

Appendix D

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Smart POS

Trade Mark: N/A

Test Model: WIZARPOS Q3

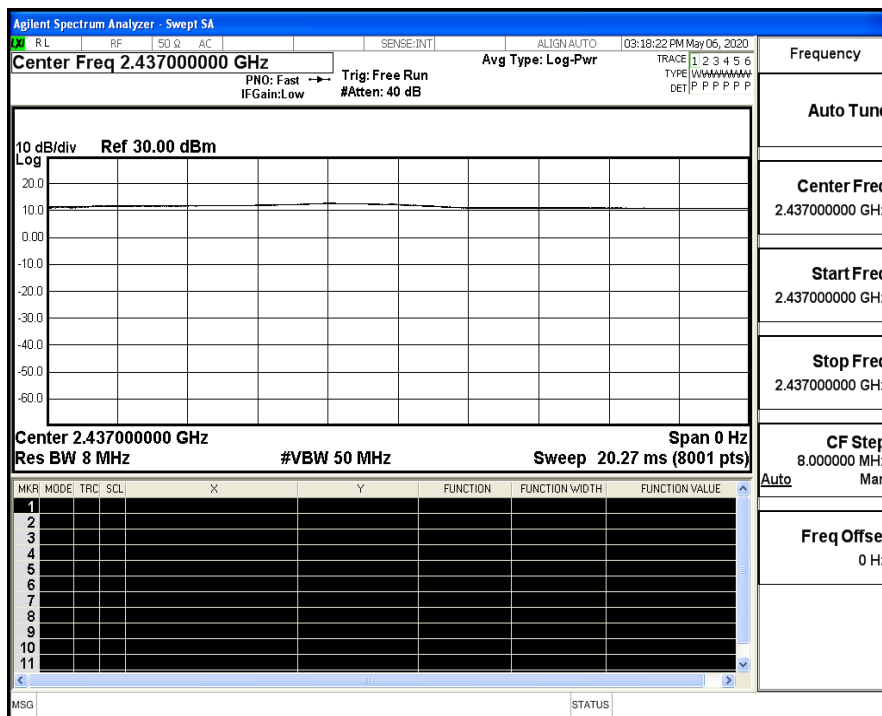
Environmental Conditions

Temperature:	23.5°C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Li Huan
Supervised by:	Tom.Liu

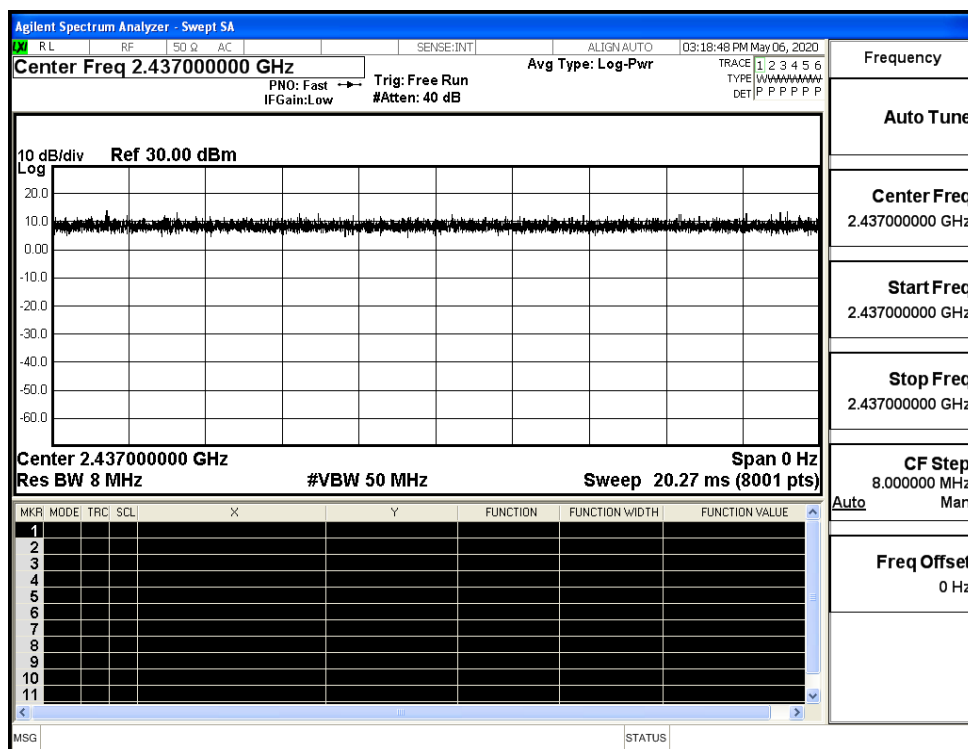
D.1 Duty Cycle

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

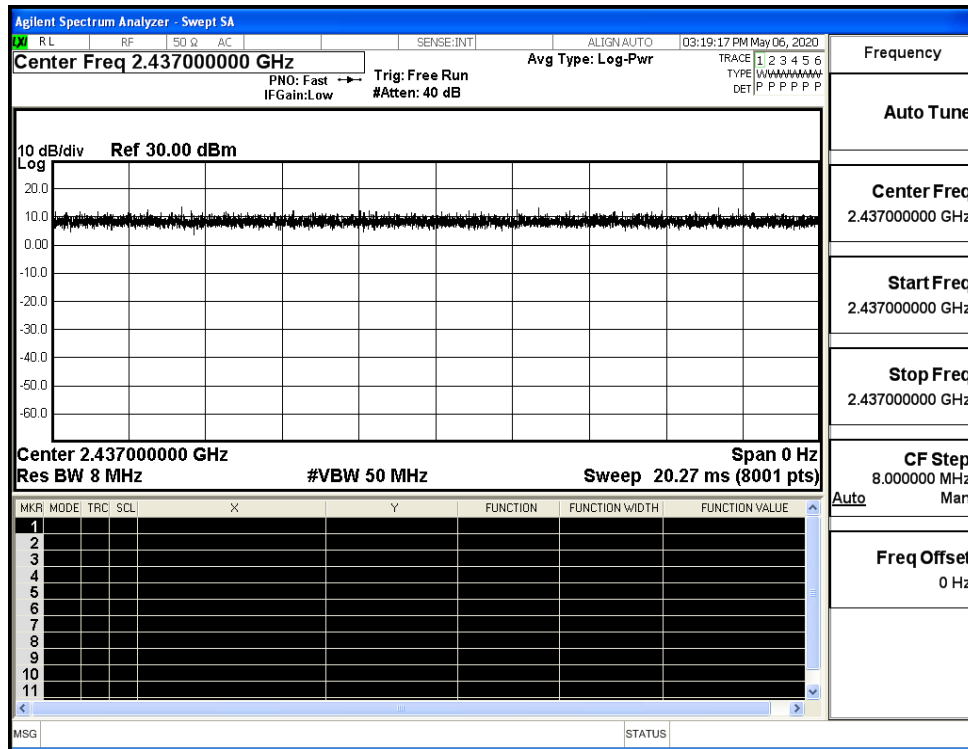
Duty Cycle_11B_2437_Ant1



Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1

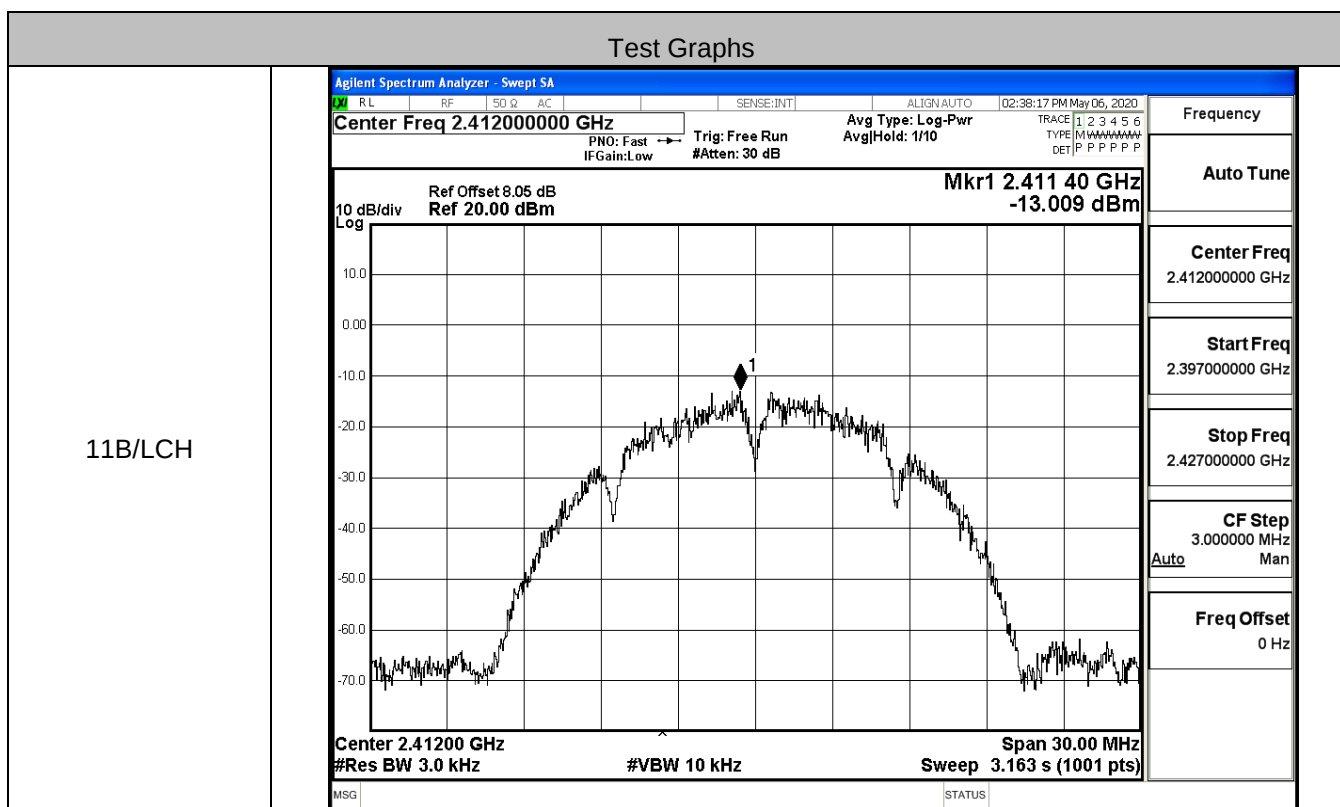


D.2 Maximum Conducted Output Power

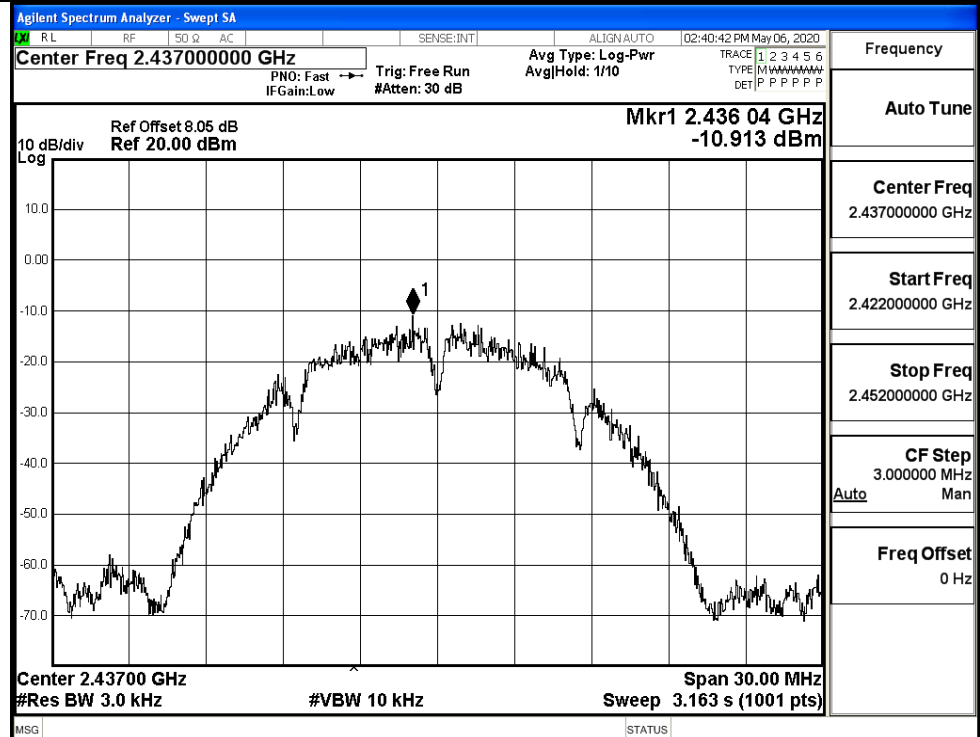
Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	12.74	30	PASS
	MCH	13.61	30	PASS
	HCH	12.89	30	PASS
11G	LCH	11.9	30	PASS
	MCH	11.91	30	PASS
	HCH	12.94	30	PASS
11N20SISO	LCH	12.86	30	PASS
	MCH	11.84	30	PASS
	HCH	12.83	30	PASS

D.3 Maximum Power Spectral Density

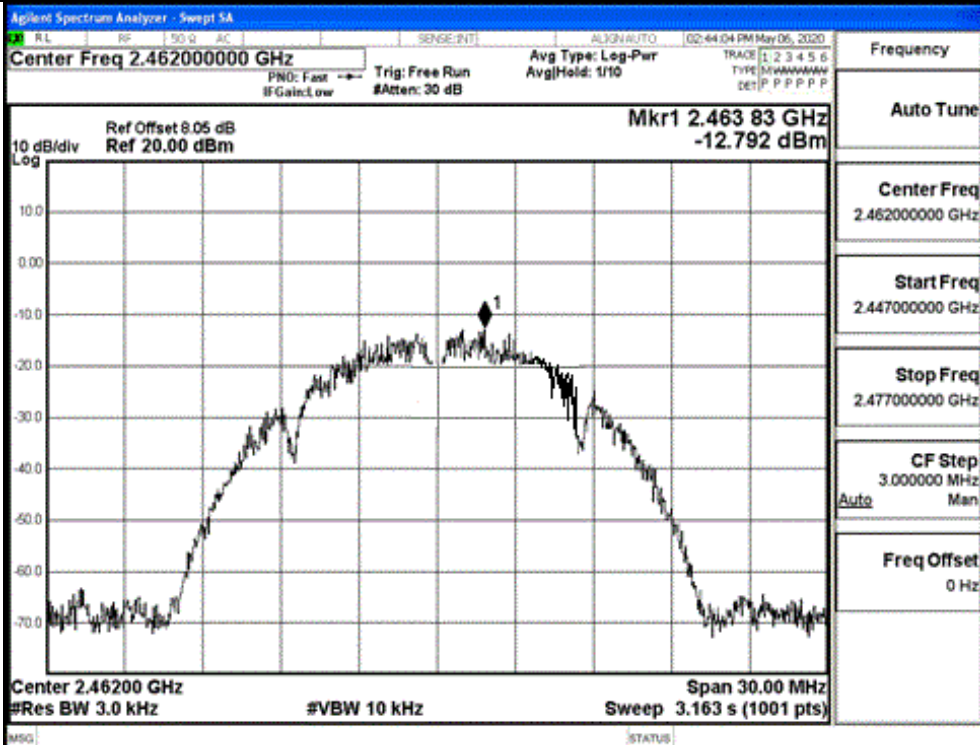
Mode	Channel	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-13.009	8	PASS
	MCH	-10.913	8	PASS
	HCH	-12.792	8	PASS
11G	LCH	-21.272	8	PASS
	MCH	-20.595	8	PASS
	HCH	-19.665	8	PASS
11N20SISO	LCH	-20.164	8	PASS
	MCH	-21.412	8	PASS
	HCH	-19.127	8	PASS



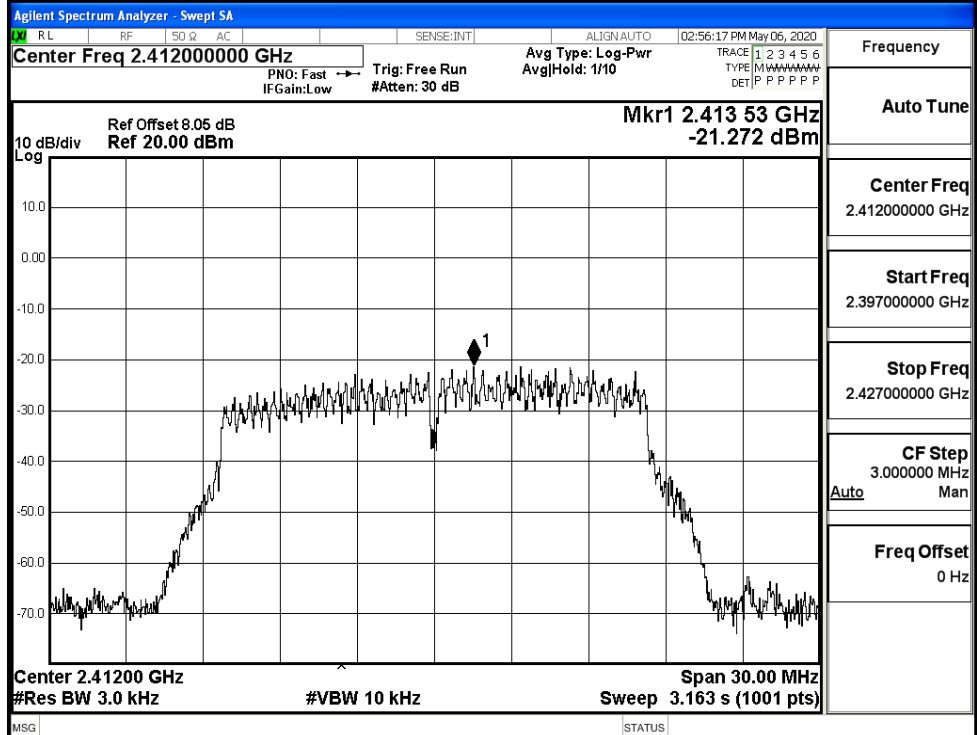
11B/MCH



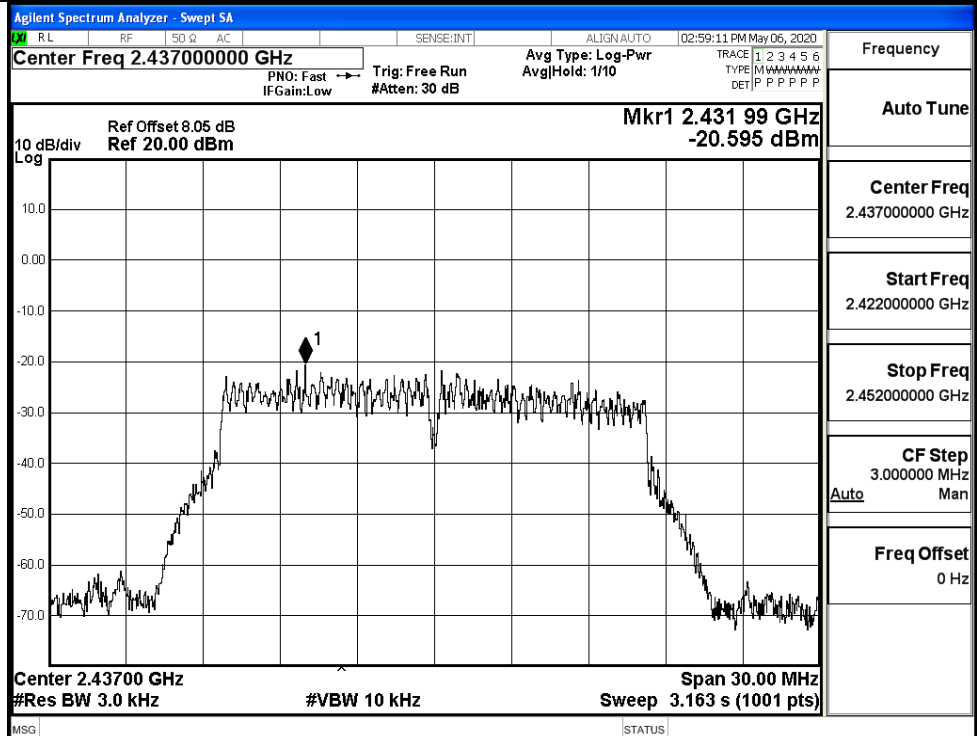
11B/HCH



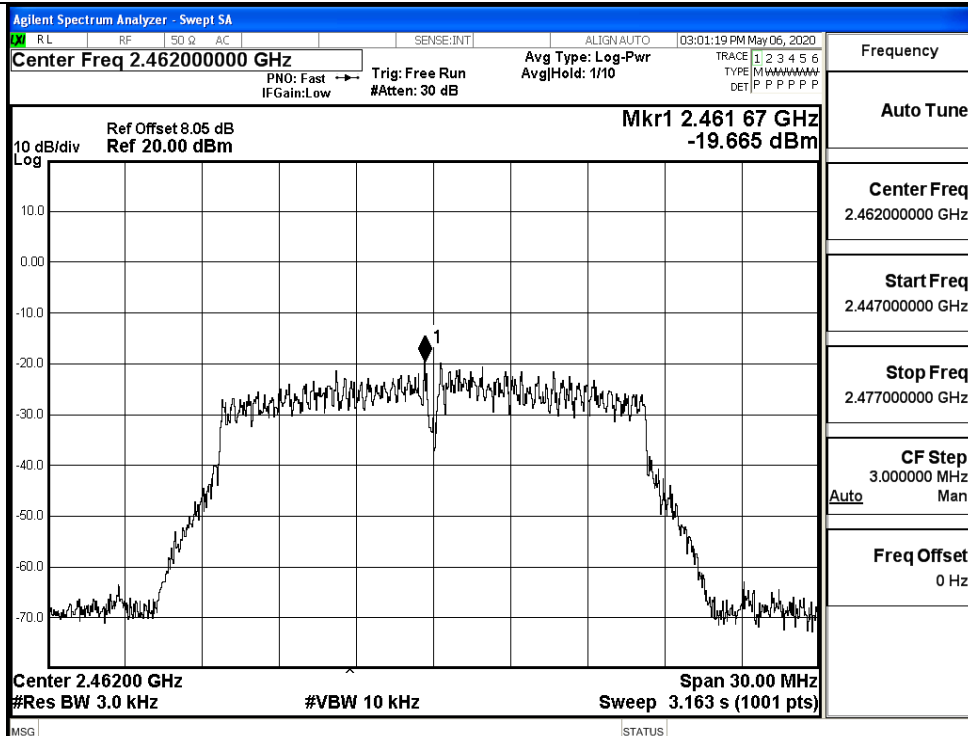
11G/LCH



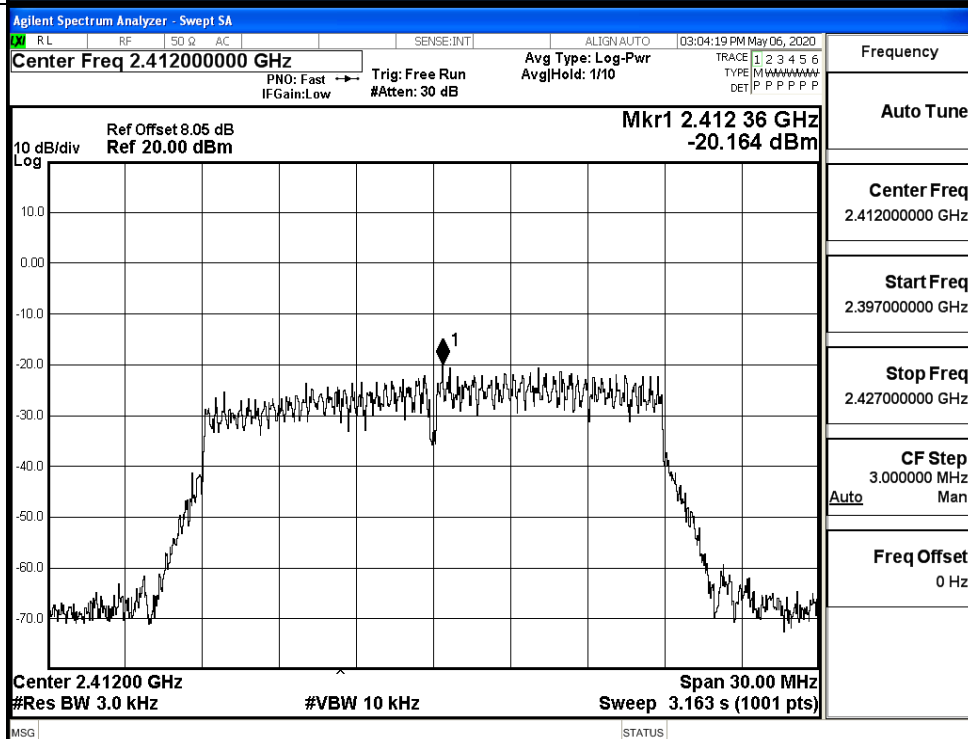
11G/MCH

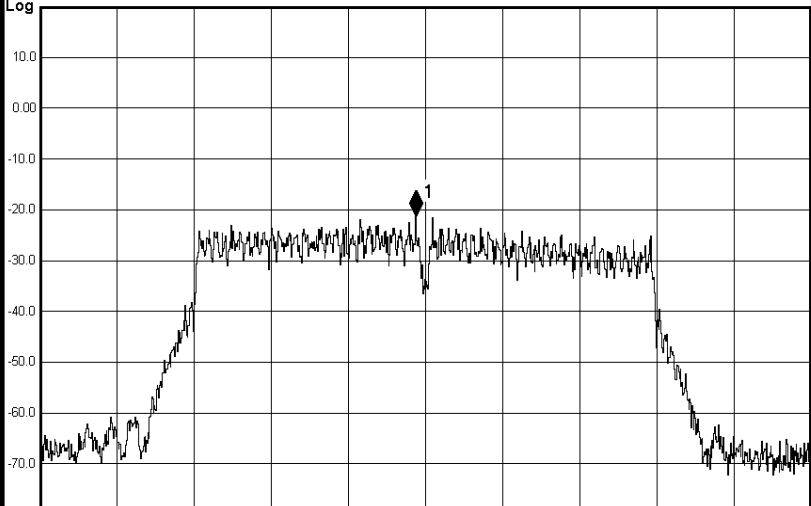
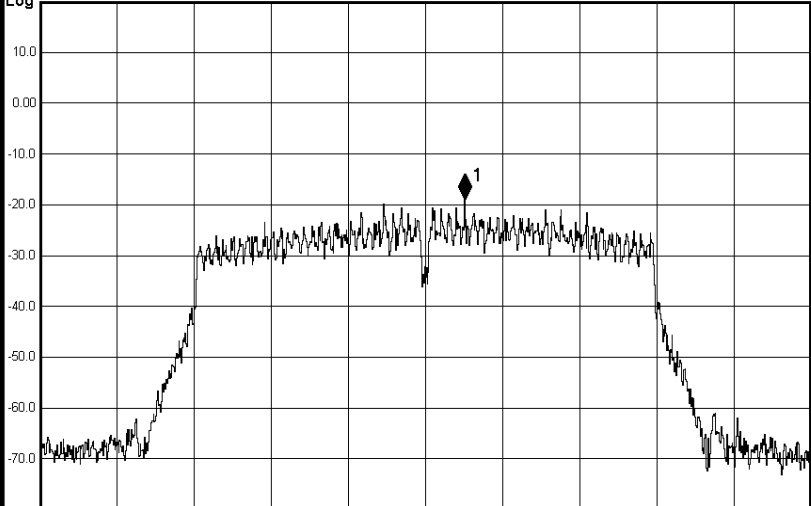


11G/HCH



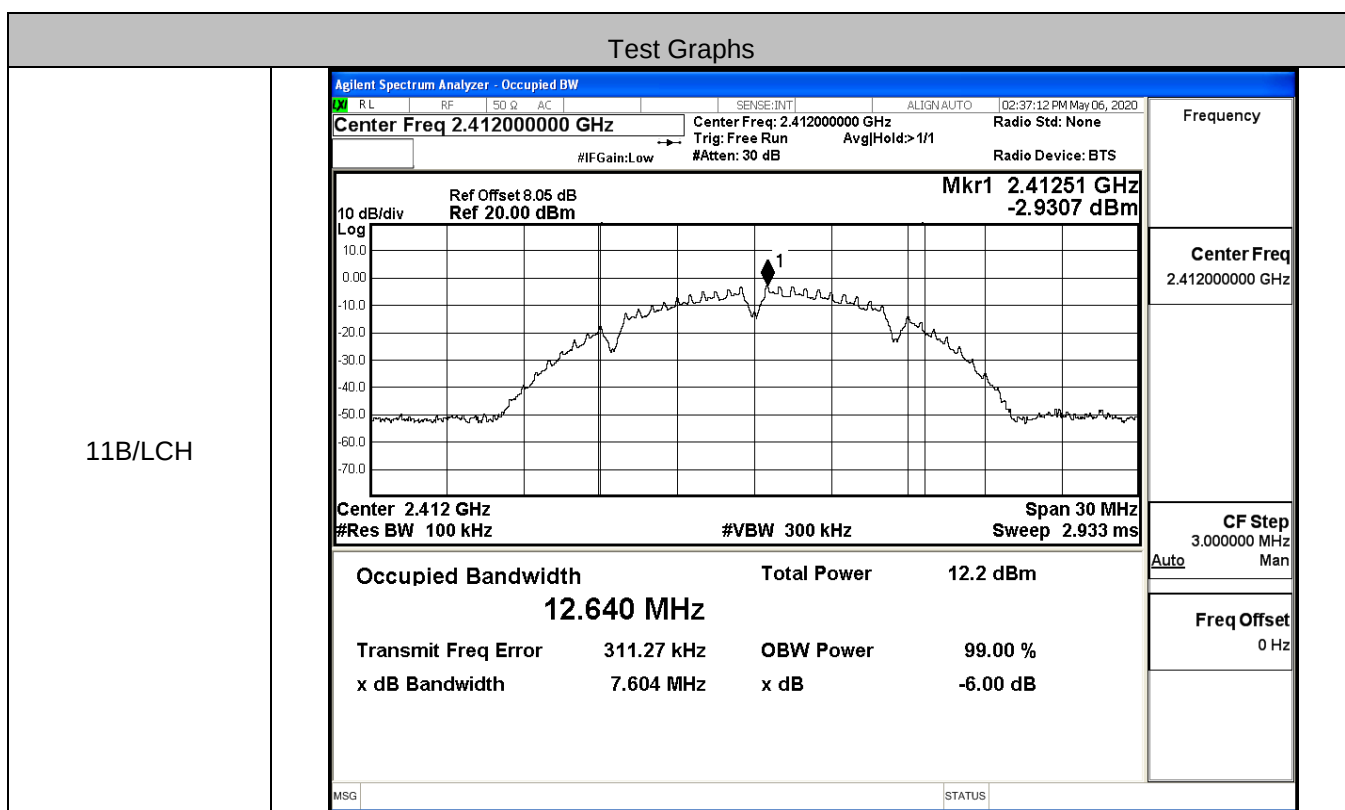
11N20SISO/LCH



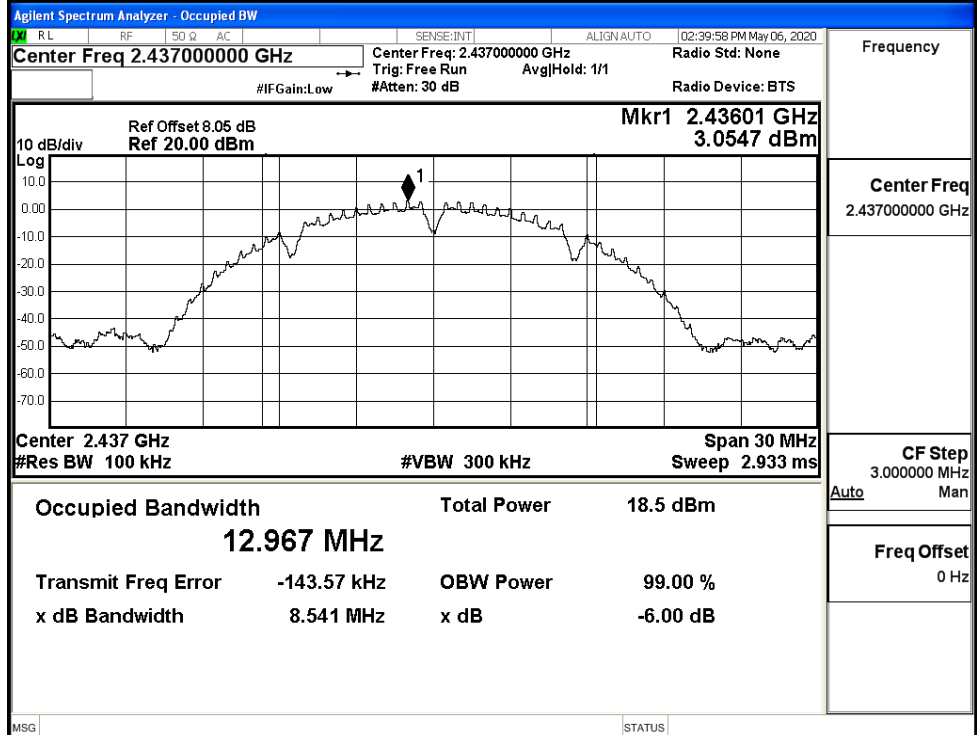
11N20SISO/MCH	Agilent Spectrum Analyzer - Swept SA Center Freq 2.437000000 GHz Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.436 64 GHz -21.412 dBm  Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts) MSG STATUS	Frequency Auto Tune Center Freq 2.437000000 GHz Start Freq 2.422000000 GHz Stop Freq 2.452000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
11N20SISO/HCH	Agilent Spectrum Analyzer - Swept SA Center Freq 2.462000000 GHz Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.463 53 GHz -19.127 dBm  Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz 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

D.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	7.604	≥ 0.5	PASS
	MCH	8.541	≥ 0.5	PASS
	HCH	7.578	≥ 0.5	PASS
11G	LCH	15.56	≥ 0.5	PASS
	MCH	16.46	≥ 0.5	PASS
	HCH	15.47	≥ 0.5	PASS
11N20SISO	LCH	16.82	≥ 0.5	PASS
	MCH	17.70	≥ 0.5	PASS
	HCH	16.32	≥ 0.5	PASS



11B/MCH



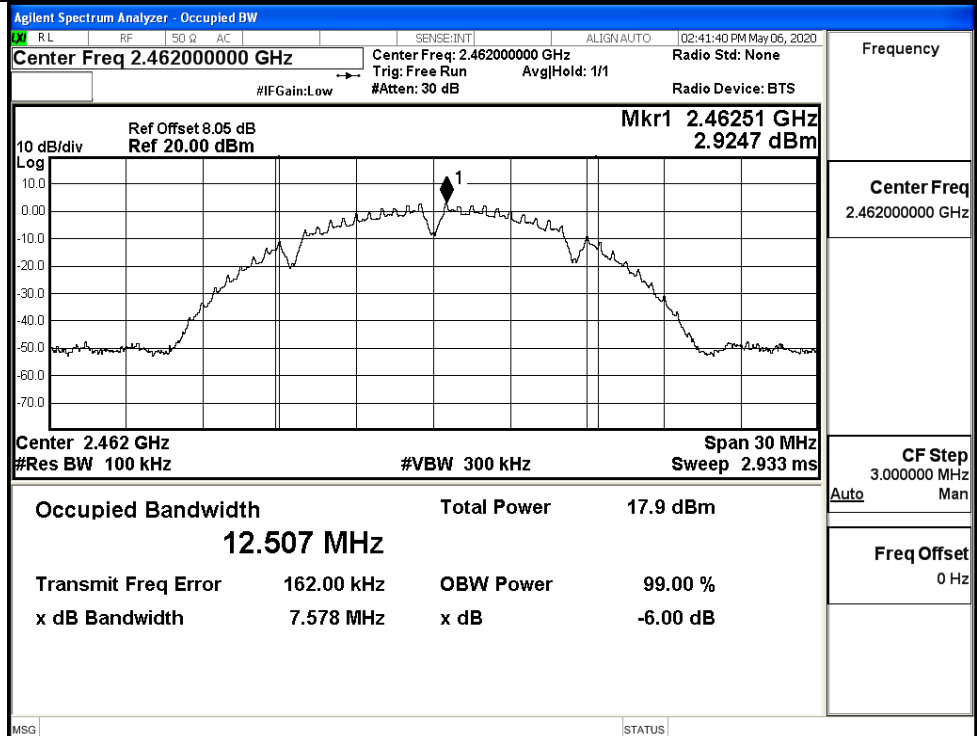
Frequency

Center Freq
2.437000000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

11B/HCH



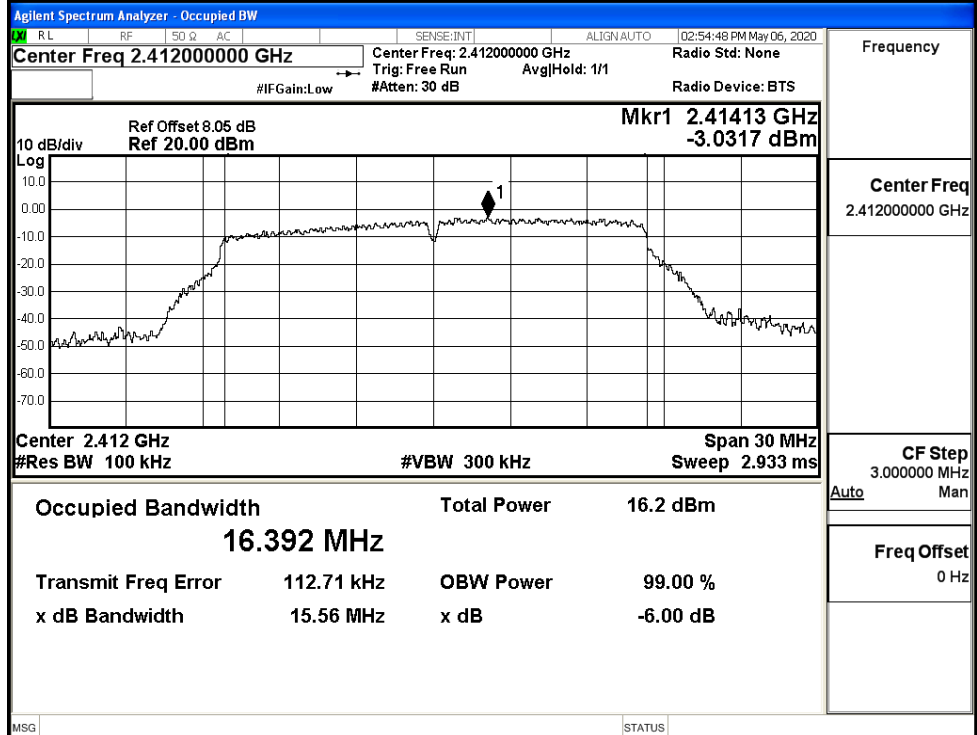
Frequency

Center Freq
2.462000000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

11G/LCH



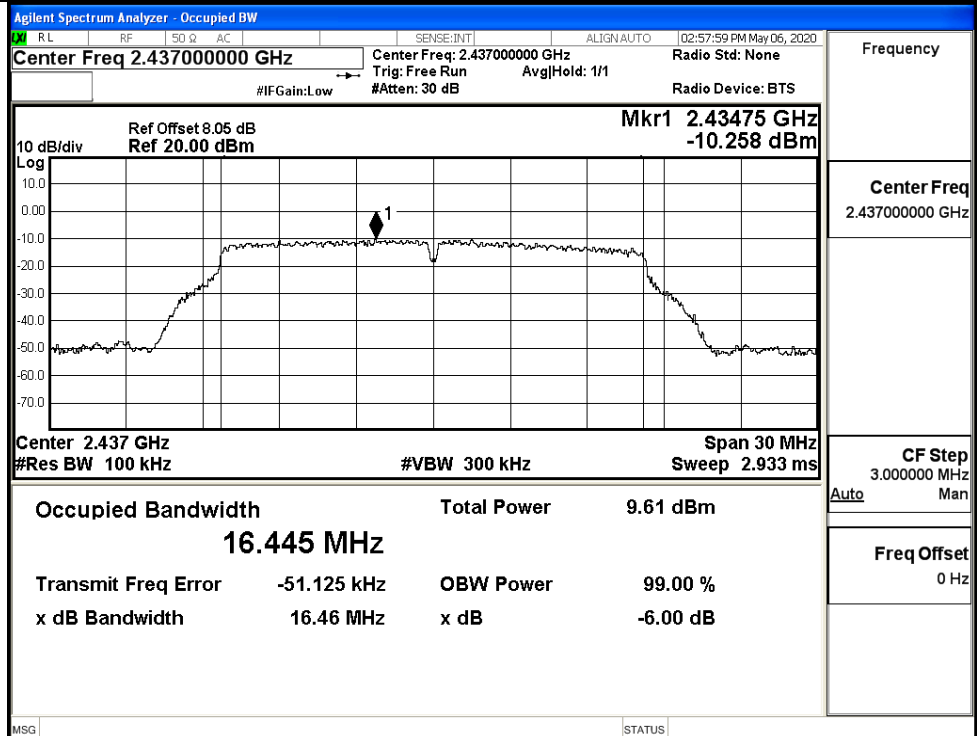
Frequency

Center Freq
2.41200000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

11G/MCH



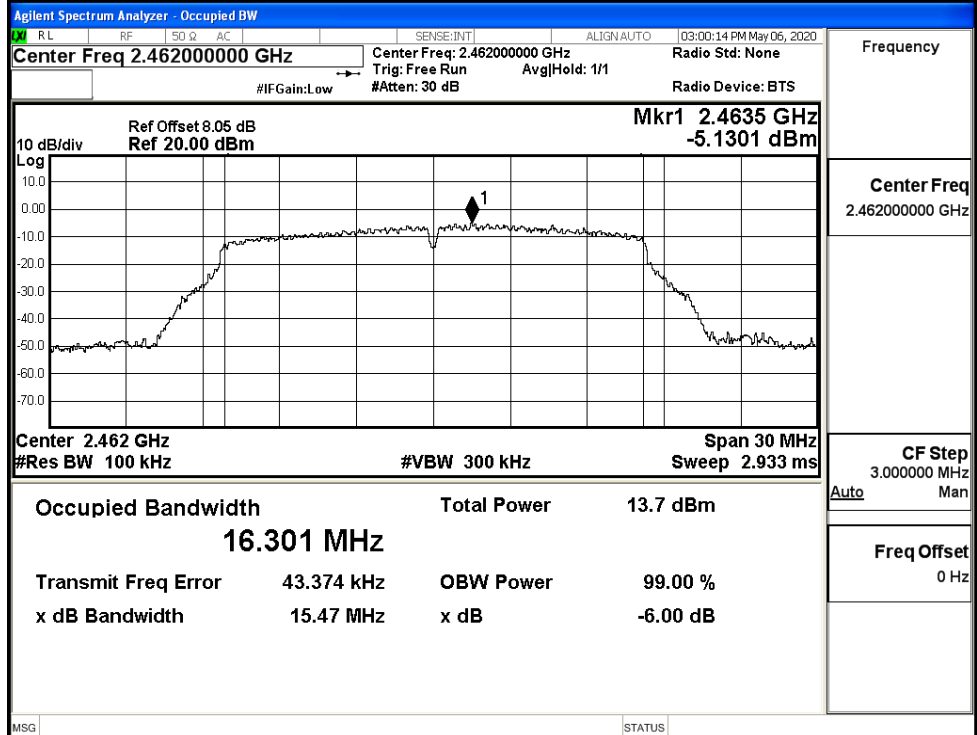
Frequency

Center Freq
2.437000000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

11G/HCH



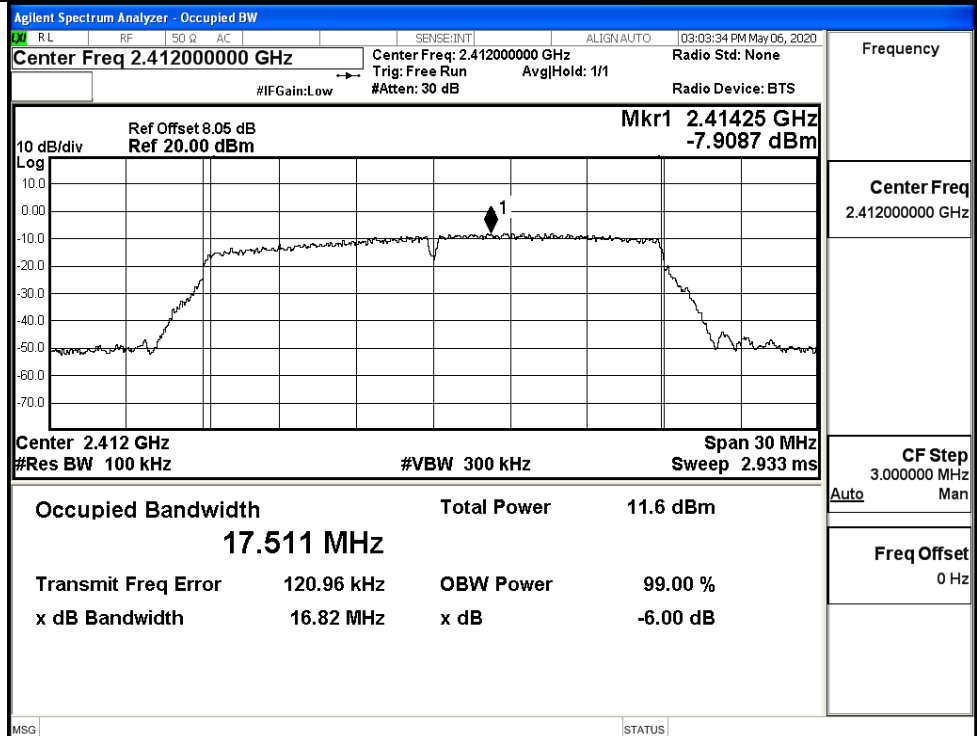
Frequency

Center Freq
2.462000000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

11N20SISO/LCH

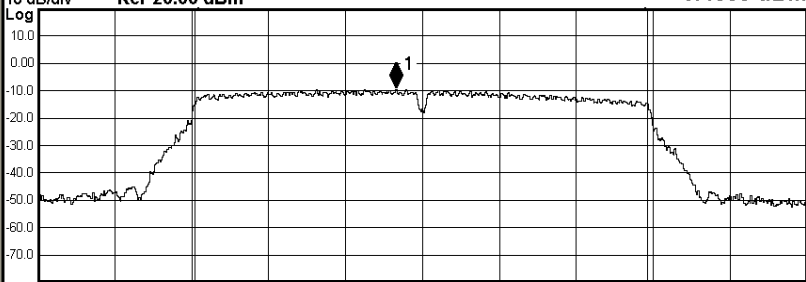
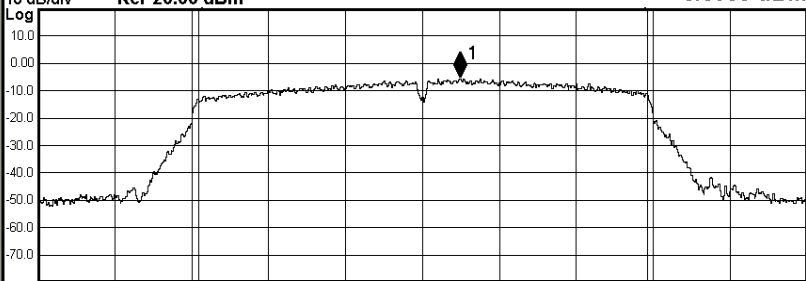


Frequency

Center Freq
2.412000000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

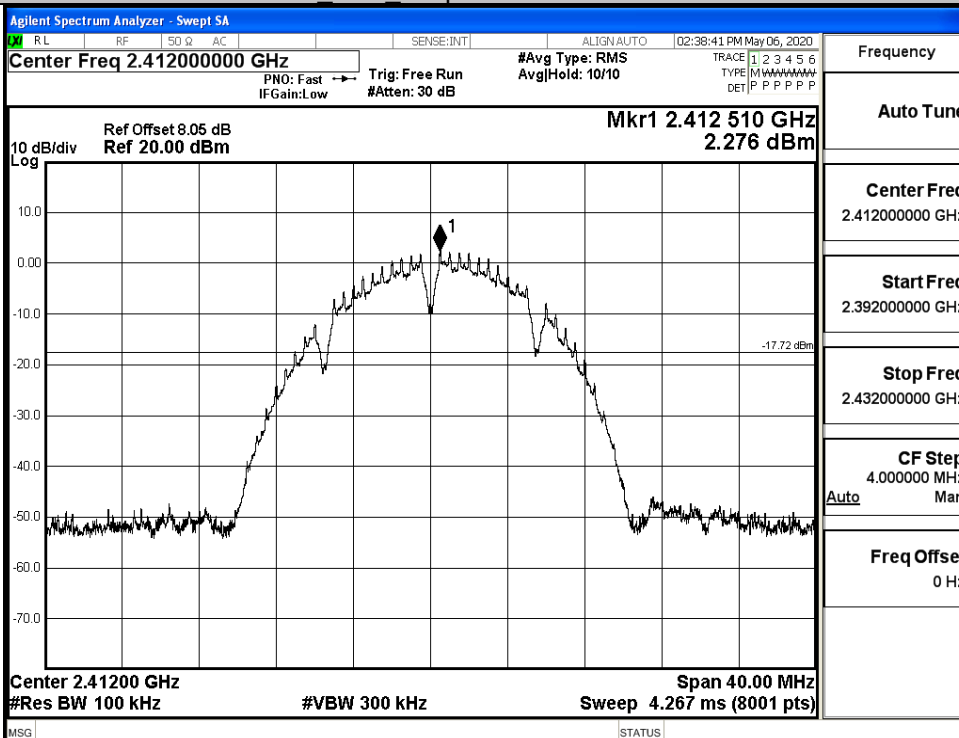
11N20SISO/MCH	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Trig: Free Run #Atten: 30 dB Radio Std: None Avg Hold: 1/1 Radio Device: BTS Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.43598 GHz -9.4580 dBm  Center 2.437 GHz #Res BW 100 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.624 MHz Total Power 10.5 dBm Transmit Freq Error -50.736 kHz OBW Power 99.00 % x dB Bandwidth 17.70 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 Center Freq 2.462000000 GHz Center Freq: 2.462000000 GHz Trig: Free Run #Atten: 30 dB Radio Std: None Avg Hold: 1/1 Radio Device: BTS Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.46347 GHz -5.6965 dBm  Center 2.462 GHz #Res BW 100 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.452 MHz Total Power 13.6 dBm Transmit Freq Error 47.941 kHz OBW Power 99.00 % x dB Bandwidth 16.32 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

D.5 RF Conducted Spurious Emissions

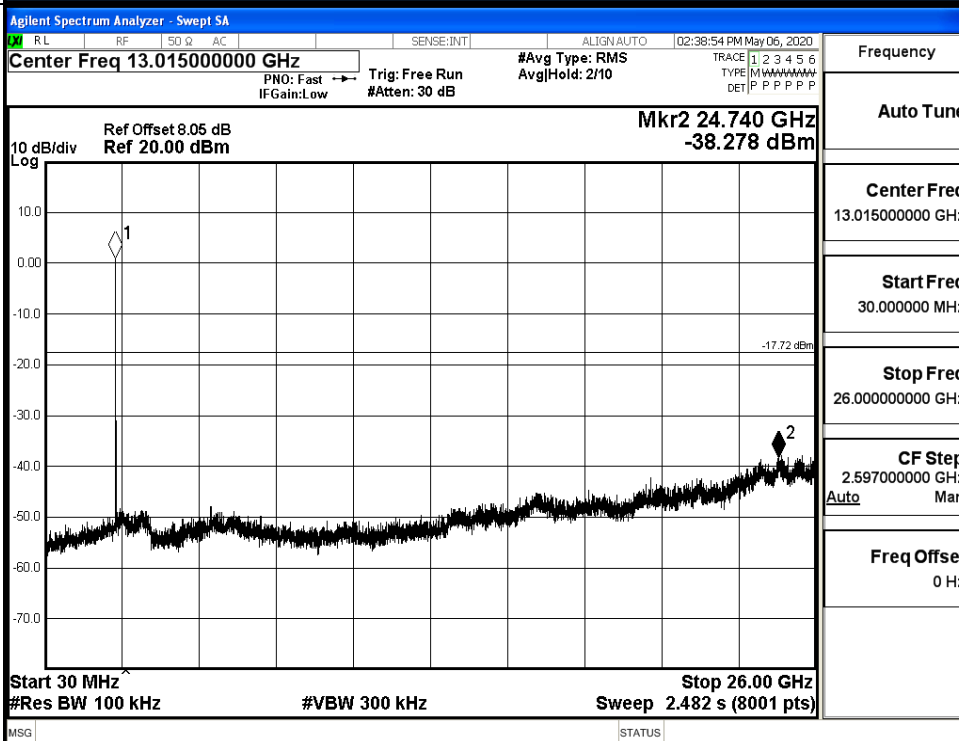
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	2.276	-38.278	-17.724	PASS
	MCH	2.814	-37.147	-17.186	PASS
	HCH	2.458	-37.928	-17.542	PASS
11G	LCH	-8.79	-37.227	-28.790	PASS
	MCH	-9.292	-37.780	-29.292	PASS
	HCH	-7.196	-37.334	-27.196	PASS
11N20 SISO	LCH	-8.14	-37.808	-28.140	PASS
	MCH	-9.589	-37.574	-29.589	PASS
	HCH	-8.103	-38.494	-28.103	PASS

11B LCH Graphs

Pref/11B/LCH

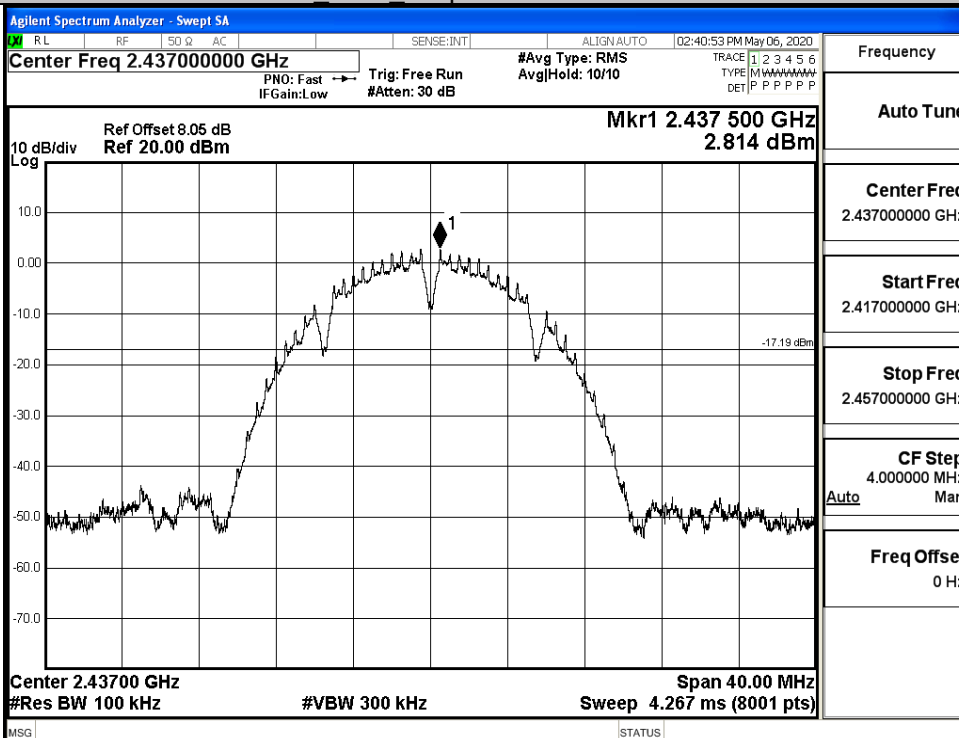


Puw/11B/LCH

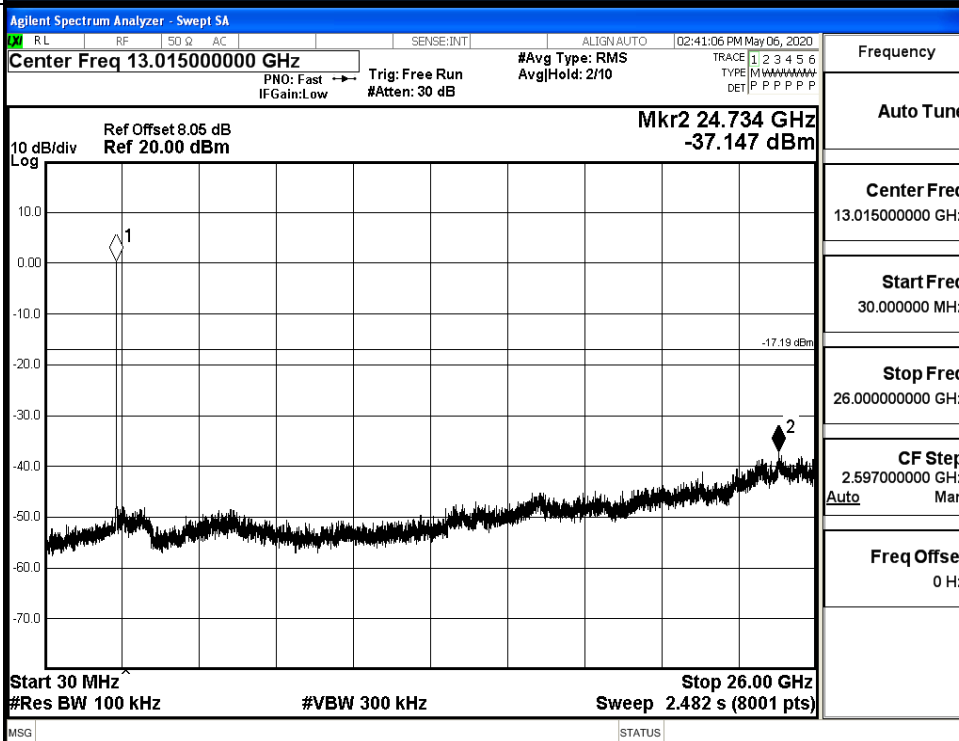


11B MCH Graphs

Pref/11B/MCH

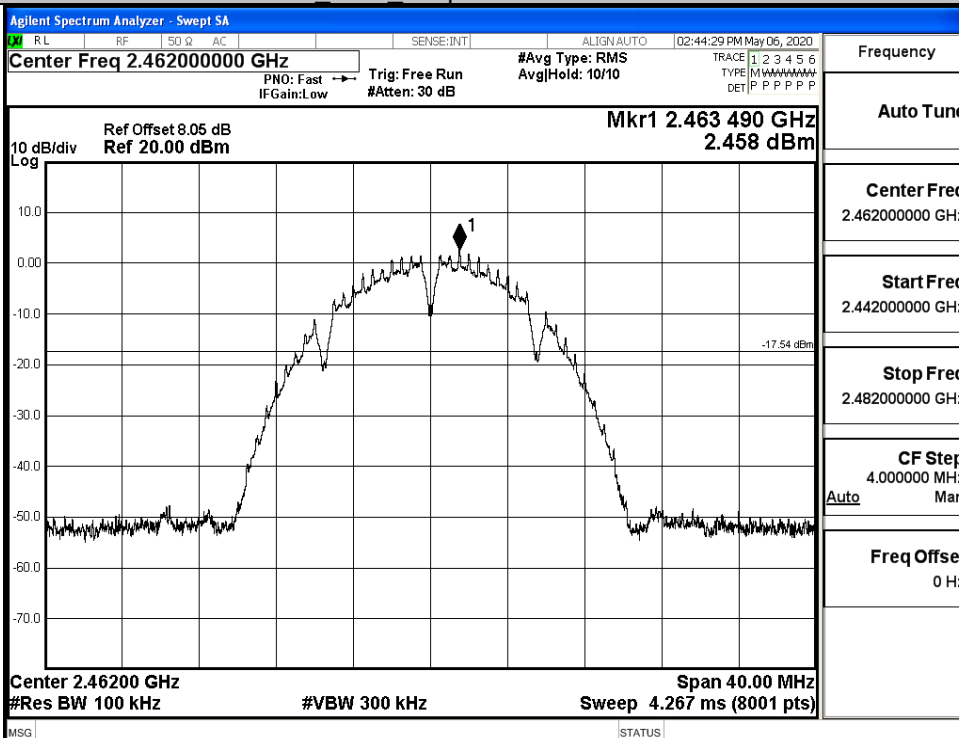


Puw/11B/MCH

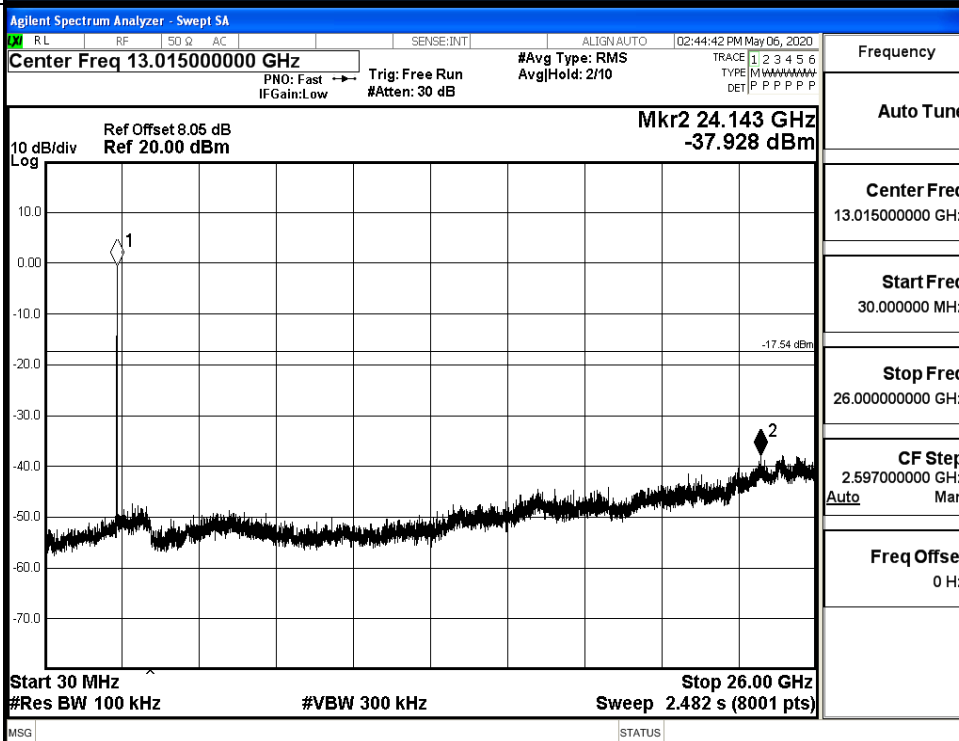


11B HCH Graphs

Pref/11B/HCH

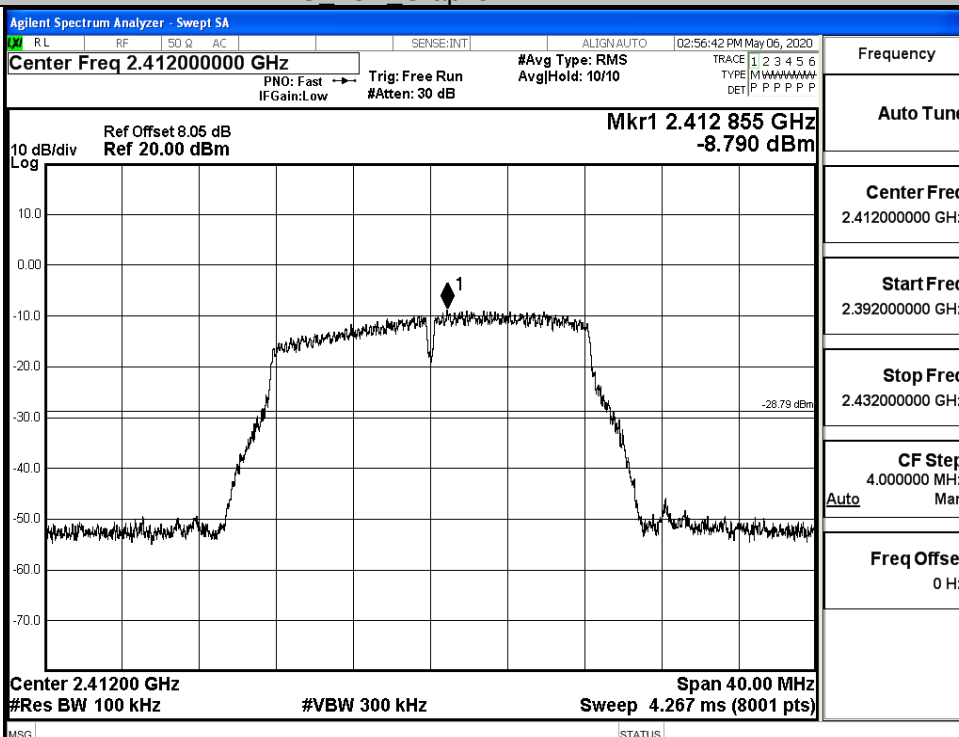


Puw/11B/HCH

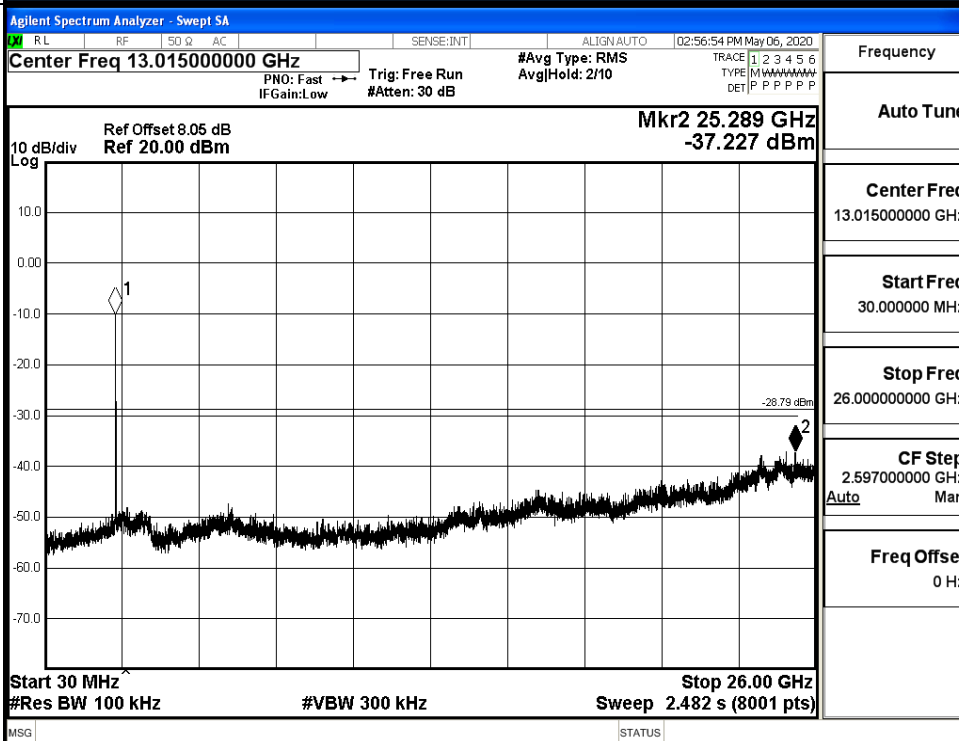


11G LCH Graphs

Pref/11G/LCH

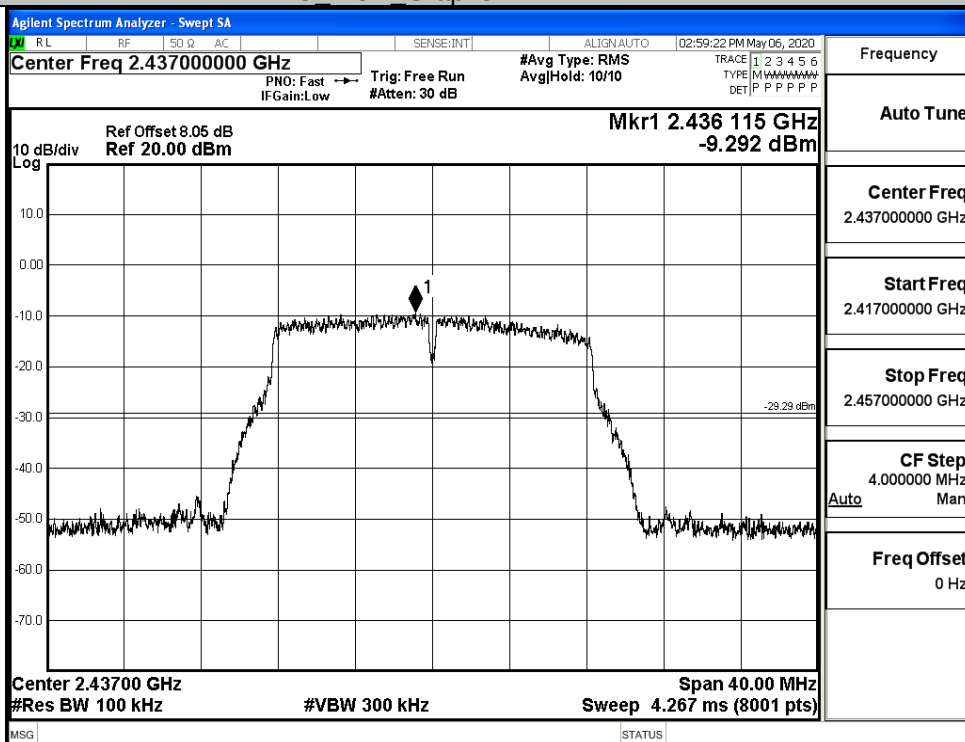


Puw/11G/LCH

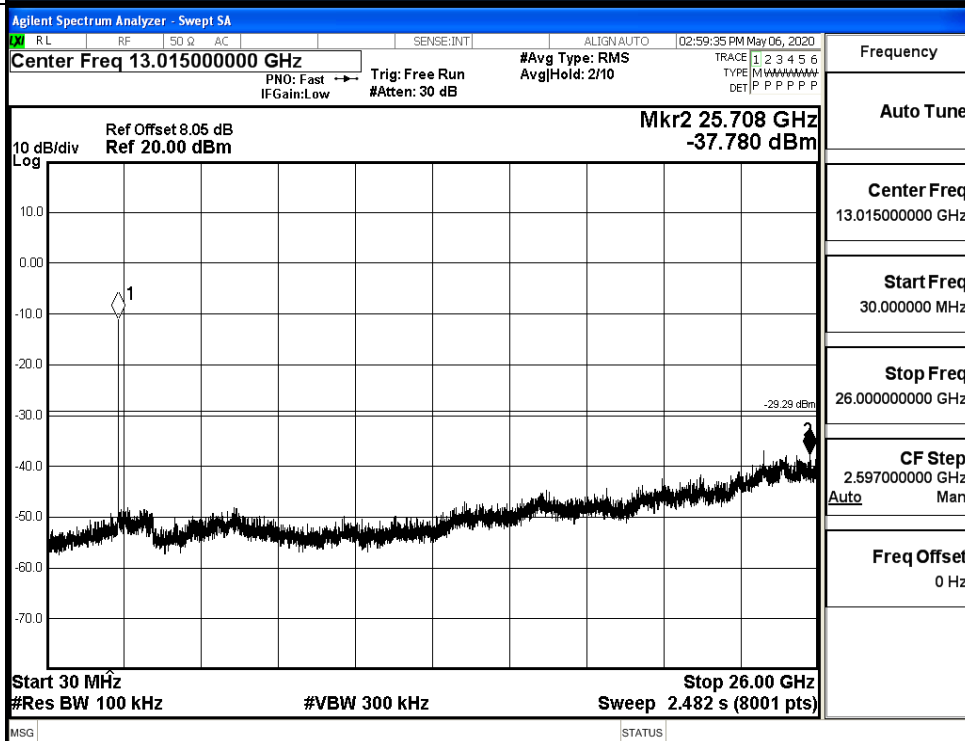


11G MCH Graphs

Pref/11G/MCH

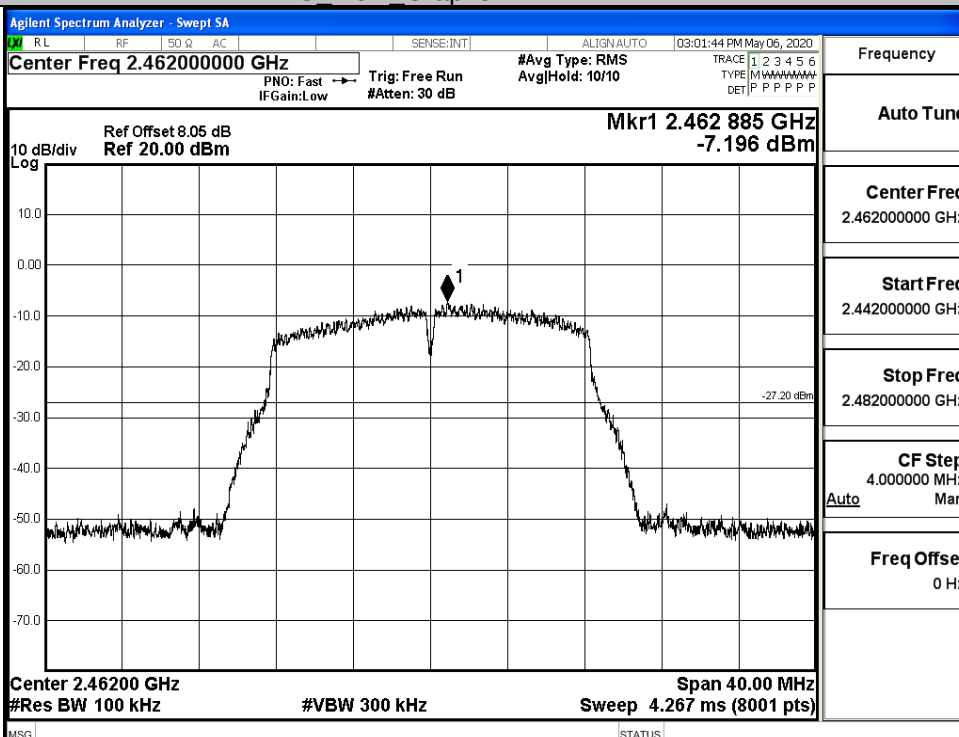


Puw/11G/MCH

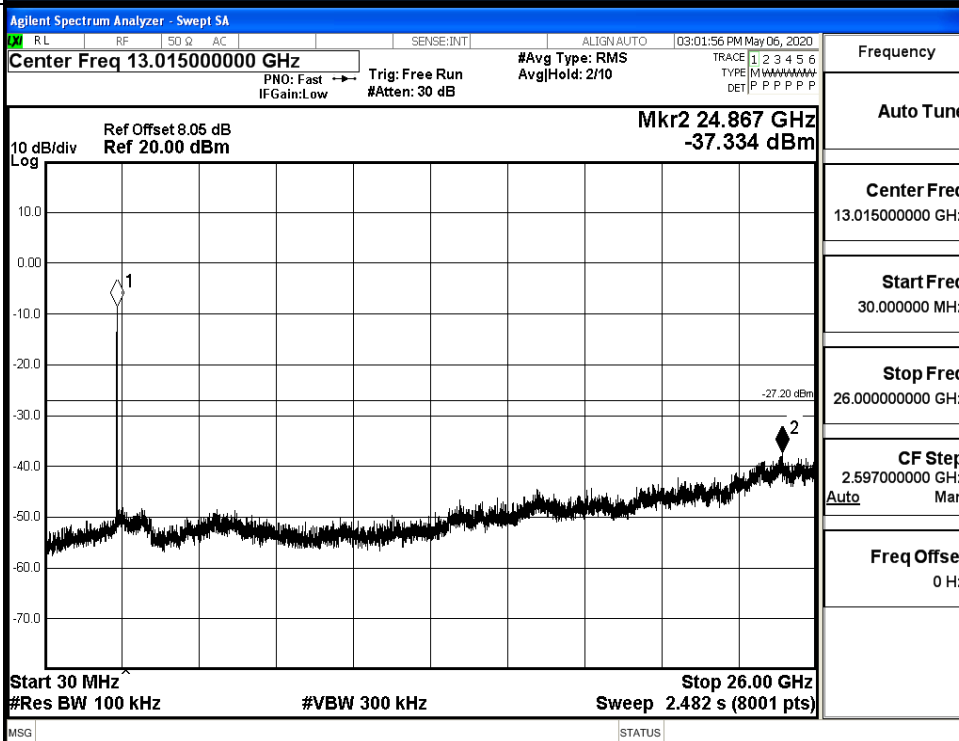


11G HCH Graphs

Pref/11G/HCH

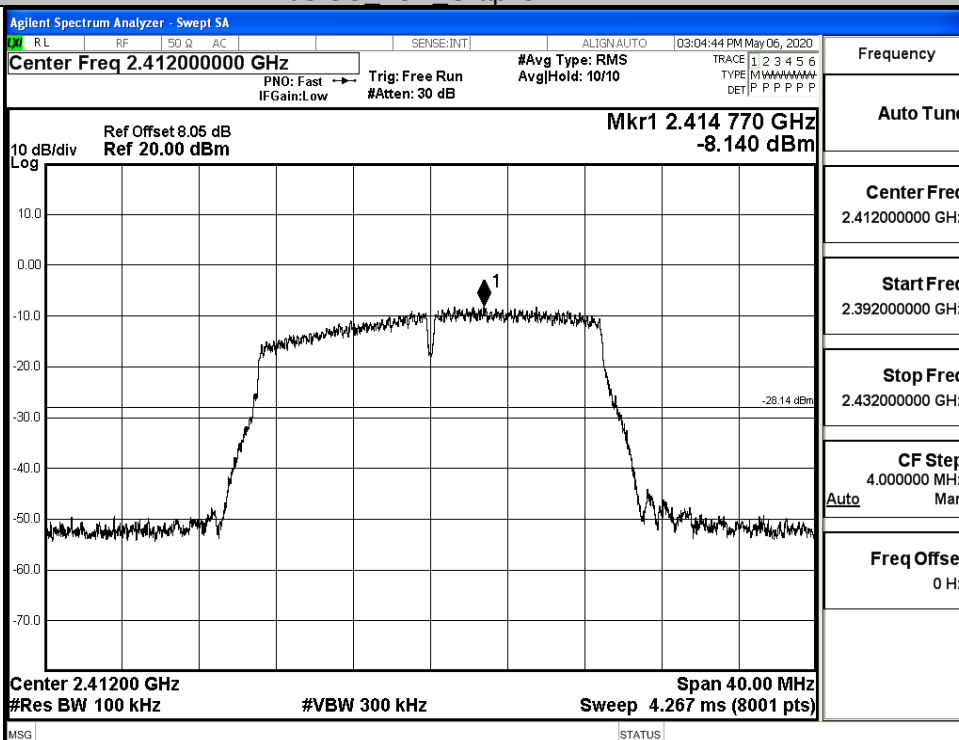


Puw/11G/HCH

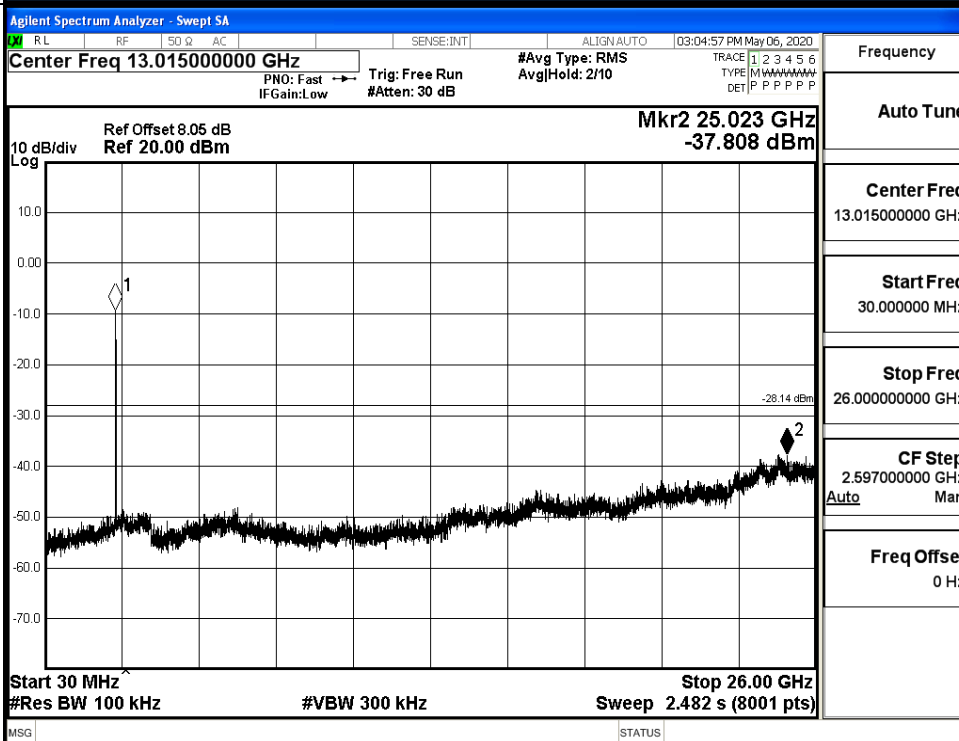


11N20SISO LCH Graphs

Pref/11N20SIS
O/LCH

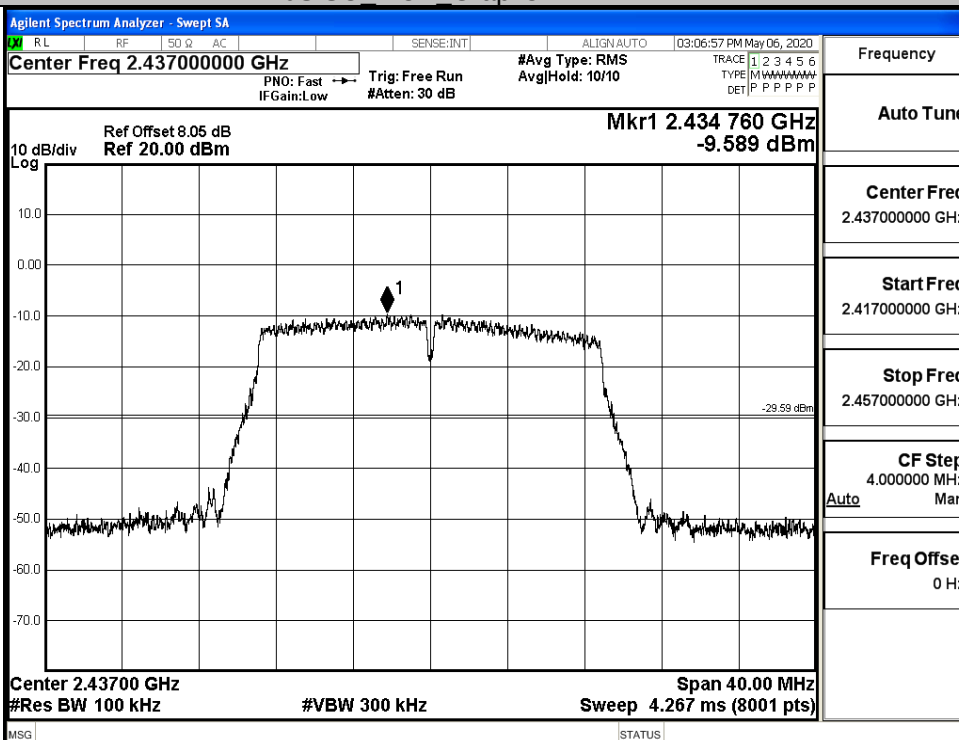


Puw/11N20
SISO/LCH

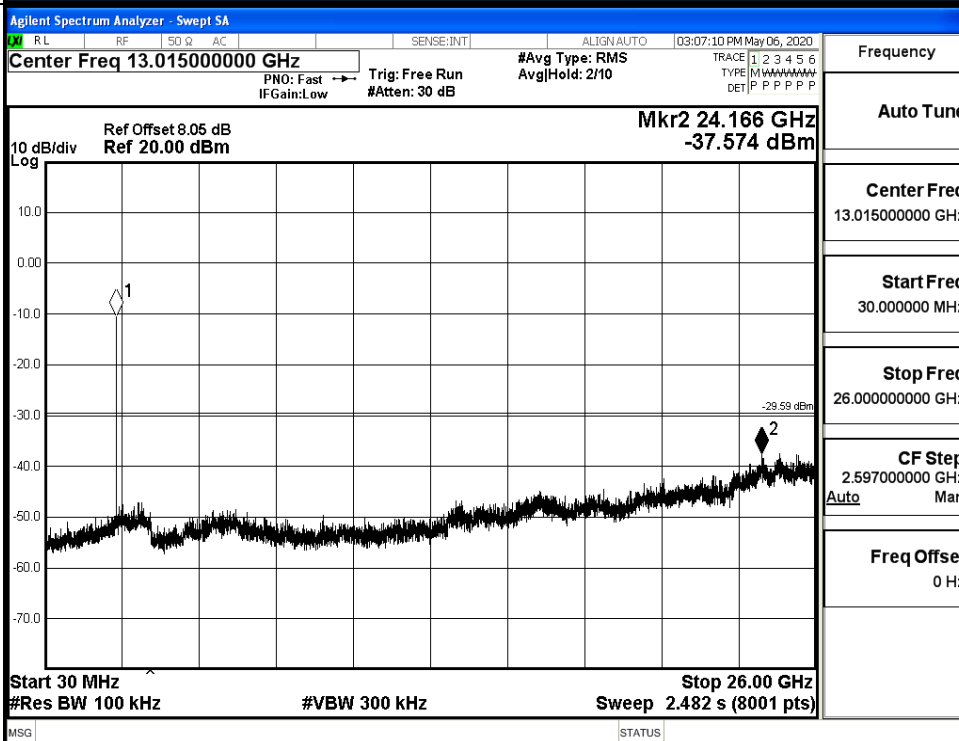


11N20SISO MCH Graphs

Pref/11N20
SISO/MCH

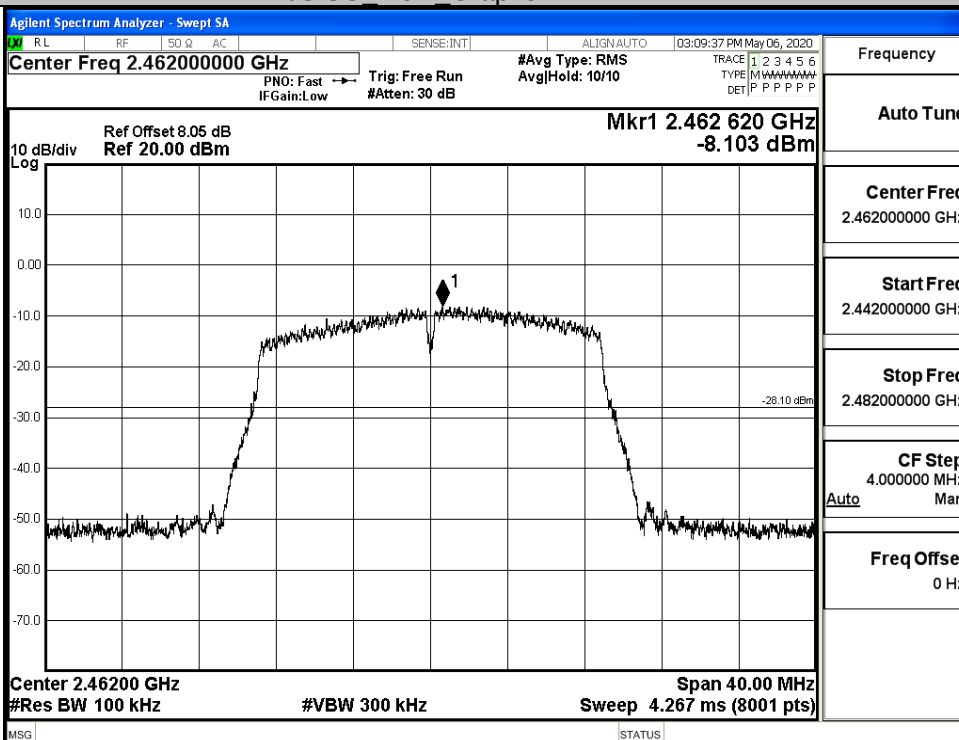


Puw/11N20
SISO/MCH

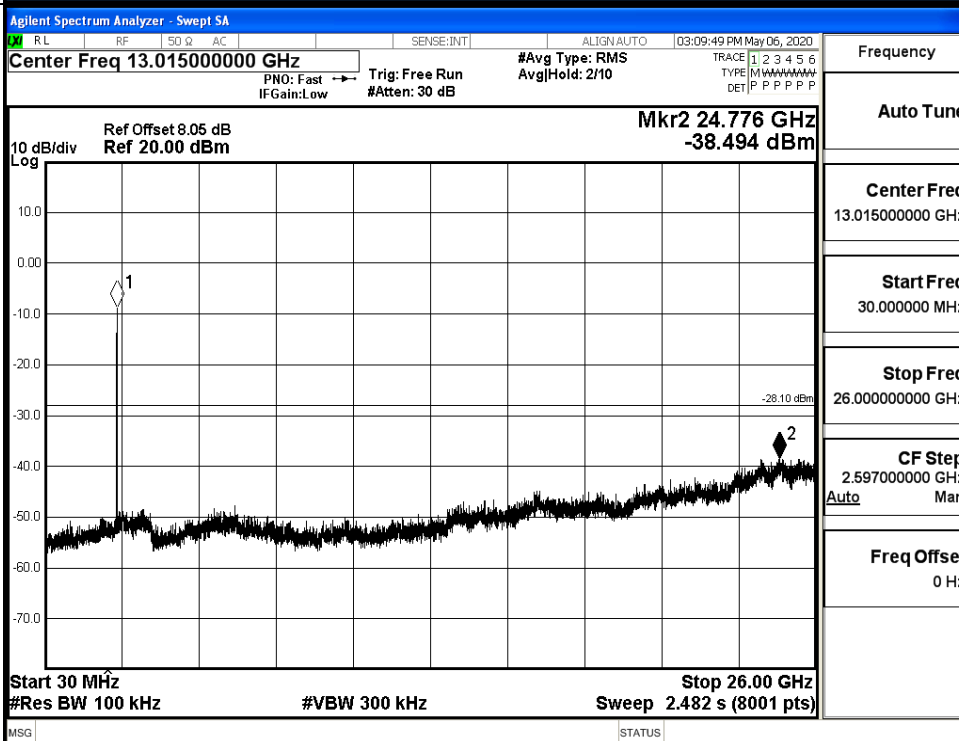


11N20SISO HCH Graphs

Pref/11N20
SISO/HCH

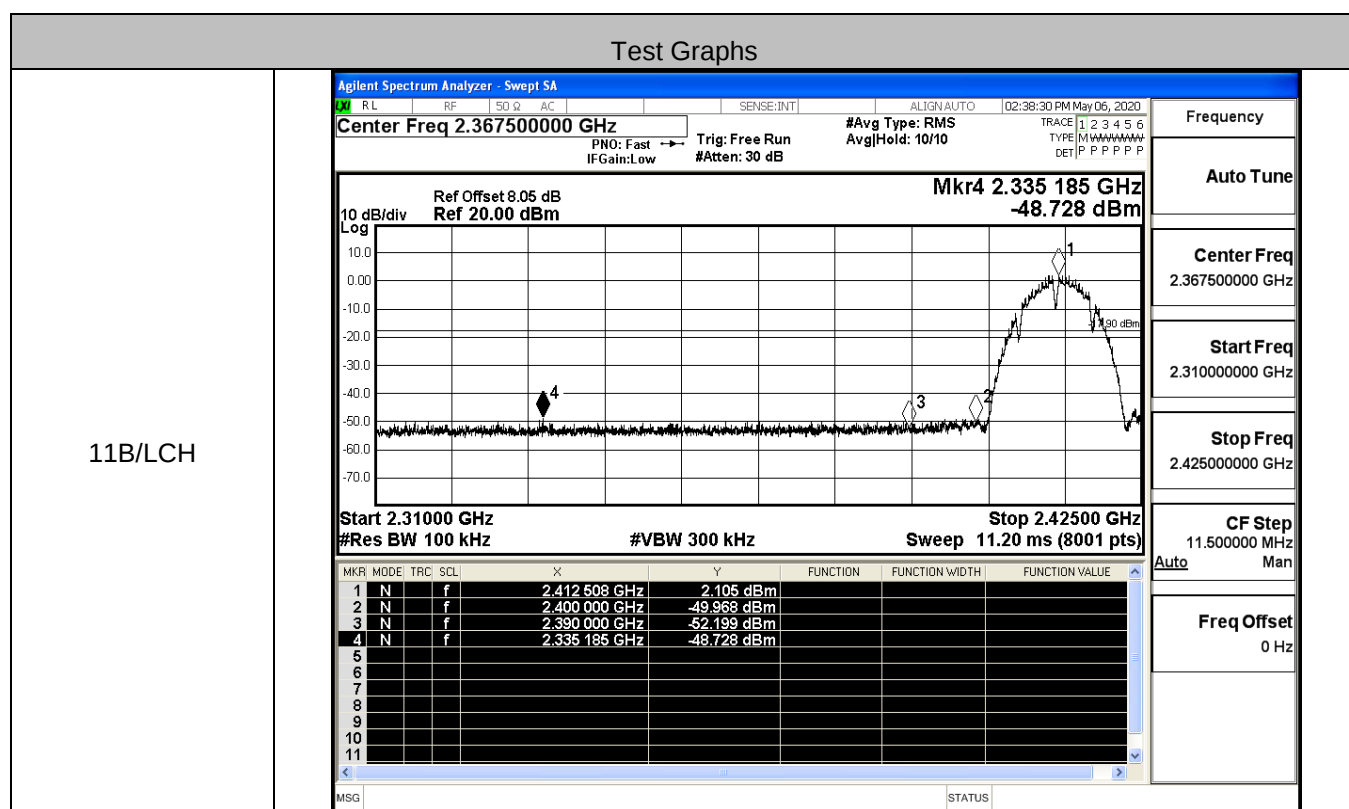


Puw/11N20
SISO/HCH

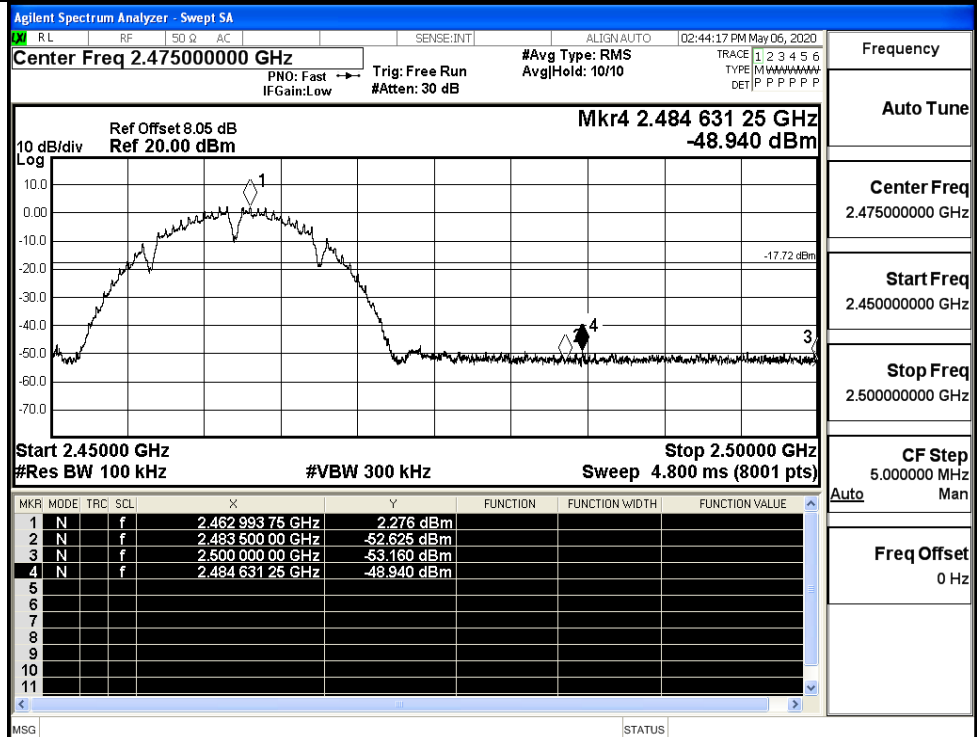


D.6 Band-edge for RF Conducted Emissions

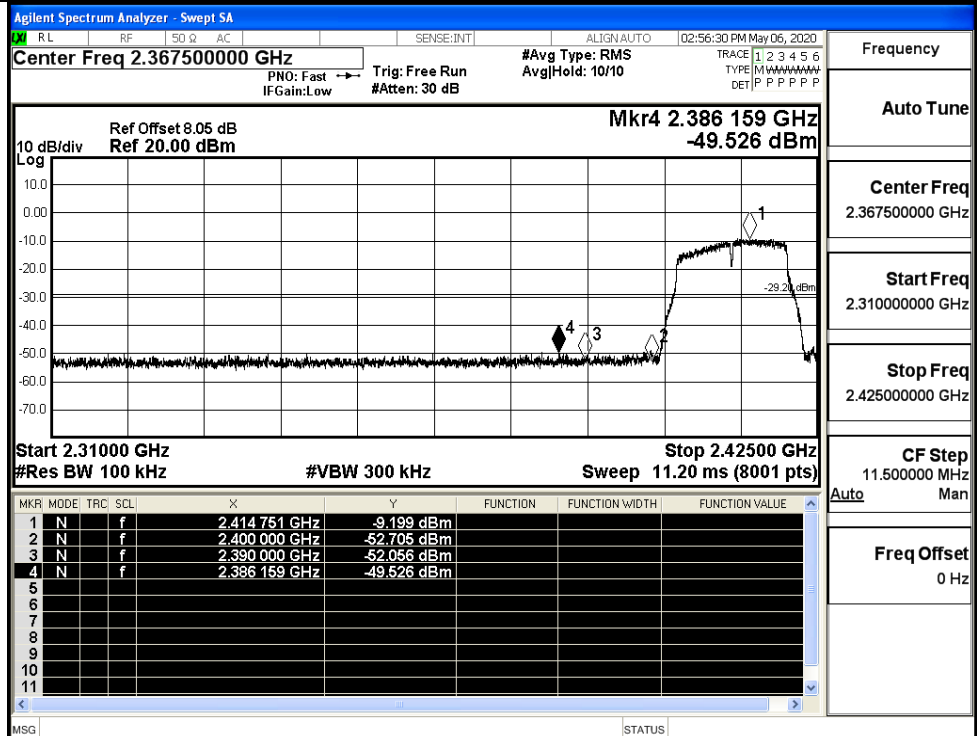
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	2.105	-48.728	-17.9	PASS
	HCH	2.276	-48.940	-17.72	PASS
11G	LCH	-9.199	-49.526	-29.2	PASS
	HCH	-7.761	-48.530	-27.76	PASS
11N20SISO	LCH	-8.247	-50.080	-28.25	PASS
	HCH	-7.818	-49.344	-27.82	PASS



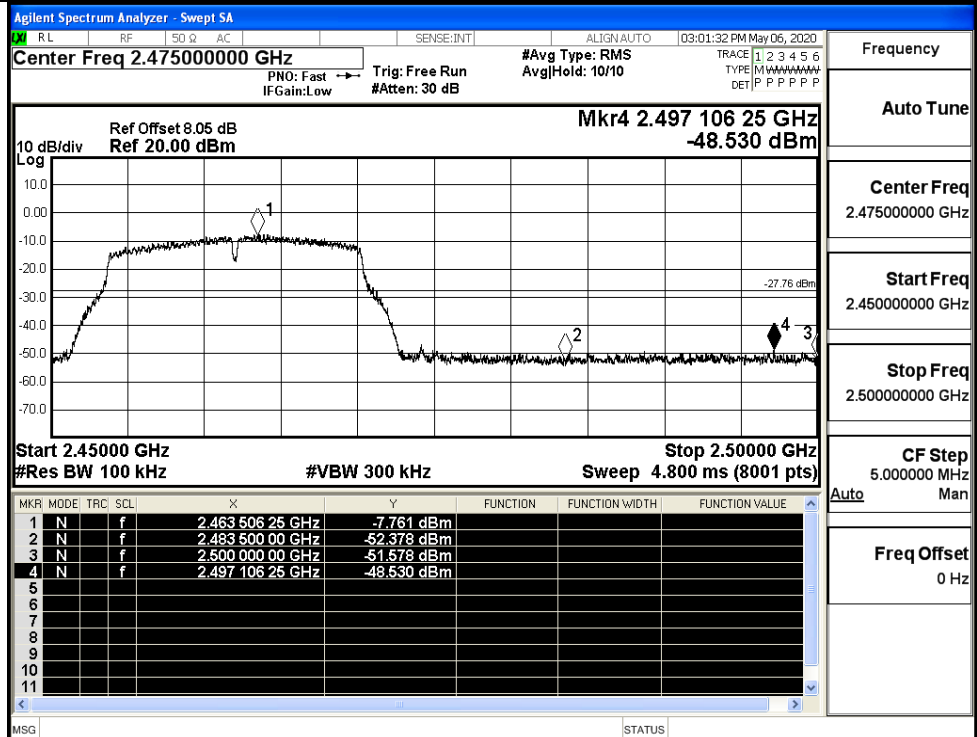
11B/HCH



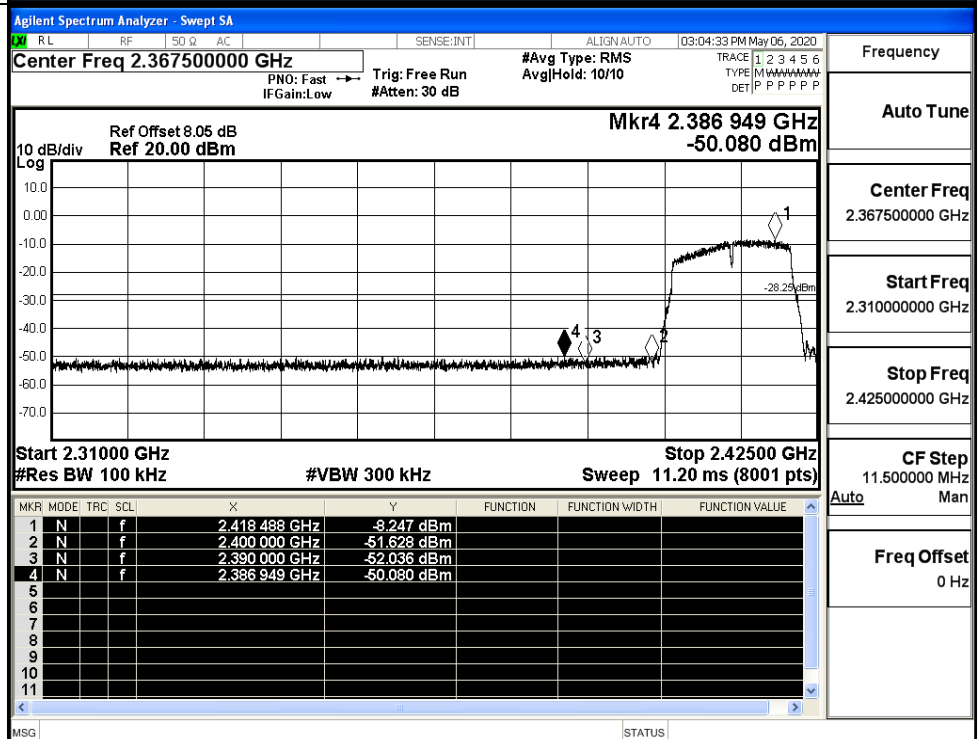
11G/LCH



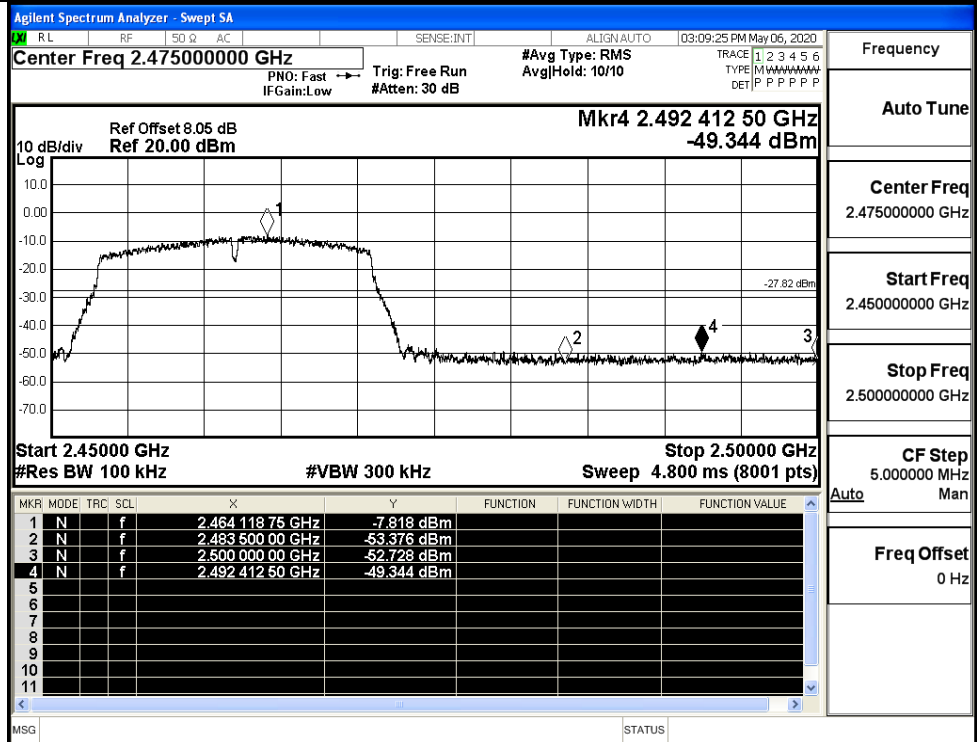
11G/HCH



11N20SISO/LCH



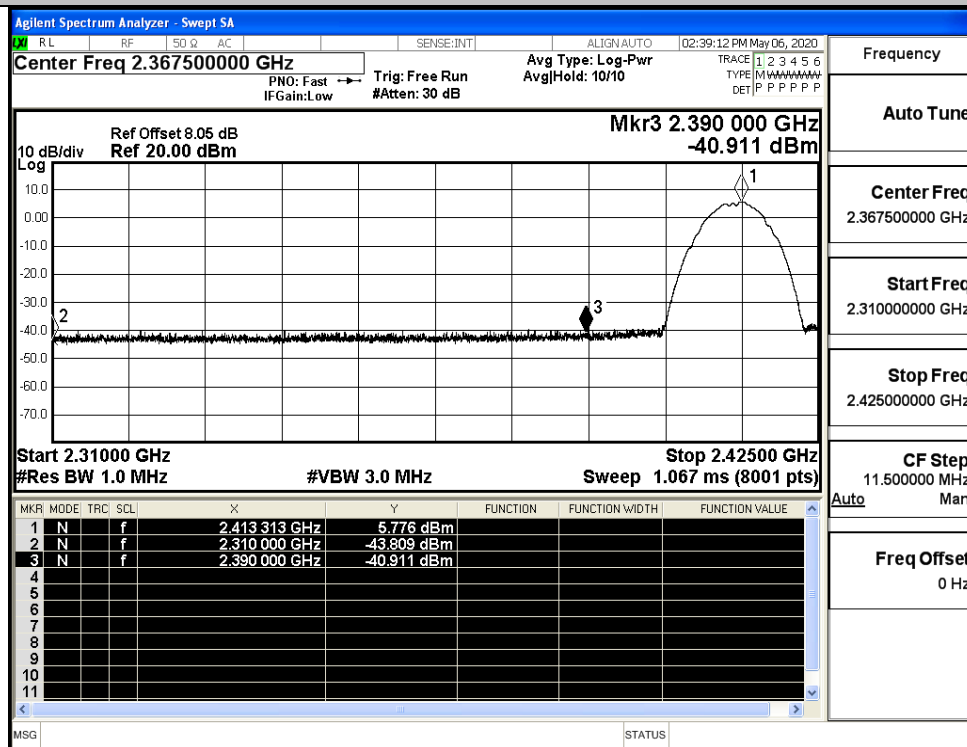
11N20SISO/HCH



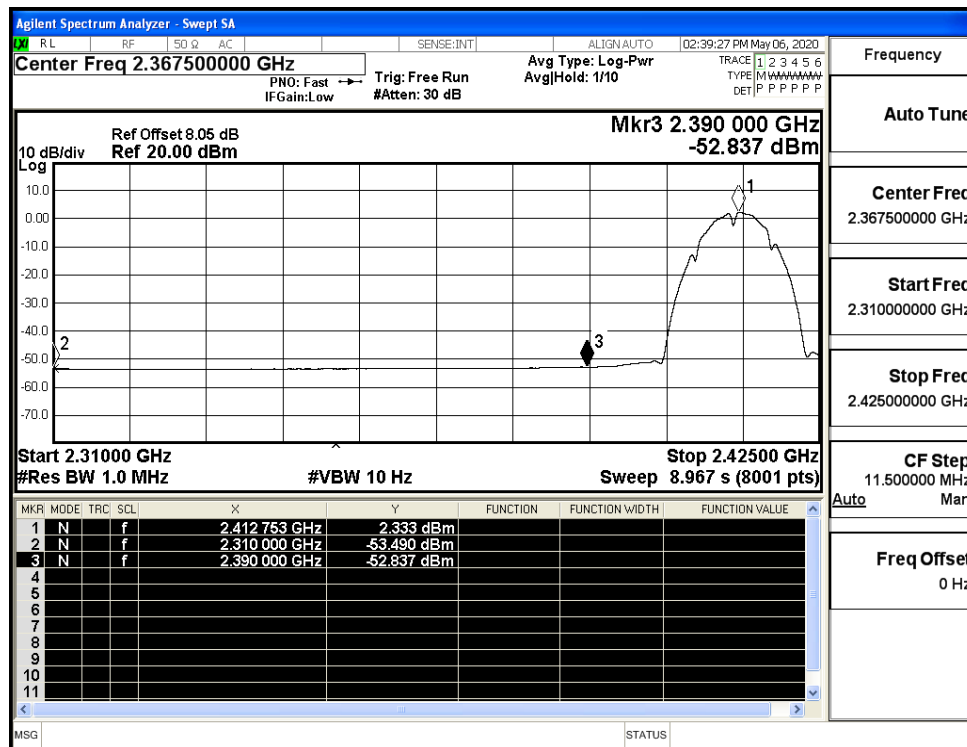
D.7 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-43.81	2.0	0	53.42	PEAK	74	PASS
	2412	Ant1	2310.0	-53.49	2.0	0	43.74	AV	54	PASS
	2412	Ant1	2390.0	-40.91	2.0	0	56.32	PEAK	74	PASS
	2412	Ant1	2390.0	-52.84	2.0	0	44.39	AV	54	PASS
	2462	Ant1	2483.5	-42.27	2.0	0	54.96	PEAK	74	PASS
	2462	Ant1	2483.5	-52.53	2.0	0	44.70	AV	54	PASS
	2462	Ant1	2500.0	-41.27	2.0	0	55.96	PEAK	74	PASS
	2462	Ant1	2500.0	-52.42	2.0	0	44.81	AV	54	PASS
11G	2412	Ant1	2310.0	-42.82	2.0	0	54.41	PEAK	74	PASS
	2412	Ant1	2310.0	-53.50	2.0	0	43.73	AV	54	PASS
	2412	Ant1	2390.0	-43.22	2.0	0	54.01	PEAK	74	PASS
	2412	Ant1	2390.0	-52.87	2.0	0	44.36	AV	54	PASS
	2462	Ant1	2483.5	-42.39	2.0	0	54.84	PEAK	74	PASS
	2462	Ant1	2483.5	-52.58	2.0	0	44.65	AV	54	PASS
	2462	Ant1	2500.0	-42.71	2.0	0	54.52	PEAK	74	PASS
	2462	Ant1	2500.0	-52.41	2.0	0	44.82	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-41.69	2.0	0	55.54	PEAK	74	PASS
	2412	Ant1	2310.0	-53.50	2.0	0	43.73	AV	54	PASS
	2412	Ant1	2390.0	-42.47	2.0	0	54.76	PEAK	74	PASS
	2412	Ant1	2390.0	-52.77	2.0	0	44.46	AV	54	PASS
	2462	Ant1	2483.5	-40.96	2.0	0	56.27	PEAK	74	PASS
	2462	Ant1	2483.5	-52.58	2.0	0	44.65	AV	54	PASS
	2462	Ant1	2500.0	-42.14	2.0	0	55.09	PEAK	74	PASS
	2462	Ant1	2500.0	-52.44	2.0	0	44.79	AV	54	PASS

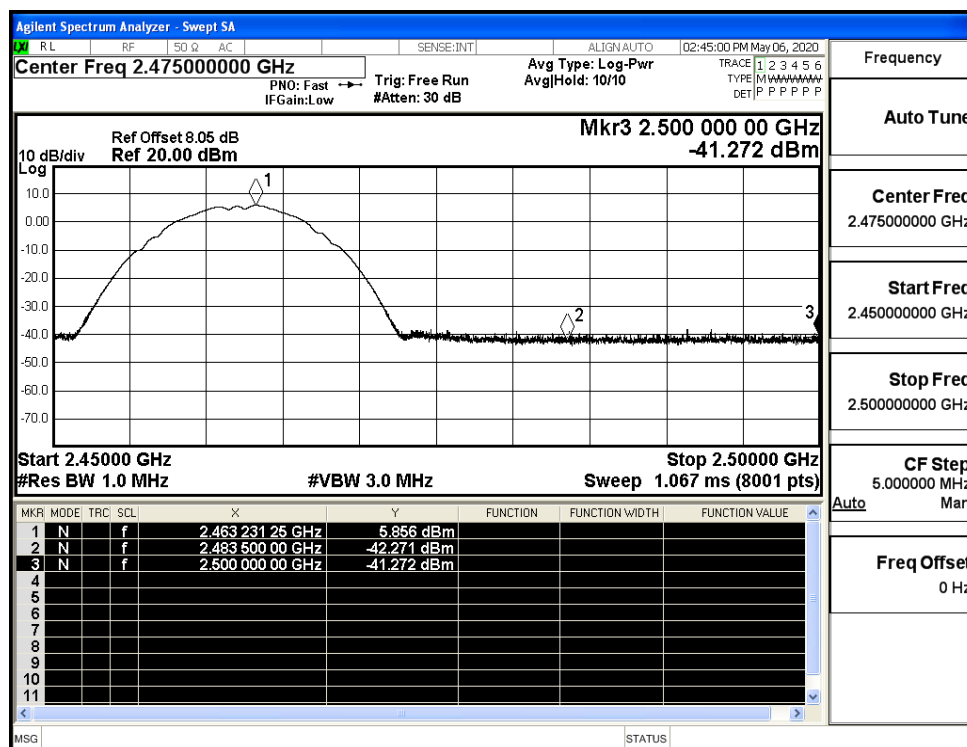
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



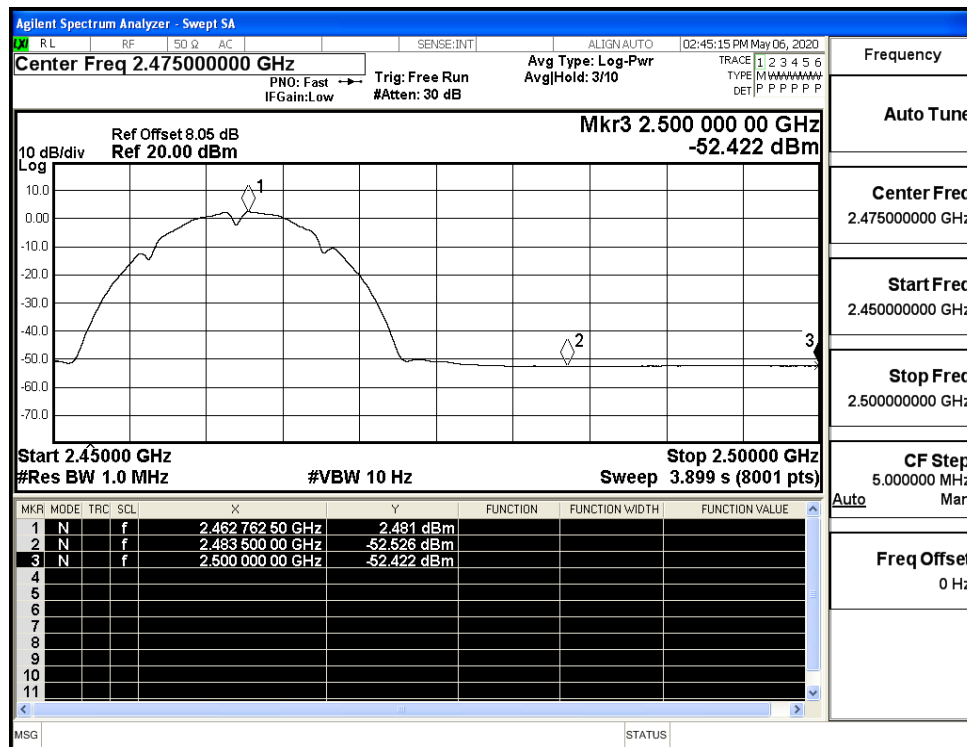
Restrict-band band-edge measurements_11B_2412_Ant1_AV



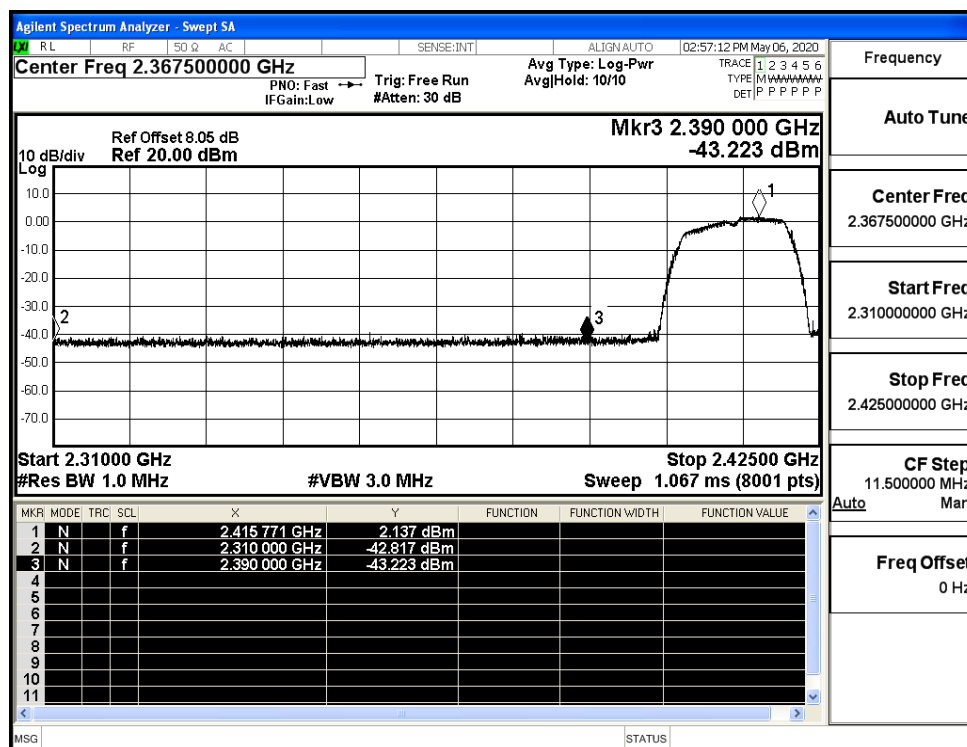
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



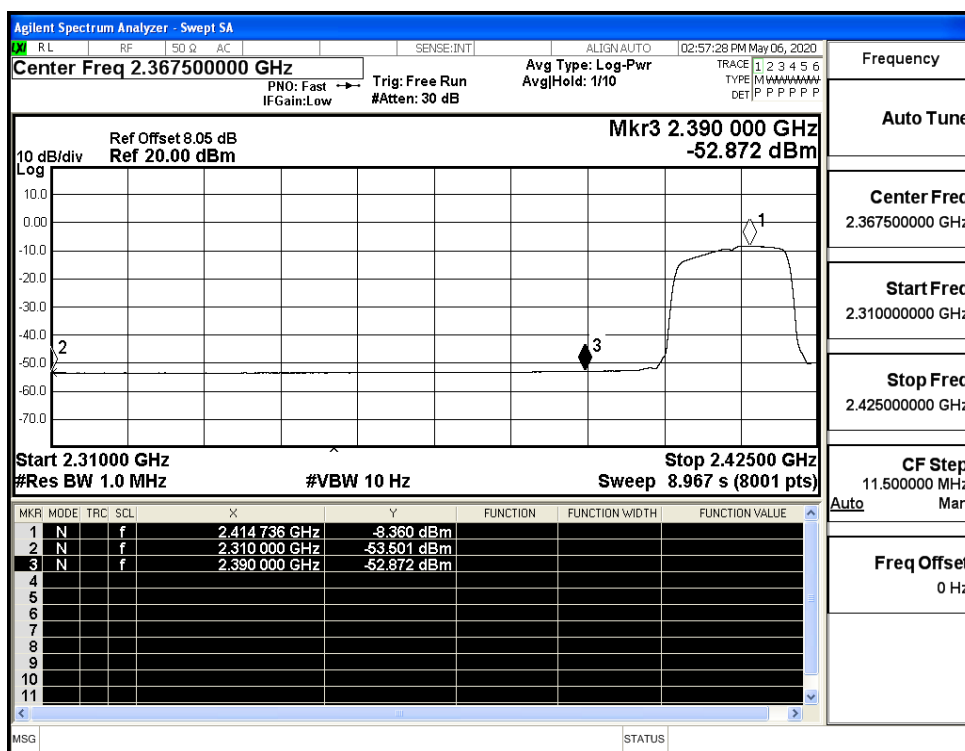
Restrict-band band-edge measurements_11B_2462_Ant1_AV



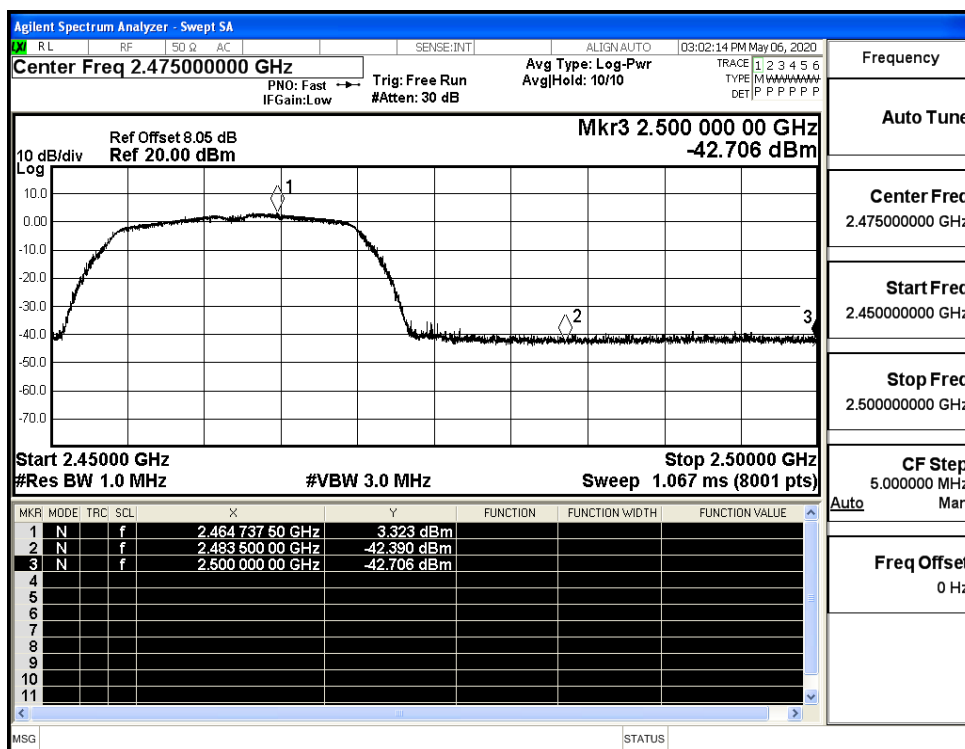
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



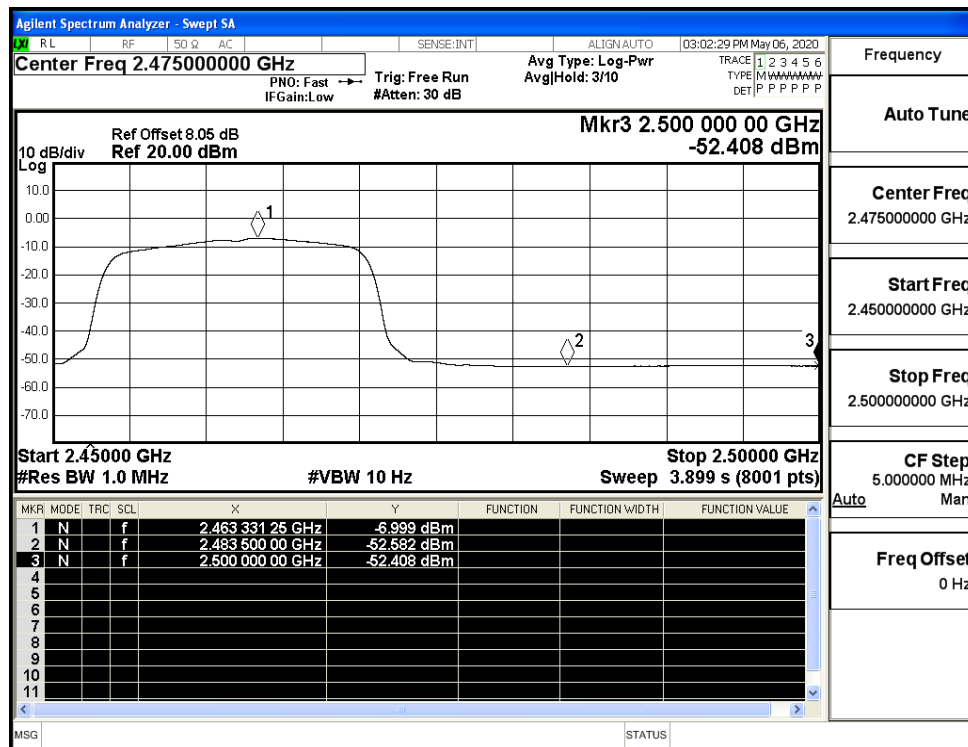
Restrict-band band-edge measurements_11G_2412_Ant1_AV



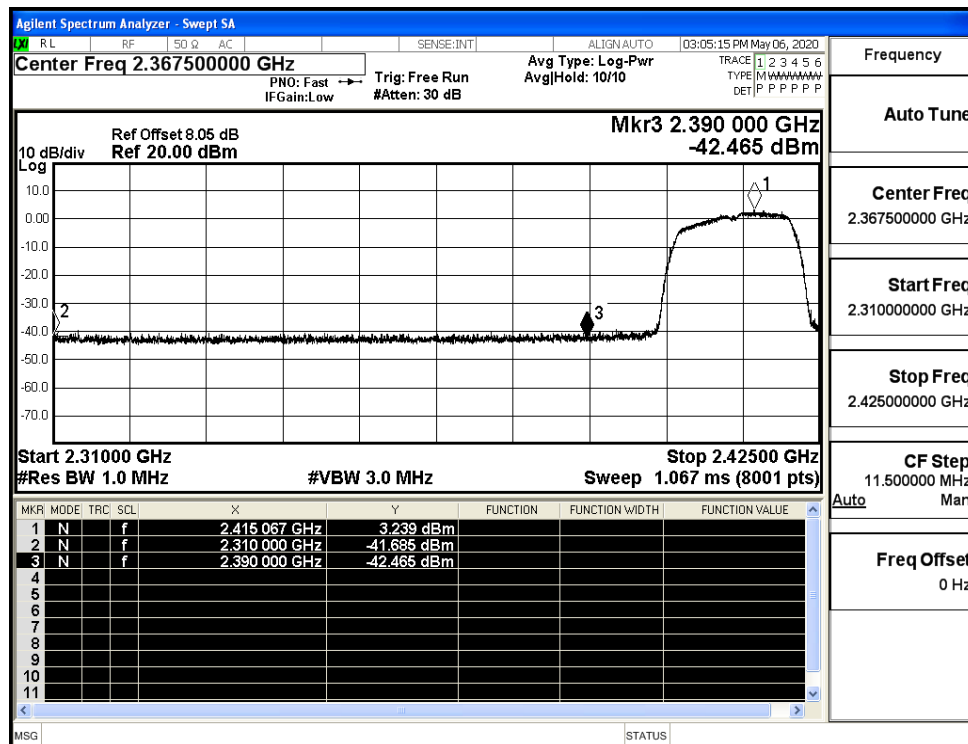
Restrict-band band-edge measurements_11G_2462_Ant1_PEAK



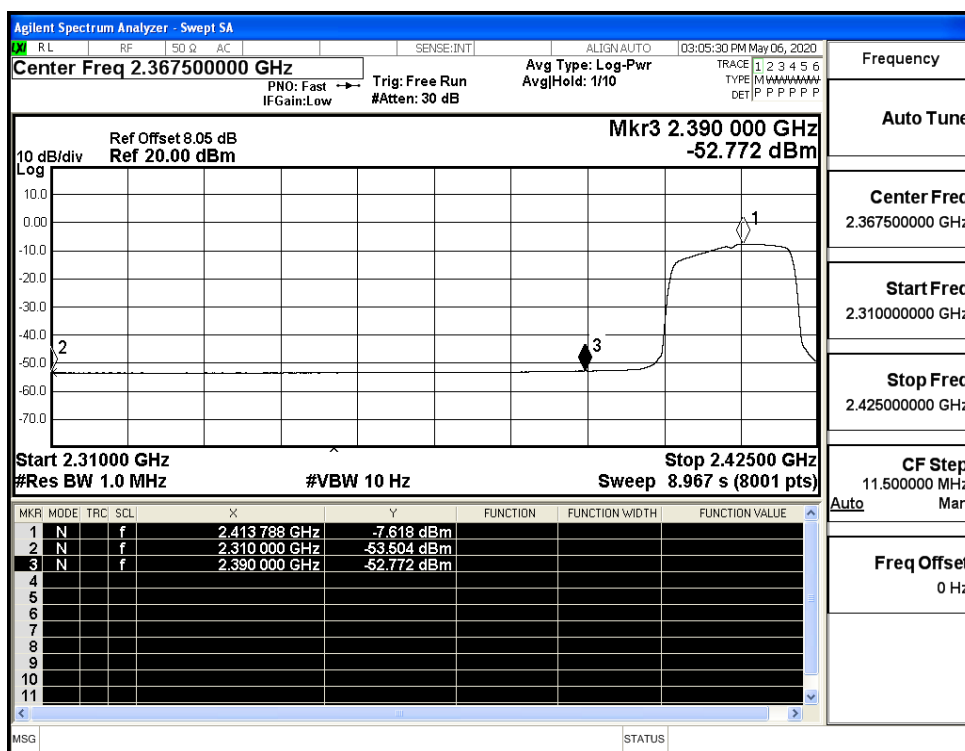
Restrict-band band-edge measurements_11G_2462_Ant1_AV



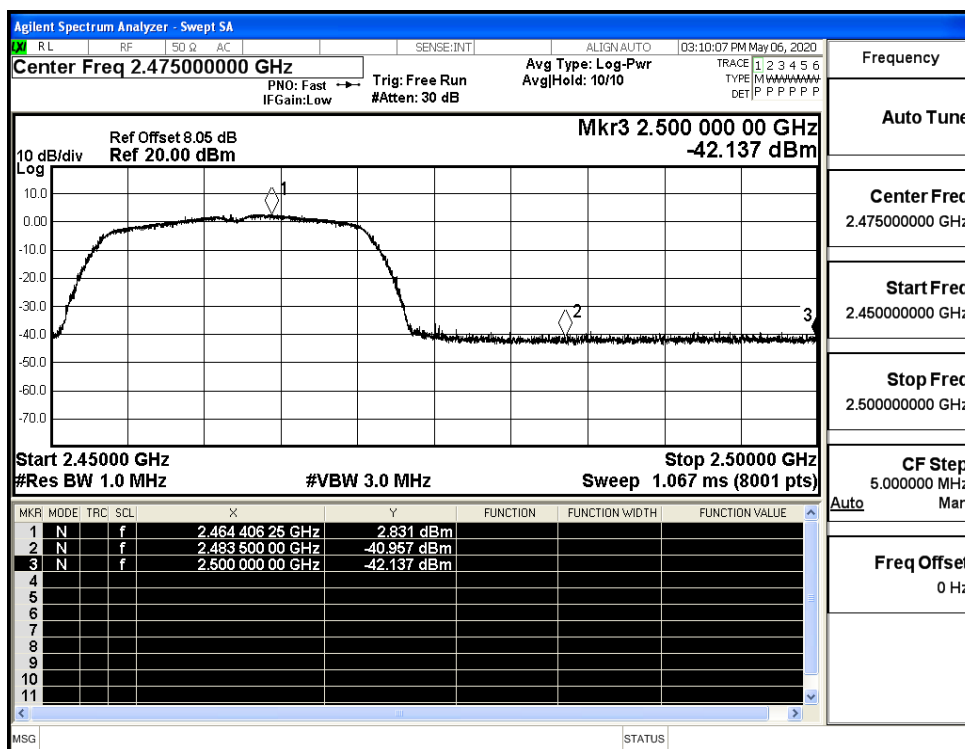
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



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

