

Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: HyTabPlus

Trade Mark: HYUNDAI

Test Model: HT10LB3MBKLTM

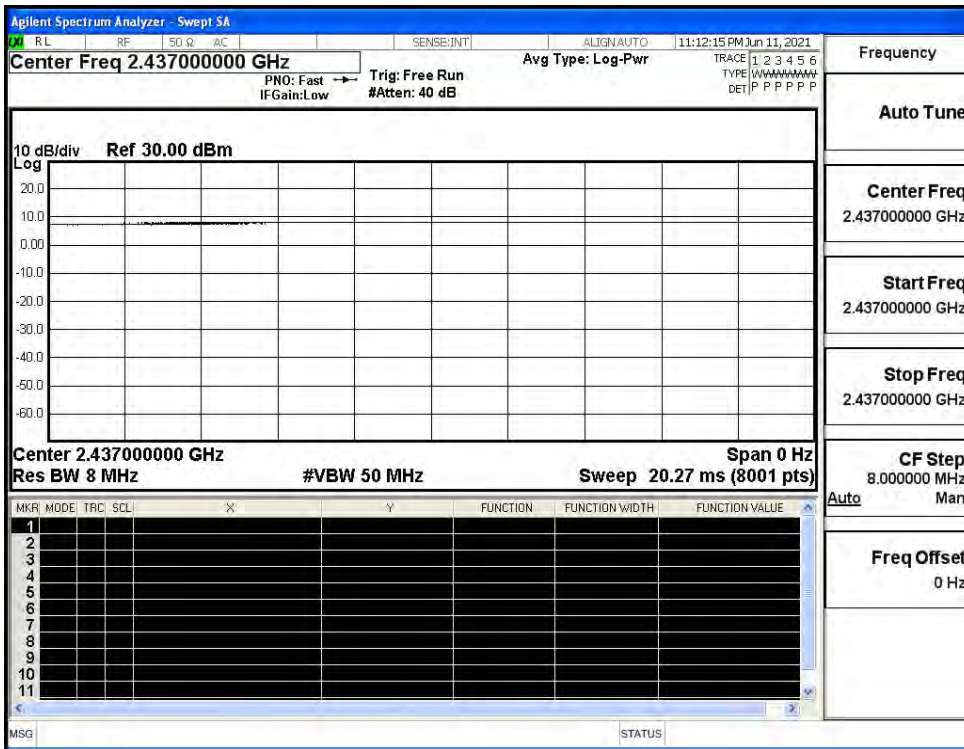
Environmental Conditions

Temperature:	21.6° C
Relative Humidity:	52.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Ken He
Supervised by:	Li Huan

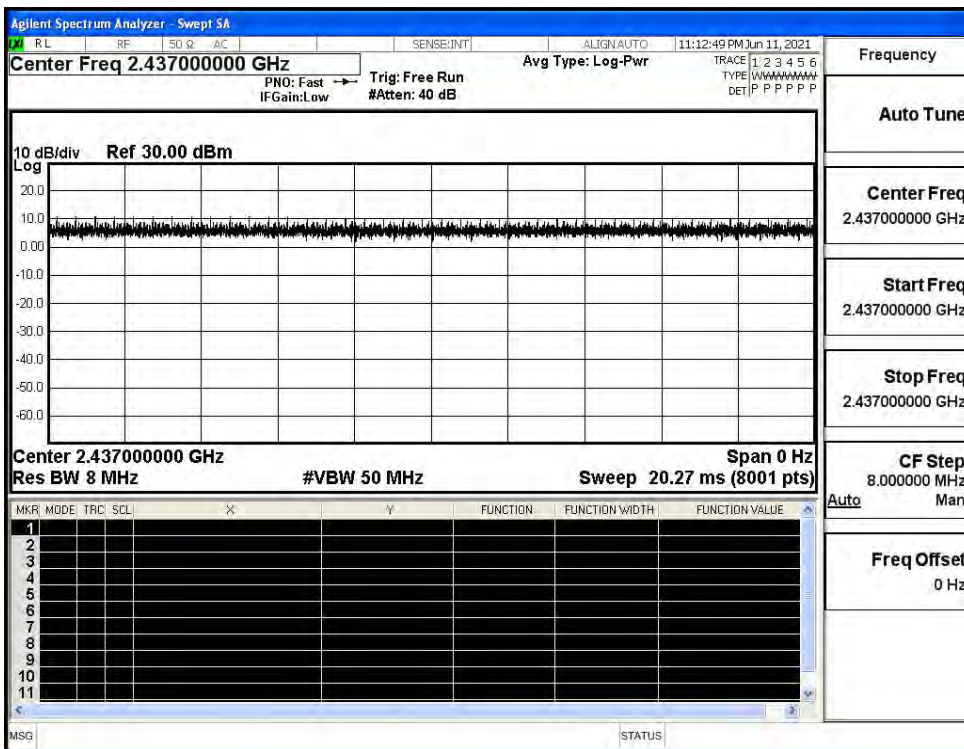
C.1 Duty Cycle

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

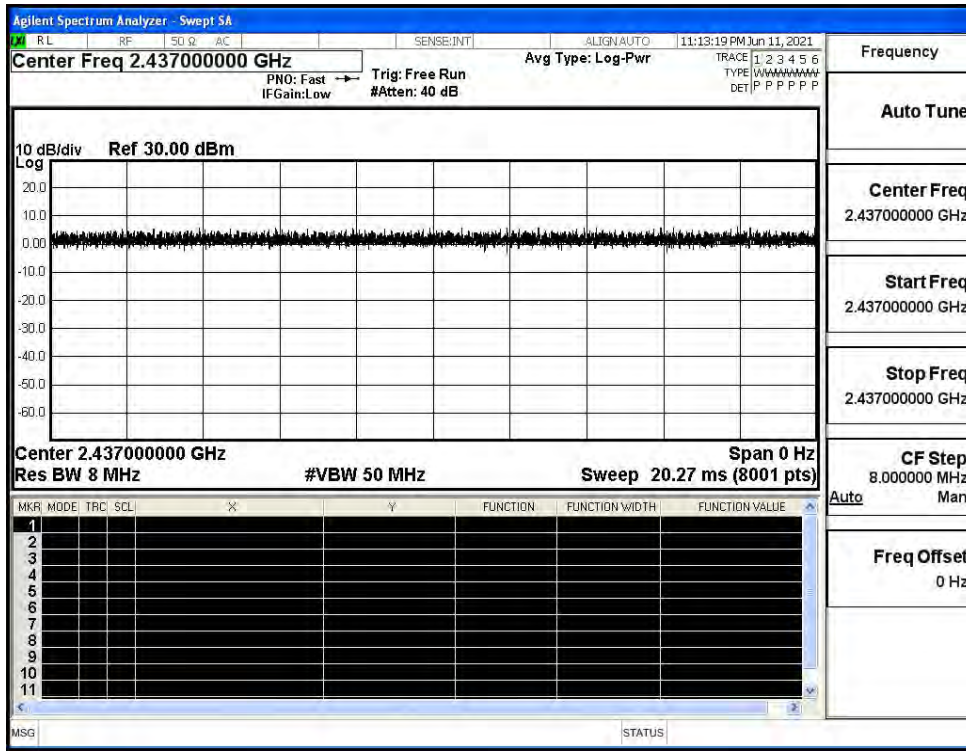
Duty Cycle_11B_2437_Ant1



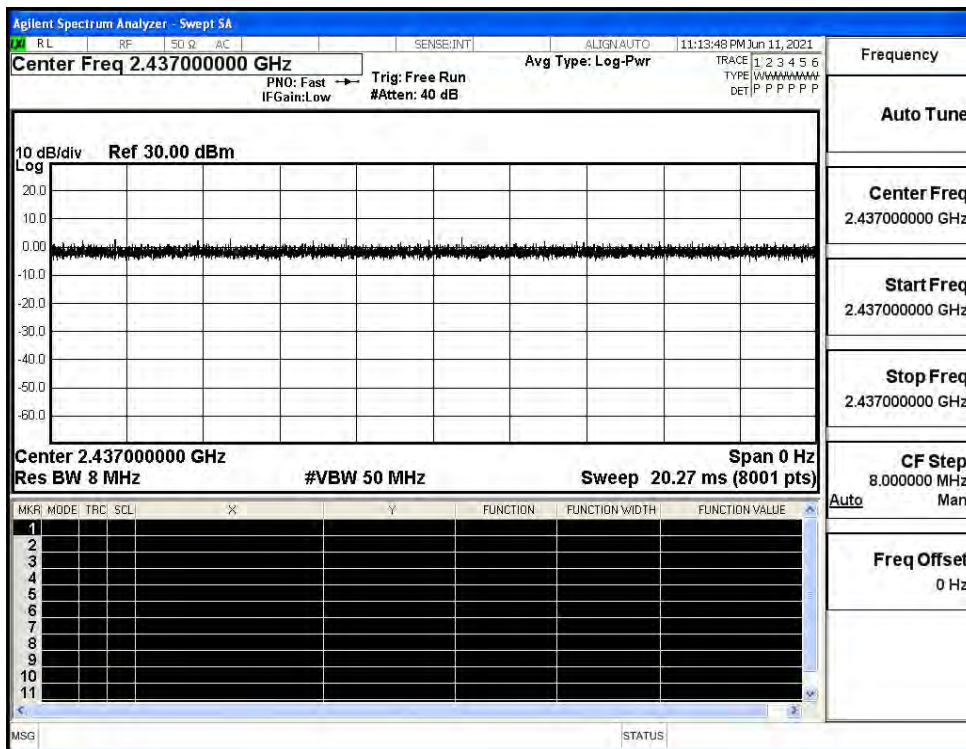
Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



Duty Cycle_11N40SISO_2437_Ant1



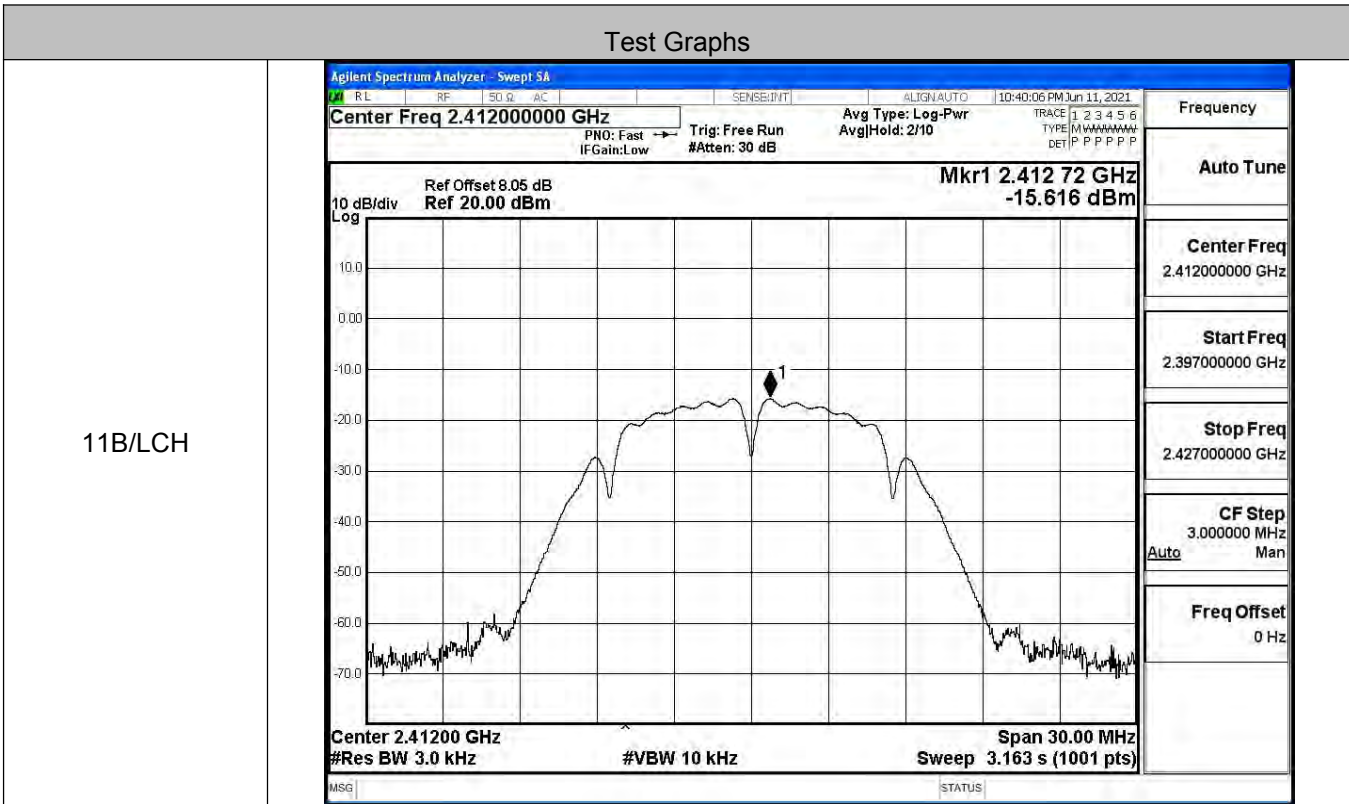
C.2 Maximum Conducted Output Power

Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	15.46	30	PASS
	MCH	15.23	30	PASS
	HCH	14.70	30	PASS
11G	LCH	14.21	30	PASS
	MCH	14.92	30	PASS
	HCH	14.56	30	PASS
11N20SISO	LCH	14.40	30	PASS
	MCH	15.09	30	PASS
	HCH	14.44	30	PASS
11N40SISO	LCH	13.82	30	PASS
	MCH	13.40	30	PASS
	HCH	13.39	30	PASS

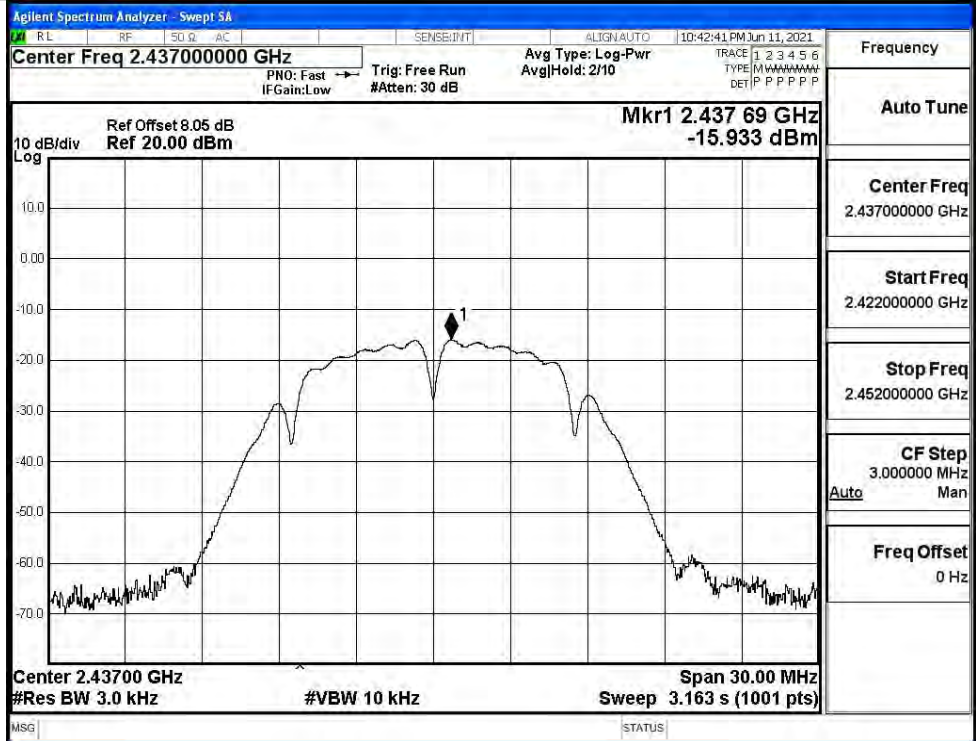
C.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-15.616	8	PASS
	MCH	-15.933	8	PASS
	HCH	-16.499	8	PASS
11G	LCH	-22.153	8	PASS
	MCH	-20.999	8	PASS
	HCH	-20.449	8	PASS
11N20SISO	LCH	-21.860	8	PASS
	MCH	-19.837	8	PASS
	HCH	-20.995	8	PASS
11N40SISO	LCH	-23.098	8	PASS
	MCH	-24.736	8	PASS
	HCH	-23.895	8	PASS

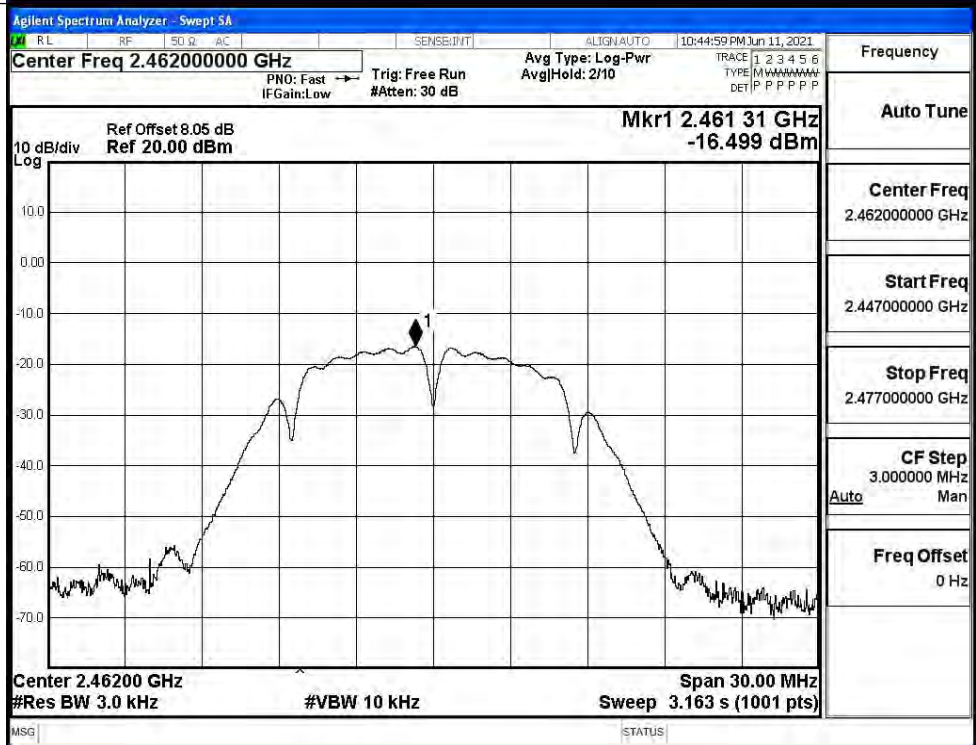
Test Graphs



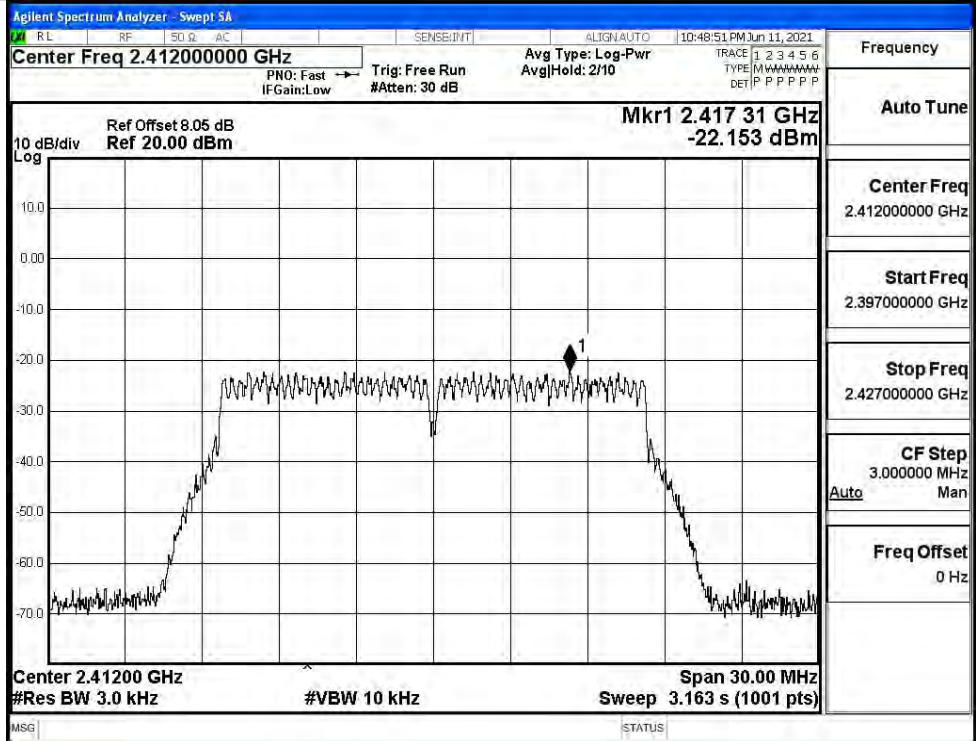
11B/MCH



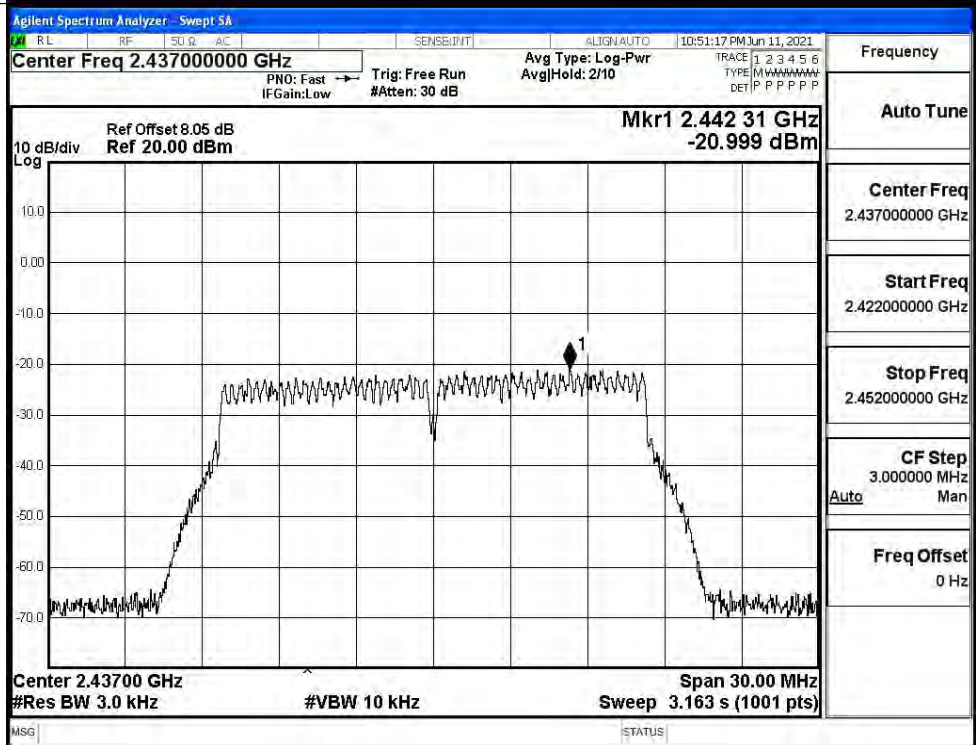
11B/HCH



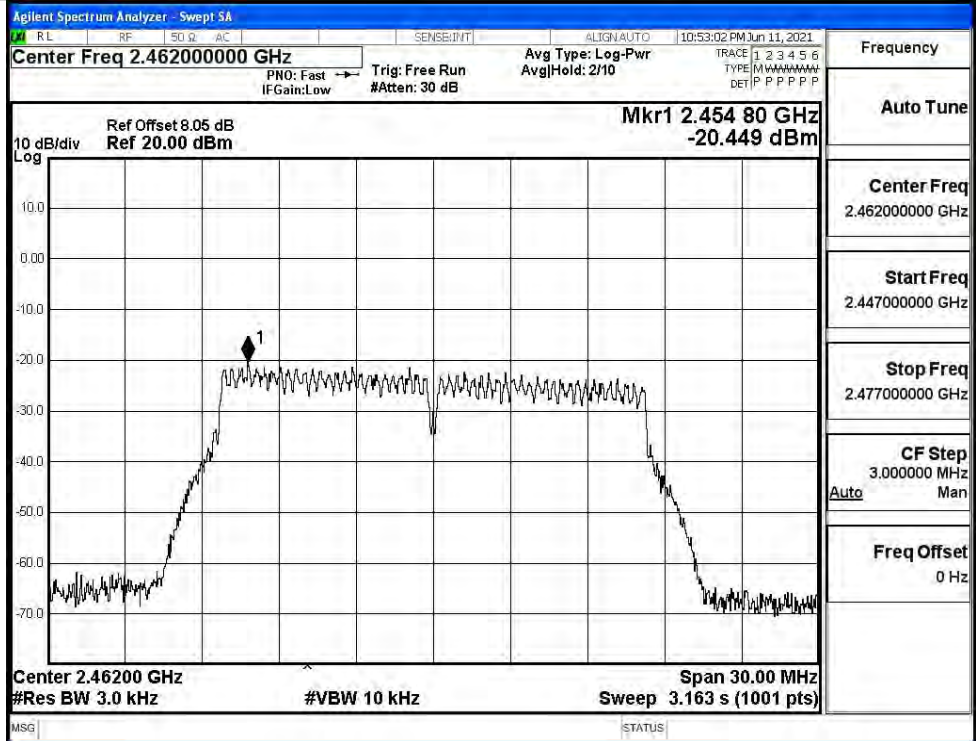
11G/LCH



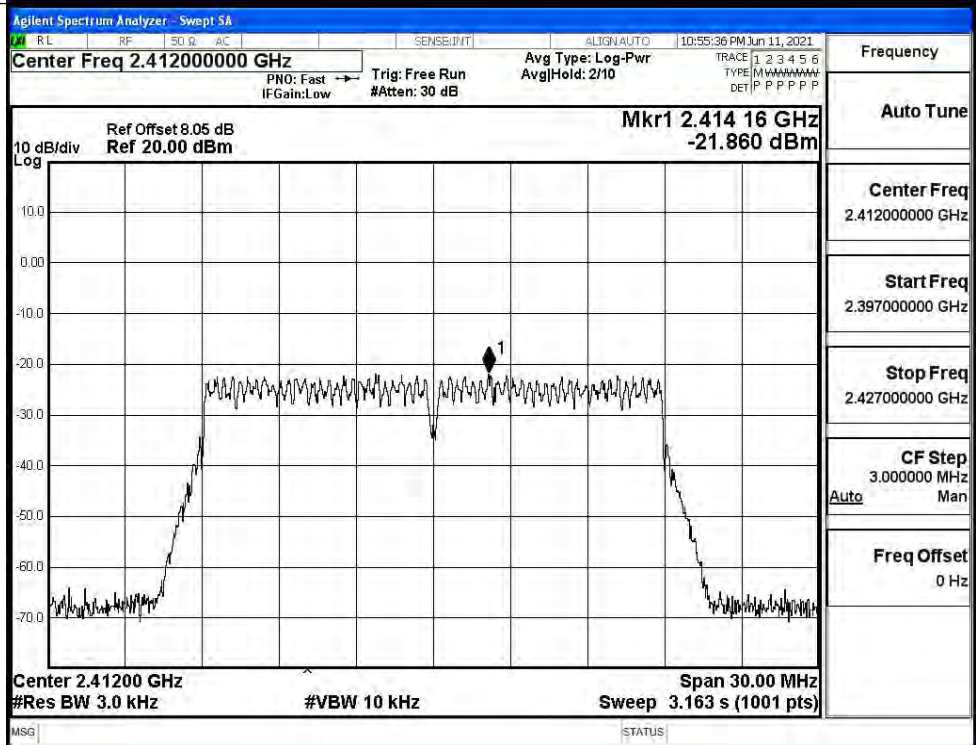
11G/MCH



11G/HCH

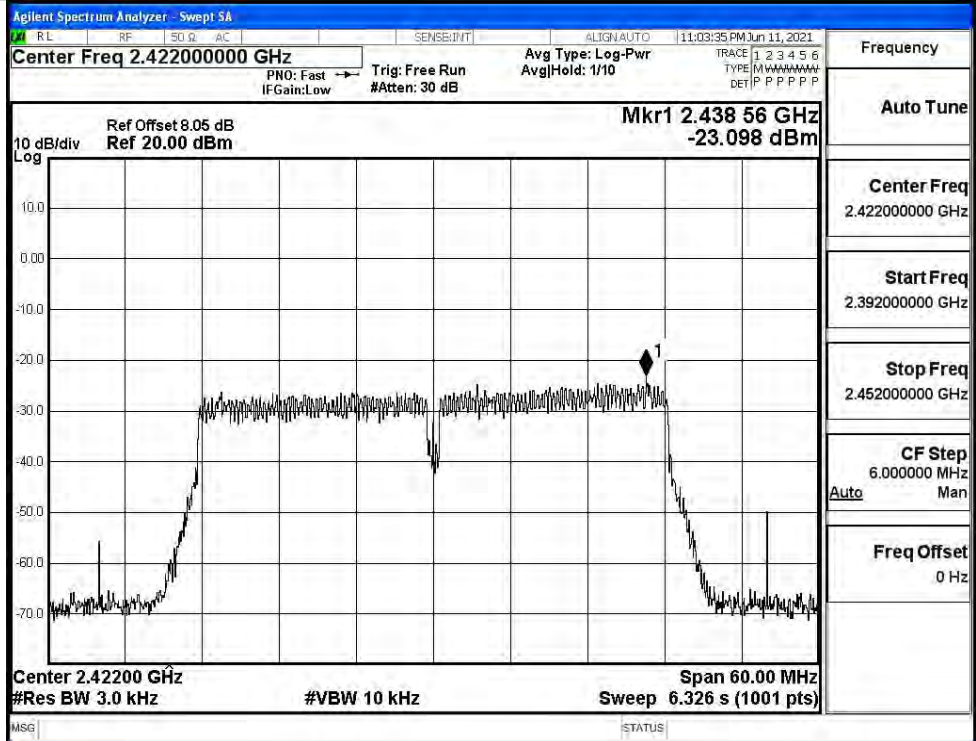


11N20SISO/LCH

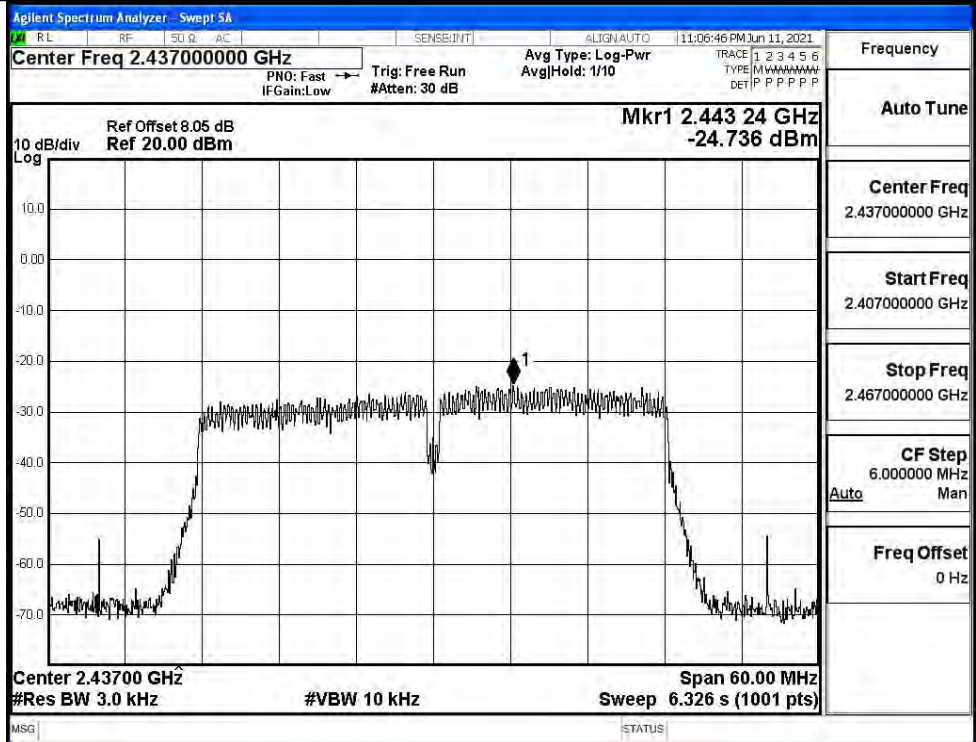


<p>11N20SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.43700000 GHz</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Mkr1 2.44357 GHz -19.837 dBm</p> <p>Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.43700000 GHz</p> <p>Start Freq 2.422000000 GHz</p> <p>Stop Freq 2.452000000 GHz</p> <p>CF Step 3.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>11N20SISO/HCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.46200000 GHz</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Mkr1 2.45540 GHz -20.995 dBm</p> <p>Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 30.00 MHz Sweep 3.163 s (1001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.46200000 GHz</p> <p>Start Freq 2.447000000 GHz</p> <p>Stop Freq 2.477000000 GHz</p> <p>CF Step 3.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>

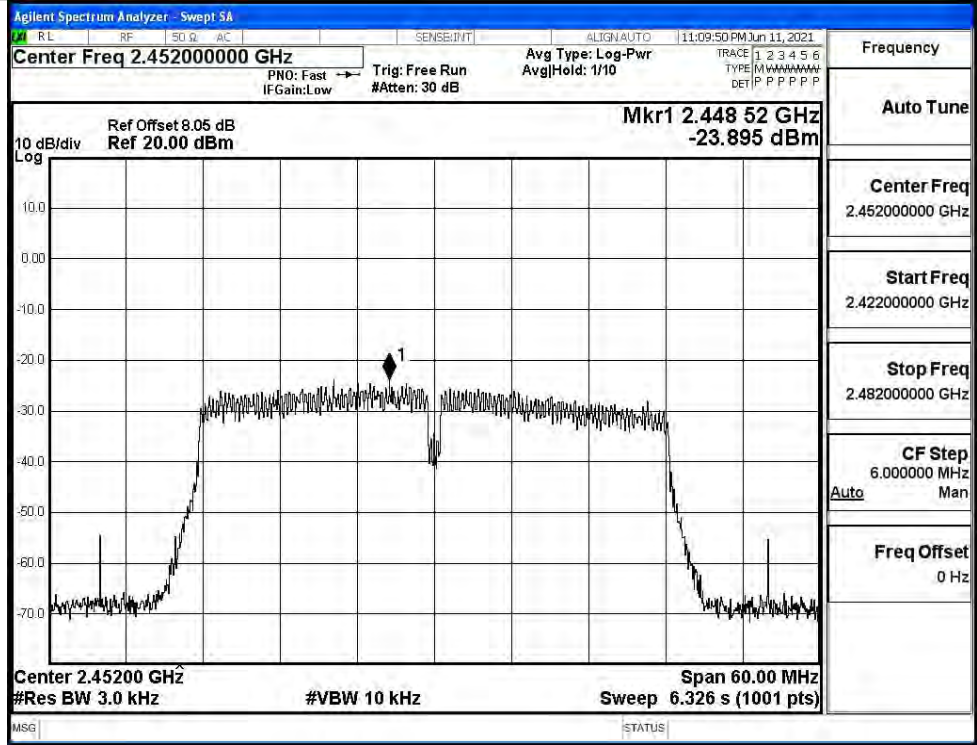
11N40SISO/LCH



11N40SISO/MCH



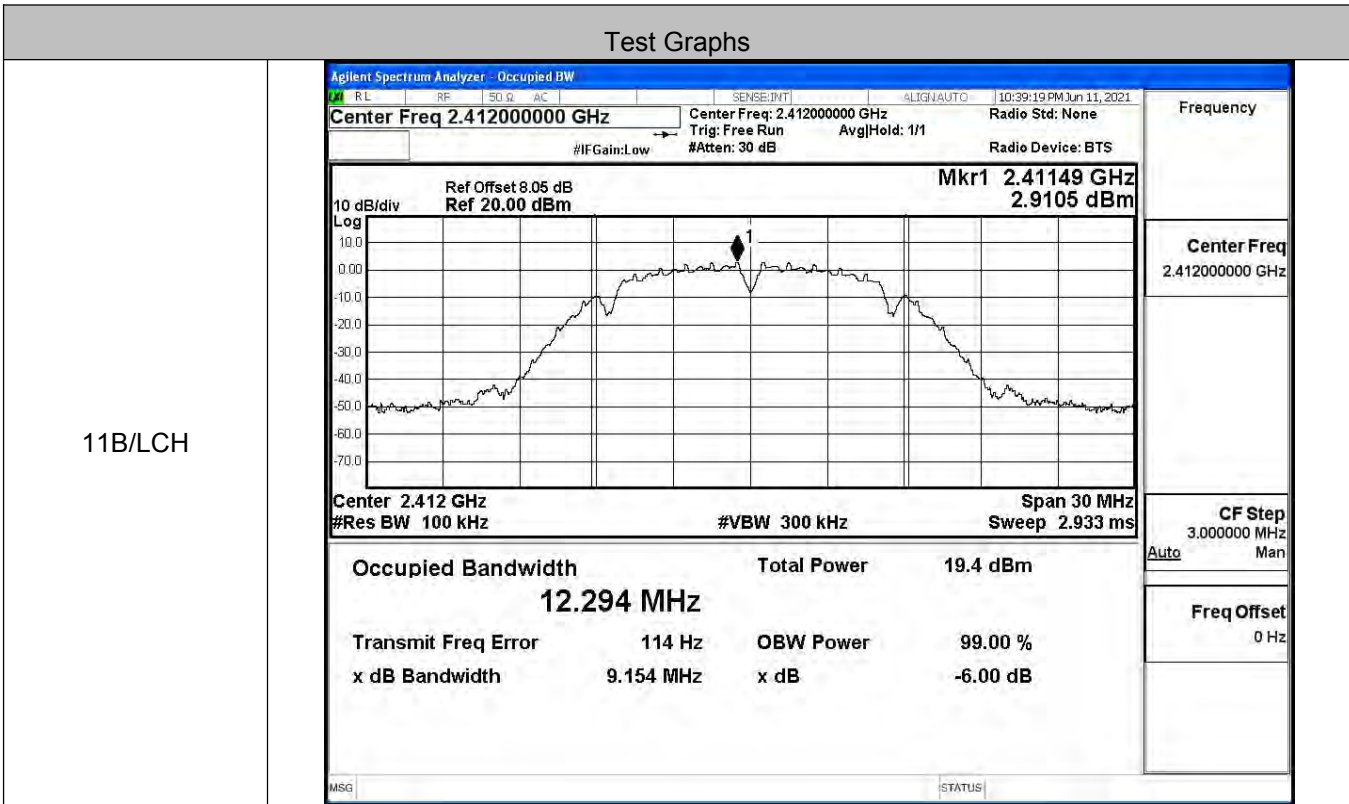
11N40SISO/HCH



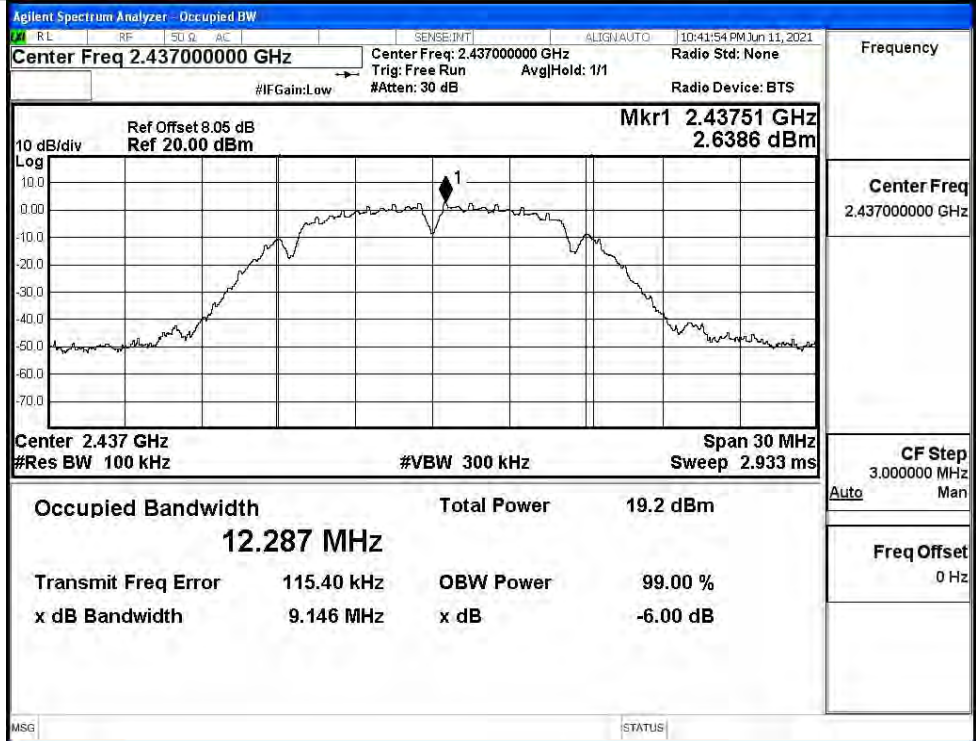
C.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.154	≥0.5	PASS
	MCH	9.146	≥0.5	PASS
	HCH	9.522	≥0.5	PASS
11G	LCH	16.62	≥0.5	PASS
	MCH	16.58	≥0.5	PASS
	HCH	16.54	≥0.5	PASS
11N20SISO	LCH	17.81	≥0.5	PASS
	MCH	17.79	≥0.5	PASS
	HCH	17.75	≥0.5	PASS
11N40SISO	LCH	36.51	≥0.5	PASS
	MCH	36.38	≥0.5	PASS
	HCH	36.01	≥0.5	PASS

Test Graphs



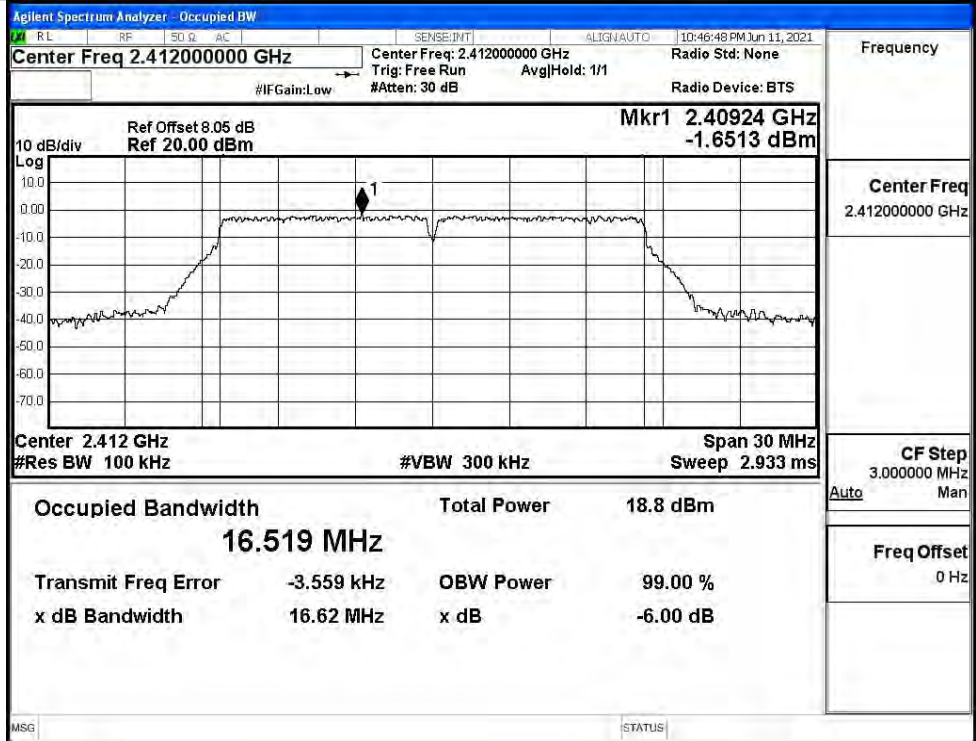
11B/MCH



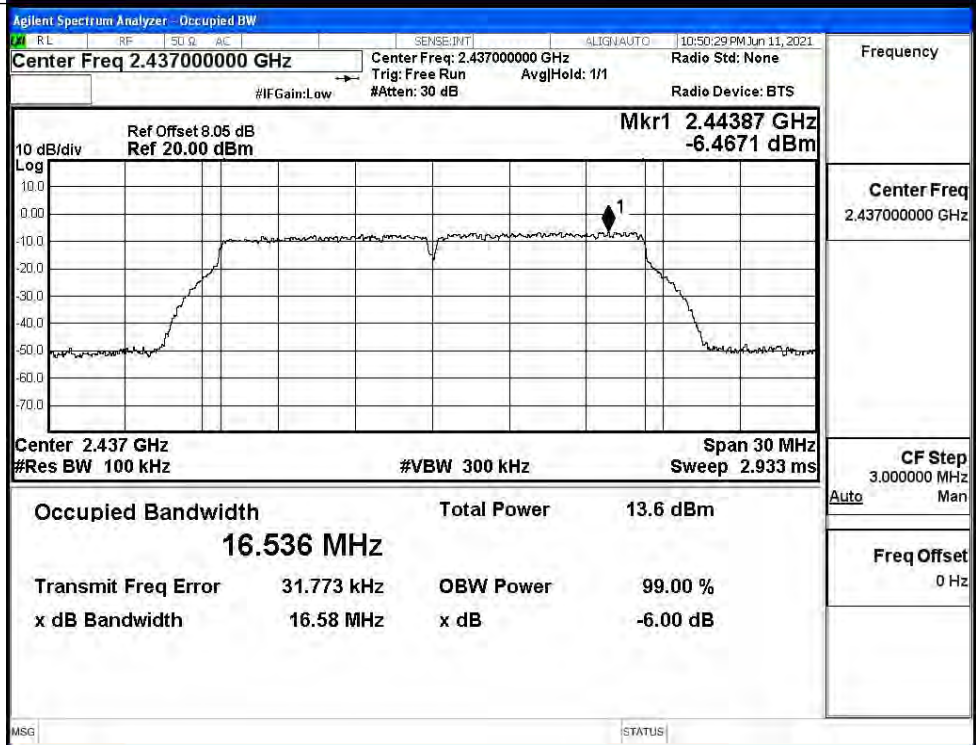
11B/HCH



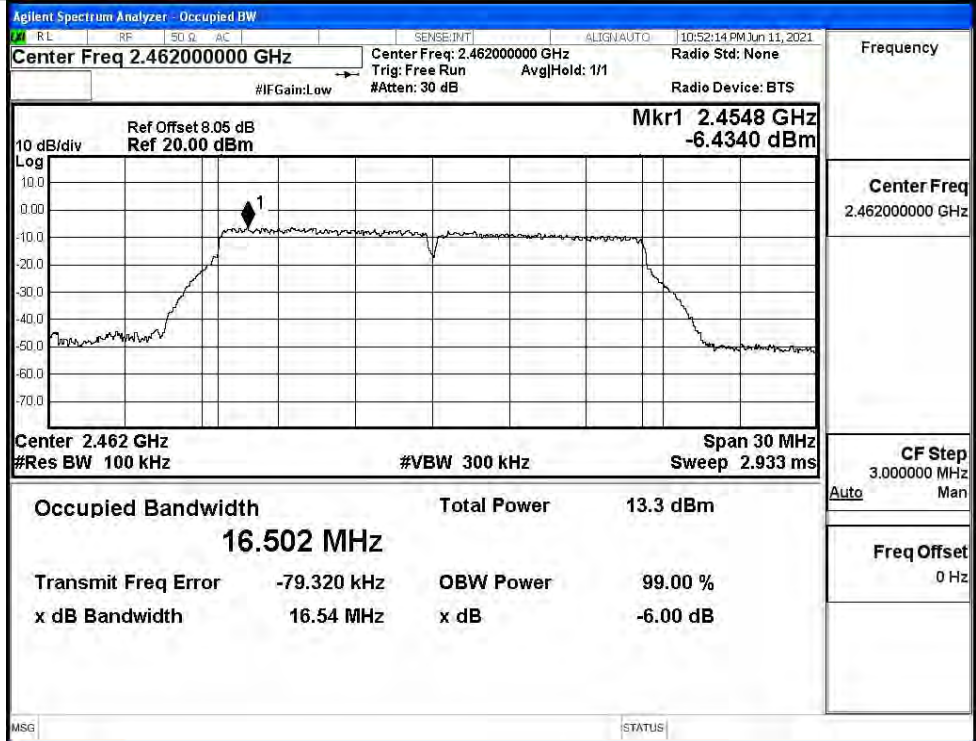
11G/LCH



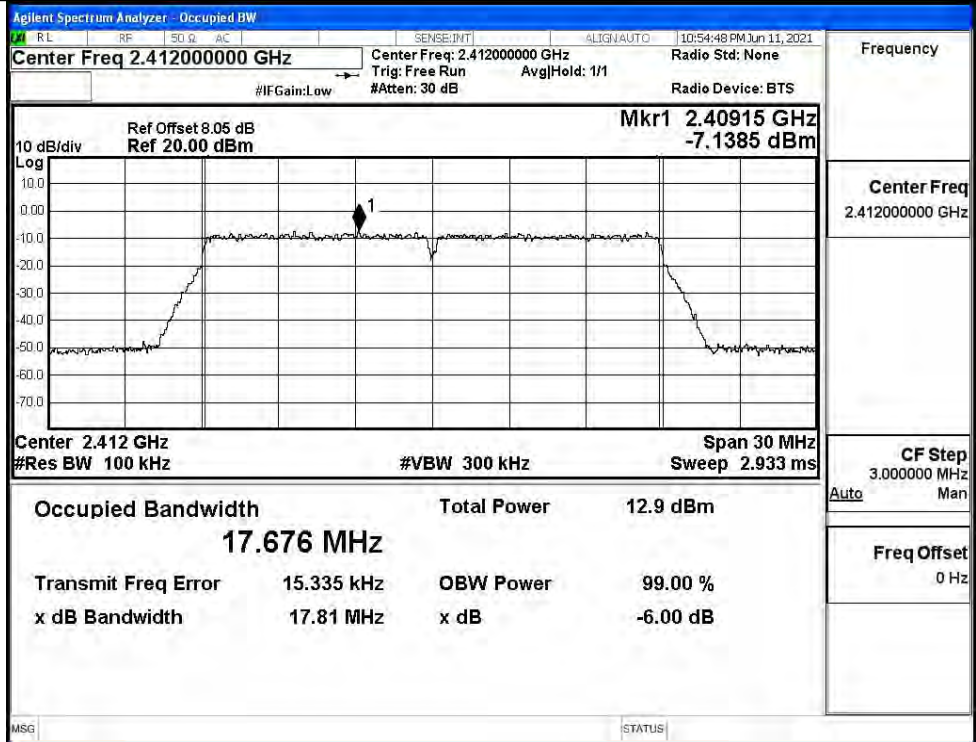
11G/MCH



11G/HCH

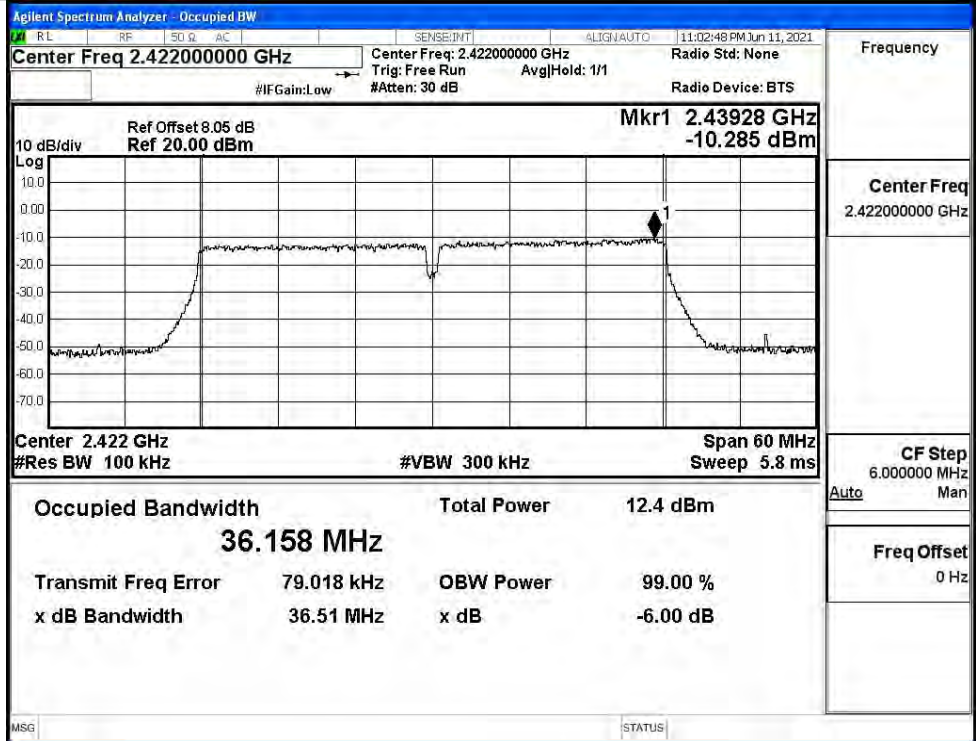


11N20SISO/LCH



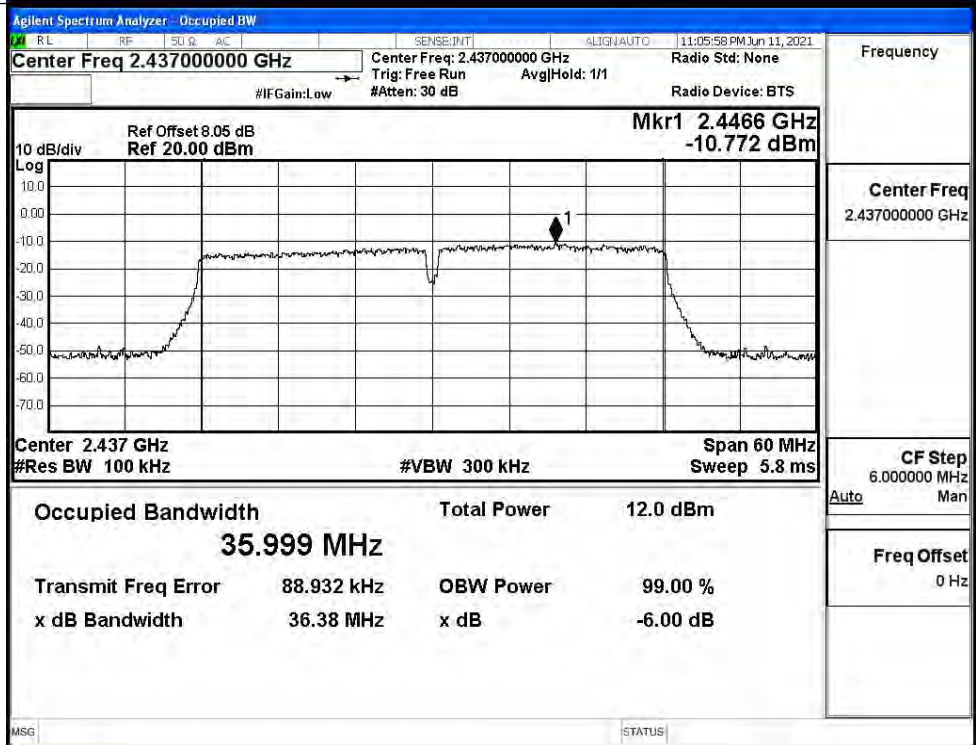
<p>11N20SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Radio Std: None Trig: Free Run Avg Hold: 1/1 #IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <p>10 dB/div Ref Offset 8.05 dB Mkr1 2.44537 GHz Ref 20.00 dBm -6.3113 dBm</p> <p>Center 2.437 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms</p> <p>Occupied Bandwidth Total Power 13.5 dBm 17.669 MHz</p> <p>Transmit Freq Error 48.870 kHz OBW Power 99.00 % x dB Bandwidth 17.79 MHz x dB -6.00 dB</p> <p>MSG STATUS</p>	<p>Frequency</p> <p>Center Freq 2.437000000 GHz</p> <p>CF Step 3.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>11N20SISO/HCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.462000000 GHz Center Freq: 2.462000000 GHz Radio Std: None Trig: Free Run Avg Hold: >1/1 #IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <p>10 dB/div Ref Offset 8.05 dB Mkr1 2.45663 GHz Ref 20.00 dBm -6.5746 dBm</p> <p>Center 2.462 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms</p> <p>Occupied Bandwidth Total Power 12.9 dBm 17.667 MHz</p> <p>Transmit Freq Error -46.990 kHz OBW Power 99.00 % x dB Bandwidth 17.75 MHz x dB -6.00 dB</p> <p>MSG STATUS</p>	<p>Frequency</p> <p>Center Freq 2.462000000 GHz</p> <p>CF Step 3.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>

11N40SISO/LCH



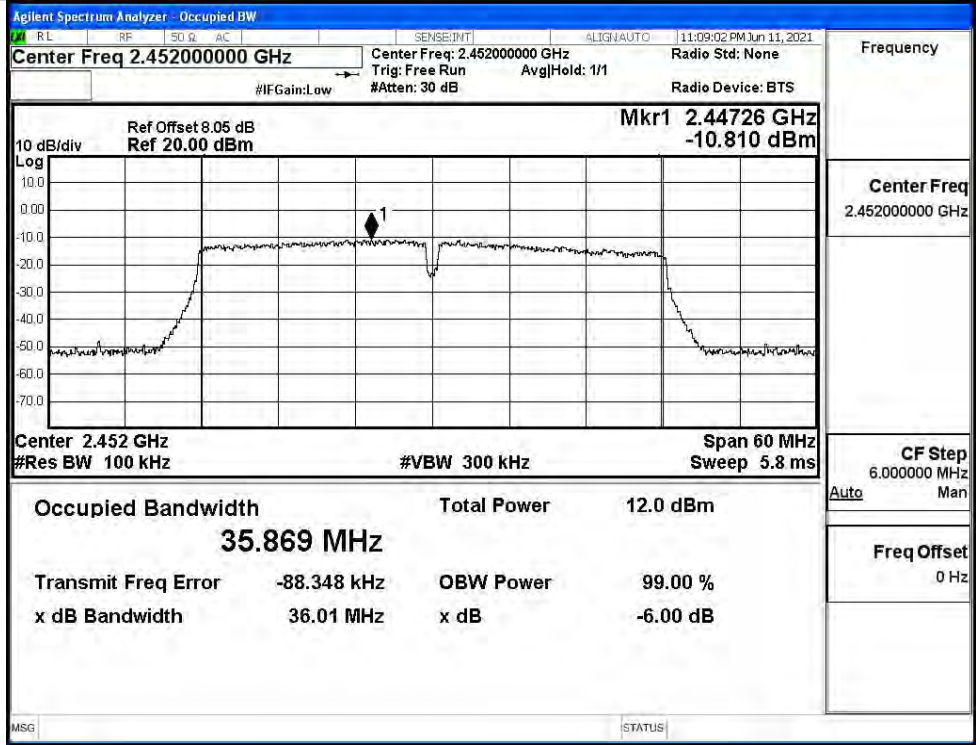
Frequency	2.42200000 GHz
Center Freq	2.42200000 GHz
CF Step	6.000000 MHz
Auto	Man
Freq Offset	0 Hz

11N40SISO/MCH



Frequency	2.43700000 GHz
Center Freq	2.43700000 GHz
CF Step	6.000000 MHz
Auto	Man
Freq Offset	0 Hz

11N40SISO/HCH



C.5 RF Conducted Spurious Emissions

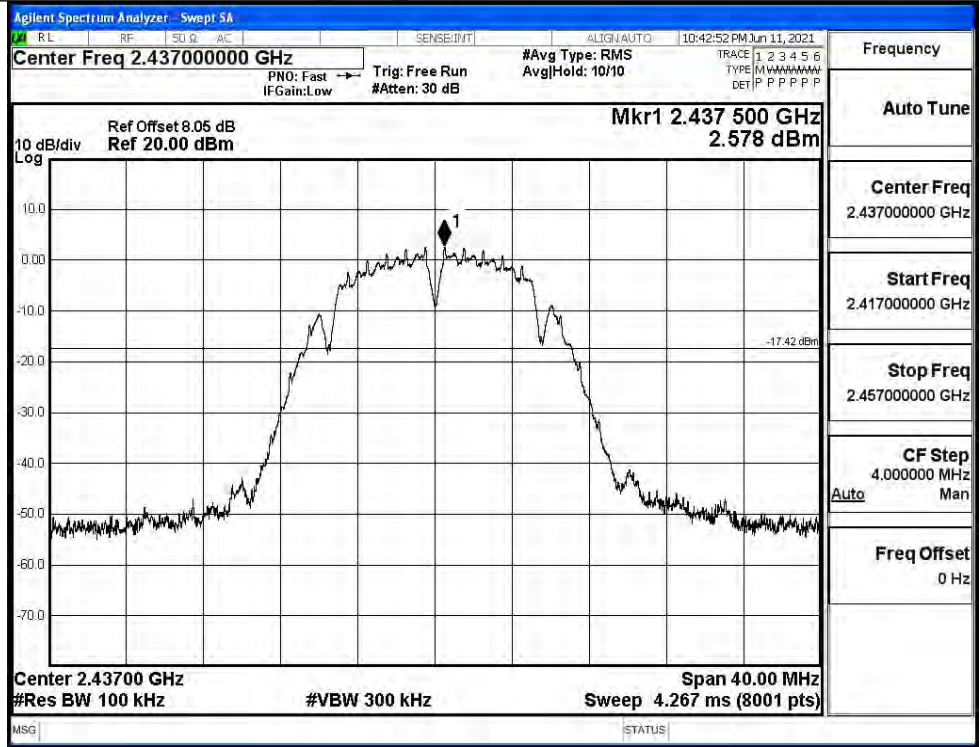
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	2.815	-36.621	-17.185	PASS
	MCH	2.578	-37.884	-17.422	PASS
	HCH	2.037	-37.934	-17.963	PASS
11G	LCH	-7.9	-36.331	-27.900	PASS
	MCH	-6.499	-38.020	-26.499	PASS
	HCH	-6.629	-38.656	-26.629	PASS
11N20 SISO	LCH	-7.548	-37.998	-27.548	PASS
	MCH	-6.198	-38.453	-26.198	PASS
	HCH	-6.521	-37.851	-26.521	PASS
11N40 SISO	LCH	-10.343	-38.155	-30.343	PASS
	MCH	-11.091	-38.192	-31.091	PASS
	HCH	-11.067	-38.278	-31.067	PASS

11B LCH Graphs

<p>Pref/11B/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.41200000 GHz</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Mkr1 2.411 500 GHz 2.815 dBm</p> <p>10 dB/div Log</p> <p>Center 2.41200 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 4.267 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.412000000 GHz</p> <p>Start Freq 2.392000000 GHz</p> <p>Stop Freq 2.432000000 GHz</p> <p>CF Step 4.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>Puw/11B/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 13.01500000 GHz</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Mkr2 24.786 GHz -36.621 dBm</p> <p>10 dB/div Log</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.482 s (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 13.015000000 GHz</p> <p>Start Freq 30.0000000 MHz</p> <p>Stop Freq 26.000000000 GHz</p> <p>CF Step 2.597000000 GHz Auto Man</p> <p>Freq Offset 0 Hz</p>

11B MCH Graphs

Pref/11B/MCH

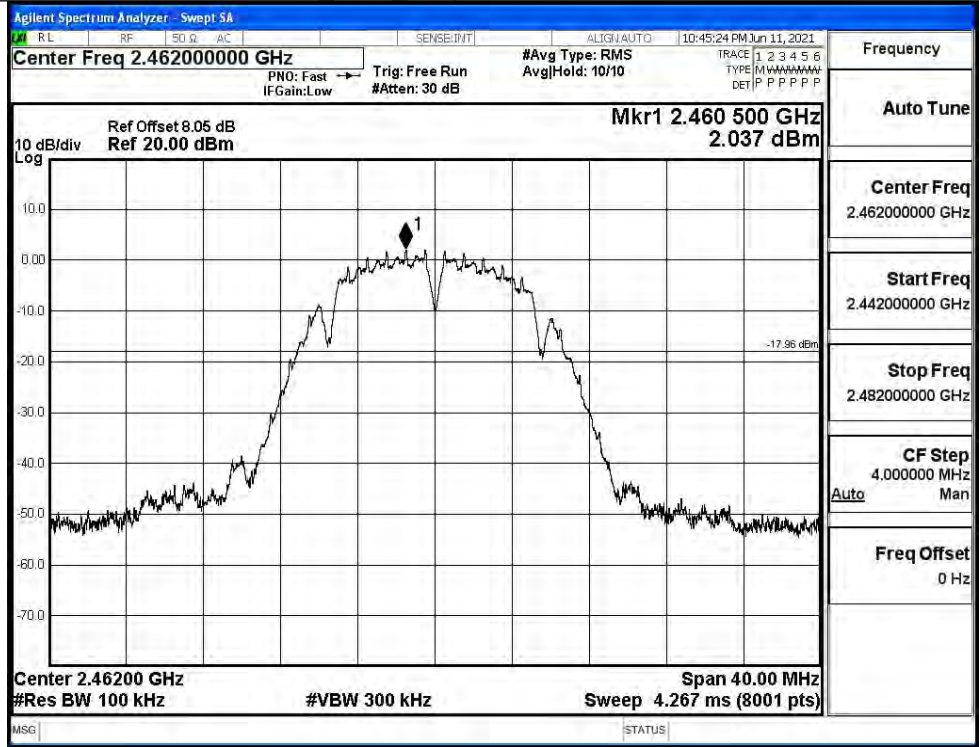


Puw/11B/MCH

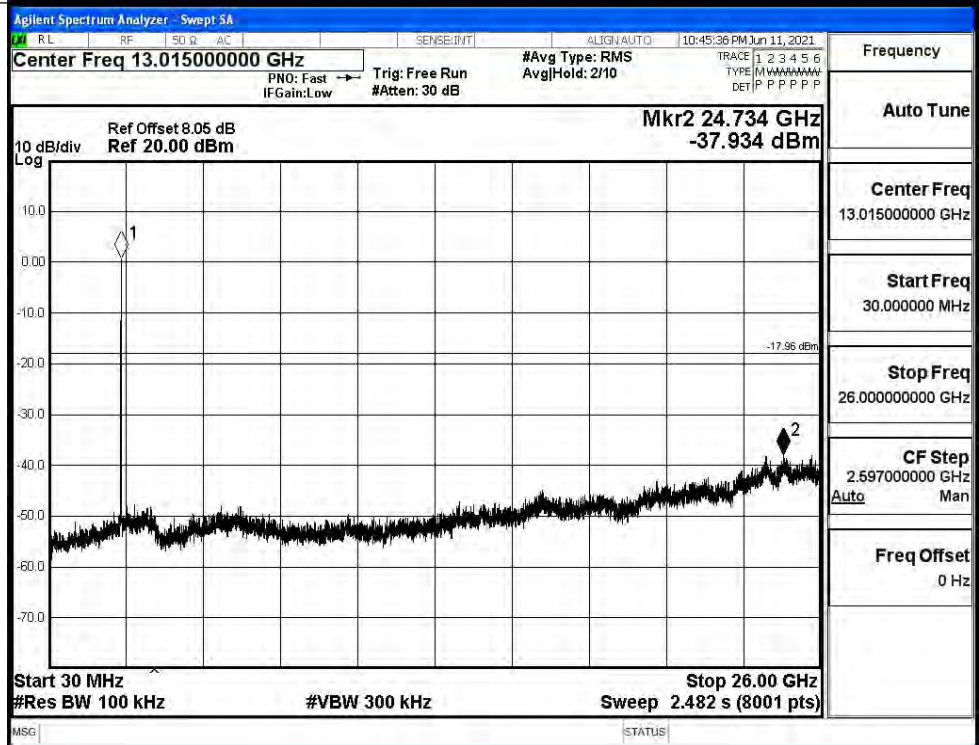


11B HCH Graphs

Pref/11B/HCH



Puw/11B/HCH

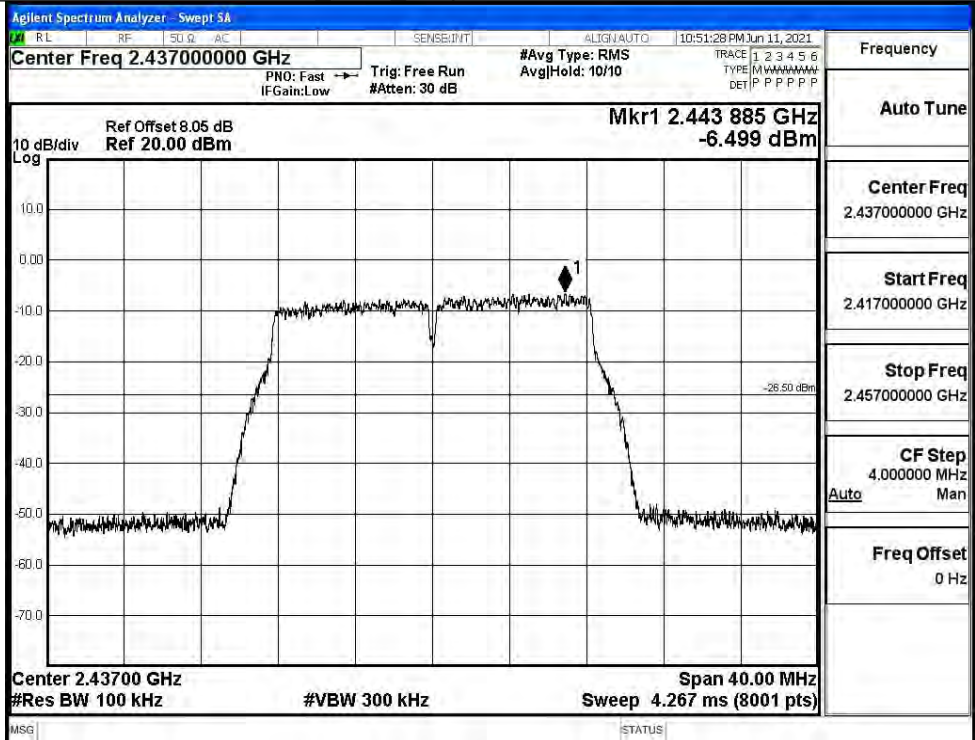


11G LCH Graphs

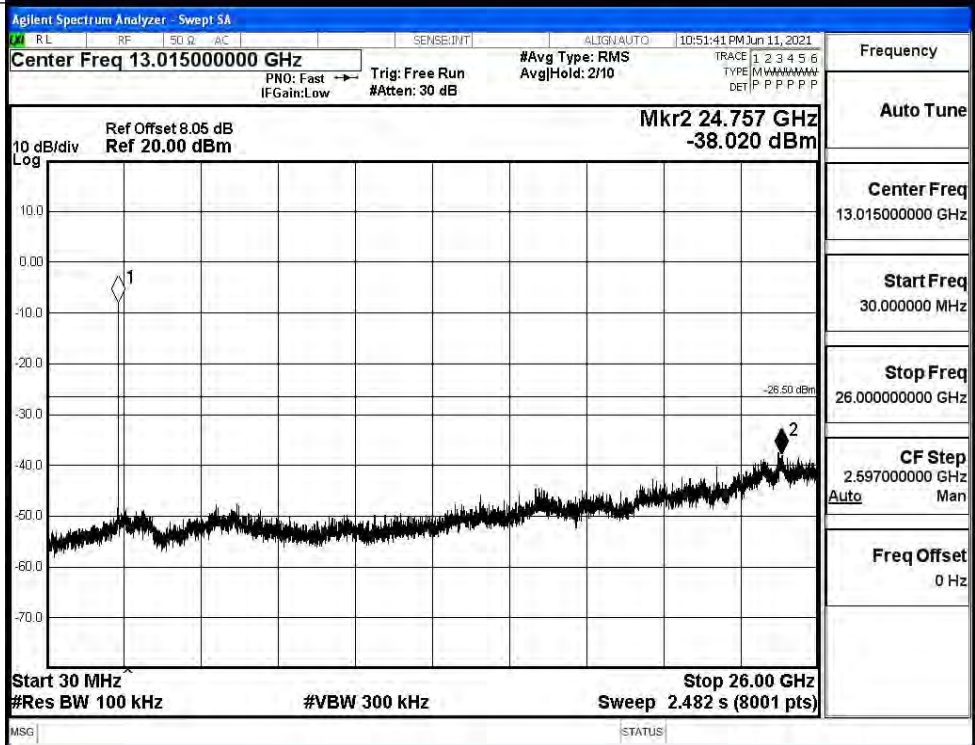
<p>Pref/11G/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.41200000 GHz</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Mkr1 2.405 390 GHz -7.900 dBm</p> <p>Center 2.41200 GHz #Res BW 100 kHz #VBW 300 kHz Span 40.00 MHz Sweep 4.267 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.412000000 GHz</p> <p>Start Freq 2.392000000 GHz</p> <p>Stop Freq 2.432000000 GHz</p> <p>CF Step 4.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>Puw/11G/LCH</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 13.01500000 GHz</p> <p>Ref Offset 8.05 dB Ref 20.00 dBm</p> <p>Mkr2 24.796 GHz -36.331 dBm</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 26.00 GHz Sweep 2.482 s (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 13.015000000 GHz</p> <p>Start Freq 30.0000000 MHz</p> <p>Stop Freq 26.000000000 GHz</p> <p>CF Step 2.597000000 GHz Auto Man</p> <p>Freq Offset 0 Hz</p>

11G MCH Graphs

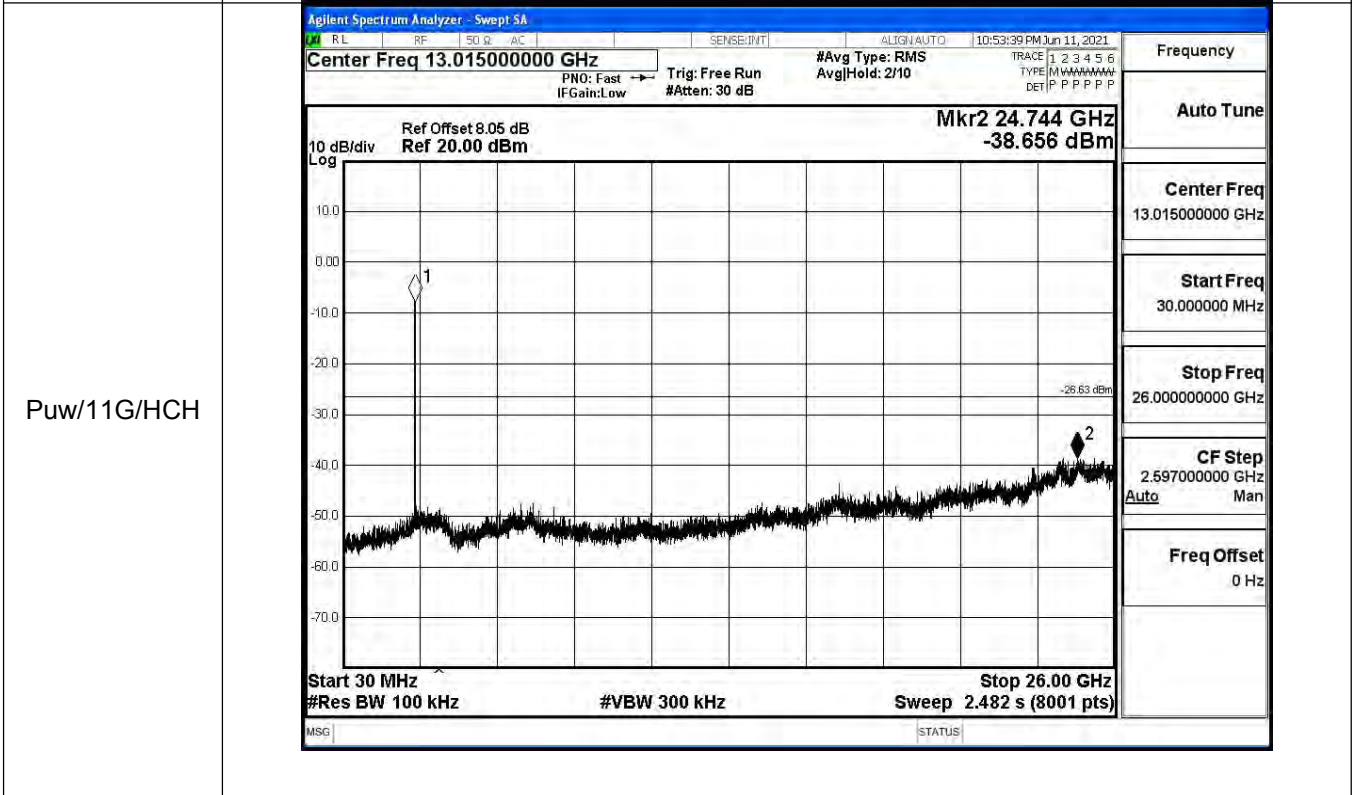
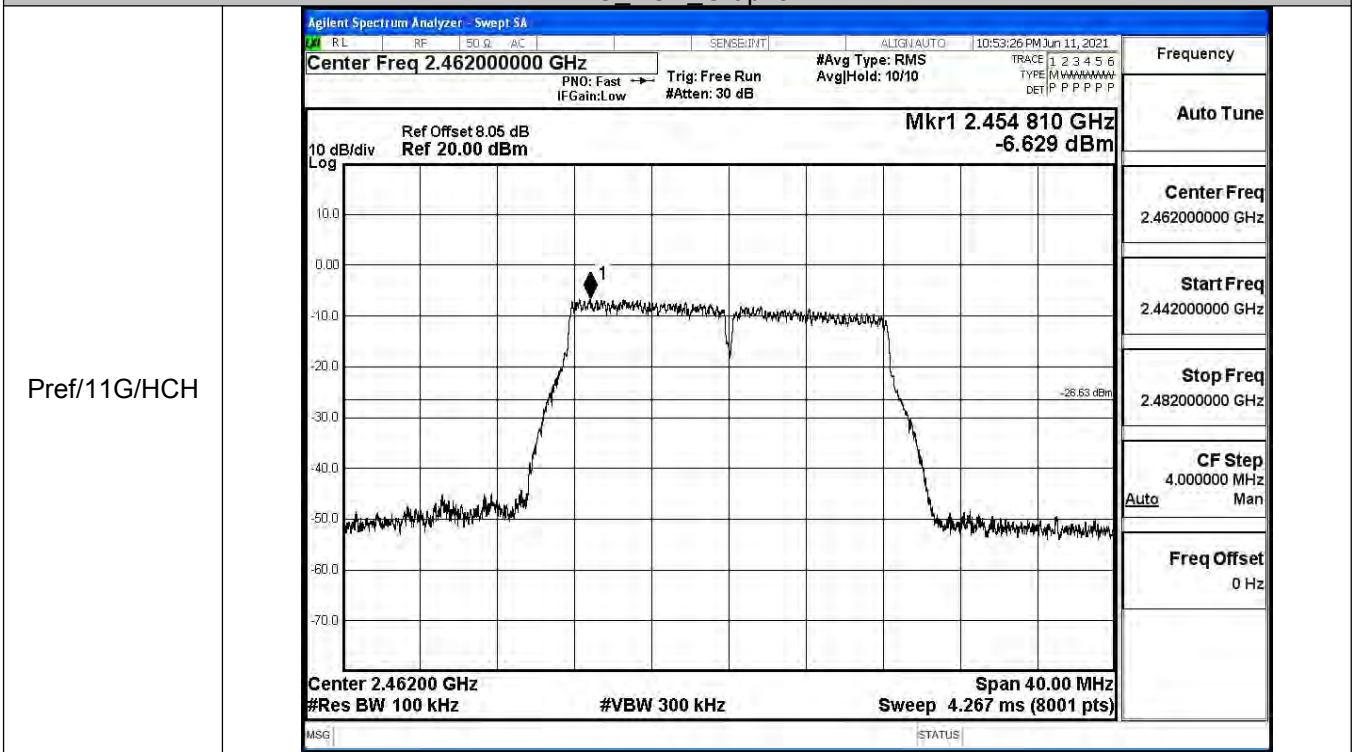
Pref/11G/MCH



Puw/11G/MCH

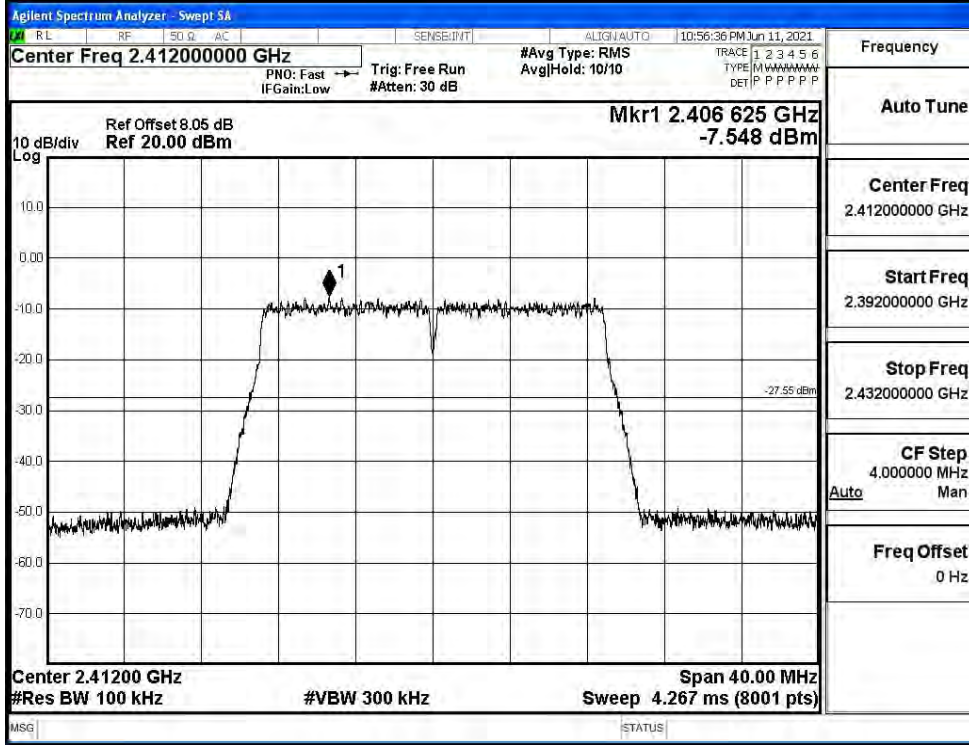


11G HCH Graphs

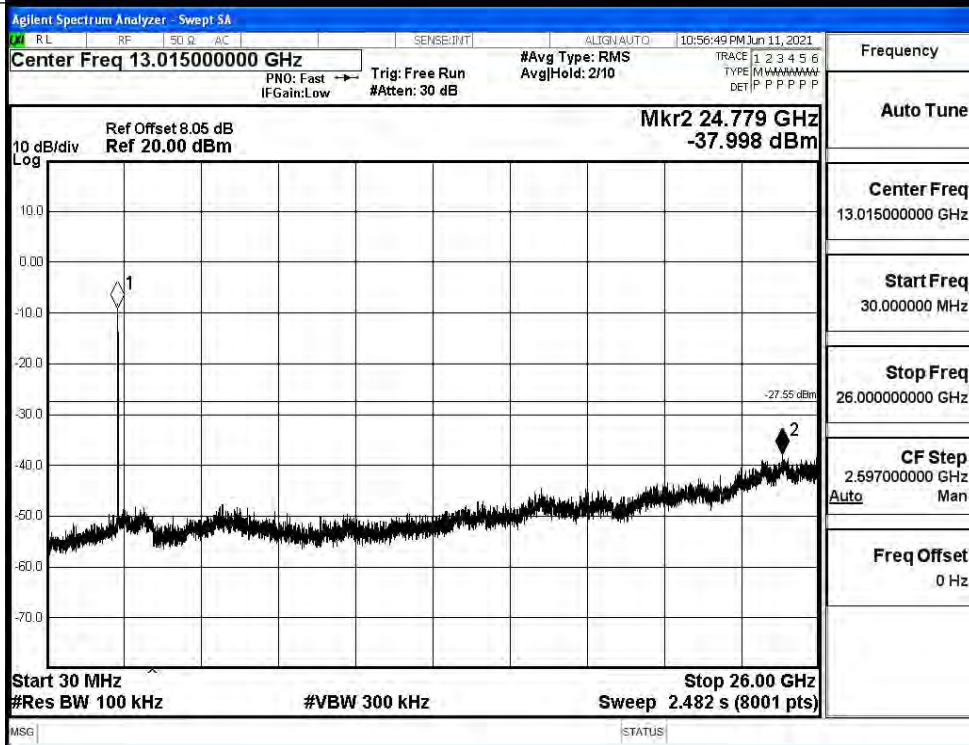


11N20SISO LCH Graphs

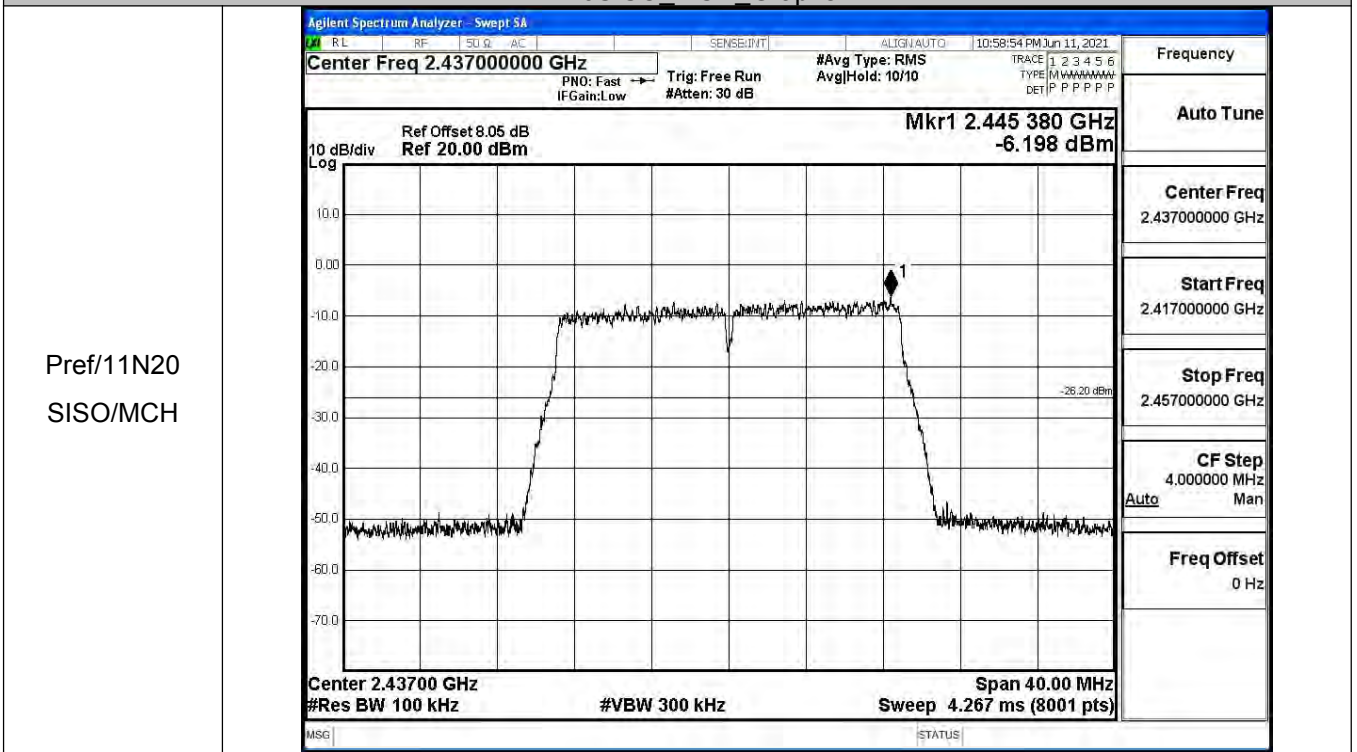
Pref/11N20SISO
O/LCH



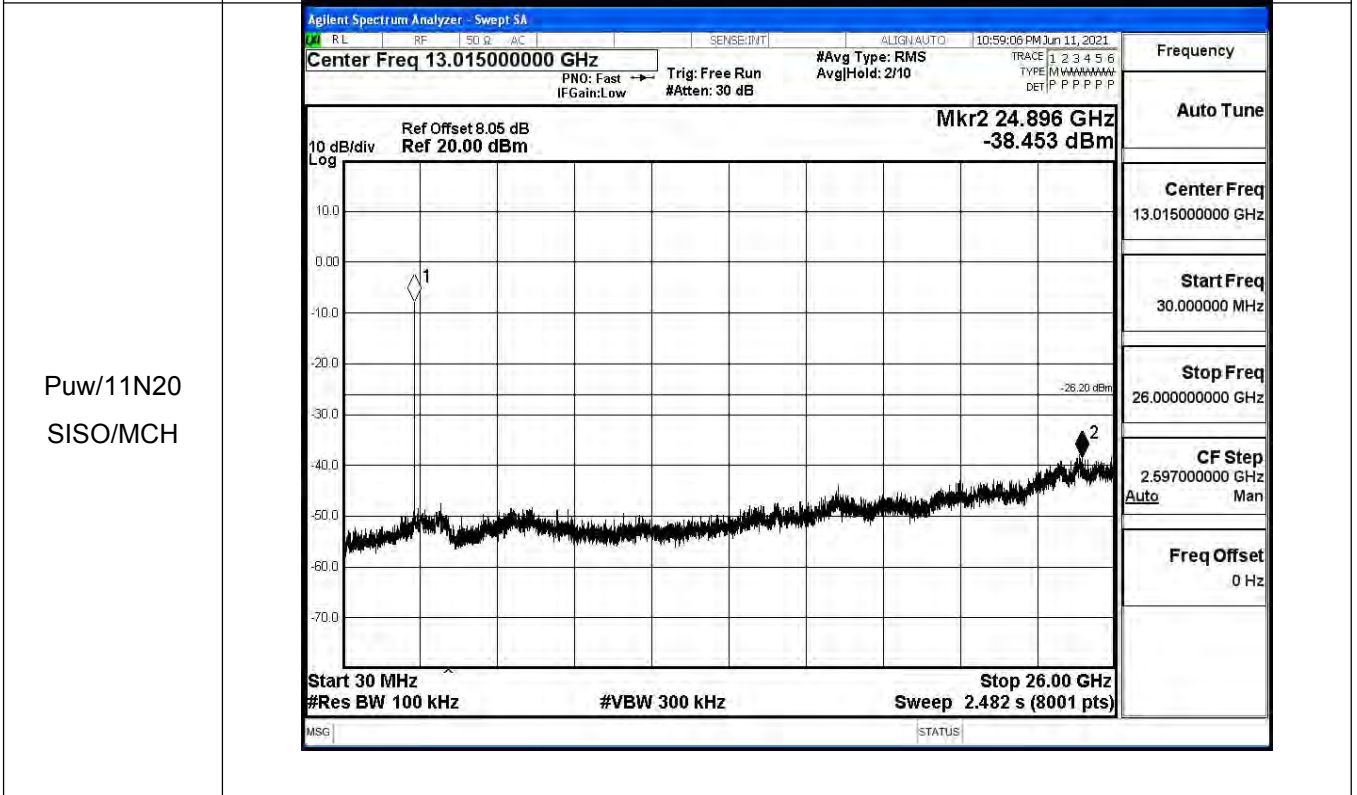
Puw/11N20
SISO/LCH



11N20SISO MCH Graphs



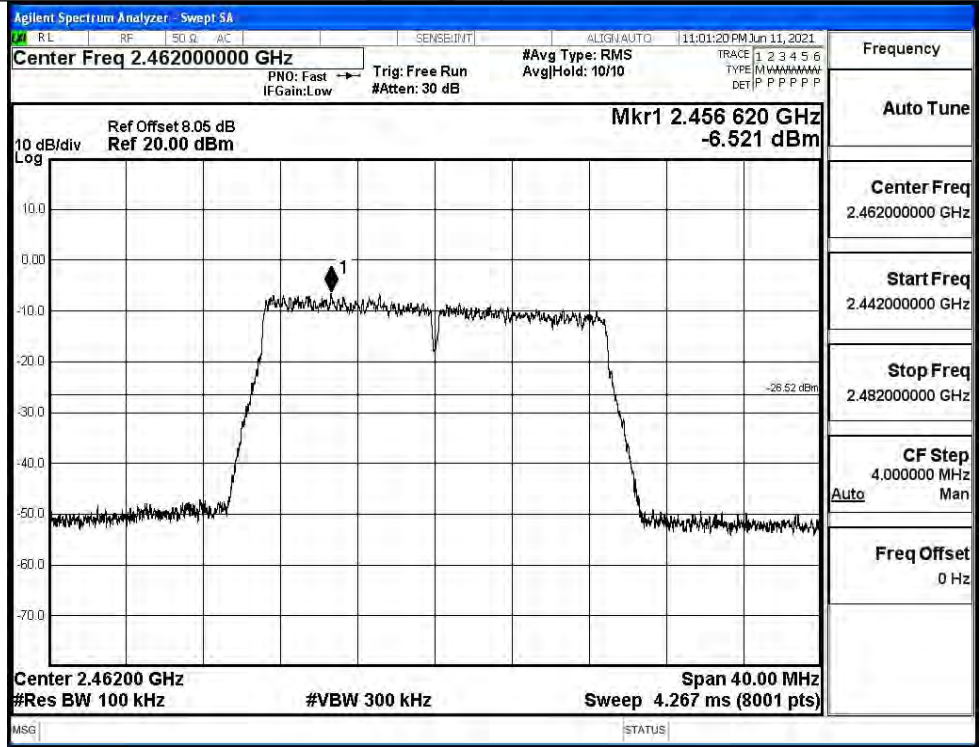
Pref/11N20
SISO/MCH



Puw/11N20
SISO/MCH

11N20SISO HCH Graphs

Pref/11N20
SISO/HCH

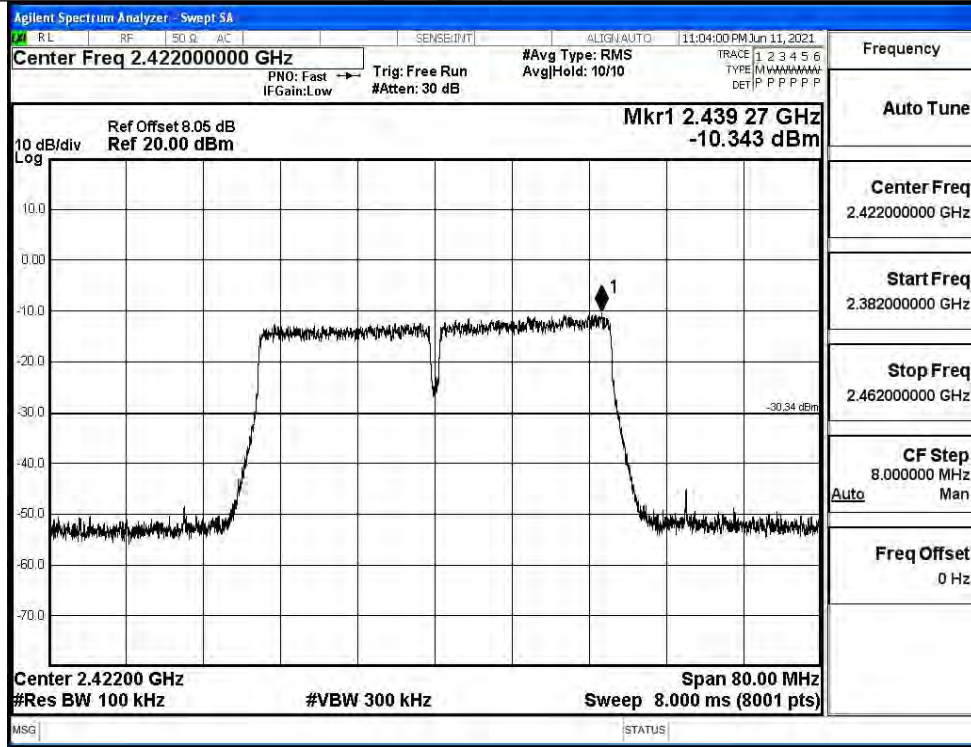


Puw/11N20
SISO/HCH

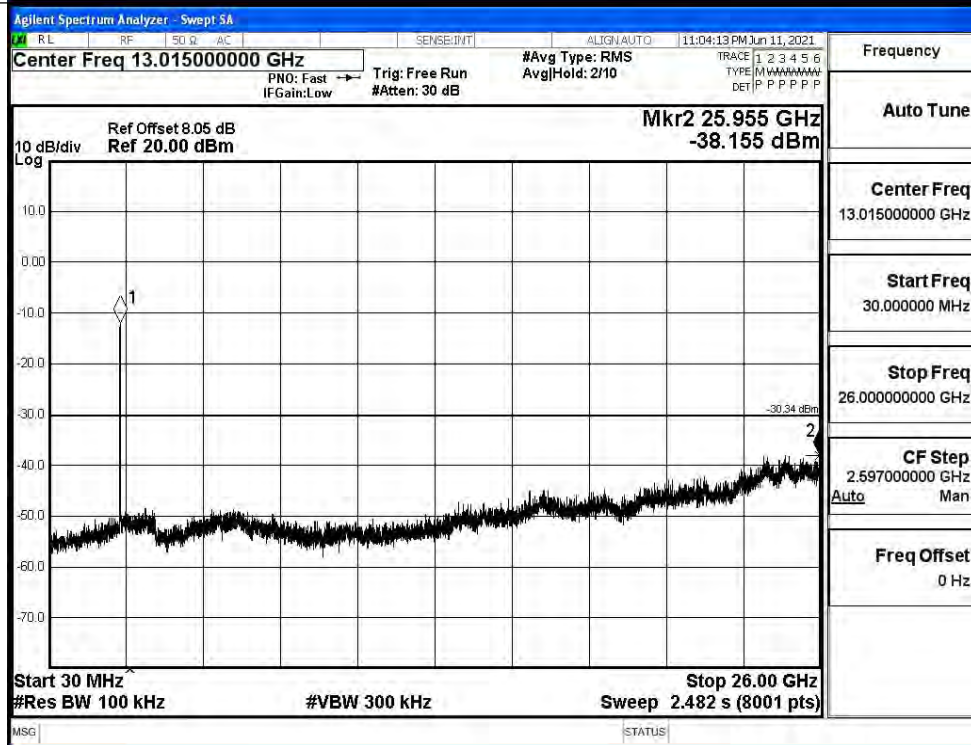


11N40SISO LCH Graphs

Pref/11N40
SISO/LCH

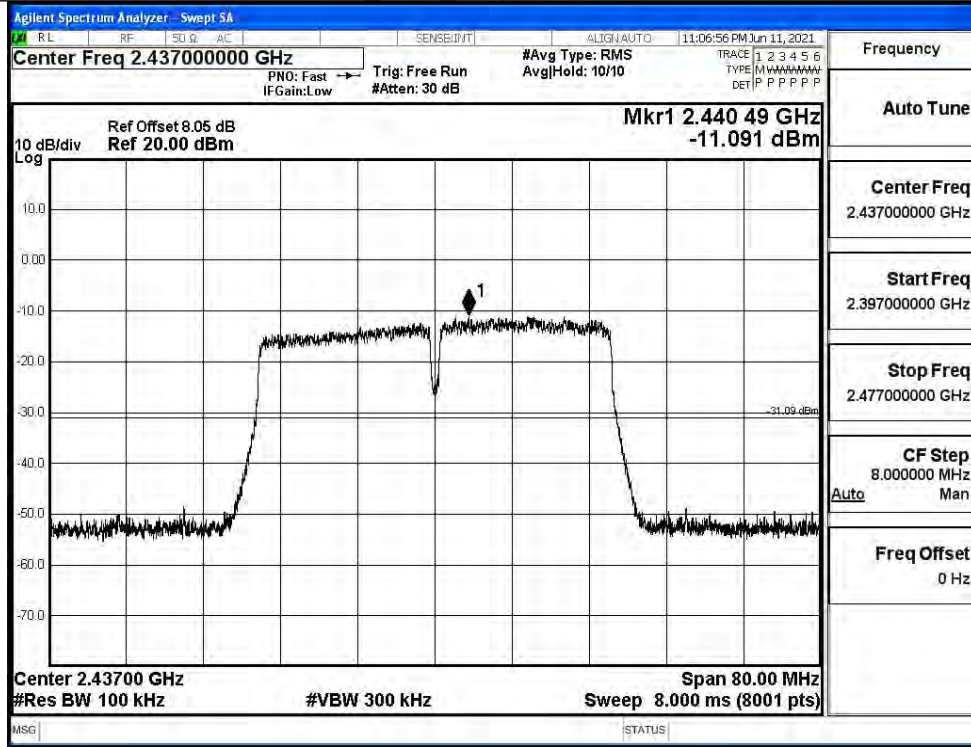


Puw/11N40
SISO/LCH

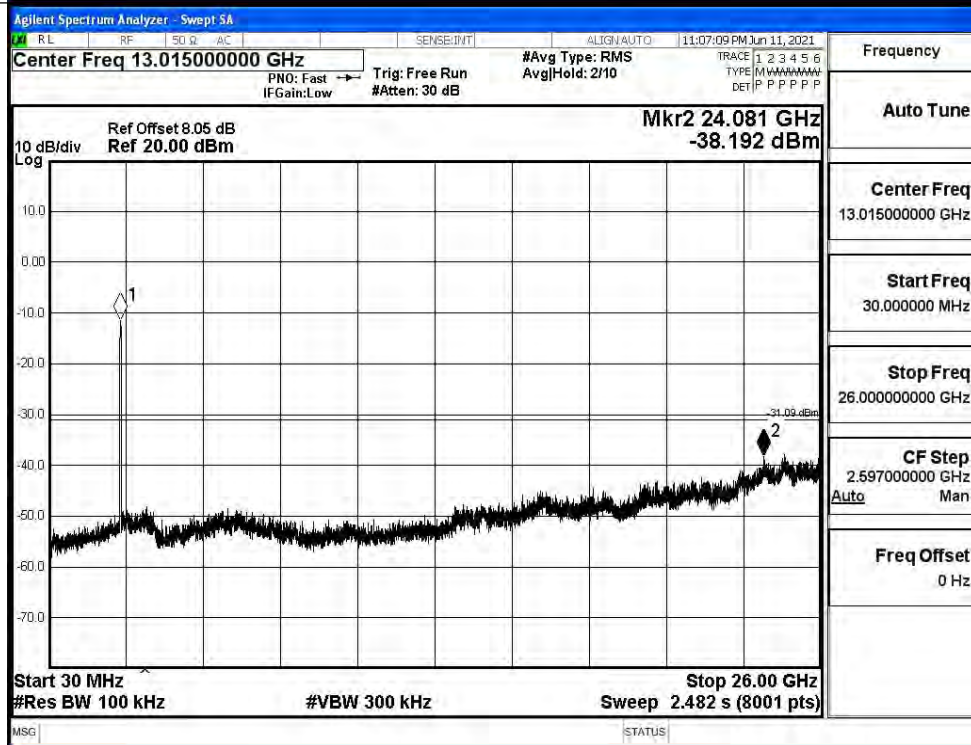


11N40SISO MCH Graphs

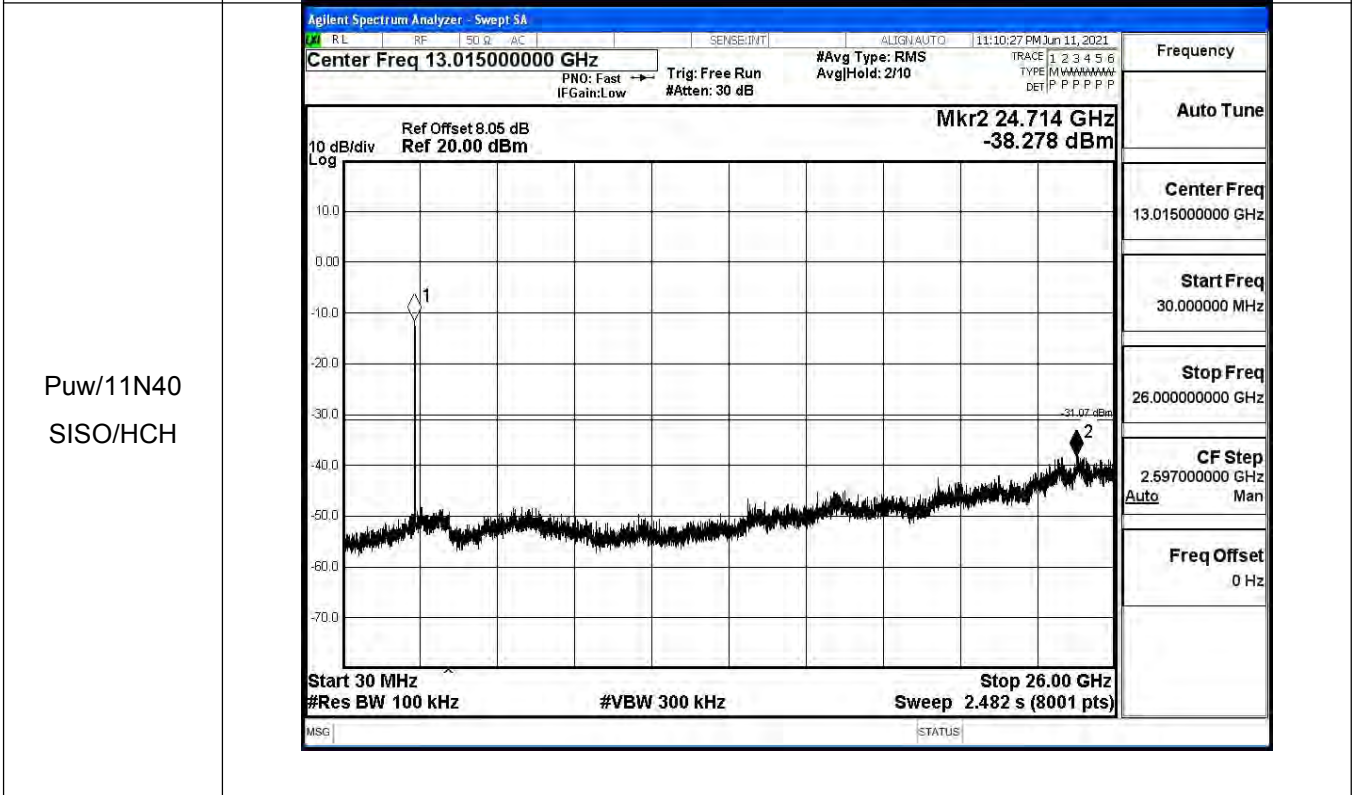
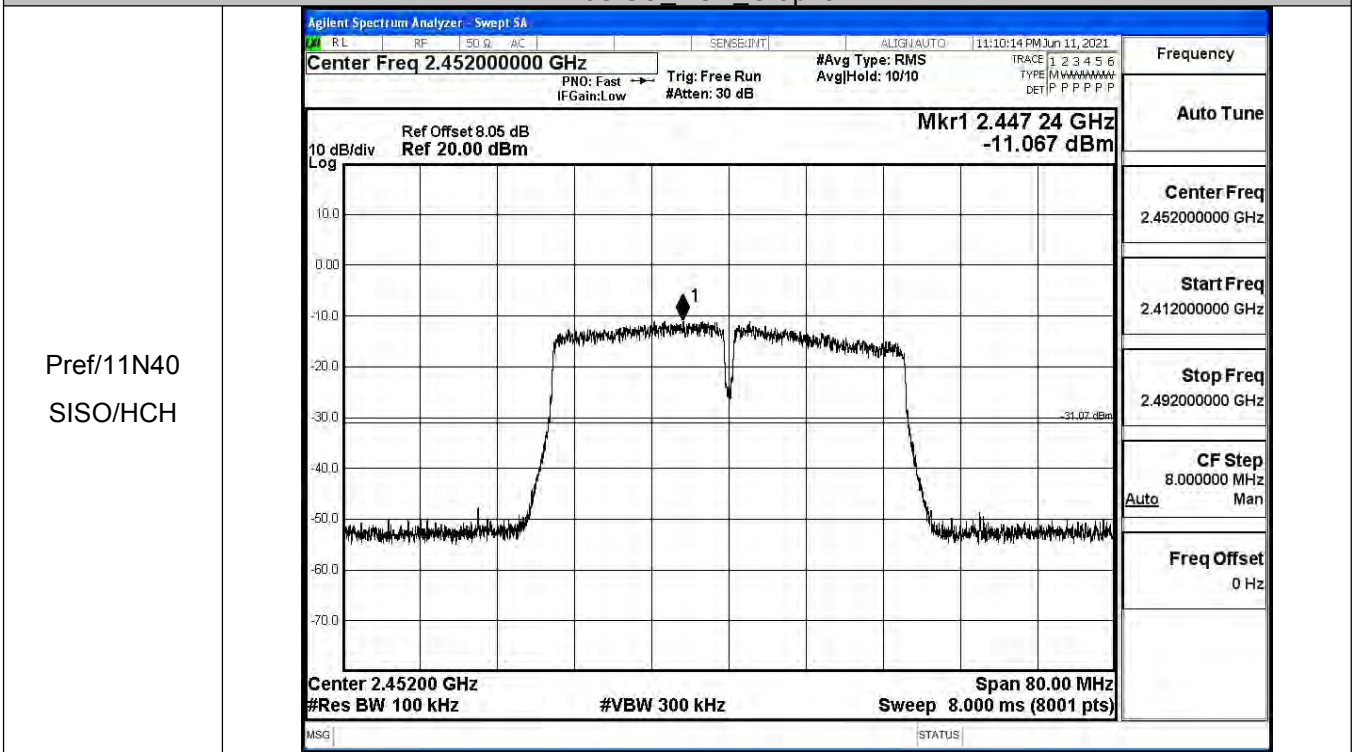
Pref/11N40
SISO/MCH



Puw/11N40
SISO/MCH

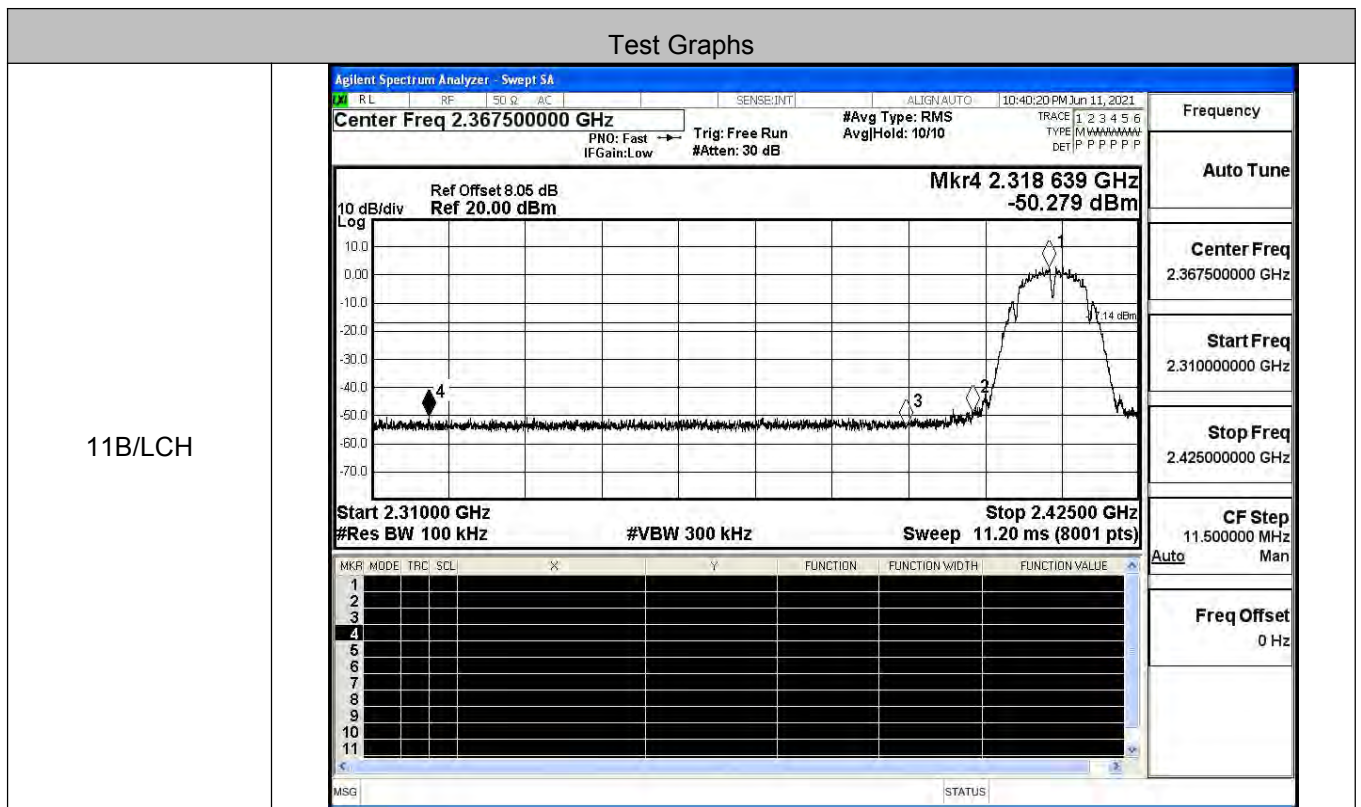


11N40SISO HCH Graphs

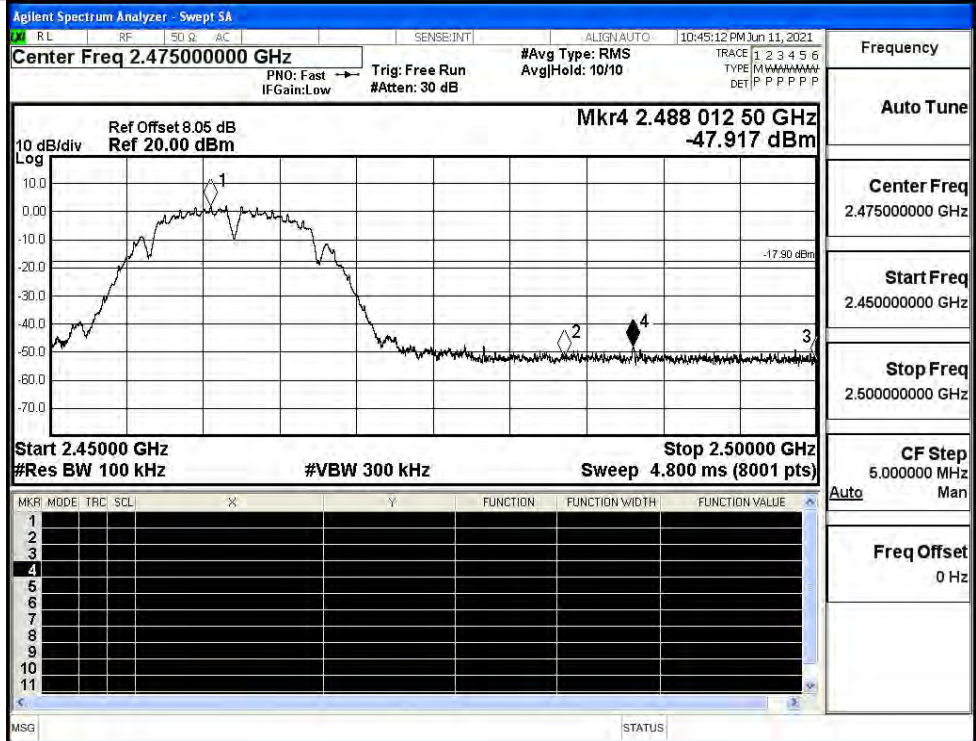


C.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	2.858	-50.279	-17.14	PASS
	HCH	2.105	-47.917	-17.9	PASS
11G	LCH	-7.968	-50.393	-27.97	PASS
	HCH	-6.642	-46.826	-26.64	PASS
11N20SISO	LCH	-7.304	-49.993	-27.3	PASS
	HCH	-6.522	-46.985	-26.52	PASS
11N40SISO	LCH	-10.687	-50.320	-30.69	PASS
	HCH	-10.801	-49.823	-30.8	PASS

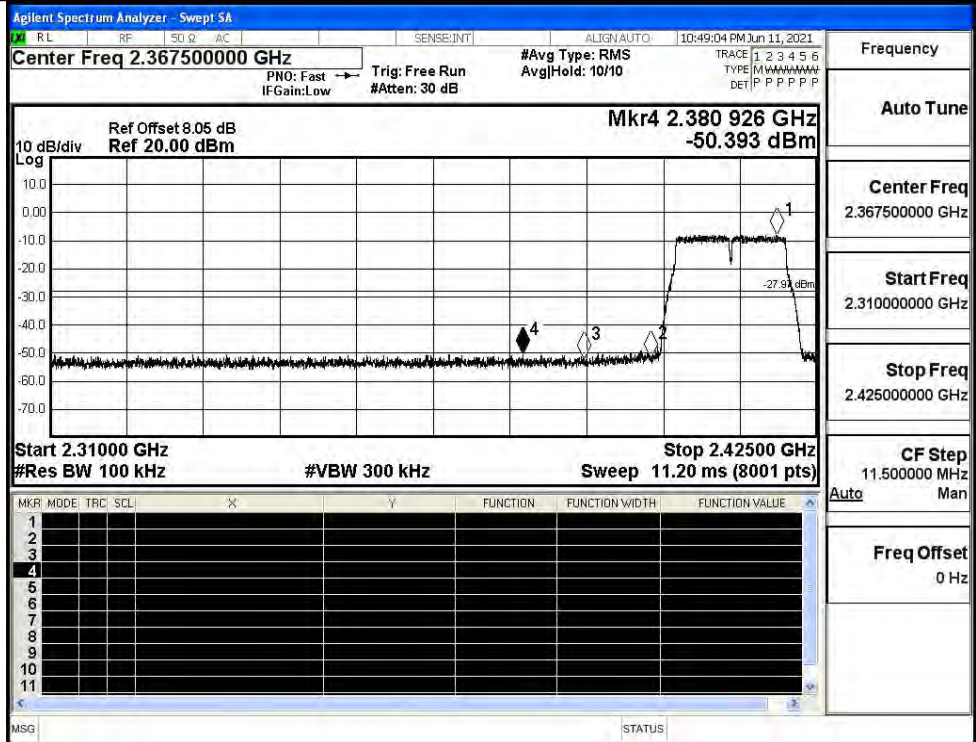


11B/HCH



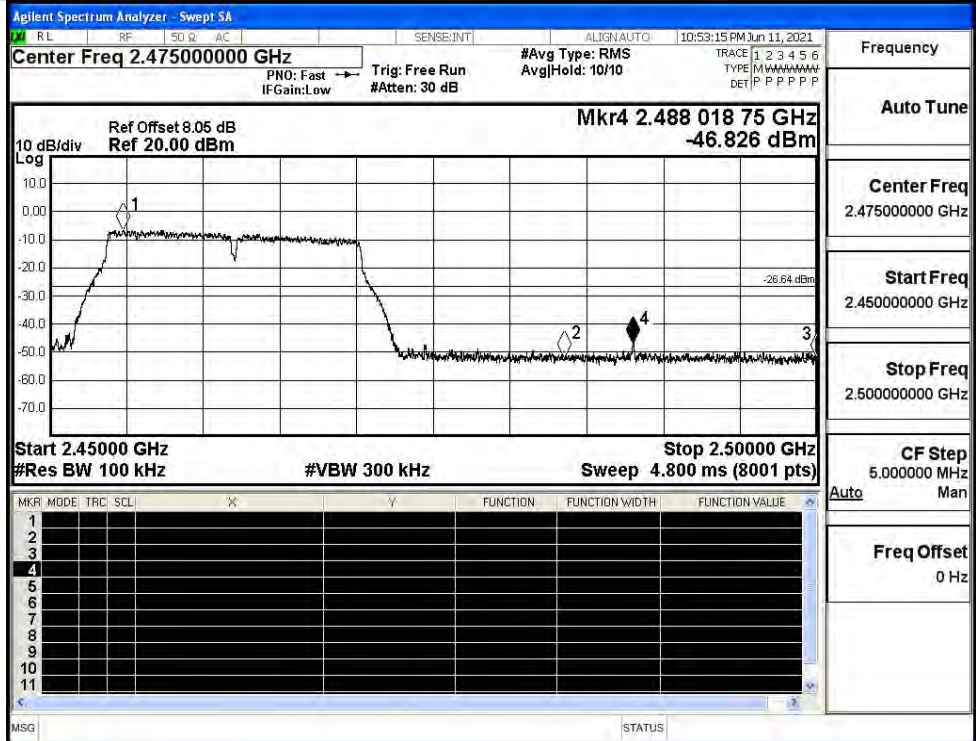
Frequency
Auto Tune
Center Freq 2.47500000 GHz
Start Freq 2.45000000 GHz
Stop Freq 2.50000000 GHz
CF Step 5.000000 MHz
Auto Man
Freq Offset 0 Hz

11G/LCH



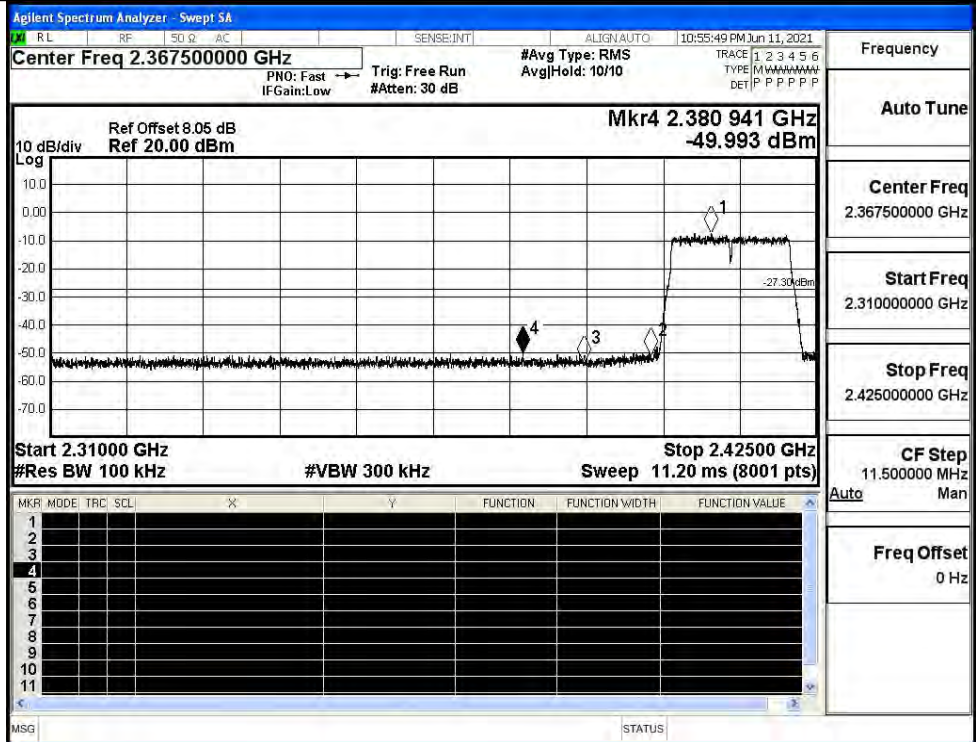
Frequency
Auto Tune
Center Freq 2.36750000 GHz
Start Freq 2.31000000 GHz
Stop Freq 2.42500000 GHz
CF Step 11.500000 MHz
Auto Man
Freq Offset 0 Hz

11G/HCH



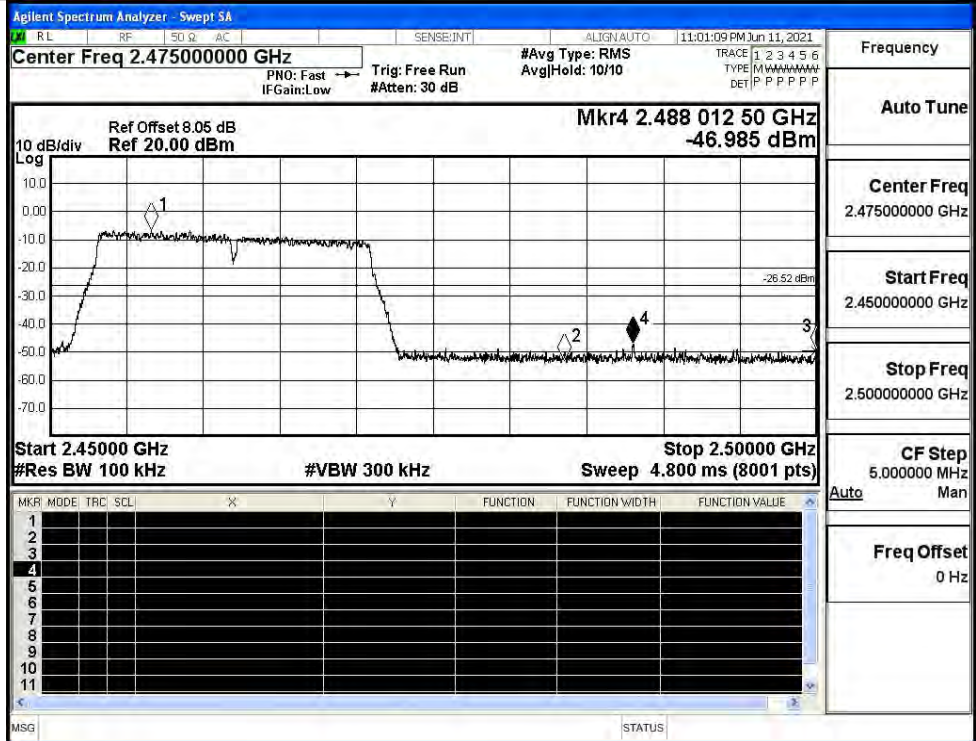
Frequency
Auto Tune
Center Freq 2.47500000 GHz
Start Freq 2.45000000 GHz
Stop Freq 2.50000000 GHz
CF Step 5.000000 MHz
Auto Man
Freq Offset 0 Hz

11N20SISO/LCH



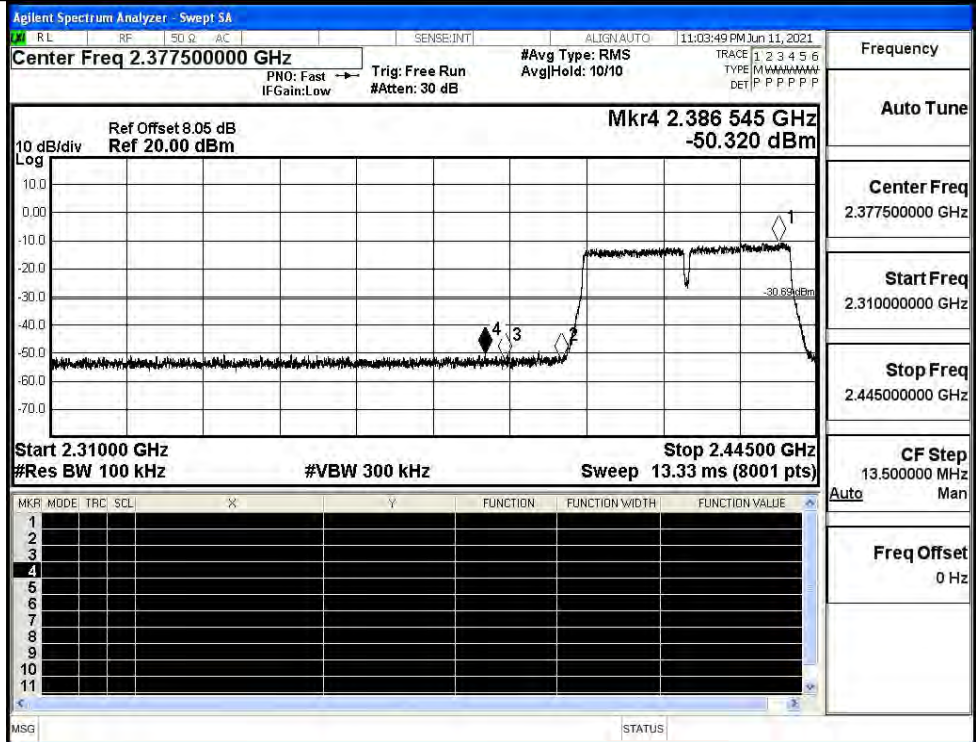
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Auto Tune
Center Freq 2.36750000 GHz
Start Freq 2.31000000 GHz
Stop Freq 2.42500000 GHz
CF Step 11.500000 MHz
Auto Man
Freq Offset 0 Hz

11N20SISO/HCH



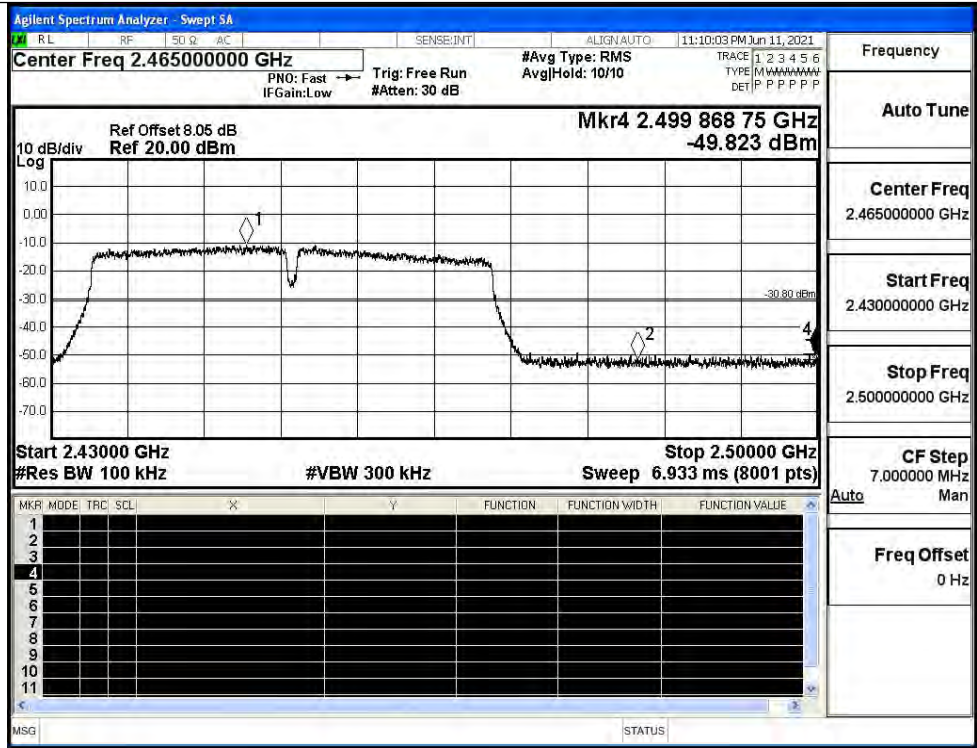
Frequency
Auto Tune
Center Freq 2.47500000 GHz
Start Freq 2.45000000 GHz
Stop Freq 2.50000000 GHz
CF Step 5.000000 MHz
Auto Man
Freq Offset 0 Hz

11N40SISO/LCH



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

11N40SISO/HCH

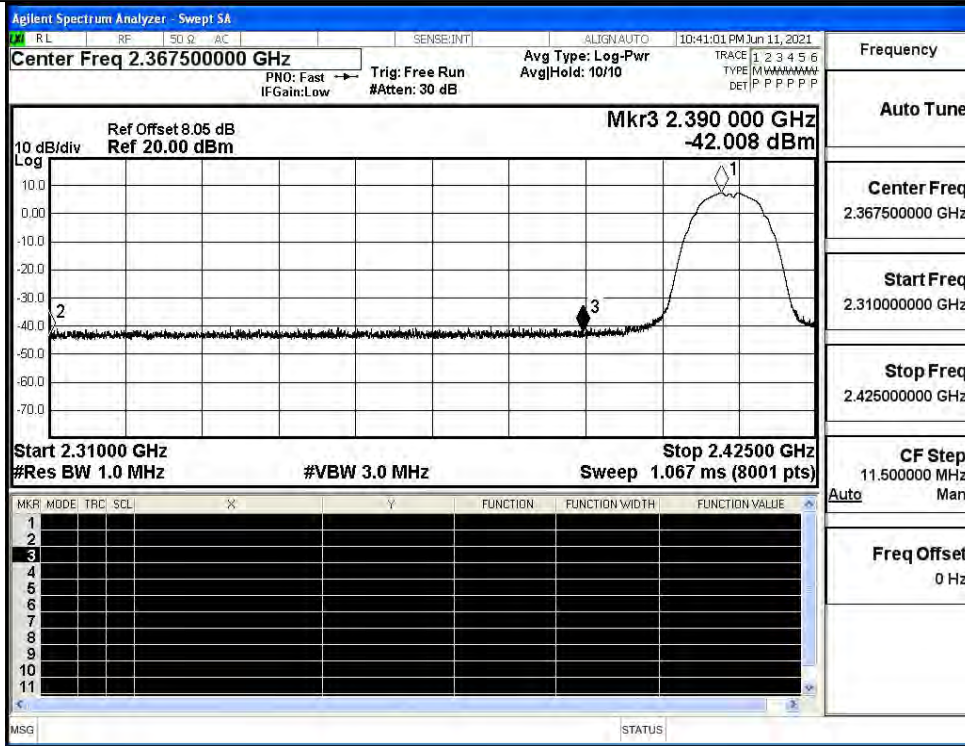


C.7 Restrict-band band-edge measurements

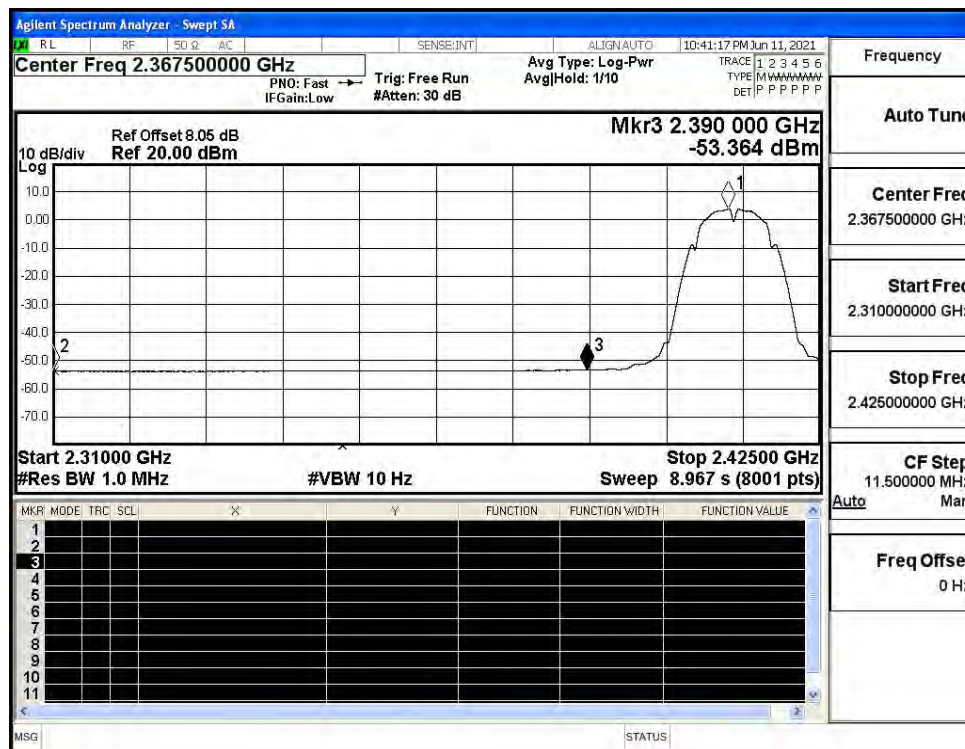
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBu V/m]	Verdict
11B	2412	Ant1	2310.0	-43.84	2.0	0	53.39	PEAK	74	PASS
	2412	Ant1	2310.0	-53.79	2.0	0	43.44	AV	54	PASS
	2412	Ant1	2390.0	-42.01	2.0	0	55.22	PEAK	74	PASS
	2412	Ant1	2390.0	-53.36	2.0	0	43.87	AV	54	PASS
	2462	Ant1	2483.5	-42.74	2.0	0	54.49	PEAK	74	PASS
	2462	Ant1	2483.5	-52.55	2.0	0	44.68	AV	54	PASS
	2462	Ant1	2500.0	-41.56	2.0	0	55.67	PEAK	74	PASS
	2462	Ant1	2500.0	-52.81	2.0	0	44.42	AV	54	PASS
11G	2412	Ant1	2310.0	-42.03	2.0	0	55.20	PEAK	74	PASS
	2412	Ant1	2310.0	-53.79	2.0	0	43.44	AV	54	PASS
	2412	Ant1	2390.0	-41.05	2.0	0	56.18	PEAK	74	PASS
	2412	Ant1	2390.0	-53.35	2.0	0	43.88	AV	54	PASS
	2462	Ant1	2483.5	-42.40	2.0	0	54.83	PEAK	74	PASS
	2462	Ant1	2483.5	-52.29	2.0	0	44.94	AV	54	PASS
	2462	Ant1	2500.0	-43.43	2.0	0	53.80	PEAK	74	PASS
	2462	Ant1	2500.0	-52.81	2.0	0	44.42	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-42.87	2.0	0	54.36	PEAK	74	PASS
	2412	Ant1	2310.0	-53.79	2.0	0	43.44	AV	54	PASS
	2412	Ant1	2390.0	-43.09	2.0	0	54.14	PEAK	74	PASS
	2412	Ant1	2390.0	-53.30	2.0	0	43.93	AV	54	PASS
	2462	Ant1	2483.5	-42.41	2.0	0	54.82	PEAK	74	PASS
	2462	Ant1	2483.5	-52.24	2.0	0	44.99	AV	54	PASS
	2462	Ant1	2500.0	-42.97	2.0	0	54.26	PEAK	74	PASS
	2462	Ant1	2500.0	-52.81	2.0	0	54.11	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-43.12	2.0	0	43.44	PEAK	74	PASS
	2422	Ant1	2310.0	-53.79	2.0	0	54.52	AV	54	PASS

	2422	Ant1	2390.0	-42.71	2.0	0	43.87	PEAK	74	PASS
	2422	Ant1	2390.0	-53.36	2.0	0	54.54	AV	54	PASS
	2452	Ant1	2483.5	-42.69	2.0	0	44.59	PEAK	74	PASS
	2452	Ant1	2483.5	-52.64	2.0	0	55.52	AV	54	PASS
	2452	Ant1	2500.0	-41.71	2.0	0	44.46	PEAK	74	PASS
	2452	Ant1	2500.0	-52.77	2.0	0	54.11	AV	54	PASS

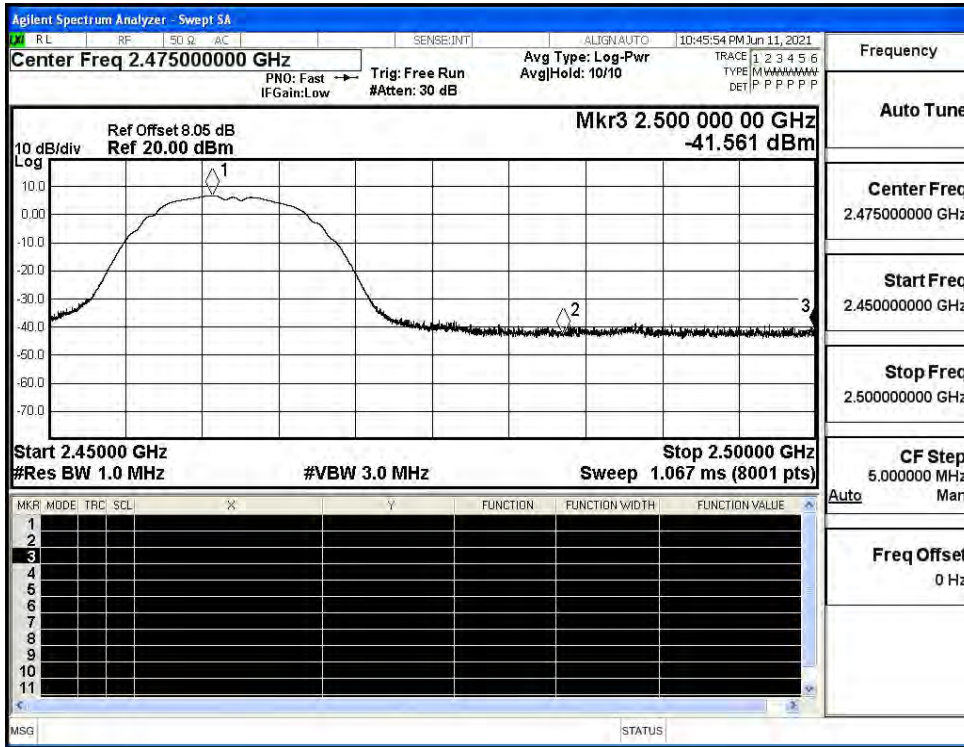
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



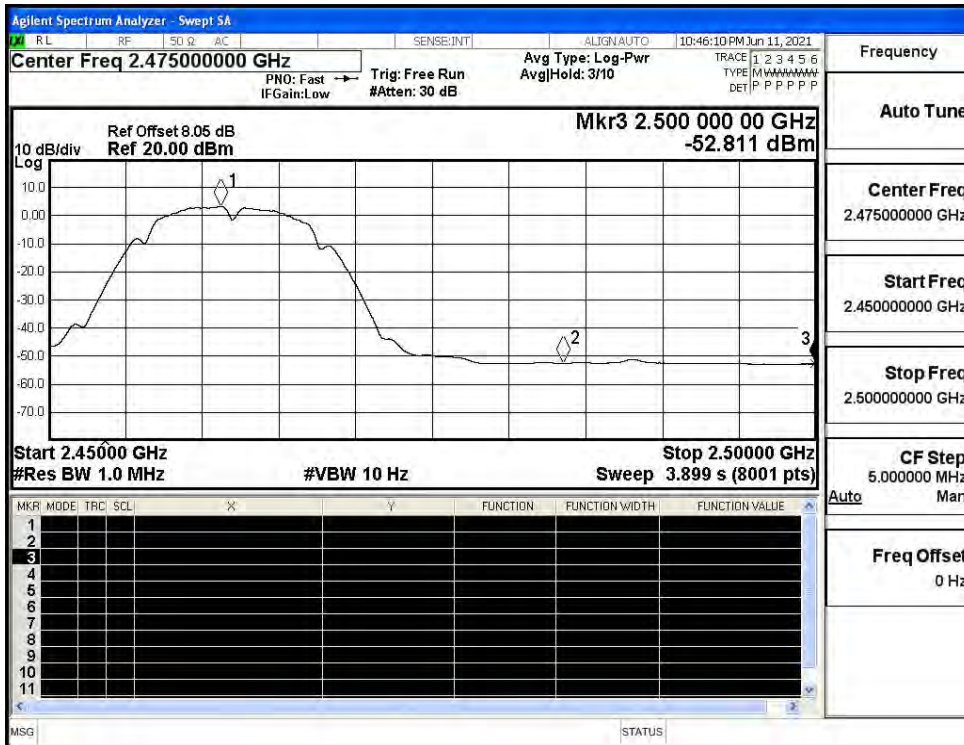
Restrict-band band-edge measurements_11B_2412_Ant1_AV



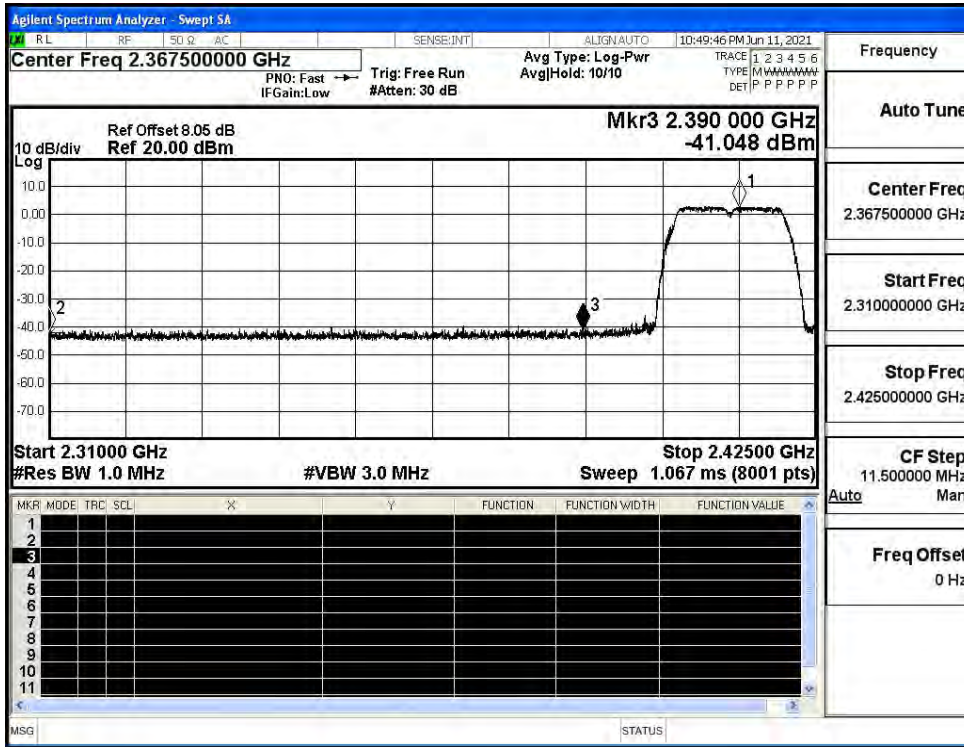
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



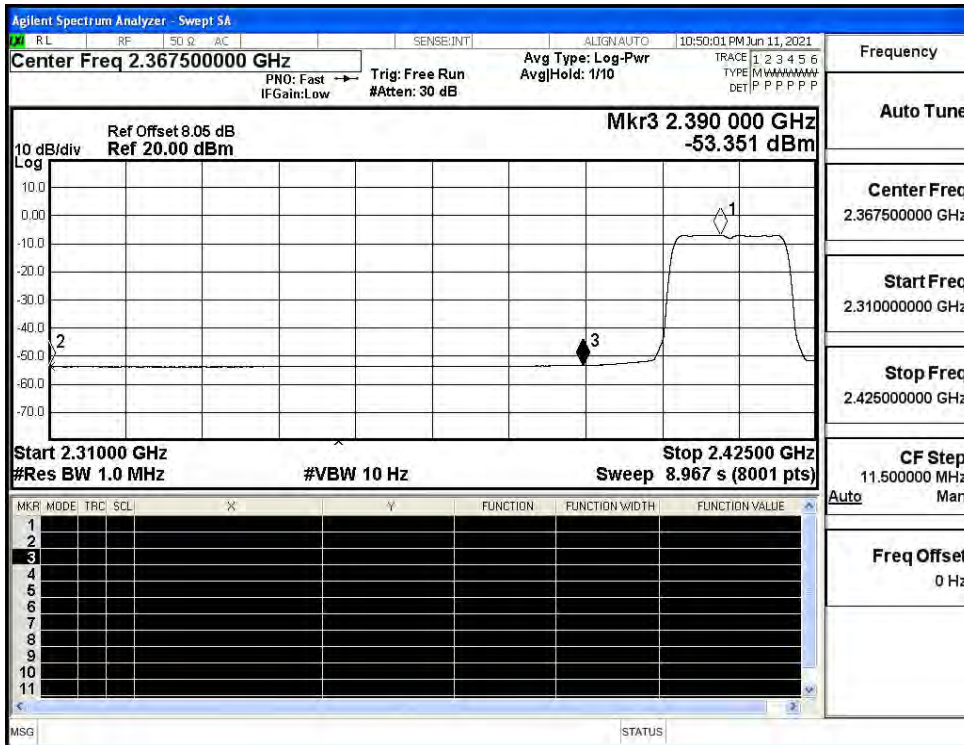
Restrict-band band-edge measurements_11B_2462_Ant1_AV



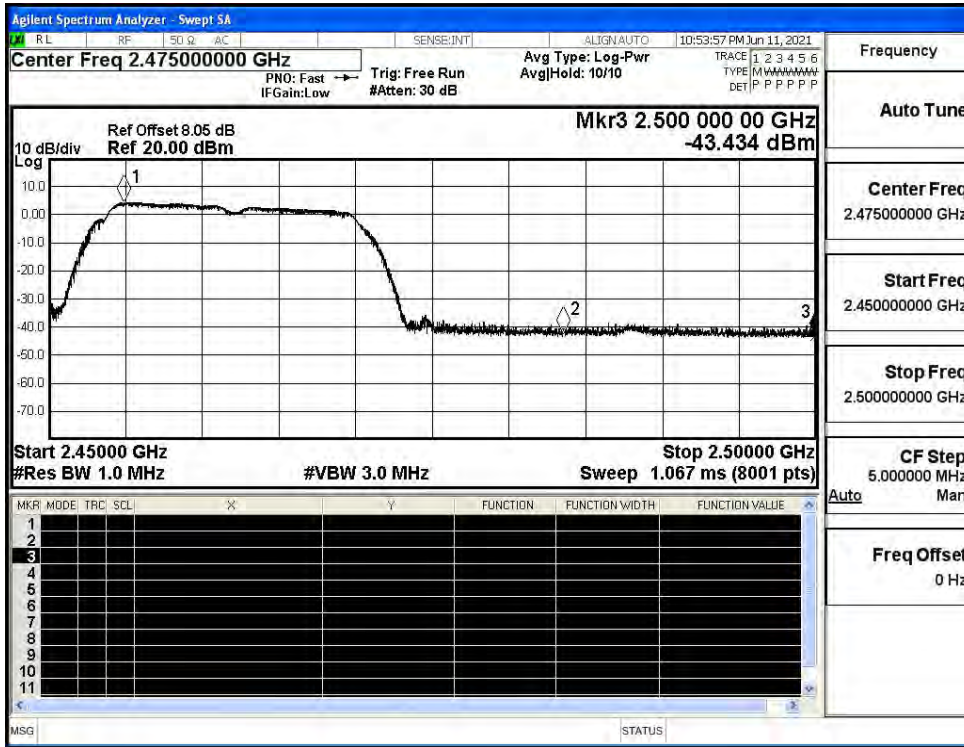
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



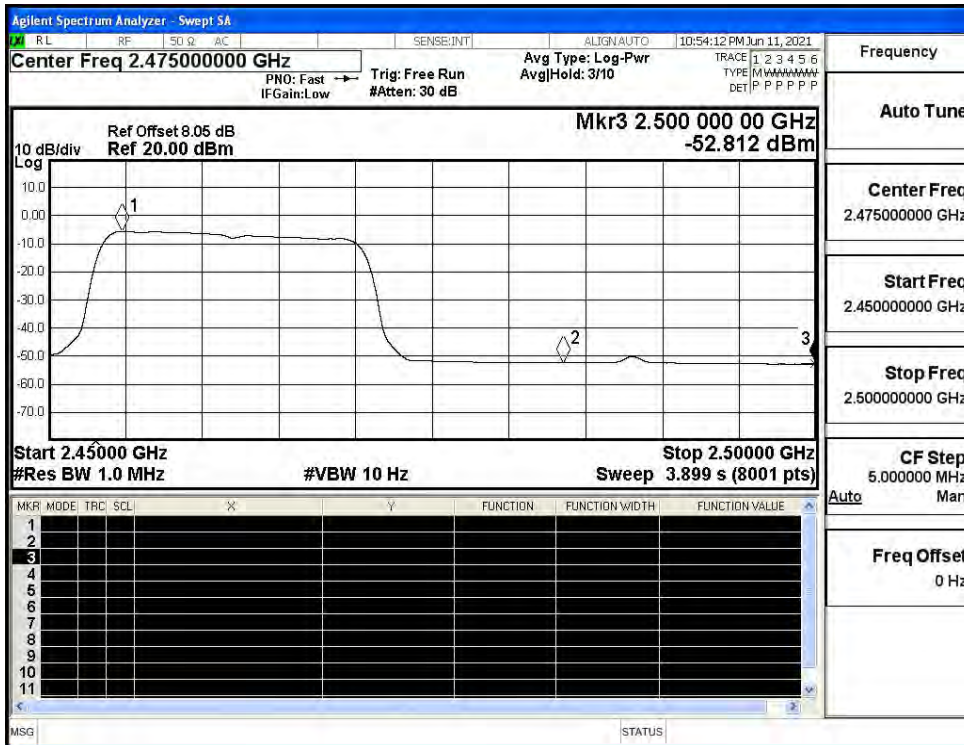
Restrict-band band-edge measurements_11G_2412_Ant1_AV



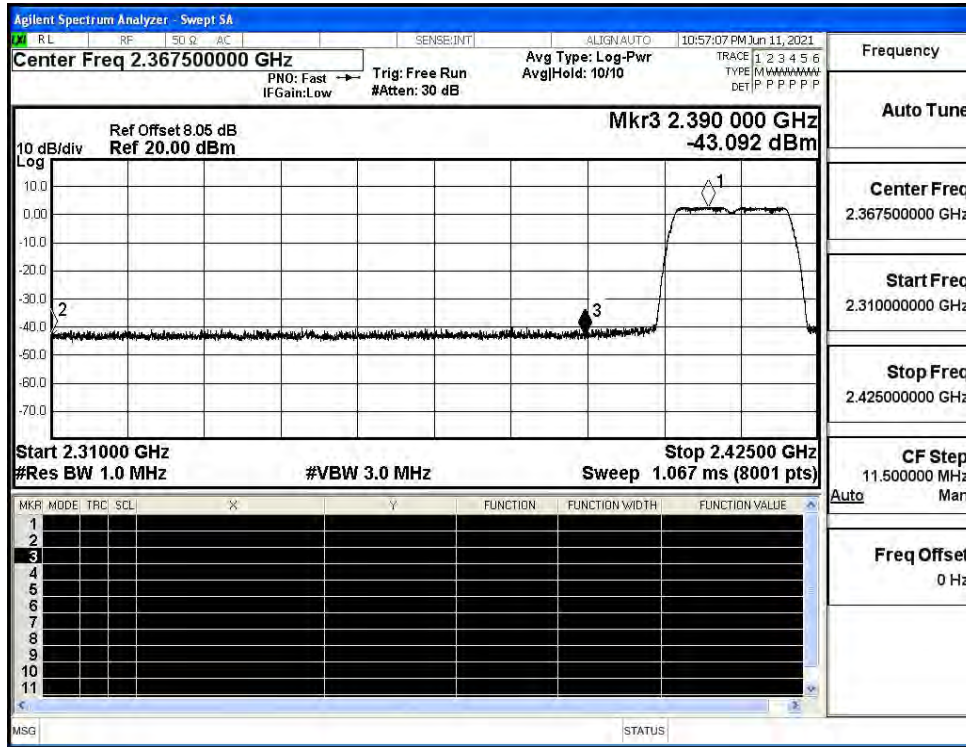
Restrict-band band-edge measurements_11G_2462_Ant1_PEAK



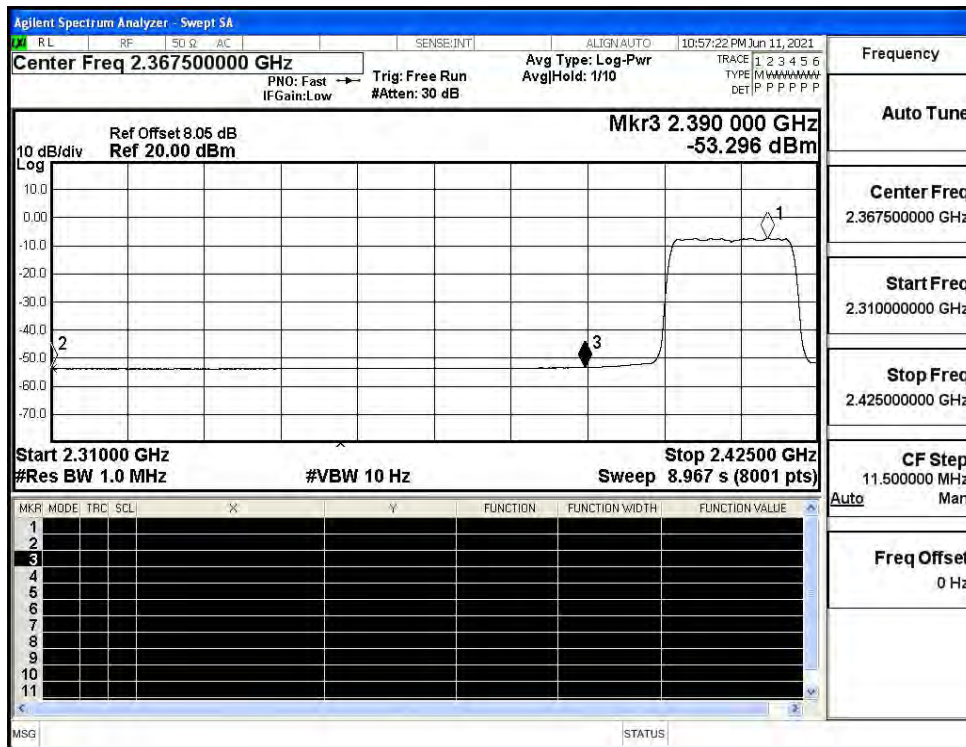
Restrict-band band-edge measurements_11G_2462_Ant1_AV



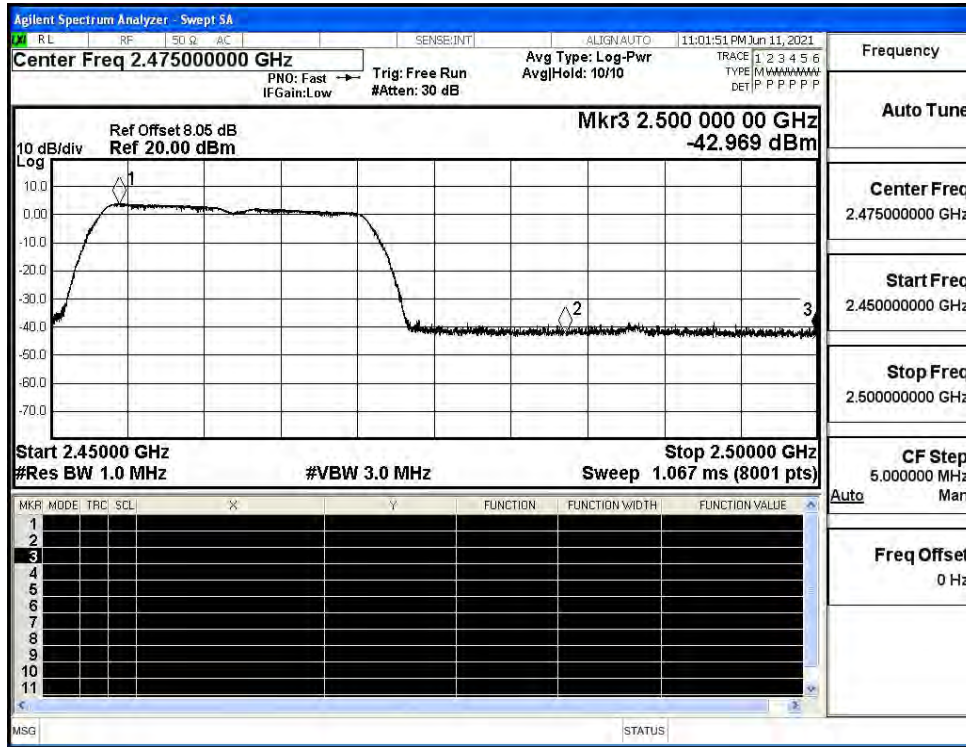
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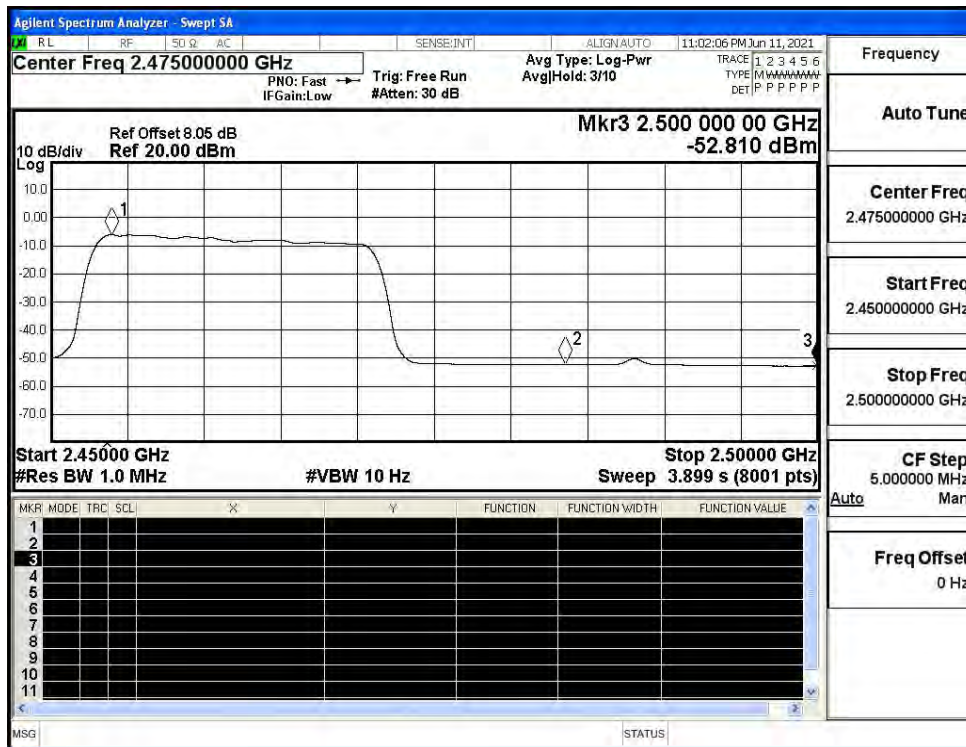
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_AV



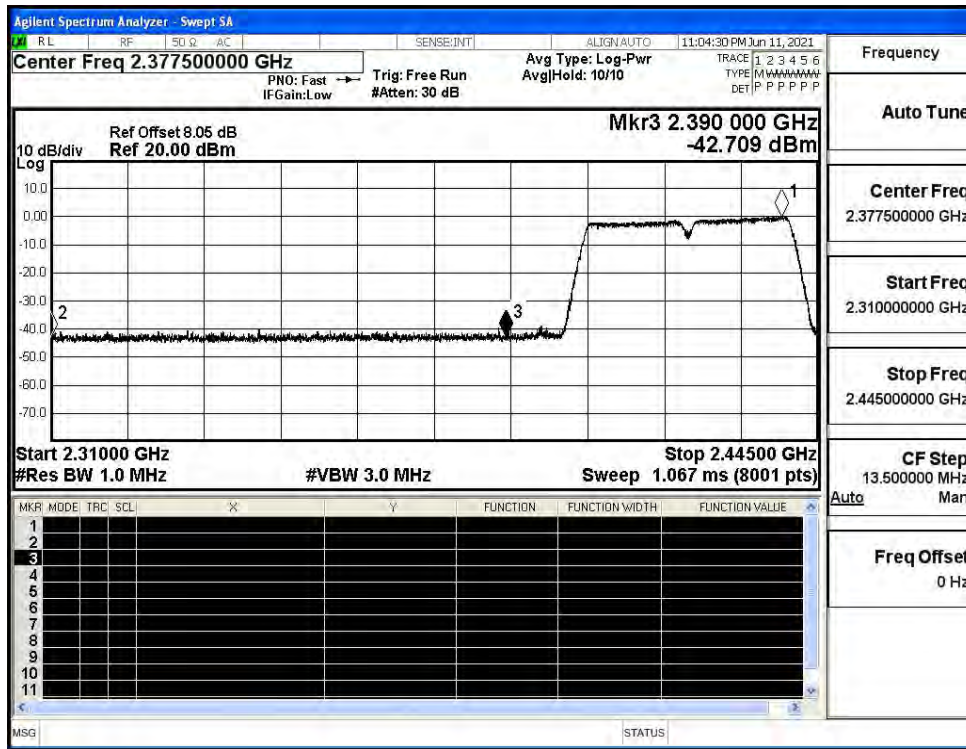
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_PEAK



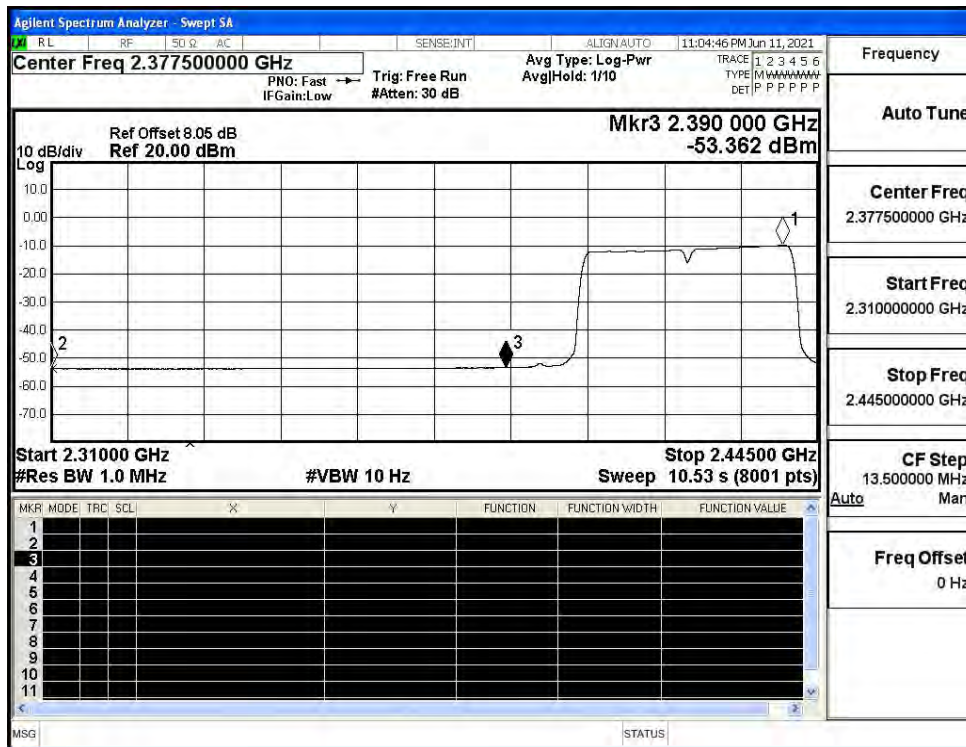
Restrict-band band-edge measurements_11N20SISO_2462_Ant1_AV



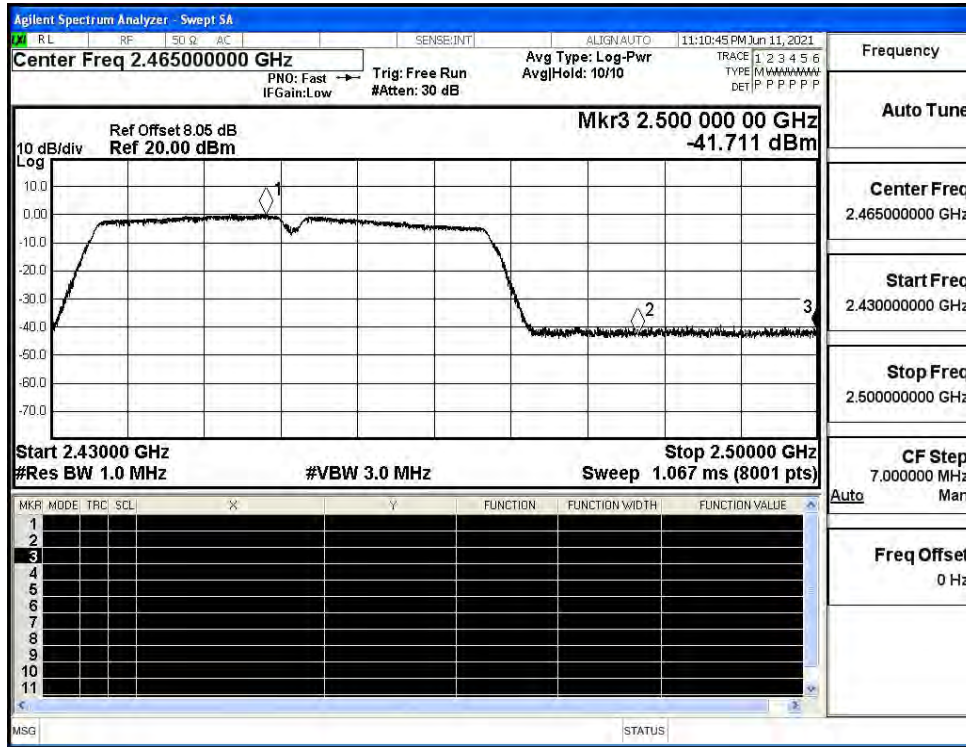
Restrict-band band-edge measurements_11N40SISO_2422_Ant1_PEAK



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

