

Appendix A

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

Product Name: tablet

Trade Mark: TOPELOTEK, UJoyFeel

Test Model: KIDS707

Environmental Conditions

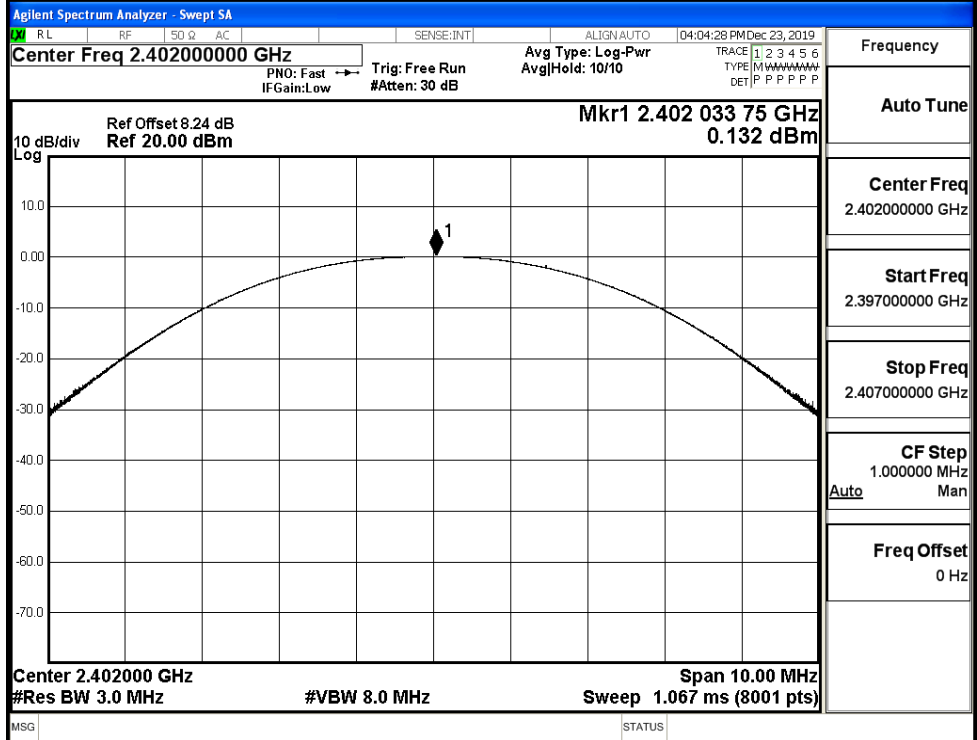
Temperature:	24.6°C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Alisa Huang
Supervised by:	Wang Chuang

A.1 Maximum Conducted Peak Output Power

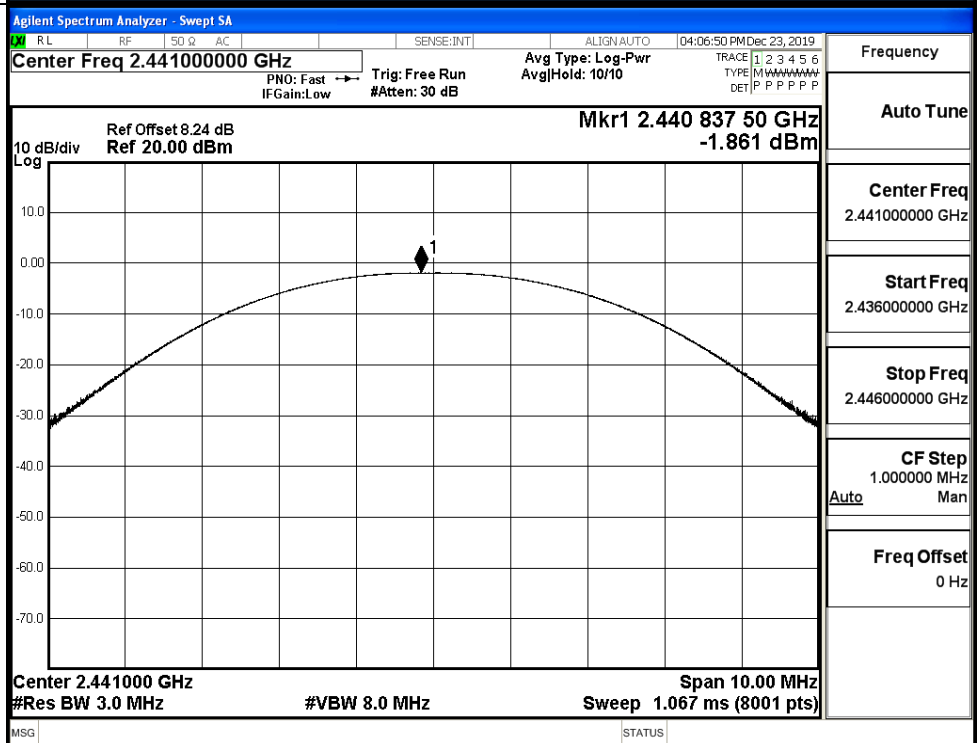
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.132	21	PASS
	MCH	-1.861	21	PASS
	HCH	-0.646	21	PASS
$\pi/4$ DQPSK	LCH	-0.622	21	PASS
	MCH	-2.522	21	PASS
	HCH	-1.418	21	PASS
8DPSK	LCH	-0.434	21	PASS
	MCH	-2.281	21	PASS
	HCH	-1.183	21	PASS

Test Graphs

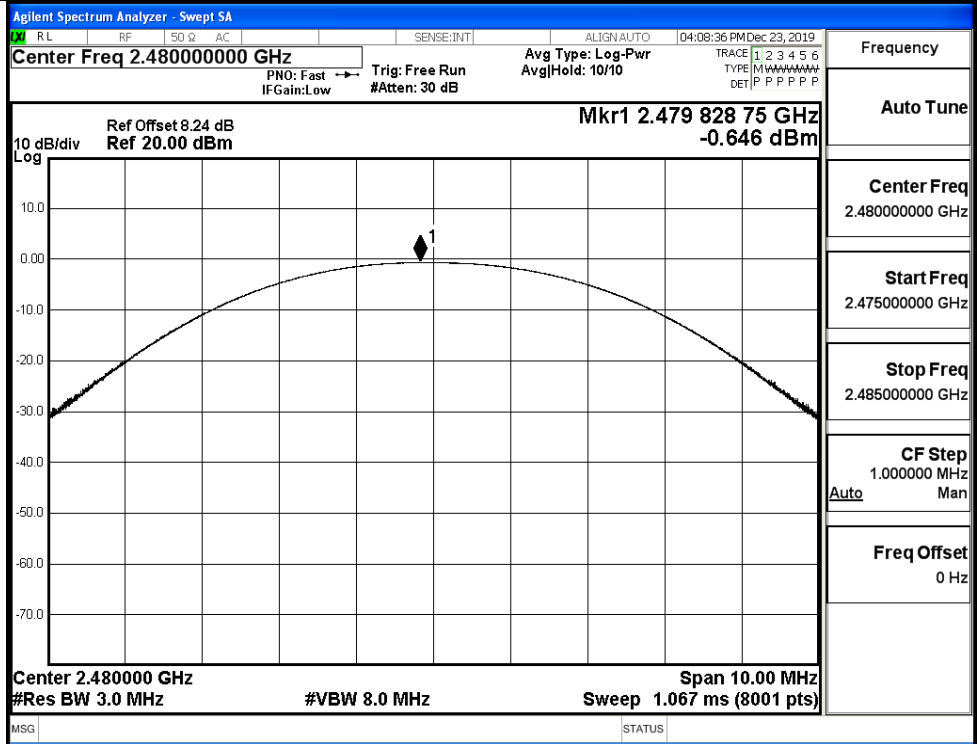
GFSK/LCH



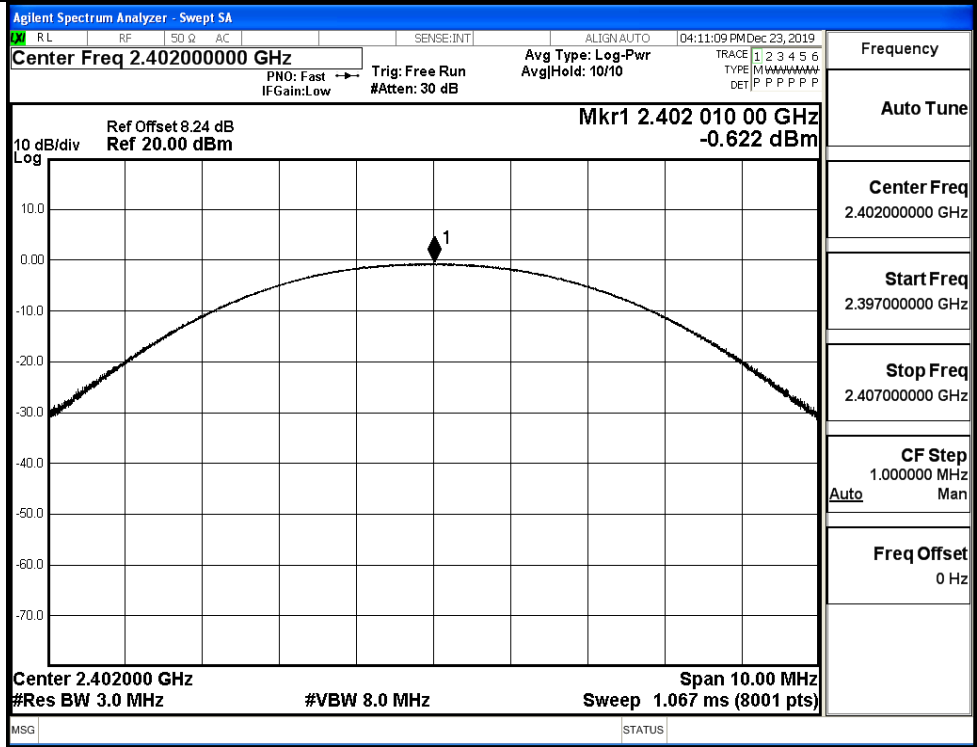
GFSK/MCH



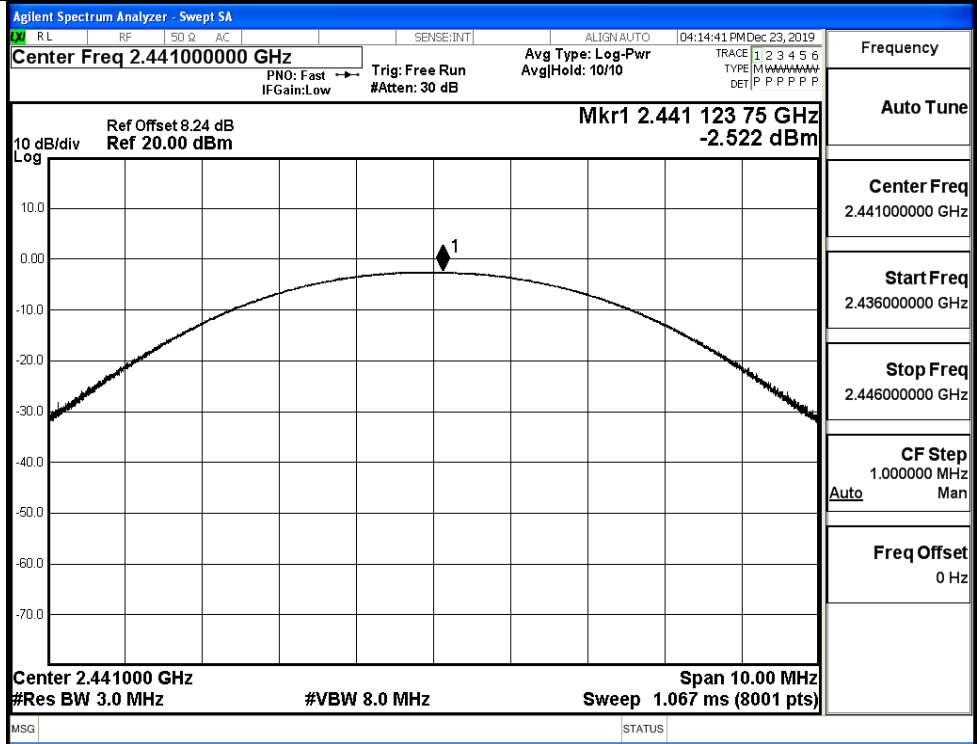
GFSK/HCH



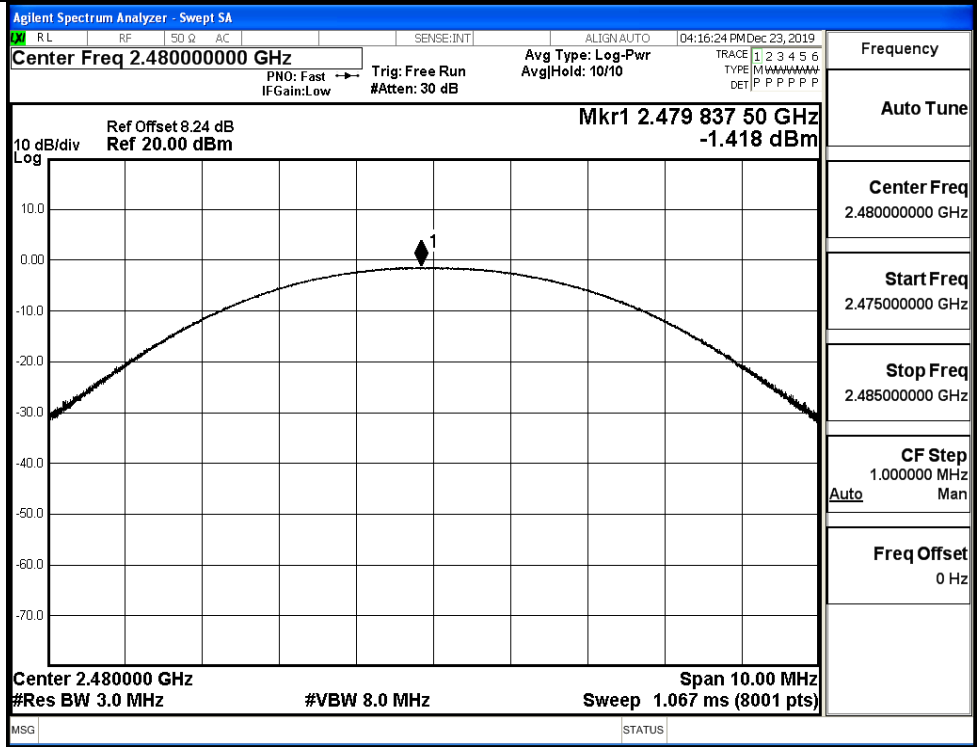
$\pi/4$ DQPSK/LCH



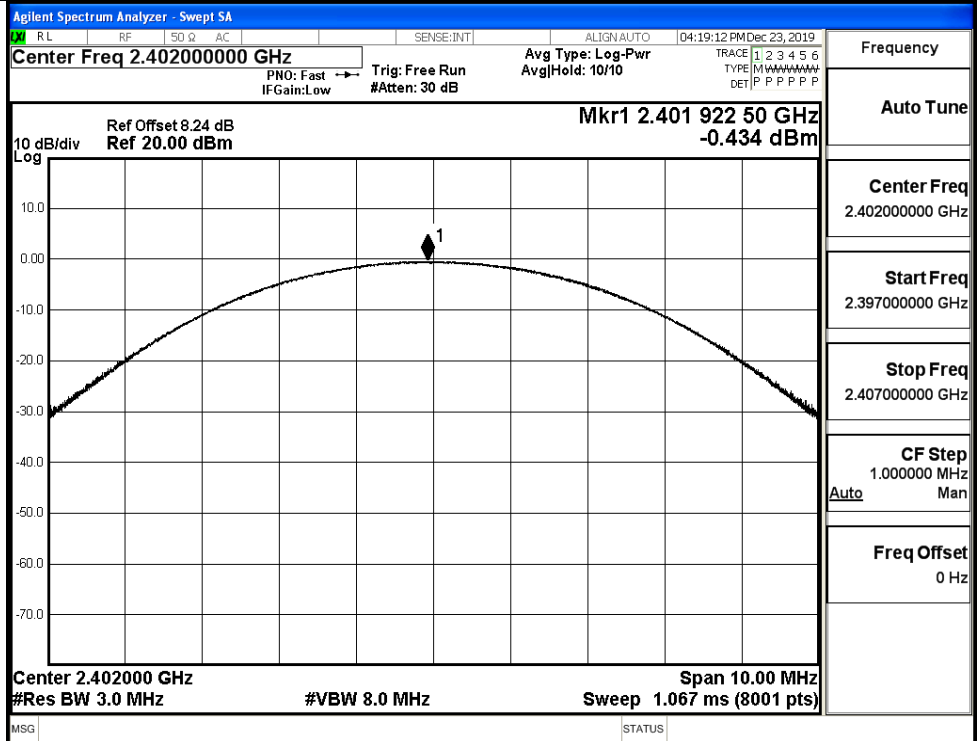
π /4DQPSK/MCH



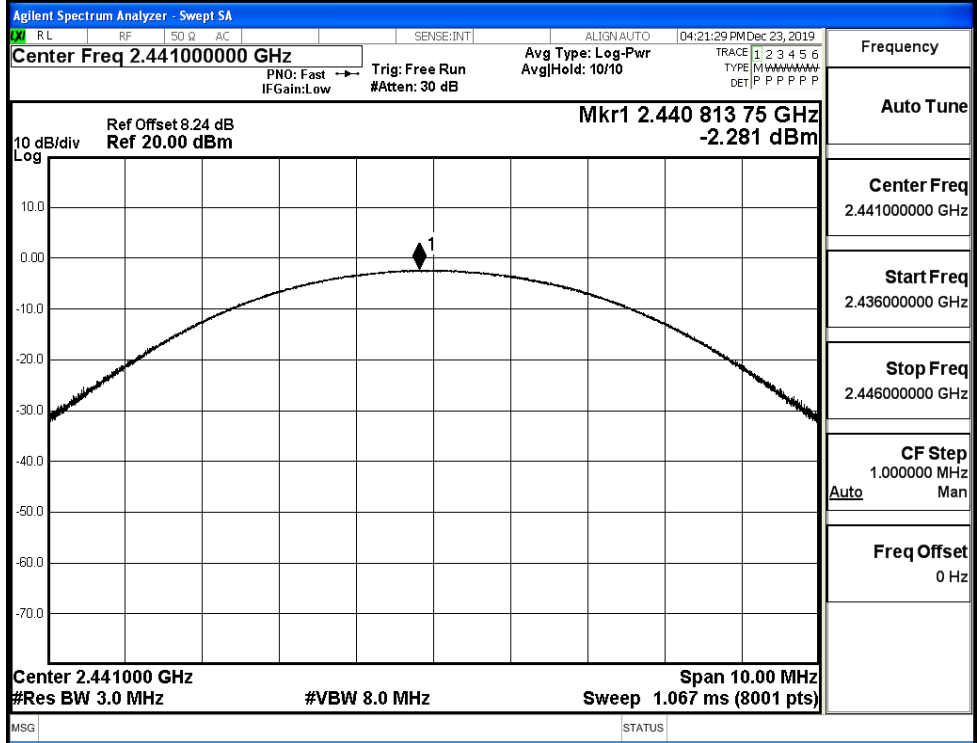
π /4DQPSK/HCH



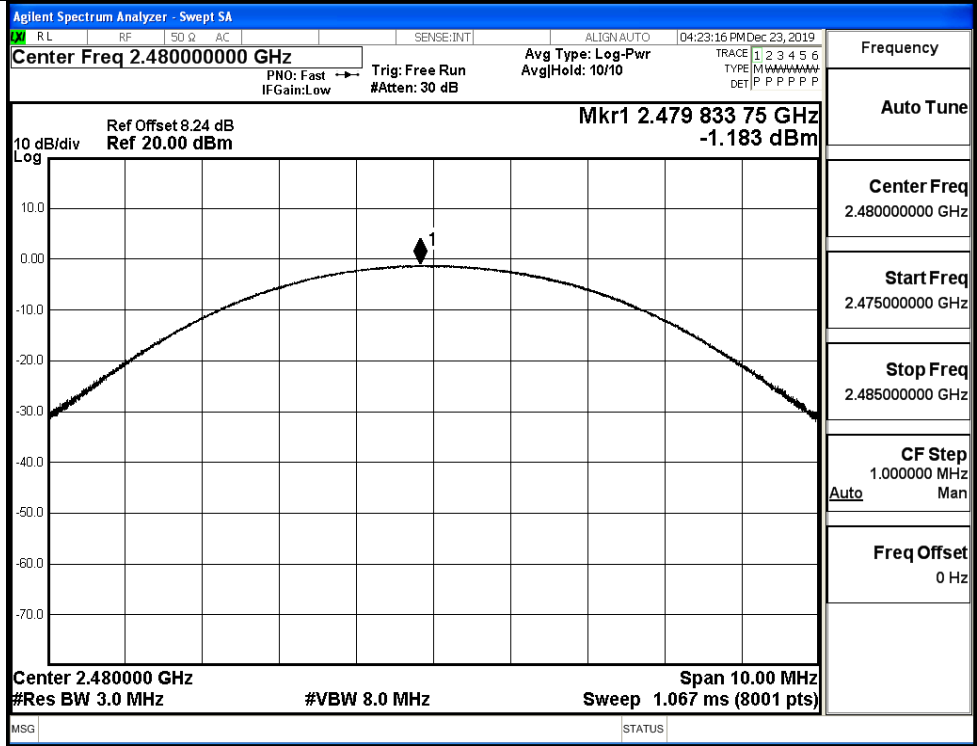
8DPSK/LCH



8DPSK/MCH

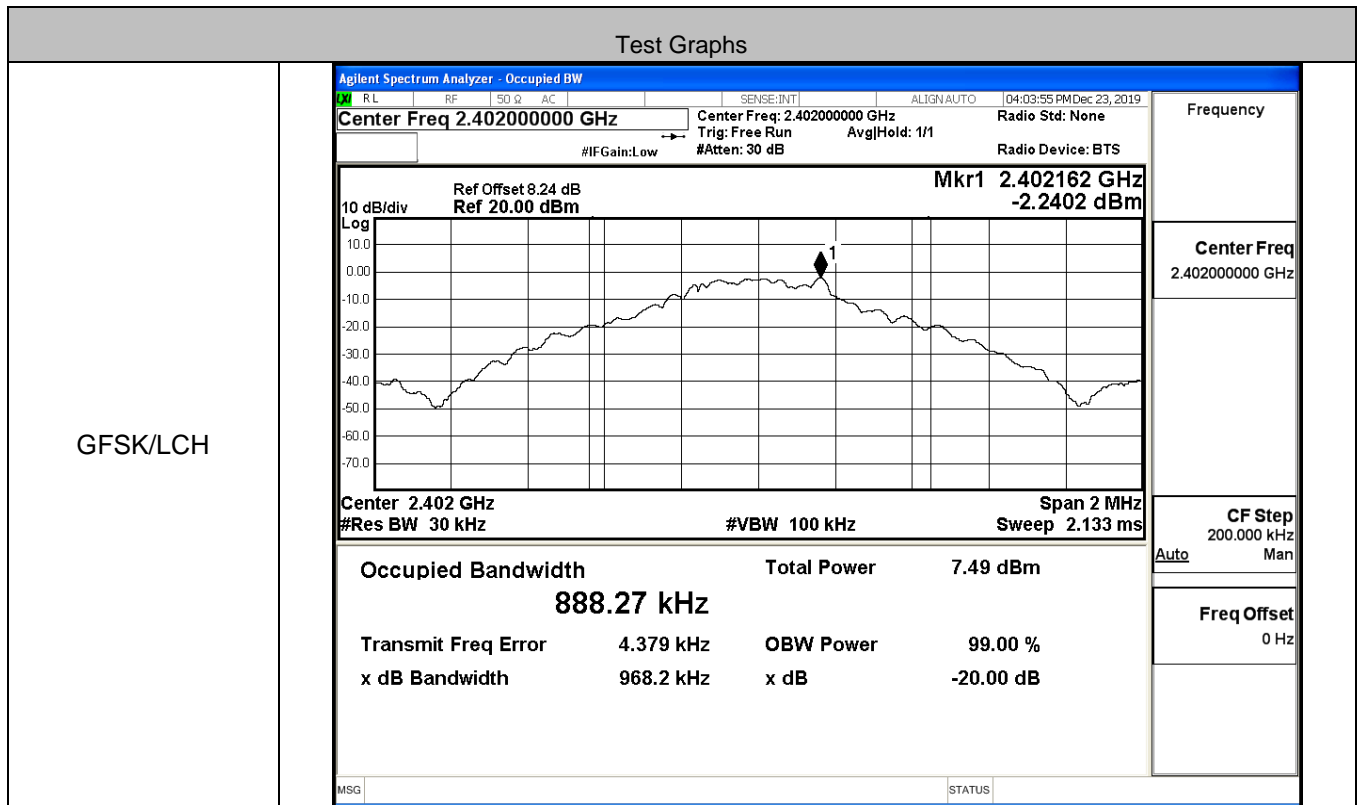


8DPSK/HCH

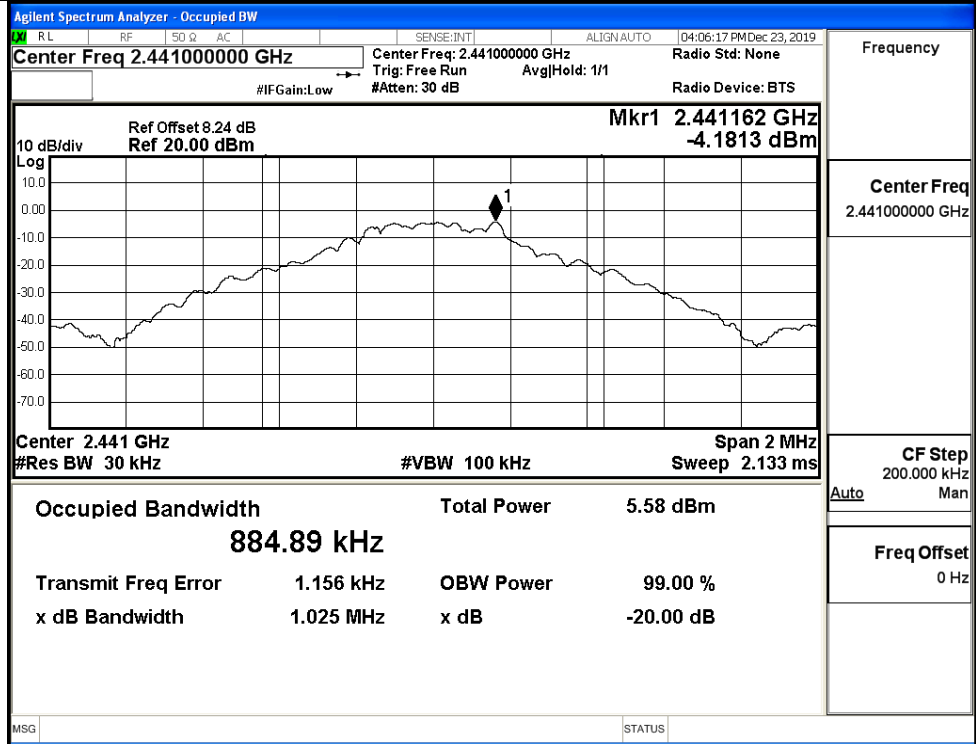


A.2 20dB Bandwidth and 99% Bandwidth

Mode	Channel	20dB Bandwidth [MHz]	99% Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9682	0.8883	Not Specified	PASS
	MCH	1.025	0.8849	Not Specified	PASS
	HCH	1.029	0.8888	Not Specified	PASS
π/4DQPSK	LCH	1.318	1.175	Not Specified	PASS
	MCH	1.293	1.176	Not Specified	PASS
	HCH	1.290	1.170	Not Specified	PASS
8DPSK	LCH	1.292	1.185	Not Specified	PASS
	MCH	1.299	1.189	Not Specified	PASS
	HCH	1.300	1.183	Not Specified	PASS

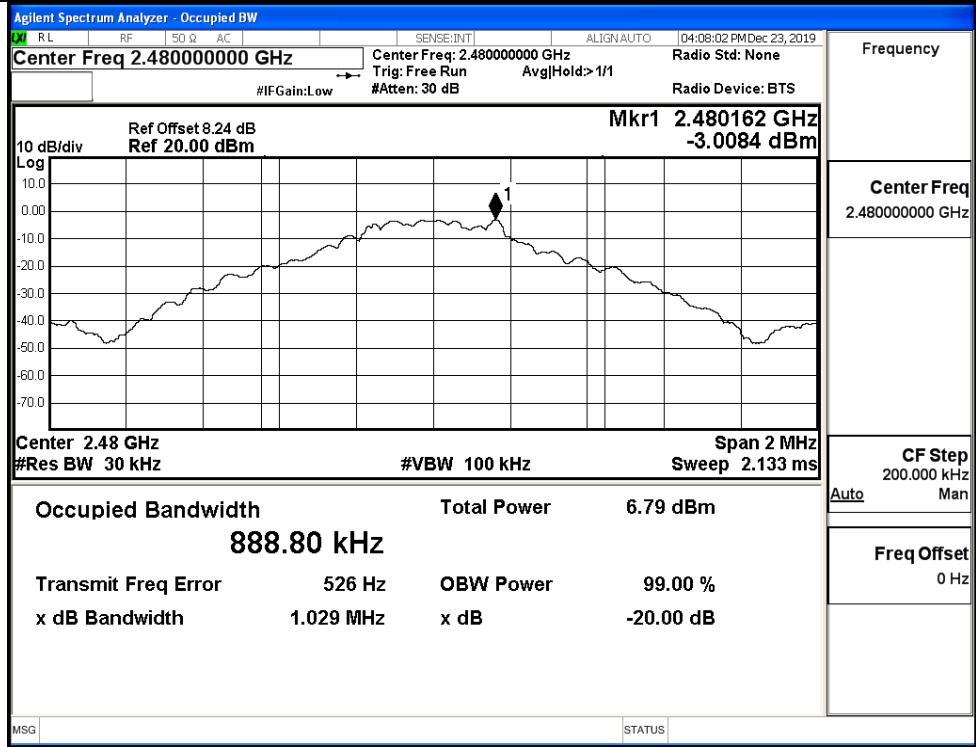


GFSK/MCH



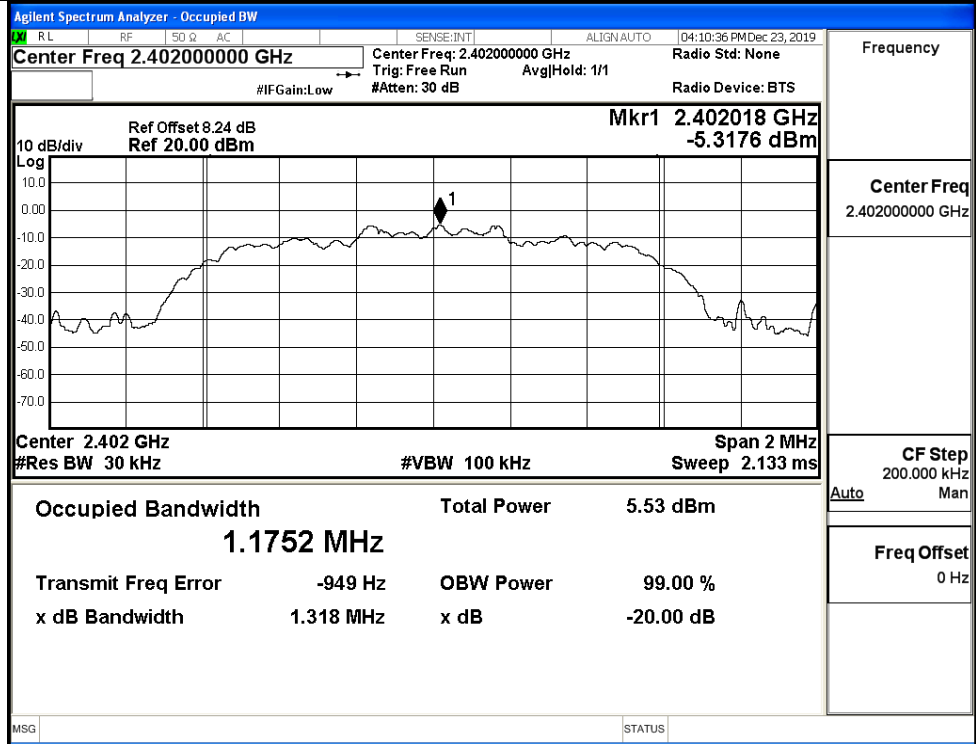
Frequency	2.44100000 GHz
Center Freq	2.44100000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

GFSK/HCH

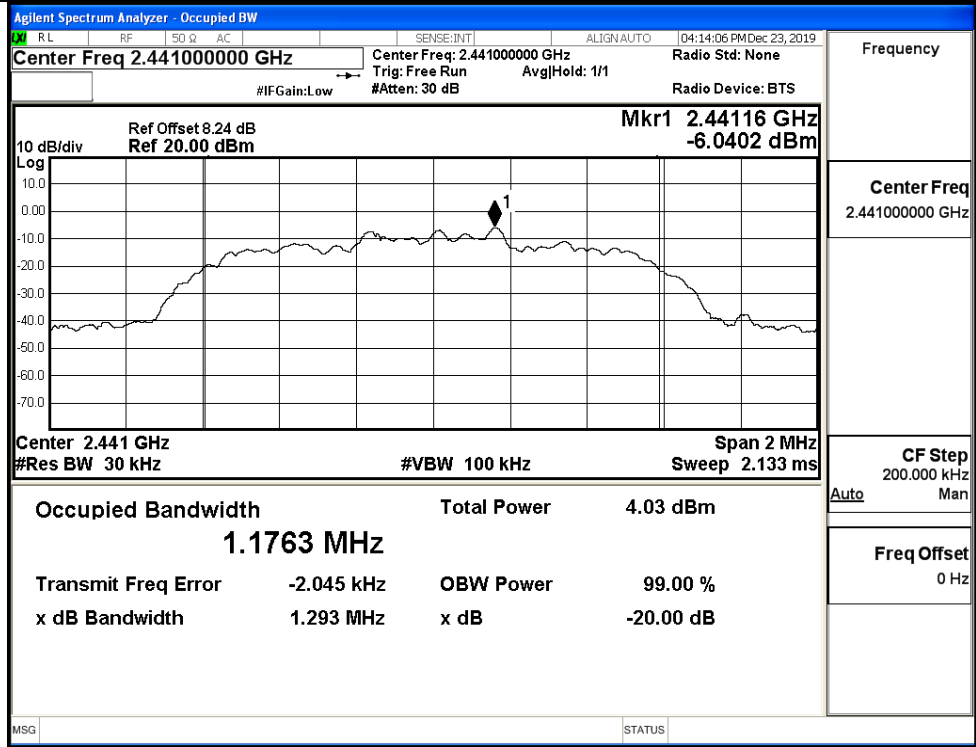


Frequency	2.48000000 GHz
Center Freq	2.48000000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

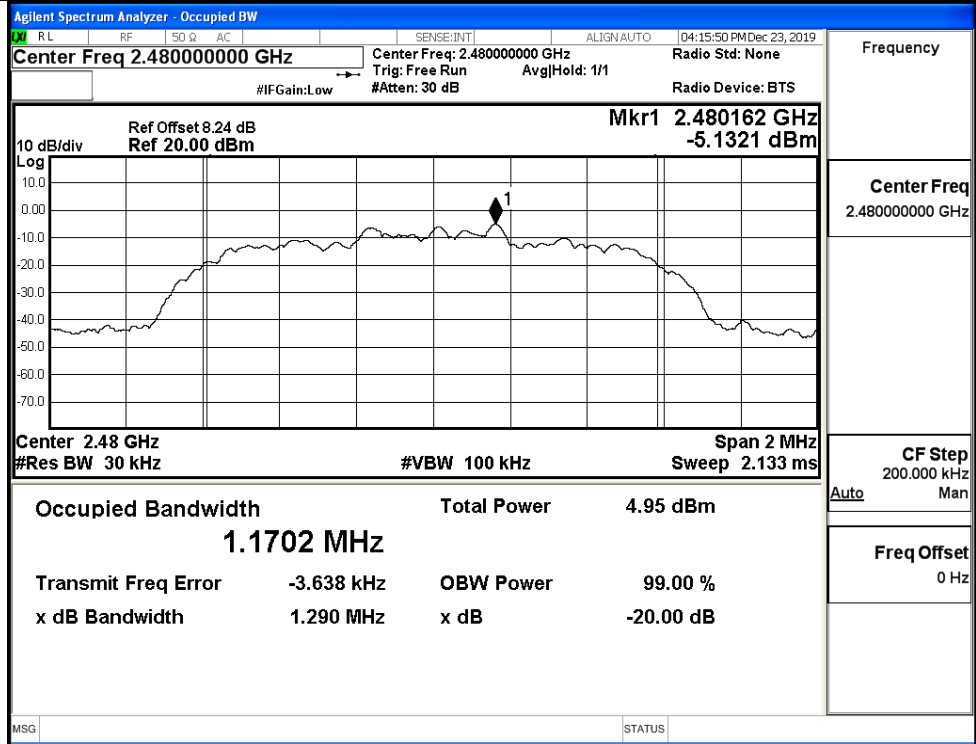
$\pi/4$ DQPSK/LCH



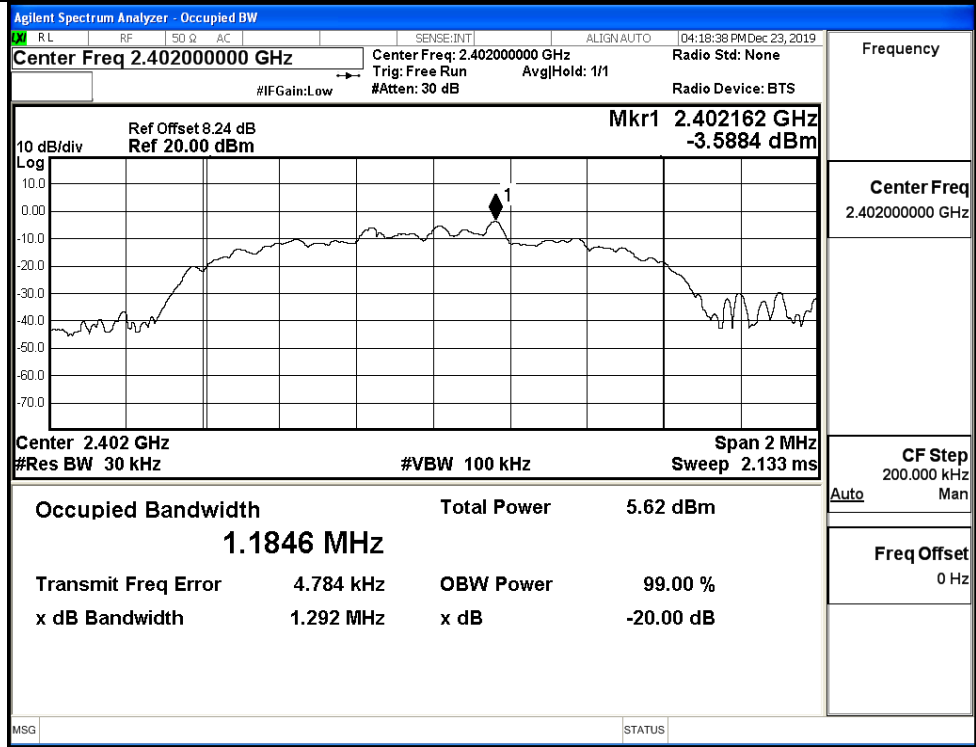
$\pi/4$ DQPSK/MCH



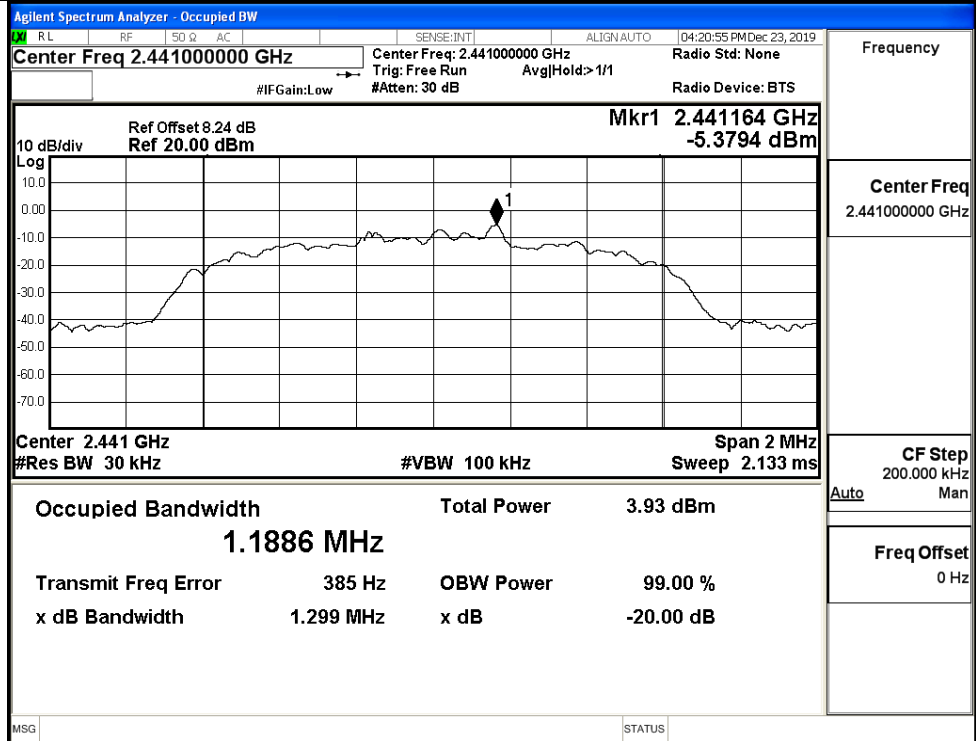
$\pi/4$ DQPSK/HCH



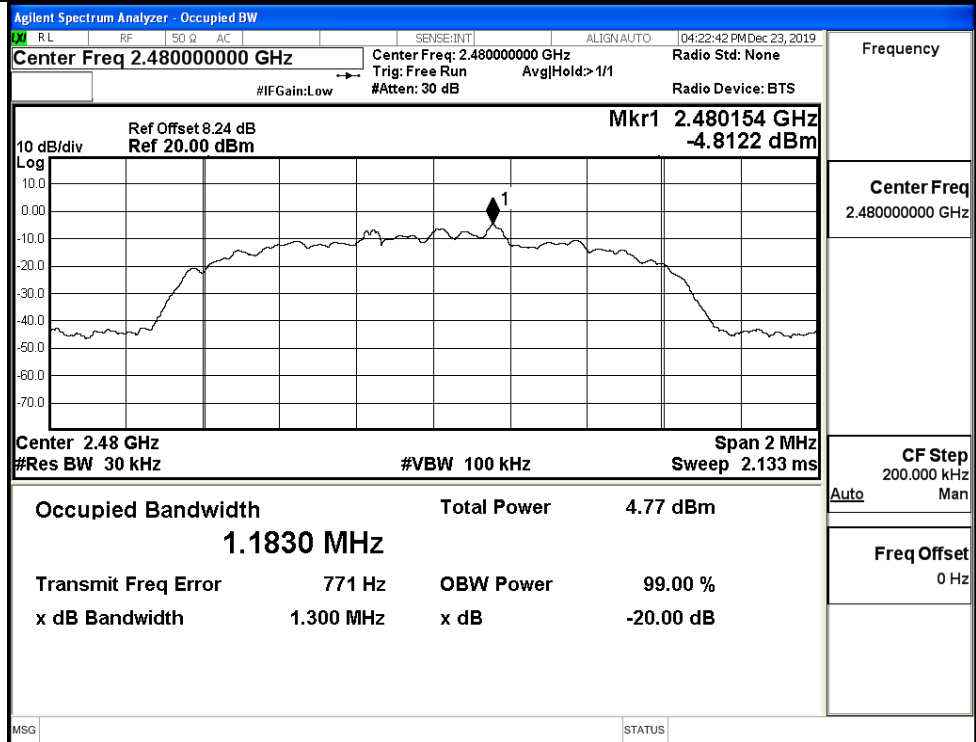
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH



A.3 Carrier Frequency Separation

Mode	Channel	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.834	0.686	PASS
	MCH	0.836	0.686	PASS
	HCH	1.148	0.686	PASS
π/4DQPSK	LCH	1.014	0.879	PASS
	MCH	1.110	0.879	PASS
	HCH	1.300	0.879	PASS
8DPSK	LCH	1.130	0.867	PASS
	MCH	1.278	0.867	PASS
	HCH	0.942	0.867	PASS

Test Graphs

GFSK/LCH

Frequency

Auto Tune

Center Freq
2.402500000 GHz

Start Freq
2.401500000 GHz

Stop Freq
2.403500000 GHz

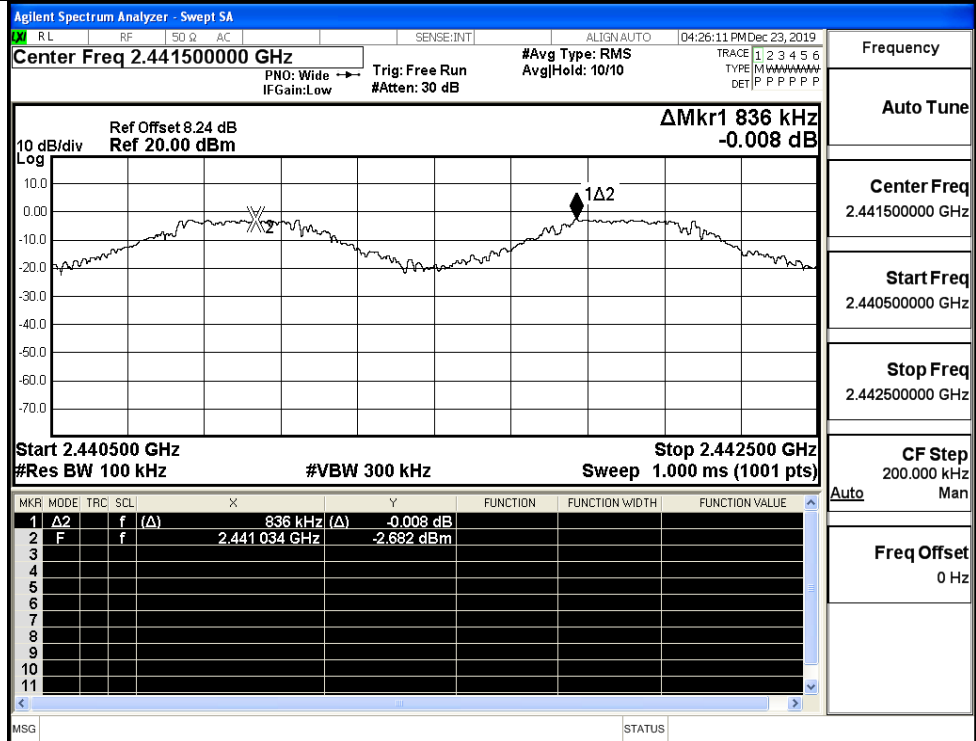
CF Step
200.000 kHz

Auto Man

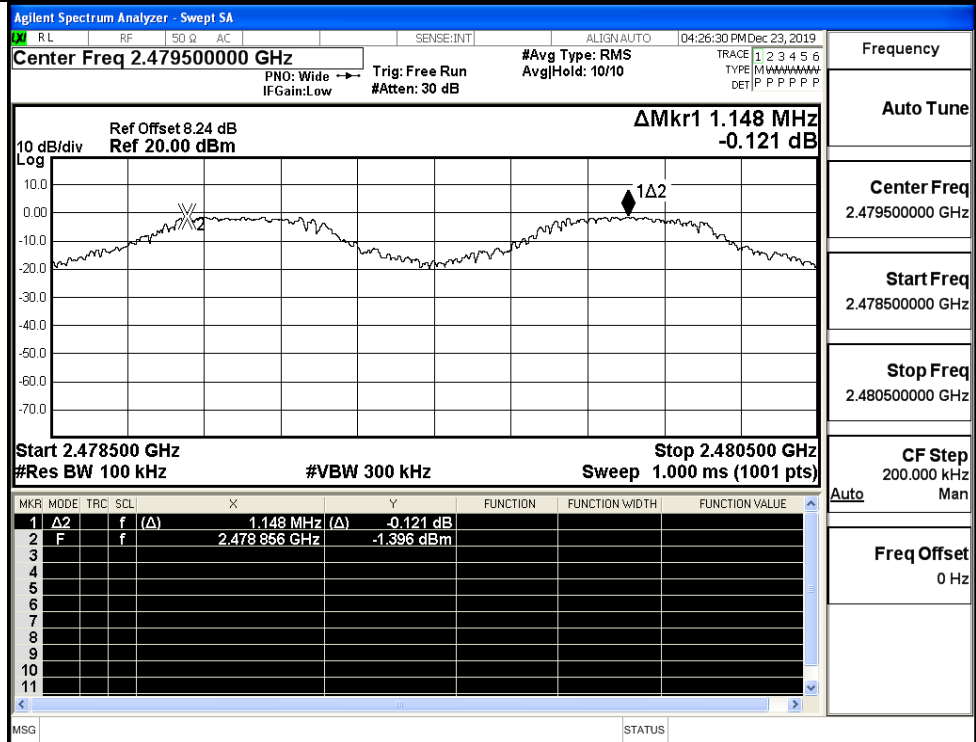
Freq Offset
0 Hz

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	Δ2	f	(Δ)	833.75 kHz (Δ)	0.204 dB			
2	F	f		2.40203425 GHz	-0.741 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								

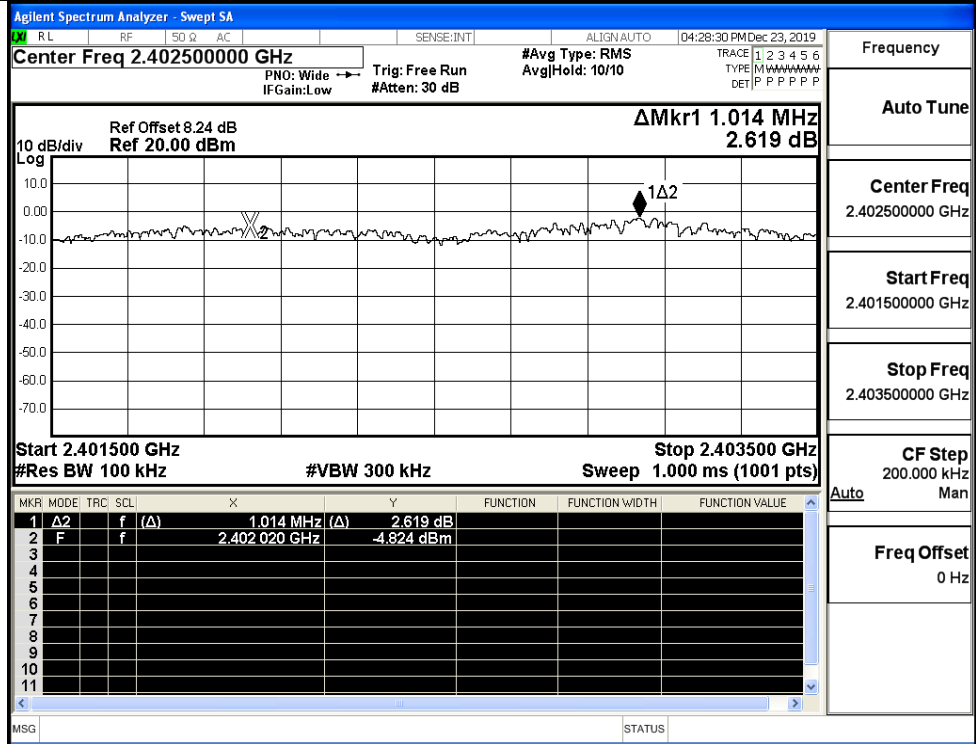
GFSK/MCH



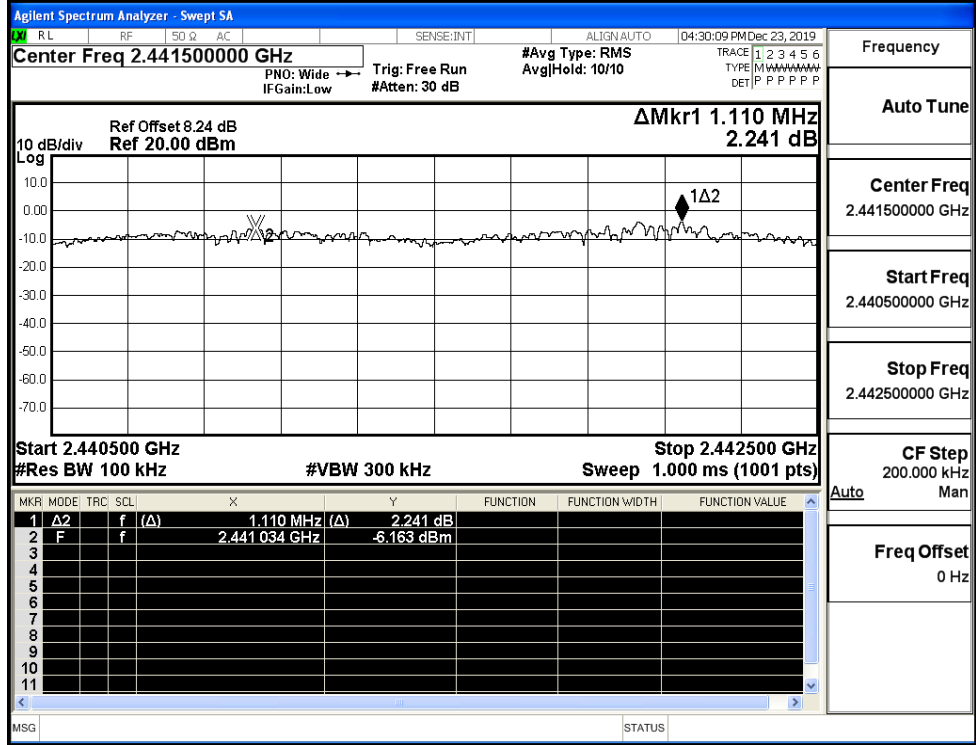
GFSK/HCH



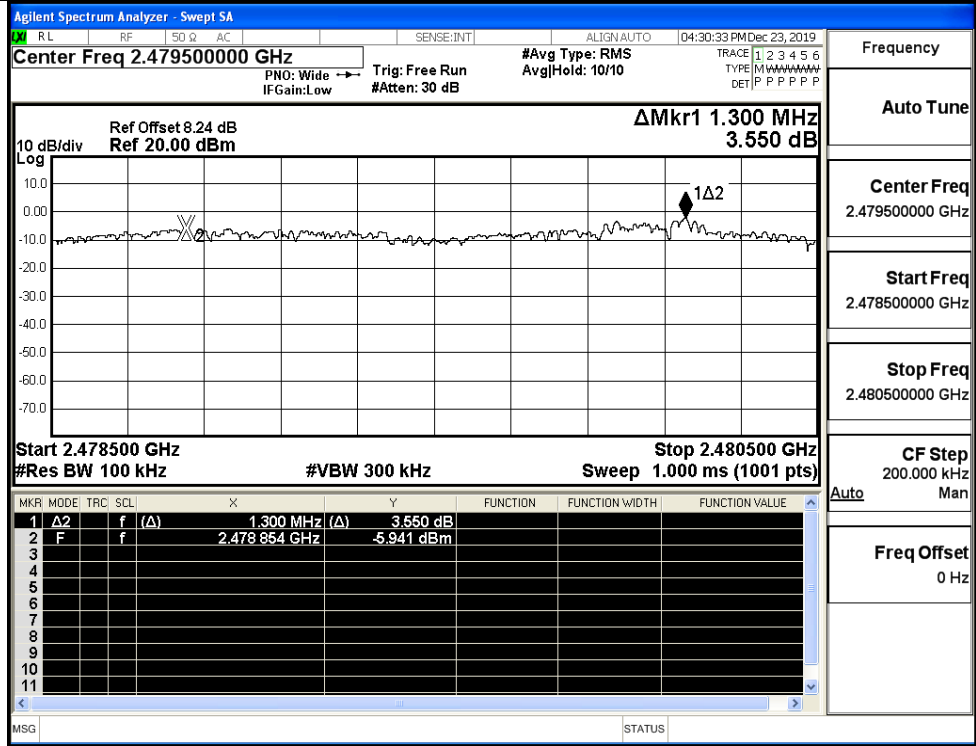
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH

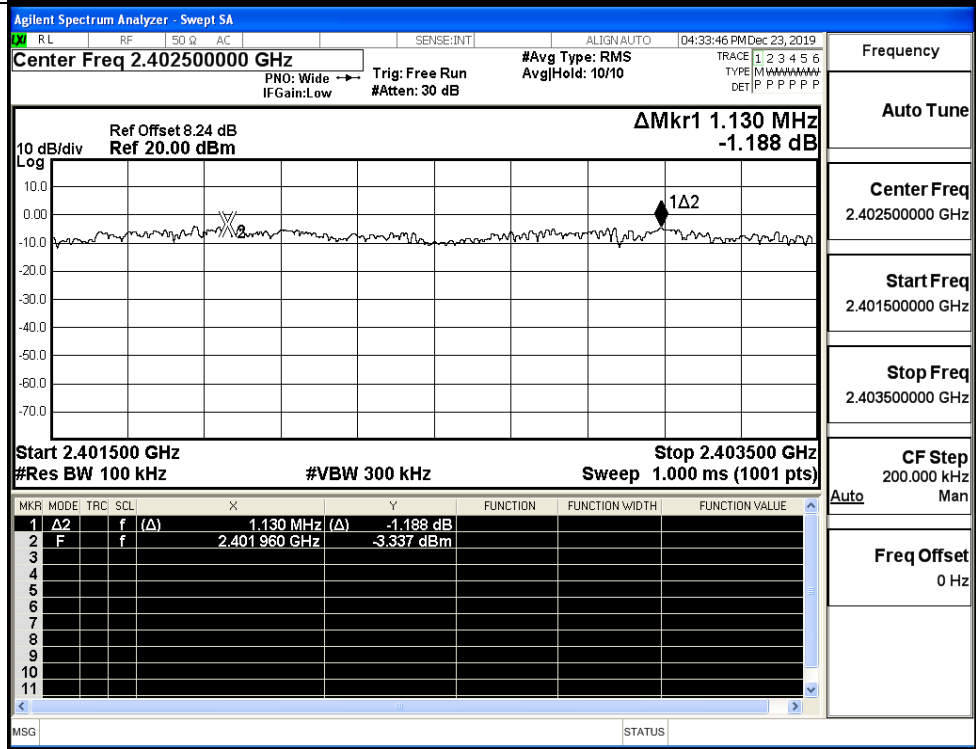


π/4DQPSK/HCH

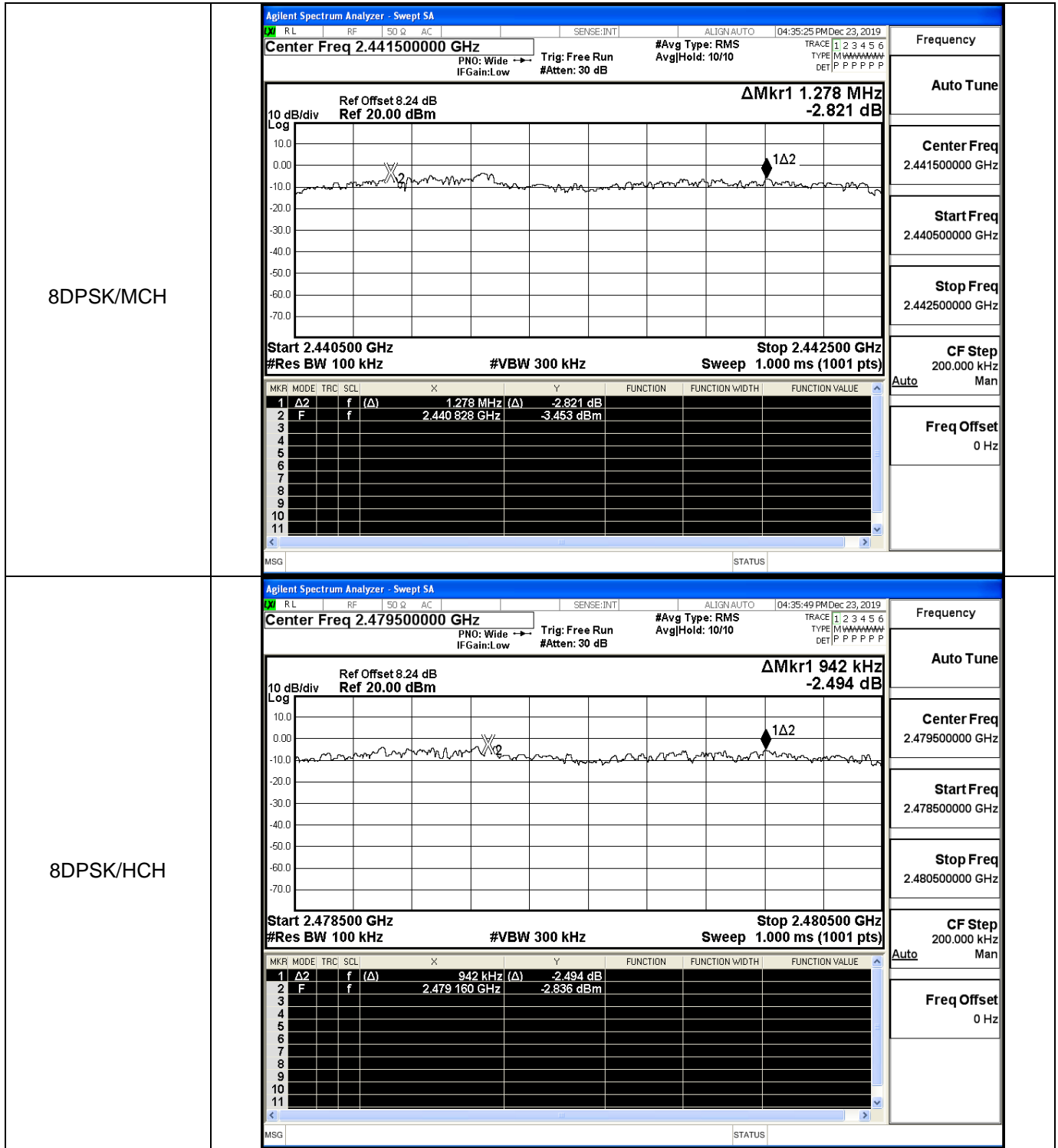


Frequency
Auto Tune
Center Freq 2.479500000 GHz
Start Freq 2.478500000 GHz
Stop Freq 2.480500000 GHz
CF Step 200.000 kHz Auto Man
Freq Offset 0 Hz

8DPSK/LCH



Frequency
Auto Tune
Center Freq 2.402500000 GHz
Start Freq 2.401500000 GHz
Stop Freq 2.403500000 GHz
CF Step 200.000 kHz Auto Man
Freq Offset 0 Hz

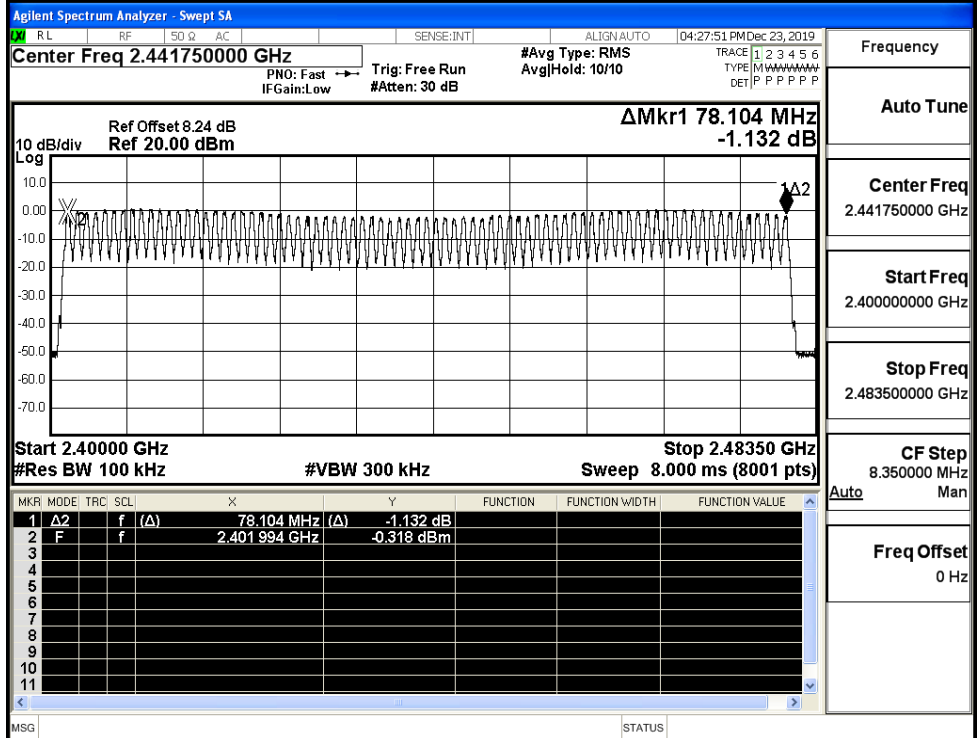


A.4 Hopping Channel Number

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

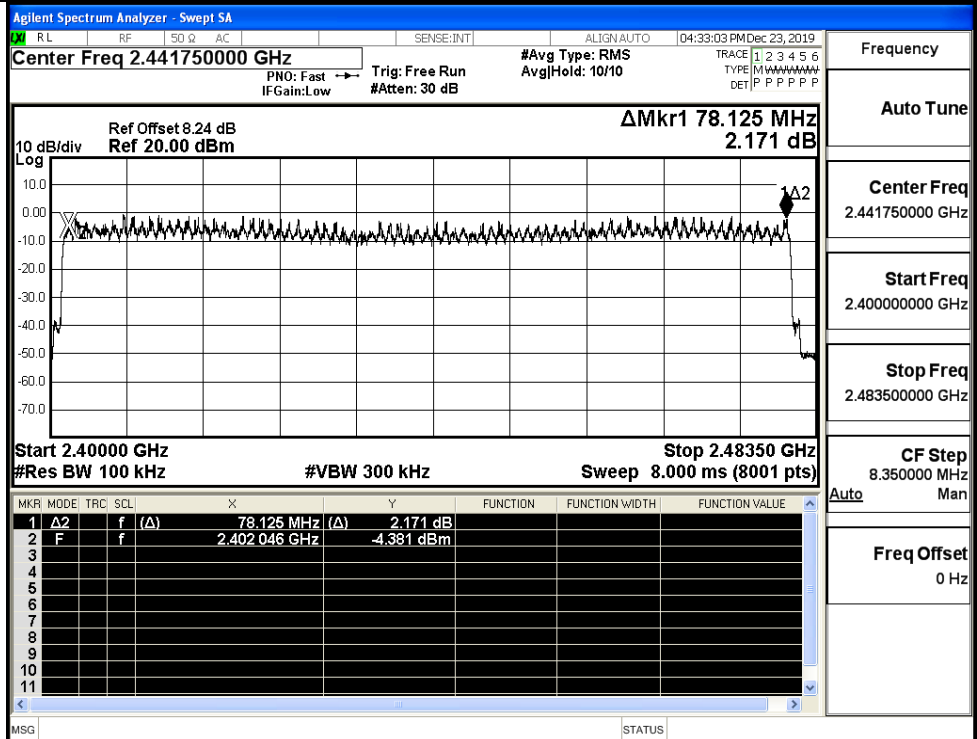
Test Graphs

GFSK/Hop



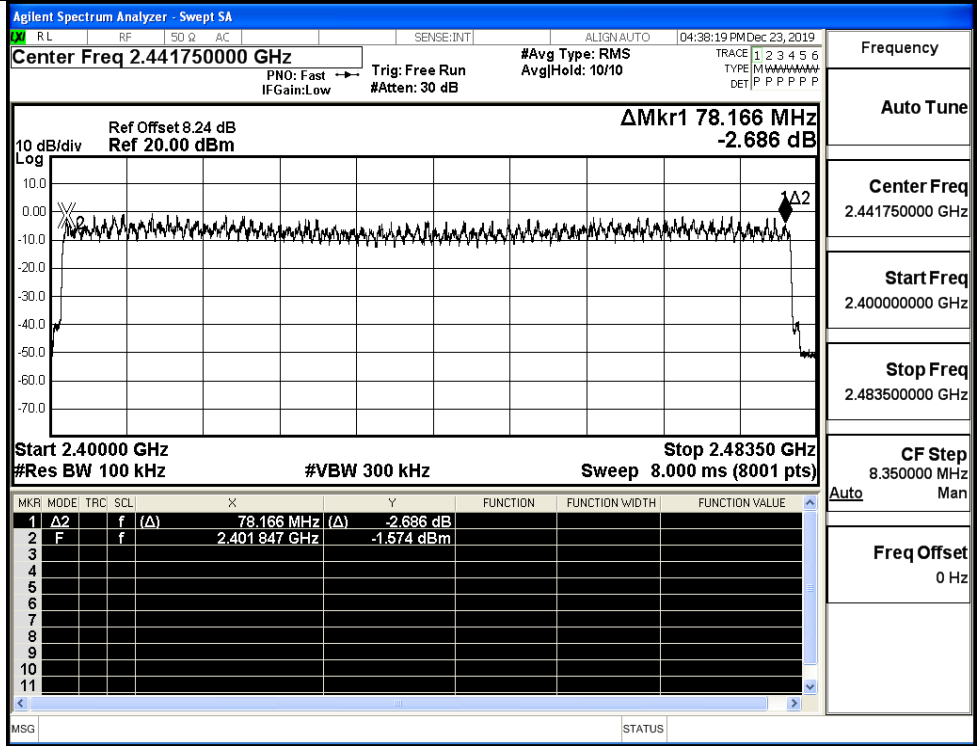
Frequency	
Auto Tune	
Center Freq	2.441750000 GHz
Start Freq	2.400000000 GHz
Stop Freq	2.483500000 GHz
CF Step	8.350000 MHz
Auto	Man
Freq Offset	0 Hz

π/4DQPSK/Hop



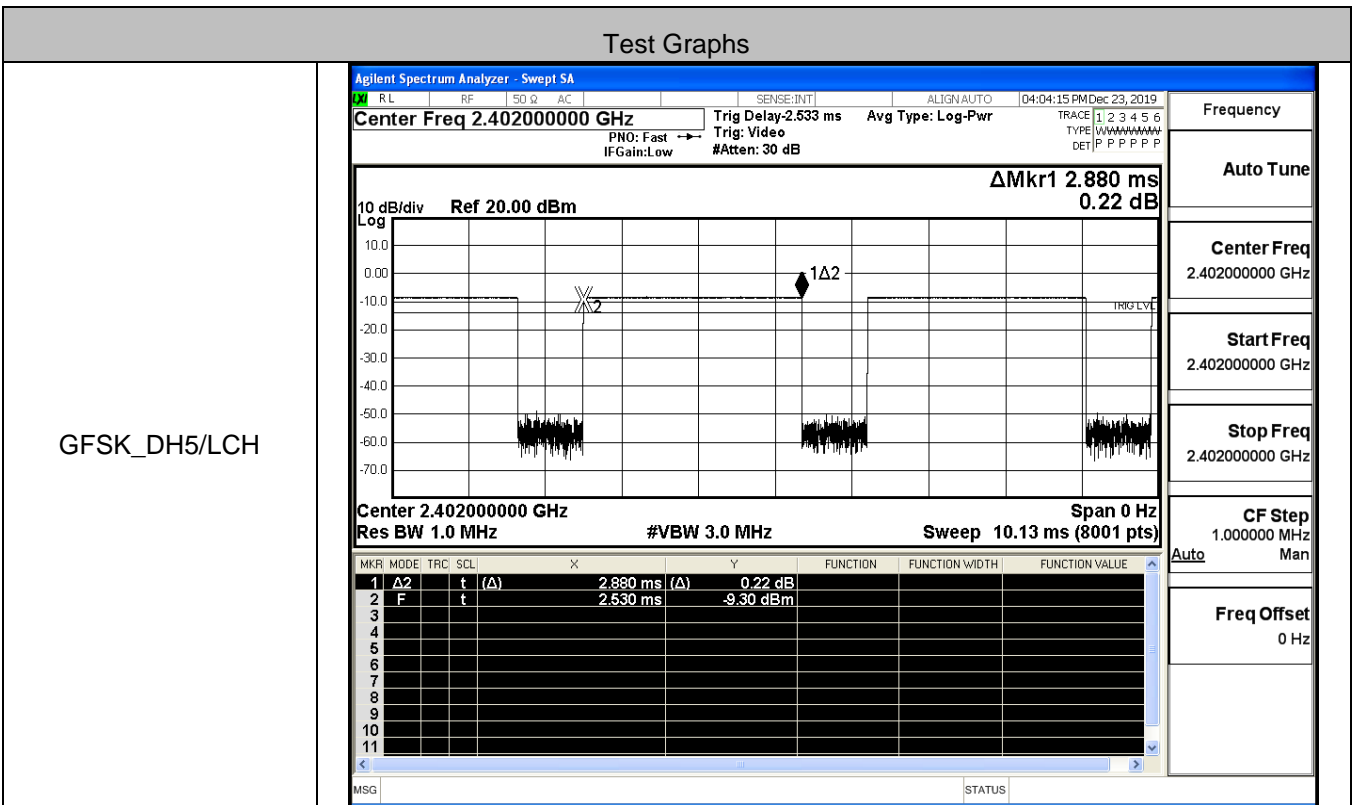
Frequency	
Auto Tune	
Center Freq	2.441750000 GHz
Start Freq	2.400000000 GHz
Stop Freq	2.483500000 GHz
CF Step	8.350000 MHz
Auto	Man
Freq Offset	0 Hz

8DPSK/Hop

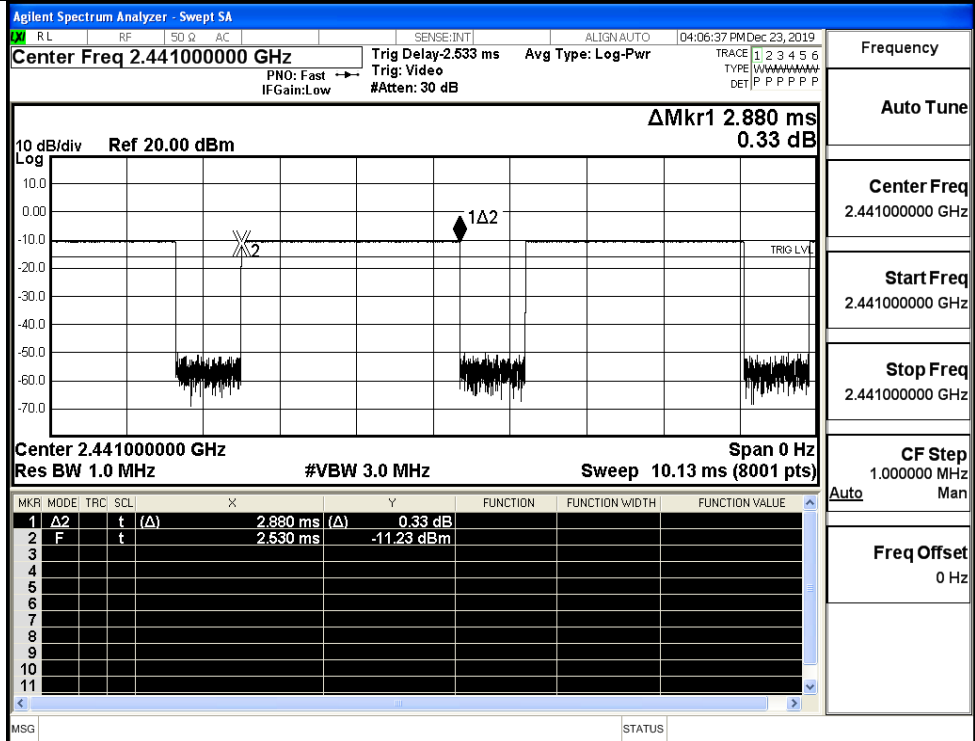


A.5 Dwell Time

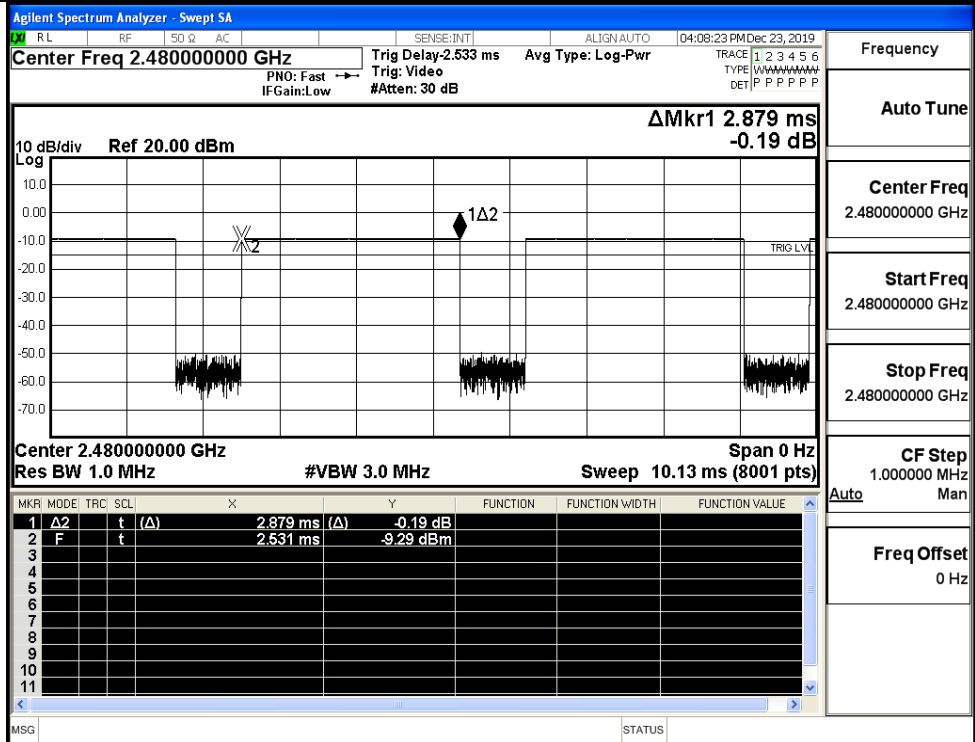
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
π/4DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.307	0.4	PASS
	2DH5	HCH	2.88	106.7	0.307	0.4	PASS
8DPSK	3DH5	LCH	2.88	106.7	0.308	0.4	PASS
	3DH5	MCH	2.88	106.7	0.308	0.4	PASS
	3DH5	HCH	2.88	106.7	0.308	0.4	PASS



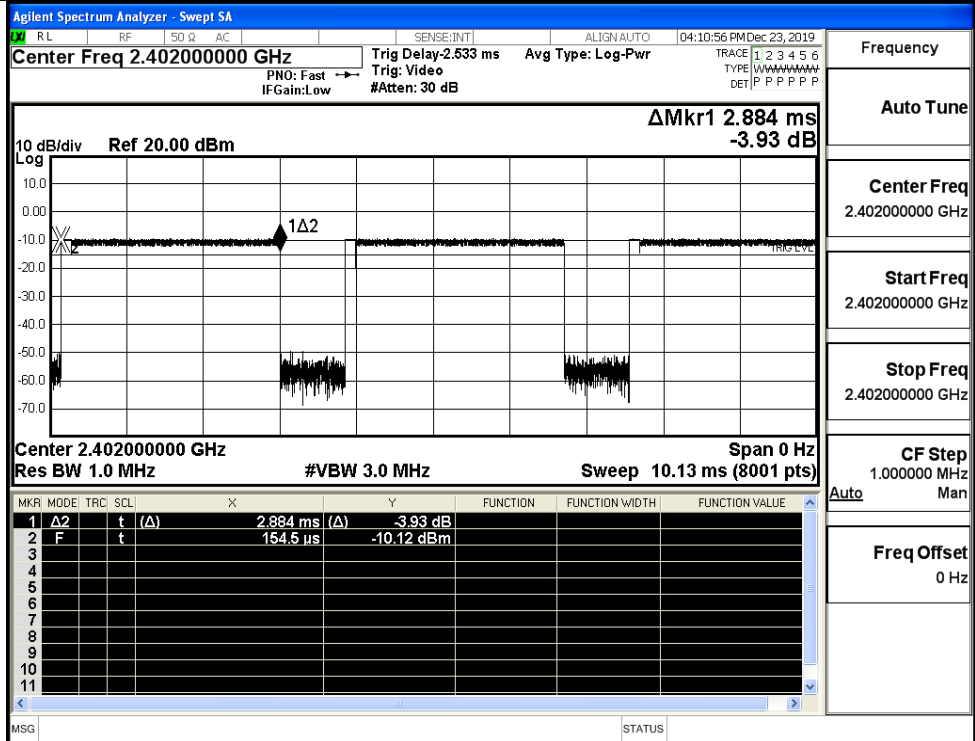
GFSK_DH5/MCH



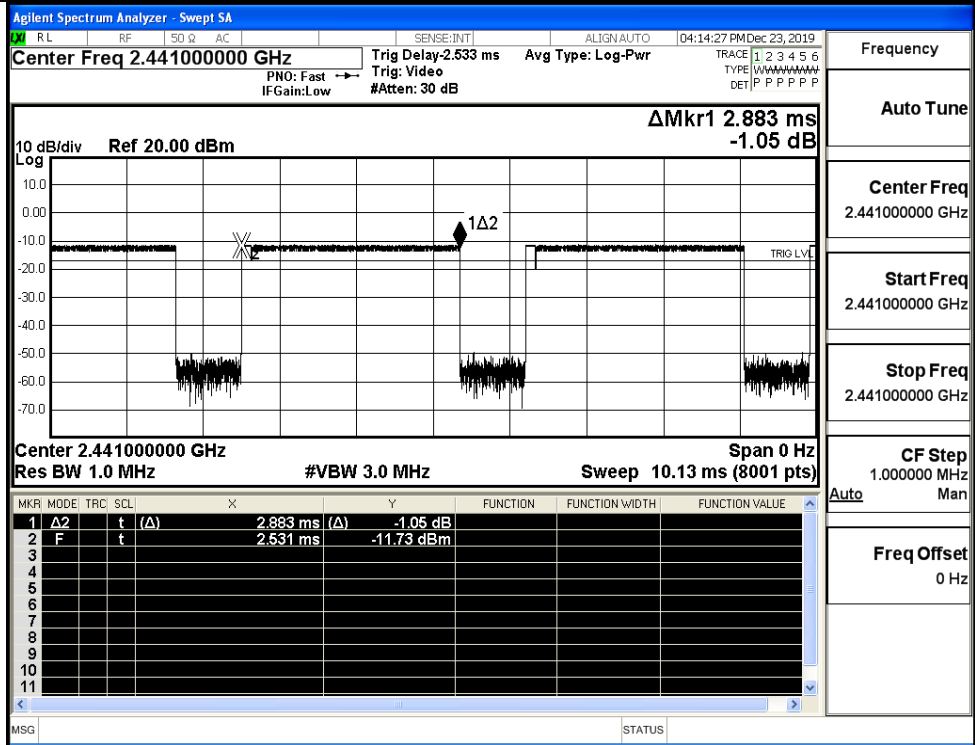
GFSK_DH5/HCH



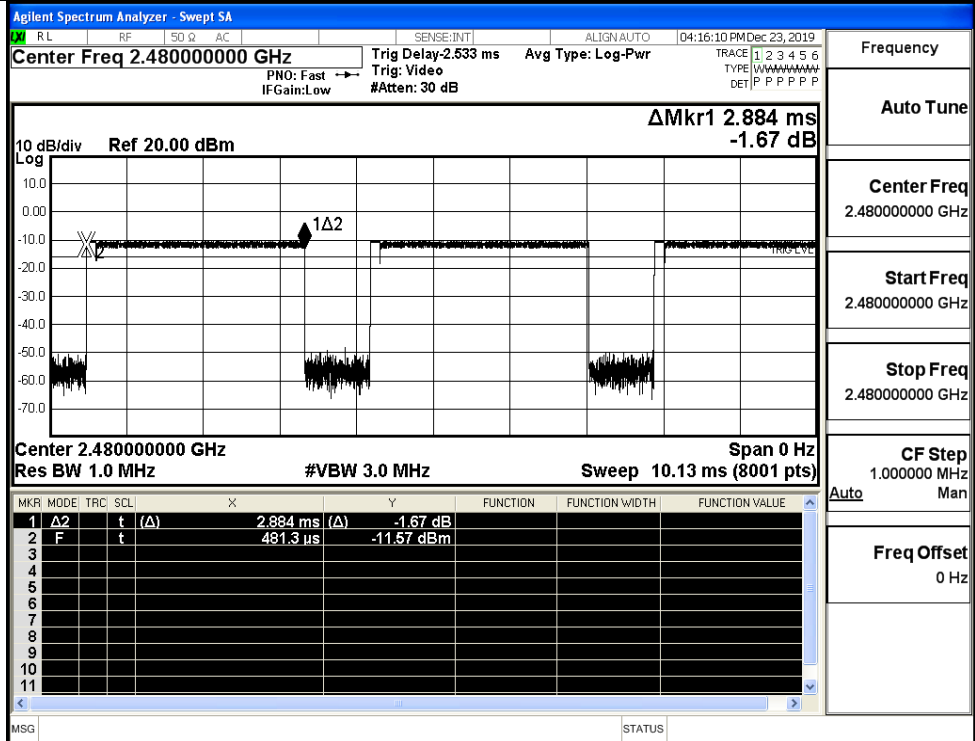
π /4DQPSK
_2DH5/LCH



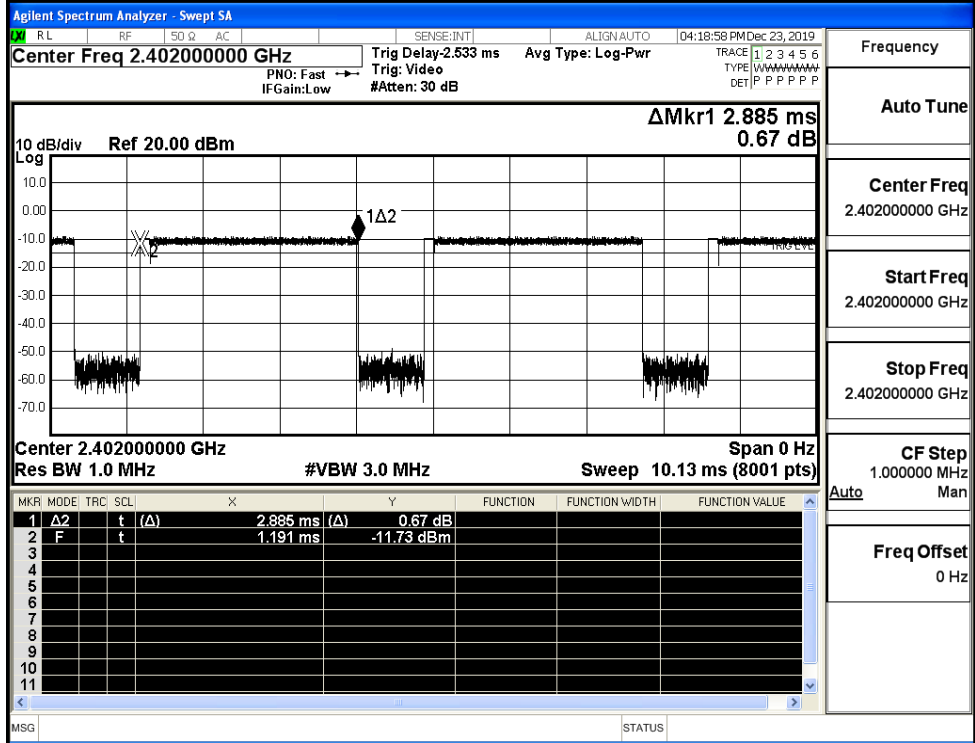
π /4DQPSK
_2DH5/MCH



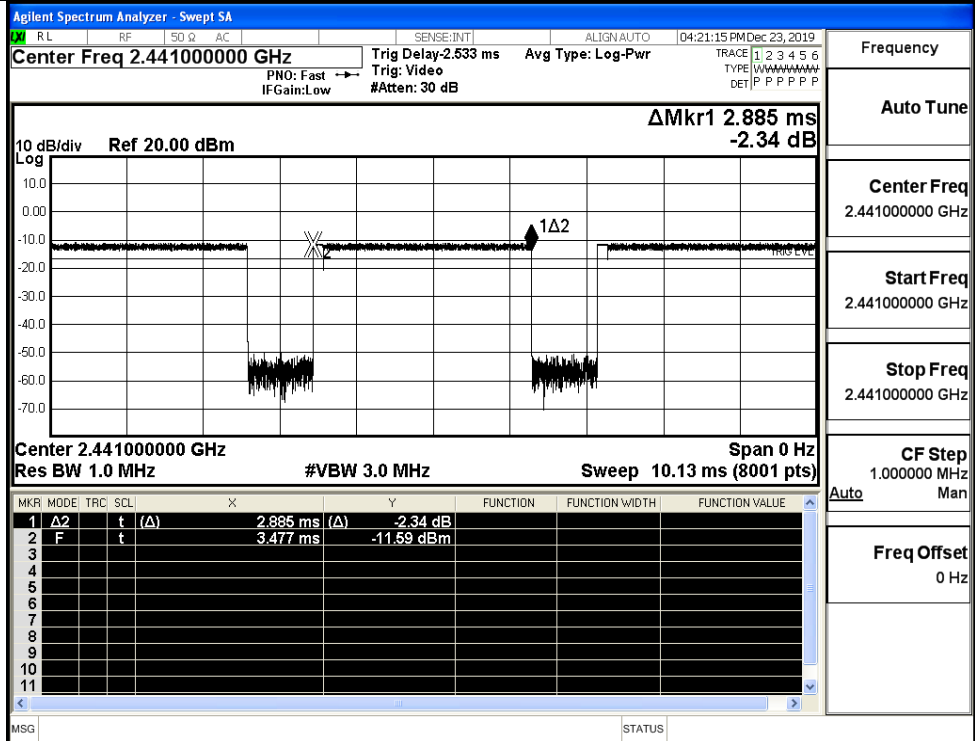
$\pi/4$ DQPSK
_2DH5/HCH



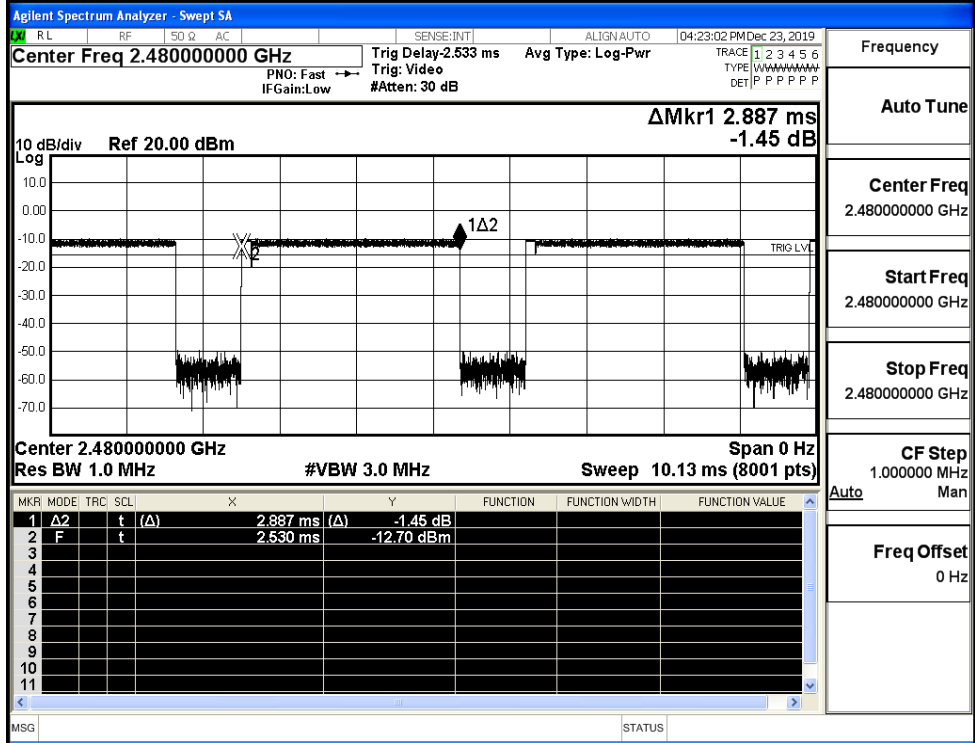
8DPSK_3DH5/LCH



8DPSK_3DH5/MCH



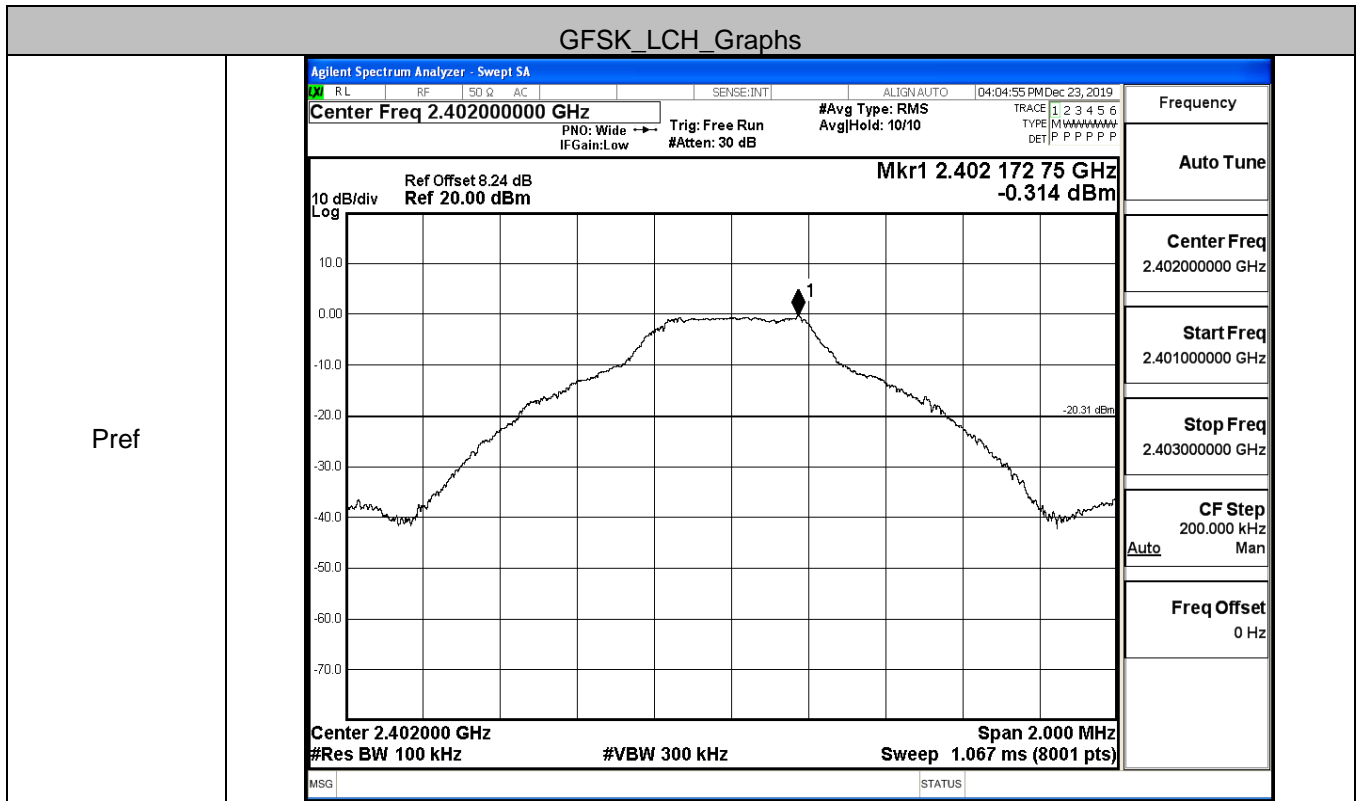
8DPSK_3DH5/HCH



A.6 RF Conducted Spurious Emissions

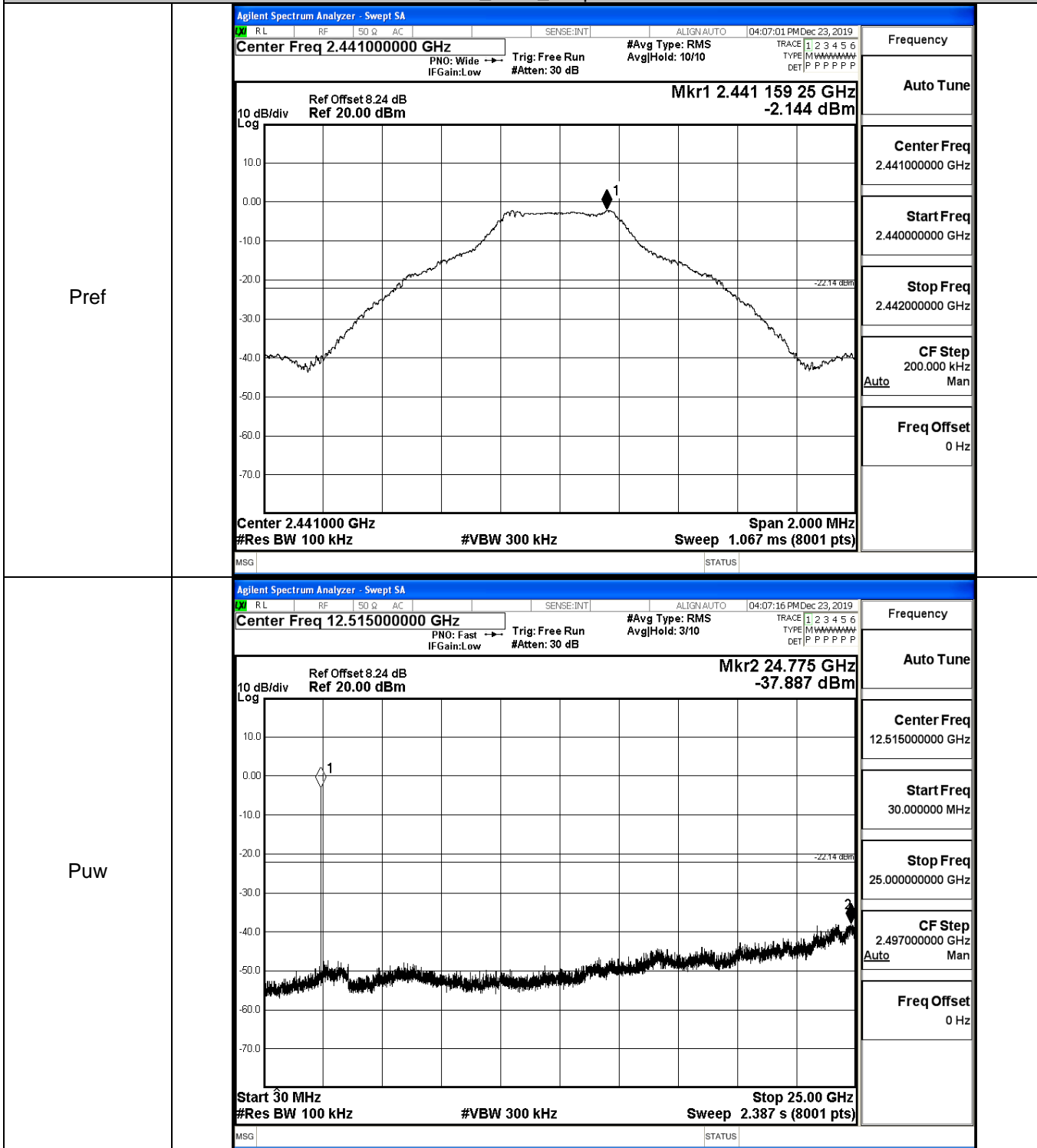
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-0.314	-37.150	-20.314	PASS
	MCH	-2.144	-37.887	-22.144	PASS
	HCH	-0.983	-36.461	-20.983	PASS
π /4DQPSK	LCH	-1.64	-37.307	-21.640	PASS
	MCH	-3.438	-37.347	-23.438	PASS
	HCH	-2.363	-36.635	-22.363	PASS
8DPSK	LCH	-1.472	-36.968	-21.472	PASS
	MCH	-3.844	-37.064	-23.844	PASS
	HCH	-2.983	-37.197	-22.983	PASS

GFSK_LCH_Graphs



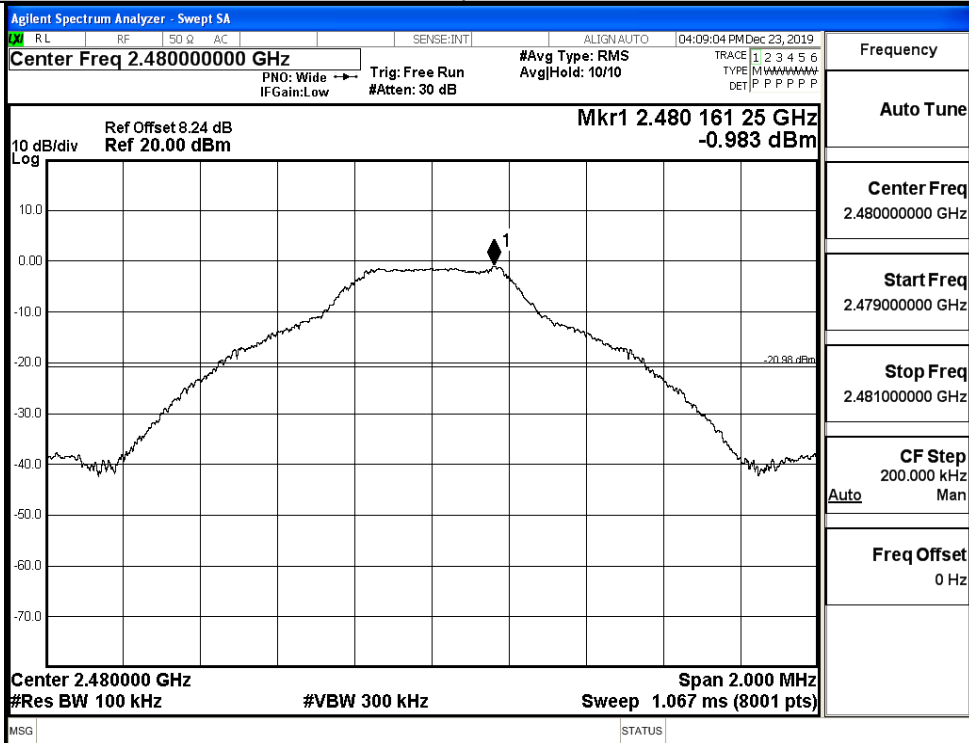
Pref

GFSK_MCH_Graphs

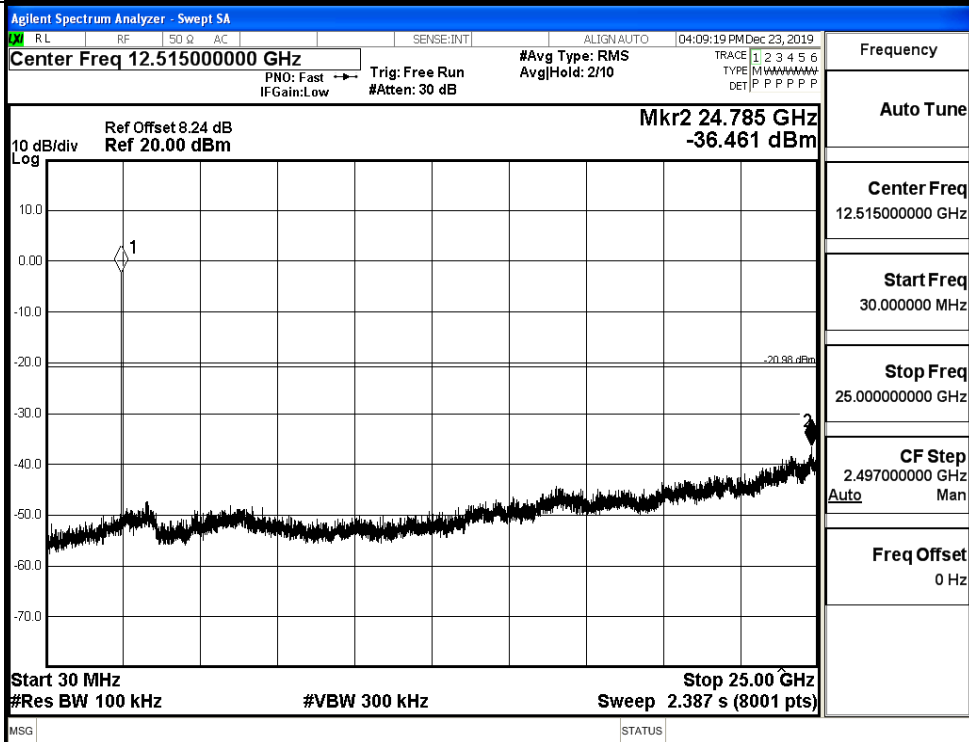


GFSK_HCH_Graphs

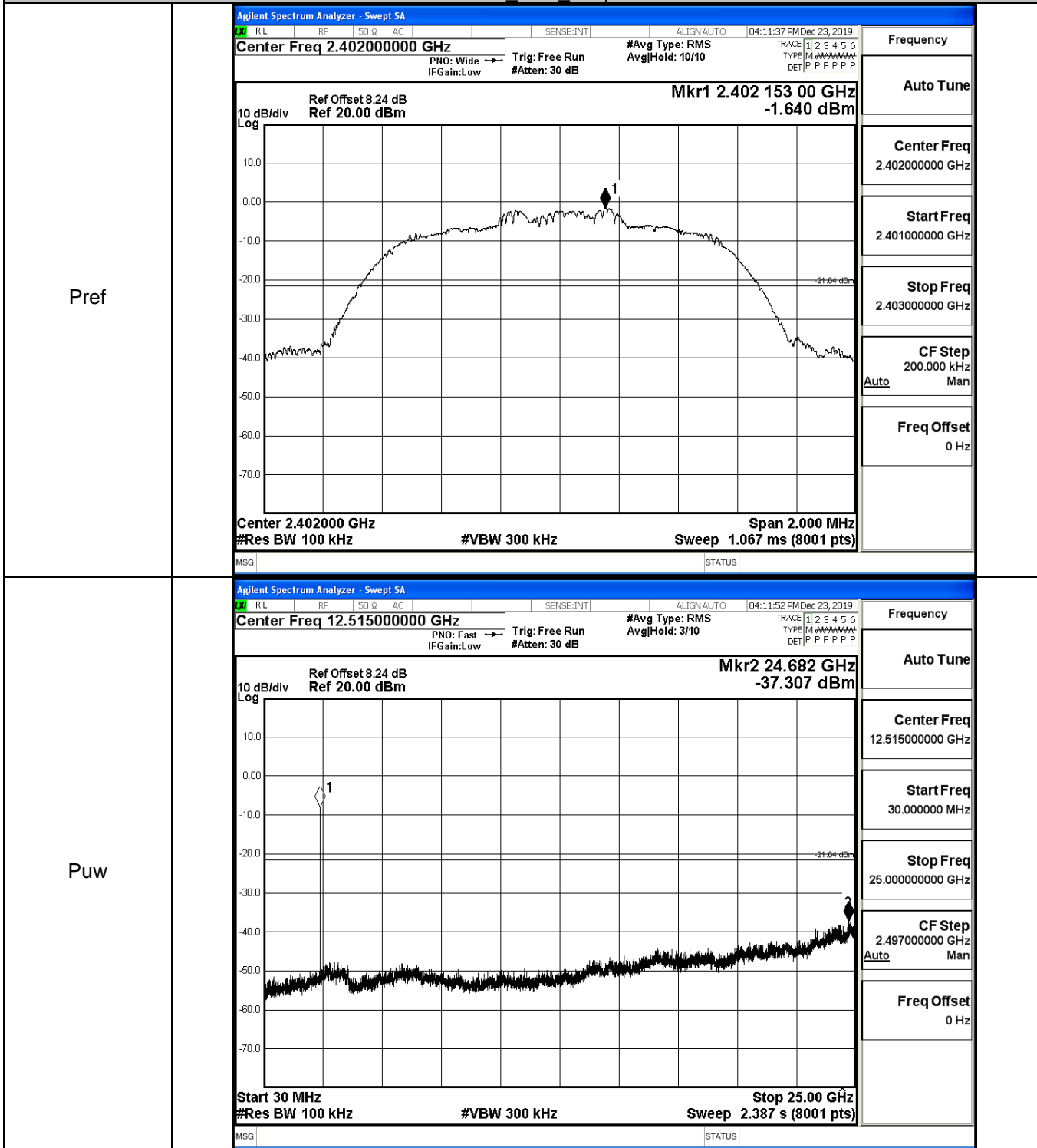
Pref



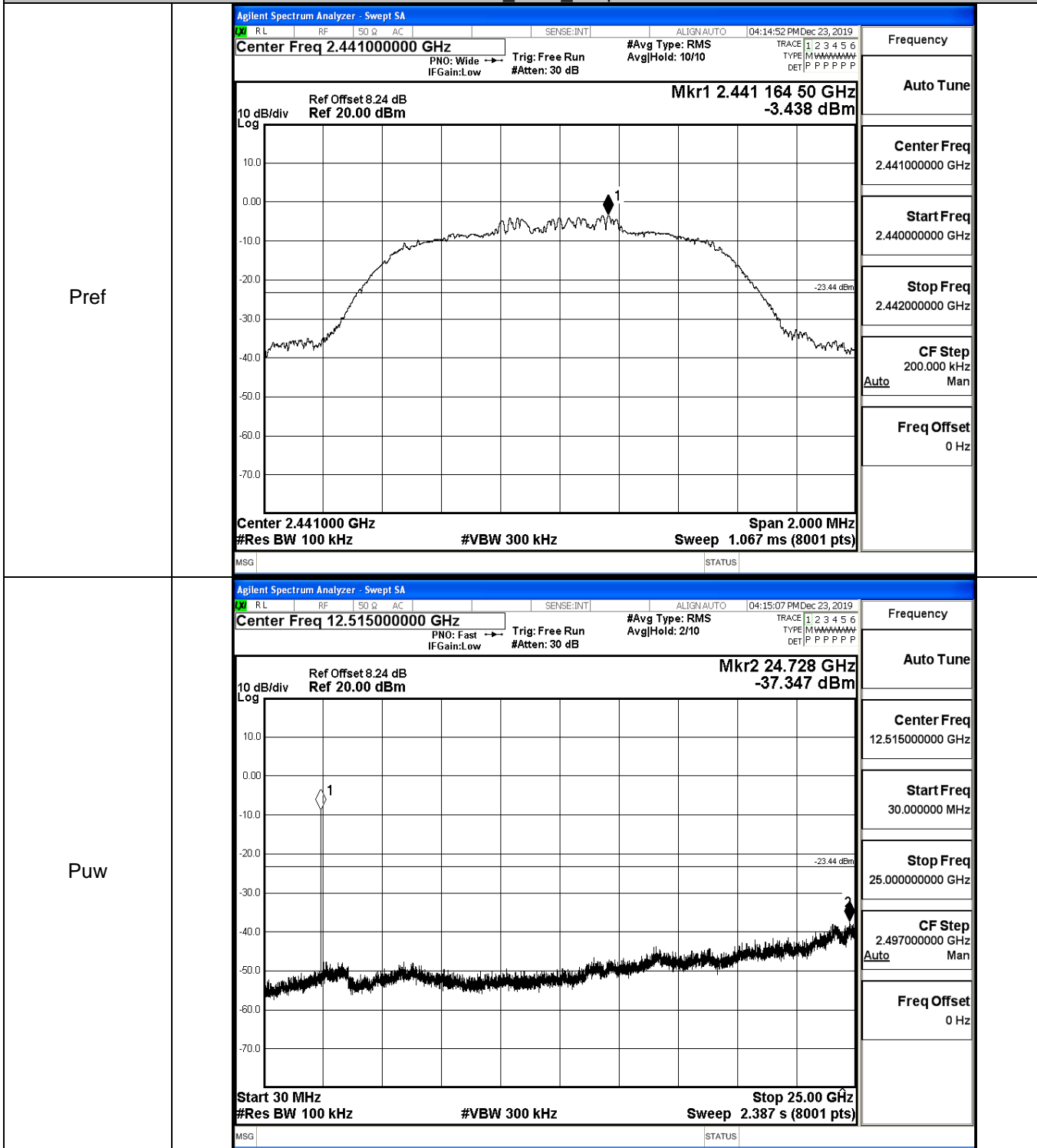
Puw



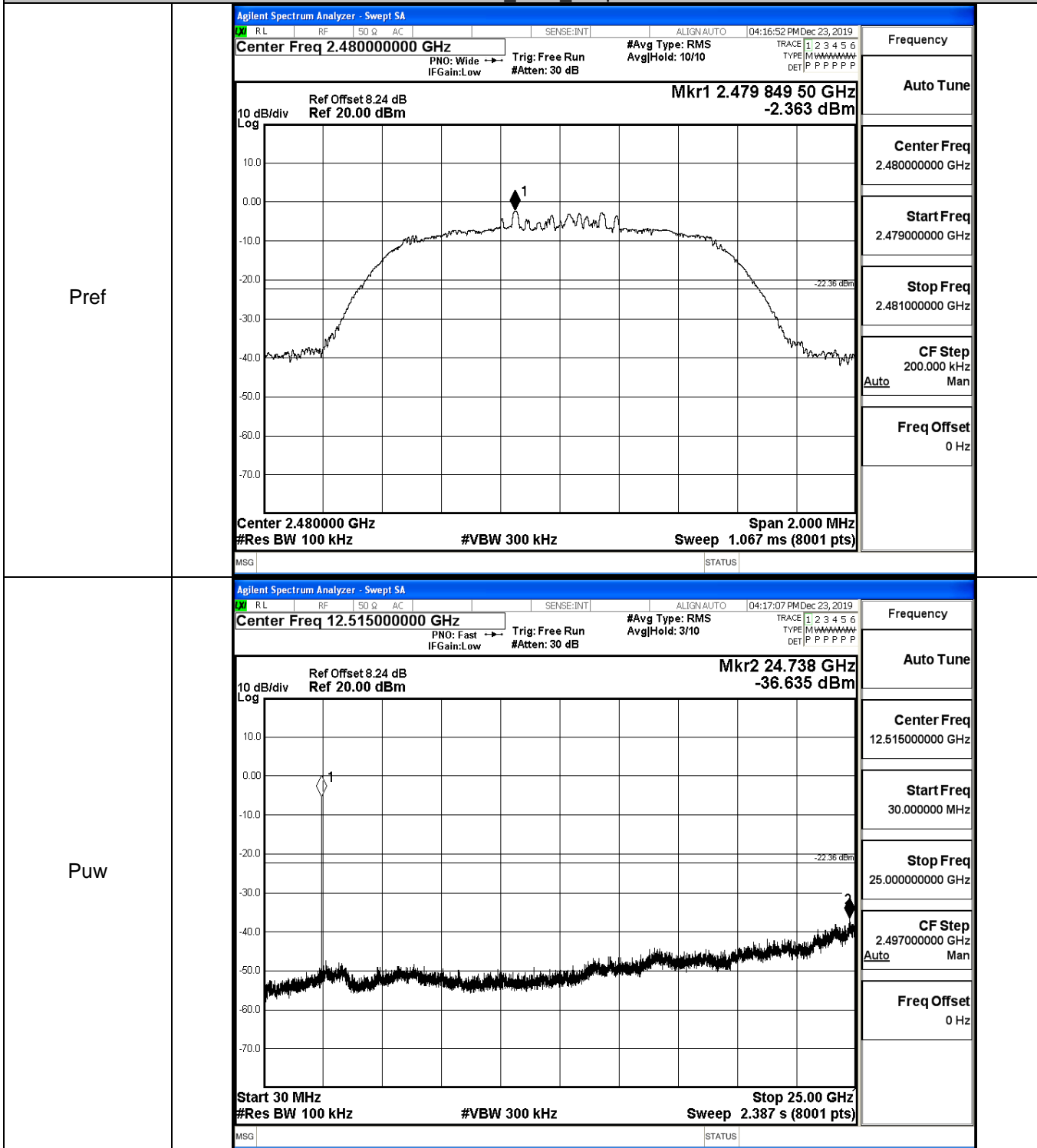
$\pi/4$ DQPSK_LCH_Graphs



$\pi/4$ DQPSK_MCH_Graphs

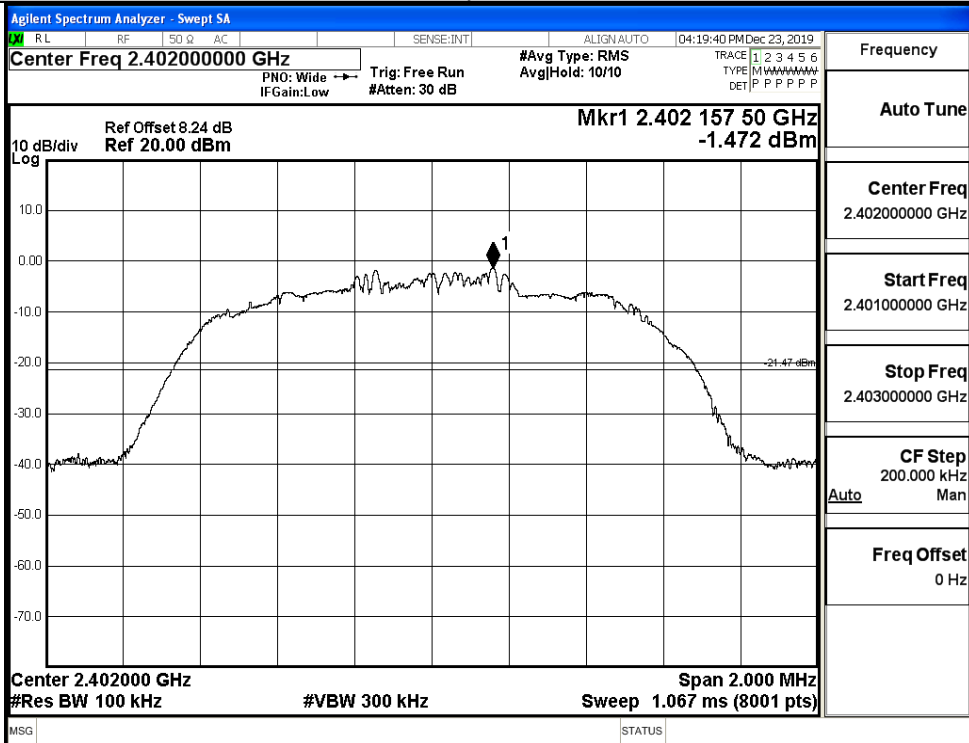


$\pi/4$ DQPSK_HCH_Graphs

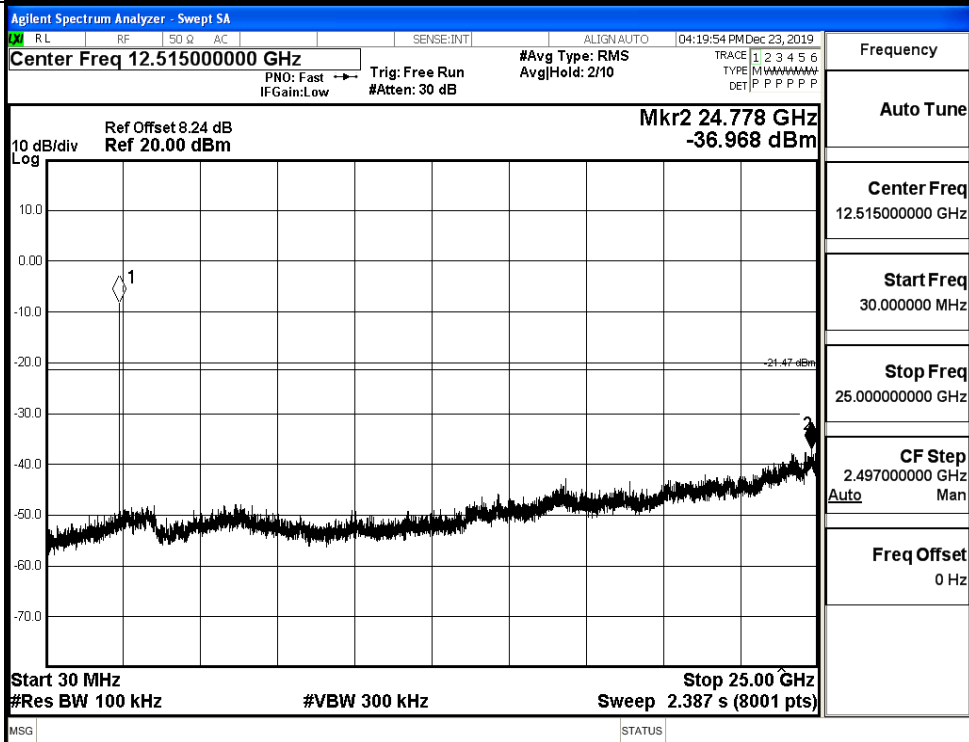


8DPSK_LCH_Graphs

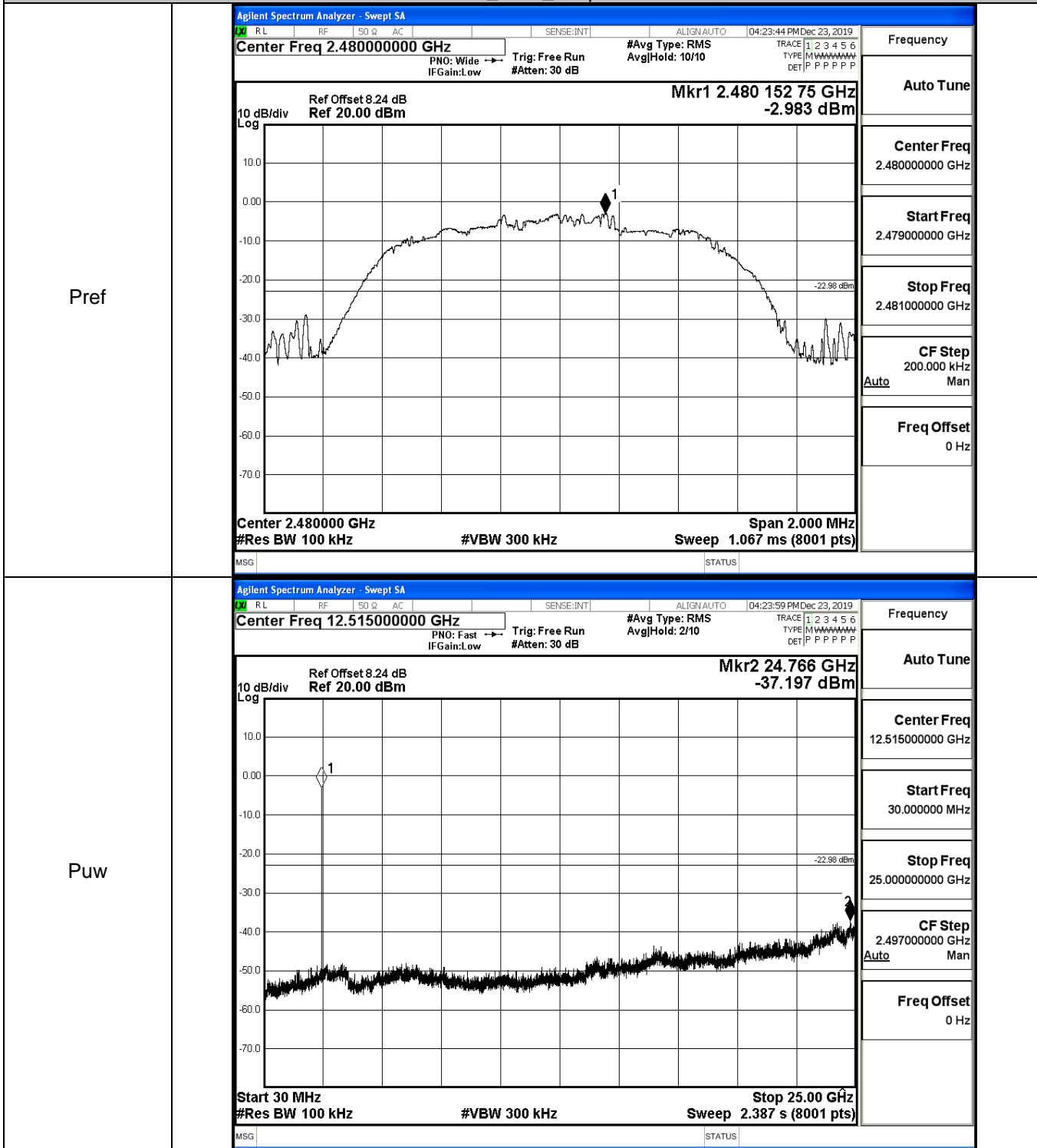
Pref



Puw



8DPSK_HCH_Graphs

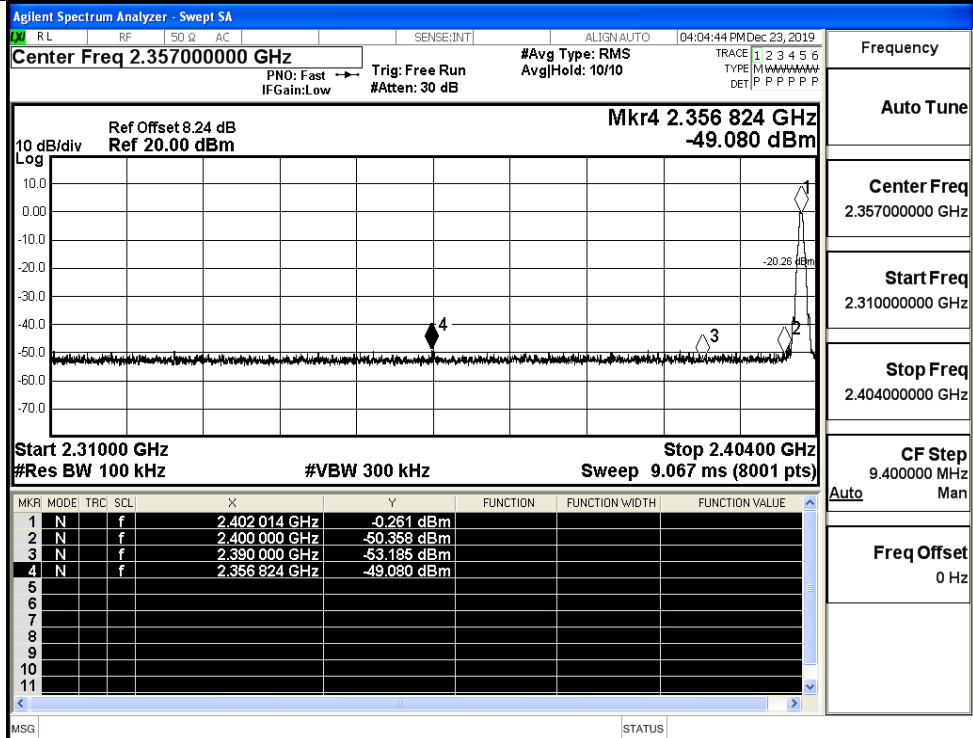


A.7 Band-edge for RF Conducted Emissions

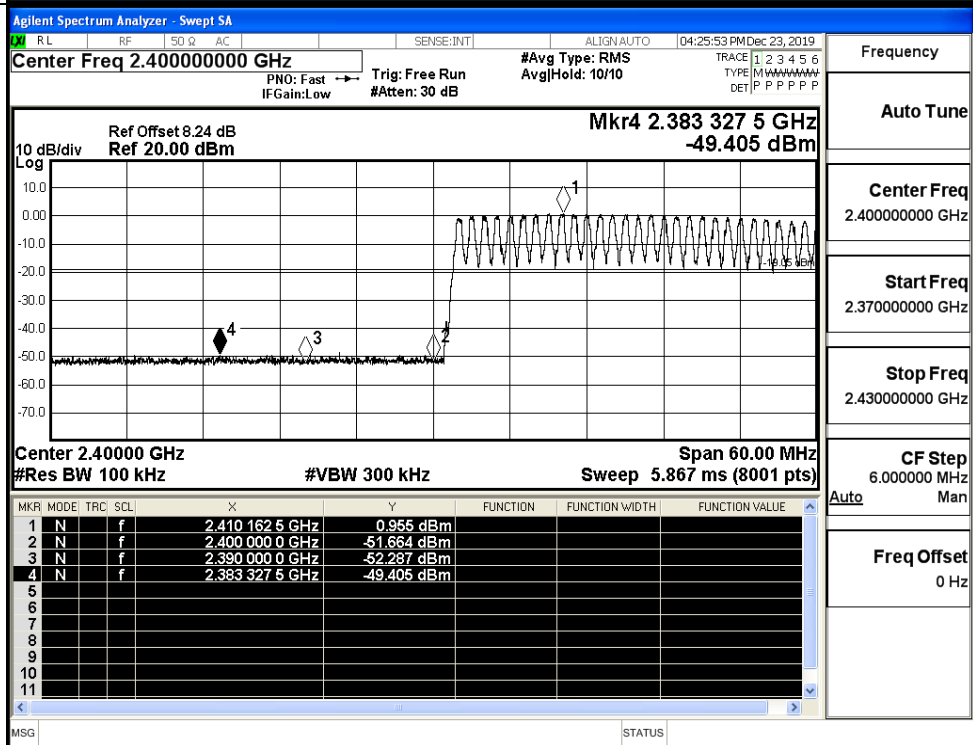
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-0.261	Off	-49.080	-20.26	PASS
			0.955	On	-49.405	-19.05	PASS
	HCH	2480	-1.024	Off	-48.747	-21.02	PASS
			0.563	On	-48.617	-19.44	PASS
$\pi/4$ DQPSK	LCH	2402	-4.313	Off	-49.727	-24.31	PASS
			-0.005	On	-48.846	-20.01	PASS
	HCH	2480	-2.433	Off	-47.918	-22.43	PASS
			-1.349	On	-47.924	-21.35	PASS
8DPSK	LCH	2402	-3.290	Off	-48.842	-23.29	PASS
			-0.602	On	-48.588	-20.6	PASS
	HCH	2480	-2.251	Off	-48.172	-22.25	PASS
			-1.623	On	-48.286	-21.62	PASS

Test Graphs

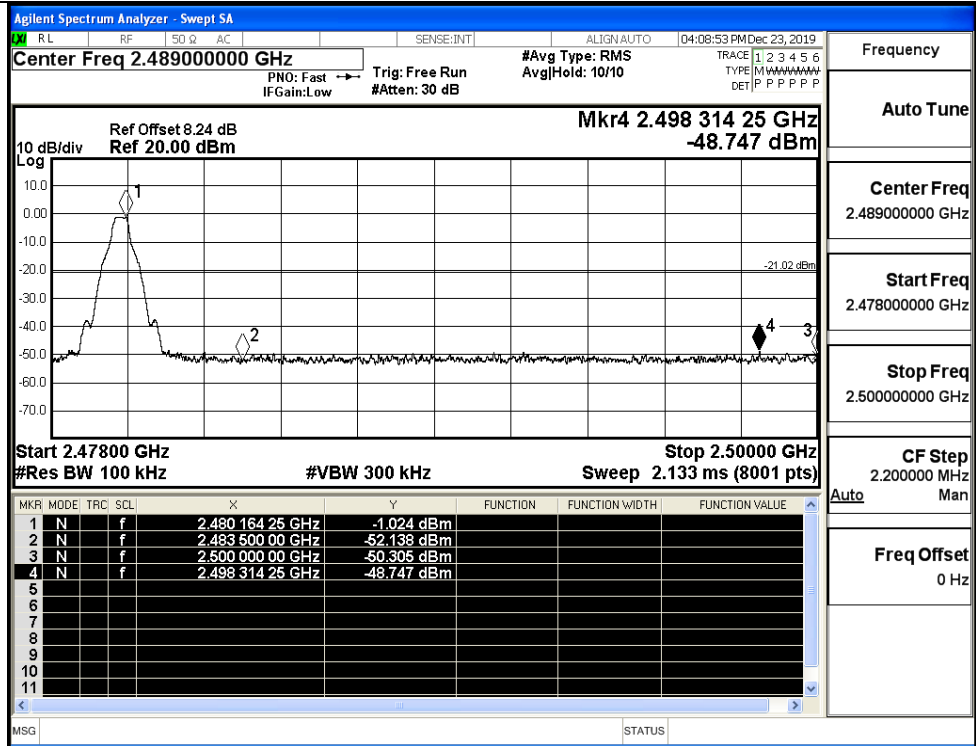
GFSK/LCH/No Hop



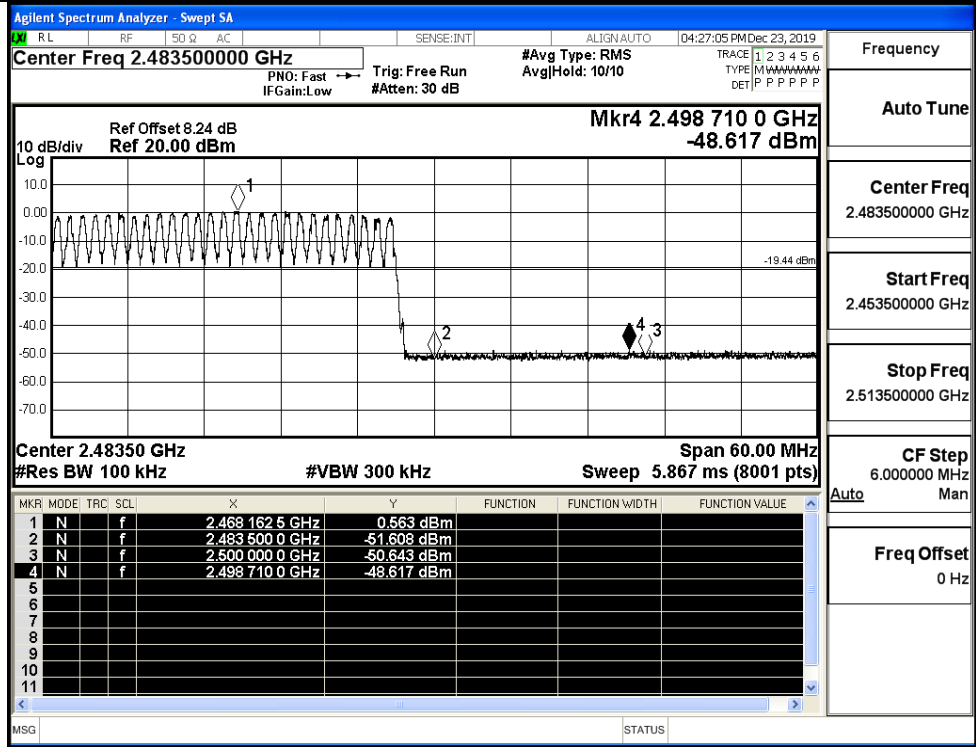
GFSK/LCH/Hop



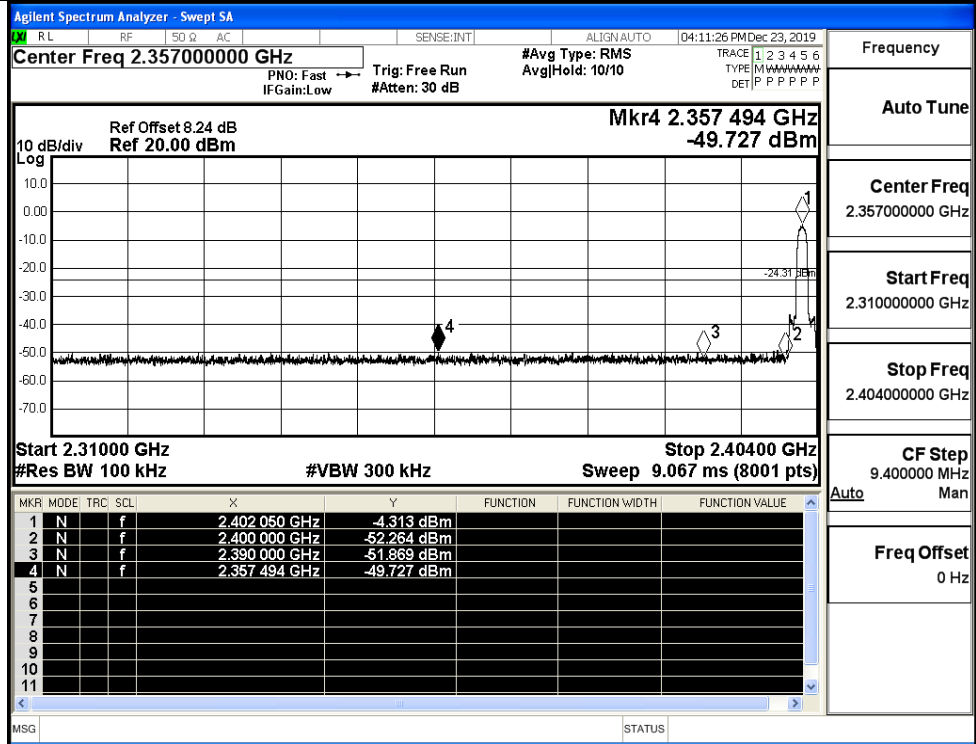
GFSK/HCH/No Hop



GFSK/HCH/Hop

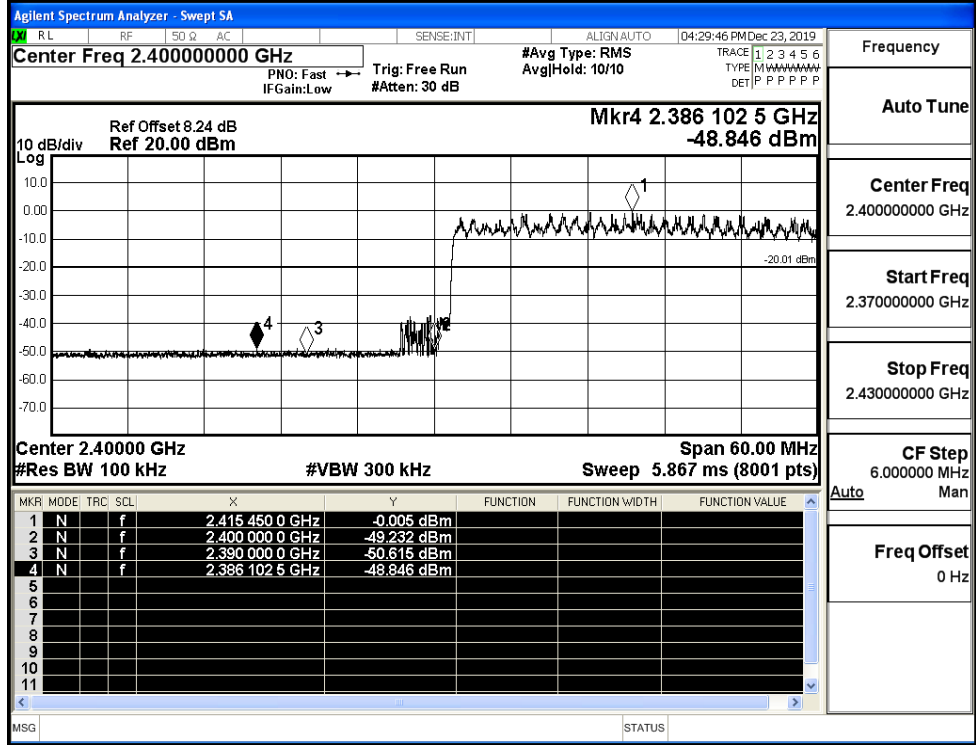


$\pi/4$ DQPSK/LCH/No
Hop



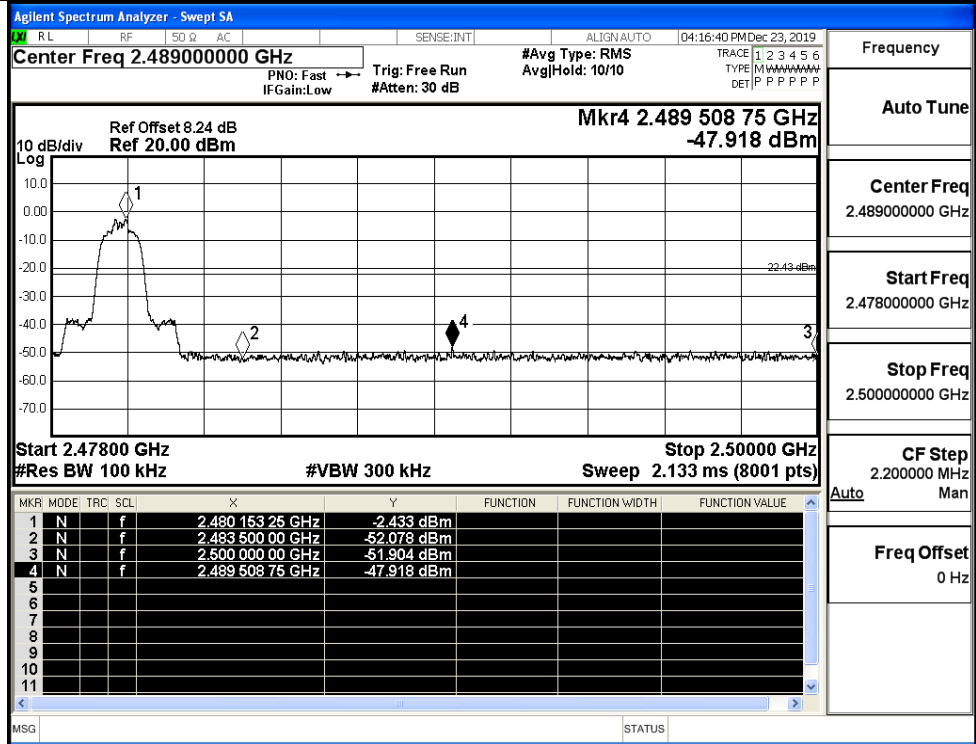
Frequency	
Auto Tune	
Center Freq	2.357000000 GHz
Start Freq	2.310000000 GHz
Stop Freq	2.404000000 GHz
CF Step	9.400000 MHz
Auto	Man
Freq Offset	0 Hz

$\pi/4$ DQPSK/LCH/Hop

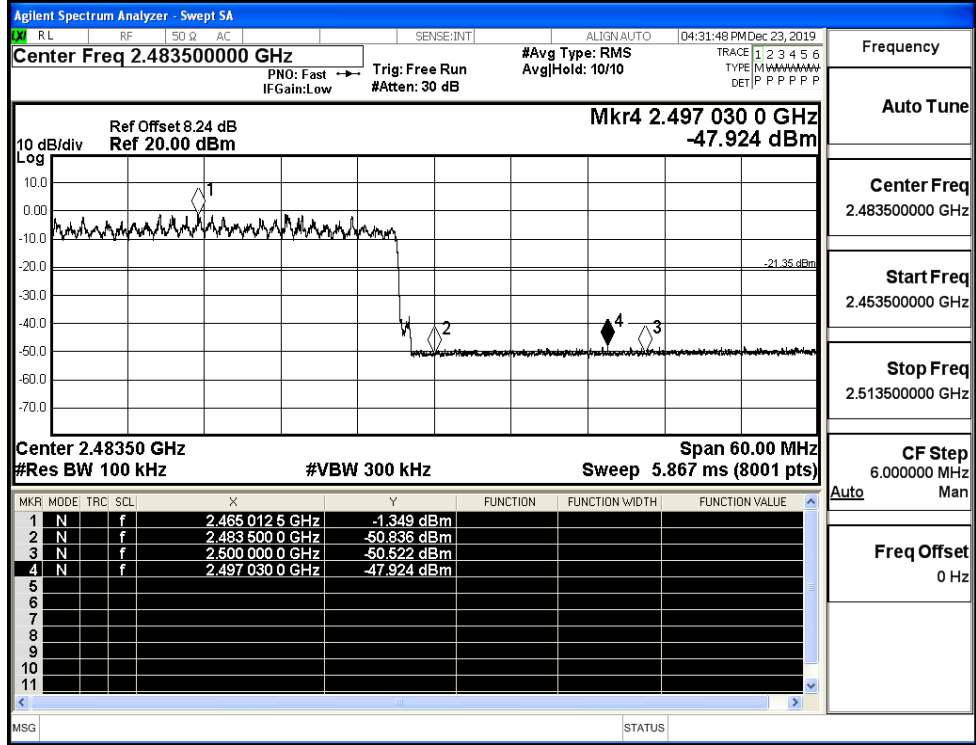


Frequency	
Auto Tune	
Center Freq	2.400000000 GHz
Start Freq	2.370000000 GHz
Stop Freq	2.430000000 GHz
CF Step	6.000000 MHz
Auto	Man
Freq Offset	0 Hz

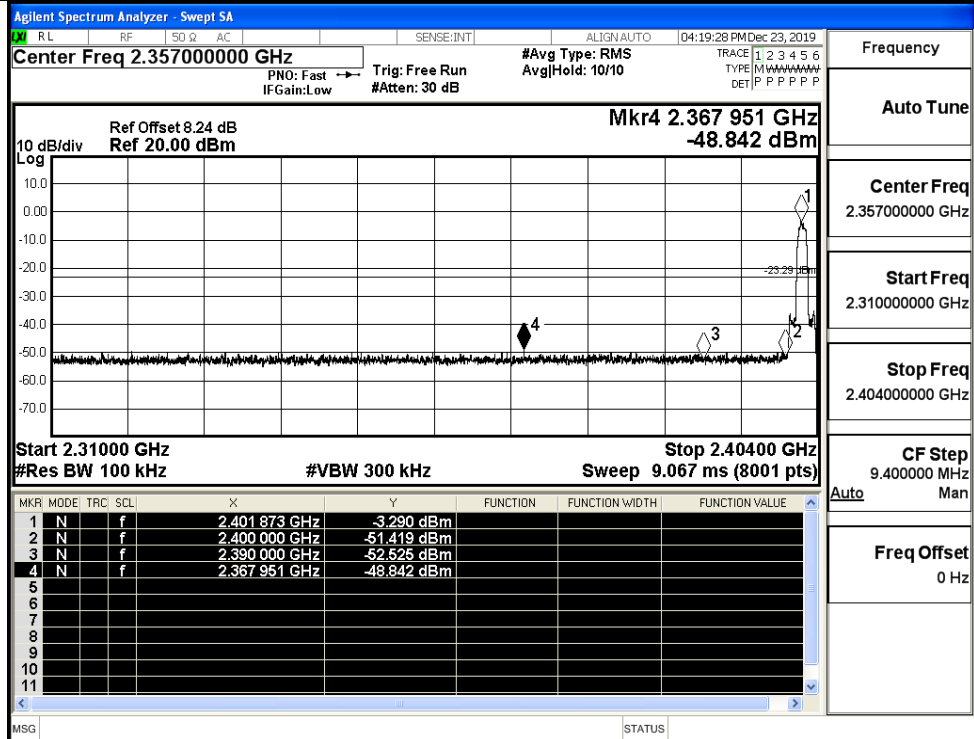
π /4DQPSK/HCH/No
Hop



π /4DQPSK/HCH/Hop

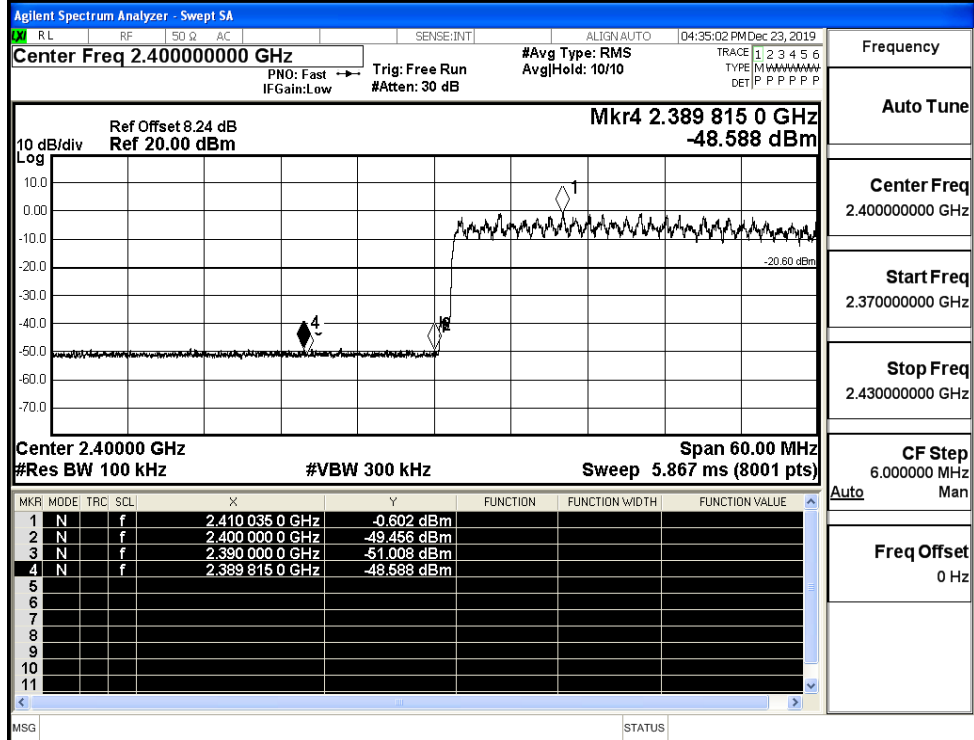


8DPSK/LCH/No Hop



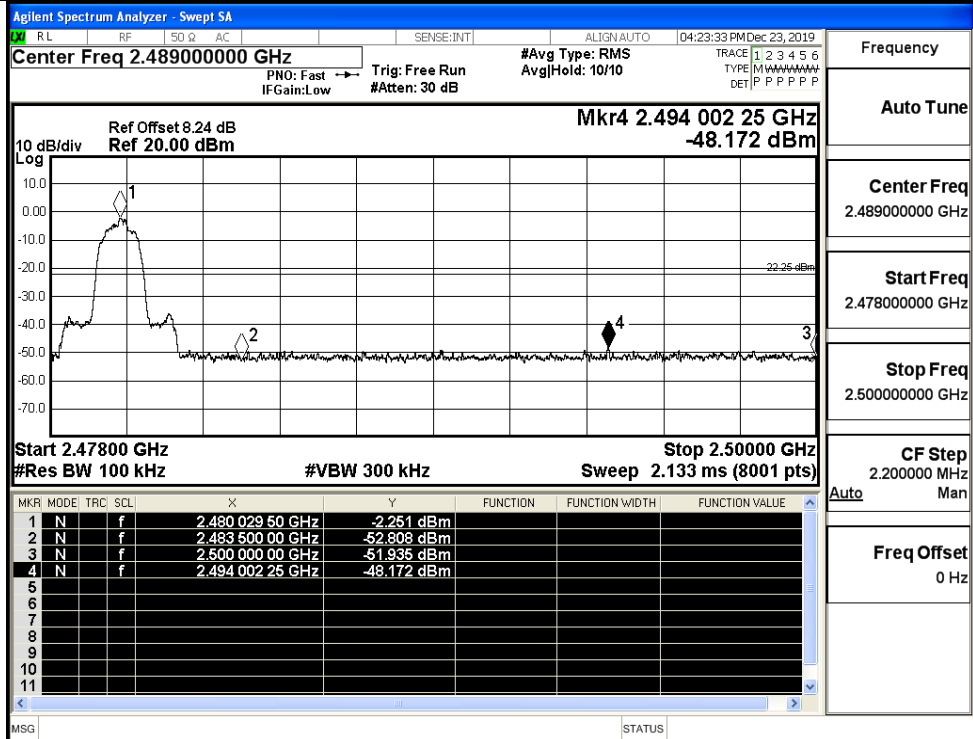
Frequency
Auto Tune
Center Freq
2.357000000 GHz
Start Freq
2.310000000 GHz
Stop Freq
2.404000000 GHz
CF Step
9.400000 MHz
Auto Man
Freq Offset
0 Hz

8DPSK/LCH/Hop



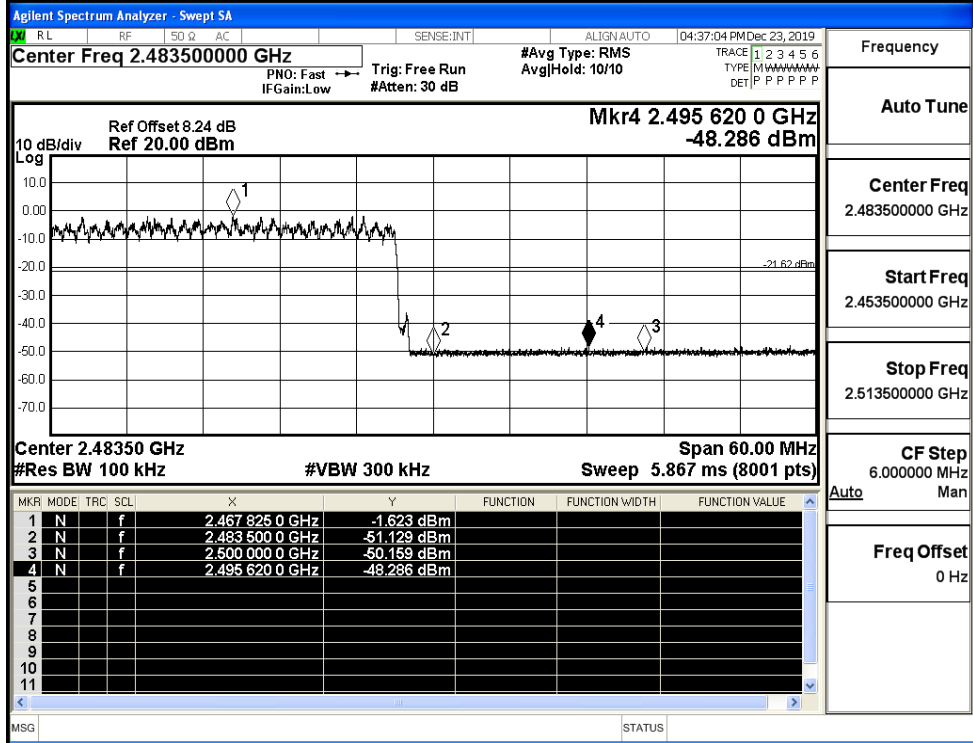
Frequency
Auto Tune
Center Freq
2.400000000 GHz
Start Freq
2.370000000 GHz
Stop Freq
2.430000000 GHz
CF Step
6.000000 MHz
Auto Man
Freq Offset
0 Hz

8DPSK/HCH/No Hop



Frequency
Auto Tune
Center Freq
2.489000000 GHz
Start Freq
2.478000000 GHz
Stop Freq
2.500000000 GHz
CF Step
2.200000 MHz
Freq Offset
0 Hz

8DPSK/HCH/Hop

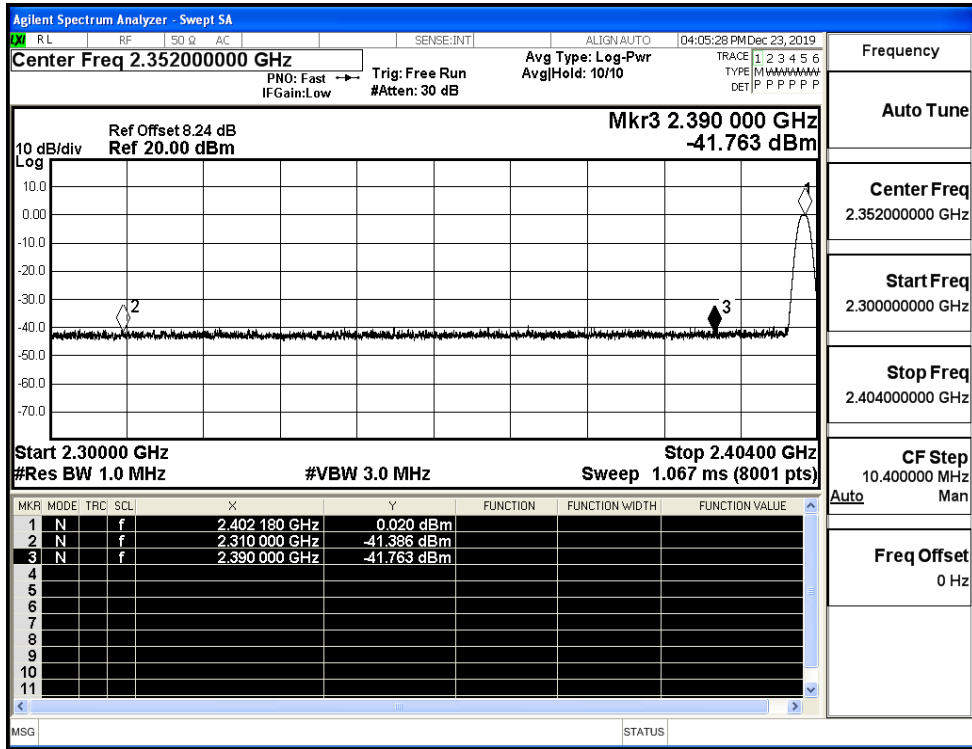


Frequency
Auto Tune
Center Freq
2.483500000 GHz
Start Freq
2.453500000 GHz
Stop Freq
2.513500000 GHz
CF Step
6.000000 MHz
Freq Offset
0 Hz

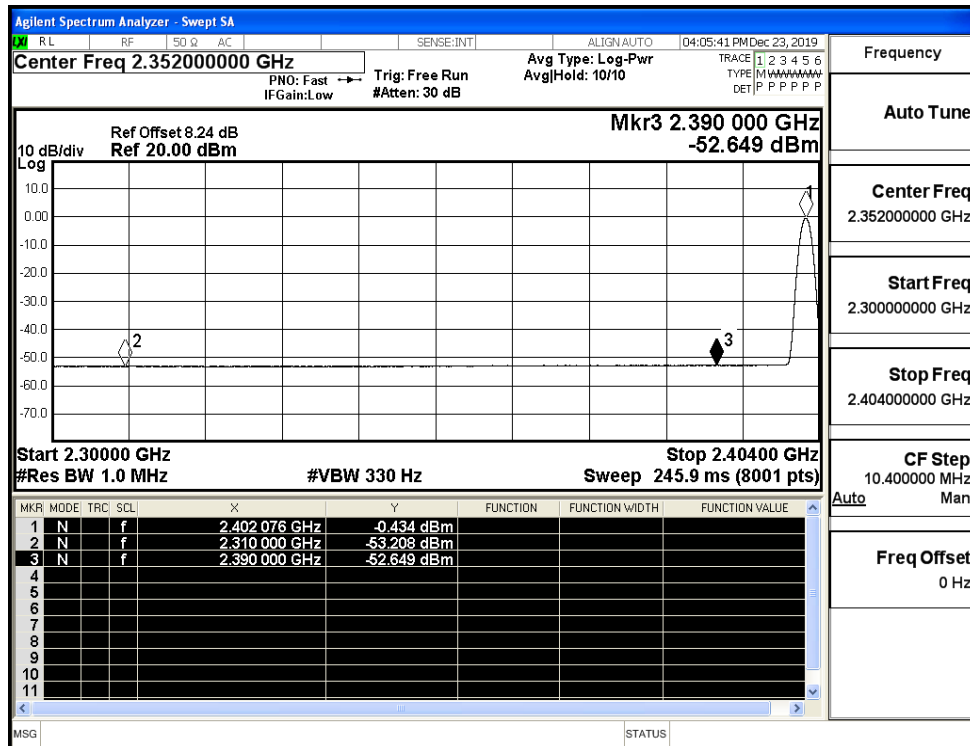
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-41.39	2.0	0	55.87	PEAK	74	PASS
	Off	2310.0	-53.21	2.0	0	44.05	AV	54	PASS
	Off	2390.0	-41.76	2.0	0	55.49	PEAK	74	PASS
	Off	2390.0	-52.65	2.0	0	44.61	AV	54	PASS
	Off	2483.5	-41.96	2.0	0	55.30	PEAK	74	PASS
	Off	2483.5	-52.26	2.0	0	45.00	AV	54	PASS
	Off	2500.0	-40.59	2.0	0	56.66	PEAK	74	PASS
	Off	2500.0	-52.00	2.0	0	45.26	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-43.64	2.0	0	53.62	PEAK	74	PASS
	Off	2310.0	-53.08	2.0	0	44.18	AV	54	PASS
	Off	2390.0	-41.04	2.0	0	56.21	PEAK	74	PASS
	Off	2390.0	-52.75	2.0	0	44.50	AV	54	PASS
	Off	2483.5	-42.81	2.0	0	54.45	PEAK	74	PASS
	Off	2483.5	-52.26	2.0	0	45.00	AV	54	PASS
	Off	2500.0	-41.17	2.0	0	56.09	PEAK	74	PASS
	Off	2500.0	-52.08	2.0	0	45.18	AV	54	PASS
8DPSK	Off	2310.0	-43.36	2.0	0	53.90	PEAK	74	PASS
	Off	2310.0	-53.08	2.0	0	44.18	AV	54	PASS
	Off	2390.0	-41.78	2.0	0	55.48	PEAK	74	PASS
	Off	2390.0	-52.77	2.0	0	44.49	AV	54	PASS
	Off	2483.5	-42.35	2.0	0	54.90	PEAK	74	PASS
	Off	2483.5	-52.27	2.0	0	44.99	AV	54	PASS
	Off	2500.0	-41.76	2.0	0	55.50	PEAK	74	PASS
	Off	2500.0	-52.08	2.0	0	45.18	AV	54	PASS

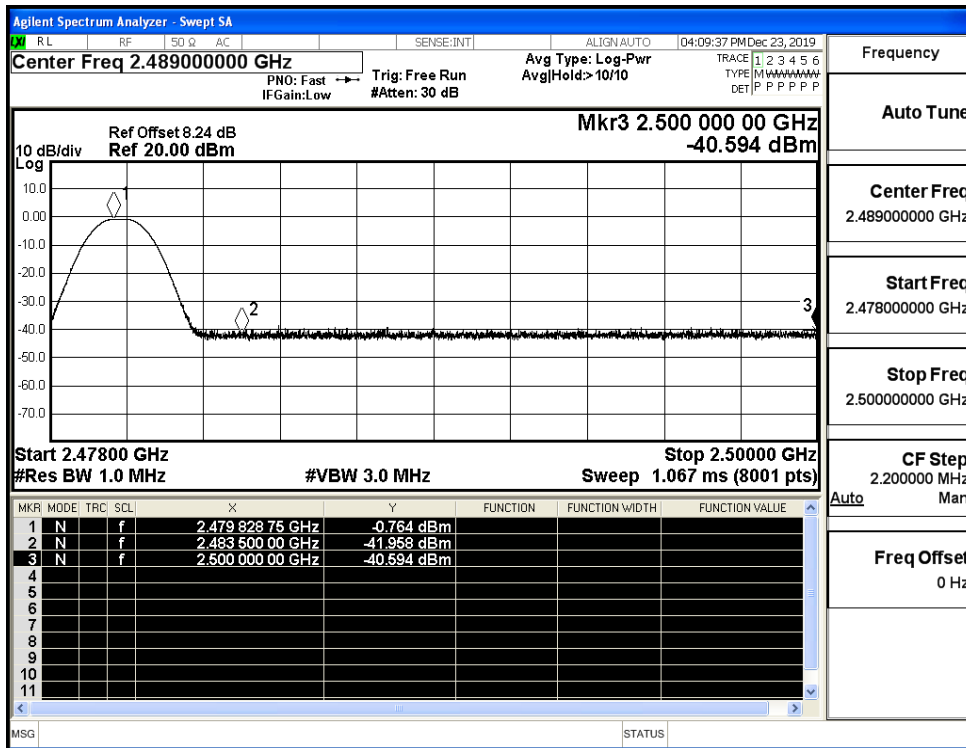
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



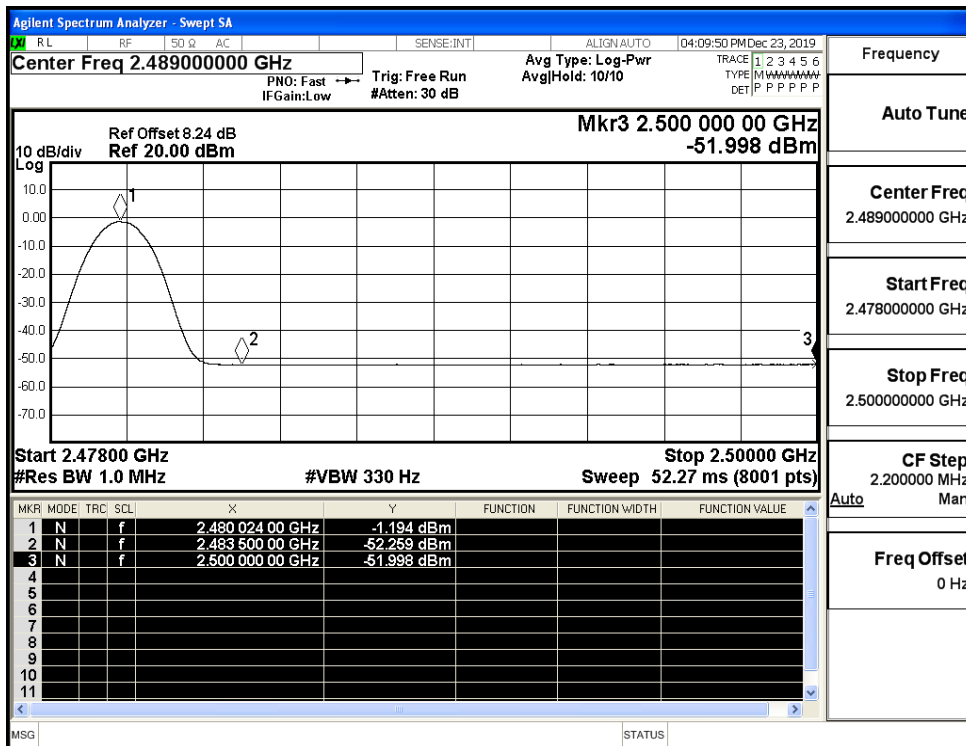
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)



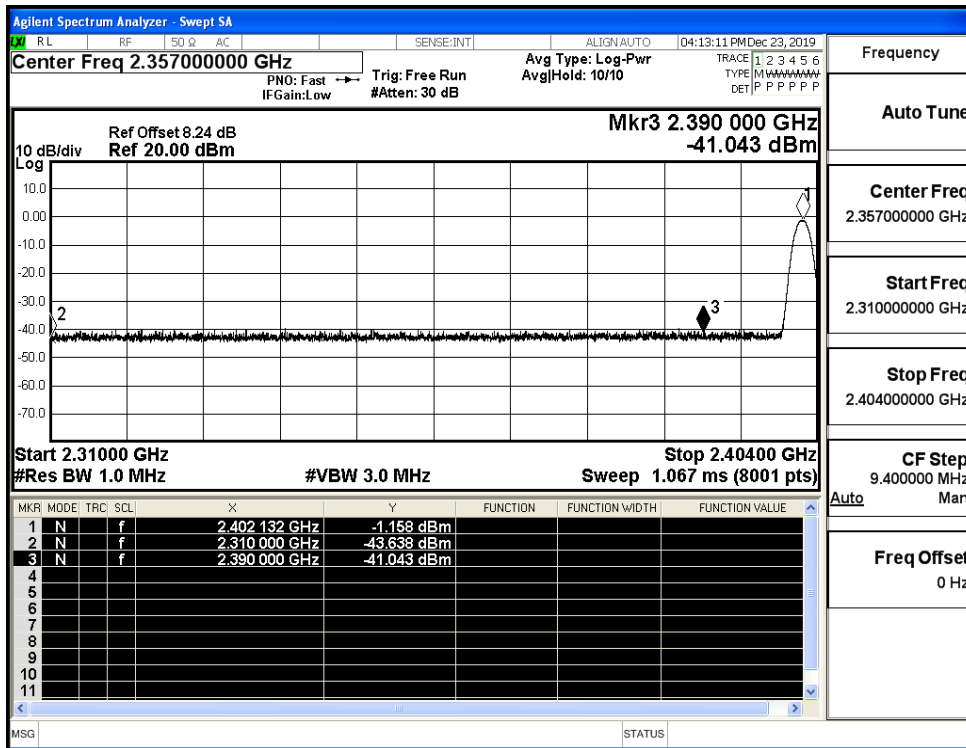
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)



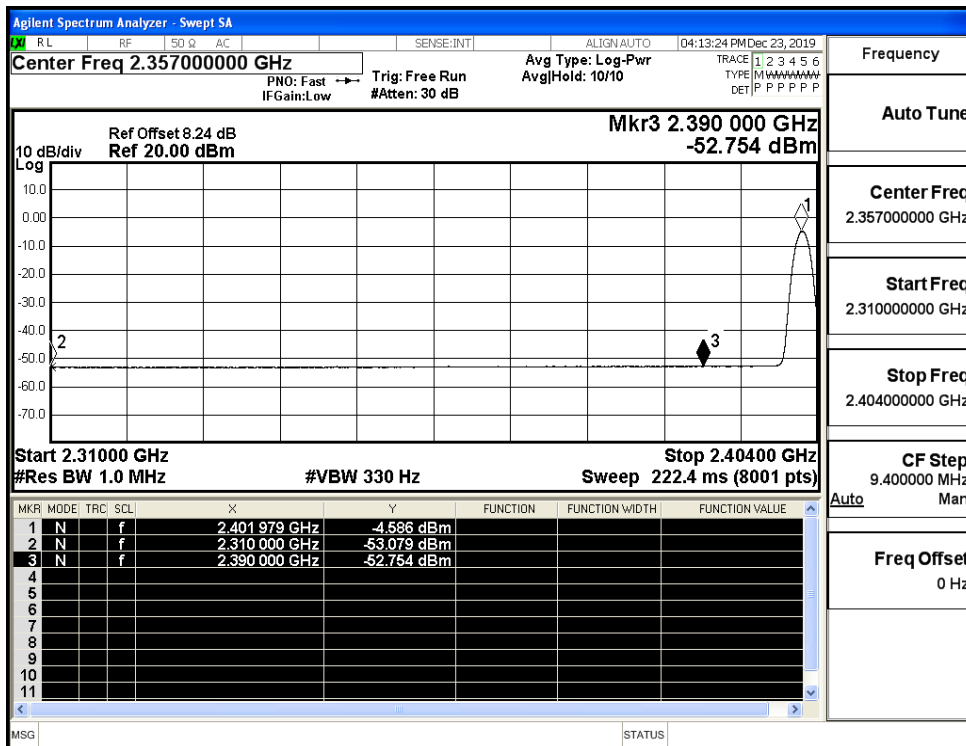
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)



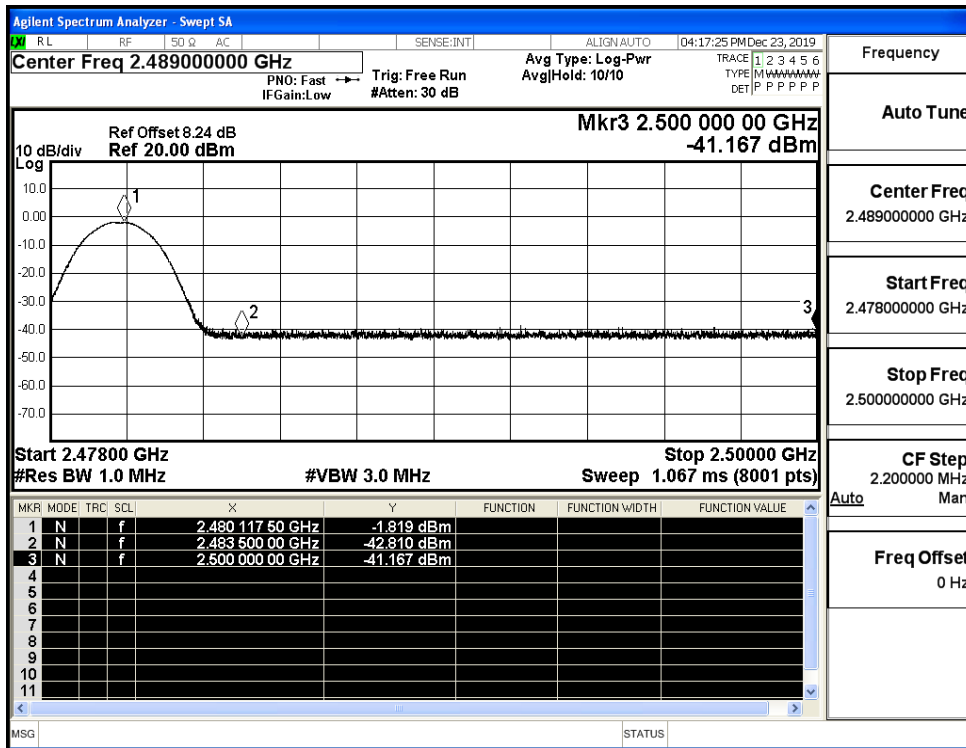
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)



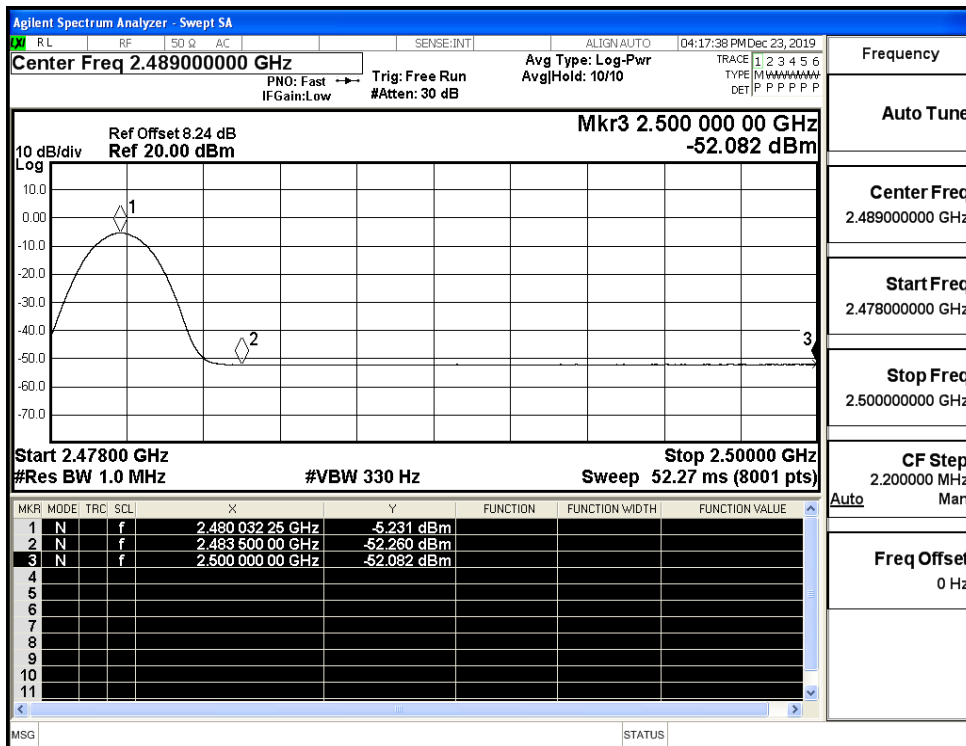
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)



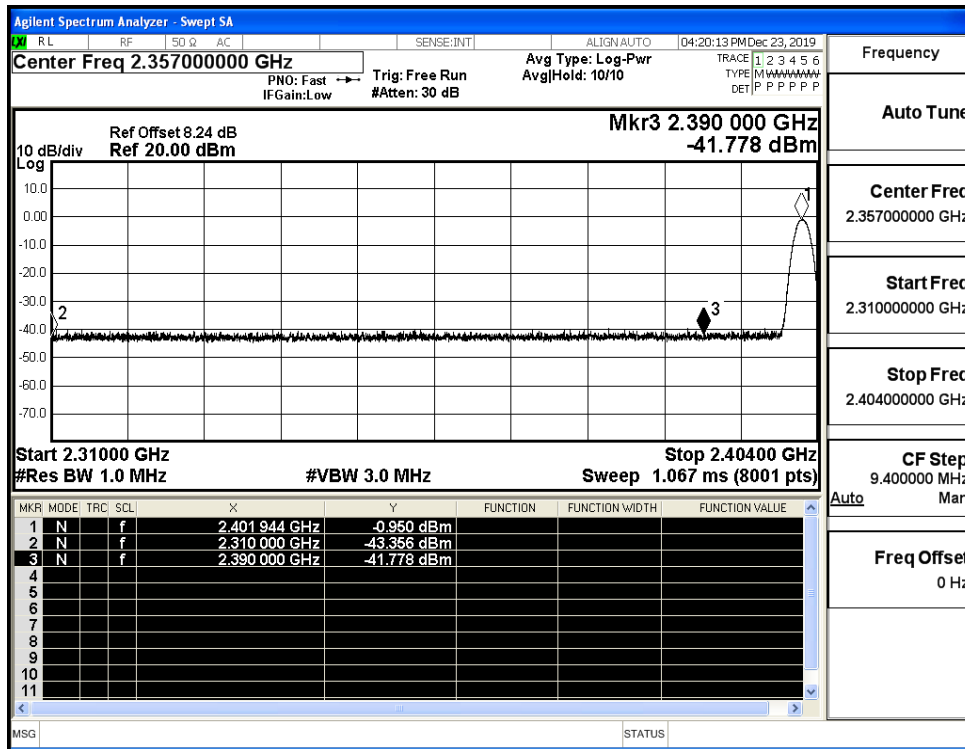
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (High Channel)



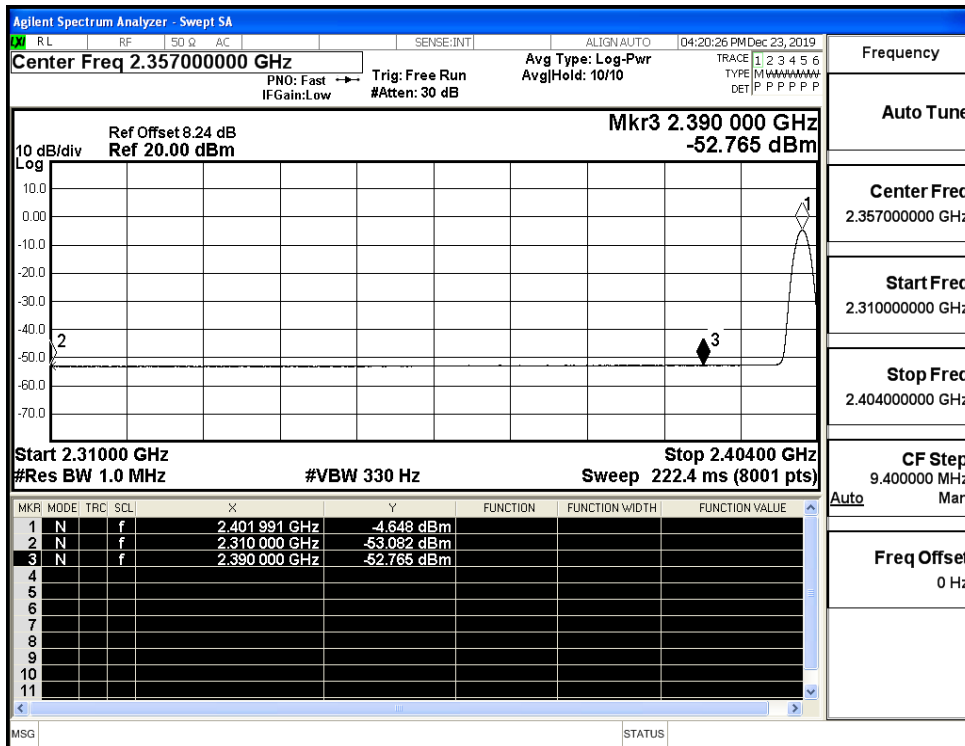
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (High Channel)



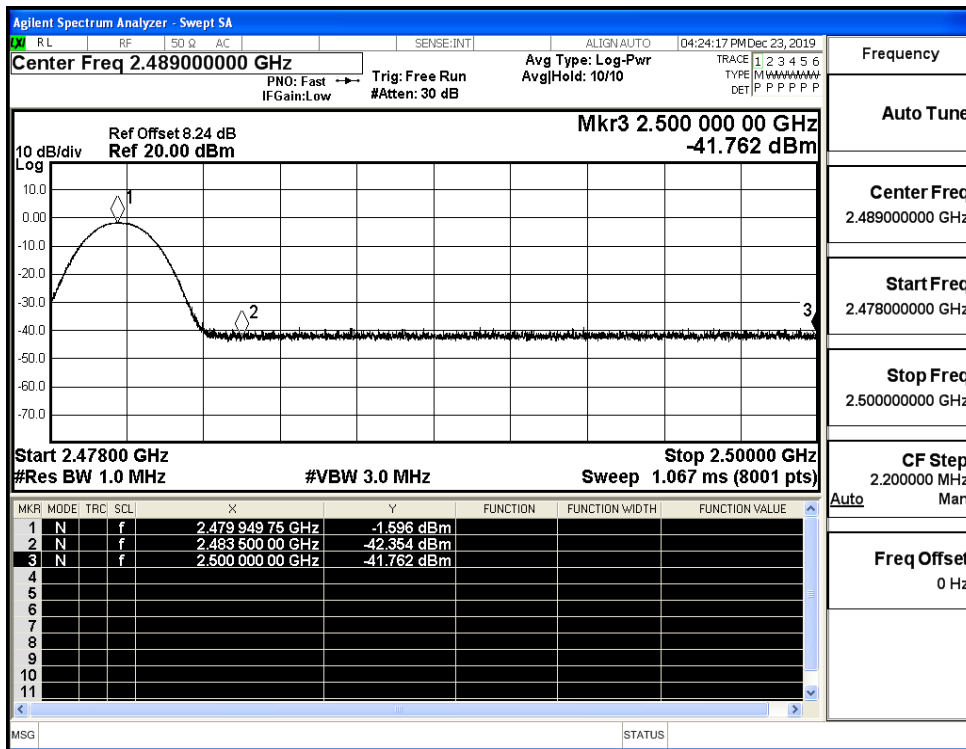
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

