Appendix A

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

Product Name: Bluetooth speaker side table
Trade Mark: N/A
Test Model: FB-12

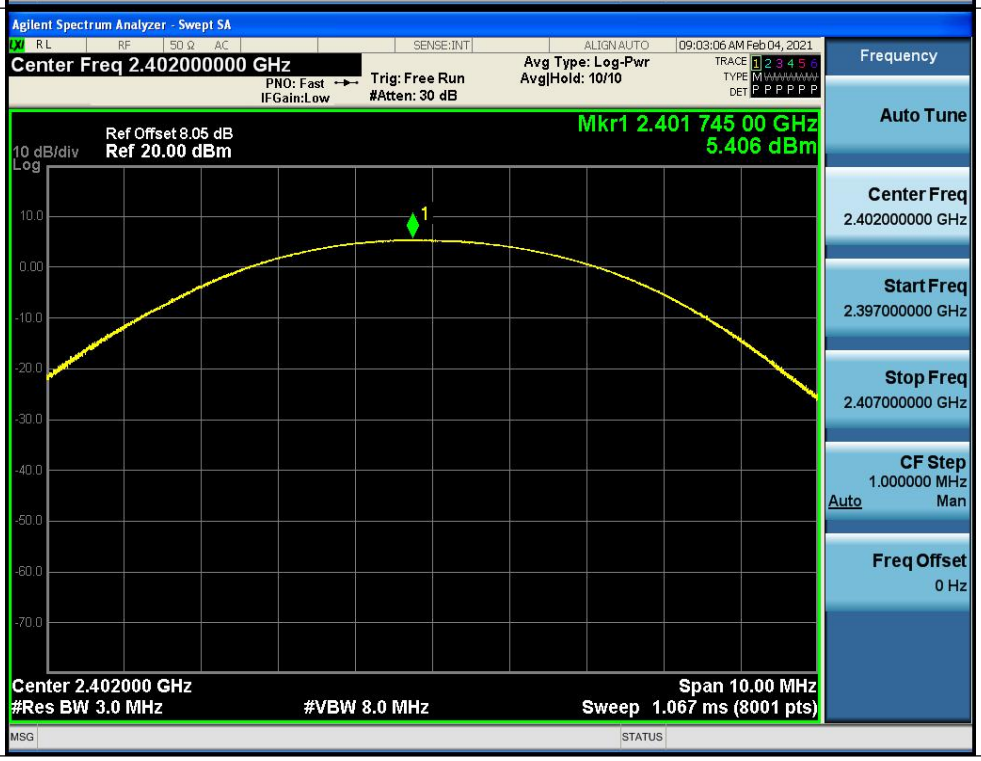
Environmental Conditions

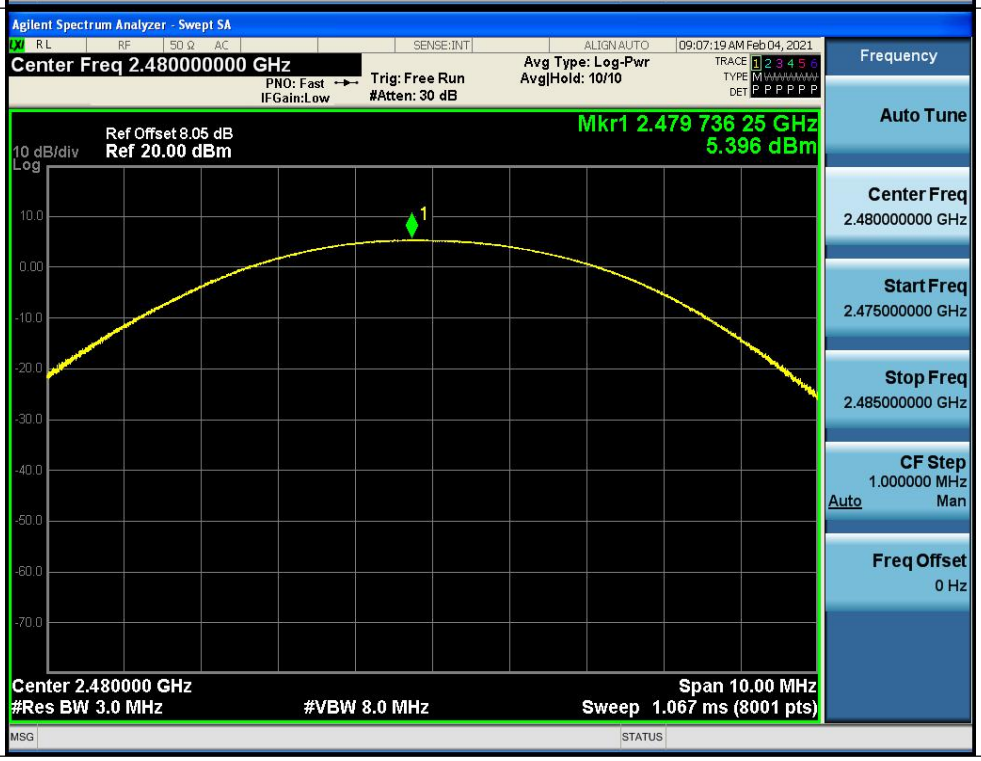
Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Li Huan

A.1 Maxmum Conducted Peak Output Power

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	4.753	21	PASS
	MCH	5.024	21	PASS
	HCH	4.777	21	PASS
π/4DQPSK	LCH	5.406	21	PASS
	MCH	5.649	21	PASS
	HCH	5.396	21	PASS

Test Graphs		
GFSK/LCH		
GFSK/MCH		

GFSK/HCH		
π/4DQPSK/LCH		

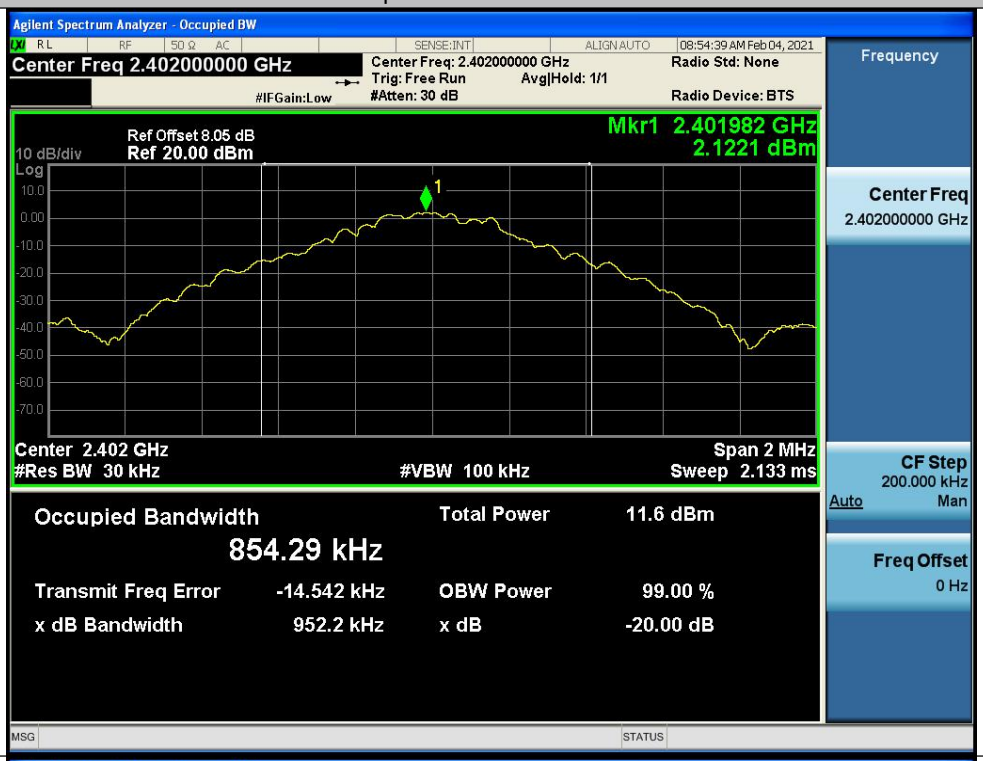
π/4DQPSK/MCH		
π/4DQPSK/HCH		

A.2 20dB Bandwidth

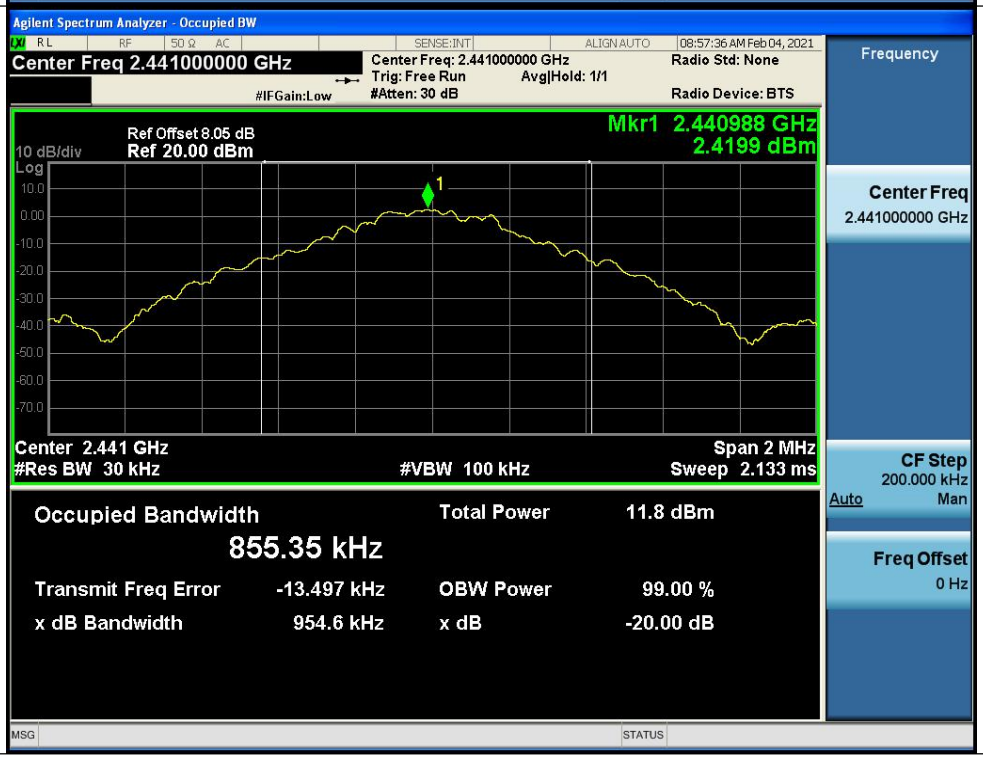
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9522	Not Specified	PASS
	MCH	0.9546	Not Specified	PASS
	HCH	0.9509	Not Specified	PASS
π/4DQPSK	LCH	1.322	Not Specified	PASS
	MCH	1.314	Not Specified	PASS
	HCH	1.313	Not Specified	PASS

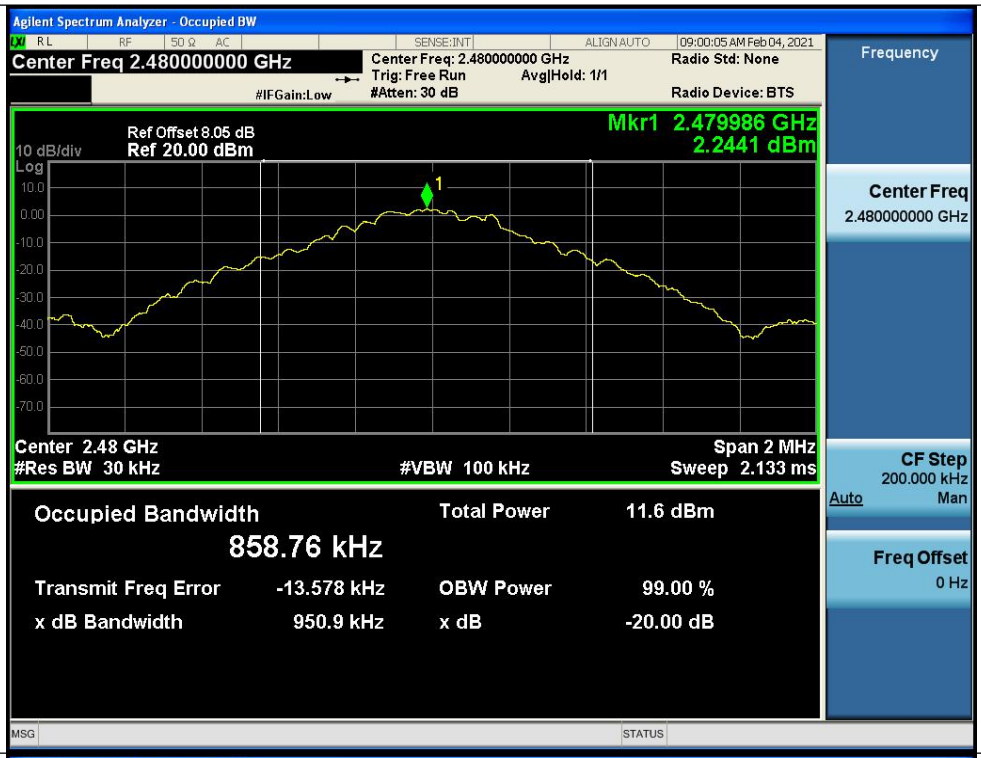
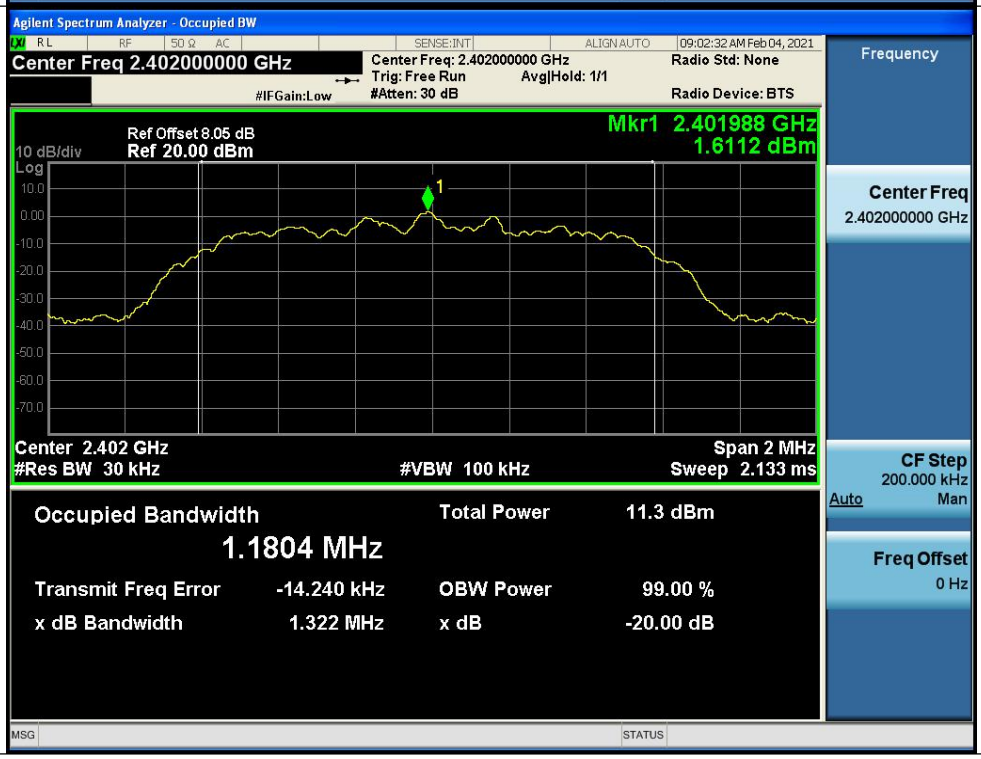
Test Graphs

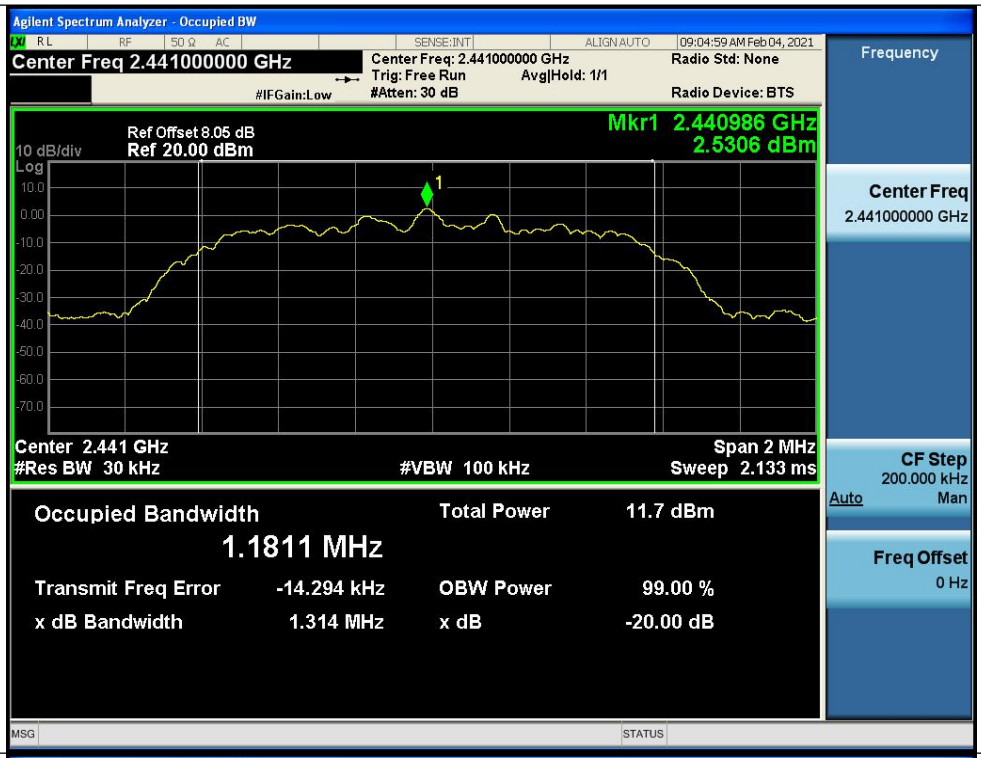
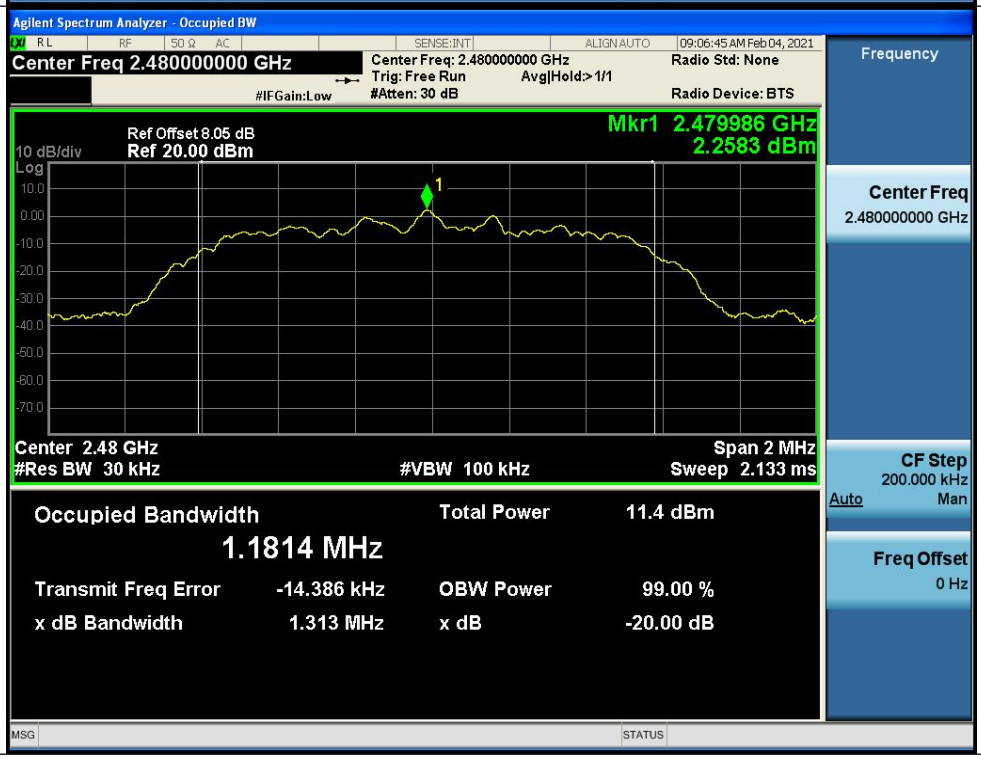
GFSK/LCH



GFSK/MCH



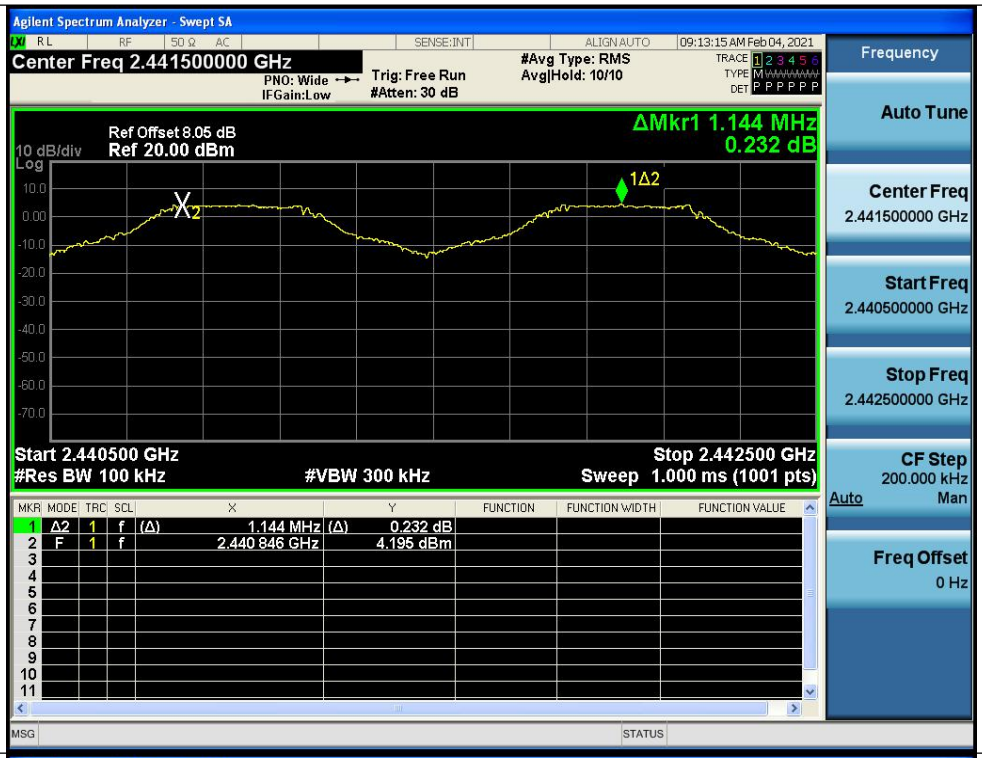
GFSK/HCH		
π/4DQPSK/LCH		

π/4DQPSK/MCH		
π/4DQPSK/HCH		

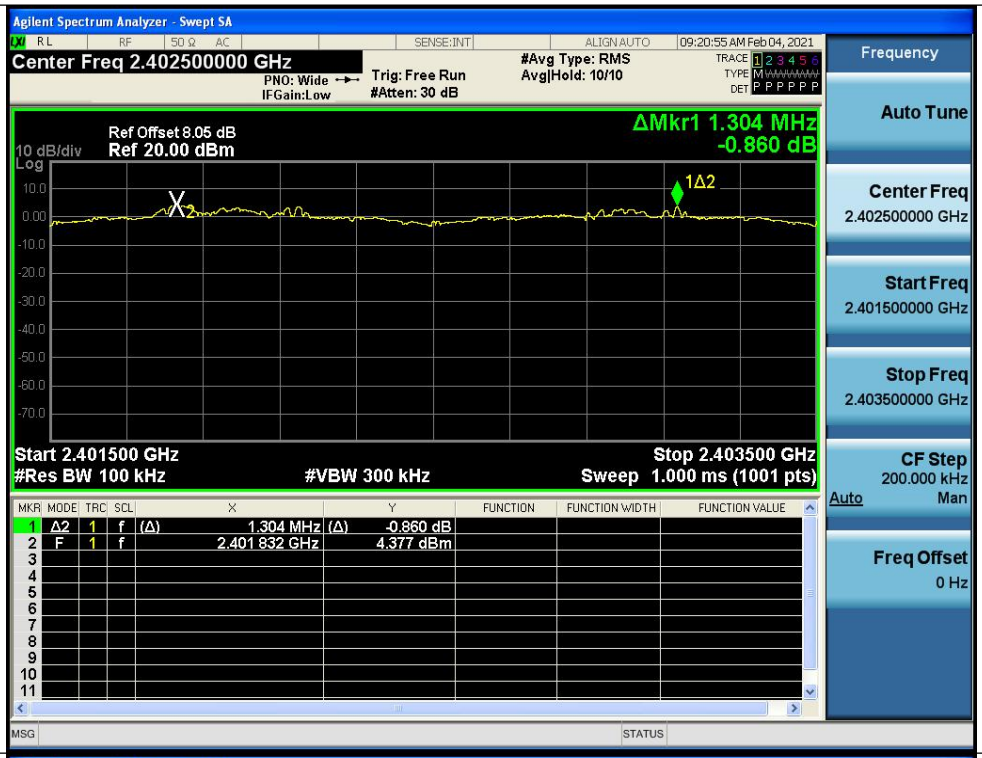
A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.311	0.636	PASS
	MCH	1.144	0.636	PASS
	HCH	1.098	0.636	PASS
π/4DQPSK	LCH	1.304	0.881	PASS
	MCH	0.992	0.881	PASS
	HCH	0.972	0.881	PASS

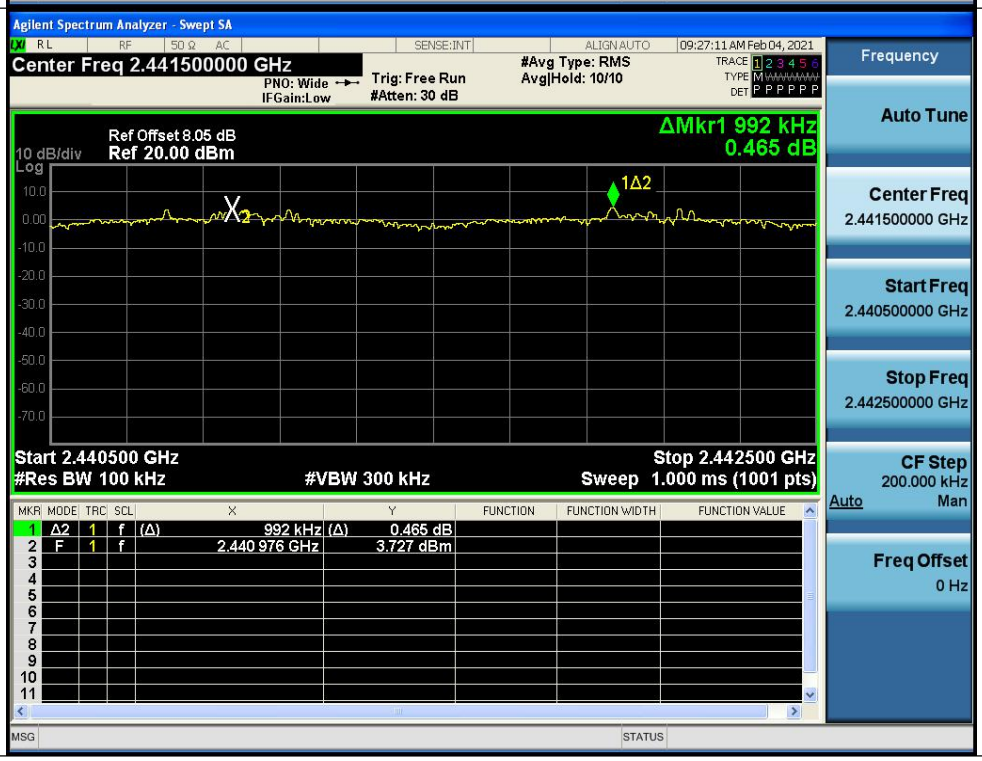
Test Graphs		
GFSK/LCH		

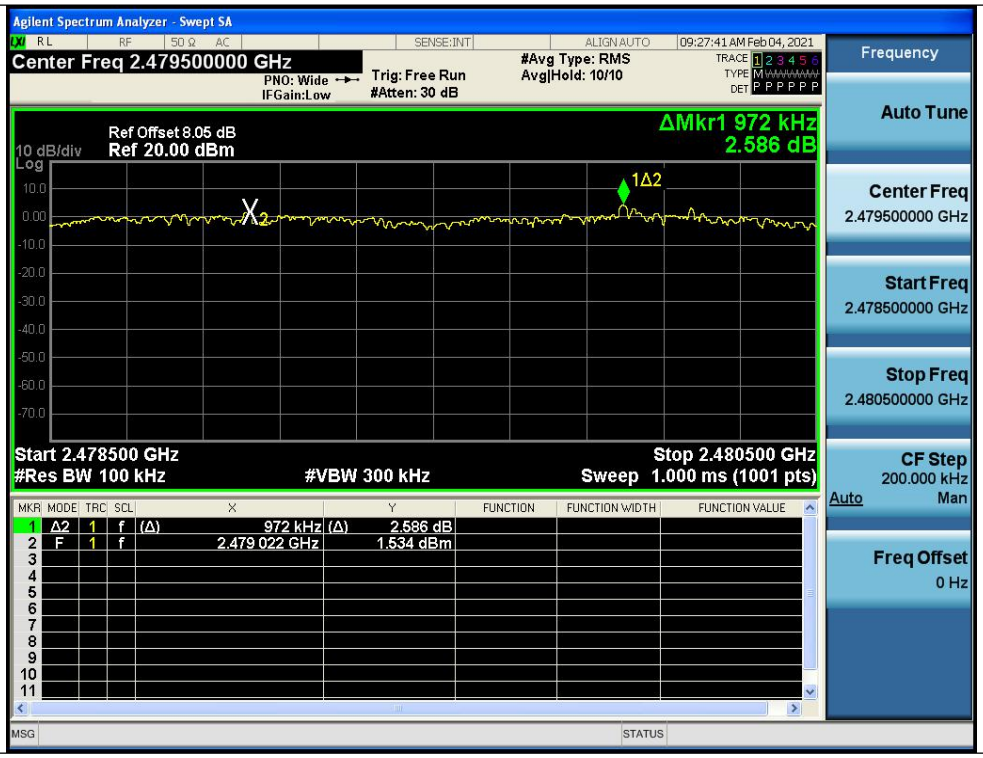
GFSK/MCH		
GFSK/HCH		

π/4DQPSK/LCH



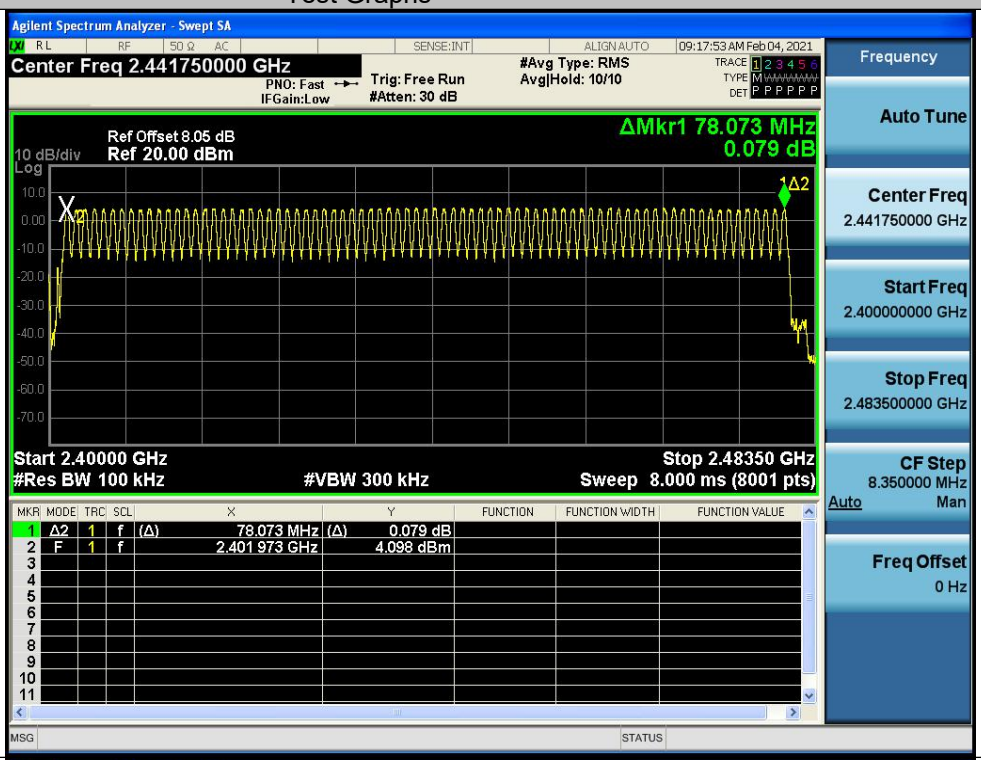
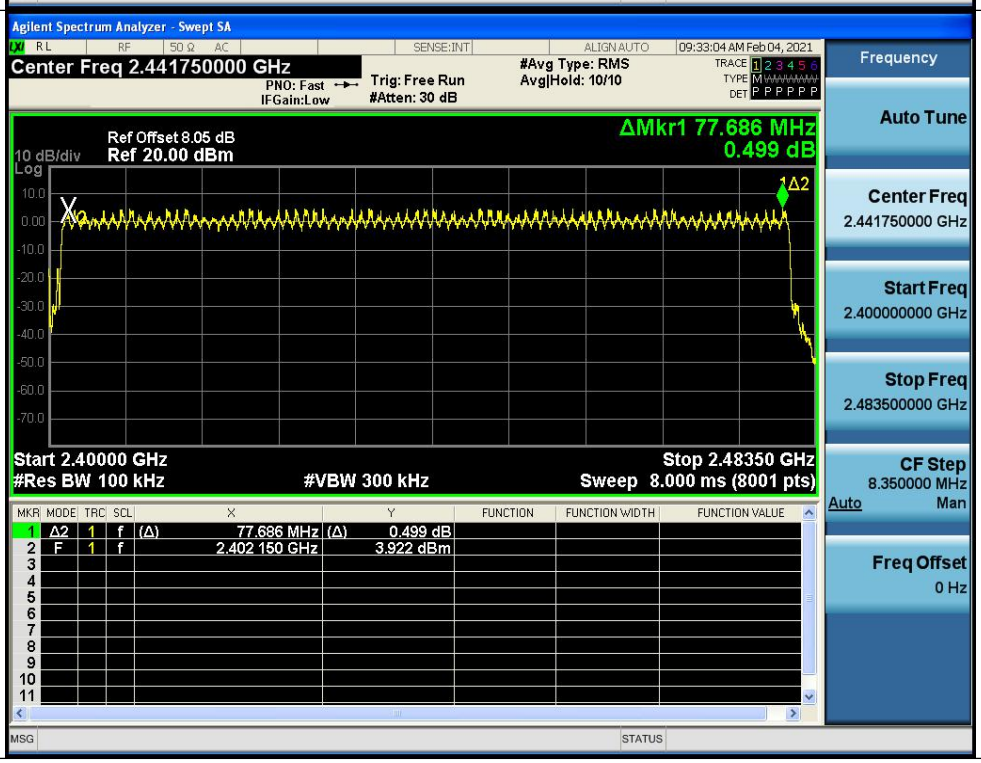
π/4DQPSK/MCH



π/4DQPSK/HCH		

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.479500000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 10/10
09:27:41 AM Feb 04, 2021
Ref Offset 8.05 dB
10 dB/div
Ref 20.00 dBm
ΔMkr1 972 kHz
2.586 dB
1Δ2
Start 2.478500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.480500 GHz
Sweep 1.000 ms (1001 pts)
1 Δ2 1 f (Δ) 972 kHz (Δ) 2.586 dB
2 F 1 f 2.479 022 GHz 1.534 dBm
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

A.4 Hopping Channel Number

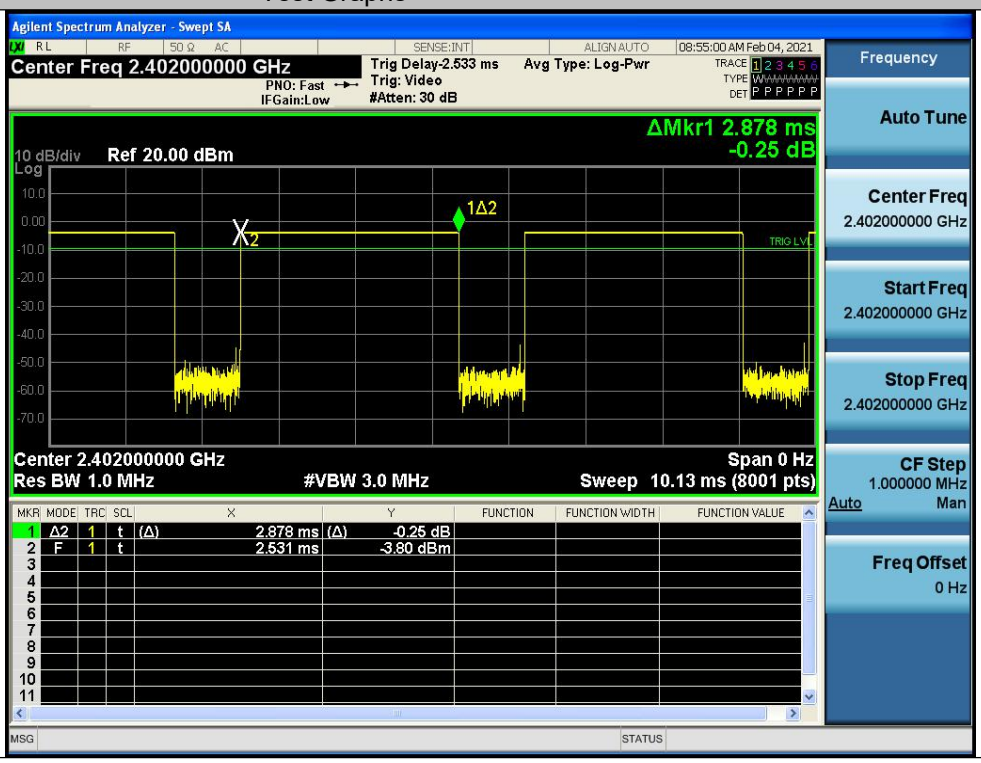
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
π/4DQPSK	Hop	79	>=15	PASS
Test Graphs				
GFSK/Hop				
π/4DQPSK/Hop				

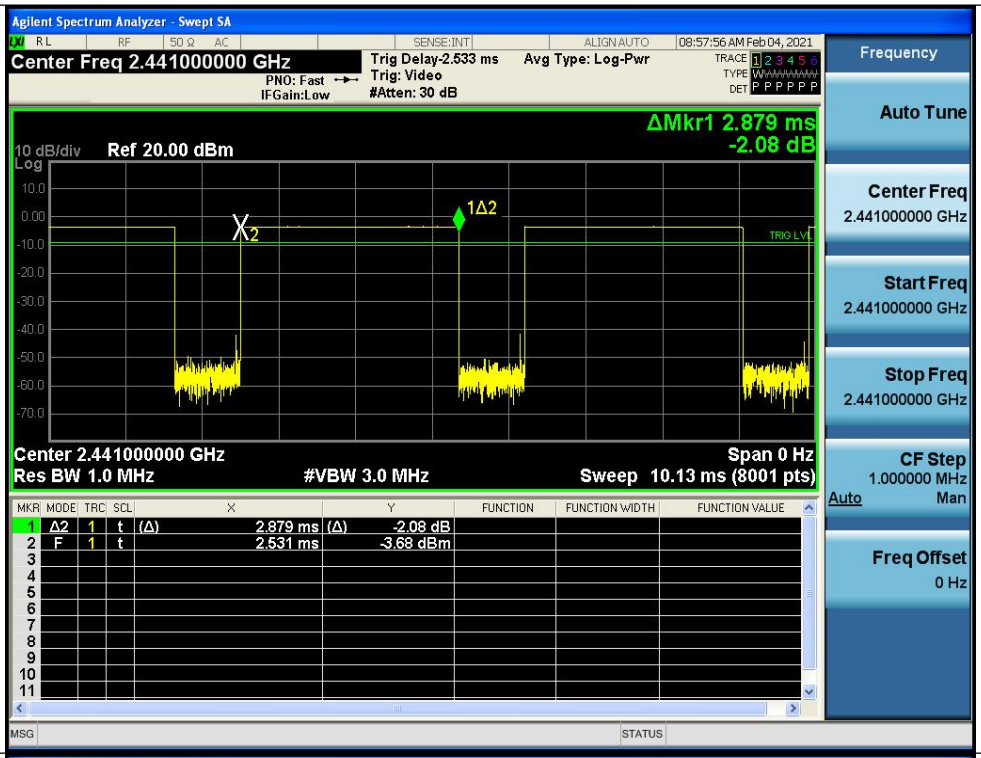
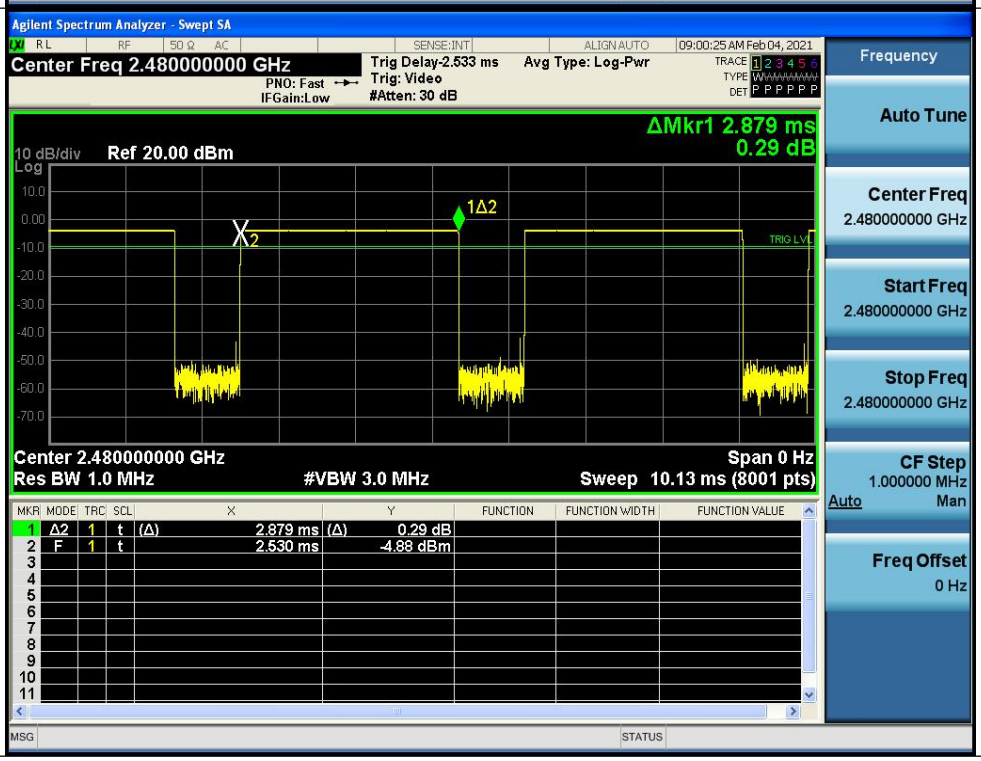
A.5 Dwell Time

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	0.308	0.4	PASS
	2DH5	HCH	2.88	106.7	0.307	0.4	PASS

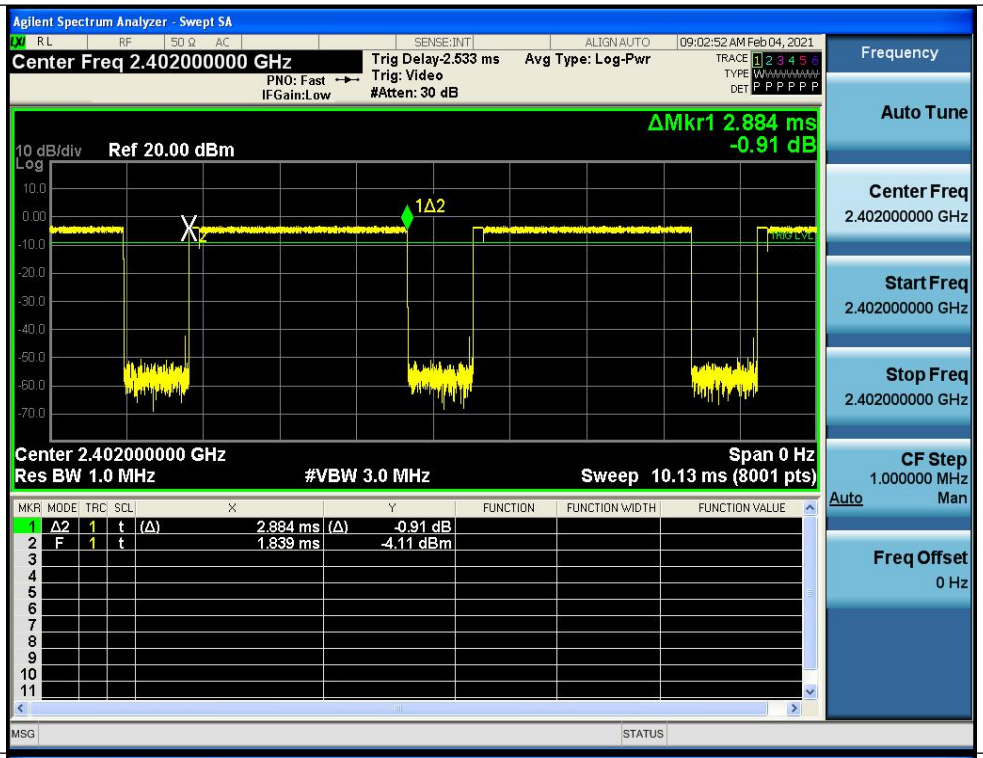
Test Graphs

GFSK_DH5/LCH

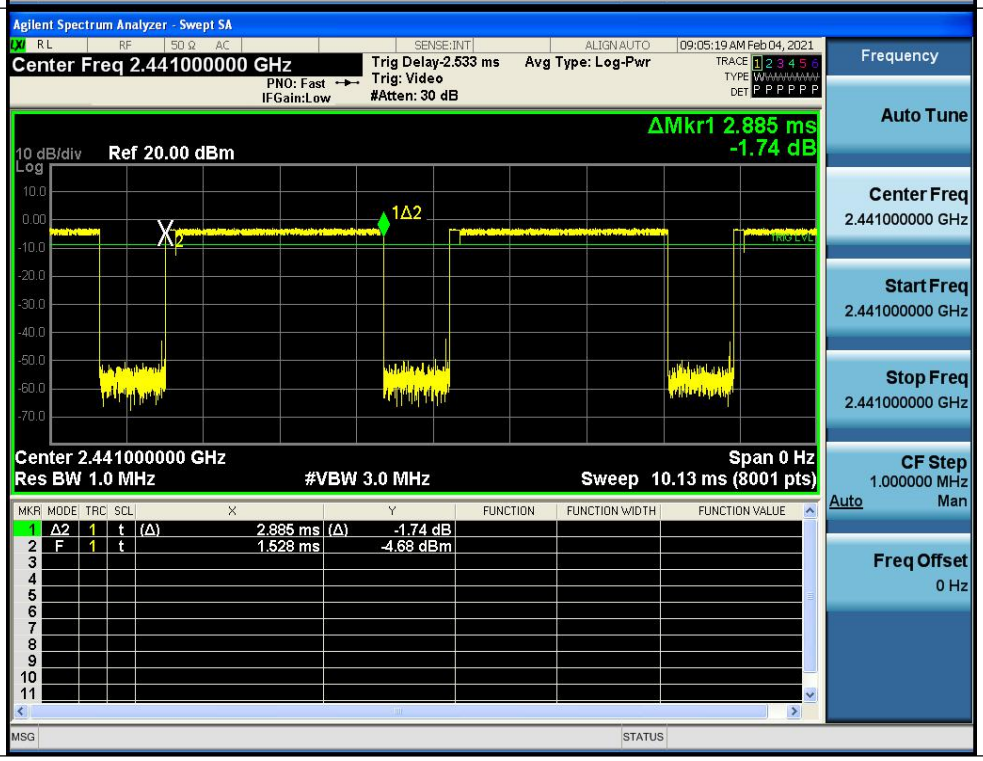


GFSK_DH5/MCH	
GFSK_DH5/HCH	

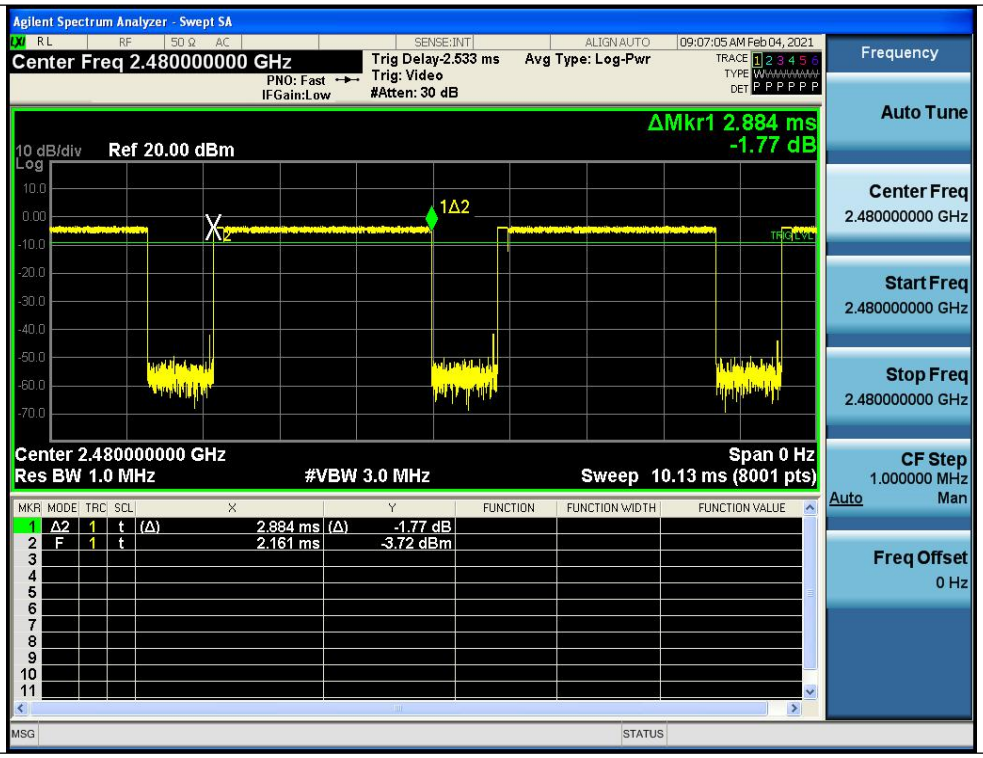
π/4DQPSK
_2DH5/LCH



π/4DQPSK
_2DH5/MCH



π/4DQPSK
_2DH5/HCH



A.6 RF Conducted Spurious Emissions

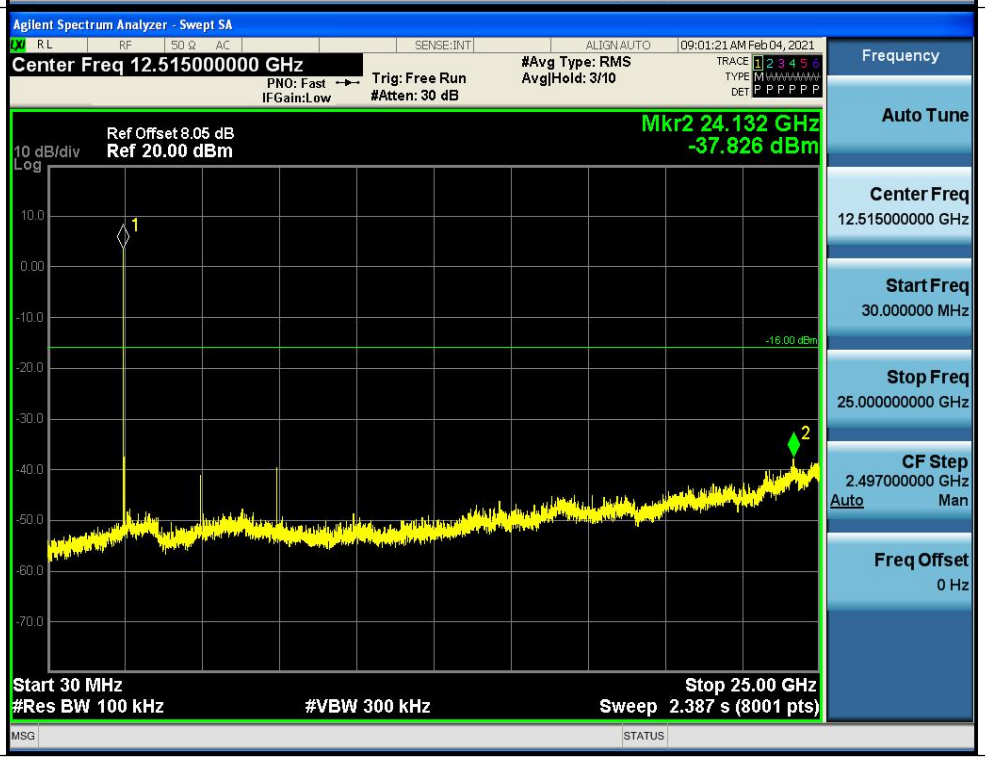
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	4.13	-37.164	-15.870	PASS
	MCH	4.335	-37.306	-15.665	PASS
	HCH	3.996	-37.826	-16.004	PASS
π/4DQPSK	LCH	4.298	-37.665	-15.702	PASS
	MCH	4.565	-37.299	-15.435	PASS
	HCH	4.165	-37.757	-15.835	PASS

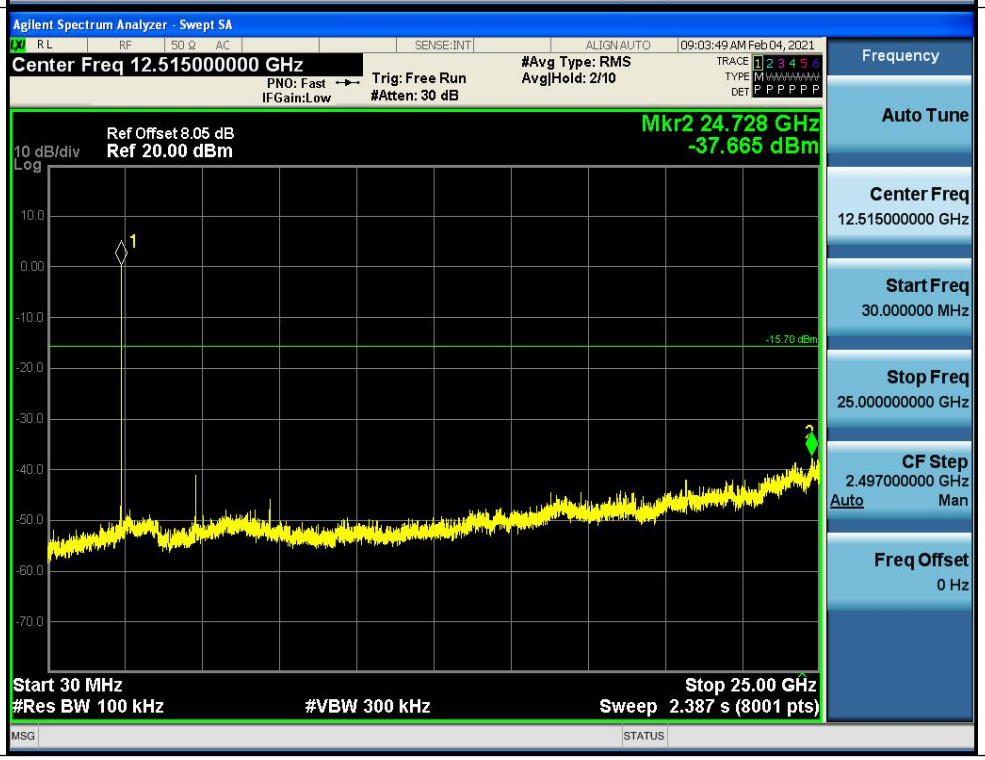
GFSK_LCH_Graphs		
Pref		

Puw		

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 10/10
08:56:22 AM Feb 04, 2021
Ref Offset 8.05 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr2 4.802 GHz
-37.164 dBm
-15.87 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

GFSK_MCH_Graphs			
Pref			
Puw			

GFSK_HCH_Graphs			
Pref			
Puw			

π/4DQPSK_LCH_Graphs			
Pref			
Puw			

π/4DQPSK_MCH_Graphs			
Pref			
Puw			