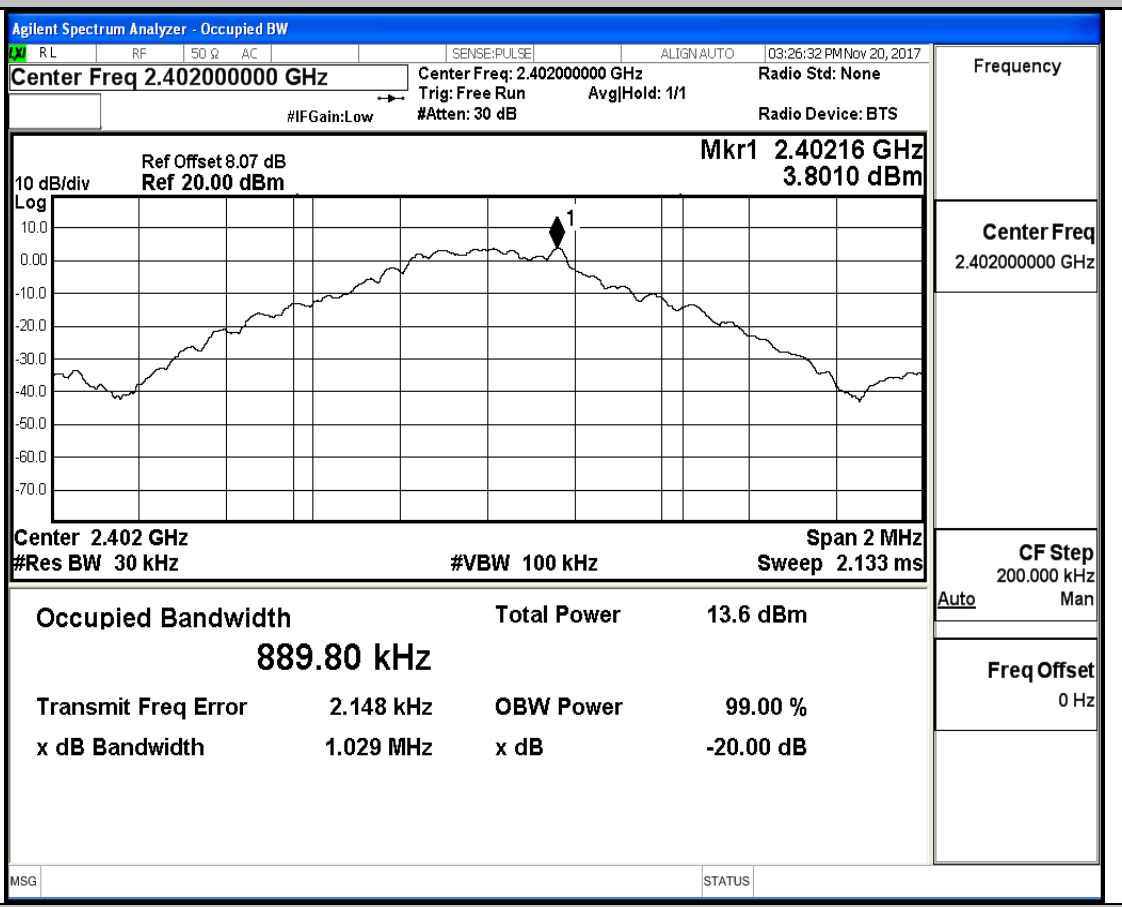
Appendix A
RF Test Data for BT V4.2(BDR/EDR) (Conducted Measurement)

Product Name: Mini Wireless Earphone A02
Trade Mark: Baseus
Test Model: Baseus Encok A02
FCC ID: 2AN7Y-A02

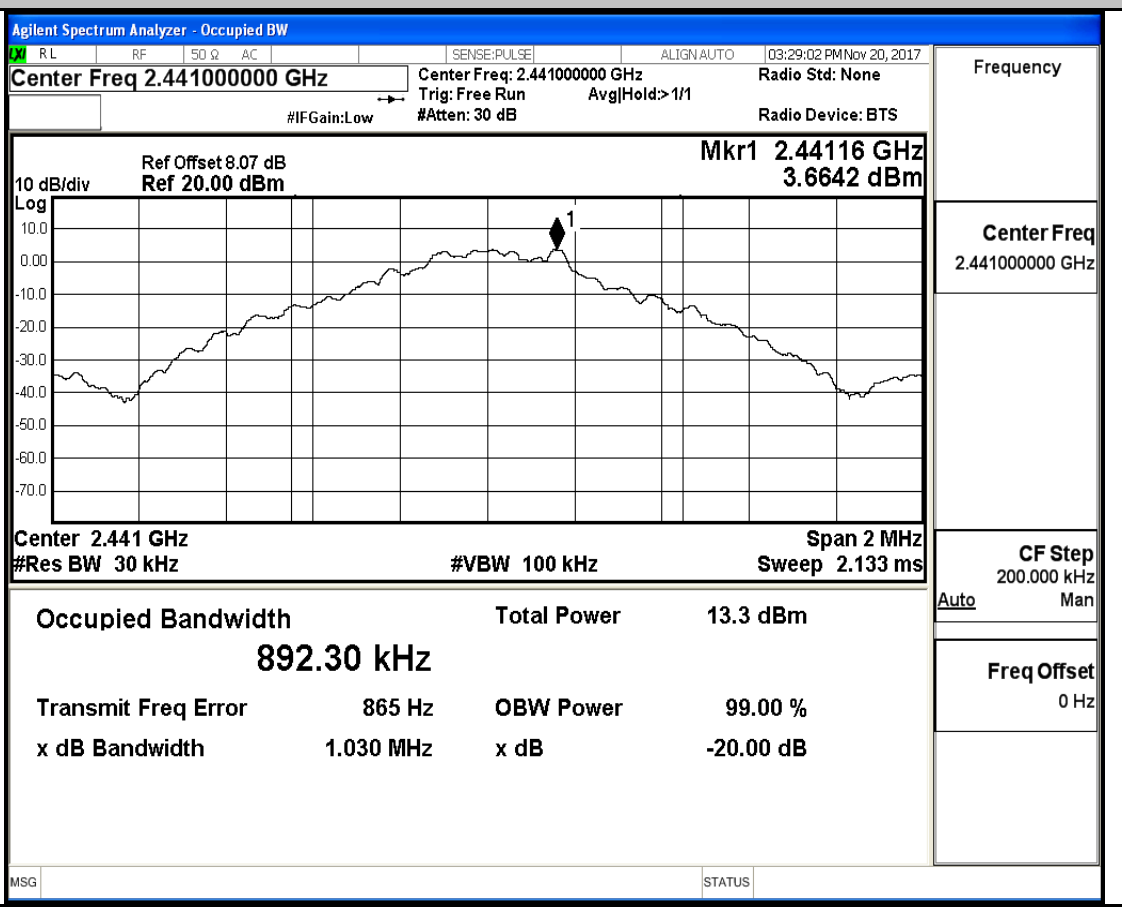
A.1 20 dB Bandwidth

Test Mode	Test Channel	EBW[MHz]	Limit[MHz]	Verdict
GFSK	2402	1.029	---	PASS
	2441	1.030	---	PASS
	2480	1.029	---	PASS
π/4-DQPSK	2402	1.290	---	PASS
	2441	1.305	---	PASS
	2480	1.292	---	PASS
8-DPSK	2402	1.296	---	PASS
	2441	1.300	---	PASS
	2480	1.301	---	PASS

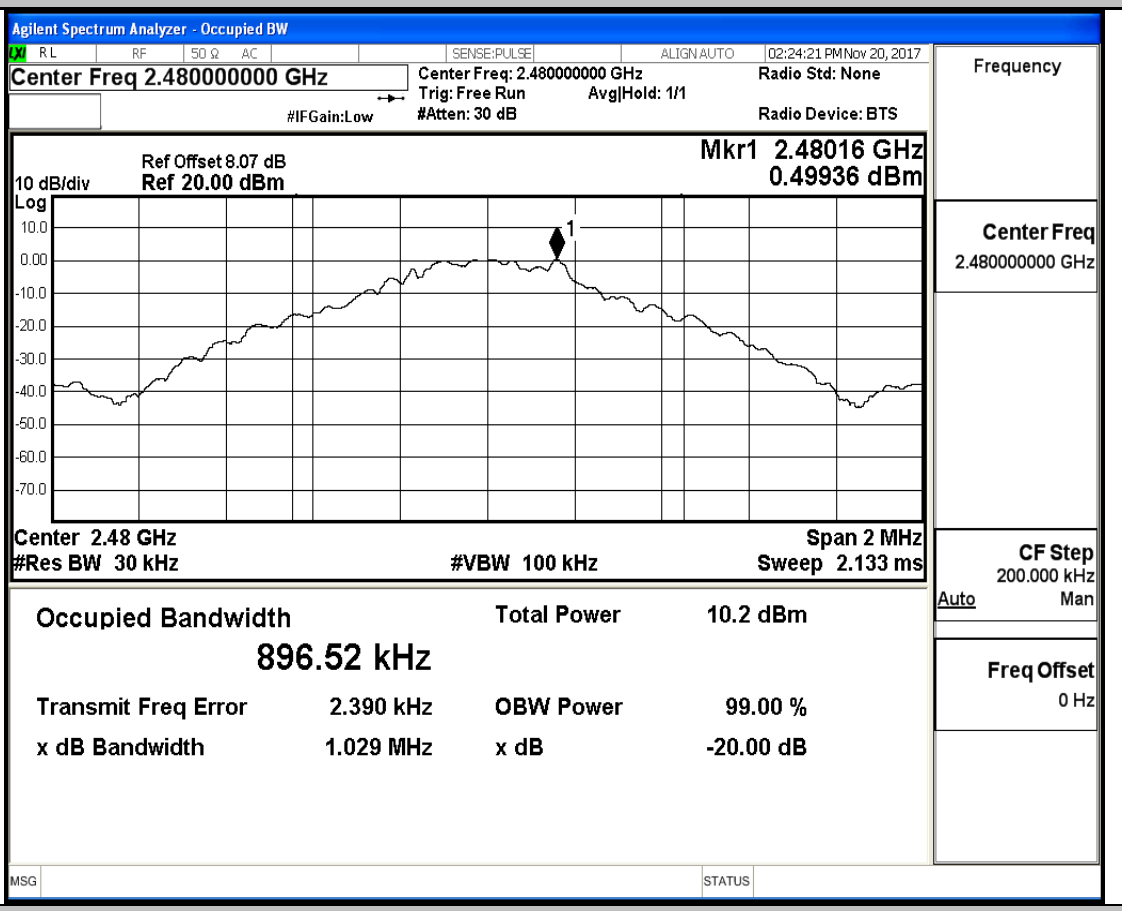
20 dB Bandwidth_GFSK_2402



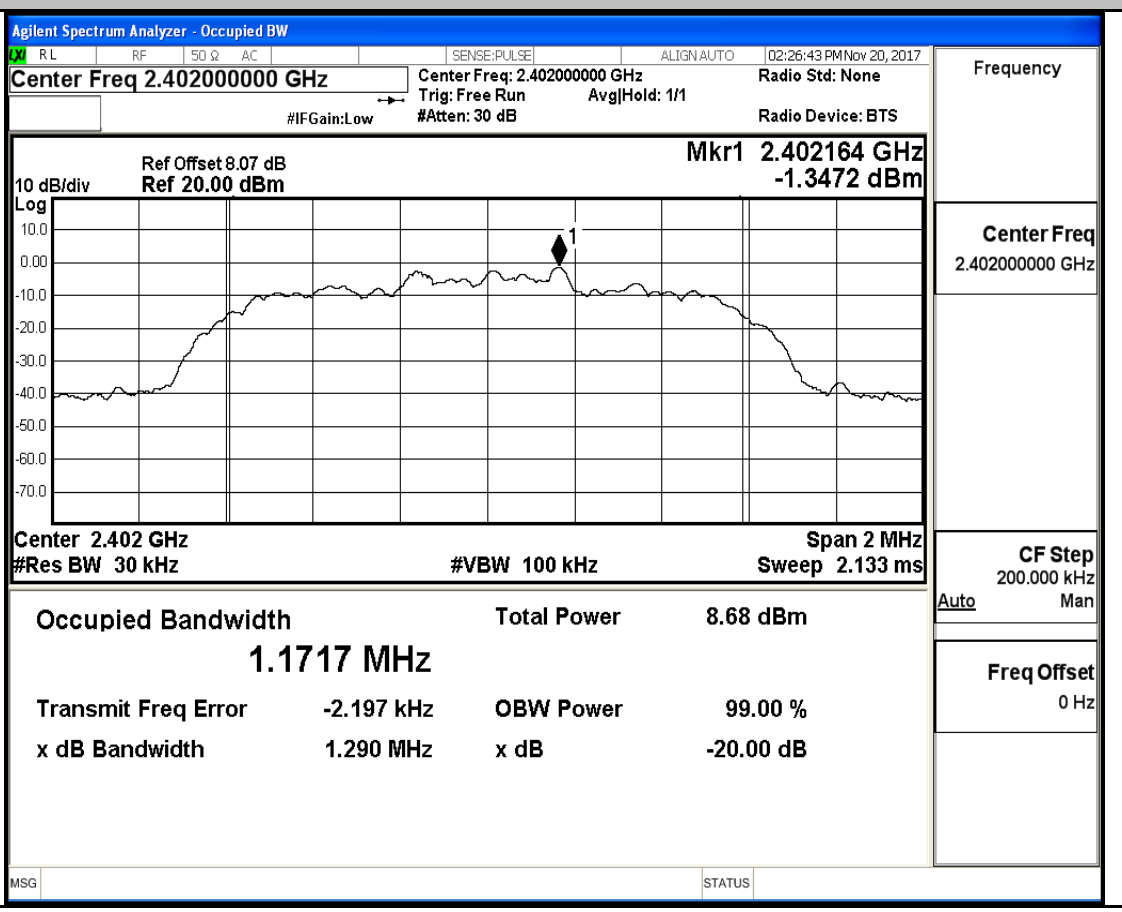
20 dB Bandwidth_GFSK_2441



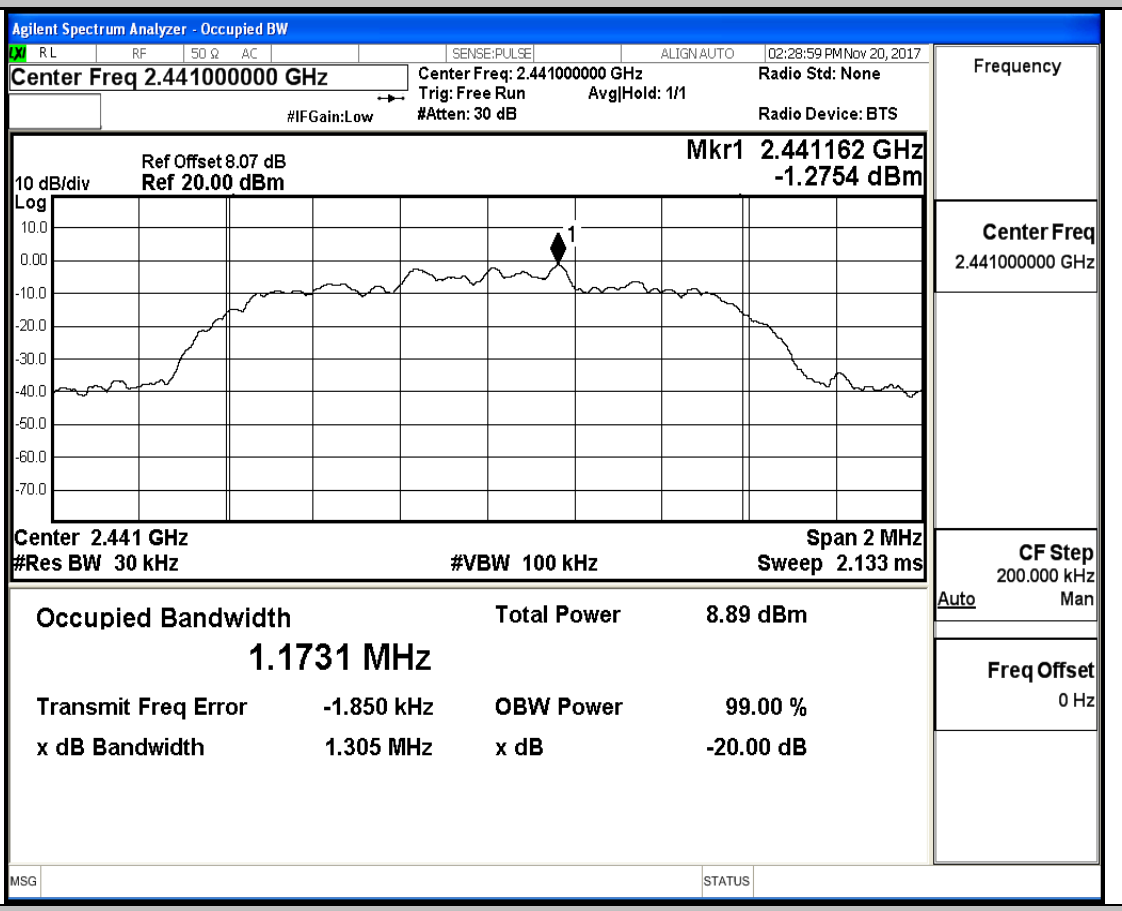
20 dB Bandwidth_GFSK_2480



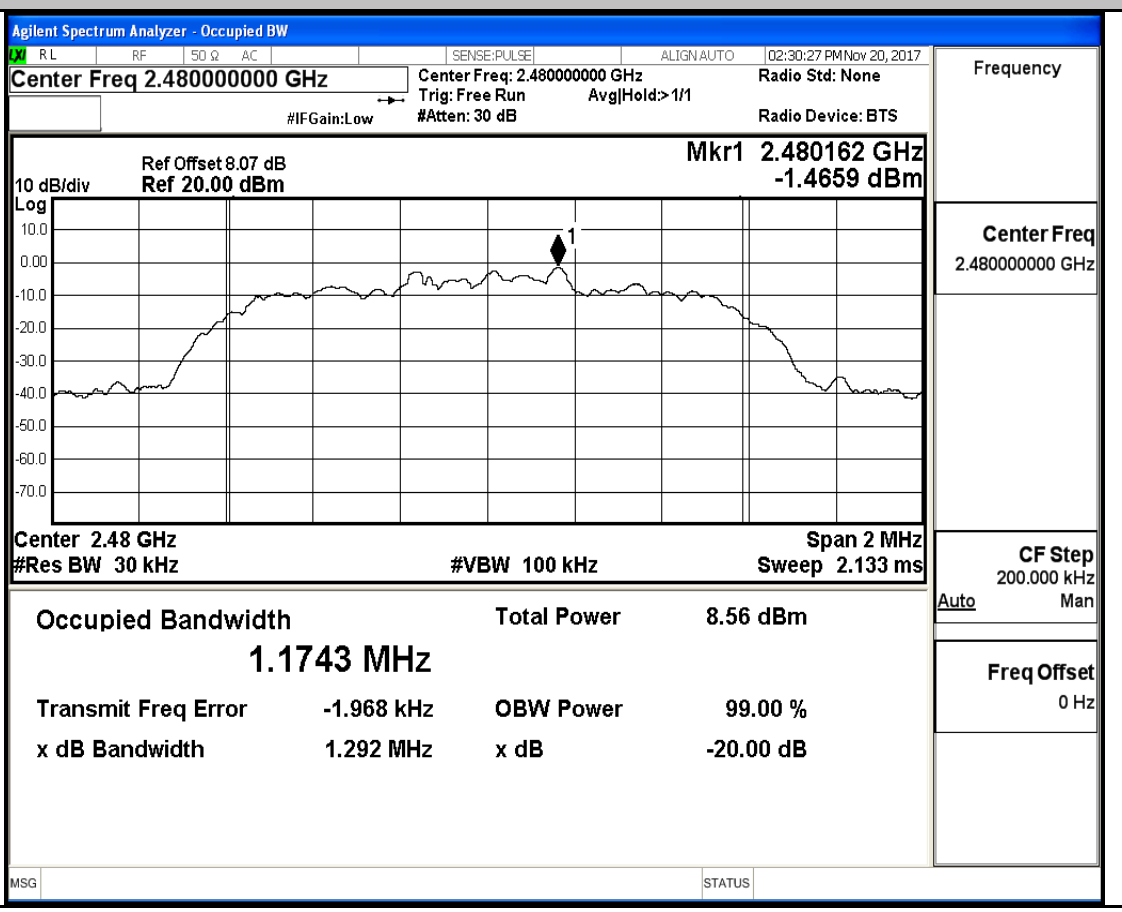
20 dB Bandwidth_π/4-DQPSK_2402



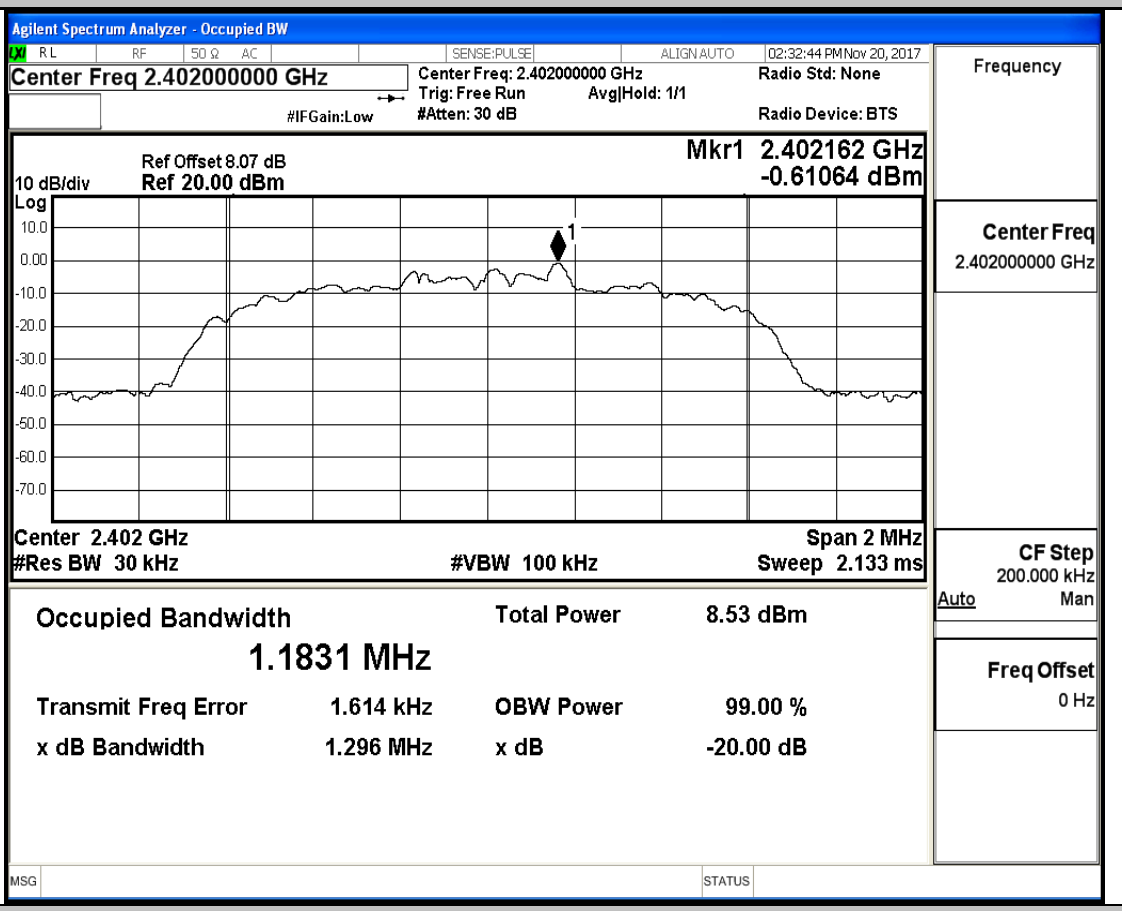
20 dB Bandwidth_π/4-DQPSK_2441



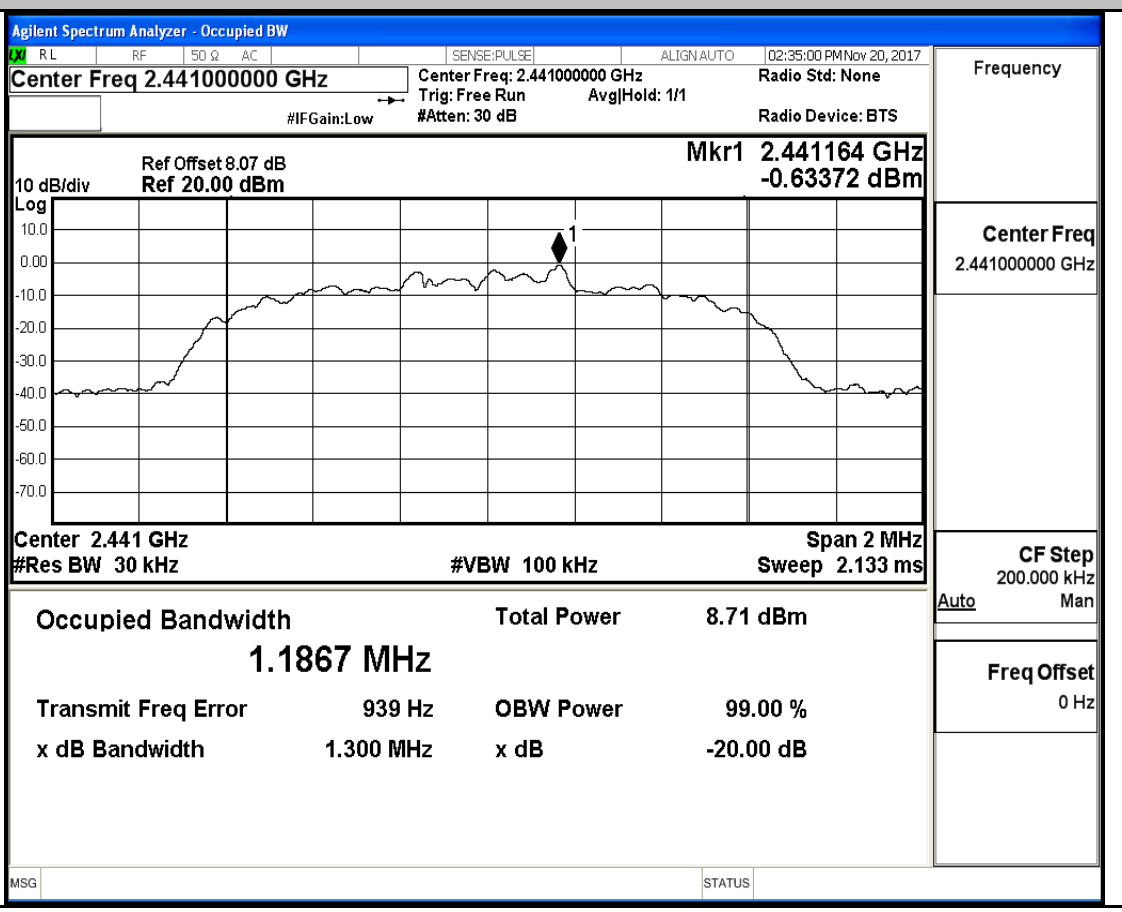
20 dB Bandwidth_π/4-DQPSK_2480



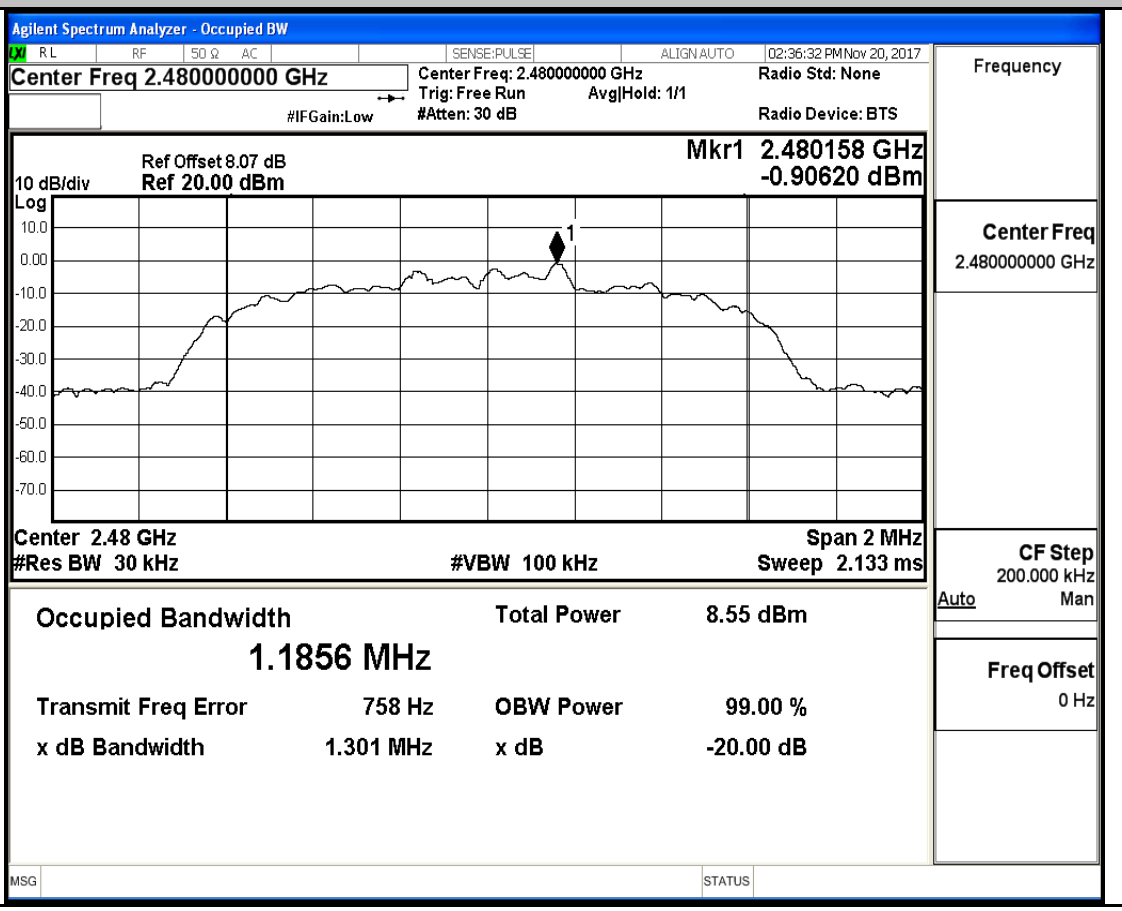
20 dB Bandwidth_8-DPSK_2402



20 dB Bandwidth_8-DPSK_2441



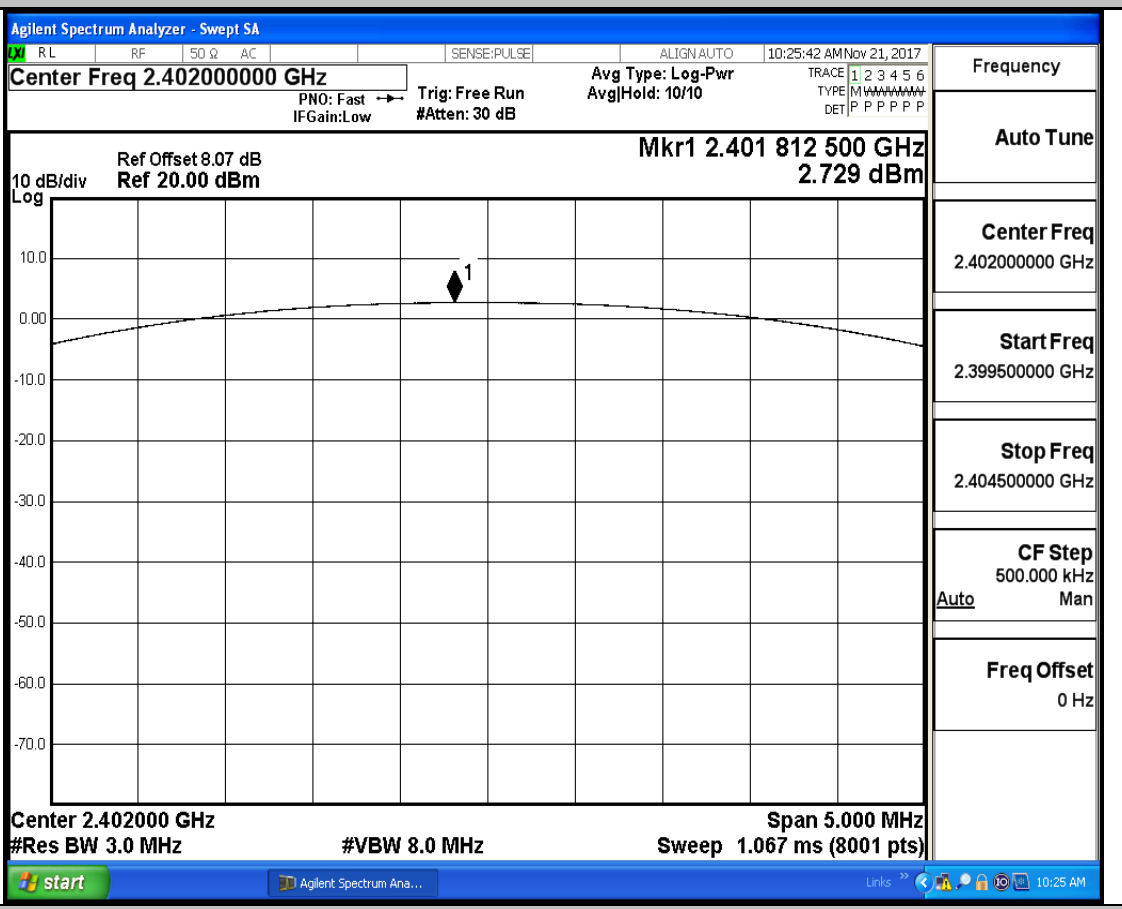
20 dB Bandwidth_8-DPSK_2480



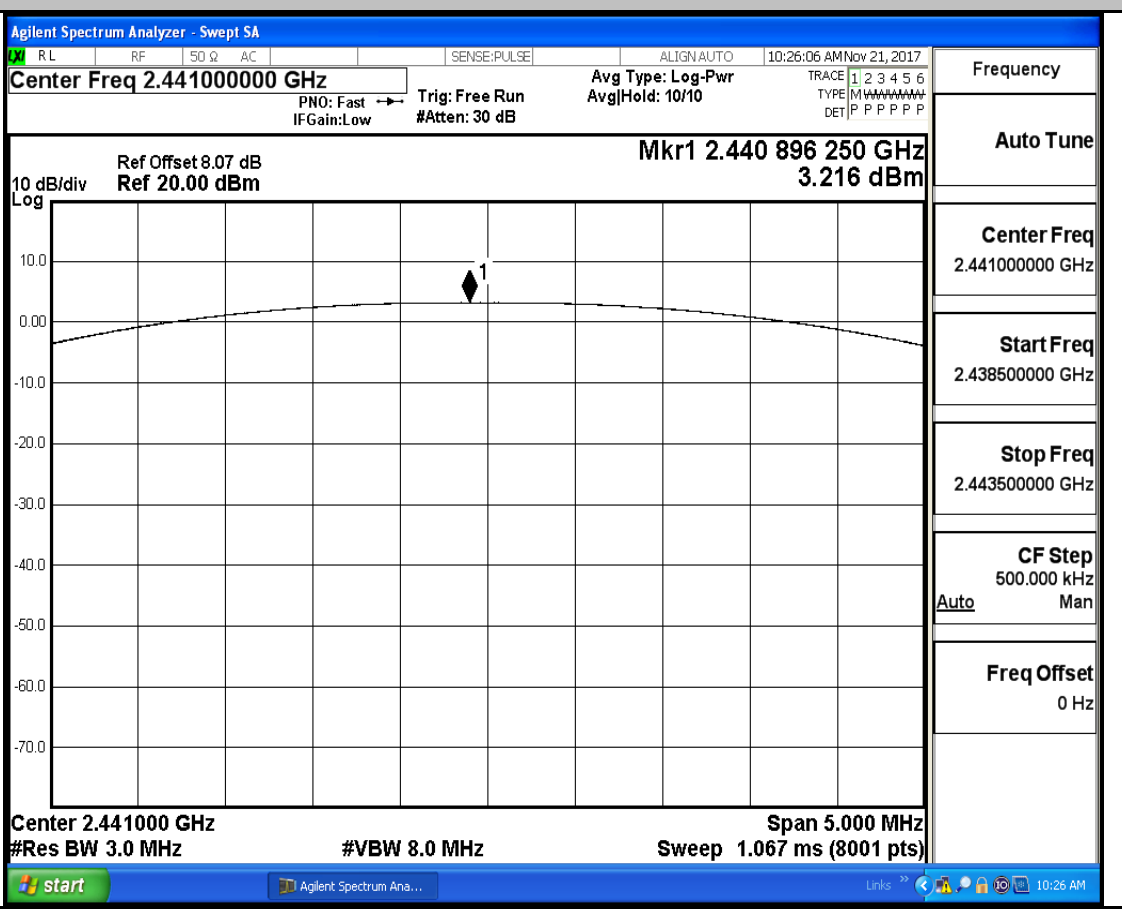
A.2 Conducted Peak Output Power

Test Mode	Test Channel	Power[dBm]	Limit[dBm]	Verdict
GFSK	2402	2.729	30	PASS
	2441	3.216	30	PASS
	2480	2.881	30	PASS
π/4-DQPSK	2402	2.436	30	PASS
	2441	2.445	30	PASS
	2480	2.152	30	PASS
8-DPSK	2402	2.597	30	PASS
	2441	2.612	30	PASS
	2480	2.324	30	PASS

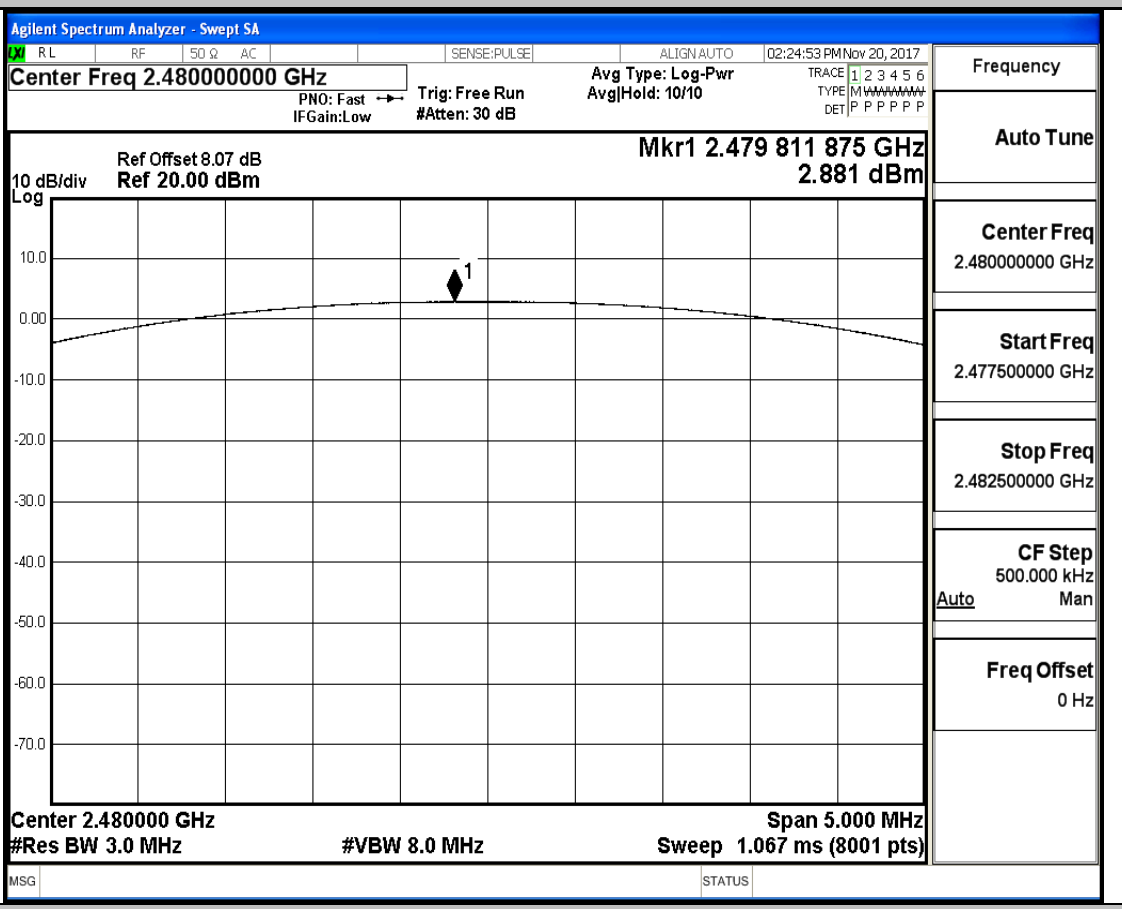
Conducted Peak Output Power_GFSK_2402



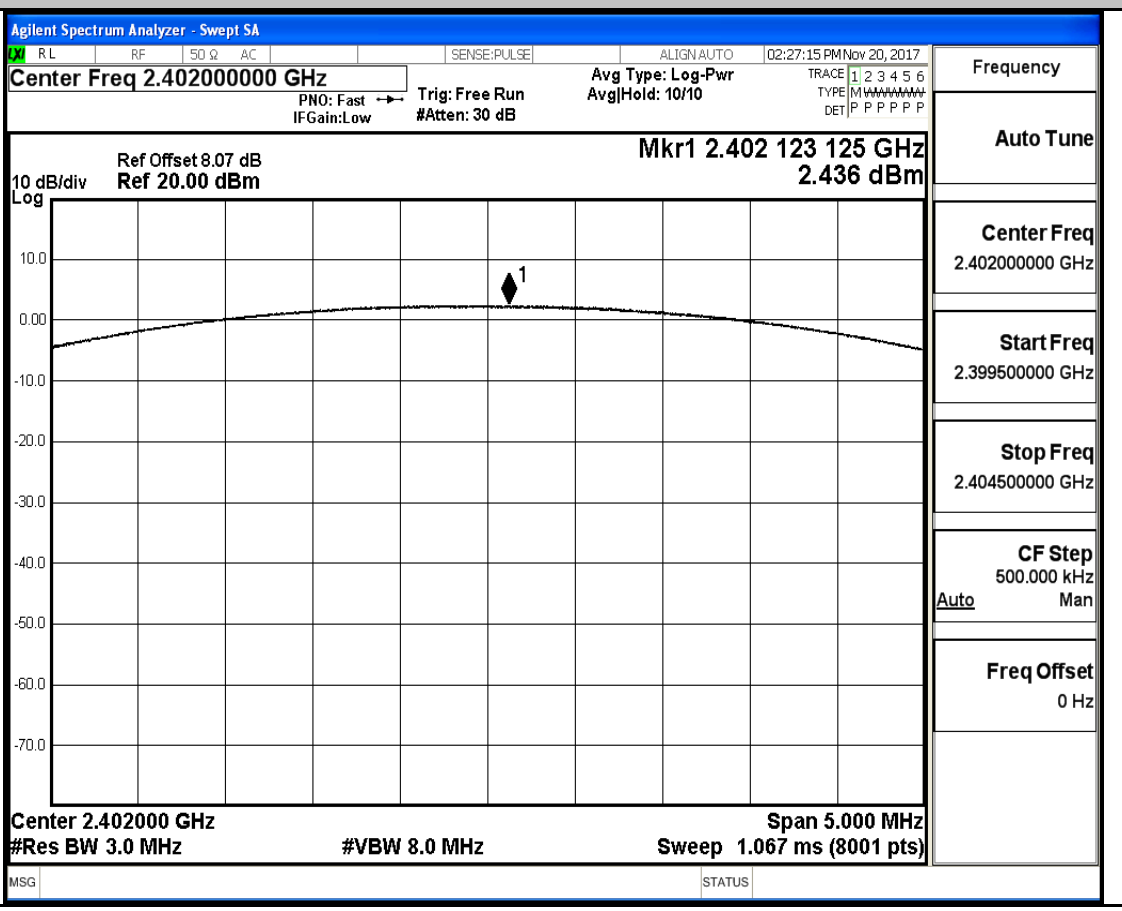
Conducted Peak Output Power_GFSK_2441



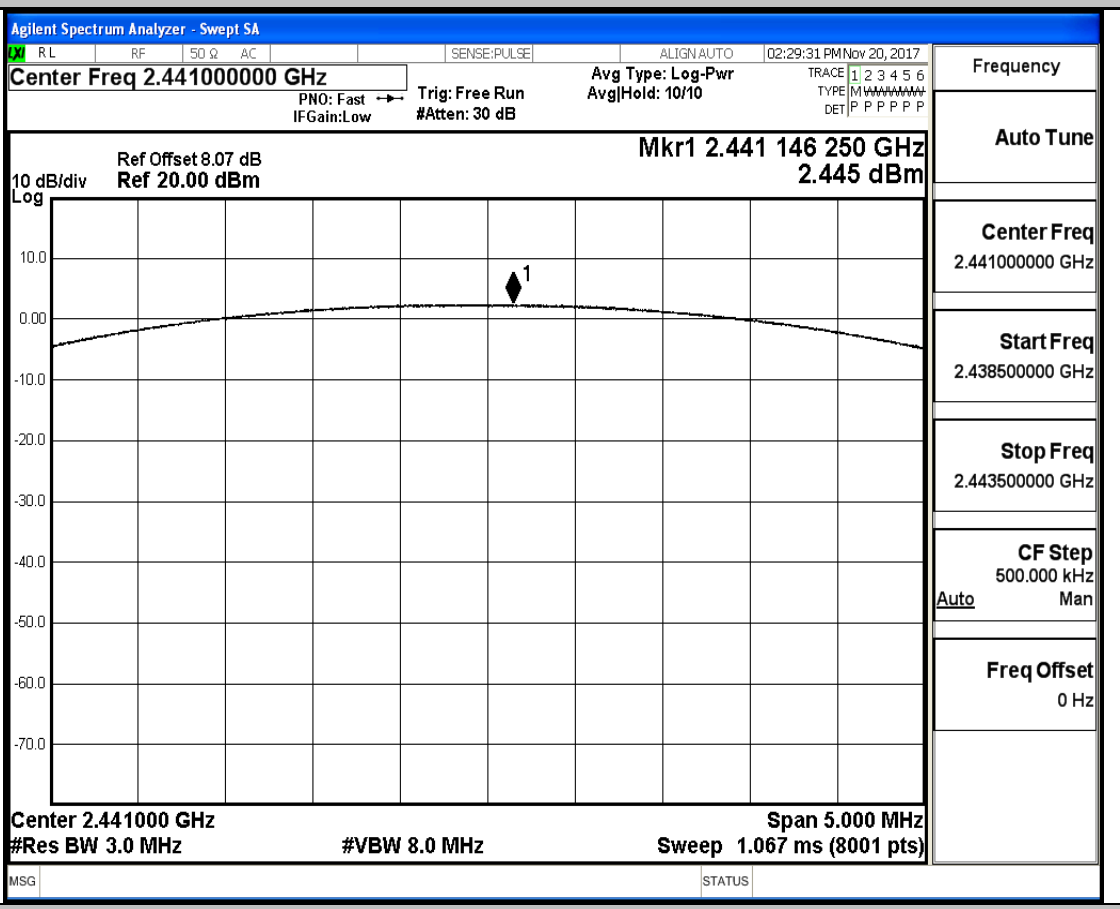
Conducted Peak Output Power_GFSK_2480



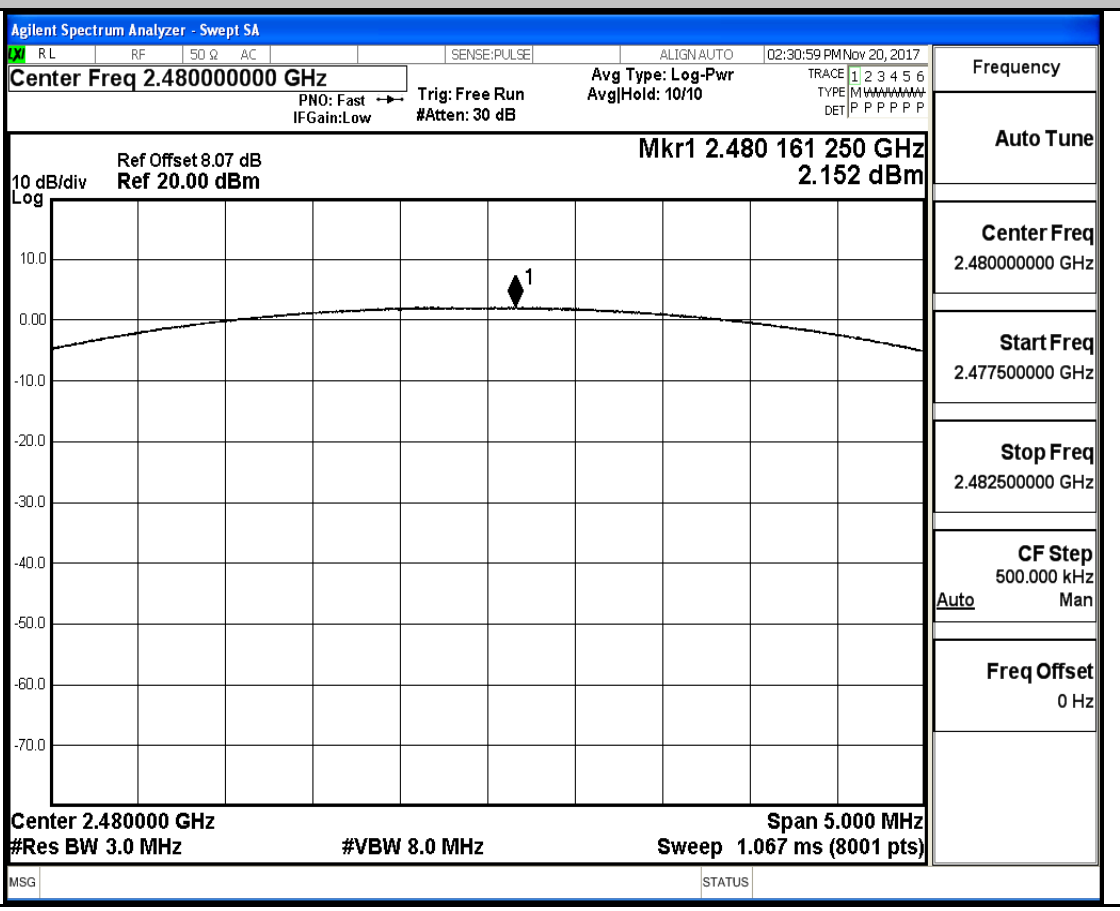
Conducted Peak Output Power_π/4-DQPSK_2402



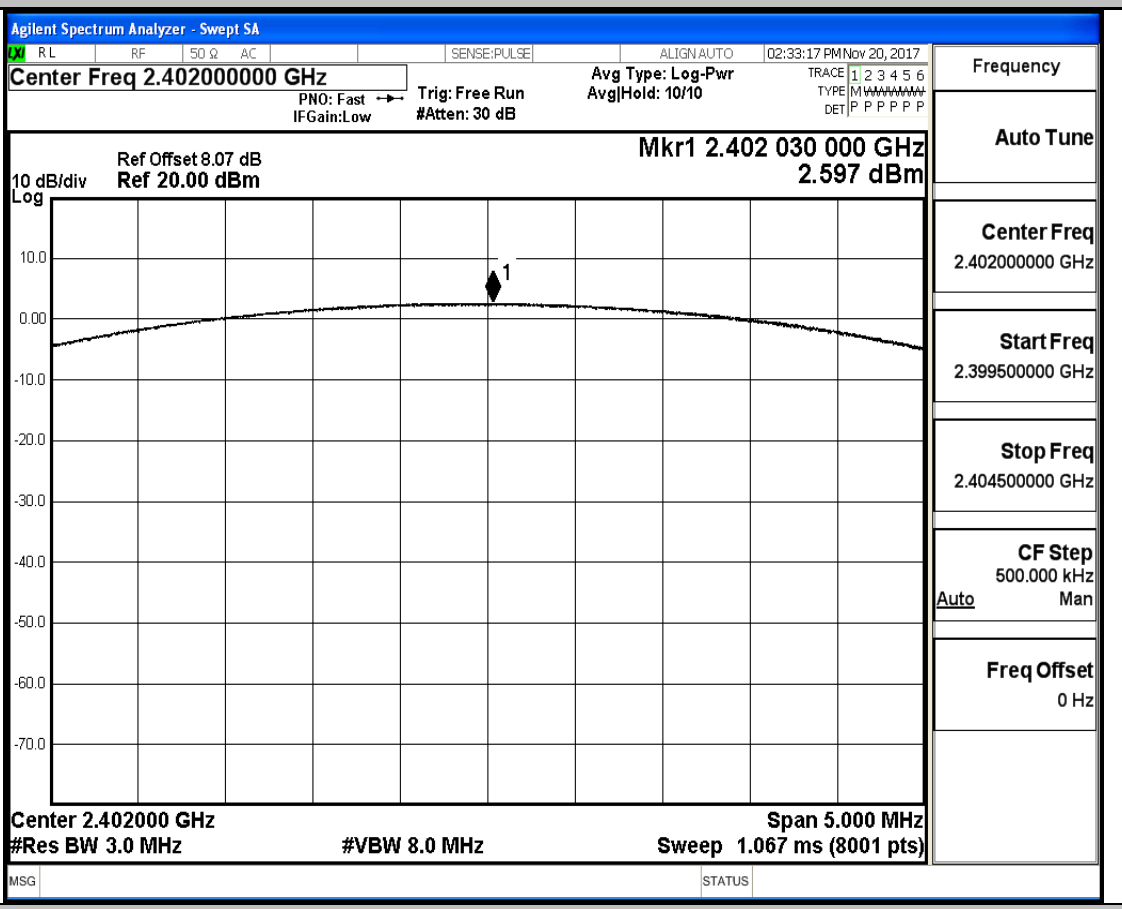
Conducted Peak Output Power_π/4-DQPSK_2441



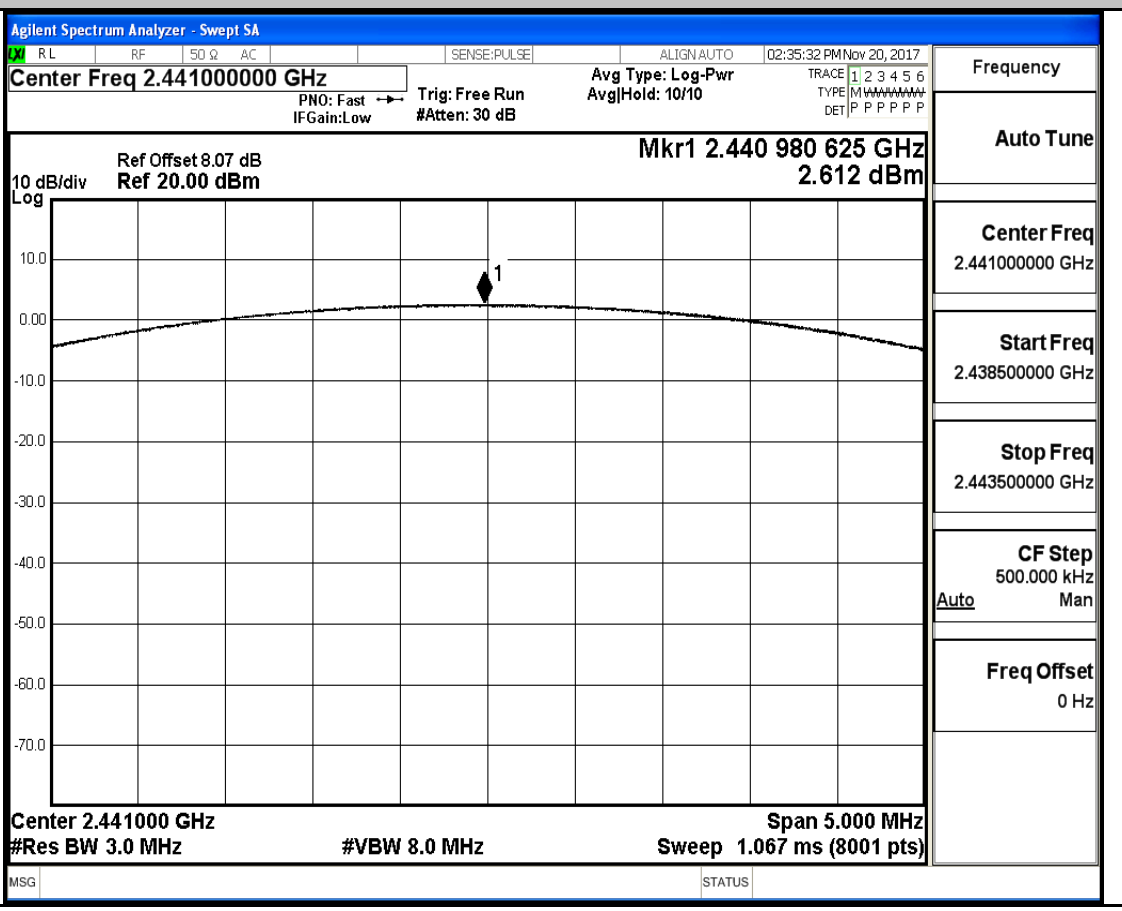
Conducted Peak Output Power_π/4-DQPSK_2480



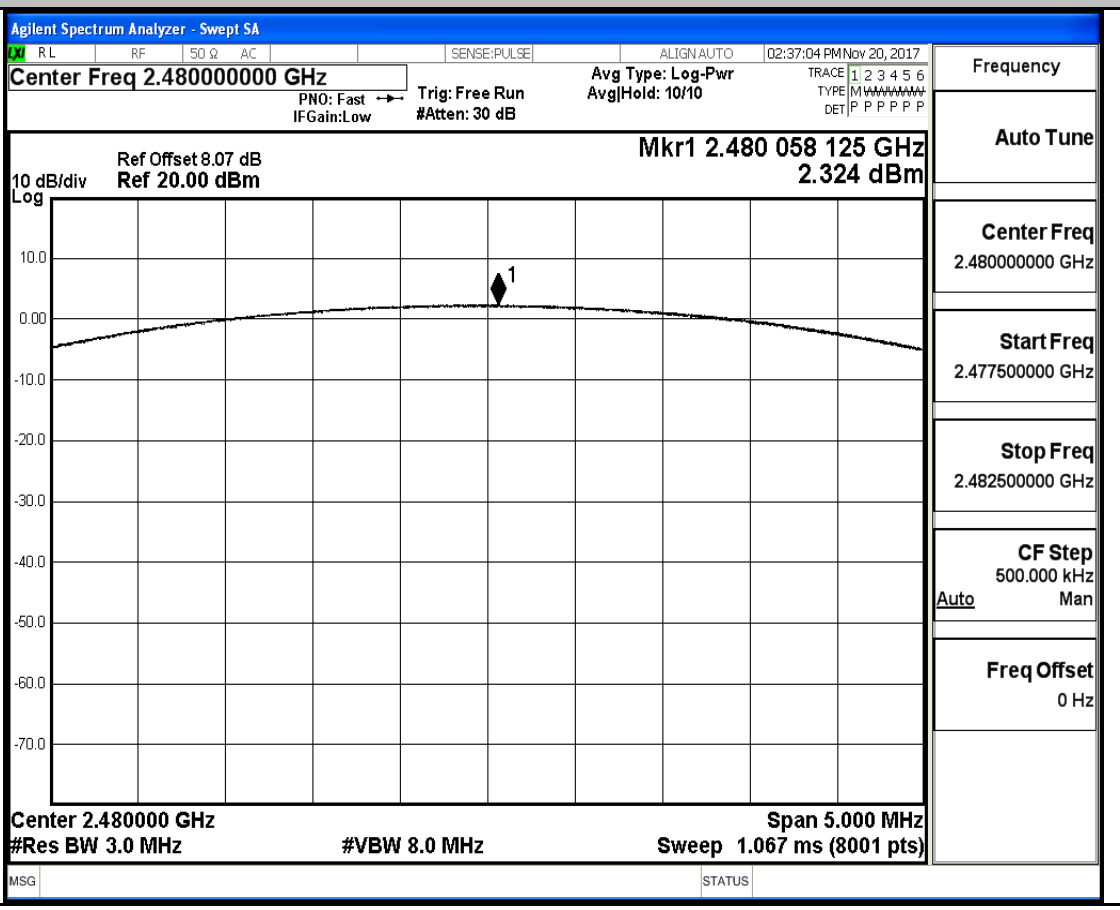
Conducted Peak Output Power_8-DPSK_2402



Conducted Peak Output Power_8-DPSK_2441



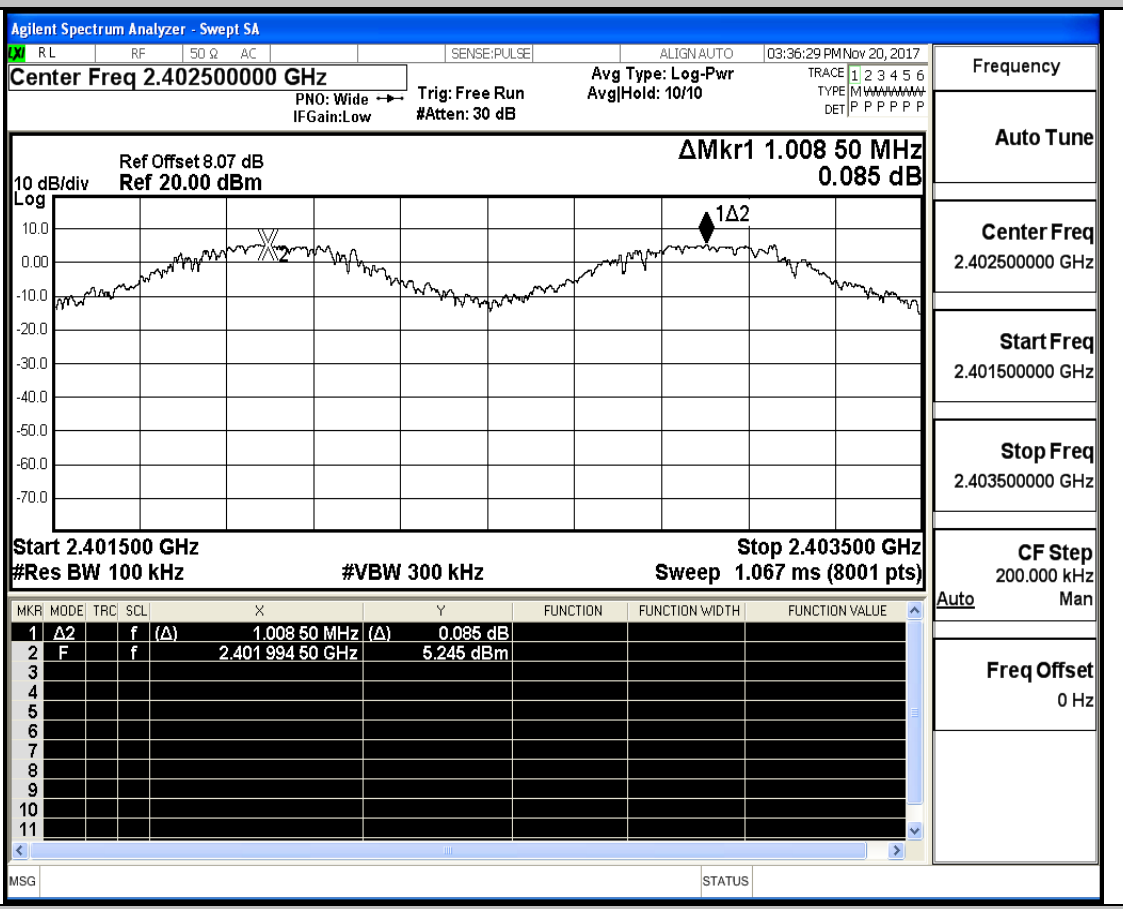
Conducted Peak Output Power_8-DPSK_2480



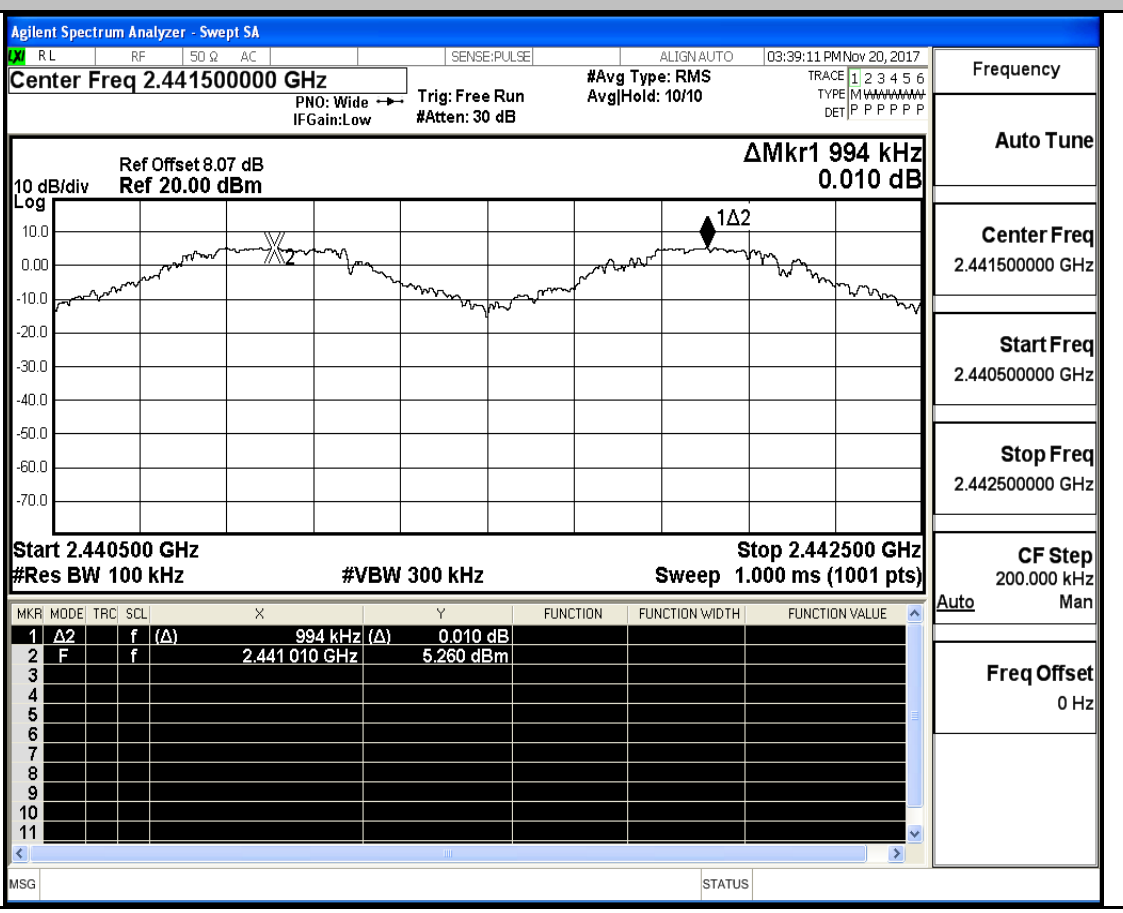
A.3 Carrier Frequency Separation

Test Mode	Test Channel	Result[MHz]	Limit[MHz]	Verdict
GFSK	2402	1.009	0.69	PASS
	2441	0.994	0.69	PASS
	2480	0.918	0.69	PASS
π/4-DQPSK	2402	1.024	0.86	PASS
	2441	1.018	0.87	PASS
	2480	1.046	0.86	PASS
8-DPSK	2402	1.34	0.86	PASS
	2441	1.324	0.87	PASS
	2480	0.884	0.87	PASS

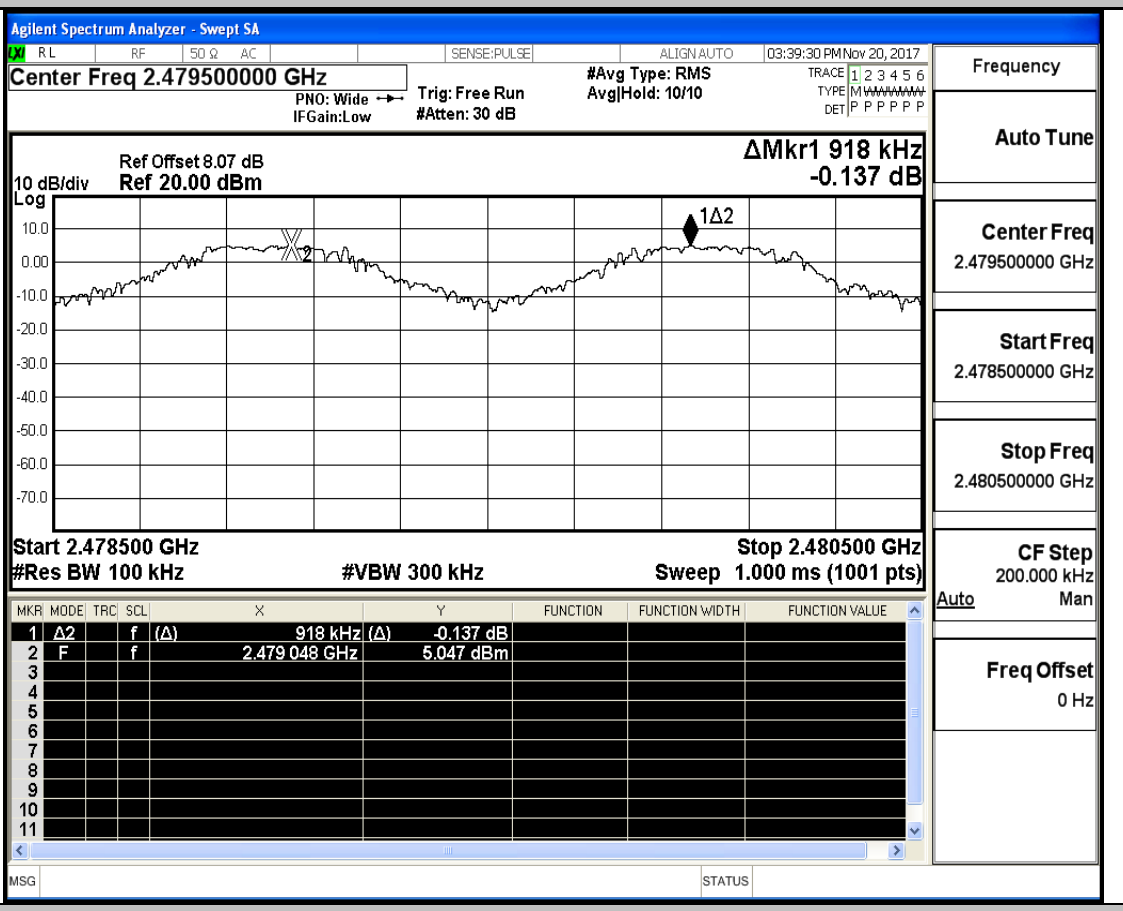
Carrier Frequency Separation_GFSK_2402



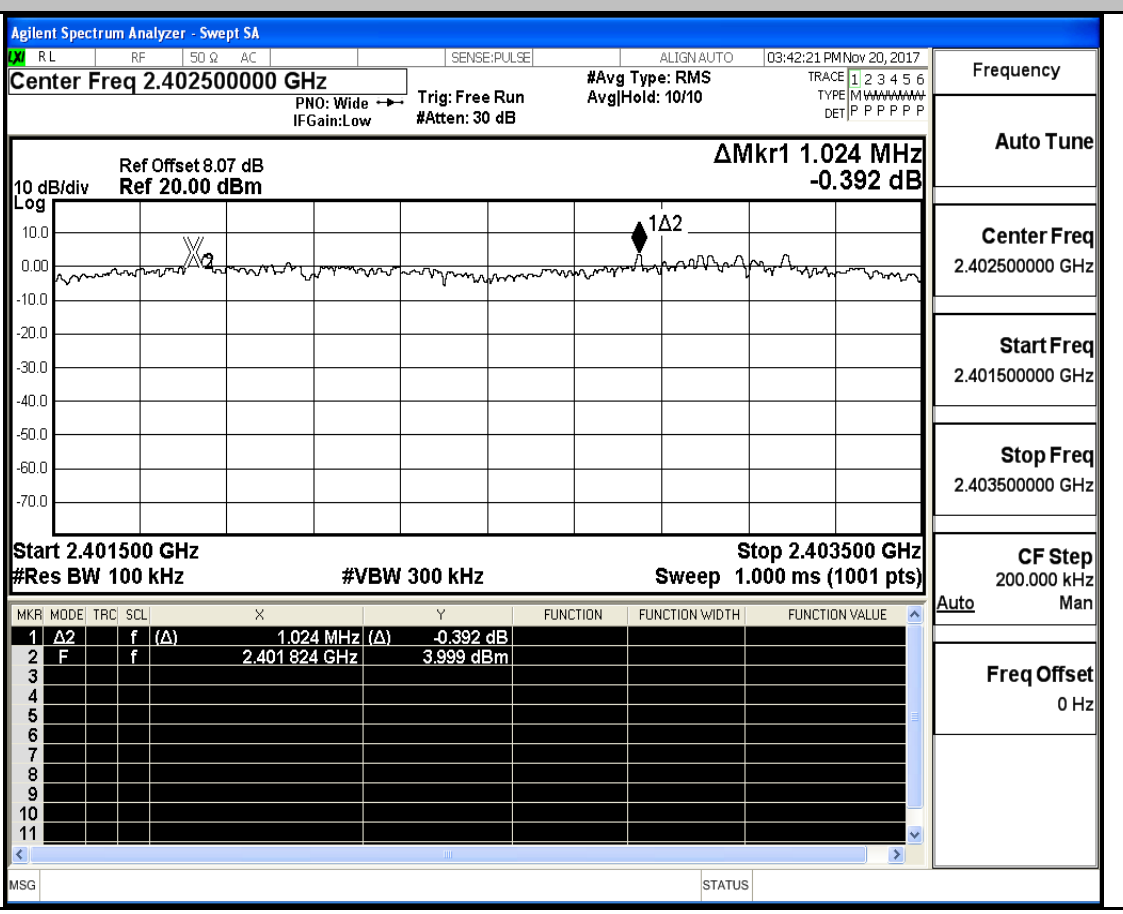
Carrier Frequency Separation_GFSK_2441



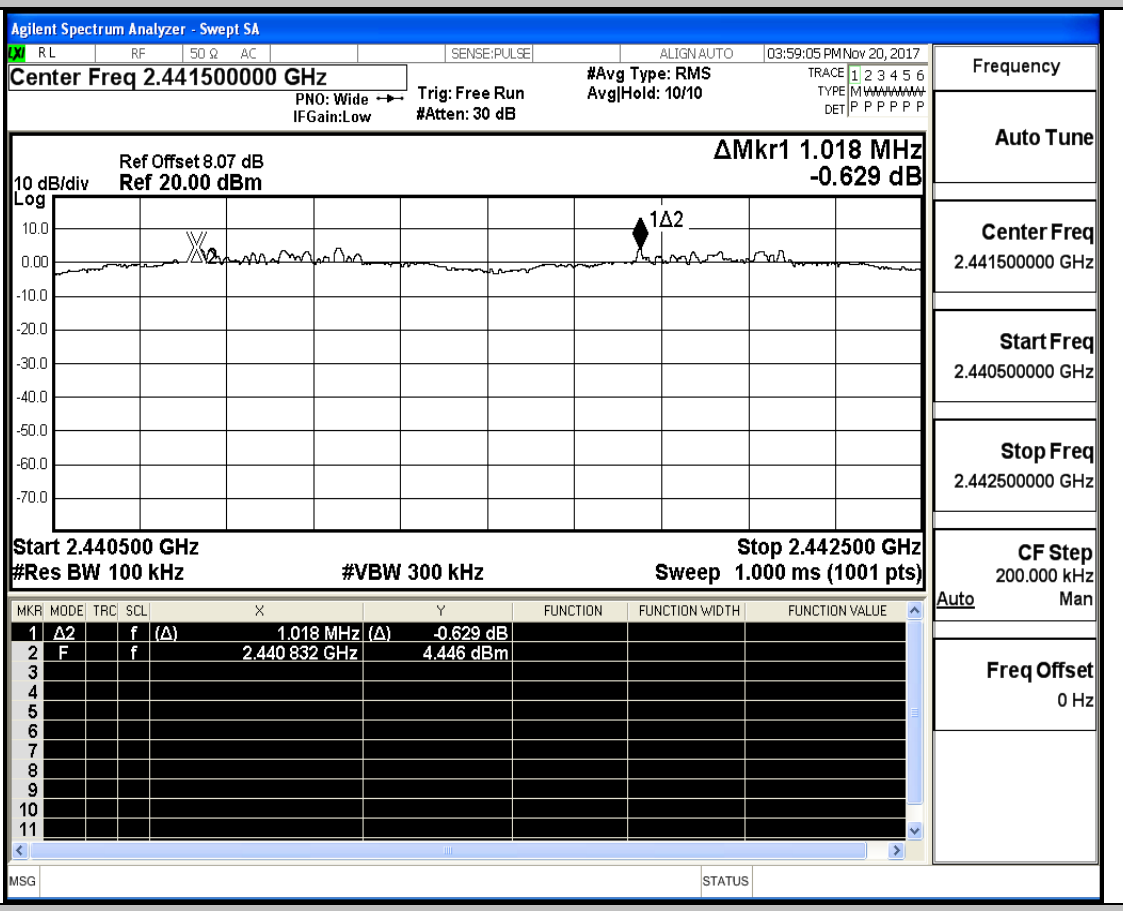
Carrier Frequency Separation_GFSK_2480



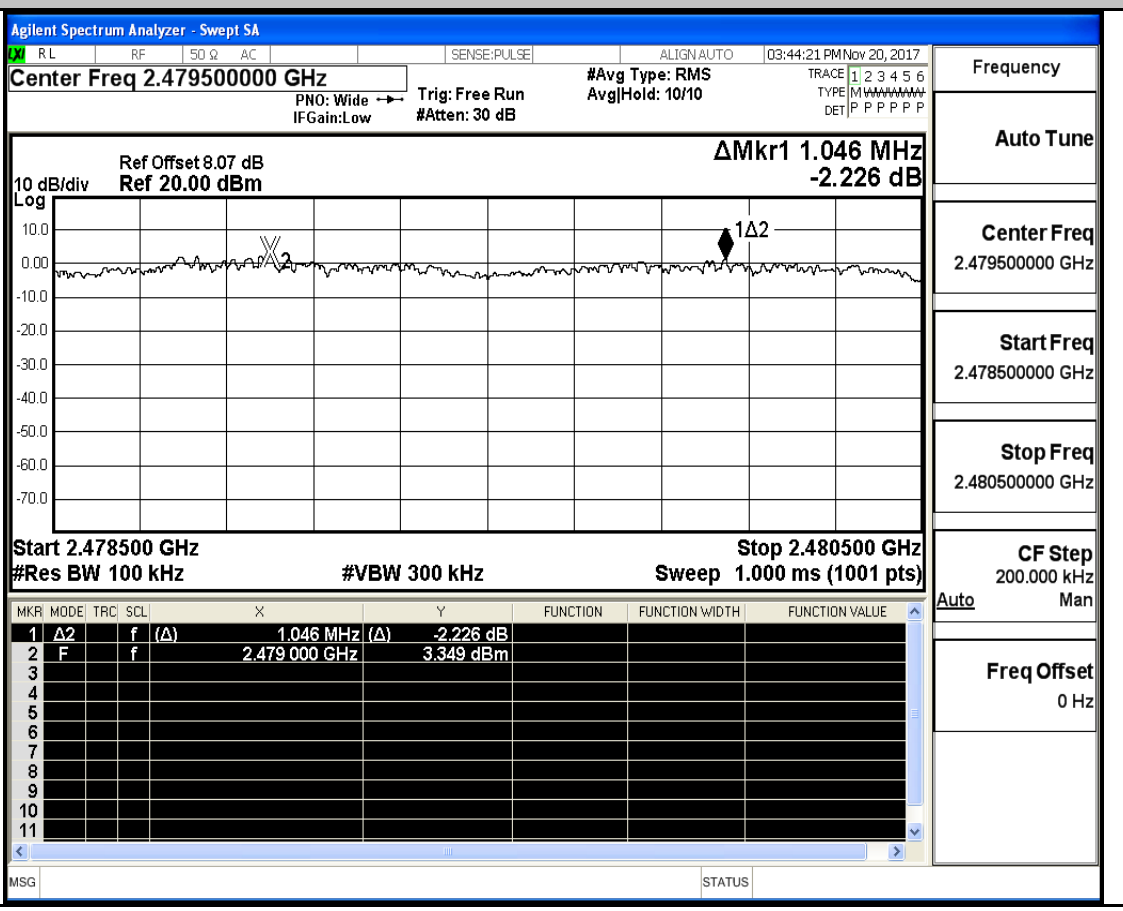
Carrier Frequency Separation_π/4-DQPSK_2402



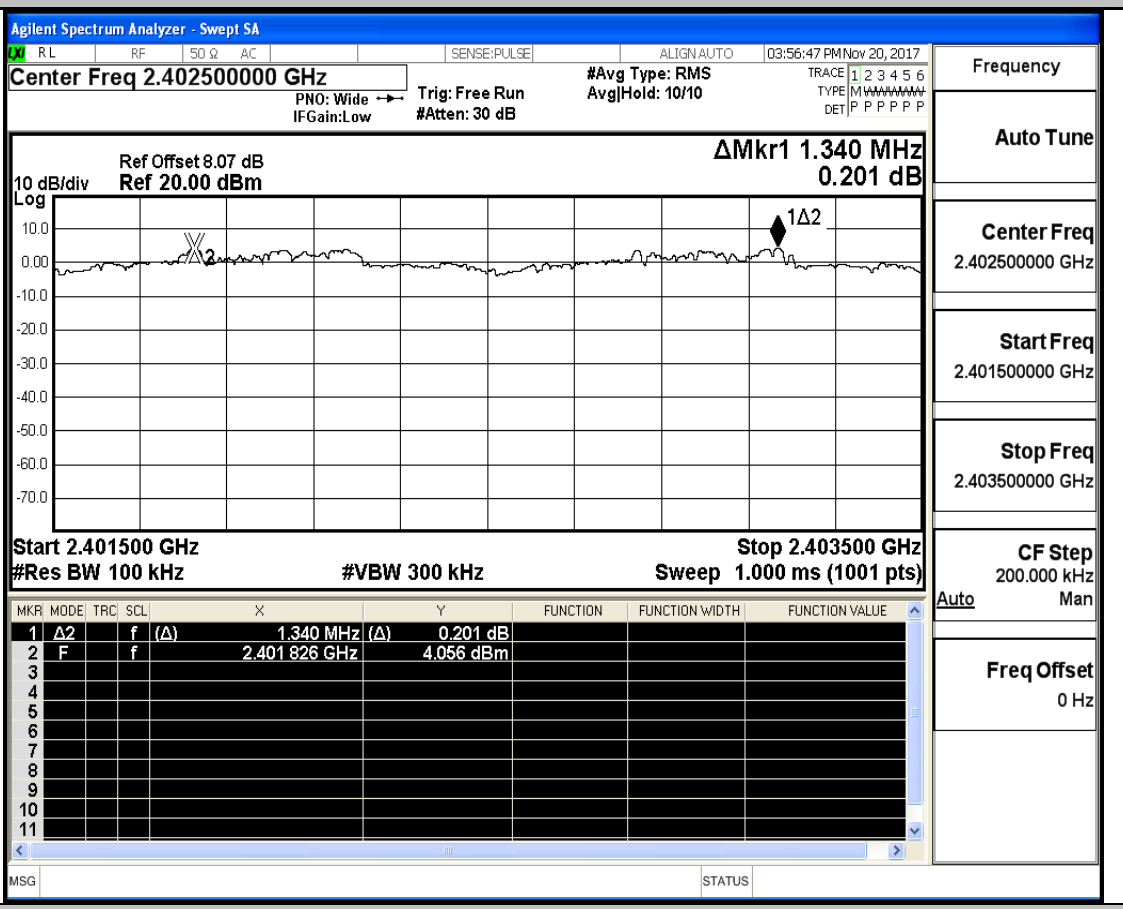
Carrier Frequency Separation_π/4-DQPSK_2441



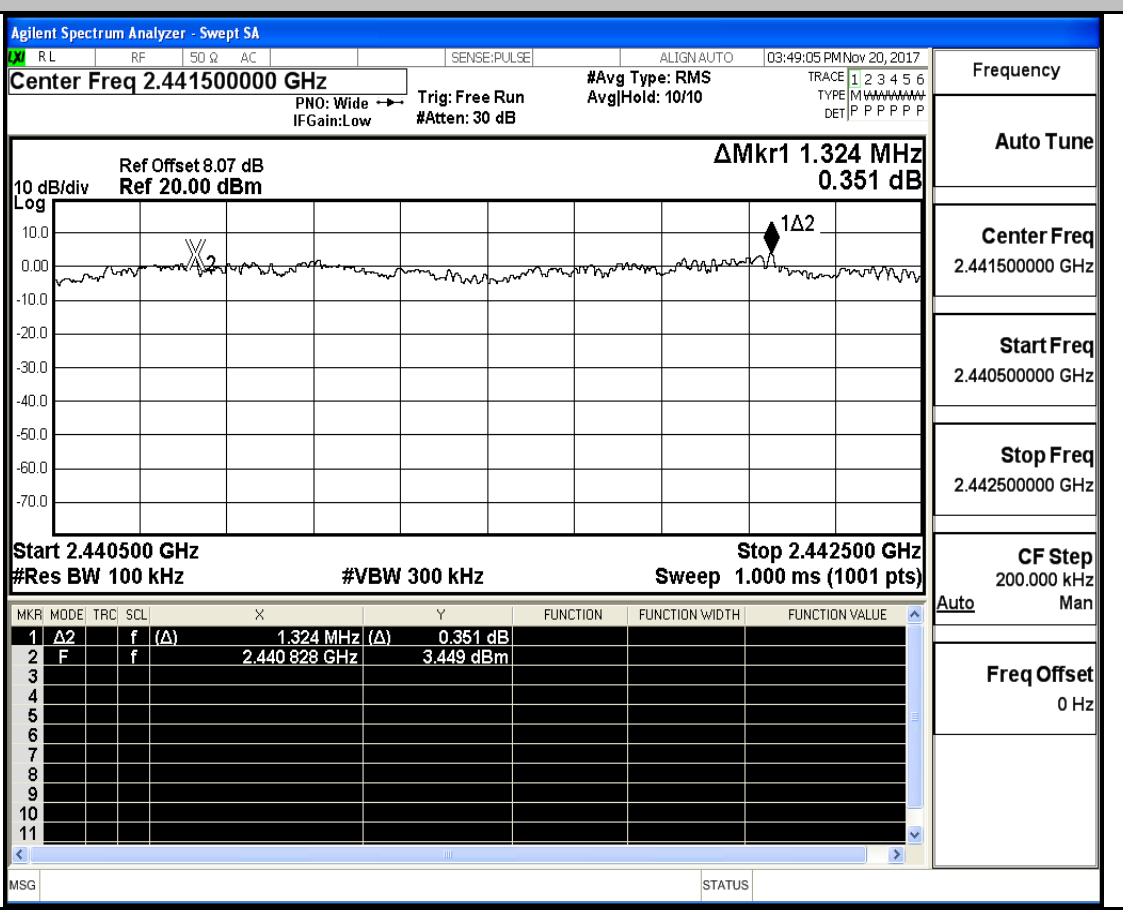
Carrier Frequency Separation_π/4-DQPSK_2480



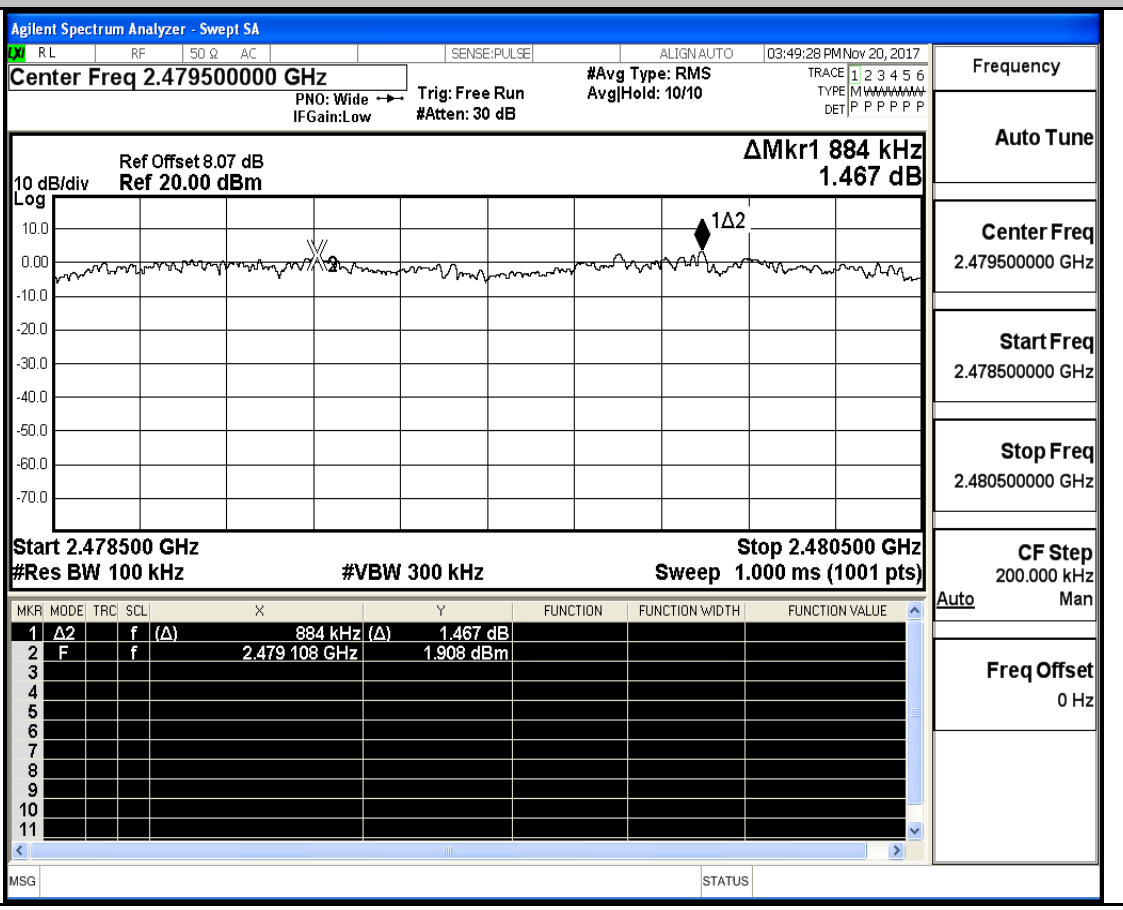
Carrier Frequency Separation_8-DPSK_2402



Carrier Frequency Separation_8-DPSK_2441



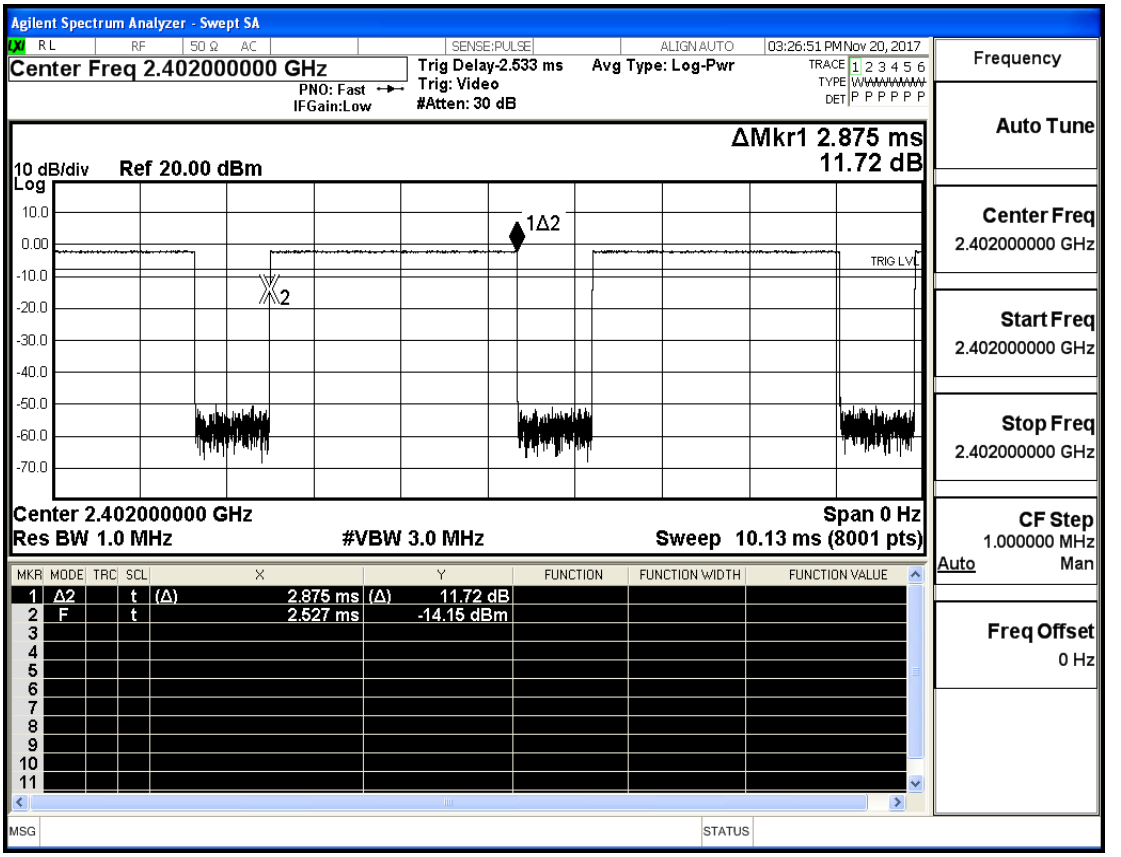
Carrier Frequency Separation_8-DPSK_2480



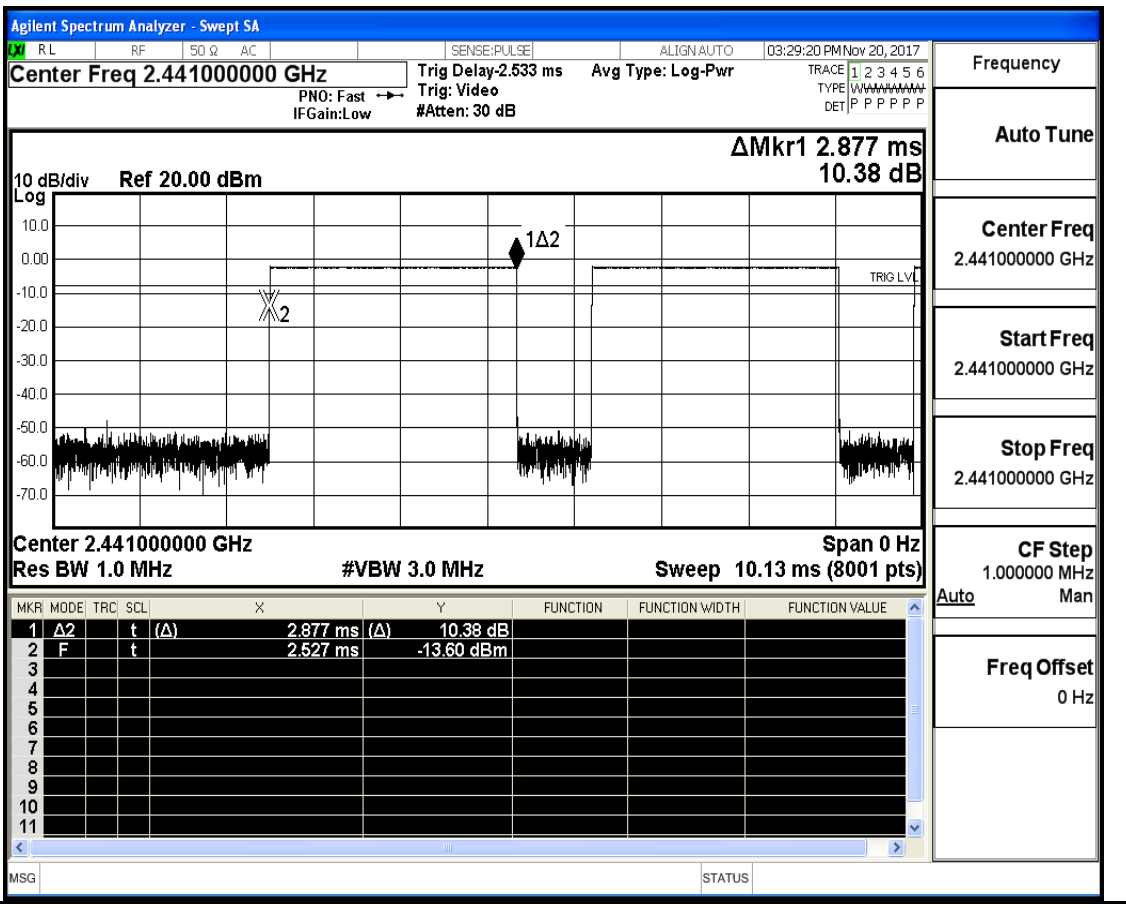
A.4 Dwell Time

Test Mode	Test Channel	Burst Width[ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit[s]	Verdict
GFSK	2402	2.88	106.7	0.307	0.4	PASS
	2441	2.88	106.7	0.307	0.4	PASS
	2480	2.88	106.7	0.307	0.4	PASS
π/4-DQPSK	2402	2.88	106.7	0.307	0.4	PASS
	2441	2.88	106.7	0.307	0.4	PASS
	2480	2.88	106.7	0.307	0.4	PASS
8-DPSK	2402	2.88	106.7	0.307	0.4	PASS
	2441	2.88	106.7	0.307	0.4	PASS
	2480	2.88	106.7	0.307	0.4	PASS

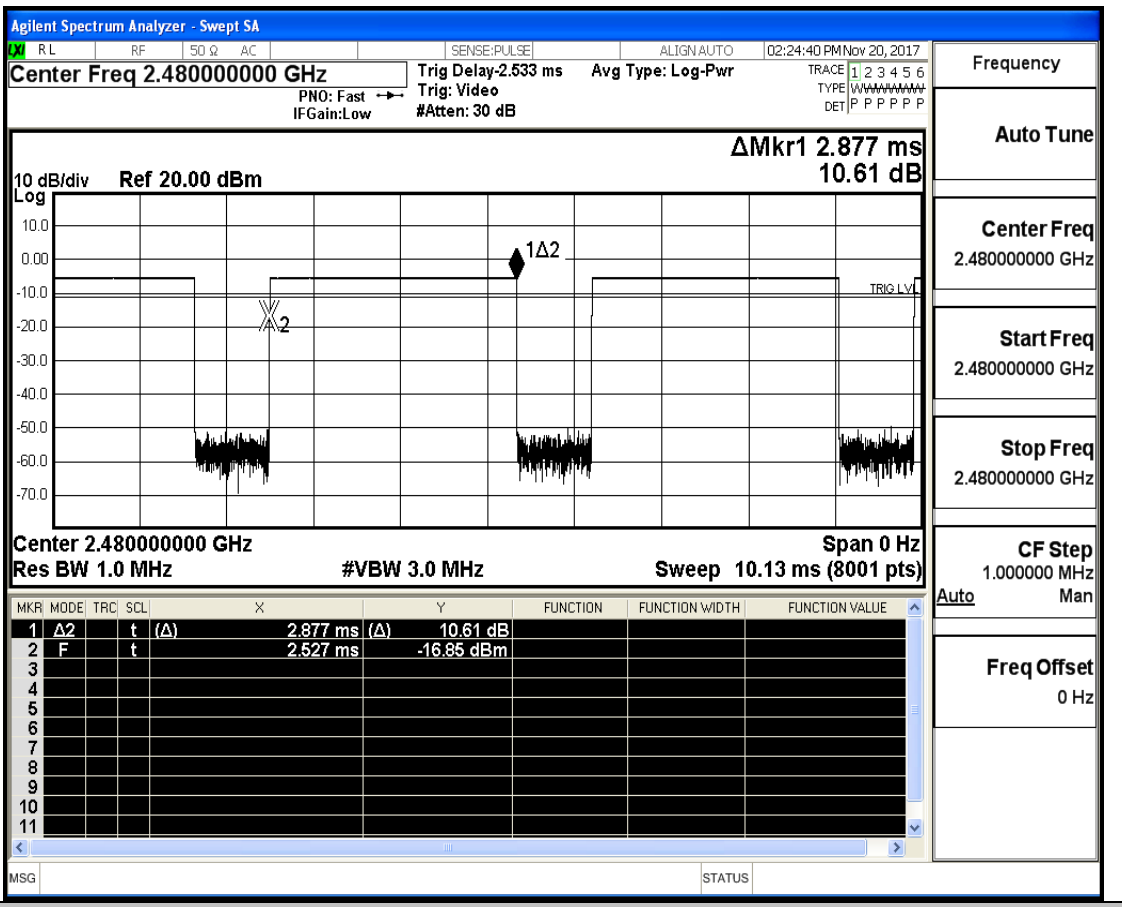
Dwell Time_GFSK_2402



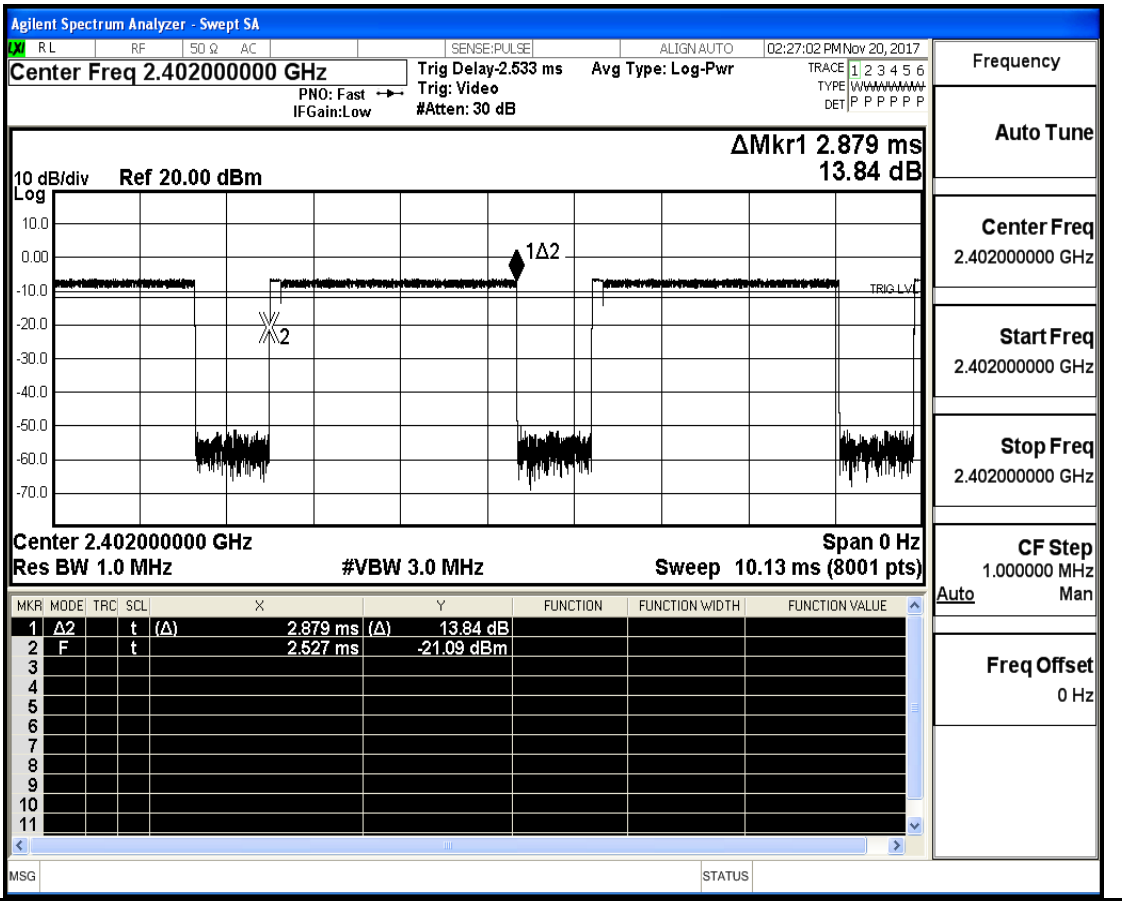
Dwell Time_GFSK_2441



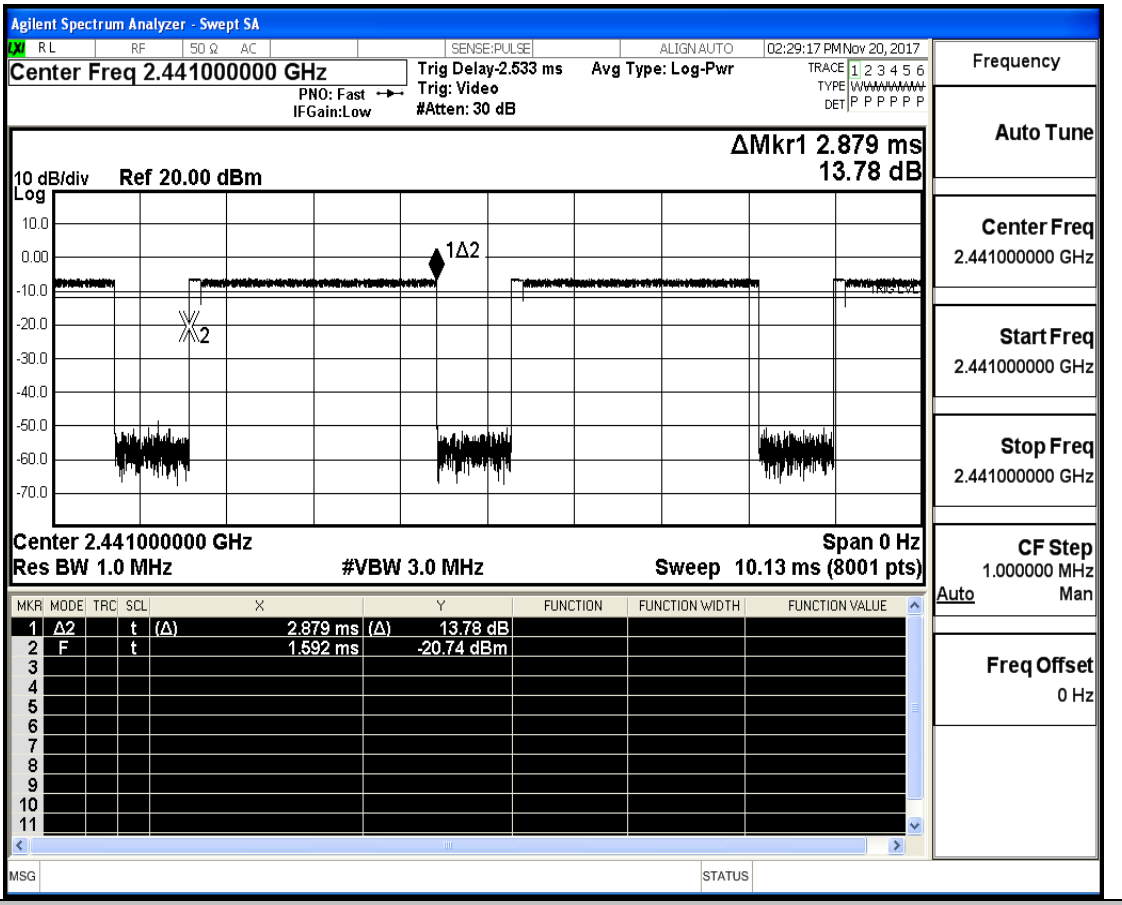
Dwell Time_GFSK_2480



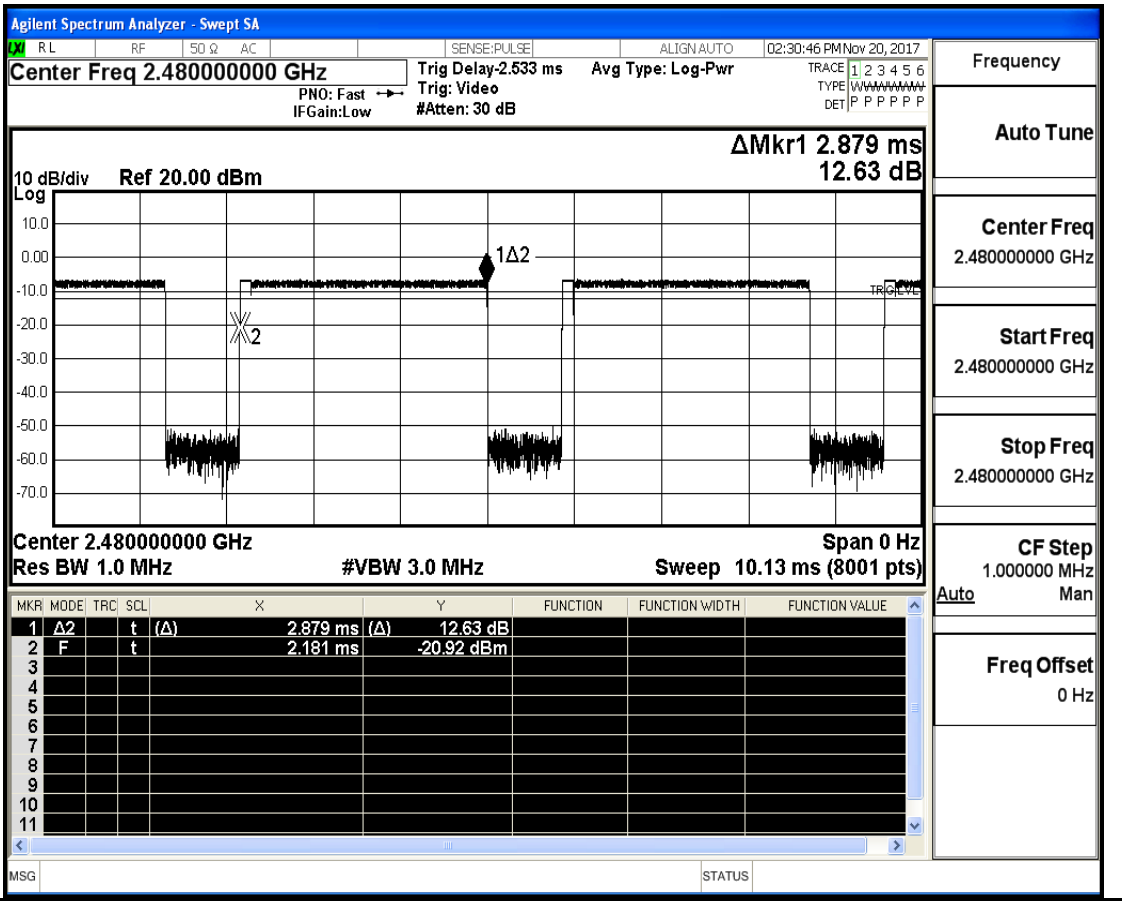
Dwell Time_π/4-DQPSK_2402



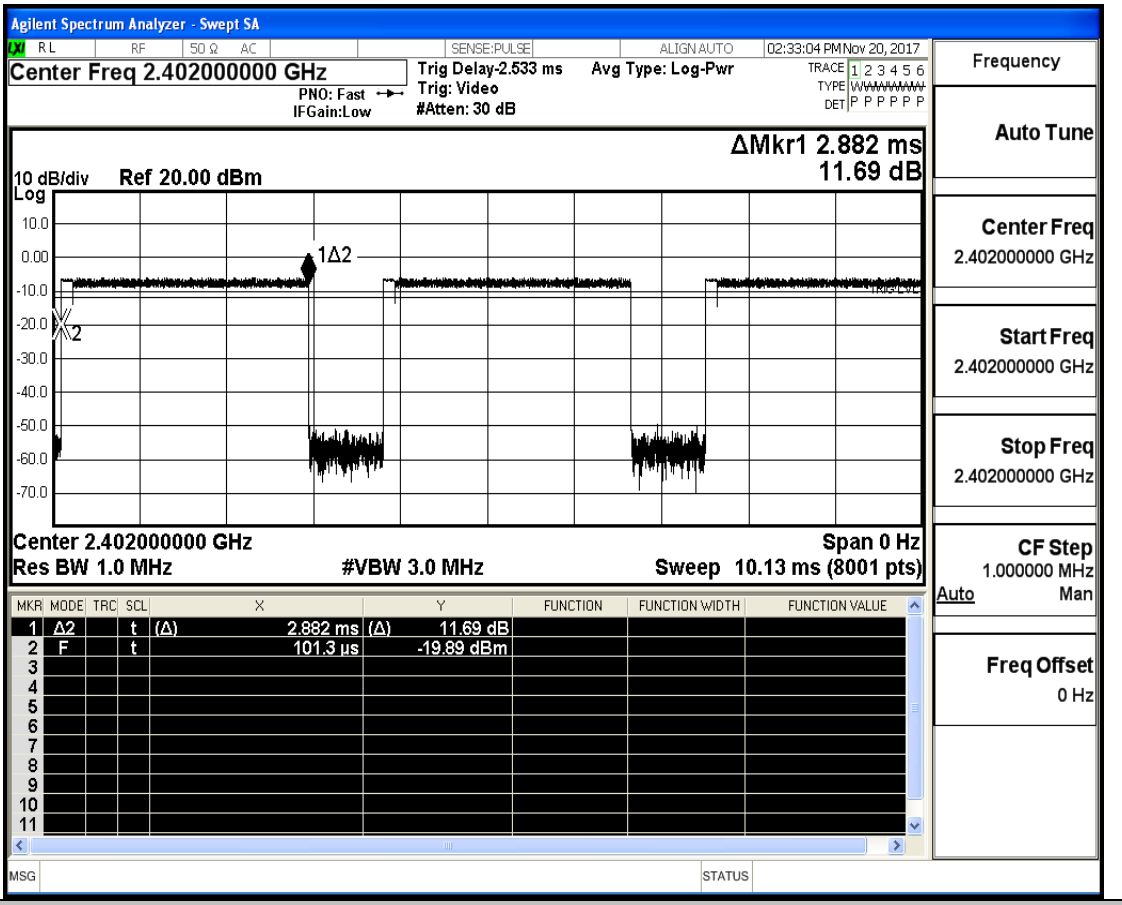
Dwell Time_π/4-DQPSK_2441



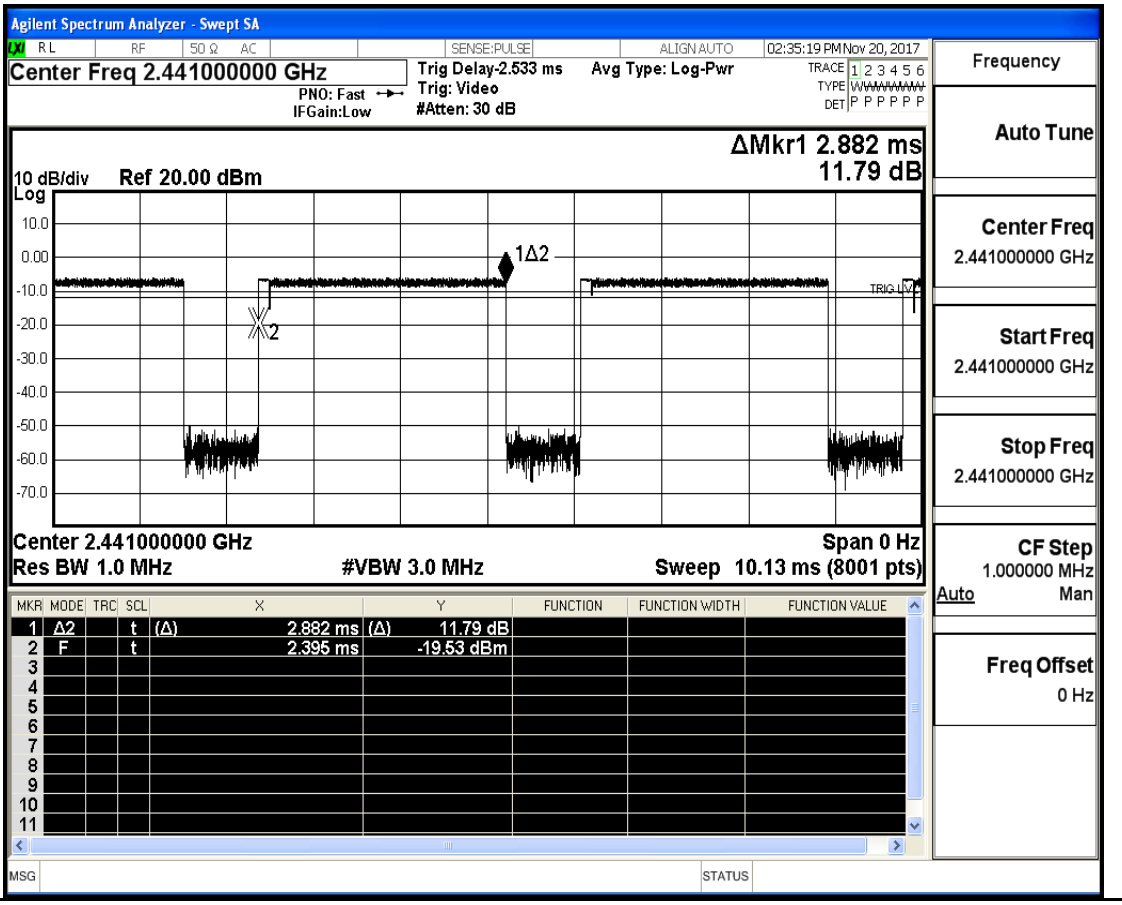
Dwell Time_π/4-DQPSK_2480



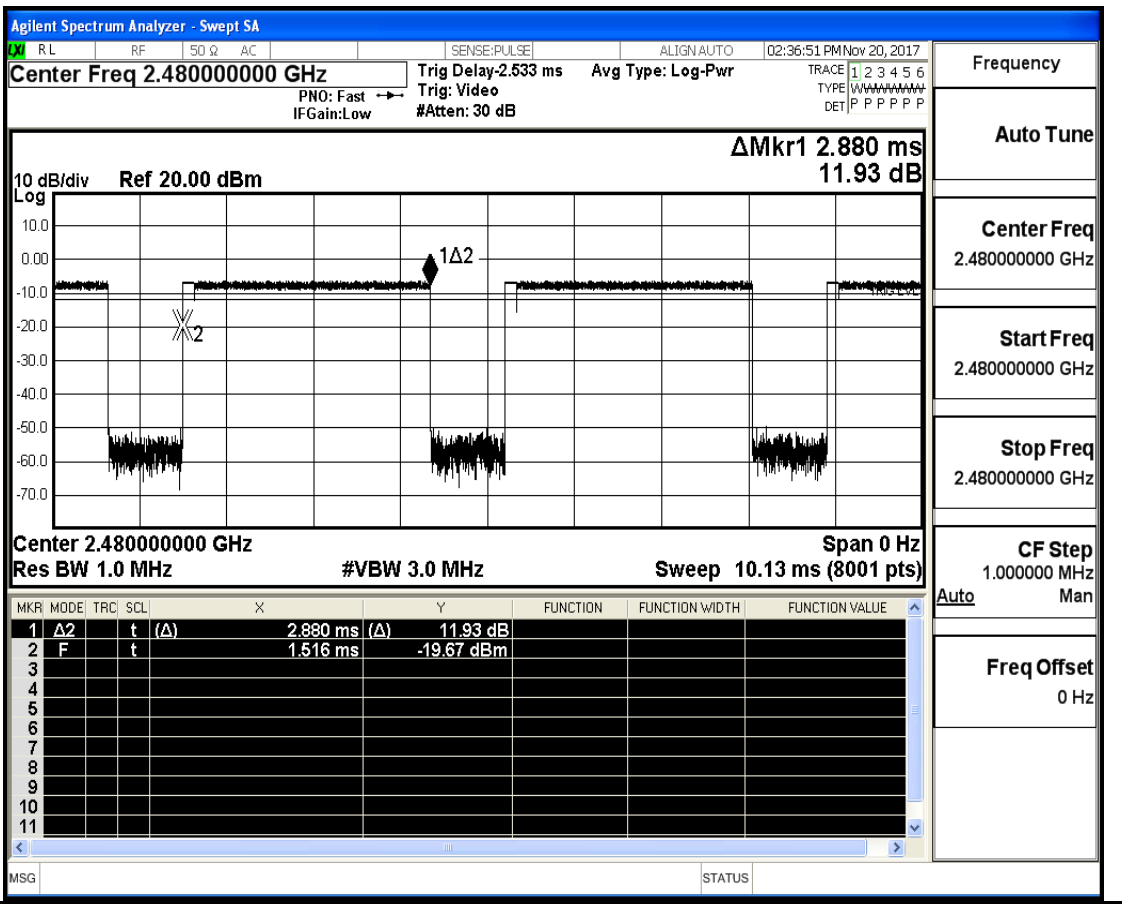
Dwell Time_8-DPSK_2402



Dwell Time_8-DPSK_2441



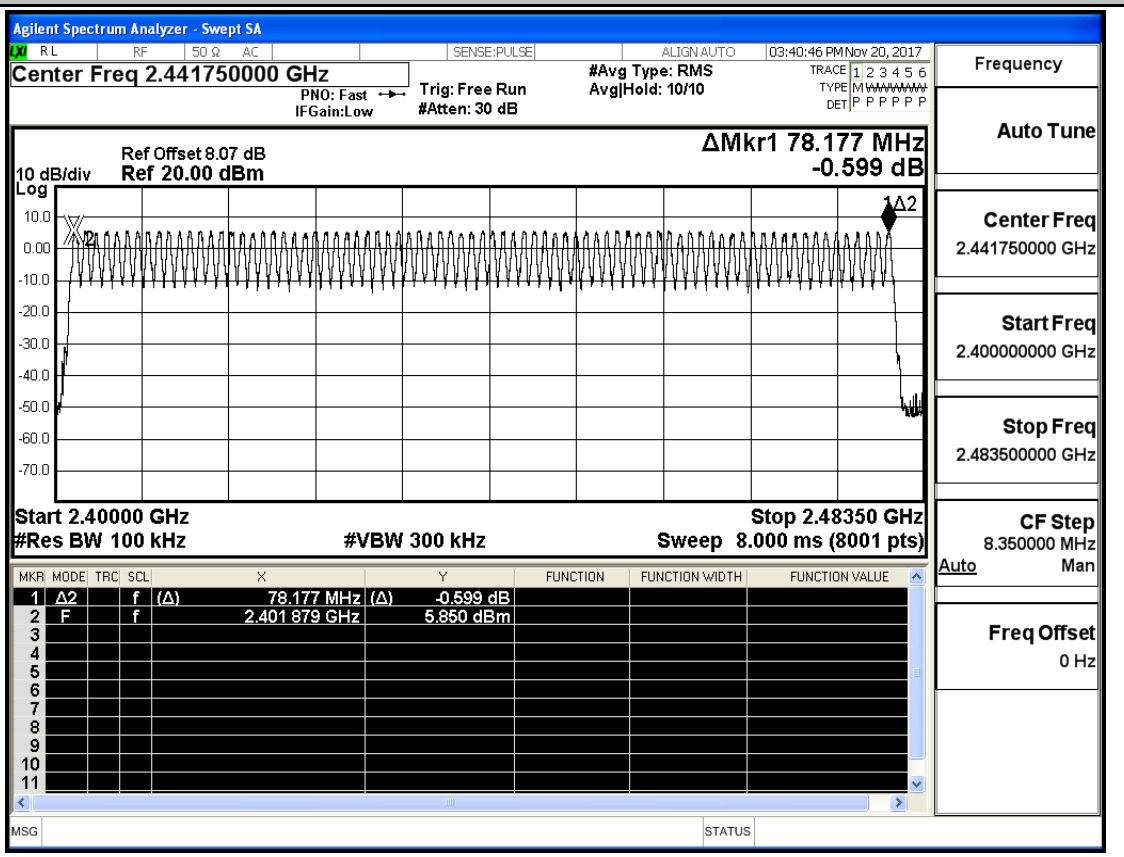
Dwell Time_8-DPSK_2480



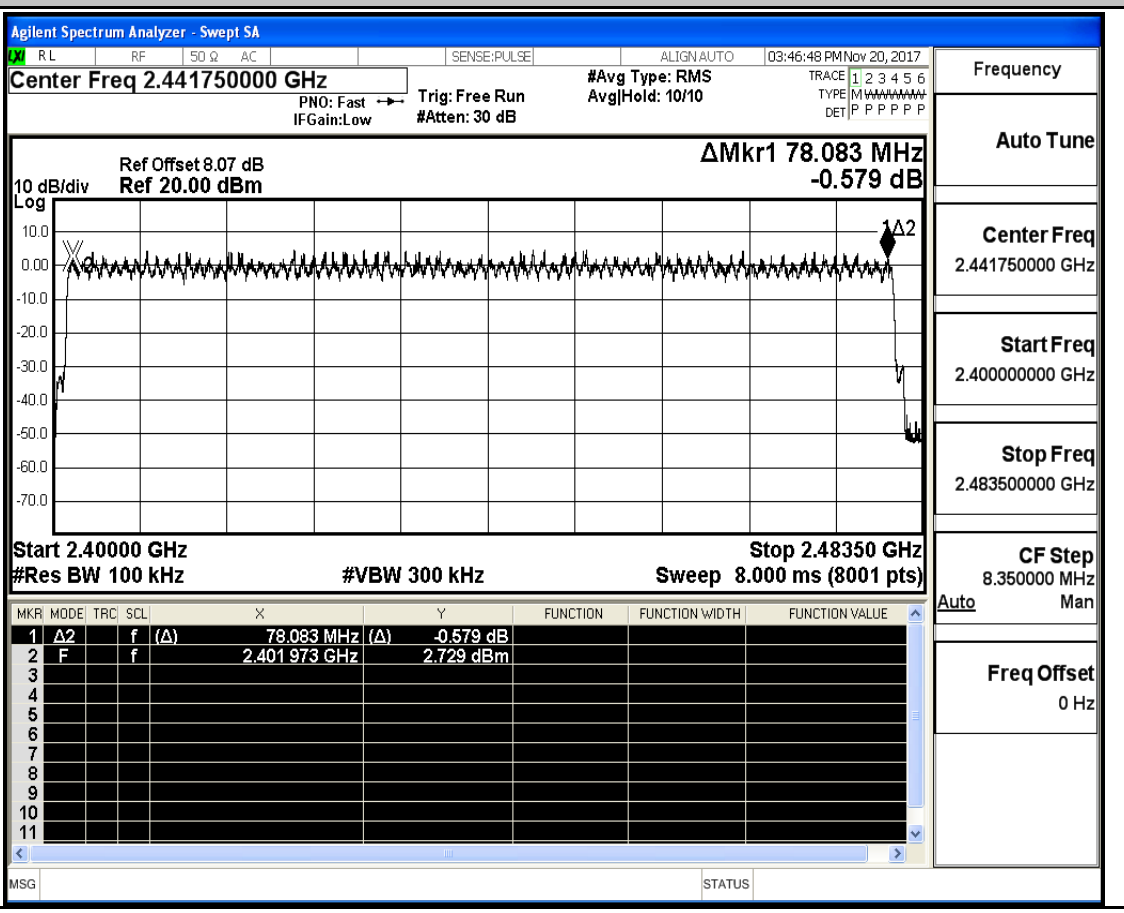
A.5 Hopping Channel Number

Test Mode	Test Channel	Number of Hopping Channel[N]	Limit[N]	Verdict
GFSK	2402	79	>=15	PASS
π/4-DQPSK	2402	79	>=15	PASS
8-DPSK	2402	79	>=15	PASS

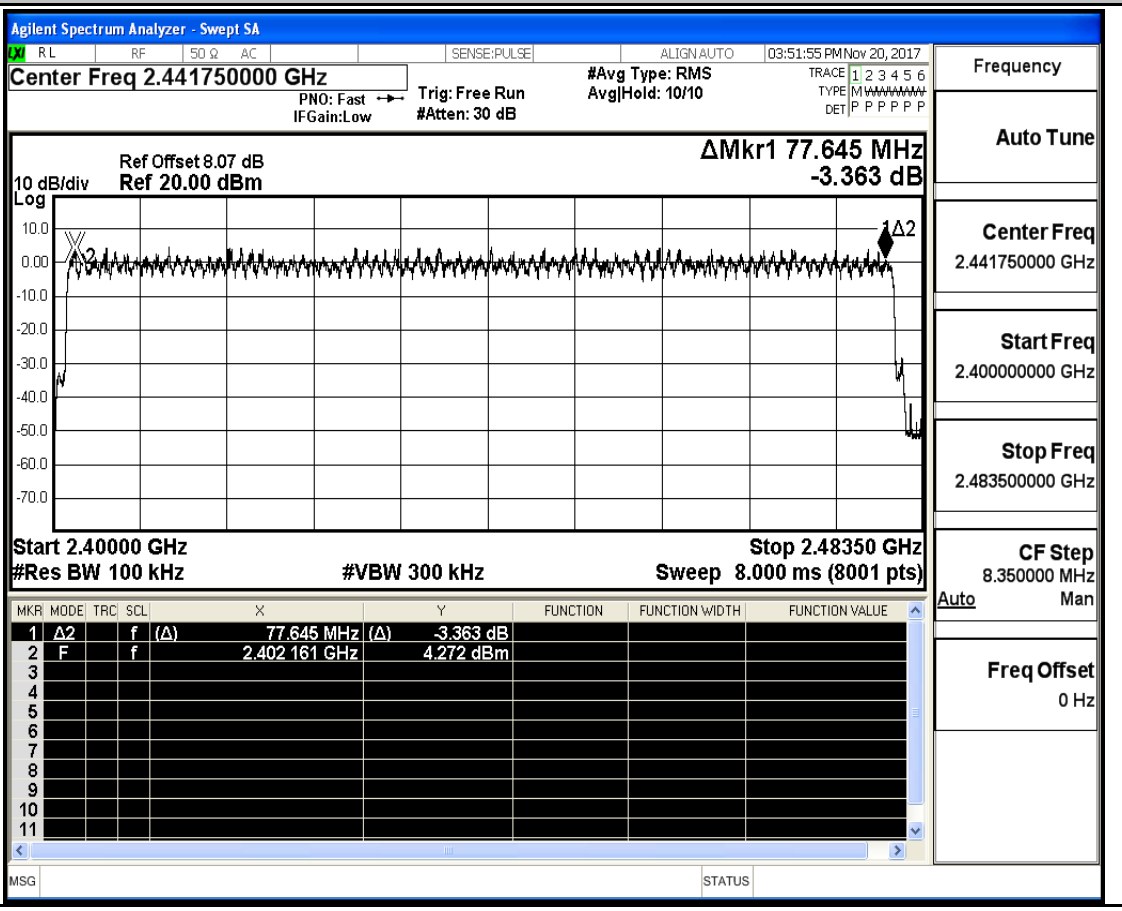
Hopping Channel Number_GFSK_2402



Hopping Channel Number_π/4-DQPSK_2402



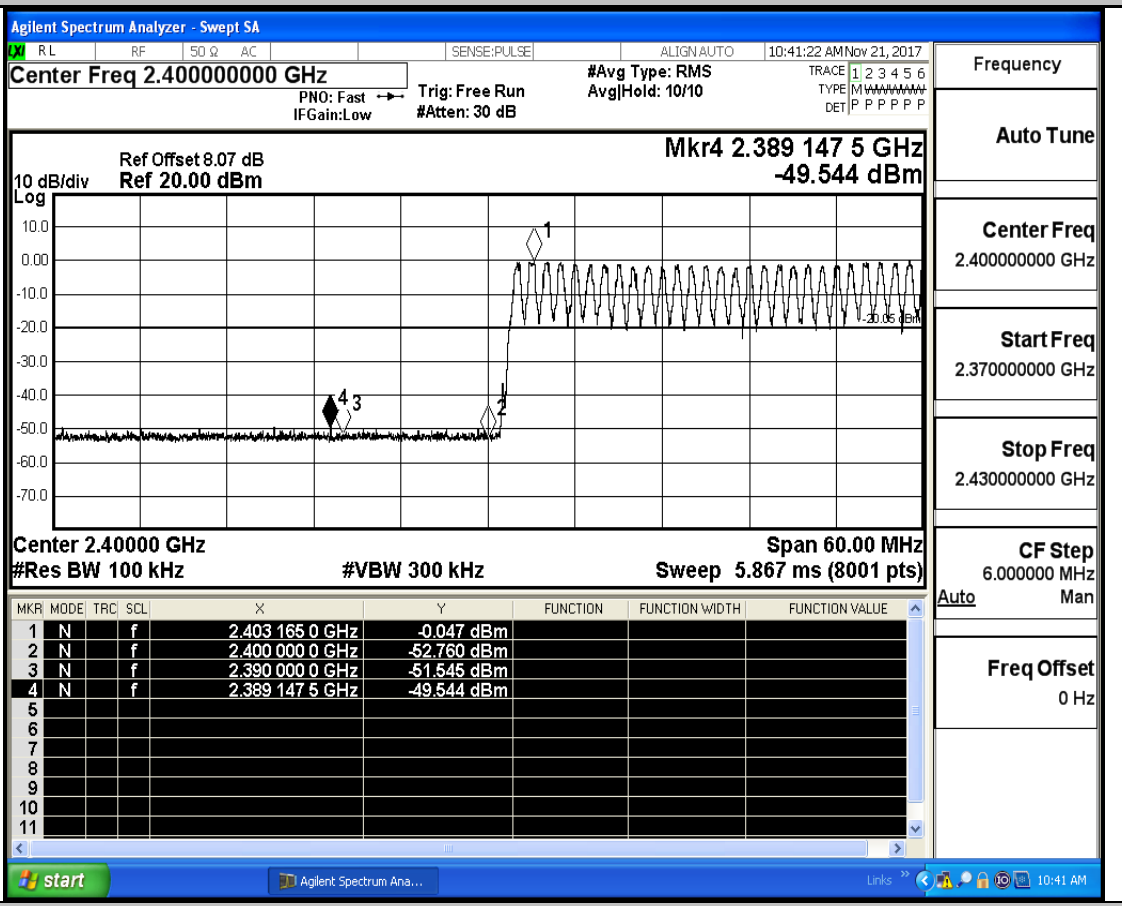
Hopping Channel Number_8-DPSK_2402



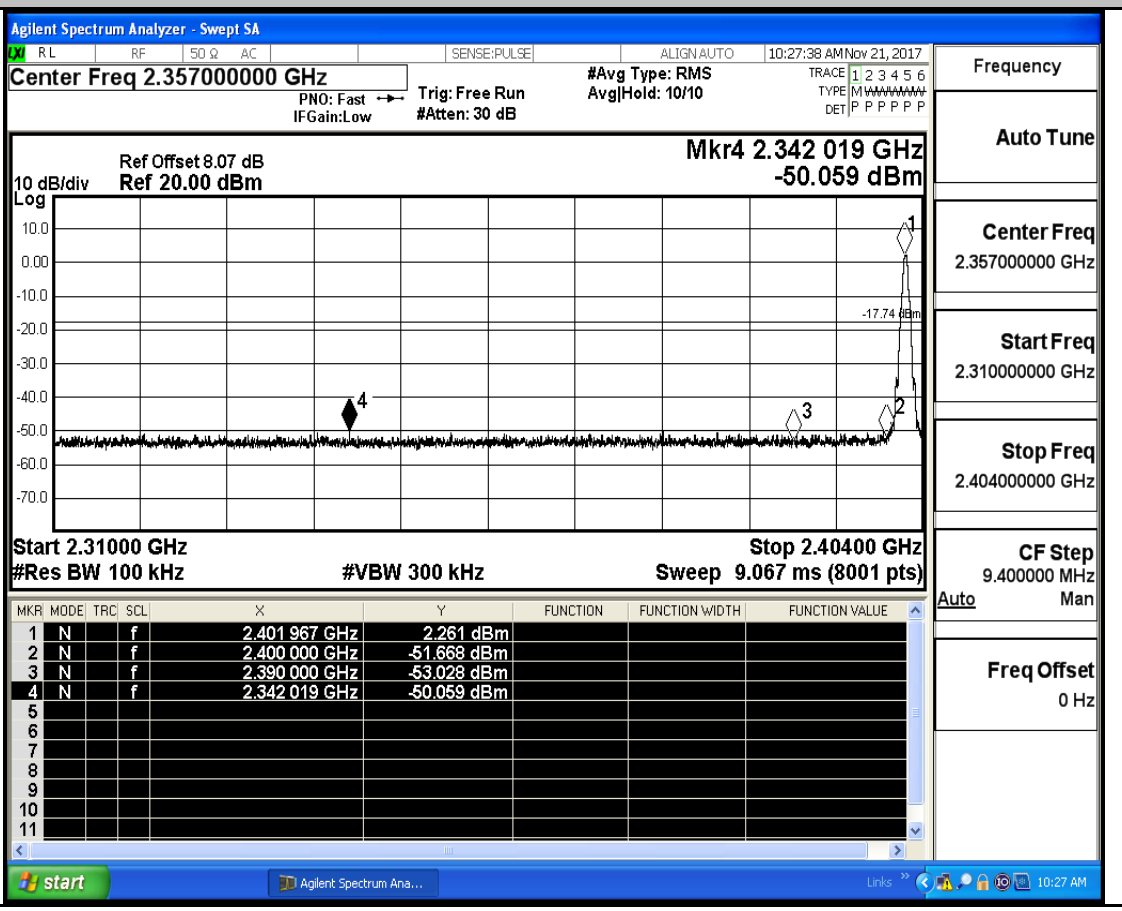
A.6 Band-edge for RF Conducted Emissions

Test Mode	Test Channel	Hopping	Carrier Power[dBm]	Max. Spurious Level [dBm]	Limit[dBm]	Verdict
GFSK	2402	On	-0.047	-49.544	-20.05	PASS
	2402	Off	2.261	-50.059	-17.74	PASS
	2480	On	1.618	-49.676	-18.38	PASS
	2480	Off	0.042	-49.595	-19.96	PASS
π/4-DQPSK	2402	On	1.130	-49.224	-18.87	PASS
	2402	Off	-2.033	-50.178	-22.03	PASS
	2480	On	2.044	-48.887	-17.96	PASS
	2480	Off	-0.541	-49.234	-20.54	PASS
8-DPSK	2402	On	1.332	-49.772	-18.67	PASS
	2402	Off	0.668	-49.858	-19.33	PASS
	2480	Off	-0.414	-49.925	-20.41	PASS
	2480	On	2.81	-48.868	-17.19	PASS

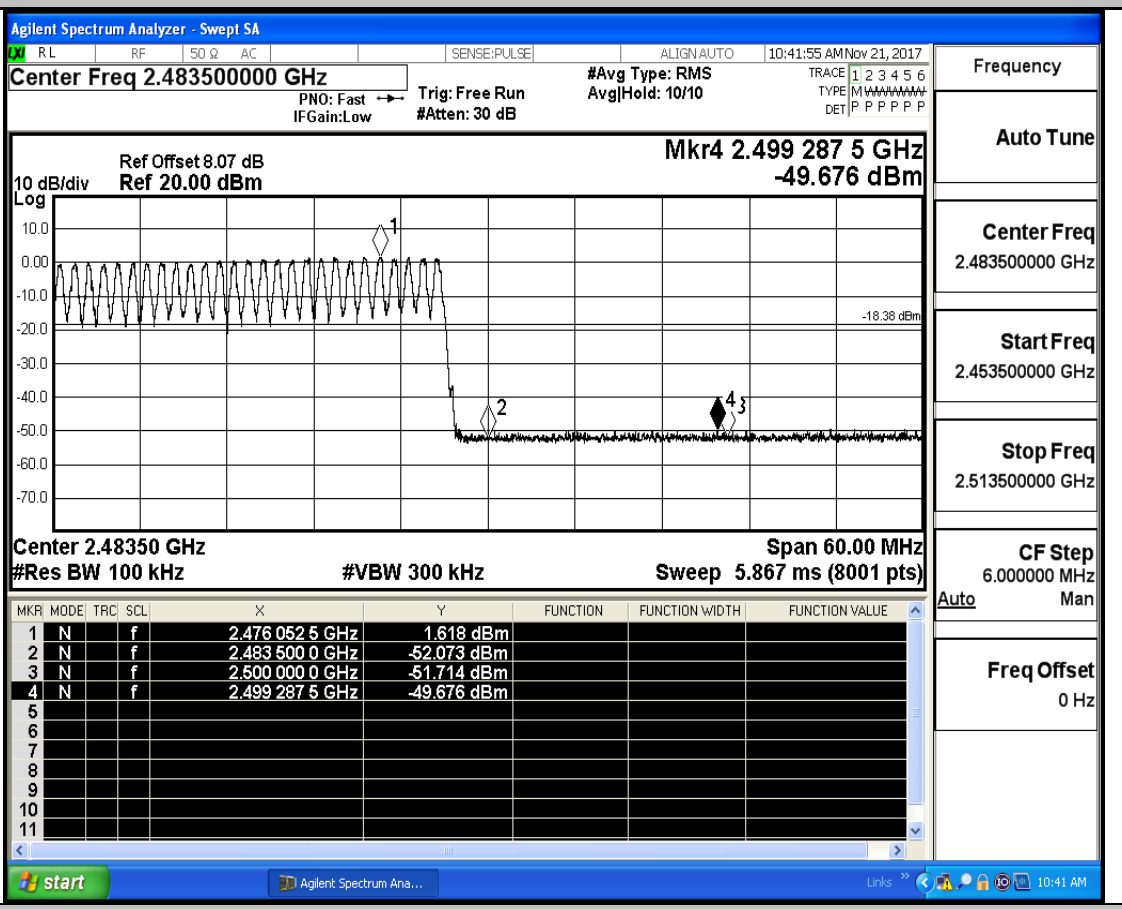
Band-edge for RF Conducted Emissions_GFSK_2402_Hopping On



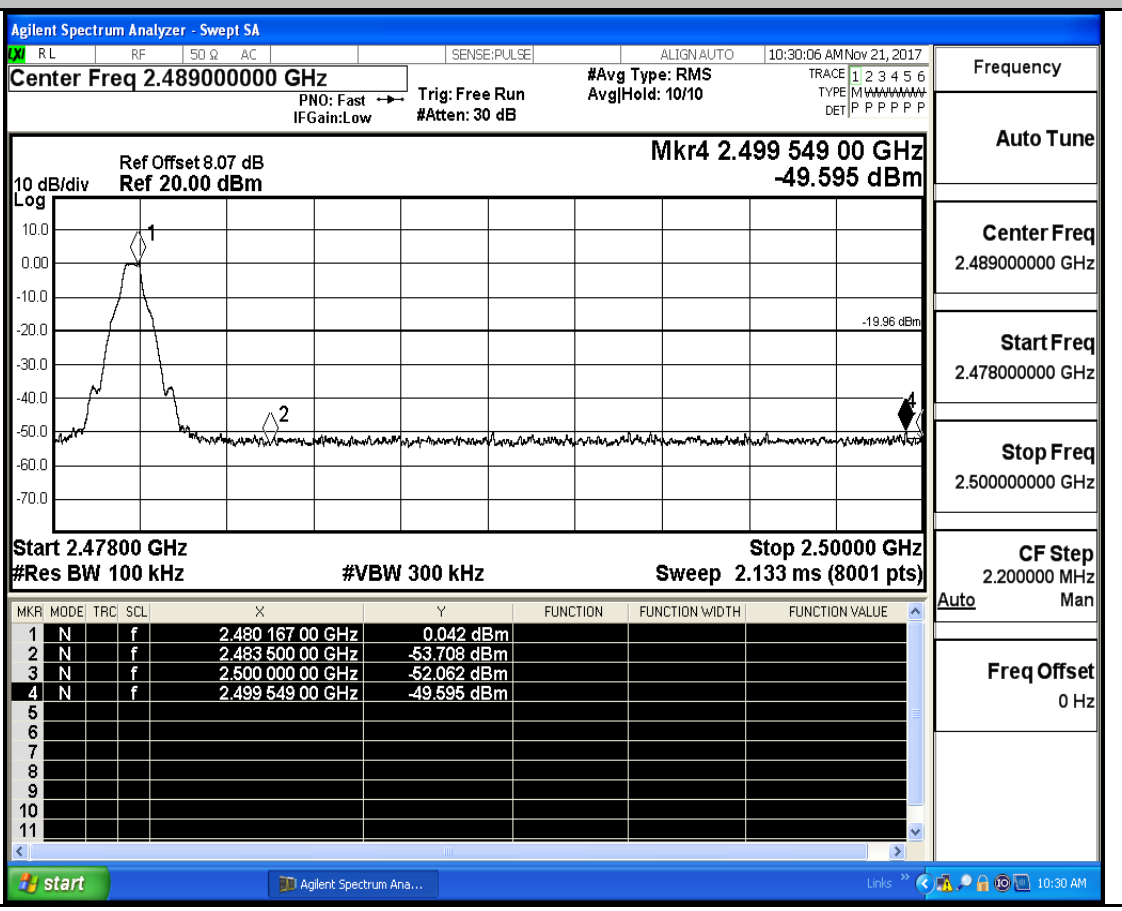
Band-edge for RF Conducted Emissions_GFSK_2402_Hopping Off



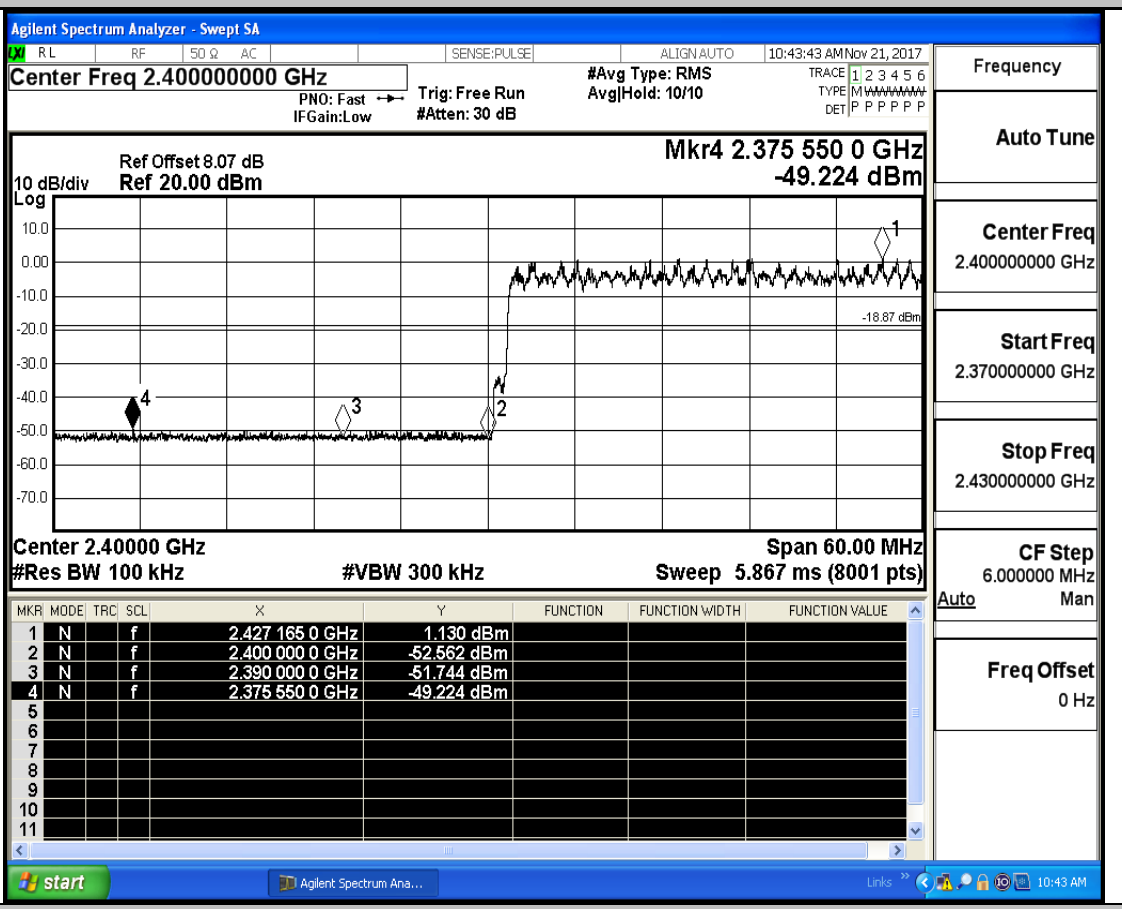
Band-edge for RF Conducted Emissions_GFSK_2480_Hopping On



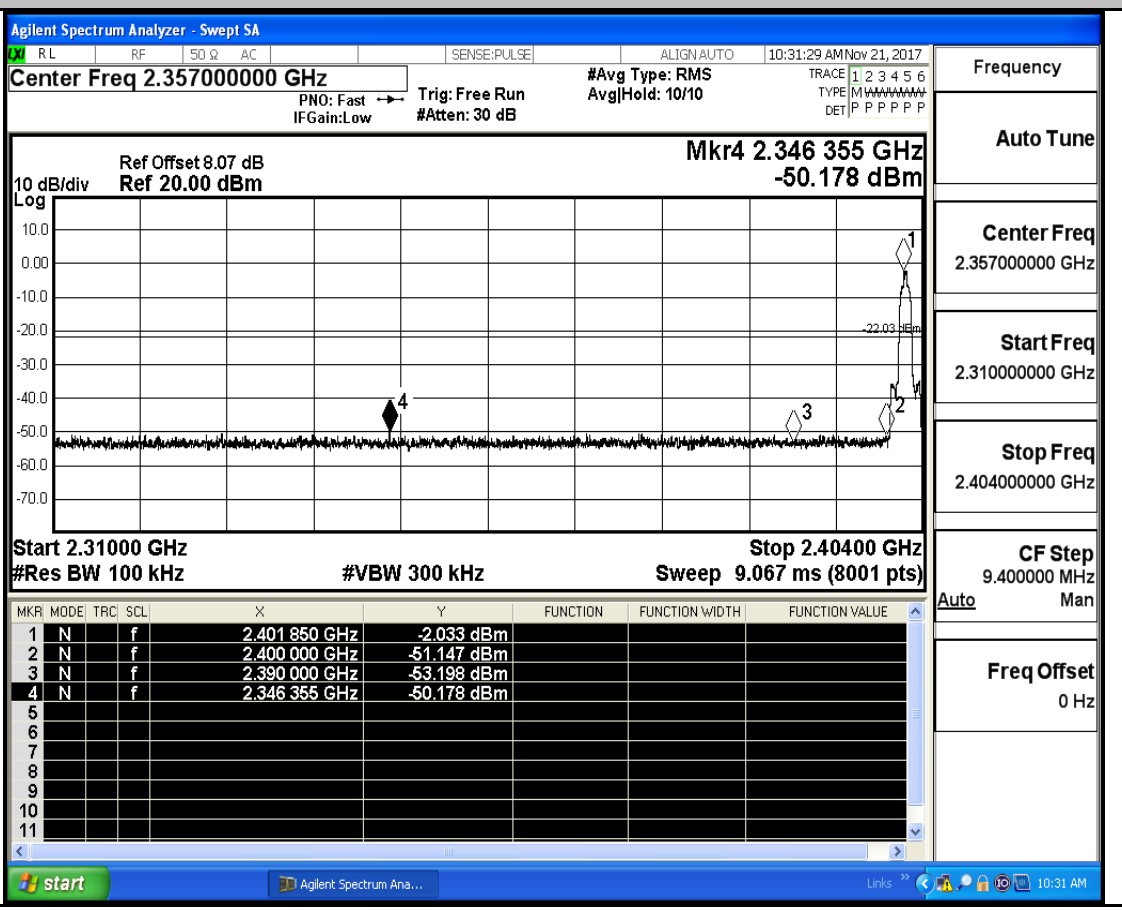
Band-edge for RF Conducted Emissions_GFSK_2480_Hopping Off



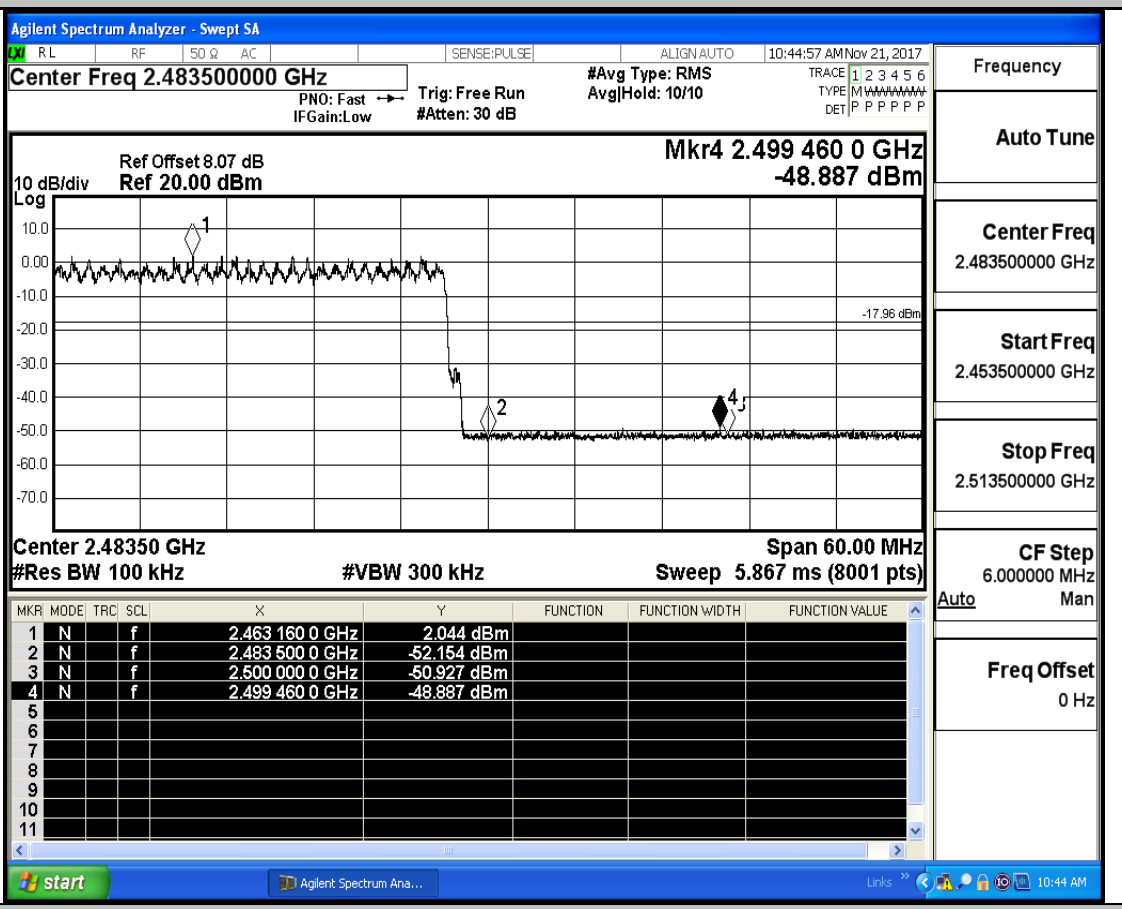
Band-edge for RF Conducted Emissions_π/4-DQPSK_2402_Hopping On



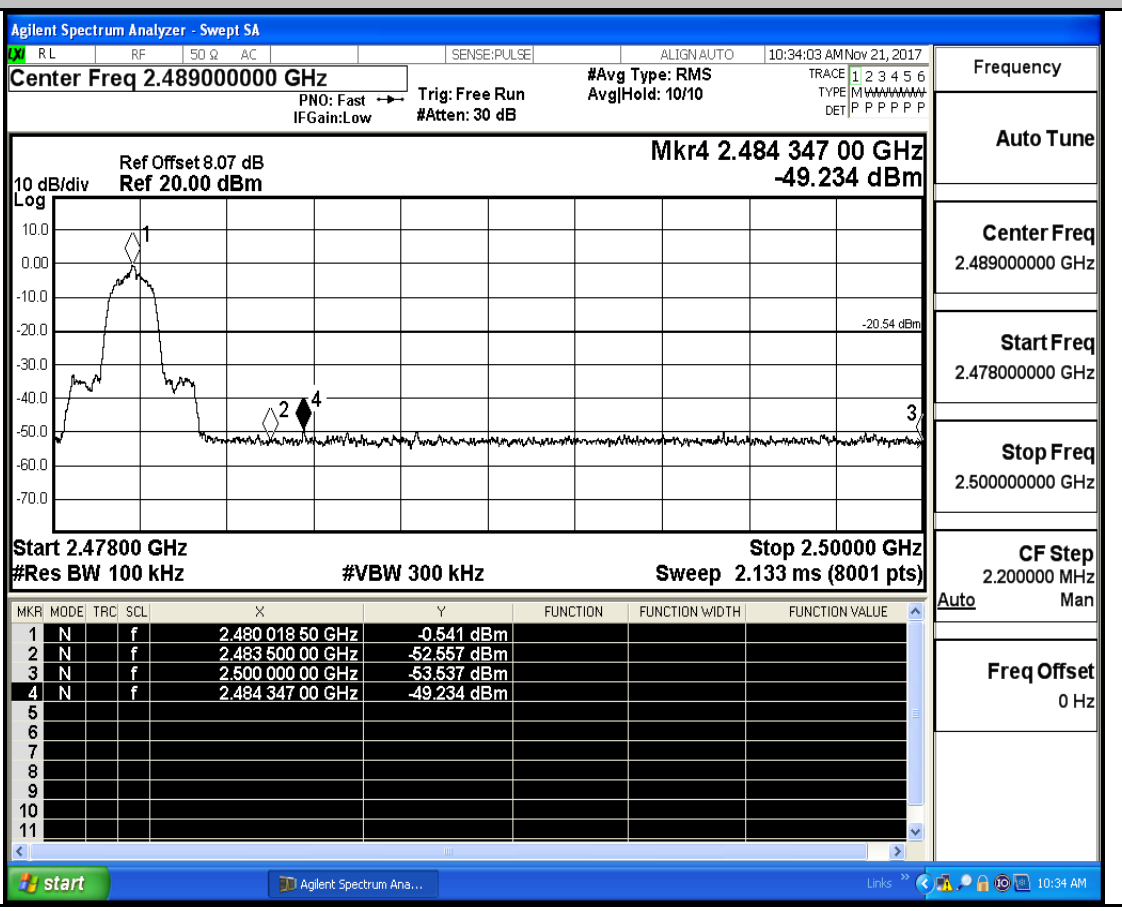
Band-edge for RF Conducted Emissions_π/4-DQPSK_2402_Hopping Off



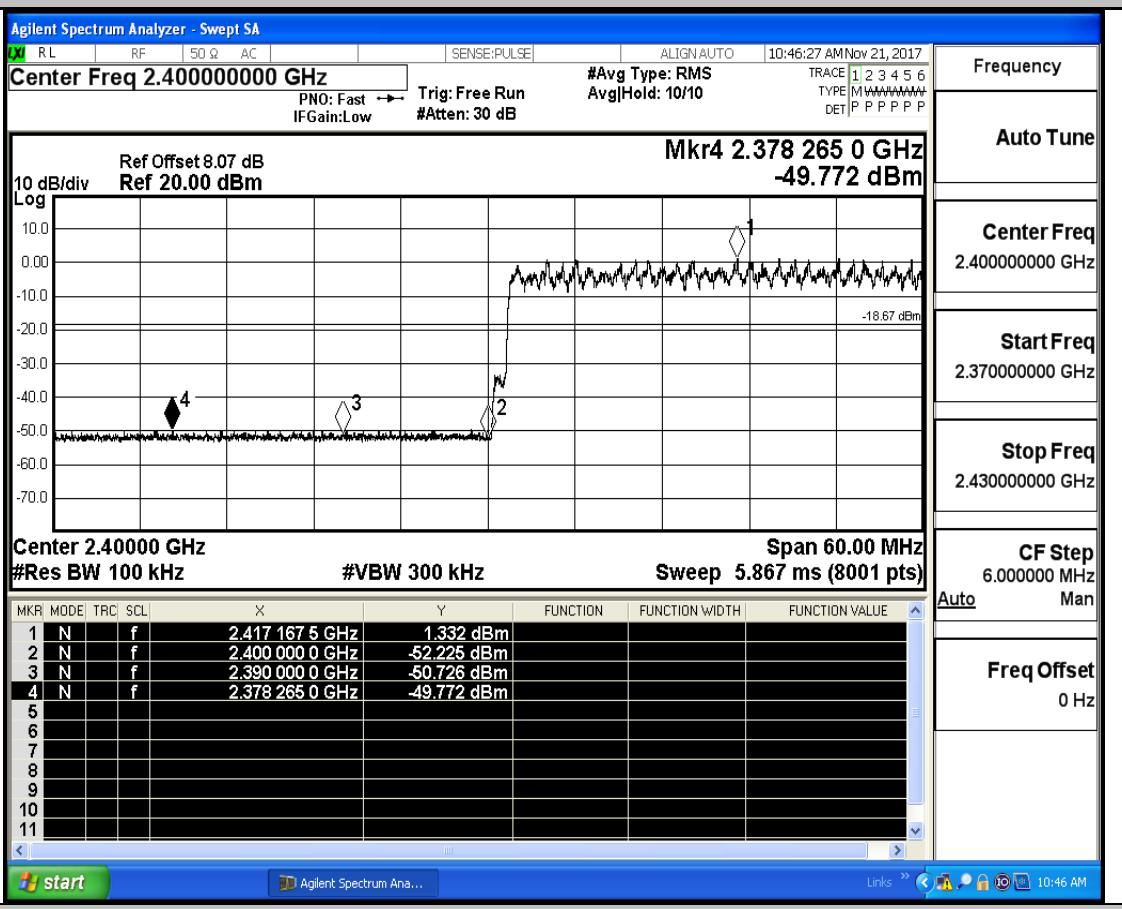
Band-edge for RF Conducted Emissions_π/4-DQPSK_2480_Hopping On



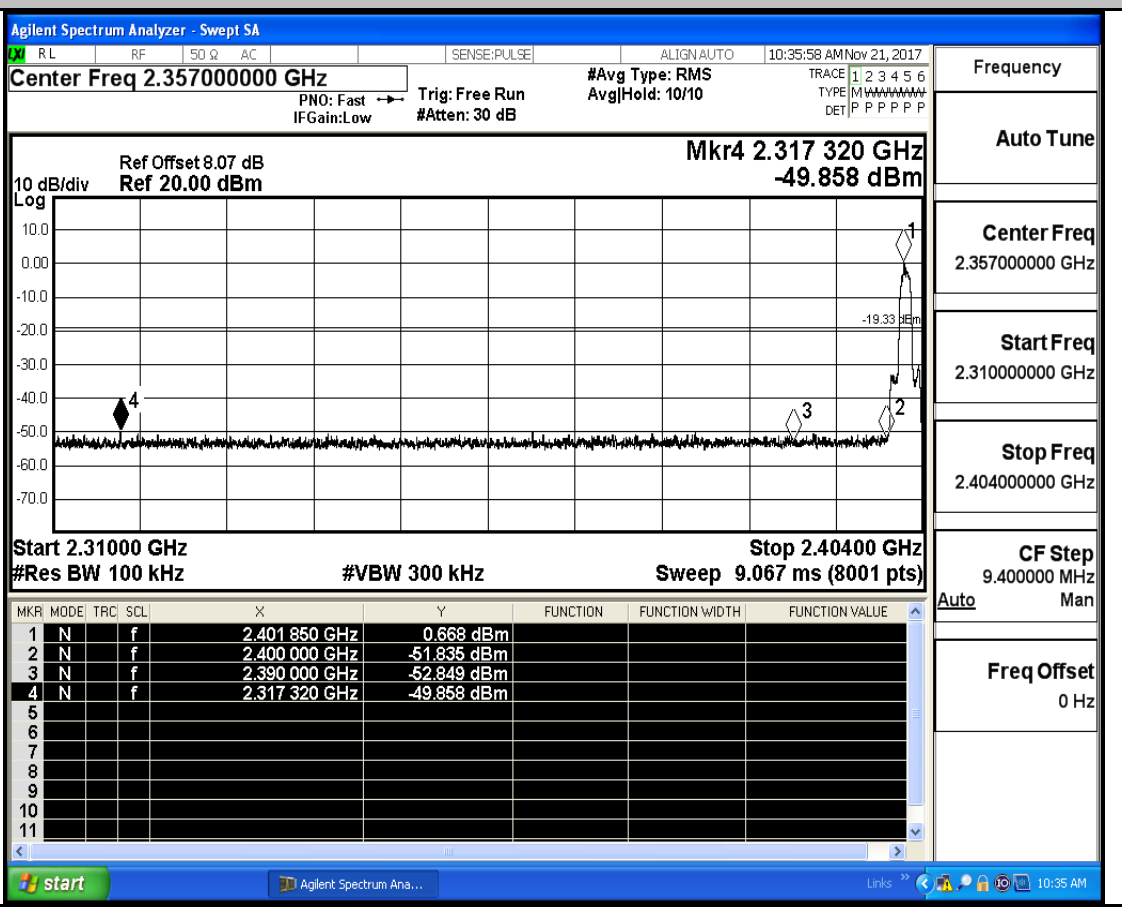
Band-edge for RF Conducted Emissions_π/4-DQPSK_2480_Hopping Off



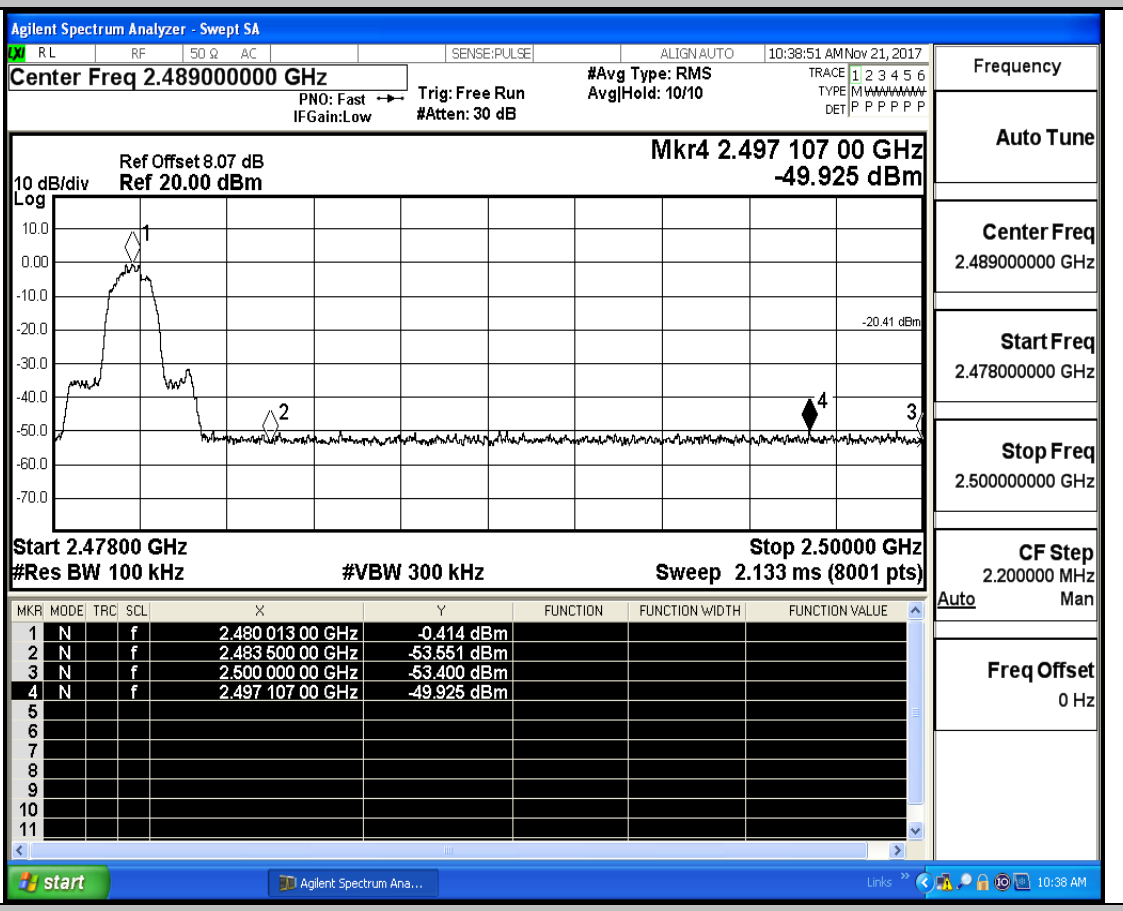
Band-edge for RF Conducted Emissions_8-DPSK_2402_Hopping On



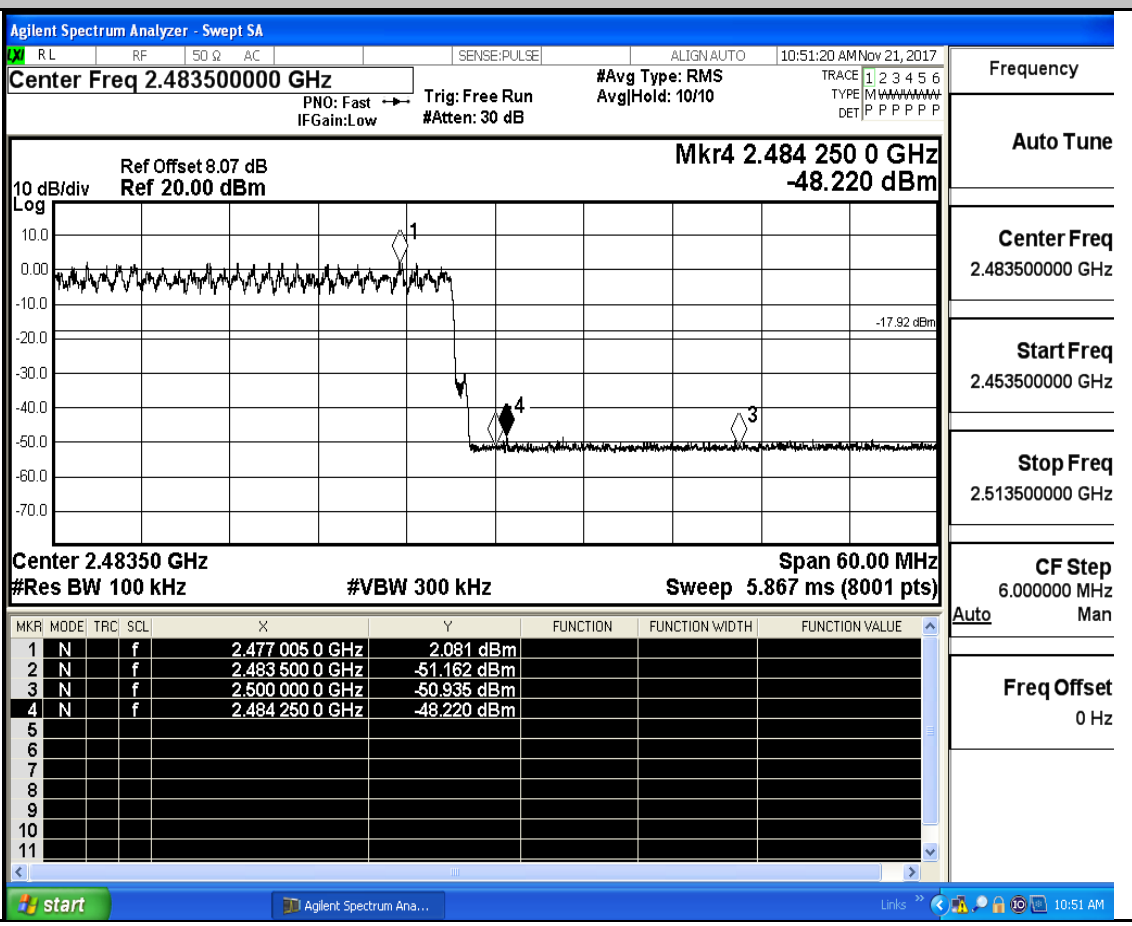
Band-edge for RF Conducted Emissions_8-DPSK_2402_Hopping Off



Band-edge for RF Conducted Emissions_8-DPSK_2480_Hopping Off



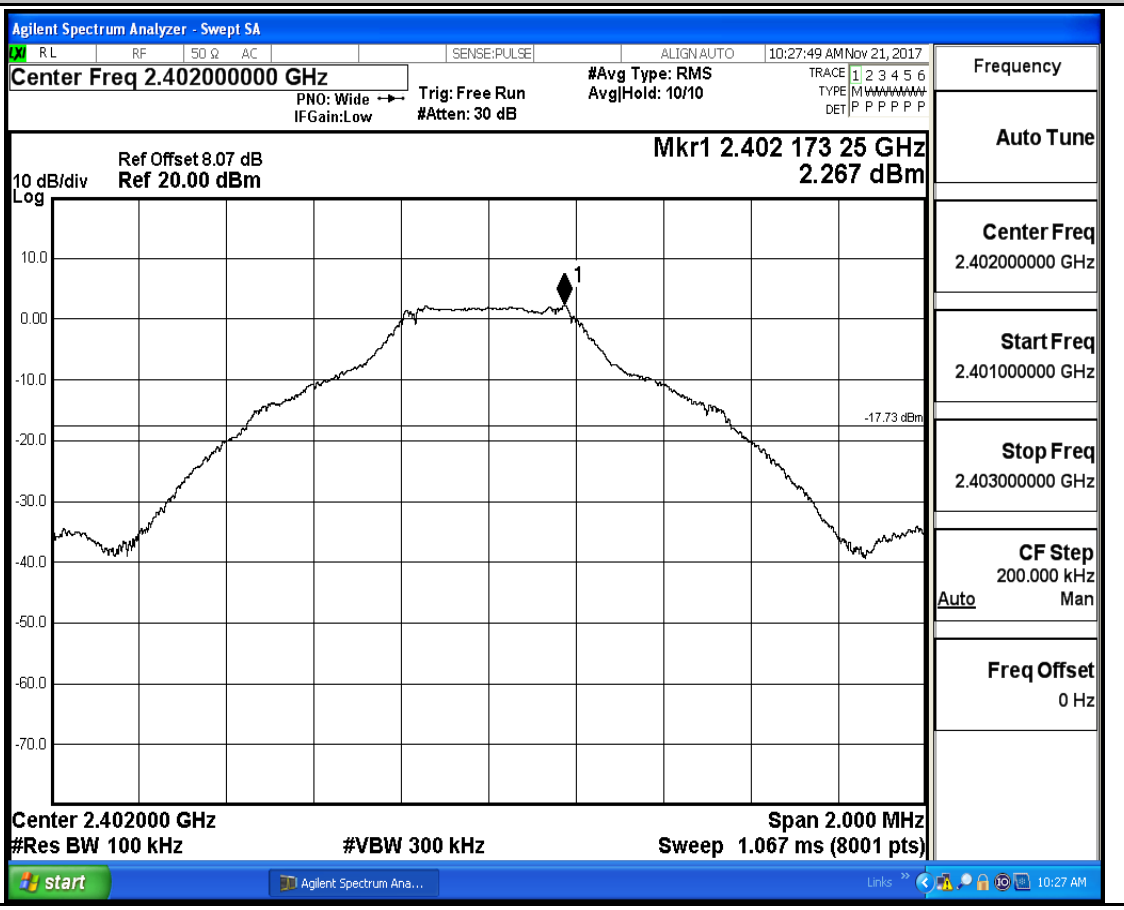
Band-edge for RF Conducted Emissions_8-DPSK_2480_Hopping On

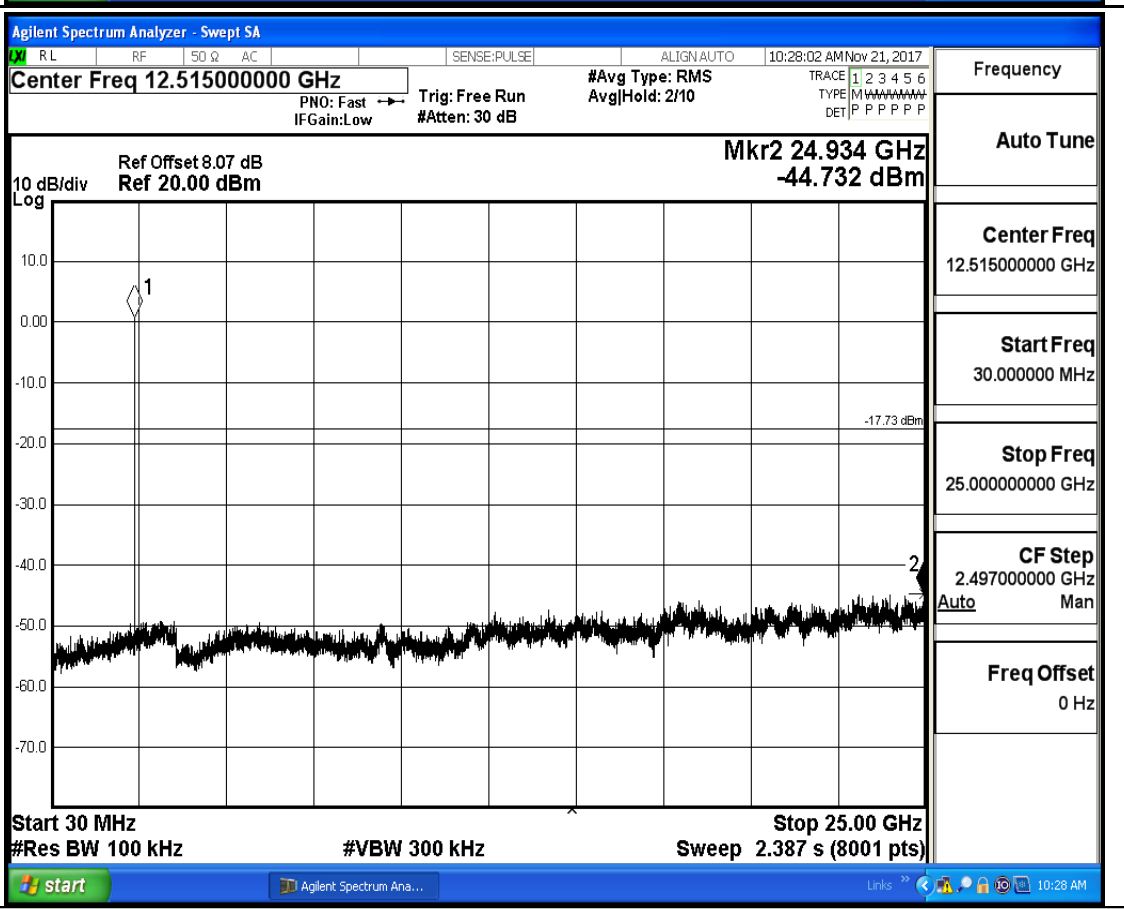


A.7 RF Conducted Spurious Emissions

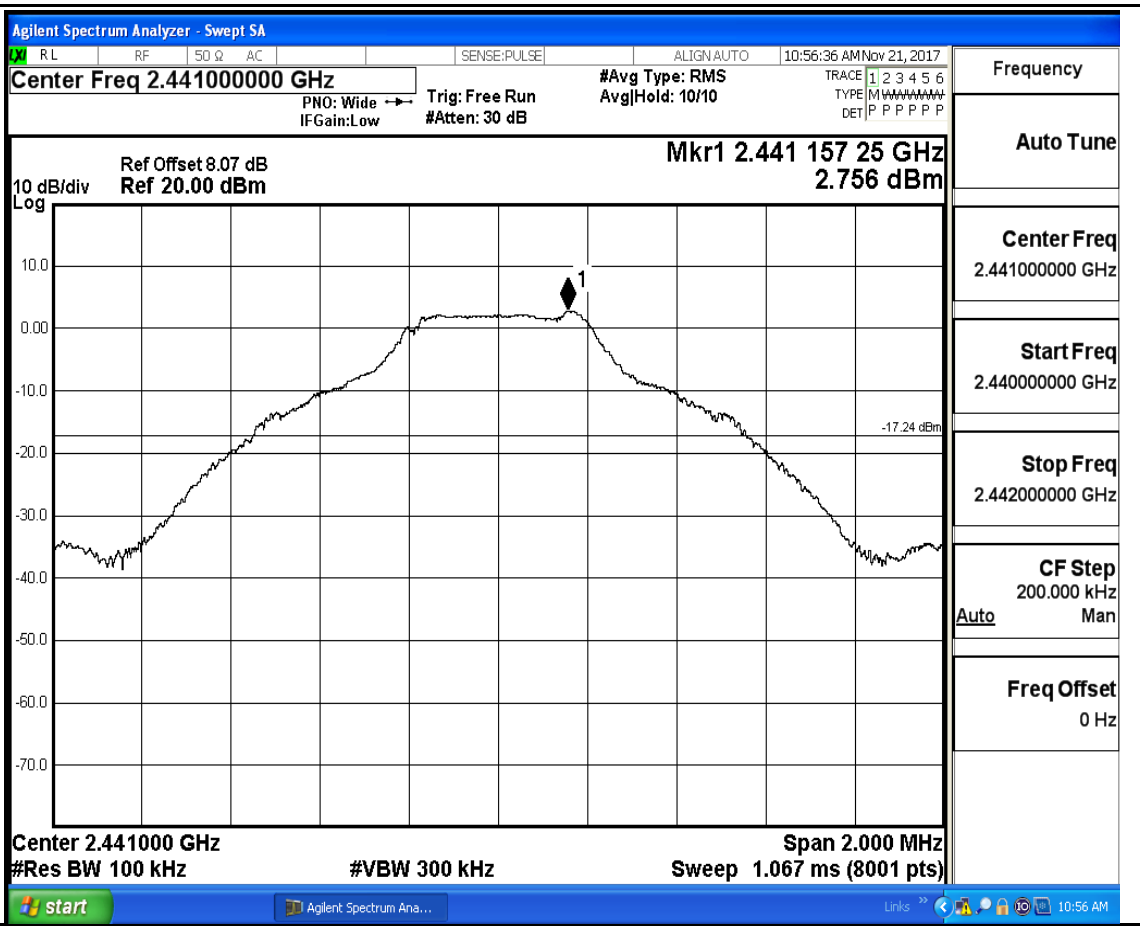
Test Mode	Test Channel	StartFre [MHz]	StopFre [MHz]	RBW [kHz]	VBW [kHz]	Pref[dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	2402	30	25000	100	300	2.267	-44.732	<-17.733	PASS
	2441	30	25000	100	300	5.328	-43.999	<-14.672	PASS
	2480	30	25000	100	300	0.576	-44.508	<-19.424	PASS
π/4-DQPSK	2402	30	25000	100	300	-2.17	-44.146	<-22.17	PASS
	2441	30	25000	100	300	1.559	-45.225	<-18.441	PASS
	2480	30	25000	100	300	-0.925	-44.562	<-20.925	PASS
8-DPSK	2402	30	25000	100	300	0.676	-44.593	<-19.324	PASS
	2441	30	25000	100	300	1.513	-44.765	<-18.487	PASS
	2480	30	25000	100	300	-0.463	-44.808	<-20.463	PASS

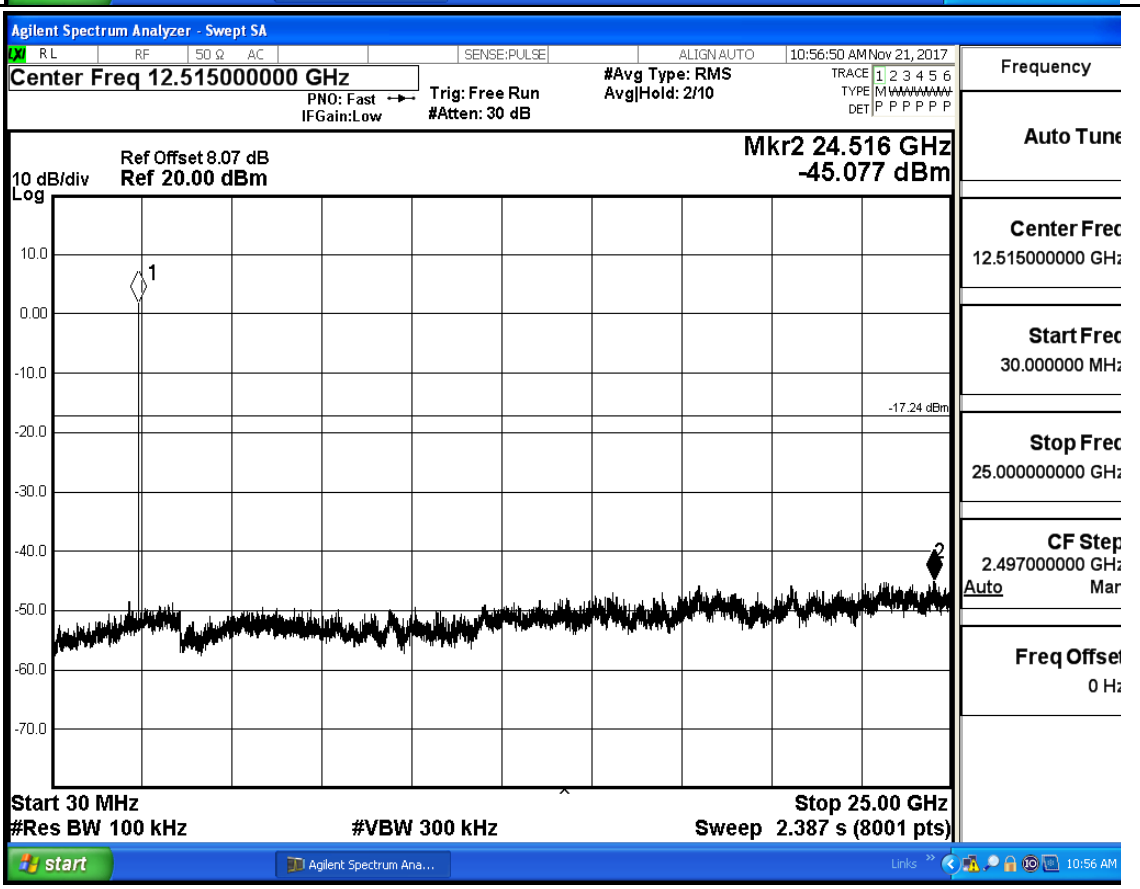
RF Conducted Spurious Emissions_GFSK_2402



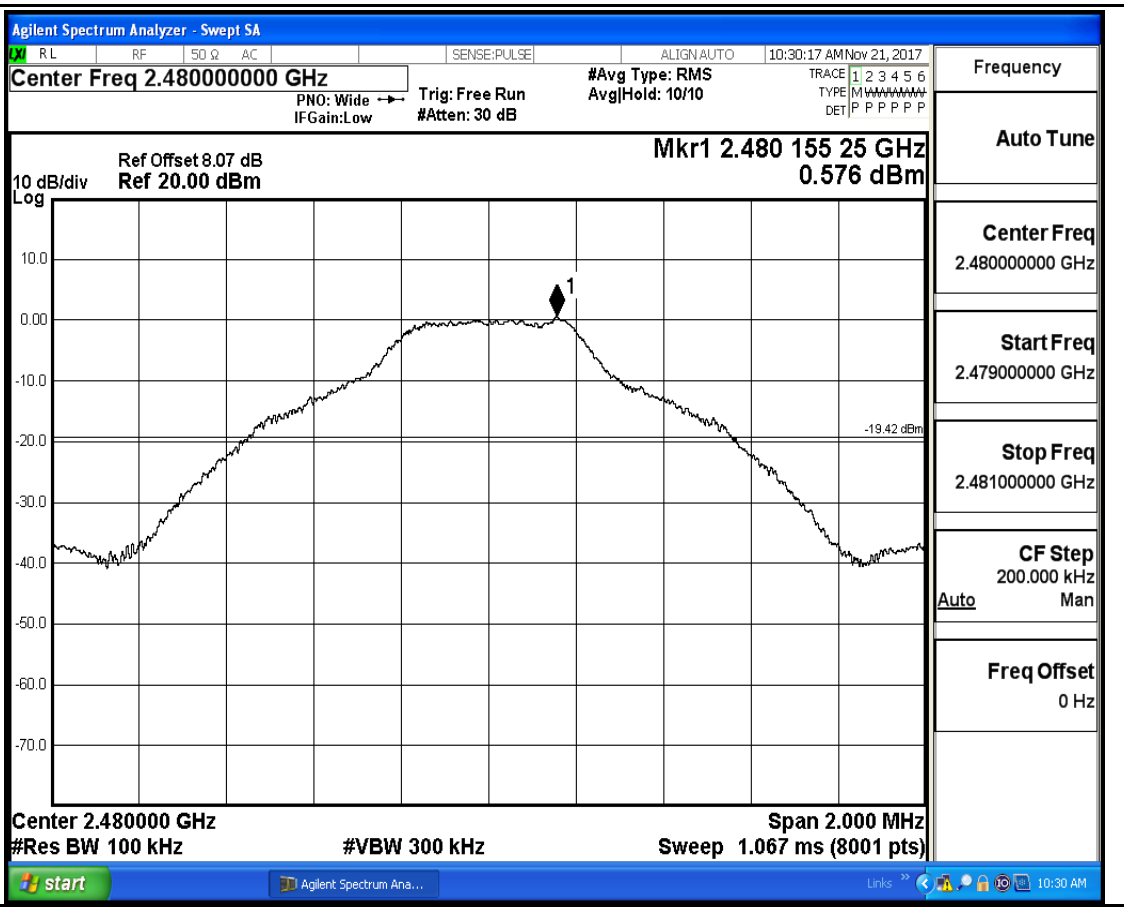


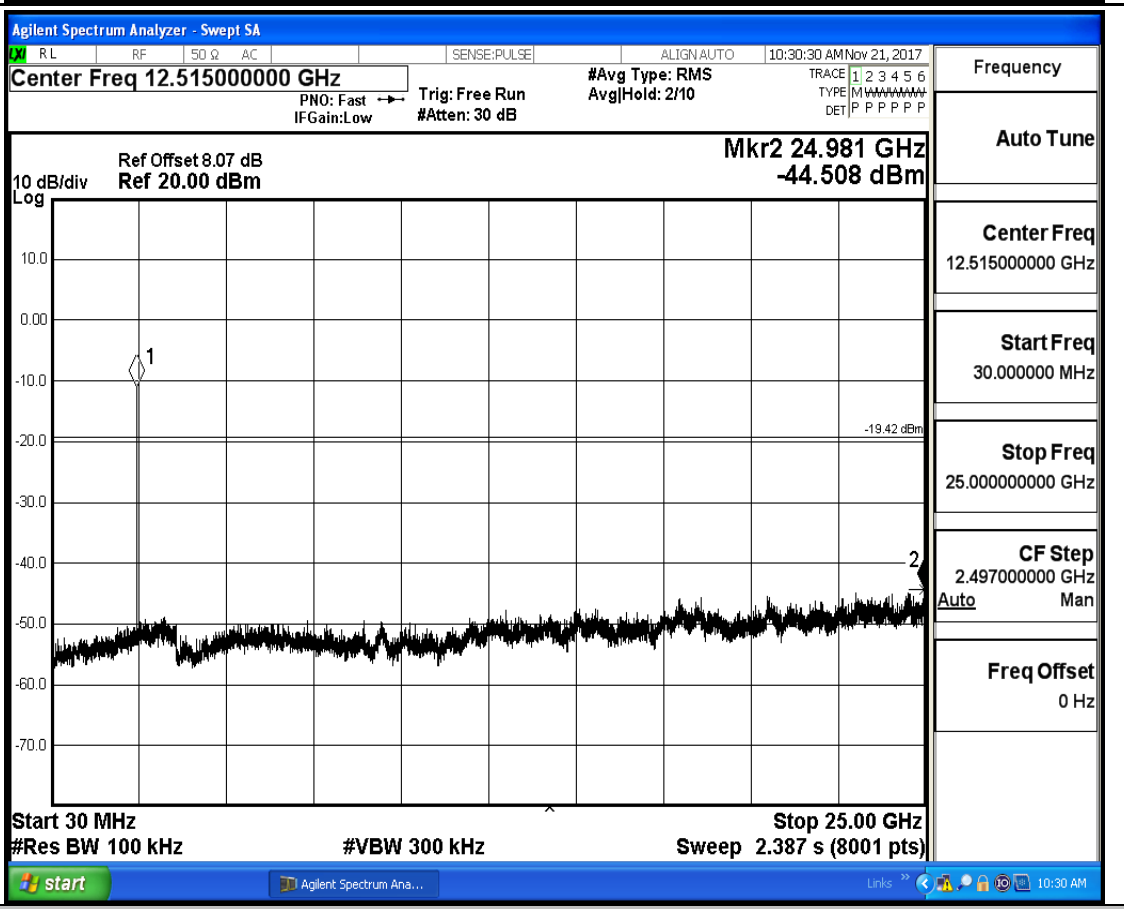
RF Conducted Spurious Emissions_GFSK_2441



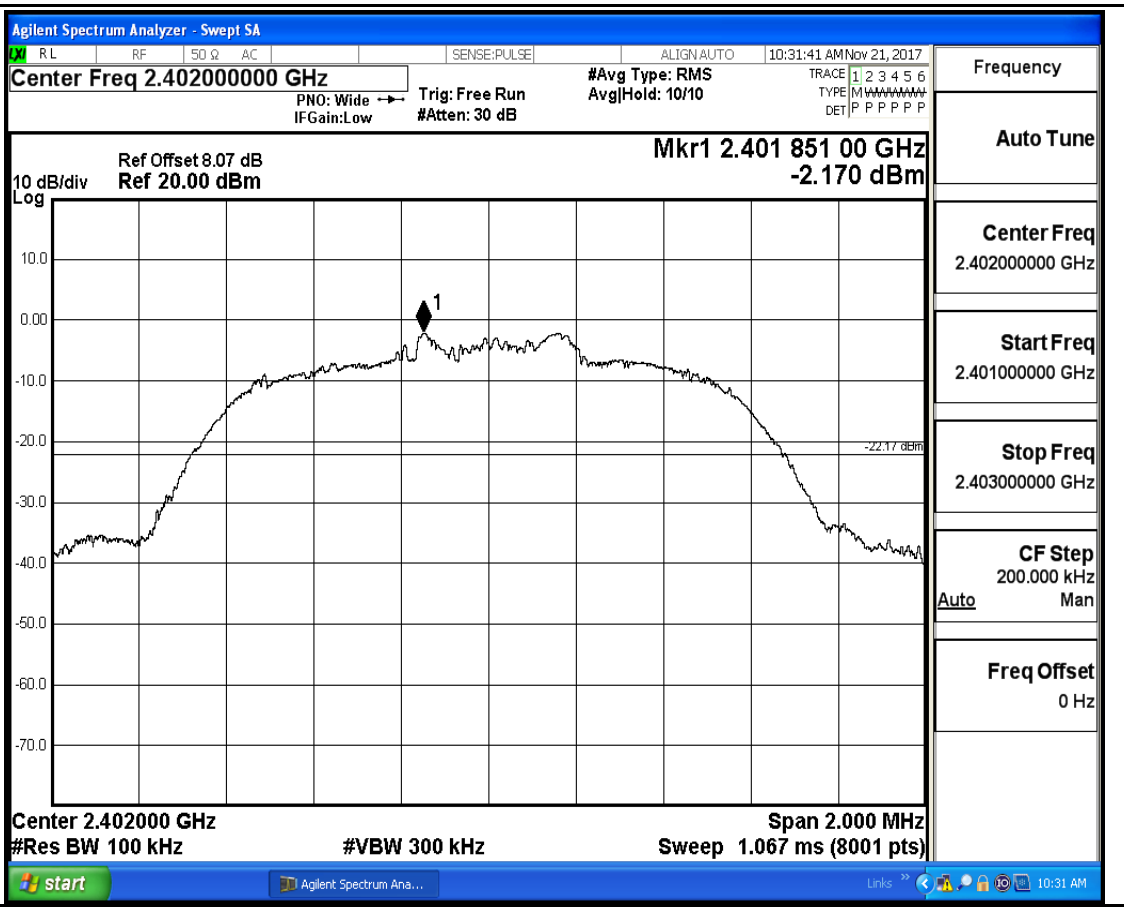


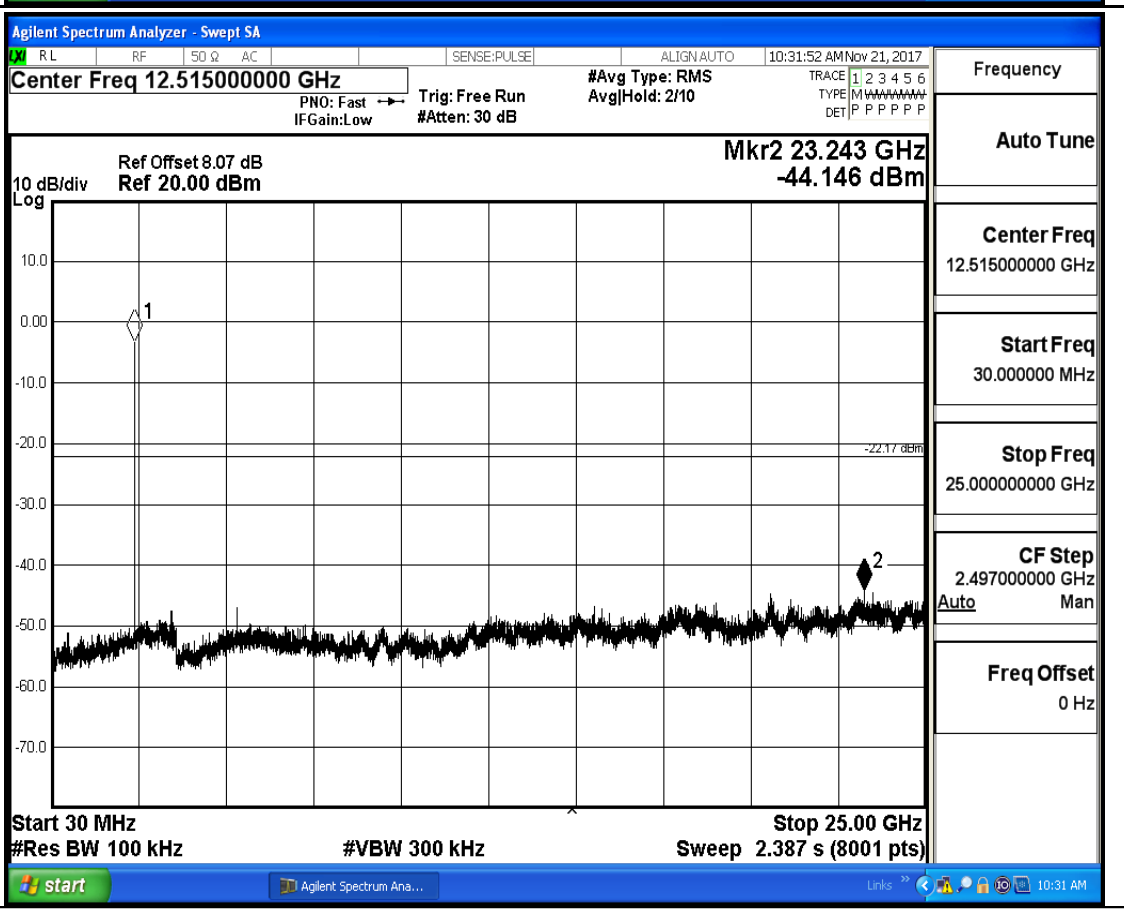
RF Conducted Spurious Emissions_GFSK_2480



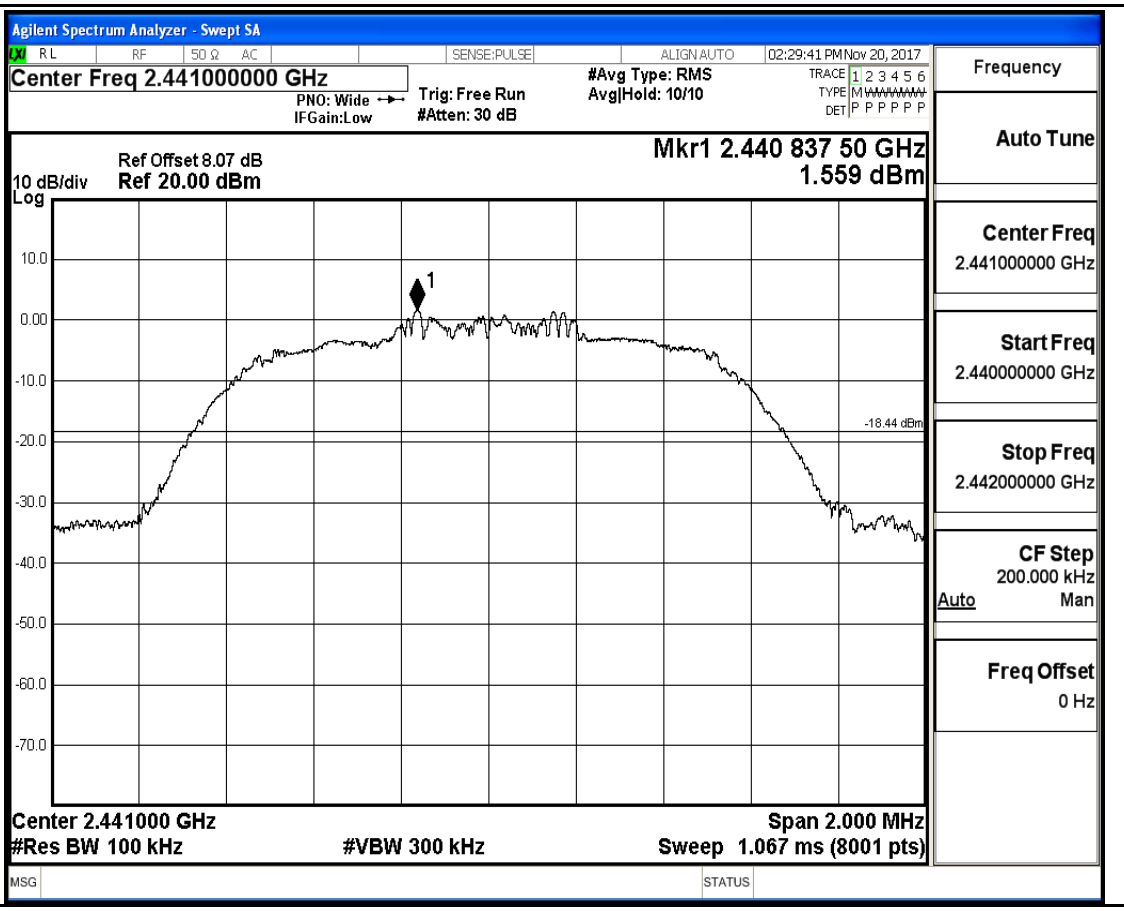


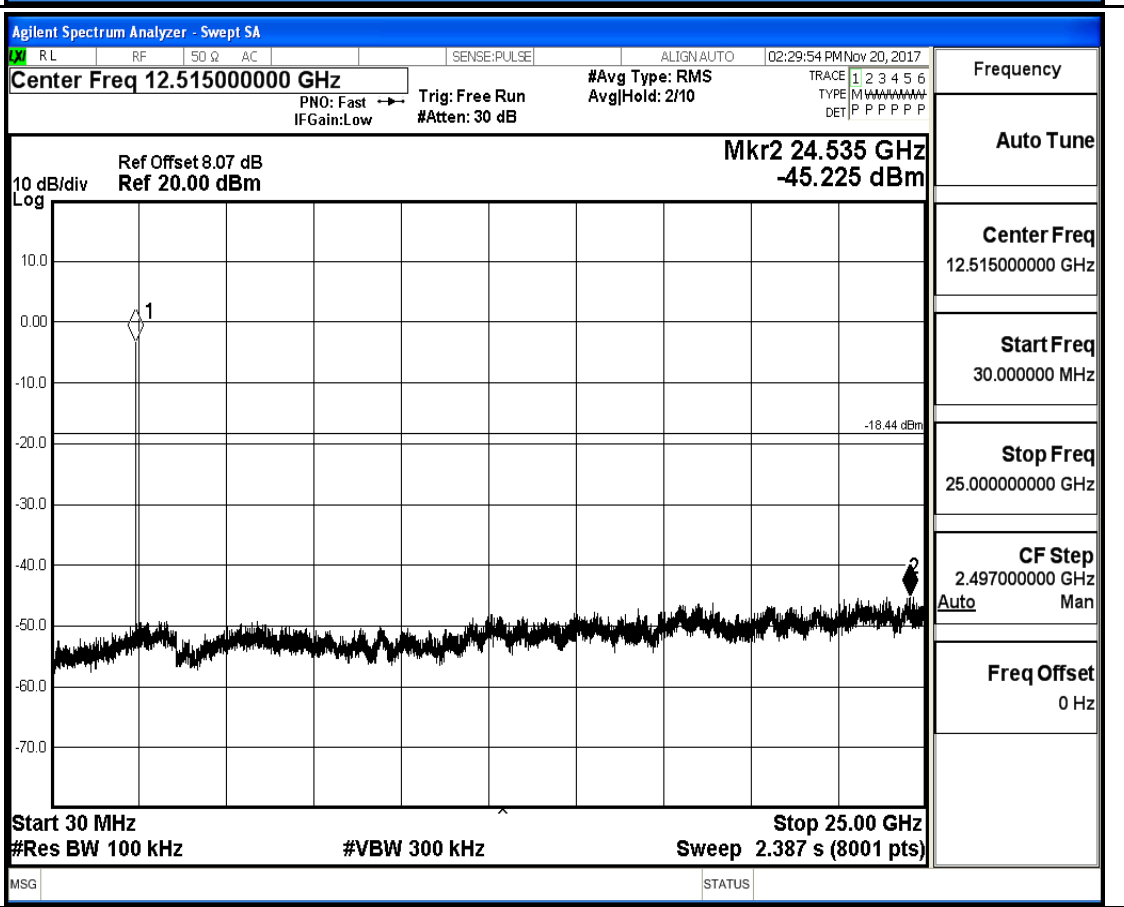
RF Conducted Spurious Emissions_π/4-DQPSK_2402



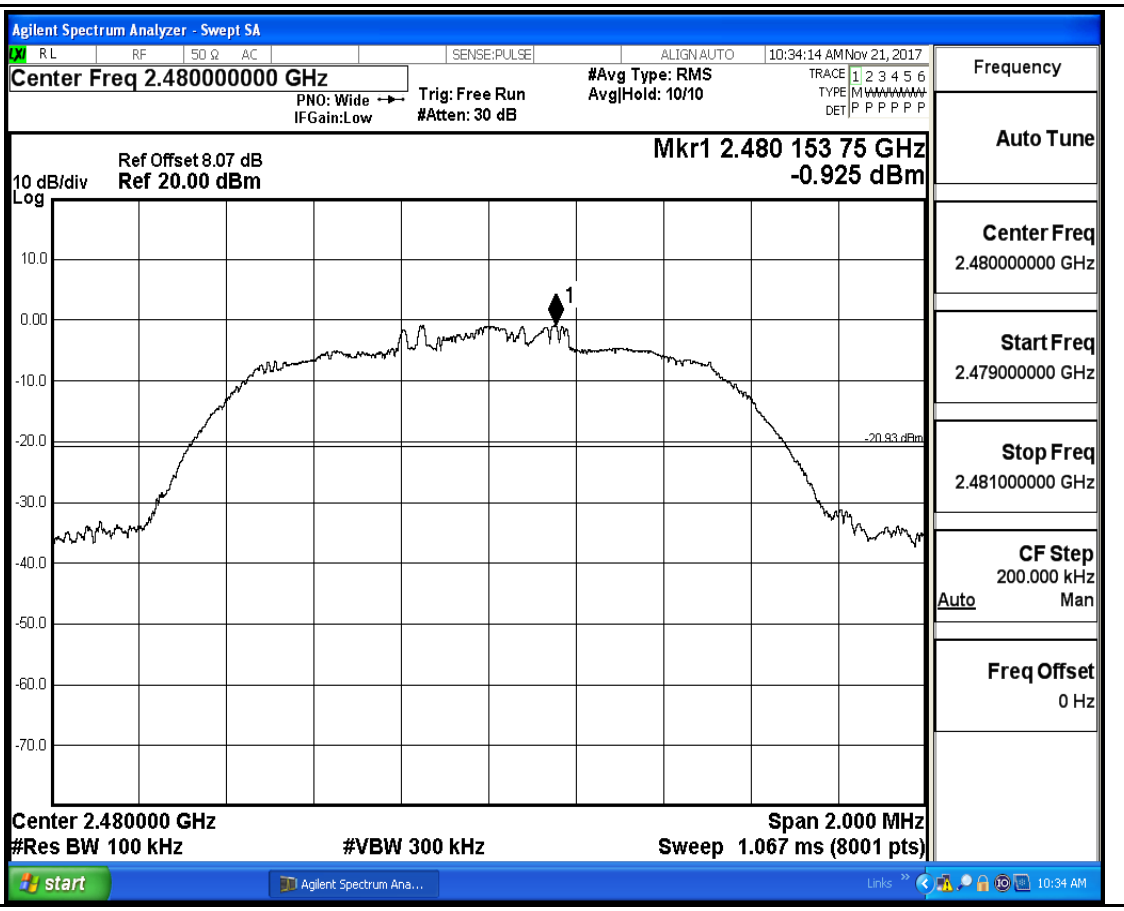


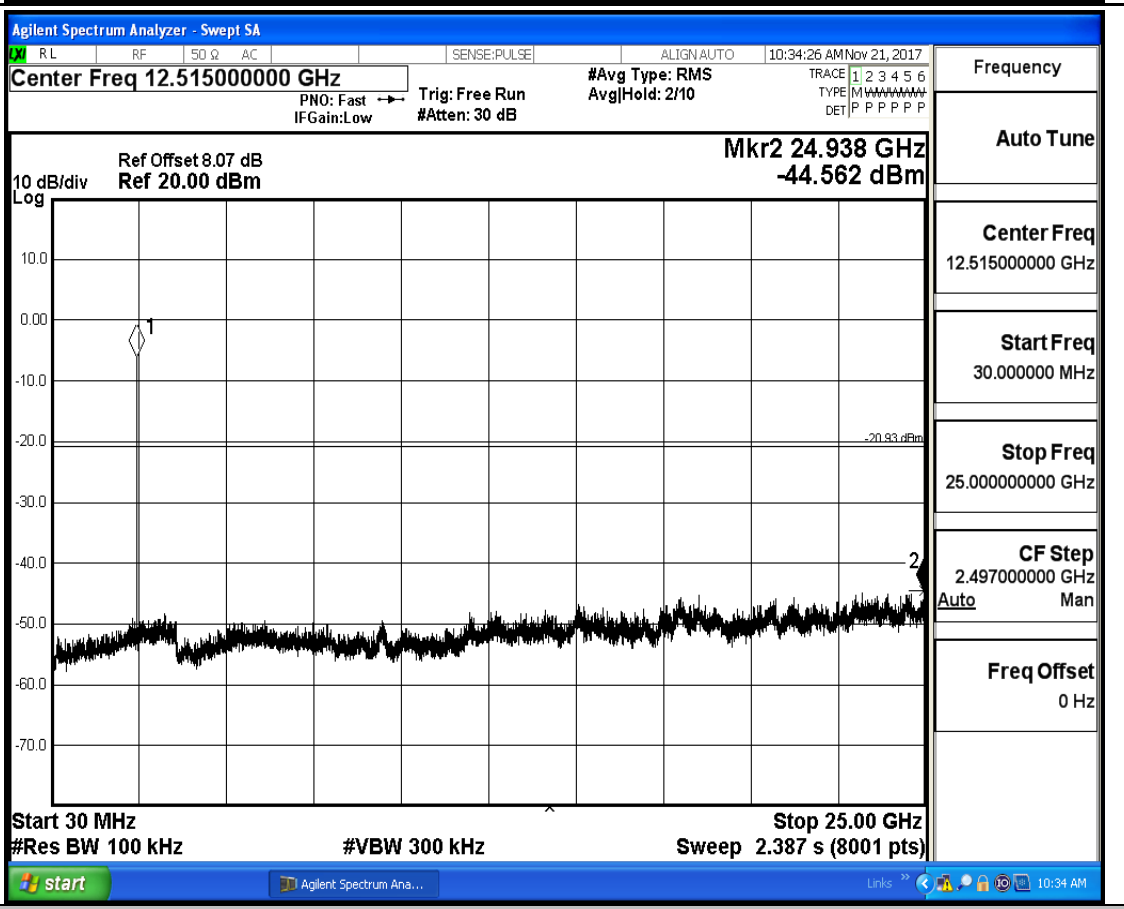
RF Conducted Spurious Emissions_π/4-DQPSK_2441



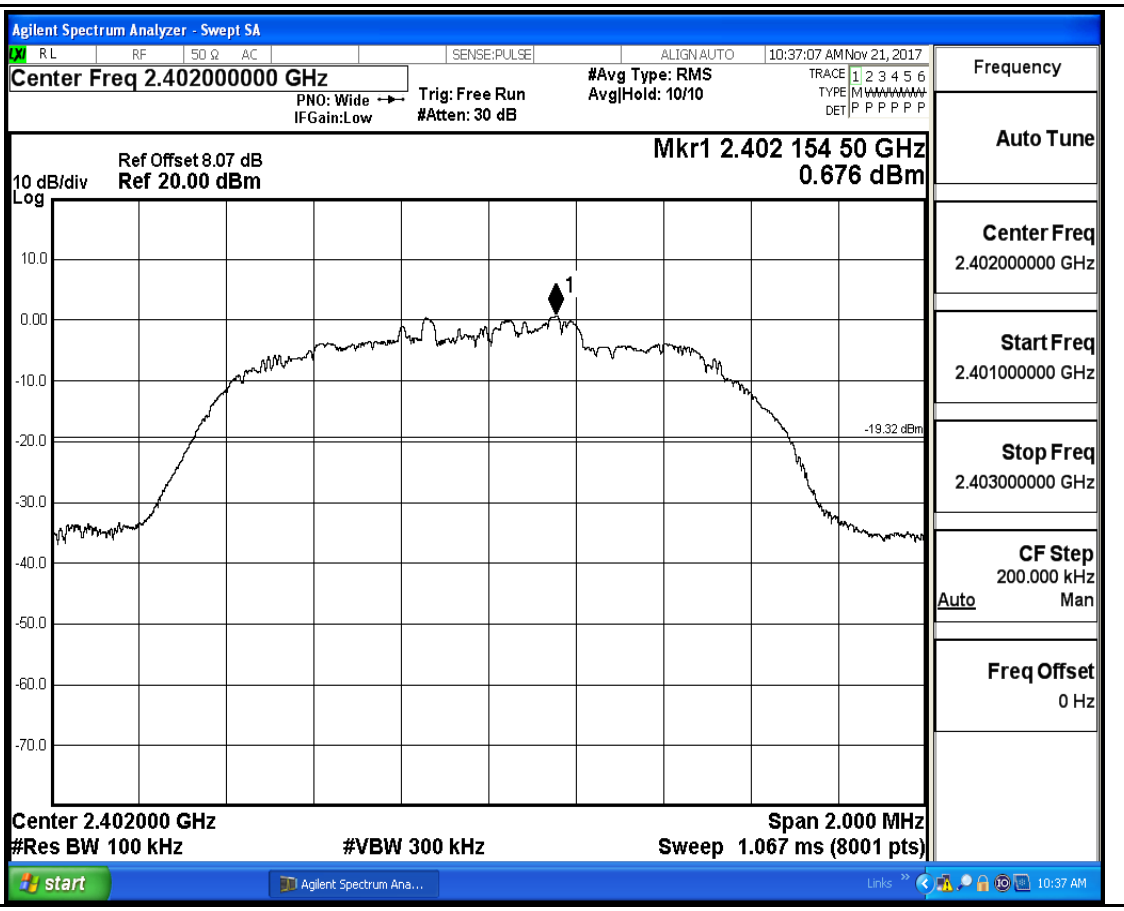


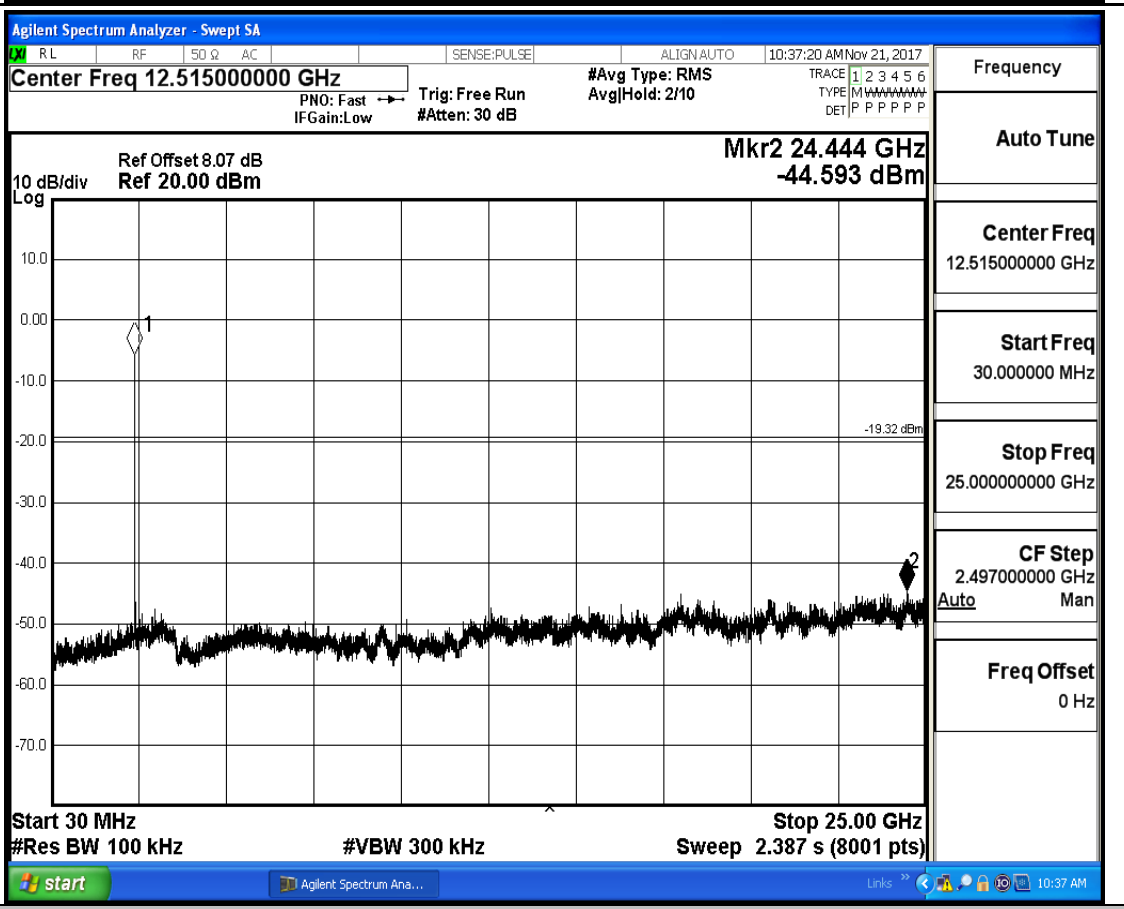
RF Conducted Spurious Emissions_π/4-DQPSK_2480



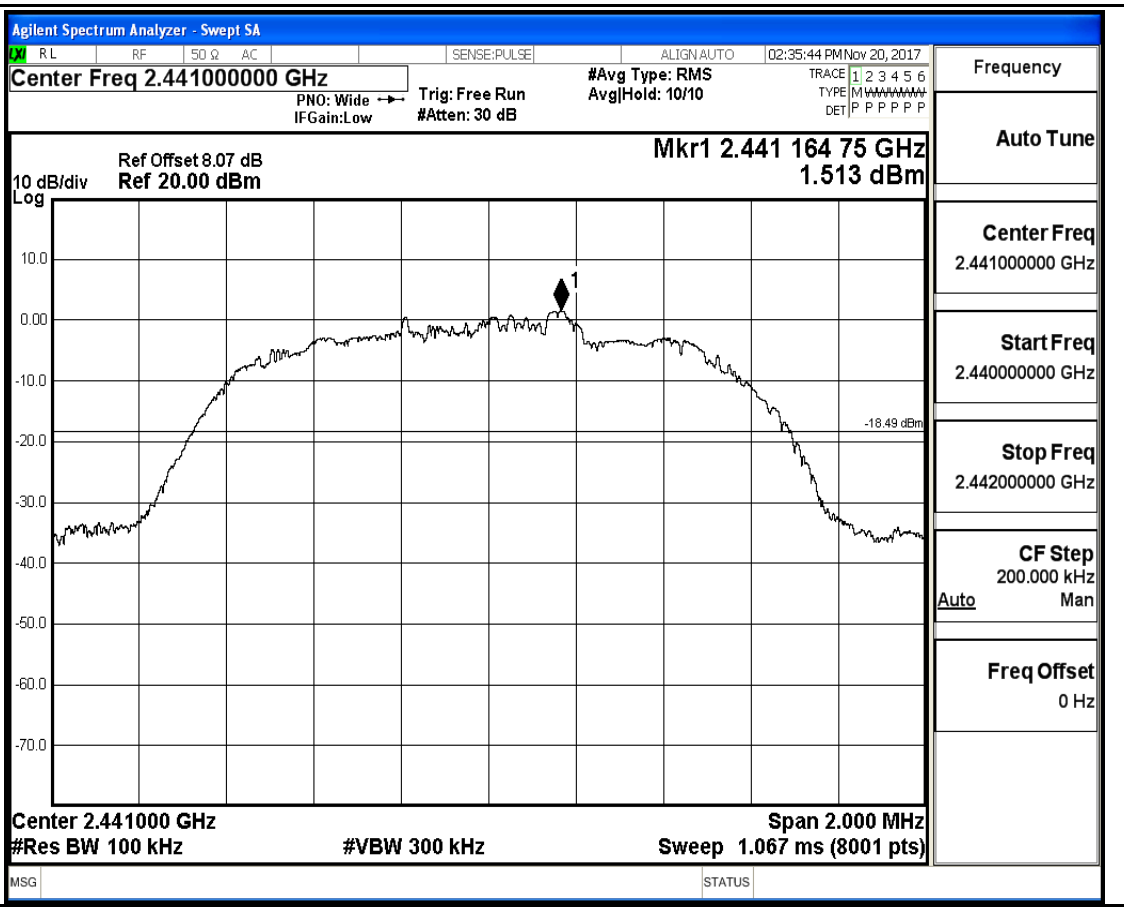


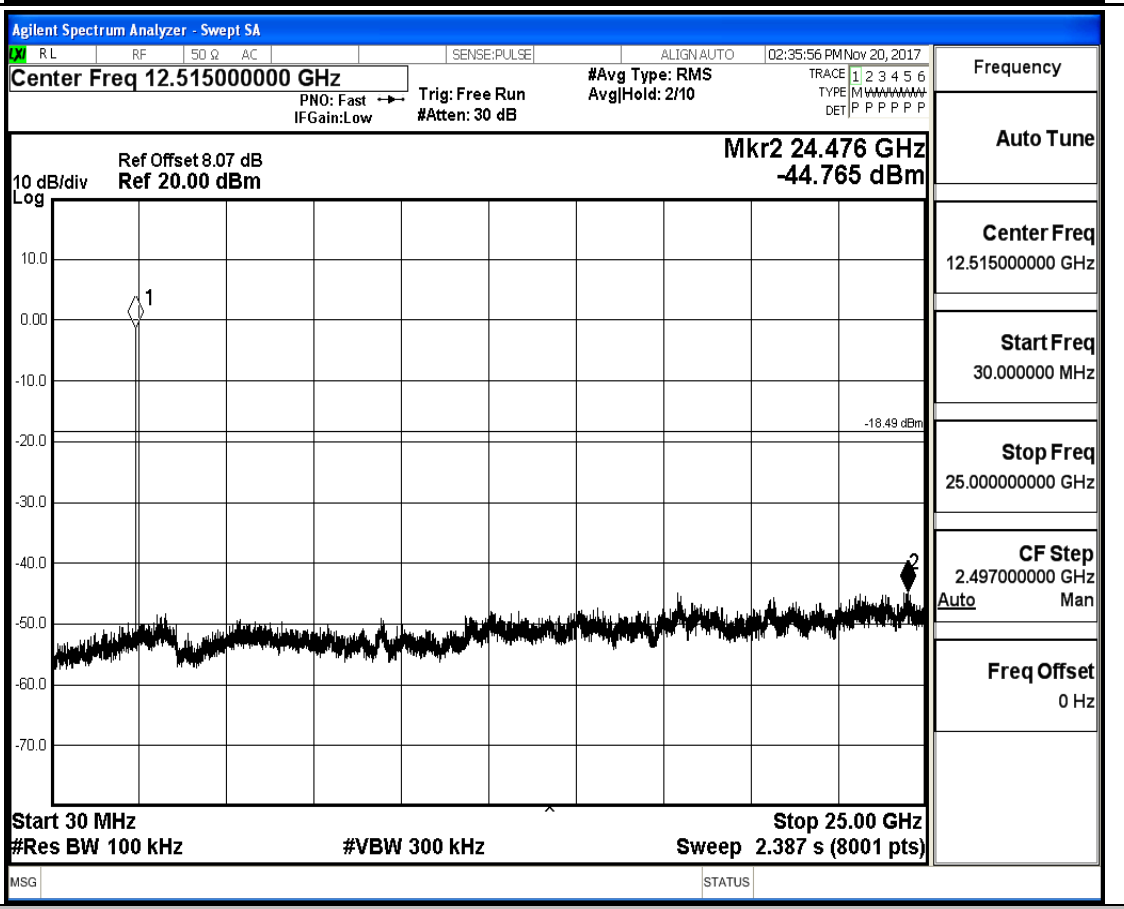
RF Conducted Spurious Emissions_8-DPSK_2402



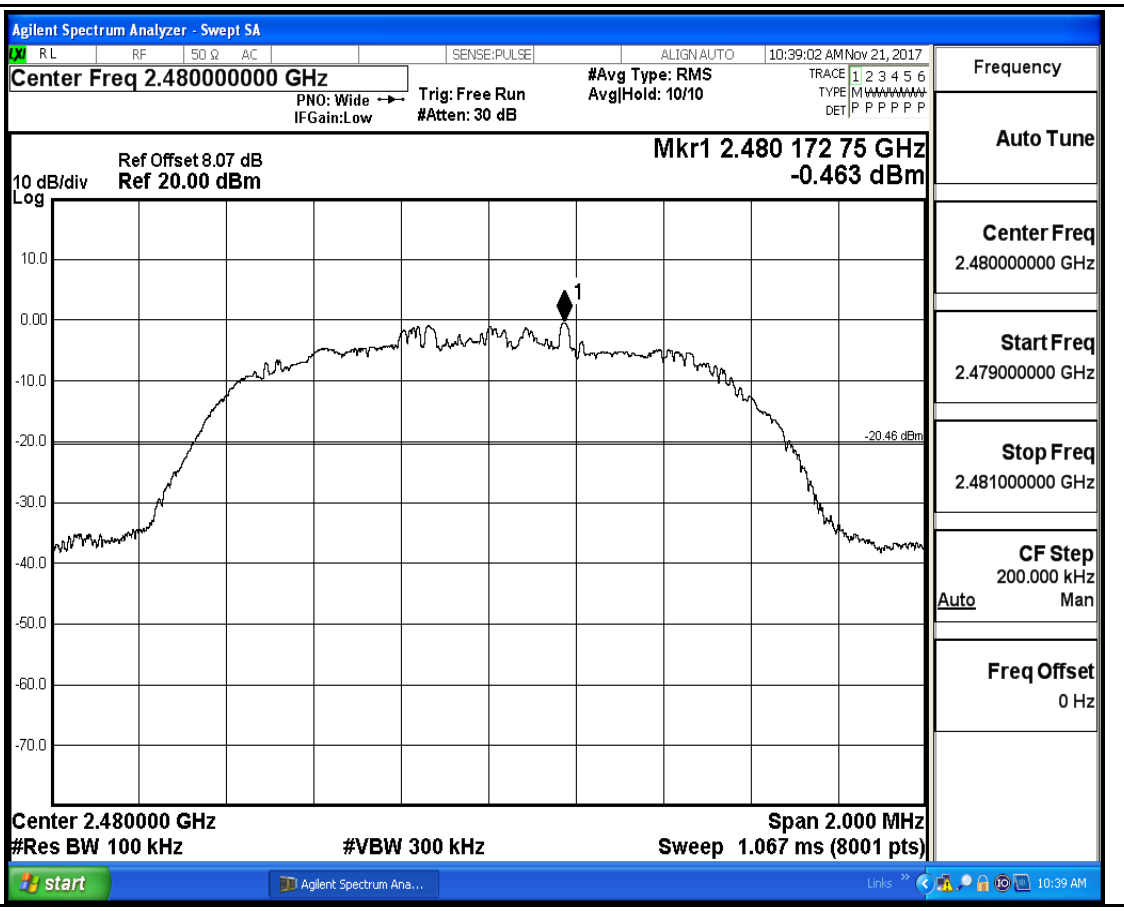


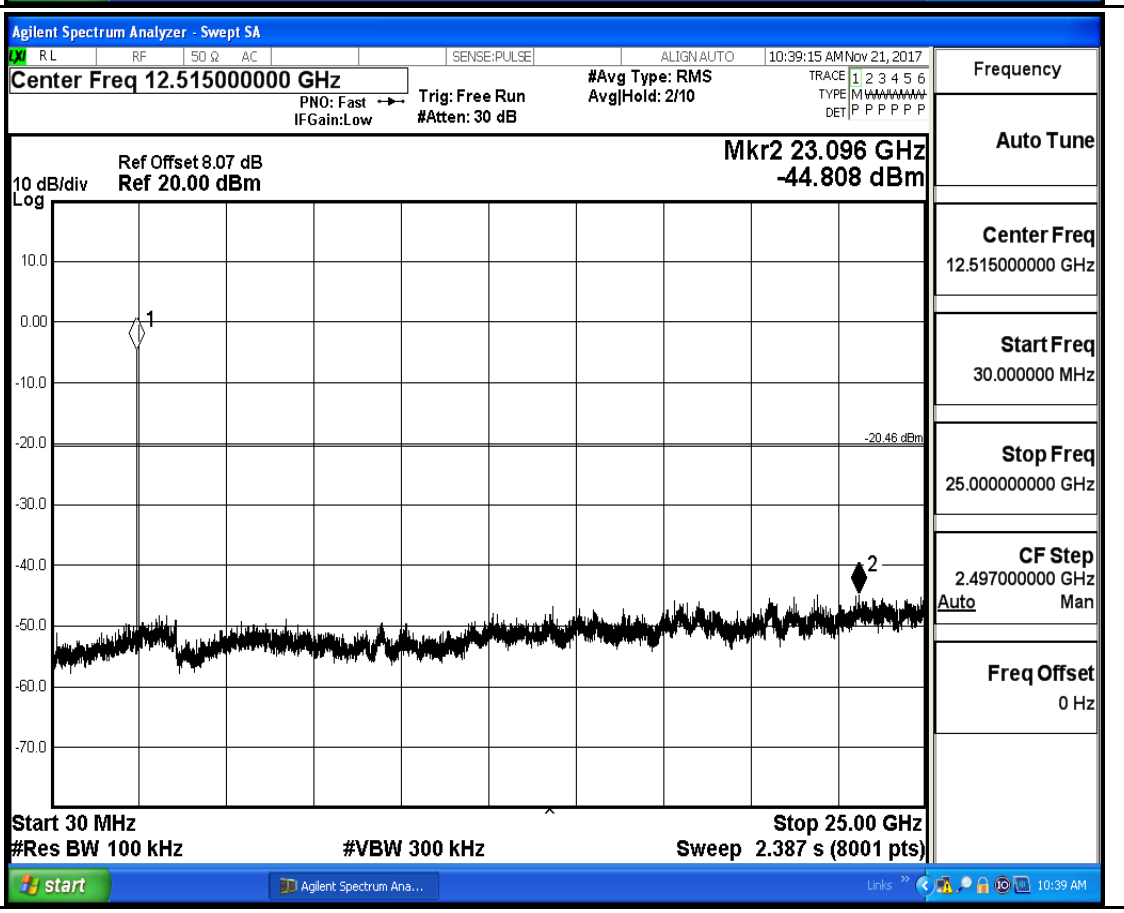
RF Conducted Spurious Emissions_8-DPSK_2441





RF Conducted Spurious Emissions_8-DPSK_2480

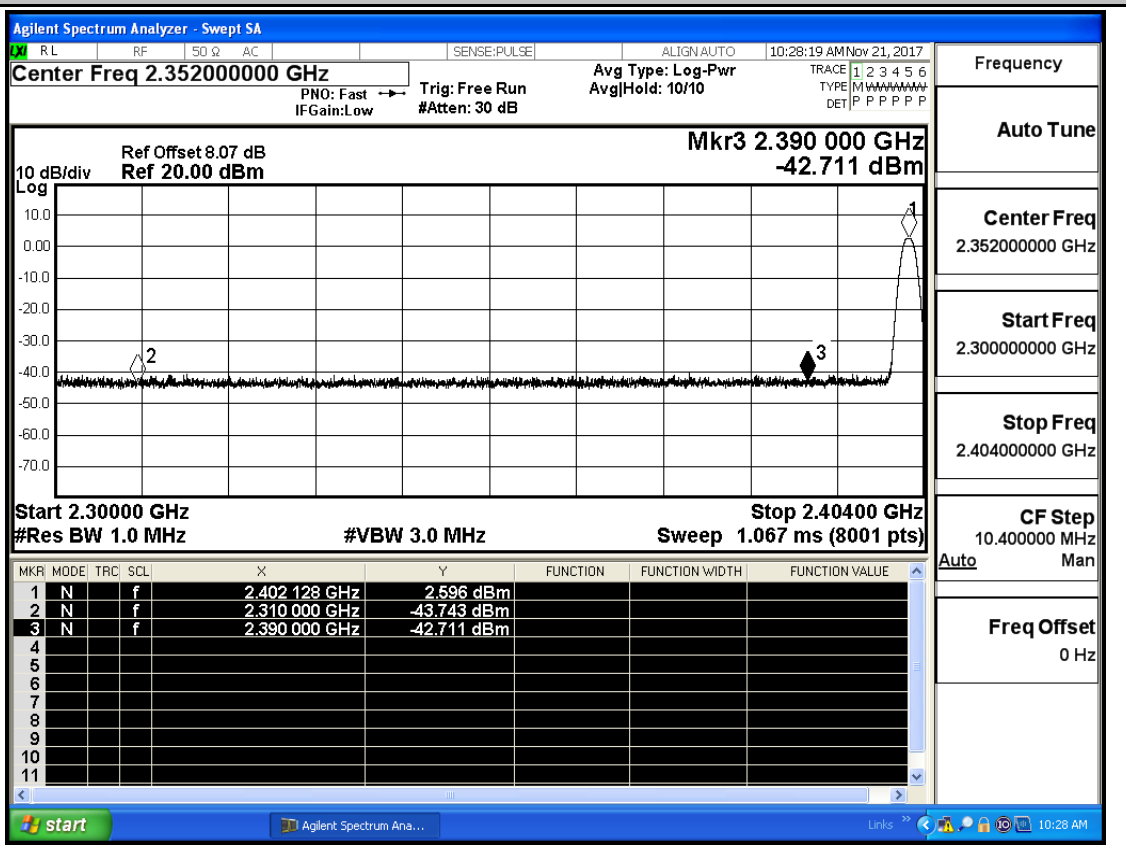

Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:PULSE
ALIGN AUTO
10:39:02 AM Nov 21, 2017
Center Freq 2.480000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 10/10
TRACE 1 2 3 4 5 6
TYPE M
DET P P P P P
Ref Offset 8.07 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.480 172 75 GHz
-0.463 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-20.46 dBm
Center 2.480000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 2.000 MHz
Sweep 1.067 ms (8001 pts)
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.479000000 GHz
Stop Freq
2.481000000 GHz
CF Step
200.000 kHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
Links
10:39 AM


Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:PULSE
ALIGN AUTO
10:39:15 AM Nov 21, 2017
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 2/10
TRACE 1 2 3 4 5 6
TYPE M
DET P P P P P
Ref Offset 8.07 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr2 23.096 GHz
-44.808 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-20.46 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.387 s (8001 pts)
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz
start
Agilent Spectrum Ana...
Links
10:39 AM

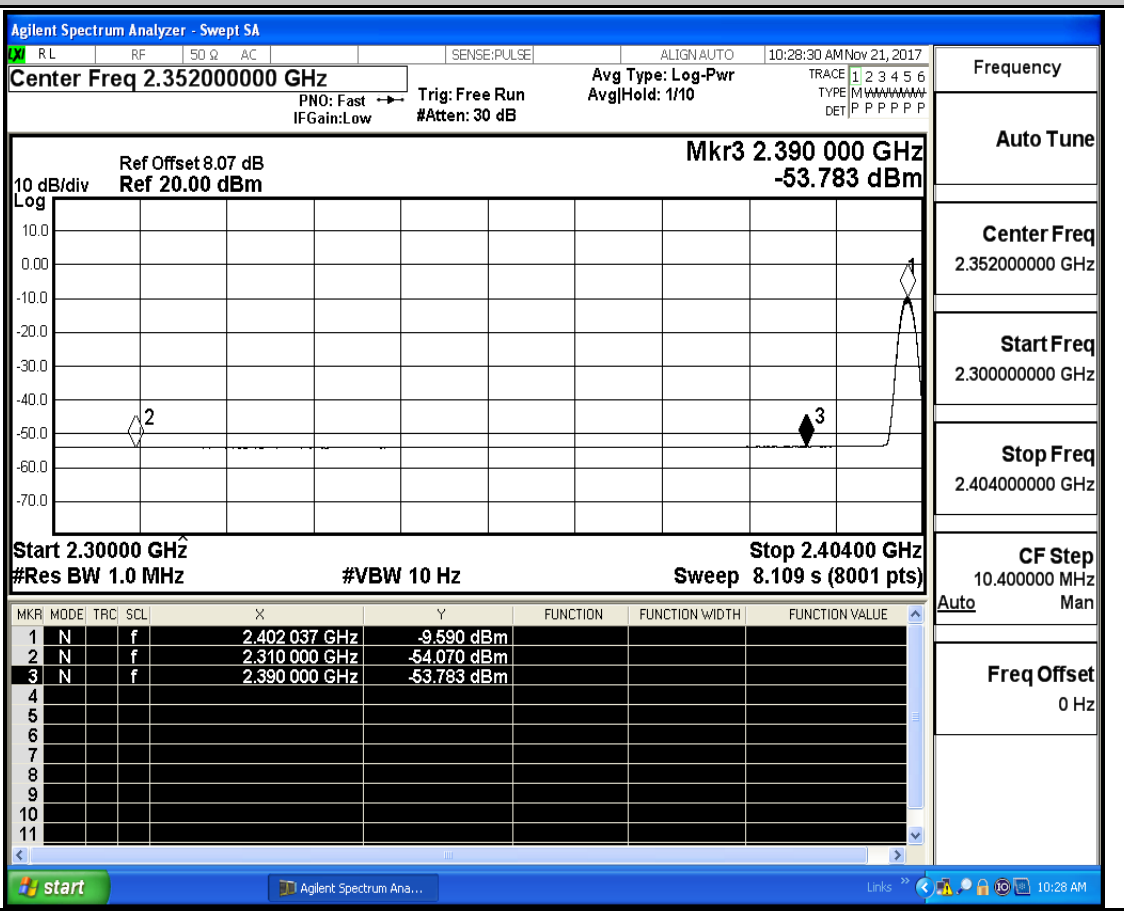
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-43.74	0.5	0	53.52	PEAK	74	PASS
	Off	2310.0	-54.07	0.5	0	43.19	AV	54	PASS
	Off	2390.0	-42.71	0.5	0	54.55	PEAK	74	PASS
	Off	2390.0	-53.78	0.5	0	43.48	AV	54	PASS
	Off	2483.5	-43.17	0.5	0	54.09	PEAK	74	PASS
	Off	2483.5	-53.56	0.5	0	43.70	AV	54	PASS
	Off	2500.0	-42.85	0.5	0	54.41	PEAK	74	PASS
	Off	2500.0	-53.45	0.5	0	43.81	AV	54	PASS
π/4-DQPSK	Off	2310.0	-44.27	0.5	0	52.99	PEAK	74	PASS
	Off	2310.0	-54.04	0.5	0	43.22	AV	54	PASS
	Off	2390.0	-44.31	0.5	0	52.95	PEAK	74	PASS
	Off	2390.0	-53.78	0.5	0	43.48	AV	54	PASS
	Off	2483.5	-43.10	0.5	0	54.16	PEAK	74	PASS
	Off	2483.5	-53.45	0.5	0	43.81	AV	54	PASS
	Off	2500.0	-41.92	0.5	0	55.34	PEAK	74	PASS
	Off	2500.0	-53.43	0.5	0	43.83	AV	54	PASS
8-DPSK	Off	2310.0	-42.82	0.5	0	54.44	PEAK	74	PASS
	Off	2310.0	-54.03	0.5	0	43.23	AV	54	PASS
	Off	2390.0	-42.33	0.5	0	54.93	PEAK	74	PASS
	Off	2390.0	-53.84	0.5	0	43.42	AV	54	PASS
	Off	2483.5	-42.73	0.5	0	54.53	PEAK	74	PASS
	Off	2483.5	-53.43	0.5	0	43.83	AV	54	PASS
	Off	2500.0	-43.70	0.5	0	53.56	PEAK	74	PASS
	Off	2500.0	-53.48	0.5	0	43.78	AV	54	PASS

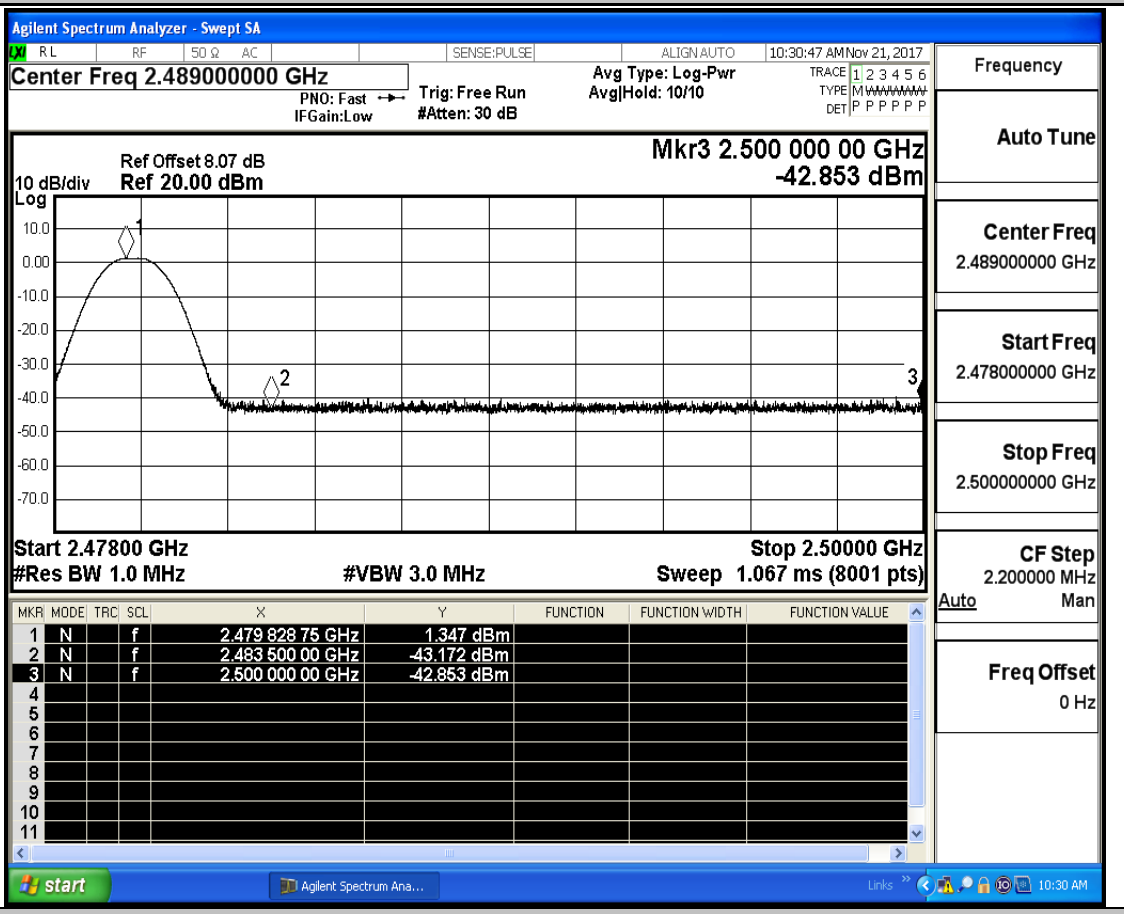
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK



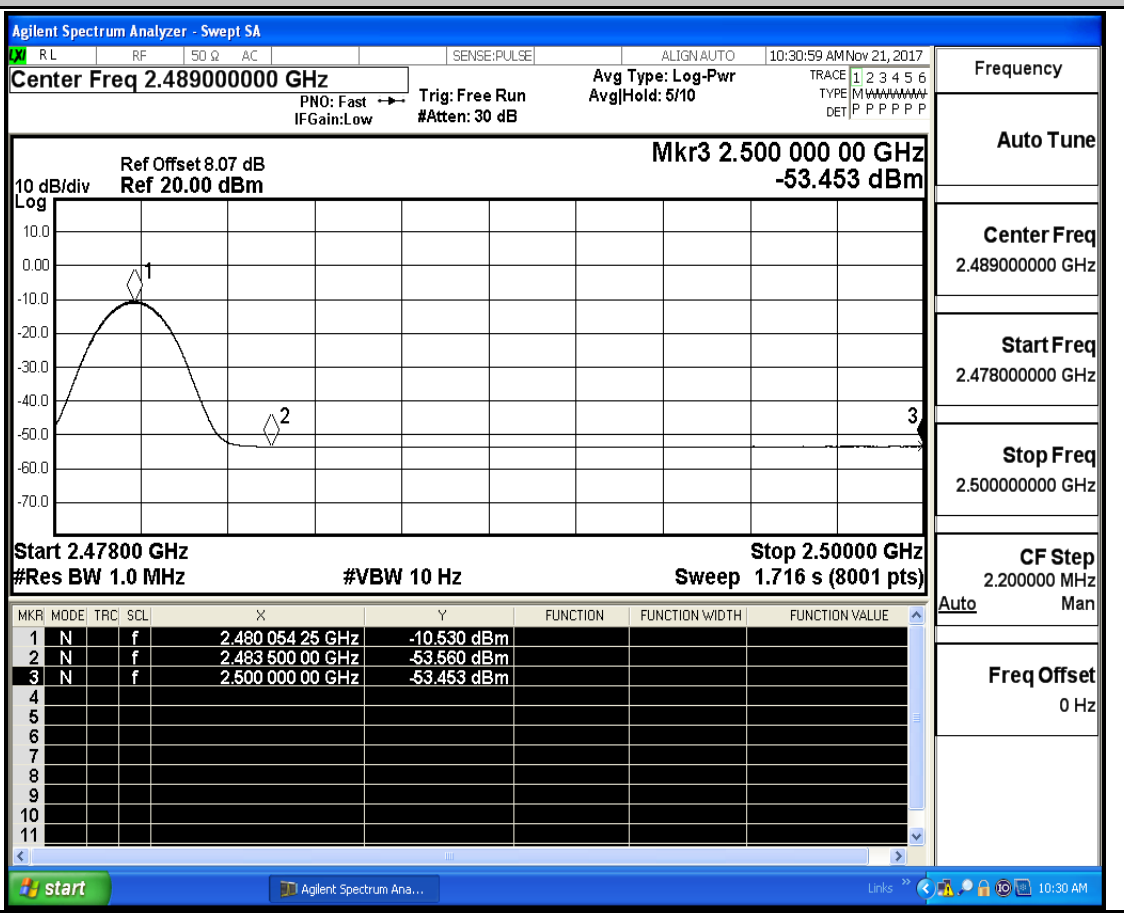
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average



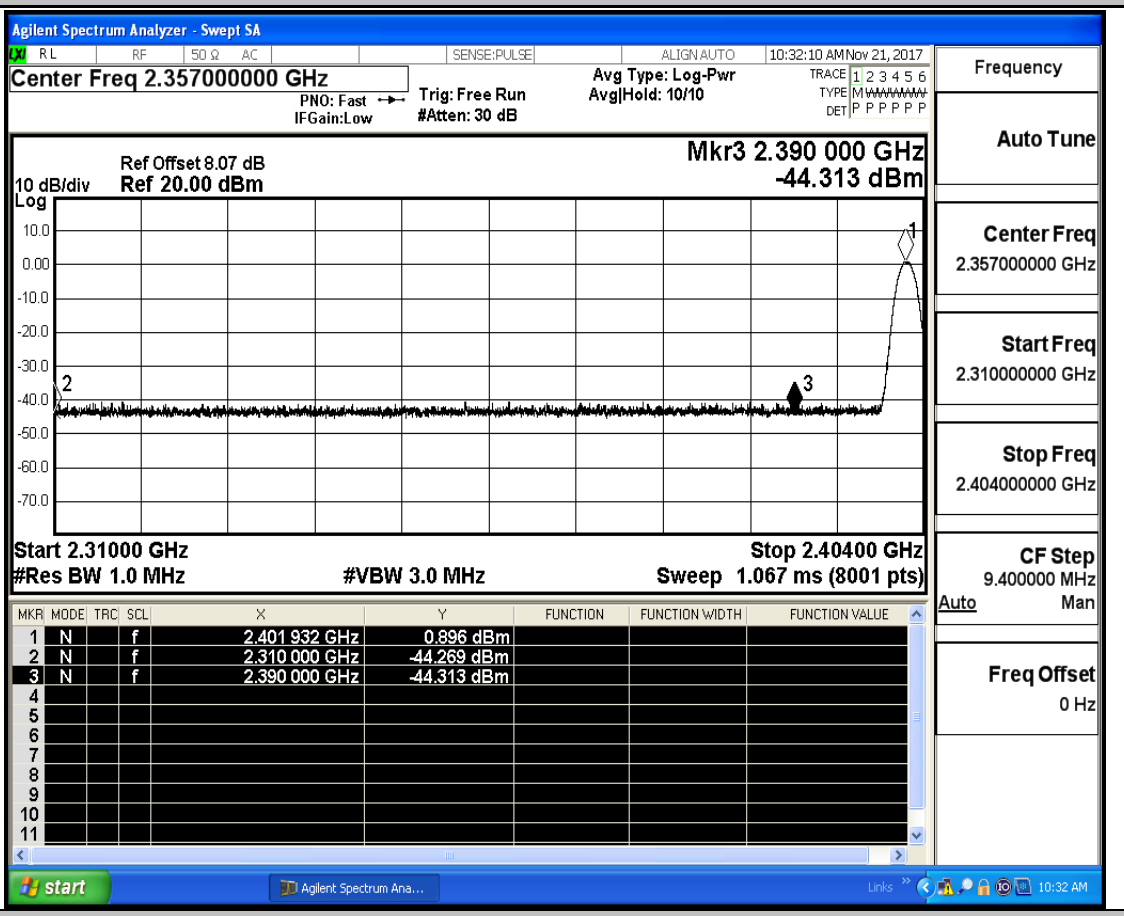
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK



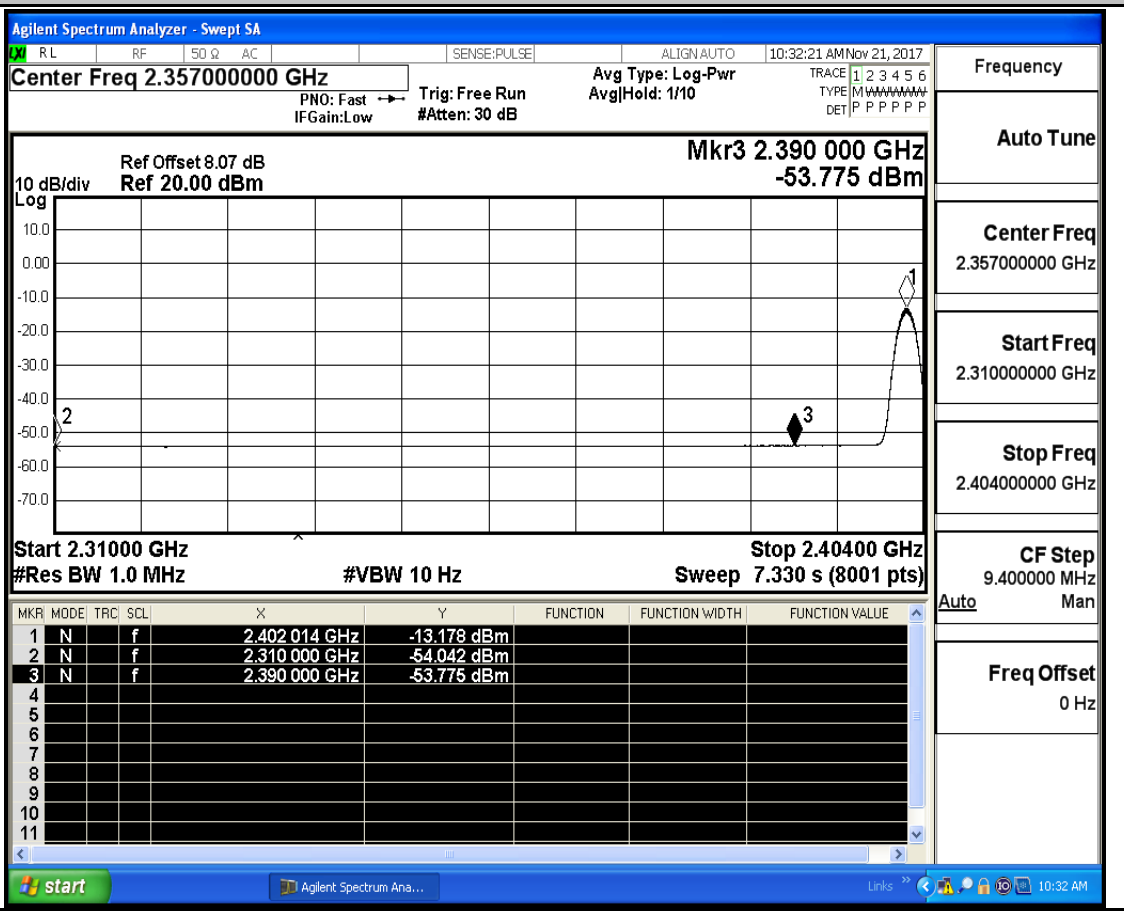
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average



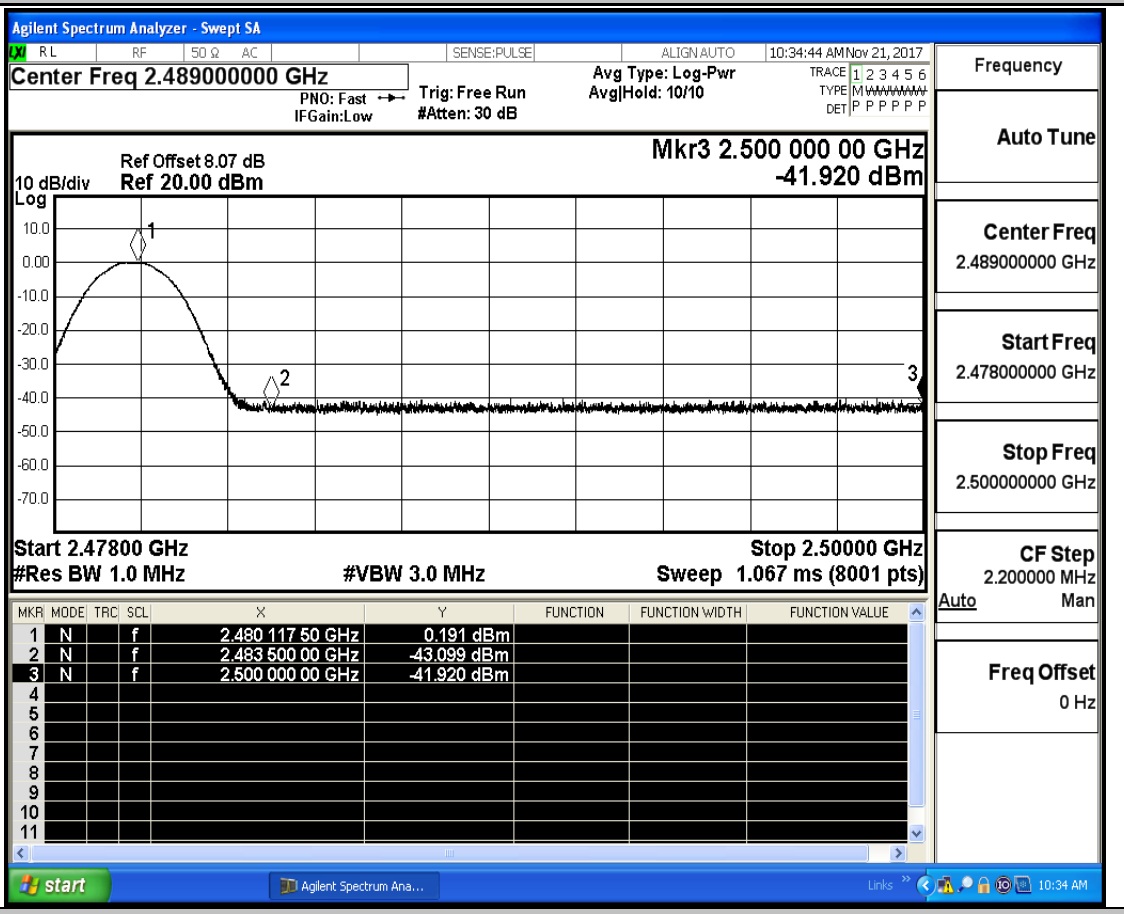
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK



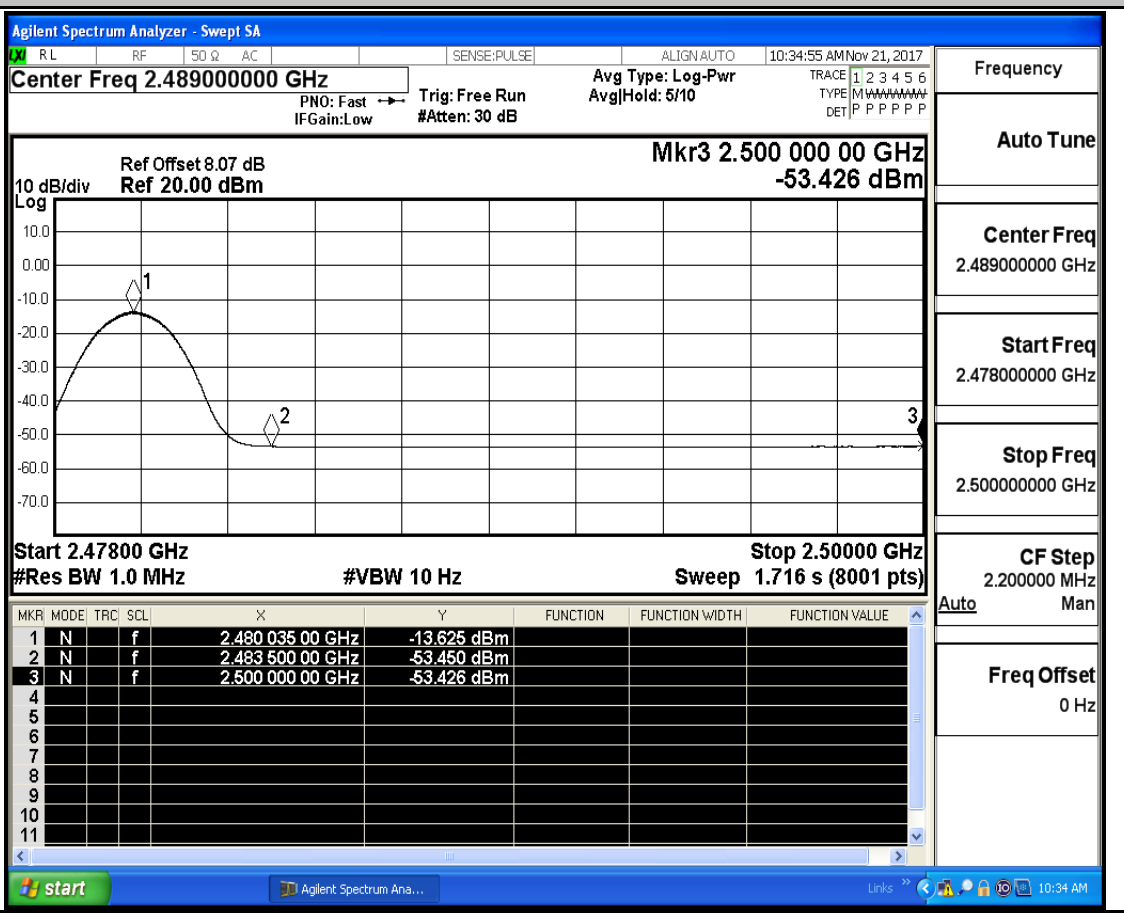
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average



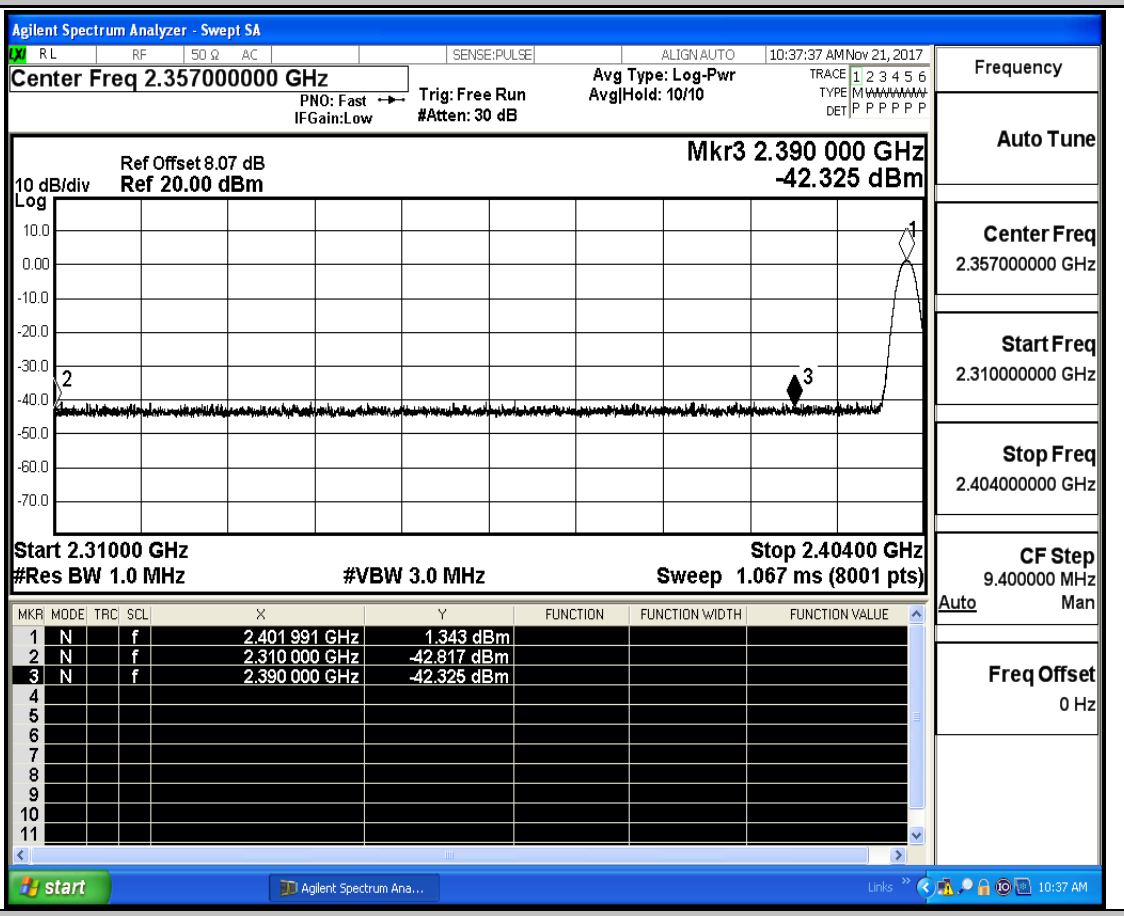
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK



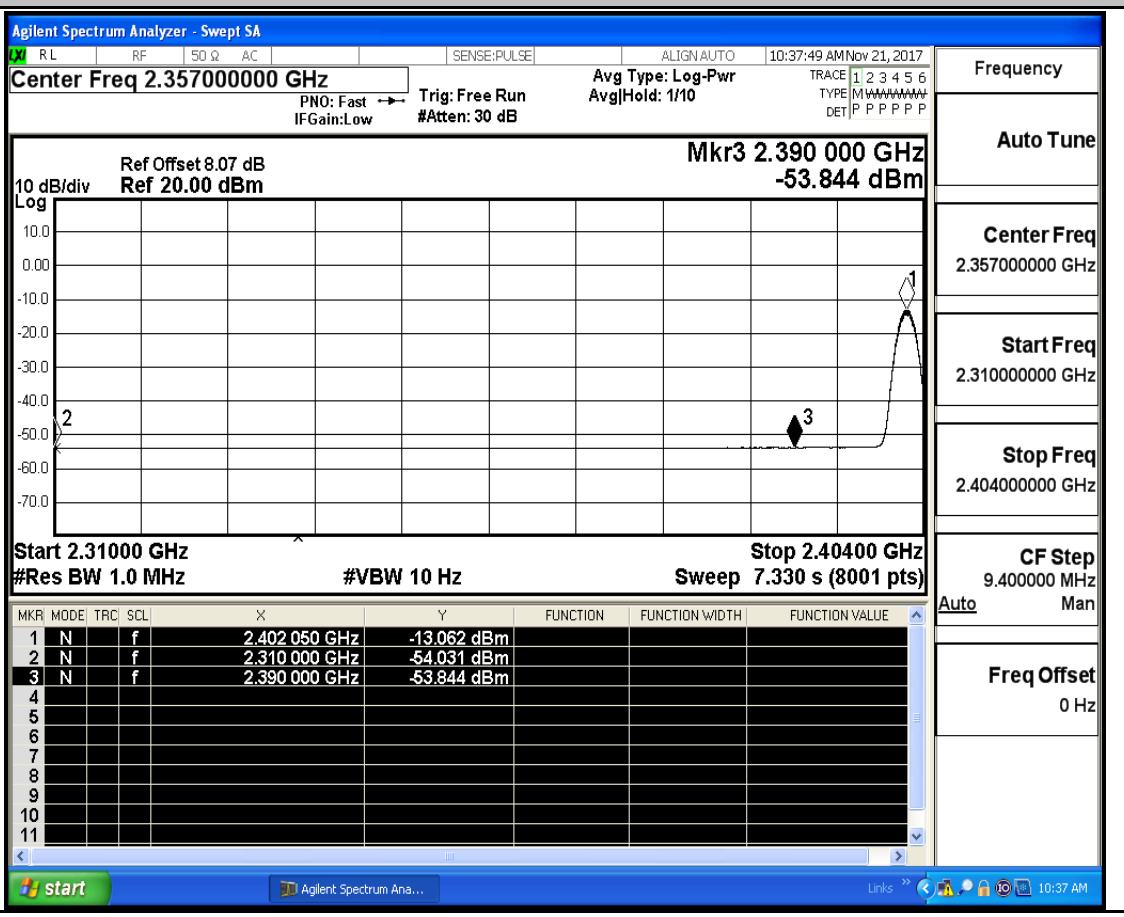
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average



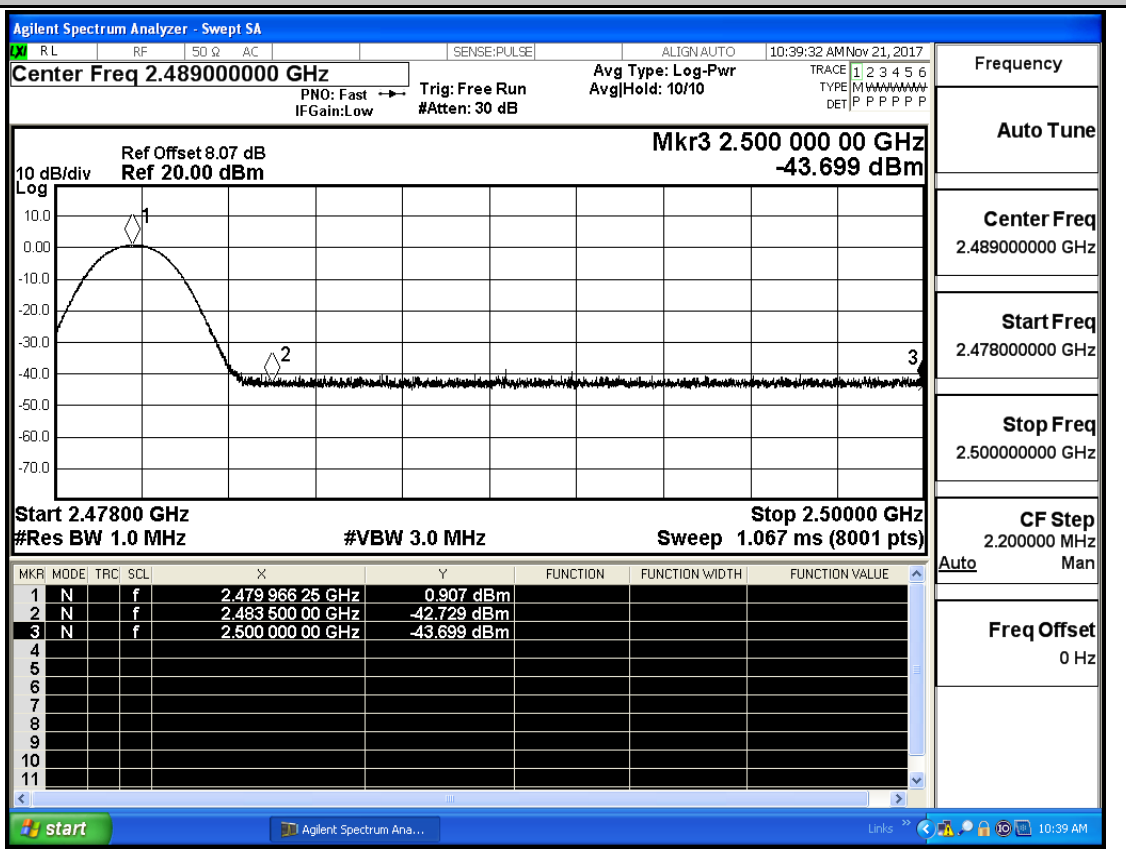
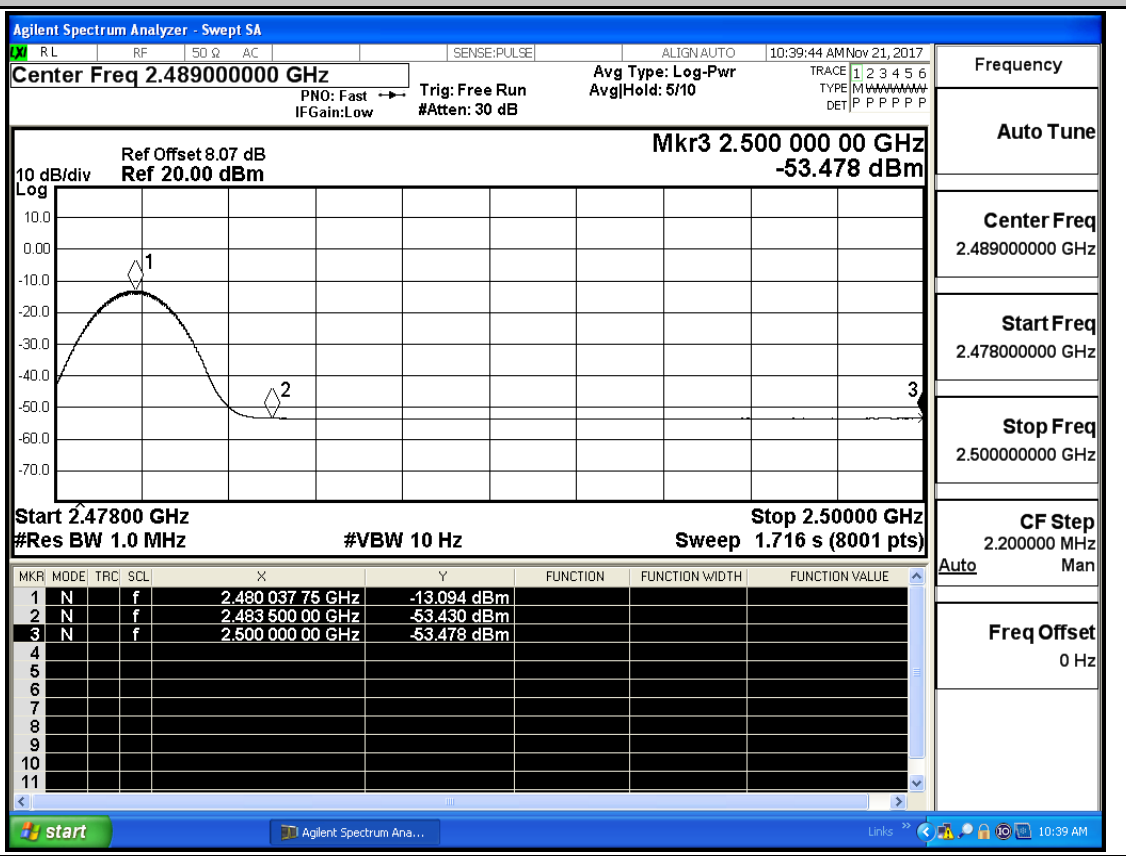
Restrict-band band-edge measurements_Hopping Off_8-DPSK_PEAK



Restrict-band band-edge measurements_Hopping Off_8-DPSK_Average



Restrict-band band-edge measurements_Hopping Off_8-DPSK_PEAK



Restrict-band band-edge measurements_Hopping Off_8-DPSK_Average