

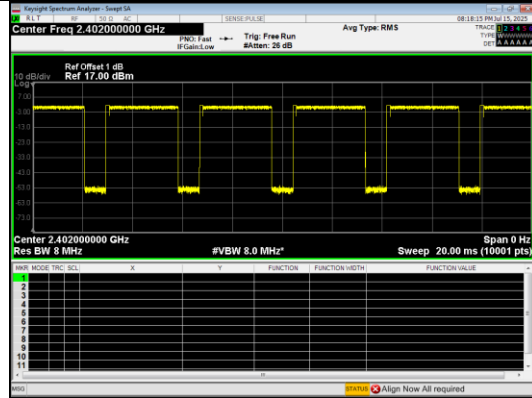
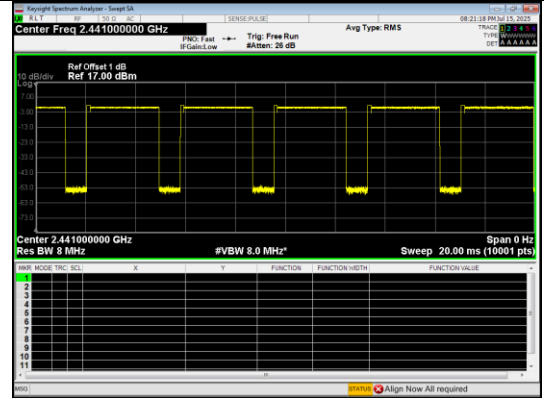
Appendix RF test data for BT

Duty Cycle Test Result

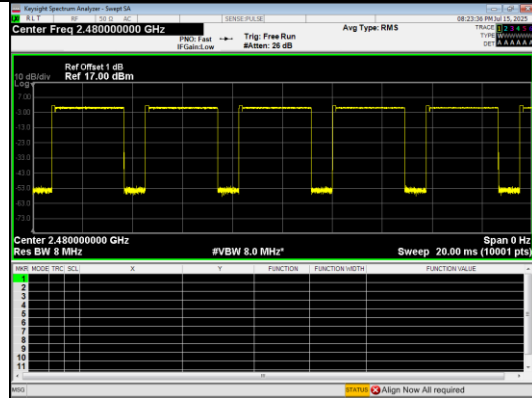
Modulation	Packets	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
GFSK	DH5	0	2.878	3.748	76.79	0.7679	1.147	0.3475
		39	2.878	3.748	76.79	0.7679	1.147	0.3475
		78	2.880	3.748	76.84	0.7684	1.1441	0.3472
$\pi/4$ DQPSK	2-DH5	0	2.886	3.748	77.00	0.7700	1.1351	0.3465
		39	2.884	3.748	76.95	0.7695	1.1379	0.3467
		78	2.886	3.748	77.00	0.7700	1.1351	0.3465
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

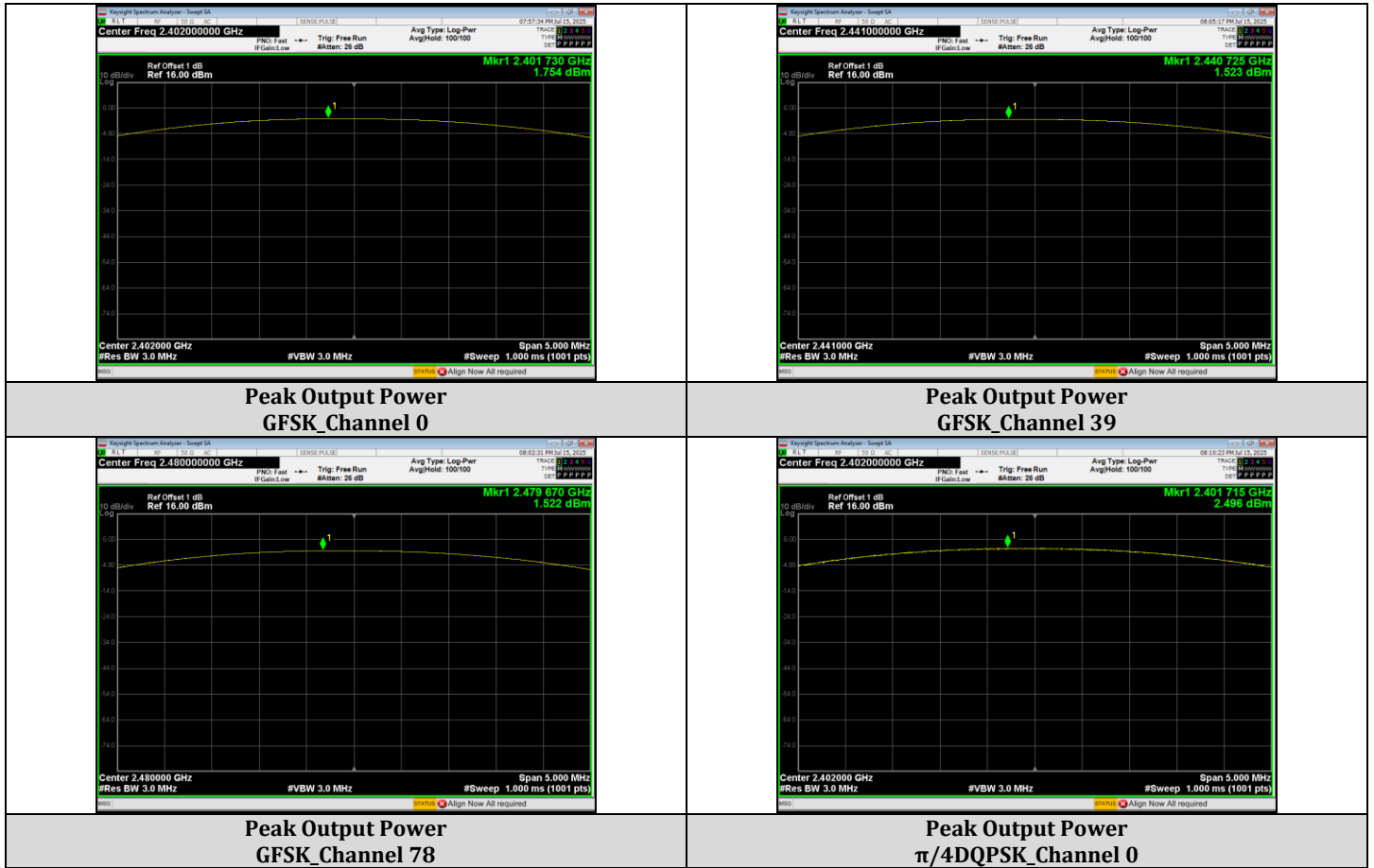
8DPSK(3-DH5)_Channel 78

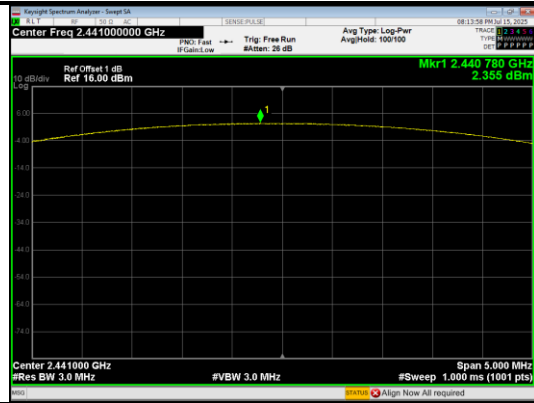
Conducted Output Power

Test Result

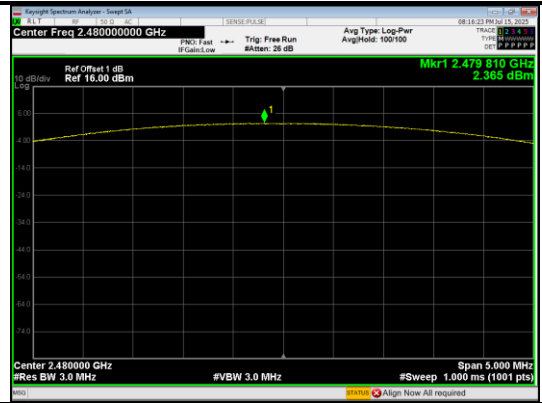
Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Max. Avg. Power (dBm)	Limit (dBm)	Result
GFSK	DH5	0	1.75	1.50	1.54	≤30	PASS
		39	1.52	1.42	1.39		PASS
		78	1.52	1.42	1.36		PASS
$\pi/4$ DQPSK	2-DH5	0	2.50	1.78	-0.04	≤20.97	PASS
		39	2.35	1.72	-0.25		PASS
		78	2.37	1.73	-0.32		PASS
8DPSK	3-DH5	0	2.84	1.92	-0.13		PASS
		39	2.73	1.87	-0.26		PASS
		78	2.76	1.89	-0.33		PASS

Test Graphs

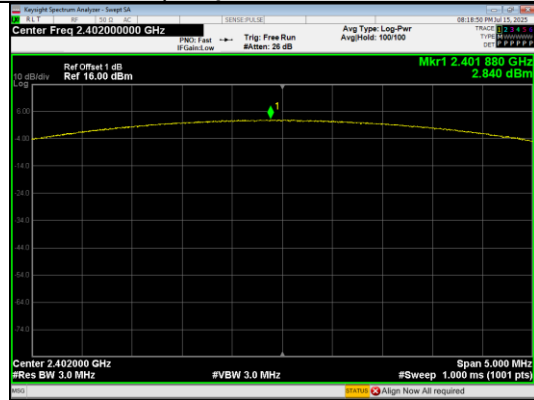




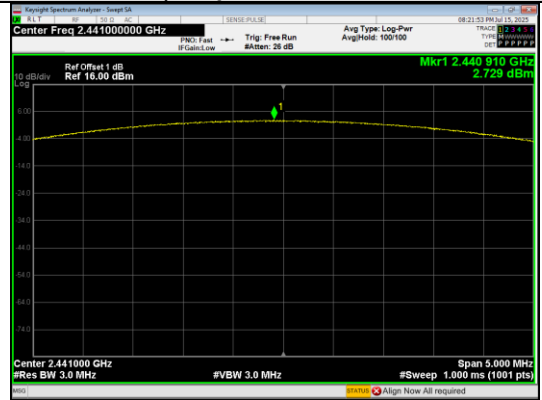
Peak Output Power
 $\pi/4$ DQPSK_Channel 39



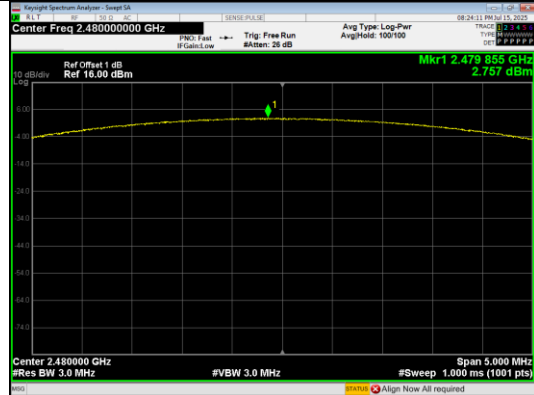
Peak Output Power
 $\pi/4$ DQPSK_Channel 78



Peak Output Power
8DPSK_Channel 0



Peak Output Power
8DPSK_Channel 39



Peak Output Power
8DPSK_Channel 78

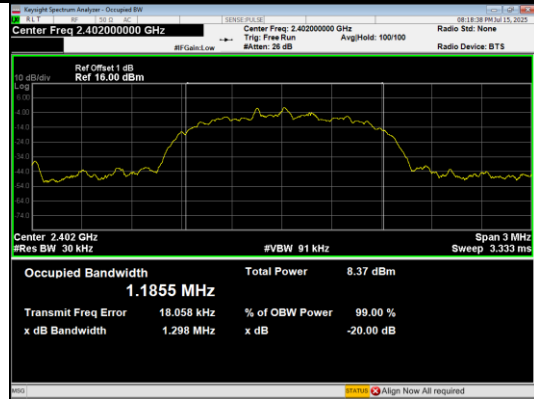
20dB Bandwidth

Test Result

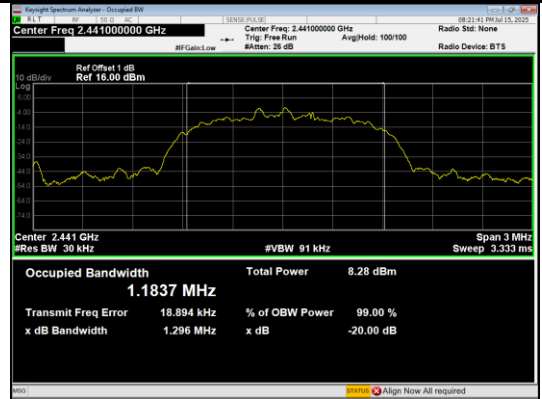
Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	0.9500
	39	2441 MHz	0.9500
	78	2480 MHz	0.9500
$\pi/4$ DQPSK	0	2402 MHz	1.280
	39	2441 MHz	1.280
	78	2480 MHz	1.280
8DPSK	0	2402 MHz	1.300
	39	2441 MHz	1.300
	78	2480 MHz	1.300

Test Graphs

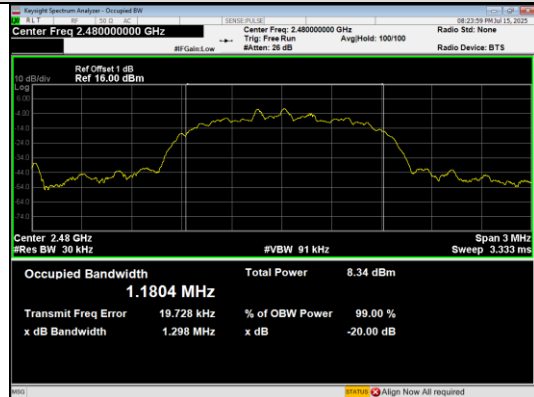




8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



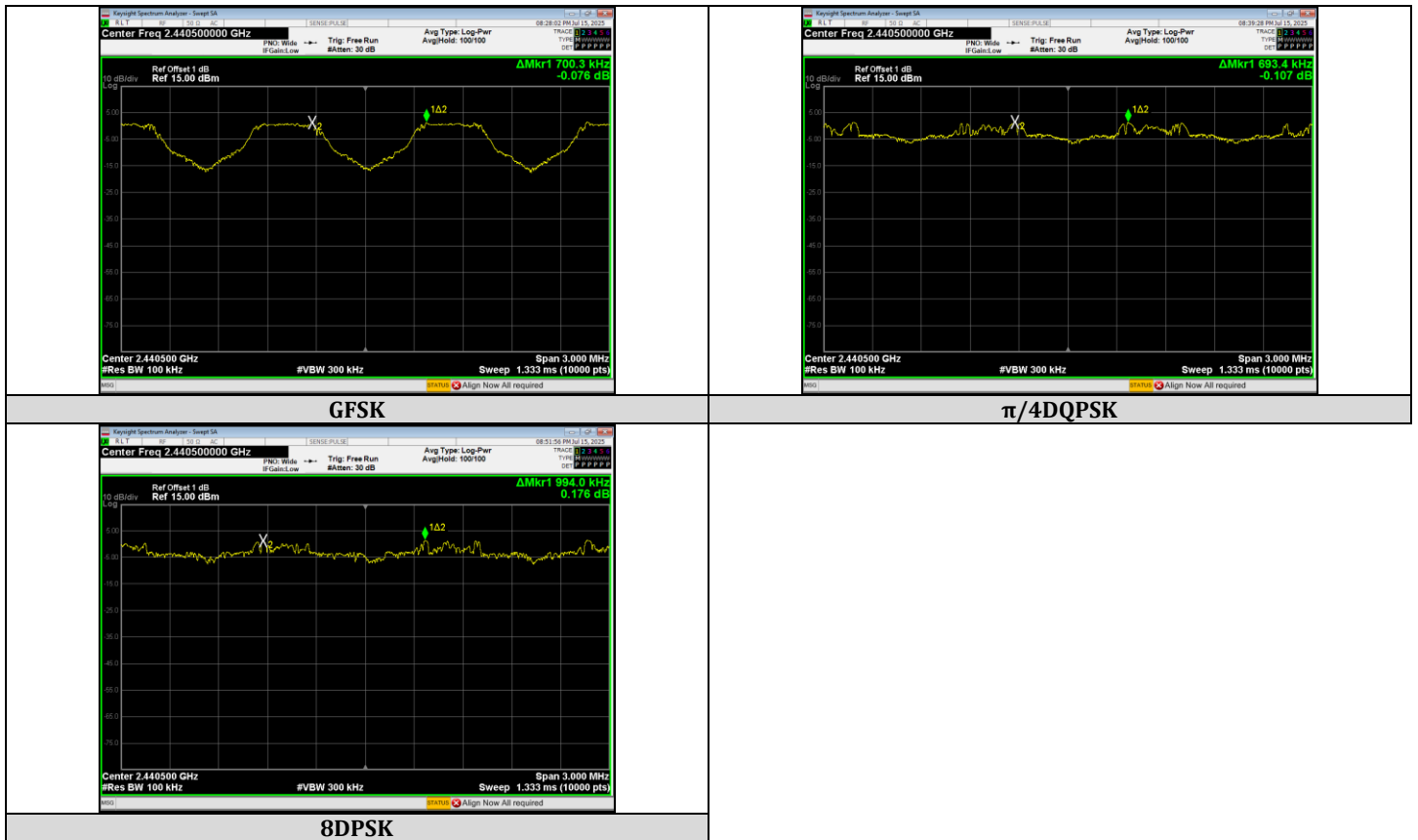
8DPSK_3-DH5_Channel 78

Carrier Frequencies Separation

Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2440.1734	2440.8737	0.7003	0.99	PASS
$\pi/4$ DQPSK	2-DH5	2440.174	2440.8674	0.6934	0.99	PASS
8DPSK	3-DH5	2439.8716	2440.8656	0.9940	0.99	PASS

Test Graphs

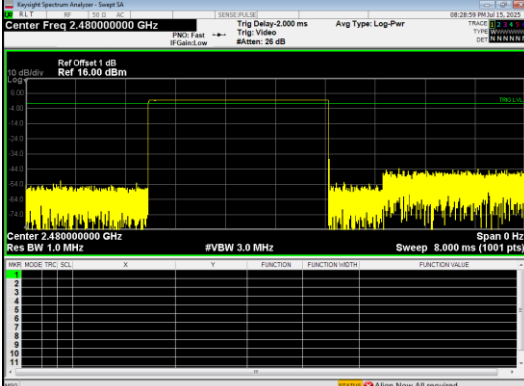
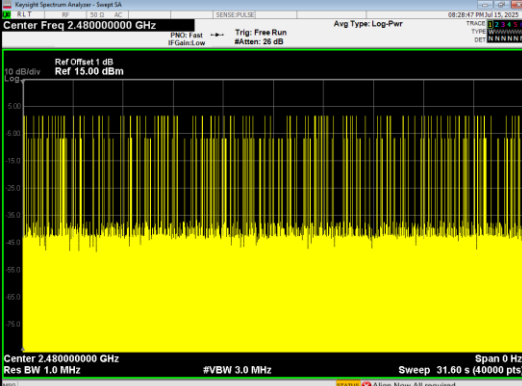
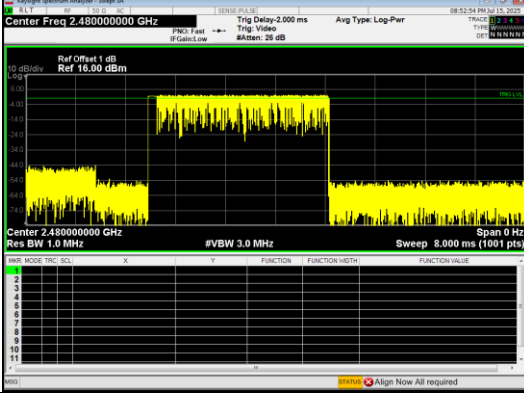


Dwell Time

Test Result

Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH5	Hopping	2.880	108	311.04	< 400	PASS
$\pi/4$ DQPSK	2-DH5		2.880	119	342.72		PASS
8DPSK	3-DH5		2.896	110	318.56		PASS

Test Graphs

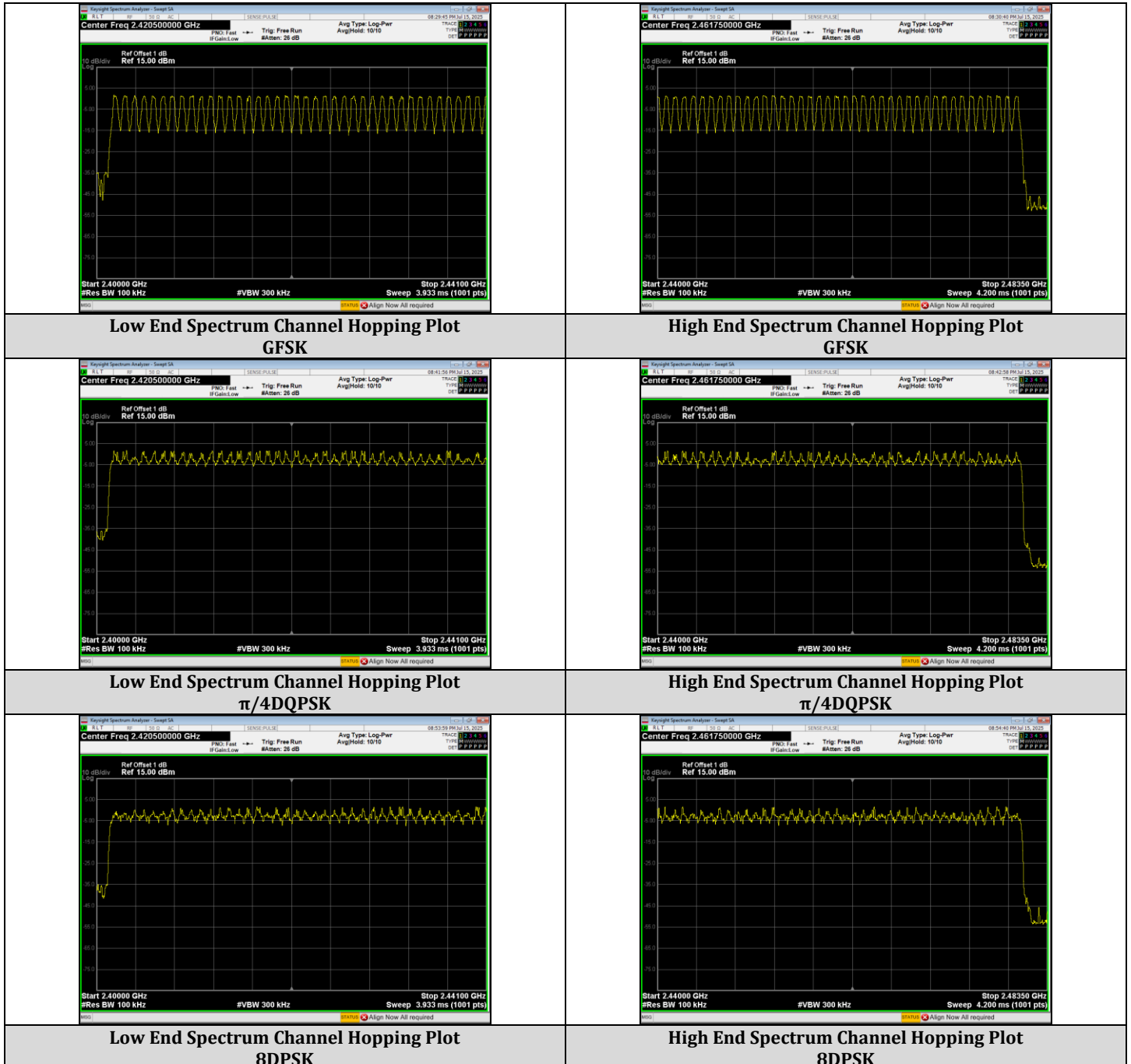
	
Pulse Width GFSK_DH5	Number of Pulses in 31.6 seconds GFSK_DH5
	
Pulse Width $\pi/4$DQPSK_2-DH5	Number of Pulses in 31.6 seconds $\pi/4$DQPSK_2-DH5
	
Pulse Width 8DPSK_3-DH5	Number of Pulses in 31.6 seconds 8DPSK_3-DH5

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



Conducted Out Of Band Emission

Test Result

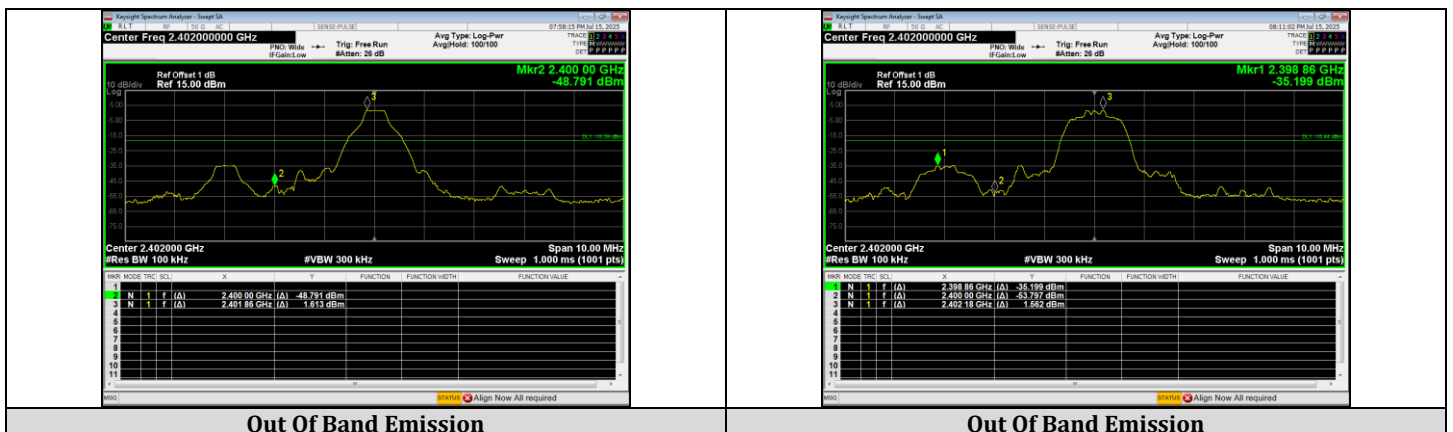
Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2399.00	-34.762	-18.39	-16.372	PASS
			2400.00	-48.790	-18.39	-30.400	PASS
			9601.90	-44.543	-18.39	-26.153	PASS
		39	9757.93	-46.574	-18.62	-27.954	PASS
		78	2483.50	-47.230	-18.64	-28.590	PASS
			24942.6	-48.104	-18.64	-29.464	PASS
$\pi/4$ DQPSK	2-DH5	0	2398.86	-35.200	-18.44	-16.759	PASS
			2400.00	-53.800	-18.44	-35.360	PASS
			9601.90	-44.446	-18.44	-26.006	PASS
		39	9757.93	-45.863	-18.64	-27.223	PASS
		78	2483.50	-46.160	-18.6	-27.560	PASS
			9914.00	-47.949	-18.6	-29.349	PASS
8DPSK	3-DH5	0	2398.86	-34.712	-18.4	-16.312	PASS
			2400.00	-46.910	-18.4	-28.510	PASS
			9601.90	-44.446	-18.4	-26.046	PASS
		39	9757.93	-46.132	-18.59	-27.542	PASS
		78	96.17	-39.406	-18.6	-20.806	PASS
			2483.50	-48.350	-18.6	-29.750	PASS

Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2400.00	-34.520	-18.46	-16.060	PASS
π/4DQPSK	2-DH5		2483.50	-47.430	-18.75	-28.680	PASS
			2398.87	-35.741	-18.44	-17.301	PASS
			2400.00	-36.510	-18.44	-18.070	PASS
			2483.50	-46.950	-18.7	-28.250	PASS
8DPSK	3-DH5		2400.00	-35.770	-18.47	-17.300	PASS
			2483.50	-47.990	-18.65	-29.340	PASS

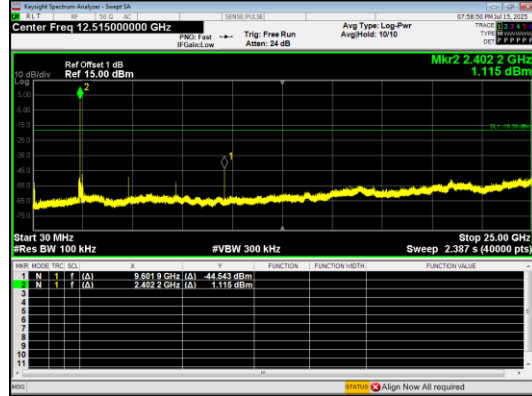
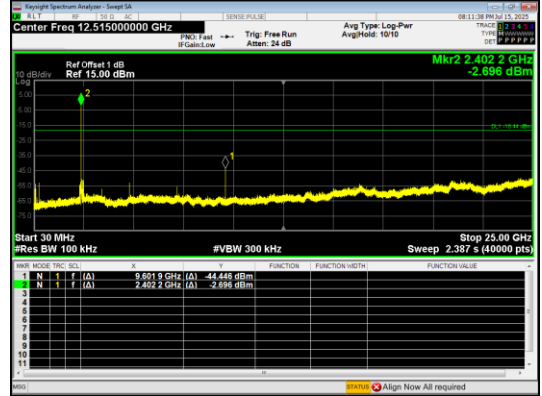
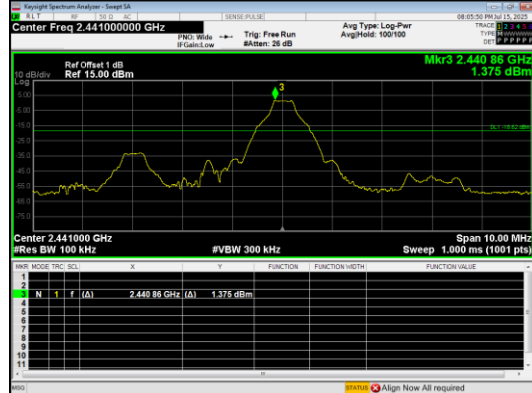
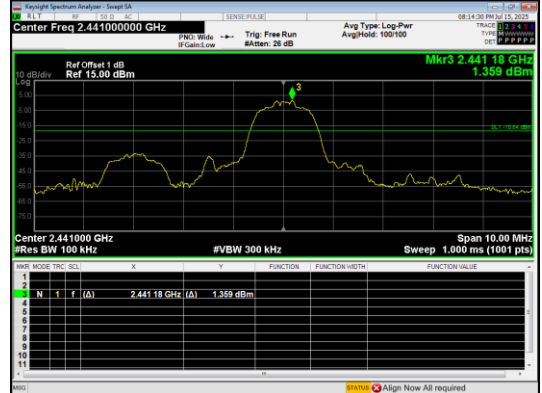
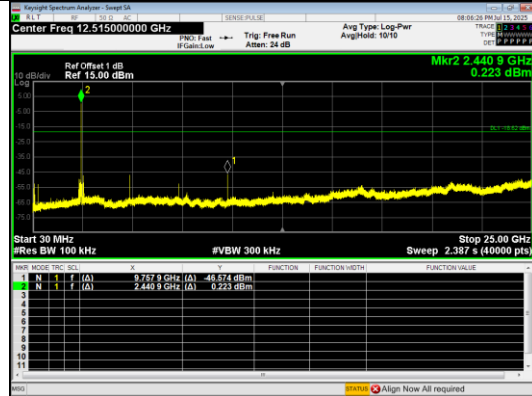
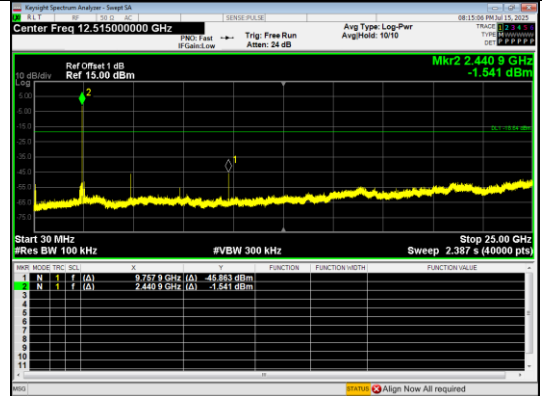
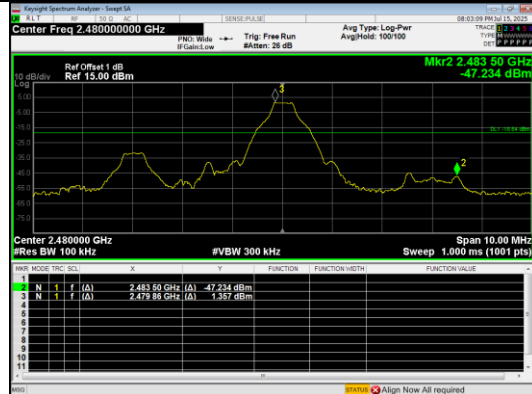
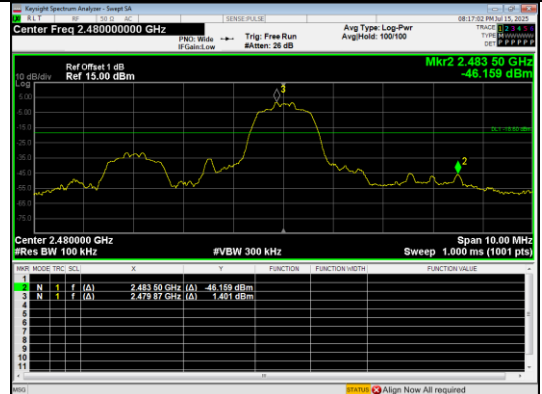
Test Graphs



Out Of Band Emission

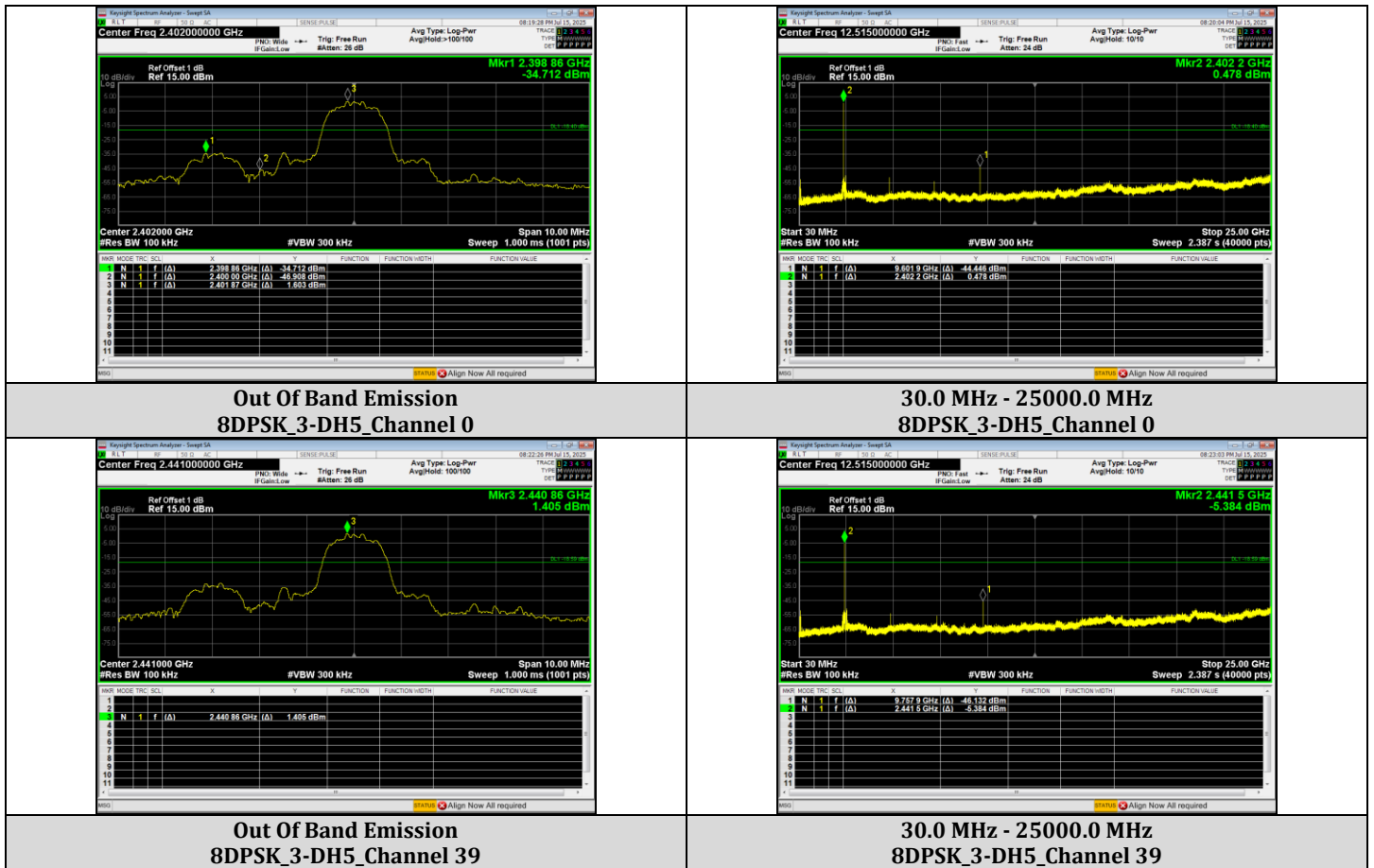
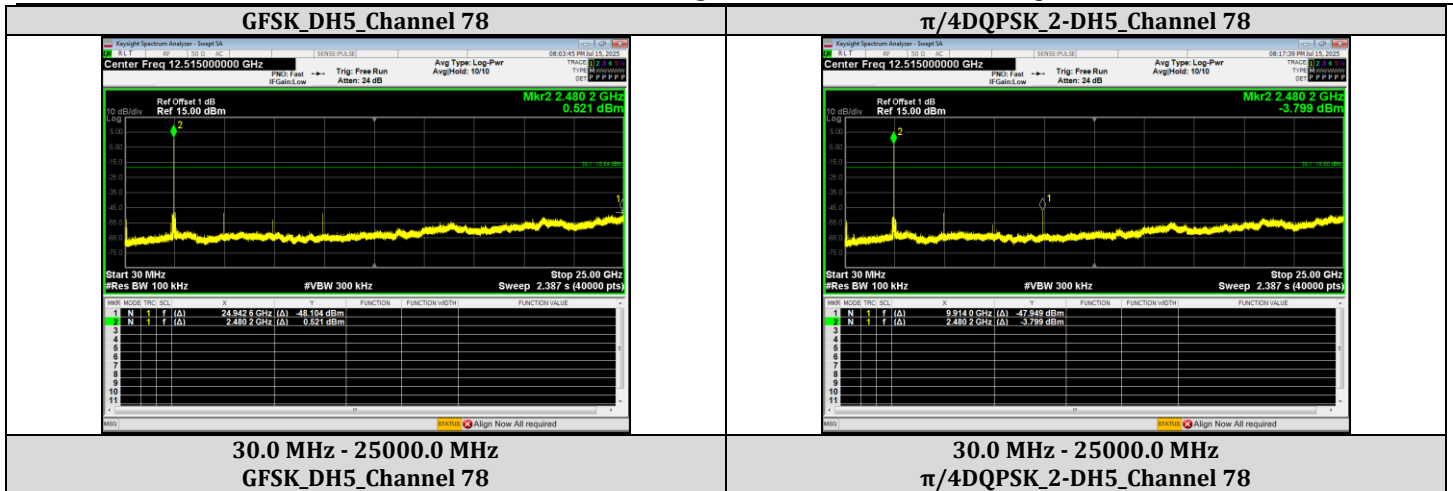
Out Of Band Emission

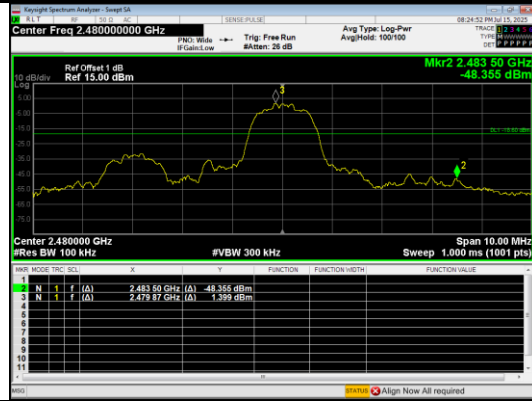
GFSK_DH5_Channel 0


 $\pi/4$ DQPSK_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


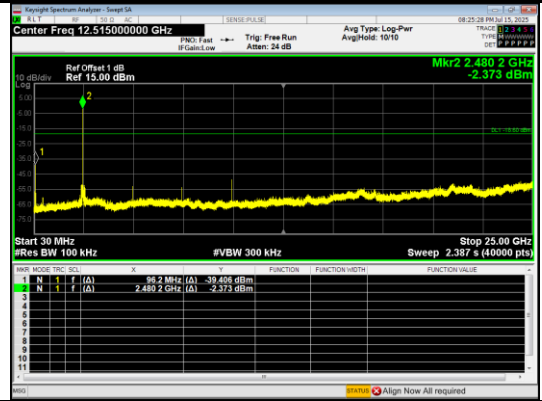
Out Of Band Emission

Out Of Band Emission

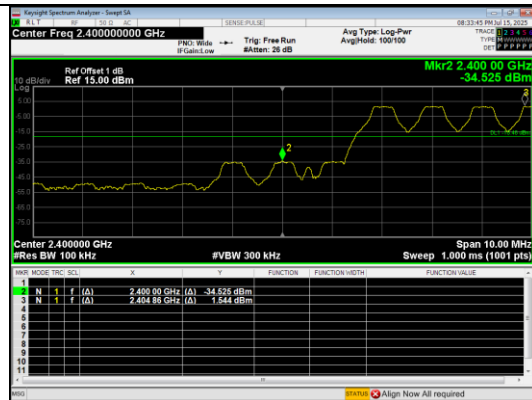




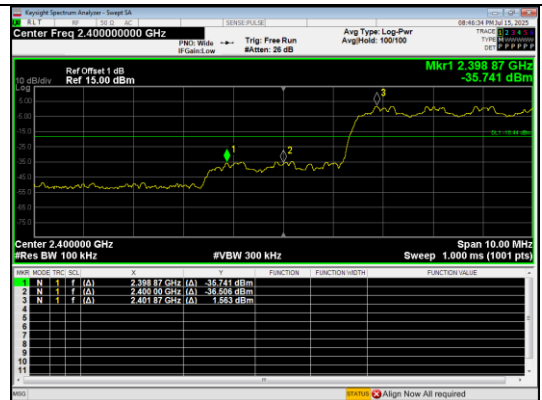
Out Of Band Emission
8DPSK_3-DH5_Channel 78



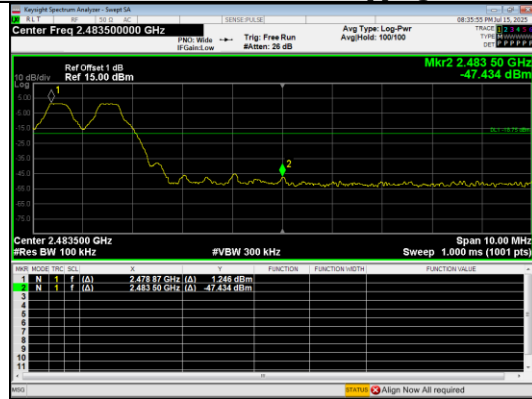
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 78



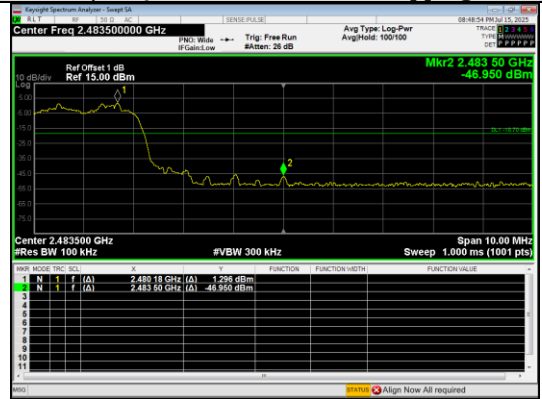
Out Of Band Emission(Left)
GFSK_DH5_Channel Hopping



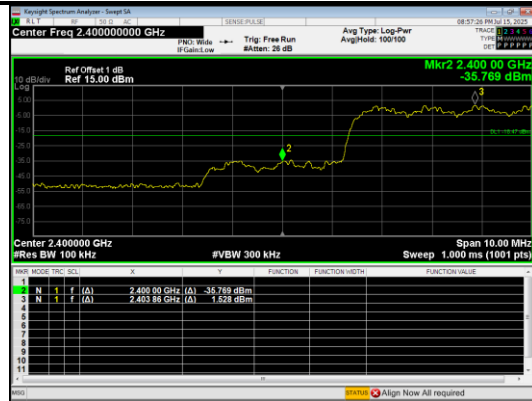
Out Of Band Emission(Left)
 $\pi/4$ DQPSK_2-DH5_Channel Hopping



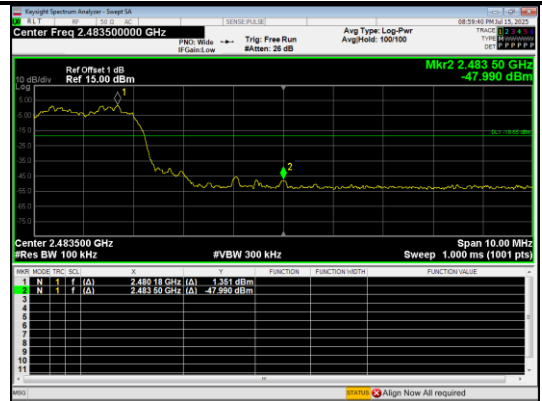
Out Of Band Emission(Right)
GFSK_DH5_Channel Hopping



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 *****