



Appendix B

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Under-cabinet luminaires

Trade Mark: 

Test Model: GE-SMRT-UCL-30-20W-2765-WH-WFBT-01

Environmental Conditions

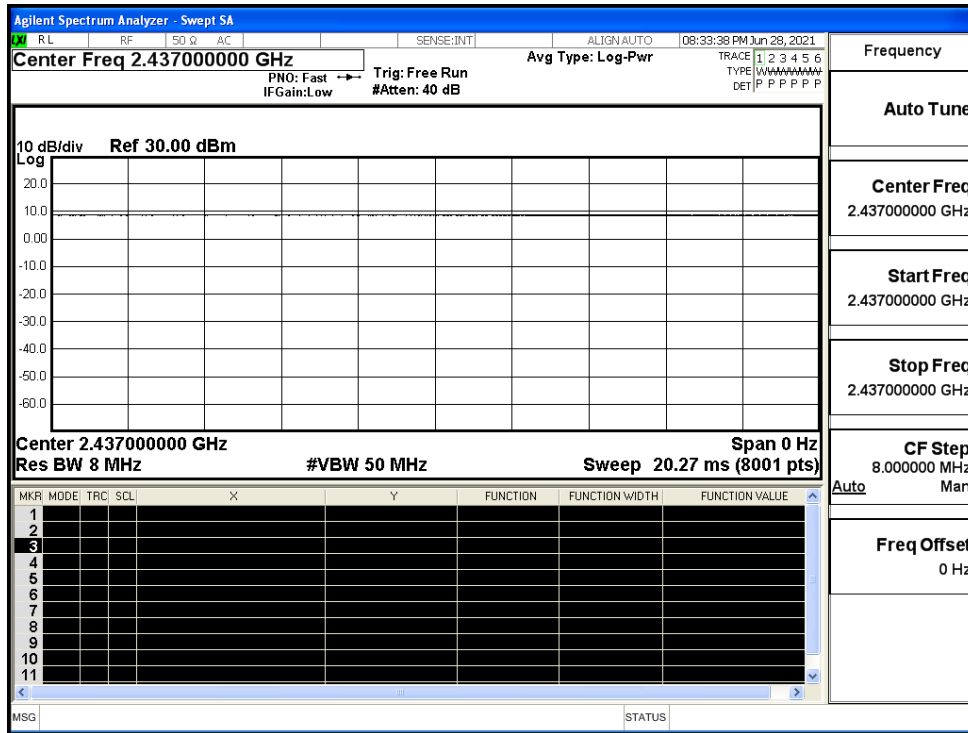
Temperature:	24.6° C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

B.1 Duty Cycle

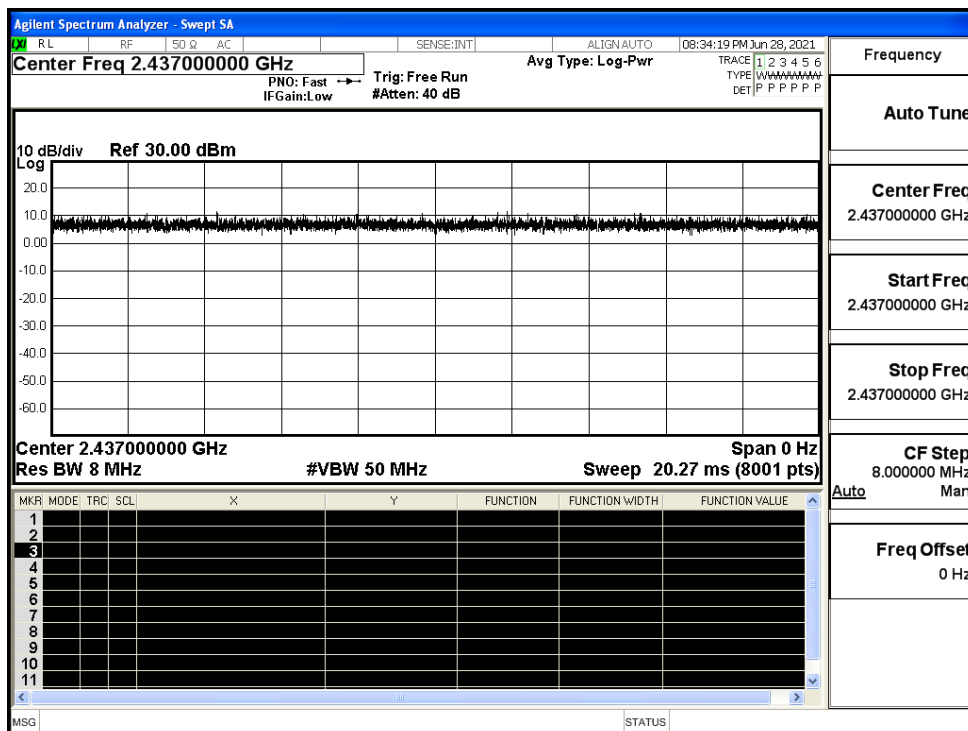
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2437	Ant1	100	PASS
11G	2437	Ant1	100	PASS
11N20SISO	2437	Ant1	100	PASS
11N40SISO	2437	Ant1	100	PASS



Duty Cycle_11B_2437_Ant1

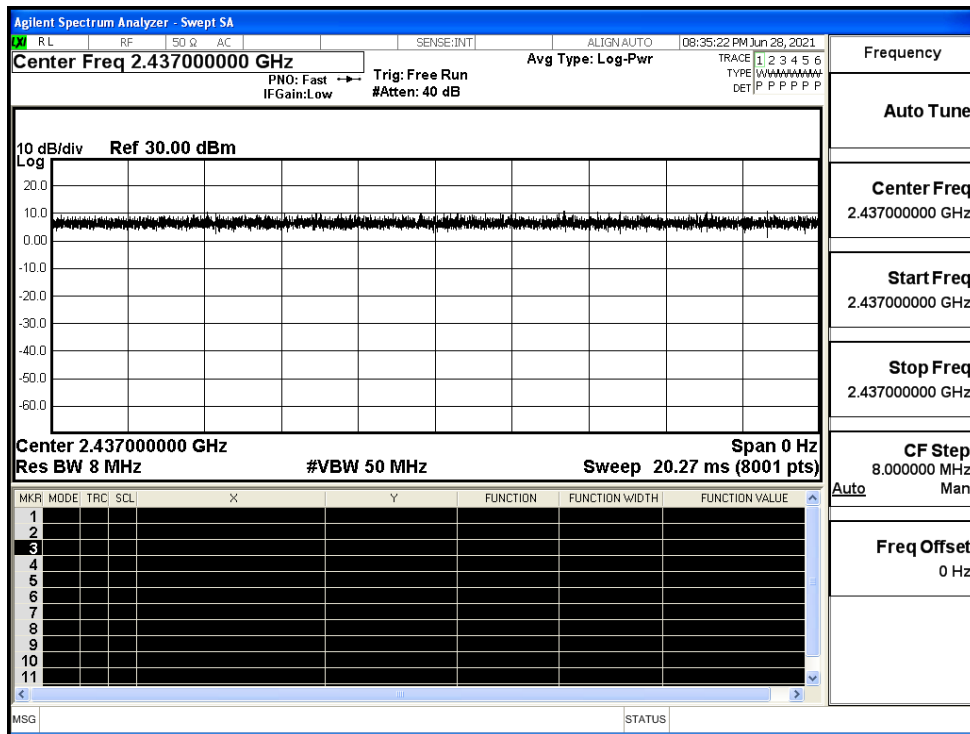


Duty Cycle_11G_2437_Ant1

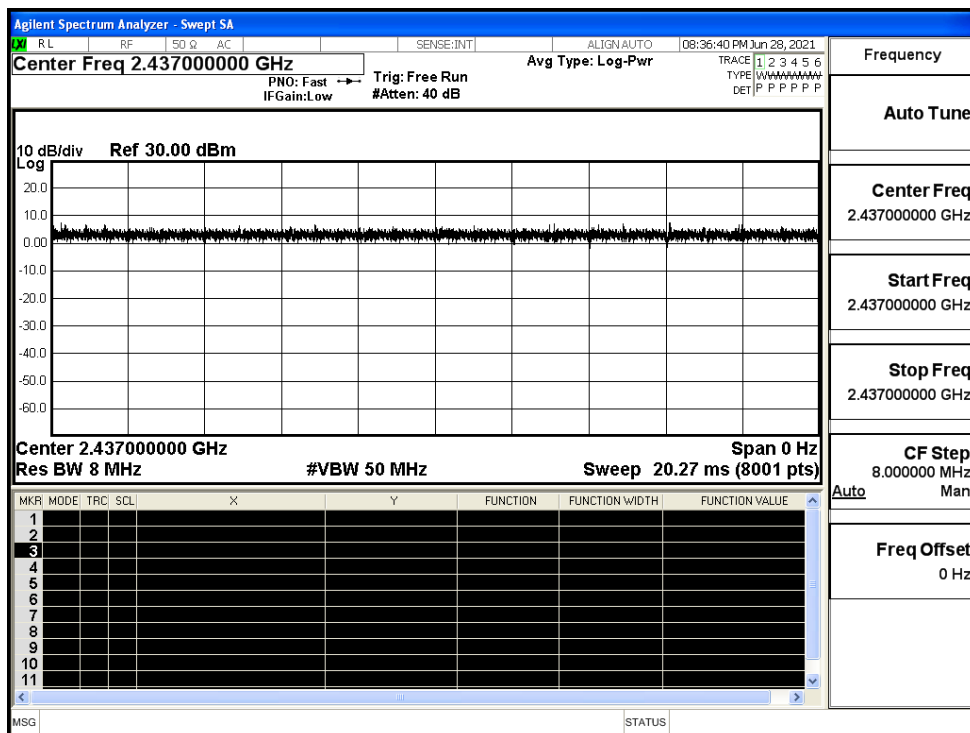




Duty Cycle_11N20SISO_2437_Ant1



Duty Cycle_11N40SISO_2437_Ant1





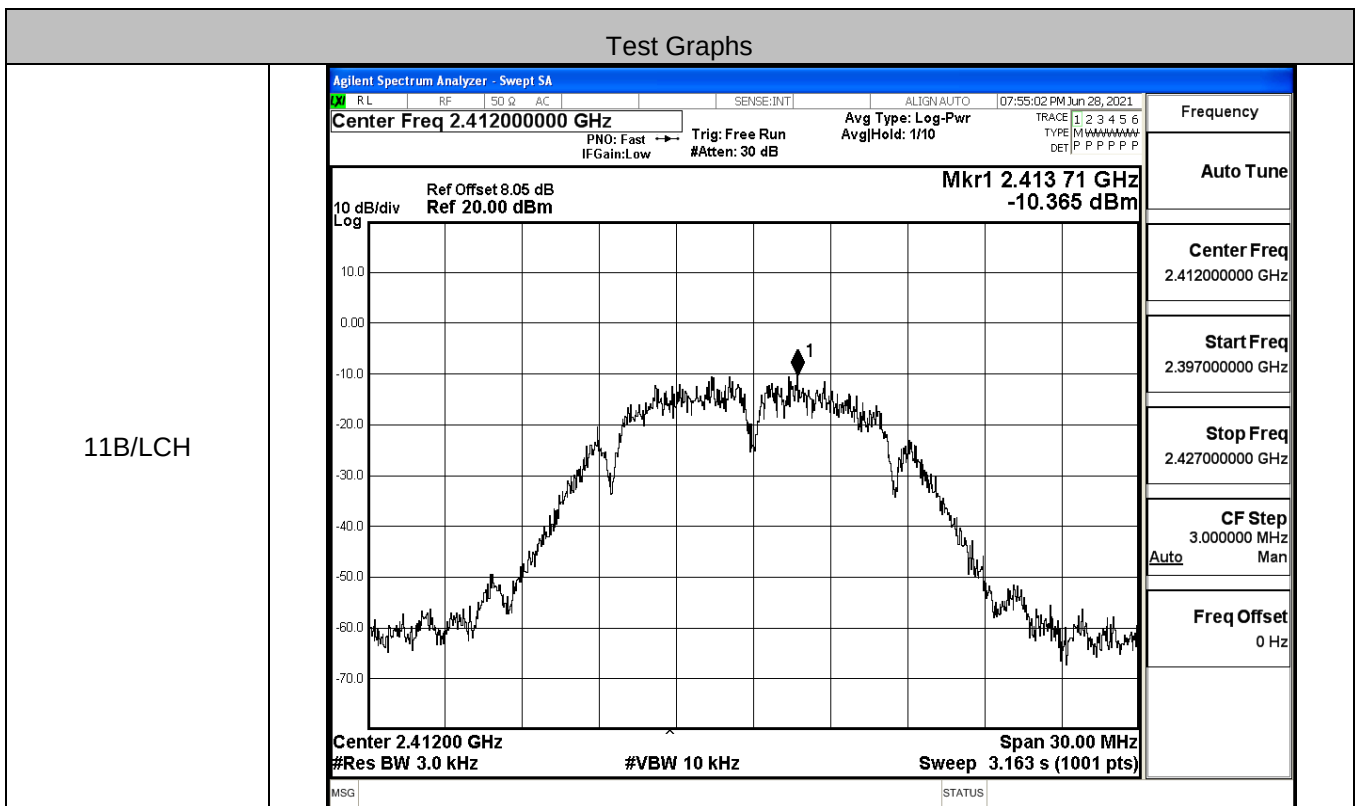
B.2 Maximum Conducted Output Power

Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	16.05	30	PASS
	MCH	16.04	30	PASS
	HCH	15.46	30	PASS
11G	LCH	17.24	30	PASS
	MCH	19.24	30	PASS
	HCH	18.82	30	PASS
11N20SISO	LCH	17.22	30	PASS
	MCH	19.38	30	PASS
	HCH	18.72	30	PASS
11N40SISO	LCH	19.28	30	PASS
	MCH	19.28	30	PASS
	HCH	19.11	30	PASS



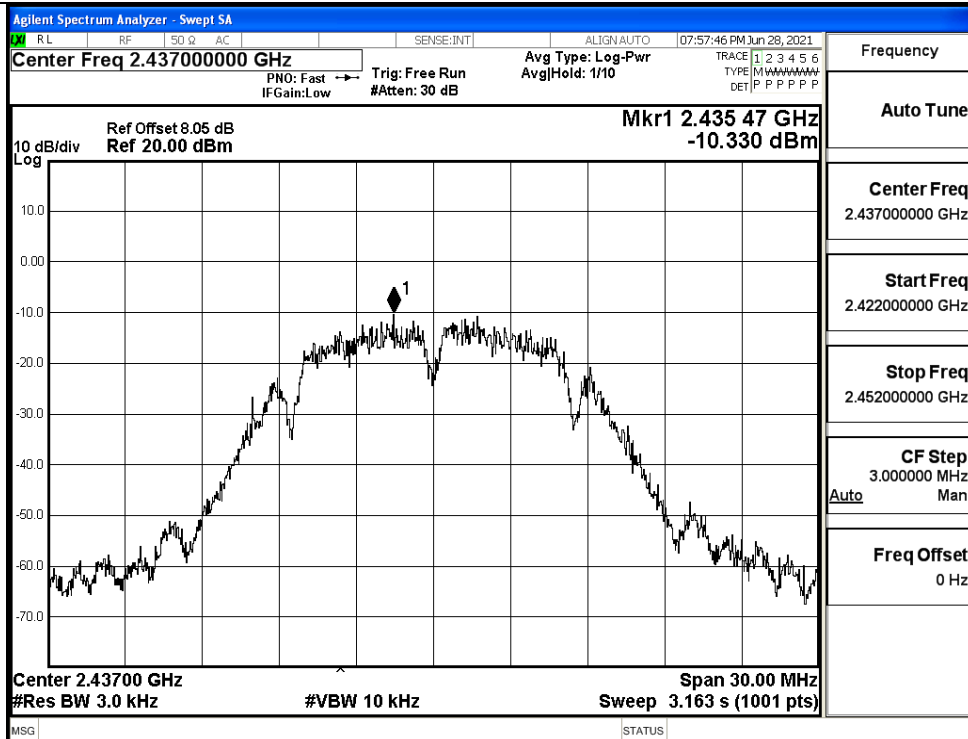
B.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-10.365	8	PASS
	MCH	-10.330	8	PASS
	HCH	-9.678	8	PASS
11G	LCH	-16.000	8	PASS
	MCH	-12.823	8	PASS
	HCH	-13.030	8	PASS
11N20SISO	LCH	-15.566	8	PASS
	MCH	-14.237	8	PASS
	HCH	-14.251	8	PASS
11N40SISO	LCH	-17.447	8	PASS
	MCH	-16.739	8	PASS
	HCH	-14.828	8	PASS

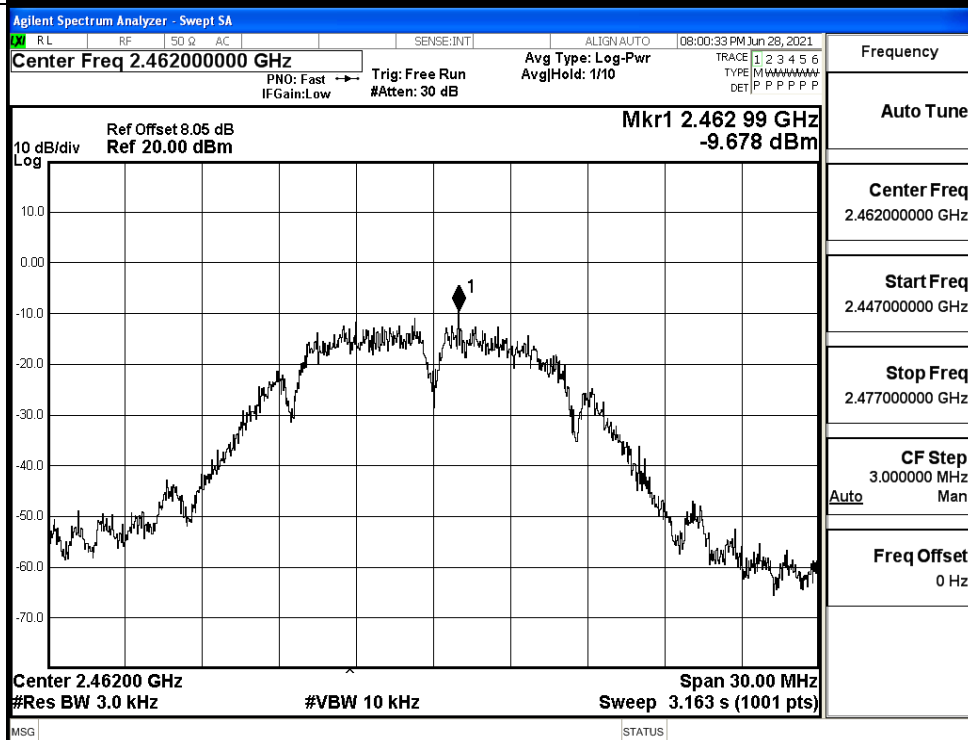




11B/MCH

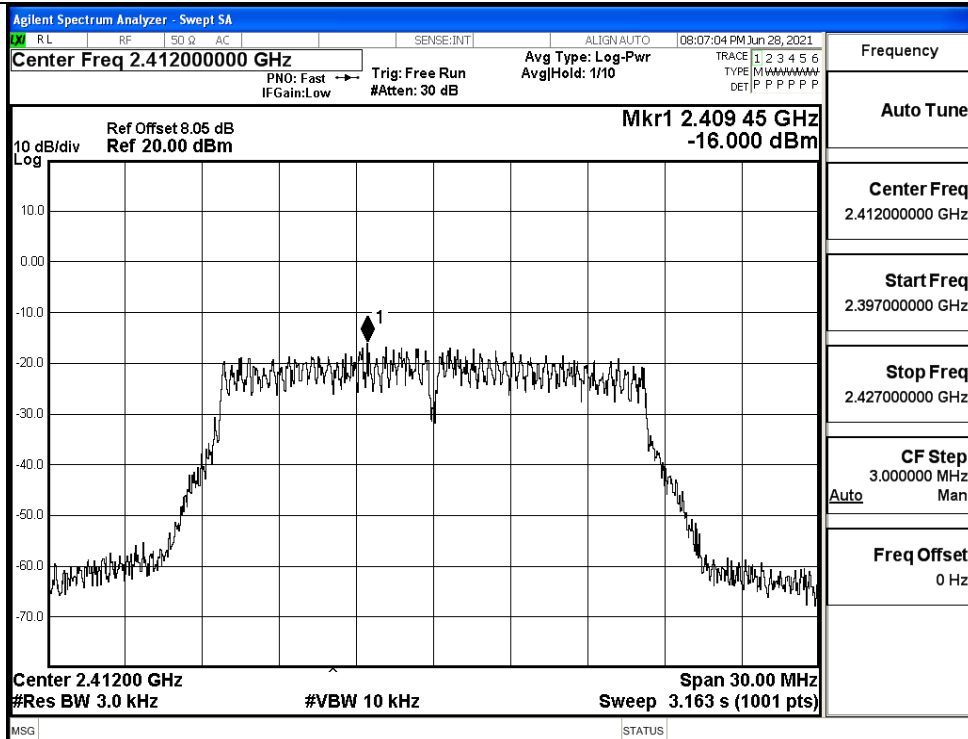


11B/HCH

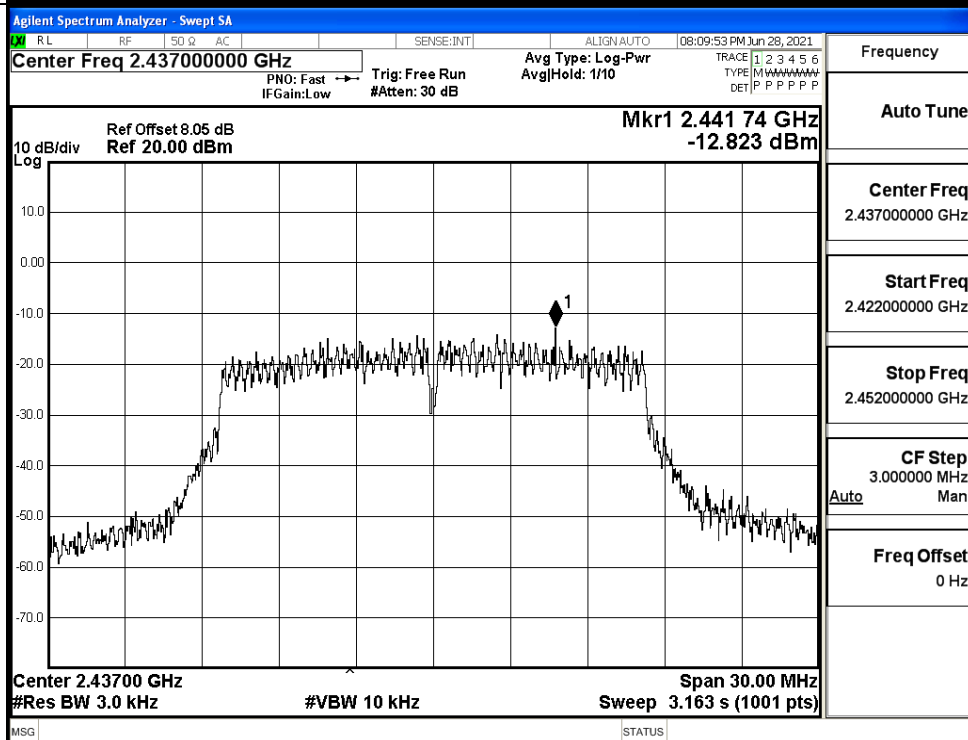




11G/LCH



11G/MCH



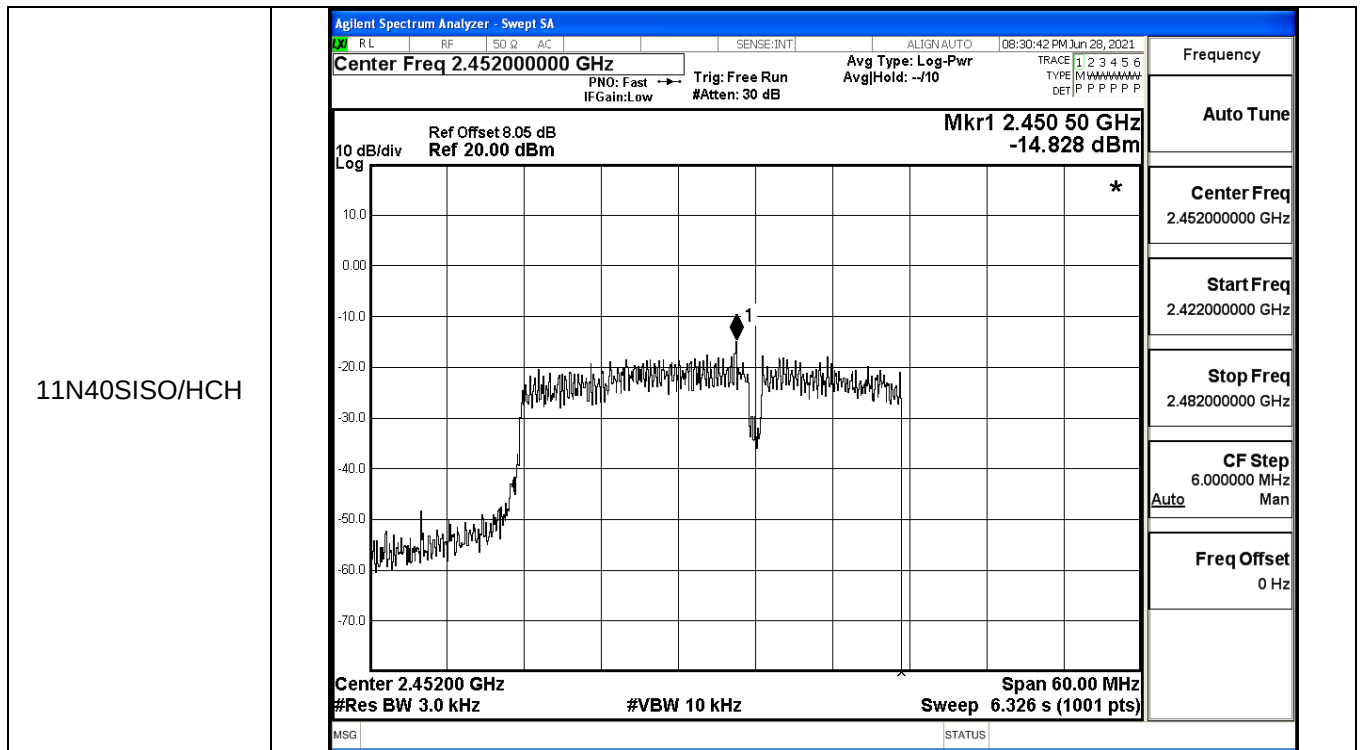


11G/HCH	Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE:INT ALIGN:AUTO 08:11:46 PM Jun 28, 2021 Center Freq 2.462000000 GHz PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr Avg/Hold: 1/10 TRACE 1 TYPE [M] W W W W W W W W DET [P] P P P P P P Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.460 47 GHz -13.030 dBm Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 3.163 s (1001 pts) MSG STATUS 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	Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE:INT ALIGN:AUTO 08:17:10 PM Jun 28, 2021 Center Freq 2.412000000 GHz PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr Avg/Hold: 1/10 TRACE 1 TYPE [M] W W W W W W W W DET [P] P P P P P P Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.410 74 GHz -15.566 dBm Center 2.41200 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 3.163 s (1001 pts) MSG STATUS 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

Page 9 of 46



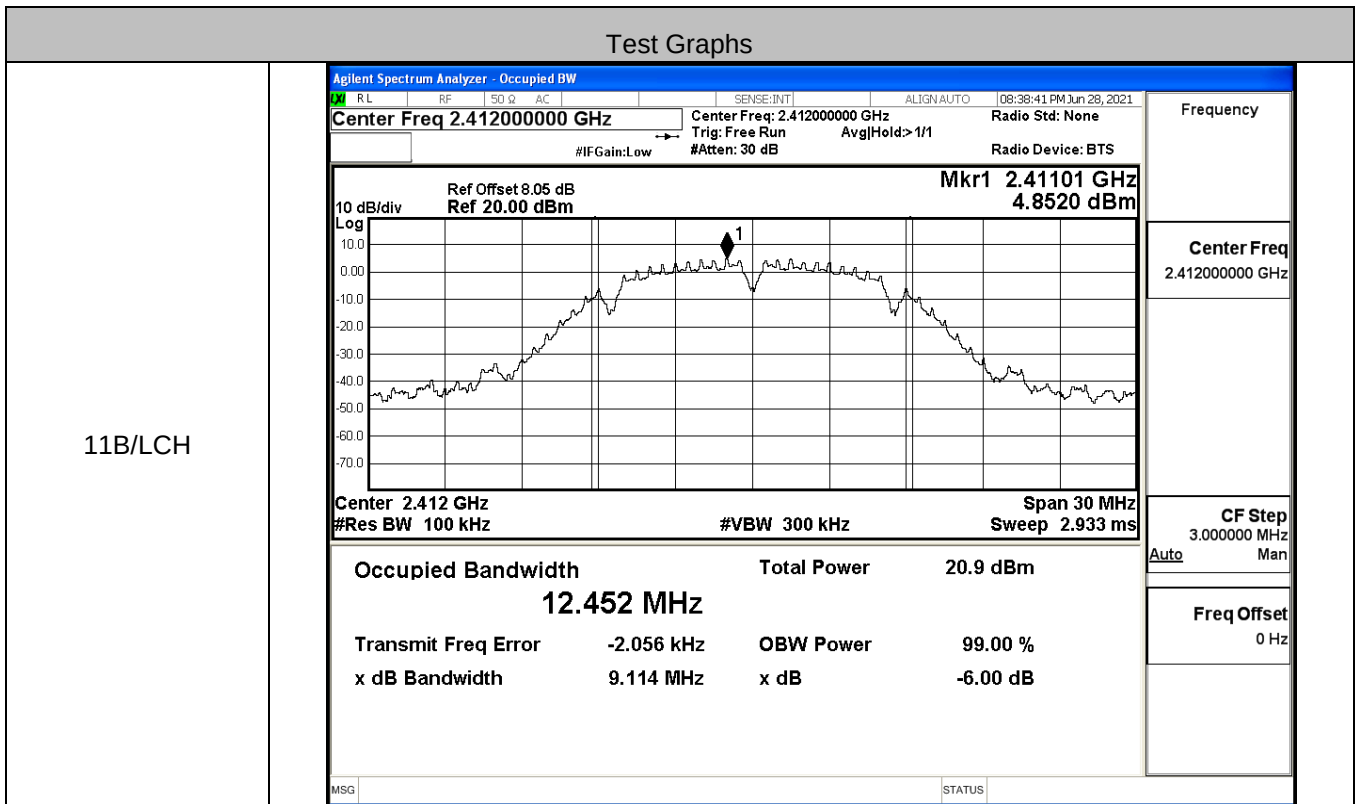
11N40SISO/LCH	Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE:INT ALIGN:Auto 08:26:06 PM Jun 28, 2021 Center Freq 2.422000000 GHz PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr Avg/Hold: --10 TRACE 1 2 3 4 5 6 TYPE [M] W [W] W [W] W [W] W [W] W [W] DET [P] P P P P P P P Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.423 56 GHz -17.447 dBm Center 2.42200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 60.00 MHz Sweep 6.326 s (1001 pts) MSG STATUS Frequency Auto Tune Center Freq 2.422000000 GHz Start Freq 2.392000000 GHz Stop Freq 2.452000000 GHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz
11N40SISO/MCH	Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENSE:INT ALIGN:Auto 08:28:58 PM Jun 28, 2021 Center Freq 2.437000000 GHz PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr Avg/Hold: --10 TRACE 1 2 3 4 5 6 TYPE [M] W [W] W [W] W [W] W [W] DET [P] P P P P P P P Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.442 64 GHz -16.739 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 60.00 MHz Sweep 6.326 s (1001 pts) MSG STATUS Frequency Auto Tune Center Freq 2.437000000 GHz Start Freq 2.407000000 GHz Stop Freq 2.467000000 GHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz





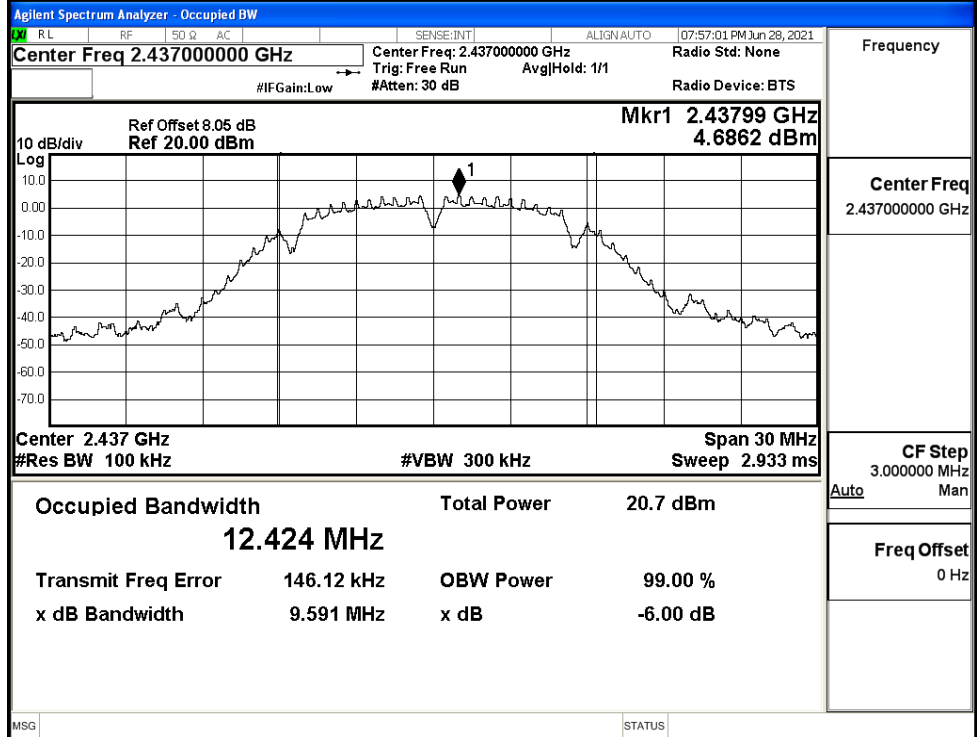
B.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.114	≥ 0.5	PASS
	MCH	9.591	≥ 0.5	PASS
	HCH	9.123	≥ 0.5	PASS
11G	LCH	15.47	≥ 0.5	PASS
	MCH	14.27	≥ 0.5	PASS
	HCH	15.77	≥ 0.5	PASS
11N20SISO	LCH	16.25	≥ 0.5	PASS
	MCH	16.07	≥ 0.5	PASS
	HCH	16.35	≥ 0.5	PASS
11N40SISO	LCH	35.73	≥ 0.5	PASS
	MCH	35.18	≥ 0.5	PASS
	HCH	35.12	≥ 0.5	PASS

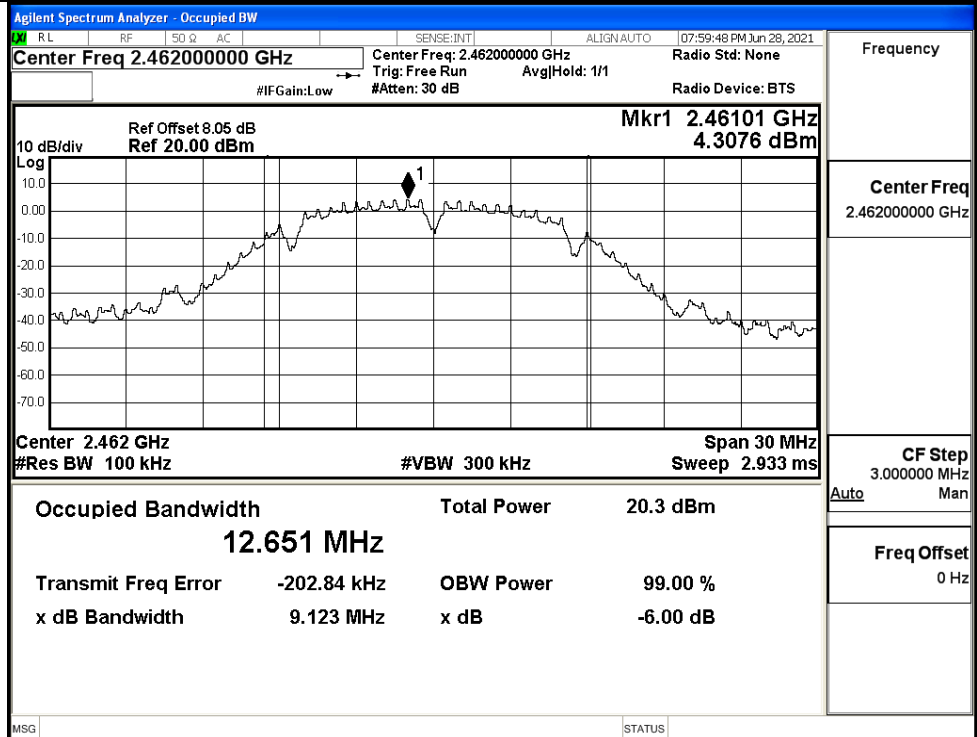




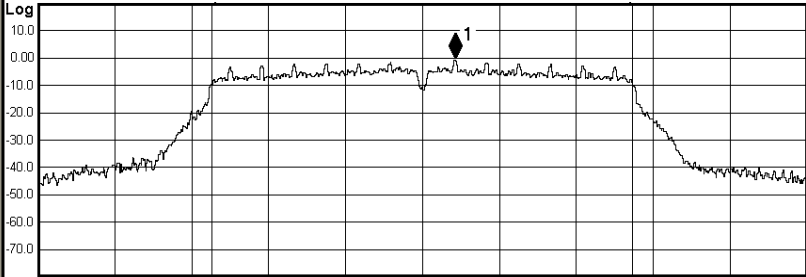
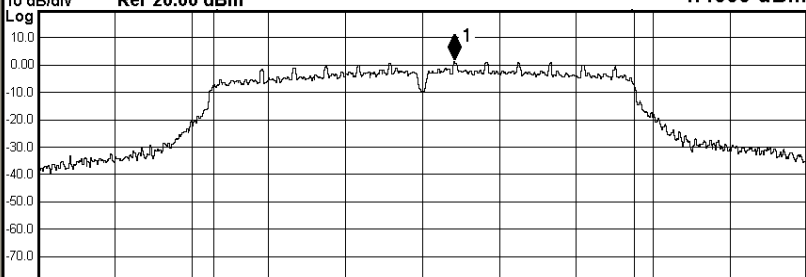
11B/MCH



11B/HCH

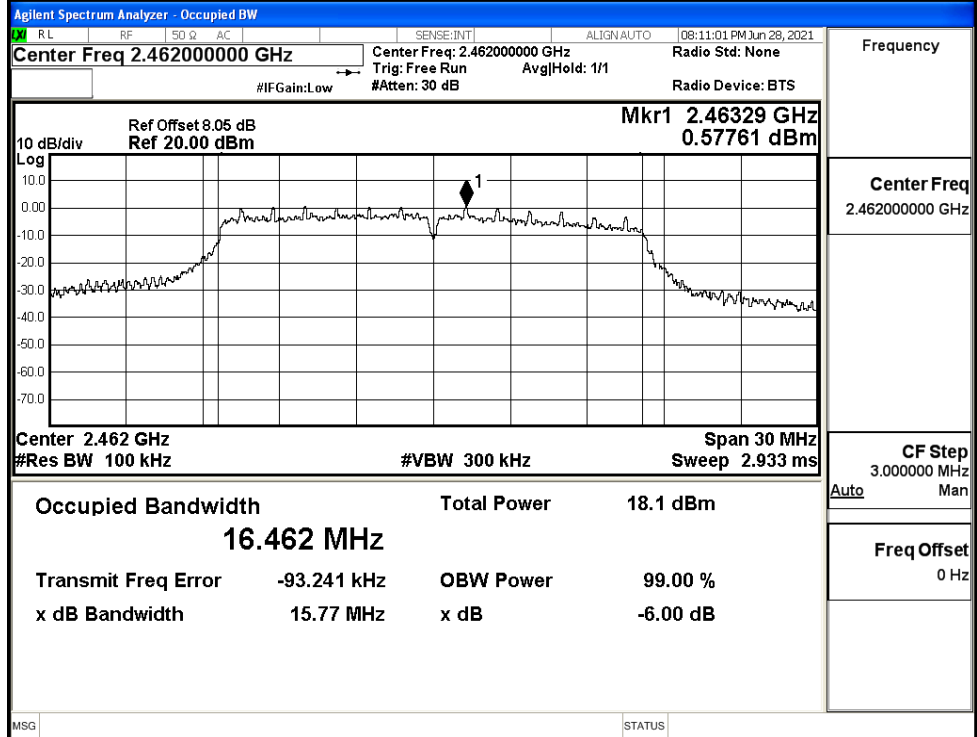




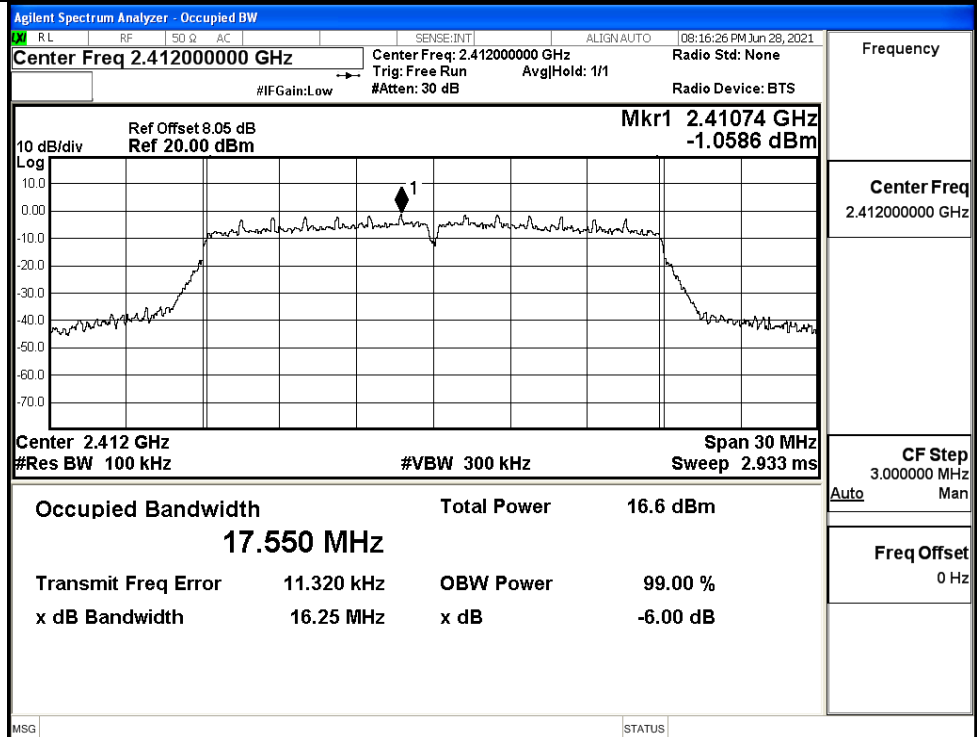
11G/LCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 08:06:19 PM Jun 28, 2021 Center Freq 2.412000000 GHz Center Freq: 2.412000000 GHz Radio Std: None #IF Gain: Low Trig: Free Run Avg/Hold: 1/1 Radio Device: BTS 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.41329 GHz -0.62146 dBm  Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth Total Power 16.5 dBm 16.381 MHz Transmit Freq Error -1.872 kHz OBW Power 99.00 % x dB Bandwidth 15.47 MHz x dB -6.00 dB MSG STATUS	Frequency Center Freq 2.412000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
11G/MCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 08:09:09 PM Jun 28, 2021 Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Radio Std: None #IF Gain: Low Trig: Free Run Avg/Hold: 1/1 Radio Device: BTS 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.43823 GHz 1.4053 dBm  Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth Total Power 18.7 dBm 16.393 MHz Transmit Freq Error 56.507 kHz OBW Power 99.00 % x dB Bandwidth 14.27 MHz x dB -6.00 dB MSG STATUS	Frequency Center Freq 2.437000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz



11G/HCH



11N20SISO/LCH

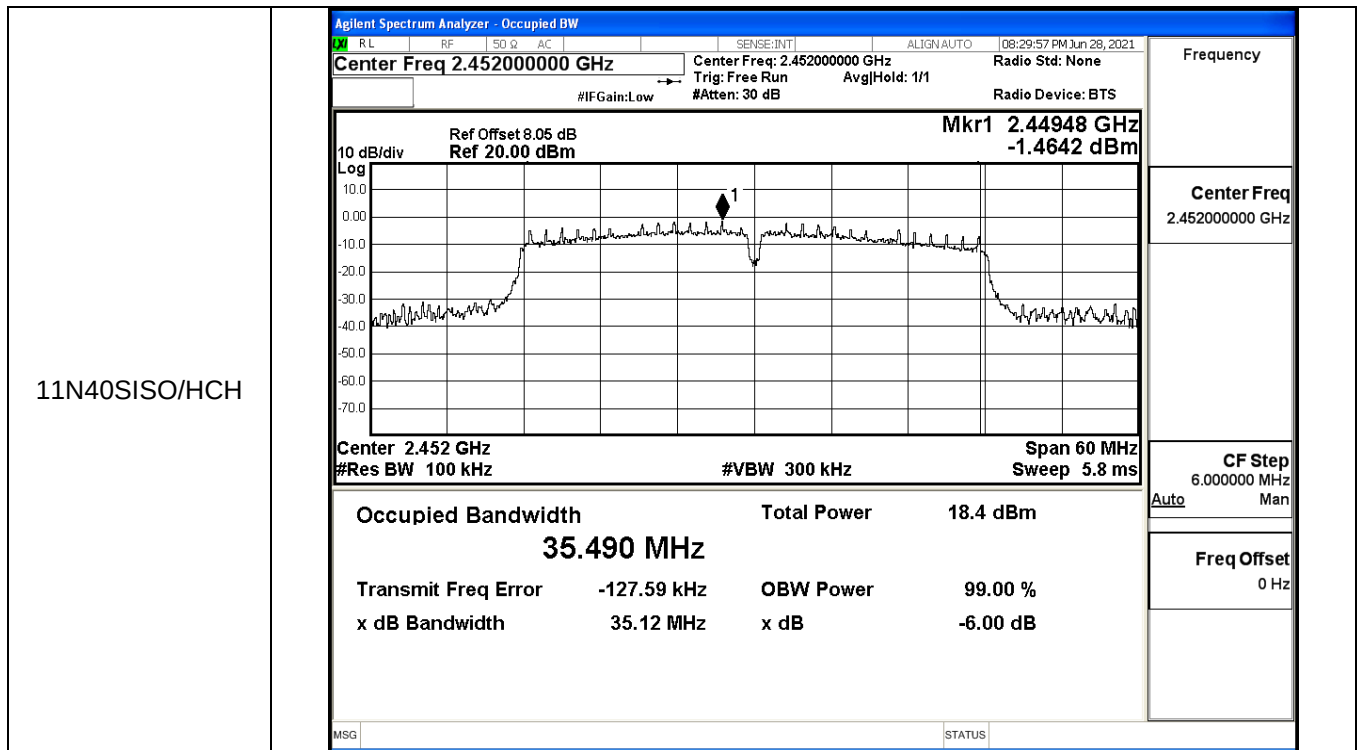




11N20SISO/MCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 08:19:21 PM Jun 28, 2021 Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Radio Std: None #IF Gain: Low Trig: Free Run Avg/Hold: 1/1 #Atten: 30 dB Radio Device: BTS 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.43829 GHz 1.5696 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth Total Power 18.4 dBm 17.549 MHz Transmit Freq Error 56.439 kHz OBW Power 99.00 % x dB Bandwidth 16.07 MHz x dB -6.00 dB MSG STATUS	Frequency Center Freq 2.437000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
11N20SISO/HCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 08:21:09 PM Jun 28, 2021 Center Freq 2.462000000 GHz Center Freq: 2.462000000 GHz Radio Std: None #IF Gain: Low Trig: Free Run Avg/Hold: 1/1 #Atten: 30 dB Radio Device: BTS 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.46074 GHz 0.60740 dBm Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth Total Power 18.1 dBm 17.583 MHz Transmit Freq Error -75.141 kHz OBW Power 99.00 % x dB Bandwidth 16.35 MHz x dB -6.00 dB MSG STATUS	Frequency Center Freq 2.462000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz



11N40SISO/LCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 08:25:21 PM Jun 28, 2021 Center Freq 2.422000000 GHz Center Freq: 2.422000000 GHz Trig: Free Run #Atten: 30 dB Radio Std: None Radio Device: BTS 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.43328 GHz -2.2149 dBm Center 2.422 GHz #Res BW 100 kHz #VBW 300 kHz Span 60 MHz Sweep 5.8 ms Occupied Bandwidth Total Power 18.5 dBm 35.920 MHz Transmit Freq Error 121.32 kHz OBW Power 99.00 % x dB Bandwidth 35.73 MHz x dB -6.00 dB MSG STATUS	Frequency Center Freq 2.422000000 GHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz
11N40SISO/MCH	Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 08:28:13 PM Jun 28, 2021 Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Trig: Free Run #Atten: 30 dB Radio Std: None Radio Device: BTS 10 dB/div Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.44198 GHz -1.8581 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 60 MHz Sweep 5.8 ms Occupied Bandwidth Total Power 18.5 dBm 35.675 MHz Transmit Freq Error 139.72 kHz OBW Power 99.00 % x dB Bandwidth 35.18 MHz x dB -6.00 dB MSG STATUS	Frequency Center Freq 2.437000000 GHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz





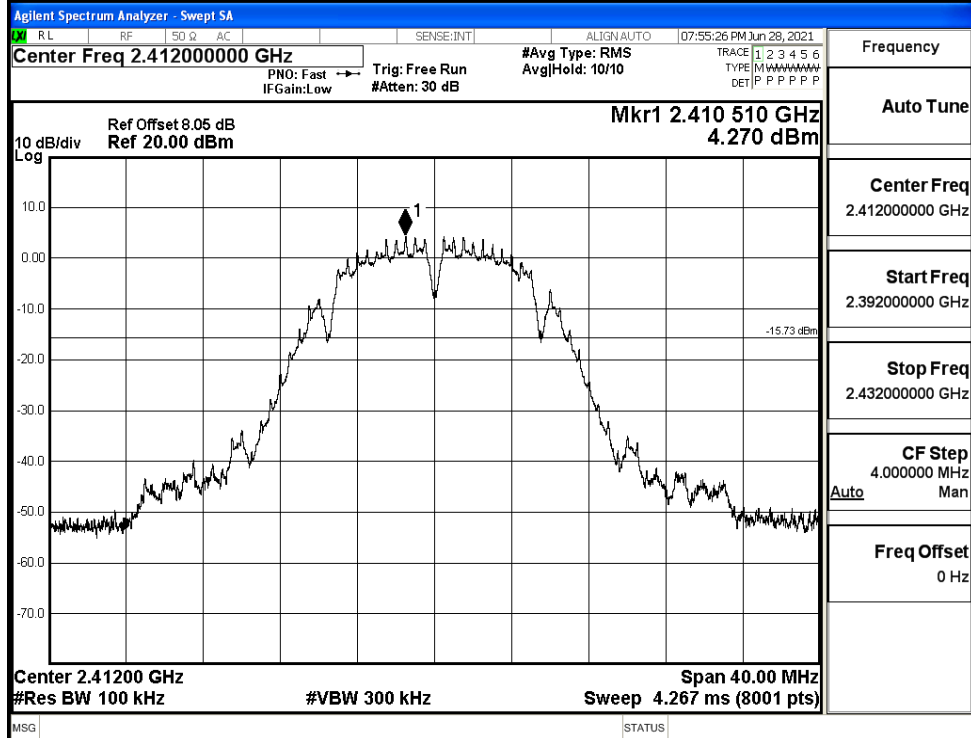
B.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	4.27	-38.046	-15.730	PASS
	MCH	4.276	-38.493	-15.724	PASS
	HCH	4.268	-37.598	-15.732	PASS
11G	LCH	-1.072	-38.244	-21.072	PASS
	MCH	0.857	-37.685	-19.143	PASS
	HCH	0.632	-37.188	-19.368	PASS
11N20 SISO	LCH	-0.584	-37.168	-20.584	PASS
	MCH	1.506	-37.175	-18.494	PASS
	HCH	0.65	-38.392	-19.350	PASS
11N40 SISO	LCH	-2.283	-37.701	-22.283	PASS
	MCH	-1.915	-37.351	-21.915	PASS
	HCH	-1.5	-37.145	-21.500	PASS

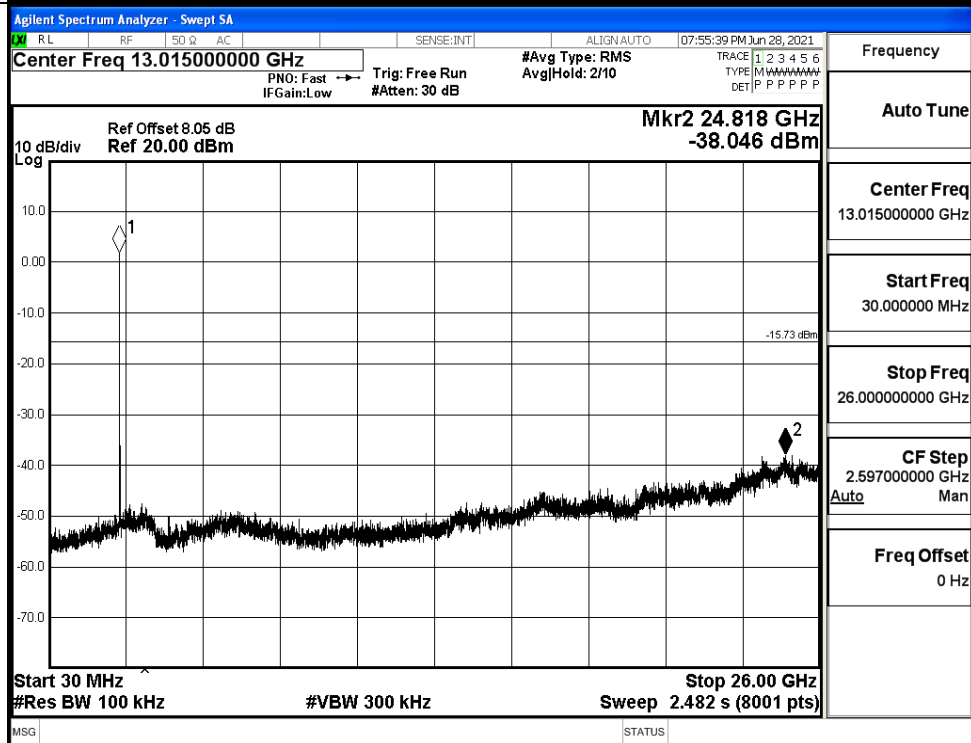


11B LCH Graphs

Pref/11B/LCH



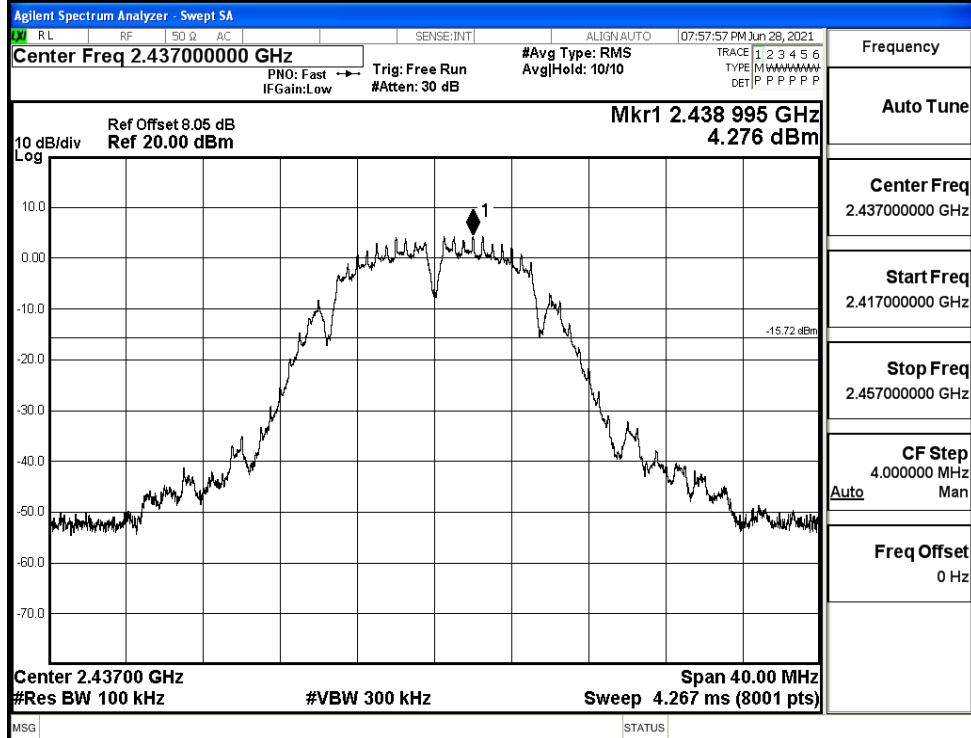
Puw/11B/LCH



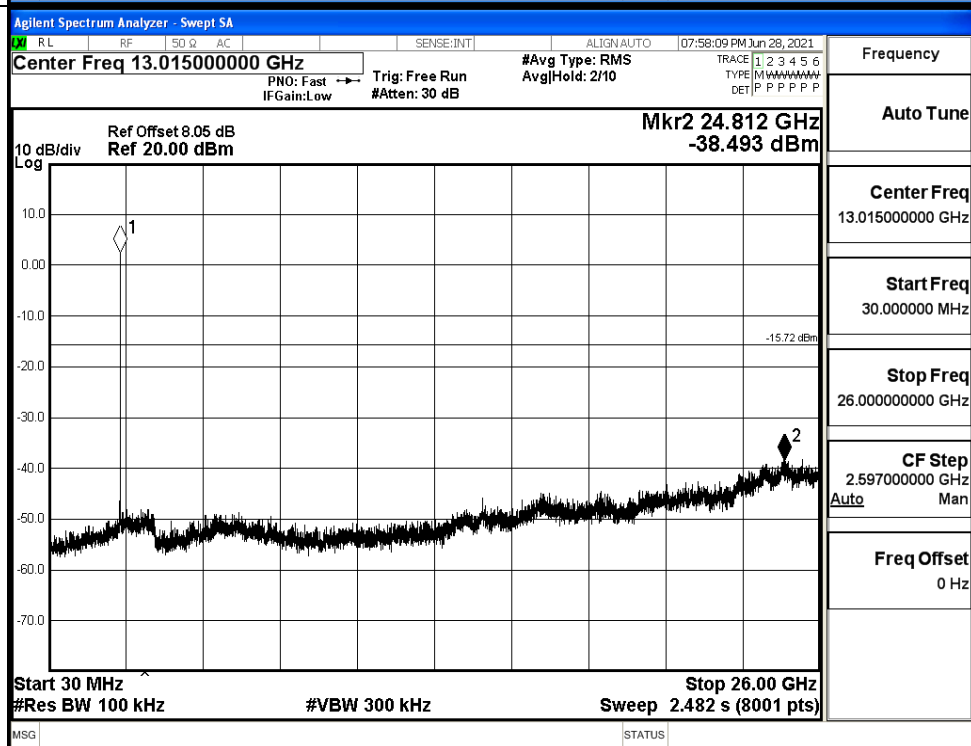


11B MCH Graphs

Pref/11B/MCH



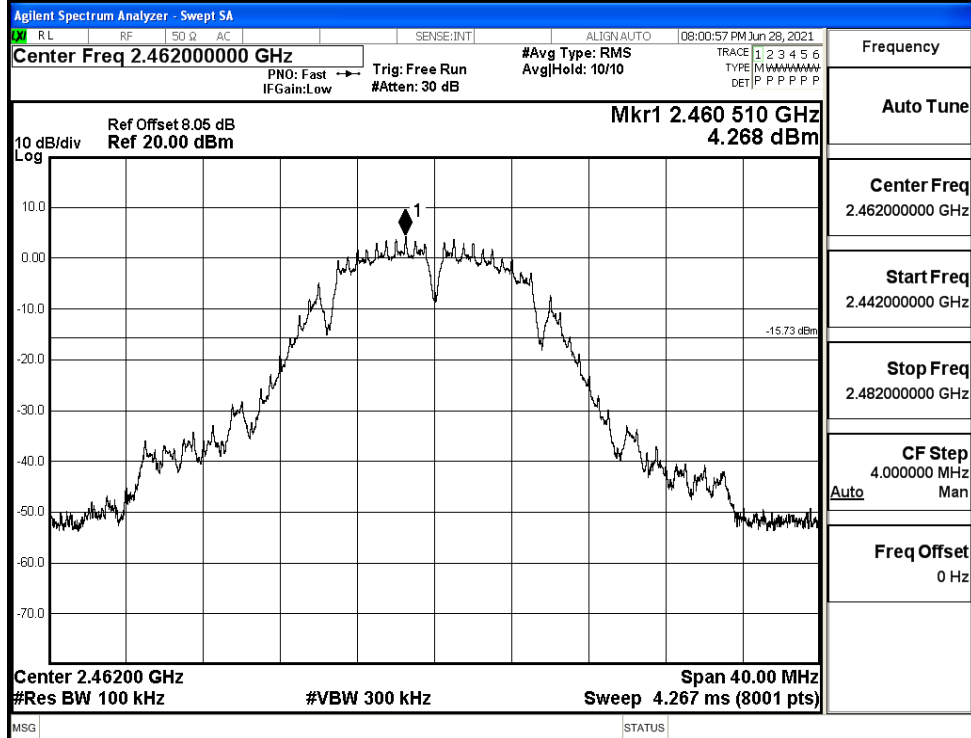
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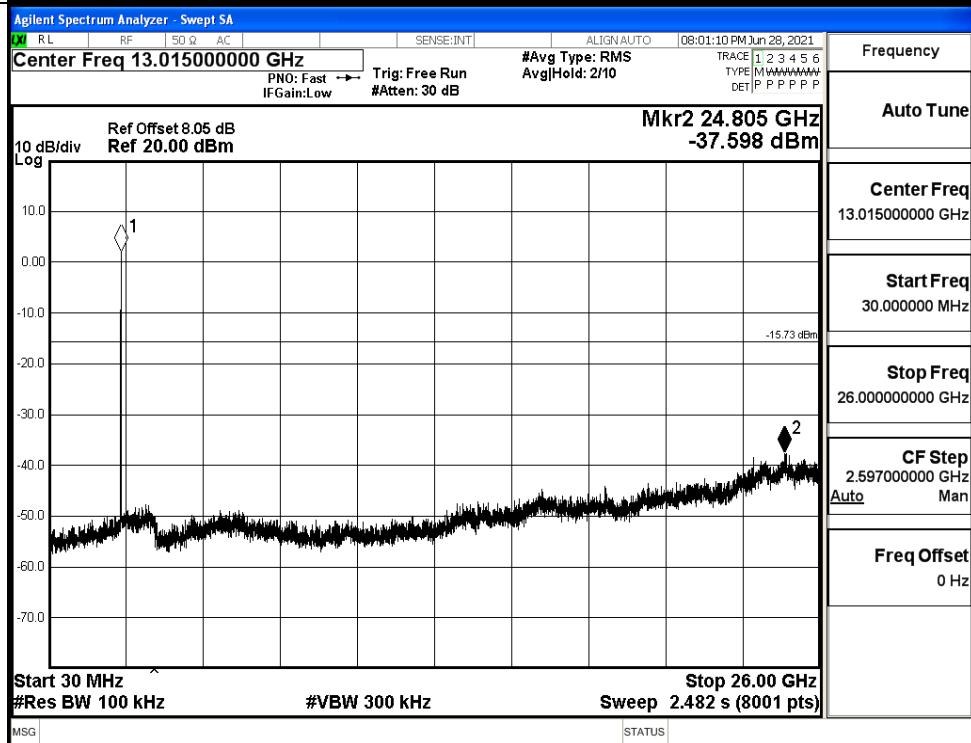


11B HCH Graphs

Pref/11B/HCH



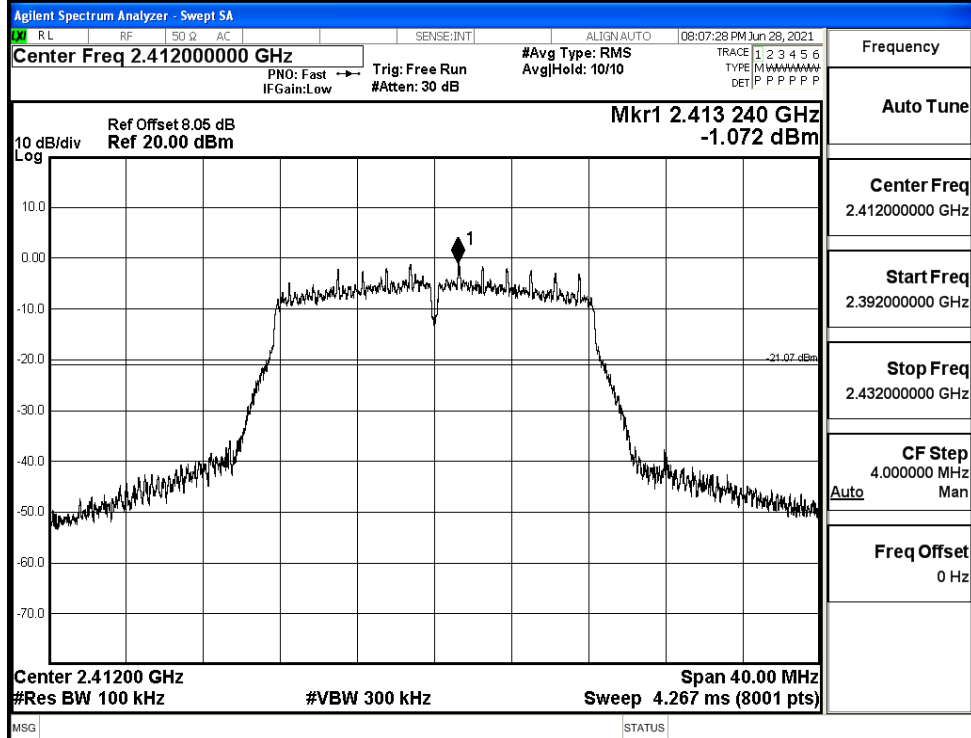
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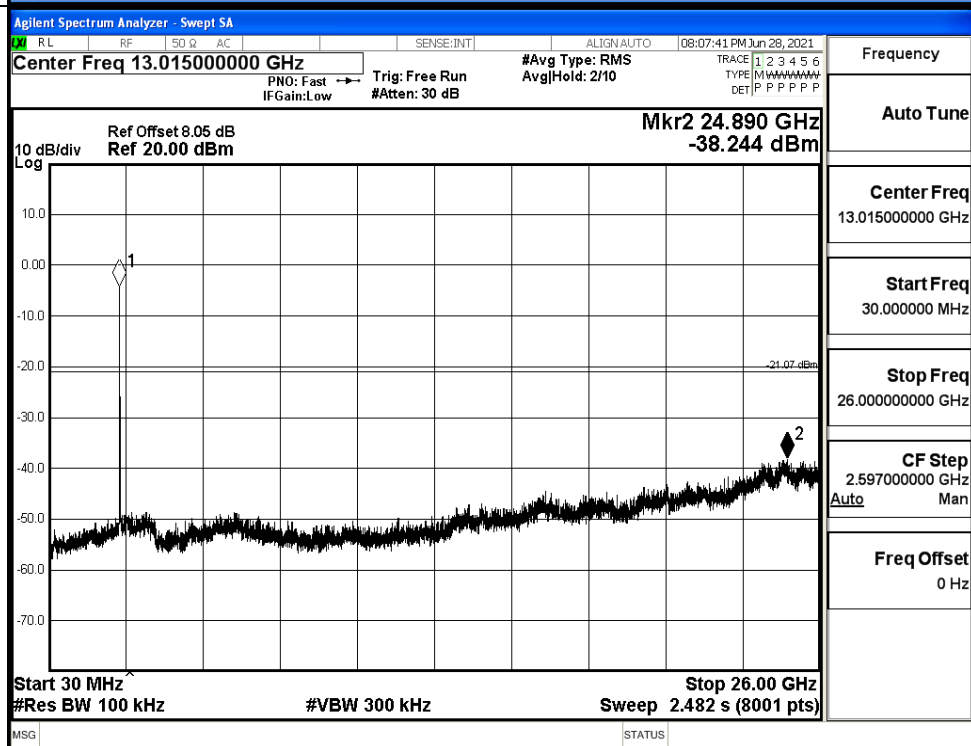


11G_LCH_Graphs

Pref/11G/LCH



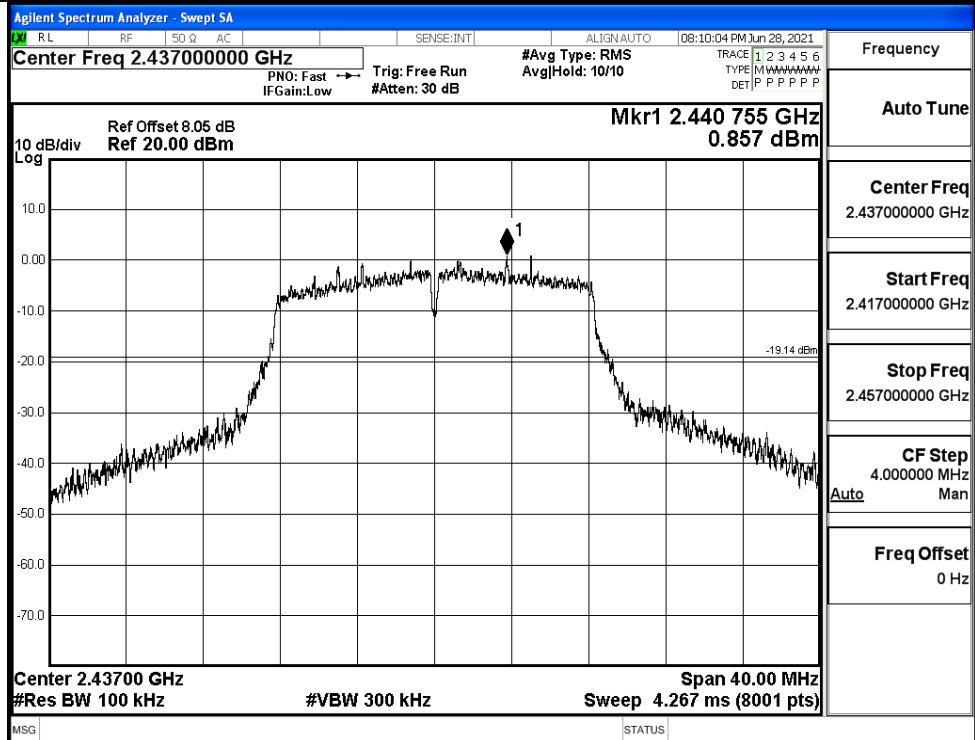
Puw/11G/LCH



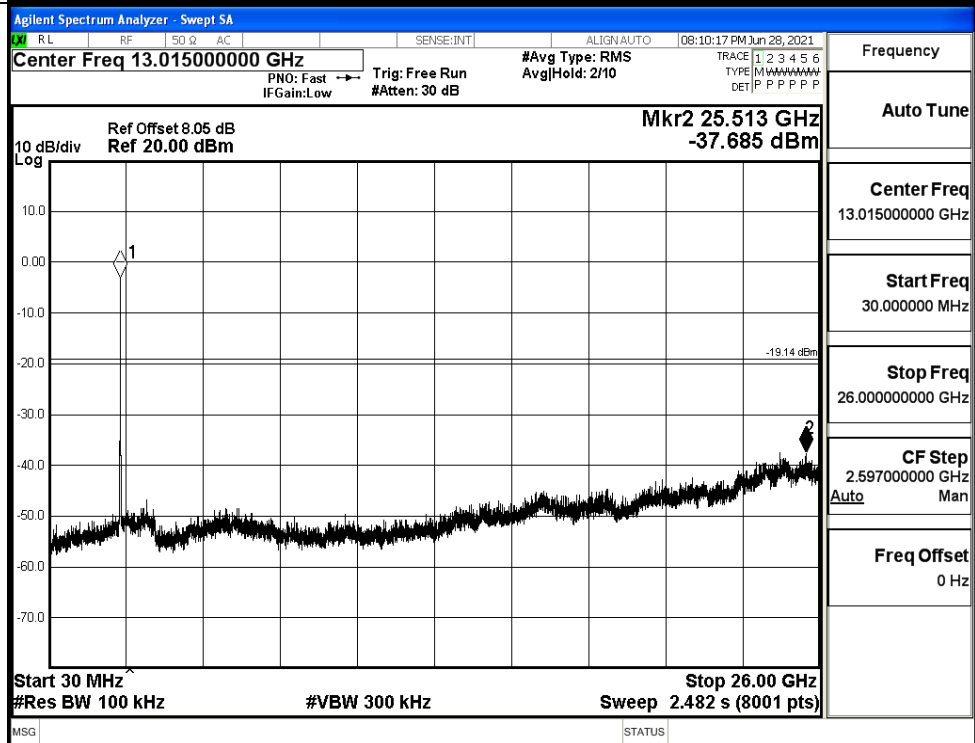


11G MCH Graphs

Pref/11G/MCH



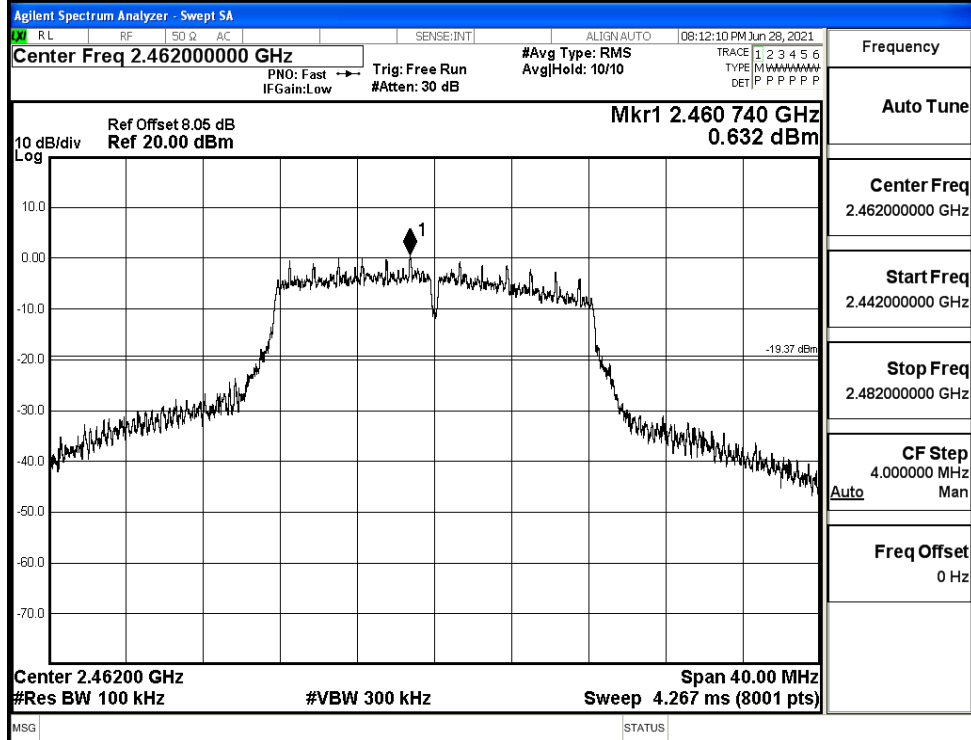
Puw/11G/MCH



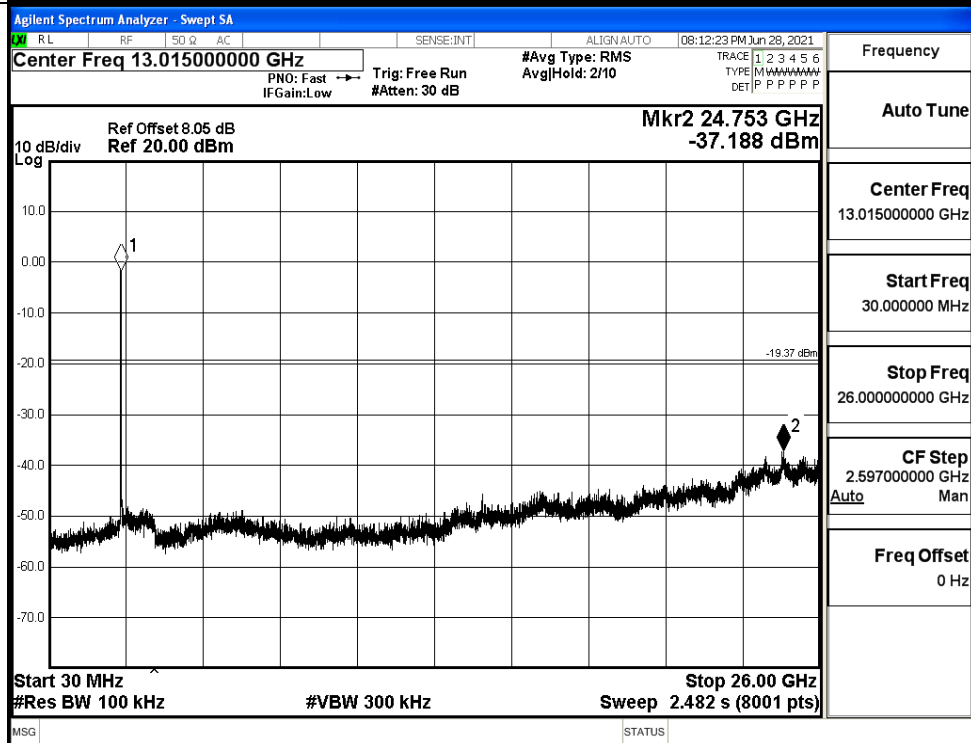


11G HCH Graphs

Pref/11G/HCH



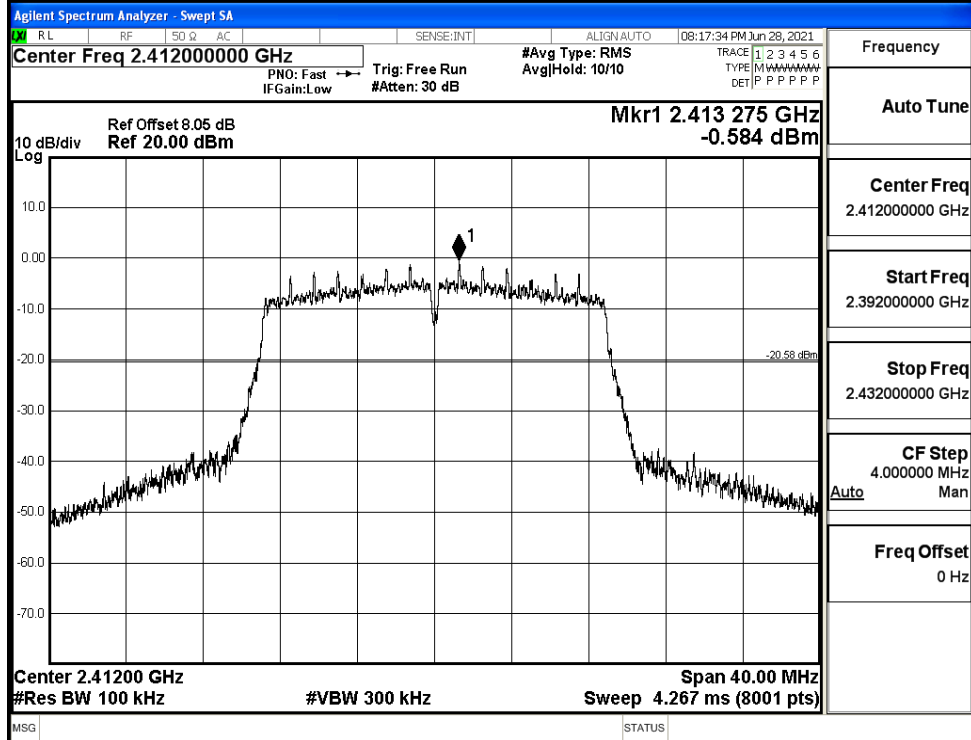
Puw/11G/HCH



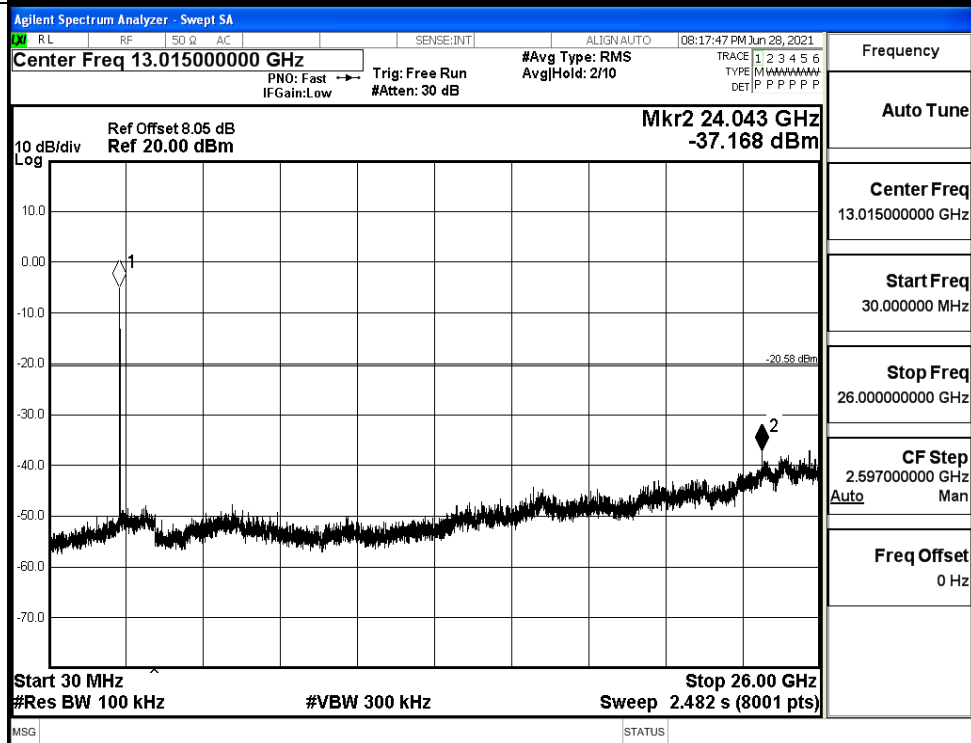


11N20SISO LCH Graphs

Pref/11N20SIS
O/LCH



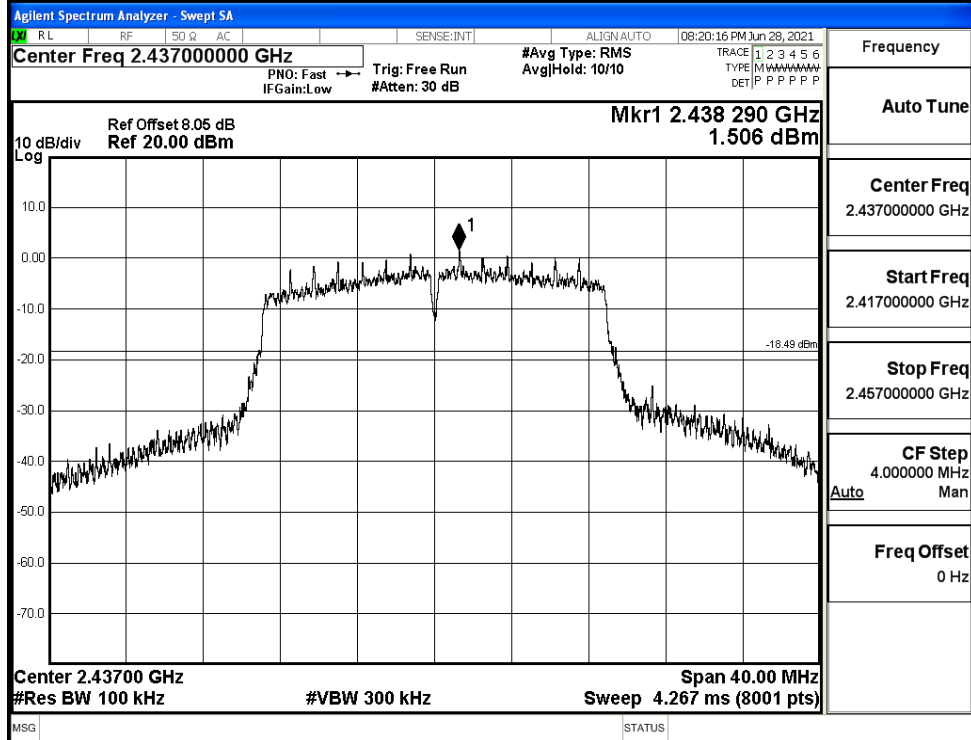
Puw/11N20
SISO/LCH



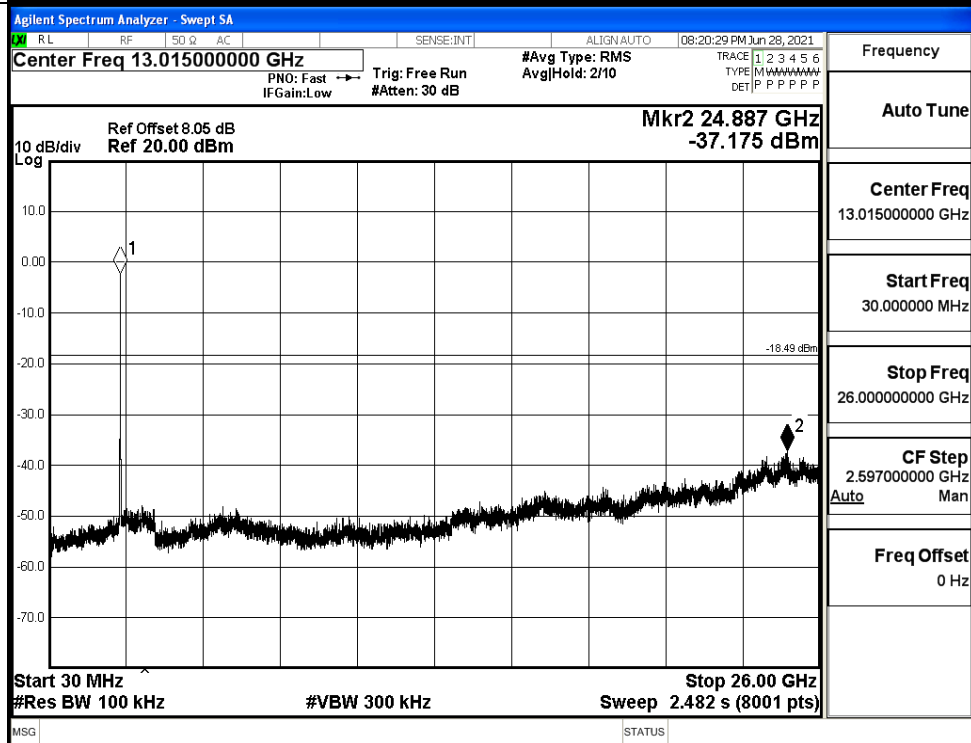


11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCH



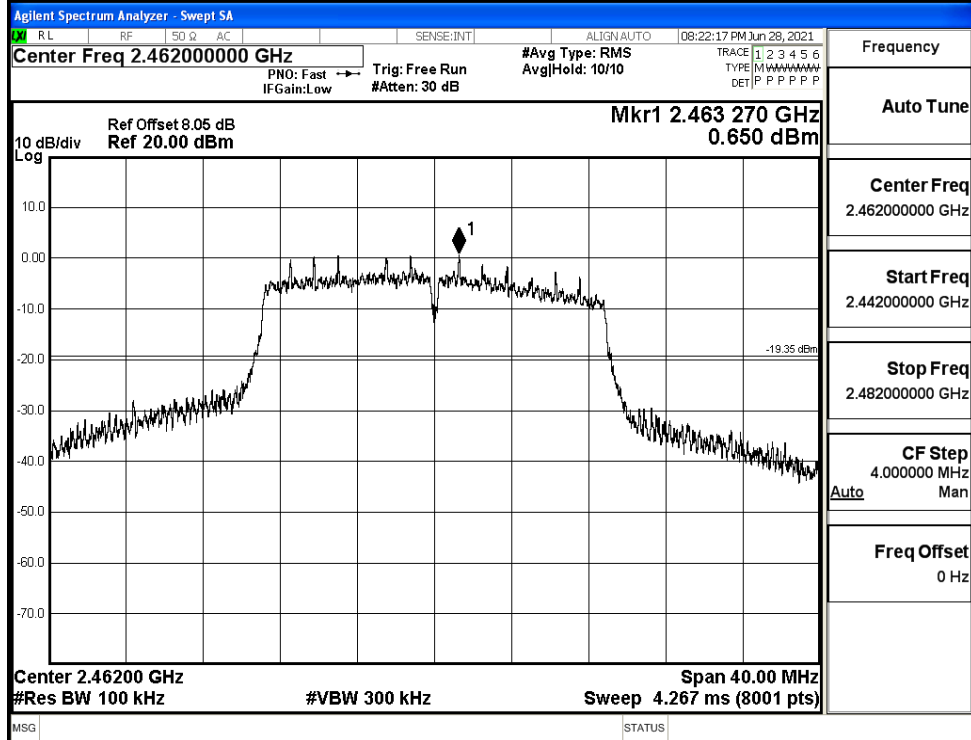
Puw/11N20
SISO/MCH



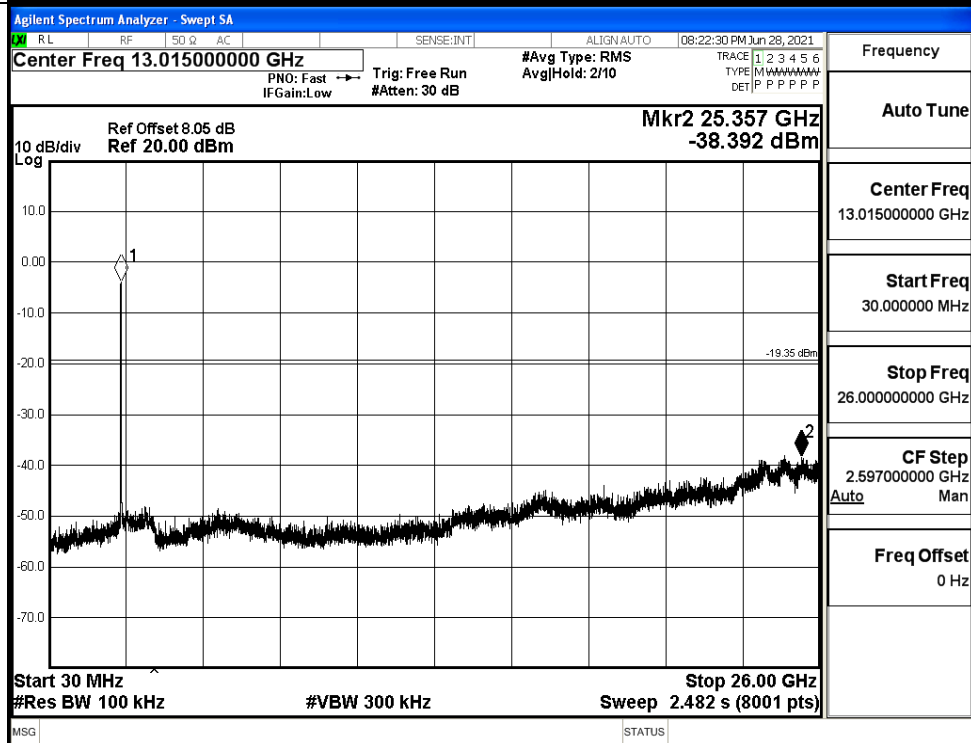


11N20SISO HCH Graphs

Pref/11N20
SISO/HCH



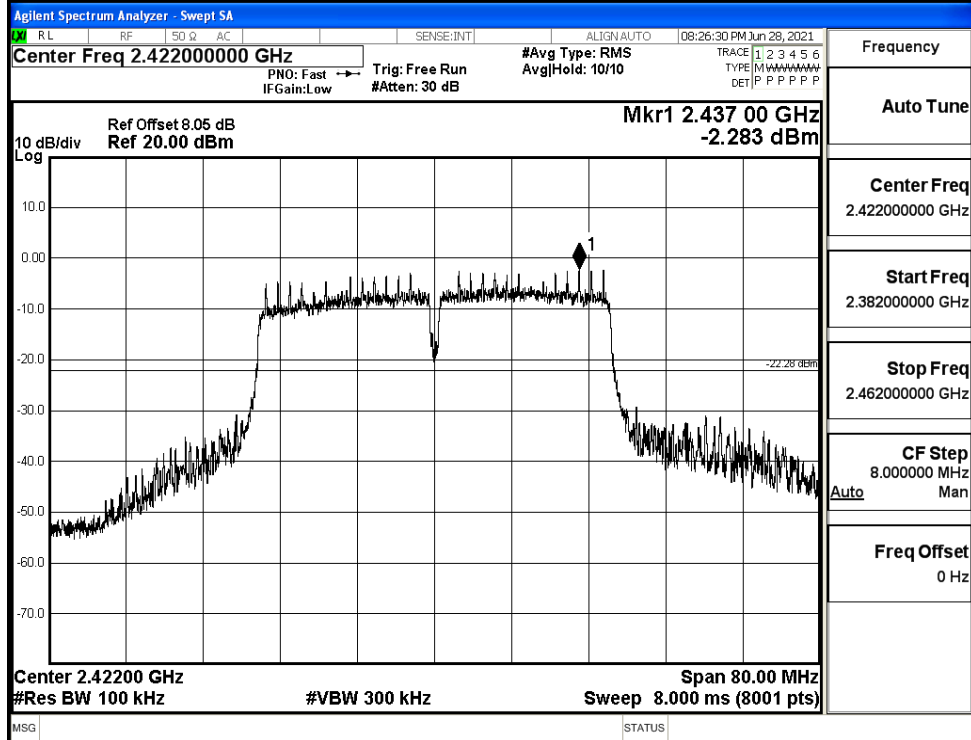
Puw/11N20
SISO/HCH



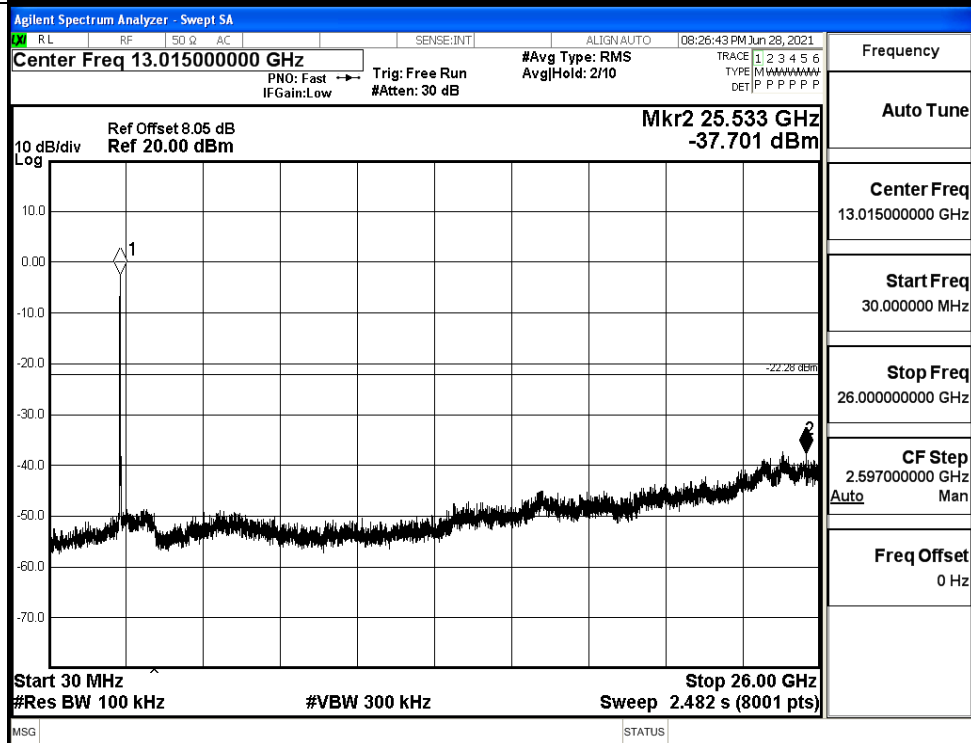


11N40SISO LCH Graphs

Pref/11N40
SISO/LCH



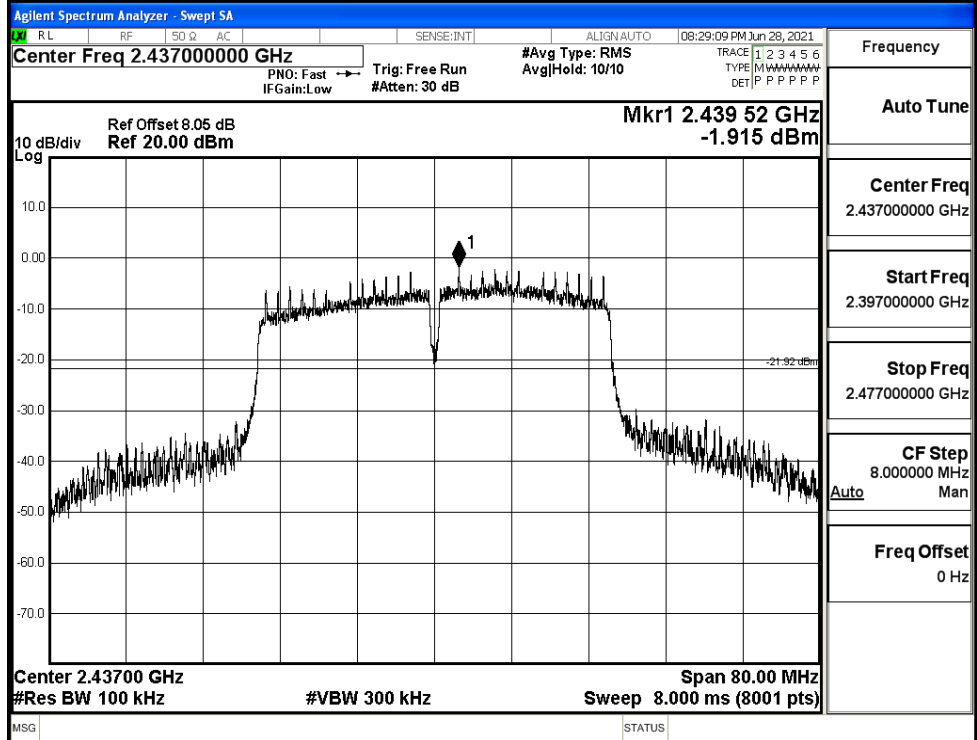
Puw/11N40
SISO/LCH



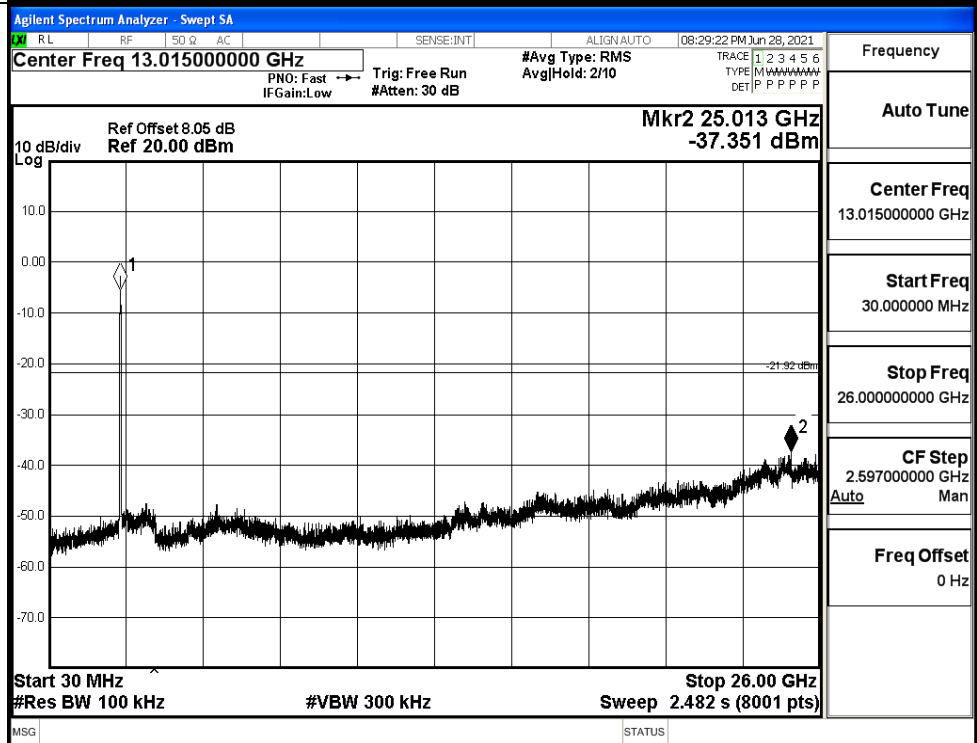


11N40SISO_MCH_Graphs

Pref/11N40
SISO/MCH



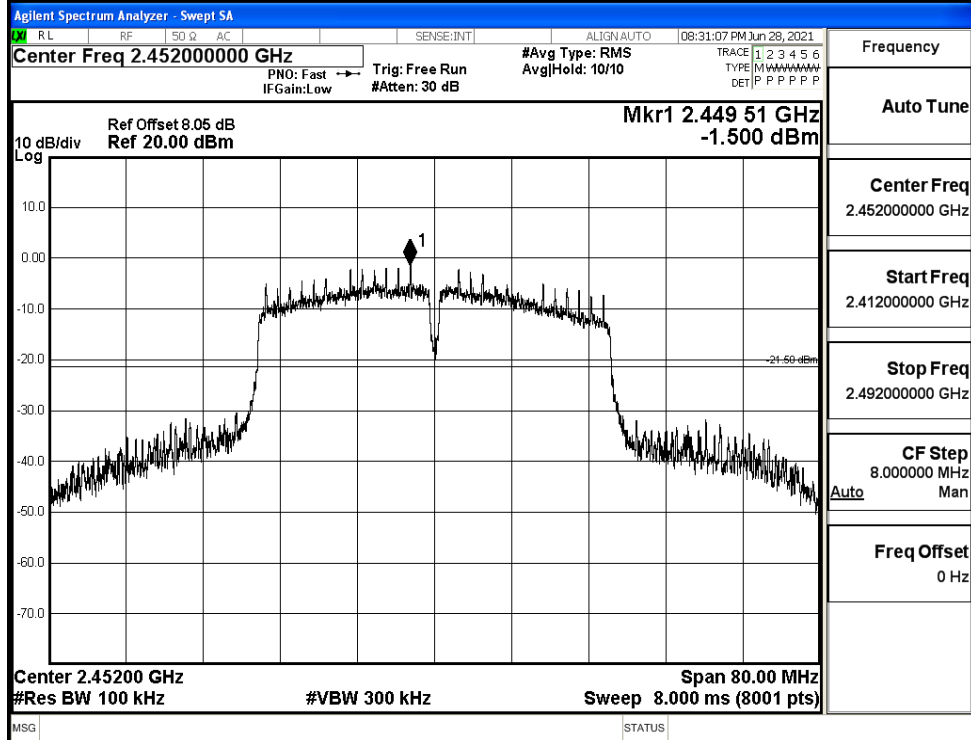
Puw/11N40
SISO/MCH



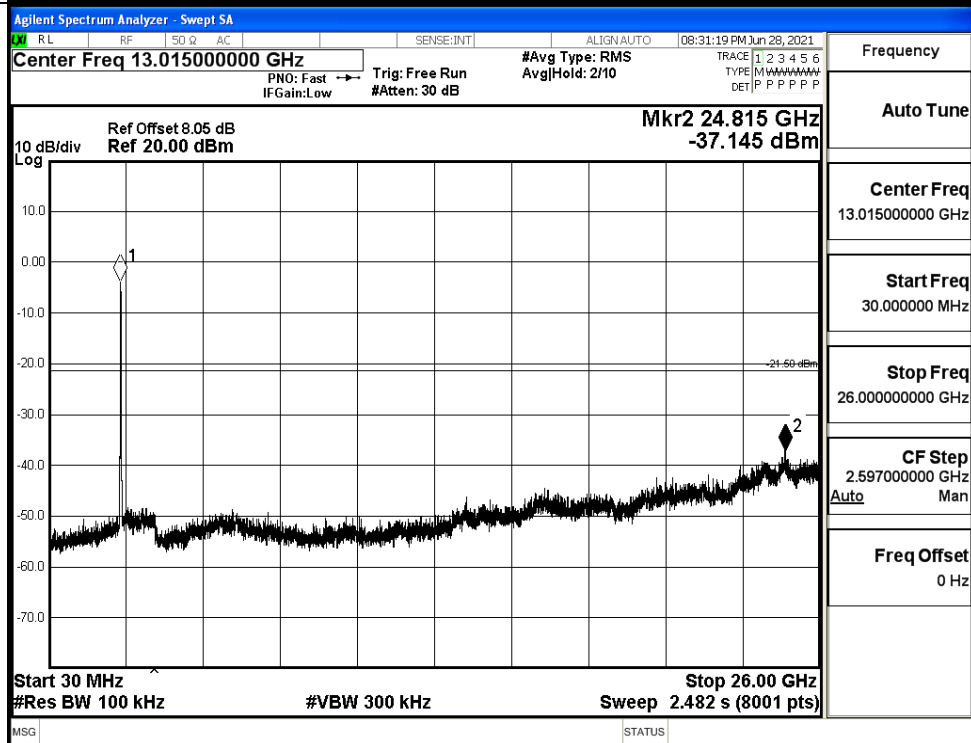


11N40SISO HCH Graphs

Pref/11N40
SISO/HCH



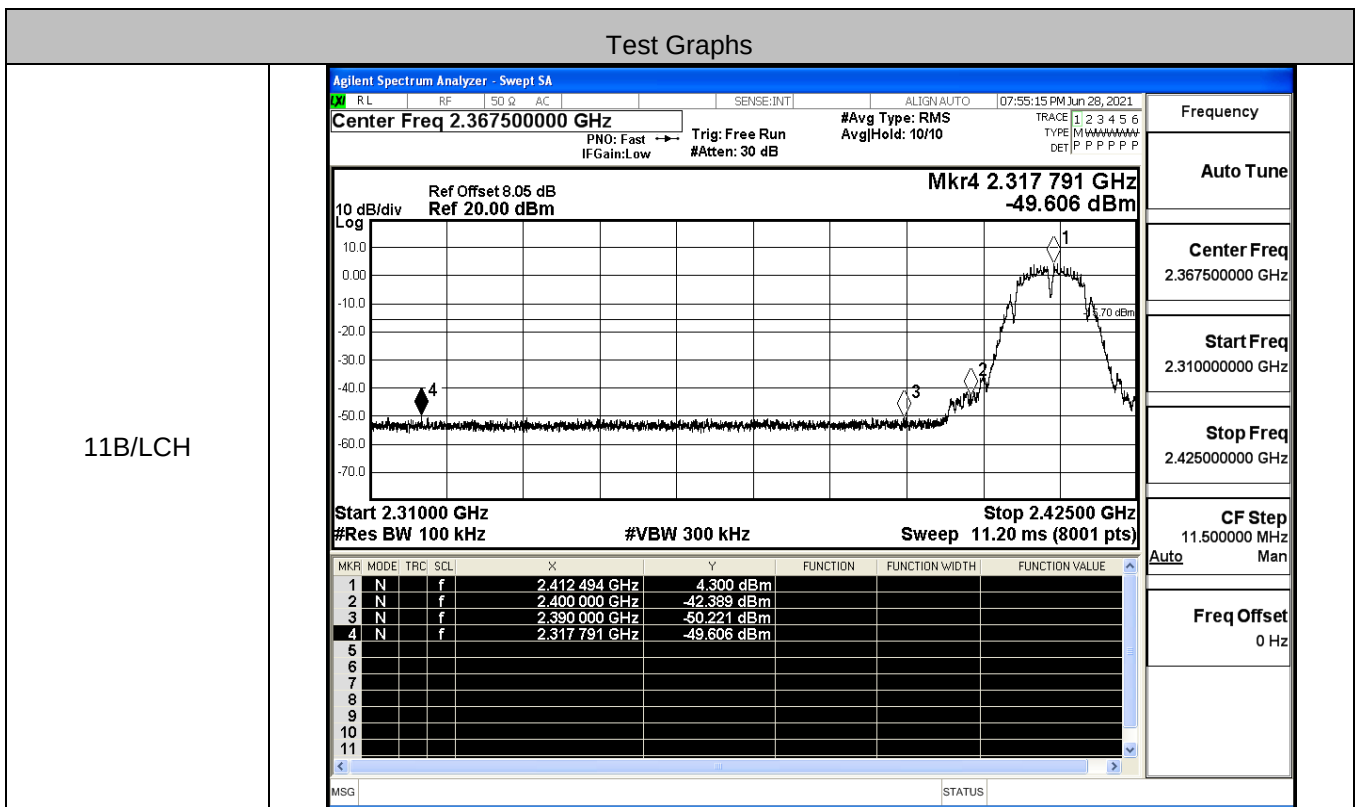
Puw/11N40
SISO/HCH





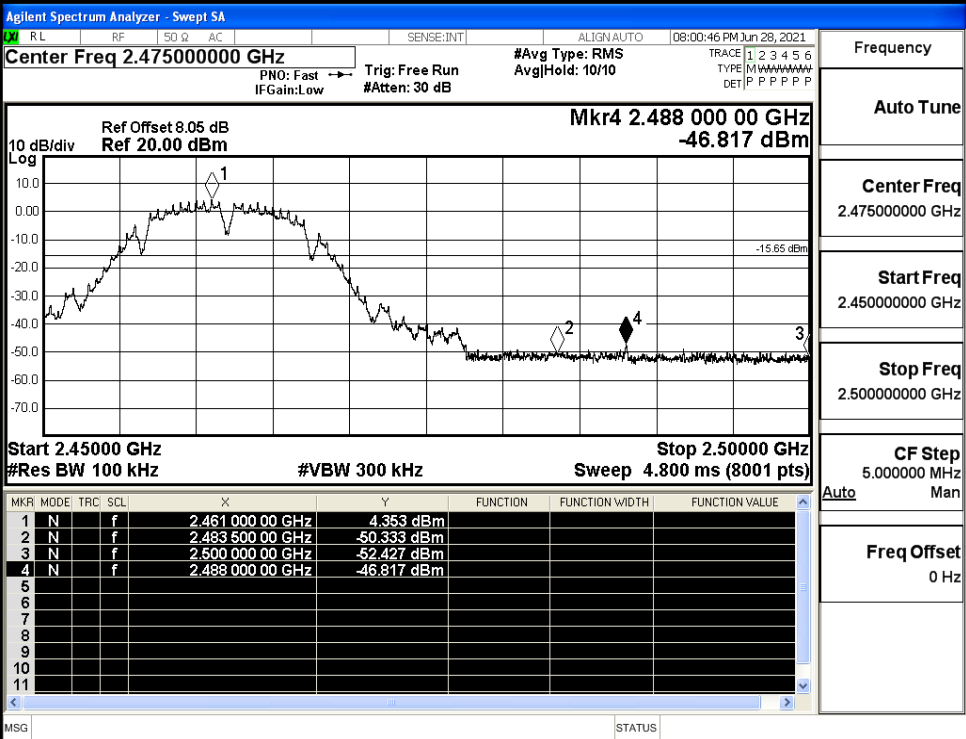
B.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	4.300	-49.606	-15.7	PASS
	HCH	4.353	-46.817	-15.65	PASS
11G	LCH	-1.173	-49.652	-21.17	PASS
	HCH	0.764	-43.568	-19.24	PASS
11N20SISO	LCH	-1.083	-49.796	-21.08	PASS
	HCH	0.559	-42.691	-19.44	PASS
11N40SISO	LCH	-2.367	-46.619	-22.37	PASS
	HCH	-1.614	-34.243	-21.61	PASS

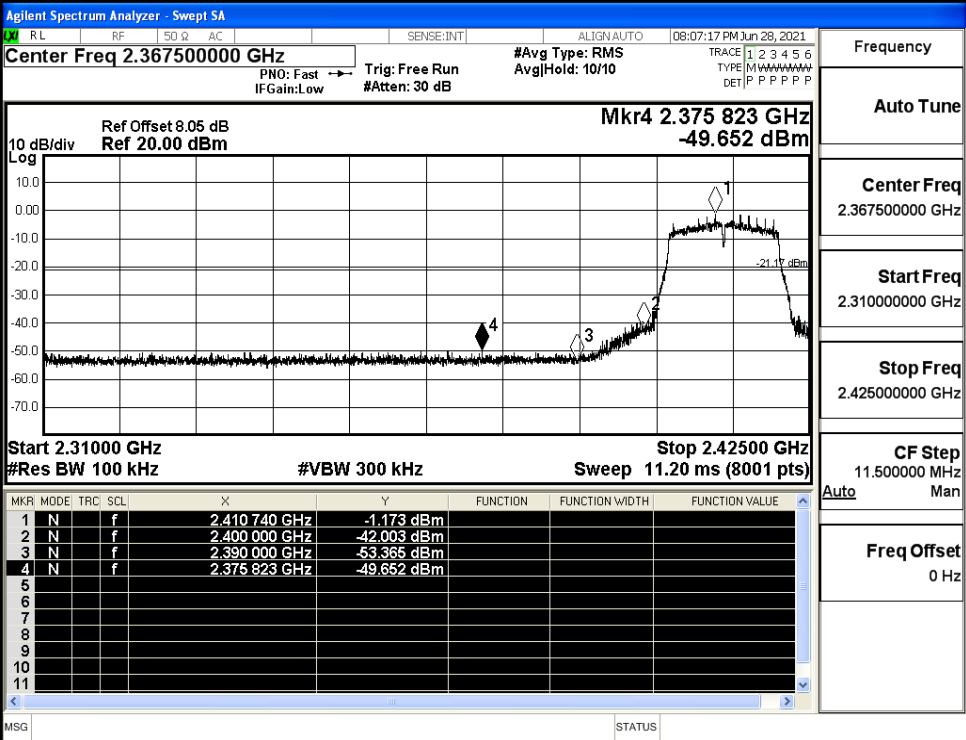




11B/HCH

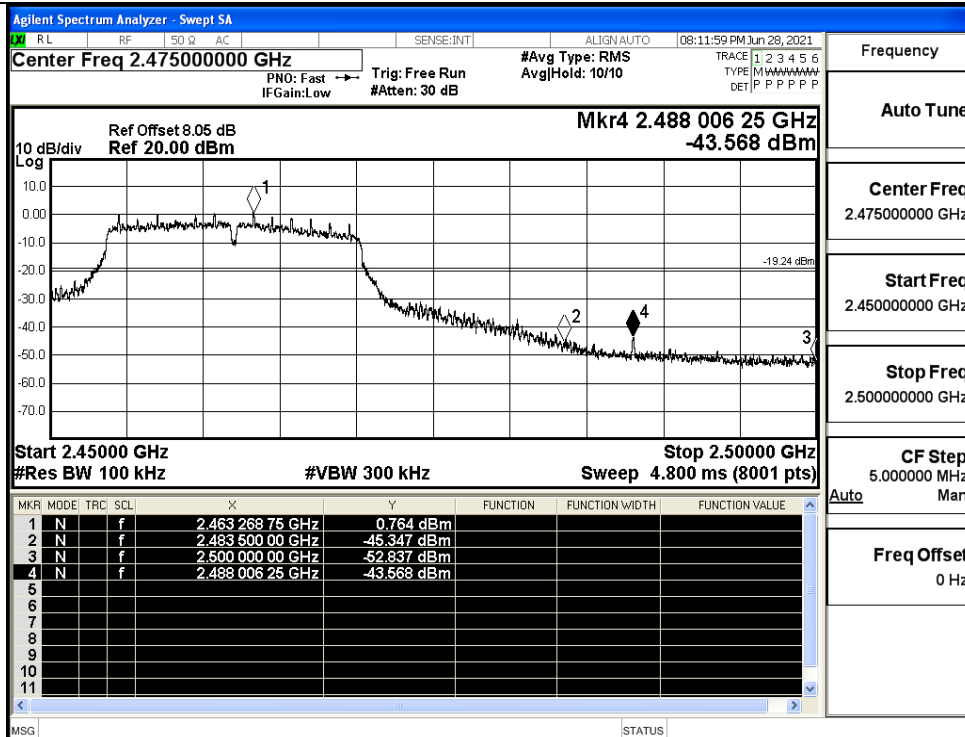


11G/LCH





11G/HCH



Frequency

Auto Tune

Center Freq
2.475000000 GHz

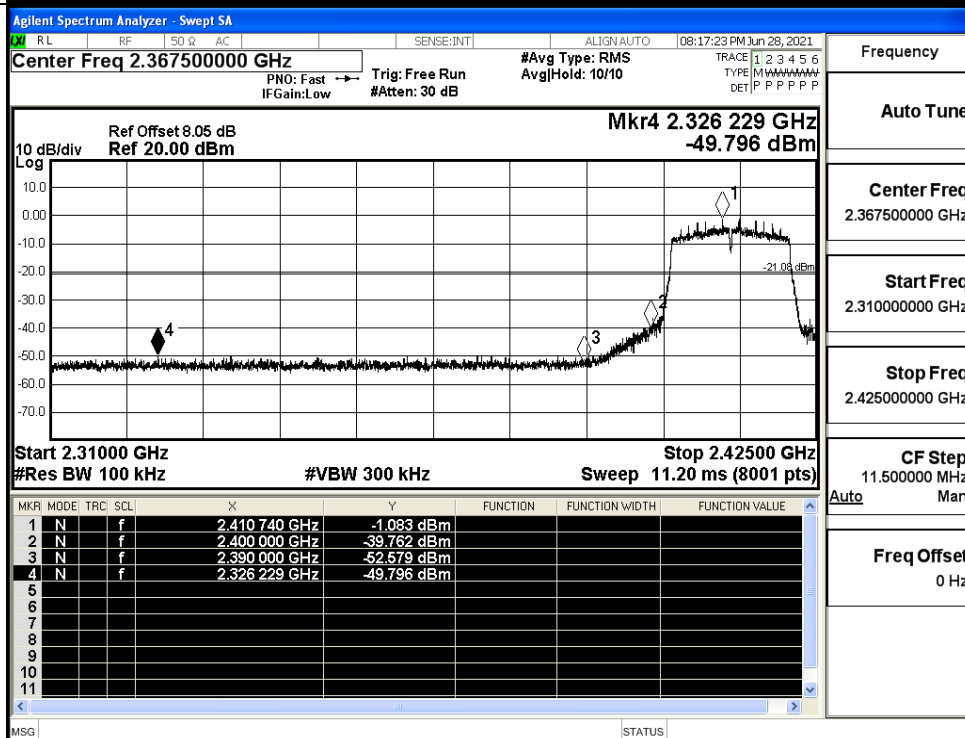
Start Freq
2.450000000 GHz

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

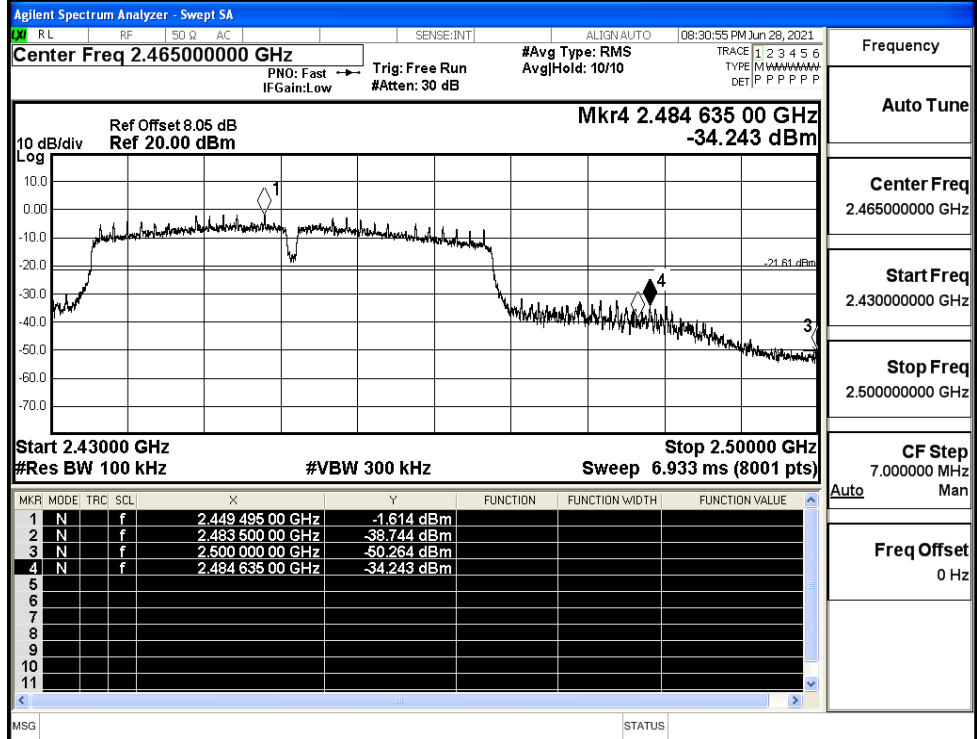
CF Step
11.500000 MHz

Freq Offset
0 Hz

Page 35 of 46



11N40SISO/HCH



**B.7 Restrict-band band-edge measurements**

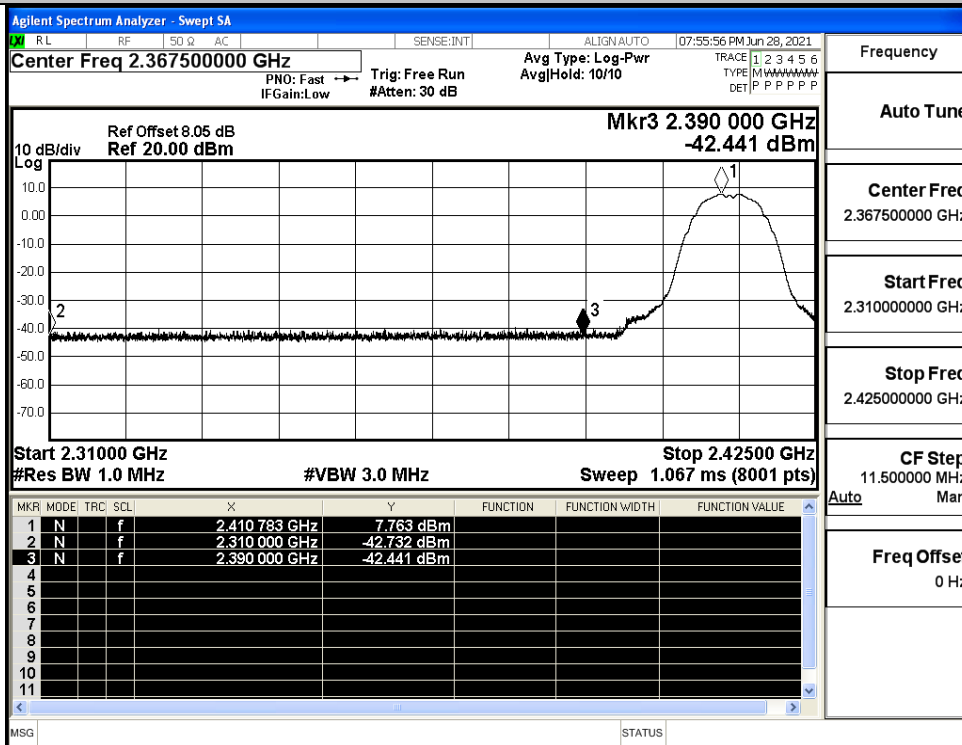
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-42.73	2.0	0	54.53	PEAK	74	PASS
	2412	Ant1	2310.0	-53.60	2.0	0	43.66	AV	54	PASS
	2412	Ant1	2390.0	-42.44	2.0	0	54.82	PEAK	74	PASS
	2412	Ant1	2390.0	-53.09	2.0	0	44.17	AV	54	PASS
	2462	Ant1	2483.5	-40.06	2.0	0	57.2	PEAK	74	PASS
	2462	Ant1	2483.5	-51.18	2.0	0	46.08	AV	54	PASS
	2462	Ant1	2500.0	-41.85	2.0	0	55.41	PEAK	74	PASS
	2462	Ant1	2500.0	-52.63	2.0	0	44.63	AV	54	PASS
11G	2412	Ant1	2310.0	-43.00	2.0	0	54.26	PEAK	74	PASS
	2412	Ant1	2310.0	-53.56	2.0	0	43.7	AV	54	PASS
	2412	Ant1	2390.0	-42.80	2.0	0	54.46	PEAK	74	PASS
	2412	Ant1	2390.0	-52.94	2.0	0	44.32	AV	54	PASS
	2462	Ant1	2483.5	-34.62	2.0	0	62.64	PEAK	74	PASS
	2462	Ant1	2483.5	-48.09	2.0	0	49.17	AV	54	PASS
	2462	Ant1	2500.0	-43.20	2.0	0	54.06	PEAK	74	PASS
	2462	Ant1	2500.0	-52.58	2.0	0	44.68	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-41.56	2.0	0	55.7	PEAK	74	PASS
	2412	Ant1	2310.0	-53.60	2.0	0	43.66	AV	54	PASS
	2412	Ant1	2390.0	-41.65	2.0	0	55.61	PEAK	74	PASS
	2412	Ant1	2390.0	-52.84	2.0	0	44.42	AV	54	PASS
	2462	Ant1	2483.5	-33.73	2.0	0	63.53	PEAK	74	PASS
	2462	Ant1	2483.5	-46.78	2.0	0	50.48	AV	54	PASS
	2462	Ant1	2500.0	-42.31	2.0	0	54.95	PEAK	74	PASS
	2462	Ant1	2500.0	-52.60	2.0	0	44.66	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-41.66	2.0	0	55.6	PEAK	74	PASS
	2422	Ant1	2310.0	-53.56	2.0	0	43.7	AV	54	PASS



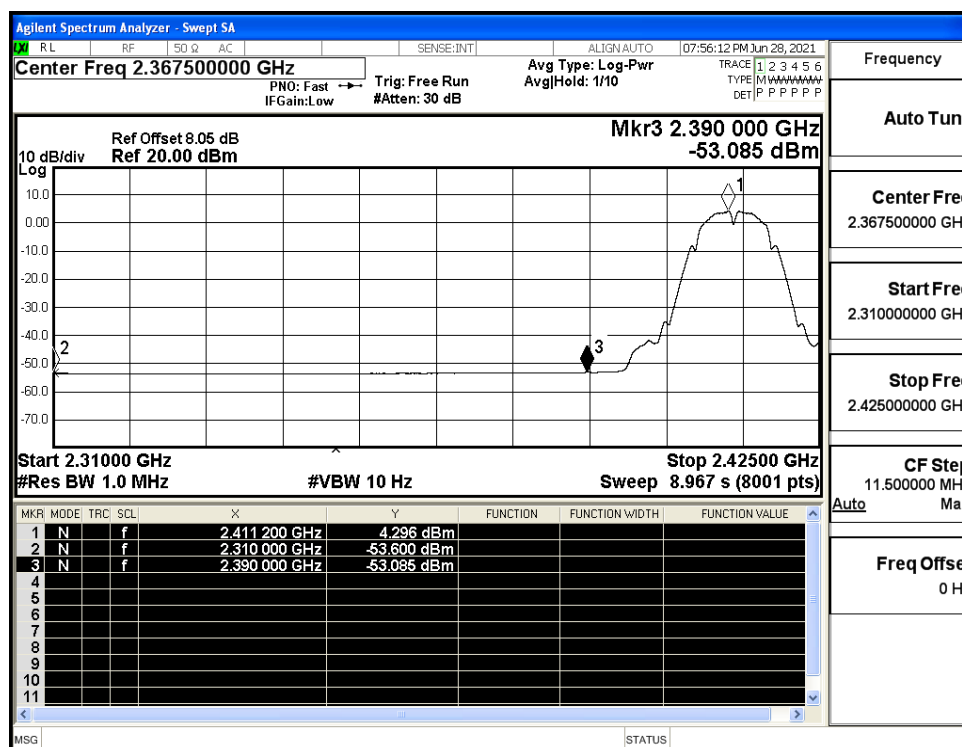
	2422	Ant1	2390.0	-34.03	2.0	0	63.23	PEAK	74	PASS
	2422	Ant1	2390.0	-50.63	2.0	0	46.63	AV	54	PASS
	2452	Ant1	2483.5	-24.87	2.0	0	72.39	PEAK	74	PASS
	2452	Ant1	2483.5	-43.05	2.0	0	54.21	AV	54	PASS
	2452	Ant1	2500.0	-42.53	2.0	0	54.73	PEAK	74	PASS
	2452	Ant1	2500.0	-52.58	2.0	0	44.68	AV	54	PASS



Restrict-band band-edge measurements_11B_2412_Ant1_PEAK

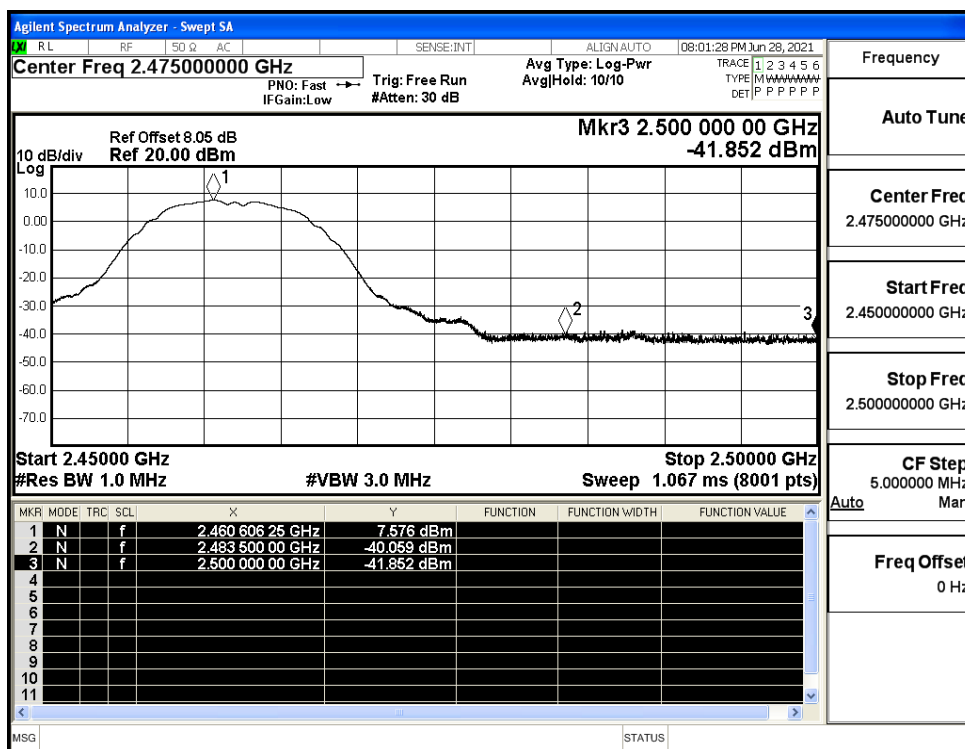


Restrict-band band-edge measurements_11B_2412_Ant1_AV

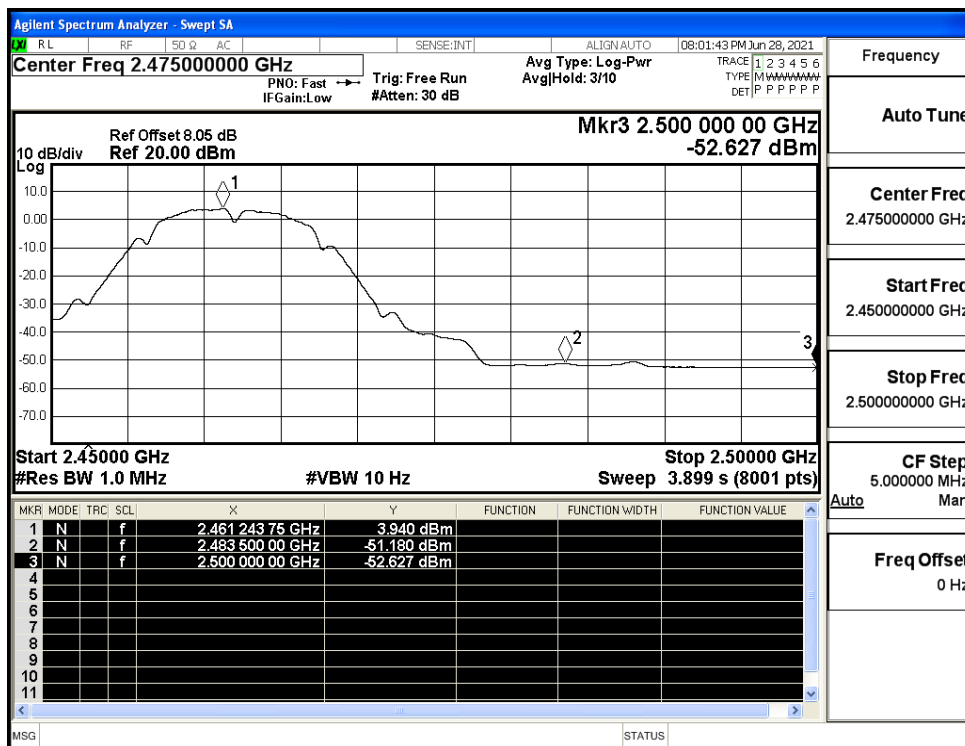




Restrict-band band-edge measurements_11B_2462_Ant1_PEAK

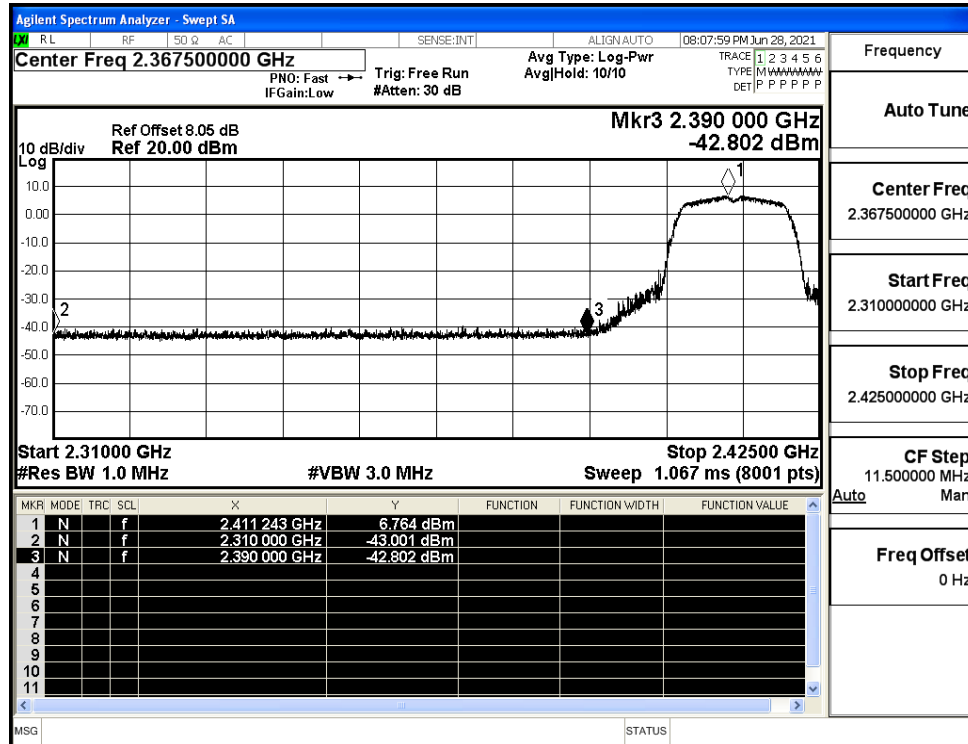


Restrict-band band-edge measurements_11B_2462_Ant1_AV

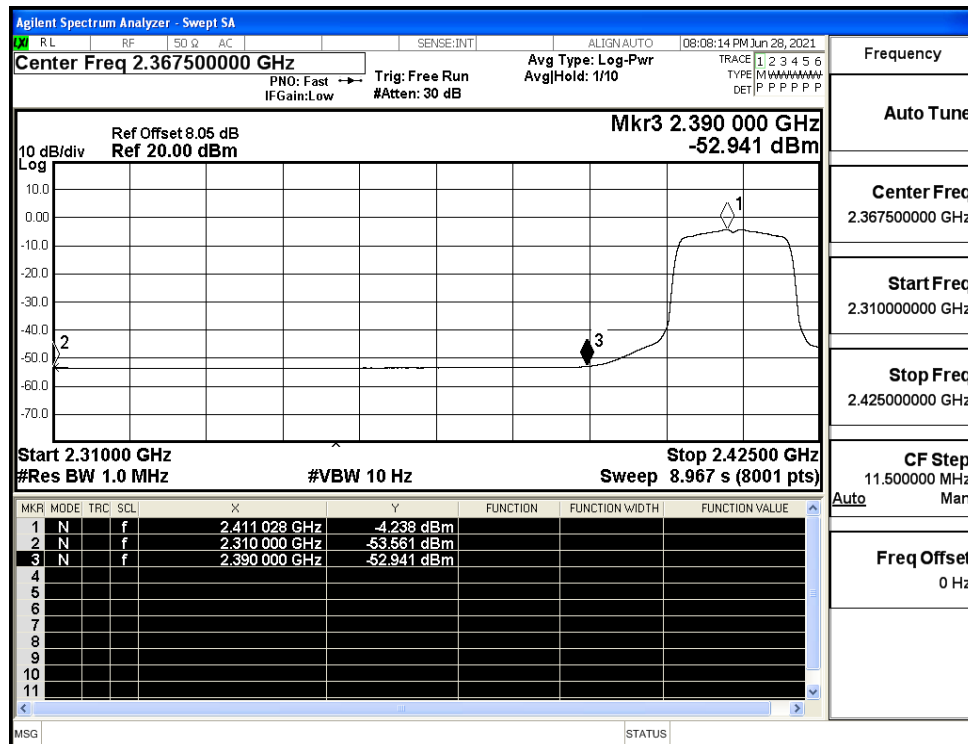




Restrict-band band-edge measurements_11G_2412_Ant1_PEAK

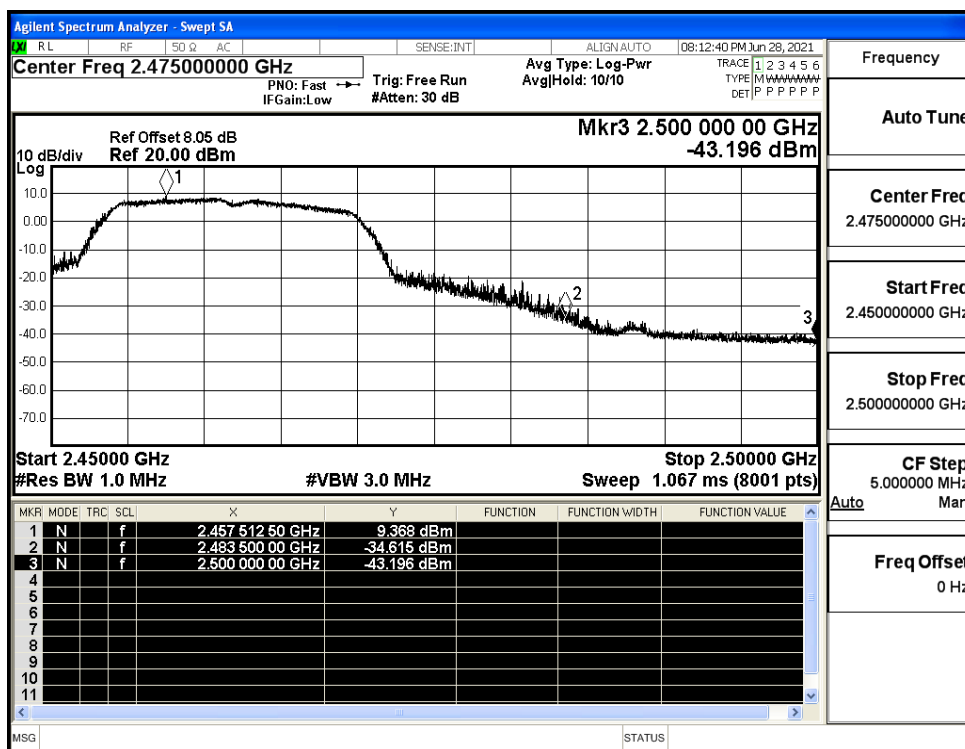


Restrict-band band-edge measurements_11G_2412_Ant1_AV

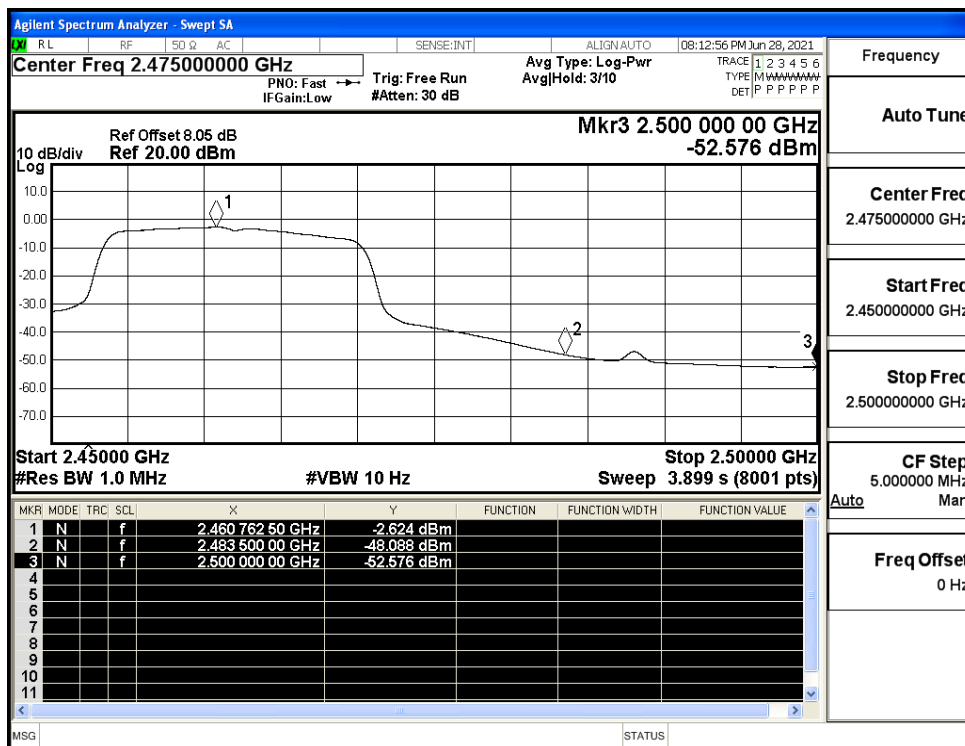




Restrict-band band-edge measurements_11G_2462_Ant1_PEAK

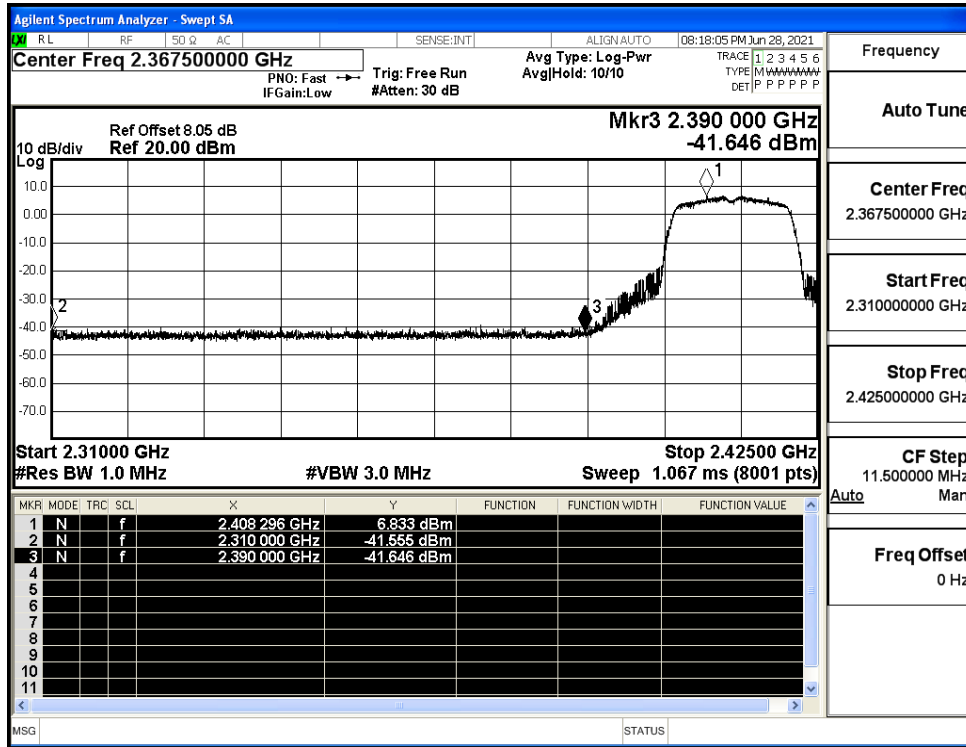


Restrict-band band-edge measurements_11G_2462_Ant1_AV

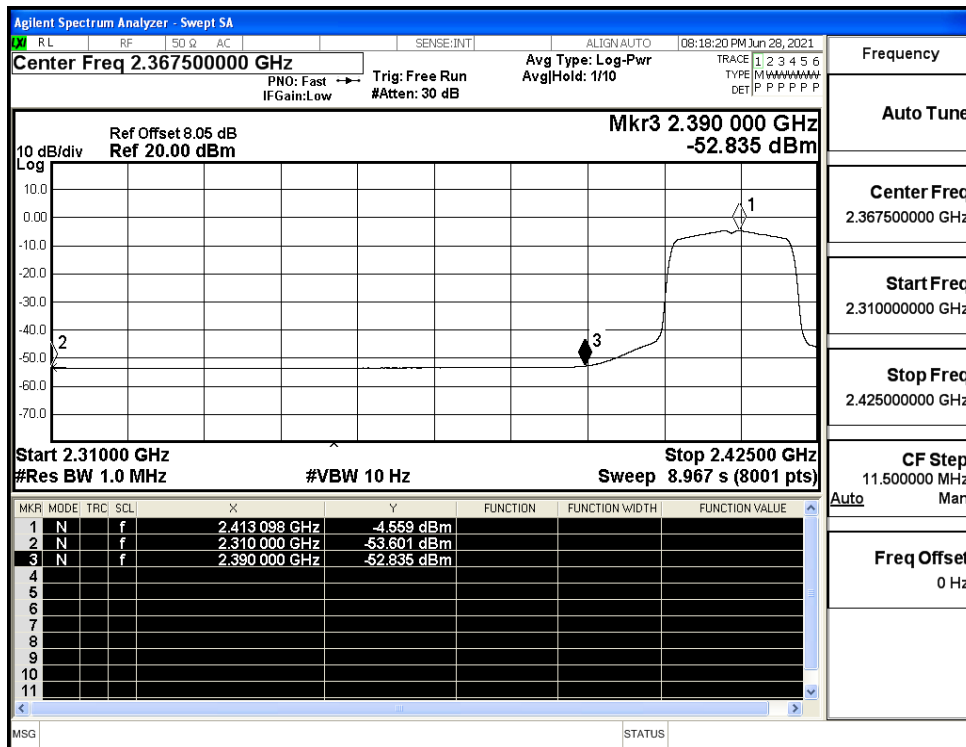




Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK

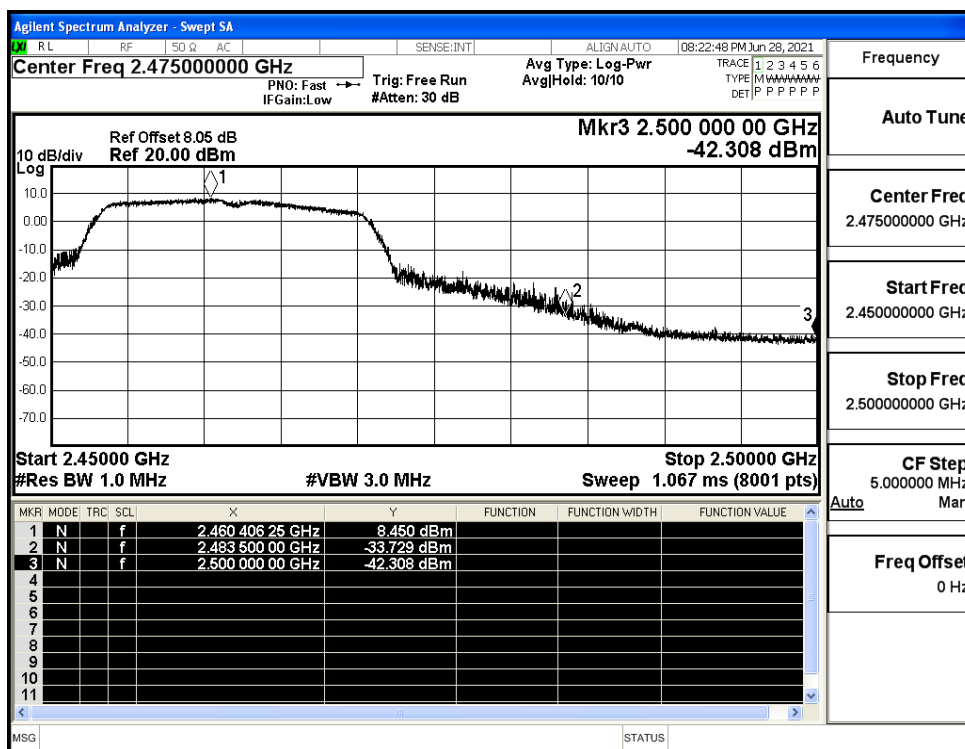


Restrict-band band-edge measurements_11N20SISO_2412_Ant1_AV

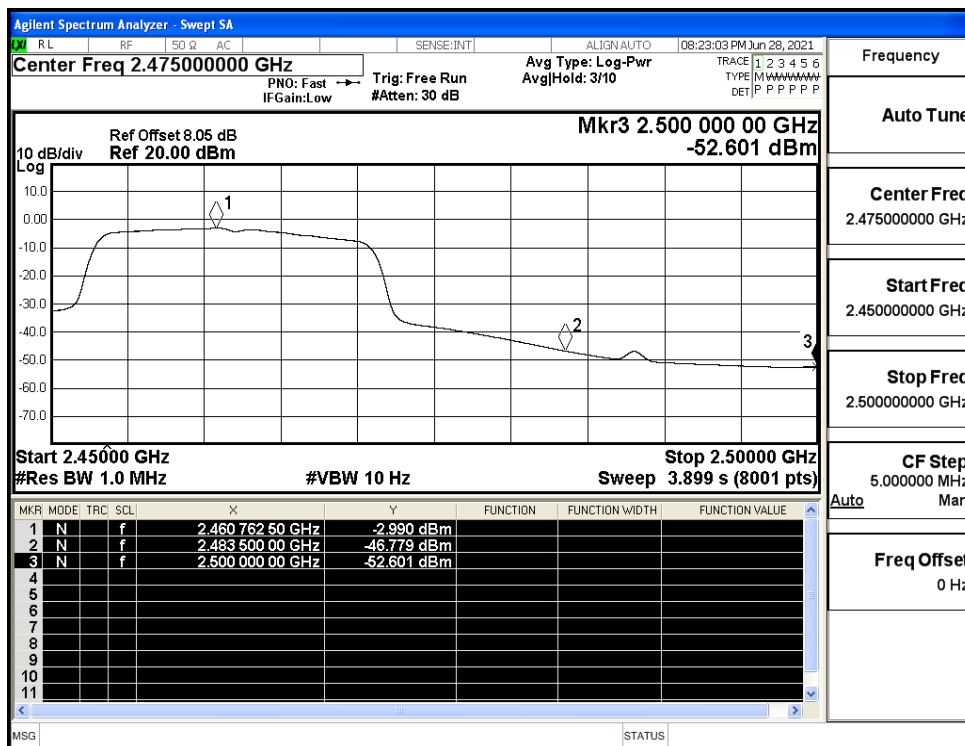




Restrict-band band-edge measurements_11N20SISO_2462_Ant1_PEAK

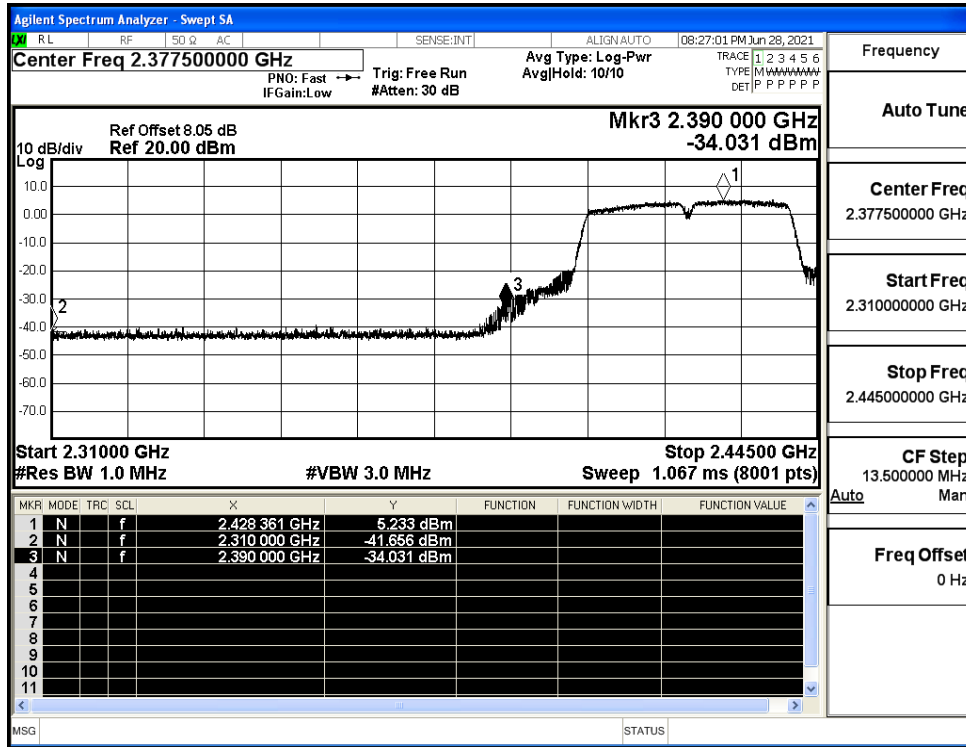


Restrict-band band-edge measurements_11N20SISO_2462_Ant1_AV

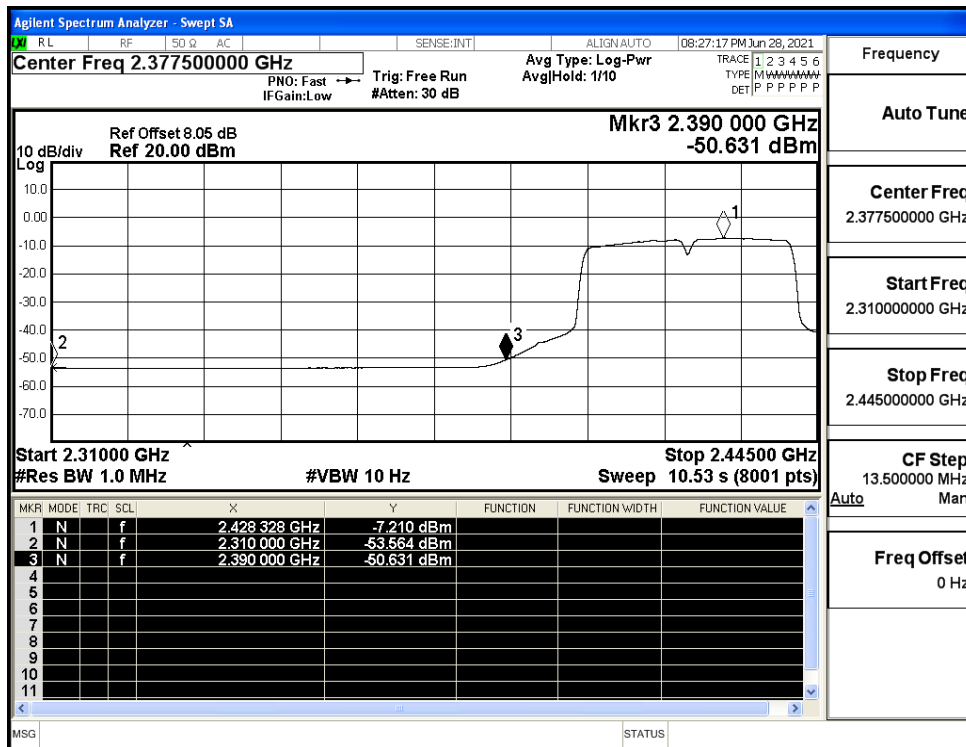




Restrict-band band-edge measurements_11N40SISO_2422_Ant1_PEAK

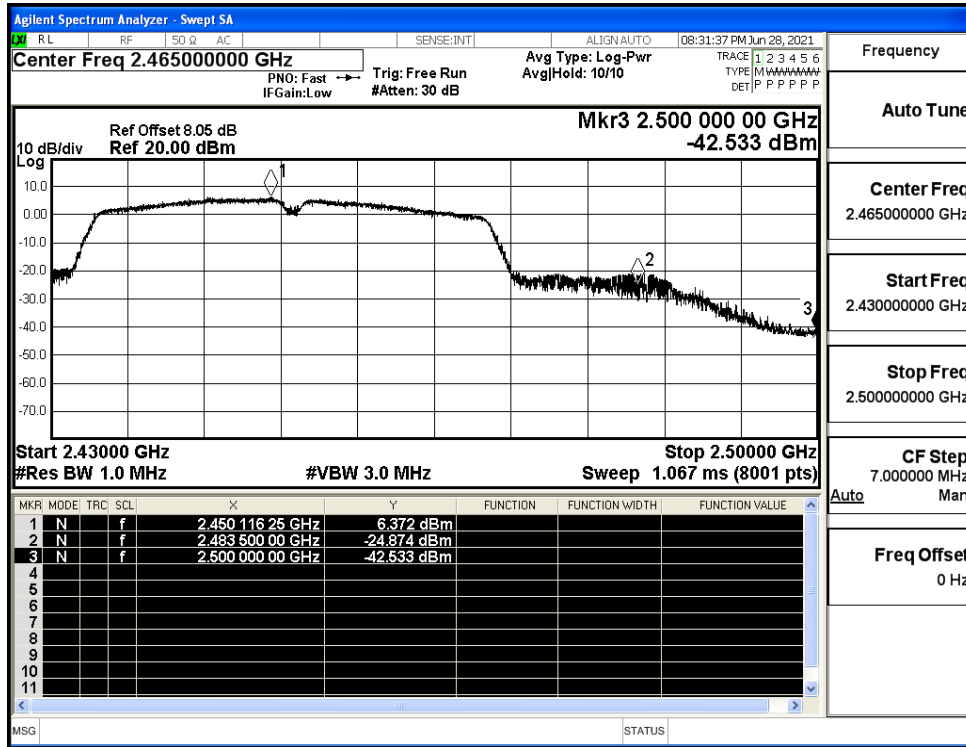


Restrict-band band-edge measurements_11N40SISO_2422_Ant1_AV





Restrict-band band-edge measurements_11N40SISO_2452_Ant1_PEAK



Restrict-band band-edge measurements_11N40SISO_2452_Ant1_AV

