Appendix A

RF Test Data for BT V4.1 (BDR/EDR) (Conducted Measurement)

Product Name: PCSGOB1018M-Series

Trade Mark: PC SMART

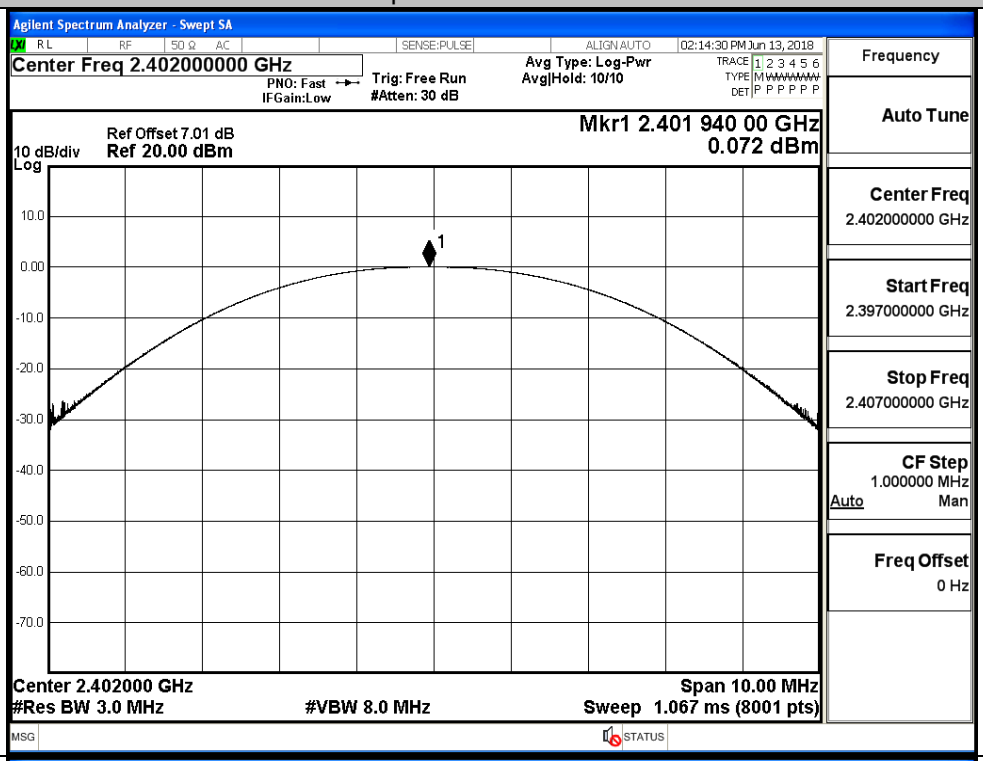
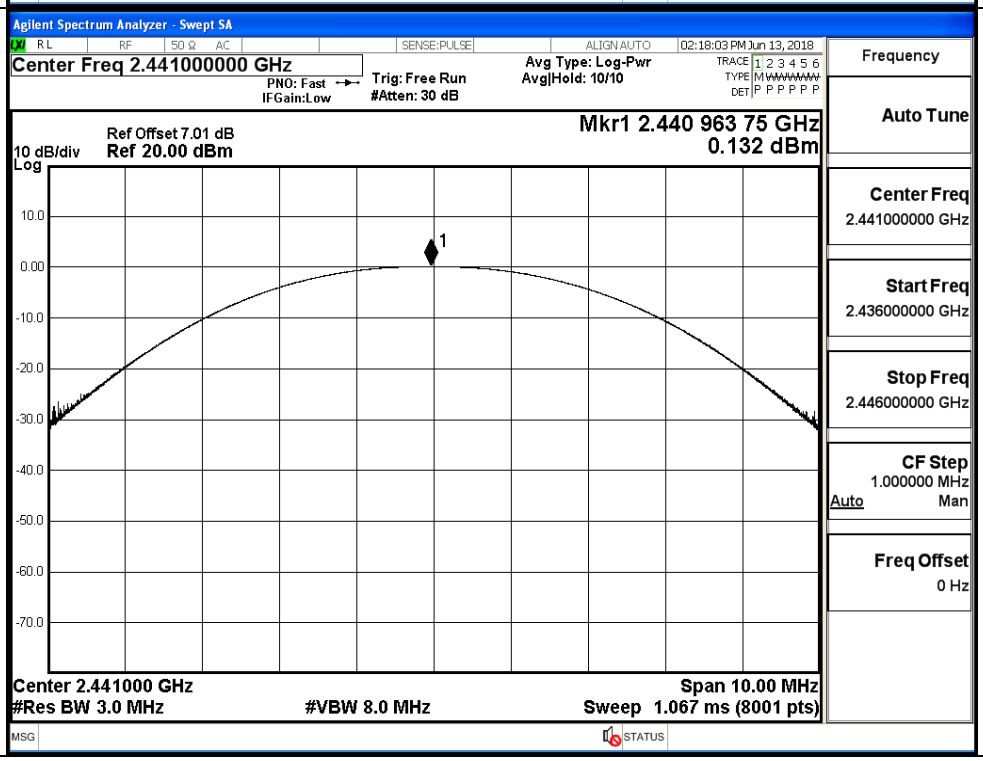
Test Model: PCSGOB1018M-A

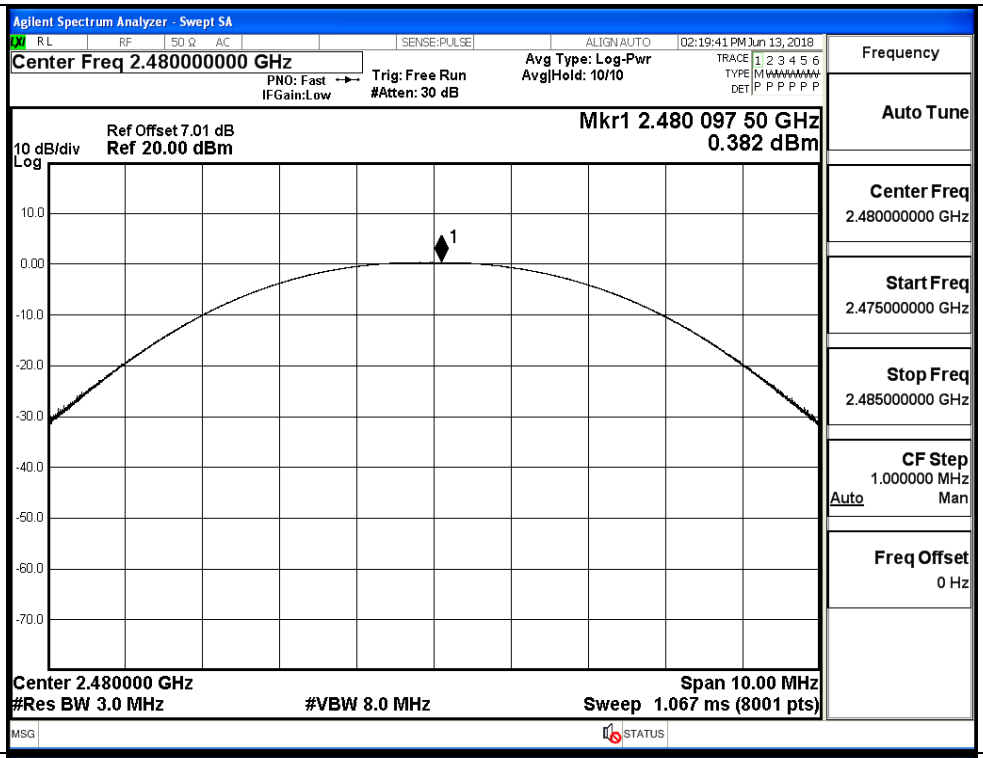
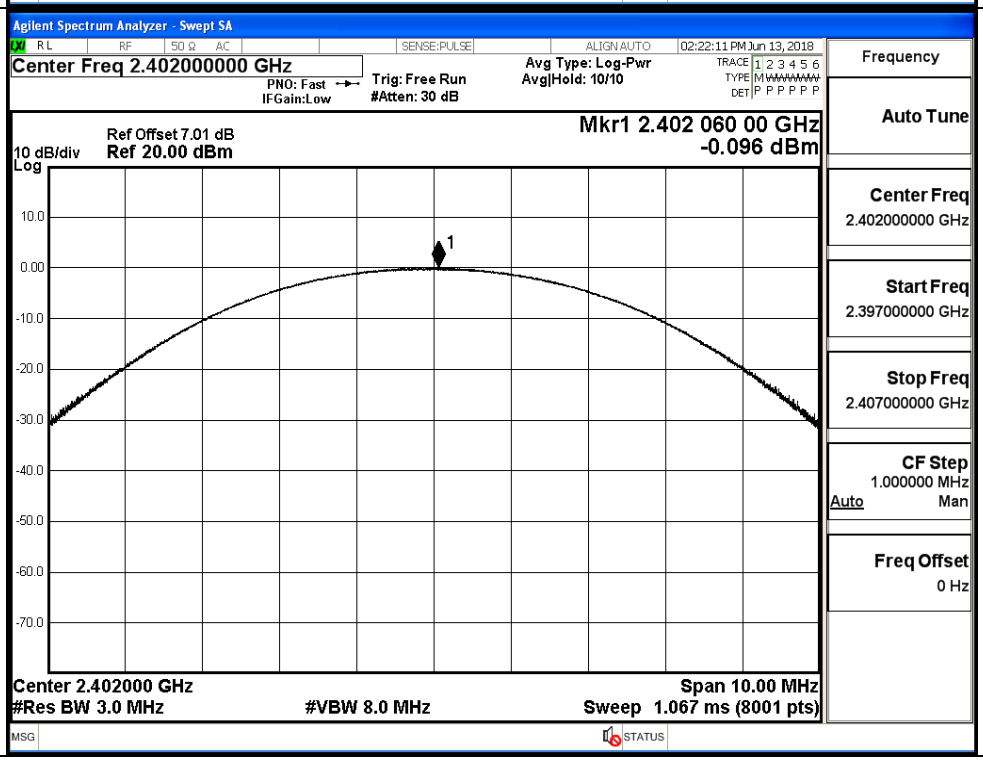
Environmental Conditions

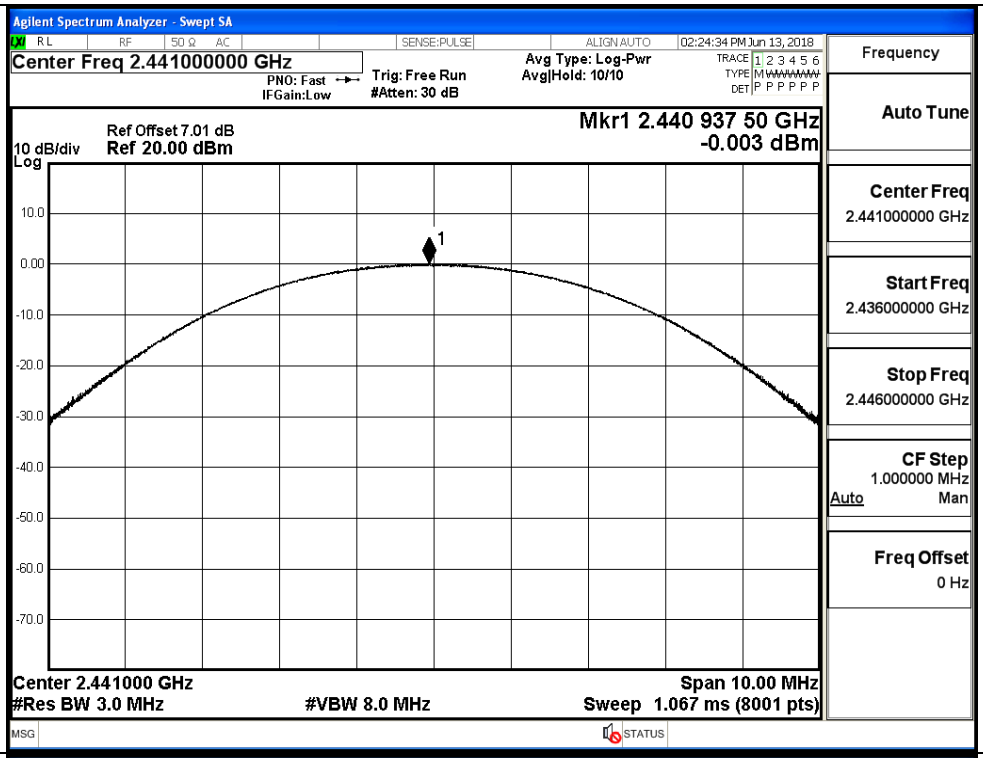
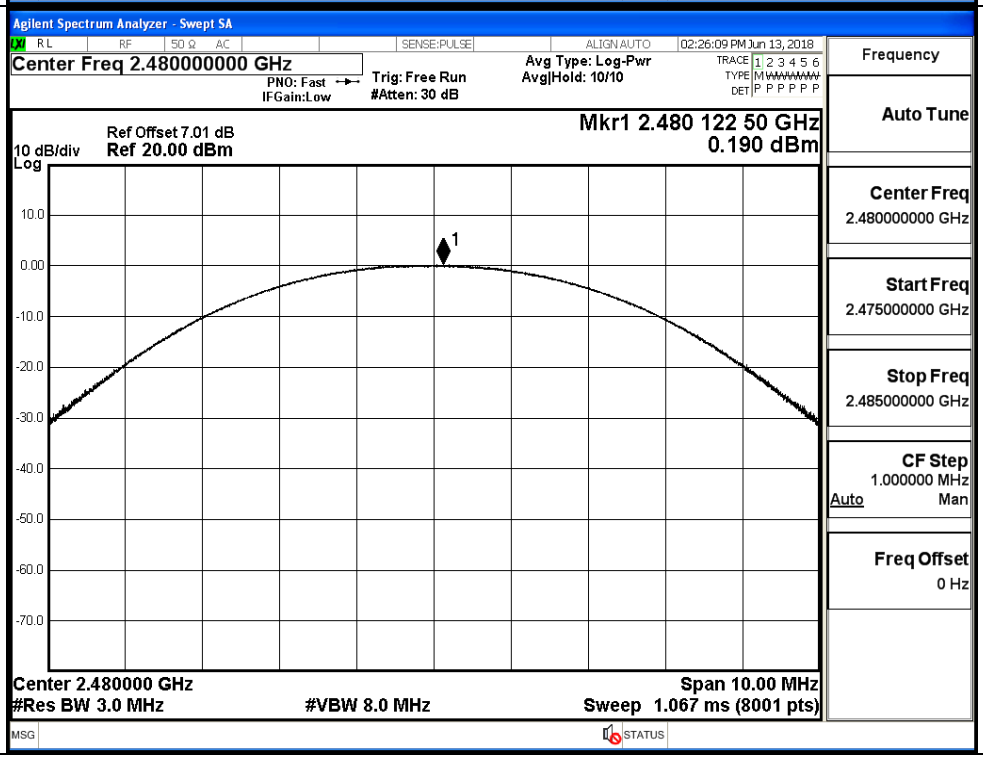
Temperature:	23.2 ° C
Relative Humidity:	52.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Wilson.Hong
Supervised by:	Jayden.Zhuo

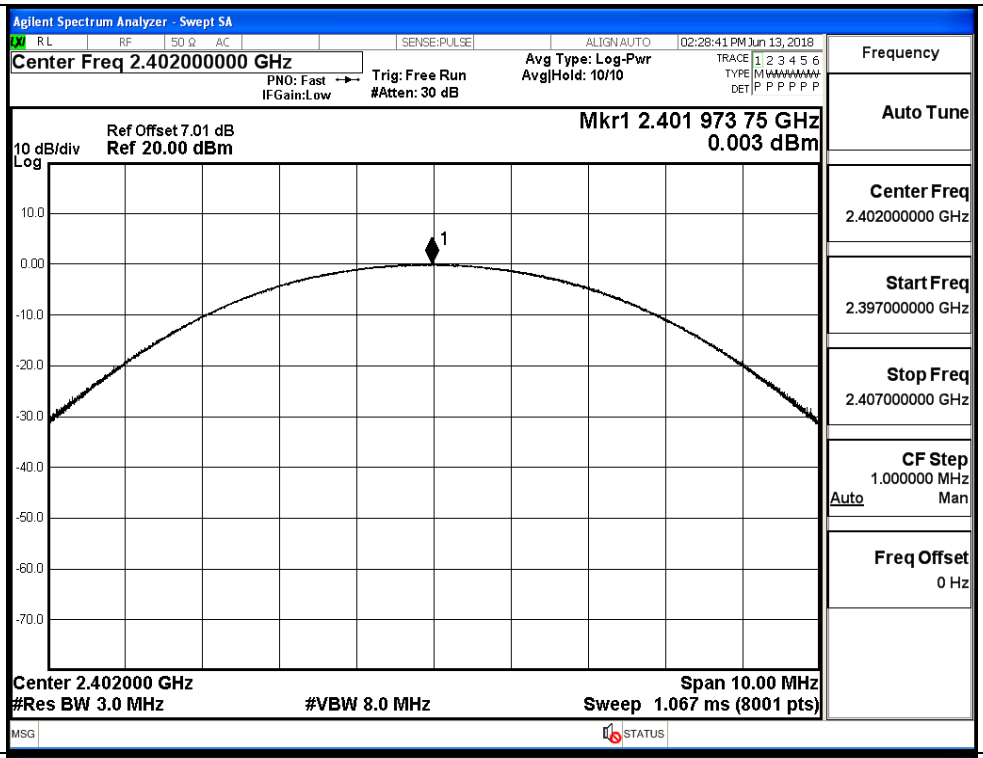
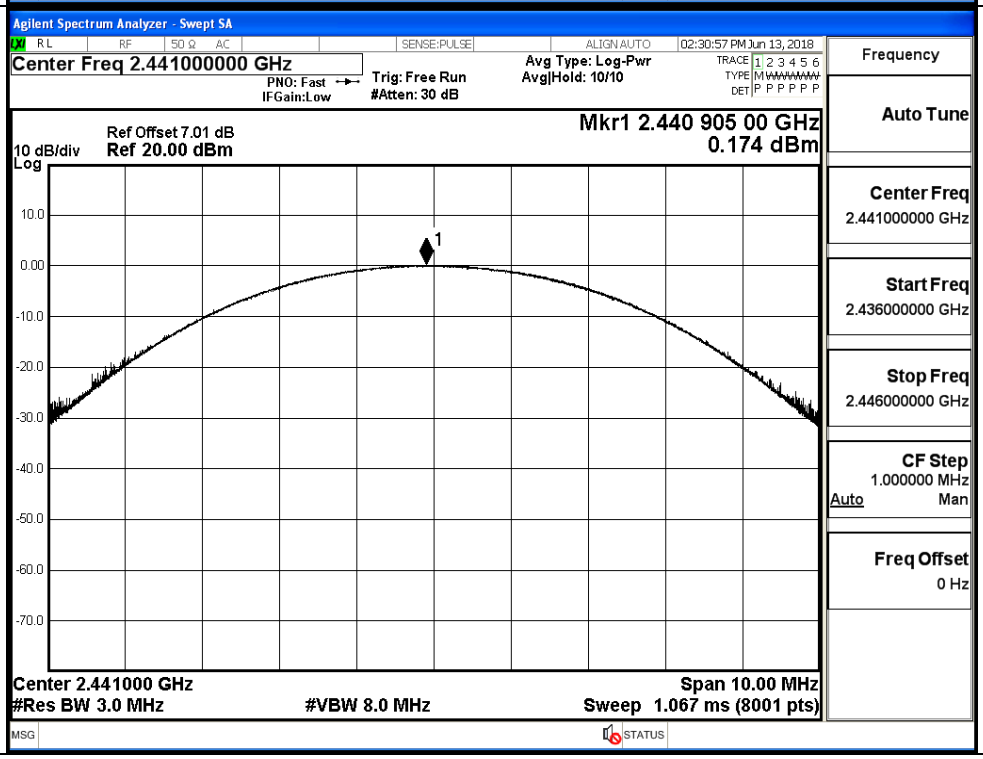
A.1 Maximum Conducted Peak Output Power

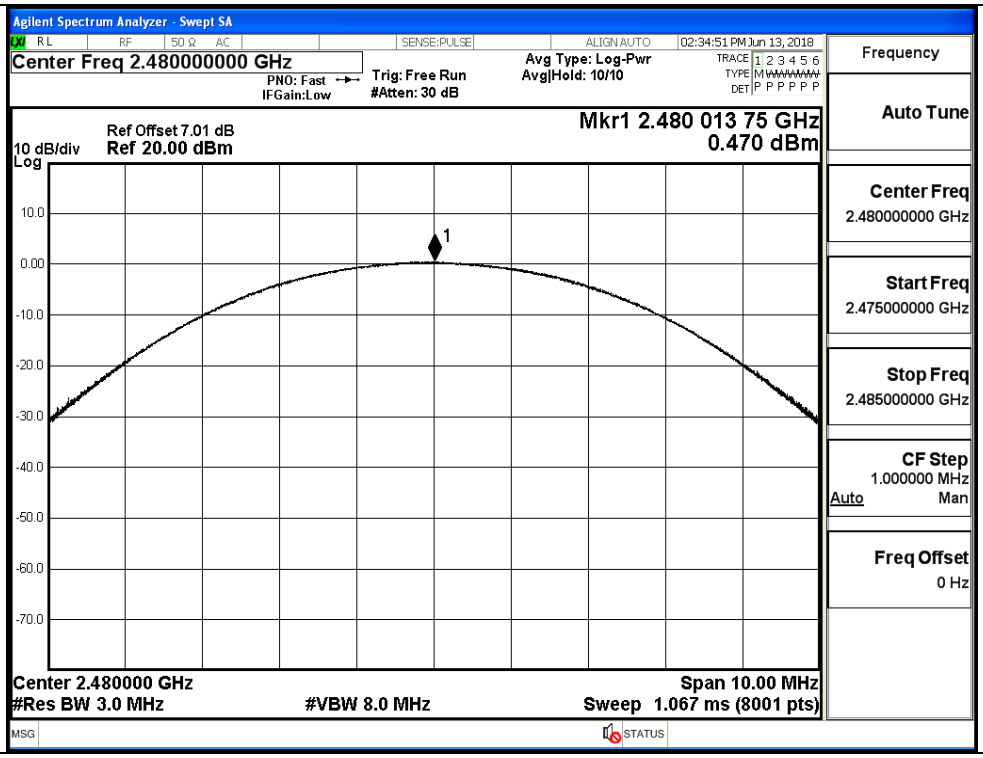
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.072	30	PASS
	MCH	0.132	30	PASS
	HCH	0.382	30	PASS
π/4DQPSK	LCH	-0.096	21	PASS
	MCH	-0.003	21	PASS
	HCH	0.190	21	PASS
8DPSK	LCH	0.003	21	PASS
	MCH	0.174	21	PASS
	HCH	0.470	21	PASS

Test Graphs		
GFSK/LCH		
GFSK/MCH		

GFSK/HCH	
π/4DQPSK/LCH	

π/4DQPSK/MCH	
π/4DQPSK/HCH	

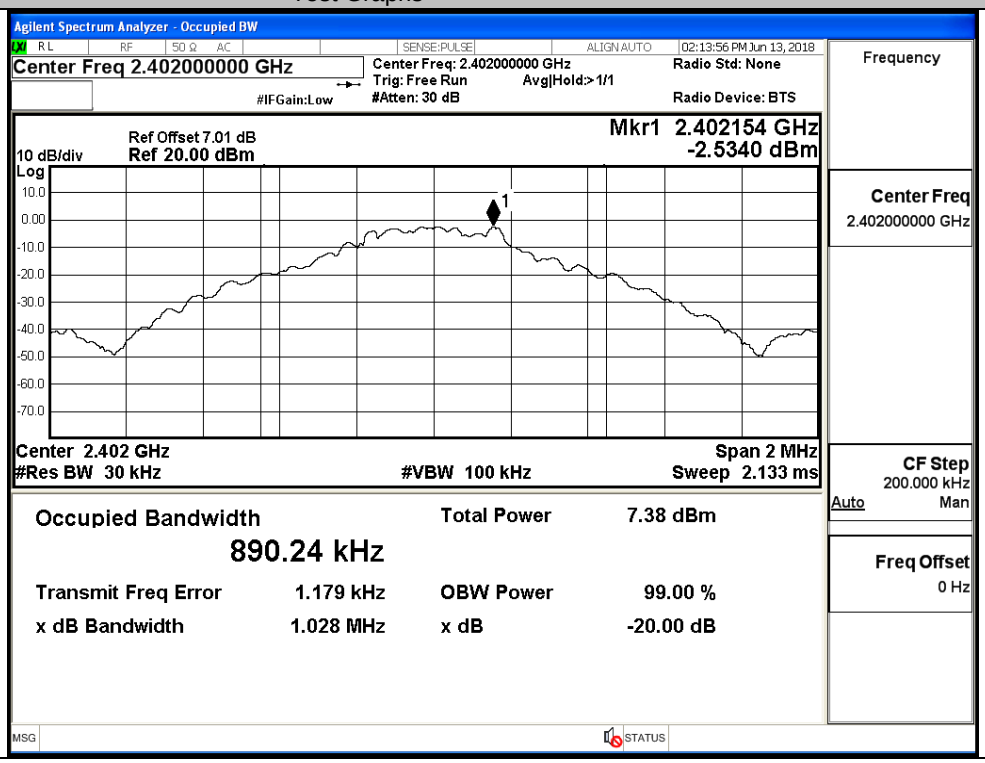
8DPSK/LCH	
8DPSK/MCH	

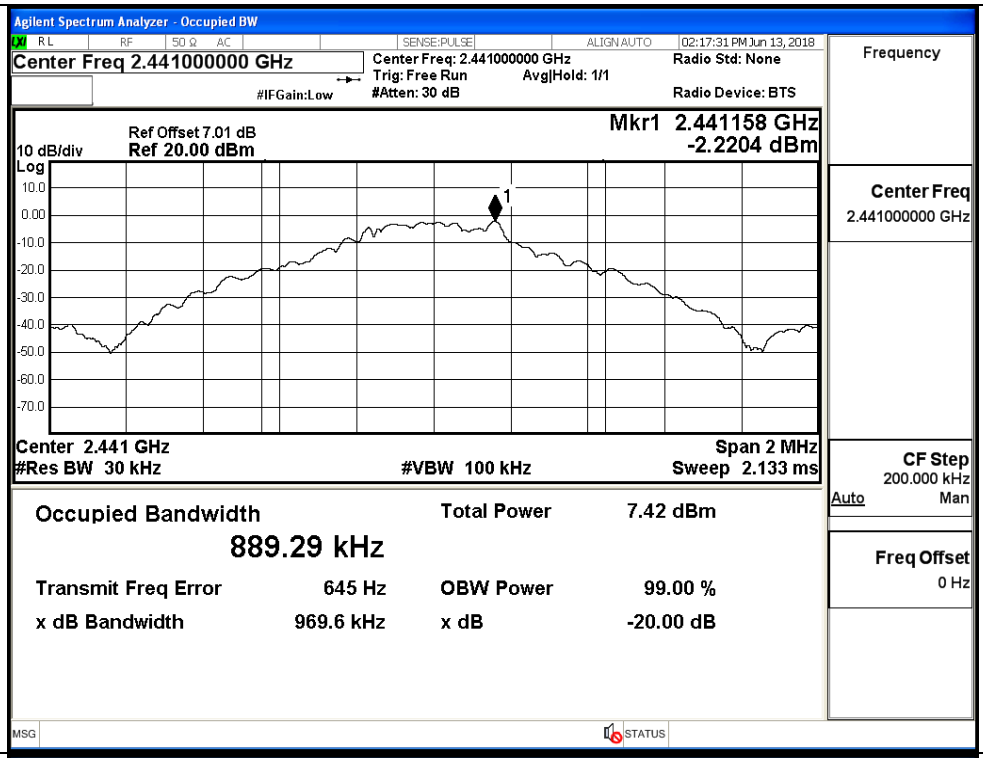
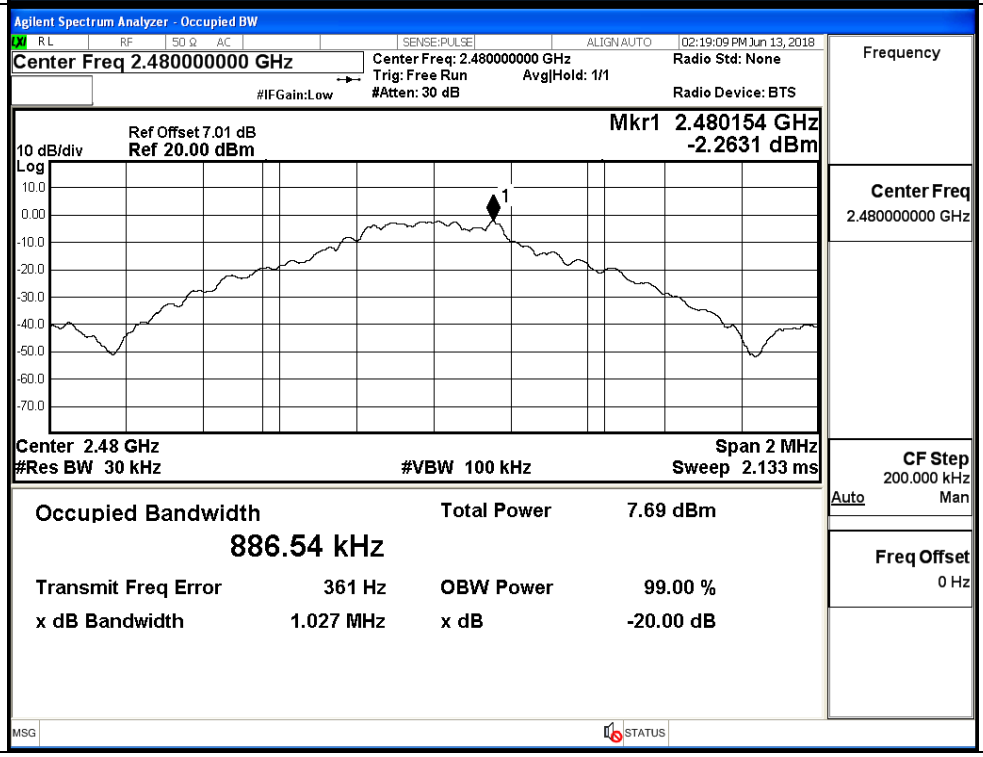
8DPSK/HCH	

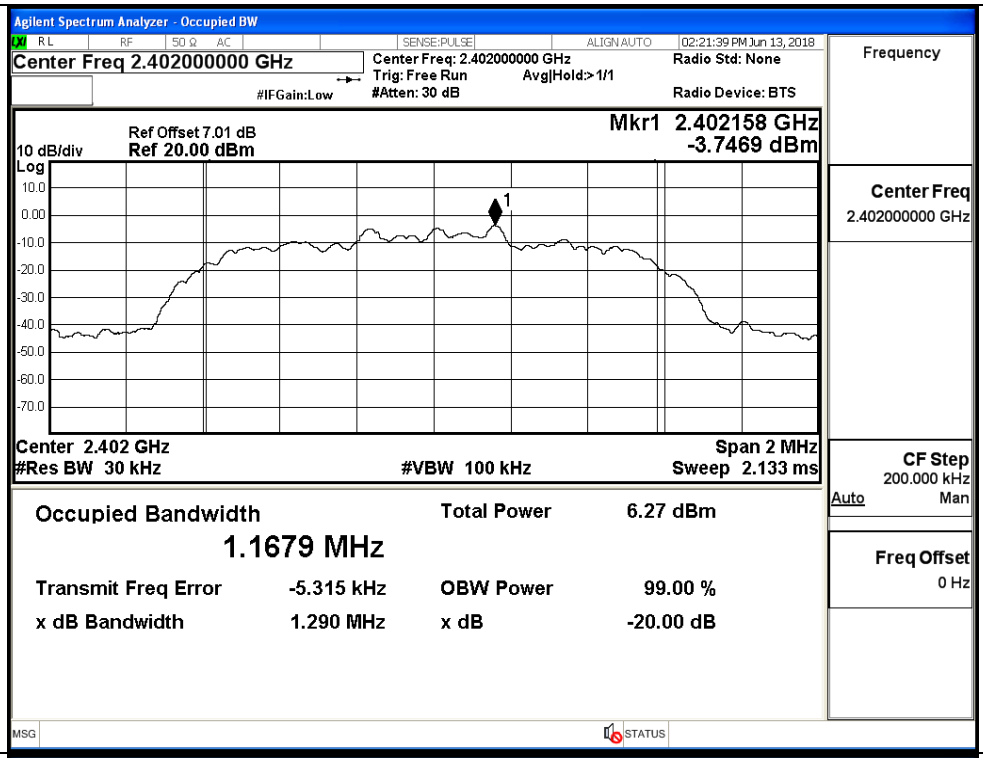
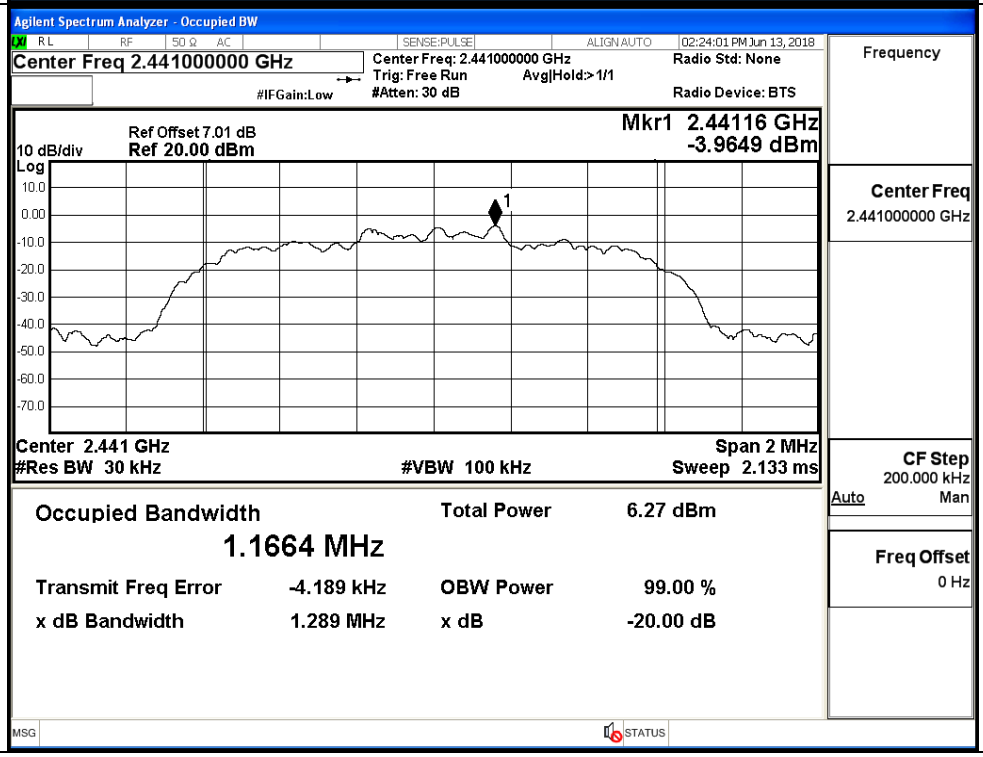
Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 10/10
02:34:51 PM Jun 13, 2018
Ref Offset 7.01 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 2.480 013 75 GHz
0.470 dBm
Center 2.480000 GHz
#Res BW 3.0 MHz
#VBW 8.0 MHz
Span 10.00 MHz
Sweep 1.067 ms (8001 pts)
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.475000000 GHz
Stop Freq
2.485000000 GHz
CF Step
1.000000 MHz
Auto
Man
Freq Offset
0 Hz

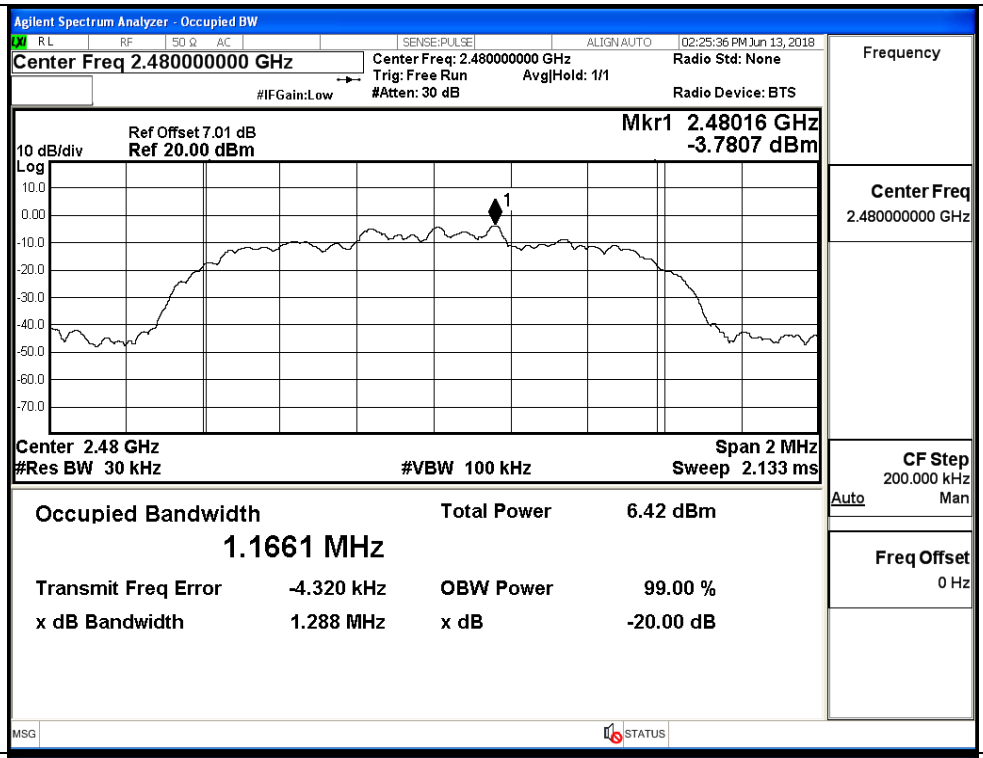
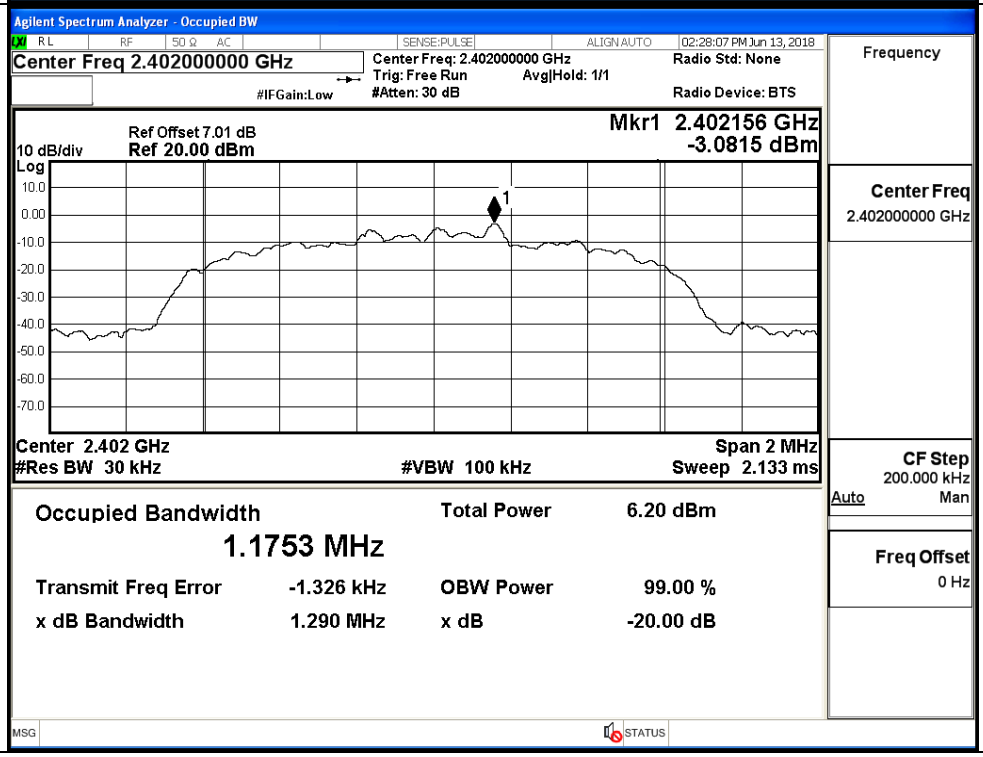
A.2 20dB Bandwidth

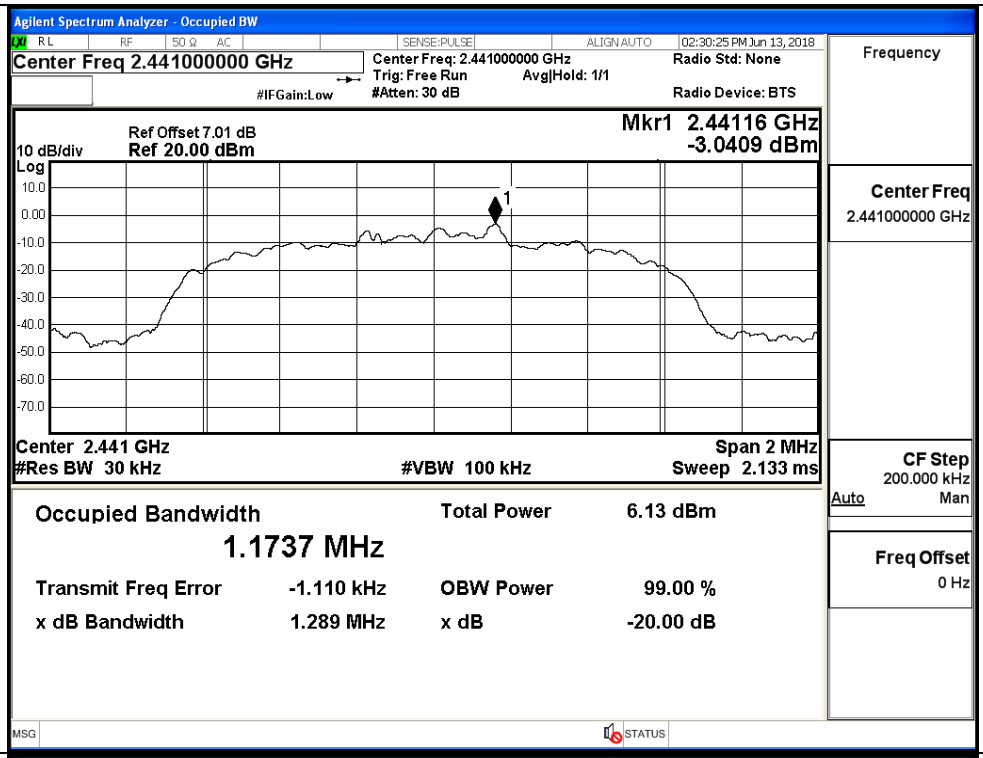
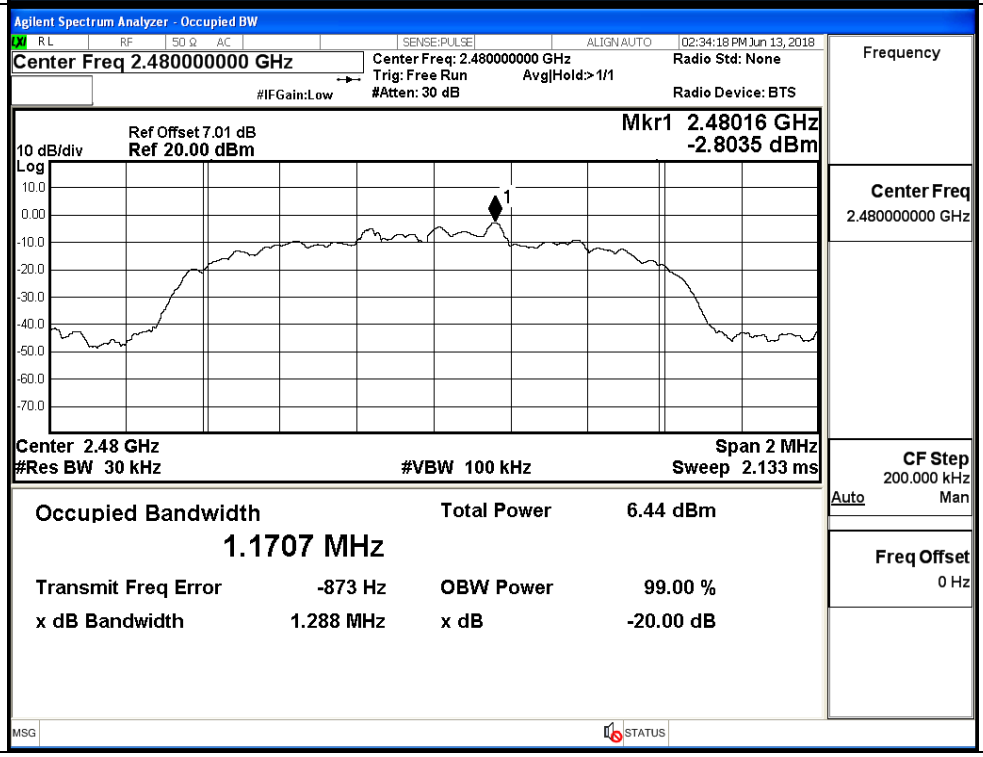
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.028	Not Specified	PASS
	MCH	0.9696	Not Specified	PASS
	HCH	1.027	Not Specified	PASS
π/4DQPSK	LCH	1.290	Not Specified	PASS
	MCH	1.289	Not Specified	PASS
	HCH	1.288	Not Specified	PASS
8DPSK	LCH	1.290	Not Specified	PASS
	MCH	1.289	Not Specified	PASS
	HCH	1.288	Not Specified	PASS

Test Graphs	
GFSK/LCH	

GFSK/MCH	
GFSK/HCH	

π/4DQPSK/LCH	
π/4DQPSK/MCH	

π/4DQPSK/HCH	
8DPSK/LCH	

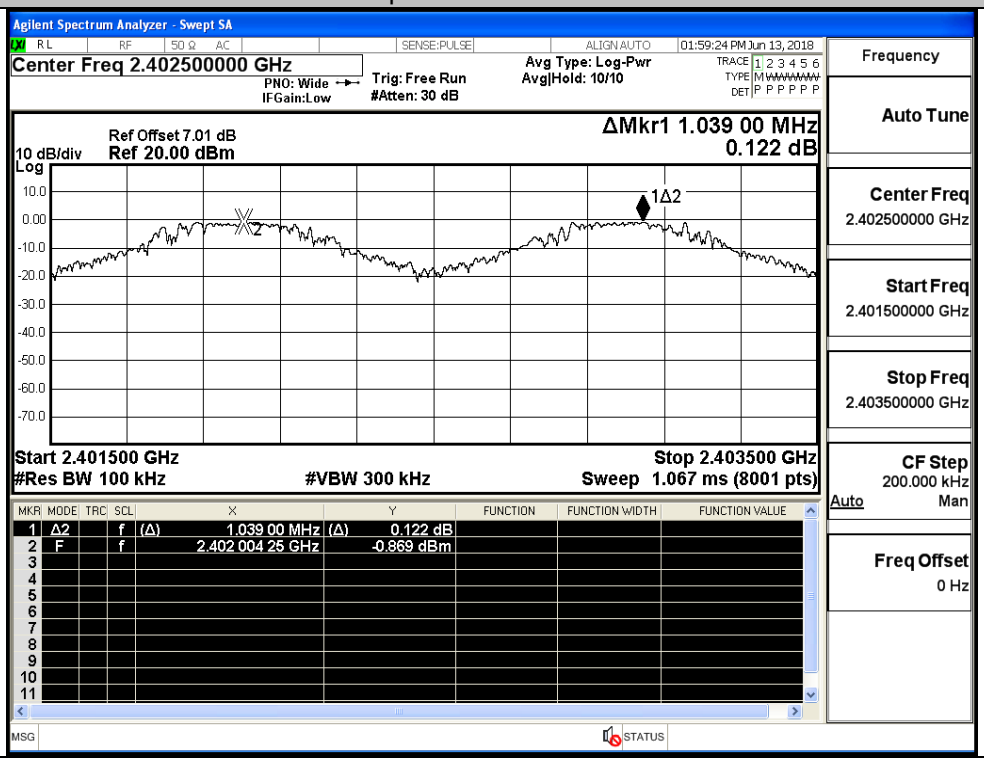
8DPSK/MCH	
8DPSK/HCH	

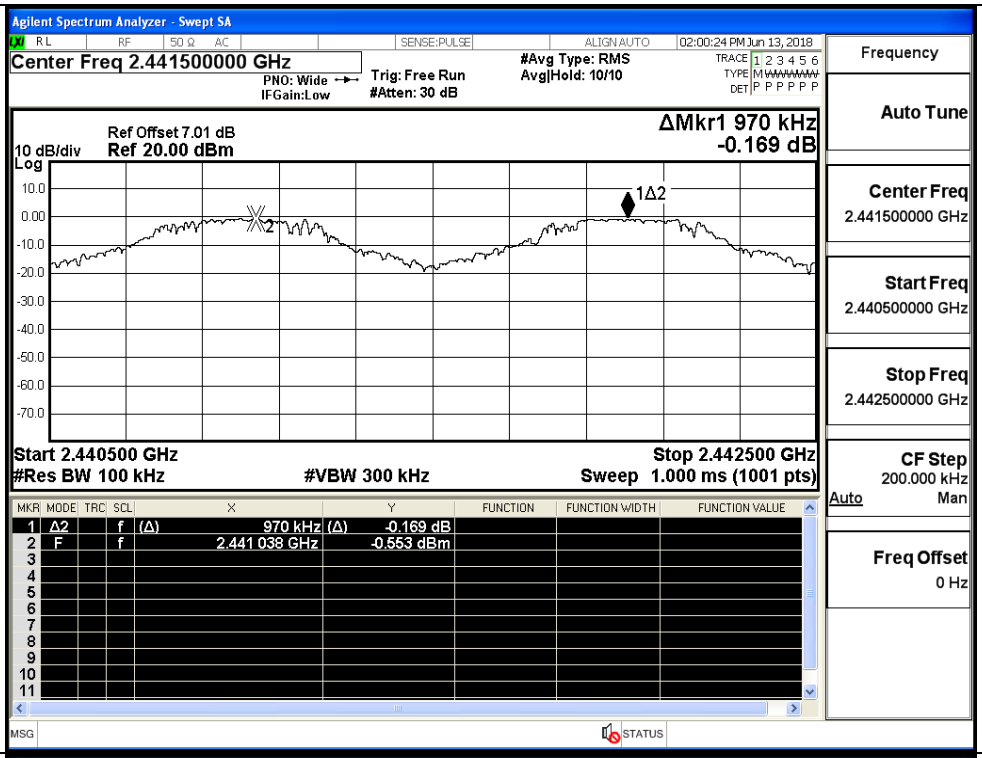
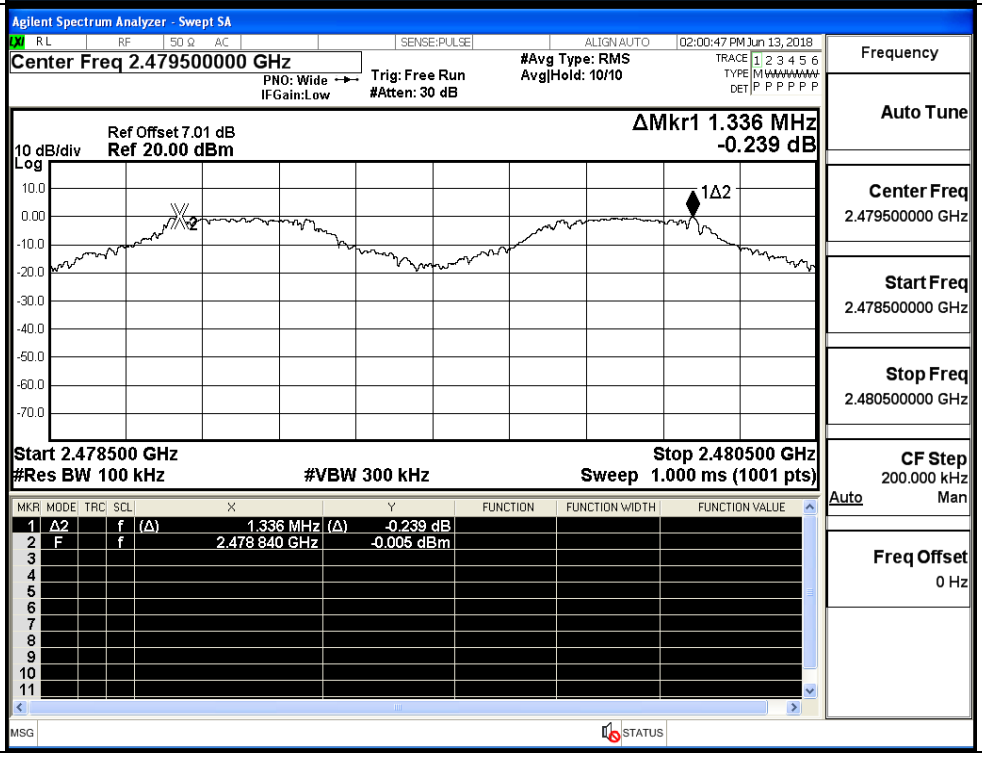
A.3 Carrier Frequency Separation

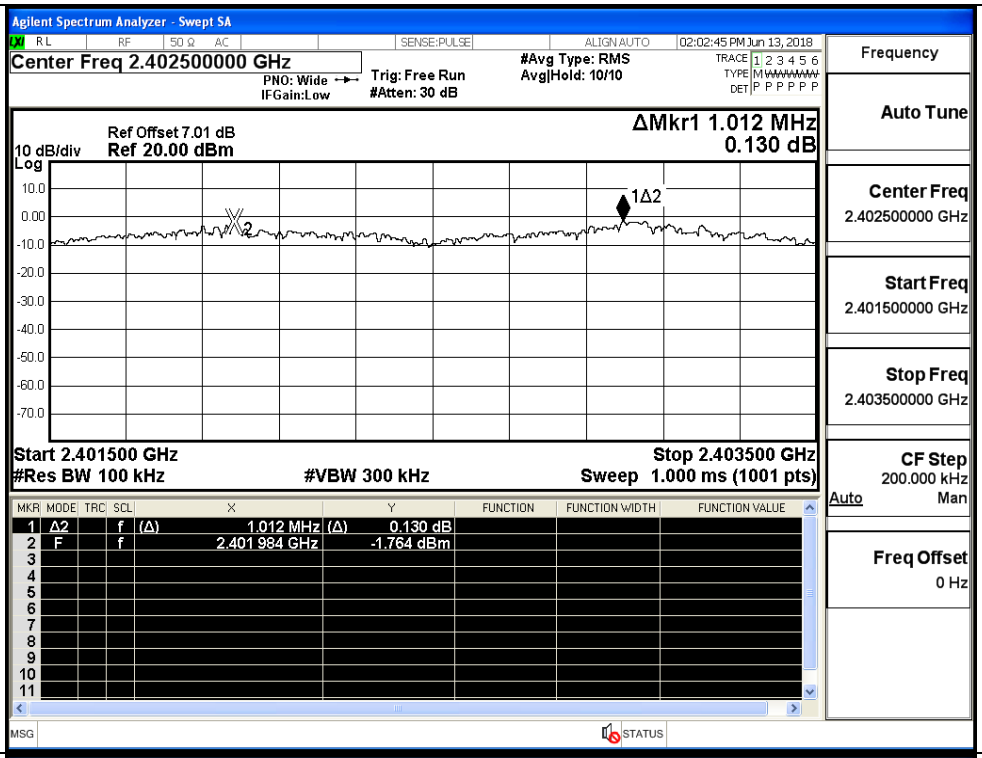
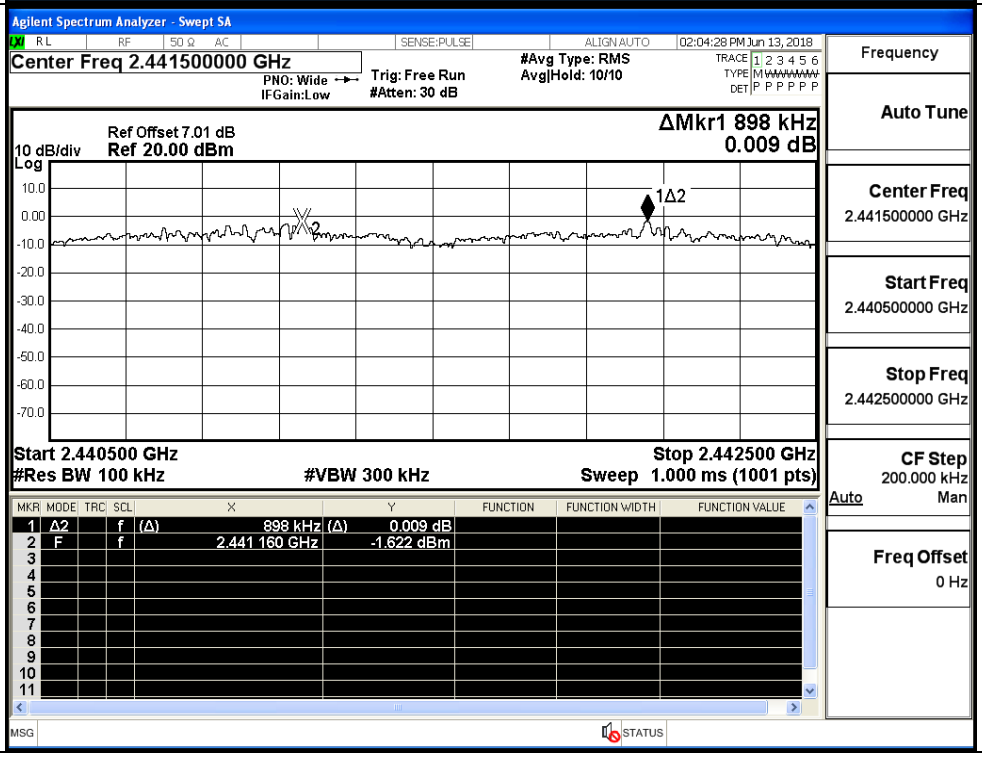
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.039	0.685	PASS
	MCH	0.970	0.646	PASS
	HCH	1.336	0.685	PASS
π/4DQPSK	LCH	1.012	0.860	PASS
	MCH	0.898	0.859	PASS
	HCH	0.892	0.859	PASS
8DPSK	LCH	1.332	0.860	PASS
	MCH	1.234	0.859	PASS
	HCH	1.120	0.859	PASS

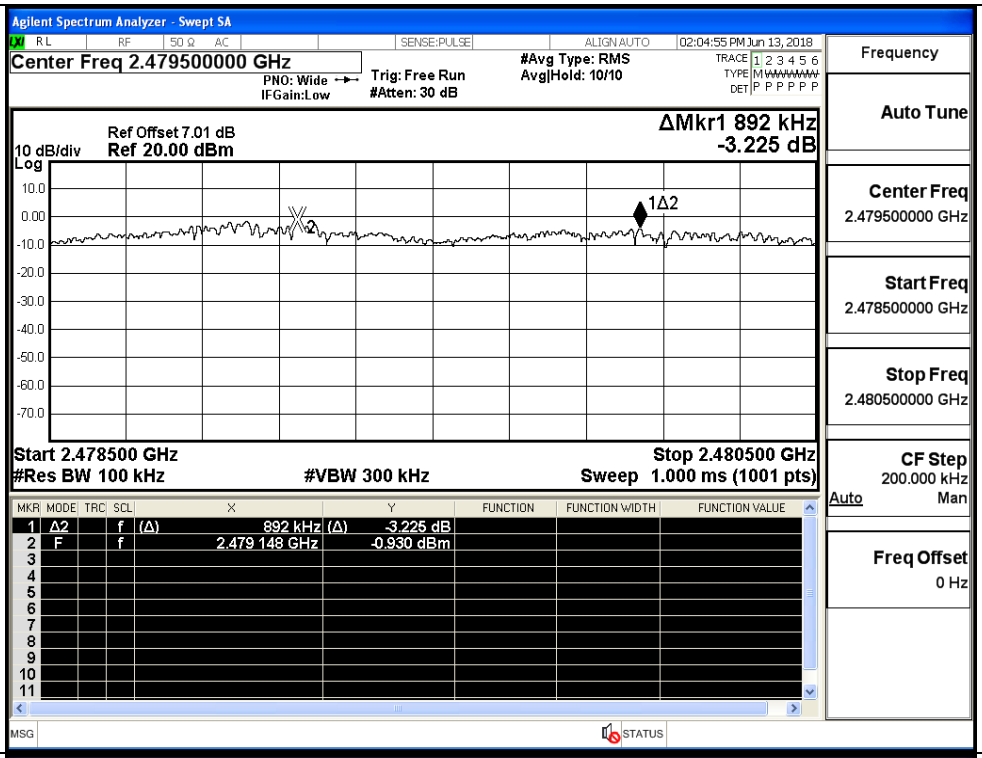
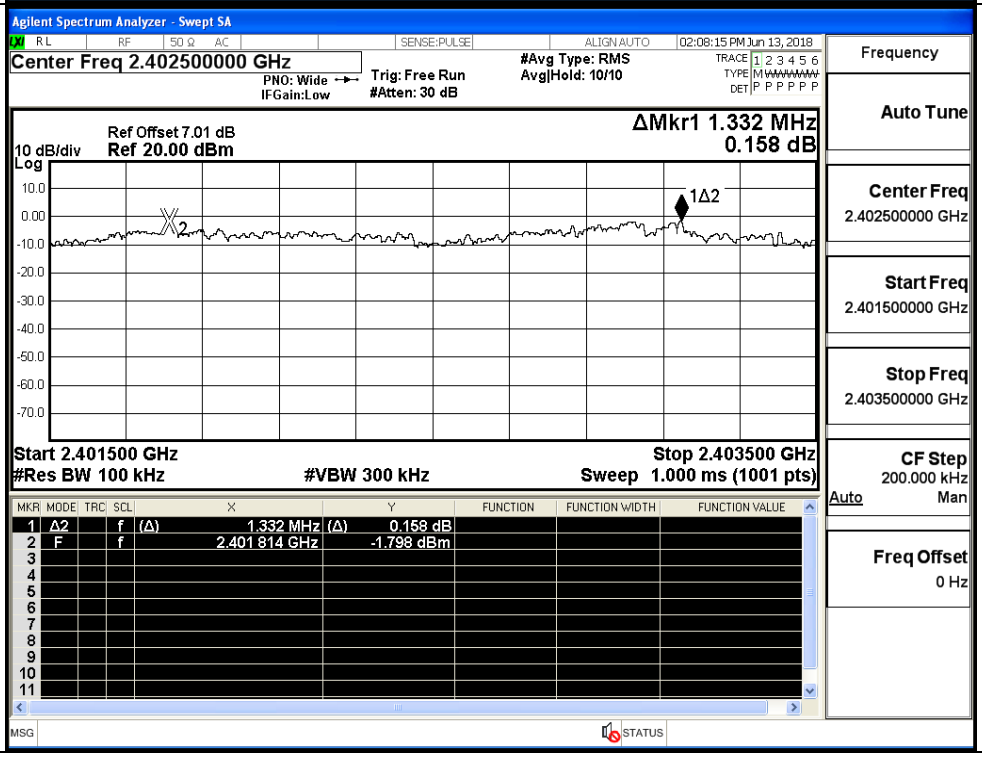
Test Graphs

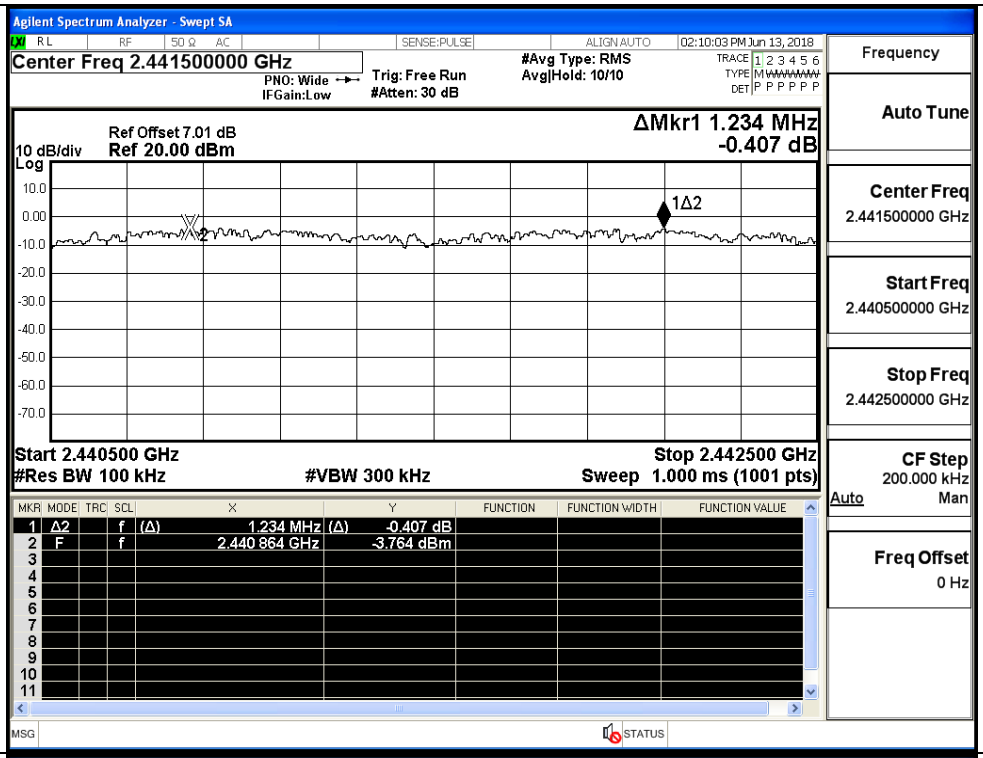
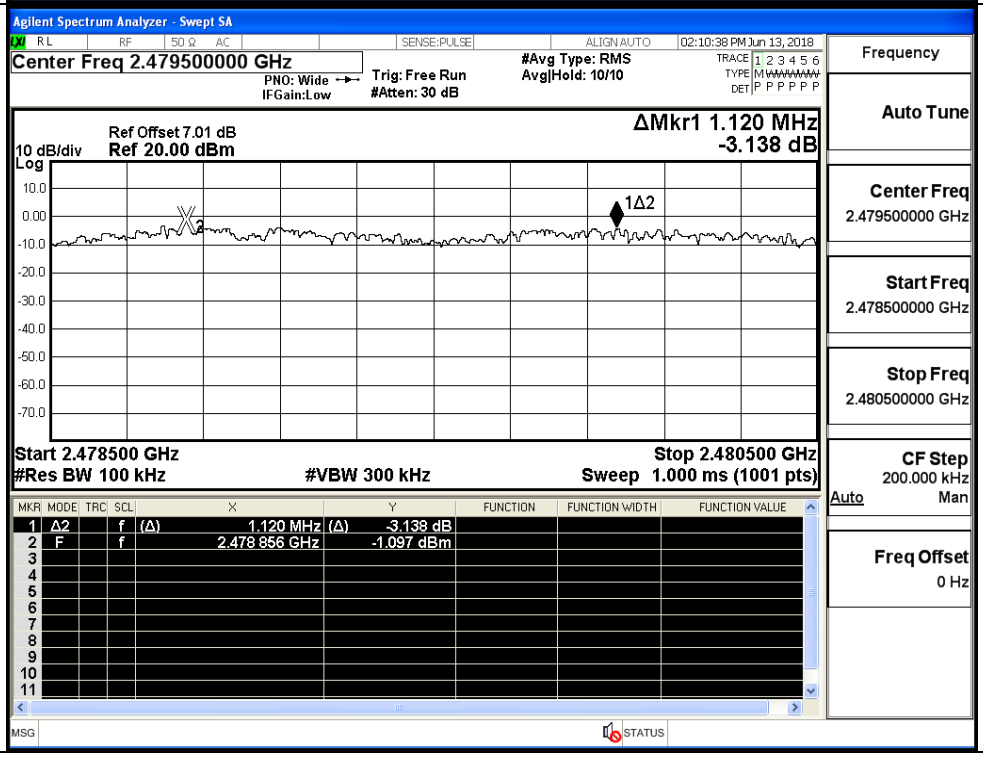
GFSK/LCH



GFSK/MCH	
GFSK/HCH	

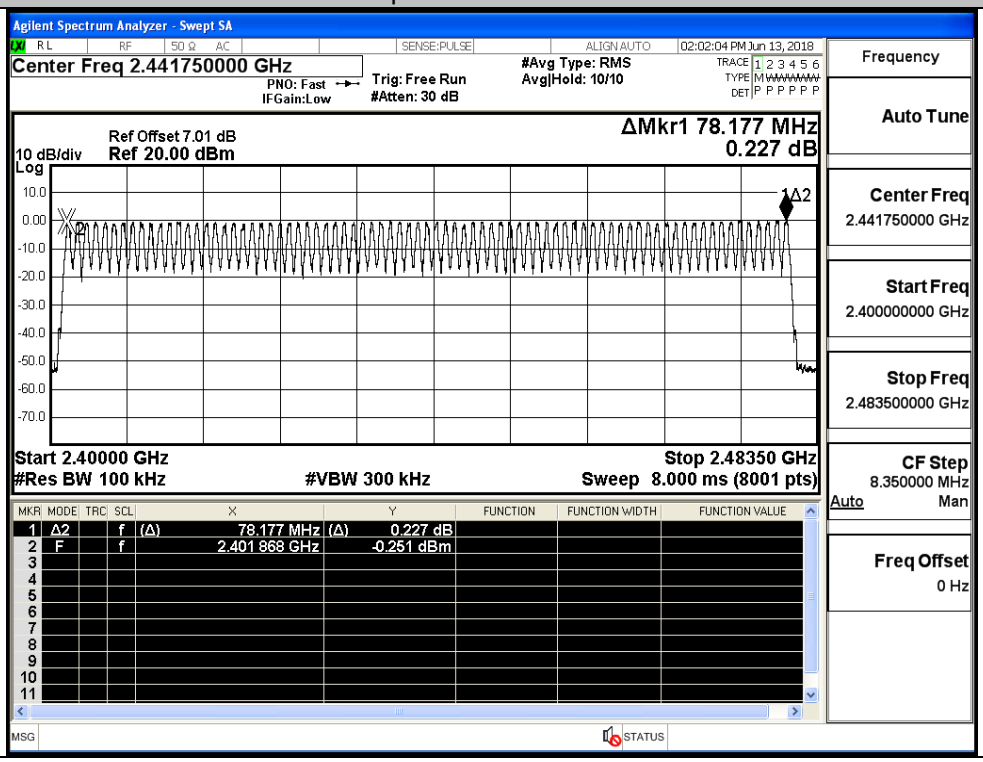
π/4DQPSK/LCH	
π/4DQPSK/MCH	

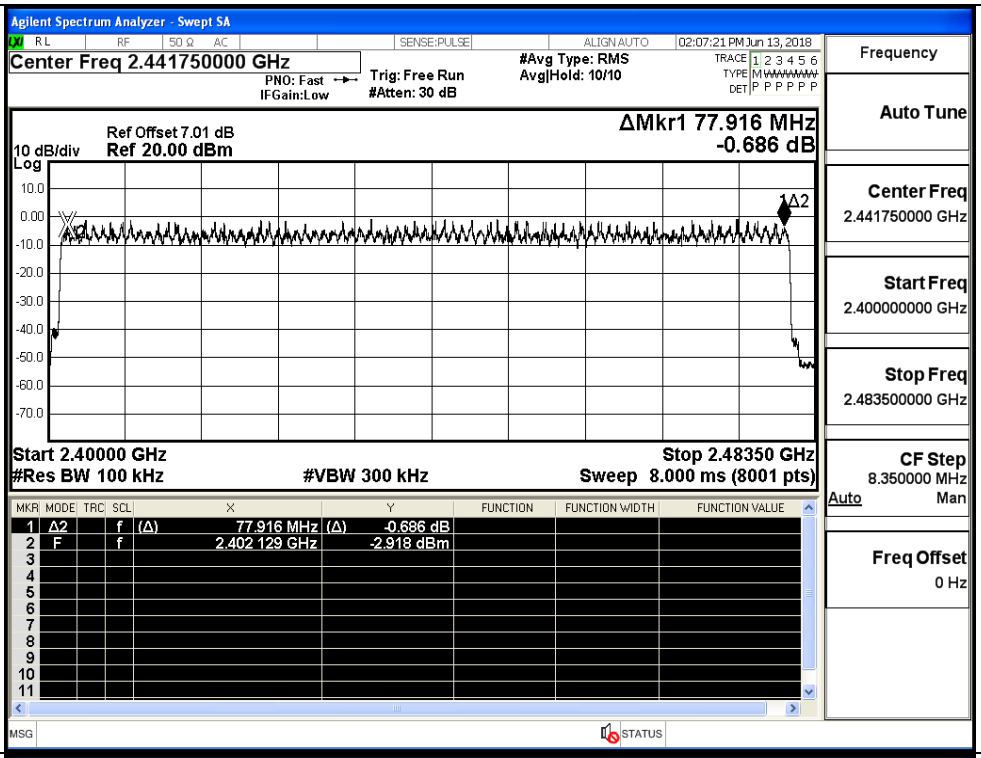
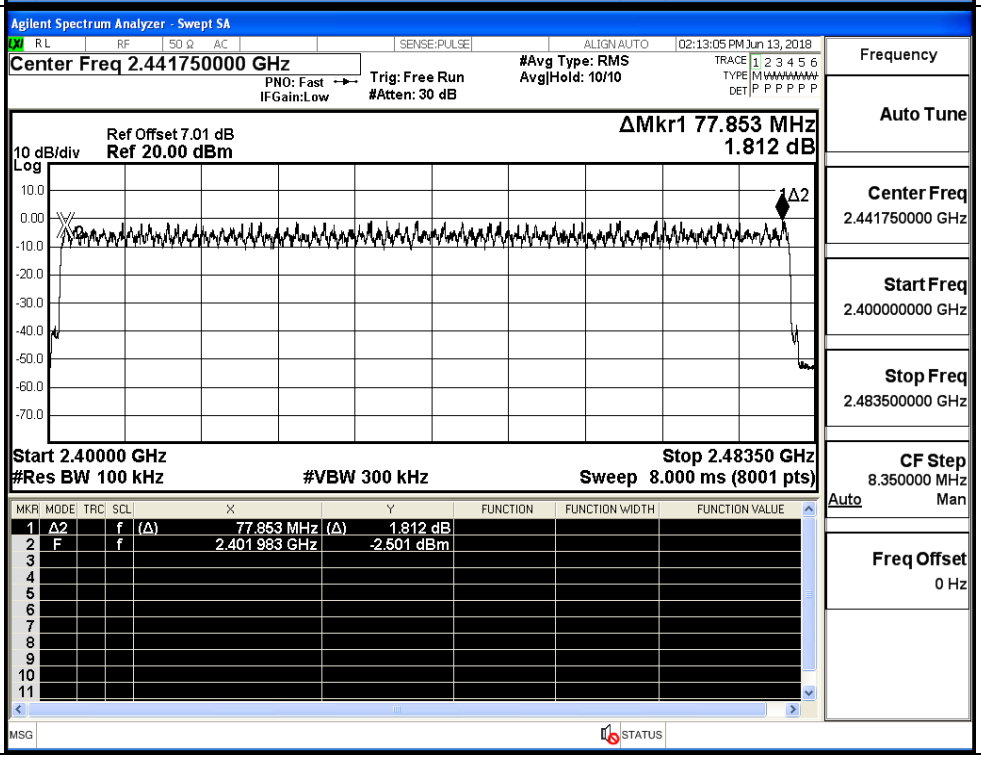
π/4DQPSK/HCH	
8DPSK/LCH	

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 Graphs		
GFSK/Hop		

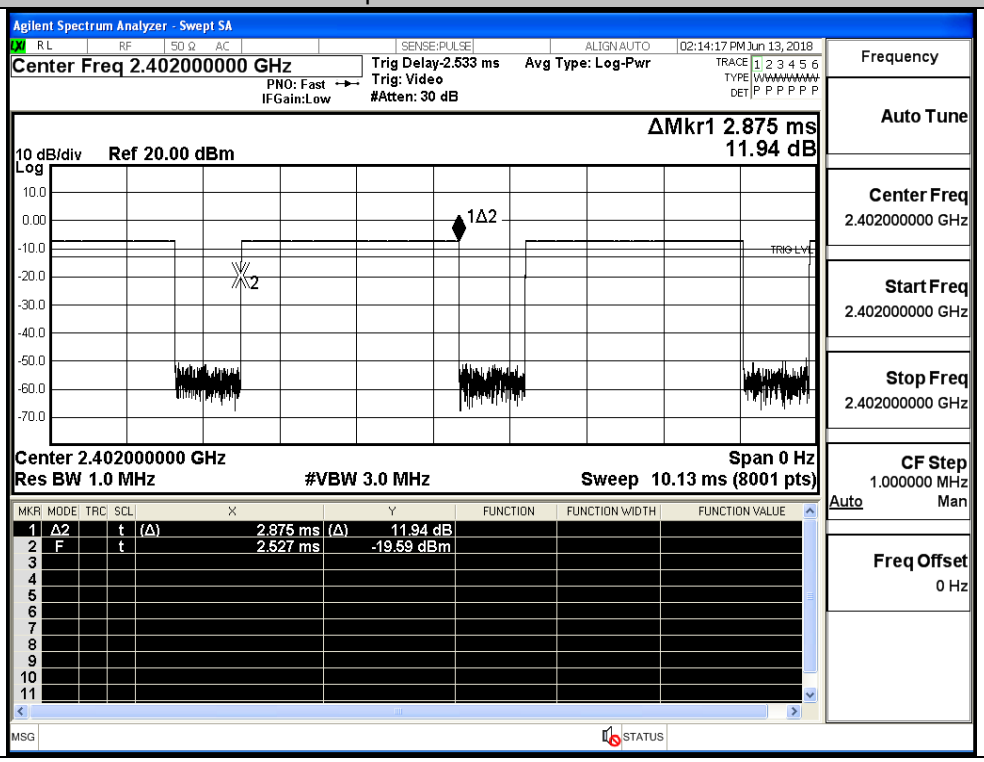
π/4DQPSK/Hop	
8DPSK/Hop	

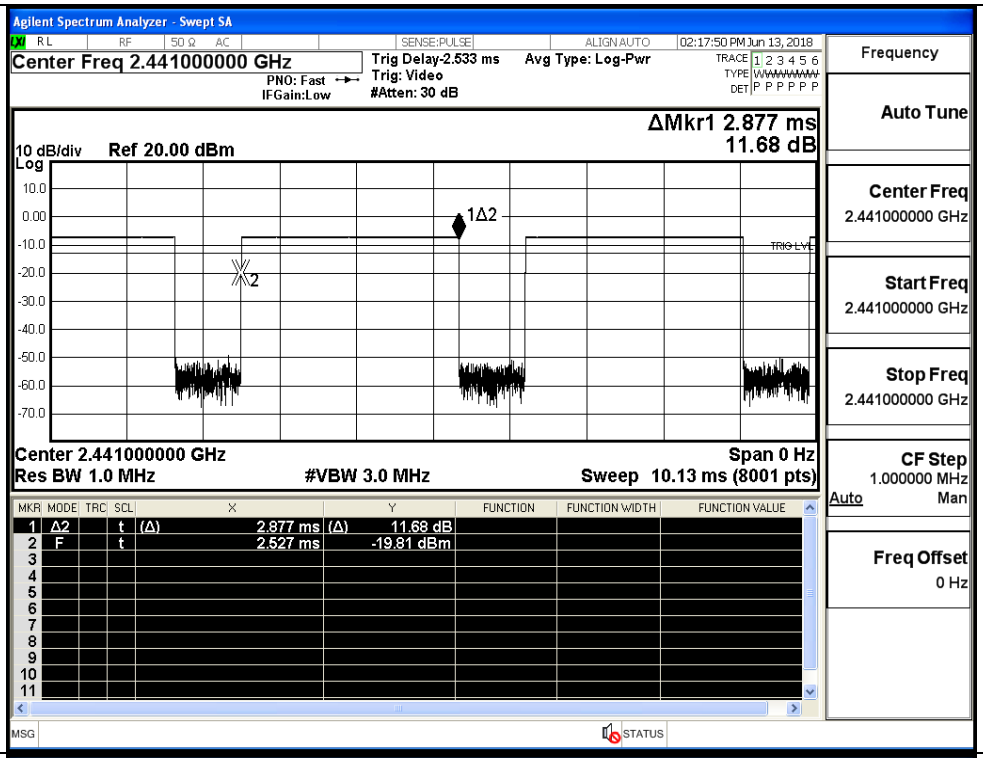
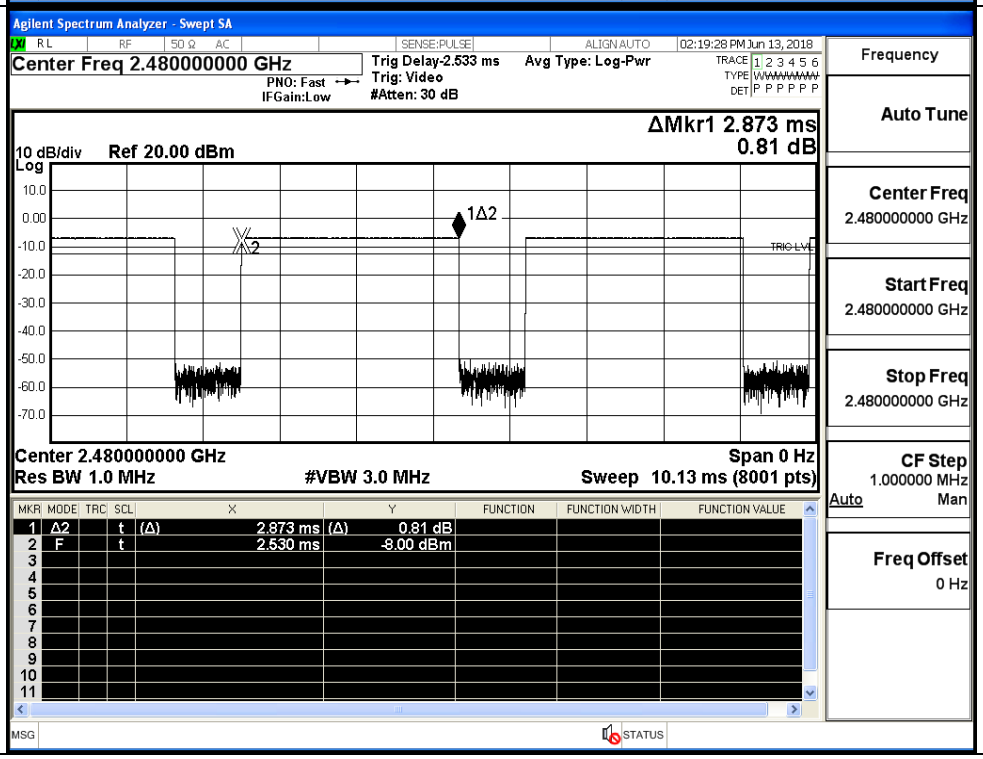
A.5 Dwell Time

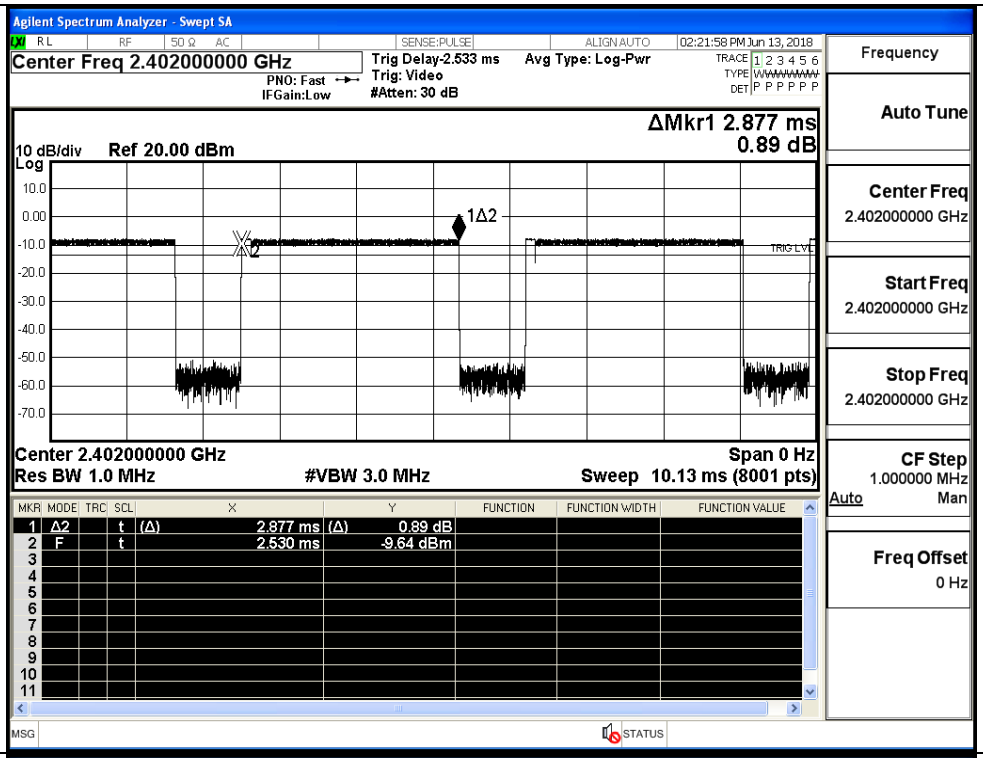
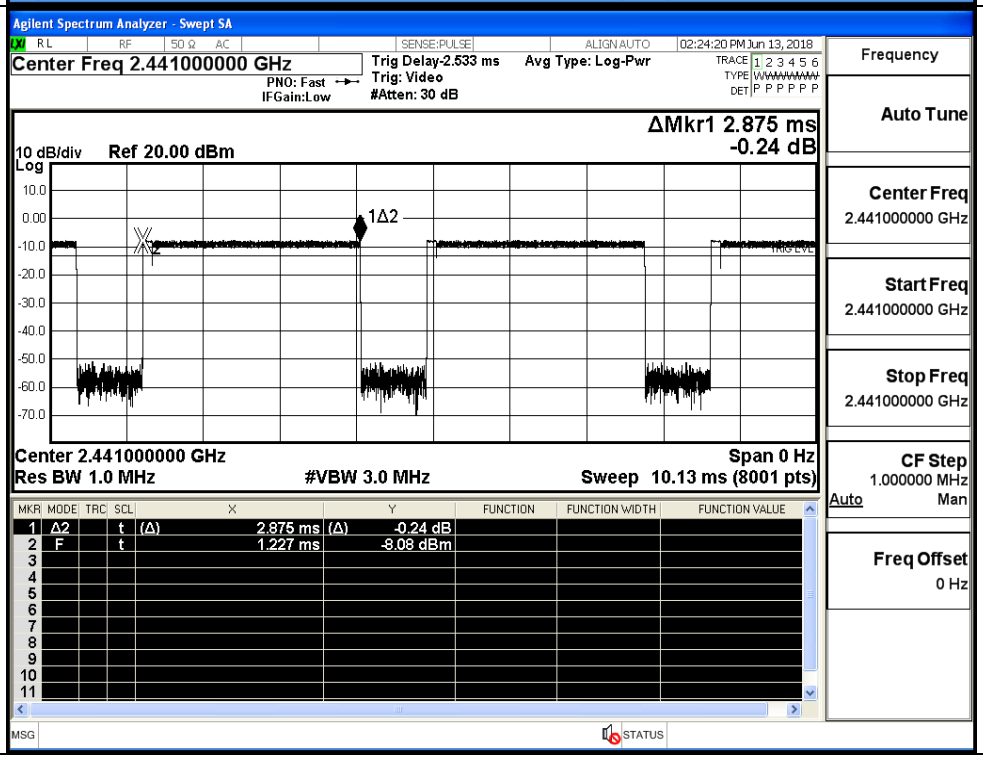
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.87	106.7	0.306	0.4	PASS
π/4DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.307	0.4	PASS
	2DH5	HCH	2.87	106.7	0.307	0.4	PASS
8DPSK	3DH5	LCH	2.88	106.7	0.307	0.4	PASS
	3DH5	MCH	2.88	106.7	0.307	0.4	PASS
	3DH5	HCH	2.87	106.7	0.307	0.4	PASS

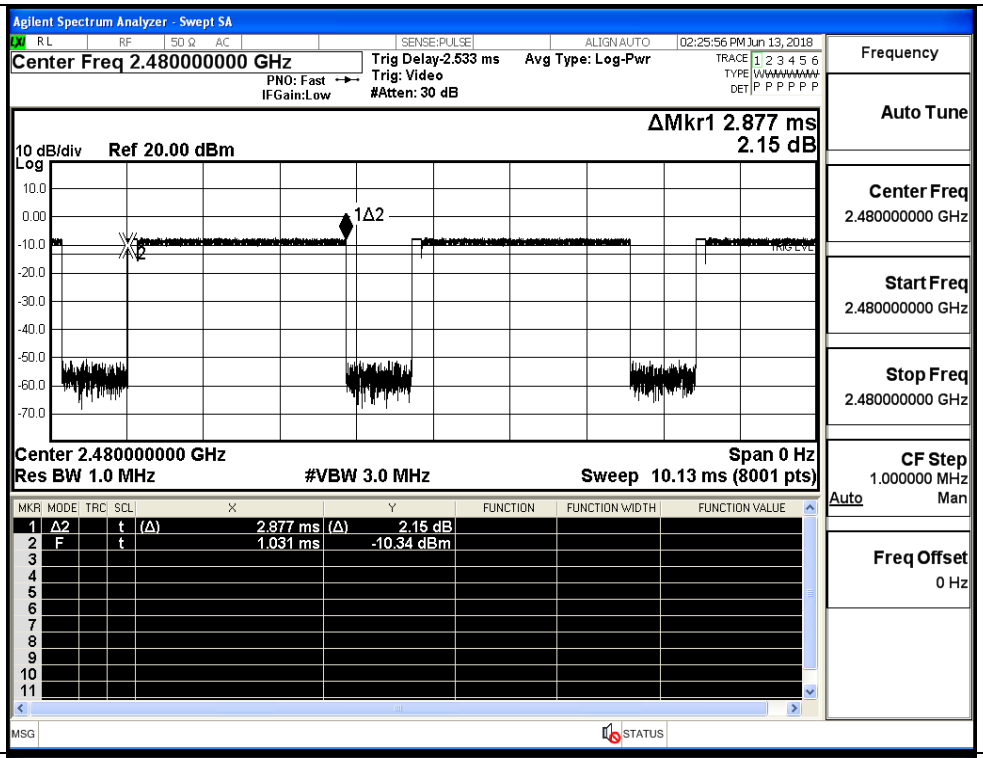
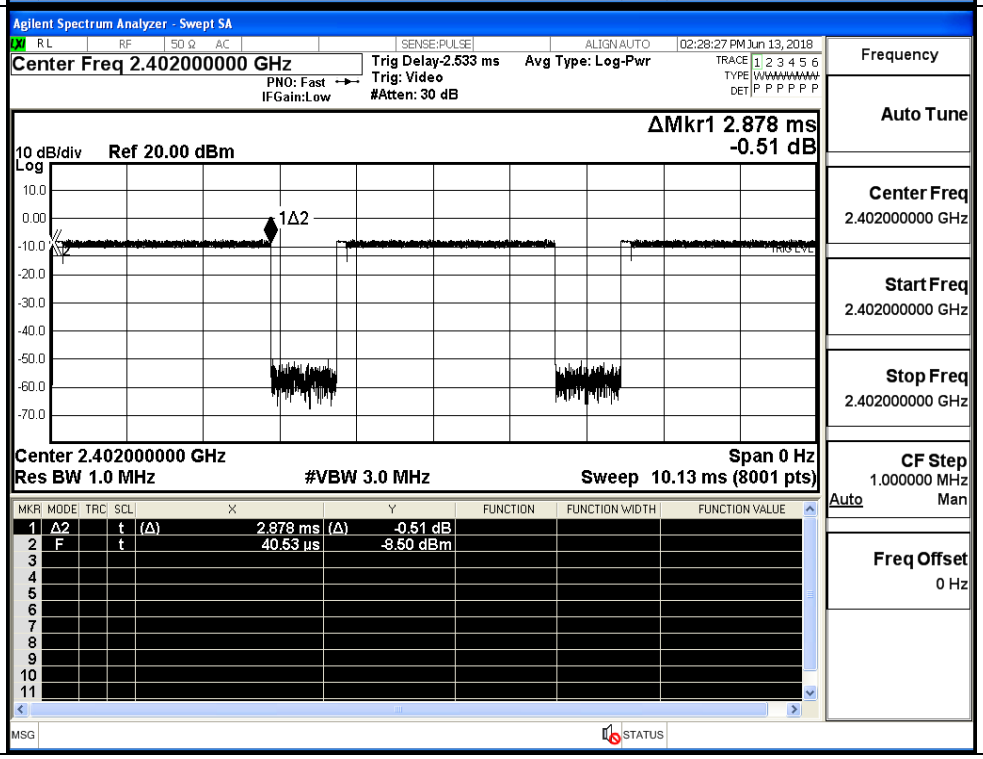
Test Graphs

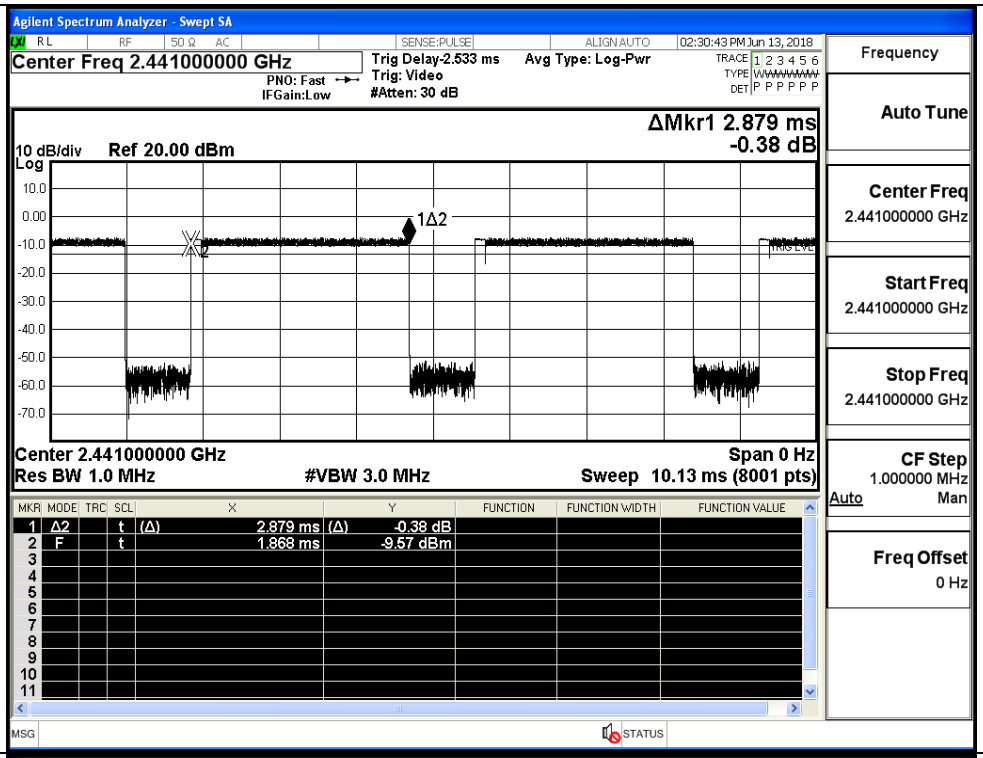
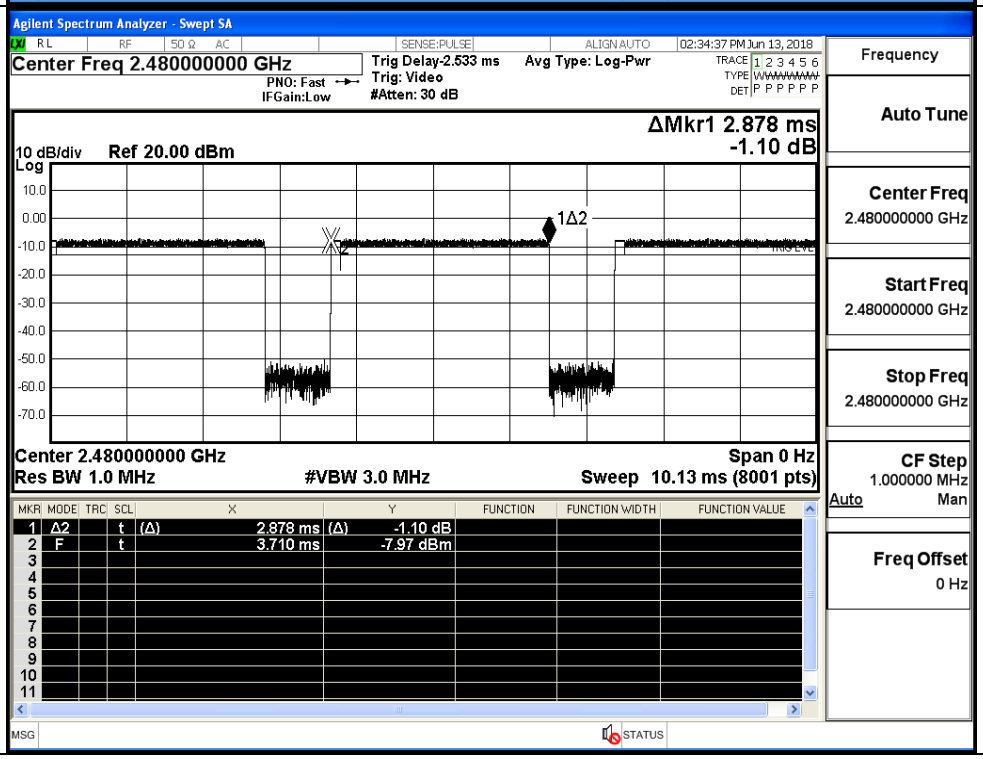
GFSK_DH5/LCH



GFSK_DH5/MCH	
GFSK_DH5/HCH	

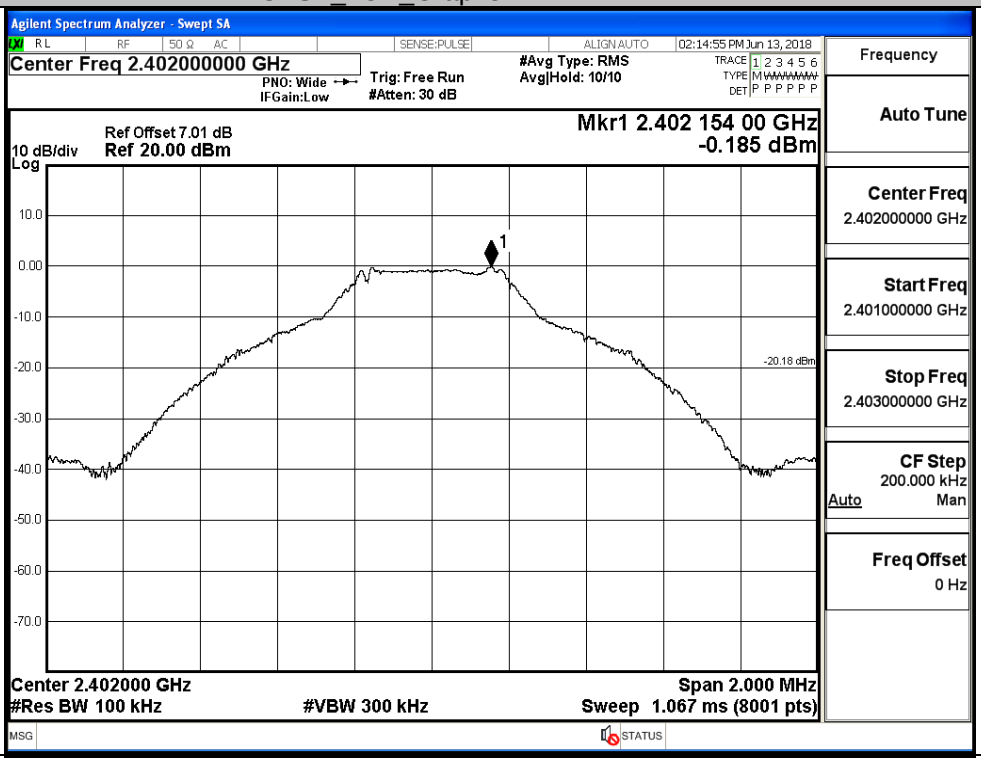
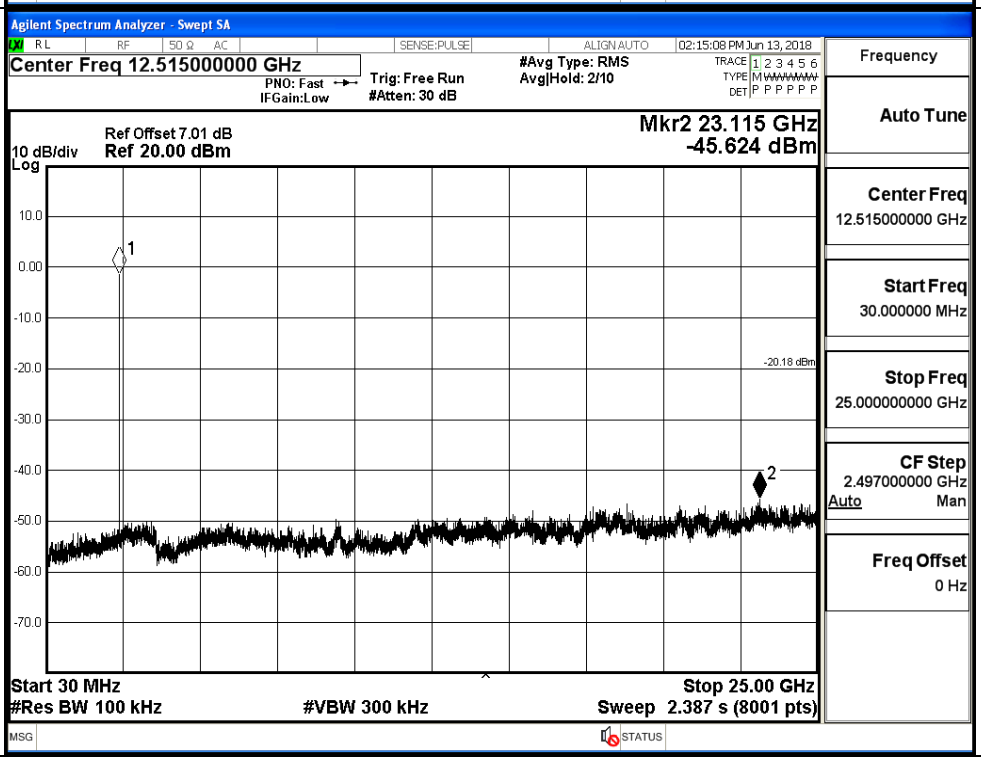
π/4DQPSK _2DH5/LCH	
π/4DQPSK _2DH5/MCH	

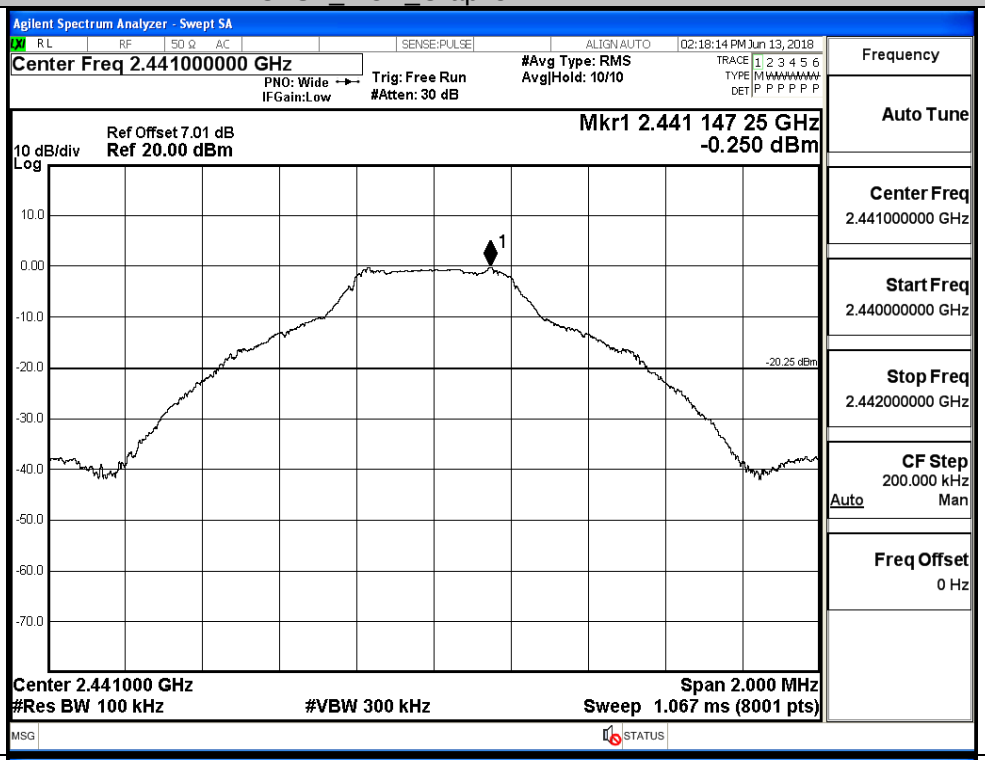
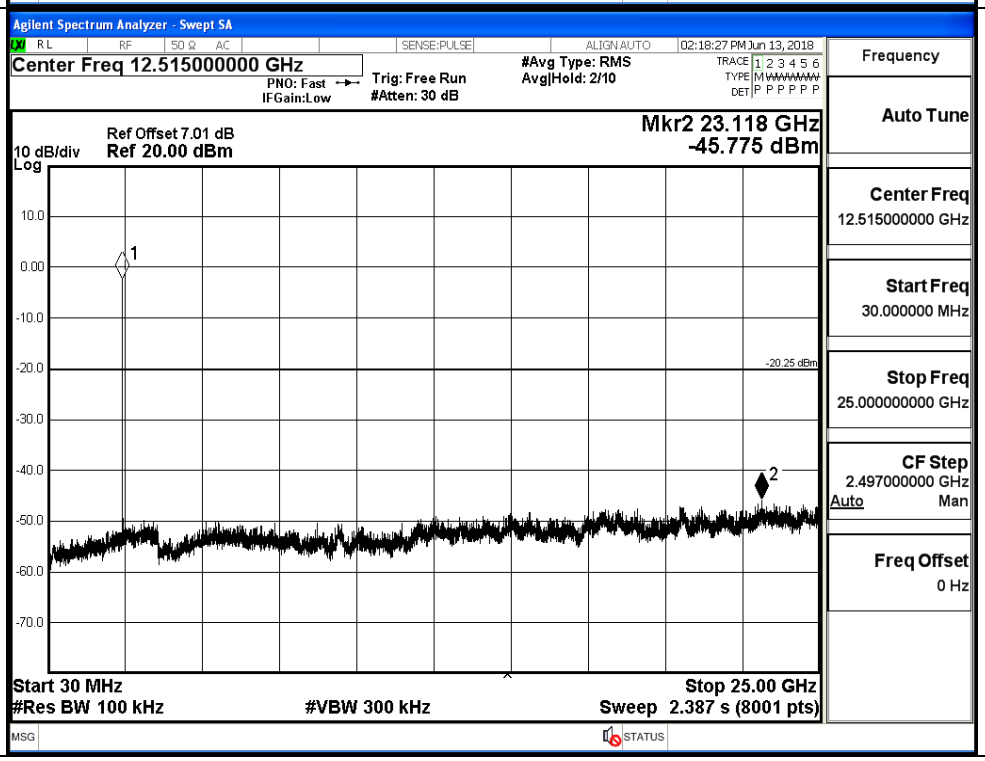
π/4DQPSK _2DH5/HCH	
8DPSK _3DH5/LCH	

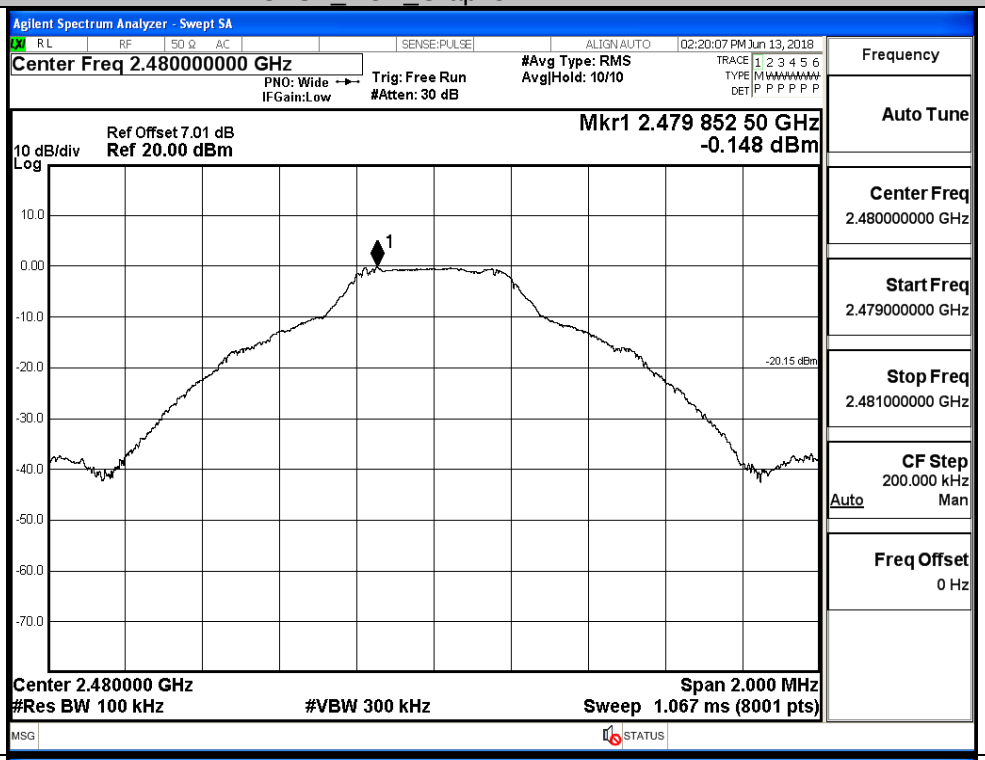
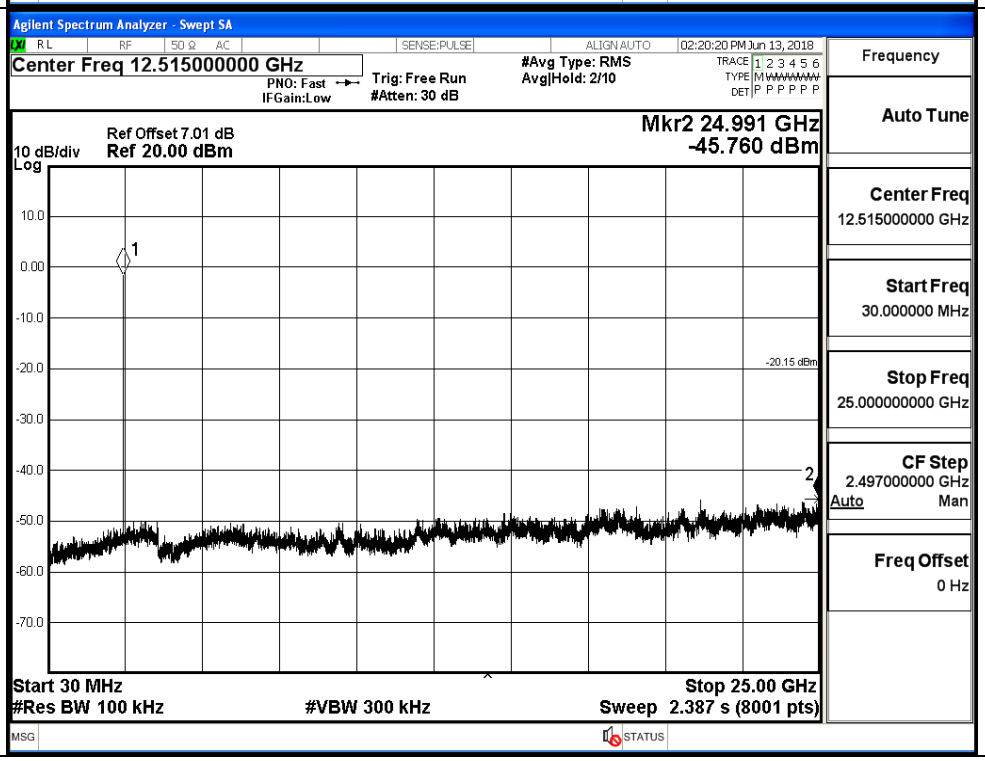
8DPSK _3DH5/MCH	
8DPSK _3DH5/HCH	

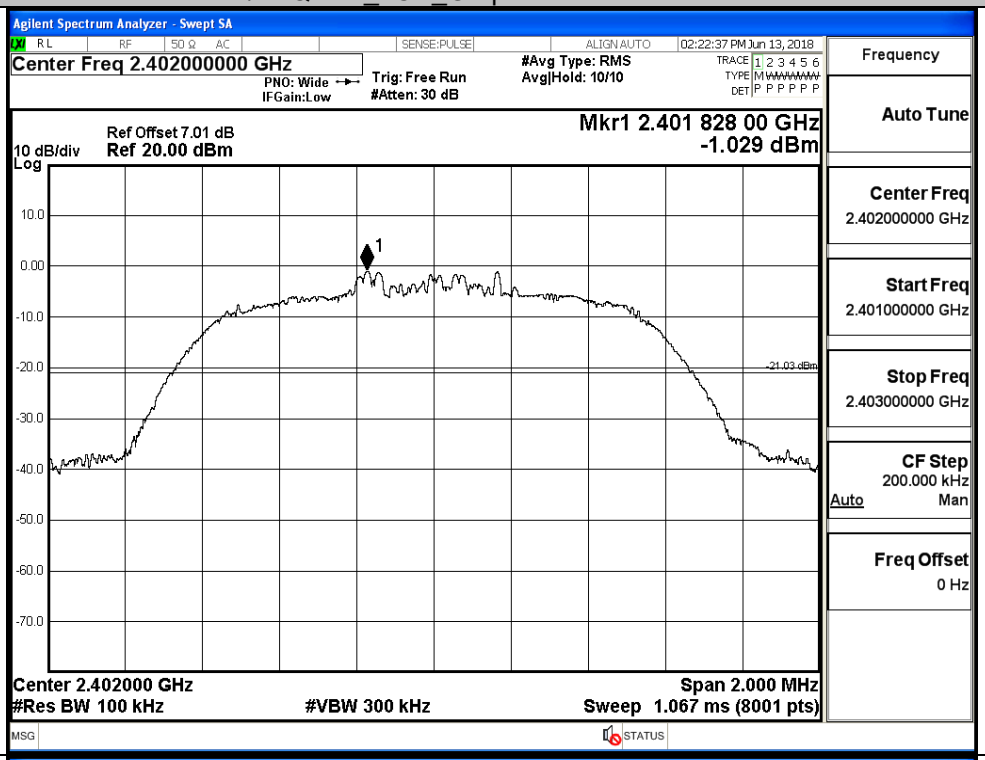
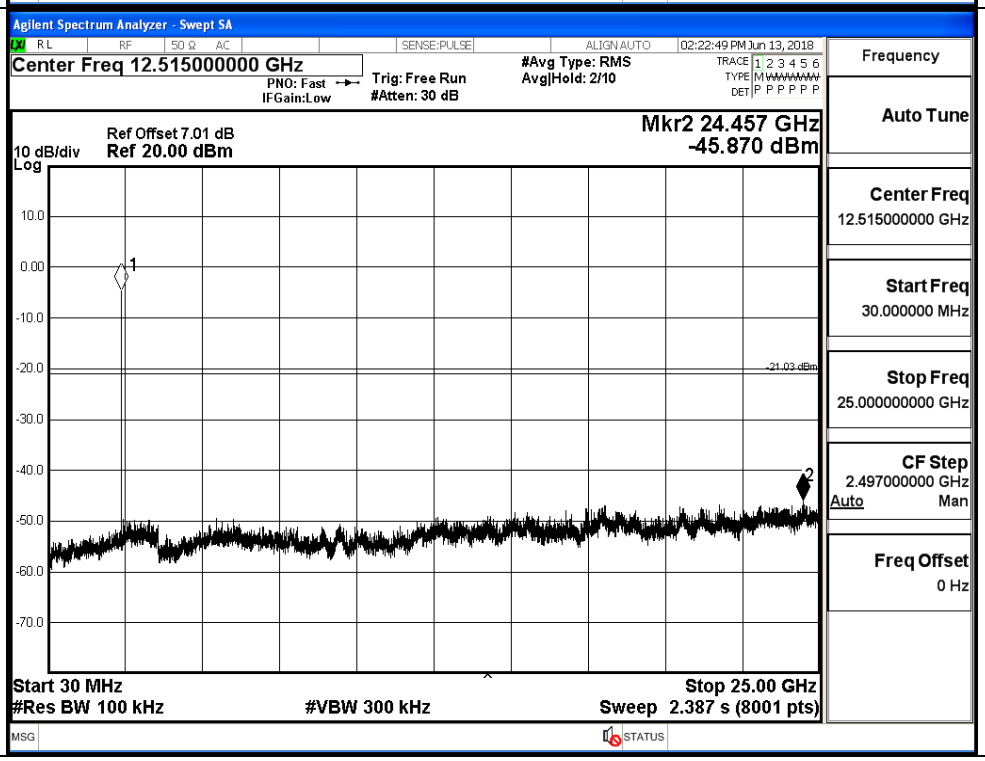
A.6 RF Conducted Spurious Emissions

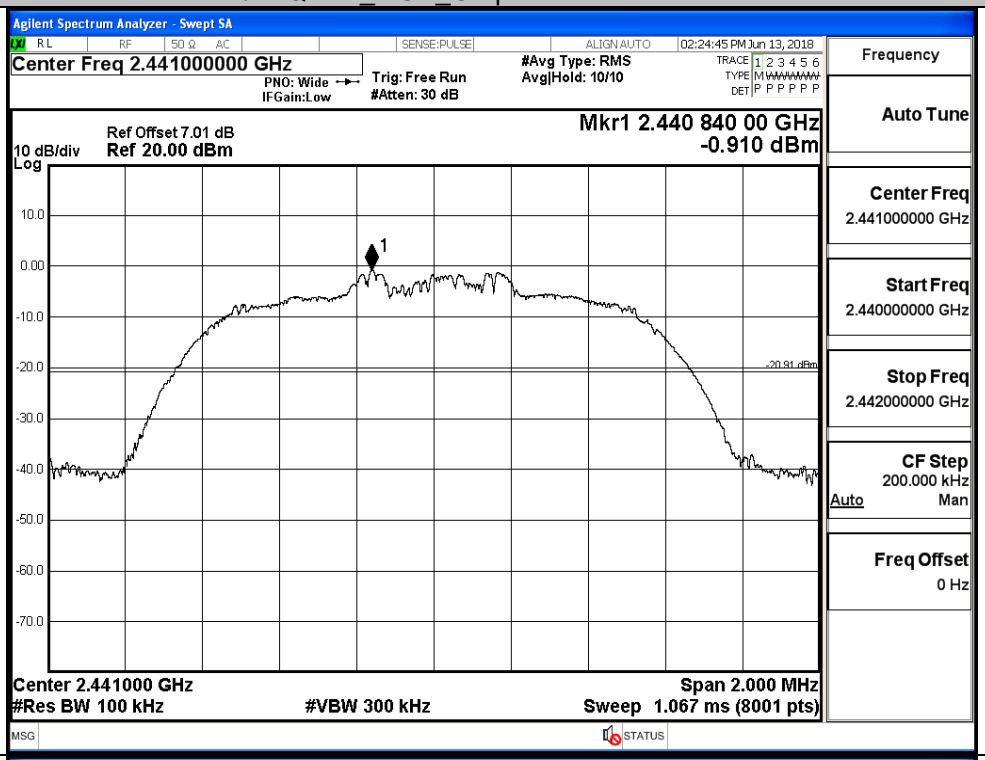
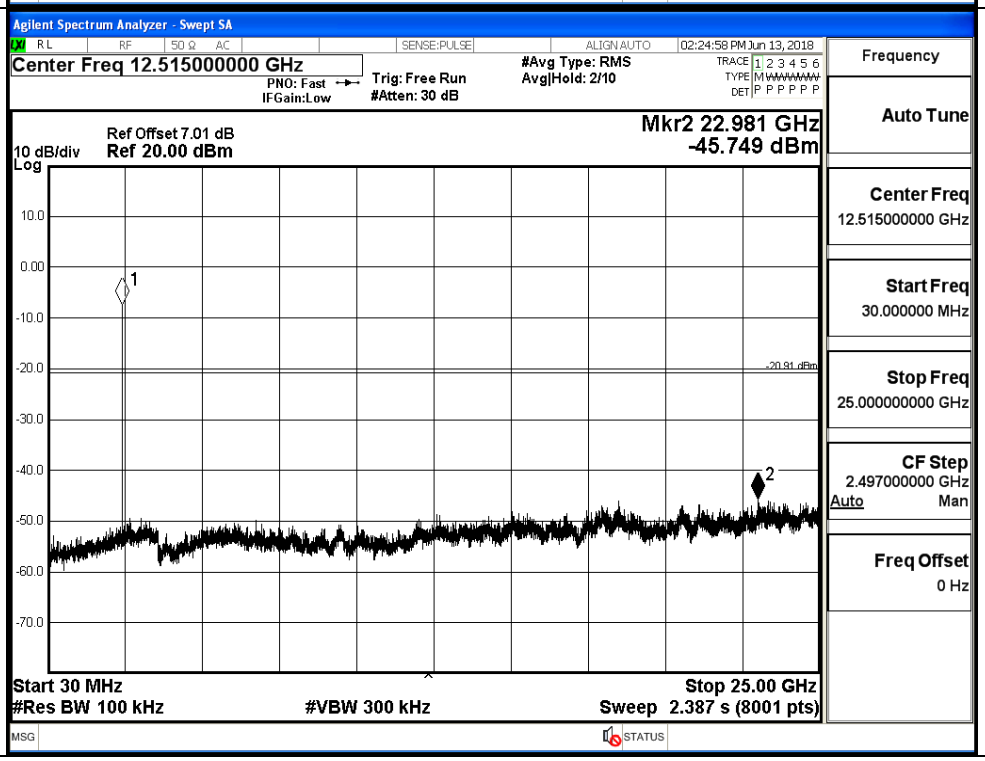
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-0.185	-45.624	-20.185	PASS
	MCH	-0.25	-45.775	-20.250	PASS
	HCH	-0.148	-45.760	-20.148	PASS
π/4DQPSK	LCH	-1.029	-45.870	-21.029	PASS
	MCH	-0.91	-45.749	-20.910	PASS
	HCH	-1.066	-45.672	-21.066	PASS
8DPSK	LCH	-1.043	-45.147	-21.043	PASS
	MCH	-1.013	-45.069	-21.013	PASS
	HCH	-0.87	-44.987	-20.870	PASS

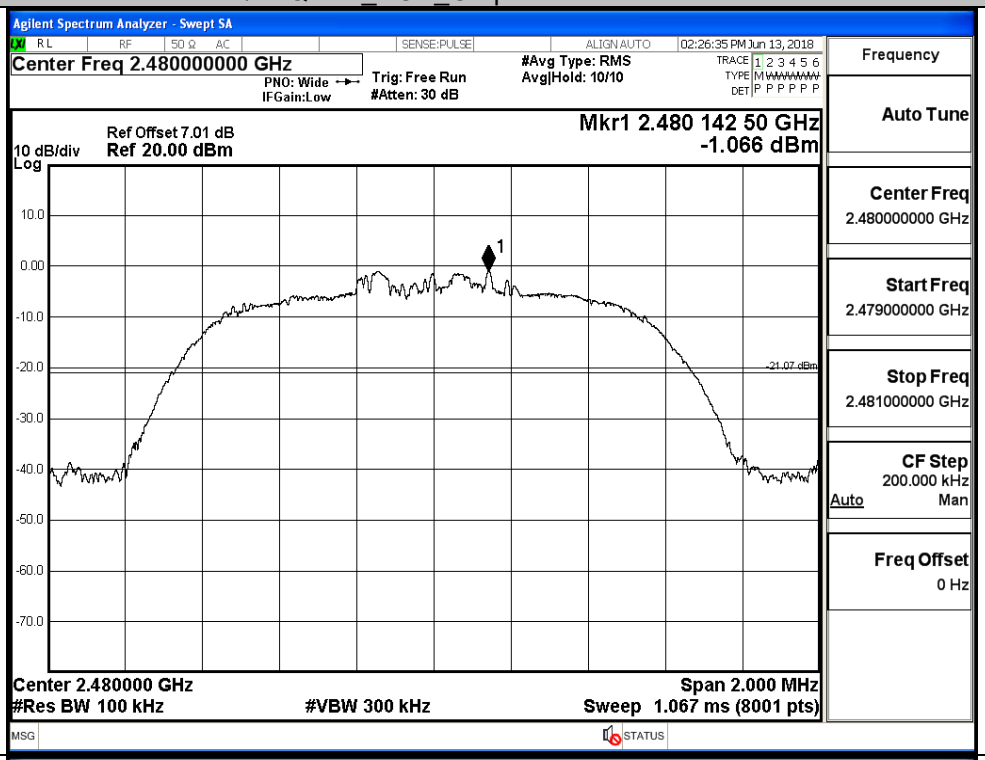
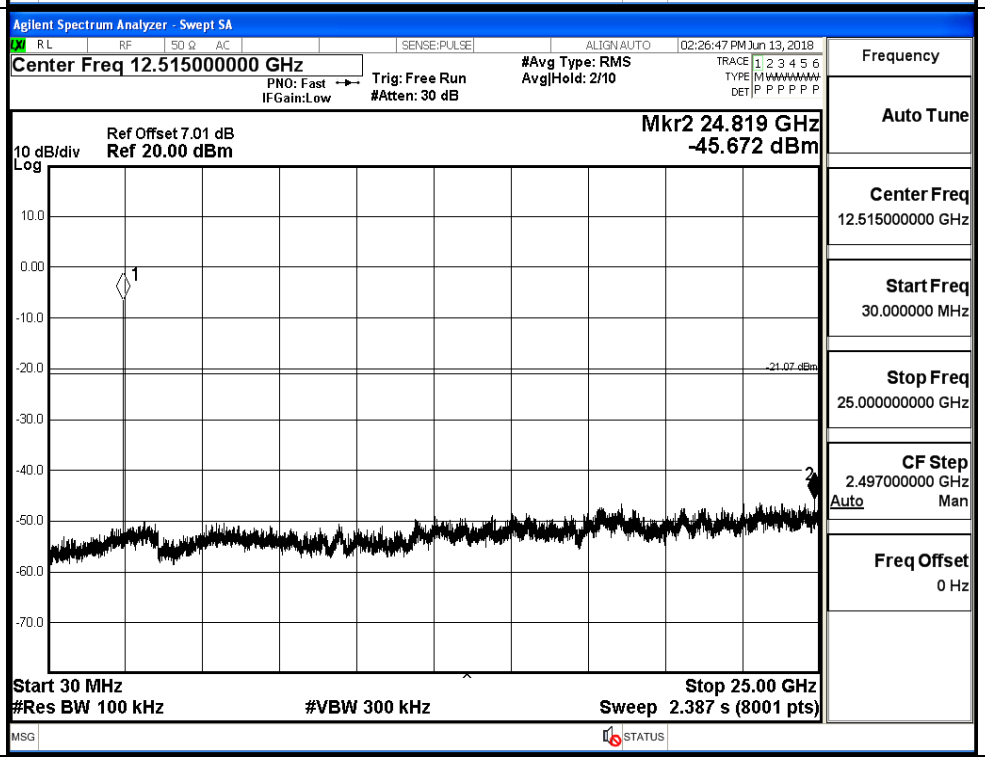
GFSK_LCH_Graphs			
Pref			
Puw			

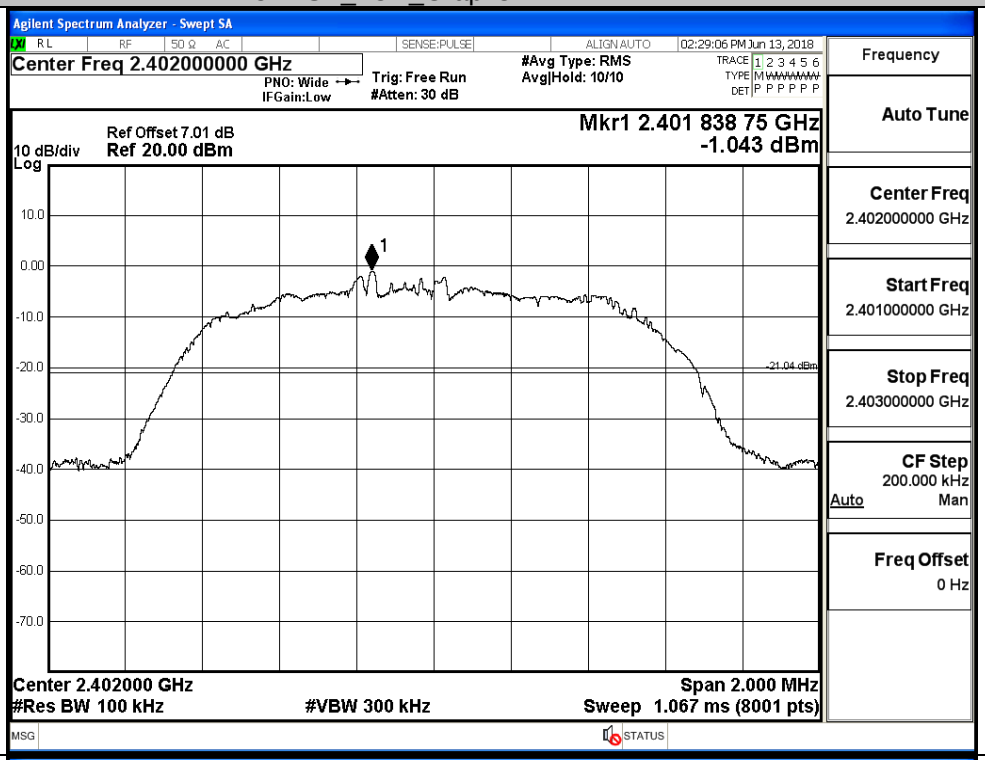
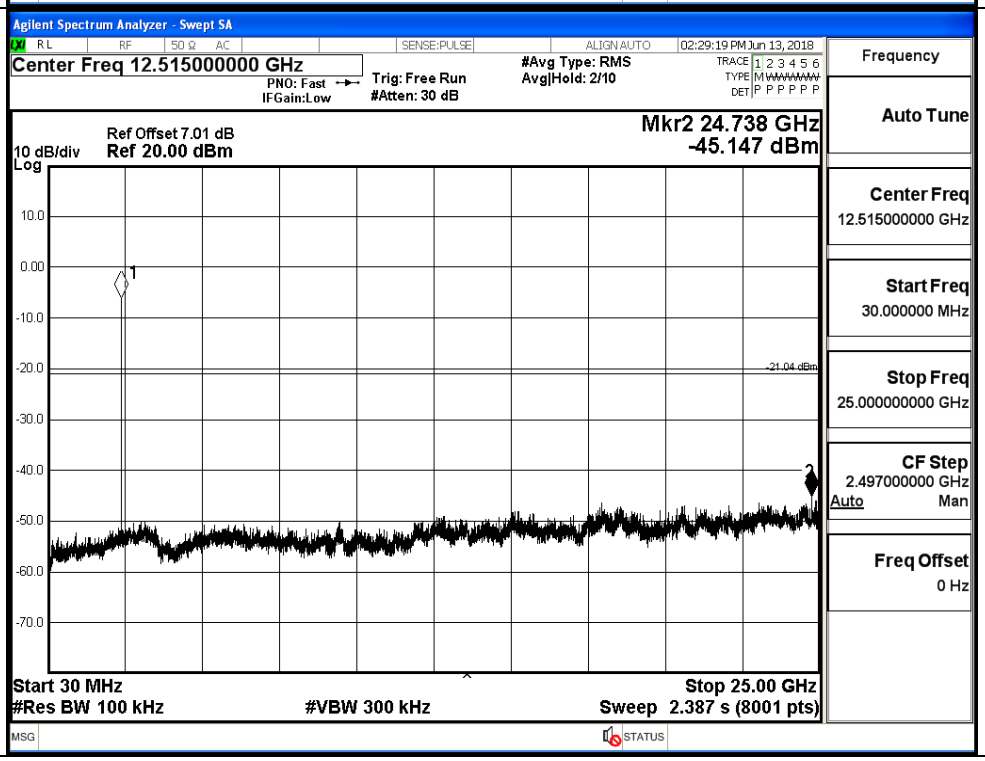
GFSK_MCH_Graphs		
Pref		
Puw		

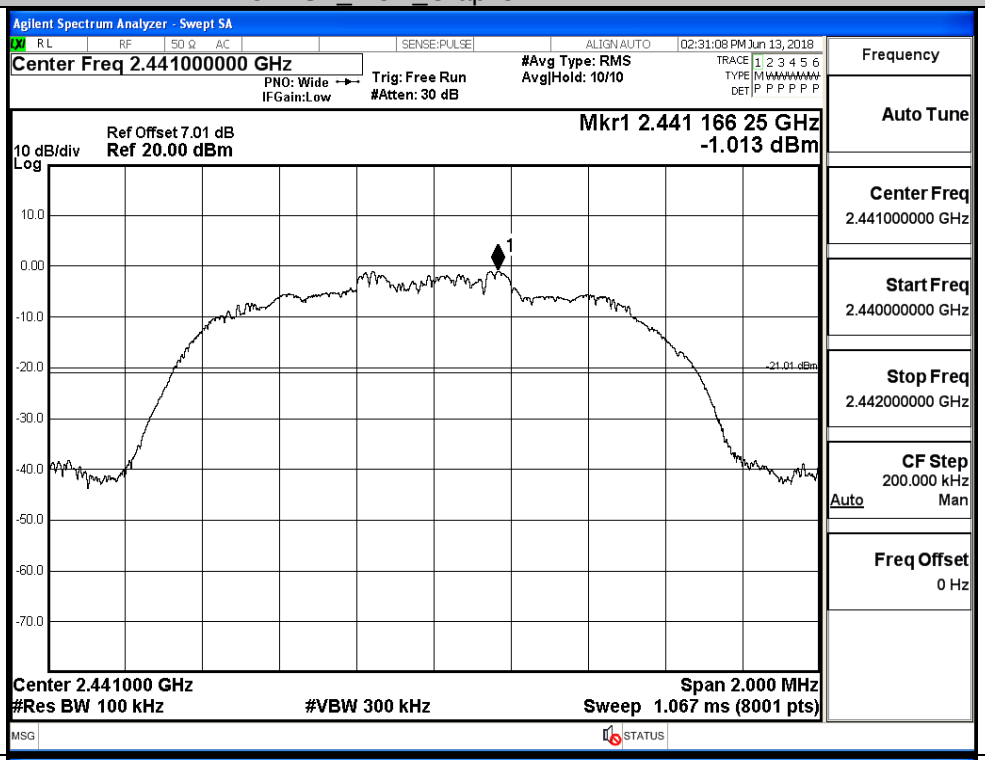
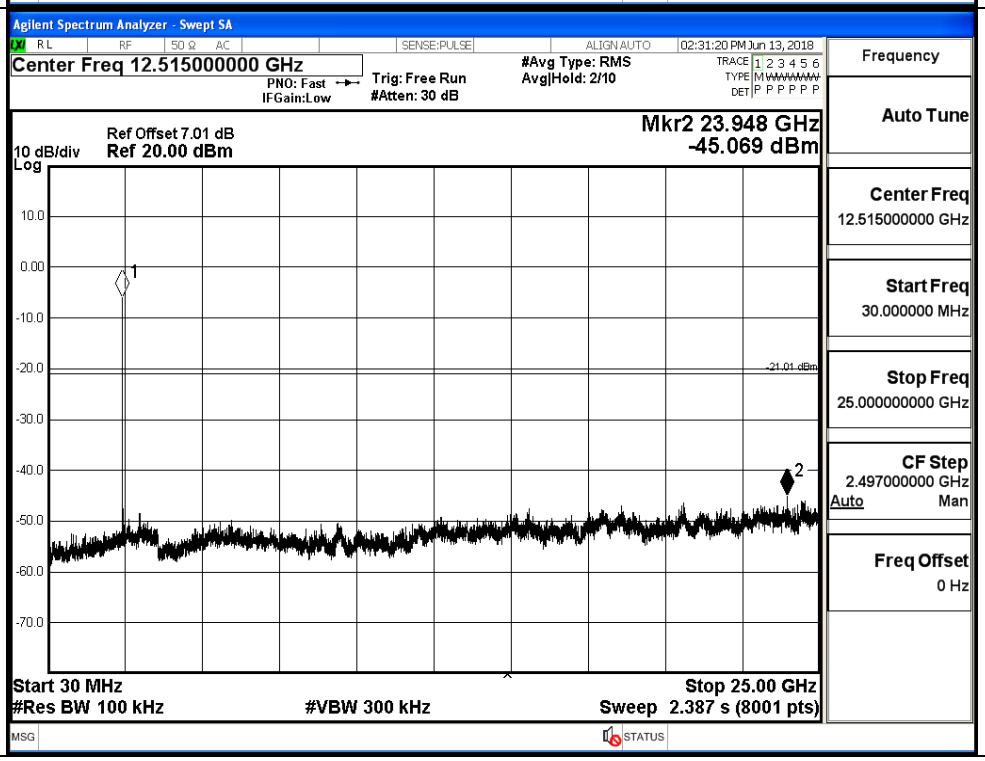
GFSK_HCH_Graphs		
Pref		
Puw		

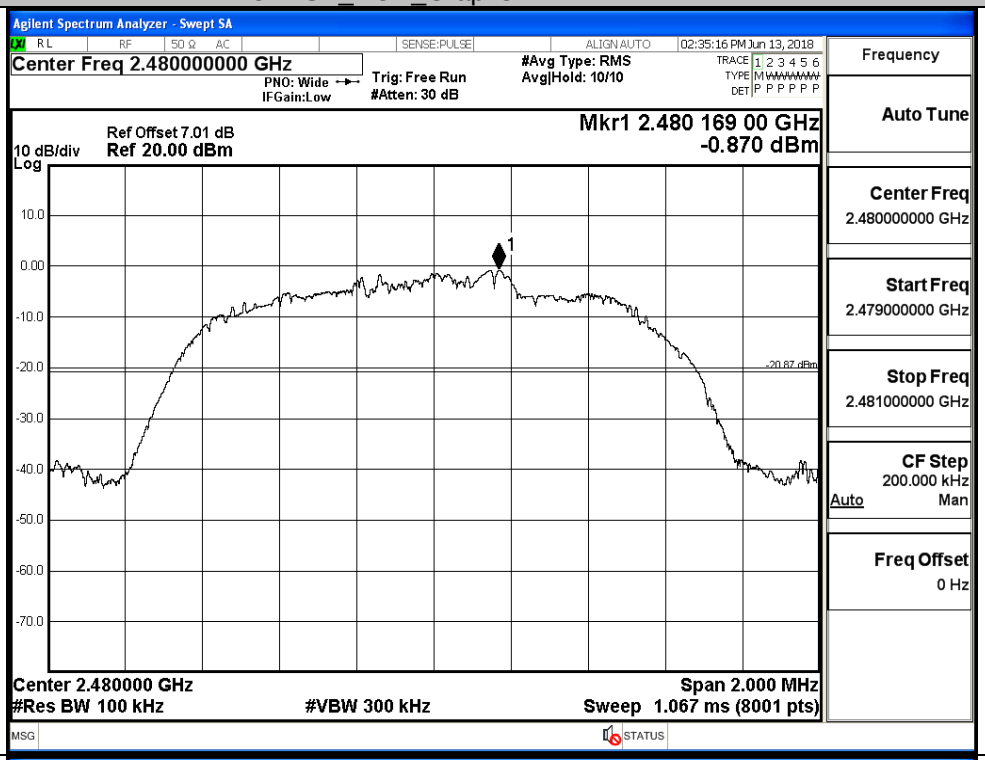
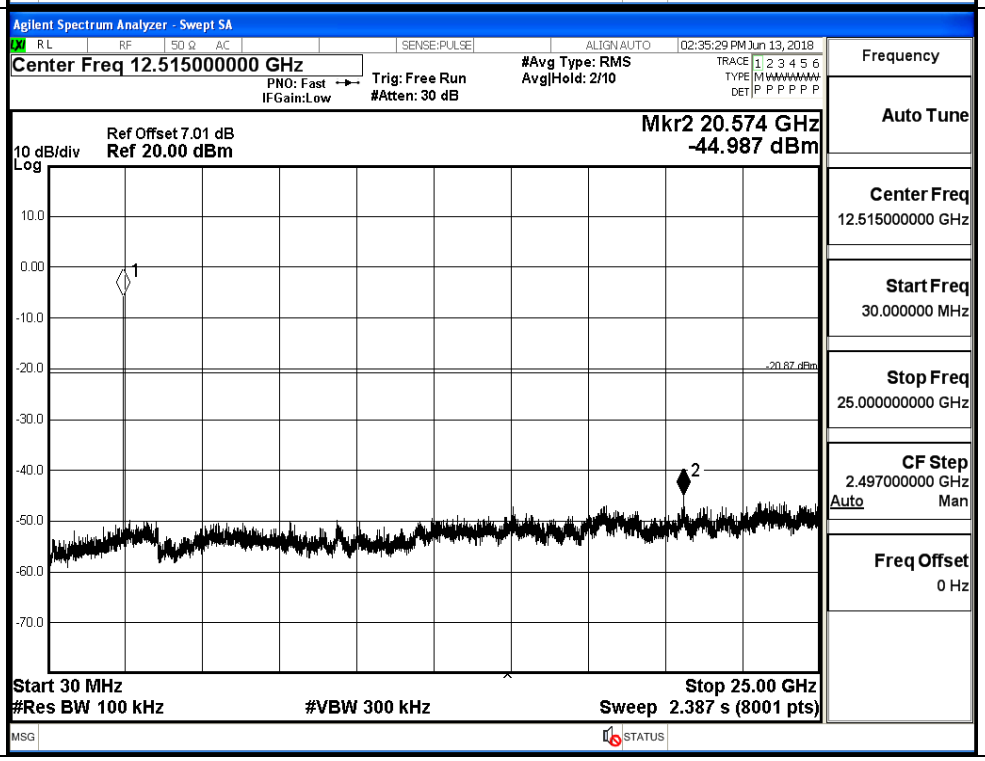
π/4DQPSK_LCH_Graphs		
Pref		
Puw		

π/4DQPSK_MCH_Graphs		
Pref		
Puw		

π/4DQPSK_HCH_Graphs		
Pref		
Puw		

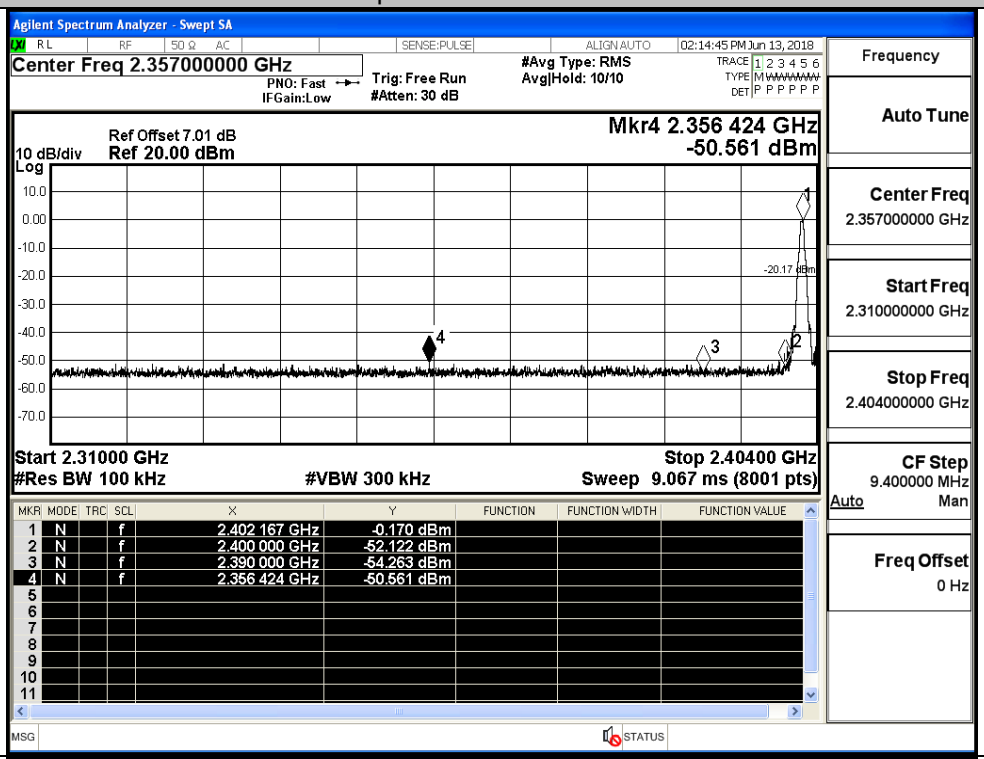
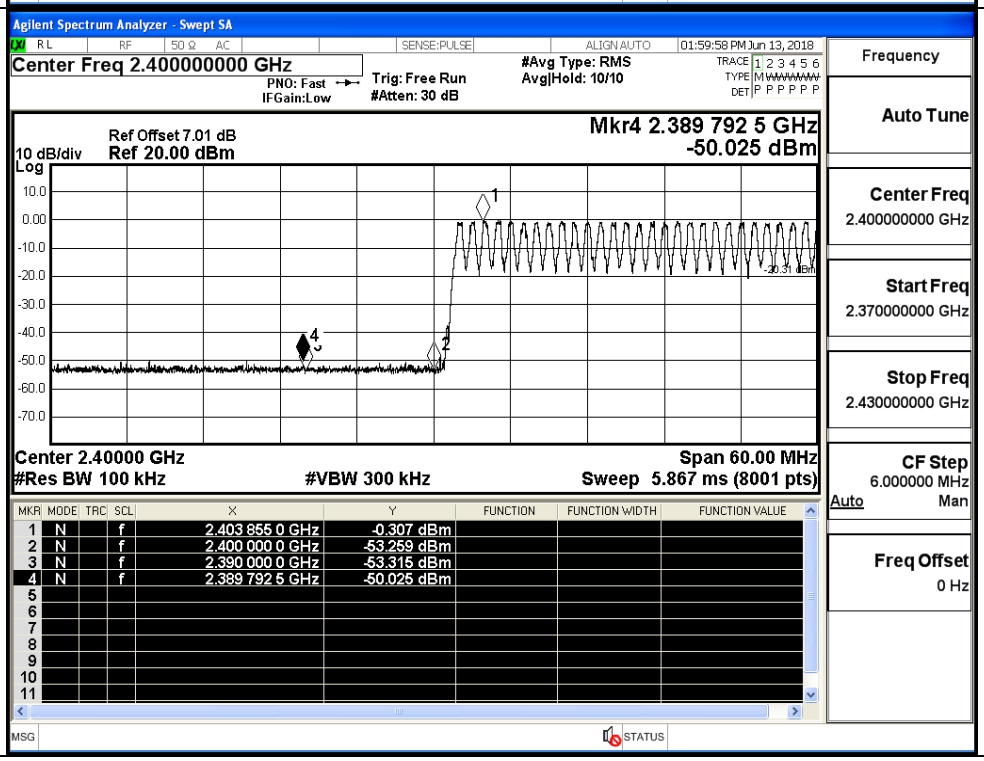
8DPSK_LCH_Graphs		
Pref		
Puw		

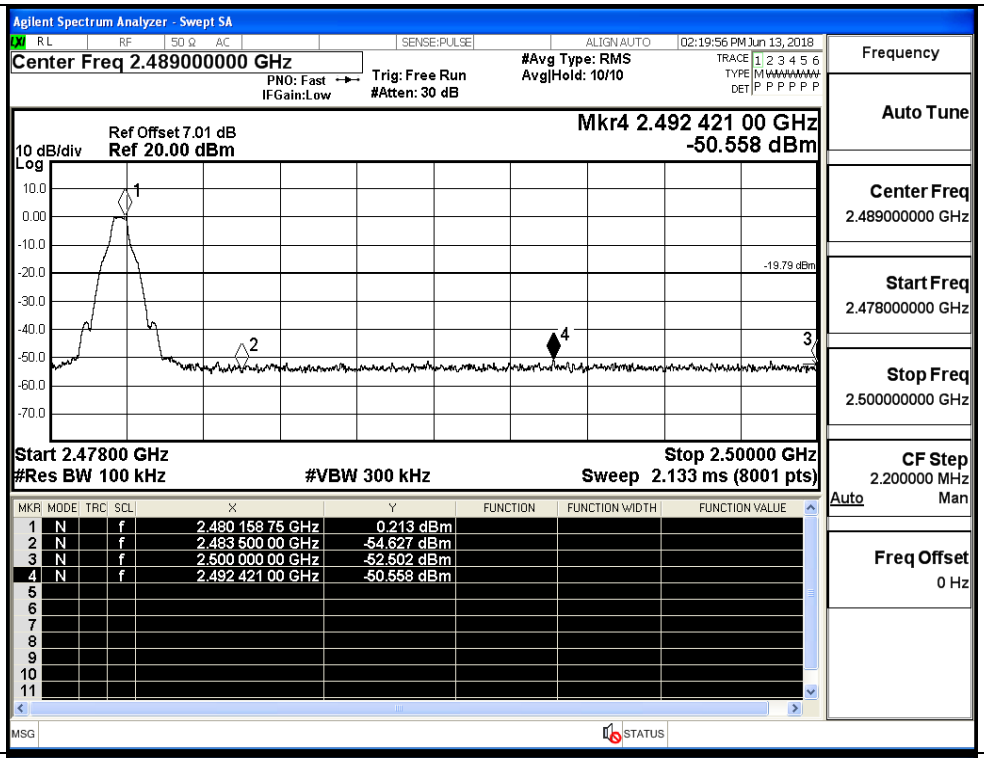
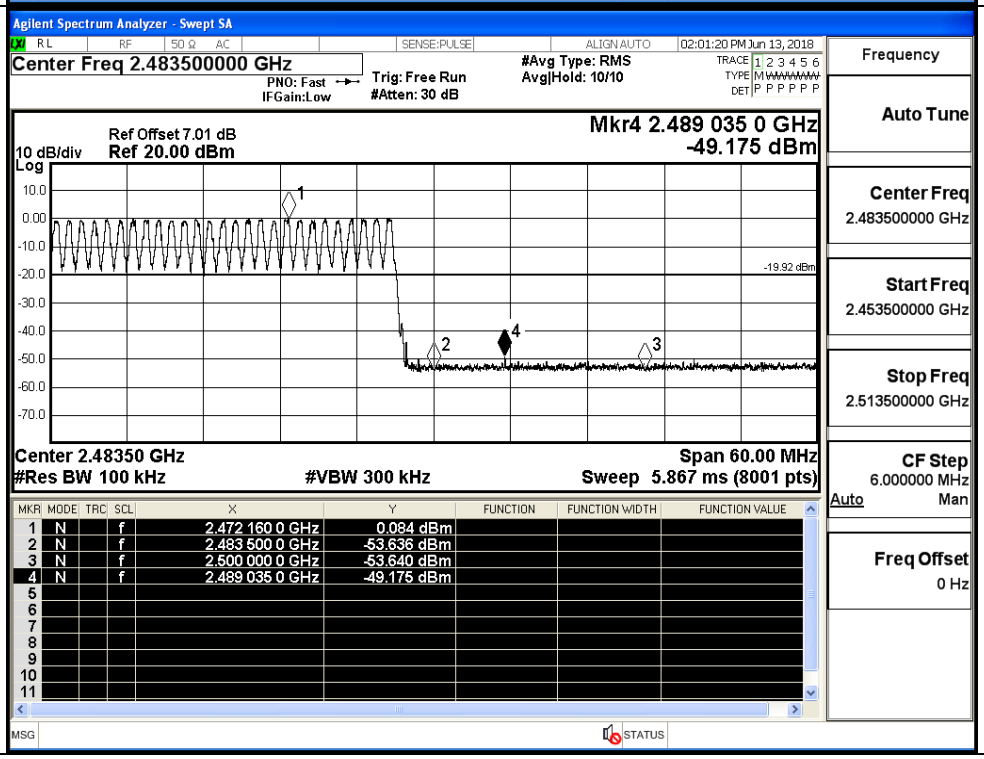
8DPSK_MCH_Graphs		
Pref		
Puw		

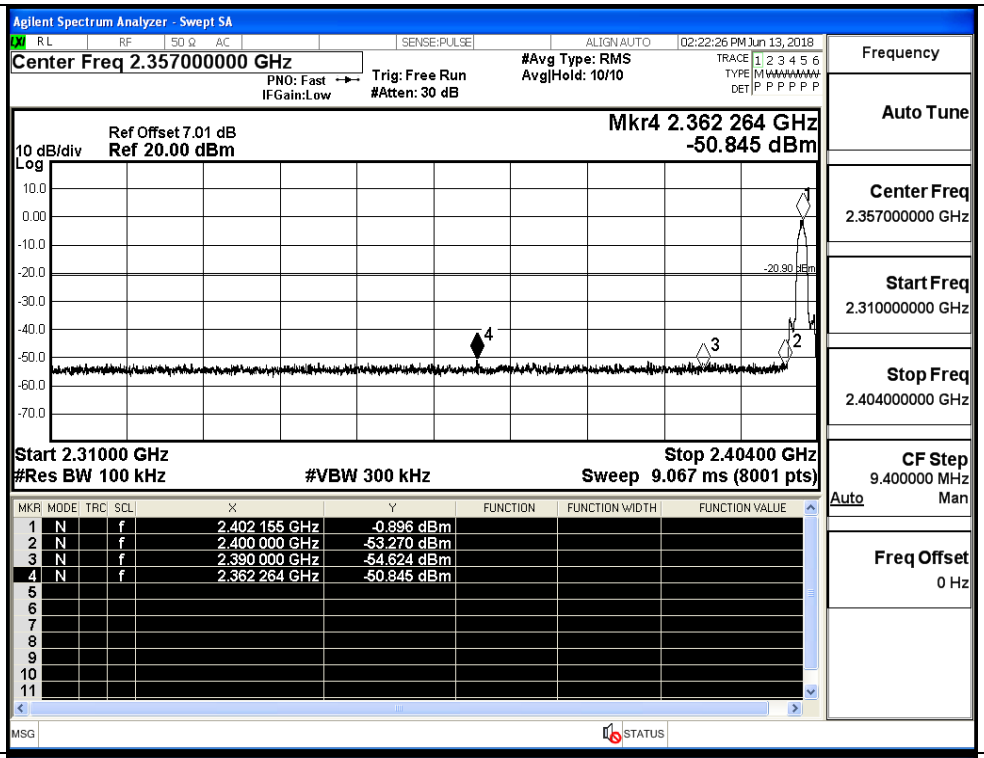
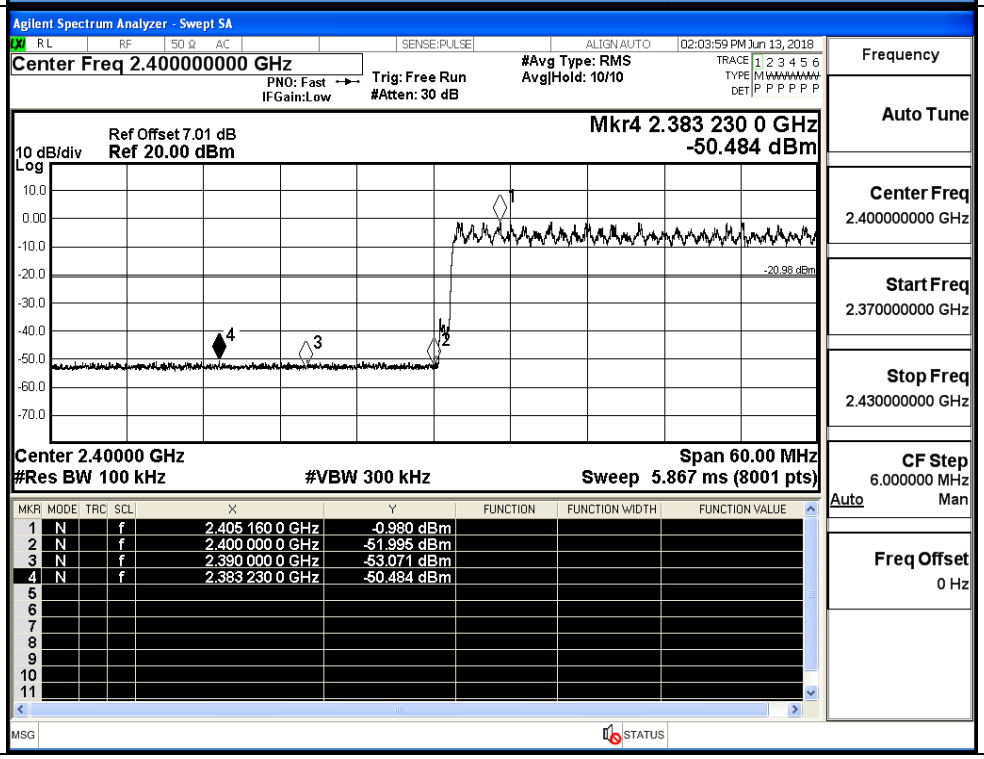
8DPSK_HCH_Graphs			
Pref			
Puw			

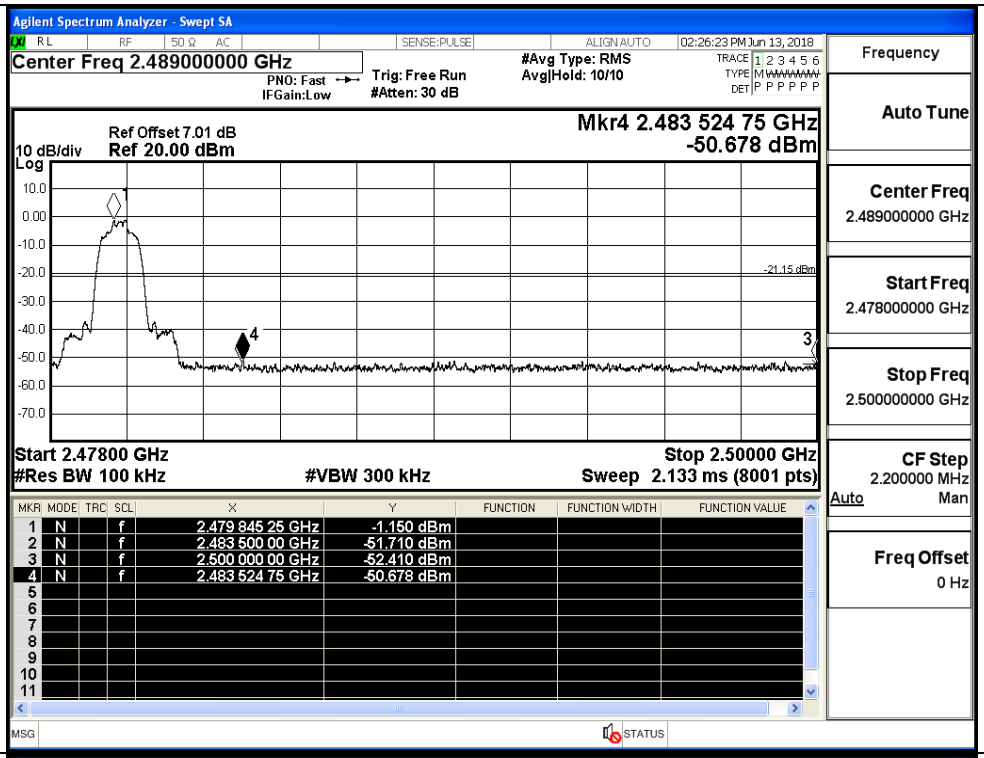
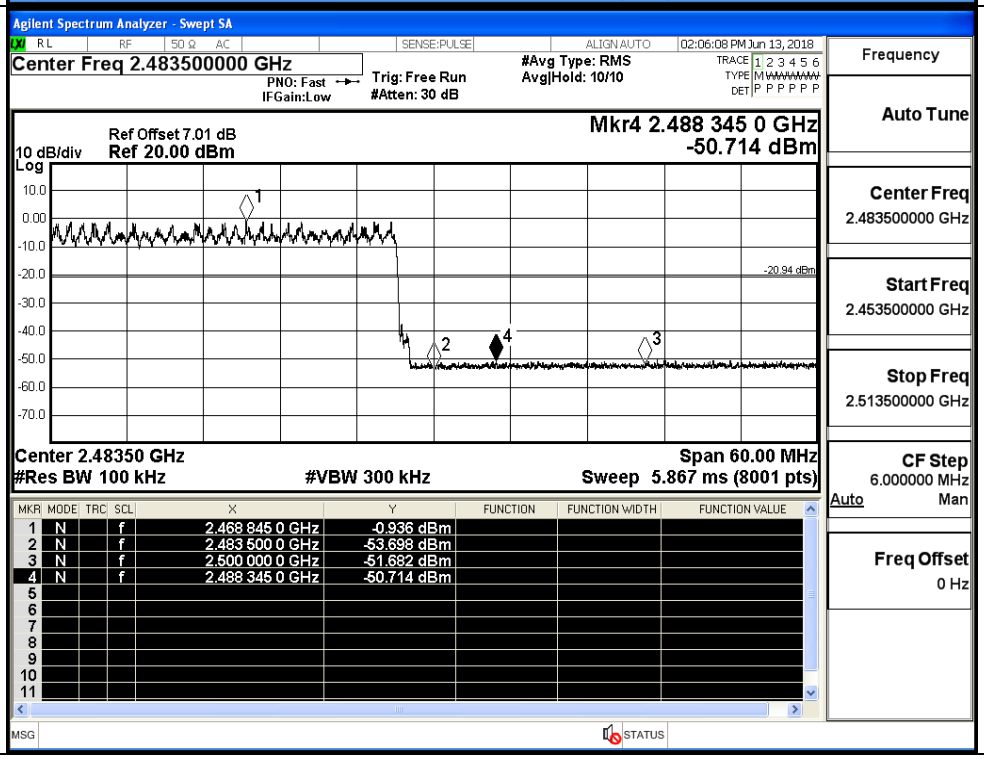
A.7 Band-edge for RF Conducted Emissions

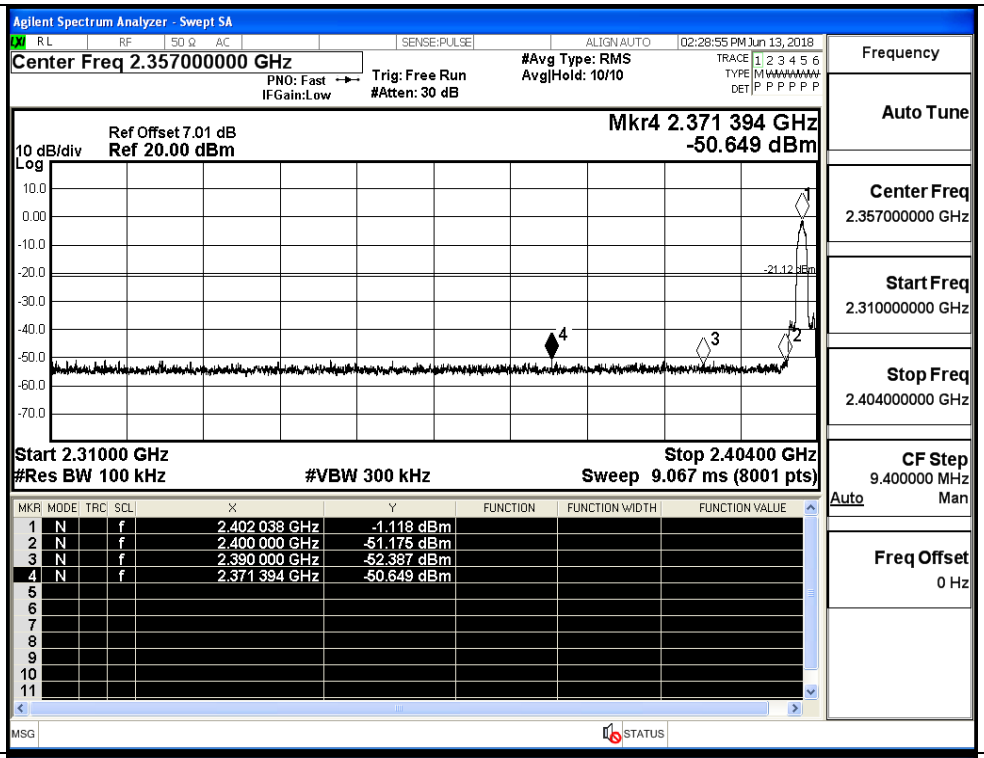
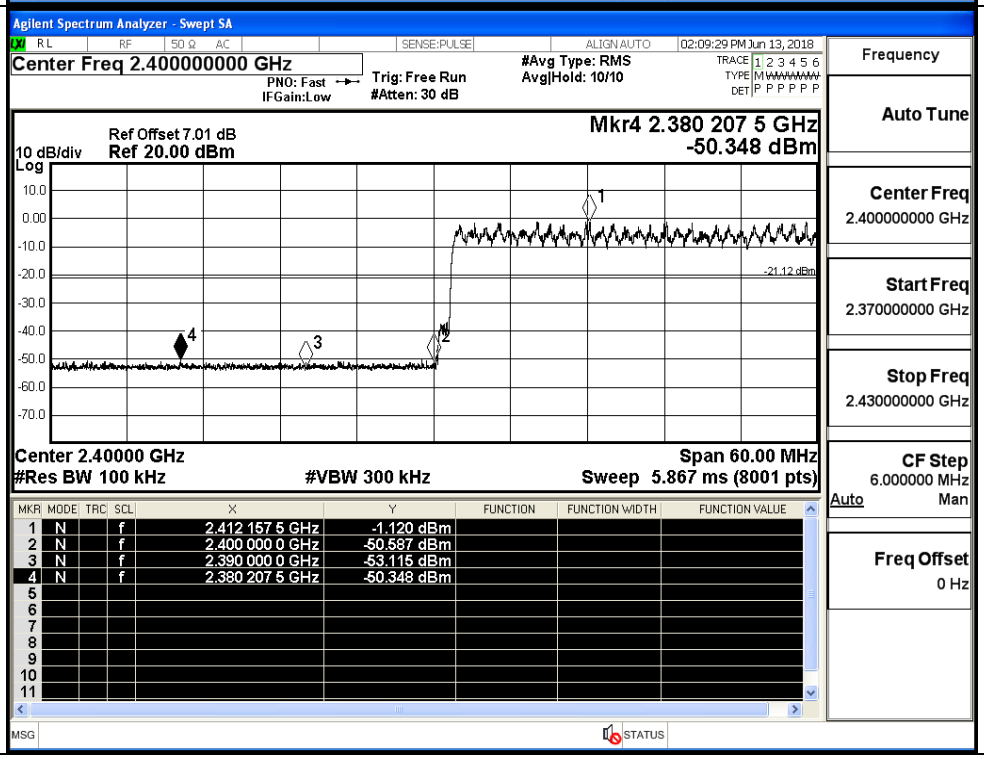
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-0.170	Off	-50.561	-20.17	PASS
			-0.307	On	-50.025	-20.31	PASS
	HCH	2480	0.213	Off	-50.558	-19.79	PASS
			0.084	On	-49.175	-19.92	PASS
π/4DQPSK	LCH	2402	-0.896	Off	-50.845	-20.9	PASS
			-0.980	On	-50.484	-20.98	PASS
	HCH	2480	-1.150	Off	-50.678	-21.15	PASS
			-0.936	On	-50.714	-20.94	PASS
8DPSK	LCH	2402	-1.118	Off	-50.649	-21.12	PASS
			-1.120	On	-50.348	-21.12	PASS
	HCH	2480	-0.620	Off	-50.958	-20.62	PASS
			-0.752	On	-49.952	-20.75	PASS

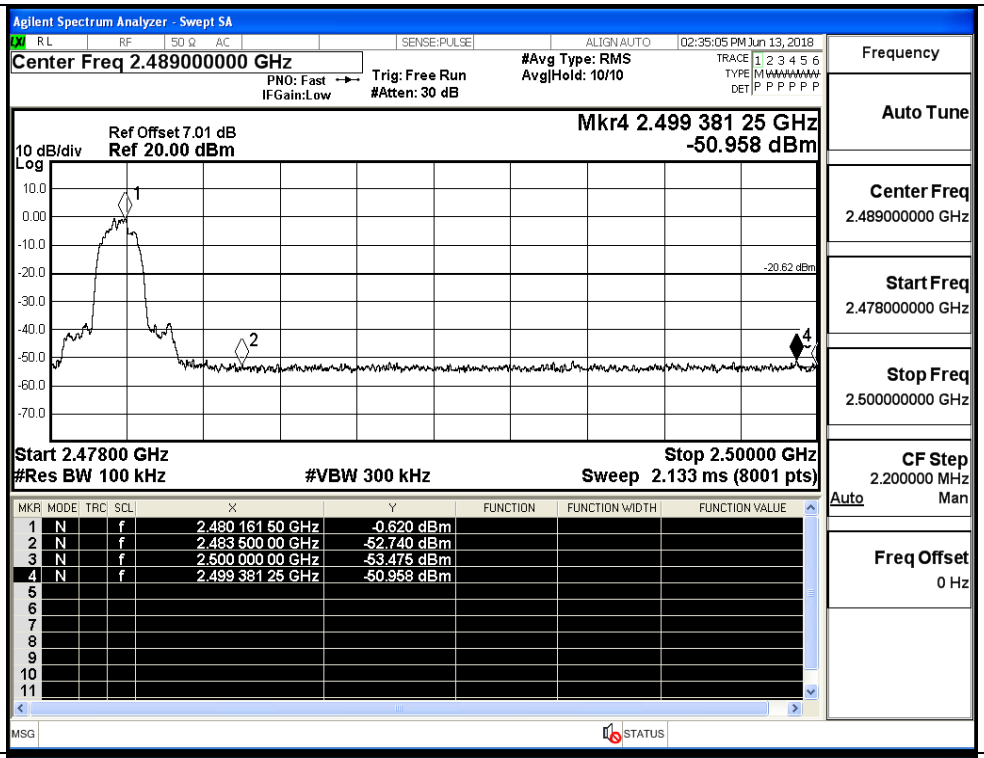
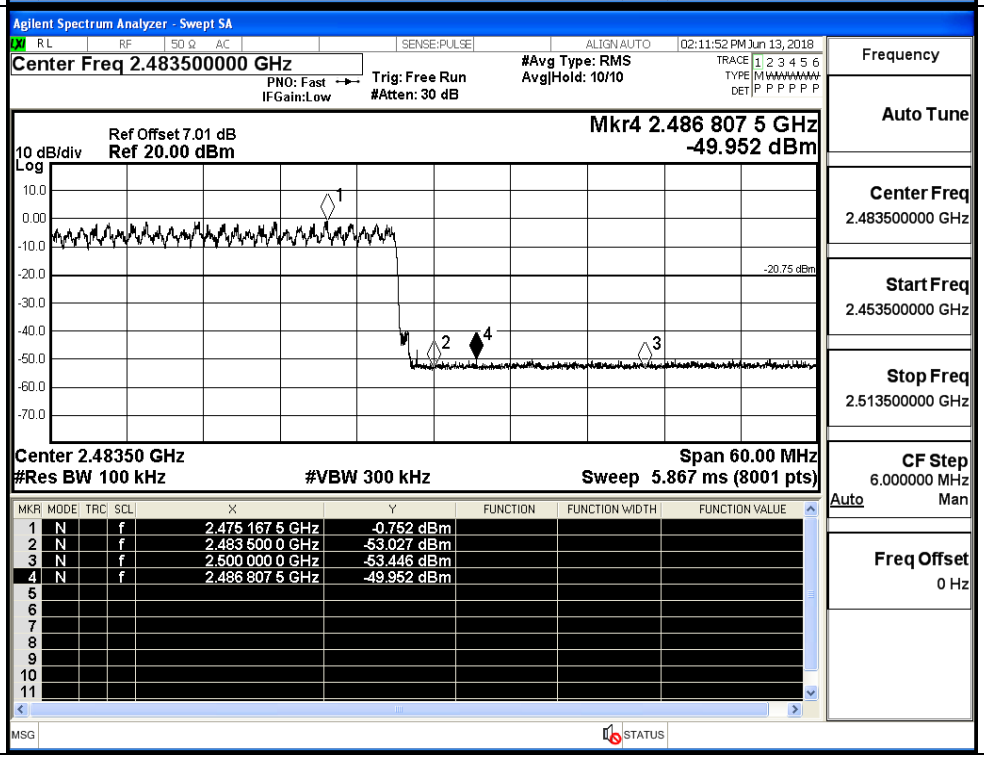
Test Graphs	
GFSK/LCH/No Hop	
GFSK/LCH/Hop	

GFSK/HCH/No Hop	
GFSK/HCH/Hop	

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

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

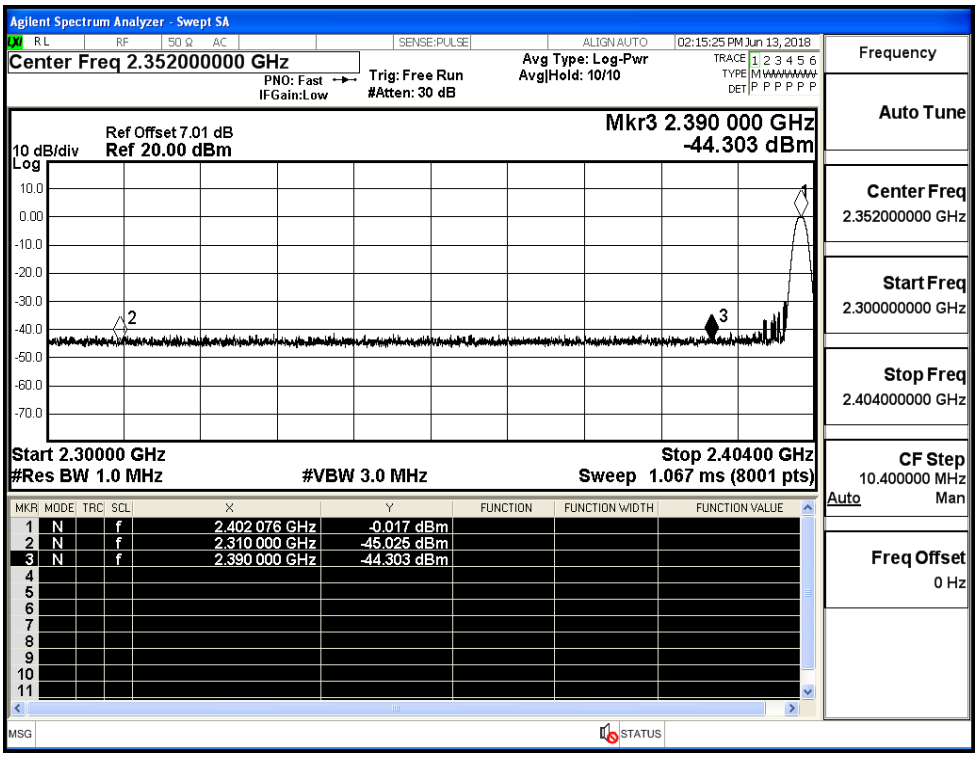
8DPSK/LCH/No Hop	
8DPSK/LCH/Hop	

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

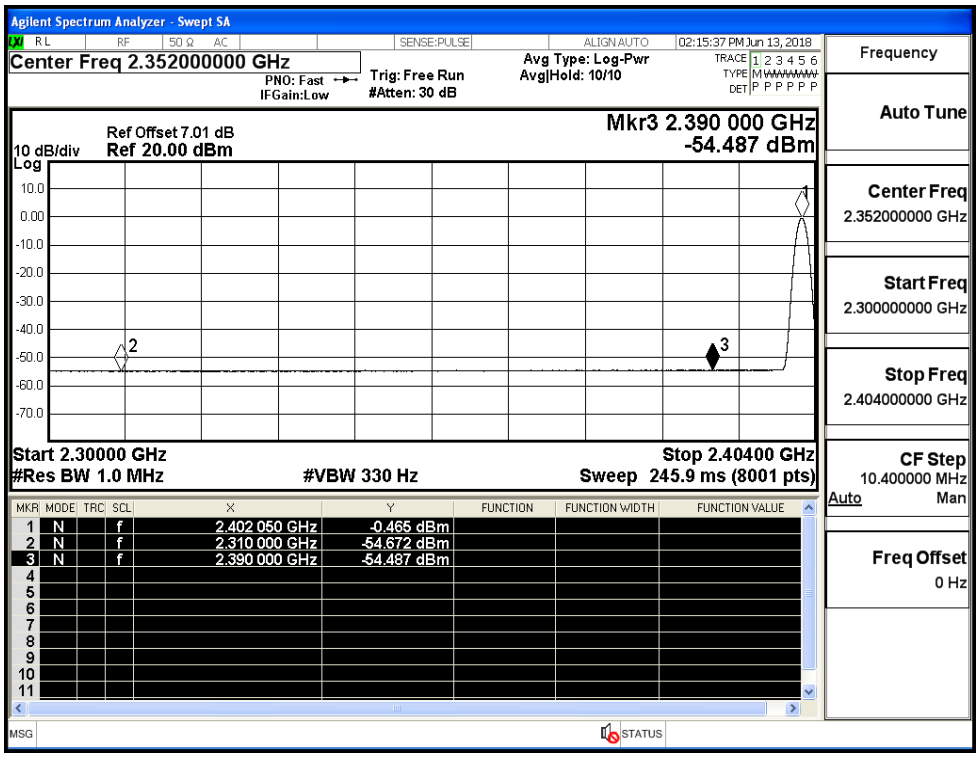
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-45.03	2.0	0	52.23	PEAK	74	PASS
	Off	2310.0	-54.67	2.0	0	42.59	AV	54	PASS
	Off	2390.0	-44.30	2.0	0	52.95	PEAK	74	PASS
	Off	2390.0	-54.49	2.0	0	42.77	AV	54	PASS
	Off	2483.5	-44.71	2.0	0	52.55	PEAK	74	PASS
	Off	2483.5	-54.26	2.0	0	42.99	AV	54	PASS
	Off	2500.0	-43.44	2.0	0	53.82	PEAK	74	PASS
	Off	2500.0	-54.14	2.0	0	43.12	AV	54	PASS
π/4DQPSK	Off	2310.0	-45.70	2.0	0	51.56	PEAK	74	PASS
	Off	2310.0	-54.83	2.0	0	42.43	AV	54	PASS
	Off	2390.0	-44.48	2.0	0	52.78	PEAK	74	PASS
	Off	2390.0	-54.47	2.0	0	42.79	AV	54	PASS
	Off	2483.5	-44.40	2.0	0	52.86	PEAK	74	PASS
	Off	2483.5	-54.18	2.0	0	43.07	AV	54	PASS
	Off	2500.0	-43.94	2.0	0	53.32	PEAK	74	PASS
	Off	2500.0	-54.10	2.0	0	43.16	AV	54	PASS
8DPSK	Off	2310.0	-43.99	2.0	0	53.27	PEAK	74	PASS
	Off	2310.0	-54.85	2.0	0	42.41	AV	54	PASS
	Off	2390.0	-44.52	2.0	0	52.74	PEAK	74	PASS
	Off	2390.0	-54.52	2.0	0	42.74	AV	54	PASS
	Off	2483.5	-44.41	2.0	0	52.85	PEAK	74	PASS
	Off	2483.5	-54.09	2.0	0	43.16	AV	54	PASS
	Off	2500.0	-42.41	2.0	0	54.84	PEAK	74	PASS
	Off	2500.0	-54.01	2.0	0	43.25	AV	54	PASS

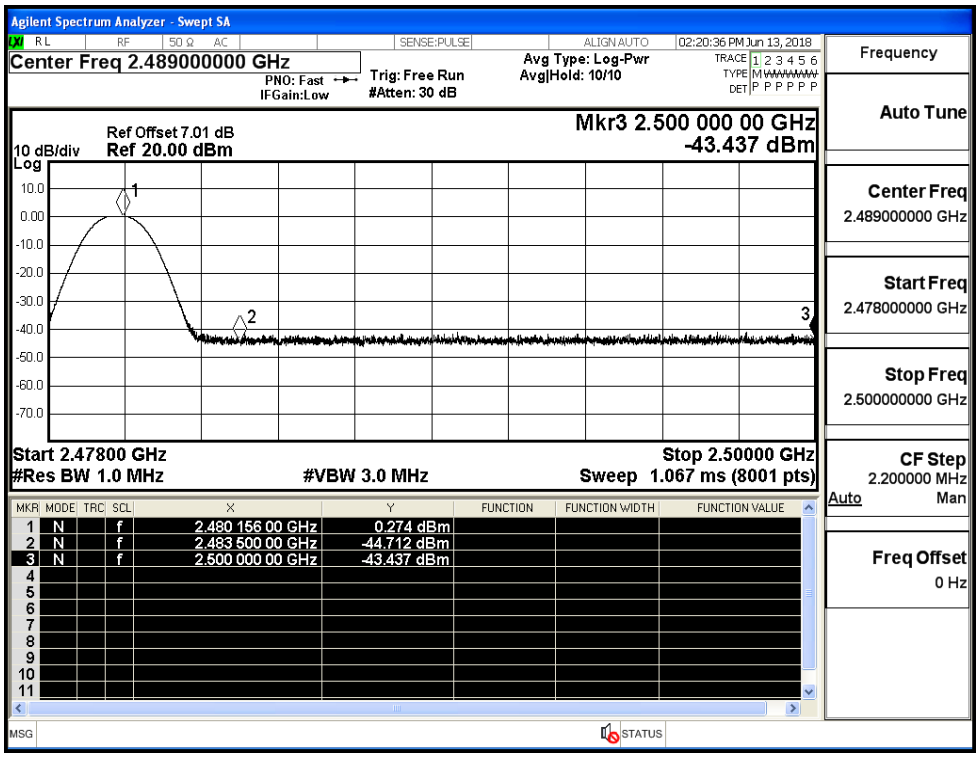
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (Low Channel)



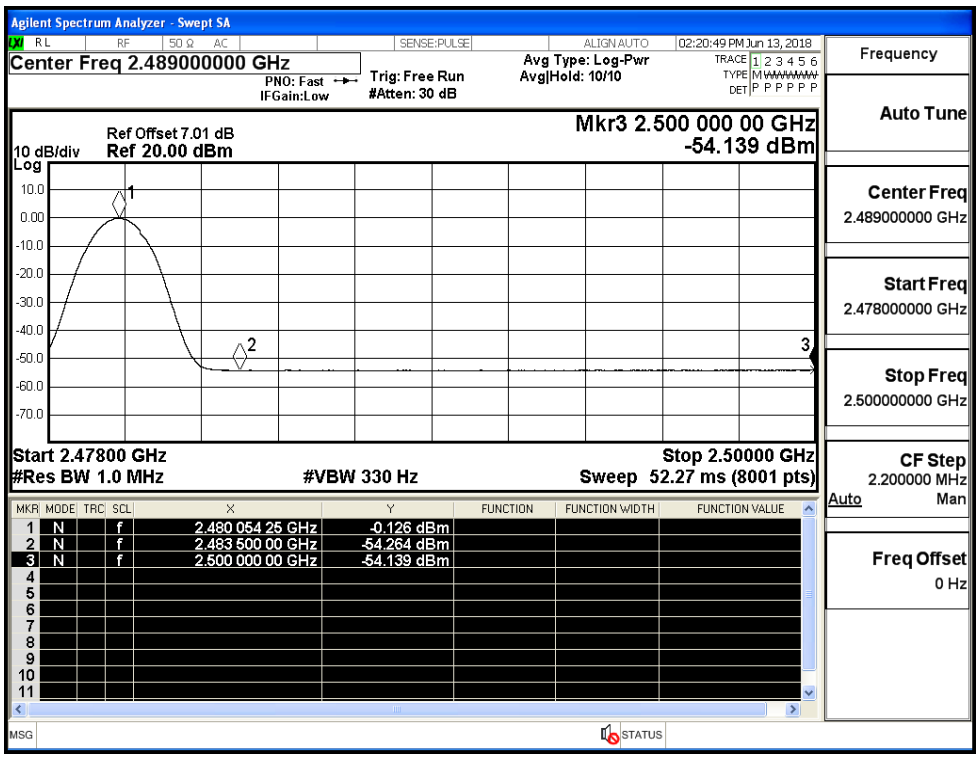
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (Low Channel)



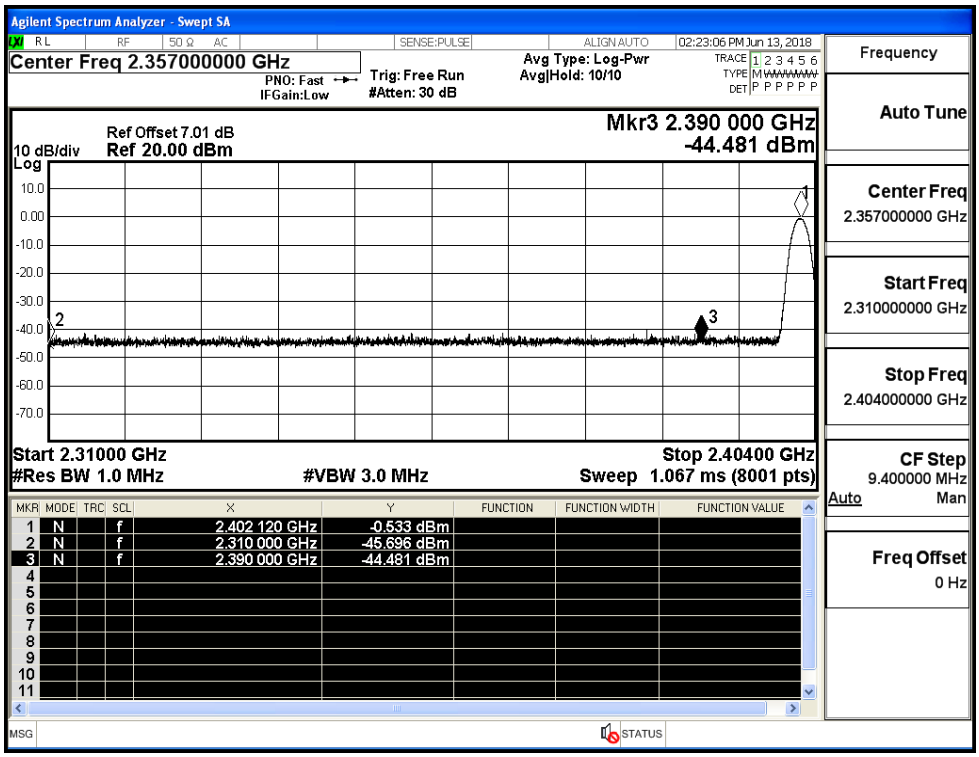
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



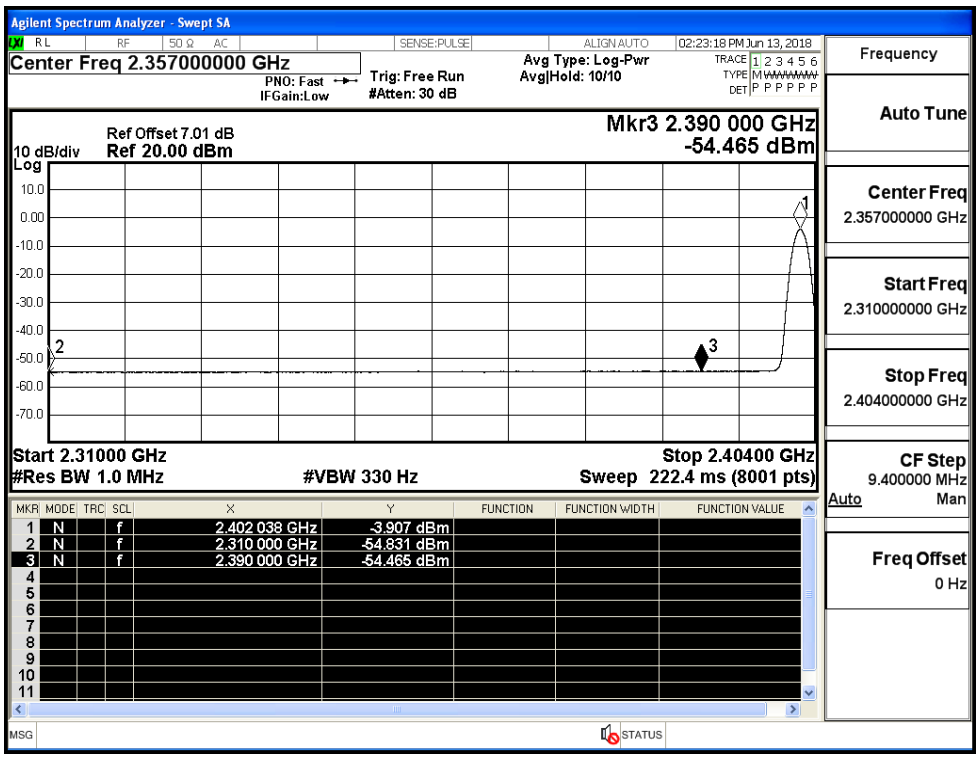
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



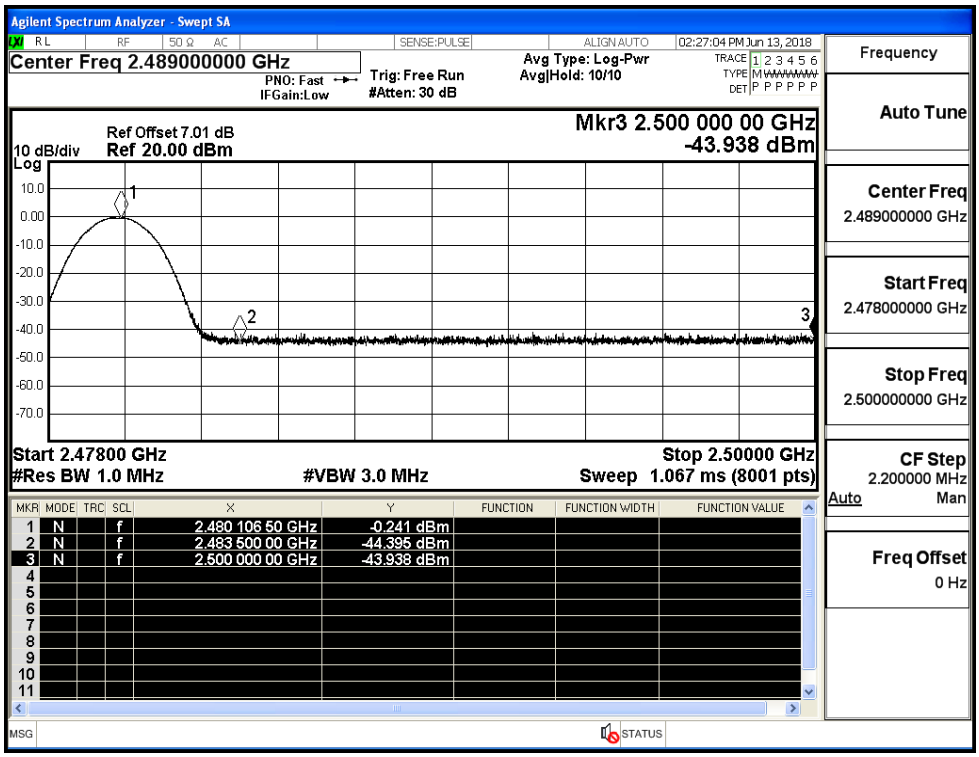
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (Low Channel)



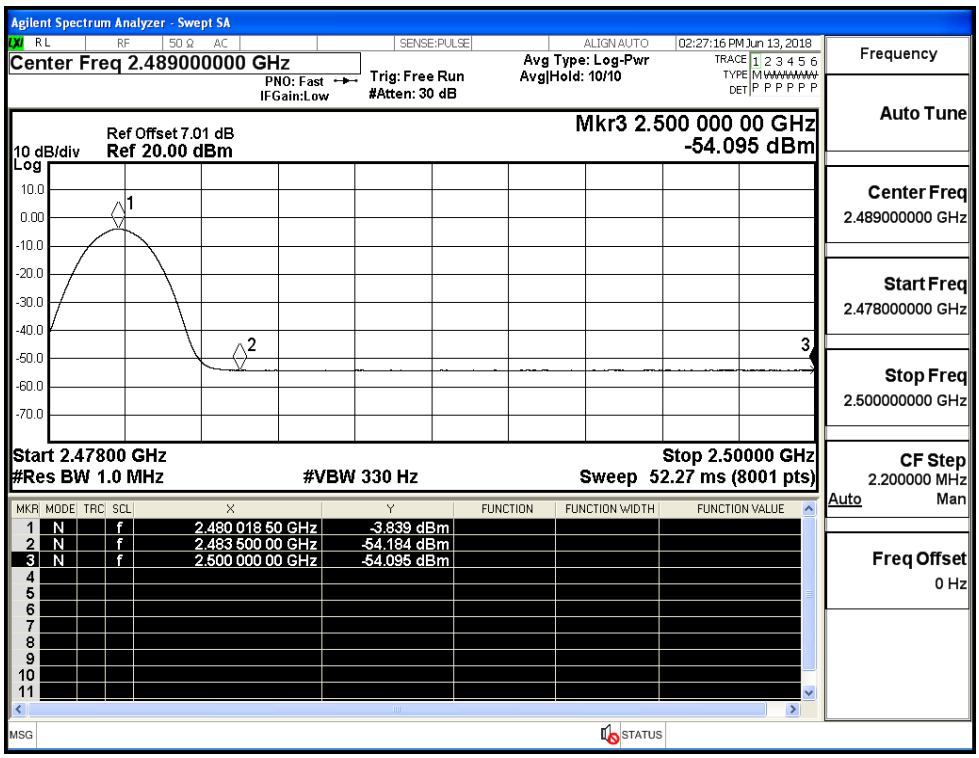
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (Low Channel)



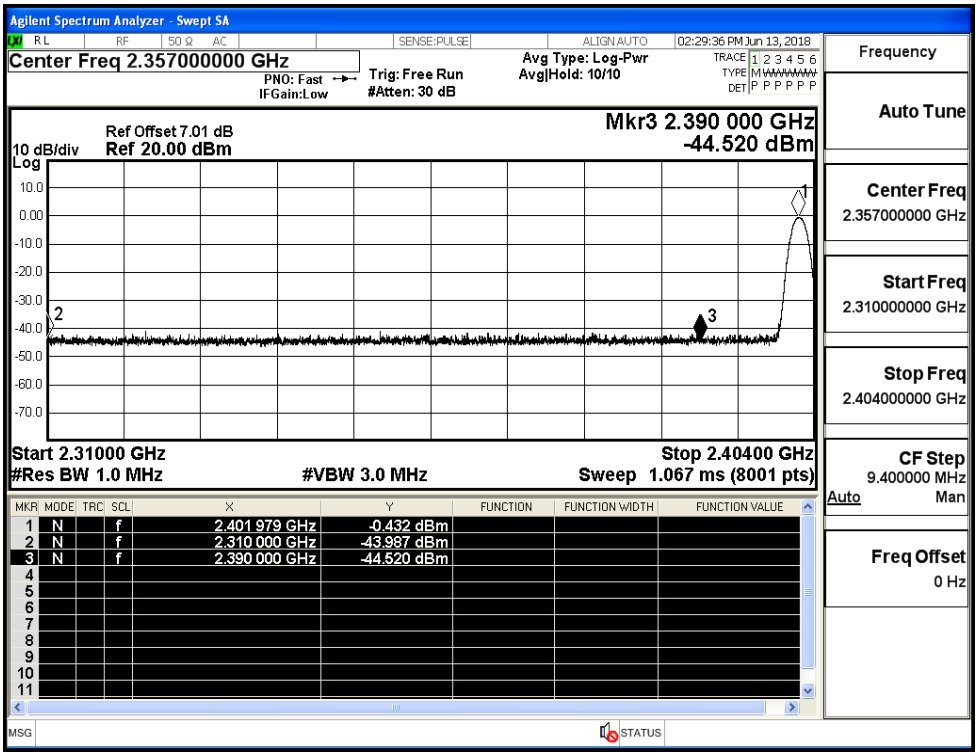
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (High Channel)



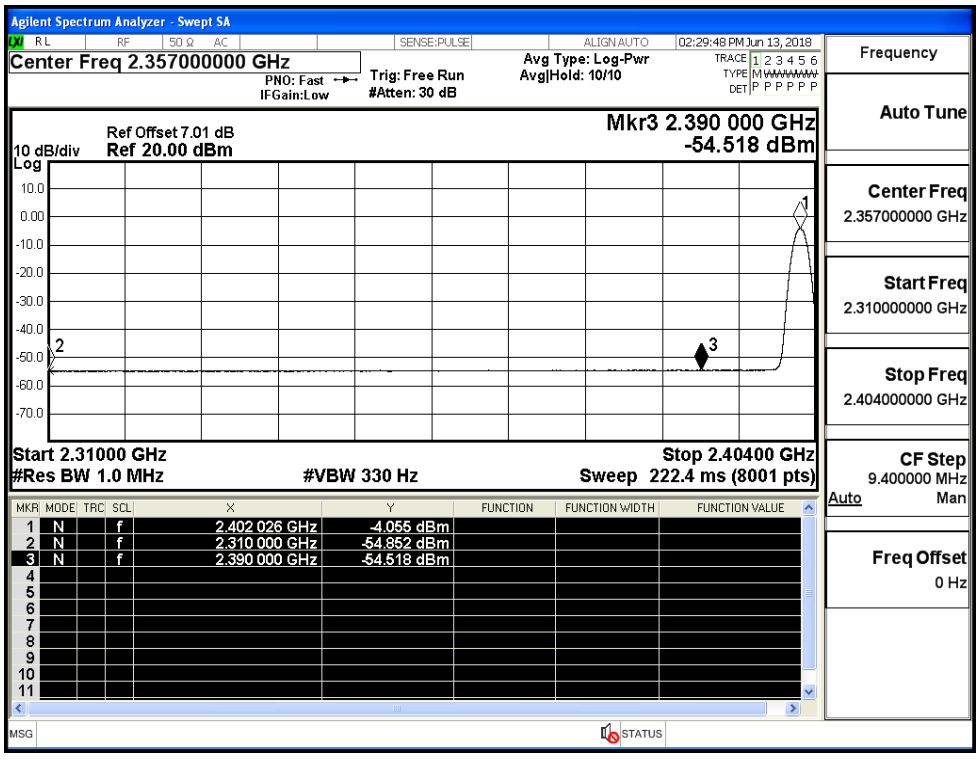
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (High Channel)



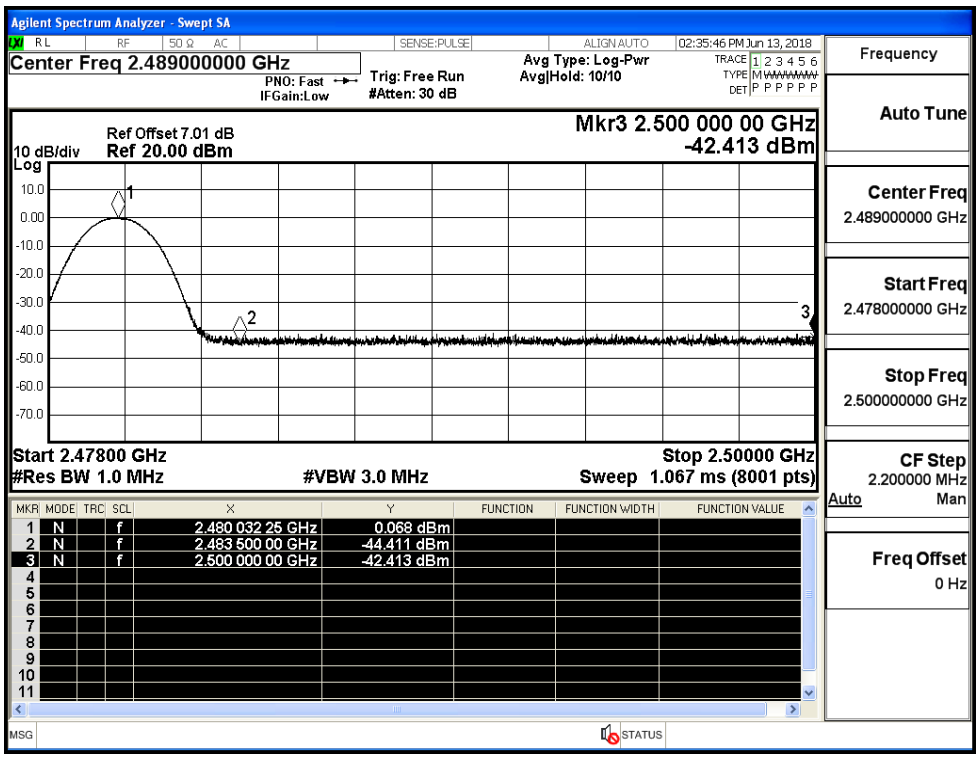
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



Restrict-band band-edge measurements_Hopping Off_8DPSK_Average (Low Channel)



Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (High Channel)



Restrict-band band-edge measurements_Hopping Off_8DPSK_Average (High Channel)