Appendix A
RF Test Data for BT(BDR/EDR) (Conducted Measurement)

Product Name: 4G Mobile phone

Trade Mark: NYX Mobile

Test Model: Nickel

FCC ID: YPVITALCOMNICKEL

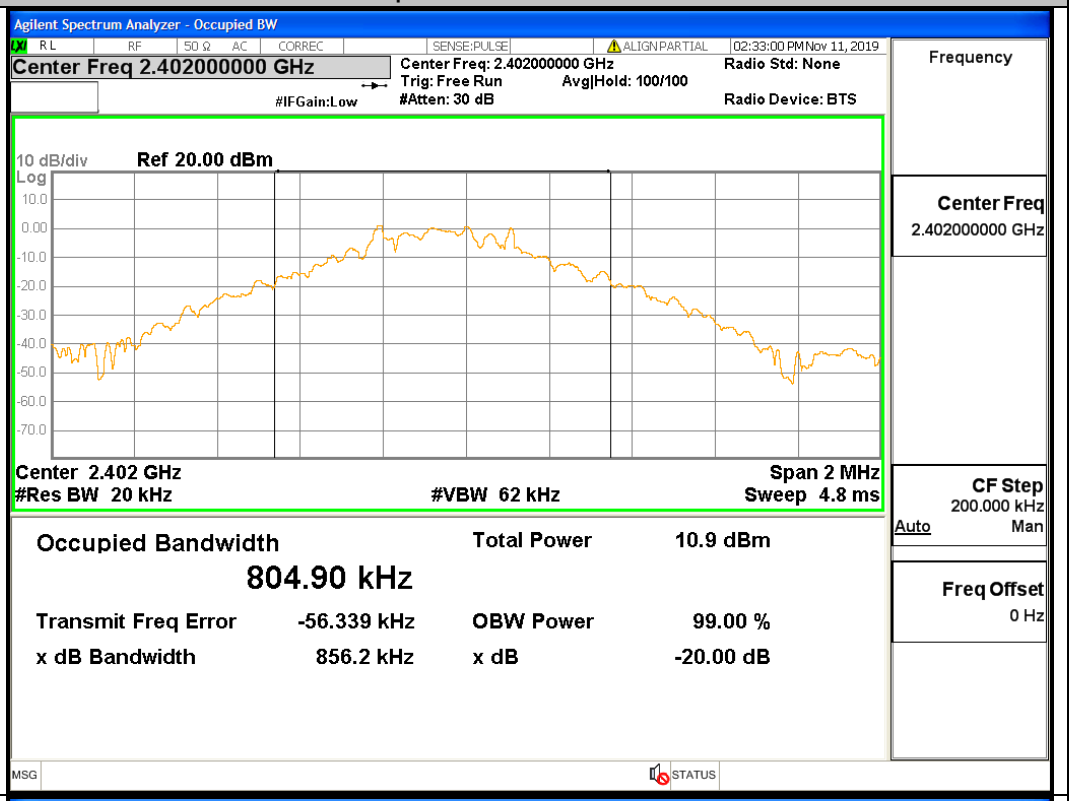
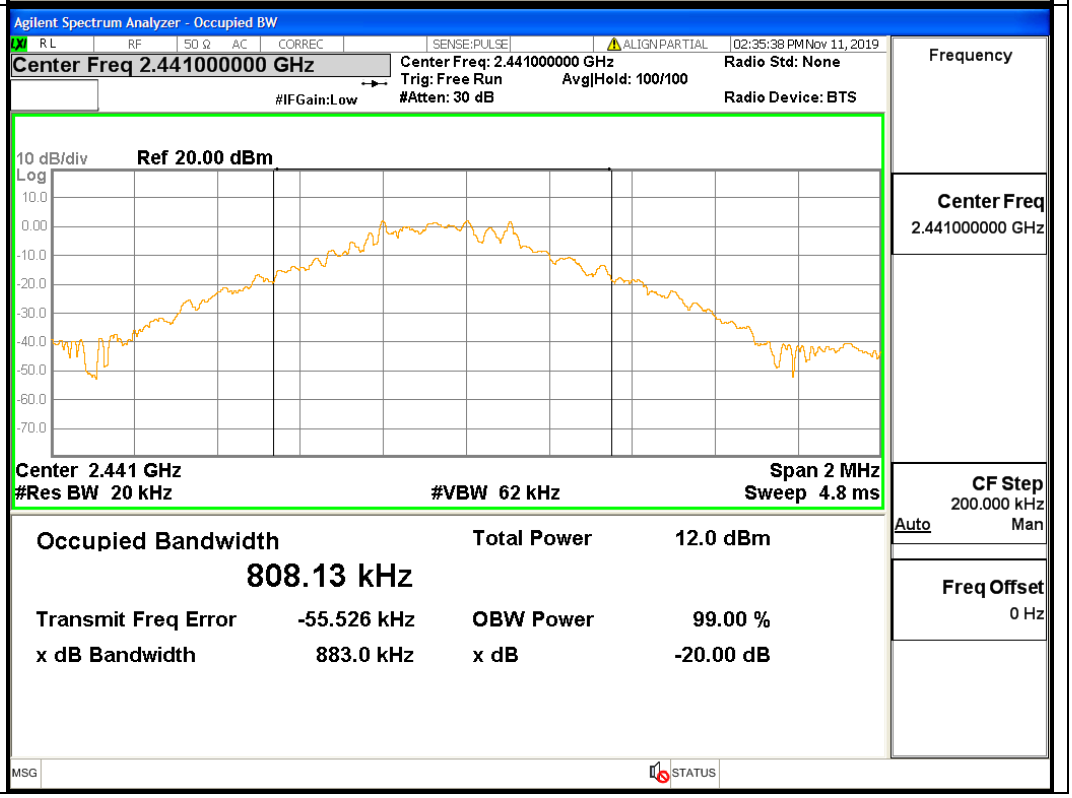
Environmental Conditions

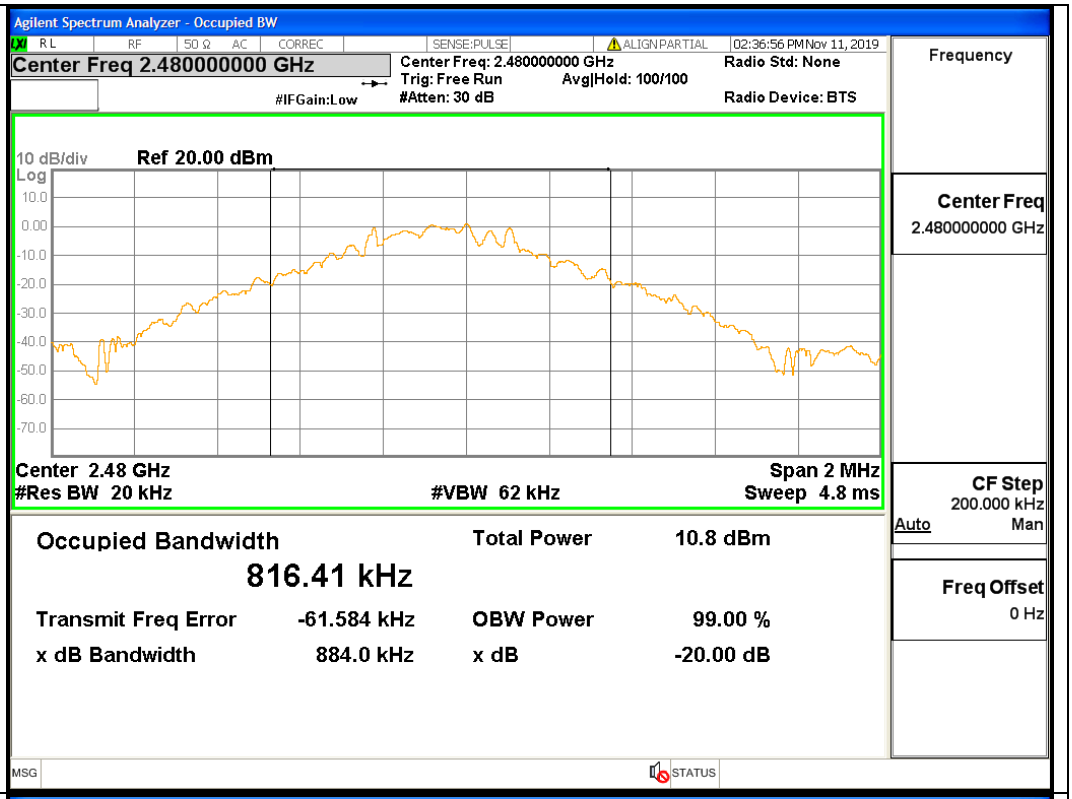
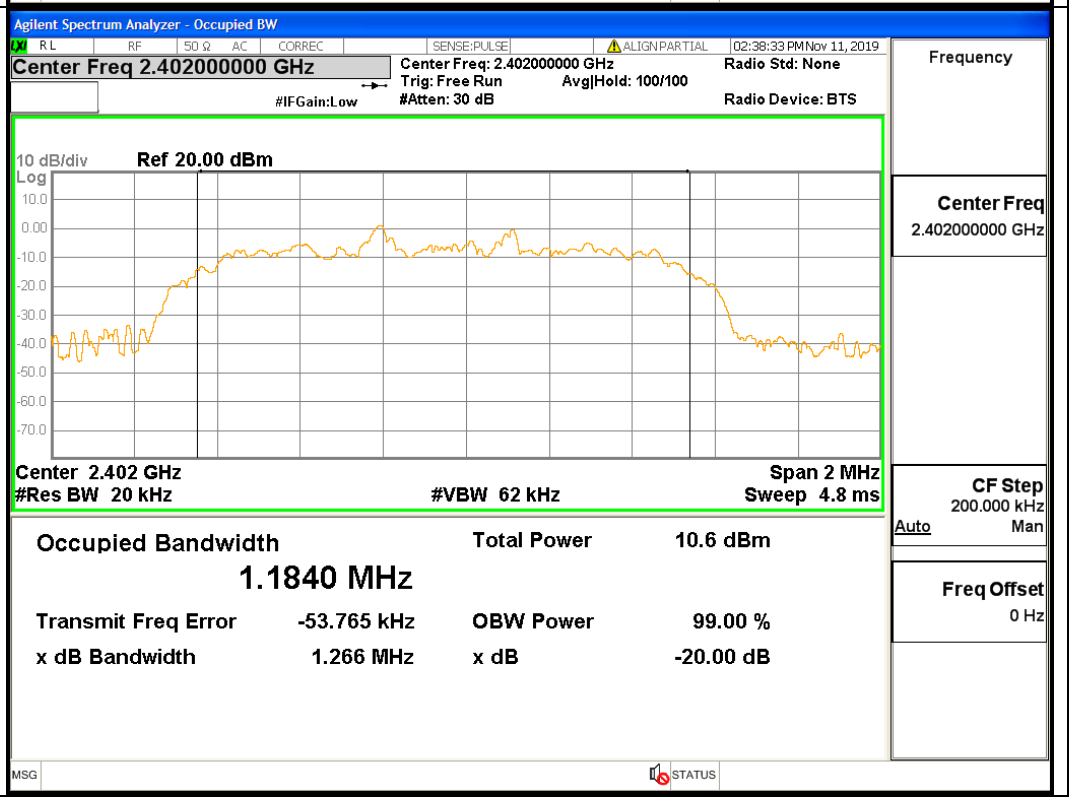
Temperature:	22.5° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Gary Qian
Supervised by:	Eden Hu

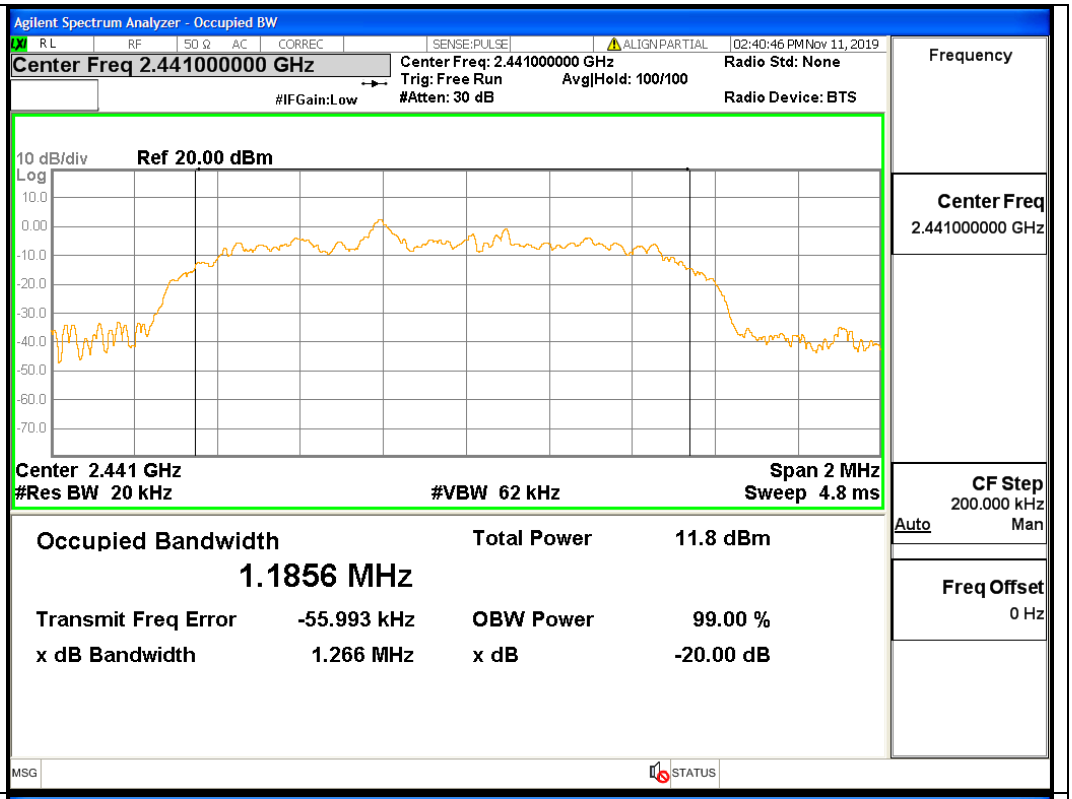
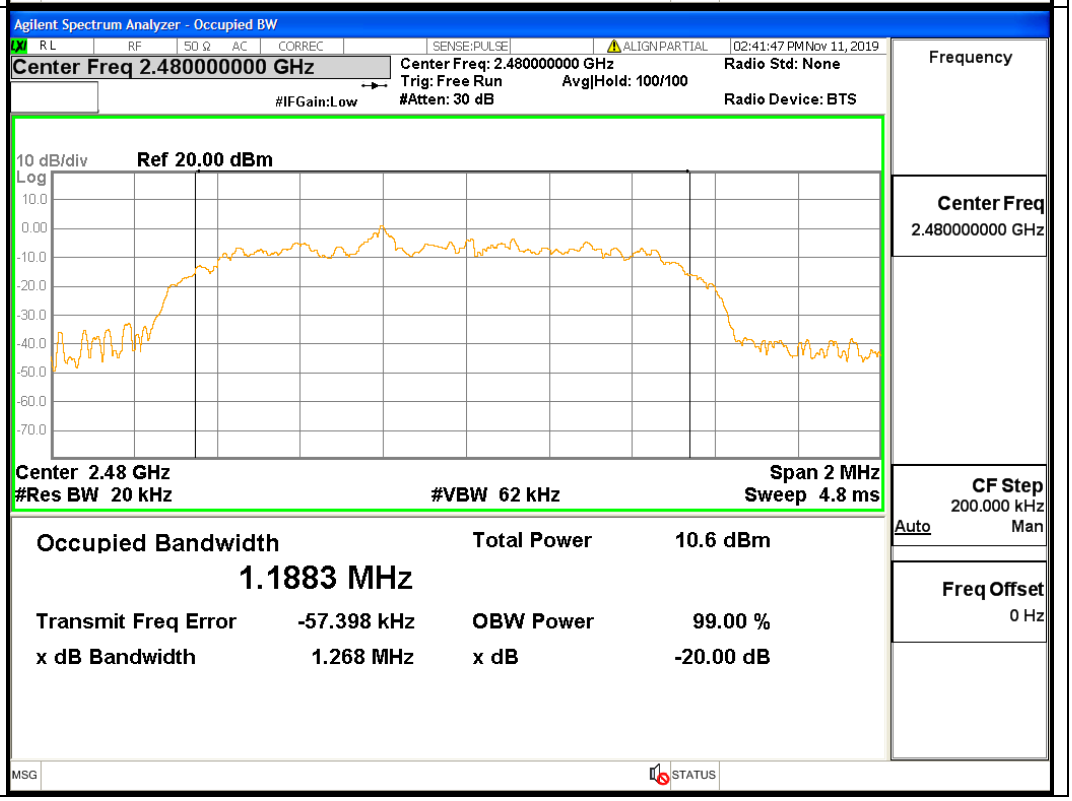
A.1 20 dB Bandwidth

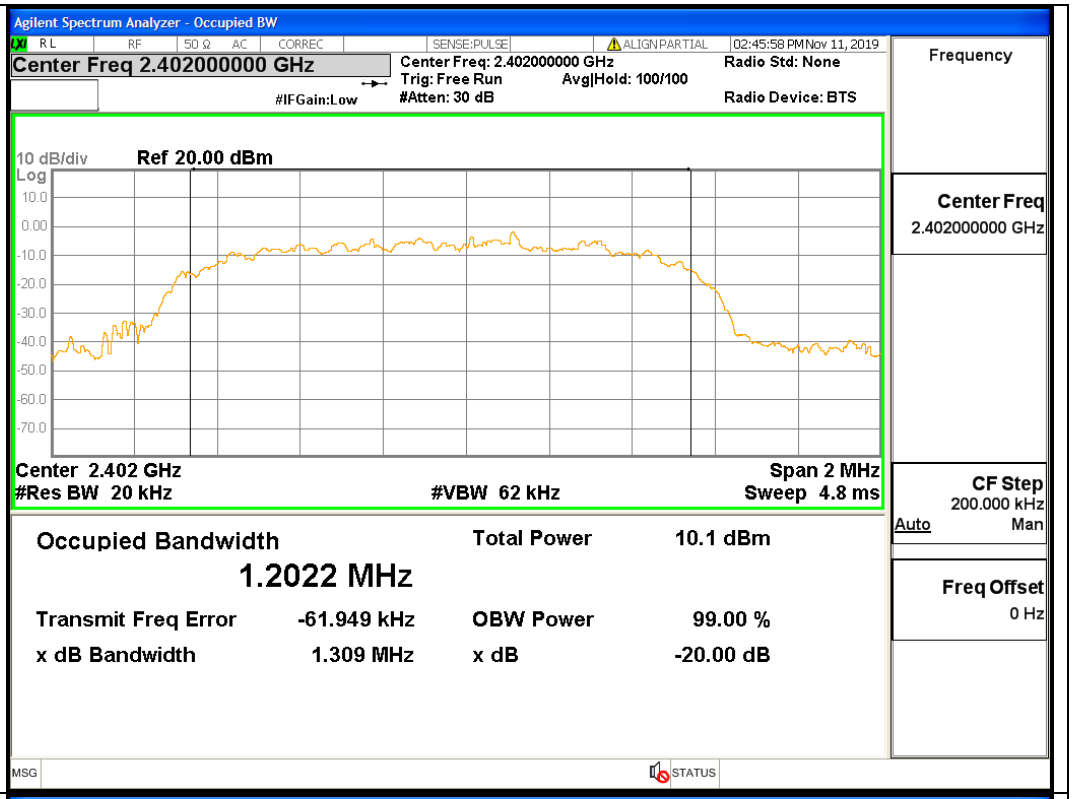
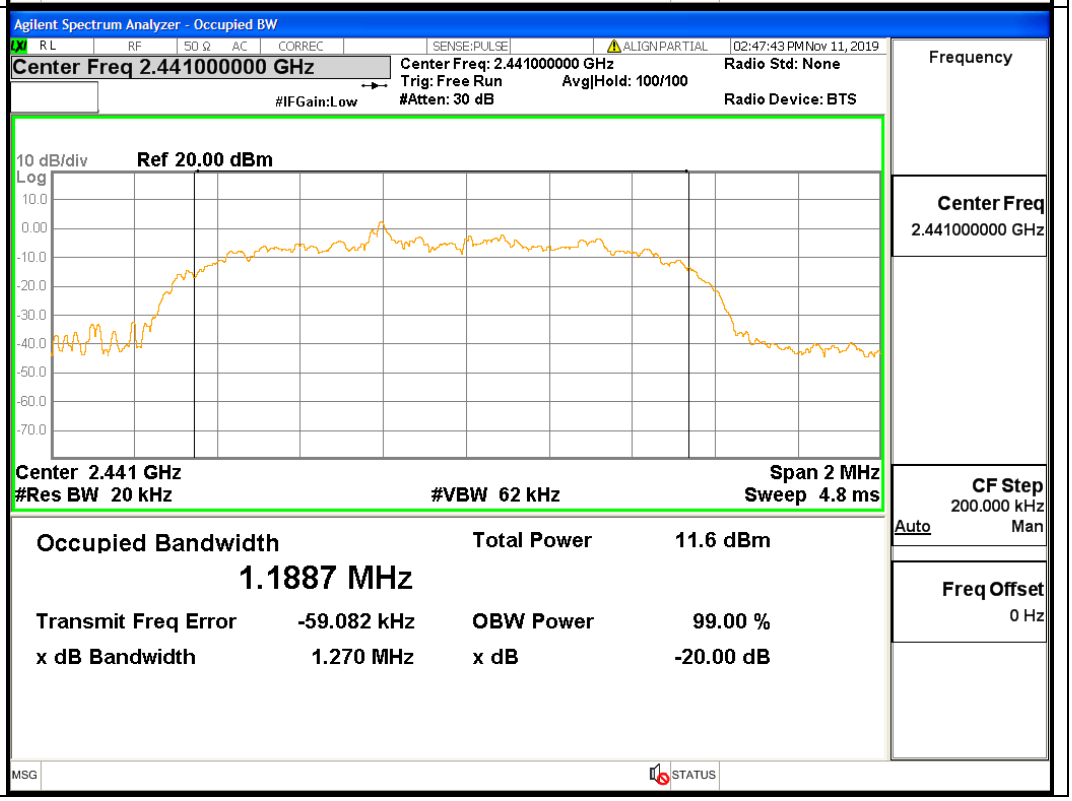
Mode	Channel.	20dB Bandwidth [MHz]	Limit(MHz)	Verdict
GFSK	LCH	0.856	Not Specified	PASS
GFSK	MCH	0.883	Not Specified	PASS
GFSK	HCH	0.884	Not Specified	PASS
π/4DQPSK	LCH	1.266	Not Specified	PASS
π/4DQPSK	MCH	1.266	Not Specified	PASS
π/4DQPSK	HCH	1.268	Not Specified	PASS
8DPSK	LCH	1.309	Not Specified	PASS
8DPSK	MCH	1.270	Not Specified	PASS
8DPSK	HCH	1.264	Not Specified	PASS

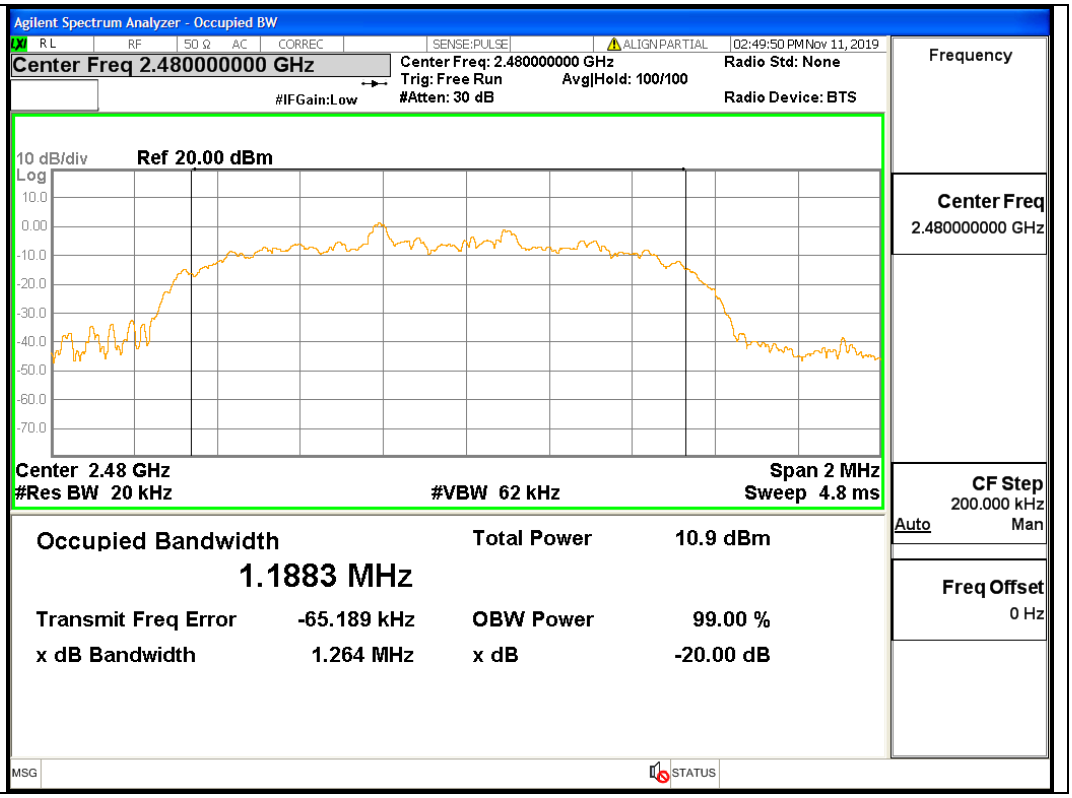
Test Graph

Graphs	
GFSK/LCH	
GFSK/MCH	

GFSK/HCH	
π/4DQPSK/LCH	

π/4DQPSK/MCH	
π/4DQPSK/HCH	

8DPSK/LCH	
8DPSK/MCH	

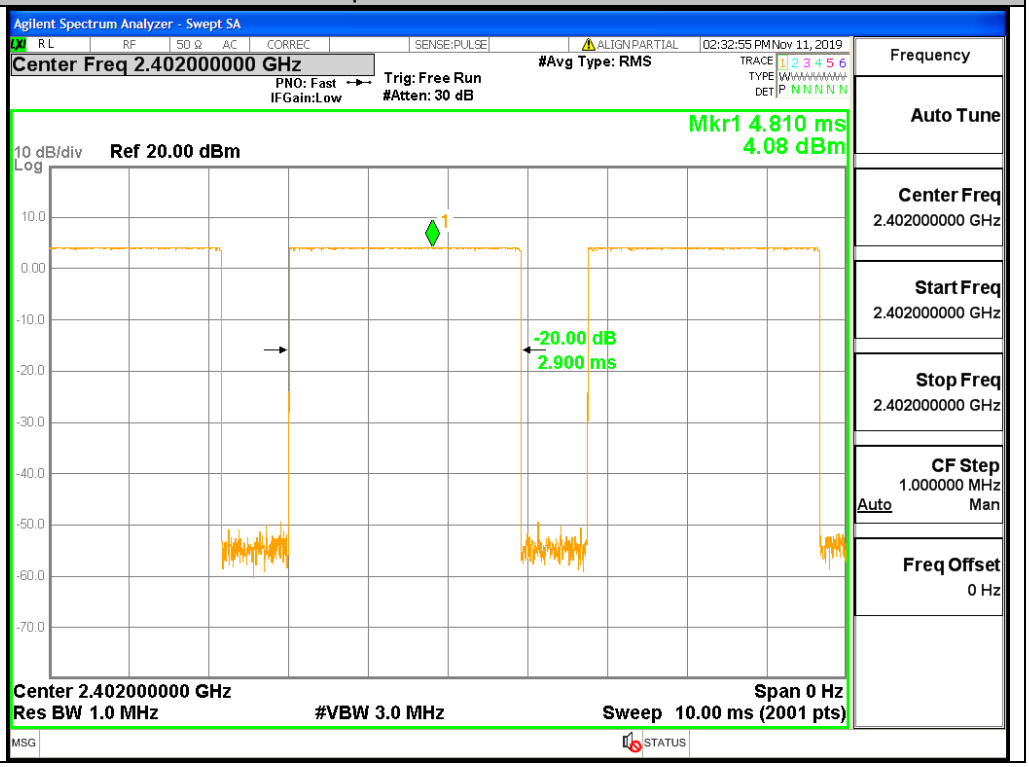
8DPSK/HCH	

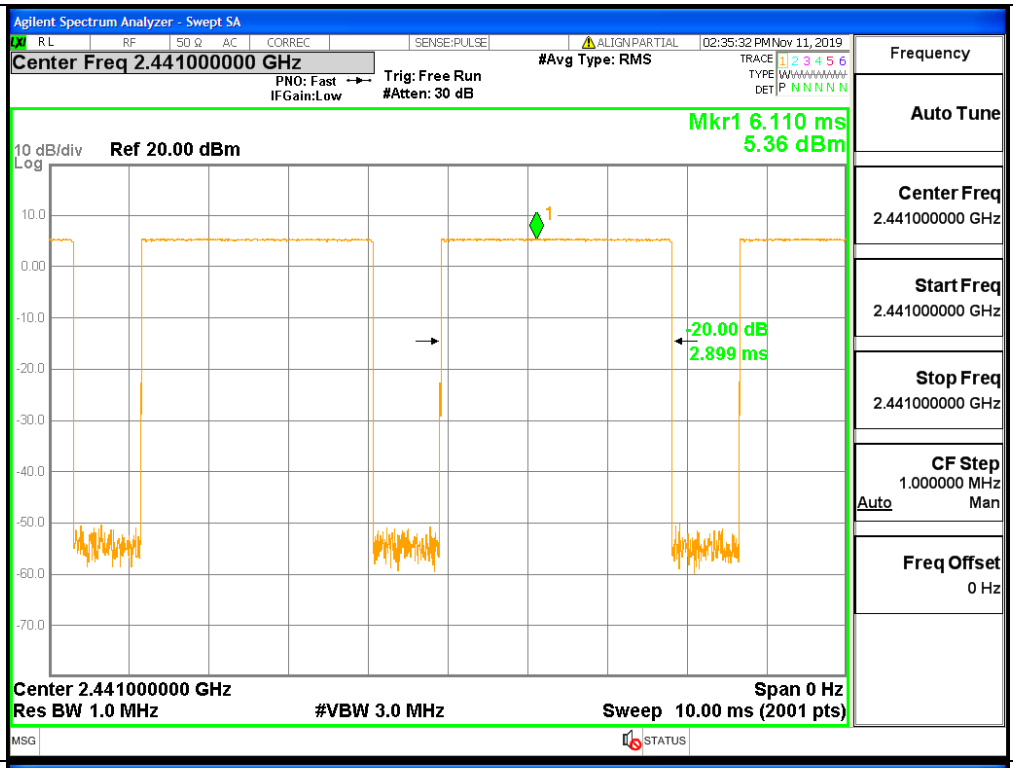
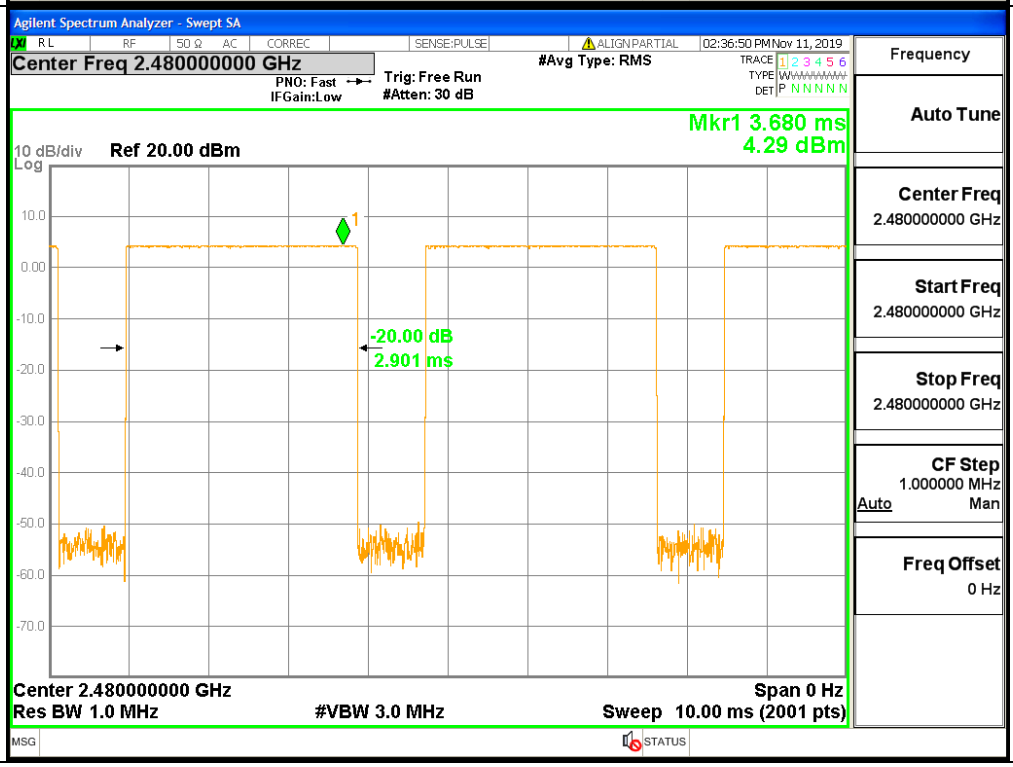
Agilent Spectrum Analyzer - Occupied BW
RL
RF
50 Ω AC
CORREC
SENSE:PULSE
ALIGN PARTIAL
02:49:50 PM Nov 11, 2019
Center Freq 2.480000000 GHz
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold: 100/100
#IFGain:Low
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center Freq
2.480000000 GHz
Center 2.48 GHz
#Res BW 20 kHz
#VBW 62 kHz
Span 2 MHz
Sweep 4.8 ms
CF Step
200.000 kHz
Auto
Man
Occupied Bandwidth
1.1883 MHz
Total Power
10.9 dBm
Transmit Freq Error
-65.189 kHz
OBW Power
99.00 %
x dB Bandwidth
1.264 MHz
x dB
-20.00 dB
Freq Offset
0 Hz
MSG
STATUS

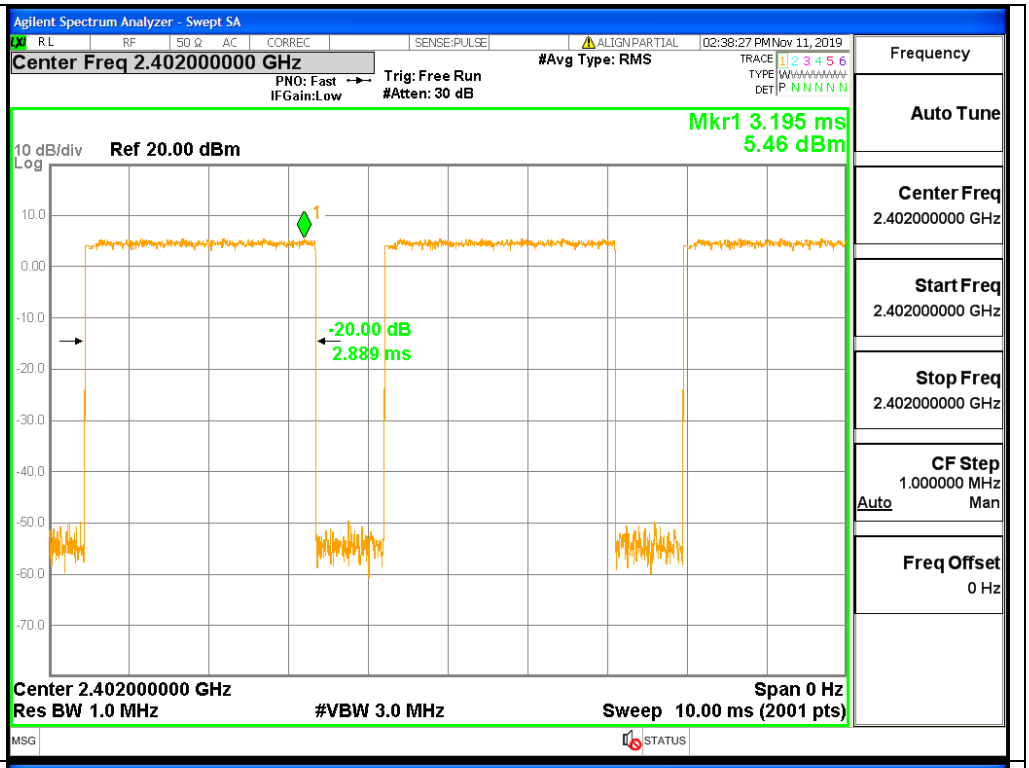
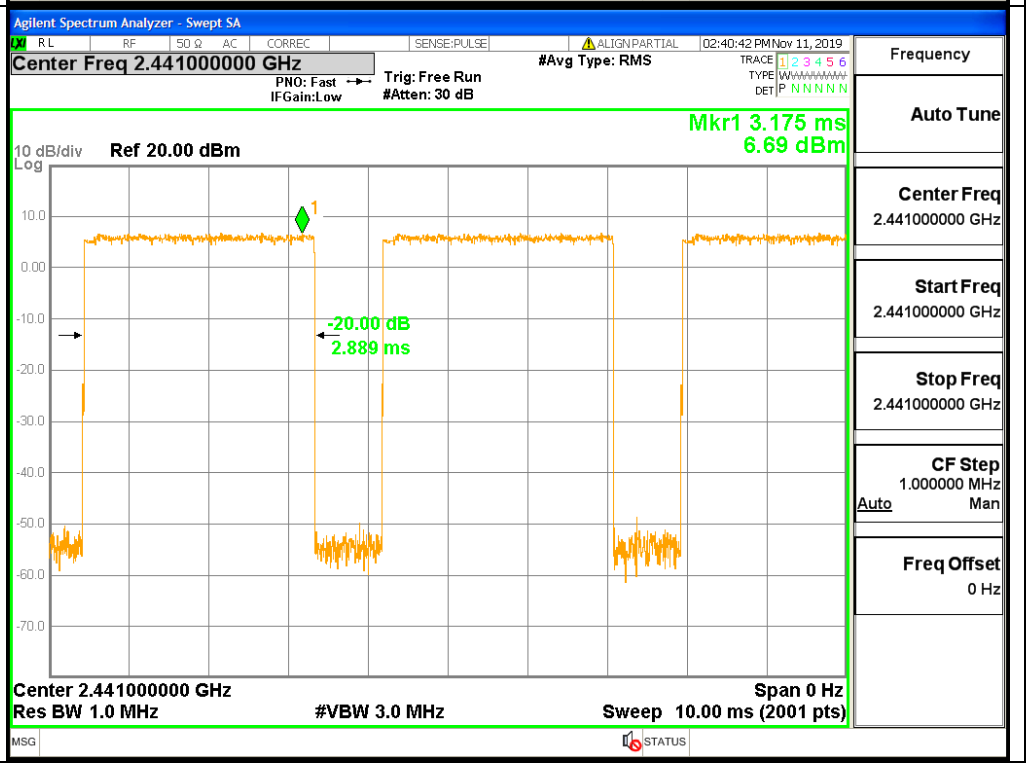
A.2 Dwell Time

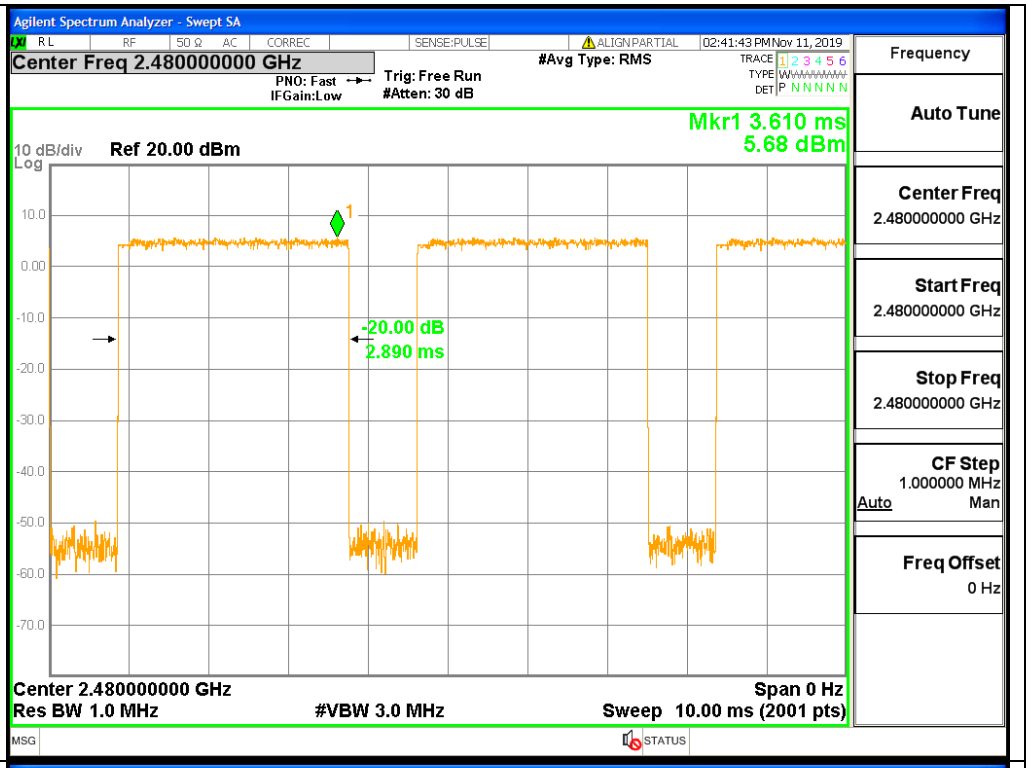
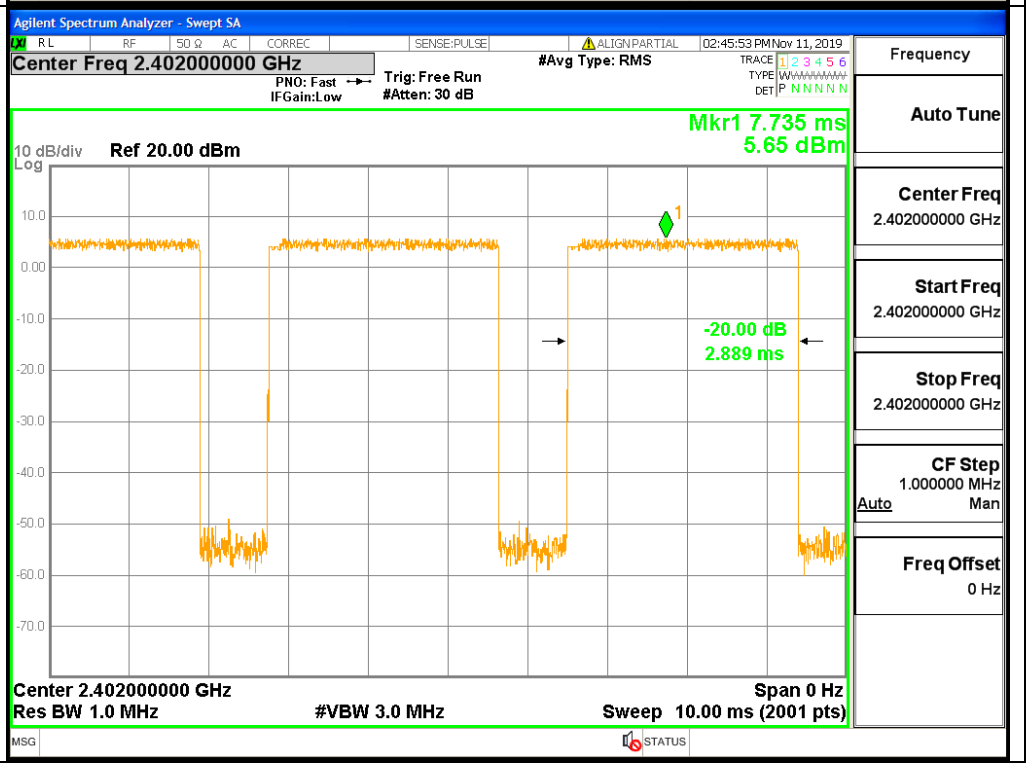
Mode	Packet	Channel	Burst Width [s/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	0.002900	106.7	0.3094	0.4	PASS
GFSK	DH5	MCH	0.002899	106.7	0.3094	0.4	PASS
GFSK	DH5	HCH	0.002901	106.7	0.3095	0.4	PASS
π/4DQPSK	2DH5	LCH	0.002889	106.7	0.3083	0.4	PASS
π/4DQPSK	2DH5	MCH	0.002889	106.7	0.3083	0.4	PASS
π/4DQPSK	2DH5	HCH	0.002890	106.7	0.3084	0.4	PASS
8DPSK	3DH5	LCH	0.002889	106.7	0.3083	0.4	PASS
8DPSK	3DH5	MCH	0.002890	106.7	0.3083	0.4	PASS
8DPSK	3DH5	HCH	0.002890	106.7	0.3083	0.4	PASS

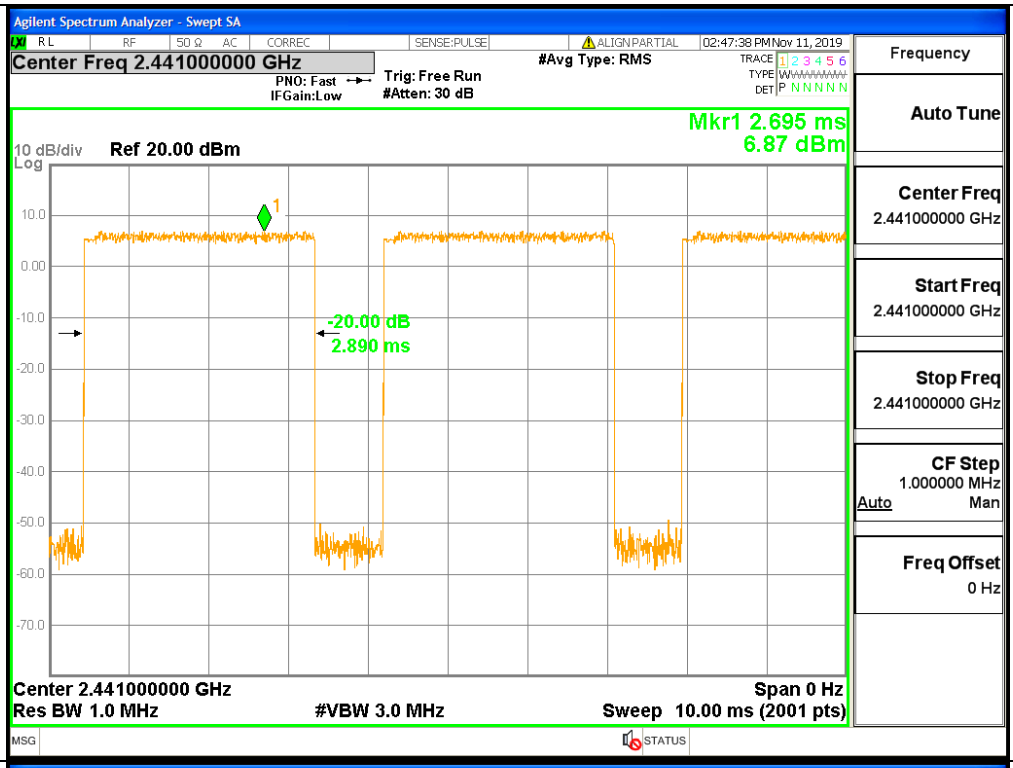
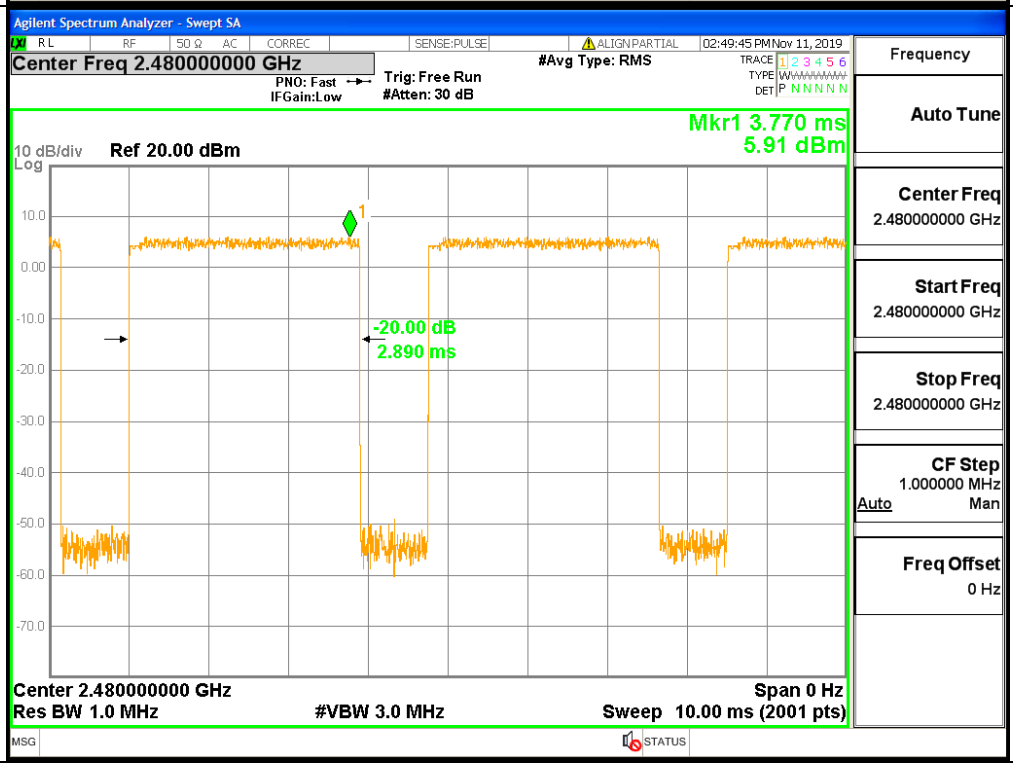
Test Graph

Graphs	
GFSK_DH5/LCH	

GFSK_DH5/MCH	
GFSK_DH5/HCH	

π/4DQPSK _2DH5/LCH	
π/4DQPSK _2DH5/MCH	

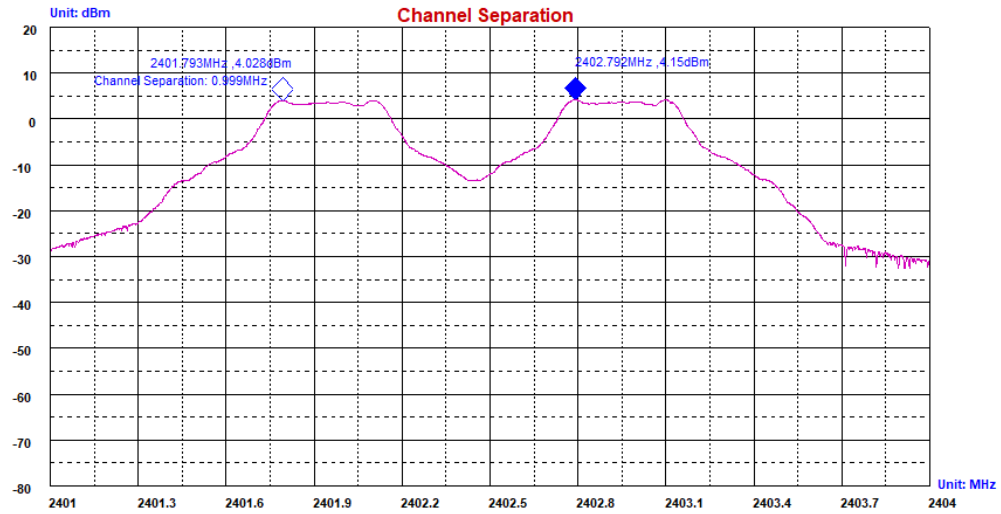
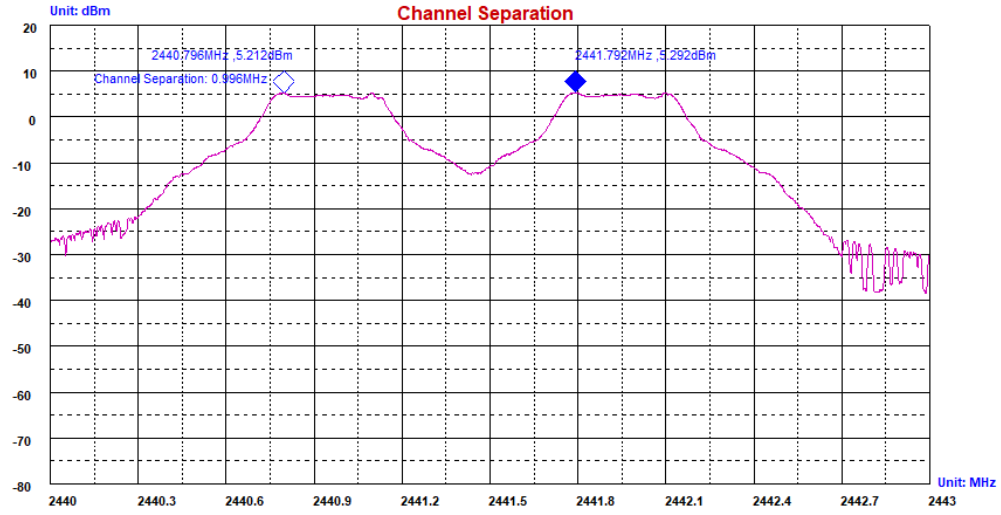
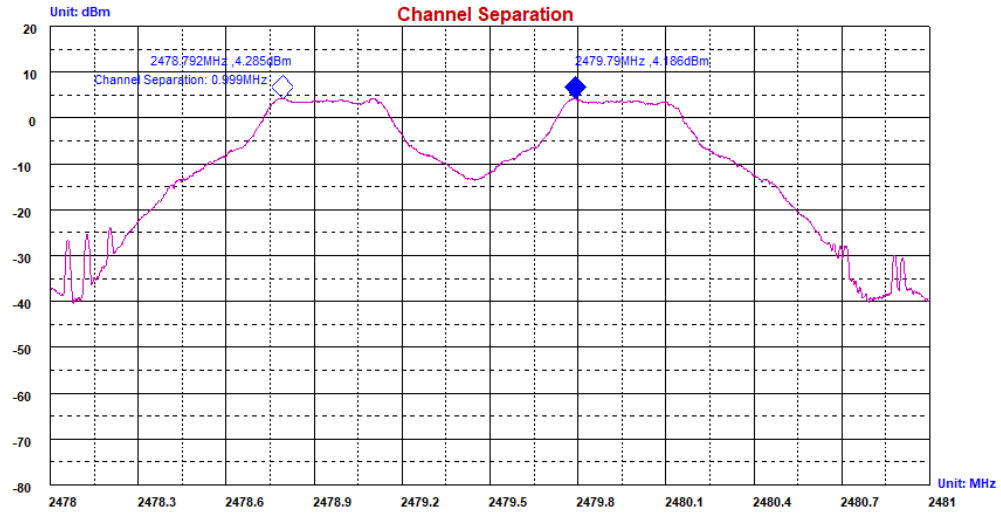
π/4DQPSK _2DH5/HCH	
8DPSK _3DH5/LCH	

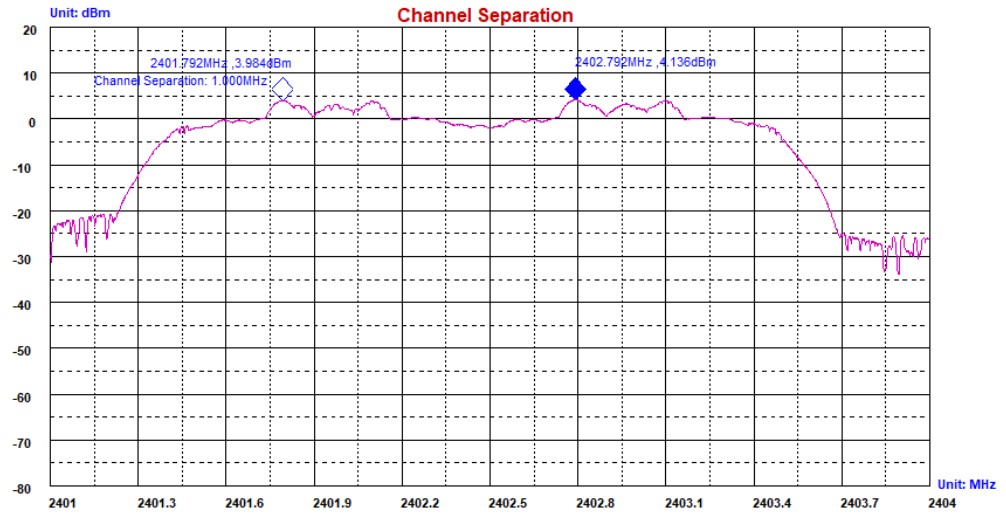
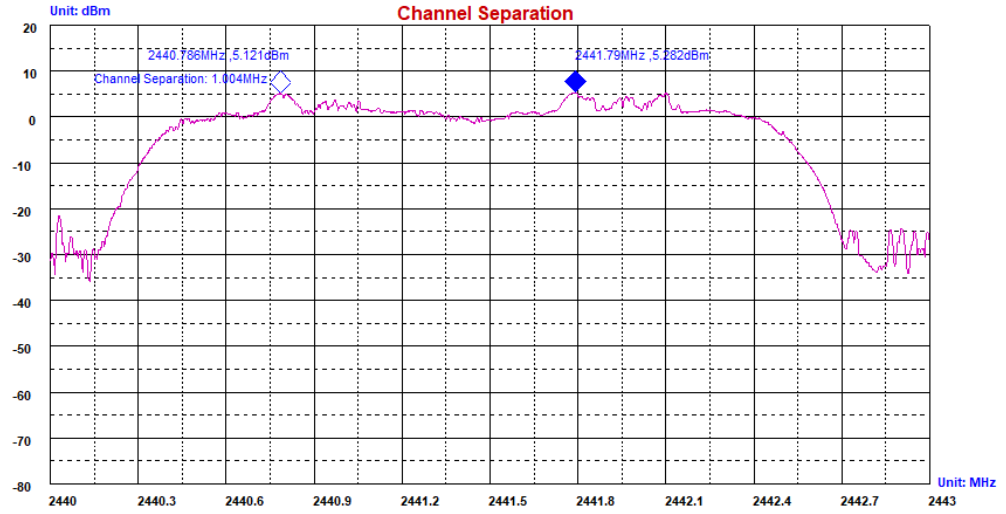
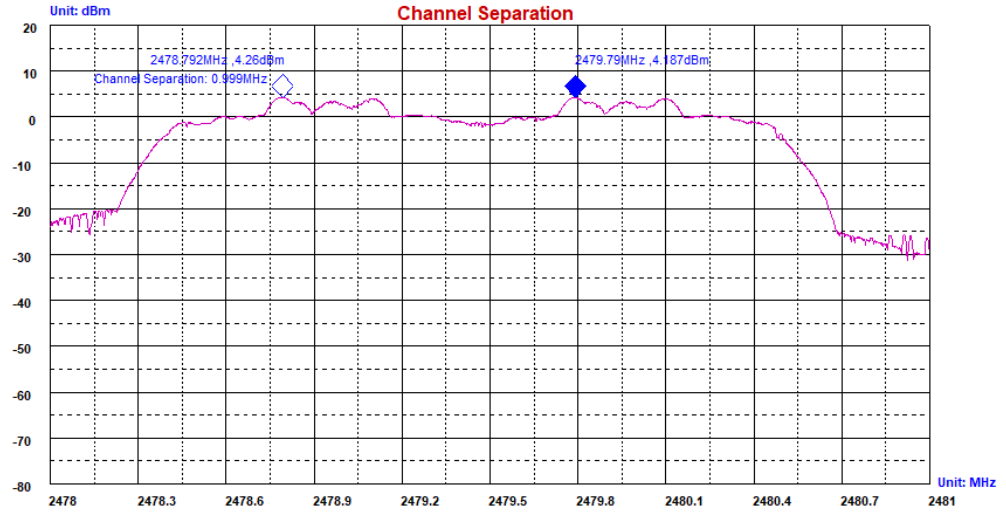
8DPSK _3DH5/MCH	
8DPSK _3DH5/HCH	

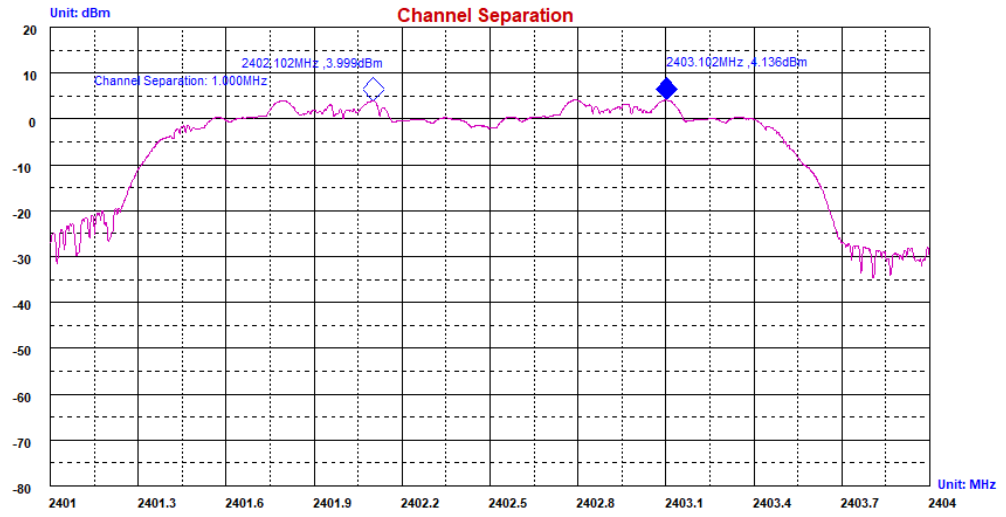
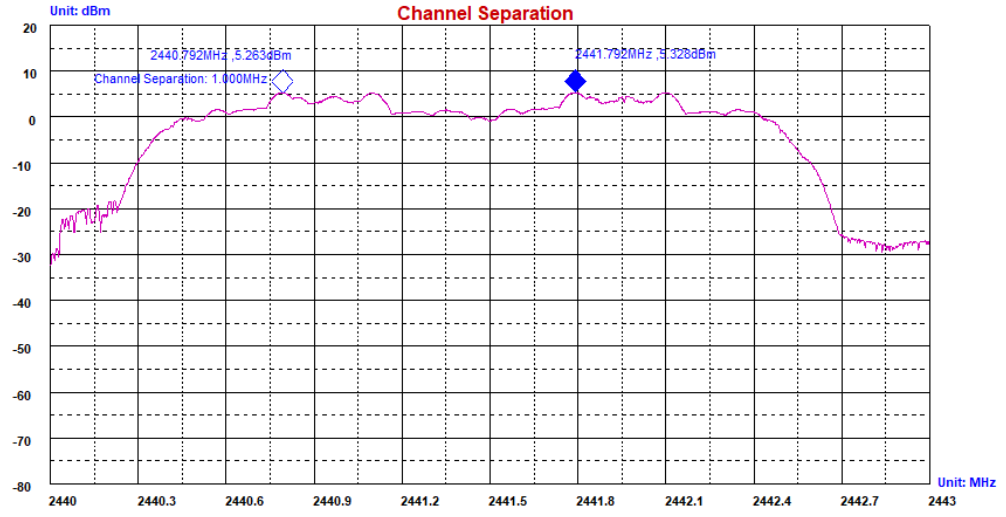
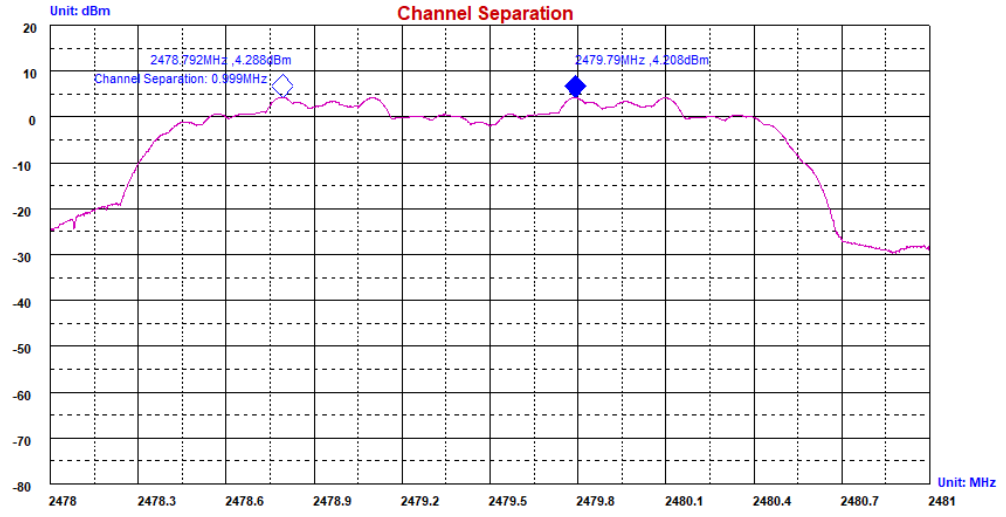
A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.999	0.571	PASS
GFSK	MCH	0.996	0.589	PASS
GFSK	HCH	0.999	0.589	PASS
π/4DQPSK	LCH	1.000	0.844	PASS
π/4DQPSK	MCH	1.004	0.844	PASS
π/4DQPSK	HCH	0.999	0.845	PASS
8DPSK	LCH	1.000	0.873	PASS
8DPSK	MCH	1.000	0.843	PASS
8DPSK	HCH	0.999	0.843	PASS

Test Graph

Graphs	
GFSK/LCH	
GFSK/MCH	
GFSK/HCH	

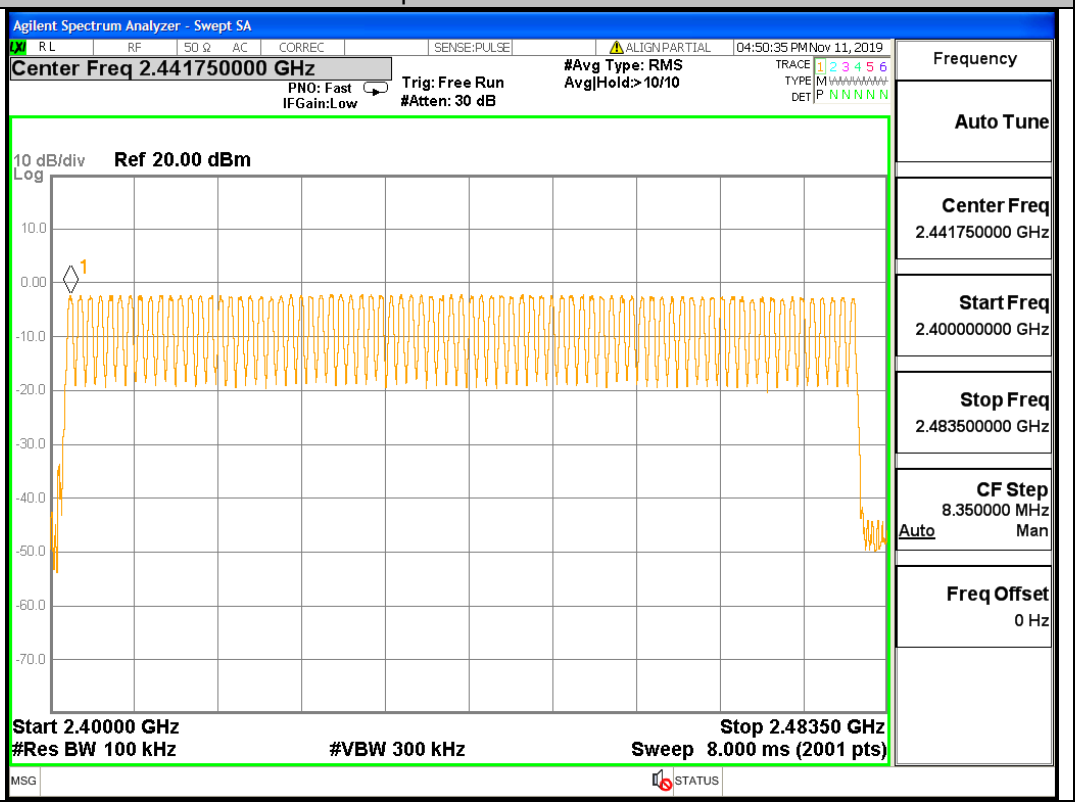
π/4DQPSK/LCH	
π/4DQPSK/MCH	
π/4DQPSK/HCH	

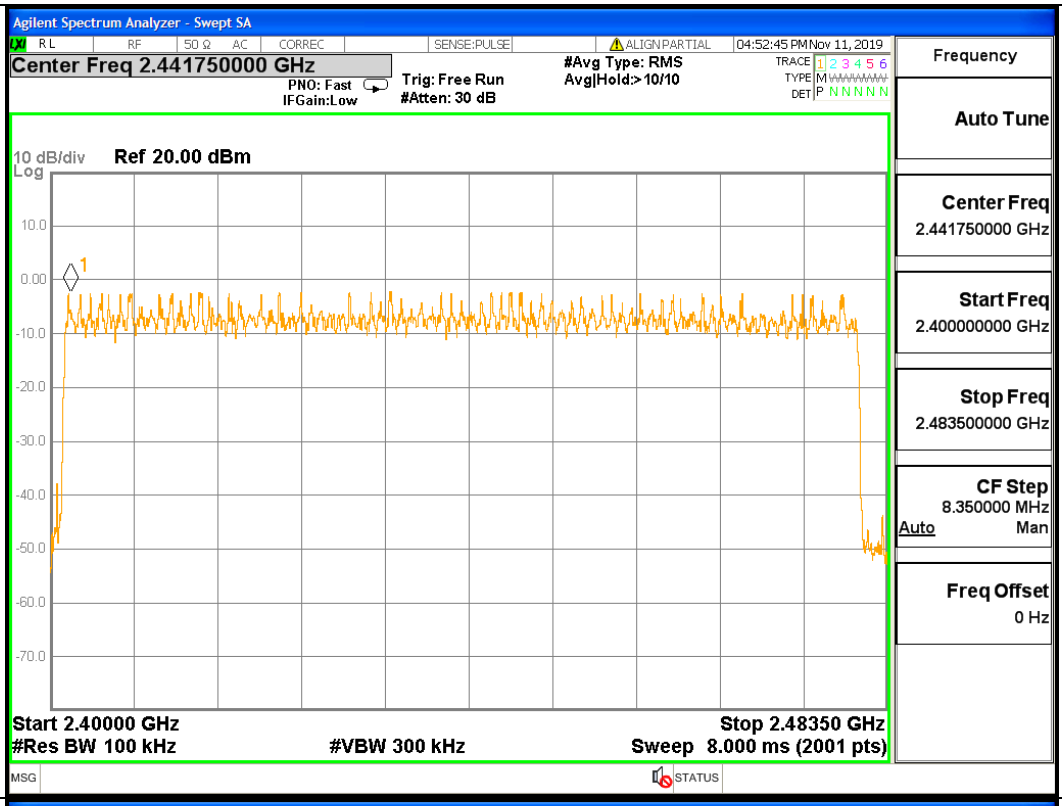
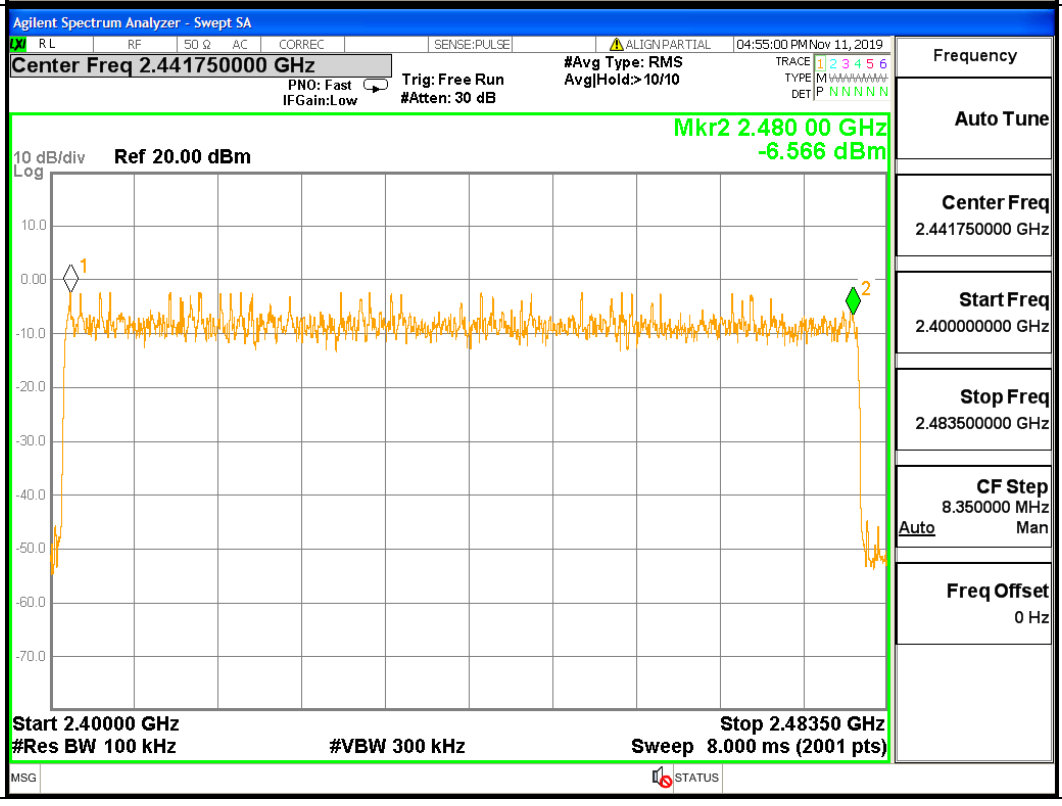
8DPSK/LCH	
8DPSK/MCH	
8DPSK/HCH	

A.4 Hopping Channel Number

Mode	Channel.	Number of Hopping Channel[N]	Limit[N]	Verdict
GFSK	Hop	79	>=15	PASS
π/4DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS

Test Graph

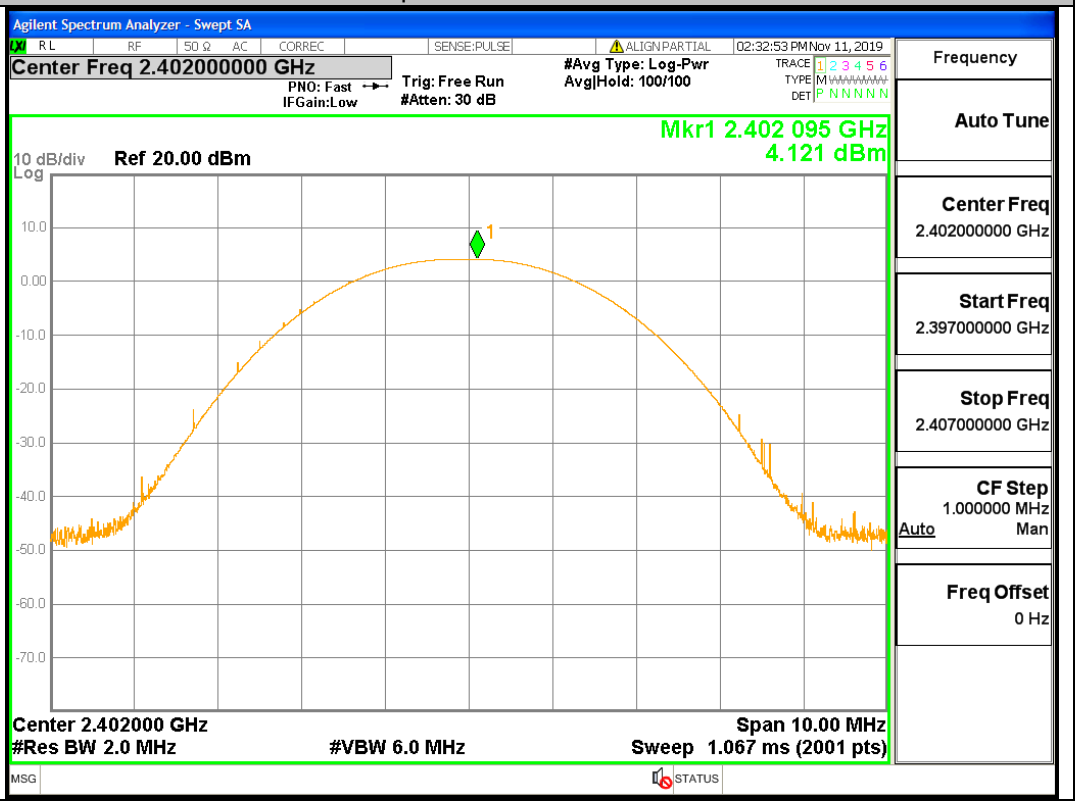
Graphs	
GFSK/Hop	

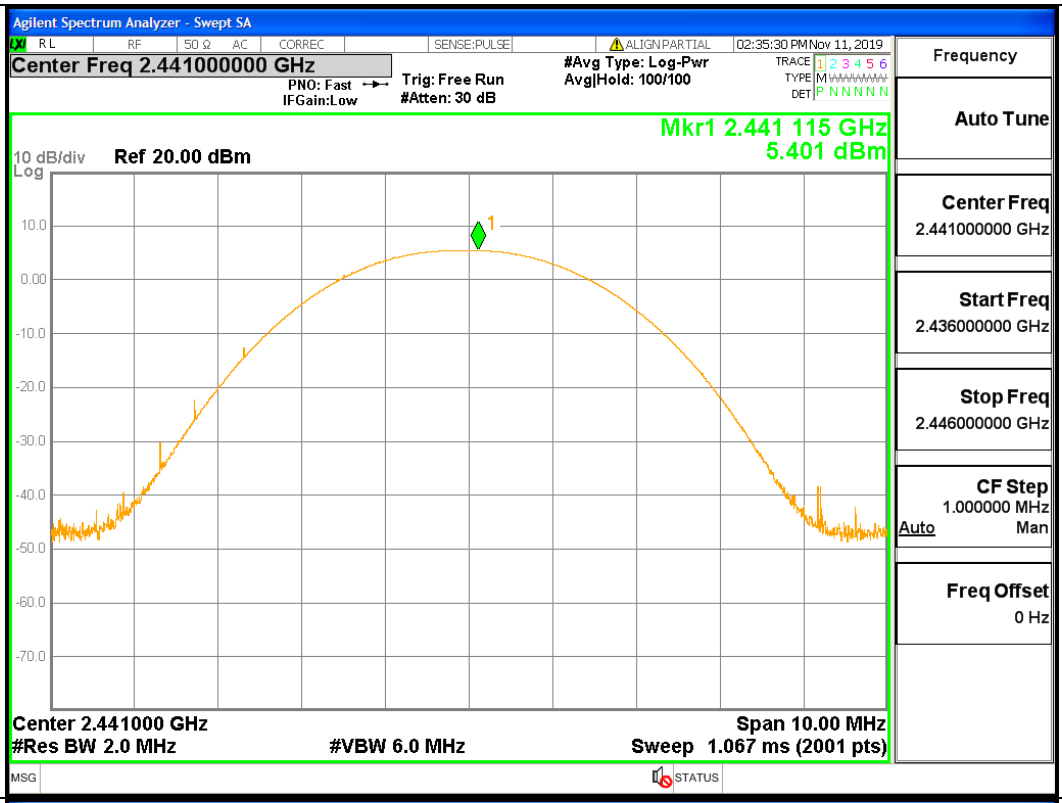
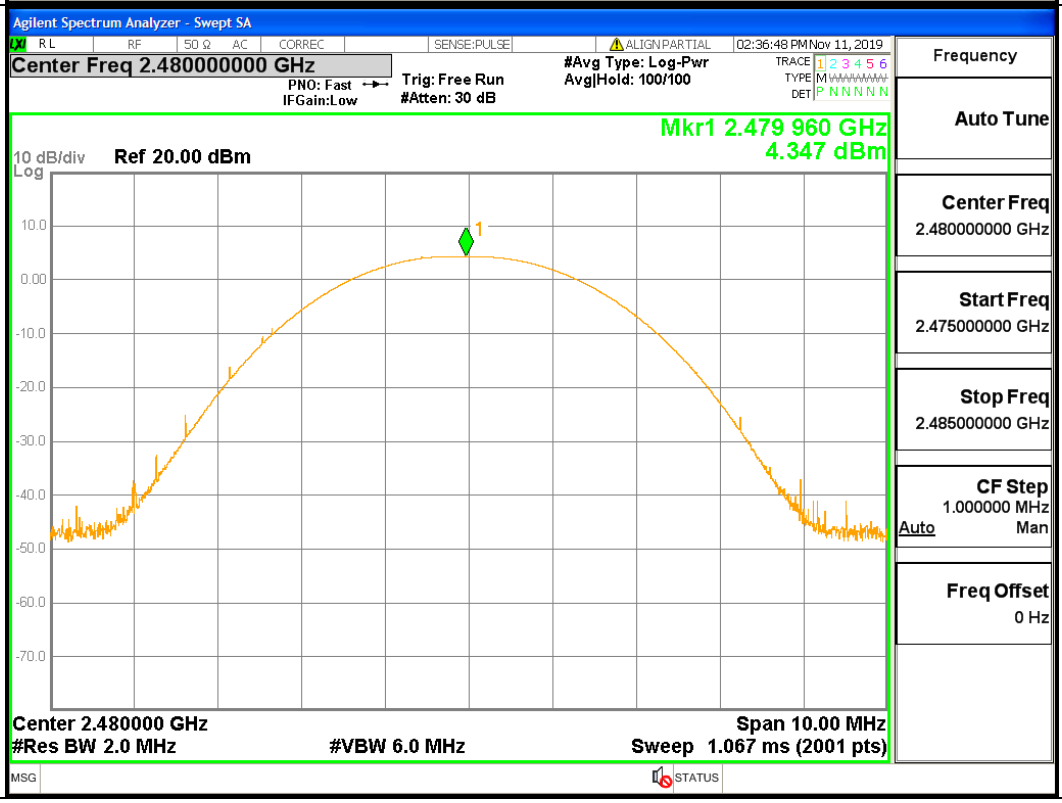
π/4DQPSK/Hop	
8DPSK/Hop	

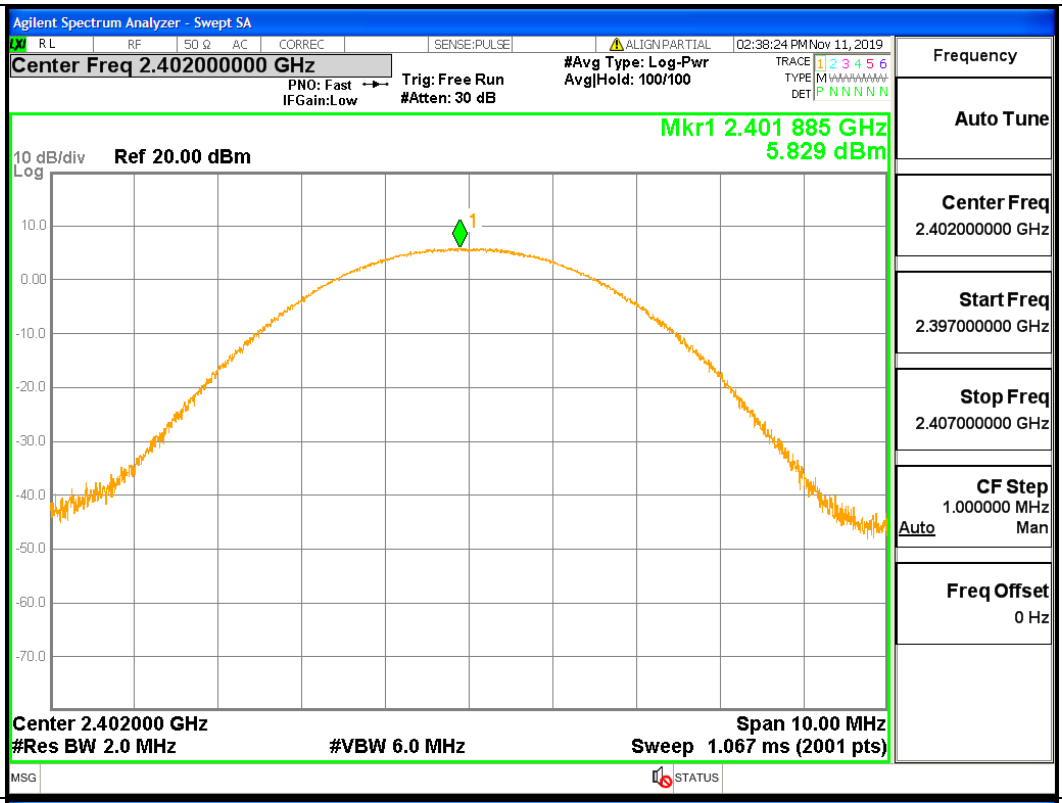
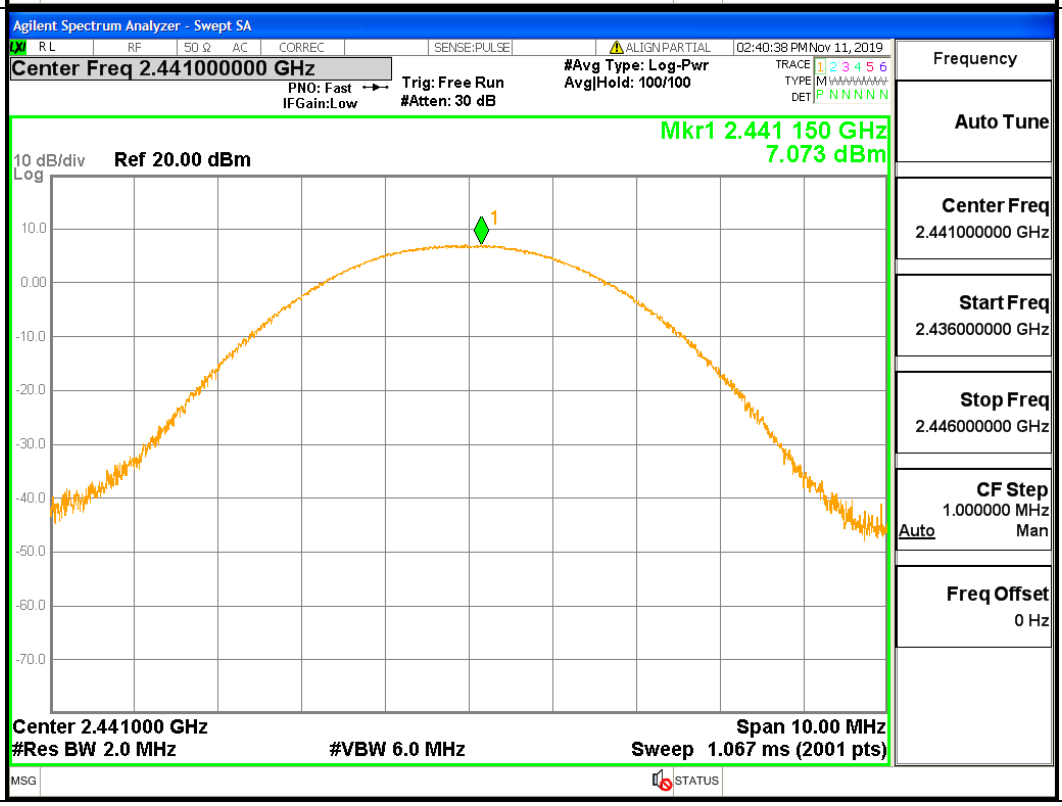
A.5 Conducted Peak Output Power

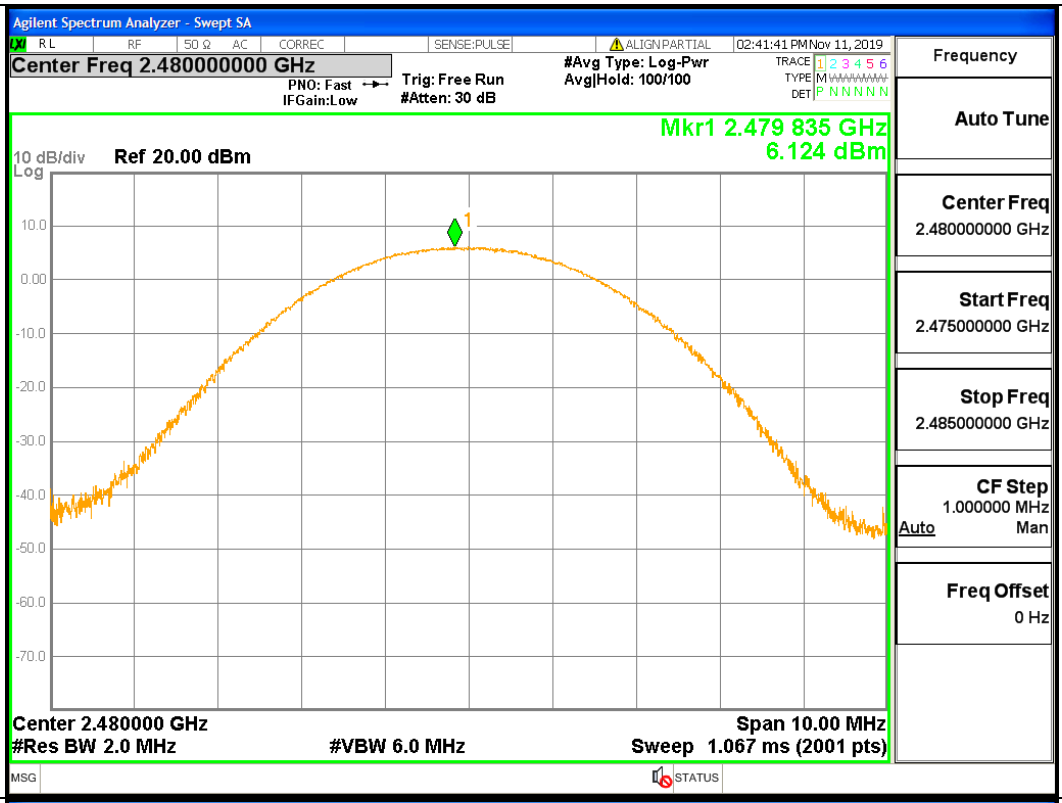
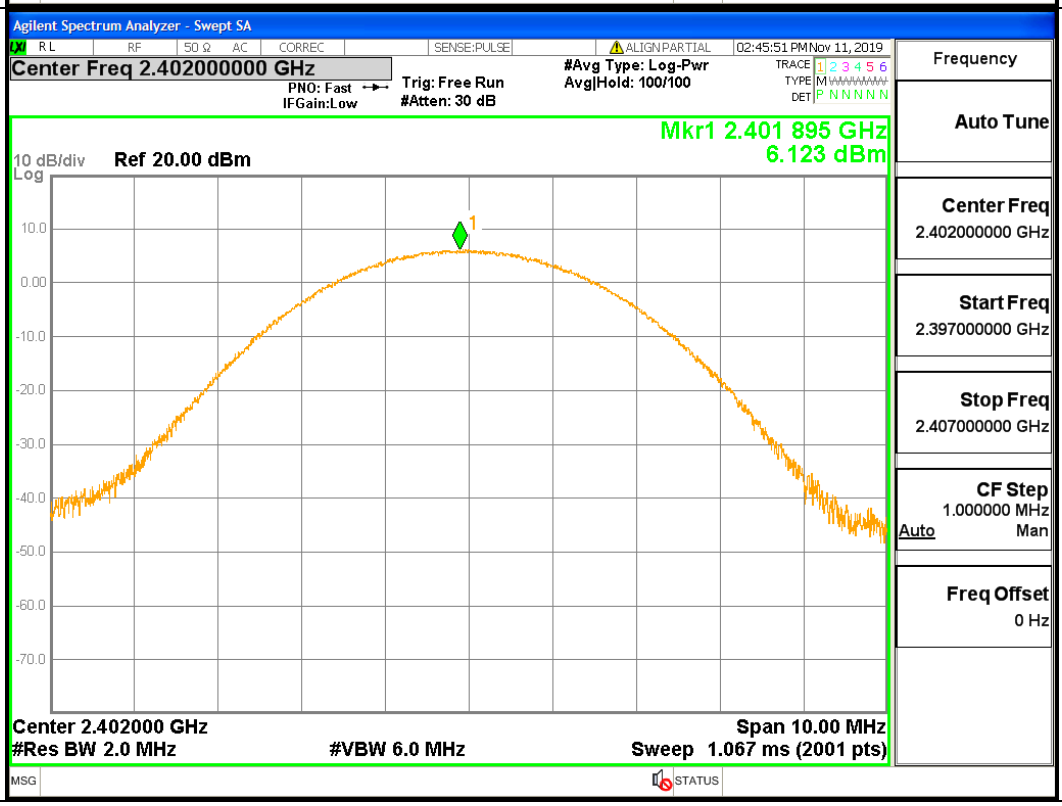
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	4.121	21	PASS
GFSK	MCH	5.401	21	PASS
GFSK	HCH	4.347	21	PASS
π/4DQPSK	LCH	5.829	21	PASS
π/4DQPSK	MCH	7.073	21	PASS
π/4DQPSK	HCH	6.124	21	PASS
8DPSK	LCH	6.123	21	PASS
8DPSK	MCH	7.322	21	PASS
8DPSK	HCH	6.407	21	PASS

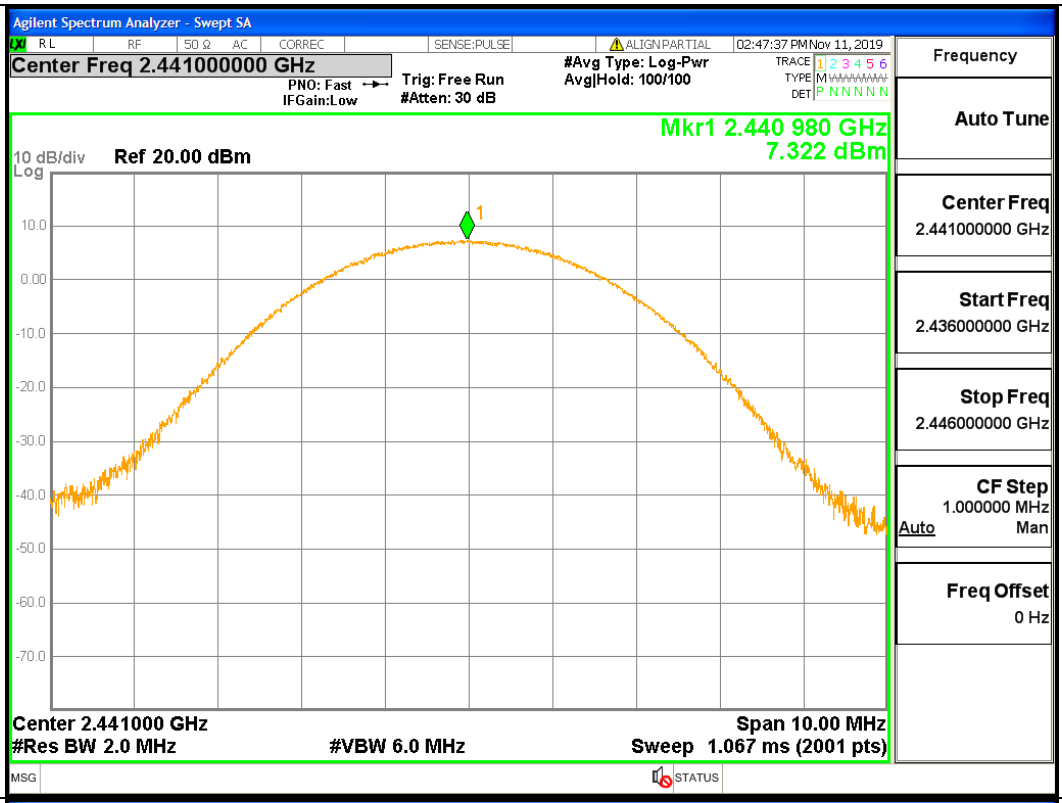
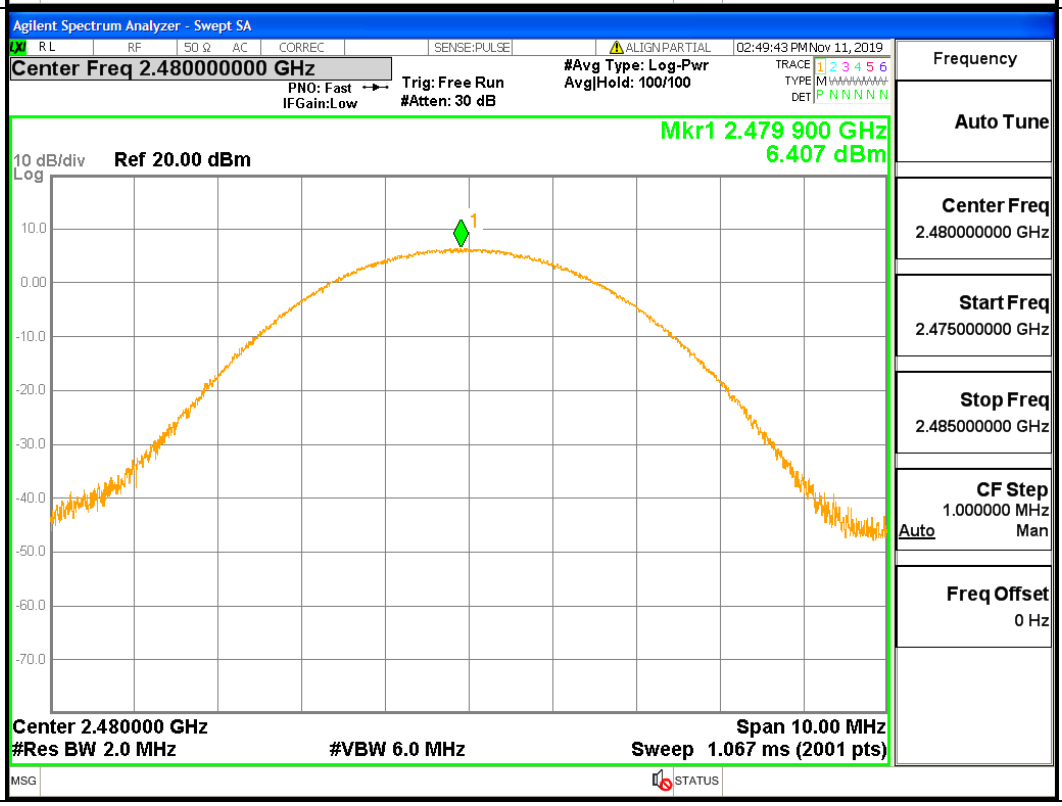
Test Graph

Graphs	
GFSK/LCH	

GFSK/MCH	
GFSK/HCH	

π/4DQPSK/LCH	
π/4DQPSK/MCH	

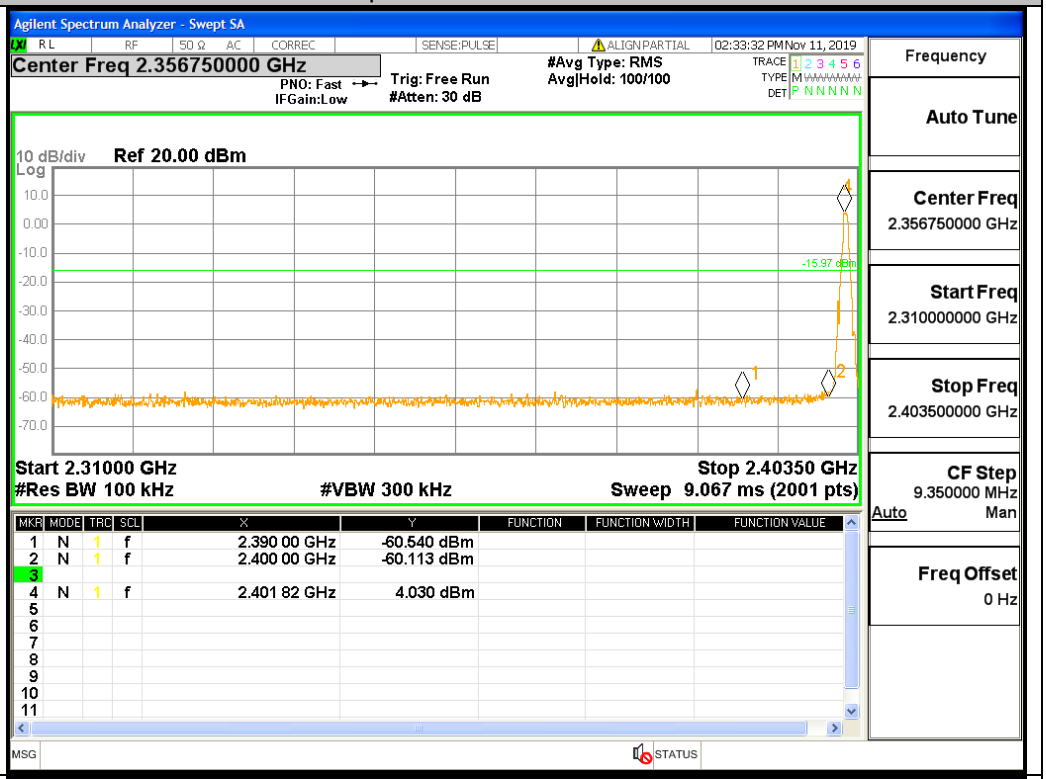
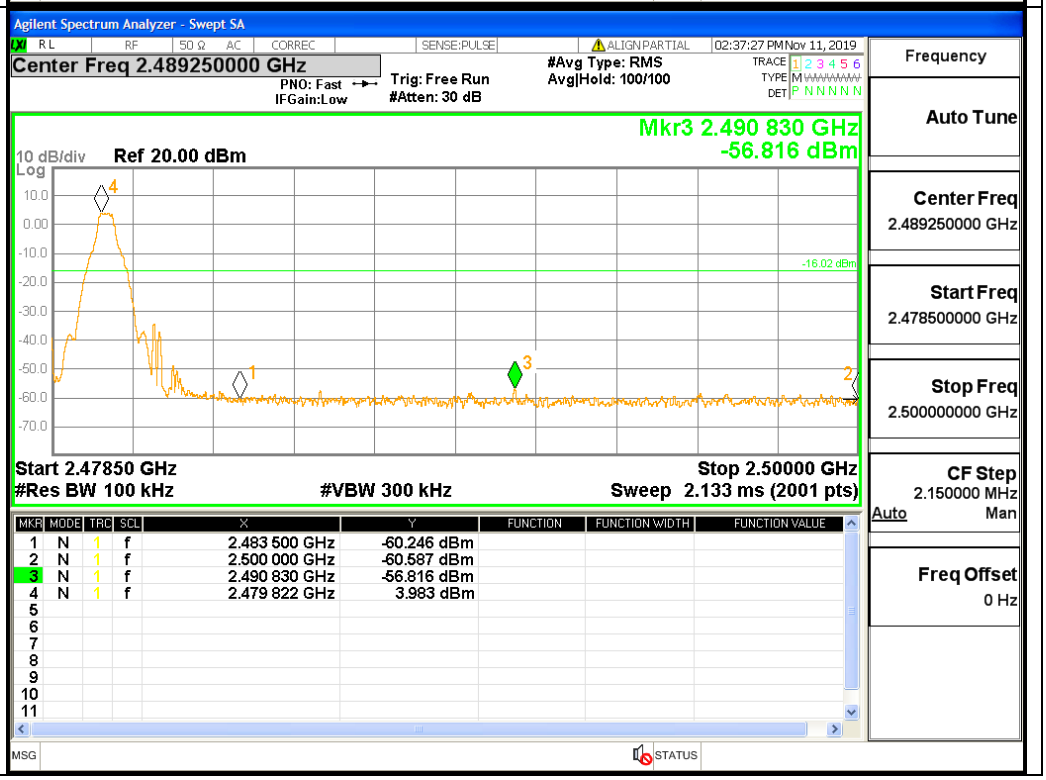
π/4DQPSK/HCH	
8DPSK/LCH	

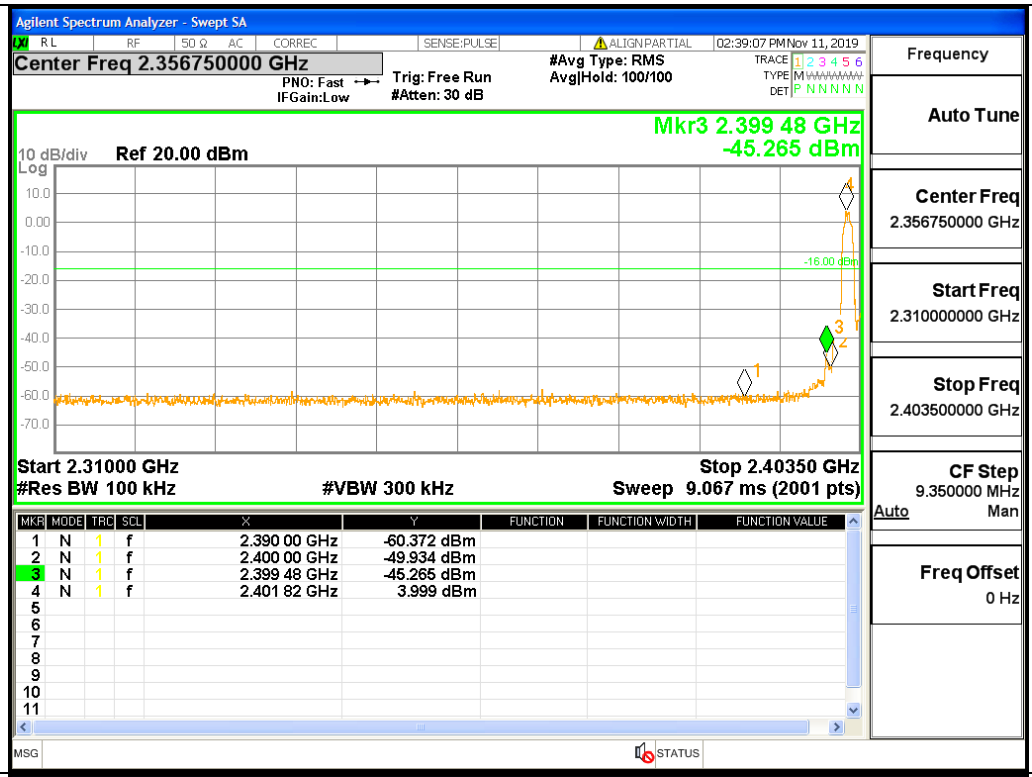
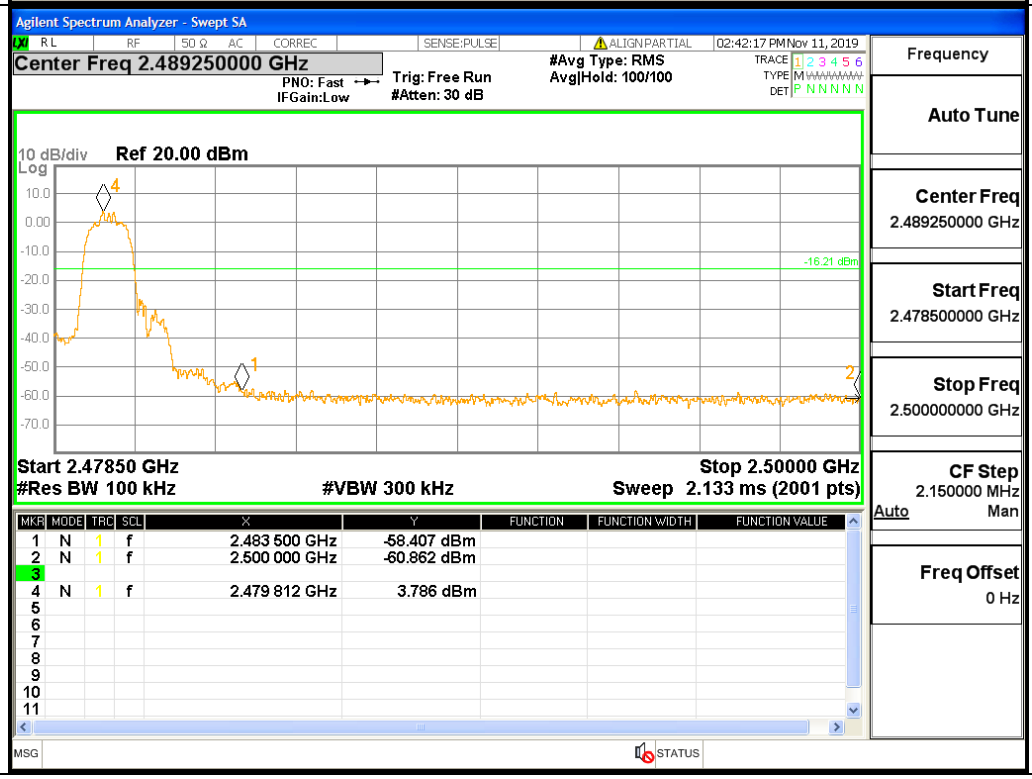
8DPSK/MCH	
8DPSK/HCH	

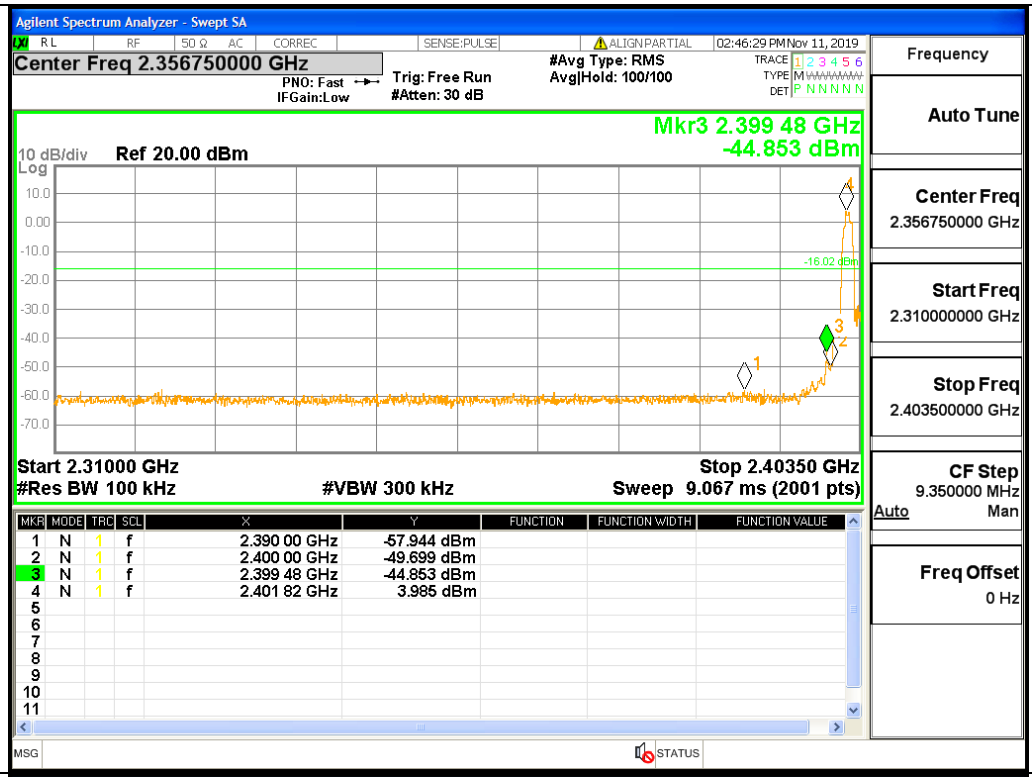
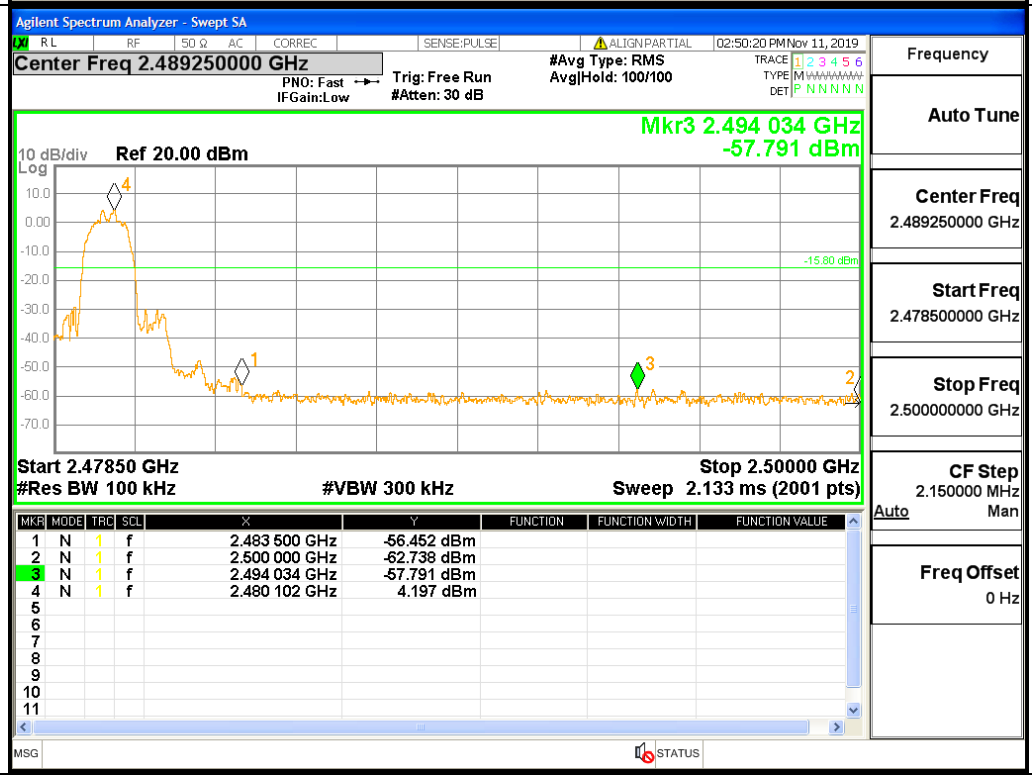
A.6 Band-edge for RF Conducted Emissions

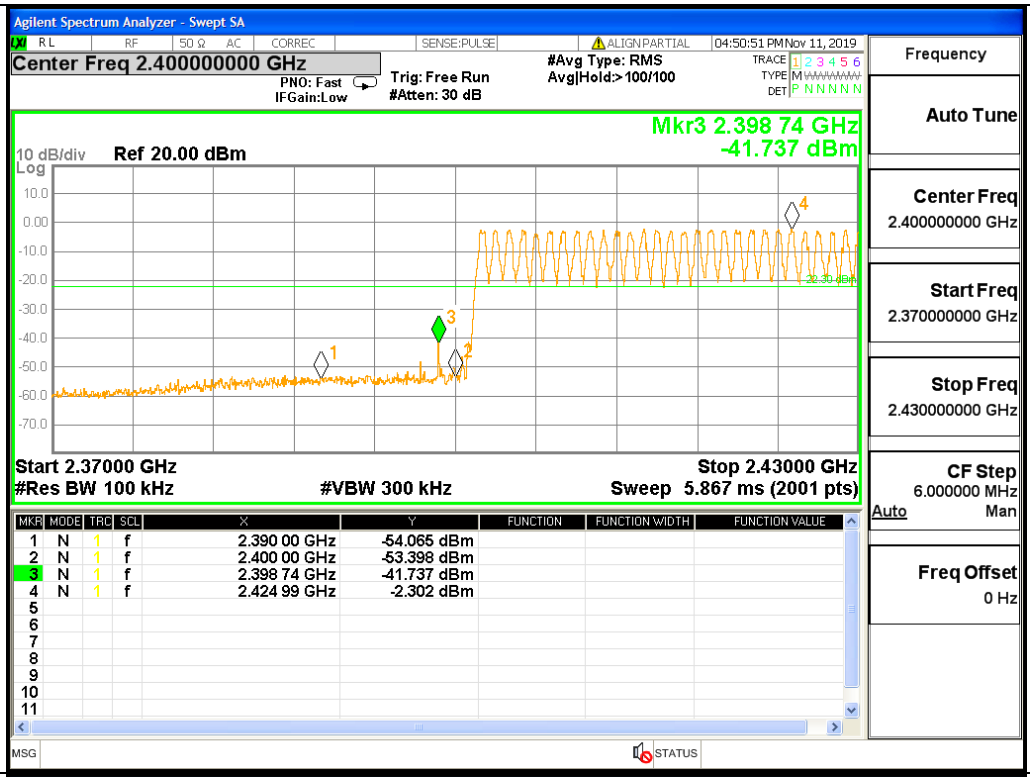
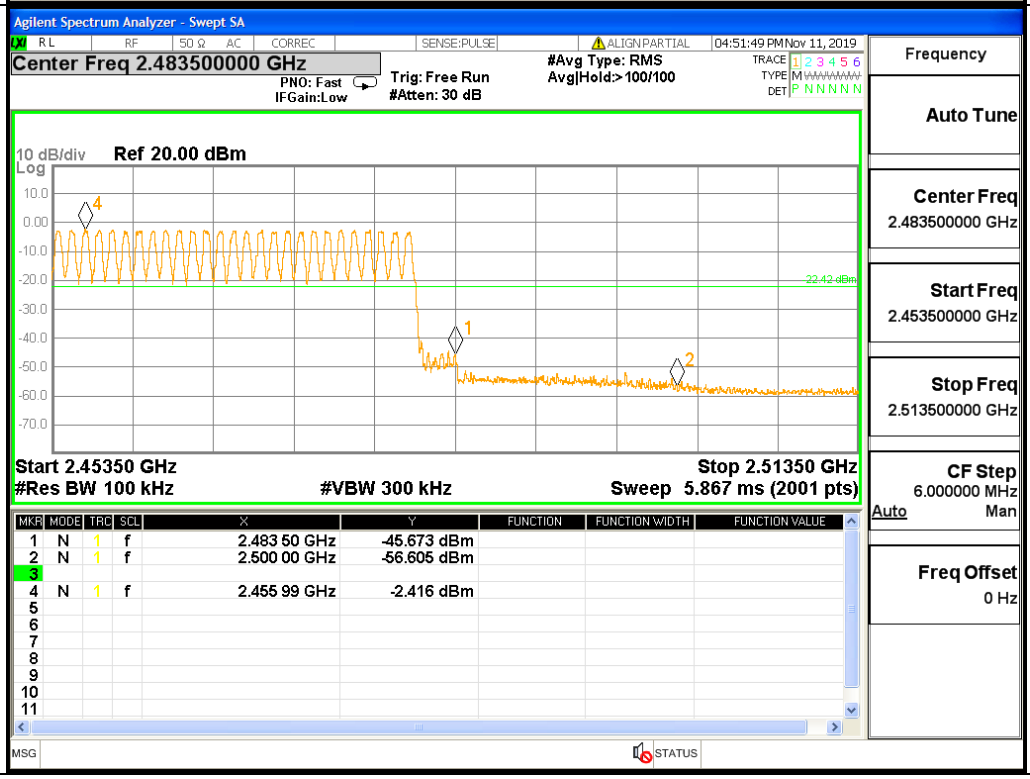
Type	Carrier Frequency(MHz)	Frequency(MHz)	Carrier Frequency Power [dBm]	Bandedge Peak(dBm)	Upper limit(dBm)	Conclusion
1DH5	2402	2400	4.030	-60.110	-15.970	Pass
1DH5	2480	2490.83	3.983	-56.816	-16.017	Pass
2DH5	2402	2399.48	3.999	-45.265	-16.001	Pass
2DH5	2480	2483.5	3.786	-58.410	-16.214	Pass
3DH5	2402	2399.48	3.985	-44.853	-16.015	Pass
3DH5	2480	2483.5	4.197	-56.450	-15.803	Pass
1DH5-Hopping	2402	2398.74	-2.302	-41.737	-22.302	Pass
1DH5-Hopping	2480	2483.5	-2.416	-45.670	-22.416	Pass
2DH5-Hopping	2402	2399.85	-2.346	-38.819	-22.346	Pass
2DH5-Hopping	2480	2483.5	-2.438	-47.340	-22.438	Pass
3DH5-Hopping	2402	2400	-2.306	-39.210	-22.306	Pass
3DH5-Hopping	2480	2483.5	-2.432	-46.400	-22.432	Pass

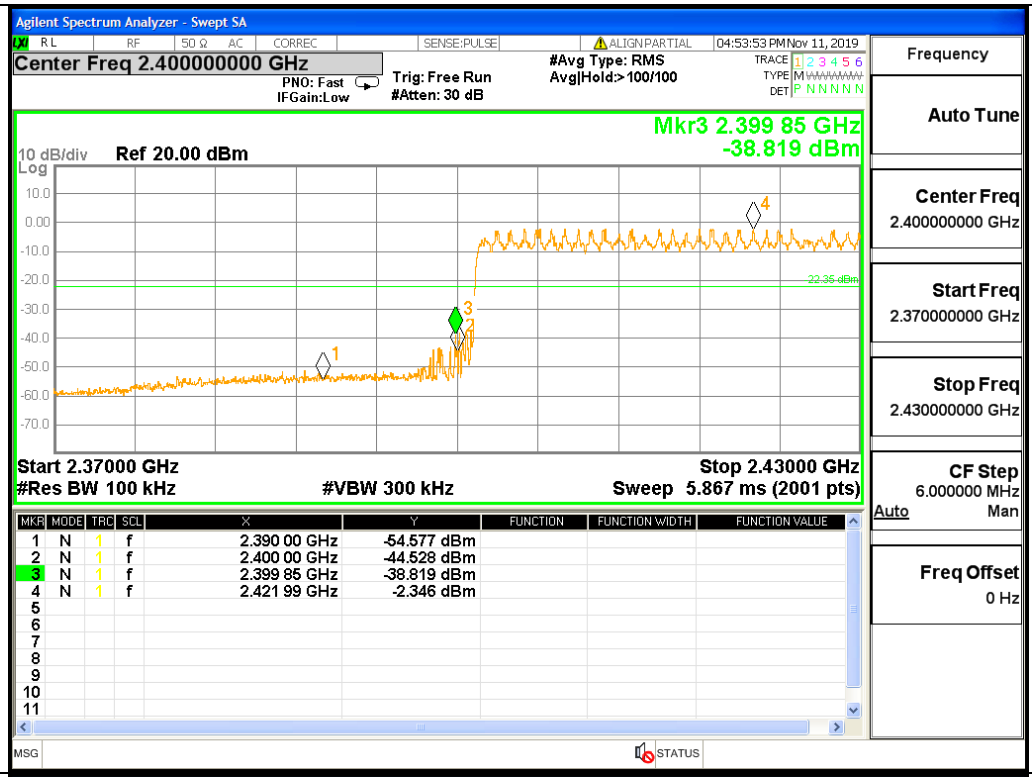
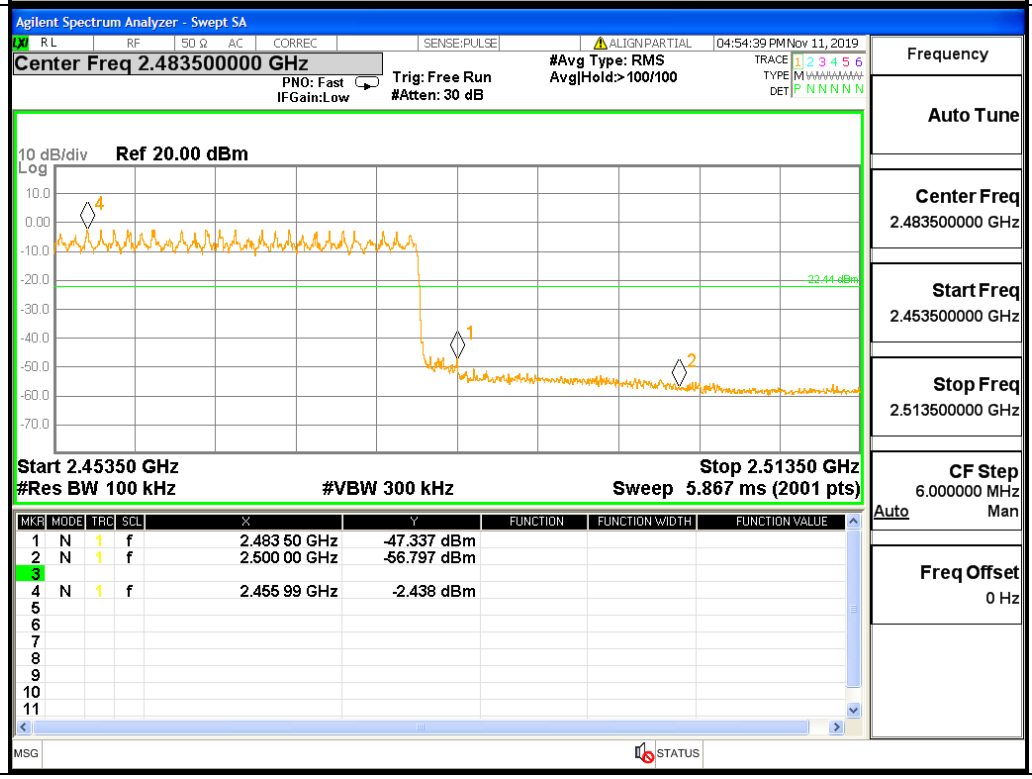
Test Graph

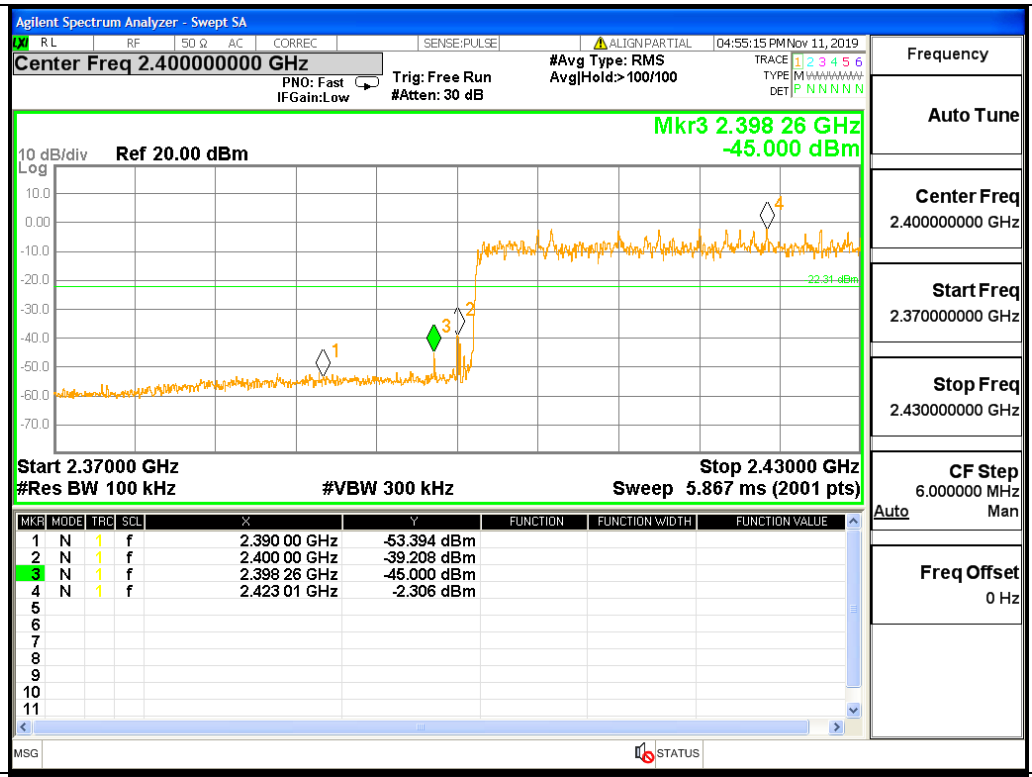
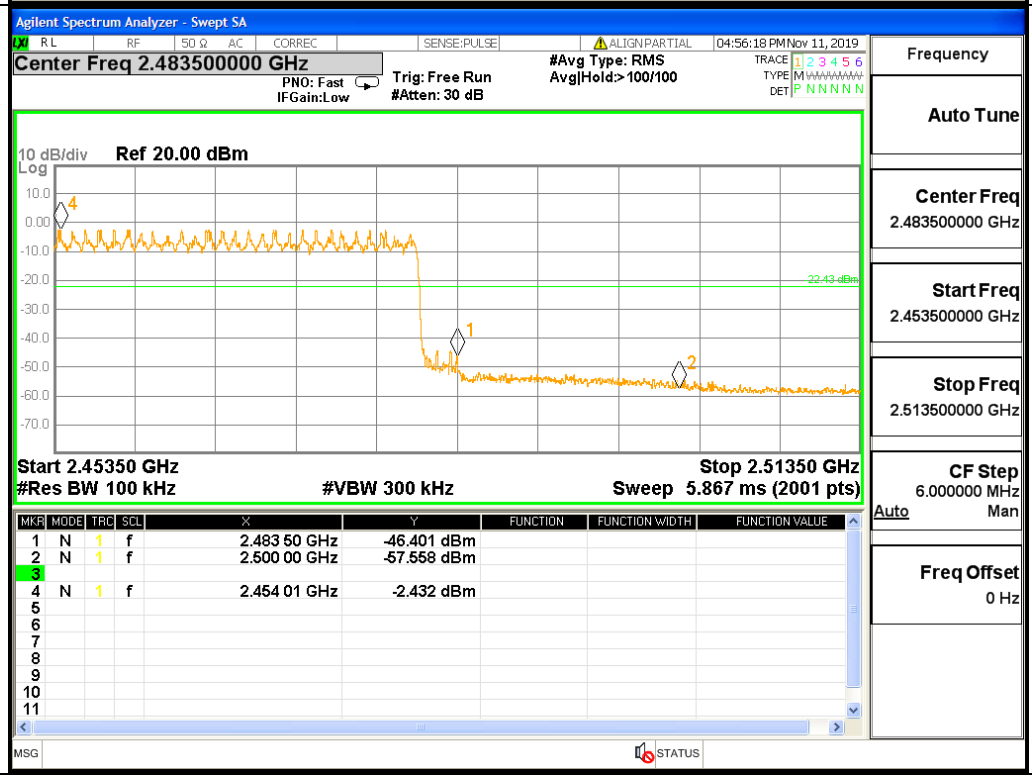
Graphs	
GFSK/LCH/No Hop	
GFSK/HCH/No Hop	

π/4DQPSK/LCH/No Hop	
π/4DQPSK/HCH/No Hop	

8DPSK/LCH/No Hop	
8DPSK/HCH/No Hop	

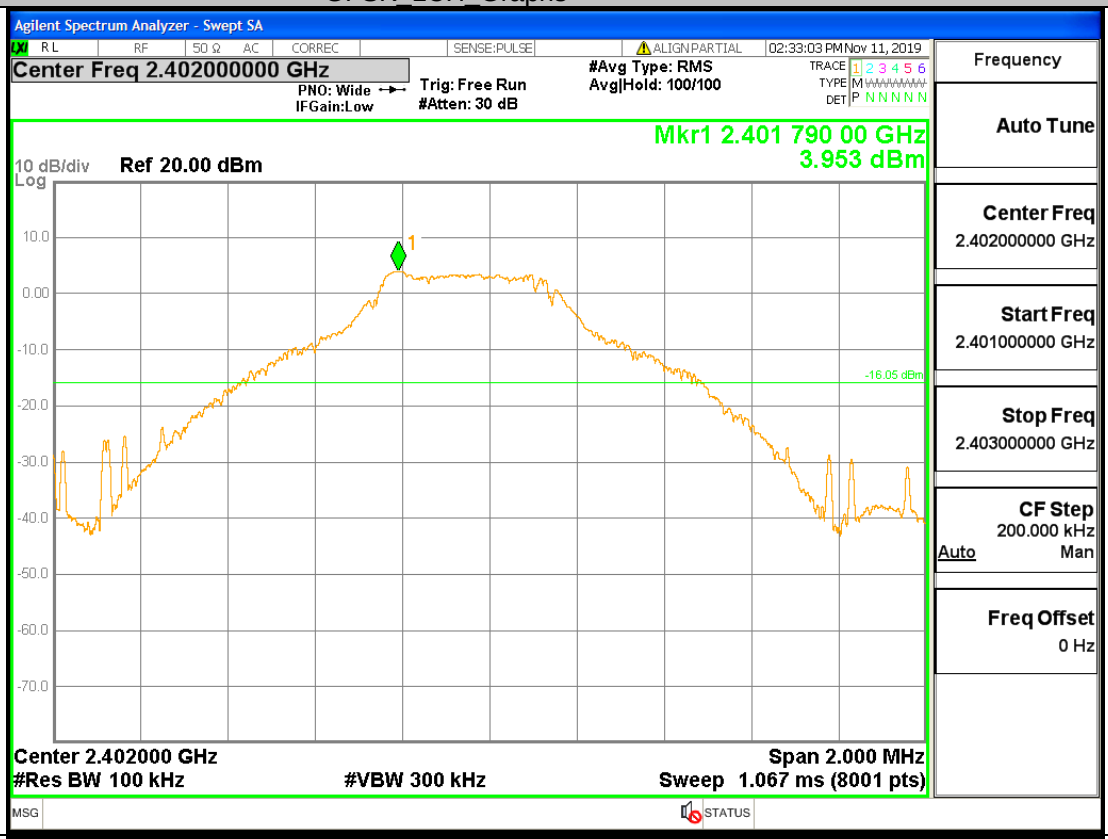
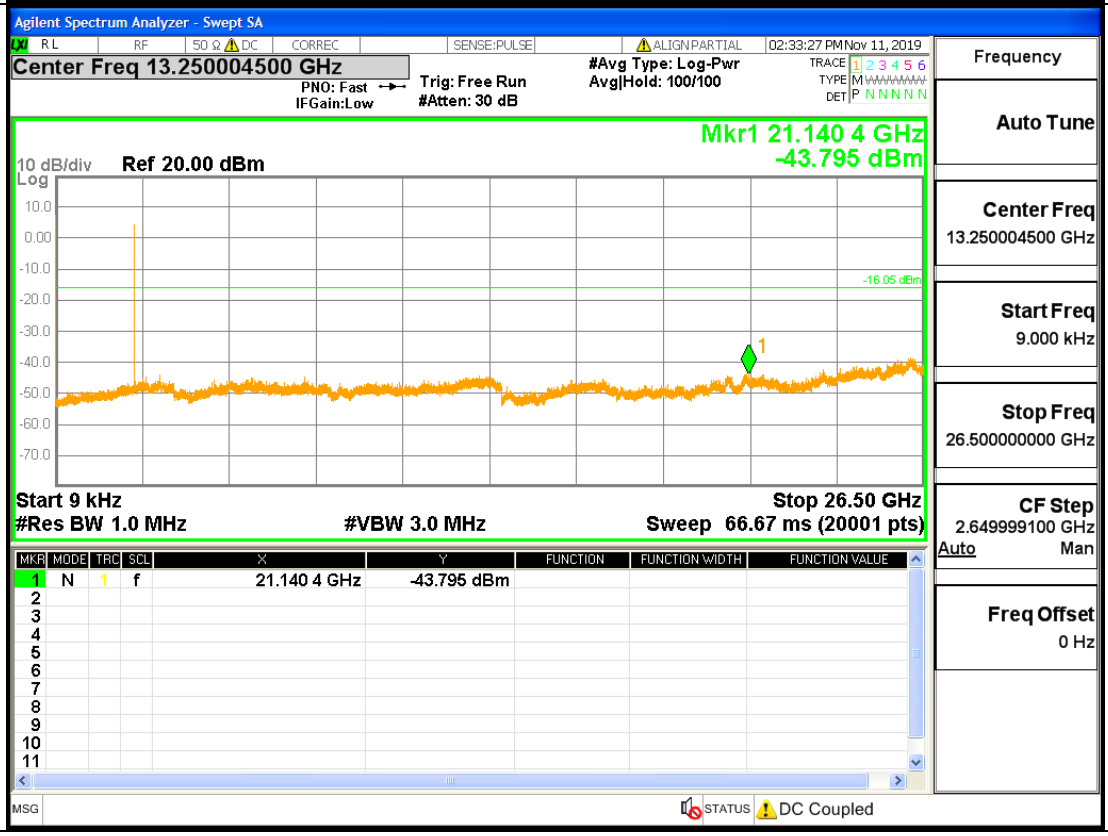
GFSK/LCH/Hop	
GFSK/HCH/Hop	

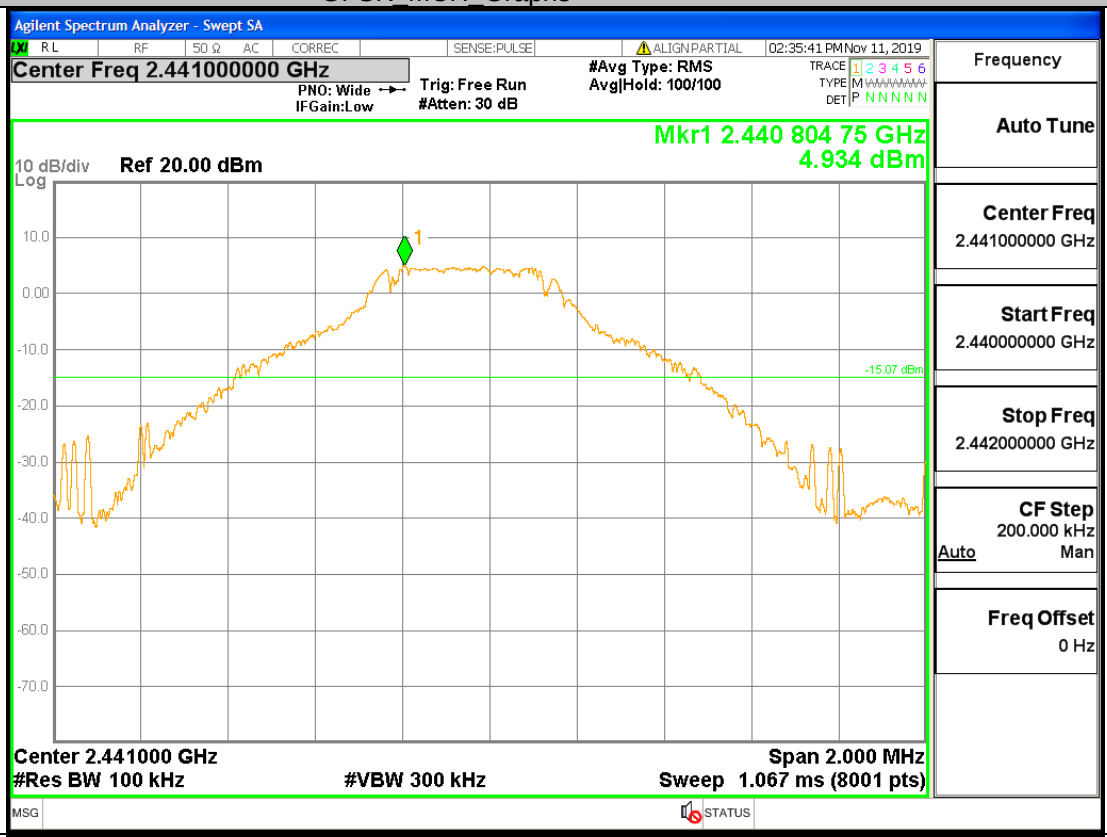
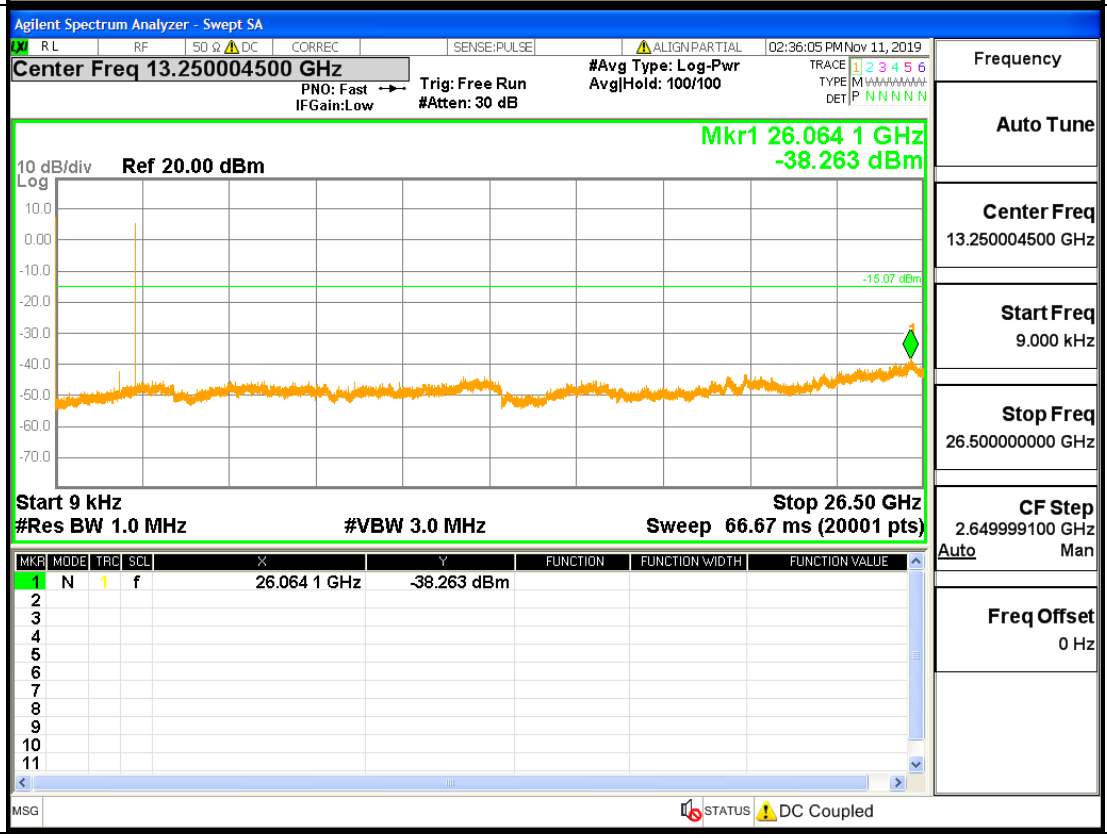
π/4DQPSK/LCH/Hop	
π /4DQPSK/HCH/Hop	

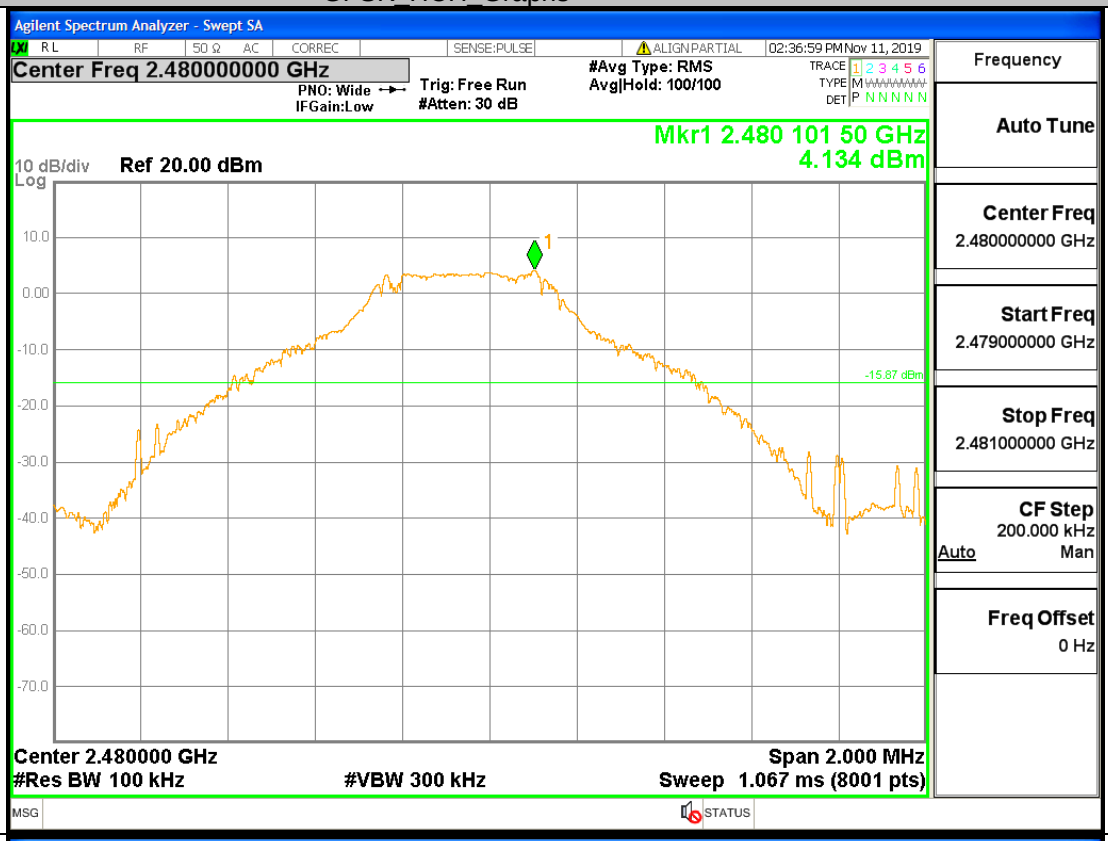
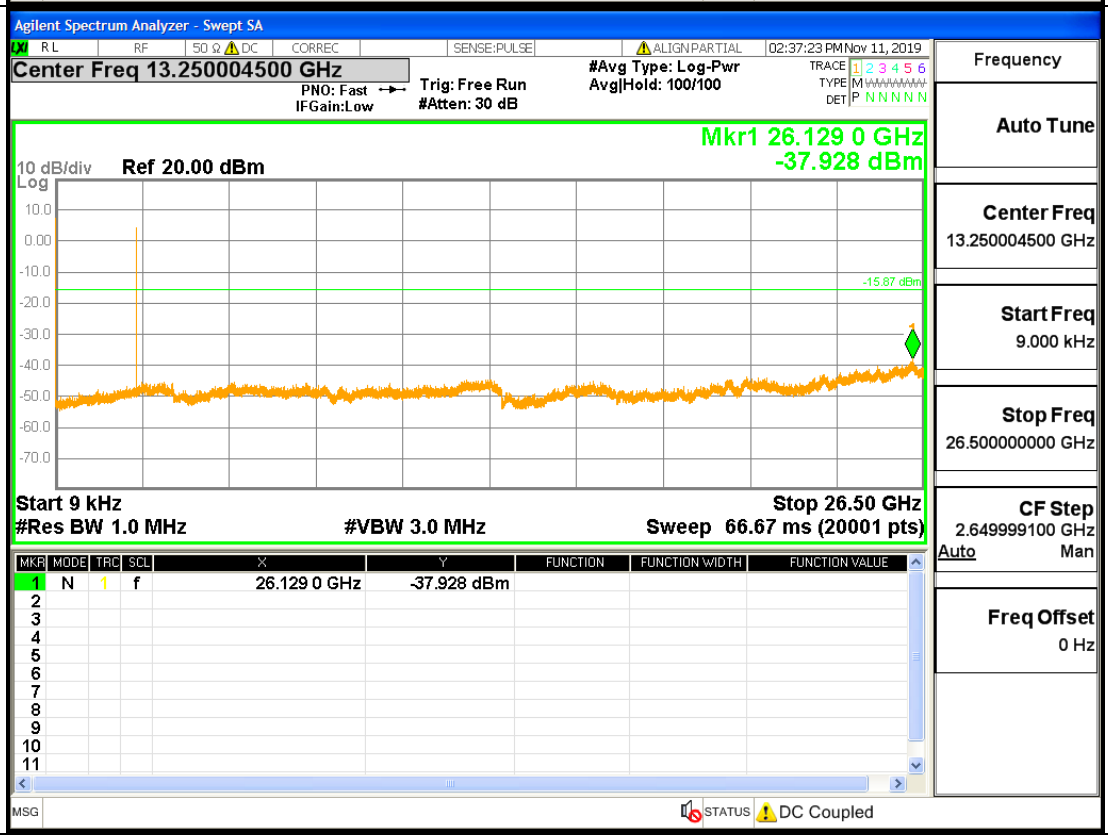
8DPSK/LCH/Hop	
8DPSK/HCH/Hop	

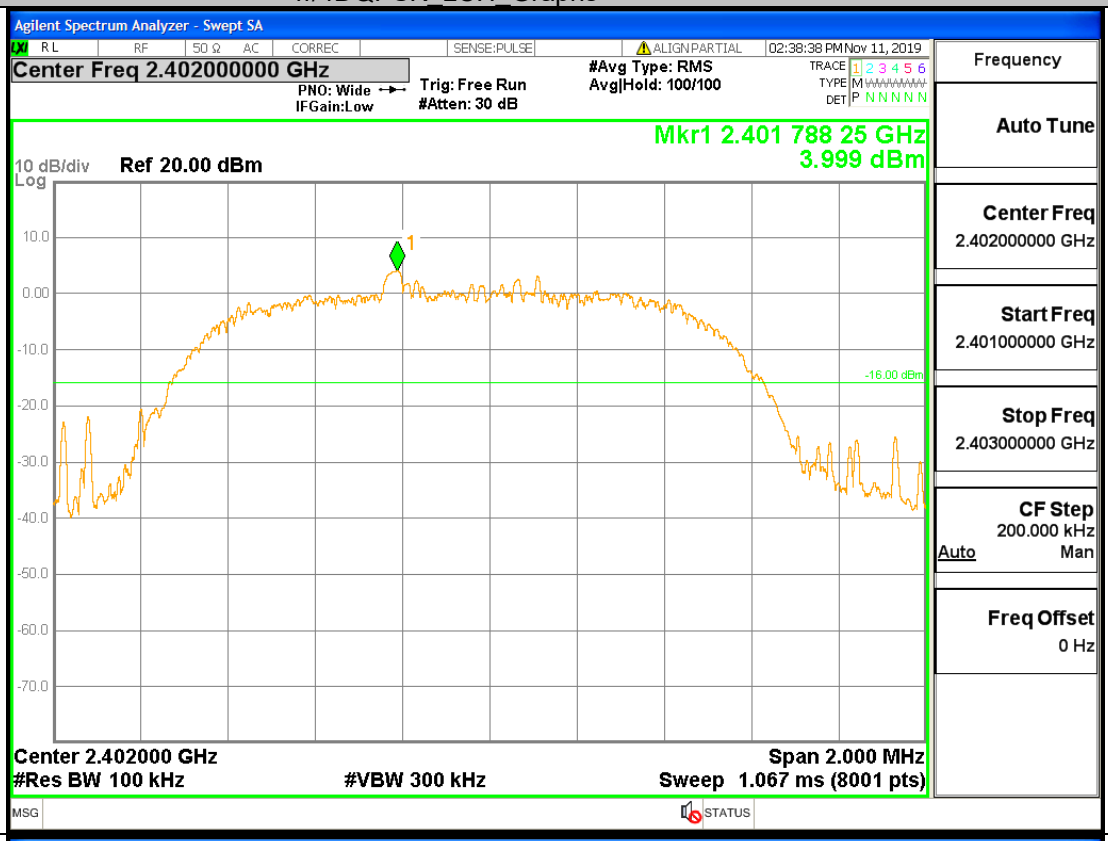
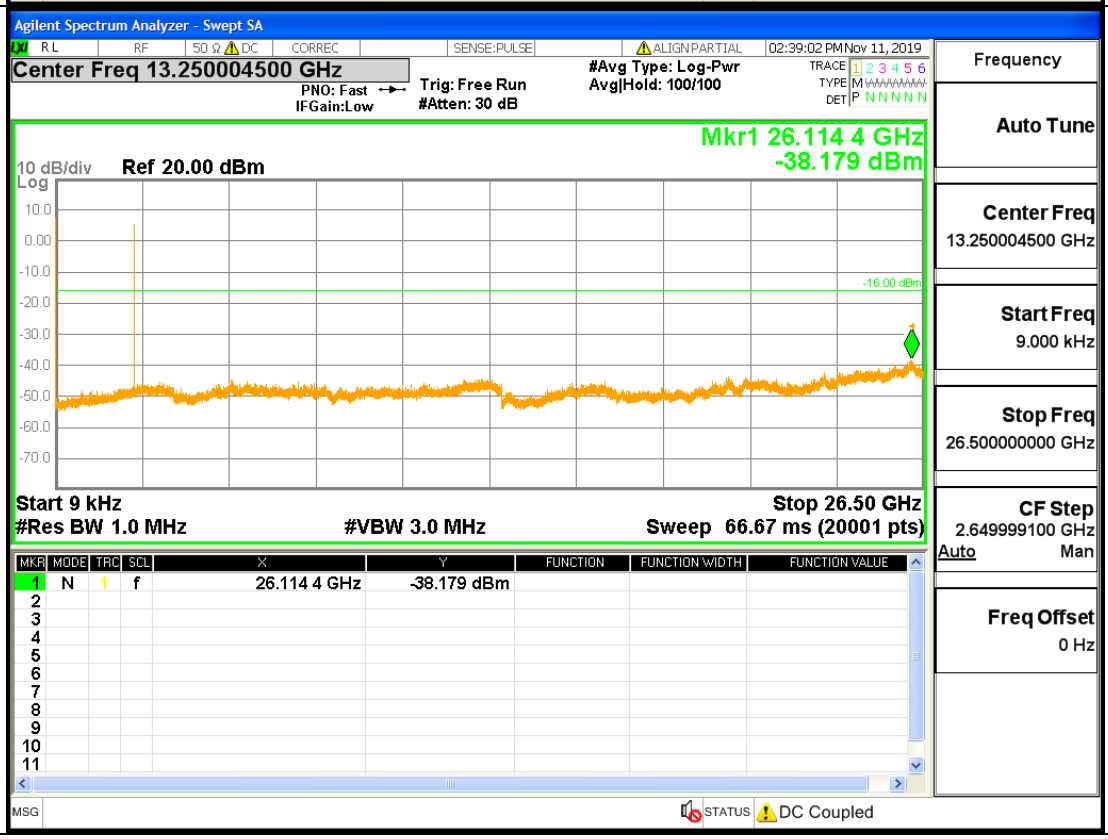
A.7 RF Conducted Spurious Emissions

Test Graph

GFSK_LCH_Graphs	
Pref	
Puw	

GFSK_MCH_Graphs	
Pref	
Puw	

GFSK_HCH_Graphs	
Pref	
Puw	

π/4DQPSK_LCH_Graphs	
Pref	
Puw	

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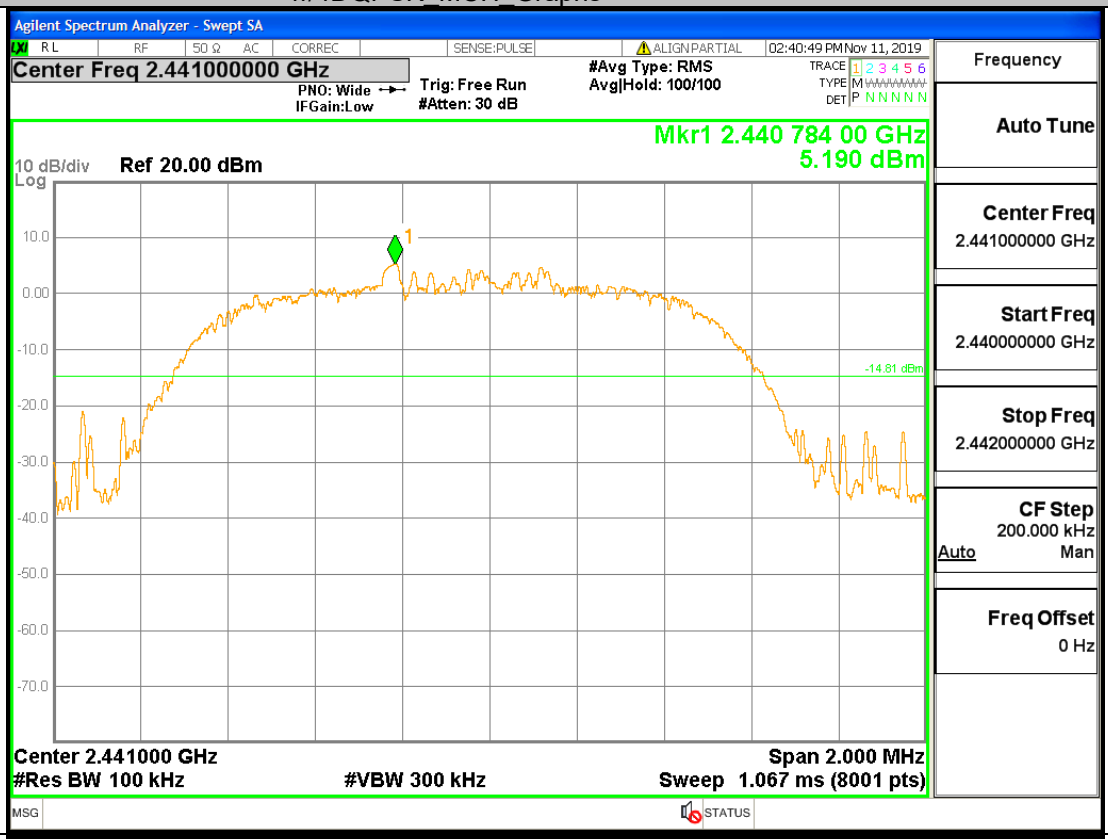
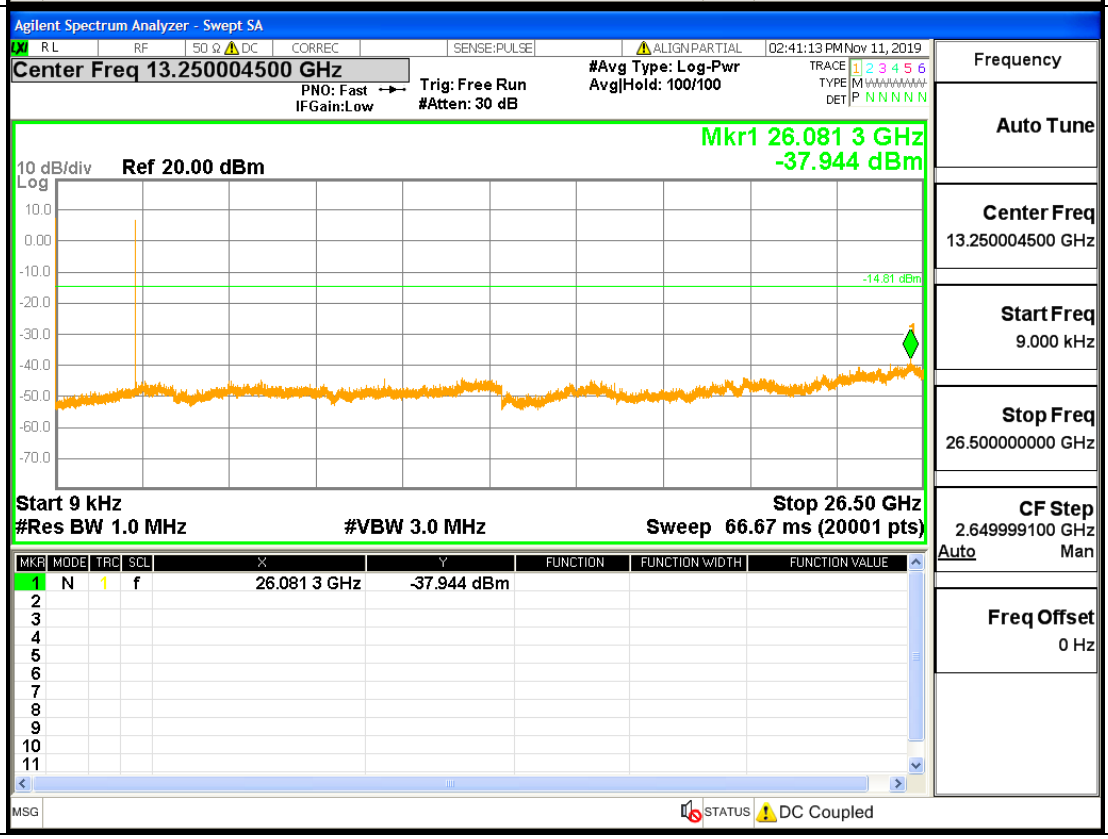
Pref	
Puw	

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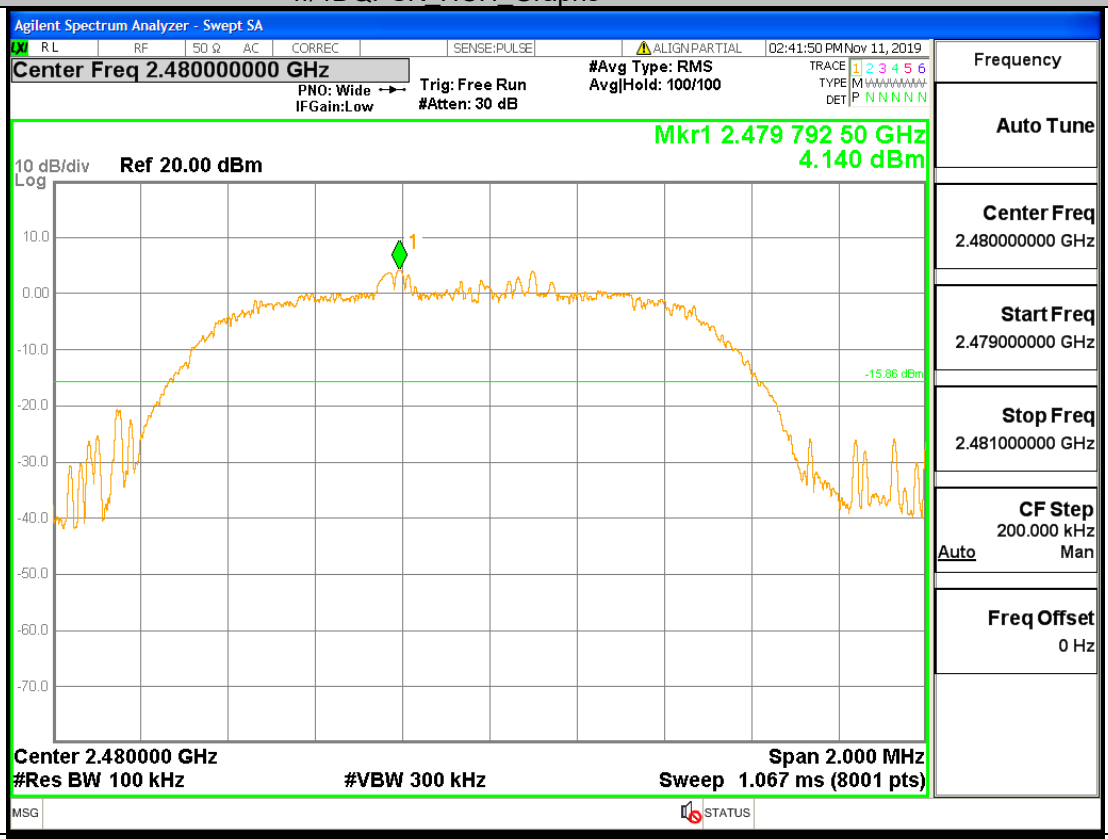
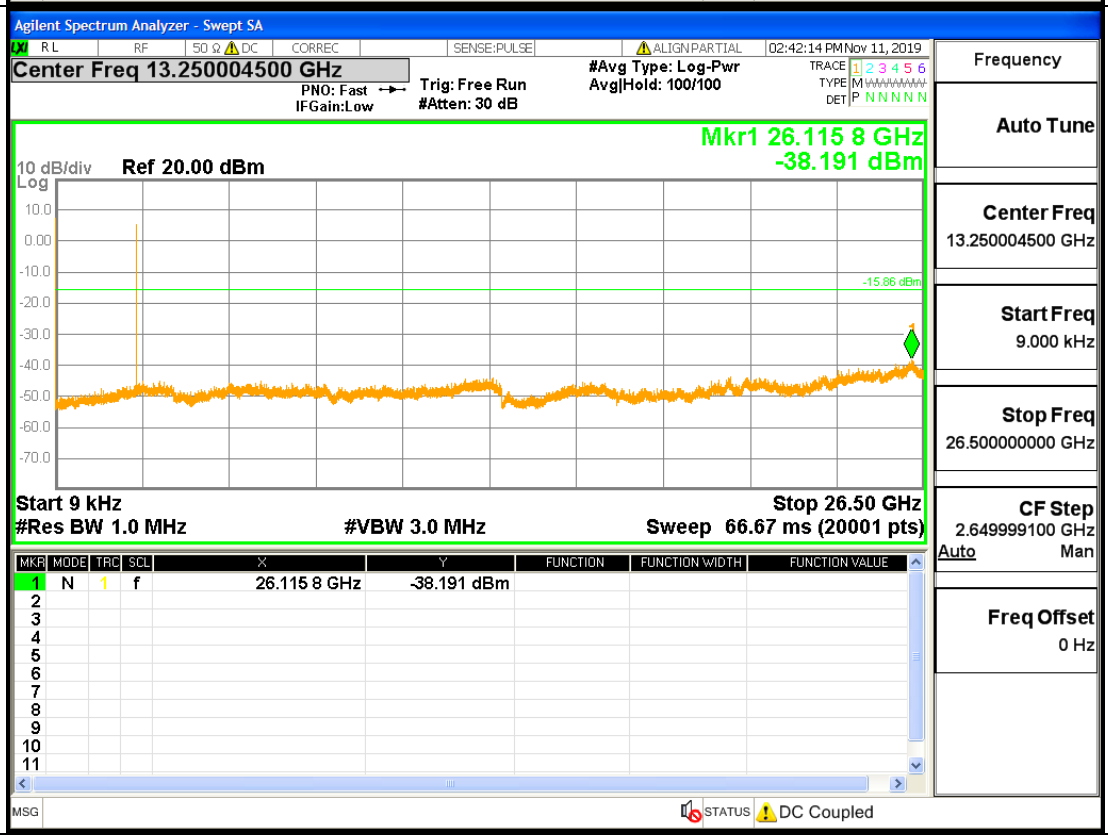
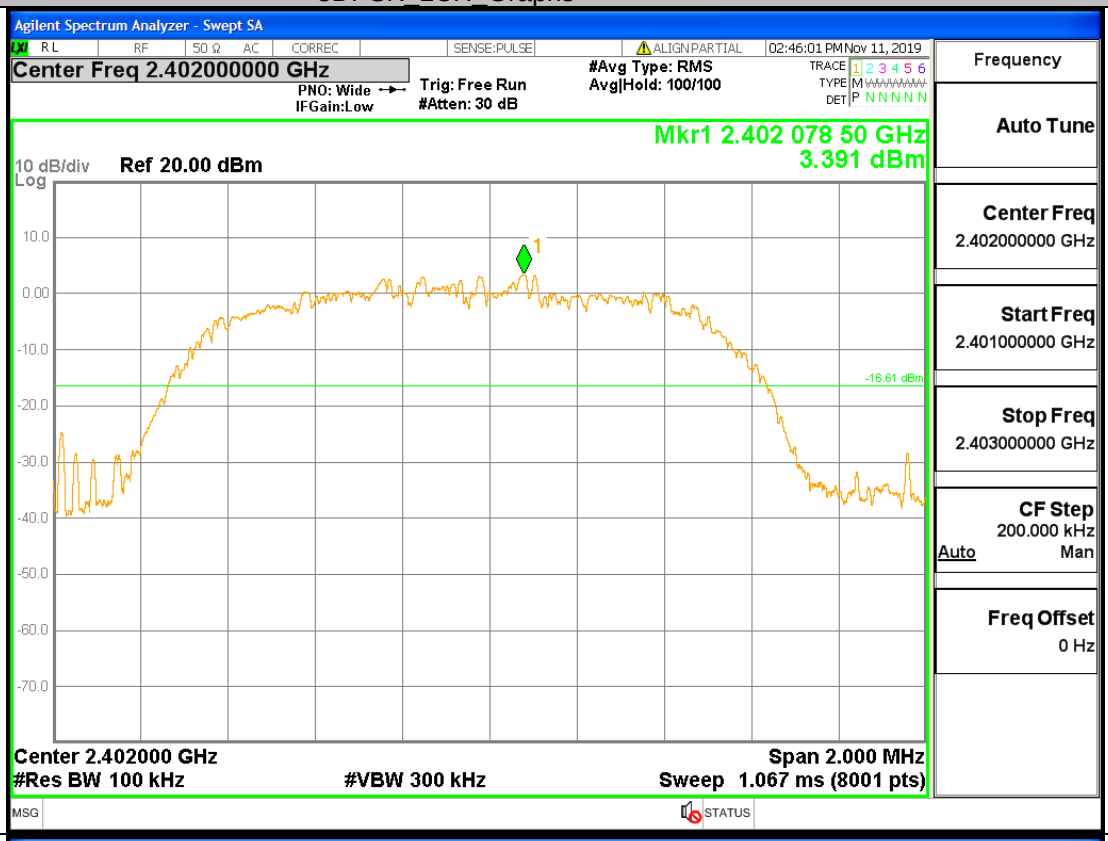
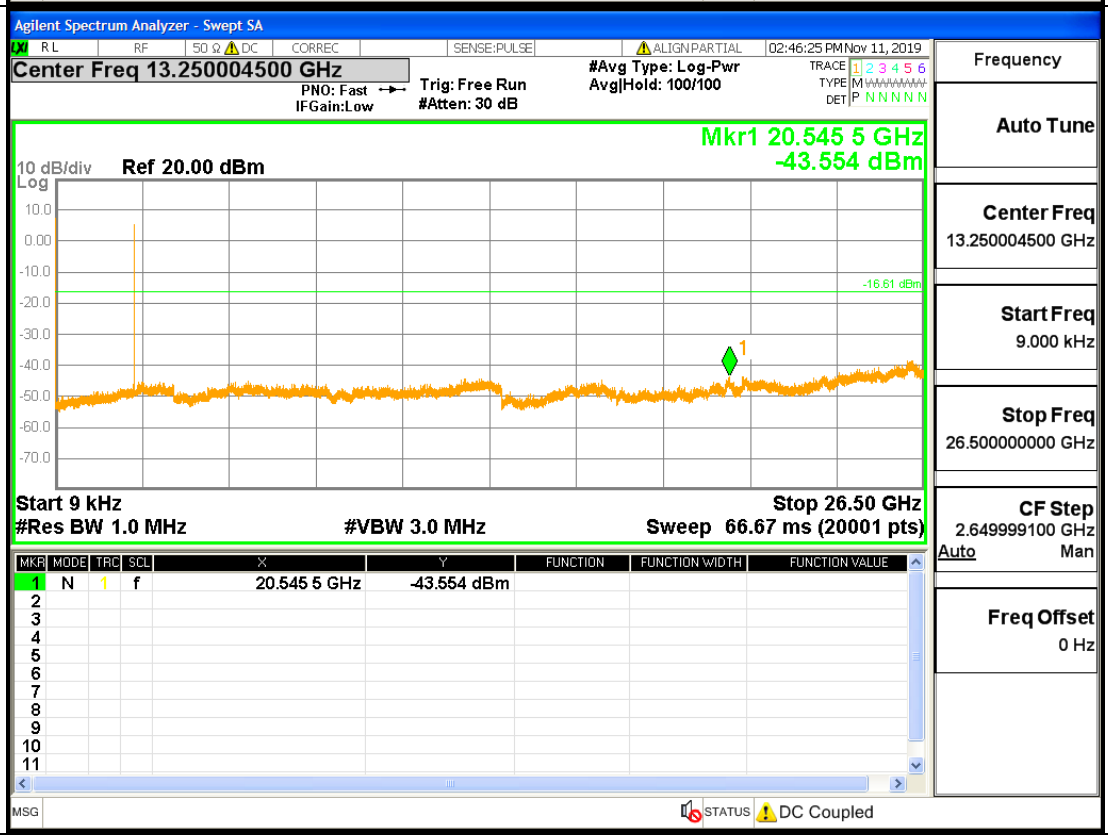
Pref	
Puw	

8DPSK_LCH_Graphs	
Pref	
Puw	

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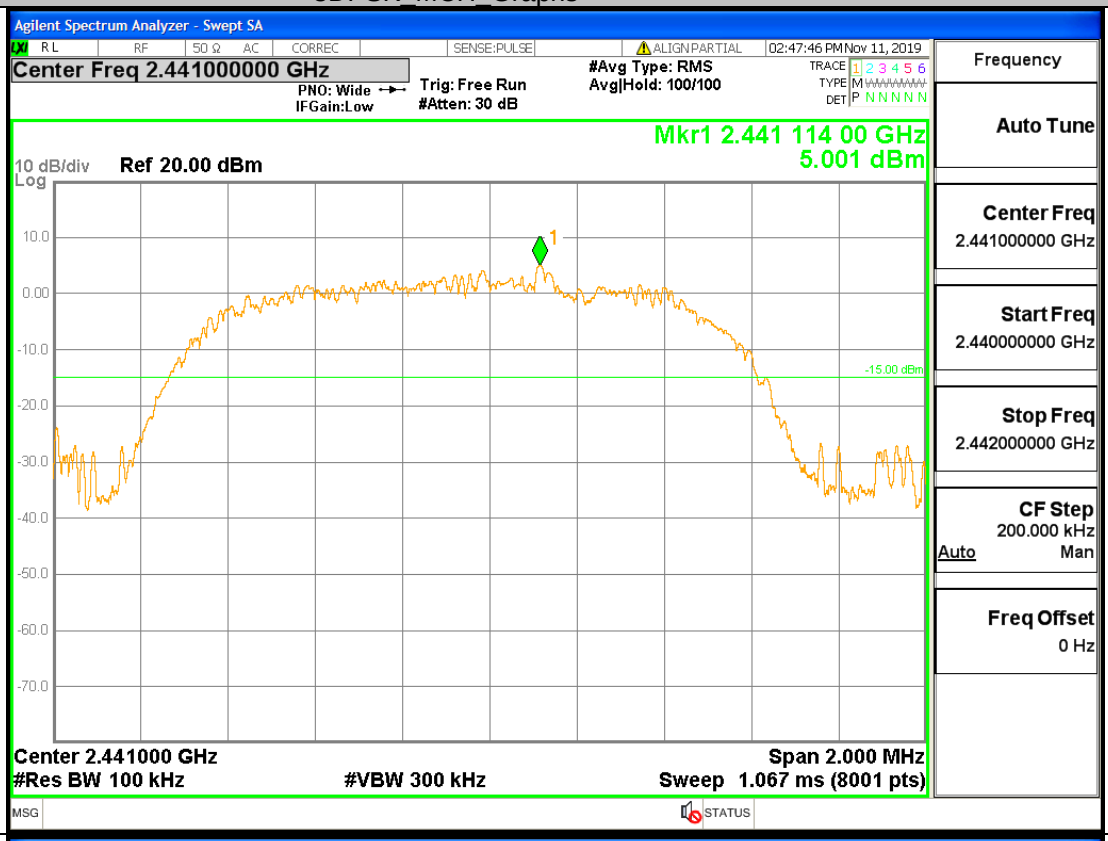
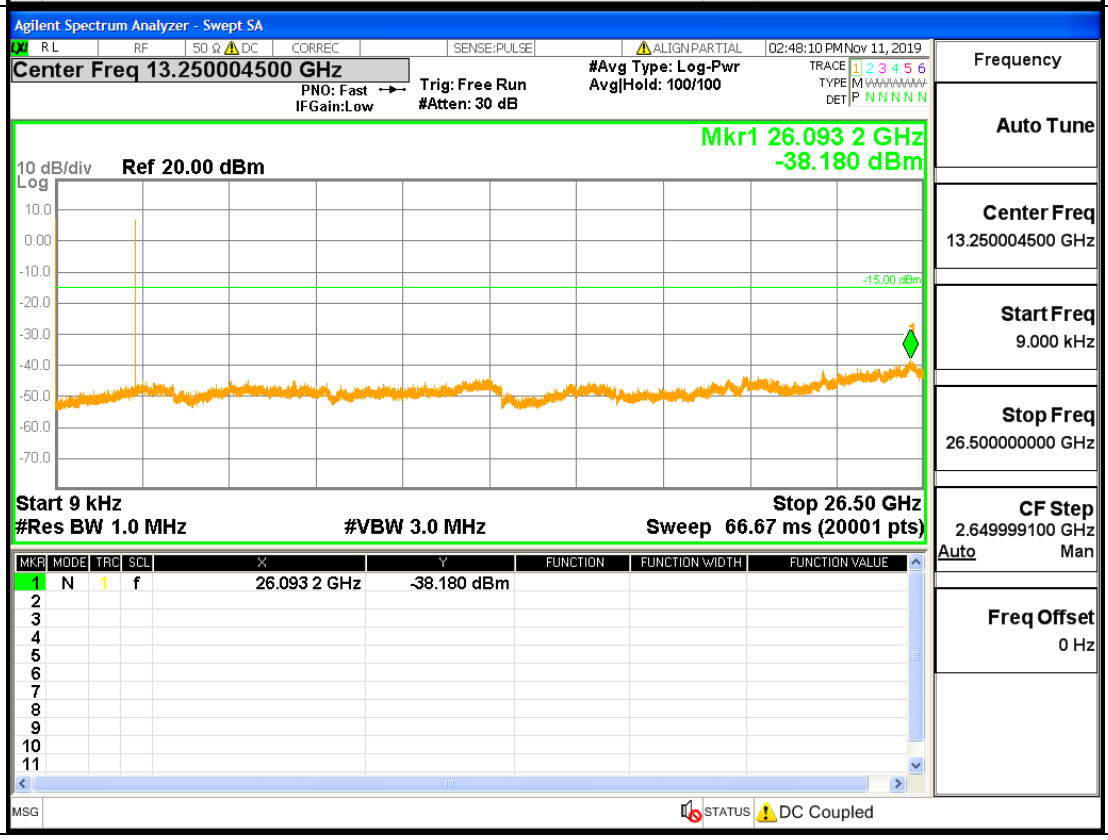
Pref	
Puw	

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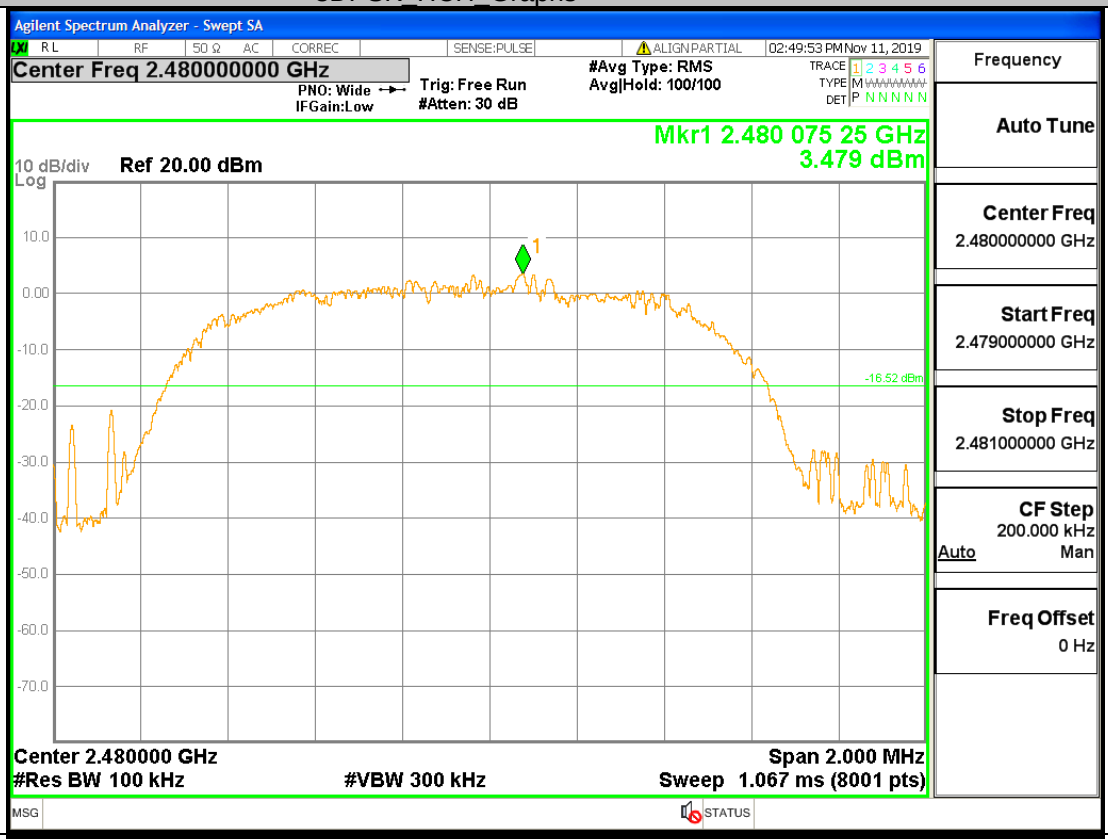
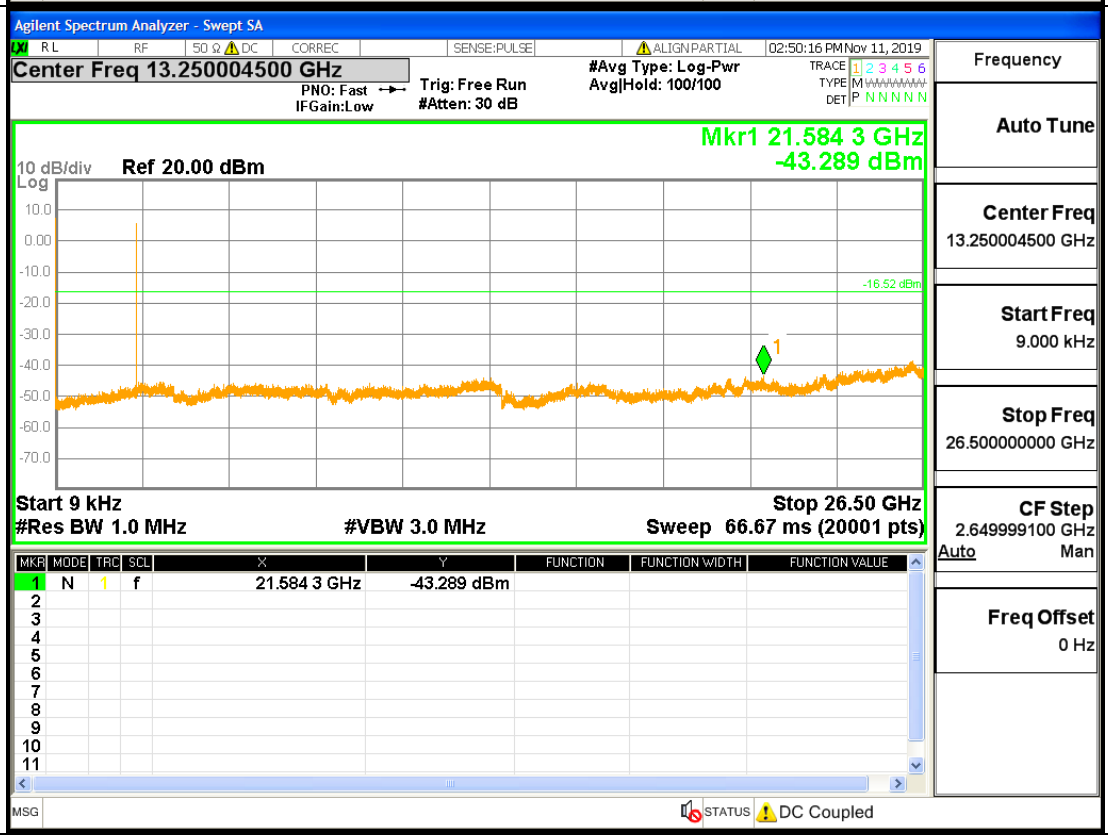
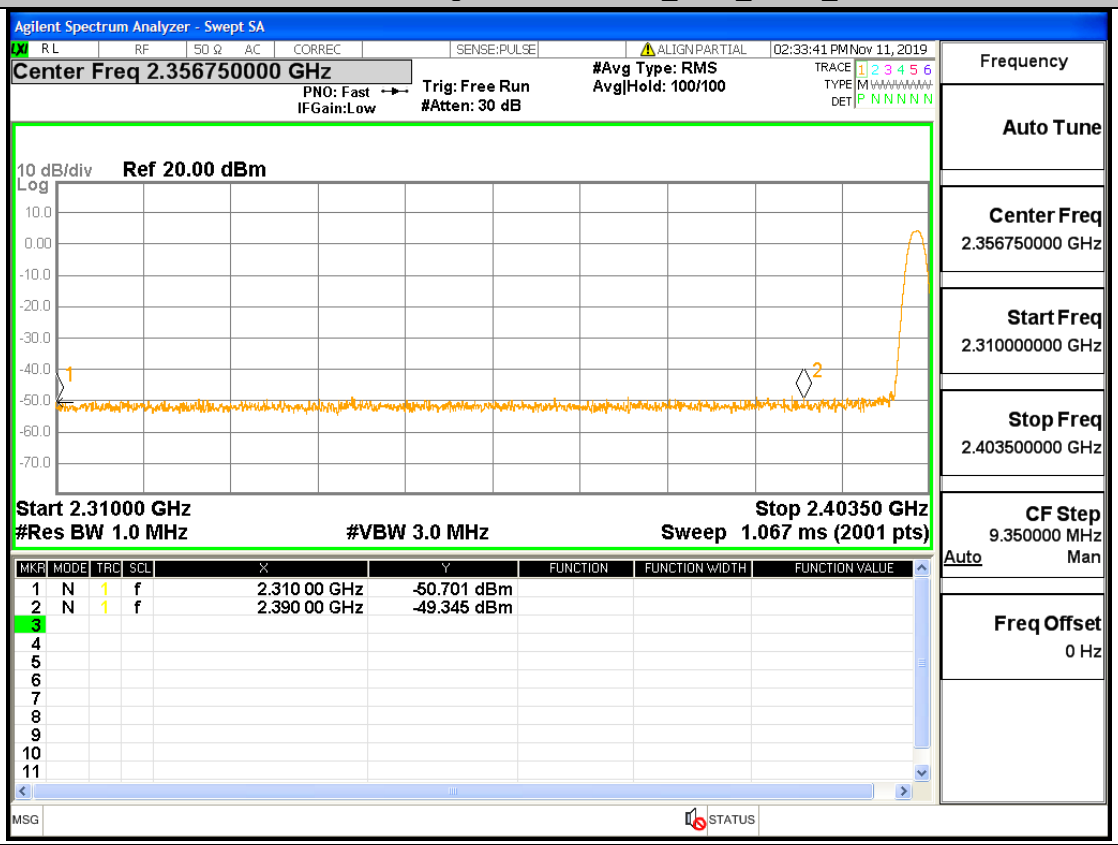
Pref	
Puw	

A.8 Restrict-band band-edge measurements

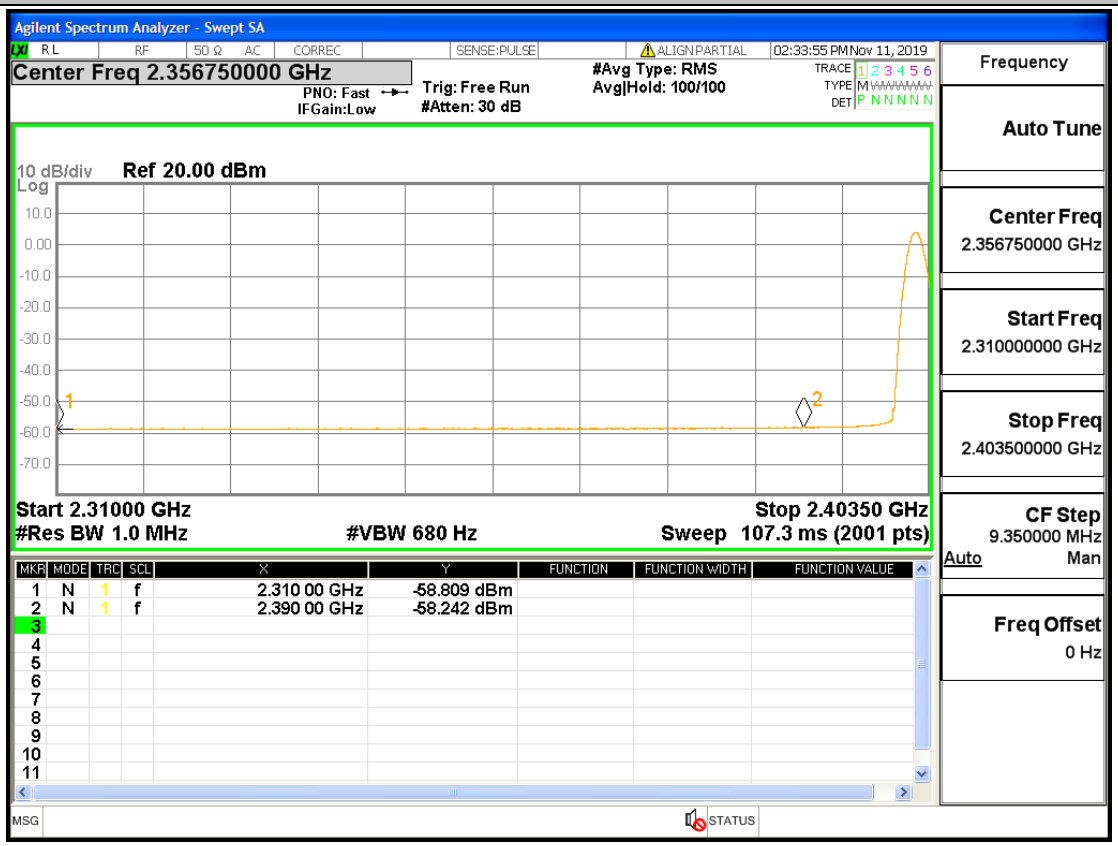
Type	Carrier Frequency (MHz)	Frequency(MHz)	Gain	Ground Factor	Peak Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2390	2.10	0.00	-49.34	47.96	74	Pass
1DH5	2480	2484.251	2.10	0.00	-46.34	50.96	74	Pass
2DH5	2402	2390	2.10	0.00	-50.48	46.82	74	Pass
2DH5	2480	2484.477	2.10	0.00	-45.436	51.86	74	Pass
3DH5	2402	2390	2.10	0.00	-50.34	46.96	74	Pass
3DH5	2480	2483.5	2.10	0.00	-47.51	49.79	74	Pass

Type	Carrier Frequency (MHz)	Frequency(MHz)	Gain	Ground Factor	Average Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2390	2.10	0.00	-58.24	39.06	54	Pass
1DH5	2480	2484.251	2.10	0.00	-53.10	44.20	54	Pass
2DH5	2402	2390	2.10	0.00	-58.30	39.00	54	Pass
2DH5	2480	2484.477	2.10	0.00	-50.78	46.52	54	Pass
3DH5	2402	2390	2.10	0.00	-58.29	39.01	54	Pass
3DH5	2480	2483.5	2.10	0.00	-50.75	46.55	54	Pass

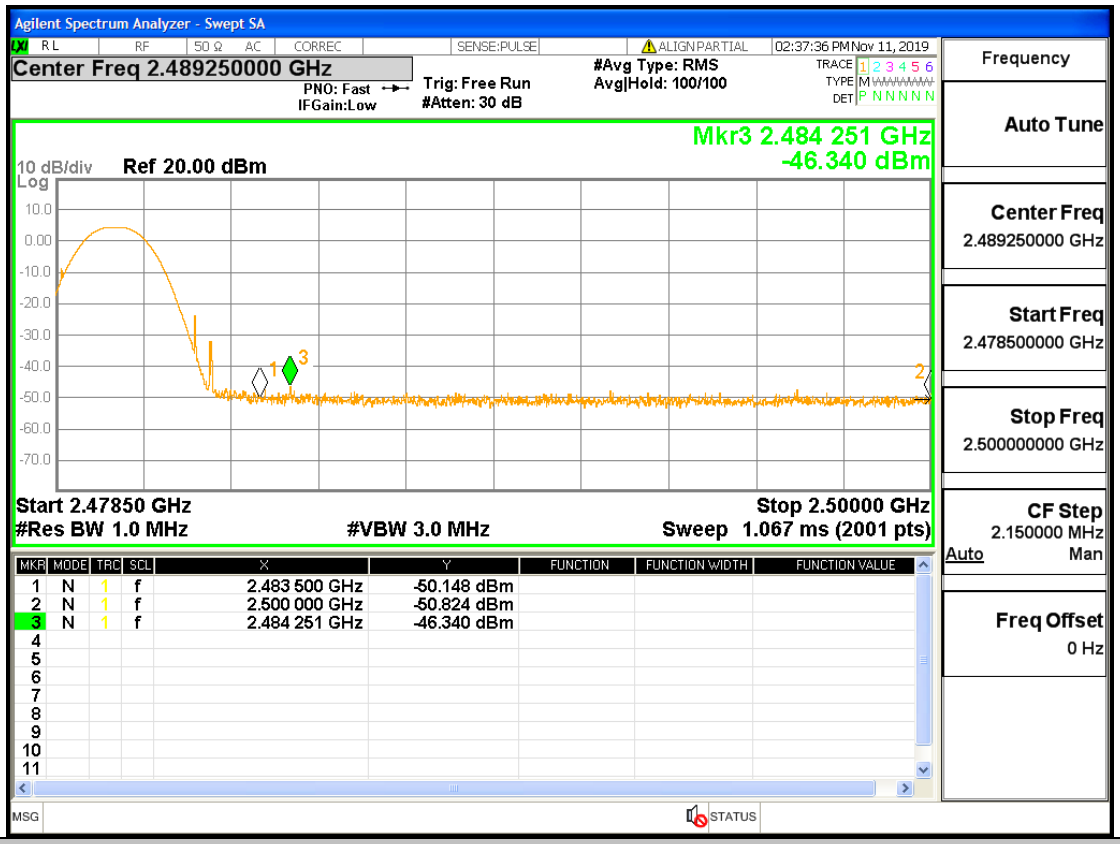
Restrict-band band-edge measurements_2402_PEAK_DH5



Restrict-band band-edge measurements_2402_AV_DH5

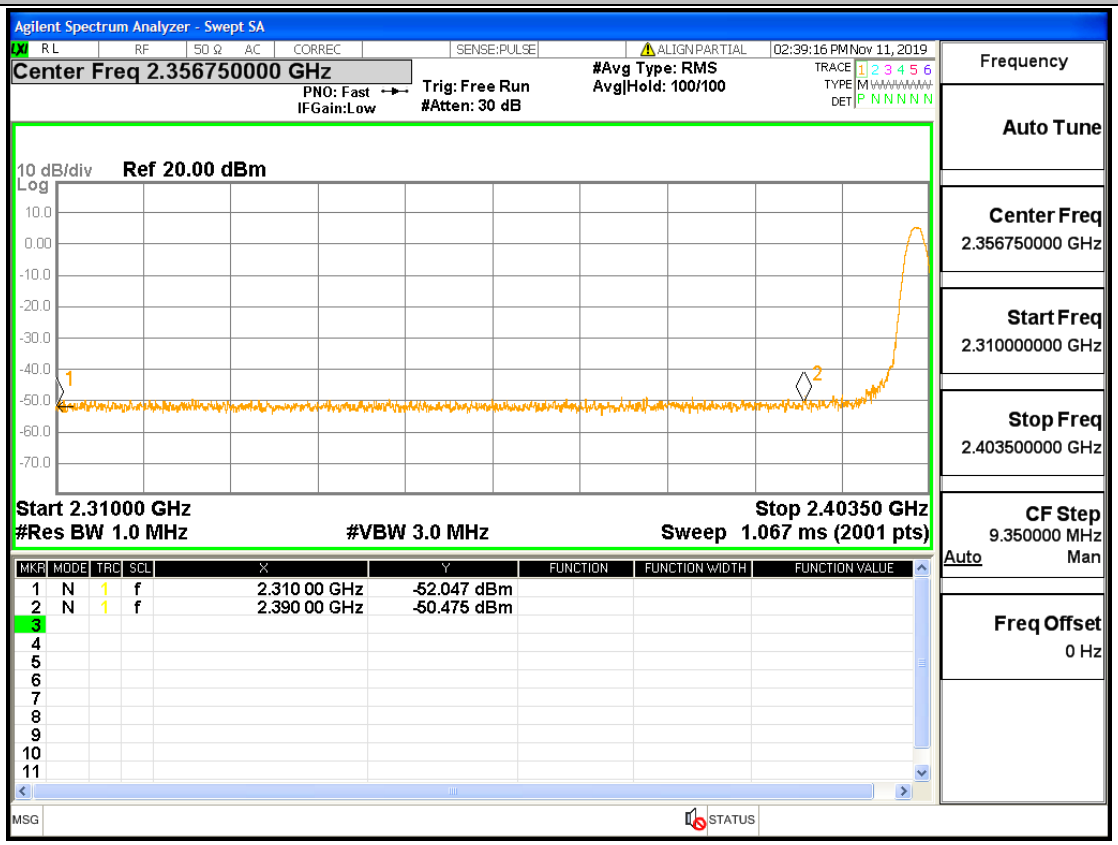


Restrict-band band-edge measurements_2480_PEAK_DH5

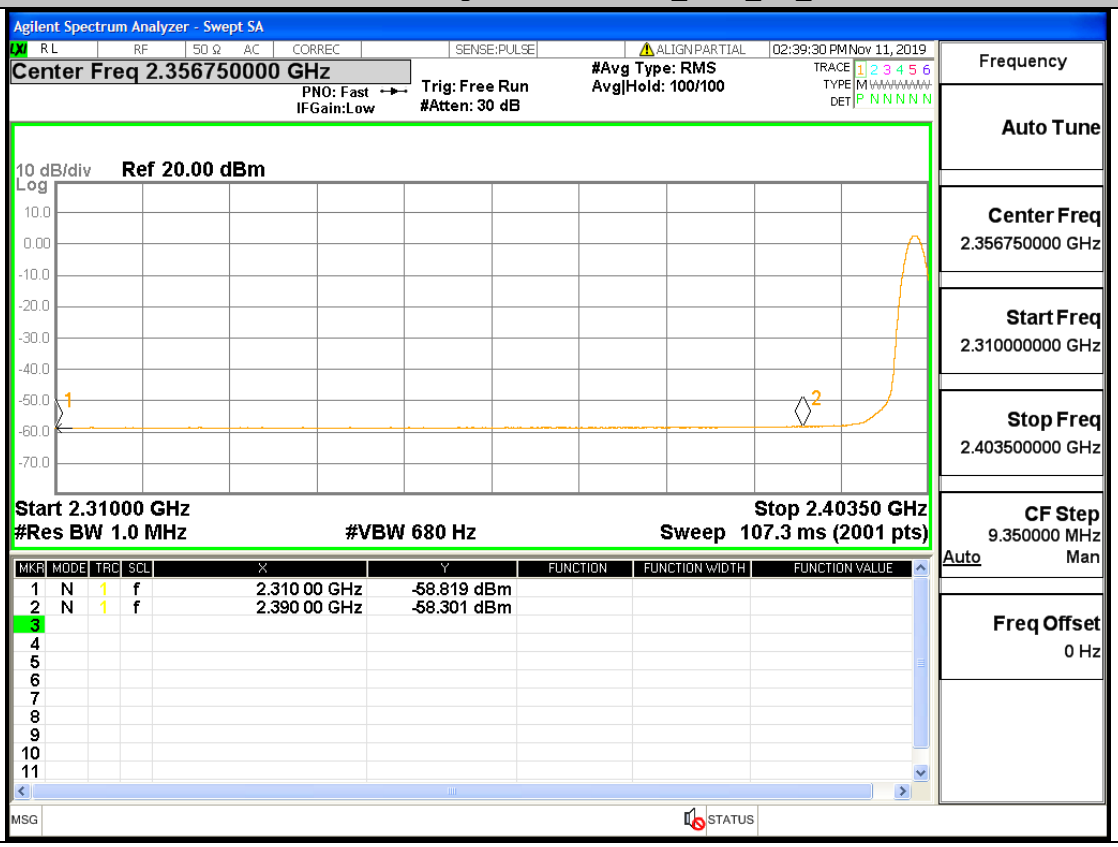


Restrict-band band-edge measurements_2480_AV_DH5

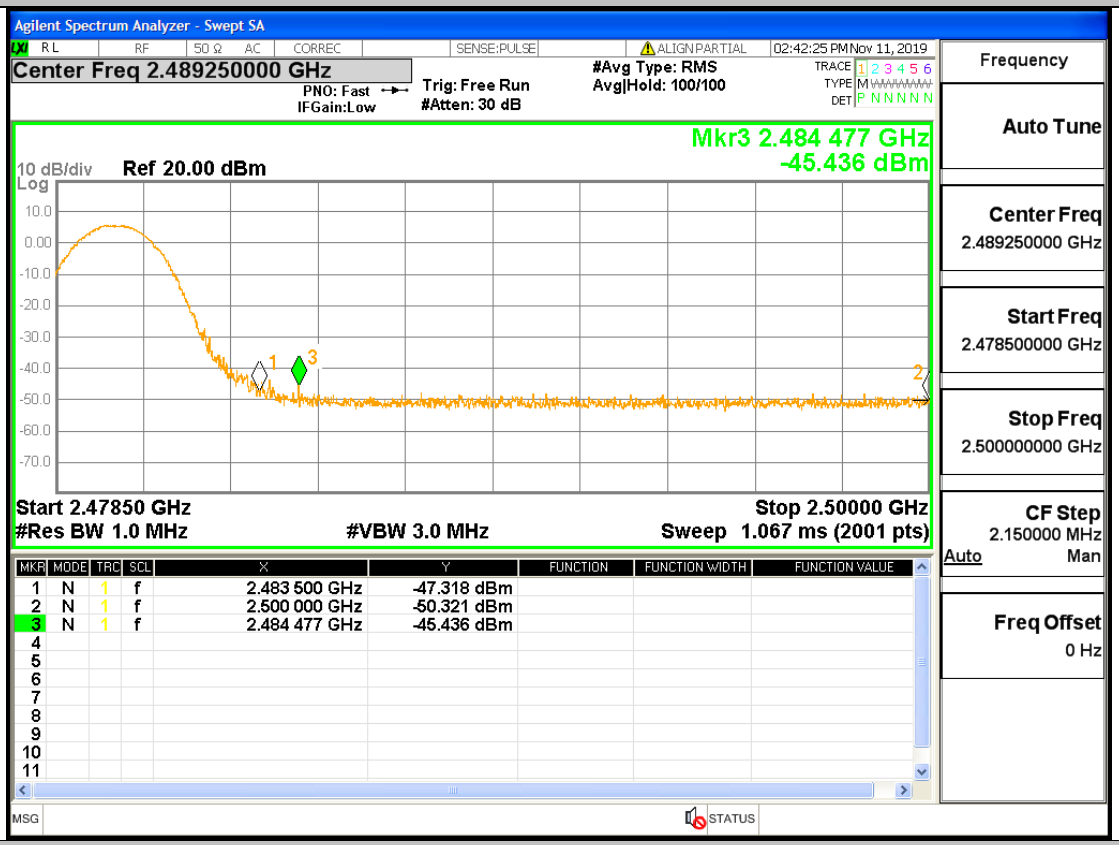
Restrict-band band-edge measurements_2402_PEAK_2DH5



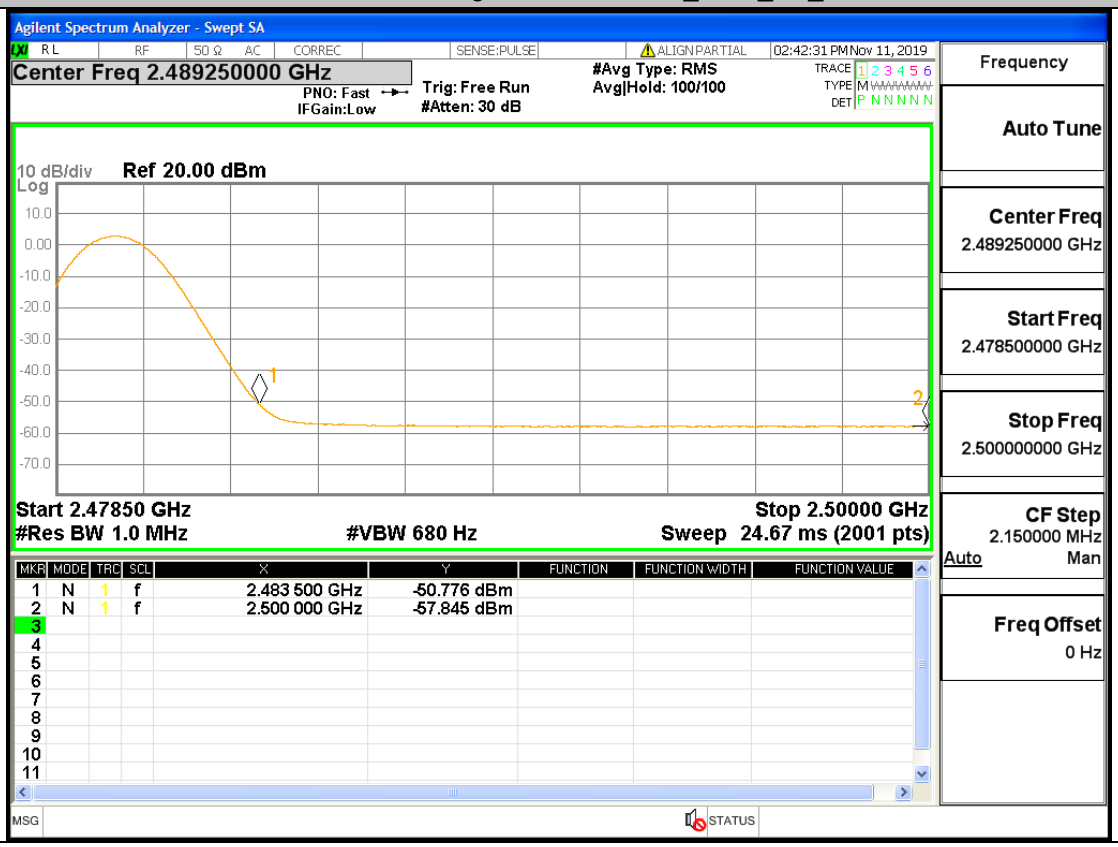
Restrict-band band-edge measurements_2402_AV_2DH5



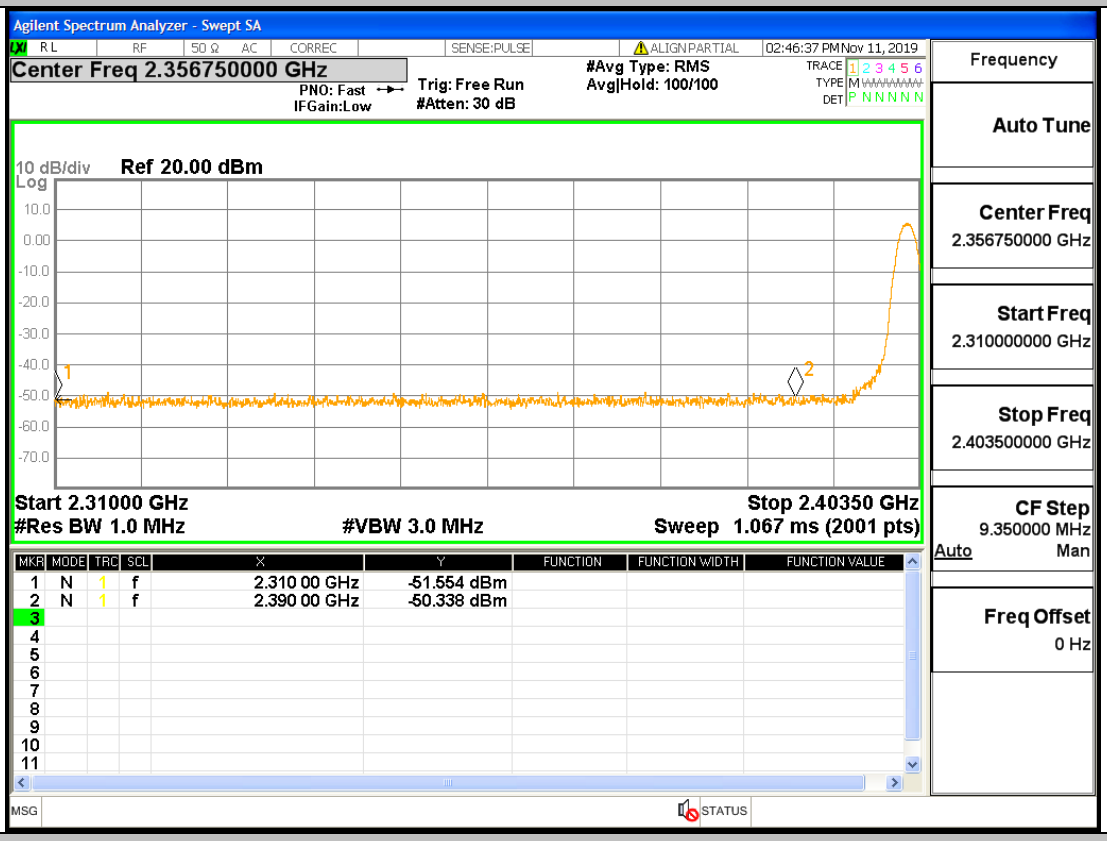
Restrict-band band-edge measurements_2480_PEAK_2DH5



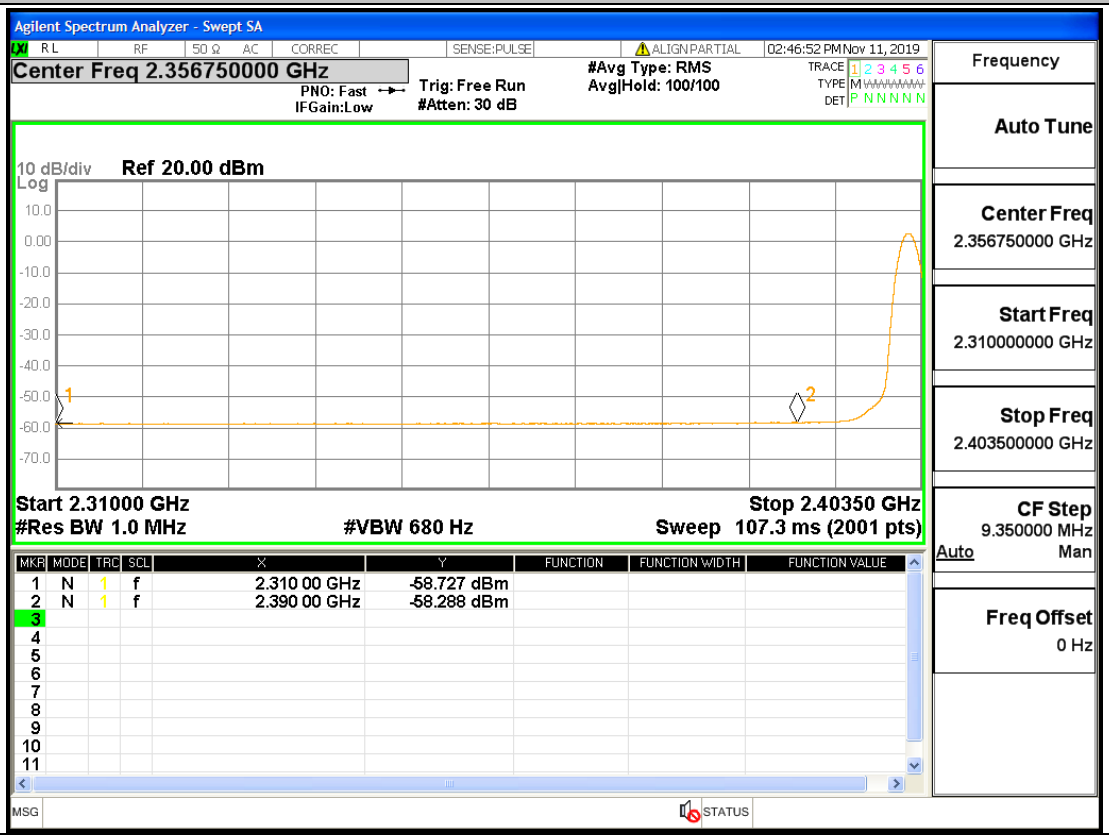
Restrict-band band-edge measurements_2480_AV_2DH5



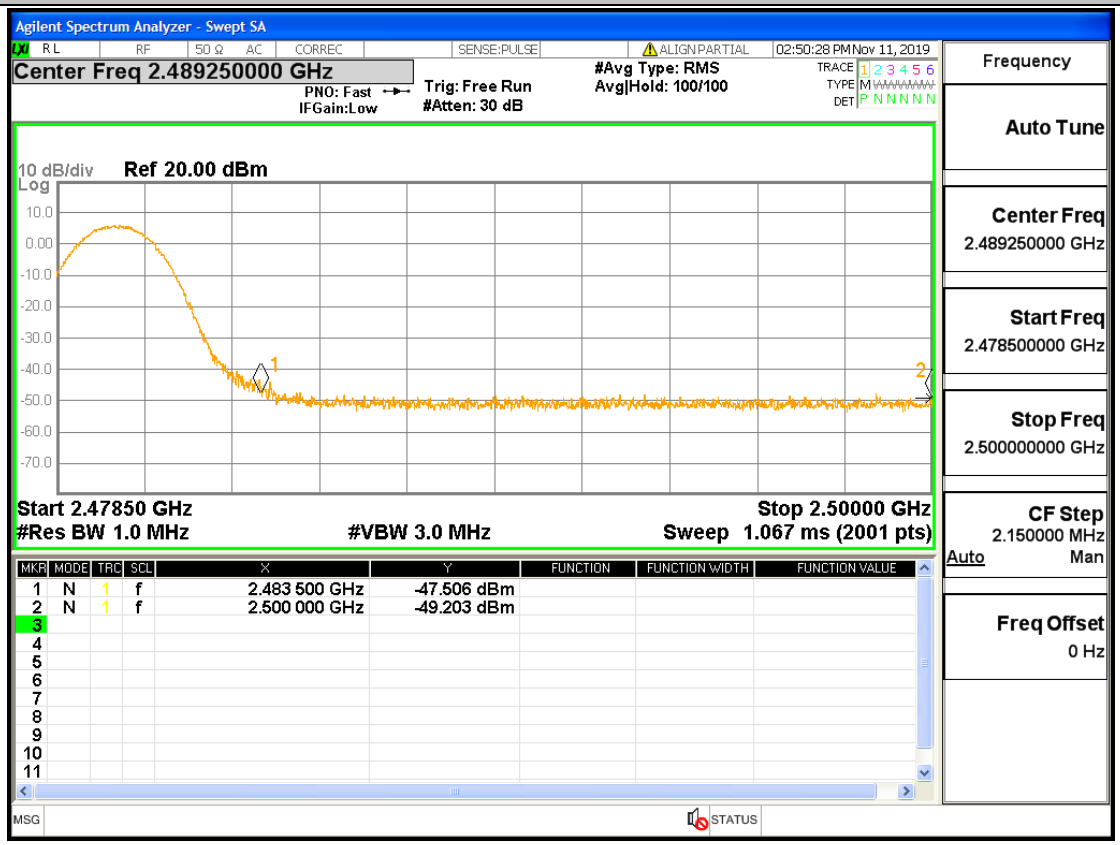
Restrict-band band-edge measurements_2402_PEAK_3DH5



Restrict-band band-edge measurements_2402_AV_3DH5



Restrict-band band-edge measurements_2480_PEAK_3DH5



Restrict-band band-edge measurements_2480_AV_3DH5