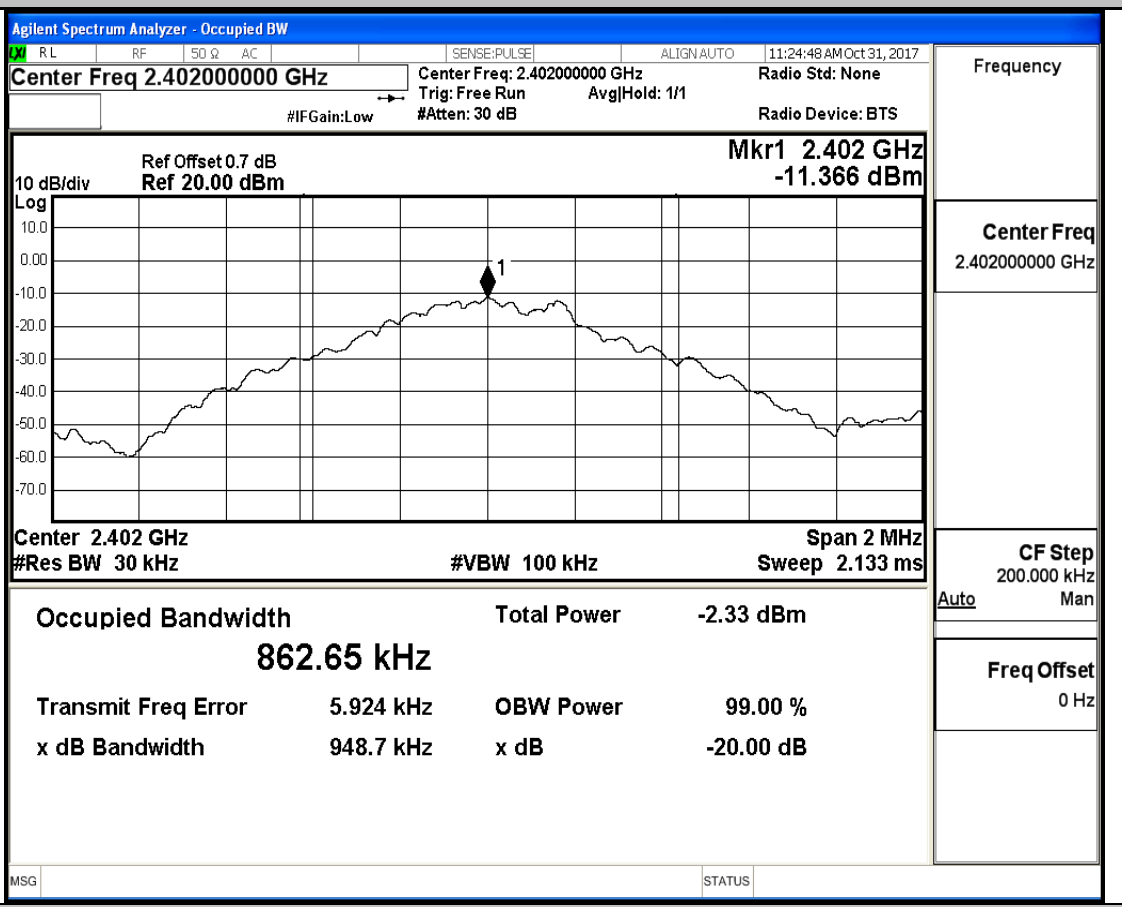
Appendix A
RF Test Data(Conducted Measurement)

Product Name: Smart Sunglasses
Trade Mark: Gonbes
Test Model: GBS-G1
FCC ID: 2AN9HGBS-G1

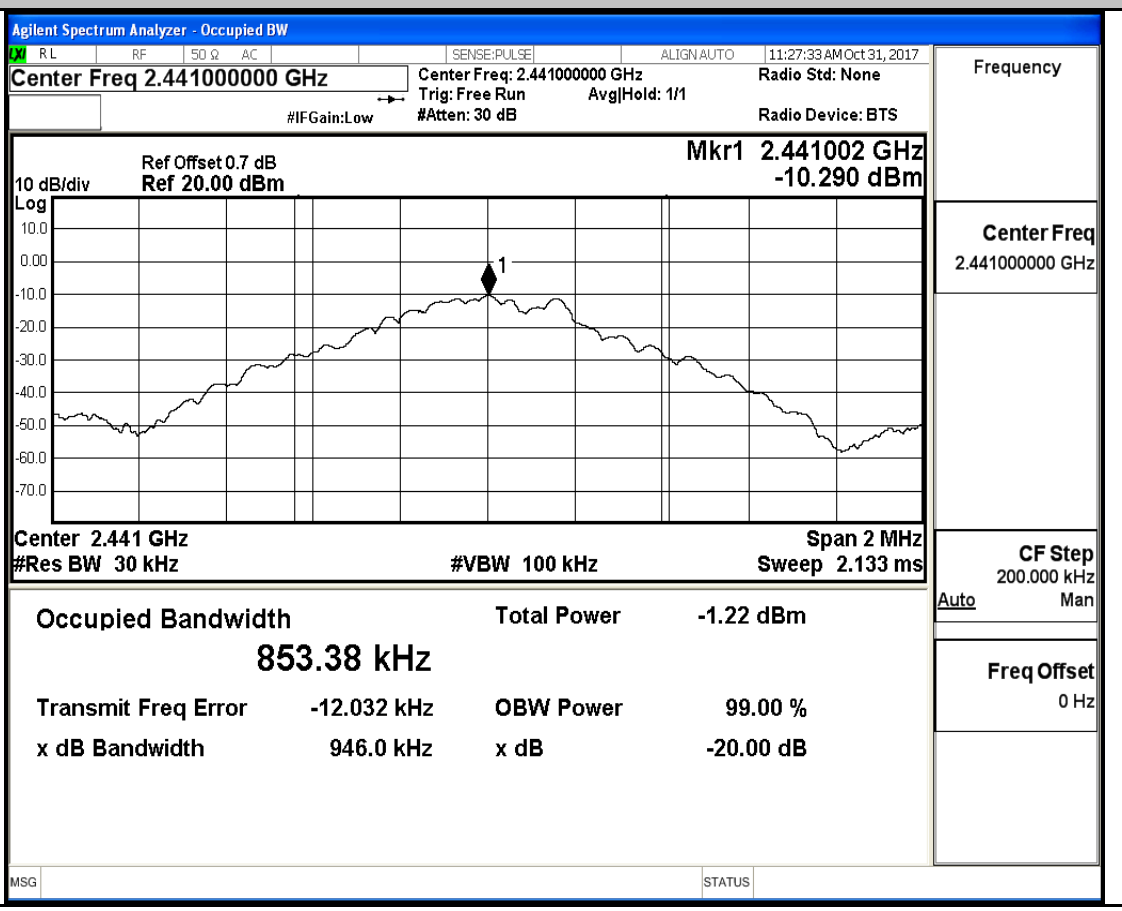
A.1 20 dB Bandwidth

Test Mode	Test Channel	EBW[MHz]	Limit[MHz]	Verdict
GFSK	2402	0.9487	---	PASS
	2441	0.9460	---	PASS
	2480	0.9464	---	PASS
π/4-DQPSK	2402	1.266	---	PASS
	2441	1.232	---	PASS
	2480	1.231	---	PASS
8-DPSK	2402	1.282	---	PASS
	2441	1.264	---	PASS
	2480	1.262	---	PASS

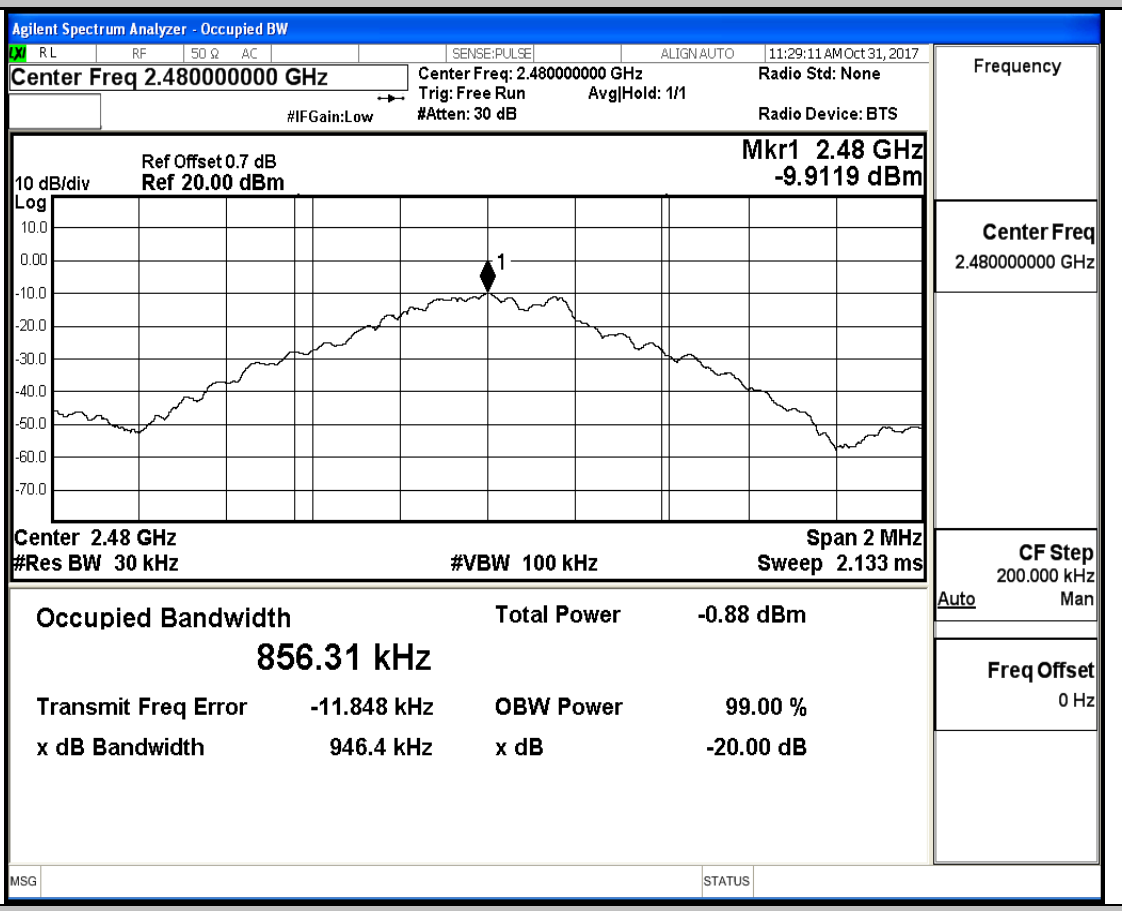
20 dB Bandwidth_GFSK_2402



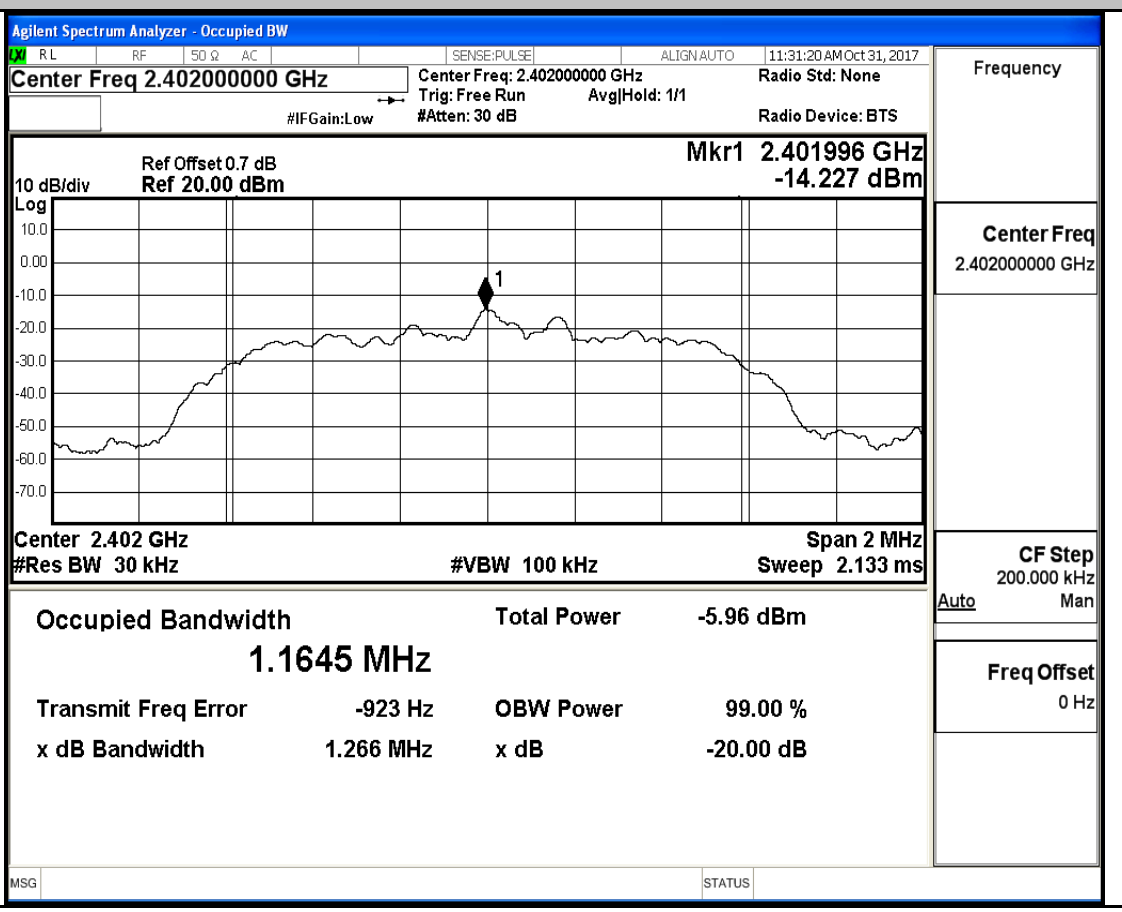
20 dB Bandwidth_GFSK_2441



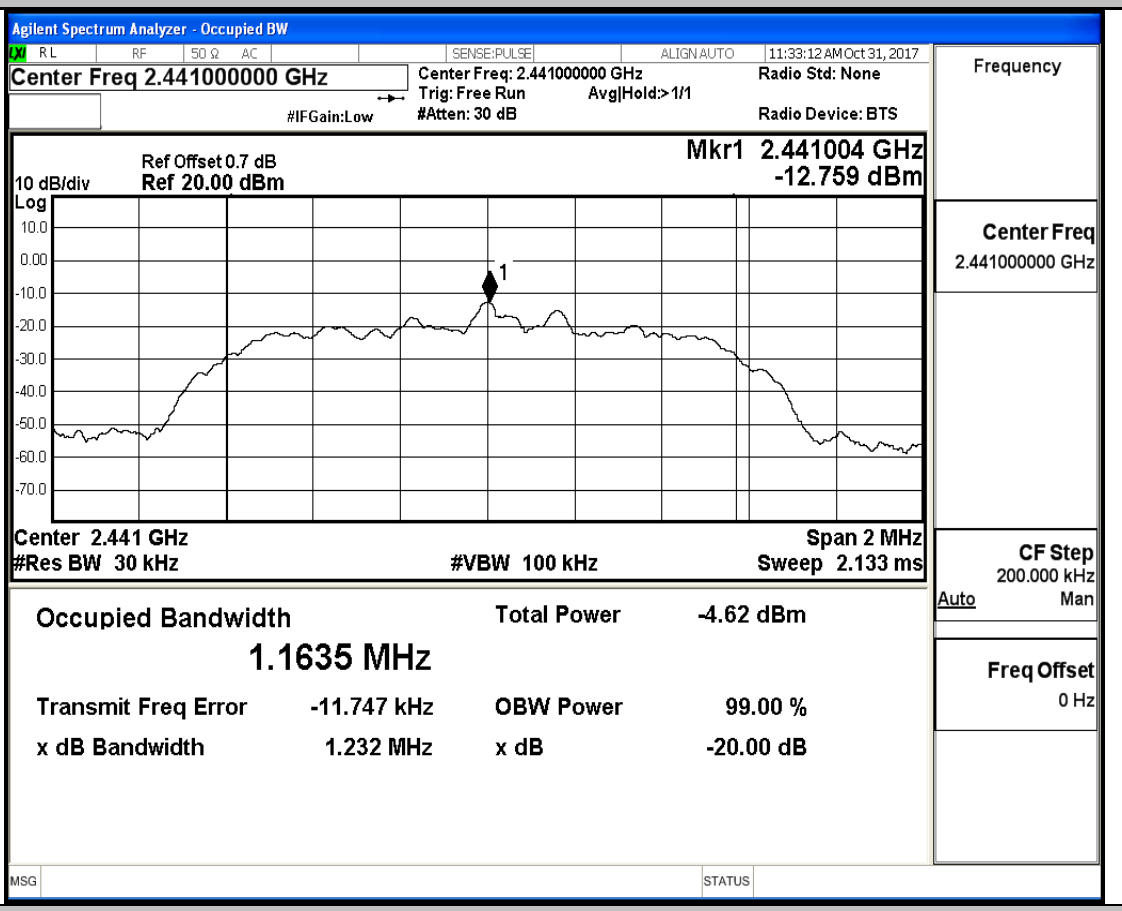
20 dB Bandwidth_GFSK_2480



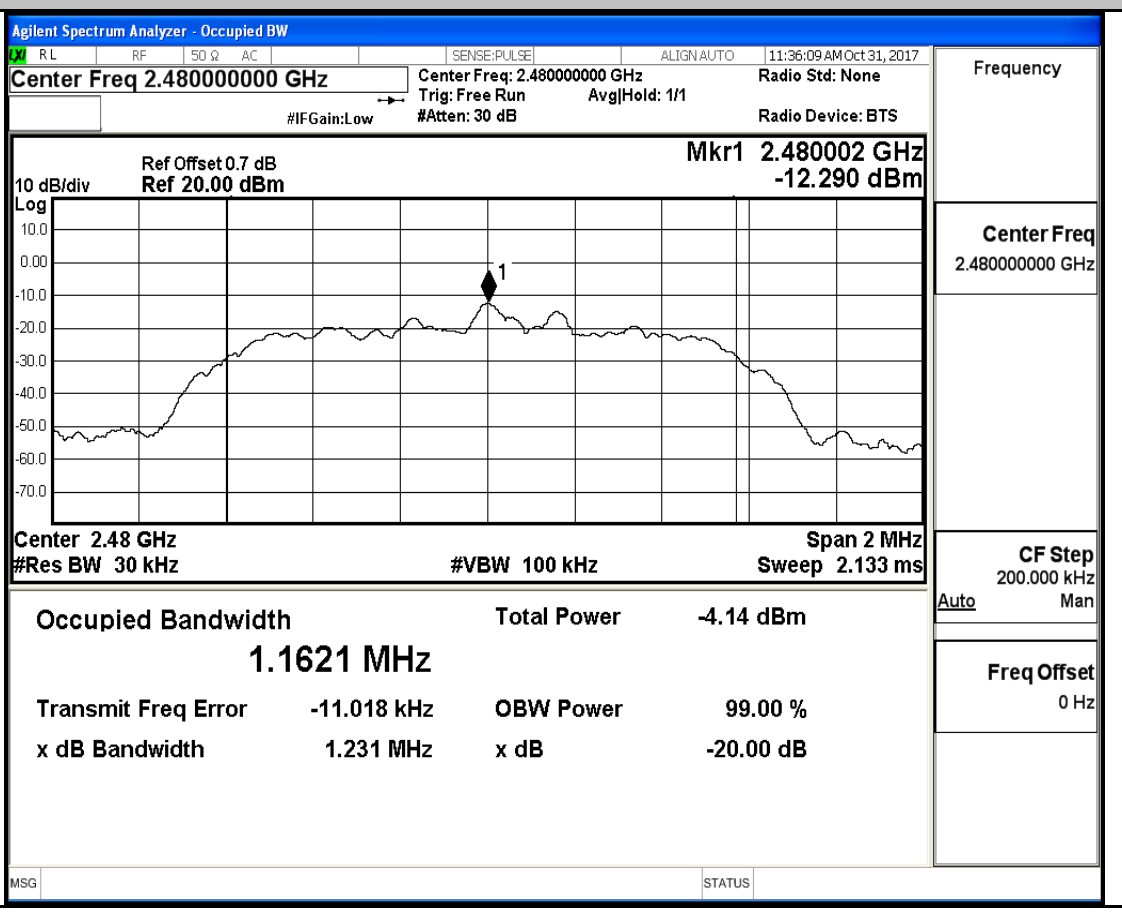
20 dB Bandwidth_π/4-DQPSK_2402



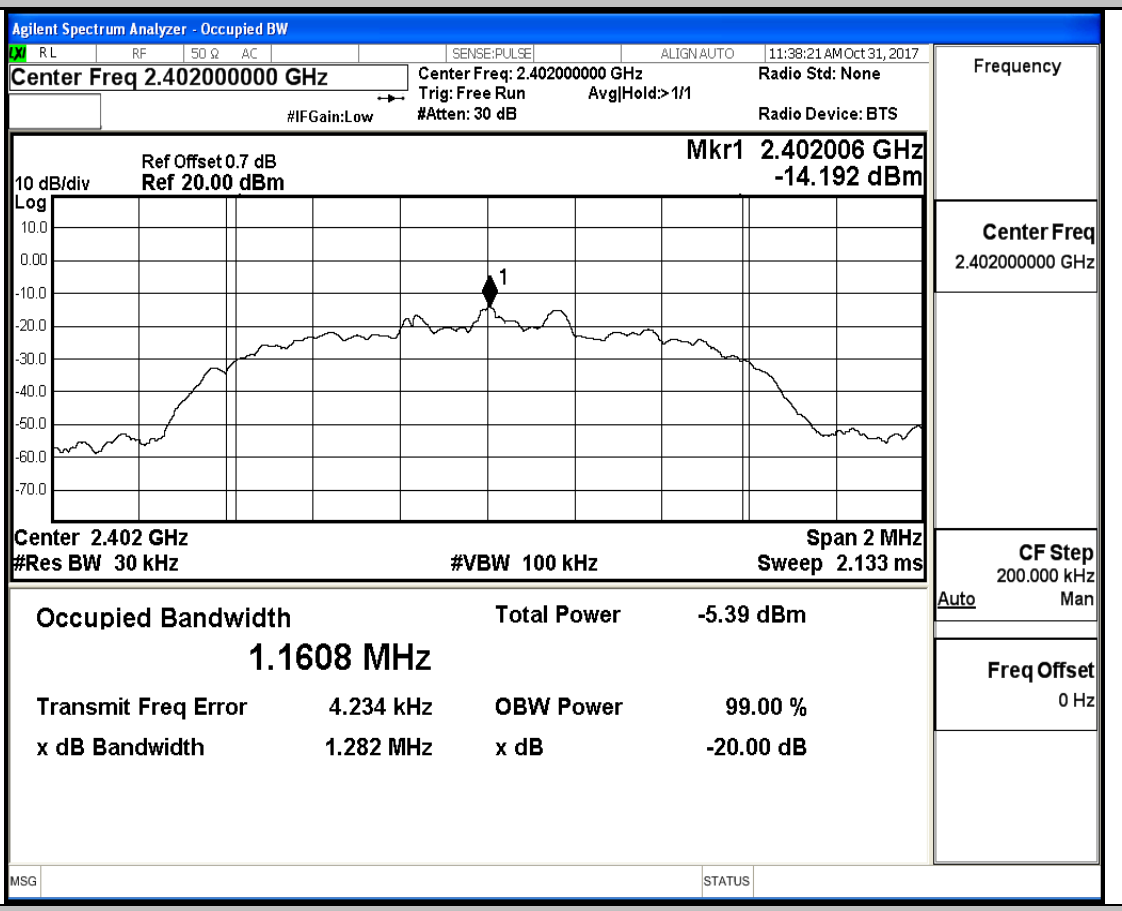
20 dB Bandwidth_π/4-DQPSK_2441



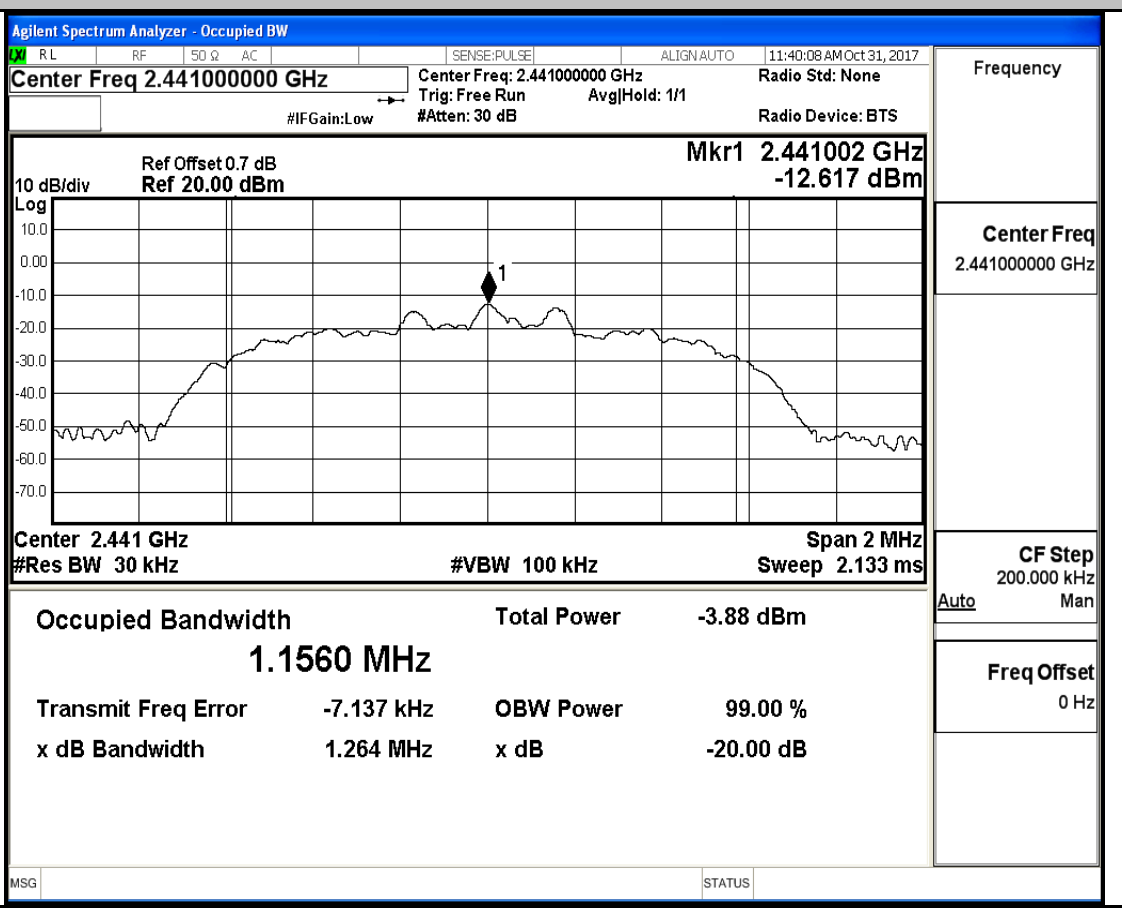
20 dB Bandwidth_π/4-DQPSK_2480



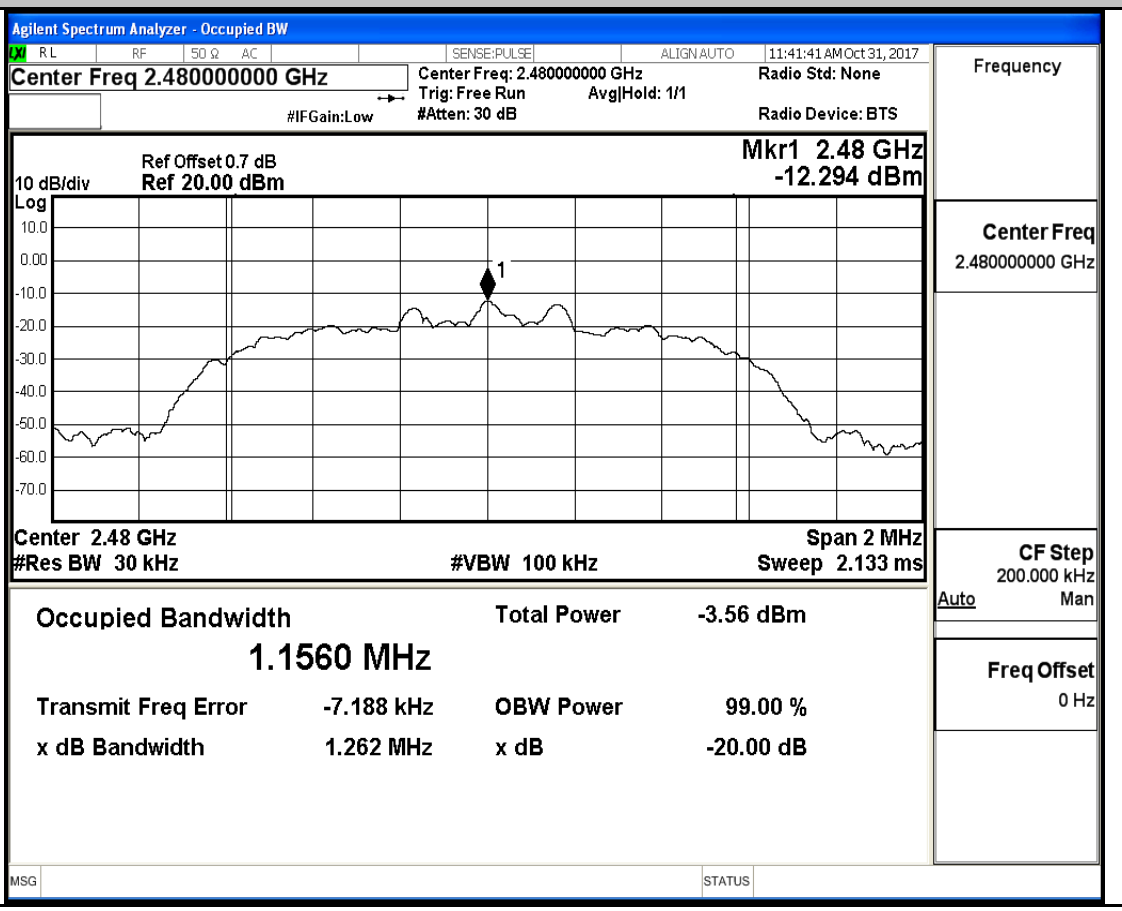
20 dB Bandwidth_8-DPSK_2402



20 dB Bandwidth_8-DPSK_2441



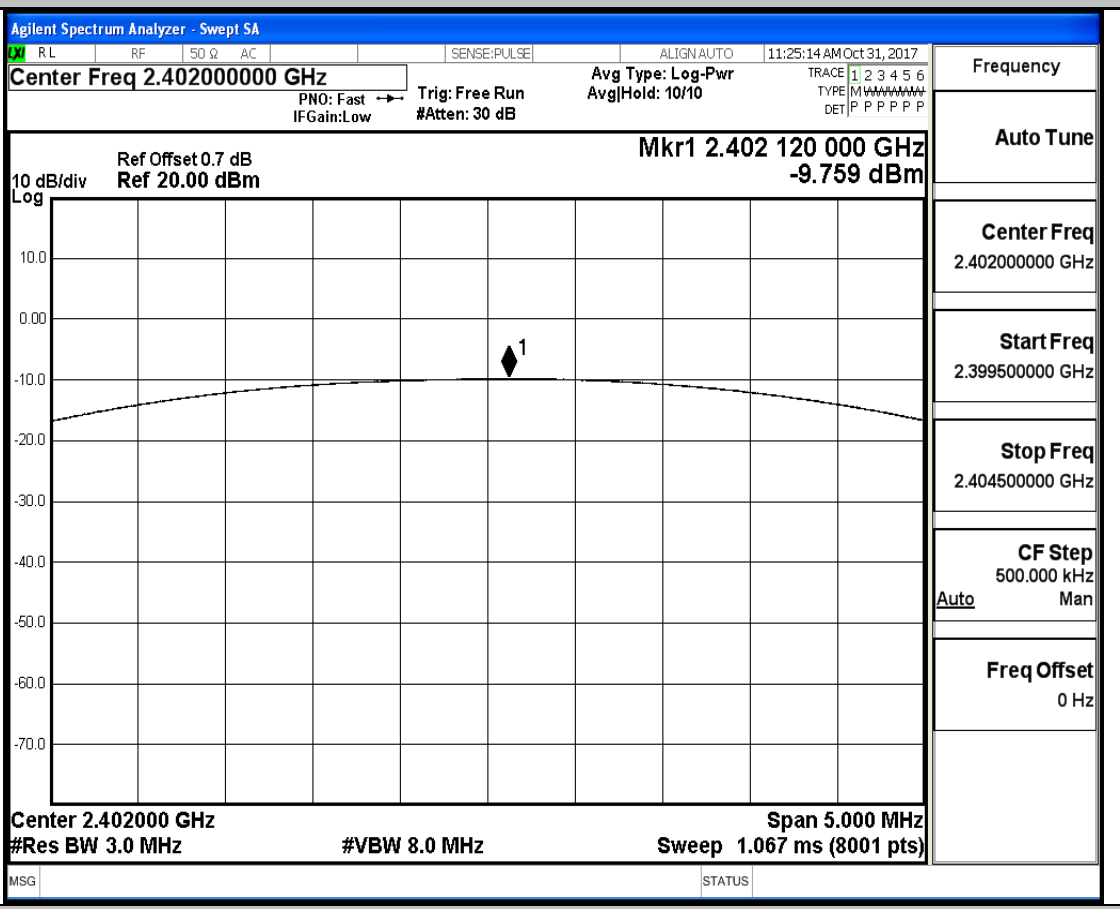
20 dB Bandwidth_8-DPSK_2480



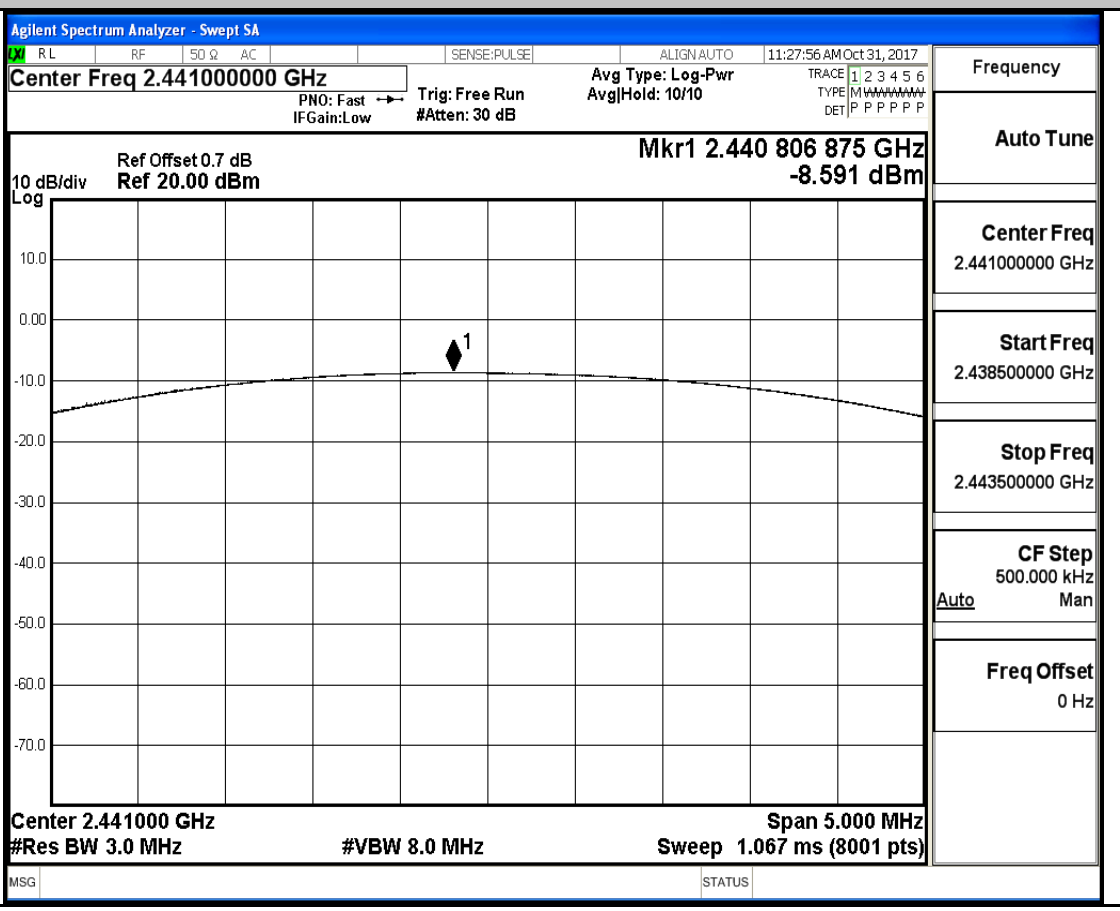
A.2 Conducted Peak Output Power

Test Mode	Test Channel	Power[dBm]	Limit[dBm]	Verdict
GFSK	2402	-9.759	30	PASS
	2441	-8.591	30	PASS
	2480	-8.239	30	PASS
π/4-DQPSK	2402	-11.836	30	PASS
	2441	-10.546	30	PASS
	2480	-10.111	30	PASS
8-DPSK	2402	-11.394	30	PASS
	2441	-10.089	30	PASS
	2480	-9.74	30	PASS

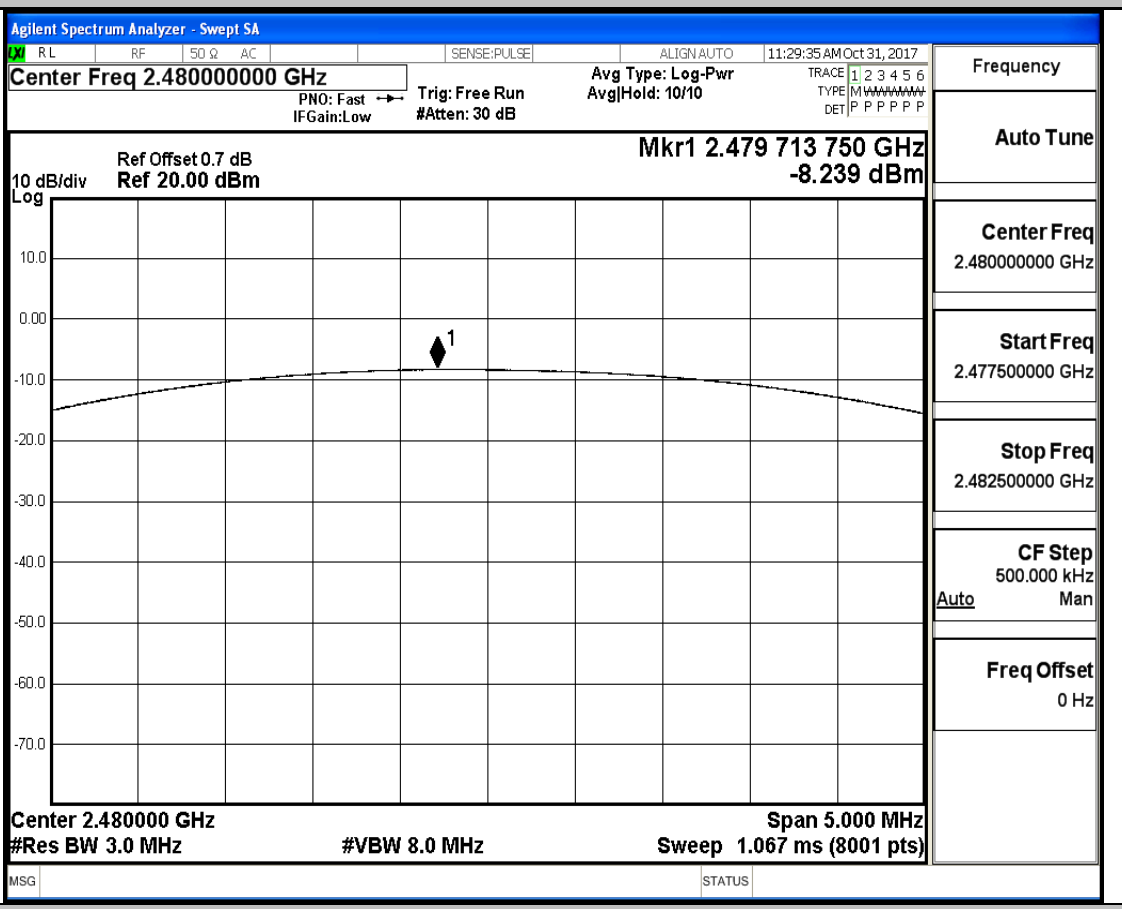
Conducted Peak Output Power_GFSK_2402



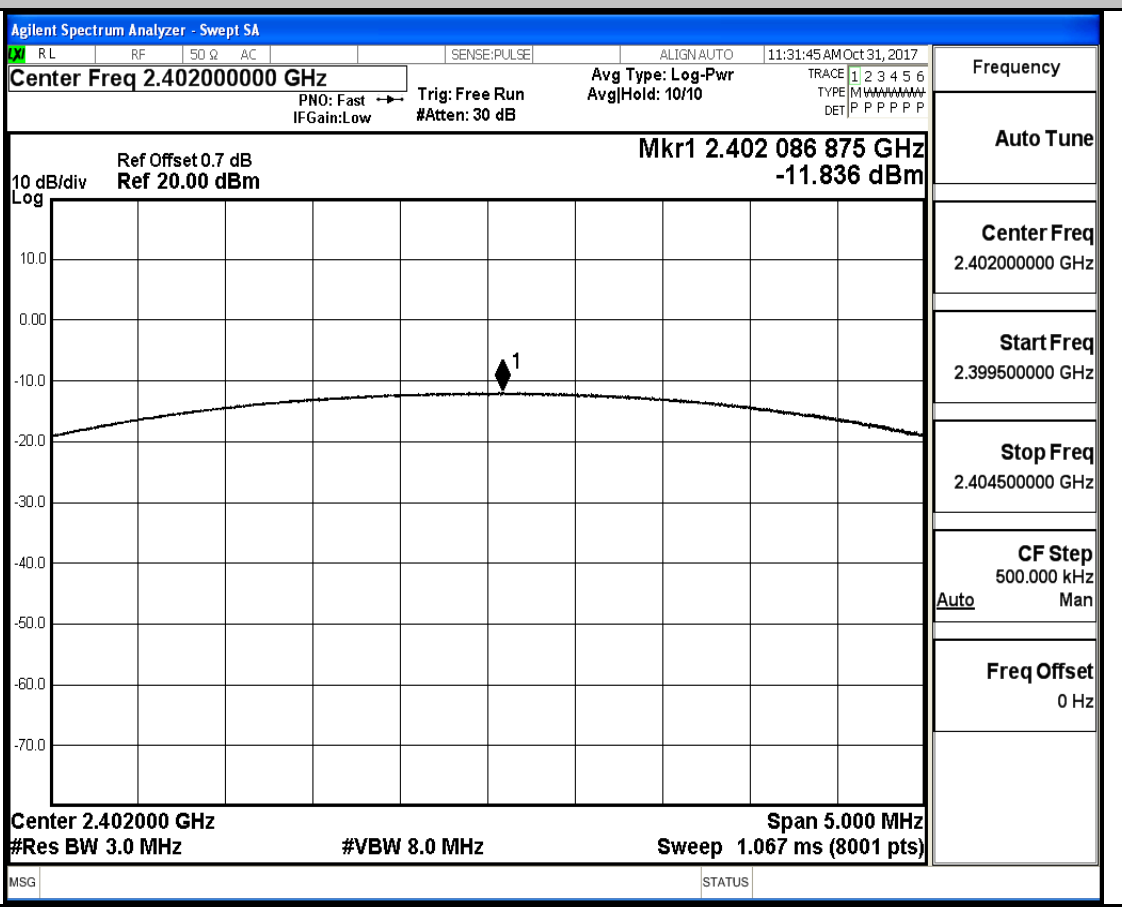
Conducted Peak Output Power_GFSK_2441



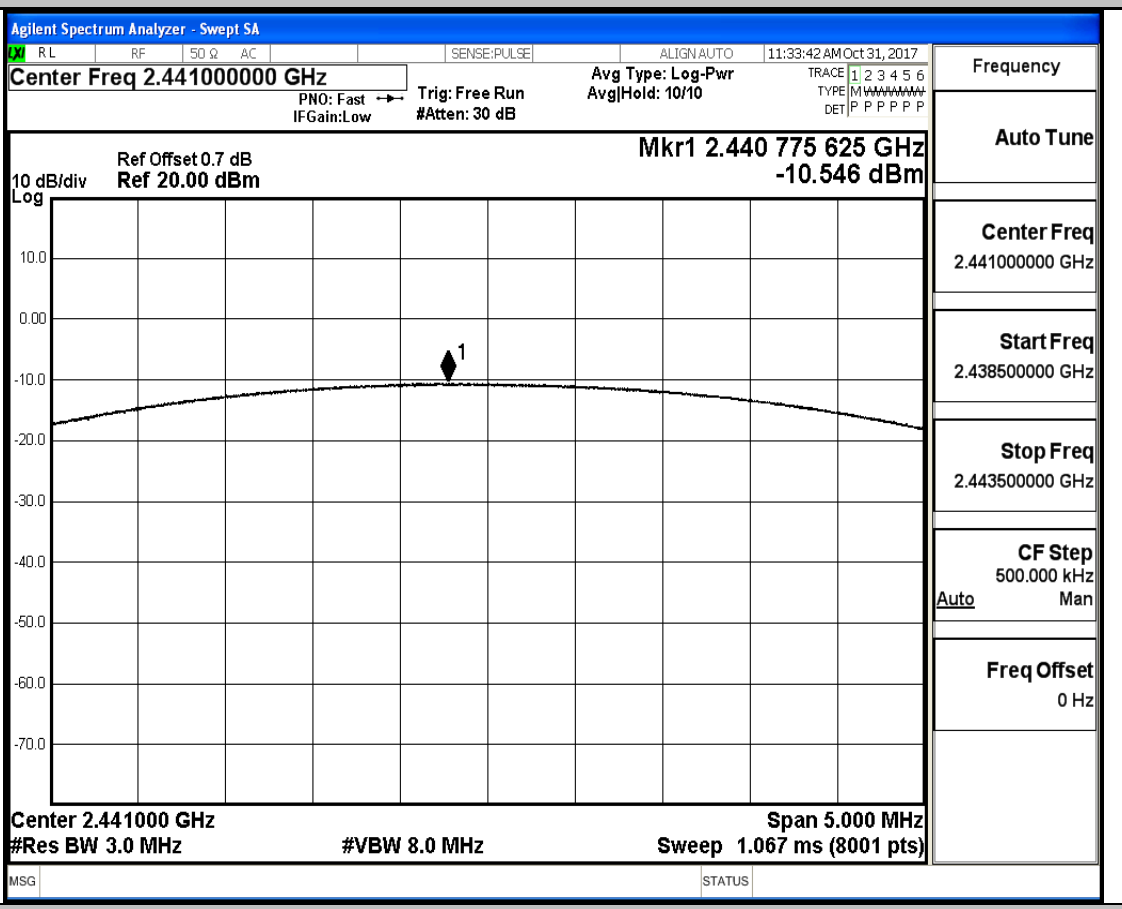
Conducted Peak Output Power_GFSK_2480



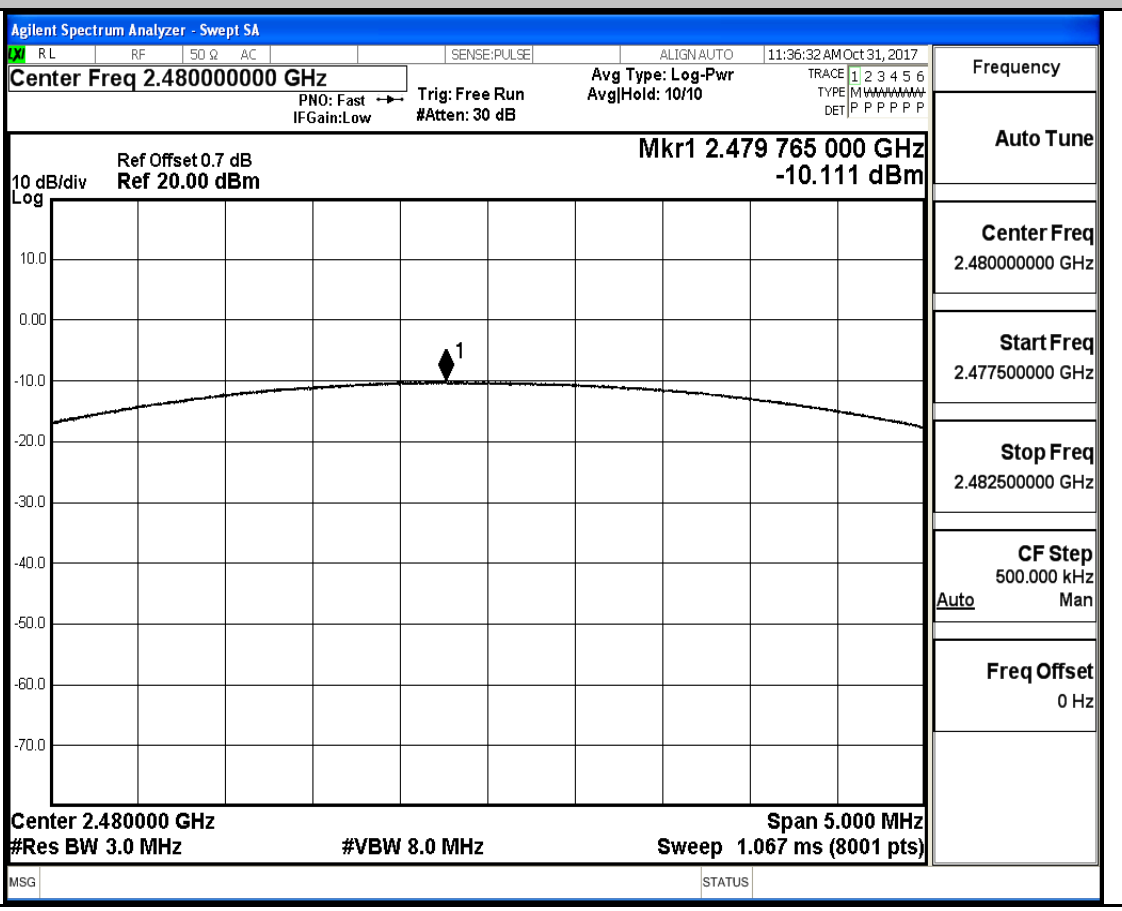
Conducted Peak Output Power_π/4-DQPSK_2402



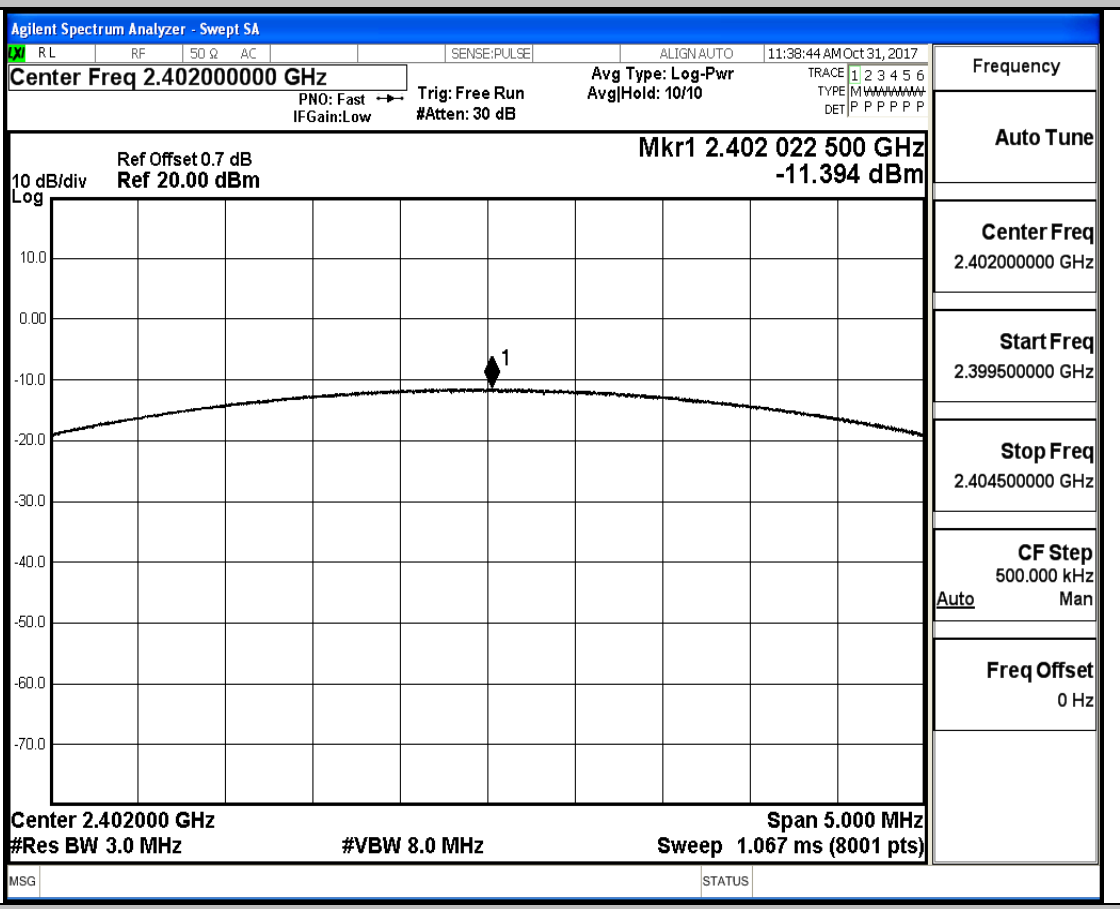
Conducted Peak Output Power_π/4-DQPSK_2441



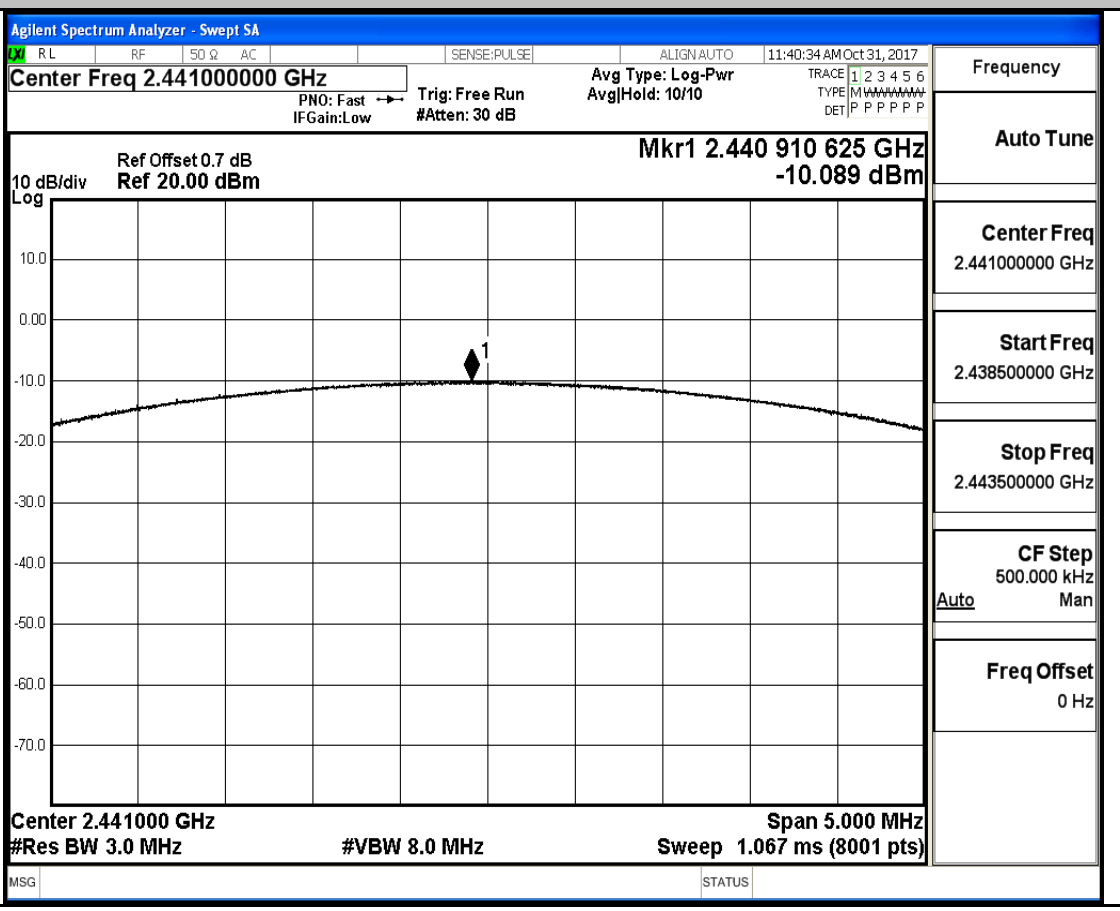
Conducted Peak Output Power_π/4-DQPSK_2480



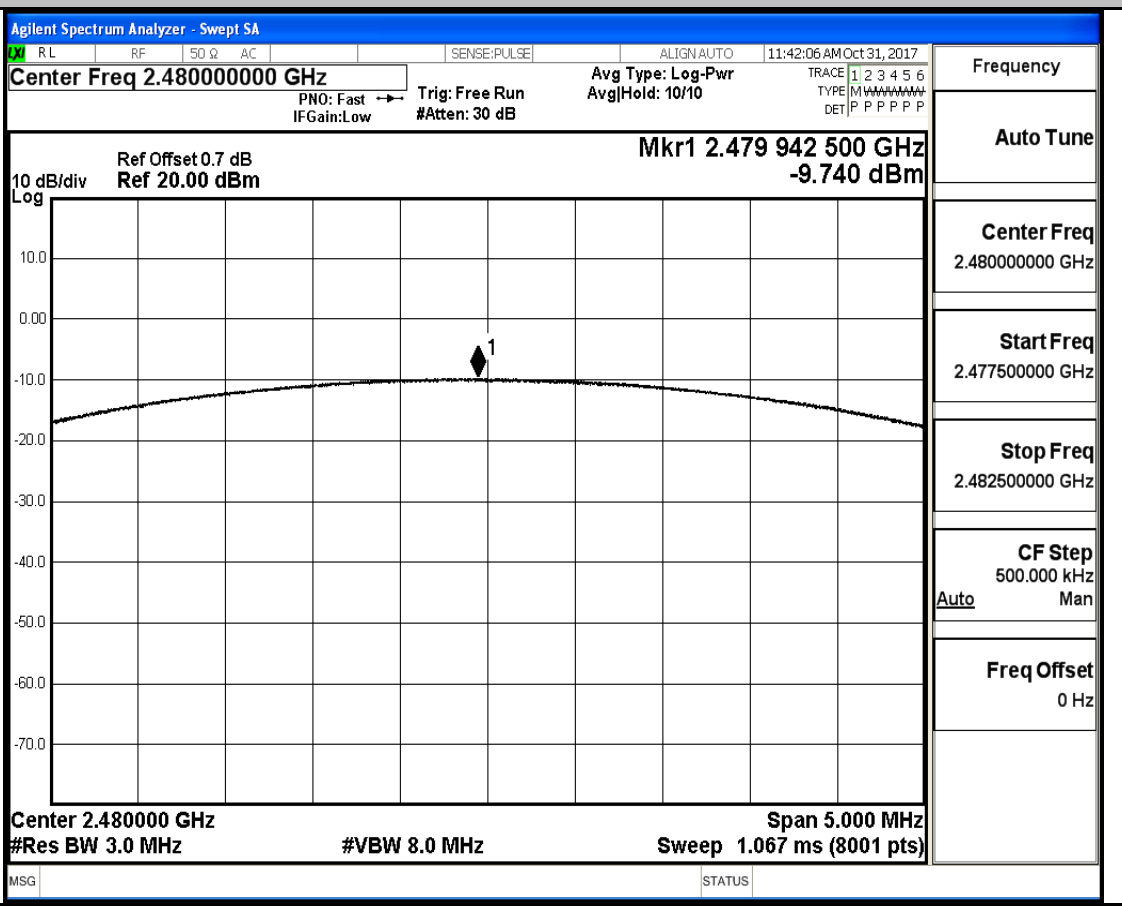
Conducted Peak Output Power_8-DPSK_2402



Conducted Peak Output Power_8-DPSK_2441



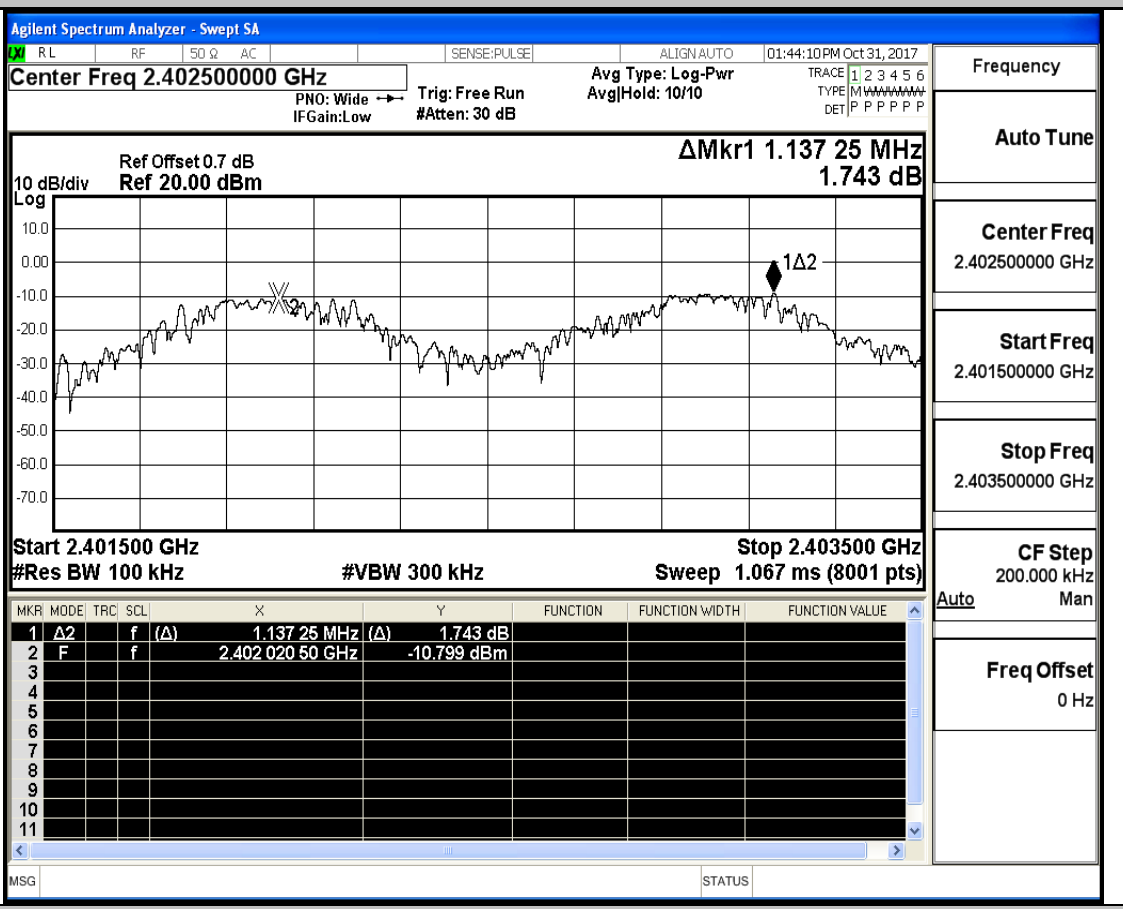
Conducted Peak Output Power_8-DPSK_2480



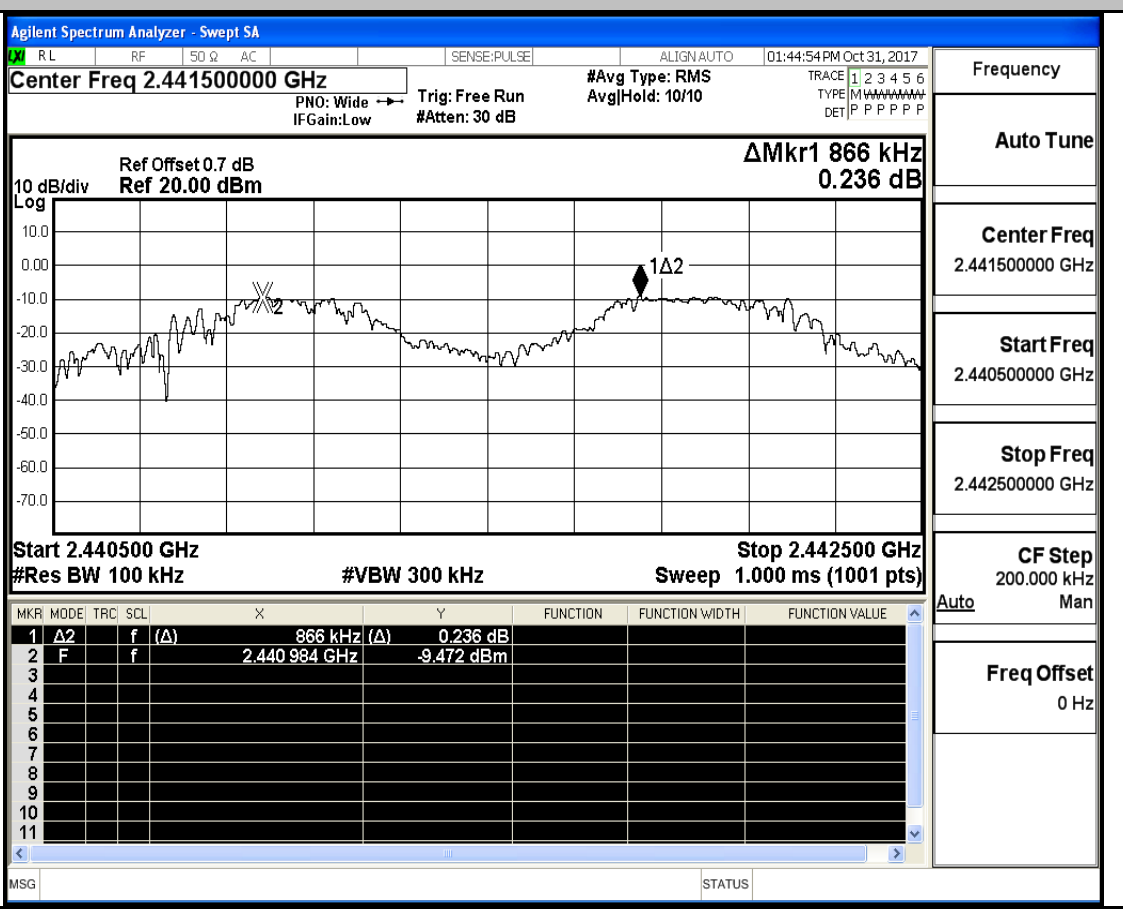
A.3 Carrier Frequency Separation

Test Mode	Test Channel	Result[MHz]	Limit[MHz]	Verdict
GFSK	2402	1.137	0.632466666666667	PASS
	2441	0.866	0.630666666666667	PASS
	2480	1.158	0.630933333333333	PASS
π/4-DQPSK	2402	0.996	0.844	PASS
	2441	1.016	0.821333333333333	PASS
	2480	0.996	0.820666666666667	PASS
8-DPSK	2402	1.162	0.854666666666667	PASS
	2441	1.294	0.842666666666667	PASS
	2480	1.138	0.841333333333333	PASS

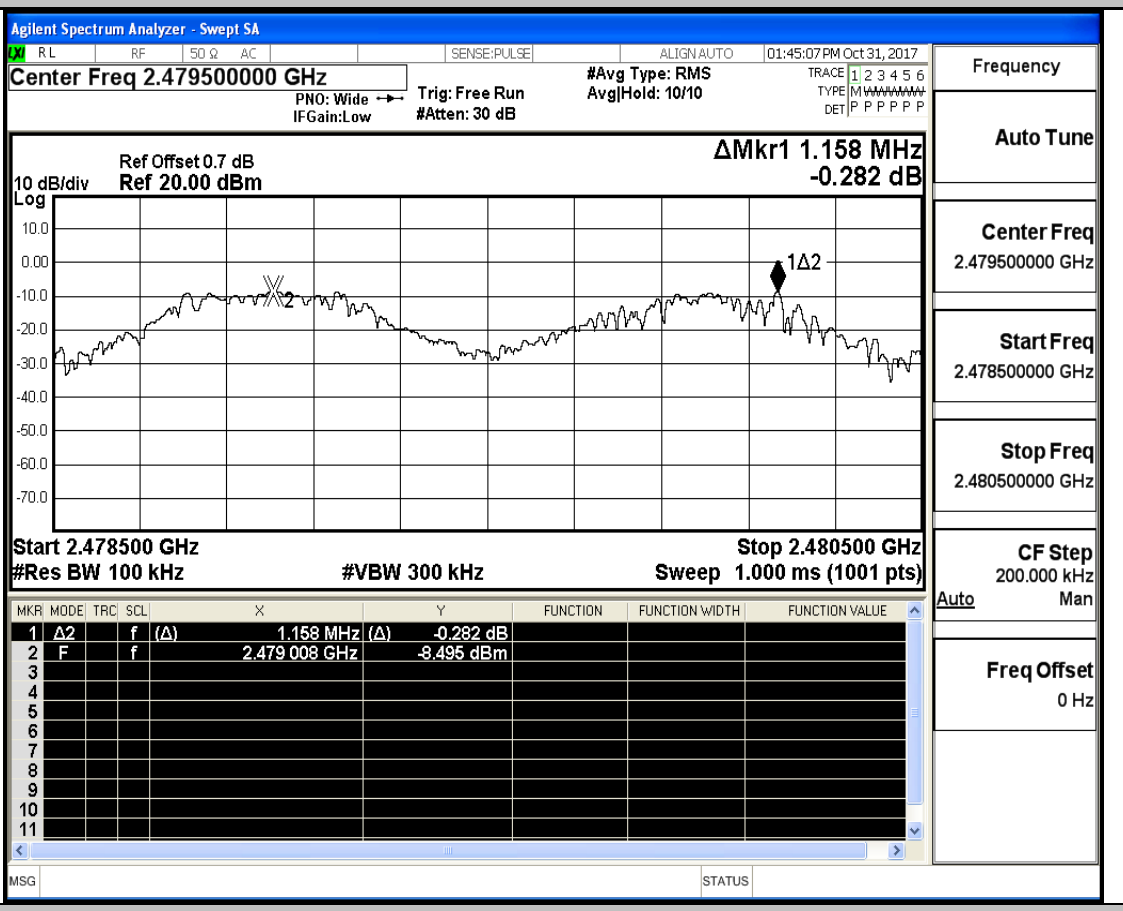
Carrier Frequency Separation_GFSK_2402



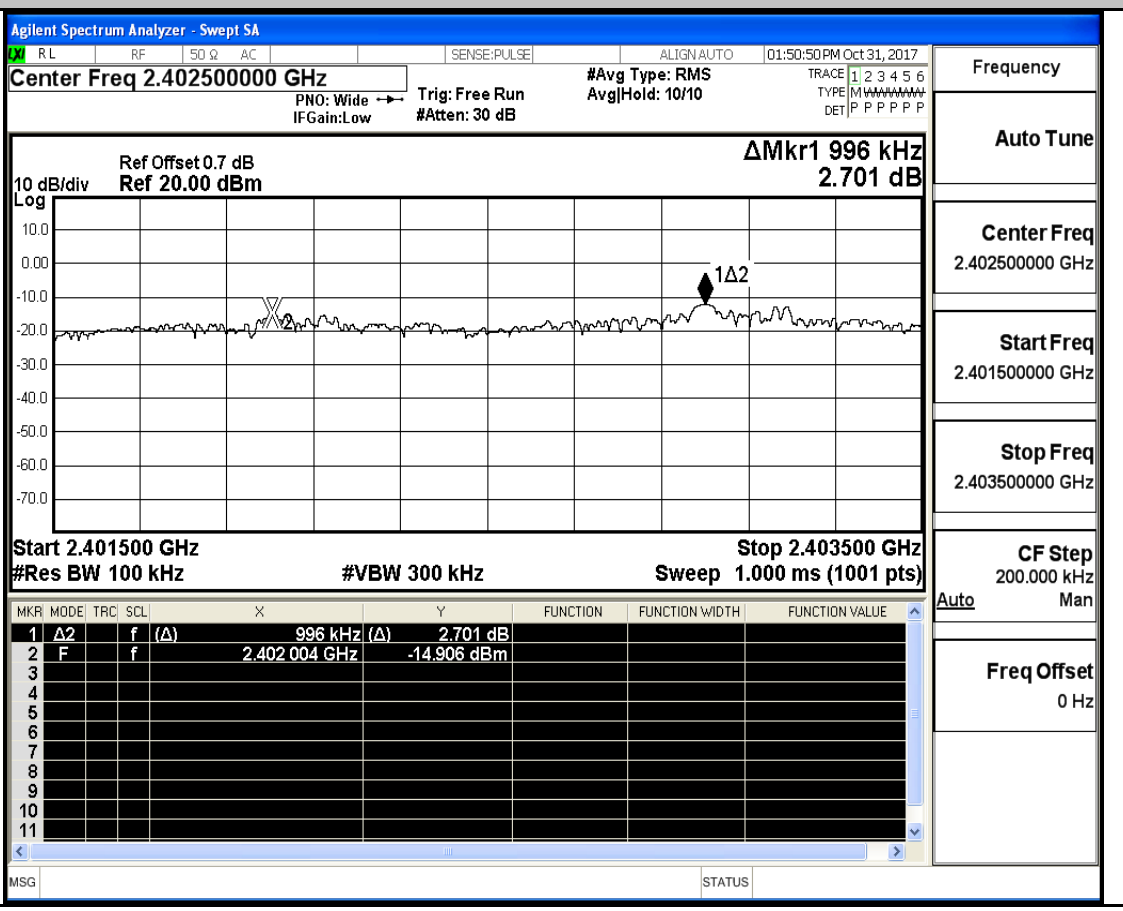
Carrier Frequency Separation_GFSK_2441



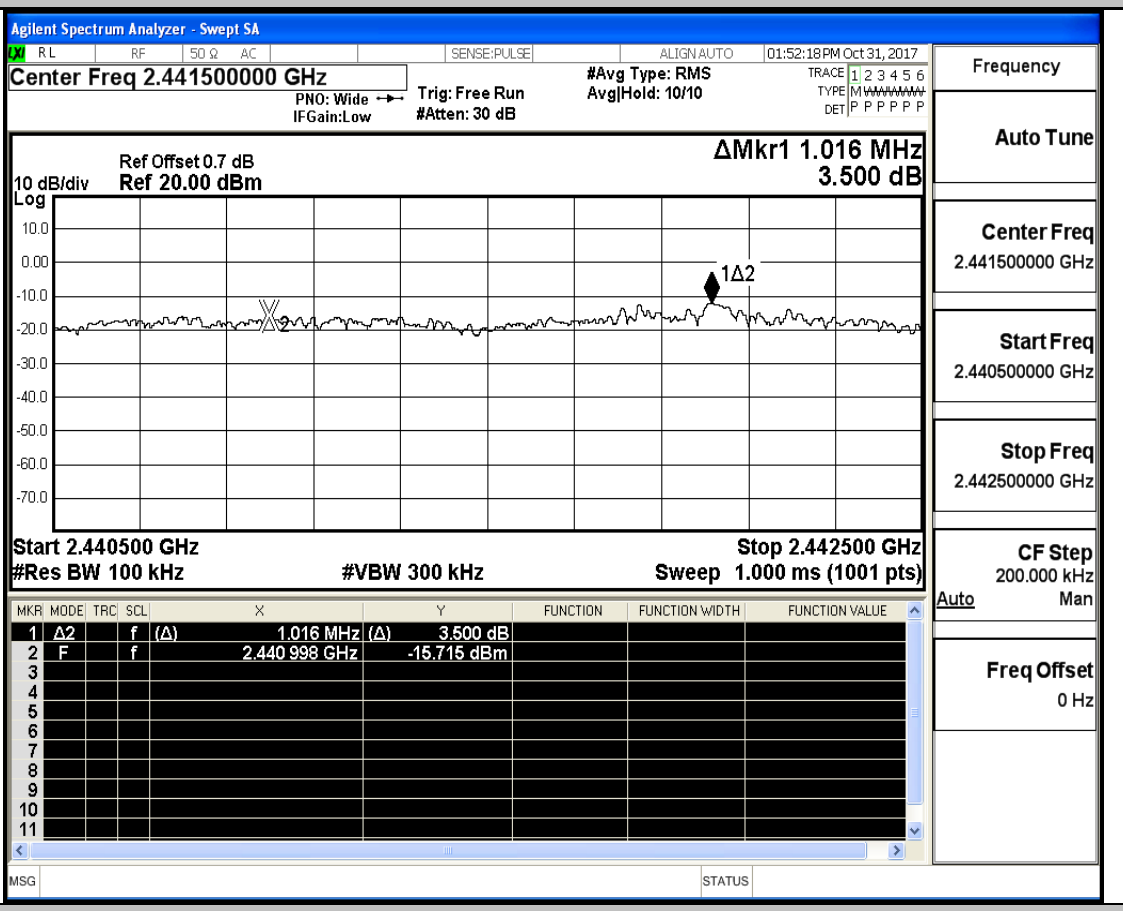
Carrier Frequency Separation_GFSK_2480



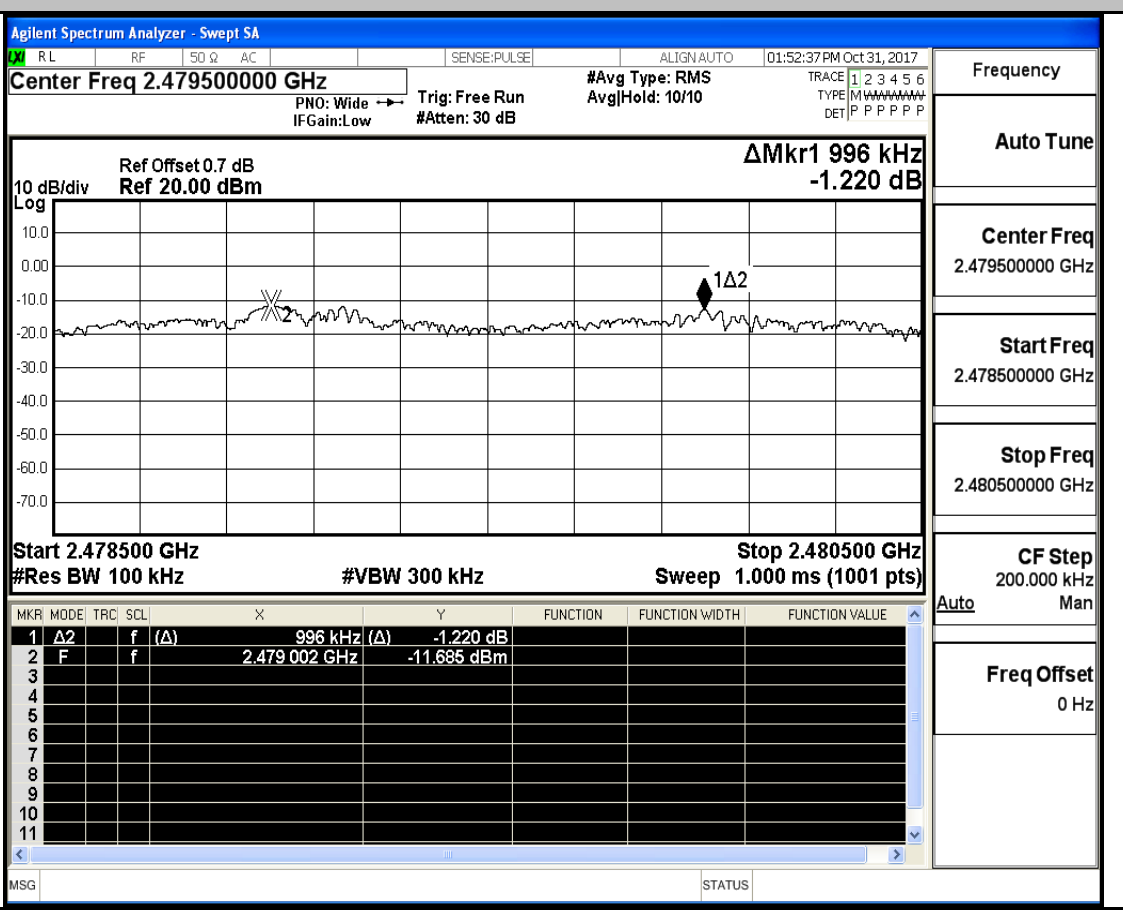
Carrier Frequency Separation_π/4-DQPSK_2402



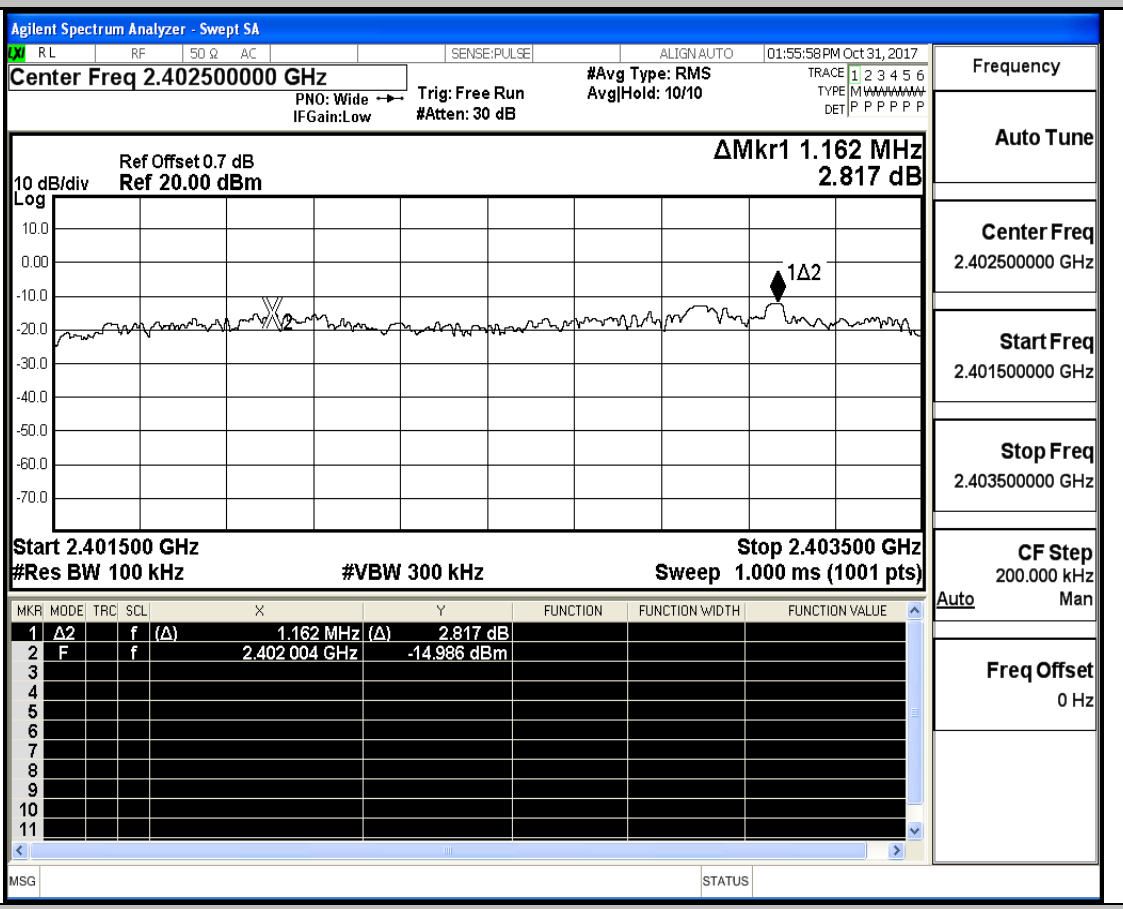
Carrier Frequency Separation_π/4-DQPSK_2441



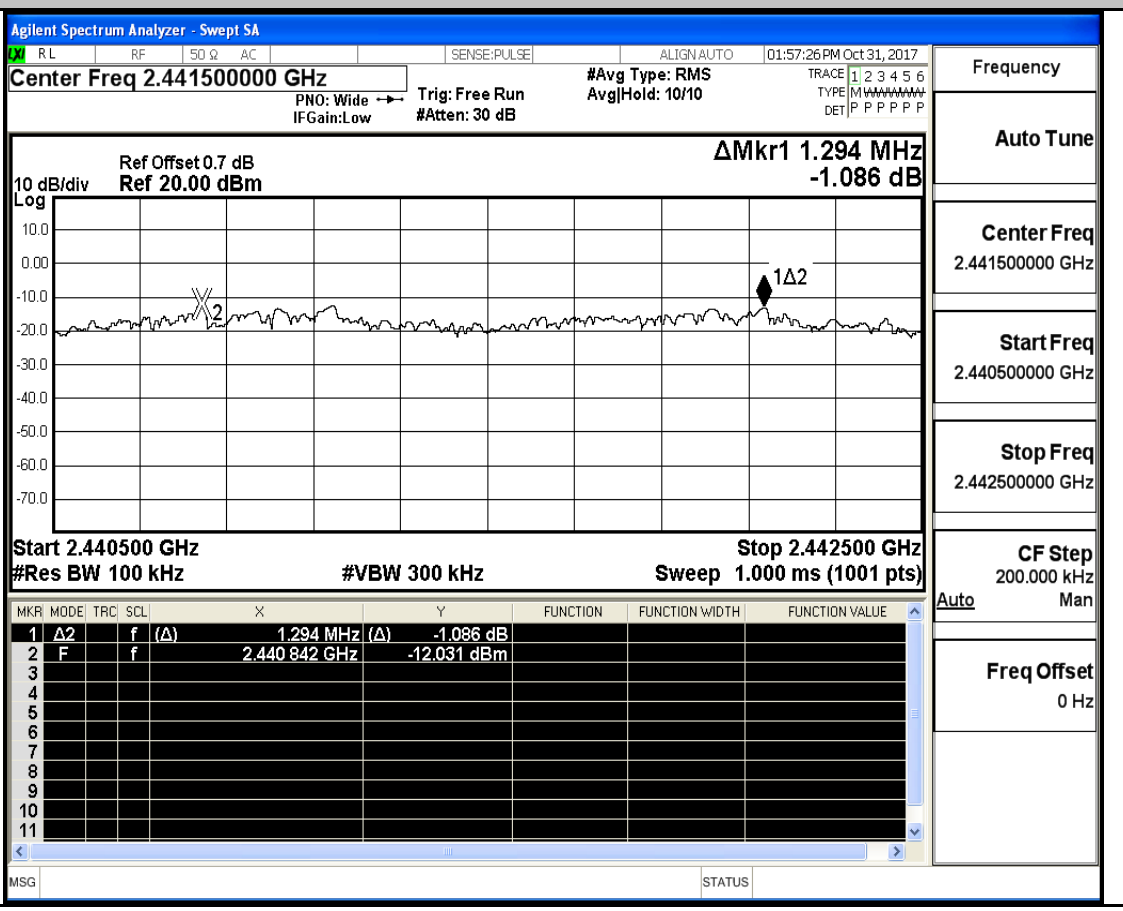
Carrier Frequency Separation_π/4-DQPSK_2480



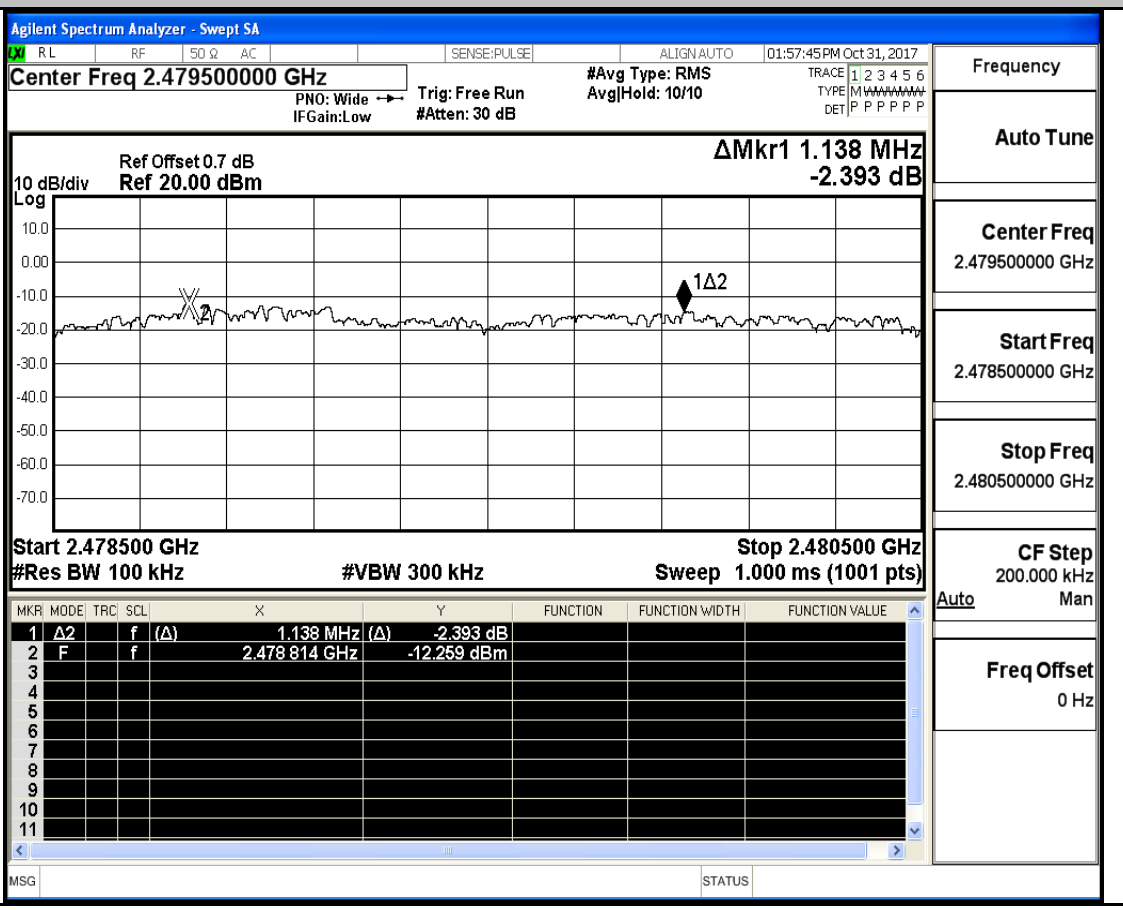
Carrier Frequency Separation_8-DPSK_2402



Carrier Frequency Separation_8-DPSK_2441



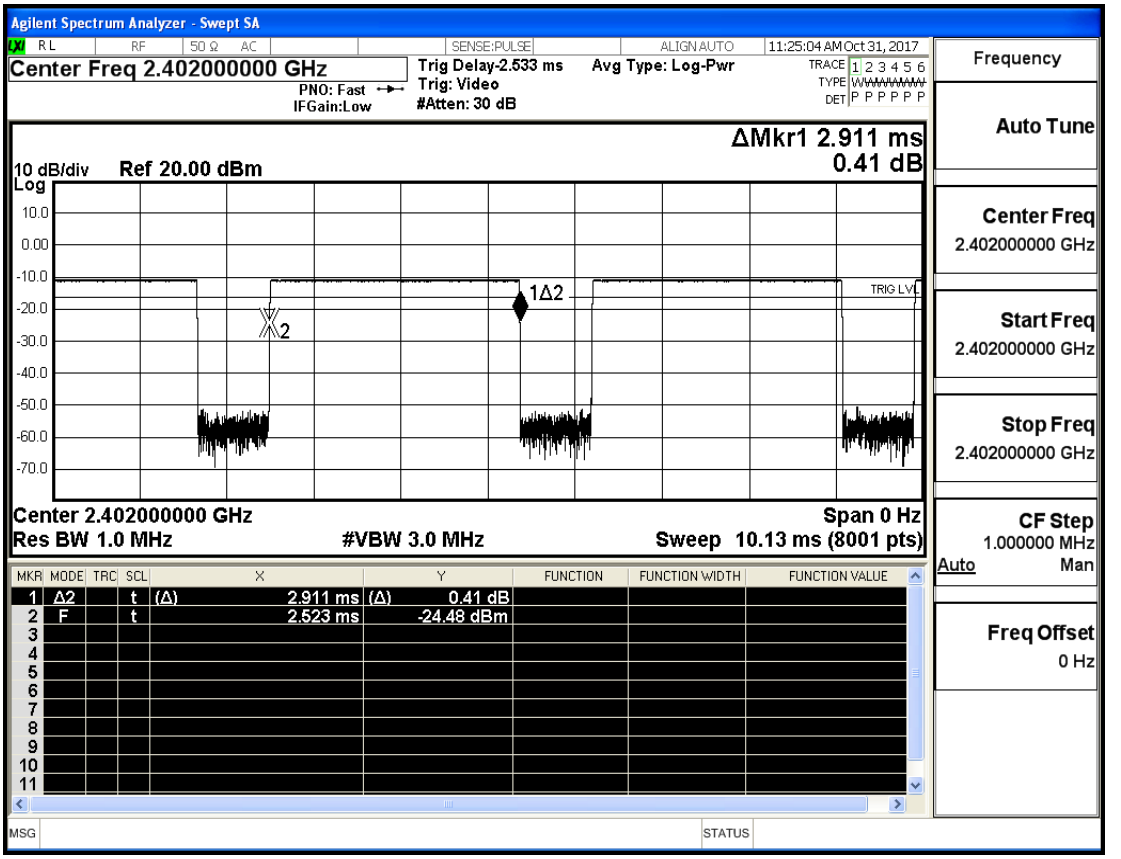
Carrier Frequency Separation_8-DPSK_2480



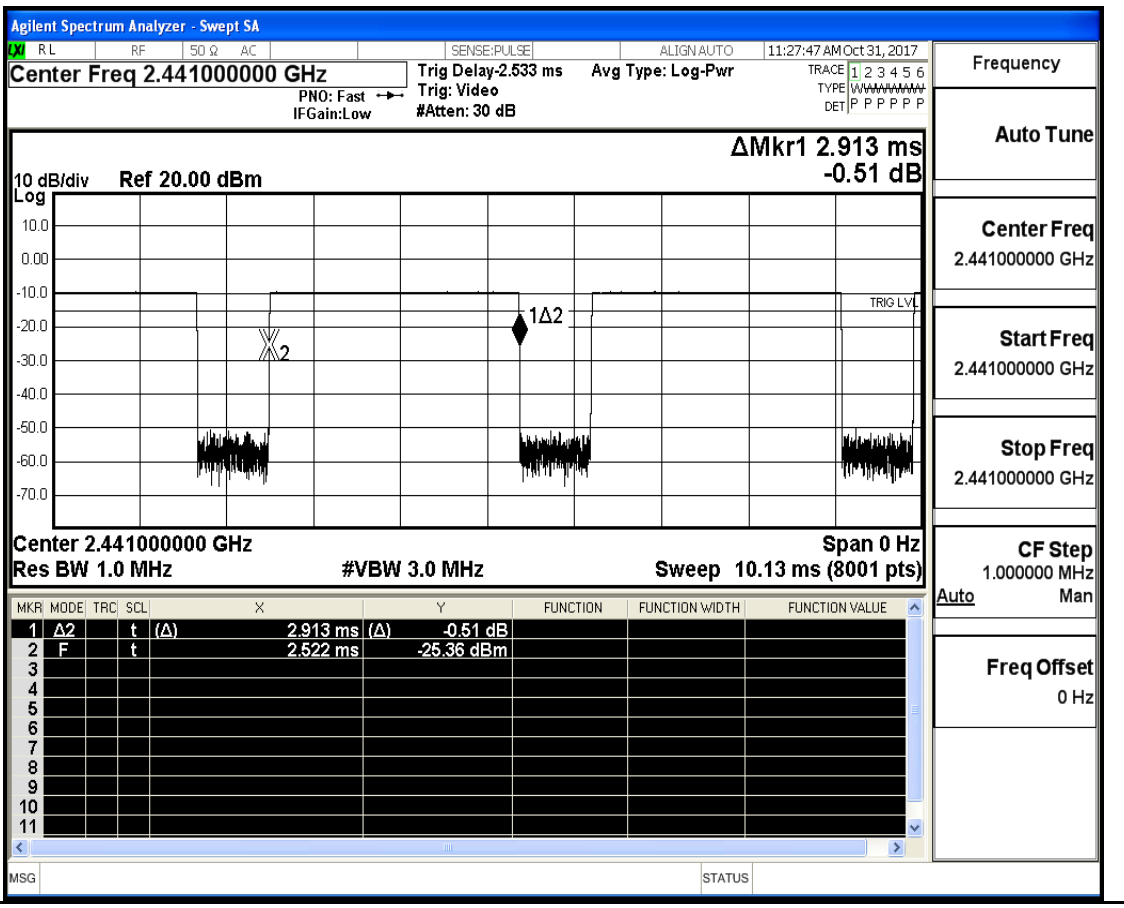
A.4 Dwell Time

Test Mode	Test Channel	Burst Width[ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit[s]	Verdict
GFSK	2402	2.91	106.7	0.31	0.4	PASS
	2441	2.91	106.7	0.31	0.4	PASS
	2480	2.91	106.7	0.31	0.4	PASS
π/4-DQPSK	2402	2.92	106.7	0.312	0.4	PASS
	2441	2.92	106.7	0.312	0.4	PASS
	2480	2.92	106.7	0.312	0.4	PASS
8-DPSK	2402	2.92	106.7	0.312	0.4	PASS
	2441	2.92	106.7	0.312	0.4	PASS
	2480	2.92	106.7	0.312	0.4	PASS

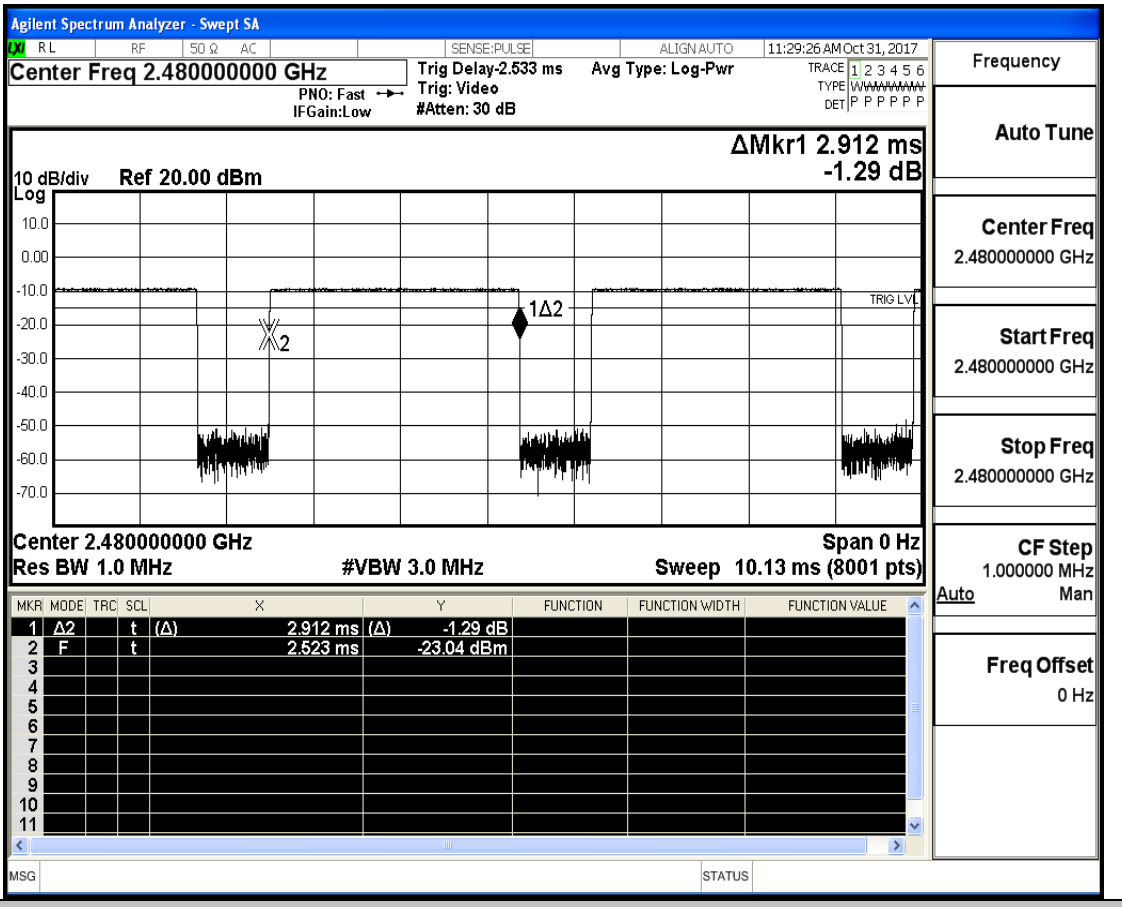
Dwell Time_GFSK_2402



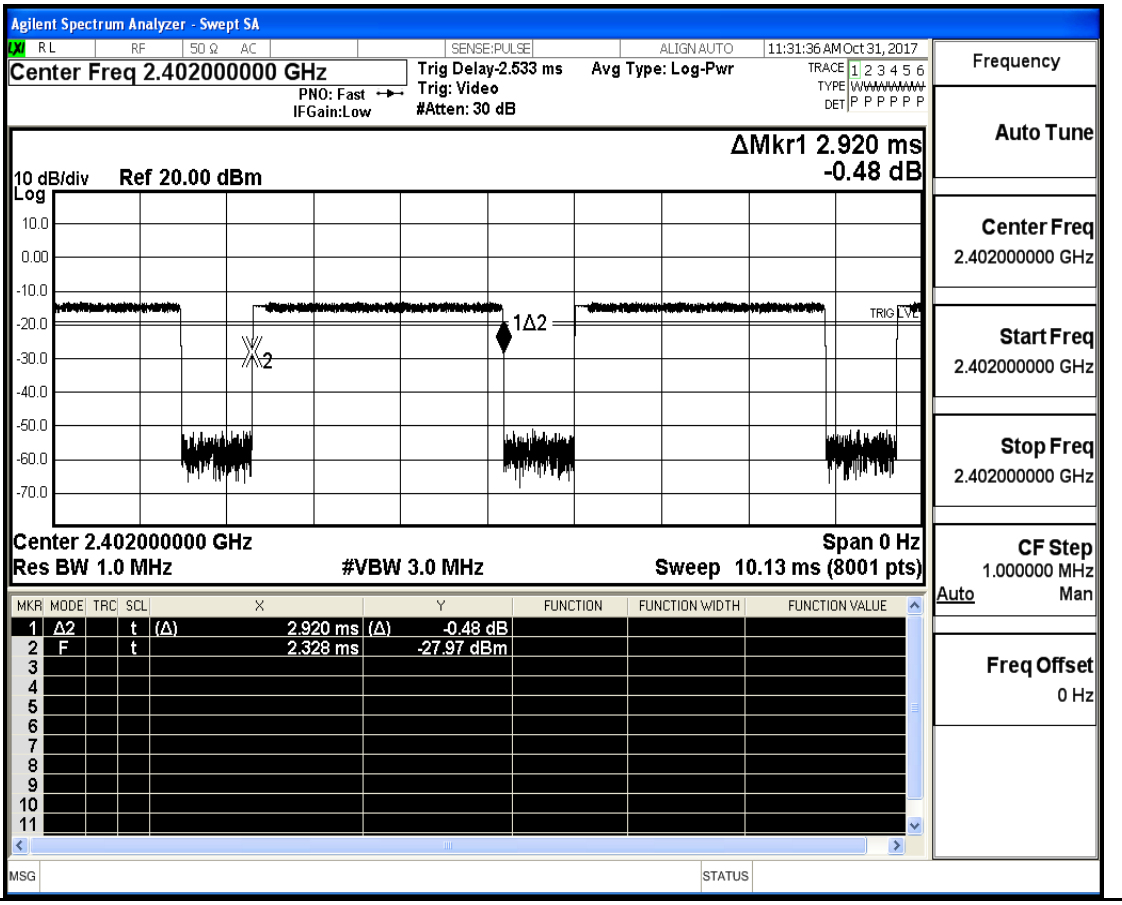
Dwell Time_GFSK_2441



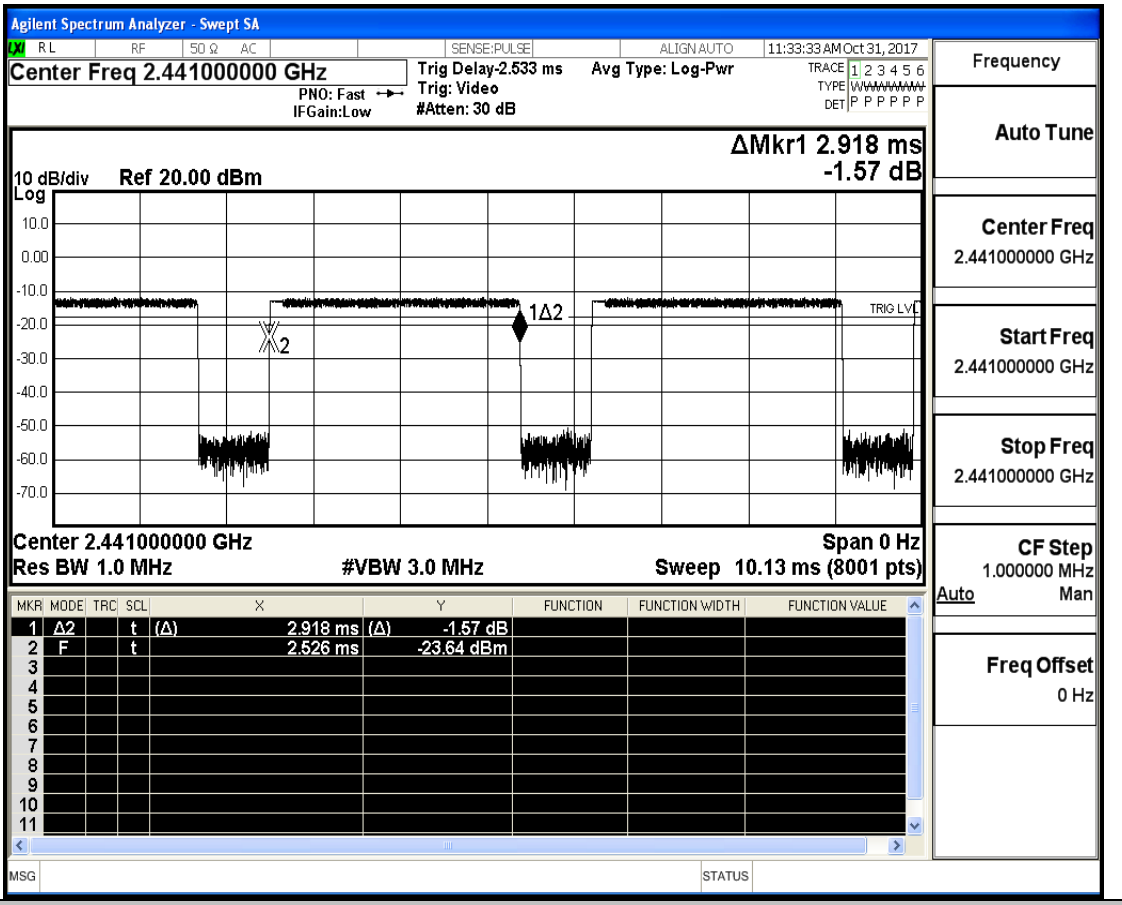
Dwell Time_GFSK_2480



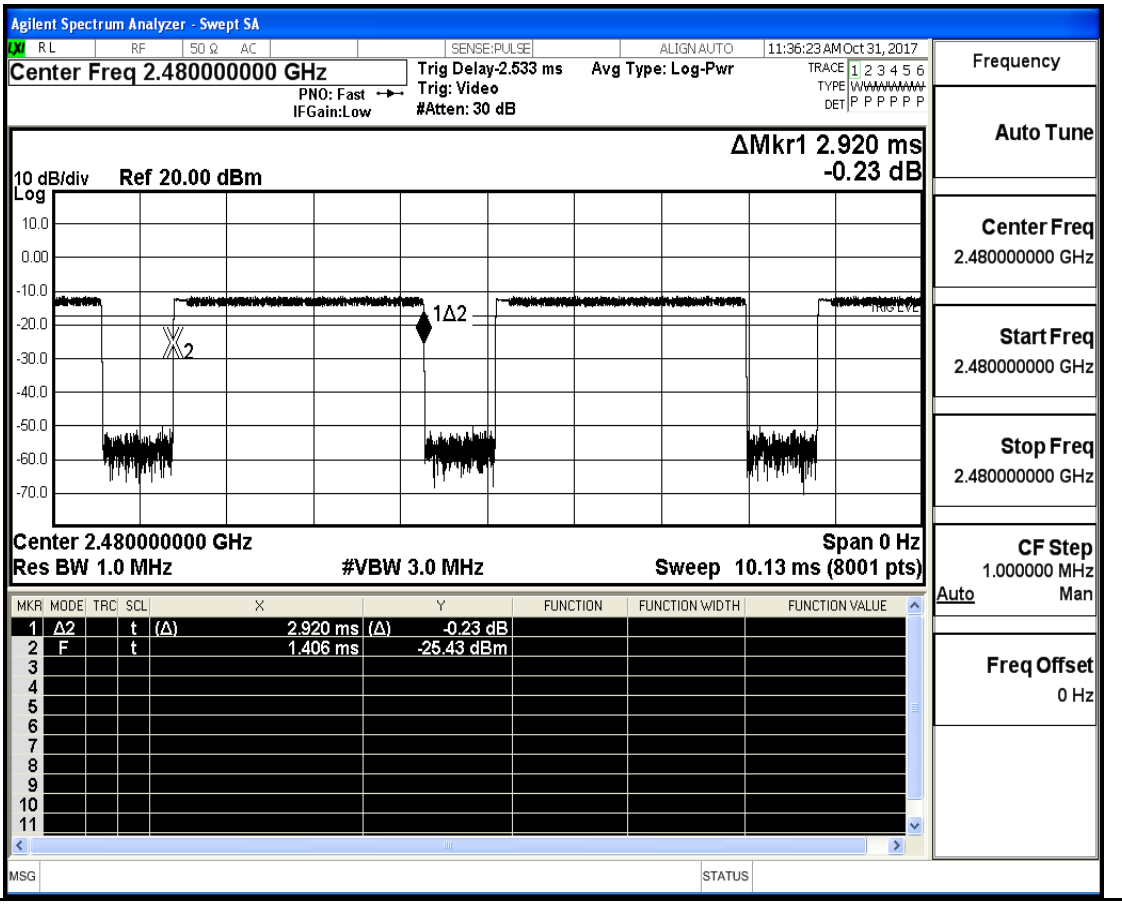
Dwell Time_π/4-DQPSK_2402



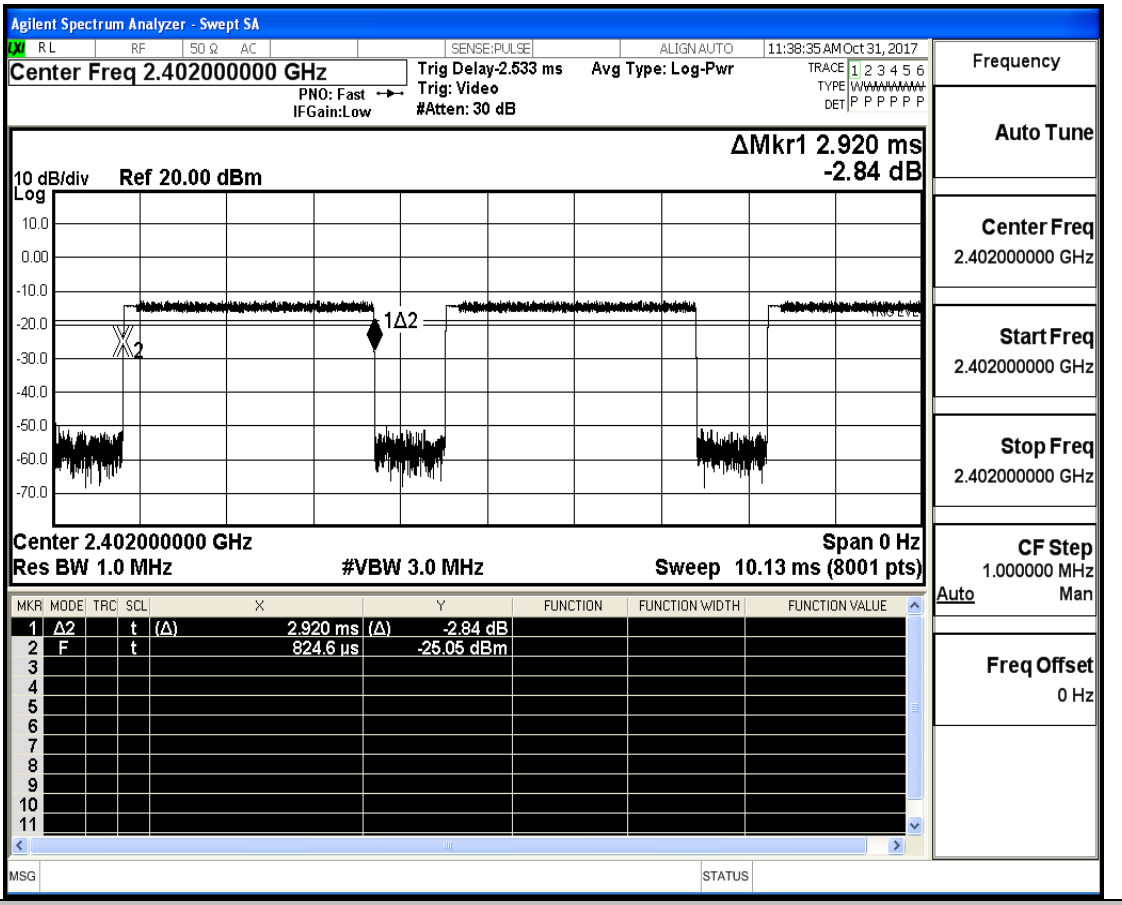
Dwell Time_π/4-DQPSK_2441



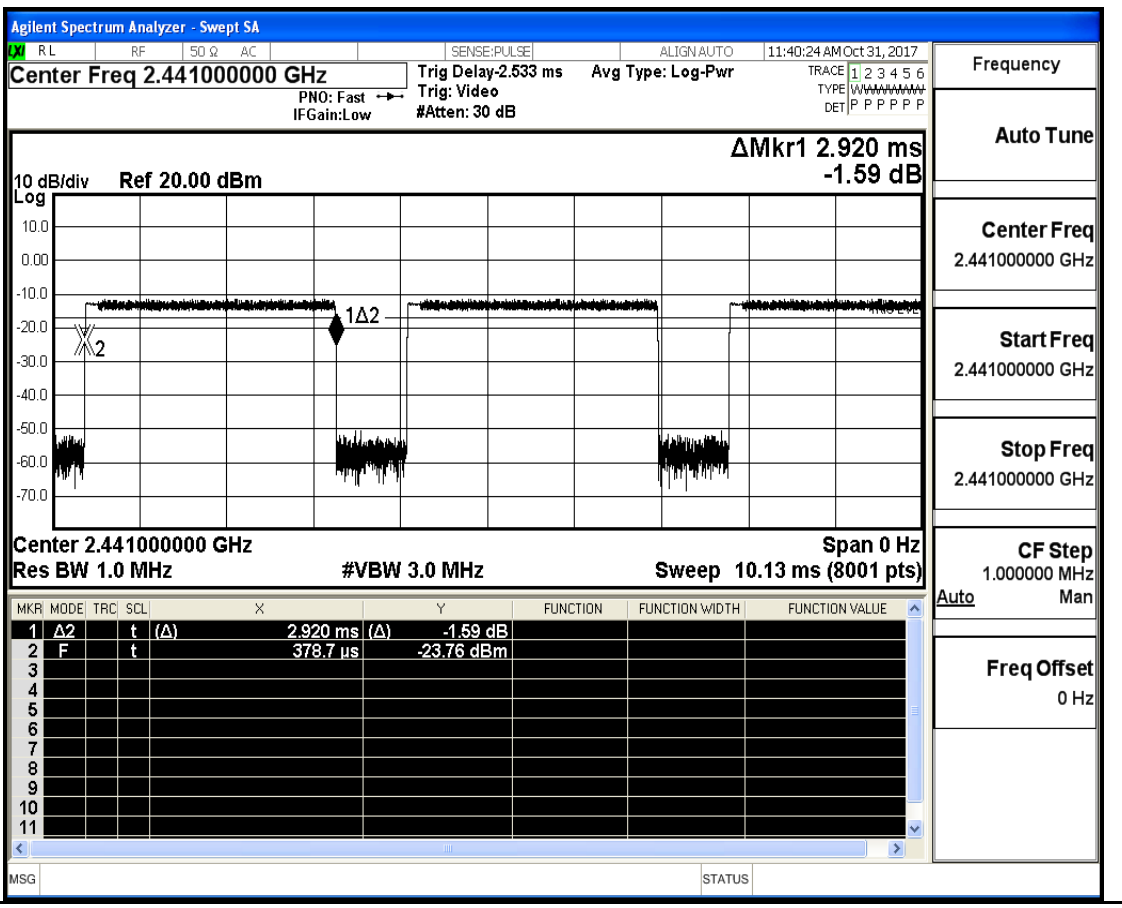
Dwell Time_π/4-DQPSK_2480



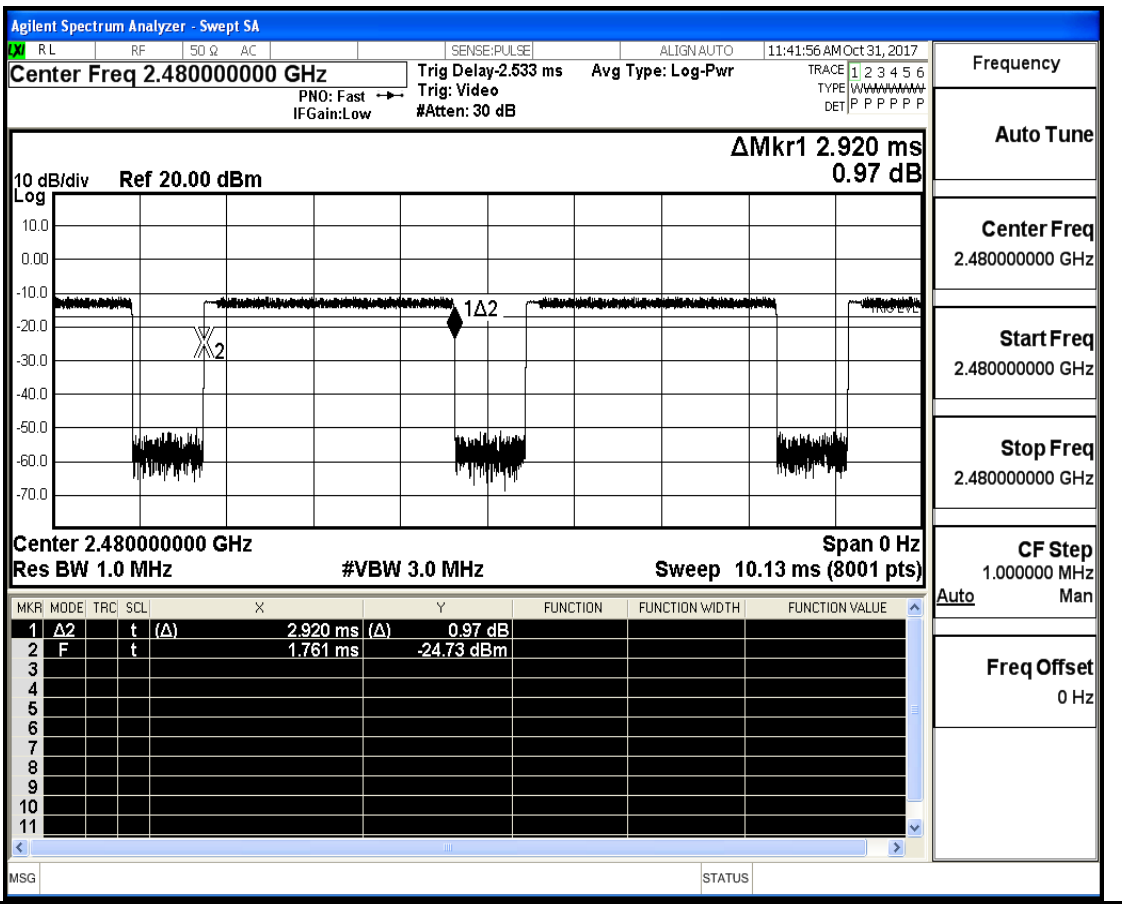
Dwell Time_8-DPSK_2402



Dwell Time_8-DPSK_2441



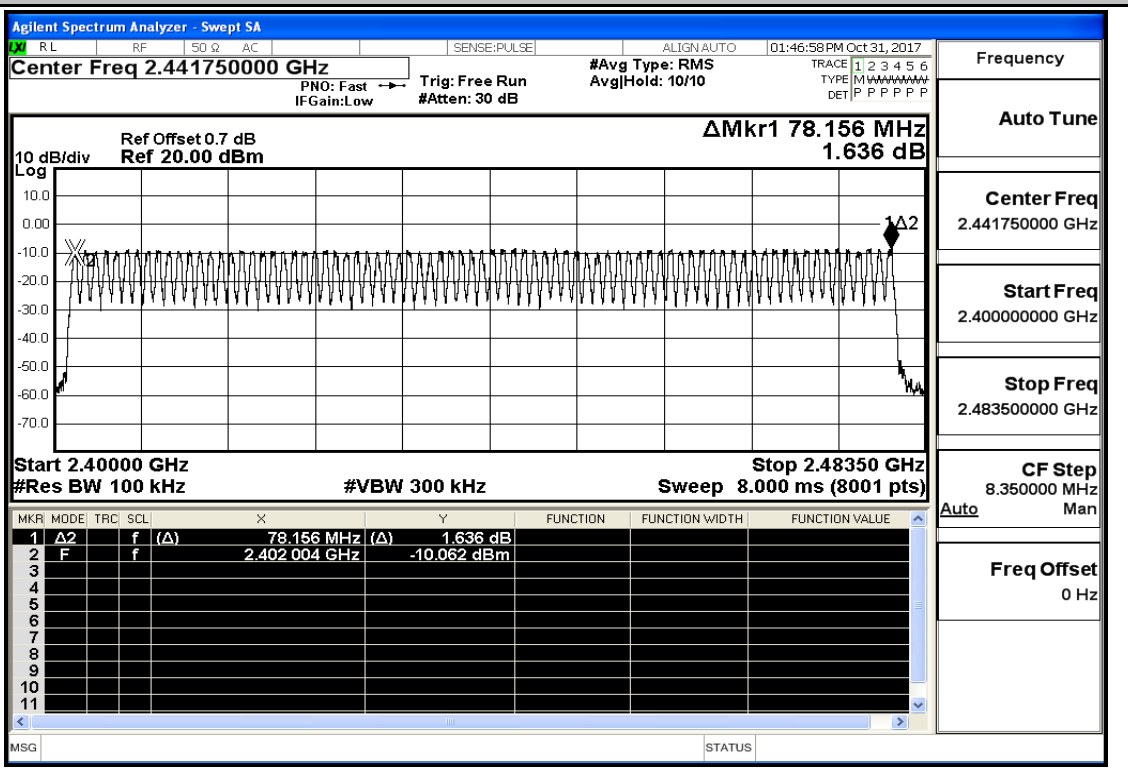
Dwell Time_8-DPSK_2480



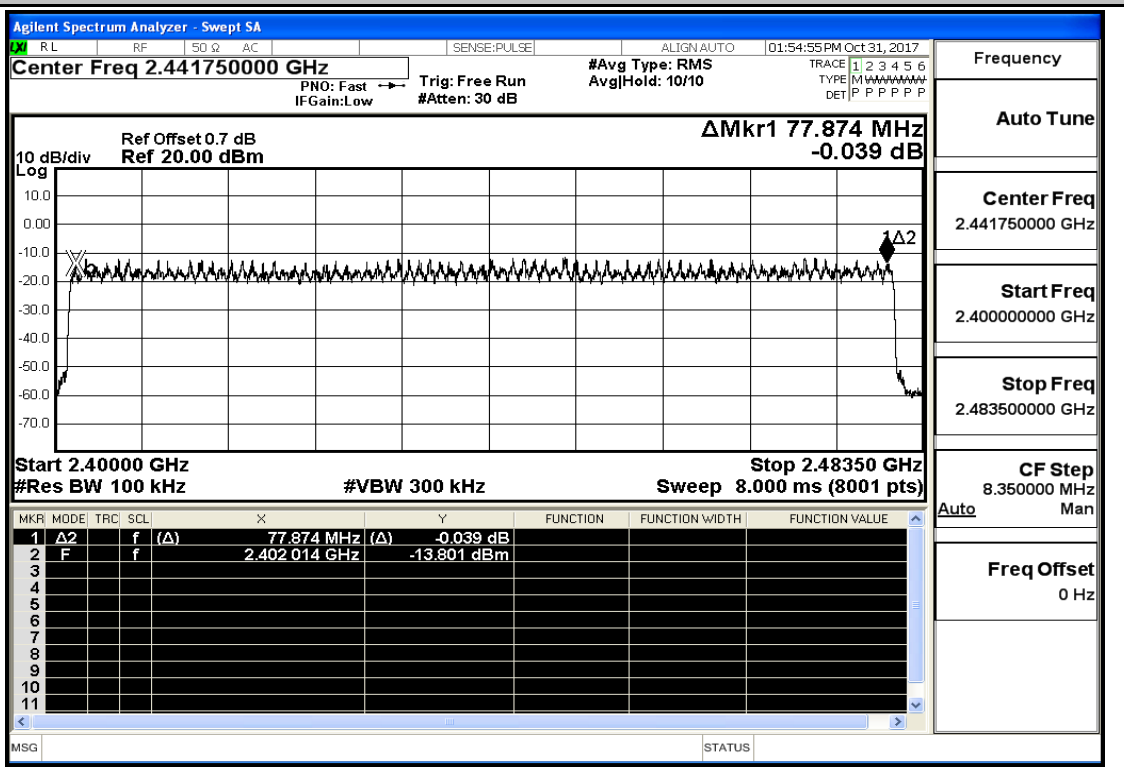
A.5 Hopping Channel Number

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

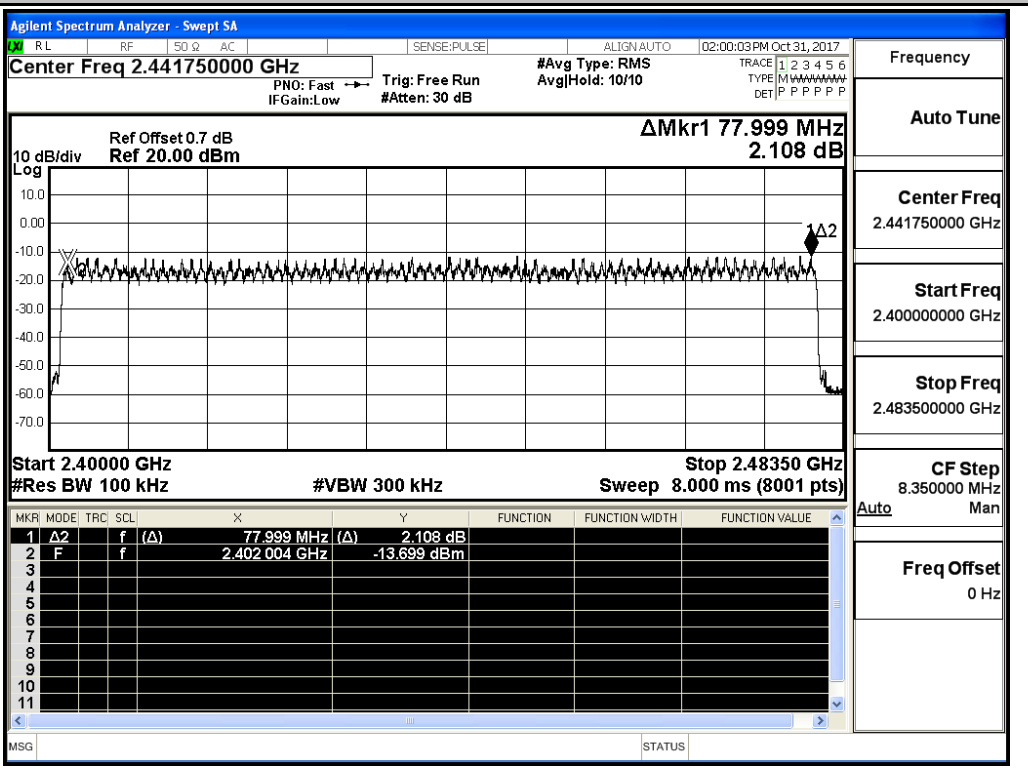
Hopping Channel Number_GFSK_2402



Hopping Channel Number_π/4-DQPSK_2402



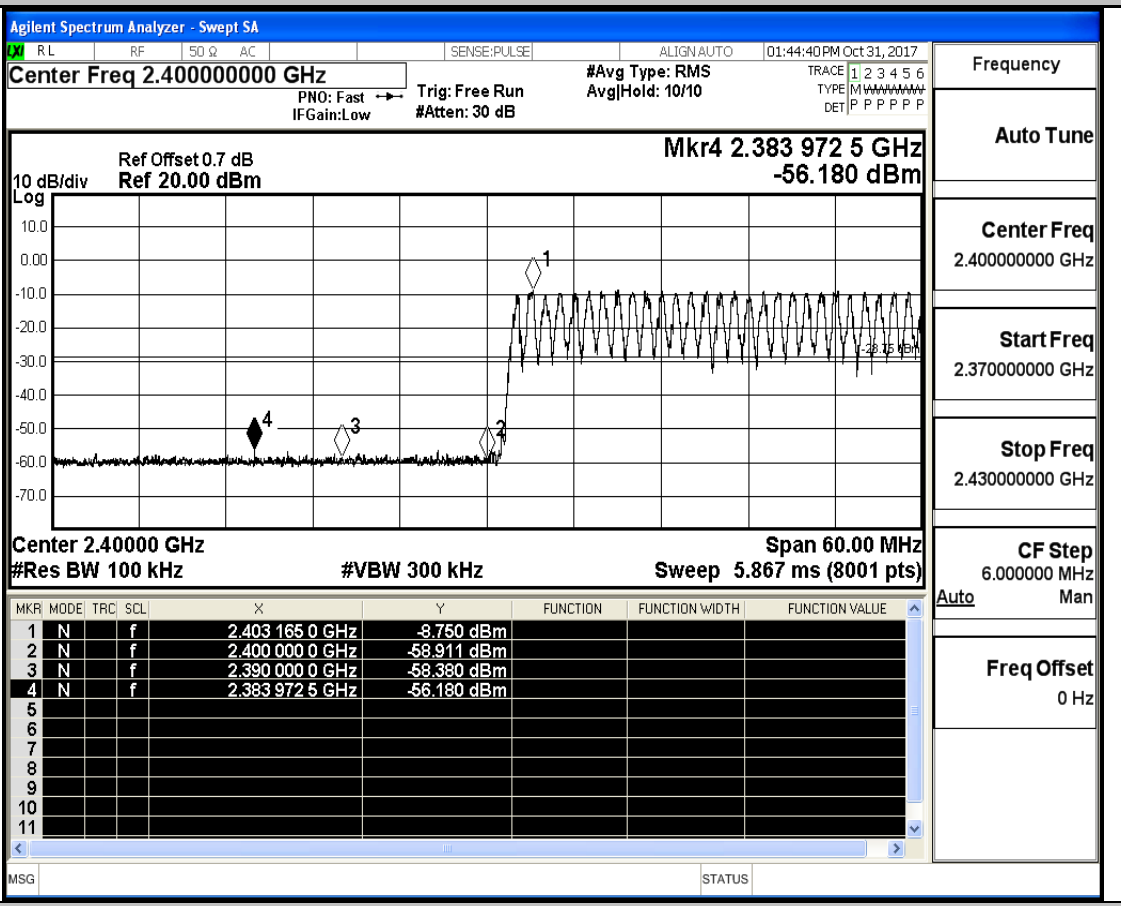
Hopping Channel Number_8-DPSK_2402



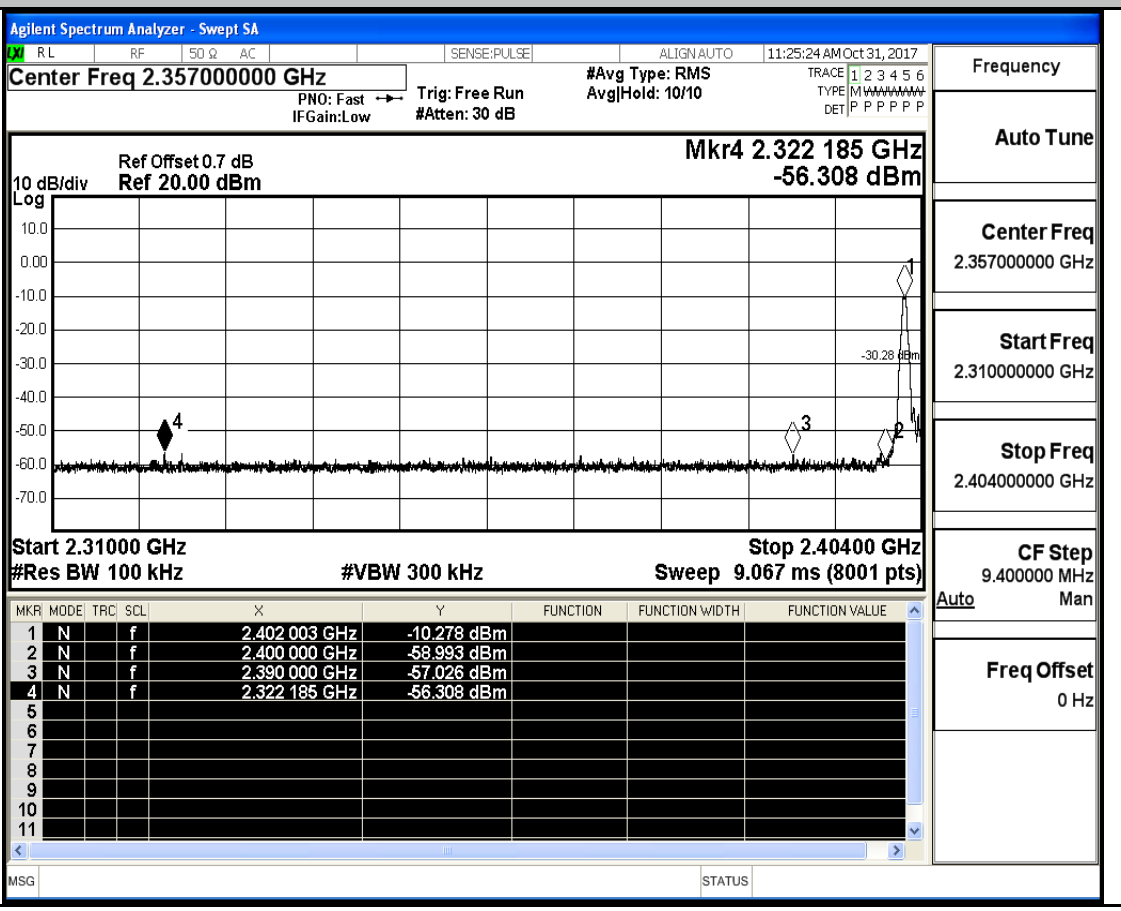
A.6 Band-edge for RF Conducted Emissions

Test Mode	Test Channel	Hopping	Carrier Power[dBm]	Max. Spurious Level [dBm]	Limit[dBm]	Verdict
GFSK	2402	On	-8.750	-56.180	-28.75	PASS
	2402	Off	-10.278	-56.308	-30.28	PASS
	2480	On	-8.485	-56.188	-28.49	PASS
	2480	Off	-8.743	-56.731	-28.74	PASS
π/4-DQPSK	2402	On	-12.252	-56.630	-32.25	PASS
	2402	Off	-13.671	-57.603	-33.67	PASS
	2480	On	-11.698	-56.611	-31.7	PASS
	2480	Off	-11.788	-57.420	-31.79	PASS
8-DPSK	2402	On	-12.213	-56.615	-32.21	PASS
	2402	Off	-13.391	-57.587	-33.39	PASS
	2480	On	-11.723	-56.554	-31.72	PASS
	2480	Off	-11.588	-56.091	-31.59	PASS

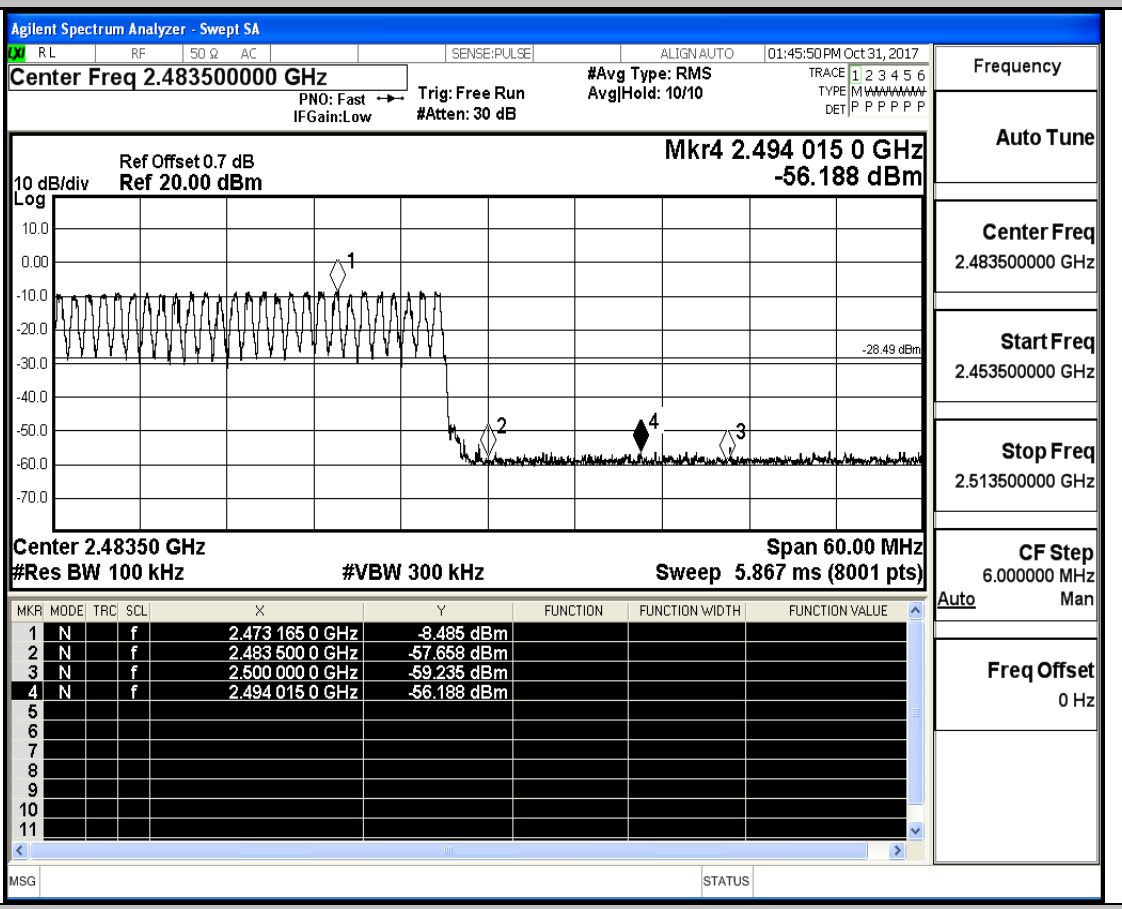
Band-edge for RF Conducted Emissions_GFSK_2402_Hopping On



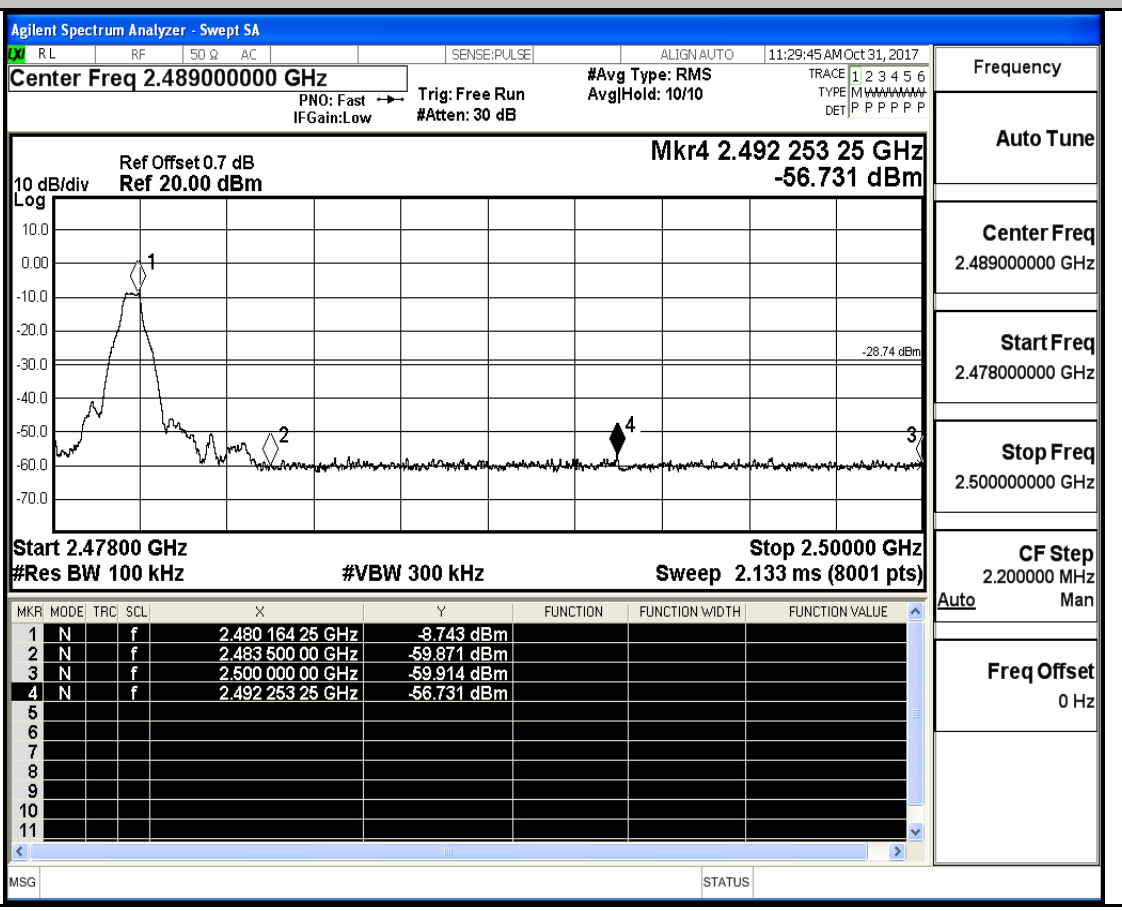
Band-edge for RF Conducted Emissions_GFSK_2402_Hopping Off



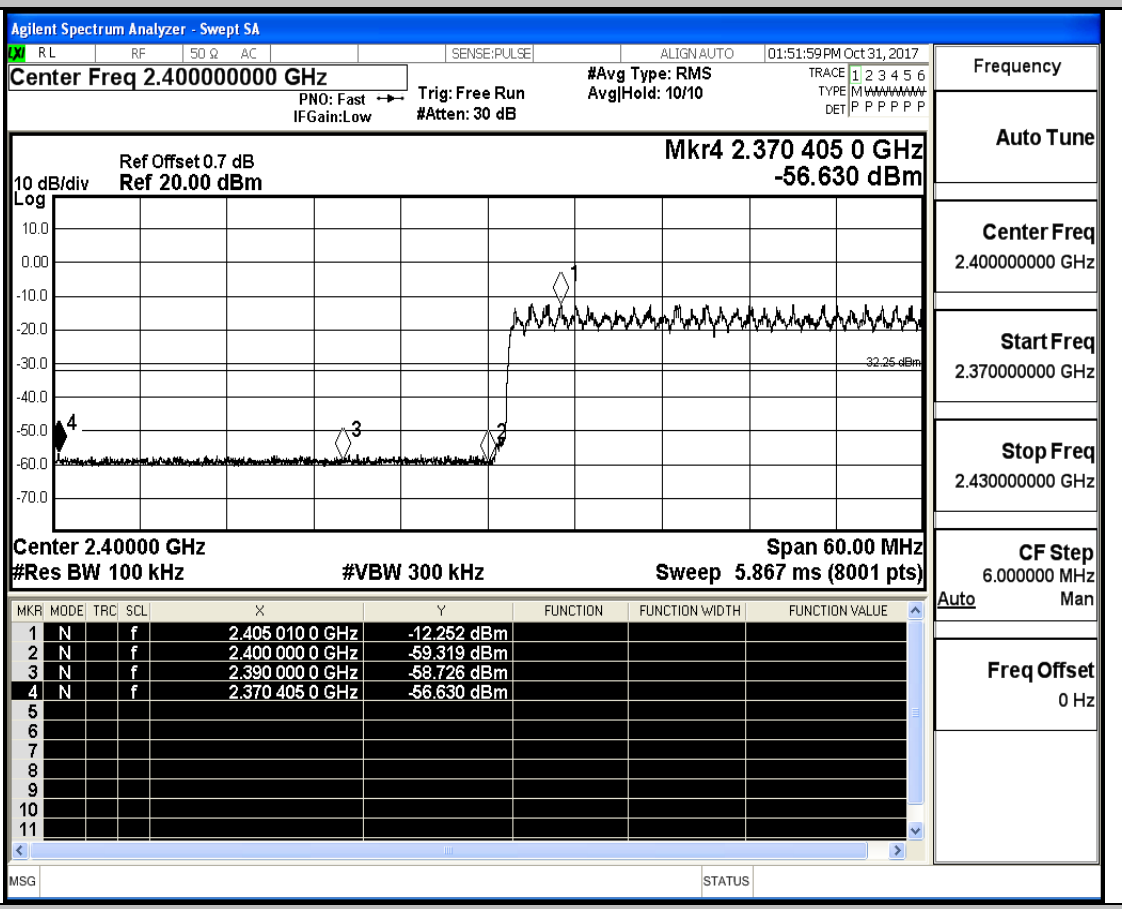
Band-edge for RF Conducted Emissions_GFSK_2480_Hopping On



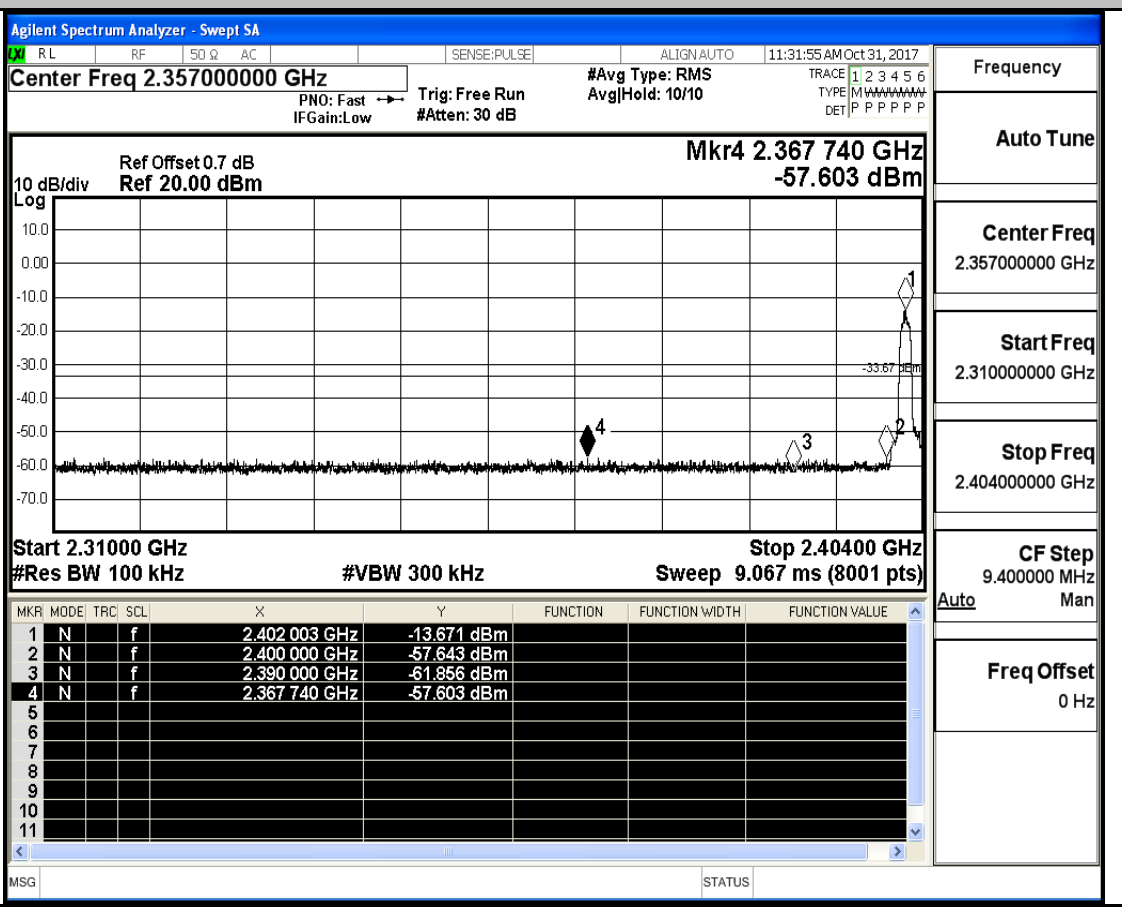
Band-edge for RF Conducted Emissions_GFSK_2480_Hopping Off



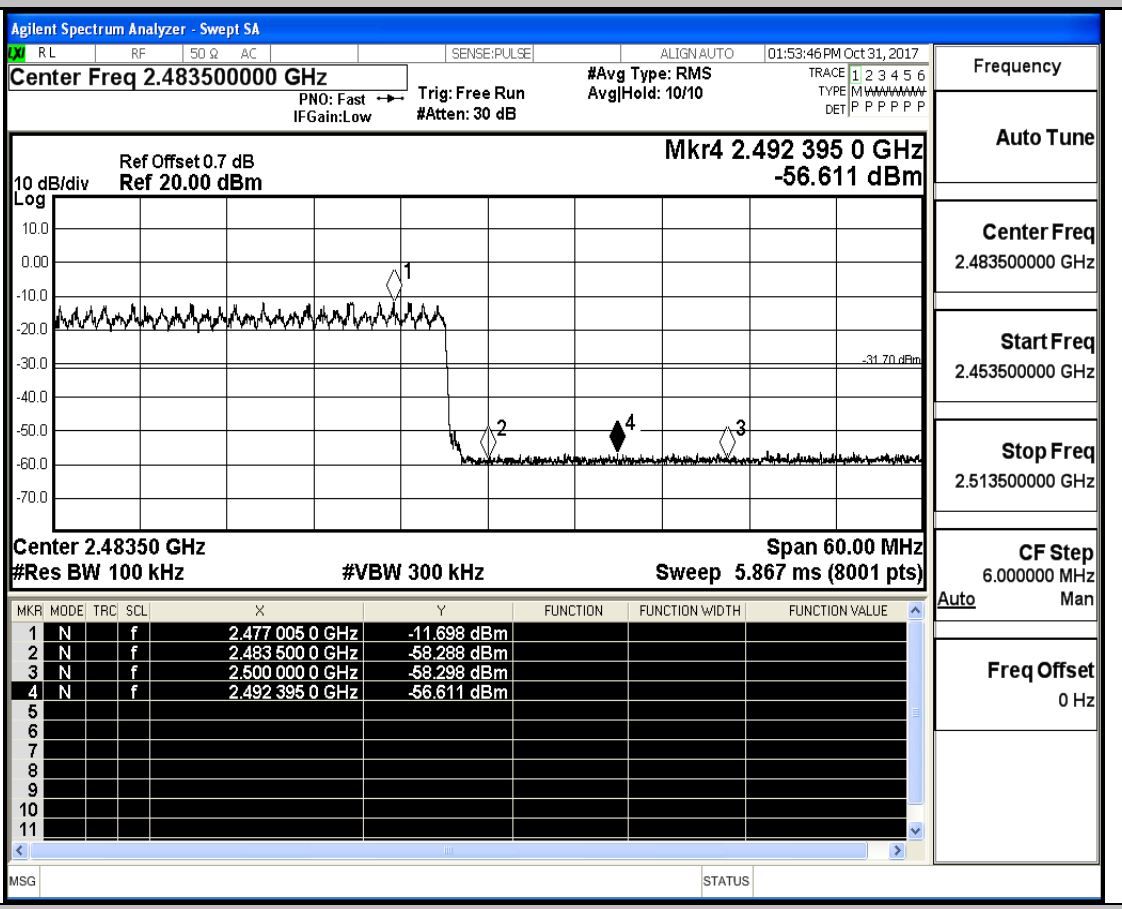
Band-edge for RF Conducted Emissions_π/4-DQPSK_2402_Hopping On



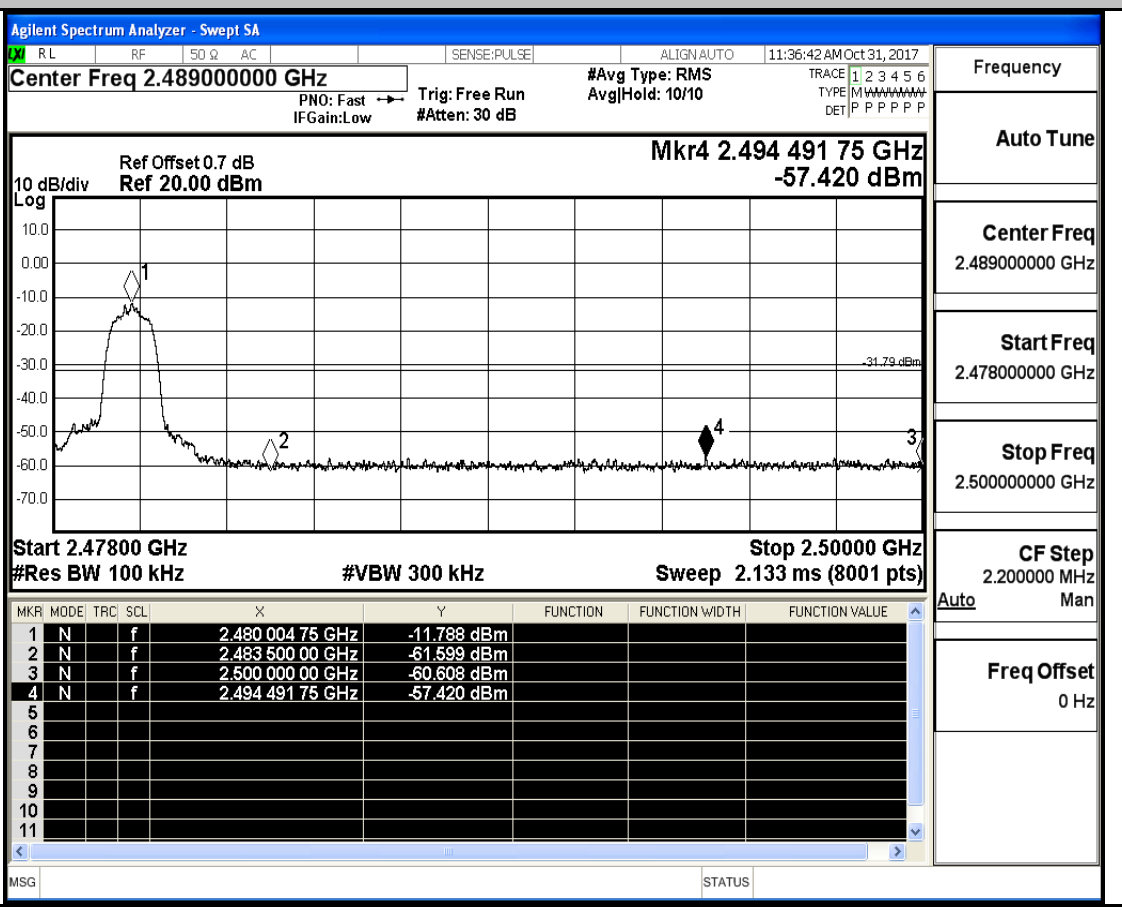
Band-edge for RF Conducted Emissions_π/4-DQPSK_2402_Hopping Off



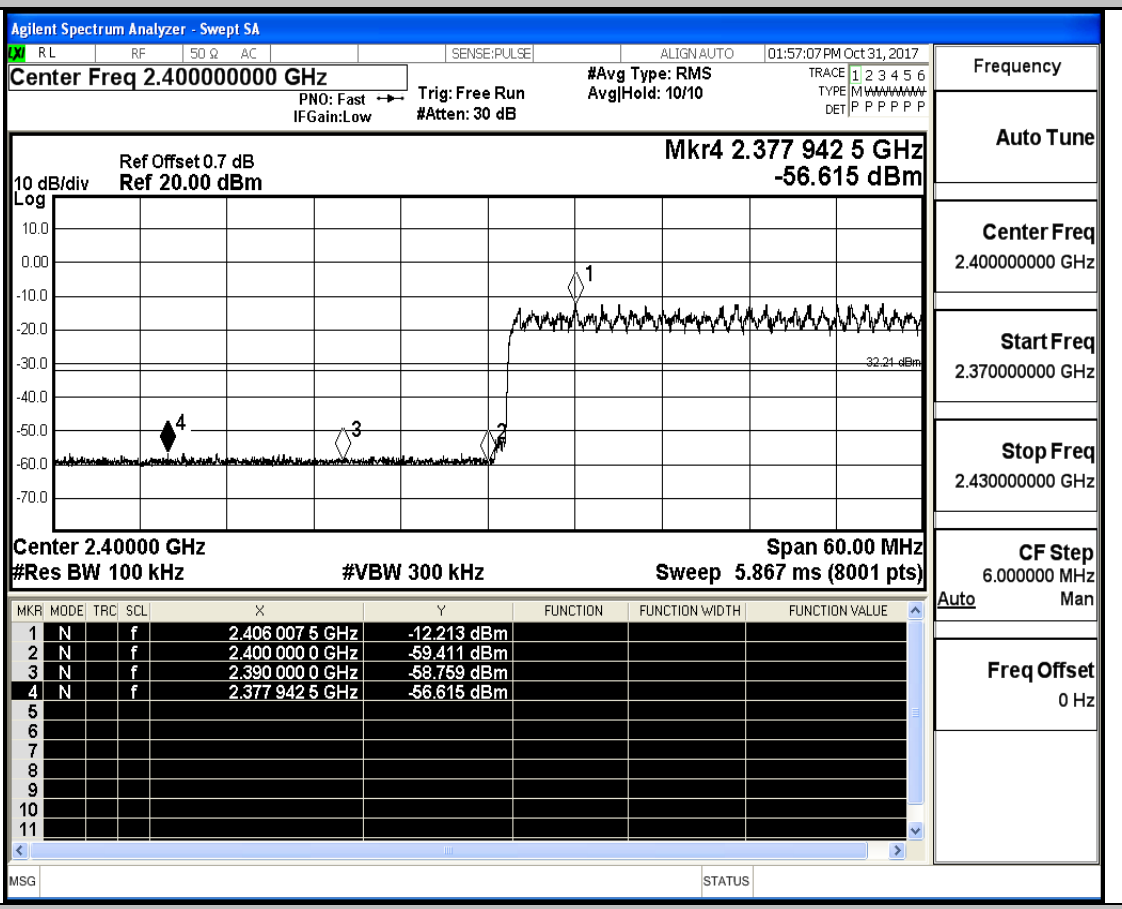
Band-edge for RF Conducted Emissions_π/4-DQPSK_2480_Hopping On



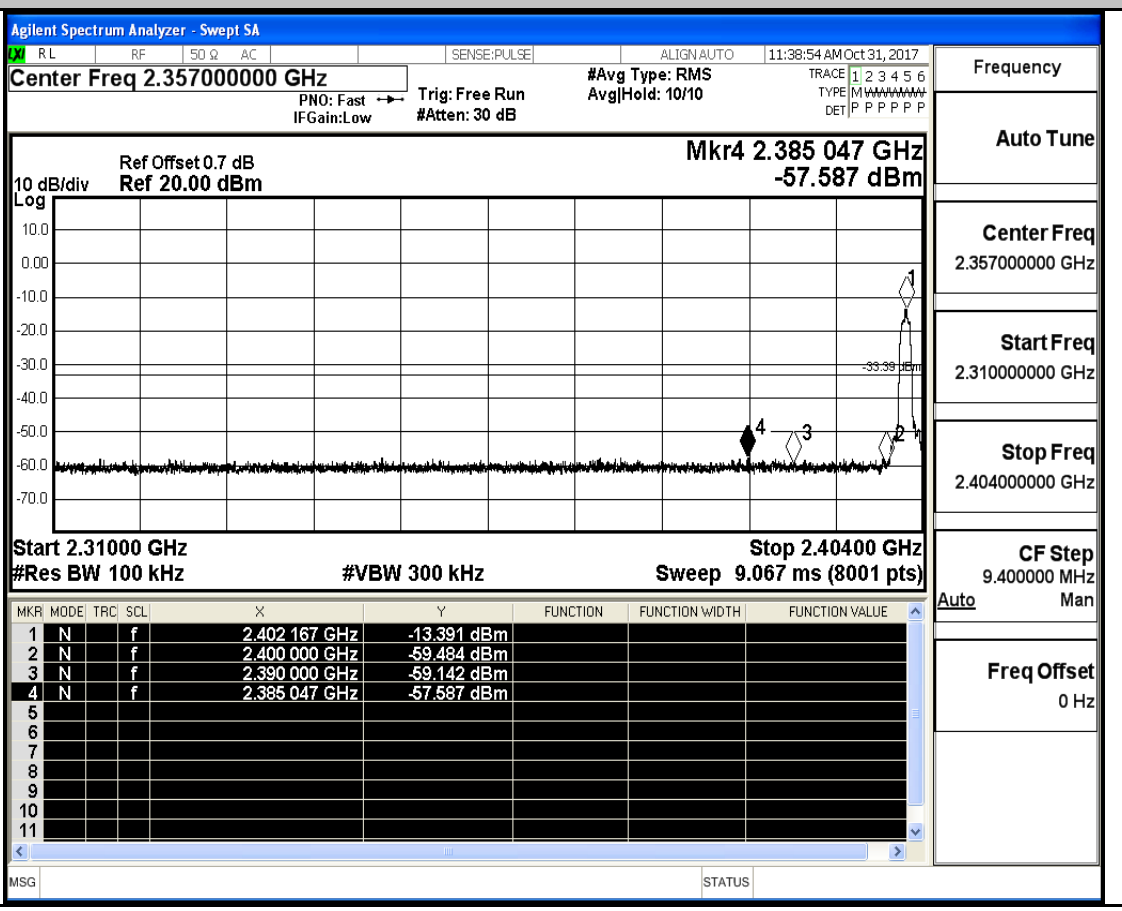
Band-edge for RF Conducted Emissions_π/4-DQPSK_2480_Hopping Off



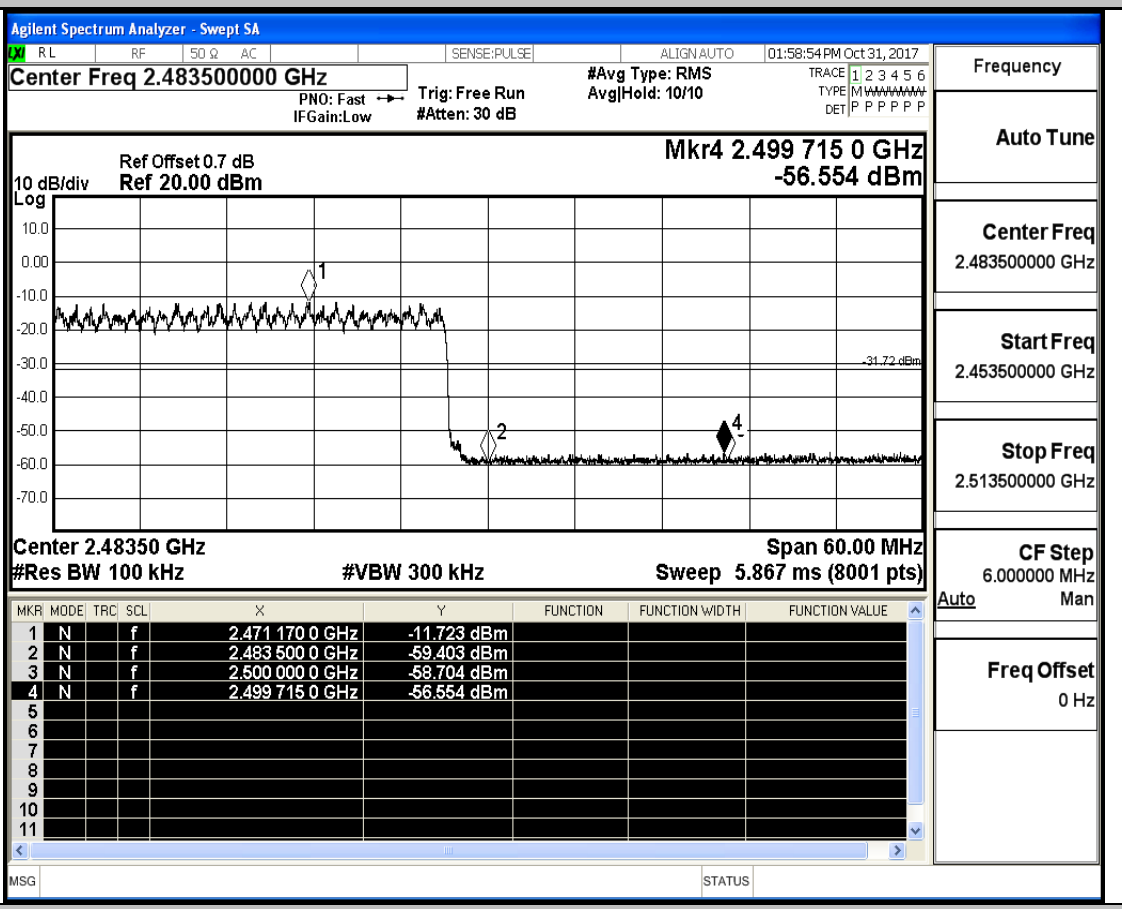
Band-edge for RF Conducted Emissions_8-DPSK_2402_Hopping On



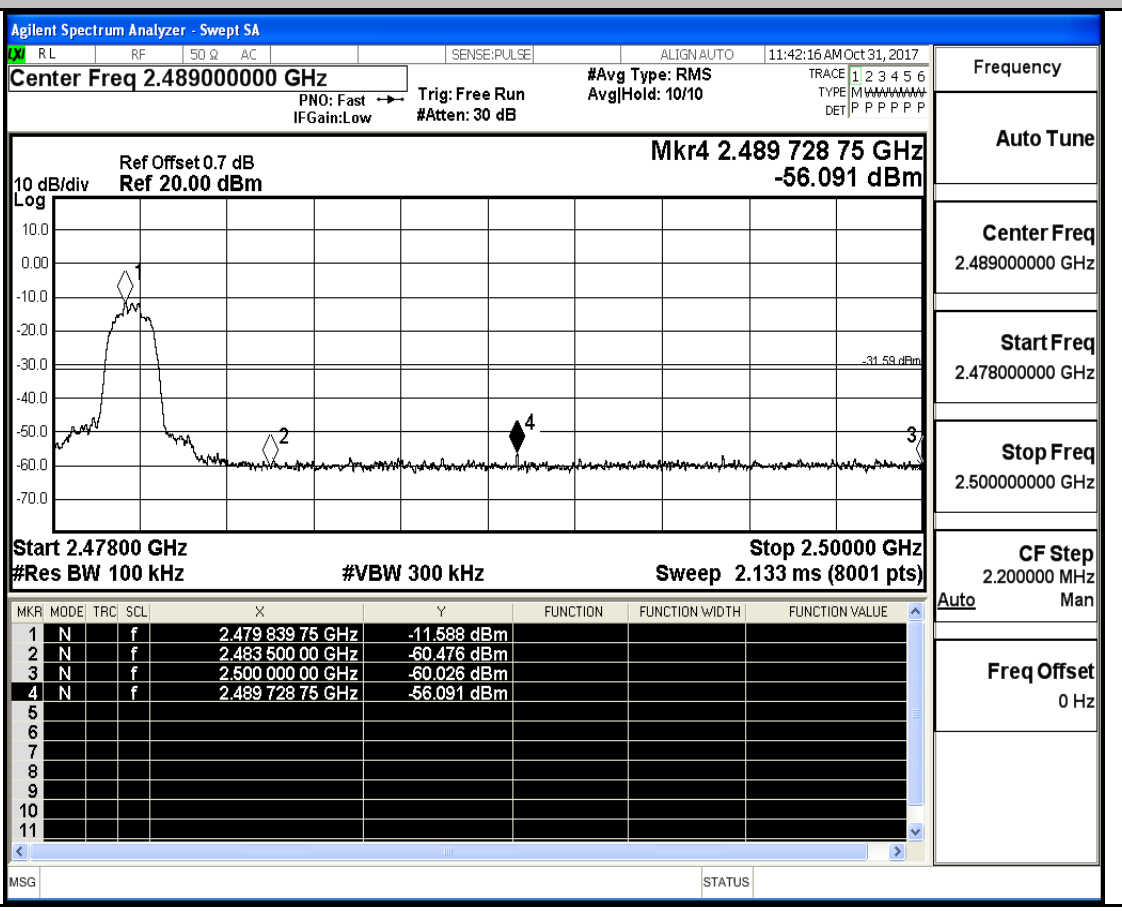
Band-edge for RF Conducted Emissions_8-DPSK_2402_Hopping Off



Band-edge for RF Conducted Emissions_8-DPSK_2480_Hopping On



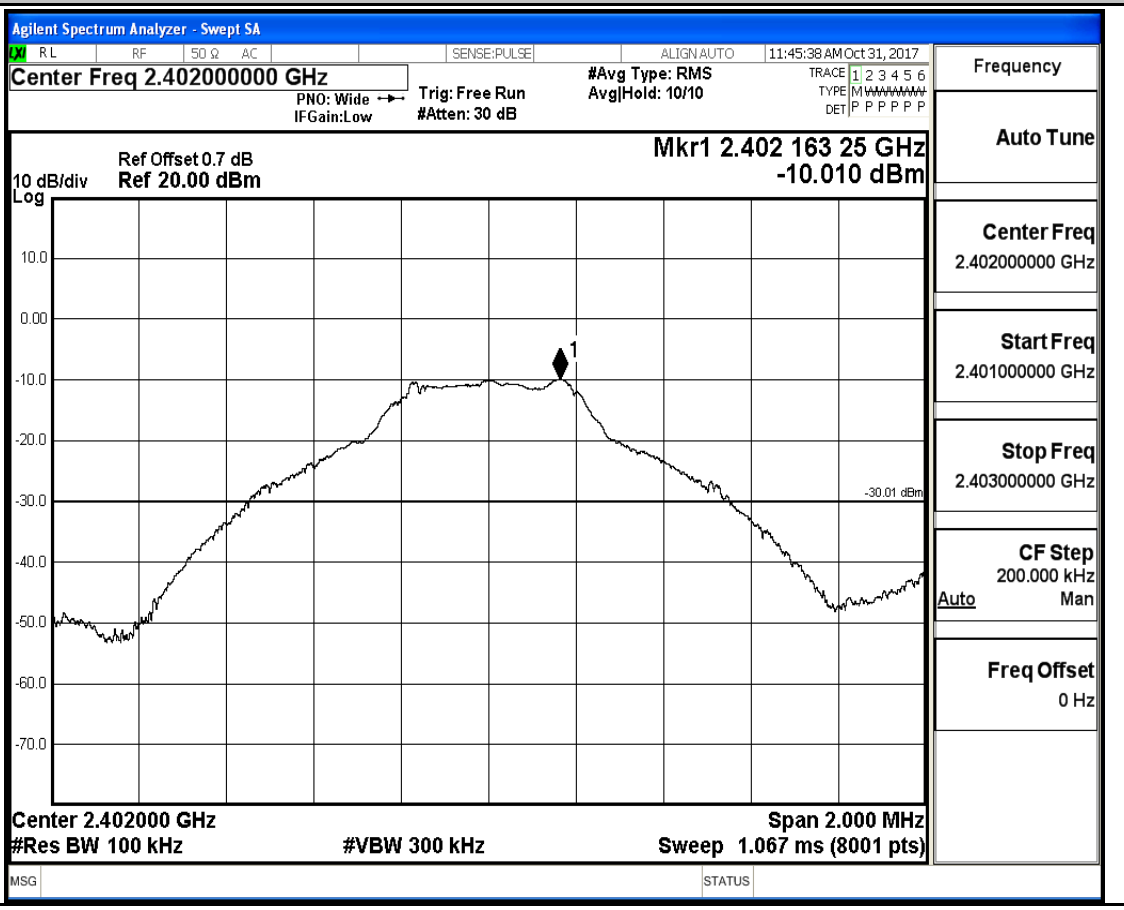
Band-edge for RF Conducted Emissions_8-DPSK_2480_Hopping Off

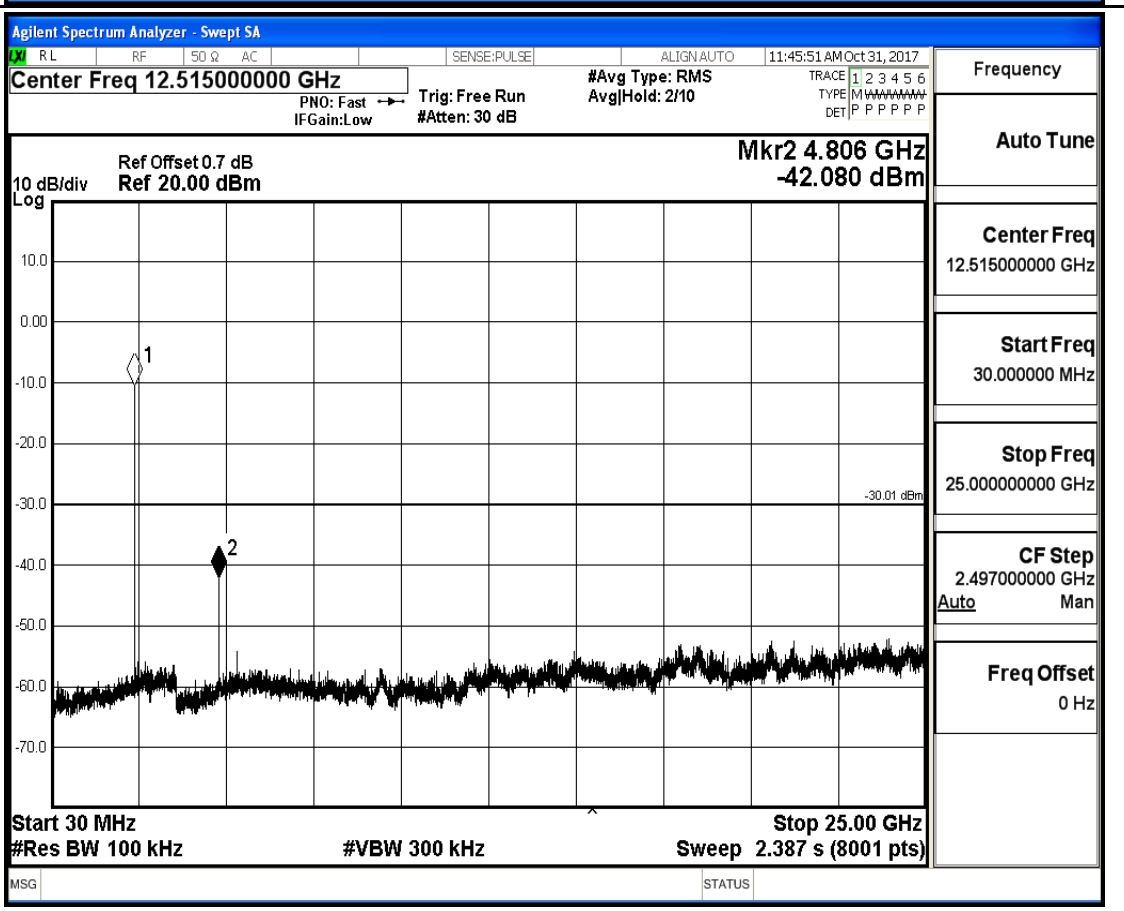


A.7 RF Conducted Spurious Emissions

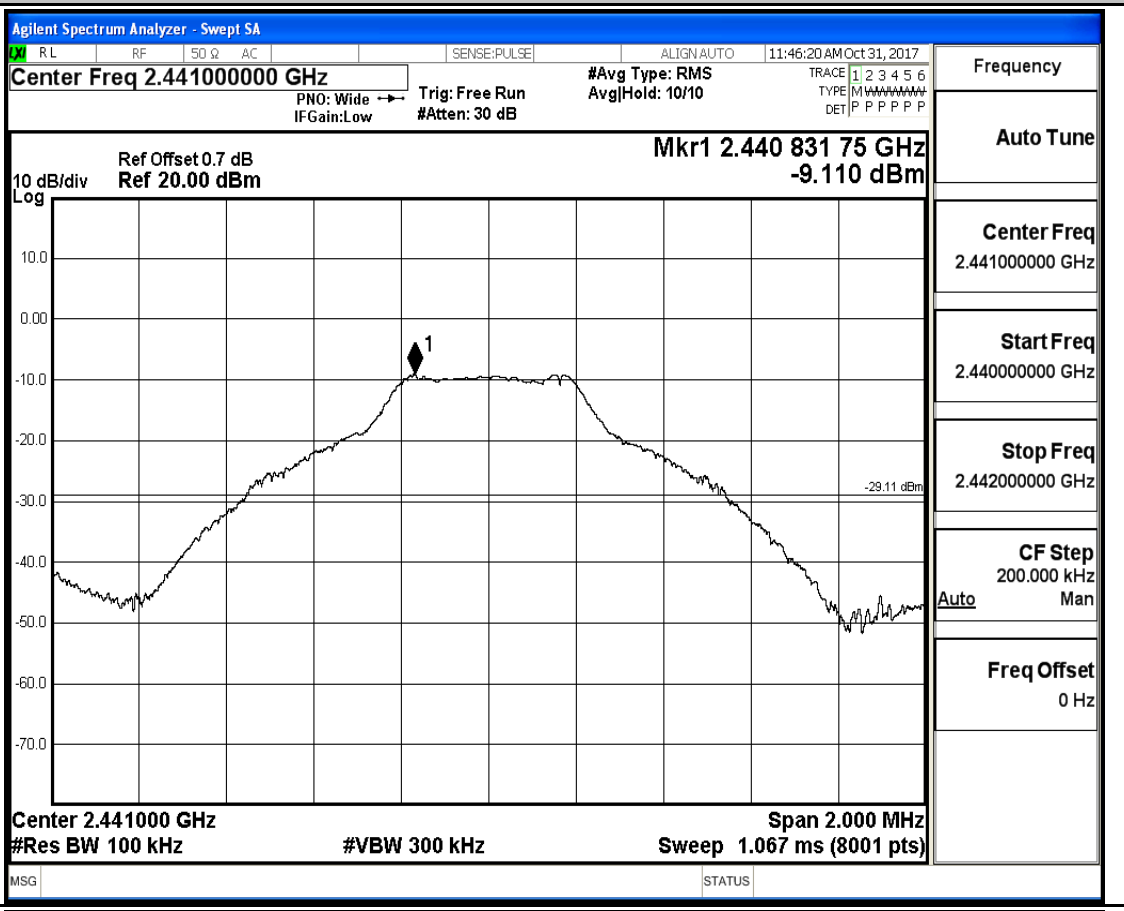
Test Mode	Test Channel	StartFre [MHz]	StopFre [MHz]	RBW [kHz]	VBW [kHz]	Pref[dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	2402	30	25000	100	300	-10.01	-42.080	<-30.01	PASS
	2441	30	25000	100	300	-9.11	-38.855	<-29.11	PASS
	2480	30	25000	100	300	-8.641	-39.777	<-28.641	PASS
π/4-DQPSK	2402	30	25000	100	300	-13.614	-48.225	<-33.614	PASS
	2441	30	25000	100	300	-12.347	-44.882	<-32.347	PASS
	2480	30	25000	100	300	-11.756	-33.033	<-31.756	PASS
8-DPSK	2402	30	25000	100	300	-13.406	-43.646	<-33.406	PASS
	2441	30	25000	100	300	-12.017	-44.746	<-32.017	PASS
	2480	30	25000	100	300	-11.776	-44.540	<-31.776	PASS

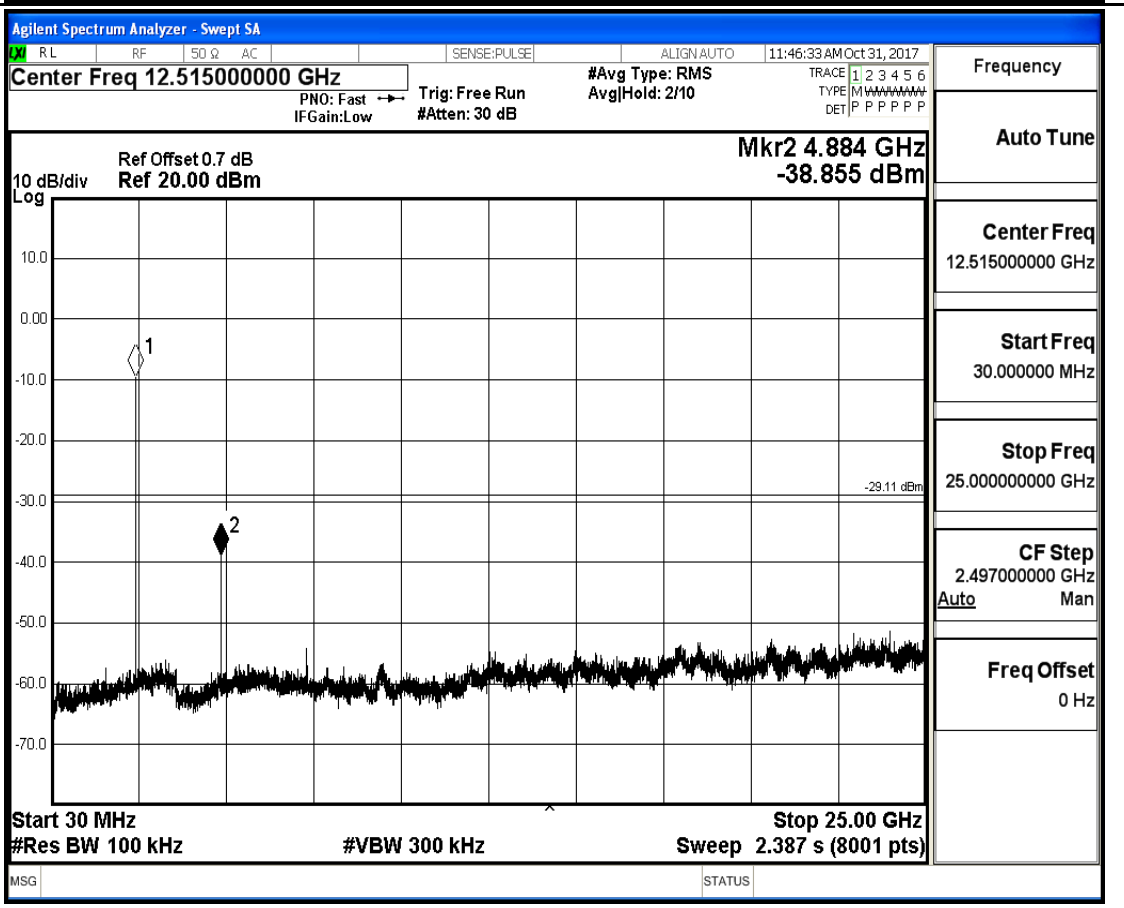
RF Conducted Spurious Emissions_GFSK_2402



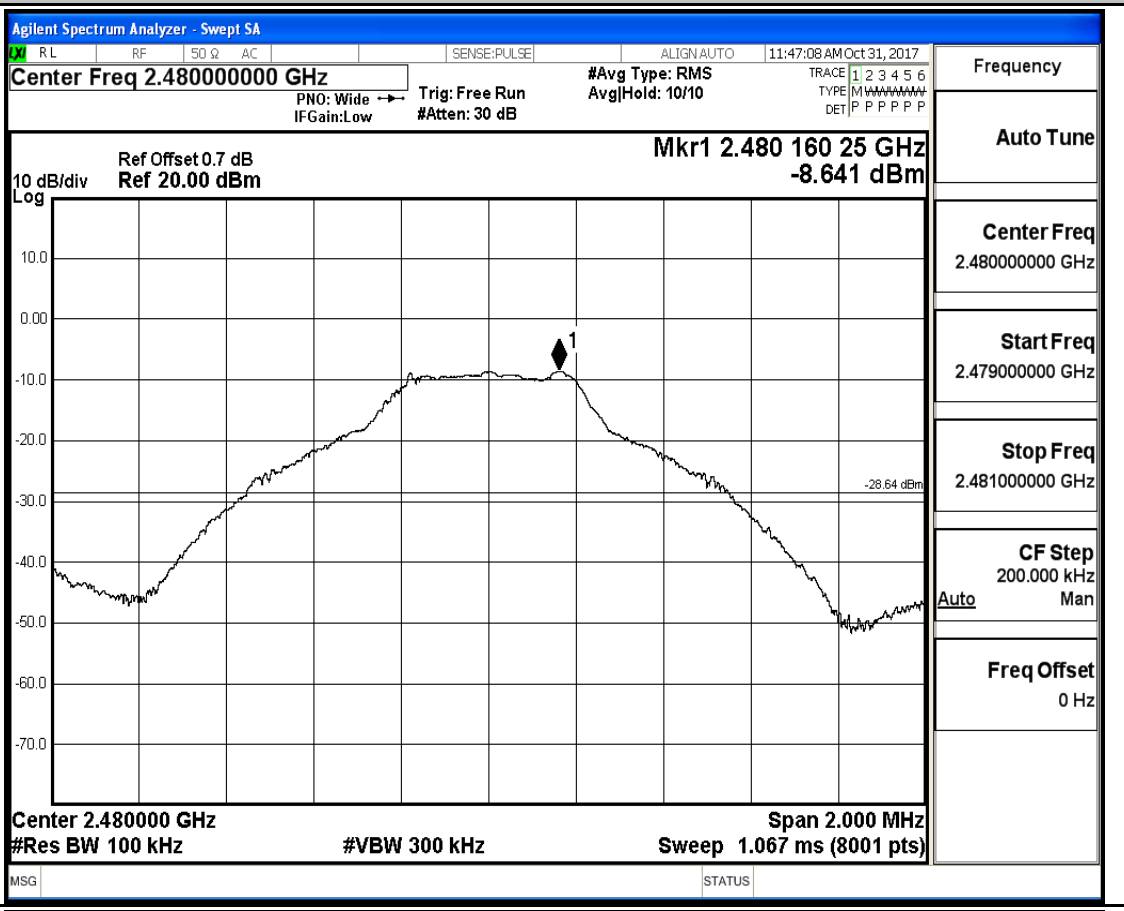


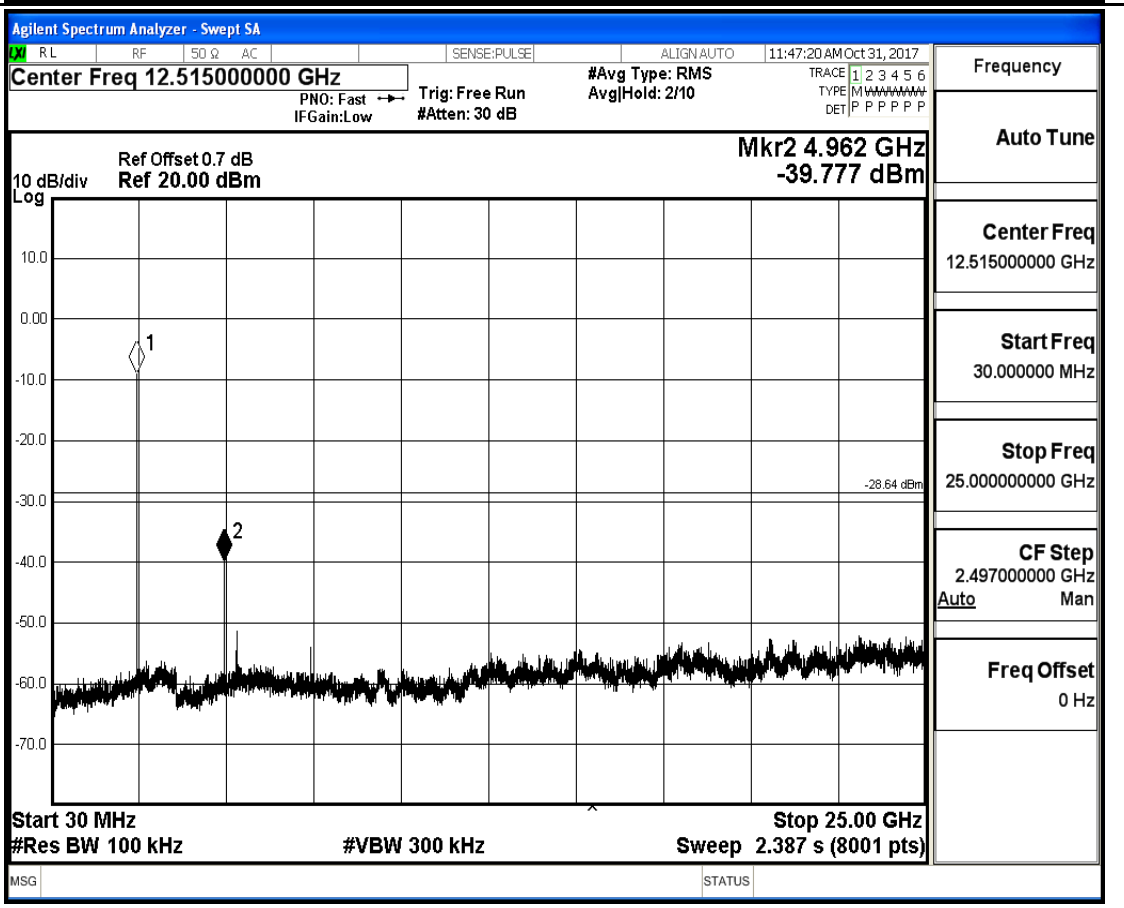
RF Conducted Spurious Emissions_GFSK_2441



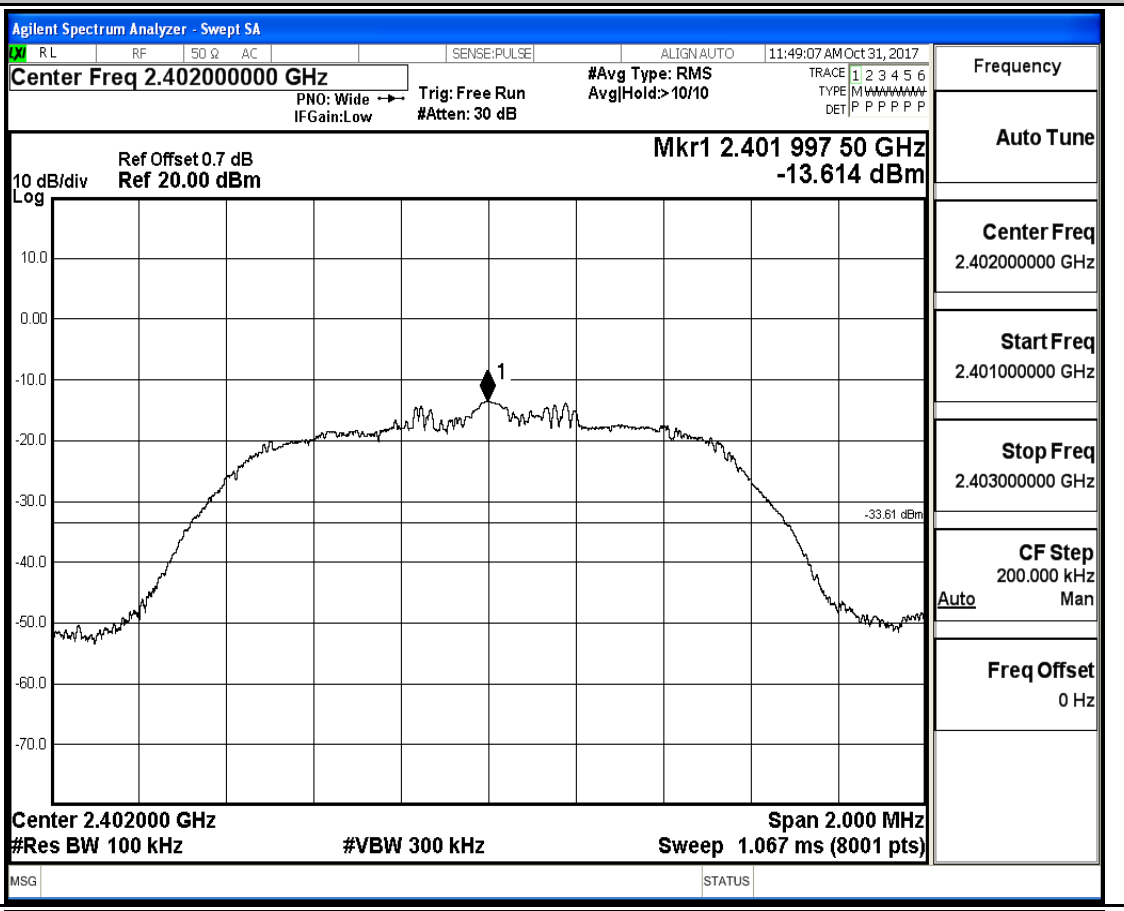


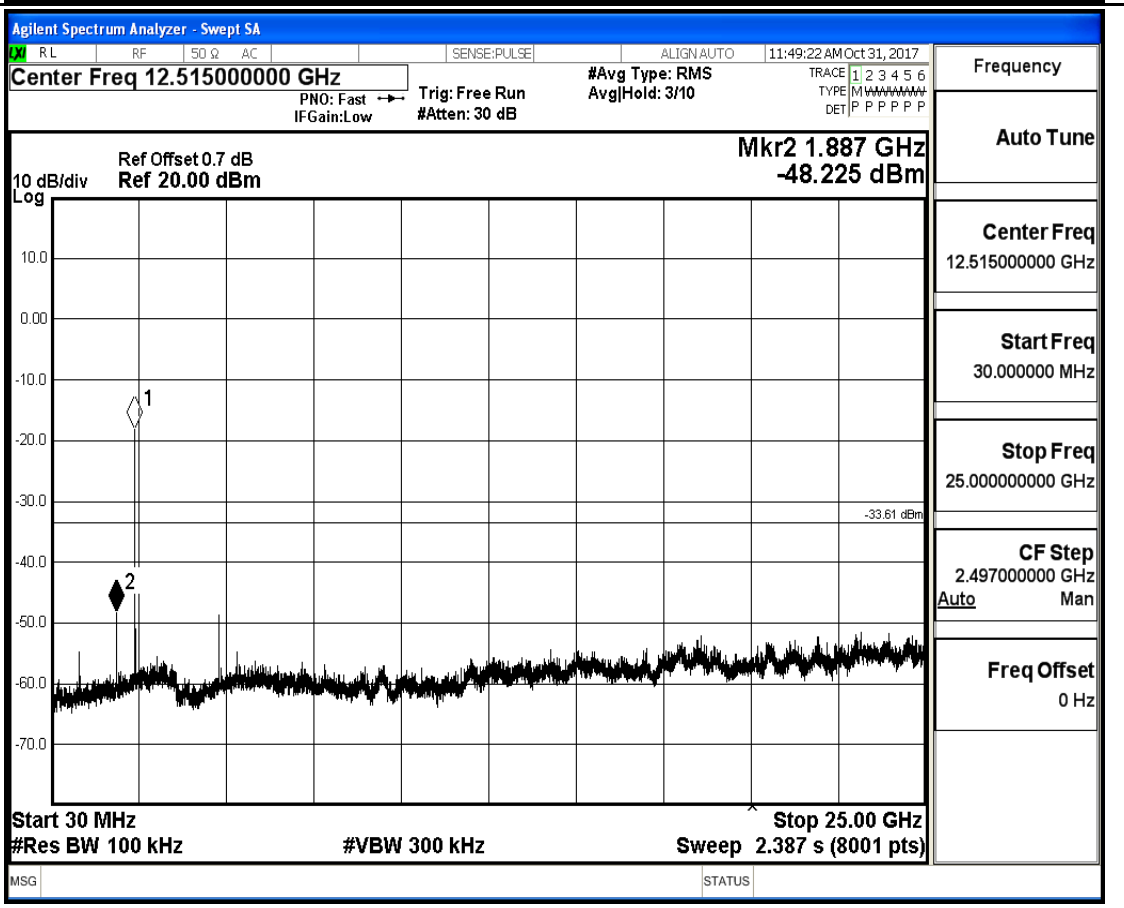
RF Conducted Spurious Emissions_GFSK_2480



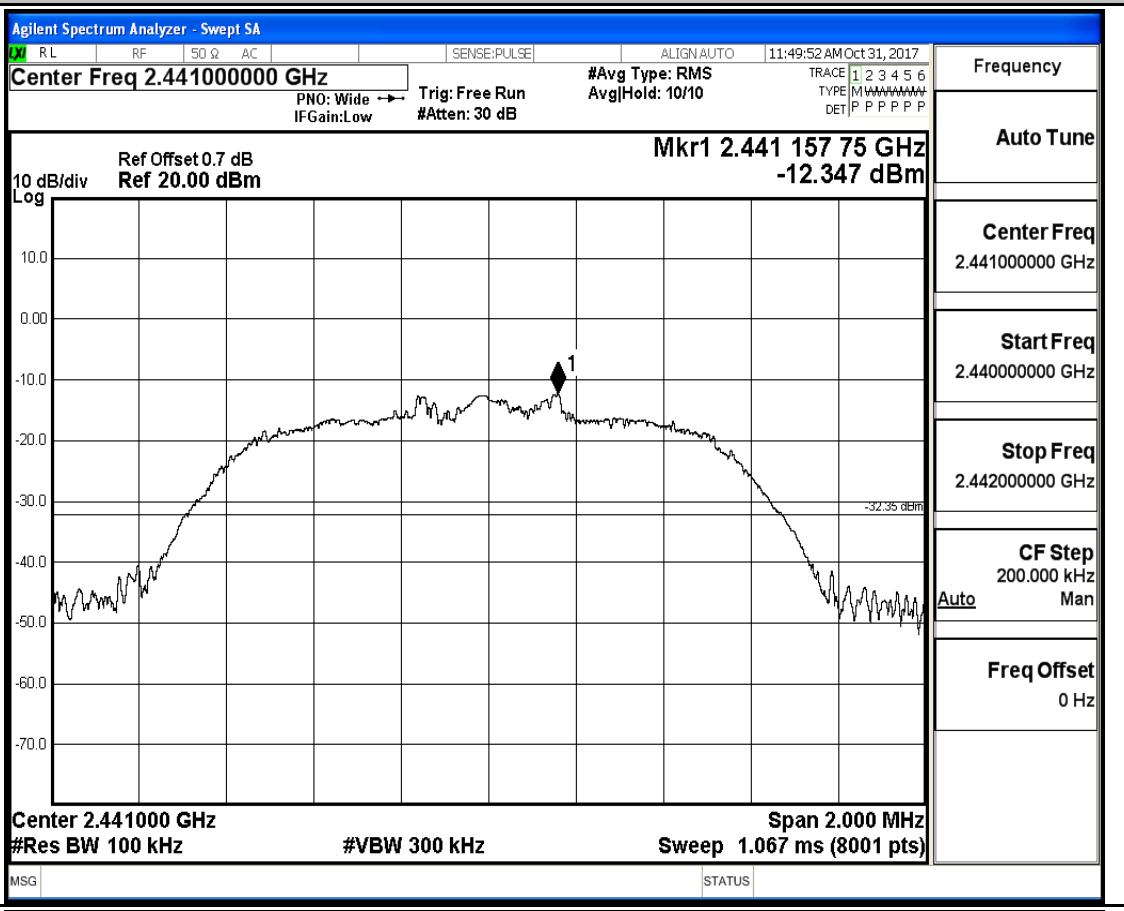


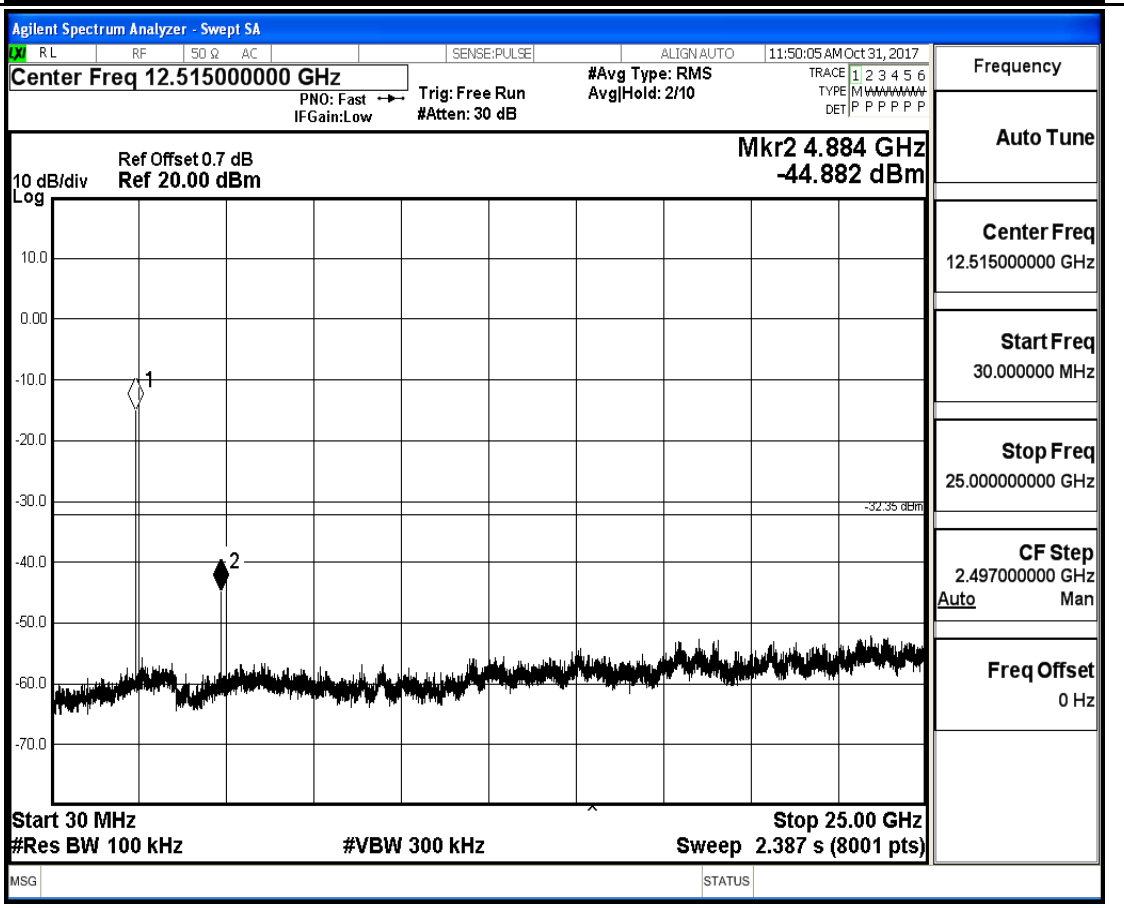
RF Conducted Spurious Emissions_π/4-DQPSK_2402



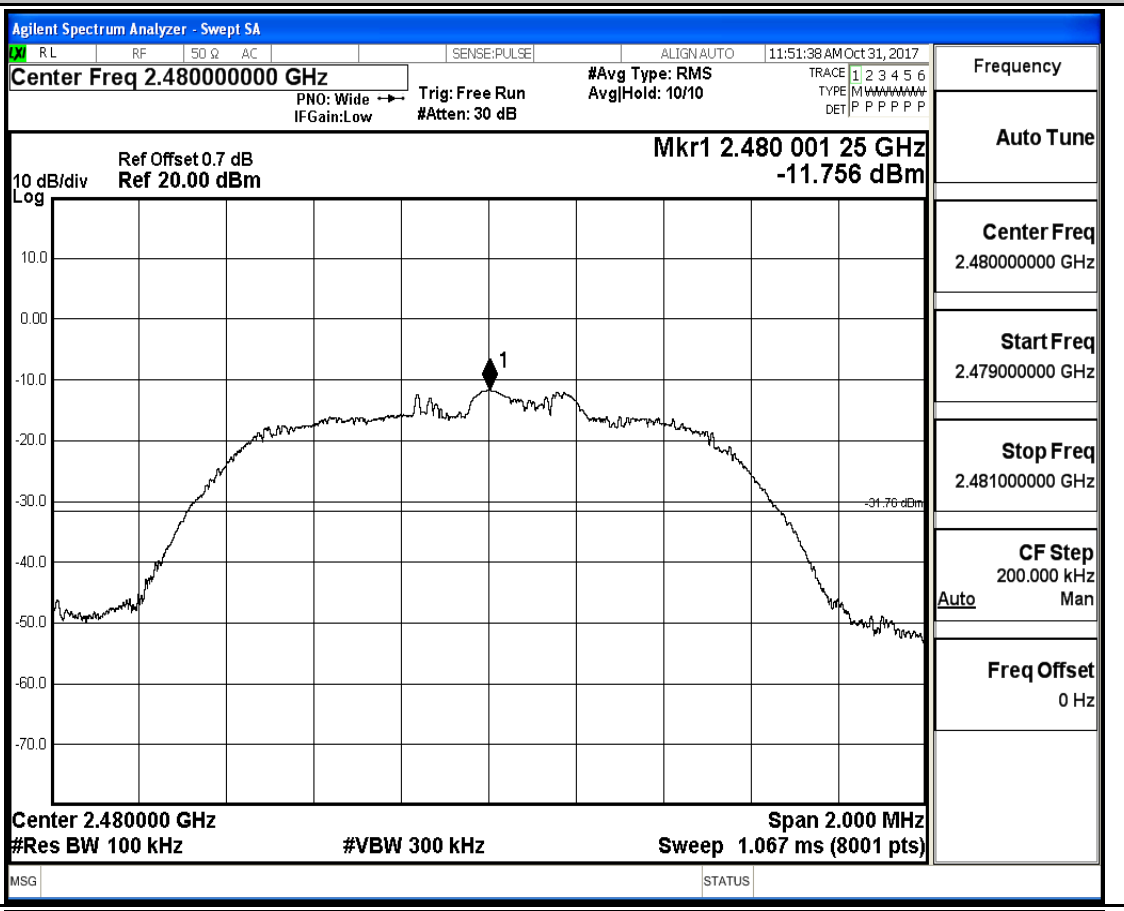


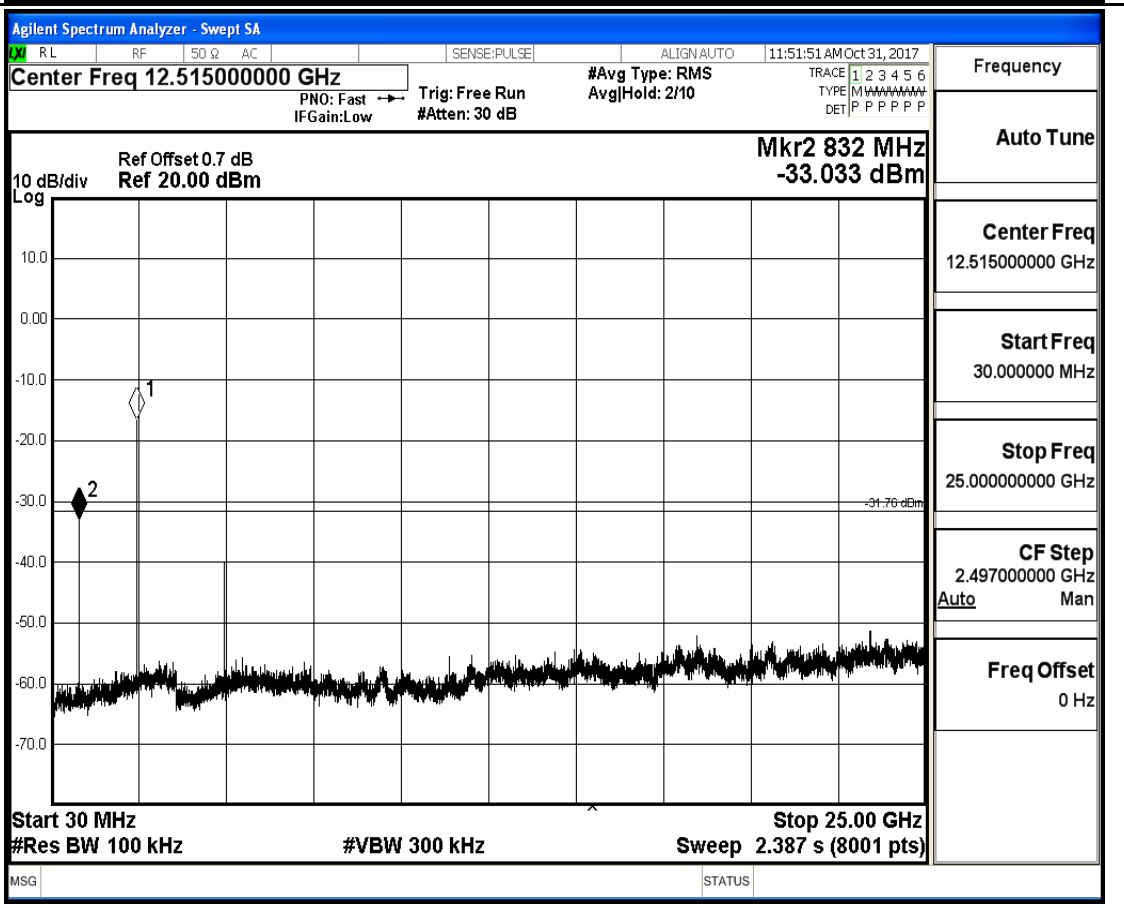
RF Conducted Spurious Emissions_π/4-DQPSK_2441



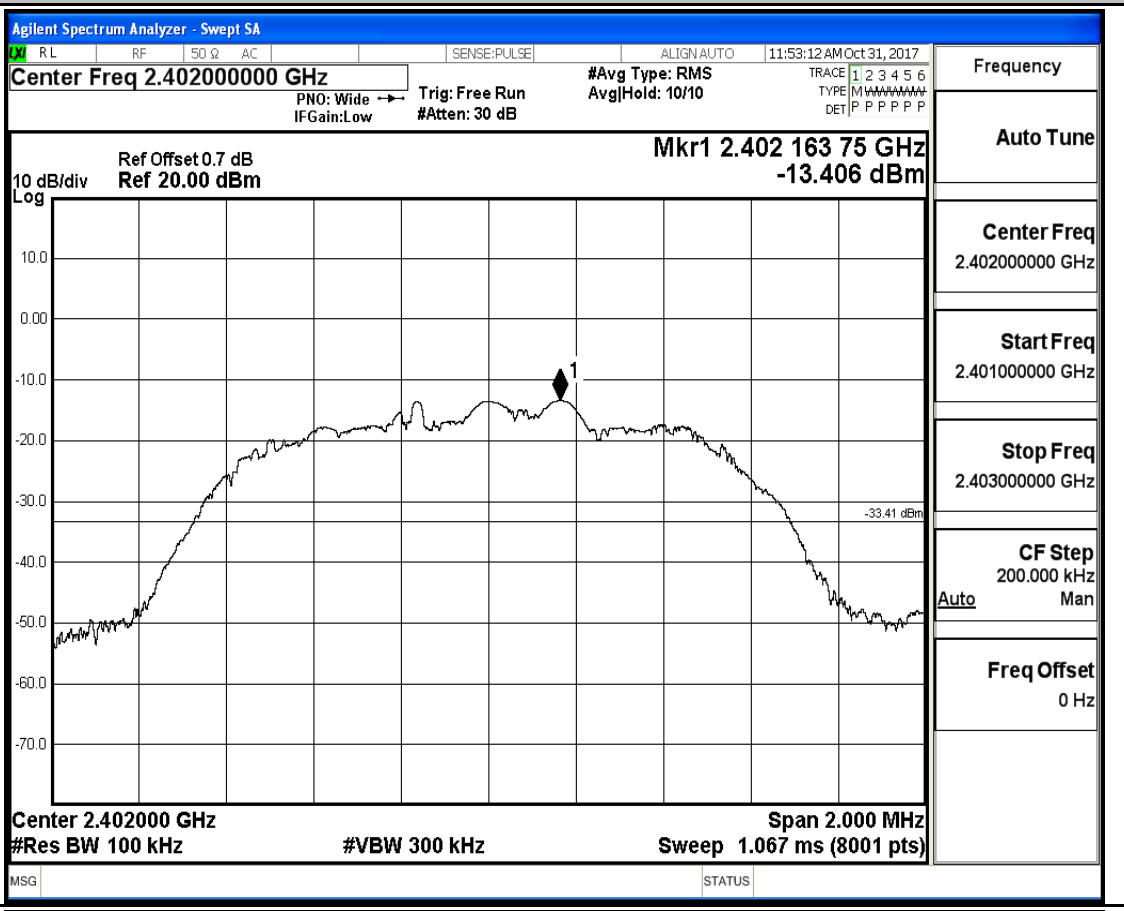


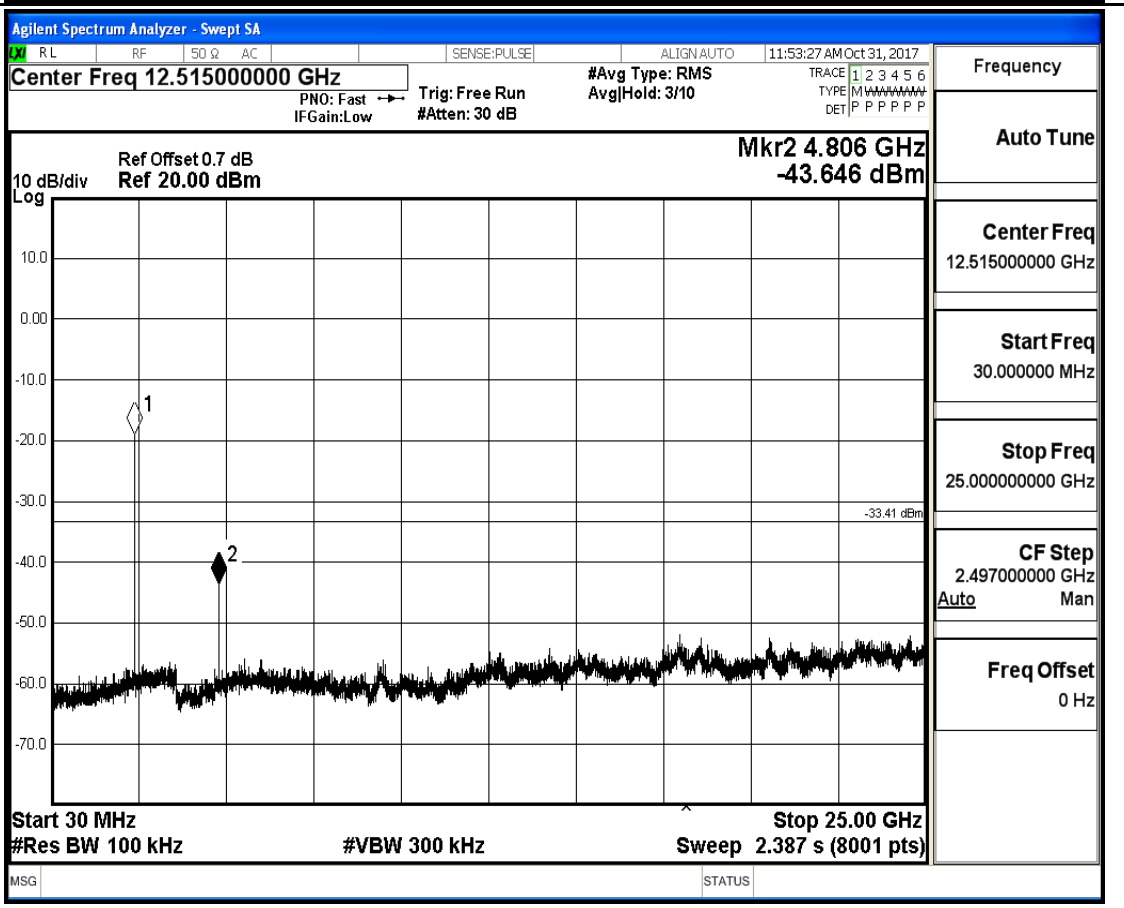
RF Conducted Spurious Emissions_π/4-DQPSK_2480



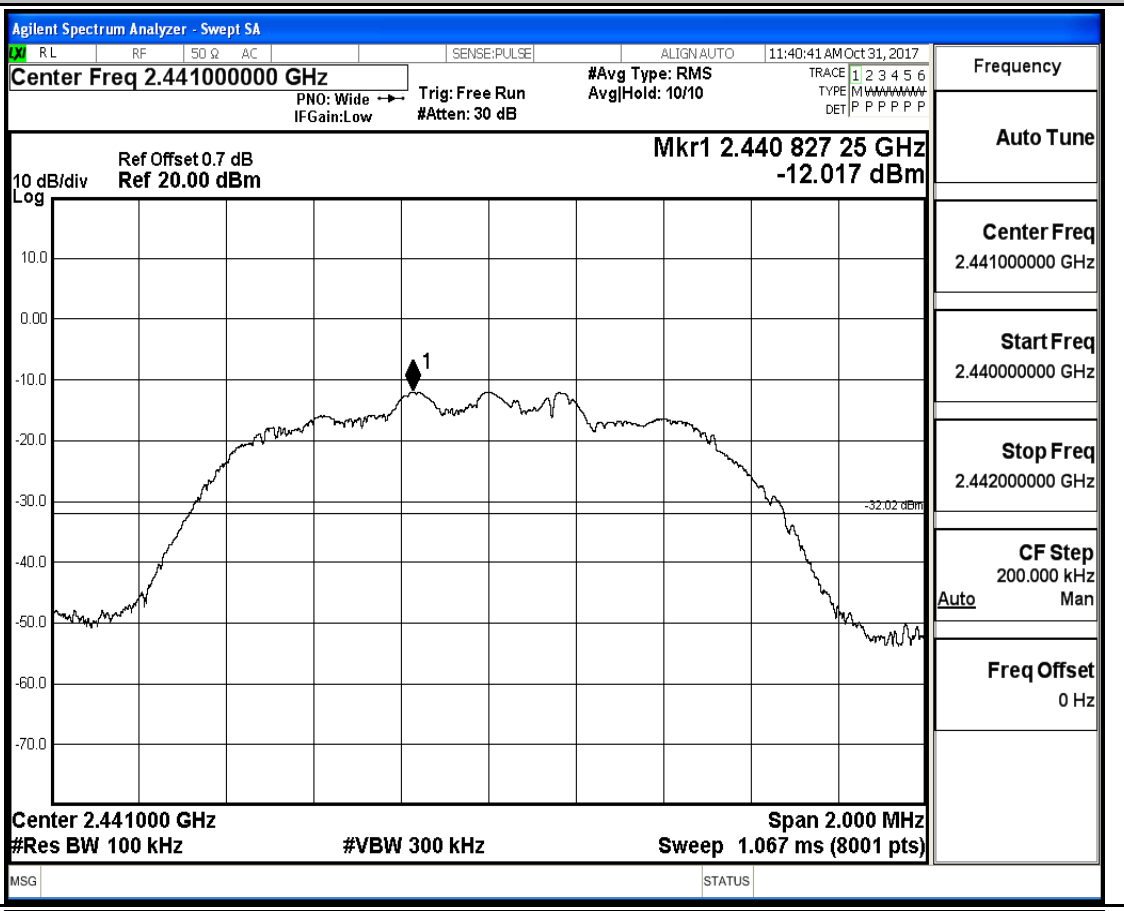


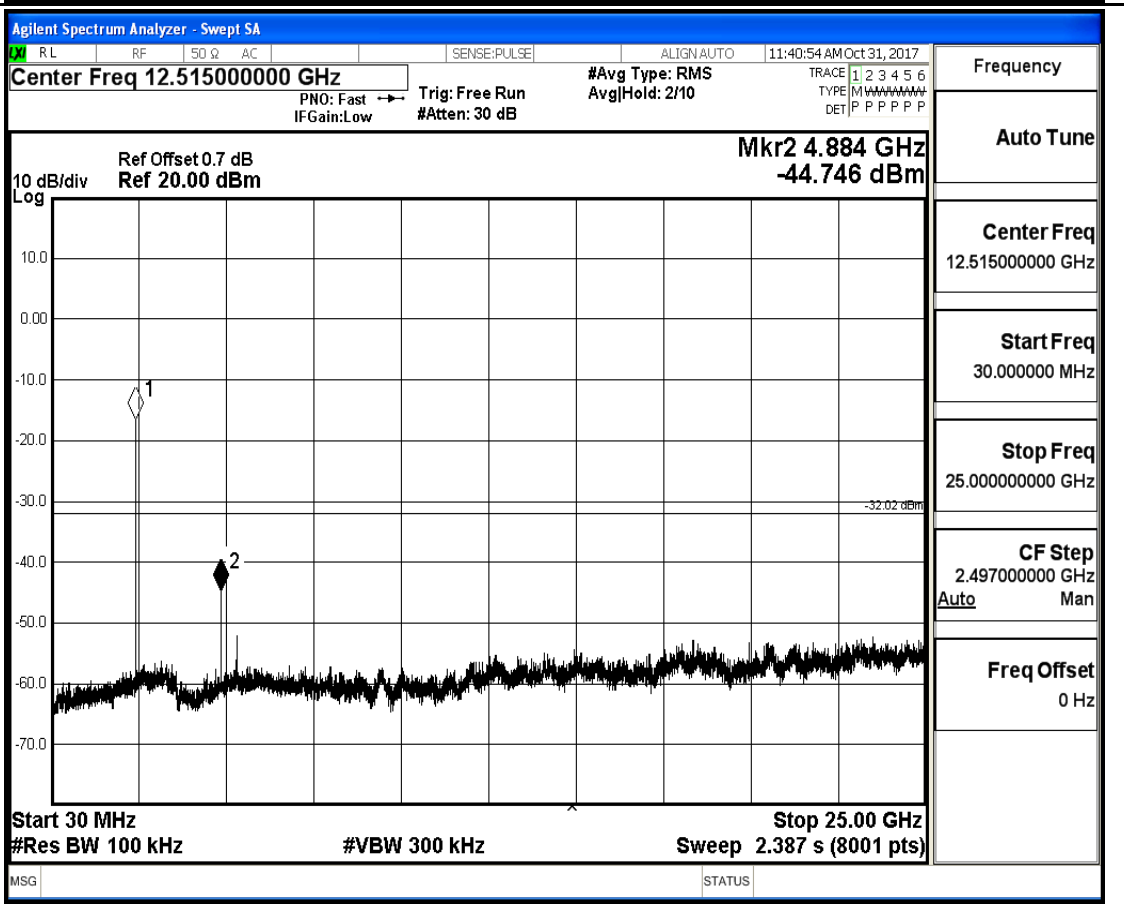
RF Conducted Spurious Emissions_8-DPSK_2402



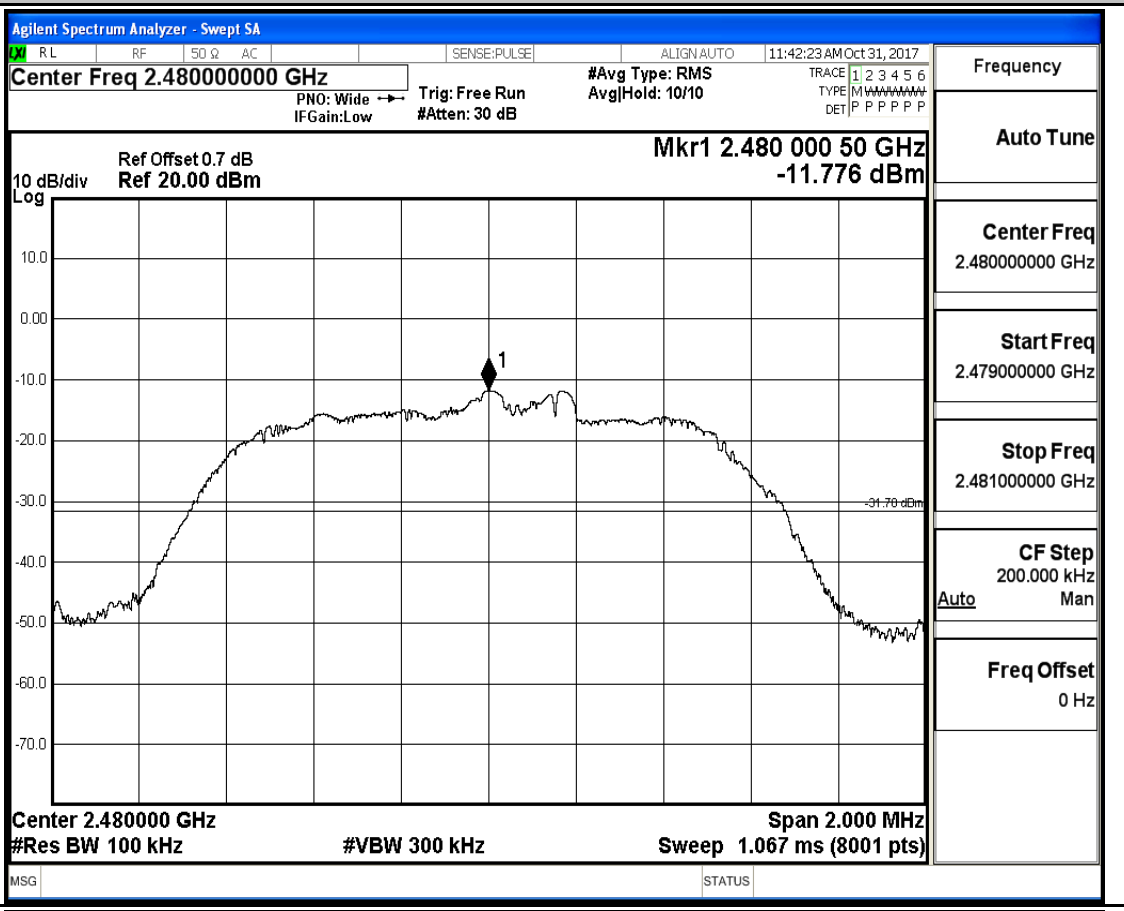


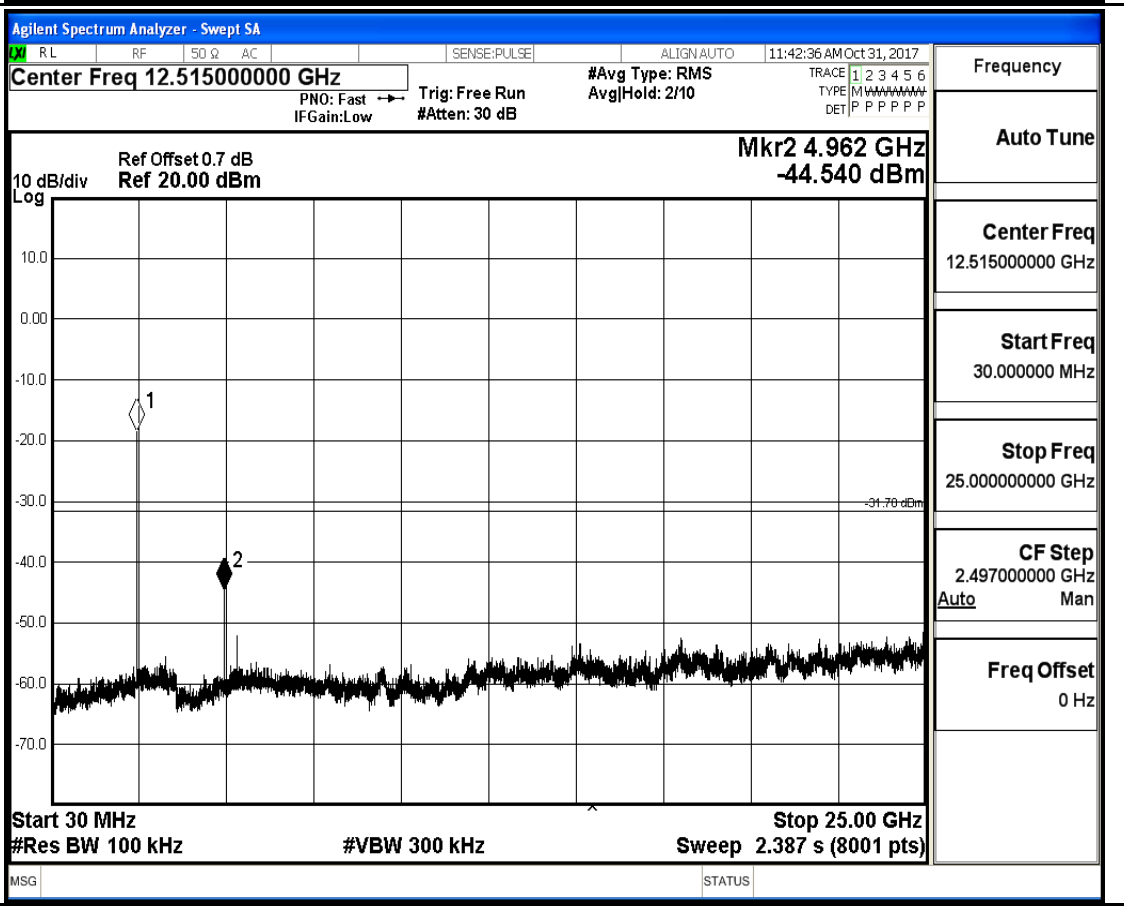
RF Conducted Spurious Emissions_8-DPSK_2441





RF Conducted Spurious Emissions_8-DPSK_2480

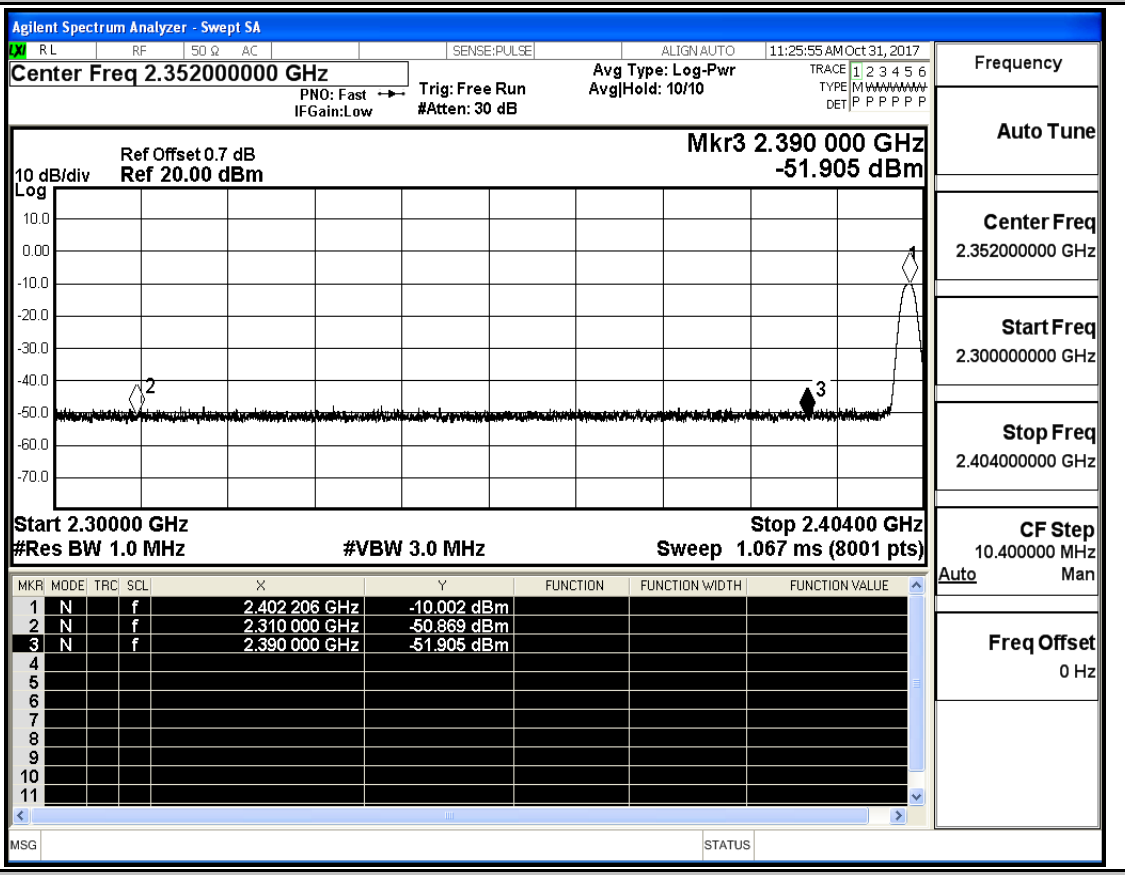




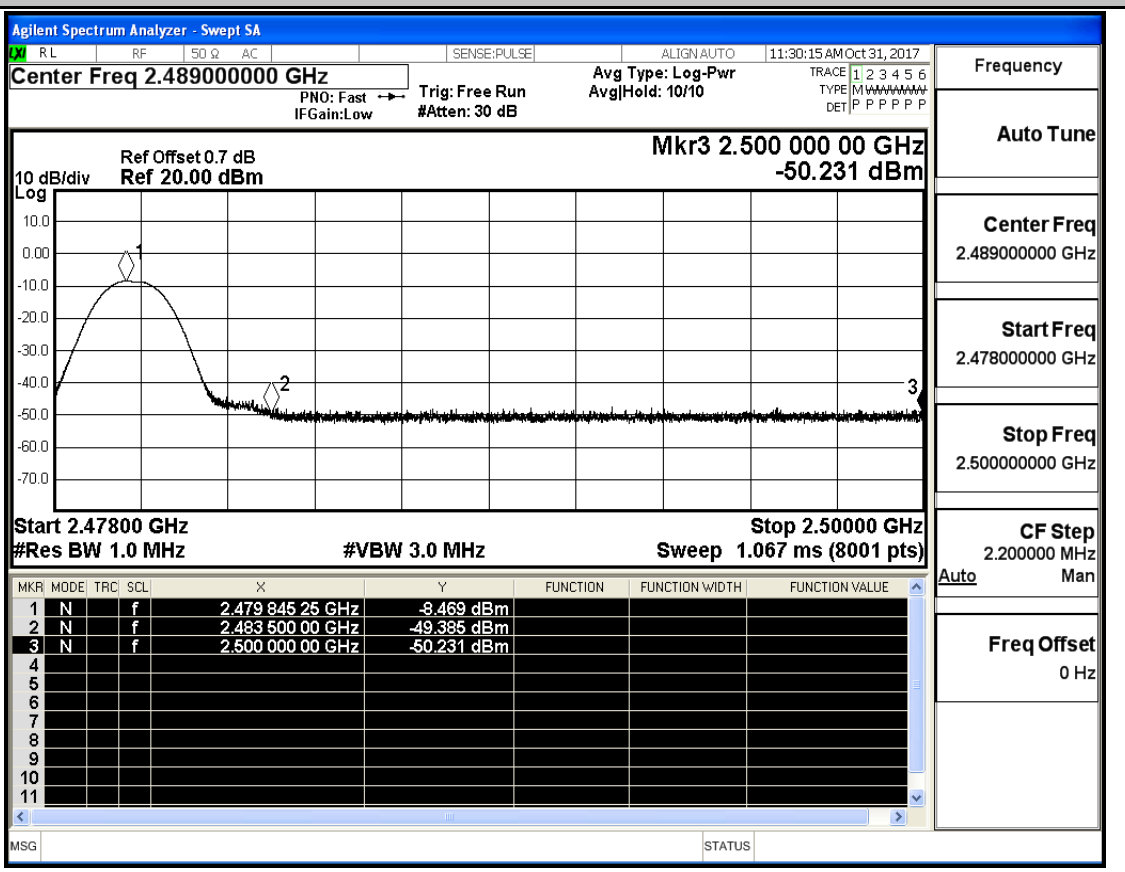
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-50.87	2.0	0	46.39	PEAK	74	PASS
	Off	2390.0	-51.91	2.0	0	45.35	PEAK	74	PASS
	Off	2483.5	-49.39	2.0	0	47.87	PEAK	74	PASS
	Off	2500.0	-50.23	2.0	0	47.03	PEAK	74	PASS
π/4-DQPSK	Off	2310.0	-52.33	2.0	0	44.93	PEAK	74	PASS
	Off	2390.0	-50.31	2.0	0	46.95	PEAK	74	PASS
	Off	2483.5	-51.21	2.0	0	46.05	PEAK	74	PASS
	Off	2500.0	-50.20	2.0	0	47.06	PEAK	74	PASS
8-DPSK	Off	2310.0	-50.90	2.0	0	46.36	PEAK	74	PASS
	Off	2390.0	-51.43	2.0	0	45.83	PEAK	74	PASS
	Off	2483.5	-49.66	2.0	0	47.60	PEAK	74	PASS
	Off	2500.0	-50.52	2.0	0	46.74	PEAK	74	PASS

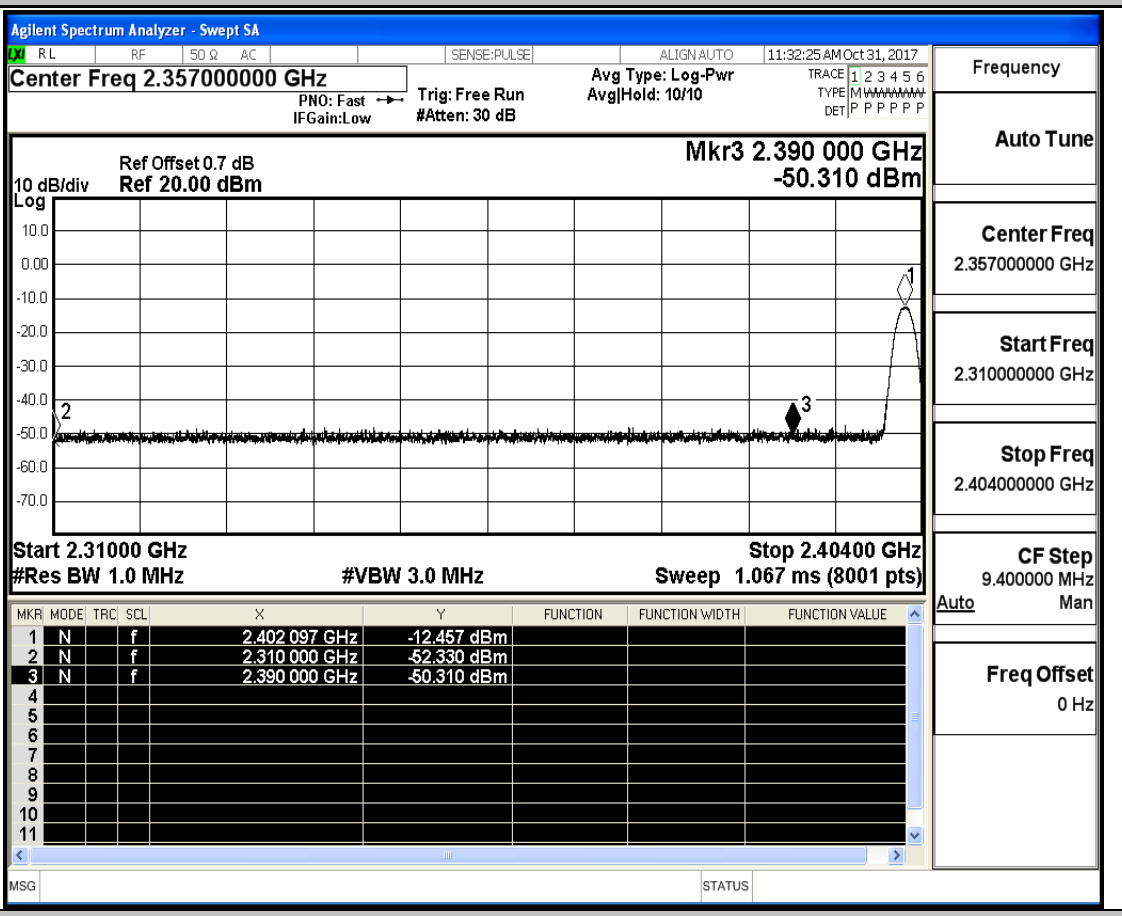
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK



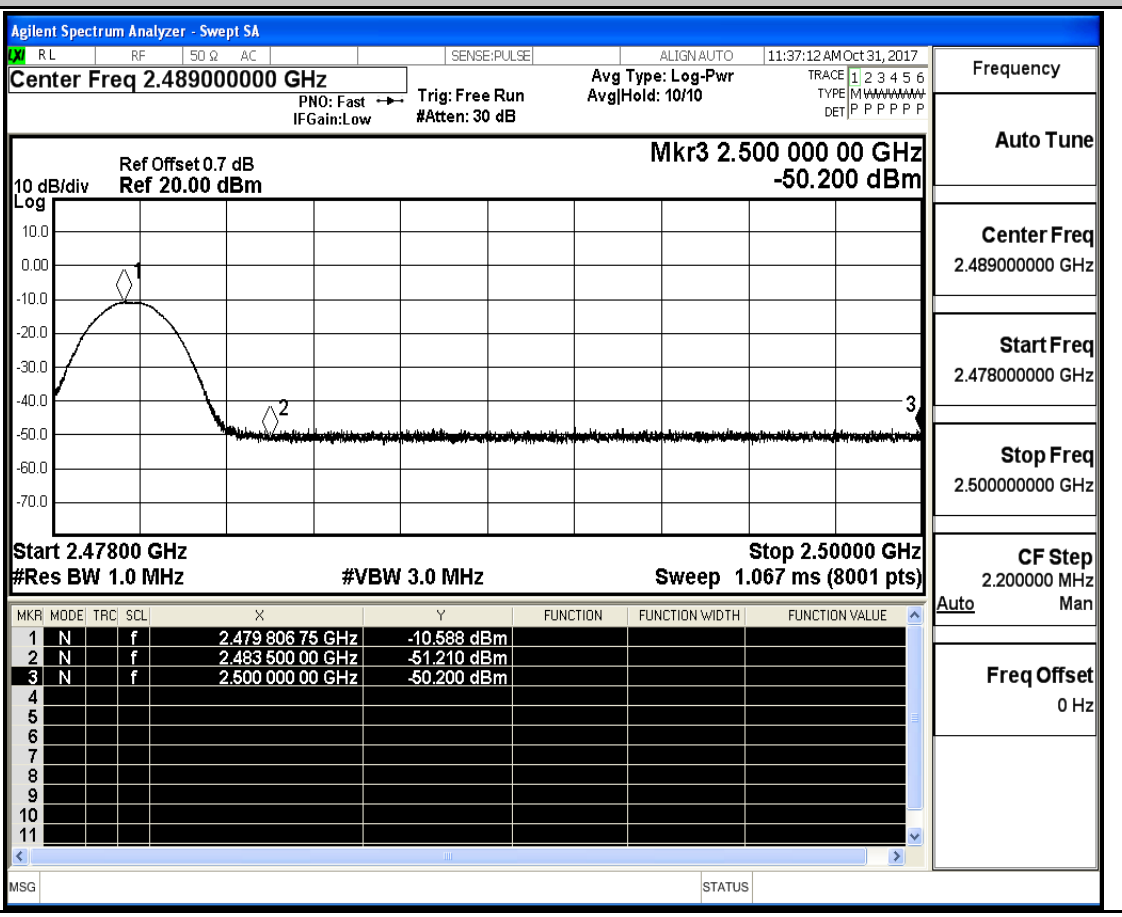
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK



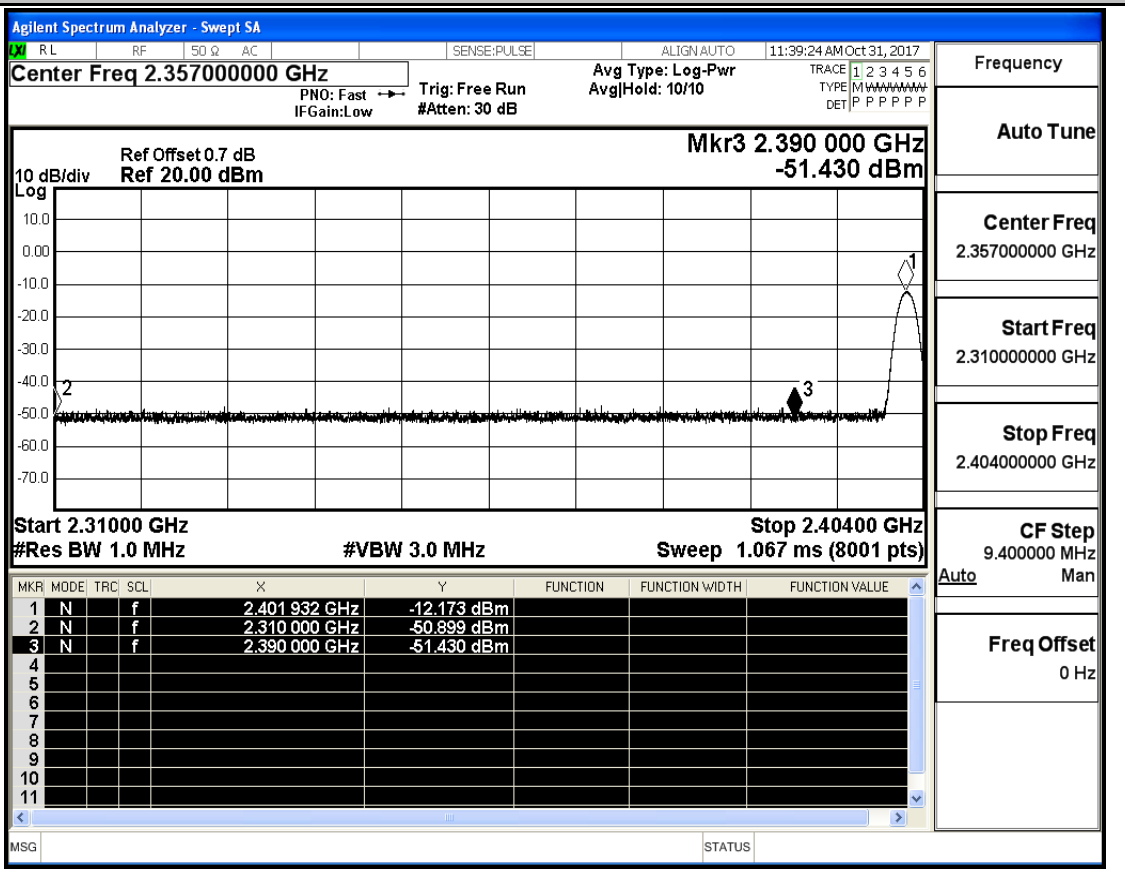
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK



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



Restrict-band band-edge measurements_Hopping Off_8-DPSK_PEAK



Restrict-band band-edge measurements_Hopping Off_8-DPSK_PEAK