

Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Smart Wi-Fi Power Strip

Trade Mark: Tenda

Test Model: SP15

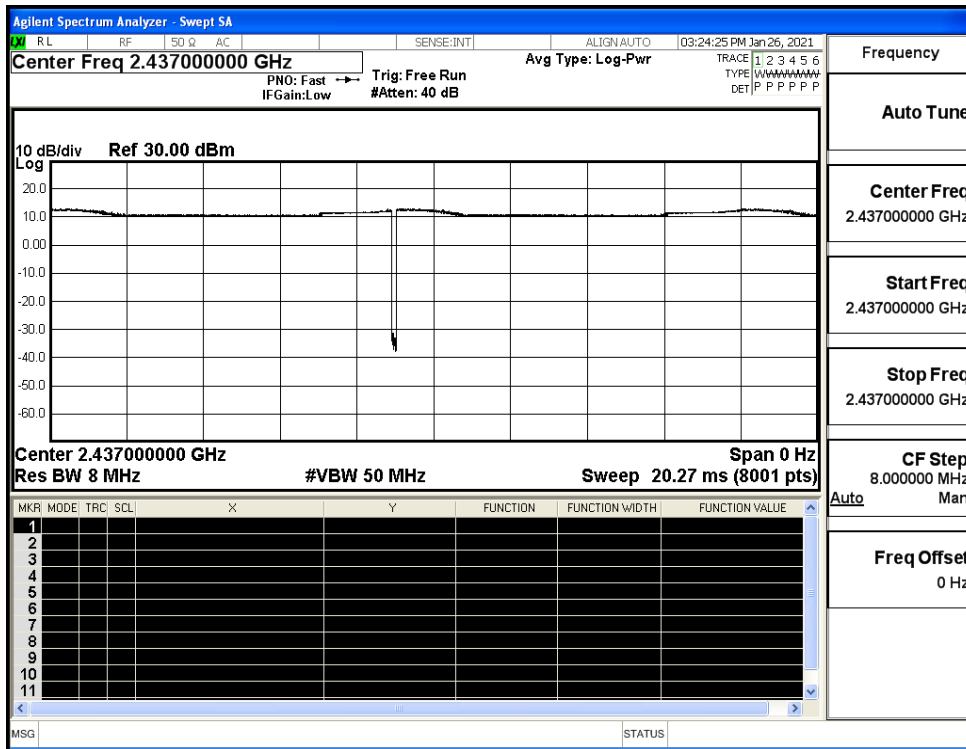
Environmental Conditions

Temperature:	22.6° C
Relative Humidity:	53.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

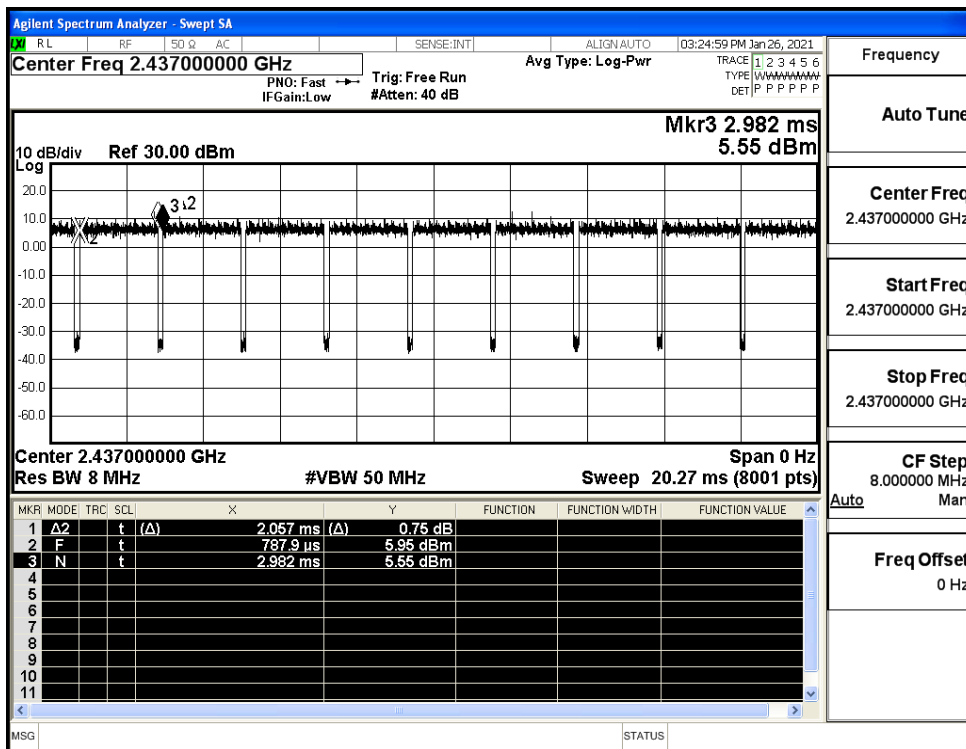
A.1 Duty Cycle

Test Mode	Test Channel	Ant	Duty Cycle[%]	1/T Minimum VBW(KHz)	Verdict
11B	2437	Ant1	100	0.01	PASS
11G	2437	Ant1	93.76	0.49	PASS
11N20SISO	2437	Ant1	93.45	0.52	PASS
11N40SISO	2437	Ant1	87.26	1.07	PASS

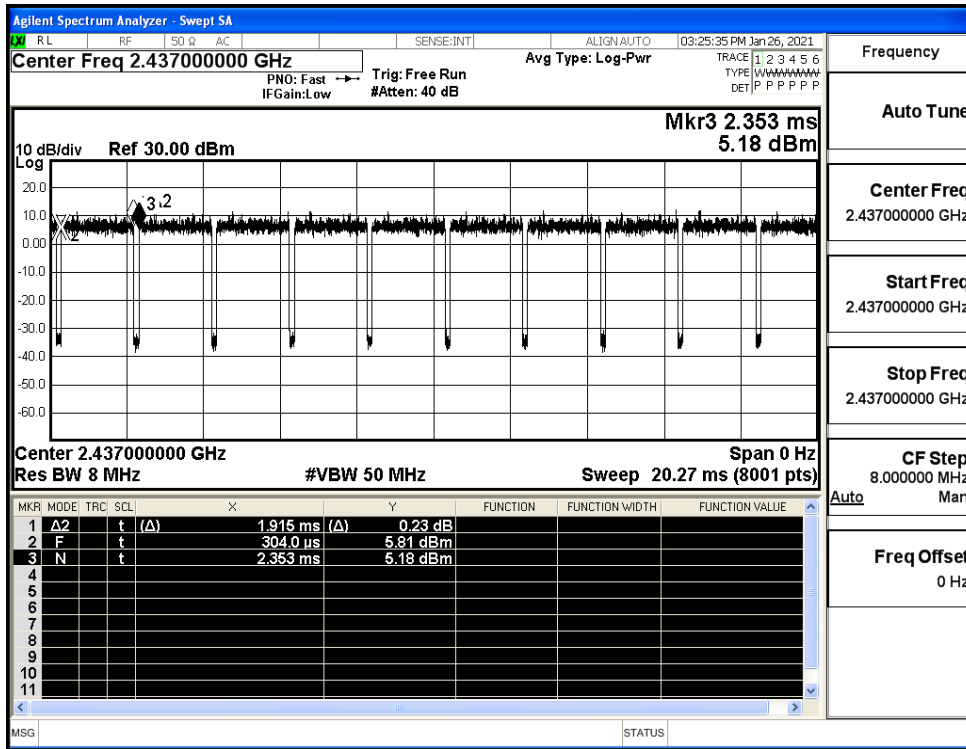
Duty Cycle_11B_2437_Ant1



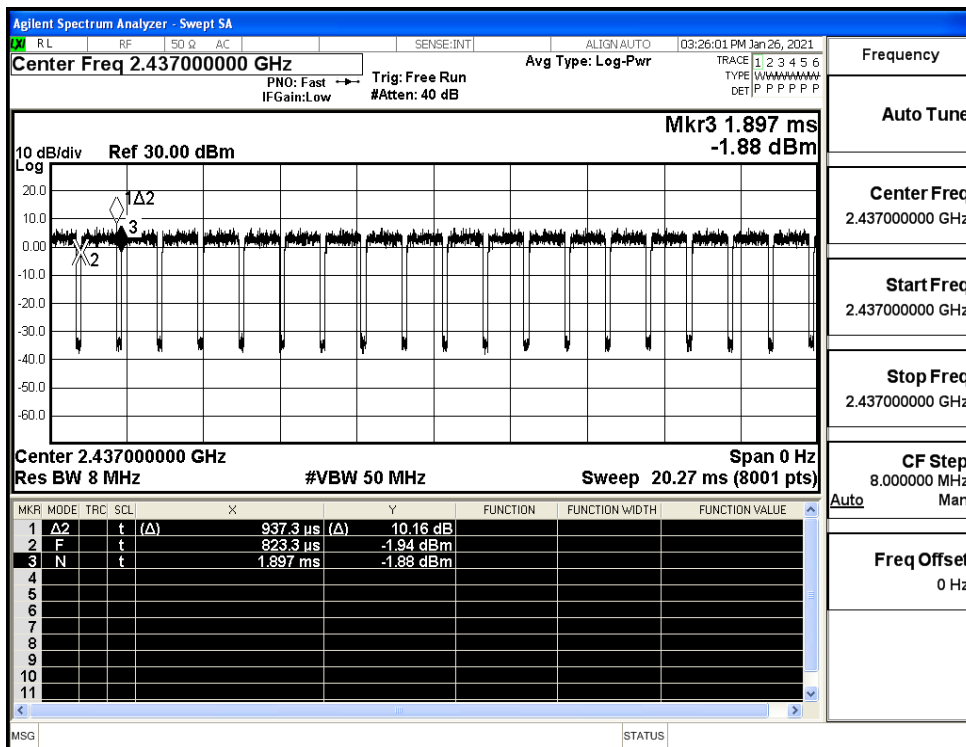
Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



Duty Cycle_11N40SISO_2437_Ant1

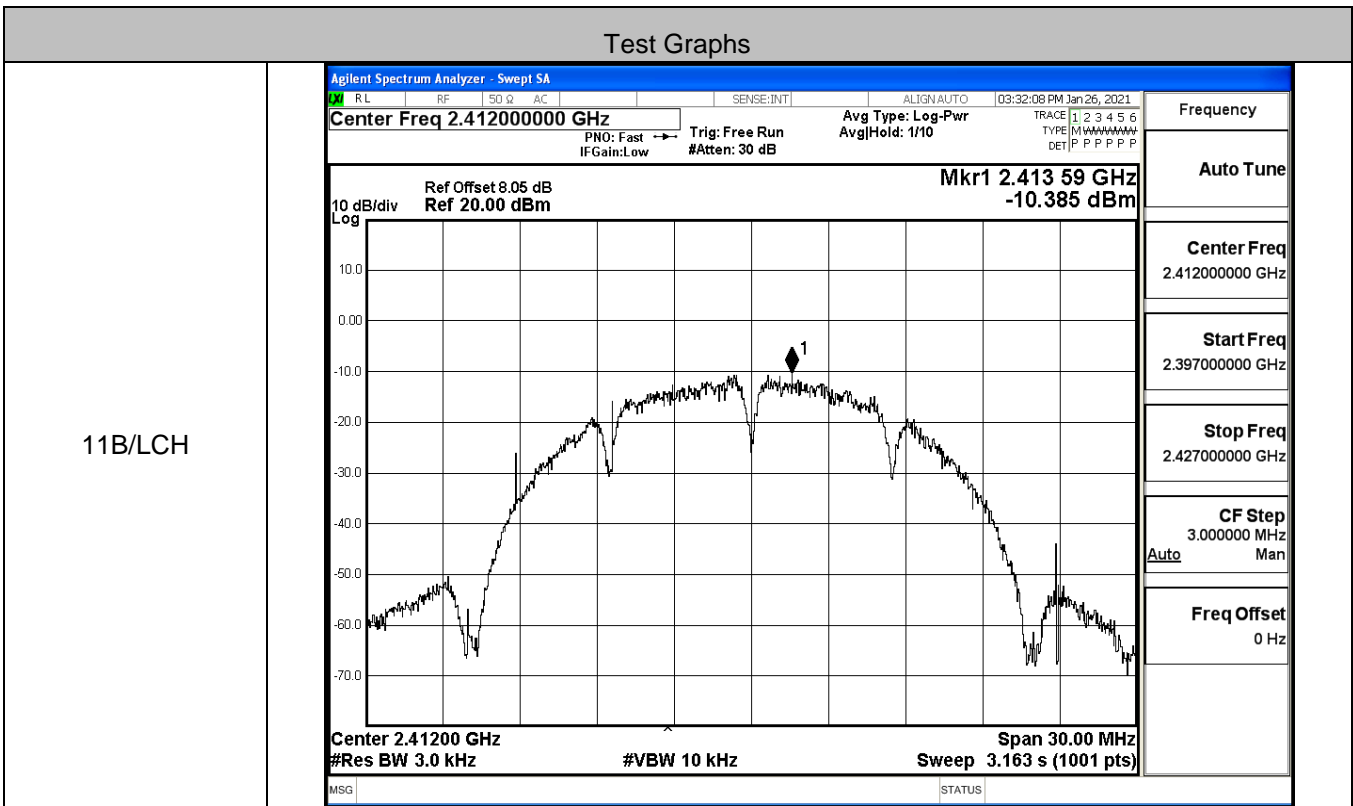


A.2 Maximum Conducted Output Power

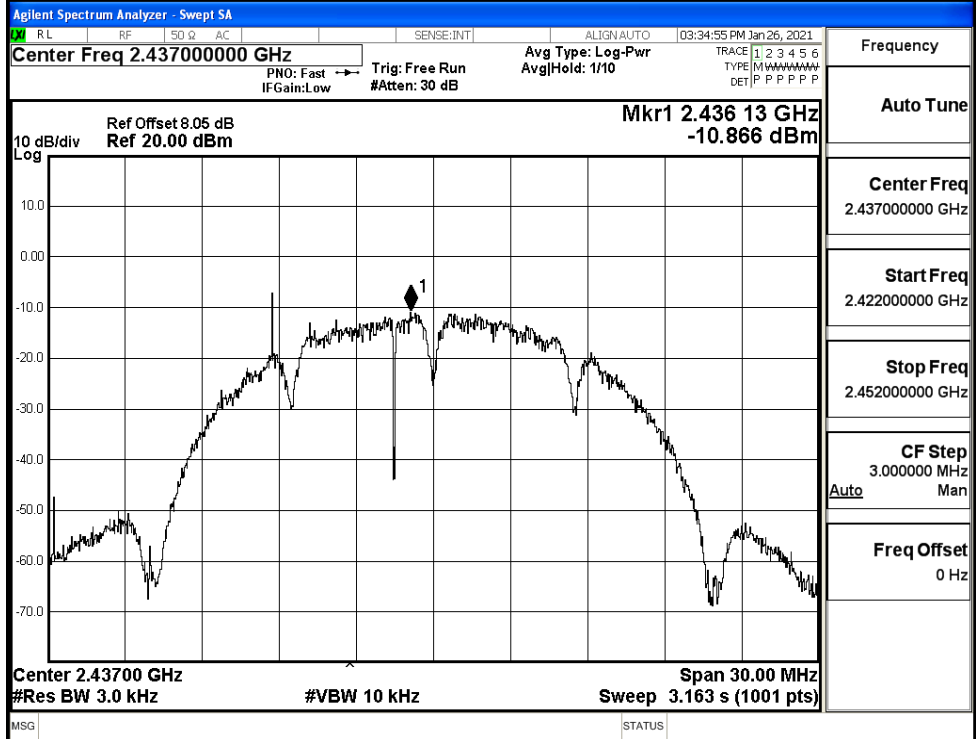
Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	18.2	30	PASS
	MCH	18.22	30	PASS
	HCH	18.2	30	PASS
11G	LCH	19.3	30	PASS
	MCH	19.32	30	PASS
	HCH	19.4	30	PASS
11N20SISO	LCH	19.51	30	PASS
	MCH	19.57	30	PASS
	HCH	19.59	30	PASS
11N40SISO	LCH	19.91	30	PASS
	MCH	19.96	30	PASS
	HCH	19.96	30	PASS

A.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-10.385	8	PASS
	MCH	-10.866	8	PASS
	HCH	-10.465	8	PASS
11G	LCH	-16.382	8	PASS
	MCH	-15.419	8	PASS
	HCH	-16.273	8	PASS
11N20SISO	LCH	-16.081	8	PASS
	MCH	-15.830	8	PASS
	HCH	-15.313	8	PASS
11N40SISO	LCH	-18.444	8	PASS
	MCH	-17.981	8	PASS
	HCH	-17.942	8	PASS

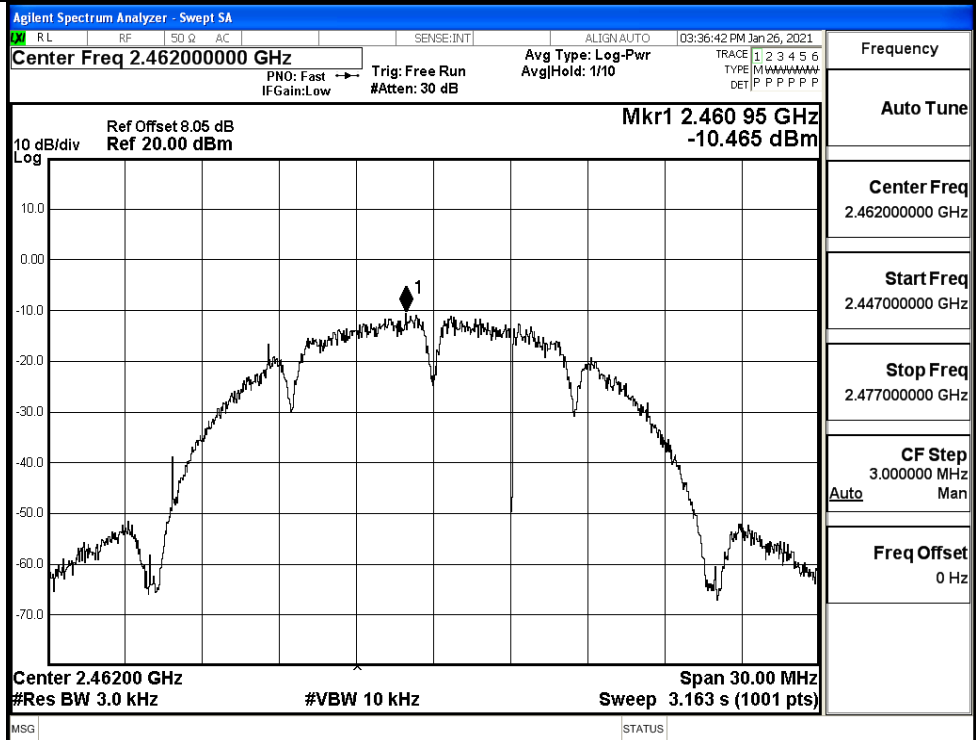


11B/MCH



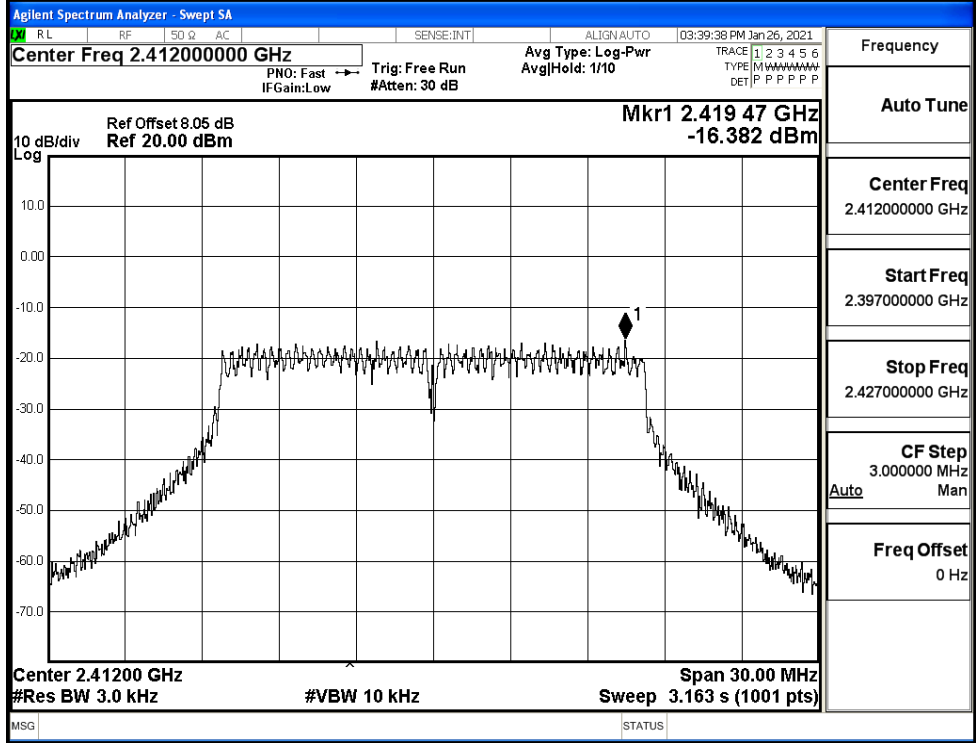
Frequency	2.43700000 GHz
Auto Tune	
Center Freq	2.43700000 GHz
Start Freq	2.42200000 GHz
Stop Freq	2.45200000 GHz
CF Step	3.000000 MHz Auto Man
Freq Offset	0 Hz

11B/HCH

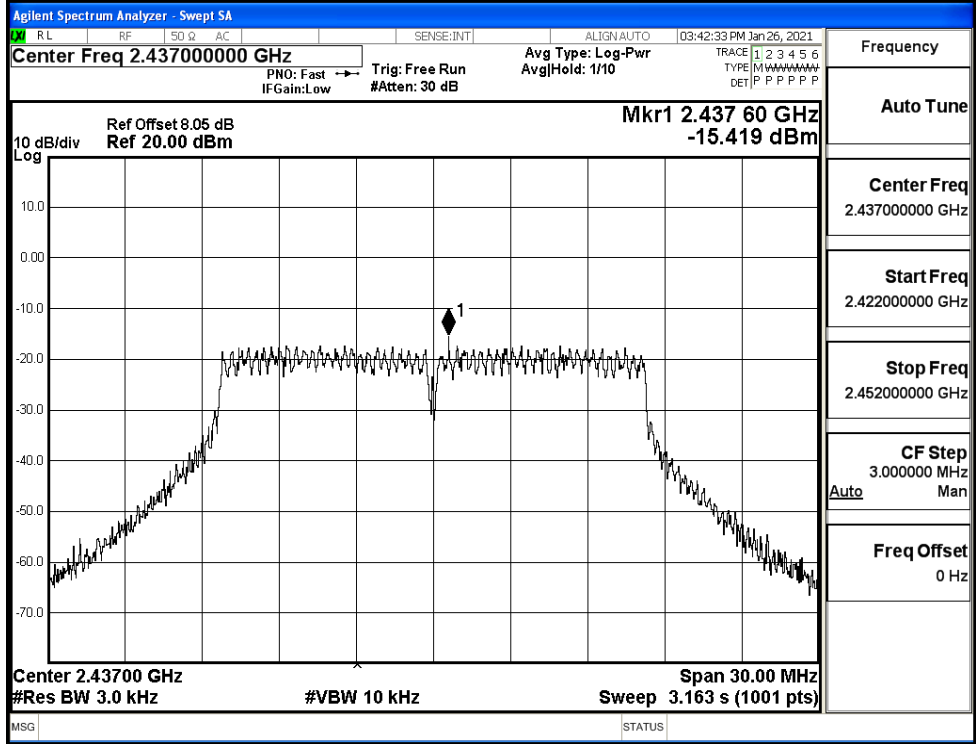


Frequency	2.46200000 GHz
Auto Tune	
Center Freq	2.46200000 GHz
Start Freq	2.44700000 GHz
Stop Freq	2.47700000 GHz
CF Step	3.000000 MHz Auto Man
Freq Offset	0 Hz

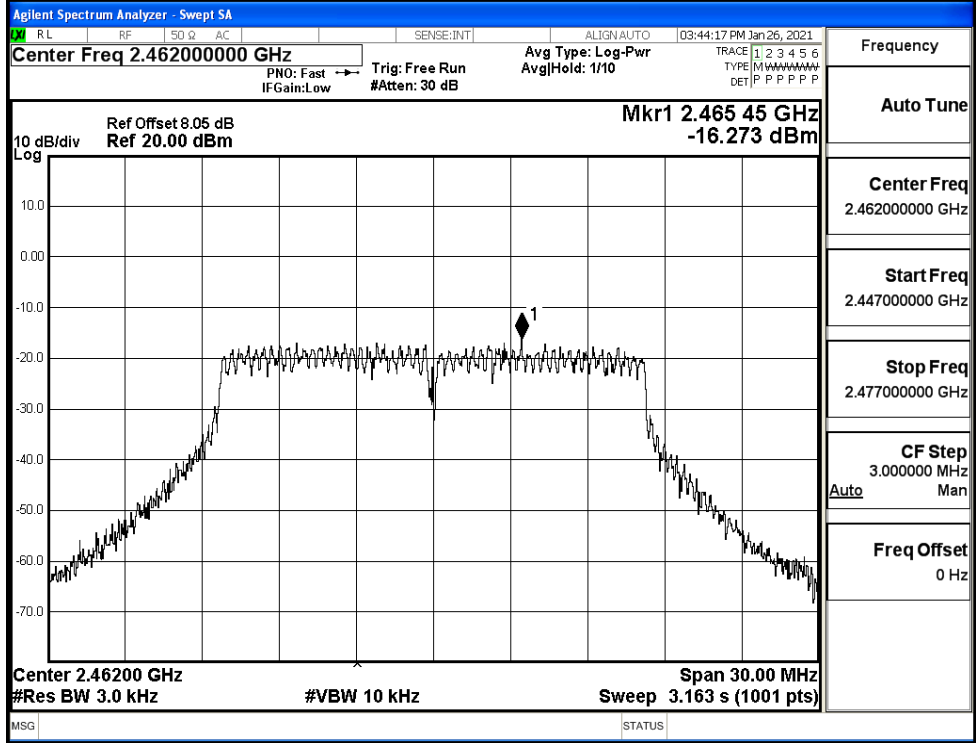
11G/LCH



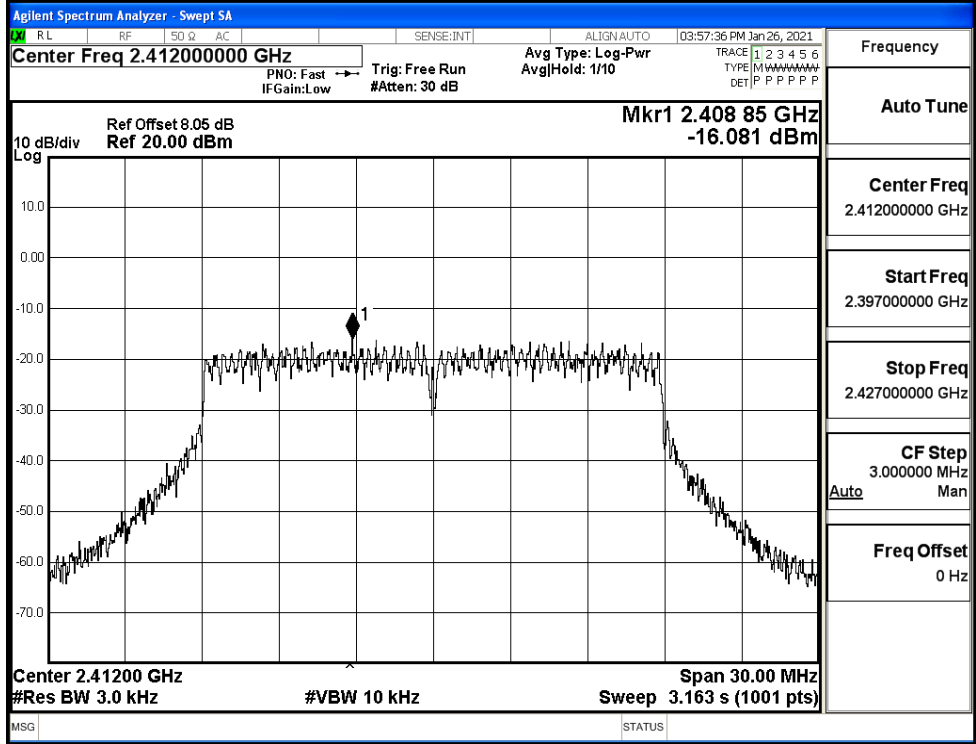
11G/MCH



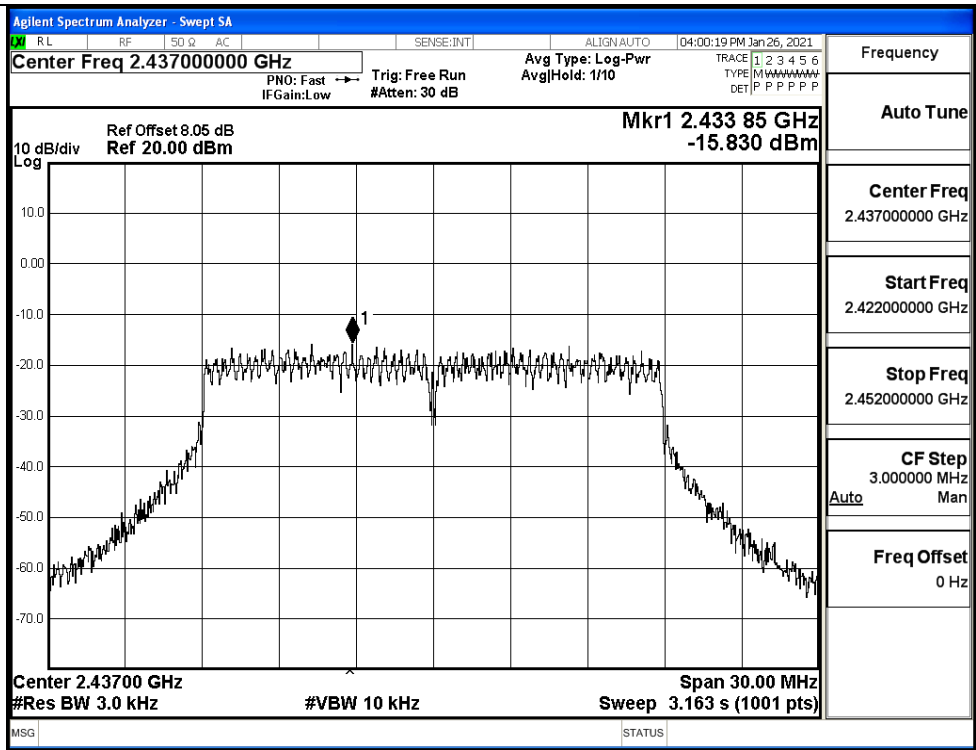
11G/HCH



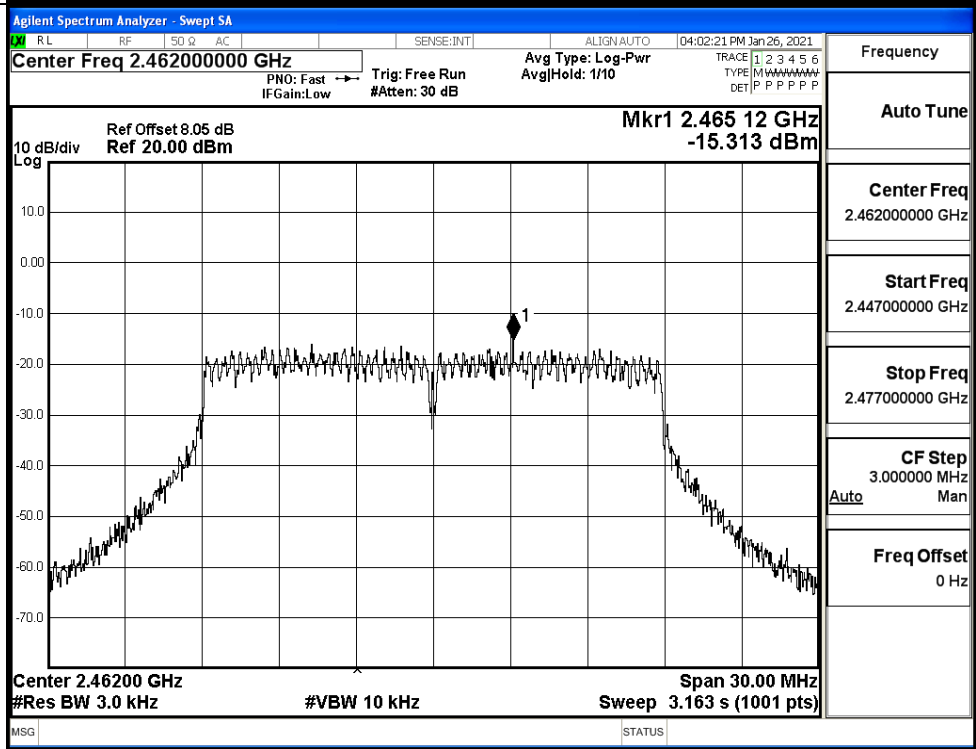
11N20SISO/LCH



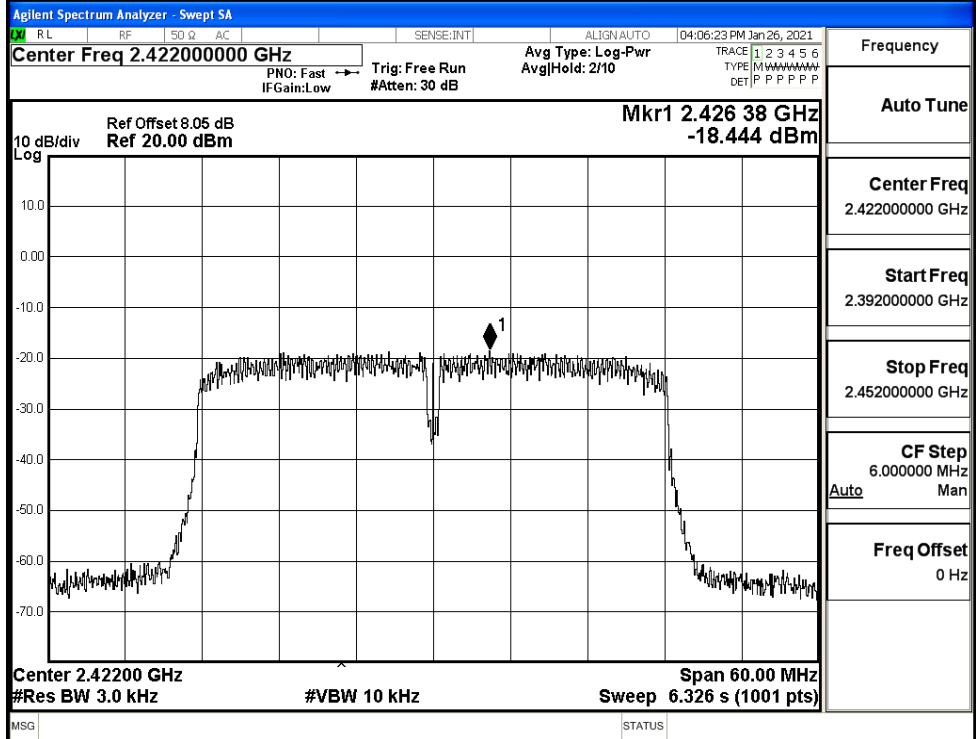
11N20SISO/MCH



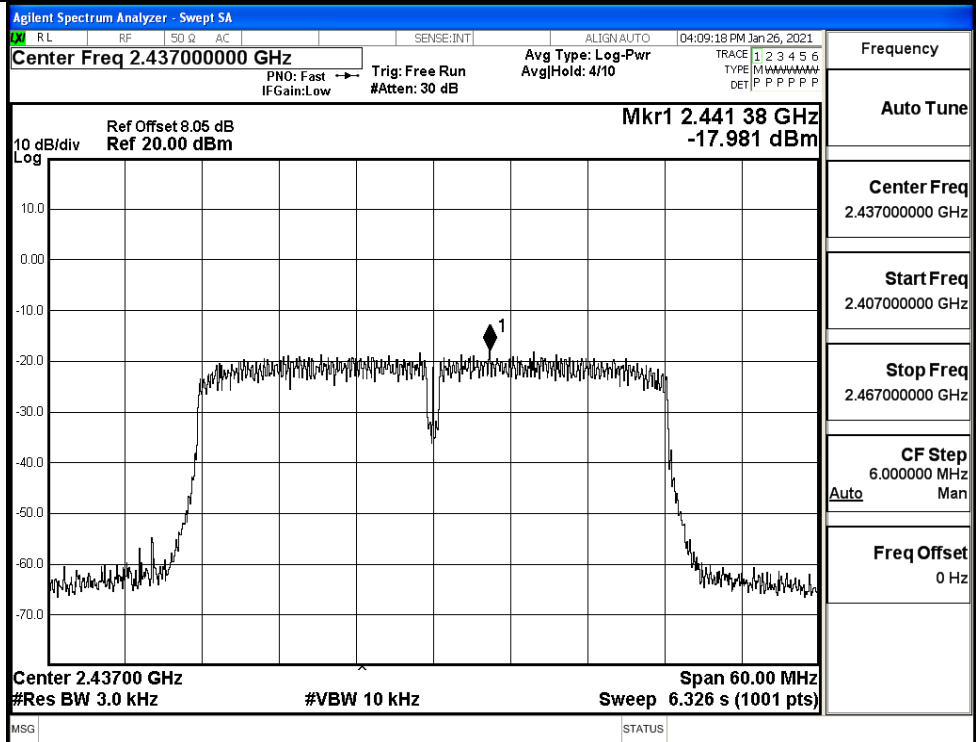
11N20SISO/HCH



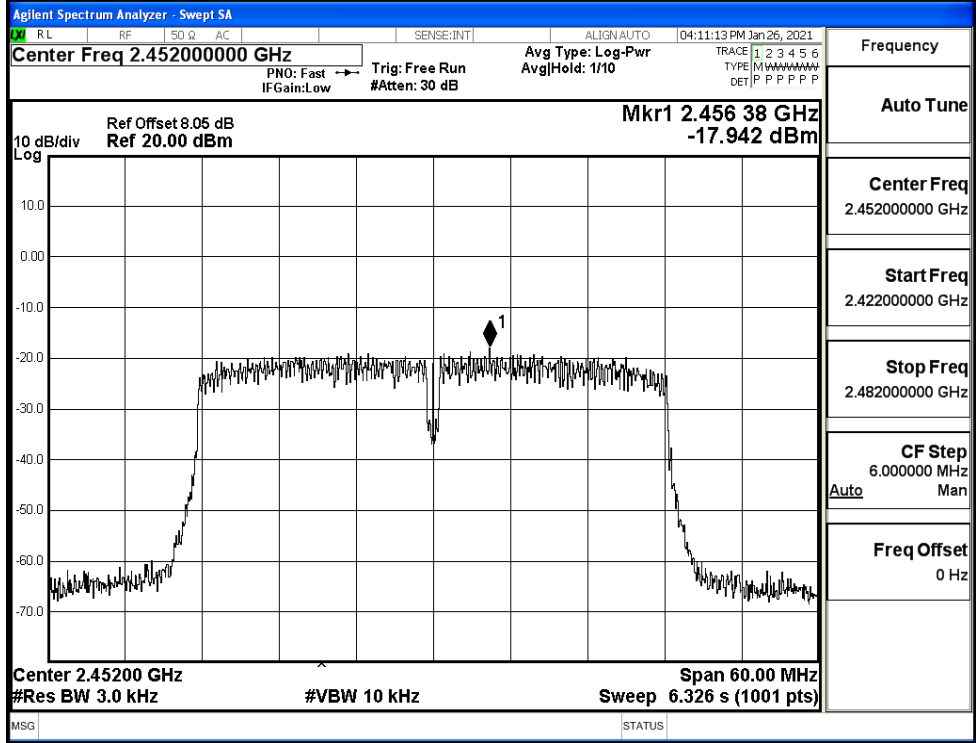
11N40SISO/LCH



11N40SISO/MCH

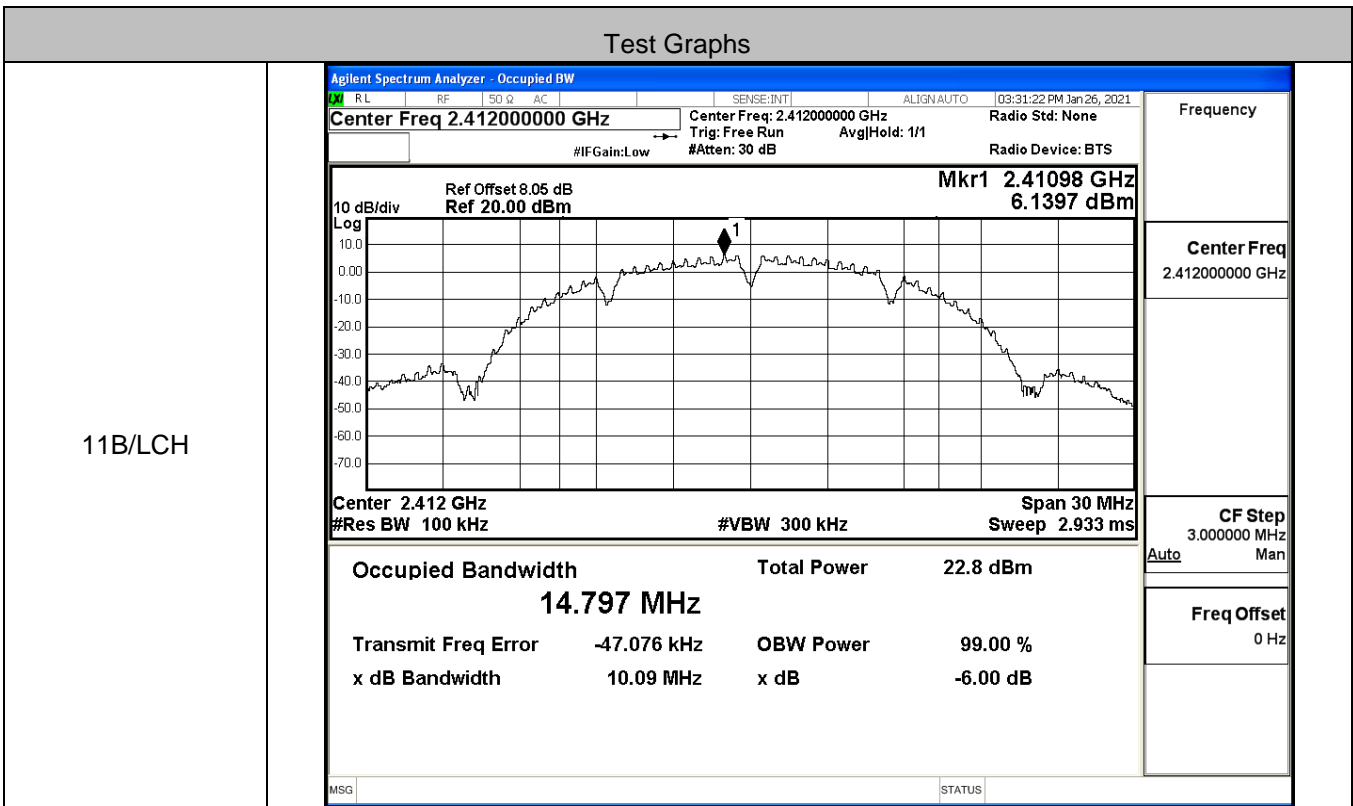


11N40SISO/HCH

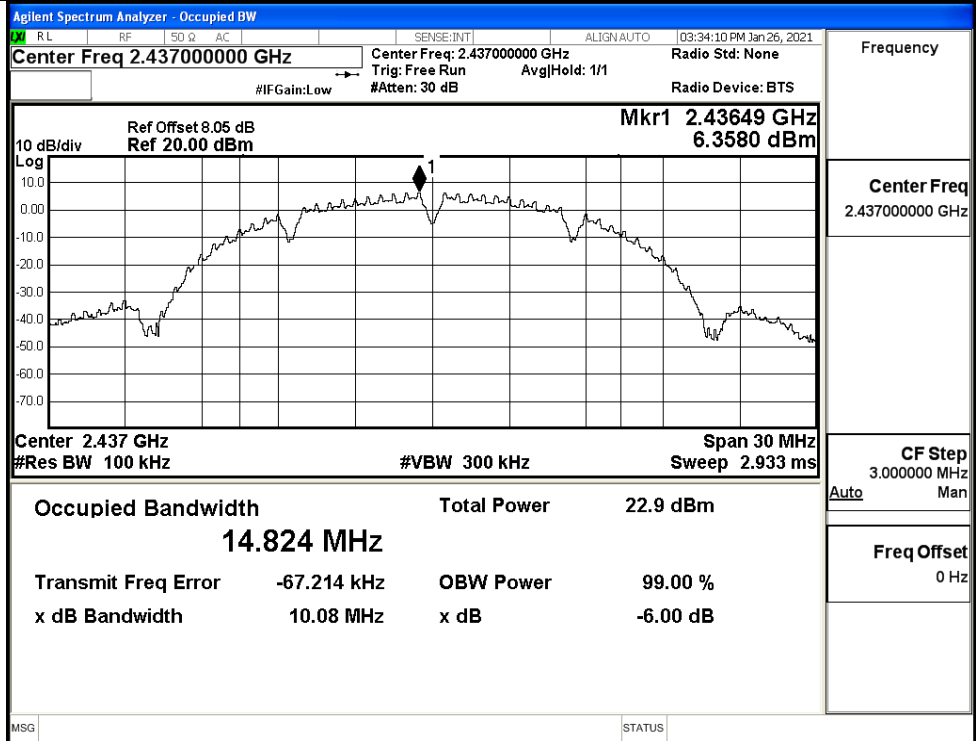


A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	10.09	≥0.5	PASS
	MCH	10.08	≥0.5	PASS
	HCH	10.08	≥0.5	PASS
11G	LCH	16.36	≥0.5	PASS
	MCH	16.35	≥0.5	PASS
	HCH	16.36	≥0.5	PASS
11N20SISO	LCH	17.14	≥0.5	PASS
	MCH	17.16	≥0.5	PASS
	HCH	17.32	≥0.5	PASS
11N40SISO	LCH	35.21	≥0.5	PASS
	MCH	35.17	≥0.5	PASS
	HCH	35.18	≥0.5	PASS



11B/MCH



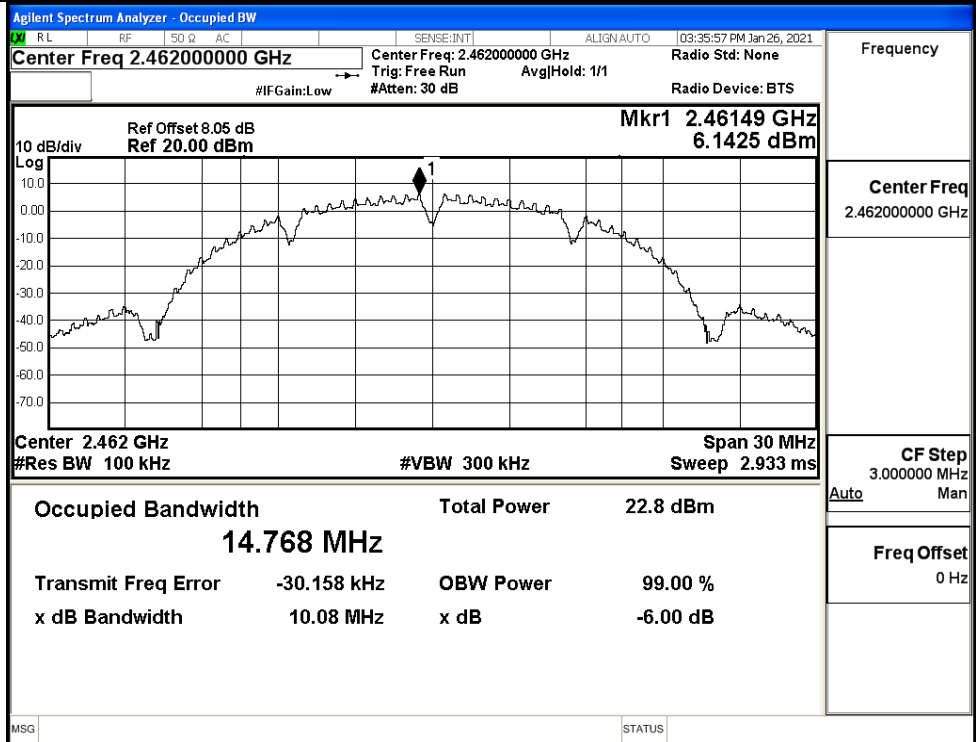
Frequency

Center Freq
2.43700000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

11B/HCH



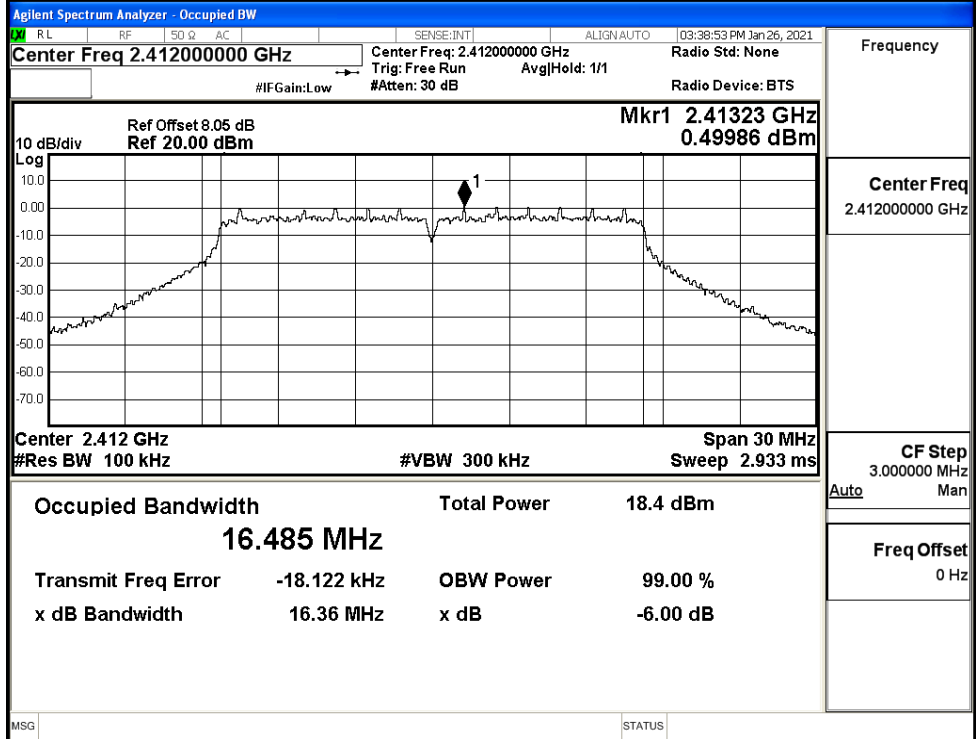
Frequency

Center Freq
2.46200000 GHz

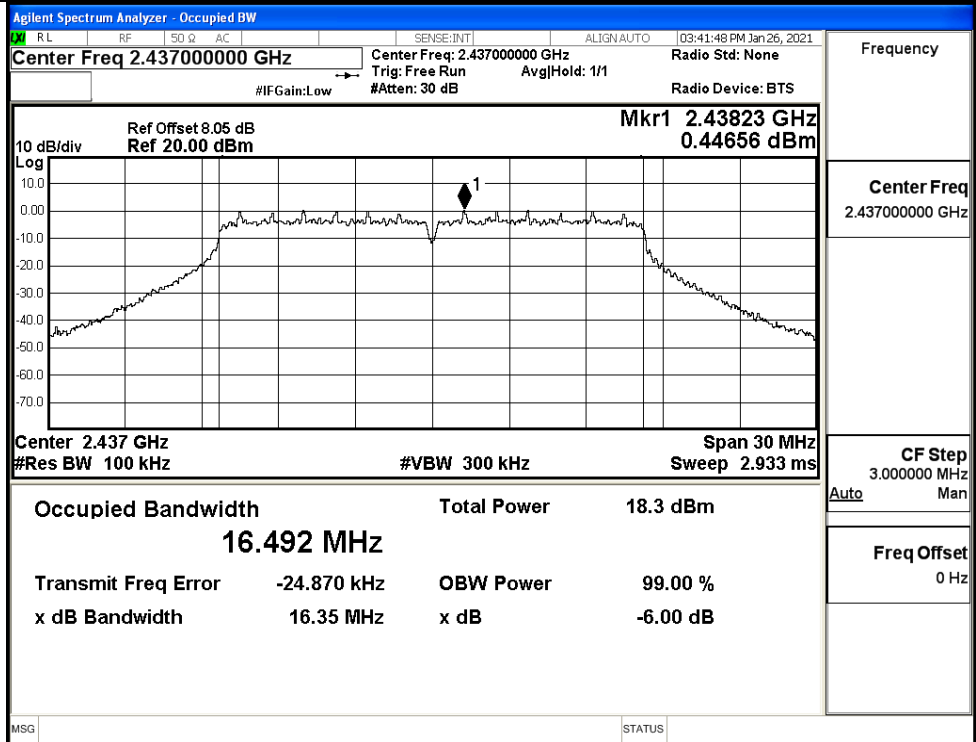
CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

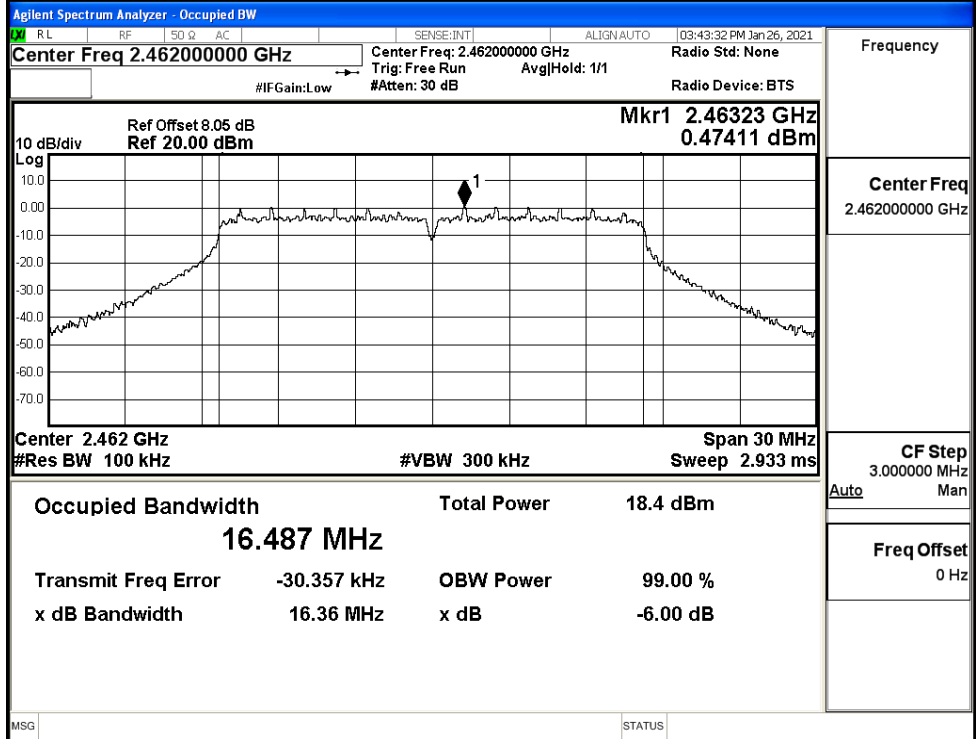
11G/LCH



11G/MCH

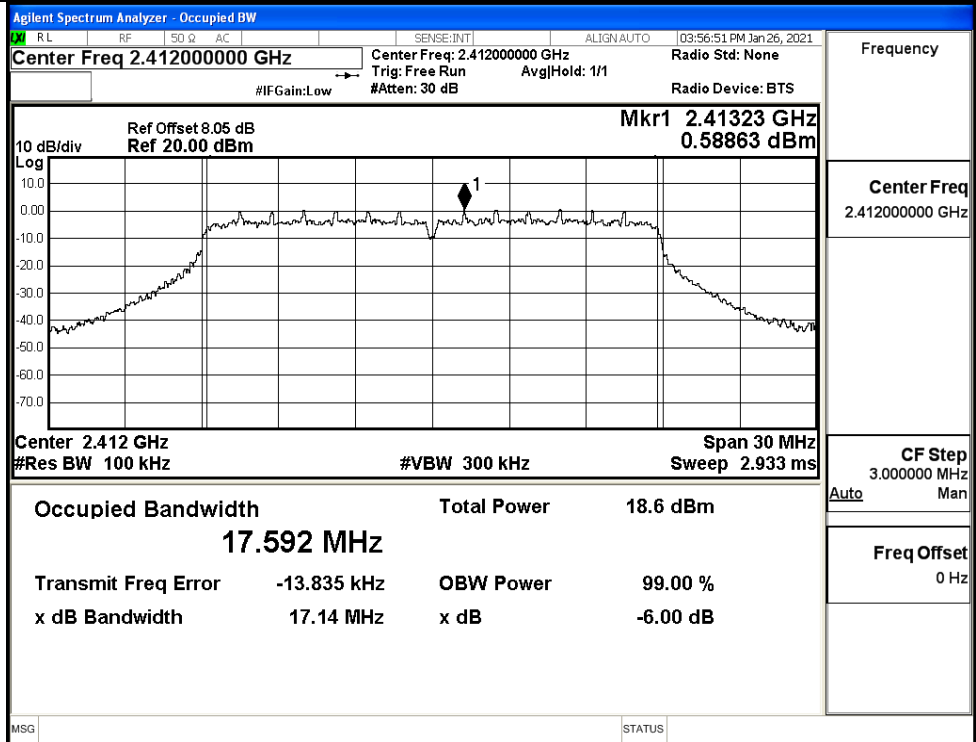


11G/HCH



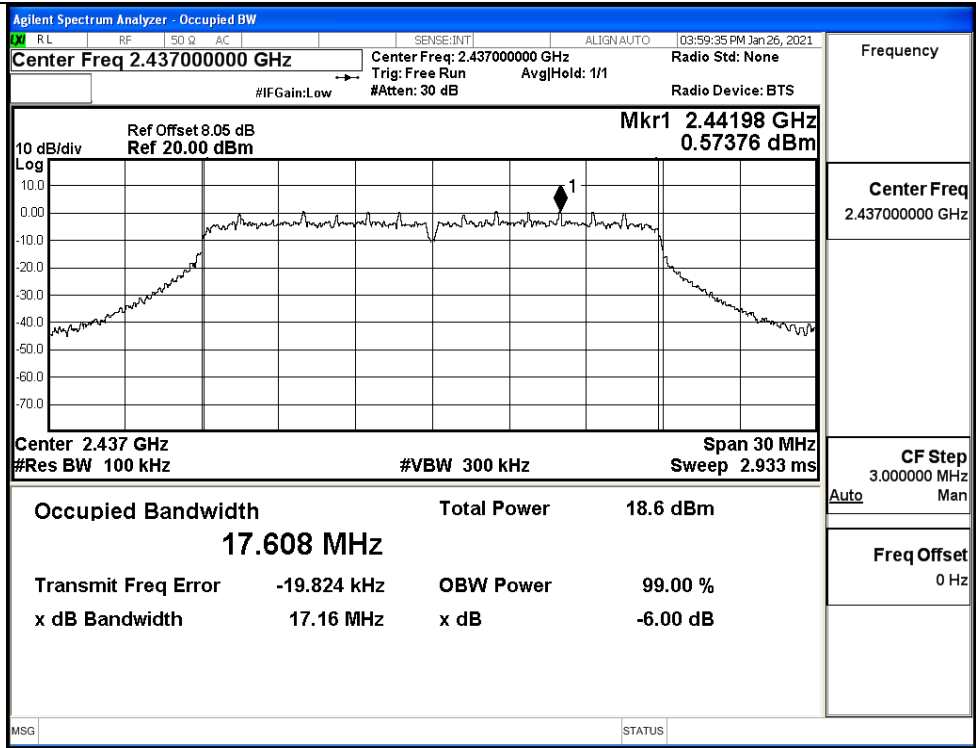
Frequency	2.46200000 GHz
Center Freq	2.46200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11N20SISO/LCH

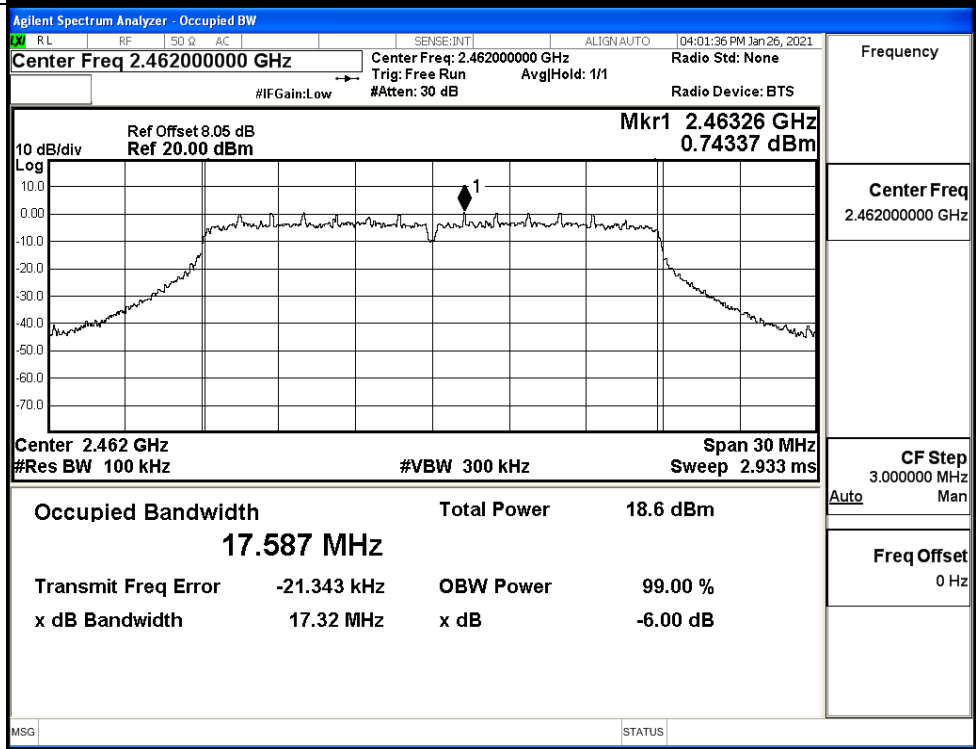


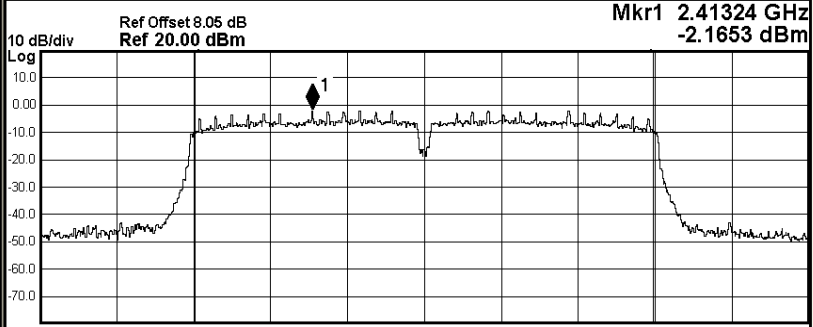
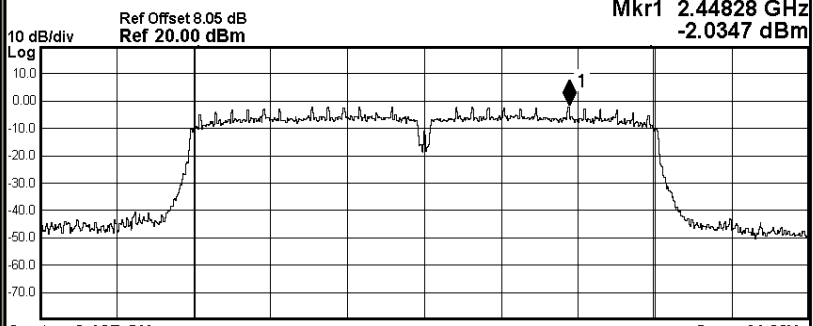
Frequency	2.41200000 GHz
Center Freq	2.41200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11N20SISO/MCH

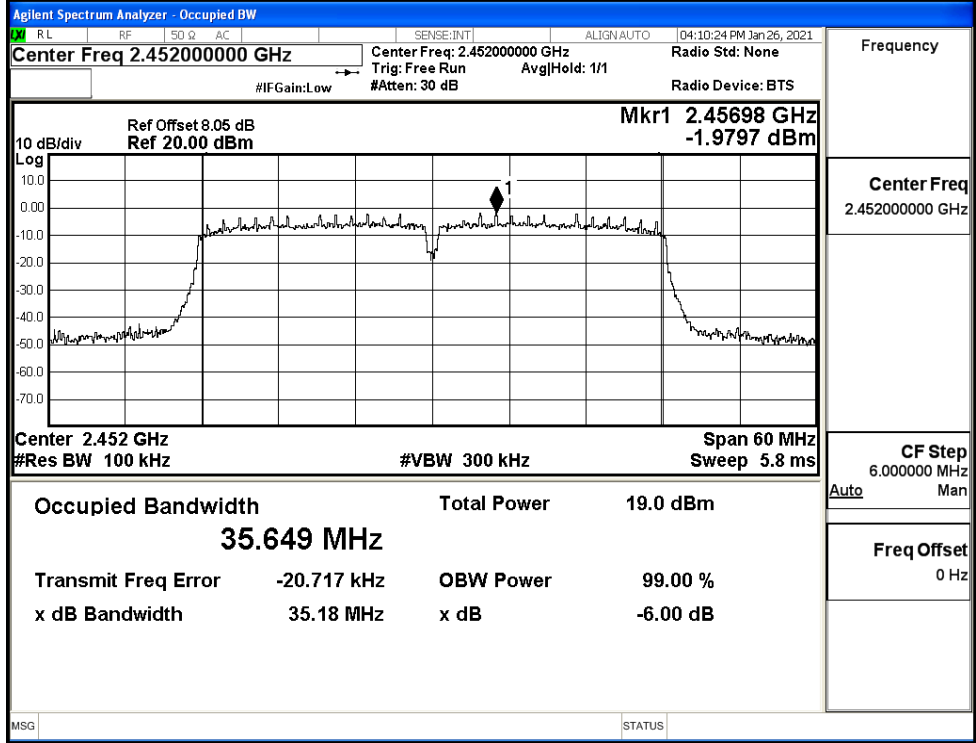


11N20SISO/HCH



<p>11N40SISO/LCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>RL RF 50 Ω AC SENSE:INT ALIGN AUTO 04:05:28 PM Jan 26, 2021</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 2.41324 GHz Ref 20.00 dBm -2.1653 dBm</p> <p>Center 2.422 GHz Span 60 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 5.8 ms</p> <p>Occupied Bandwidth Total Power 19.0 dBm 35.665 MHz</p> <p>Transmit Freq Error -11.640 kHz OBW Power 99.00 % x dB Bandwidth 35.21 MHz x dB -6.00 dB</p> <p>MSG STATUS</p>	<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>
	<p>11N40SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>RL RF 50 Ω AC SENSE:INT ALIGN AUTO 04:08:09 PM Jan 26, 2021</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 2.44828 GHz Ref 20.00 dBm -2.0347 dBm</p> <p>Center 2.437 GHz Span 60 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 5.8 ms</p> <p>Occupied Bandwidth Total Power 19.0 dBm 35.682 MHz</p> <p>Transmit Freq Error -21.683 kHz OBW Power 99.00 % x dB Bandwidth 35.17 MHz x dB -6.00 dB</p> <p>MSG STATUS</p>

11N40SISO/HCH

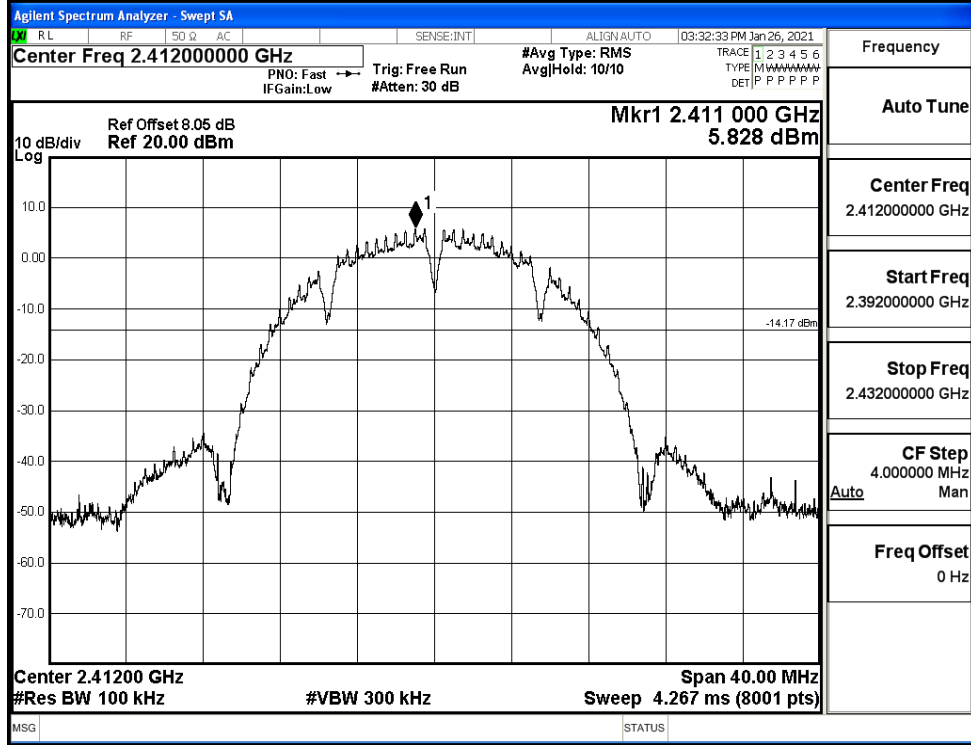


A.5 RF Conducted Spurious Emissions

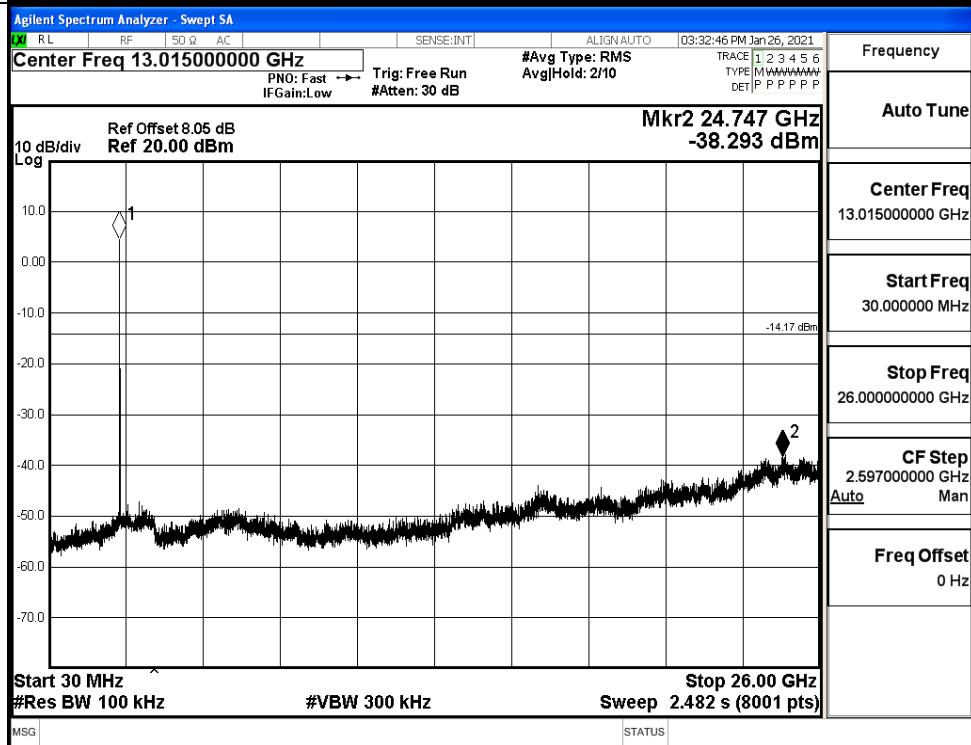
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	5.828	-38.293	-14.172	PASS
	MCH	6.013	-38.150	-13.987	PASS
	HCH	5.977	-37.982	-14.023	PASS
11G	LCH	0.248	-37.438	-19.752	PASS
	MCH	0.034	-38.881	-19.966	PASS
	HCH	0.302	-38.012	-19.698	PASS
11N20 SISO	LCH	0.409	-38.588	-19.591	PASS
	MCH	0.342	-37.394	-19.658	PASS
	HCH	0.439	-38.195	-19.561	PASS
11N40 SISO	LCH	-2.158	-37.648	-22.158	PASS
	MCH	-2.289	-37.799	-22.289	PASS
	HCH	-2.126	-38.049	-22.126	PASS

11B_LCH_Graphs

Pref/11B/LCH

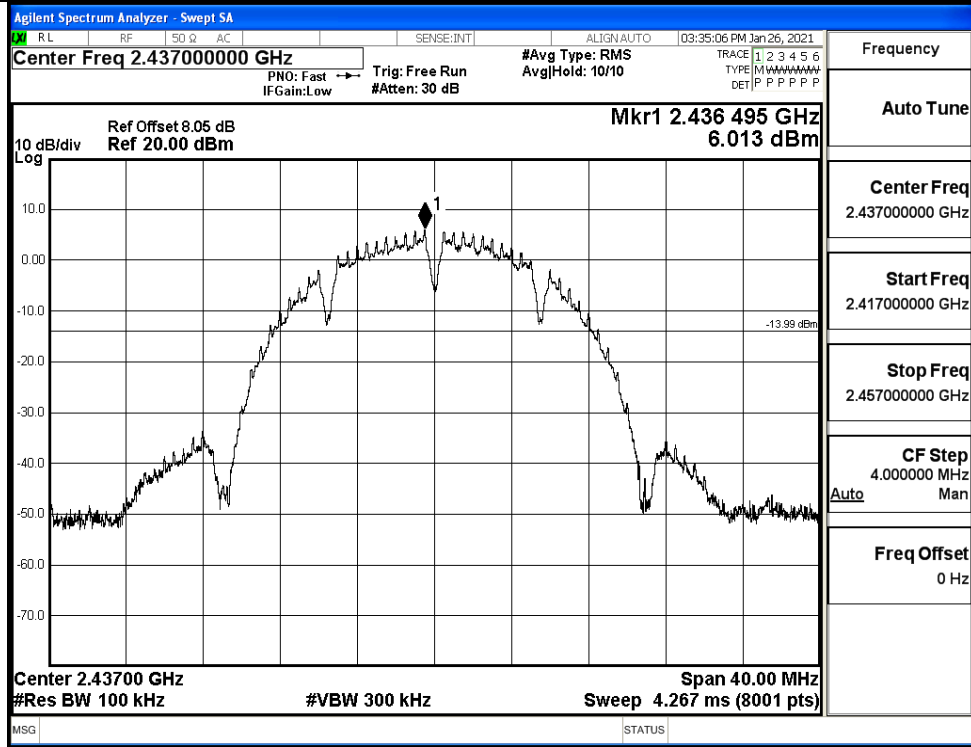


Puw/11B/LCH

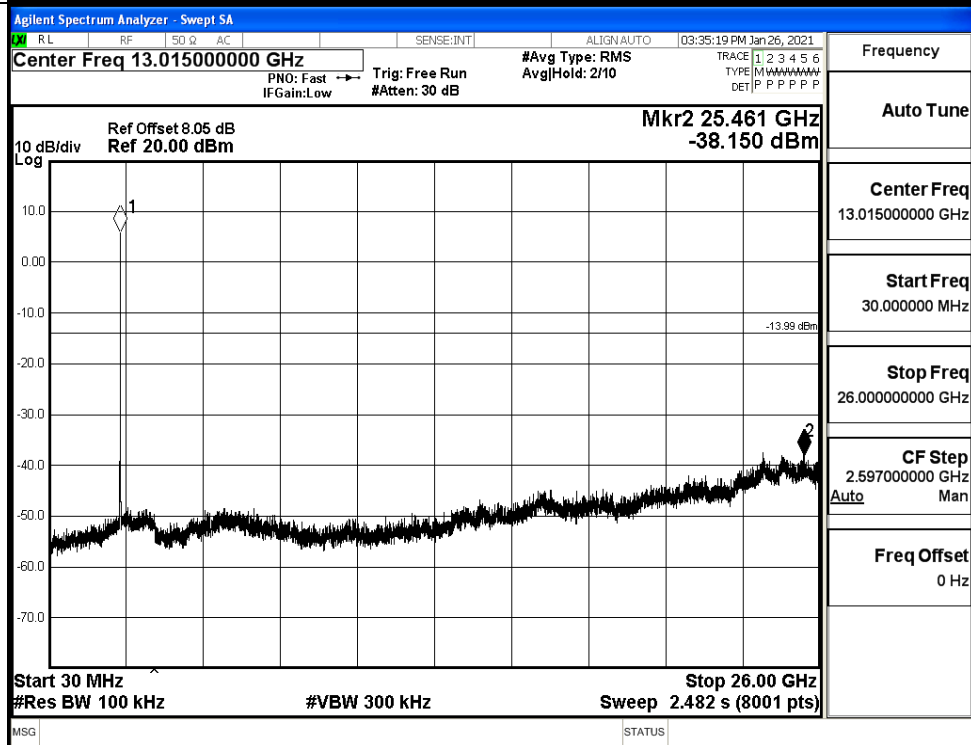


11B_MCH_Graphs

Pref/11B/MCH

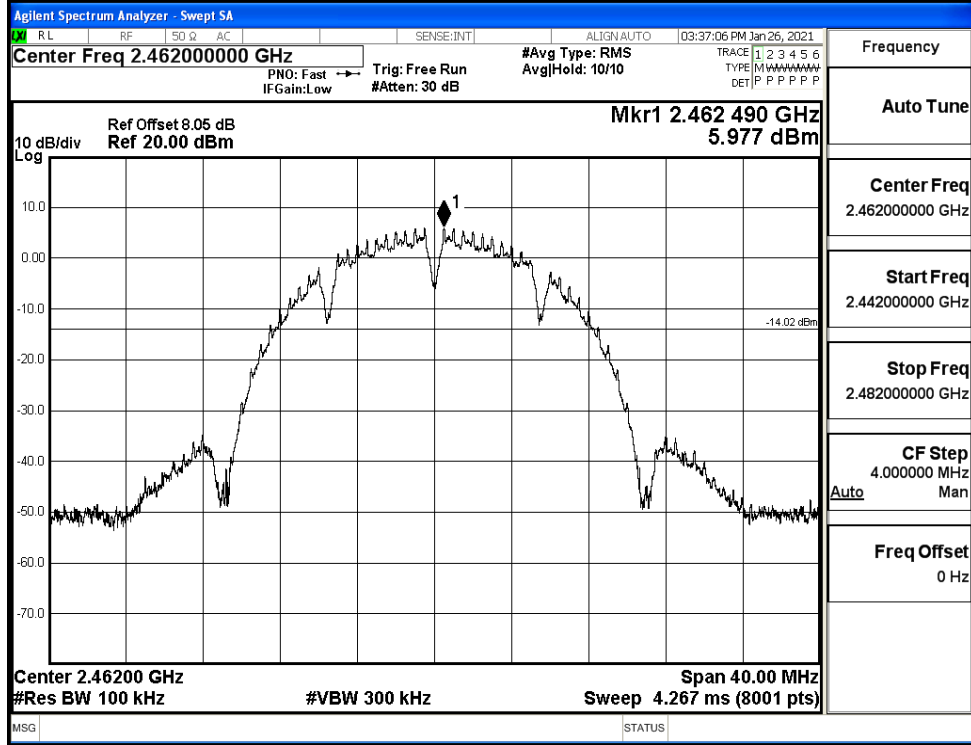


Puw/11B/MCH

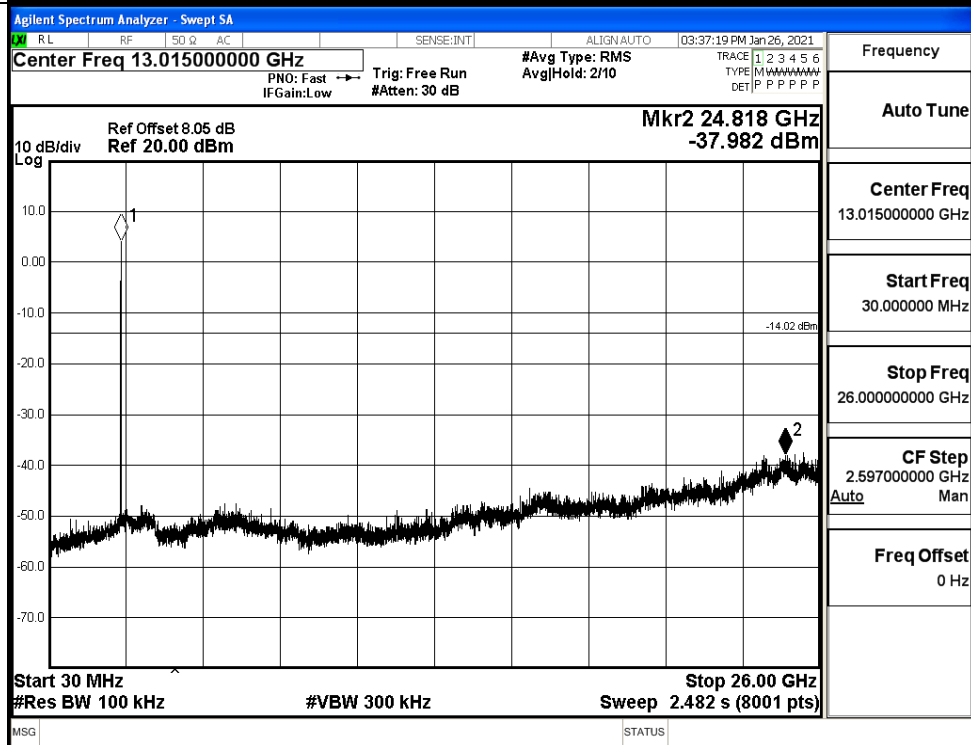


11B_HCH_Graphs

Pref/11B/HCH

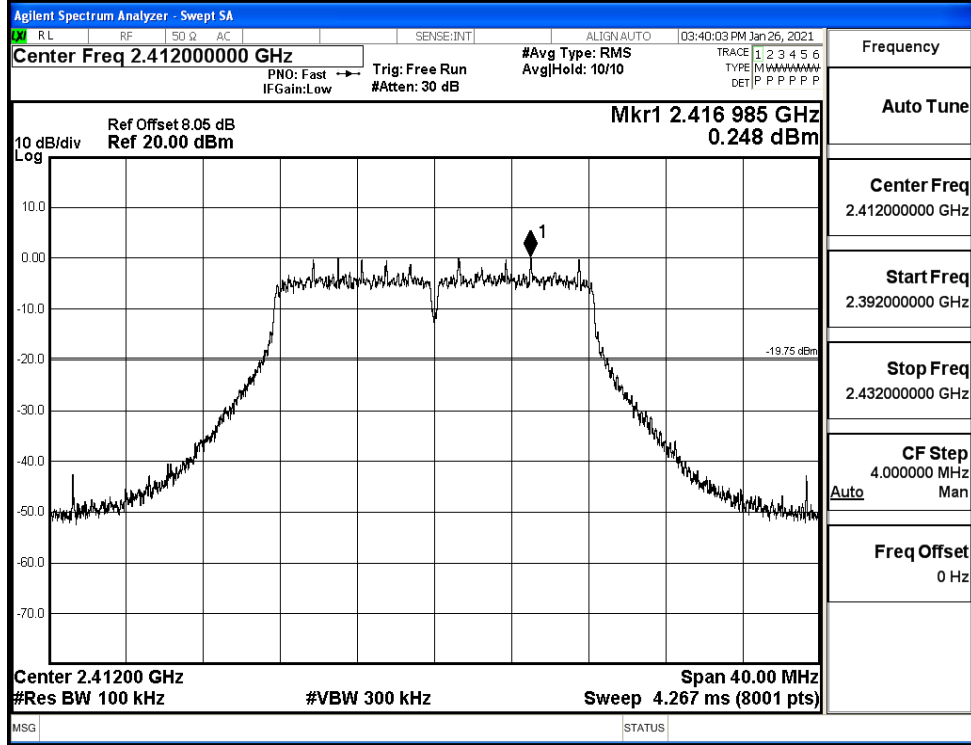


Puw/11B/HCH

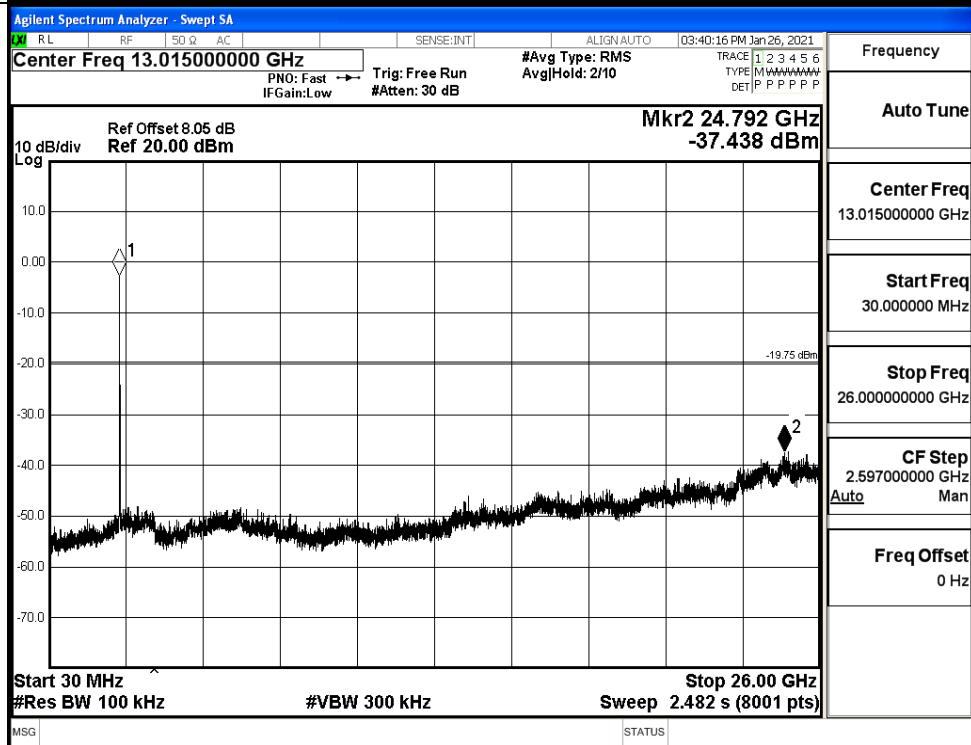


11G_LCH_Graphs

Pref/11G/LCH

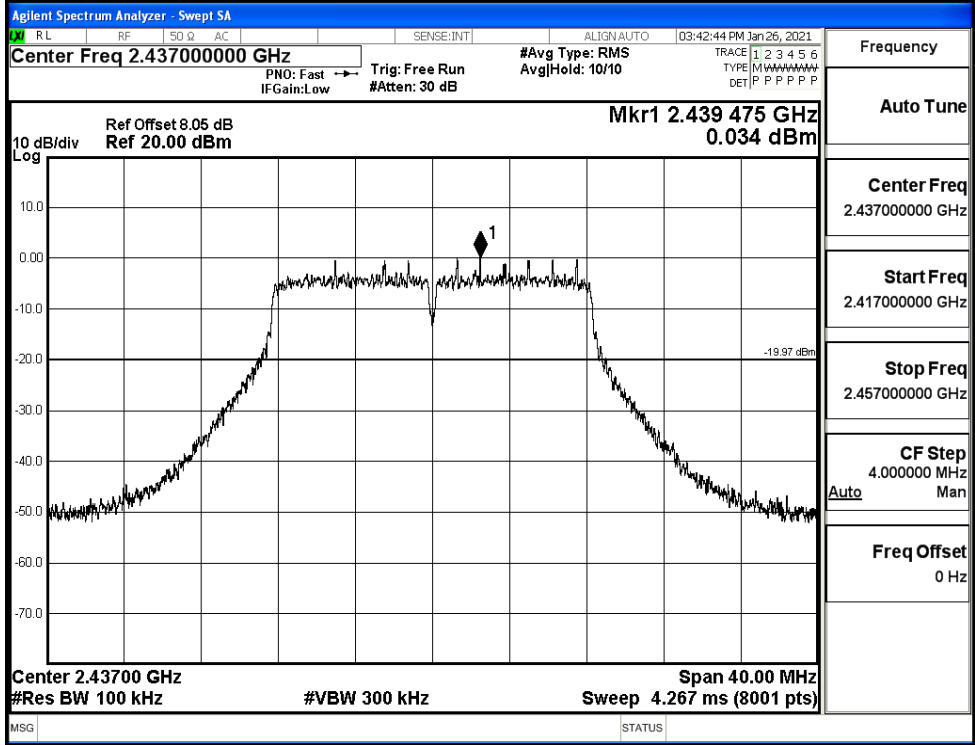


Puw/11G/LCH

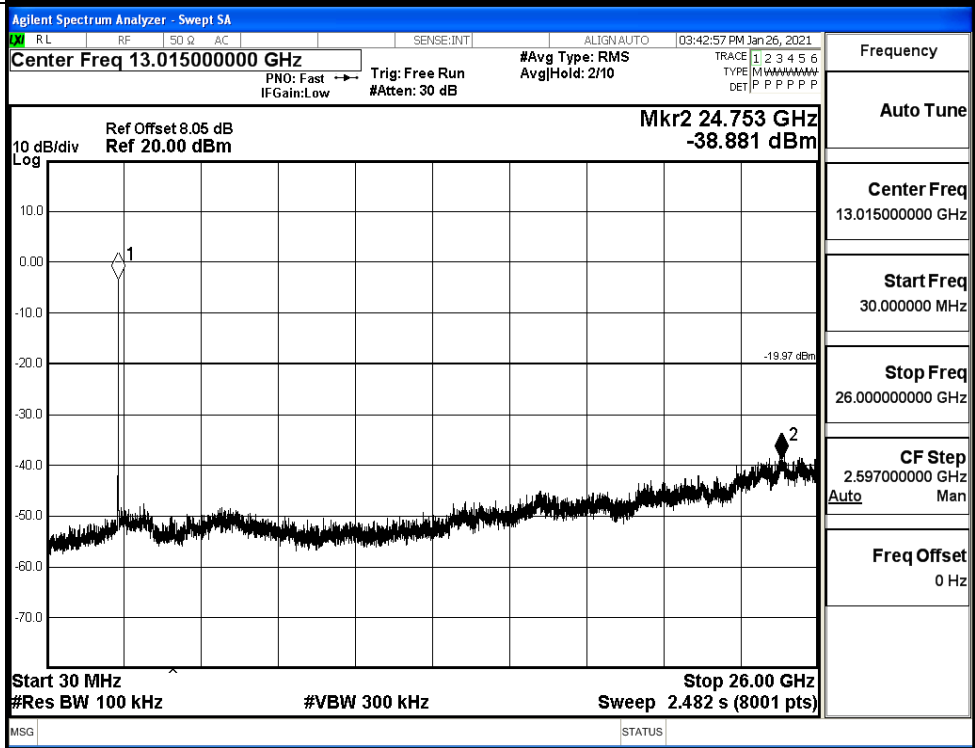


11G_MCH_Graphs

Pref/11G/MCH

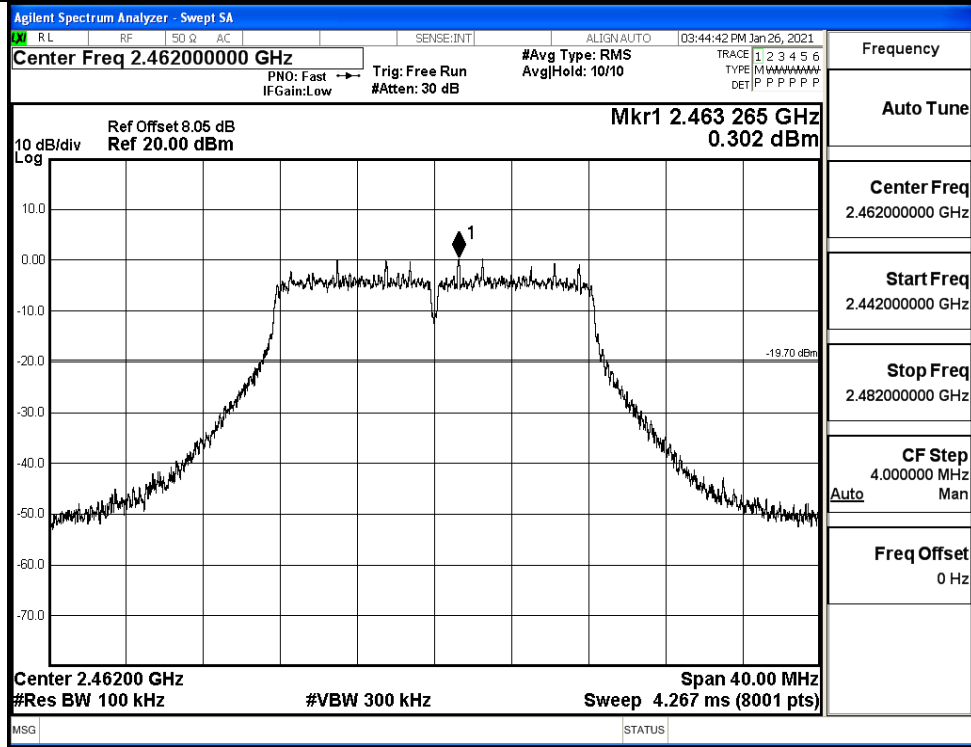


Puw/11G/MCH

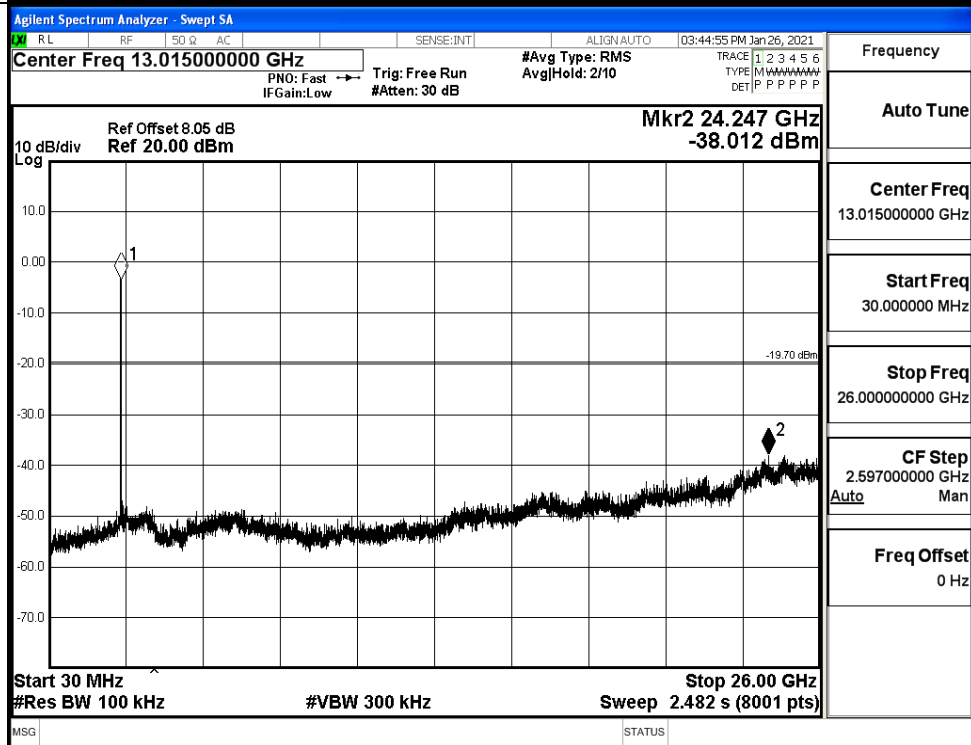


11G_HCH_Graphs

Pref/11G/HCH

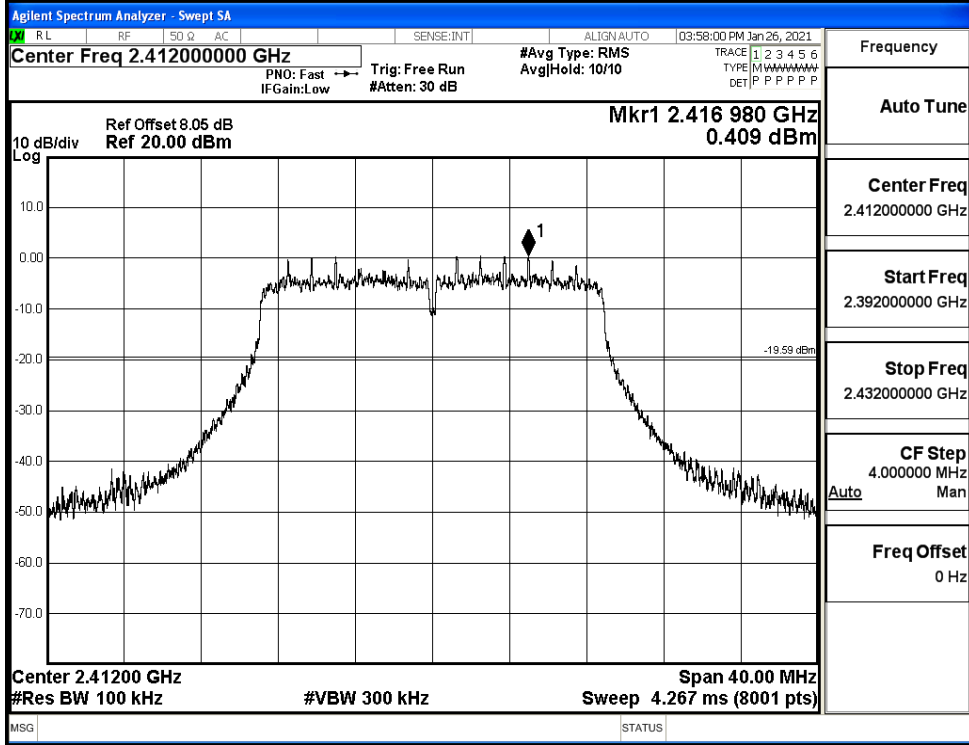


Puw/11G/HCH

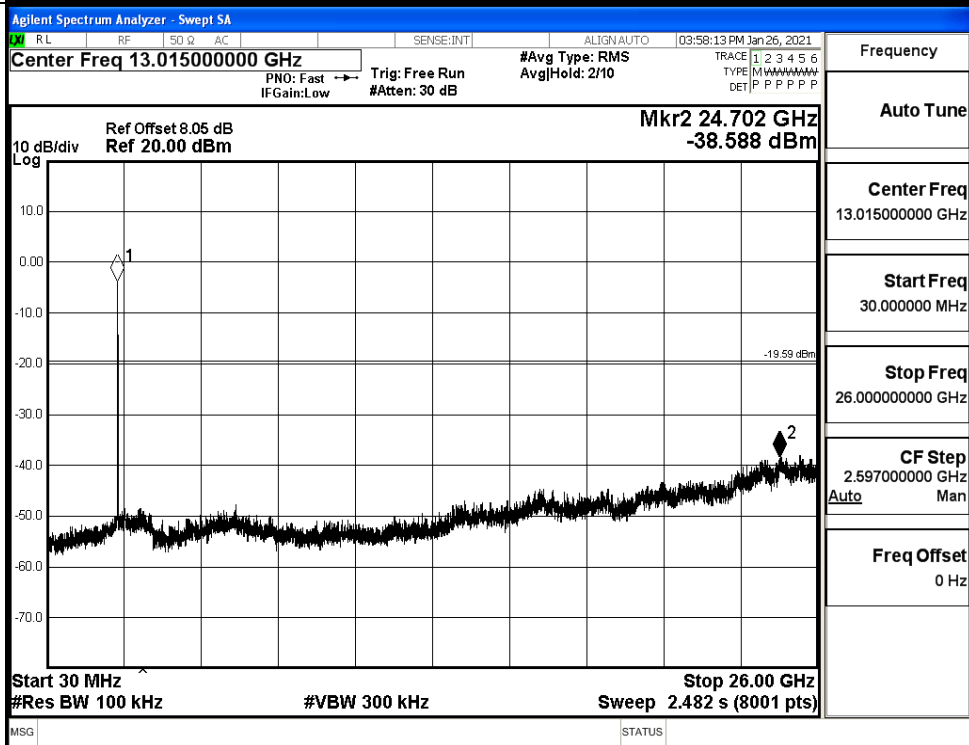


11N20SISO_LCH_Graphs

Pref/11N20SIS
O/LCH

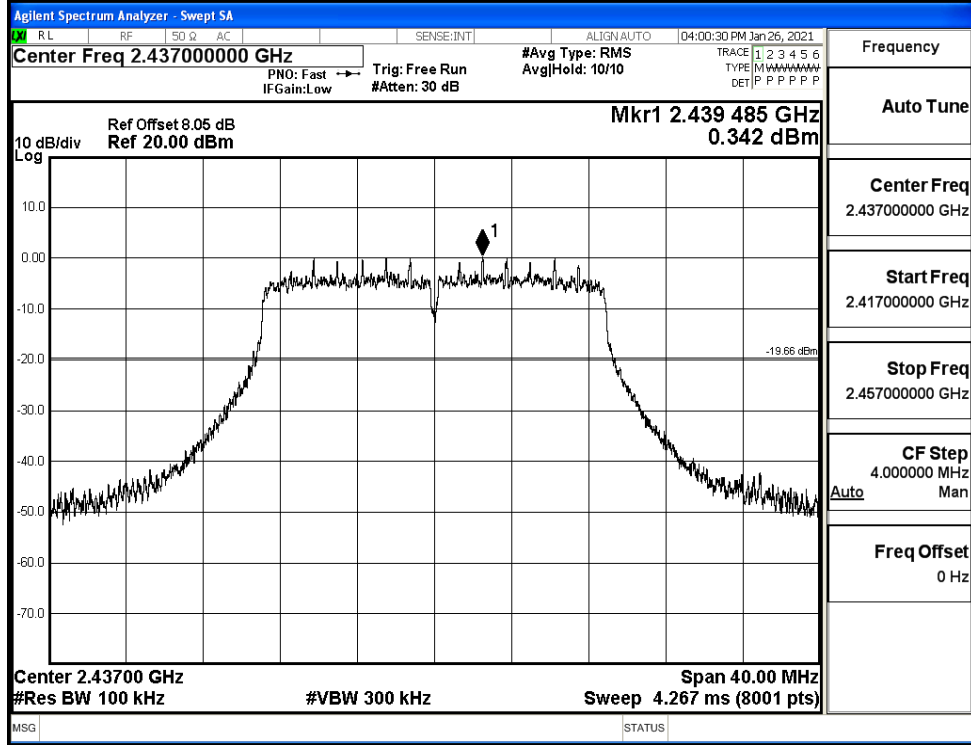


Puw/11N20
SISO/LCH

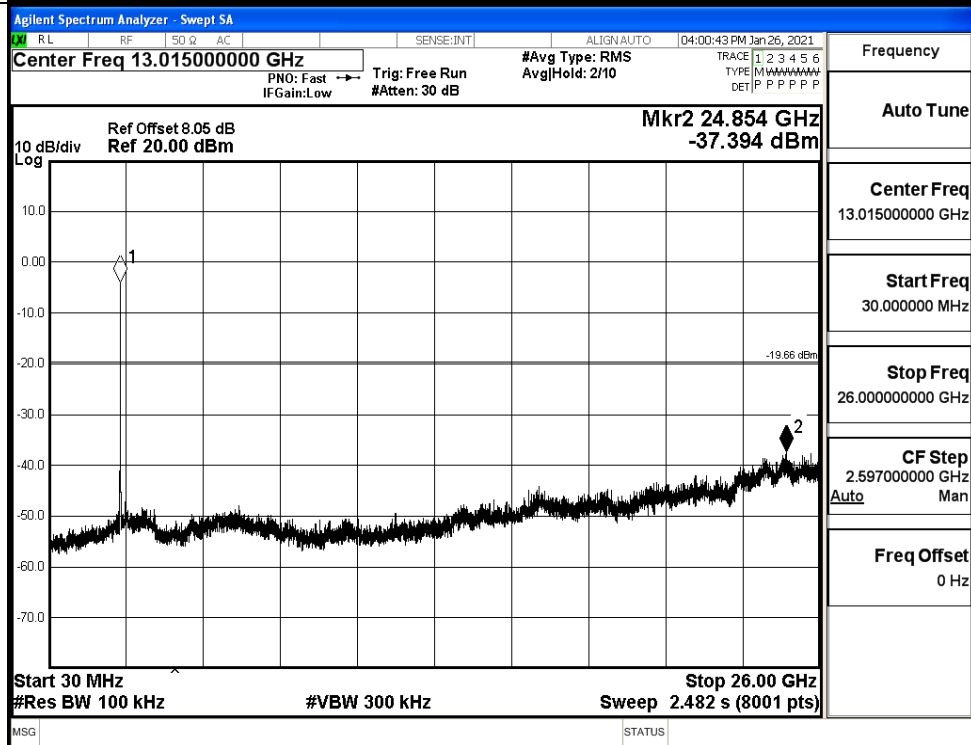


11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCH

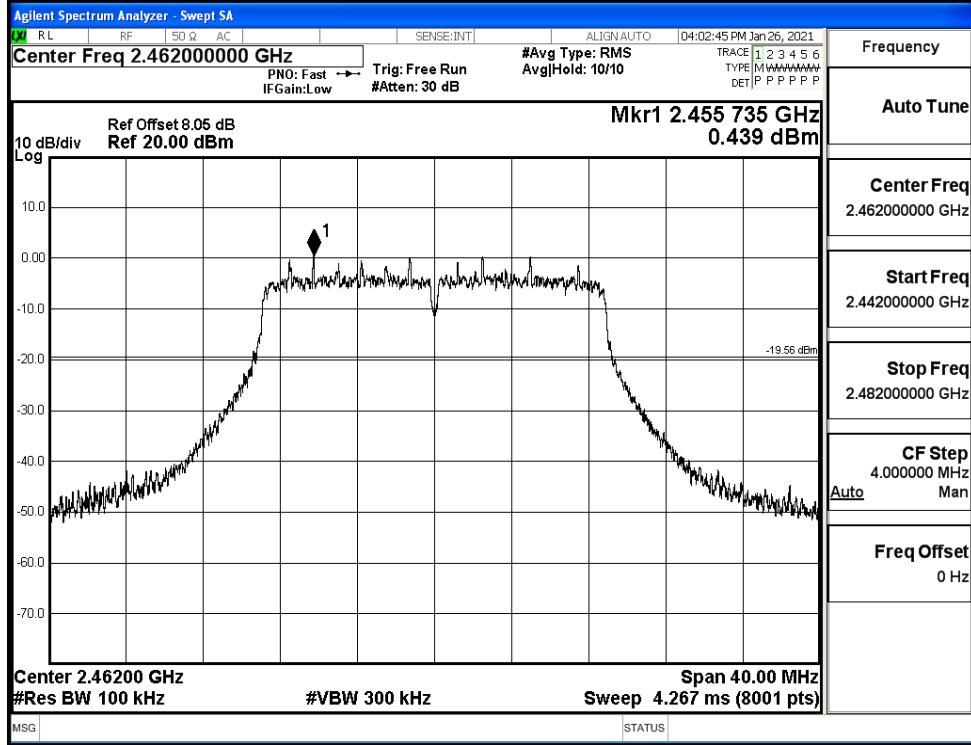


Puw/11N20
SISO/MCH

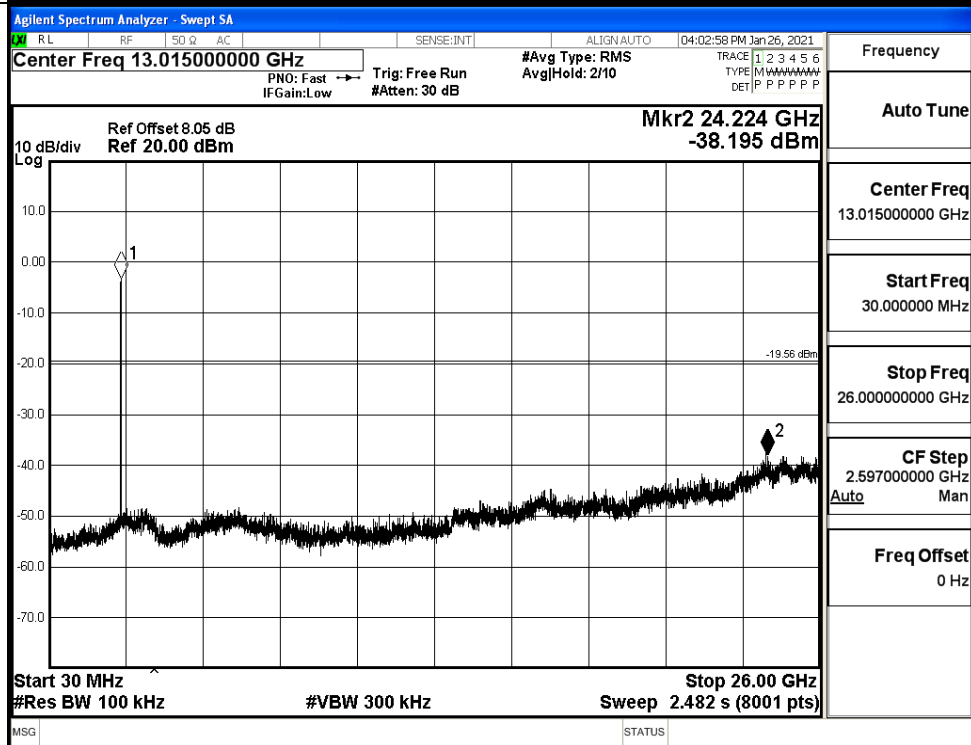


11N20SISO_HCH_Graphs

Pref/11N20
SISO/HCH

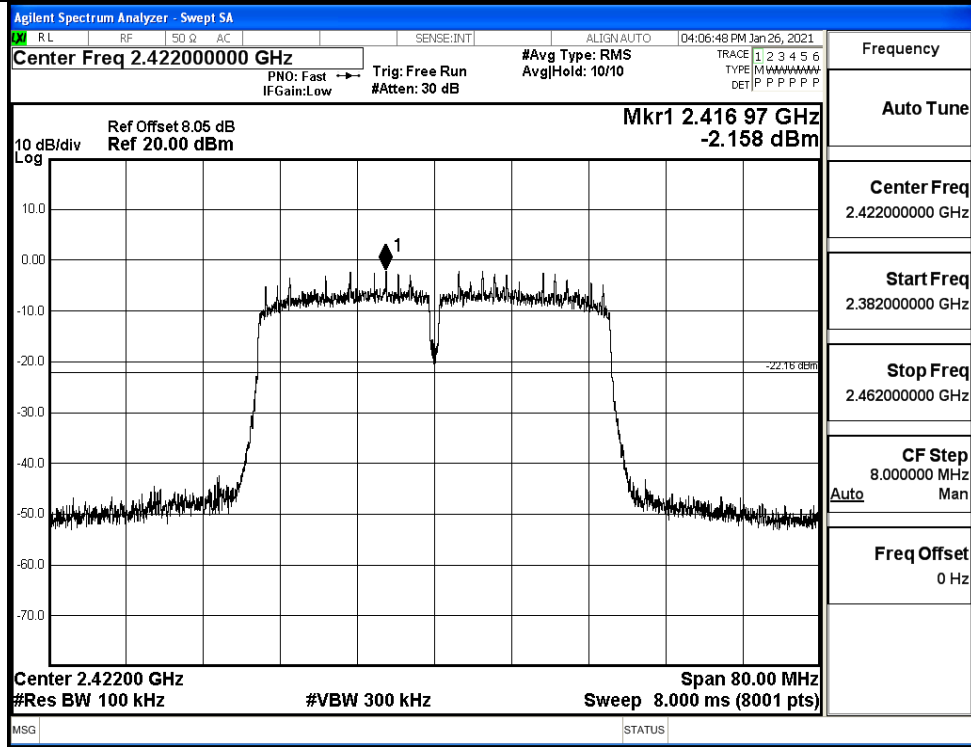


Puw/11N20
SISO/HCH

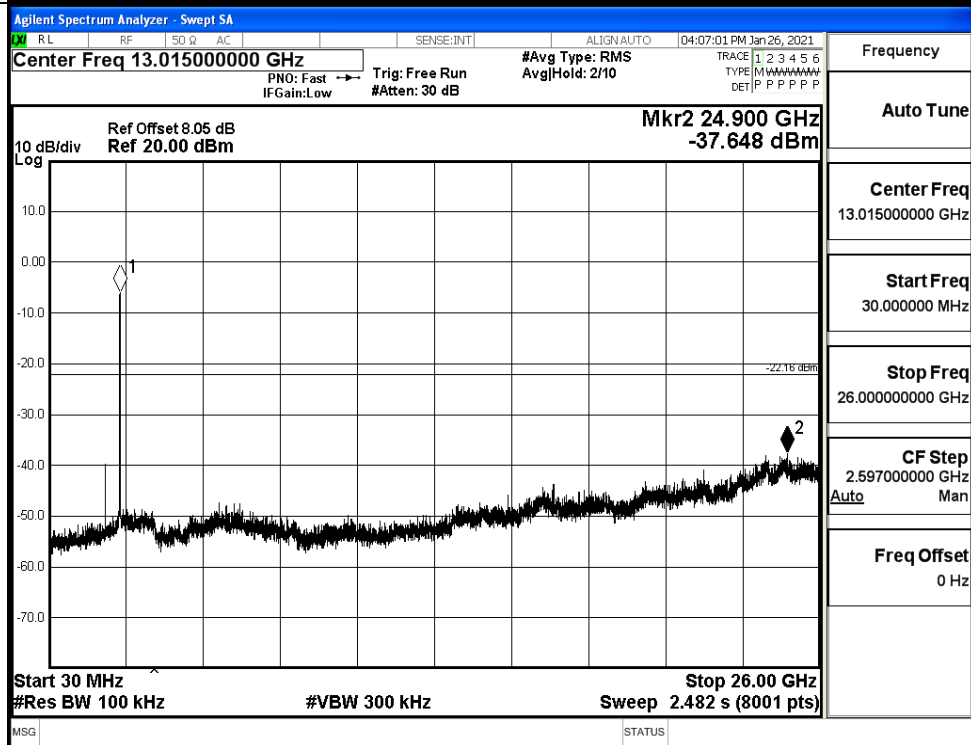


11N40SISO_LCH_Graphs

Pref/11N40
SISO/LCH

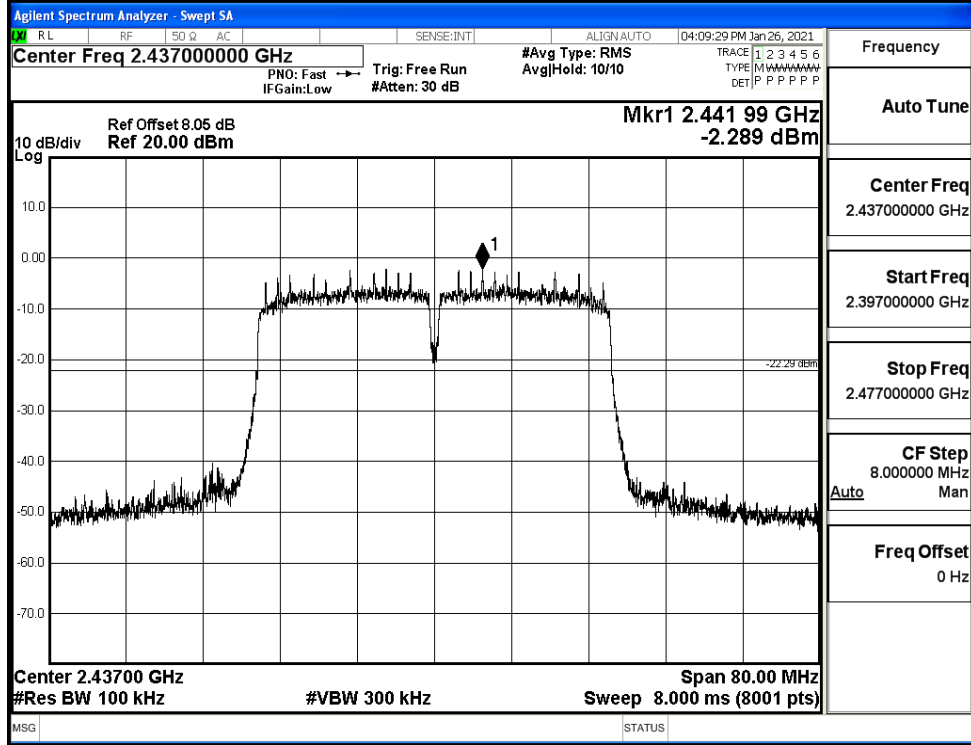


Puw/11N40
SISO/LCH

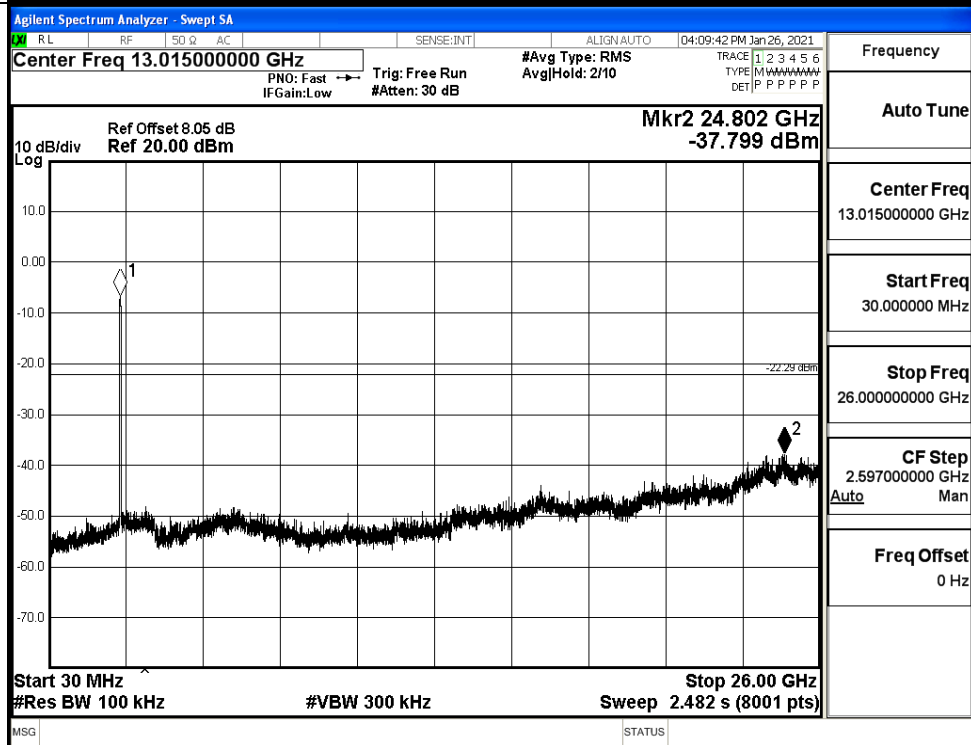


11N40SISO_MCH_Graphs

Pref/11N40
SISO/MCH

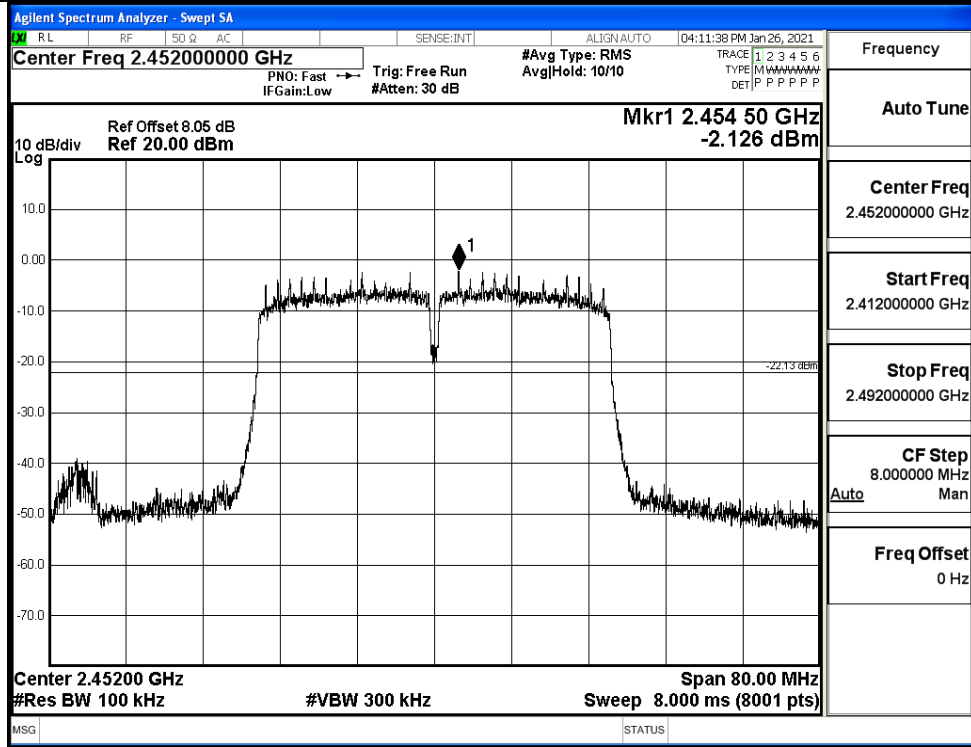


Puw/11N40
SISO/MCH

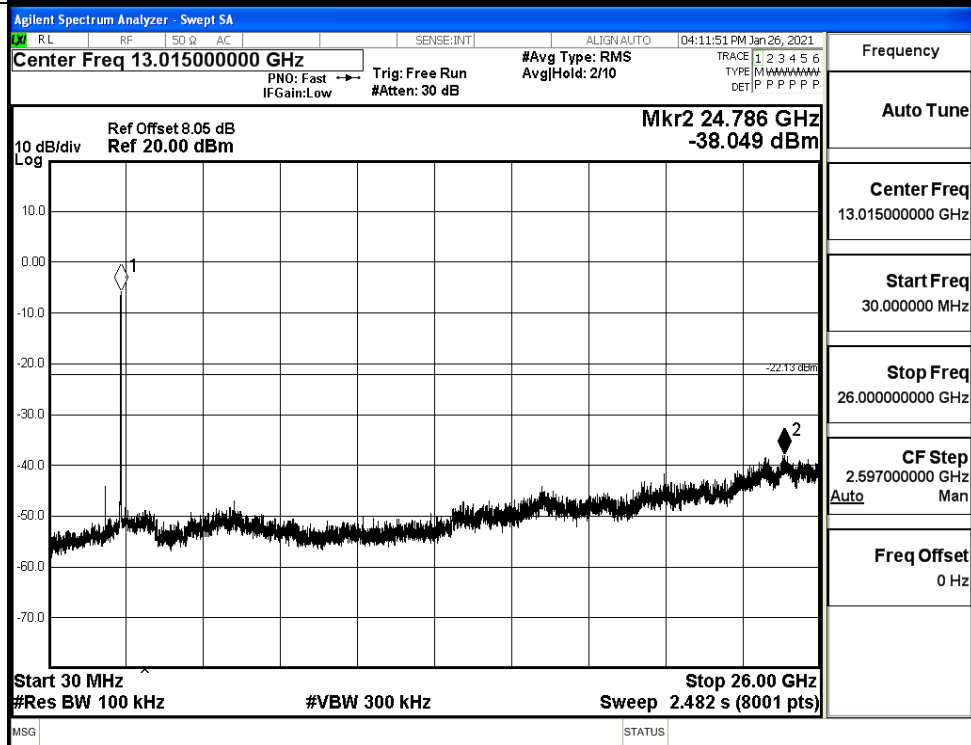


11N40SISO_HCH_Graphs

Pref/11N40
SISO/HCH

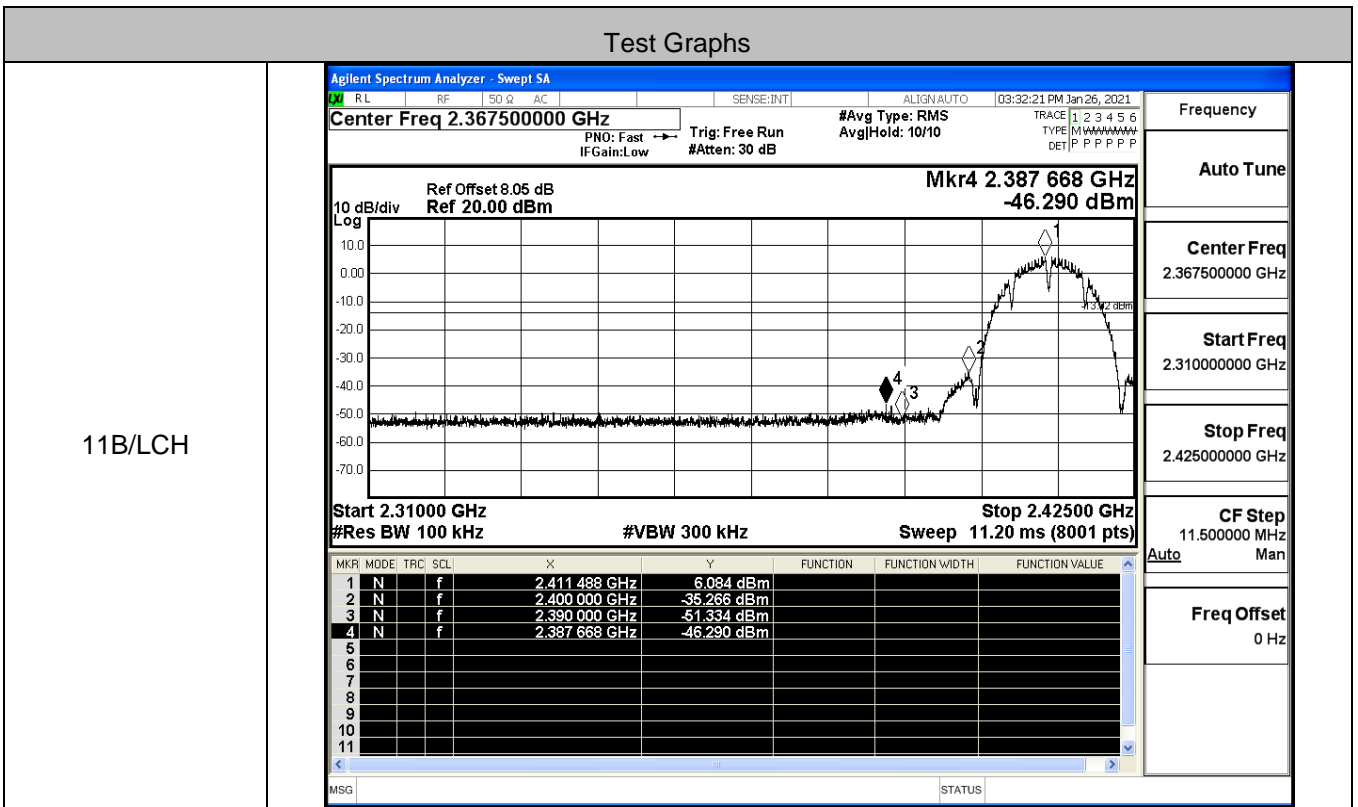


Puw/11N40
SISO/HCH

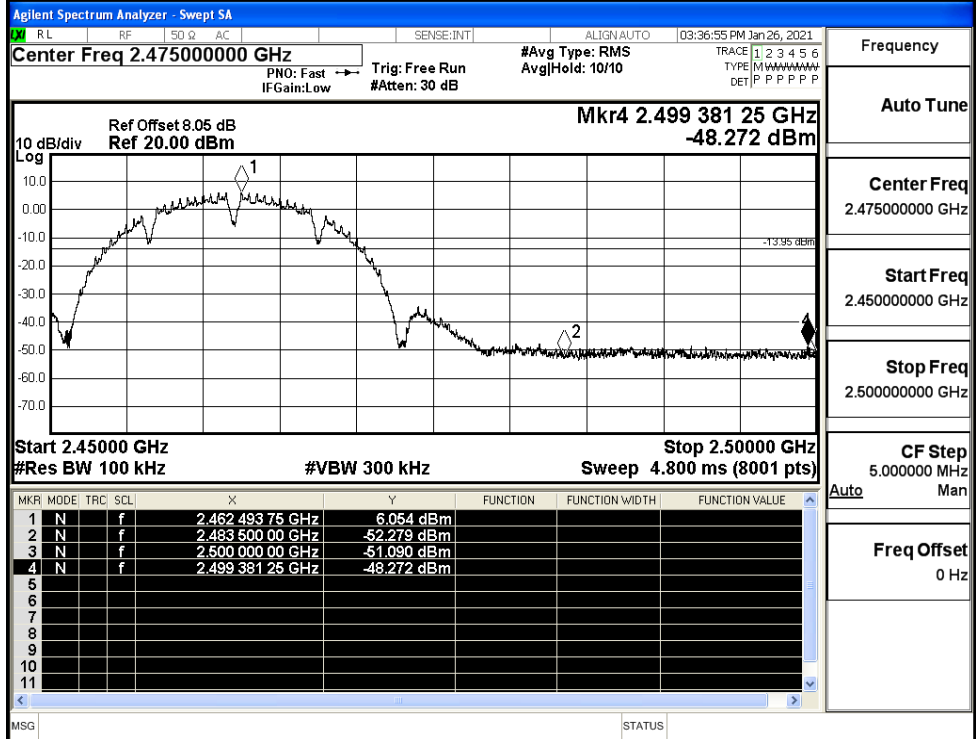


A.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	6.084	-46.290	-13.92	PASS
	HCH	6.054	-48.272	-13.95	PASS
11G	LCH	0.219	-44.373	-19.78	PASS
	HCH	-0.010	-42.990	-20.01	PASS
11N20SISO	LCH	0.596	-44.967	-19.4	PASS
	HCH	0.676	-48.846	-19.32	PASS
11N40SISO	LCH	-2.189	-46.322	-22.19	PASS
	HCH	-2.142	-46.781	-22.14	PASS

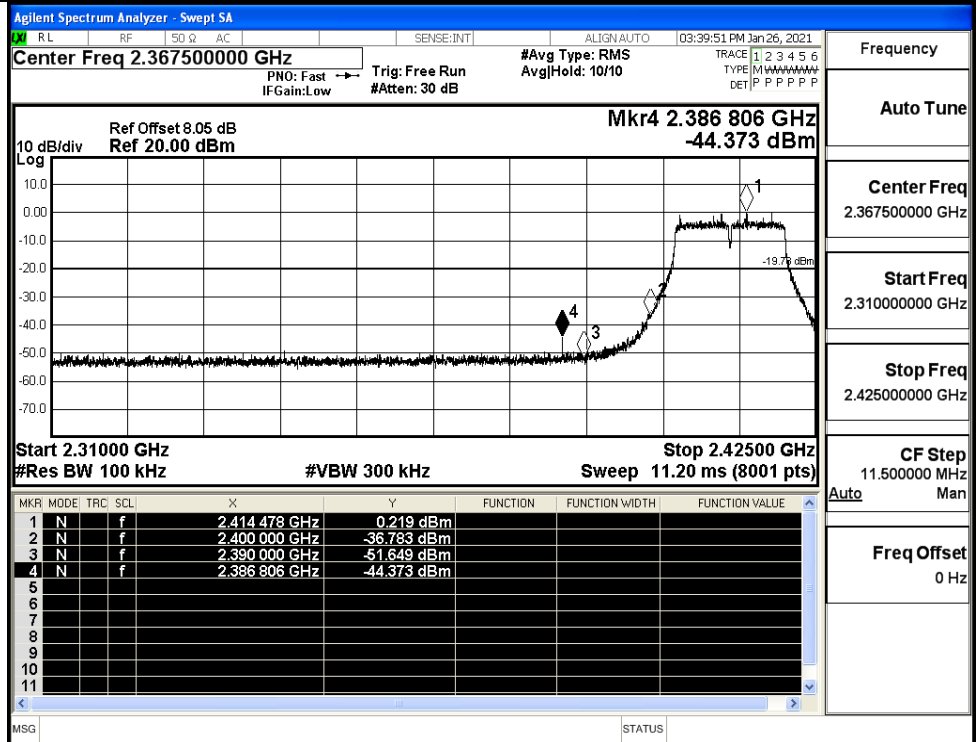


11B/HCH



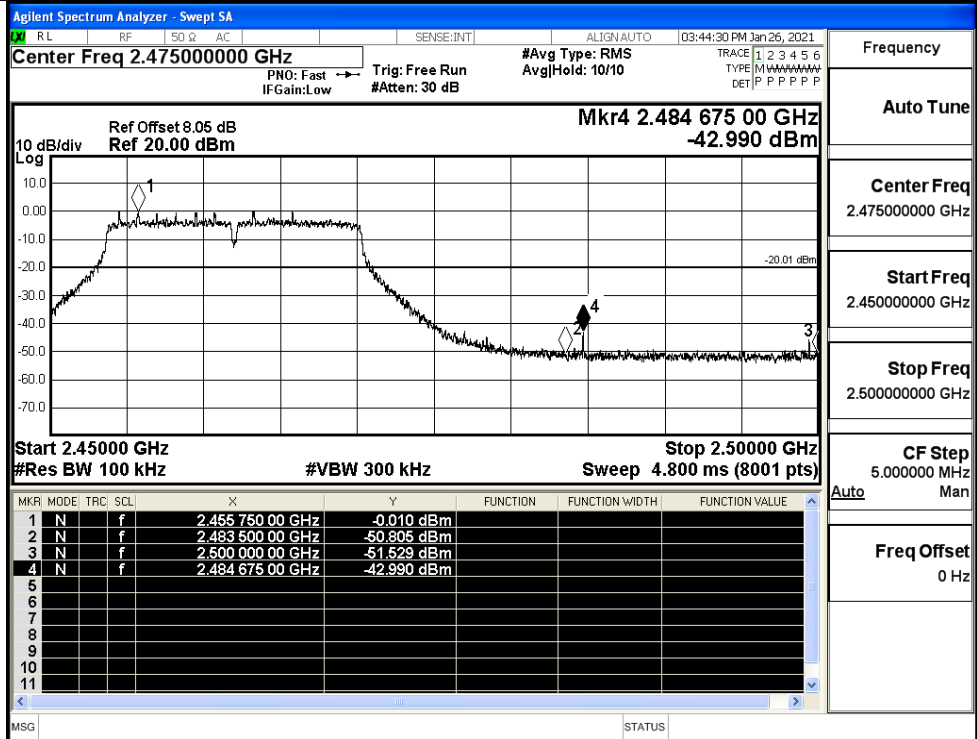
Frequency	
Auto Tune	
Center Freq	2.47500000 GHz
Start Freq	2.45000000 GHz
Stop Freq	2.50000000 GHz
CF Step	5.000000 MHz
Freq Offset	0 Hz

11G/LCH



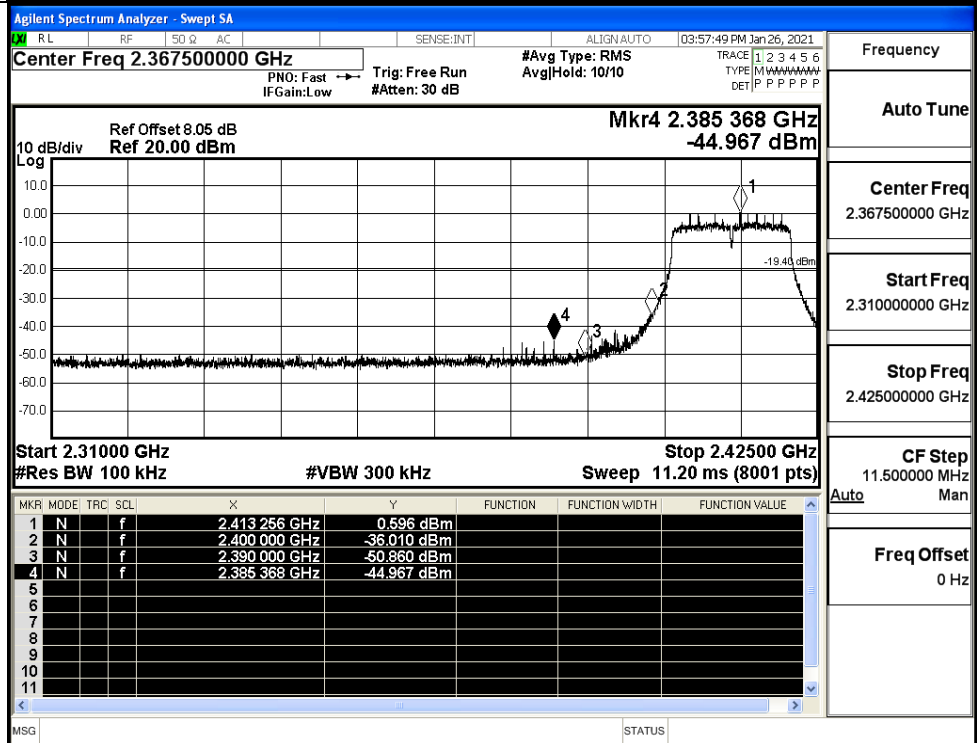
Frequency	
Auto Tune	
Center Freq	2.36750000 GHz
Start Freq	2.31000000 GHz
Stop Freq	2.42500000 GHz
CF Step	11.500000 MHz
Freq Offset	0 Hz

11G/HCH



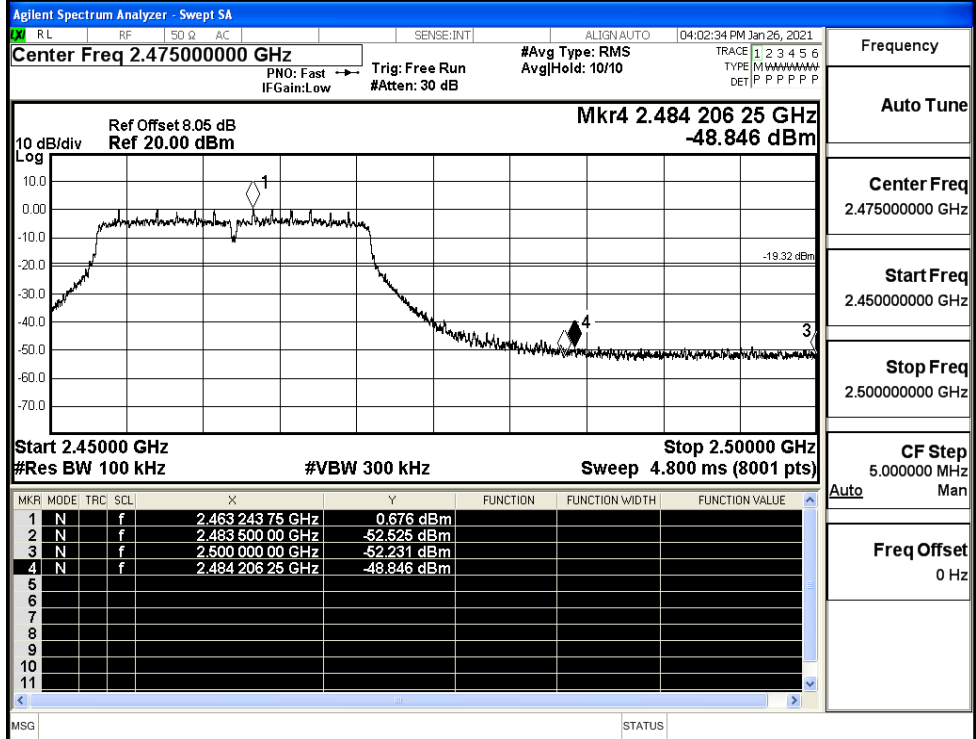
Frequency	
Auto Tune	
Center Freq	2.475000000 GHz
Start Freq	2.450000000 GHz
Stop Freq	2.500000000 GHz
CF Step	5.000000 MHz
Freq Offset	0 Hz

11N20SISO/LCH

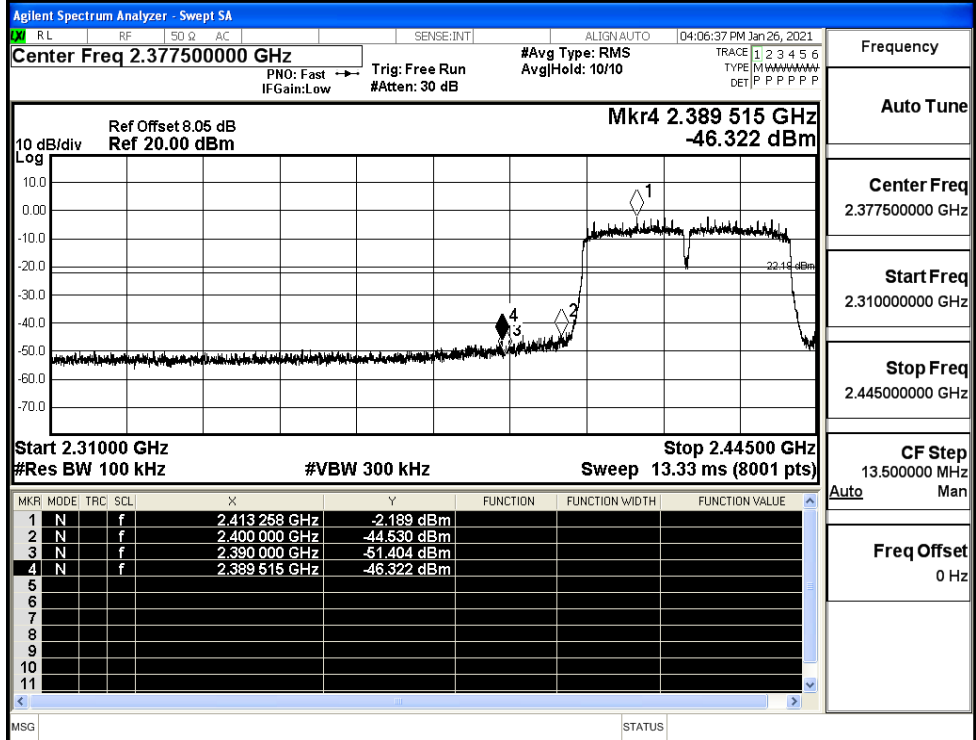


Frequency	
Auto Tune	
Center Freq	2.367500000 GHz
Start Freq	2.310000000 GHz
Stop Freq	2.425000000 GHz
CF Step	11.500000 MHz
Freq Offset	0 Hz

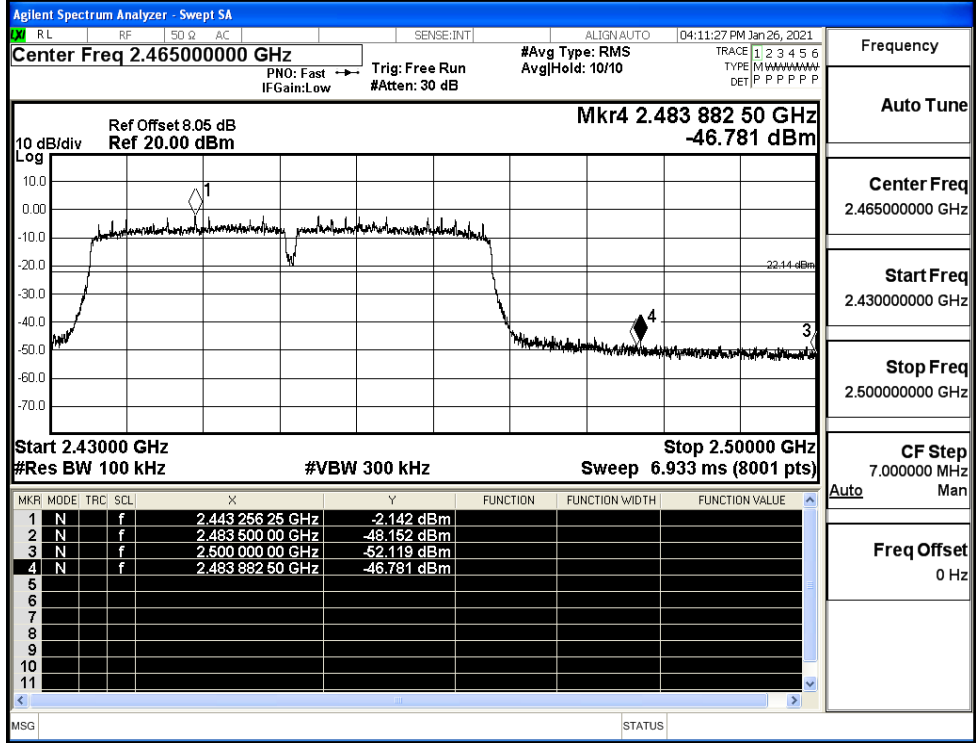
11N20SISO/HCH



11N40SISO/LCH



11N40SISO/HCH



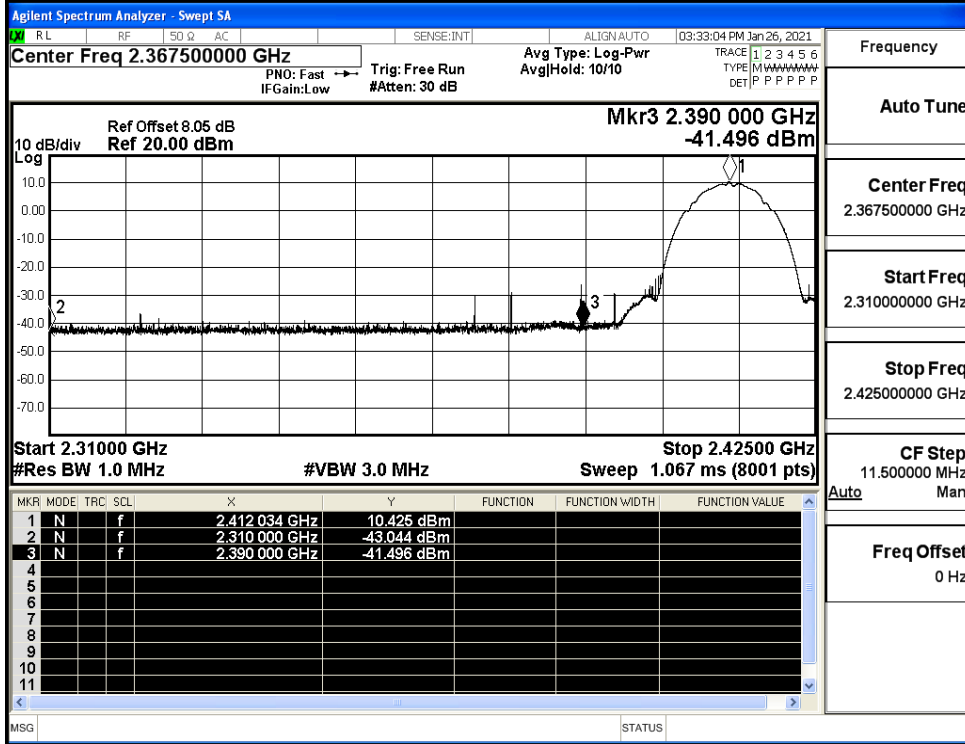
Frequency
Auto Tune
Center Freq 2.46500000 GHz
Start Freq 2.43000000 GHz
Stop Freq 2.50000000 GHz
CF Step 7.000000 MHz Auto Man
Freq Offset 0 Hz

A.7 Restrict-band band-edge measurements

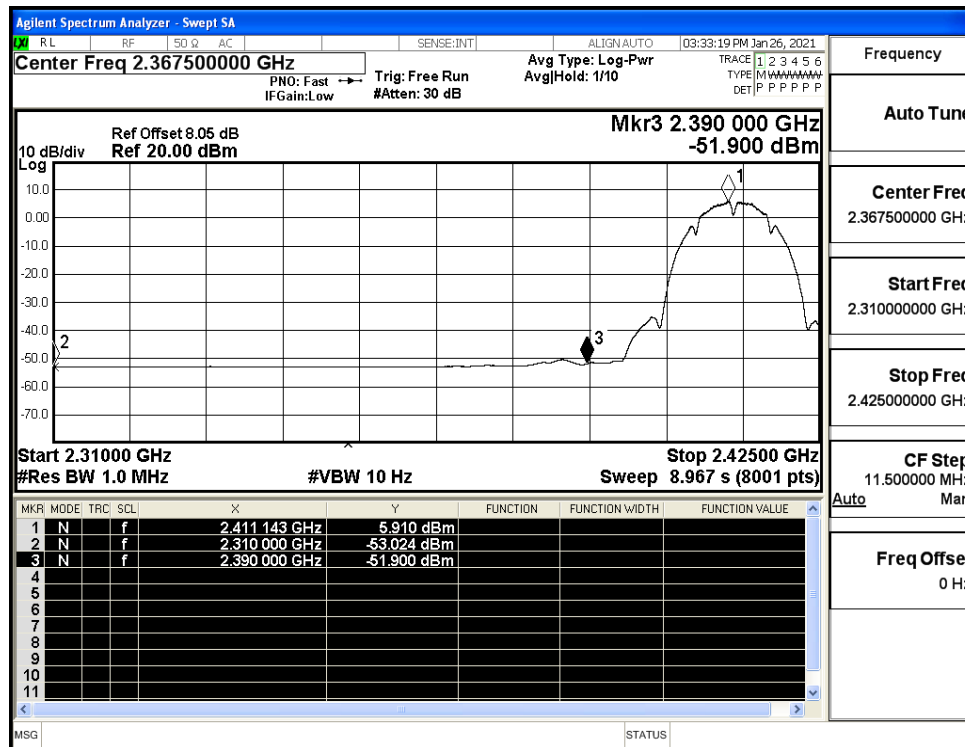
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBu V/m]	Verdict
11B	2412	Ant1	2310.0	-43.04	2.0	0	54.22	PEAK	74	PASS
	2412	Ant1	2310.0	-53.02	2.0	0	44.24	AV	54	PASS
	2412	Ant1	2390.0	-41.50	2.0	0	55.76	PEAK	74	PASS
	2412	Ant1	2390.0	-51.90	2.0	0	45.36	AV	54	PASS
	2462	Ant1	2483.5	-41.52	2.0	0	55.74	PEAK	74	PASS
	2462	Ant1	2483.5	-51.64	2.0	0	45.62	AV	54	PASS
	2462	Ant1	2500.0	-42.89	2.0	0	54.37	PEAK	74	PASS
	2462	Ant1	2500.0	-51.89	2.0	0	45.37	AV	54	PASS
11G	2412	Ant1	2310.0	-42.10	2.0	0	55.16	PEAK	74	PASS
	2412	Ant1	2310.0	-52.83	2.0	0	44.43	AV	54	PASS
	2412	Ant1	2390.0	-37.82	2.0	0	59.44	PEAK	74	PASS
	2412	Ant1	2390.0	-51.24	2.0	0	46.02	AV	54	PASS
	2462	Ant1	2483.5	-41.39	2.0	0	55.87	PEAK	74	PASS
	2462	Ant1	2483.5	-50.86	2.0	0	46.4	AV	54	PASS
	2462	Ant1	2500.0	-41.94	2.0	0	55.32	PEAK	74	PASS
	2462	Ant1	2500.0	-51.59	2.0	0	45.67	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-43.14	2.0	0	54.12	PEAK	74	PASS
	2412	Ant1	2310.0	-52.62	2.0	0	44.64	AV	54	PASS
	2412	Ant1	2390.0	-38.44	2.0	0	58.82	PEAK	74	PASS
	2412	Ant1	2390.0	-50.98	2.0	0	46.28	AV	54	PASS
	2462	Ant1	2483.5	-39.26	2.0	0	58	PEAK	74	PASS
	2462	Ant1	2483.5	-50.51	2.0	0	46.75	AV	54	PASS
	2462	Ant1	2500.0	-42.43	2.0	0	54.83	PEAK	74	PASS
	2462	Ant1	2500.0	-51.69	2.0	0	45.57	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-43.70	2.0	0	53.56	PEAK	74	PASS
	2422	Ant1	2310.0	-52.61	2.0	0	44.65	AV	54	PASS

	2422	Ant1	2390.0	-36.59	2.0	0	60.67	PEAK	74	PASS
	2422	Ant1	2390.0	-49.51	2.0	0	47.75	AV	54	PASS
	2452	Ant1	2483.5	-39.37	2.0	0	57.89	PEAK	74	PASS
	2452	Ant1	2483.5	-49.81	2.0	0	47.45	AV	54	PASS
	2452	Ant1	2500.0	-41.15	2.0	0	56.11	PEAK	74	PASS
	2452	Ant1	2500.0	-51.17	2.0	0	46.09	AV	54	PASS

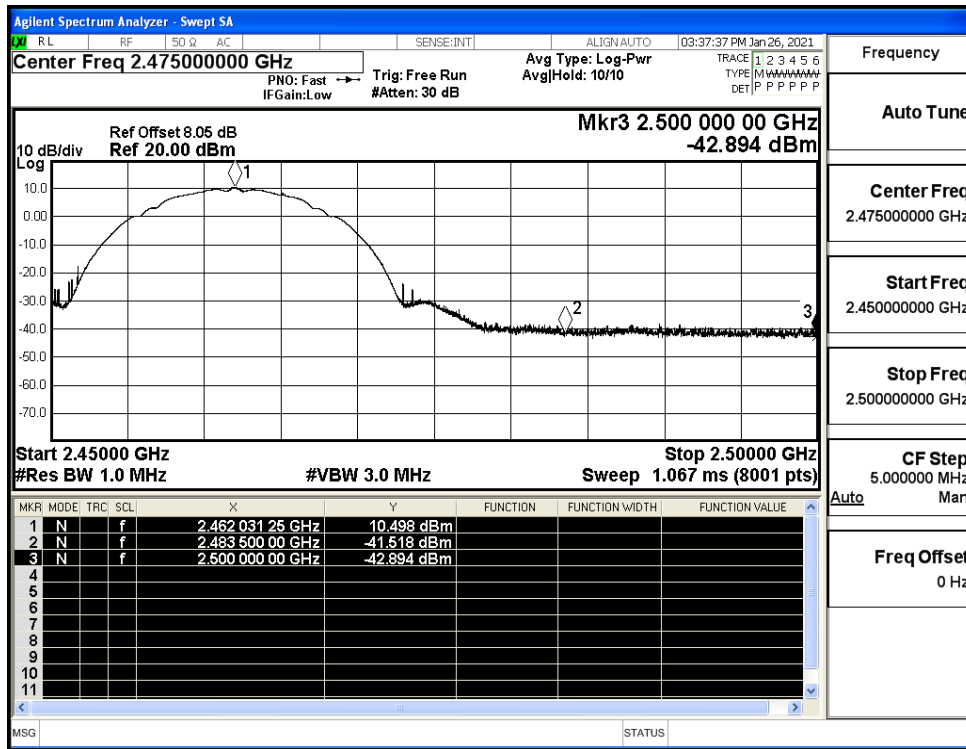
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



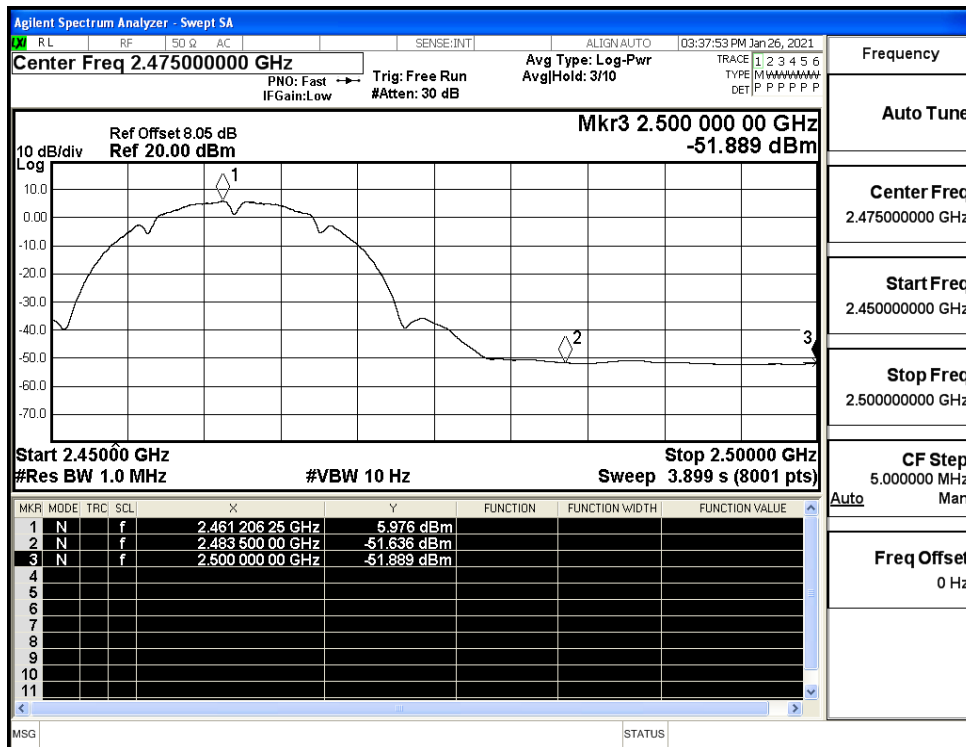
Restrict-band band-edge measurements_11B_2412_Ant1_AV



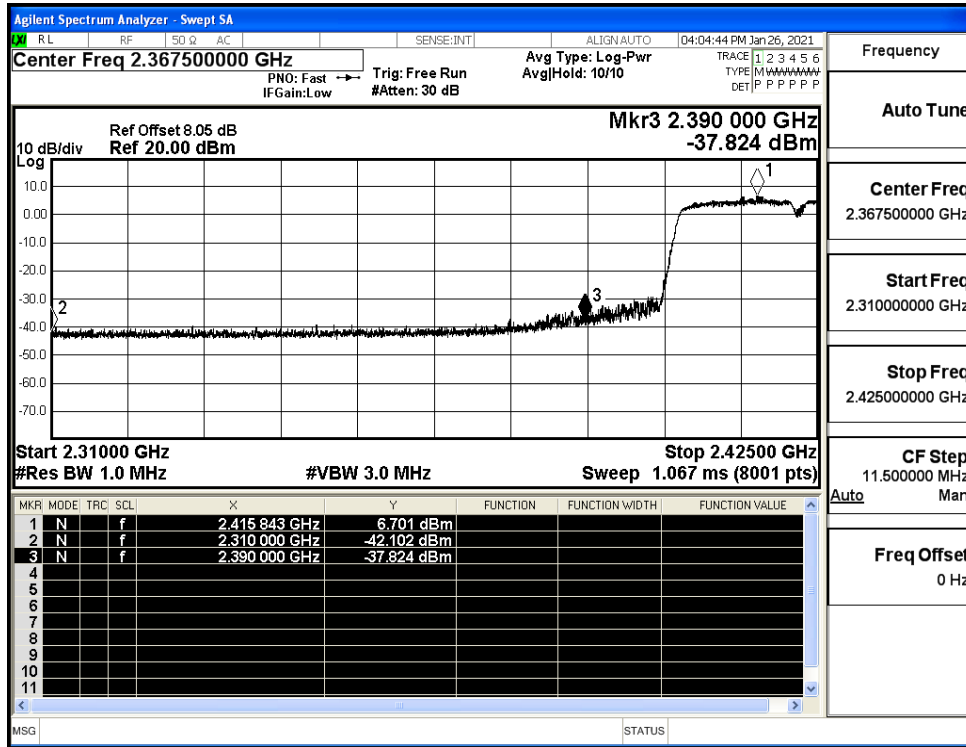
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



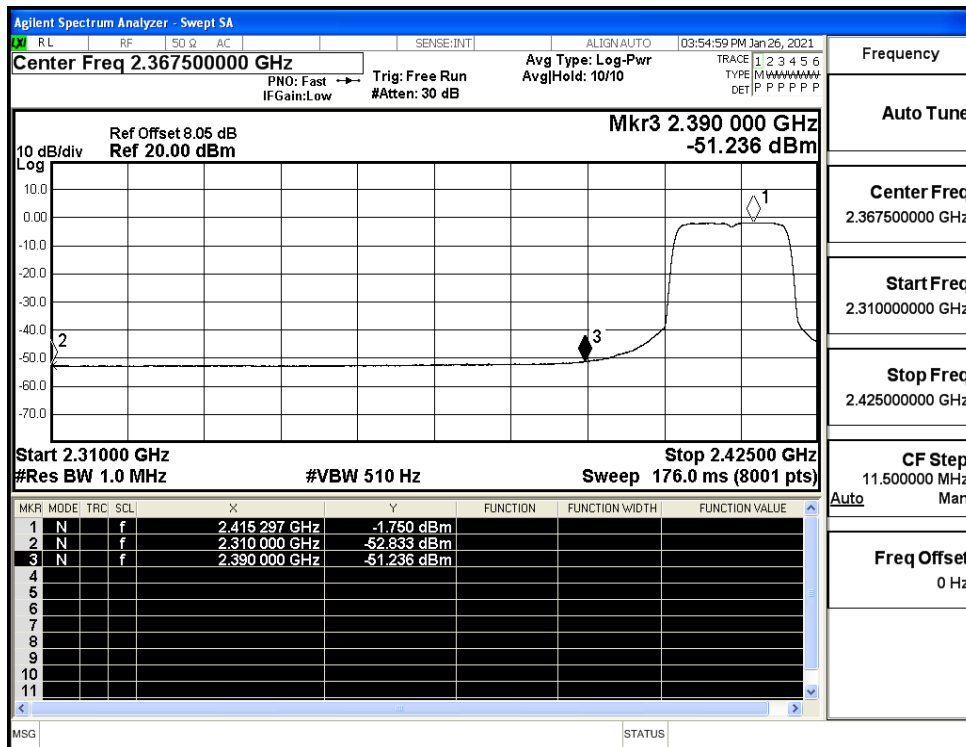
Restrict-band band-edge measurements_11B_2462_Ant1_AV



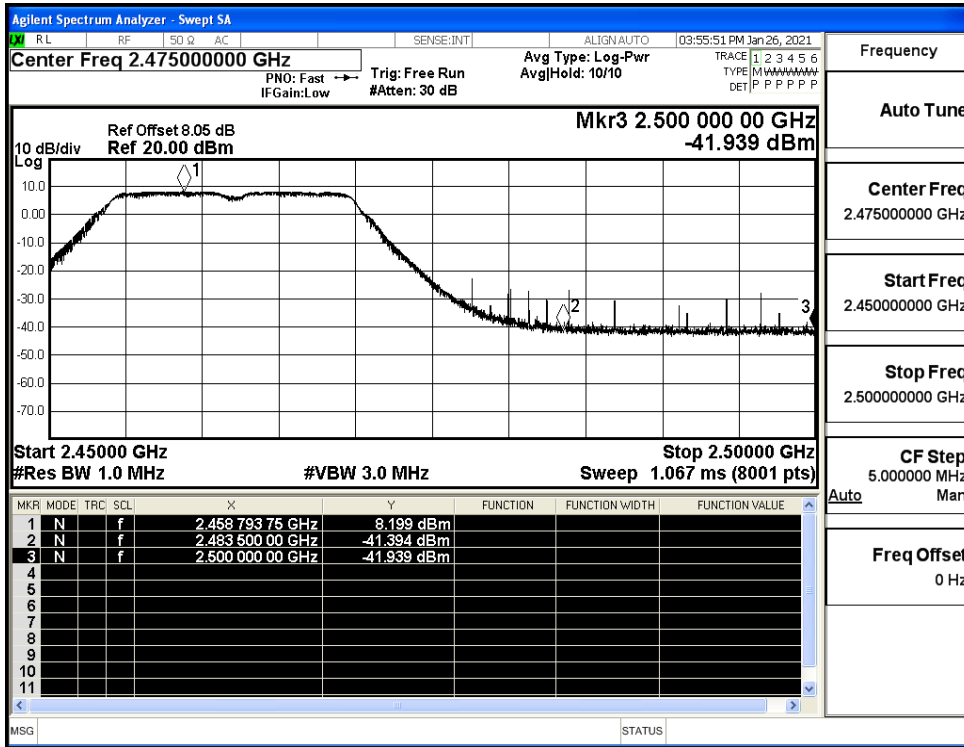
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



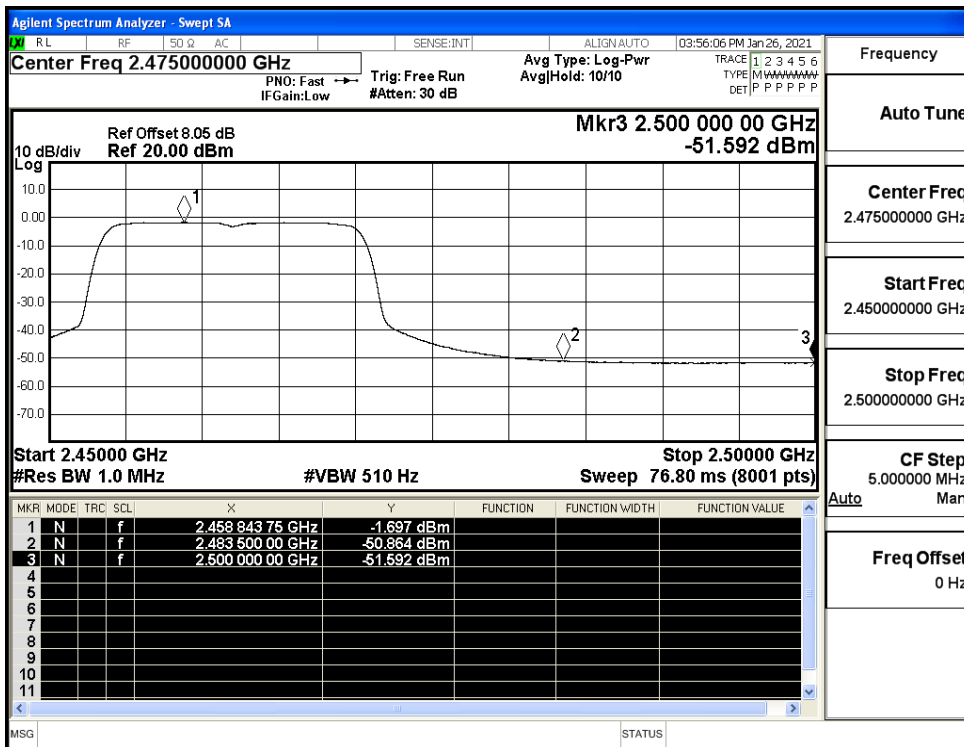
Restrict-band band-edge measurements_11G_2412_Ant1_AV



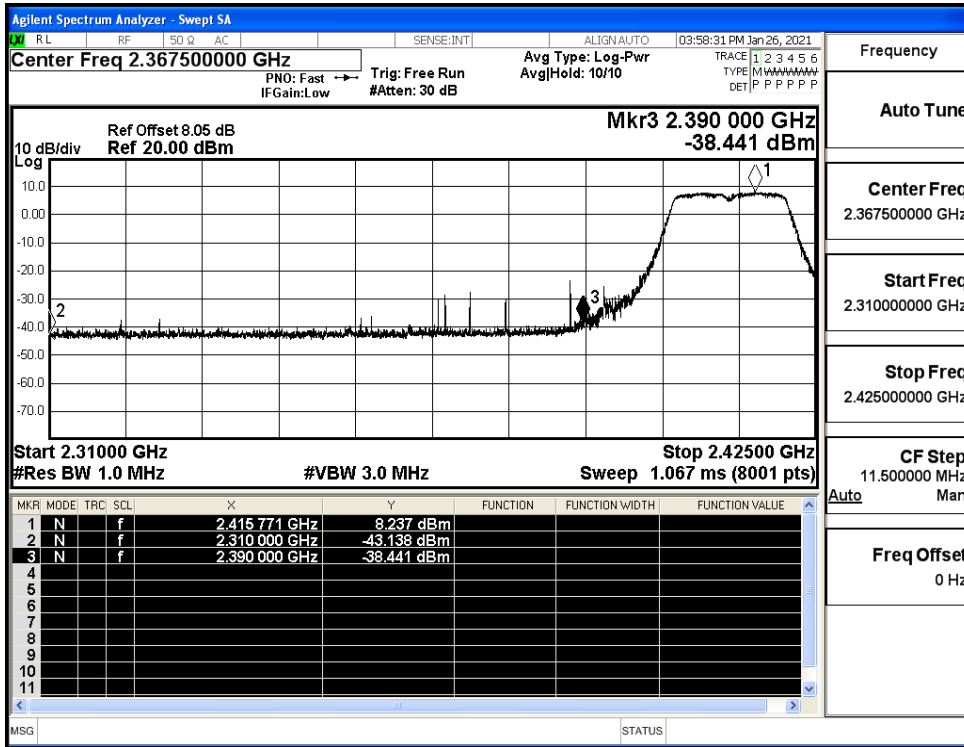
Restrict-band band-edge measurements_11G_2462_Ant1_PEAK



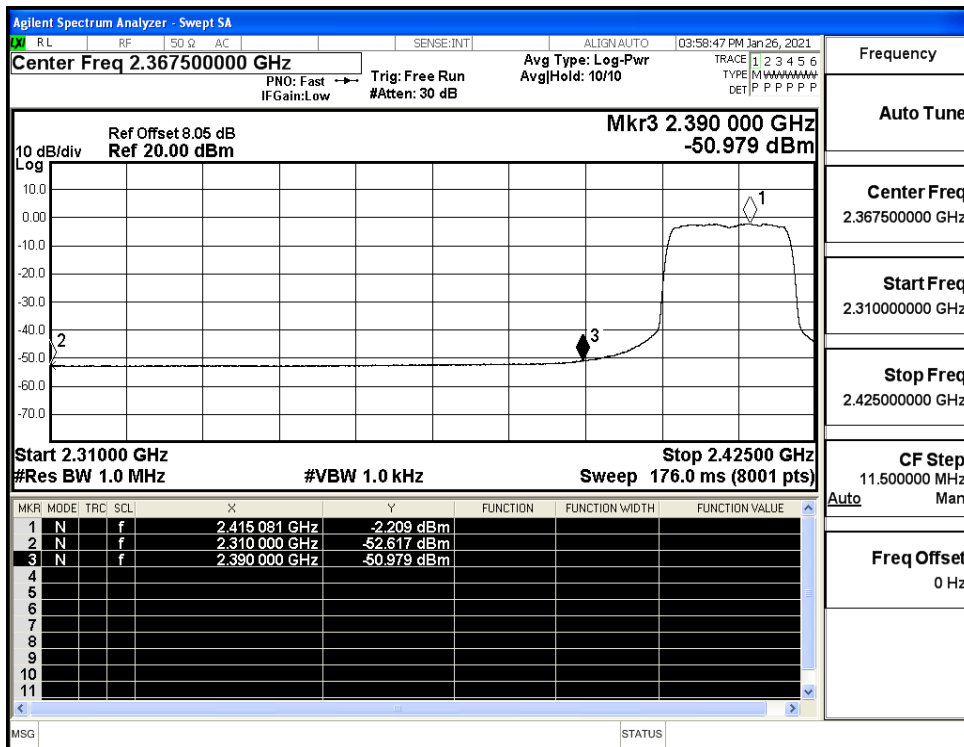
Restrict-band band-edge measurements_11G_2462_Ant1_AV



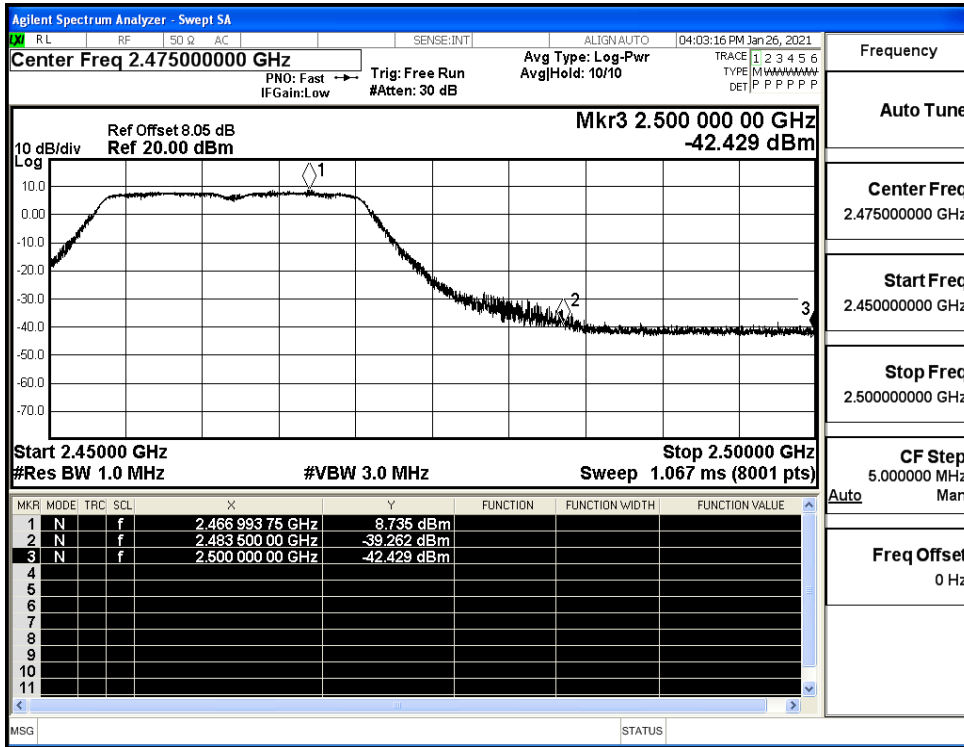
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



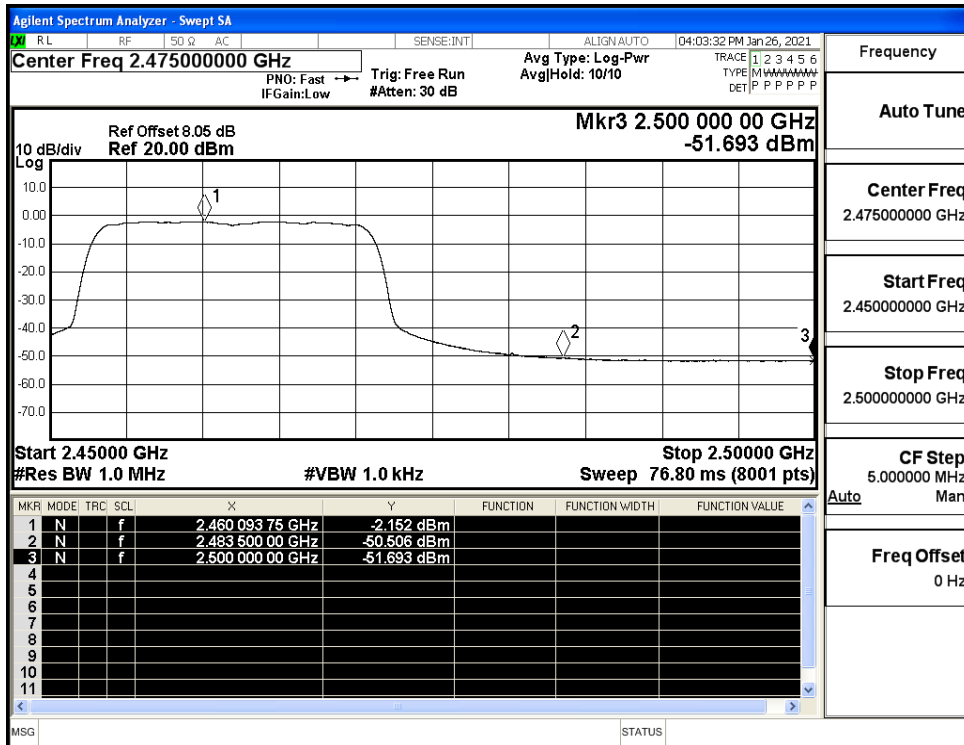
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_AV



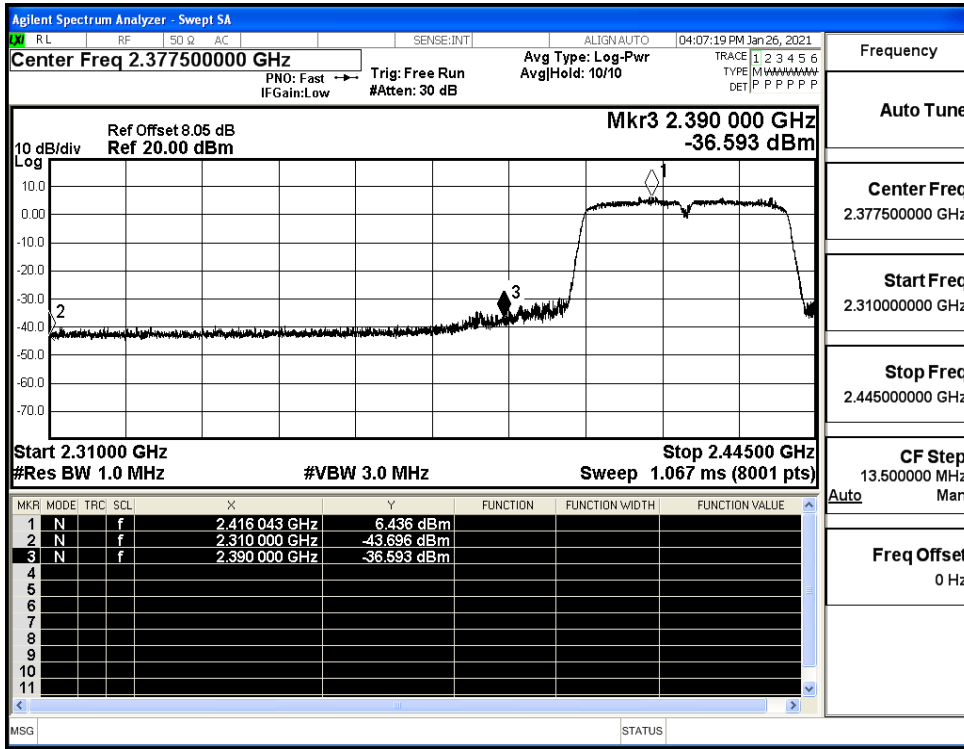
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_PEAK



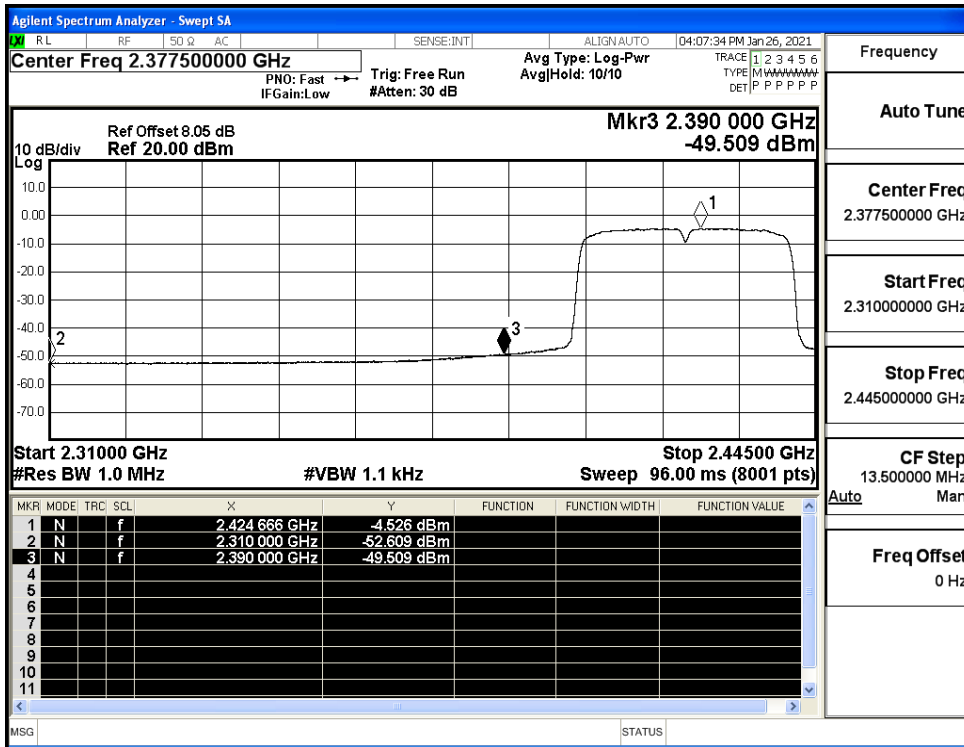
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_AV



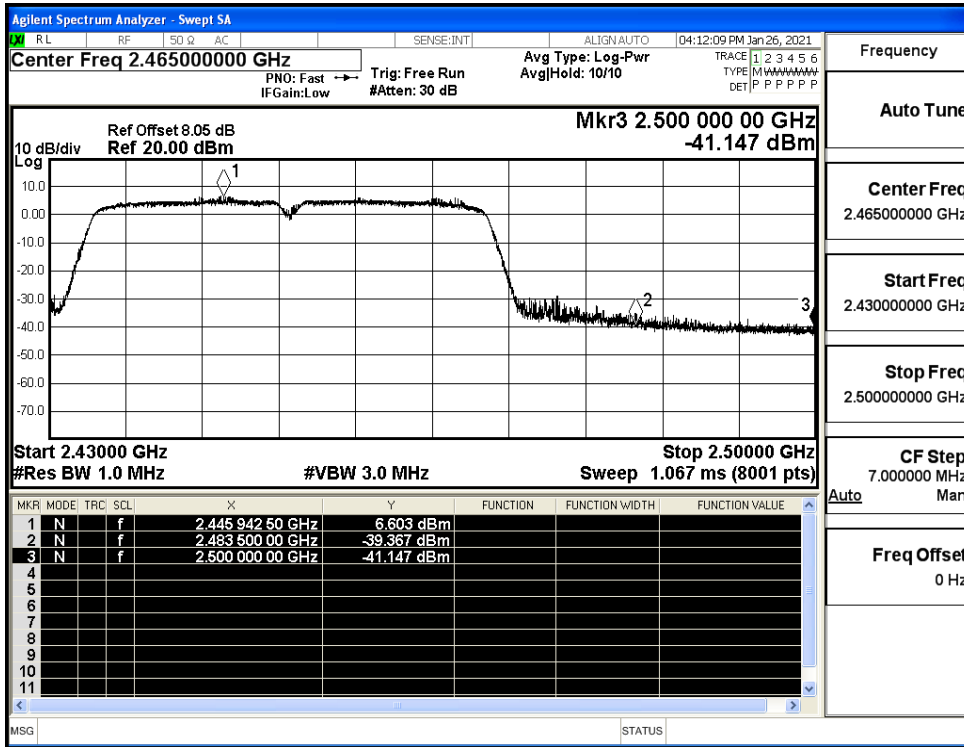
Restrict-band band-edge measurements_11N40SISO_2422_Ant1_PEAK



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

