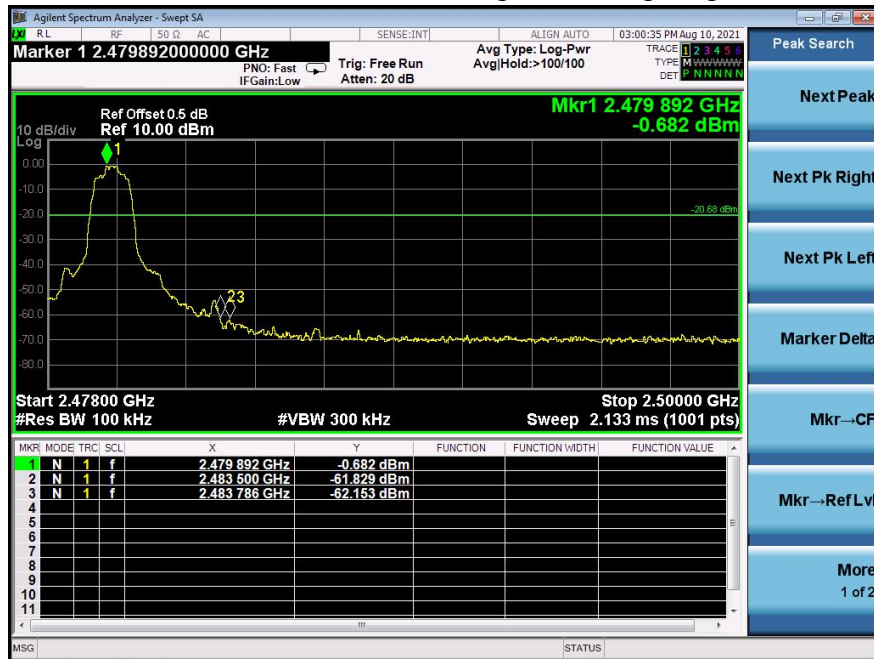
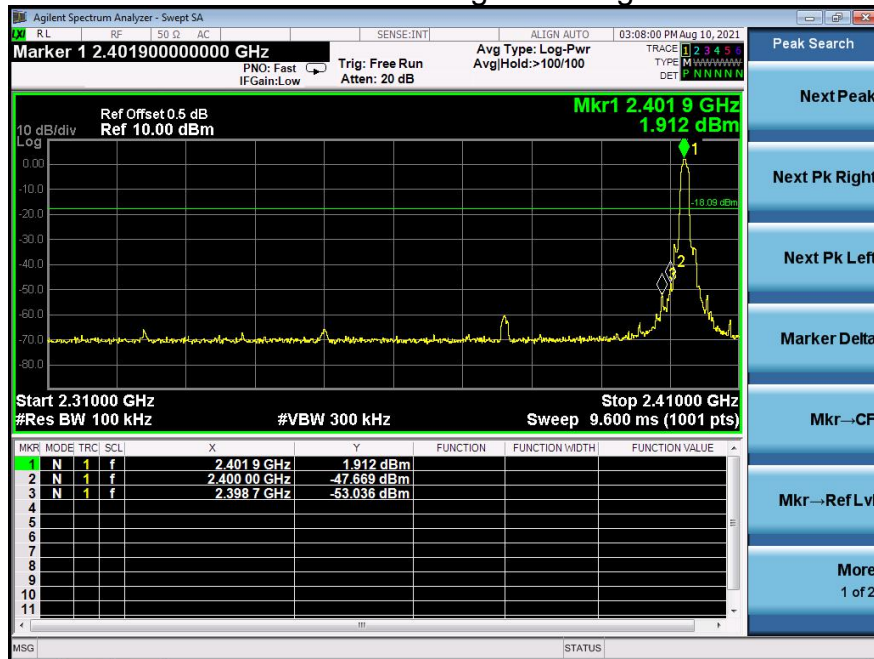
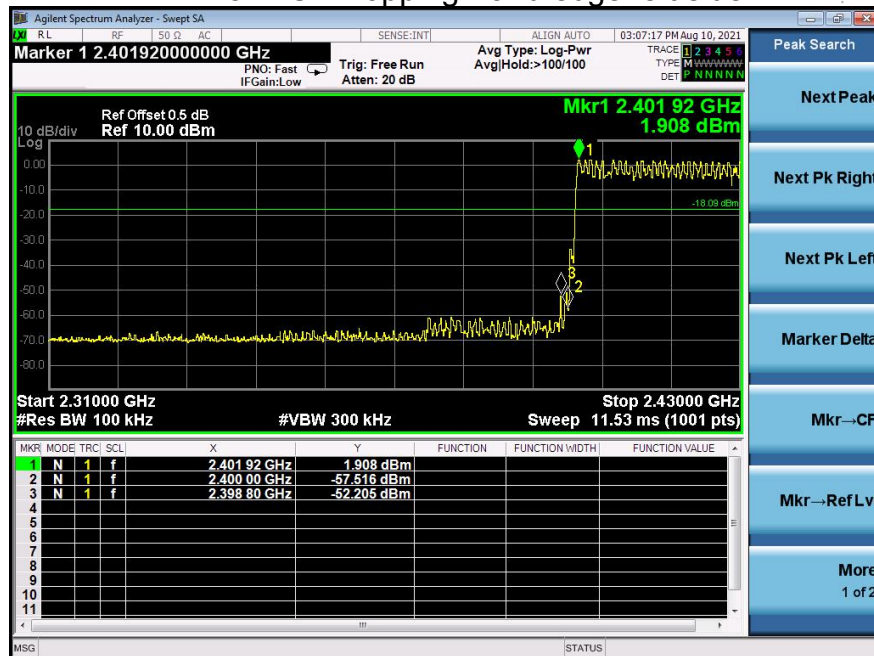


$\pi/4$ DQPSK Transmitting Band edge-right side

 $\pi/4$ DQPSK Hopping Band edge-right side

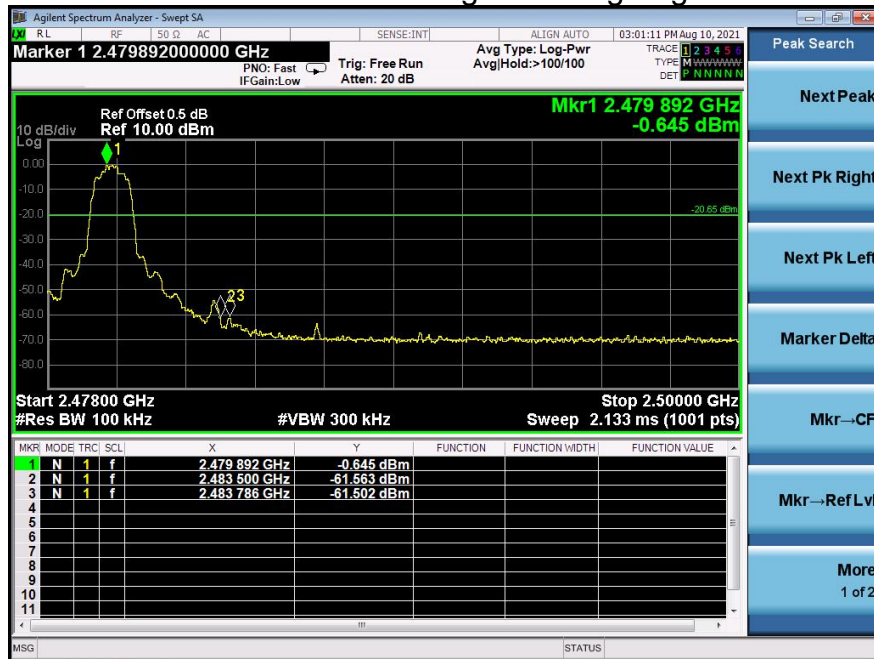

8DPSK Transmitting Band edge-left side



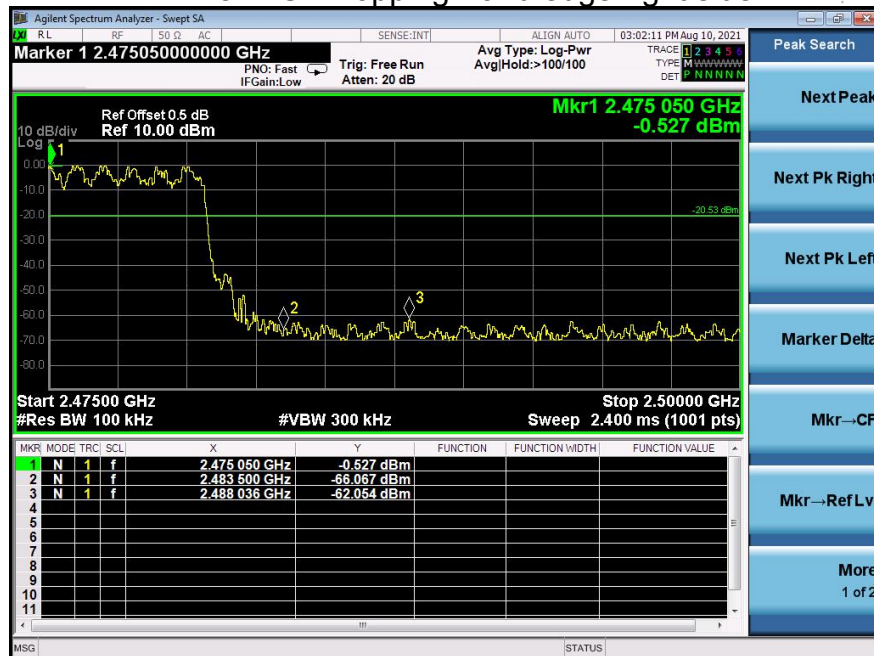
8DPSK Hopping Band edge-left side



8DPSK Transmitting Band edge-right side



8DPSK Hopping Band edge-right side



10. 20 DB BANDWIDTH

10.1 Block Diagram Of Test Setup



10.2 Limit

N/A

10.3 Test procedure

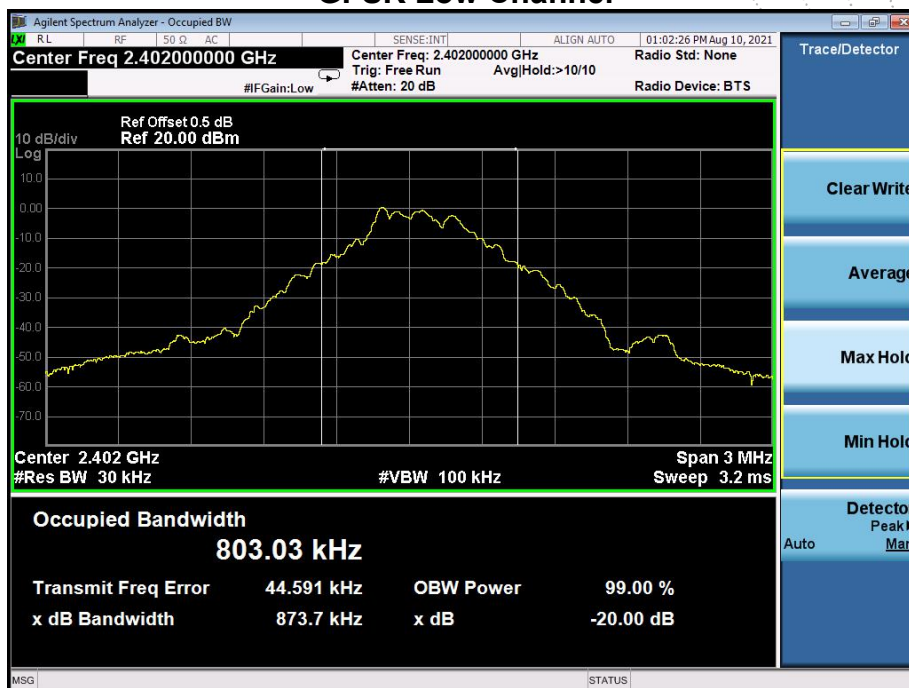
1. Set RBW = 30kHz.
2. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude 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

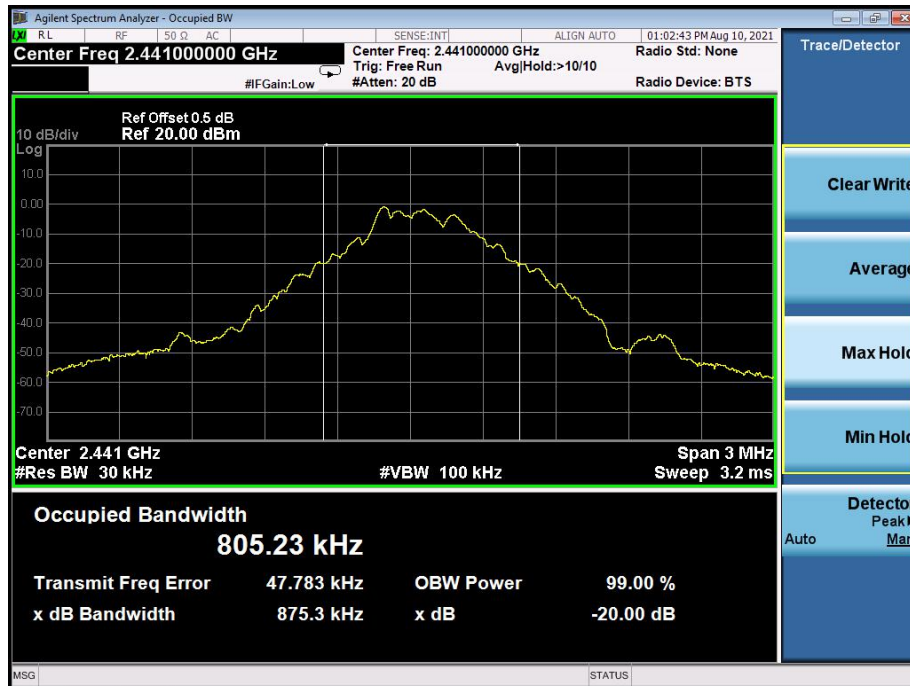
Temperature :	26°C	Relative Humidity :	54%
Test Voltage :	DC 3.7V	Remark	N/A

Modulation	Test Channel	Bandwidth(MHz)
GFSK	Low	0.874
GFSK	Middle	0.875
GFSK	High	0.876
$\pi/4$ DQPSK	Low	1.283
$\pi/4$ DQPSK	Middle	1.269
$\pi/4$ DQPSK	High	1.301
8DPSK	Low	1.218
8DPSK	Middle	1.218
8DPSK	High	1.219

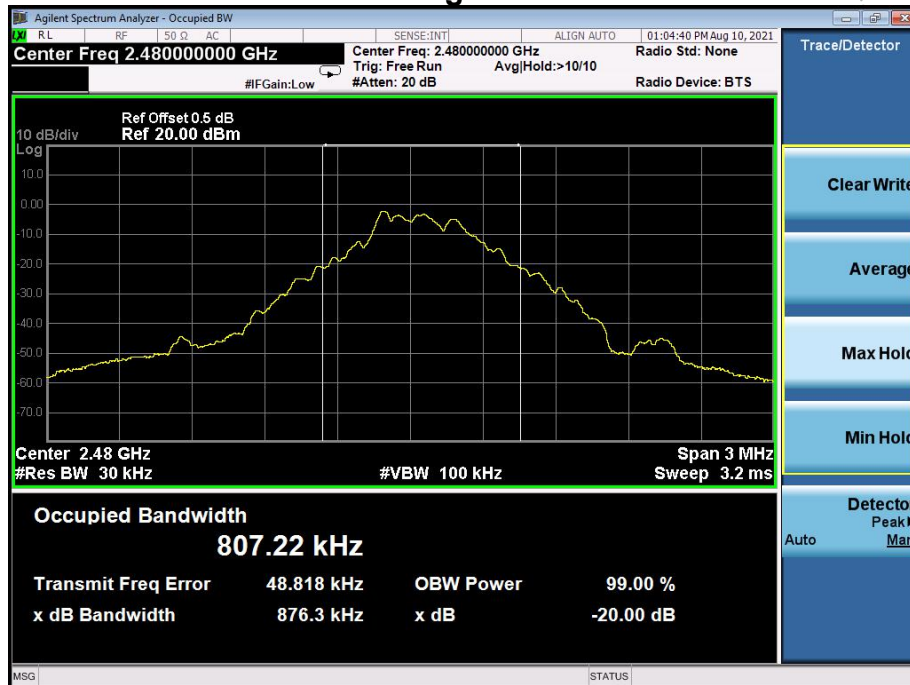
Test plots GFSK Low Channel



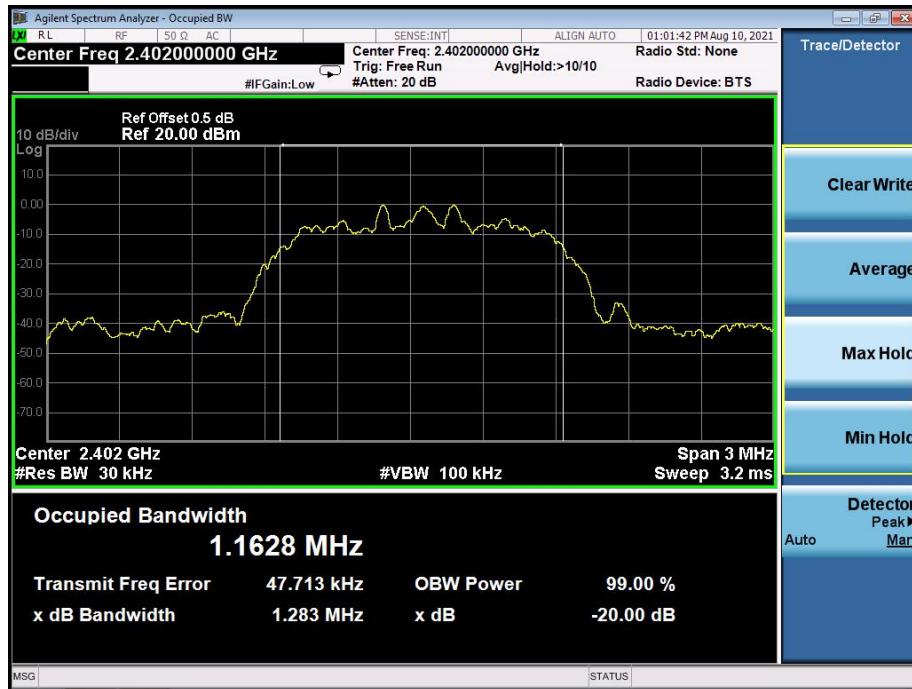
GFSK Middle Channel



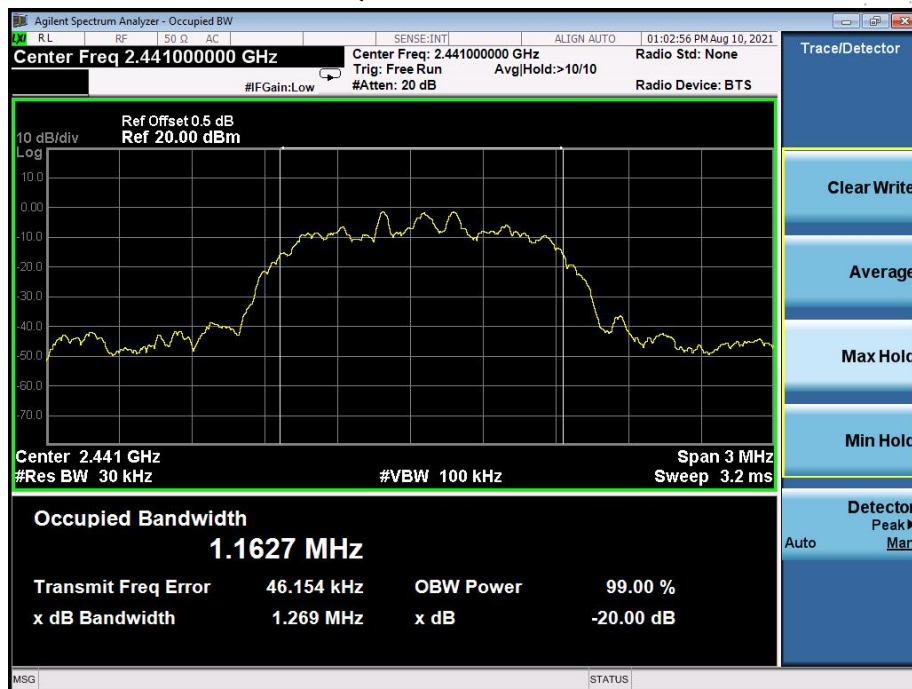
GFSK High Channel



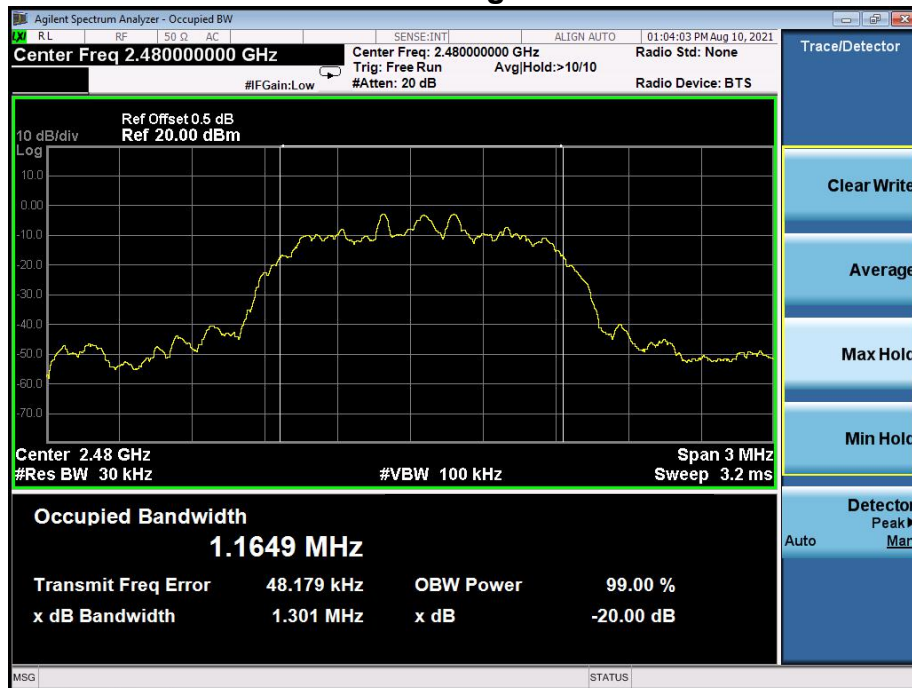
π /4DQPSK Low Channel



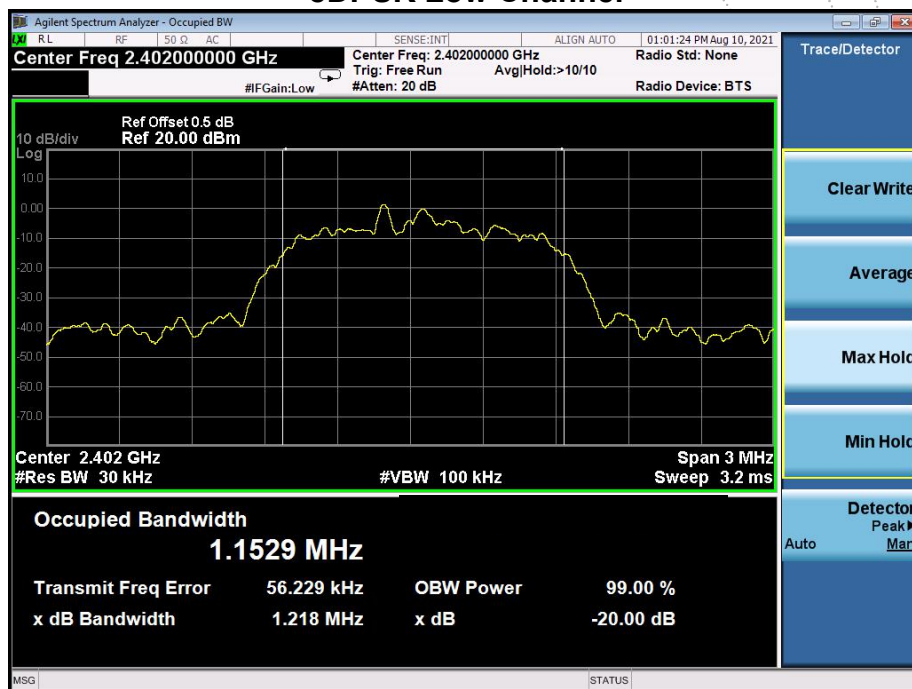
π /4DQPSK Middle Channel



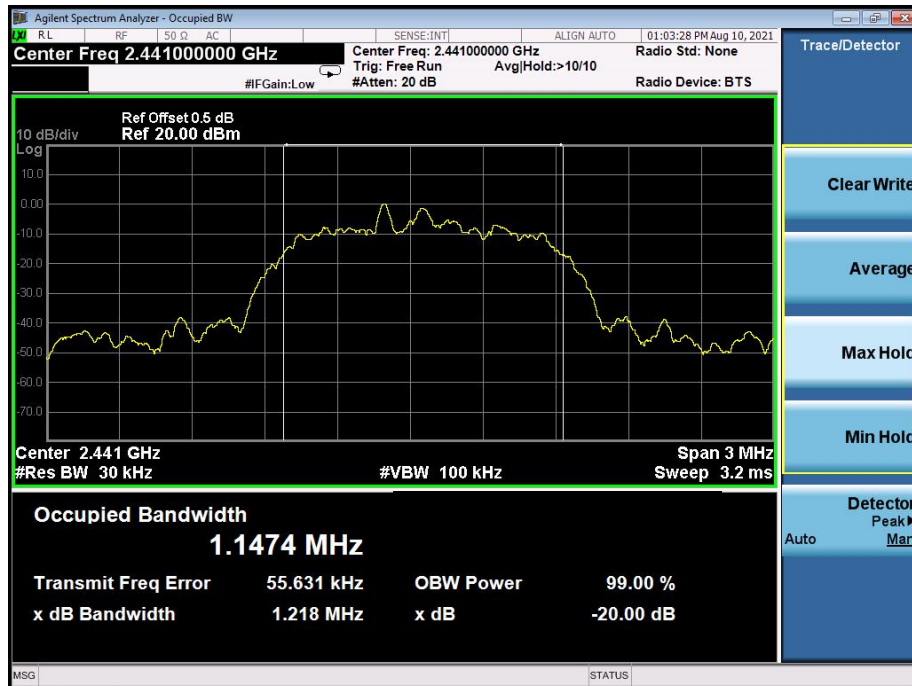
π /4DQPSK High Channel



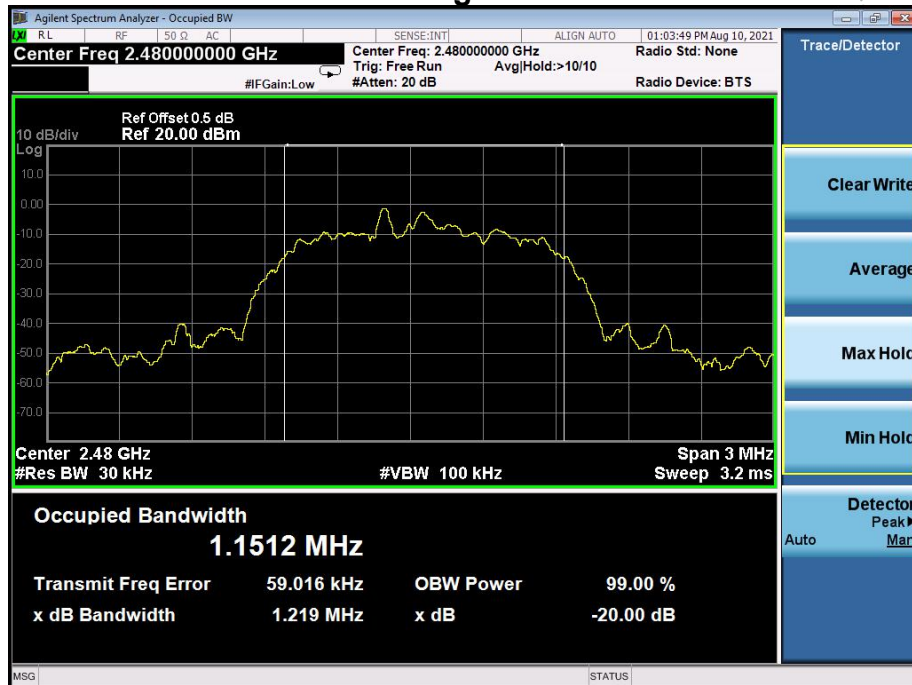
8DPSK Low Channel



8DPSK Middle Channel



8DPSK High Channel



11. MAXIMUM PEAK OUTPUT POWER

11.1 Block Diagram Of Test Setup



11.2 Limit

FCC Part15 (15.247), Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(1)	Peak Output Power	0.125 watt or 21dBm	2400-2483.5	PASS

11.3 Test procedure

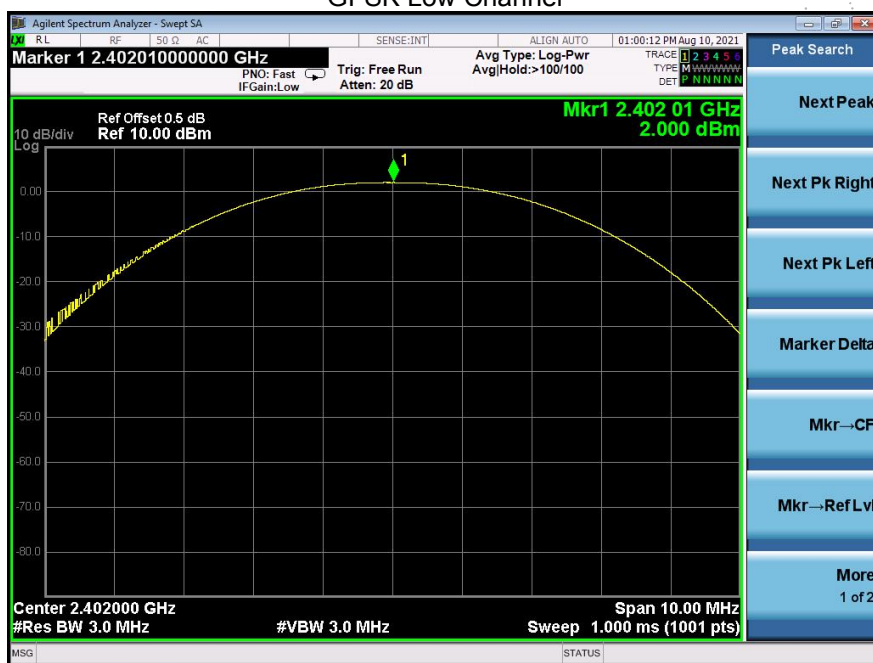
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 3MHz. VBW = 3MHz. Sweep = auto; Detector Function = Peak.
3. Keep the EUT in transmitting at lowest, medium and highest channel individually. Record the max value.

11.4 Test Result

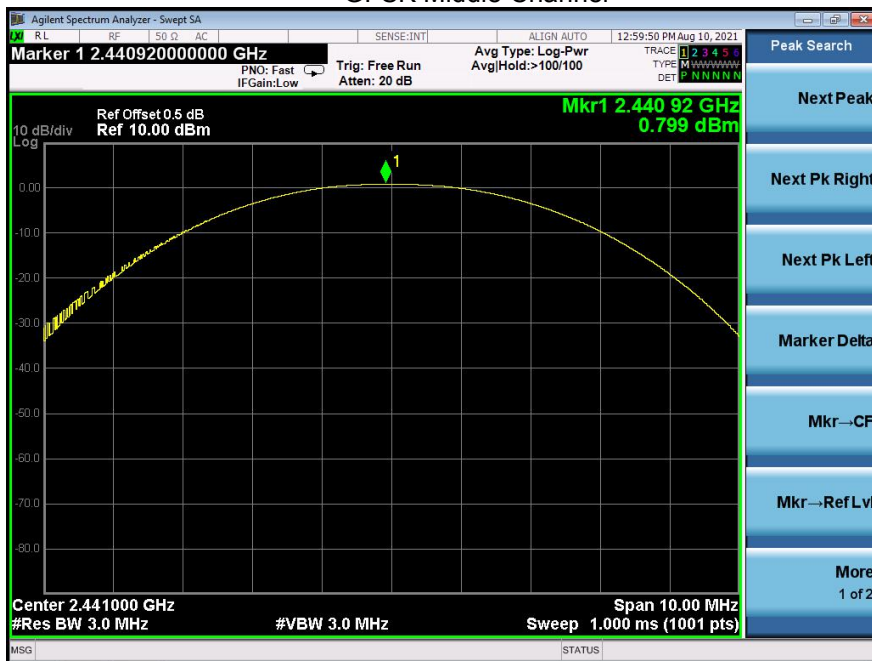
Temperature :	26°C	Relative Humidity :	54%
Test Voltage :	DC 3.7V	Remark:	N/A

Modulation	Test Channel	Output Power (dBm)	Limit (dBm)
GFSK	Low	2.000	21
GFSK	Middle	0.799	21
GFSK	High	-0.578	21
$\pi/4$ DQPSK	Low	4.650	21
$\pi/4$ DQPSK	Middle	3.317	21
$\pi/4$ DQPSK	High	1.817	21
8DPSK	Low	5.352	21
8DPSK	Middle	3.972	21
8DPSK	High	2.475	21

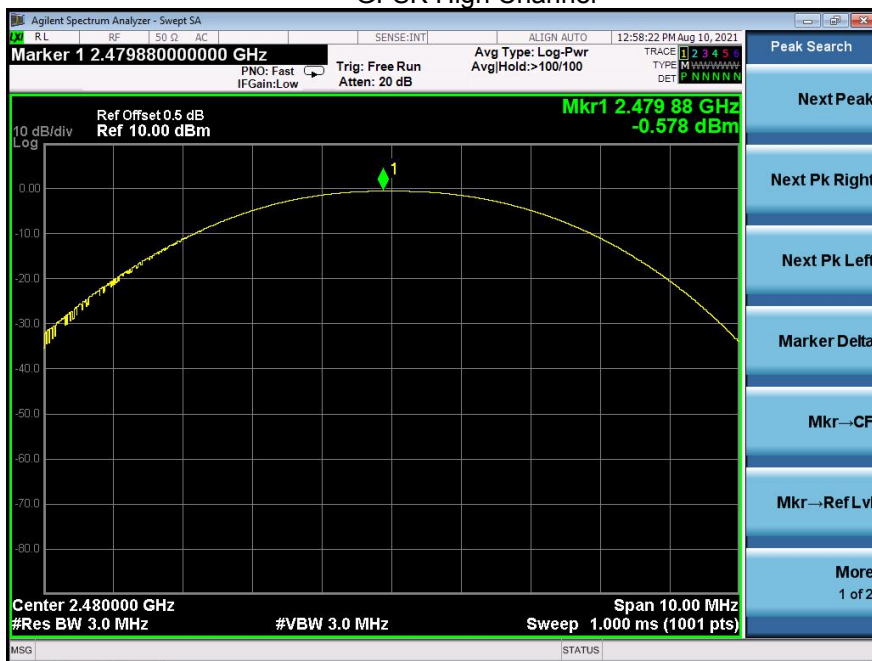
Test plots
GFSK Low Channel

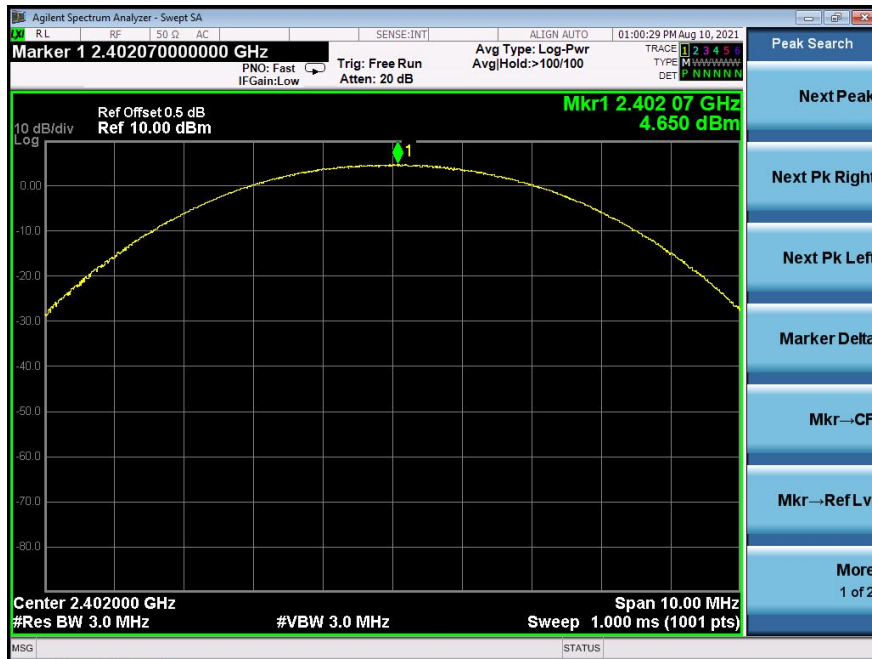
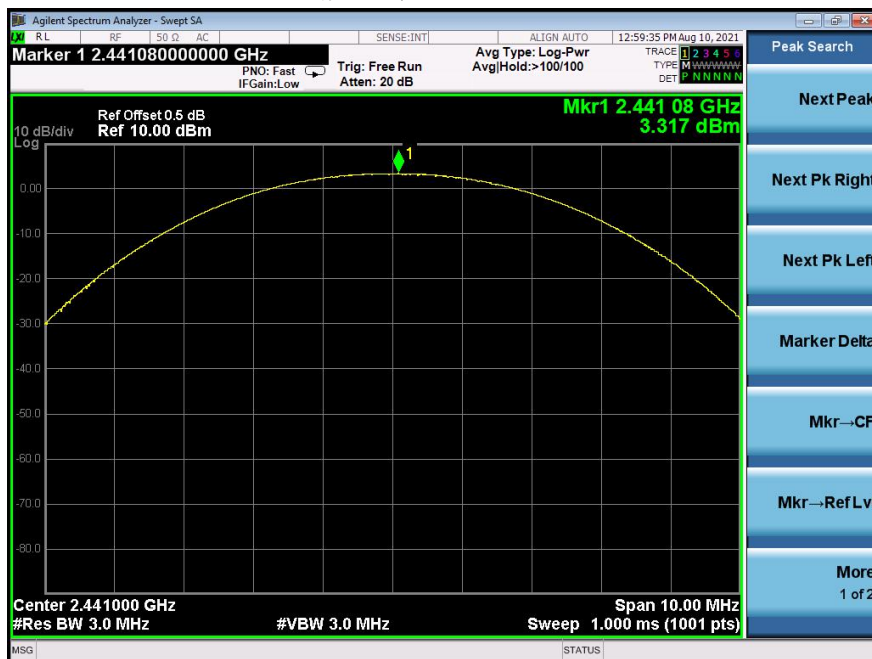


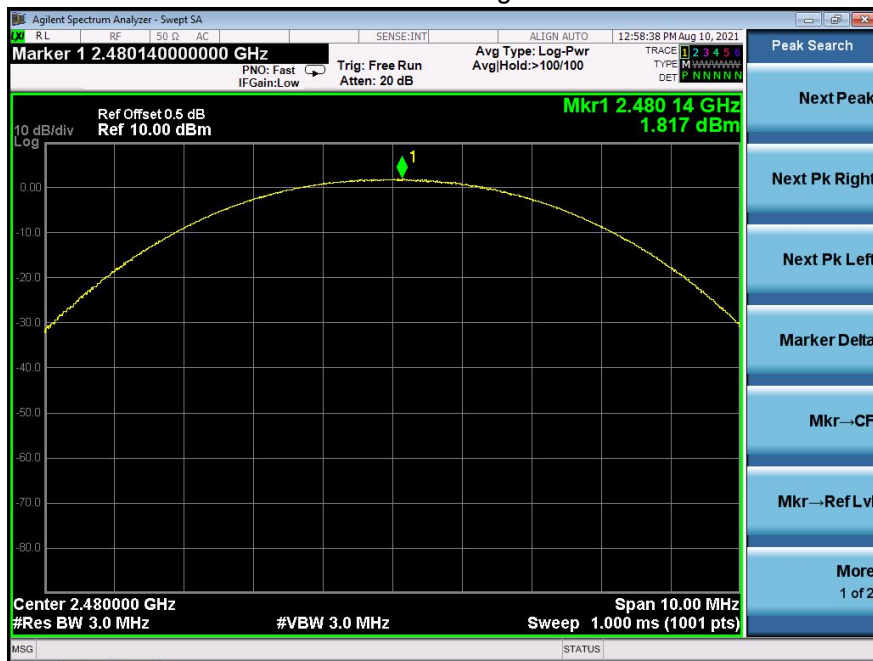
GFSK Middle Channel



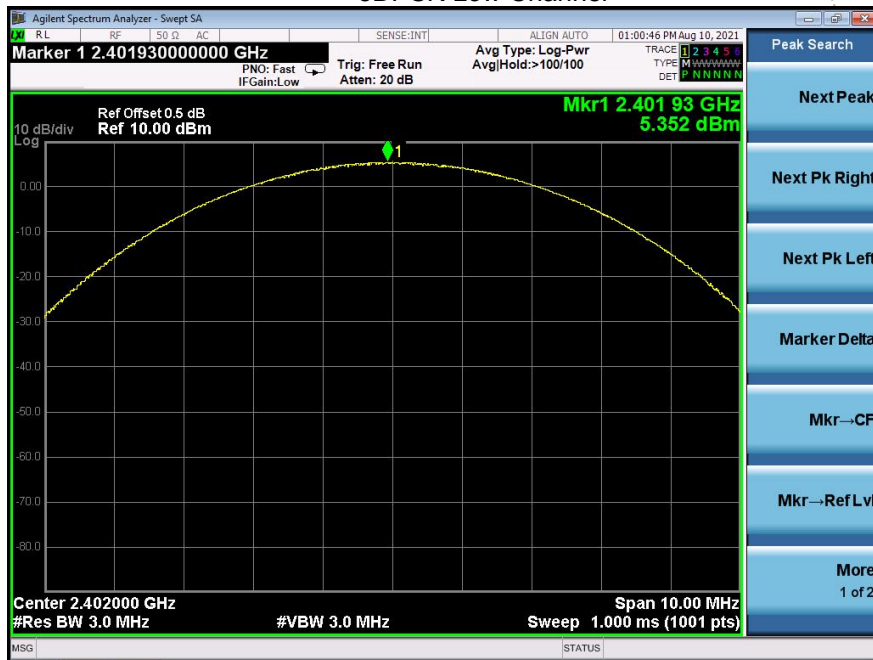
GFSK High Channel



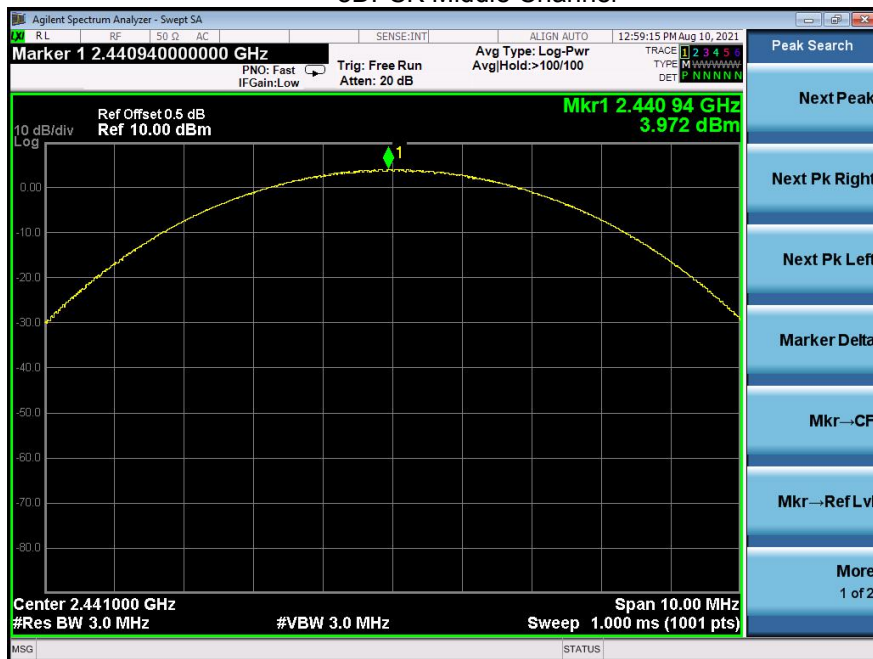
$\pi/4$ DQPSK Low Channel

 $\pi/4$ DQPSK Middle Channel


$\pi/4$ DQPSK High Channel


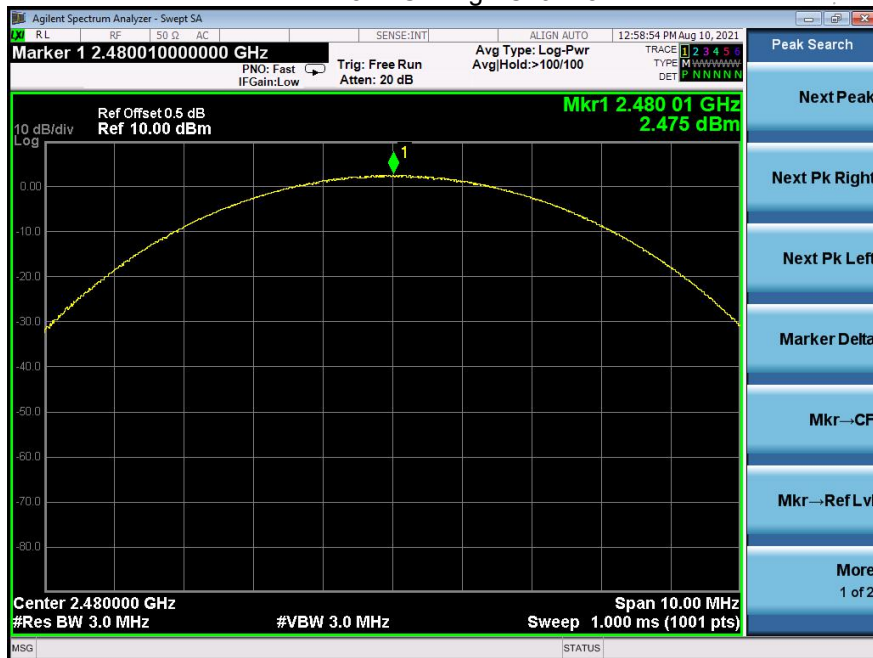
8DPSK Low Channel



8DPSK Middle Channel



8DPSK High Channel



12. HOPPING CHANNEL SEPARATION

12.1 Block Diagram Of Test Setup



12.2 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.

12.3 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 = 2.0MHz. 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.

12.4 Test Result

Modulation	Test Channel	Separation (MHz)	Limit(MHz)	Result
GFSK	Low	1.000	0.583	PASS
GFSK	Middle	0.998	0.583	PASS
GFSK	High	1.002	0.584	PASS
$\pi/4$ DQPSK	Low	1.004	0.855	PASS
$\pi/4$ DQPSK	Middle	0.998	0.846	PASS
$\pi/4$ DQPSK	High	1.000	0.867	PASS
8DPSK	Low	1.002	0.812	PASS
8DPSK	Middle	0.998	0.812	PASS
8DPSK	High	1.000	0.813	PASS

Test plots GFSK Low Channel

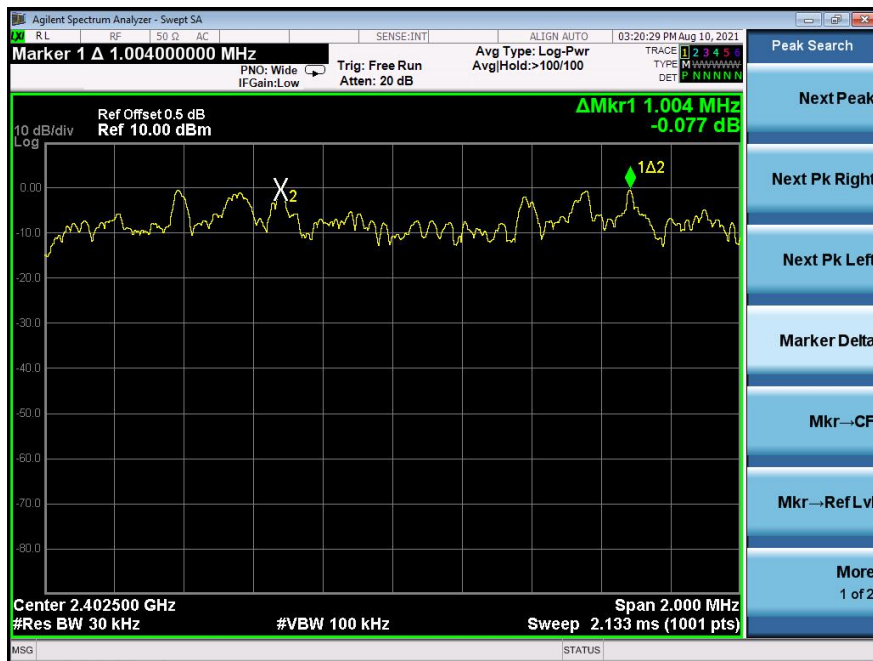


GFSK Middle Channel

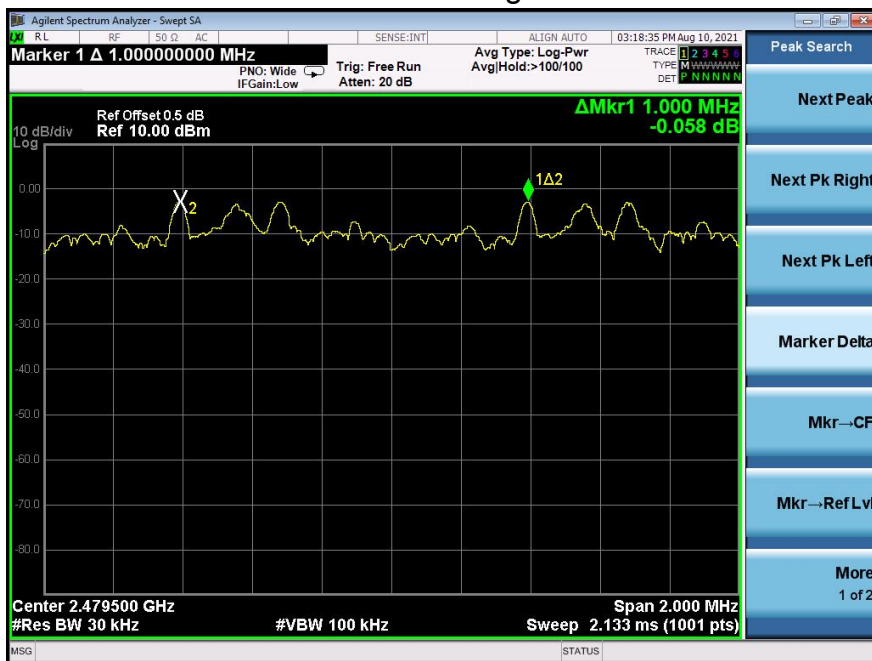


GFSK High Channel



$\pi/4$ DQPSK Low Channel

 $\pi/4$ DQPSK Middle Channel


$\pi/4$ DQPSK High Channel



8DPSK Low Channel



8DPSK Middle Channel



8DPSK High Channel



13. NUMBER OF HOPPING FREQUENCY

13.1 Block Diagram Of Test Setup



13.2 Limit

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

13.3 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 = 100kHz. VBW = 300kHz. Sweep = auto; Detector Function = Peak. Trace = Max hold.
3. Allow the trace to stabilize. It may prove necessary to break the span up to sections. in order to clearly show all of the hopping frequencies. The limit is specified in one of the subparagraphs of this Section.
4. Set the spectrum analyzer: Start Frequency = 2.4GHz, Stop Frequency = 2.4835GHz. Sweep=auto;

13.4 Test Result

Test Plots: 79 Channels in total GFSK



$\pi/4$ DQPSK

