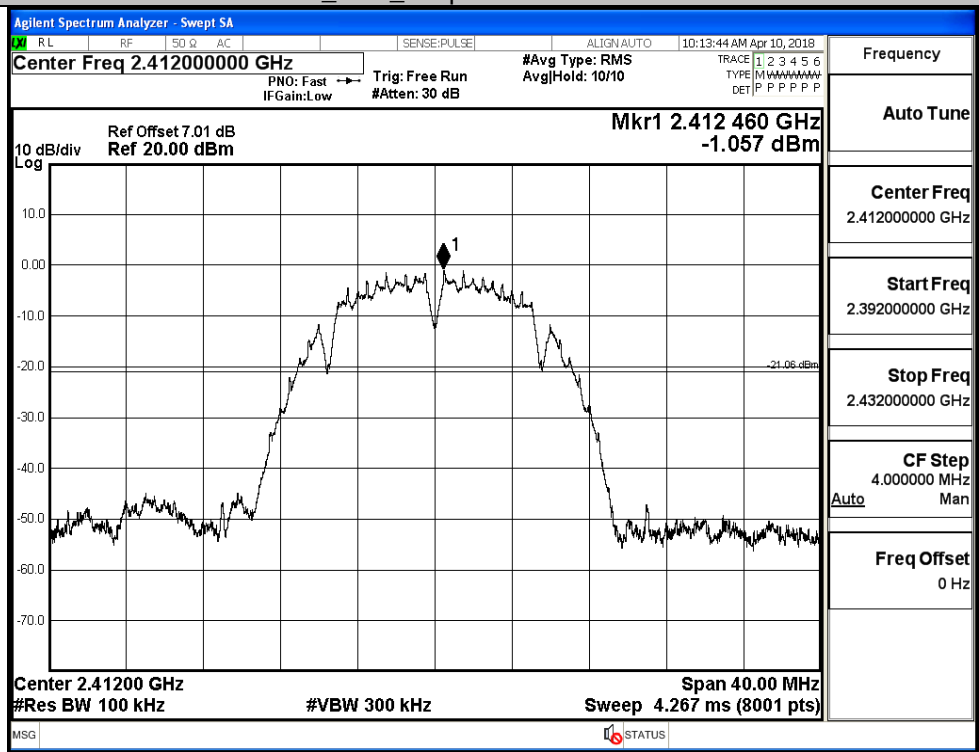


A.4 RF Conducted Spurious Emissions

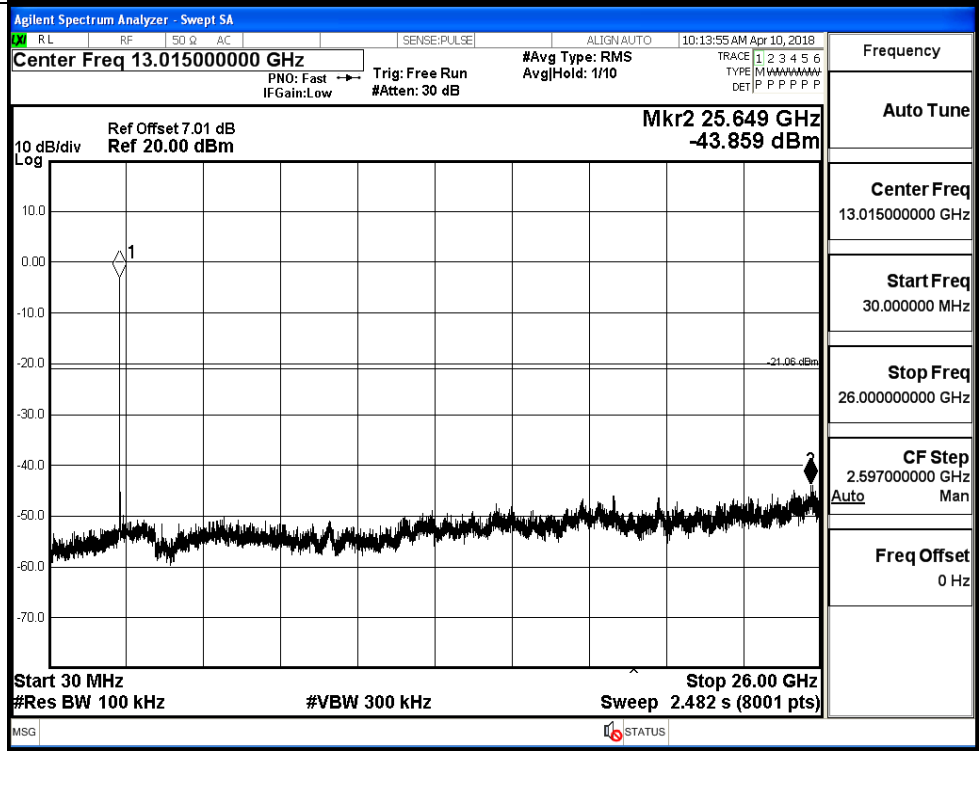
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-1.057	-43.859	-21.057	PASS
	MCH	-0.661	-44.313	-20.661	PASS
	HCH	-1.128	-44.694	-21.128	PASS
11G	LCH	-5.592	-44.405	-25.592	PASS
	MCH	-5.79	-43.326	-25.790	PASS
	HCH	-7.494	-44.861	-27.494	PASS
11N20 SISO	LCH	-6.992	-43.234	-26.992	PASS
	MCH	-7.312	-44.038	-27.312	PASS
	HCH	-7.085	-44.459	-27.085	PASS
11N40 SISO	LCH	-10.07	-45.185	-30.070	PASS
	MCH	-10.486	-42.639	-30.486	PASS
	HCH	-10.488	-44.190	-30.488	PASS

11B_LCH_Graphs

Pref/11B/LCH

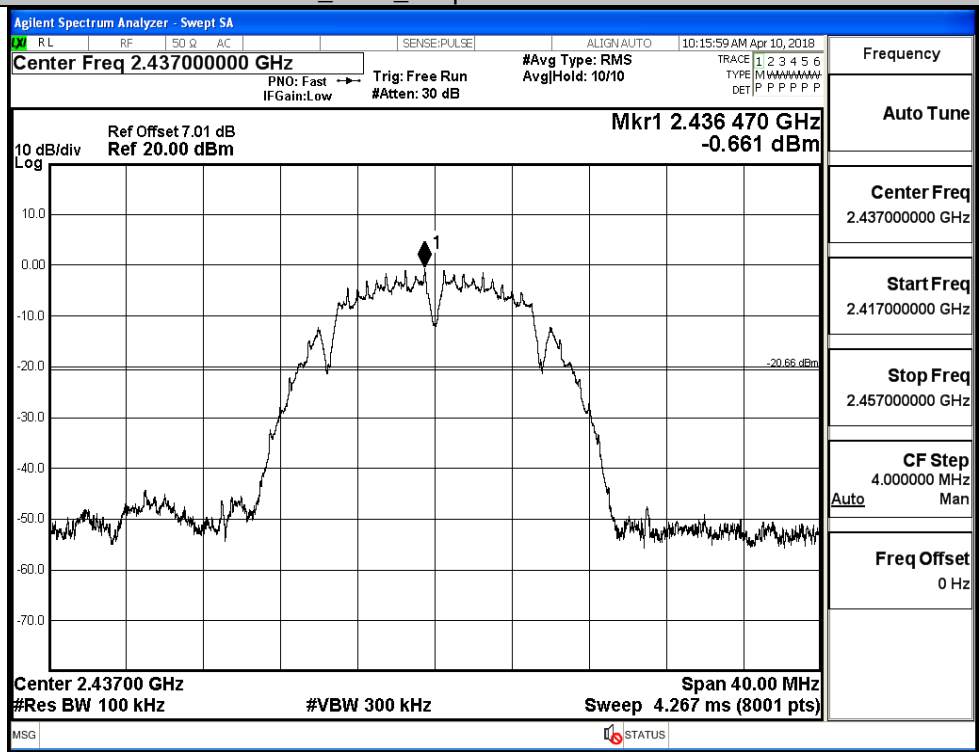


Puw/11B/LCH

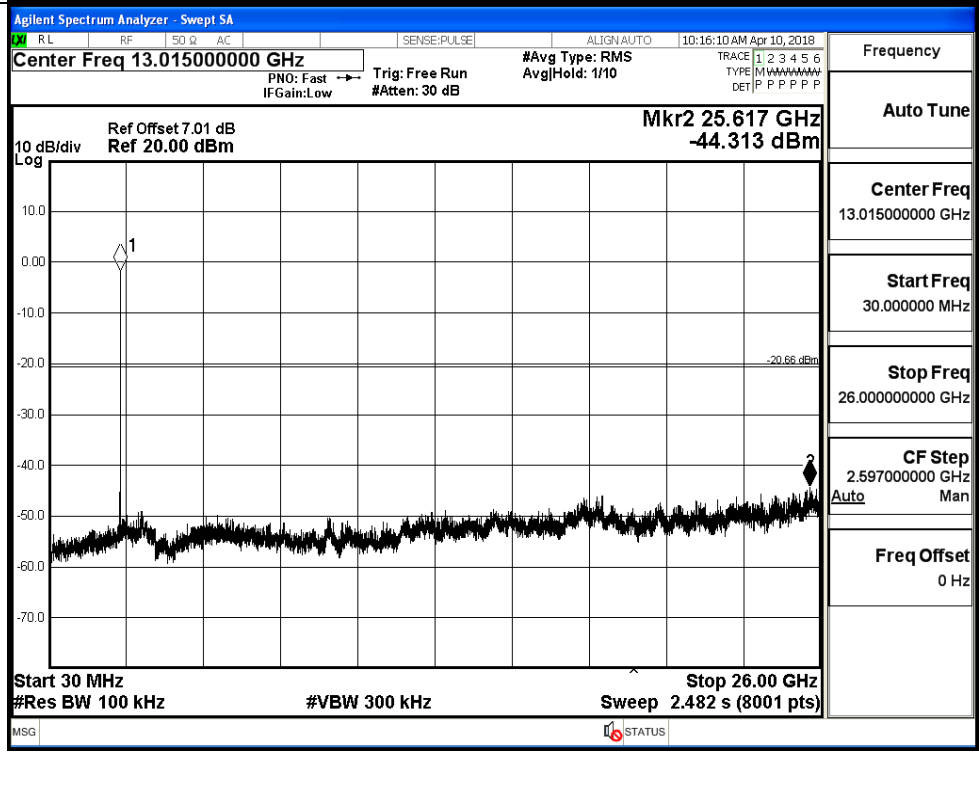


11B_MCH_Graphs

Pref/11B/MCH

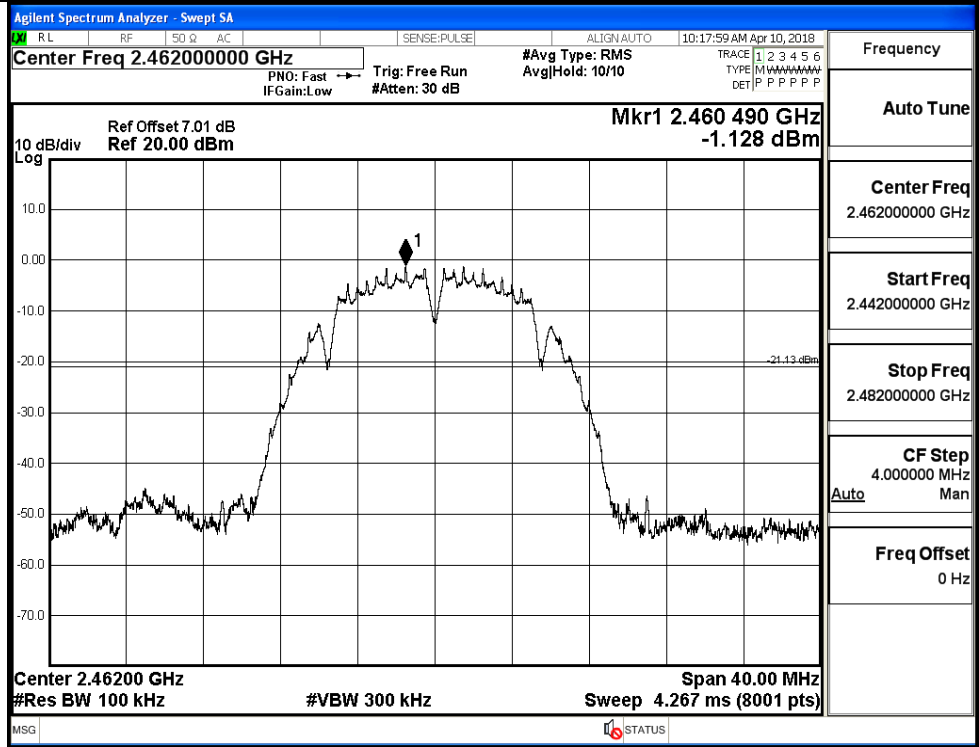


Puw/11B/MCH

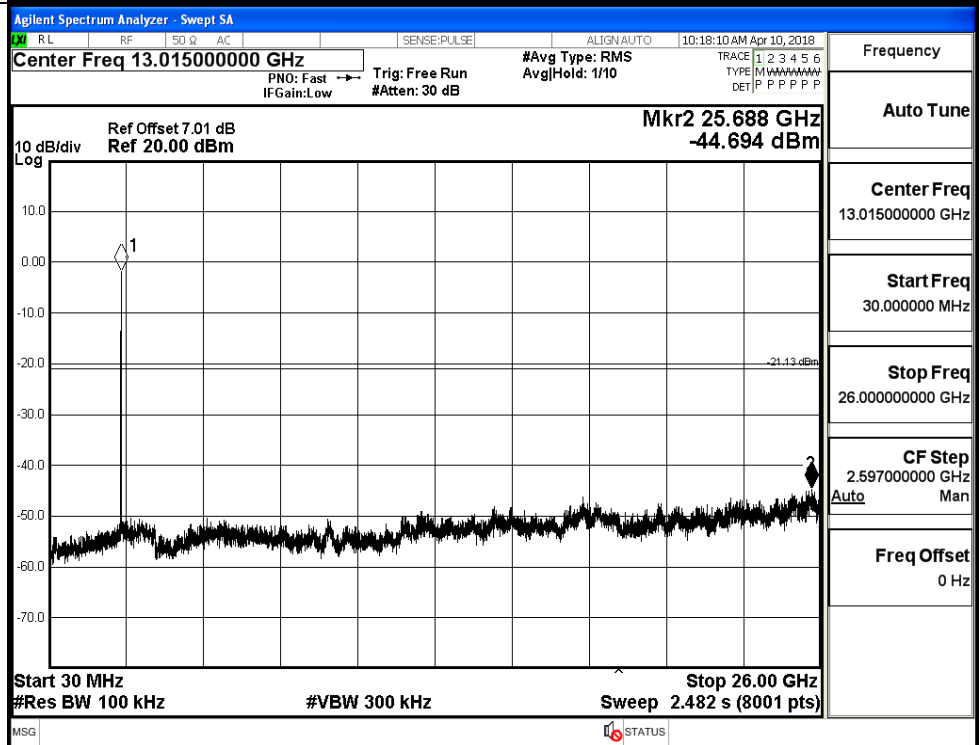


11B_HCH_Graphs

Pref/11B/HCH

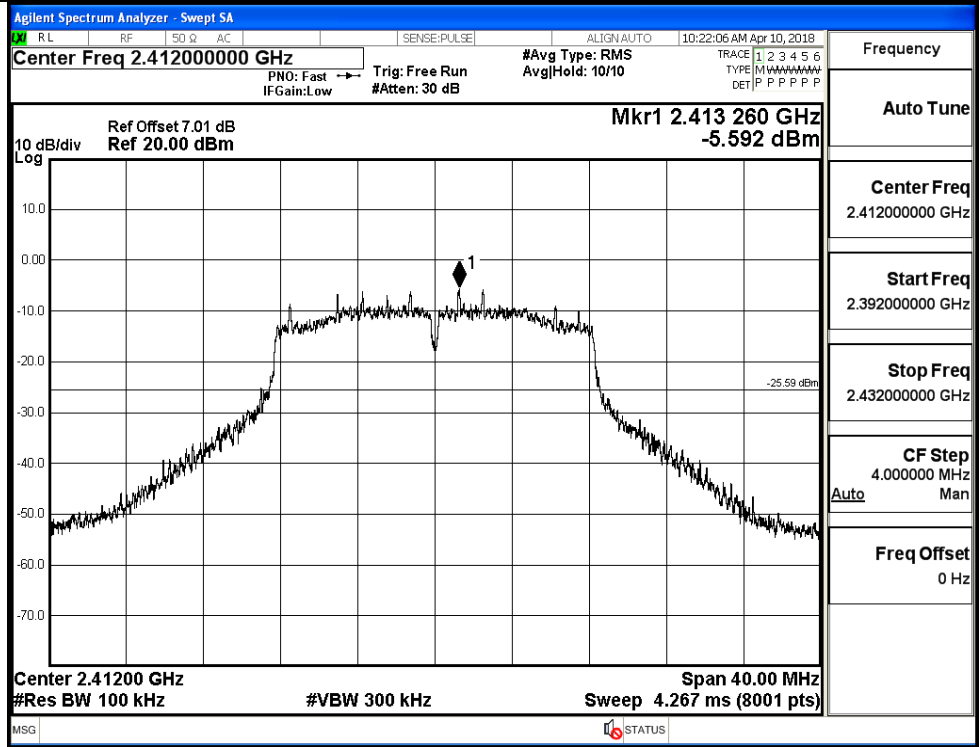


Puw/11B/HCH

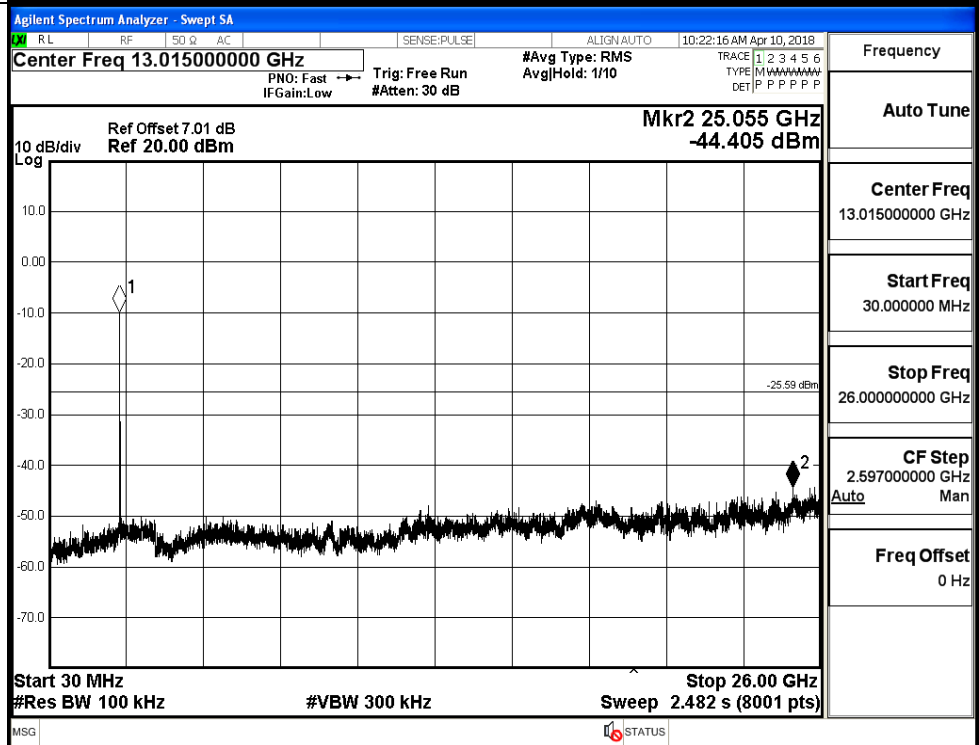


11G_LCH_Graphs

Pref/11G/LCH

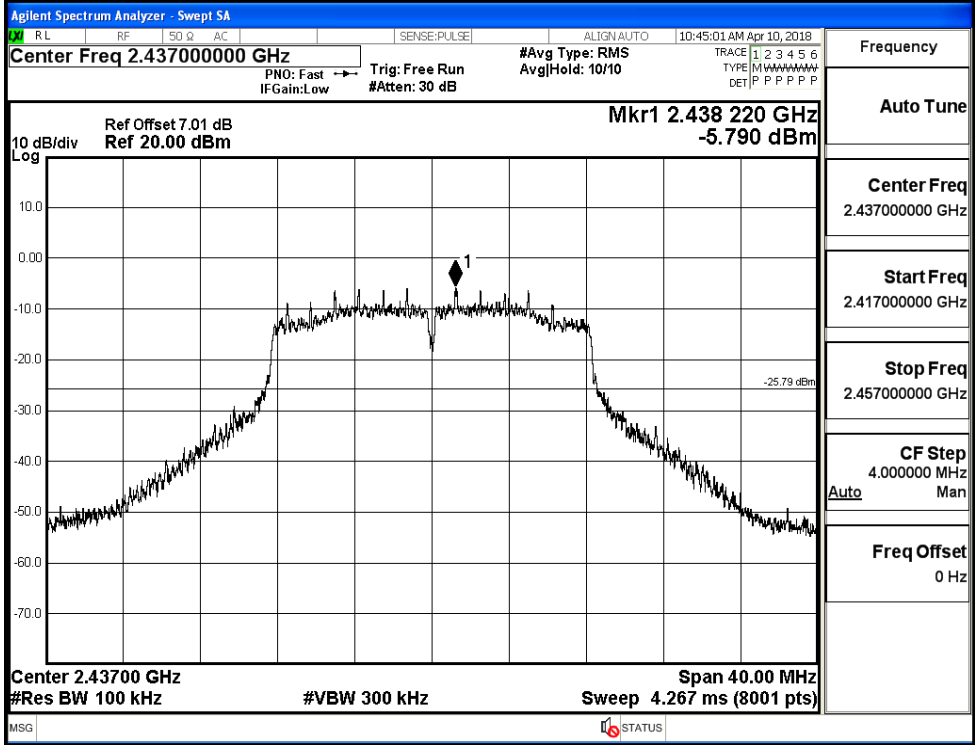


Puw/11G/LCH

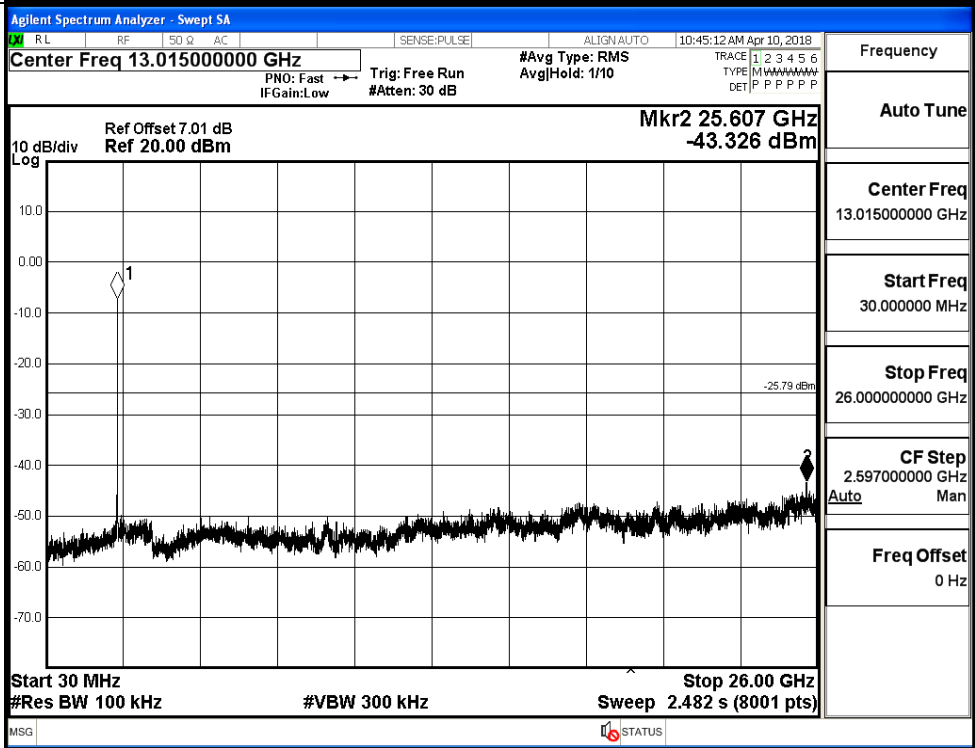


11G_MCH_Graphs

Pref/11G/MCH

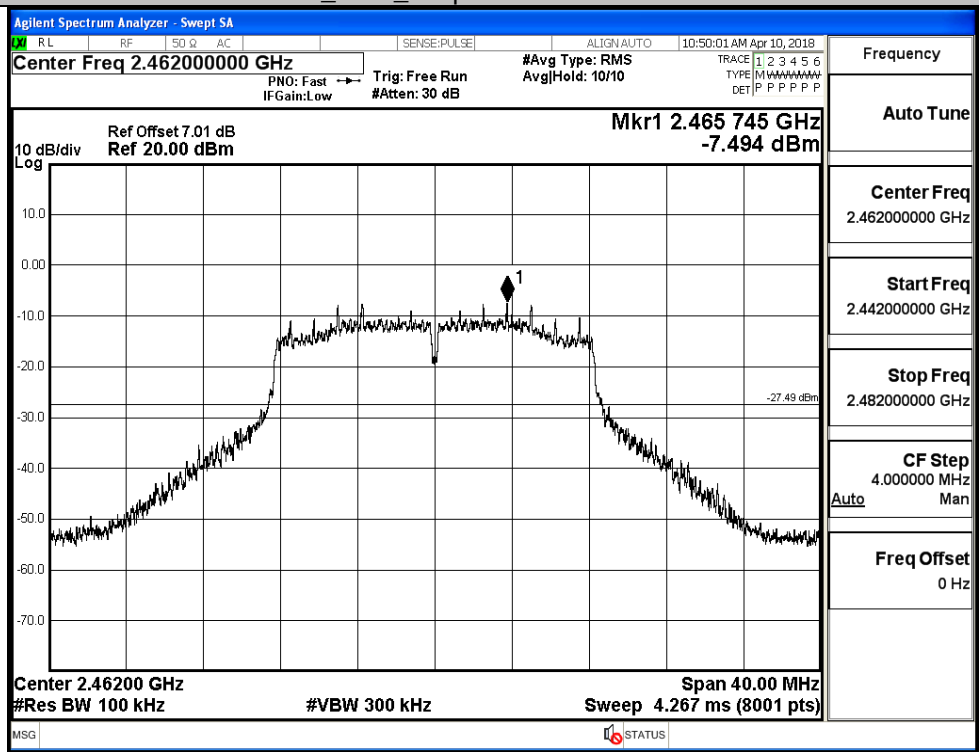


Puw/11G/MCH

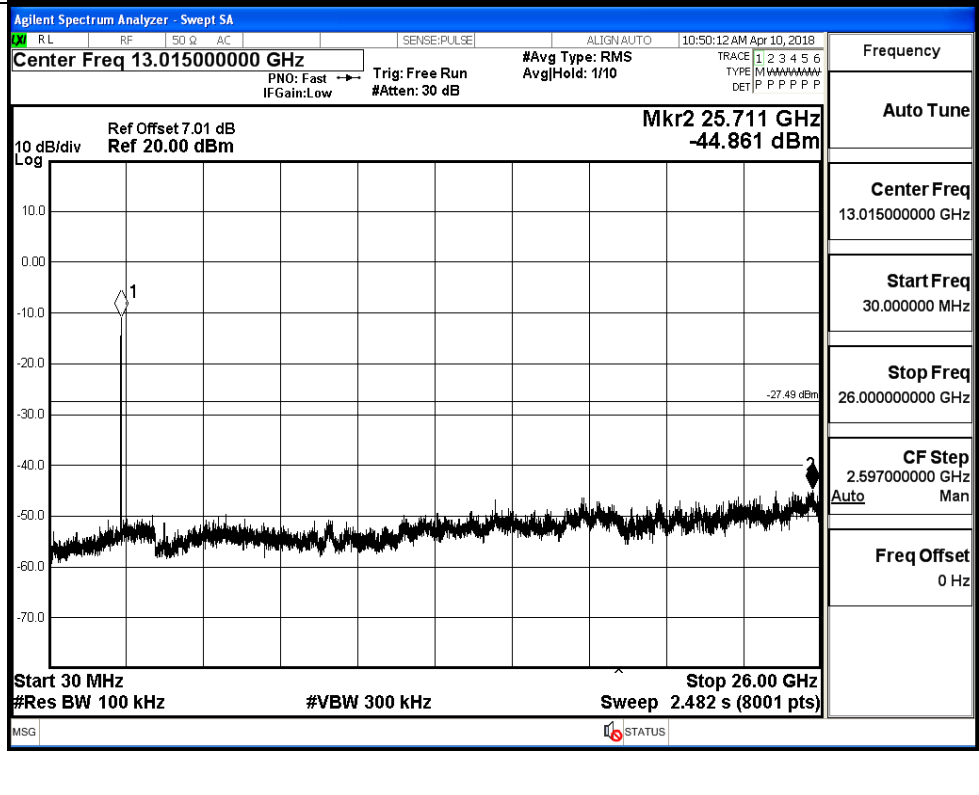


11G_HCH_Graphs

Pref/11G/HCH

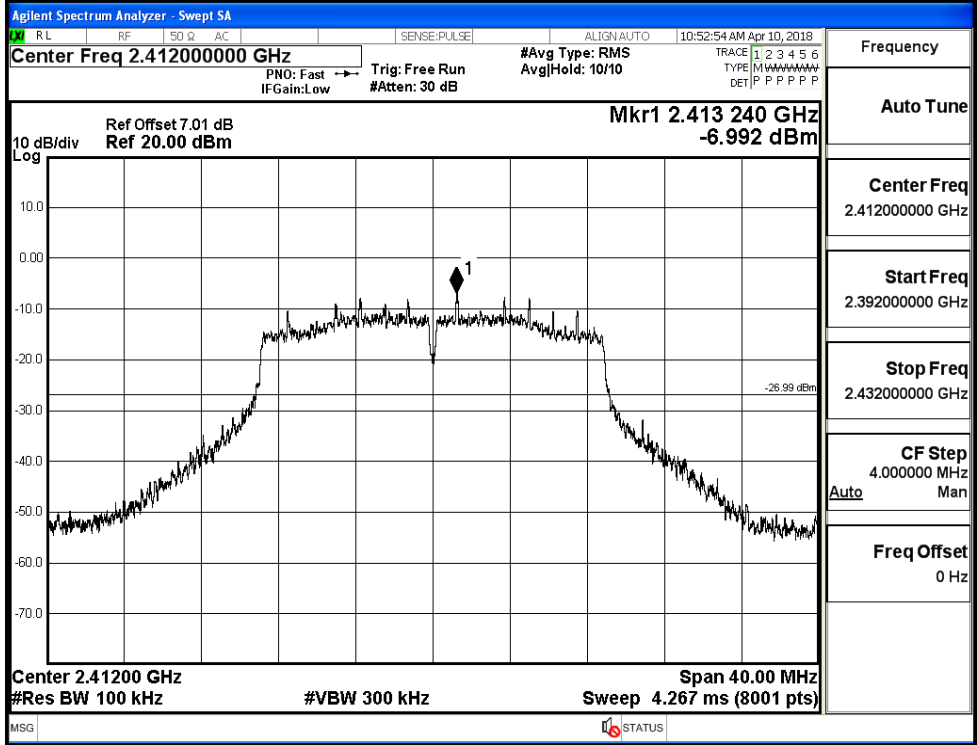


Puw/11G/HCH

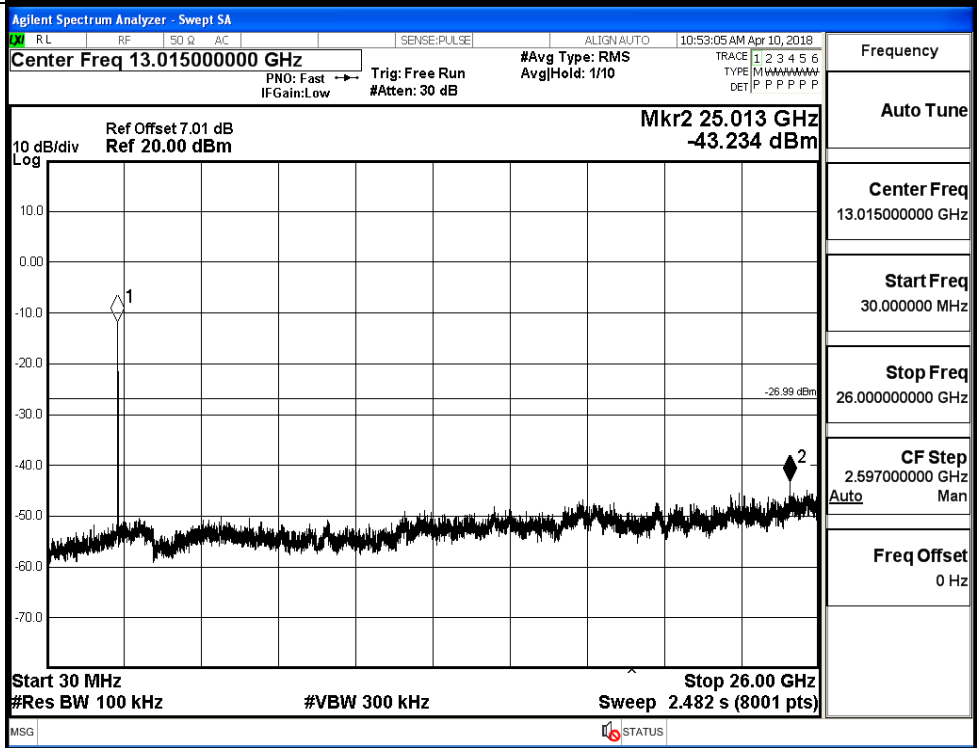


11N20SISO_LCH_Graphs

Pref/11N20SIS
O/LCH

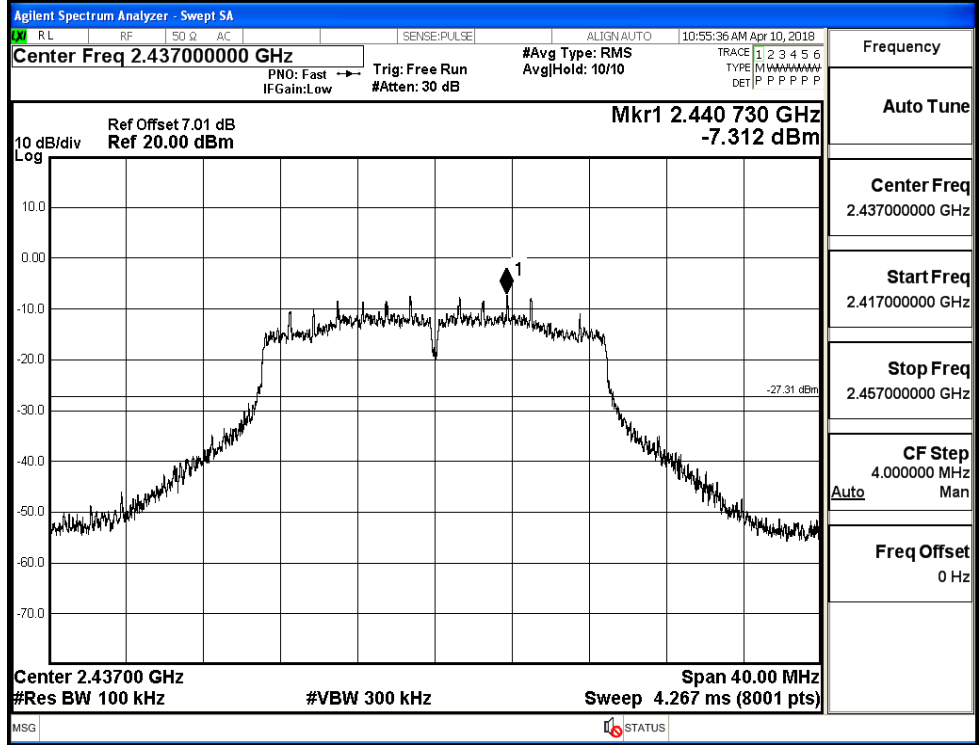


Puw/11N20
SISO/LCH

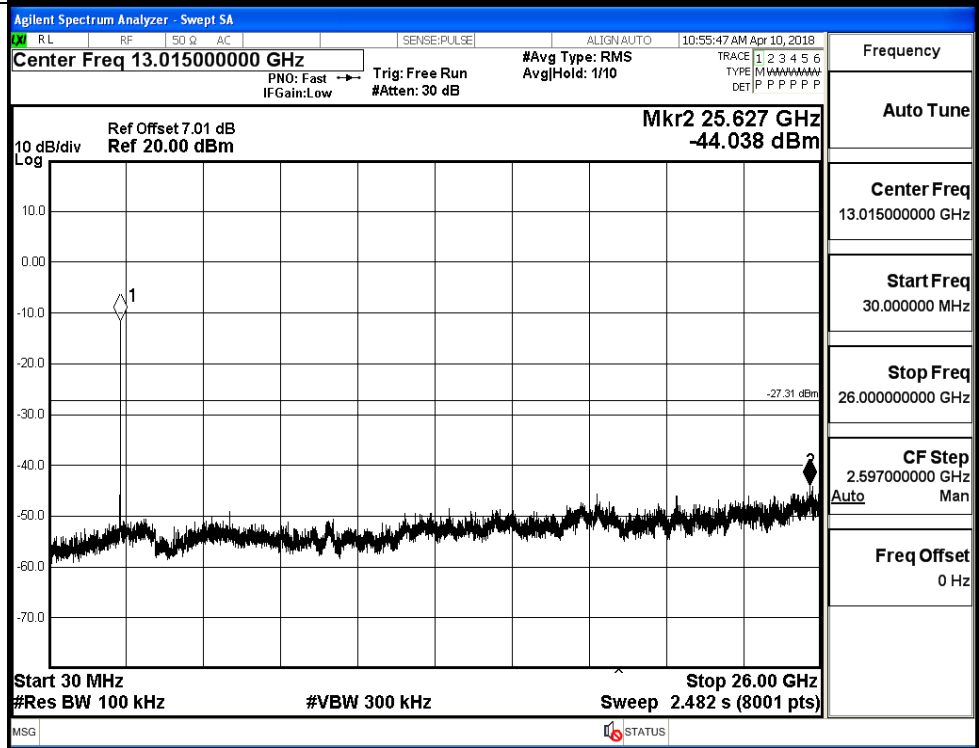


11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCH

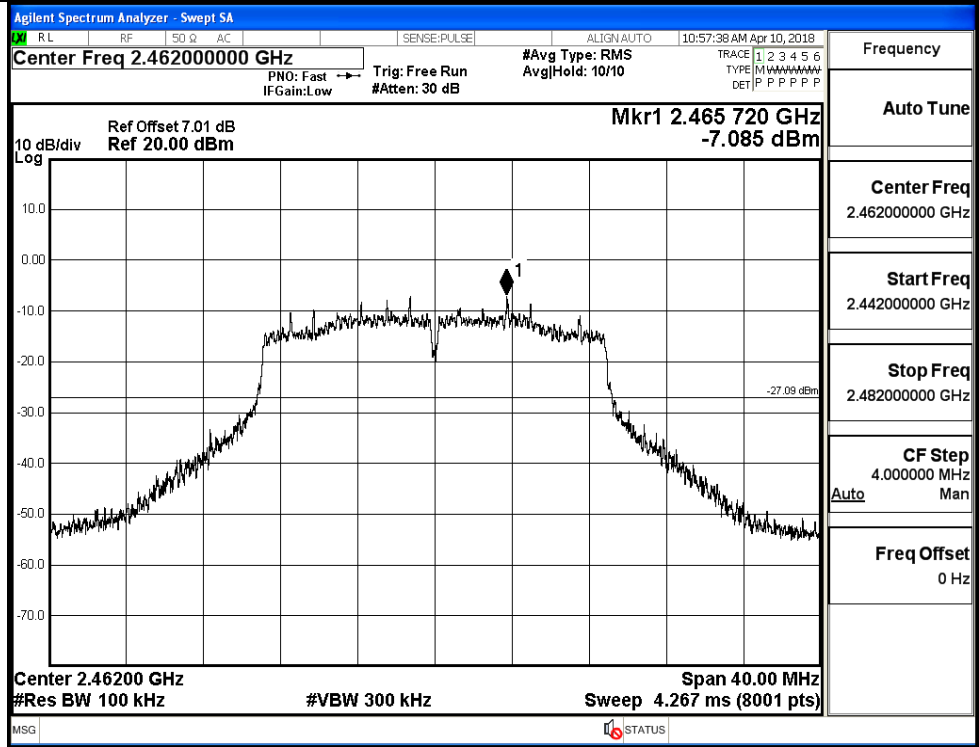


Puw/11N20
SISO/MCH

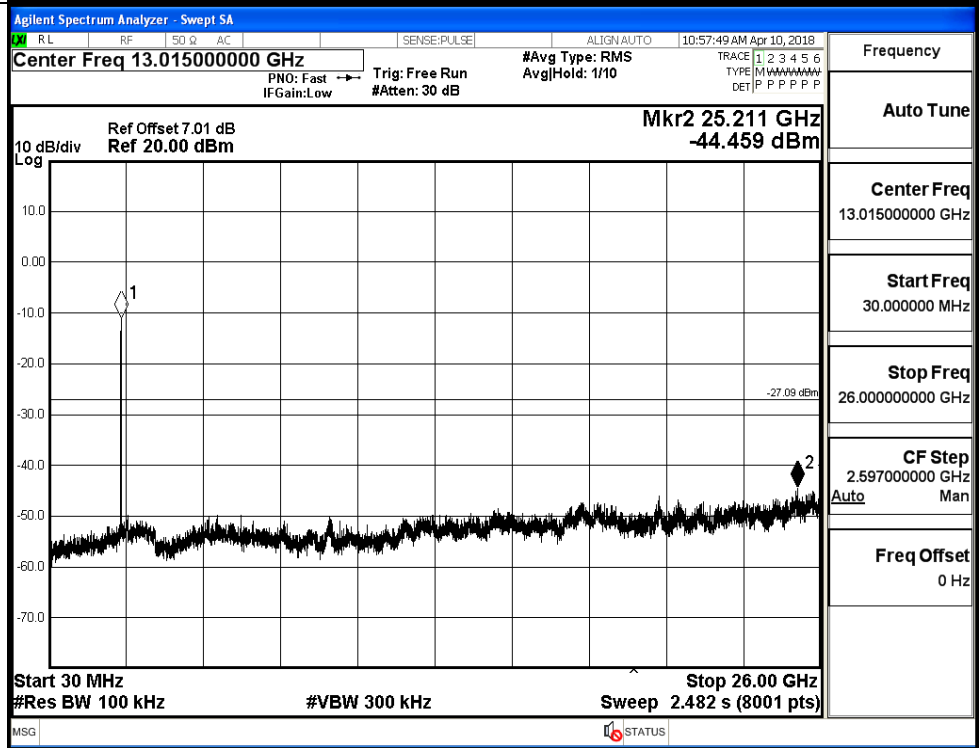


11N20SISO_HCH_Graphs

Pref/11N20
SISO/HCH

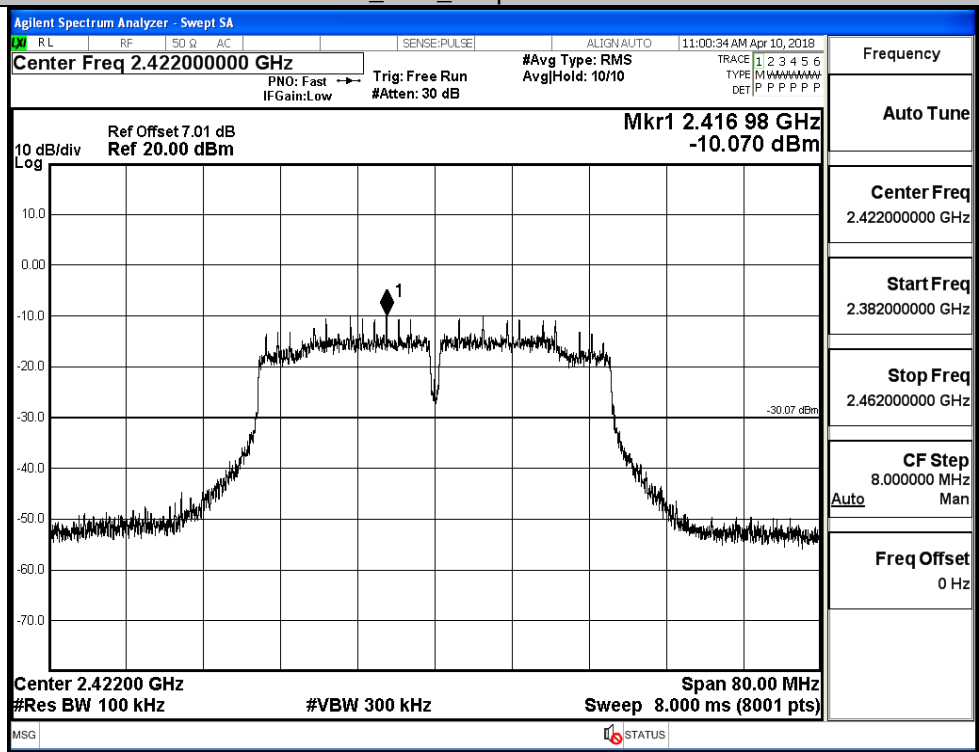


Puw/11N20
SISO/HCH

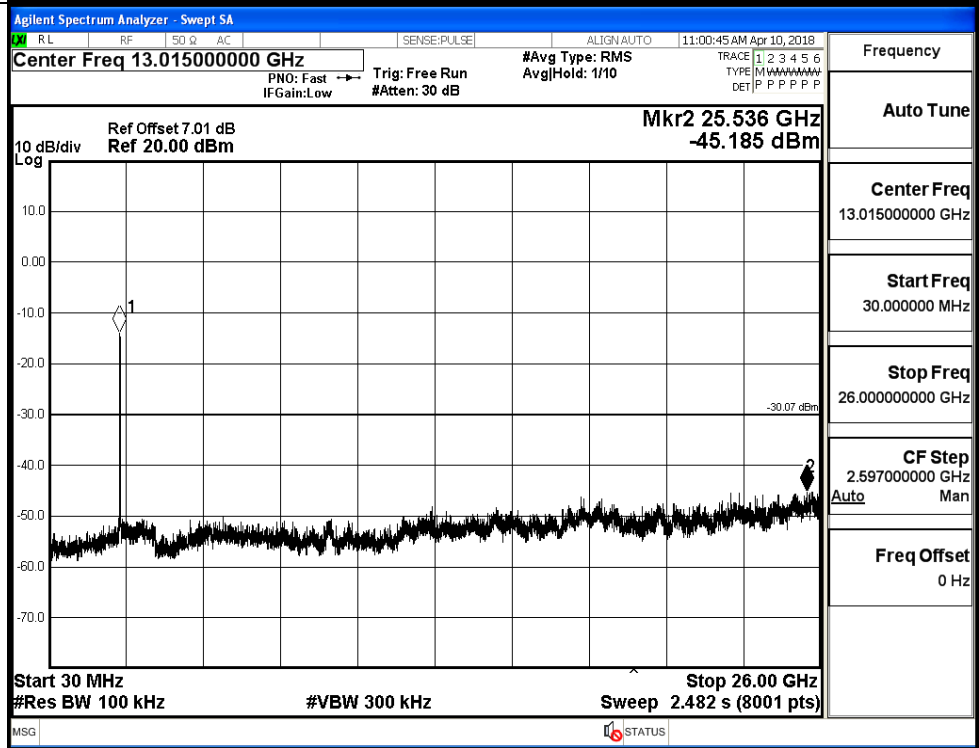


11N40SISO_LCH_Graphs

Pref/11N40
SISO/LCH

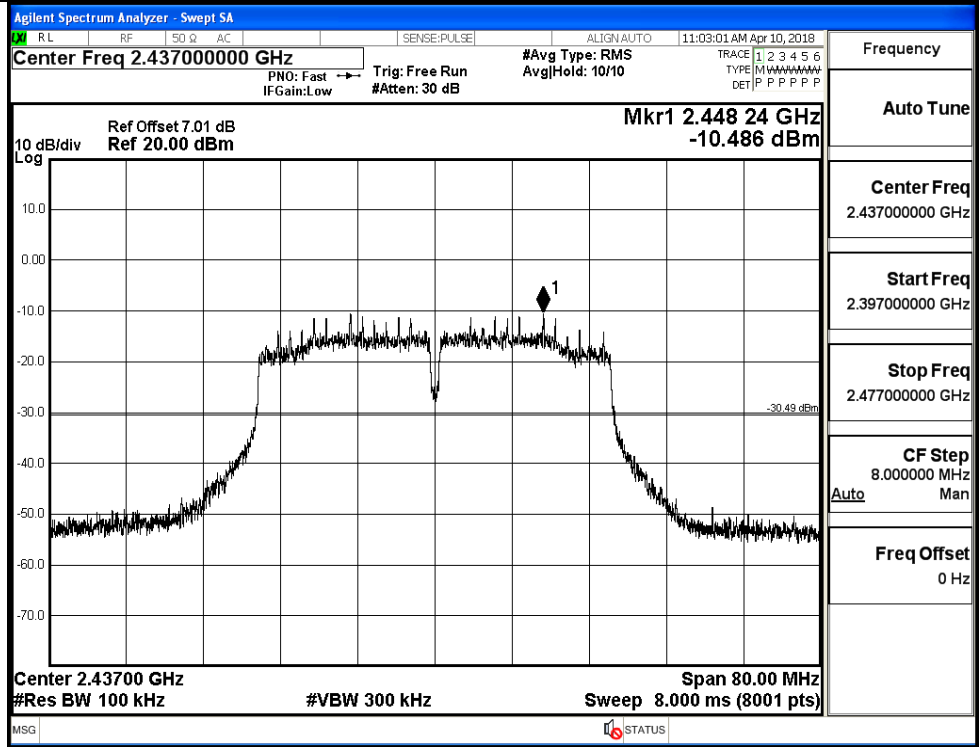


Puw/11N40
SISO/LCH

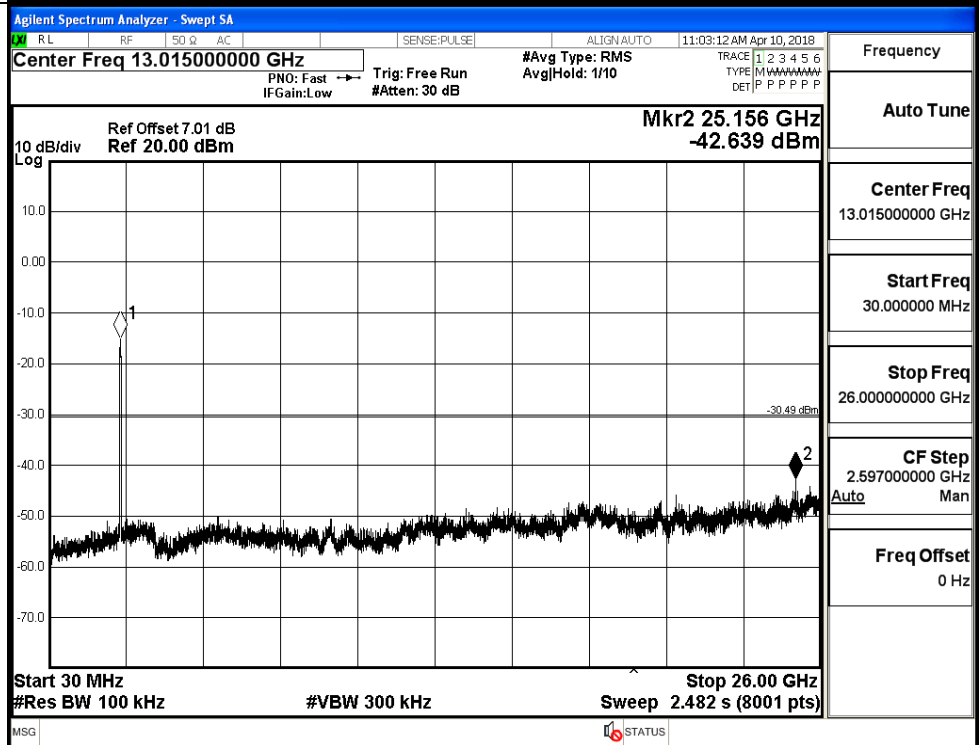


11N40SISO_MCH_Graphs

Pref/11N40
SISO/MCH

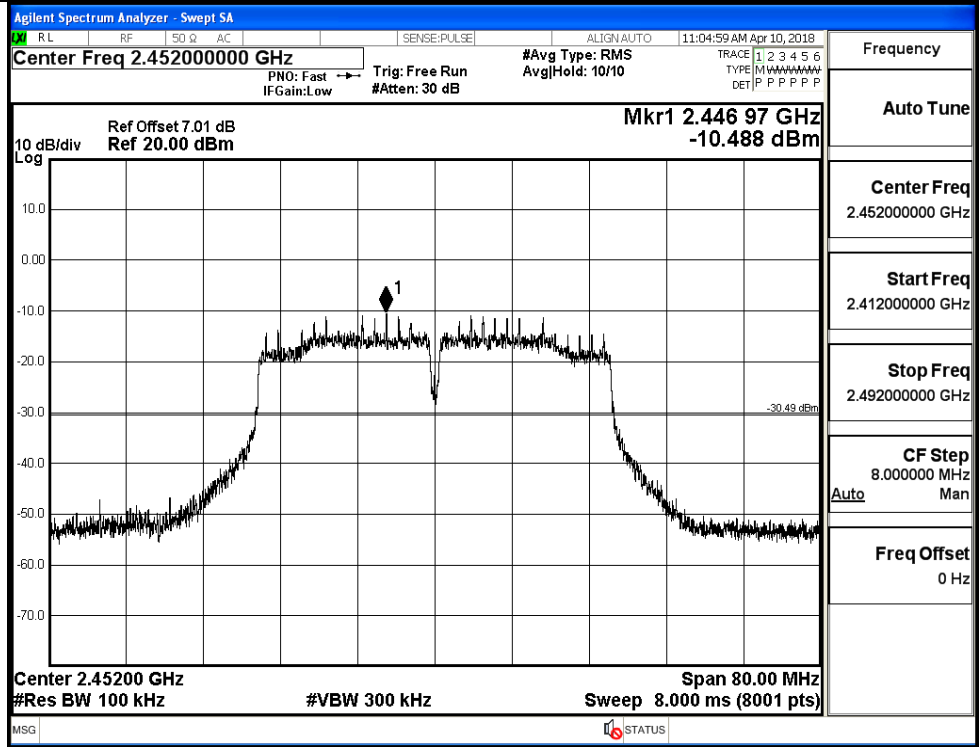


Puw/11N40
SISO/MCH

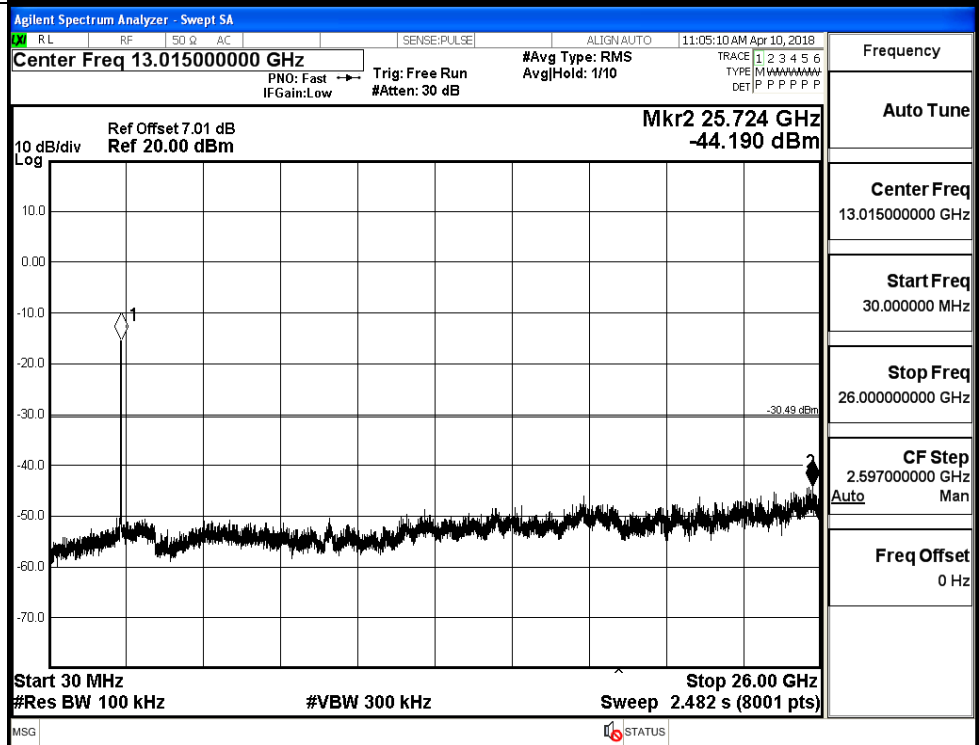


11N40SISO_HCH_Graphs

Pref/11N40
SISO/HCH

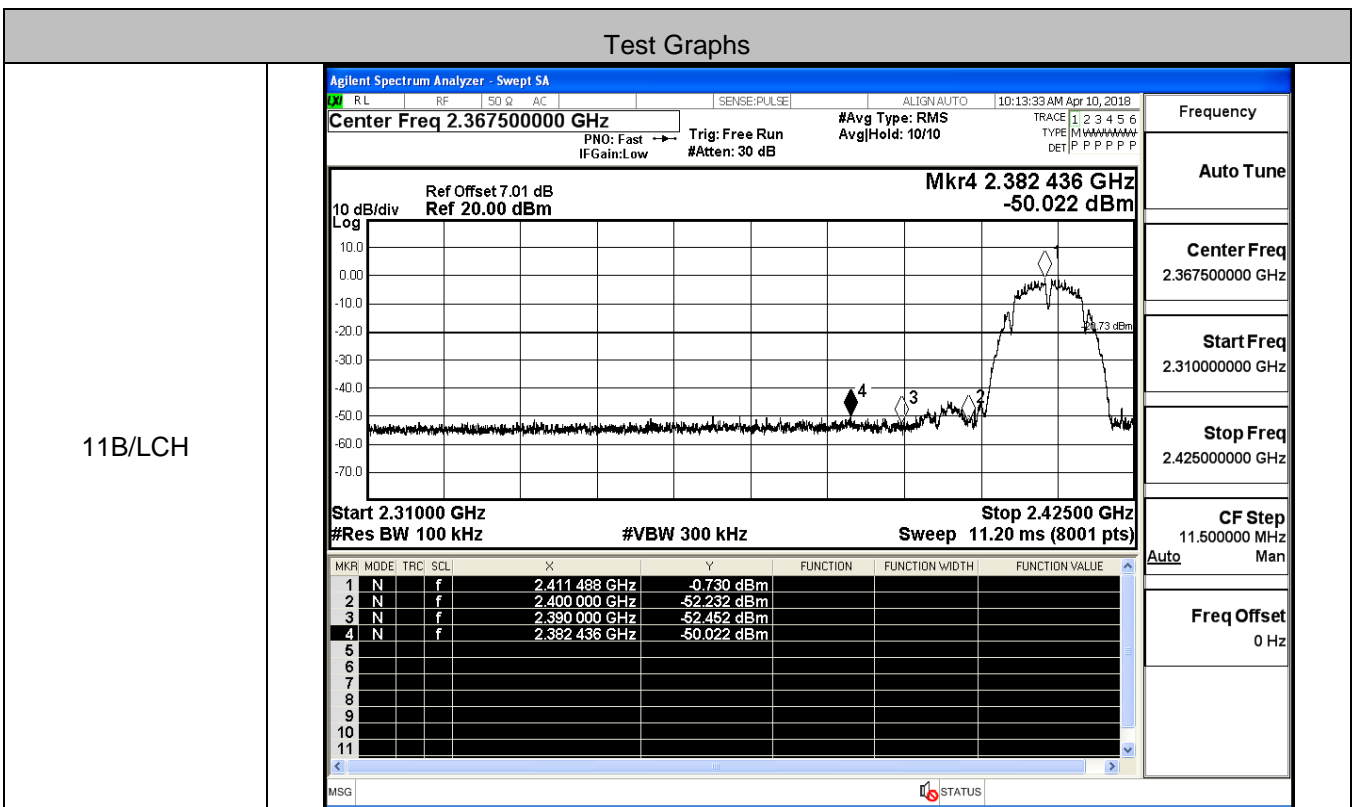


Puw/11N40
SISO/HCH

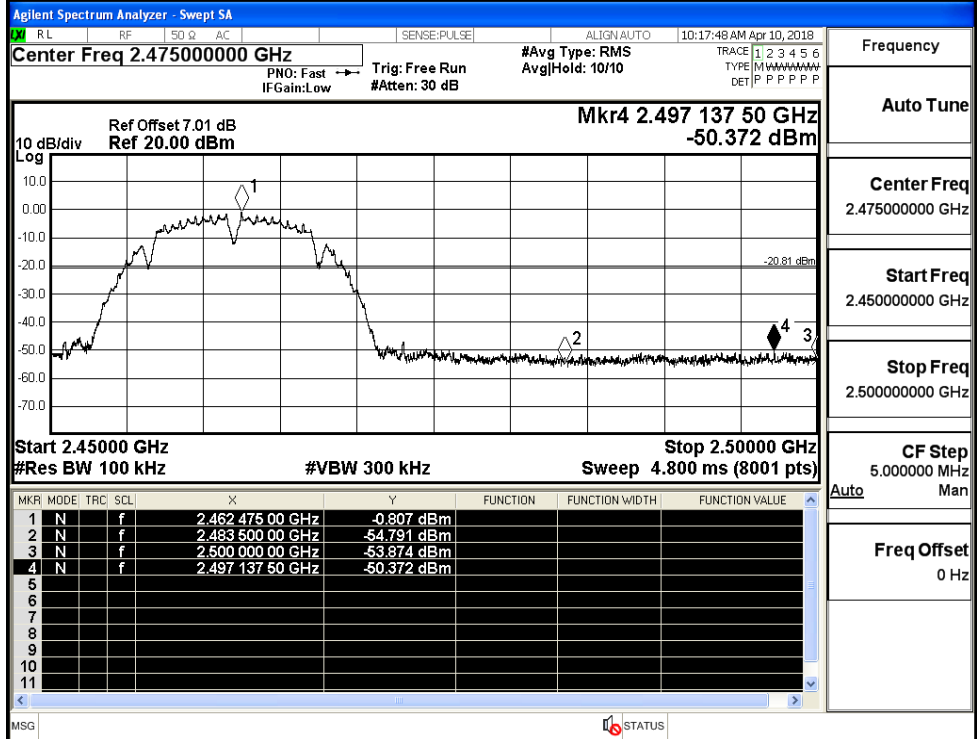


A.5 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-0.730	-50.022	-20.73	PASS
	HCH	-0.807	-50.372	-20.81	PASS
11G	LCH	-5.419	-50.260	-25.42	PASS
	HCH	-7.715	-51.195	-27.72	PASS
11N20SISO	LCH	-7.539	-51.068	-27.54	PASS
	HCH	-6.733	-50.613	-26.73	PASS
11N40SISO	LCH	-10.074	-47.779	-30.07	PASS
	HCH	-10.570	-50.030	-30.57	PASS



11B/HCH



Frequency

Auto Tune

Center Freq
2.47500000 GHz

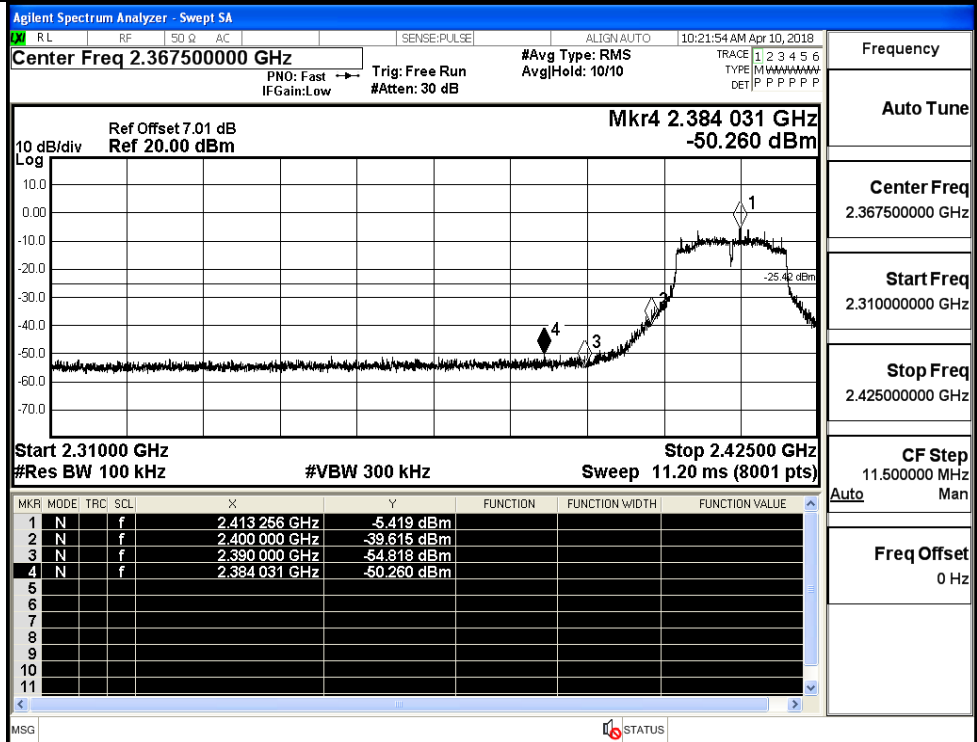
Start Freq
2.45000000 GHz

Stop Freq
2.50000000 GHz

CF Step
5.000000 MHz

Freq Offset
0 Hz

11G/LCH



Frequency

Auto Tune

Center Freq
2.36750000 GHz

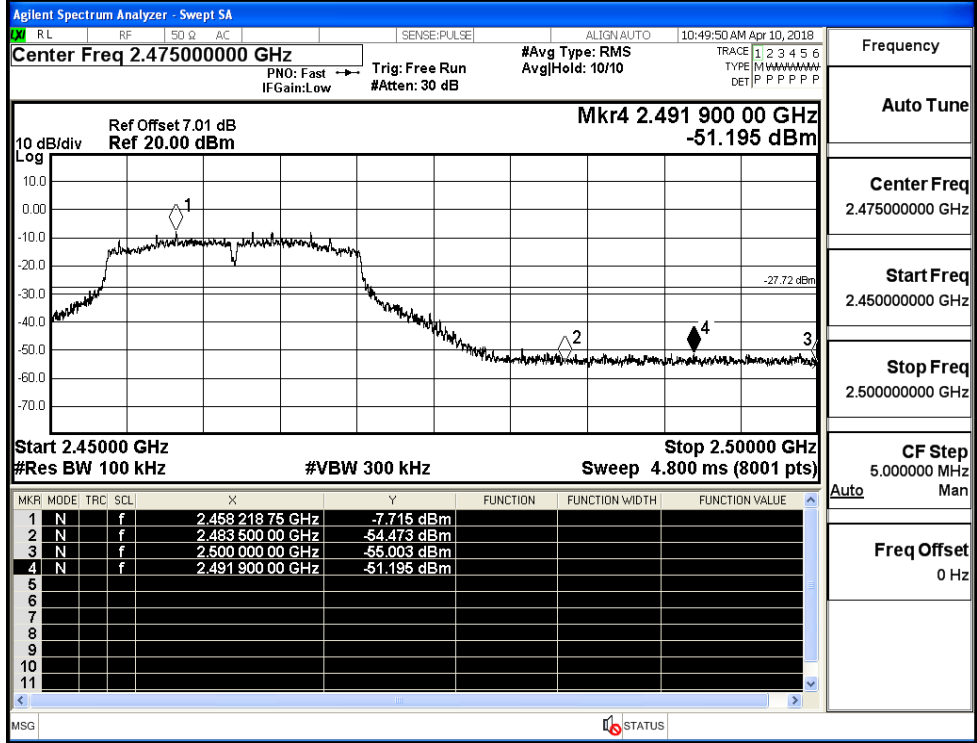
Start Freq
2.31000000 GHz

Stop Freq
2.42500000 GHz

CF Step
11.500000 MHz

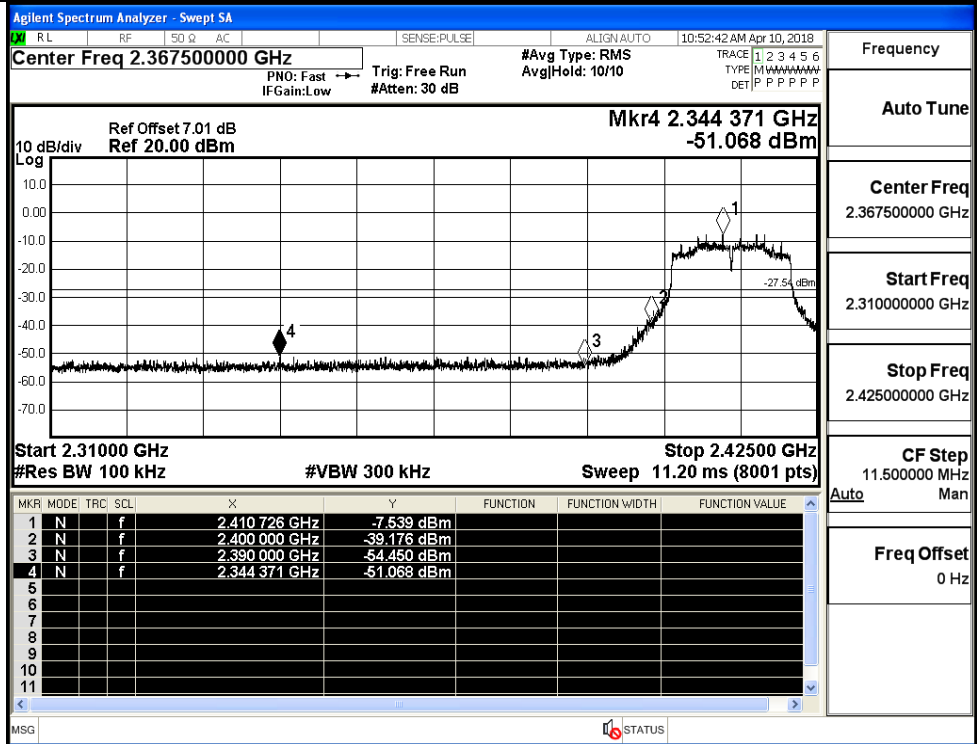
Freq Offset
0 Hz

11G/HCH



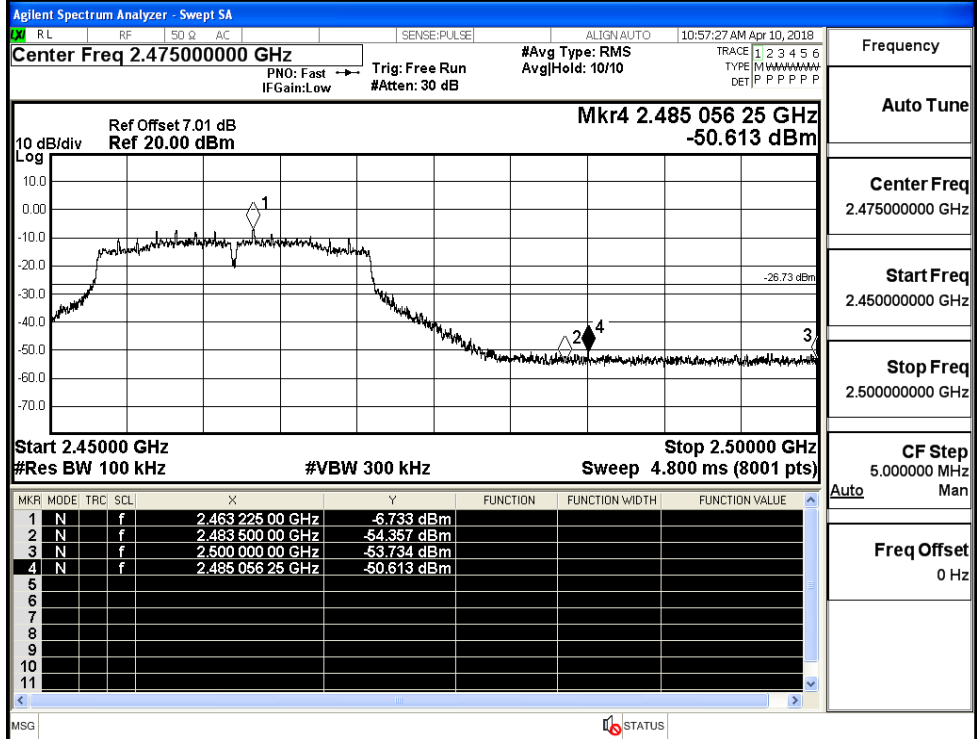
Frequency	2.47500000 GHz
Auto Tune	
Center Freq	2.47500000 GHz
Start Freq	2.45000000 GHz
Stop Freq	2.50000000 GHz
CF Step	5.000000 MHz
Freq Offset	0 Hz

11N20SISO/LCH



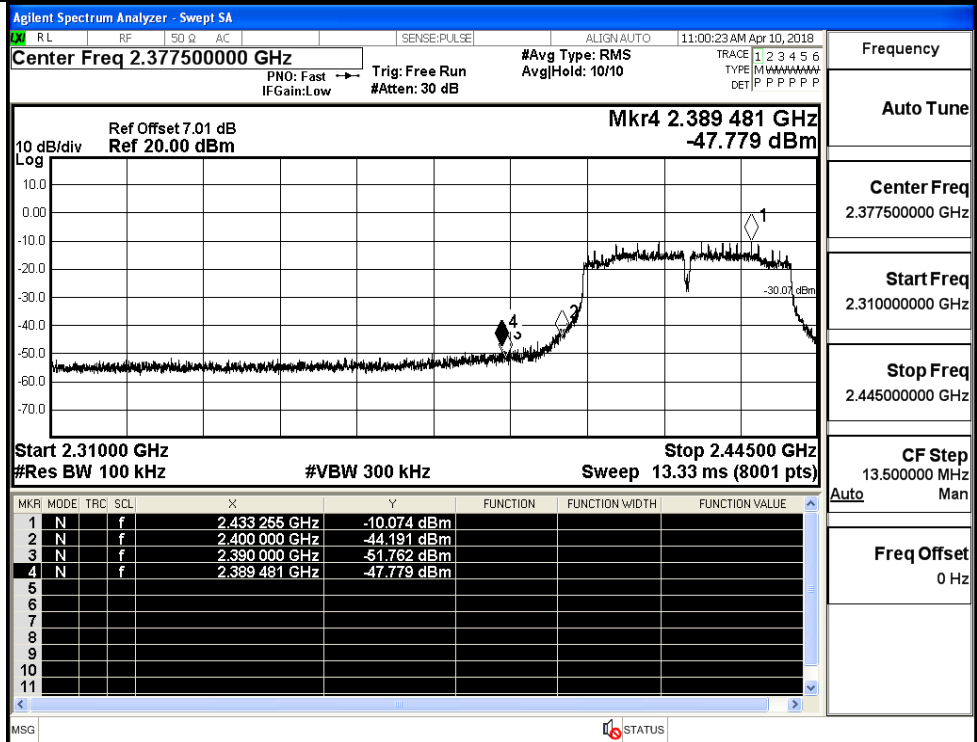
Frequency	2.36750000 GHz
Auto Tune	
Center Freq	2.36750000 GHz
Start Freq	2.31000000 GHz
Stop Freq	2.42500000 GHz
CF Step	11.500000 MHz
Freq Offset	0 Hz

11N20SISO/HCH



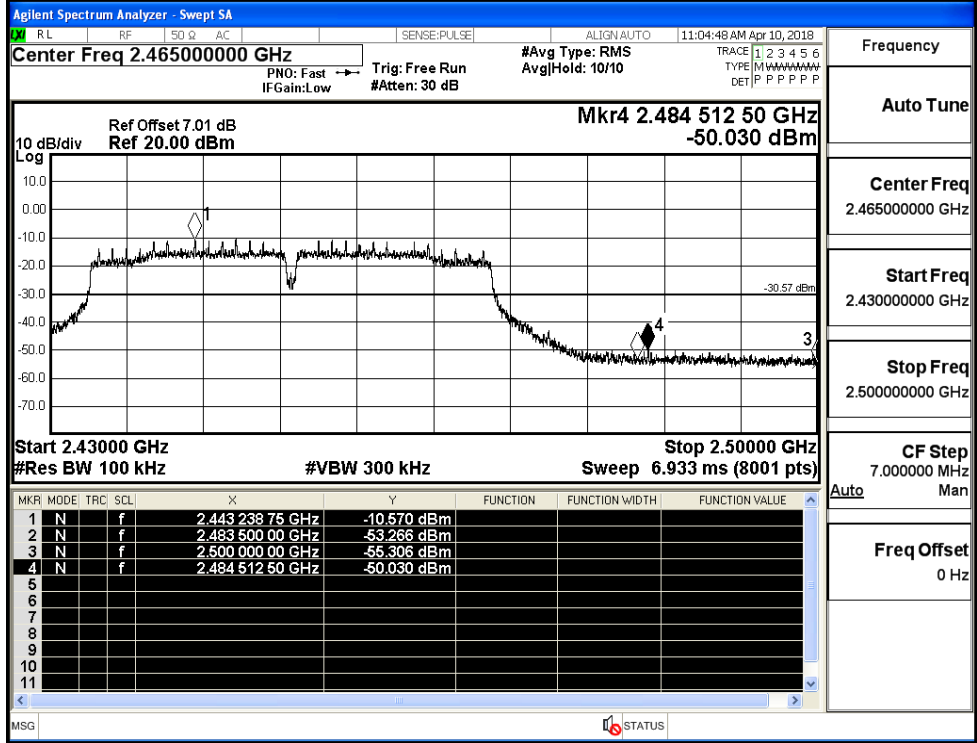
Frequency	
Auto Tune	
Center Freq	2.47500000 GHz
Start Freq	2.45000000 GHz
Stop Freq	2.50000000 GHz
CF Step	5.000000 MHz
Auto	Man
Freq Offset	0 Hz

11N40SISO/LCH



Frequency	
Auto Tune	
Center Freq	2.37750000 GHz
Start Freq	2.31000000 GHz
Stop Freq	2.44500000 GHz
CF Step	13.500000 MHz
Auto	Man
Freq Offset	0 Hz

11N40SISO/HCH

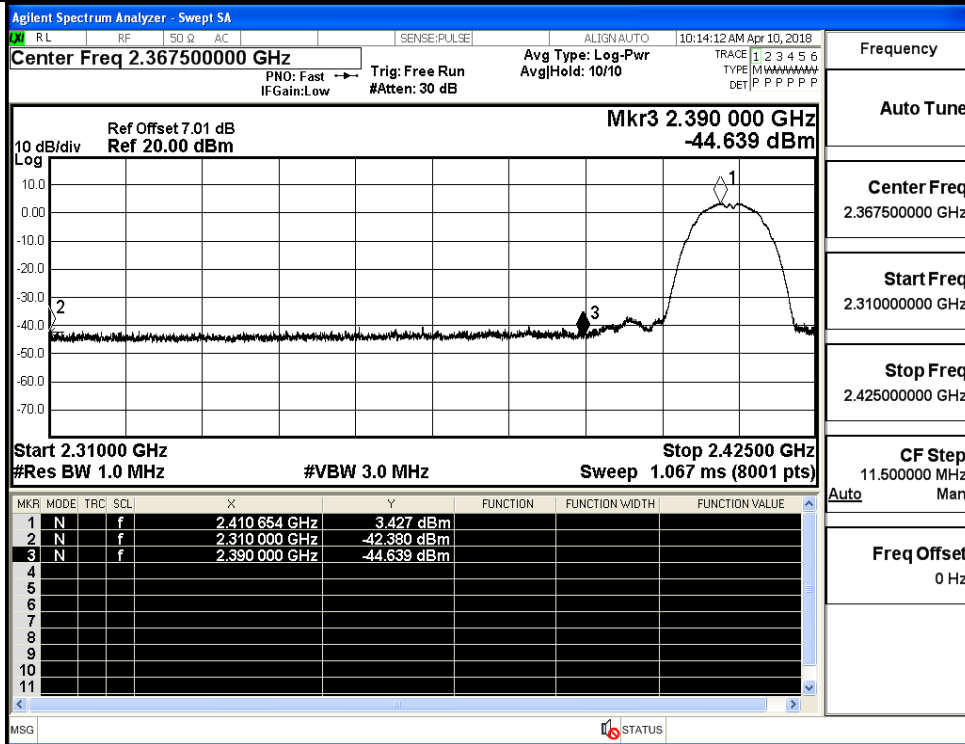


A.6 Restrict-band band-edge measurements

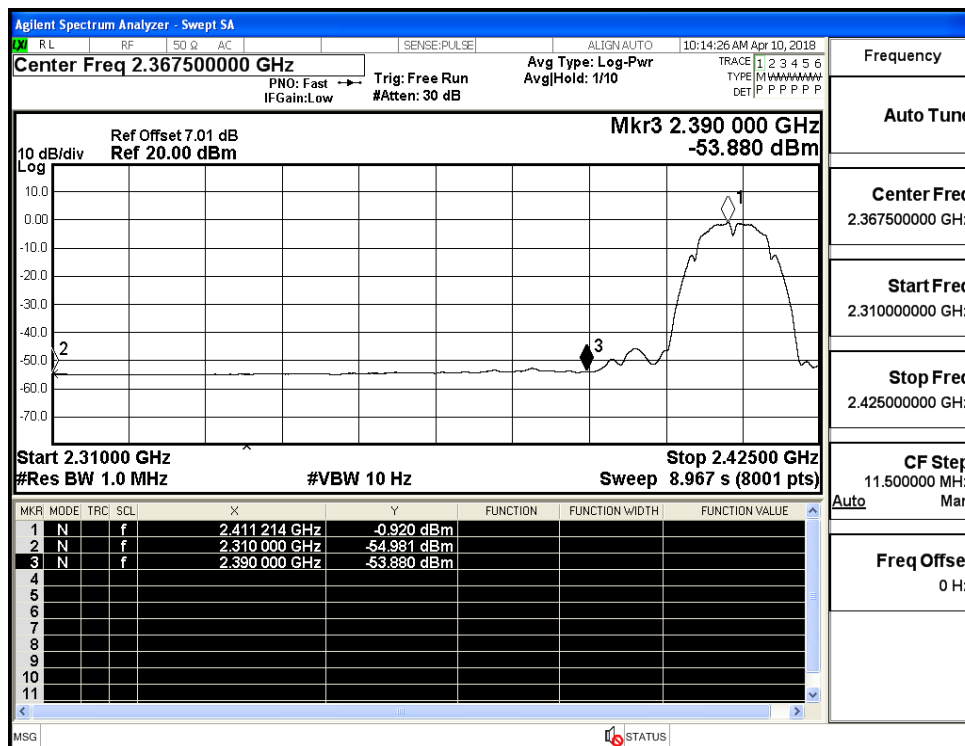
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-42.38	3.0	0	55.82	PEAK	74	PASS
	2412	Ant1	2310.0	-54.98	3.0	0	43.22	AV	54	PASS
	2412	Ant1	2390.0	-44.64	3.0	0	53.56	PEAK	74	PASS
	2412	Ant1	2390.0	-53.88	3.0	0	44.32	AV	54	PASS
	2462	Ant1	2483.5	-42.86	3.0	0	55.34	PEAK	74	PASS
	2462	Ant1	2483.5	-54.10	3.0	0	44.10	AV	54	PASS
	2462	Ant1	2500.0	-44.14	3.0	0	54.06	PEAK	74	PASS
	2462	Ant1	2500.0	-53.64	3.0	0	44.56	AV	54	PASS
11G	2412	Ant1	2310.0	-44.46	3.0	0	53.74	PEAK	74	PASS
	2412	Ant1	2310.0	-55.00	3.0	0	43.20	AV	54	PASS
	2412	Ant1	2390.0	-42.51	3.0	0	55.69	PEAK	74	PASS
	2412	Ant1	2390.0	-53.87	3.0	0	44.33	AV	54	PASS
	2462	Ant1	2483.5	-42.81	3.0	0	55.39	PEAK	74	PASS
	2462	Ant1	2483.5	-53.95	3.0	0	44.25	AV	54	PASS
	2462	Ant1	2500.0	-44.37	3.0	0	53.83	PEAK	74	PASS
	2462	Ant1	2500.0	-54.11	3.0	0	44.09	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-44.76	3.0	0	53.44	PEAK	74	PASS
	2412	Ant1	2310.0	-55.00	3.0	0	43.20	AV	54	PASS
	2412	Ant1	2390.0	-42.94	3.0	0	55.26	PEAK	74	PASS
	2412	Ant1	2390.0	-53.72	3.0	0	44.48	AV	54	PASS
	2462	Ant1	2483.5	-43.26	3.0	0	54.94	PEAK	74	PASS
	2462	Ant1	2483.5	-53.82	3.0	0	44.38	AV	54	PASS
	2462	Ant1	2500.0	-42.64	3.0	0	55.56	PEAK	74	PASS
	2462	Ant1	2500.0	-54.10	3.0	0	44.10	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-43.63	3.0	0	54.57	PEAK	74	PASS
	2422	Ant1	2310.0	-55.03	3.0	0	43.17	AV	54	PASS

	2422	Ant1	2390.0	-40.40	3.0	0	57.80	PEAK	74	PASS
	2422	Ant1	2390.0	-51.65	3.0	0	46.55	AV	54	PASS
	2452	Ant1	2483.5	-42.55	3.0	0	55.65	PEAK	74	PASS
	2452	Ant1	2483.5	-53.16	3.0	0	45.04	AV	54	PASS
	2452	Ant1	2500.0	-42.70	3.0	0	55.50	PEAK	74	PASS
	2452	Ant1	2500.0	-53.93	3.0	0	44.27	AV	54	PASS

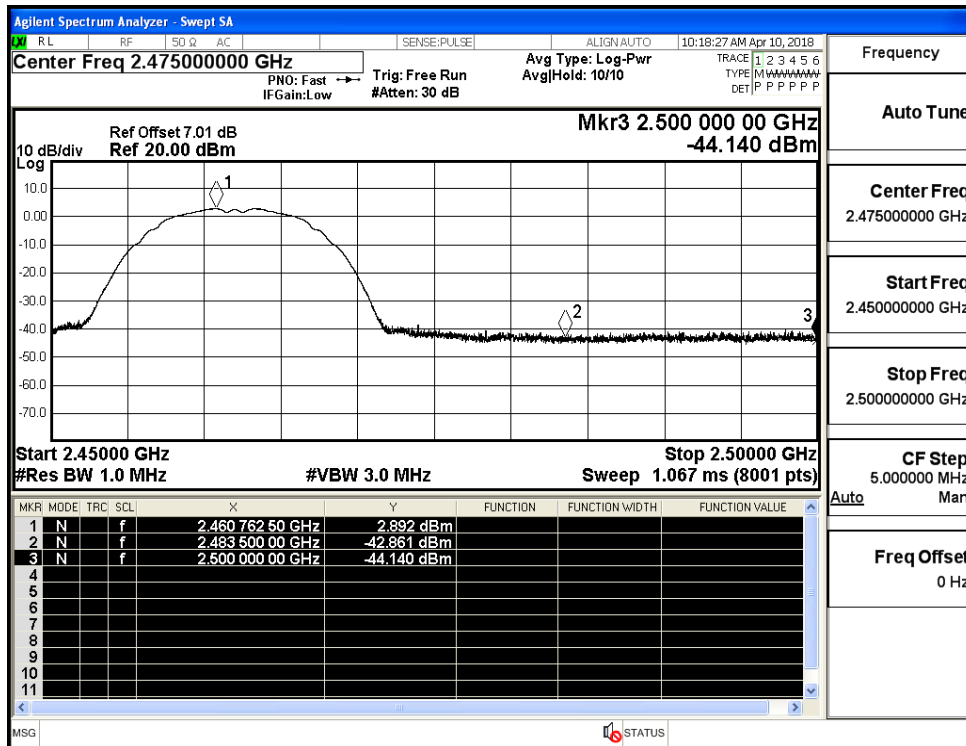
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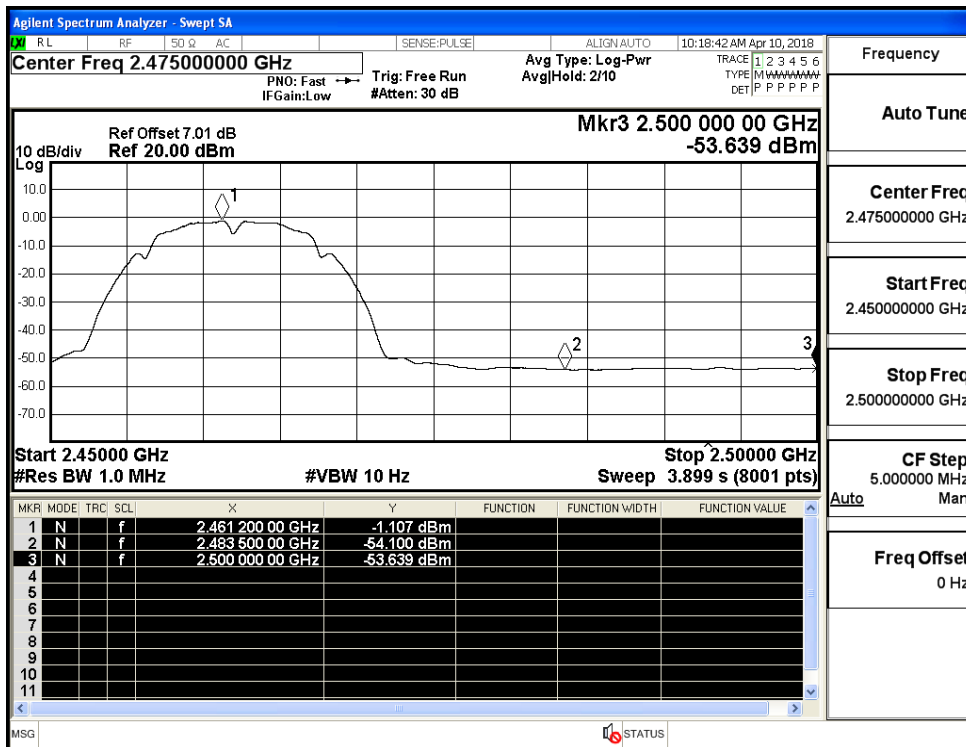
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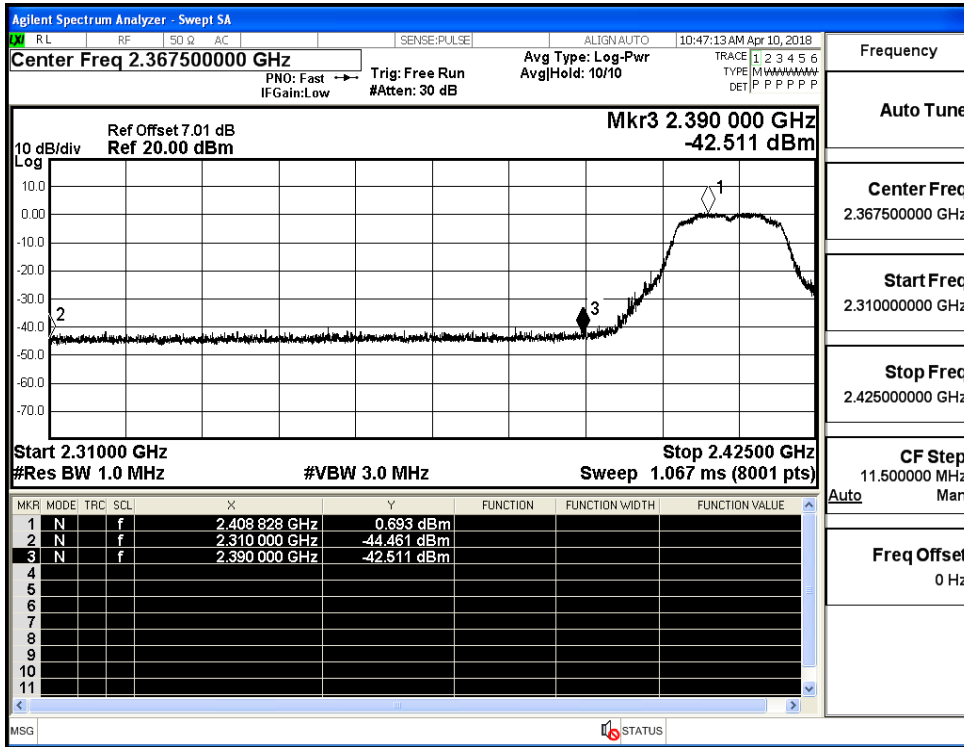
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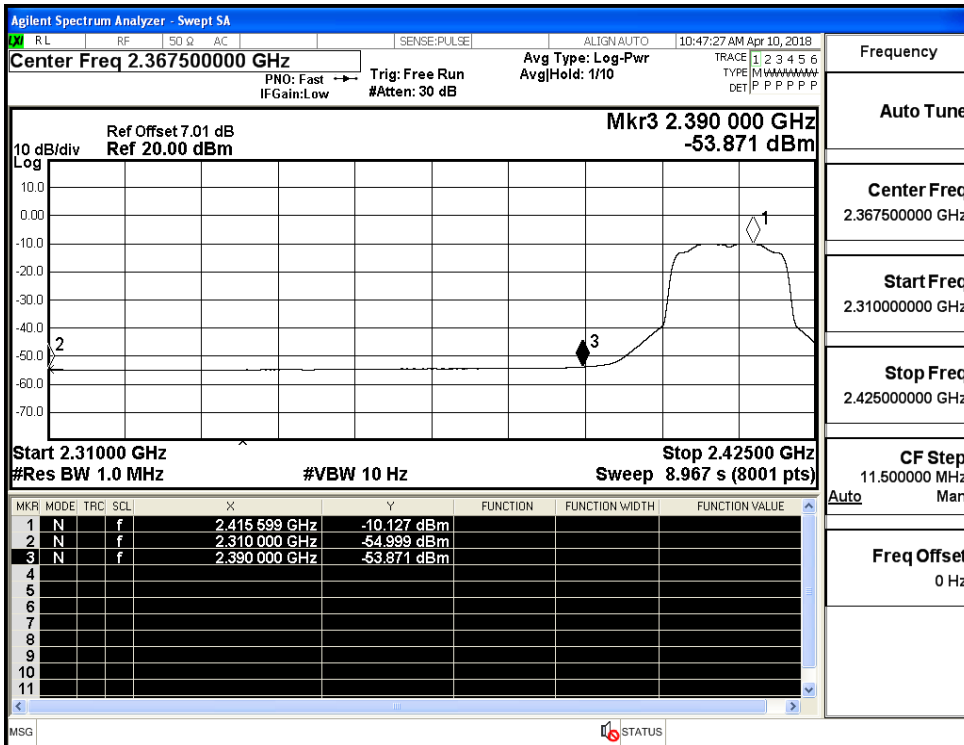
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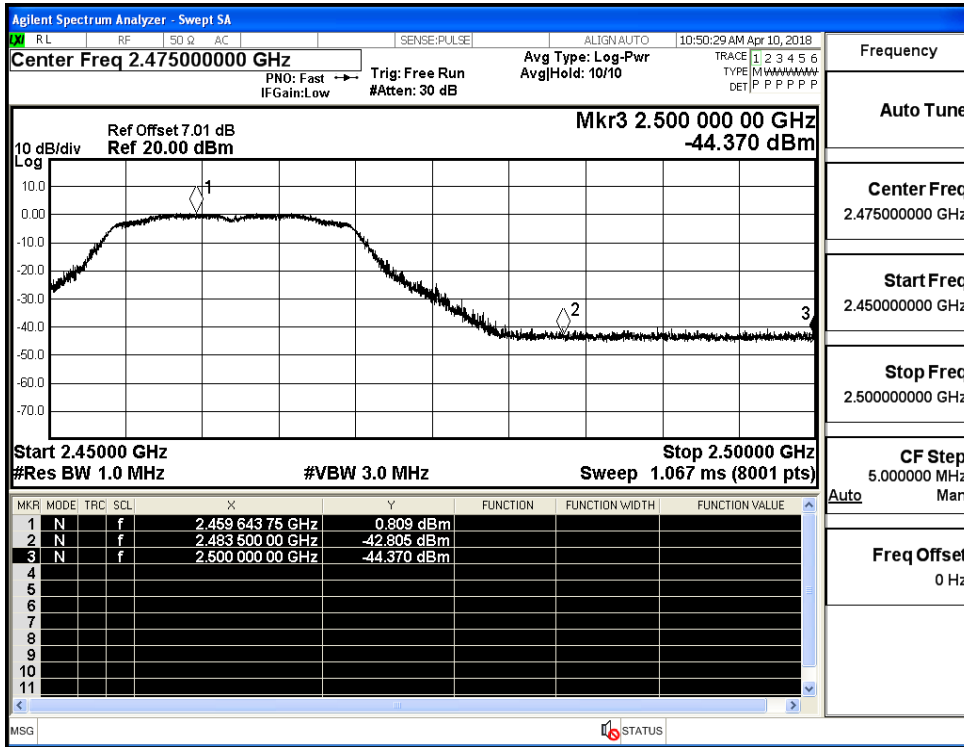
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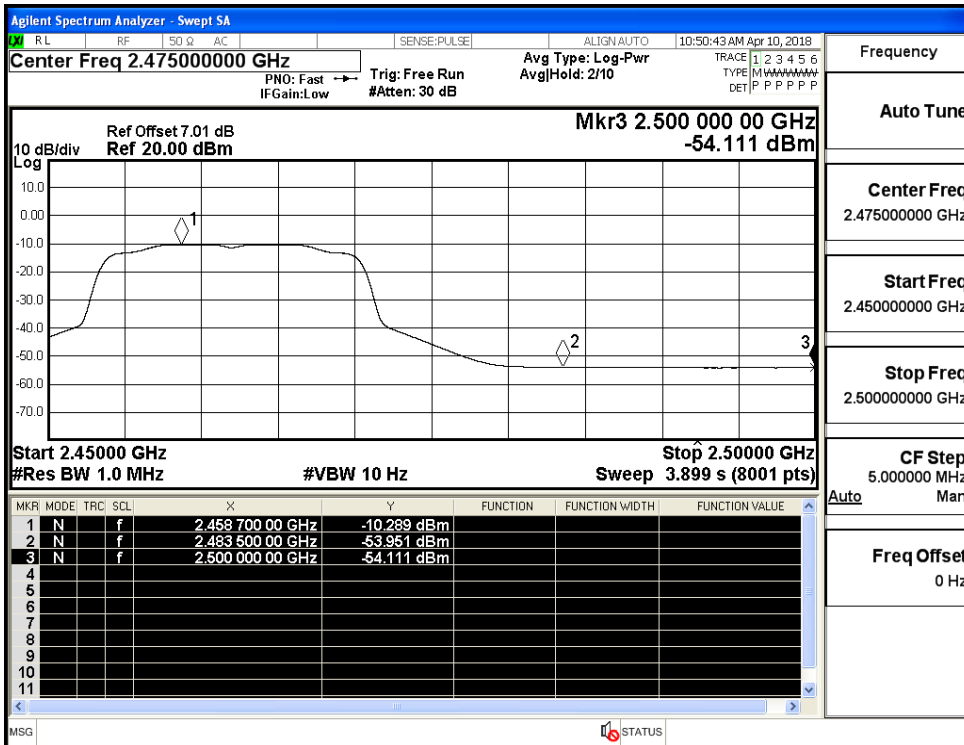
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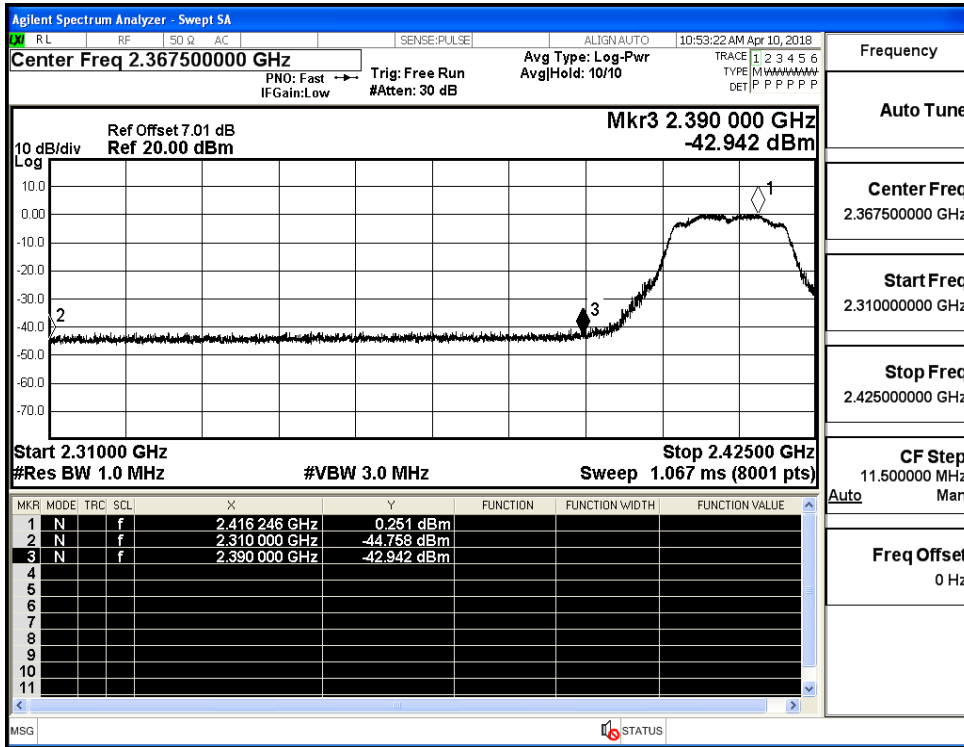
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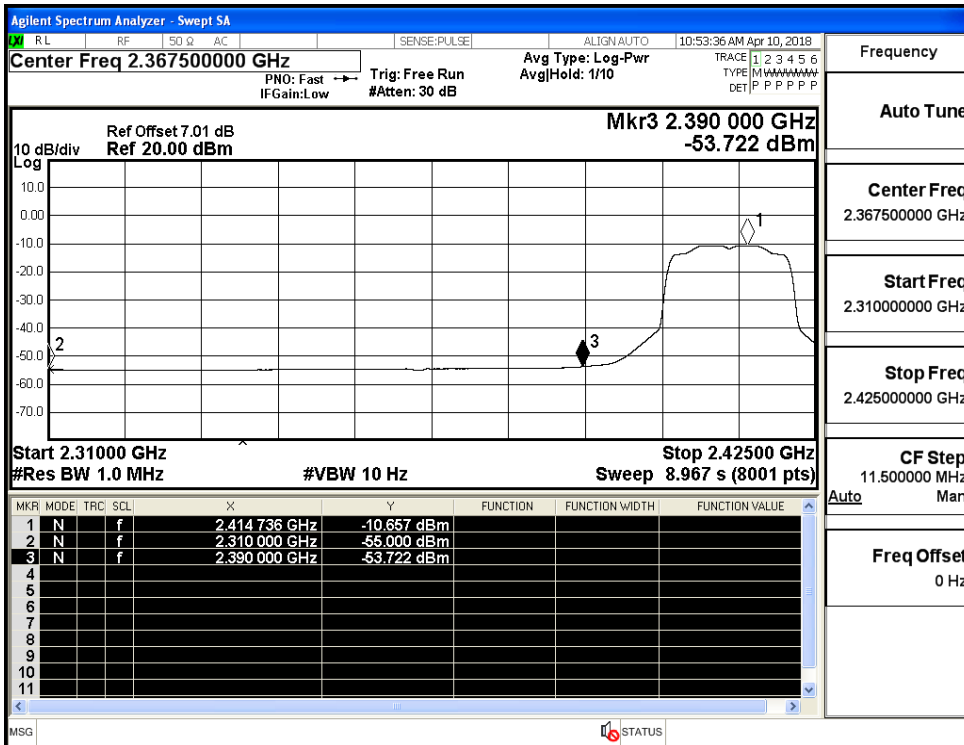
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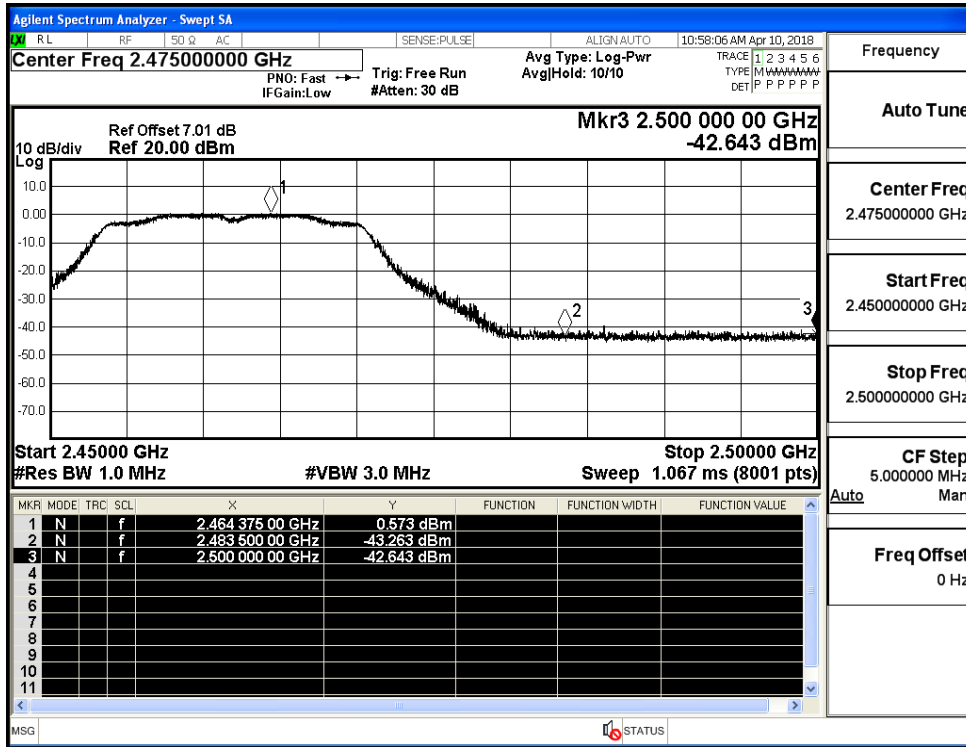
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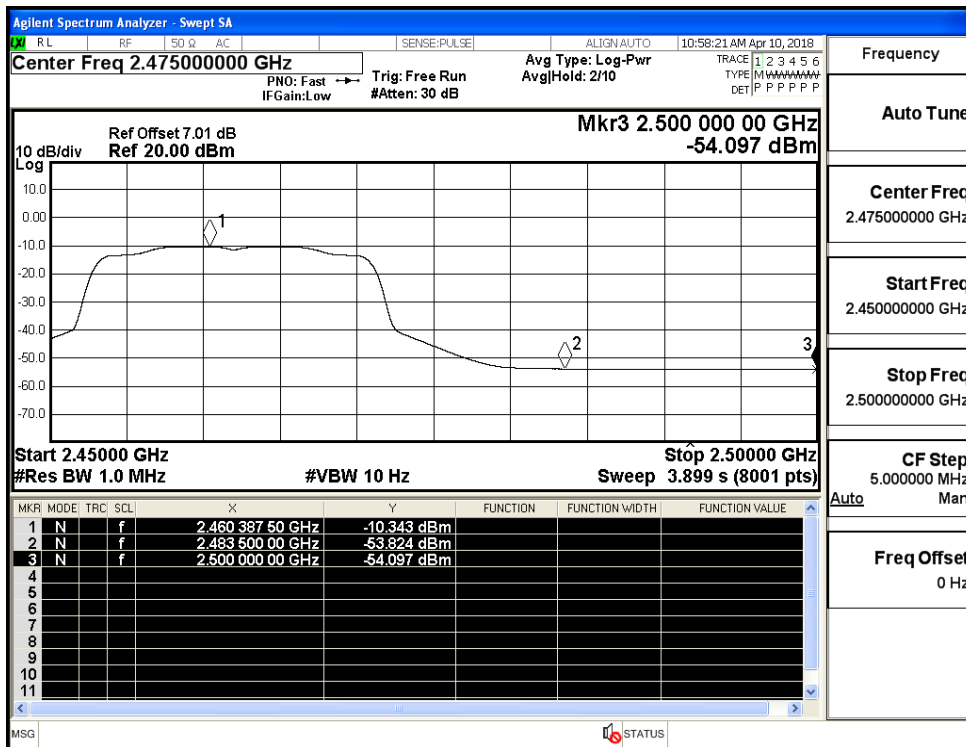
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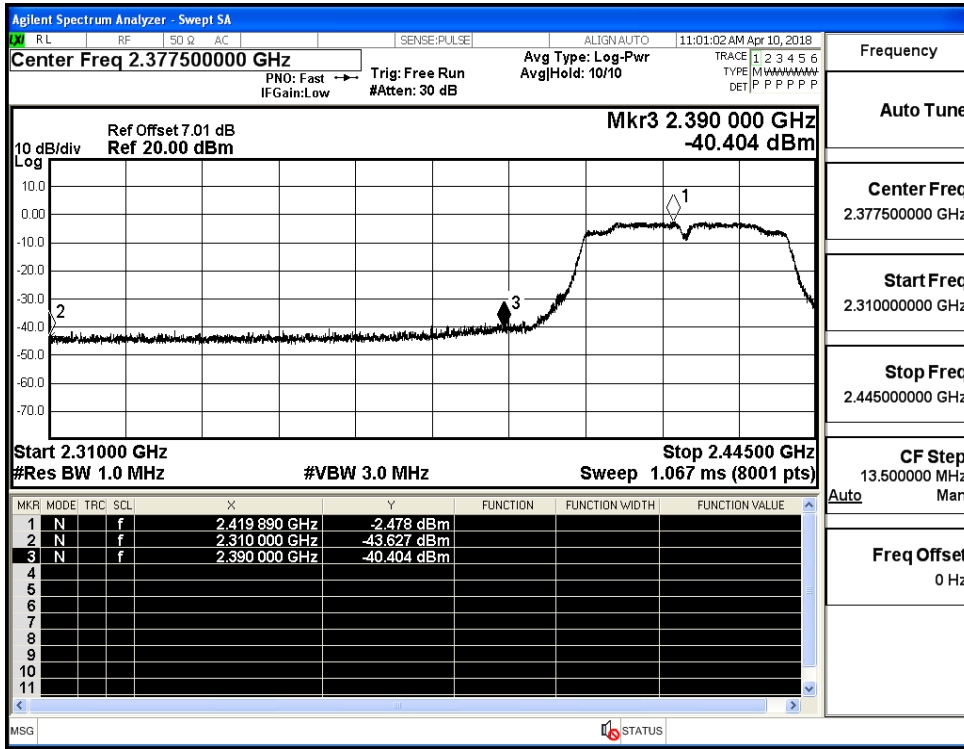
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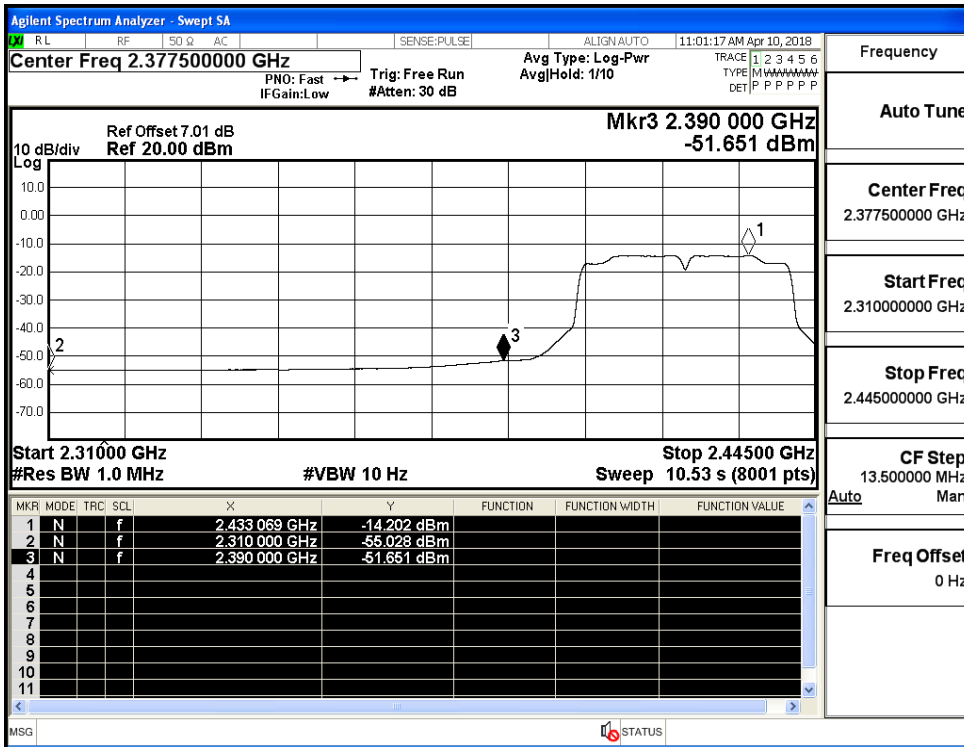
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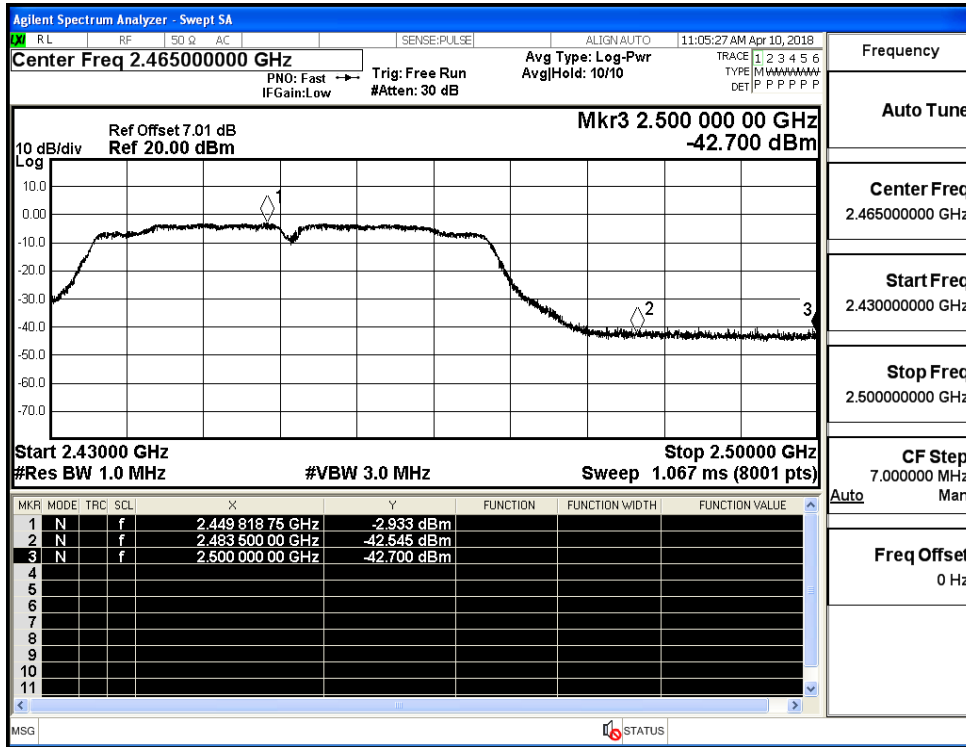
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Restrict-band band-edge measurements_11N40SISO_2422_Ant1_AV



Restrict-band band-edge measurements_11N40SISO_2452_Ant1_PEAK



Restrict-band band-edge measurements_11N40SISO_2452_Ant1_AV

