

Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: GSM/WCDMA Smartphone

Trade Mark: DOOGEE

Test Model: X11

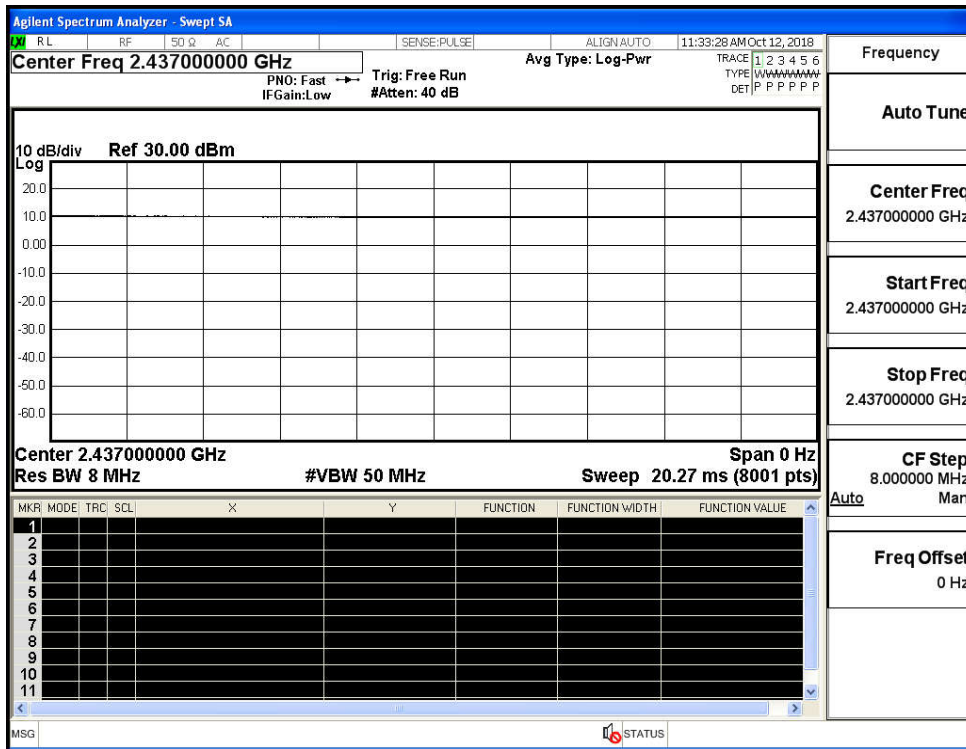
Environmental Conditions

Temperature:	24.3 ° C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Mina.Xu
Supervised by:	Jayden.Zhuo

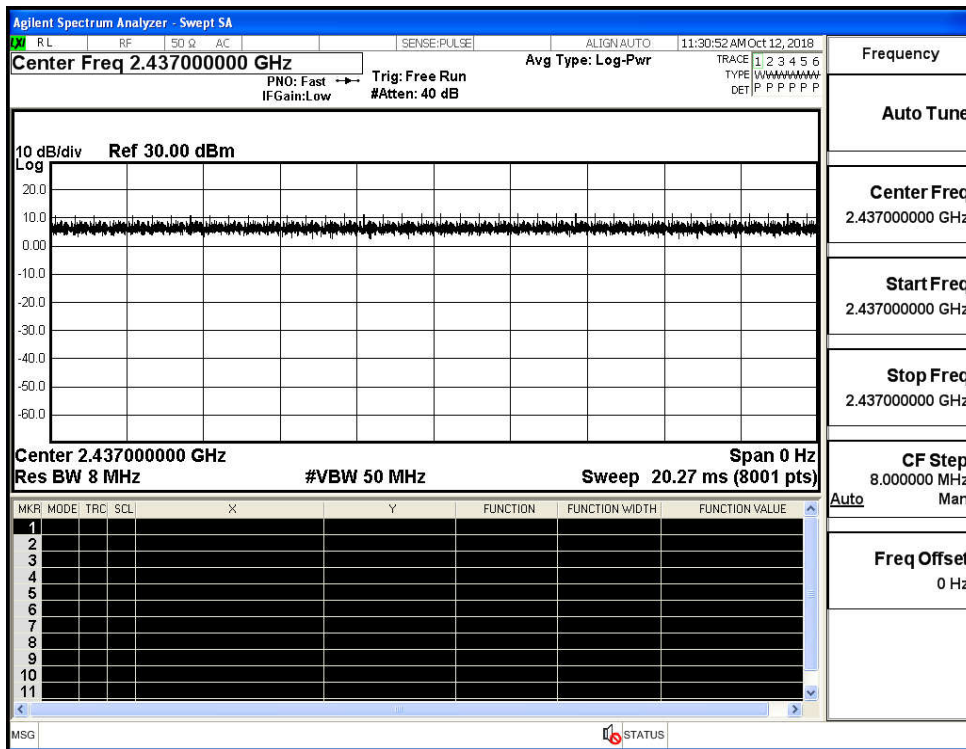
C.1 Duty Cycle

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

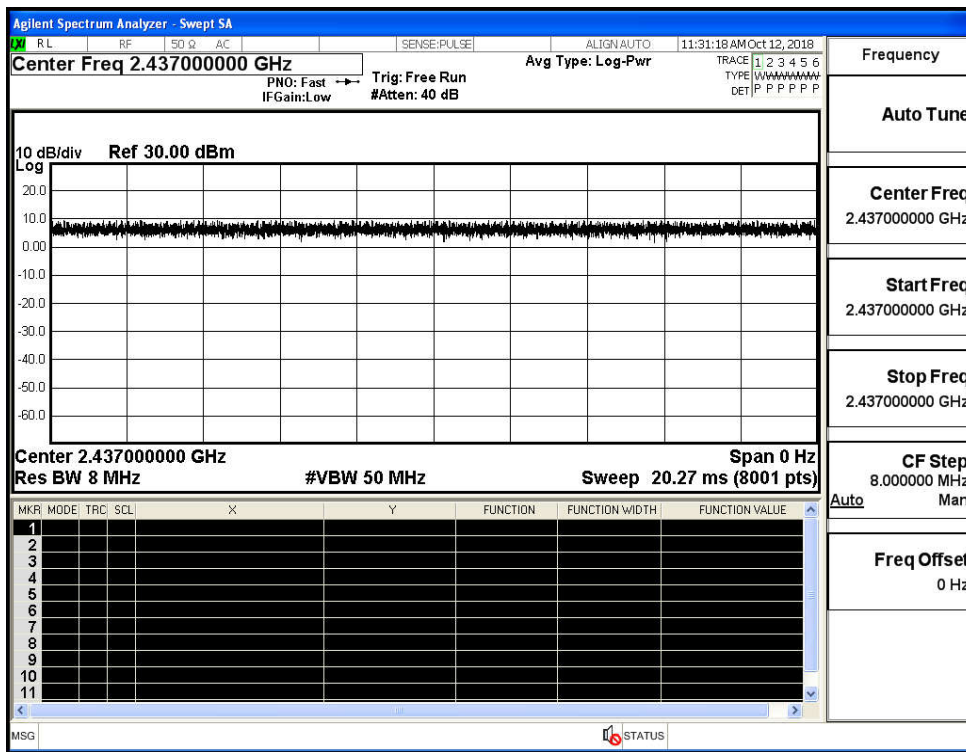
Duty Cycle_11B_2437_Ant1



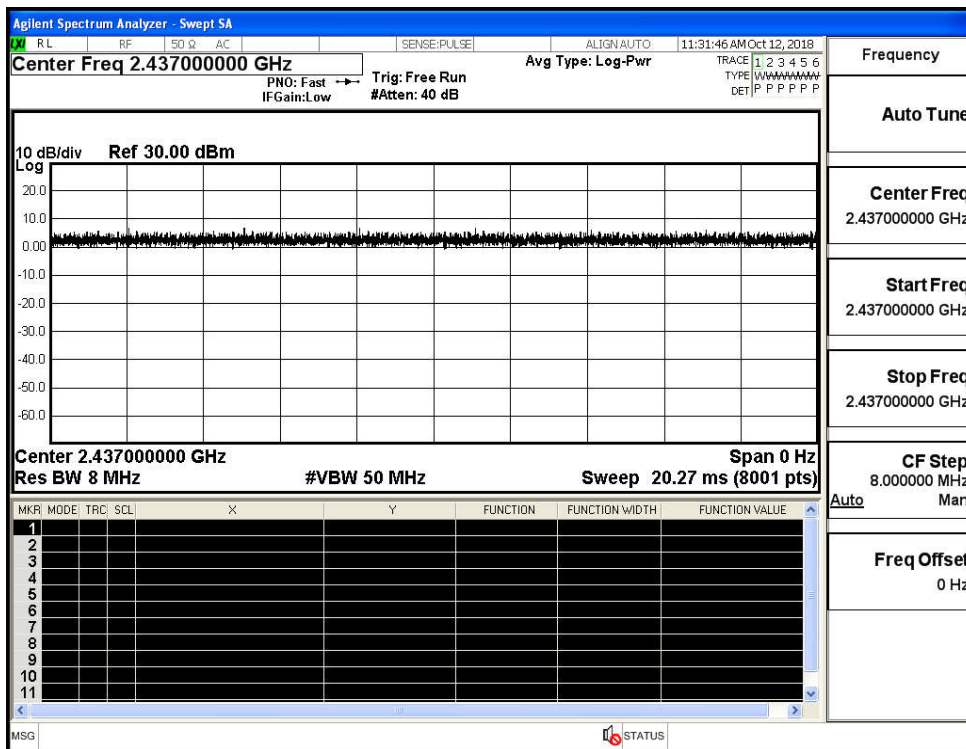
Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



Duty Cycle_11N40SISO_2437_Ant1

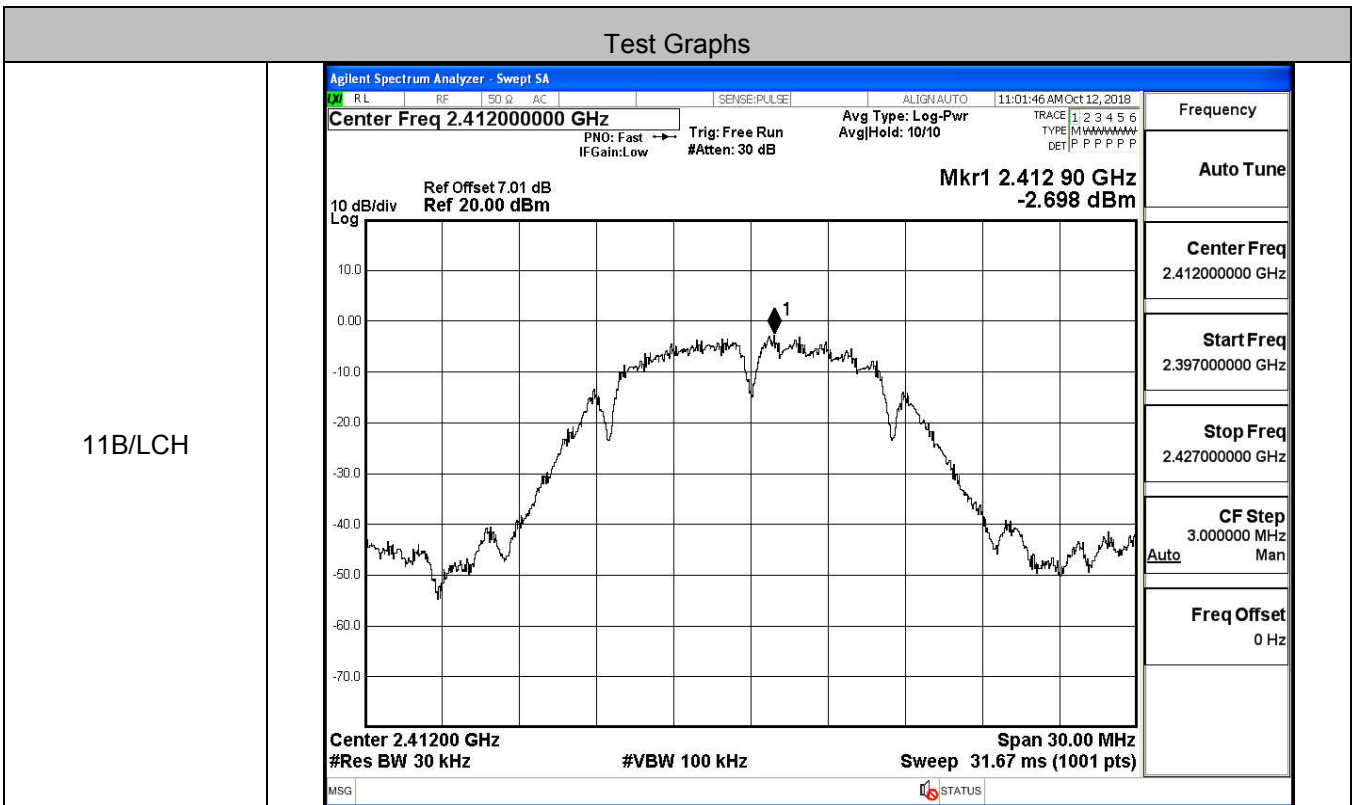


C.2 Maximum Conducted Output Power

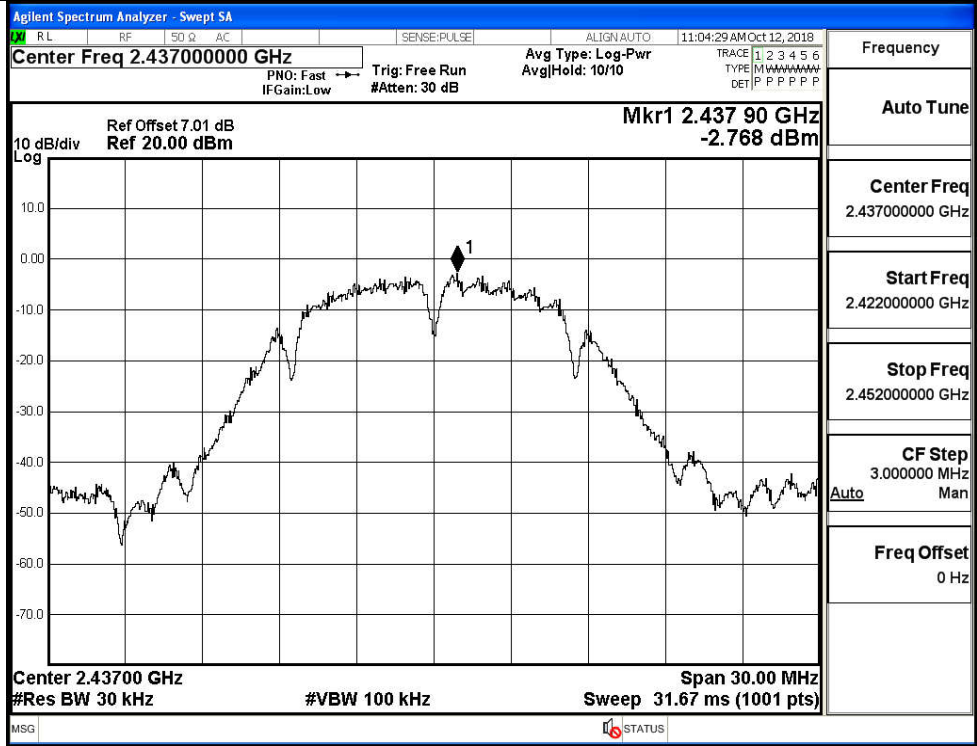
Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	16.35	30	PASS
	MCH	16.21	30	PASS
	HCH	16.26	30	PASS
11G	LCH	16.89	30	PASS
	MCH	16.46	30	PASS
	HCH	16.58	30	PASS
11N20SISO	LCH	15.37	30	PASS
	MCH	15.34	30	PASS
	HCH	15.03	30	PASS
11N40SISO	LCH	15.93	30	PASS
	MCH	15.03	30	PASS
	HCH	15.71	30	PASS

C.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/30KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-2.698	8	PASS
	MCH	-2.768	8	PASS
	HCH	-3.838	8	PASS
11G	LCH	-5.015	8	PASS
	MCH	-5.750	8	PASS
	HCH	-6.699	8	PASS
11N20SISO	LCH	-4.518	8	PASS
	MCH	-4.701	8	PASS
	HCH	-5.826	8	PASS
11N40SISO	LCH	-9.920	8	PASS
	MCH	-9.436	8	PASS
	HCH	-9.737	8	PASS



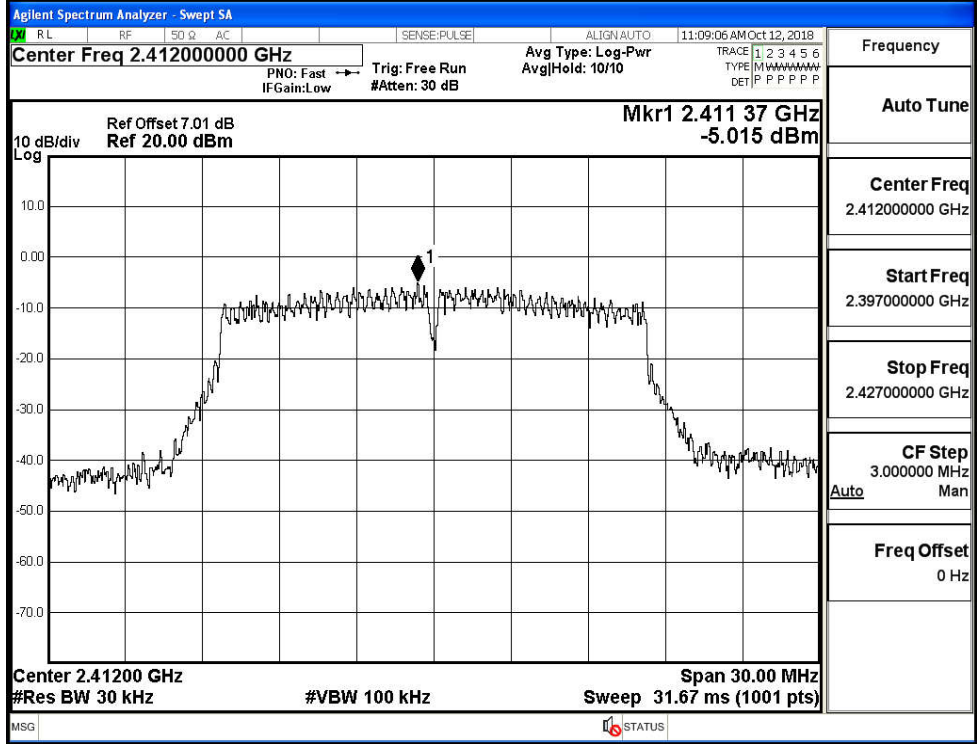
11B/MCH



11B/HCH

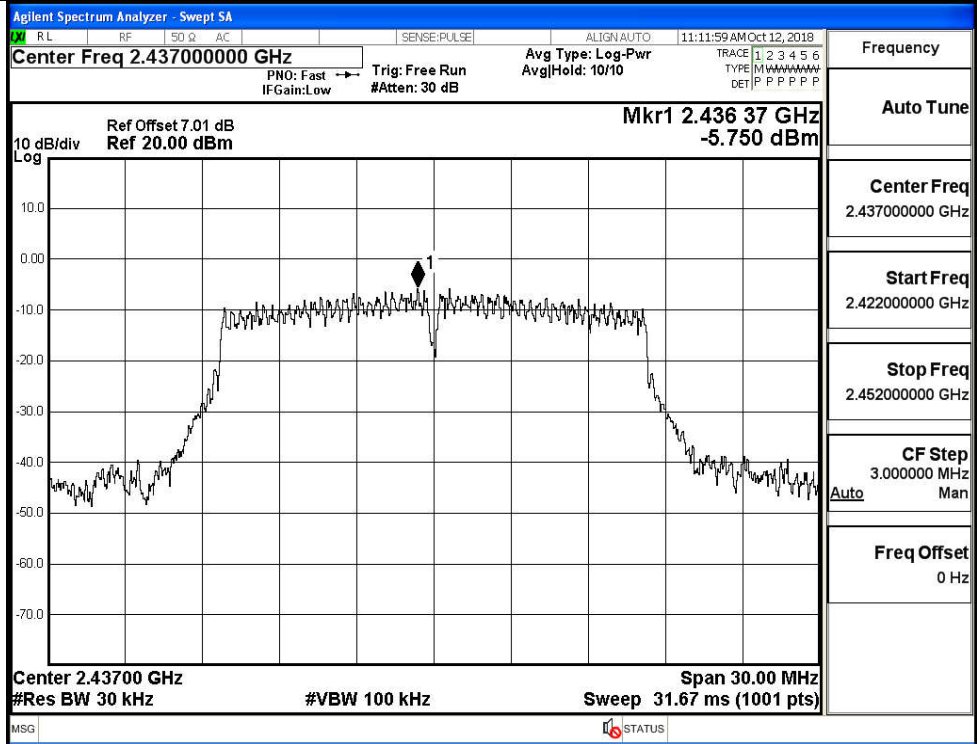


11G/LCH



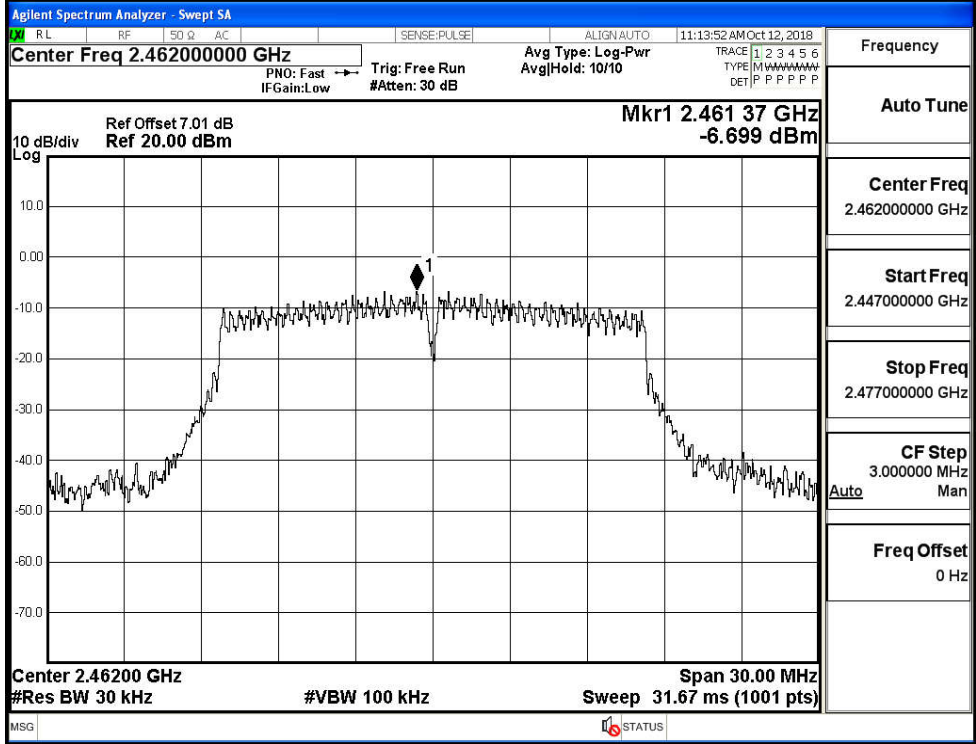
Frequency	2.41200000 GHz
Auto Tune	
Center Freq	2.41200000 GHz
Start Freq	2.397000000 GHz
Stop Freq	2.427000000 GHz
CF Step	3.000000 MHz
	Auto Man
Freq Offset	0 Hz

11G/MCH

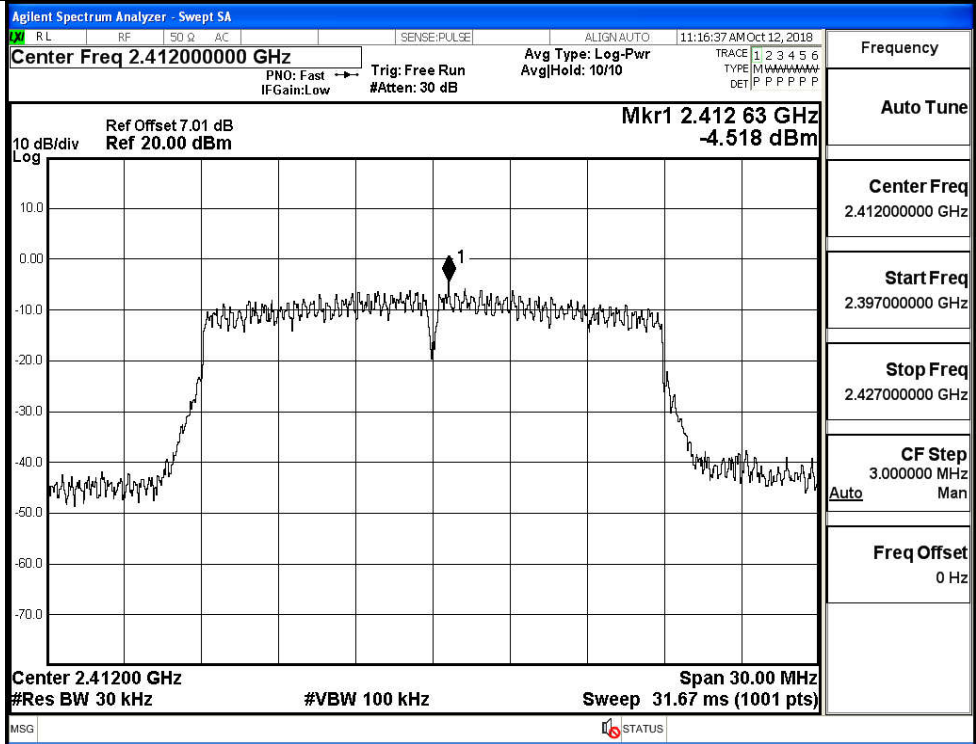


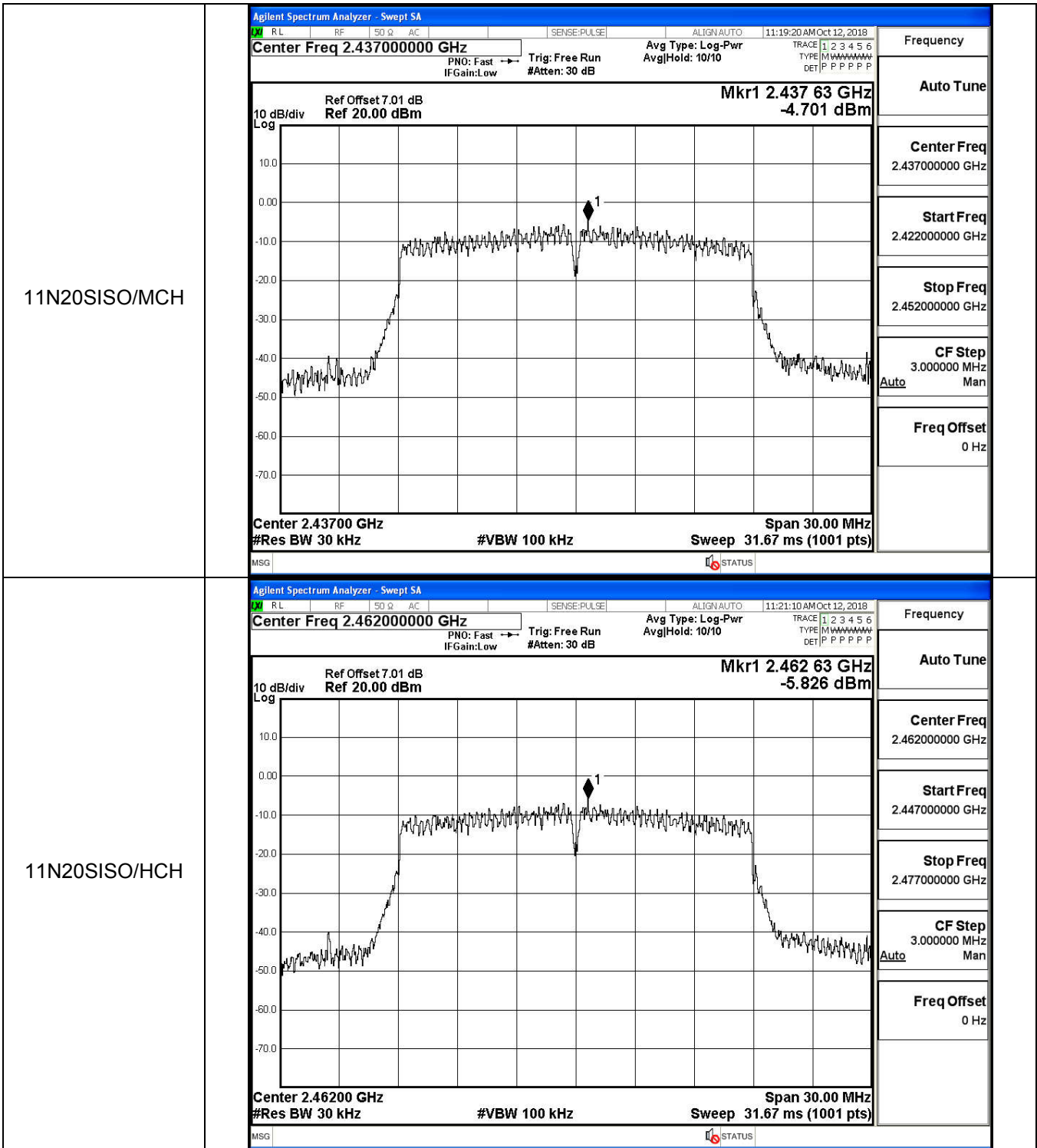
Frequency	2.43700000 GHz
Auto Tune	
Center Freq	2.437000000 GHz
Start Freq	2.422000000 GHz
Stop Freq	2.452000000 GHz
CF Step	3.000000 MHz
	Auto Man
Freq Offset	0 Hz

11G/HCH

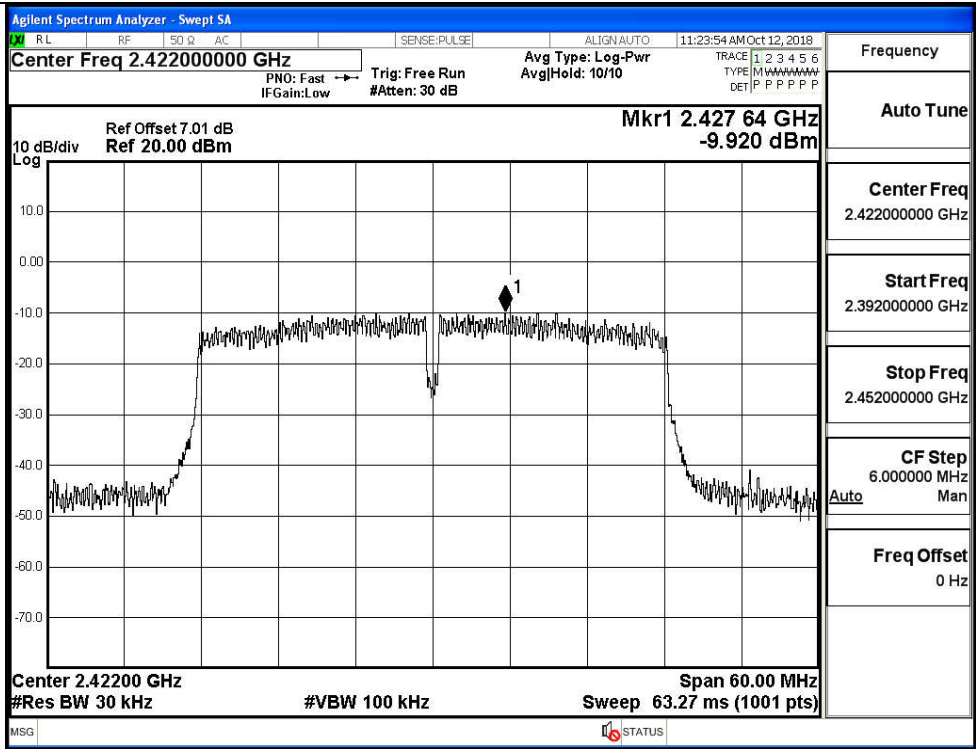


11N20SISO/LCH

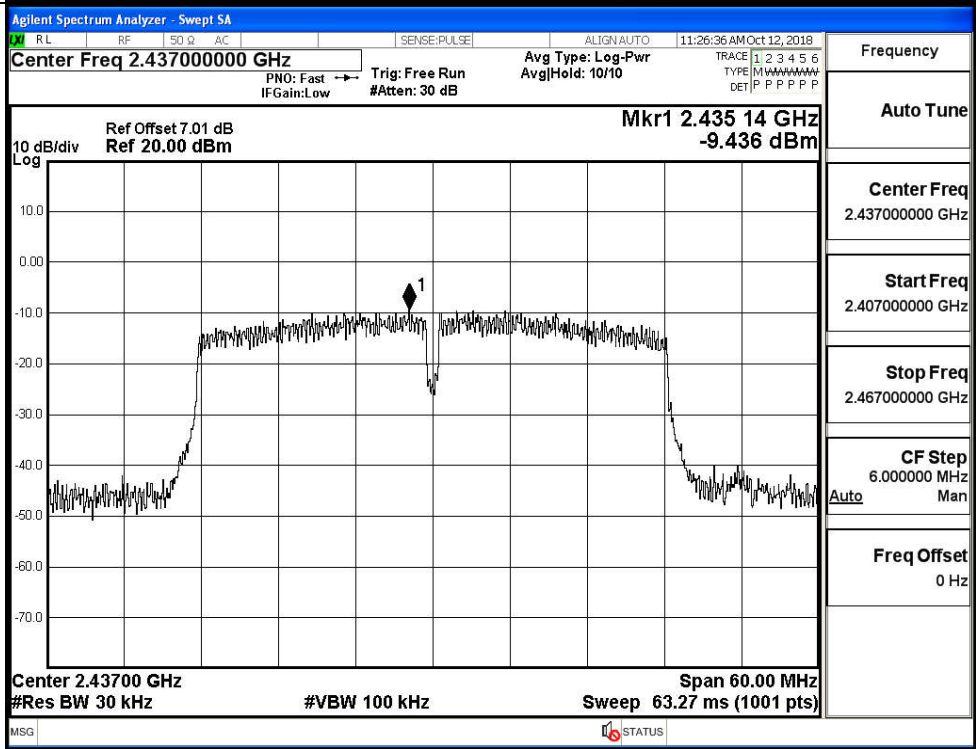




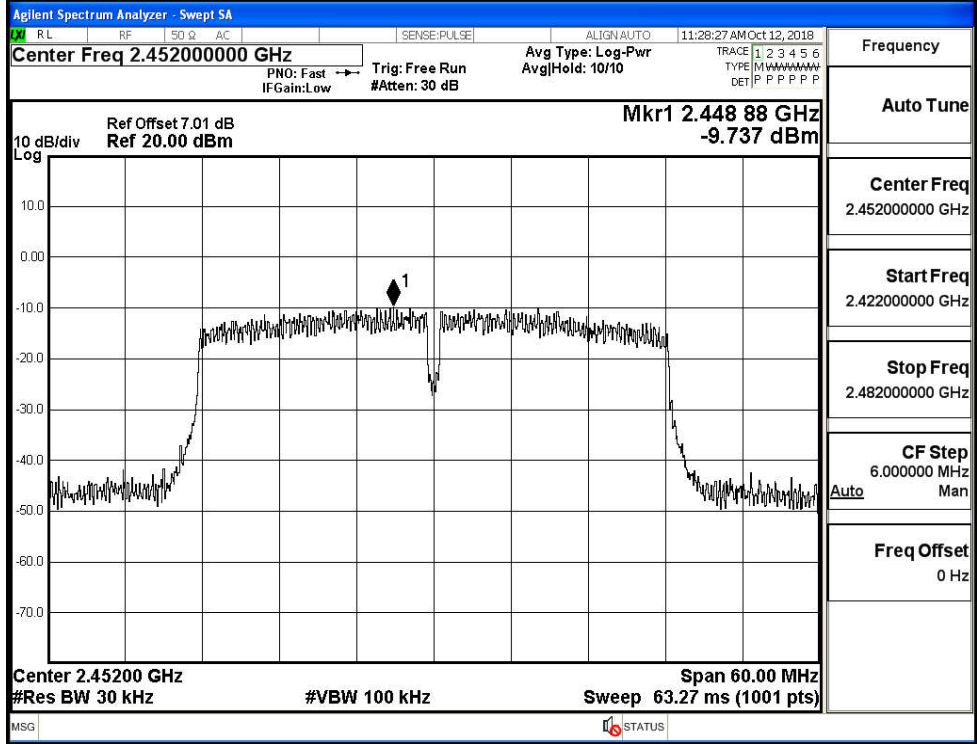
11N40SISO/LCH



11N40SISO/MCH



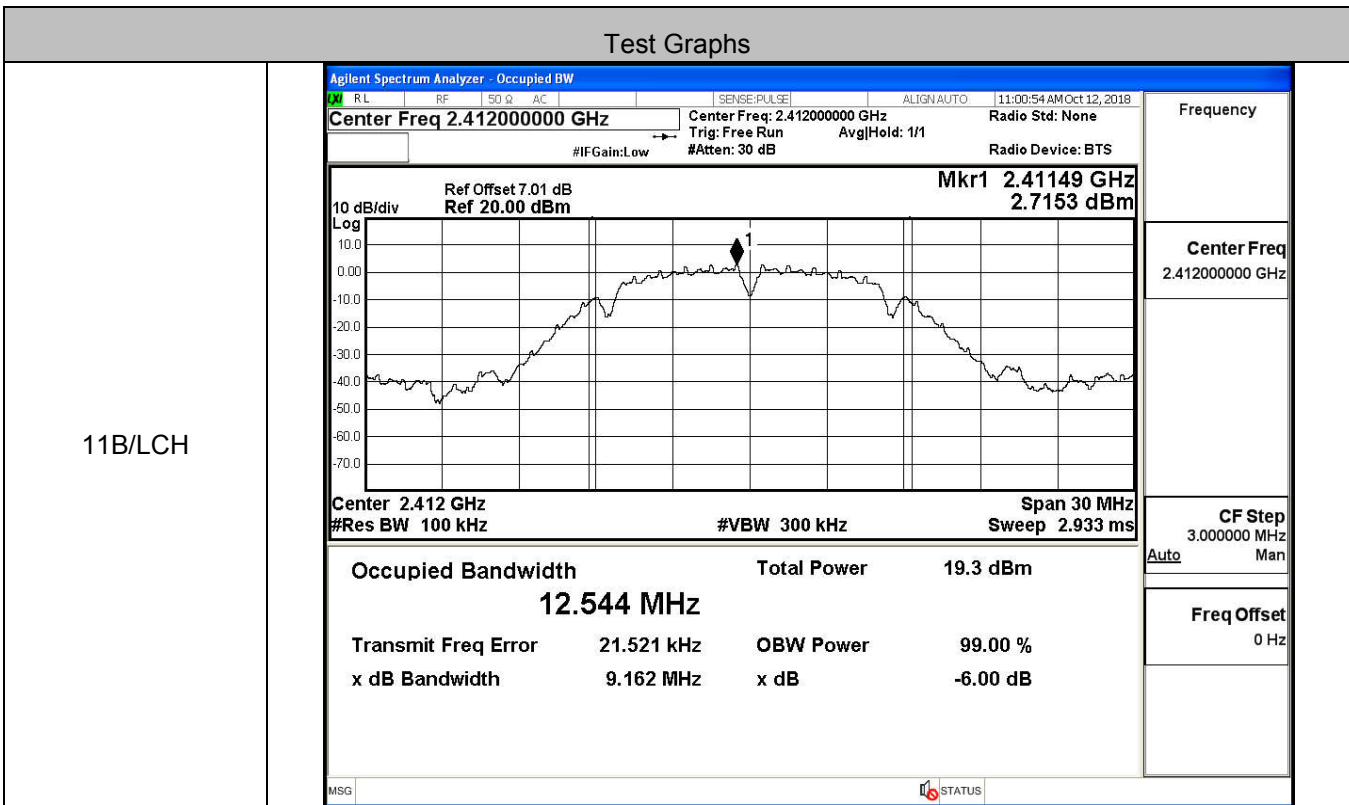
11N40SISO/HCH



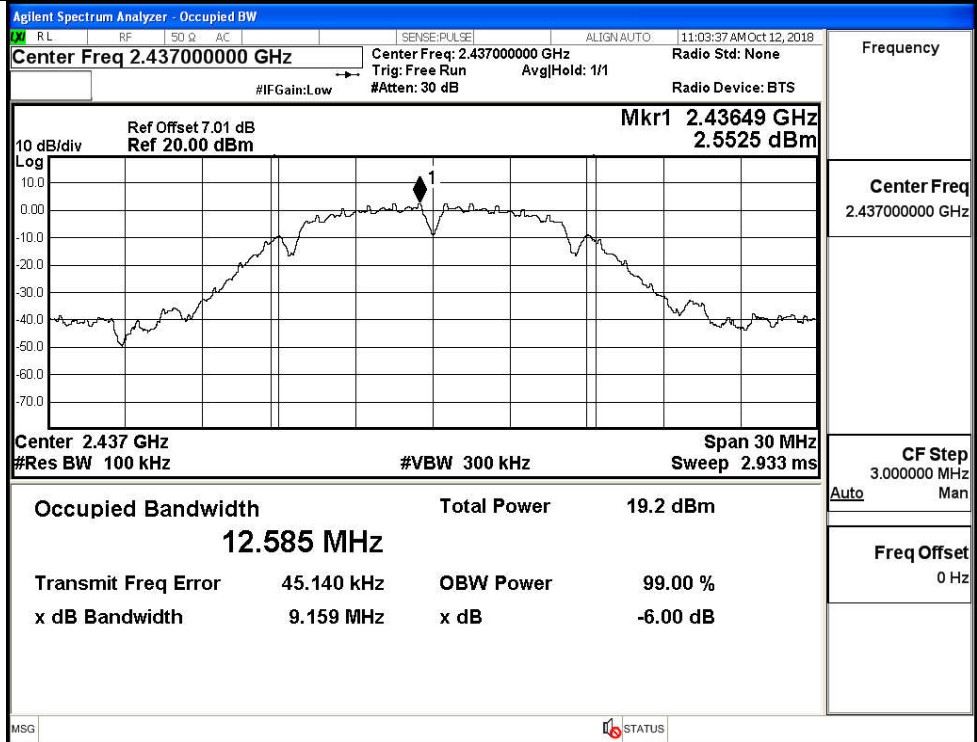
C.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.162	≥0.5	PASS
	MCH	9.159	≥0.5	PASS
	HCH	9.163	≥0.5	PASS
11G	LCH	16.40	≥0.5	PASS
	MCH	16.40	≥0.5	PASS
	HCH	16.42	≥0.5	PASS
11N20SISO	LCH	17.62	≥0.5	PASS
	MCH	17.61	≥0.5	PASS
	HCH	17.62	≥0.5	PASS
11N40SISO	LCH	36.36	≥0.5	PASS
	MCH	36.27	≥0.5	PASS
	HCH	36.34	≥0.5	PASS

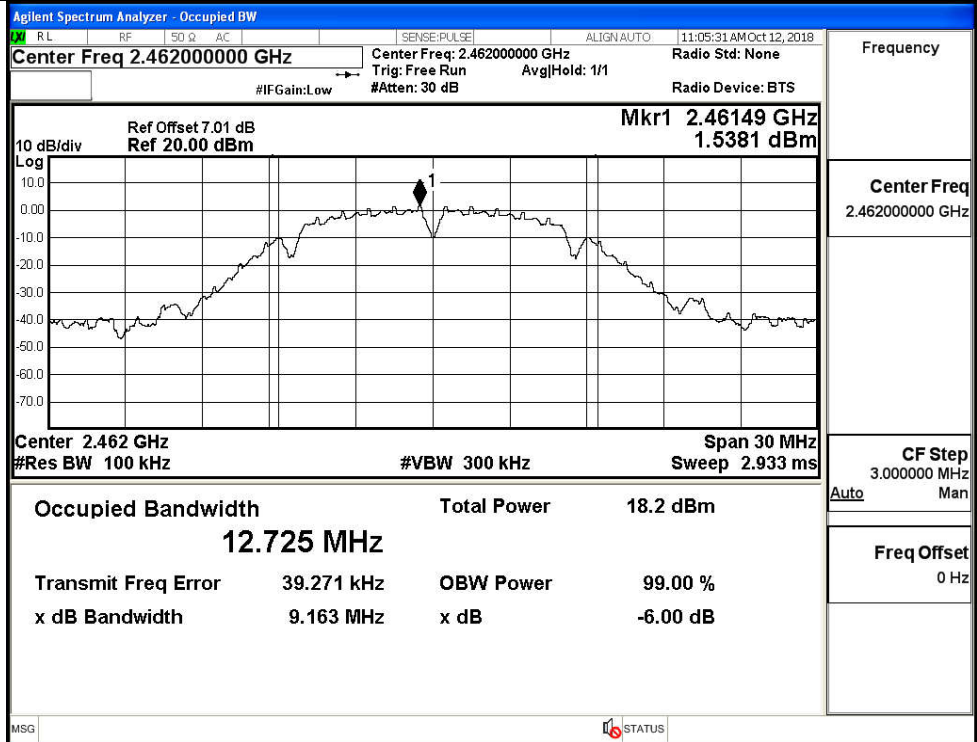
Test Graphs



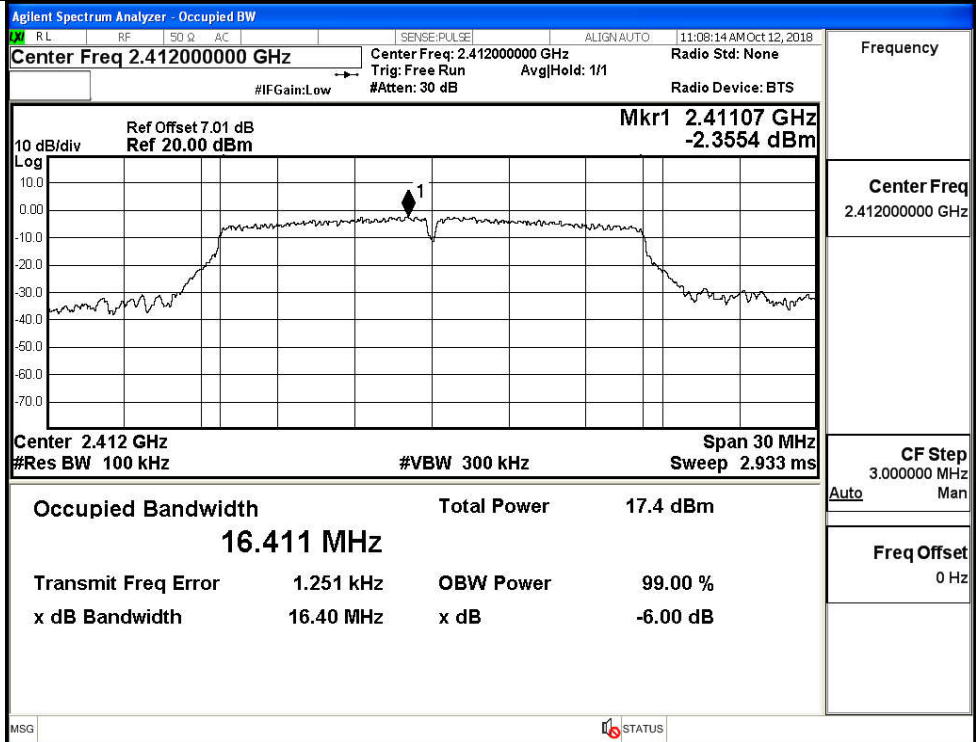
11B/MCH



11B/HCH

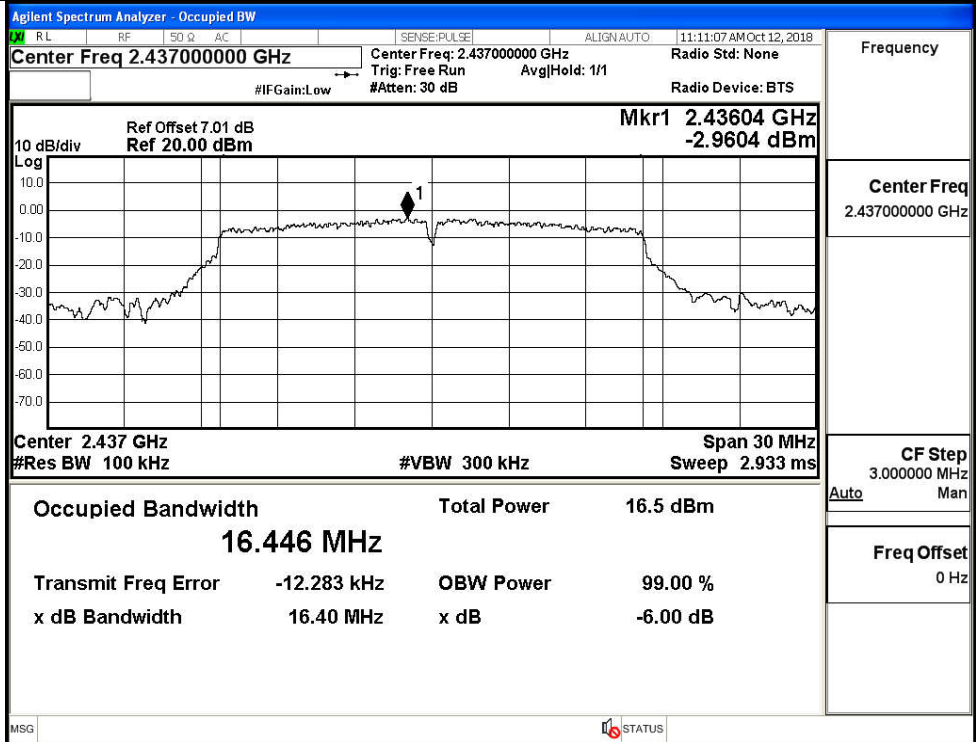


11G/LCH



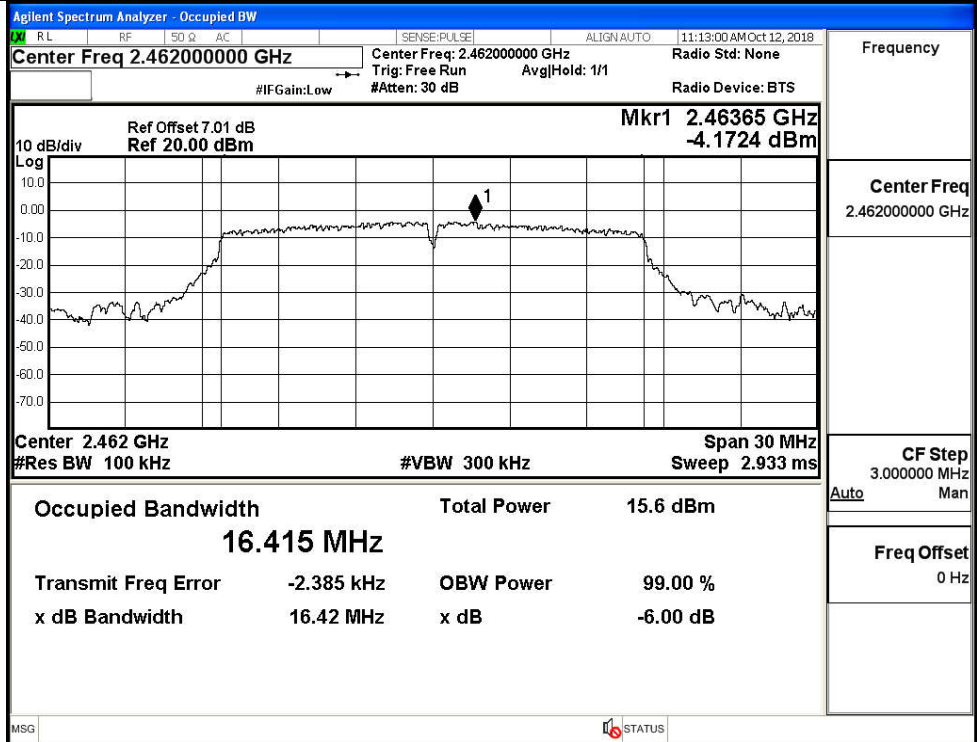
Frequency	2.41200000 GHz
Center Freq	2.41200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11G/MCH



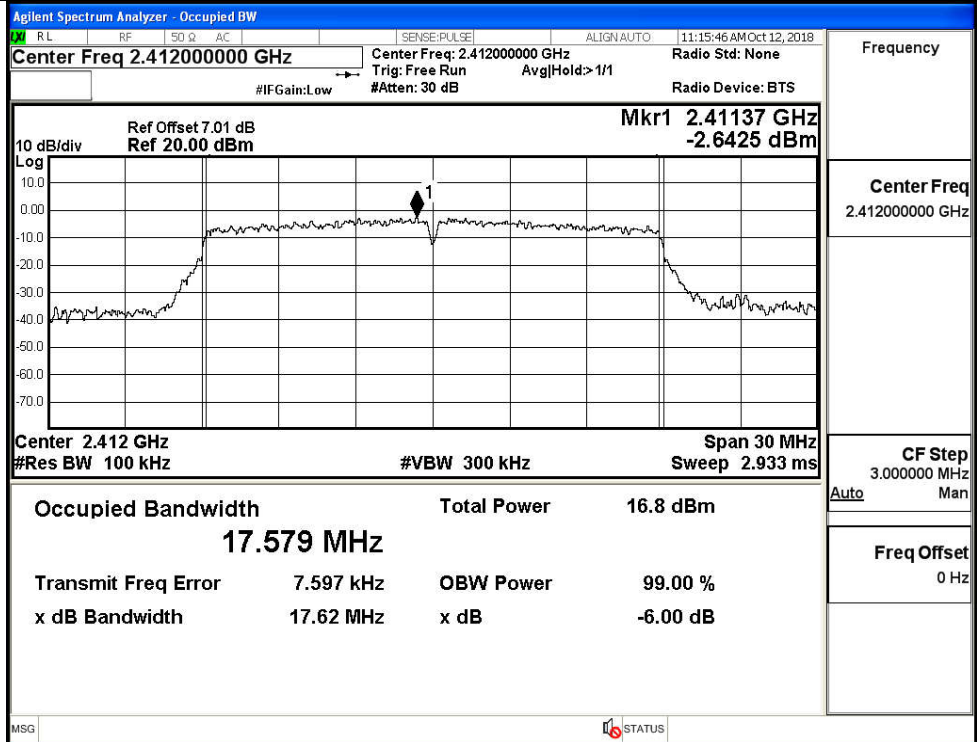
Frequency	2.43700000 GHz
Center Freq	2.43700000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11G/HCH



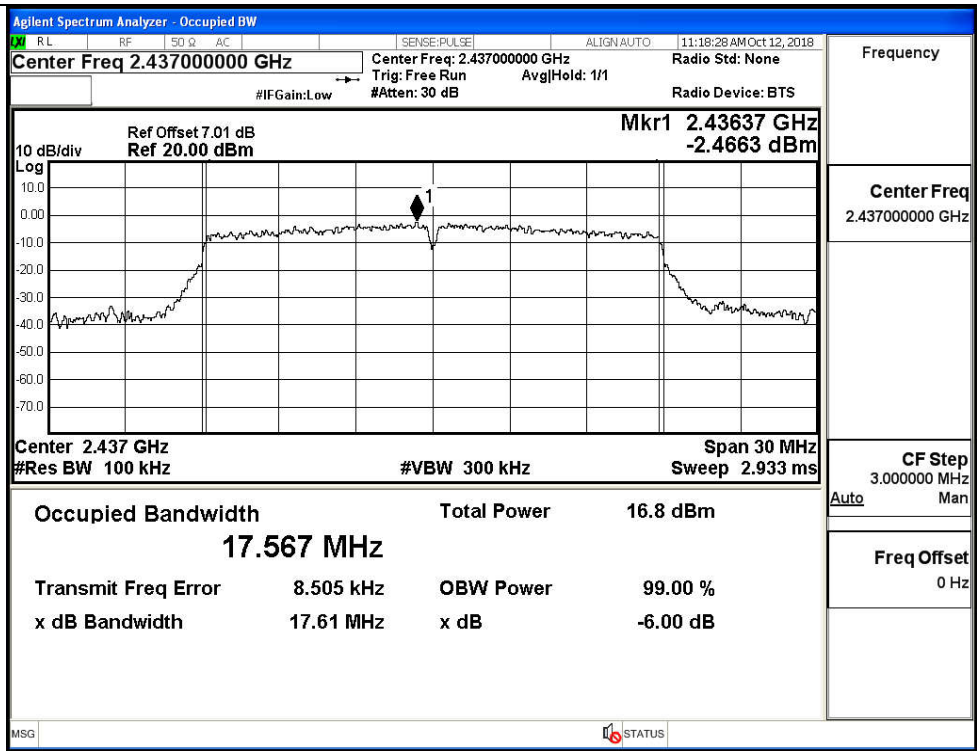
Frequency	2.46200000 GHz
Center Freq	2.46200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

11N20SISO/LCH

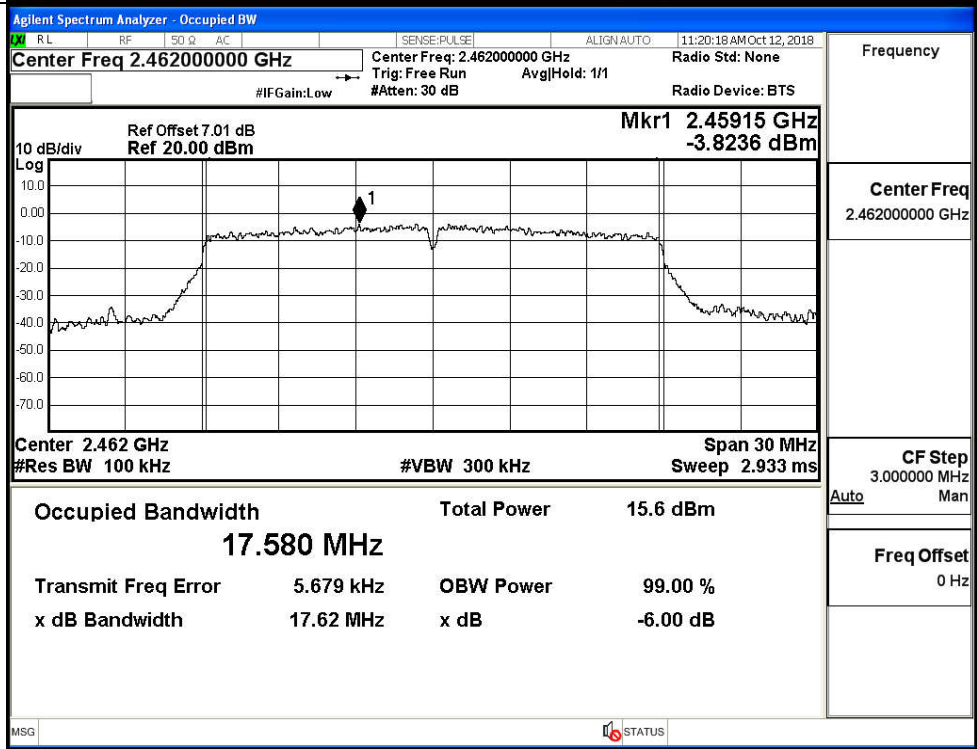


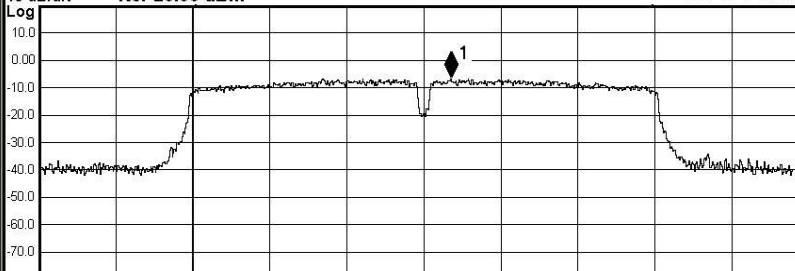
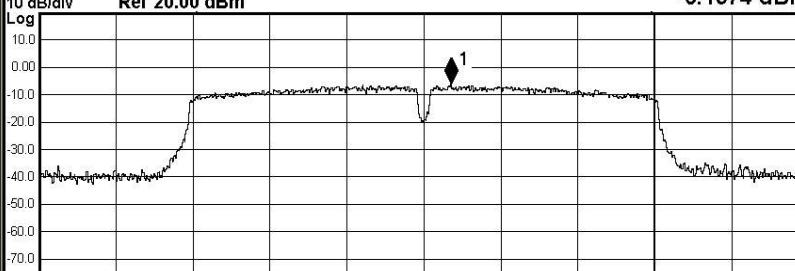
Frequency	2.41200000 GHz
Center Freq	2.41200000 GHz
CF Step	3.000000 MHz
Auto	Man
Freq Offset	0 Hz

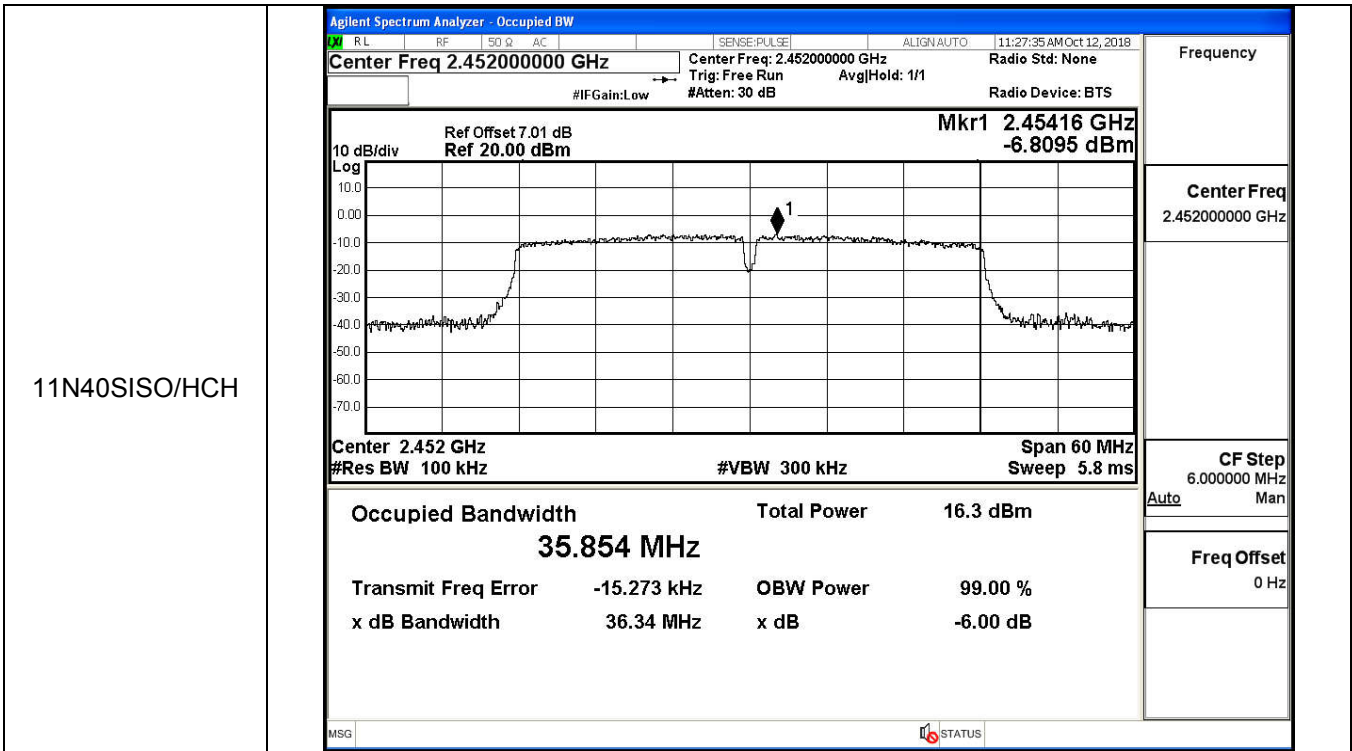
11N20SISO/MCH



11N20SISO/HCH



<p>11N40SISO/LCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.42200000 GHz</p> <p>Center Freq: 2.42200000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB</p> <p>Align: AUTO Radio Std: None AvglHold: 1/1 Radio Device: BTS</p> <p>11:23:03 AM Oct 12, 2018</p> <p>10 dB/div Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr1 2.4241 GHz -6.6496 dBm</p>  <p>Center 2.422 GHz #Res BW 100 kHz #VBW 300 kHz Span 60 MHz Sweep 5.8 ms</p> <p>Occupied Bandwidth 35.880 MHz Total Power 16.5 dBm</p> <p>Transmit Freq Error 19.336 kHz OBW Power 99.00 % x dB Bandwidth 36.36 MHz x dB -6.00 dB</p> <p>MSG STATUS</p>	<p>Frequency</p> <p>Center Freq 2.42200000 GHz</p> <p>CF Step 6.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
	<p>11N40SISO/MCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.43700000 GHz</p> <p>Center Freq: 2.43700000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB</p> <p>Align: AUTO Radio Std: None AvglHold: 1/1 Radio Device: BTS</p> <p>11:25:44 AM Oct 12, 2018</p> <p>10 dB/div Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr1 2.43916 GHz -6.1974 dBm</p>  <p>Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 60 MHz Sweep 5.8 ms</p> <p>Occupied Bandwidth 35.842 MHz Total Power 16.6 dBm</p> <p>Transmit Freq Error 6.123 kHz OBW Power 99.00 % x dB Bandwidth 36.27 MHz x dB -6.00 dB</p> <p>MSG STATUS</p>

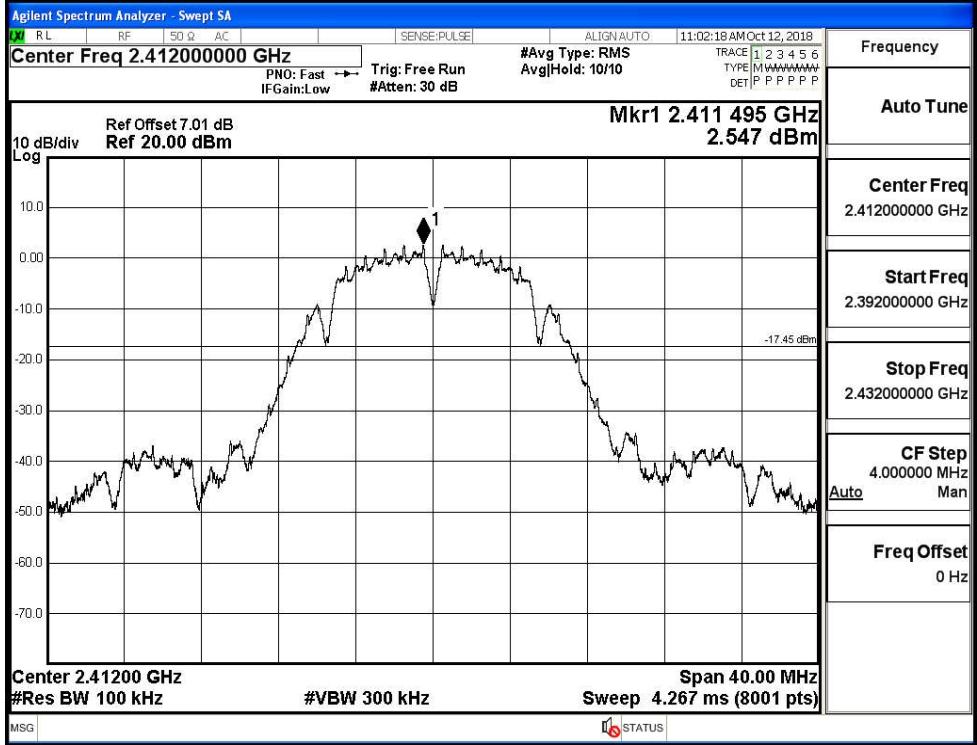


C.5 RF Conducted Spurious Emissions

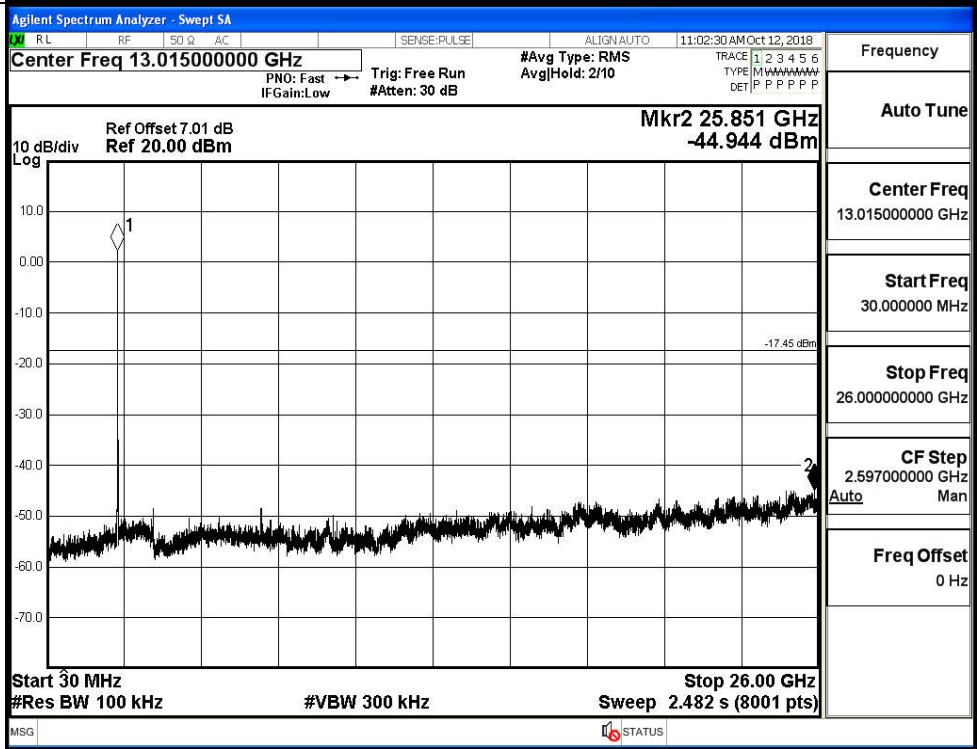
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	2.547	-44.944	-17.453	PASS
	MCH	2.438	-44.358	-17.562	PASS
	HCH	1.431	-45.145	-18.569	PASS
11G	LCH	-2.451	-44.543	-22.451	PASS
	MCH	-3.048	-42.782	-23.048	PASS
	HCH	-4.232	-44.713	-24.232	PASS
11N20 SISO	LCH	-2.693	-45.058	-22.693	PASS
	MCH	-2.567	-44.841	-22.567	PASS
	HCH	-3.997	-44.191	-23.997	PASS
11N40 SISO	LCH	-6.539	-44.518	-26.539	PASS
	MCH	-6.7	-43.212	-26.700	PASS
	HCH	-6.978	-44.068	-26.978	PASS

11B LCH Graphs

Pref/11B/LCH



Puw/11B/LCH

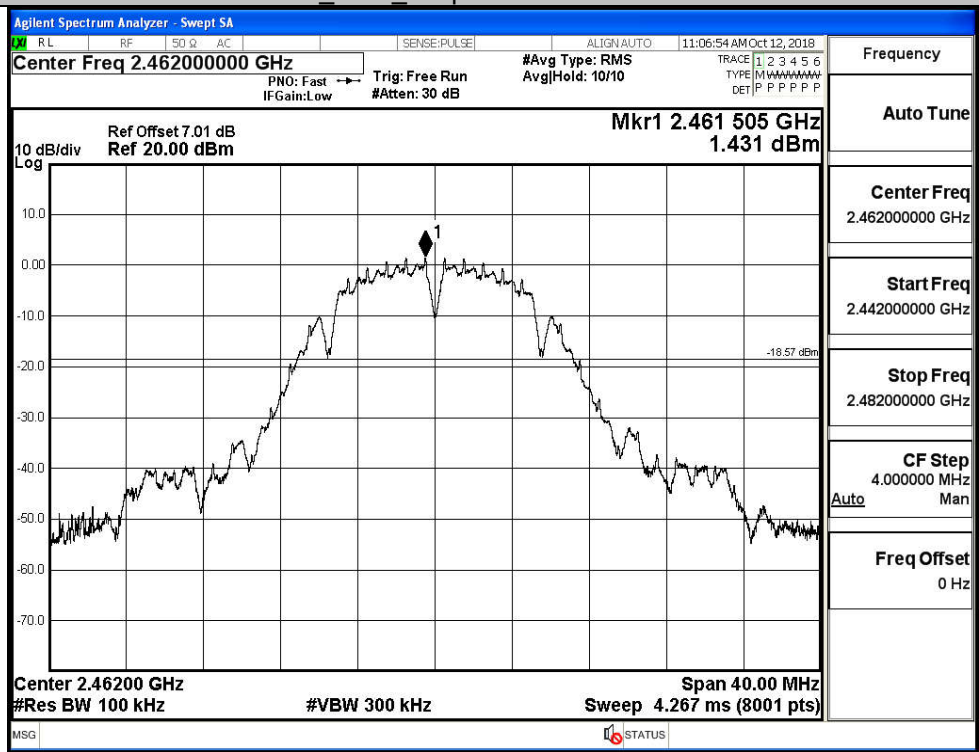


11B_MCH_Graphs

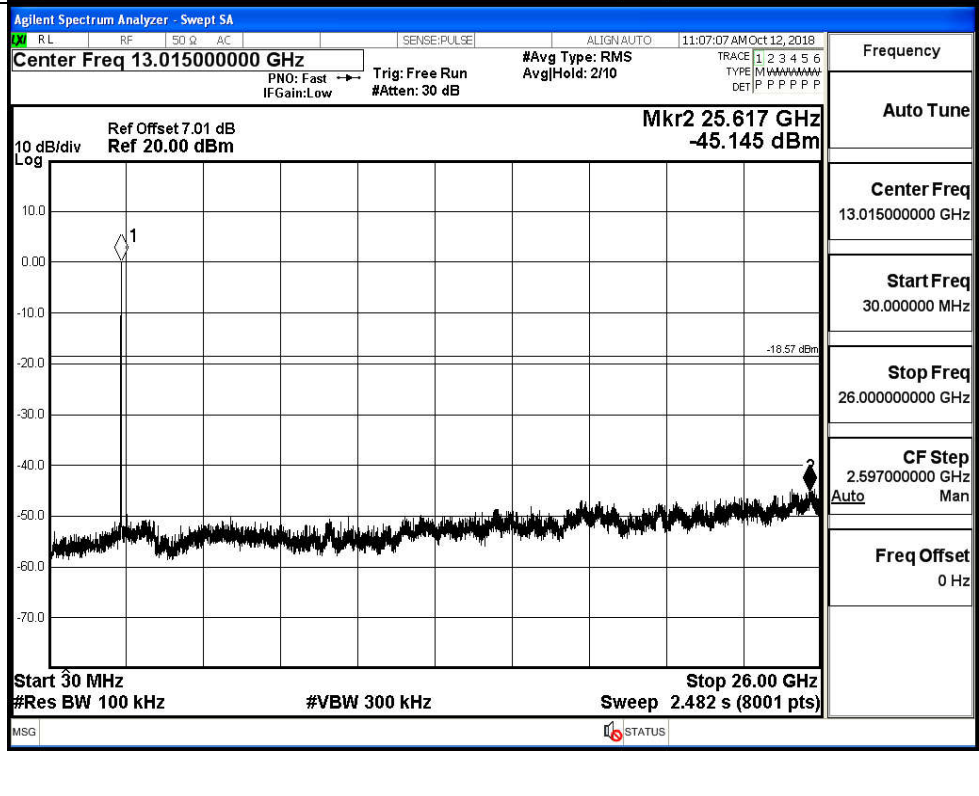
<p>Pref/11B/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.43700000 GHz Ref Offset 7.01 dB Ref 20.00 dBm Mkr1 2.436 495 GHz 2.438 dBm #Res BW 100 kHz #VBW 300 kHz Sweep 4.267 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.437000000 GHz</p> <p>Start Freq 2.417000000 GHz</p> <p>Stop Freq 2.457000000 GHz</p> <p>CF Step 4.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
	<p>Puw/11B/MCH</p>	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 13.01500000 GHz Ref Offset 7.01 dB Ref 20.00 dBm Mkr2 25.646 GHz -44.358 dBm Start 30 MHz Stop 26.00 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.482 s (8001 pts)</p>

11B HCH Graphs

Pref/11B/HCH

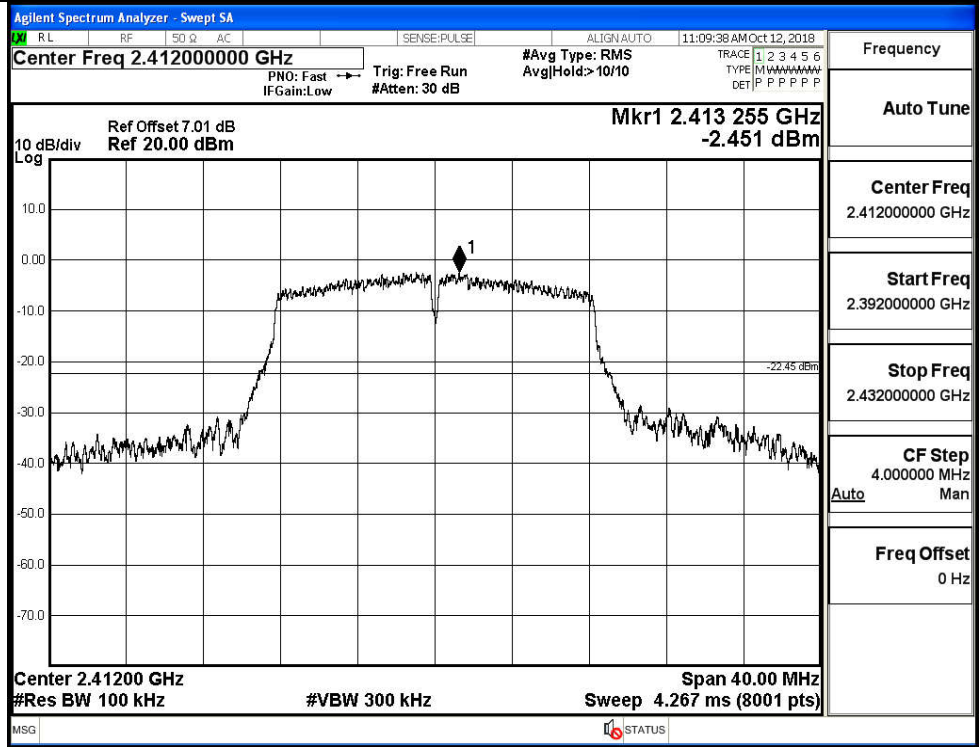


Puw/11B/HCH

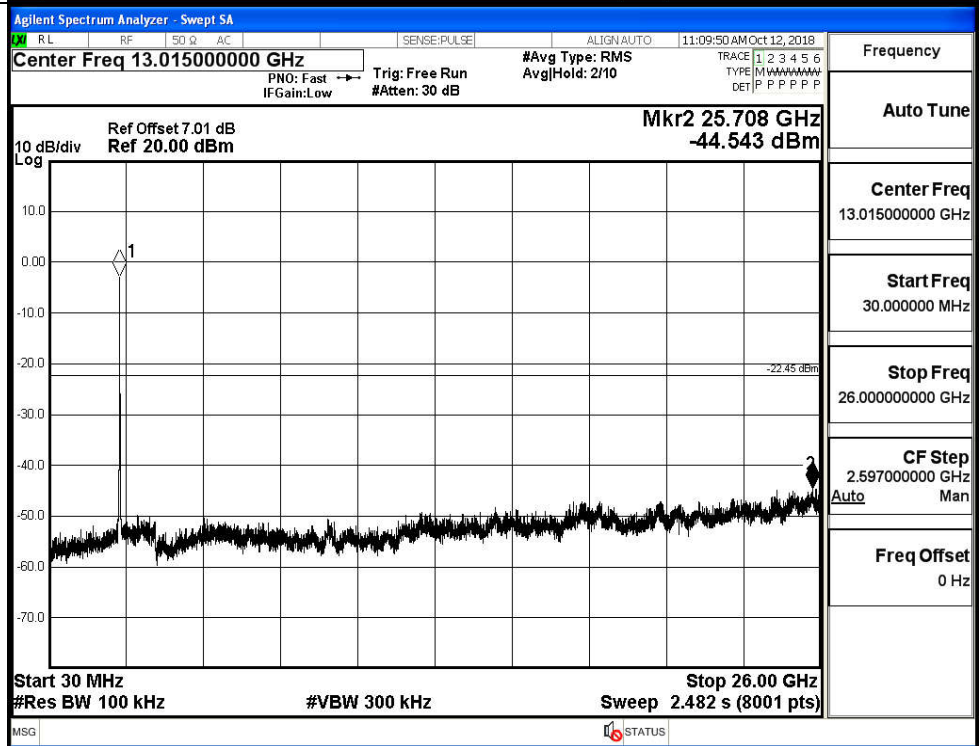


11G_LCH_Graphs

Pref/11G/LCH

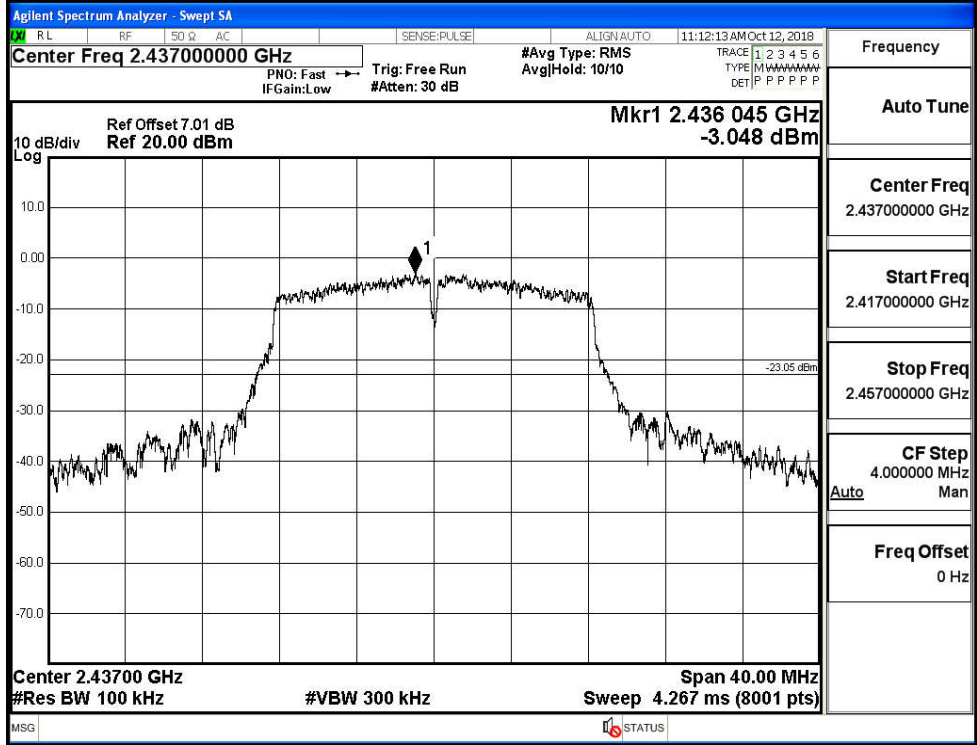


Puw/11G/LCH



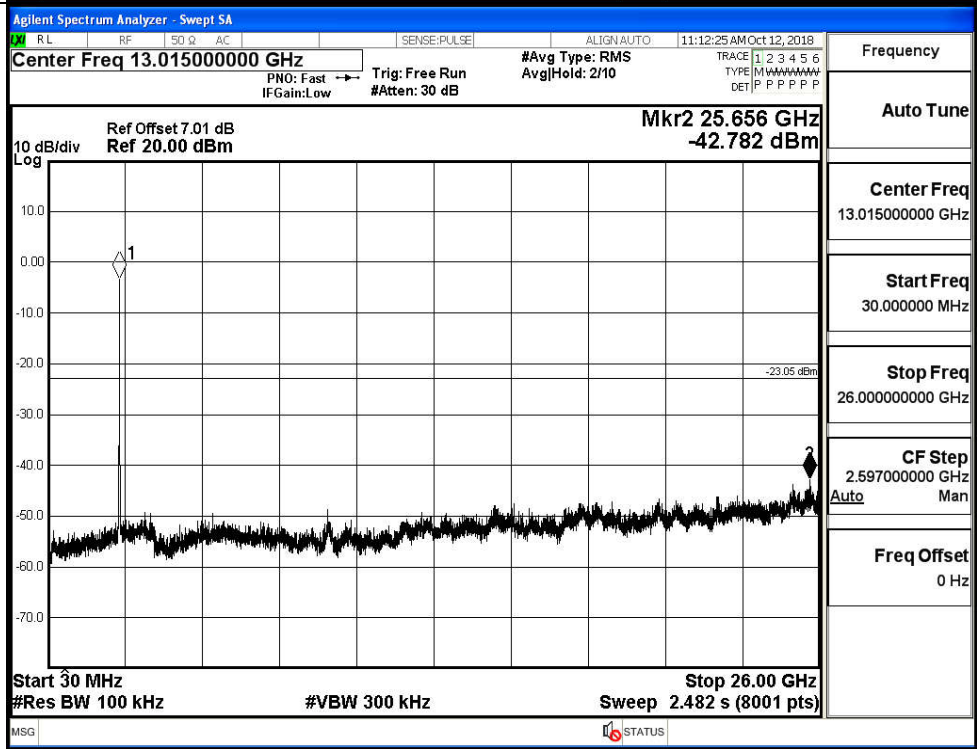
11G MCH Graphs

Pref/11G/MCH



Frequency
Auto Tune
Center Freq 2.437000000 GHz
Start Freq 2.417000000 GHz
Stop Freq 2.457000000 GHz
CF Step 4.000000 MHz Auto Man
Freq Offset 0 Hz

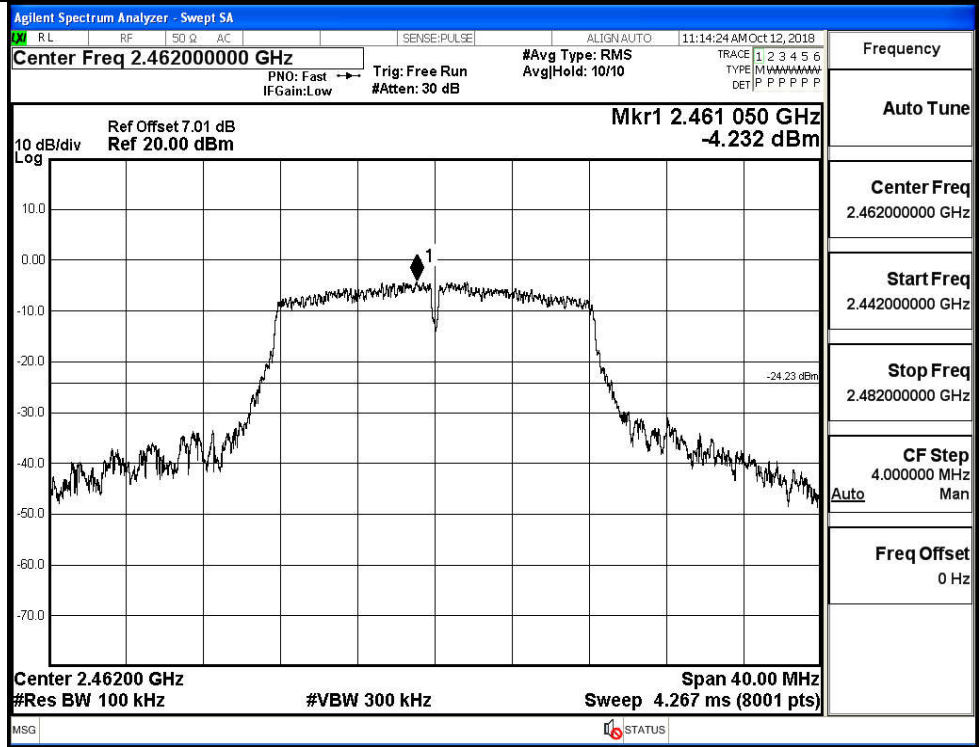
Puw/11G/MCH



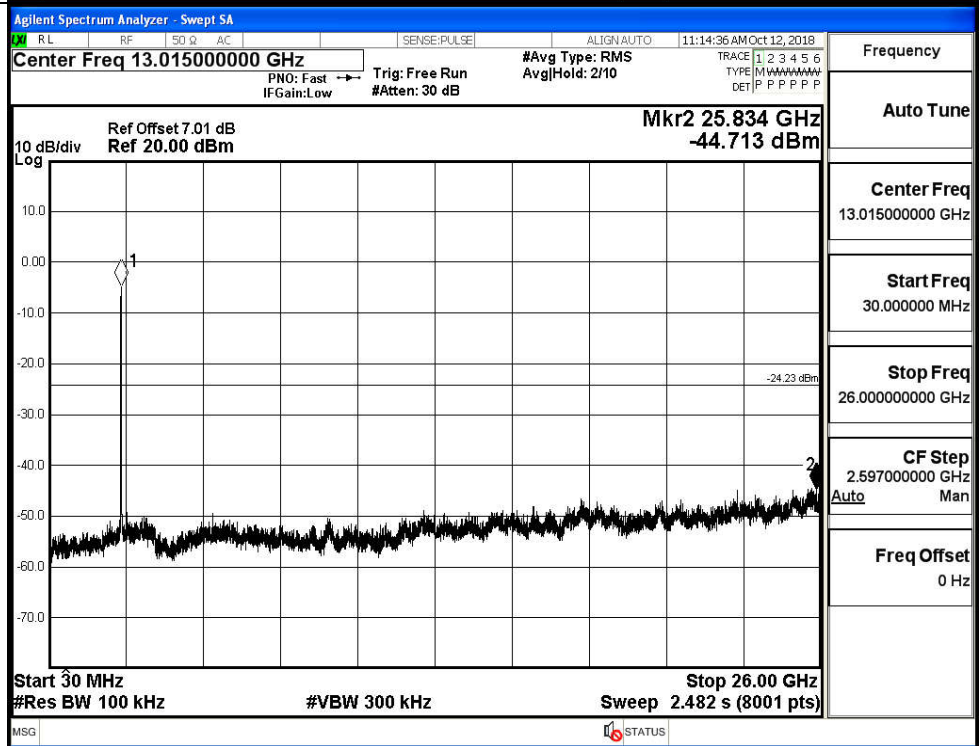
Frequency
Auto Tune
Center Freq 13.015000000 GHz
Start Freq 30.000000 MHz
Stop Freq 26.000000000 GHz
CF Step 2.597000000 GHz Auto Man
Freq Offset 0 Hz

11G HCH Graphs

Pref/11G/HCH

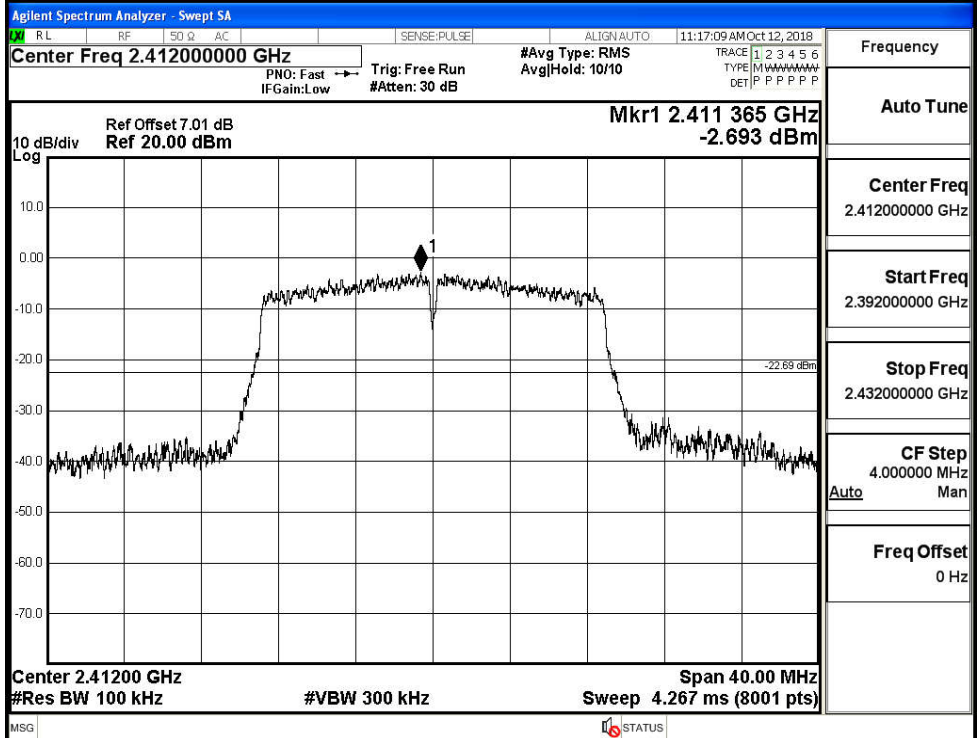


Puw/11G/HCH

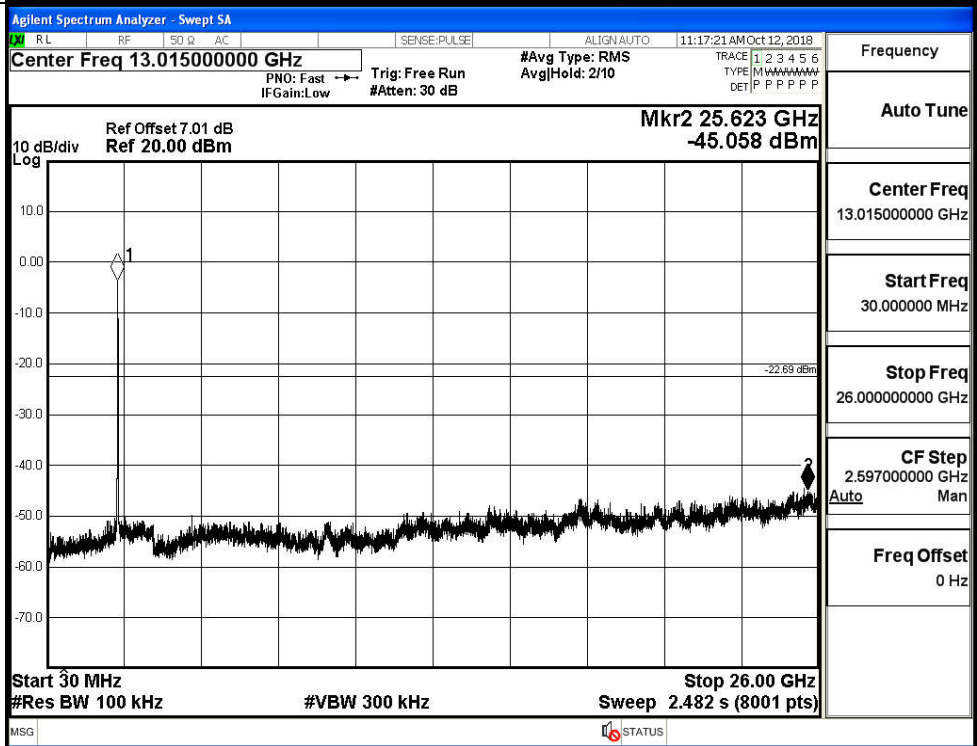


11N20SISO LCH_Graphs

Pref/11N20SIS
O/LCH

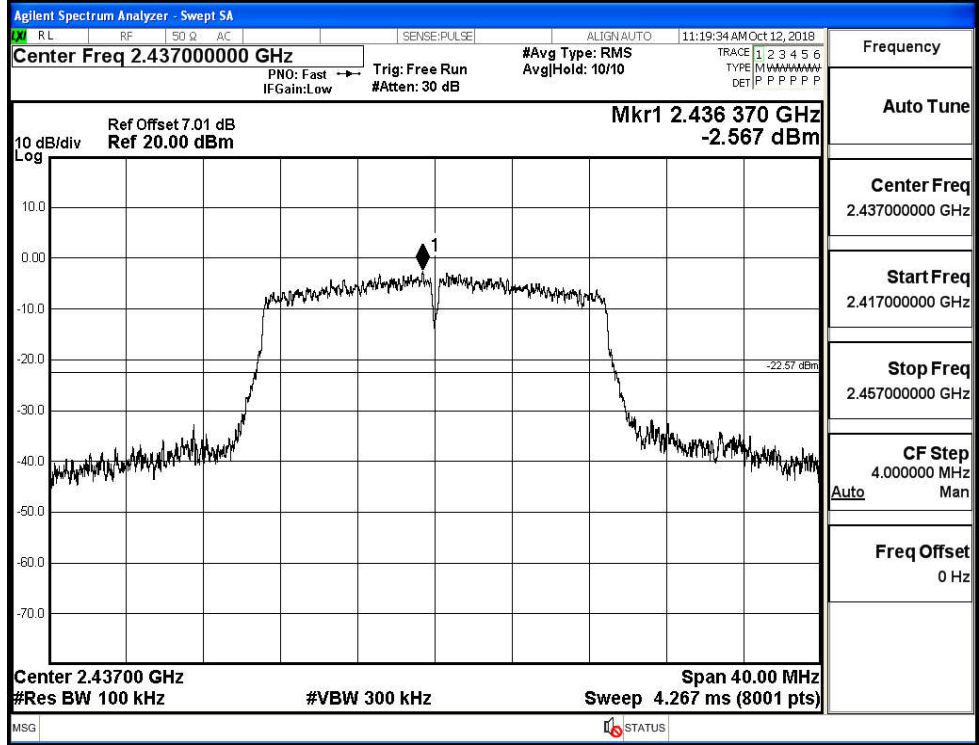


Puw/11N20
SISO/LCH



11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCH



Puw/11N20
SISO/MCH

