

Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: 4G LTE Wireless Gateway

Trade Mark: **GL·iNet**

Test Model: GL-X750V2C4

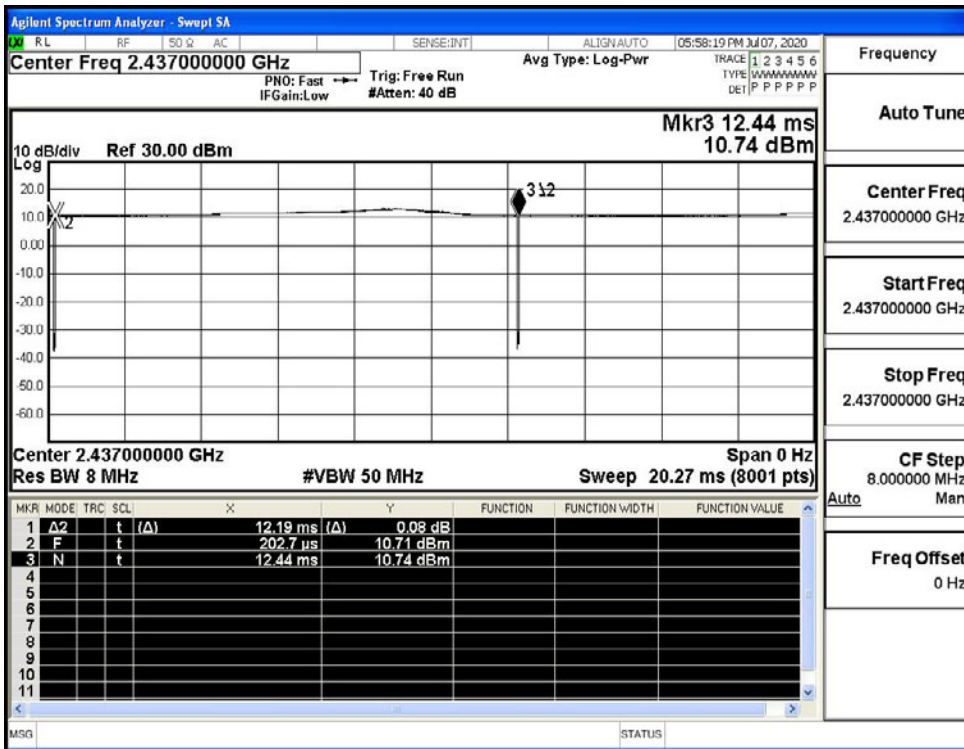
Environmental Conditions

Temperature:	23.1 ° C
Relative Humidity:	54.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Qu Xin
Supervised by:	Li Huan

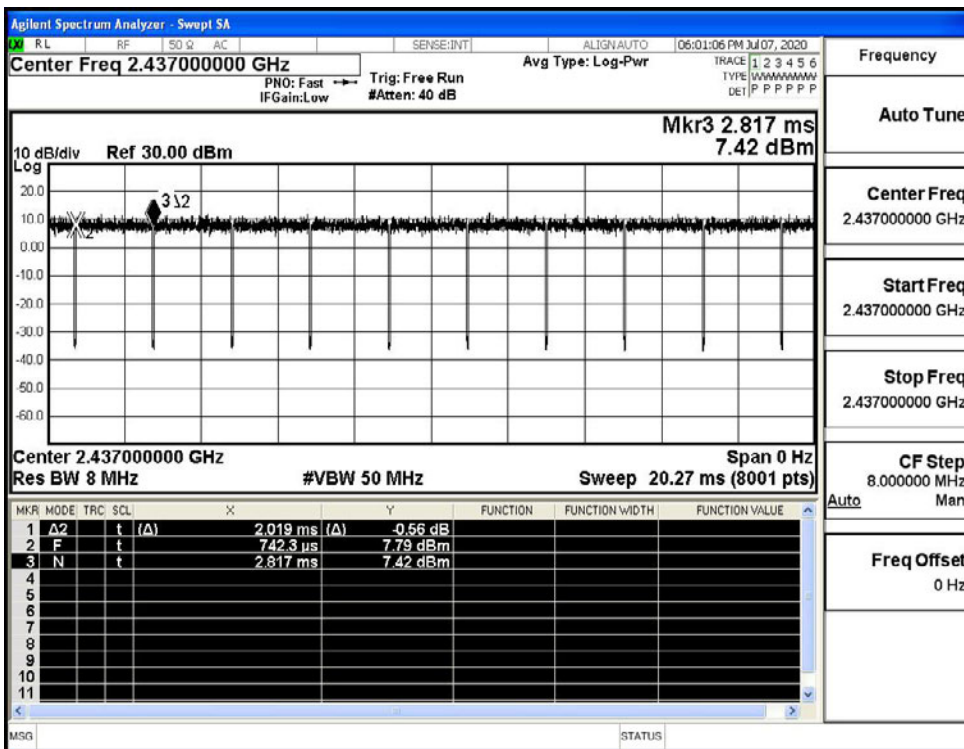
Test Mode	Test Channel	Ant	Duty Cycle[%]	1/T Minimum VBW(KHz)	Verdict
11B	2437	Ant_1	99.61	0.82	PASS
11G	2437	Ant_1	97.31	0.50	PASS
11N20	2437	Ant_1	97.12	0.53	PASS
11N40	2437	Ant_1	95.54	1.08	PASS

Test Mode	Test Channel	Ant	Duty Cycle[%]	1/T Minimum VBW(KHz)	Verdict
11B	2437	Ant_2	100	0.01	PASS
11G	2437	Ant_2	97.31	0.50	PASS
11N20	2437	Ant_2	97.13	0.53	PASS
11N40	2437	Ant_2	95.54	1.08	PASS

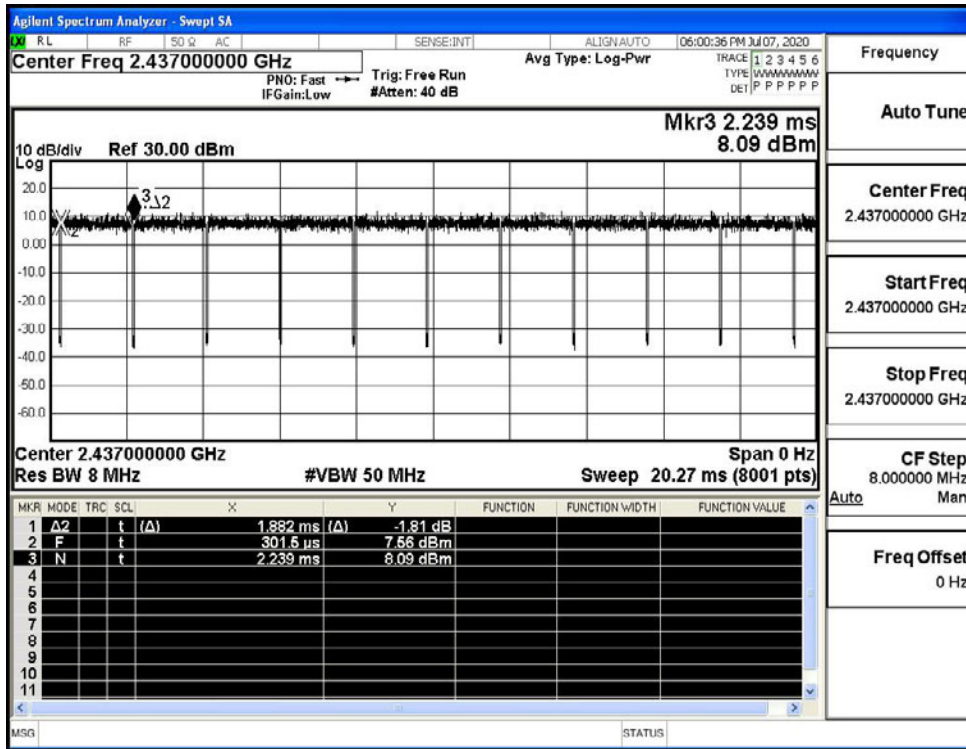
Duty Cycle_11B_2437_Ant_1



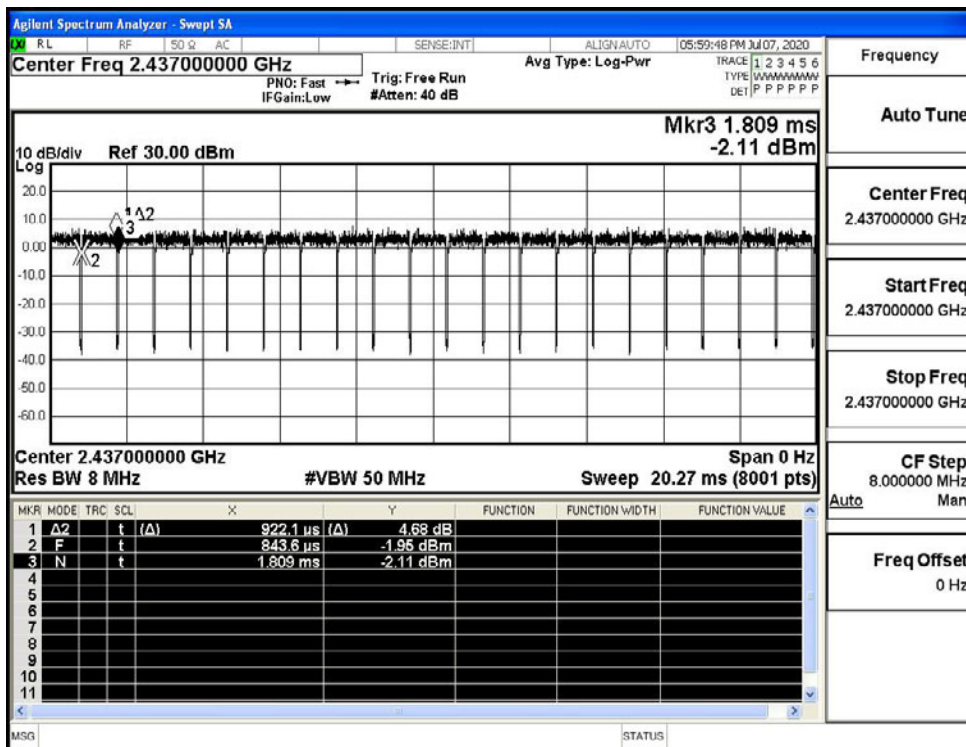
Duty Cycle_11G_2437_Ant_1



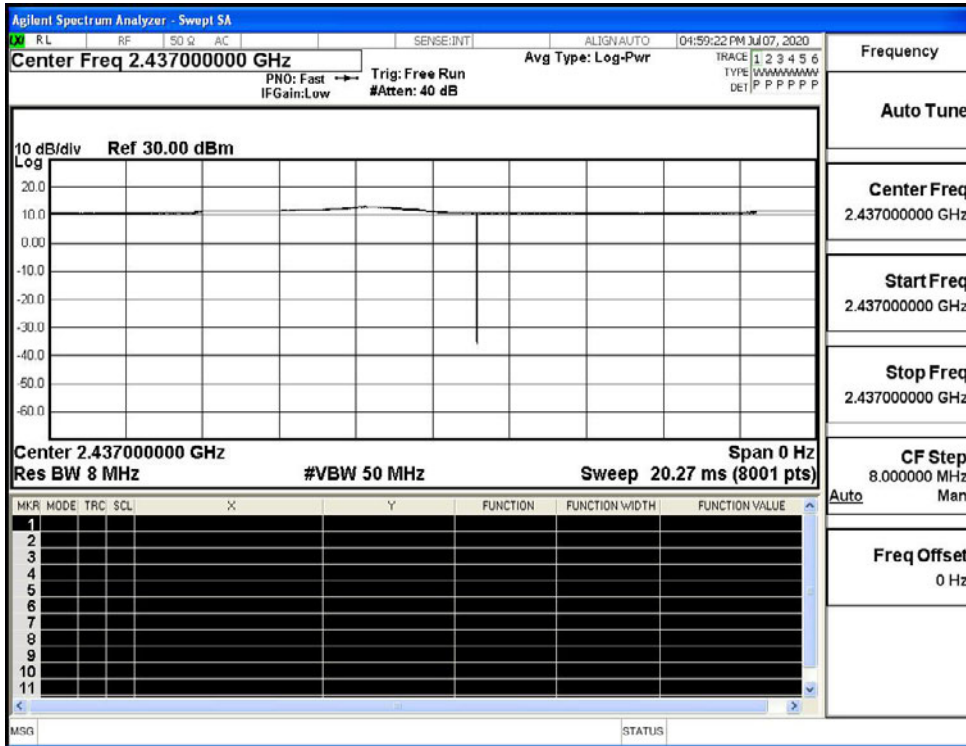
Duty Cycle_11N20SISO_2437_Ant_1



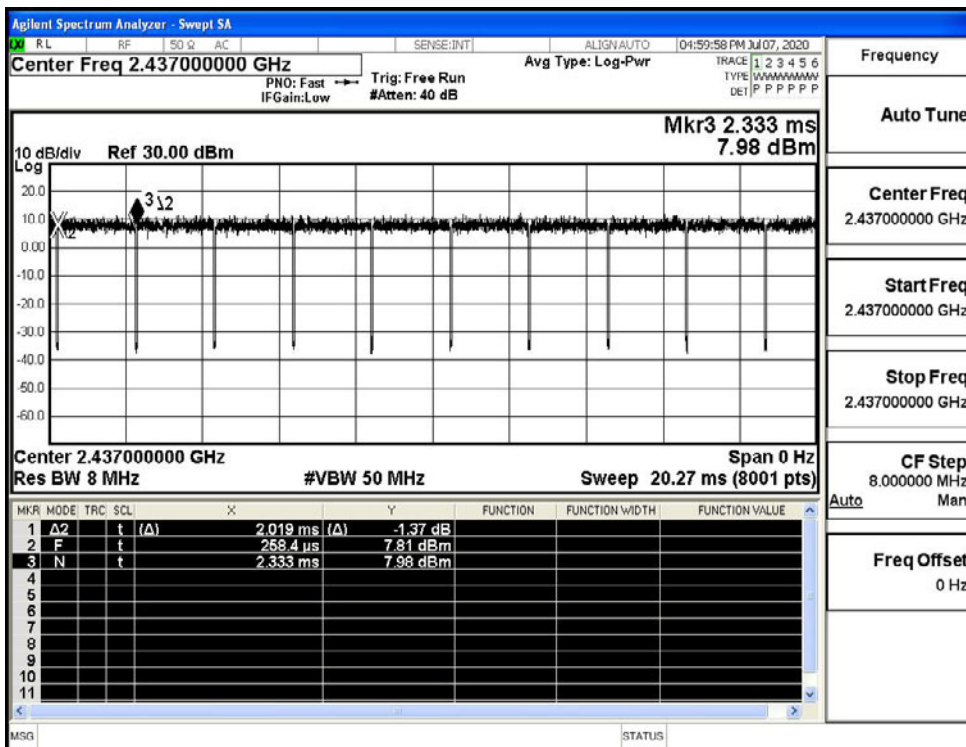
Duty Cycle_11N40SISO_2437_Ant_1



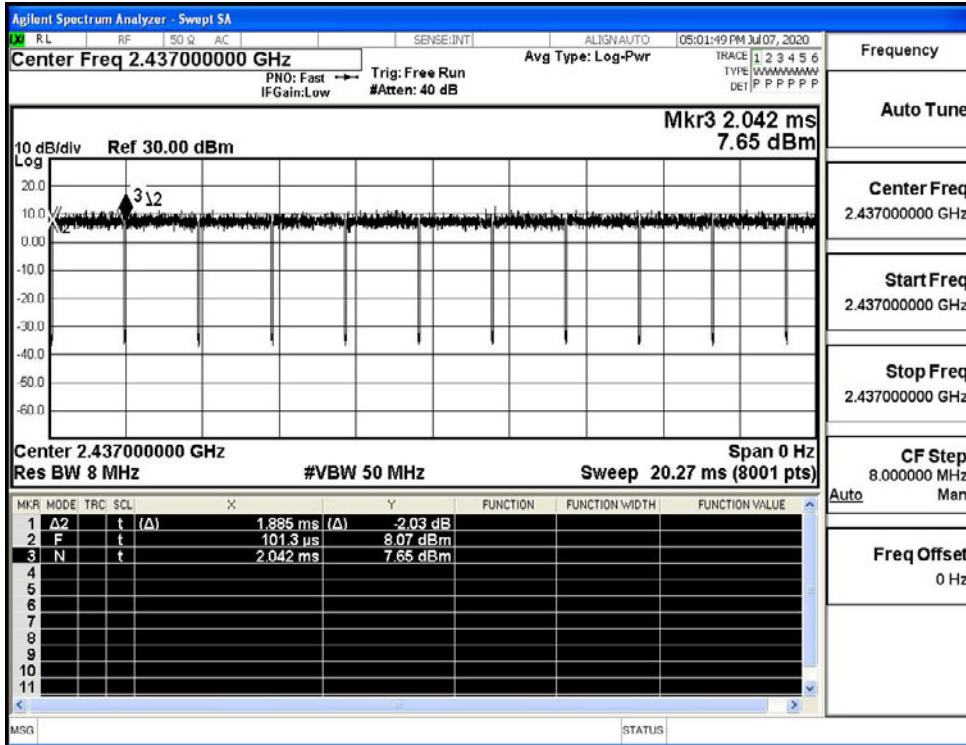
Duty Cycle_11B_2437_Ant_2



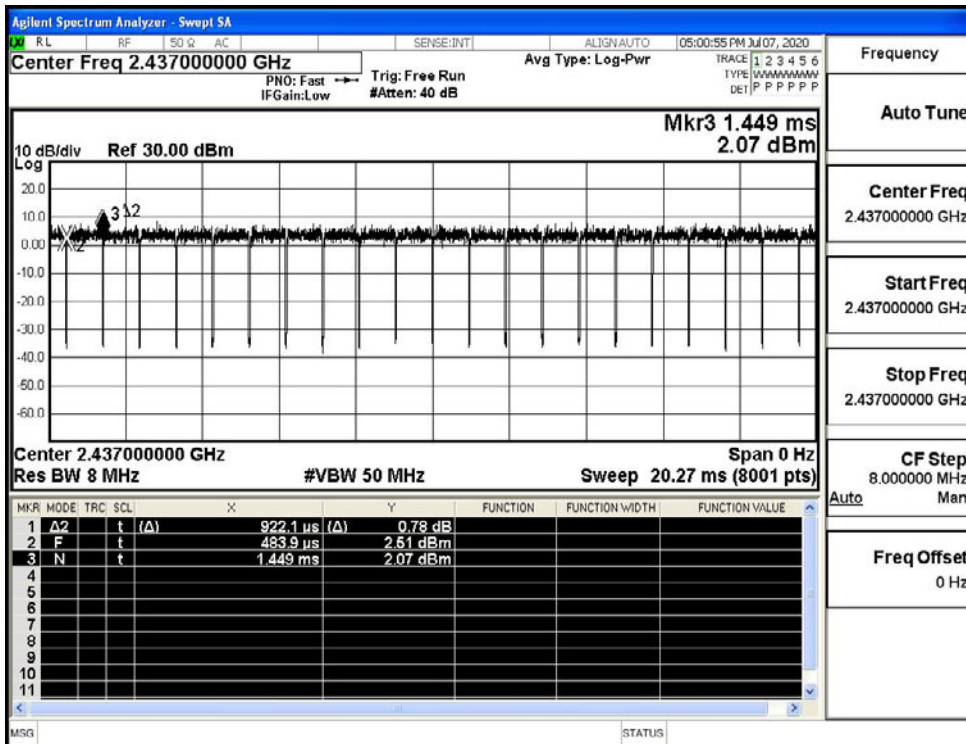
Duty Cycle_11G_2437_Ant_2



Duty Cycle_11N20SISO_2437_Ant_2



Duty Cycle_11N40SISO_2437_Ant_2



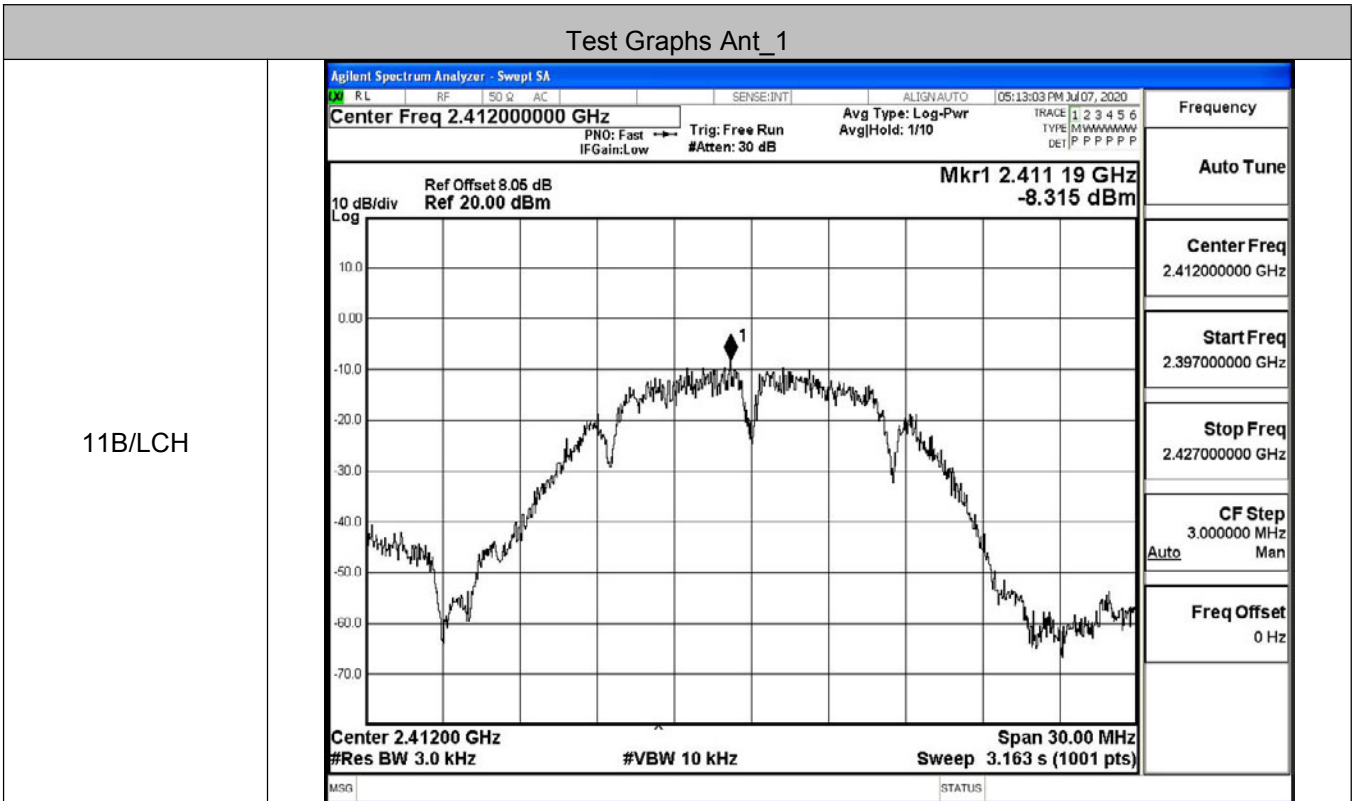
A.2 Maximum Conducted Output Power

Mode	Channel	Meas.Level [dBm]			Limit [dBm]	Verdict
		Ant_1	Ant_2	Sum		
11B	LCH	18.13	18	/	30	PASS
	MCH	18.71	18.54	/	30	PASS
	HCH	18.95	18.58	/	30	PASS
11G	LCH	19.99	19.97	/	30	PASS
	MCH	20.84	20.75	/	30	PASS
	HCH	21.04	20.78	/	30	PASS
11N20SISO	LCH	19.65	19.59	22.63	30	PASS
	MCH	20.46	20.41	23.45	30	PASS
	HCH	20.65	20.58	23.63	30	PASS
11N40SISO	LCH	19.36	19.29	22.34	30	PASS
	MCH	19.76	19.66	22.72	30	PASS
	HCH	20.53	20.5	23.53	30	PASS

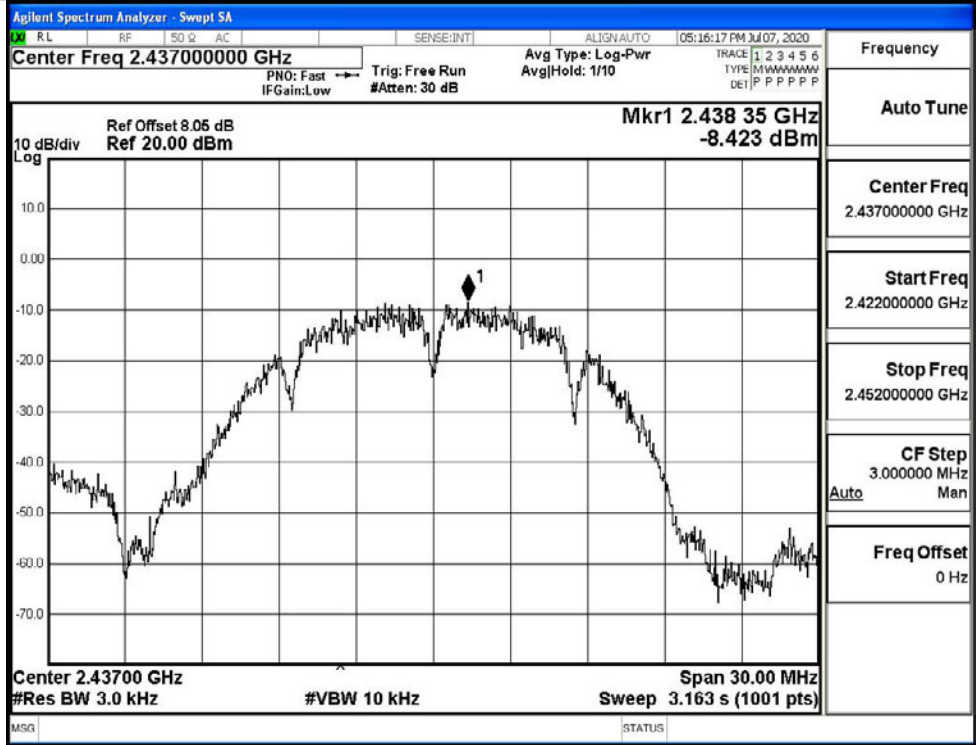
A.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/3KHz]			Limit [dBm/3KHz]	Verdict
		Ant_1	Ant_2	Sum		
11B	LCH	-8.315	-7.796	/	8	PASS
	MCH	-8.423	-7.217	/	8	PASS
	HCH	-8.413	-8.559	/	8	PASS
11G	LCH	-12.200	-14.506	/	8	PASS
	MCH	-12.112	-12.887	/	8	PASS
	HCH	-13.283	-12.859	/	8	PASS
11N20SISO	LCH	-14.059	-13.593	-10.81	8	PASS
	MCH	-13.690	-13.801	-10.73	8	PASS
	HCH	-13.167	-13.023	-10.08	8	PASS
11N40SISO	LCH	-18.410	-18.040	-15.21	8	PASS
	MCH	-17.775	-15.520	-13.49	8	PASS
	HCH	-15.870	-16.825	-13.31	8	PASS

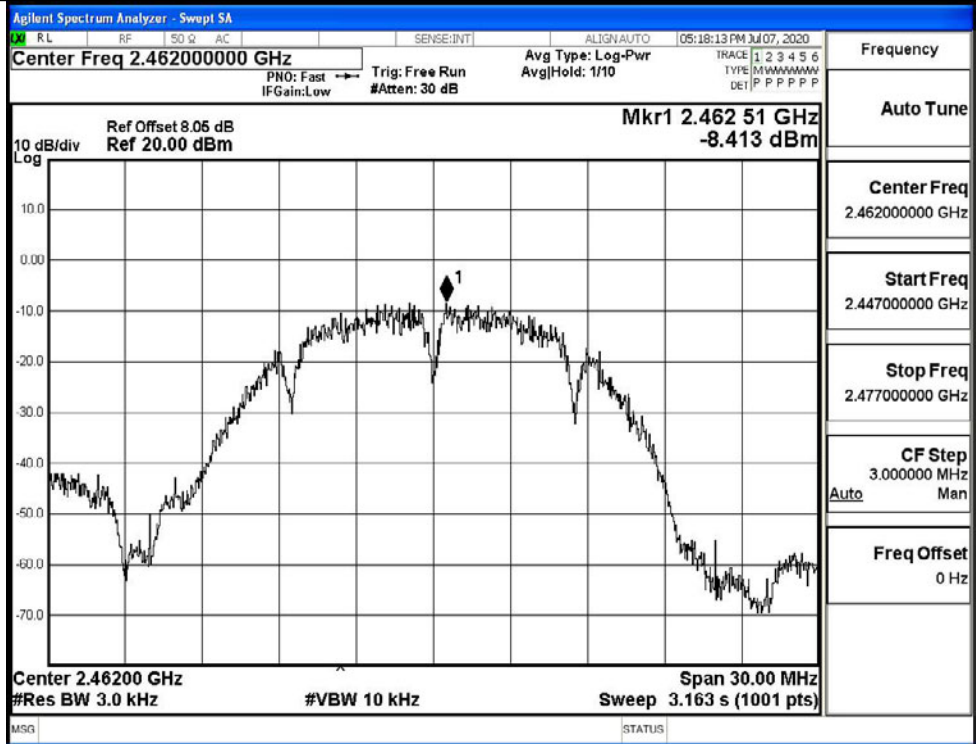
Test Graphs Ant_1



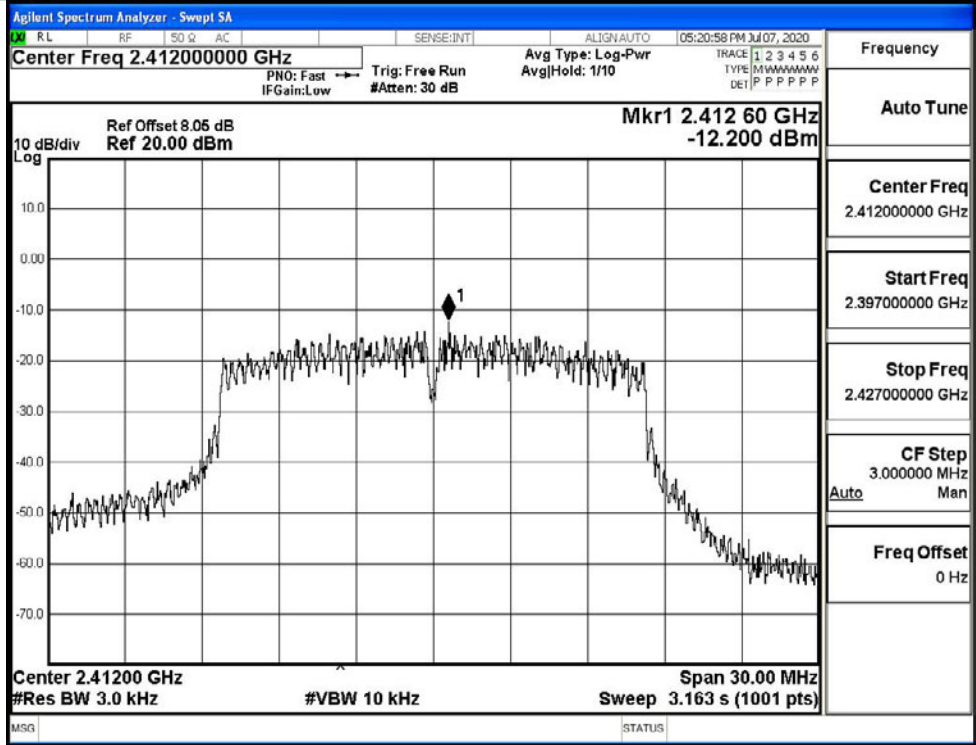
11B/MCH



11B/HCH

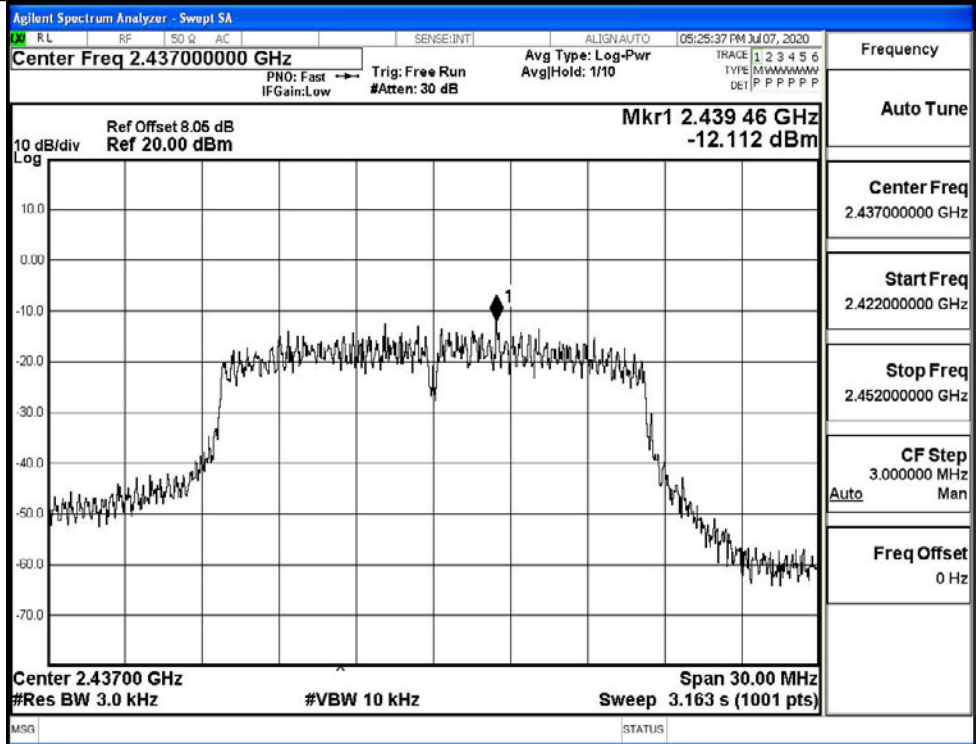


11G/LCH



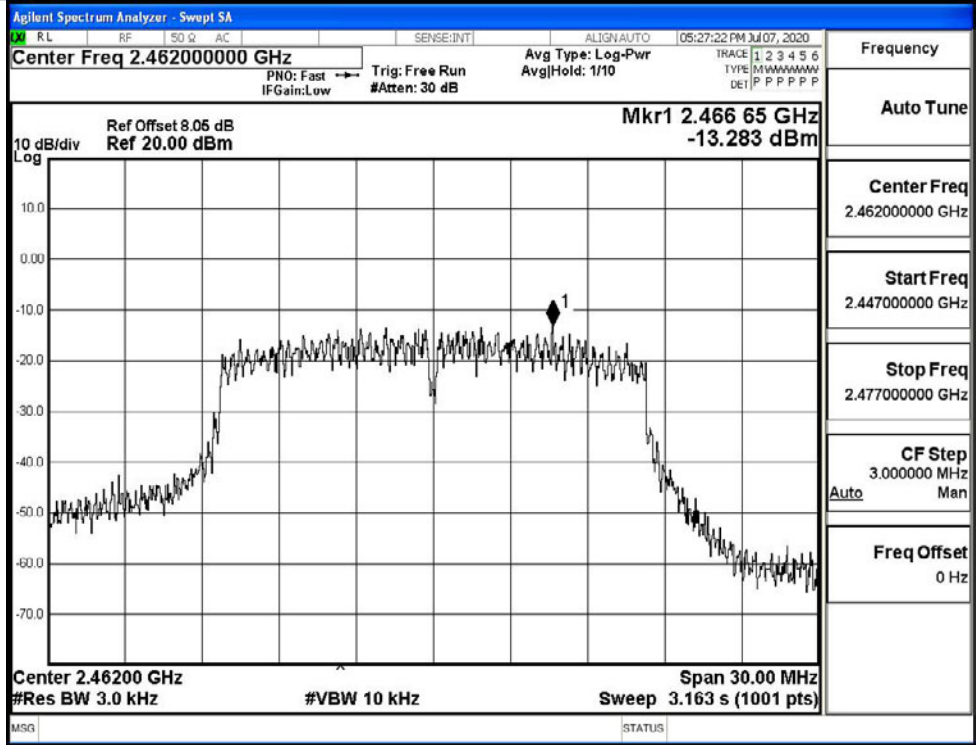
Frequency
Auto Tune
Center Freq 2.41200000 GHz
Start Freq 2.397000000 GHz
Stop Freq 2.427000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

11G/MCH

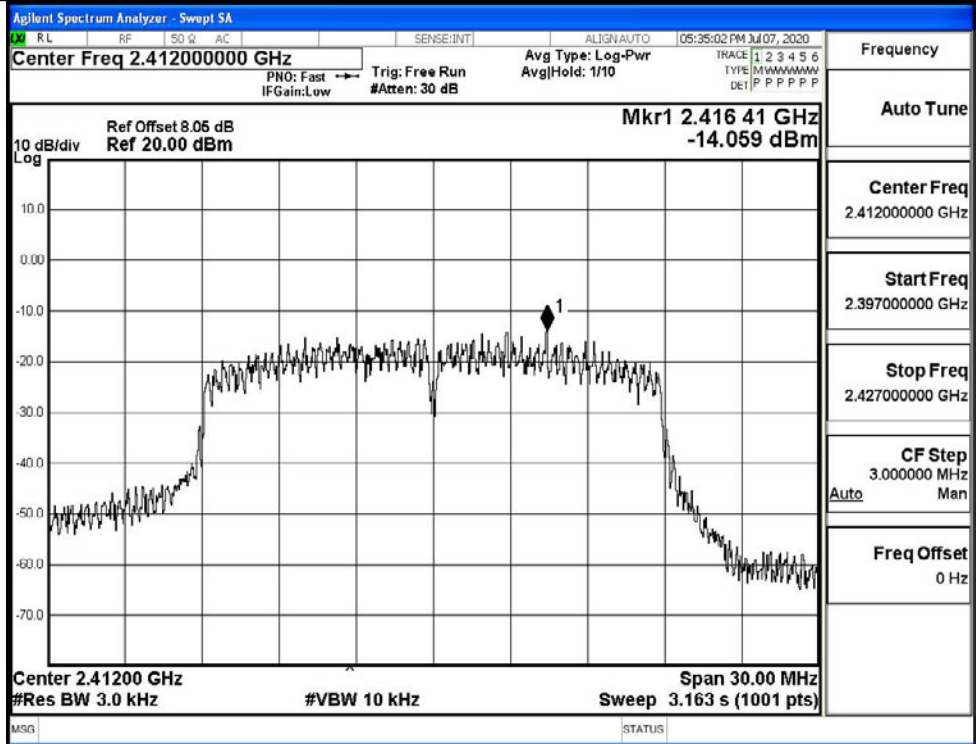


Frequency
Auto Tune
Center Freq 2.43700000 GHz
Start Freq 2.422000000 GHz
Stop Freq 2.452000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz

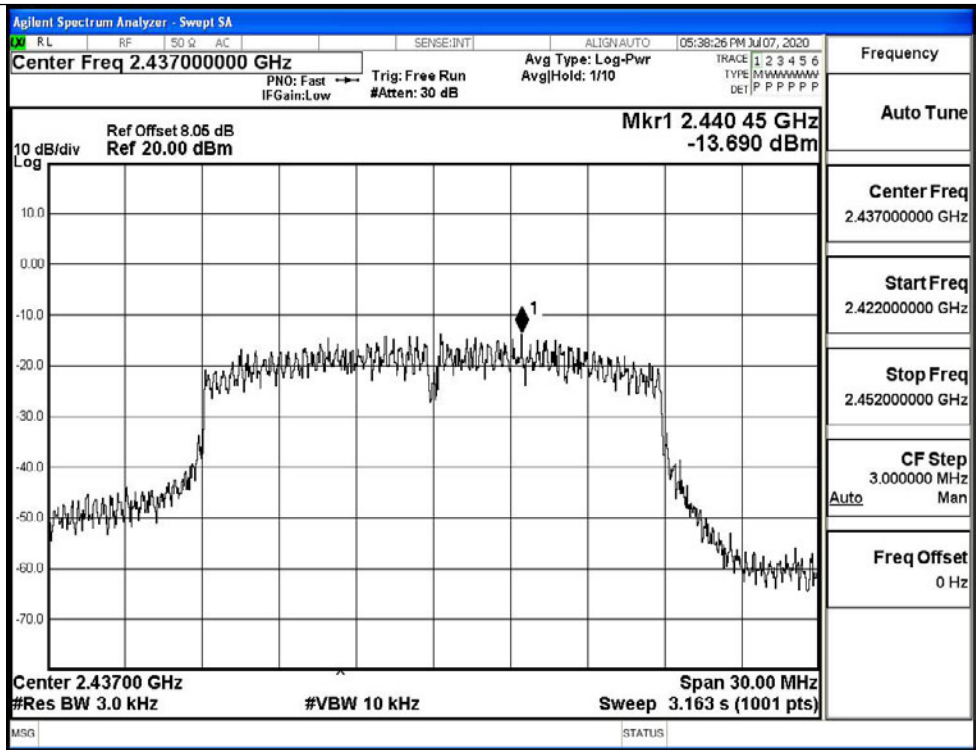
11G/HCH



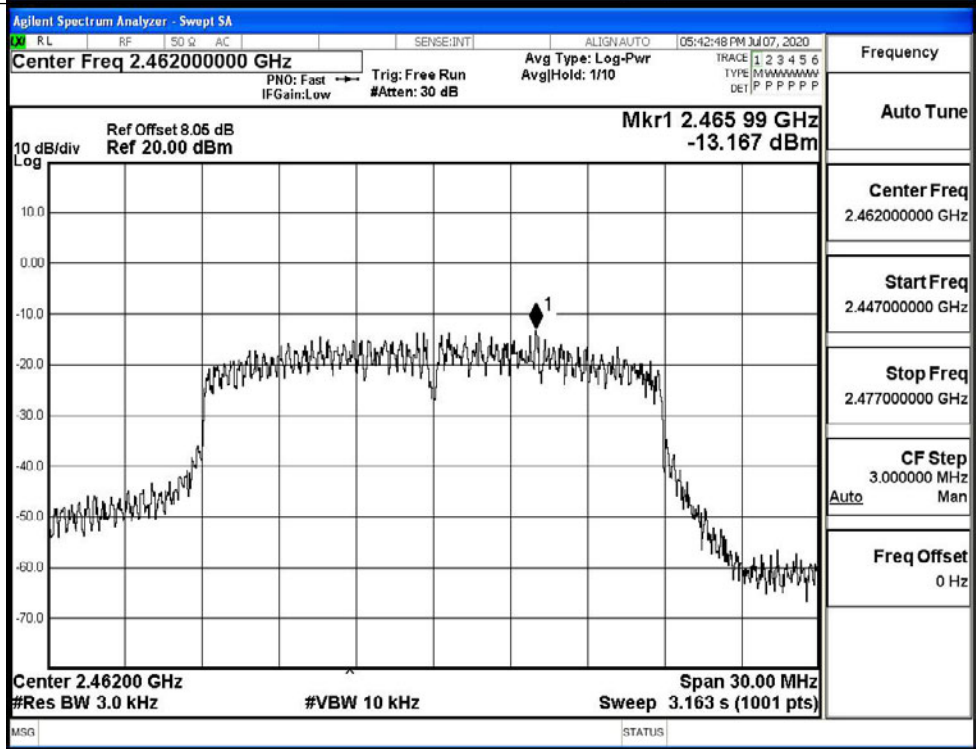
11N20SISO/LCH

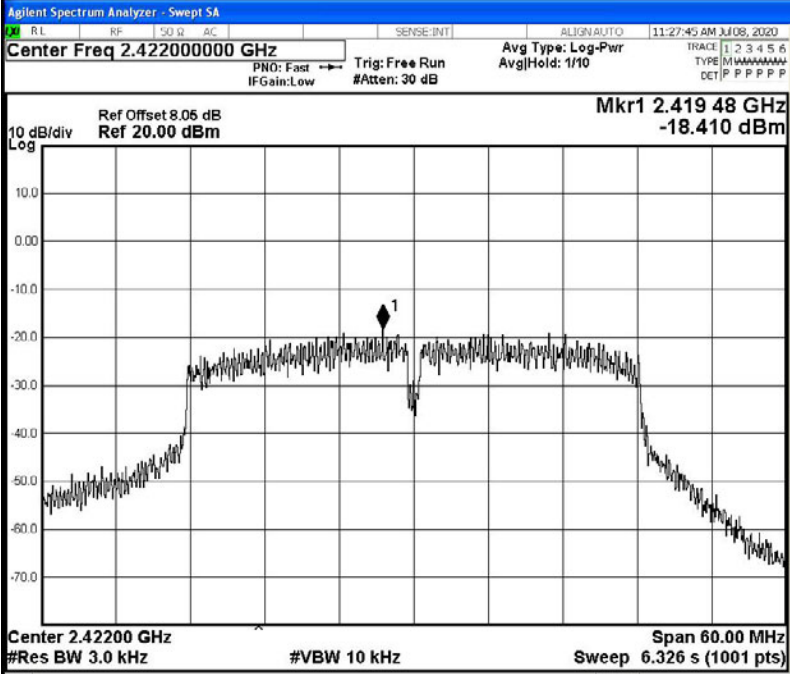
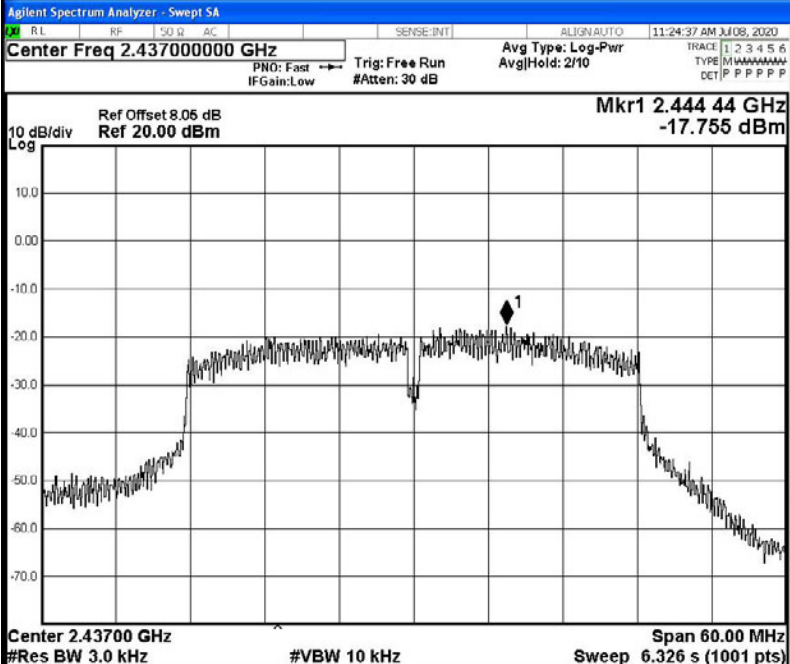


11N20SISO/MCH

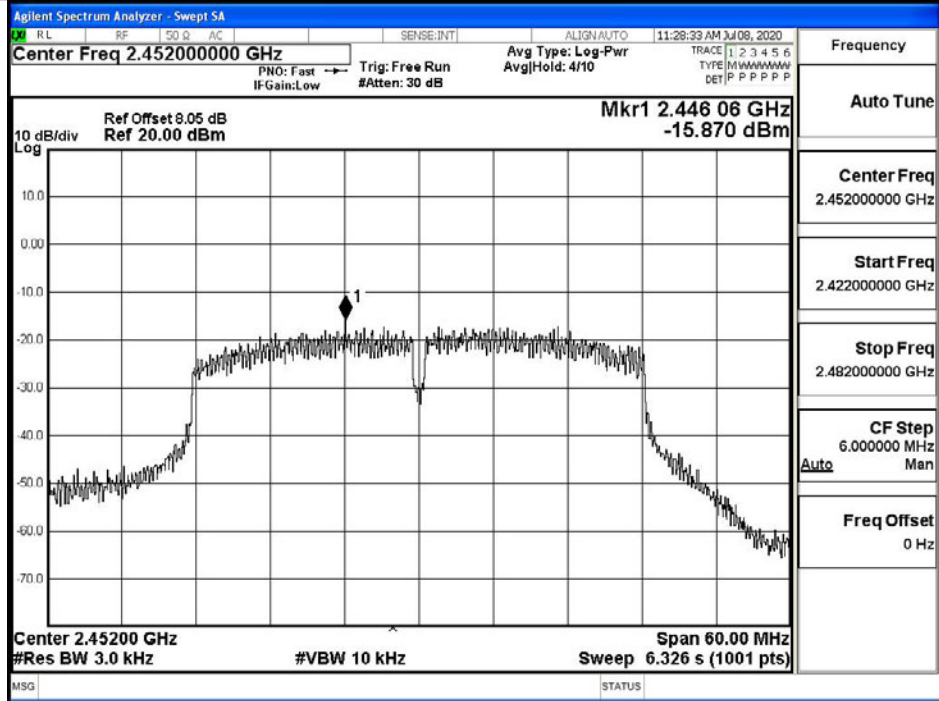


11N20SISO/HCH



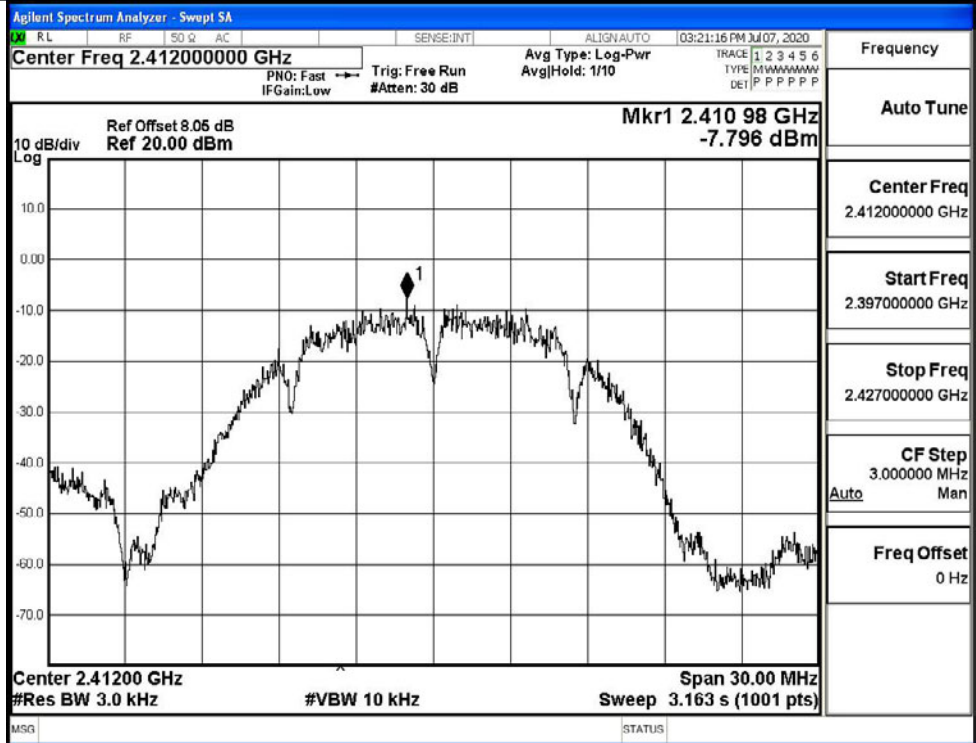
<p>11N40SISO/LCH</p>	 <p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.42200000 GHz</p> <p>Mkr1 2.419 48 GHz -18.410 dBm</p> <p>Ref Offset 8.06 dB Ref 20.00 dBm</p> <p>Center 2.42200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 60.00 MHz Sweep 6.326 s (1001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.422000000 GHz</p> <p>Start Freq 2.392000000 GHz</p> <p>Stop Freq 2.452000000 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 - Swept SA</p> <p>Center Freq 2.43700000 GHz</p> <p>Mkr1 2.444 44 GHz -17.755 dBm</p> <p>Ref Offset 8.06 dB Ref 20.00 dBm</p> <p>Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 60.00 MHz Sweep 6.326 s (1001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.437000000 GHz</p> <p>Start Freq 2.407000000 GHz</p> <p>Stop Freq 2.467000000 GHz</p> <p>CF Step 6.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>

11N40SISO/HCH

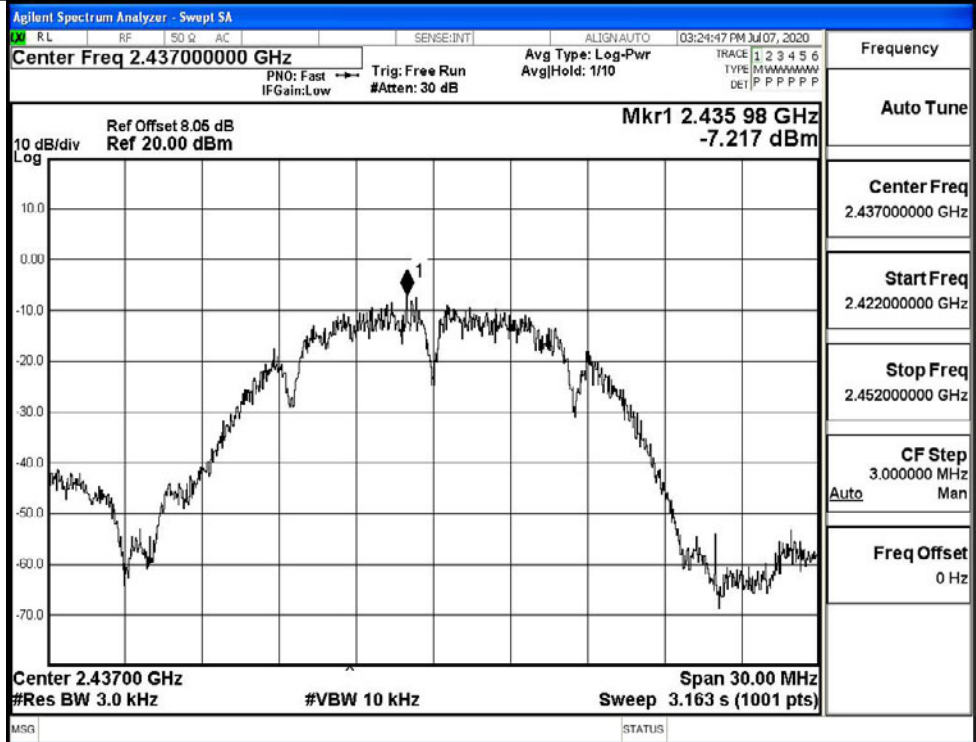


Test Graphs Ant_2

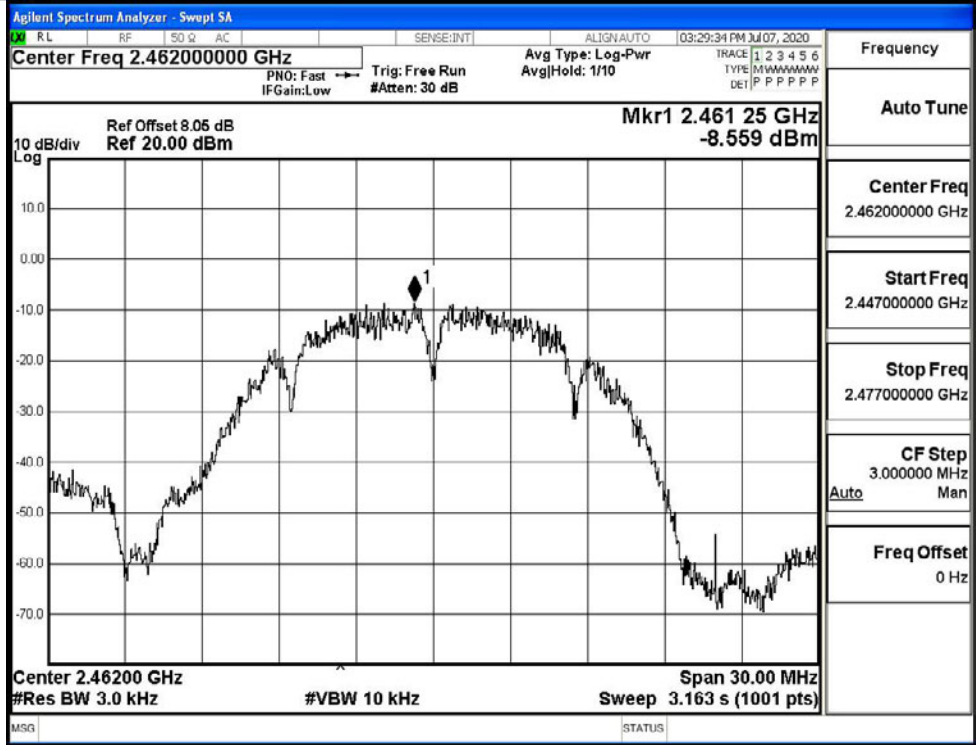
11B/LCH



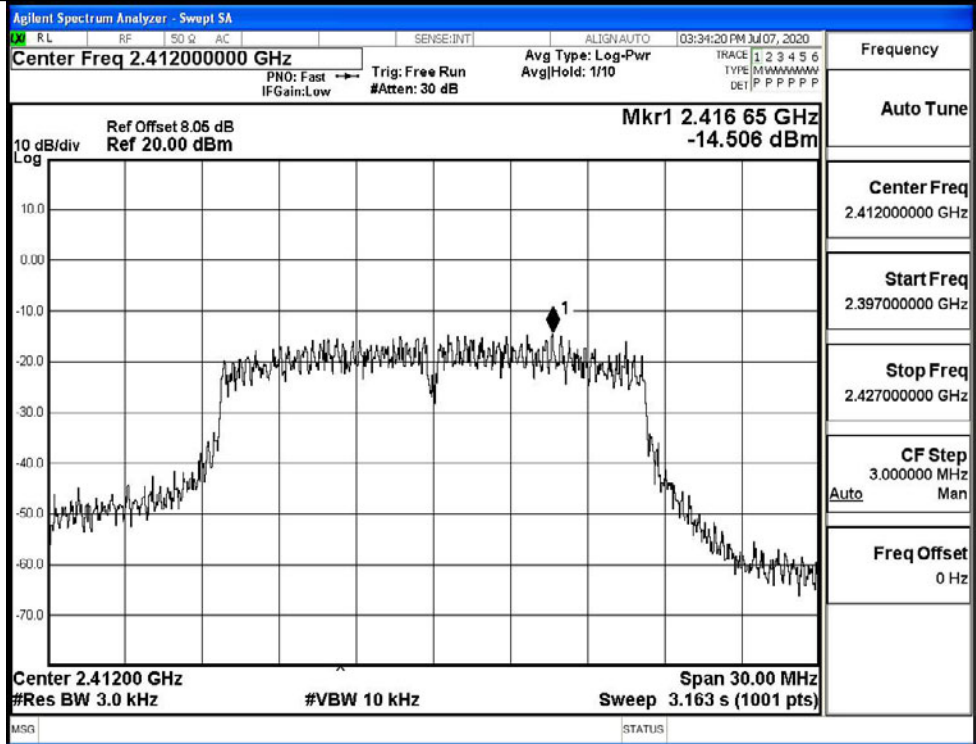
11B/MCH



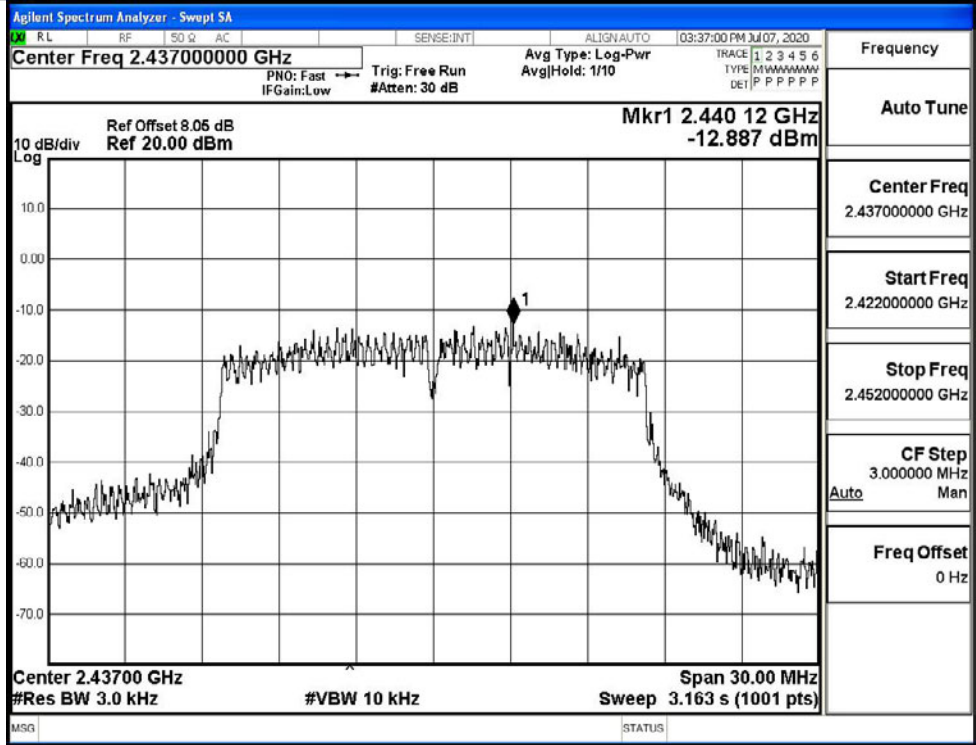
11B/HCH



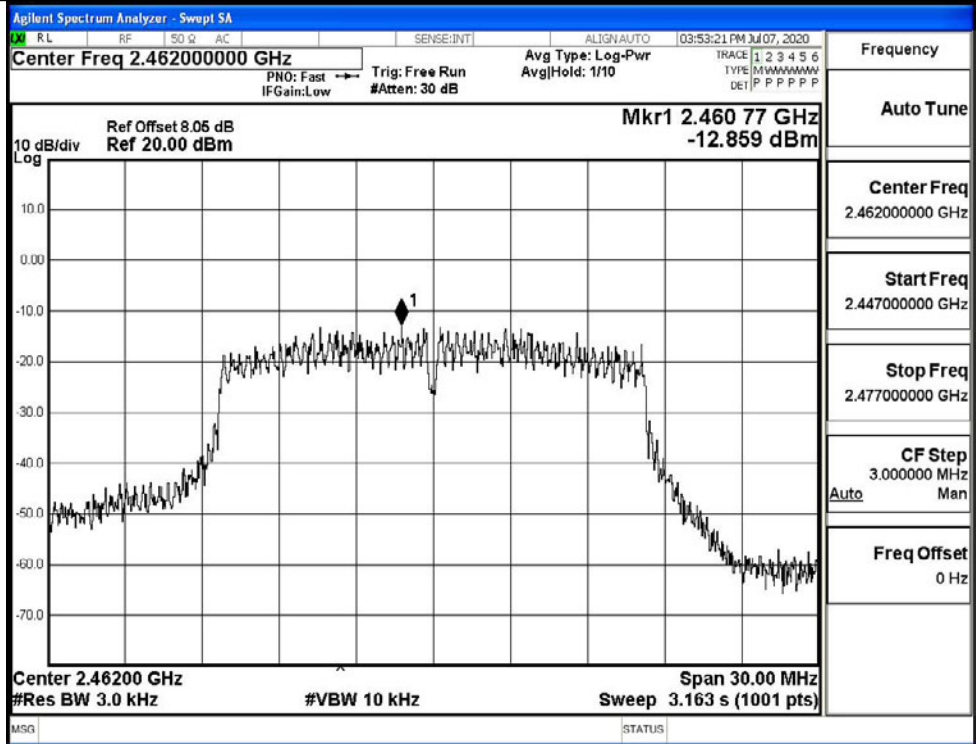
11G/LCH



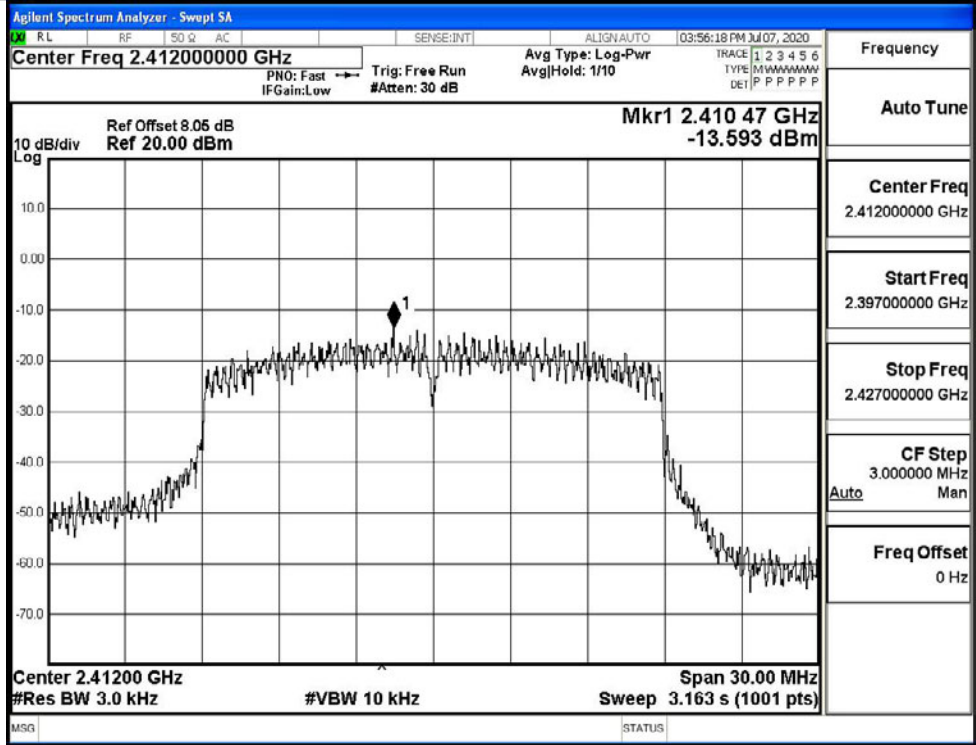
11G/MCH



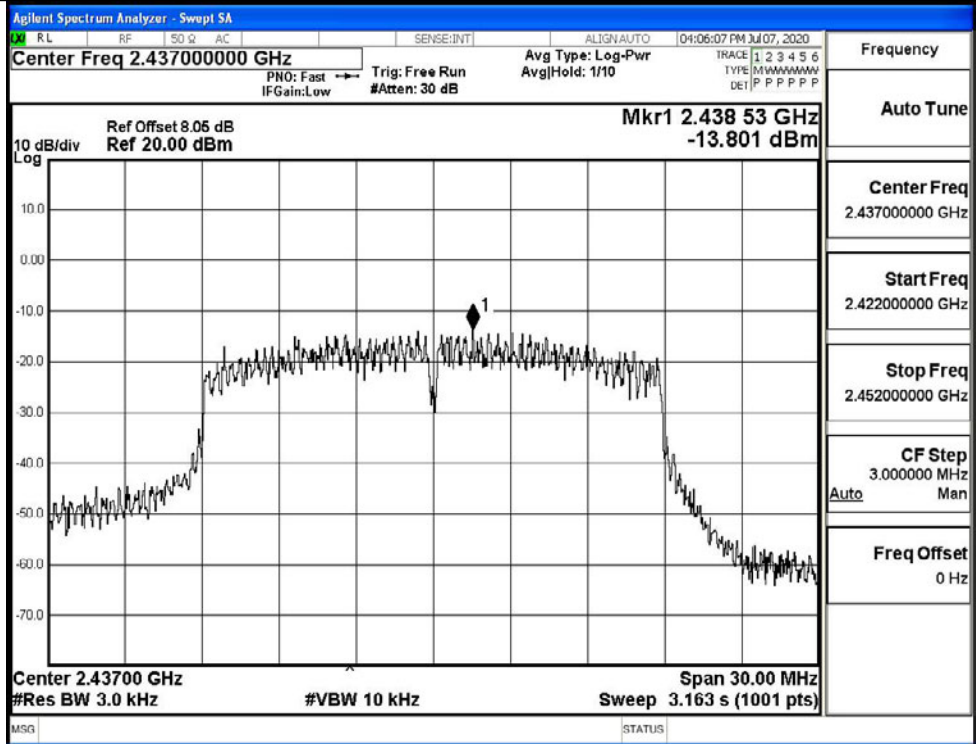
11G/HCH



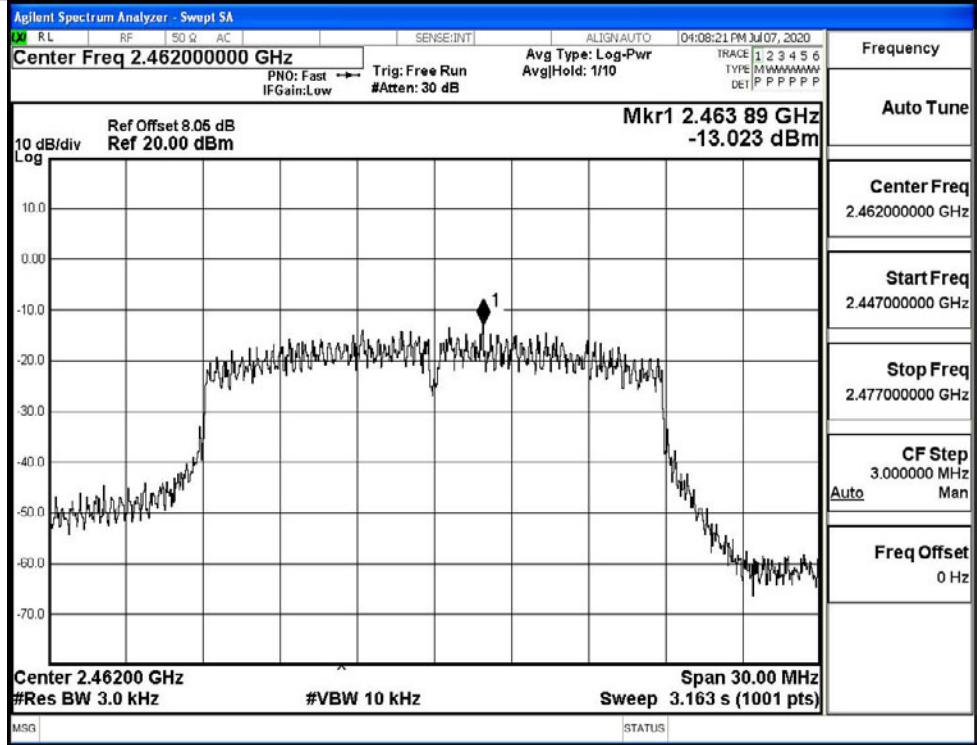
11N20SISO/LCH



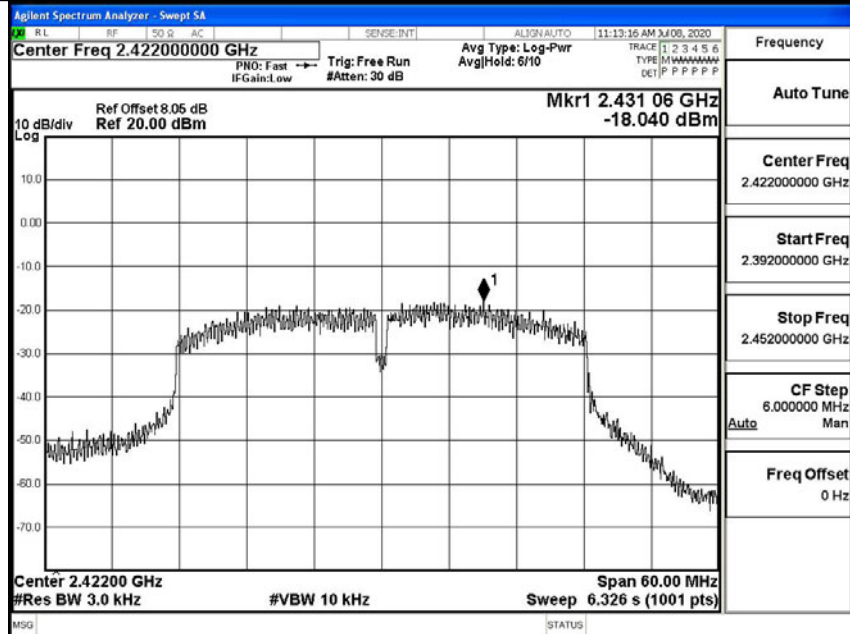
11N20SISO/MCH

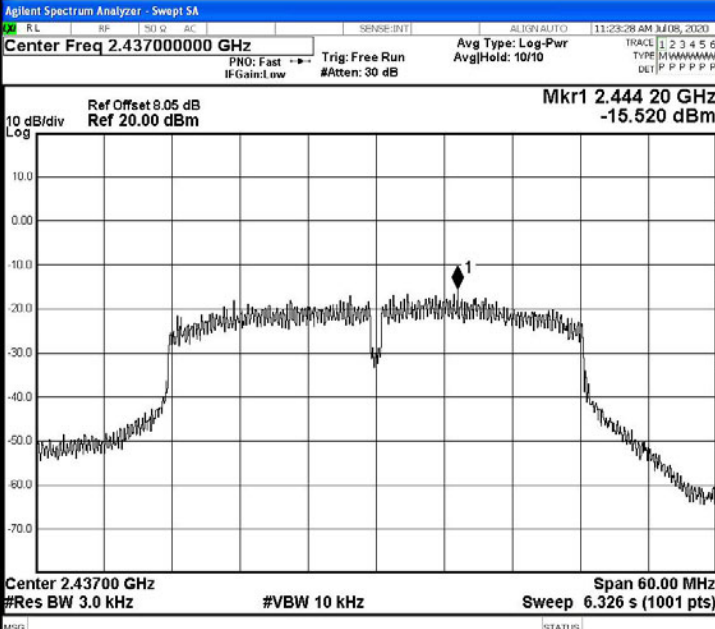
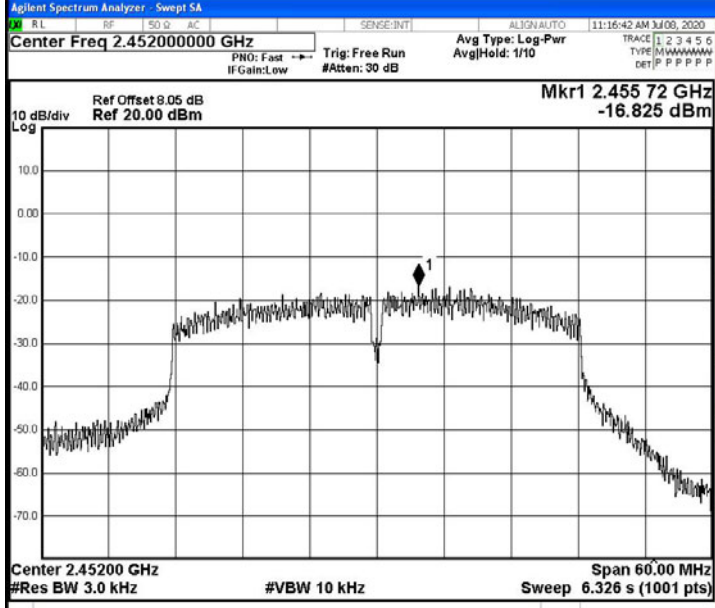


11N20SISO/HCH



11N40SISO/LCH

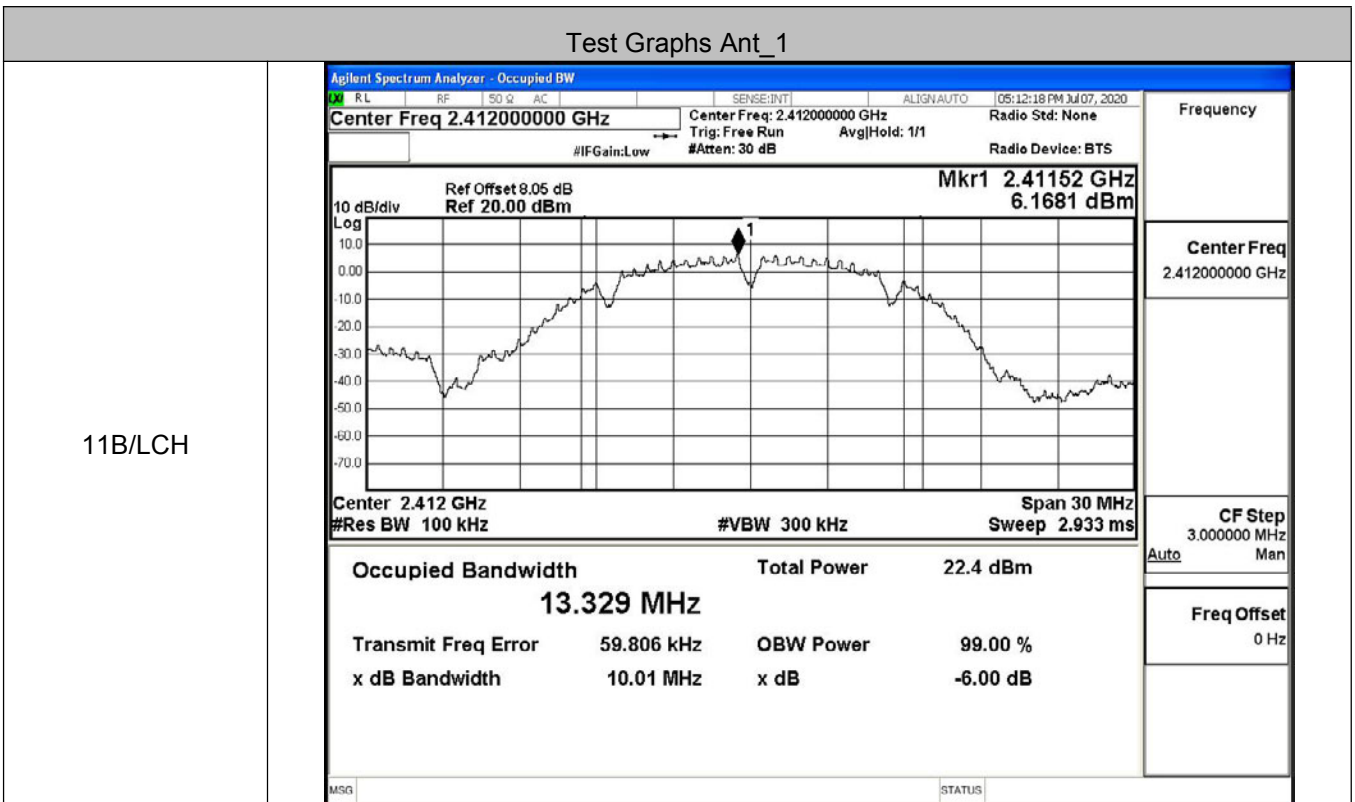


<p>11N40SISO/MCH</p>	 <p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.43700000 GHz Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.444 20 GHz -15.520 dBm Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 60.00 MHz Sweep 6.326 s (1001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.43700000 GHz</p> <p>Start Freq 2.40700000 GHz</p> <p>Stop Freq 2.46700000 GHz</p> <p>CF Step 6.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>11N40SISO/HCH</p>	 <p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.45200000 GHz Ref Offset 8.05 dB Ref 20.00 dBm Mkr1 2.455 72 GHz -16.825 dBm Center 2.45200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 60.00 MHz Sweep 6.326 s (1001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.45200000 GHz</p> <p>Start Freq 2.42200000 GHz</p> <p>Stop Freq 2.48200000 GHz</p> <p>CF Step 6.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>

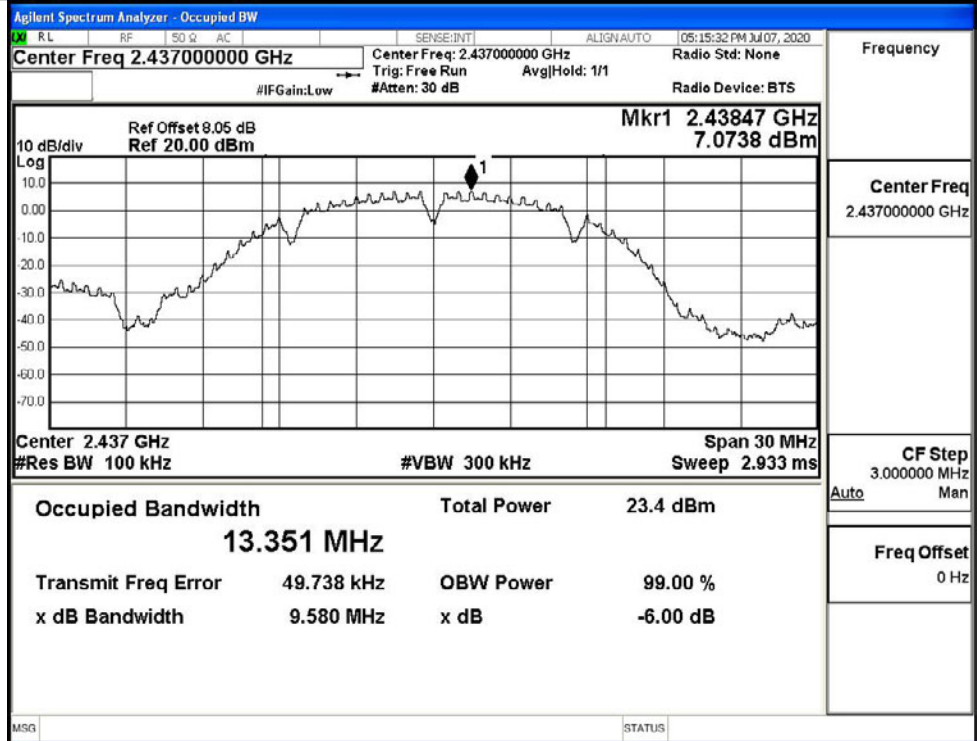
A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]		Limit [MHz]	Verdict
		Ant_1	Ant_2		
11B	LCH	10.01	10.06	≥0.5	PASS
	MCH	9.580	10.06	≥0.5	PASS
	HCH	9.591	9.582	≥0.5	PASS
11G	LCH	15.08	15.11	≥0.5	PASS
	MCH	15.13	15.12	≥0.5	PASS
	HCH	15.08	13.90	≥0.5	PASS
11N20SISO	LCH	15.11	15.08	≥0.5	PASS
	MCH	15.05	15.10	≥0.5	PASS
	HCH	15.10	15.14	≥0.5	PASS
11N40SISO	LCH	33.88	33.89	≥0.5	PASS
	MCH	33.87	33.89	≥0.5	PASS
	HCH	33.88	33.89	≥0.5	PASS

Test Graphs Ant_1



11B/MCH



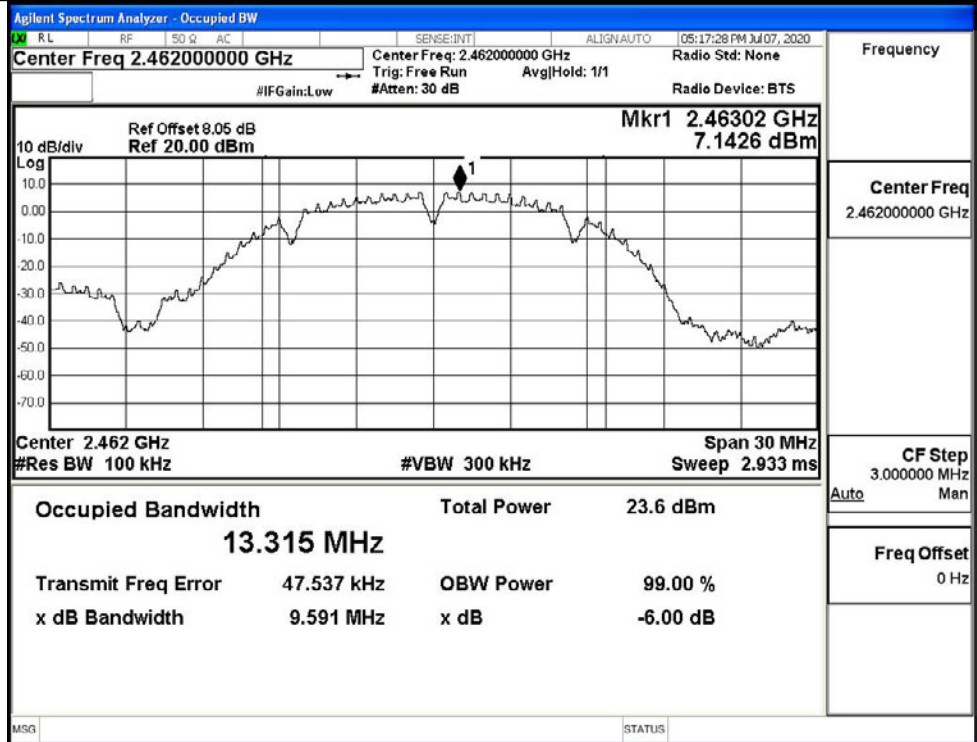
Frequency
2.43700000 GHz

Center Freq
2.43700000 GHz

CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

11B/HCH



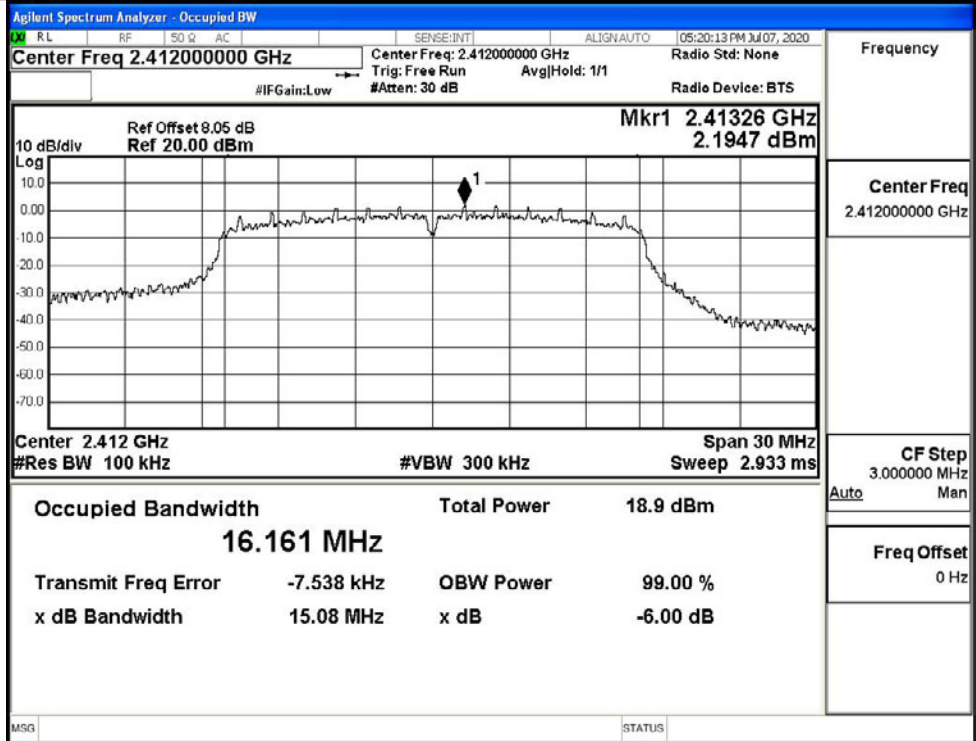
Frequency
2.46200000 GHz

Center Freq
2.46200000 GHz

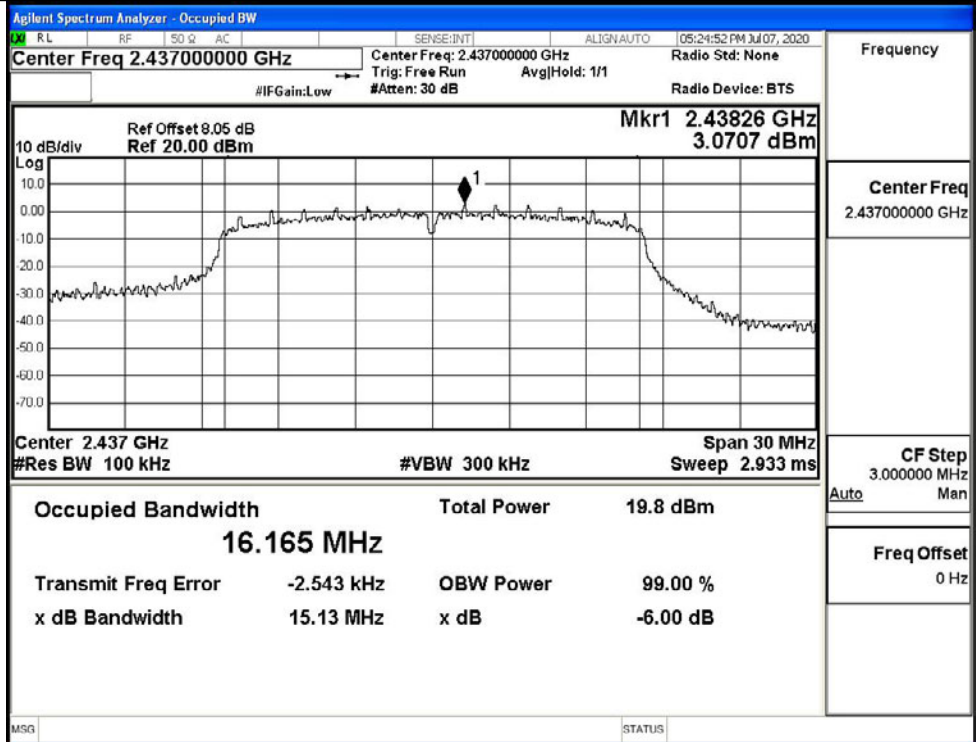
CF Step
3.000000 MHz
Auto Man

Freq Offset
0 Hz

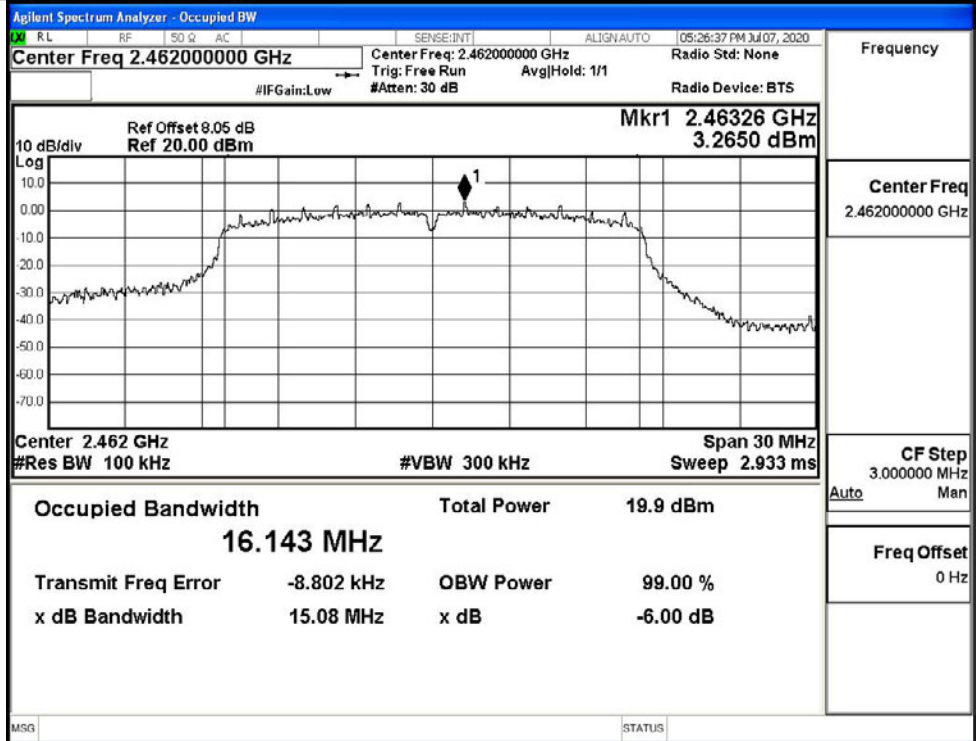
11G/LCH



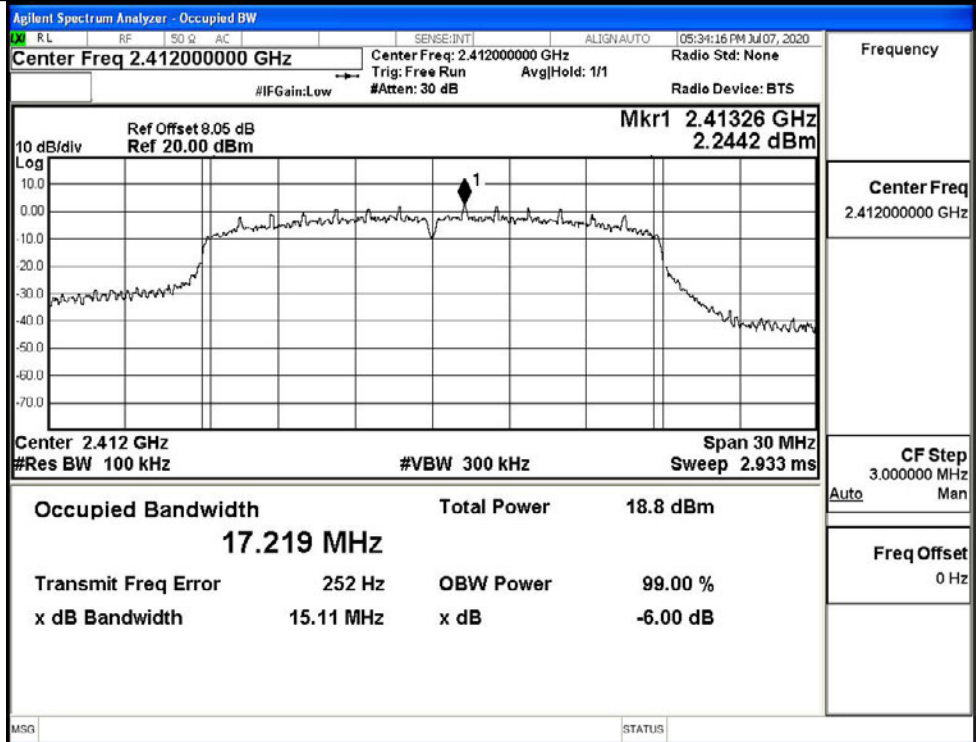
11G/MCH



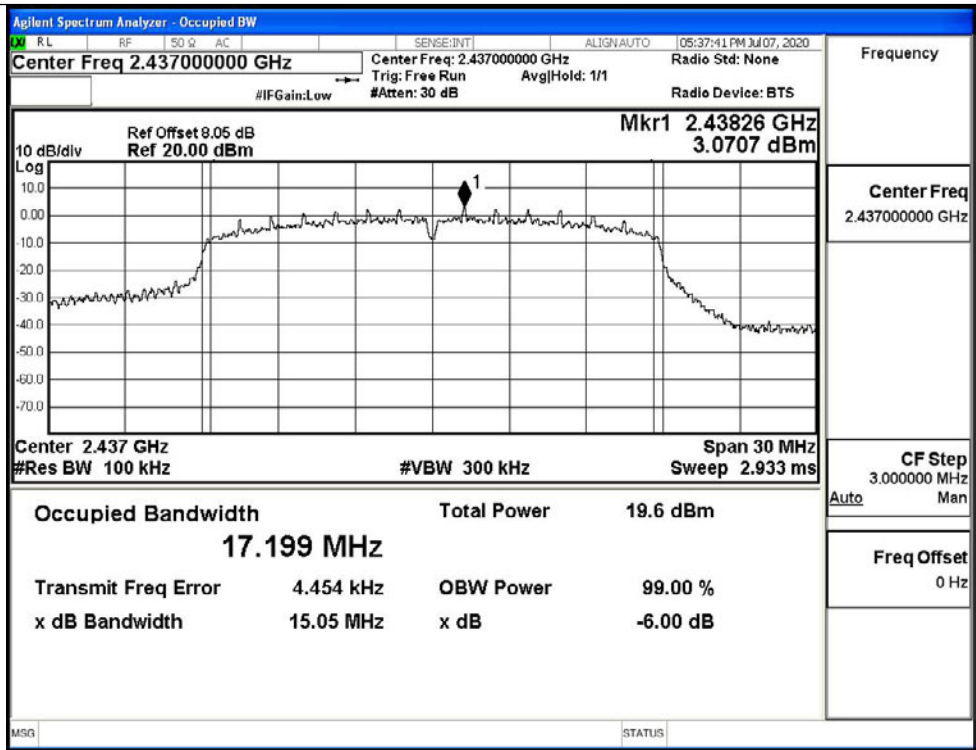
11G/HCH



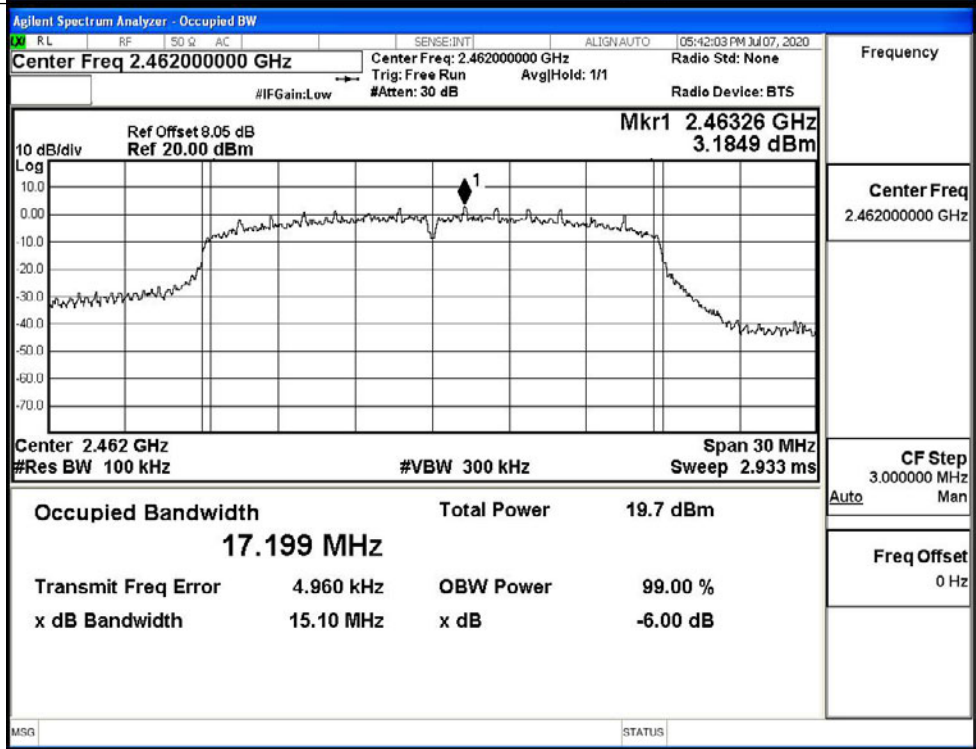
11N20SISO/LCH



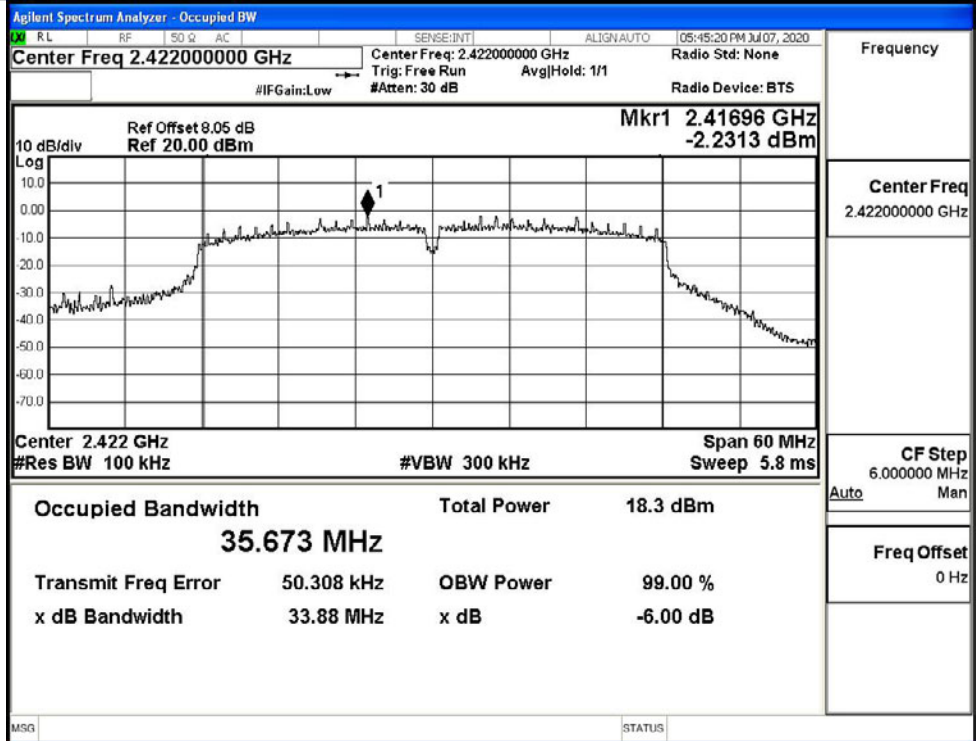
11N20SISO/MCH



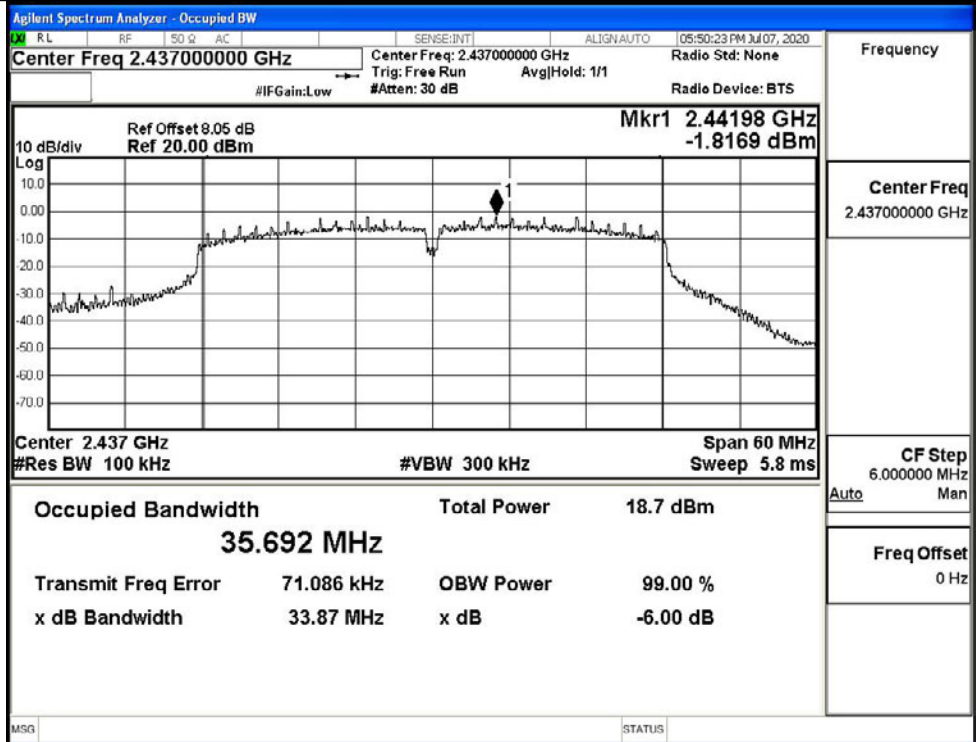
11N20SISO/HCH



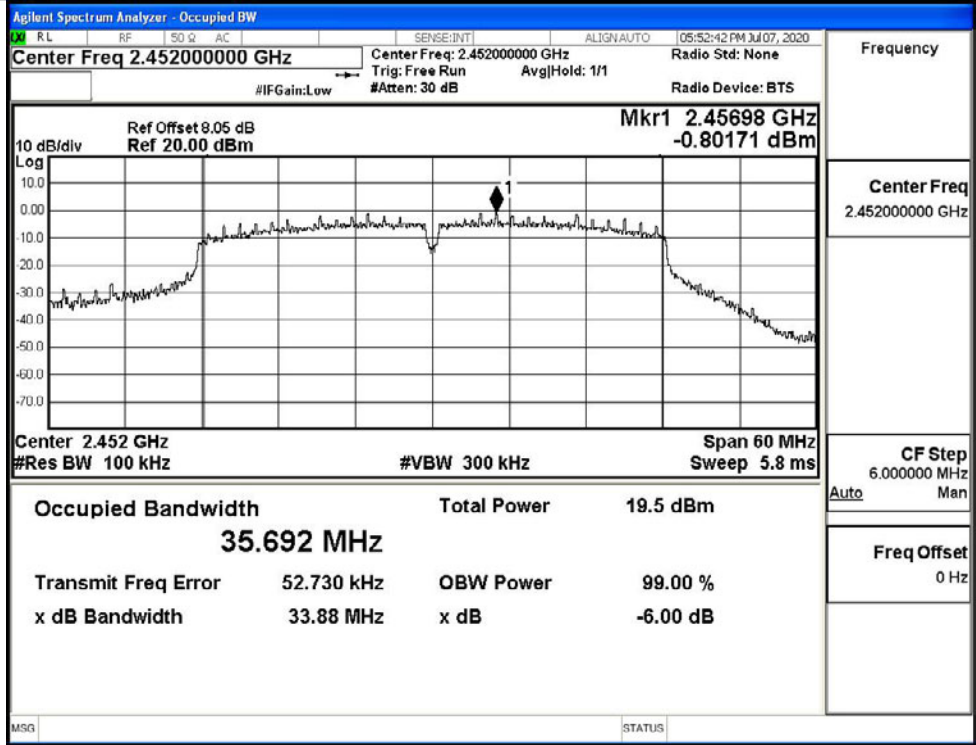
11N40SISO/LCH



11N40SISO/MCH

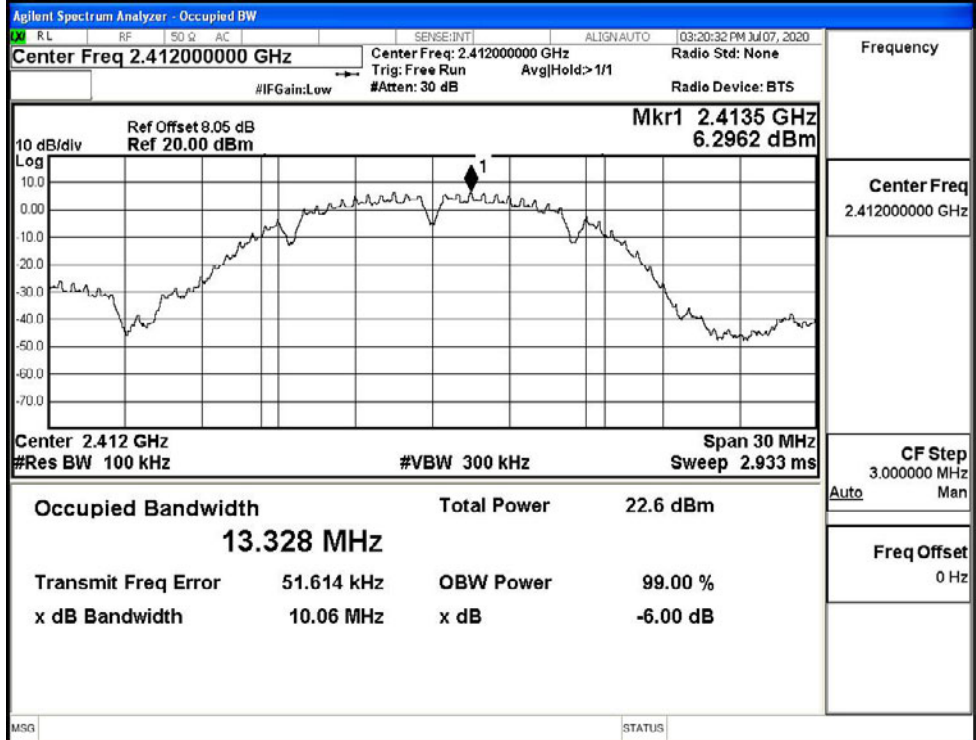


11N40SISO/HCH

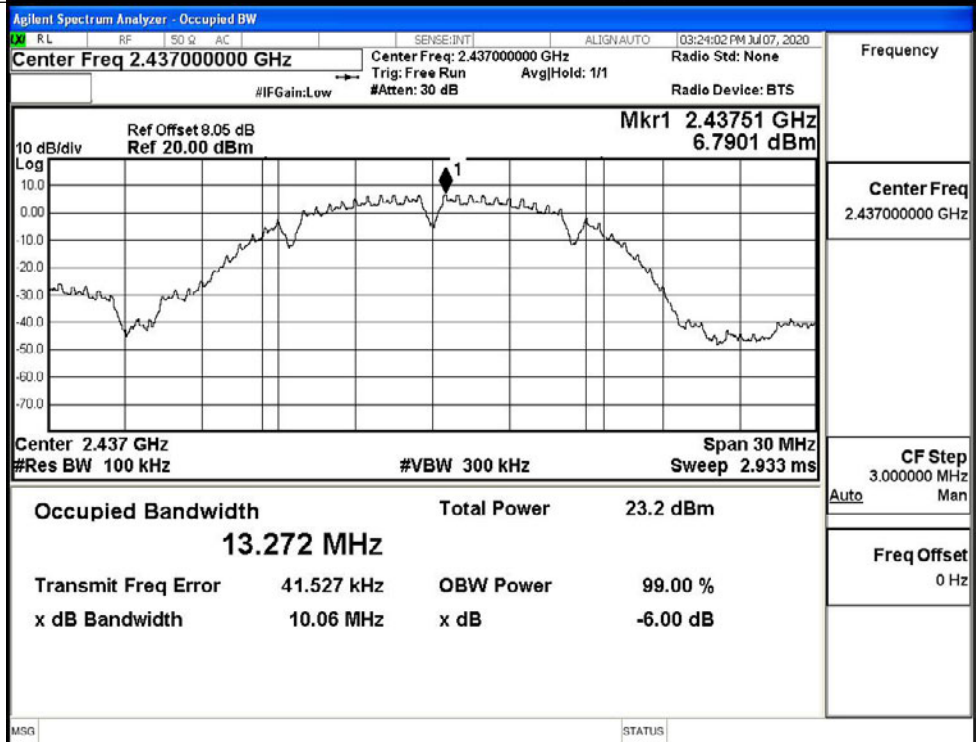


Test Graphs Ant_2

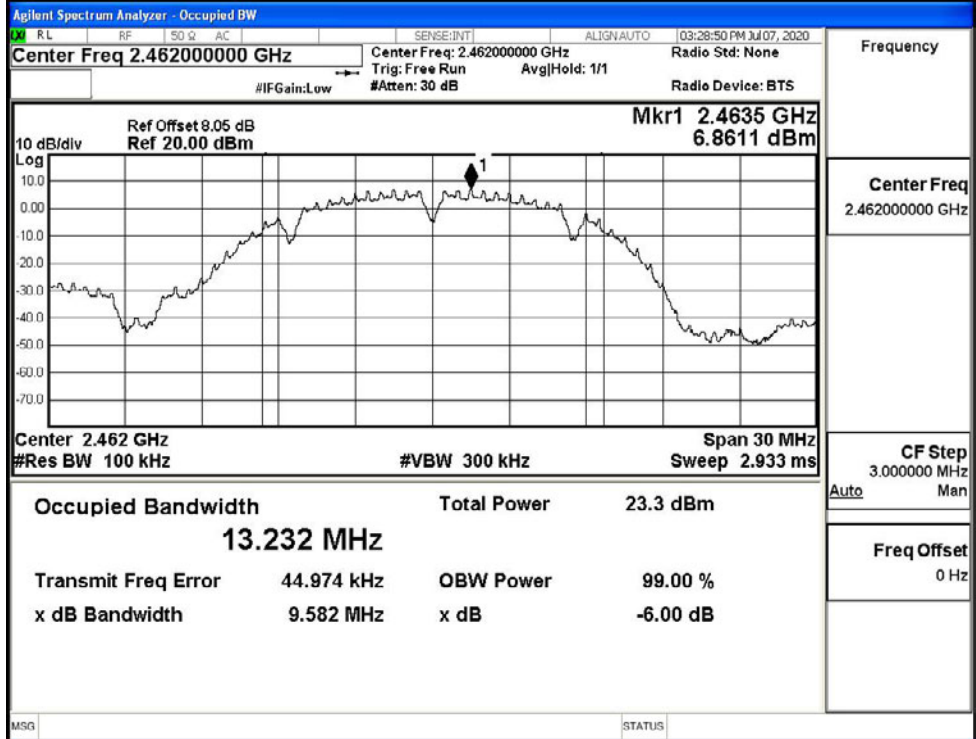
11B/LCH



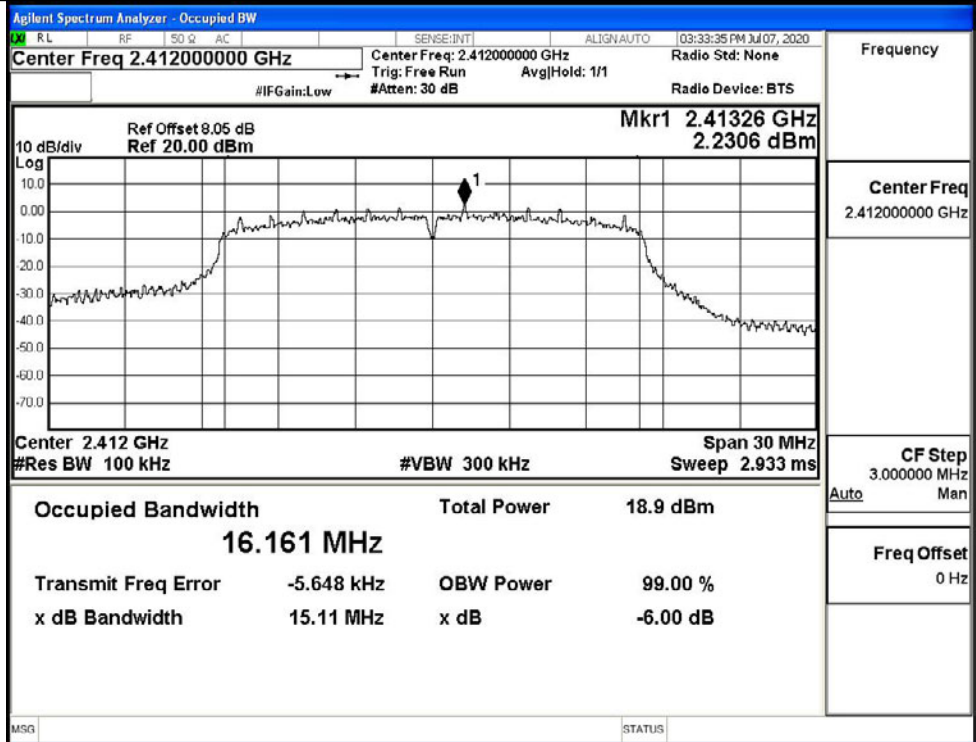
11B/MCH



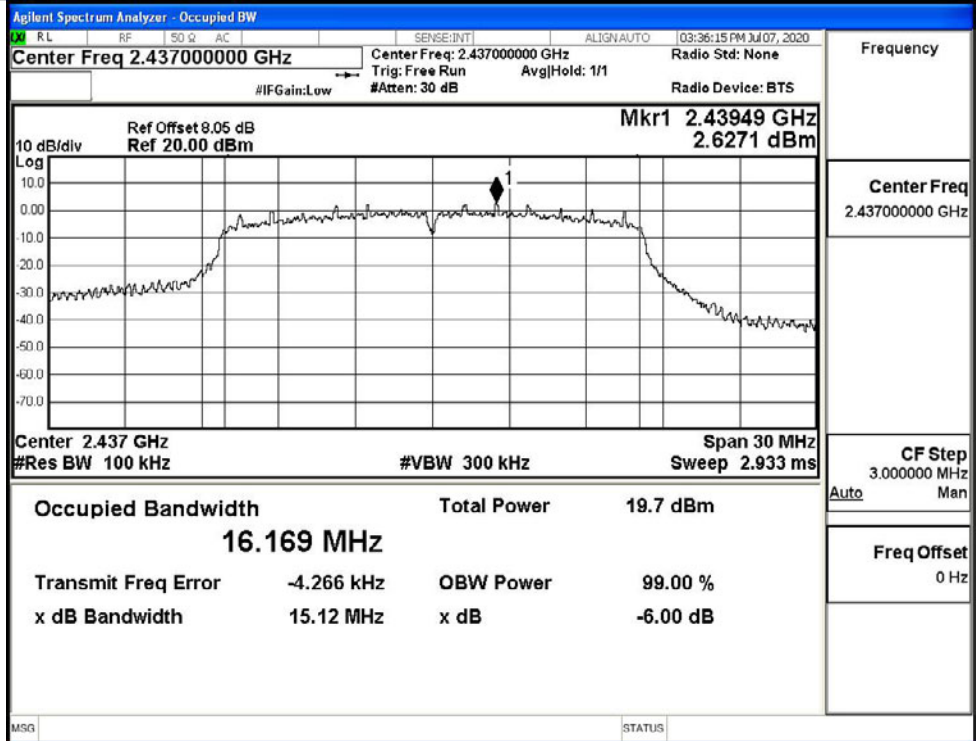
11B/HCH



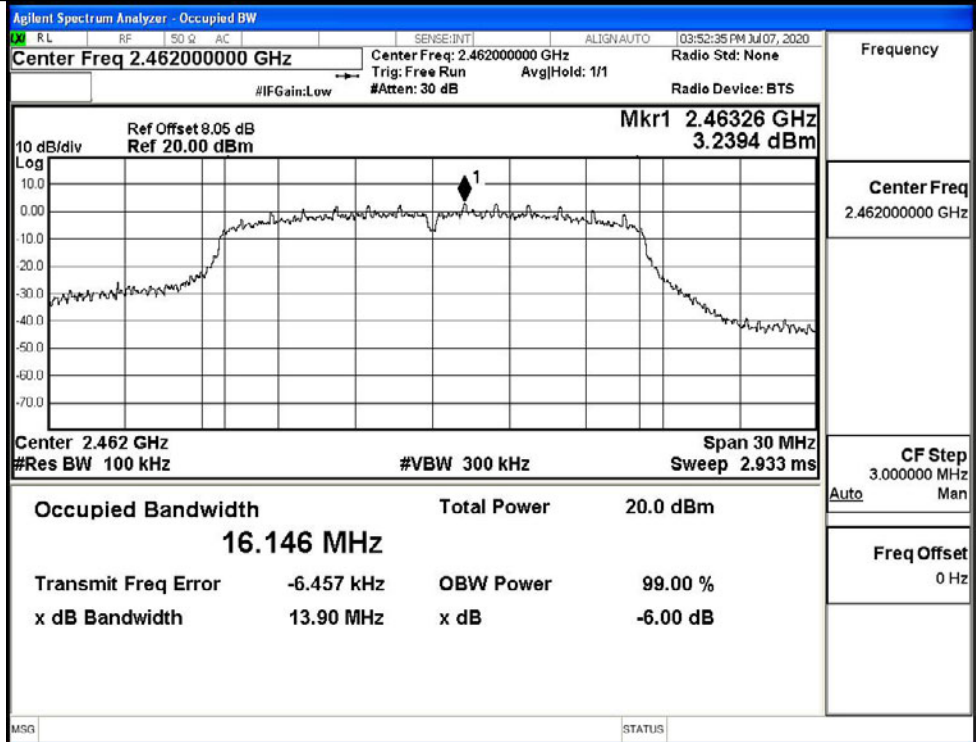
11G/LCH



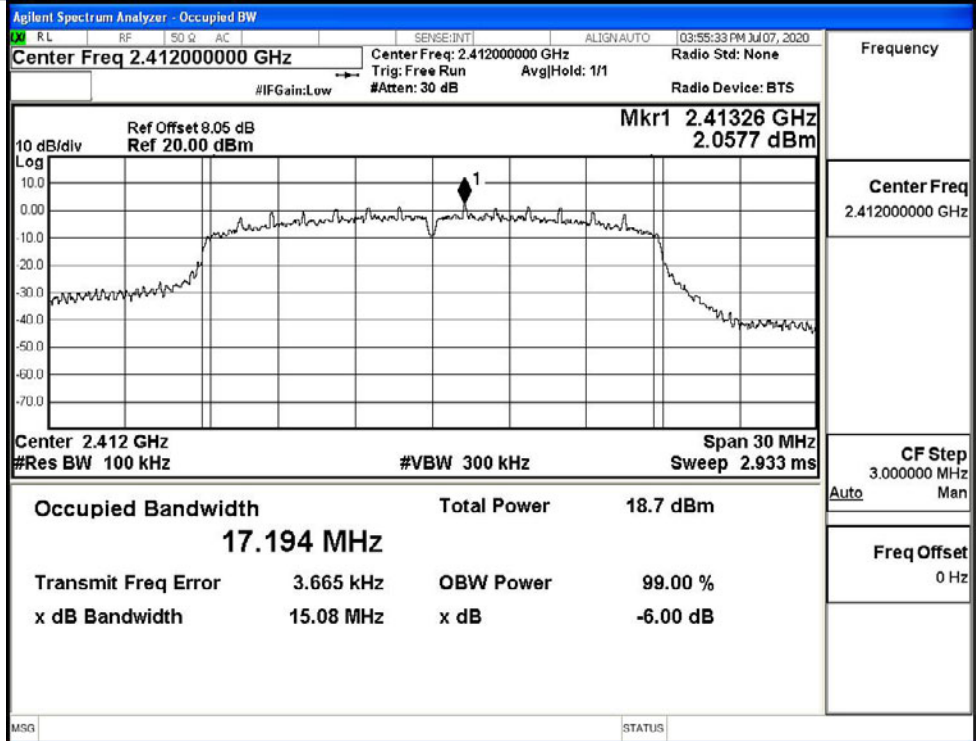
11G/MCH



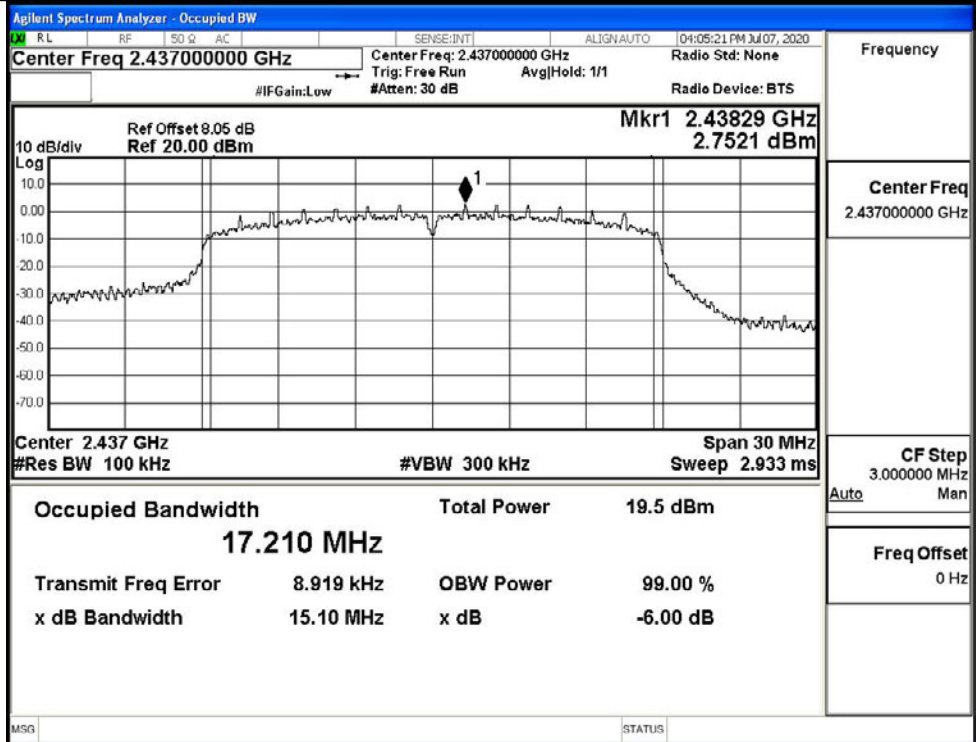
11G/HCH



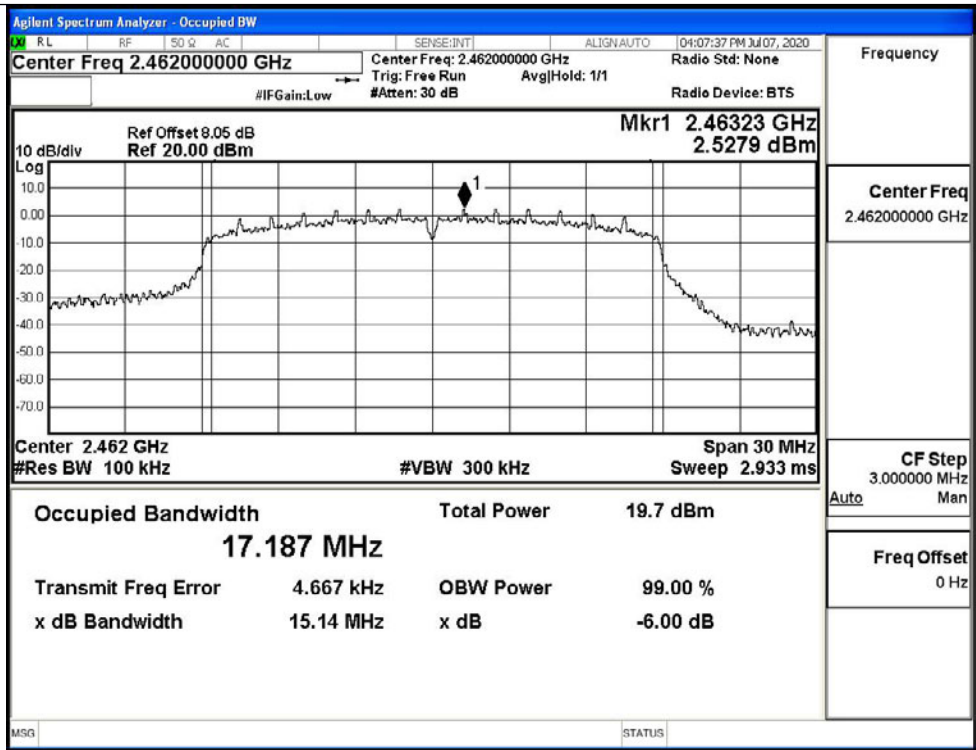
11N20SISO/LCH



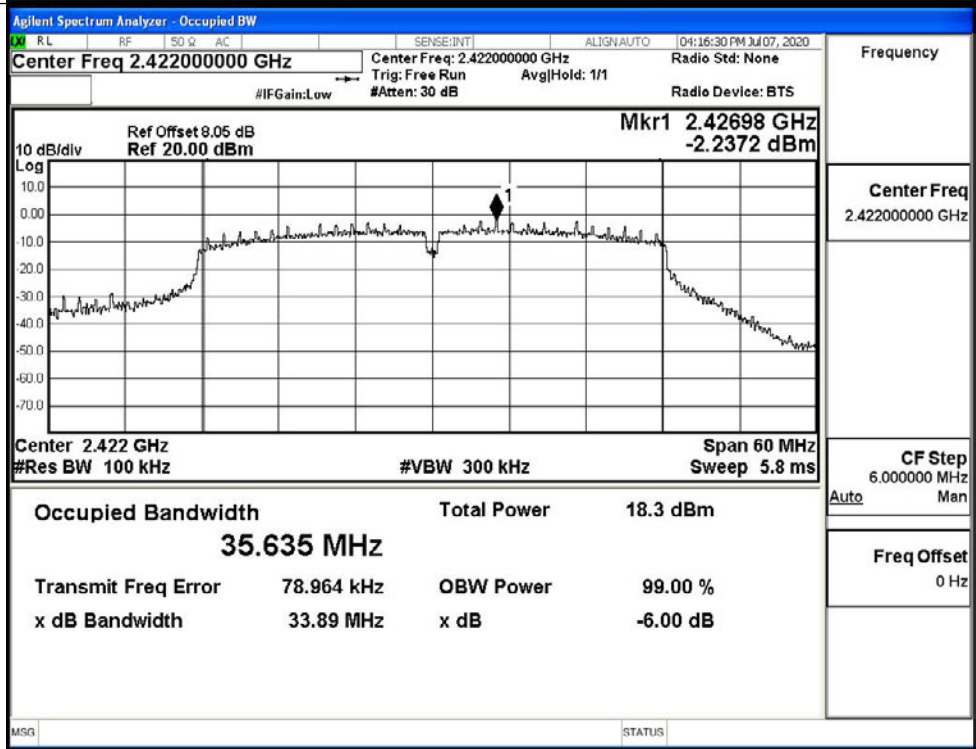
11N20SISO/MCH



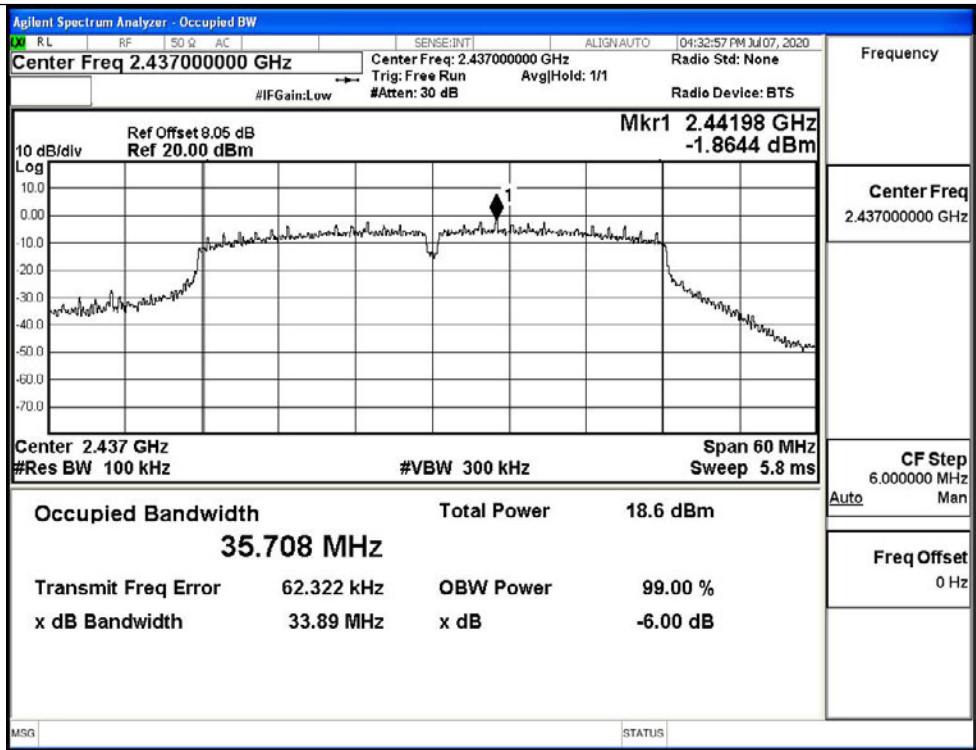
11N20SISO/HCH



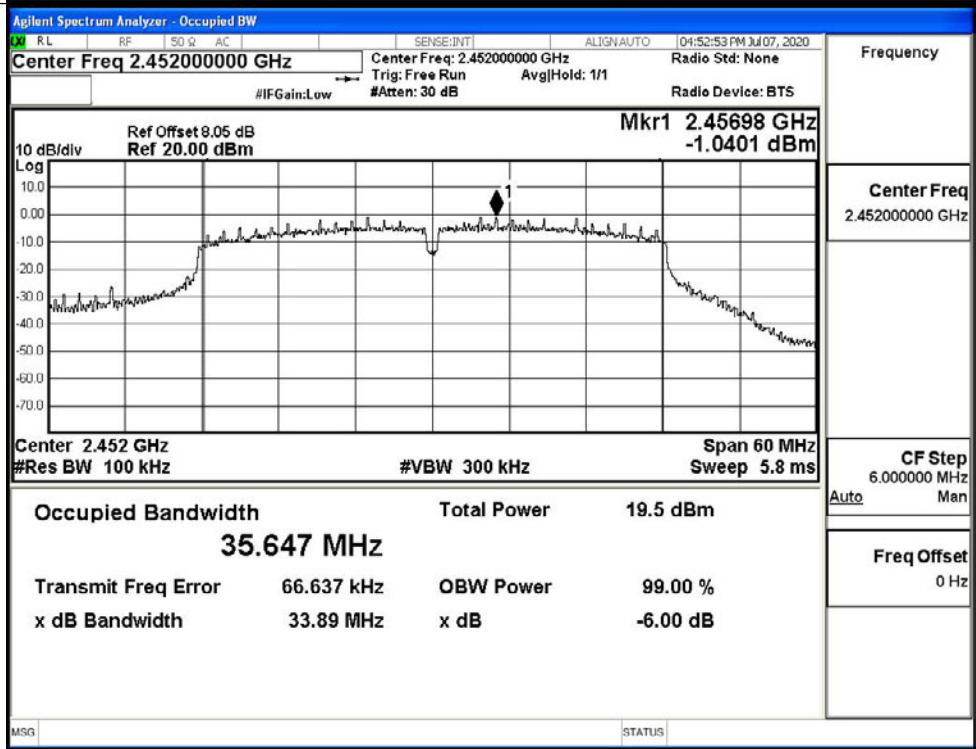
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

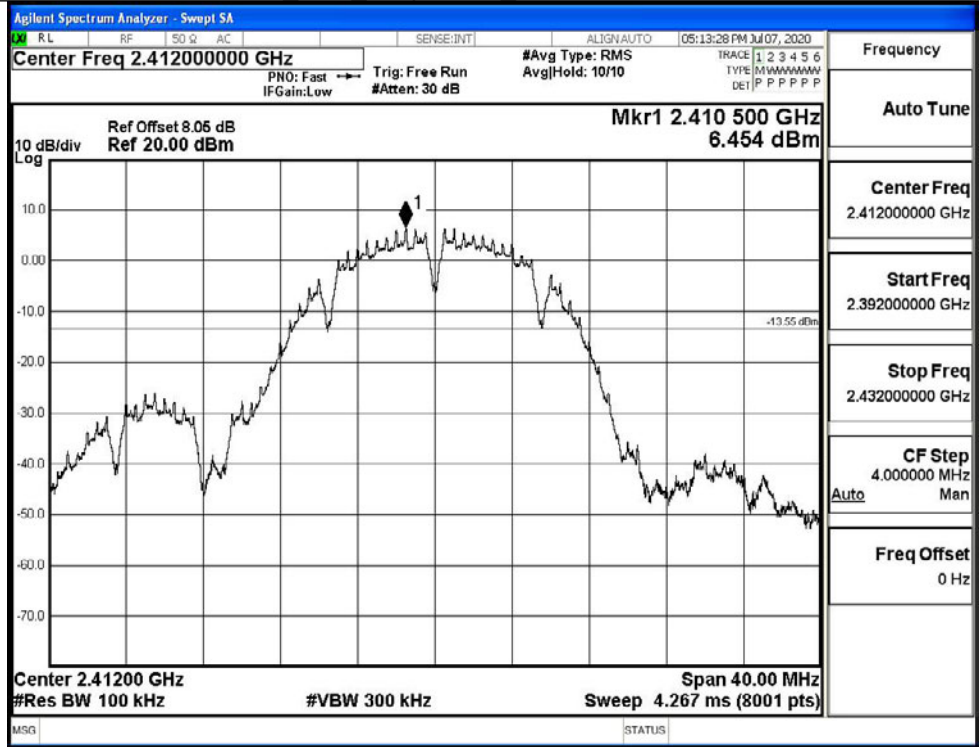


A.5 RF Conducted Spurious Emissions**Ant_1**

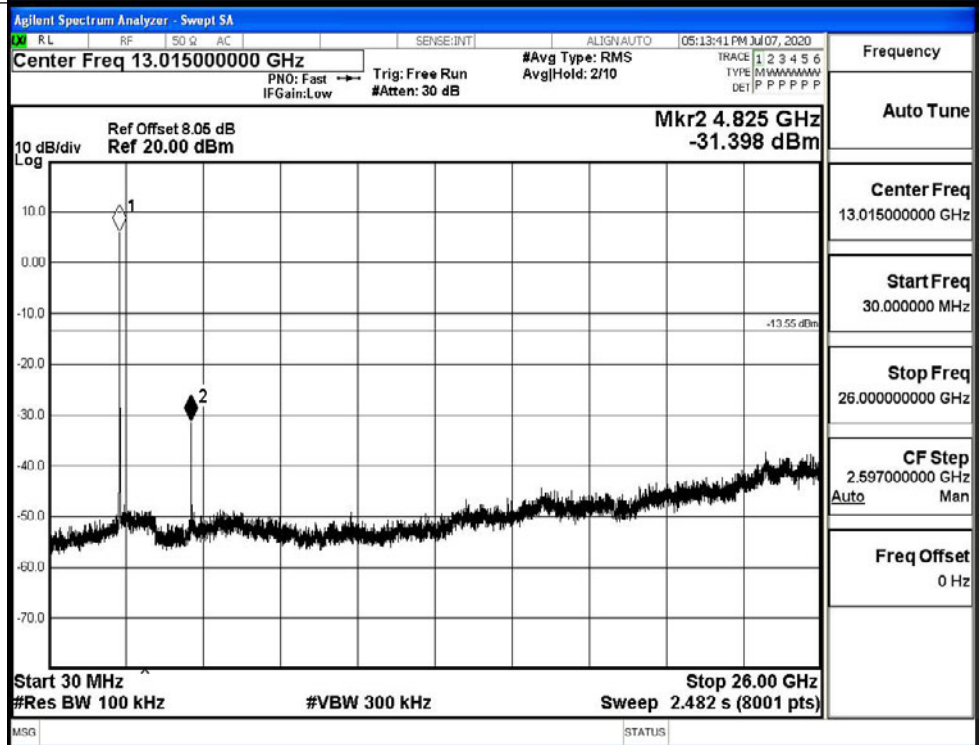
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	6.454	-31.398	-13.546	PASS
	MCH	7.345	-34.876	-12.655	PASS
	HCH	7.167	-38.003	-12.833	PASS
11G	LCH	2.178	-36.815	-17.822	PASS
	MCH	2.996	-37.891	-17.004	PASS
	HCH	3.197	-36.741	-16.803	PASS
11N20 SISO	LCH	2.156	-38.407	-17.844	PASS
	MCH	2.991	-37.997	-17.009	PASS
	HCH	2.536	-37.335	-17.464	PASS
11N40 SISO	LCH	-2.566	-38.387	-22.566	PASS
	MCH	-1.63	-37.119	-21.630	PASS
	HCH	-1.056	-37.393	-21.056	PASS

11B LCH Graphs Ant 1

Pref/11B/LCH

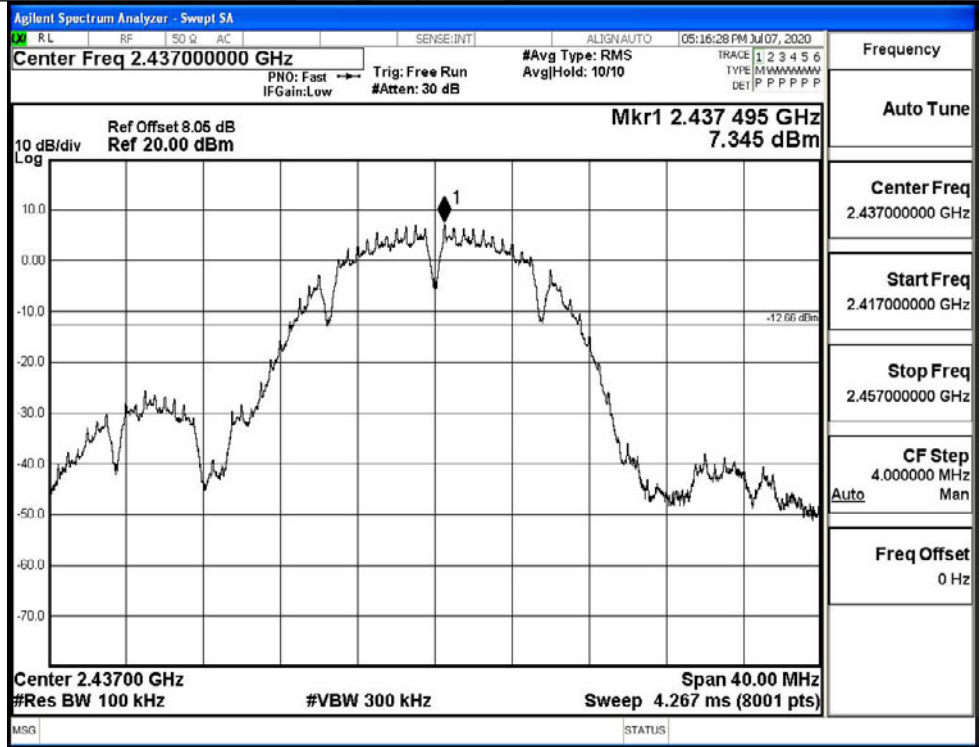


Puw/11B/LCH



11B MCH Graphs Ant 1

Pref/11B/MCH



Puw/11B/MCH

