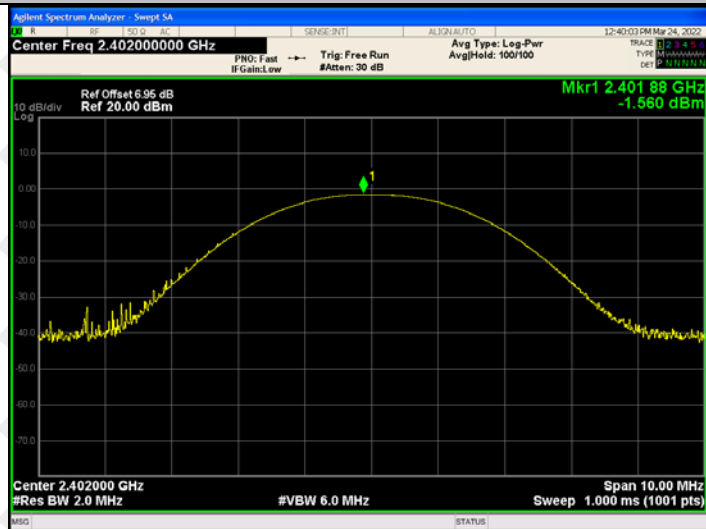


Test Graph:

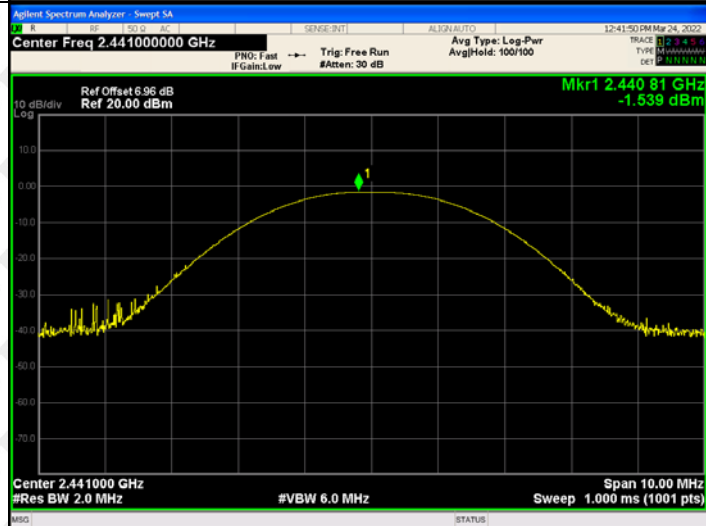
ANT1

Graphs

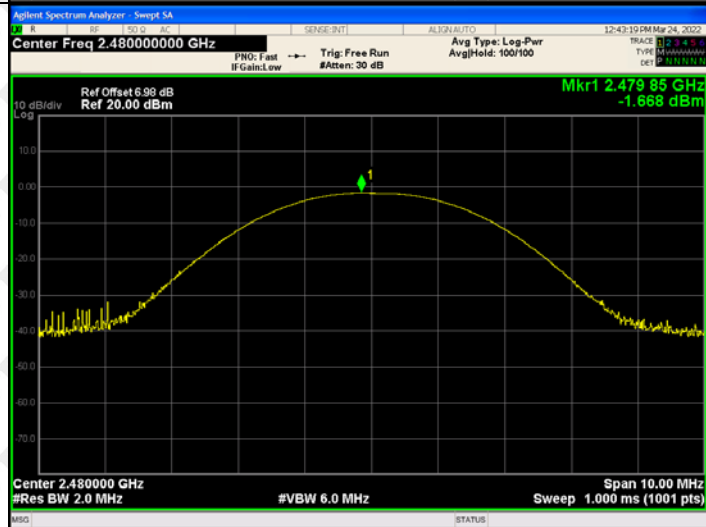
GFSK/LCH

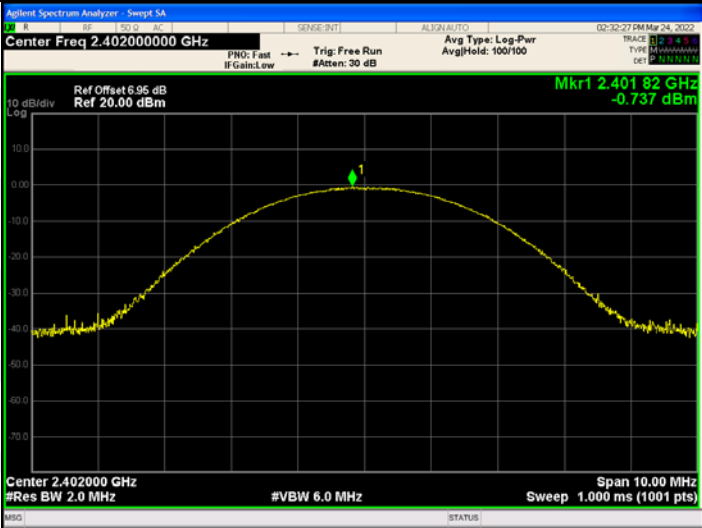
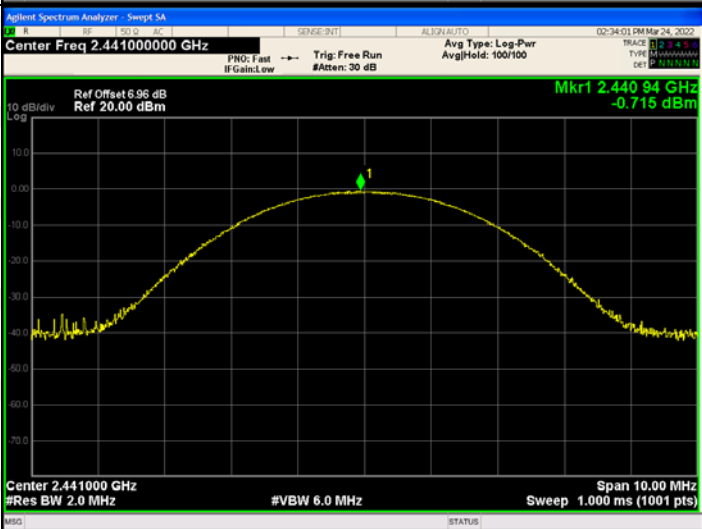
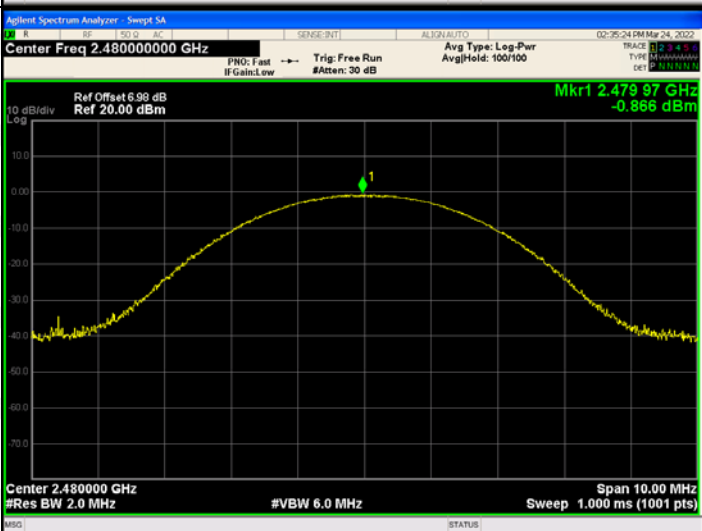


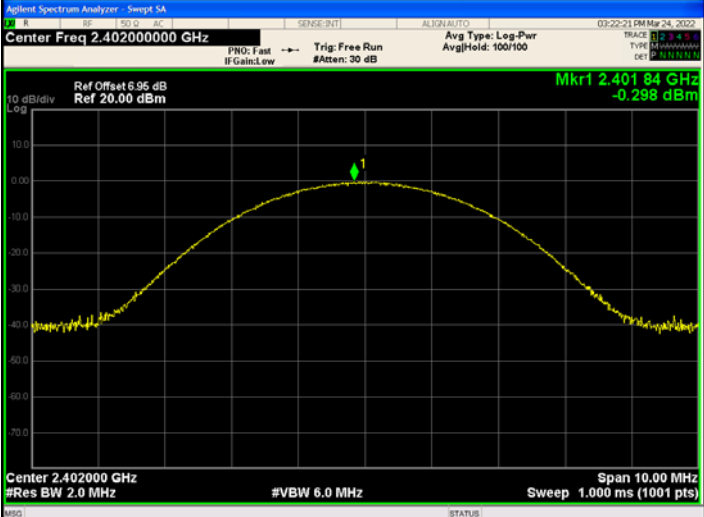
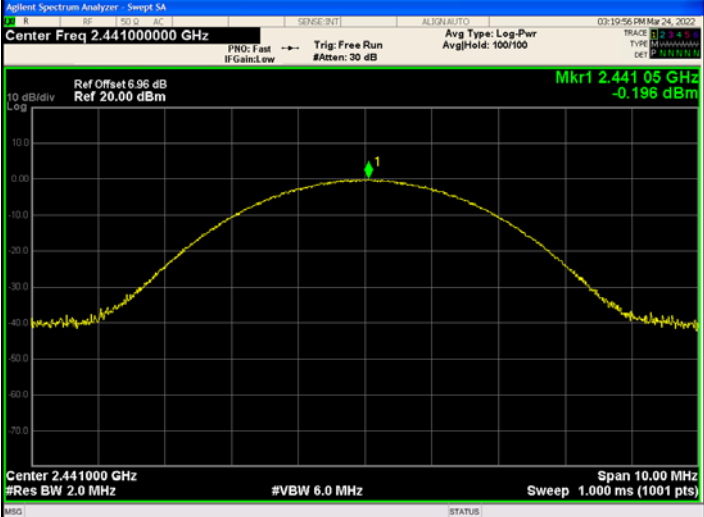
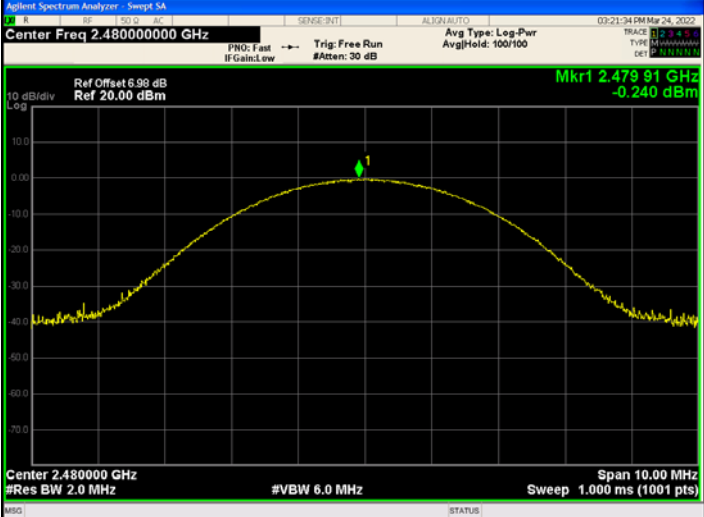
GFSK/MCH



GFSK/HCH



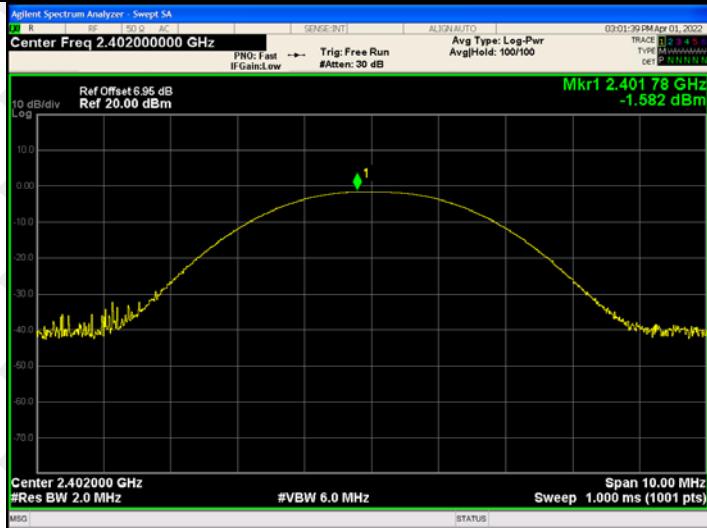
$\pi/4$ DQPSK/LCH	
$\pi/4$ DQPSK/MCH	
$\pi/4$ DQPSK/HCH	

8DPSK/LCH	 Agilent Spectrum Analyzer - Sweep SA Center Freq 2.40200000 GHz Ref Offset 6.96 dB Ref 20.00 dBm Mkr1 2.40184 GHz -0.298 dBm Center 2.402000 GHz #Res BW 2.0 MHz #VBW 6.0 MHz Span 10.00 MHz Sweep 1.000 ms (1001 pts)
8DPSK /MCH	 Agilent Spectrum Analyzer - Sweep SA Center Freq 2.44100000 GHz Ref Offset 6.96 dB Ref 20.00 dBm Mkr1 2.44105 GHz -0.196 dBm Center 2.441000 GHz #Res BW 2.0 MHz #VBW 6.0 MHz Span 10.00 MHz Sweep 1.000 ms (1001 pts)
8DPSK /HCH	 Agilent Spectrum Analyzer - Sweep SA Center Freq 2.48000000 GHz Ref Offset 6.96 dB Ref 20.00 dBm Mkr1 2.47991 GHz -0.240 dBm Center 2.480000 GHz #Res BW 2.0 MHz #VBW 6.0 MHz Span 10.00 MHz Sweep 1.000 ms (1001 pts)

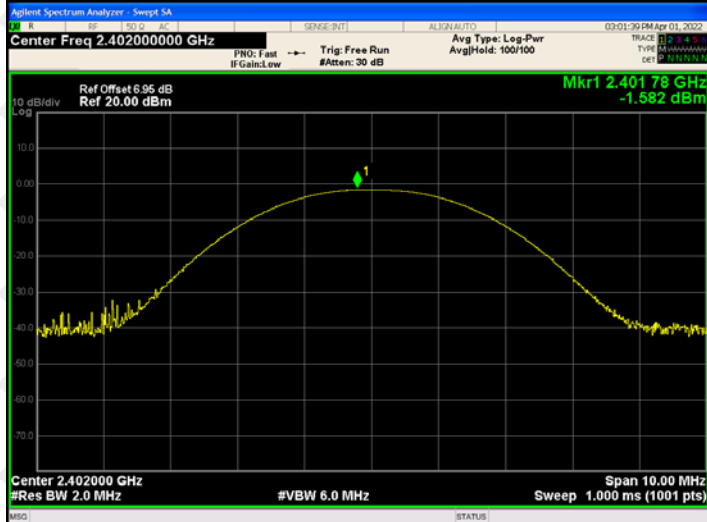
ANT2

Graphs

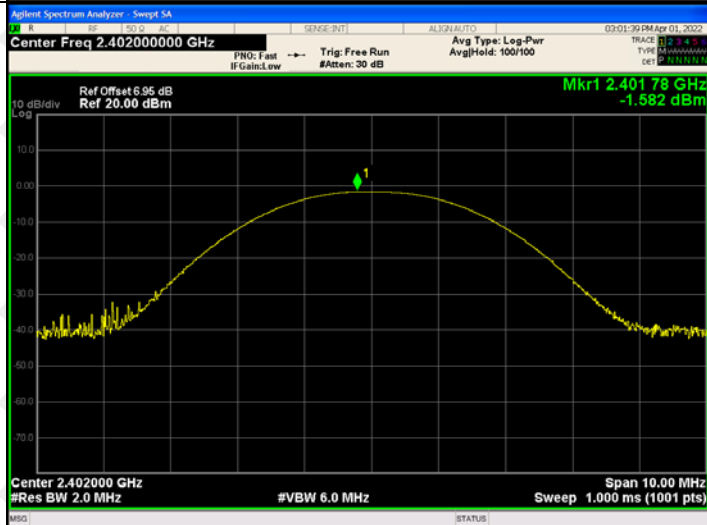
GFSK/LCH

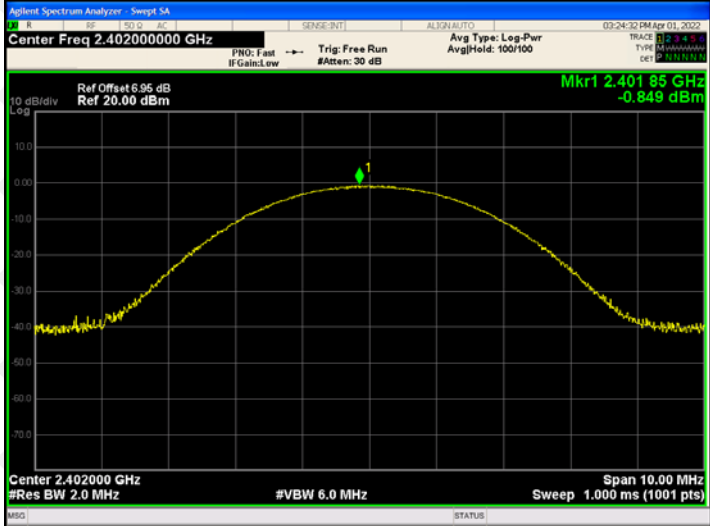
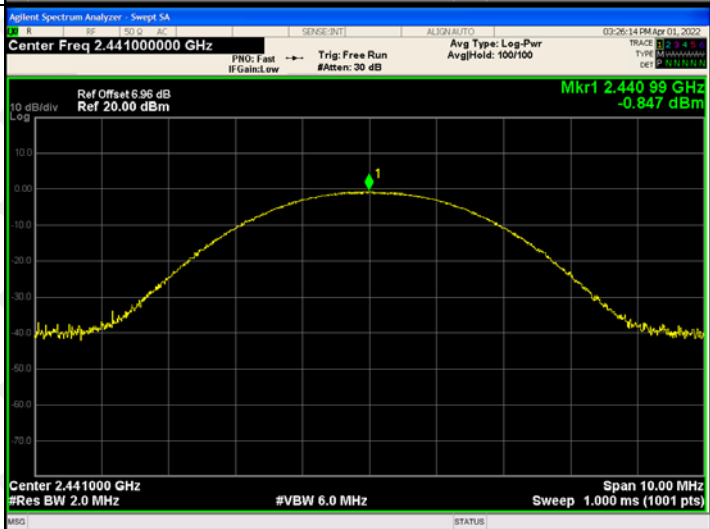
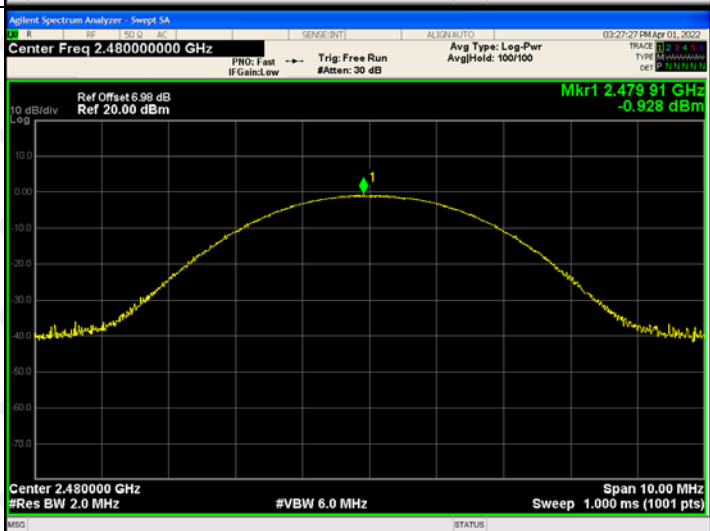


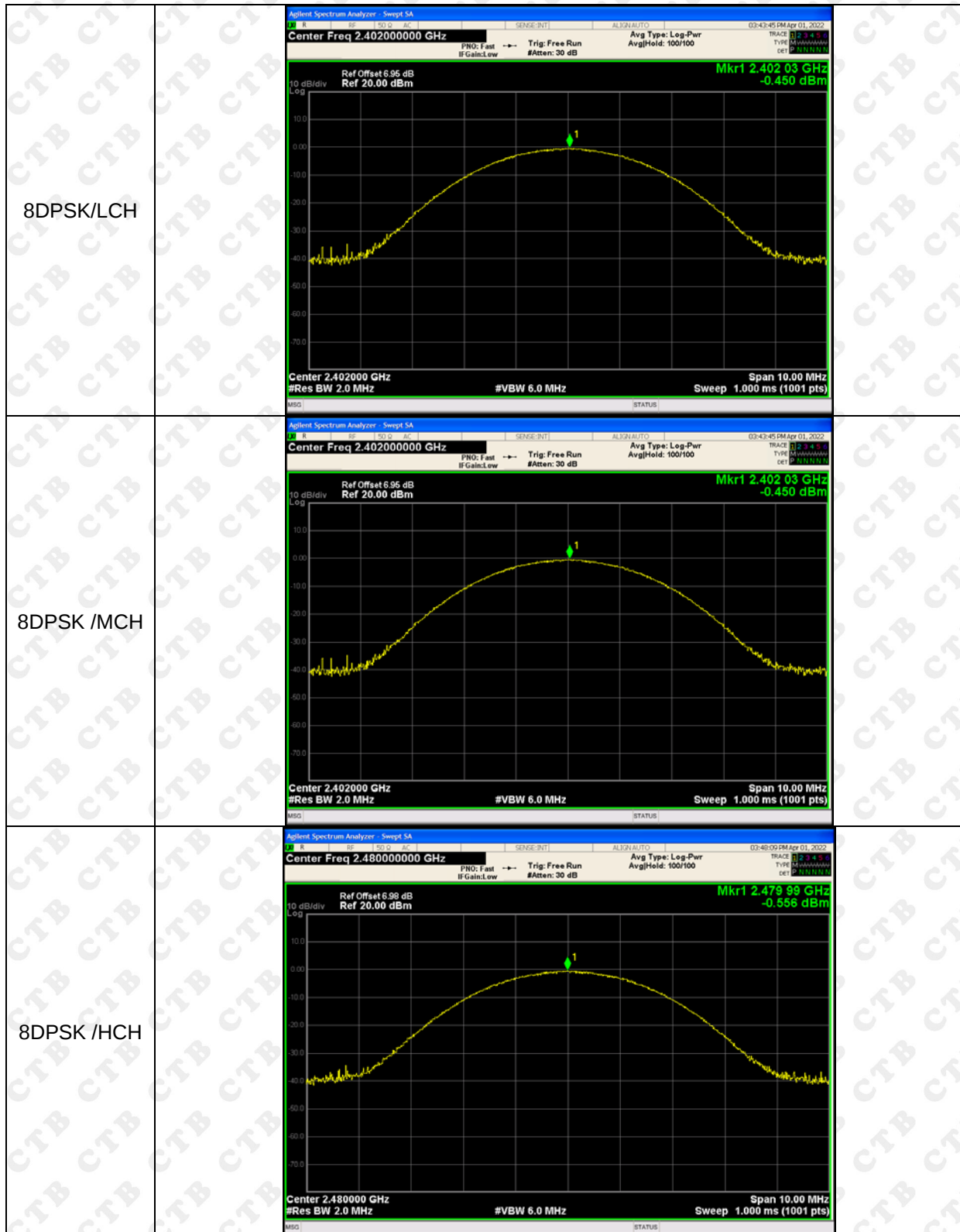
GFSK/MCH



GFSK/HCH

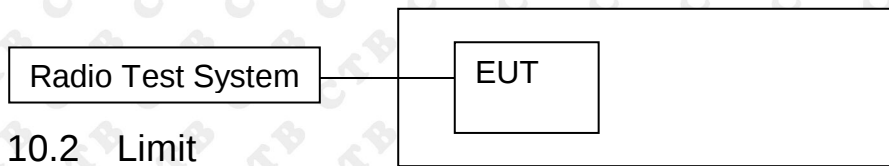


$\pi/4$ DQPSK/LCH	
$\pi/4$ DQPSK/MCH	
$\pi/4$ DQPSK/HCH	



10. 20DB OCCUPIED BANDWIDTH

10.1 Block Diagram Of Test Setup



10.2 Limit

Alternatively, frequency hopping systems operating in the 2400-2483.5MHz band may have hopping channel carrier frequencies that are separated by 25kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125mw.

10.3 Test procedure

1. Rem1. Set RBW = 30 kHz.
2. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

10.4 Test Result

ANT1

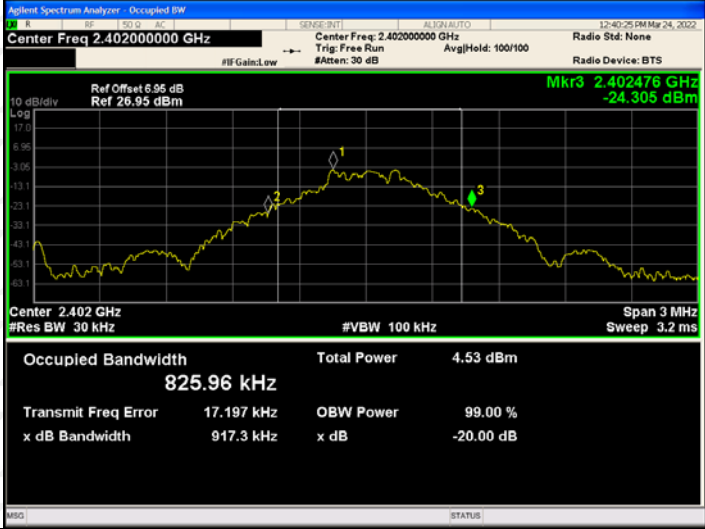
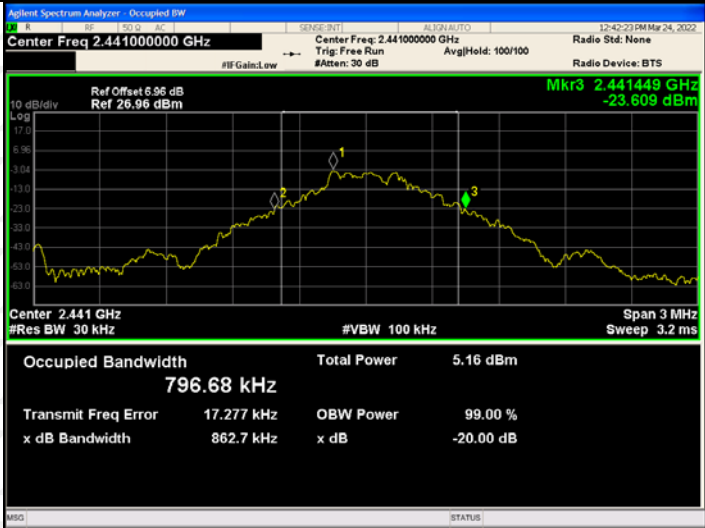
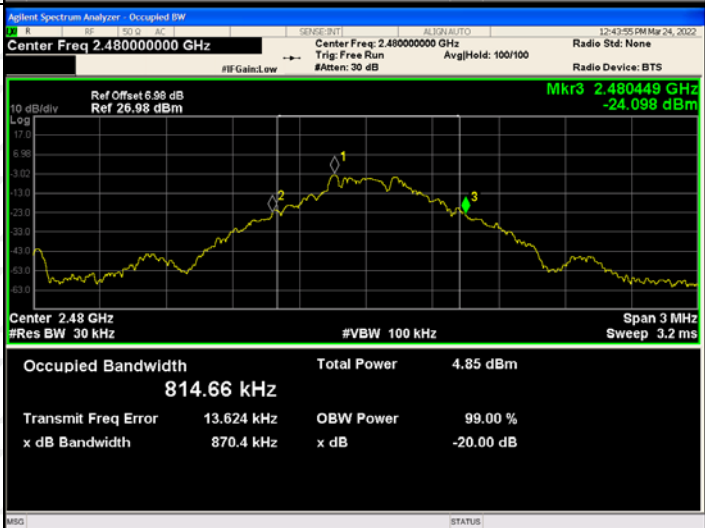
Test Mode	Frequency	20dB Bandwidth (MHz)	Result
GFSK	Low channel	0.917	PASS
	Mid channel	0.863	PASS
	High channel	0.87	PASS
$\pi/4$ DQPSK	Low channel	1.266	PASS
	Mid channel	1.258	PASS
	High channel	1.281	PASS
8DPSK	Low channel	1.304	PASS
	Mid channel	1.272	PASS
	High channel	1.29	PASS

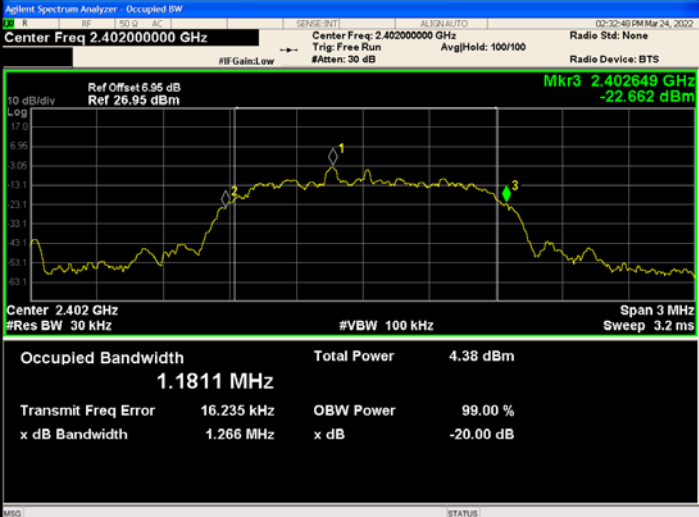
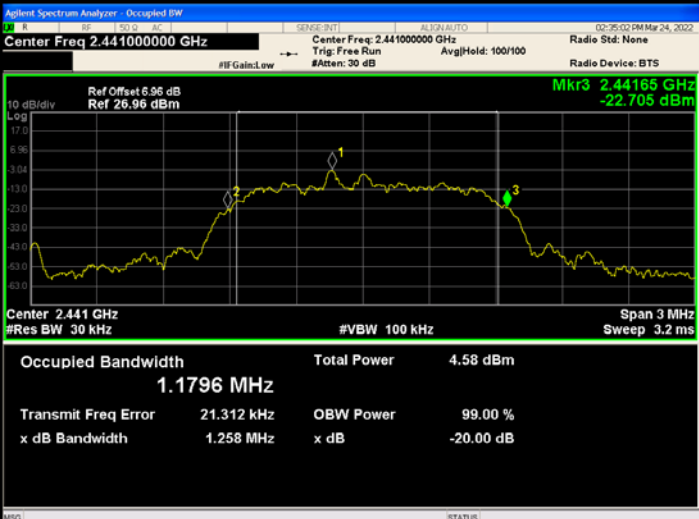
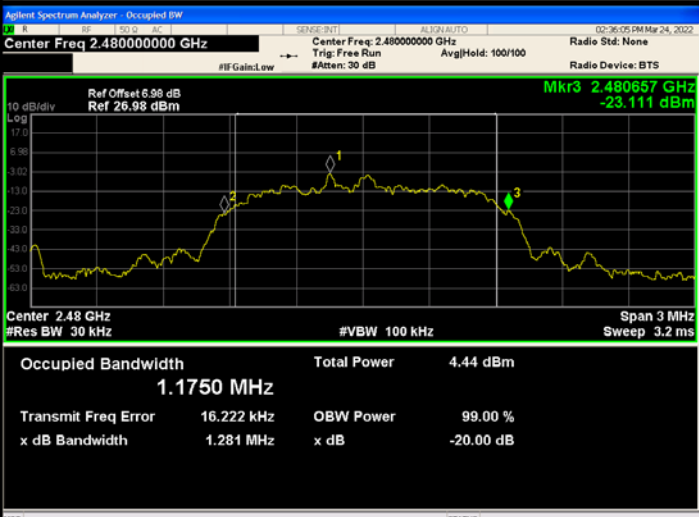
ANT2

Test Mode	Frequency	20dB Bandwidth (MHz)	Result
GFSK	Low channel	0.876	PASS
	Mid channel	0.866	PASS
	High channel	0.888	PASS
$\pi/4$ DQPSK	Low channel	1.275	PASS
	Mid channel	1.313	PASS
	High channel	1.273	PASS
8DPSK	Low channel	1.298	PASS
	Mid channel	1.291	PASS
	High channel	1.3	PASS

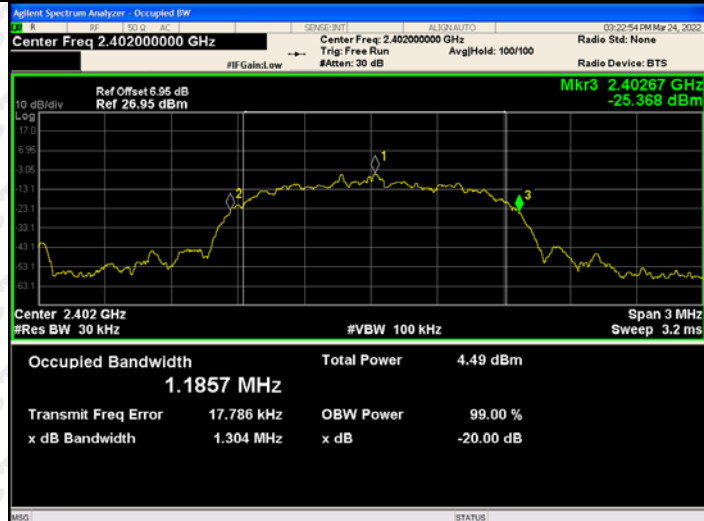
Note: All modes of operation were Pre-scan and the worst-case emissions are reported.

Test Graph:
ANT1

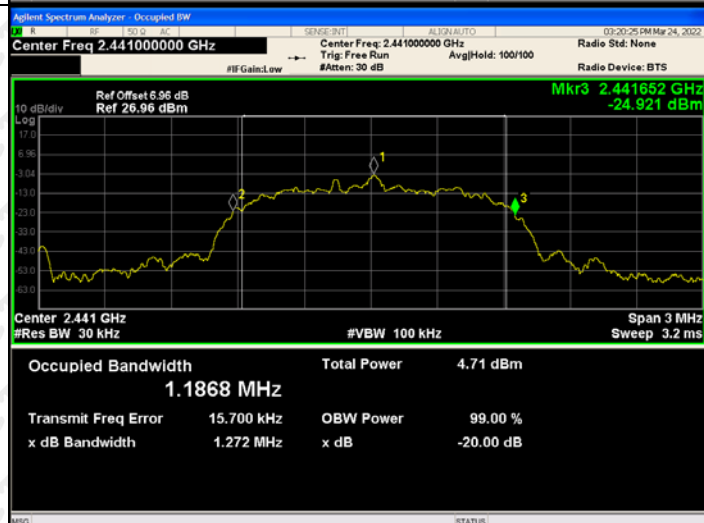
GFSK Low channel	
GFSK Mid channel	
GFSK High channel	

$\pi/4$ -DQPSK Low channel	
$\pi/4$ -DQPSK Mid channel	
$\pi/4$ -DQPSK High channel	

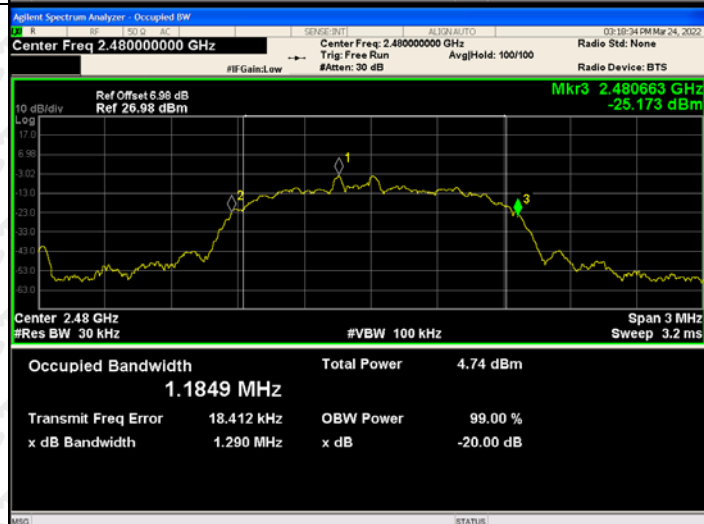
8DPSK
Low channel



8DPSK
Mid channel

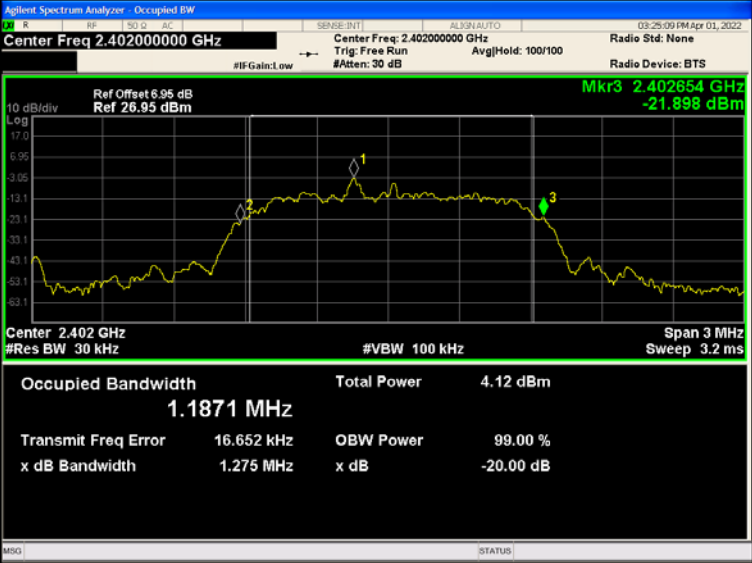
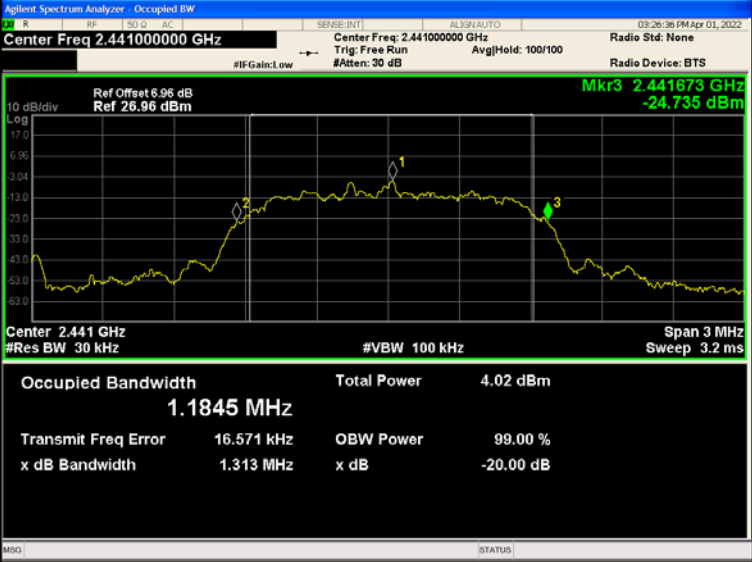
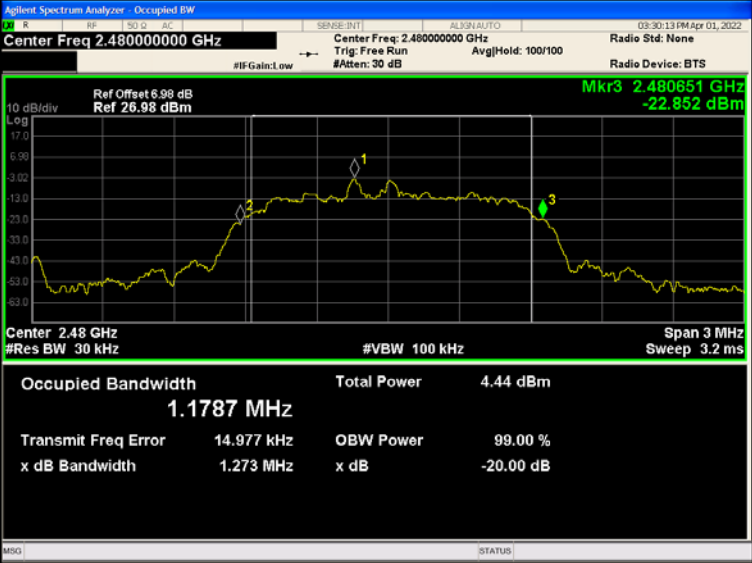


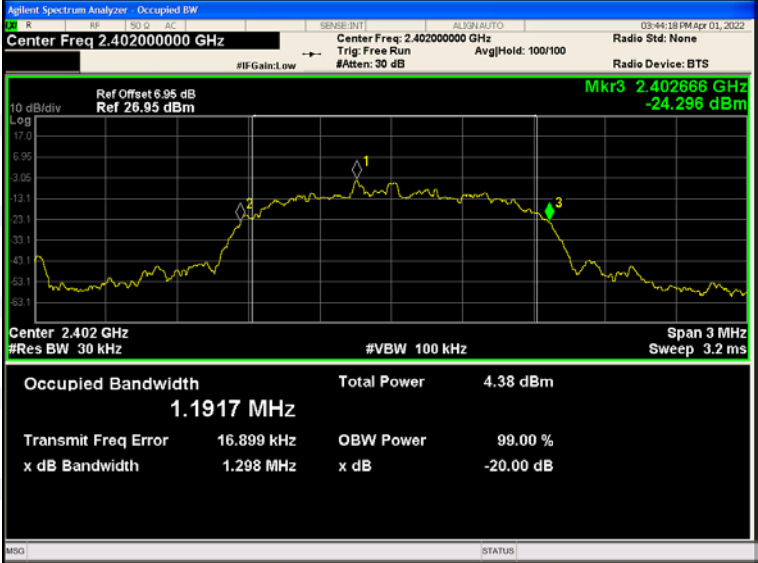
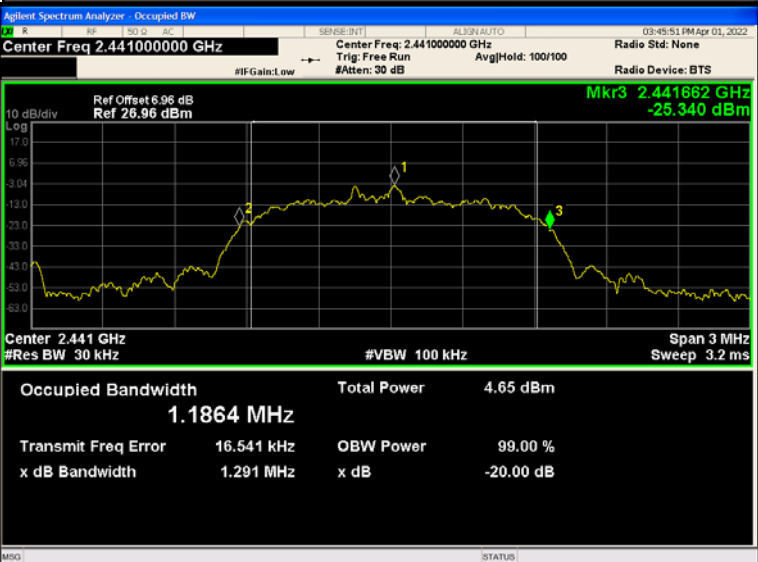
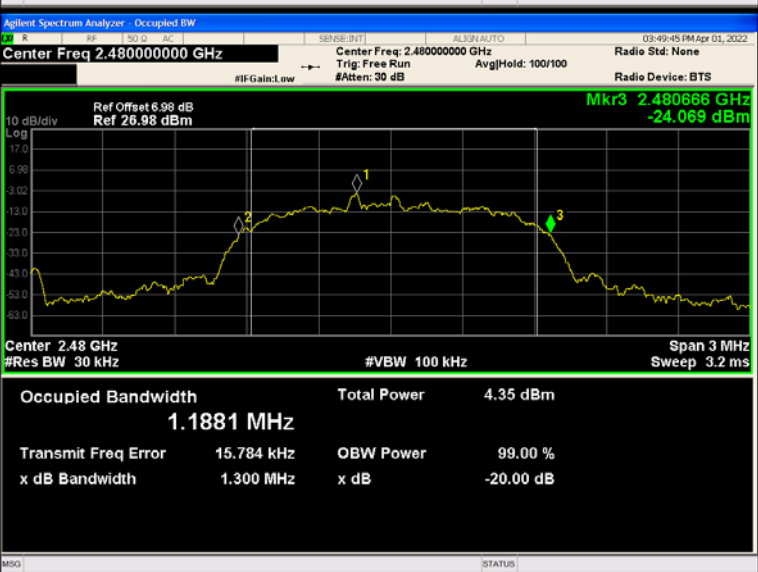
8DPSK
High channel



ANT2

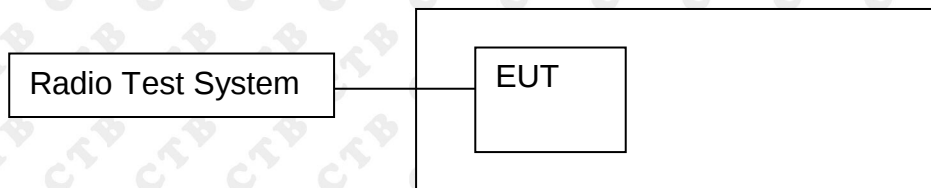
GFSK
Low channelGFSK
Mid channelGFSK
High channel

$\pi/4$ -DQPSK Low channel	
$\pi/4$ -DQPSK Mid channel	
$\pi/4$ -DQPSK High channel	

8DPSK Low channel	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.402000000 GHz Ref Offset 6.95 dB Ref 26.95 dBm Mkr3 2.402686 GHz -24.296 dBm Center 2.402 GHz #Res BW 30 kHz #VBW 100 kHz Span 3 MHz Sweep 3.2 ms Occupied Bandwidth 1.1917 MHz Total Power 4.38 dBm Transmit Freq Error 16.899 kHz OBW Power 99.00 % x dB Bandwidth 1.298 MHz x dB -20.00 dB
8DPSK Mid channel	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.441000000 GHz Ref Offset 6.96 dB Ref 26.96 dBm Mkr3 2.441682 GHz -25.340 dBm Center 2.441 GHz #Res BW 30 kHz #VBW 100 kHz Span 3 MHz Sweep 3.2 ms Occupied Bandwidth 1.1864 MHz Total Power 4.65 dBm Transmit Freq Error 16.541 kHz OBW Power 99.00 % x dB Bandwidth 1.291 MHz x dB -20.00 dB
8DPSK High channel	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.480000000 GHz Ref Offset 6.98 dB Ref 26.98 dBm Mkr3 2.480686 GHz -24.069 dBm Center 2.48 GHz #Res BW 30 kHz #VBW 100 kHz Span 3 MHz Sweep 3.2 ms Occupied Bandwidth 1.1881 MHz Total Power 4.35 dBm Transmit Freq Error 15.784 kHz OBW Power 99.00 % x dB Bandwidth 1.300 MHz x dB -20.00 dB

11. CARRIER FREQUENCIES SEPARATION

11.1 Block Diagram Of Test Setup



11.2 Limit

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 0.125W.

11.3 Test procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 30kHz. VBW = 100kHz , Span = 2MHz. Sweep = auto; Detector Function = Peak. Trace = Max hold.
3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section Submit this plot.

11.4 Test Result

ANT1

Mode	Channel.	Carrier Frequency Separation [MHz]	Verdict
GFSK	LCH	1.002	PASS
GFSK	MCH	1.000	PASS
GFSK	HCH	1.000	PASS
$\pi/4$ DQPSK	LCH	1.000	PASS
$\pi/4$ DQPSK	MCH	1.000	PASS
$\pi/4$ DQPSK	HCH	1.000	PASS
8DPSK	LCH	1.000	PASS
8DPSK	MCH	1.000	PASS
8DPSK	HCH	1.000	PASS

ANT2

Mode	Channel.	Carrier Frequency Separation [MHz]	Verdict
GFSK	LCH	1.002	PASS
GFSK	MCH	1.000	PASS
GFSK	HCH	1.000	PASS
$\pi/4$ DQPSK	LCH	1.000	PASS
$\pi/4$ DQPSK	MCH	1.000	PASS

$\pi/4$ DQPSK	HCH	1.000	PASS
8DPSK	LCH	1.000	PASS
8DPSK	MCH	1.000	PASS
8DPSK	HCH	1.000	PASS

Test Graph

ANT1

Graphs

GFSK/LCH

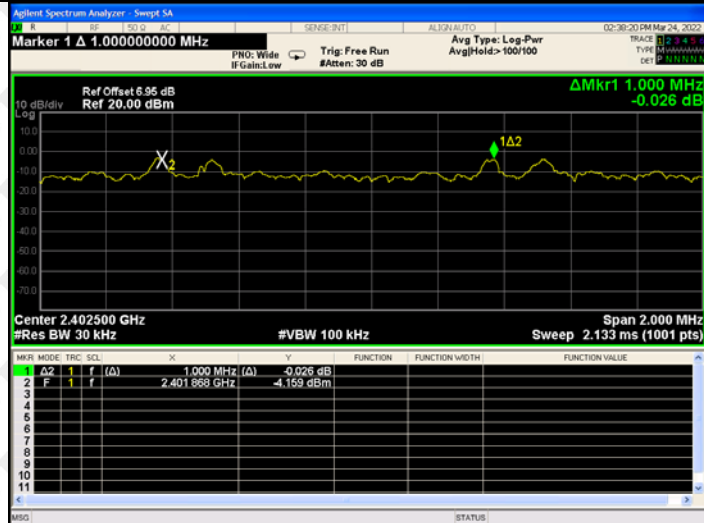
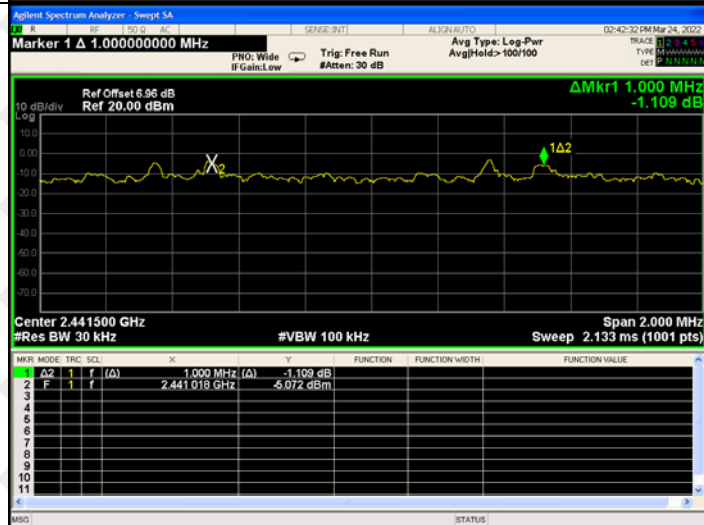
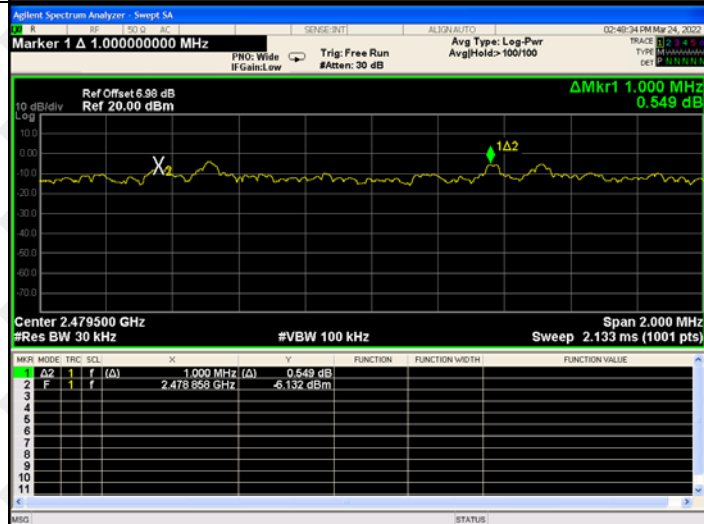


GFSK/MCH

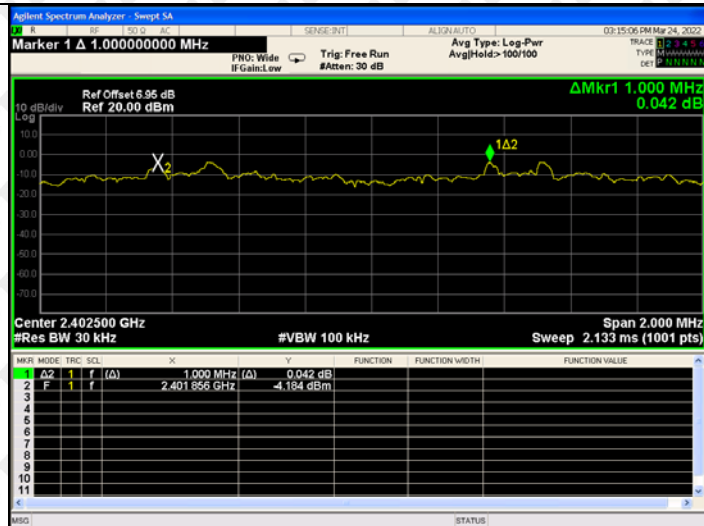


GFSK/HCH



$\pi/4$ DQPSK/LCH

 $\pi/4$ DQPSK/MCH

 $\pi/4$ DQPSK/HCH


8DPSK/LCH



8DPSK /MCH



8DPSK /HCH



ANT2

Graphs

GFSK/LCH

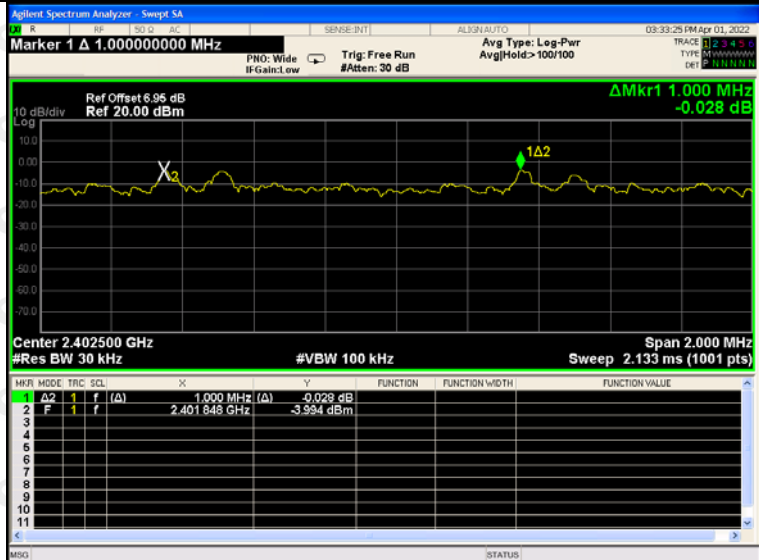
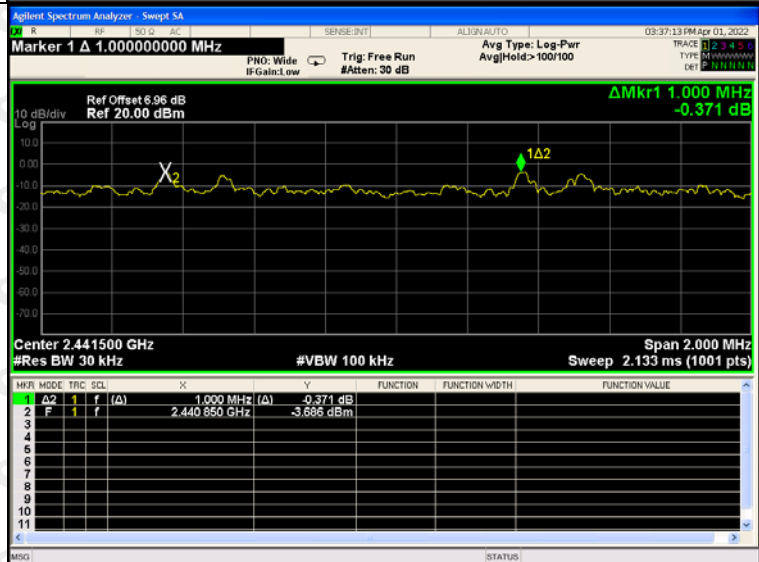


GFSK/MCH



GFSK/HCH



$\pi/4$ DQPSK/LCH

 $\pi/4$ DQPSK/MCH

 $\pi/4$ DQPSK/HCH
