

Appendix RF test data for BT

Duty Cycle Test Result

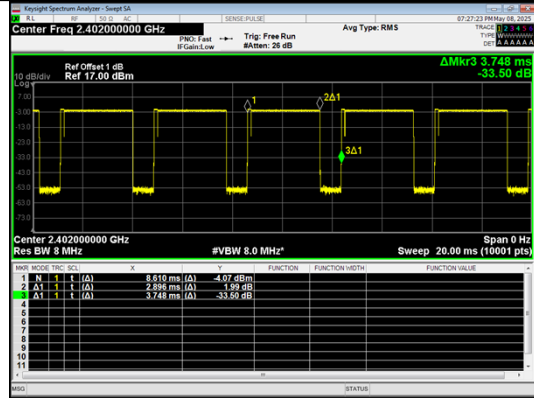
Modulation	Packets	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
GFSK	DH5	0	2.894	3.748	77.21	0.7721	1.1233	0.3455
		39	2.894	3.748	77.21	0.7721	1.1233	0.3455
		78	2.894	3.748	77.21	0.7721	1.1233	0.3455
$\pi/4$ DQPSK	2-DH5	0	2.884	3.748	76.95	0.7695	1.1379	0.3467
		39	2.884	3.748	76.95	0.7695	1.1379	0.3467
		78	2.898	3.748	77.32	0.7732	1.1171	0.3451
8DPSK	3-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	2.896	3.748	77.27	0.7727	1.1199	0.3453

Test Graphs

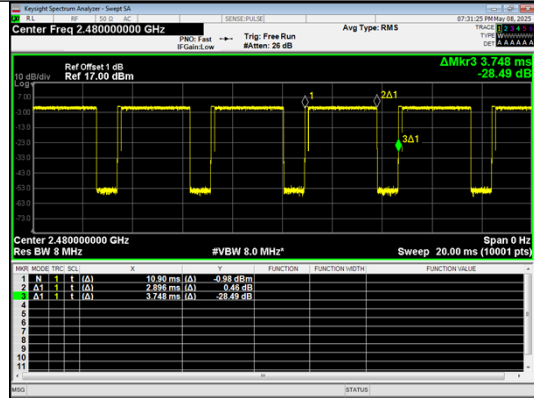




$\pi/4$ DQPSK(2-DH5)_Channel 39

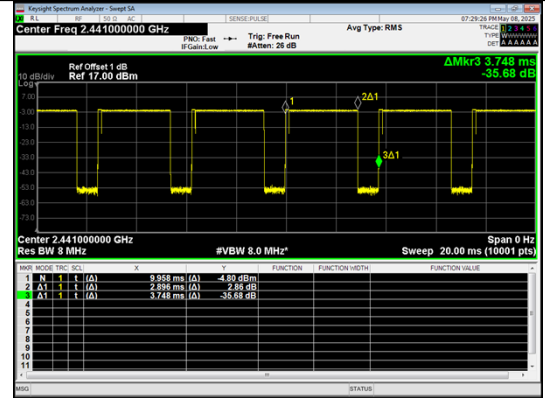


8DPSK(3-DH5)_Channel 0



8DPSK(3-DH5)_Channel 78

$\pi/4$ DQPSK(2-DH5)_Channel 78

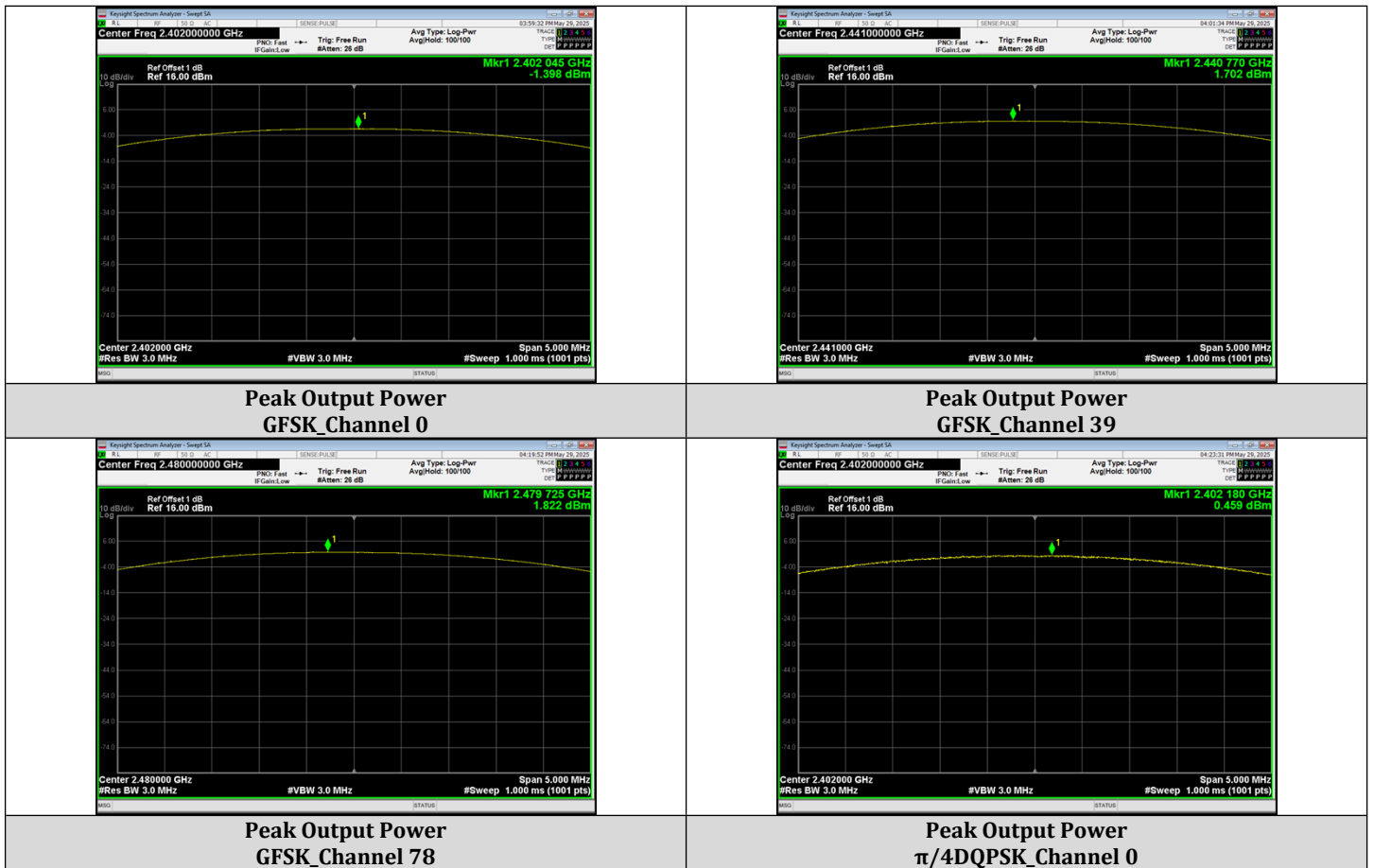


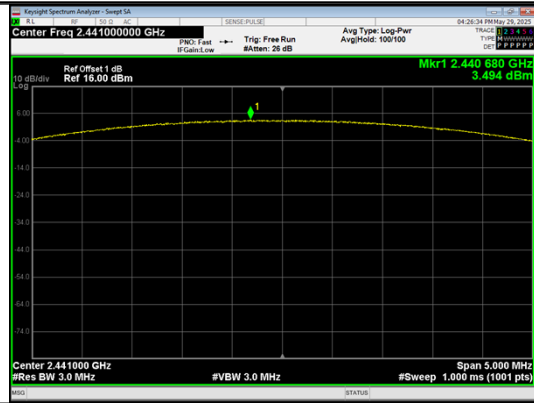
8DPSK(3-DH5)_Channel 39

Conducted Output Power Test Result

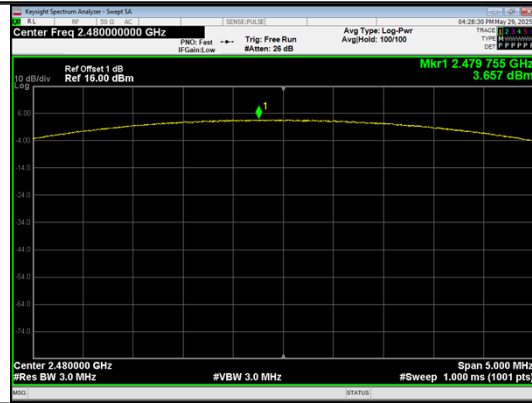
Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
GFSK	DH5	0	-1.40	0.72	≤30	PASS
		39	1.70	1.48		PASS
		78	1.82	1.52		PASS
$\pi/4$ DQPSK	2-DH5	0	0.46	1.11	≤20.97	PASS
		39	3.49	2.24		PASS
		78	3.66	2.32		PASS
8DPSK	3-DH5	0	0.96	1.25		PASS
		39	3.89	2.45		PASS
		78	4.01	2.52		PASS

Test Graphs

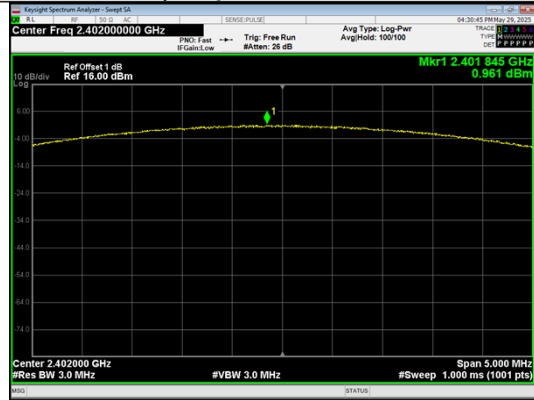




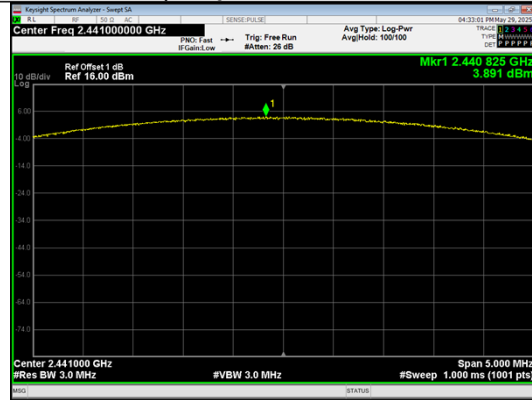
**Peak Output Power
 $\pi/4$ DQPSK_Channel 39**



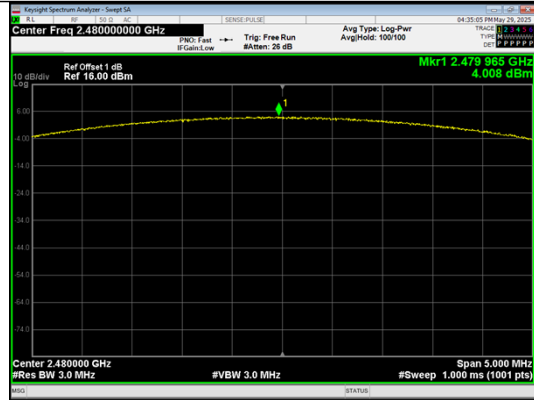
**Peak Output Power
 $\pi/4$ DQPSK_Channel 78**



**Peak Output Power
8DPSK_Channel 0**



**Peak Output Power
8DPSK_Channel 39**

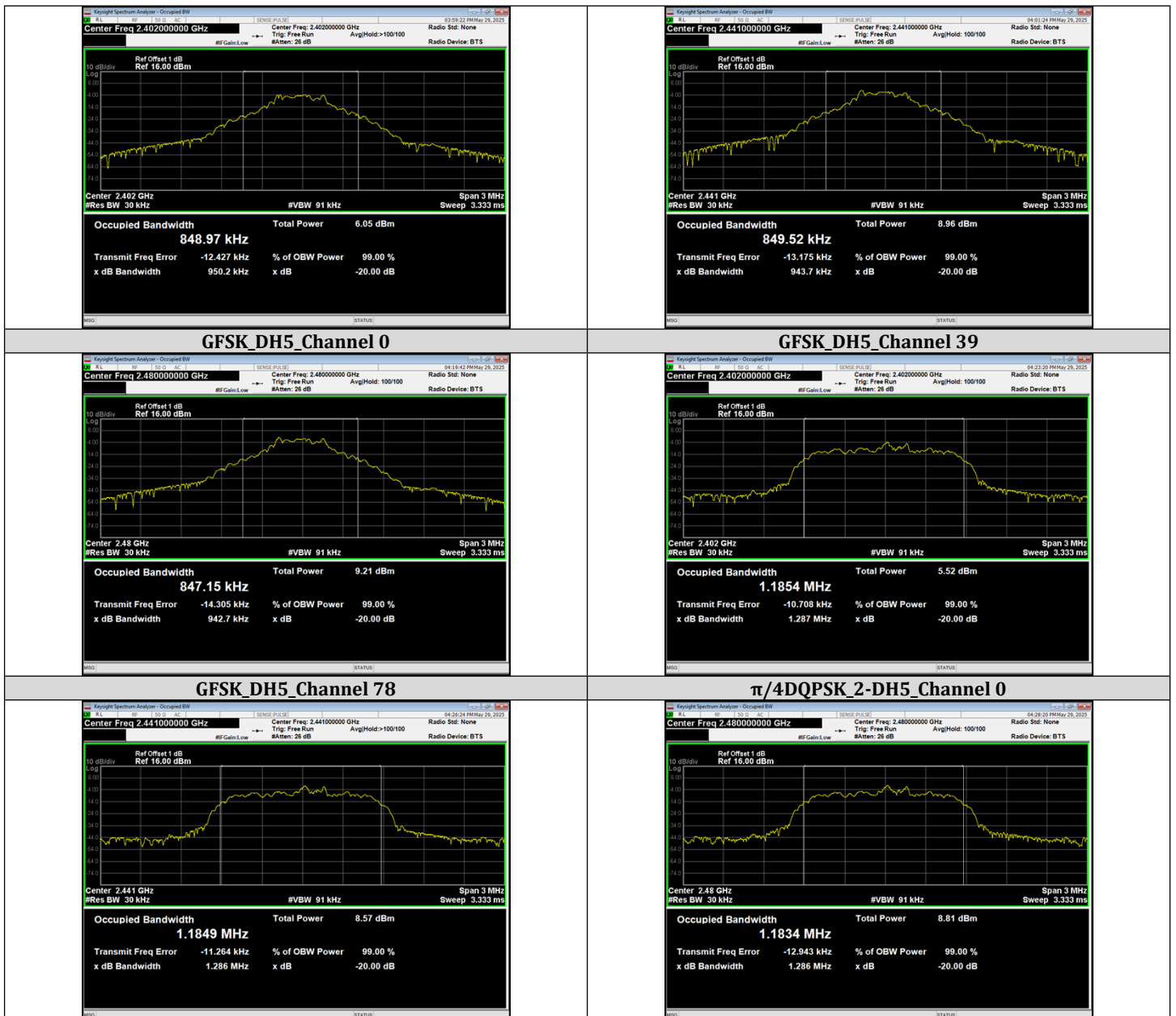


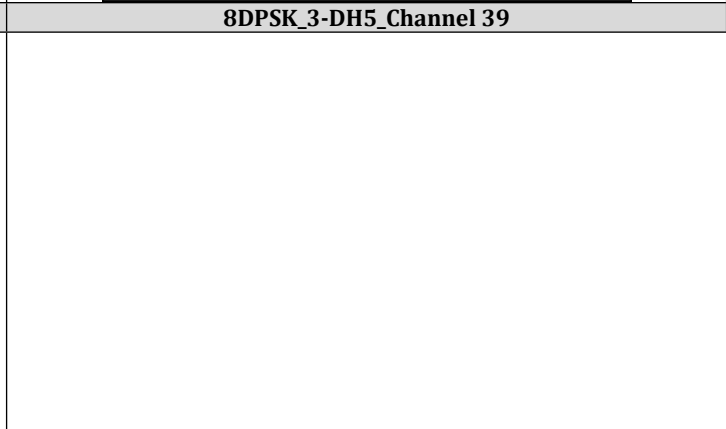
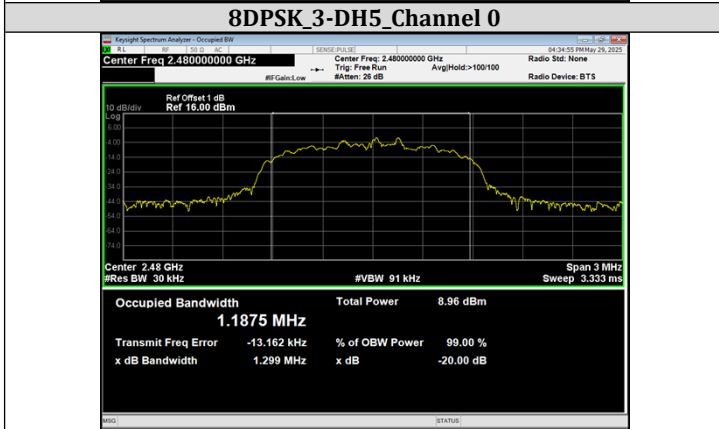
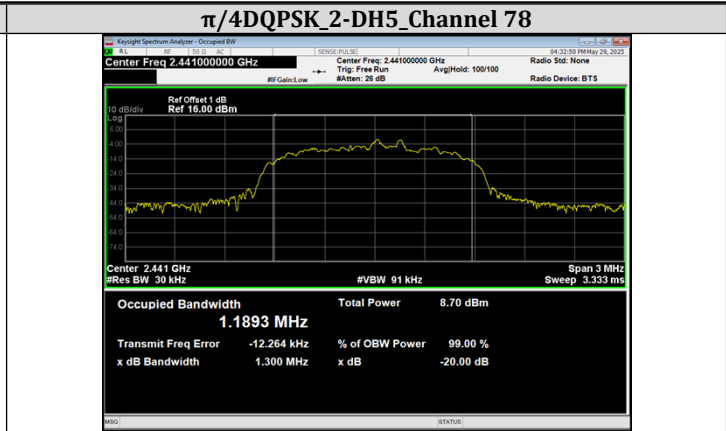
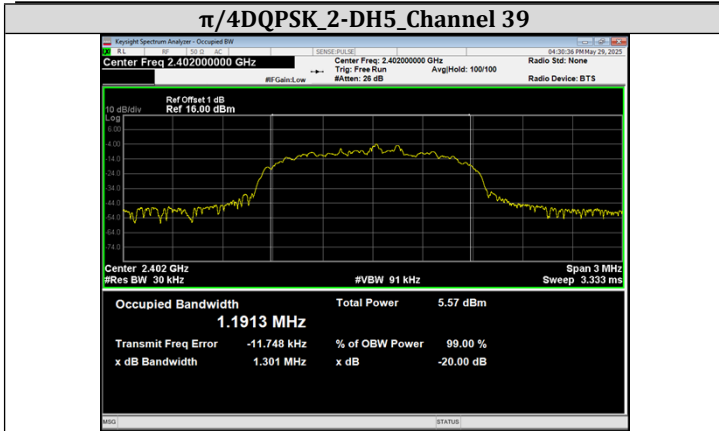
**Peak Output Power
8DPSK_Channel 78**

20dB Bandwidth & 99% Bandwidth Test Result

Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)
GFSK	0	2402 MHz	0.9502	0.84897
	39	2441 MHz	0.9437	0.84952
	78	2480 MHz	0.9427	0.84715
$\pi/4$ DQPSK	0	2402 MHz	1.287	1.1854
	39	2441 MHz	1.286	1.1849
	78	2480 MHz	1.286	1.1834
8DPSK	0	2402 MHz	1.301	1.1913
	39	2441 MHz	1.300	1.1893
	78	2480 MHz	1.299	1.1875

Test Graphs





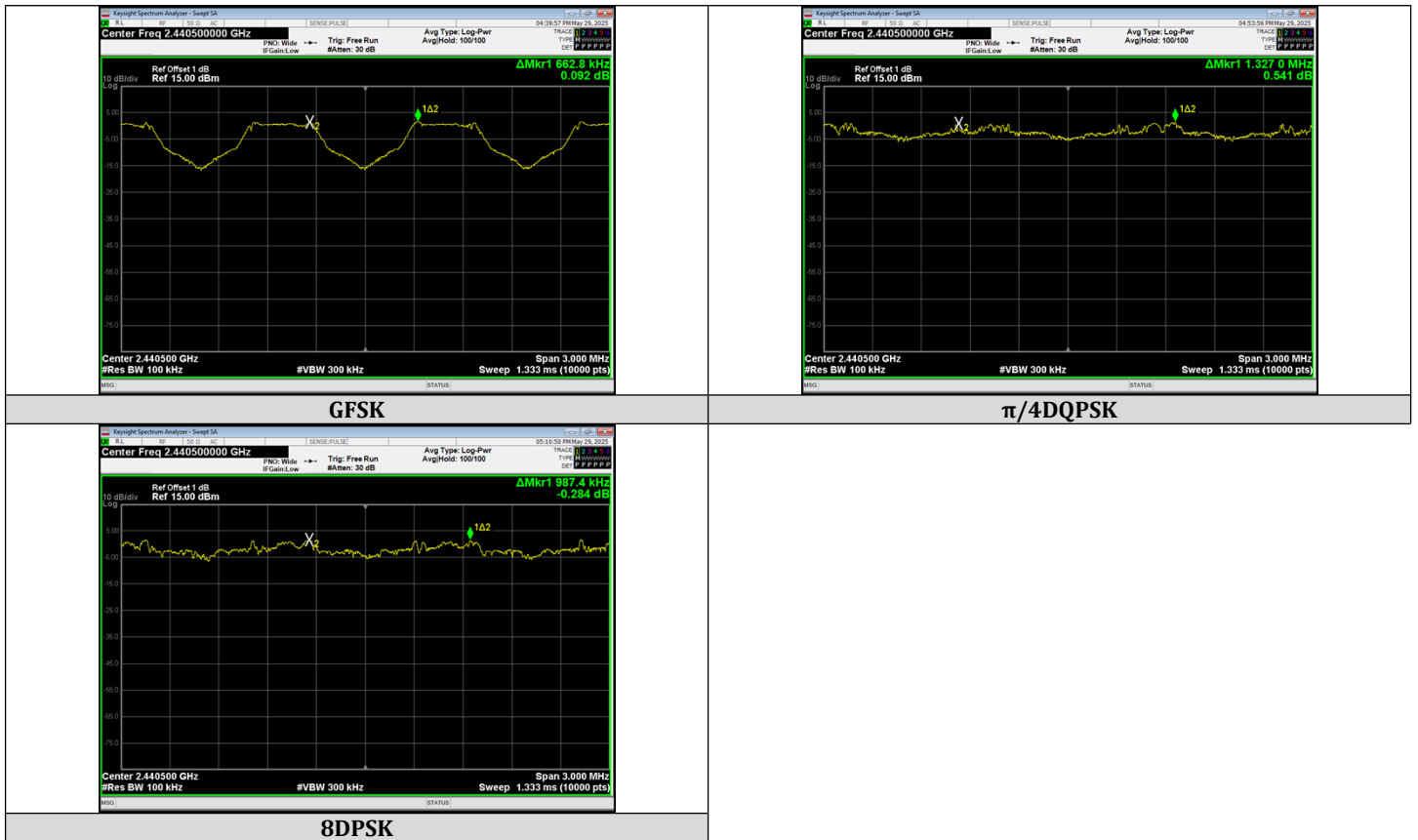
8DPSK_3-DH5_Channel 78

Carrier Frequencies Separation

Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2440.1599	2440.8227	0.6628	0.633	PASS
$\pi/4$ DQPSK	2-DH5	2439.8299	2441.1569	1.3270	0.858	PASS
8DPSK	3-DH5	2440.156	2441.1434	0.9874	0.867	PASS

Test Graphs



Number Of Hopping Channel

Test Result

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

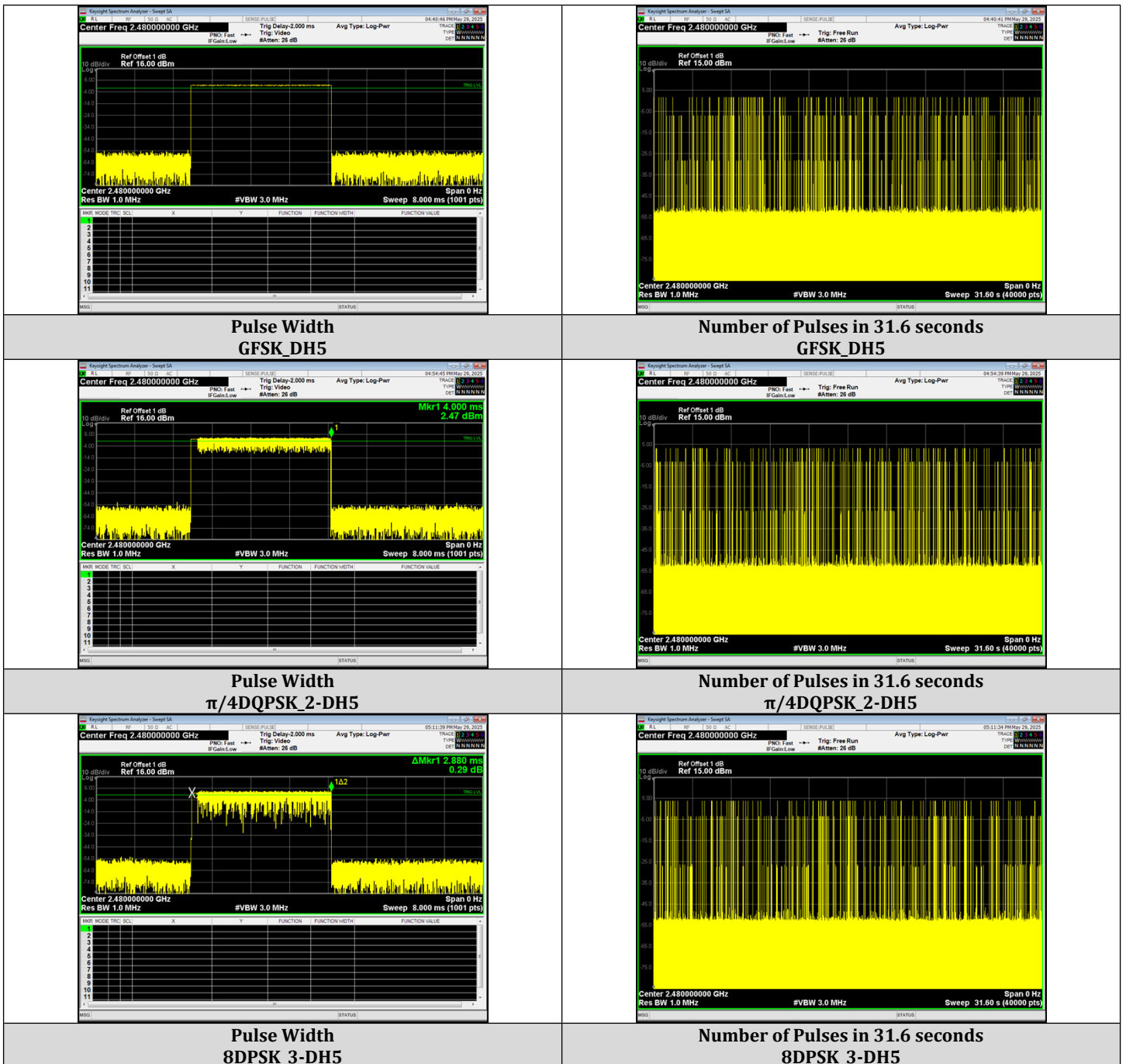
Test Graphs



**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	116	335.94	< 400	PASS
$\pi/4$ DQPSK	2-DH5		2.896	107	309.87		PASS
8DPSK	3-DH5		2.880	98	282.24		PASS

Test Graphs



Conducted Out Of Band Emission Test Result

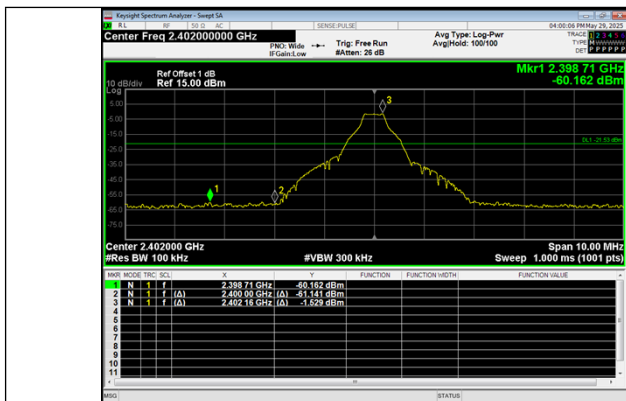
Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2398.71	-60.163	-21.53	-38.633	PASS
			2400.00	-61.141	-21.53	-39.611	PASS
			24985.0	-49.946	-21.53	-28.416	PASS
		78	24310.2	-50.332	-18.63	-31.702	PASS
			2483.50	-60.747	-18.4	-42.347	PASS
			24955.0	-50.383	-18.4	-31.983	PASS
π /4DQPSK	2-DH5	0	2398.46	-60.882	-21.7	-39.182	PASS
			2400.00	-61.280	-21.7	-39.580	PASS
			24932.6	-49.770	-21.7	-28.070	PASS
		39	24889.5	-49.173	-18.88	-30.293	PASS
			2483.50	-60.498	-18.45	-42.048	PASS
			24931.3	-49.859	-18.45	-31.409	PASS
8DPSK	3-DH5	0	2400.00	-60.239	-21.55	-38.689	PASS
			24955.0	-49.791	-21.55	-28.241	PASS
		39	24947.6	-48.671	-18.57	-30.101	PASS
			2483.50	-61.907	-18.4	-43.507	PASS
		78	24421.3	-49.527	-18.4	-31.127	PASS

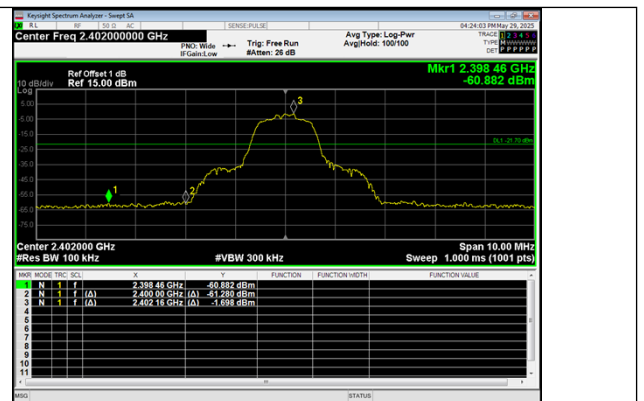
Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2396.29	-60.742	-21.25	-39.492	PASS
			2400.00	-61.761	-21.25	-40.511	PASS
			2483.50	-62.243	-18.16	-44.083	PASS
π /4DQPSK	2-DH5		2400.00	-60.673	-21.31	-39.363	PASS
			2483.50	-61.969	-18.04	-43.929	PASS
8DPSK	3-DH5		2400.00	-61.208	-21.24	-39.968	PASS
		2483.50	-61.345	-17.88	-43.465	PASS	

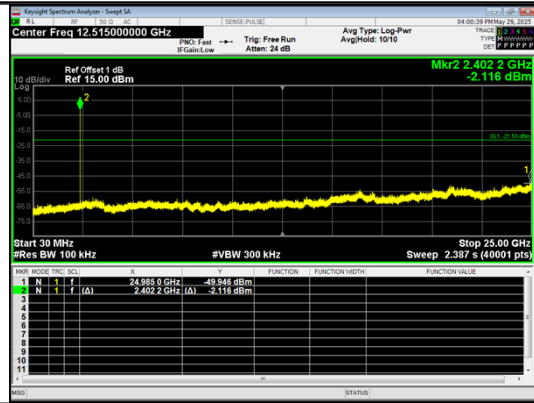
Test Graphs



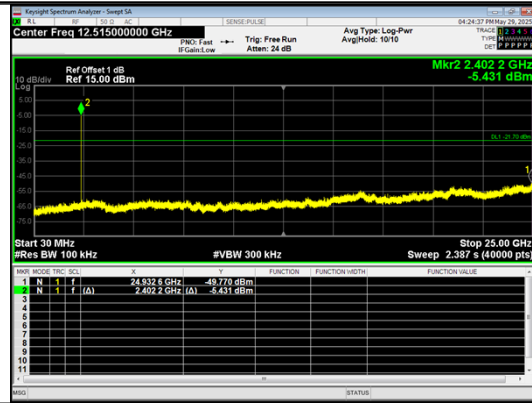
Out Of Band Emission
GFSK_DH5_Channel 0



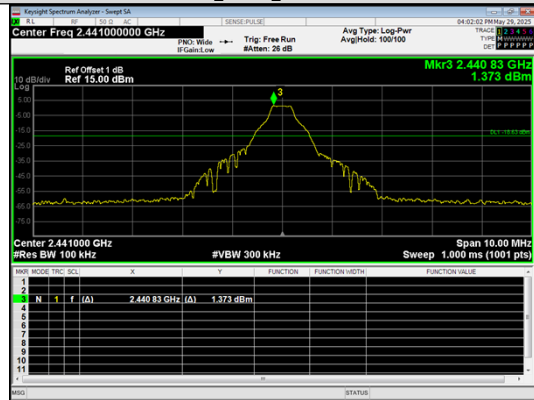
Out Of Band Emission
 π /4DQPSK_2-DH5_Channel 0



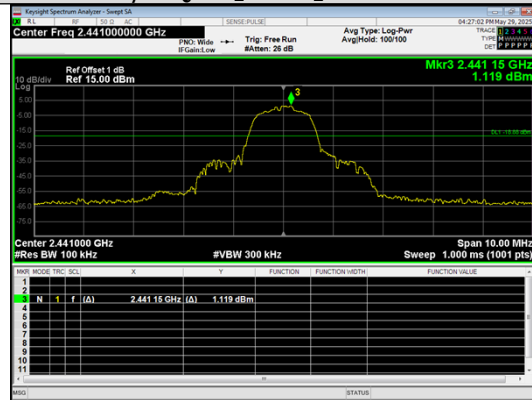
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 0



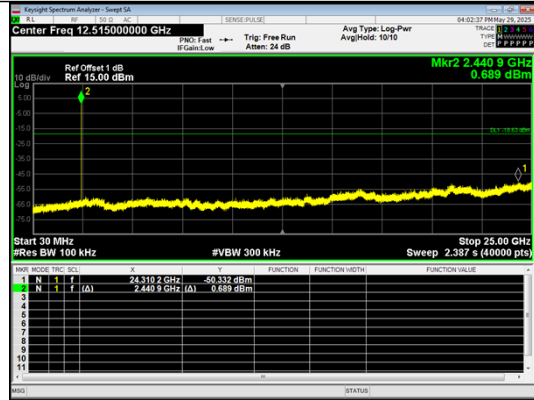
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 0



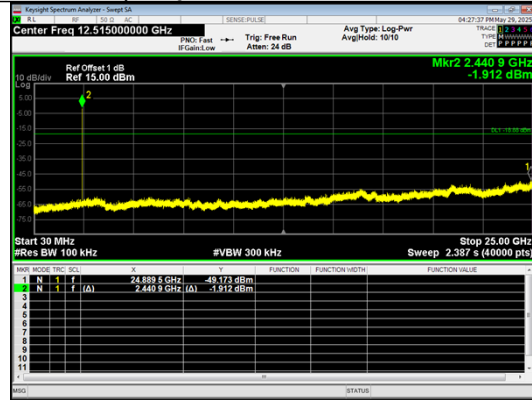
Out Of Band Emission
GFSK_DH5_Channel 39



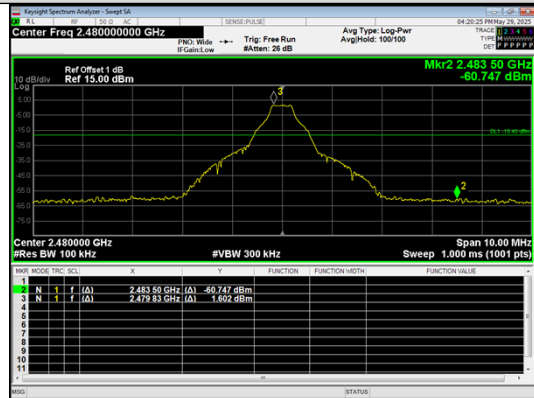
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 39



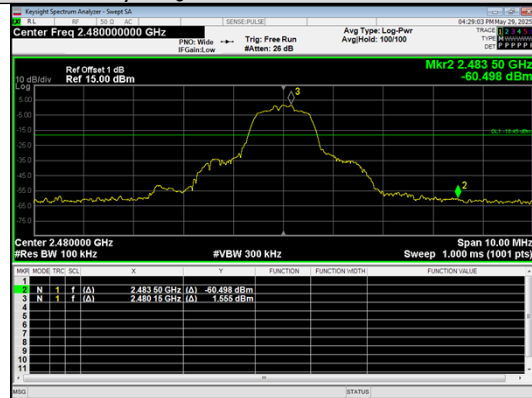
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 39



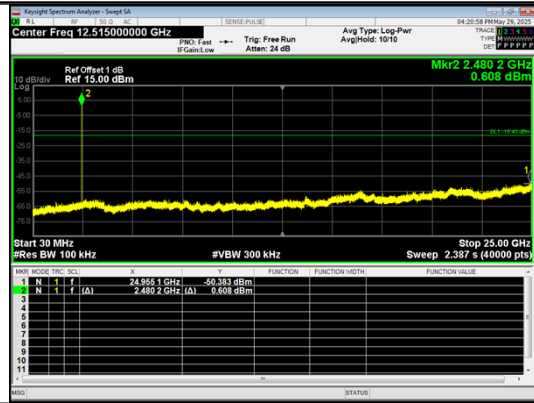
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 39



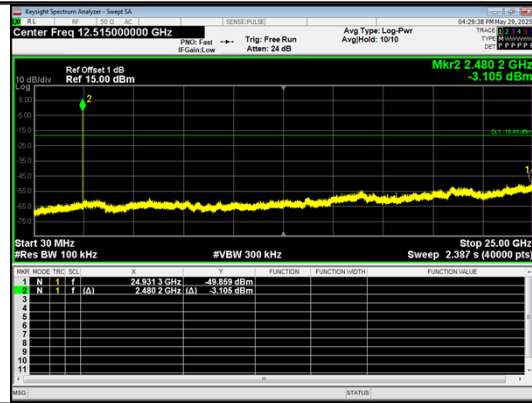
Out Of Band Emission
GFSK_DH5_Channel 78



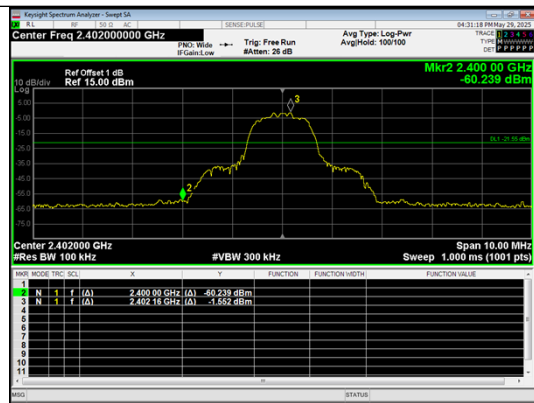
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 78



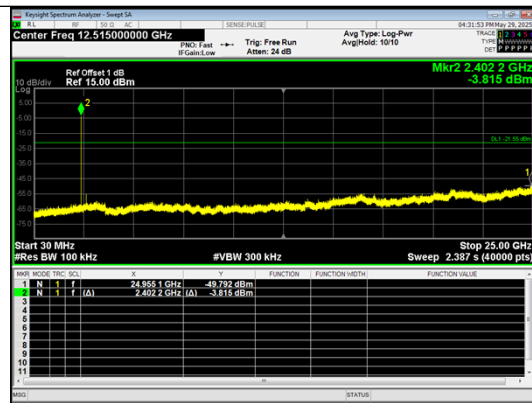
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 78



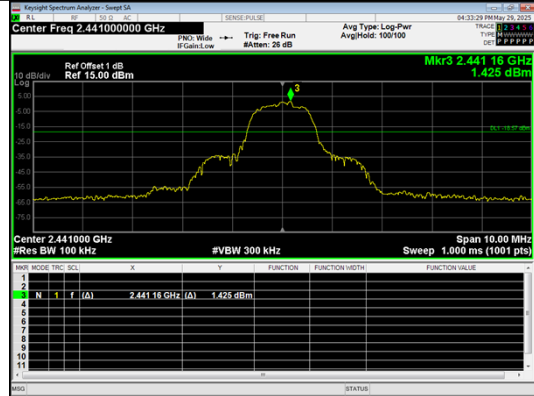
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 78



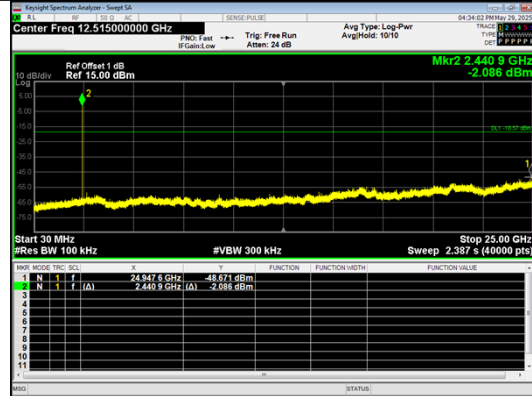
Out Of Band Emission
8DPSK_3-DH5_Channel 0



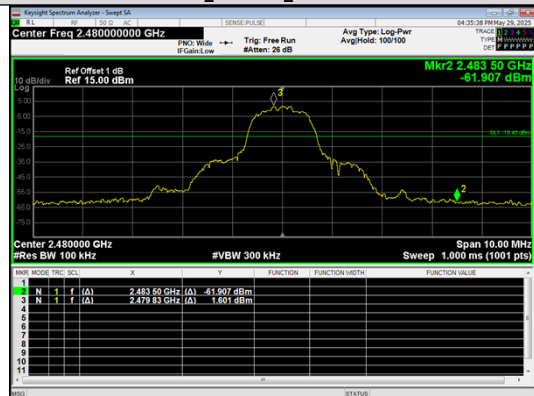
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 0



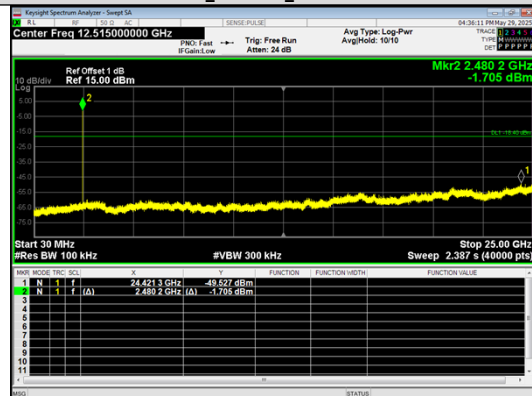
Out Of Band Emission
8DPSK_3-DH5_Channel 39



30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 39



Out Of Band Emission
8DPSK_3-DH5_Channel 39

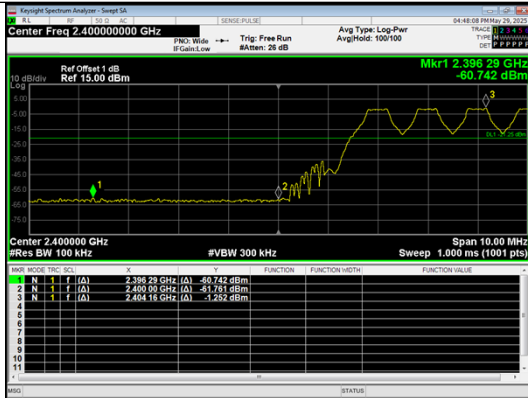


30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 39



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)
 $\pi/4$ 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

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