

## Appendix A

### RF Test Data for BT V5.0 (BDR/EDR) (Conducted Measurement)

Product Name: Bluetooth Earphones

Trade Mark: Snoky

Test Model: Snoky T10

#### Environmental Conditions

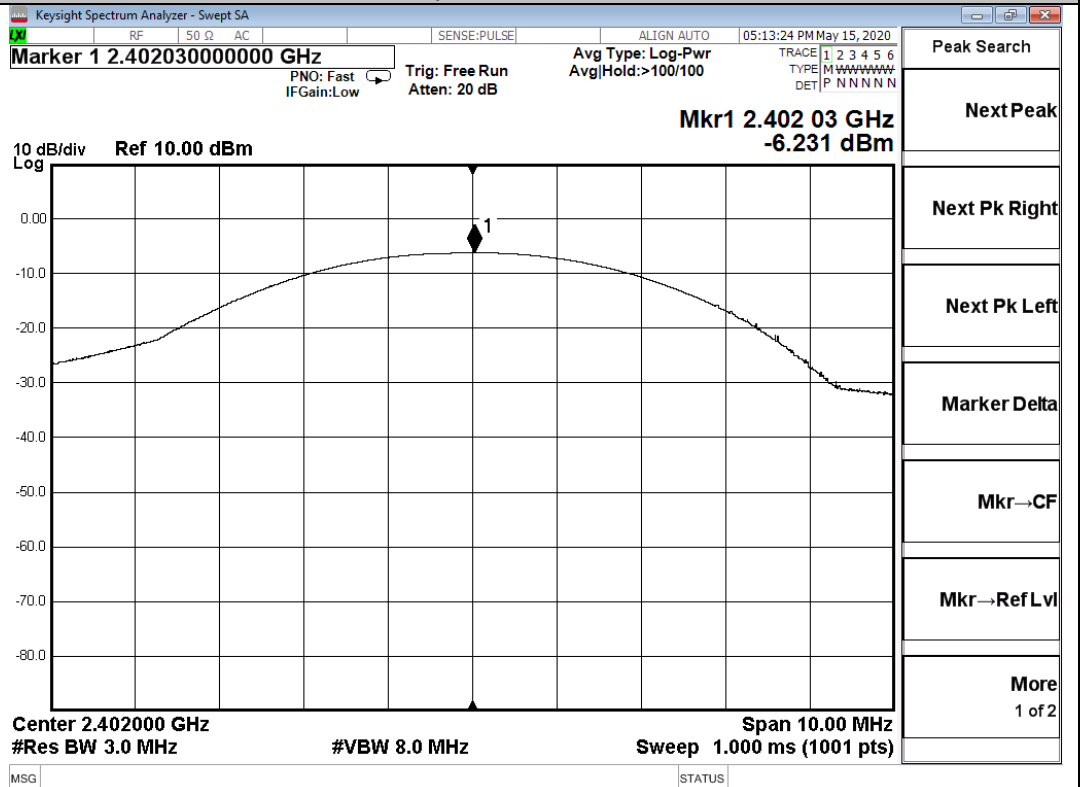
Temperature:	23.4° C
Relative Humidity:	53%
ATM Pressure:	100.0 kPa
Test Engineer:	Chuang Wang
Supervised by:	Jayden Zhuo

#### A.1 Maximum Conducted Peak Output Power

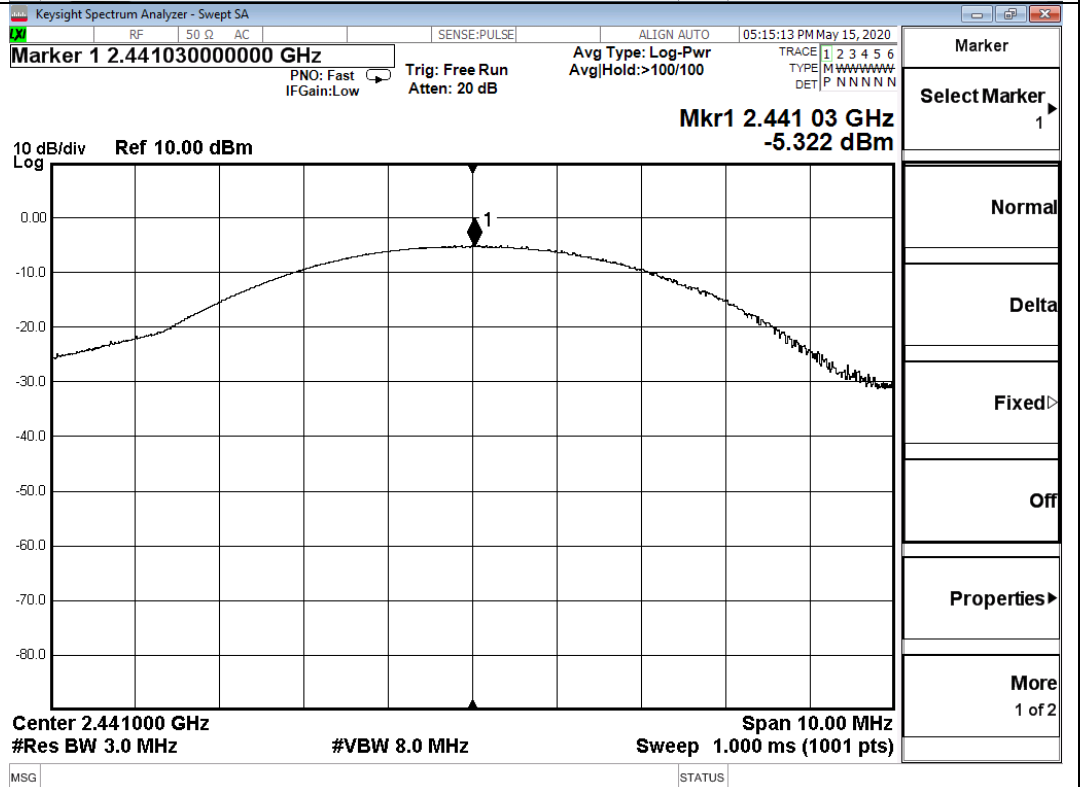
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-6.231	21	PASS
	MCH	-5.322	21	PASS
	HCH	-5.146	21	PASS
$\pi/4$ DQPSK	LCH	-5.280	21	PASS
	MCH	-4.396	21	PASS
	HCH	-4.279	21	PASS

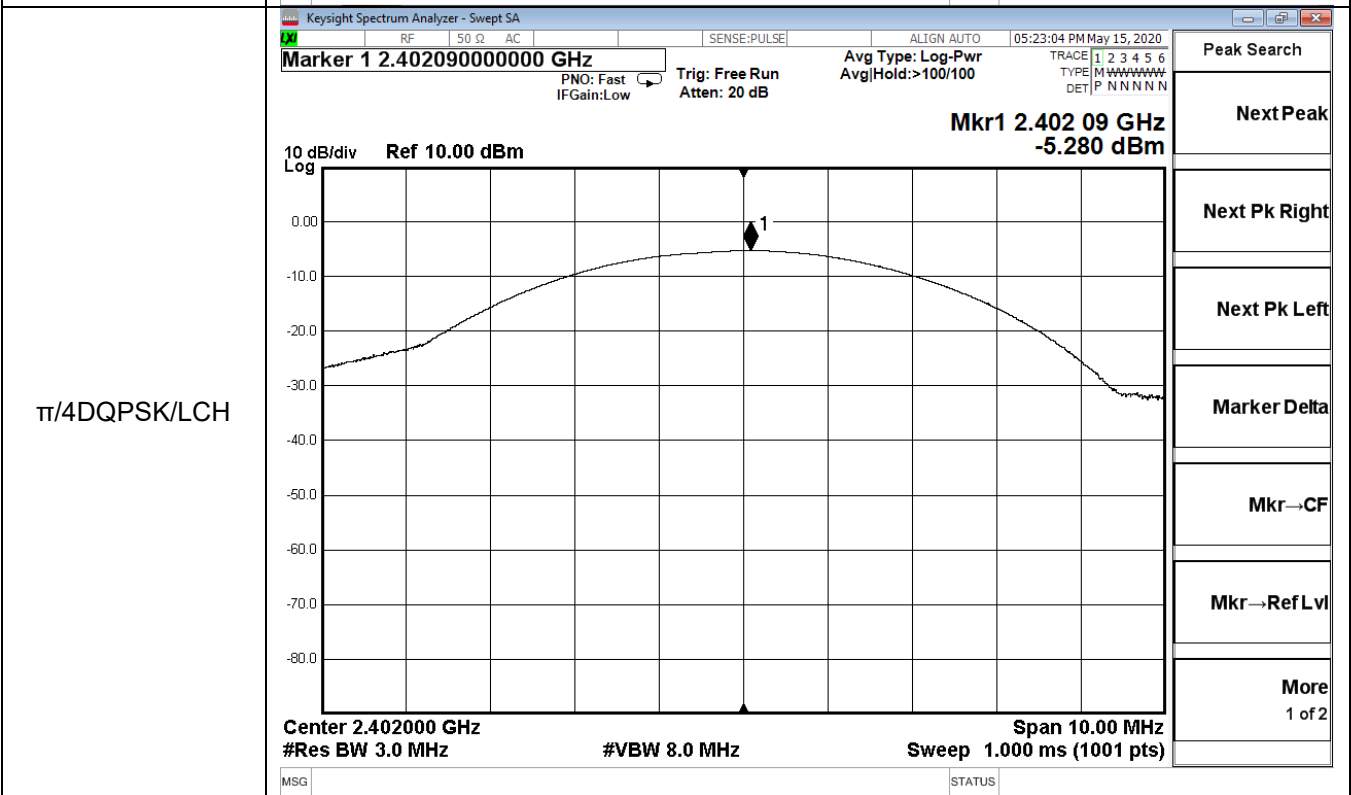
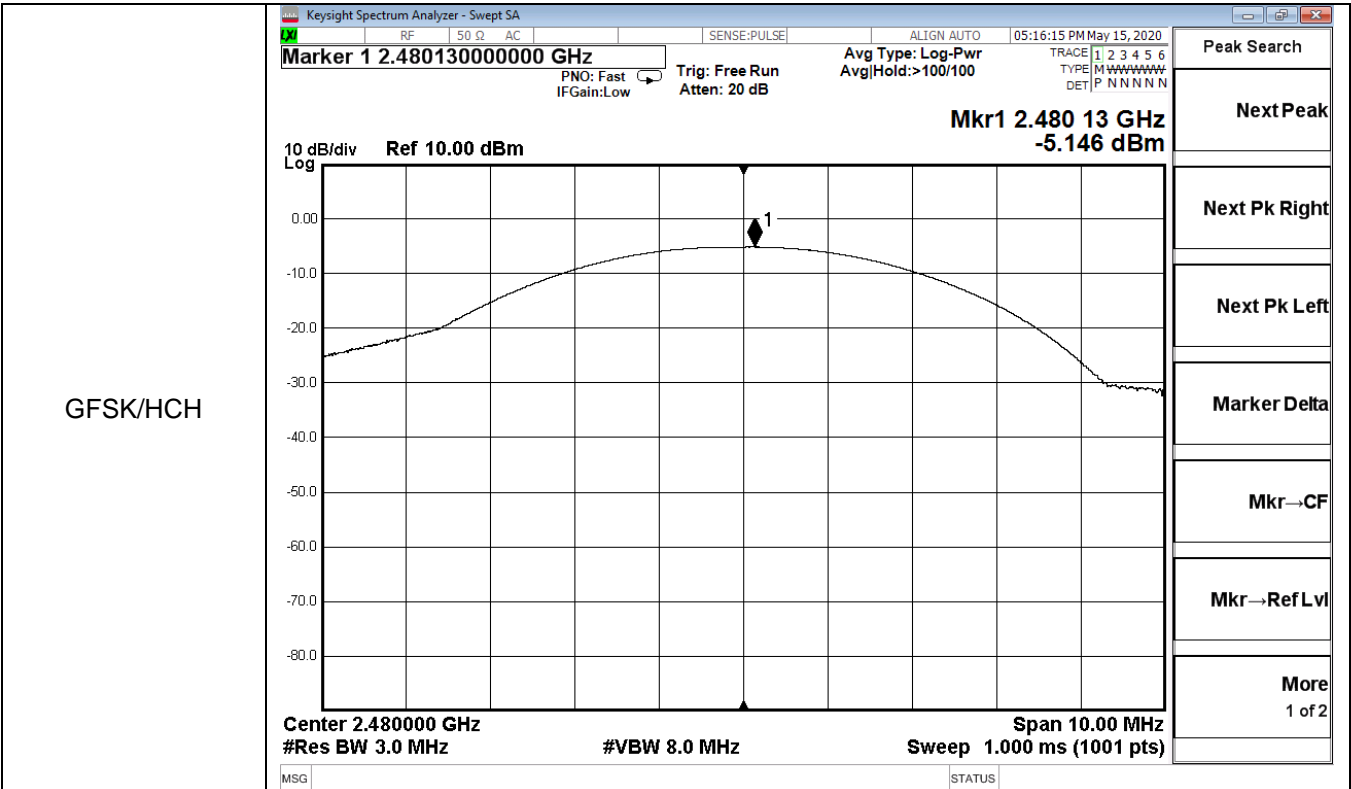
Test Graphs

GFSK/LCH

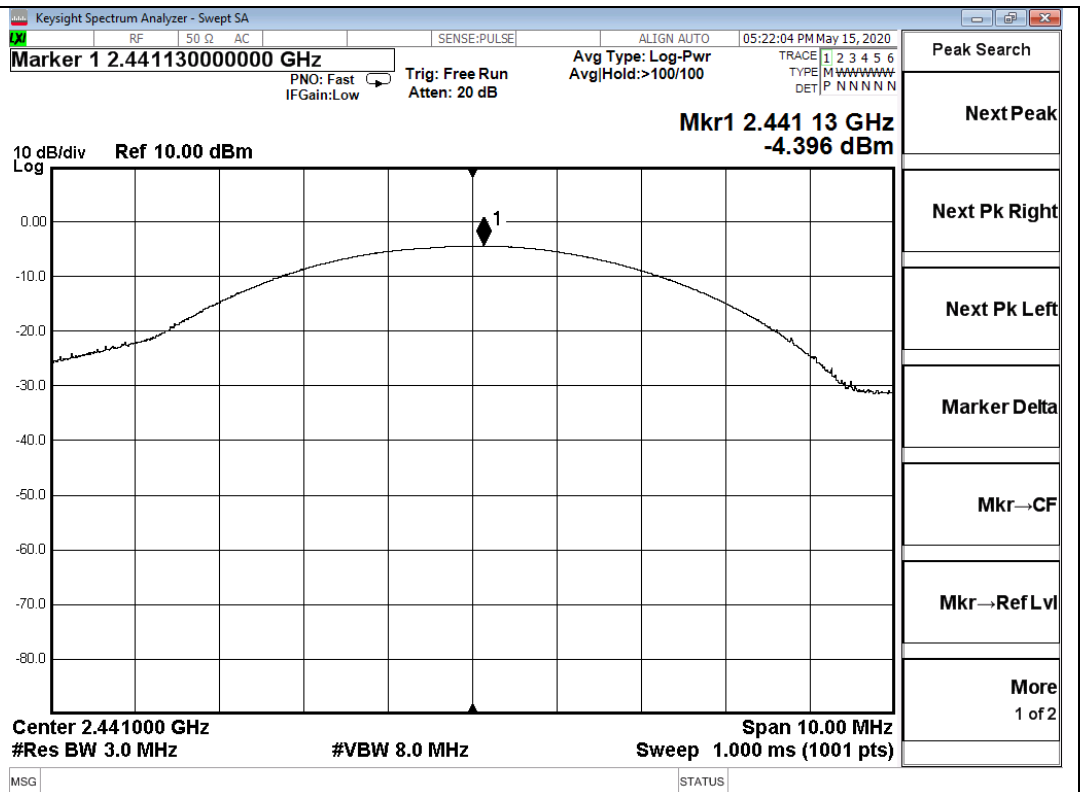


GFSK/MCH

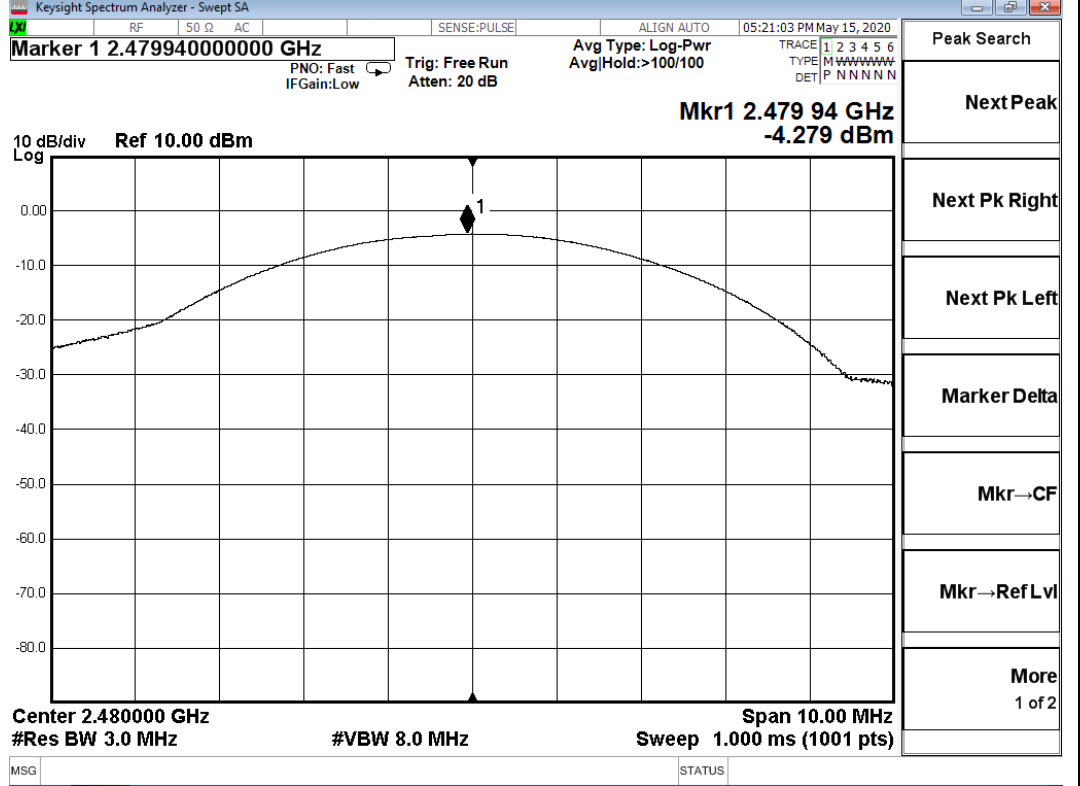




$\pi/4$ DQPSK/MCH

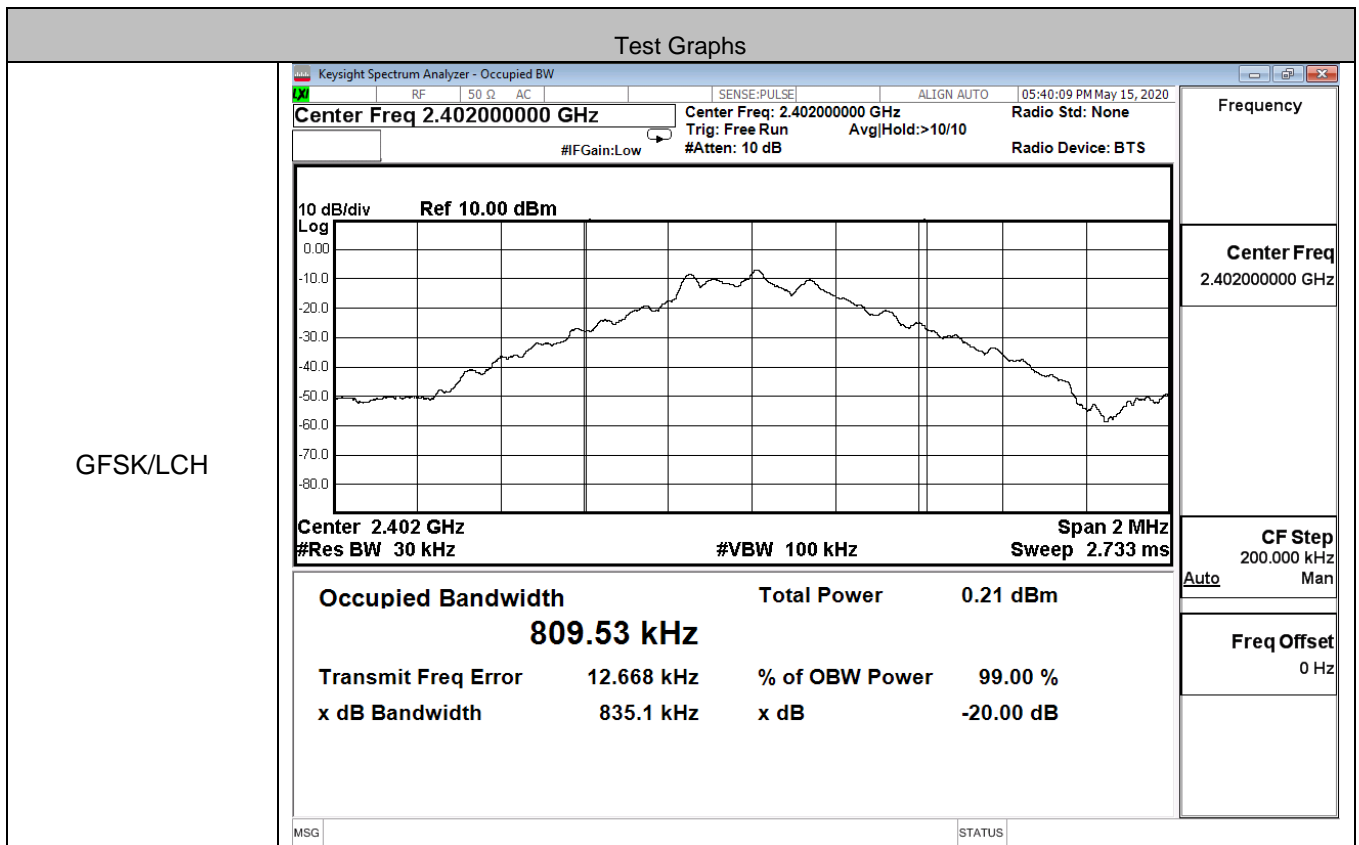


$\pi/4$ DQPSK/HCH

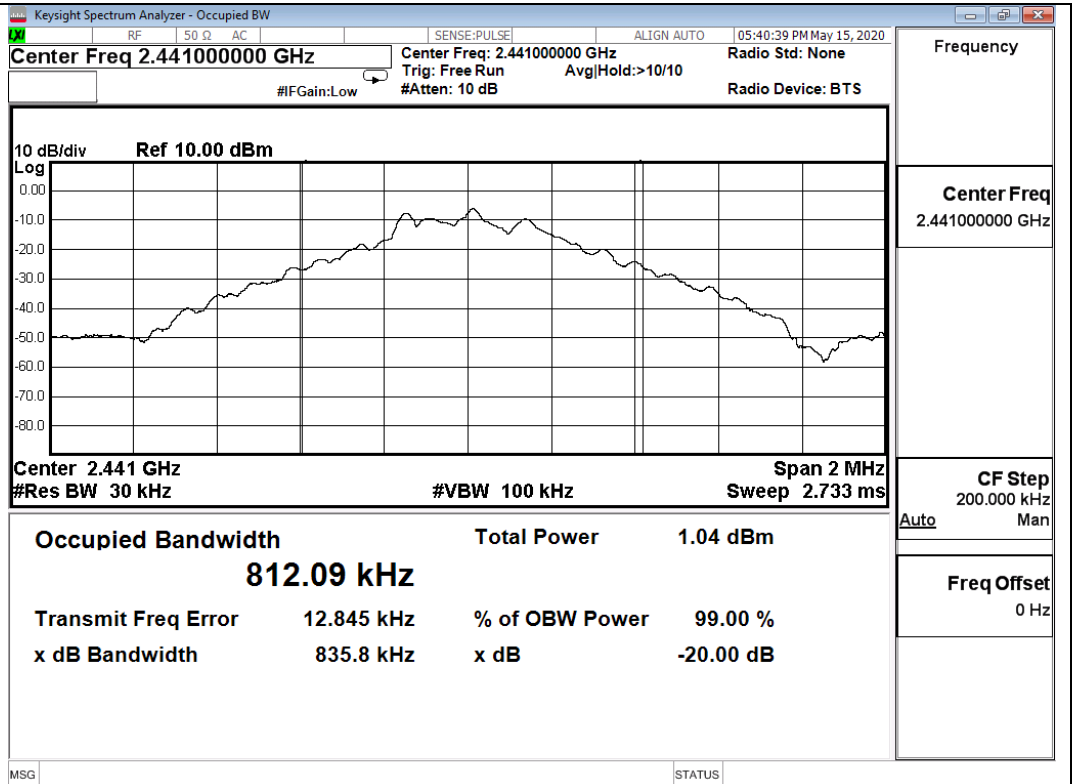


**A.2 99% and 20dB Bandwidth**

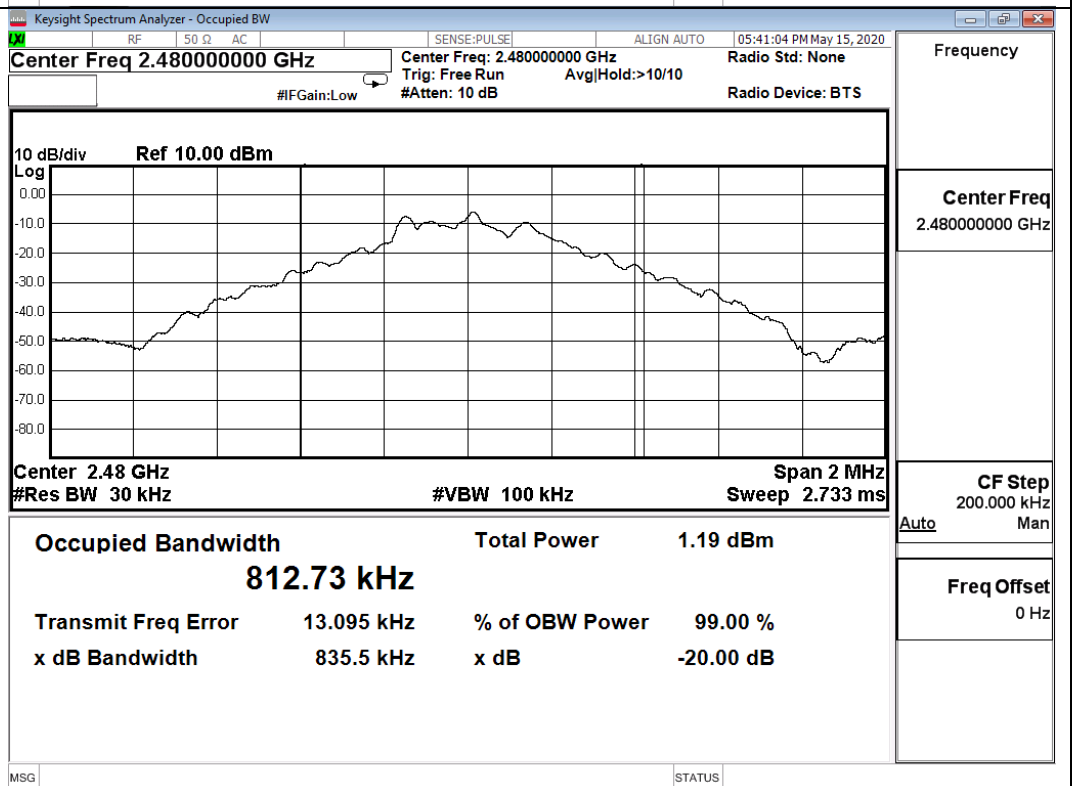
Mode	Channel.	99% Bandwidth [MHz]	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.80953	0.8351	Not Specified	PASS
	MCH	0.81209	0.8358	Not Specified	PASS
	HCH	0.81273	0.8355	Not Specified	PASS
π/4DQPSK	LCH	1.1591	1.207	Not Specified	PASS
	MCH	1.1605	1.194	Not Specified	PASS
	HCH	1.1619	1.210	Not Specified	PASS

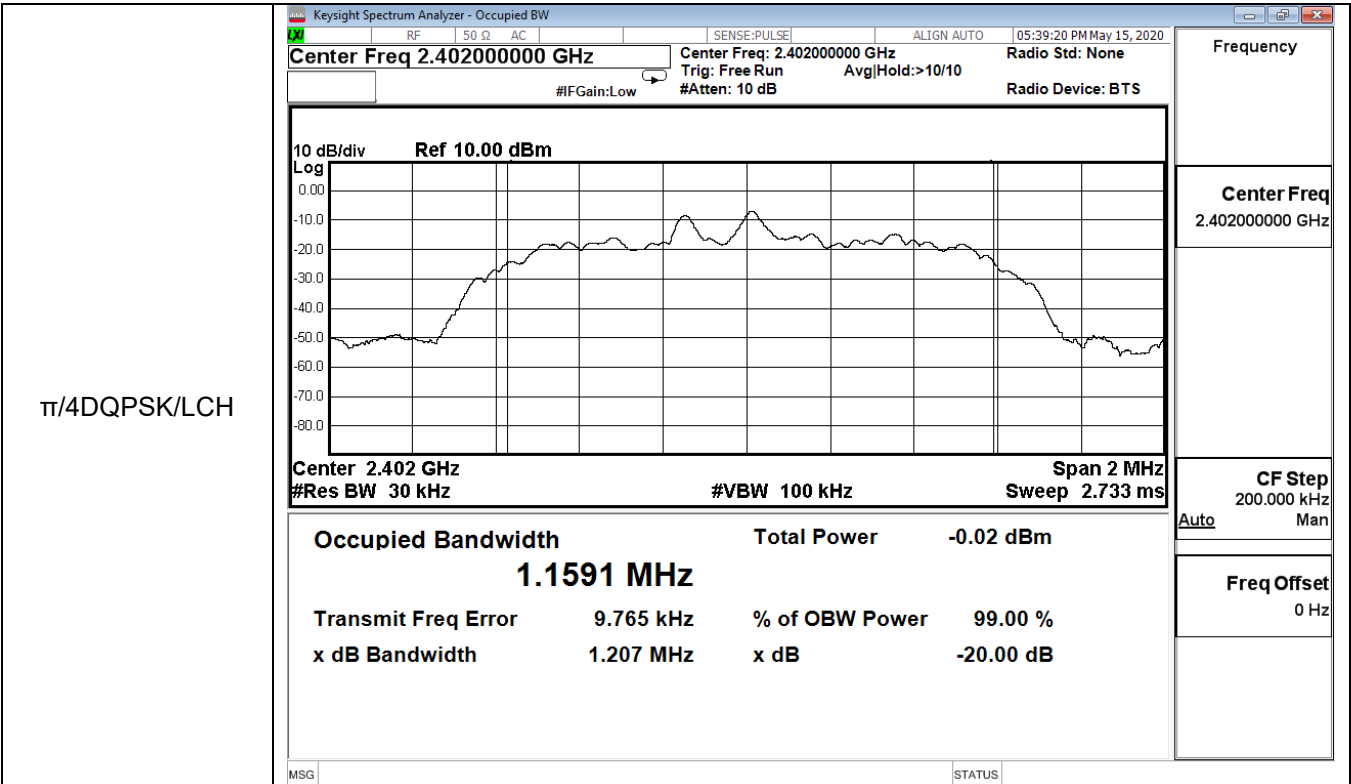


GFSK/MCH



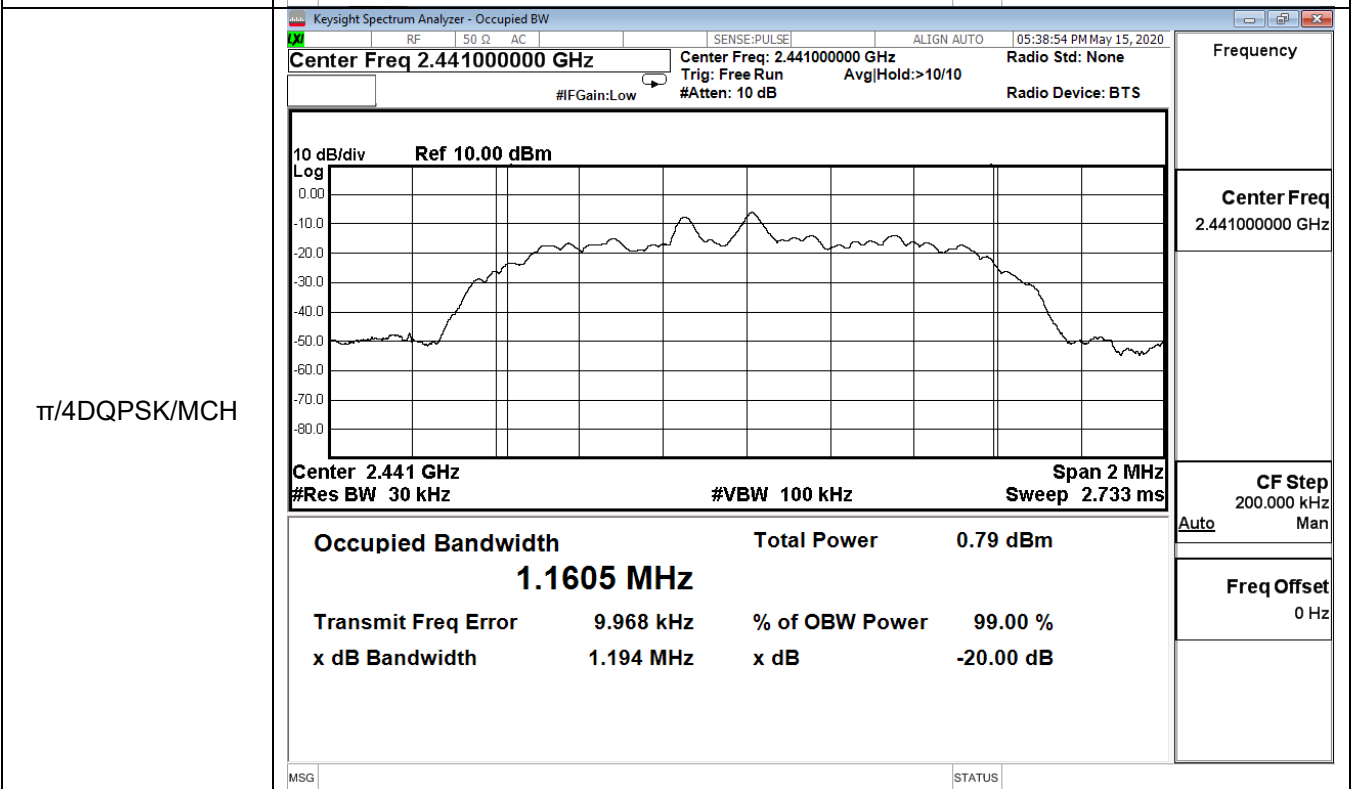
GFSK/HCH





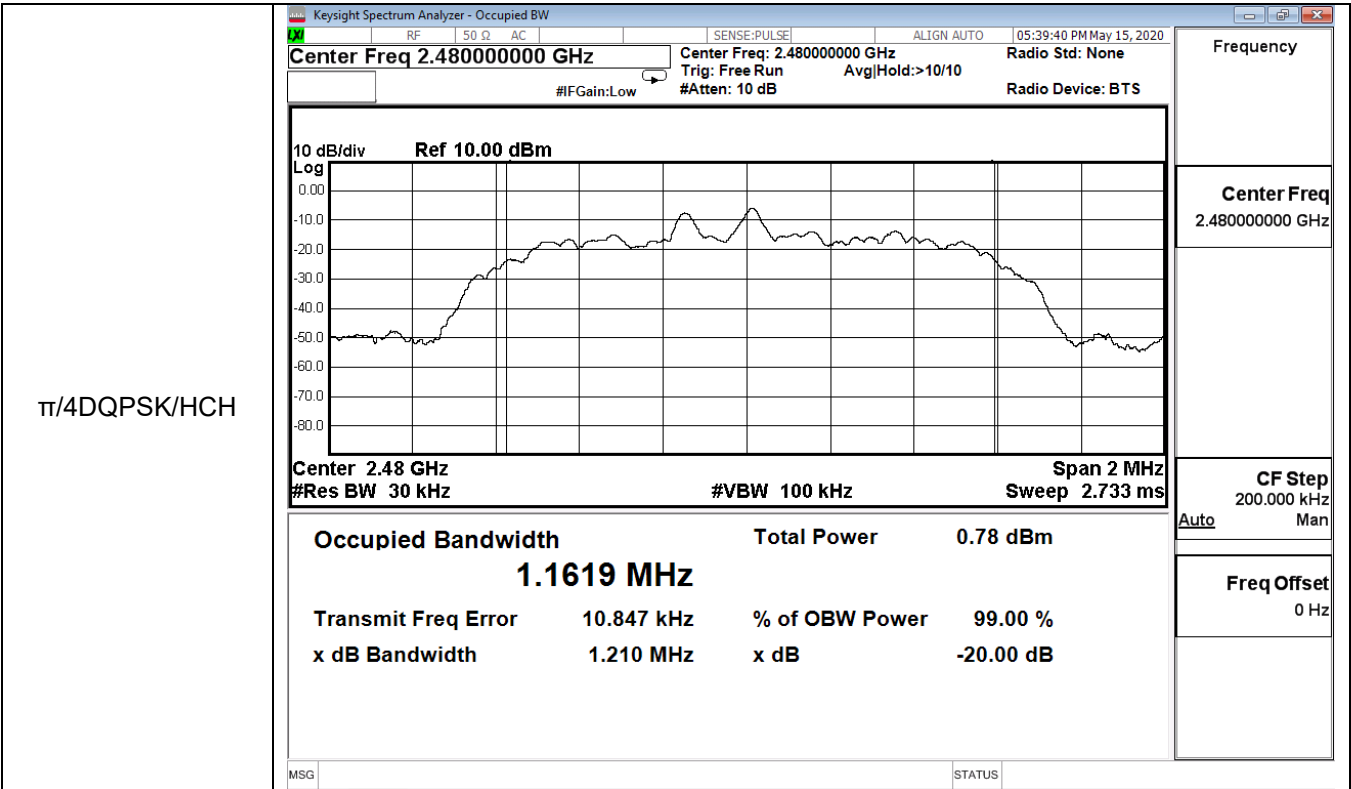
π/4DQPSK/LCH

Frequency	Center Freq 2.40200000 GHz
CF Step	200.000 kHz Auto Man
Freq Offset	0 Hz



π/4DQPSK/MCH

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





### A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.000	0.557	PASS
	MCH	1.004	0.557	PASS
	HCH	1.002	0.557	PASS
$\pi$ /4DQPSK	LCH	1.000	0.805	PASS
	MCH	1.000	0.796	PASS
	HCH	1.000	0.807	PASS

#### Test Graphs

GFSK/LCH

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N			2.402 014 GHz	-6.568 dBm			
2	$\Delta$ 1			1.000 MHz ( $\Delta$ )	0.014 dB			
3								
4								
5								
6								
7								
8								
9								
10								
11								

Frequency

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Auto Tune

---

Center Freq  
2.402500000 GHz

---

Start Freq  
2.401500000 GHz

---

Stop Freq  
2.403500000 GHz

---

CF Step  
200.000 kHz

Auto Man

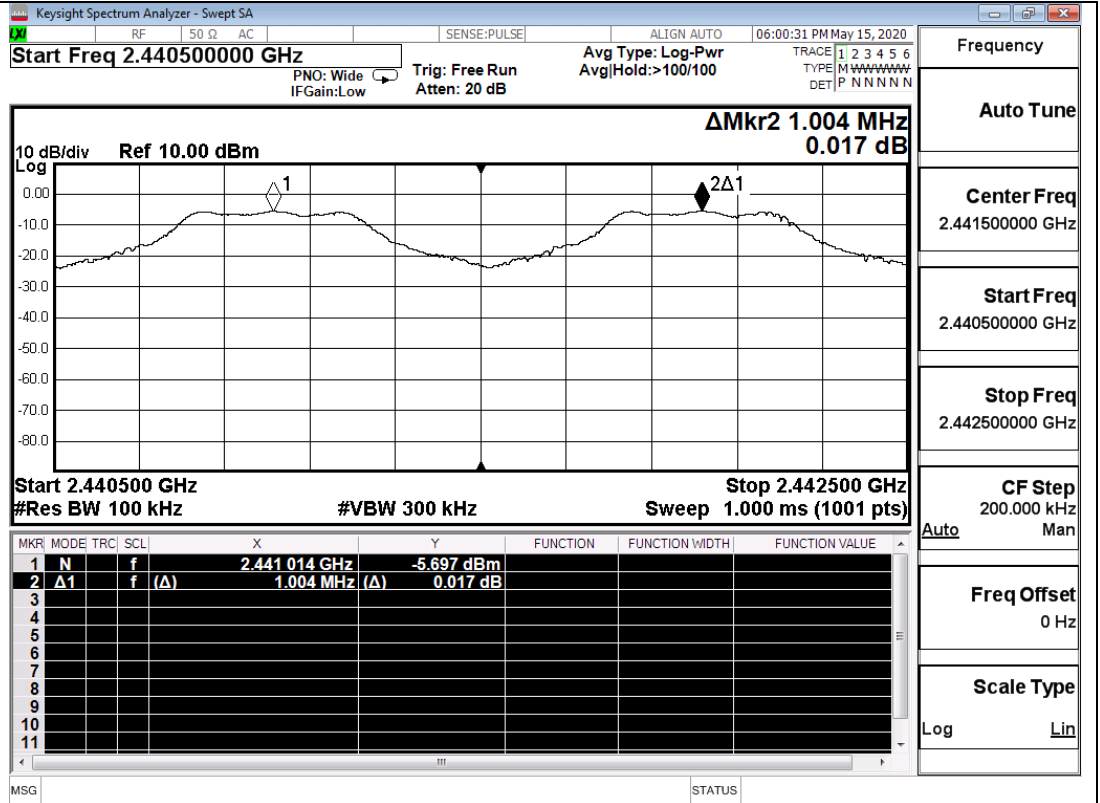
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Freq Offset  
0 Hz

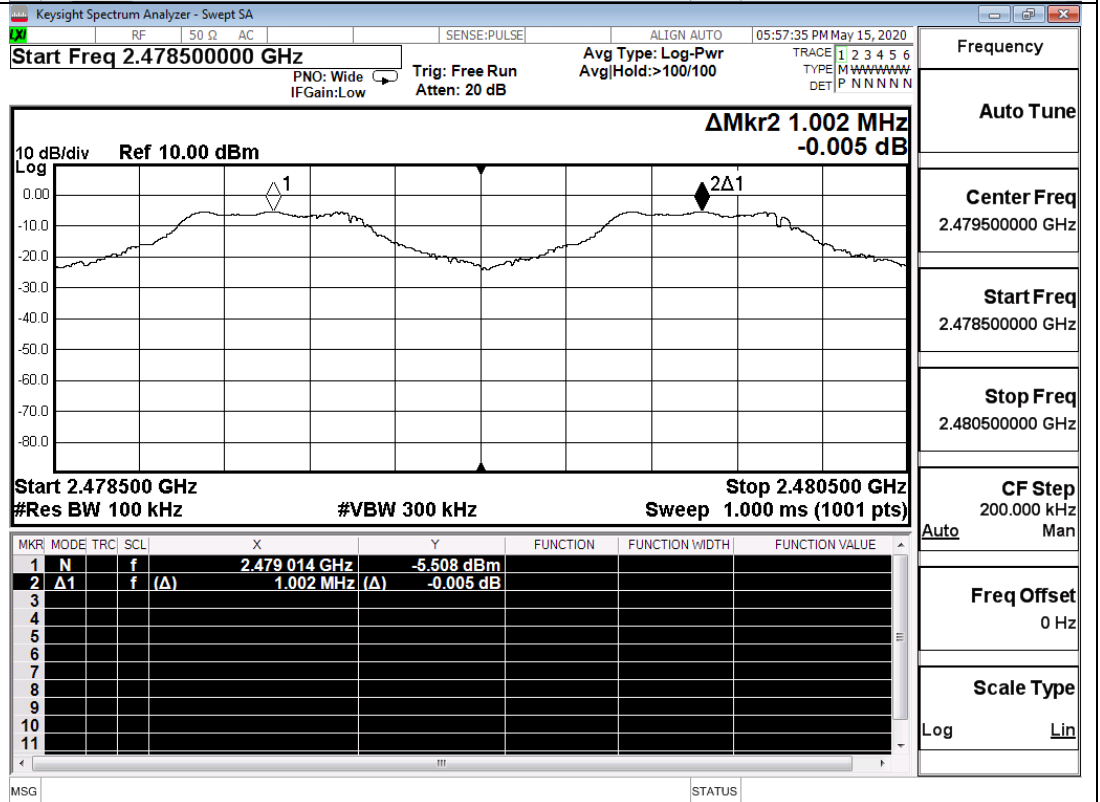
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Scale Type  
Log Lin

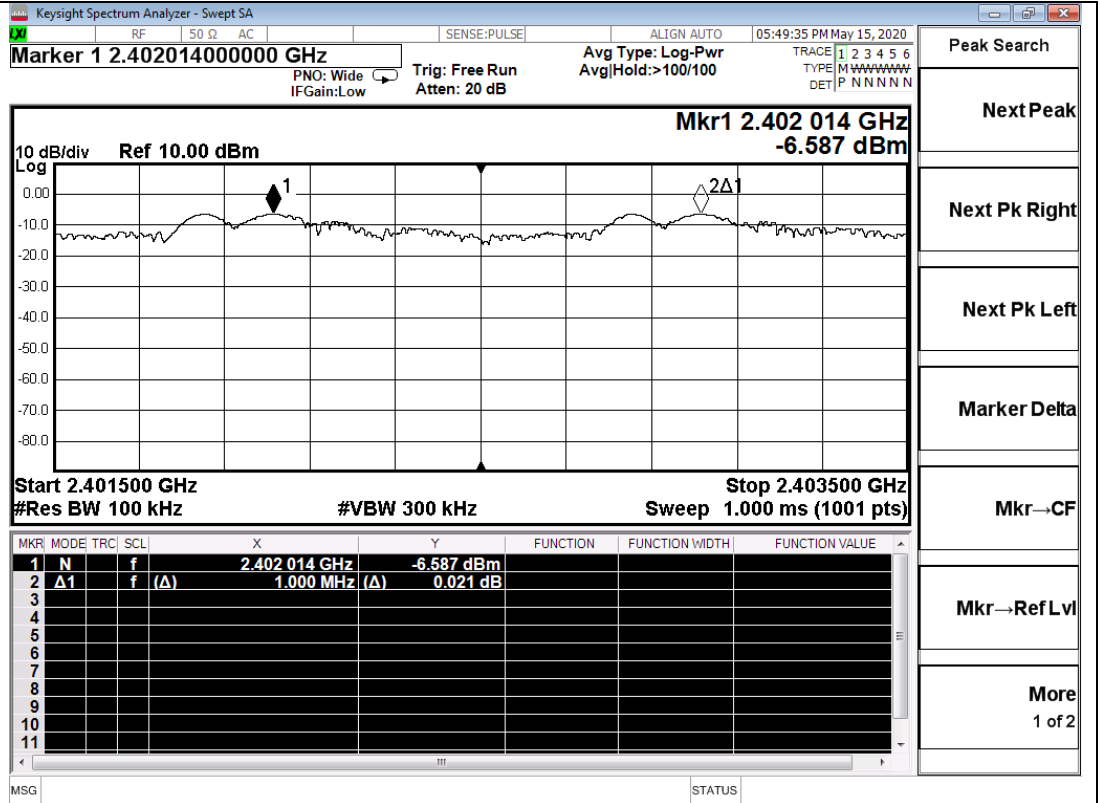
GFSK/MCH



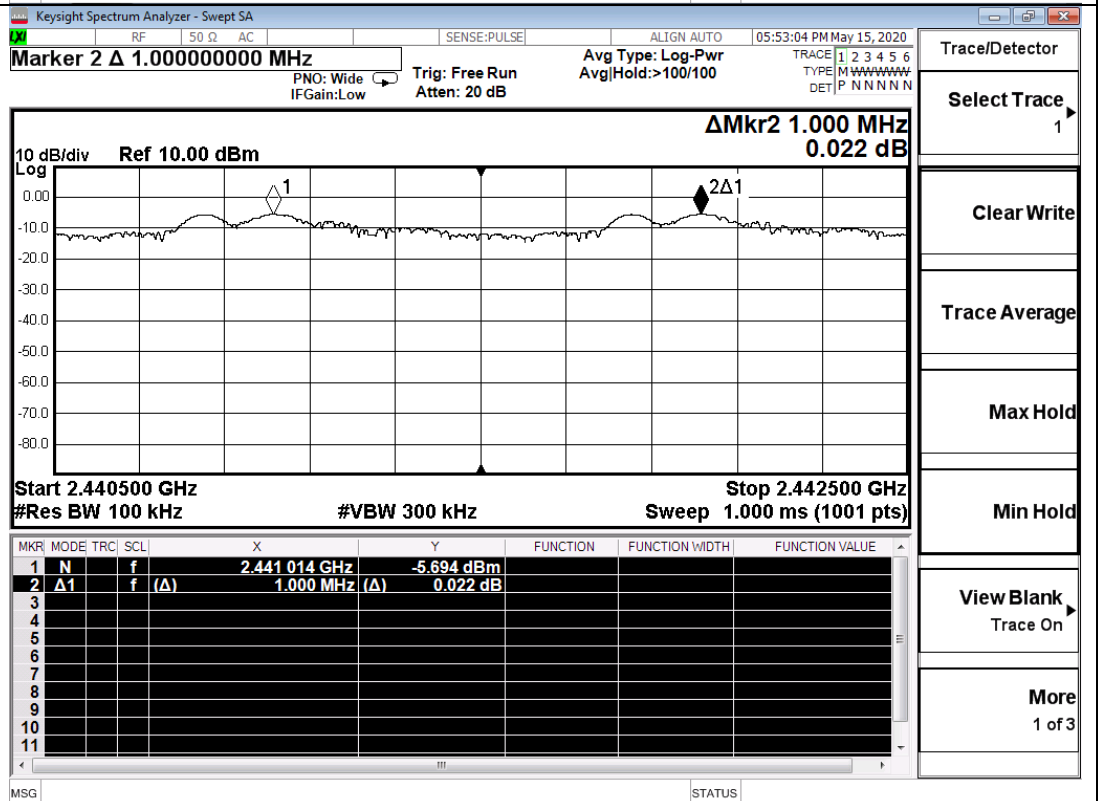
GFSK/HCH



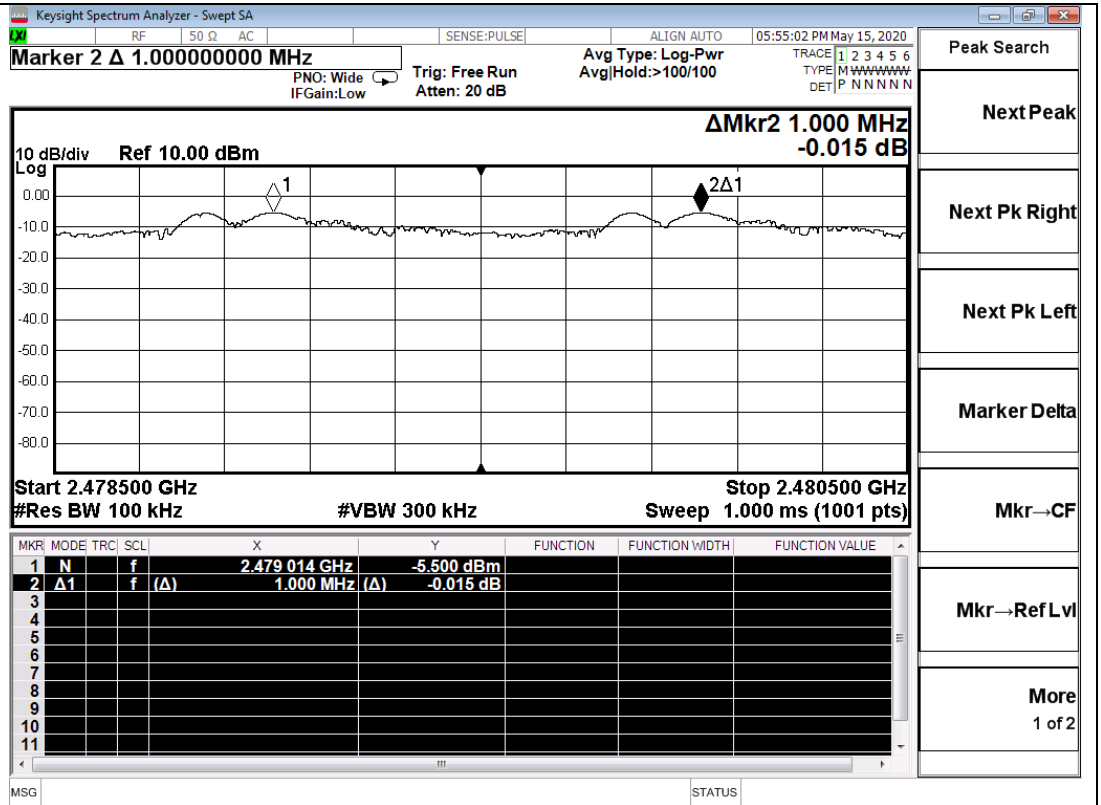
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH

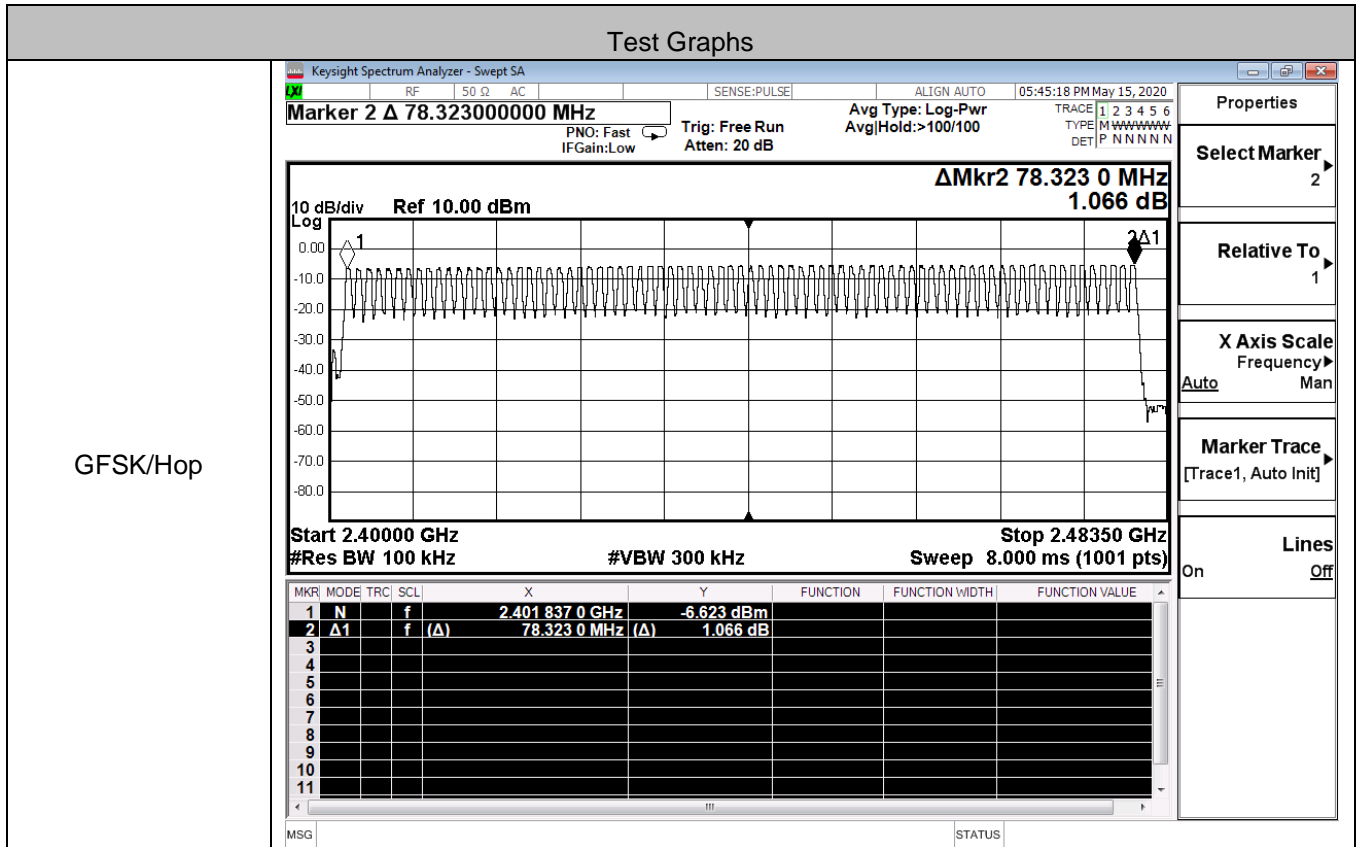


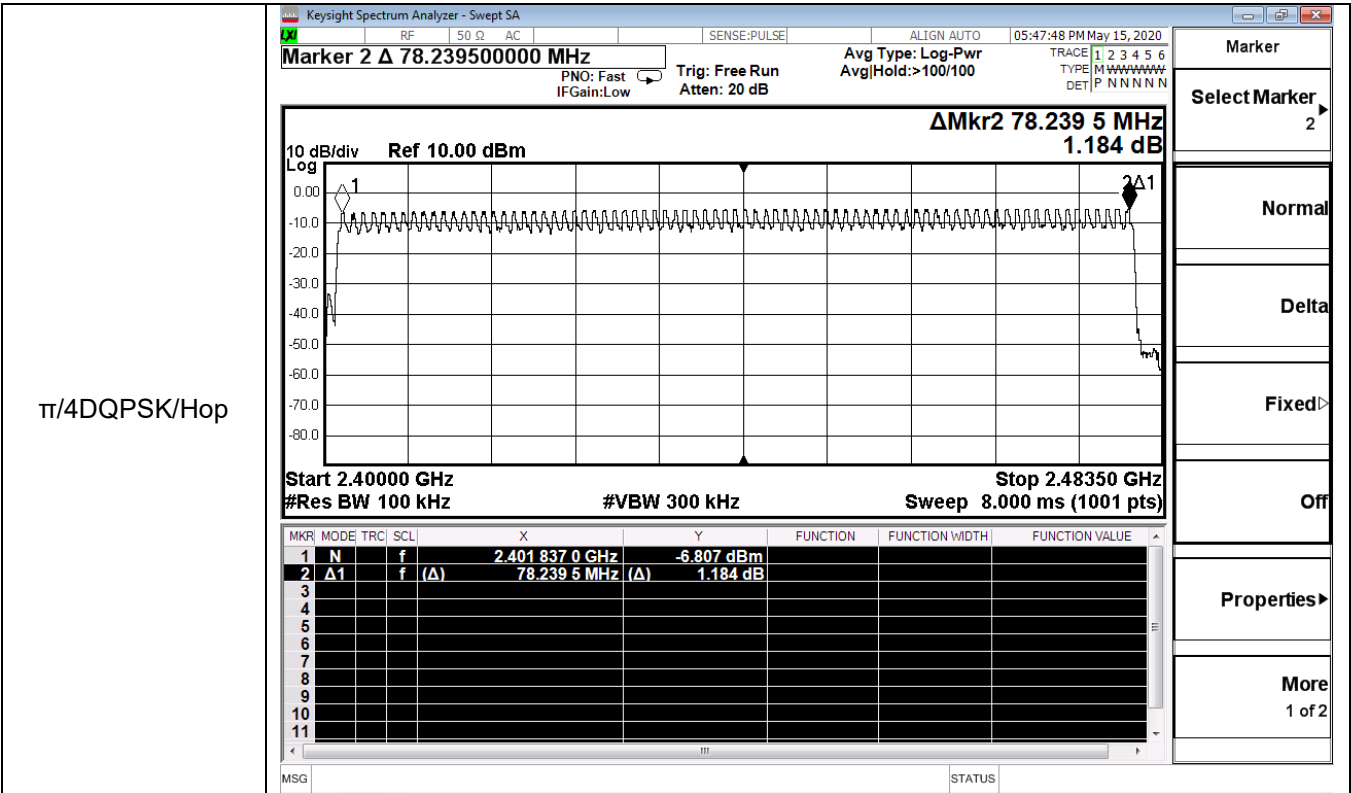
$\pi/4$ DQPSK/HCH



### A.4 Hopping Channel Number

Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS

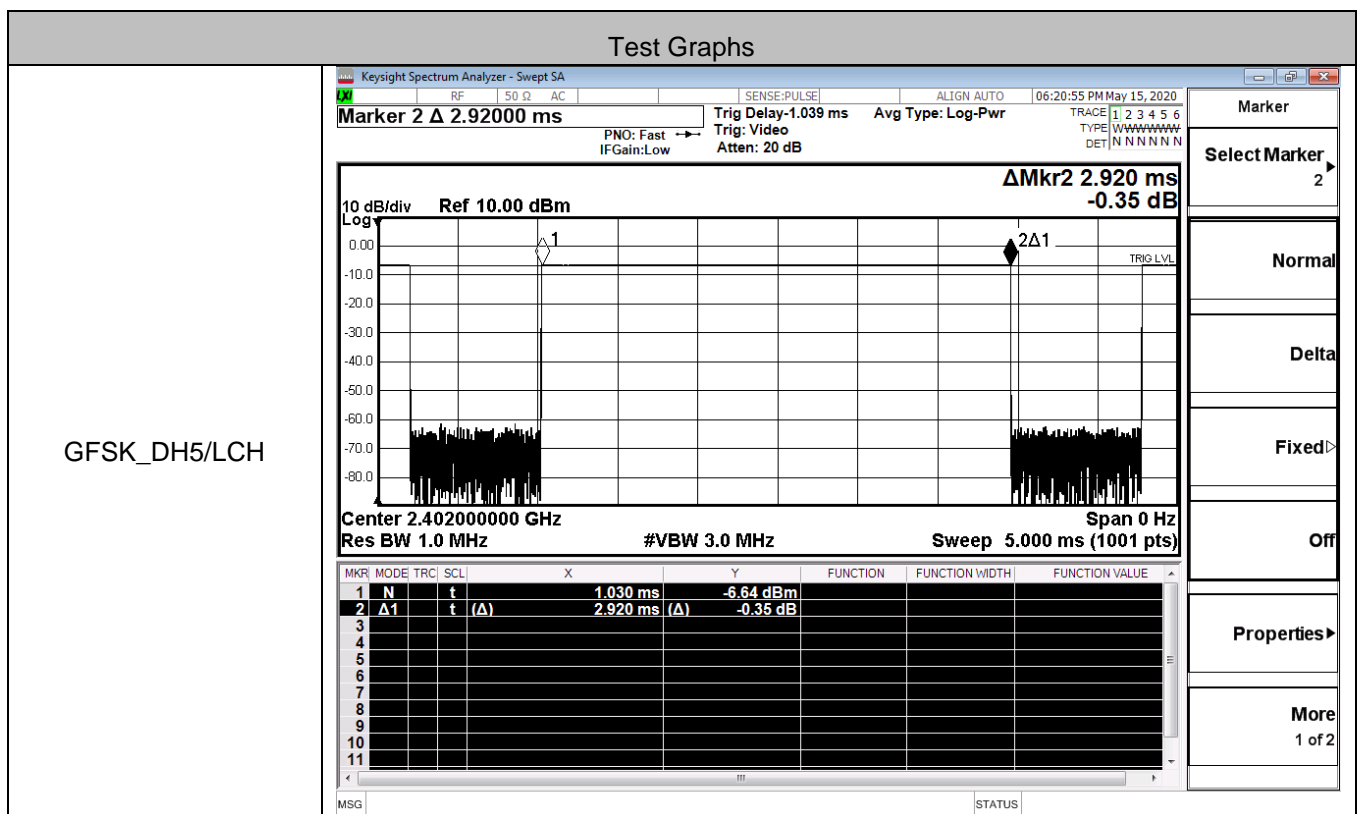




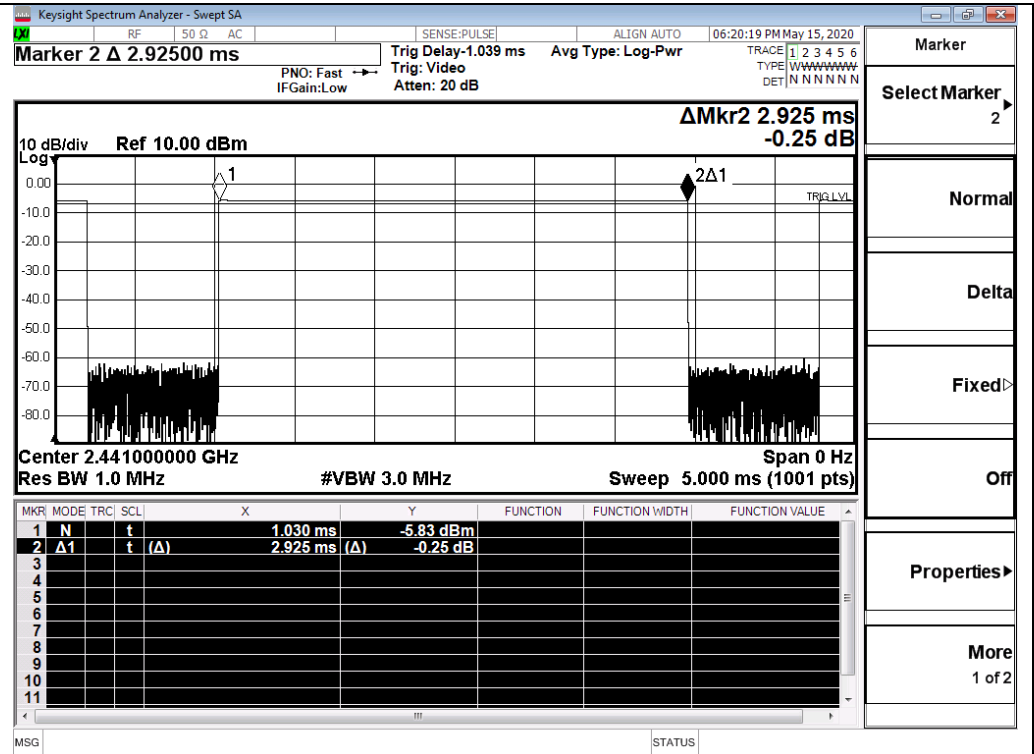
$\pi/4$ DQPSK/Hop

**A.5 Dwell Time**

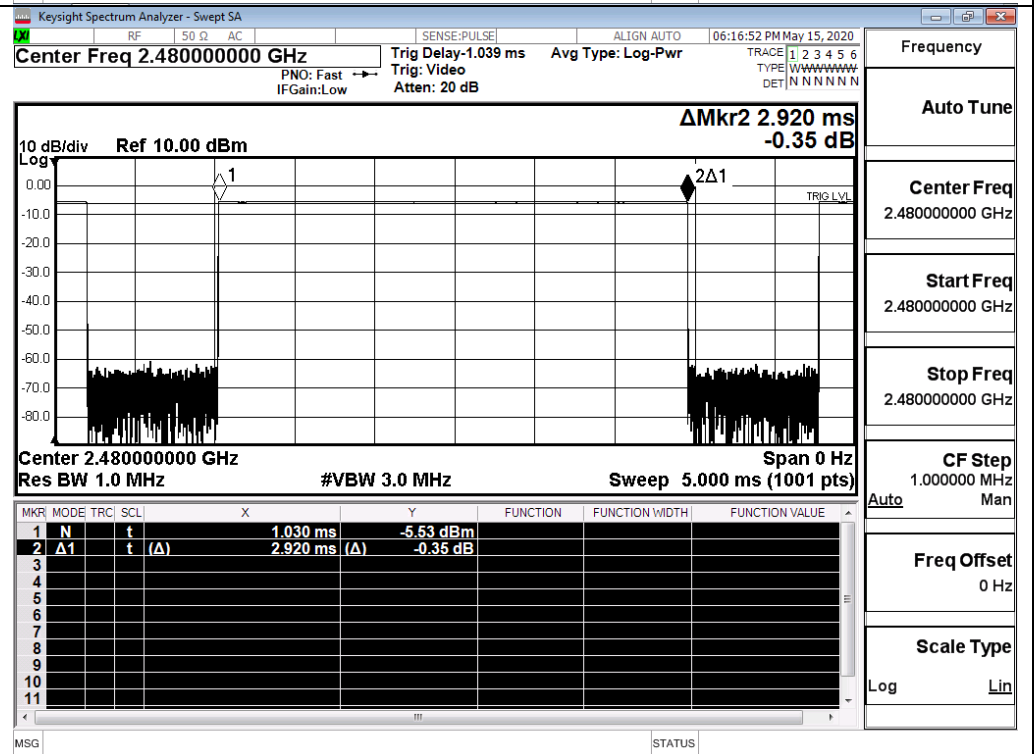
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.920	106.7	0.312	0.4	PASS
	DH5	MCH	2.925	106.7	0.312	0.4	PASS
	DH5	HCH	2.920	106.7	0.312	0.4	PASS
π/4DQPSK	2DH5	LCH	2.930	106.7	0.313	0.4	PASS
	2DH5	MCH	2.920	106.7	0.312	0.4	PASS
	2DH5	HCH	2.930	106.7	0.313	0.4	PASS



GFSK\_DH5/MCH

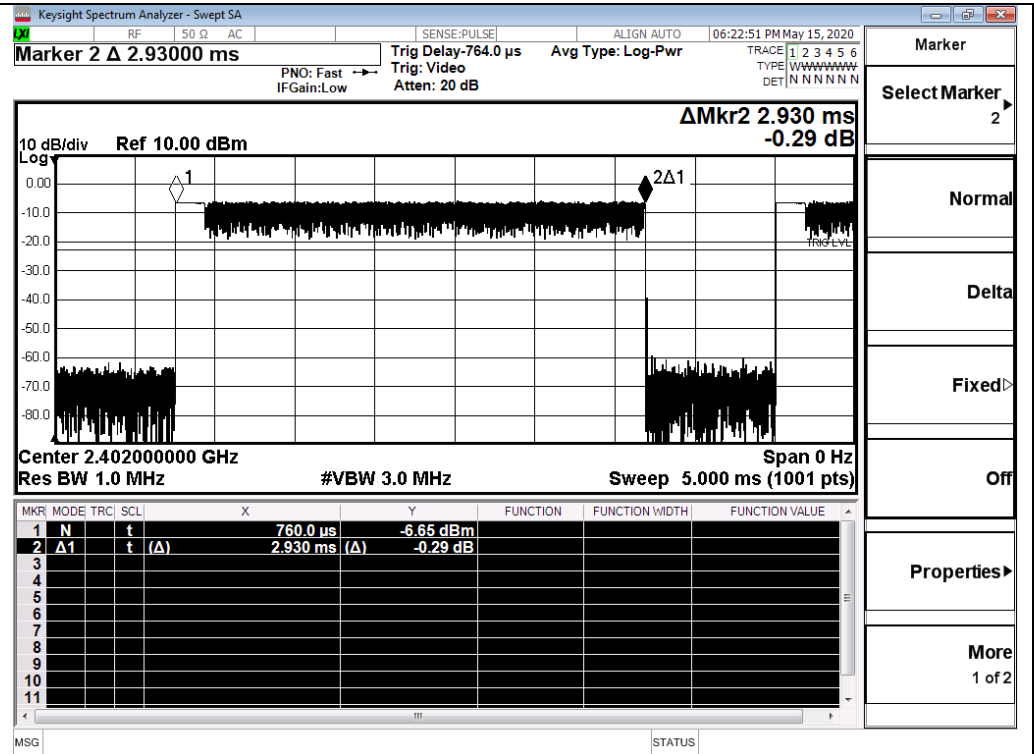


GFSK\_DH5/HCH

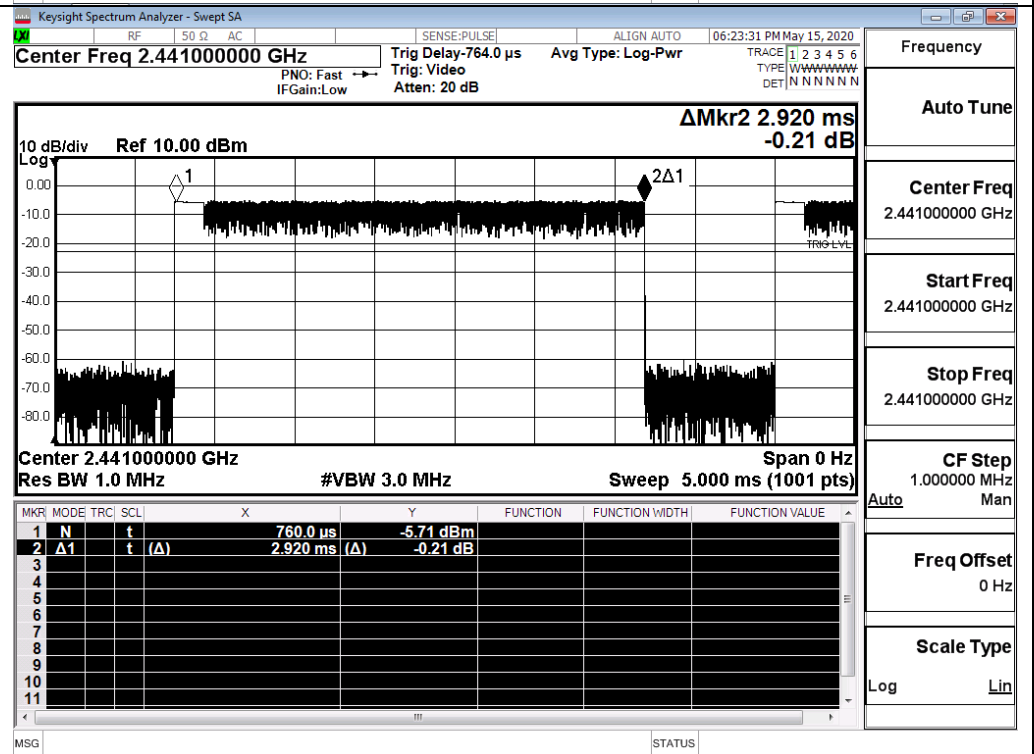




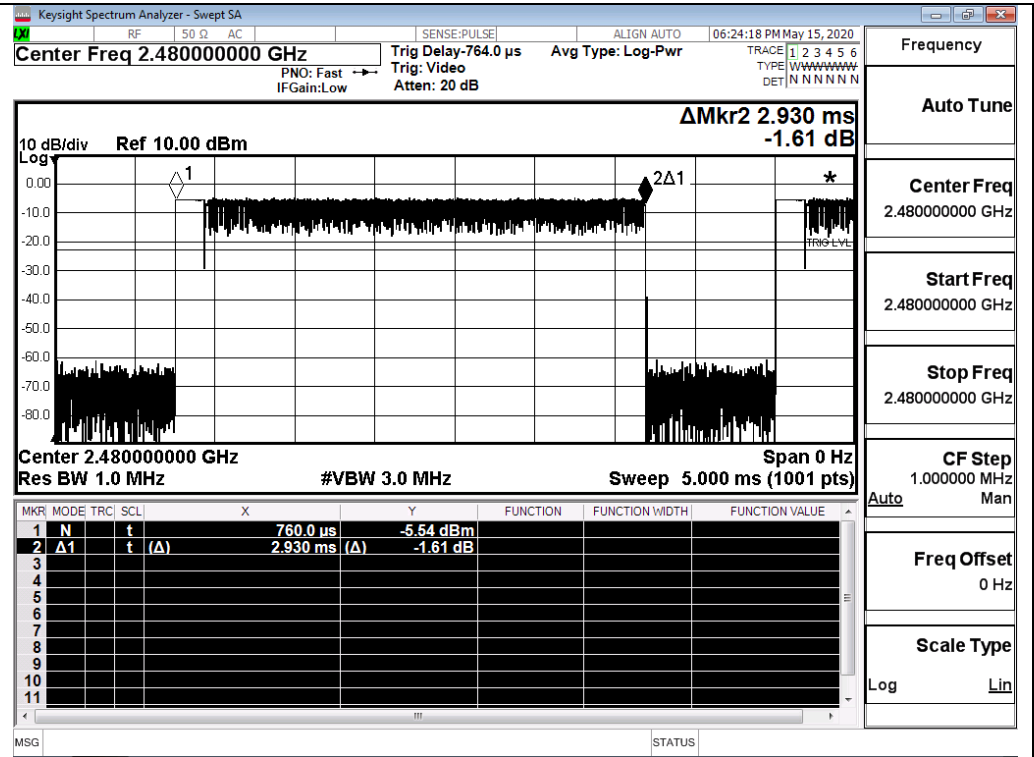
$\pi/4$ DQPSK  
\_2DH5/LCH



$\pi/4$ DQPSK  
\_2DH5/MCH



$\pi/4$ DQPSK  
\_2DH5/HCH

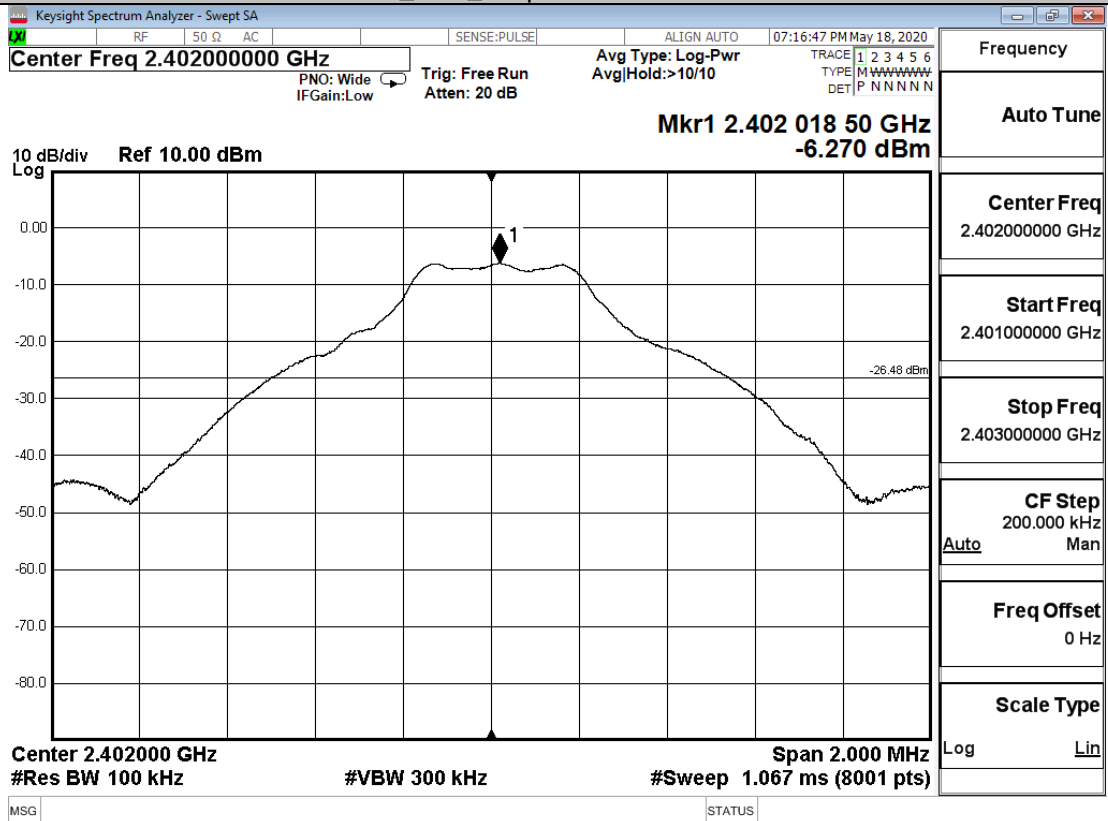


**A.6 RF Conducted Spurious Emissions**

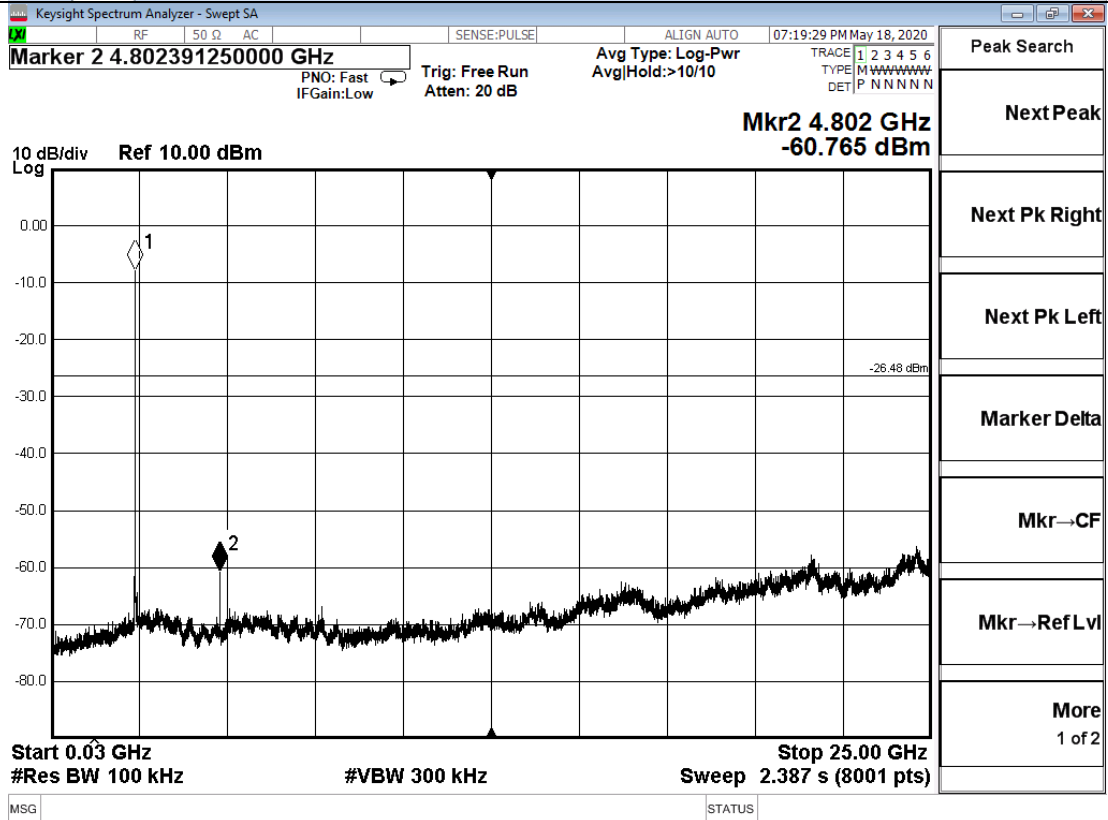
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-6.270	-60.765	-26.27	PASS
	MCH	-5.505	-59.901	-25.51	PASS
	HCH	-5.410	-65.315	-25.41	PASS
$\pi$ /4DQPSK	LCH	-6.358	-61.212	-26.36	PASS
	MCH	-5.498	-59.395	-25.50	PASS
	HCH	-5.405	-61.800	-25.41	PASS

GFSK\_LCH\_Graphs

Pref

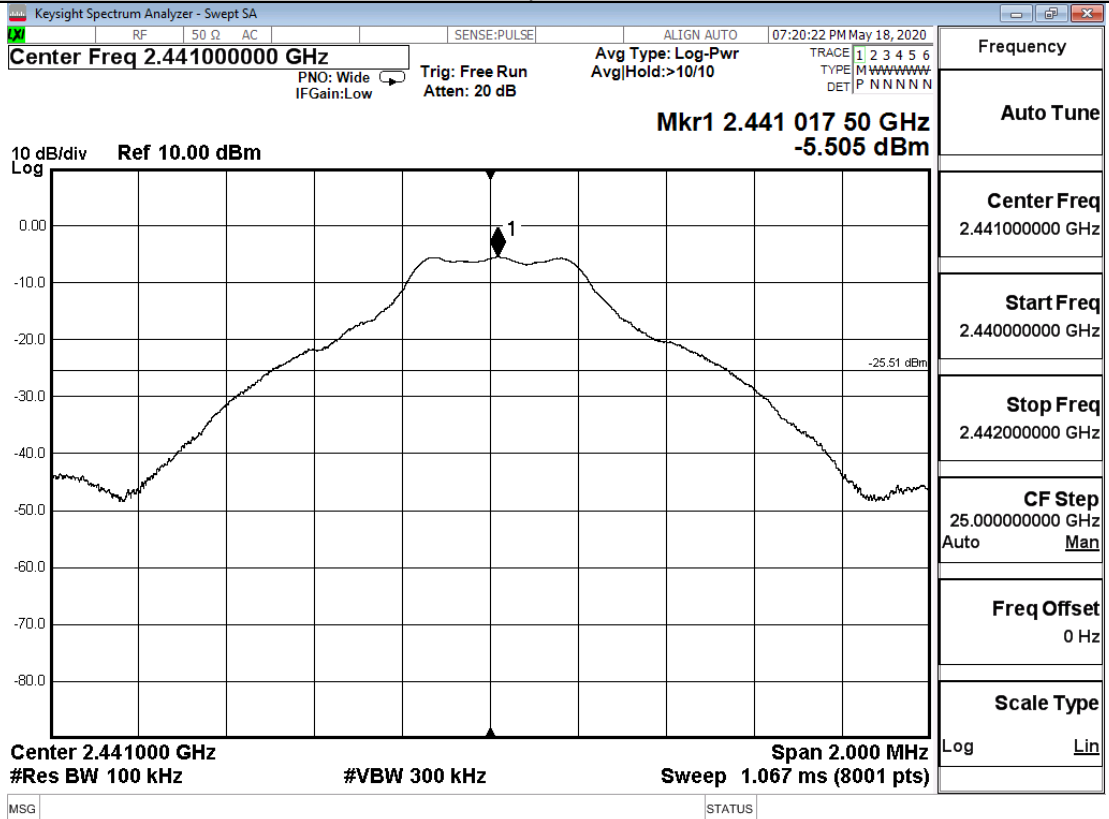


Puw

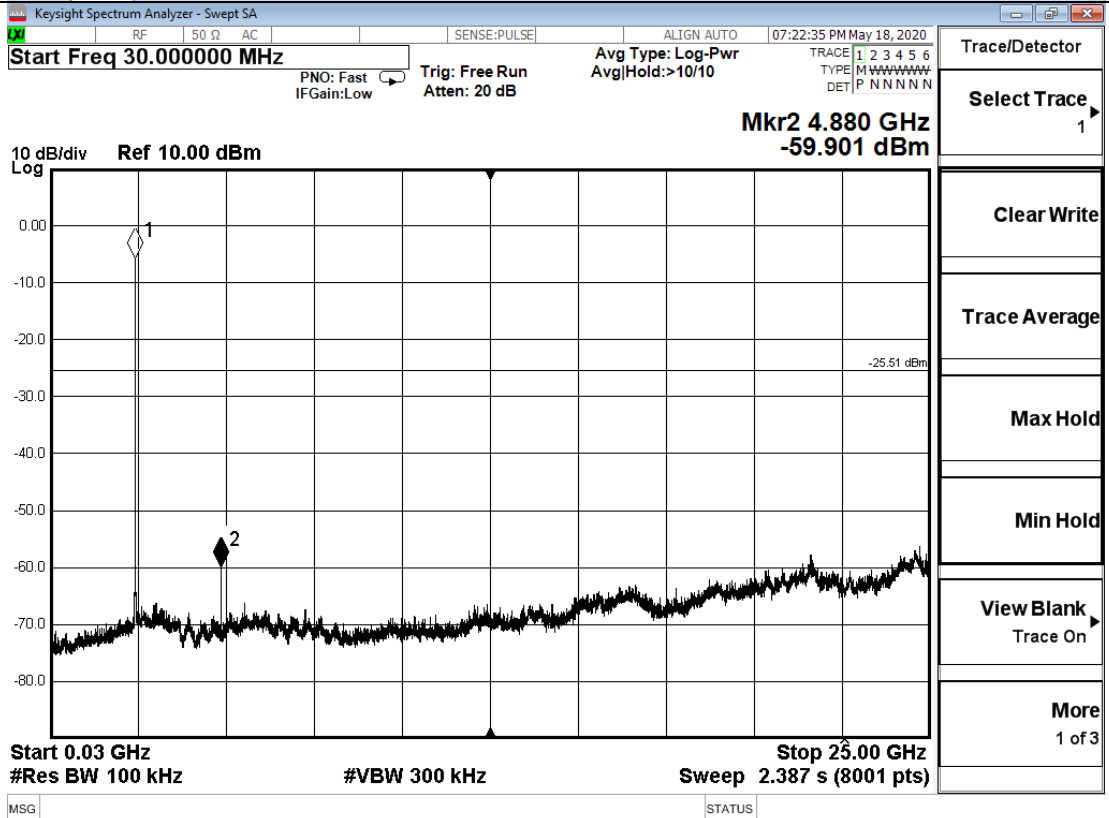


GFSK\_MCH\_Graphs

Pref

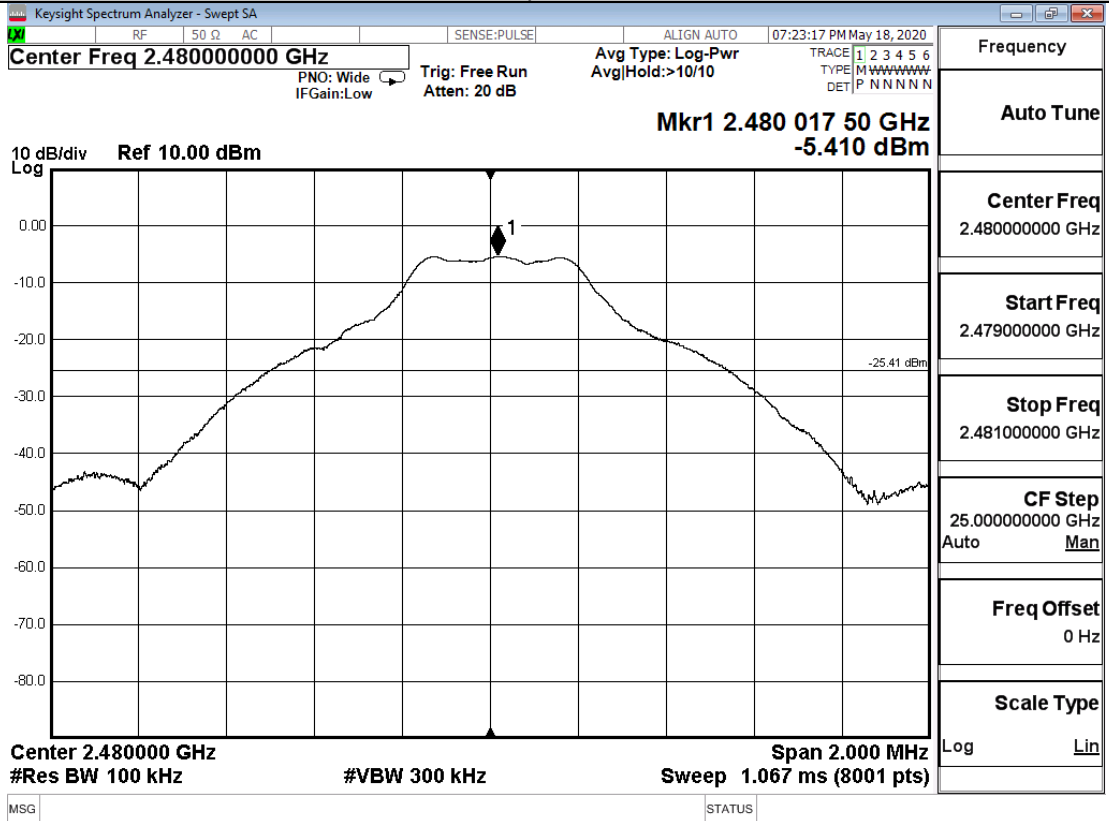


Puw

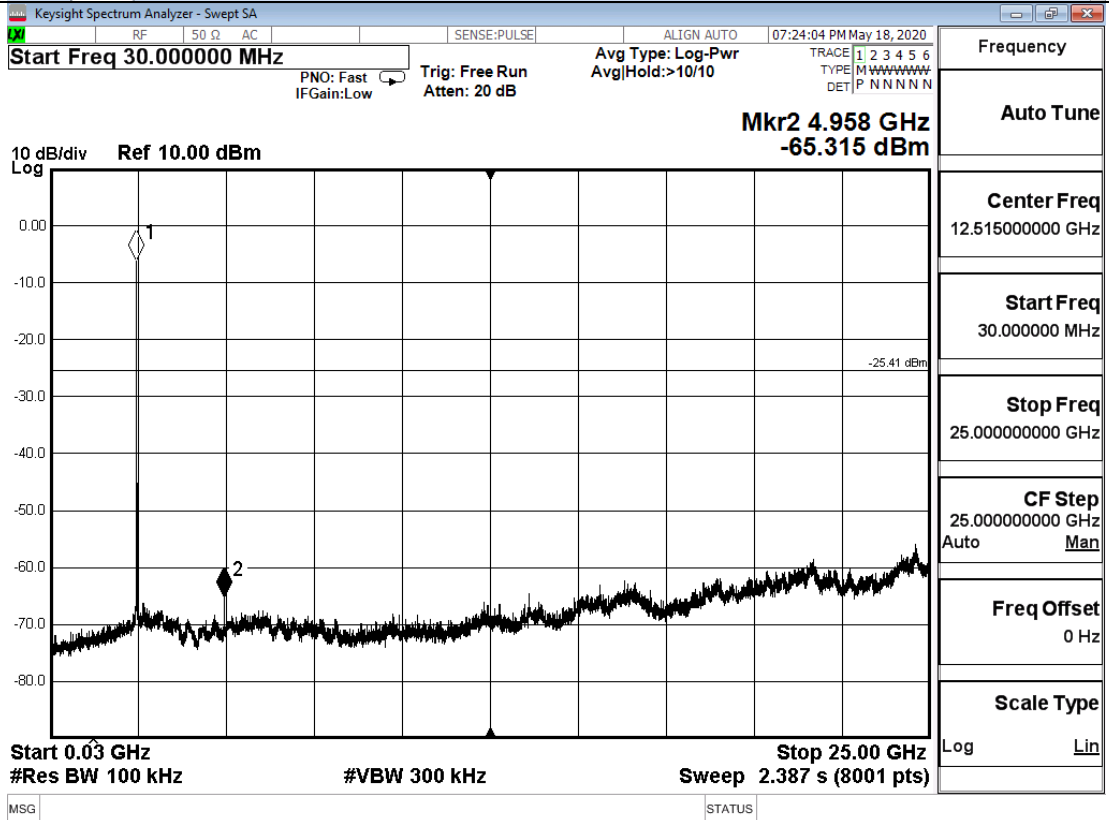


GFSK\_HCH\_Graphs

Pref

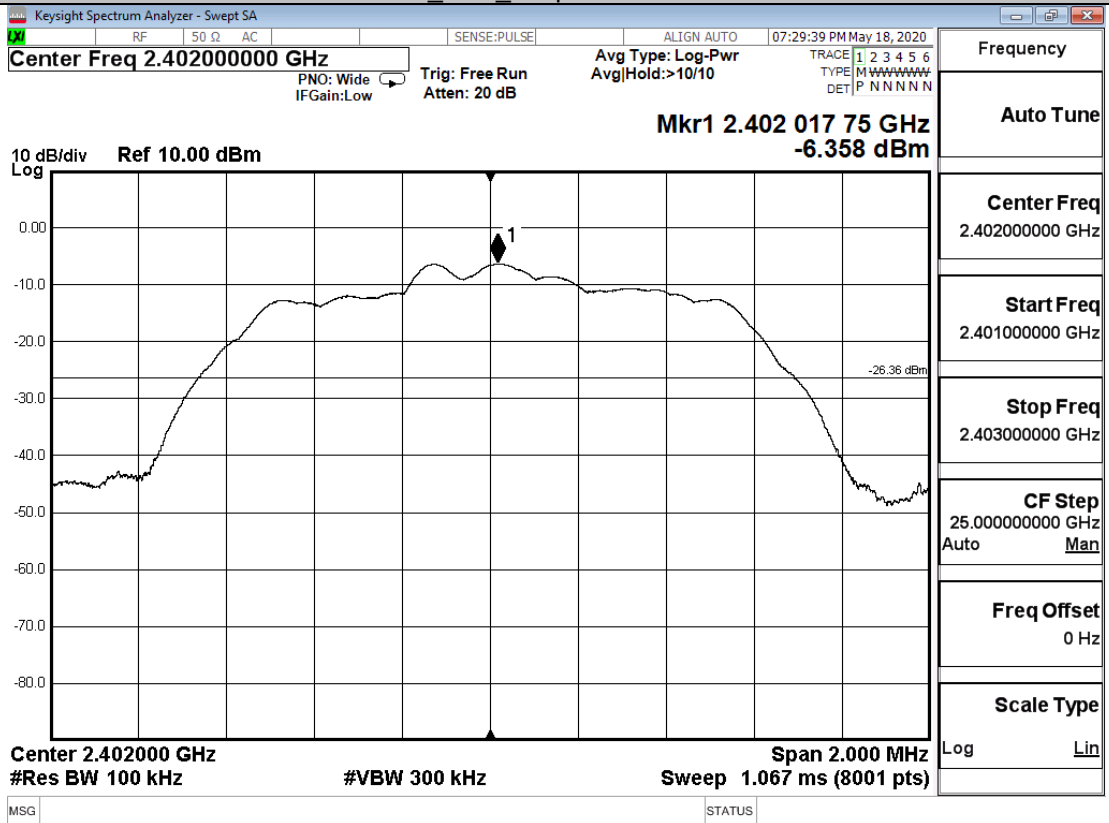


Puw

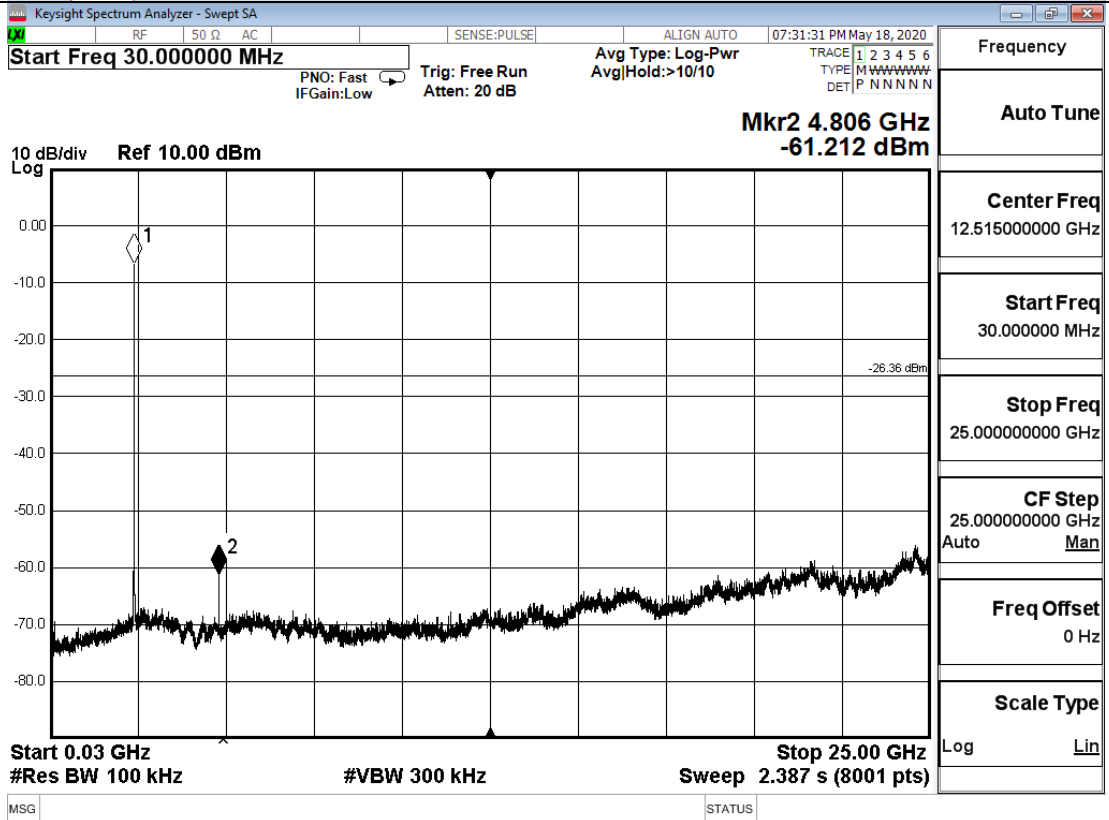


$\pi/4$ DQPSK\_LCH\_Graphs

Pref

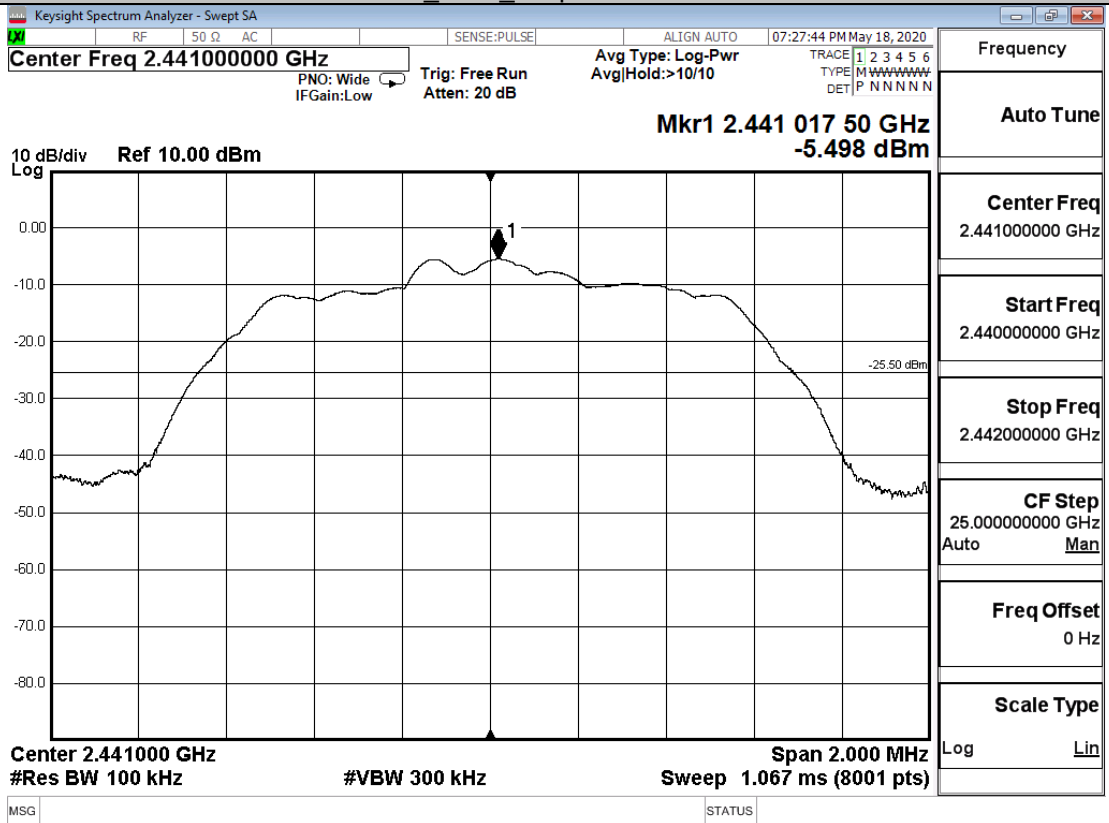


Puw

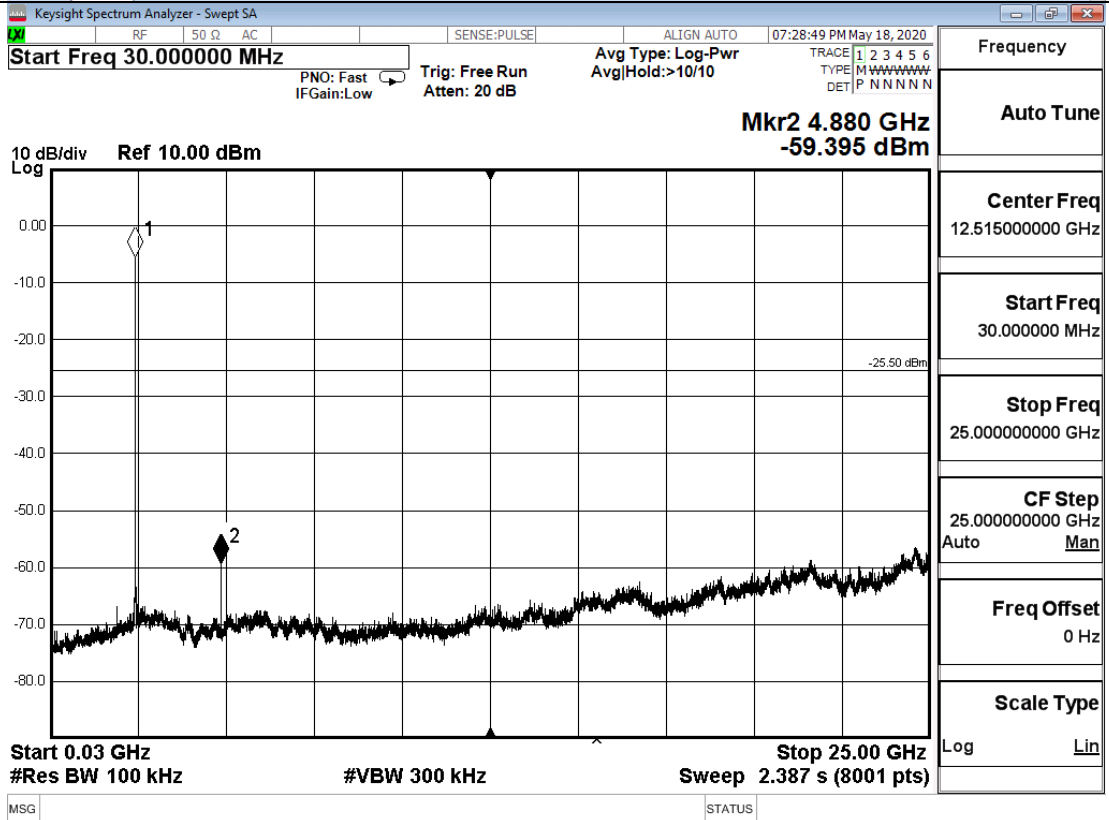


$\pi/4$ DQPSK\_MCH\_Graphs

Pref



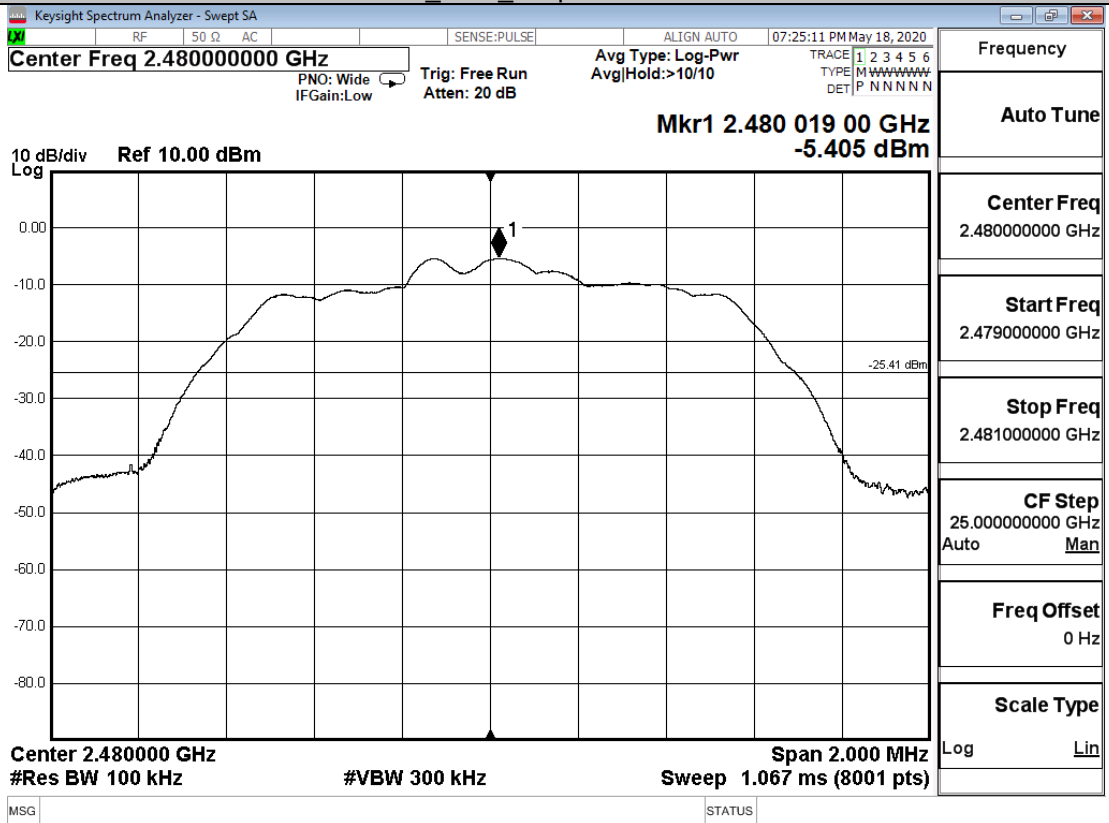
Puw



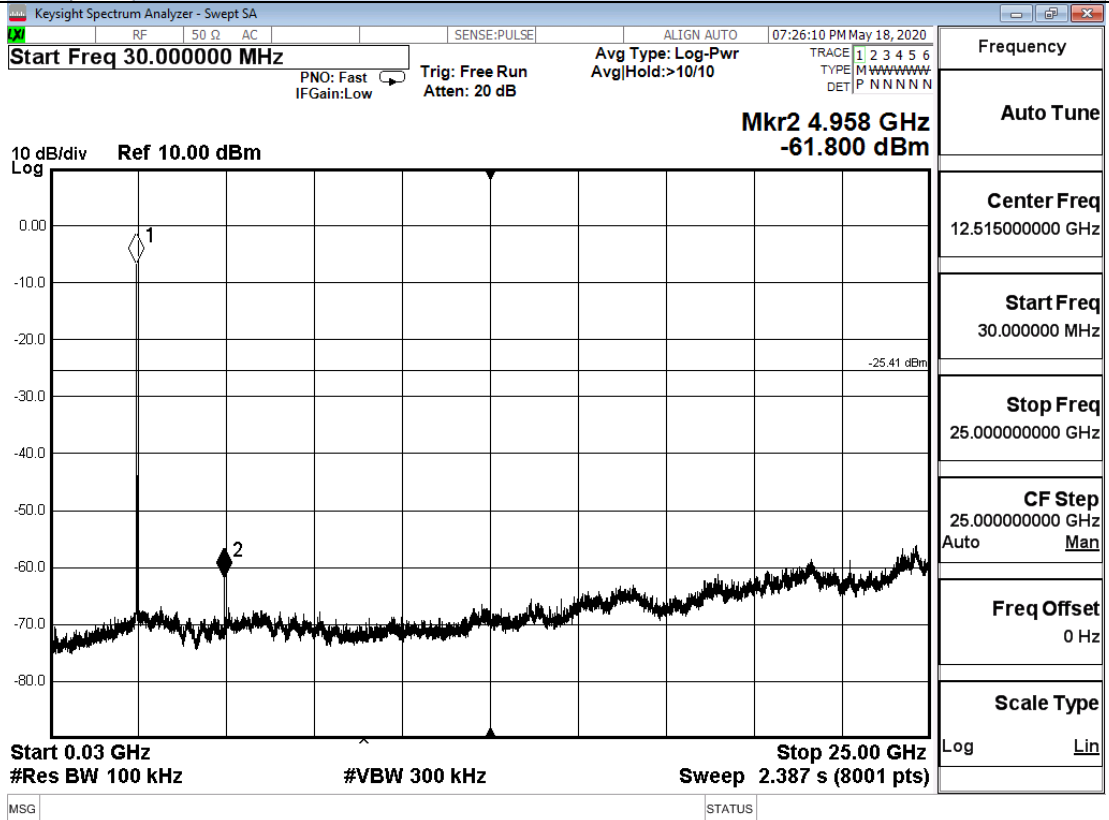


$\pi/4$ DQPSK\_HCH\_Graphs

Pref



Puw

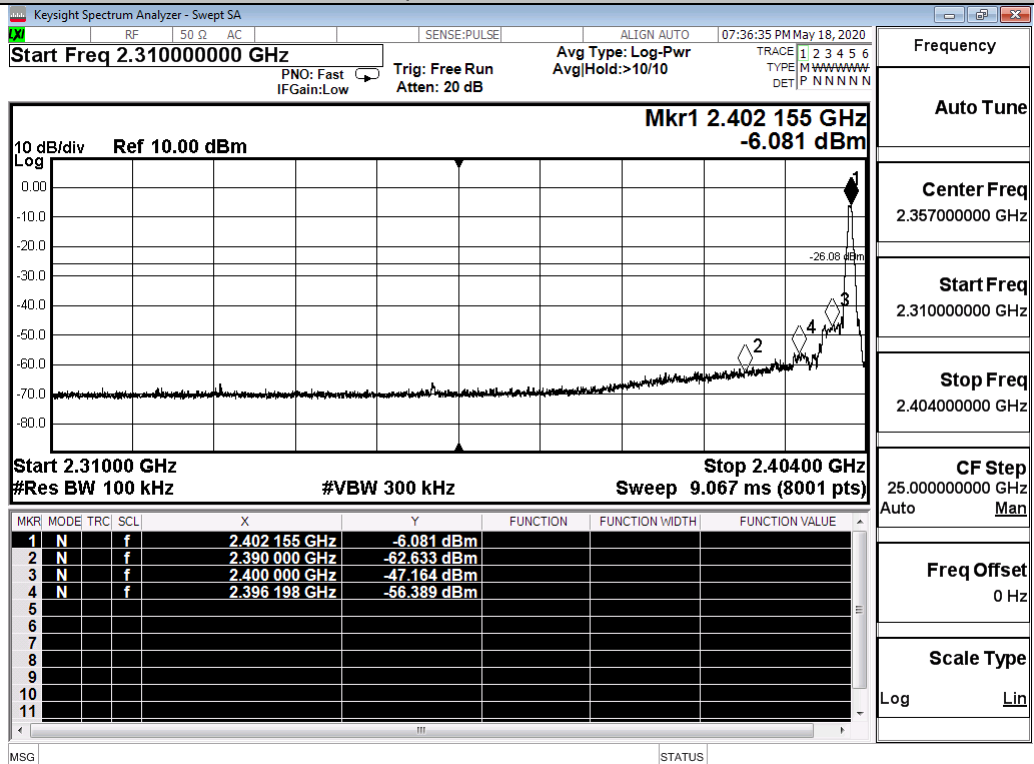


### A.7 Band-edge for RF Conducted Emissions

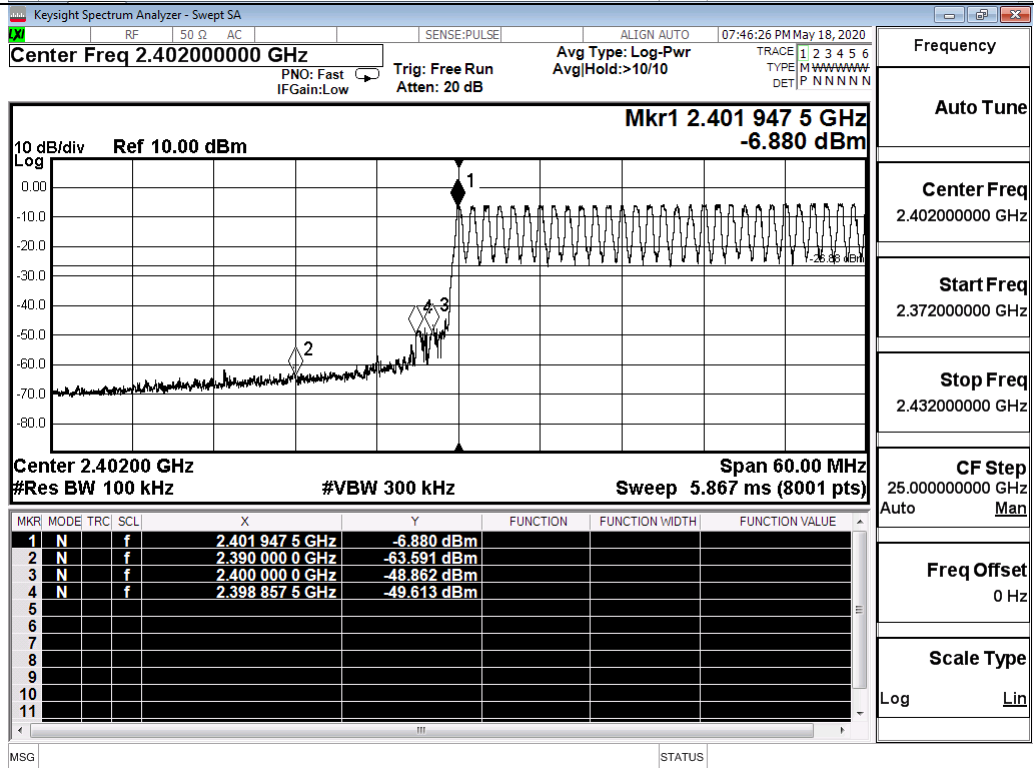
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-6.081	Off	-47.164	-26.08	PASS
			-6.880	On	-48.862	-26.88	PASS
	HCH	2480	-5.080	Off	-45.329	-25.08	PASS
			-5.297	On	-45.756	-25.30	PASS
$\pi/4$ DQPSK	LCH	2402	-6.351	Off	-47.003	-26.35	PASS
			-6.440	On	-48.174	-26.44	PASS
	HCH	2480	-5.254	Off	-47.641	-25.25	PASS
			-5.319	On	-51.473	-25.32	PASS

Test Graphs

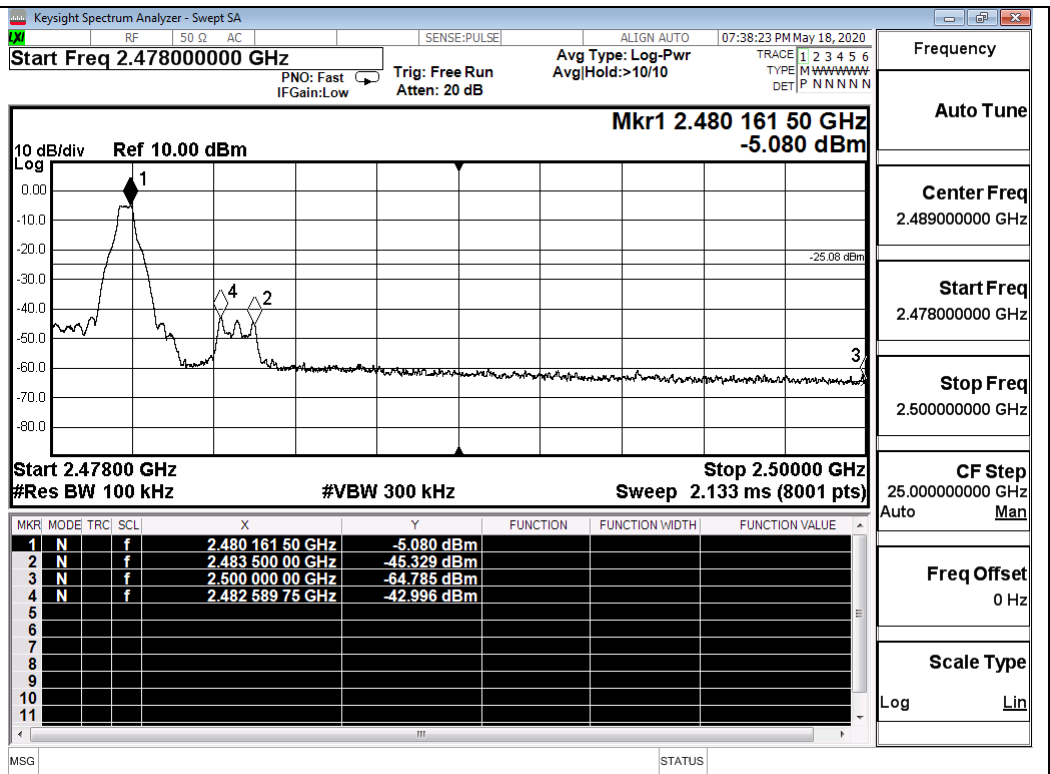
GFSK/LCH/No Hop



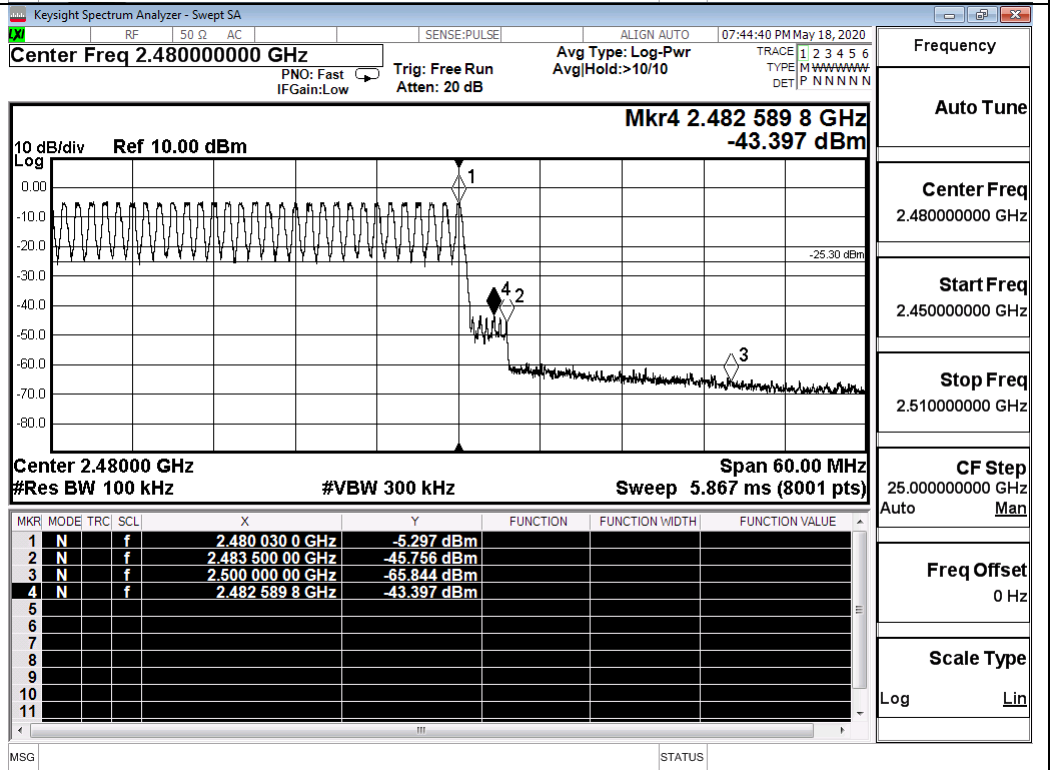
GFSK/LCH/Hop



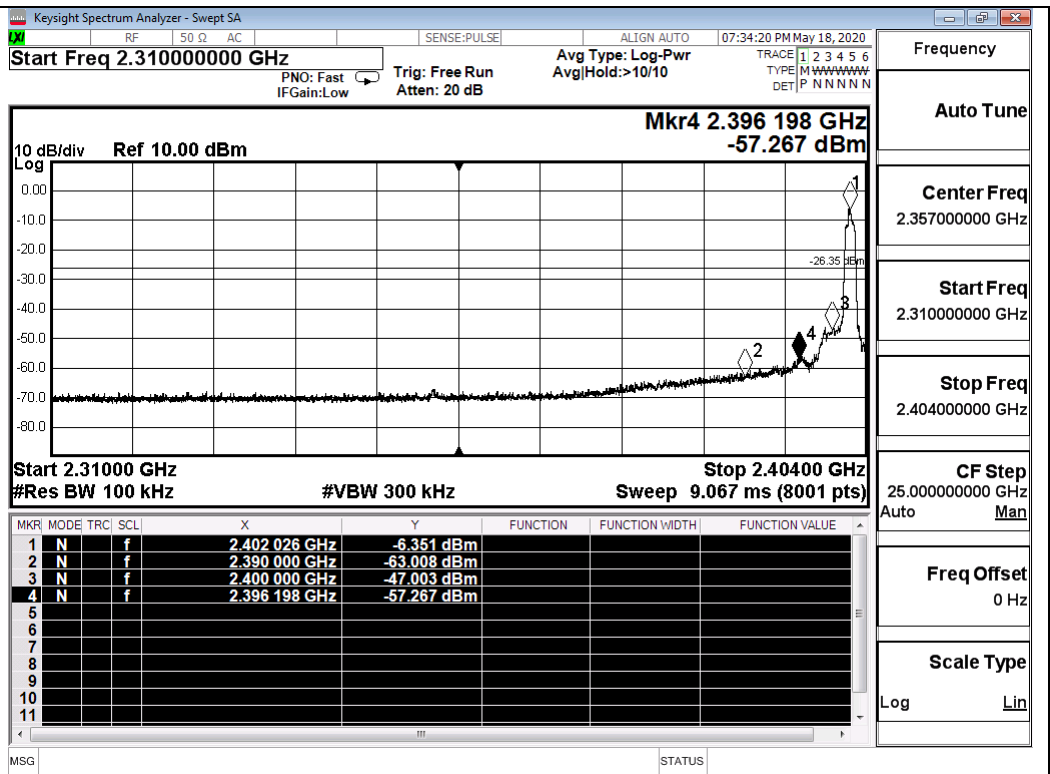
GFSK/HCH/No Hop



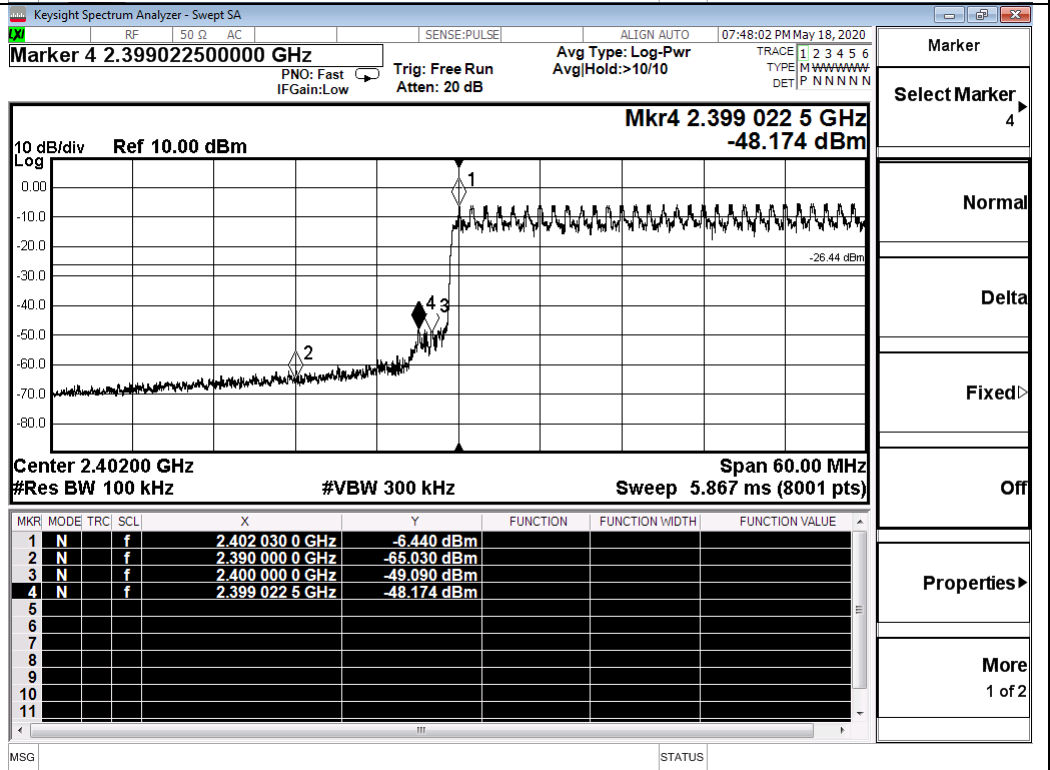
GFSK/HCH/Hop



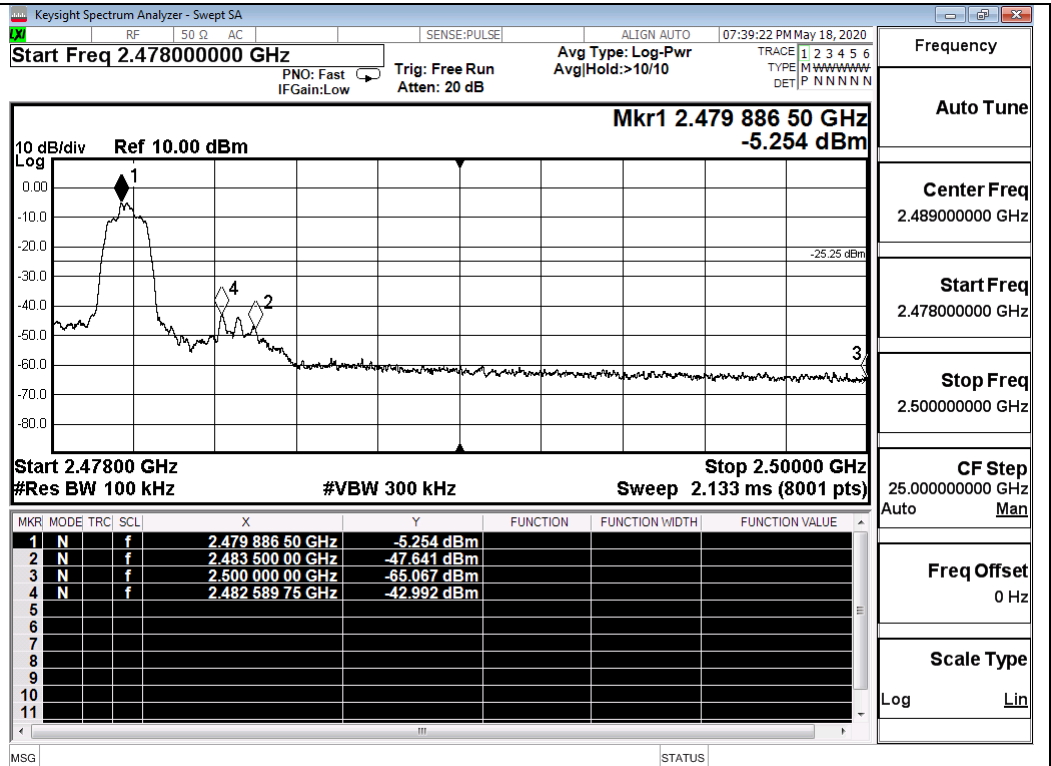
$\pi/4$ DQPSK/LCH/No Hop



$\pi/4$ DQPSK/LCH/Hop

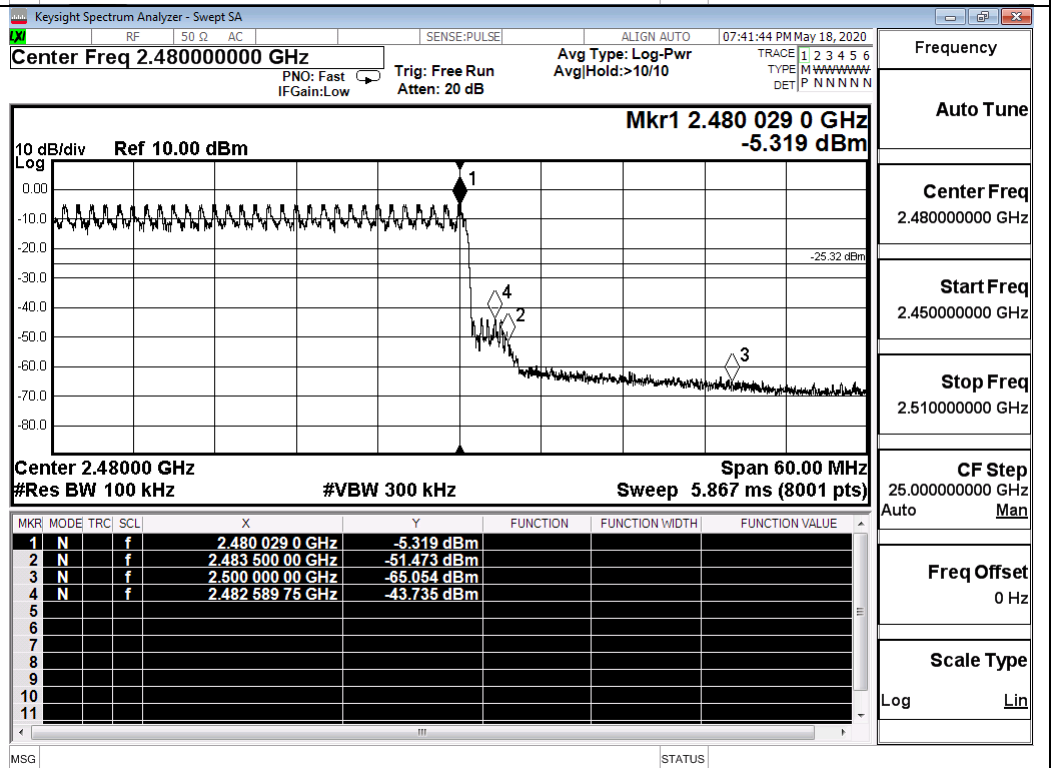


$\pi$ /4DQPSK/HCH/No Hop



Frequency	
Auto Tune	
Center Freq	2.478000000 GHz
Start Freq	2.478000000 GHz
Stop Freq	2.500000000 GHz
CF Step	25.000000000 GHz
Freq Offset	0 Hz
Scale Type	Log <u>Lin</u>

$\pi$ /4DQPSK/HCH/Hop

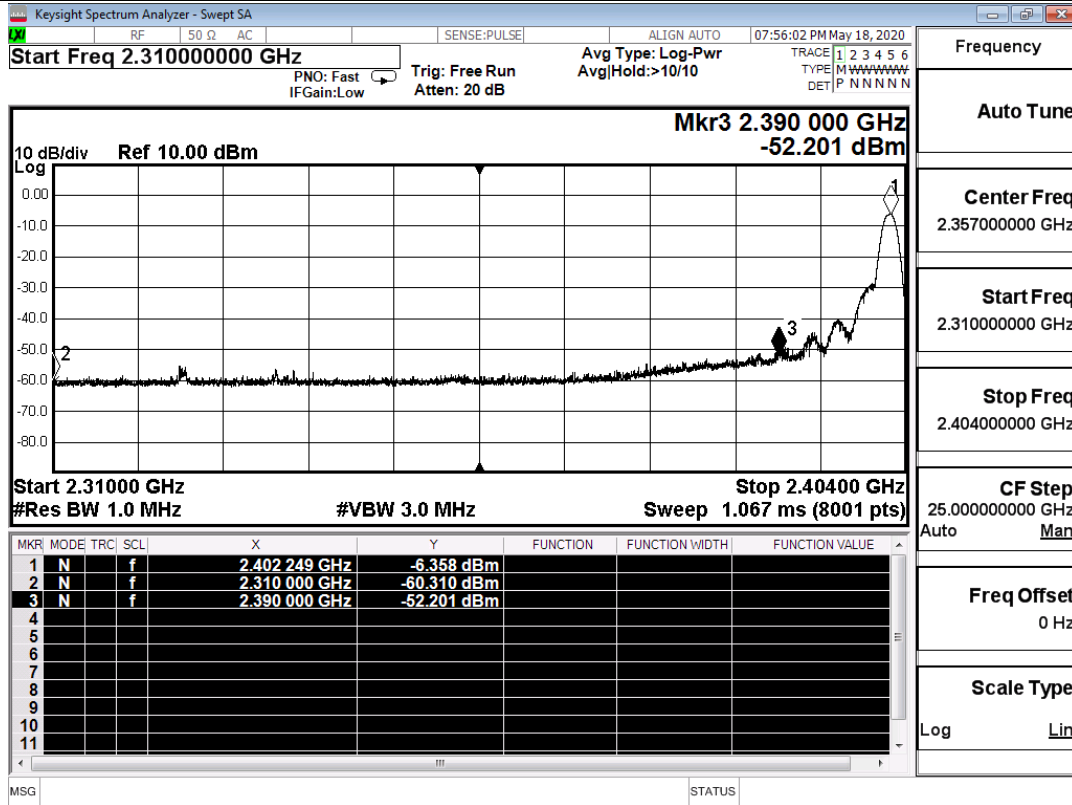


Frequency	
Auto Tune	
Center Freq	2.480000000 GHz
Start Freq	2.450000000 GHz
Stop Freq	2.510000000 GHz
CF Step	25.000000000 GHz
Freq Offset	0 Hz
Scale Type	Log <u>Lin</u>

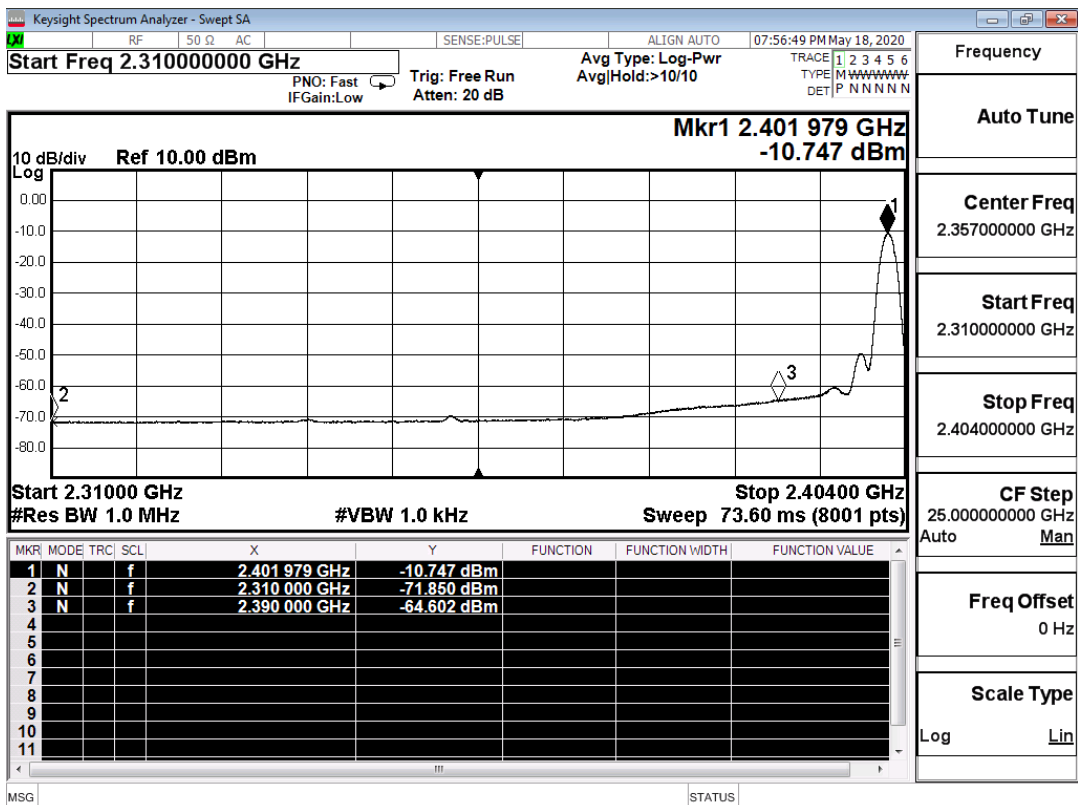
### A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-60.310	2.0	0	36.92	PEAK	74	PASS
	Off	2310.0	-71.850	2.0	0	25.38	AV	54	PASS
	Off	2390.0	-52.201	2.0	0	45.03	PEAK	74	PASS
	Off	2390.0	-64.602	2.0	0	32.63	AV	54	PASS
	Off	2483.5	-40.336	2.0	0	56.89	PEAK	74	PASS
	Off	2483.5	-50.759	2.0	0	46.47	AV	54	PASS
	Off	2500.0	-55.132	2.0	0	42.10	PEAK	74	PASS
	Off	2500.0	-66.357	2.0	0	30.87	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-61.076	2.0	0	36.15	PEAK	74	PASS
	Off	2310.0	-71.876	2.0	0	25.35	AV	54	PASS
	Off	2390.0	-50.650	2.0	0	46.58	PEAK	74	PASS
	Off	2390.0	-64.540	2.0	0	32.69	AV	54	PASS
	Off	2483.5	-41.804	2.0	0	55.43	PEAK	74	PASS
	Off	2483.5	-52.653	2.0	0	44.58	AV	54	PASS
	Off	2500.0	-55.180	2.0	0	42.05	PEAK	74	PASS
	Off	2500.0	-65.978	2.0	0	31.25	AV	54	PASS

Restrict-band band-edge measurements\_Hopping Off\_GFSK\_PEAK (Low Channel)

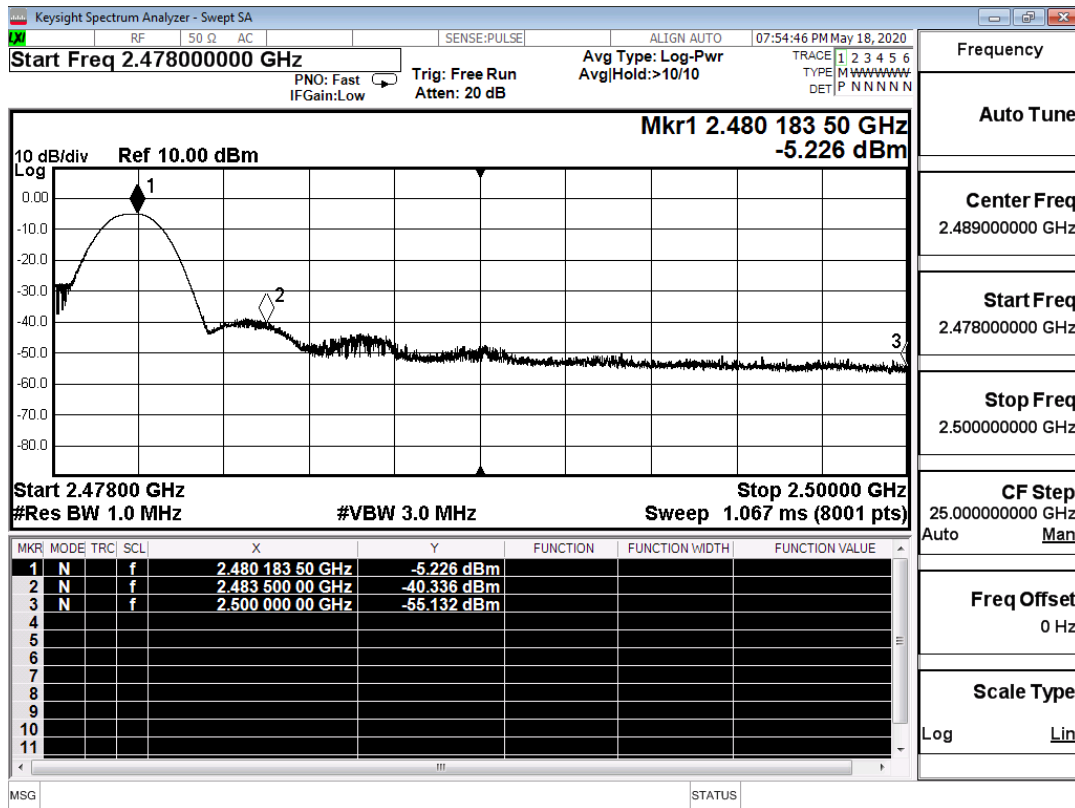


Restrict-band band-edge measurements\_Hopping Off\_GFSK\_Average (Low Channel)

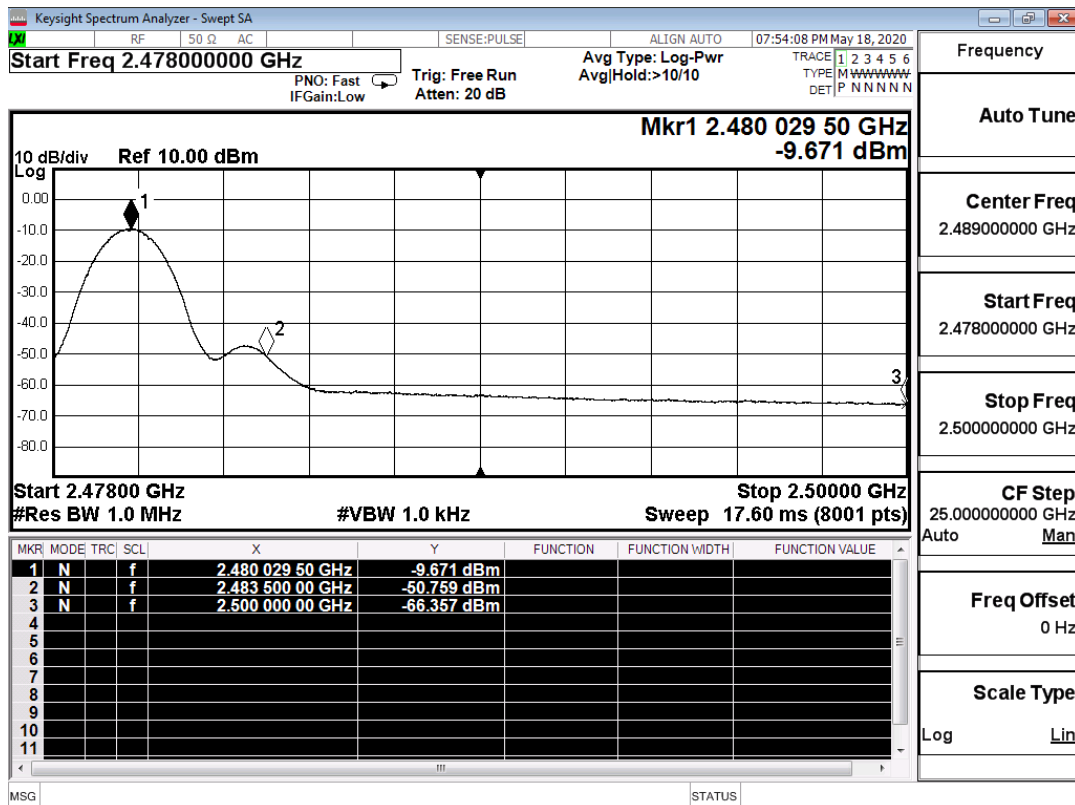




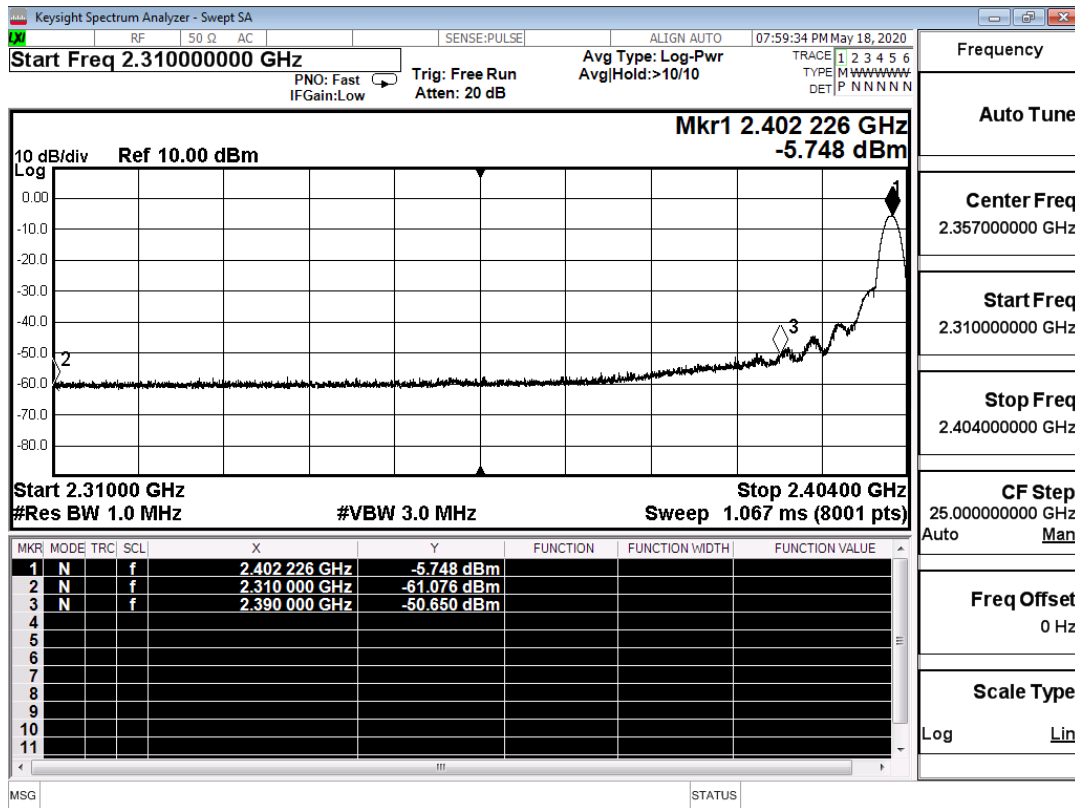
Restrict-band band-edge measurements\_Hopping Off\_GFSK\_PEAK (High Channel)



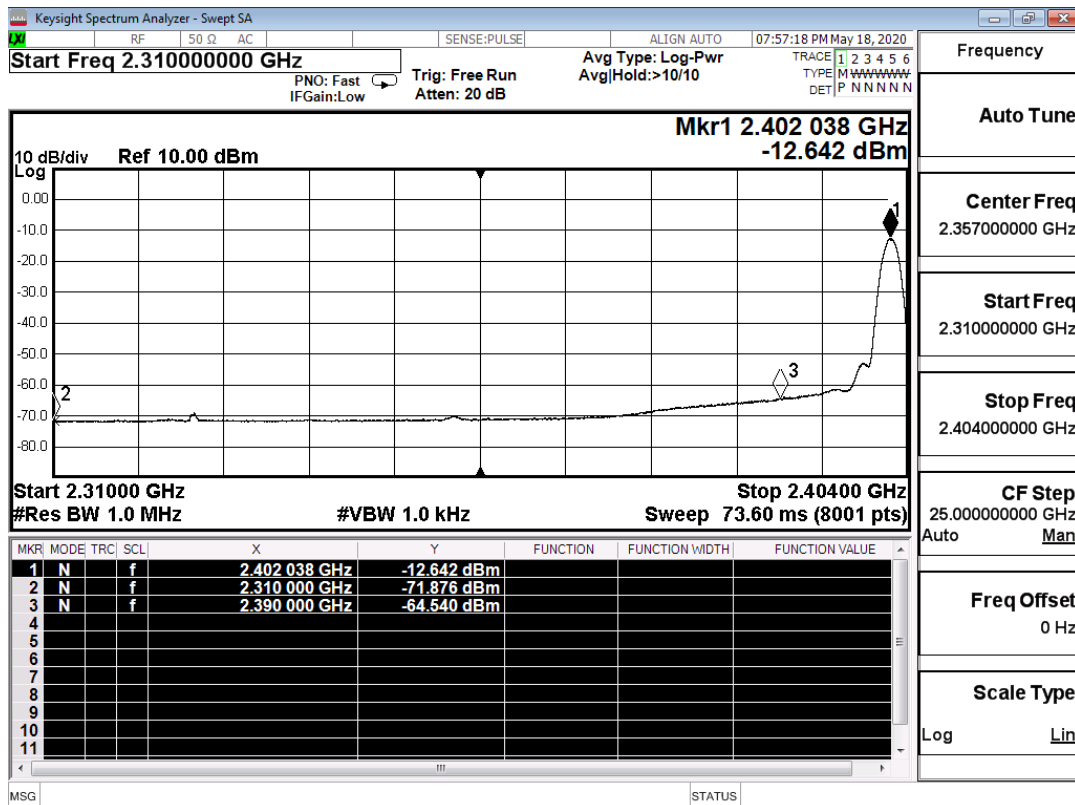
Restrict-band band-edge measurements\_Hopping Off\_GFSK\_Average (High Channel)



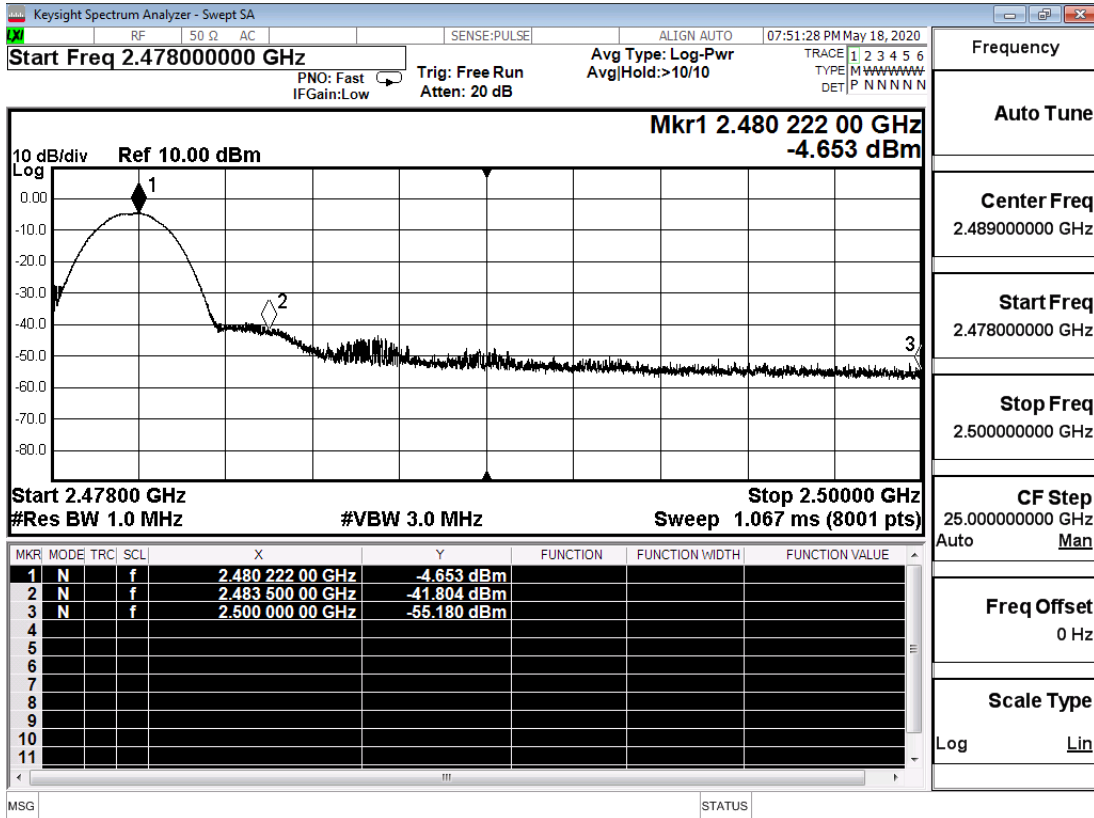
Restrict-band band-edge measurements\_Hopping Off  $\pi/4$ -DQPSK\_PEAK (Low Channel)



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)

