

Appendix RF test data for BT

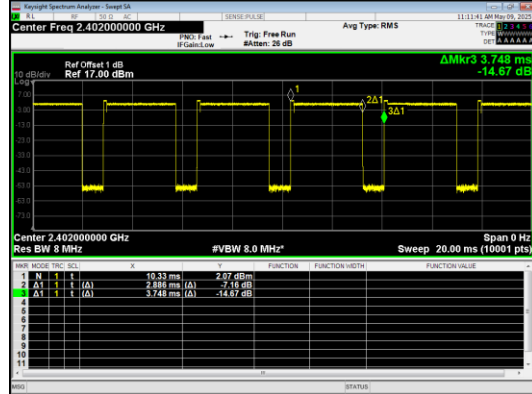
Duty Cycle Test Result

Modulation	Packets	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
GFSK	DH5	0	2.880	3.748	76.84	0.7684	1.1441	0.3472
		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
$\pi/4$ 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	2.884	3.748	76.95	0.7695	1.1379	0.3467
8DPSK	3-DH5	0	2.886	3.748	77.00	0.7700	1.1351	0.3465
		39	2.886	3.748	77.00	0.7700	1.1351	0.3465
		78	2.886	3.748	77.00	0.7700	1.1351	0.3465

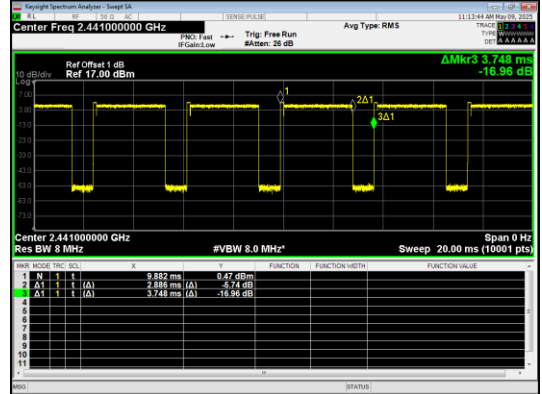
Test Graphs



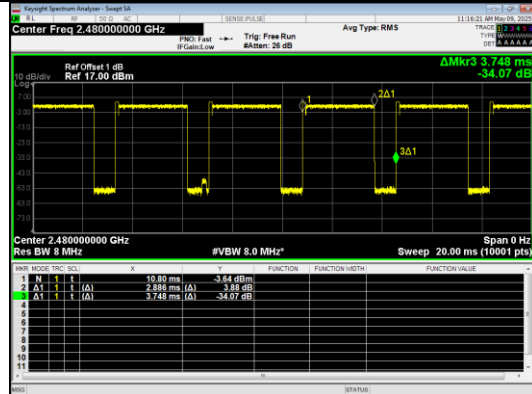
$\pi/4$ DQPSK(2-DH5)_Channel 39



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



8DPSK(3-DH5)_Channel 0



8DPSK(3-DH5)_Channel 39

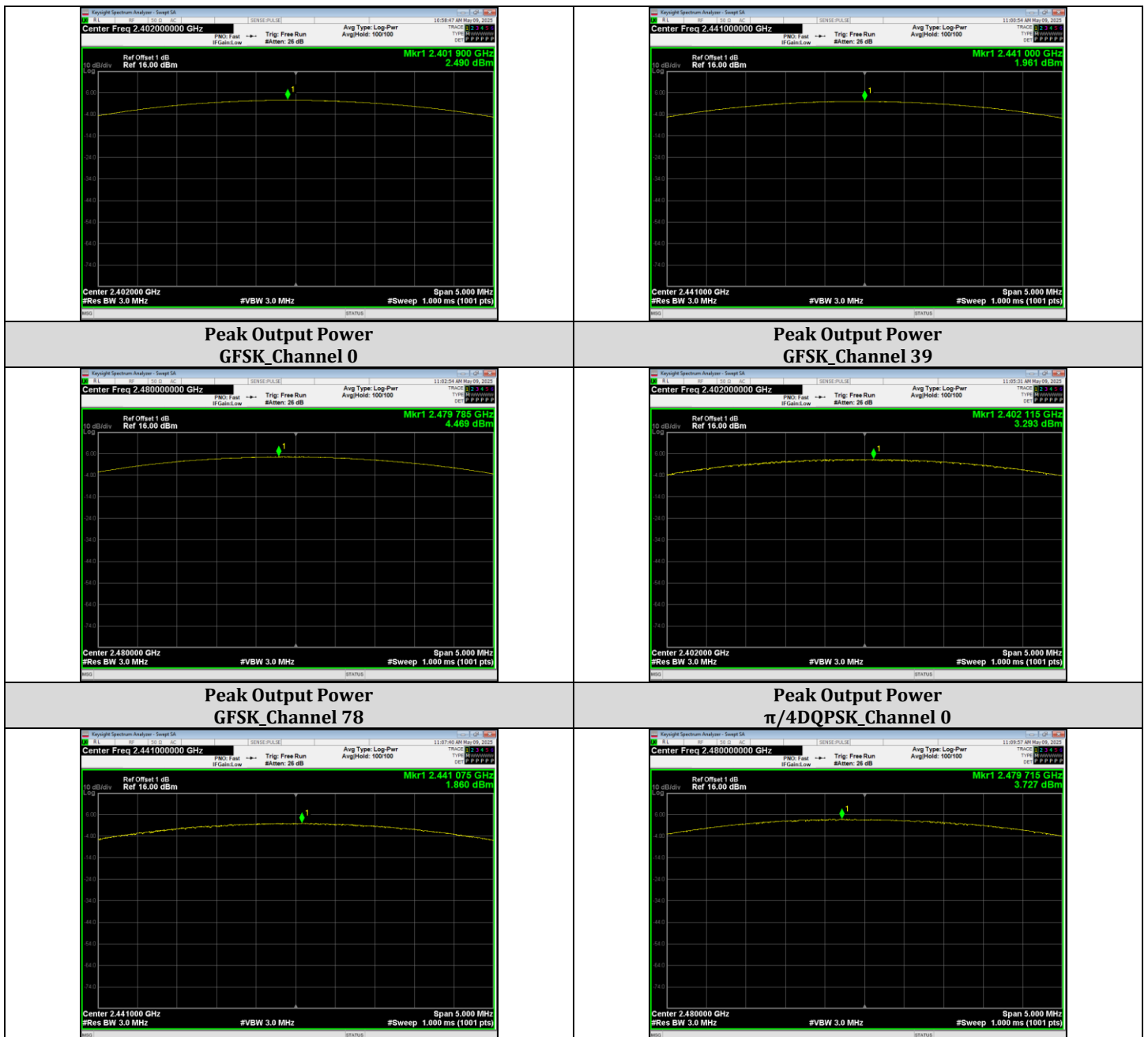
8DPSK(3-DH5)_Channel 78

Conducted Output Power

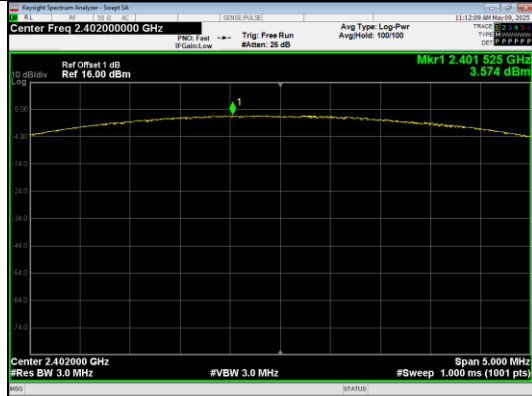
Test Result

Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Max. Avg. Power (dBm)	Limit (dBm)	Result
GFSK	DH5	0	2.49	1.77	1.68	≤30	PASS
		39	1.96	1.57	1.21		PASS
		78	4.47	2.80	4.05		PASS
$\pi/4$ DQPSK	2-DH5	0	3.29	2.13	0.21	≤20.97	PASS
		39	1.86	1.53	-1.22		PASS
		78	3.73	2.36	0.66		PASS
8DPSK	3-DH5	0	3.57	2.28	0.79	≤20.97	PASS
		39	2.31	1.70	-0.47		PASS
		78	4.05	2.54	1.03		PASS

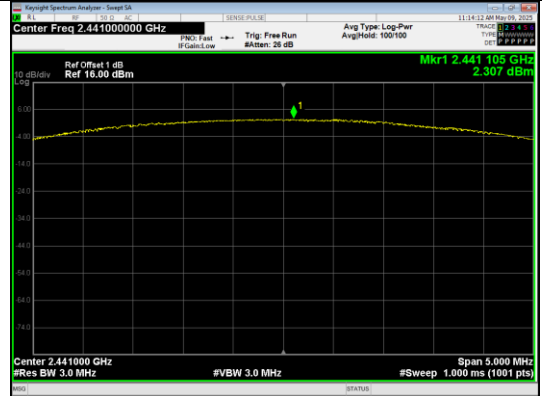
Test Graphs



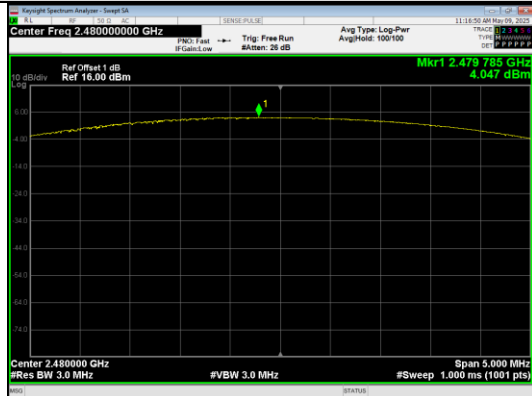
Peak Output Power $\pi/4$ DQPSK_Channel 39



Peak Output Power $\pi/4$ DQPSK_Channel 78

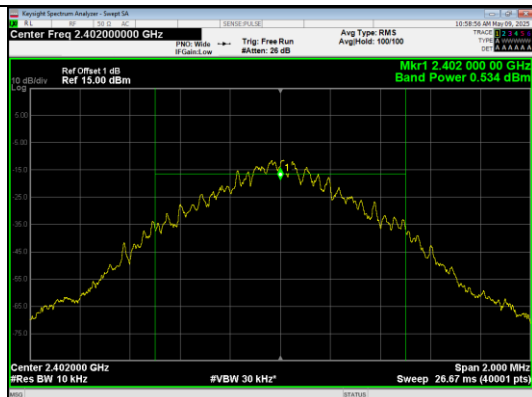


Peak Output Power 8DPSK_Channel 0

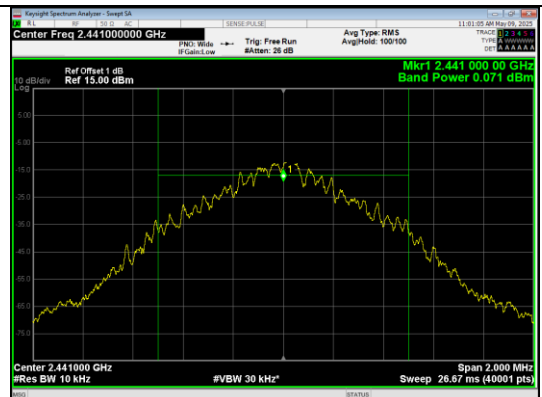


Peak Output Power 8DPSK_Channel 39

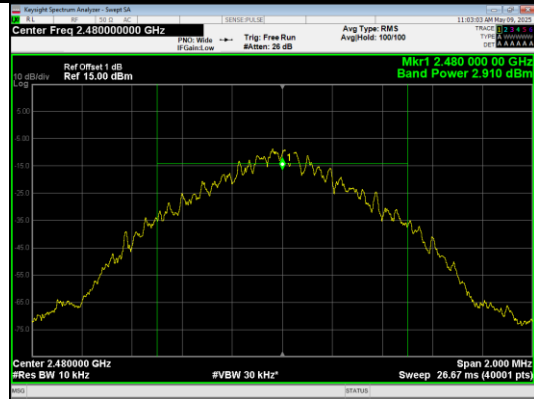
Peak Output Power 8DPSK_Channel 78



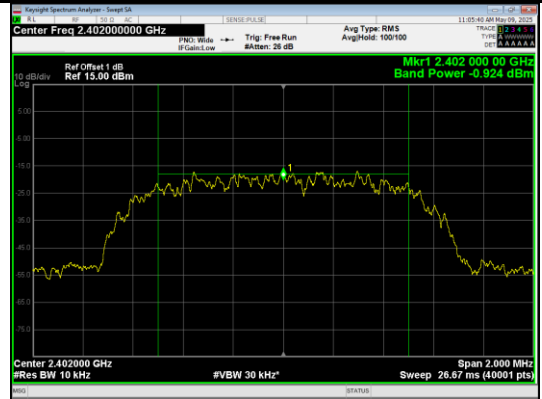
Average Output Power GFSK_Channel 0



Average Output Power GFSK_Channel 39



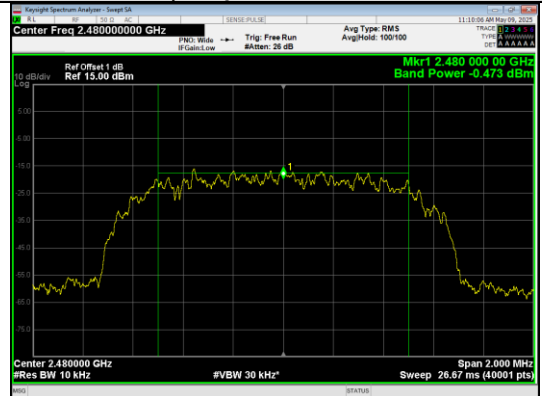
**Average Output Power
GFSK_Channel 78**



**Average Output Power
 $\pi/4$ DQPSK_Channel 0**



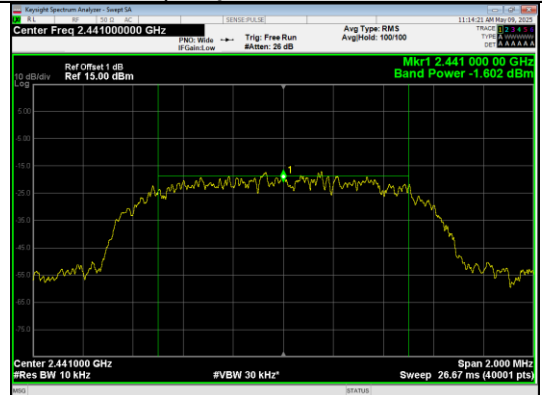
**Average Output Power
 $\pi/4$ DQPSK_Channel 39**



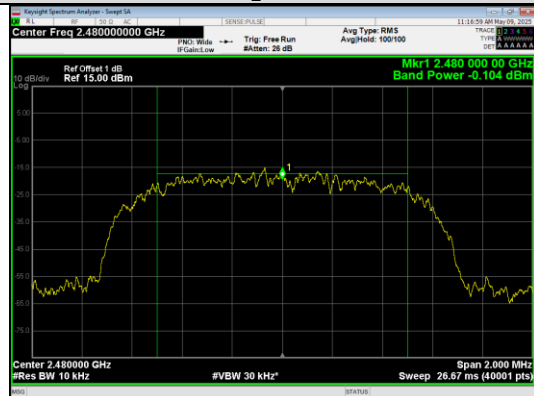
**Average Output Power
 $\pi/4$ DQPSK_Channel 78**



**Average Output Power
8DPSK_Channel 0**



**Average Output Power
8DPSK_Channel 39**



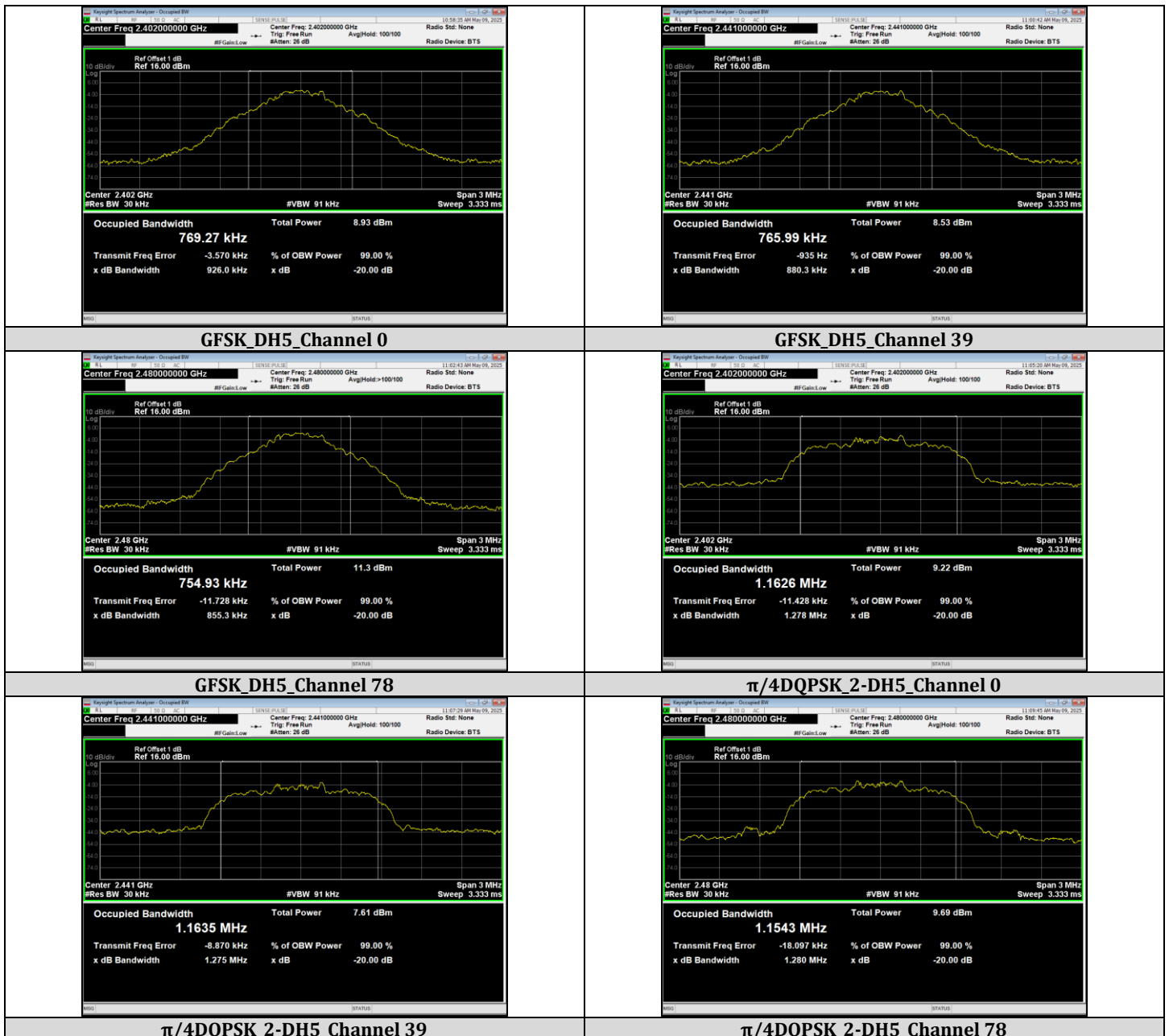
**Average Output Power
8DPSK_Channel 78**

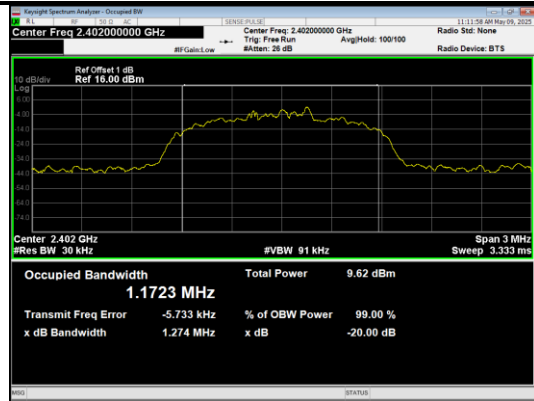
20dB Bandwidth

Test Result

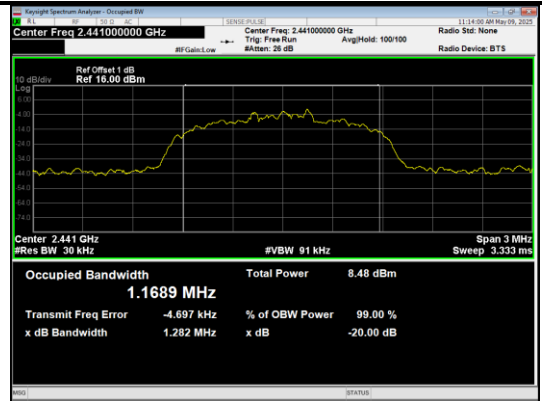
Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	0.9260
	39	2441 MHz	0.8803
	78	2480 MHz	0.8553
$\pi/4$ DQPSK	0	2402 MHz	1.278
	39	2441 MHz	1.275
	78	2480 MHz	1.280
8DPSK	0	2402 MHz	1.274
	39	2441 MHz	1.282
	78	2480 MHz	1.278

Test Graphs

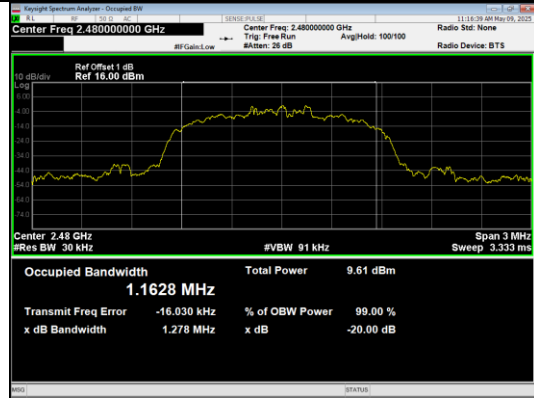




8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



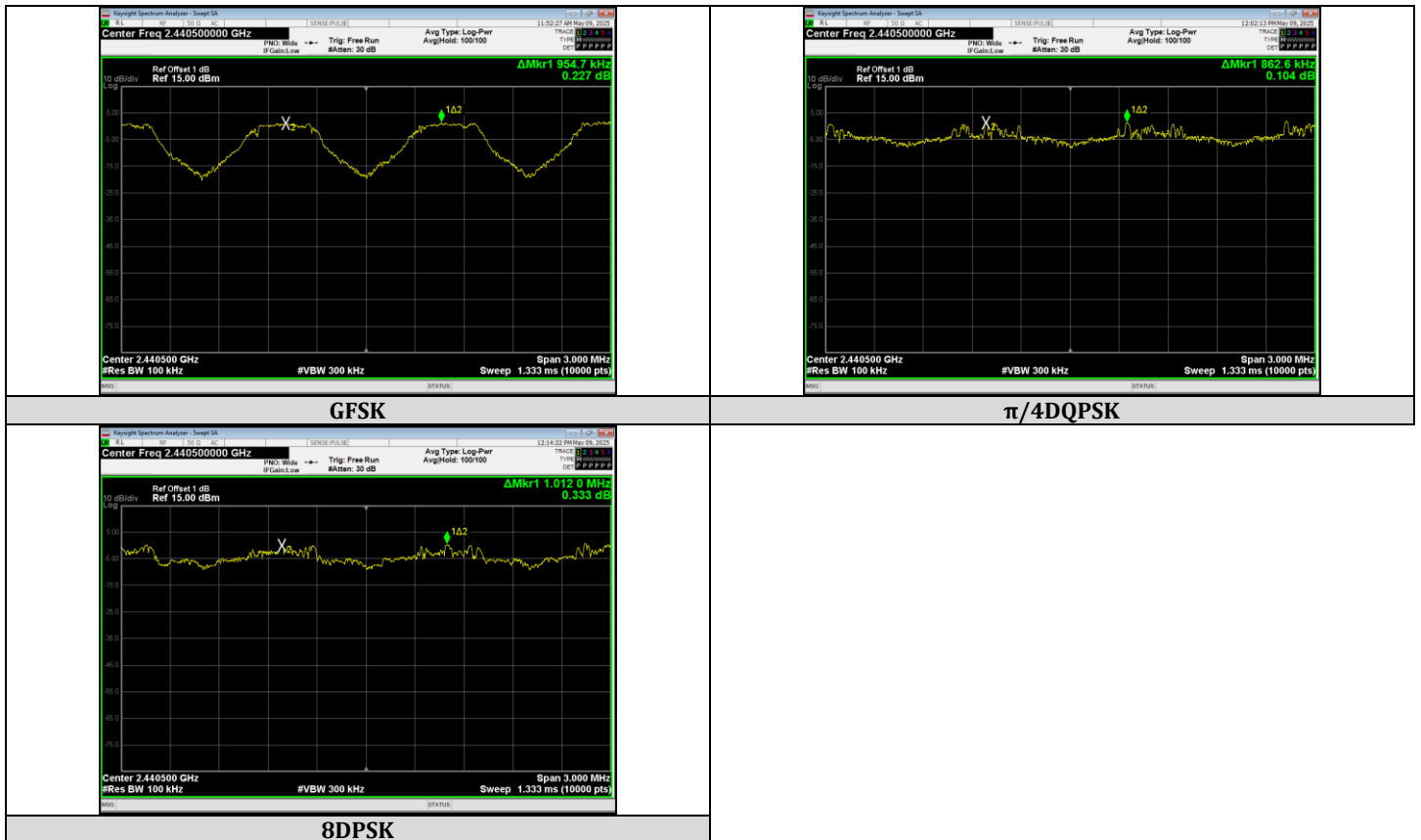
8DPSK_3-DH5_Channel 78

Carrier Frequencies Separation

Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2440.0069	2440.9616	0.9547	0.617	PASS
$\pi/4$ DQPSK	2-DH5	2439.9835	2440.8461	0.8626	0.853	PASS
8DPSK	3-DH5	2439.9835	2440.9955	1.0120	0.855	PASS

Test Graphs

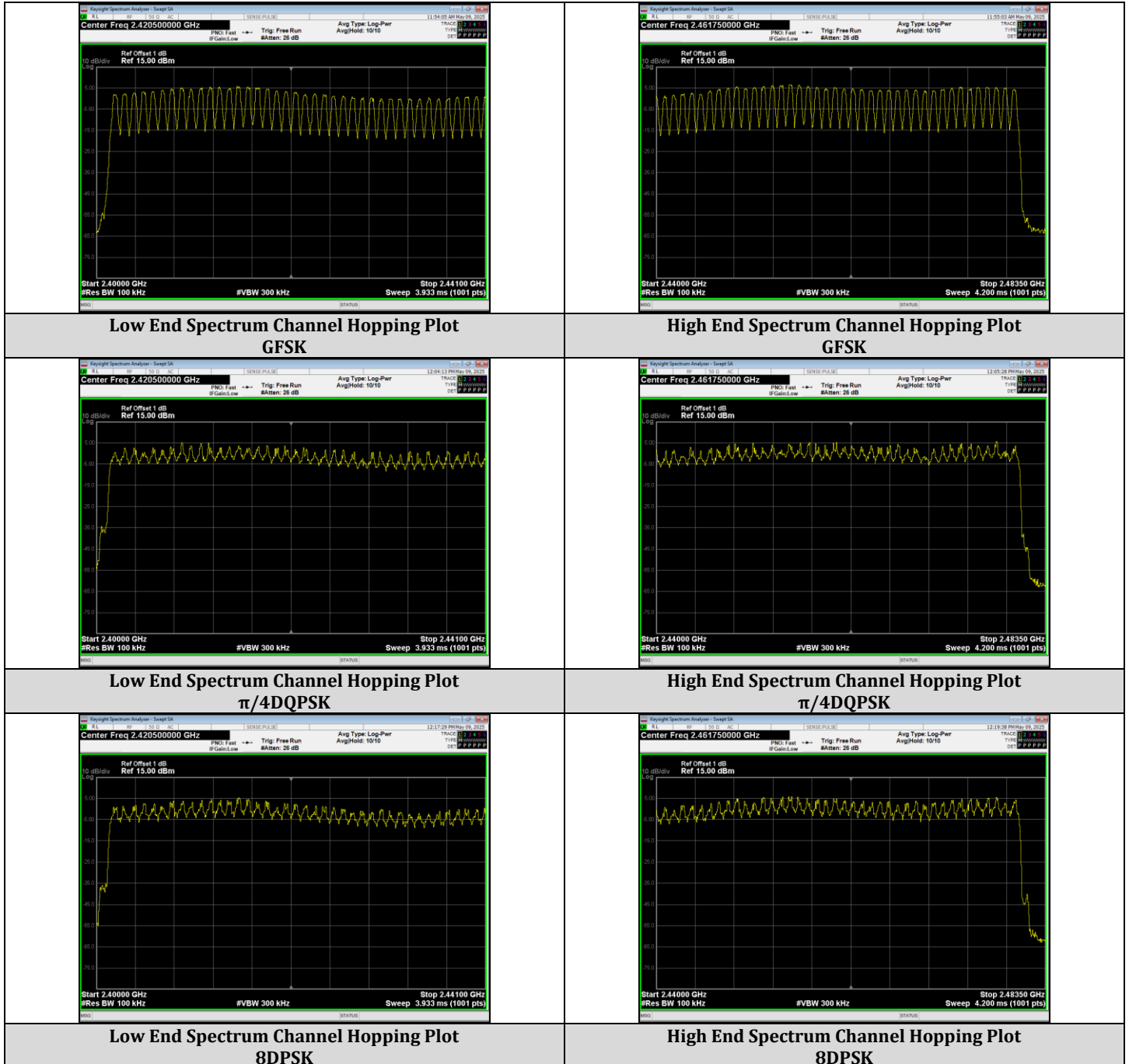


Number Of Hopping Channel

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)	2.880	96	276.48	< 400	PASS
$\pi/4$ DQPSK	2-DH5		2.880	102	293.76		PASS
8DPSK	3-DH5		2.896	103	298.29		PASS

Test Graphs



Conducted Out Of Band Emission

Test Result

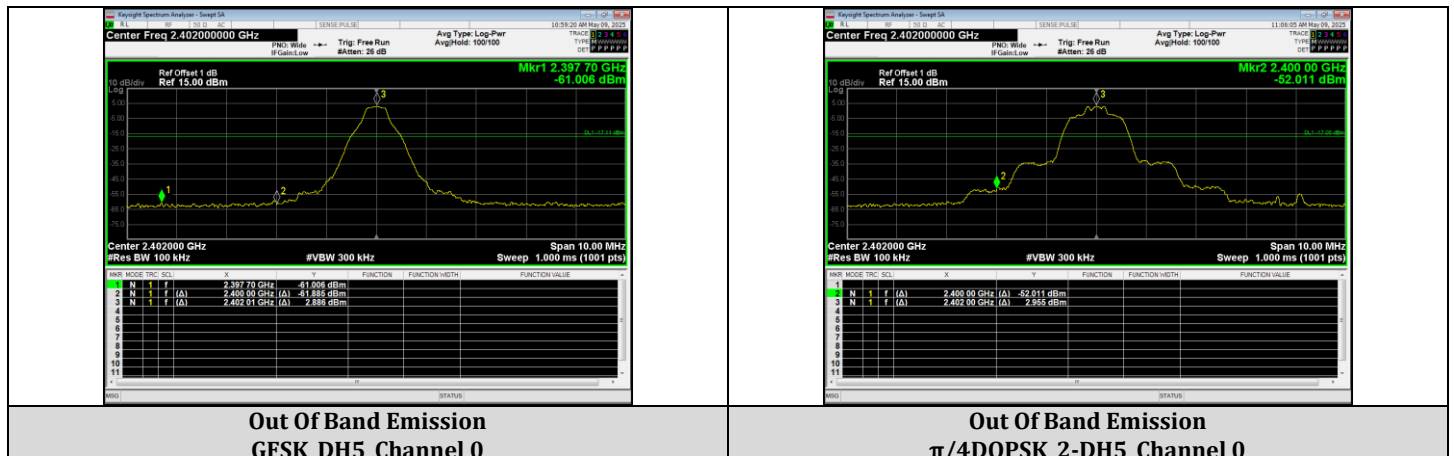
Non-Hopping

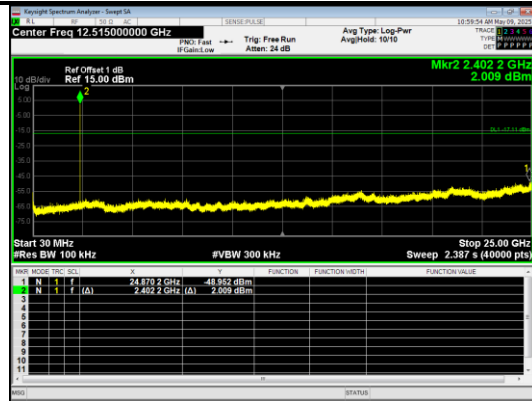
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2397.70	-61.006	-17.11	-43.896	PASS
			2400.00	-61.885	-17.11	-44.775	PASS
			24870.2	-48.952	-17.11	-31.842	PASS
		39	2671.27	-42.783	-18.32	-24.463	PASS
		78	2483.50	-60.797	-15.63	-45.167	PASS
			2669.39	-38.717	-15.63	-23.087	PASS
$\pi/4$ DQPSK	2-DH5	0	2400.00	-52.011	-17.05	-34.961	PASS
			2645.05	-32.862	-17.05	-15.812	PASS
		39	2612.59	-21.166	-18.67	-2.496	PASS
		78	2483.50	-63.264	-16.2	-47.064	PASS
			24953.2	-49.257	-16.2	-33.057	PASS
		78	2483.50	-63.264	-16.2	-47.064	PASS
8DPSK	3-DH5	0	2400.00	-52.262	-16.75	-35.512	PASS
			24646.0	-49.793	-16.75	-33.043	PASS
		39	2630.07	-32.736	-17.93	-14.806	PASS
		78	2483.50	-61.428	-16.07	-45.358	PASS
			24993.8	-49.706	-16.07	-33.636	PASS
		78	2483.50	-61.428	-16.07	-45.358	PASS

Hopping

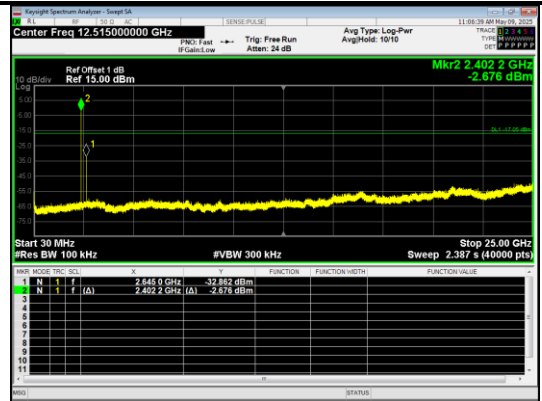
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2400.00	-60.006	-16.75	-43.256	PASS
			2483.50	-62.222	-14.71	-47.512	PASS
$\pi/4$ DQPSK	2-DH5		2400.00	-54.322	-17.24	-37.082	PASS
			2483.50	-61.768	-15.67	-46.098	PASS
8DPSK	3-DH5		2400.00	-53.201	-17.47	-35.731	PASS
			2483.50	-62.437	-14.58	-47.857	PASS

Test Graphs

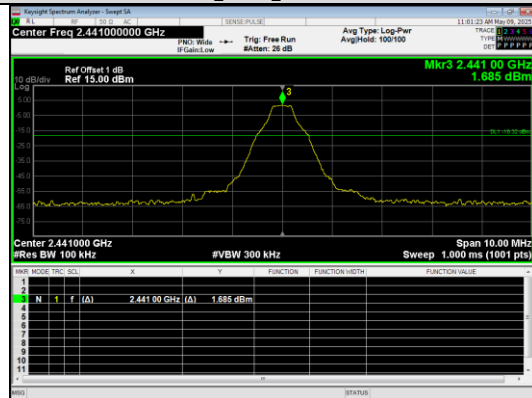




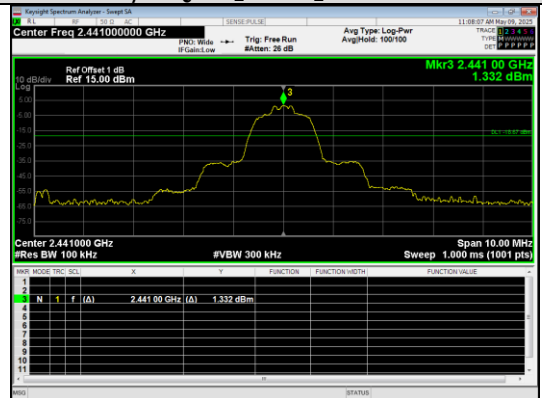
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 0



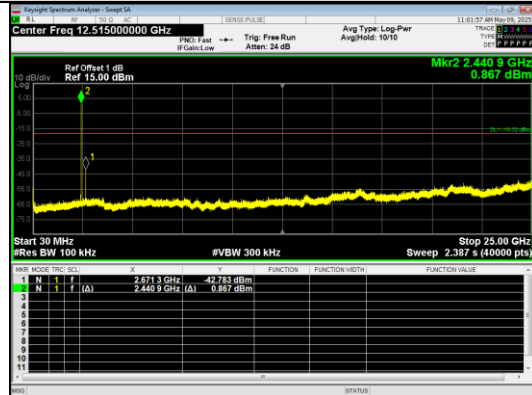
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 0



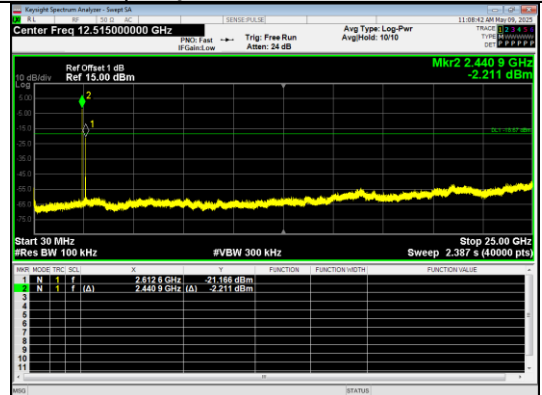
Out Of Band Emission
GFSK_DH5_Channel 39



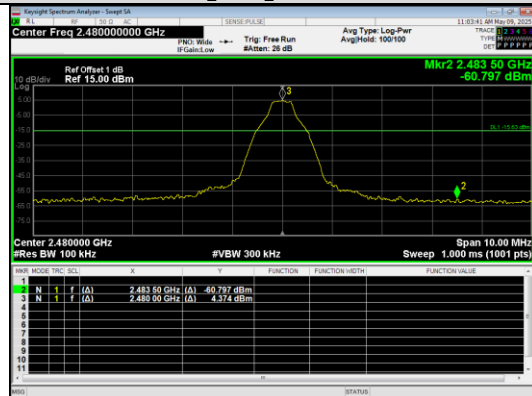
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 39



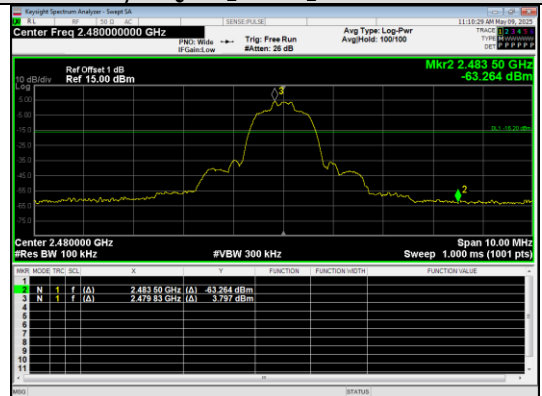
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 39



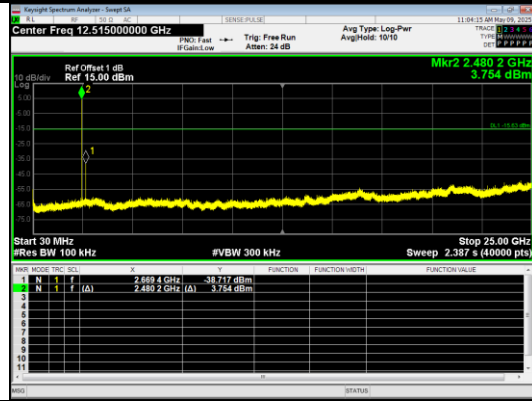
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 39



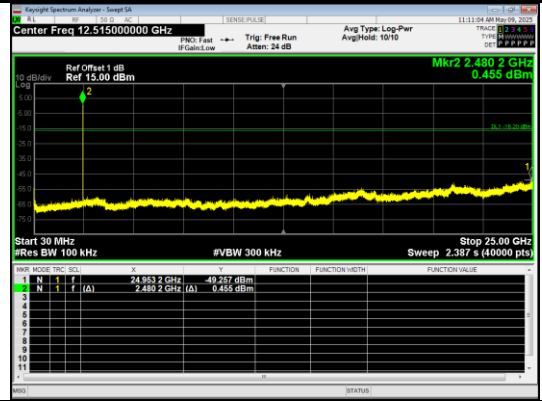
Out Of Band Emission
GFSK_DH5_Channel 78



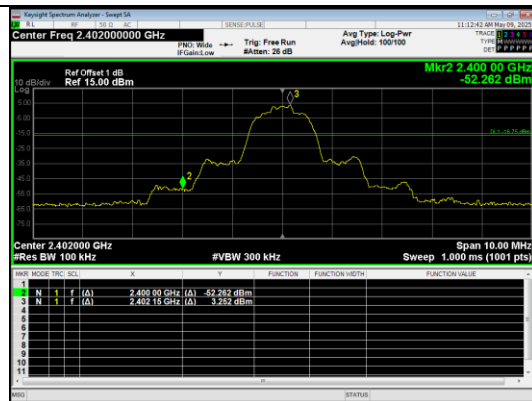
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 78



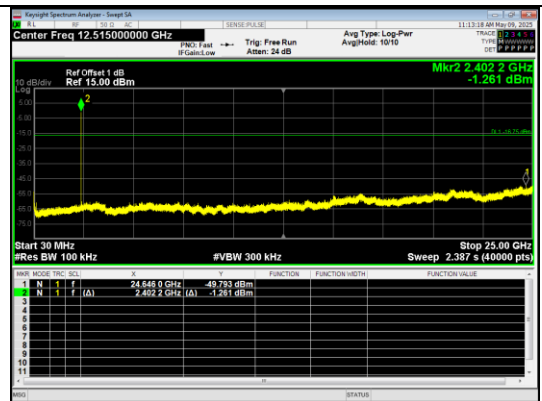
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 78



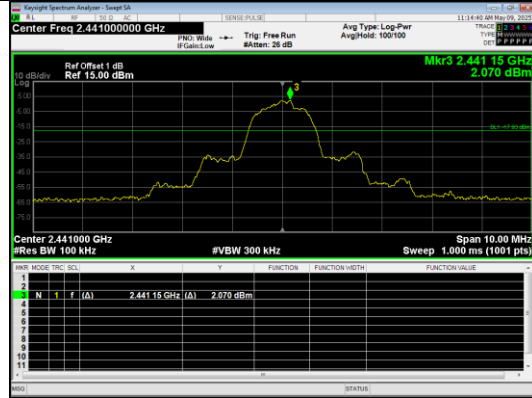
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 78



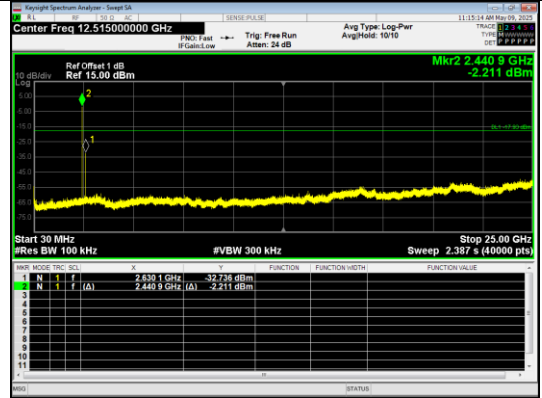
Out Of Band Emission
8DPSK_3-DH5_Channel 0



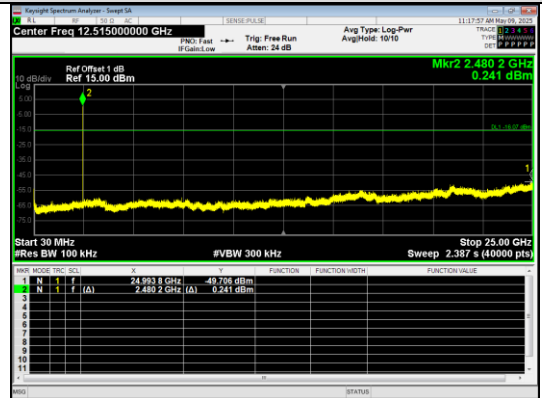
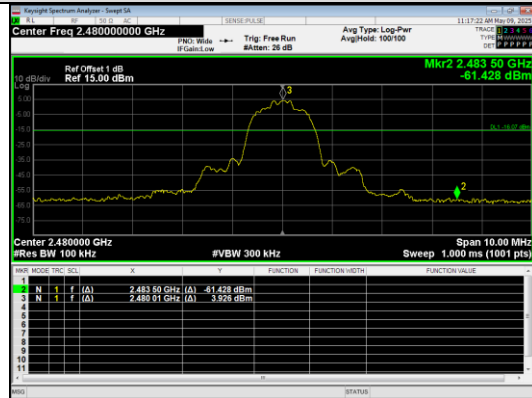
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 0



Out Of Band Emission
8DPSK_3-DH5_Channel 39

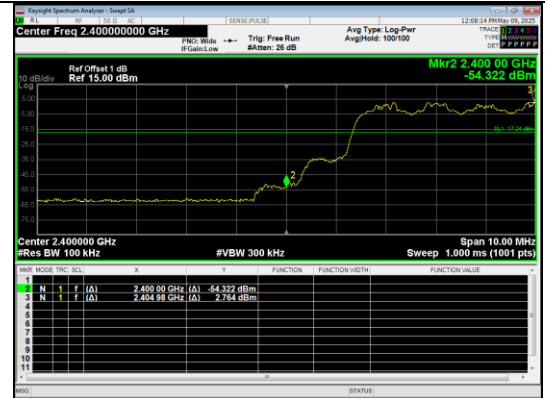
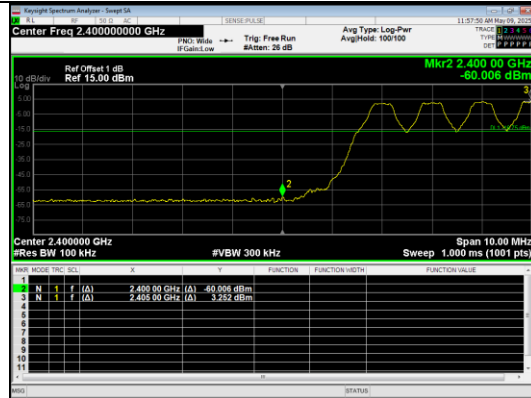


30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 39



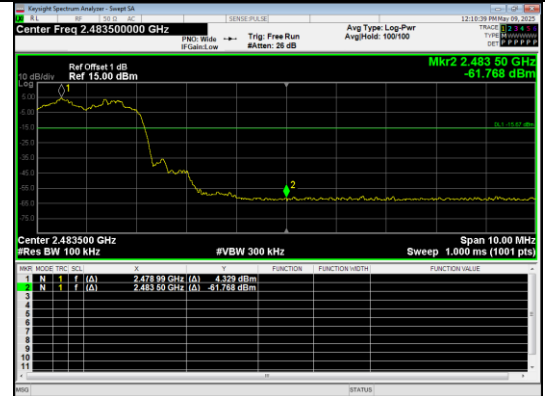
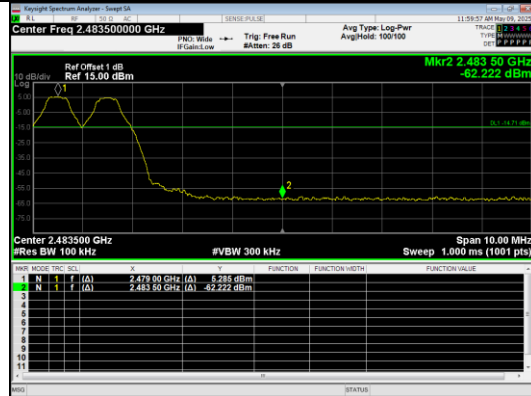
Out Of Band Emission 8DPSK_3-DH5_Channel 78

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 *****