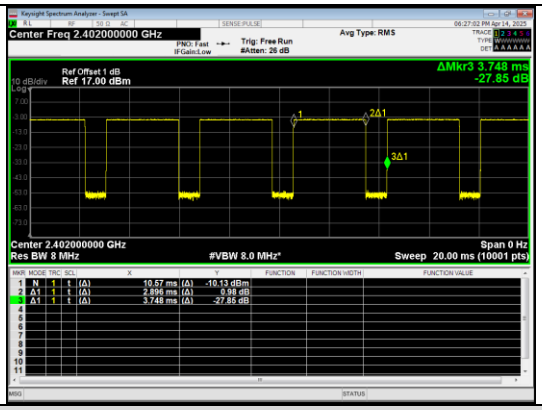
Duty Cycle

Test Result

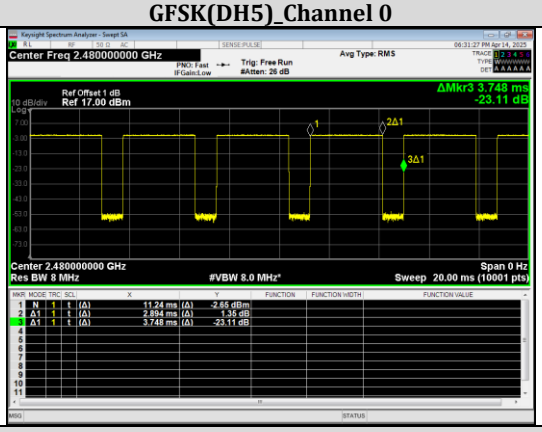
Modulation	Packets	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
GFSK	DH5	0	2.896	3.748	77.27	0.7727	1.1199	0.3453
		39	2.896	3.748	77.27	0.7727	1.1199	0.3453
		78	2.894	3.748	77.21	0.7721	1.1233	0.3455
π/4DQPSK	2-DH5	0	2.884	3.748	76.95	0.7695	1.1379	0.3467
		39	2.884	3.748	76.95	0.7695	1.1379	0.3467
		78	2.884	3.748	76.95	0.7695	1.1379	0.3467
8DPSK	3-DH5	0	2.882	3.748	76.89	0.7689	1.1413	0.3470
		39	2.882	3.748	76.89	0.7689	1.1413	0.3470
		78	2.882	3.748	76.89	0.7689	1.1413	0.3470

Test Graphs

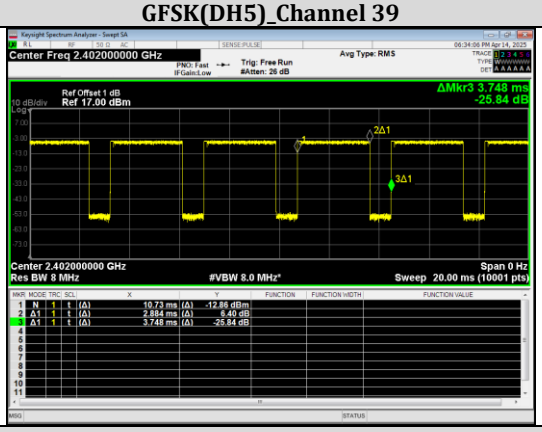


GFSK(DH5)_Channel 0

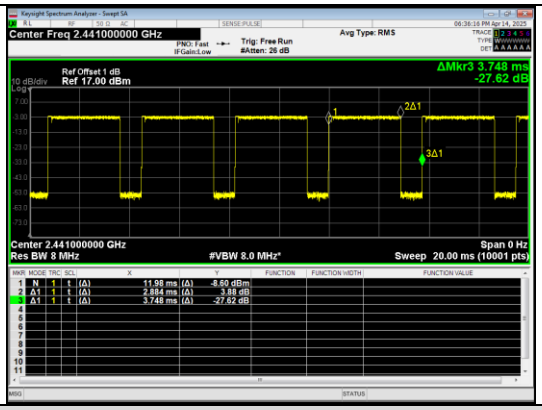
GFSK(DH5)_Channel 39



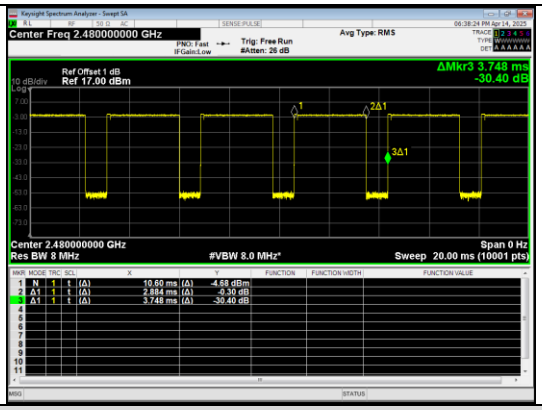
GFSK(DH5)_Channel 78



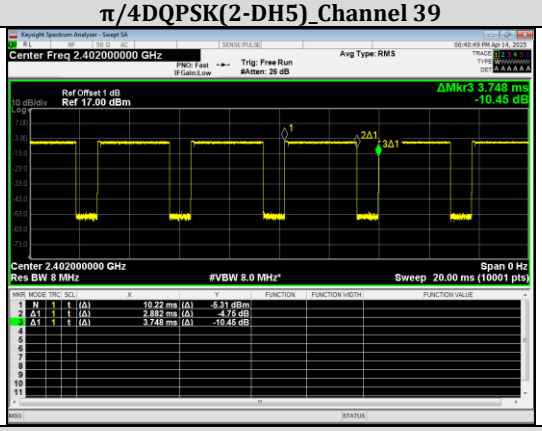
π/4DQPSK(2-DH5)_Channel 0



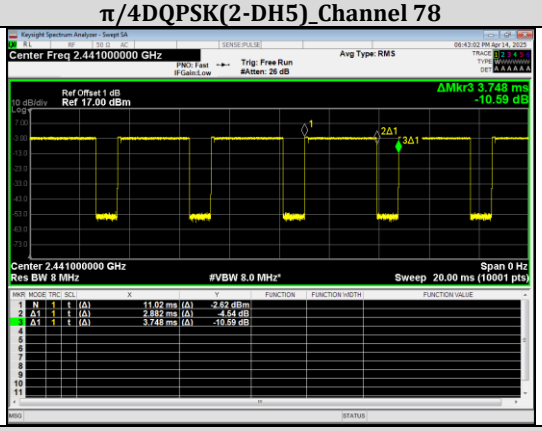
π/4DQPSK(2-DH5)_Channel 39



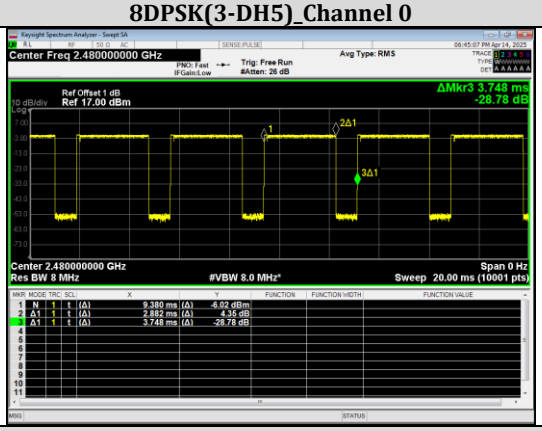
π/4DQPSK(2-DH5)_Channel 78



8DPSK(3-DH5)_Channel 0



8DPSK(3-DH5)_Channel 39



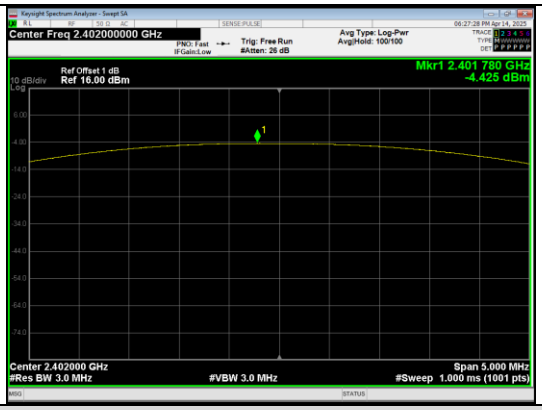
8DPSK(3-DH5)_Channel 78

Conducted Output Power

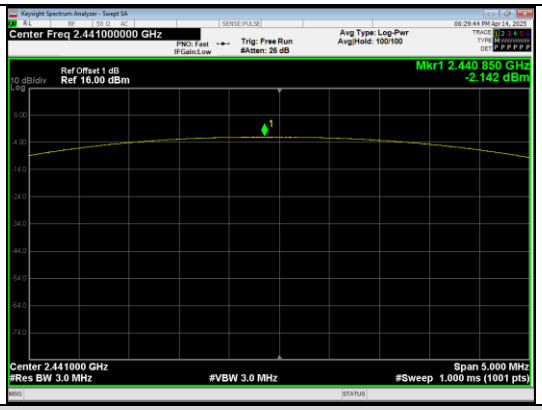
Test Result

Modulation	Packet Type	Channel	Peak Output Power (dBm)	Limit (dBm)	Result
GFSK	DH5	0	-4.42	≤30	PASS
		39	-2.14		PASS
		78	-0.67		PASS
π/4DQPSK	2-DH5	0	-2.69	≤20.97	PASS
		39	-0.37		PASS
		78	0.94		PASS
8DPSK	3-DH5	0	-2.61		PASS
		39	0.06		PASS
		78	1.63		PASS

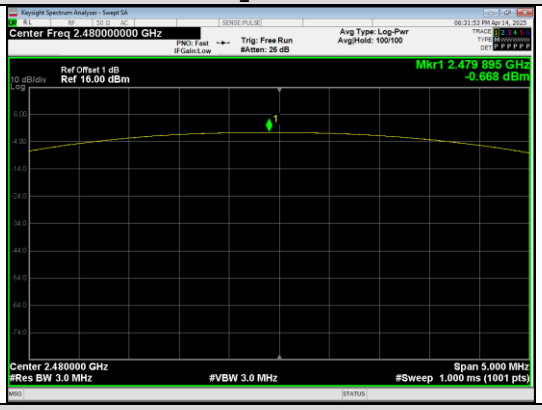
Test Graphs



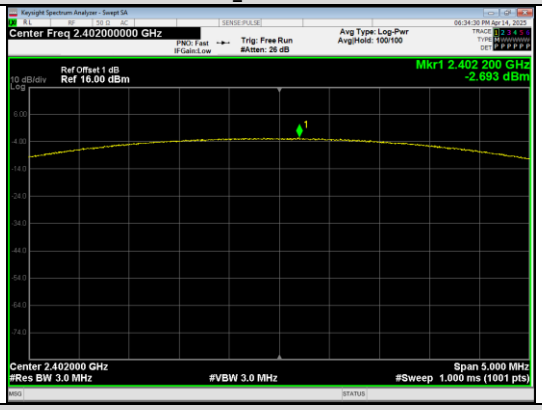
Peak Output Power
GFSK_Channel 0



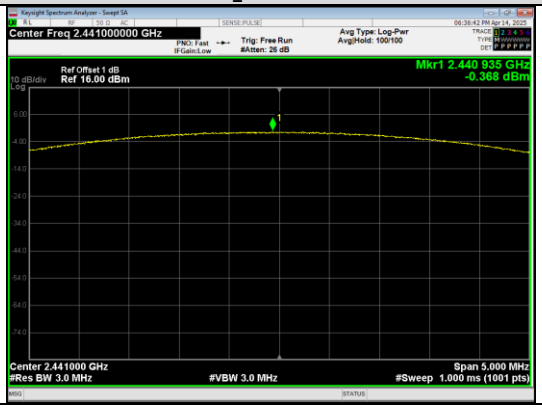
Peak Output Power
GFSK_Channel 39

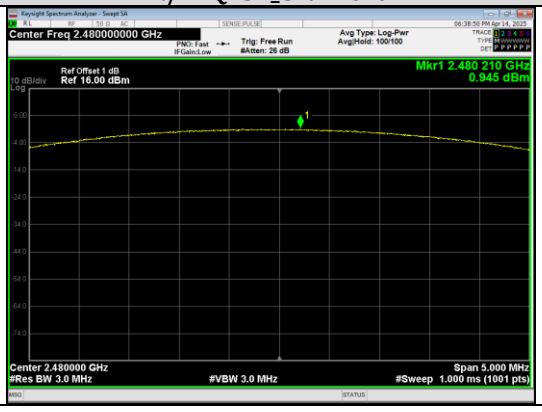


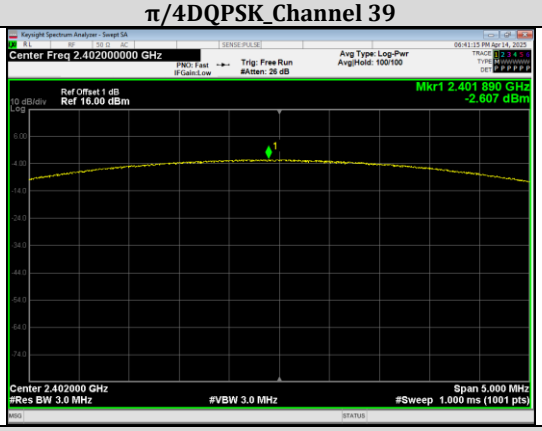
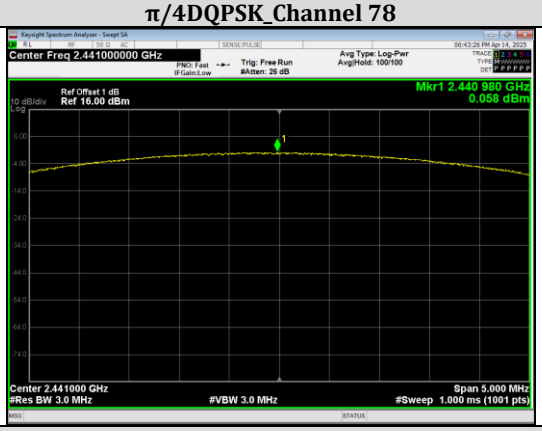
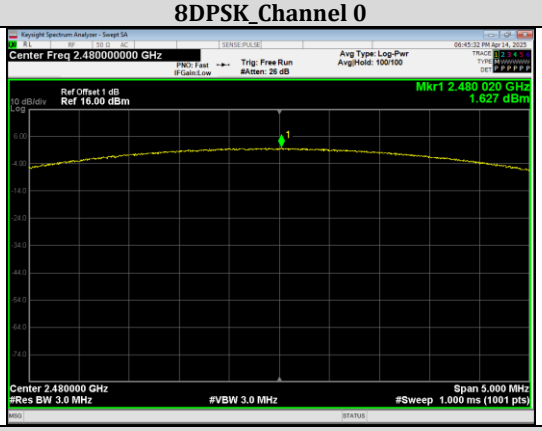
Peak Output Power
GFSK_Channel 78



Peak Output Power
π/4DQPSK_Channel 0





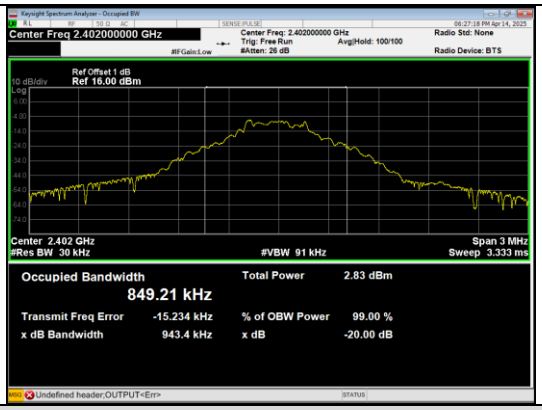
Peak Output Power π/4DQPSK_Channel 39	Peak Output Power π/4DQPSK_Channel 78
	
Peak Output Power 8DPSK_Channel 0	**Peak Output Power 8DPSK_Channel 39**
	
Peak Output Power 8DPSK_Channel 78	

20dB Bandwidth

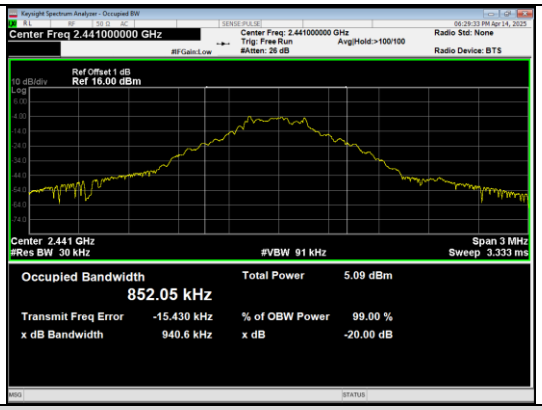
Test Result

Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	0.9434
	39	2441 MHz	0.9406
	78	2480 MHz	0.9506
π/4DQPSK	0	2402 MHz	1.286
	39	2441 MHz	1.286
	78	2480 MHz	1.284
8DPSK	0	2402 MHz	1.299
	39	2441 MHz	1.300
	78	2480 MHz	1.297

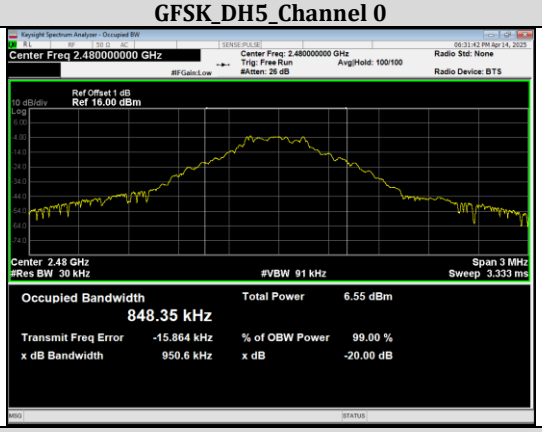
Test Graphs



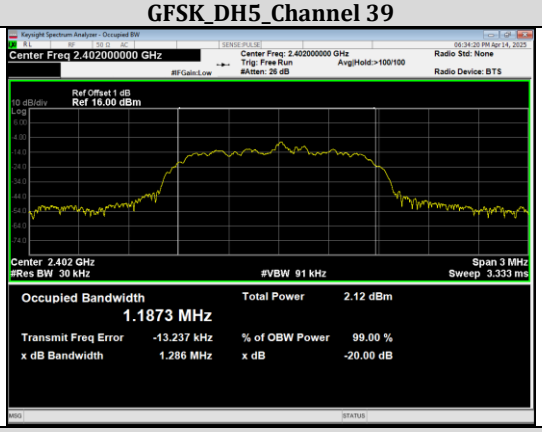
GFSK_DH5_Channel 0



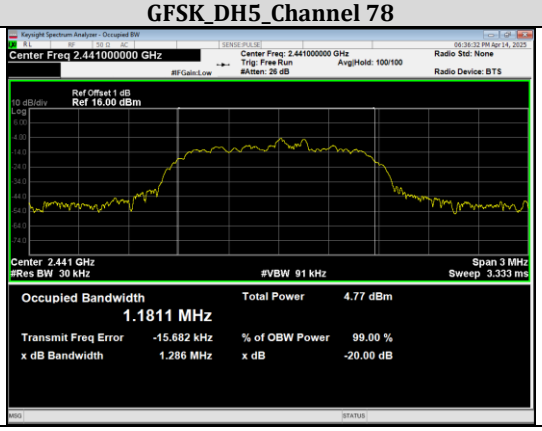
GFSK_DH5_Channel 39

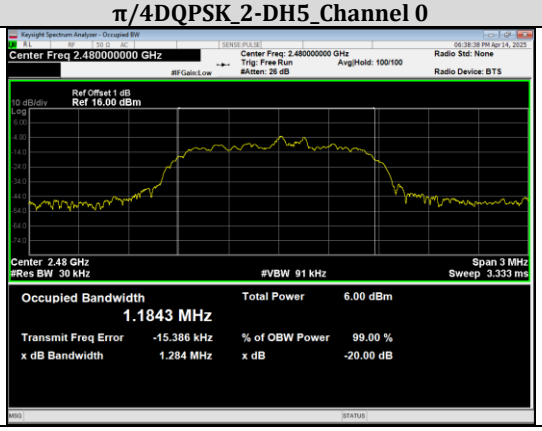


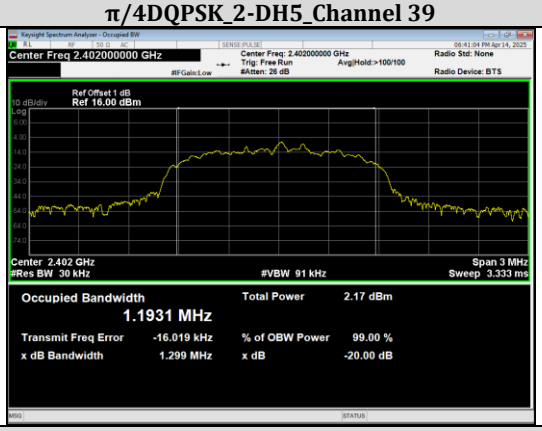
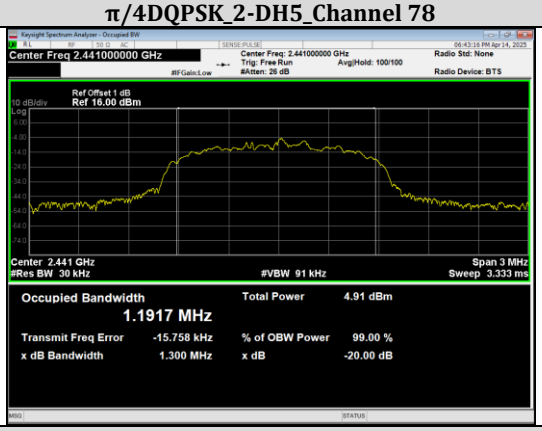
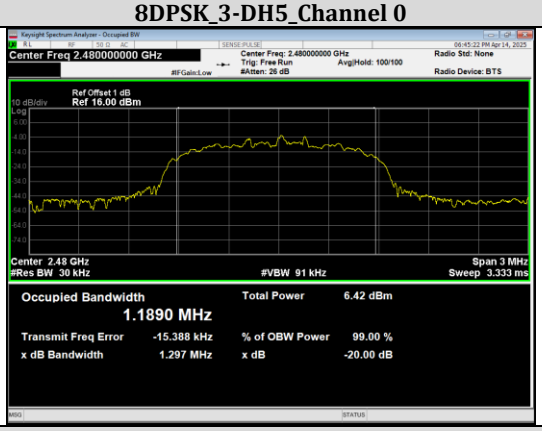
GFSK_DH5_Channel 78



π/4DQPSK_2-DH5_Channel 0





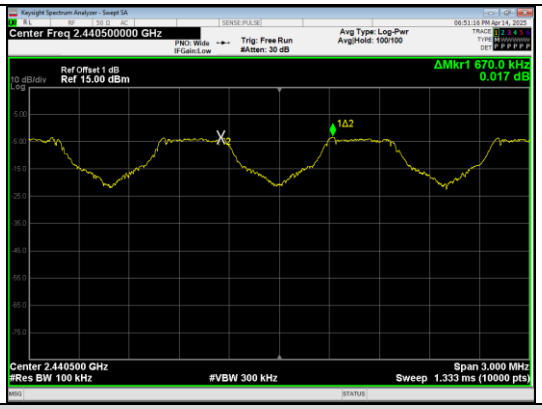
π/4DQPSK_2-DH5_Channel 39	π/4DQPSK_2-DH5_Channel 78
	
8DPSK_3-DH5_Channel 0	**8DPSK_3-DH5_Channel 39**
	
8DPSK_3-DH5_Channel 78	

Carrier Frequencies Separation

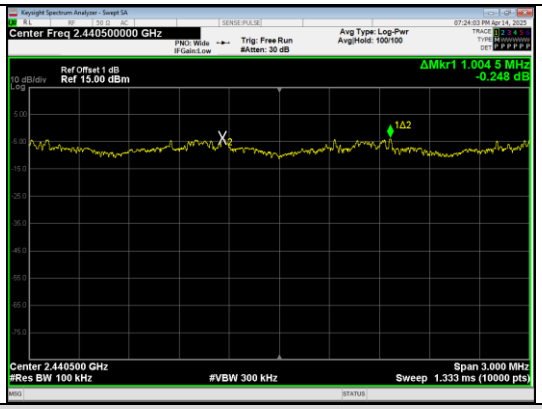
Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2440.1503	2440.8203	0.6700	0.634	PASS
π/4DQPSK	2-DH5	2440.159	2441.1635	1.0045	0.857	PASS
8DPSK	3-DH5	2439.8176	2441.159	1.3414	0.867	PASS

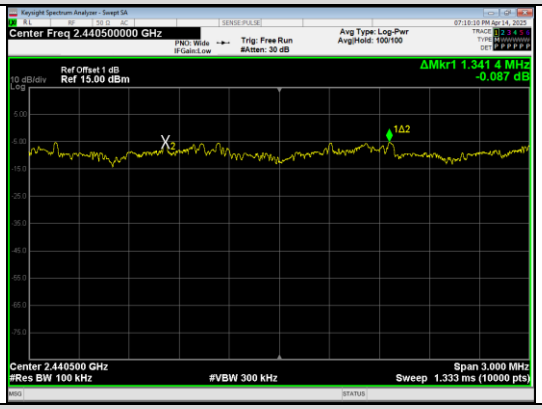
Test Graphs



GFSK



π/4DQPSK



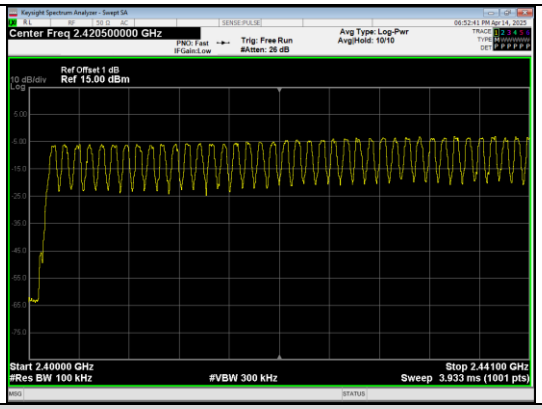
8DPSK

Number Of Hopping Channel

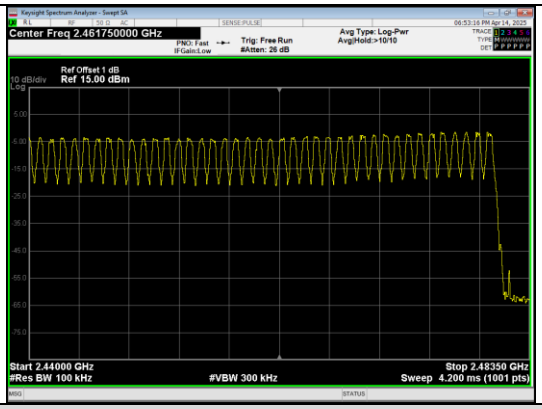
Test Result

Modulation	Packet	Number of Hopping Channel	Limit	Result
GFSK	DH5	79	15	PASS
π/4DQPSK	2-DH5	79	15	PASS
8DPSK	3-DH5	79	15	PASS

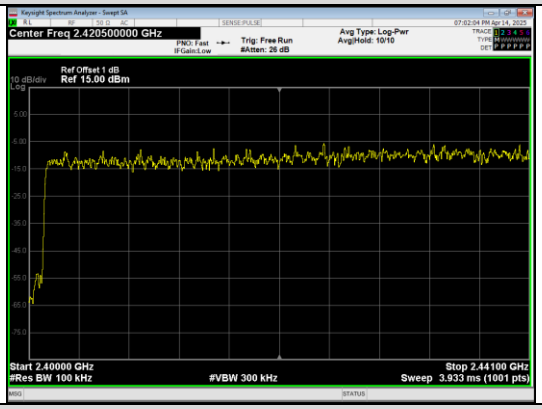
Test Graphs



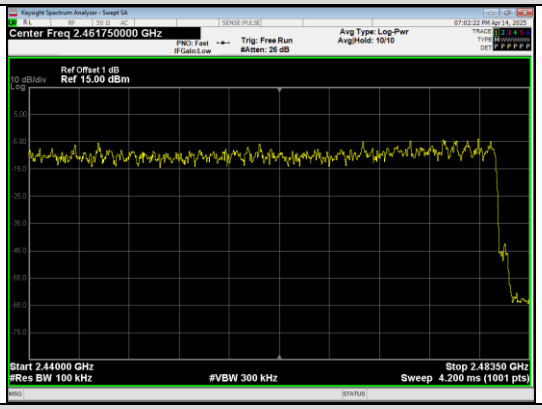
Low End Spectrum Channel Hopping Plot GFSK



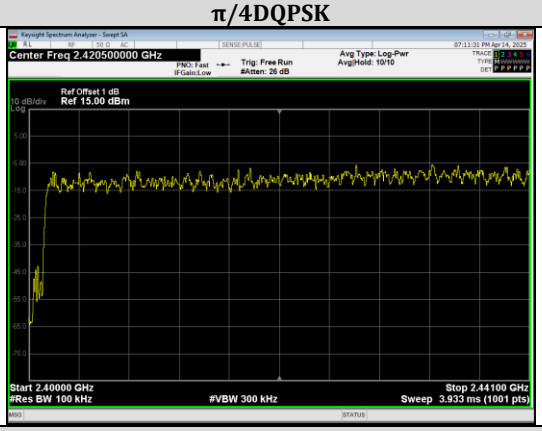
High End Spectrum Channel Hopping Plot GFSK



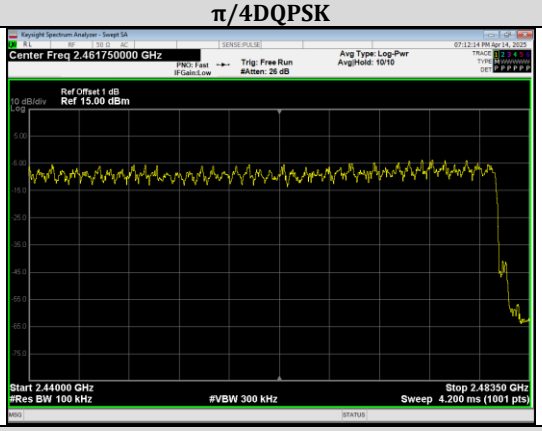
Low End Spectrum Channel Hopping Plot π/4DQPSK



High End Spectrum Channel Hopping Plot π/4DQPSK



Low End Spectrum Channel Hopping Plot 8DPSK



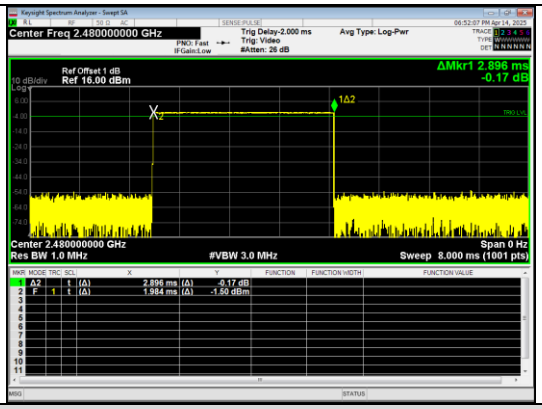
High End Spectrum Channel Hopping Plot 8DPSK

Dwell Time

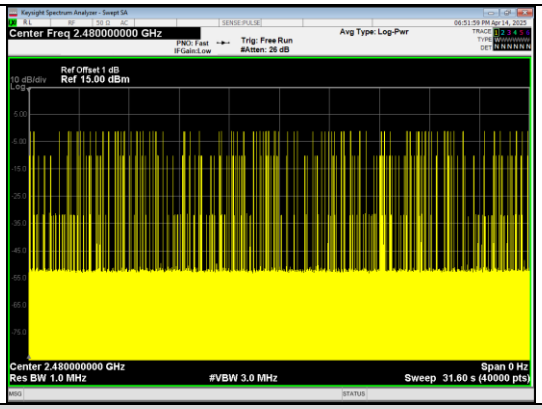
Test Result

Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH5	CH78 (2480MHz)	2.896	100	289.6	< 400	PASS
π/4DQPSK	2-DH5		2.880	105	302.4		PASS
8DPSK	3-DH5		2.880	111	319.68		PASS

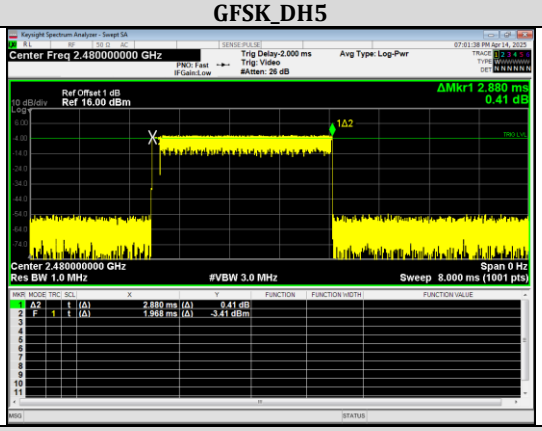
Test Graphs



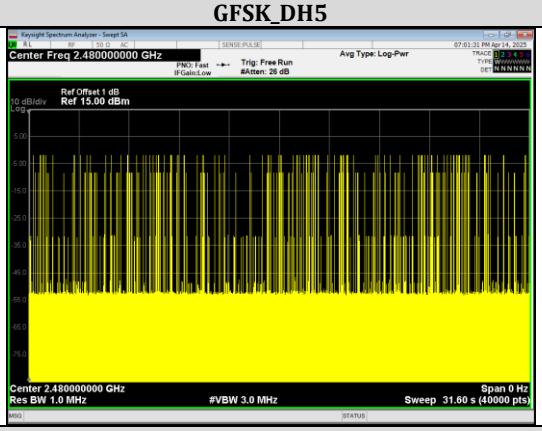
Pulse Width
GFSK_DH5



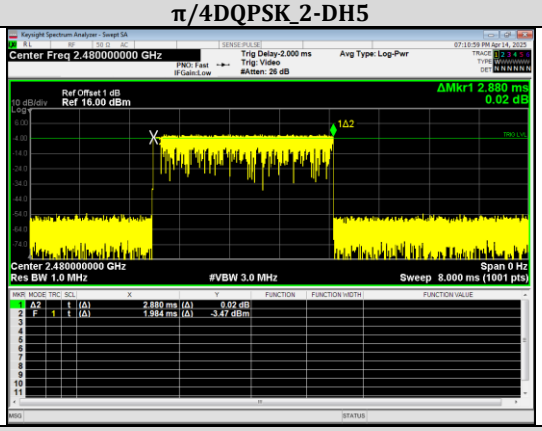
Number of Pulses in 31.6 seconds
GFSK_DH5



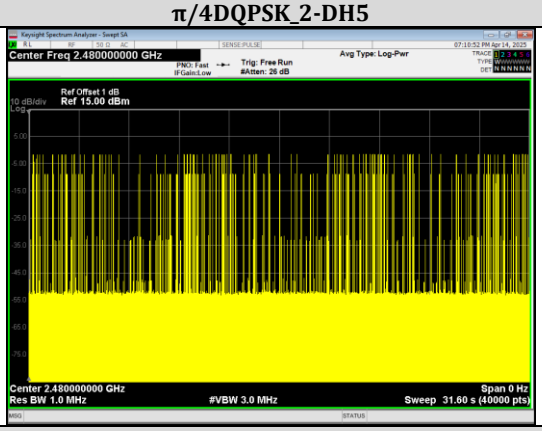
Pulse Width
π/4DQPSK_2-DH5



Number of Pulses in 31.6 seconds
π/4DQPSK_2-DH5



Pulse Width
8DPSK_3-DH5



Number of Pulses in 31.6 seconds
8DPSK_3-DH5

Conducted Out Of Band Emission

Test Result

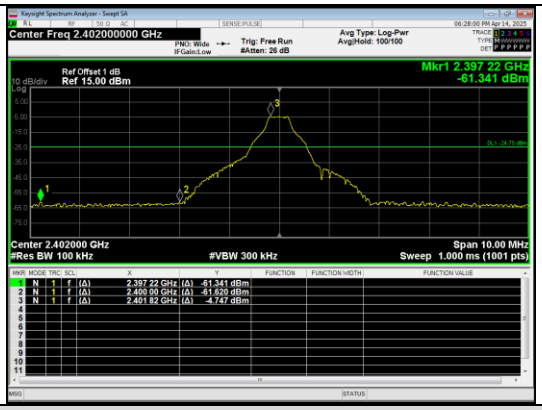
Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2397.22	-61.341	-24.75	-36.591	PASS
			2400.00	-61.620	-24.75	-36.870	PASS
			24930.7	-50.010	-24.75	-25.260	PASS
		39	24970.0	-50.318	-22.42	-27.898	PASS
		78	2483.50	-62.300	-20.96	-41.340	PASS
			24925.1	-49.447	-20.96	-28.487	PASS
π/4DQPSK	2-DH5	0	2398.24	-60.811	-24.94	-35.871	PASS
			2400.00	-60.923	-24.94	-35.983	PASS
			24946.3	-48.306	-24.94	-23.366	PASS
		39	24865.2	-49.967	-22.7	-27.267	PASS
		78	2483.50	-62.815	-21.17	-41.645	PASS
			24376.4	-49.550	-21.17	-28.380	PASS
8DPSK	3-DH5	0	2400.00	-61.249	-25.02	-36.229	PASS
			24420.7	-49.725	-25.02	-24.705	PASS
		39	24746.5	-49.781	-22.3	-27.481	PASS
		78	2483.50	-60.348	-20.76	-39.588	PASS
			24988.1	-48.973	-20.76	-28.213	PASS

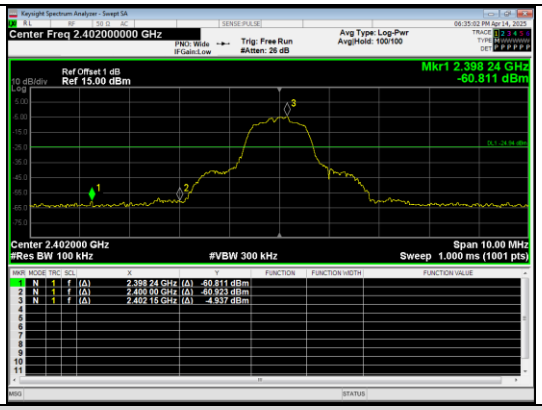
Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2396.15	-60.729	-25.86	-34.869	PASS
			2400.00	-61.827	-25.86	-35.967	PASS
			2483.50	-61.346	-21.44	-39.906	PASS
π/4DQPSK	2-DH5		2396.54	-61.251	-27.86	-33.391	PASS
			2400.00	-62.570	-27.86	-34.710	PASS
			2483.50	-62.764	-23.57	-39.194	PASS
8DPSK	3-DH5		2395.41	-60.988	-27.75	-33.238	PASS
			2400.00	-62.582	-27.75	-34.832	PASS
			2483.50	-63.085	-23.54	-39.545	PASS

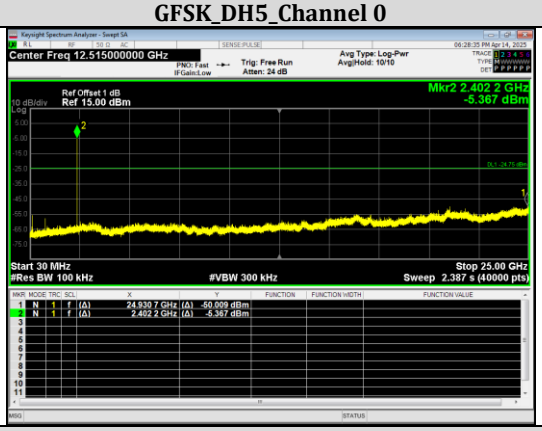
Test Graphs



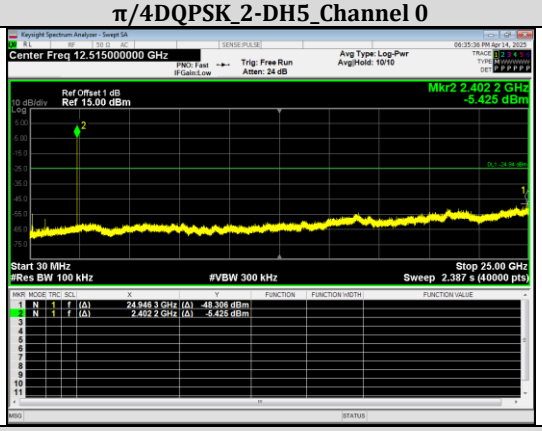
Out Of Band Emission
GFSK_DH5_Channel 0



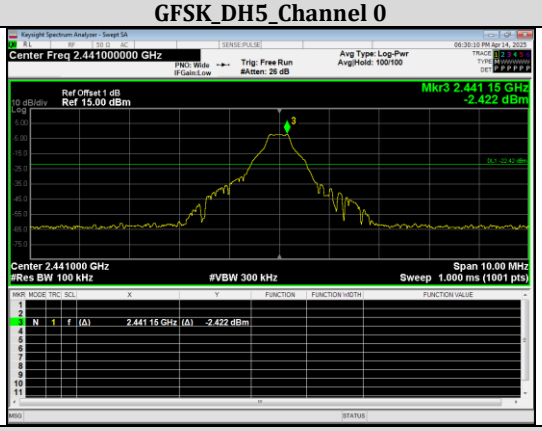
Out Of Band Emission
π/4DQPSK_2-DH5_Channel 0



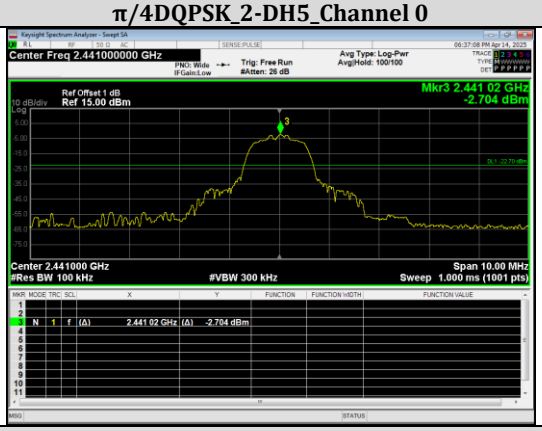
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 0



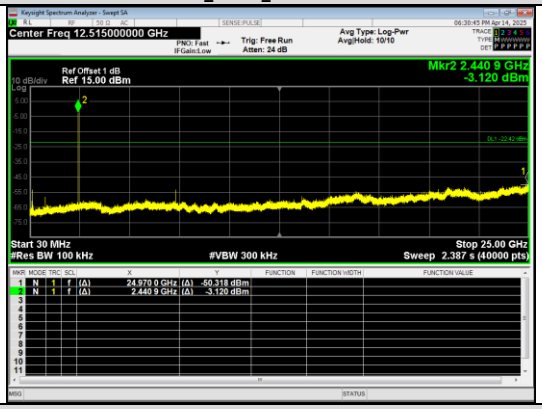
30.0 MHz - 25000.0 MHz
π/4DQPSK_2-DH5_Channel 0



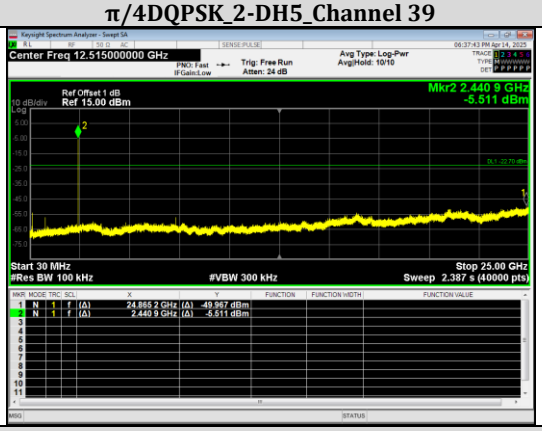
Out Of Band Emission
GFSK_DH5_Channel 39



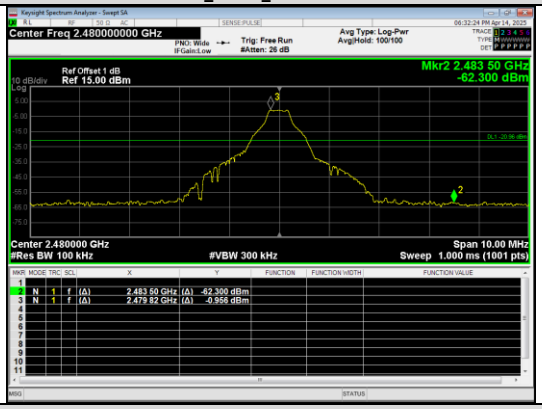
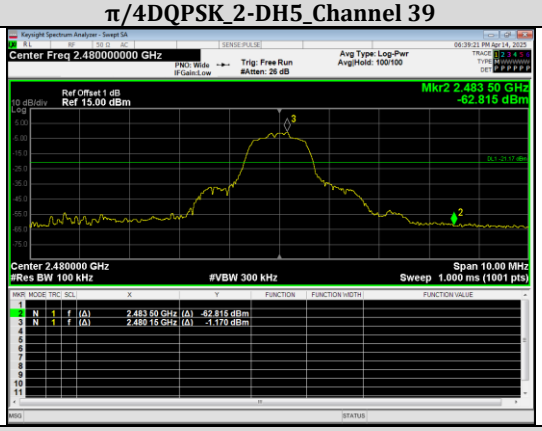
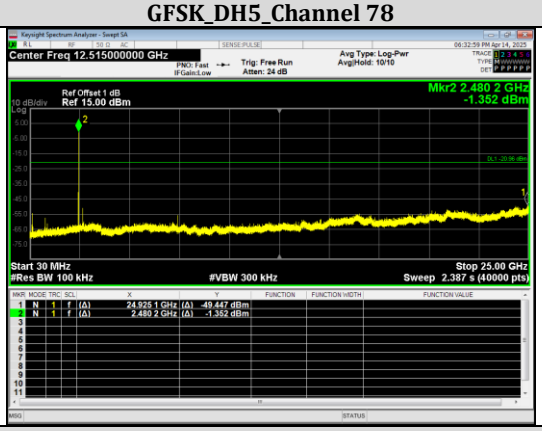
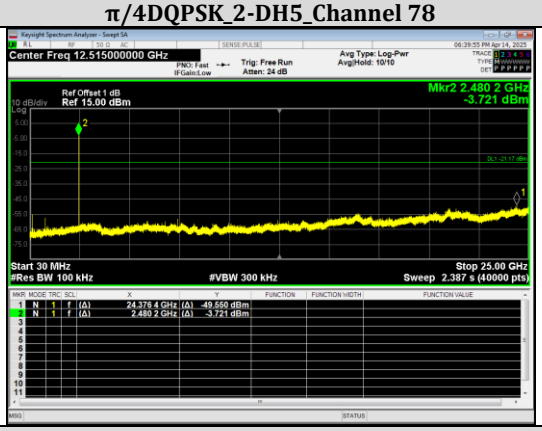
Out Of Band Emission
π/4DQPSK_2-DH5_Channel 39

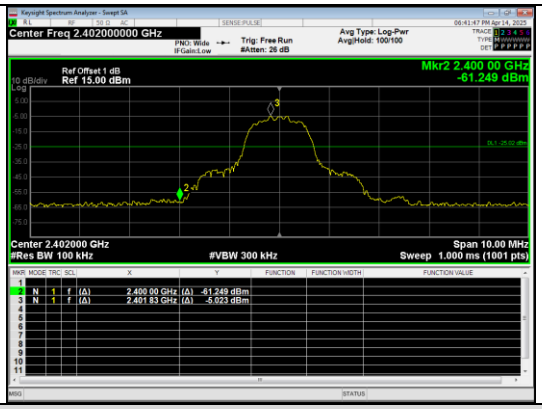
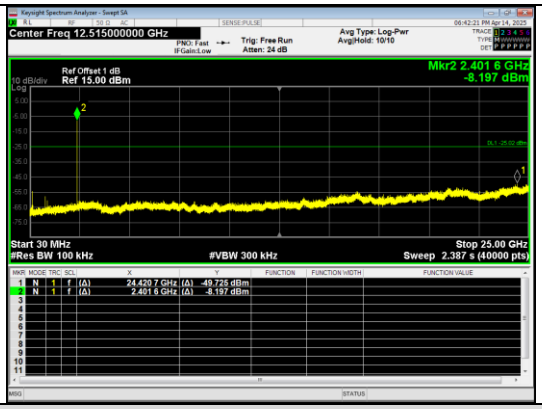


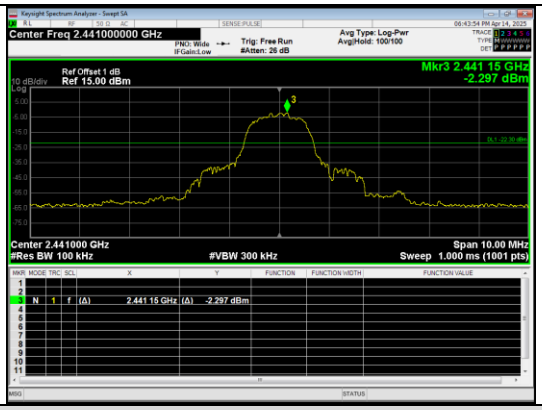
30.0 MHz - 25000.0 MHz



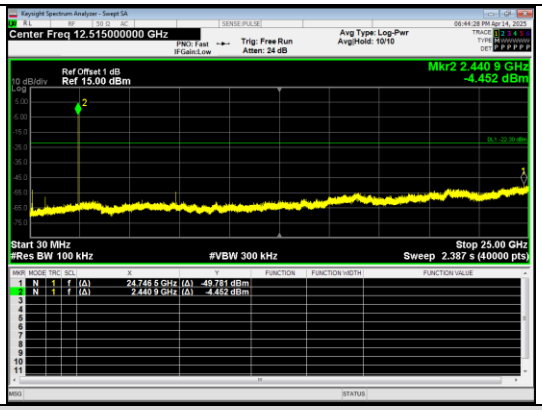
30.0 MHz - 25000.0 MHz

GFSK_DH5_Channel 39	π/4DQPSK_2-DH5_Channel 39
	
Out Of Band Emission GFSK_DH5_Channel 78	**Out Of Band Emission π/4DQPSK_2-DH5_Channel 78**
	
30.0 MHz - 25000.0 MHz GFSK_DH5_Channel 78	**30.0 MHz - 25000.0 MHz π/4DQPSK_2-DH5_Channel 78**

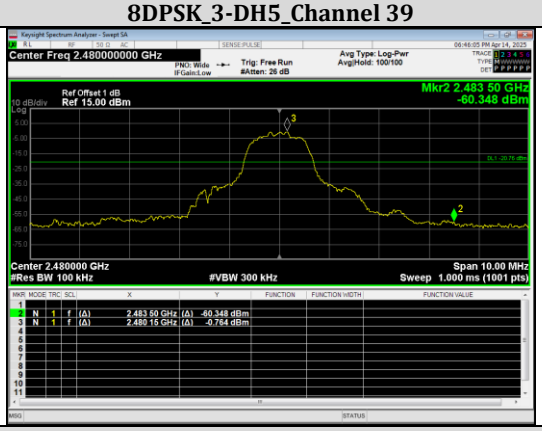
	
Out Of Band Emission 8DPSK_3-DH5_Channel 0	**30.0 MHz - 25000.0 MHz 8DPSK_3-DH5_Channel 0**



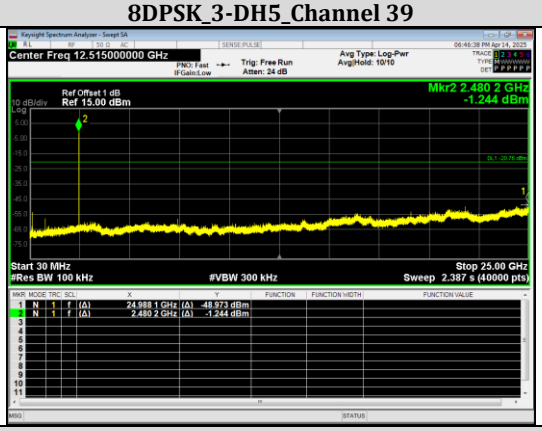
Out Of Band Emission
8DPSK_3-DH5_Channel 39



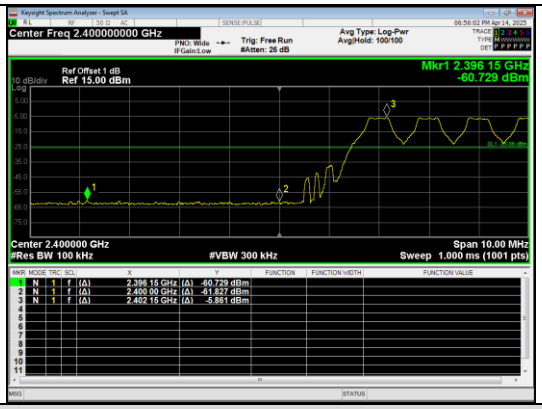
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 39



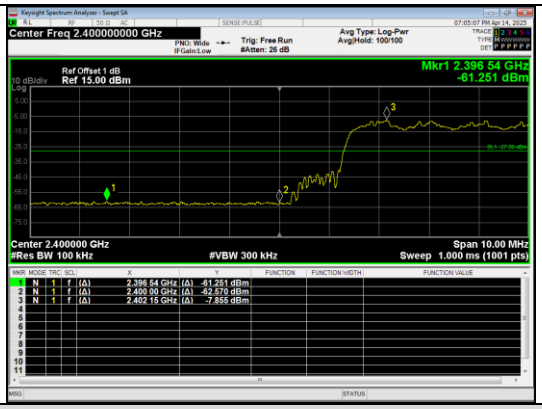
Out Of Band Emission
8DPSK_3-DH5_Channel 78



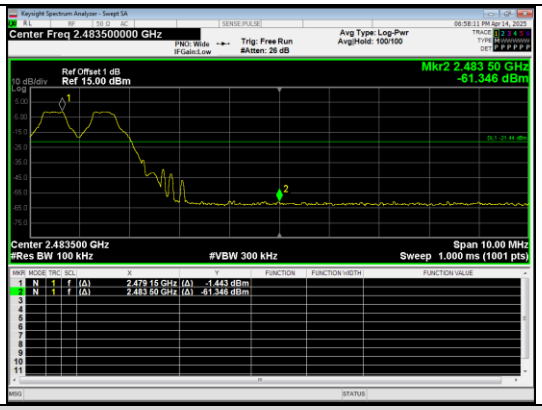
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 78



Out Of Band Emission(Left)
GFSK_DH5_Channel Hopping

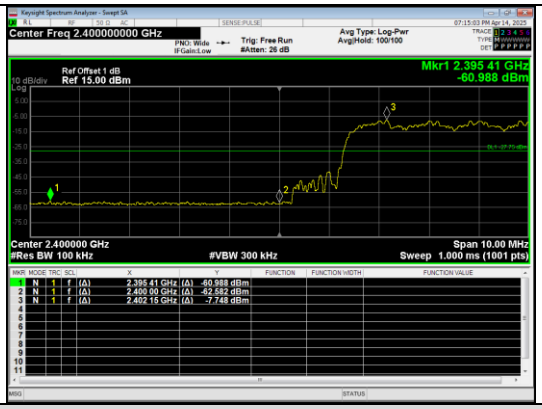


Out Of Band Emission(Left)
π/4DQPSK_2-DH5_Channel Hopping



Out Of Band Emission(Right)
GFSK_DH5_Channel Hopping

Out Of Band Emission(Right)
π/4DQPSK_2-DH5_Channel Hopping



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

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

********** End of Report **********