

Appendix A
RF Test Data for 2.4G WIFI (Conducted Measurement)
Product Name: Wall Tap Plug
Trade Mark: Nexxt Solutions
Test Model: NHP-T610

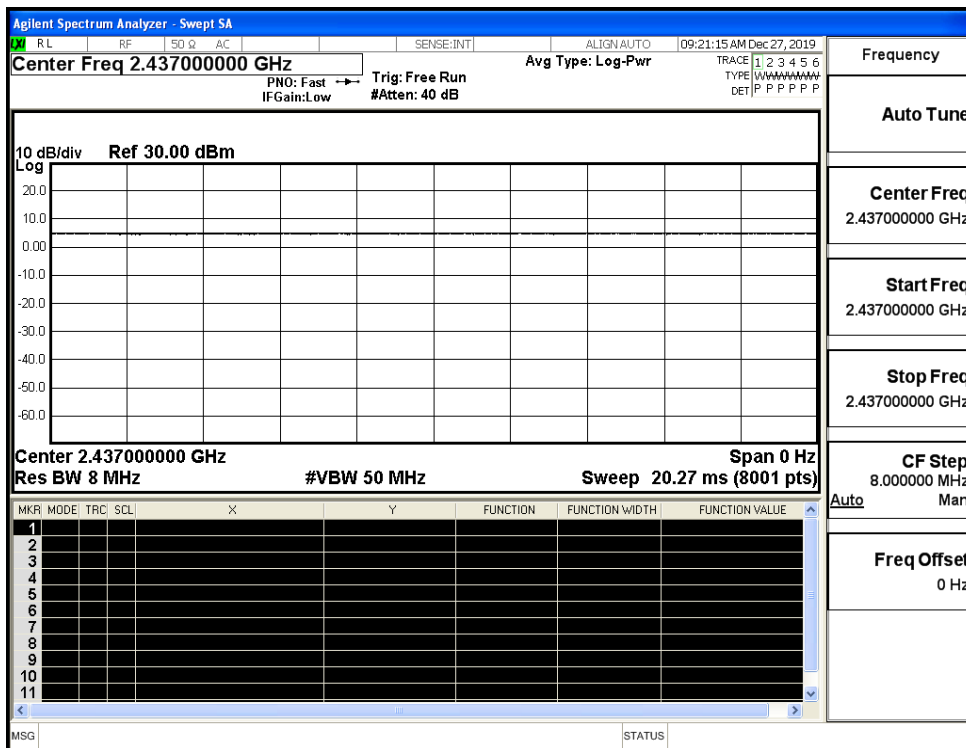
Environmental Conditions

Temperature:	24.3 ° C
Relative Humidity:	53.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Alisa Huang
Supervised by:	Wang Chuang

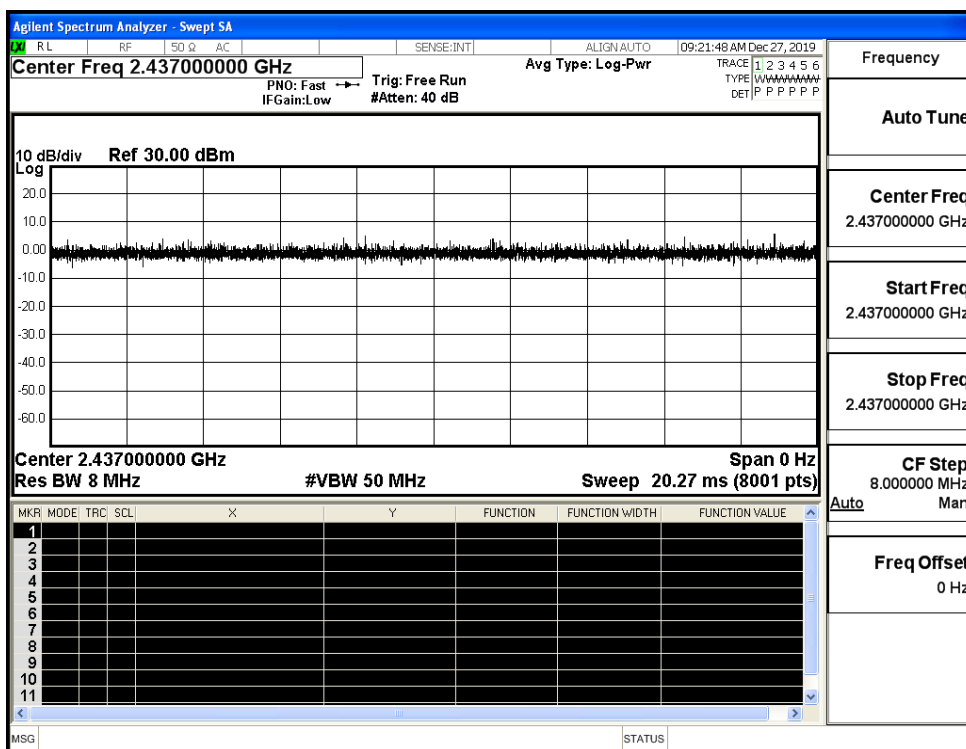
A.1 Duty Cycle

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

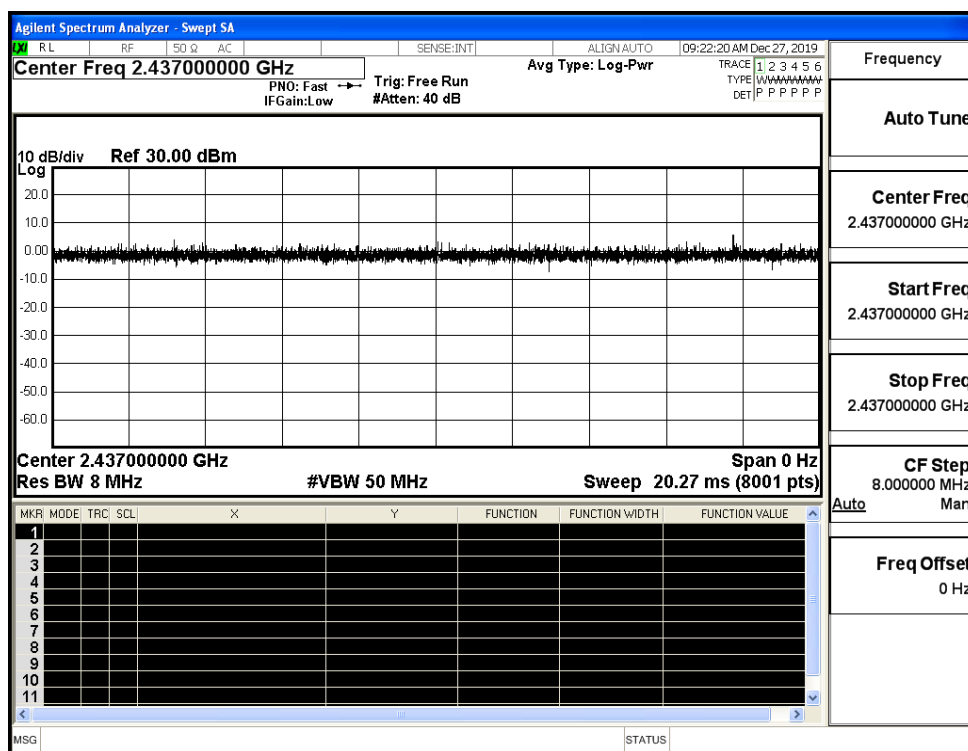
Duty Cycle_11B_2437_Ant1



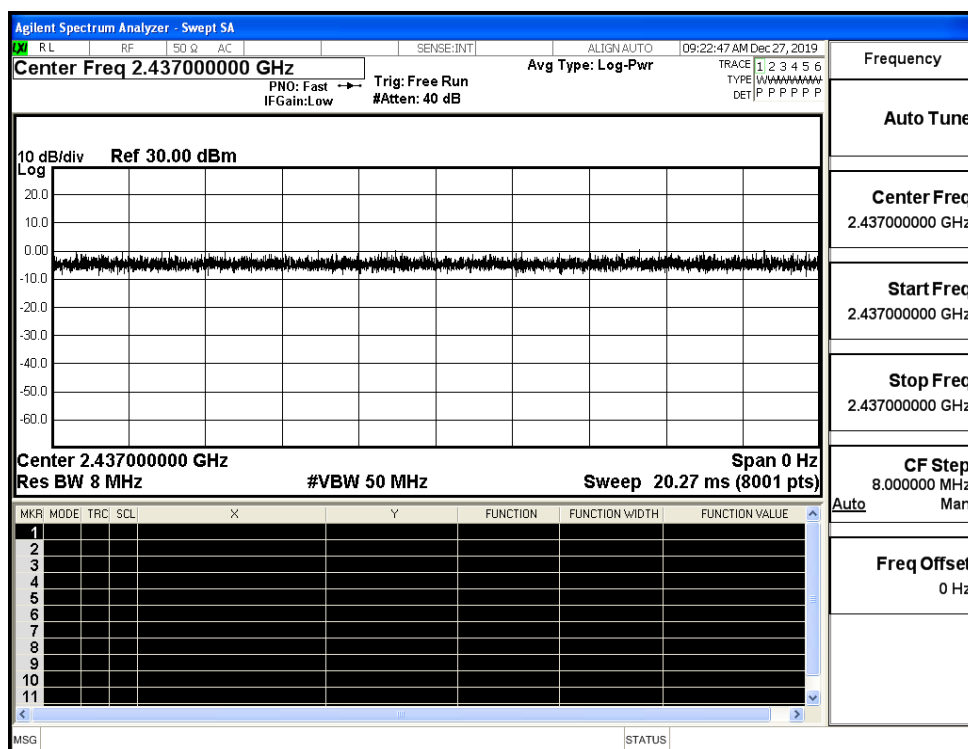
Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



Duty Cycle_11N40SISO_2437_Ant1



A.2 Maximum Conducted Output Power

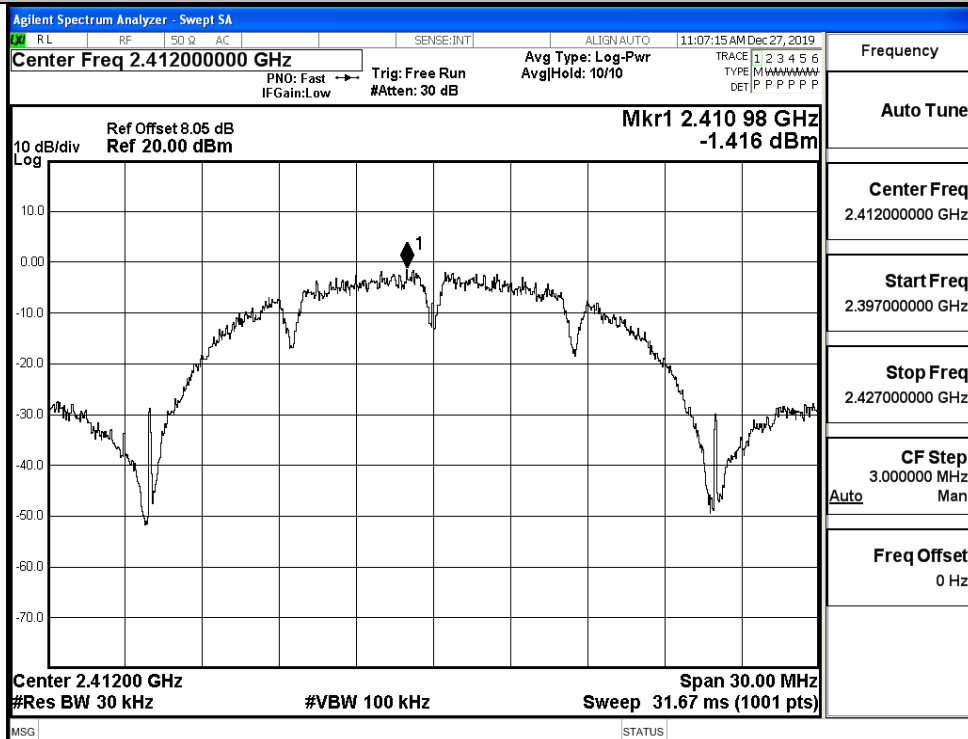
Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	16.06	30	PASS
	MCH	15.98	30	PASS
	HCH	15.46	30	PASS
11G	LCH	17.81	30	PASS
	MCH	15.17	30	PASS
	HCH	15.50	30	PASS
11N20SISO	LCH	14.83	30	PASS
	MCH	15.21	30	PASS
	HCH	15.02	30	PASS
11N40SISO	LCH	15.32	30	PASS
	MCH	15.38	30	PASS
	HCH	15.23	30	PASS

A.3 Maximum Power Spectral Density

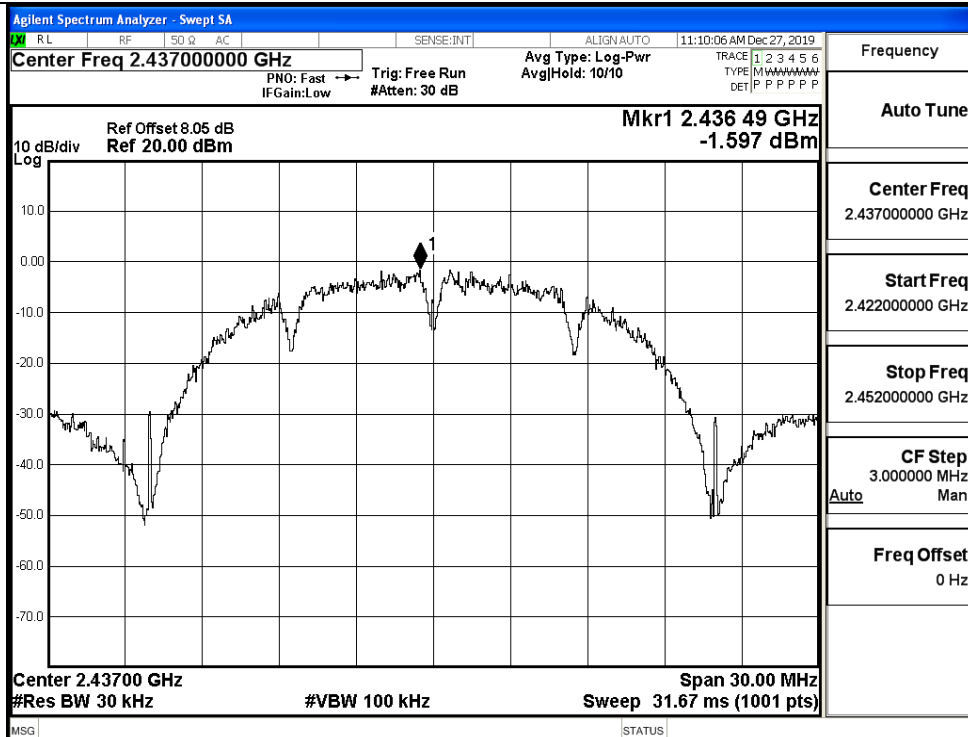
Mode	Channel	Meas.Level [dBm/30KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-1.416	8	PASS
	MCH	-1.597	8	PASS
	HCH	-2.092	8	PASS
11G	LCH	-6.175	8	PASS
	MCH	-8.953	8	PASS
	HCH	-8.407	8	PASS
11N20SISO	LCH	-9.584	8	PASS
	MCH	-8.955	8	PASS
	HCH	-9.001	8	PASS
11N40SISO	LCH	-11.822	8	PASS
	MCH	-12.070	8	PASS
	HCH	-12.063	8	PASS

Test Graphs

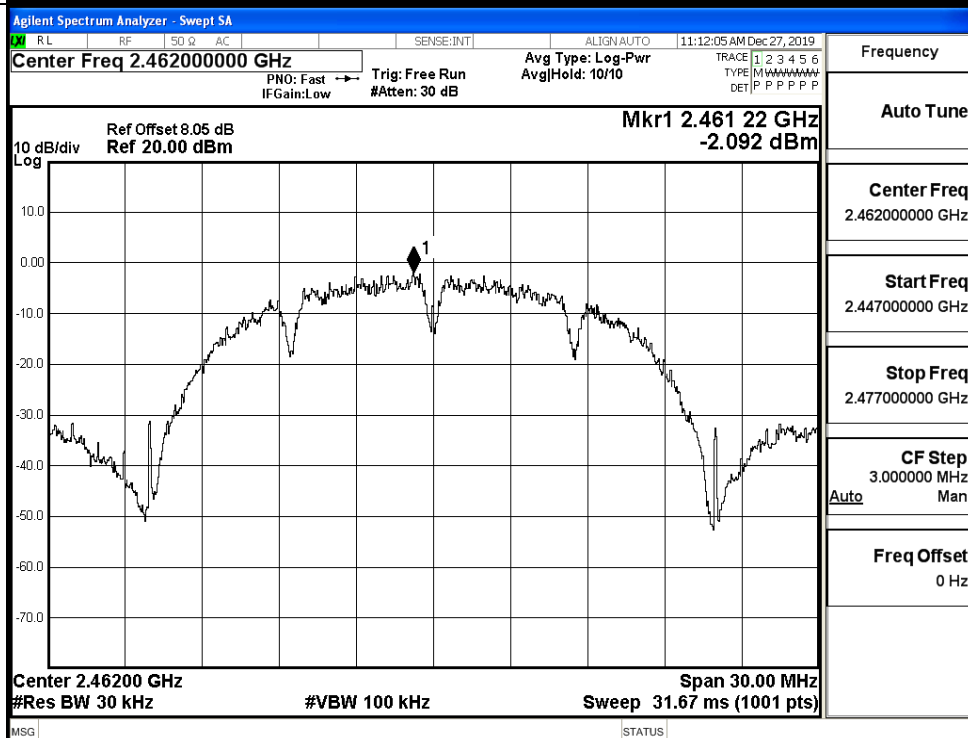
11B/LCH



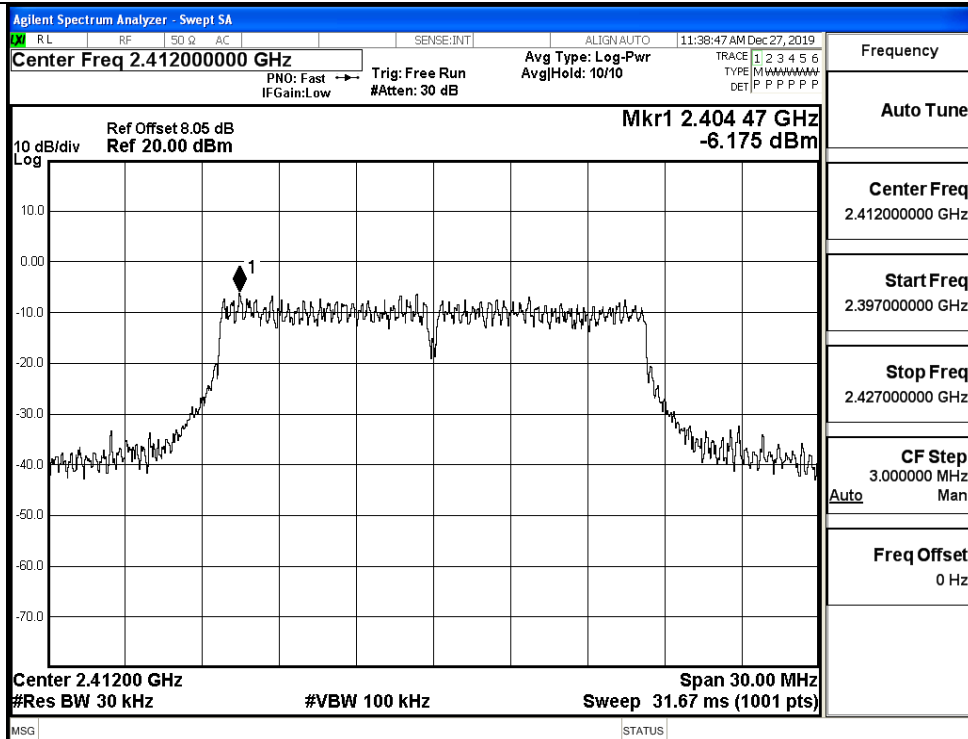
11B/MCH



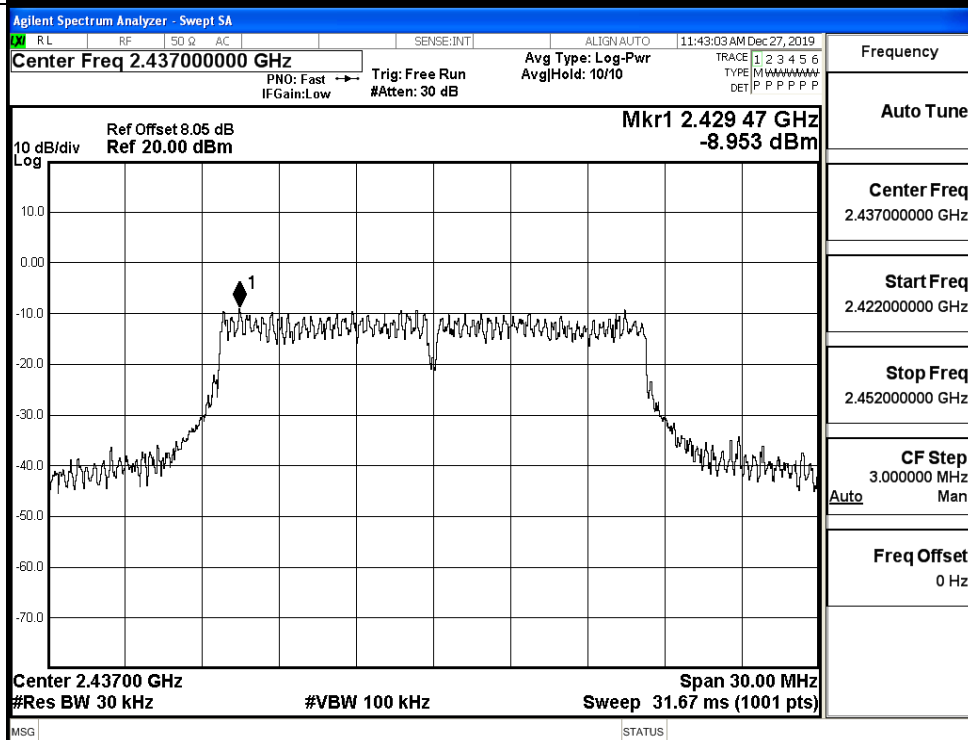
11B/HCH



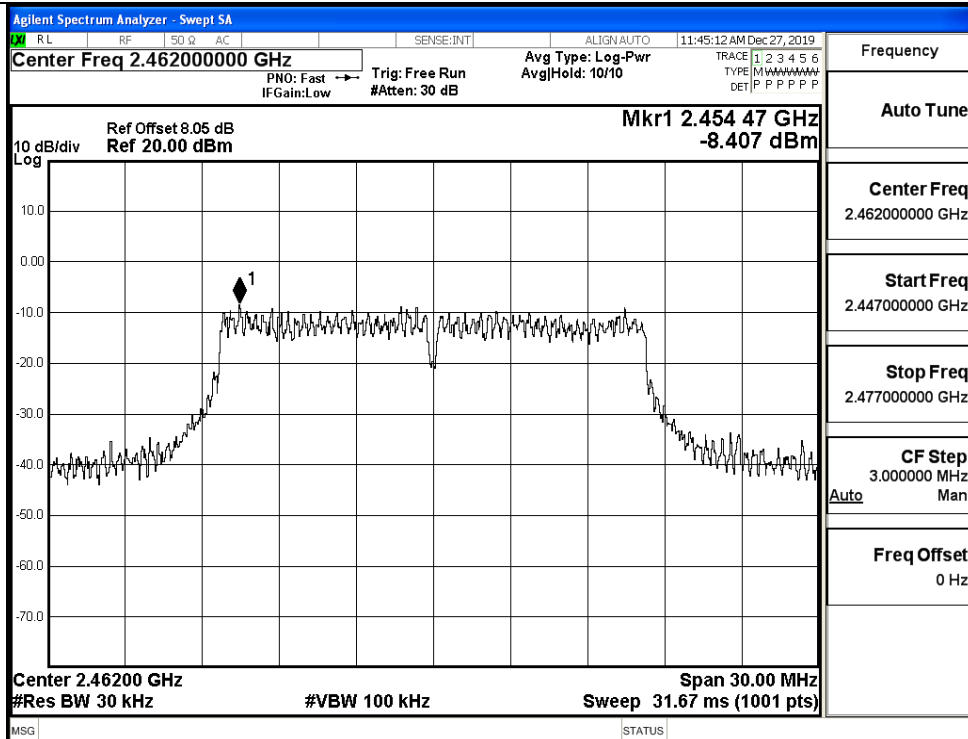
11G/LCH



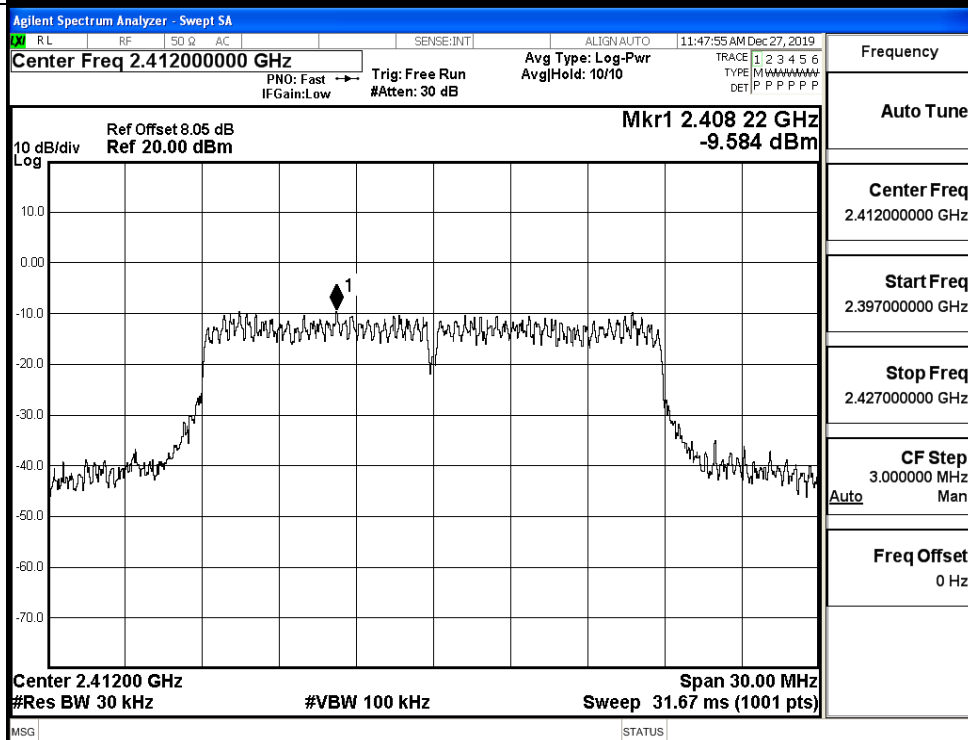
11G/MCH



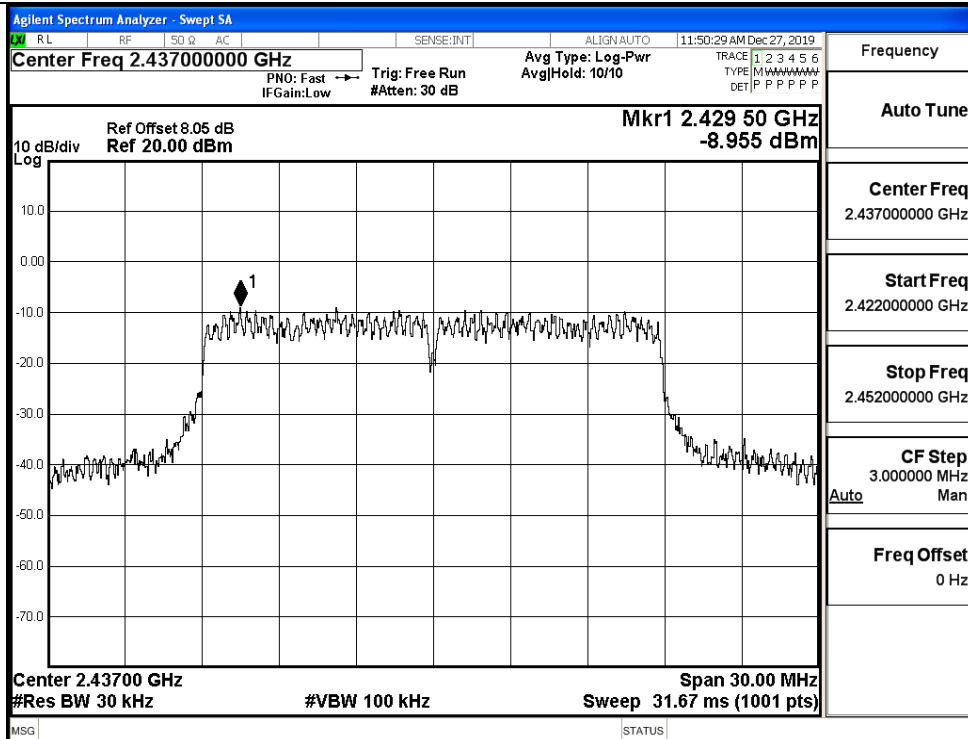
11G/HCH



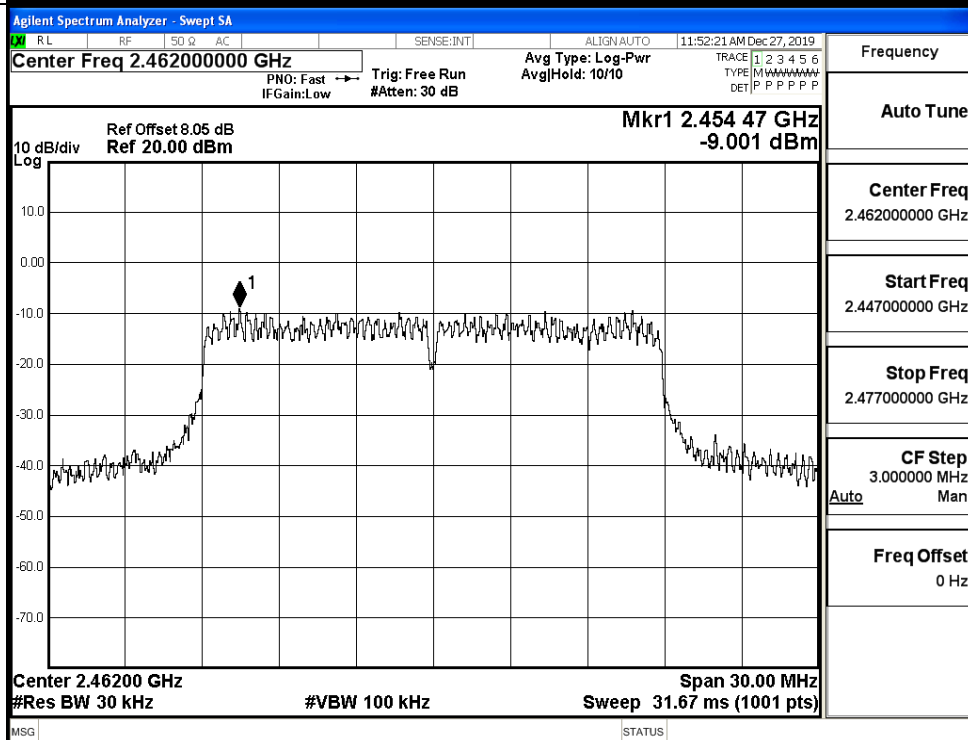
11N20SISO/LCH



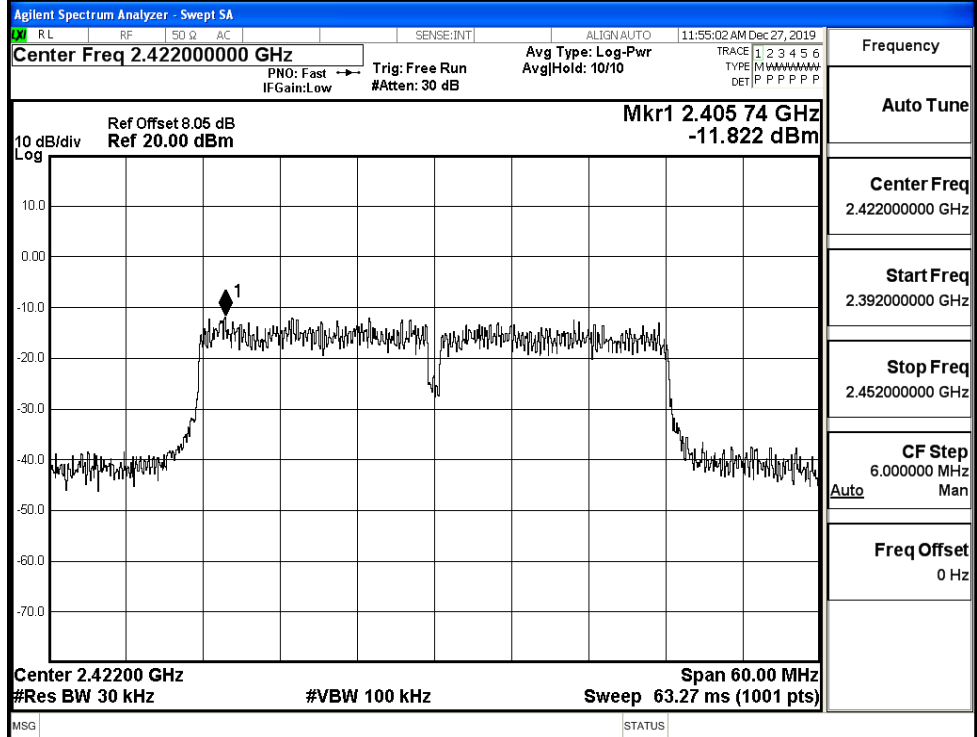
11N20SISO/MCH



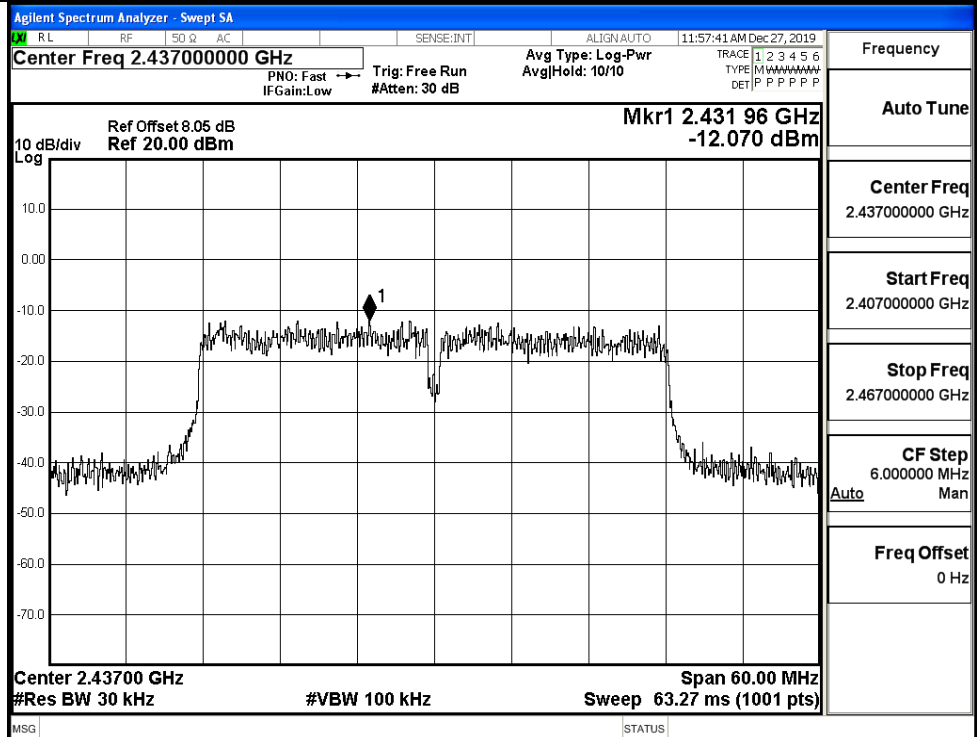
11N20SISO/HCH



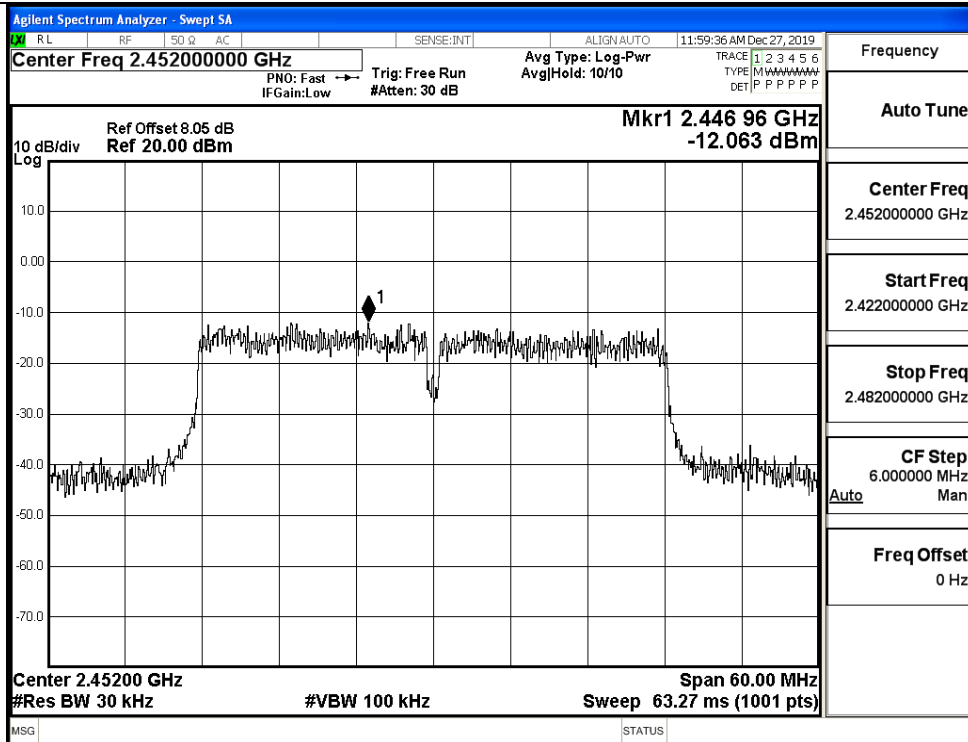
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

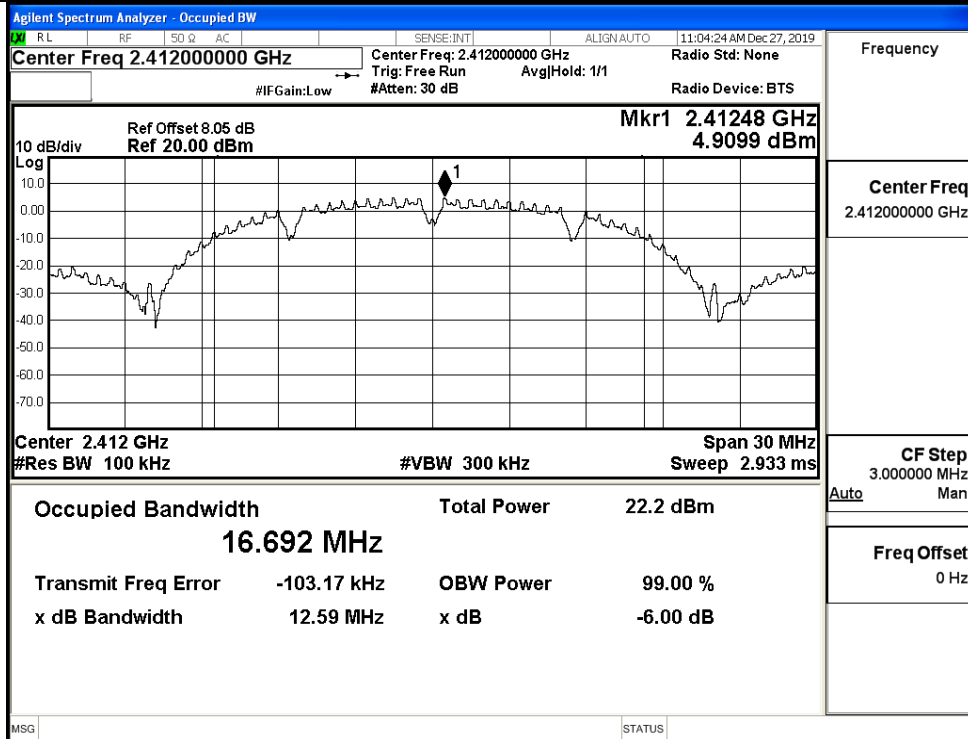


A.4 6dB Bandwidth

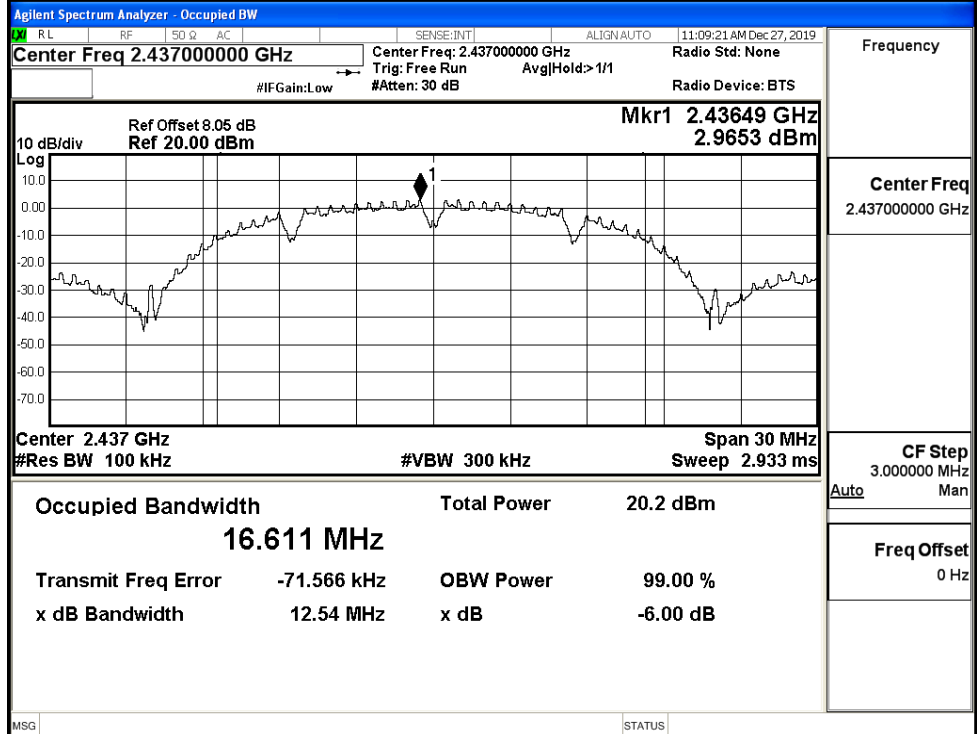
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	12.59	≥ 0.5	PASS
	MCH	12.54	≥ 0.5	PASS
	HCH	13.06	≥ 0.5	PASS
11G	LCH	16.37	≥ 0.5	PASS
	MCH	16.37	≥ 0.5	PASS
	HCH	16.36	≥ 0.5	PASS
11N20SISO	LCH	17.00	≥ 0.5	PASS
	MCH	16.99	≥ 0.5	PASS
	HCH	16.98	≥ 0.5	PASS
11N40SISO	LCH	35.52	≥ 0.5	PASS
	MCH	35.54	≥ 0.5	PASS
	HCH	35.55	≥ 0.5	PASS

Test Graphs

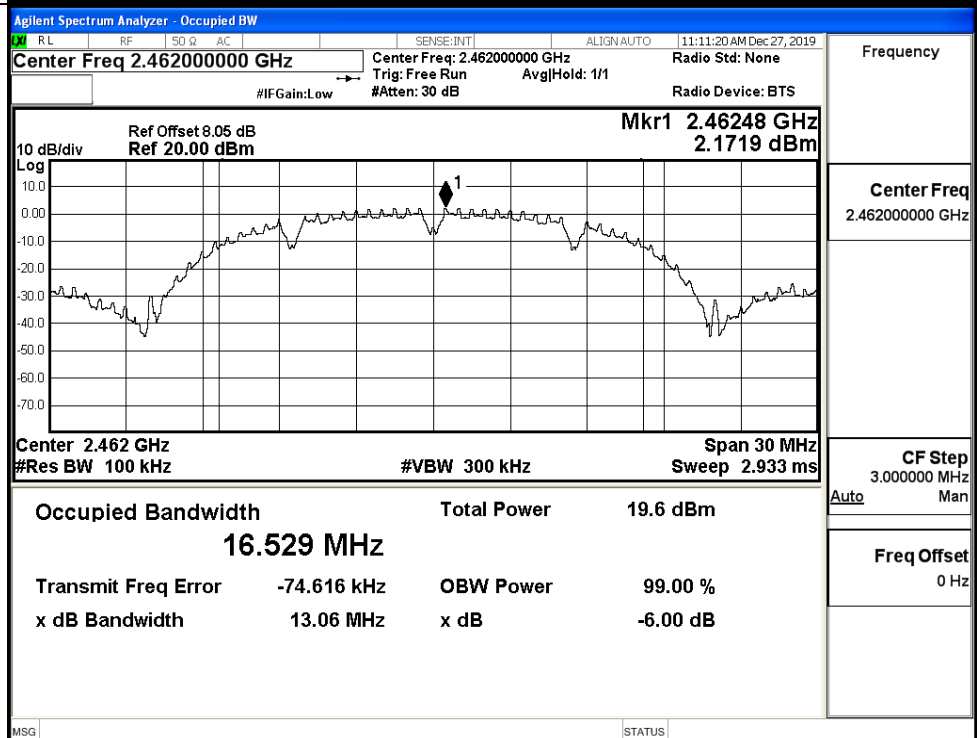
11B/LCH



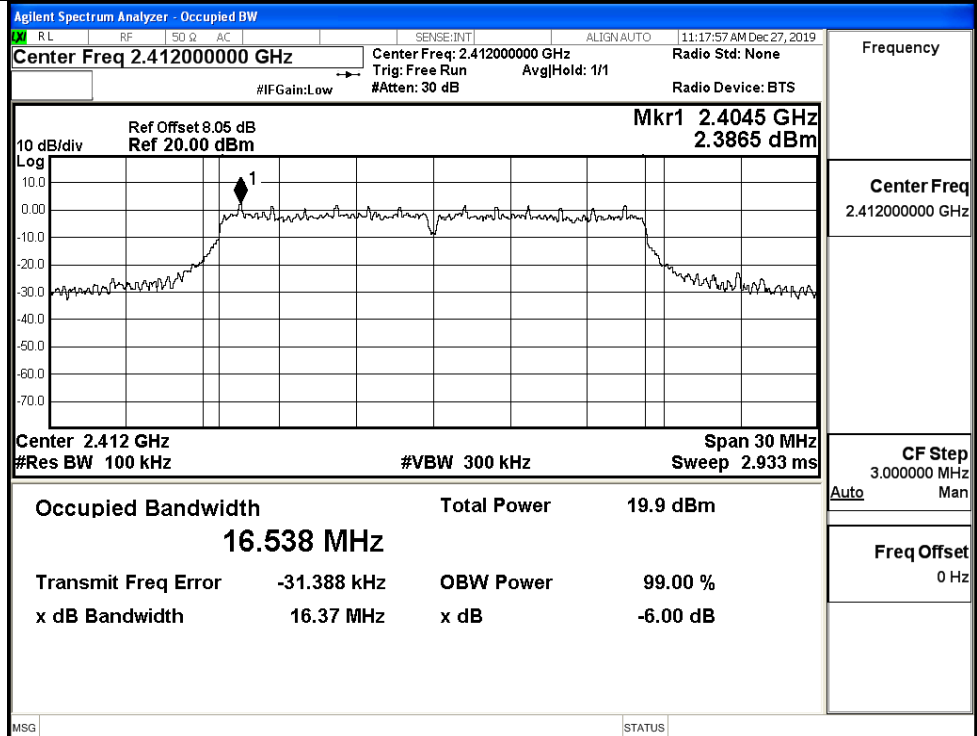
11B/MCH



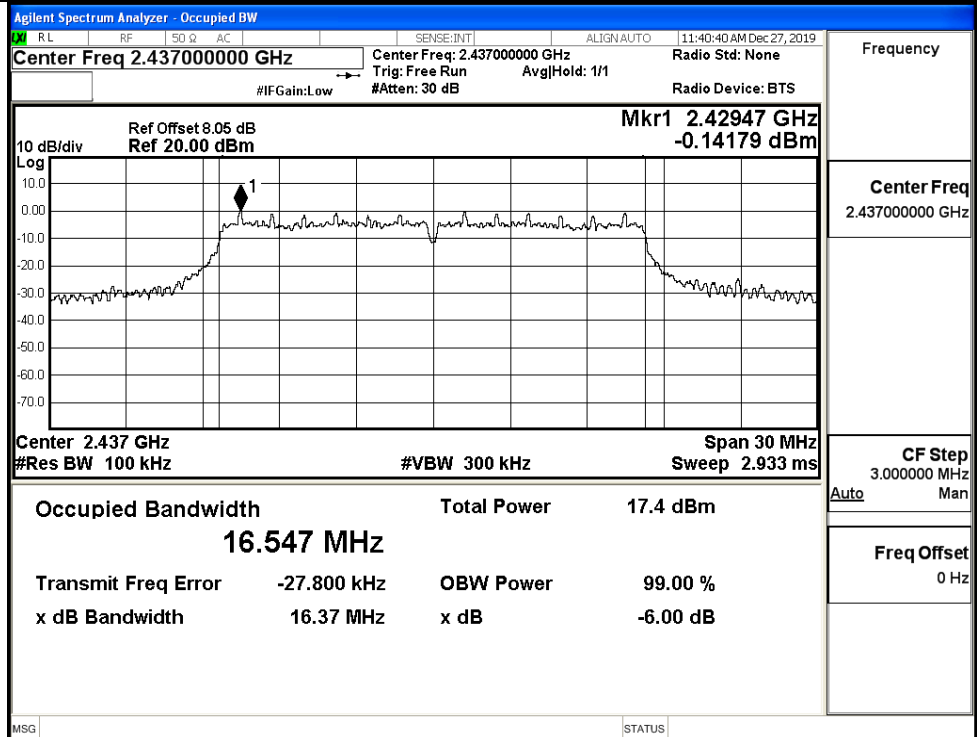
11B/HCH



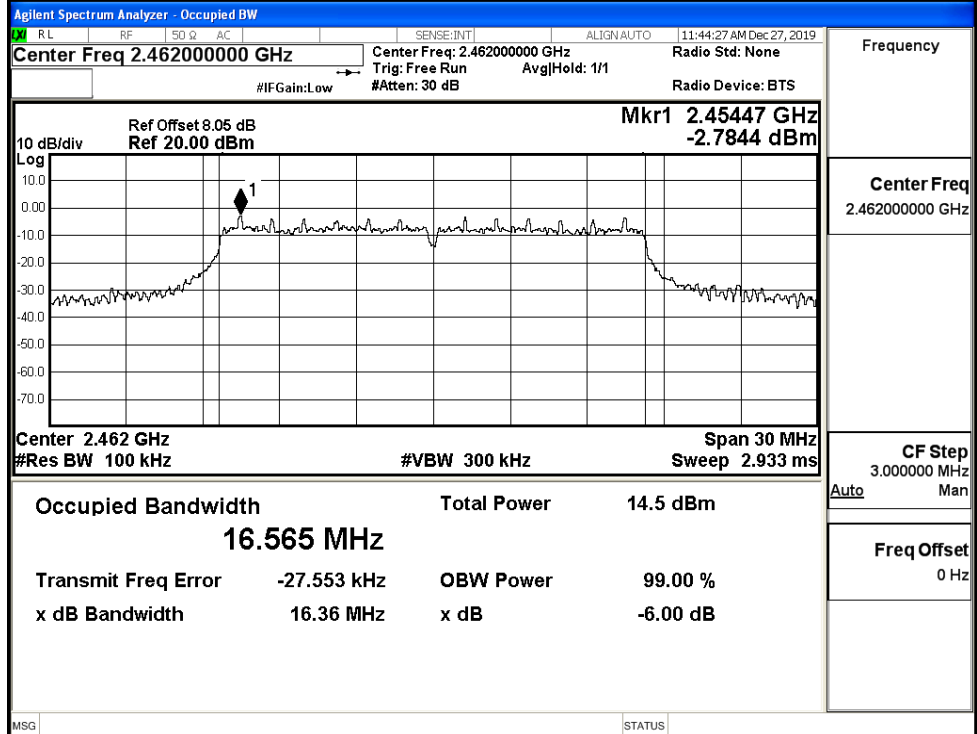
11G/LCH



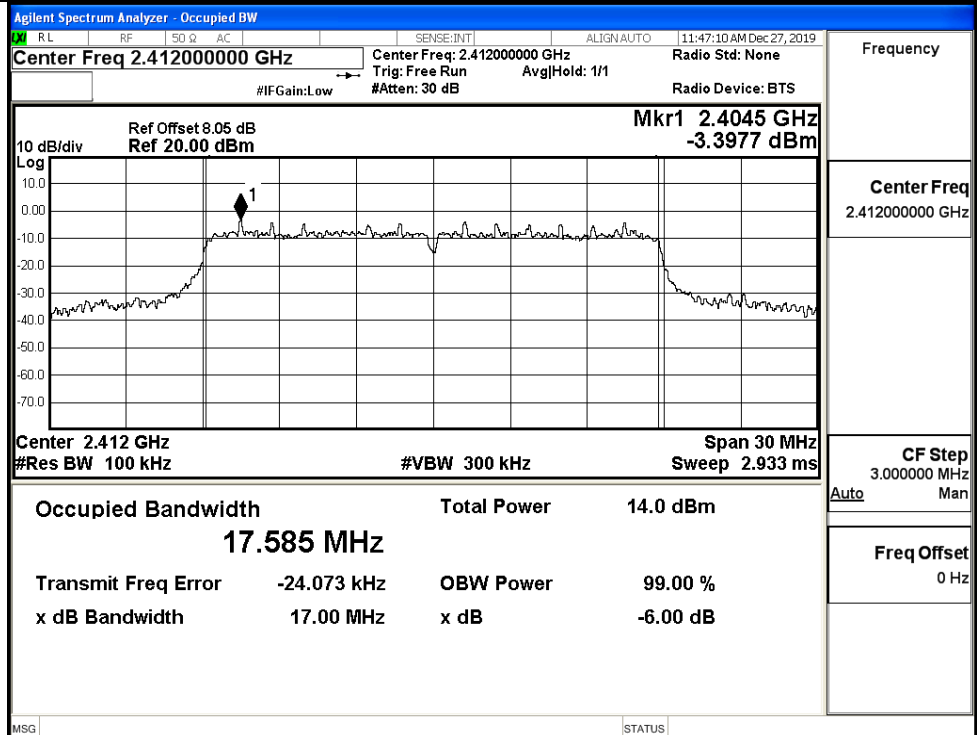
11G/MCH



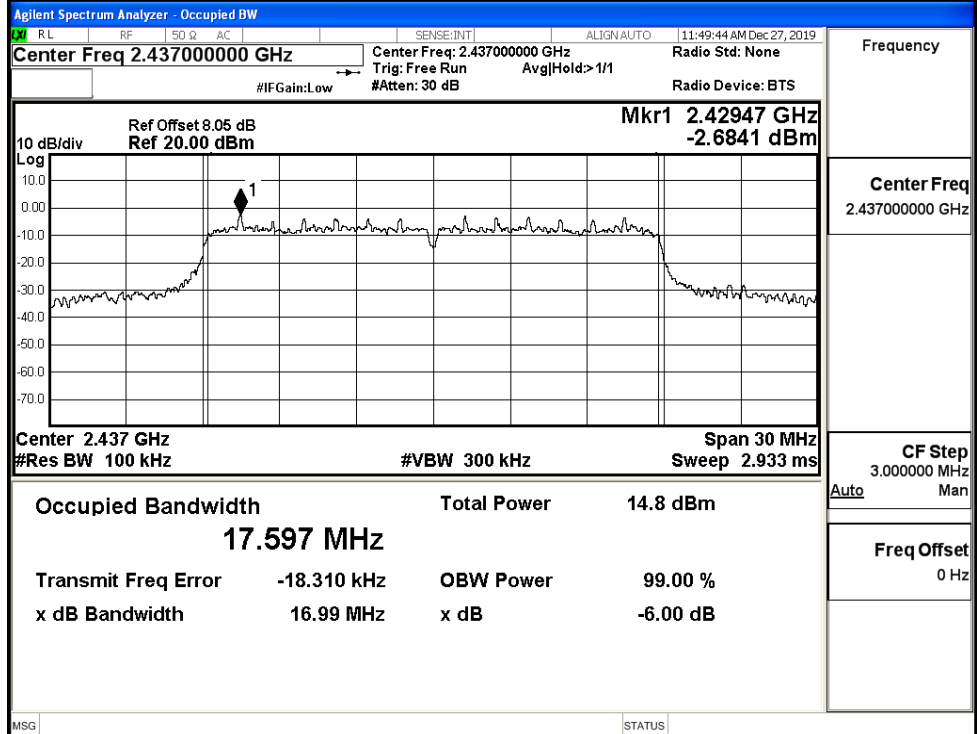
11G/HCH



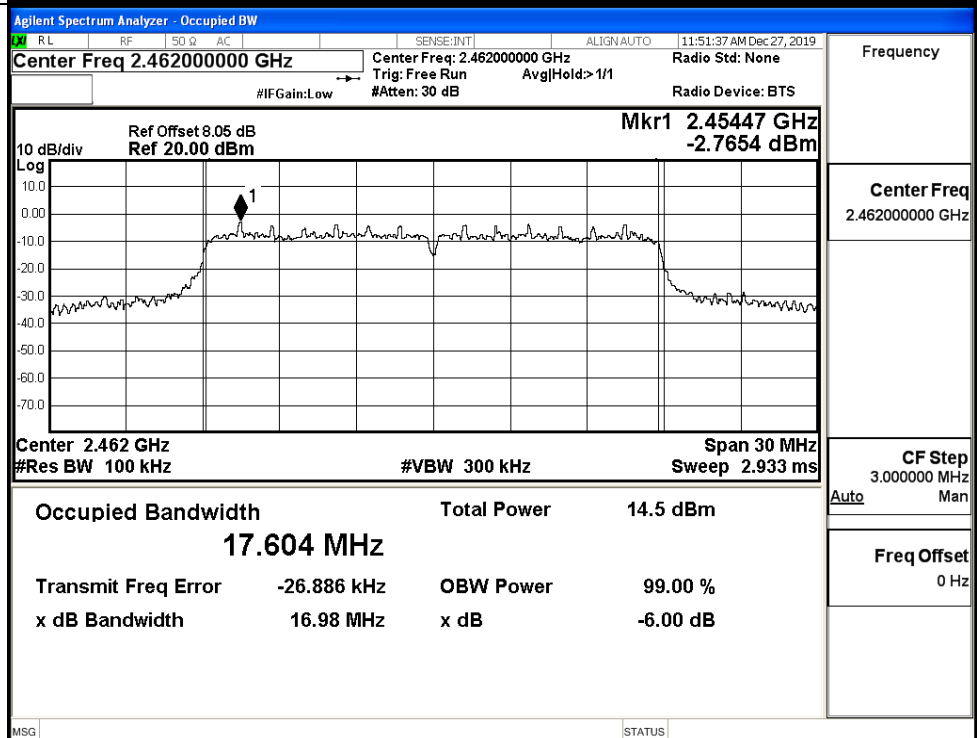
11N20SISO/LCH



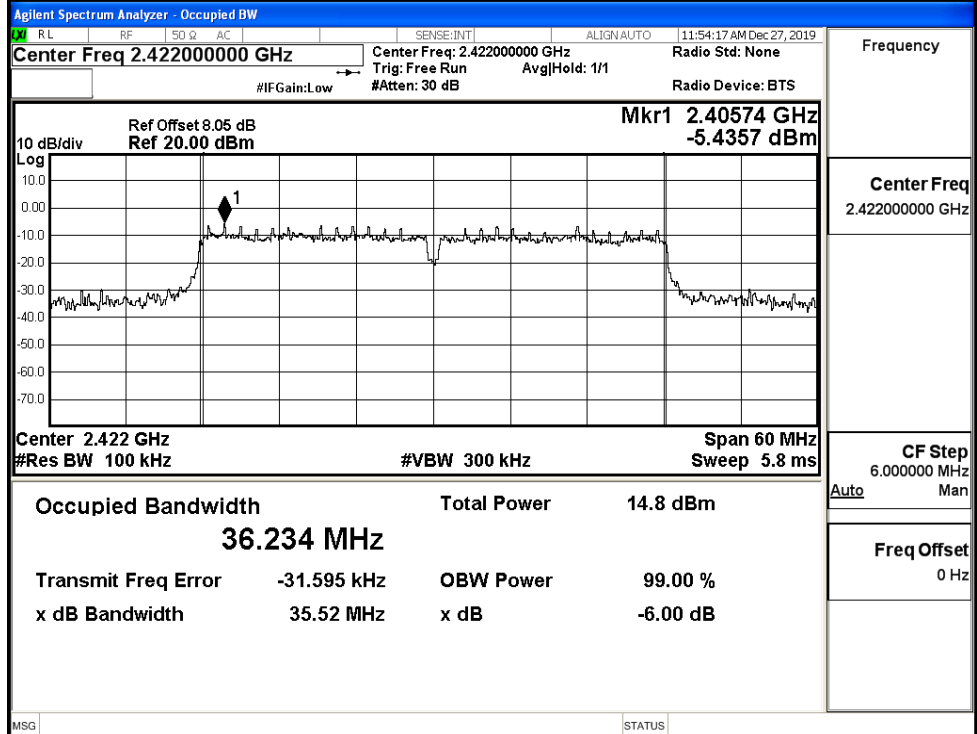
11N20SISO/MCH



11N20SISO/HCH



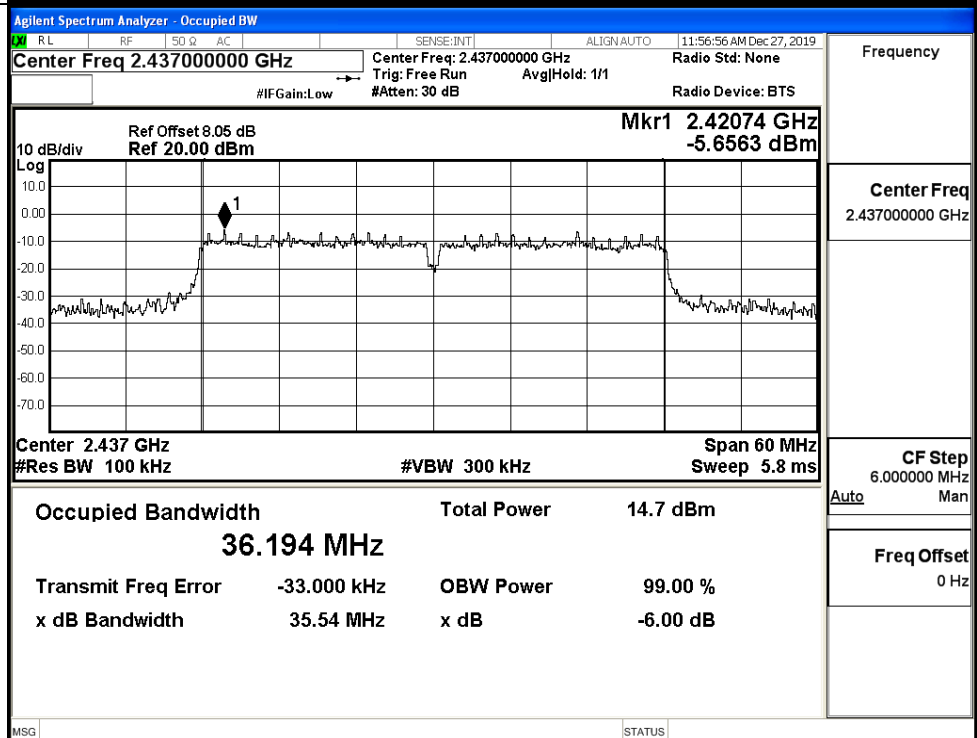
11N40SISO/LCH



Frequency

Center Freq
2.422000000 GHzCF Step
6.000000 MHz
Auto ManFreq Offset
0 Hz

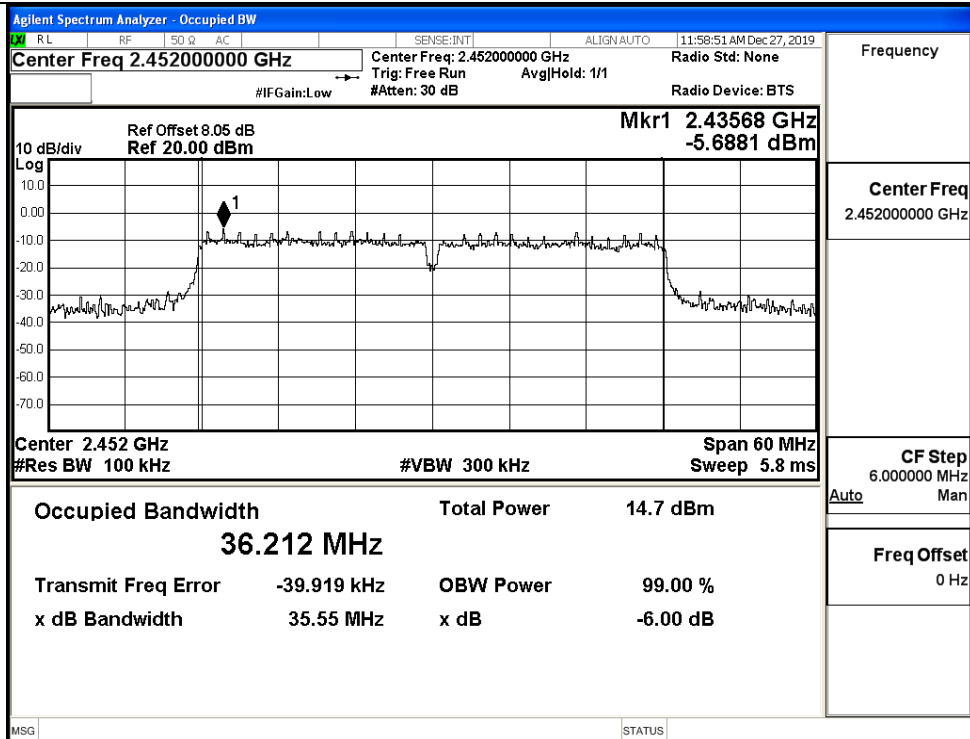
11N40SISO/MCH



Frequency

Center Freq
2.437000000 GHzCF Step
6.000000 MHz
Auto ManFreq Offset
0 Hz

11N40SISO/HCH

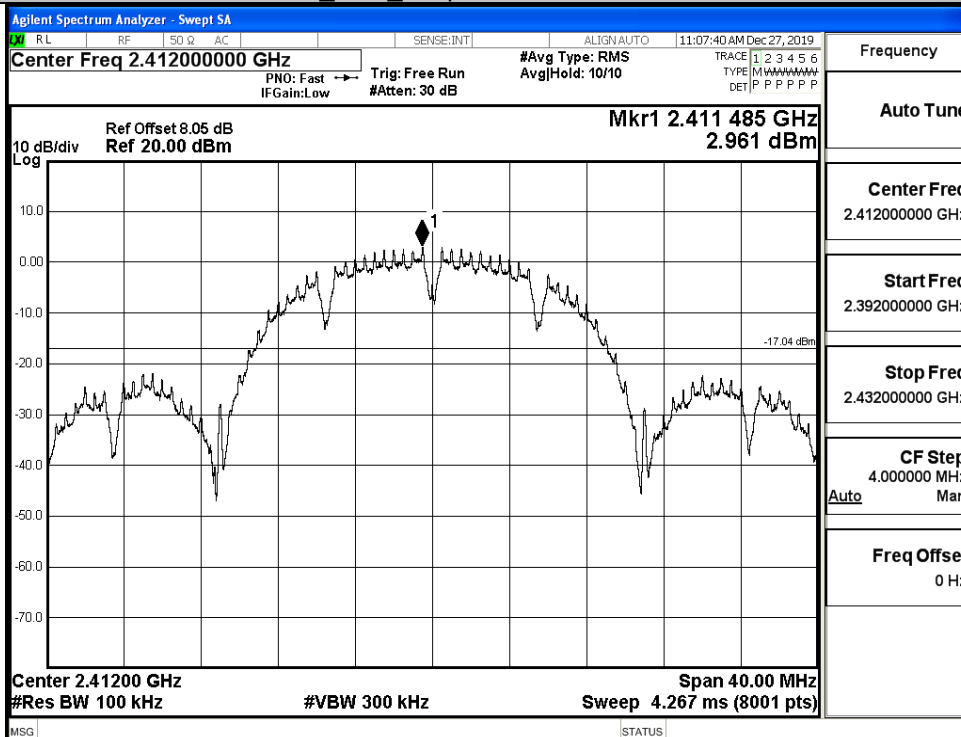


A.5 RF Conducted Spurious Emissions

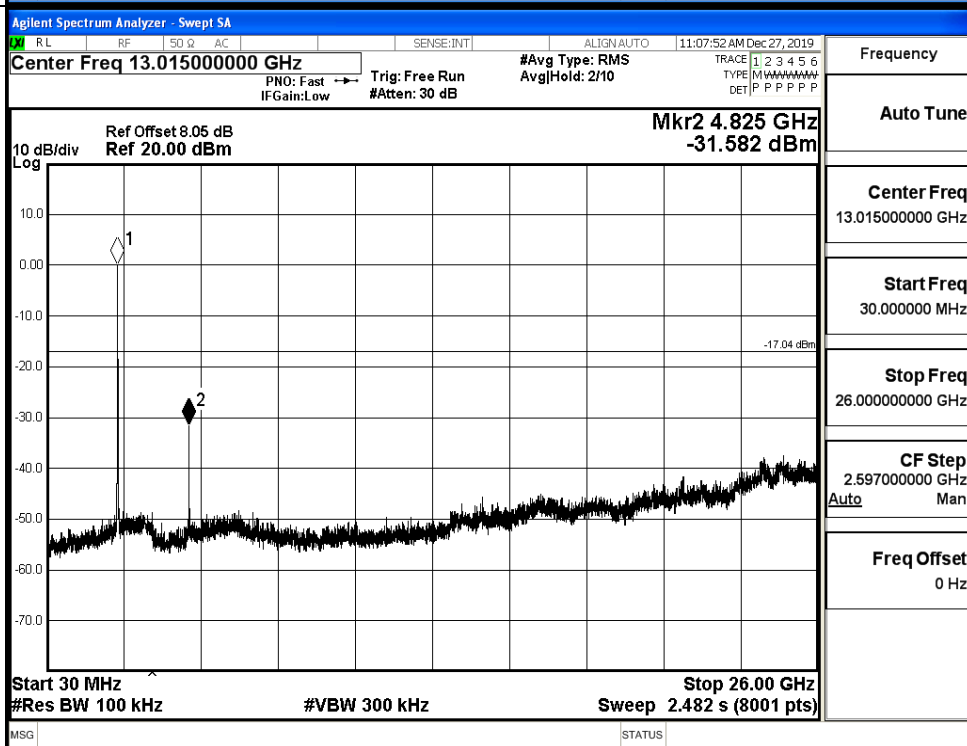
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	2.961	-31.582	-17.039	PASS
	MCH	2.625	-31.754	-17.375	PASS
	HCH	2.103	-32.318	-17.897	PASS
11G	LCH	-0.629	-37.444	-20.629	PASS
	MCH	-3.319	-37.431	-23.319	PASS
	HCH	-3.148	-38.791	-23.148	PASS
11N20 SISO	LCH	-3.396	-37.852	-23.396	PASS
	MCH	-3.07	-37.359	-23.070	PASS
	HCH	-3.283	-37.664	-23.283	PASS
11N40 SISO	LCH	-6.283	-37.800	-26.283	PASS
	MCH	-5.912	-37.398	-25.912	PASS
	HCH	-5.879	-37.347	-25.879	PASS

11B LCH Graphs

Pref/11B/LCH

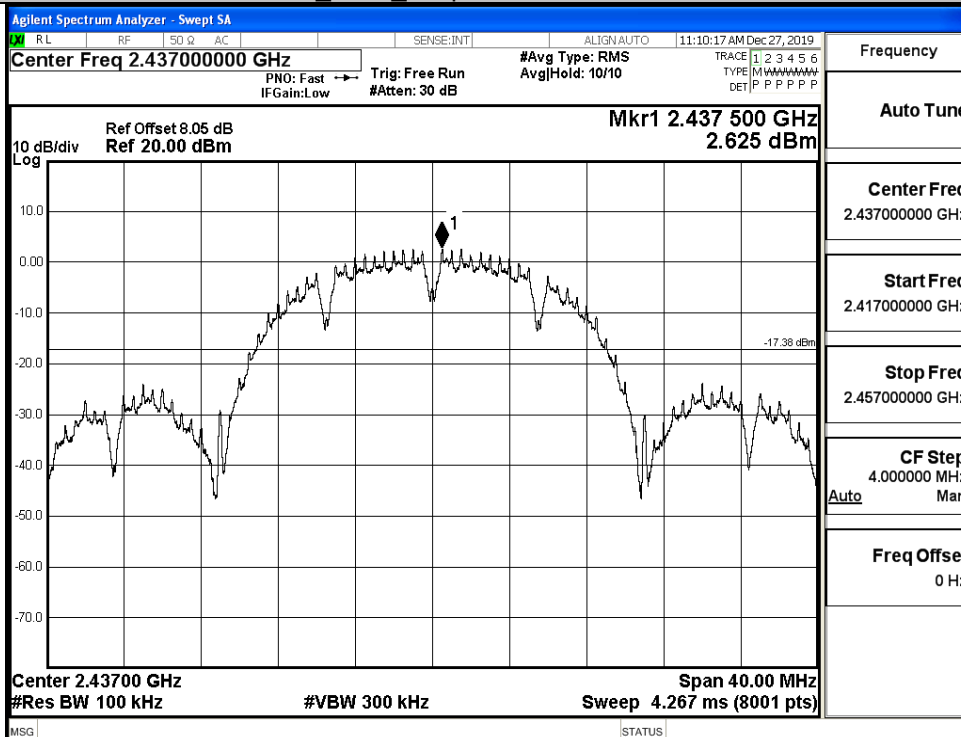


Puw/11B/LCH

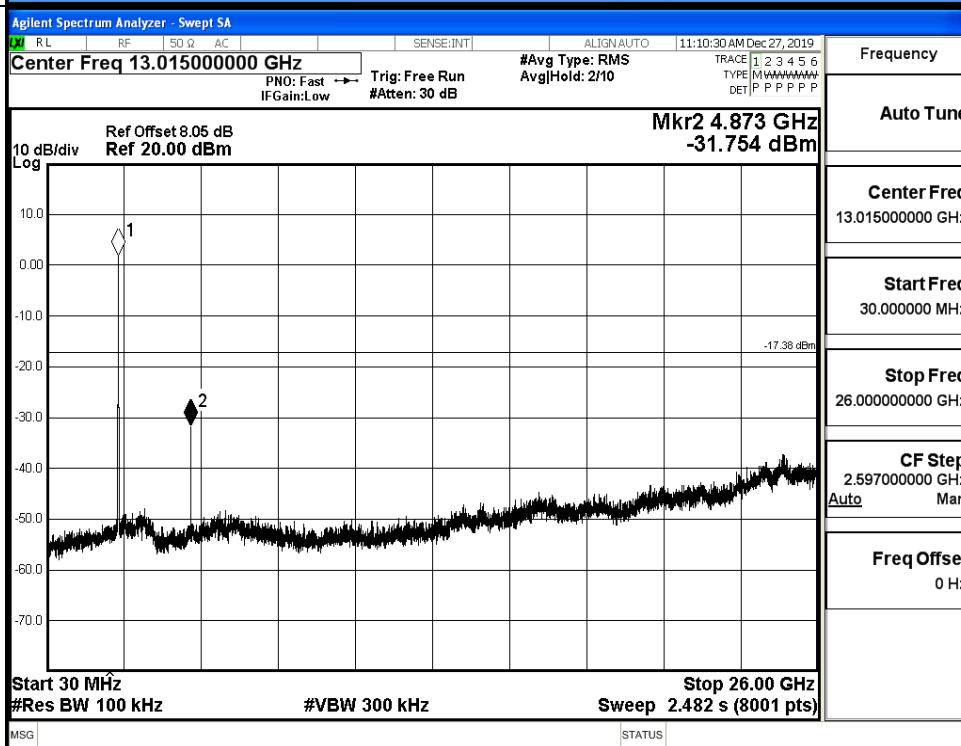


11B MCH Graphs

Pref/11B/MCH

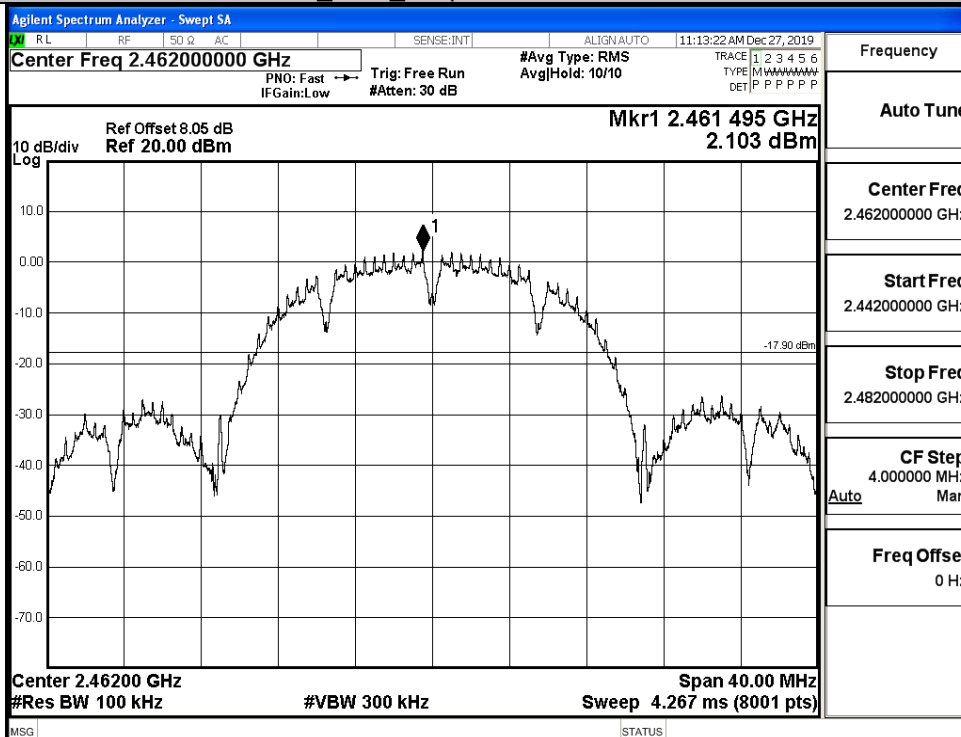


Puw/11B/MCH

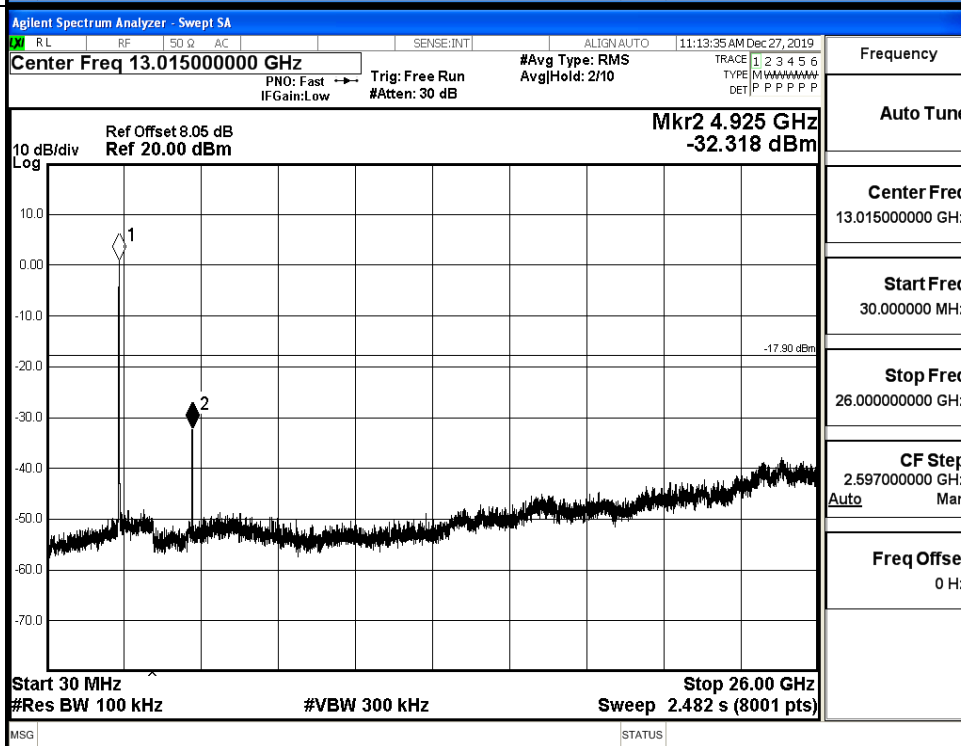


11B HCH Graphs

Pref/11B/HCH

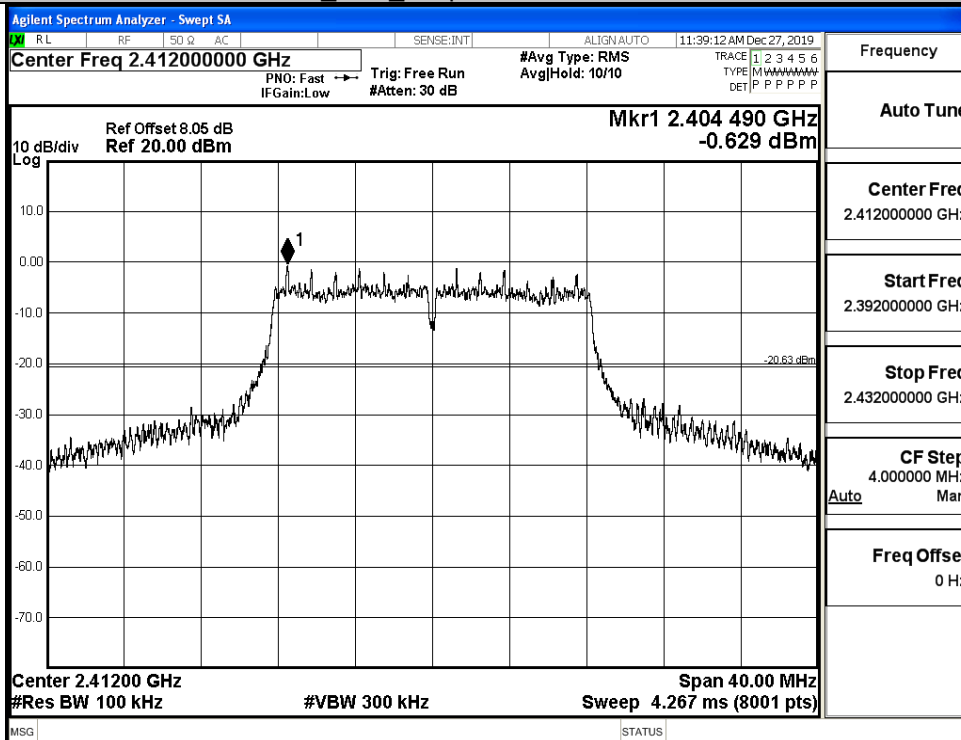


Puw/11B/HCH

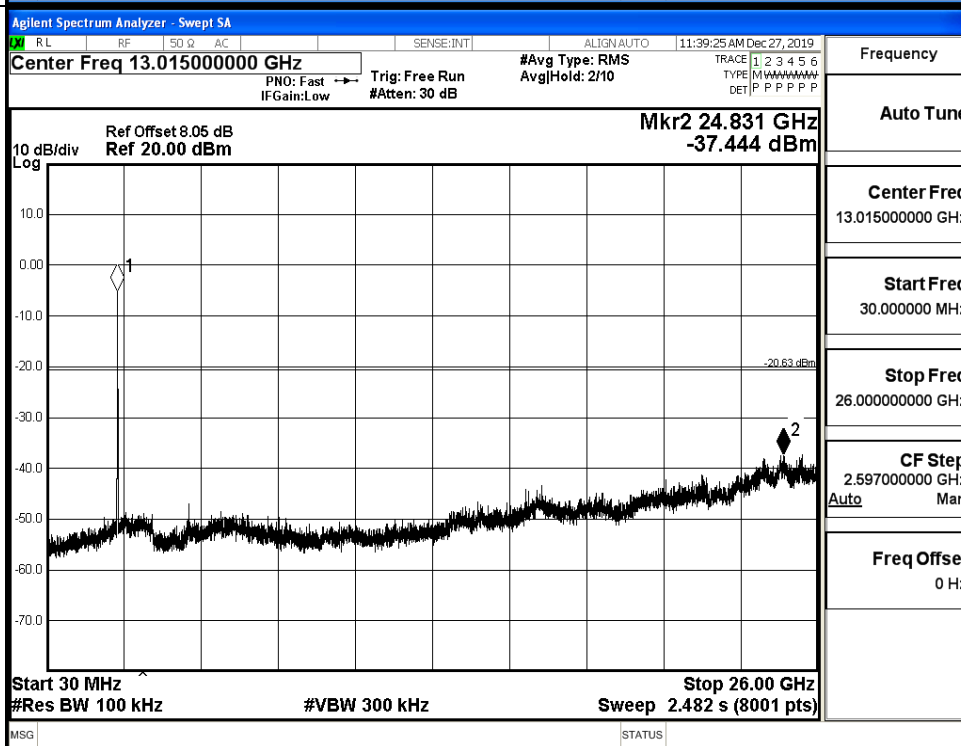


11G LCH Graphs

Pref/11G/LCH

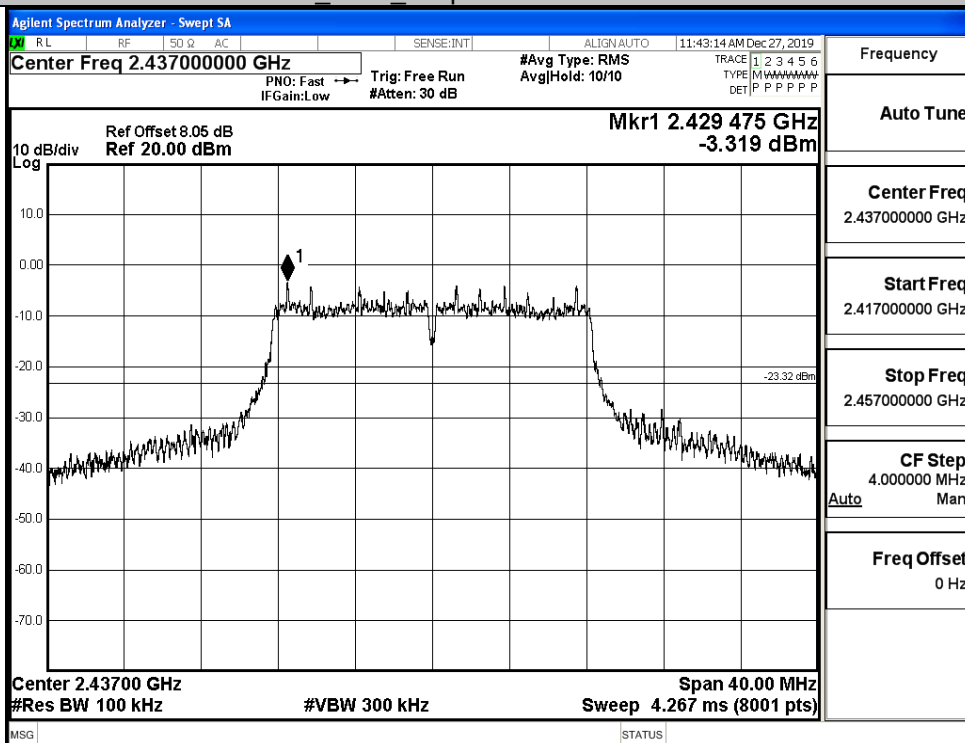


Puw/11G/LCH

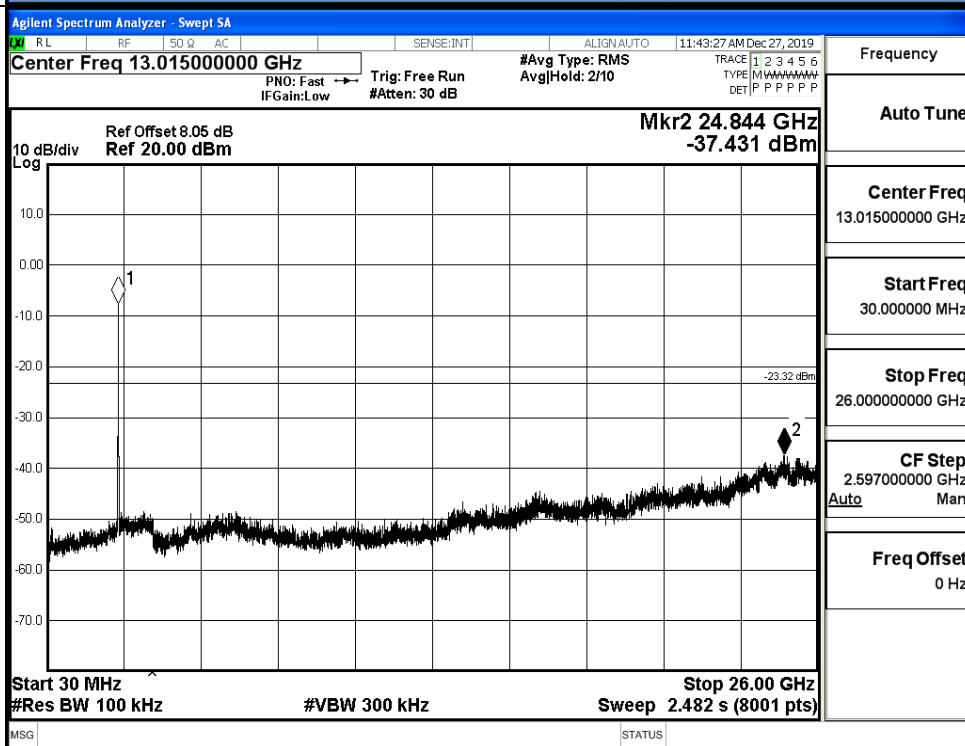


11G MCH Graphs

Pref/11G/MCH

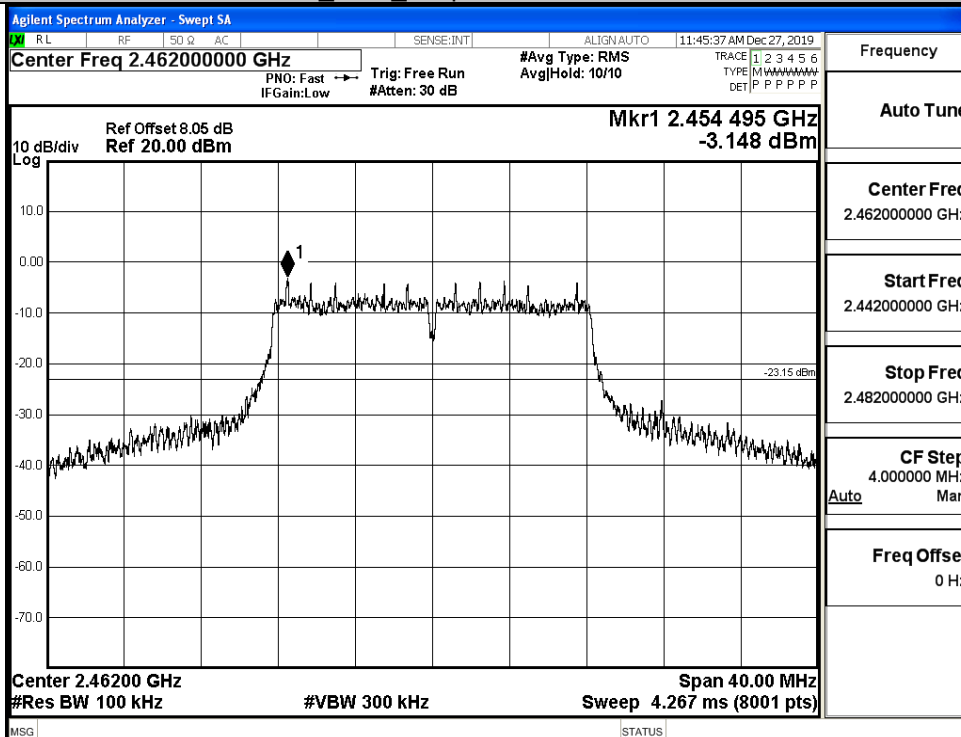


Puw/11G/MCH

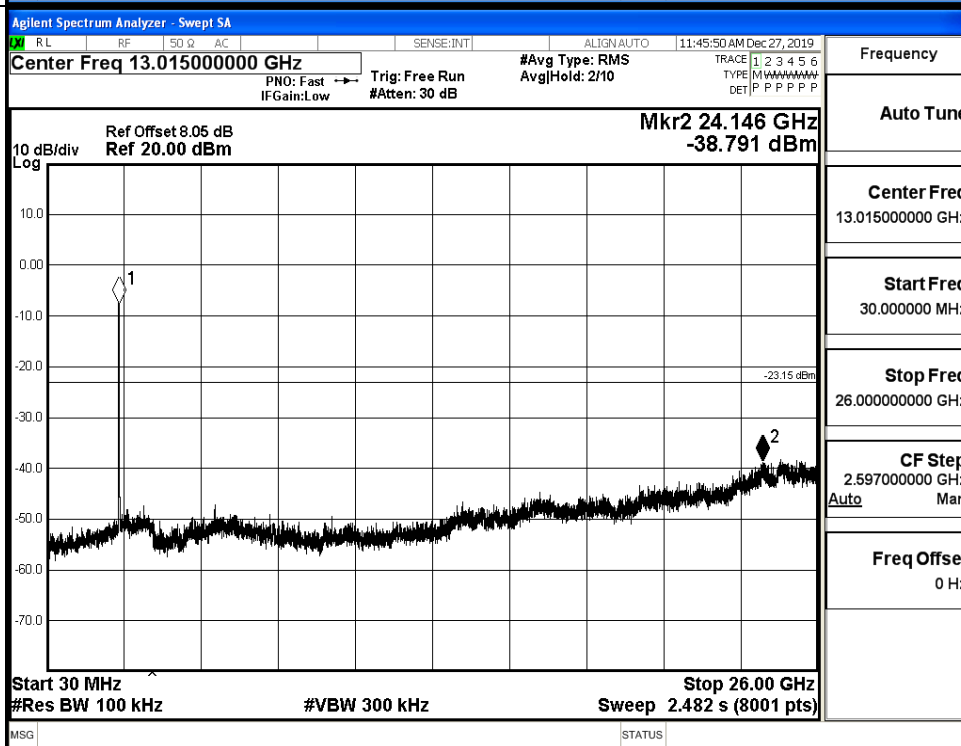


11G HCH Graphs

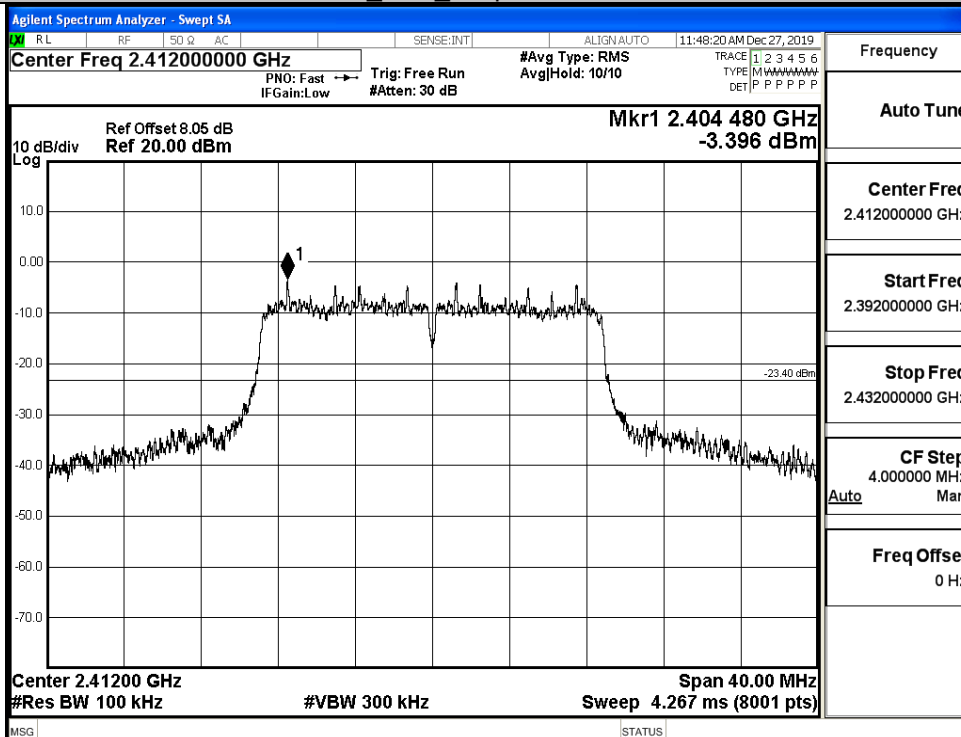
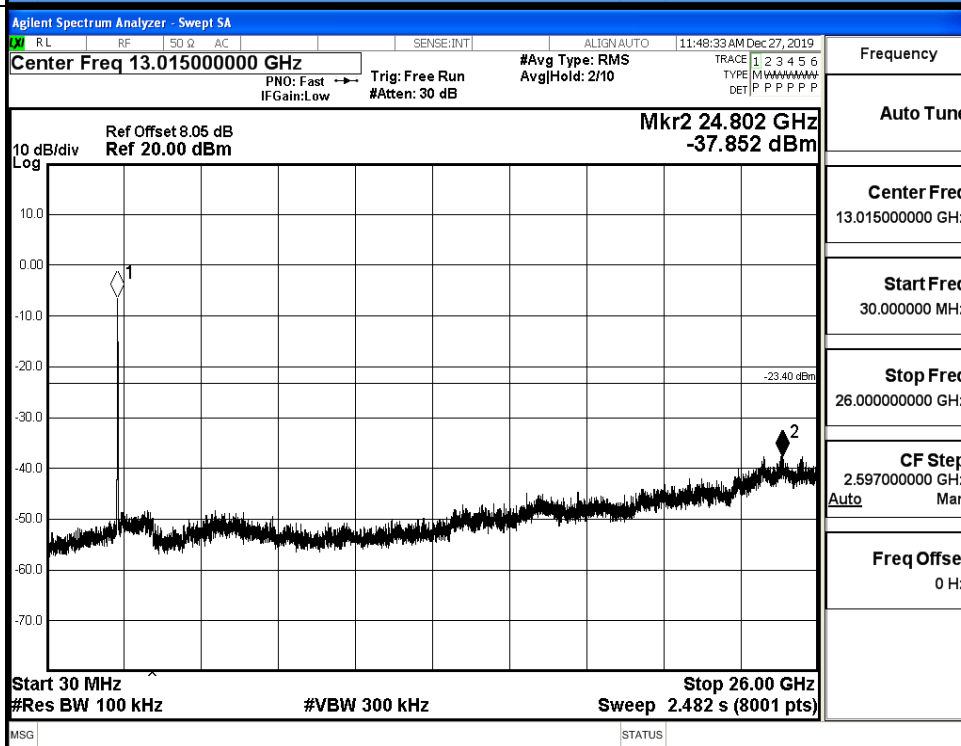
Pref/11G/HCH



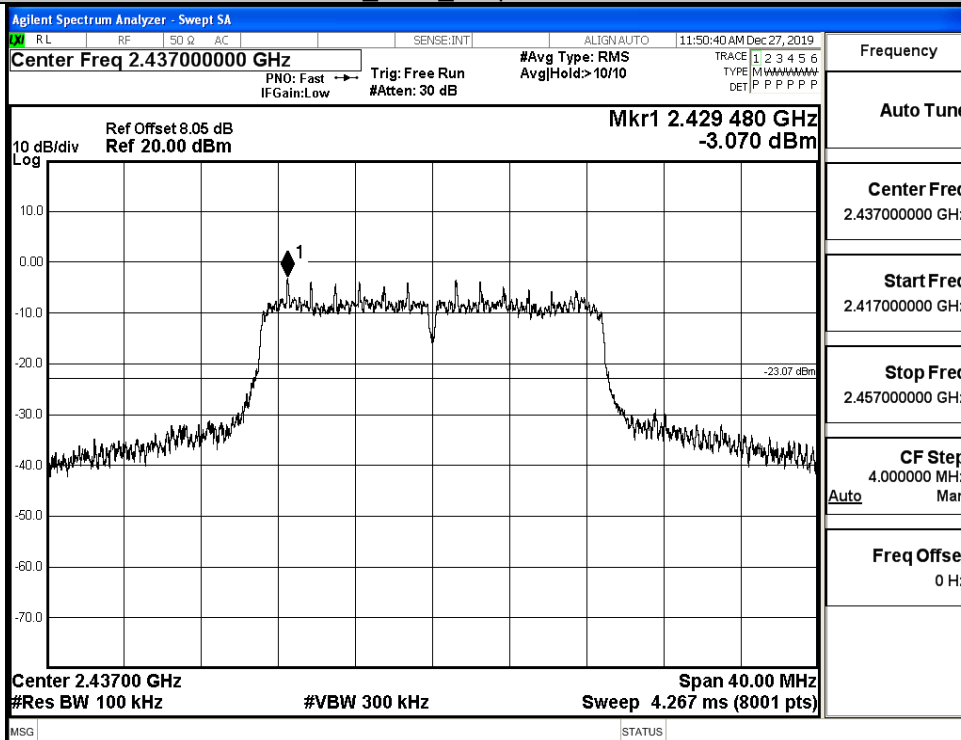
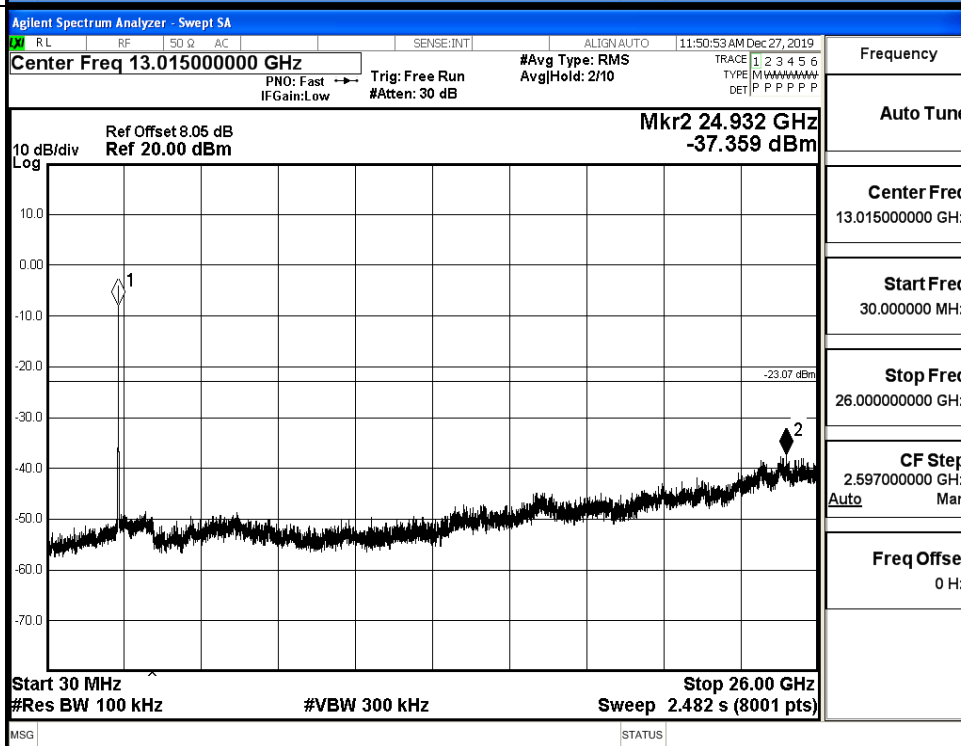
Puw/11G/HCH



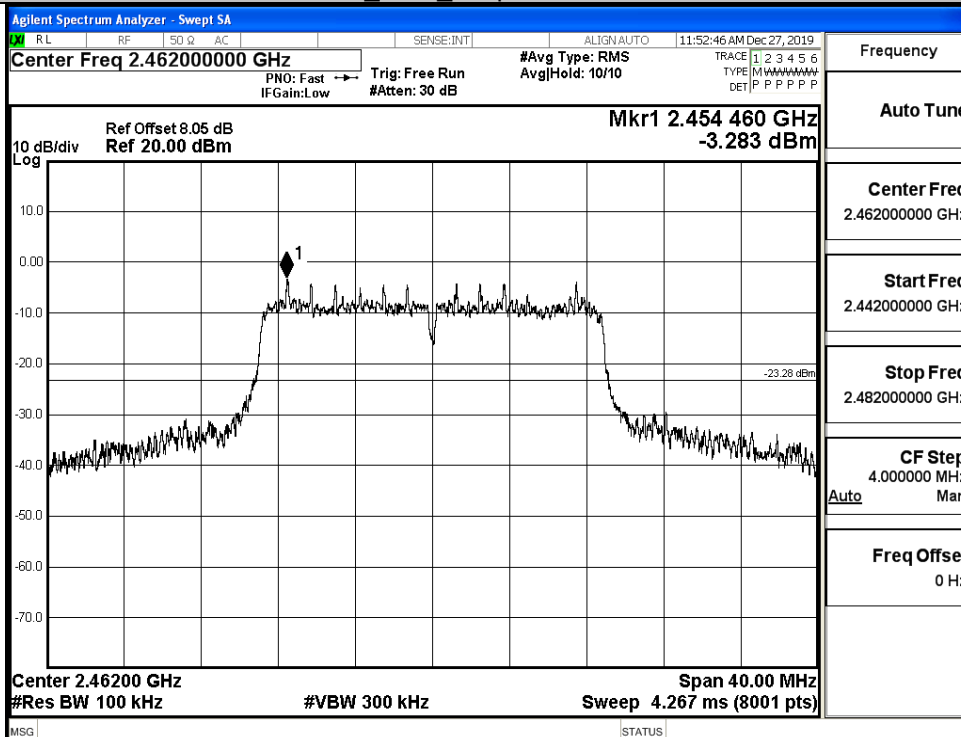
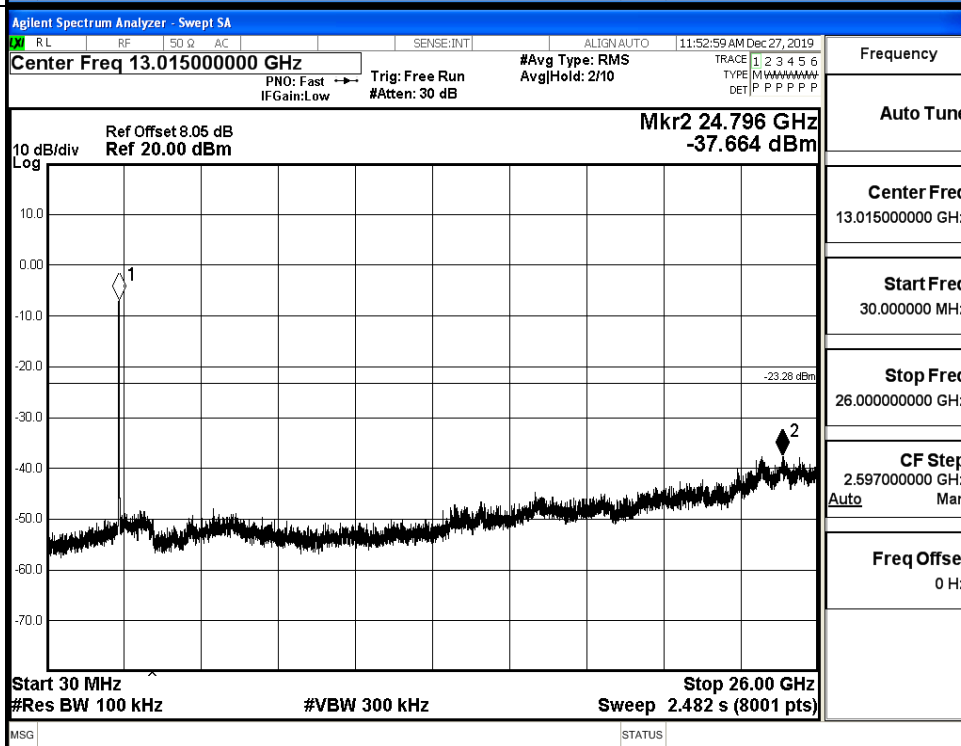
11N20SISO LCH Graphs

Pref/11N20SIS
O/LCHPuw/11N20
SISO/LCH

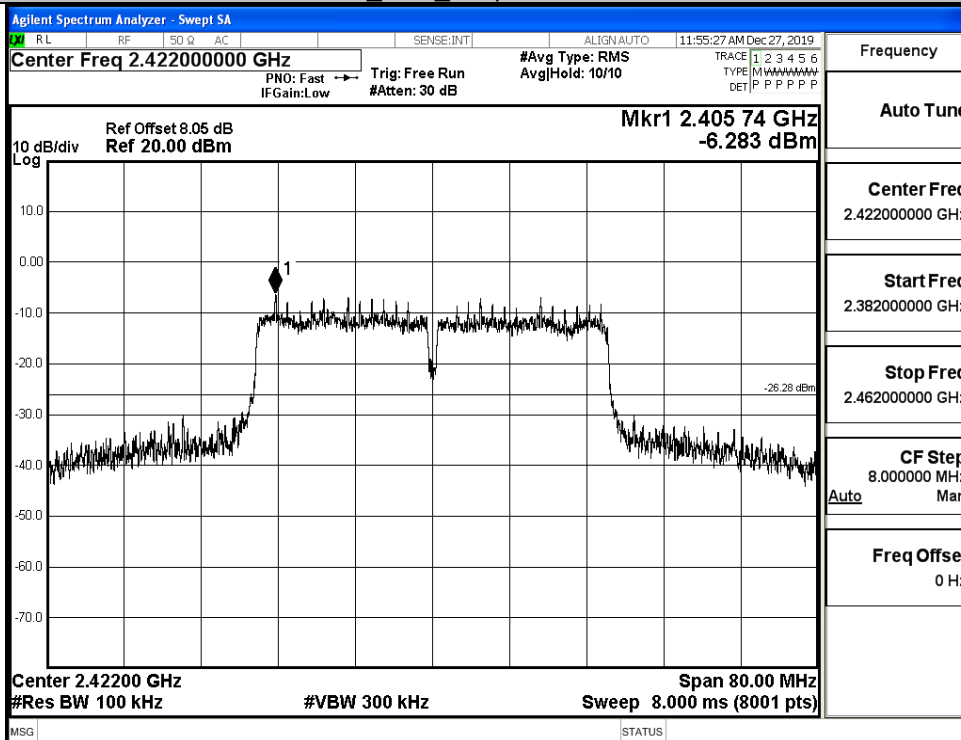
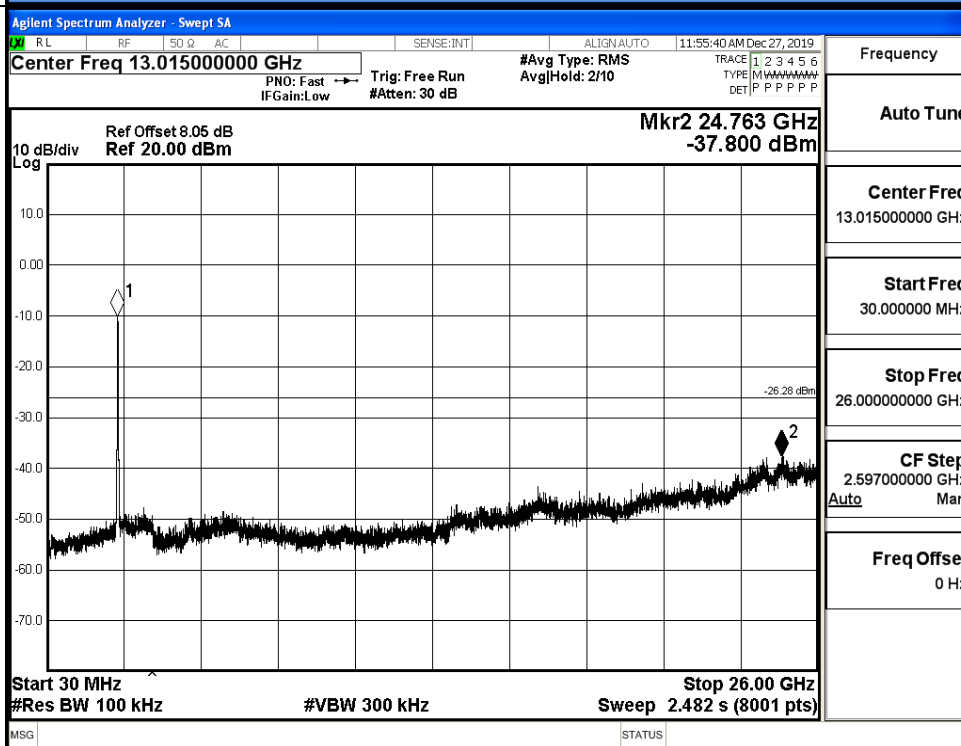
11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCHPuw/11N20
SISO/MCH

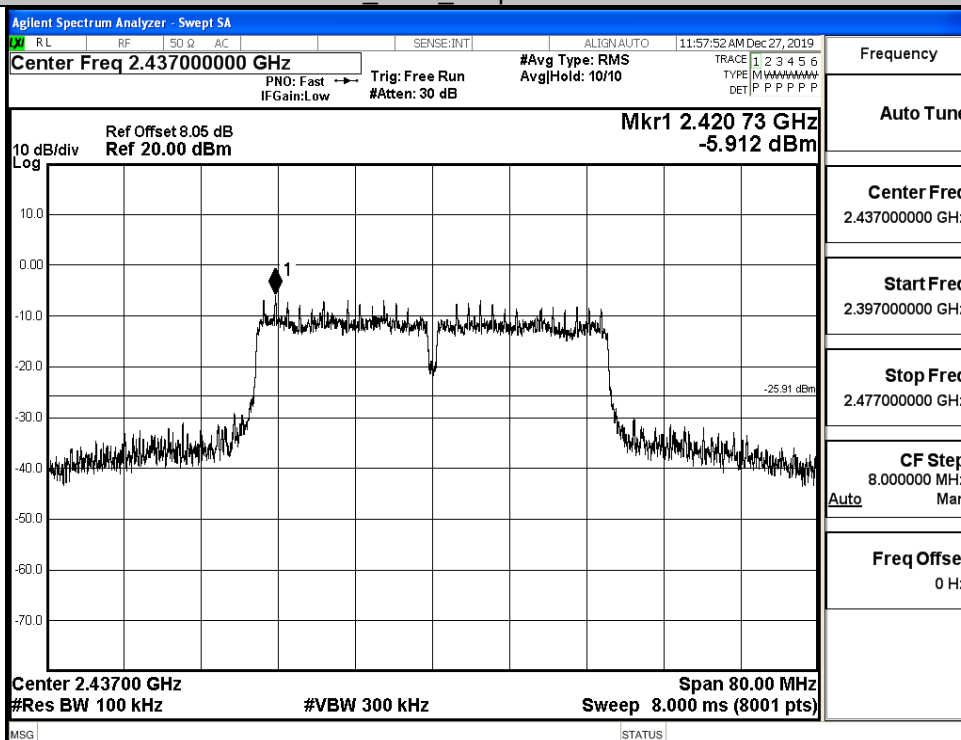
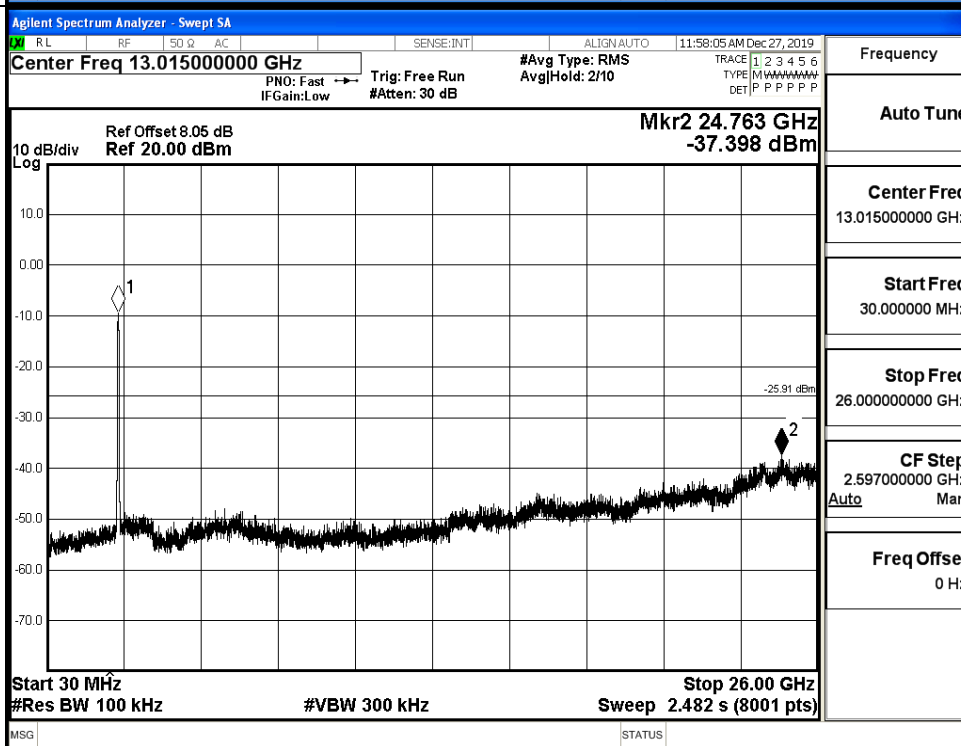
11N20SISO HCH Graphs

Pref/11N20
SISO/HCHPuw/11N20
SISO/HCH

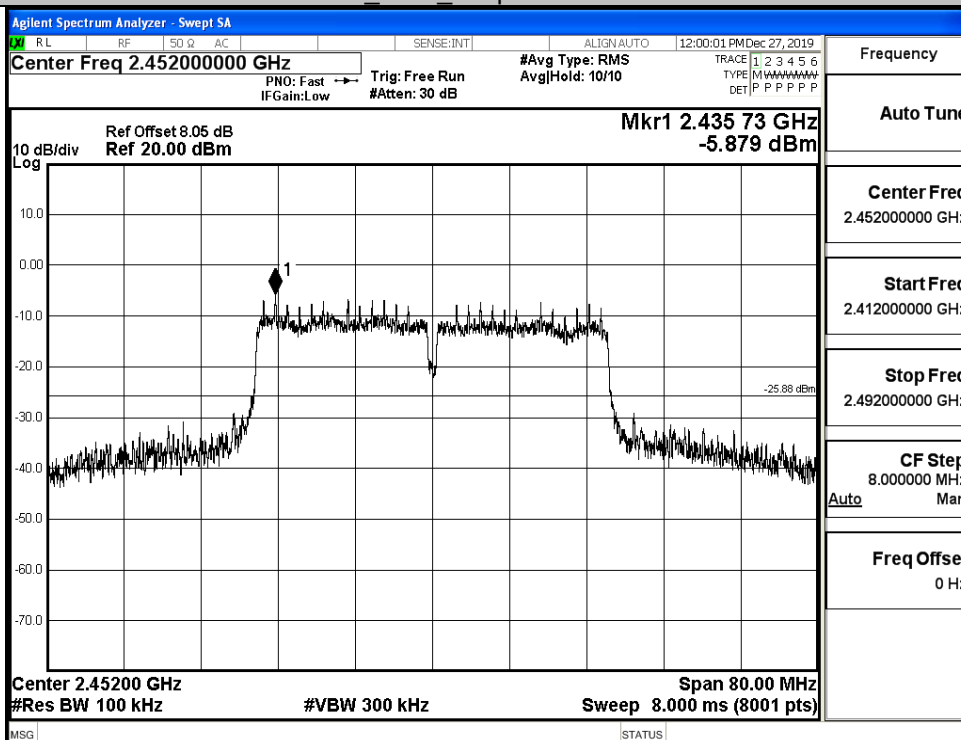
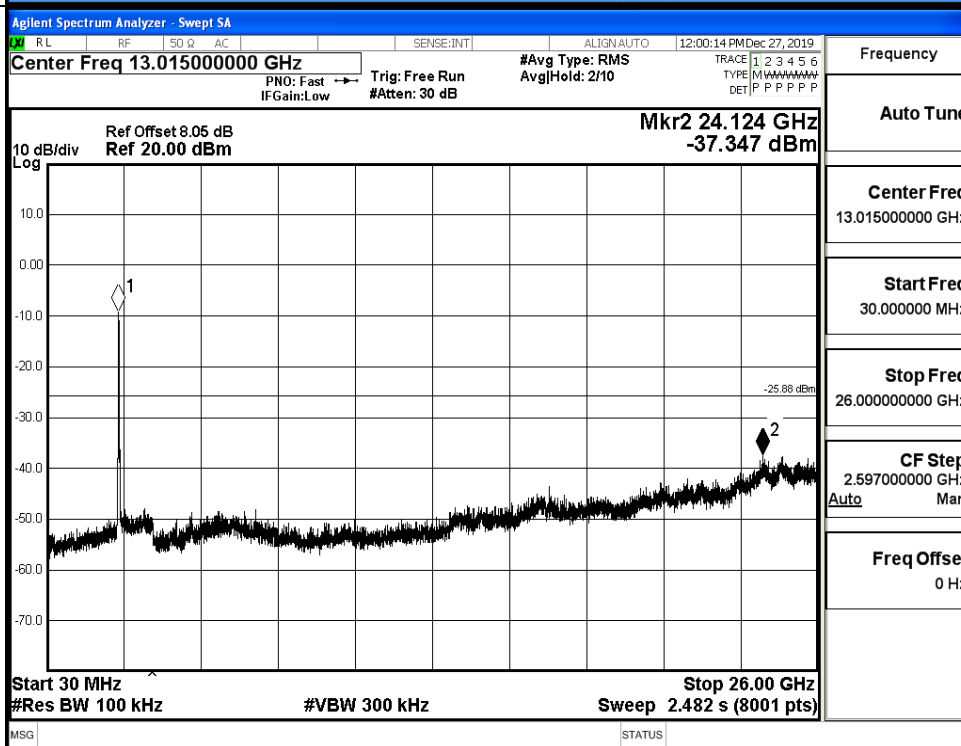
11N40SISO LCH Graphs

Pref/11N40
SISO/LCHPuw/11N40
SISO/LCH

11N40SISO_MCH_Graphs

Pref/11N40
SISO/MCHPuw/11N40
SISO/MCH

11N40SISO HCH Graphs

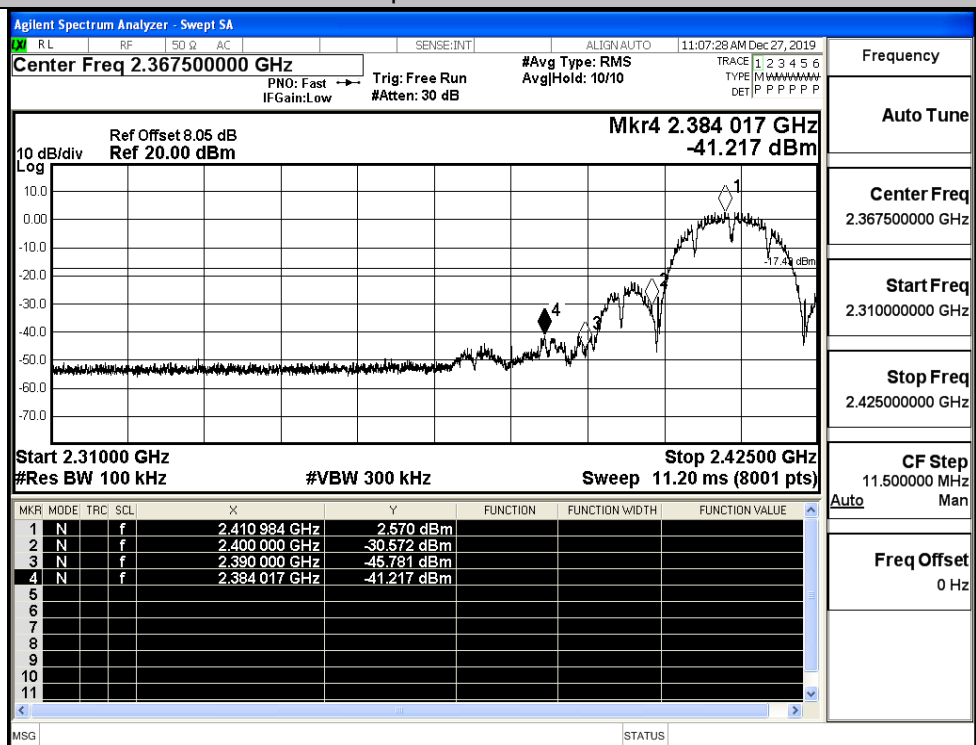
Pref/11N40
SISO/HCHPuw/11N40
SISO/HCH

A.6 Band-edge for RF Conducted Emissions

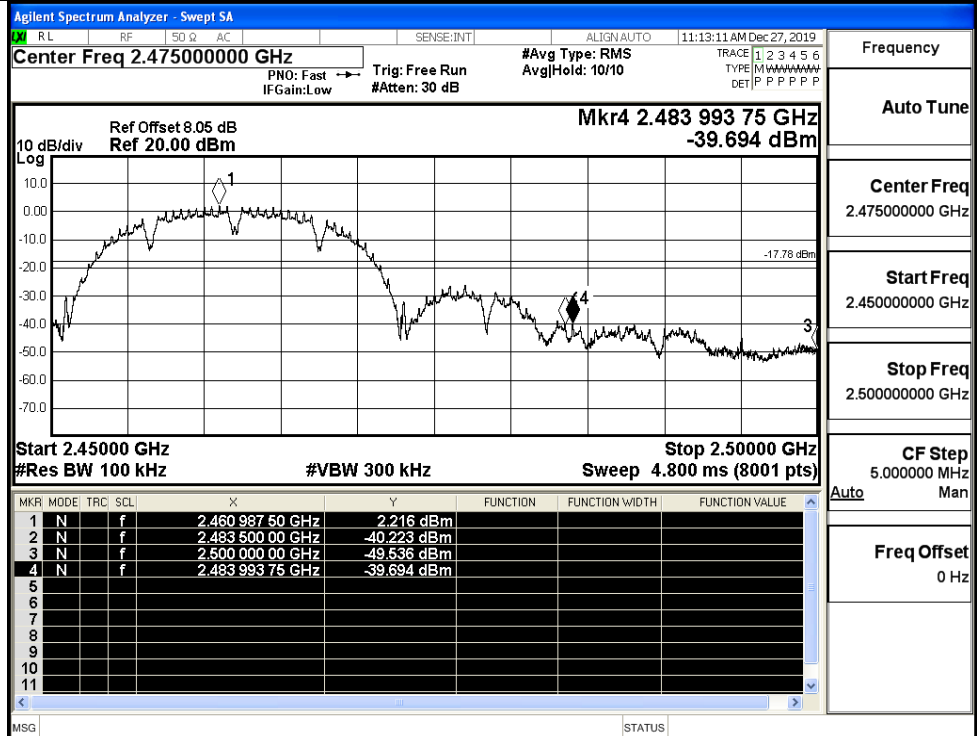
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	2.570	-41.217	-17.43	PASS
	HCH	2.216	-39.694	-17.78	PASS
11G	LCH	-1.119	-40.055	-21.12	PASS
	HCH	-3.983	-39.252	-23.98	PASS
11N20SISO	LCH	-3.393	-41.667	-23.39	PASS
	HCH	-3.666	-40.295	-23.67	PASS
11N40SISO	LCH	-6.082	-33.902	-26.08	PASS
	HCH	-5.921	-35.328	-25.92	PASS

Test Graphs

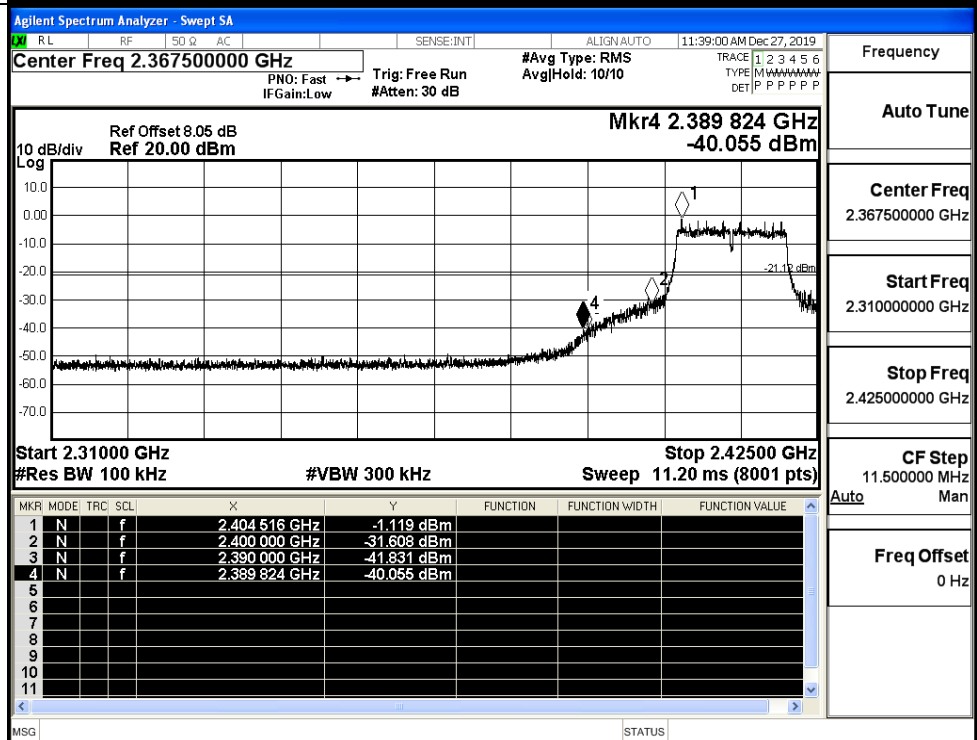
11B/LCH



11B/HCH



11G/LCH



Agilent Spectrum Analyzer - Swept SA

RL RF SO Q AC SENSE:INT ALIGN AUTO 11:45:25 AM Dec 27, 2019

Center Freq 2.475000000 GHz

PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS Avg/Hold: 10/10 TRACE 1 2 3 4 5 6 TYPE [M] WWWWMMW DET [P] P P P P P P

Mkr4 2.484 125 00 GHz -39.252 dBm

Ref Offset 8.05 dB Ref 20.00 dBm

10 dB/div Log

Start 2.45000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.50000 GHz Stop 2.50000 MHz CF Step 5.000000 MHz Man

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		2.458 225 00 GHz	-3.983 dBm			
2	N	f		2.483 500 00 GHz	-41.558 dBm			
3	N	f		2.500 000 00 GHz	-52.126 dBm			
4	N	f		2.484 125 00 GHz	-39.252 dBm			
5								
6								
7								
8								
9								
10								
11								

Auto Tune

Frequency 2.475000000 GHz

Auto Tune

Center Freq 2.475000000 GHz

Start Freq 2.450000000 GHz

Stop Freq 2.500000000 GHz

CF Step 5.000000 MHz Man

Freq Offset 0 Hz

Agilent Spectrum Analyzer - Swept SA

# R L	R F	S O Q A C	SENSE:INT	ALIGN AUTO	11:48:08 AM Dec 27, 2019
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Center Freq 2.367500000 GHz

PNO: Fast → Trig: Free Run
IF Gain: Low #Atten: 30 dB

#Avg Type: RMS AvgHold: 10/10 TRACE 1 2 3 4 5 6
TYPE [M] W X Y Z DET P P P P P P

Ref Offset 8.05 dB
Ref 20.00 dBm

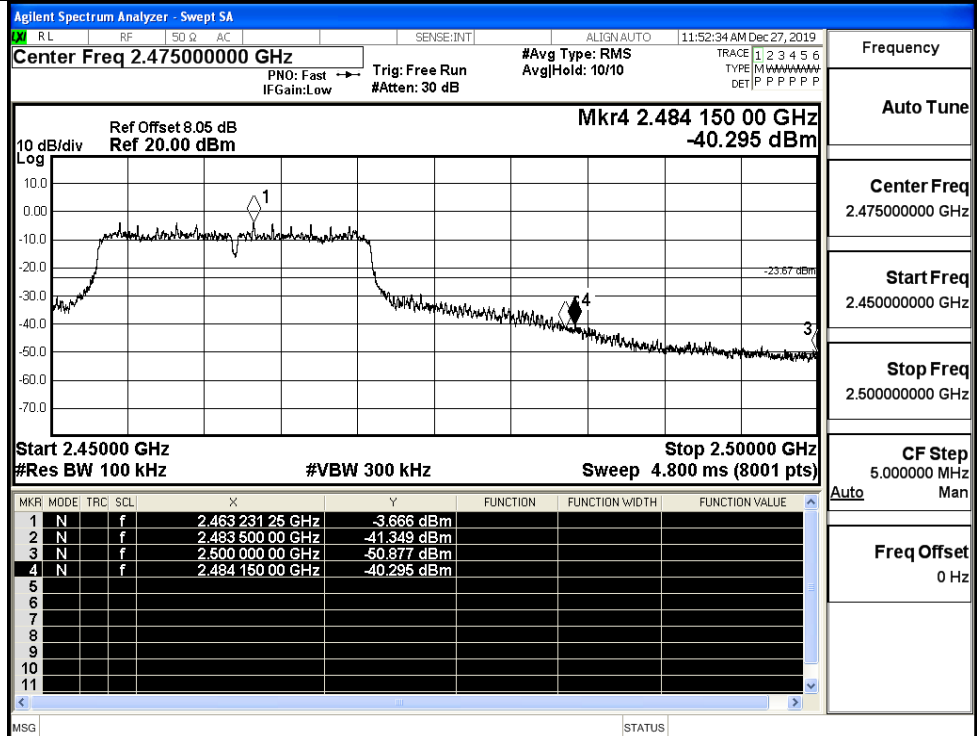
Mkr4 2.389 925 GHz
-41.667 dBm

Start 2.31000 GHz Sweep Stop 2.42500 GHz
#Res BW 100 kHz #VBW 300 kHz

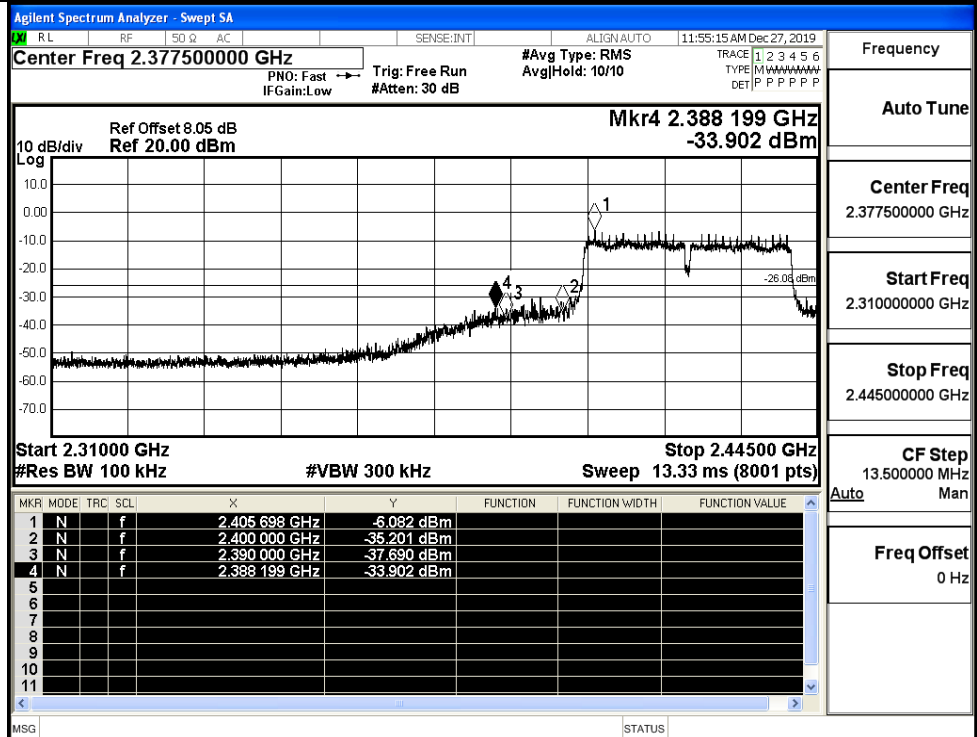
MKR MODE	TRE SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1 N	f	2.404 473 GHz	-3.393 dBm			
2 N	f	2.400 000 GHz	-35.325 dBm			
3 N	f	2.390 000 GHz	-44.020 dBm			
4 N	f	2.389 925 GHz	-41.667 dBm			
5						
6						
7						
8						
9						
10						
11						

Freq Offset 0 Hz

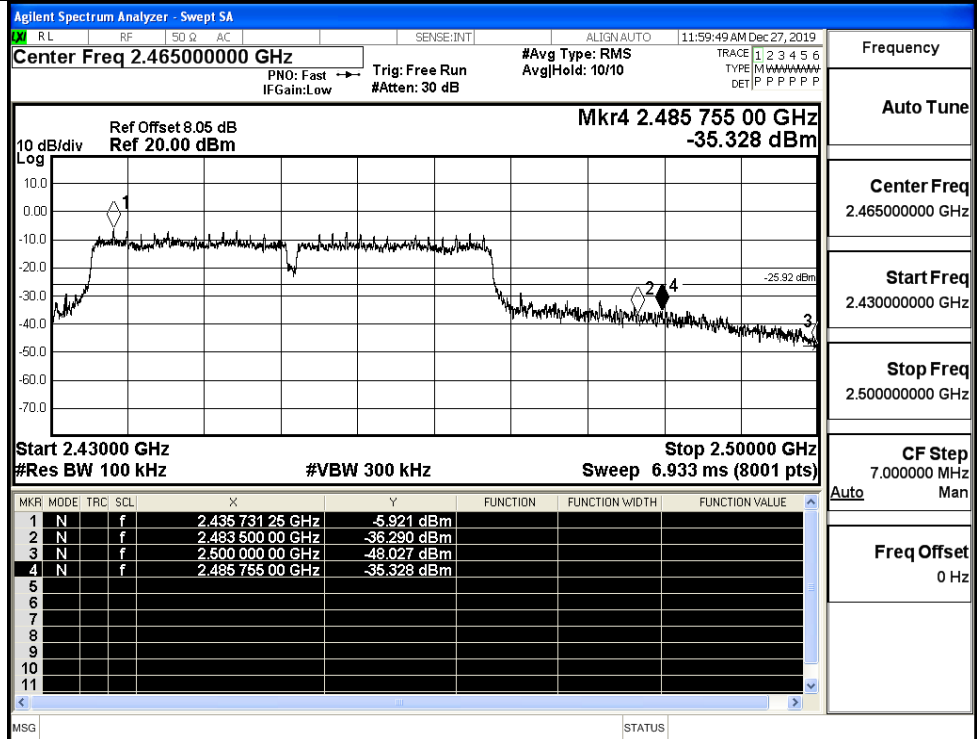
11N20SISO/HCH



11N40SISO/LCH



11N40SISO/HCH

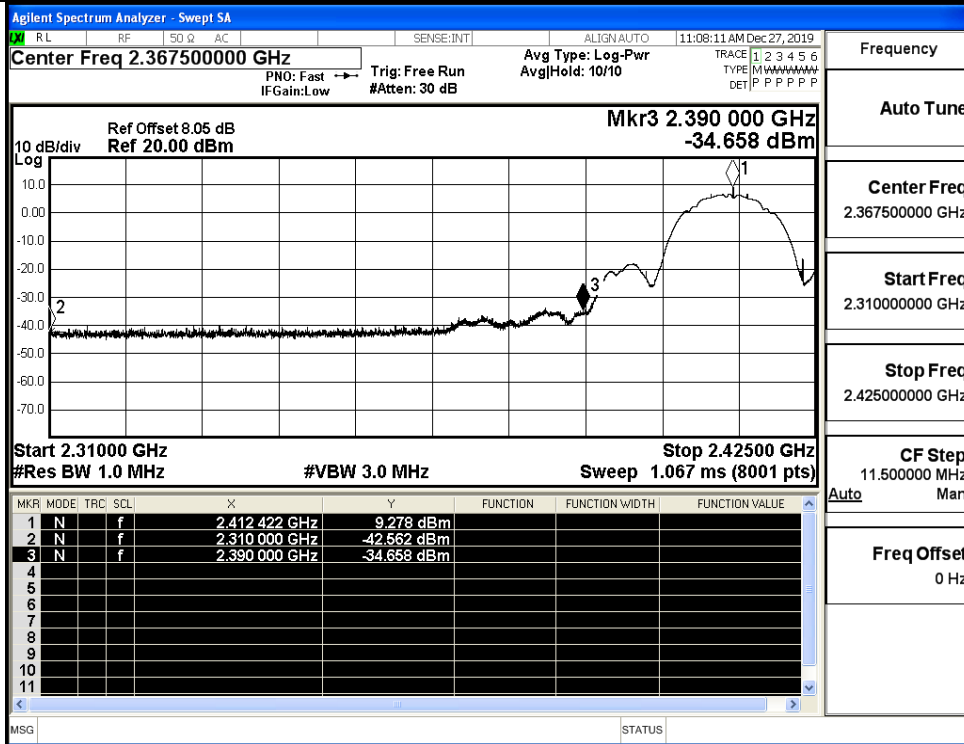


A.7 Restrict-band band-edge measurements

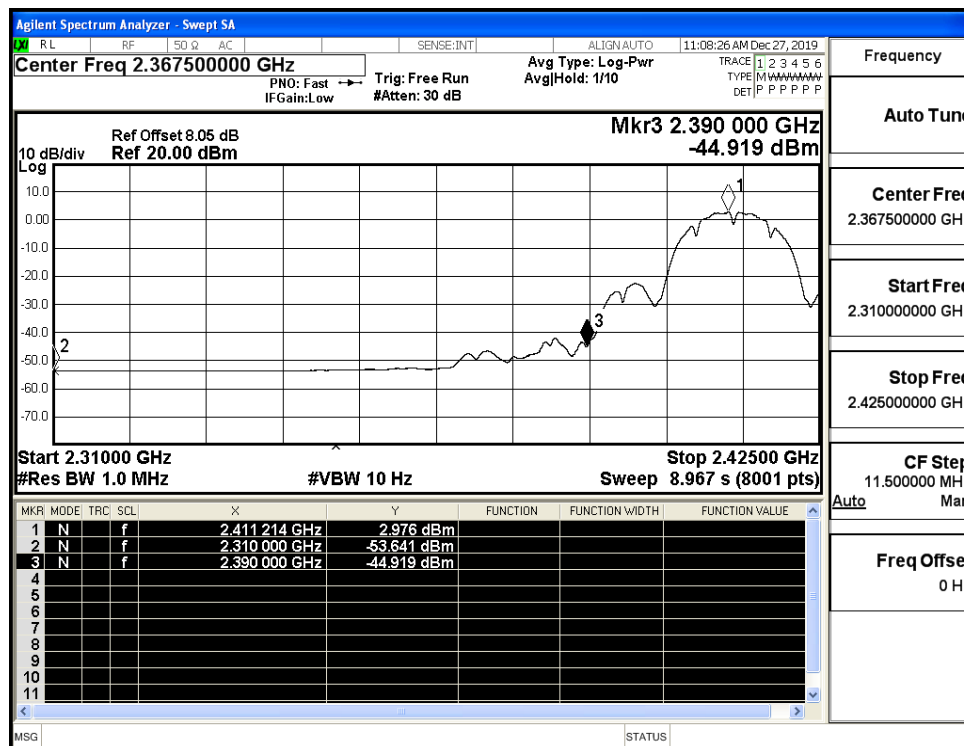
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-42.56	2.0	0	54.67	PEAK	74	PASS
	2412	Ant1	2310.0	-53.64	2.0	0	43.59	AV	54	PASS
	2412	Ant1	2390.0	-34.66	2.0	0	62.57	PEAK	74	PASS
	2412	Ant1	2390.0	-44.92	2.0	0	52.31	AV	54	PASS
	2462	Ant1	2483.5	-43.22	2.0	0	54.01	PEAK	74	PASS
	2462	Ant1	2483.5	-52.78	2.0	0	44.45	AV	54	PASS
	2462	Ant1	2500.0	-42.80	2.0	0	54.43	PEAK	74	PASS
	2462	Ant1	2500.0	-52.68	2.0	0	44.55	AV	54	PASS
11G	2412	Ant1	2310.0	-42.33	2.0	0	54.90	PEAK	74	PASS
	2412	Ant1	2310.0	-53.44	2.0	0	43.79	AV	54	PASS
	2412	Ant1	2390.0	-28.74	2.0	0	68.49	PEAK	74	PASS
	2412	Ant1	2390.0	-44.97	2.0	0	52.26	AV	54	PASS
	2462	Ant1	2483.5	-27.11	2.0	0	70.12	PEAK	74	PASS
	2462	Ant1	2483.5	-43.55	2.0	0	53.68	AV	54	PASS
	2462	Ant1	2500.0	-39.93	2.0	0	57.30	PEAK	74	PASS
	2462	Ant1	2500.0	-52.25	2.0	0	44.98	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-43.54	2.0	0	53.69	PEAK	74	PASS
	2412	Ant1	2310.0	-53.60	2.0	0	43.63	AV	54	PASS
	2412	Ant1	2390.0	-29.20	2.0	0	68.03	PEAK	74	PASS
	2412	Ant1	2390.0	-45.99	2.0	0	51.24	AV	54	PASS
	2462	Ant1	2483.5	-41.82	2.0	0	55.41	PEAK	74	PASS
	2462	Ant1	2483.5	-52.95	2.0	0	44.28	AV	54	PASS
	2462	Ant1	2500.0	-42.77	2.0	0	54.46	PEAK	74	PASS
	2462	Ant1	2500.0	-52.81	2.0	0	44.42	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-43.63	2.0	0	53.6	PEAK	74	PASS
	2422	Ant1	2310.0	-53.78	2.0	0	43.45	AV	54	PASS

	2422	Ant1	2390.0	-42.54	2.0	0	54.69	PEAK	74	PASS
	2422	Ant1	2390.0	-52.62	2.0	0	44.61	AV	54	PASS
	2452	Ant1	2483.5	-41.55	2.0	0	55.68	PEAK	74	PASS
	2452	Ant1	2483.5	-52.58	2.0	0	44.65	AV	54	PASS
	2452	Ant1	2500.0	-41.99	2.0	0	55.24	PEAK	74	PASS
	2452	Ant1	2500.0	-52.76	2.0	0	44.47	AV	54	PASS

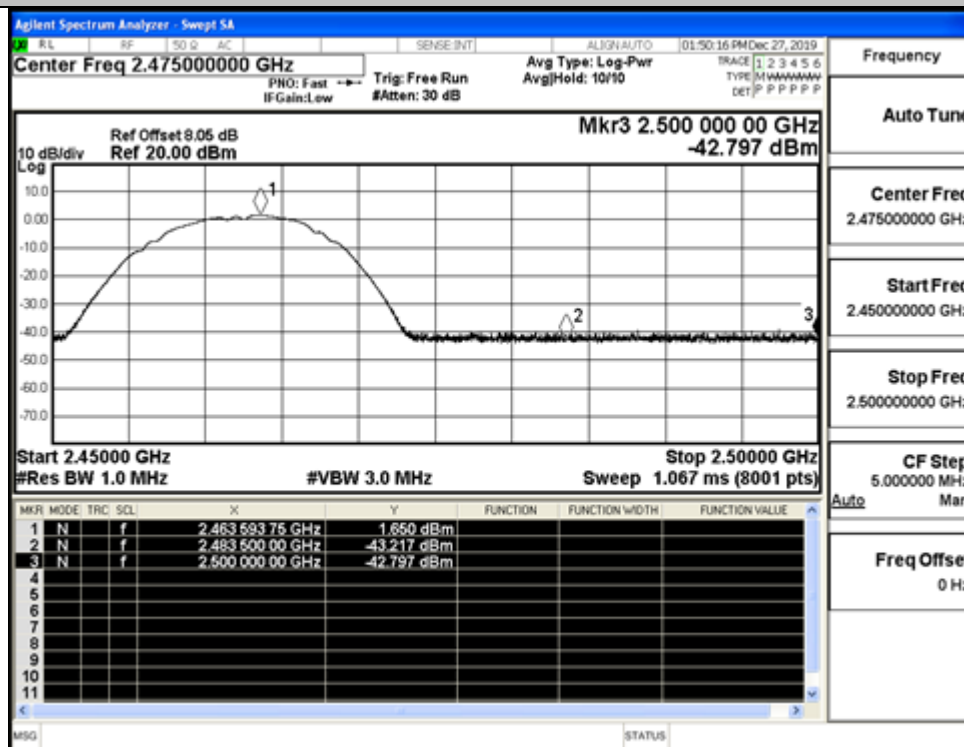
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



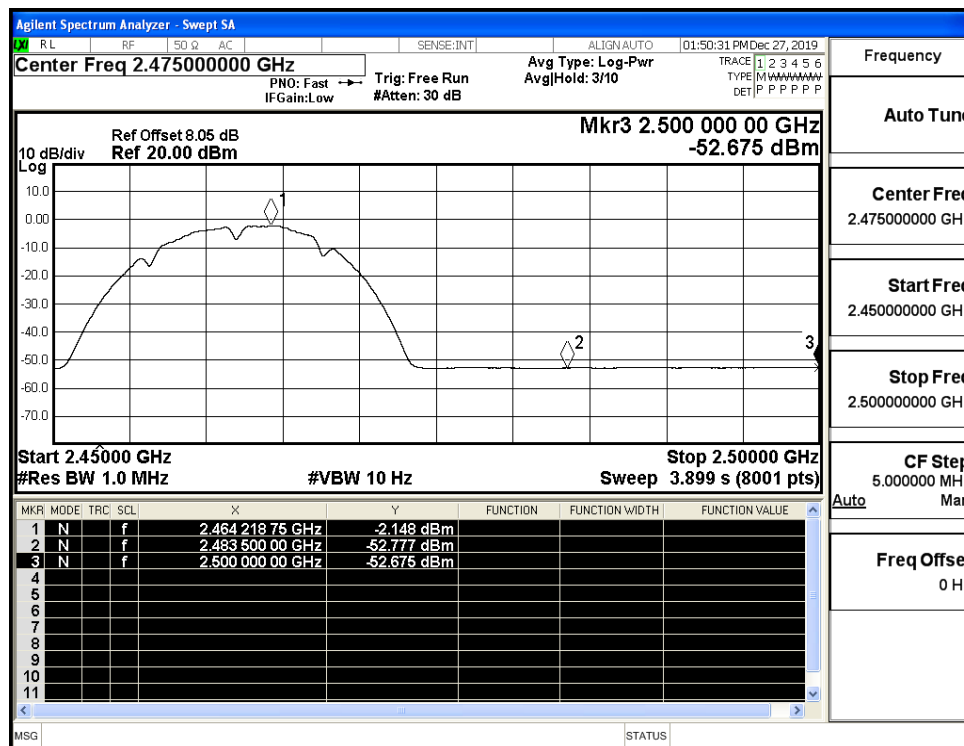
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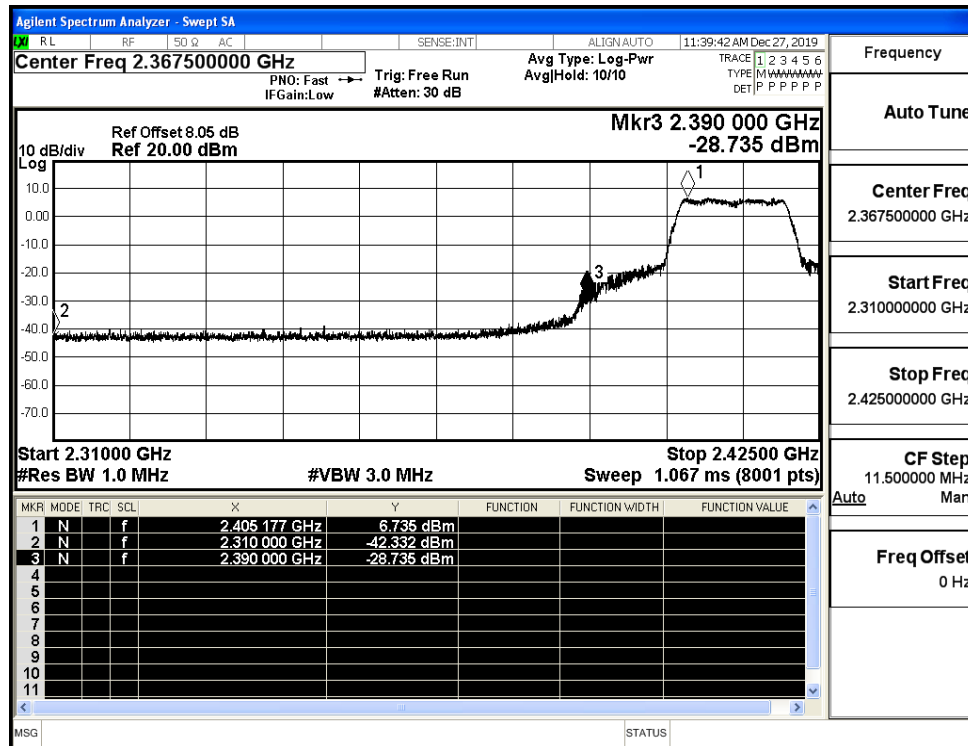
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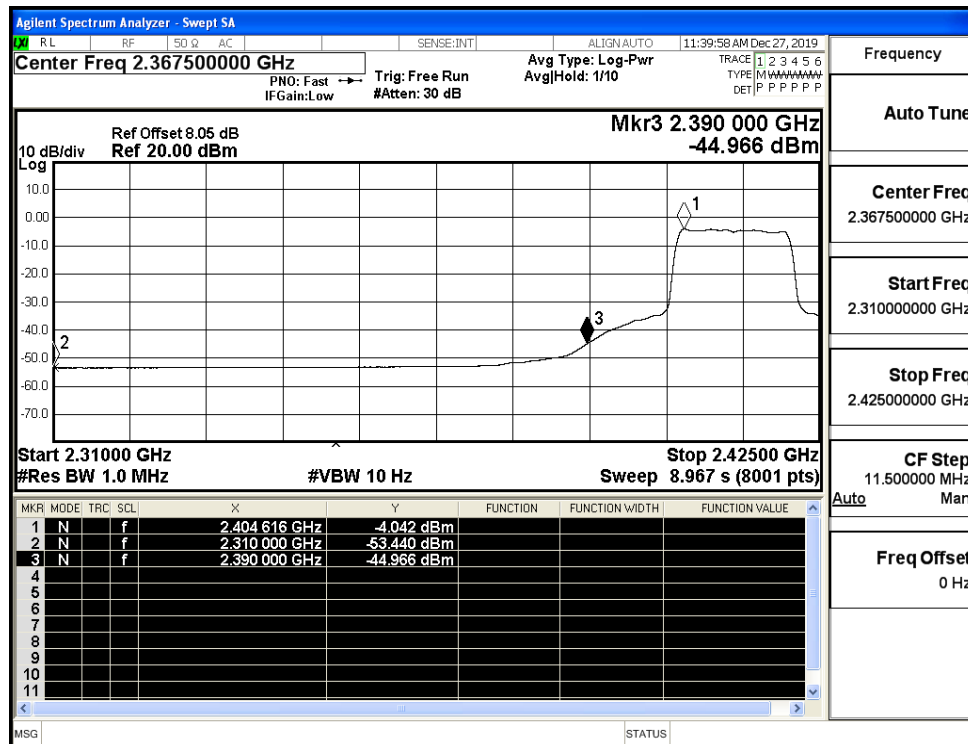
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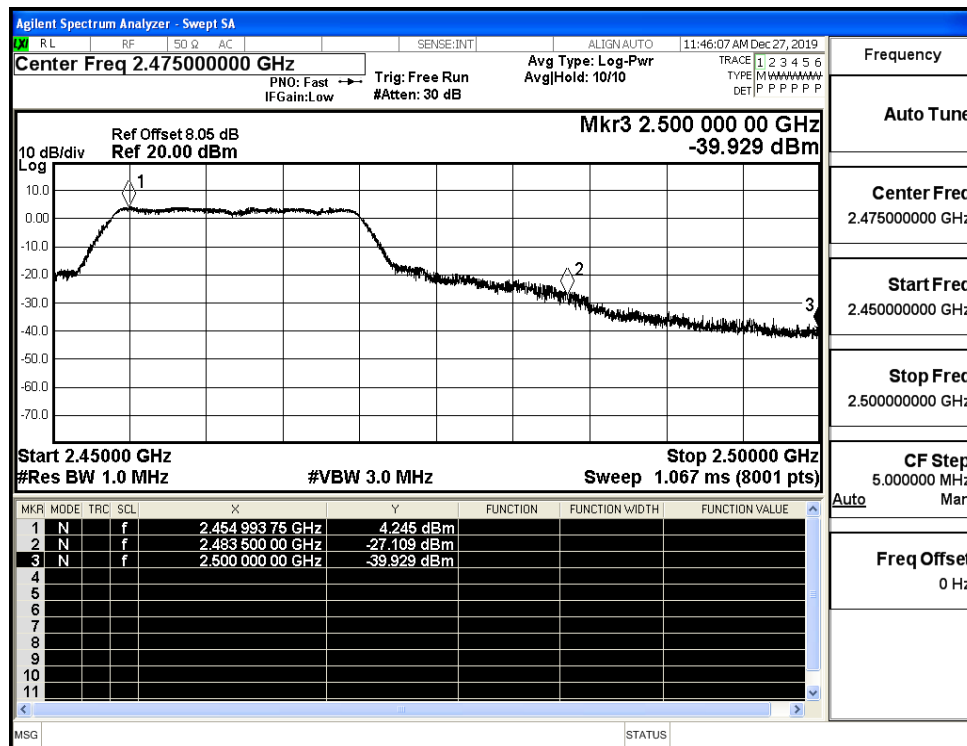
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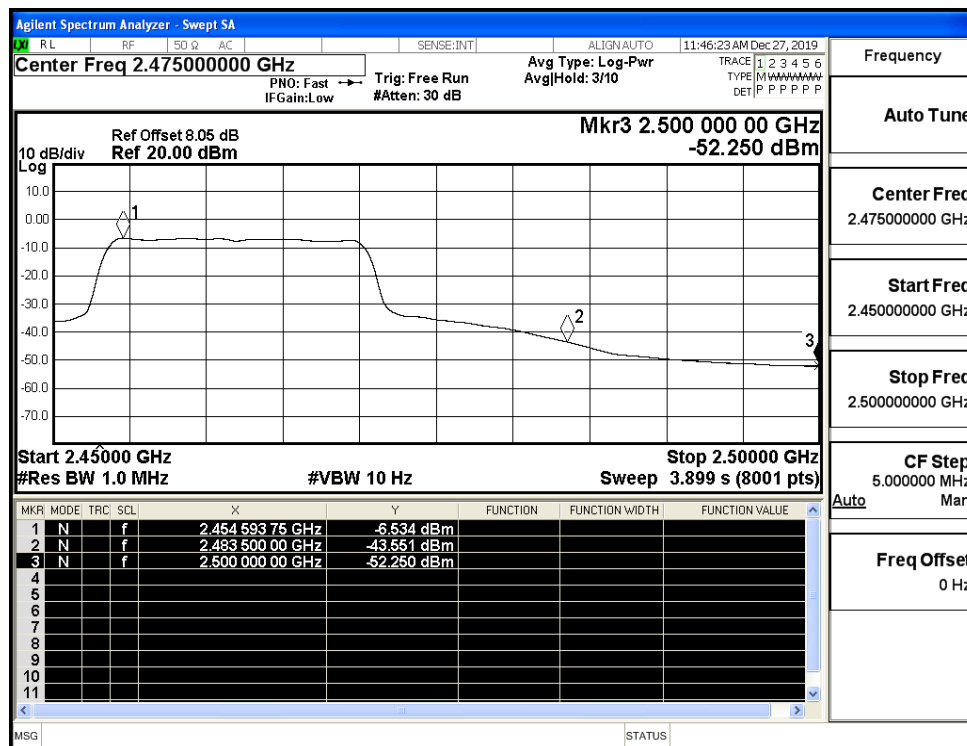
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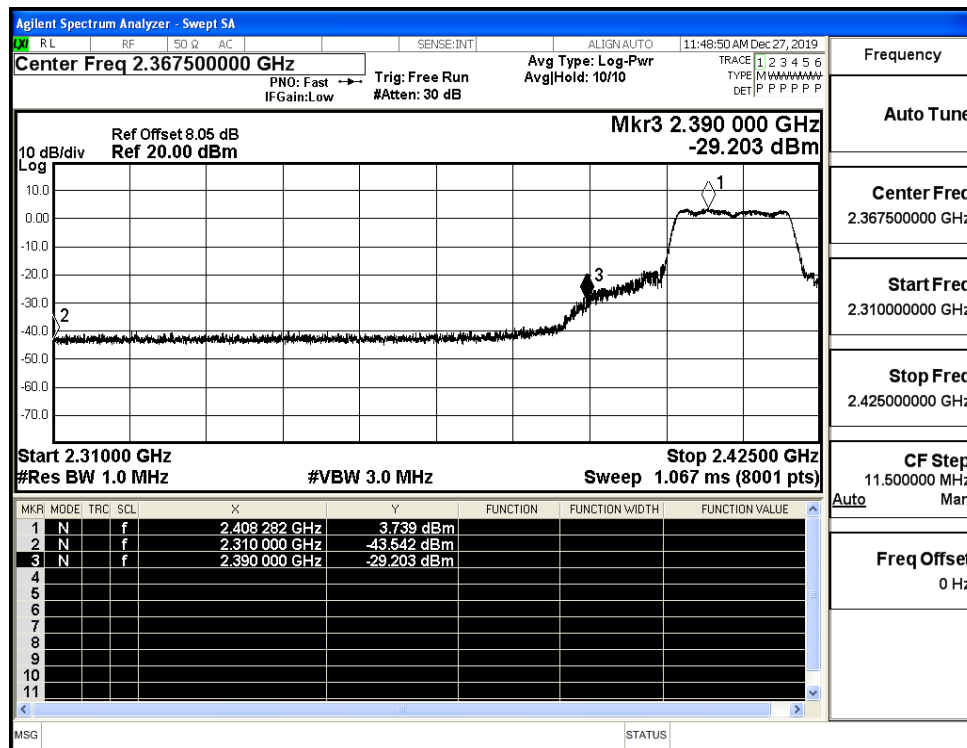
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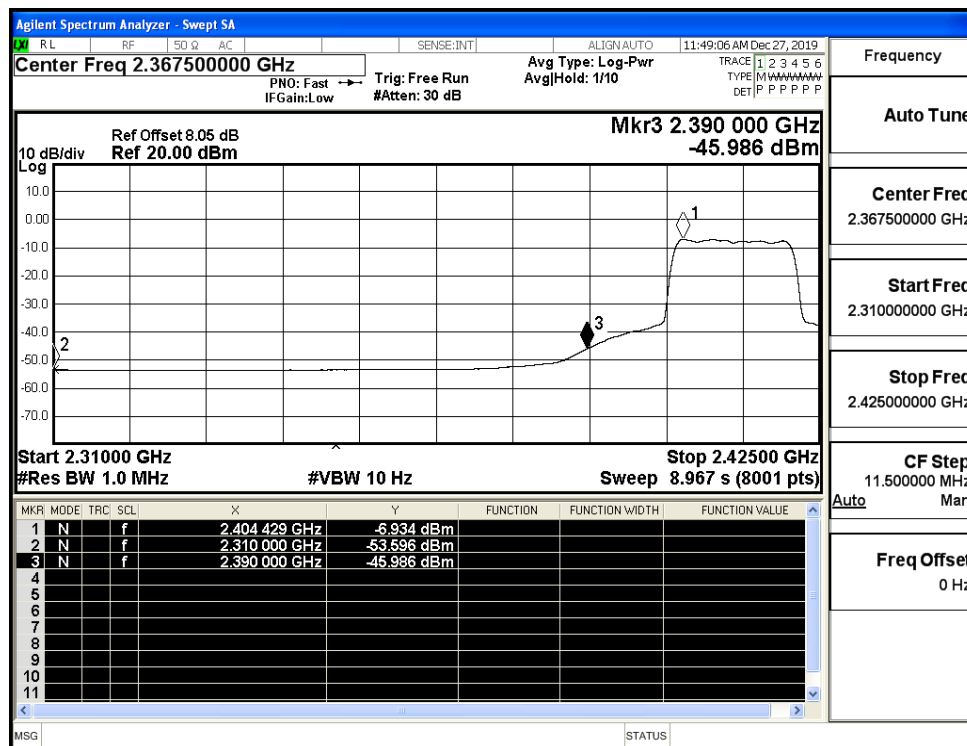
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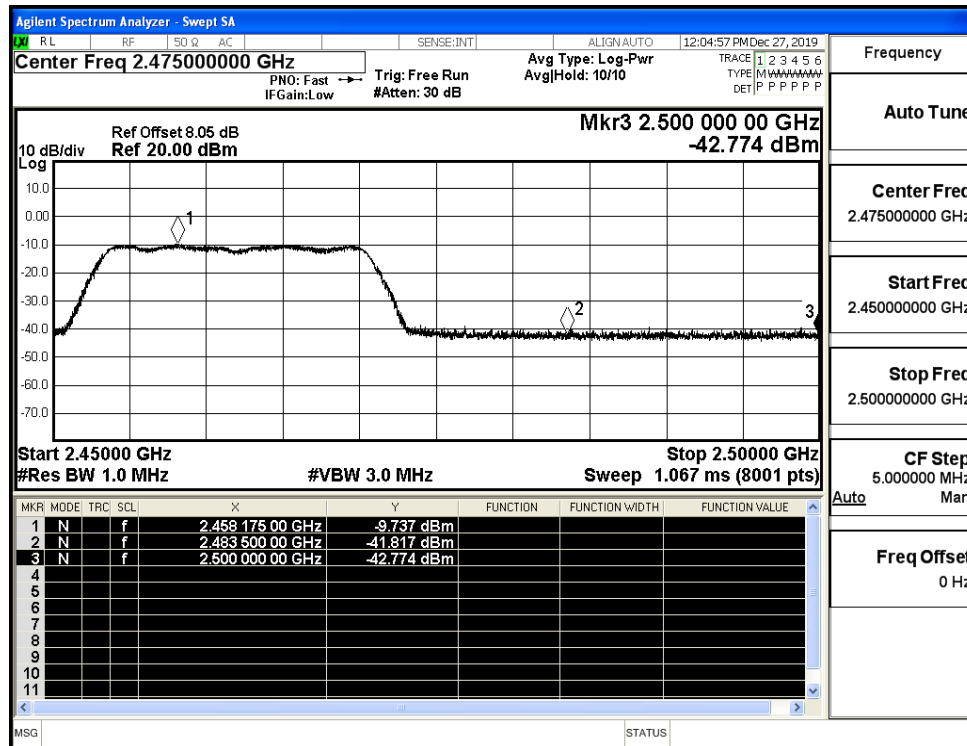
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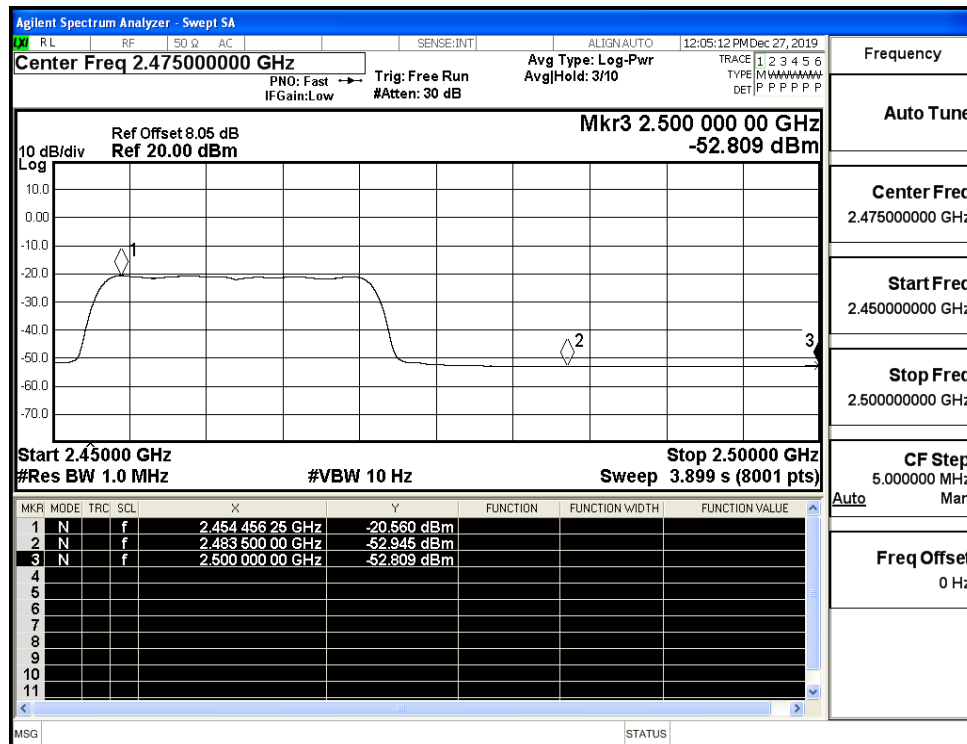
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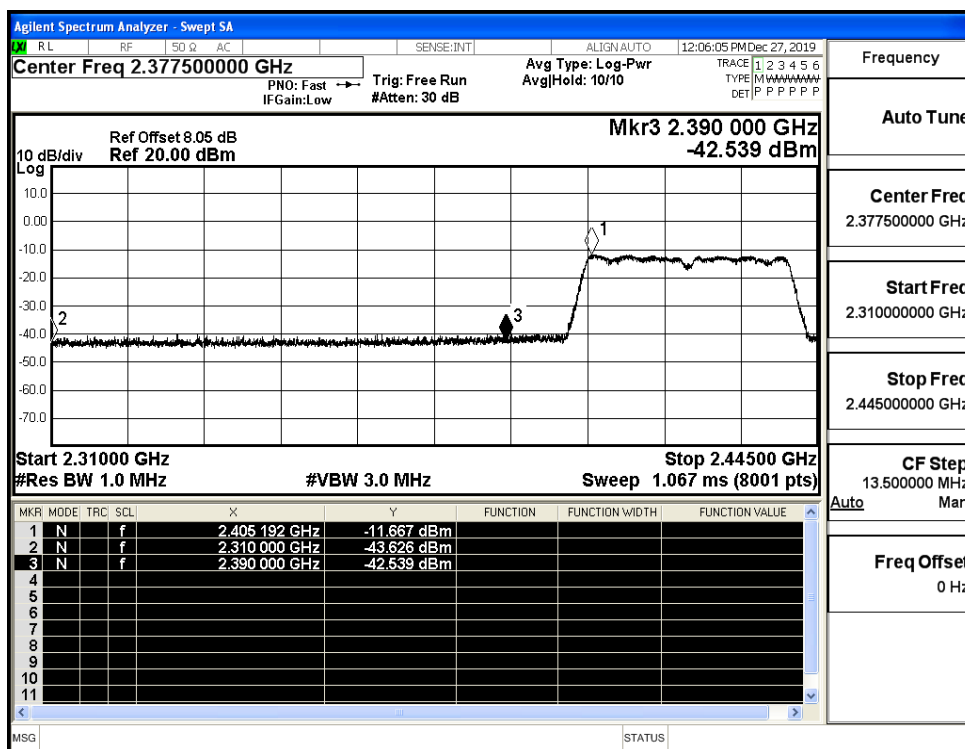
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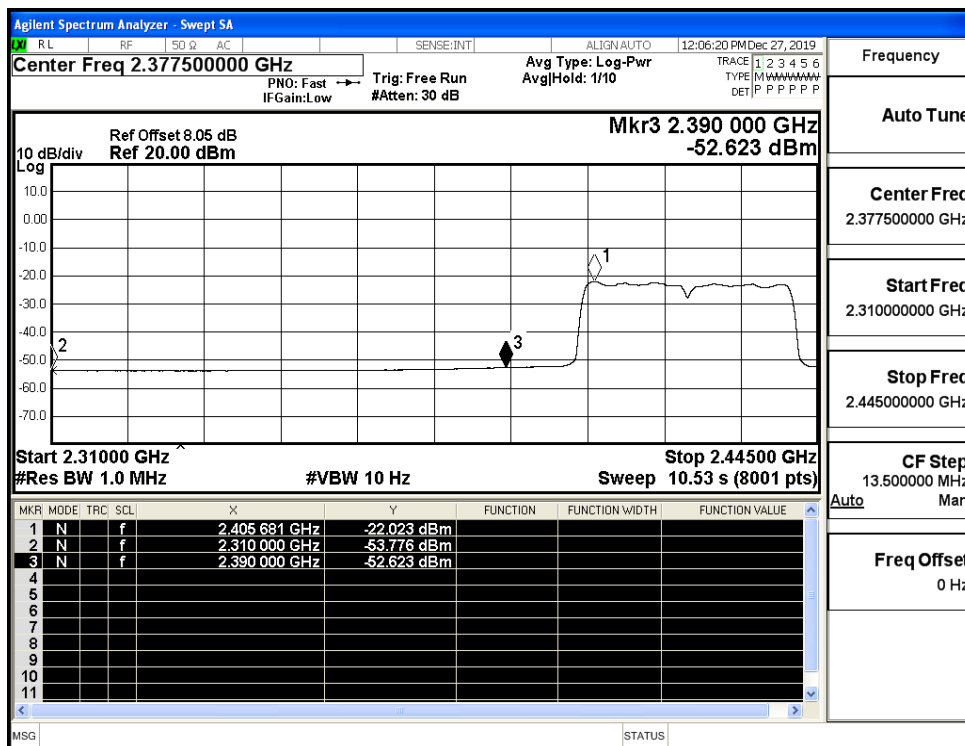
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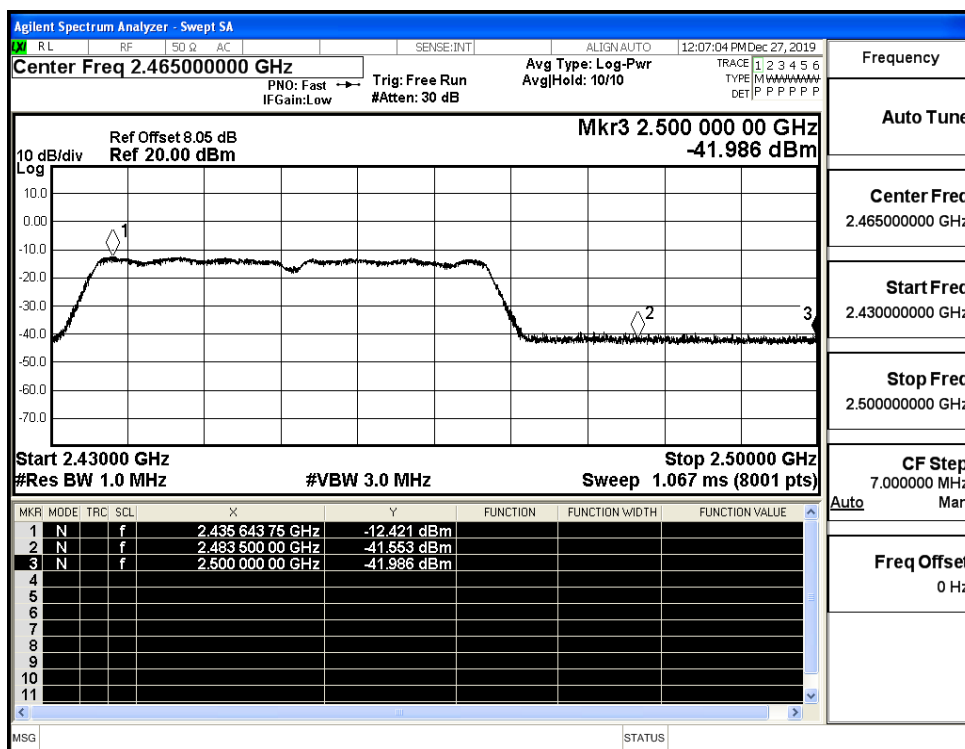
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Restrict-band band-edge measurements_11N40SISO_2422_Ant1_AV



Restrict-band band-edge measurements_11N40SISO_2452_Ant1_PEAK



Restrict-band band-edge measurements_11N40SISO_2452_Ant1_AV

