

Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Tablet

HYUNDAI

Trade Mark:

Test Model: 10LB2

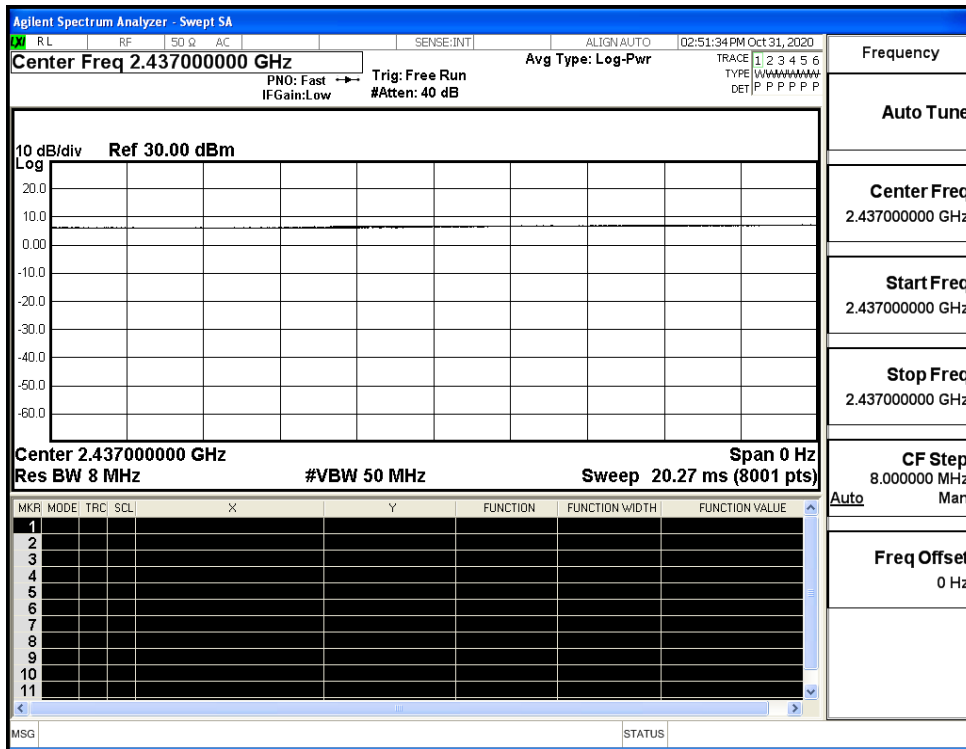
Environmental Conditions

Temperature:	22.7° C
Relative Humidity:	53.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

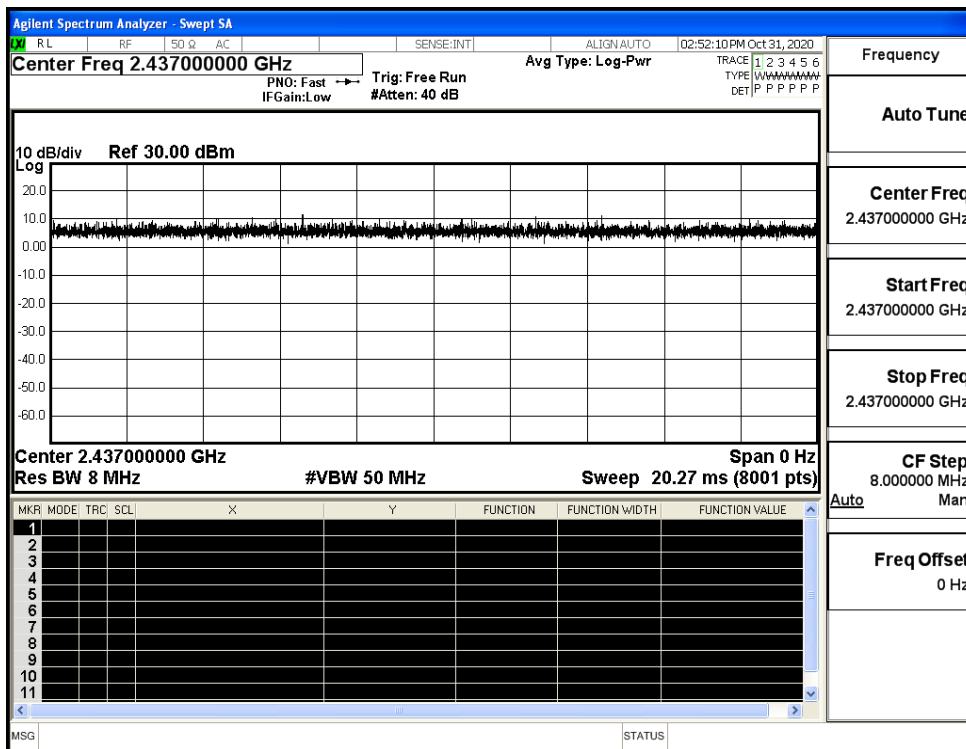
C.1 Duty Cycle

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

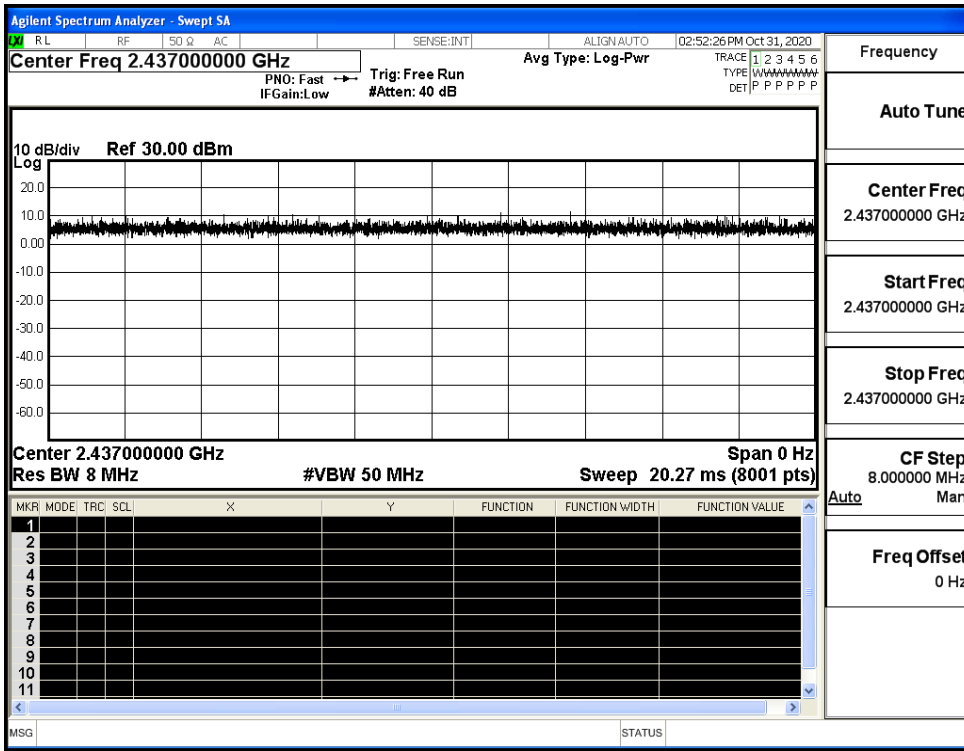
Duty Cycle_11B_2437_Ant1



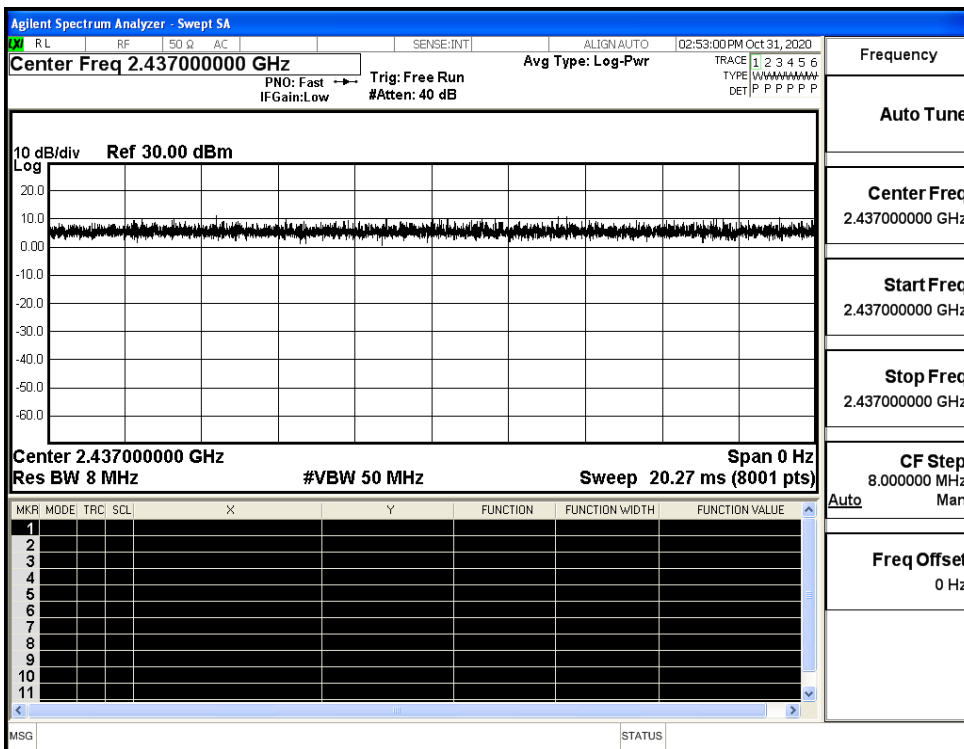
Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



Duty Cycle_11N40SISO_2437_Ant1



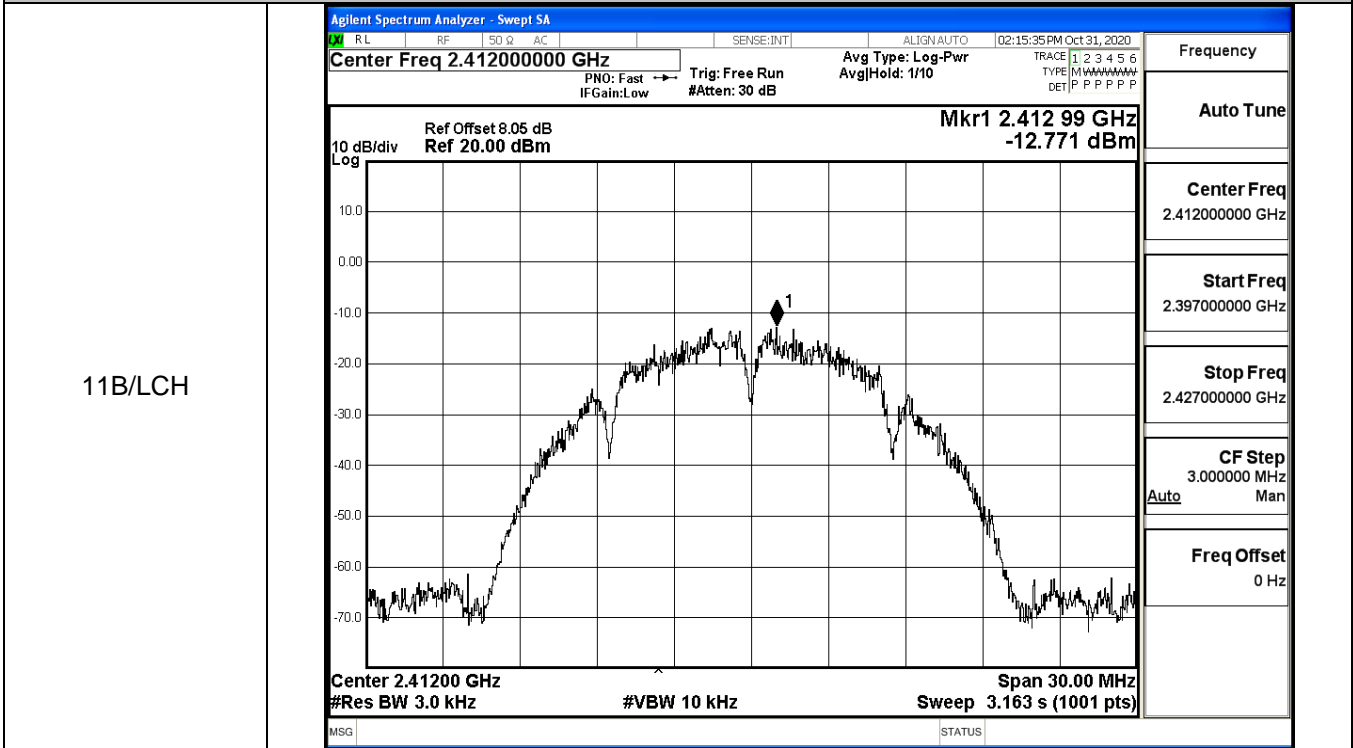
C.2 Maximum Conducted Output Power

Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	13.05	30	PASS
	MCH	13.23	30	PASS
	HCH	13.28	30	PASS
11G	LCH	13.37	30	PASS
	MCH	13.63	30	PASS
	HCH	13.41	30	PASS
11N20SISO	LCH	13.4	30	PASS
	MCH	13.52	30	PASS
	HCH	13.28	30	PASS
11N40SISO	LCH	13.73	30	PASS
	MCH	13.82	30	PASS
	HCH	13.83	30	PASS

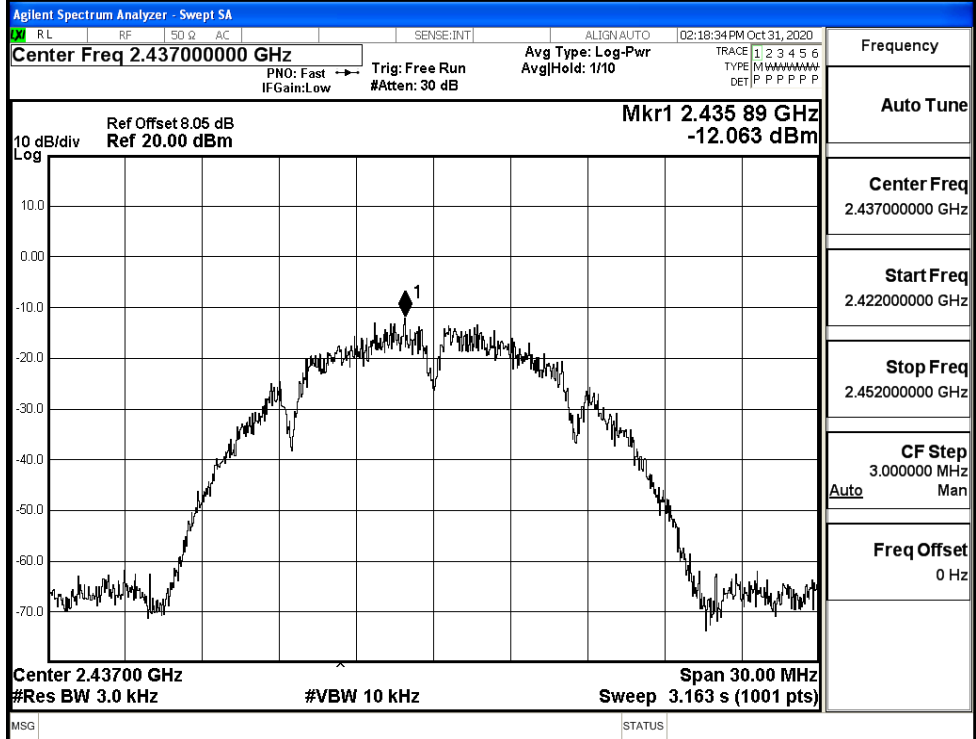
C.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-12.771	8	PASS
	MCH	-12.063	8	PASS
	HCH	-11.929	8	PASS
11G	LCH	-19.824	8	PASS
	MCH	-19.818	8	PASS
	HCH	-19.739	8	PASS
11N20SISO	LCH	-20.402	8	PASS
	MCH	-18.318	8	PASS
	HCH	-18.941	8	PASS
11N40SISO	LCH	-21.195	8	PASS
	MCH	-22.771	8	PASS
	HCH	-21.676	8	PASS

Test Graphs

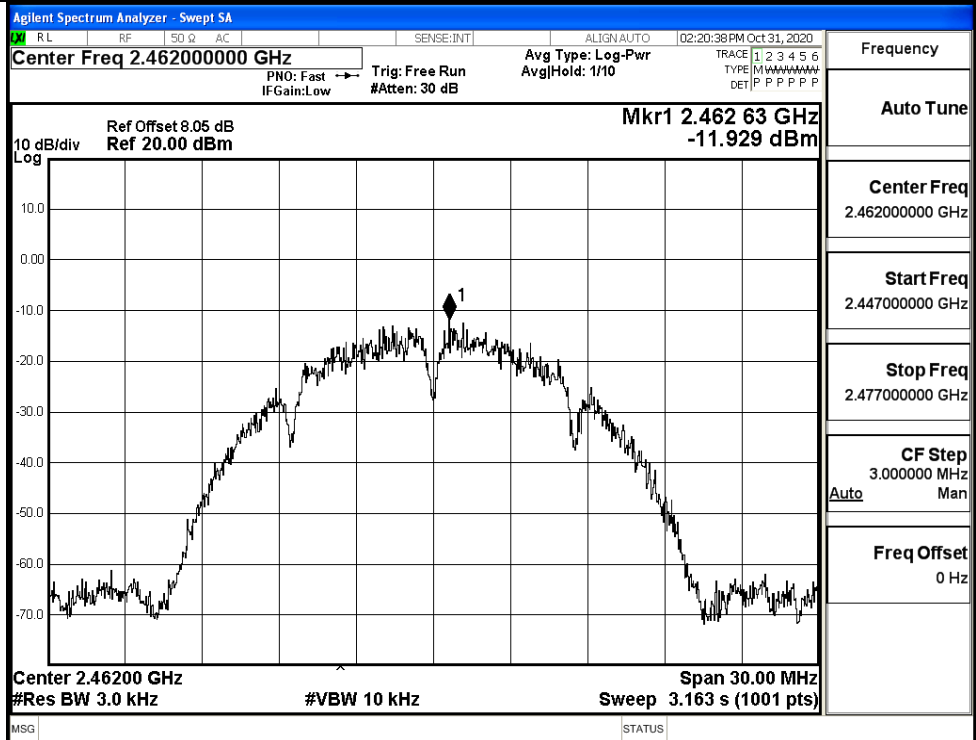


11B/MCH



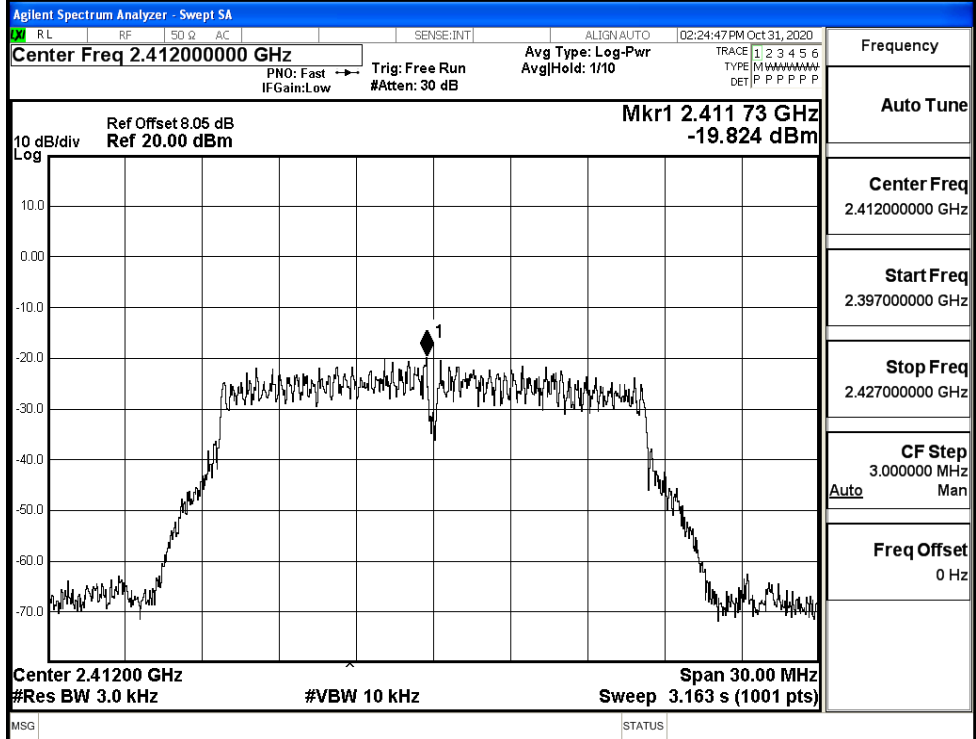
Frequency
Auto Tune
Center Freq 2.437000000 GHz
Start Freq 2.422000000 GHz
Stop Freq 2.452000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

11B/HCH



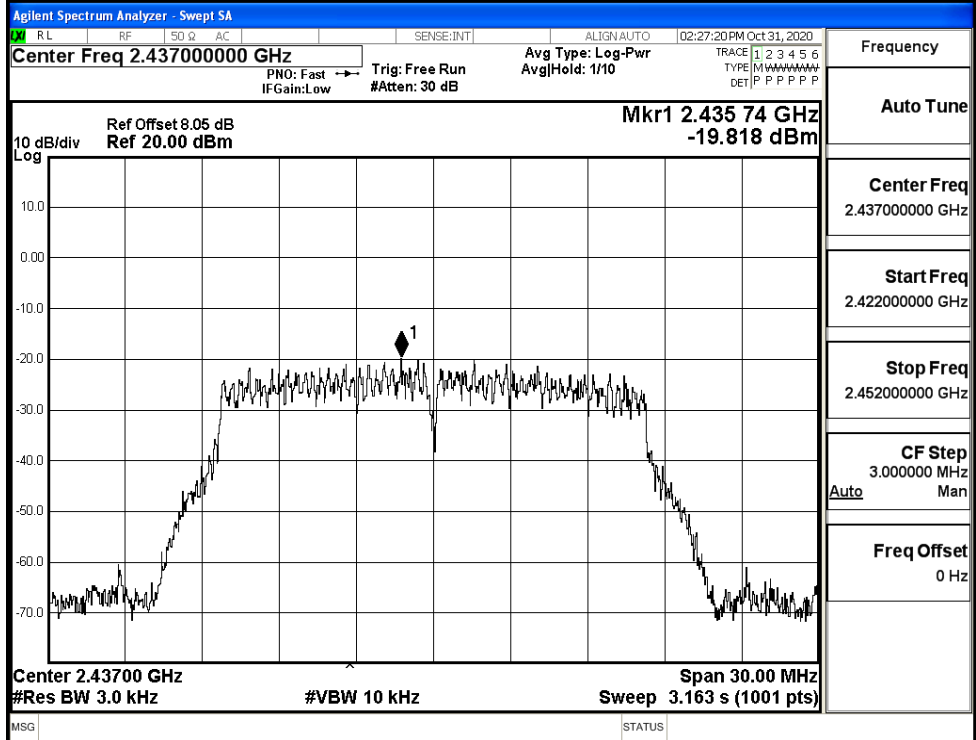
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Auto Tune
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Start Freq 2.447000000 GHz
Stop Freq 2.477000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

11G/LCH



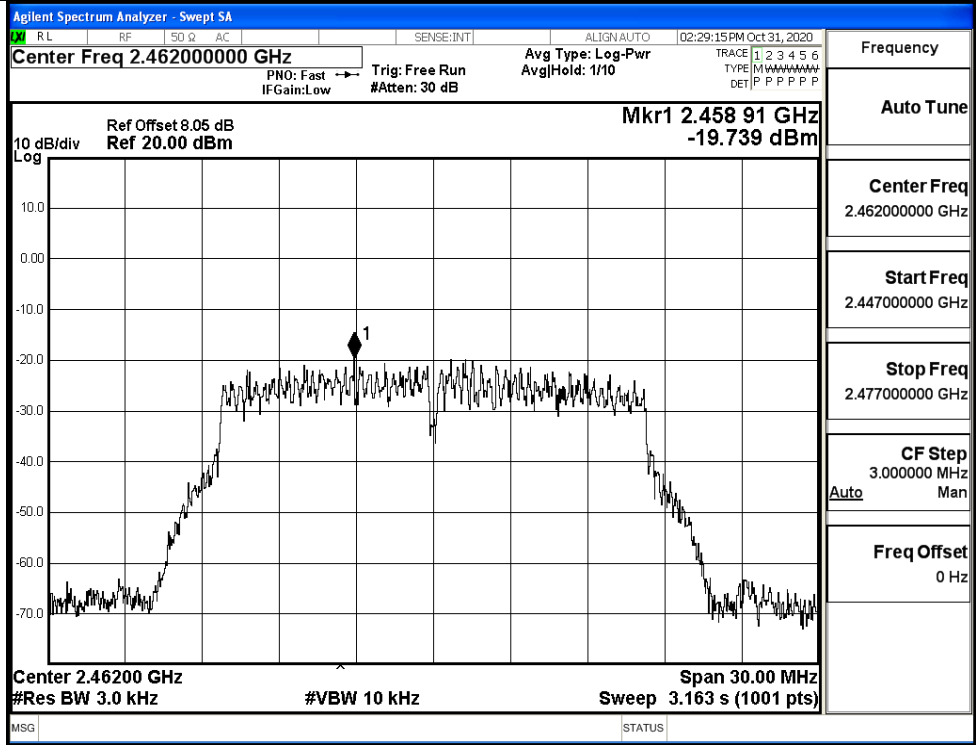
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Auto Tune	
Center Freq	2.41200000 GHz
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Stop Freq	2.427000000 GHz
CF Step	3.000000 MHz
	Auto Man
Freq Offset	0 Hz

11G/MCH

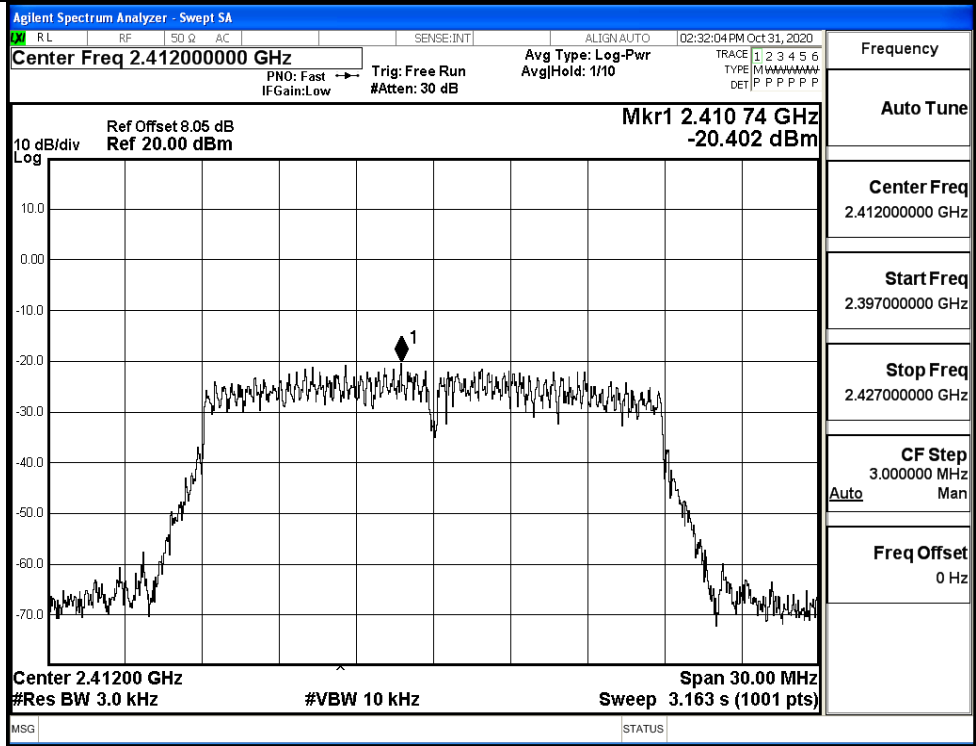


Frequency	2.43700000 GHz
Auto Tune	
Center Freq	2.43700000 GHz
Start Freq	2.422000000 GHz
Stop Freq	2.452000000 GHz
CF Step	3.000000 MHz
	Auto Man
Freq Offset	0 Hz

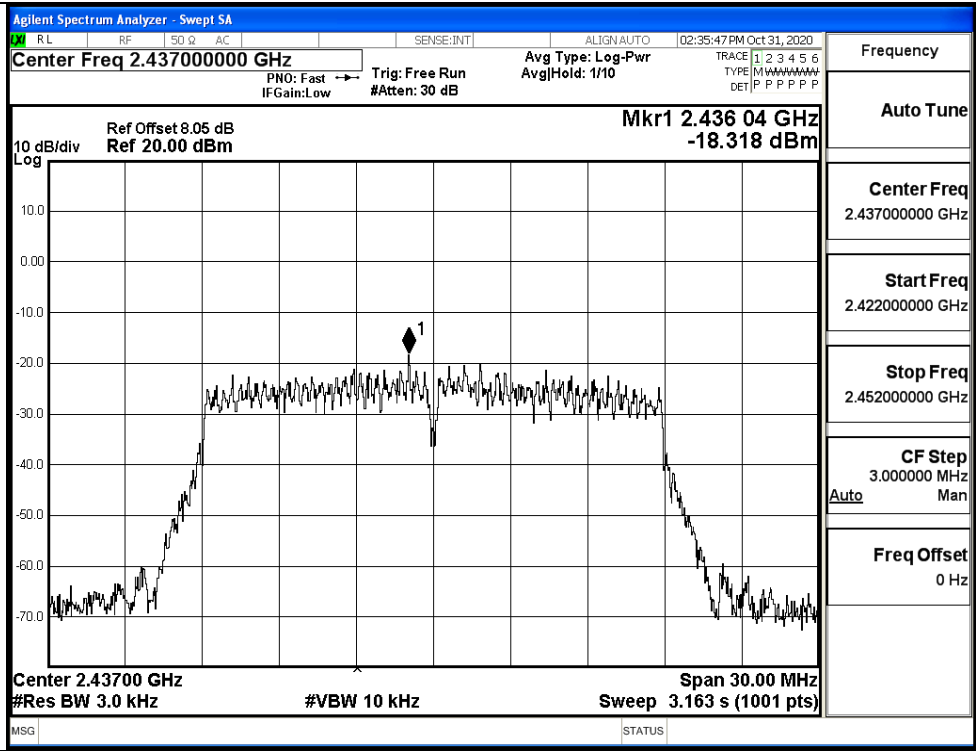
11G/HCH



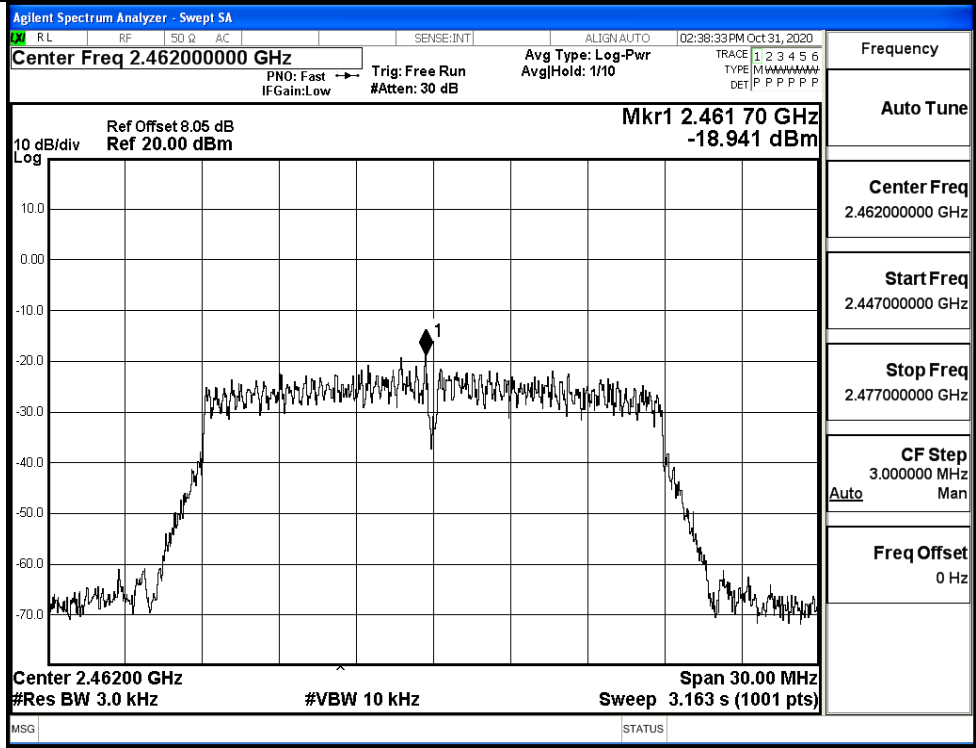
11N20SISO/LCH



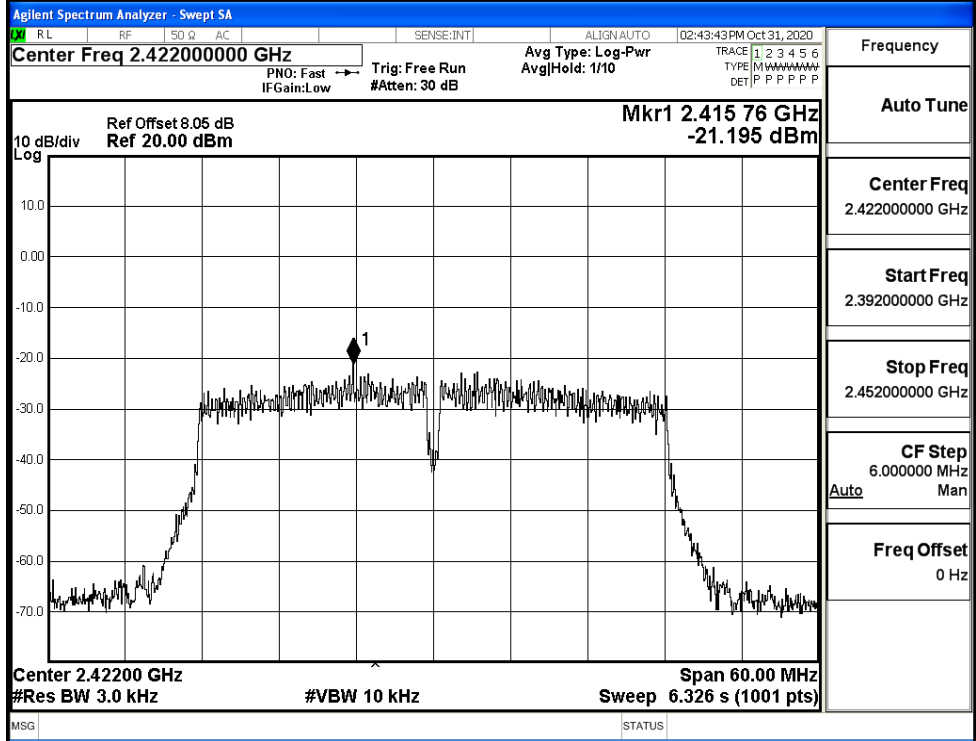
11N20SISO/MCH



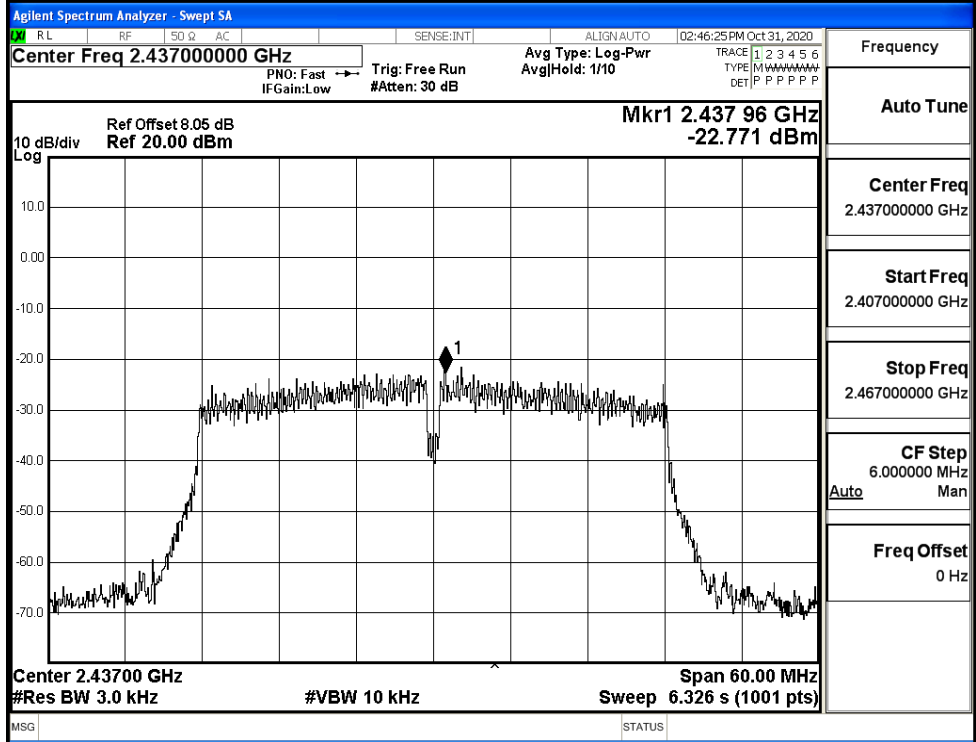
11N20SISO/HCH

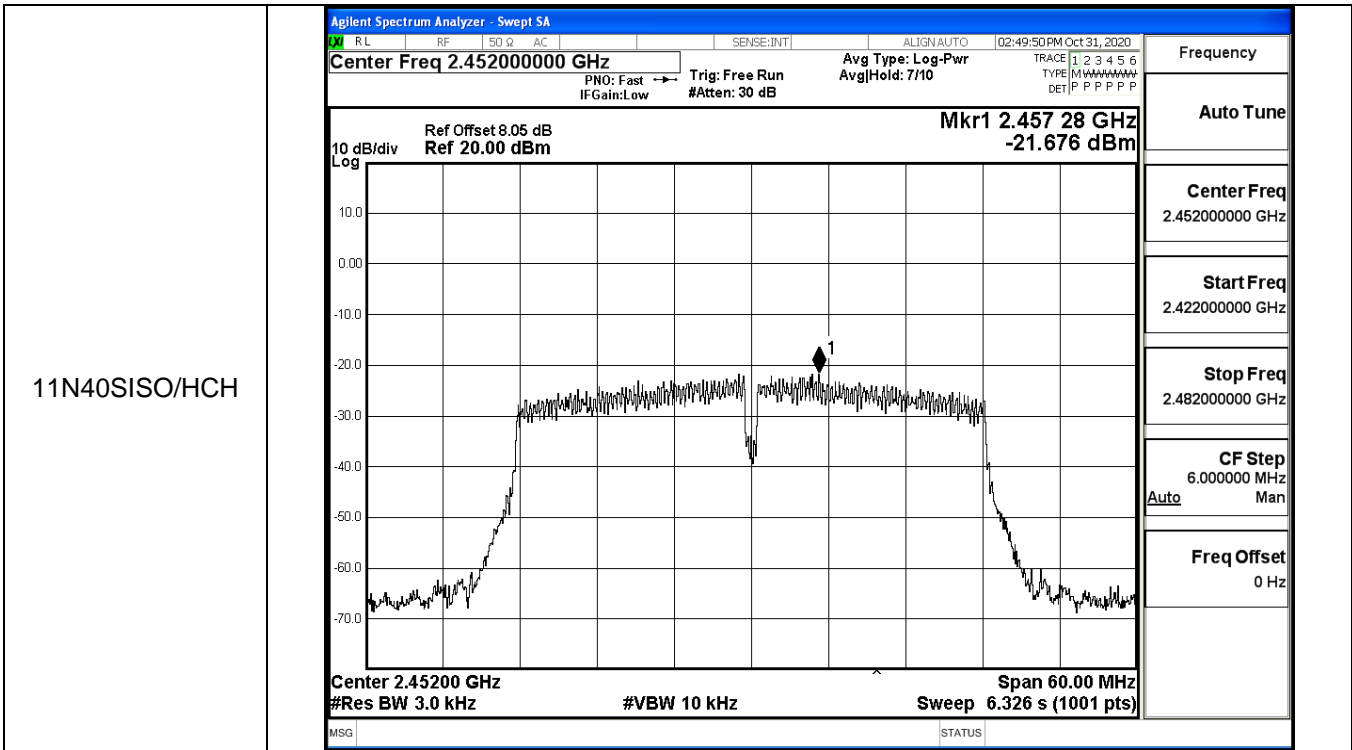


11N40SISO/LCH



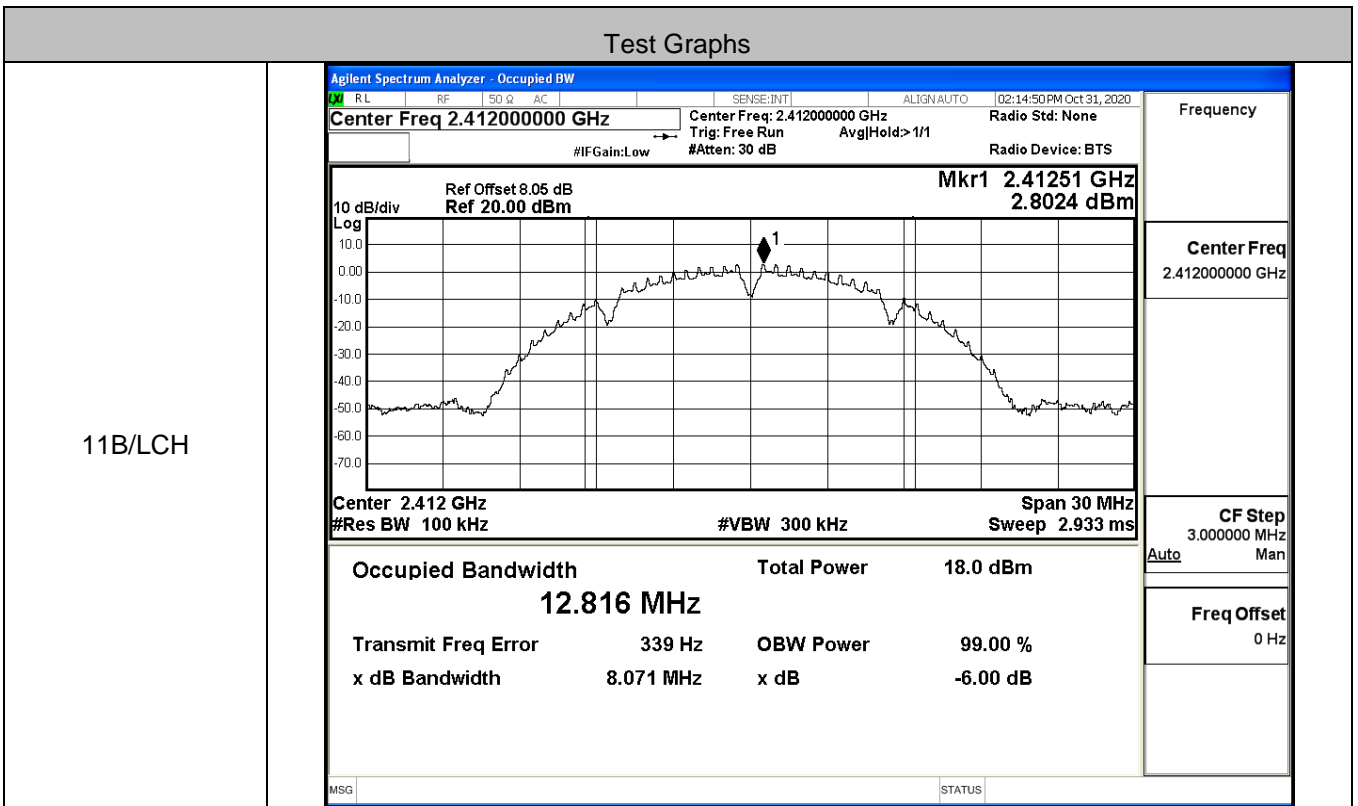
11N40SISO/MCH



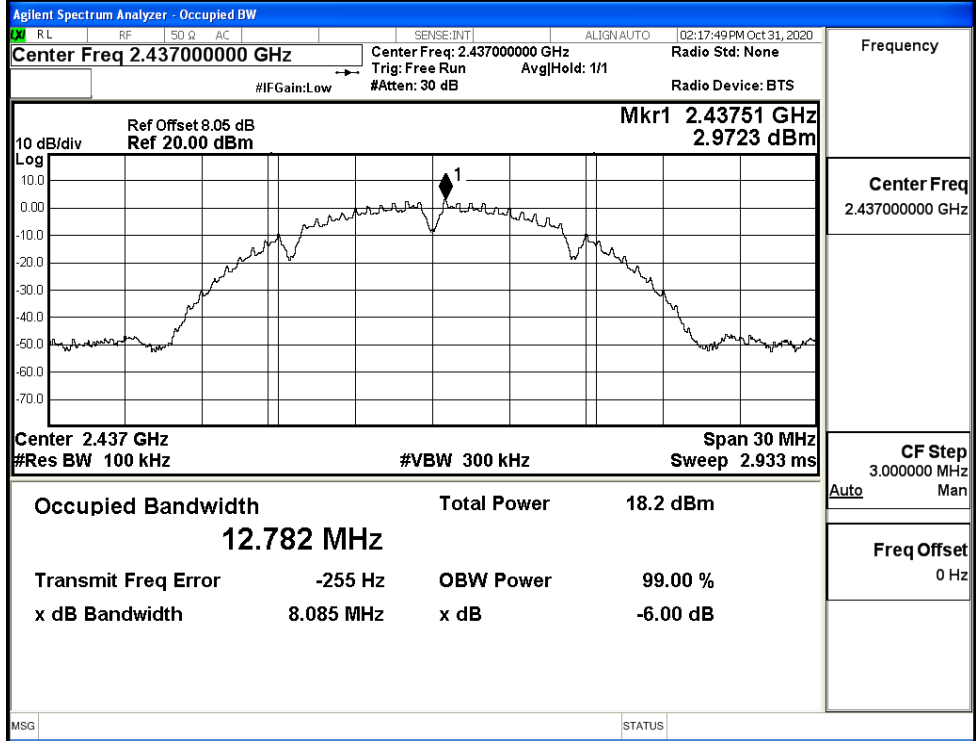


C.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	8.071	≥0.5	PASS
	MCH	8.085	≥0.5	PASS
	HCH	8.103	≥0.5	PASS
11G	LCH	16.37	≥0.5	PASS
	MCH	16.40	≥0.5	PASS
	HCH	16.38	≥0.5	PASS
11N20SISO	LCH	17.63	≥0.5	PASS
	MCH	17.63	≥0.5	PASS
	HCH	17.62	≥0.5	PASS
11N40SISO	LCH	36.28	≥0.5	PASS
	MCH	36.35	≥0.5	PASS
	HCH	36.38	≥0.5	PASS

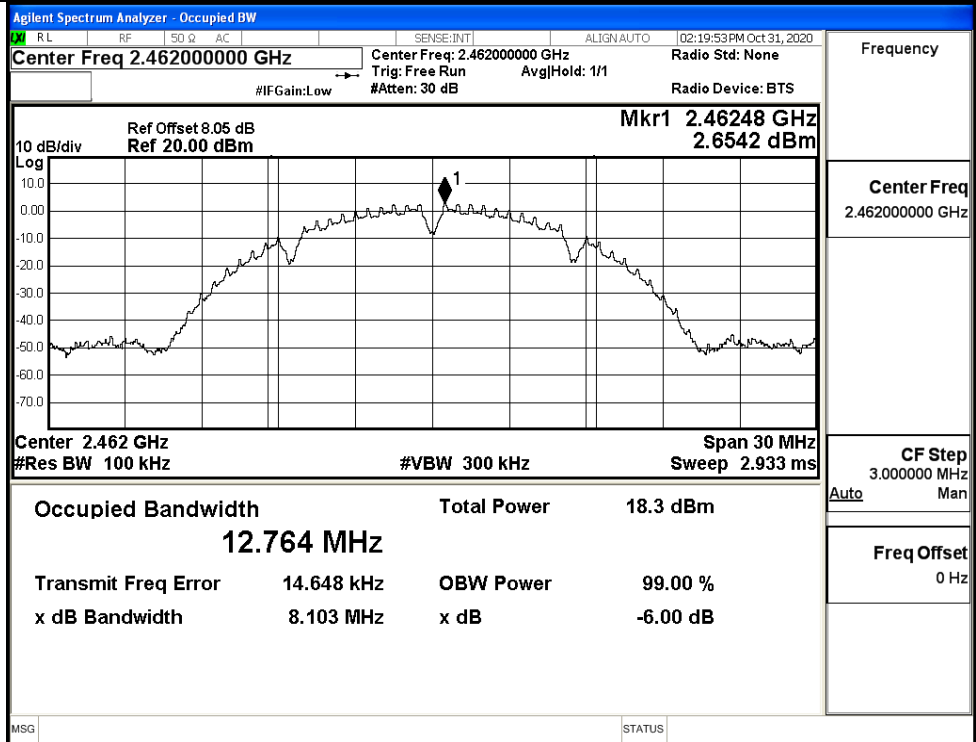


11B/MCH



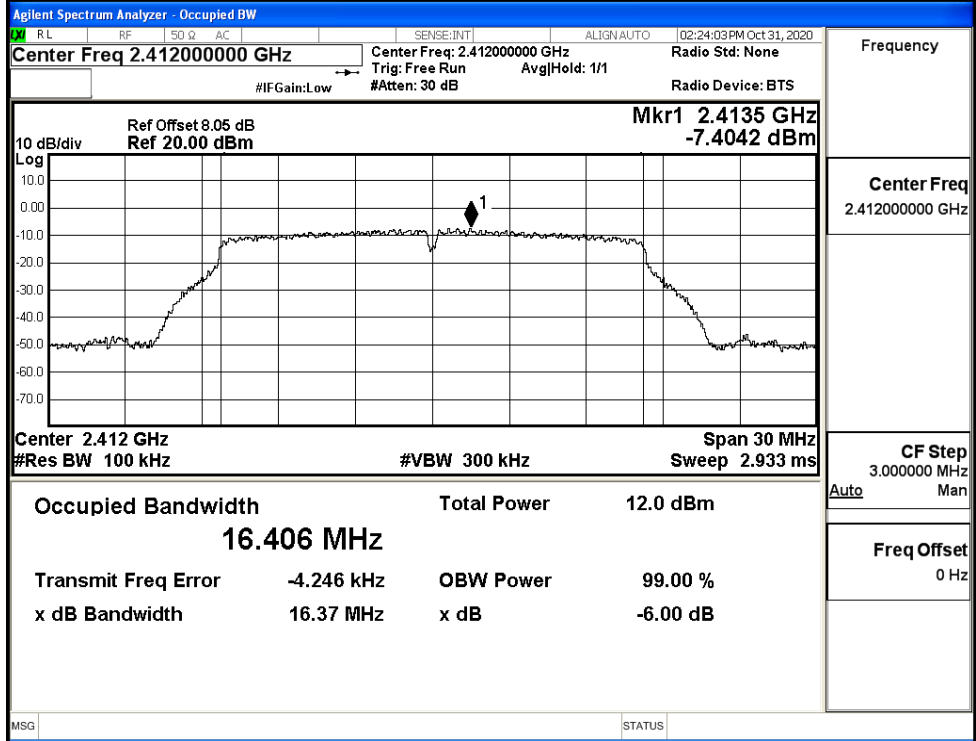
Frequency	2.43700000 GHz
Center Freq	2.43700000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11B/HCH

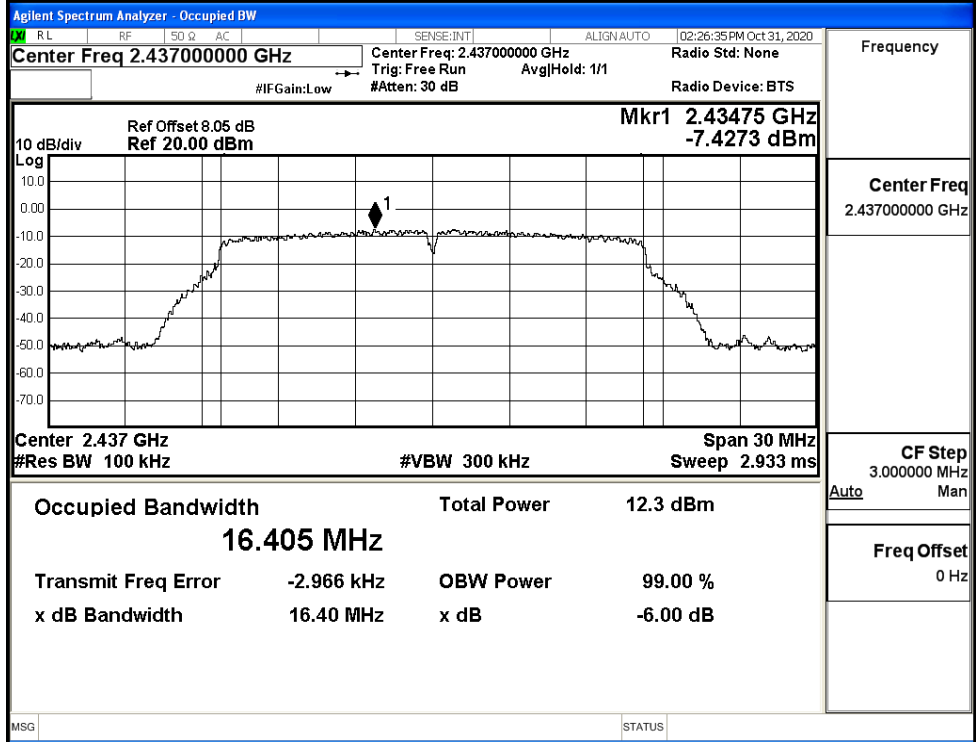


Frequency	2.46200000 GHz
Center Freq	2.46200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

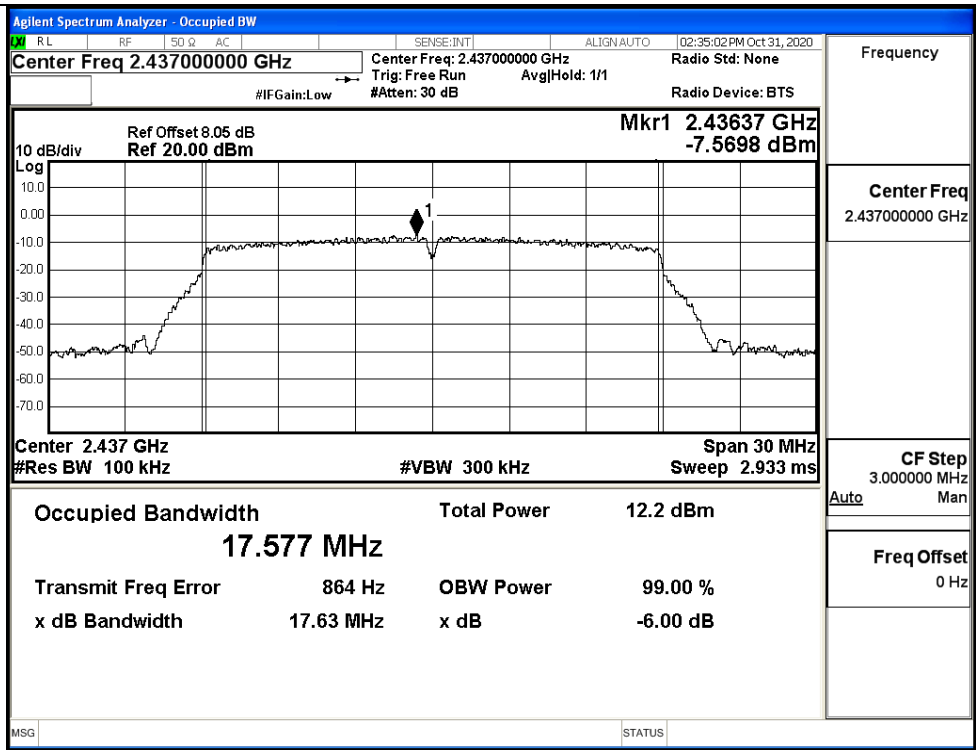
11G/LCH



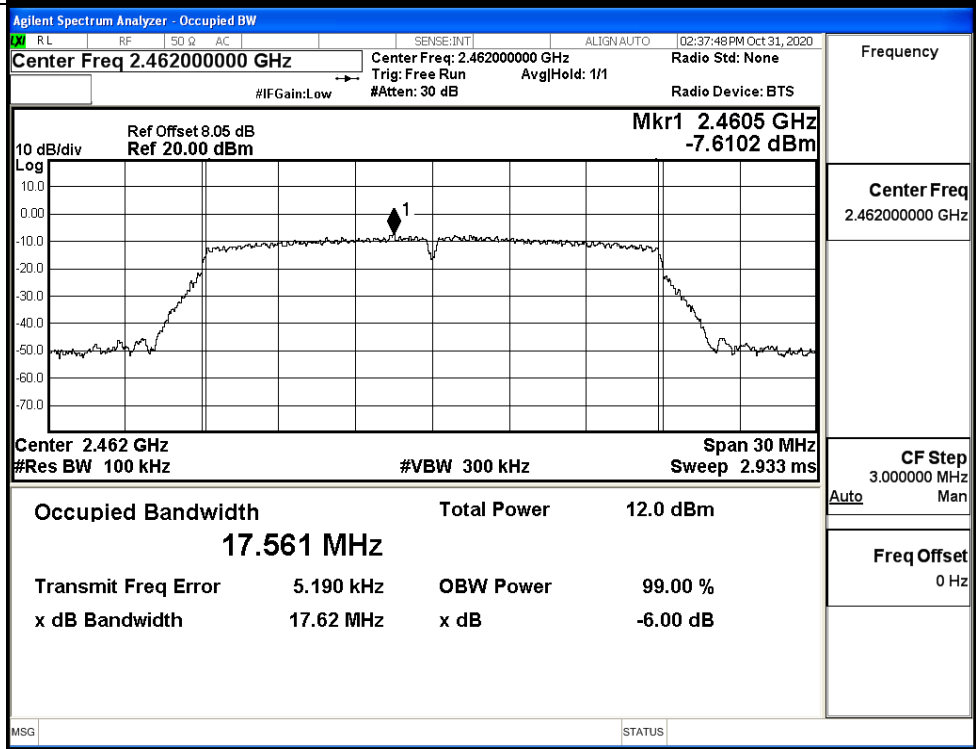
11G/MCH

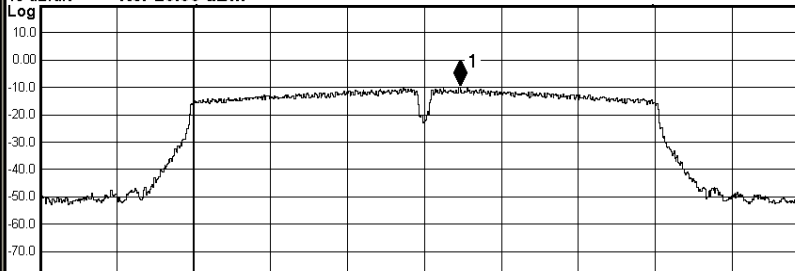
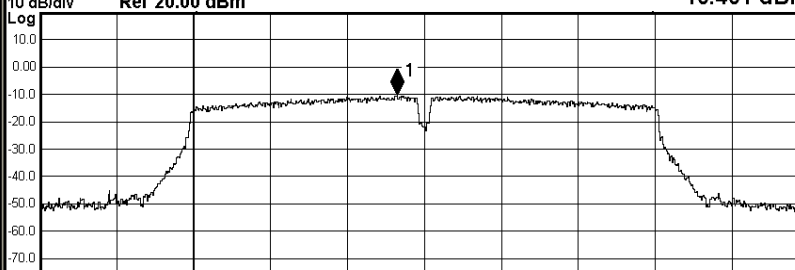


11N20SISO/MCH

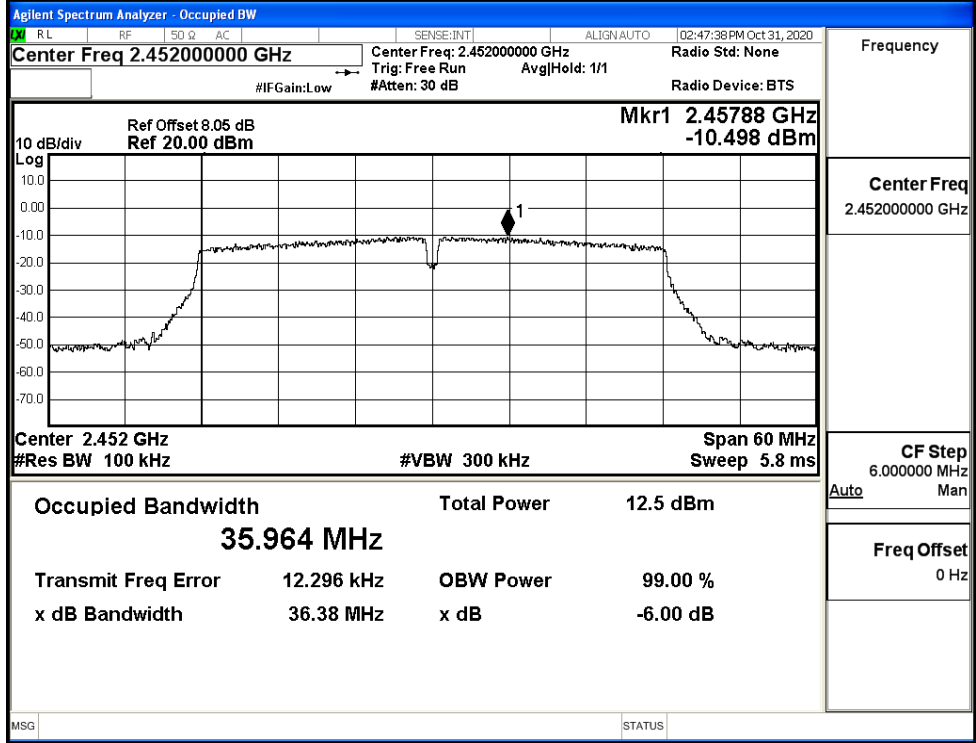


11N20SISO/HCH



<p>11N40SISO/LCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>RL RF 50 Ω AC SENSE:INT ALIGN AUTO 02:41:15 PM Oct 31, 2020</p> <p>Center Freq 2.42200000 GHz Center Freq: 2.42200000 GHz Radio Std: None Trig: Free Run AvgHold: 1/1 #IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <p>10 dB/div Ref Offset 8.05 dB Mkr1 2.42476 GHz Ref 20.00 dBm -9.9293 dBm</p>  <p>Center 2.422 GHz Span 60 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 5.8 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>12.4 dBm</td> </tr> <tr> <td>35.949 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>1.134 kHz</td> <td>OBW Power 99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>36.28 MHz</td> <td>x dB -6.00 dB</td> </tr> </table> <p>MSG STATUS</p>	Occupied Bandwidth	Total Power	12.4 dBm	35.949 MHz			Transmit Freq Error	1.134 kHz	OBW Power 99.00 %	x dB Bandwidth	36.28 MHz	x dB -6.00 dB	<p>Frequency</p> <p>Center Freq 2.42200000 GHz</p> <p>CF Step 6.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
	Occupied Bandwidth	Total Power	12.4 dBm											
35.949 MHz														
Transmit Freq Error	1.134 kHz	OBW Power 99.00 %												
x dB Bandwidth	36.28 MHz	x dB -6.00 dB												
<p>11N40SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>RL RF 50 Ω AC SENSE:INT ALIGN AUTO 02:45:06 PM Oct 31, 2020</p> <p>Center Freq 2.43700000 GHz Center Freq: 2.43700000 GHz Radio Std: None Trig: Free Run AvgHold: 1/1 #IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <p>10 dB/div Ref Offset 8.05 dB Mkr1 2.4349 GHz Ref 20.00 dBm -10.401 dBm</p>  <p>Center 2.437 GHz Span 60 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 5.8 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>12.5 dBm</td> </tr> <tr> <td>35.932 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>30.858 kHz</td> <td>OBW Power 99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>36.35 MHz</td> <td>x dB -6.00 dB</td> </tr> </table> <p>MSG STATUS</p>	Occupied Bandwidth	Total Power	12.5 dBm	35.932 MHz			Transmit Freq Error	30.858 kHz	OBW Power 99.00 %	x dB Bandwidth	36.35 MHz	x dB -6.00 dB	<p>Frequency</p> <p>Center Freq 2.43700000 GHz</p> <p>CF Step 6.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
Occupied Bandwidth	Total Power	12.5 dBm												
35.932 MHz														
Transmit Freq Error	30.858 kHz	OBW Power 99.00 %												
x dB Bandwidth	36.35 MHz	x dB -6.00 dB												

11N40SISO/HCH

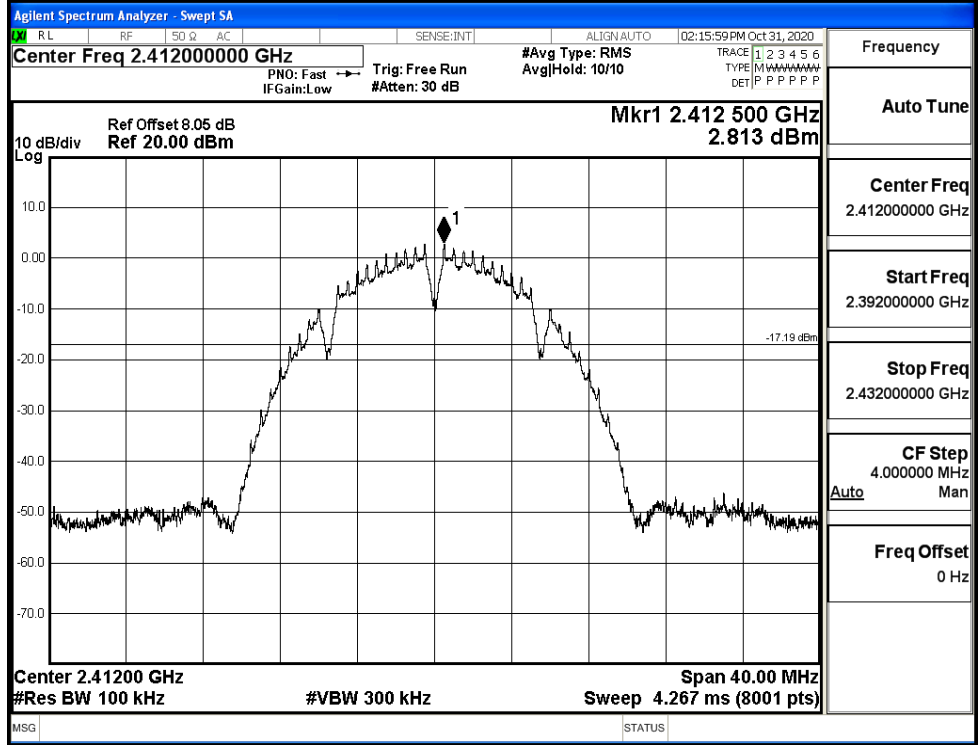


C.5 RF Conducted Spurious Emissions

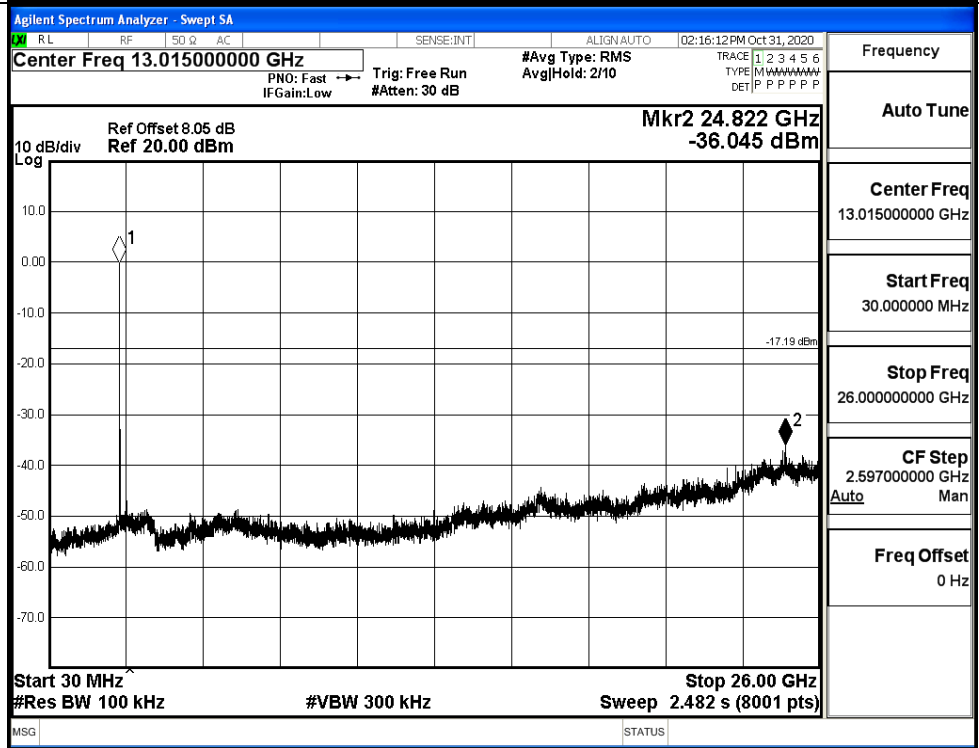
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	2.813	-36.045	-17.187	PASS
	MCH	2.078	-38.725	-17.922	PASS
	HCH	2.644	-37.648	-17.356	PASS
11G	LCH	-7.407	-38.392	-27.407	PASS
	MCH	-7.118	-37.633	-27.118	PASS
	HCH	-7.567	-37.514	-27.567	PASS
11N20 SISO	LCH	-7.712	-38.093	-27.712	PASS
	MCH	-7.97	-36.511	-27.970	PASS
	HCH	-7.6	-38.537	-27.600	PASS
11N40 SISO	LCH	-10.599	-37.356	-30.599	PASS
	MCH	-10.116	-36.906	-30.116	PASS
	HCH	-9.958	-38.250	-29.958	PASS

11B_LCH_Graphs

Pref/11B/LCH

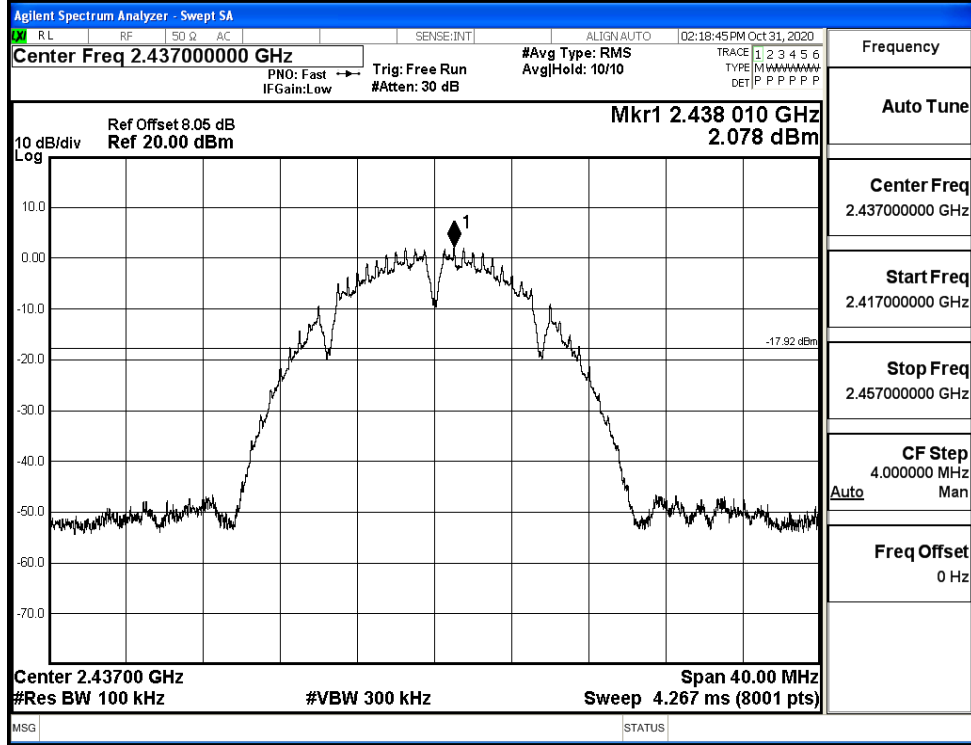


Puw/11B/LCH

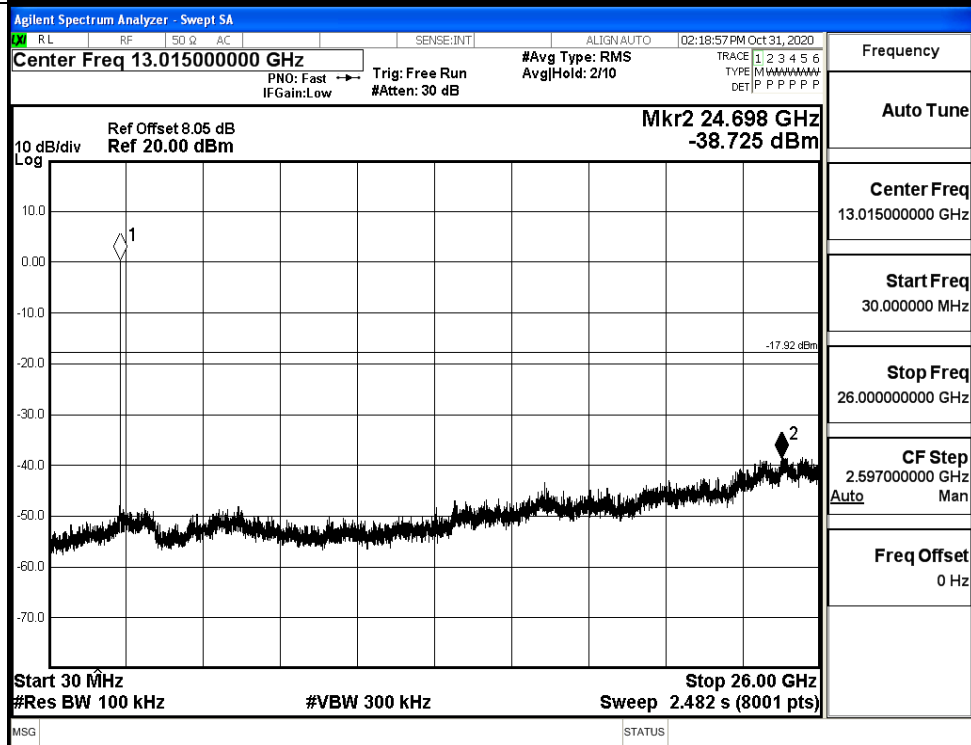


11B_MCH_Graphs

Pref/11B/MCH

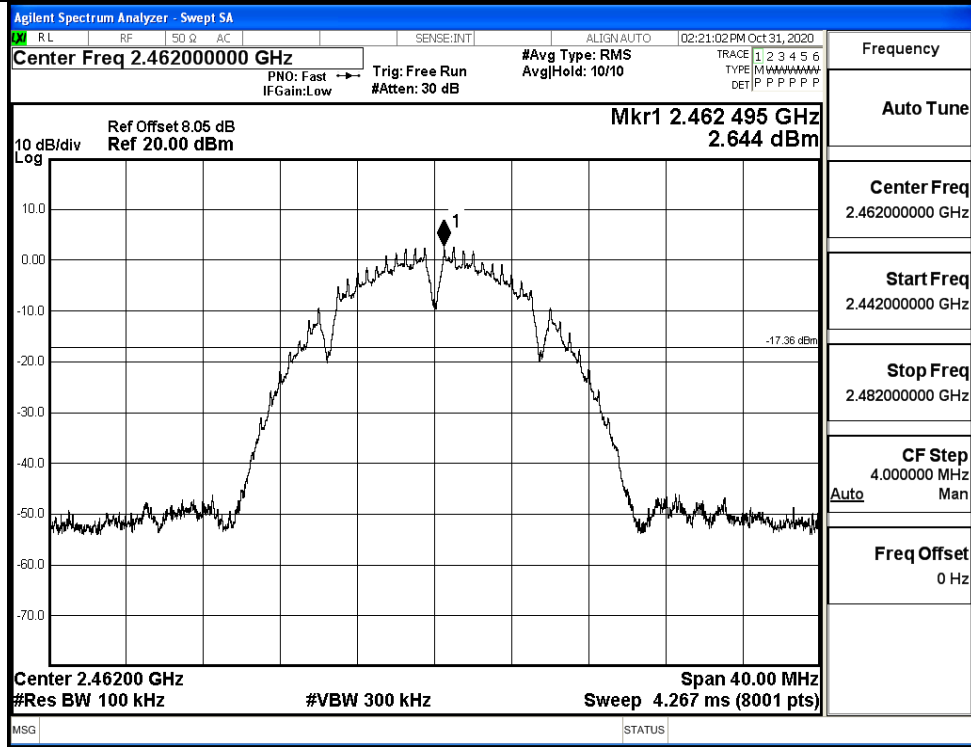


Puw/11B/MCH

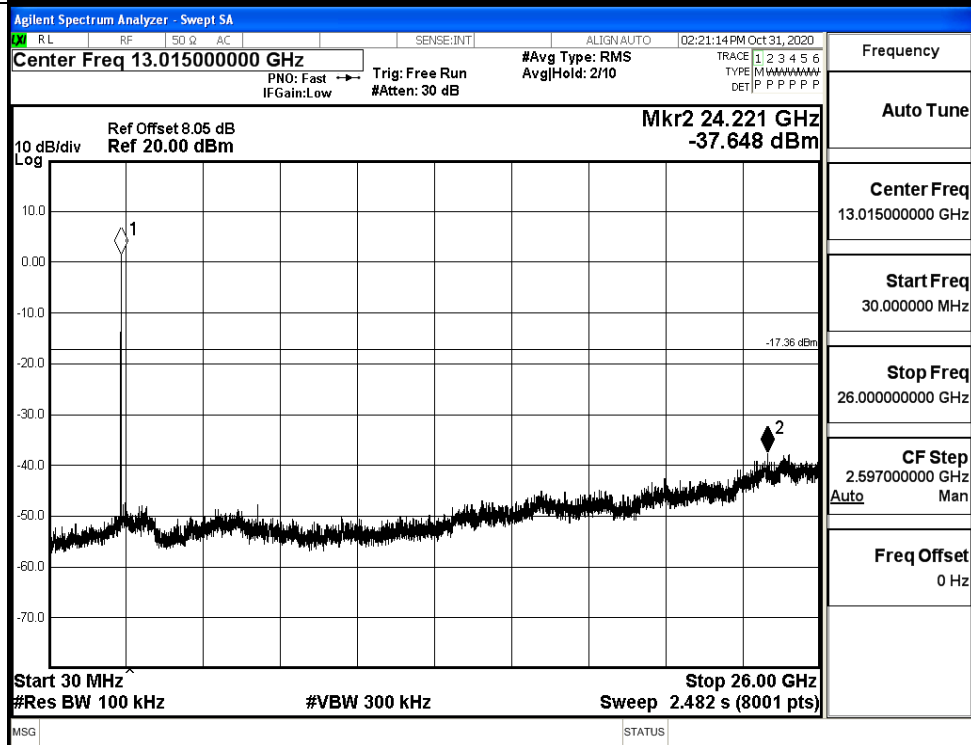


11B_HCH_Graphs

Pref/11B/HCH

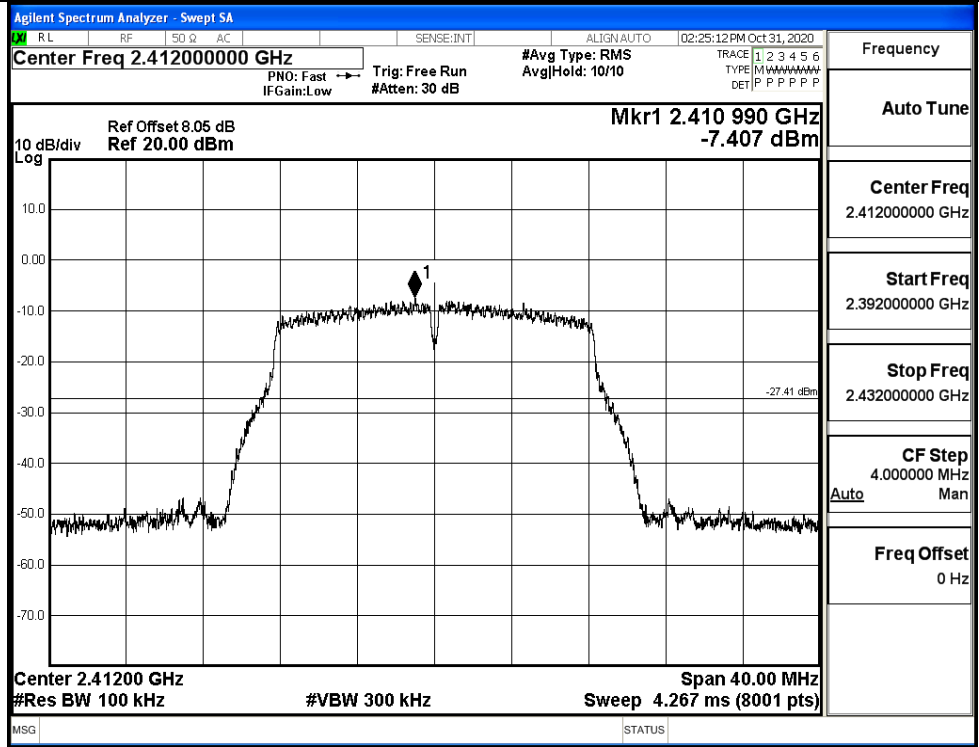


Puw/11B/HCH

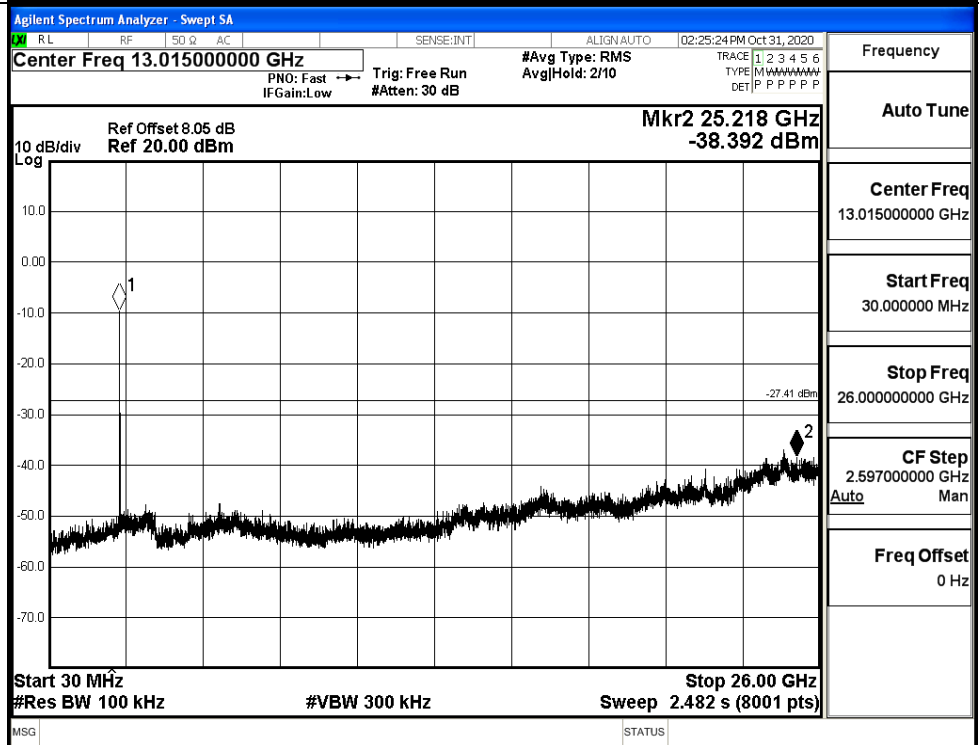


11G_LCH_Graphs

Pref/11G/LCH

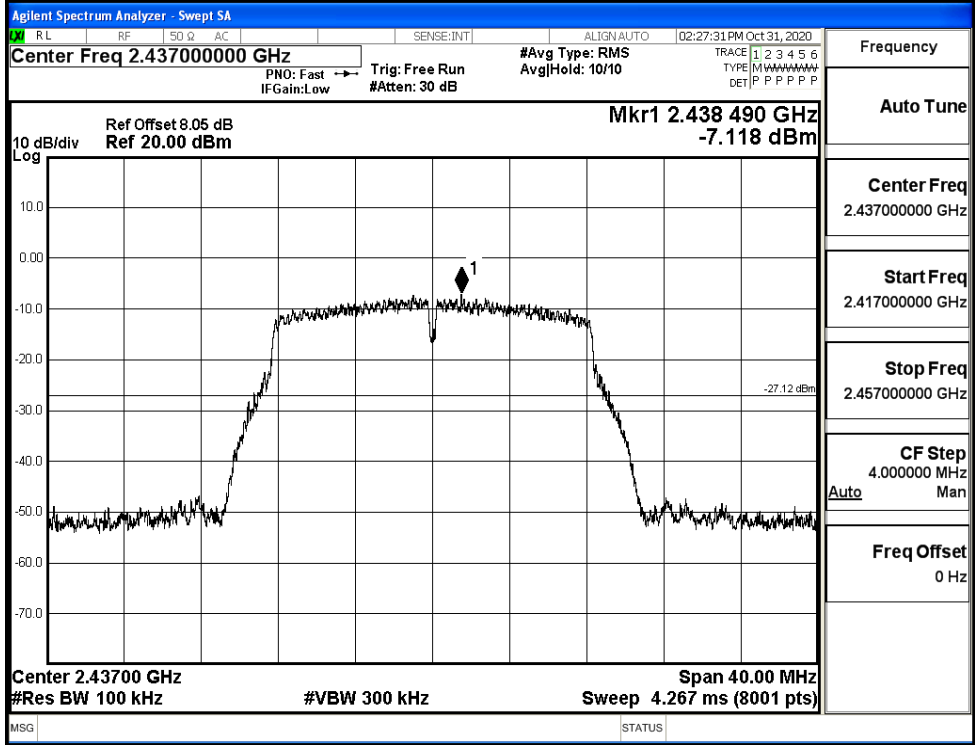


Puw/11G/LCH

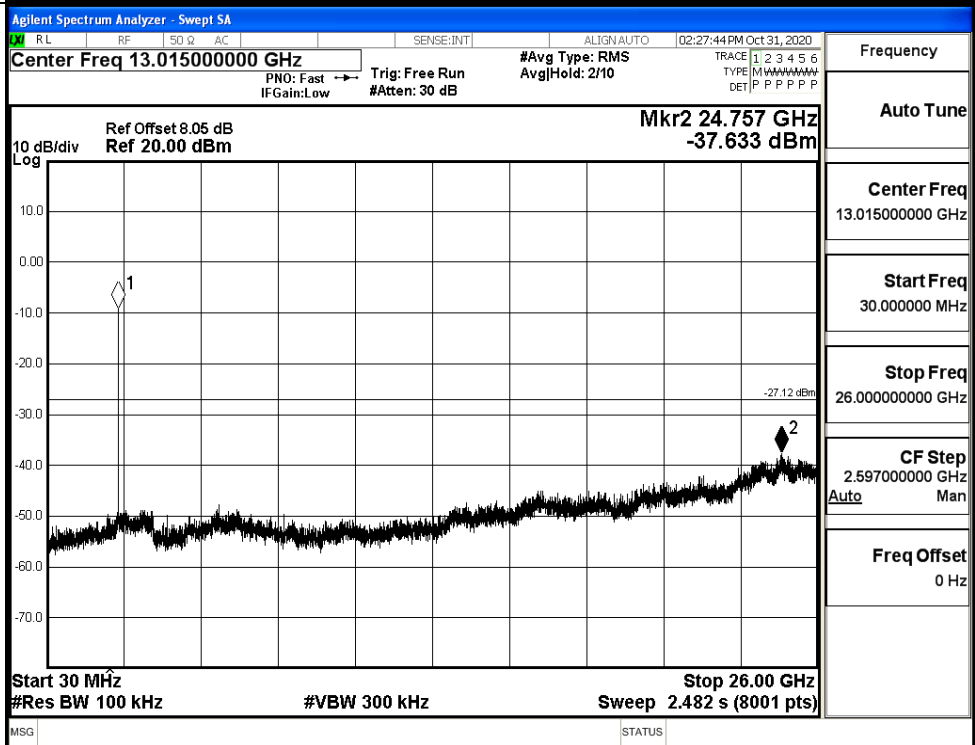


11G_MCH_Graphs

Pref/11G/MCH

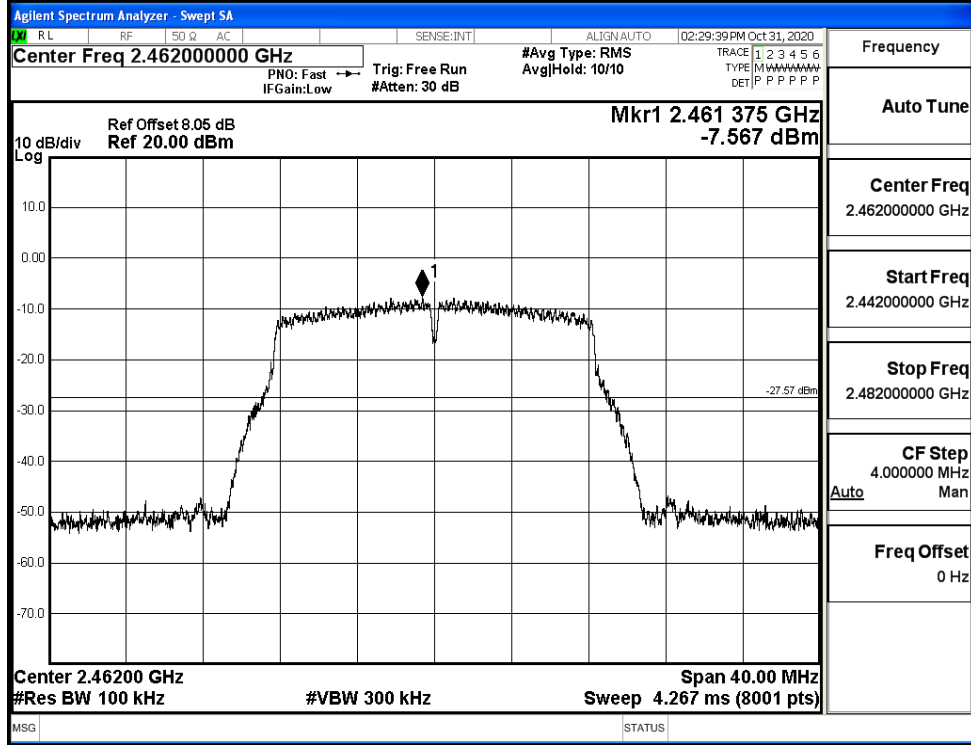


Puw/11G/MCH

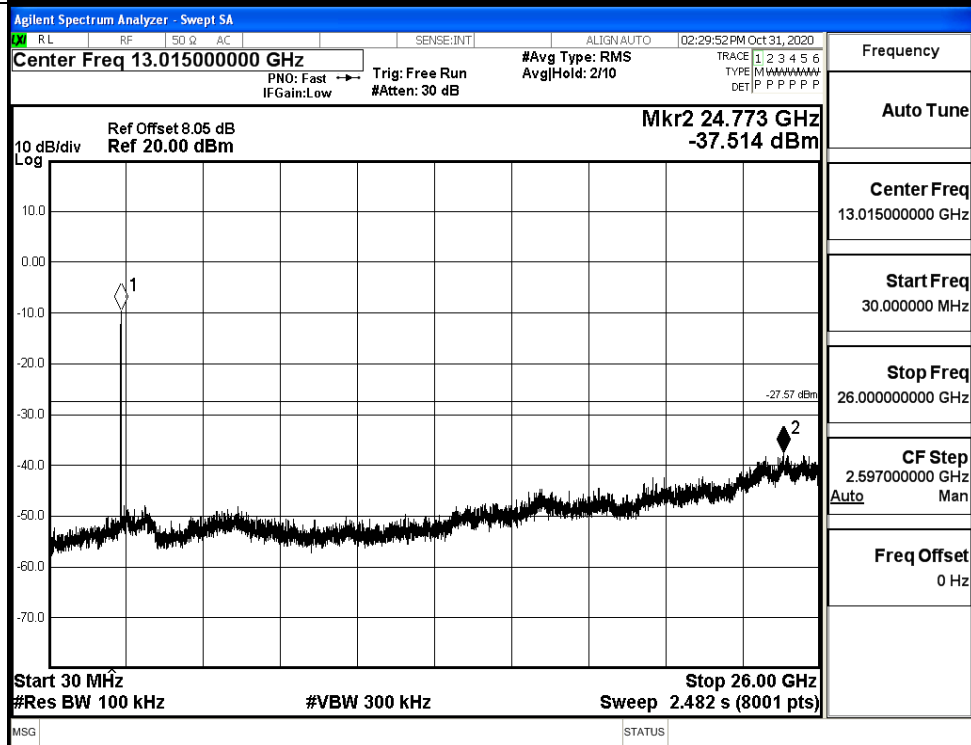


11G_HCH_Graphs

Pref/11G/HCH

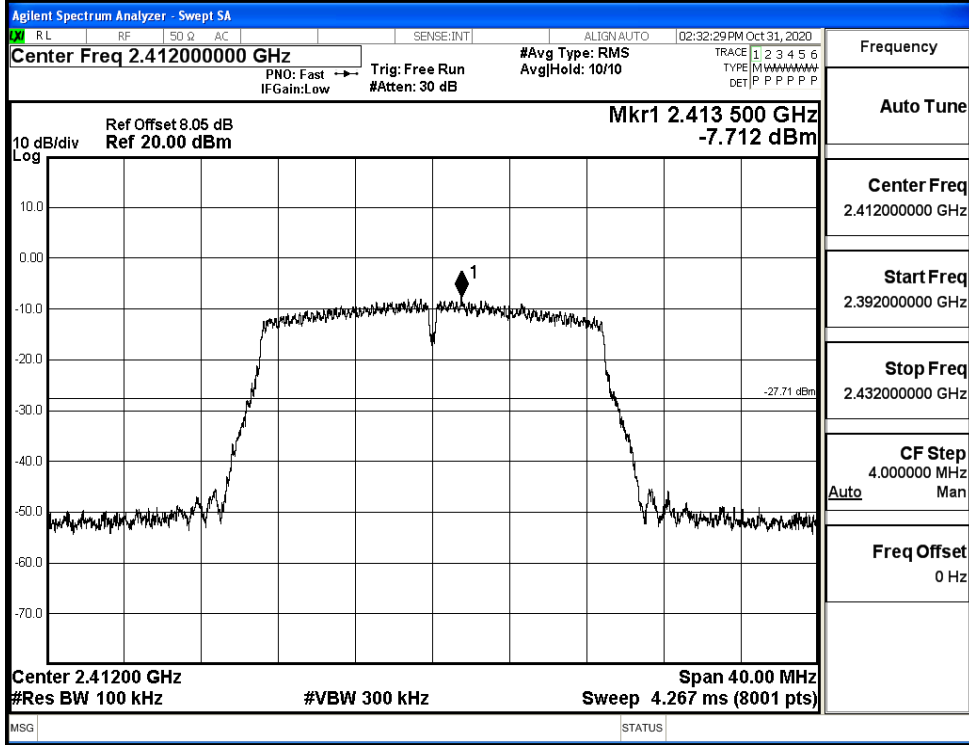


Puw/11G/HCH

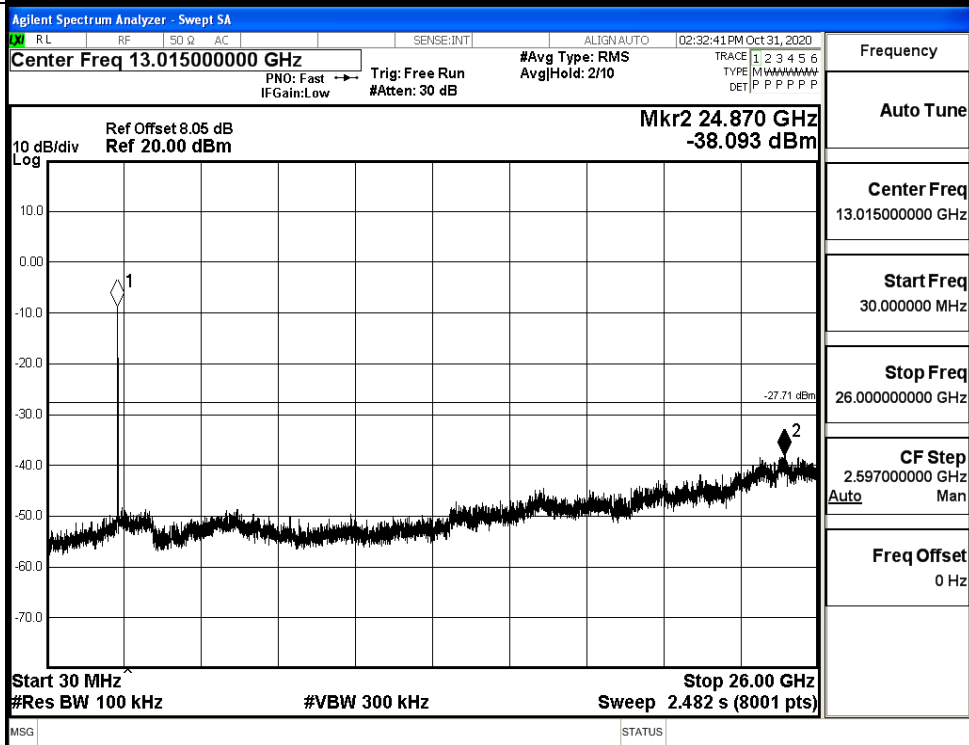


11N20SISO_LCH_Graphs

Pref/11N20SIS
O/LCH

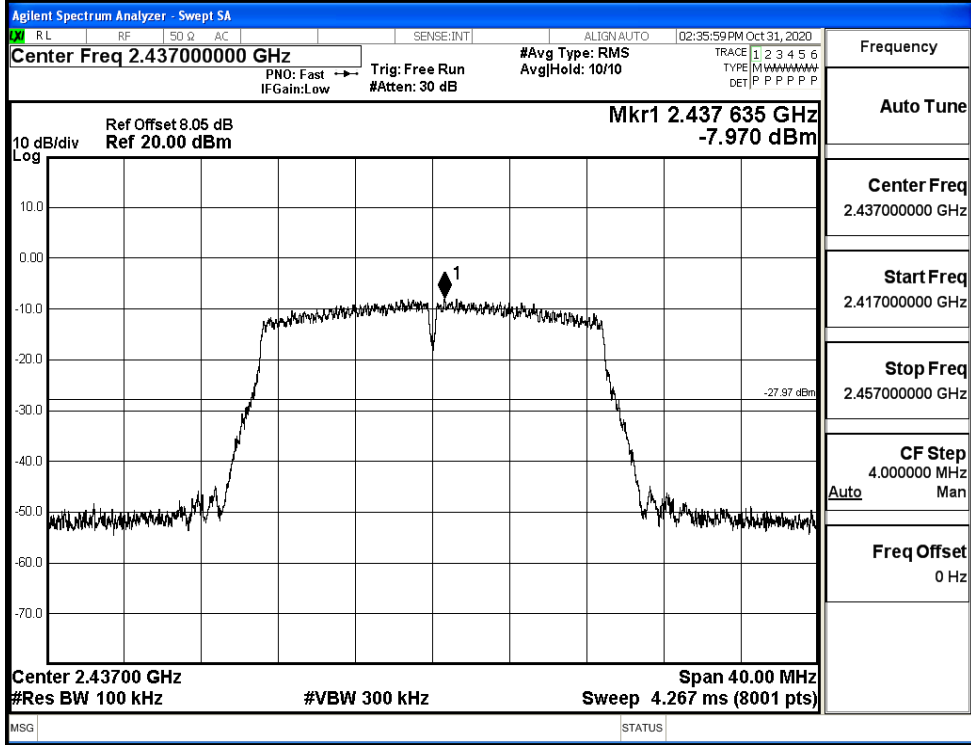


Puw/11N20
SISO/LCH

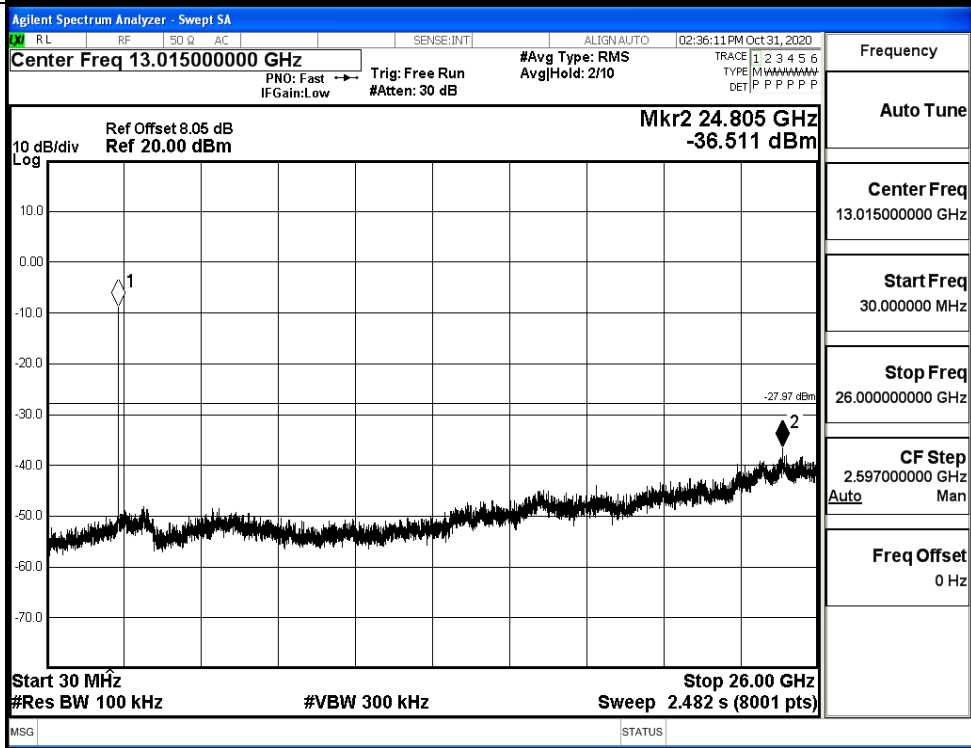


11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCH

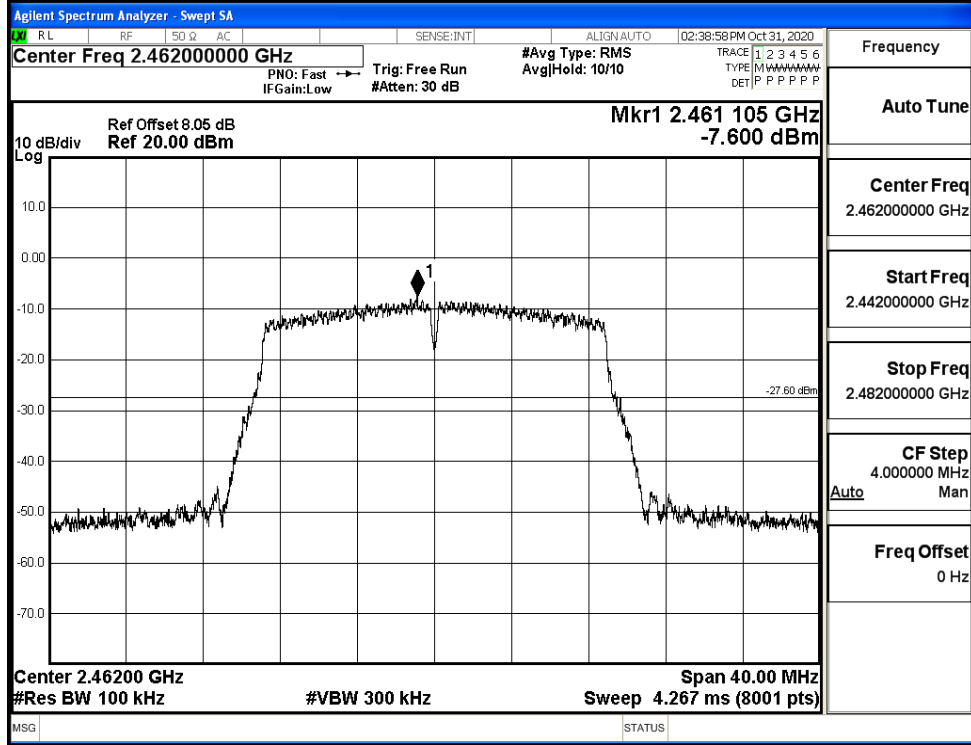


Puw/11N20
SISO/MCH

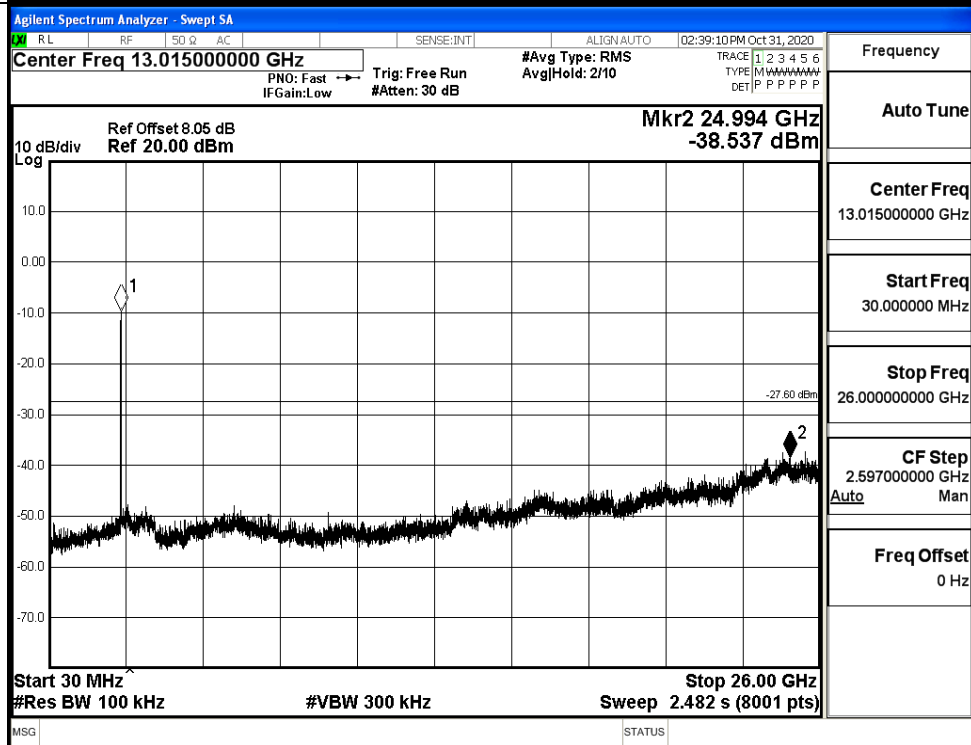


11N20SISO_HCH_Graphs

Pref/11N20
SISO/HCH

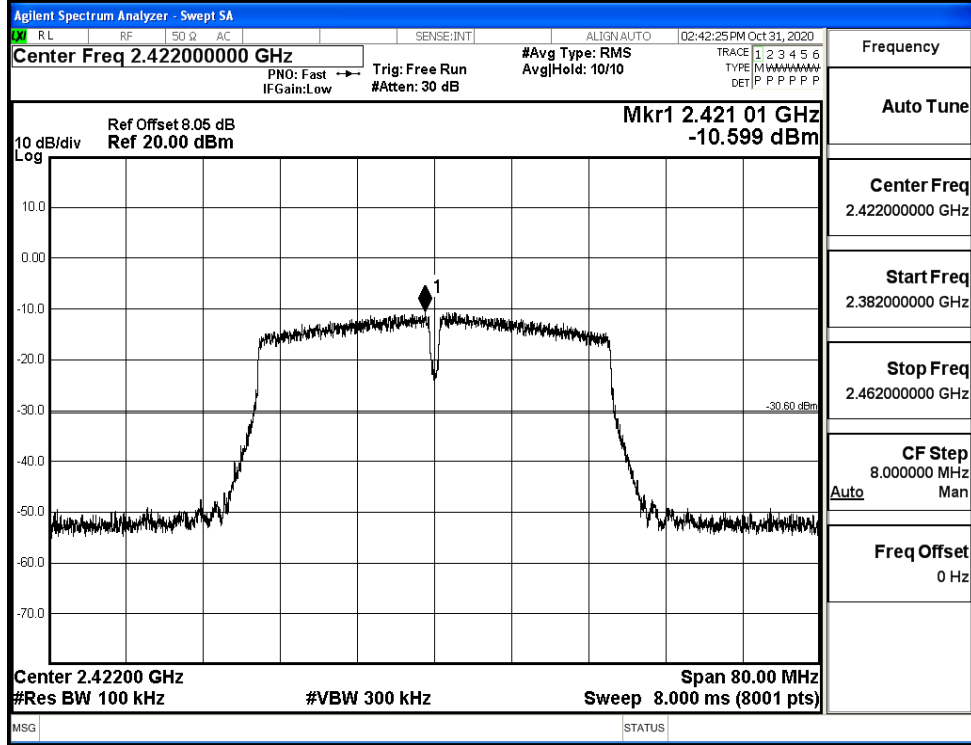


Puw/11N20
SISO/HCH

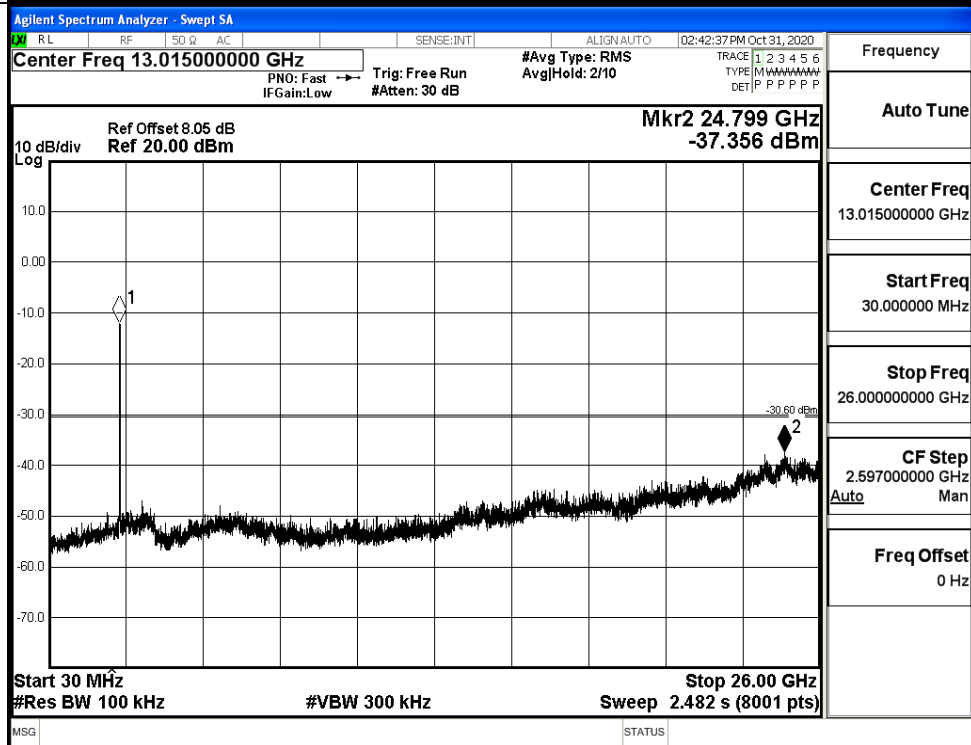


11N40SISO_LCH_Graphs

Pref/11N40
SISO/LCH

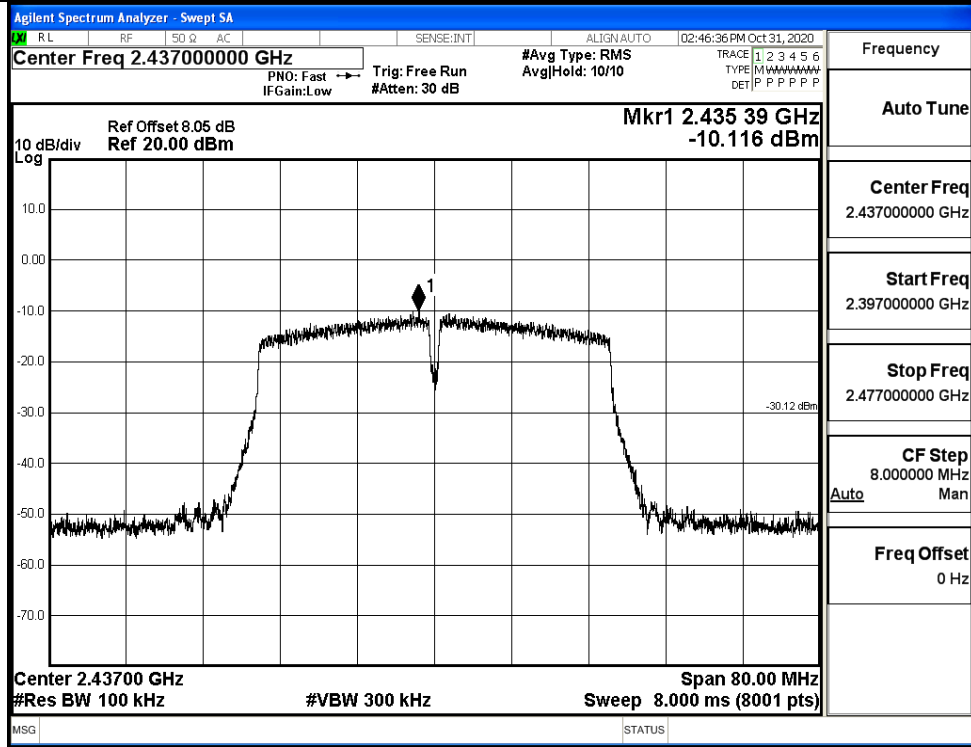


Puw/11N40
SISO/LCH

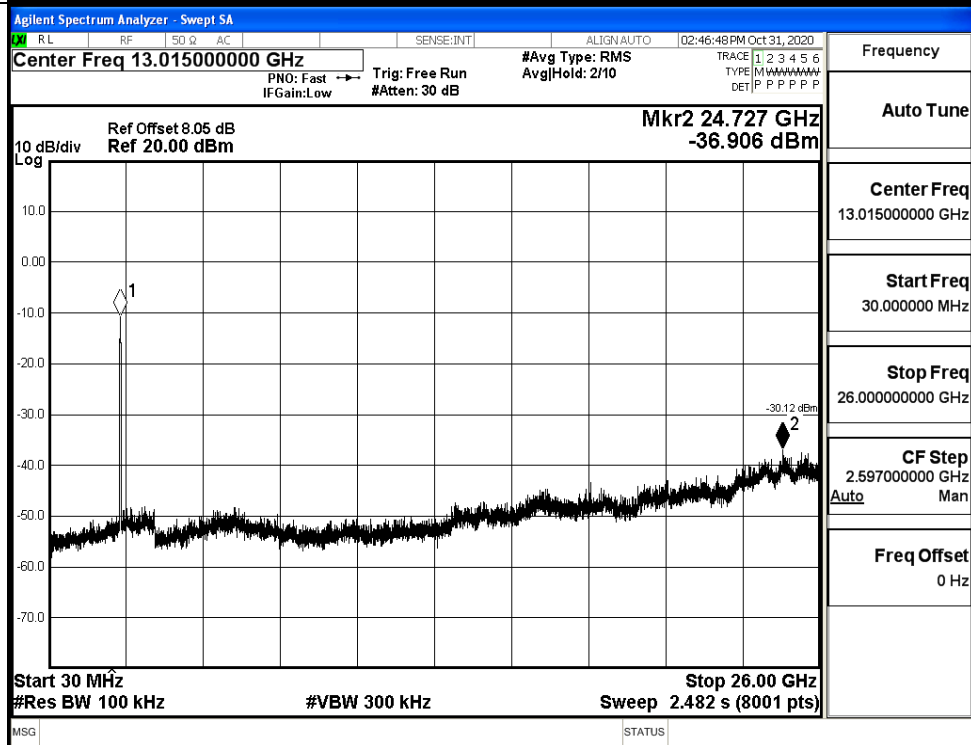


11N40SISO_MCH_Graphs

Pref/11N40
SISO/MCH

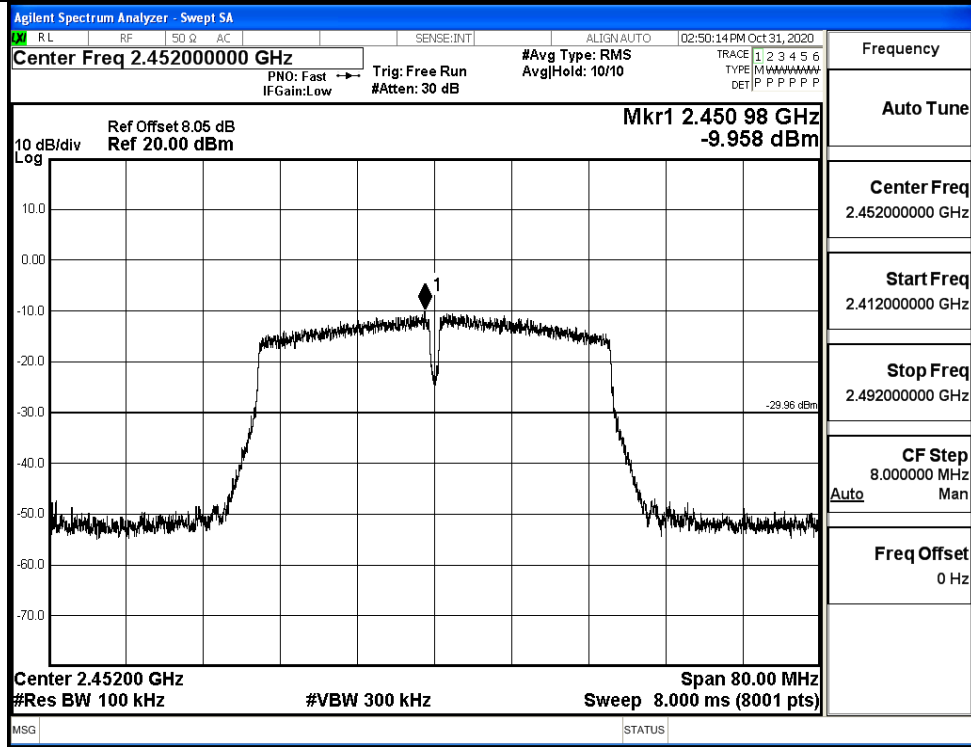


Puw/11N40
SISO/MCH

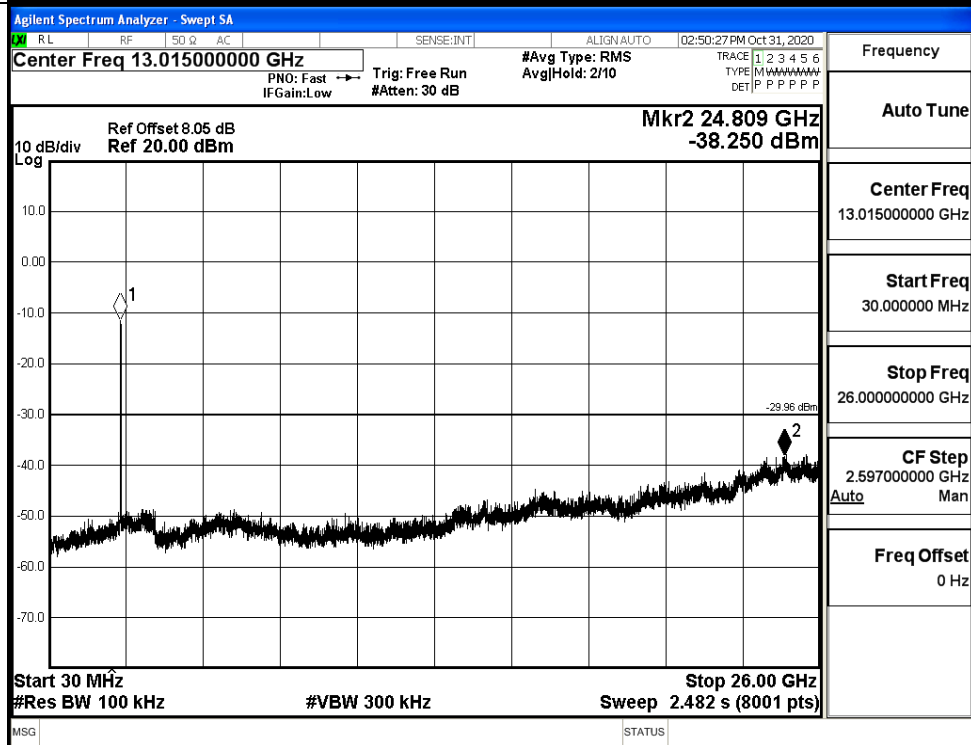


11N40SISO_HCH_Graphs

Pref/11N40
SISO/HCH

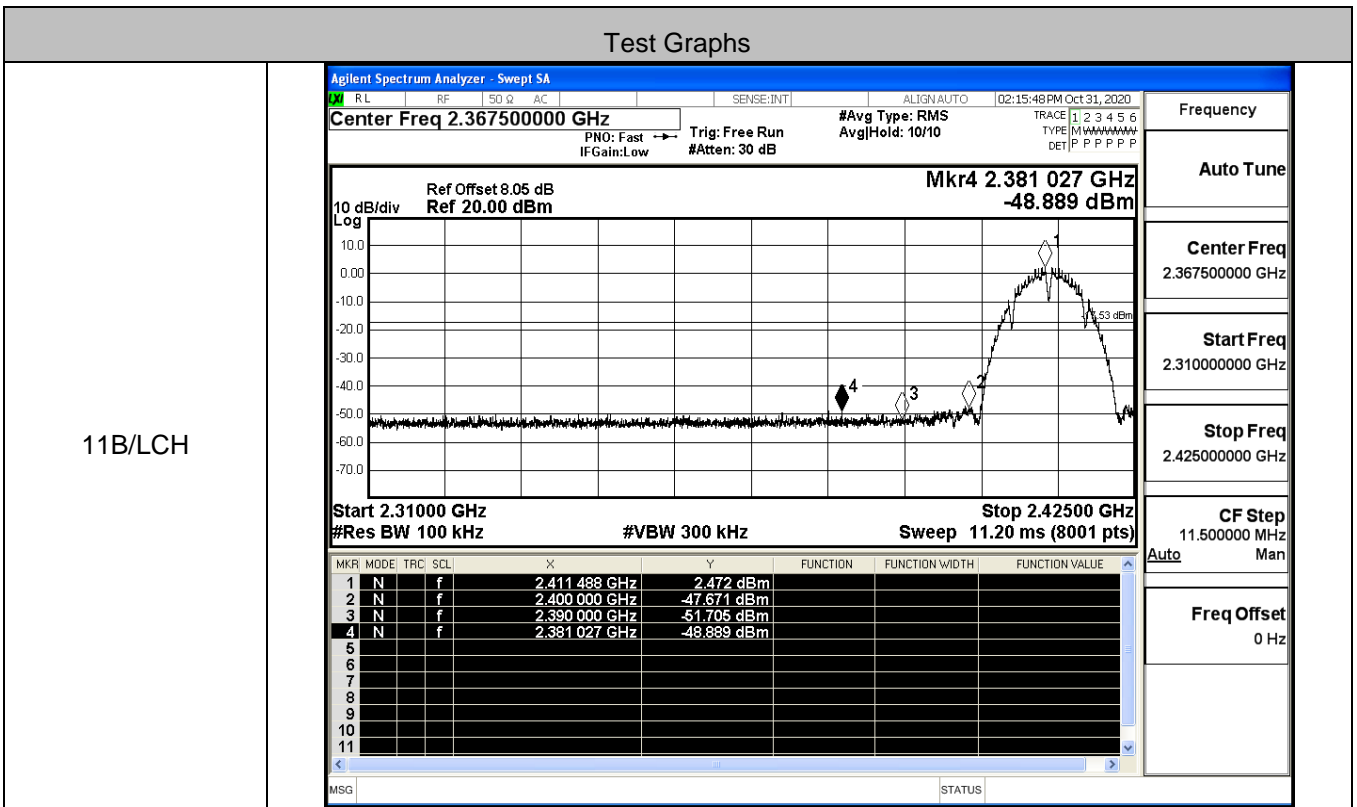


Puw/11N40
SISO/HCH

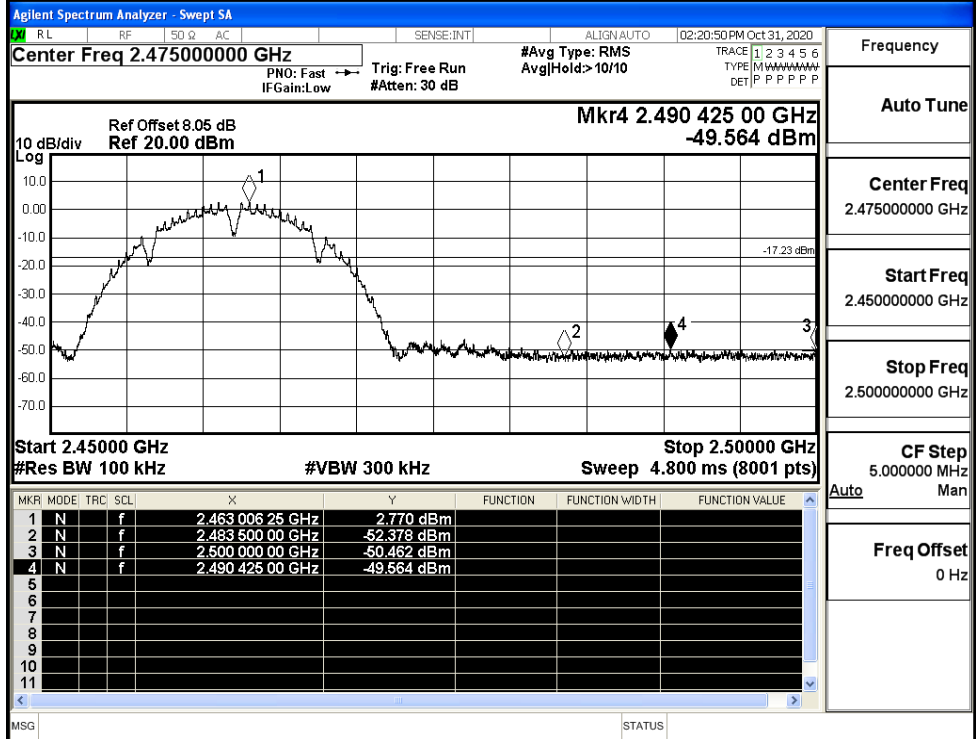


C.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	2.472	-48.889	-17.53	PASS
	HCH	2.770	-49.564	-17.23	PASS
11G	LCH	-8.180	-49.535	-28.18	PASS
	HCH	-7.717	-48.764	-27.72	PASS
11N20SISO	LCH	-7.968	-49.681	-27.97	PASS
	HCH	-7.821	-49.029	-27.82	PASS
11N40SISO	LCH	-10.731	-49.606	-30.73	PASS
	HCH	-10.487	-48.838	-30.49	PASS



11B/HCH



Frequency

Auto Tune

Center Freq
2.47500000 GHz

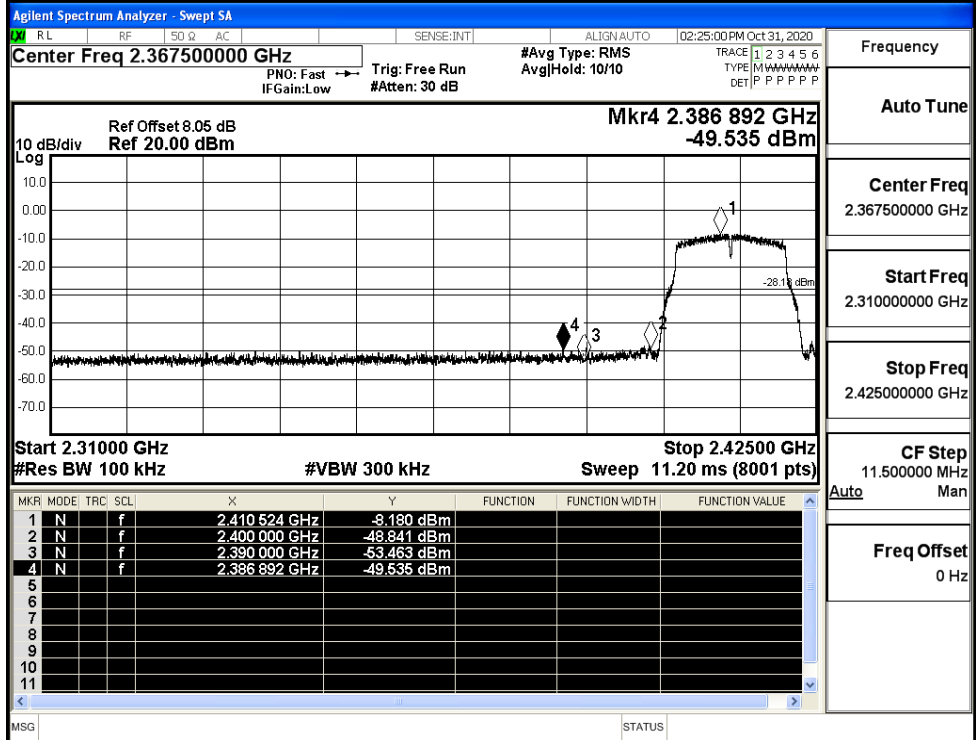
Start Freq
2.45000000 GHz

Stop Freq
2.50000000 GHz

CF Step
5.000000 MHz

Freq Offset
0 Hz

11G/LCH



Frequency

Auto Tune

Center Freq
2.36750000 GHz

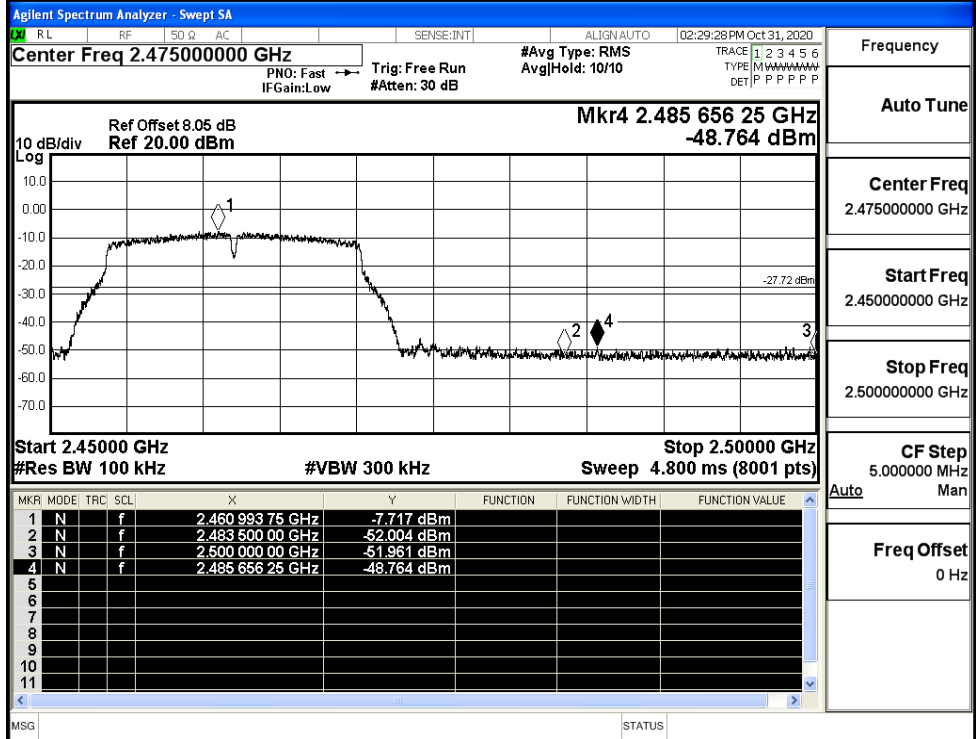
Start Freq
2.31000000 GHz

Stop Freq
2.42500000 GHz

CF Step
11.500000 MHz

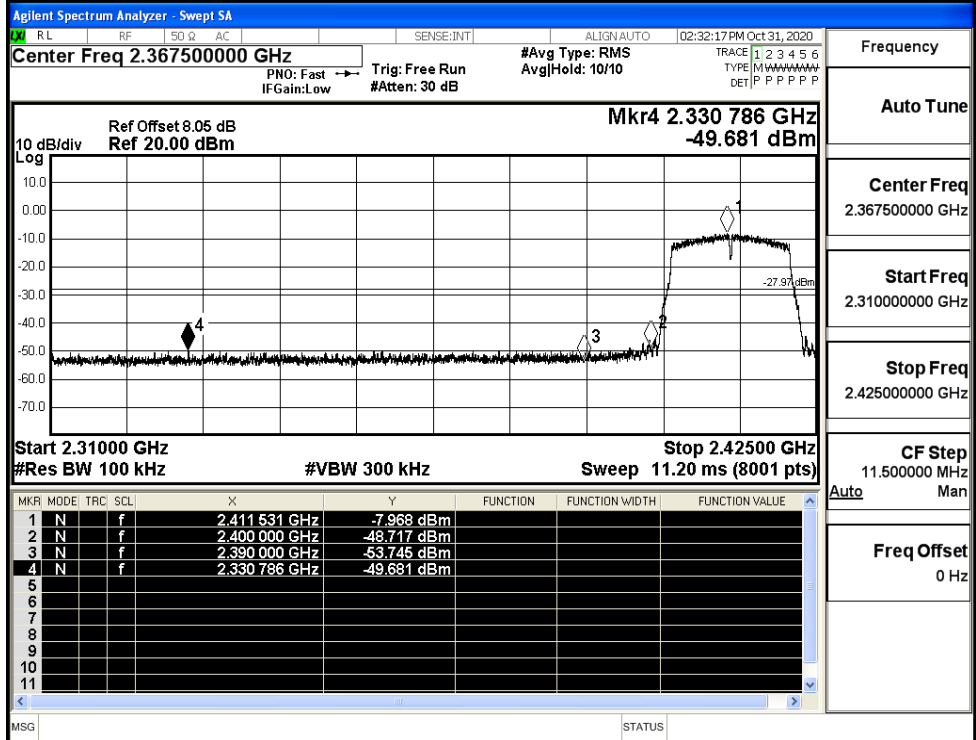
Freq Offset
0 Hz

11G/HCH



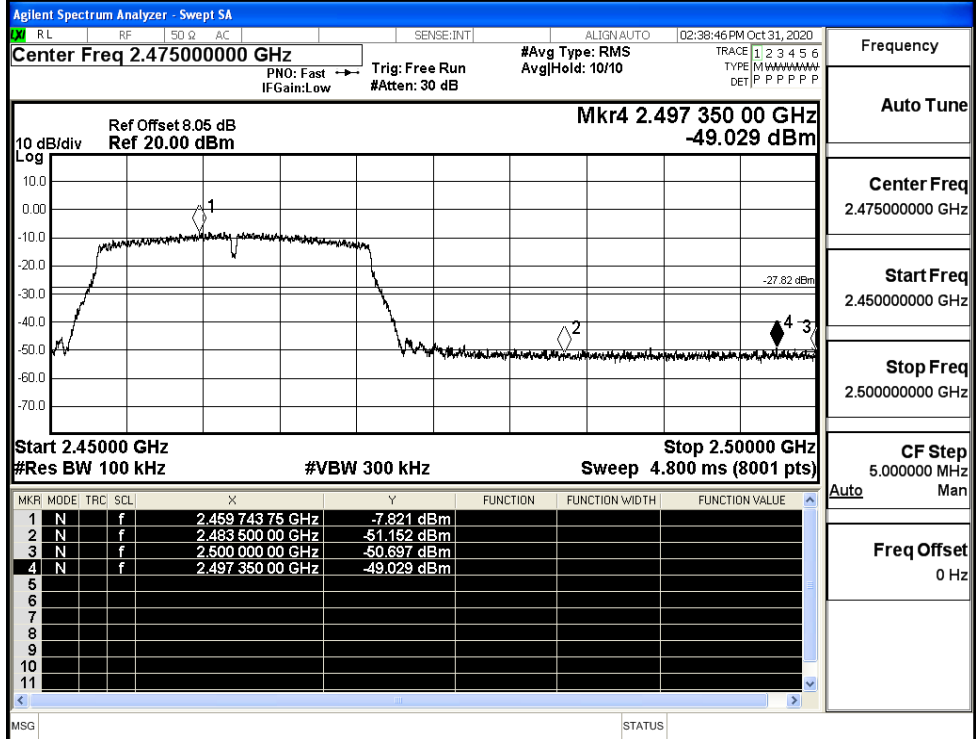
Frequency	2.47500000 GHz
Auto Tune	
Center Freq	2.47500000 GHz
Start Freq	2.45000000 GHz
Stop Freq	2.50000000 GHz
CF Step	5.000000 MHz
Freq Offset	0 Hz

11N20SISO/LCH



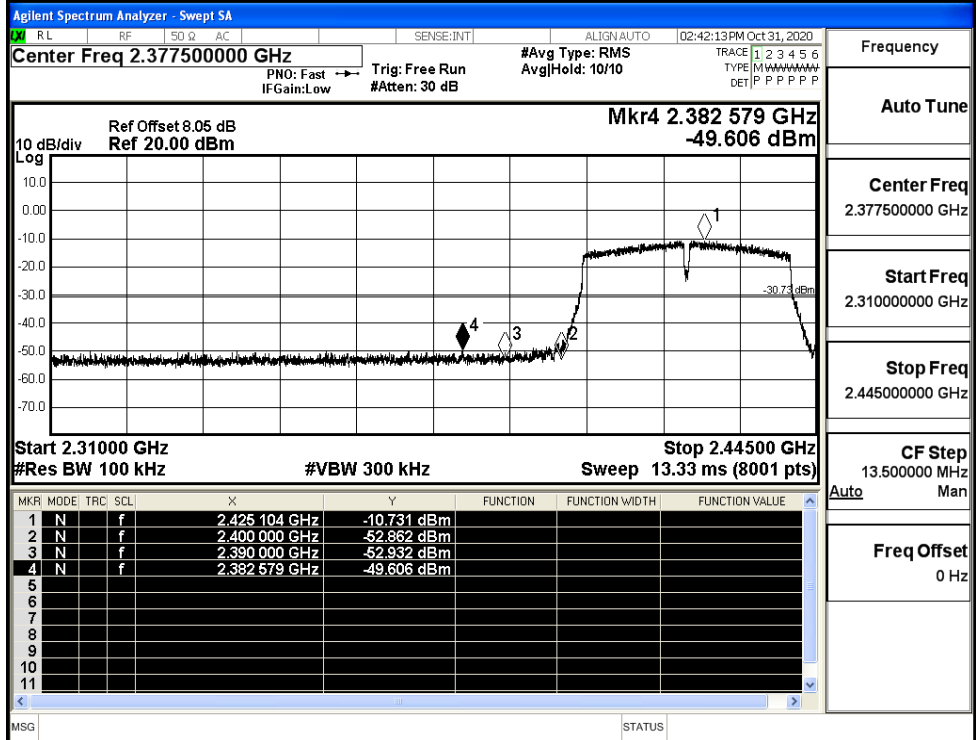
Frequency	2.36750000 GHz
Auto Tune	
Center Freq	2.36750000 GHz
Start Freq	2.31000000 GHz
Stop Freq	2.42500000 GHz
CF Step	11.500000 MHz
Freq Offset	0 Hz

11N20SISO/HCH



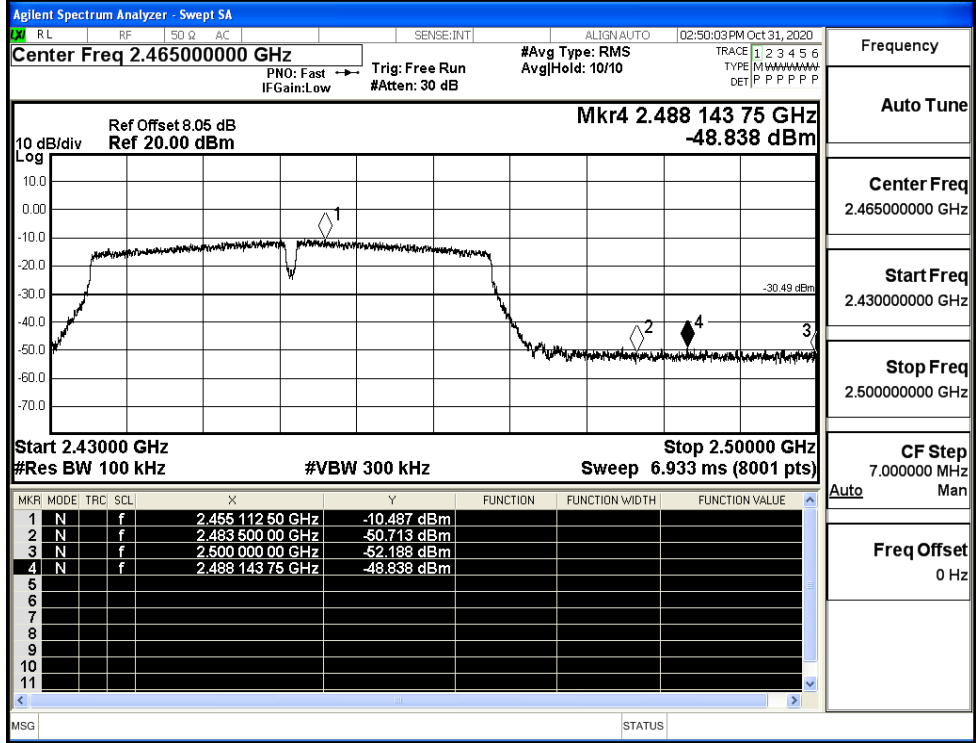
Frequency	2.47500000 GHz
Auto Tune	
Center Freq	2.47500000 GHz
Start Freq	2.45000000 GHz
Stop Freq	2.50000000 GHz
CF Step	5.000000 MHz
Freq Offset	0 Hz

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



Frequency

Auto Tune

Center Freq
2.46500000 GHz

Start Freq
2.43000000 GHz

Stop Freq
2.50000000 GHz

CF Step
7.000000 MHz

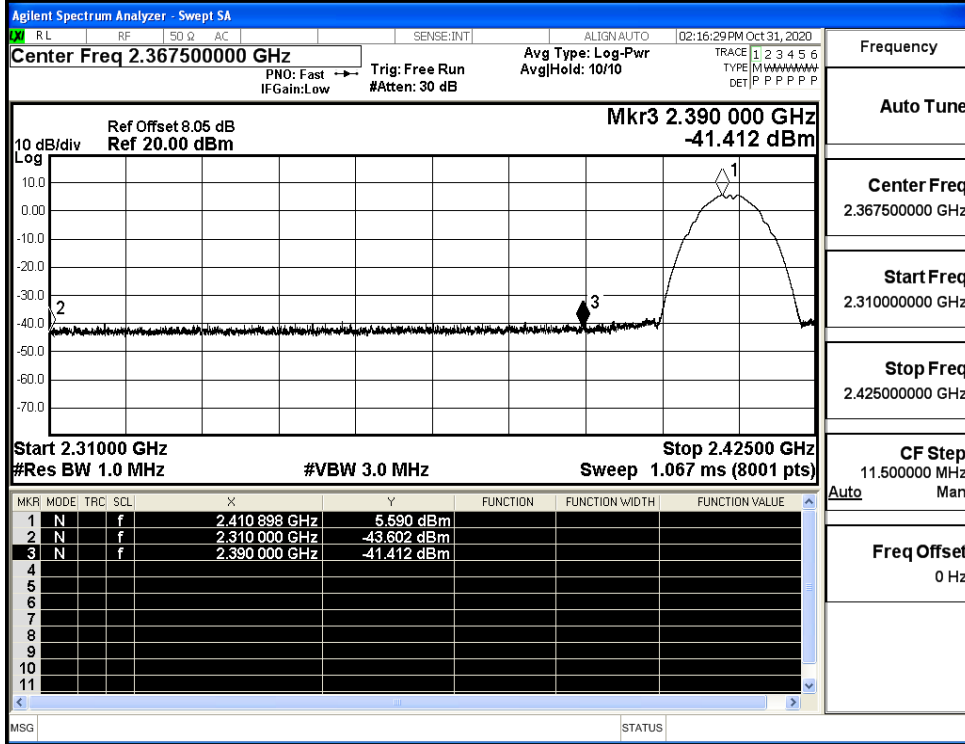
Freq Offset
0 Hz

C.7 Restrict-band band-edge measurements

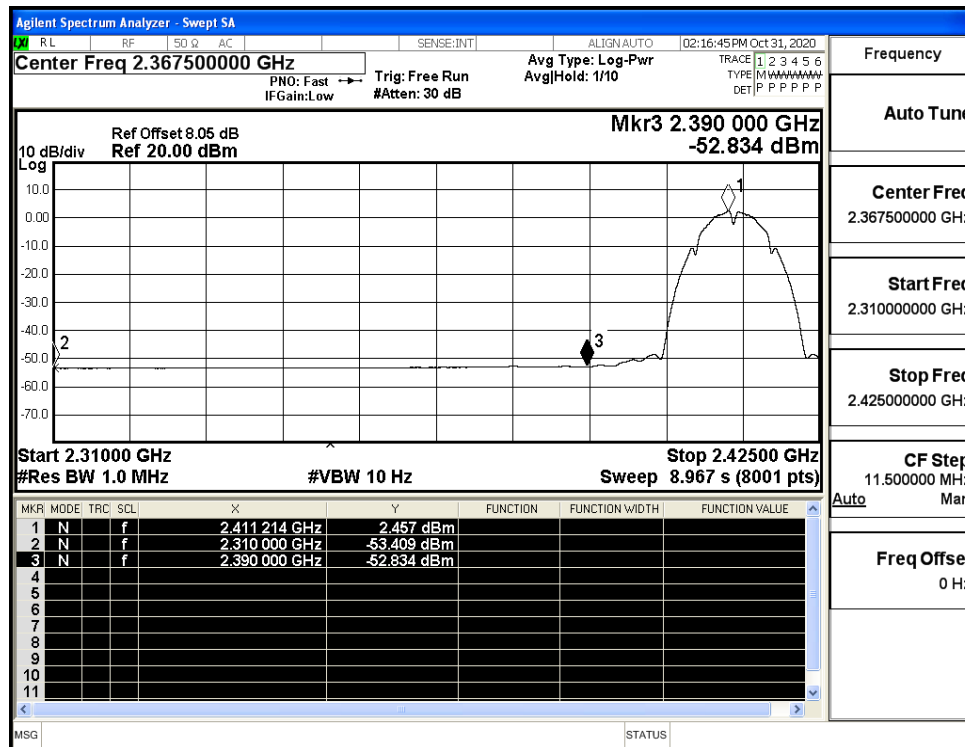
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBu V/m]	Verdict
11B	2412	Ant1	2310.0	-43.60	2.0	0	51.66	PEAK	74	PASS
	2412	Ant1	2310.0	-53.41	2.0	0	41.85	AV	54	PASS
	2412	Ant1	2390.0	-41.41	2.0	0	53.85	PEAK	74	PASS
	2412	Ant1	2390.0	-52.83	2.0	0	42.42	AV	54	PASS
	2462	Ant1	2483.5	-41.08	2.0	0	54.18	PEAK	74	PASS
	2462	Ant1	2483.5	-52.36	2.0	0	42.90	AV	54	PASS
	2462	Ant1	2500.0	-42.09	2.0	0	53.17	PEAK	74	PASS
	2462	Ant1	2500.0	-52.32	2.0	0	42.94	AV	54	PASS
11G	2412	Ant1	2310.0	-42.87	2.0	0	52.38	PEAK	74	PASS
	2412	Ant1	2310.0	-53.53	2.0	0	41.73	AV	54	PASS
	2412	Ant1	2390.0	-42.38	2.0	0	52.87	PEAK	74	PASS
	2412	Ant1	2390.0	-52.60	2.0	0	42.66	AV	54	PASS
	2462	Ant1	2483.5	-42.18	2.0	0	53.08	PEAK	74	PASS
	2462	Ant1	2483.5	-52.21	2.0	0	43.05	AV	54	PASS
	2462	Ant1	2500.0	-39.35	2.0	0	55.91	PEAK	74	PASS
	2462	Ant1	2500.0	-52.22	2.0	0	43.04	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-43.68	2.0	0	51.58	PEAK	74	PASS
	2412	Ant1	2310.0	-53.48	2.0	0	41.78	AV	54	PASS
	2412	Ant1	2390.0	-41.22	2.0	0	54.04	PEAK	74	PASS
	2412	Ant1	2390.0	-52.55	2.0	0	42.70	AV	54	PASS
	2462	Ant1	2483.5	-41.64	2.0	0	53.61	PEAK	74	PASS
	2462	Ant1	2483.5	-52.24	2.0	0	43.02	AV	54	PASS
	2462	Ant1	2500.0	-41.03	2.0	0	54.23	PEAK	74	PASS
	2462	Ant1	2500.0	-52.22	2.0	0	43.03	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-42.78	2.0	0	52.48	PEAK	74	PASS
	2422	Ant1	2310.0	-53.54	2.0	0	41.72	AV	54	PASS

	2422	Ant1	2390.0	-42.25	2.0	0	53.01	PEAK	74	PASS
	2422	Ant1	2390.0	-52.48	2.0	0	42.78	AV	54	PASS
	2452	Ant1	2483.5	-42.02	2.0	0	53.23	PEAK	74	PASS
	2452	Ant1	2483.5	-52.20	2.0	0	43.06	AV	54	PASS
	2452	Ant1	2500.0	-41.43	2.0	0	53.83	PEAK	74	PASS
	2452	Ant1	2500.0	-52.36	2.0	0	42.90	AV	54	PASS

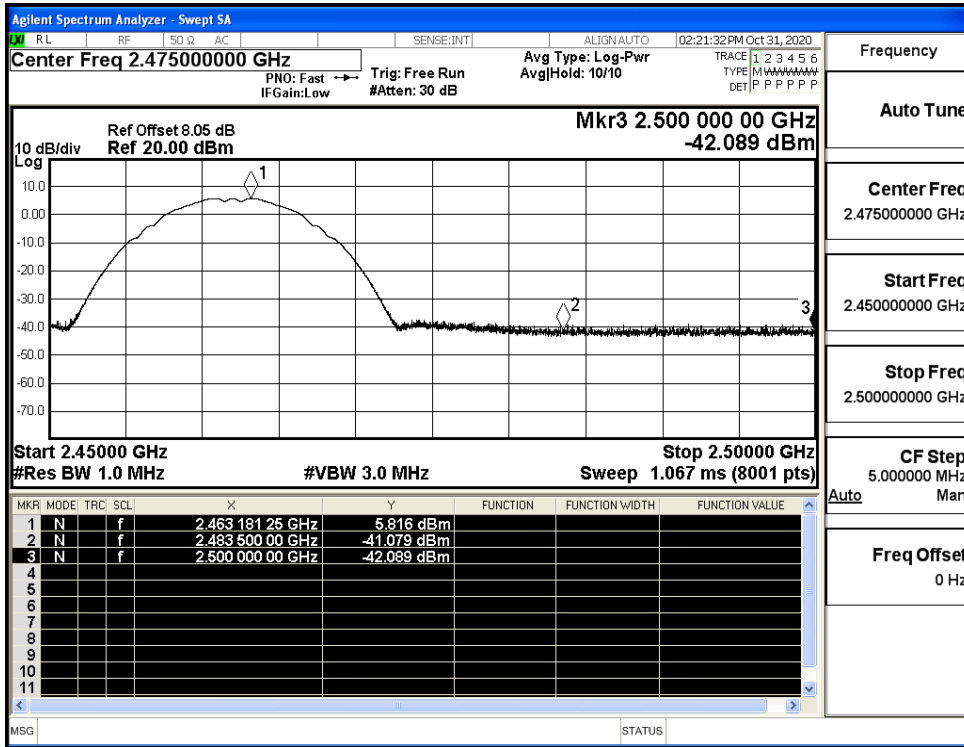
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



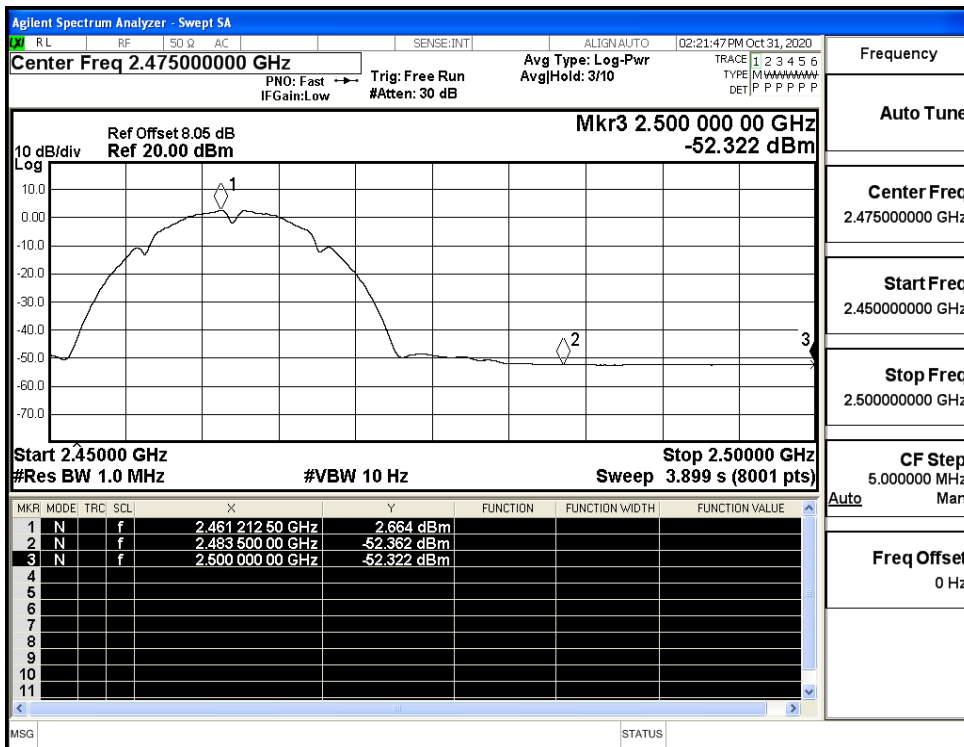
Restrict-band band-edge measurements_11B_2412_Ant1_AV



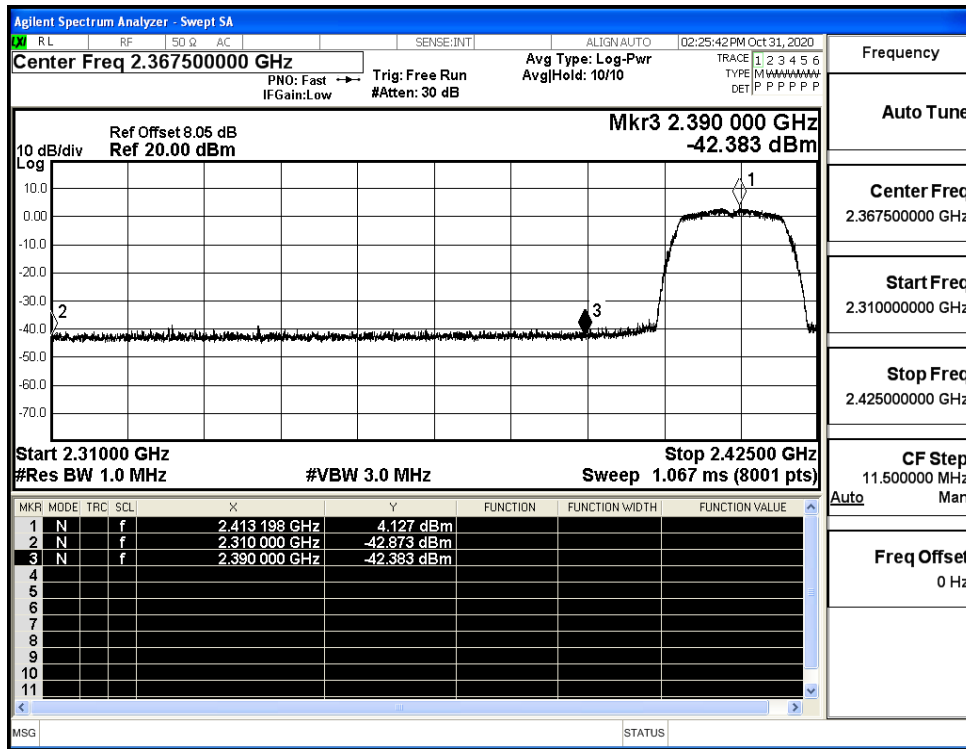
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



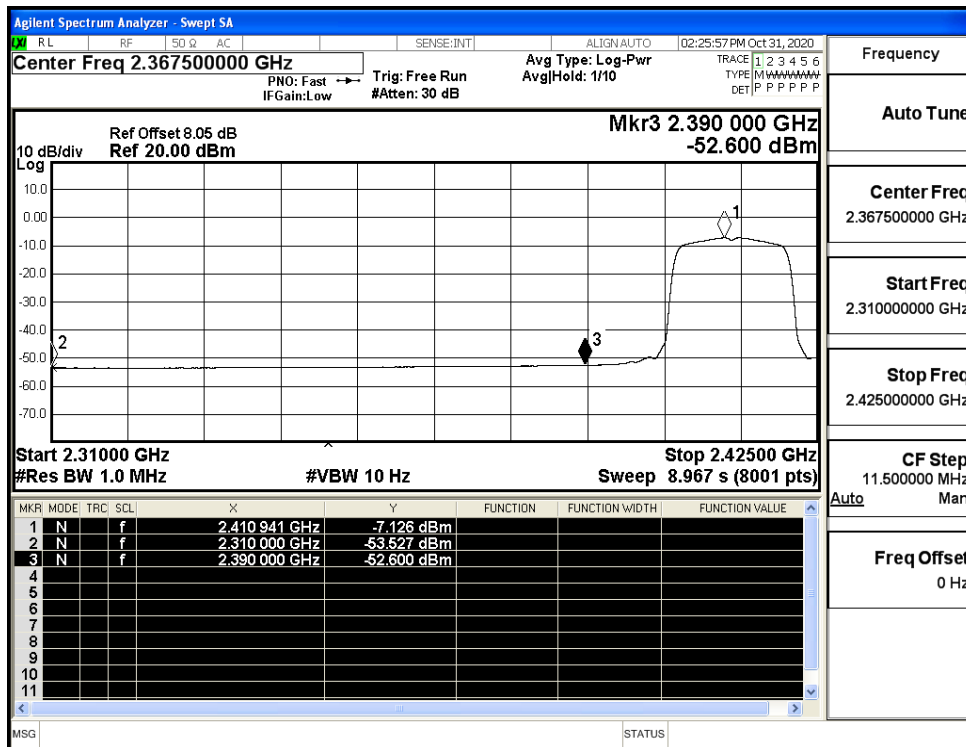
Restrict-band band-edge measurements_11B_2462_Ant1_AV



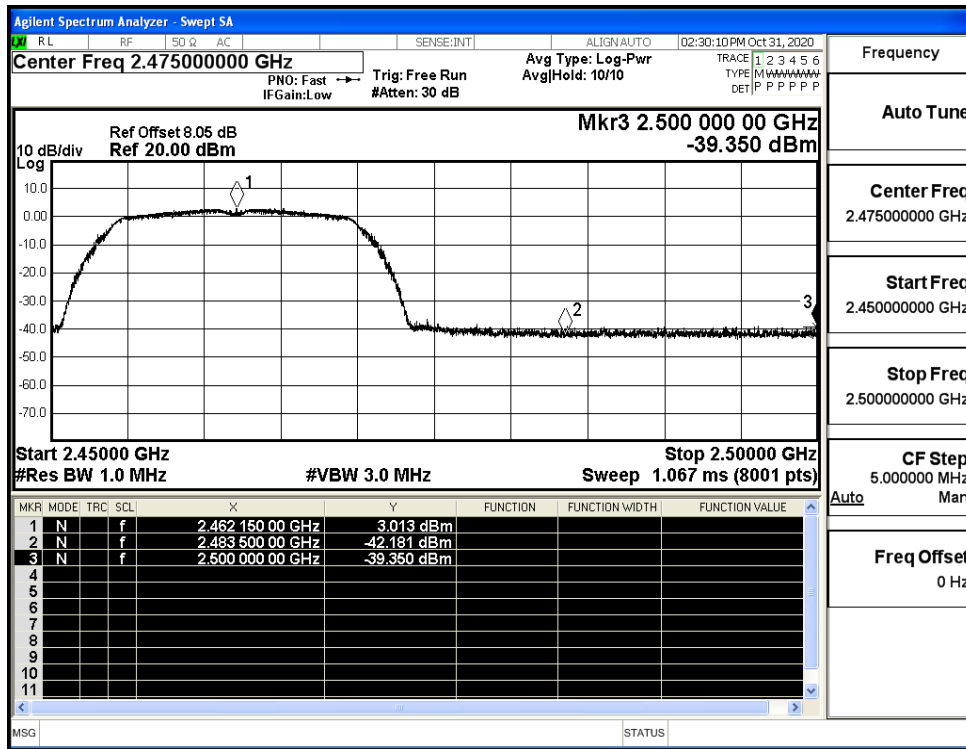
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



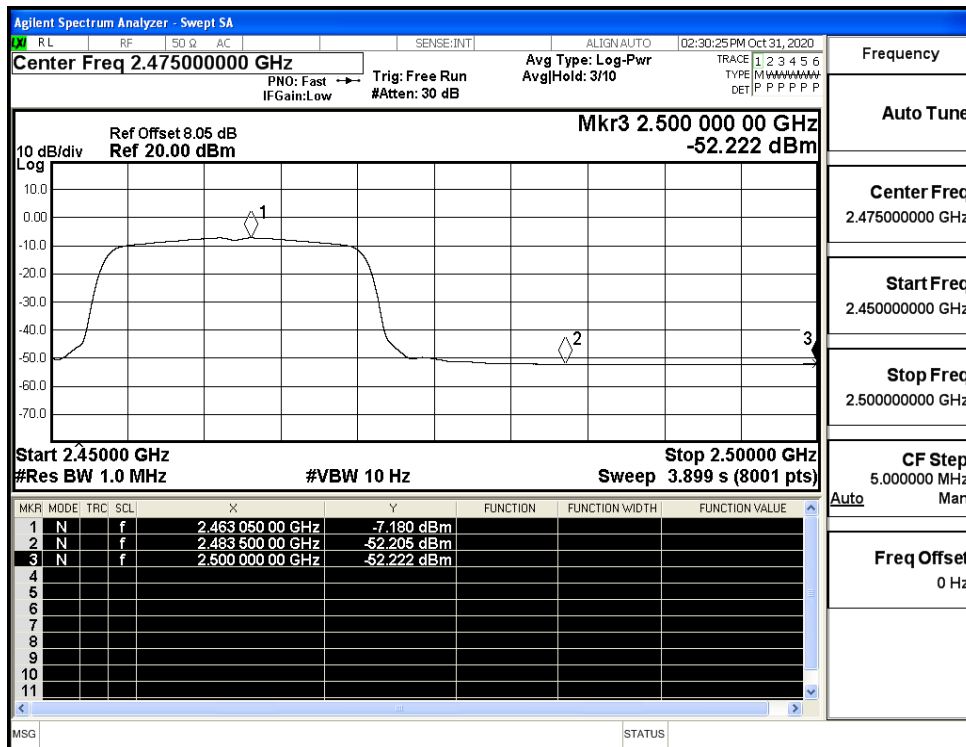
Restrict-band band-edge measurements_11G_2412_Ant1_AV



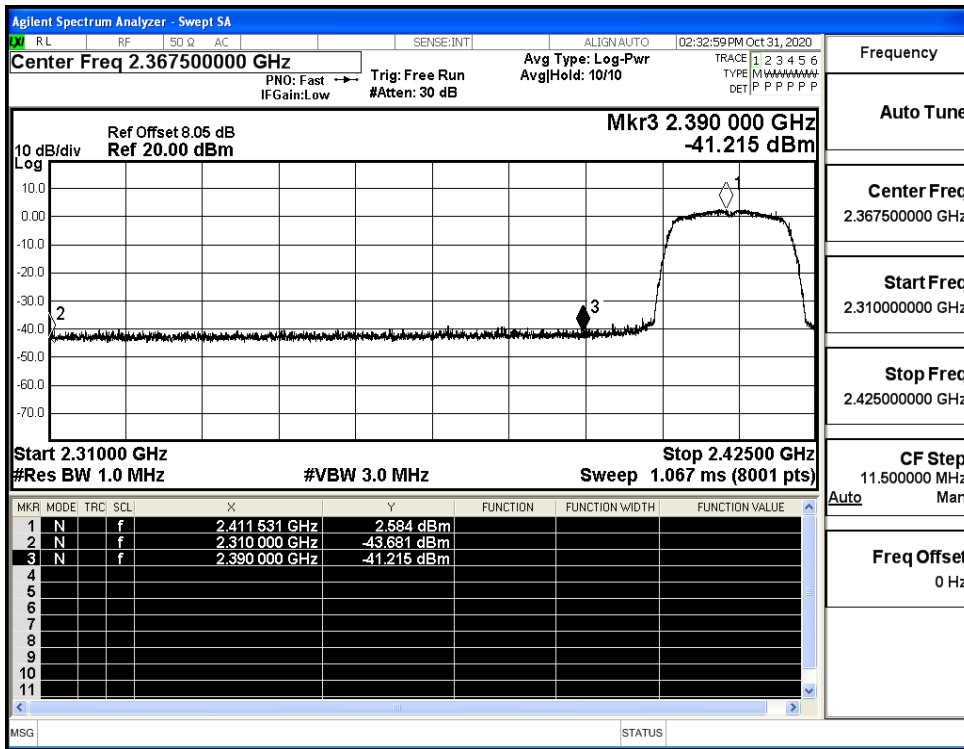
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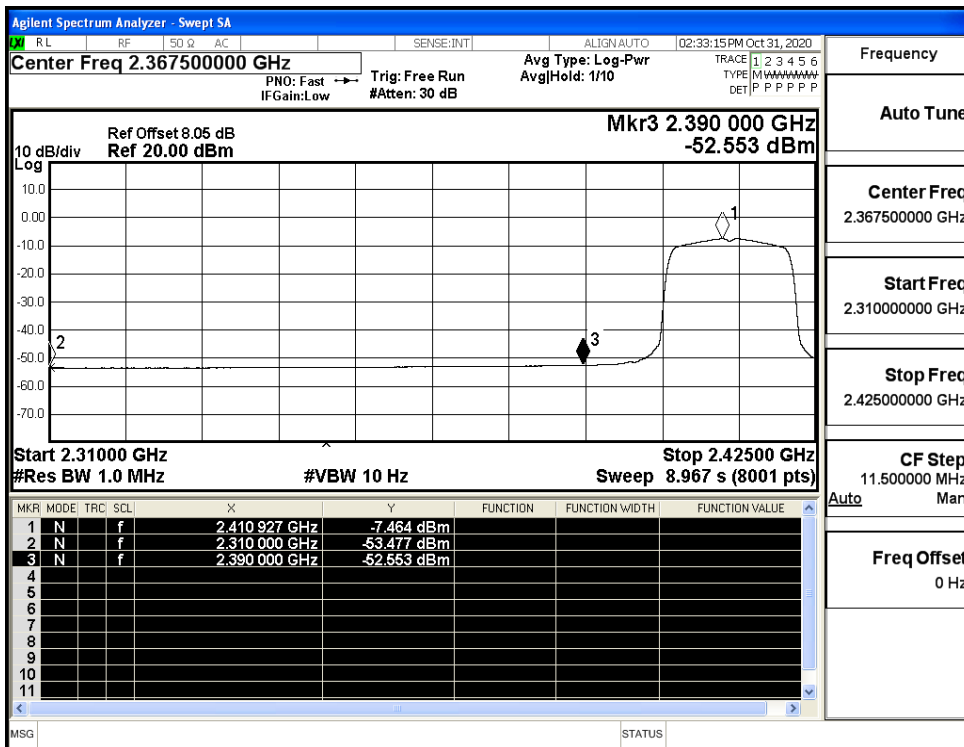
Restrict-band band-edge measurements_11G_2462_Ant1_AV



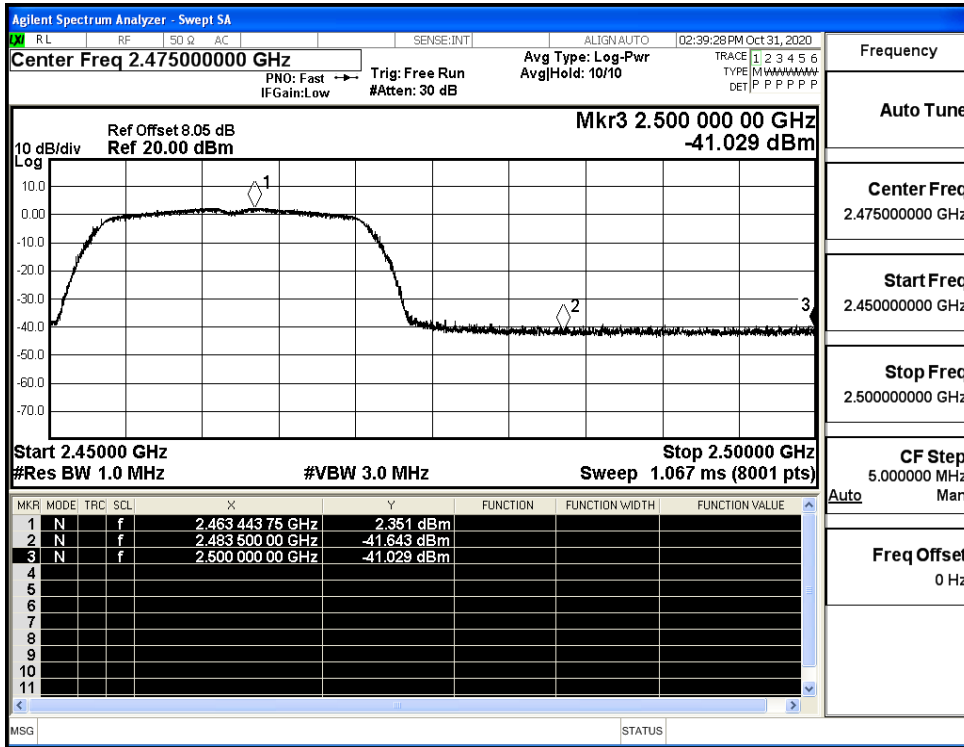
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



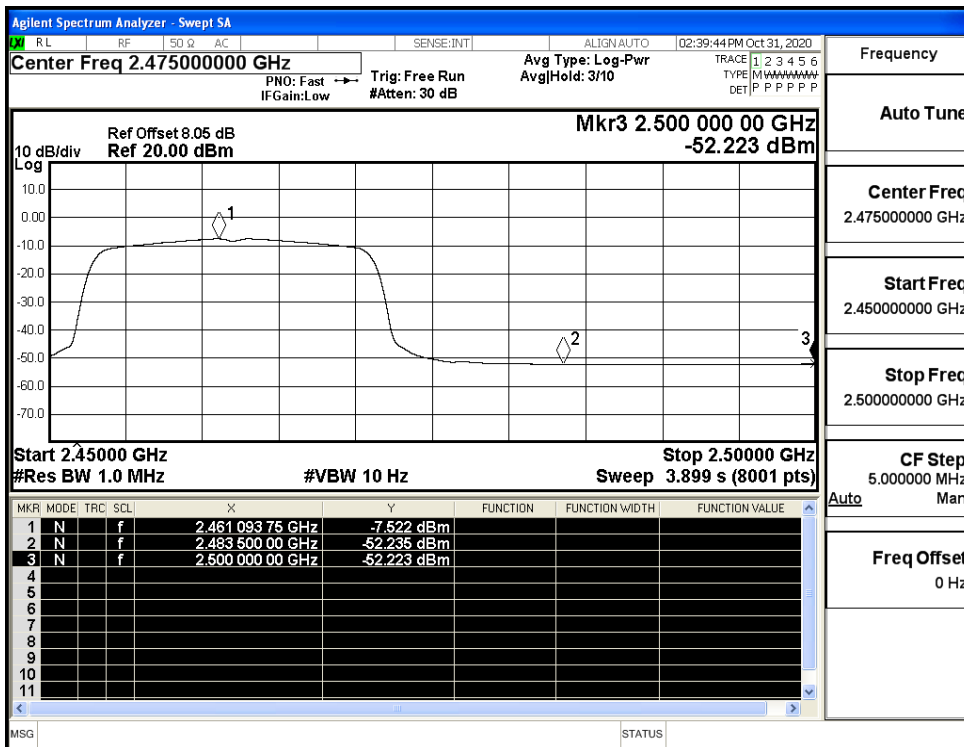
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_AV



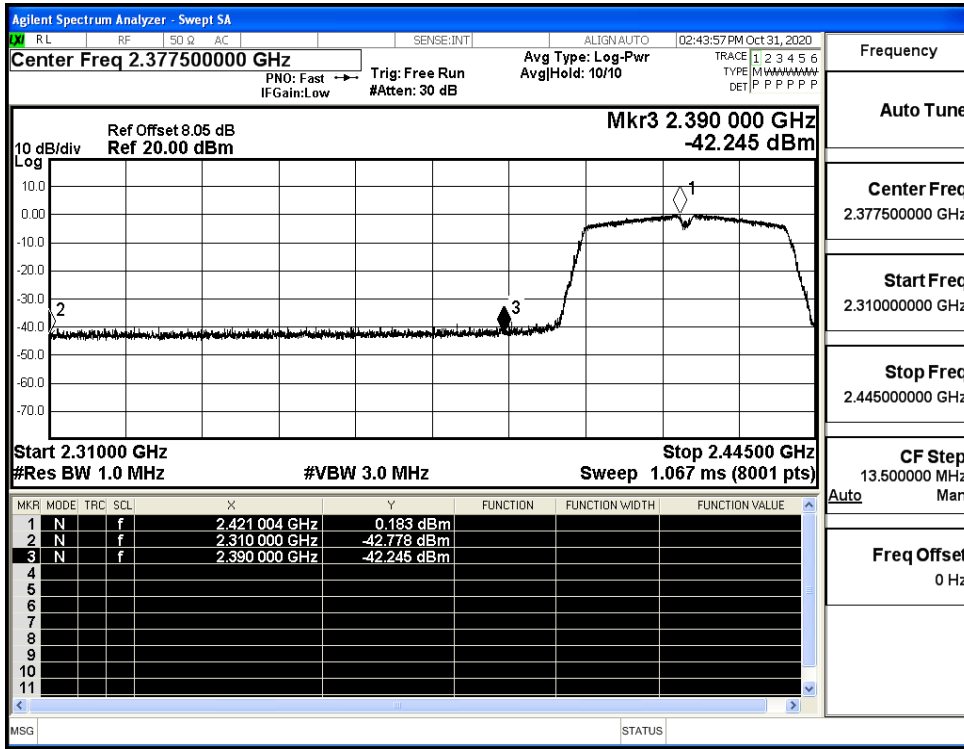
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_PEAK



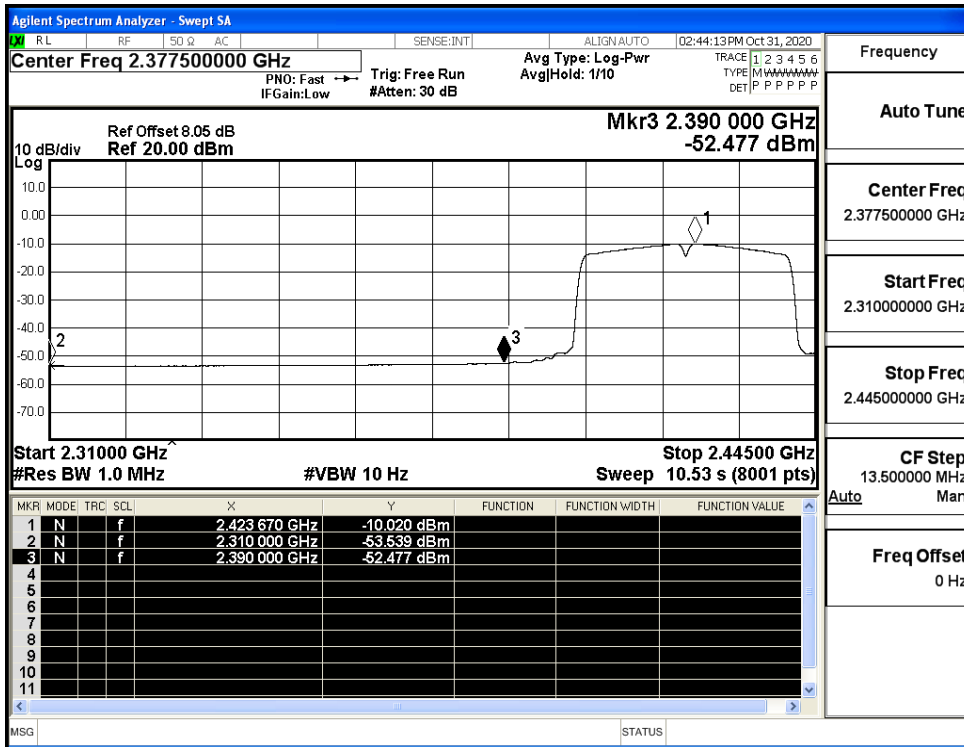
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_AV



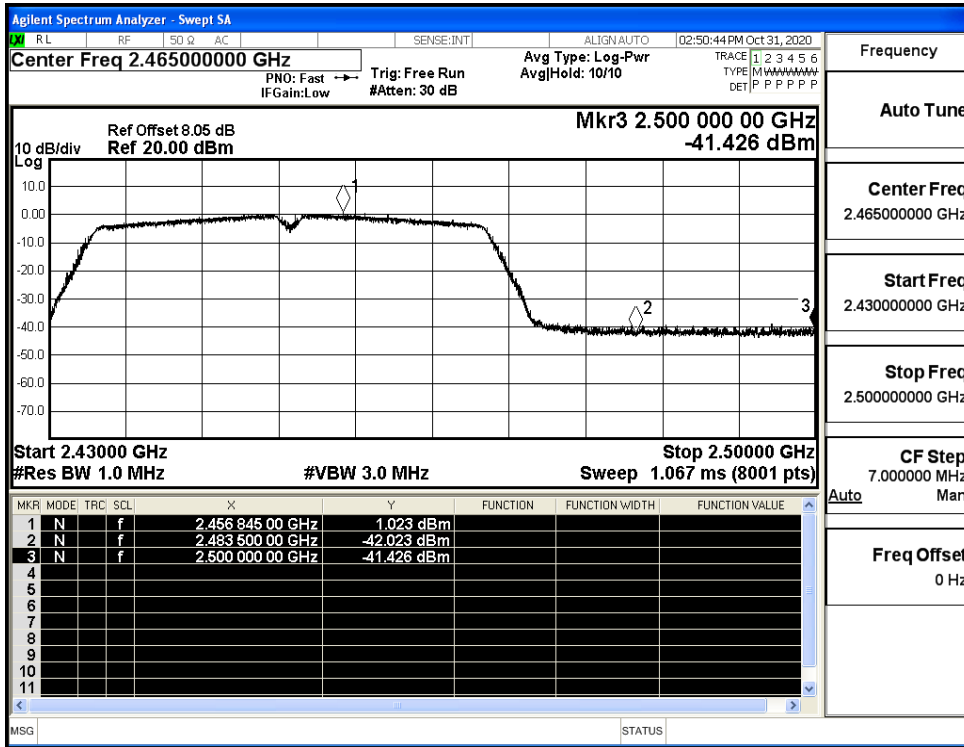
Restrict-band band-edge measurements_11N40SISO_2422_Ant1_PEAK



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

