

Appendix A:Test Results of Bluetooth BR & EDR

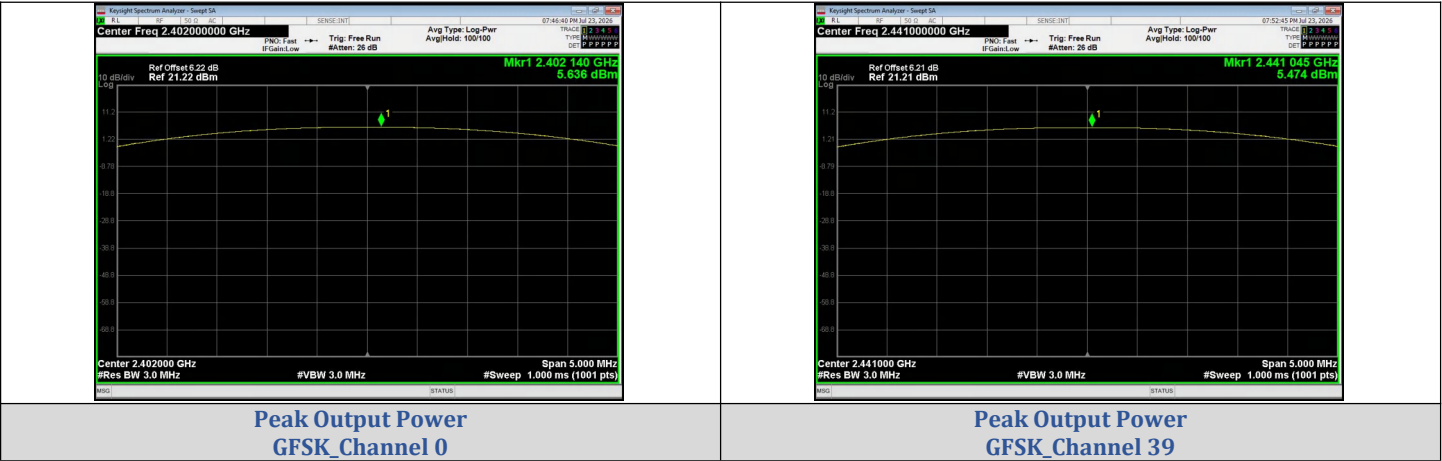
Conducted Output Power

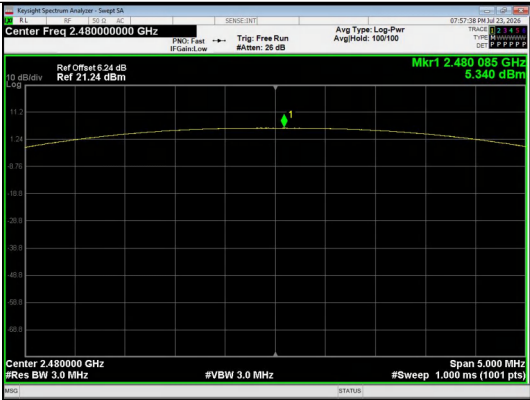
Test Result

Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Max. Avg. Power (dBm)	Limit (dBm)	Verdict
GFSK	DH5	0	5.636	3.66	None	30	PASS
		39	5.474	3.53	None		PASS
		78	5.340	3.42	None		PASS
π /4DQPSK	2-DH5	0	5.540	3.58	None		PASS
		39	5.511	3.56	None		PASS
		78	5.366	3.44	None		PASS
8DPSK	3-DH5	0	5.592	3.62	None		PASS
		39	5.529	3.57	None		PASS
		78	5.341	3.42	None		PASS

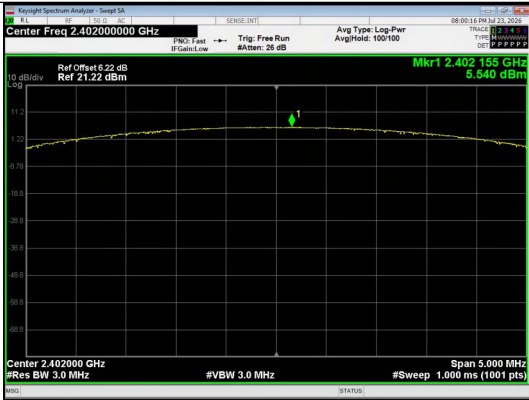
Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Power Limit (dBm)	ISED EIRP (dBm)	ISED EIRP Limit (dBm)	Max. Avg. Power (dBm)	Verdict
GFSK	DH5	0	5.636	30	5.636	≤36.02	None	PASS
		39	5.474	30	5.474	≤36.02	None	PASS
		78	5.340	30	5.340	≤36.02	None	PASS
π /4DQPSK	2-DH5	0	5.540	30	5.540	≤36.02	None	PASS
		39	5.511	30	5.511	≤36.02	None	PASS
		78	5.366	30	5.366	≤36.02	None	PASS
8DPSK	3-DH5	0	5.592	30	5.592	≤36.02	None	PASS
		39	5.529	30	5.529	≤36.02	None	PASS
		78	5.341	30	5.341	≤36.02	None	PASS

Test Graphs

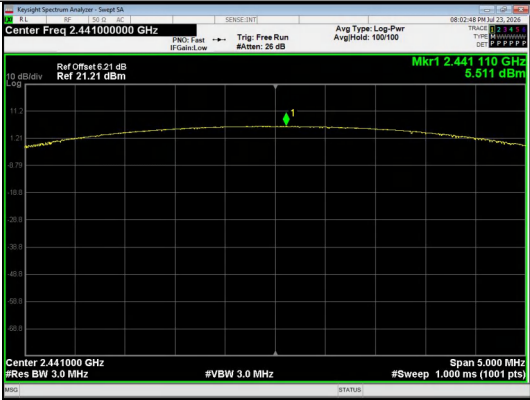




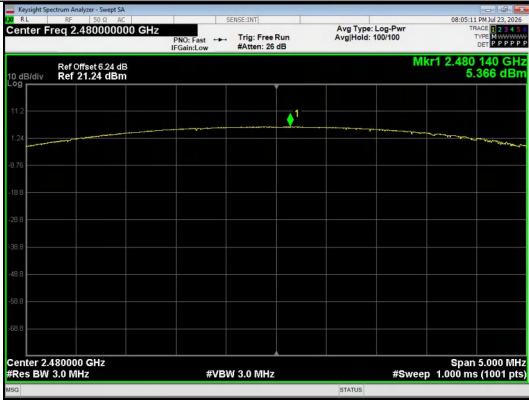
Peak Output Power
GFSK_Channel 78



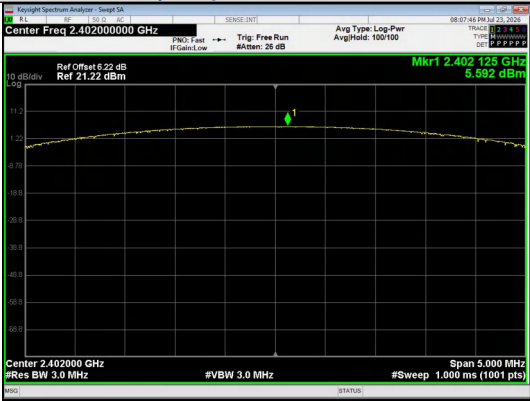
Peak Output Power
 $\pi/4$ DQPSK_Channel 0



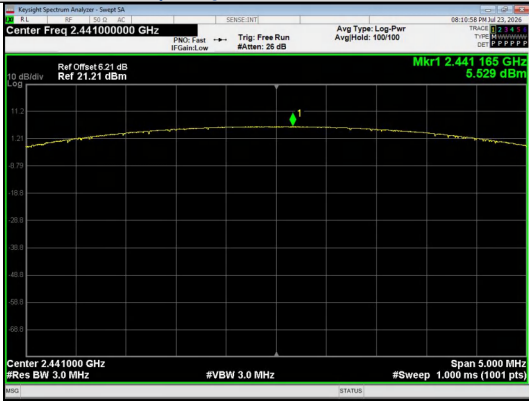
Peak Output Power
 $\pi/4$ DQPSK_Channel 39



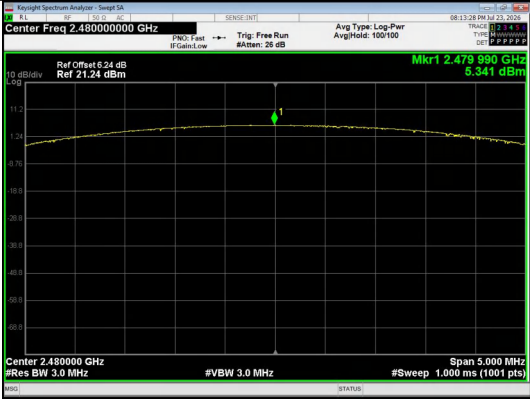
Peak Output Power
 $\pi/4$ DQPSK_Channel 78



Peak Output Power
8DPSK_Channel 0



Peak Output Power
8DPSK_Channel 39



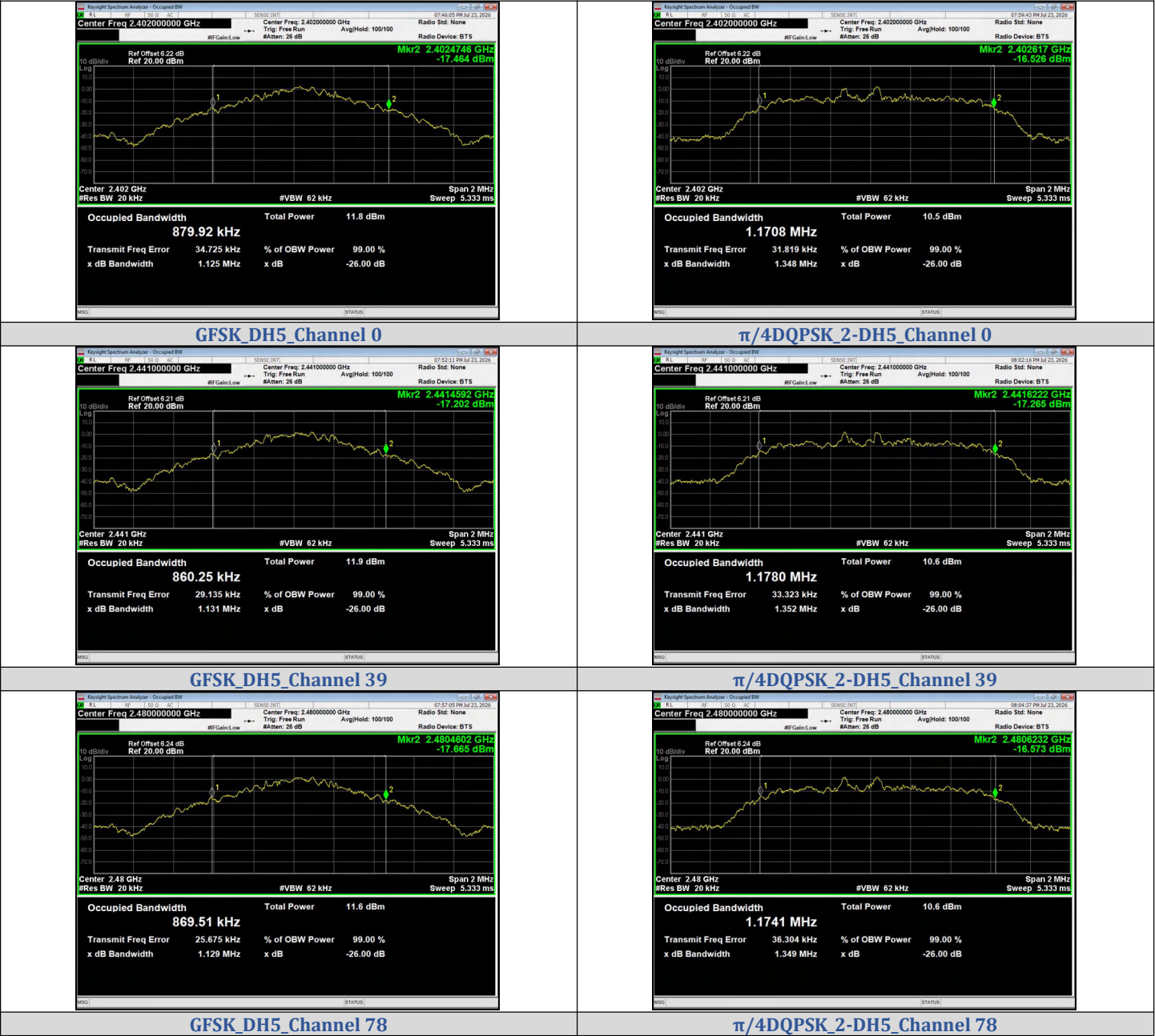
Peak Output Power
8DPSK_Channel 78

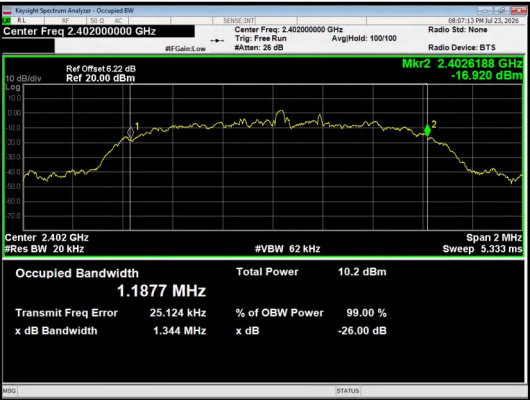
99% Bandwidth

Test Result

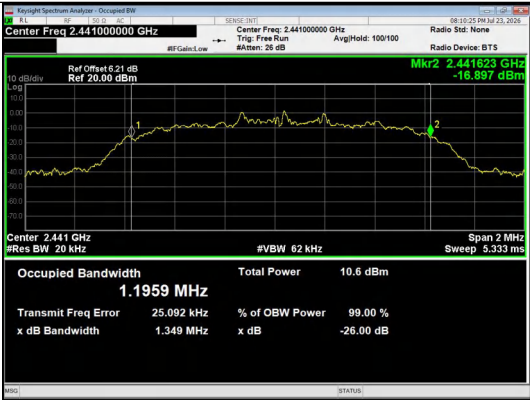
Modulation	Channel	Center Frequency (MHz)	99% BW (MHz)
GFSK	0	2402	0.88
	39	2441	0.86
	78	2480	0.87
$\pi/4$ DQPSK	0	2402	1.17
	39	2441	1.18
	78	2480	1.17
8DPSK	0	2402	1.19
	39	2441	1.20
	78	2480	1.19

Test Graphs

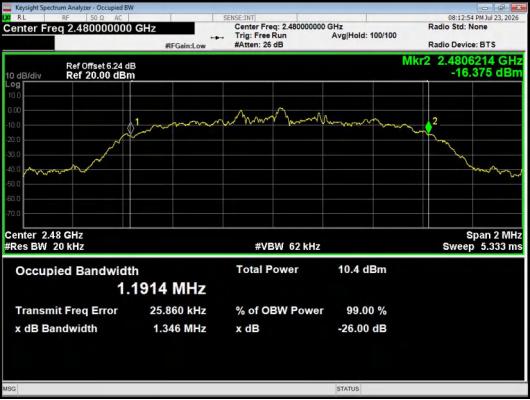




8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



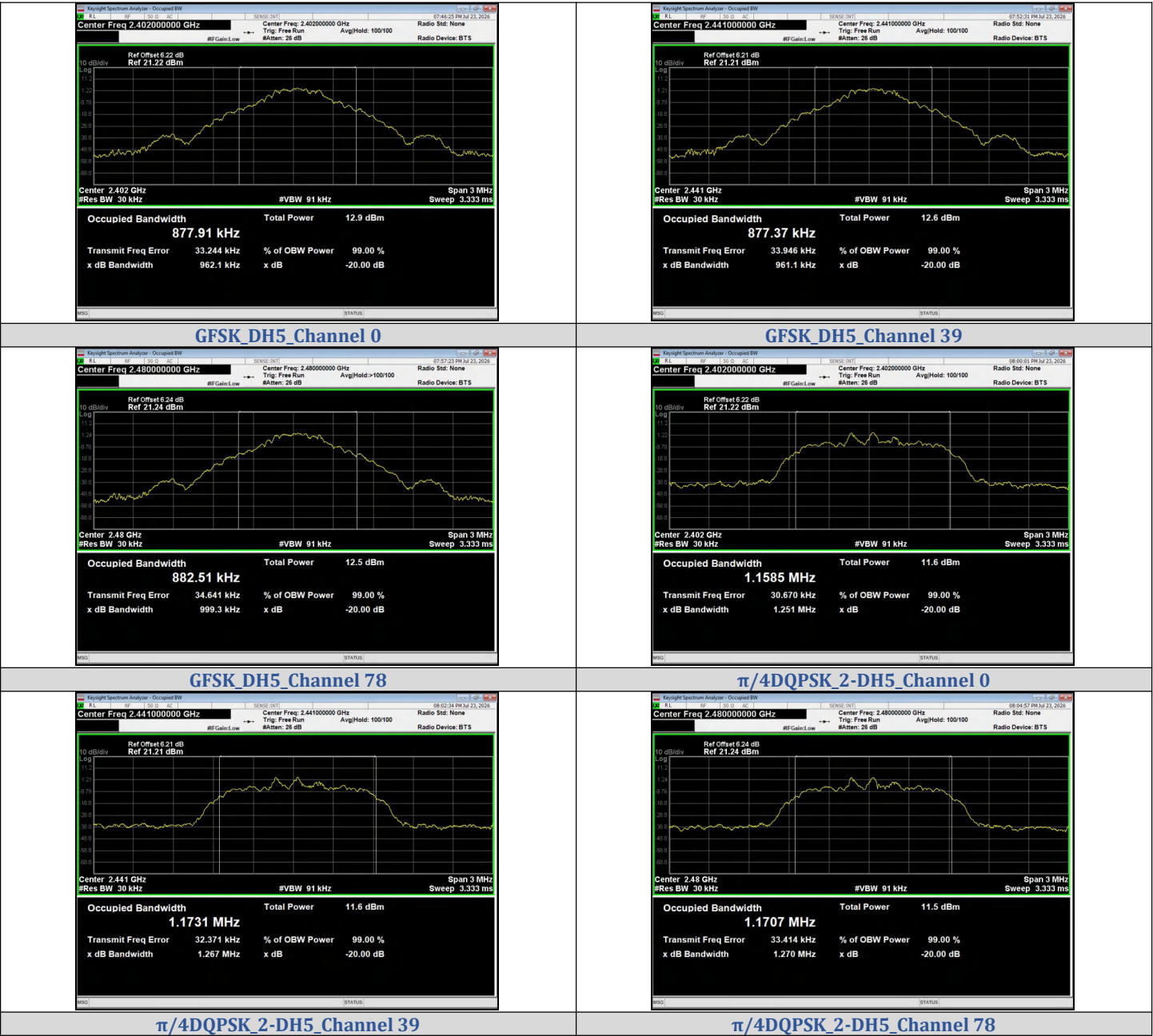
8DPSK_3-DH5_Channel 78

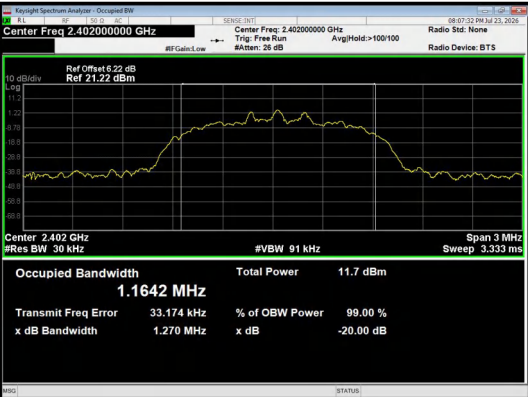
20dB Bandwidth

Test Result

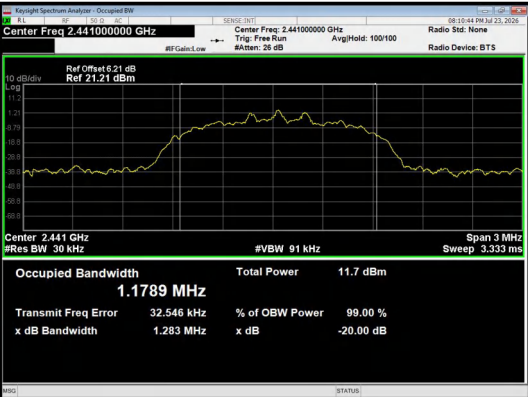
Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	0.9621
	39	2441 MHz	0.9611
	78	2480 MHz	0.9993
$\pi/4$ DQPSK	0	2402 MHz	1.251
	39	2441 MHz	1.267
	78	2480 MHz	1.270
8DPSK	0	2402 MHz	1.270
	39	2441 MHz	1.283
	78	2480 MHz	1.286

Test Graphs

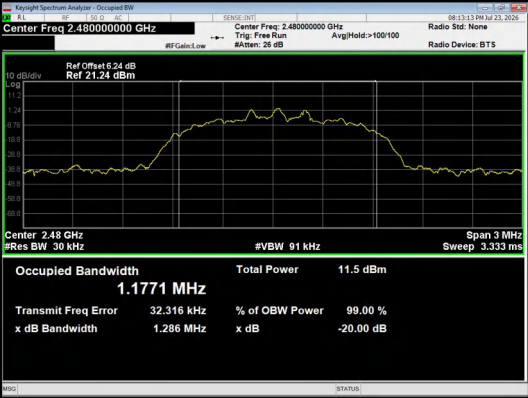




8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



8DPSK_3-DH5_Channel 78

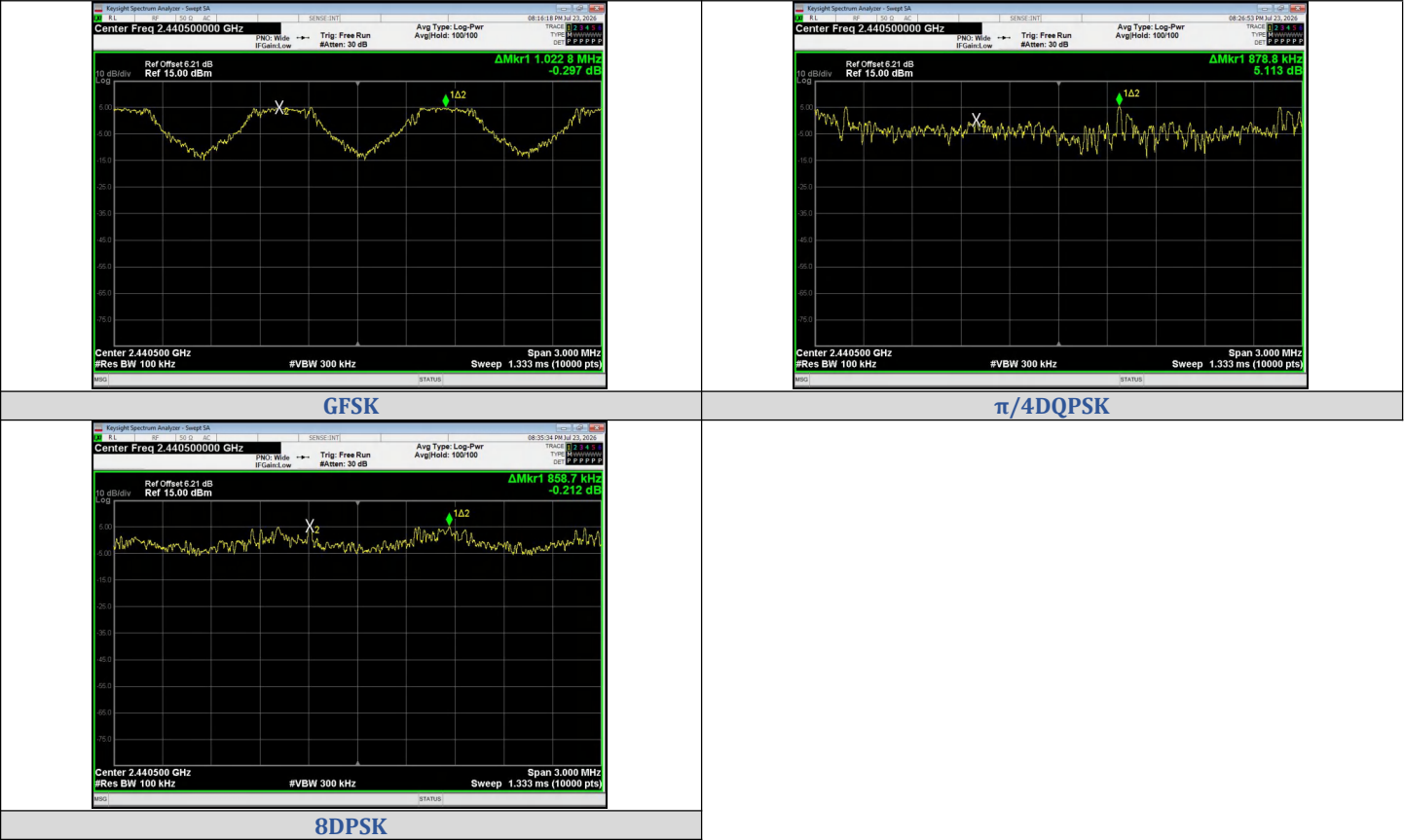
FCC ID:2BXGZ-FN20

Carrier Frequencies Separation

Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Minimum Limit (MHz)	Verdict
GFSK	DH5	2440.0171	2441.0399	1.0228	0.666	PASS
π /4DQPSK	2-DH5	2439.9934	2440.8722	0.8788	0.847	PASS
8DPSK	3-DH5	2440.204	2441.0627	0.8587	0.857	PASS

Test Graphs



FCC ID:2BXGZ-FN20

Conducted Spurious & Band Edge Emission

Test Result

Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Verdict
GFSK	DH5	0	2400.00	-44.175	-14.41	-29.765	PASS
			7205.75	-30.389	-14.41	-15.979	PASS
		39	7323.74	-31.850	-14.75	-17.100	PASS
		78	2483.50	-51.607	-14.73	-36.877	PASS
			7439.85	-35.556	-14.73	-20.826	PASS
π /4DQPSK	2-DH5	0	2400.00	-43.874	-14.53	-29.344	PASS
			9607.87	-35.748	-14.53	-21.218	PASS
		39	7323.11	-30.877	-14.56	-16.317	PASS
		78	2287.91	-37.219	-14.66	-22.559	PASS
			2483.50	-50.473	-14.66	-35.813	PASS
8DPSK	3-DH5	0	2400.00	-45.265	-14.51	-30.755	PASS
			7205.75	-30.838	-14.51	-16.328	PASS
		39	9763.93	-36.990	-14.65	-22.340	PASS
		78	2483.50	-56.625	-14.74	-41.885	PASS
			9919.99	-38.732	-14.74	-23.992	PASS

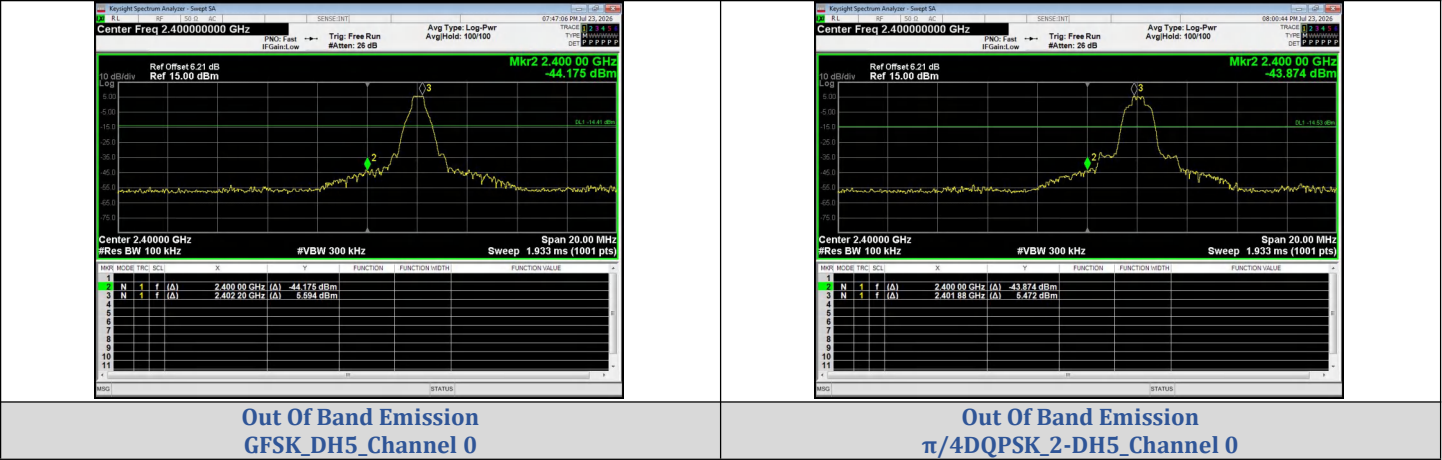
Note: input compensation coefficient (dB)= Cable Loss (dB)

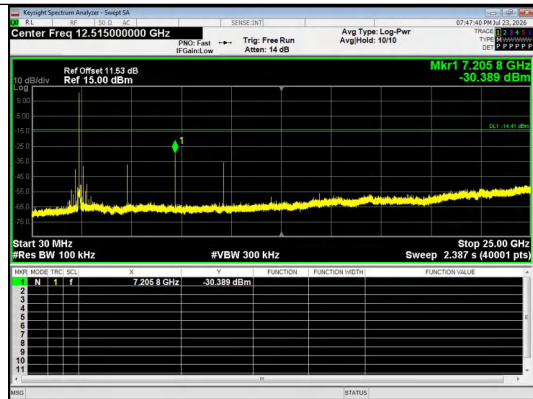
Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Verdict
GFSK	DH5	Hopping	2400.00	-46.336	-14.56	-31.776	PASS
			2483.50	-54.671	-14.72	-39.951	PASS
π /4DQPSK	2-DH5		2400.00	-48.664	-14.52	-34.144	PASS
			2483.50	-53.704	-14.70	-39.004	PASS
8DPSK	3-DH5		2400.00	-46.399	-14.50	-31.899	PASS
			2483.50	-53.048	-14.78	-38.268	PASS

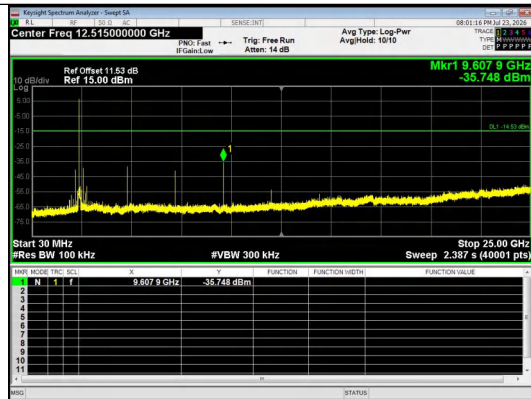
Note: input compensation coefficient (dB)= Cable Loss (dB)

Test Graphs

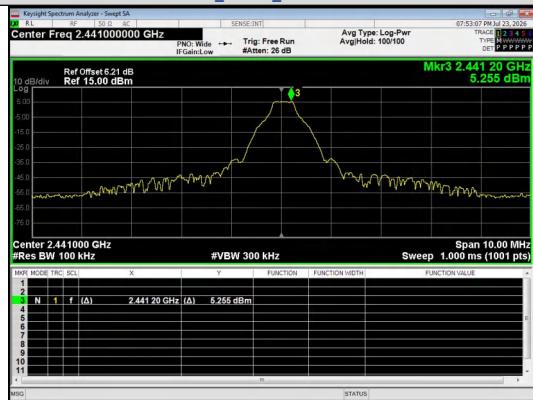




30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 0



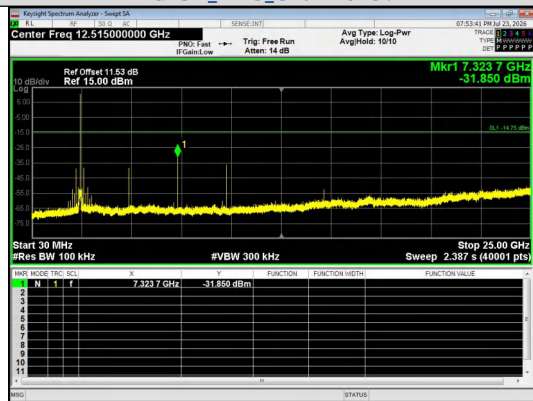
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 0



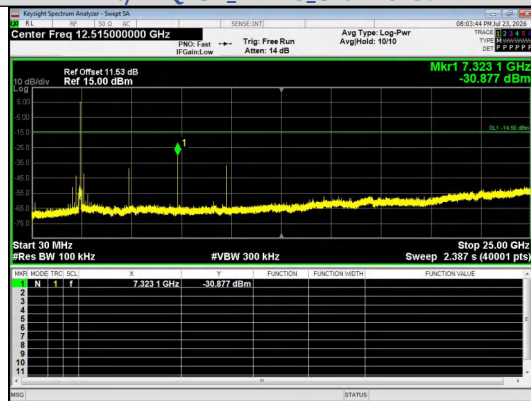
Out Of Band Emission
GFSK_DH5_Channel 39



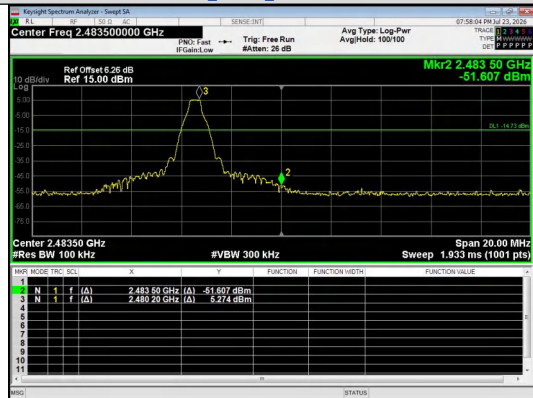
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 39



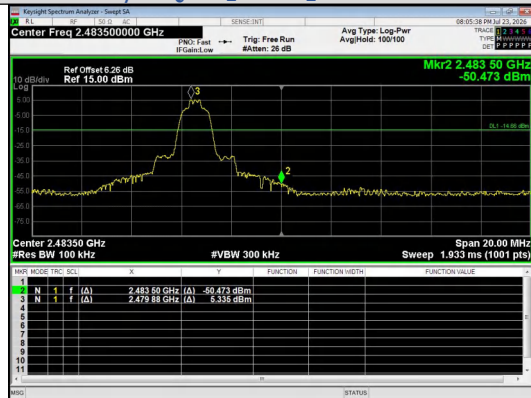
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 39



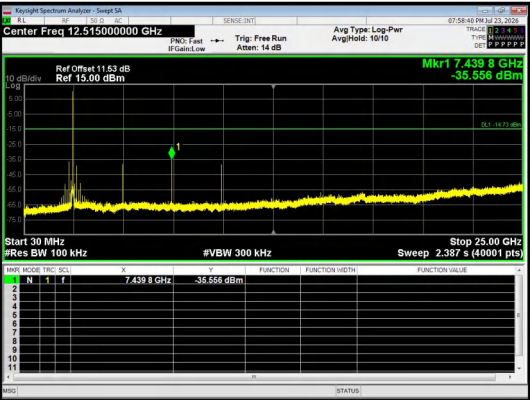
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 39



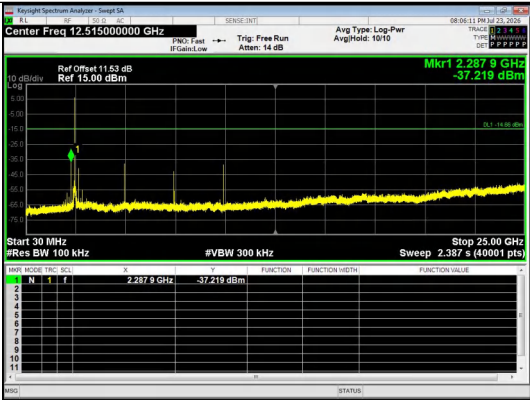
Out Of Band Emission
GFSK_DH5_Channel 78



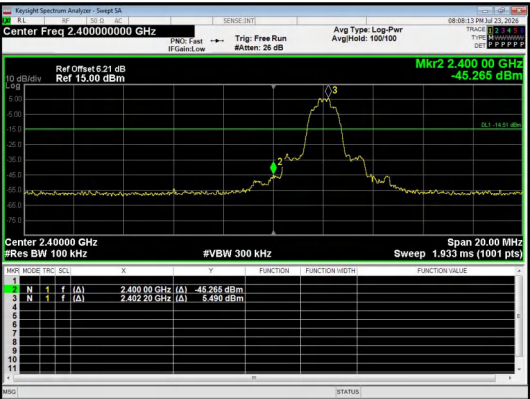
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 78



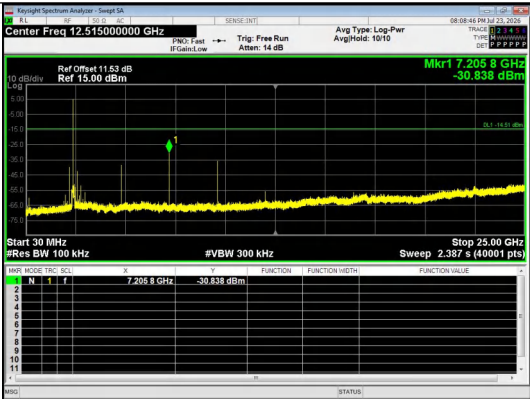
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 78



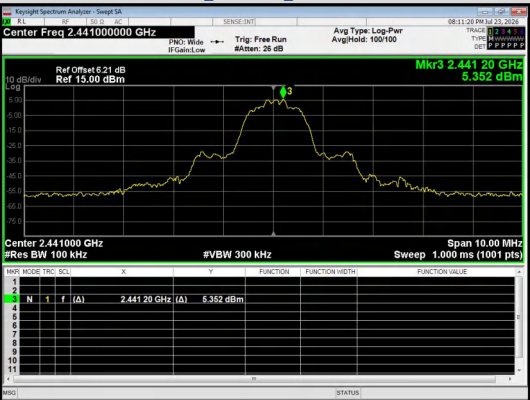
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 78



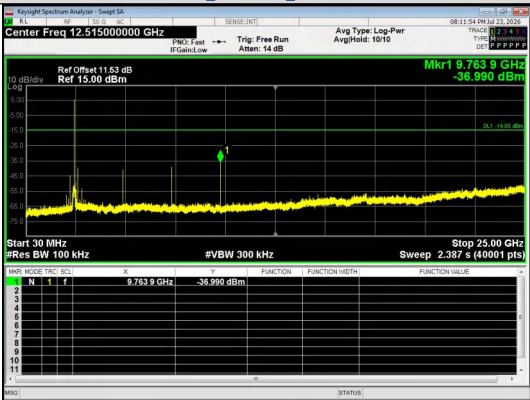
Out Of Band Emission
8DPSK_3-DH5_Channel 0



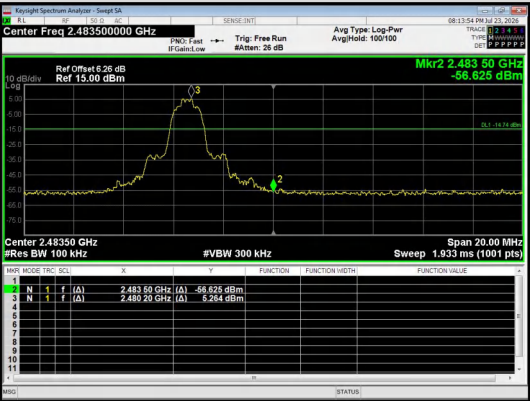
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 0



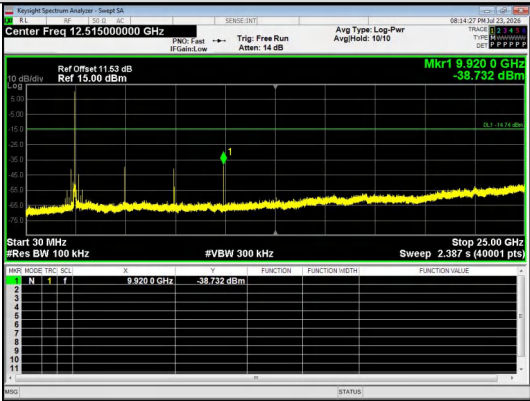
Out Of Band Emission
8DPSK_3-DH5_Channel 39



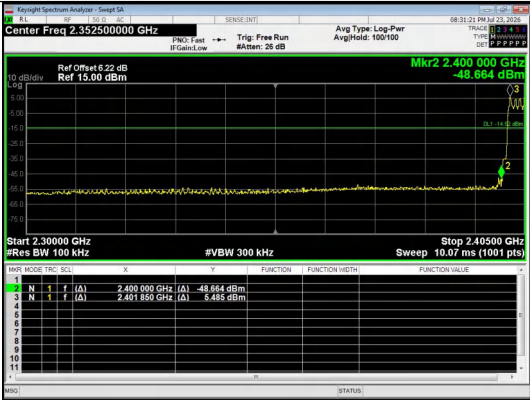
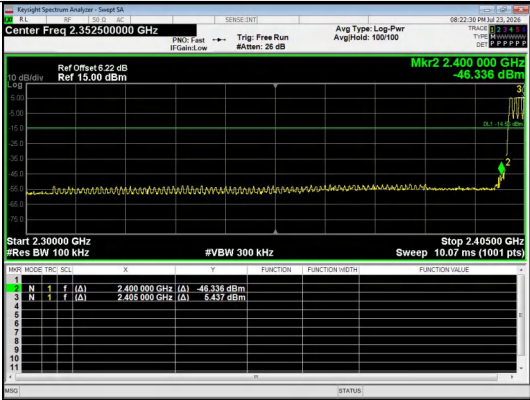
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 39



Out Of Band Emission

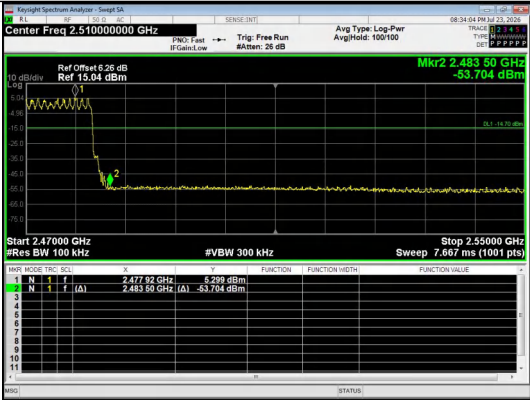
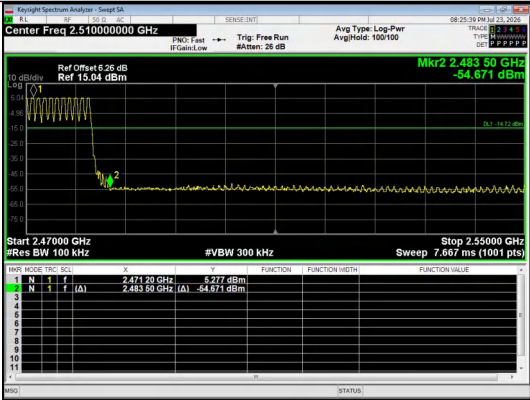


30.0 MHz - 25000.0 MHz



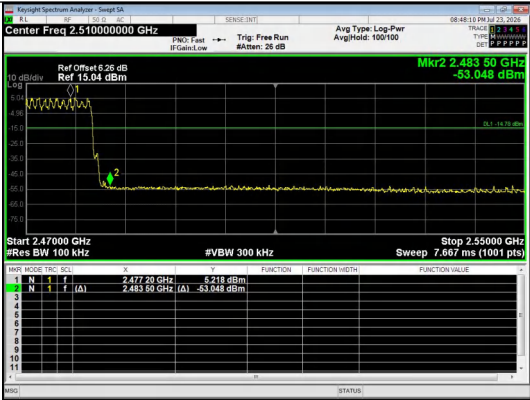
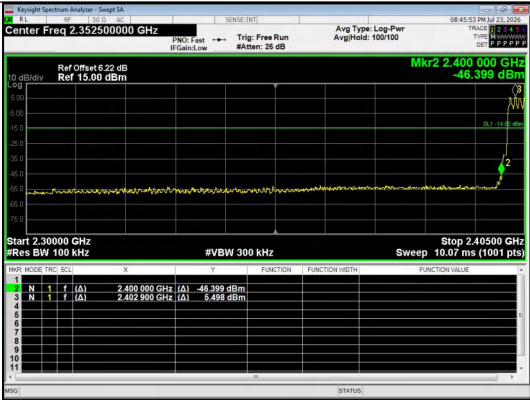
Out Of Band Emission(Left)
GFSK_DH5_Channel Hopping

Out Of Band Emission(Left)
 $\pi/4$ DQPSK_2-DH5_Channel Hopping



Out Of Band Emission(Right)
GFSK_DH5_Channel Hopping

Out Of Band Emission(Right)
 $\pi/4$ DQPSK_2-DH5_Channel Hopping



Out Of Band Emission(Left)
8DPSK_3-DH5_Channel Hopping

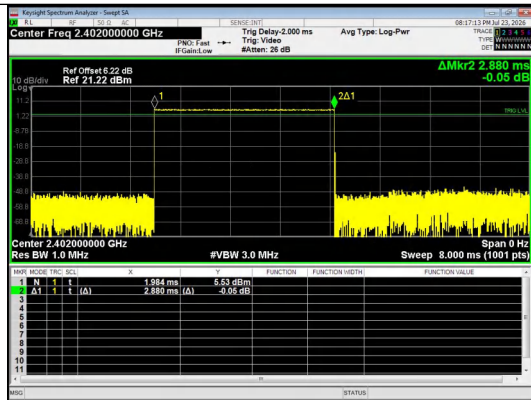
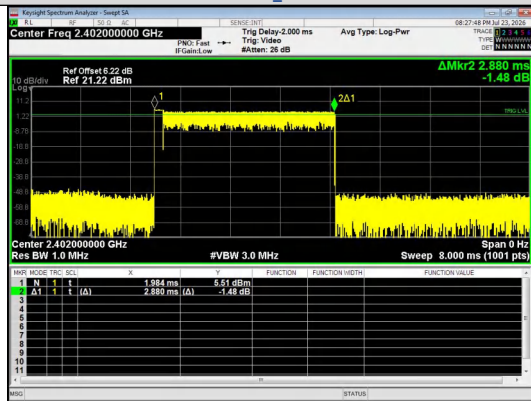
Out Of Band Emission(Right)
8DPSK_3-DH5_Channel Hopping

Dwell Time

Test Result

Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Verdict
GFSK	DH5	Hopping	2.8800	99	285.12	< 400	PASS
$\pi/4$ DQPSK	2-DH5		2.8800	103	296.64		PASS
8DPSK	3-DH5		2.8960	104	301.18		PASS
Note: Dwell time=Pulse time(ms)*Number of Pulses in 31.6 seconds							

Test Graphs

Pulse Width
GFSK_DH5Number of Pulses in 31.6 seconds
GFSK_DH5Pulse Width
 $\pi/4$ DQPSK_2-DH5Number of Pulses in 31.6 seconds
 $\pi/4$ DQPSK_2-DH5Pulse Width
8DPSK_3-DH5Number of Pulses in 31.6 seconds
8DPSK_3-DH5

FCC ID:2BXGZ-FN20

Number Of Hopping Channel

Test Result

Modulation	Packet	Number of Hopping Channel	Limit	Verdict
GFSK	DH5	79	15	PASS
$\pi/4$ DQPSK	2-DH5	79	15	PASS
8DPSK	3-DH5	79	15	PASS

Test Graphs



