

## Appendix A

### RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: 4G LTE Wireless Router

Trade Mark: GL.iNET

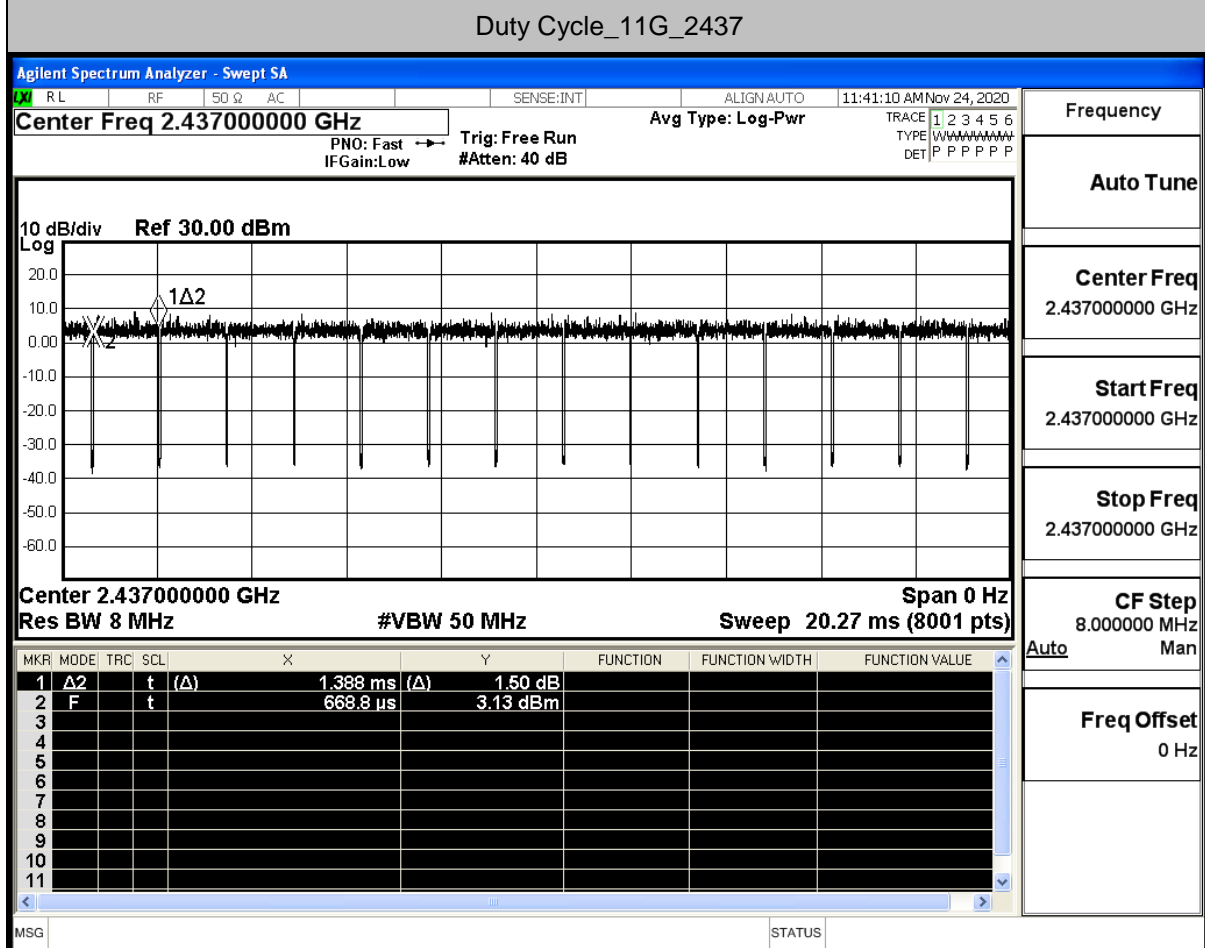
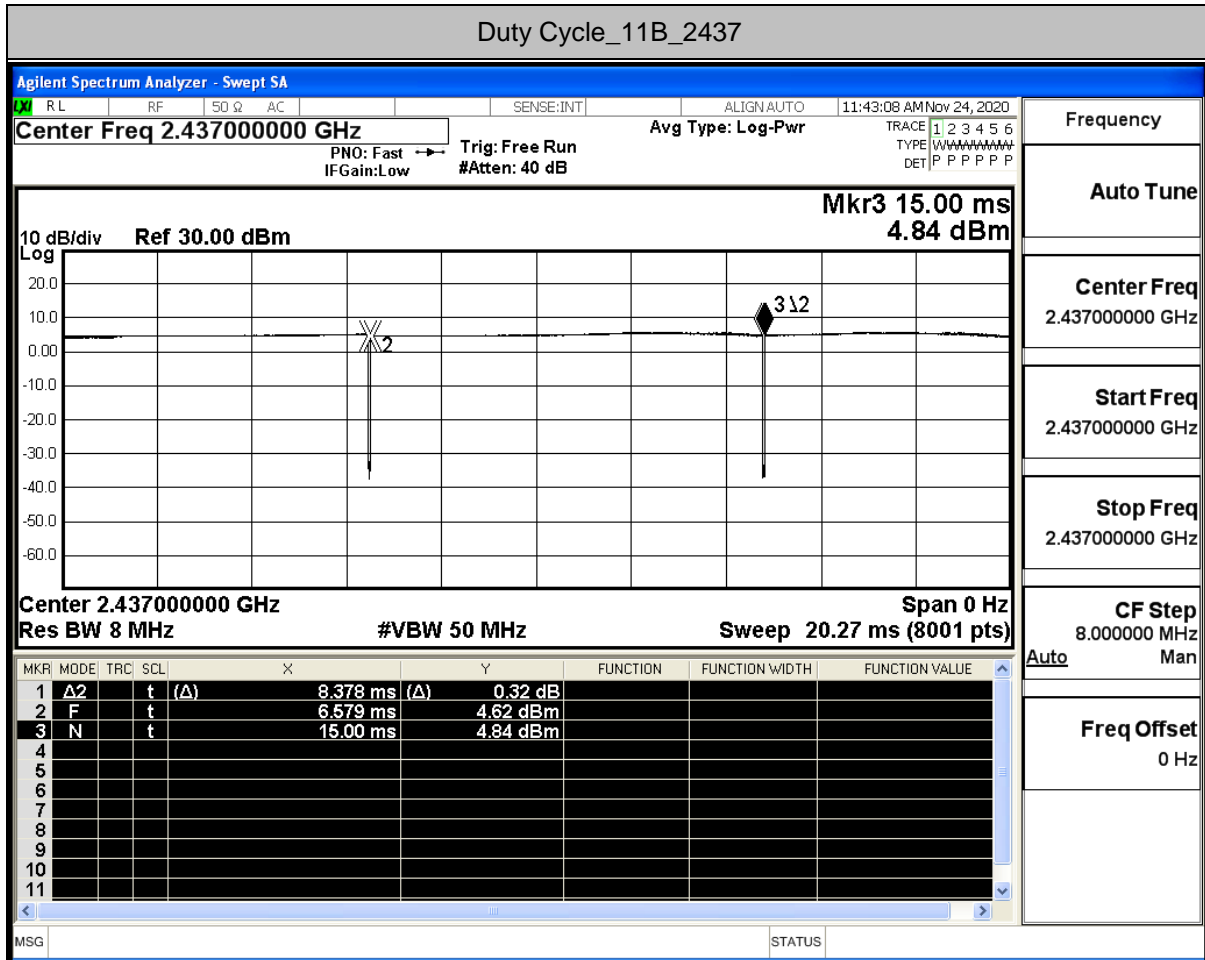
Test Model: GL-XE300C4

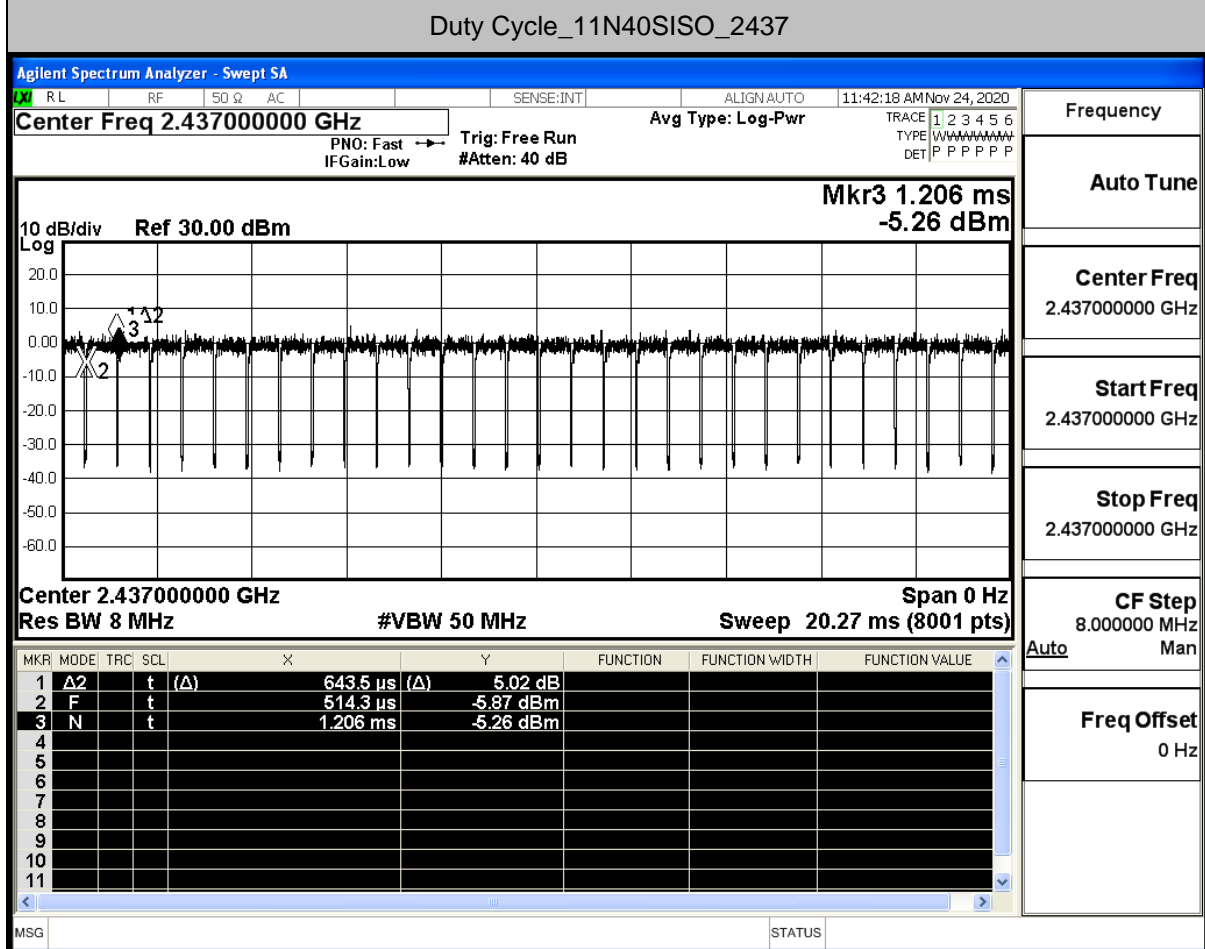
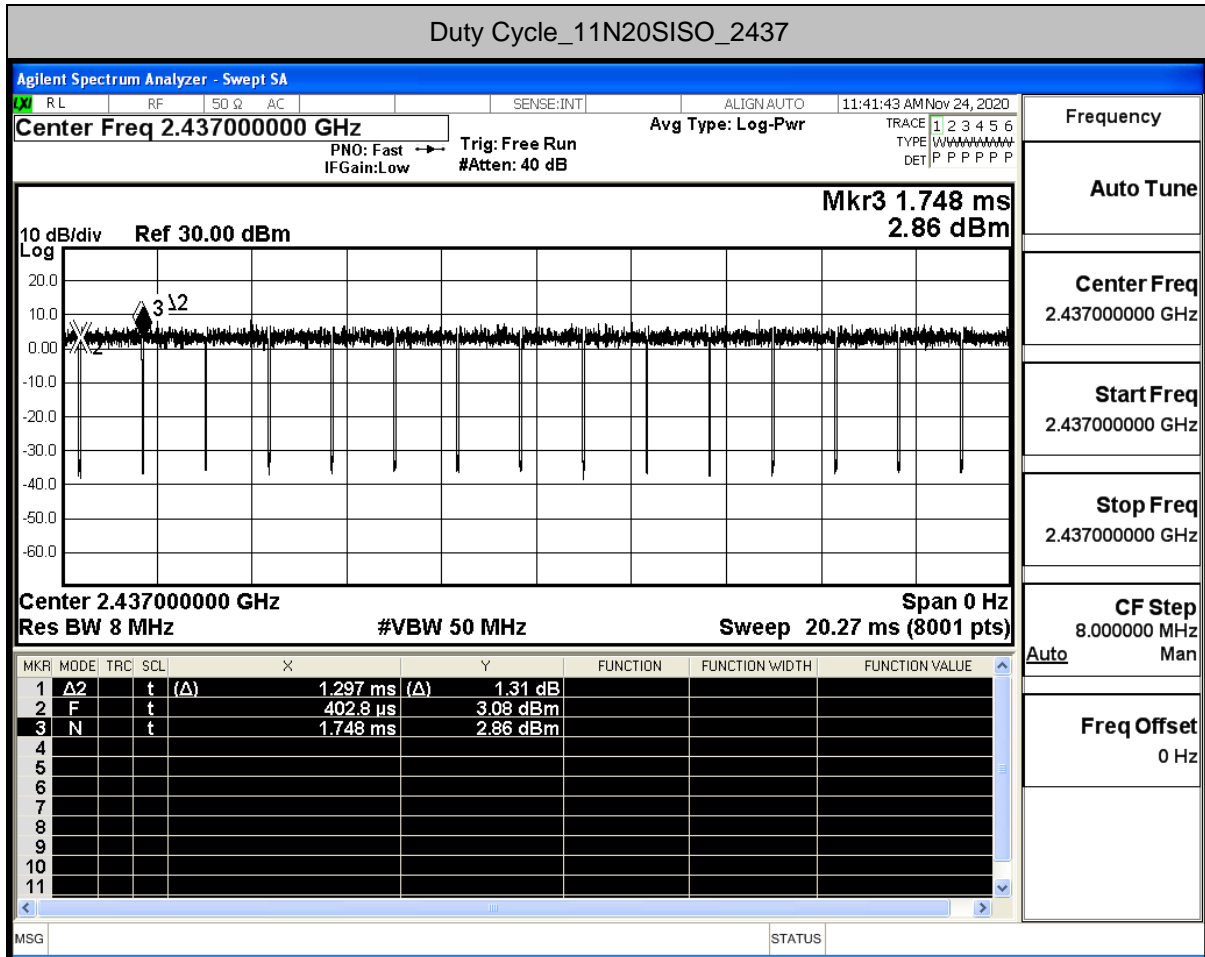
#### Environmental Conditions

Temperature:	22.3° C
Relative Humidity:	53.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

#### A.1 Duty Cycle

Test Mode	Test Channel	Duty Cycle[%]	10log(1/x) Factor (dB)	1/T Minimum VBW(KHz)
11B	2437	99.49	0.02	/
11G	2437	96.65	0.15	0.720
11N20SISO	2437	96.42	0.16	0.771
11N40SISO	2437	93.04	0.31	1.554





**A.2 Maximum Conducted Output Power**

Mode	Channel	Peak Power [dBm]			Limit [dBm]	Verdict
		Ant 0	Ant 1	Sum		
11B	LCH	17.43	17.24	/	30	PASS
	MCH	21.07	21.48	/	30	PASS
	HCH	16.24	17.55	/	30	PASS
11G	LCH	17.00	16.56	/	30	PASS
	MCH	22.01	21.81	/	30	PASS
	HCH	16.93	17.40	/	30	PASS
11N20	LCH	17.73	16.45	20.15	30	PASS
	MCH	21.46	21.36	24.42	30	PASS
	HCH	16.37	17.45	19.95	30	PASS
11N40	LCH	16.20	17.49	19.90	30	PASS
	MCH	21.27	21.24	24.27	30	PASS
	HCH	16.72	18.18	20.52	30	PASS

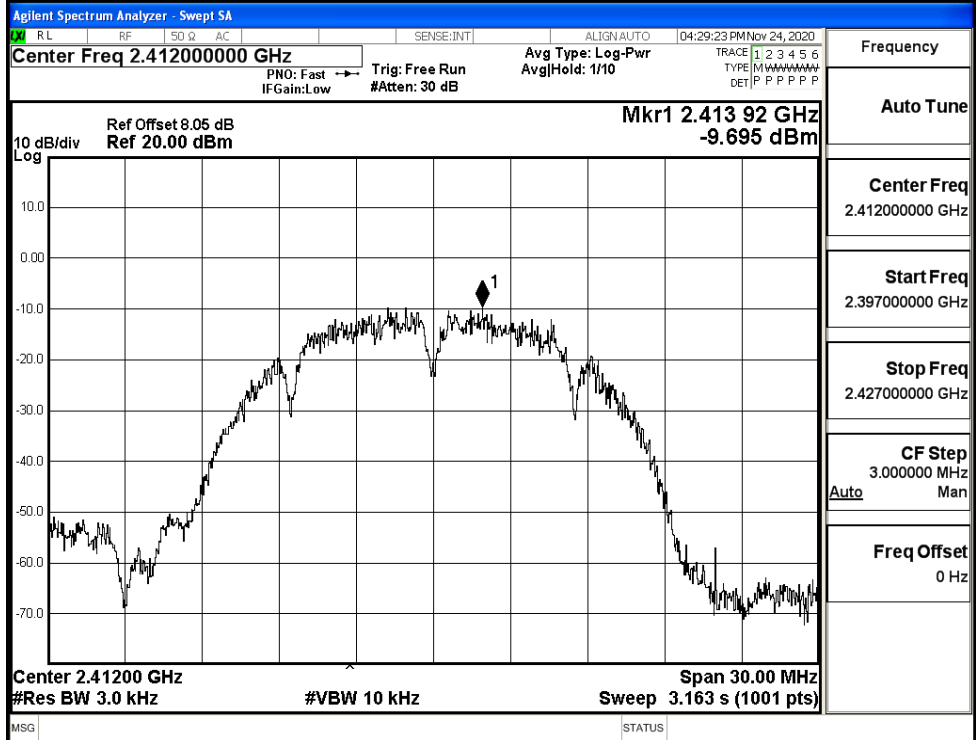
### A.3 Maximum Power Spectral Density

Mode	Channel	PSD Level [dBm/3KHz]		Limit [dBm/3KHz]	Verdict
		Ant 0	Ant 1		
11B	LCH	-9.695	-9.198	8	PASS
	MCH	-7.211	-4.527	8	PASS
	HCH	-10.853	-8.513	8	PASS
11G	LCH	-16.165	-15.265	8	PASS
	MCH	-11.544	-12.661	8	PASS
	HCH	-16.997	-15.959	8	PASS
11N20	LCH	-18.002	-17.149	8	PASS
	MCH	-12.493	-12.600	8	PASS
	HCH	-16.552	-17.018	8	PASS
11N40	LCH	-19.804	-17.877	8	PASS
	MCH	-15.552	-13.042	8	PASS
	HCH	-18.938	-18.392	8	PASS

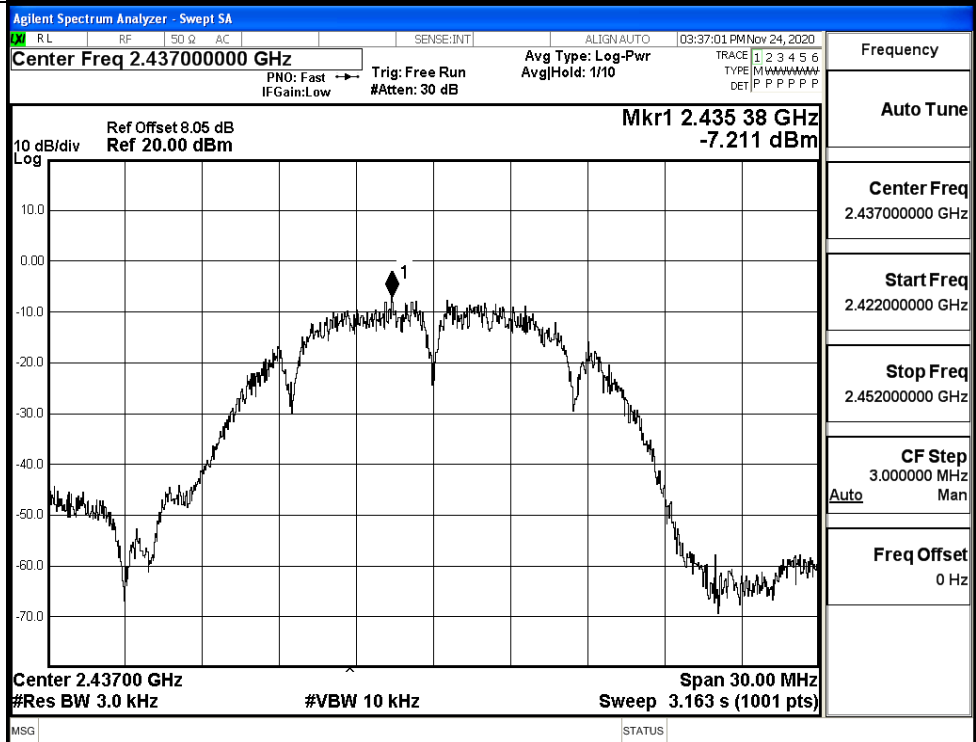
Mode	Channel	MIMO PSD [dBm/3KHz]			Limit [dBm/3KHz]	Verdict
		Ant 0	Ant 1	Sum		
11N20	LCH	-18.002	-17.149	-14.54	8	PASS
	MCH	-12.493	-12.600	-9.54	8	PASS
	HCH	-16.552	-17.018	-13.77	8	PASS
11N40	LCH	-19.804	-17.877	-15.72	8	PASS
	MCH	-15.552	-13.042	-11.11	8	PASS
	HCH	-18.938	-18.392	-15.65	8	PASS

Test Graphs\_ Ant 0

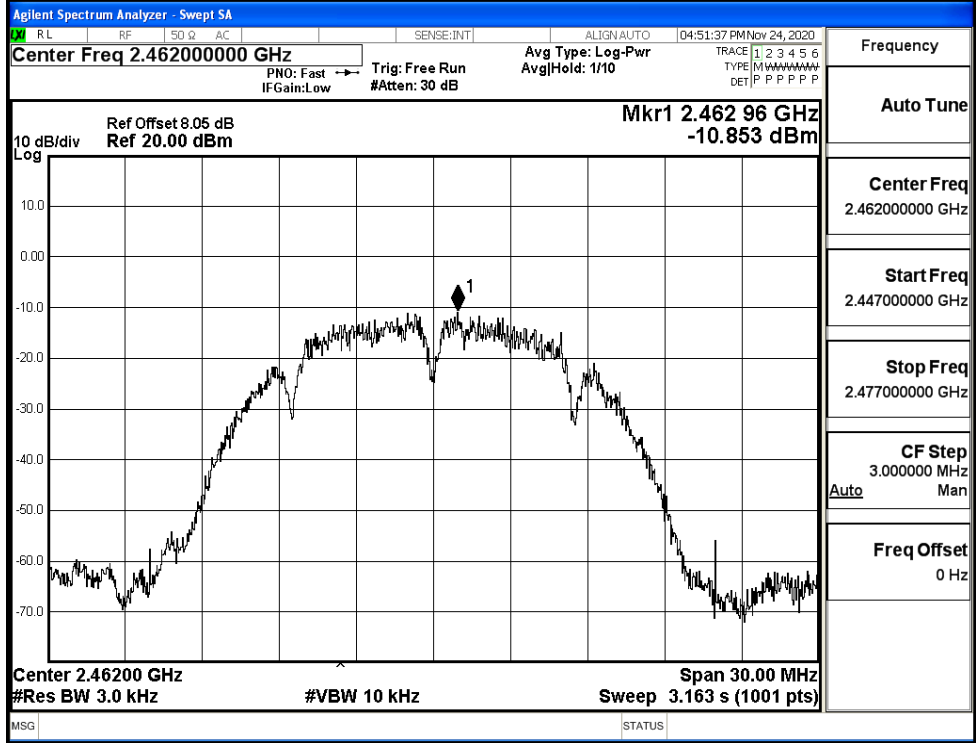
11B/LCH



11B/MCH

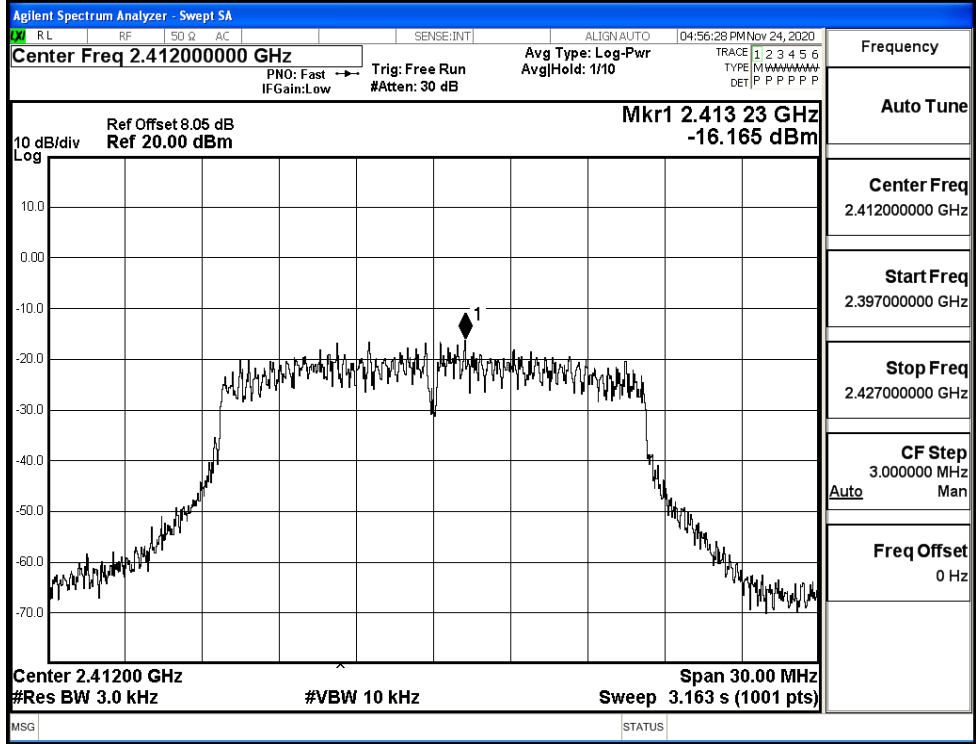


11B/HCH



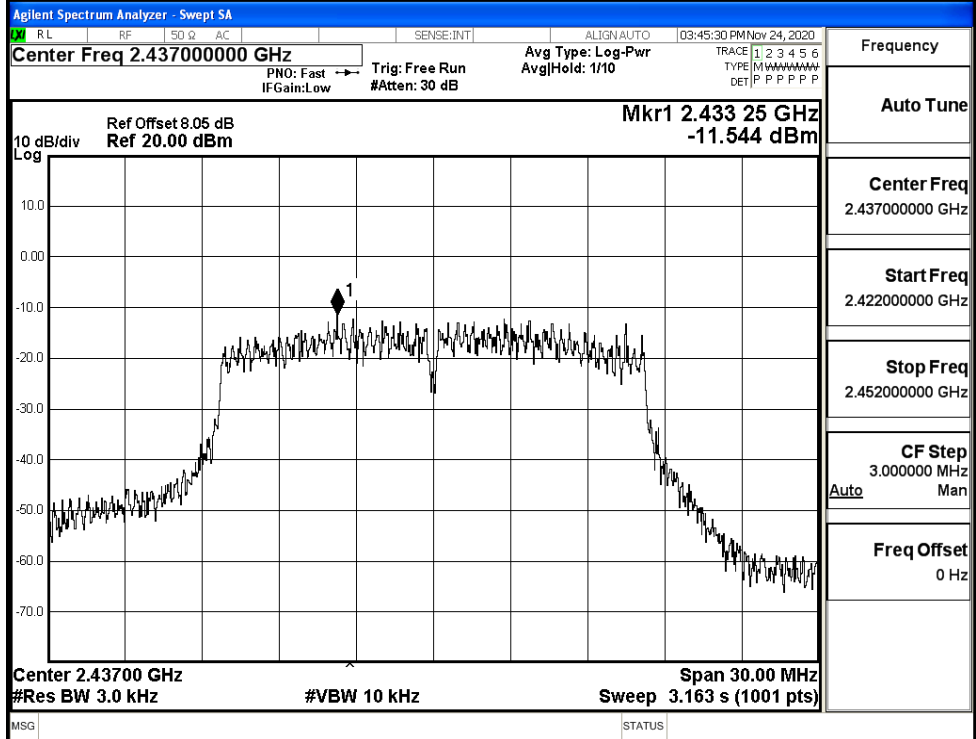
Frequency
Auto Tune
Center Freq 2.46200000 GHz
Start Freq 2.447000000 GHz
Stop Freq 2.477000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

11G/LCH



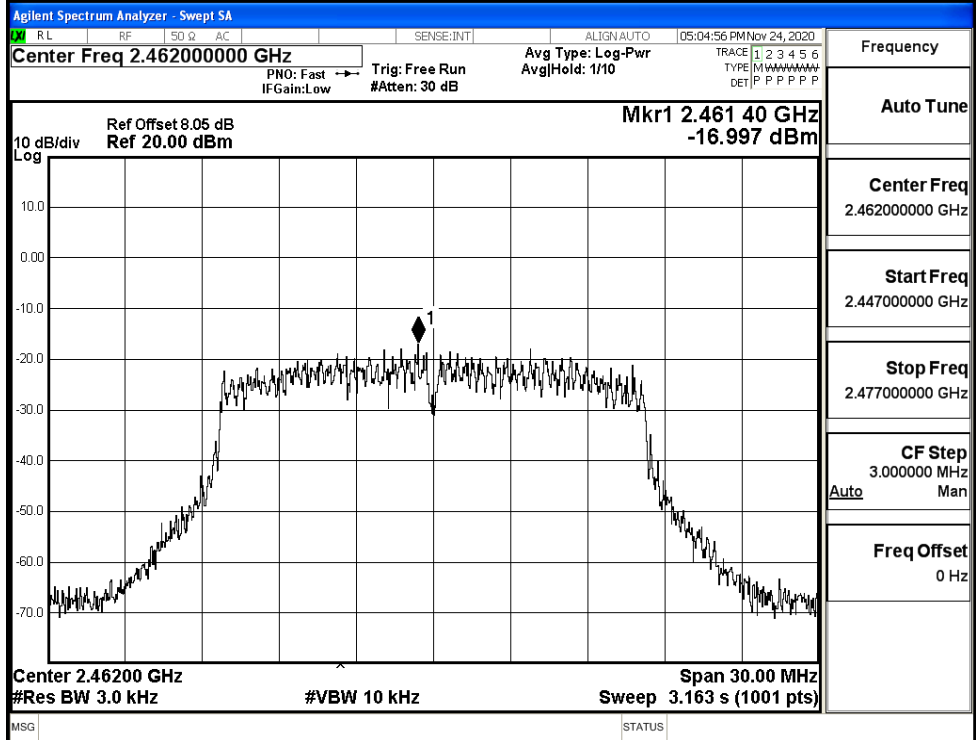
Frequency
Auto Tune
Center Freq 2.412000000 GHz
Start Freq 2.397000000 GHz
Stop Freq 2.427000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

11G/MCH



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

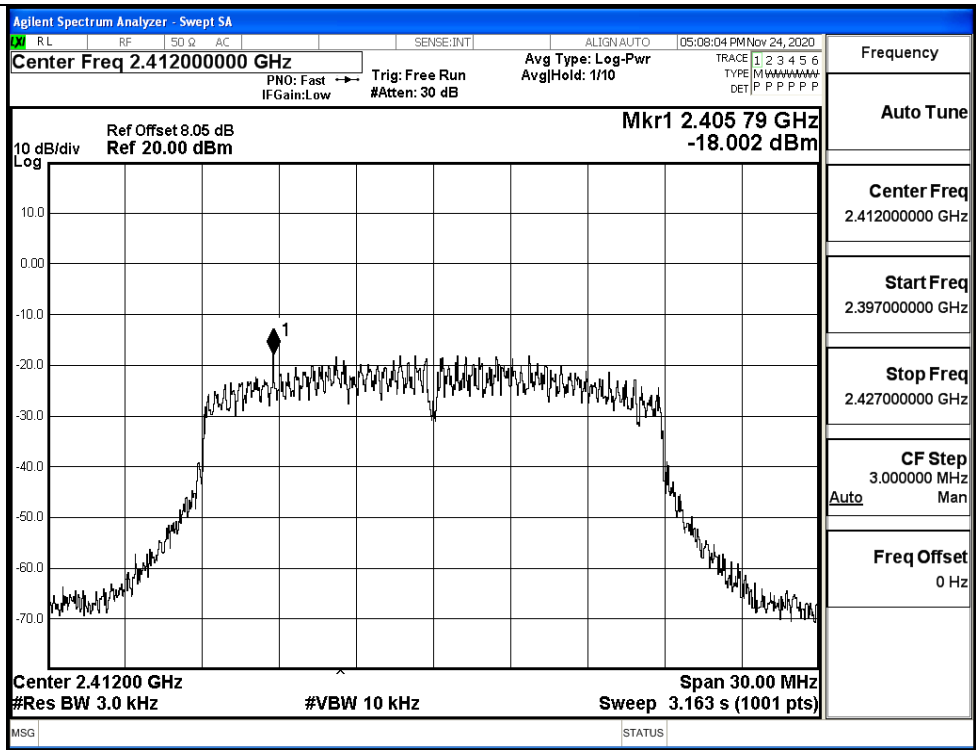
11G/HCH



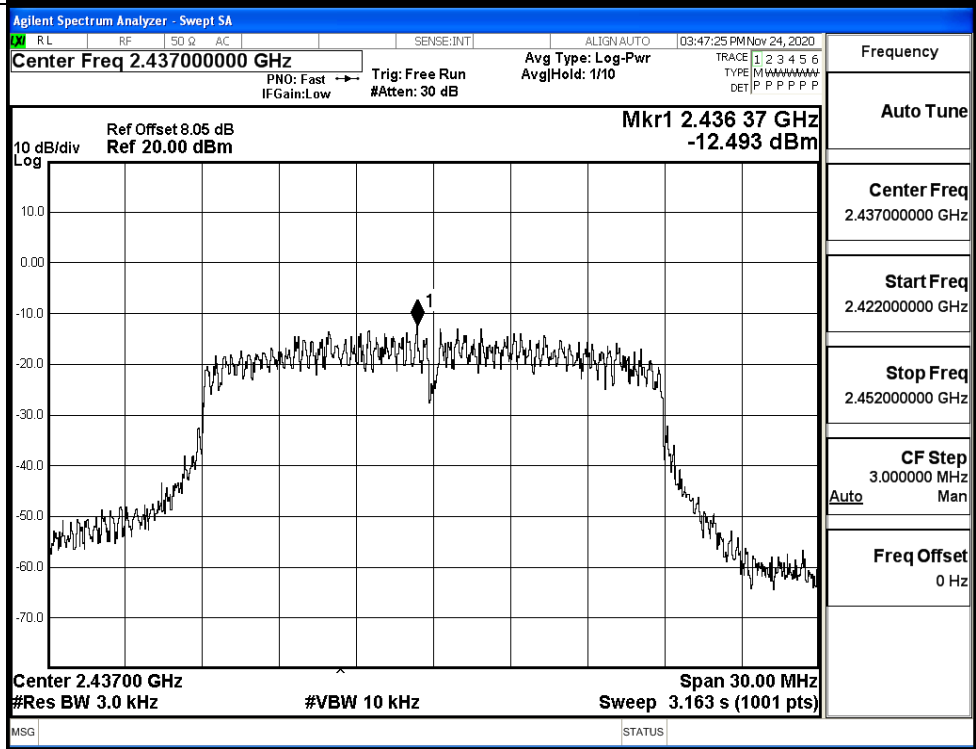
Frequency
Auto Tune
Center Freq 2.462000000 GHz
Start Freq 2.447000000 GHz
Stop Freq 2.477000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz



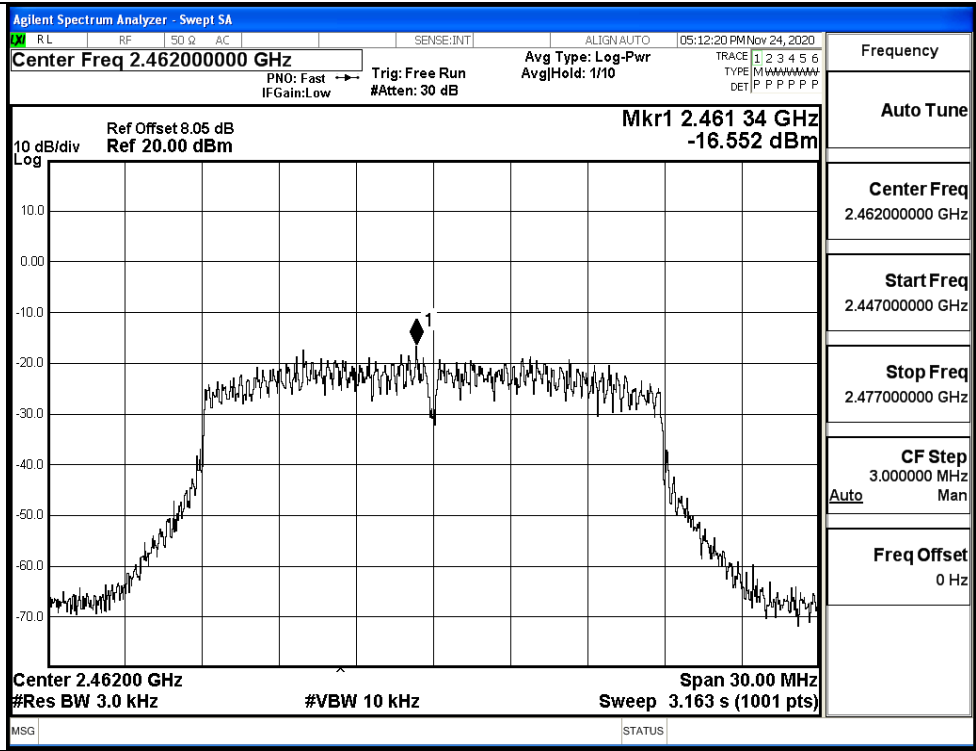
11N20SISO/LCH



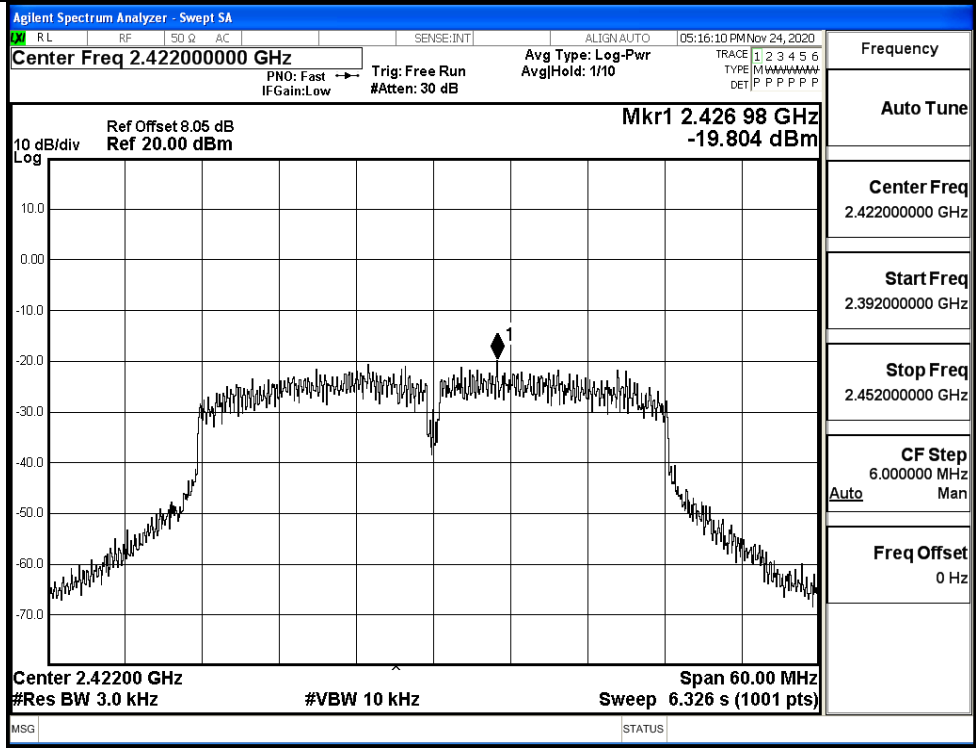
11N20SISO/MCH



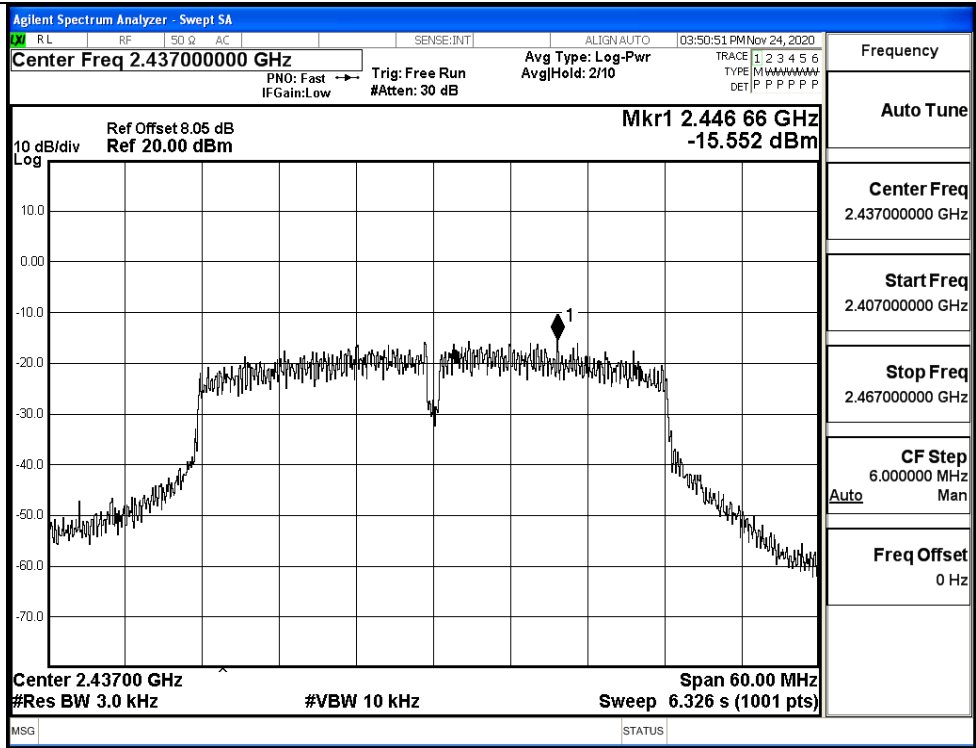
11N20SISO/HCH



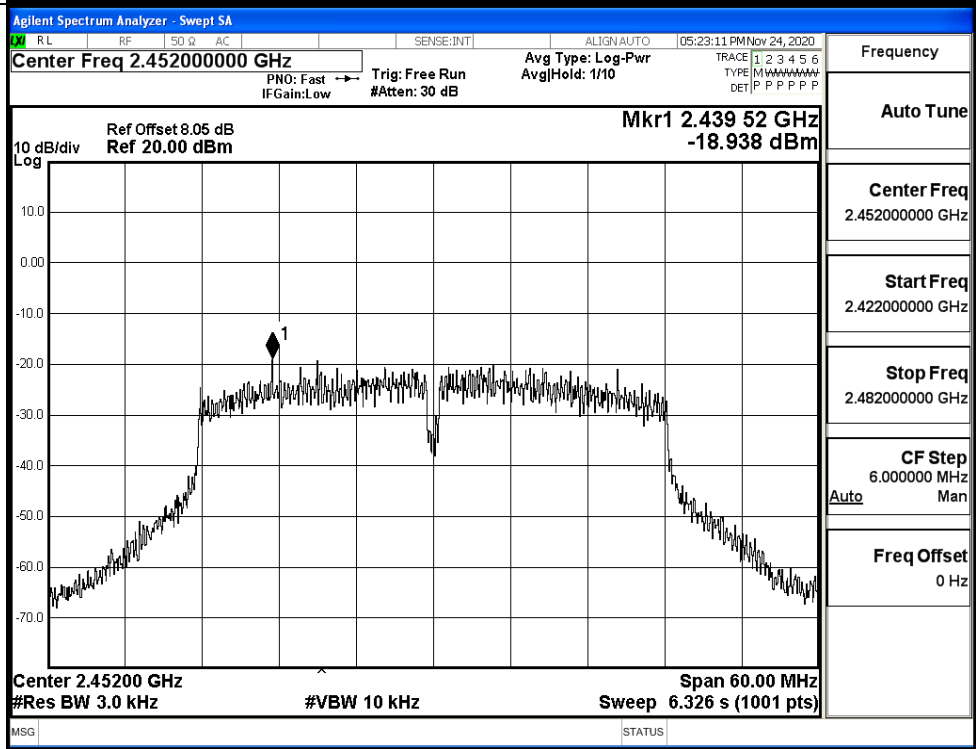
11N40SISO/LCH



11N40SISO/MCH

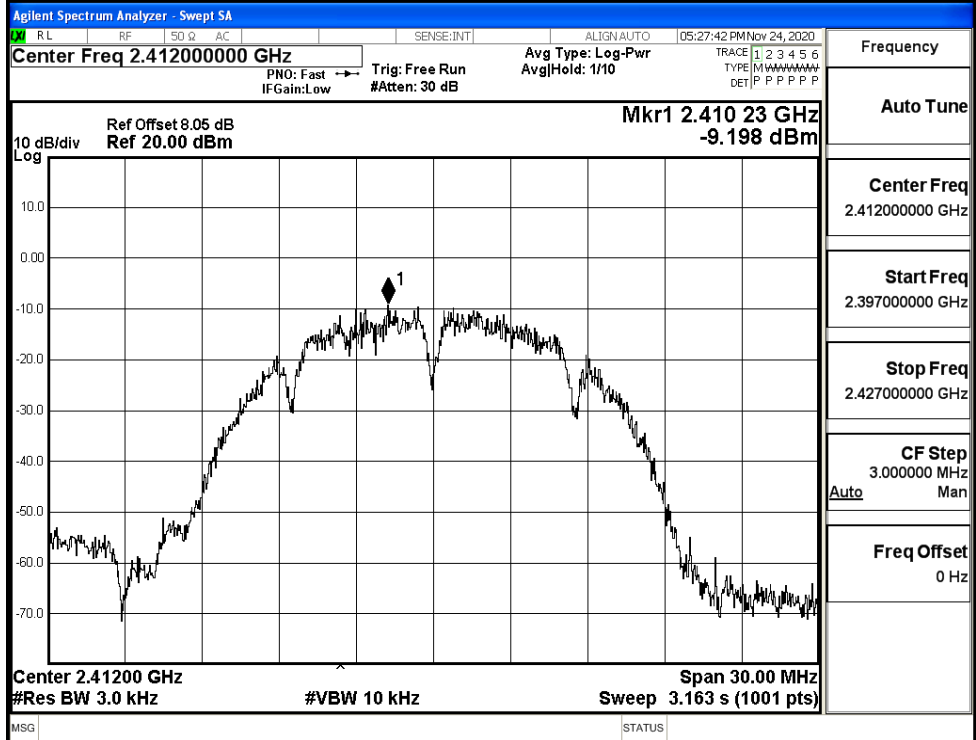


11N40SISO/HCH

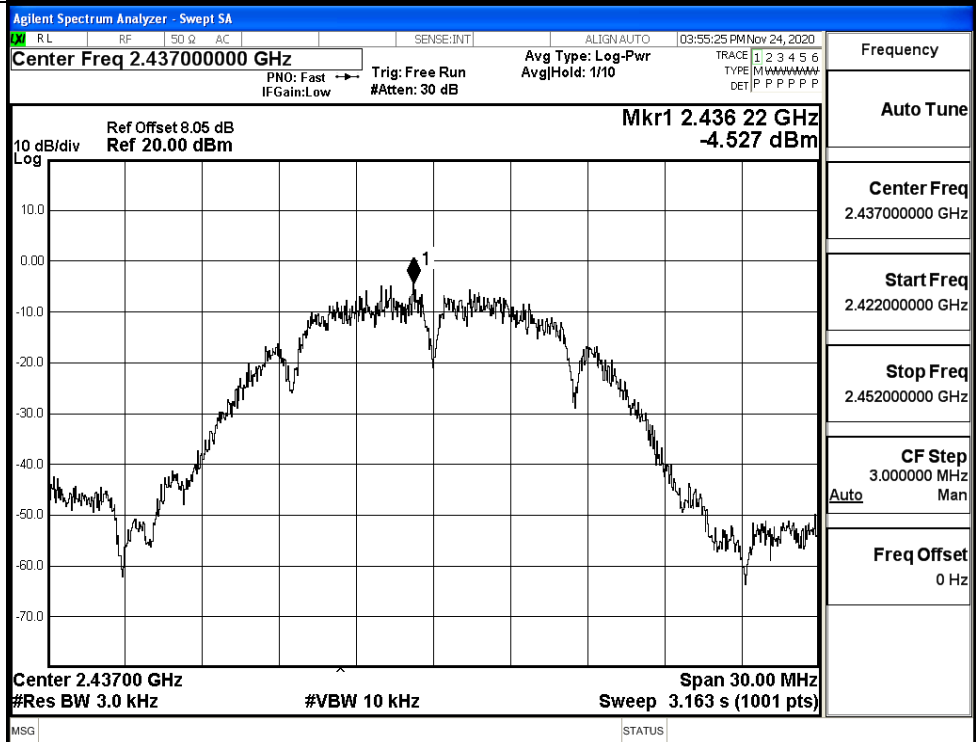


Test Graphs\_ Ant 1

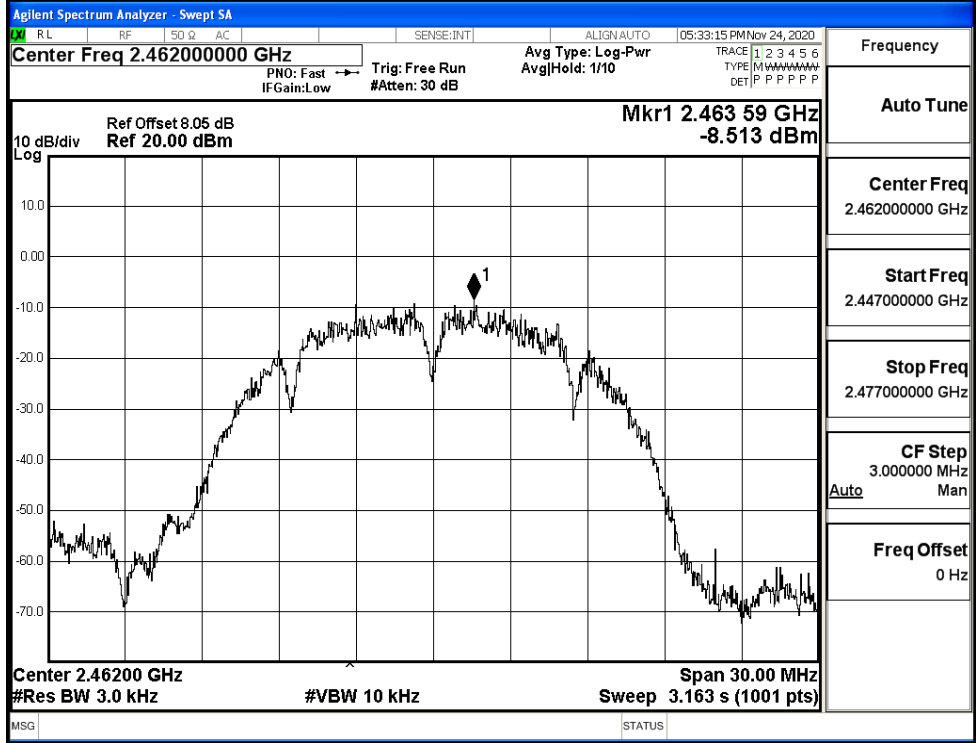
11B/LCH



11B/MCH

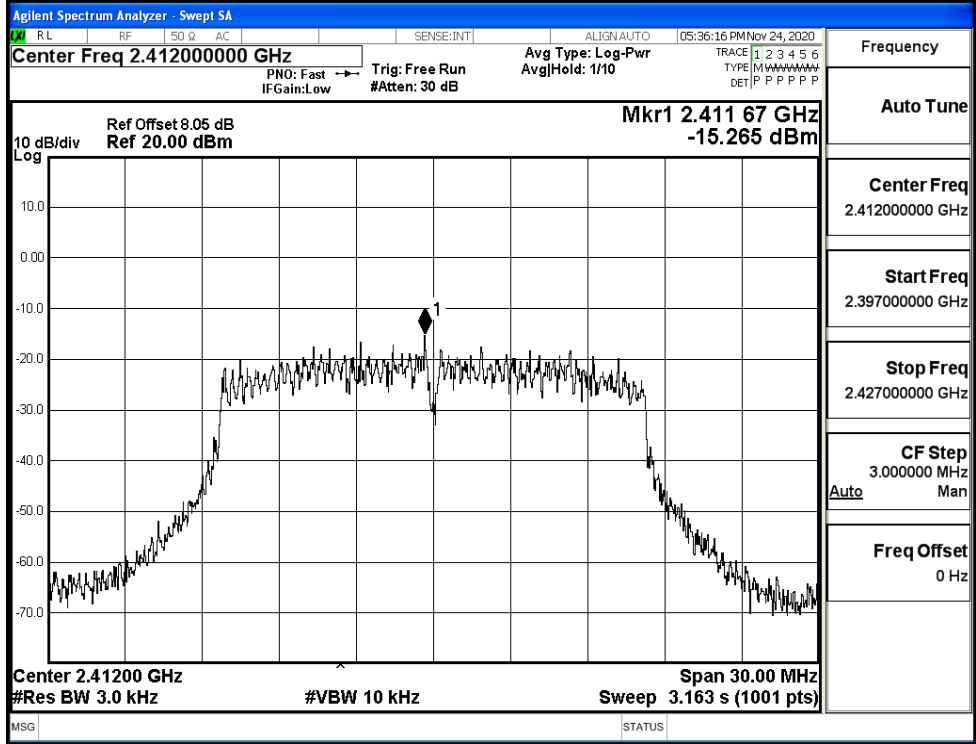


11B/HCH



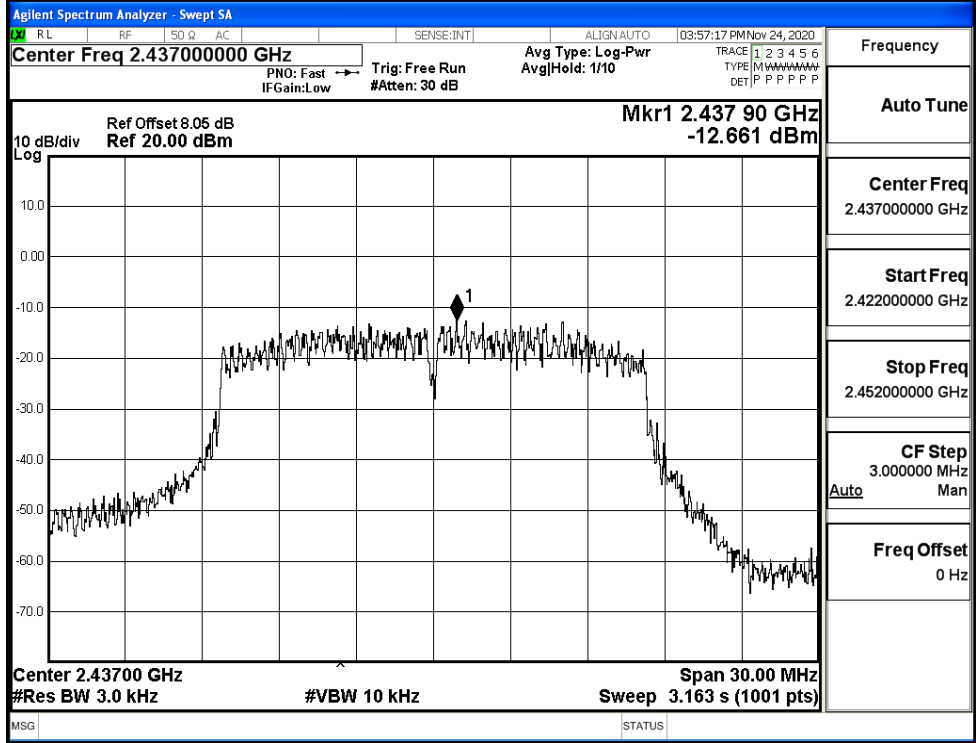
Frequency
Auto Tune
Center Freq 2.46200000 GHz
Start Freq 2.447000000 GHz
Stop Freq 2.477000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

11G/LCH

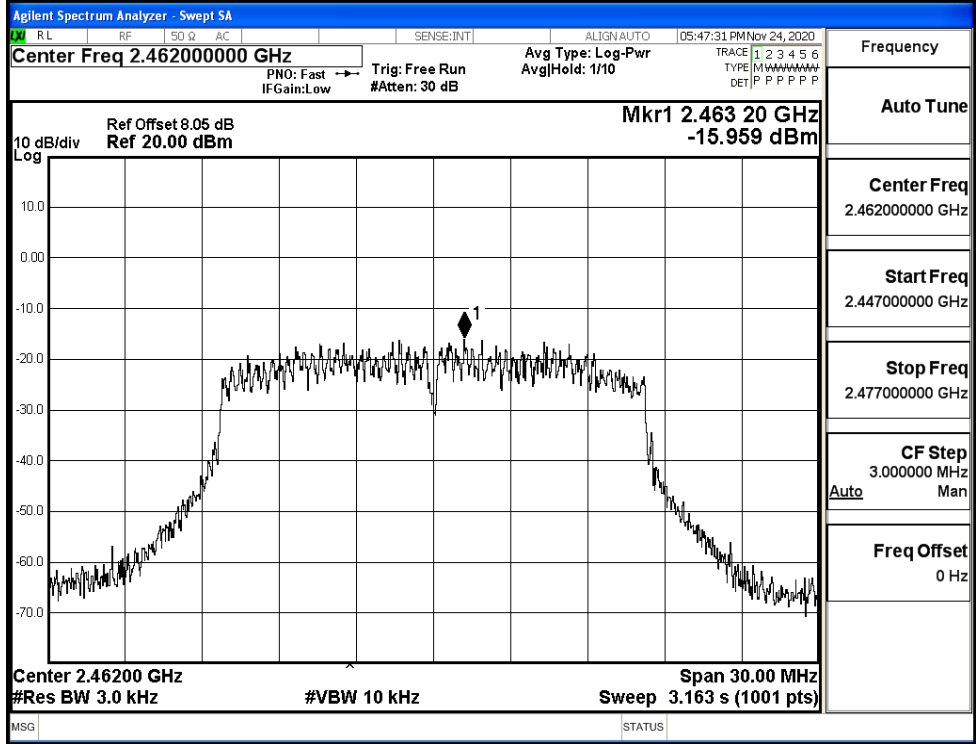


Frequency
Auto Tune
Center Freq 2.412000000 GHz
Start Freq 2.397000000 GHz
Stop Freq 2.427000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

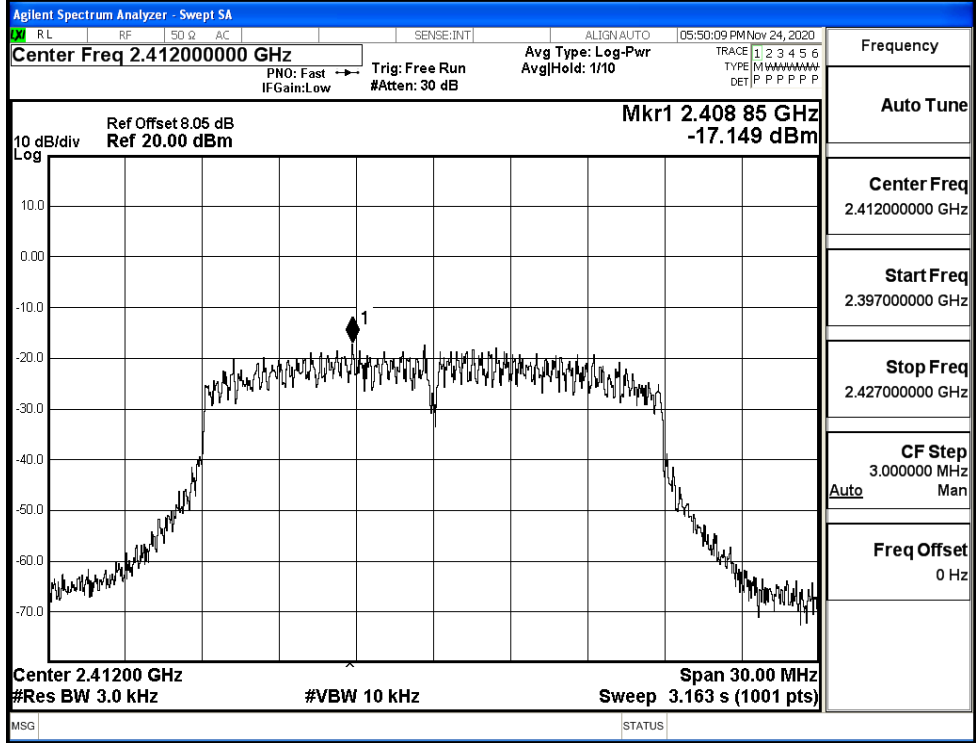
11G/MCH



11G/HCH

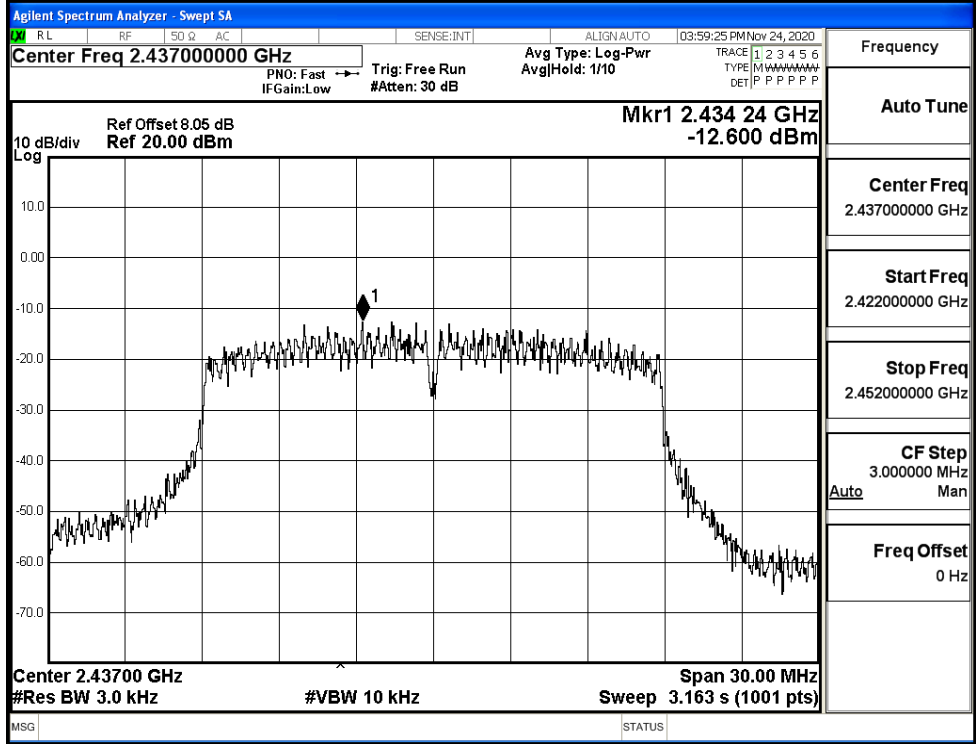


11N20SISO/LCH



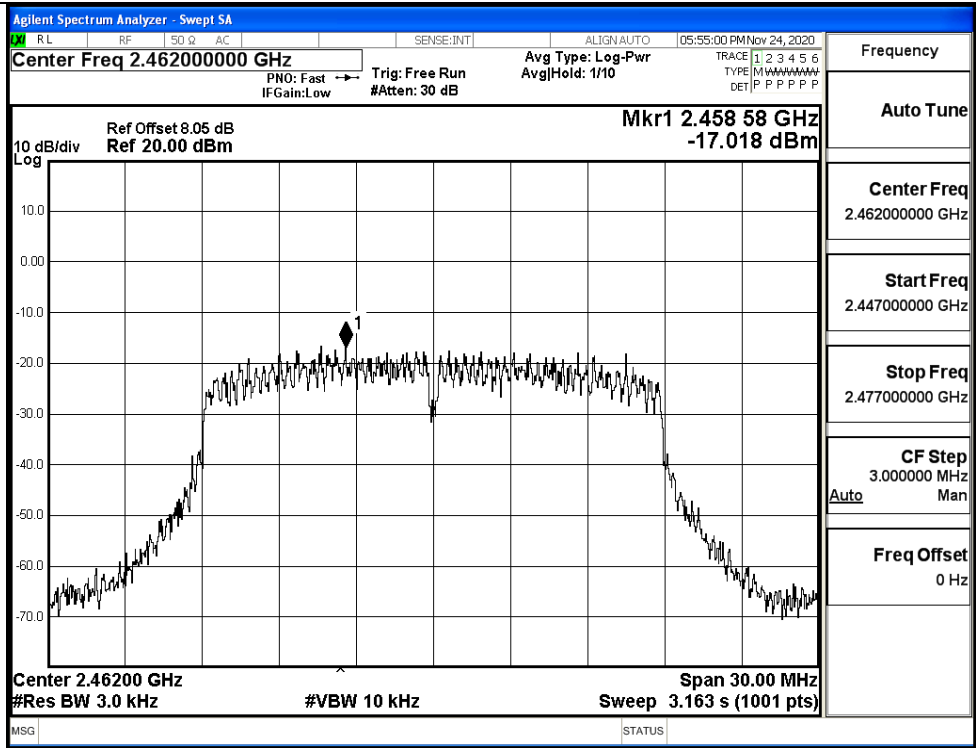
Frequency	2.41200000 GHz
Auto Tune	
Center Freq	2.41200000 GHz
Start Freq	2.397000000 GHz
Stop Freq	2.427000000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11N20SISO/MCH

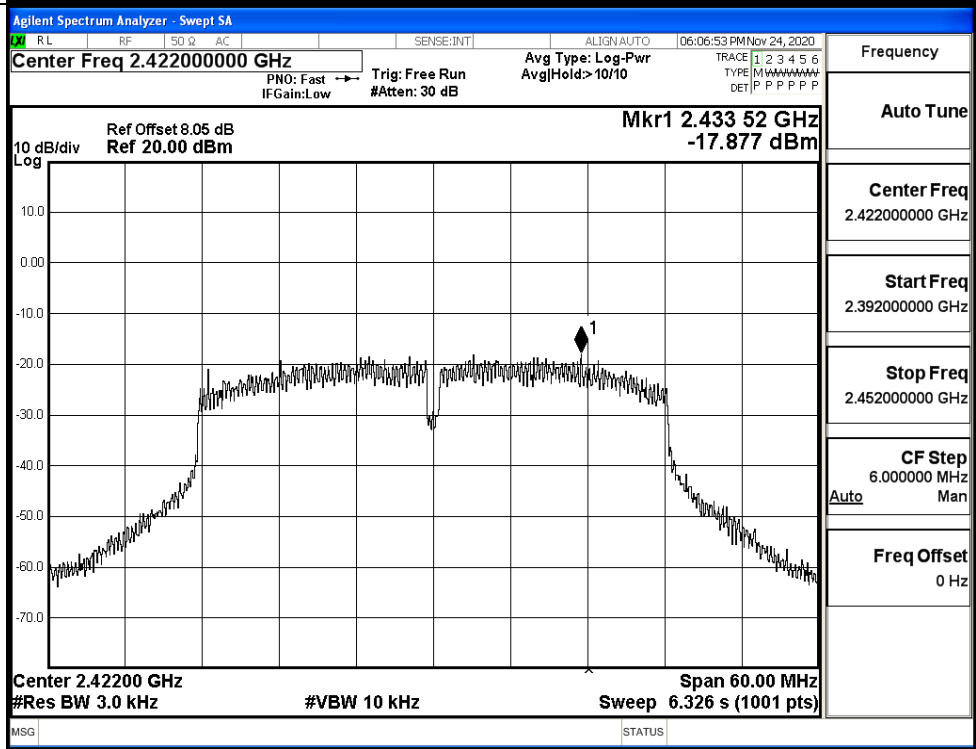


Frequency	2.43700000 GHz
Auto Tune	
Center Freq	2.43700000 GHz
Start Freq	2.422000000 GHz
Stop Freq	2.452000000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11N20SISO/HCH

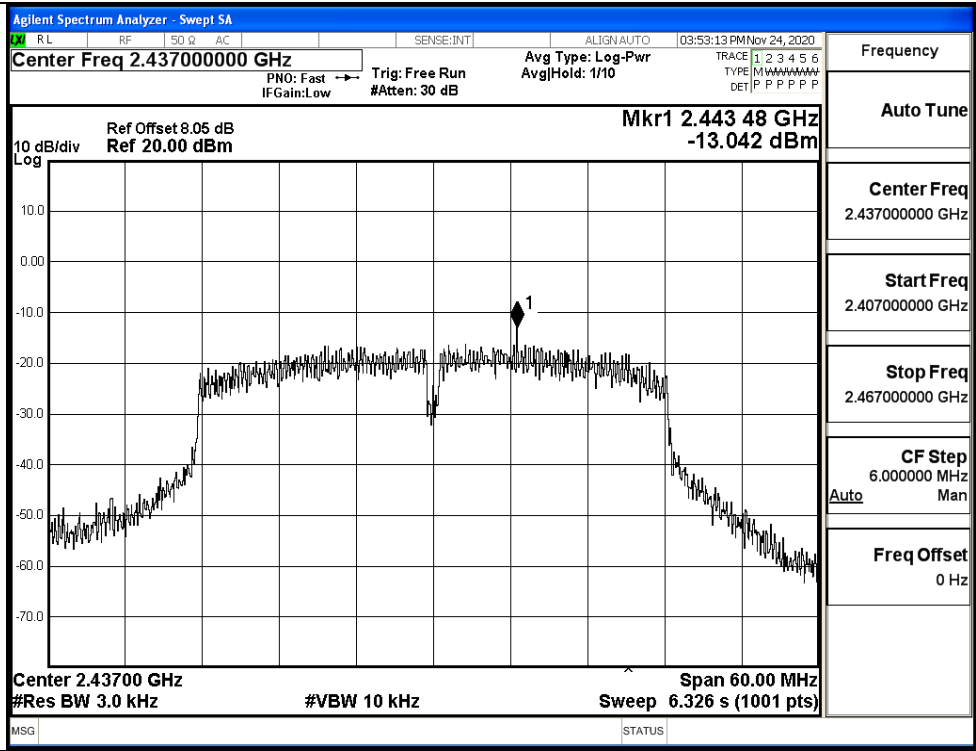


11N40SISO/LCH

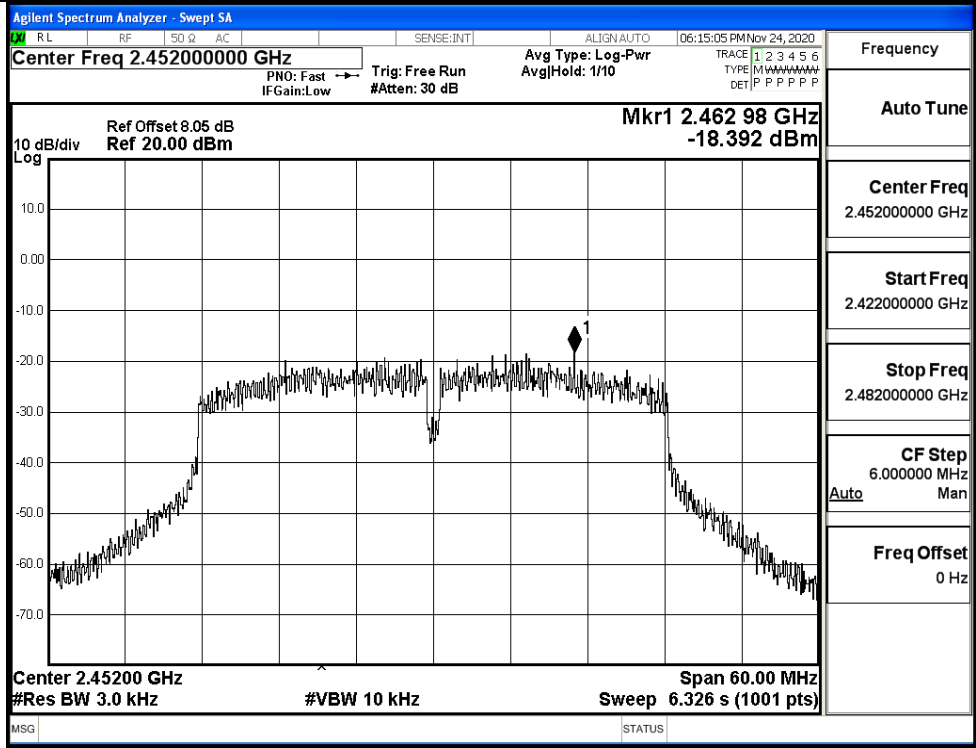




11N40SISO/MCH



11N40SISO/HCH



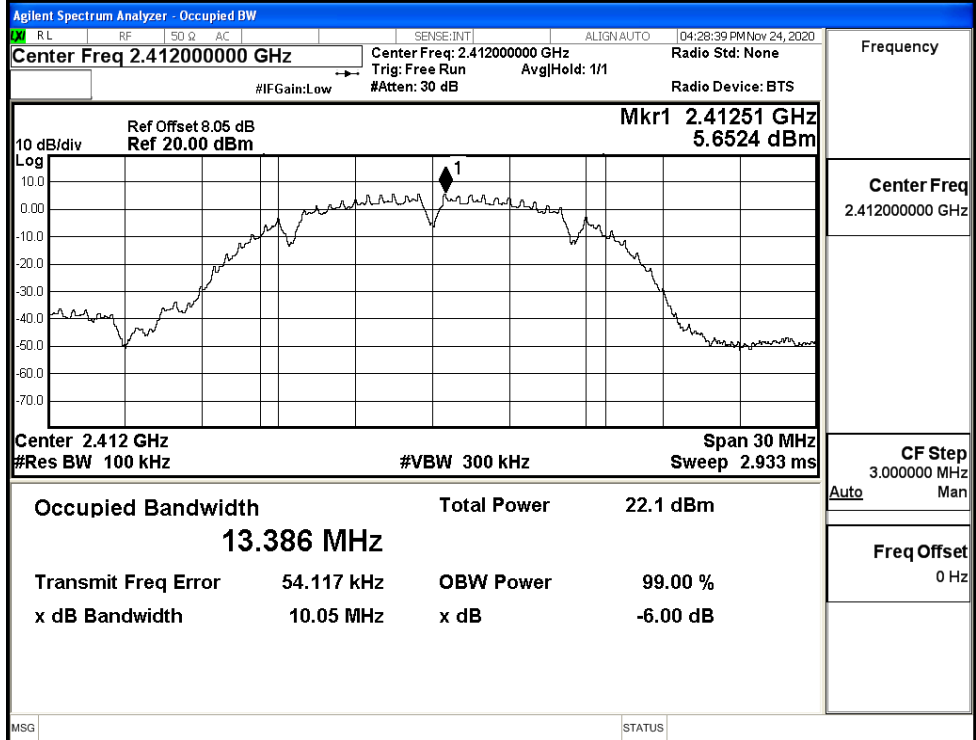
**A.4 6dB Bandwidth**

ANT 0

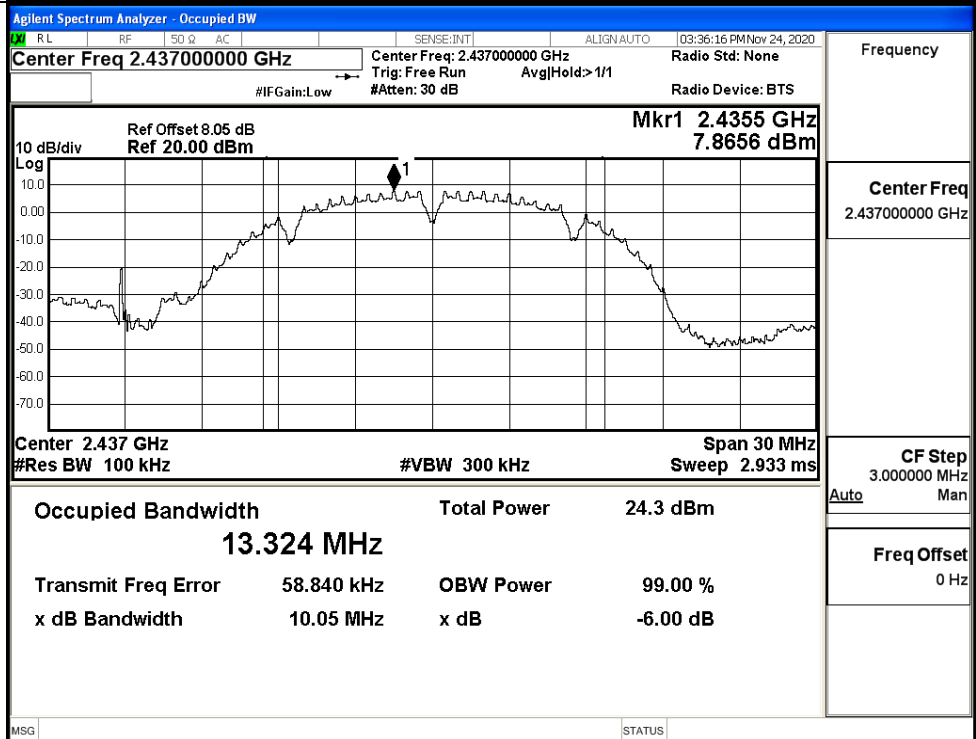
Mode	Channel	6dB Bandwidth [MHz]		Limit [MHz]	Verdict
		Ant 0	Ant 1		
11B	LCH	10.05	9.111	$\geq 0.5$	PASS
	MCH	10.05	9.566	$\geq 0.5$	PASS
	HCH	10.04	10.06	$\geq 0.5$	PASS
11G	LCH	15.15	15.11	$\geq 0.5$	PASS
	MCH	15.14	15.07	$\geq 0.5$	PASS
	HCH	15.02	13.90	$\geq 0.5$	PASS
11N20SISO	LCH	15.11	15.12	$\geq 0.5$	PASS
	MCH	15.13	15.14	$\geq 0.5$	PASS
	HCH	15.05	15.12	$\geq 0.5$	PASS
11N40SISO	LCH	35.04	35.09	$\geq 0.5$	PASS
	MCH	33.84	33.81	$\geq 0.5$	PASS
	HCH	31.43	35.11	$\geq 0.5$	PASS

Test Graphs\_ Ant 0

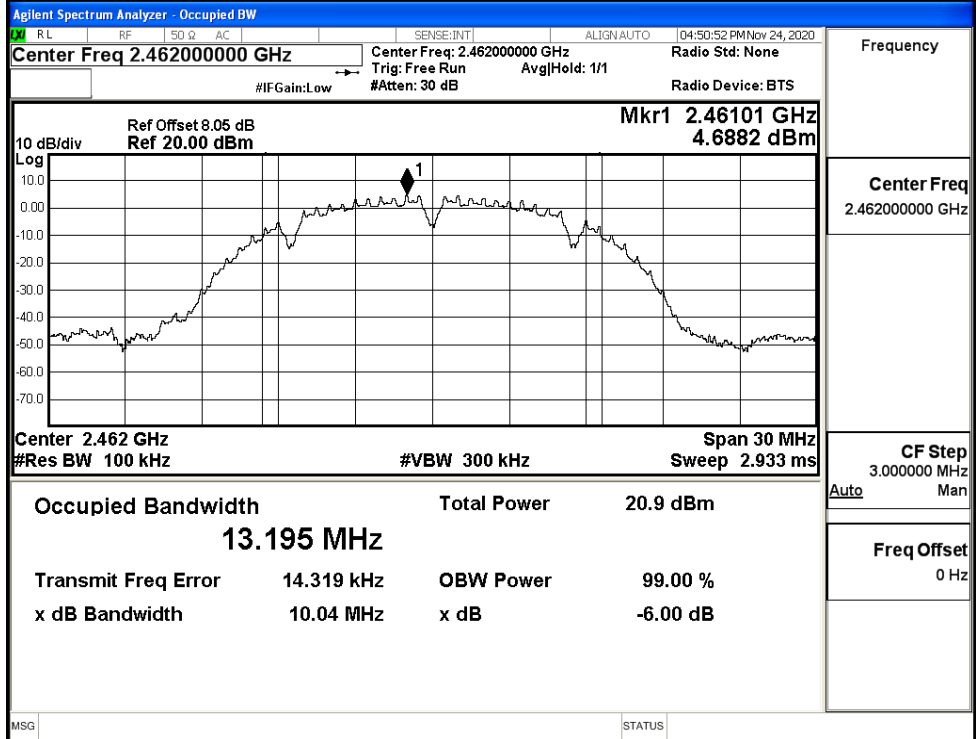
11B/LCH



11B/MCH

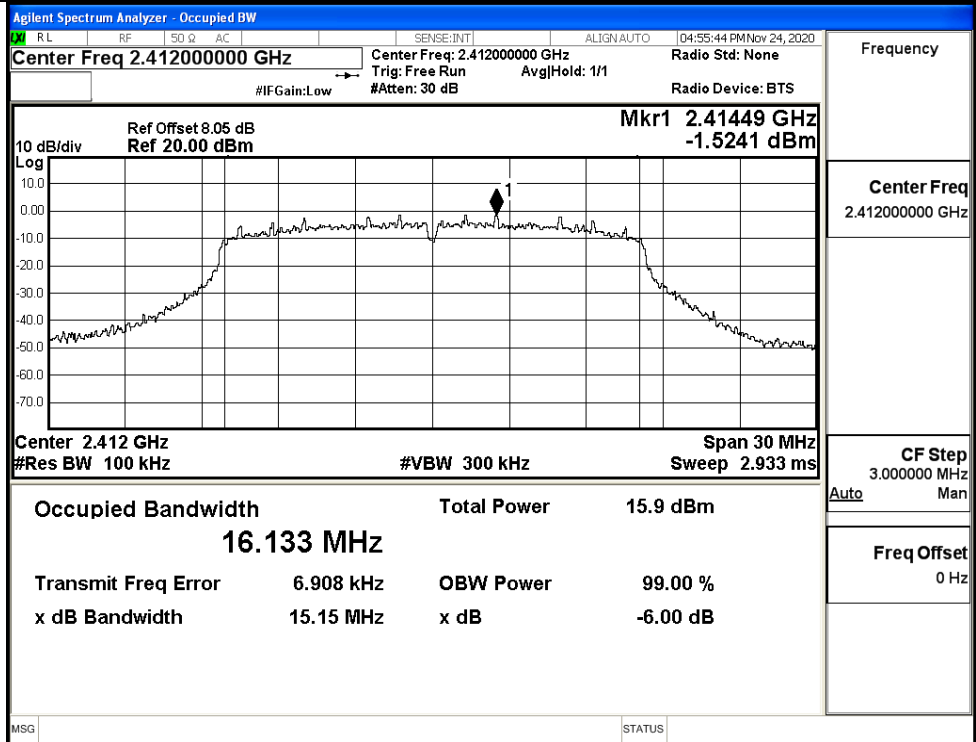


11B/HCH



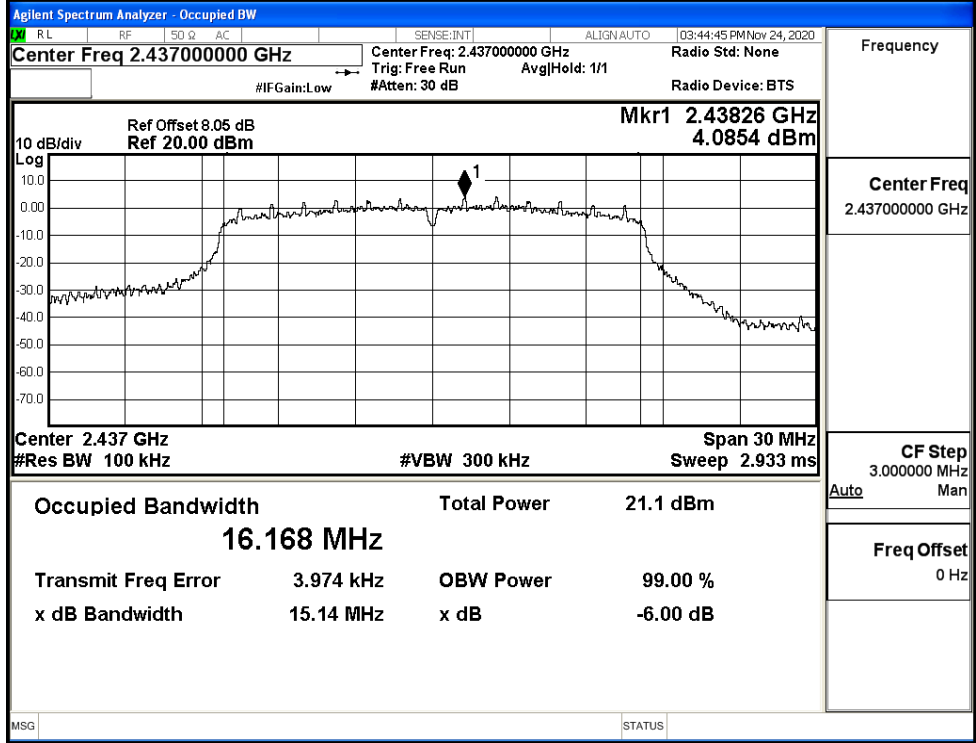
Frequency	2.46200000 GHz
Center Freq	2.46200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11G/LCH



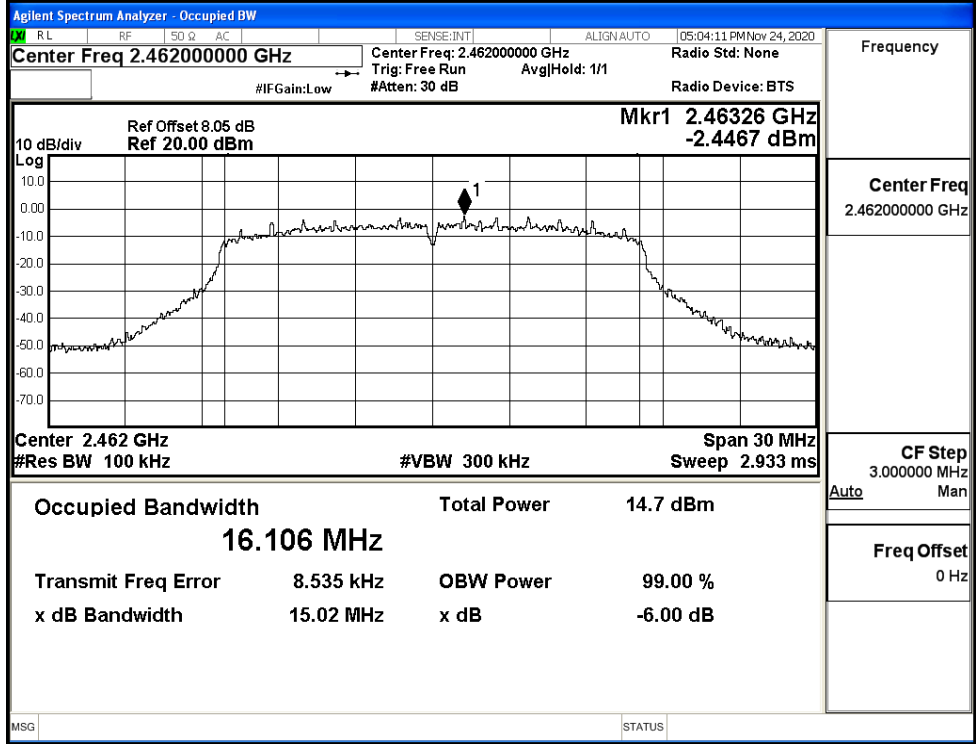
Frequency	2.41200000 GHz
Center Freq	2.41200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11G/MCH



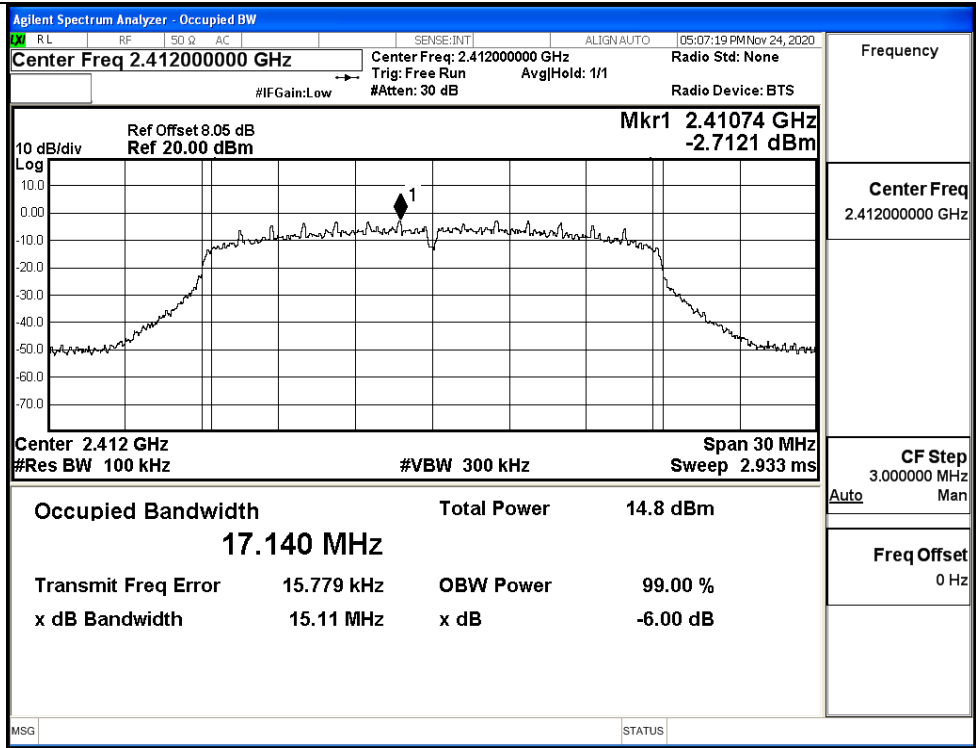
Frequency	2.43700000 GHz
Center Freq	2.43700000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11G/HCH



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

11N20SISO/LCH

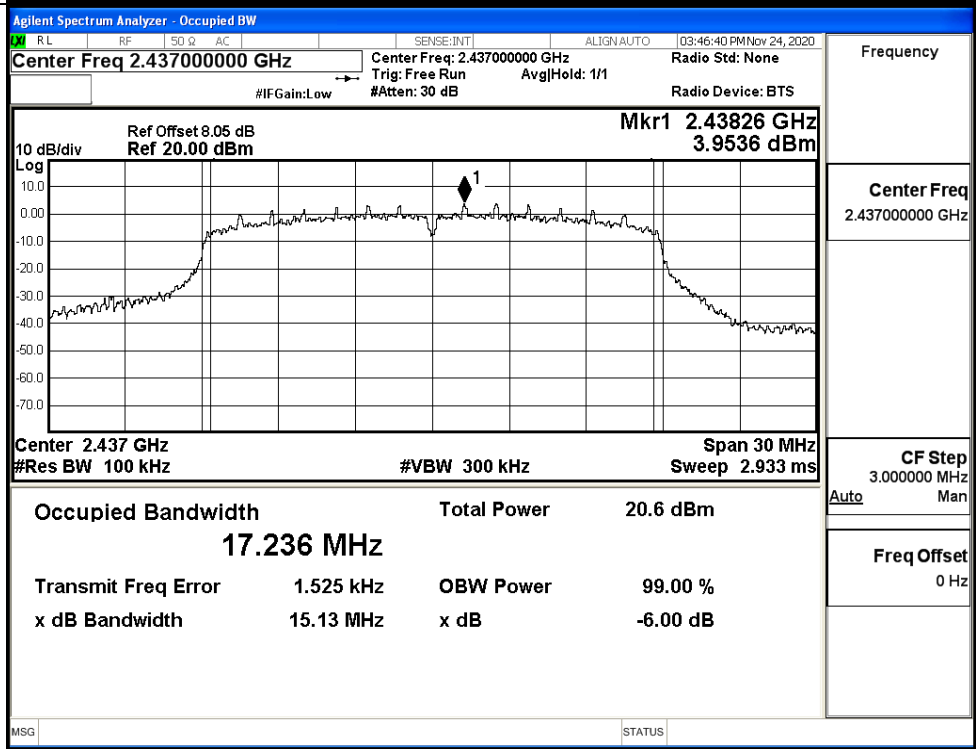


Frequency  
2.41200000 GHz

CF Step  
3.000000 MHz  
Auto Man

Freq Offset  
0 Hz

11N20SISO/MCH

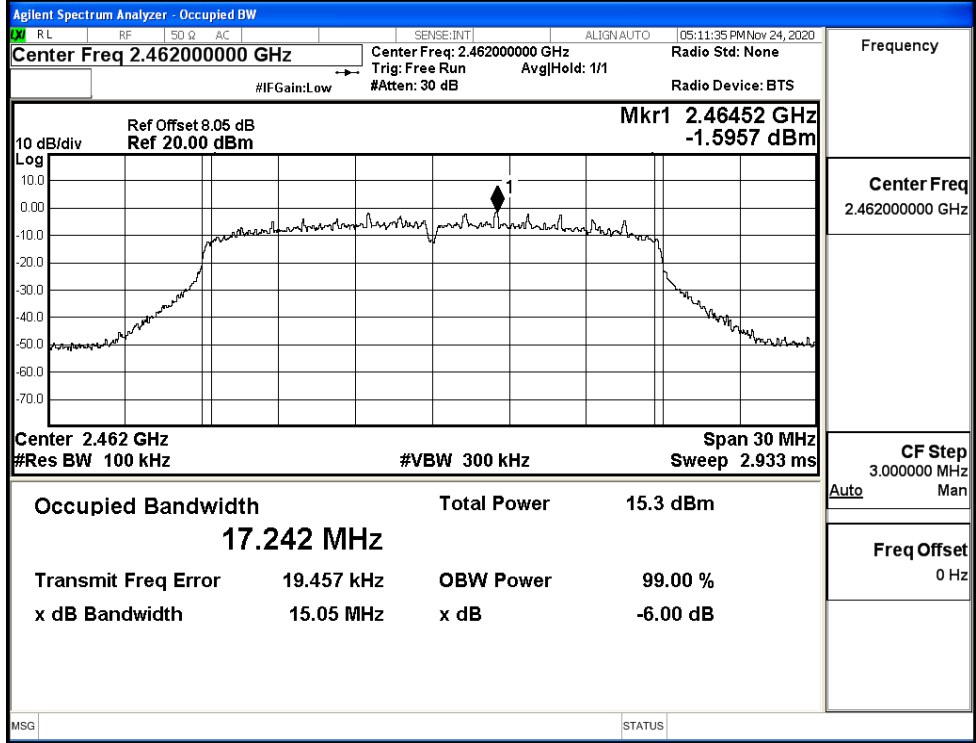


Frequency  
2.43700000 GHz

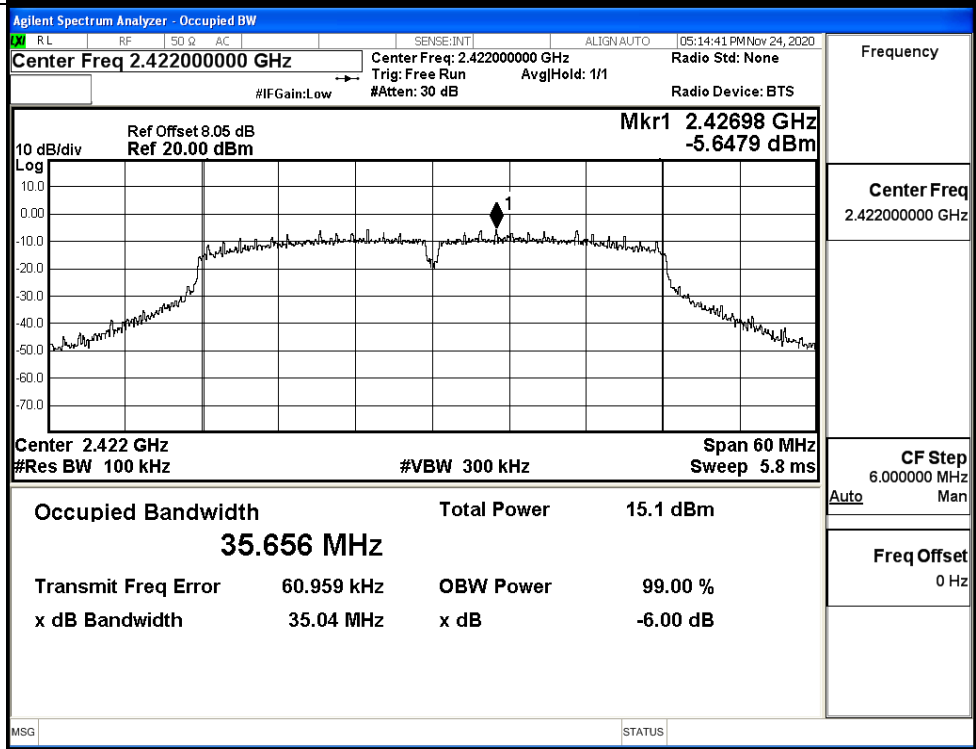
CF Step  
3.000000 MHz  
Auto Man

Freq Offset  
0 Hz

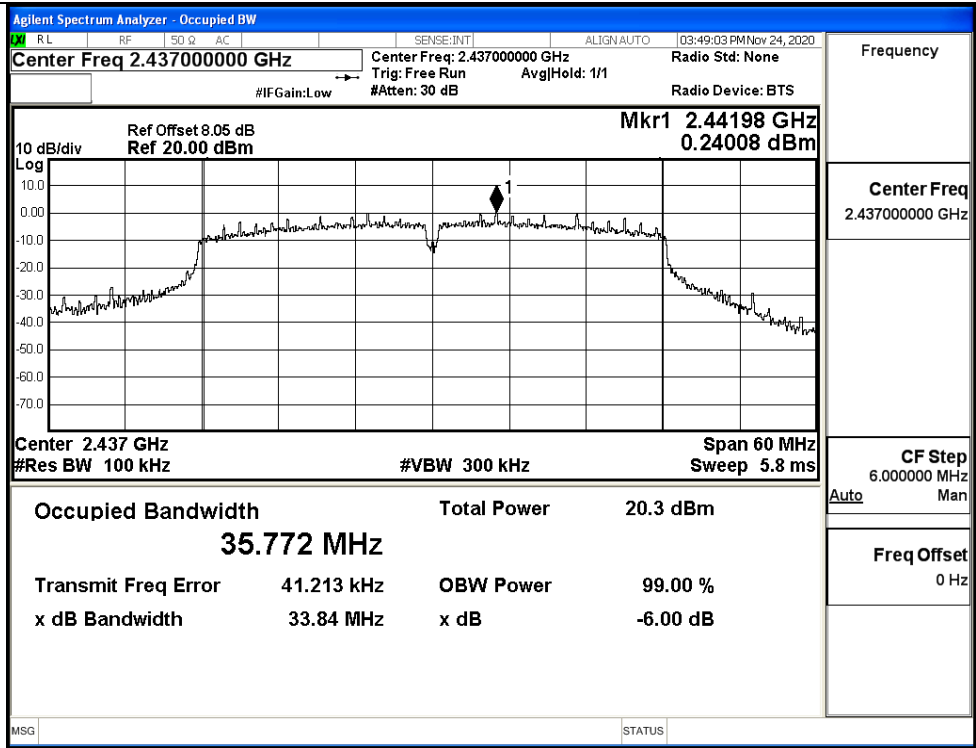
11N20SISO/HCH



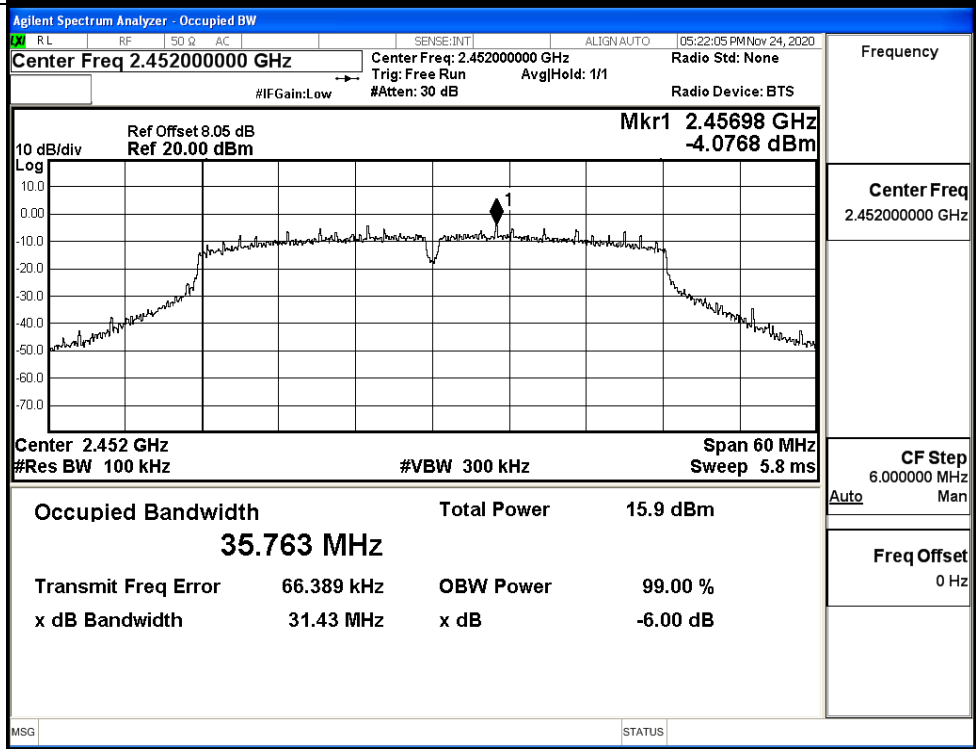
11N40SISO/LCH



11N40SISO/MCH



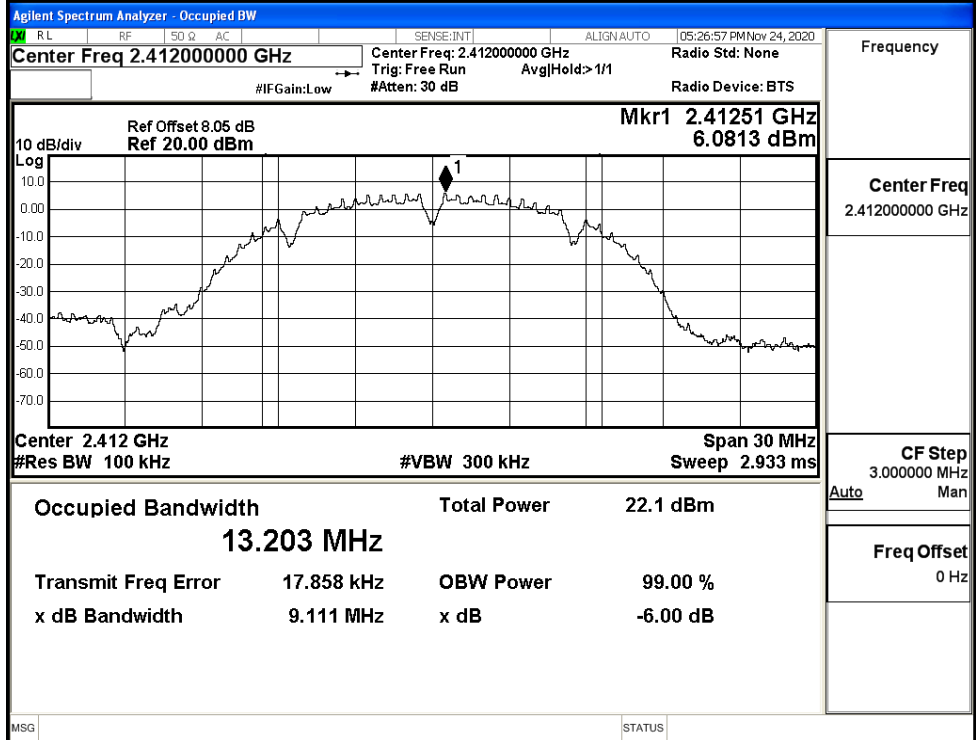
11N40SISO/HCH



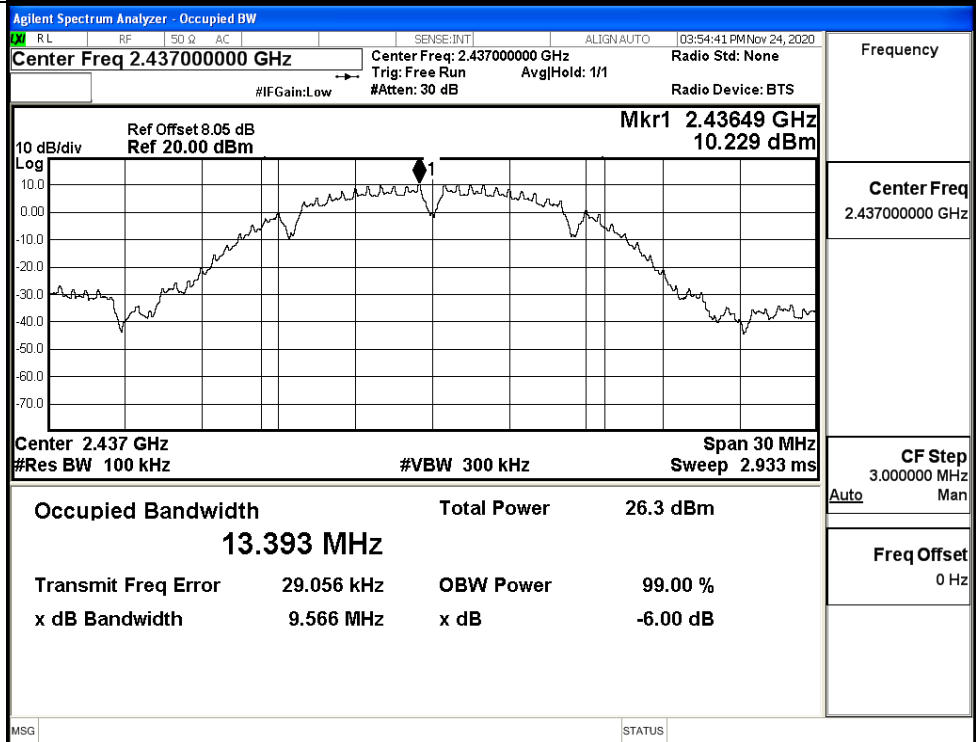


Test Graphs\_ Ant 1

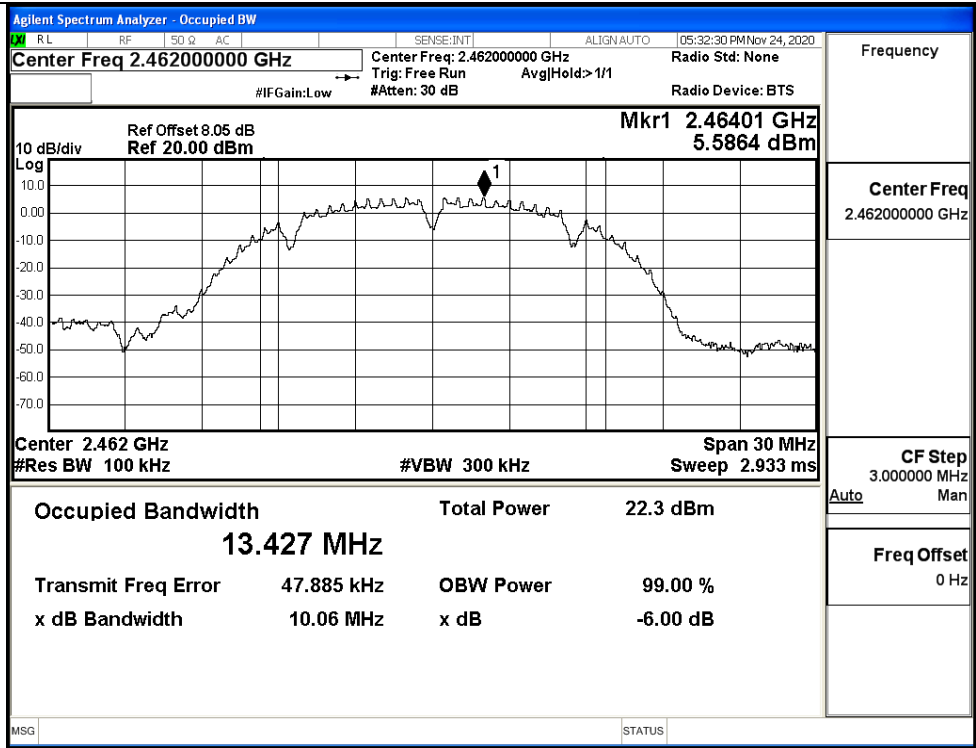
11B/LCH



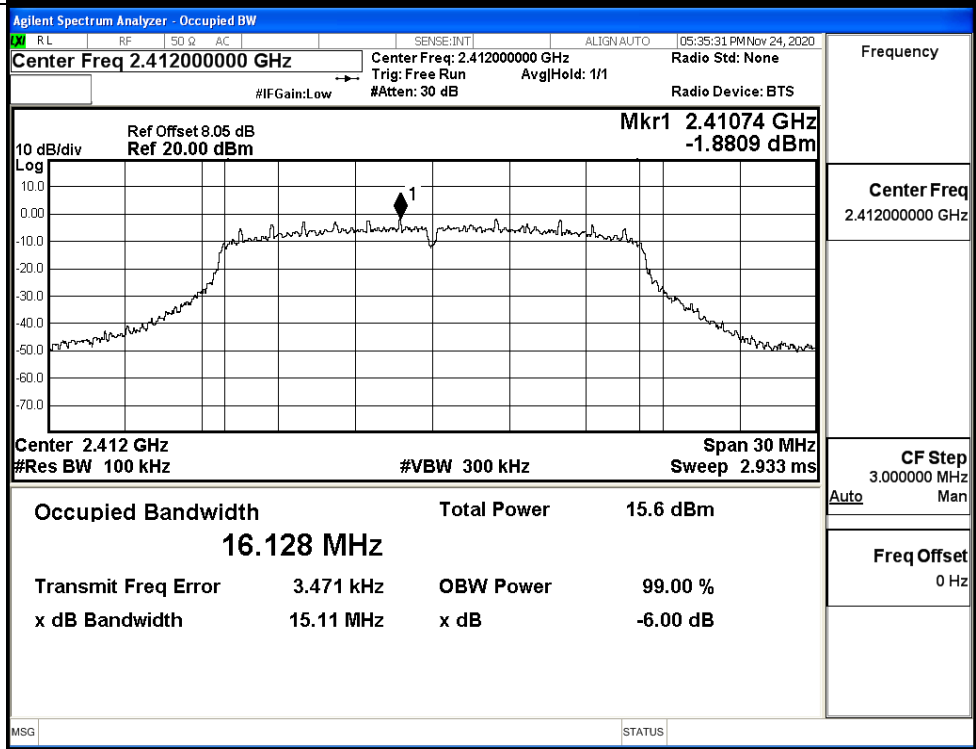
11B/MCH



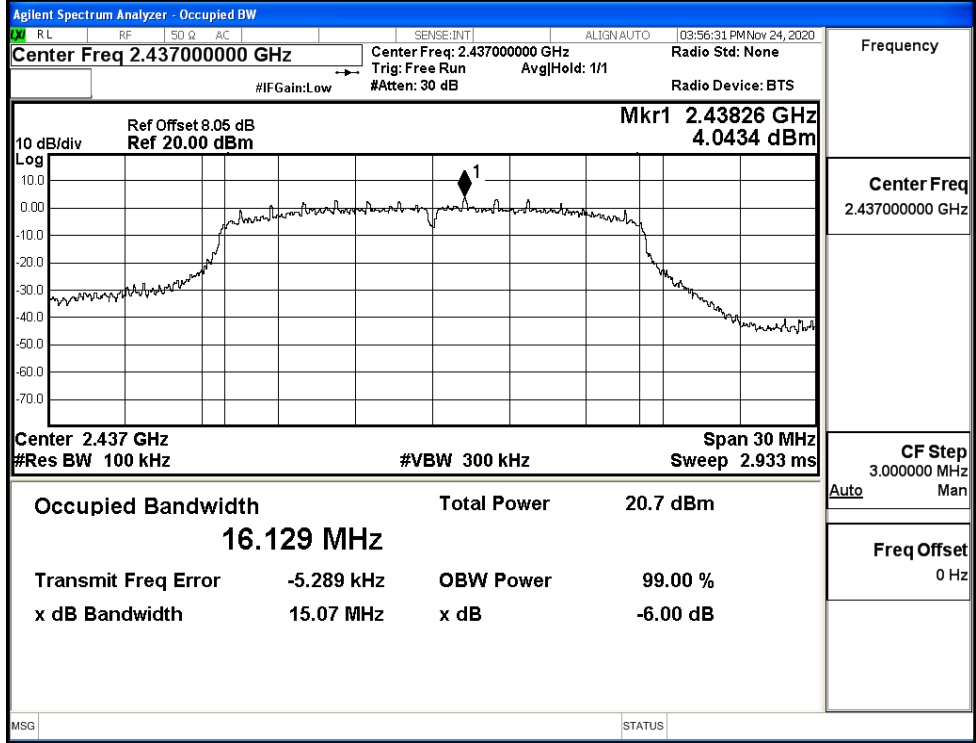
11B/HCH



11G/LCH



11G/MCH



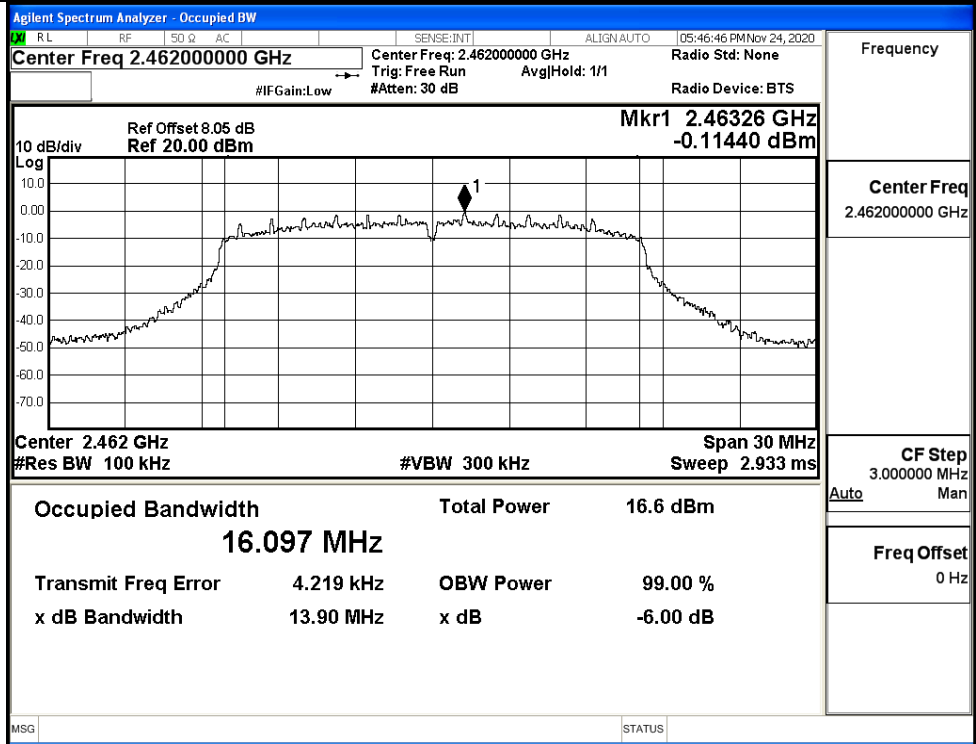
Frequency

Center Freq  
2.43700000 GHz

CF Step  
3.000000 MHz

Freq Offset  
0 Hz

11G/HCH



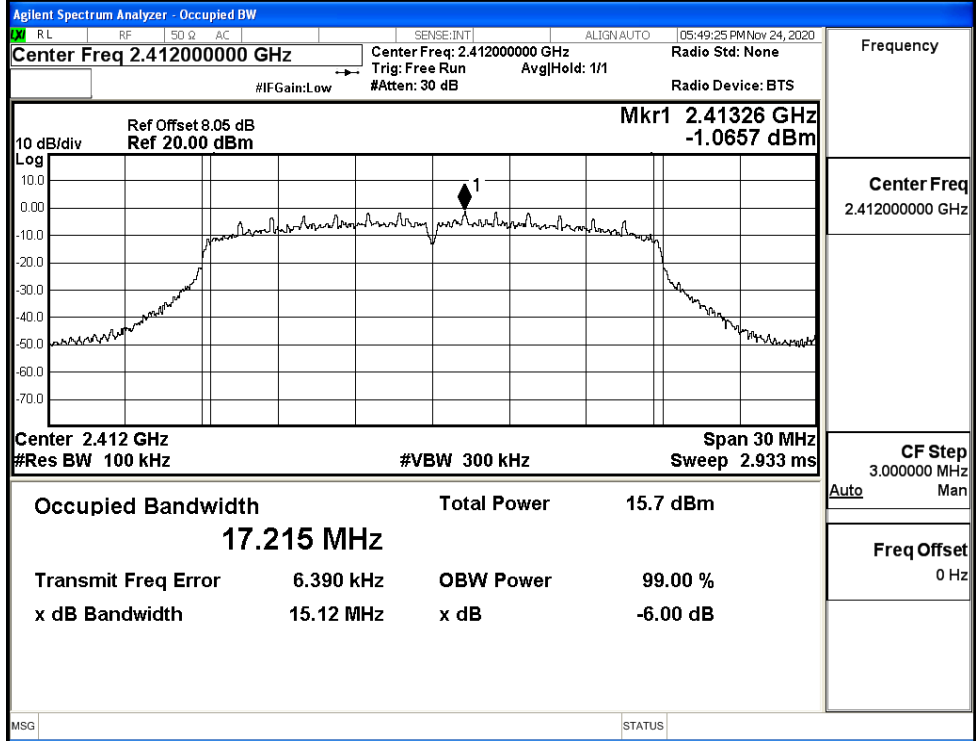
Frequency

Center Freq  
2.46200000 GHz

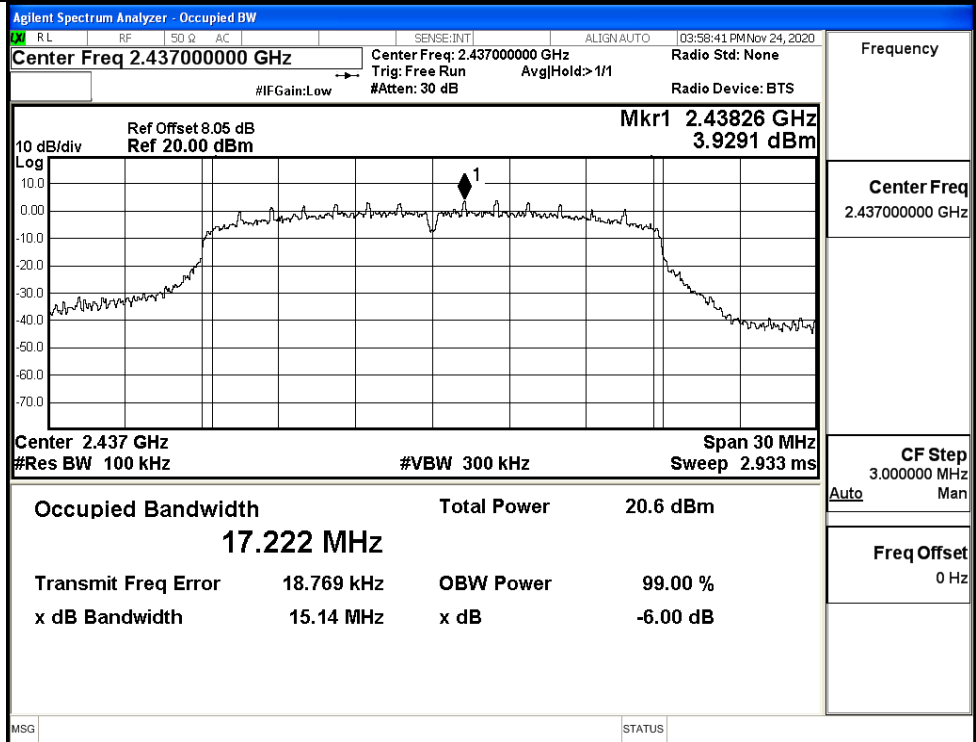
CF Step  
3.000000 MHz

Freq Offset  
0 Hz

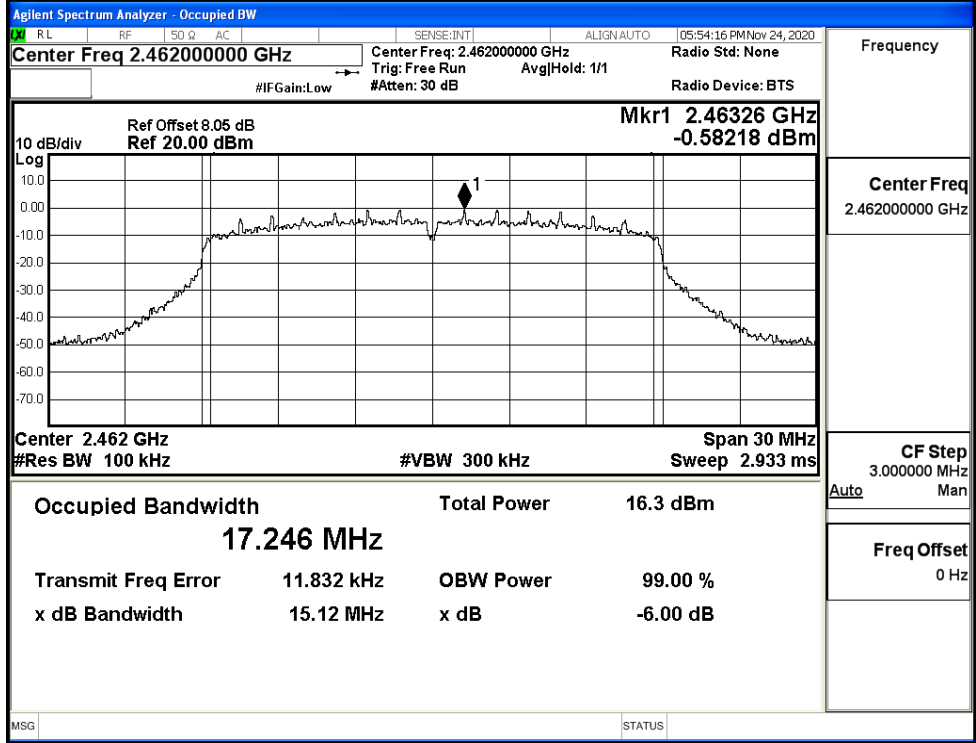
11N20SISO/LCH



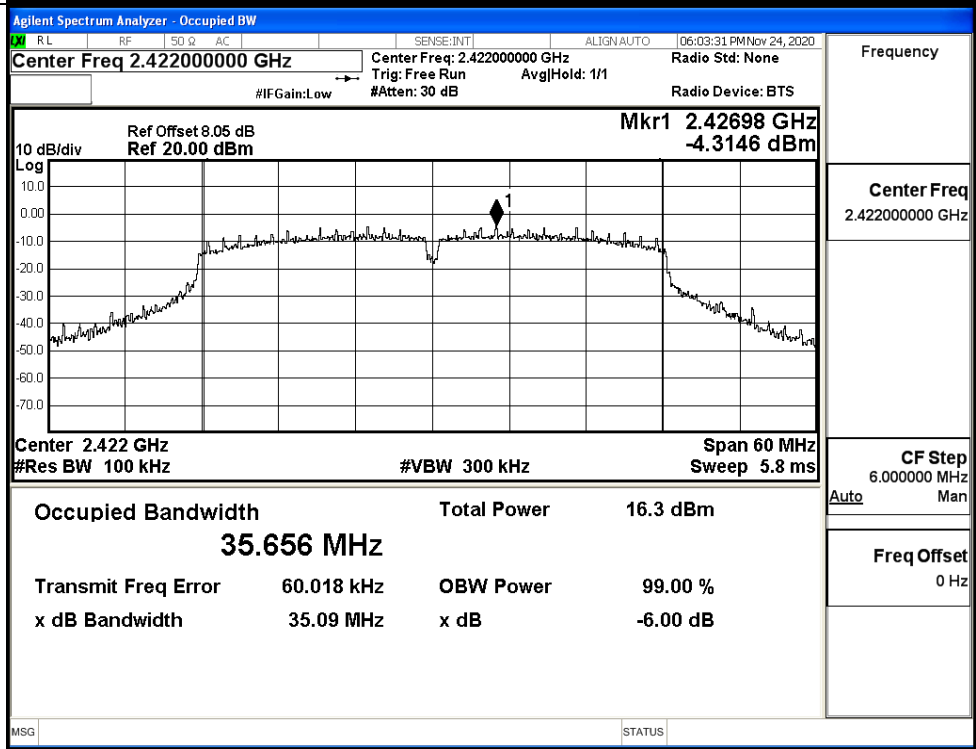
11N20SISO/MCH



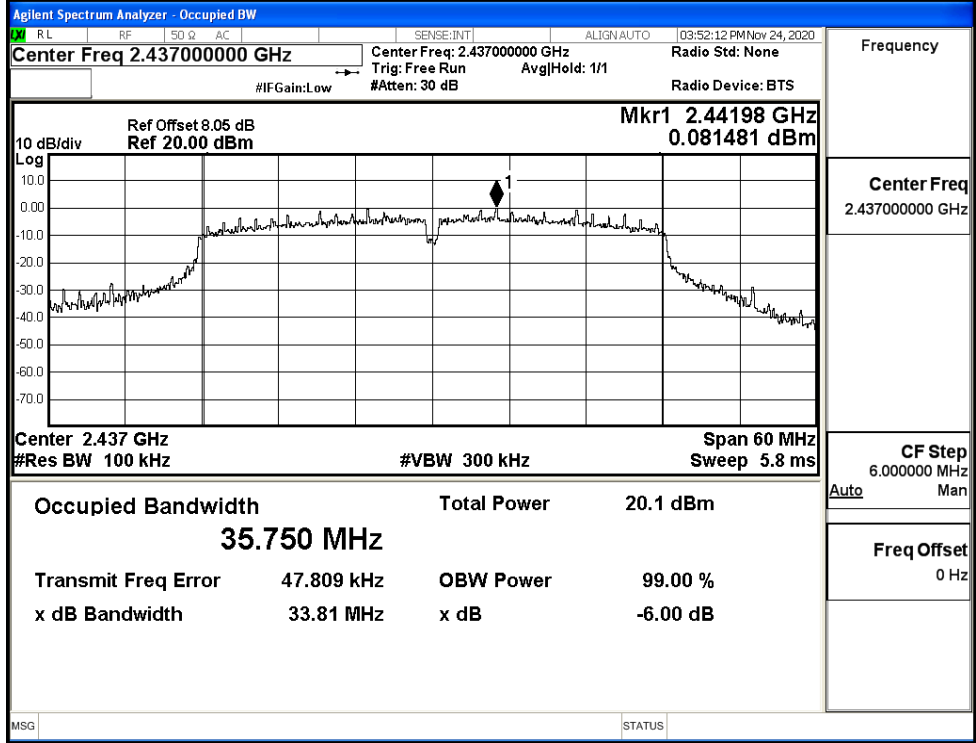
11N20SISO/HCH



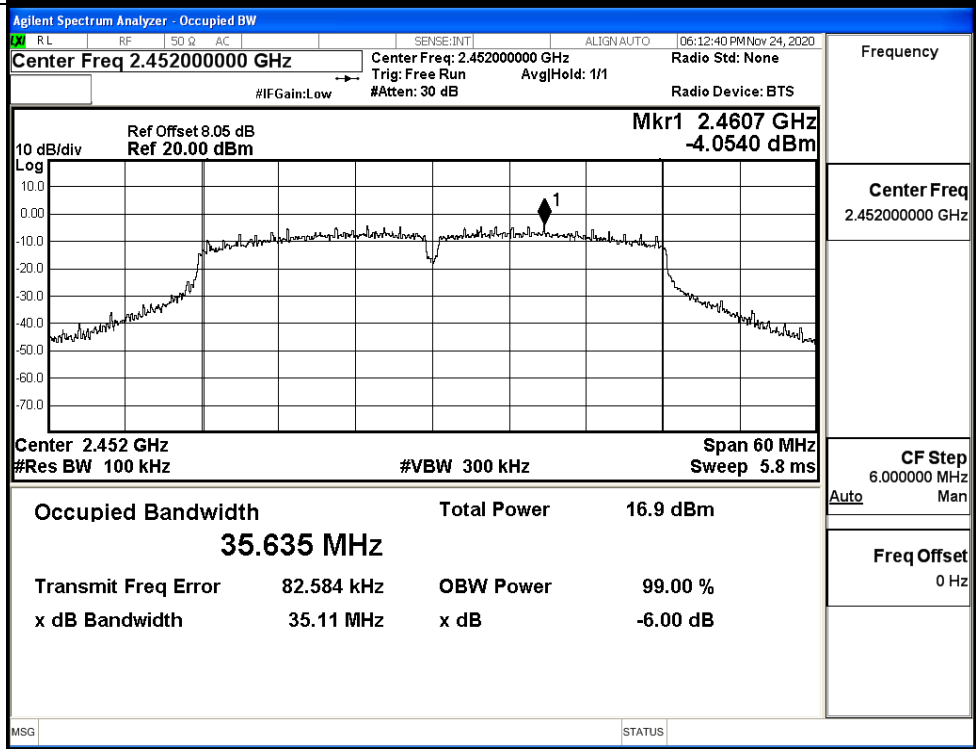
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH



## A.5 RF Conducted Spurious Emissions

ANT 0

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	5.825	-33.482	-14.175	PASS
	MCH	7.763	-28.684	-12.237	PASS
	HCH	4.793	-36.305	-15.207	PASS
11G	LCH	-2.029	-37.978	-22.029	PASS
	MCH	3.105	-37.887	-16.895	PASS
	HCH	-2.729	-37.813	-22.729	PASS
11N20 SISO	LCH	-2.767	-37.853	-22.767	PASS
	MCH	3.587	-37.979	-16.413	PASS
	HCH	-1.104	-37.644	-21.104	PASS
11N40 SISO	LCH	-5.188	-37.850	-25.188	PASS
	MCH	-0.119	-37.823	-20.119	PASS
	HCH	-4.181	-36.425	-24.181	PASS

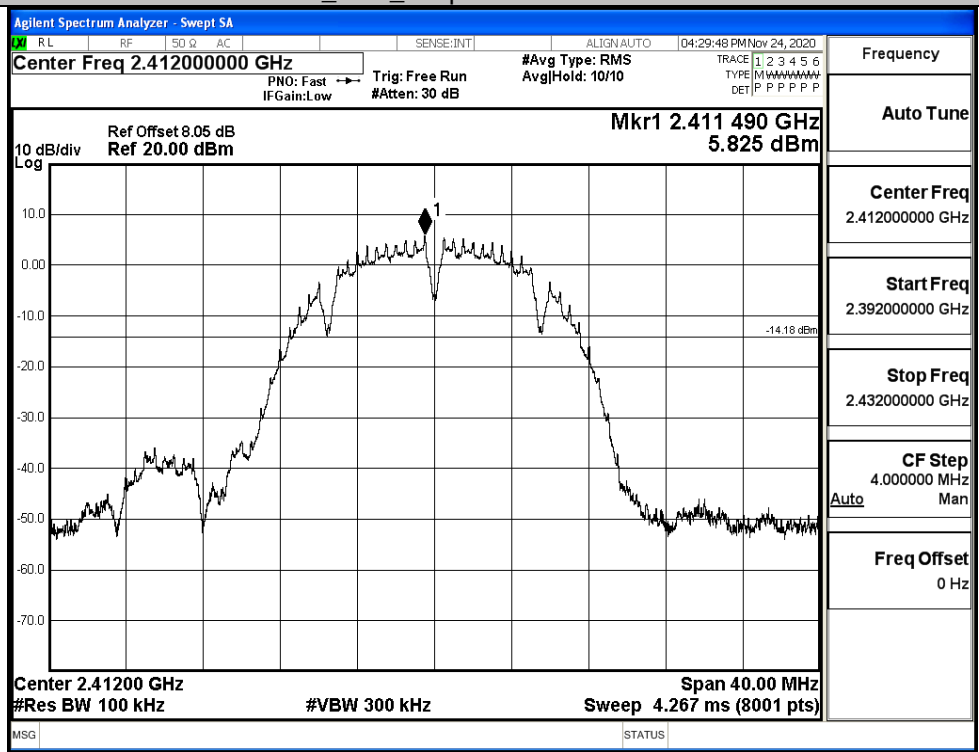
ANT 1

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	5.498	-33.609	-14.502	PASS
	MCH	9.545	-27.429	-10.455	PASS
	HCH	5.5	-34.685	-14.500	PASS
11G	LCH	-1.507	-37.294	-21.507	PASS
	MCH	-1.494	-37.842	-21.494	PASS
	HCH	-0.583	-38.385	-20.583	PASS
11N20 SISO	LCH	-0.738	-37.821	-20.738	PASS
	MCH	3.678	-36.958	-16.322	PASS
	HCH	-0.08	-37.530	-20.080	PASS
11N40 SISO	LCH	-4.271	-37.849	-24.271	PASS
	MCH	0.024	-37.712	-19.976	PASS
	HCH	-3.623	-37.280	-23.623	PASS

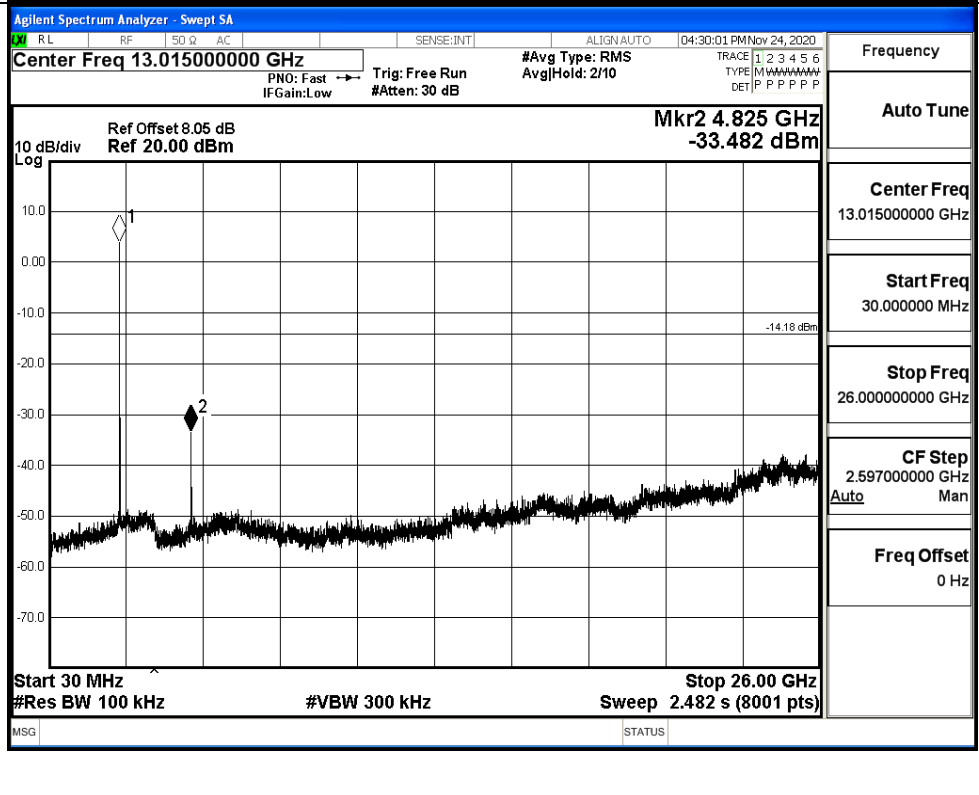
ANT 0

11B\_LCH\_Graphs

Pref/11B/LCH



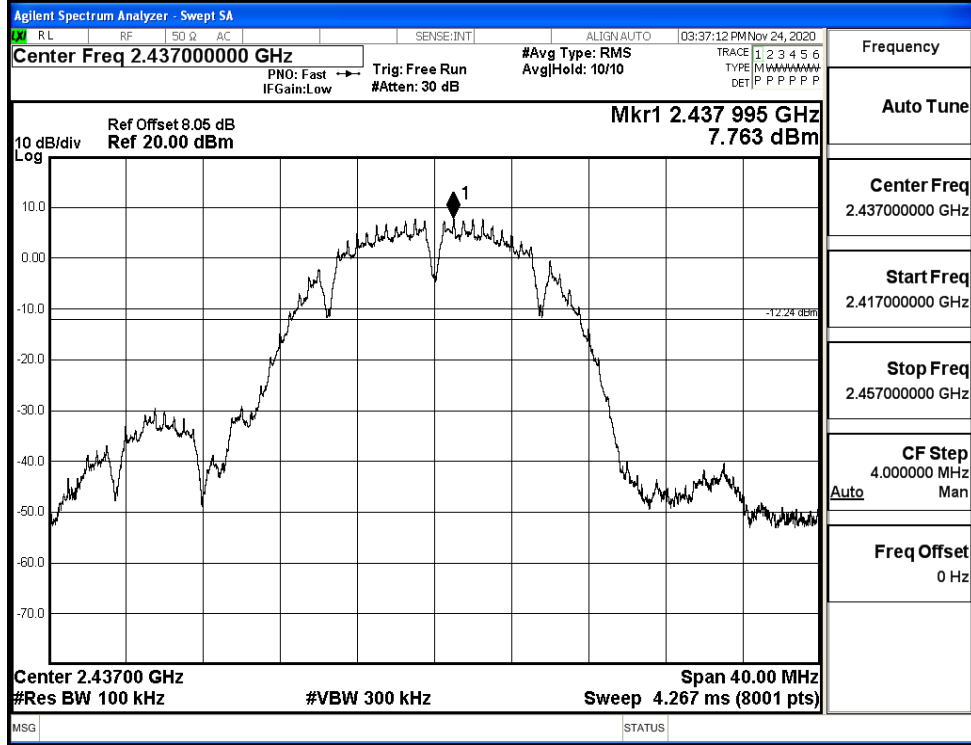
Puw/11B/LCH



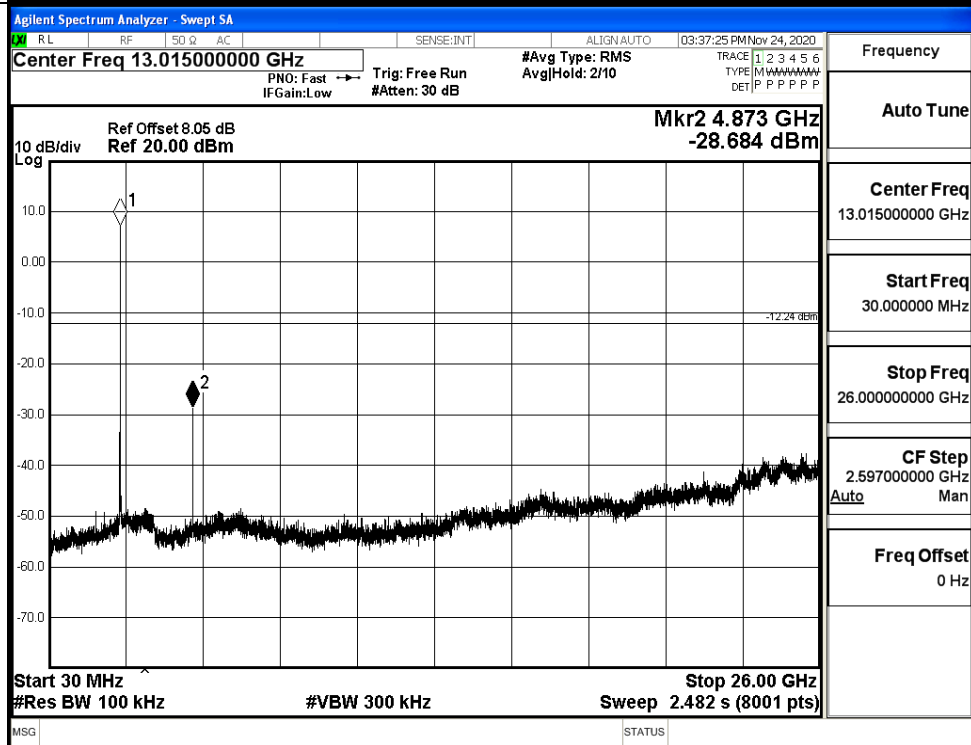


11B\_MCH\_Graphs

Pref/11B/MCH

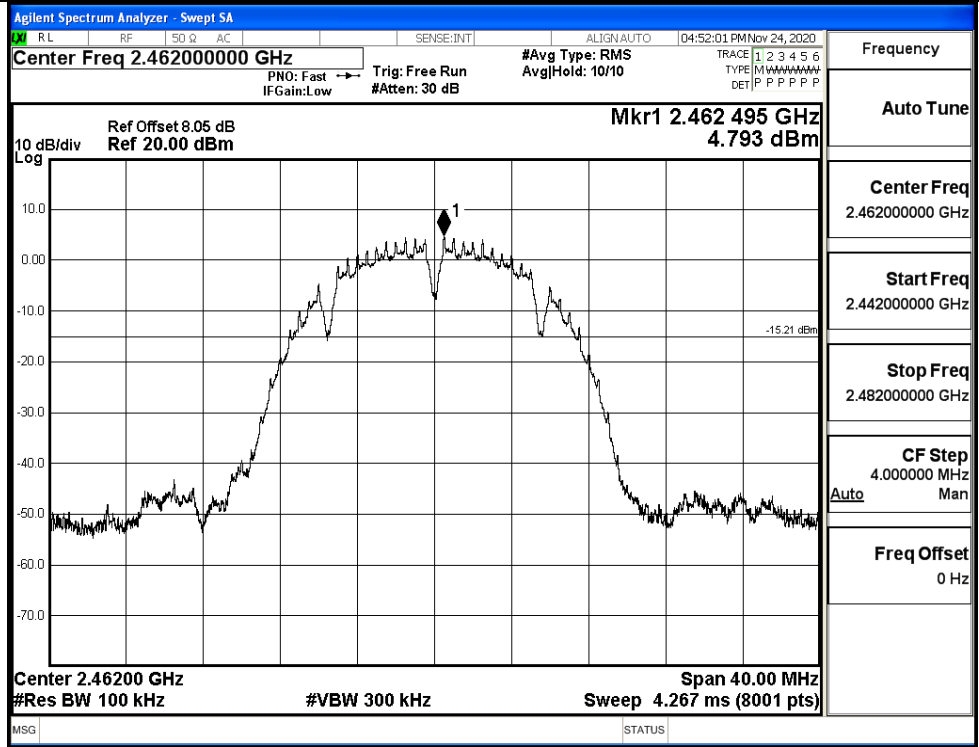


Puw/11B/MCH

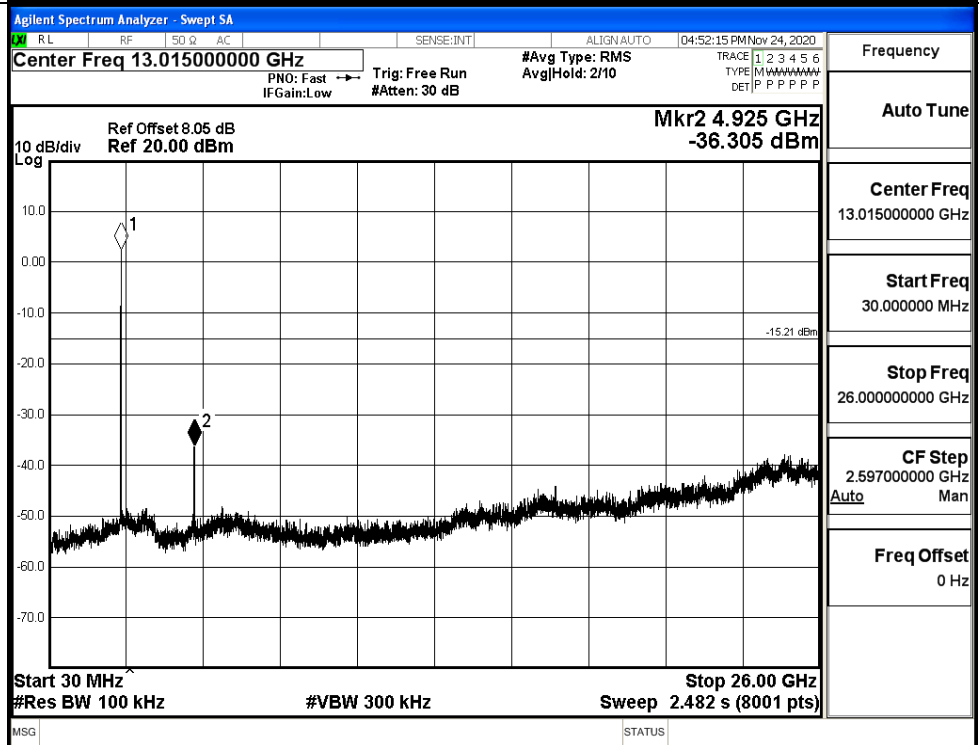


11B\_HCH\_Graphs

Pref/11B/HCH

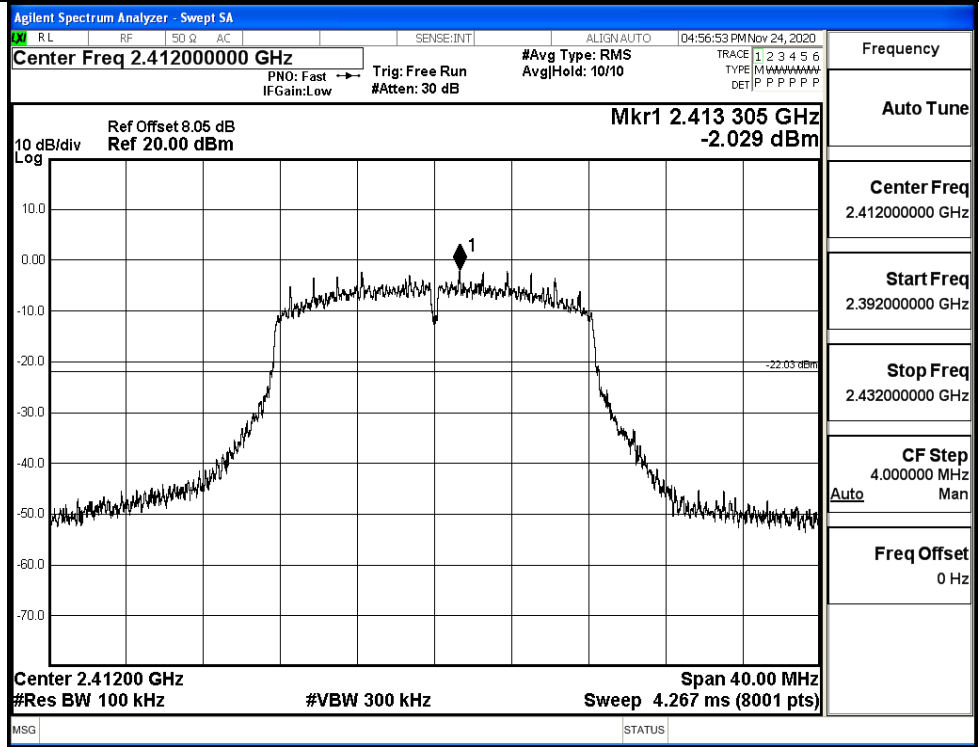


Puw/11B/HCH

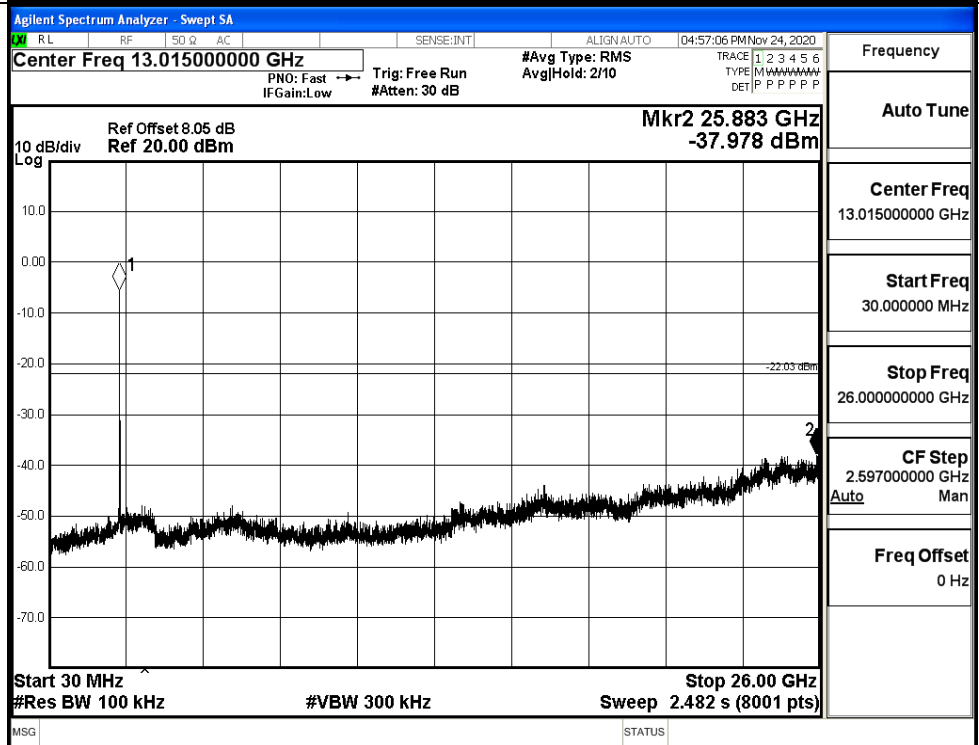


11G\_LCH\_Graphs

Pref/11G/LCH

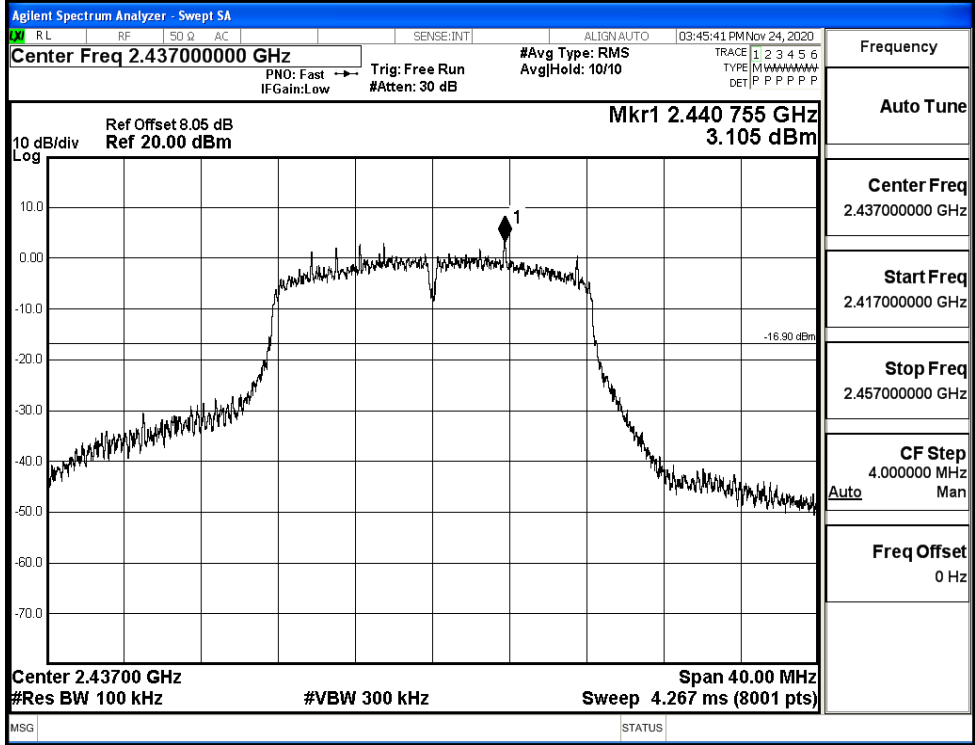


Puw/11G/LCH

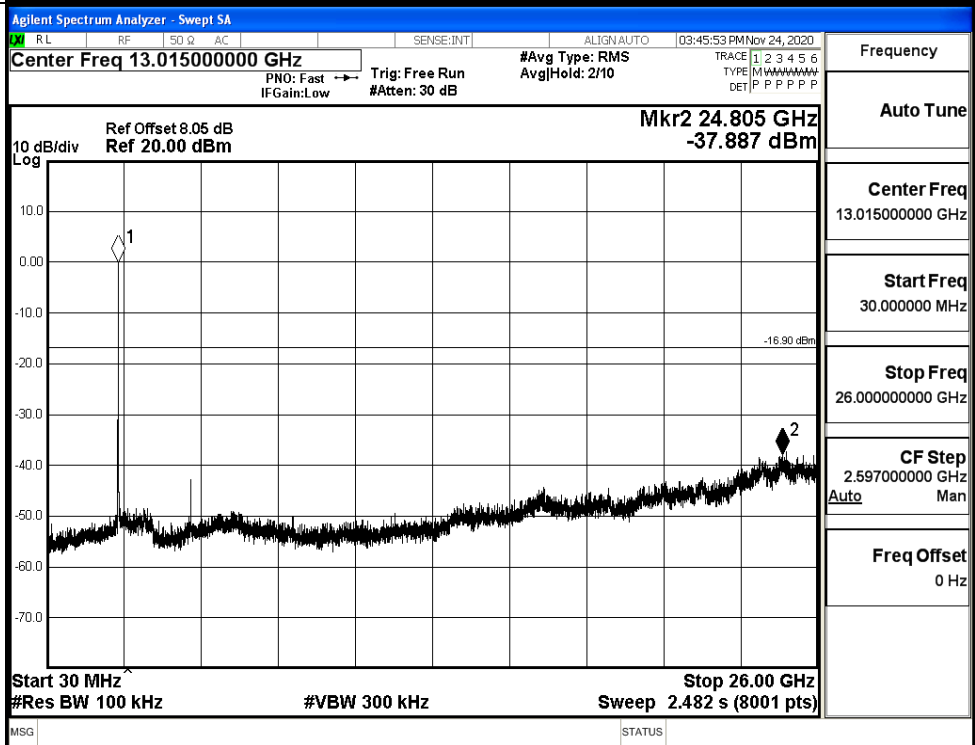


11G\_MCH\_Graphs

Pref/11G/MCH

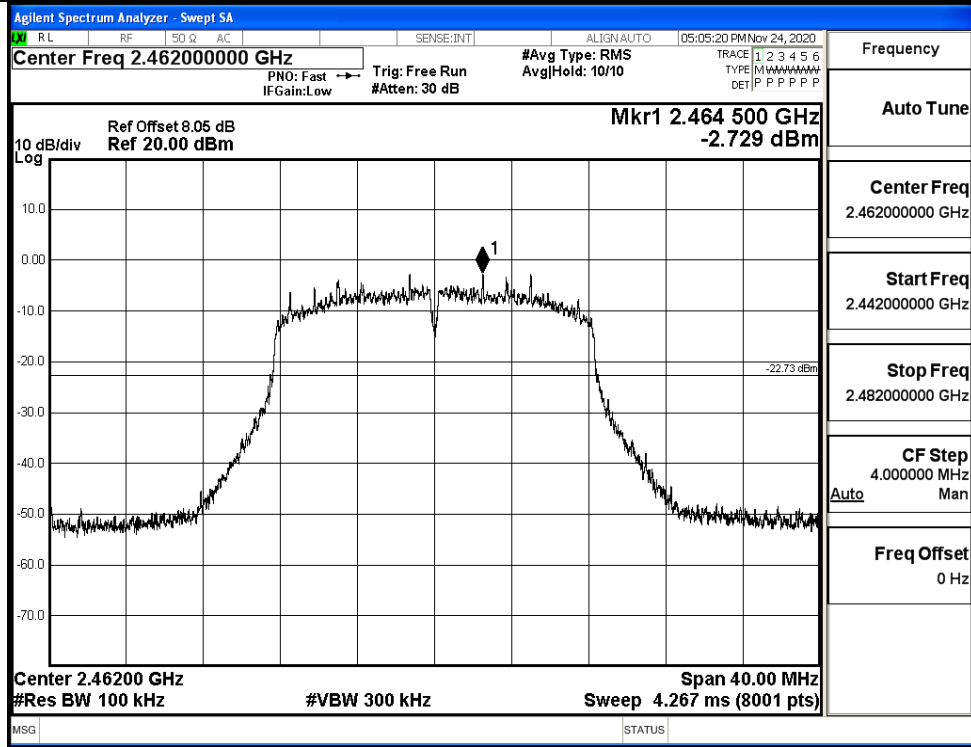


Puw/11G/MCH

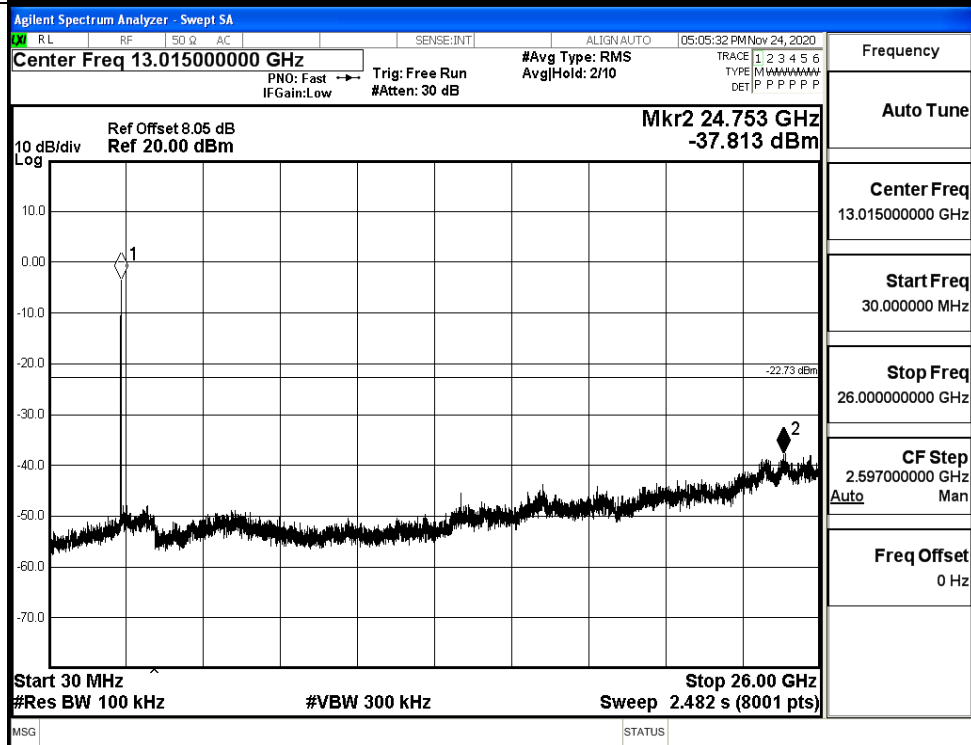


11G\_HCH\_Graphs

Pref/11G/HCH

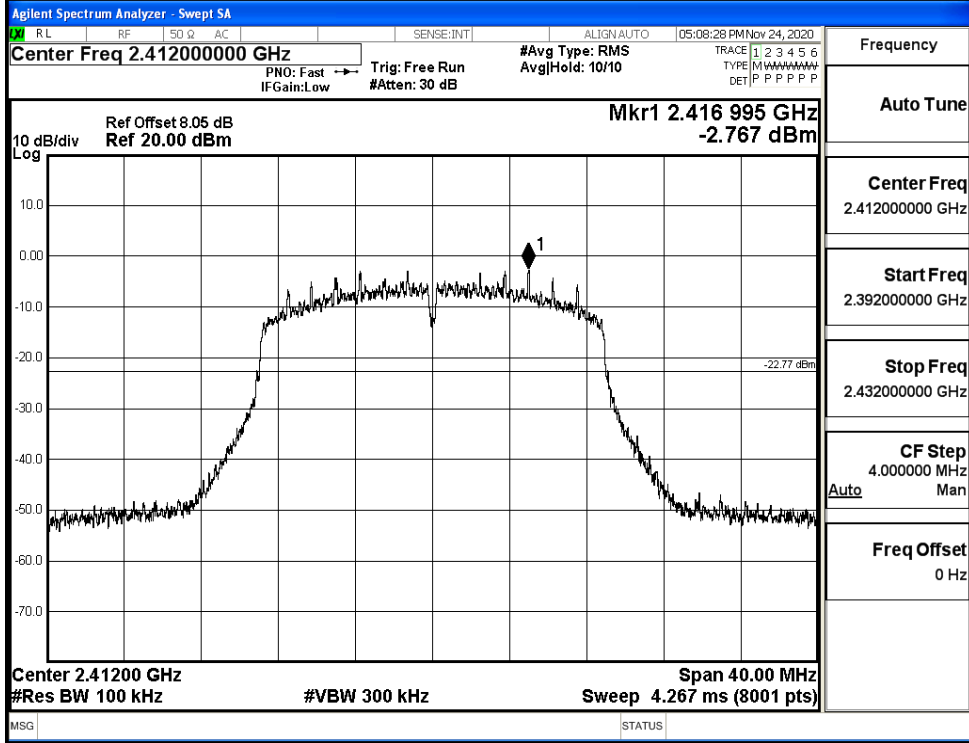


Puw/11G/HCH

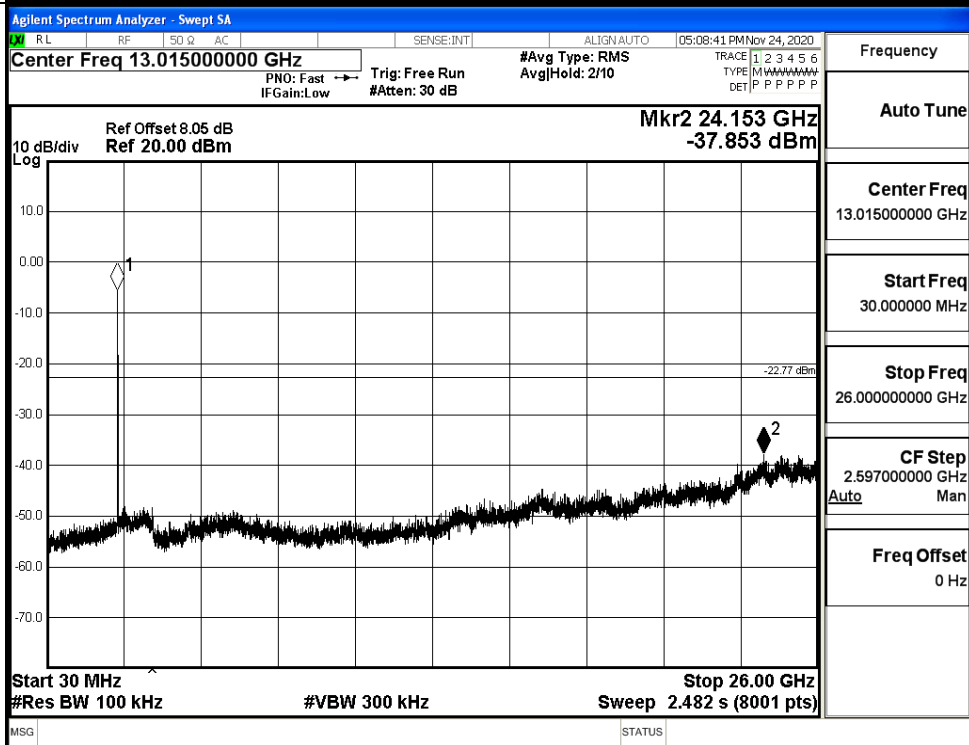


11N20SISO\_LCH\_Graphs

Pref/11N20SIS  
O/LCH

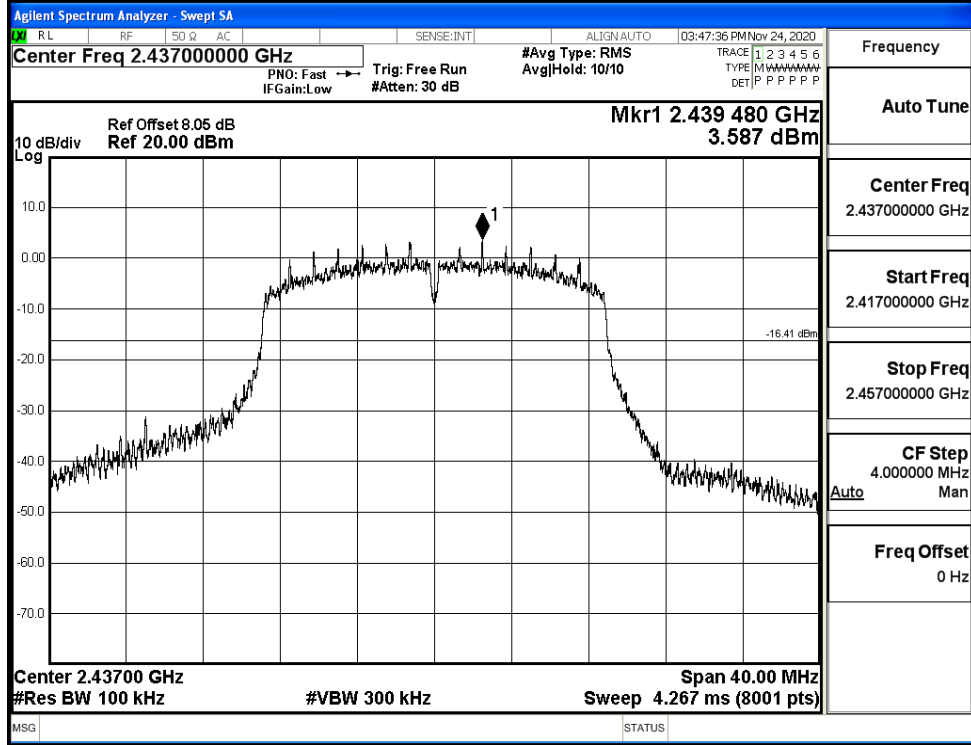


Puw/11N20  
SISO/LCH

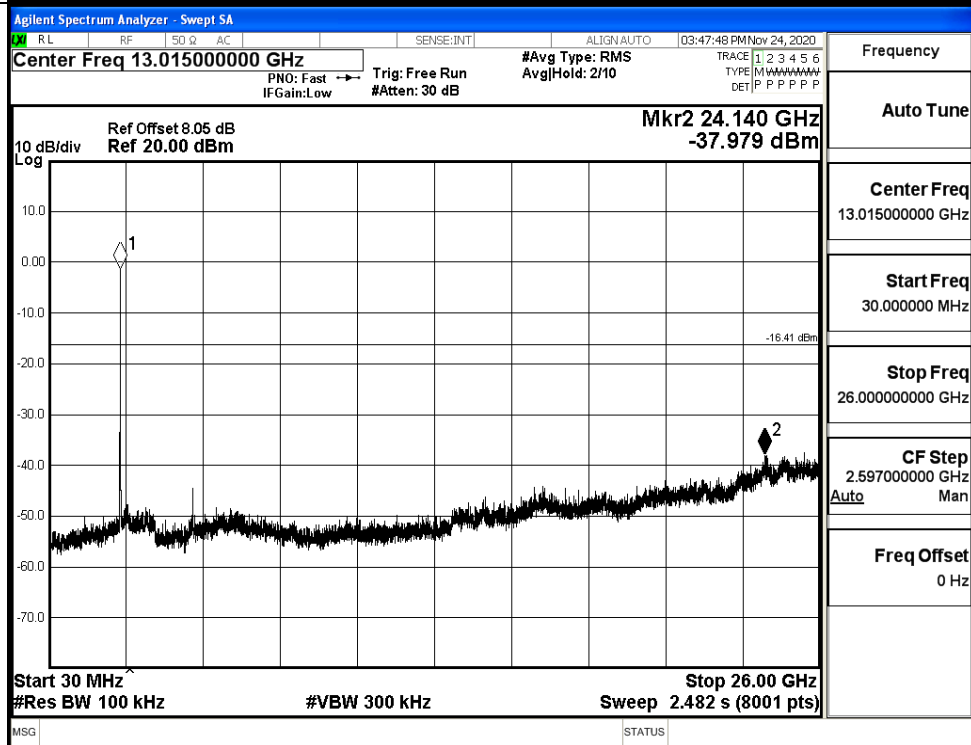


11N20SISO\_MCH\_Graphs

Pref/11N20  
SISO/MCH

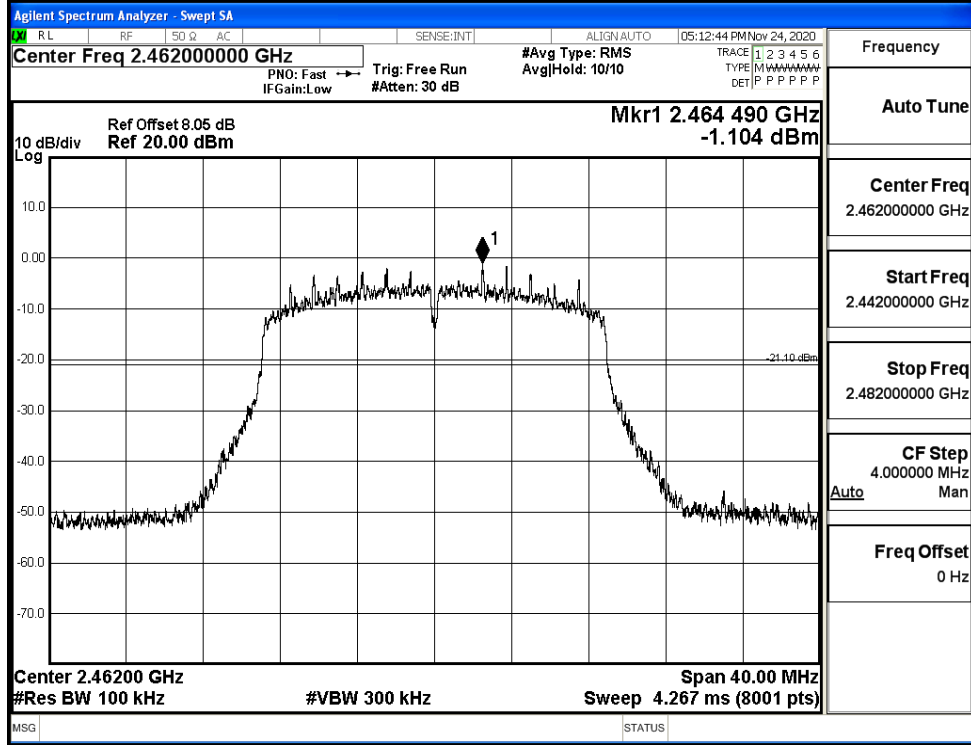


Puw/11N20  
SISO/MCH

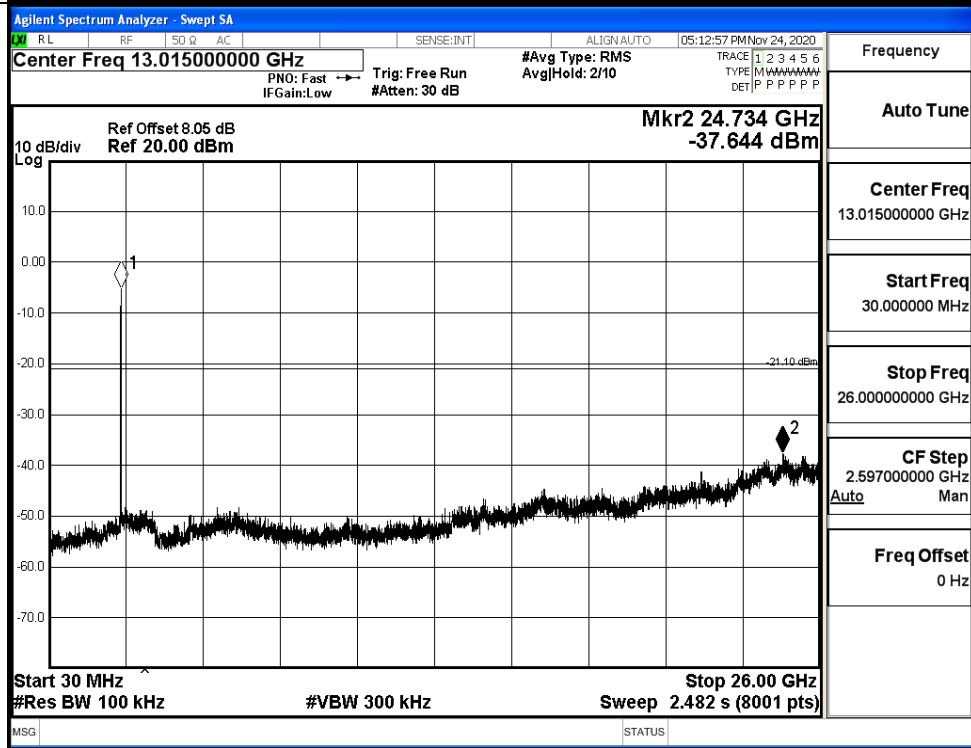


11N20SISO\_HCH\_Graphs

Pref/11N20  
SISO/HCH



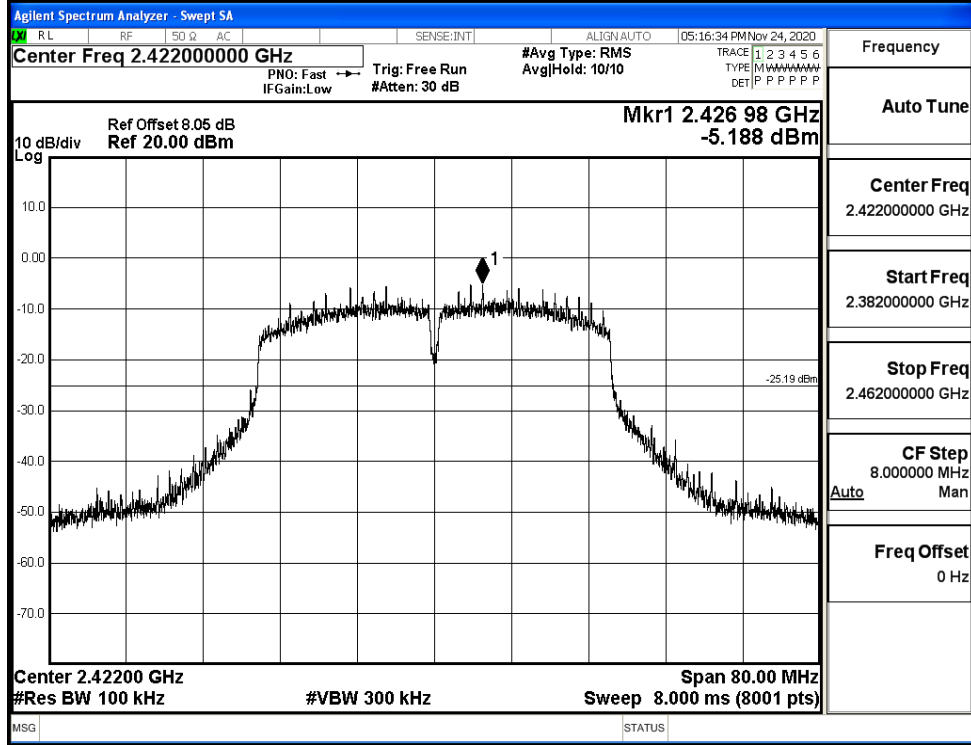
Puw/11N20  
SISO/HCH



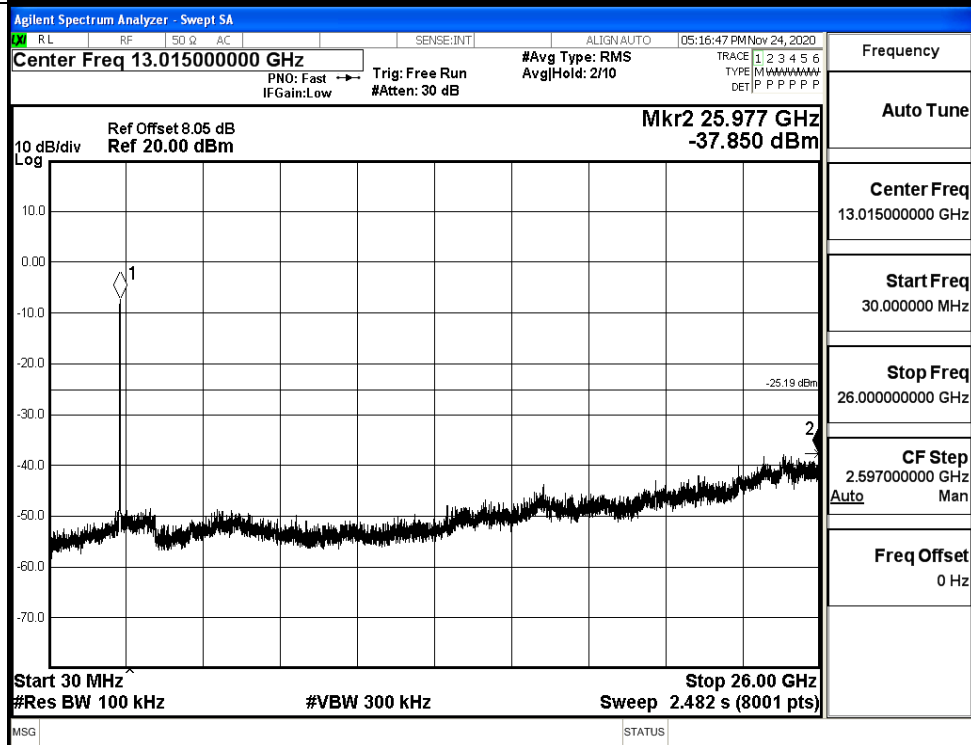


11N40SISO\_LCH\_Graphs

Pref/11N40  
SISO/LCH

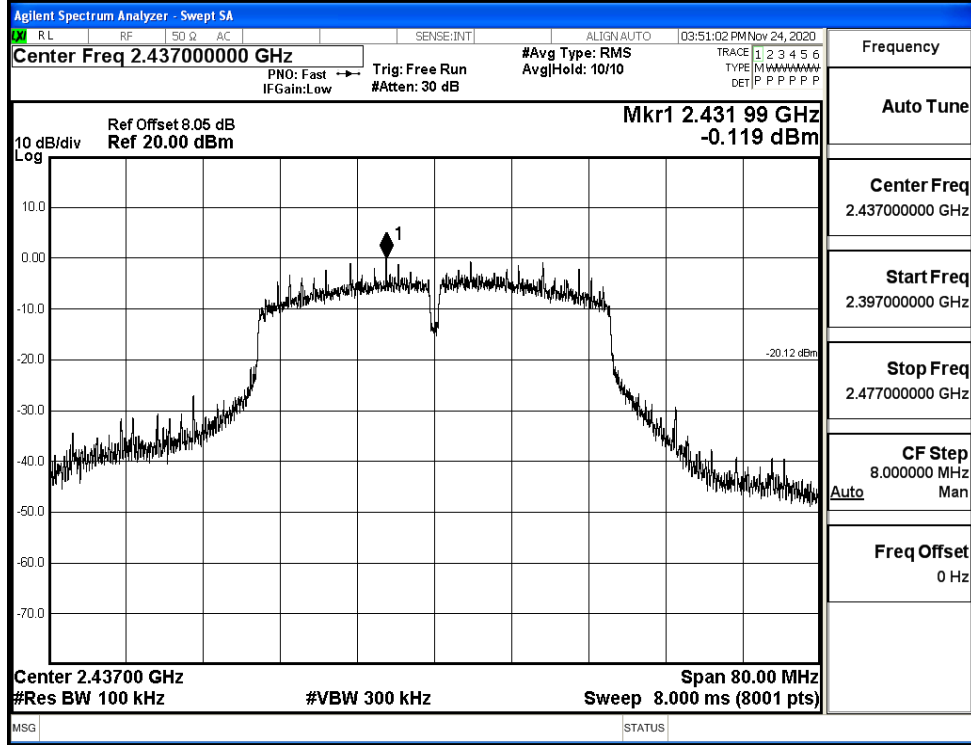


Puw/11N40  
SISO/LCH

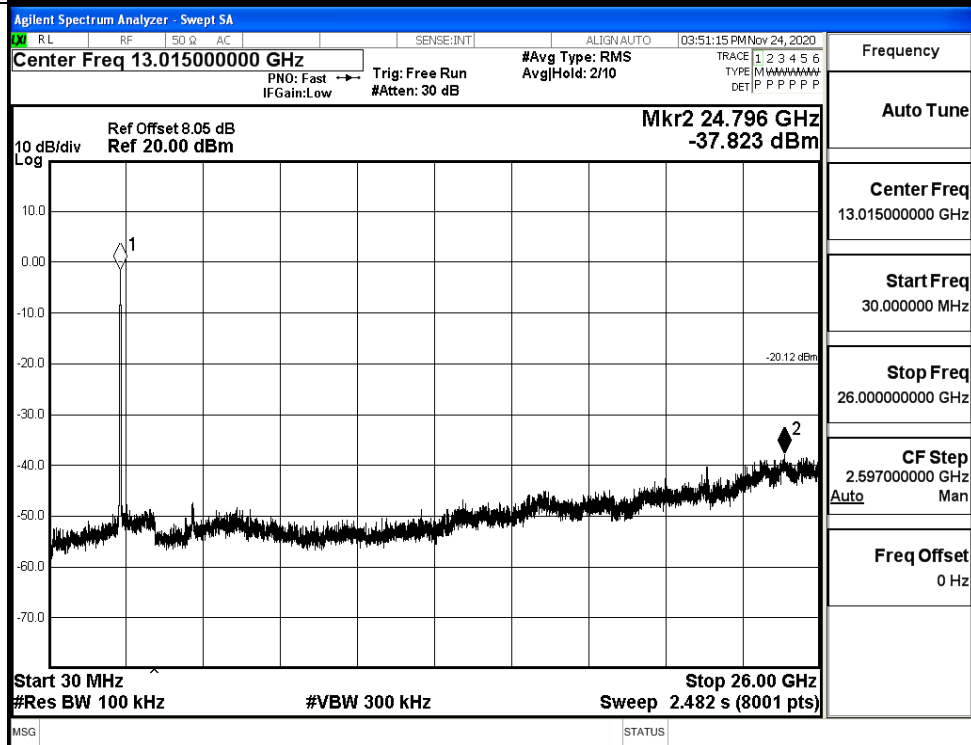


11N40SISO\_MCH\_Graphs

Pref/11N40  
SISO/MCH

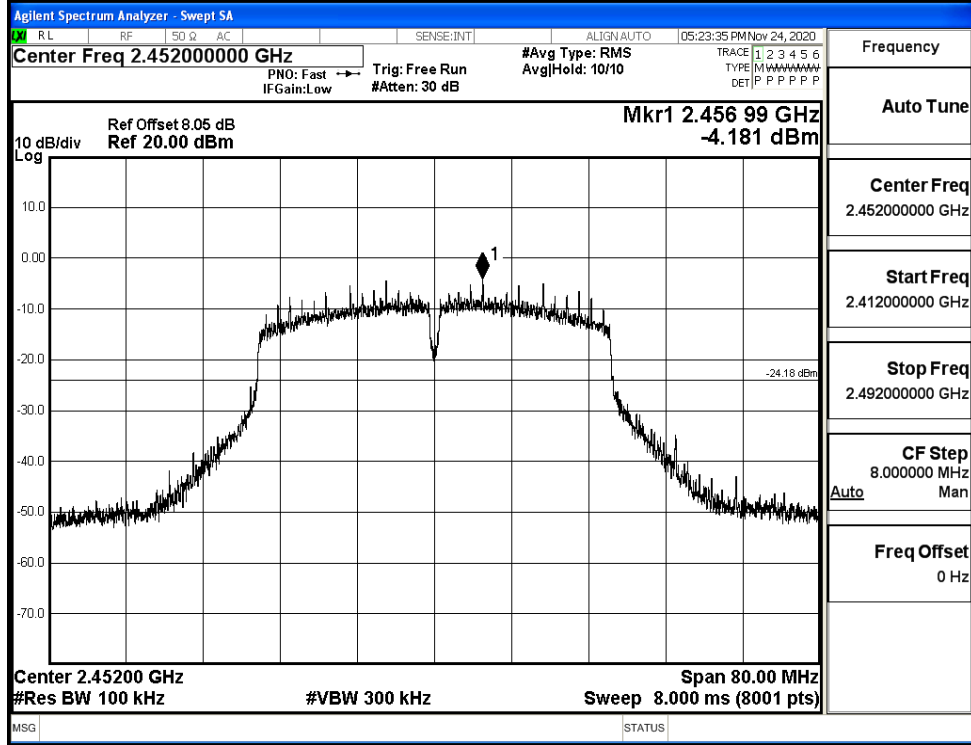


Puw/11N40  
SISO/MCH

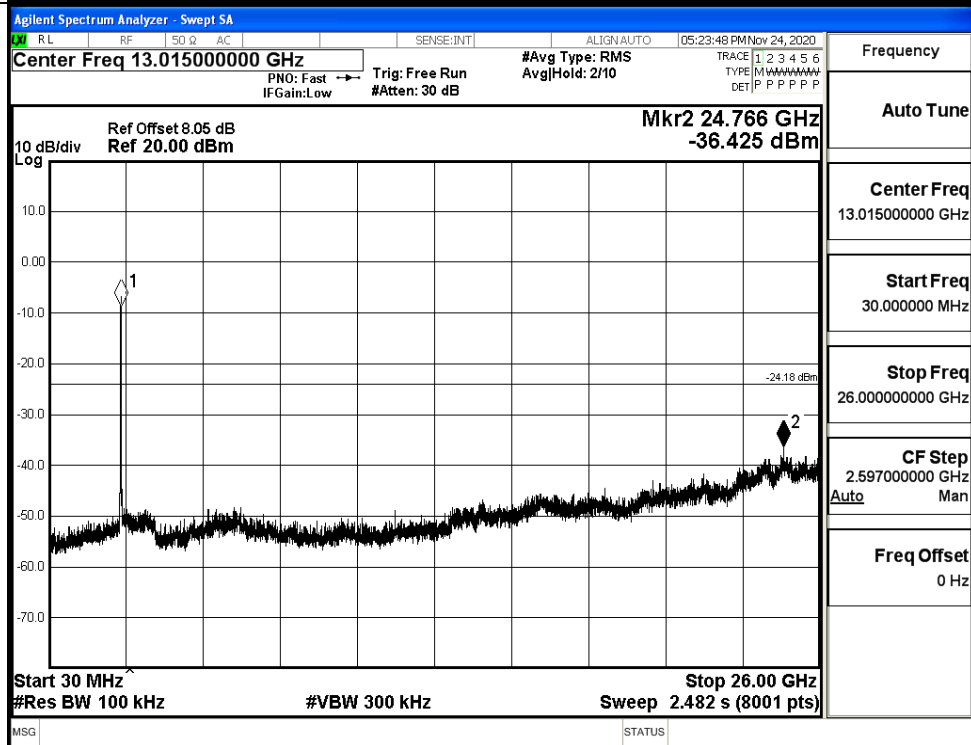


11N40SISO\_HCH\_Graphs

Pref/11N40  
SISO/HCH



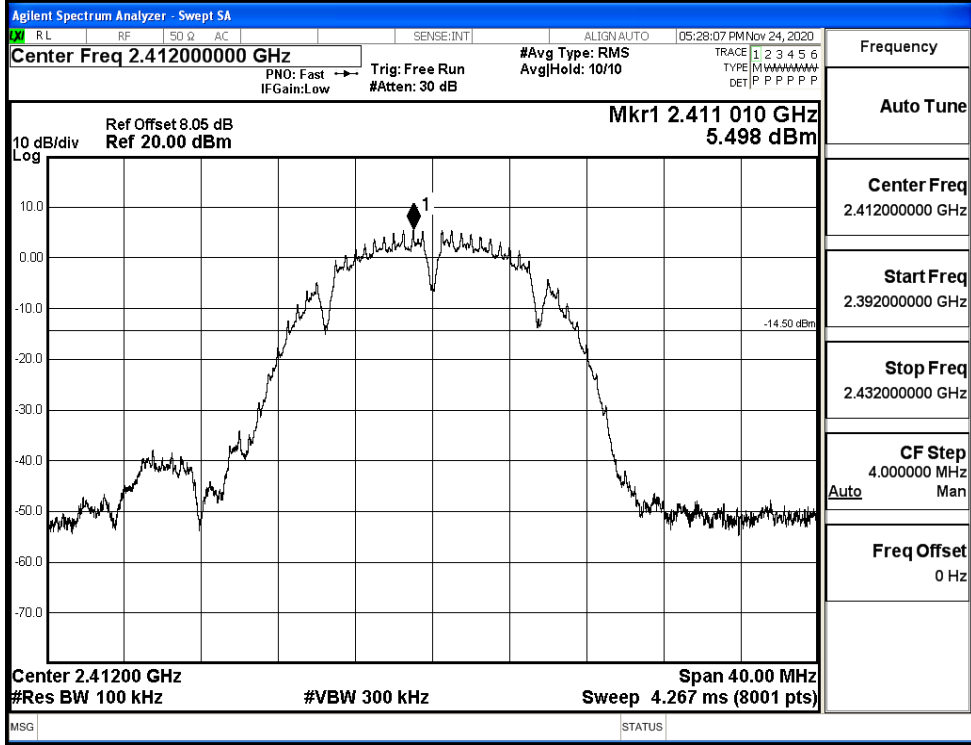
Puw/11N40  
SISO/HCH



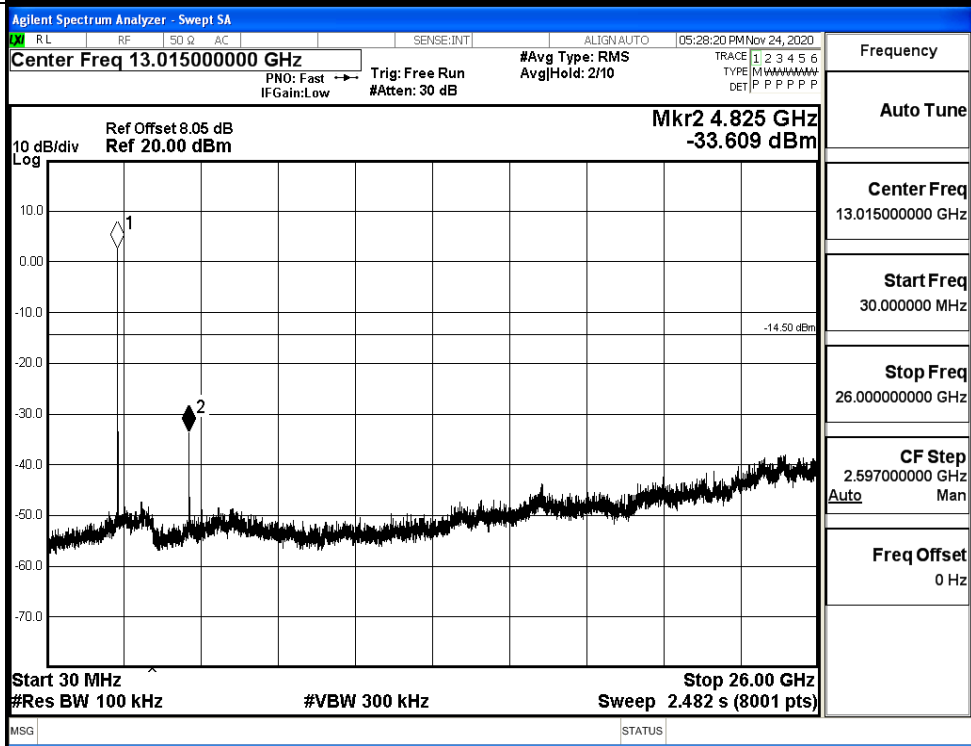
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11B\_LCH\_Graphs

Pref/11B/LCH

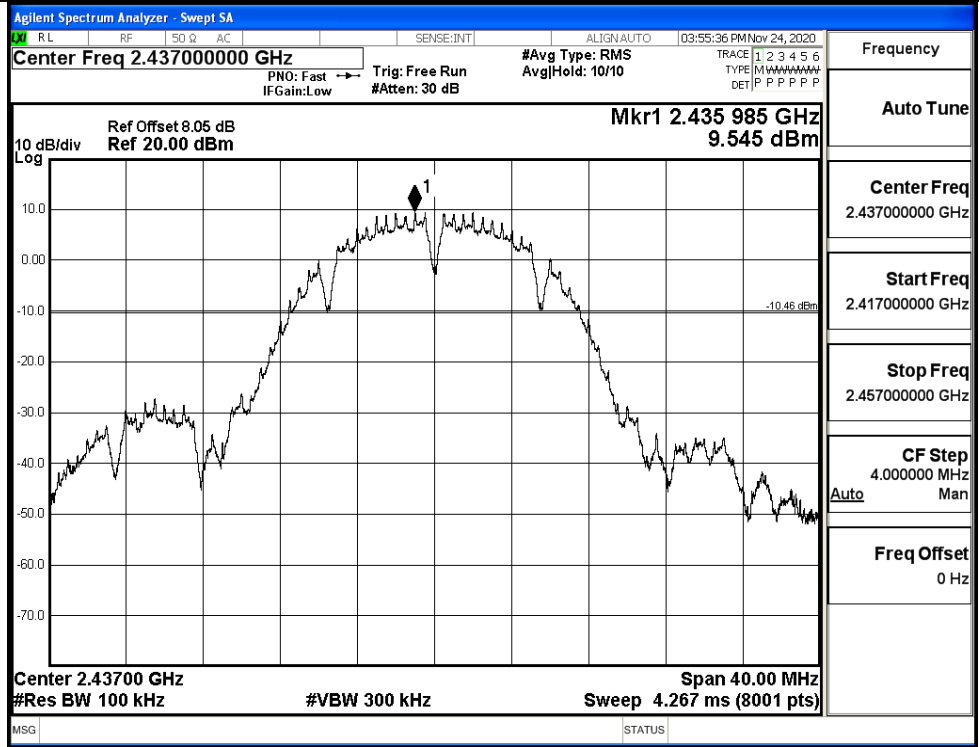


Puw/11B/LCH

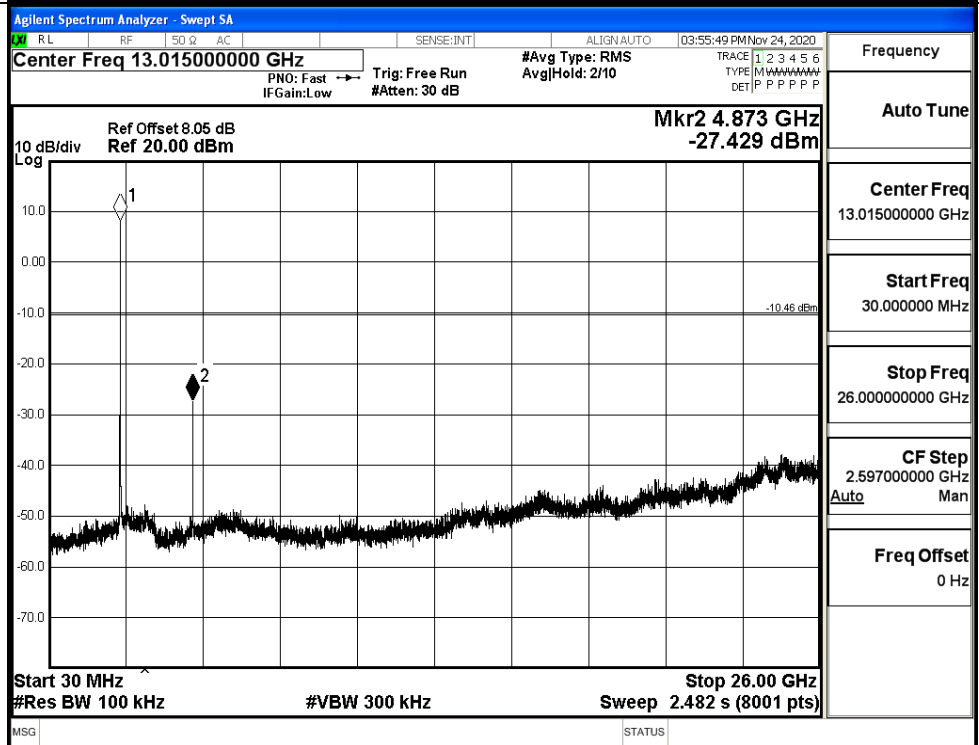


11B\_MCH\_Graphs

Pref/11B/MCH

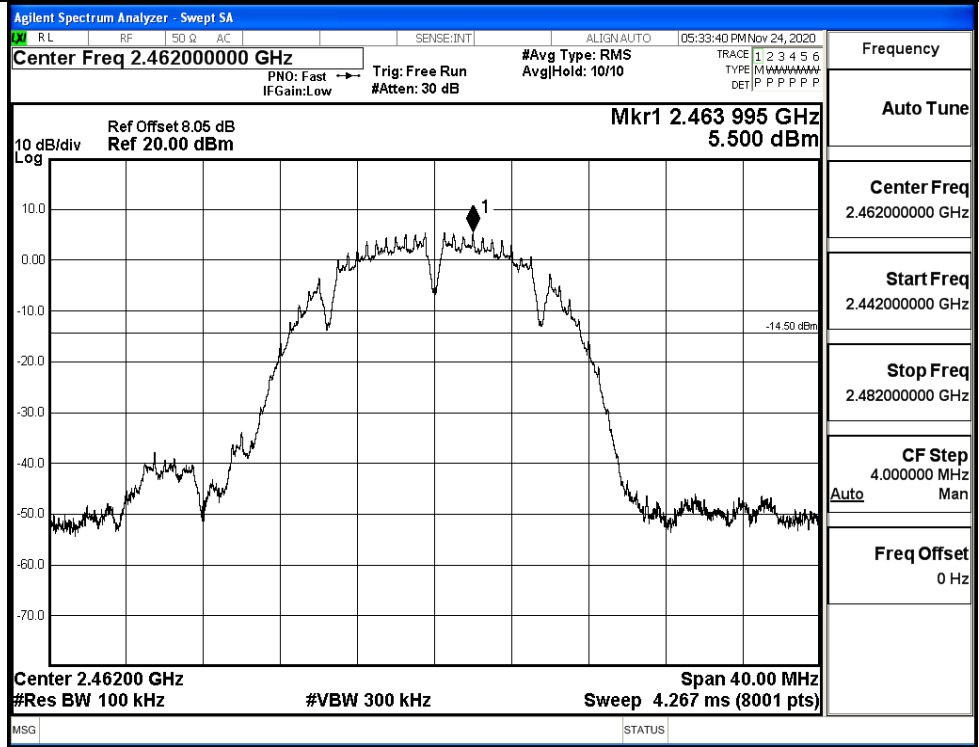


Puw/11B/MCH

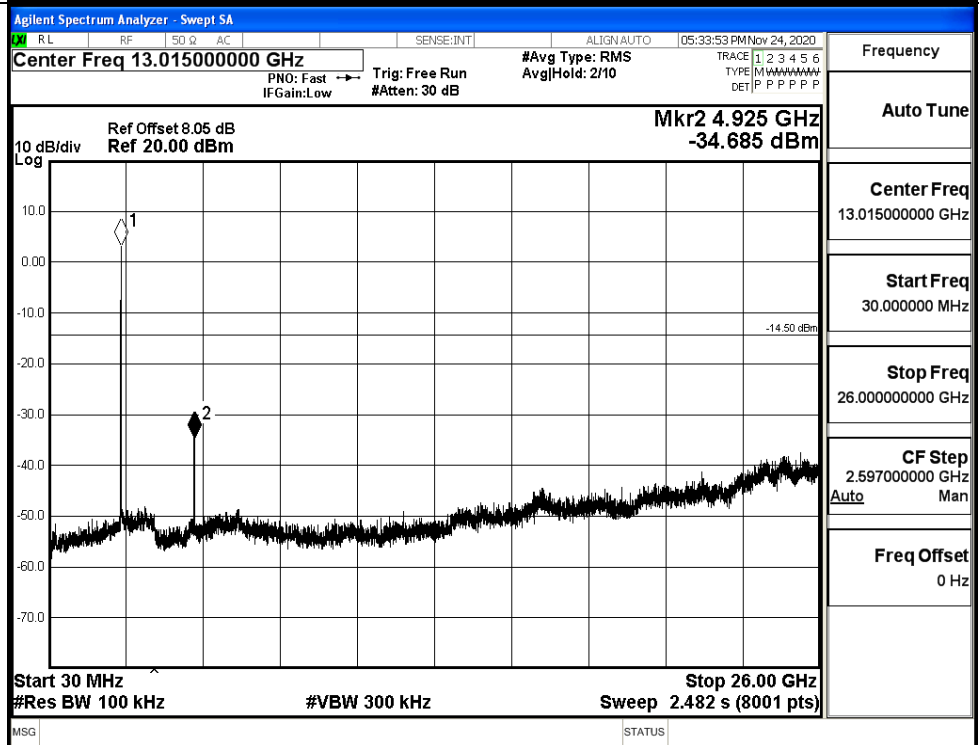


11B\_HCH\_Graphs

Pref/11B/HCH

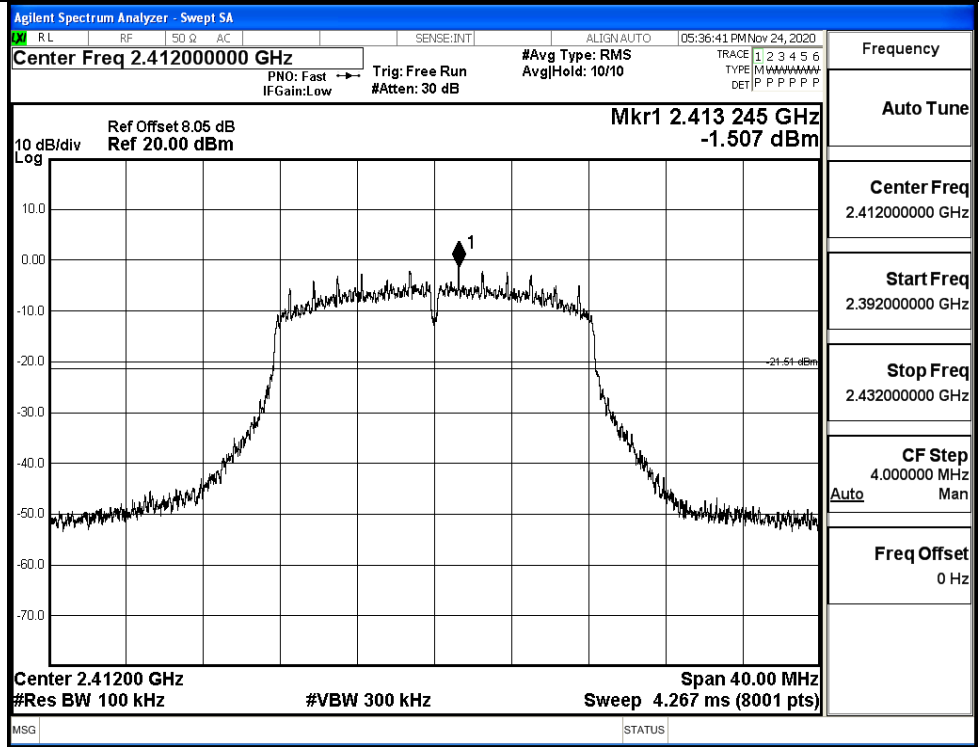


Puw/11B/HCH

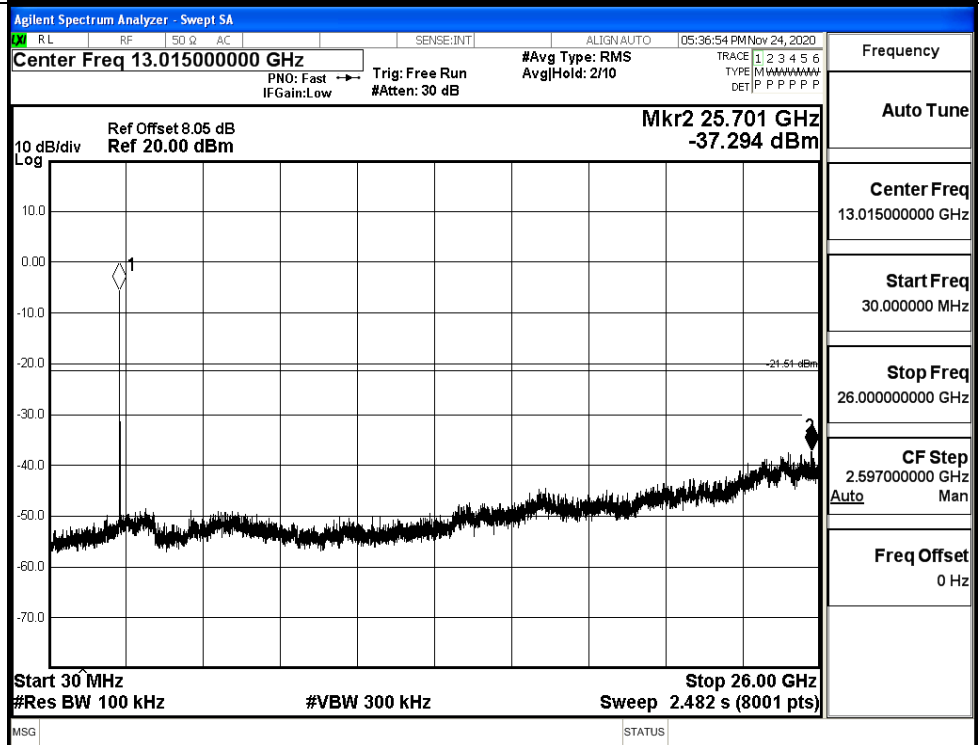


11G\_LCH\_Graphs

Pref/11G/LCH

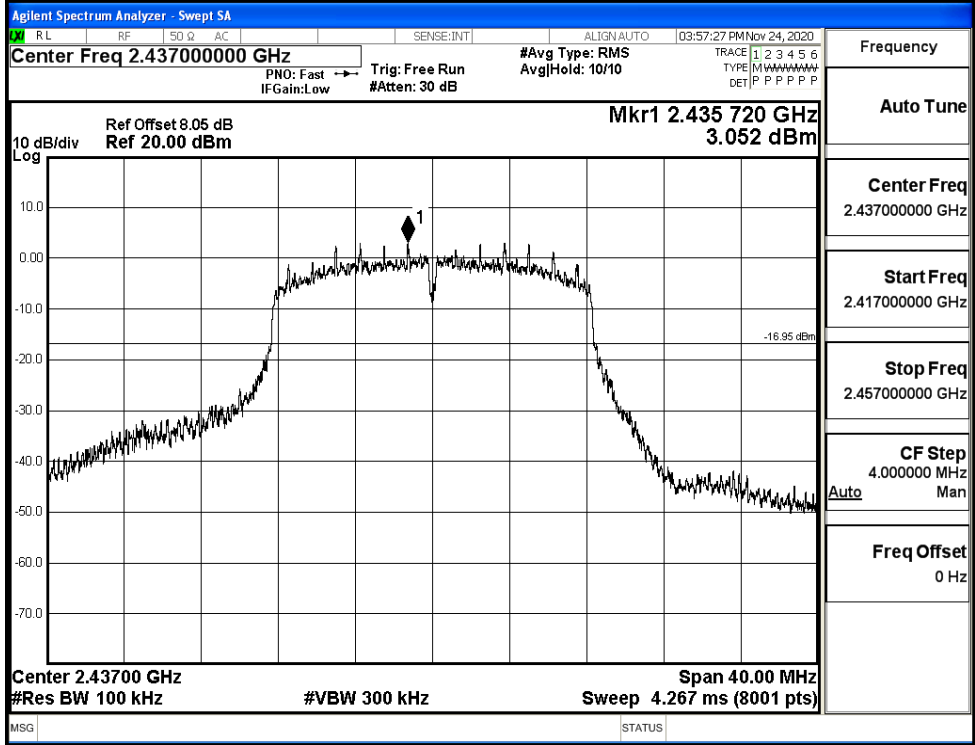


Puw/11G/LCH

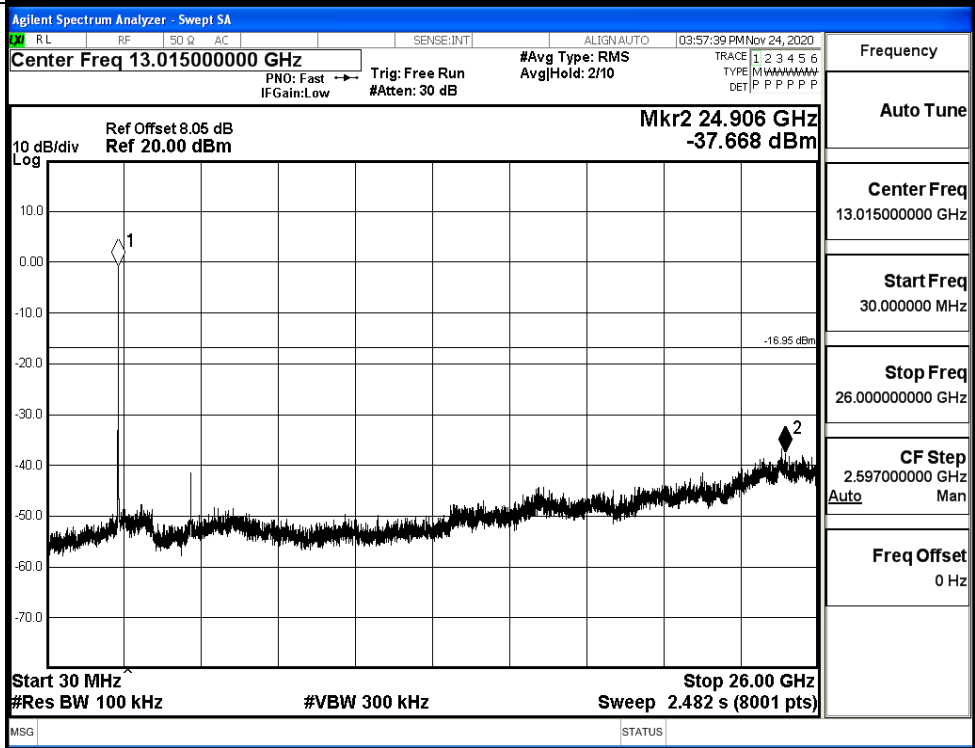


11G\_MCH\_Graphs

Pref/11G/MCH



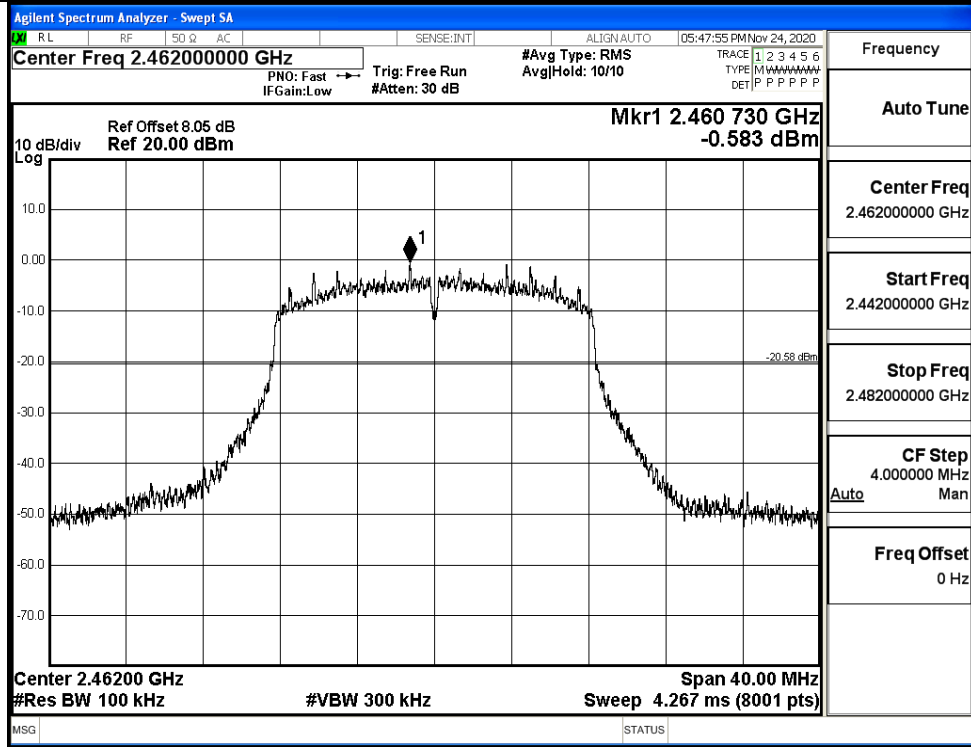
Puw/11G/MCH





11G\_HCH\_Graphs

Pref/11G/HCH



Puw/11G/HCH

