

Appendix A

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

Product Name: PARTY STAR BLUETOOTH PARTY SPEAKER

Trade Mark: Soundlogic XT

Test Model: 21563

Environmental Conditions

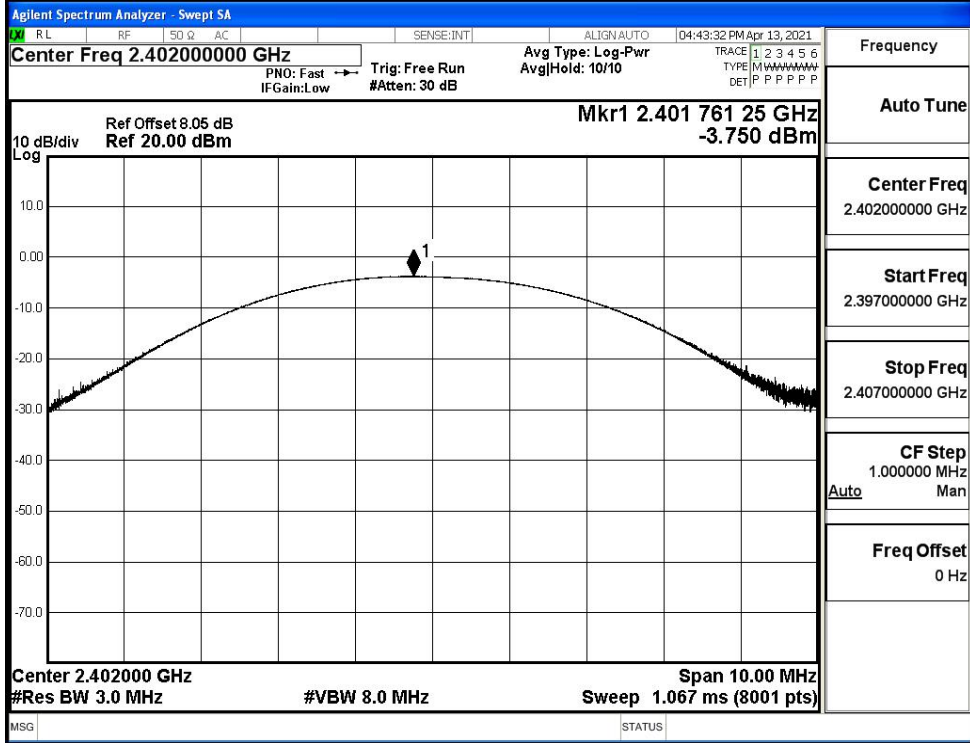
Temperature:	24.6° C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Li Huan

A.1 Maximum Conducted Peak Output Power

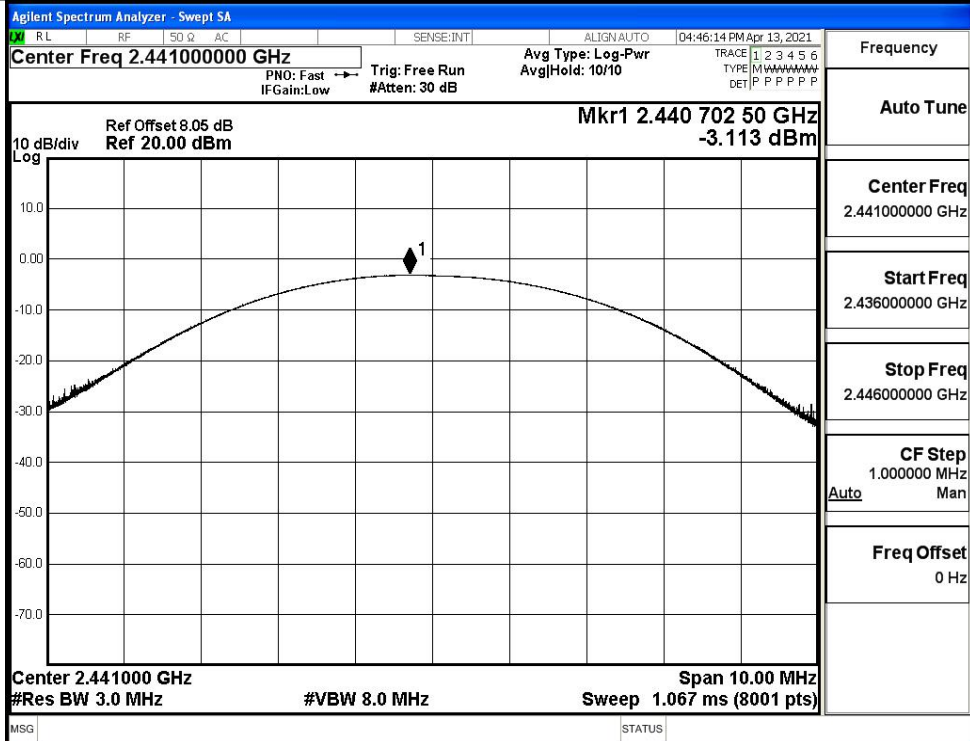
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-3.750	21	PASS
	MCH	-3.113	21	PASS
	HCH	-2.365	21	PASS
$\pi/4$ DQPSK	LCH	-2.904	21	PASS
	MCH	-2.402	21	PASS
	HCH	-1.676	21	PASS

Test Graphs

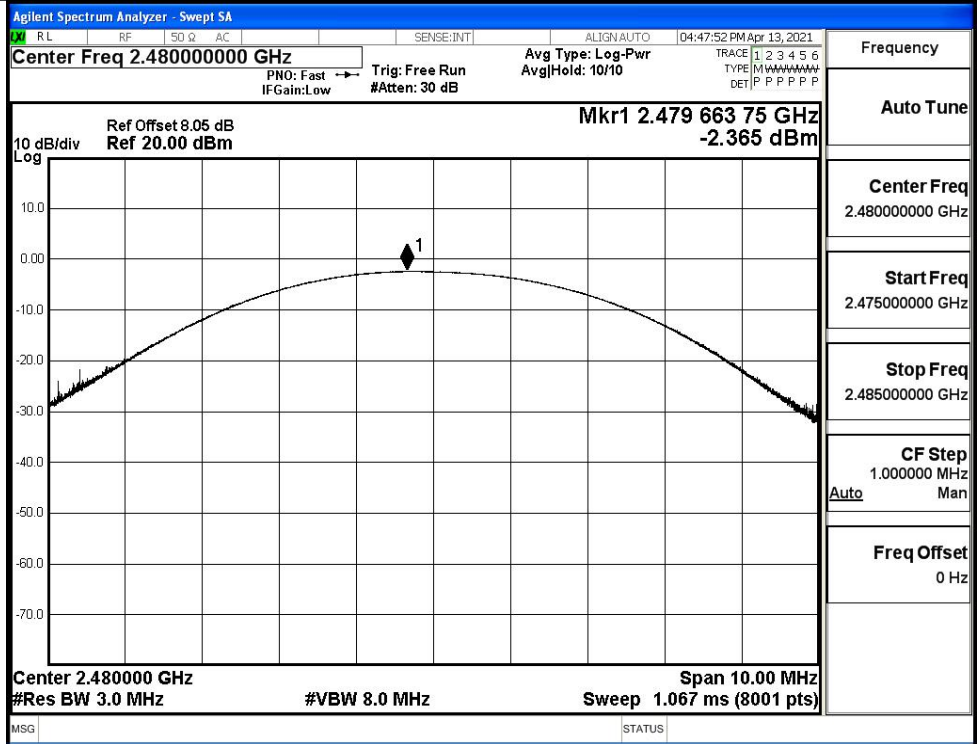
GFSK/LCH



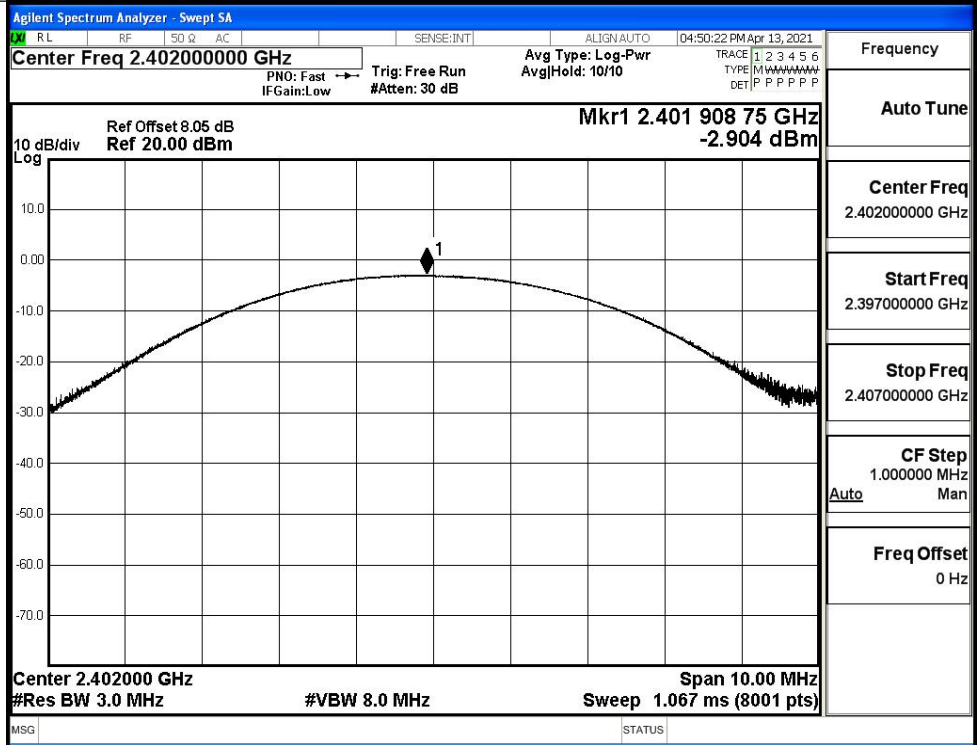
GFSK/MCH



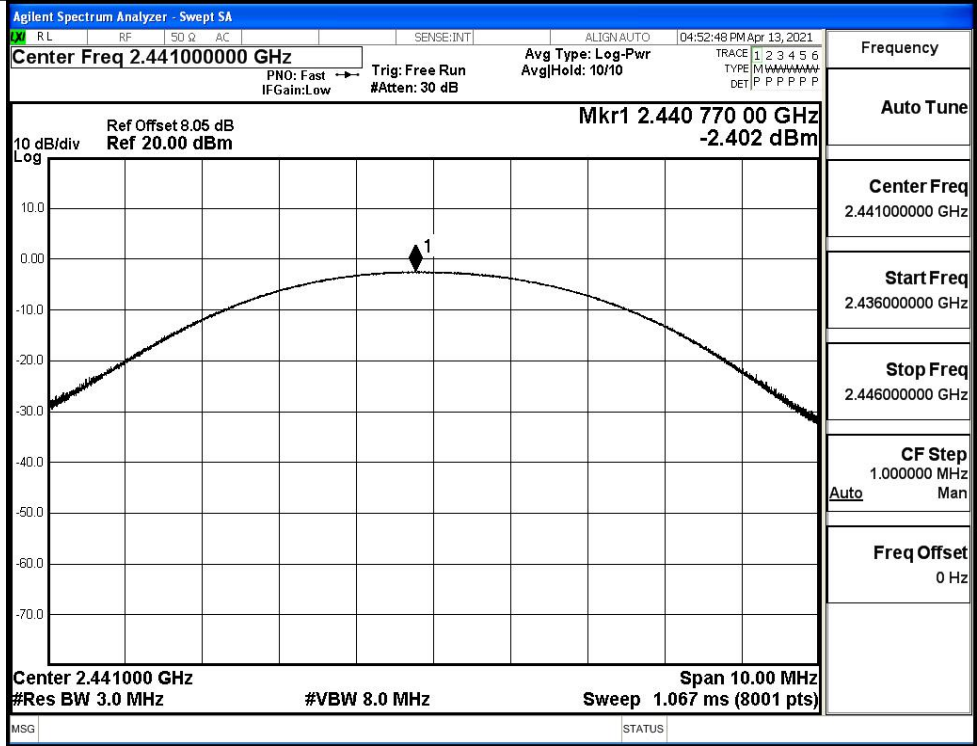
GFSK/HCH



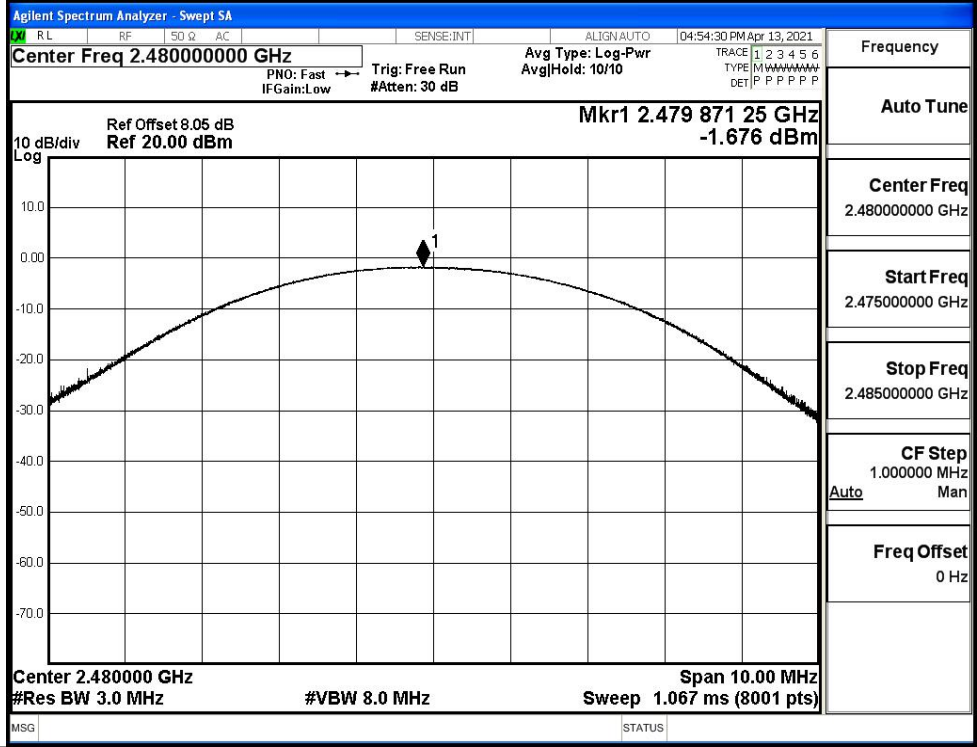
$\pi/4$ DQPSK/LCH



π /4DQPSK/MCH

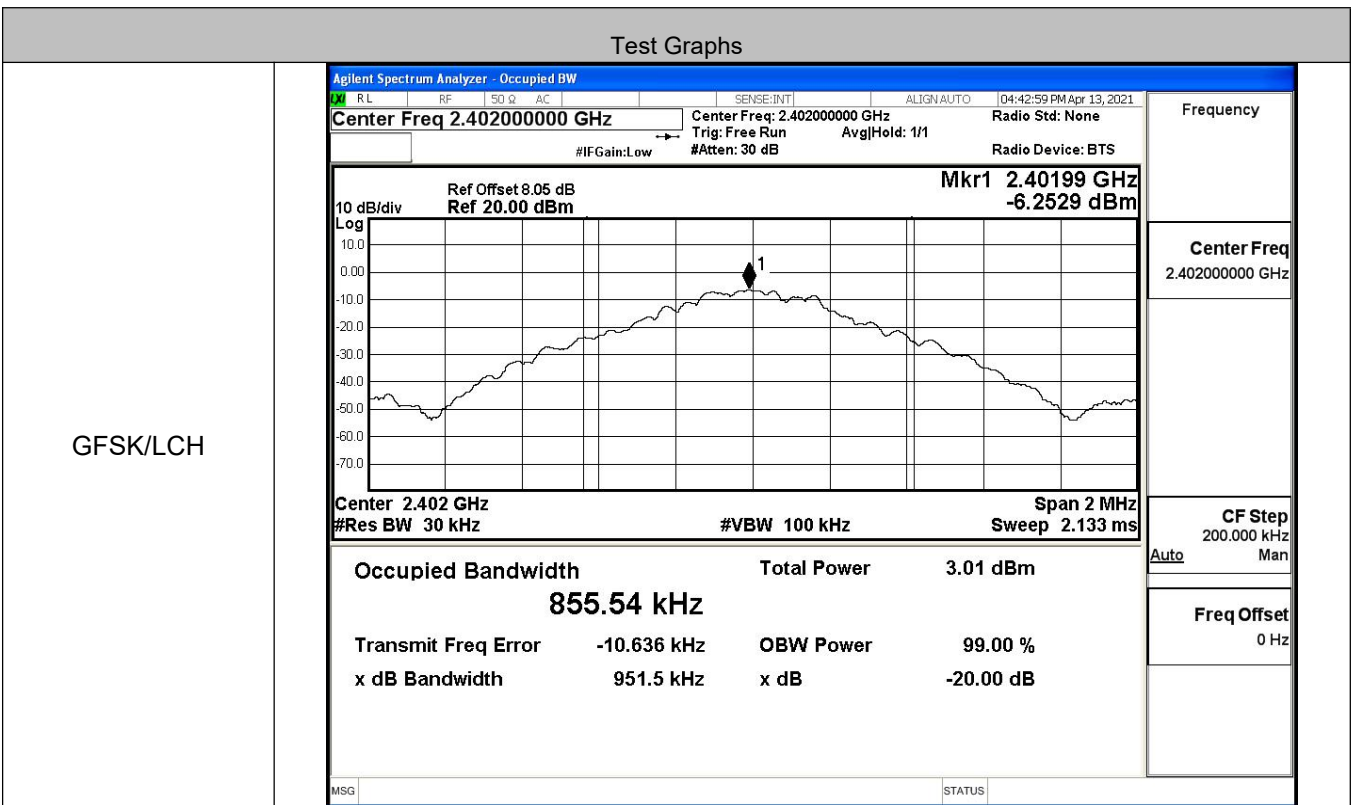


π /4DQPSK/HCH

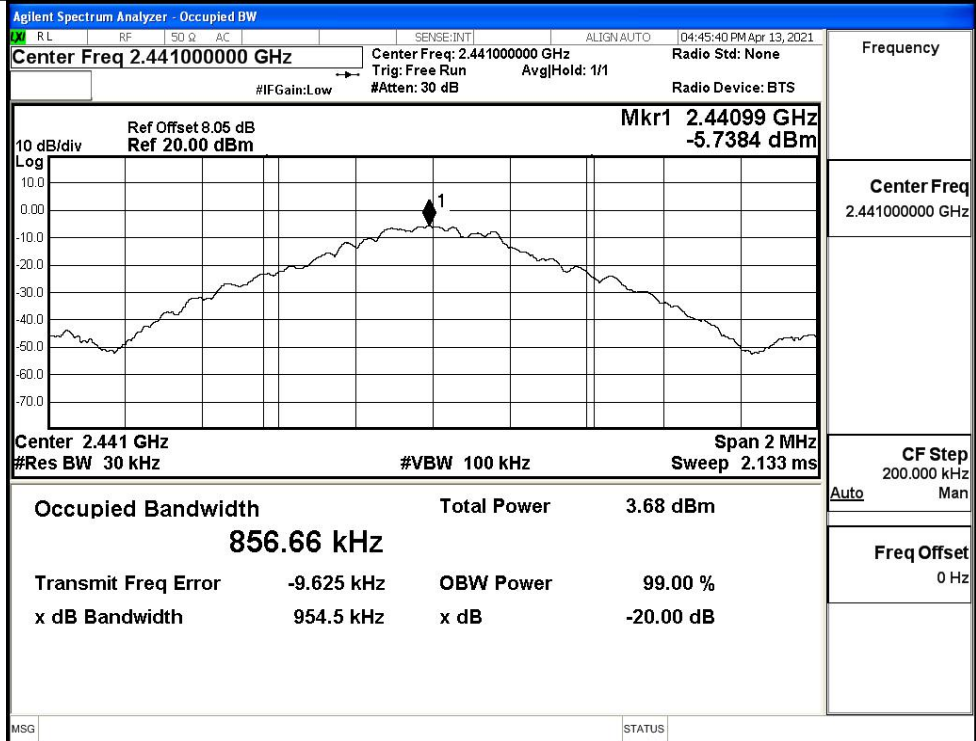


A.2 20dB Bandwidth

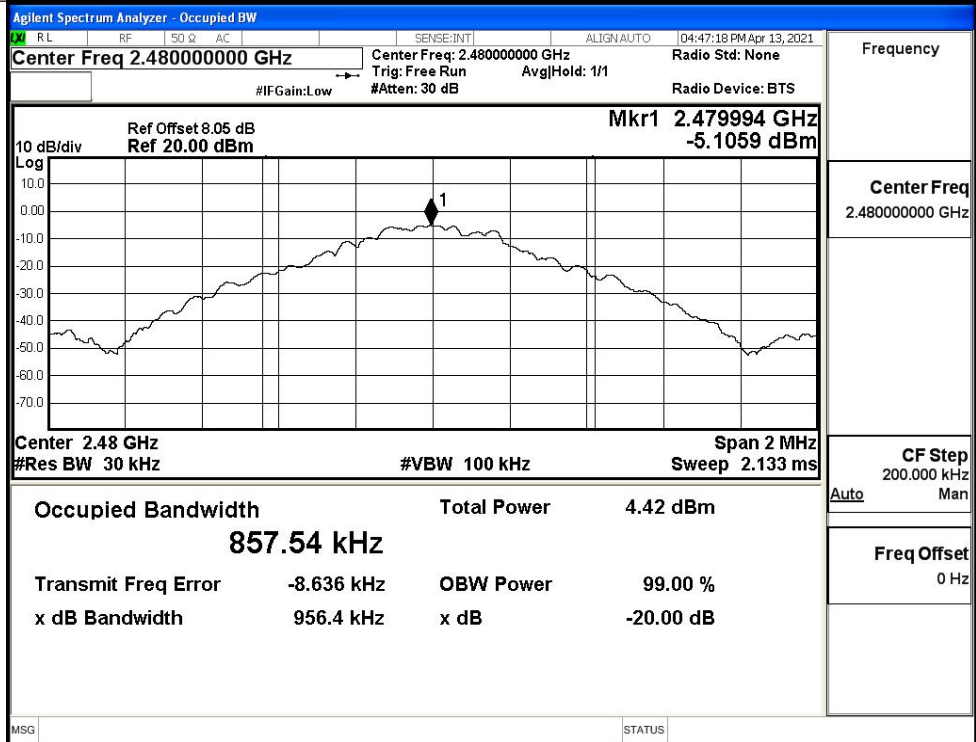
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9515	Not Specified	PASS
	MCH	0.9545	Not Specified	PASS
	HCH	0.9564	Not Specified	PASS
π/4DQPSK	LCH	1.310	Not Specified	PASS
	MCH	1.312	Not Specified	PASS
	HCH	1.311	Not Specified	PASS



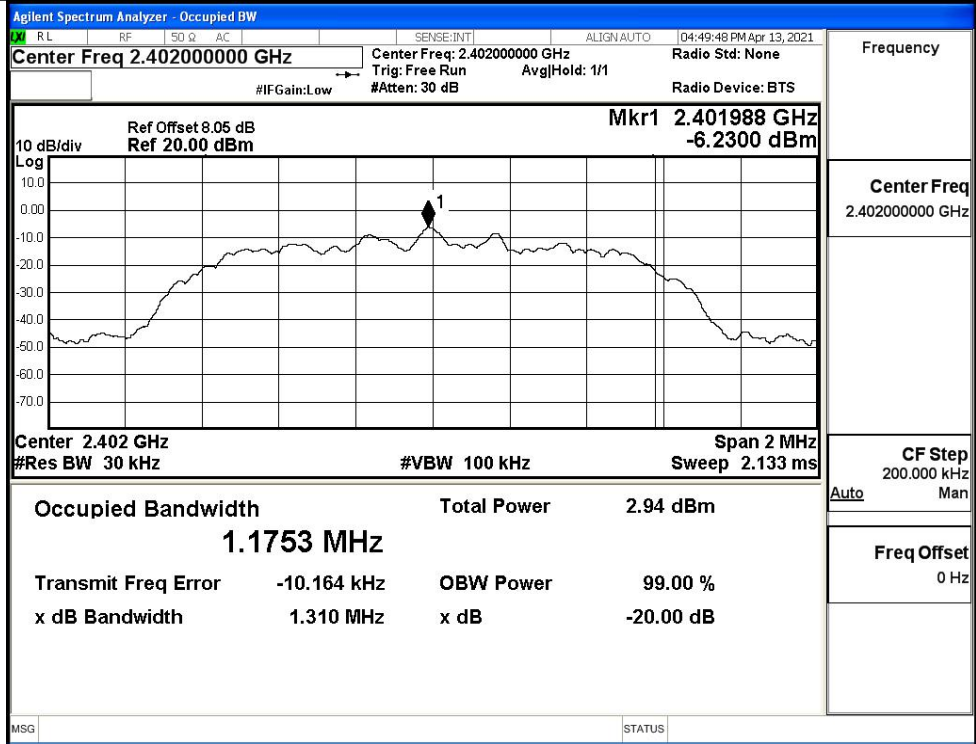
GFSK/MCH



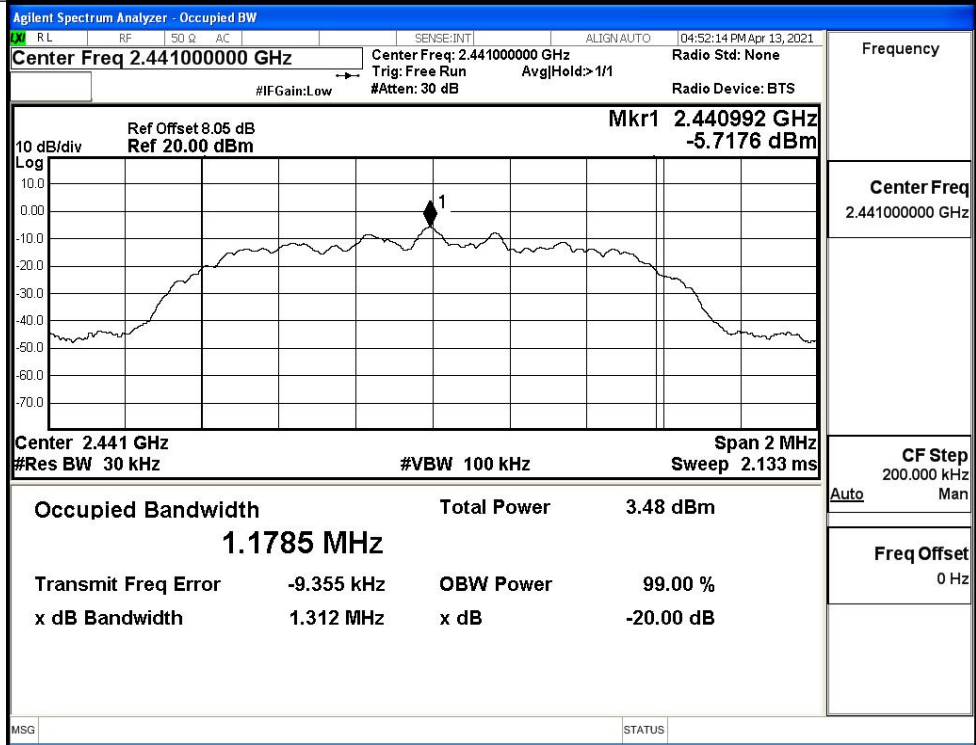
GFSK/HCH



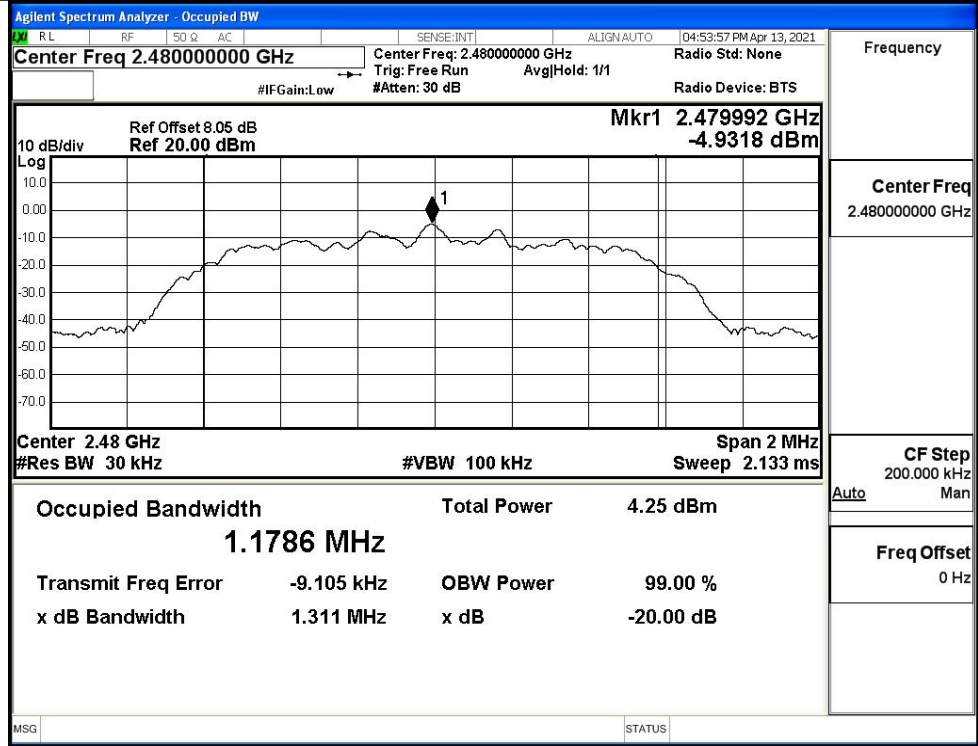
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH

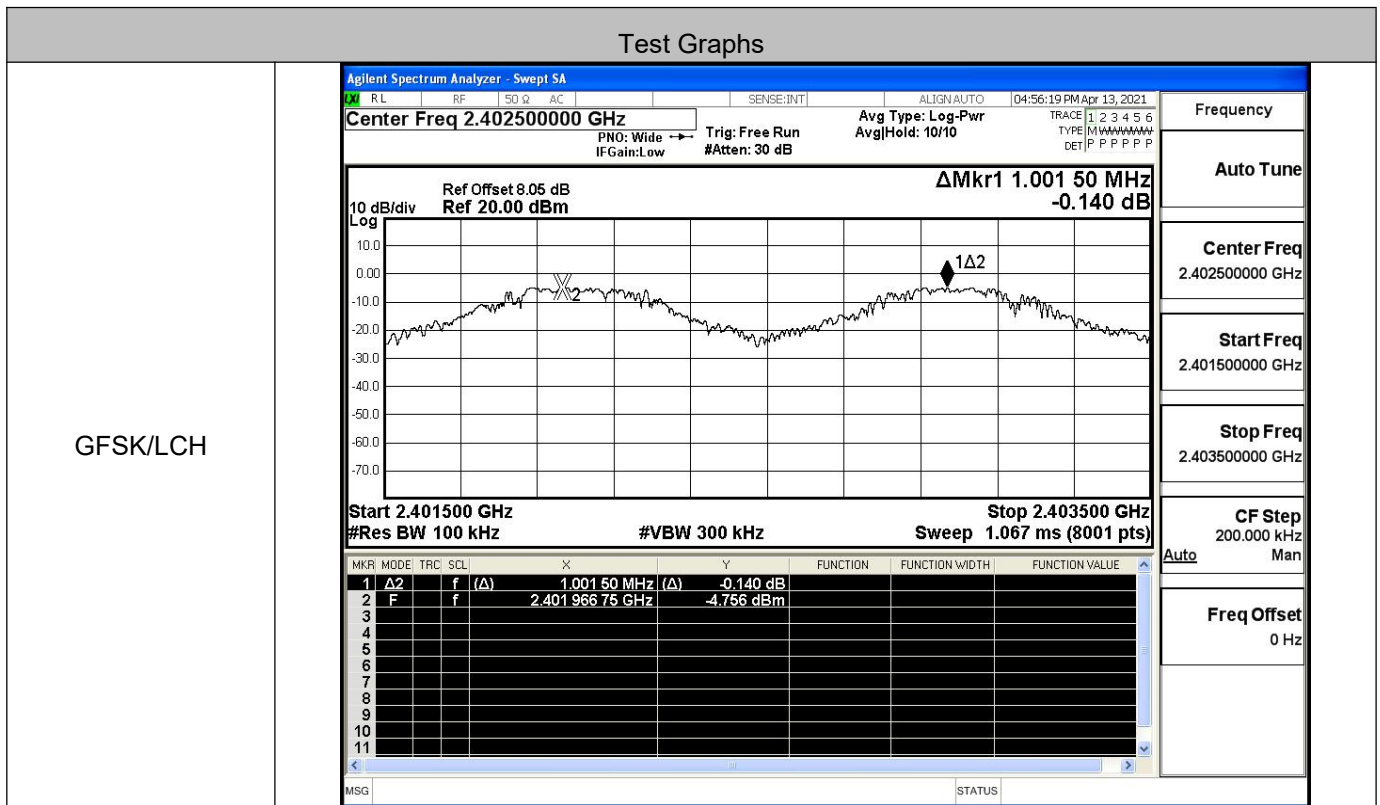


$\pi/4$ DQPSK/HCH

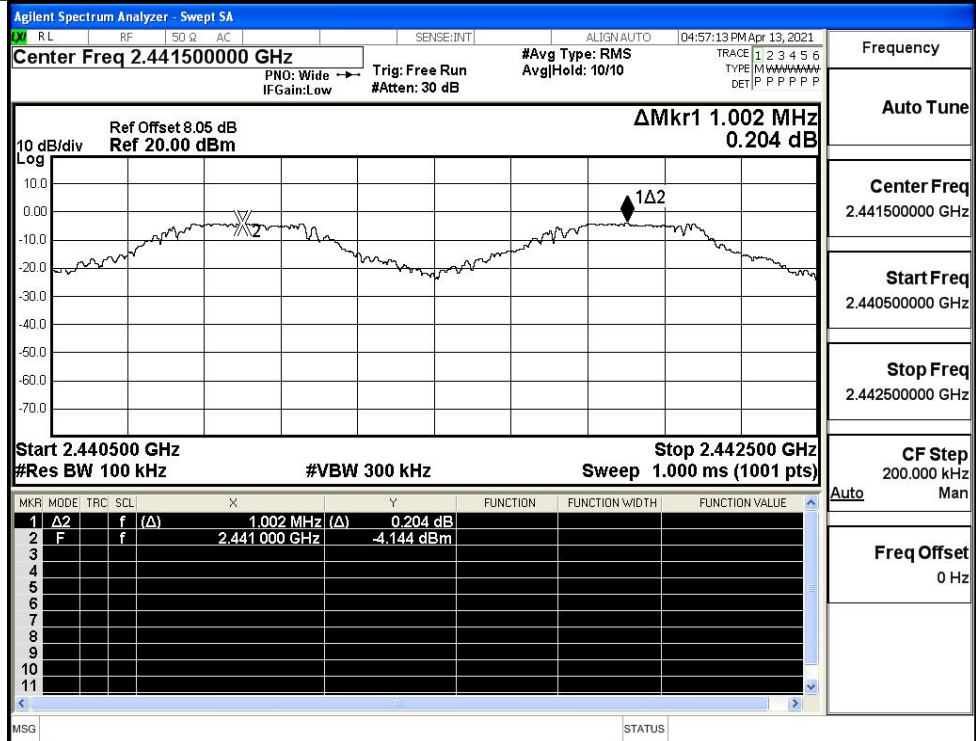


A.3 Carrier Frequency Separation

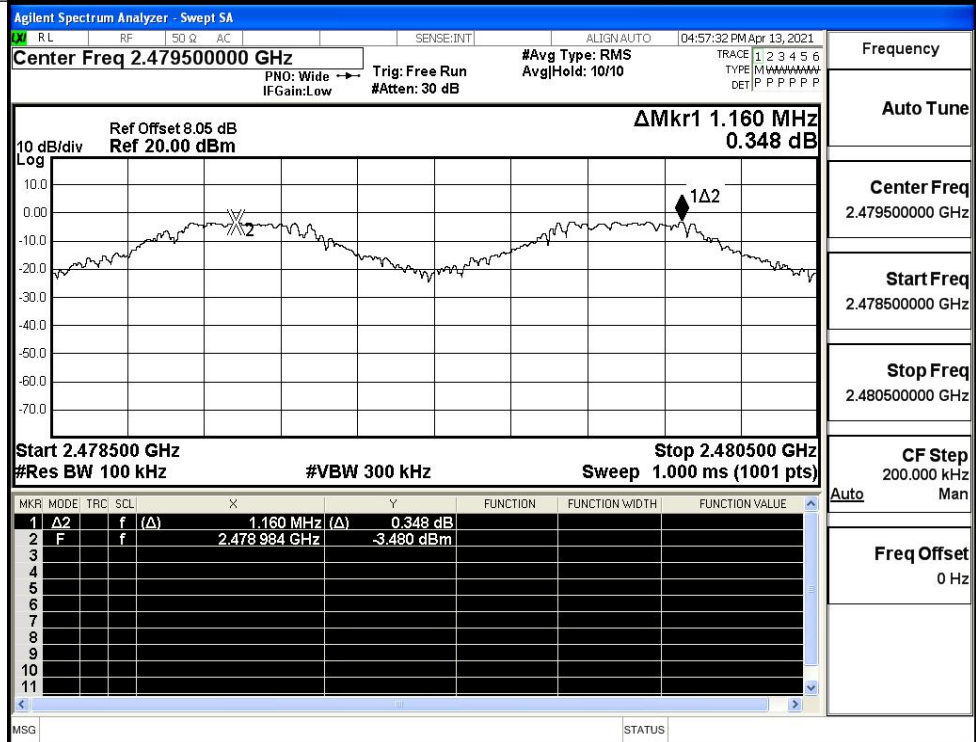
Mode	Channel	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.001	0.638	PASS
	MCH	1.002	0.638	PASS
	HCH	1.160	0.638	PASS
π/4DQPSK	LCH	0.912	0.875	PASS
	MCH	1.020	0.875	PASS
	HCH	1.018	0.875	PASS



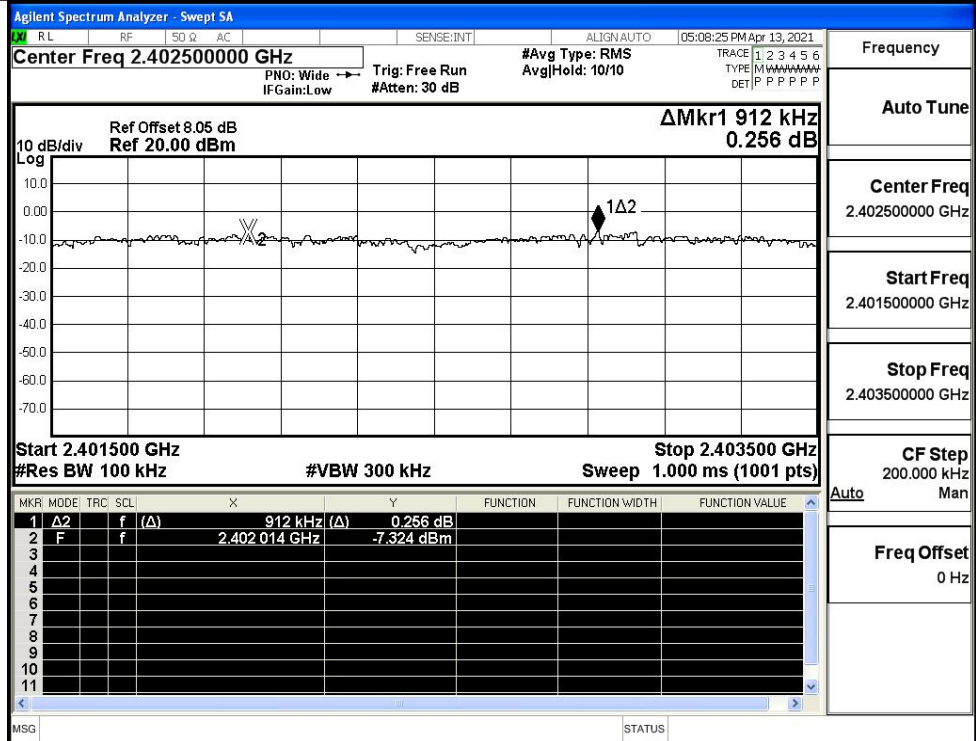
GFSK/MCH



GFSK/HCH



$\pi/4$ DQPSK/LCH



Frequency

Auto Tune

Center Freq
2.402500000 GHz

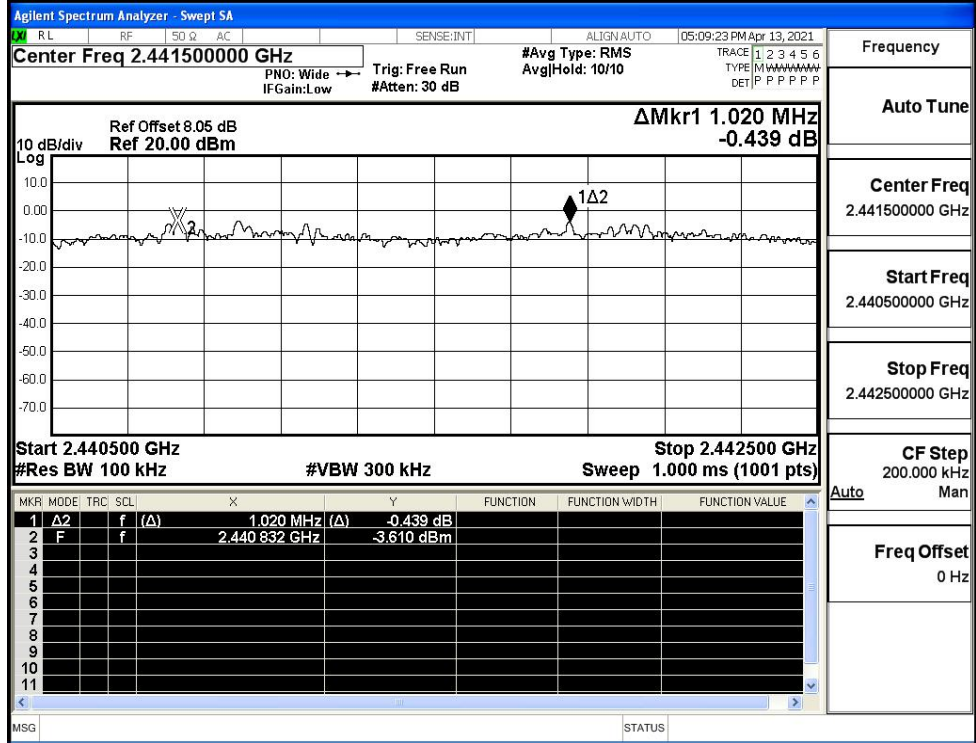
Start Freq
2.401500000 GHz

Stop Freq
2.403500000 GHz

CF Step
200.000 kHz

Freq Offset
0 Hz

$\pi/4$ DQPSK/MCH



Frequency

Auto Tune

Center Freq
2.441500000 GHz

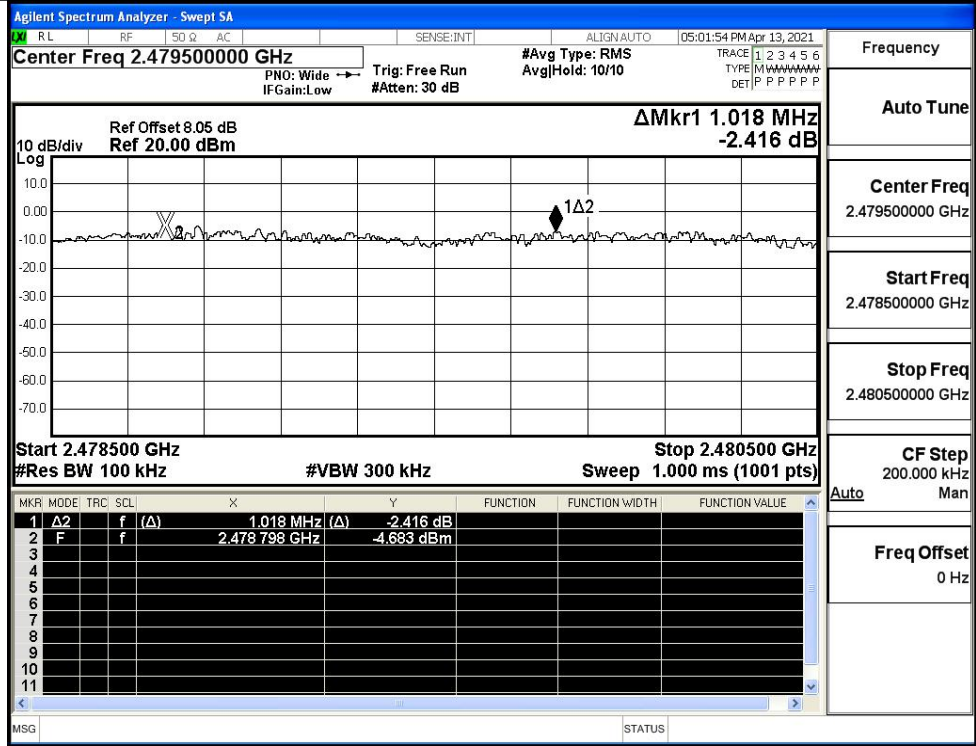
Start Freq
2.440500000 GHz

Stop Freq
2.442500000 GHz

CF Step
200.000 kHz

Freq Offset
0 Hz

π/4DQPSK/HCH



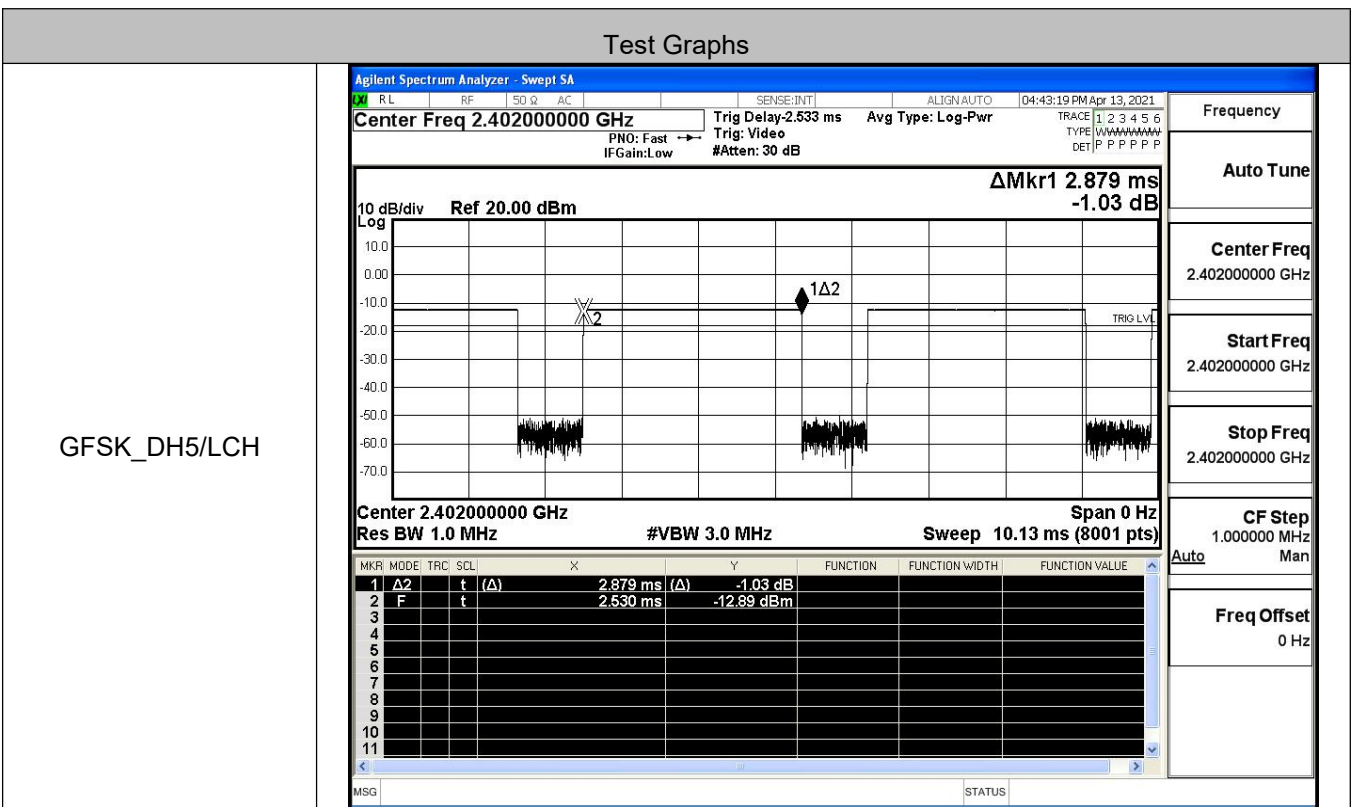
A.4 Hopping Channel Number

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

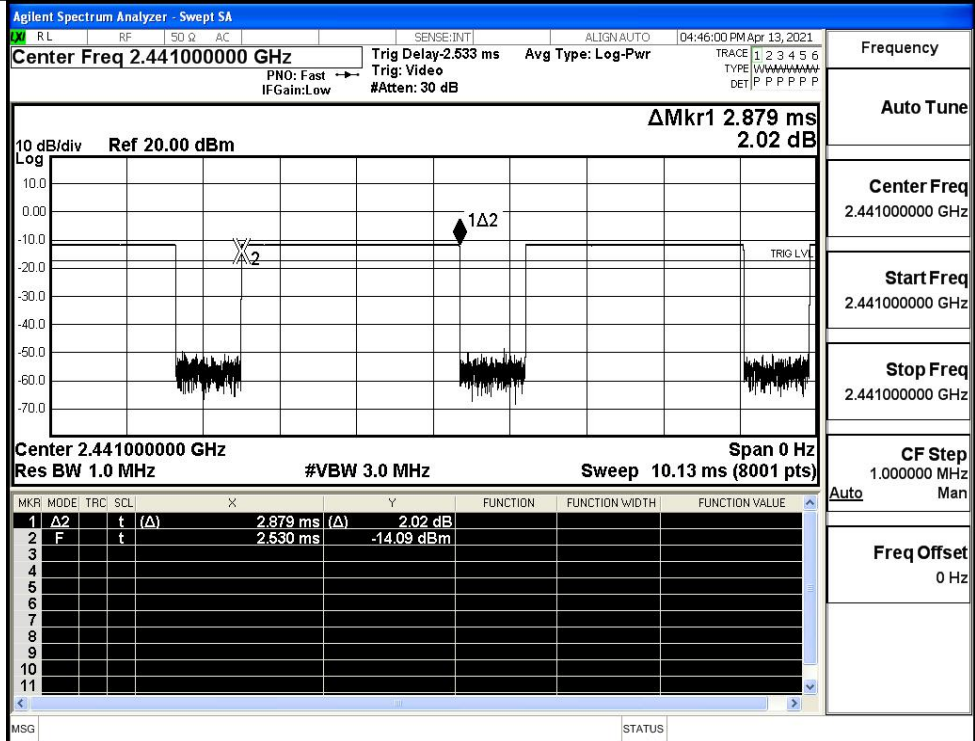
Test Graphs																												
GFSK/Hop	<div style="border: 1px solid black; padding: 5px;"> <p style="font-size: small; margin: 0;">Agilent Spectrum Analyzer - Swept SA</p> <p style="font-size: x-small; margin: 0;">RL RF 50 Q AC SENSE:INT ALIGN AUTO 04:58:52 PM Apr 13, 2021</p> <p style="font-size: small; margin: 0;">Center Freq 2.441750000 GHz #Avg Type: RMS Trig: Free Run AvgHold: 10/10</p> <p style="font-size: x-small; margin: 0;">PNO: Fast IFGain:Low #Atten: 30 dB</p> <p style="font-size: small; margin: 0;">Ref Offset 8.05 dB ΔMkr1 78.062 MHz</p> <p style="font-size: small; margin: 0;">Ref 20.00 dBm 1.358 dB</p> <p style="font-size: small; margin: 0;">Start 2.40000 GHz Stop 2.48350 GHz</p> <p style="font-size: small; margin: 0;">#Res BW 100 kHz #VBW 300 kHz Sweep 8.000 ms (8001 pts)</p> <table border="1" style="width: 100%; font-size: x-small; border-collapse: collapse;"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Δ2</td> <td>f</td> <td>(Δ)</td> <td>78.062 MHz</td> <td>(Δ)</td> <td>1.358 dB</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>F</td> <td>f</td> <td></td> <td>2.402108 GHz</td> <td></td> <td>-4.821 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p style="font-size: x-small; margin: 0;">MSG STATUS</p> </div>	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	Δ 2	f	(Δ)	78.062 MHz	(Δ)	1.358 dB			2	F	f		2.402108 GHz		-4.821 dBm		
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1	Δ 2	f	(Δ)	77.947 MHz	(Δ)	0.490 dB																						
2	F	f		2.402035 GHz		-6.898 dBm																						

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
$\pi/4$ DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.308	0.4	PASS
	2DH5	HCH	2.88	106.7	0.308	0.4	PASS

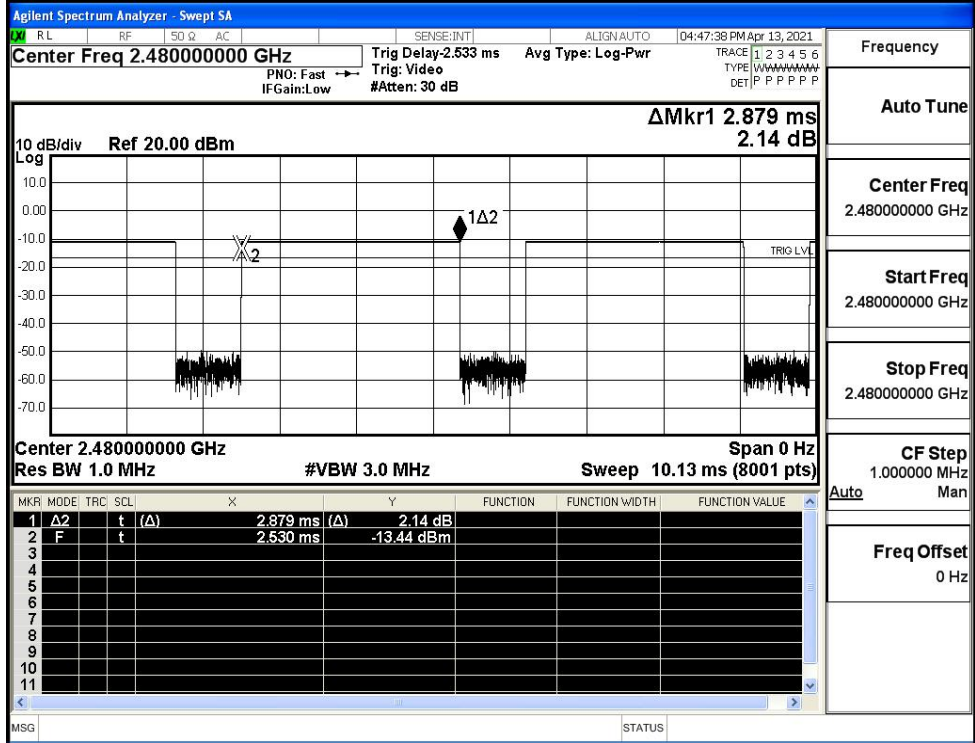


GFSK_DH5/MCH



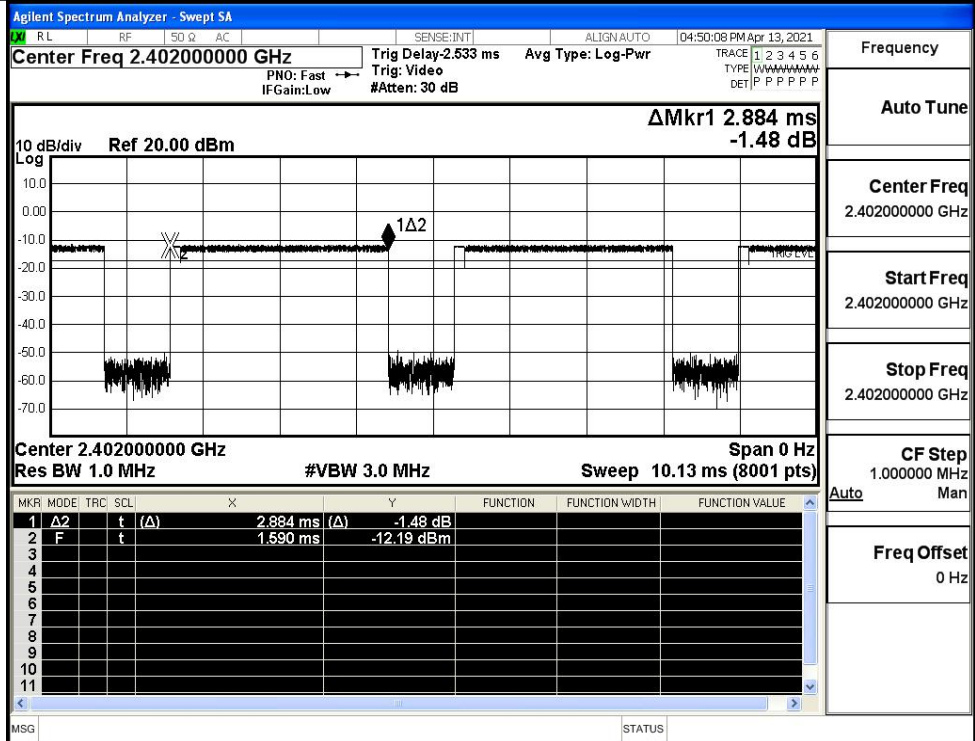
Frequency	
Auto Tune	
Center Freq	2.441000000 GHz
Start Freq	2.441000000 GHz
Stop Freq	2.441000000 GHz
CF Step	1.000000 MHz
Auto	Man
Freq Offset	0 Hz

GFSK_DH5/HCH

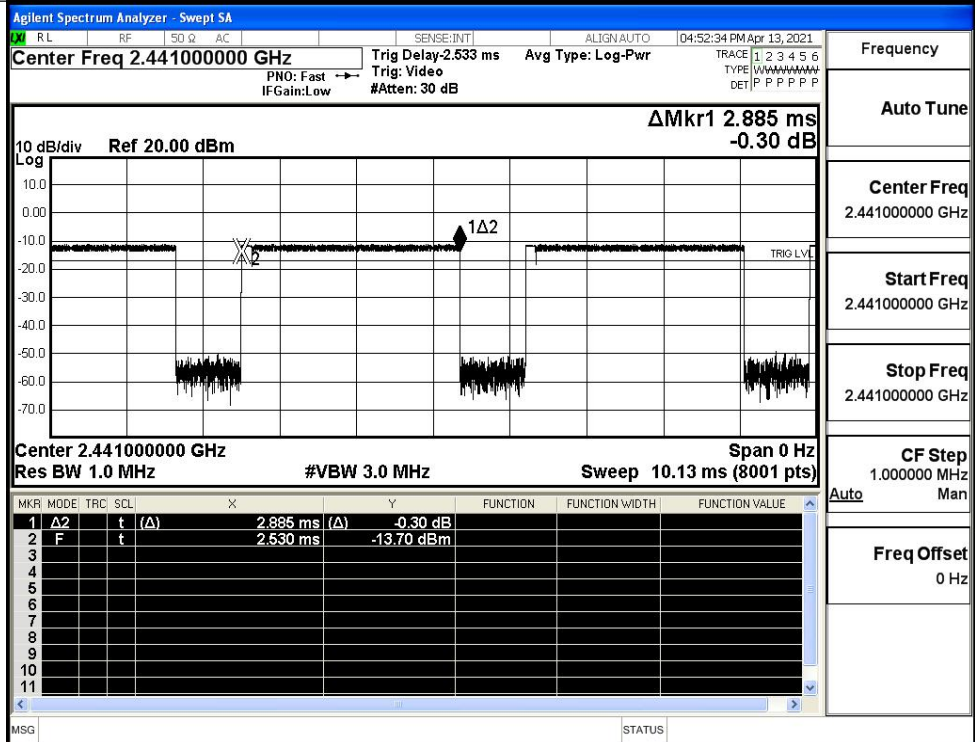


Frequency	
Auto Tune	
Center Freq	2.480000000 GHz
Start Freq	2.480000000 GHz
Stop Freq	2.480000000 GHz
CF Step	1.000000 MHz
Auto	Man
Freq Offset	0 Hz

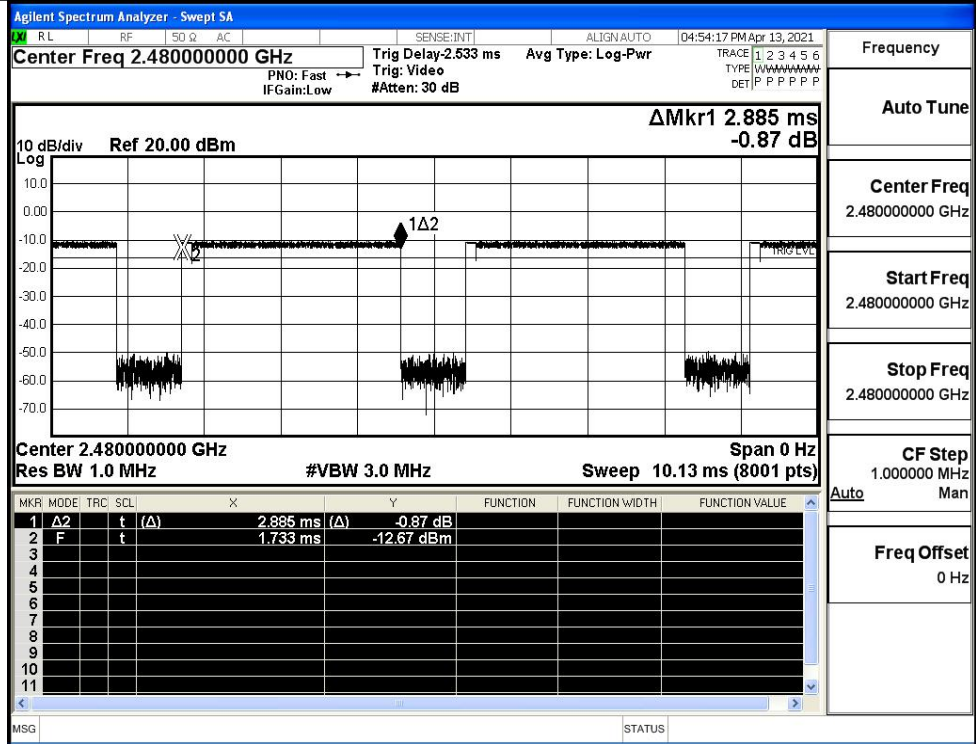
$\pi/4$ DQPSK
_2DH5/LCH



$\pi/4$ DQPSK
_2DH5/MCH



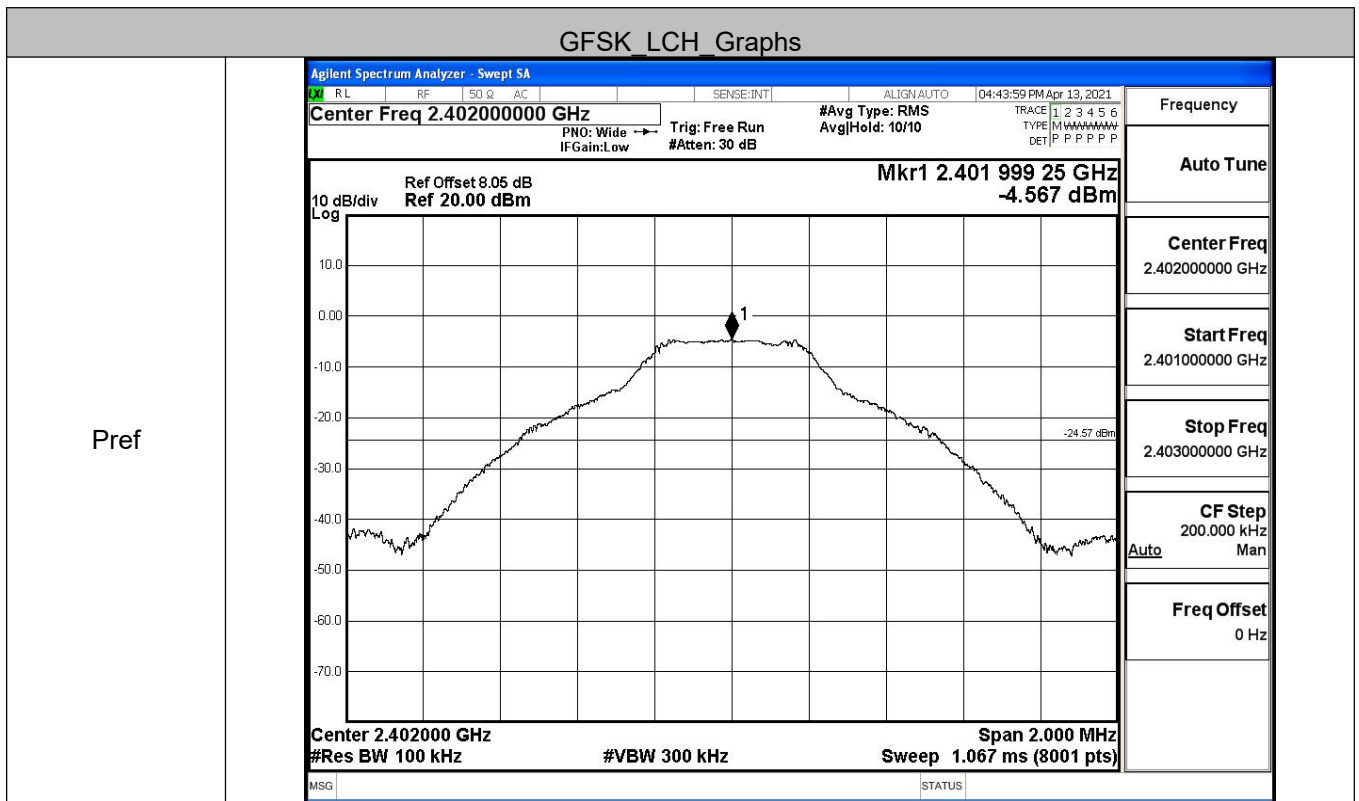
$\pi/4$ DQPSK
_2DH5/HCH



A.6 RF Conducted Spurious Emissions

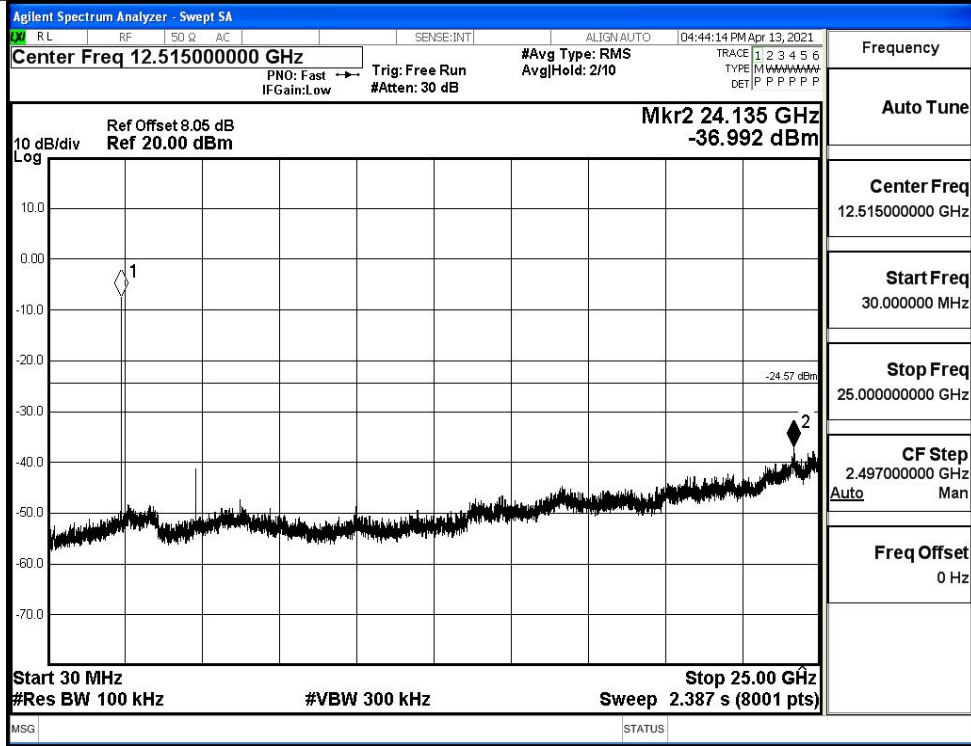
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-4.567	-36.992	-24.567	PASS
	MCH	-3.787	-37.527	-23.787	PASS
	HCH	-3.215	-37.754	-23.215	PASS
π/4DQPSK	LCH	-4.064	-37.112	-24.064	PASS
	MCH	-3.571	-36.919	-23.571	PASS
	HCH	-3.063	-37.843	-23.063	PASS

GFSK LCH Graphs



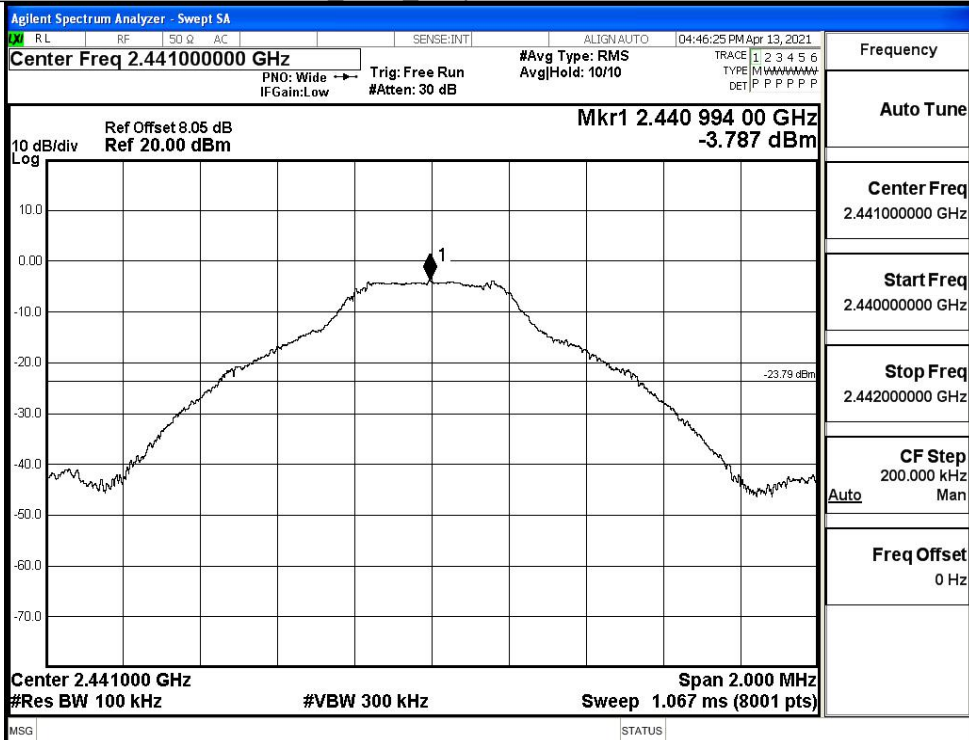
Pref

P_u

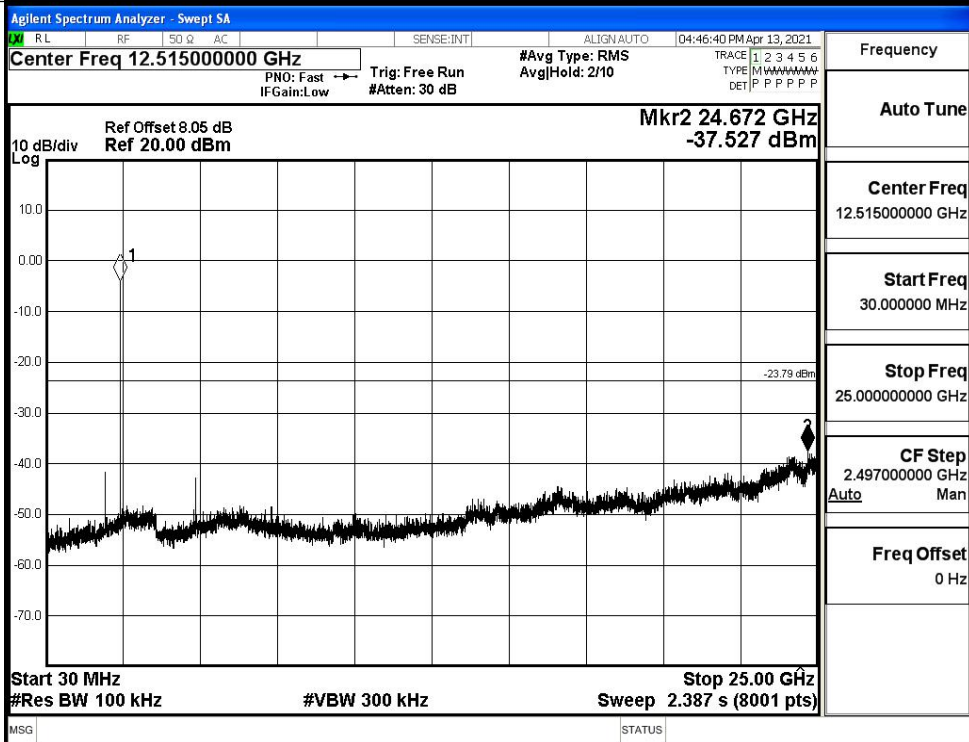


GFSK MCH Graphs

Pref

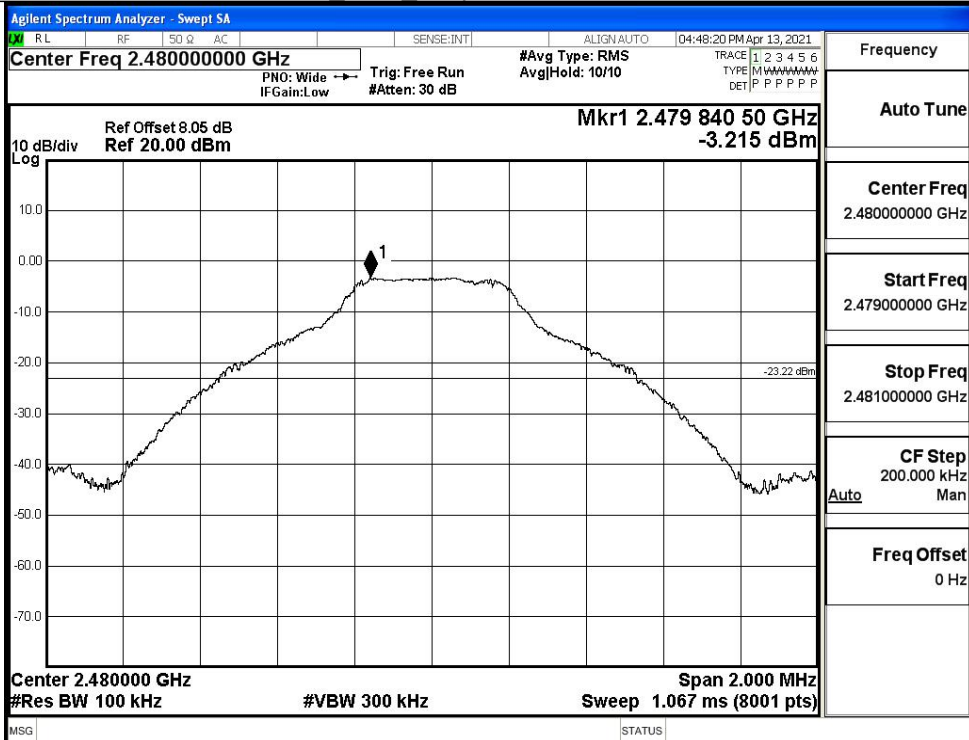


Puw



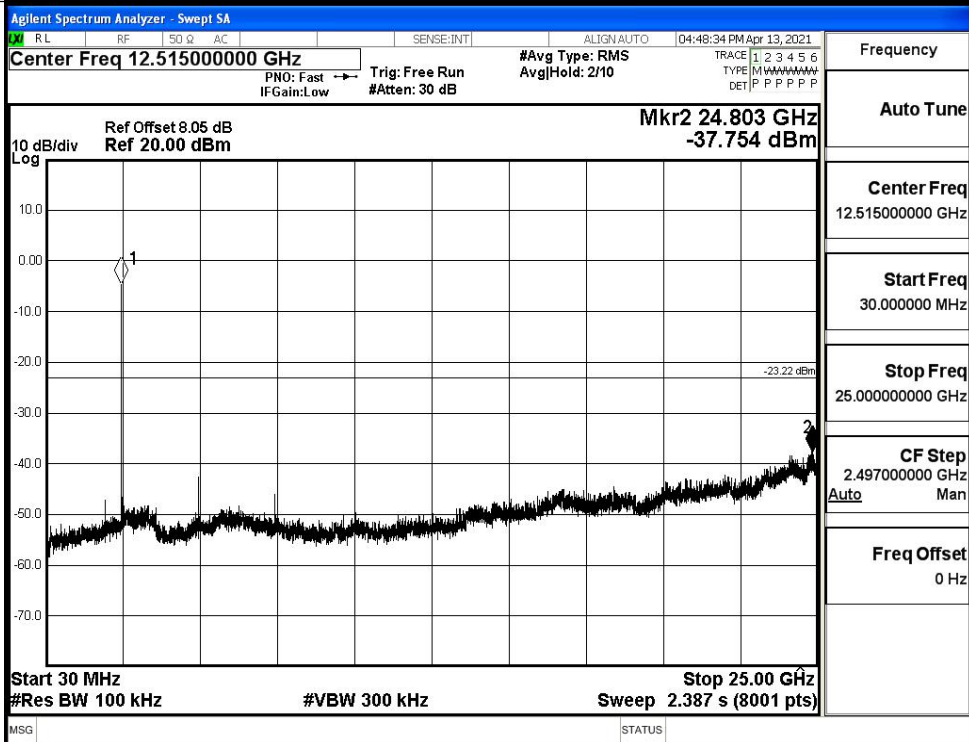
GFSK HCH_Graphs

Pref



Frequency	2.480000000 GHz
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

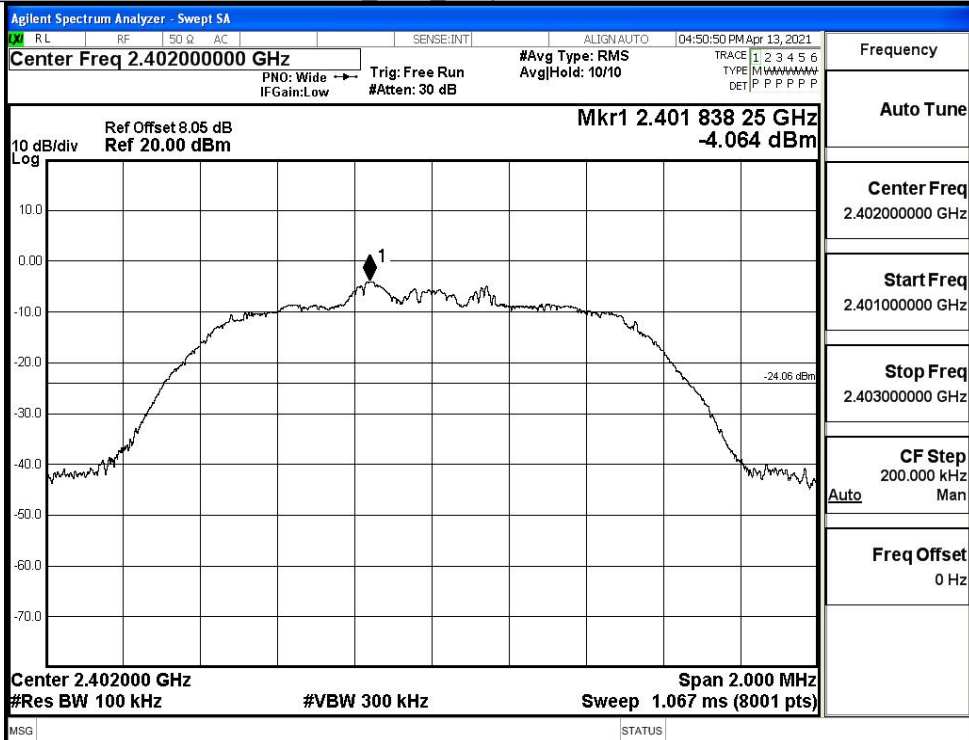
Puw



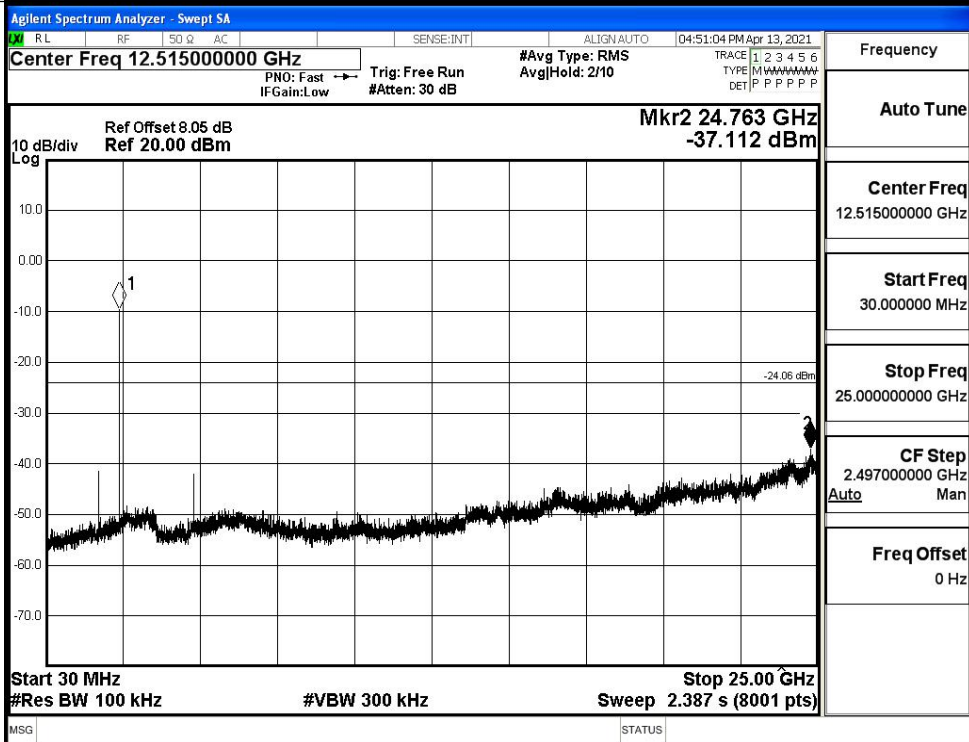
Frequency	12.515000000 GHz
Auto Tune	
Center Freq	12.515000000 GHz
Start Freq	30.000000 MHz
Stop Freq	25.000000000 GHz
CF Step	2.497000000 GHz
	Auto Man
Freq Offset	0 Hz

$\pi/4$ DQPSK LCH_Graphs

Pref

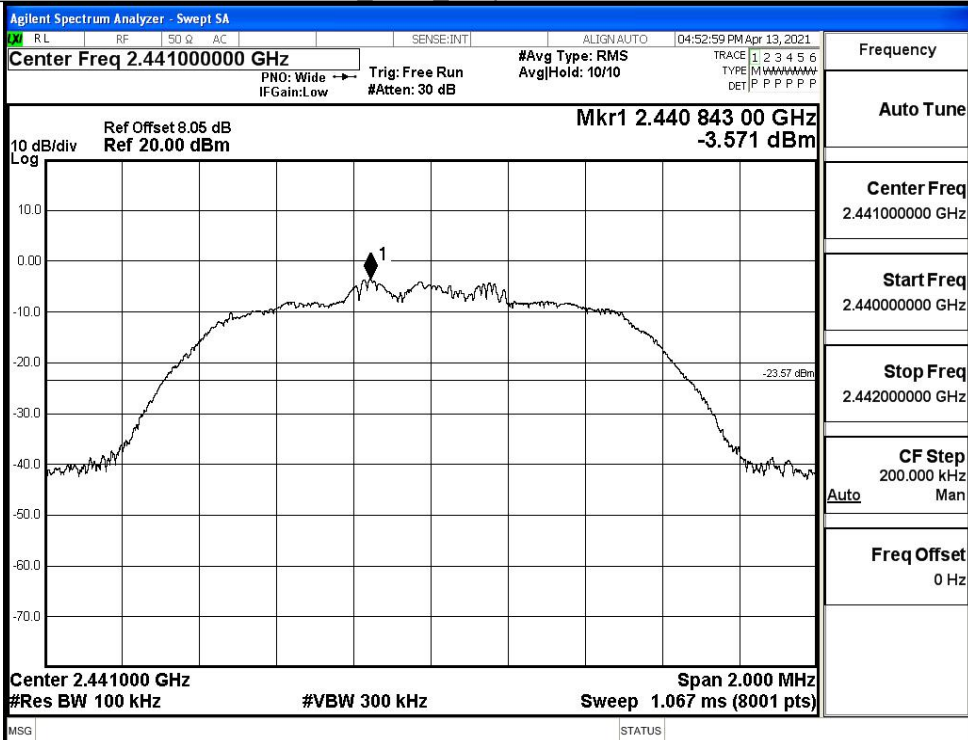


Puw



$\pi/4$ DQPSK MCH_Graphs

Pref



Puw

