

Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: REVEAL X-V

Trade Mark: TACTACAM

Test Model: REVEAL X-V

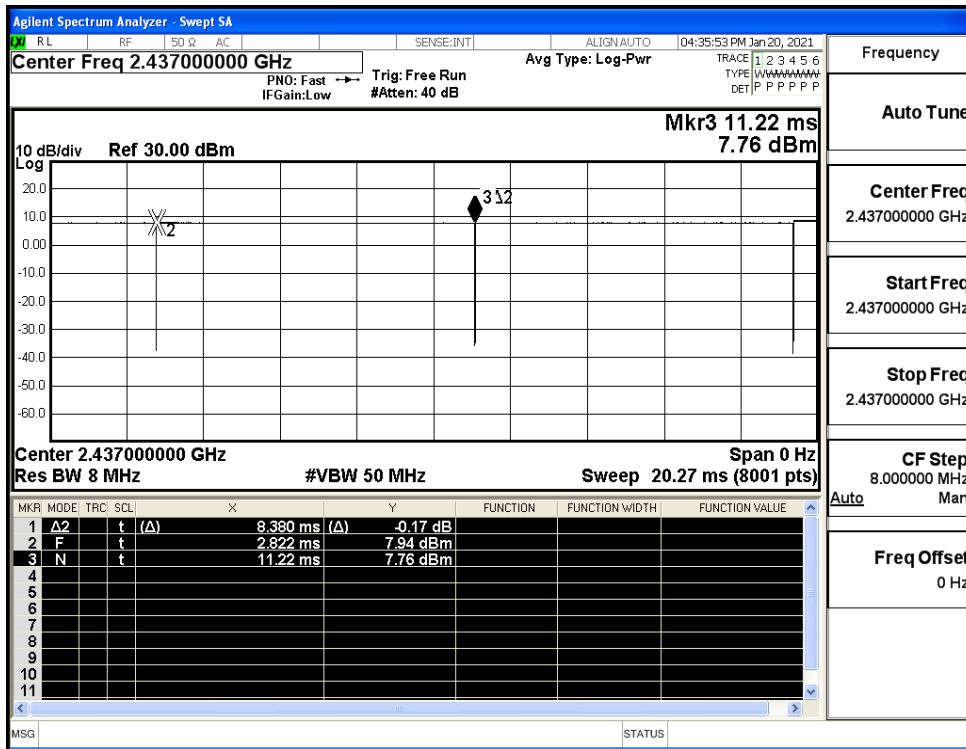
Environmental Conditions

Temperature:	21.3° C
Relative Humidity:	53.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Carl Fu
Supervised by:	Li Huan

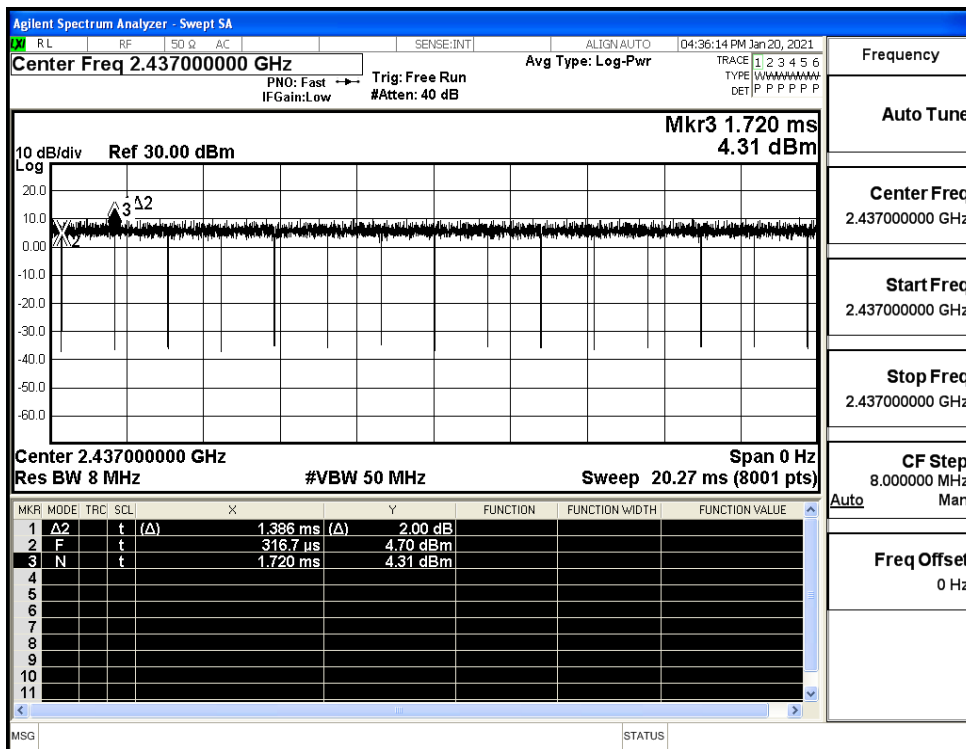
A.1 Duty Cycle

Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2437	Ant1	99.79	PASS
11G	2437	Ant1	98.74	PASS
11N20SISO	2437	Ant1	98.65	PASS
11N40SISO	2437	Ant1	98.07	PASS

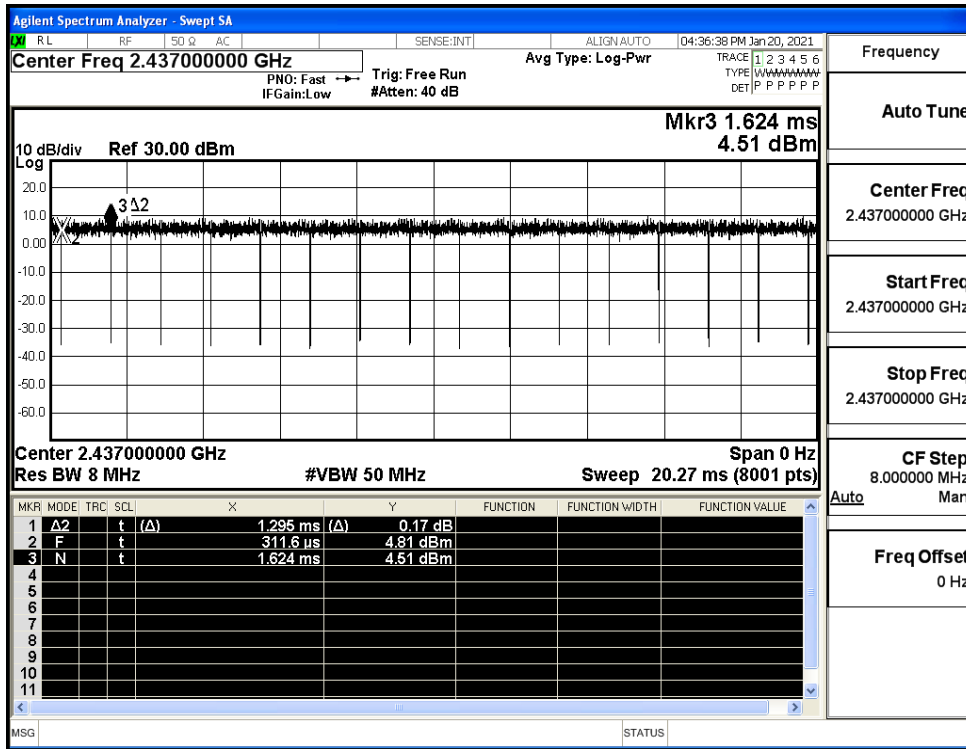
Duty Cycle_11B_2437_Ant1



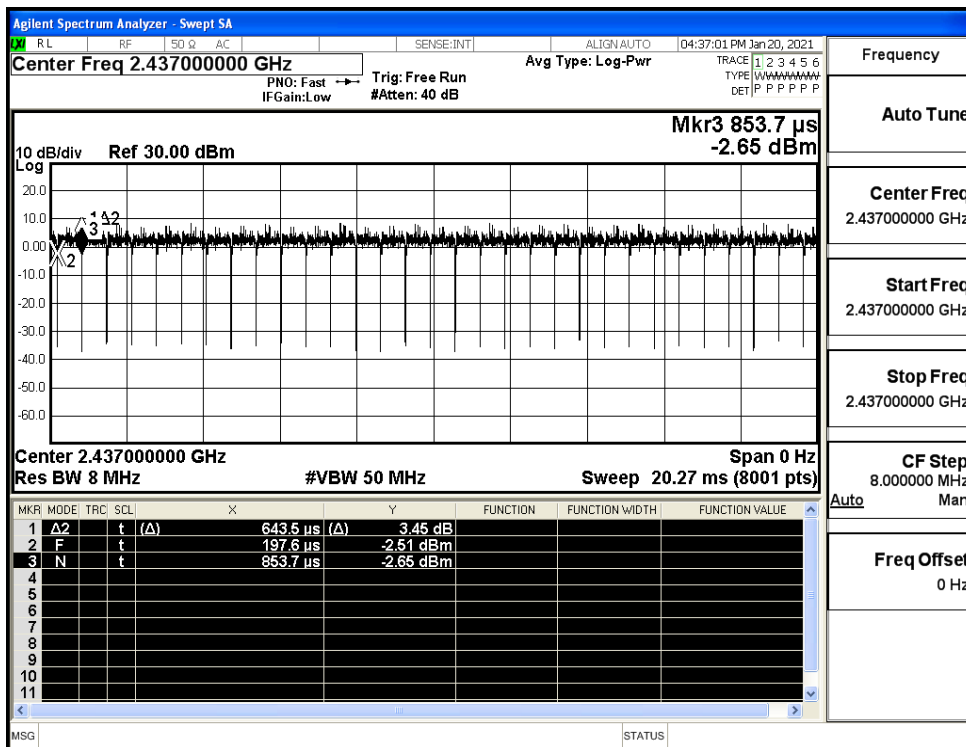
Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



Duty Cycle_11N40SISO_2437_Ant1



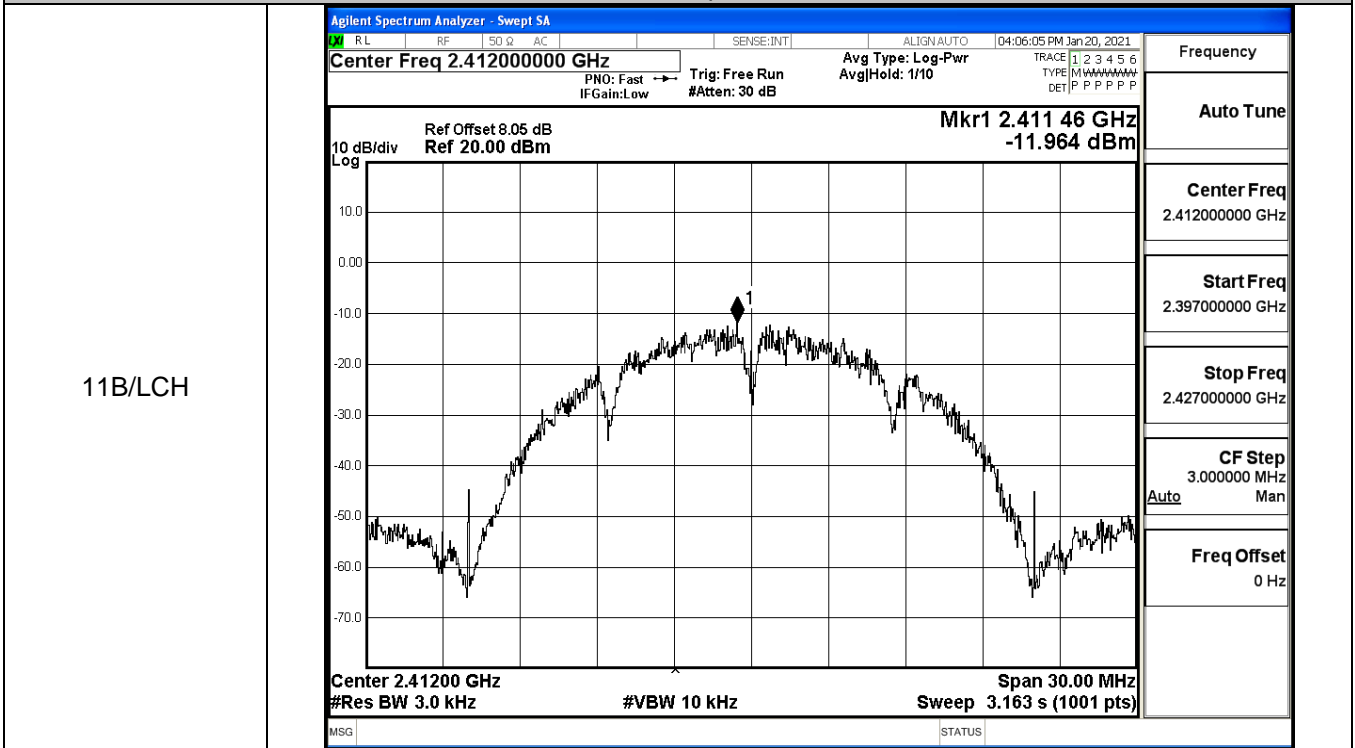
A.2 Maximum Conducted Output Power

Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	15.10	30	PASS
	MCH	15.94	30	PASS
	HCH	16.21	30	PASS
11G	LCH	15.72	30	PASS
	MCH	16.97	30	PASS
	HCH	16.94	30	PASS
11N20SISO	LCH	15.87	30	PASS
	MCH	16.10	30	PASS
	HCH	16.48	30	PASS
11N40SISO	LCH	16.09	30	PASS
	MCH	16.27	30	PASS
	HCH	16.19	30	PASS

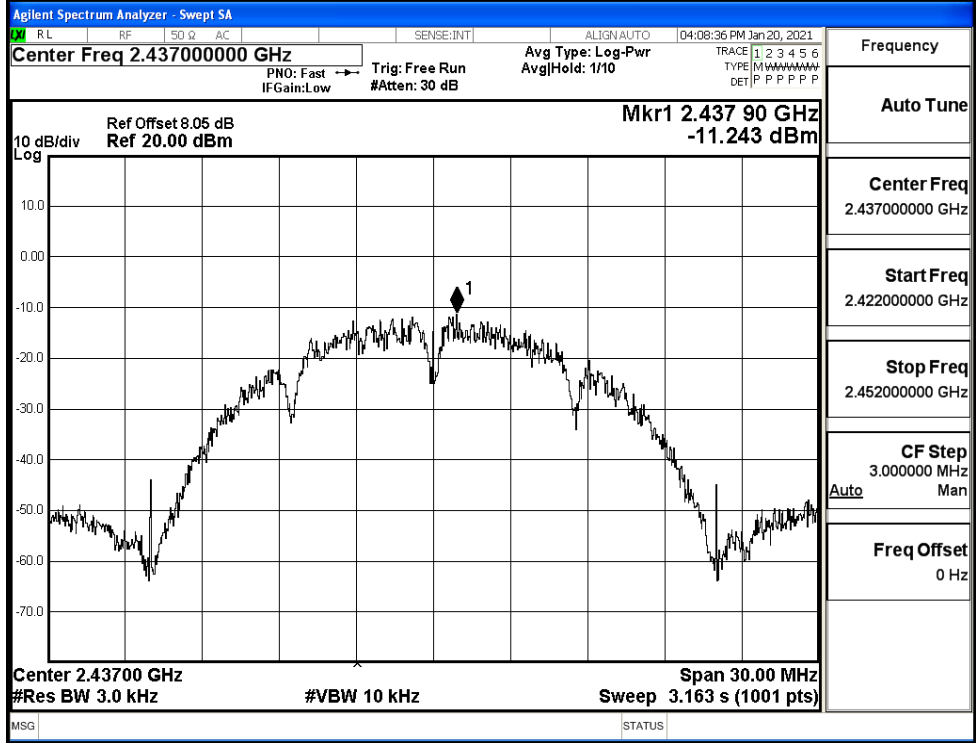
A.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-11.964	8	PASS
	MCH	-11.243	8	PASS
	HCH	-10.994	8	PASS
11G	LCH	-16.224	8	PASS
	MCH	-15.471	8	PASS
	HCH	-15.405	8	PASS
11N20SISO	LCH	-16.665	8	PASS
	MCH	-14.704	8	PASS
	HCH	-14.897	8	PASS
11N40SISO	LCH	-17.066	8	PASS
	MCH	-16.795	8	PASS
	HCH	-16.139	8	PASS

Test Graphs

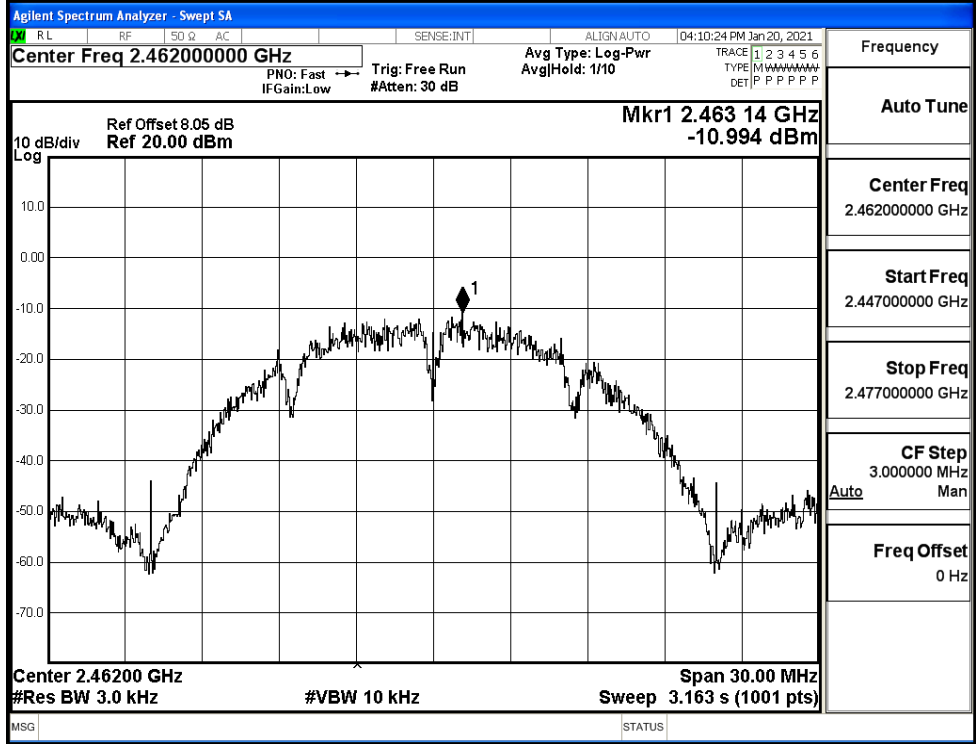


11B/MCH



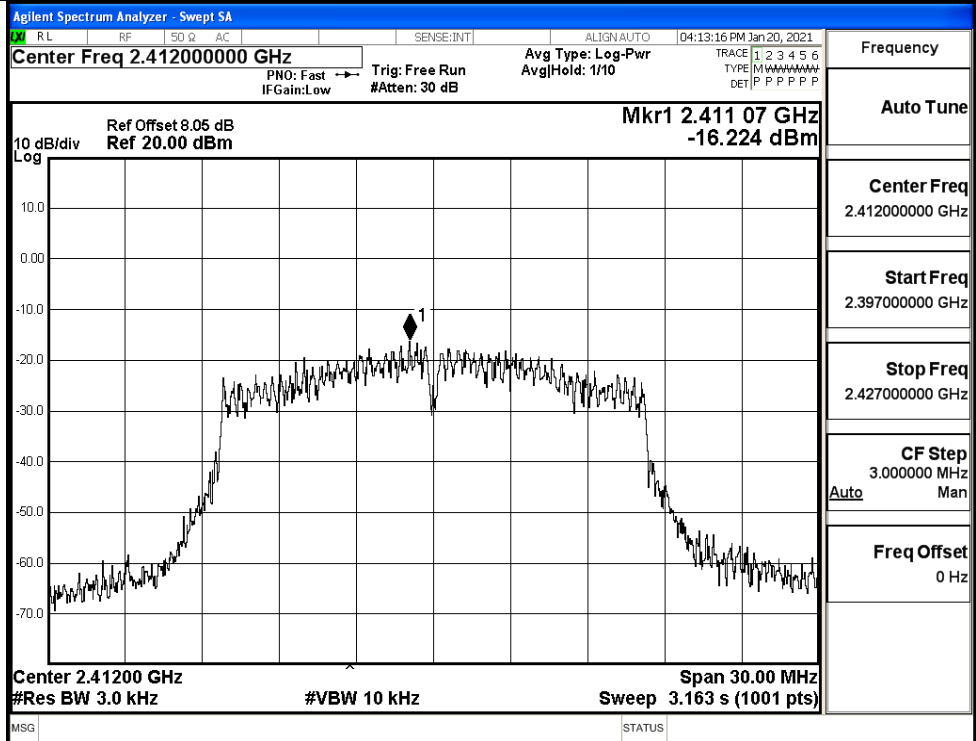
Frequency
Auto Tune
Center Freq 2.437000000 GHz
Start Freq 2.422000000 GHz
Stop Freq 2.452000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

11B/HCH



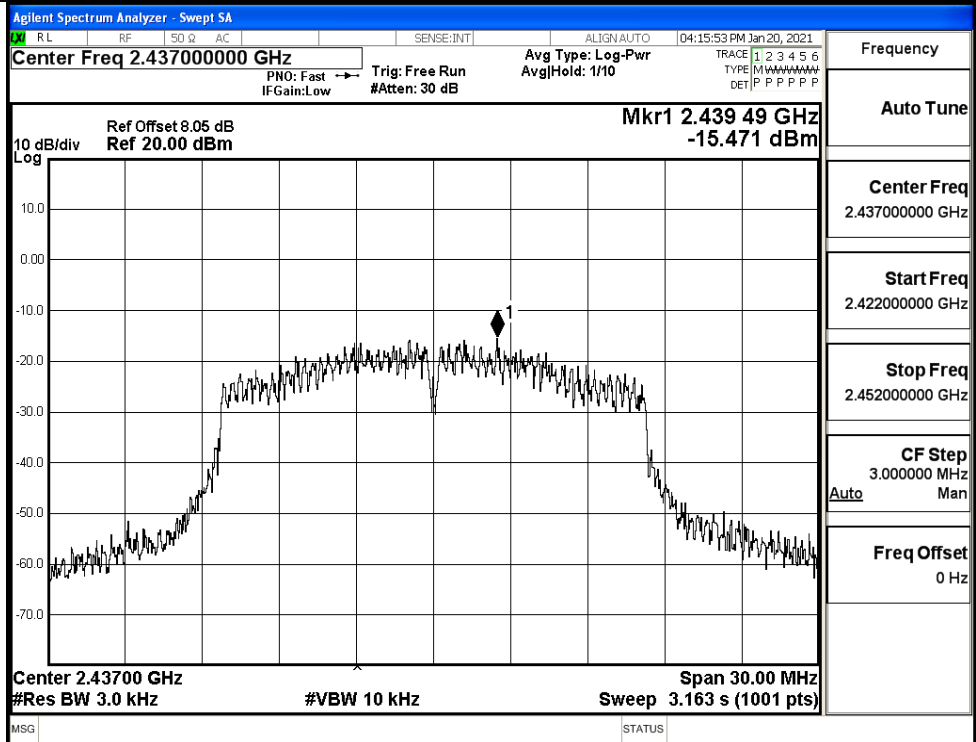
Frequency
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Start Freq 2.447000000 GHz
Stop Freq 2.477000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

11G/LCH



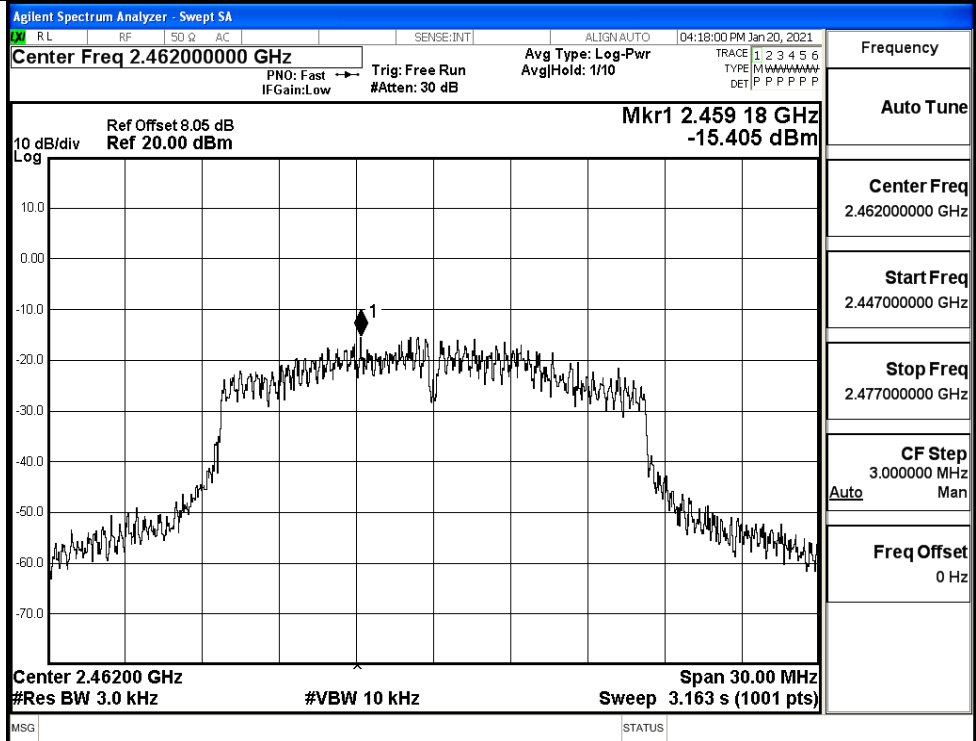
Frequency
Auto Tune
Center Freq 2.41200000 GHz
Start Freq 2.397000000 GHz
Stop Freq 2.427000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

11G/MCH

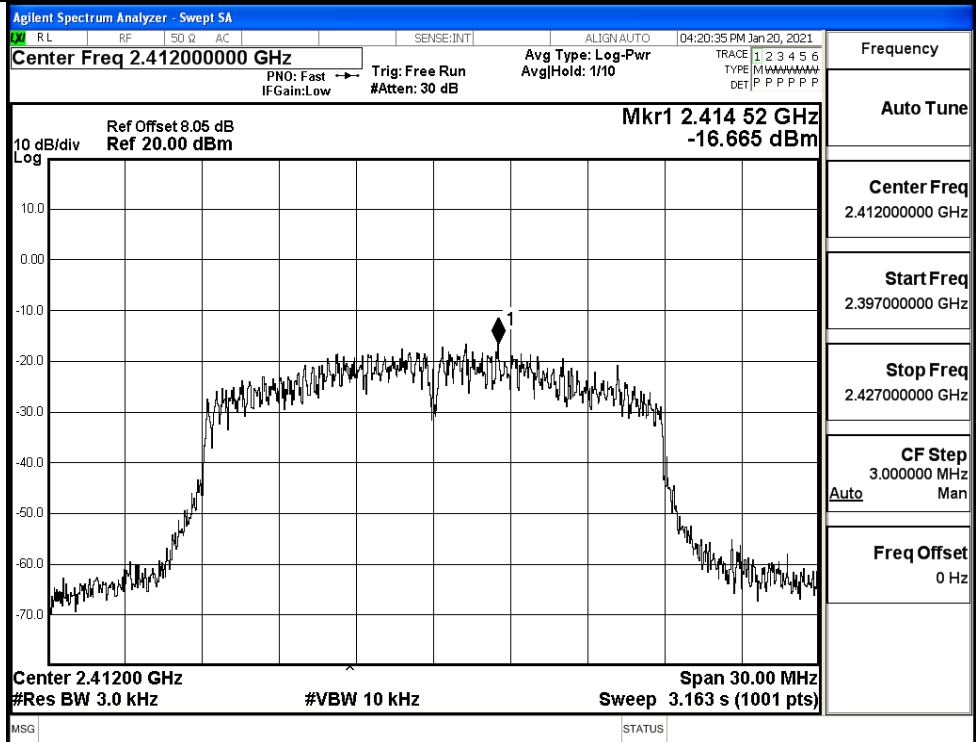


Frequency
Auto Tune
Center Freq 2.437000000 GHz
Start Freq 2.422000000 GHz
Stop Freq 2.452000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

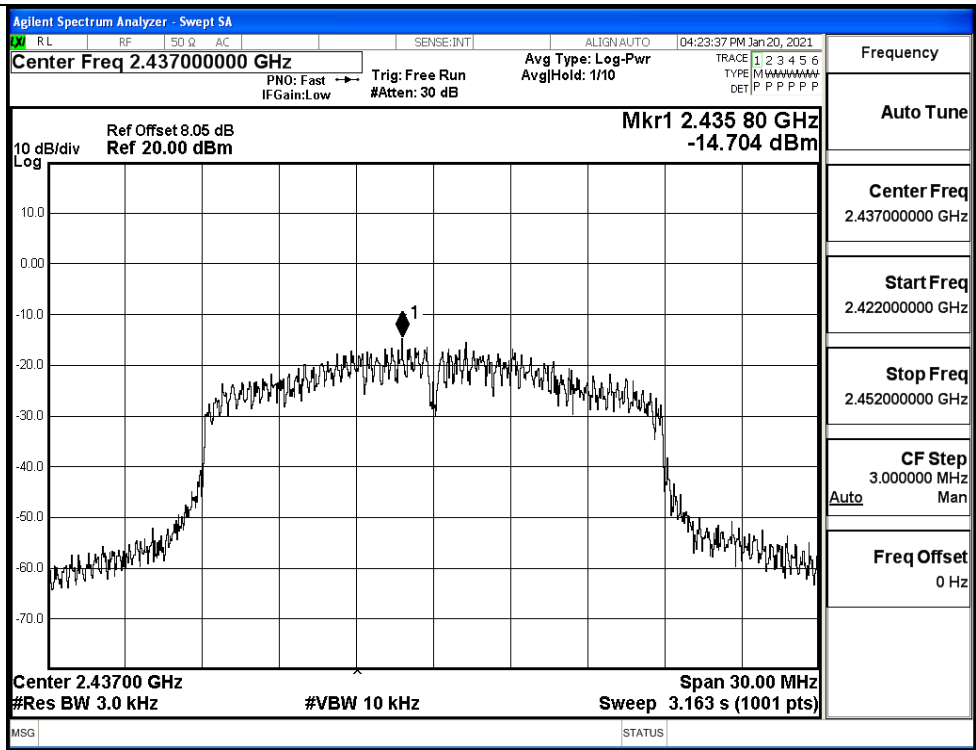
11G/HCH



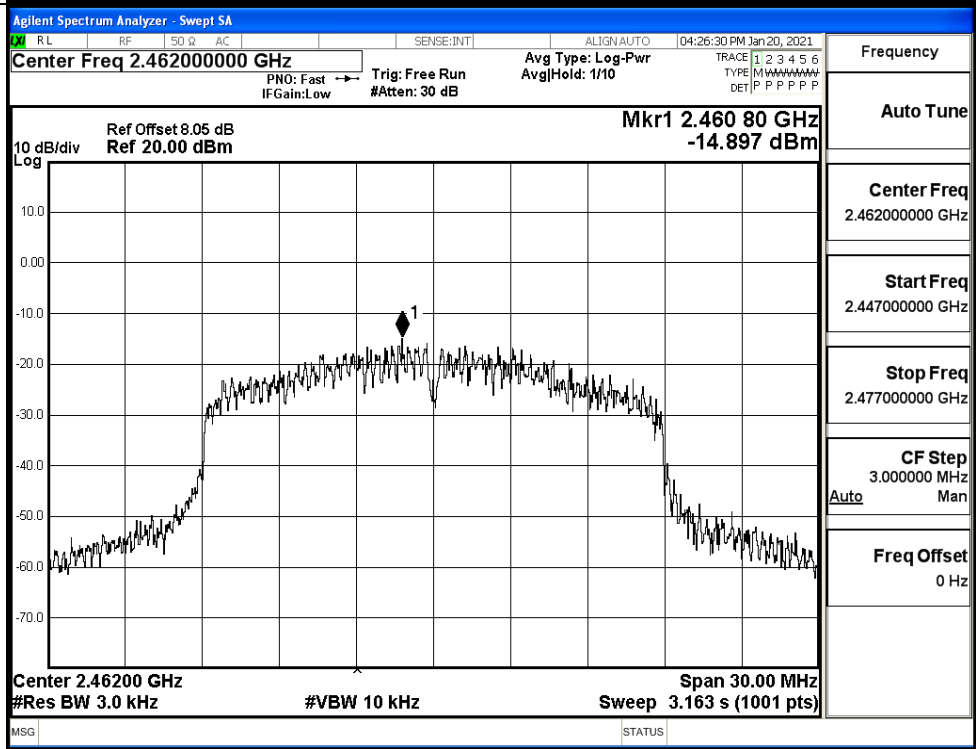
11N20SISO/LCH



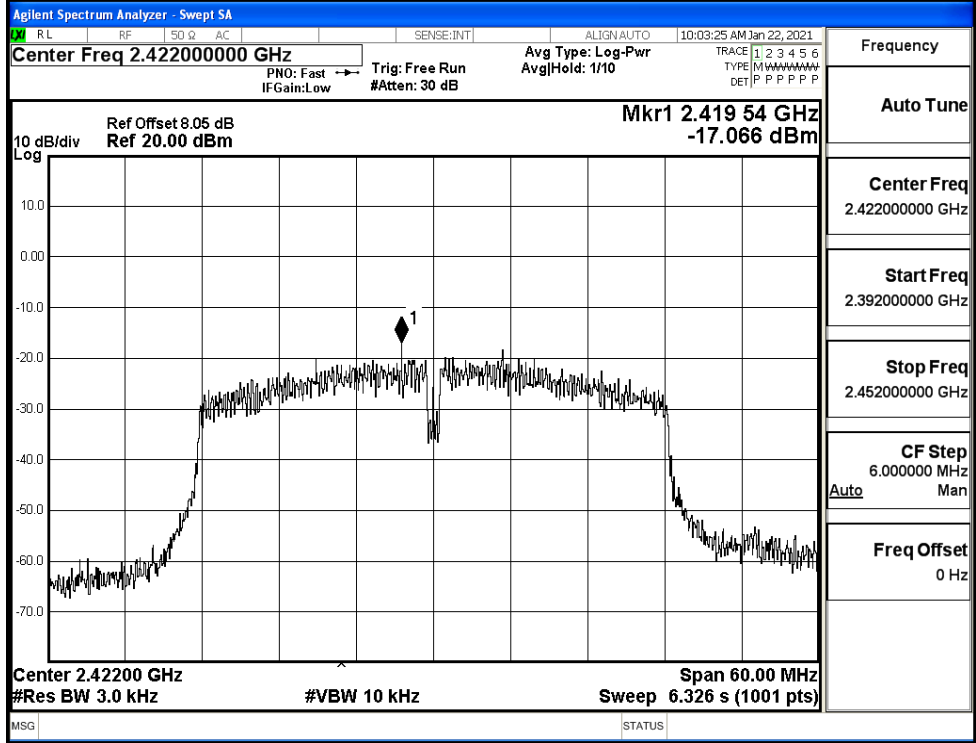
11N20SISO/MCH



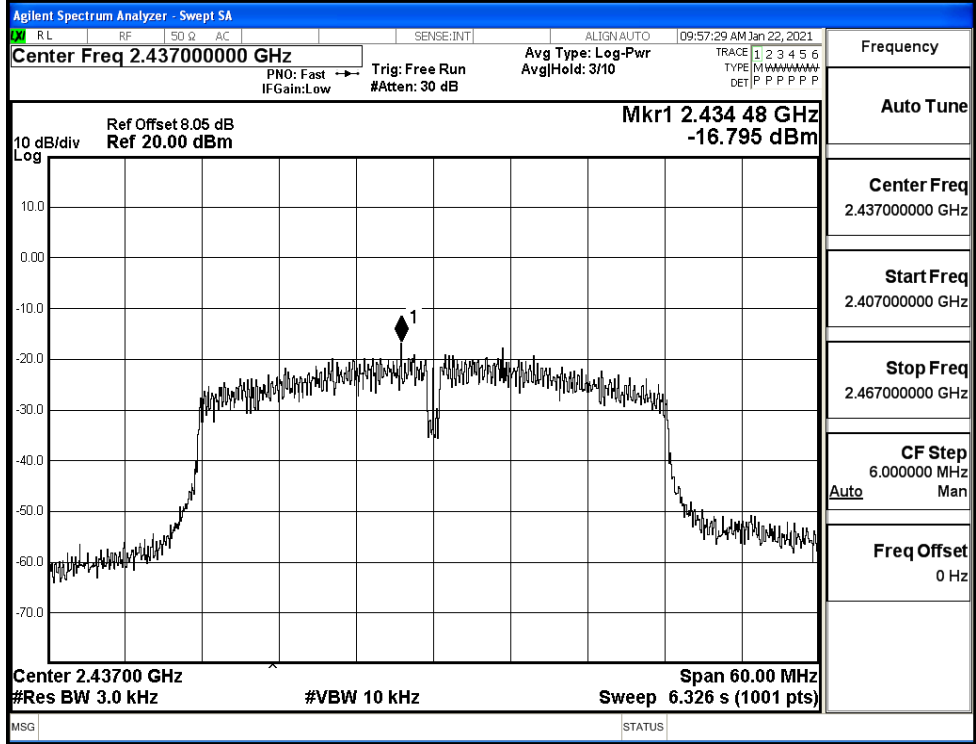
11N20SISO/HCH



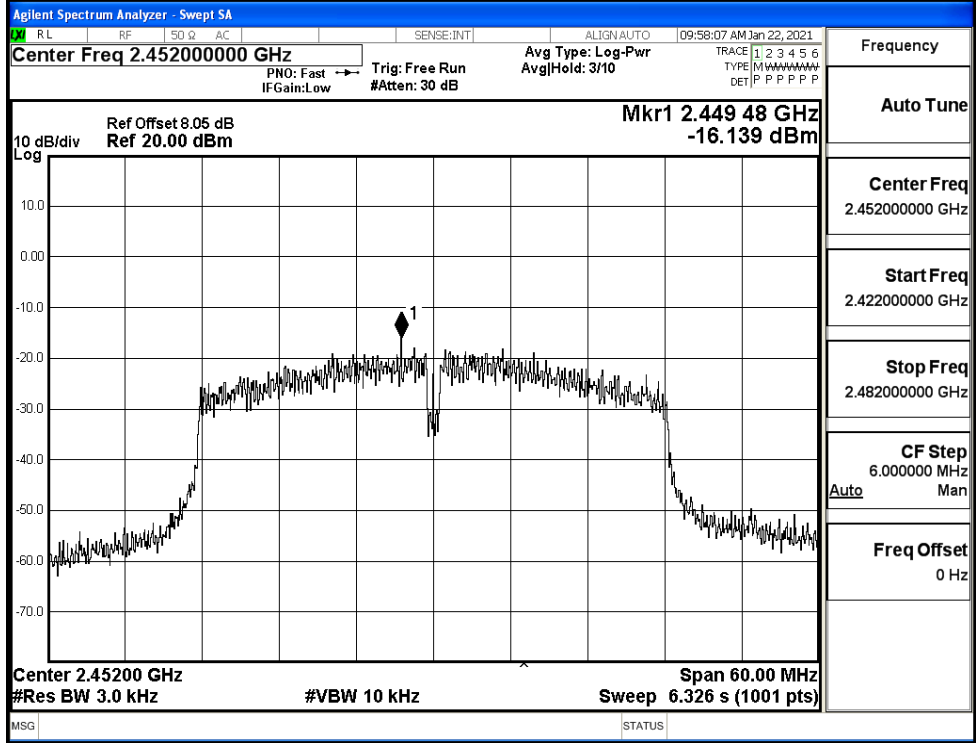
11N40SISO/LCH



11N40SISO/MCH

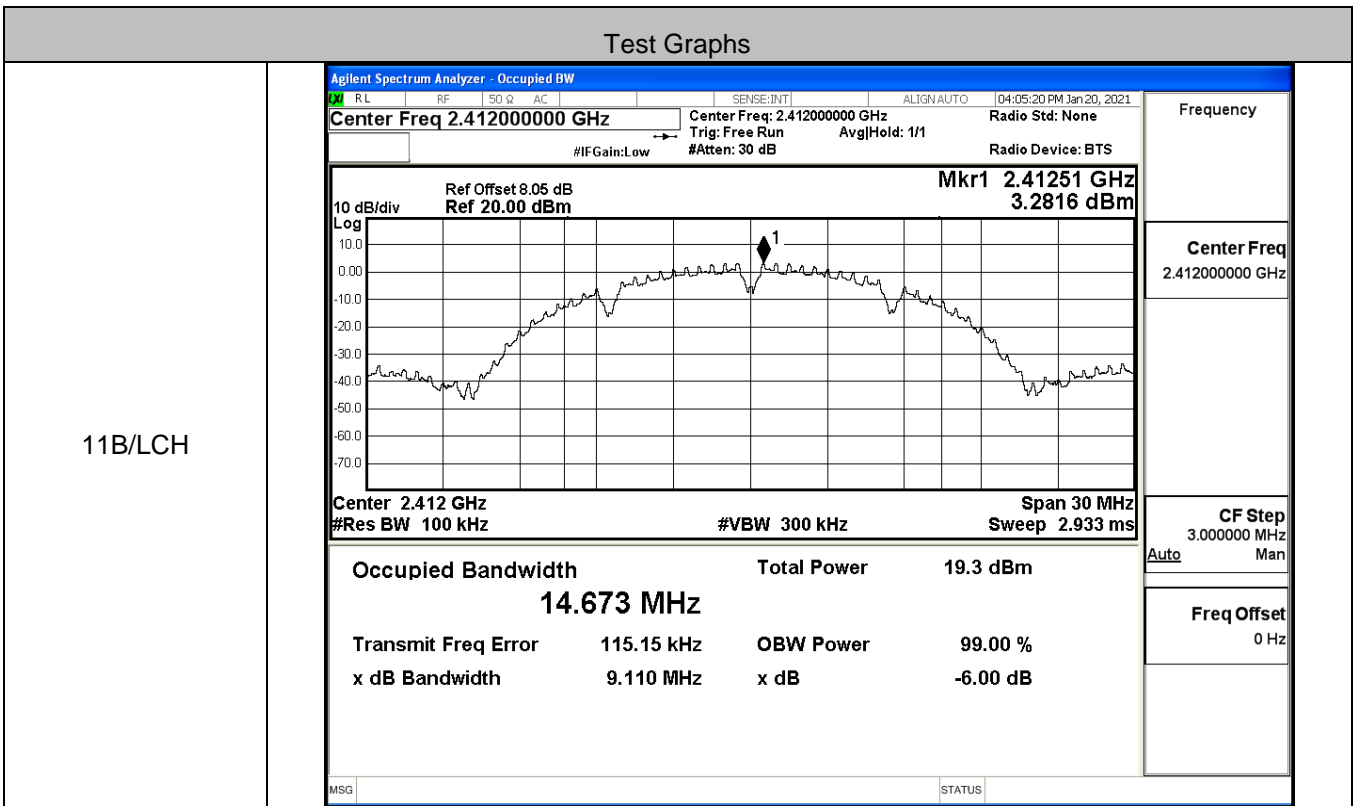


11N40SISO/HCH

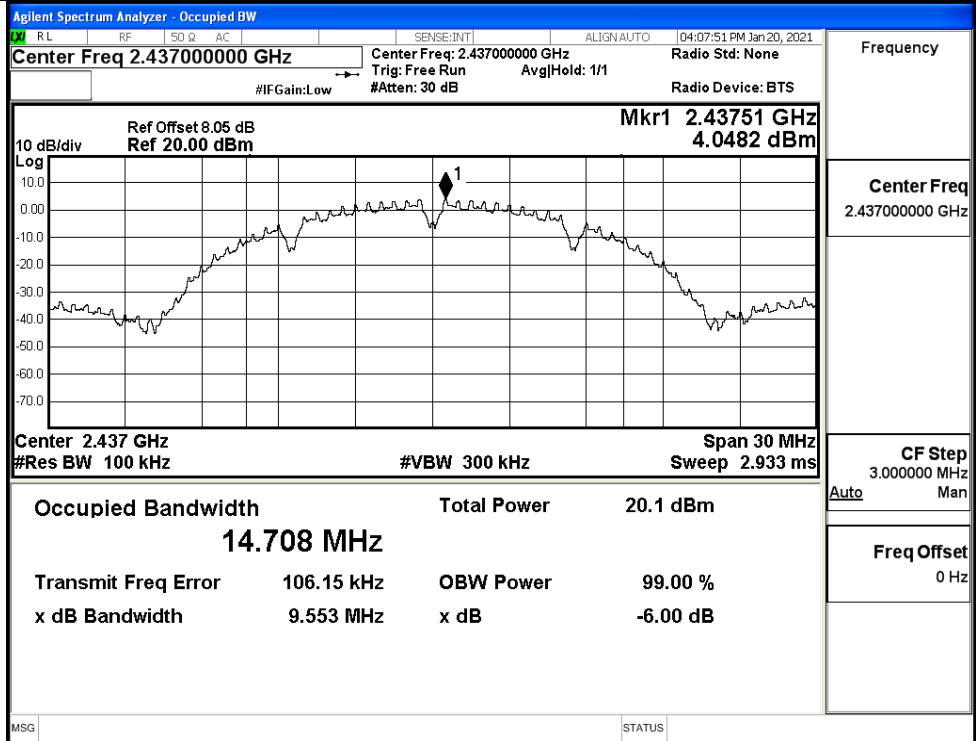


A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.110	≥0.5	PASS
	MCH	9.553	≥0.5	PASS
	HCH	9.562	≥0.5	PASS
11G	LCH	10.12	≥0.5	PASS
	MCH	12.57	≥0.5	PASS
	HCH	11.34	≥0.5	PASS
11N20SISO	LCH	13.82	≥0.5	PASS
	MCH	10.12	≥0.5	PASS
	HCH	11.34	≥0.5	PASS
11N40SISO	LCH	31.34	≥0.5	PASS
	MCH	33.80	≥0.5	PASS
	HCH	30.11	≥0.5	PASS



11B/MCH



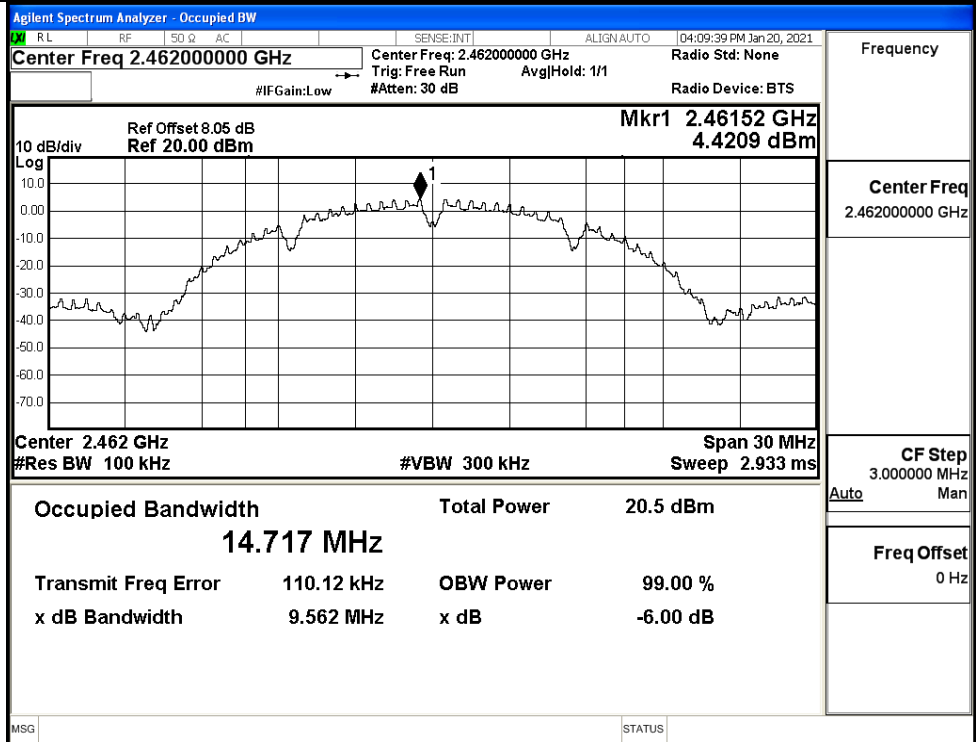
Frequency

Center Freq
2.43700000 GHz

CF Step
3.000000 MHz

Freq Offset
0 Hz

11B/HCH



Frequency

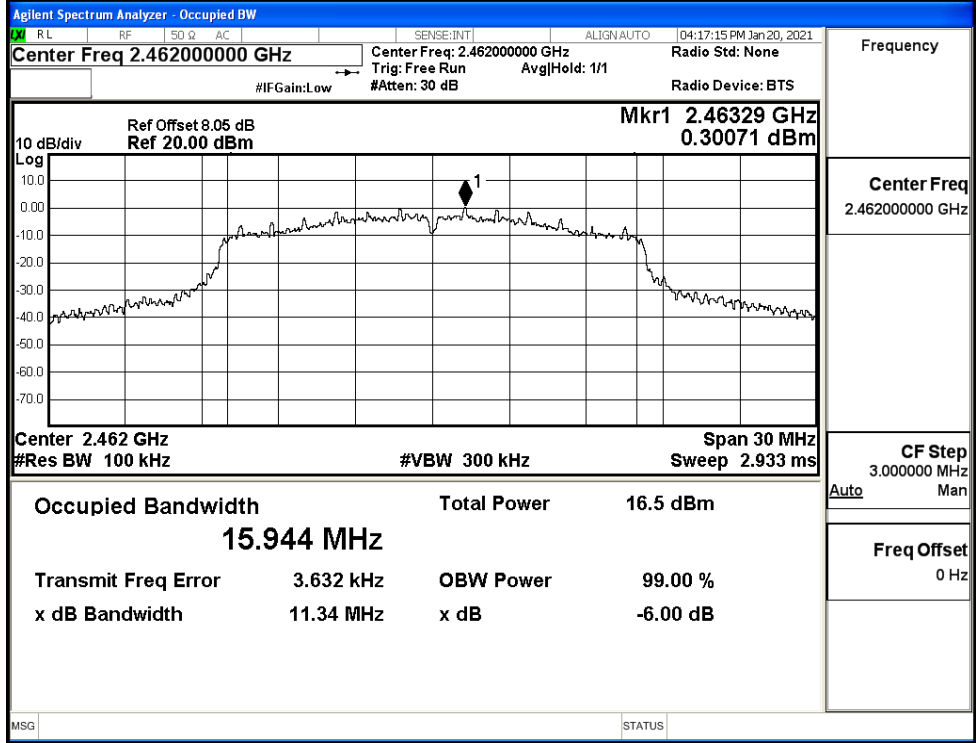
Center Freq
2.46200000 GHz

CF Step
3.000000 MHz

Freq Offset
0 Hz

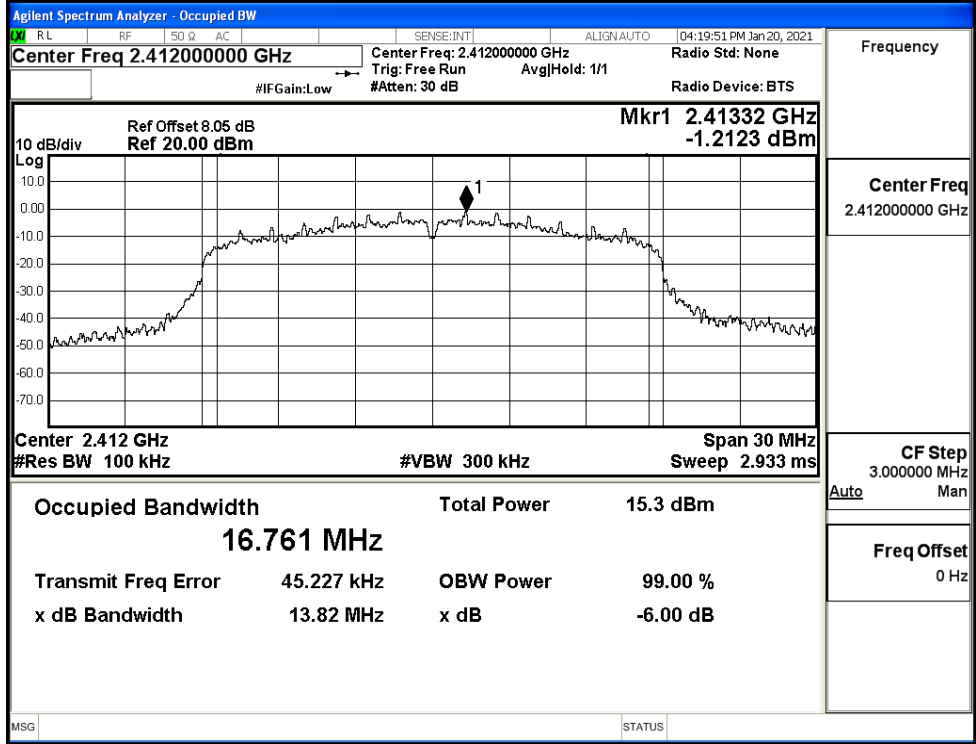
<p>11G/LCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.41200000 GHz</p> <p>Center Freq: 2.41200000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB</p> <p>Mkr1 2.41329 GHz -0.40905 dBm</p> <p>10 dB/div Log Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Center 2.412 GHz #Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 15.881 MHz</p> <p>Total Power 15.5 dBm</p> <p>Transmit Freq Error 52.137 kHz</p> <p>x dB Bandwidth 10.12 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -6.00 dB</p>	<p>Frequency</p> <p>Center Freq 2.41200000 GHz</p> <p>CF Step 3.000000 MHz</p> <p>Freq Offset 0 Hz</p>
	<p>11G/MCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.43700000 GHz</p> <p>Center Freq: 2.43700000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB</p> <p>Mkr1 2.43823 GHz 0.014716 dBm</p> <p>10 dB/div Log Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Center 2.437 GHz #Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz Sweep 2.933 ms</p> <p>Occupied Bandwidth 15.949 MHz</p> <p>Total Power 16.3 dBm</p> <p>Transmit Freq Error 37.826 kHz</p> <p>x dB Bandwidth 12.57 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -6.00 dB</p>

11G/HCH



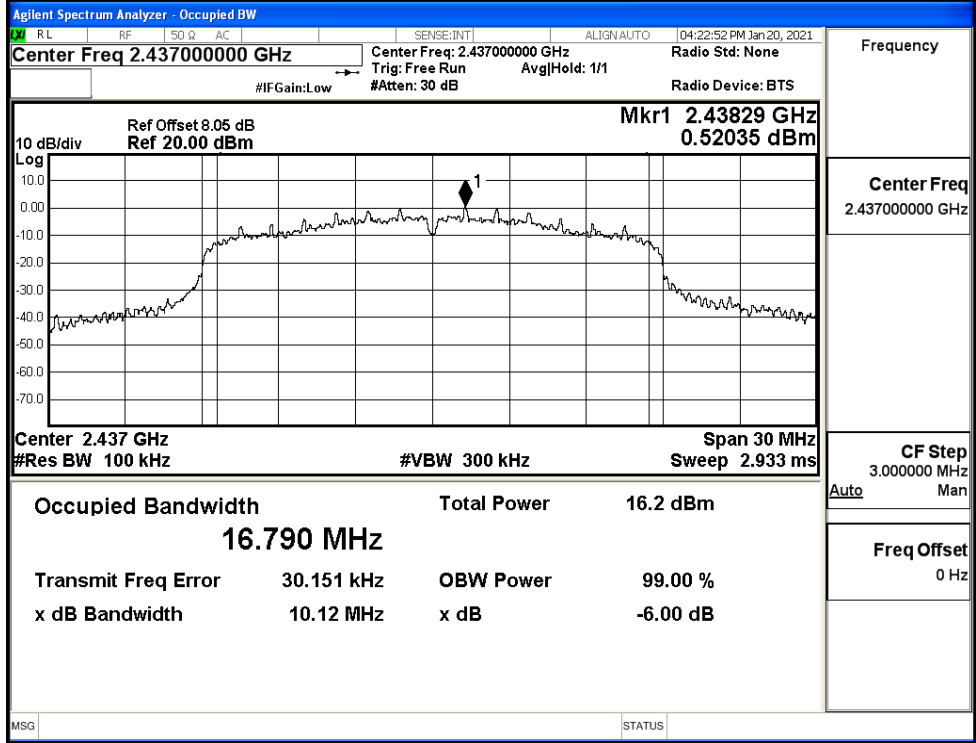
Frequency	2.46200000 GHz
Center Freq	2.46200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11N20SISO/LCH

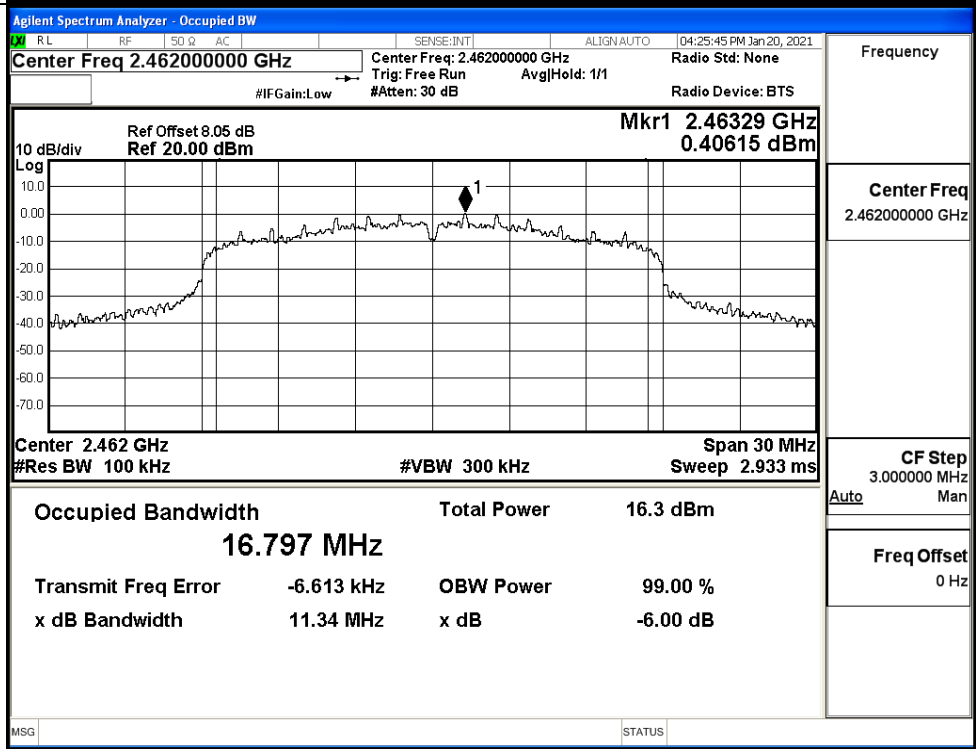


Frequency	2.41200000 GHz
Center Freq	2.41200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

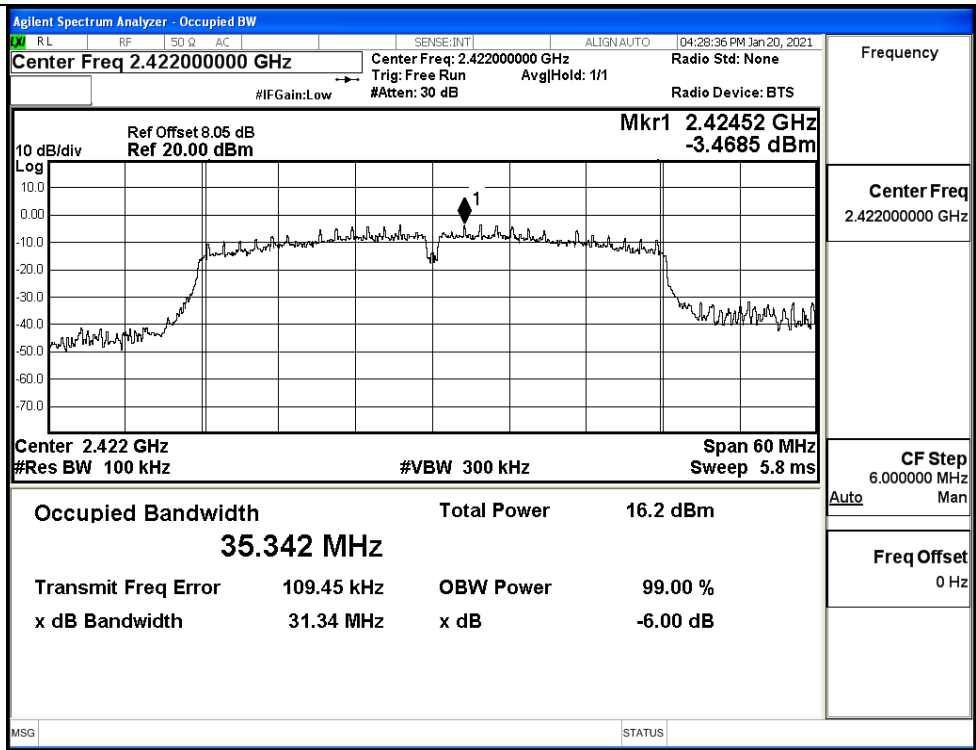
11N20SISO/MCH



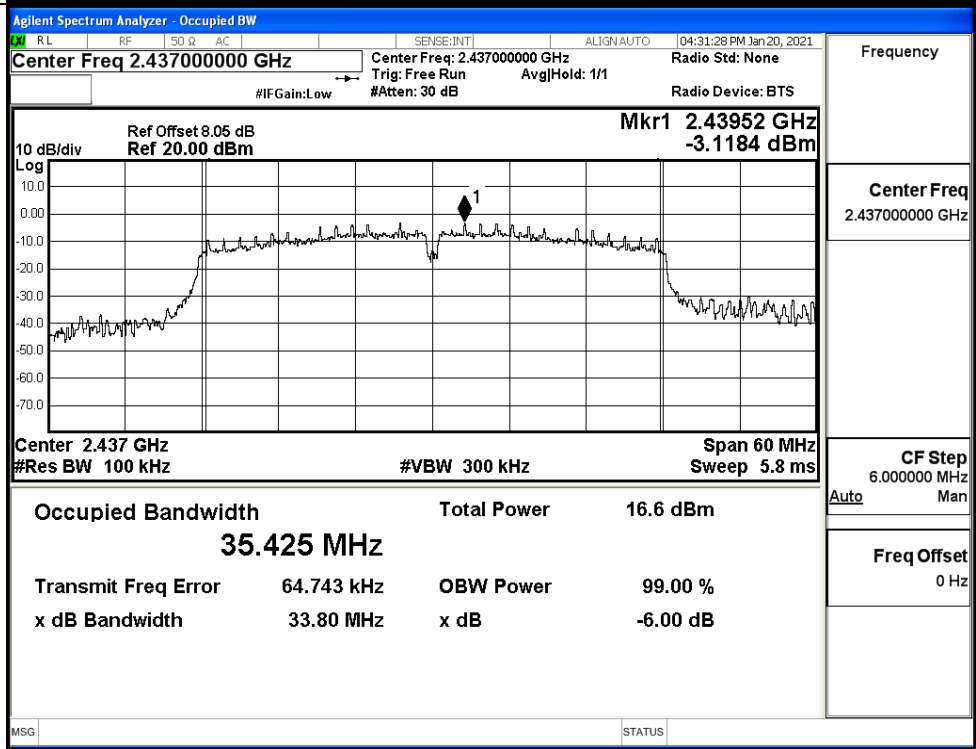
11N20SISO/HCH



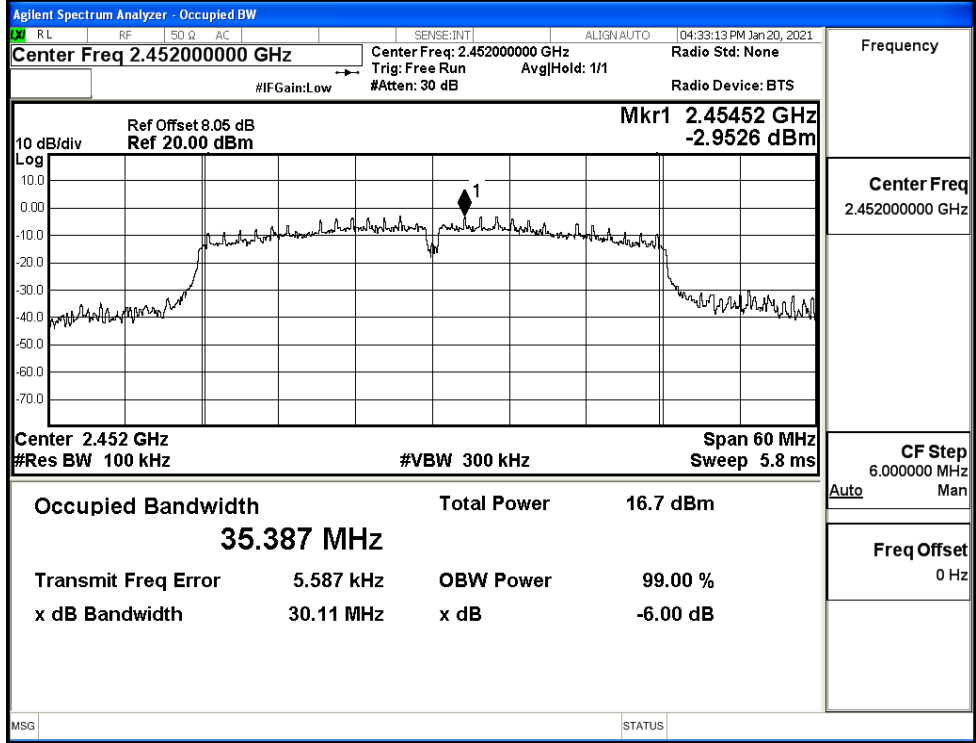
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

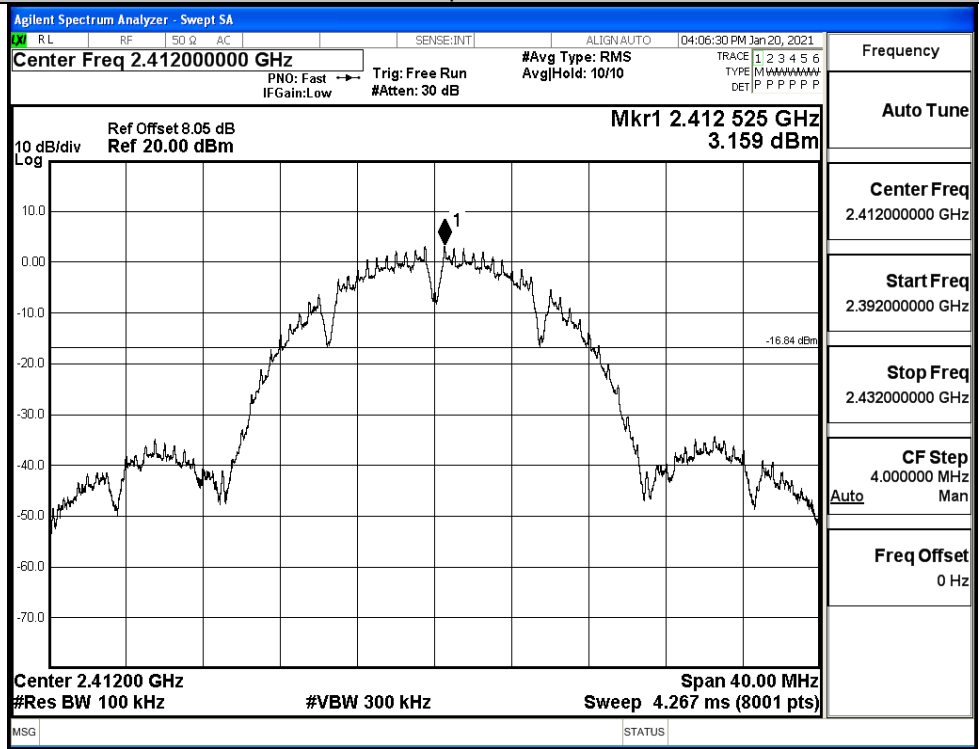


A.5 RF Conducted Spurious Emissions

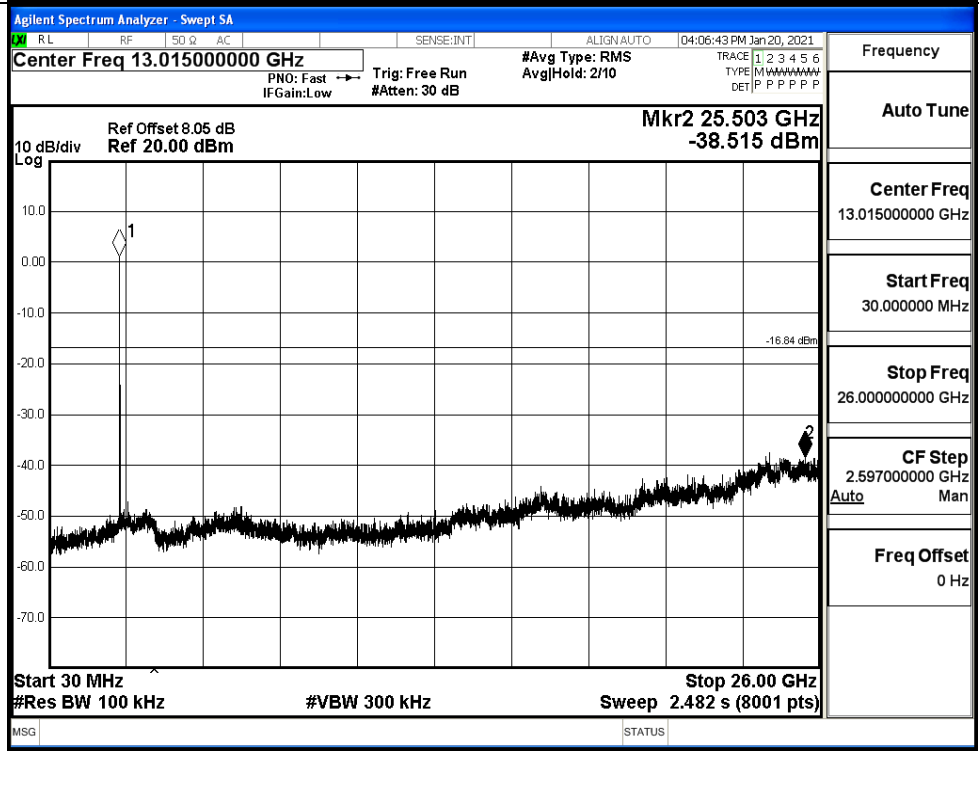
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	3.159	-38.515	-16.841	PASS
	MCH	3.613	-37.651	-16.387	PASS
	HCH	4.089	-37.331	-15.911	PASS
11G	LCH	-0.454	-36.619	-20.454	PASS
	MCH	0.337	-38.092	-19.663	PASS
	HCH	-1.173	-38.065	-21.173	PASS
11N20 SISO	LCH	-0.561	-37.920	-20.561	PASS
	MCH	0.246	-37.264	-19.754	PASS
	HCH	-0.13	-37.634	-20.130	PASS
11N40 SISO	LCH	-3.674	-37.087	-23.674	PASS
	MCH	-3.338	-38.486	-23.338	PASS
	HCH	-3.123	-38.365	-23.123	PASS

11B_LCH_Graphs

Pref/11B/LCH

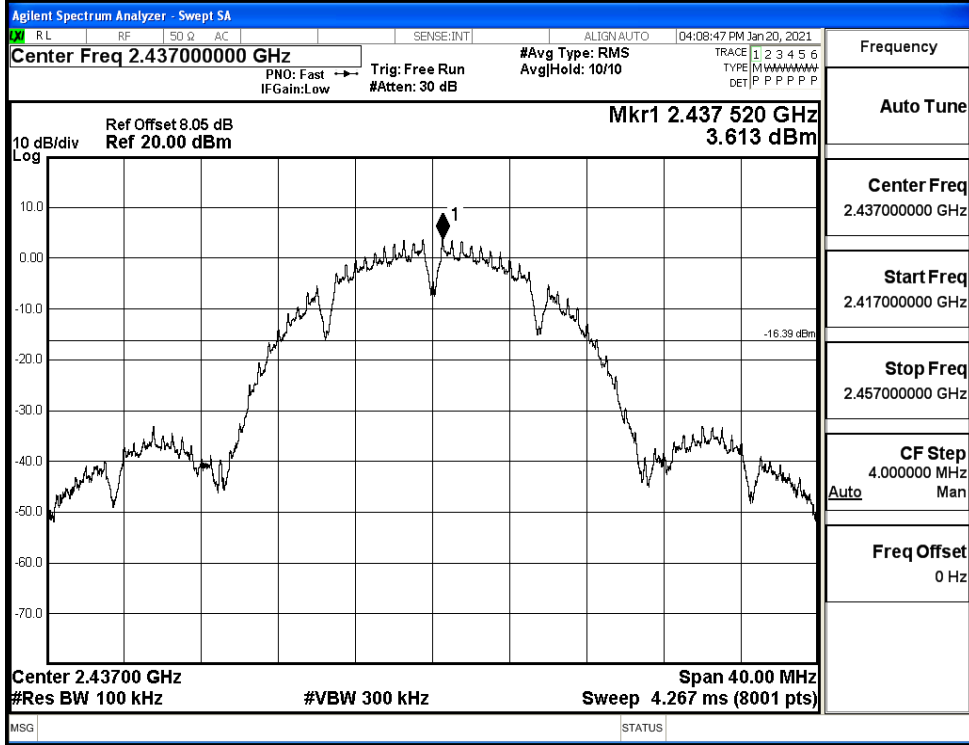


Puw/11B/LCH

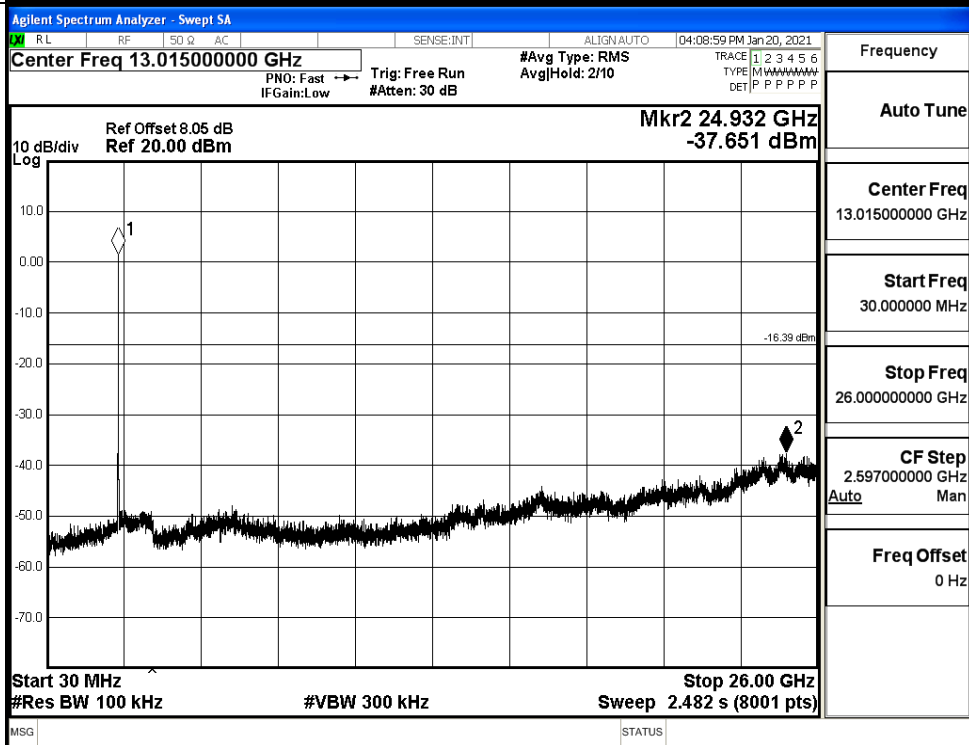


11B_MCH_Graphs

Pref/11B/MCH

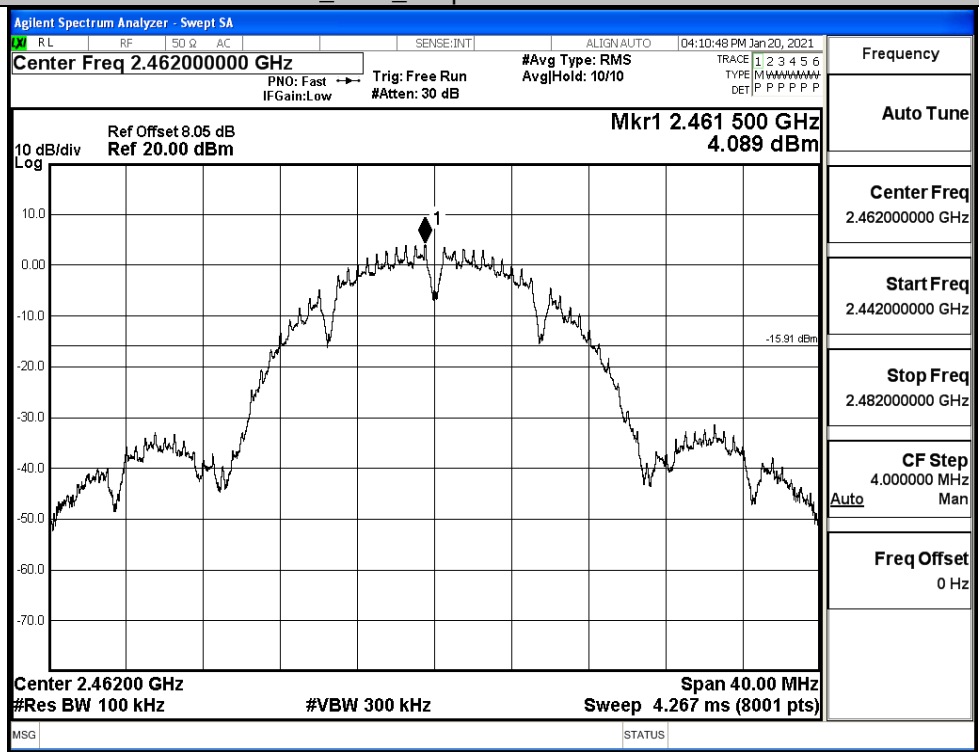


Puw/11B/MCH

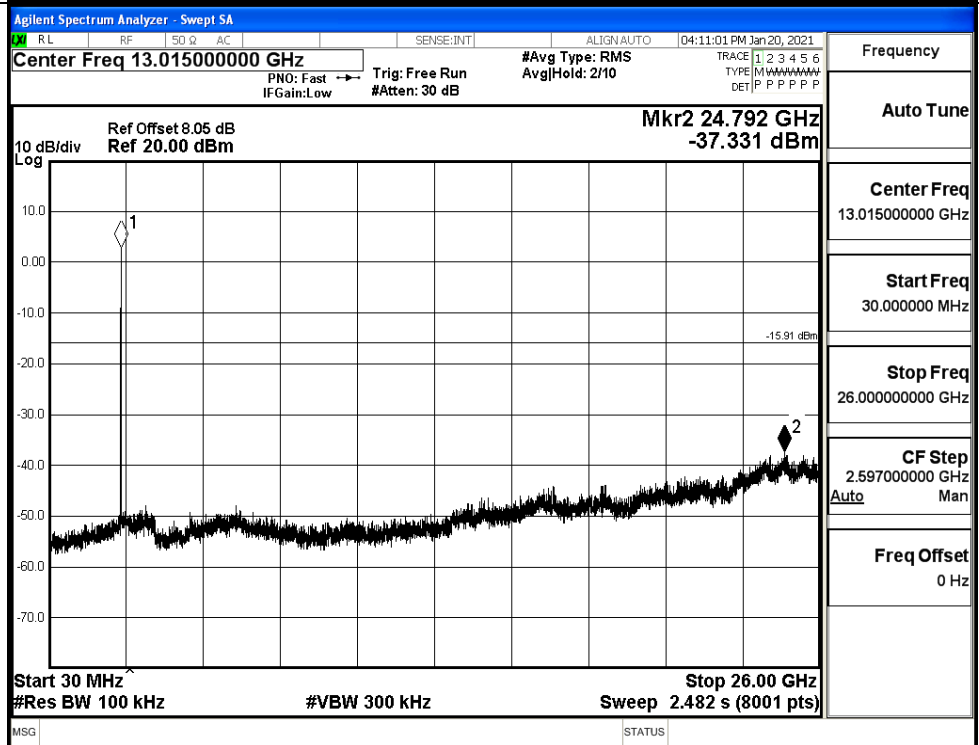


11B_HCH_Graphs

Pref/11B/HCH

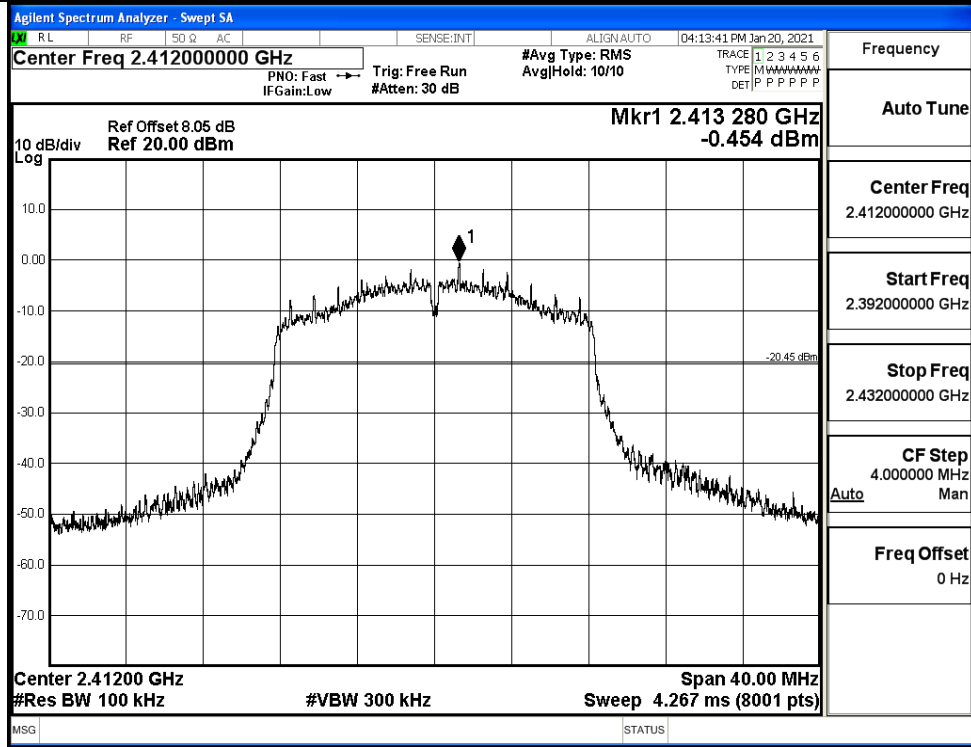


Puw/11B/HCH

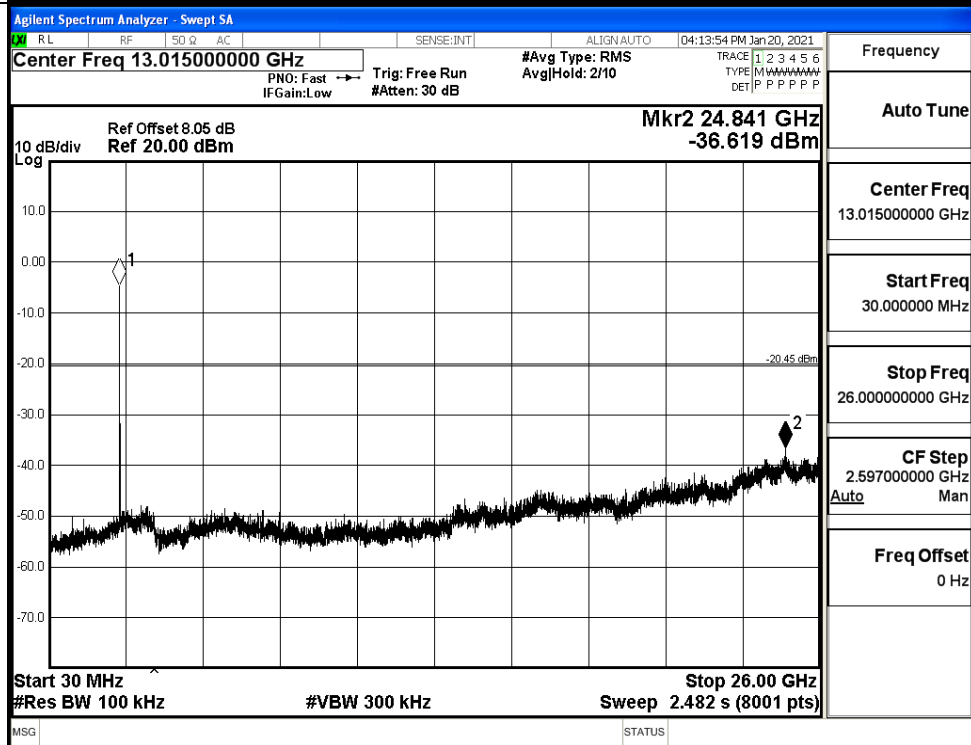


11G_LCH_Graphs

Pref/11G/LCH

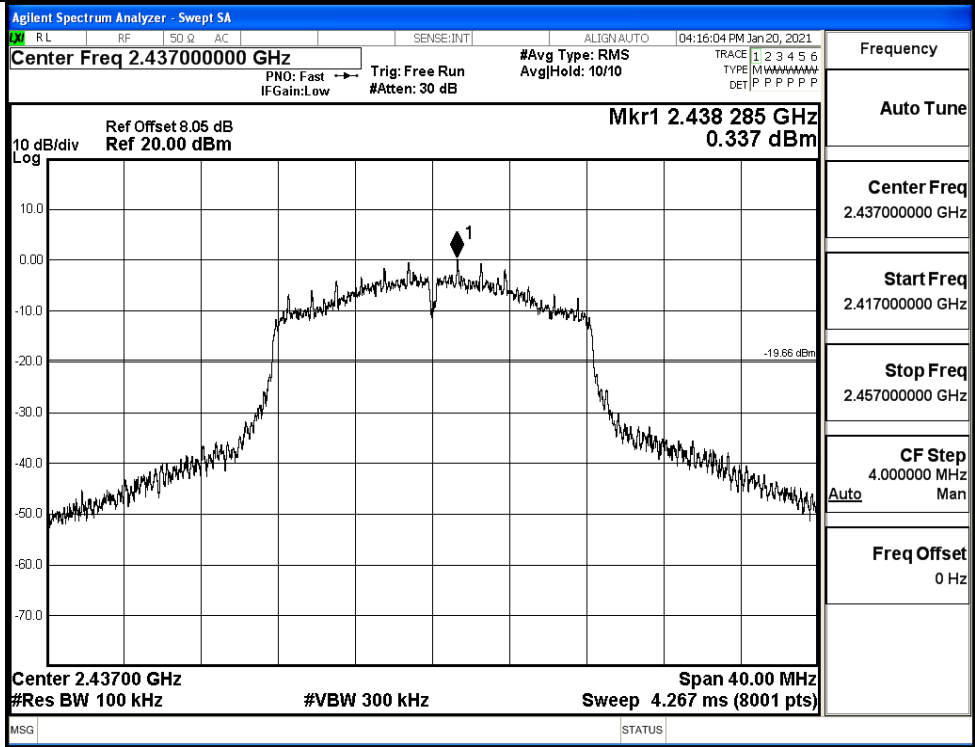


Puw/11G/LCH

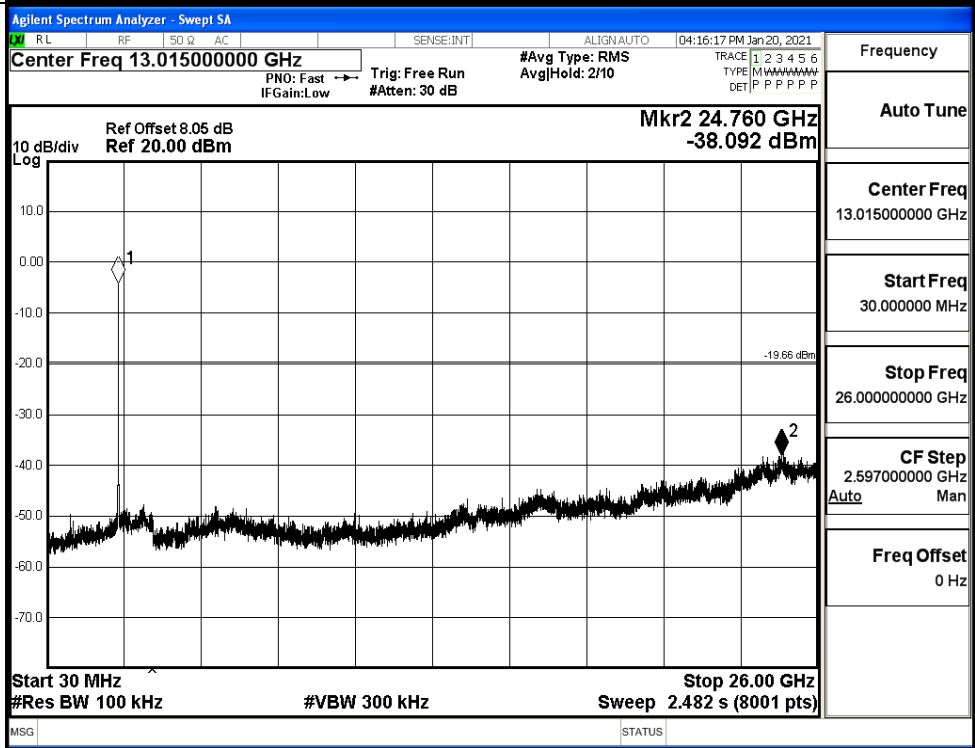


11G_MCH_Graphs

Pref/11G/MCH

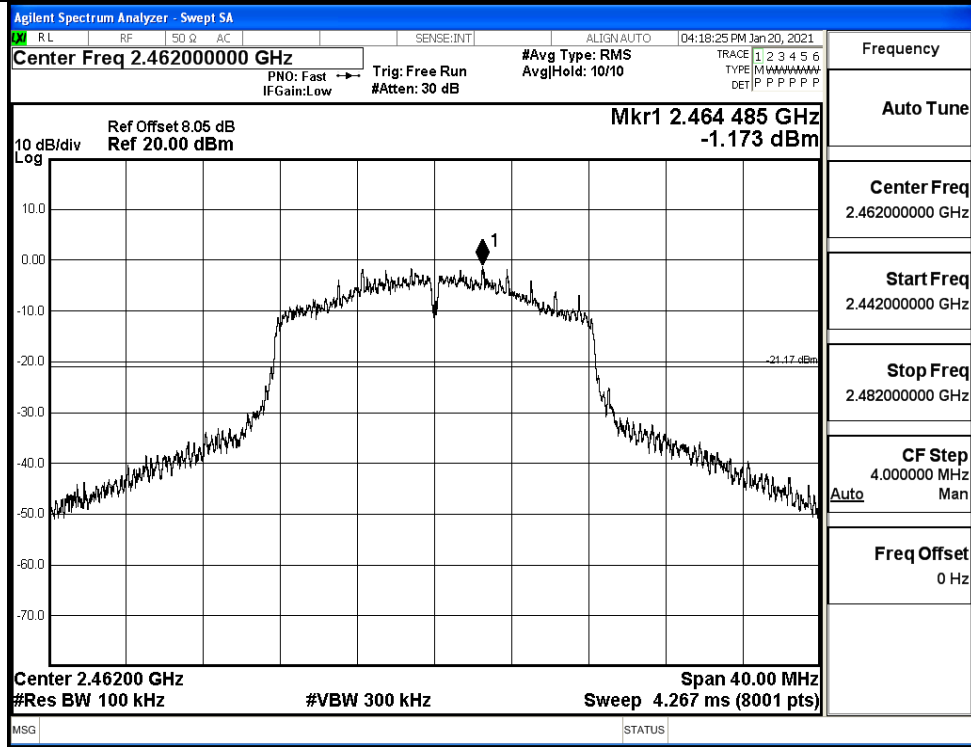


Puw/11G/MCH

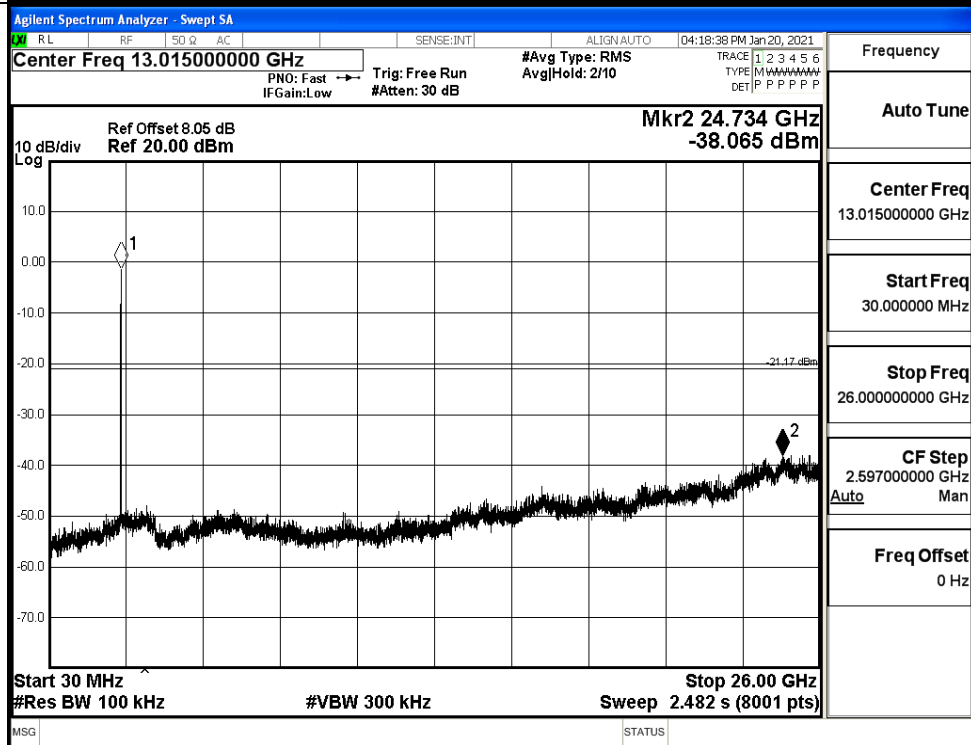


11G_HCH_Graphs

Pref/11G/HCH

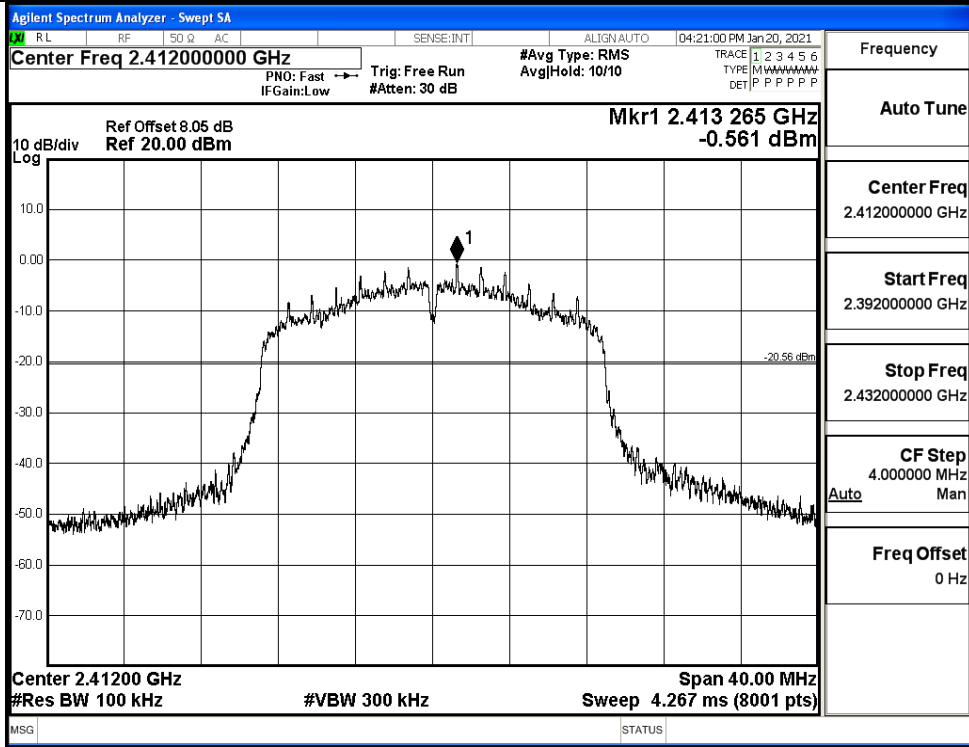


Puw/11G/HCH

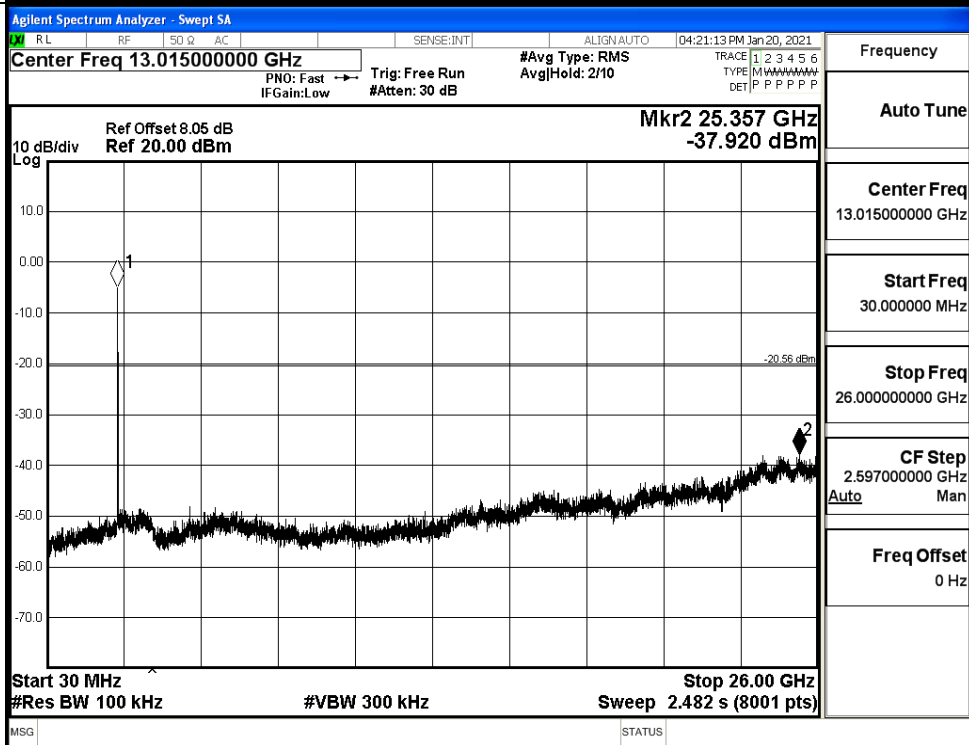


11N20SISO_LCH_Graphs

Pref/11N20SIS
O/LCH

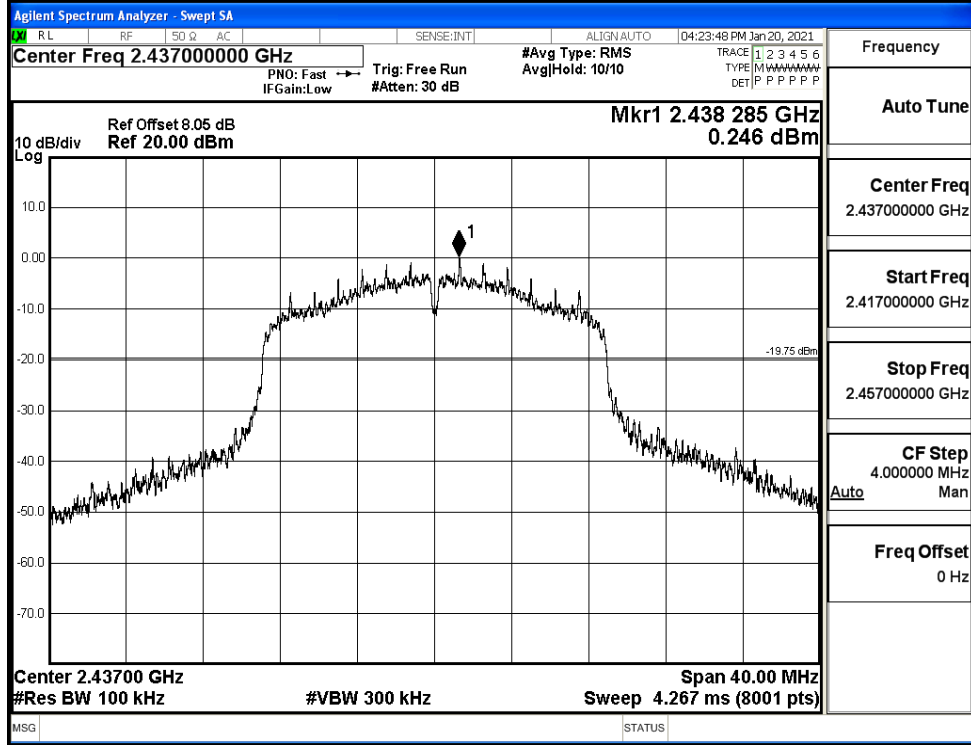


Puw/11N20
SISO/LCH

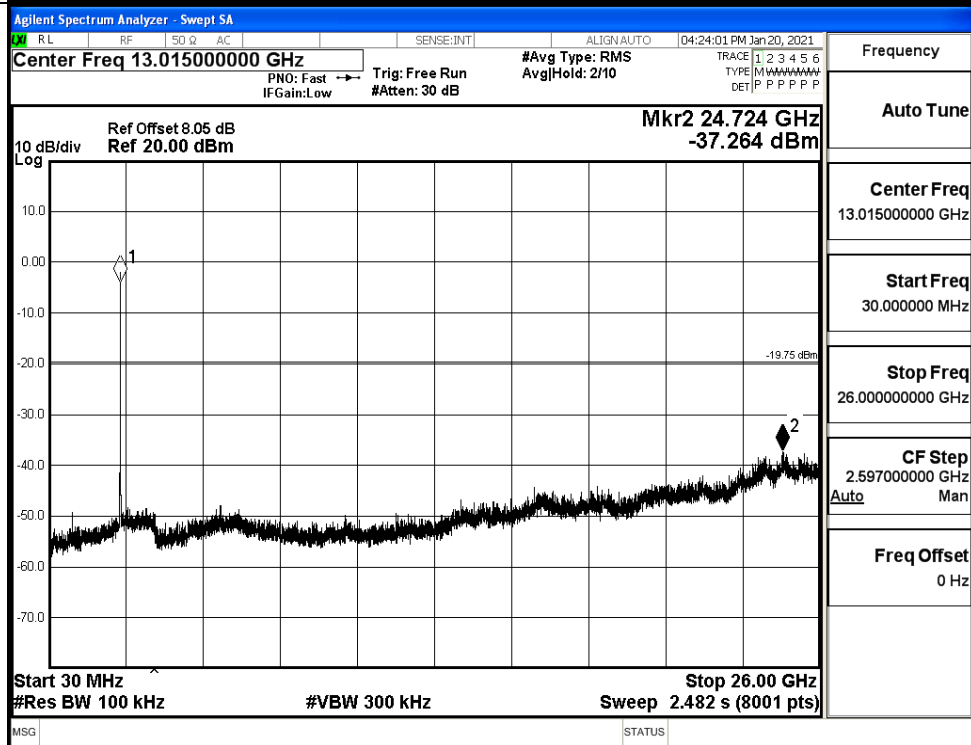


11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCH

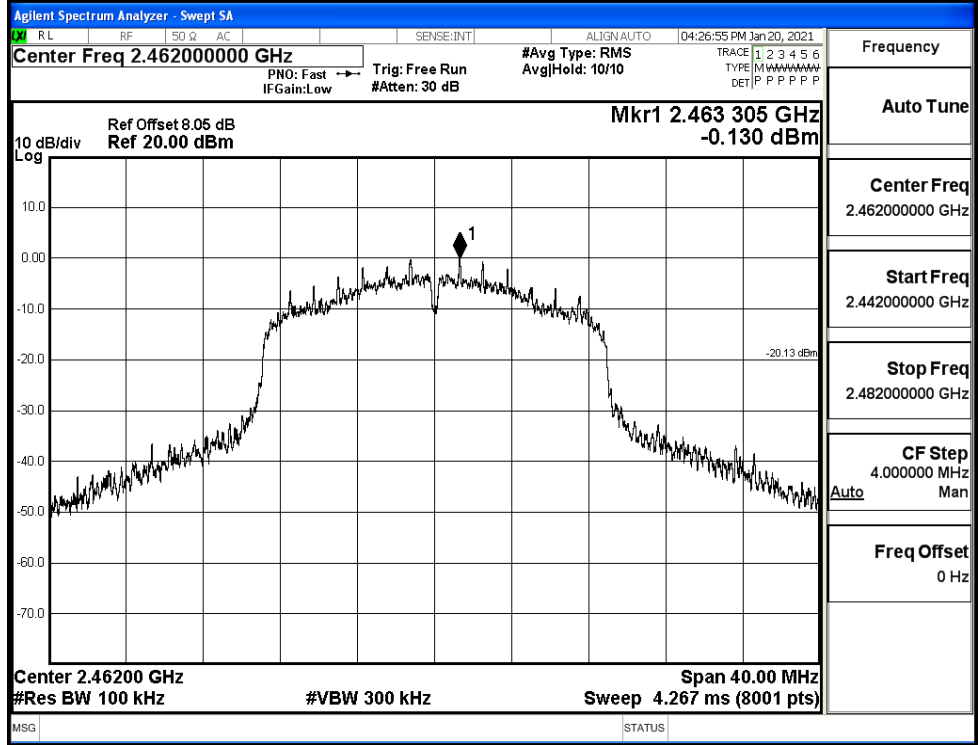


Puw/11N20
SISO/MCH

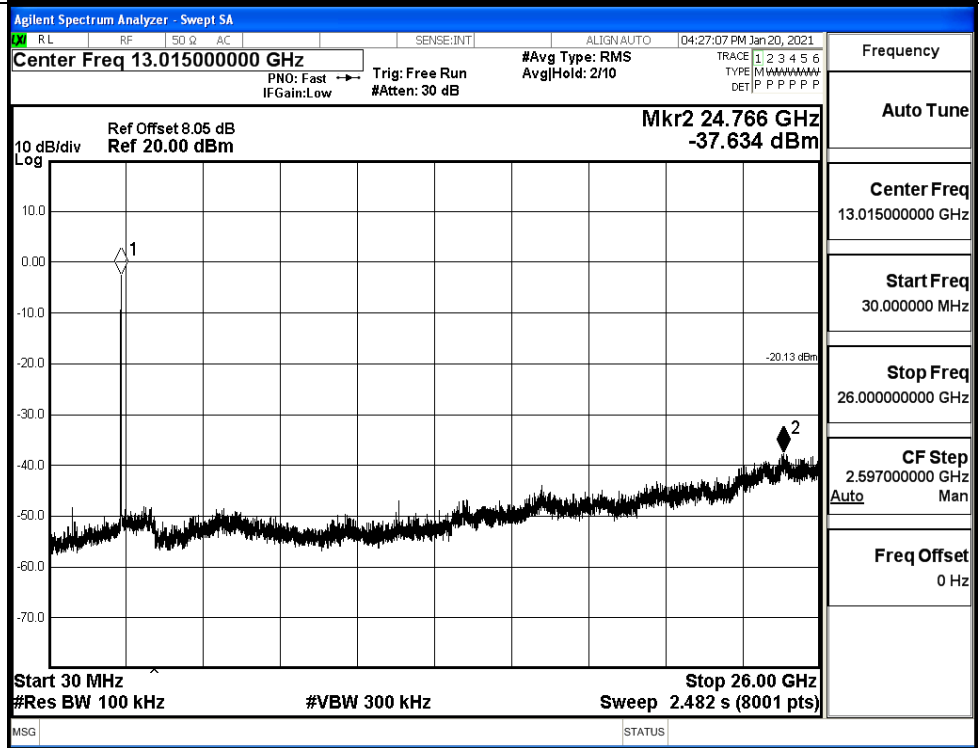


11N20SISO_HCH_Graphs

Pref/11N20
SISO/HCH

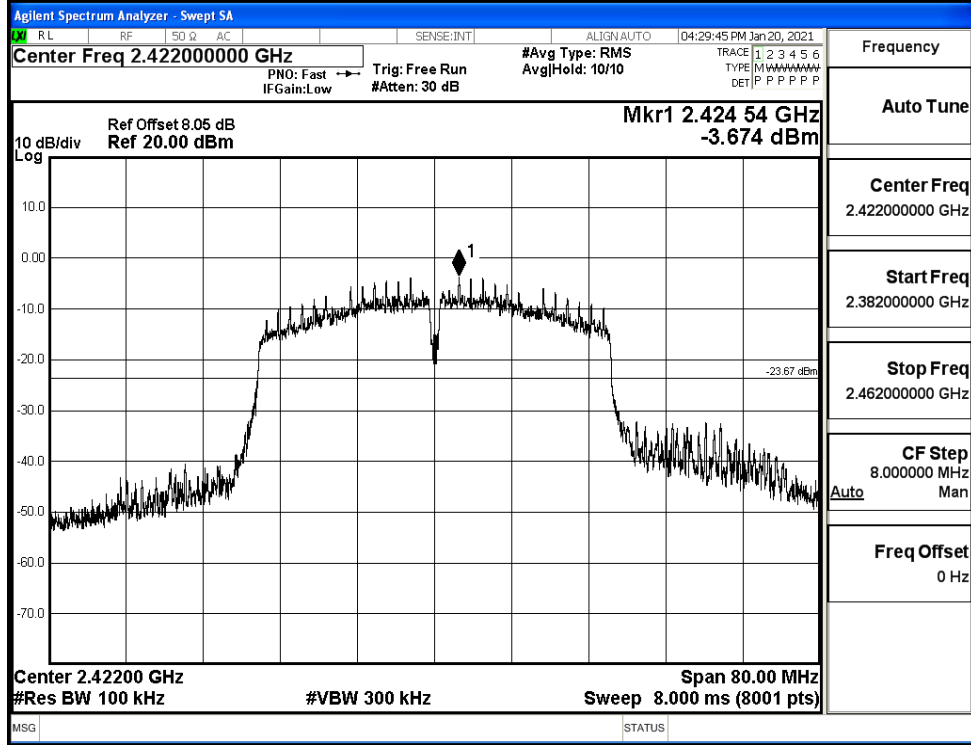


Puw/11N20
SISO/HCH

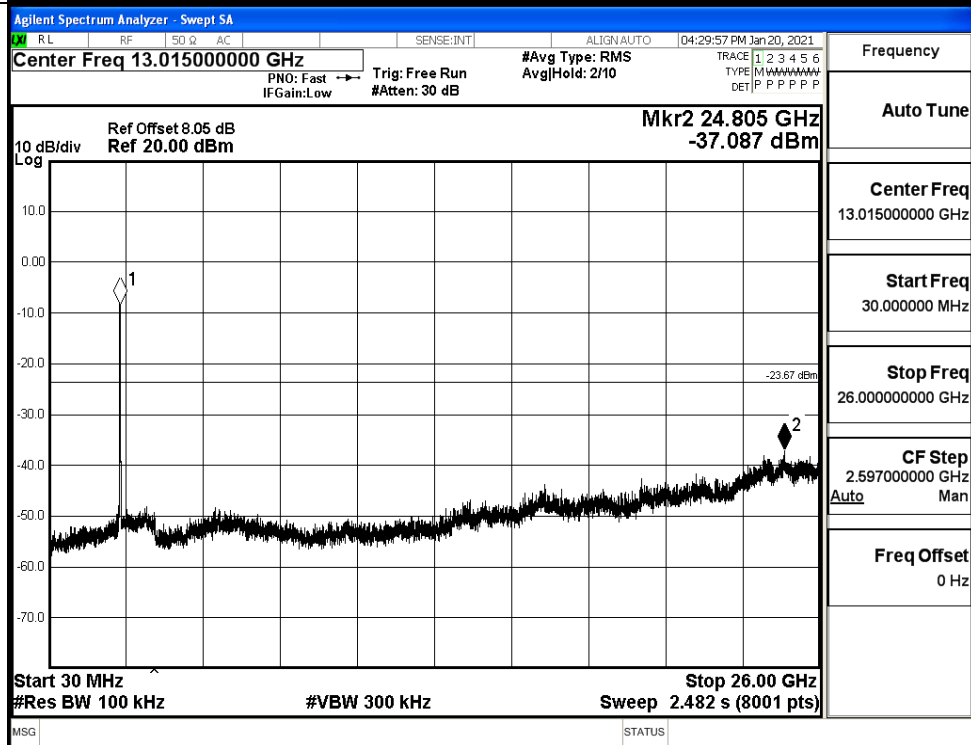


11N40SISO_LCH_Graphs

Pref/11N40
SISO/LCH

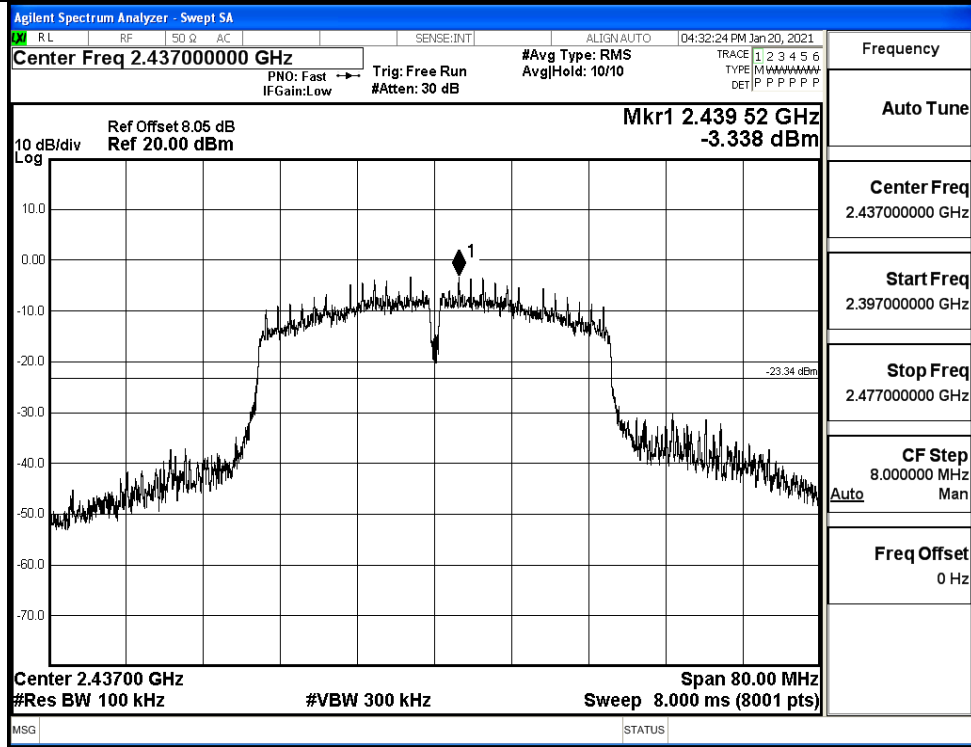


Puw/11N40
SISO/LCH

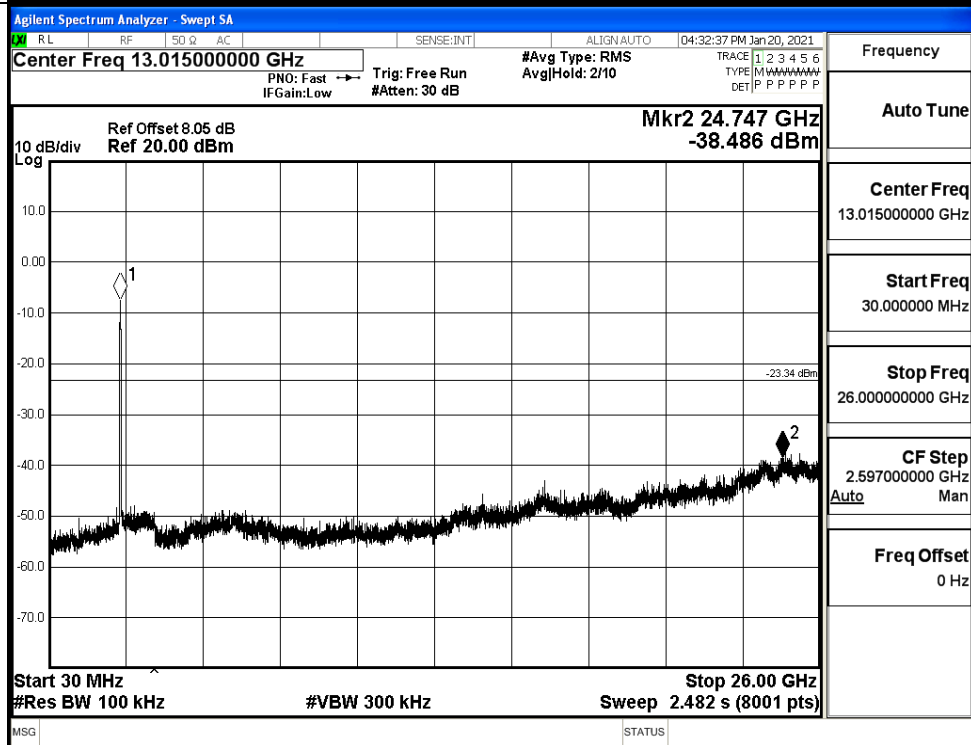


11N40SISO_MCH_Graphs

Pref/11N40
SISO/MCH

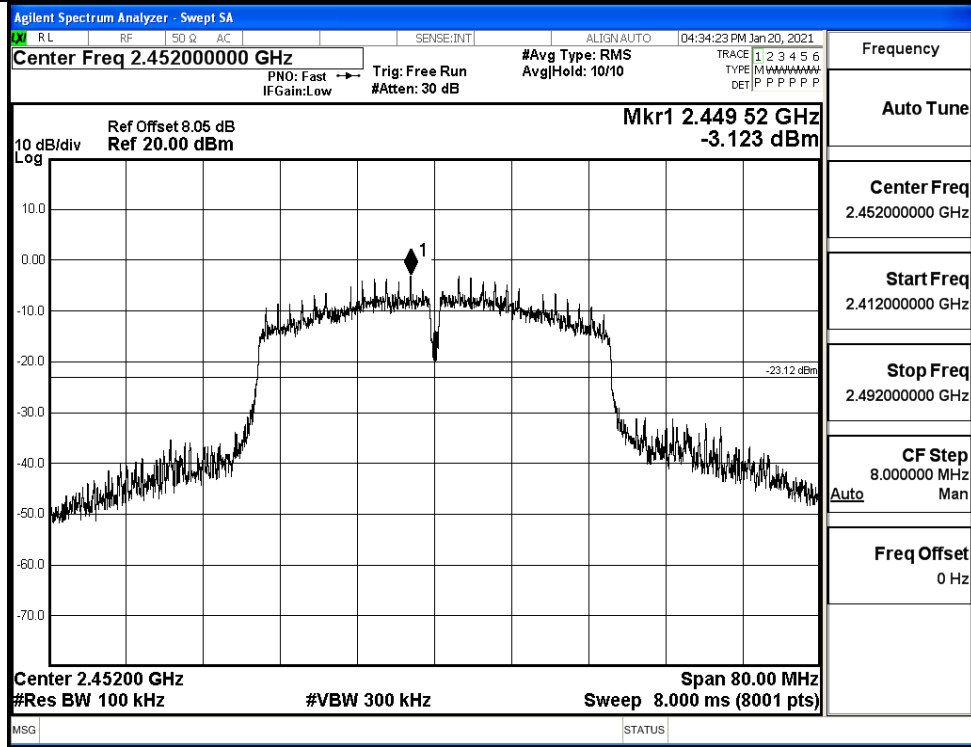


Puw/11N40
SISO/MCH

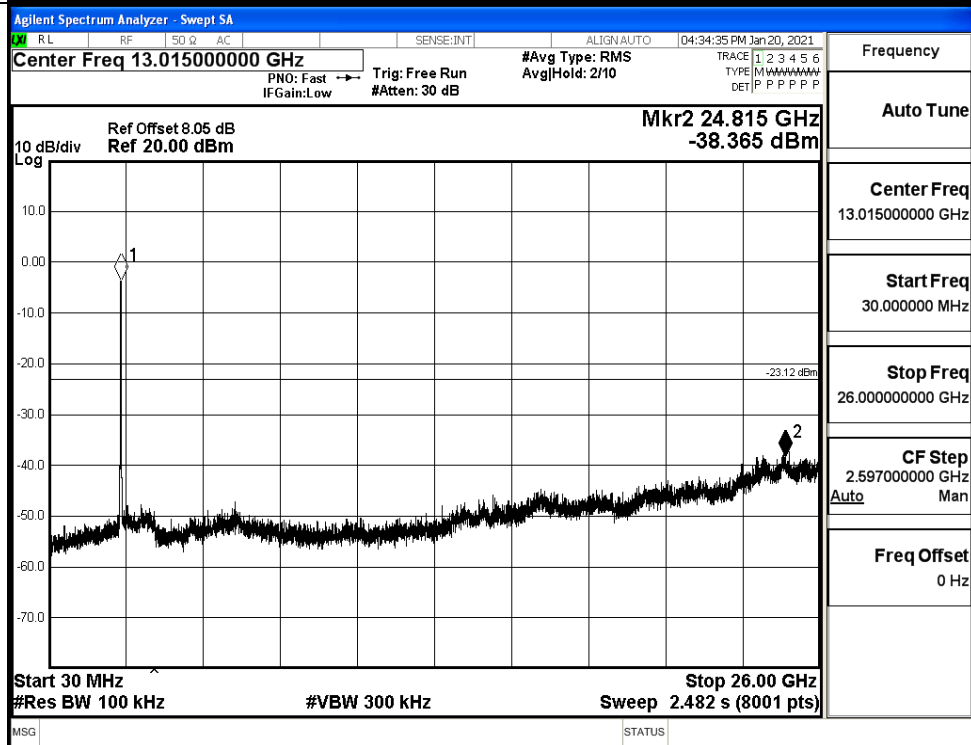


11N40SISO_HCH_Graphs

Pref/11N40
SISO/HCH

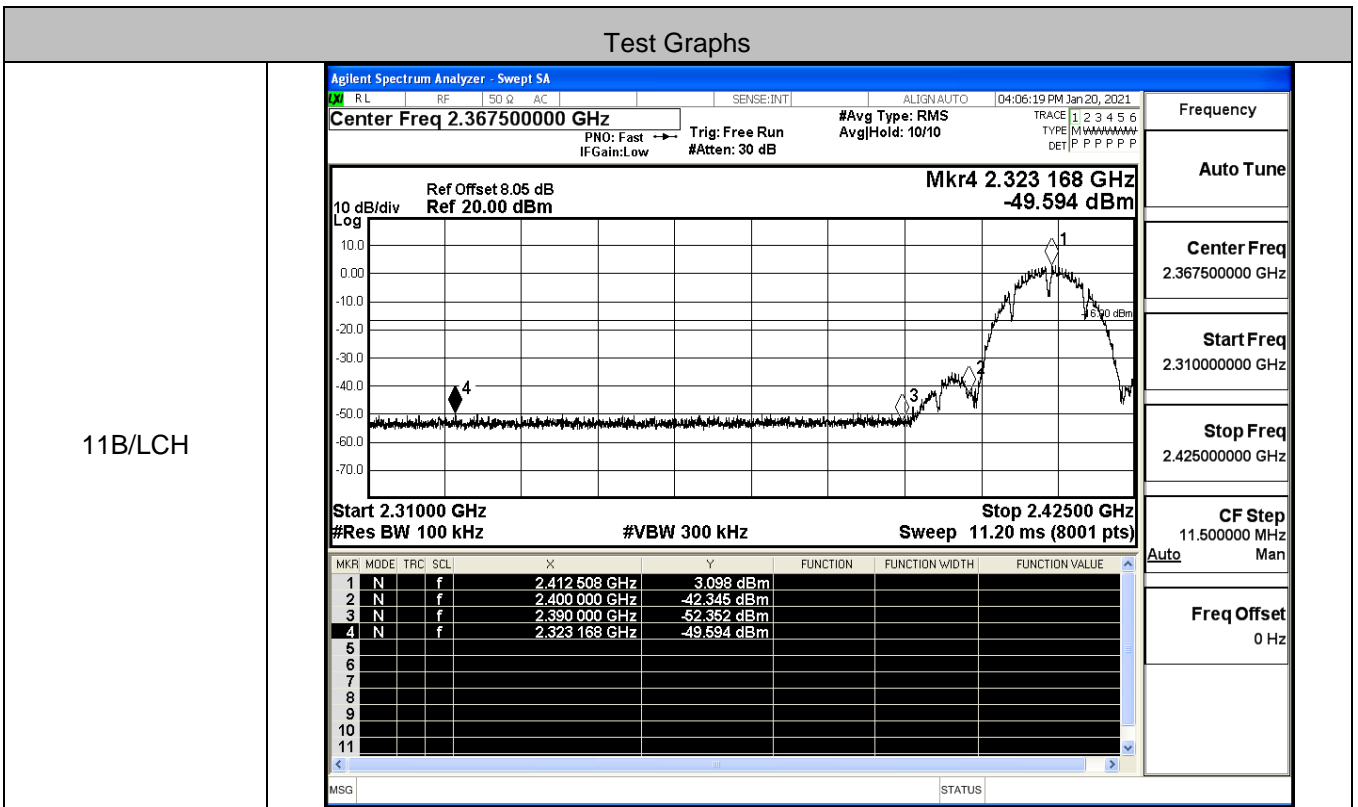


Puw/11N40
SISO/HCH

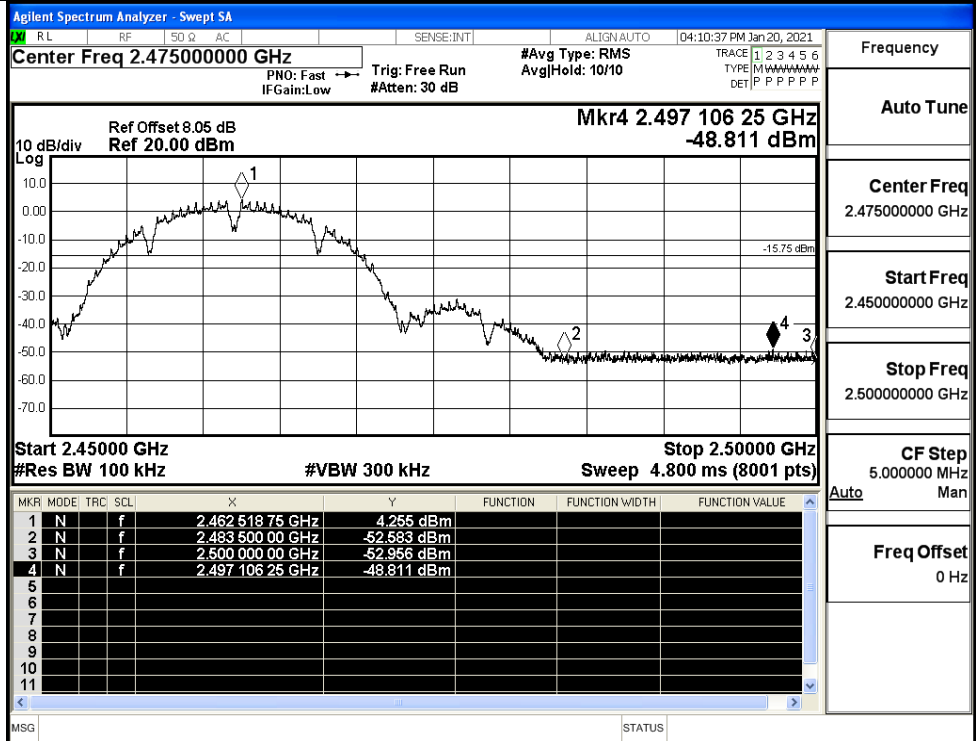


A.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	3.098	-49.594	-16.9	PASS
	HCH	4.255	-48.811	-15.75	PASS
11G	LCH	-1.402	-49.611	-21.4	PASS
	HCH	-0.149	-48.256	-20.15	PASS
11N20SISO	LCH	-0.588	-49.453	-20.59	PASS
	HCH	0.437	-47.939	-19.56	PASS
11N40SISO	LCH	-3.803	-45.555	-23.8	PASS
	HCH	-3.117	-36.952	-23.12	PASS



11B/HCH



Frequency

Auto Tune

Center Freq
2.47500000 GHz

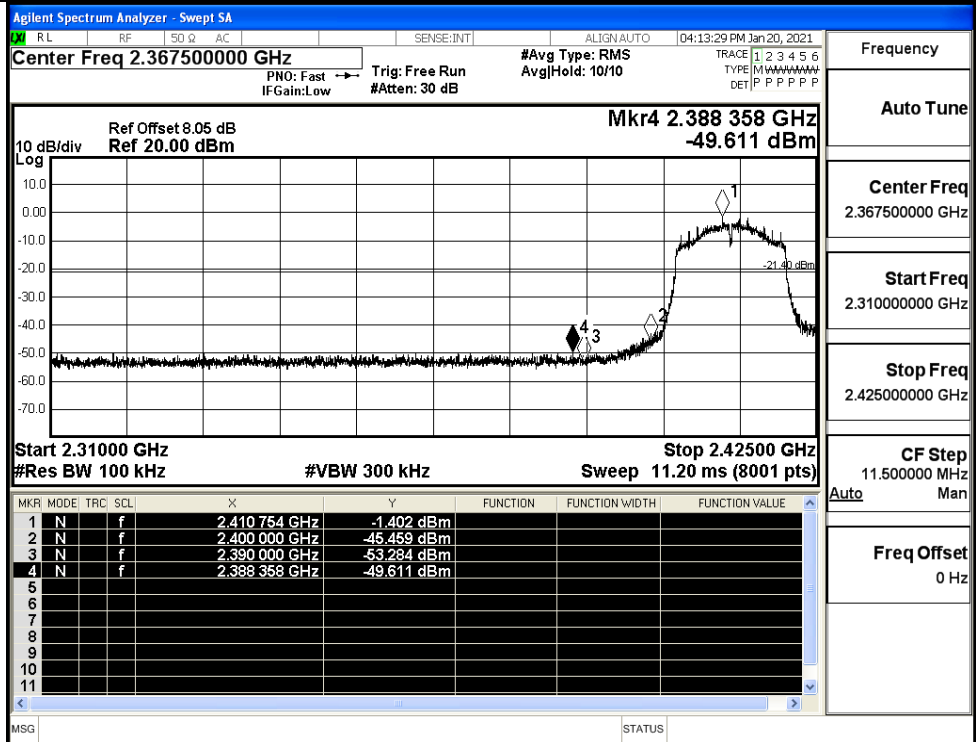
Start Freq
2.45000000 GHz

Stop Freq
2.50000000 GHz

CF Step
5.000000 MHz

Freq Offset
0 Hz

11G/LCH



Frequency

Auto Tune

Center Freq
2.36750000 GHz

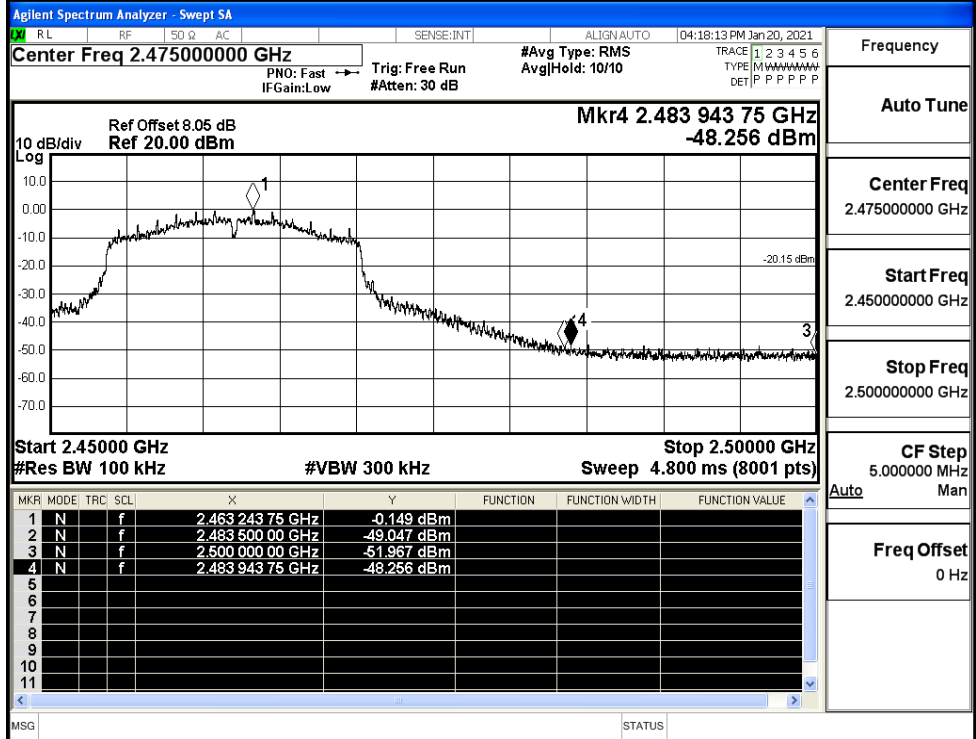
Start Freq
2.31000000 GHz

Stop Freq
2.42500000 GHz

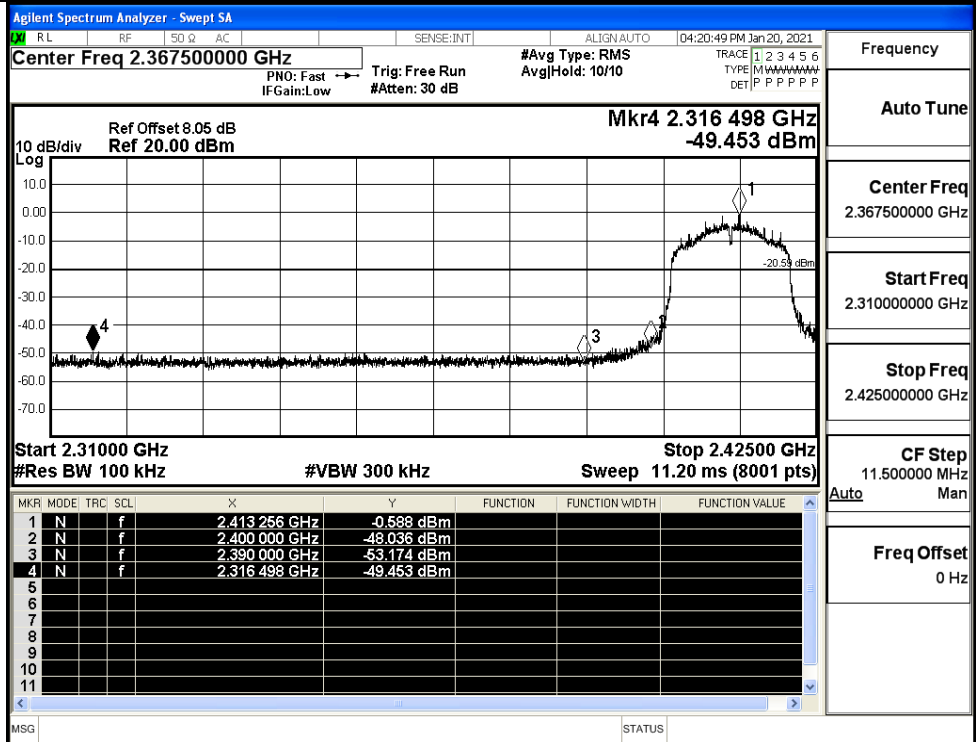
CF Step
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Freq Offset
0 Hz

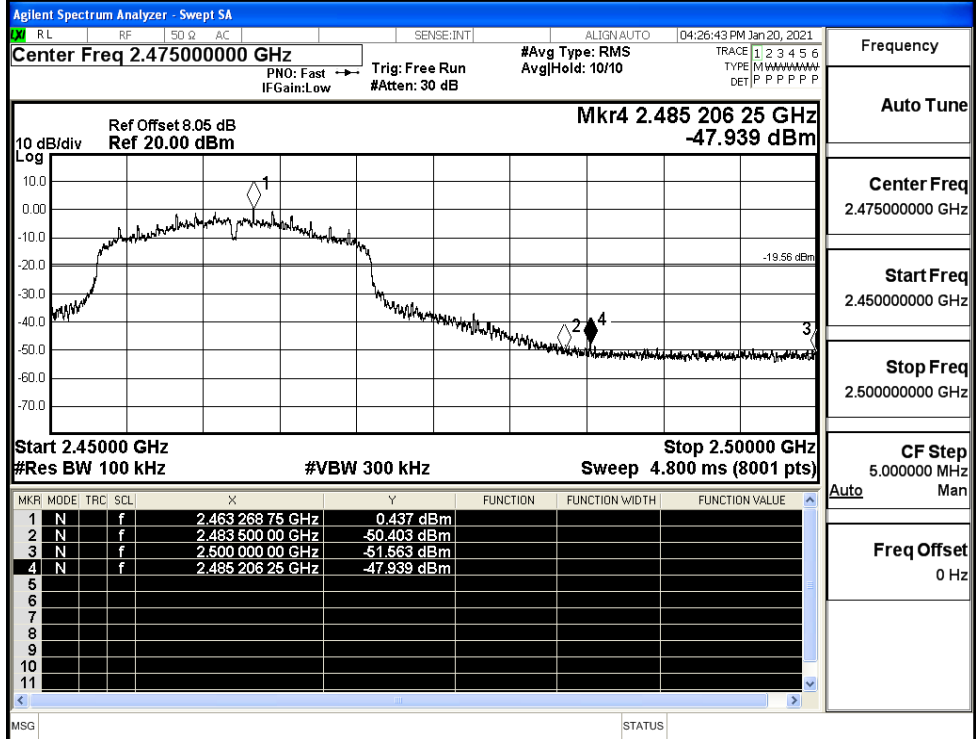
11G/HCH



11N20SISO/LCH

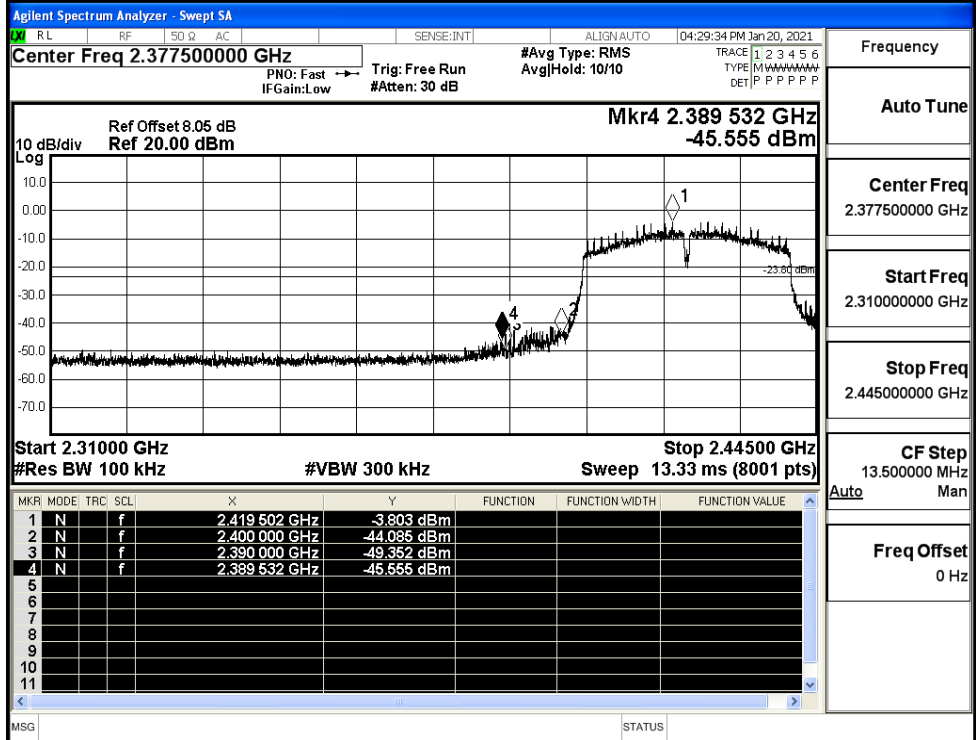


11N20SISO/HCH



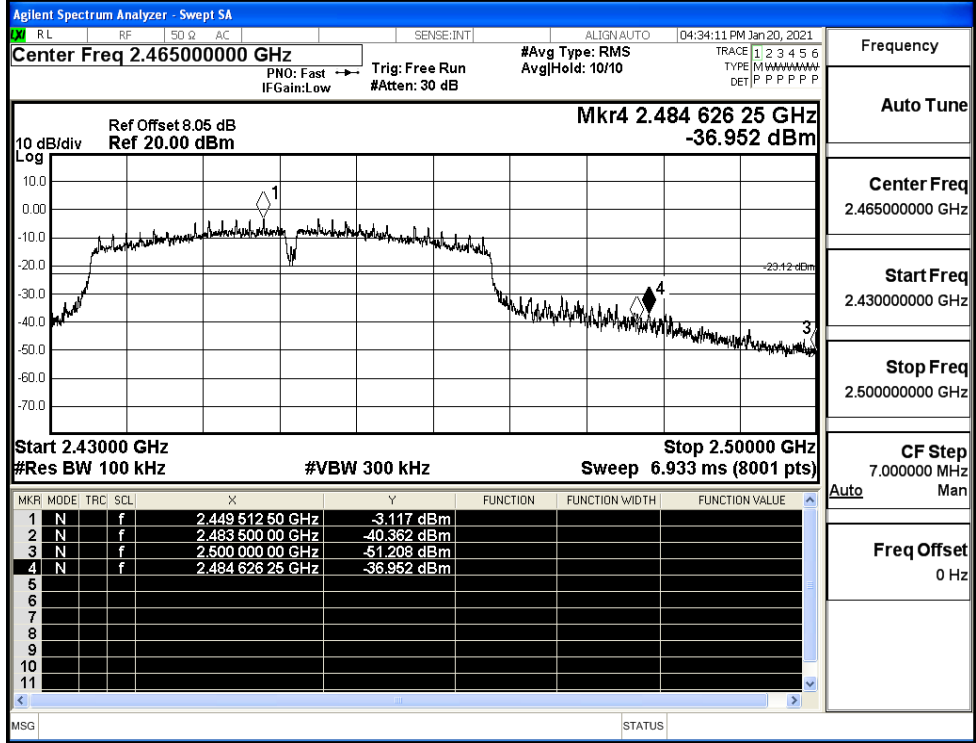
Frequency	2.47500000 GHz
Auto Tune	
Center Freq	2.47500000 GHz
Start Freq	2.45000000 GHz
Stop Freq	2.50000000 GHz
CF Step	5.000000 MHz
Freq Offset	0 Hz

11N40SISO/LCH



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

11N40SISO/HCH

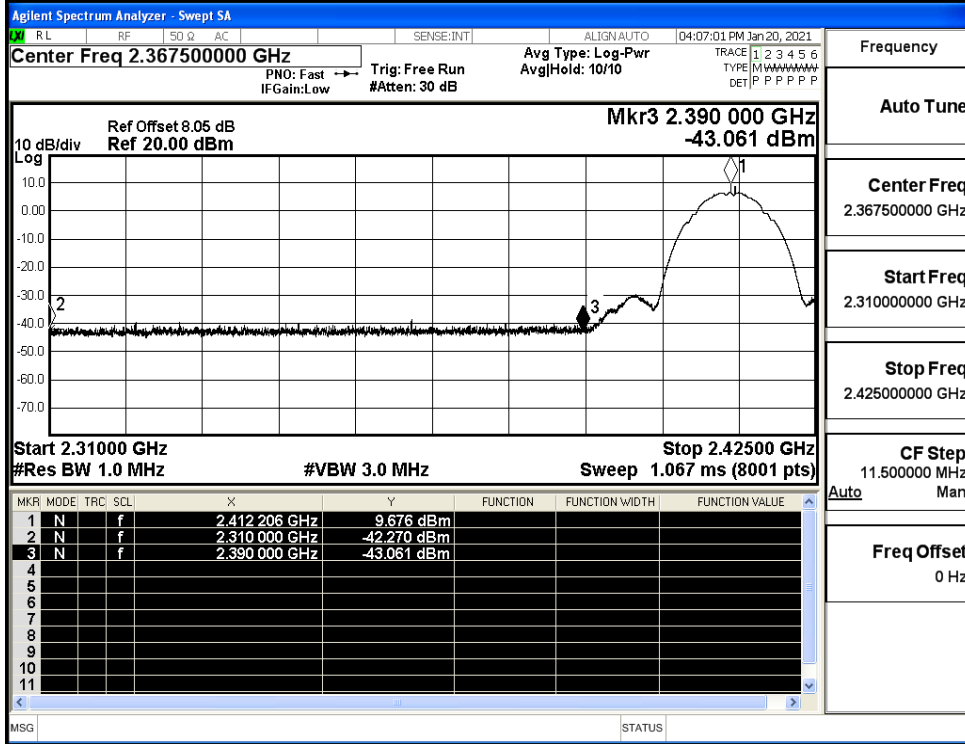


A.7 Restrict-band band-edge measurements

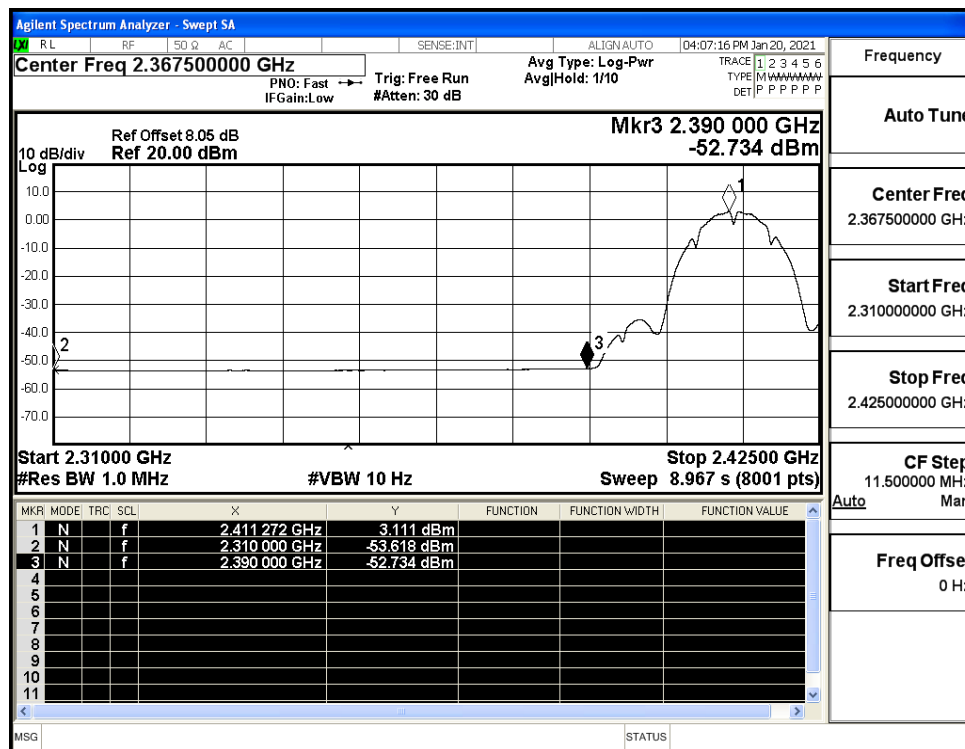
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-42.27	3.0	0	55.96	PEAK	74	PASS
	2412	Ant1	2310.0	-53.62	3.0	0	44.61	AV	54	PASS
	2412	Ant1	2390.0	-43.06	3.0	0	55.17	PEAK	74	PASS
	2412	Ant1	2390.0	-52.73	3.0	0	45.50	AV	54	PASS
	2462	Ant1	2483.5	-40.47	3.0	0	57.76	PEAK	74	PASS
	2462	Ant1	2483.5	-52.38	3.0	0	45.85	AV	54	PASS
	2462	Ant1	2500.0	-41.86	3.0	0	56.37	PEAK	74	PASS
	2462	Ant1	2500.0	-52.40	3.0	0	45.83	AV	54	PASS
11G	2412	Ant1	2310.0	-40.78	3.0	0	57.45	PEAK	74	PASS
	2412	Ant1	2310.0	-53.52	3.0	0	44.71	AV	54	PASS
	2412	Ant1	2390.0	-40.51	3.0	0	57.72	PEAK	74	PASS
	2412	Ant1	2390.0	-52.83	3.0	0	45.40	AV	54	PASS
	2462	Ant1	2483.5	-37.27	3.0	0	60.96	PEAK	74	PASS
	2462	Ant1	2483.5	-50.66	3.0	0	47.57	AV	54	PASS
	2462	Ant1	2500.0	-41.91	3.0	0	56.32	PEAK	74	PASS
	2462	Ant1	2500.0	-52.36	3.0	0	45.87	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-42.74	3.0	0	55.49	PEAK	74	PASS
	2412	Ant1	2310.0	-53.51	3.0	0	44.72	AV	54	PASS
	2412	Ant1	2390.0	-41.39	3.0	0	56.84	PEAK	74	PASS
	2412	Ant1	2390.0	-52.74	3.0	0	45.49	AV	54	PASS
	2462	Ant1	2483.5	-38.12	3.0	0	60.11	PEAK	74	PASS
	2462	Ant1	2483.5	-50.51	3.0	0	47.72	AV	54	PASS
	2462	Ant1	2500.0	-42.41	3.0	0	55.82	PEAK	74	PASS
	2462	Ant1	2500.0	-52.38	3.0	0	45.85	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-42.34	3.0	0	55.89	PEAK	74	PASS
	2422	Ant1	2310.0	-53.52	3.0	0	44.71	AV	54	PASS
	2422	Ant1	2390.0	-35.75	3.0	0	62.48	PEAK	74	PASS

	2422	Ant1	2390.0	-50.28	3.0	0	47.95	AV	54	PASS
	2452	Ant1	2483.5	-29.76	3.0	0	68.47	PEAK	74	PASS
	2452	Ant1	2483.5	-45.54	3.0	0	52.69	AV	54	PASS
	2452	Ant1	2500.0	-36.89	3.0	0	61.34	PEAK	74	PASS
	2452	Ant1	2500.0	-51.03	3.0	0	47.20	AV	54	PASS

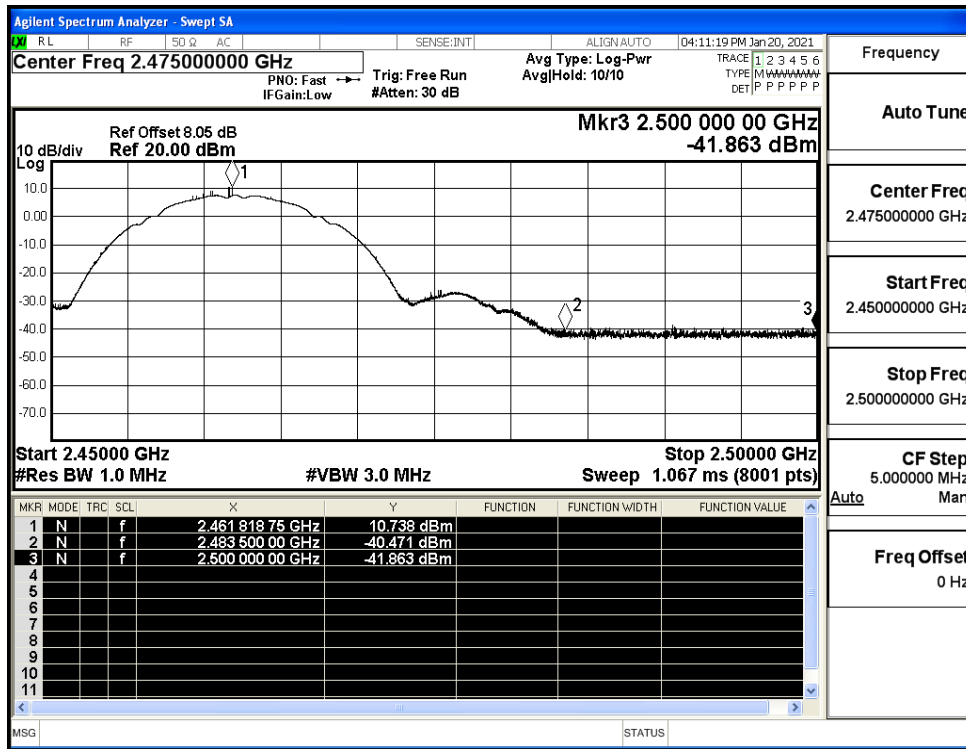
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



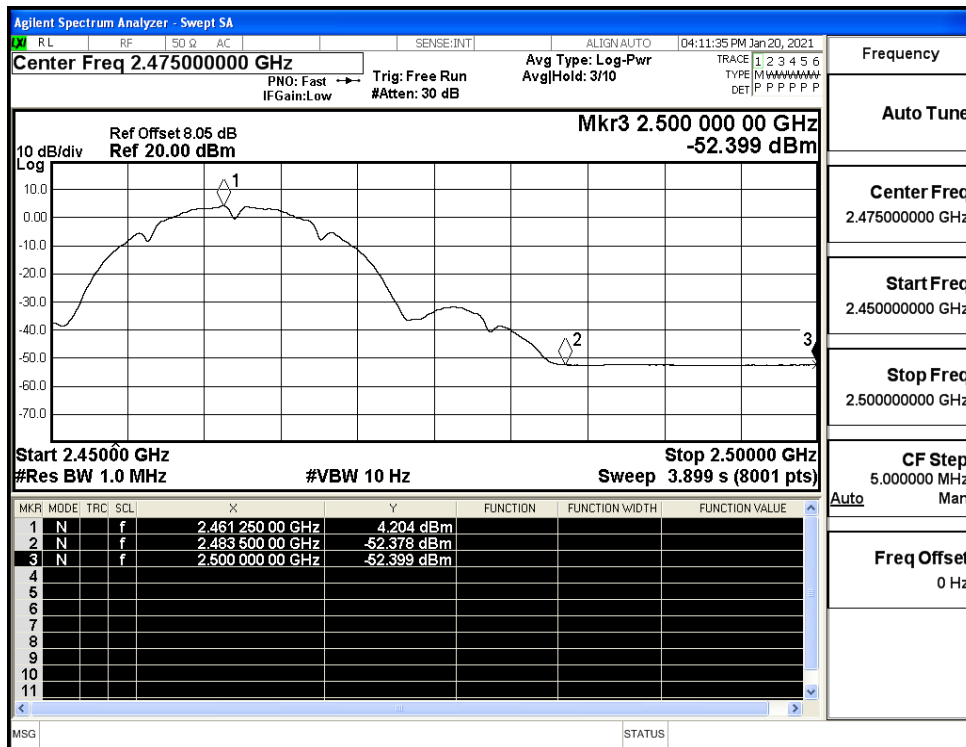
Restrict-band band-edge measurements_11B_2412_Ant1_AV



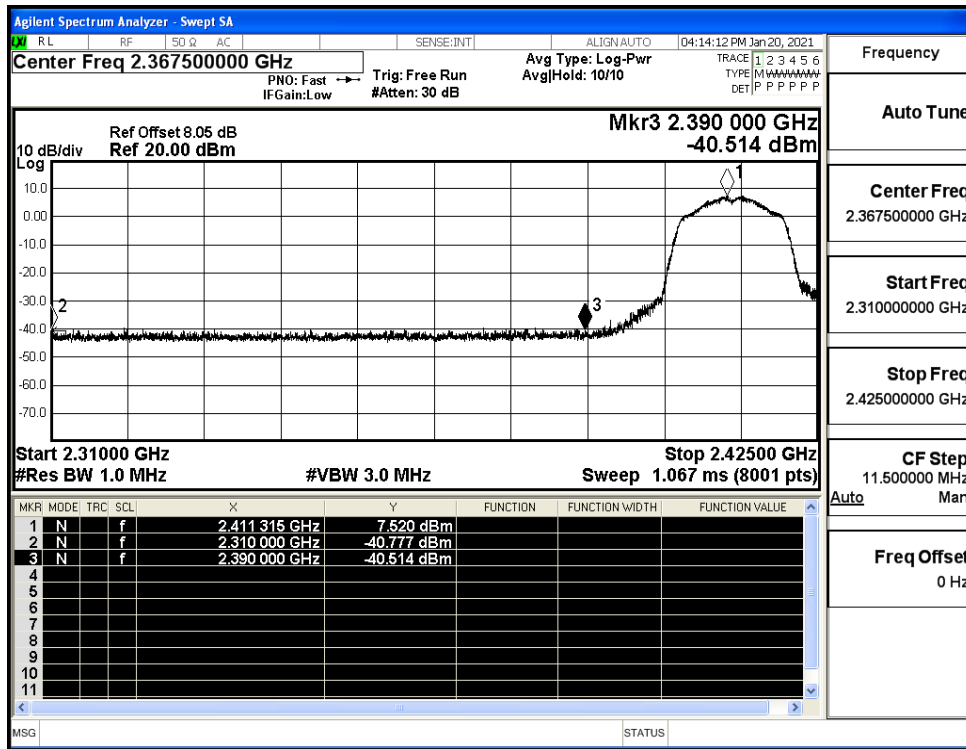
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



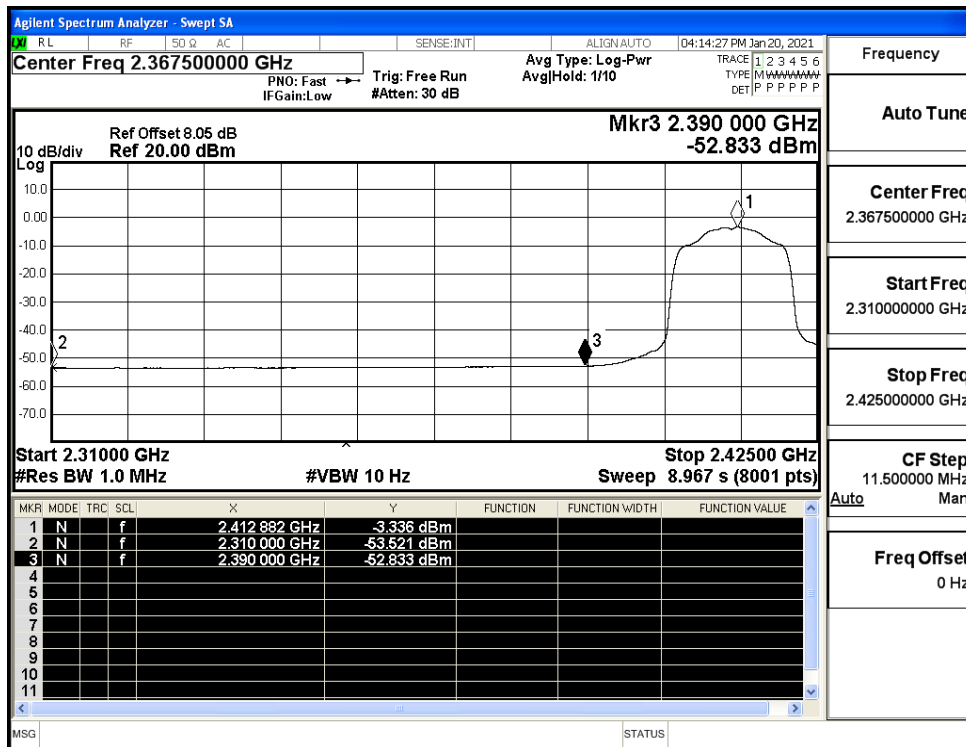
Restrict-band band-edge measurements_11B_2462_Ant1_AV



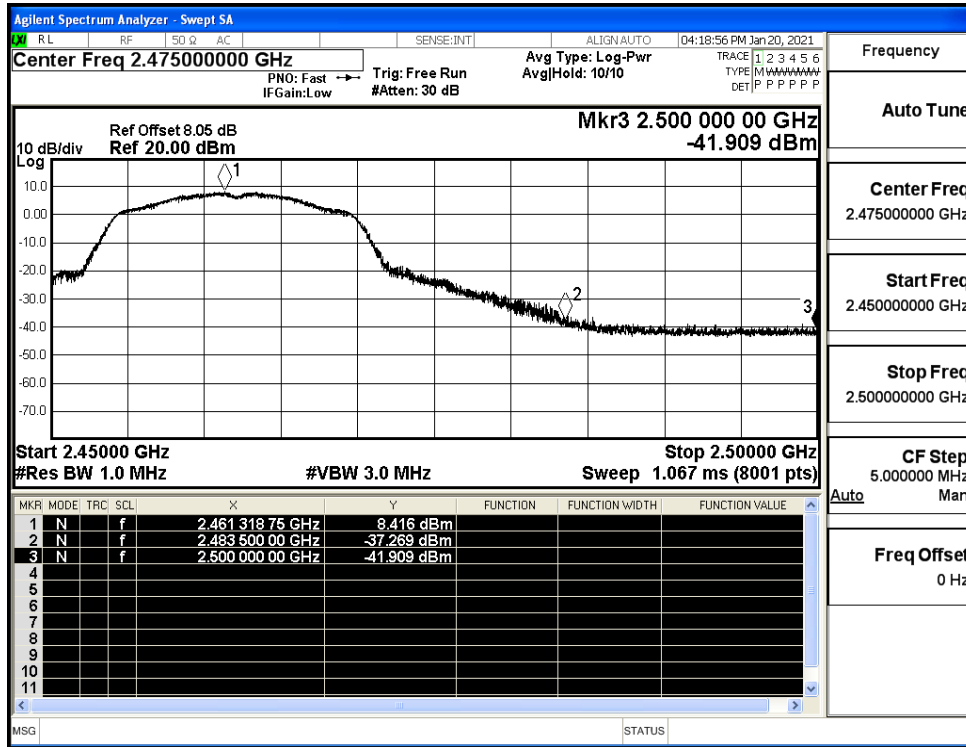
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



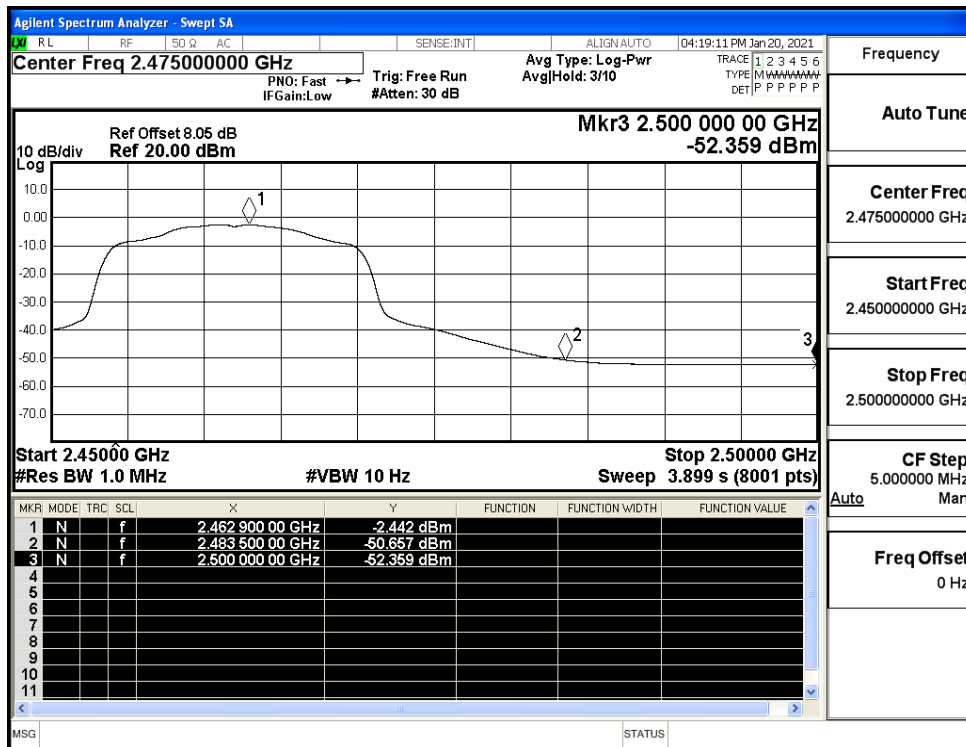
Restrict-band band-edge measurements_11G_2412_Ant1_AV



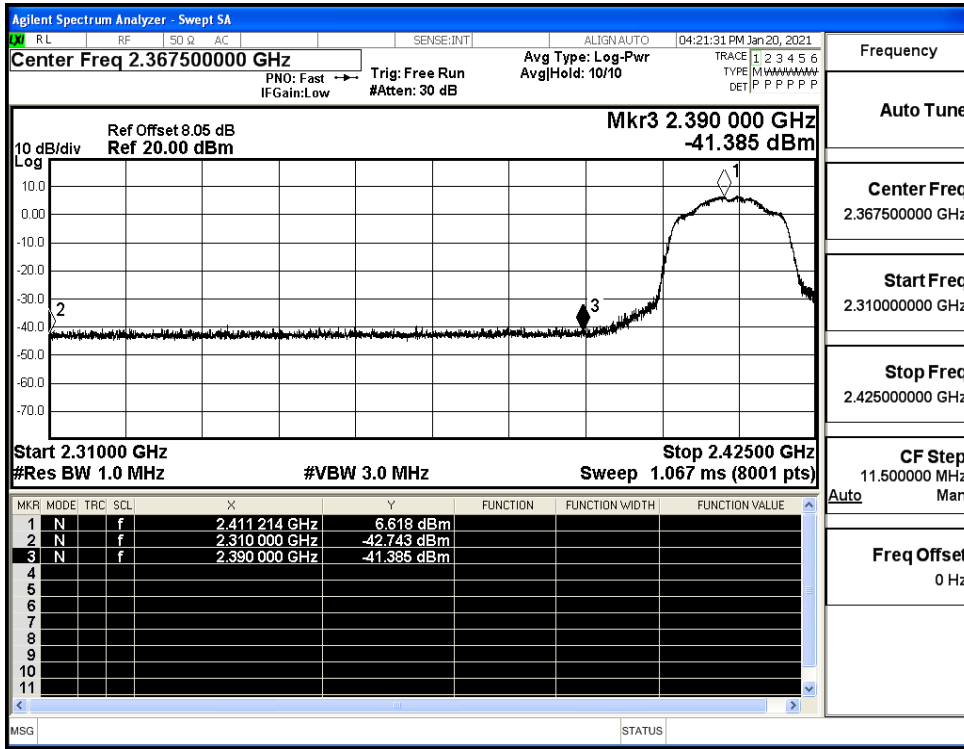
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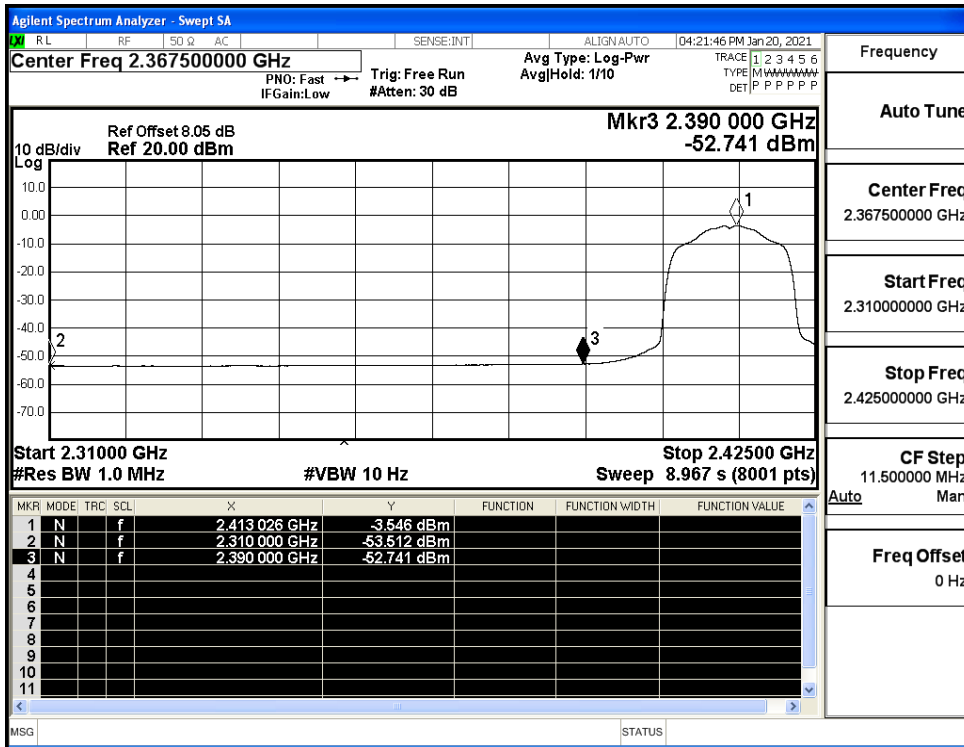
Restrict-band band-edge measurements_11G_2462_Ant1_AV



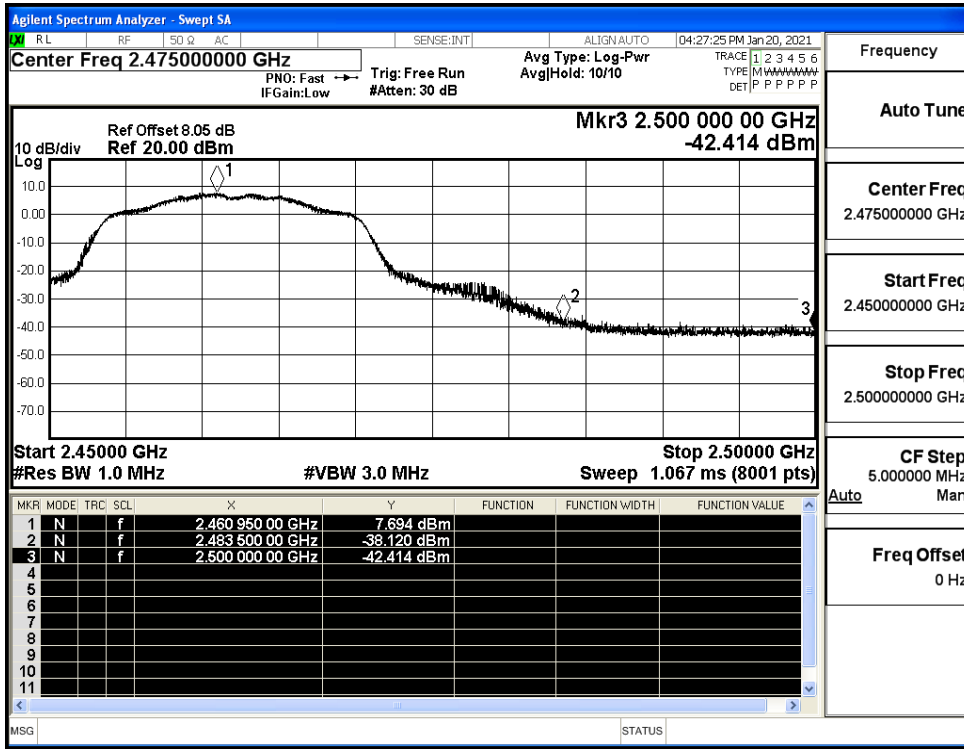
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



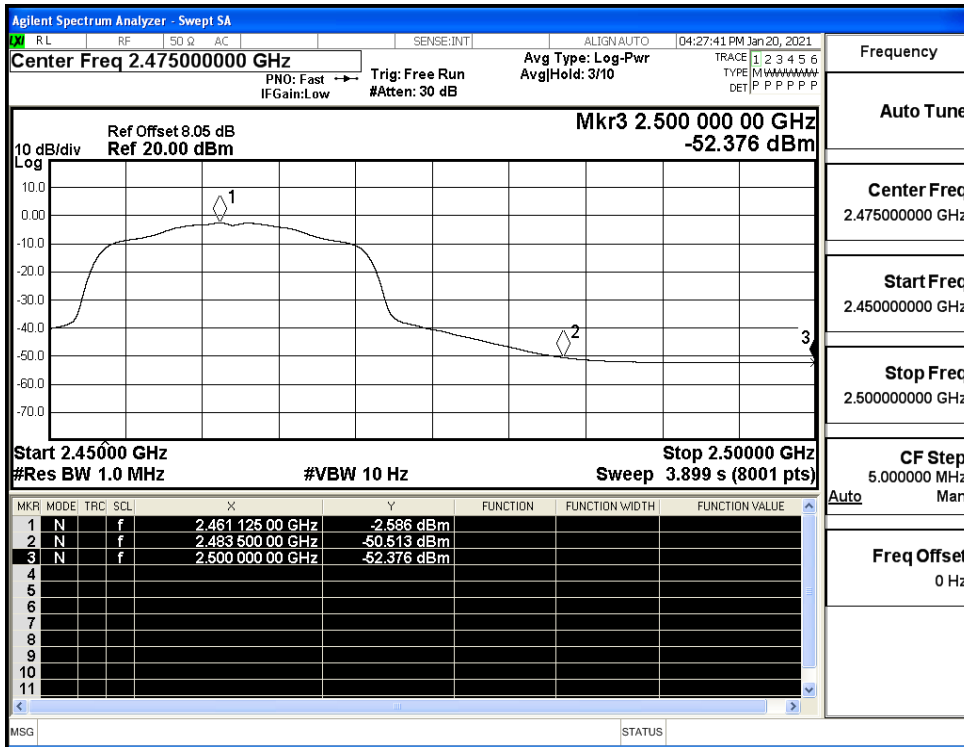
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_AV



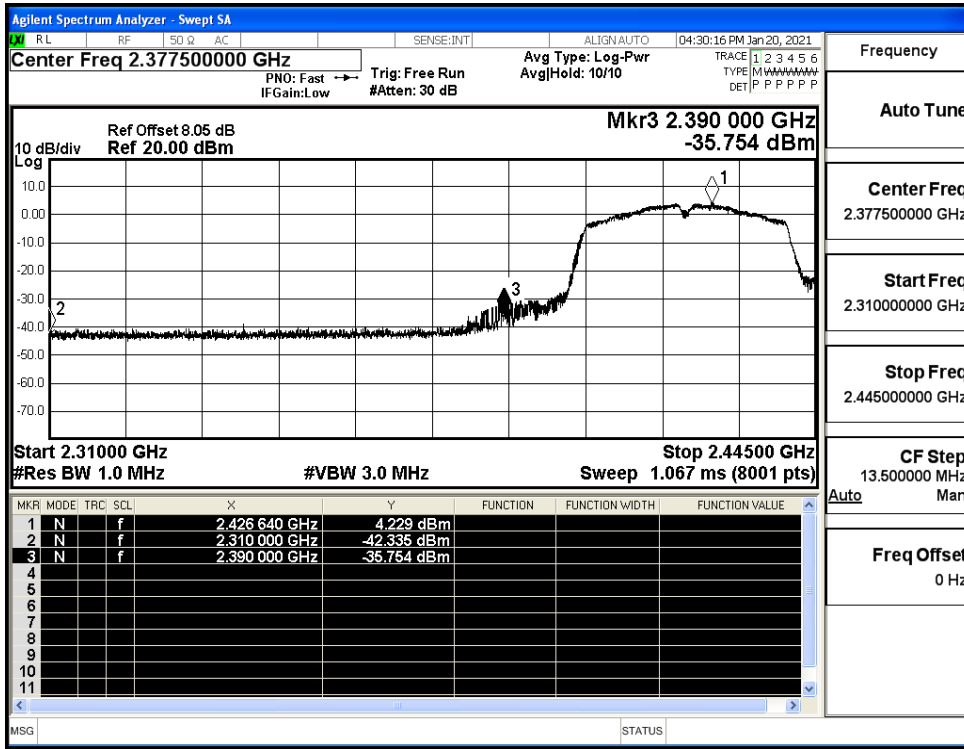
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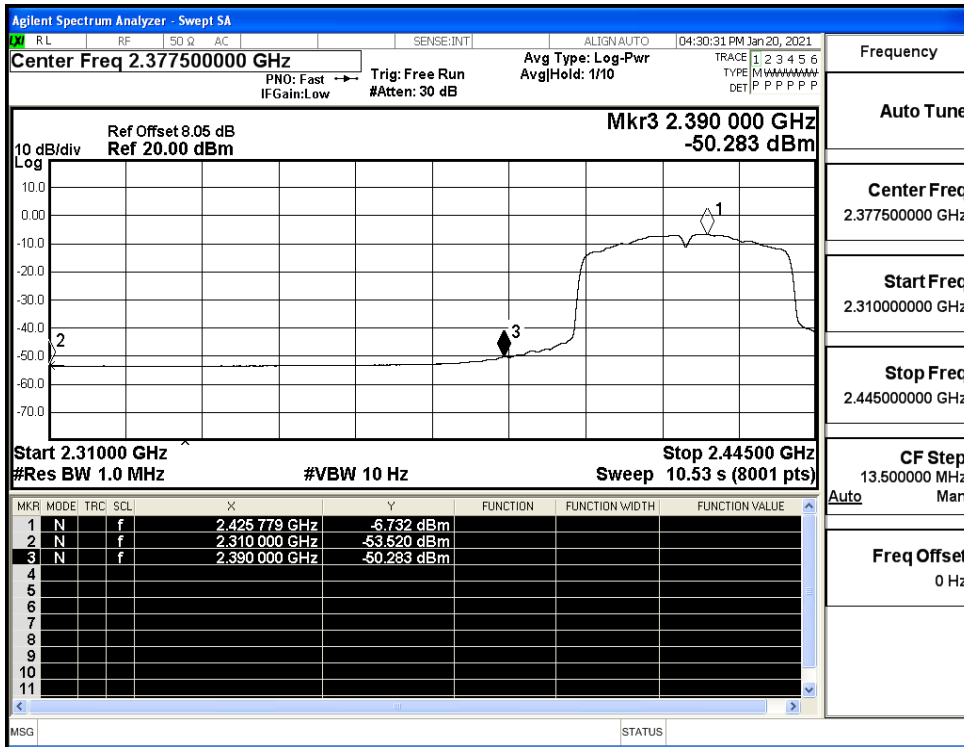
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_AV



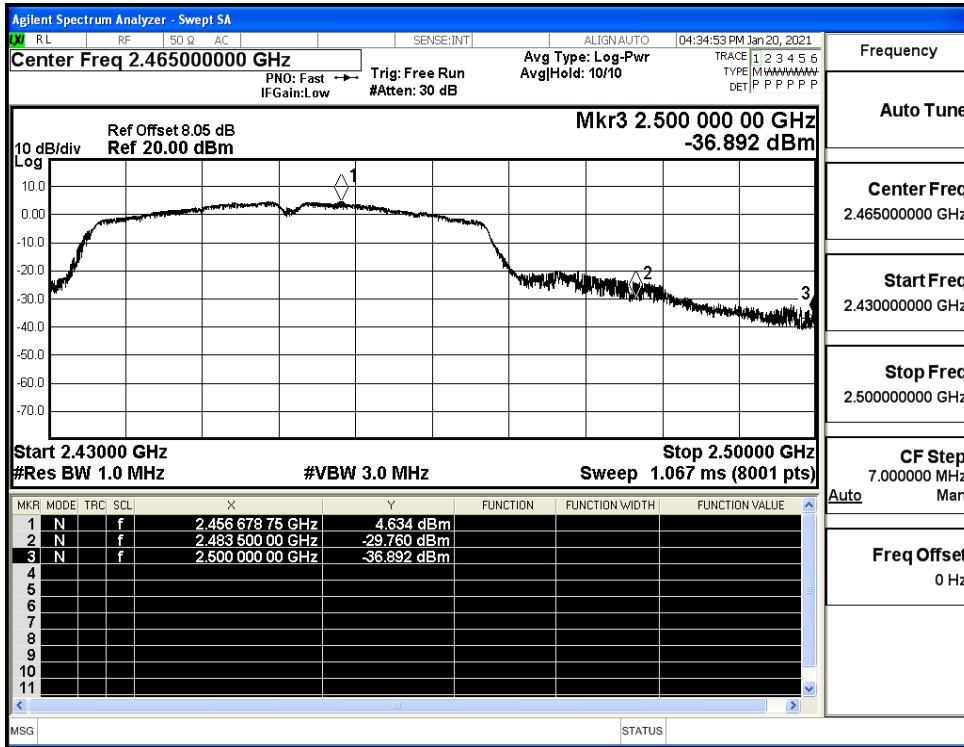
Restrict-band band-edge measurements_11N40SISO_2422_Ant1_PEAK



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

