

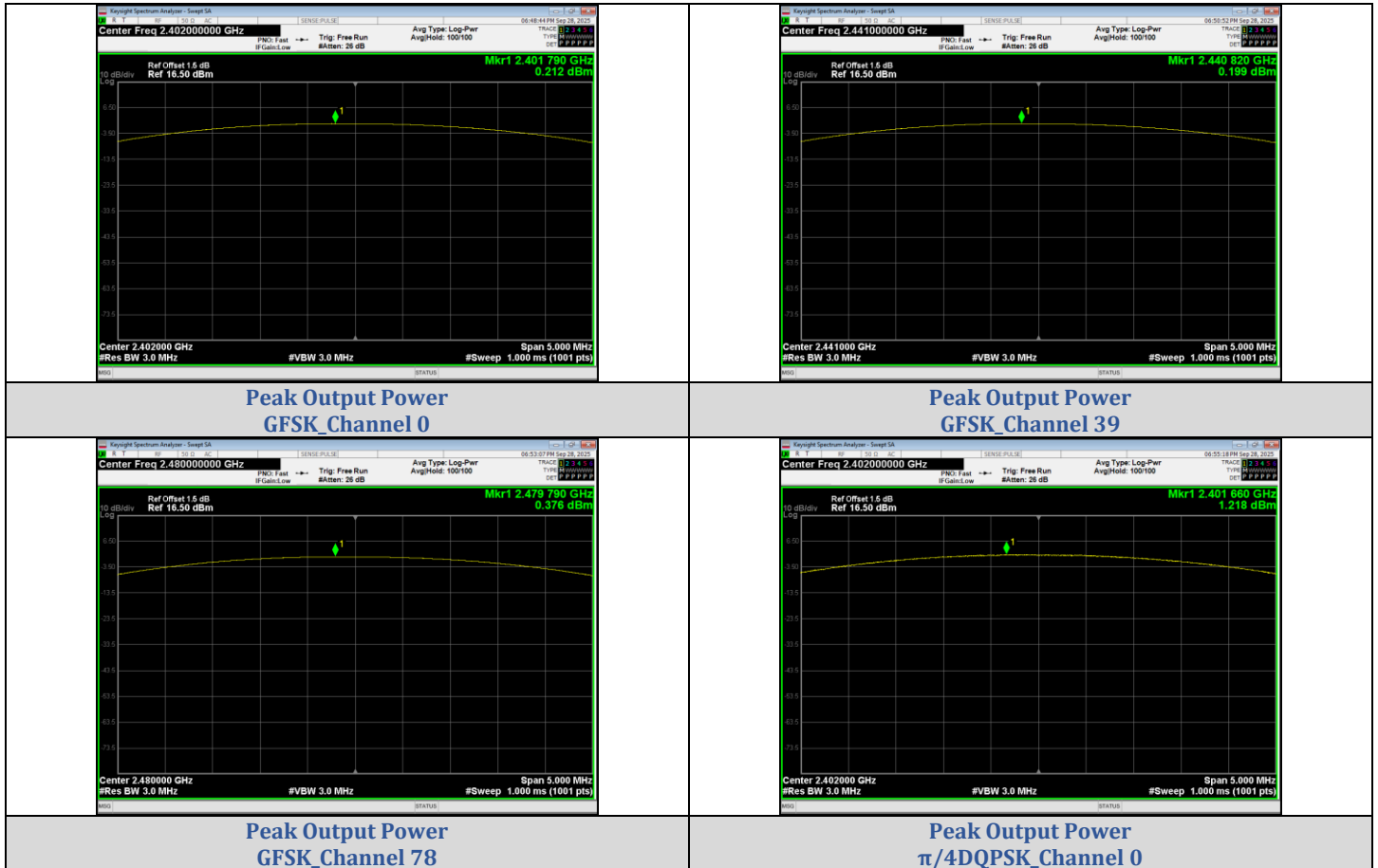
Appendix RF test data for BT

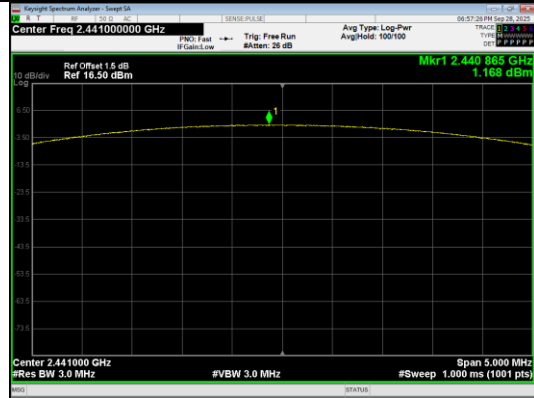
Conducted Output Power

Test Result

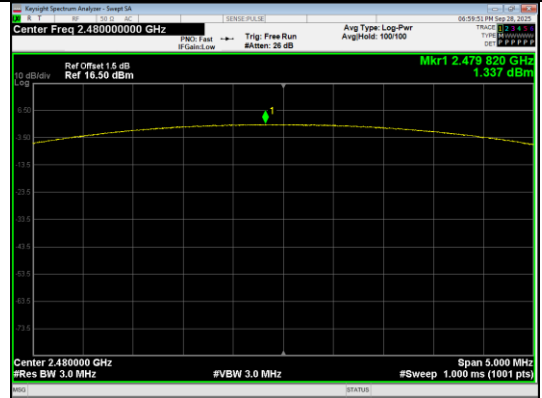
Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
GFSK	DH5	0	0.21	1.05	≤ 20.97	PASS
		39	0.20	1.05		PASS
		78	0.38	1.09		PASS
$\pi/4$ DQPSK	2-DH5	0	1.22	1.32		PASS
		39	1.17	1.31		PASS
		78	1.34	1.36		PASS
8DPSK	3-DH5	0	1.64	1.46		PASS
		39	1.60	1.45		PASS
		78	1.78	1.51		PASS

Test Graphs

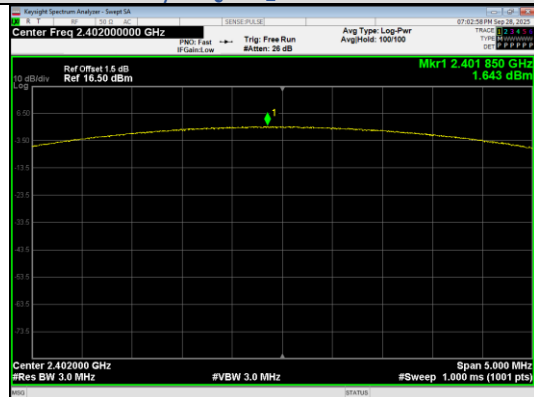




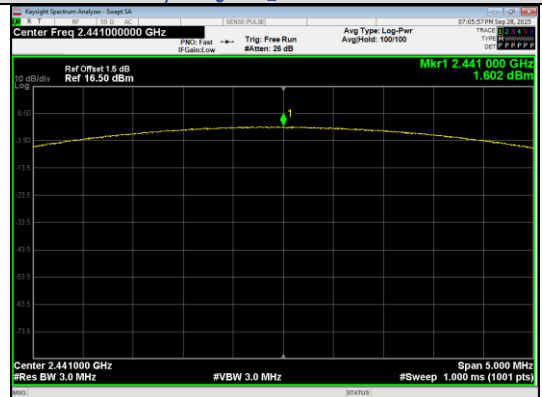
Peak Output Power
 $\pi/4$ DQPSK_Channel 39



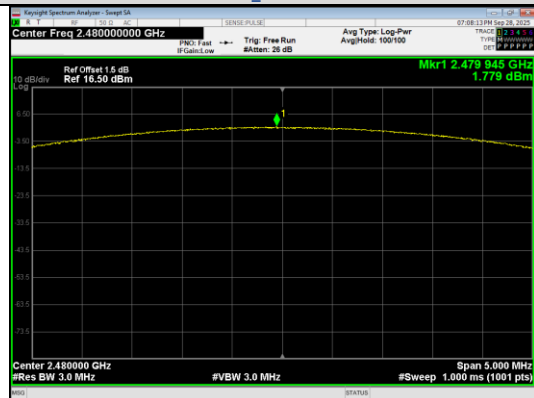
Peak Output Power
 $\pi/4$ DQPSK_Channel 78



Peak Output Power
8DPSK_Channel 0



Peak Output Power
8DPSK_Channel 39



Peak Output Power
8DPSK_Channel 78

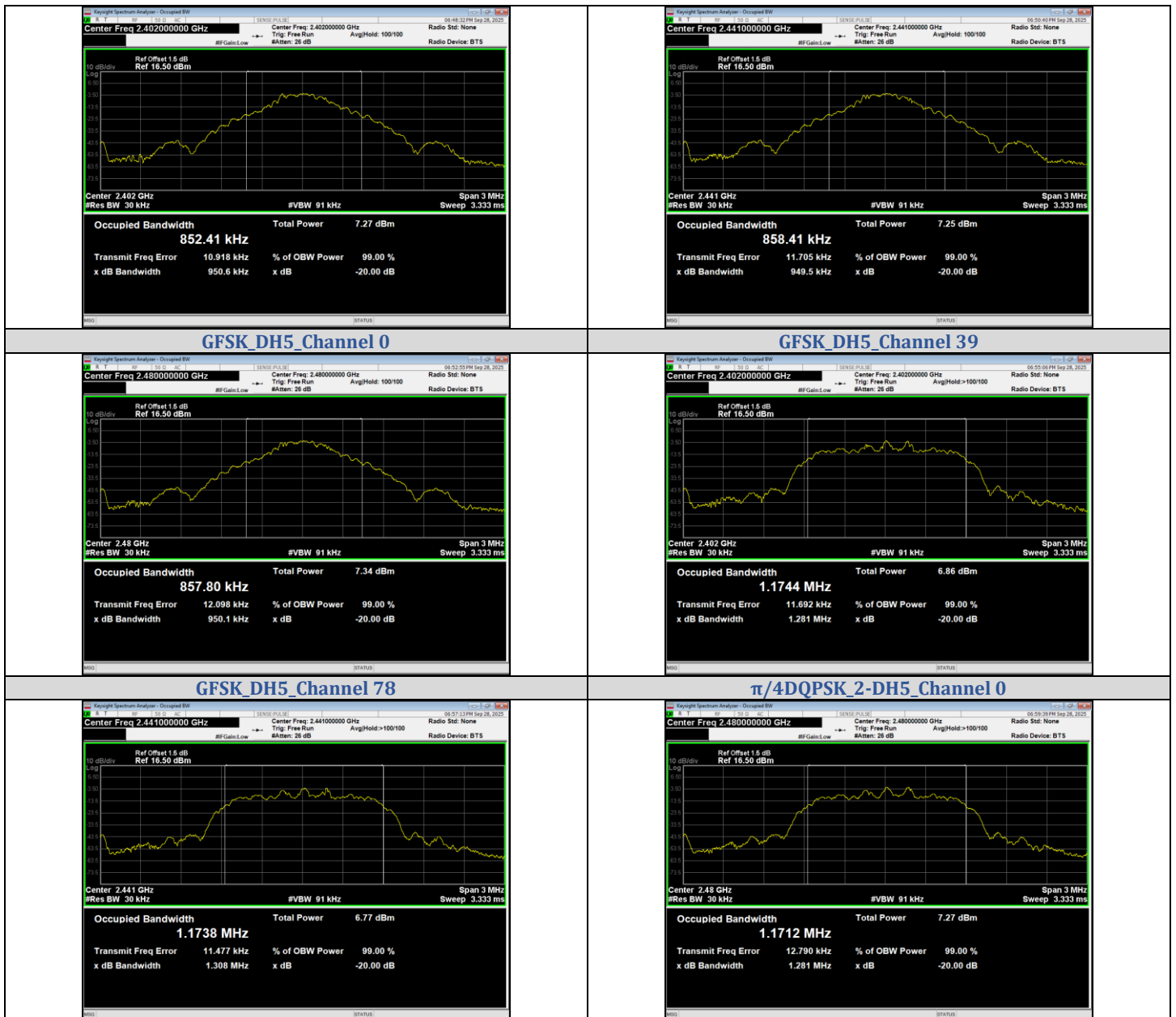


20dB Bandwidth

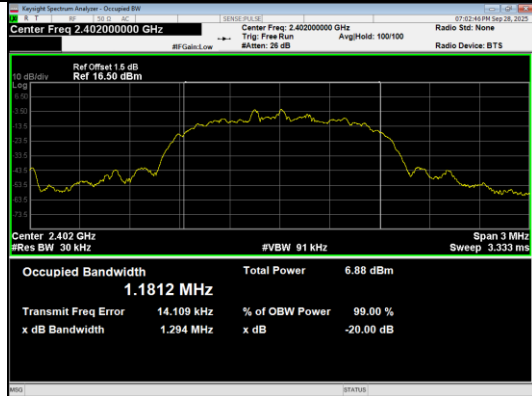
Test Result

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	1.310
	78	2480 MHz	1.280
8DPSK	0	2402 MHz	1.290
	39	2441 MHz	1.290
	78	2480 MHz	1.290

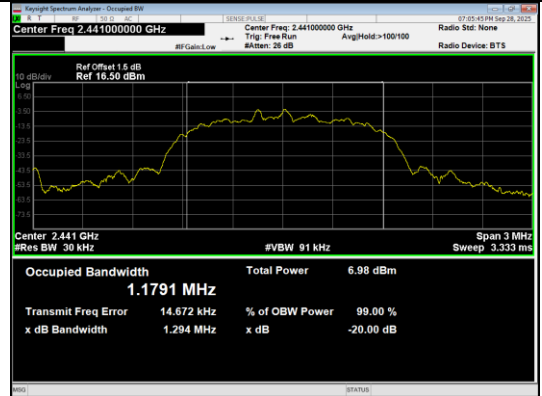
Test Graphs



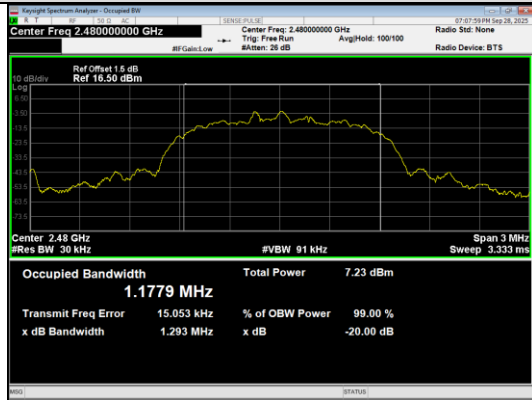
$\pi/4$ DQPSK 2-DH5_Channel 39



$\pi/4$ DQPSK 2-DH5_Channel 78



8DPSK 3-DH5_Channel 0



8DPSK 3-DH5_Channel 39

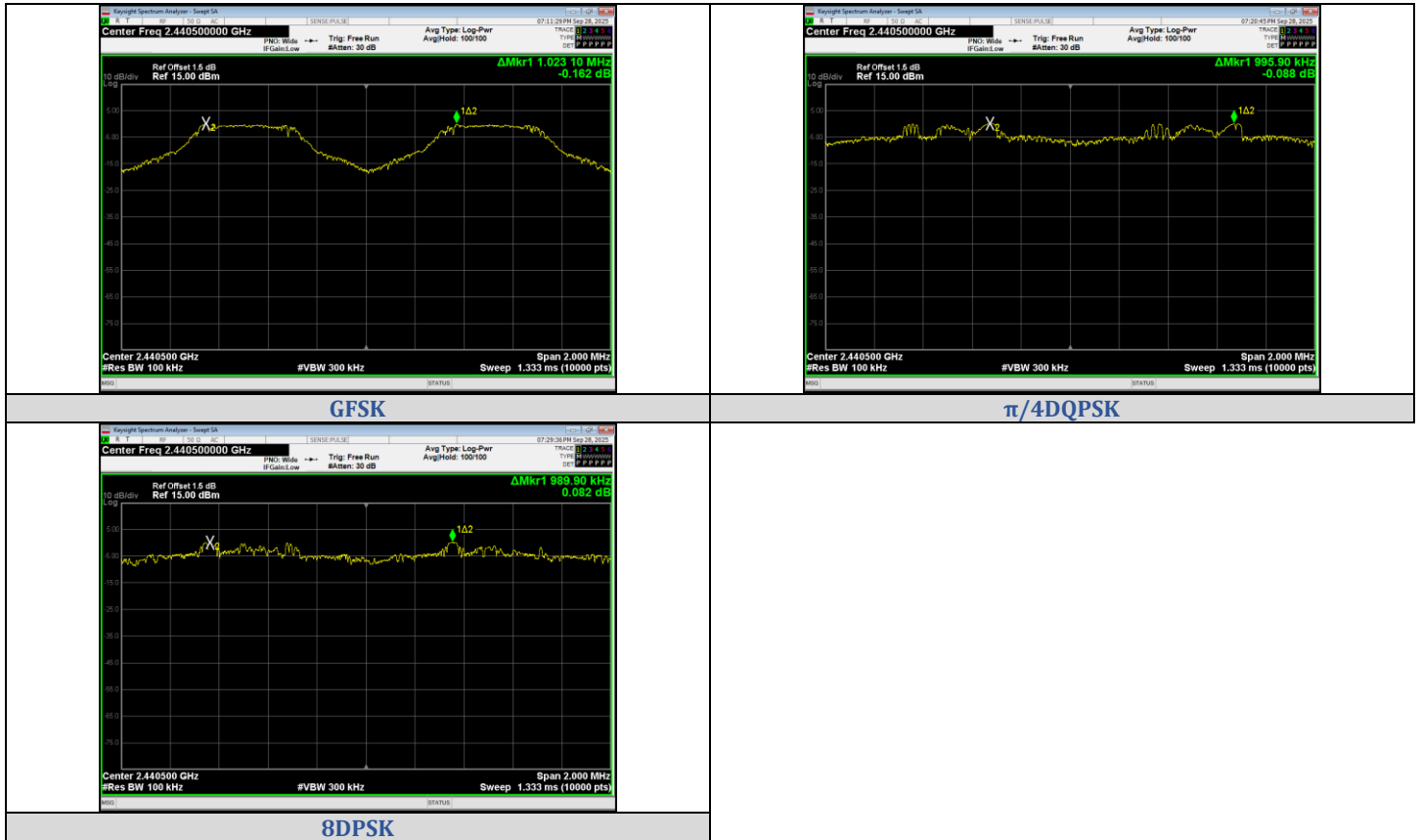
8DPSK 3-DH5_Channel 78

Carrier Frequencies Separation

Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2439.8454	2440.8685	1.0231	0.99	PASS
$\pi/4$ DQPSK	2-DH5	2440.1713	2441.1672	0.9959	0.99	PASS
8DPSK	3-DH5	2439.8618	2440.8517	0.9899	0.99	PASS

Test Graphs



Conducted Out Of Band Emission

Test Result

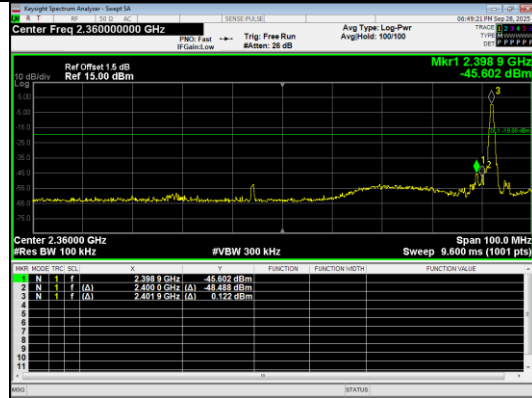
Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2398.90	-45.602	-19.88	-25.722	PASS
			2400.00	-48.490	-19.88	-28.610	PASS
			9602.20	-46.209	-19.88	-26.329	PASS
		39	9758.31	-47.376	-19.83	-27.546	PASS
		78	2483.50	-46.920	-19.72	-27.200	PASS
			9913.75	-46.349	-19.72	-26.629	PASS
$\pi/4$ DQPSK	2-DH5	0	2398.80	-44.734	-19.79	-24.944	PASS
			2400.00	-48.610	-19.79	-28.820	PASS
			9602.20	-45.933	-19.79	-26.143	PASS
		39	9758.31	-46.975	-19.88	-27.095	PASS
		78	96.17	-35.522	-19.67	-15.852	PASS
			2483.50	-46.240	-19.67	-26.570	PASS
8DPSK	3-DH5	0	2399.00	-45.546	-19.86	-25.686	PASS
			2400.00	-47.880	-19.86	-28.020	PASS
			9602.20	-45.789	-19.86	-25.929	PASS
		39	96.17	-35.309	-19.85	-15.459	PASS
		78	2483.50	-46.890	-19.84	-27.050	PASS
			9914.37	-45.808	-19.84	-25.968	PASS

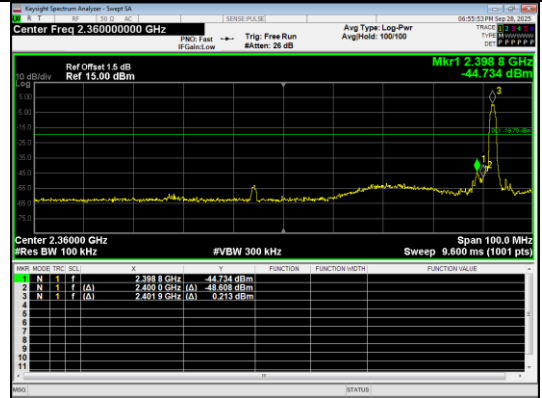
Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2398.90	-45.106	-19.84	-25.266	PASS
			2400.00	-46.350	-19.84	-26.510	PASS
			2483.50	-47.670	-19.74	-27.930	PASS
$\pi/4$ DQPSK	2-DH5		2400.00	-47.740	-19.87	-27.870	PASS
			2483.50	-50.880	-19.72	-31.160	PASS
8DPSK	3-DH5		2398.90	-47.184	-19.91	-27.274	PASS
			2400.00	-47.220	-19.91	-27.310	PASS
			2483.50	-52.940	-19.67	-33.270	PASS

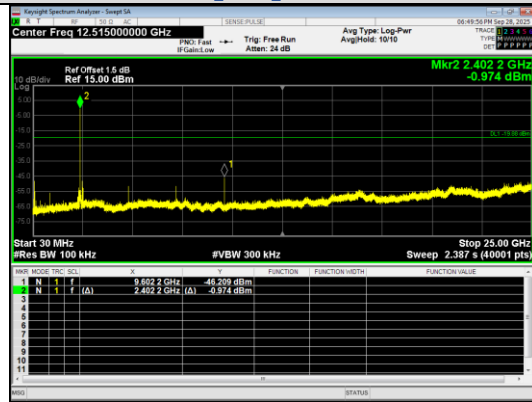
Test Graphs



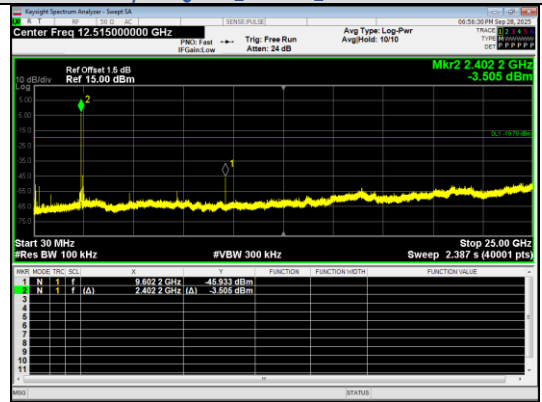
Out Of Band Emission
GFSK_DH5_Channel 0



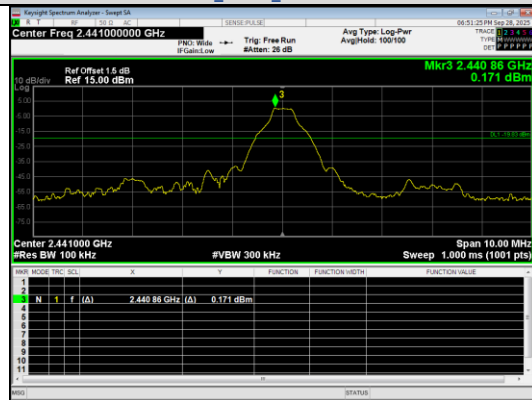
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 0



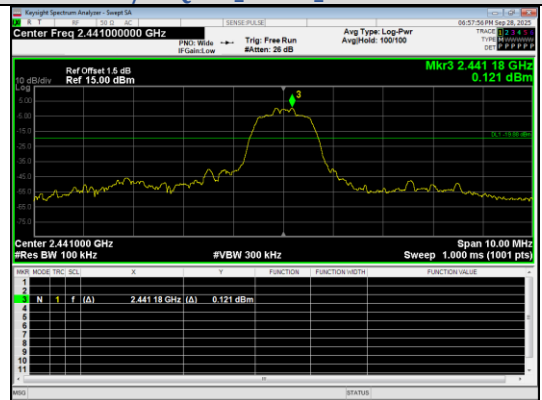
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 0



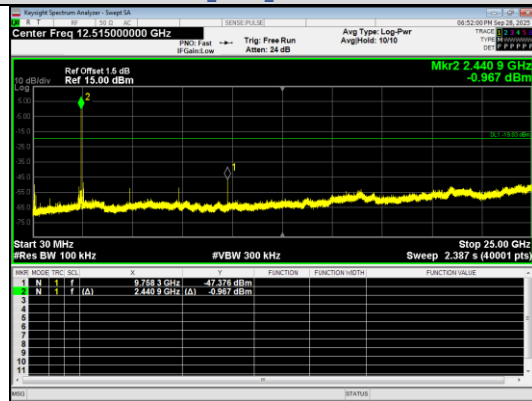
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 0



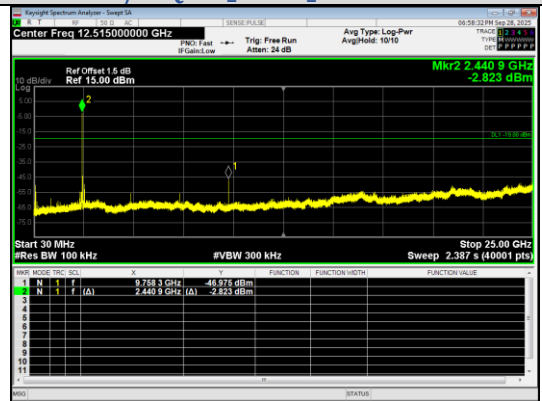
Out Of Band Emission
GFSK_DH5_Channel 39



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

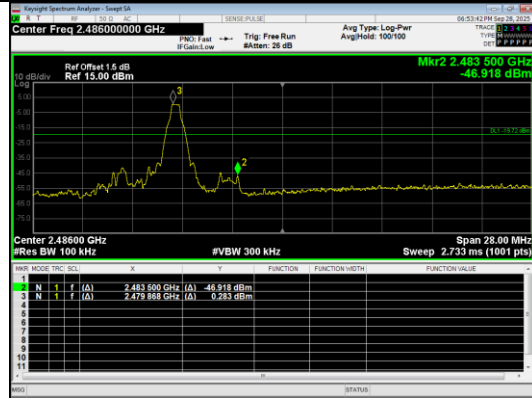


30.0 MHz - 25000.0 MHz

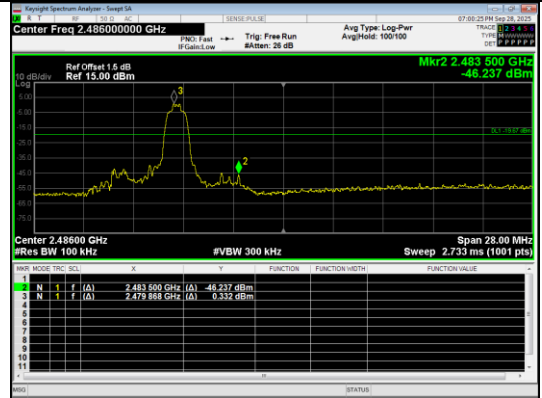


30.0 MHz - 25000.0 MHz

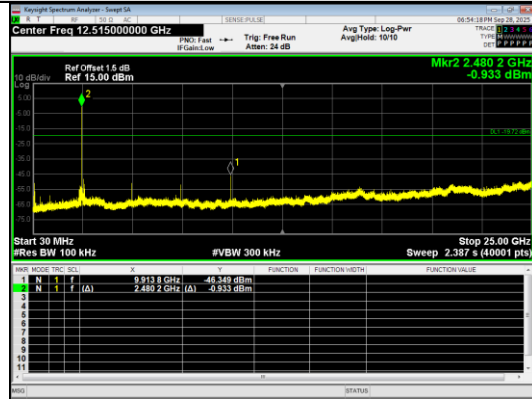
GFSK_DH5_Channel 39



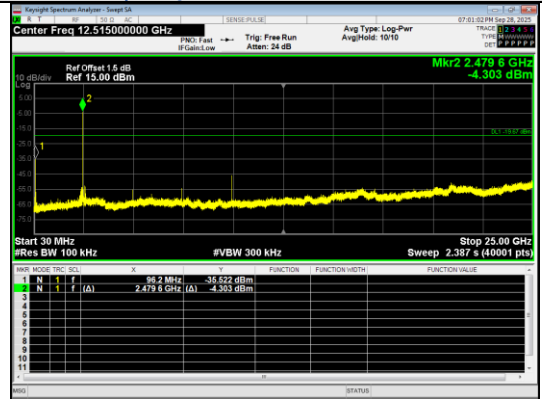
$\pi/4$ DQPSK_2-DH5_Channel 39



Out Of Band Emission GFSK_DH5_Channel 78

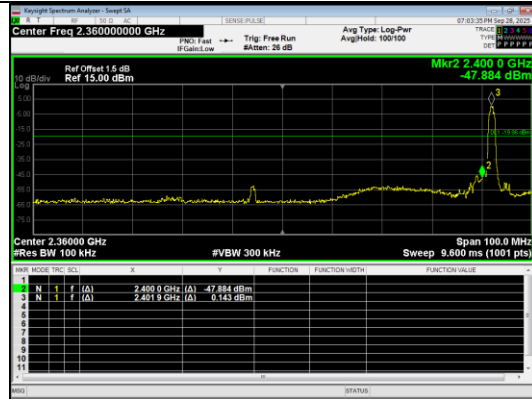


Out Of Band Emission $\pi/4$ DQPSK_2-DH5_Channel 78

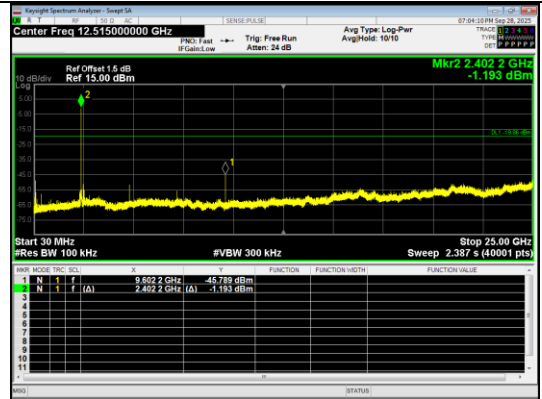


30.0 MHz - 25000.0 MHz GFSK_DH5_Channel 78

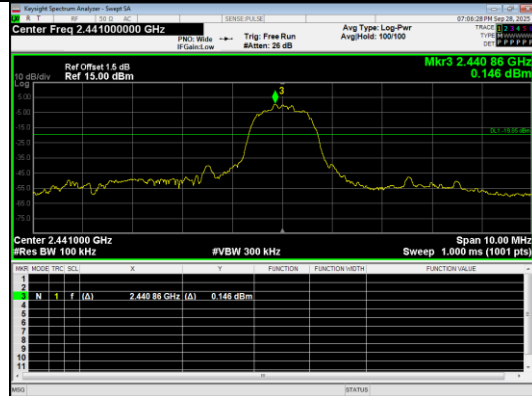
30.0 MHz - 25000.0 MHz $\pi/4$ DQPSK_2-DH5_Channel 78



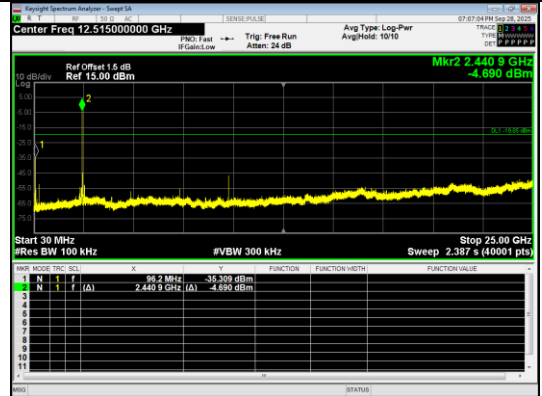
Out Of Band Emission 8DPSK_3-DH5_Channel 0



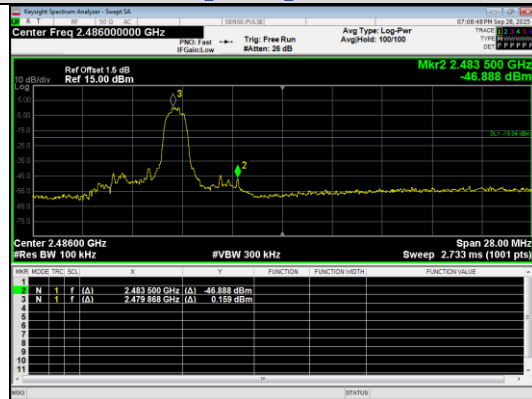
30.0 MHz - 25000.0 MHz 8DPSK_3-DH5_Channel 0



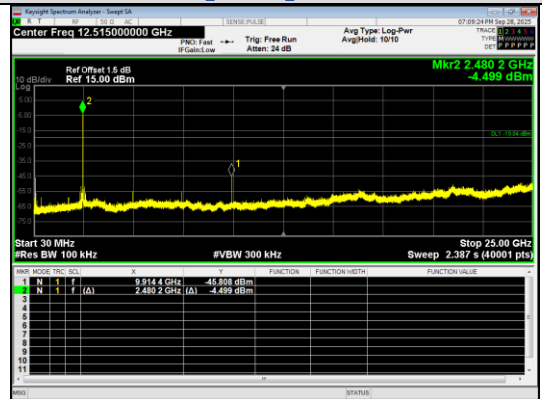
Out Of Band Emission
8DPSK_3-DH5_Channel 39



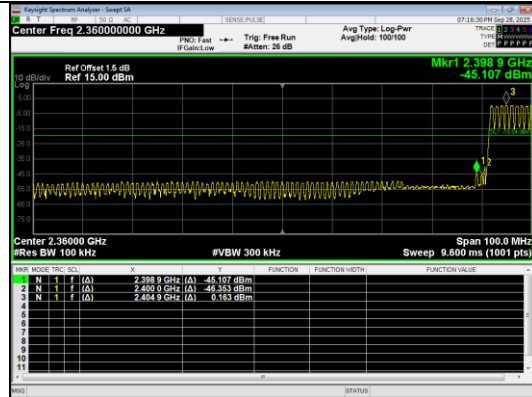
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 39



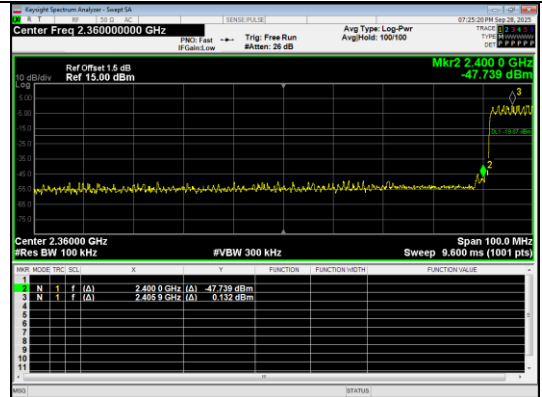
Out Of Band Emission
8DPSK_3-DH5_Channel 78



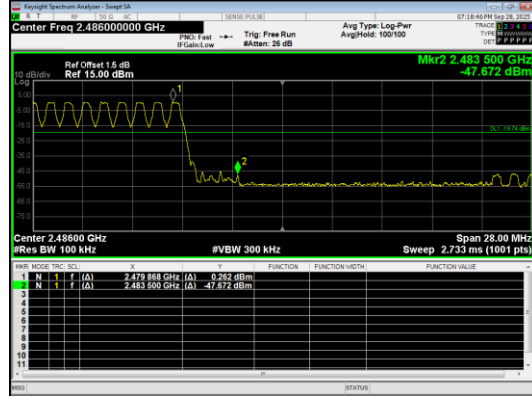
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 78



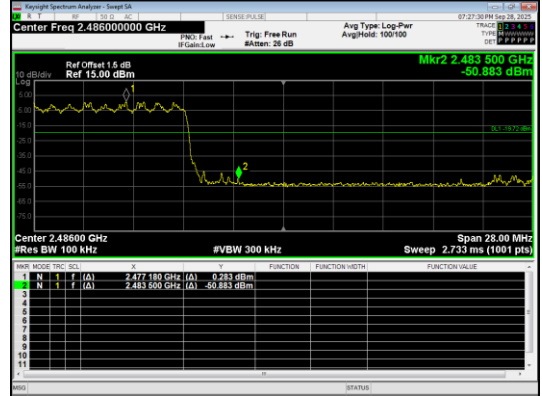
Out Of Band Emission(Left)
GFSK_DH5_Channel Hopping



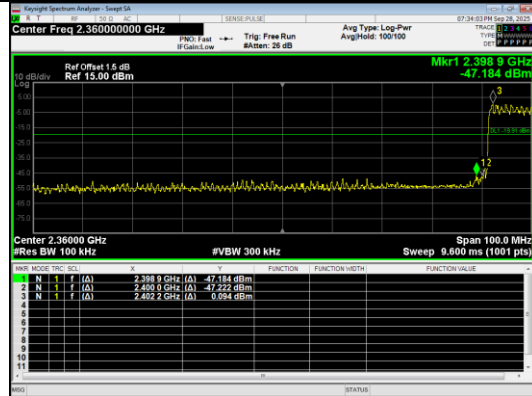
Out Of Band Emission(Left)
 $\pi/4$ DQPSK_2-DH5_Channel Hopping



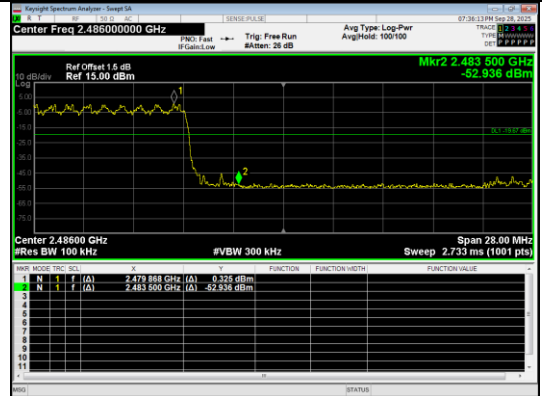
Out Of Band Emission(Right)
GFSK_DH5_Channel Hopping



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



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

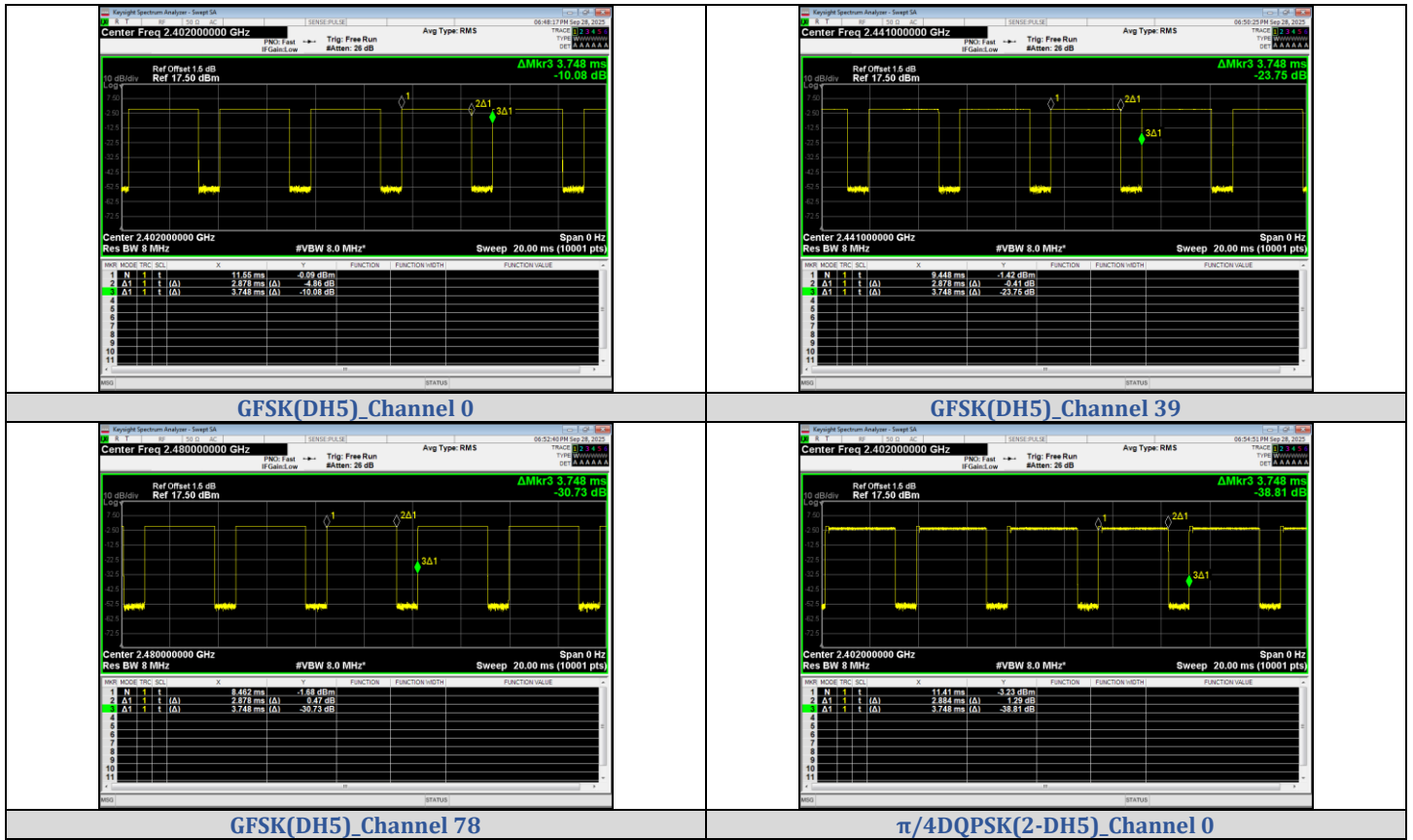


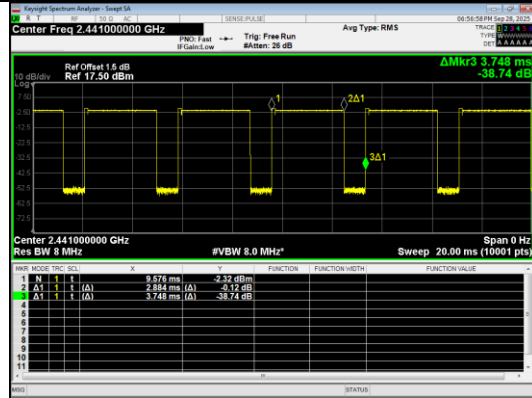
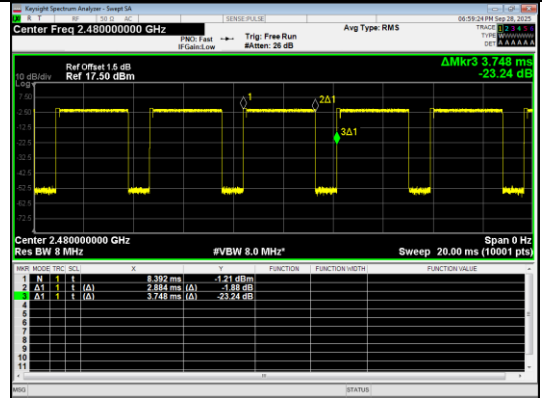
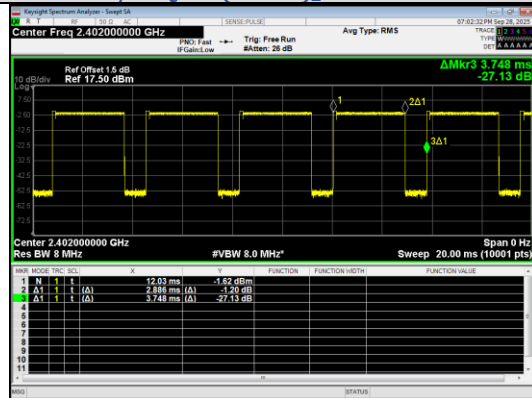
Out Of Band Emission(Right)
8DPSK_3-DH5_Channel Hopping

Duty Cycle Test Result

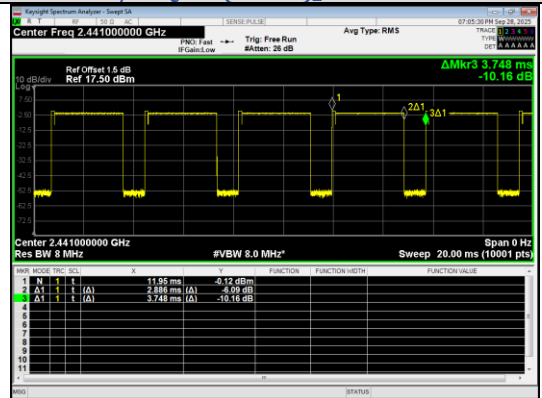
Modulation	Packets	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
GFSK	DH5	0	2.878	3.748	76.79	0.7679	1.147	0.3475
		39	2.878	3.748	76.79	0.7679	1.147	0.3475
		78	2.878	3.748	76.79	0.7679	1.147	0.3475
$\pi/4$ DQPSK	2-DH5	0	2.884	3.748	76.95	0.7695	1.1379	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

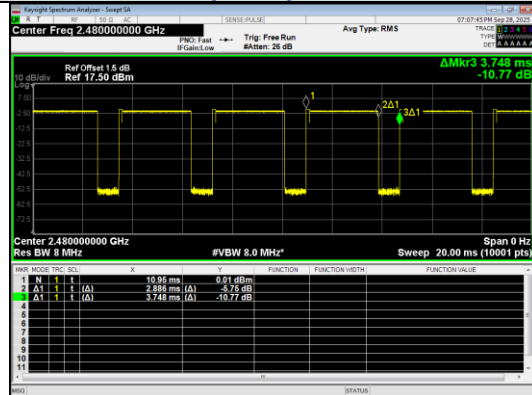



 $\pi/4$ DQPSK(2-DH5)_Channel 39

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


8DPSK(3-DH5)_Channel 0



8DPSK(3-DH5)_Channel 39



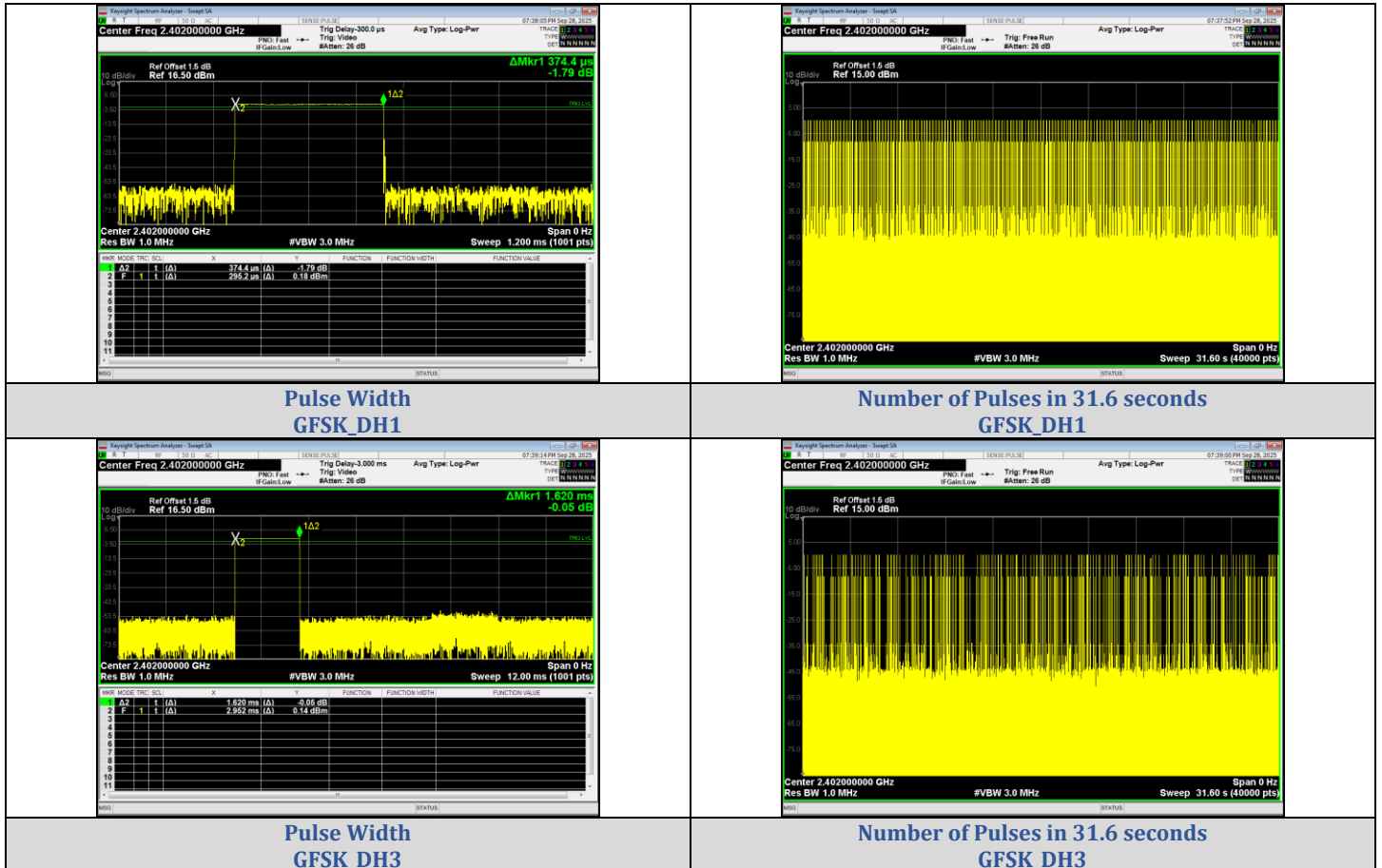
8DPSK(3-DH5)_Channel 78

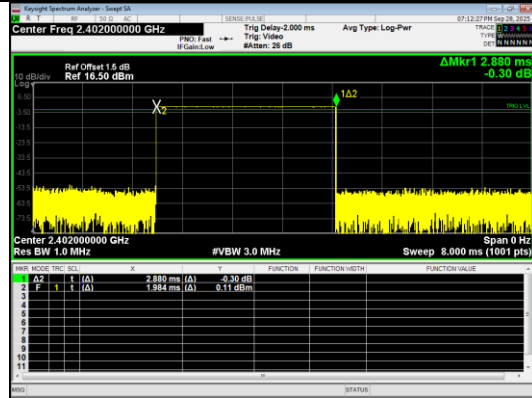
Dwell Time

Test Result

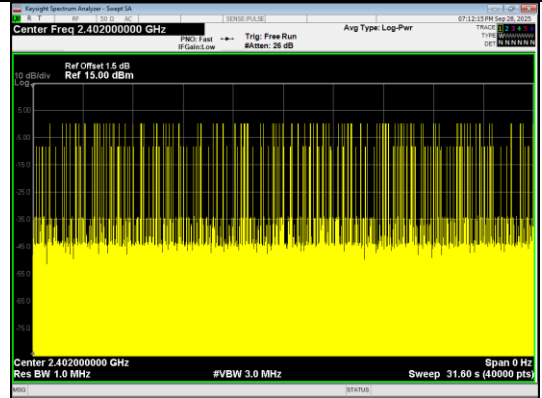
Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH1	Hopping	0.3744	315	117.94	< 400	PASS
	DH3		1.620	162	262.44		PASS
	DH5		2.880	113	325.44		PASS
$\pi/4$ DQPSK	2-DH1		0.3840	318	122.11		PASS
	2-DH3		1.632	159	259.49		PASS
	2-DH5		2.896	109	315.66		PASS
8DPSK	3-DH1		0.3840	317	121.73		PASS
	3-DH3		1.632	166	270.91		PASS
	3-DH5		2.880	110	316.8		PASS

Test Graphs

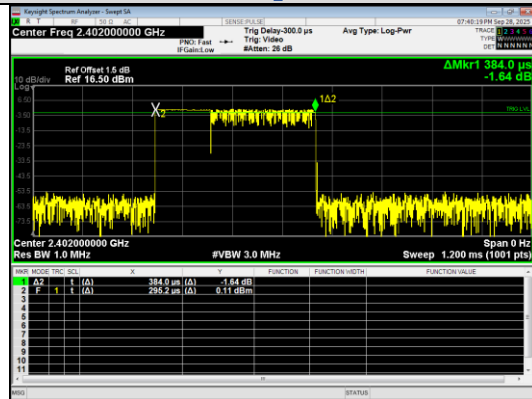




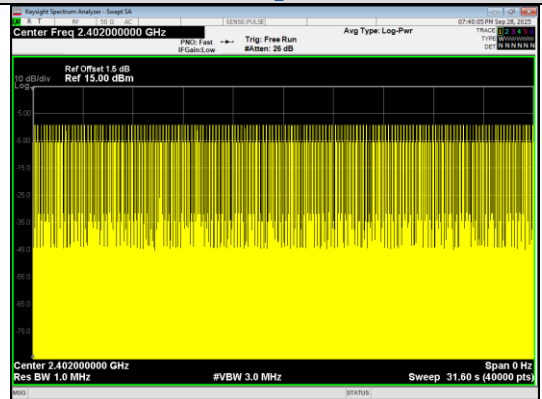
Pulse Width
GFSK_DH5



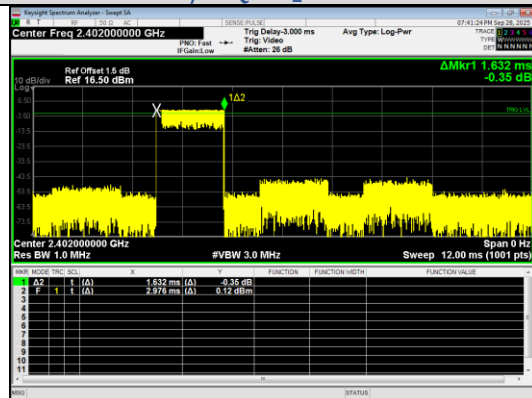
Number of Pulses in 31.6 seconds
GFSK_DH5



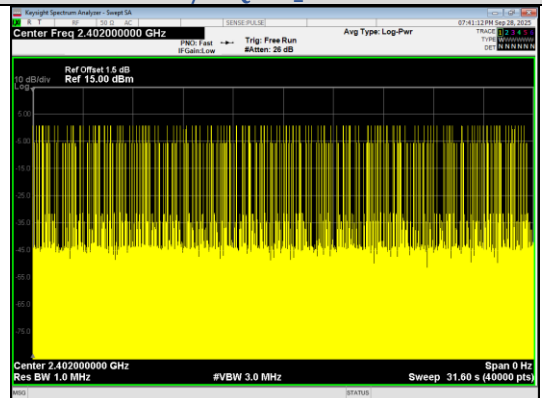
Pulse Width
 $\pi/4$ DQPSK_2-DH1



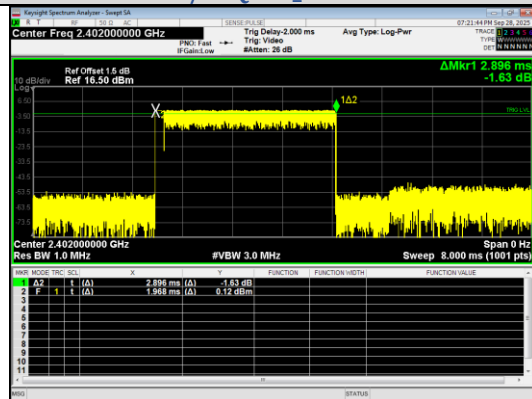
Number of Pulses in 31.6 seconds
 $\pi/4$ DQPSK_2-DH1



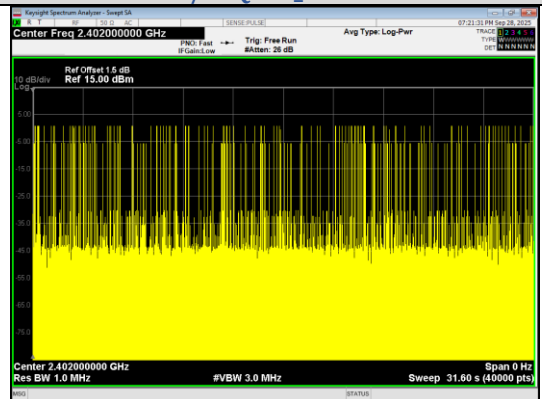
Pulse Width
 $\pi/4$ DQPSK_2-DH3



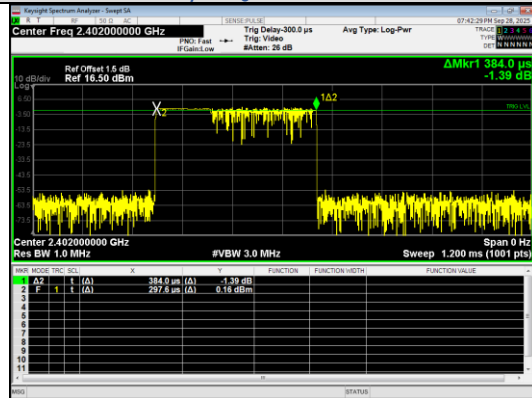
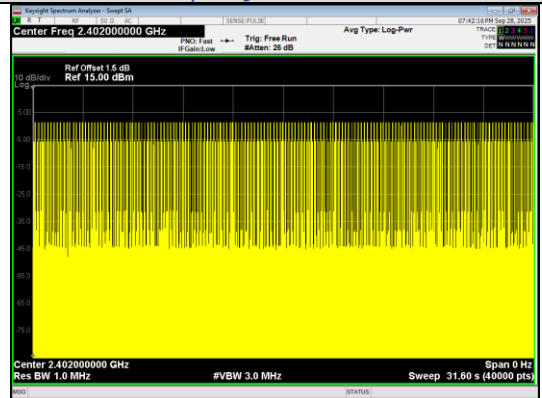
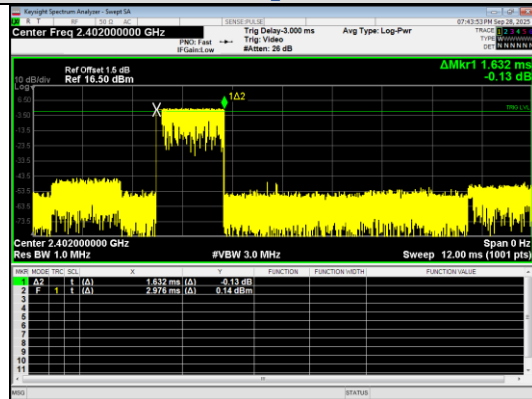
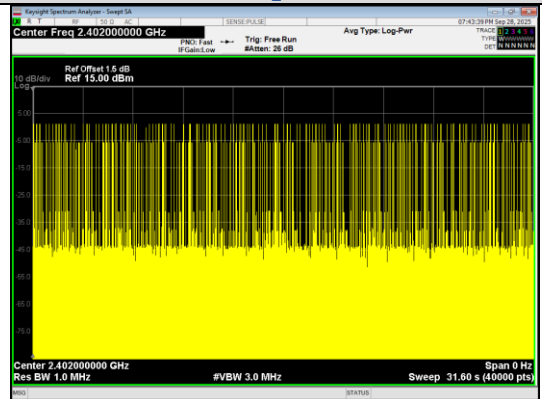
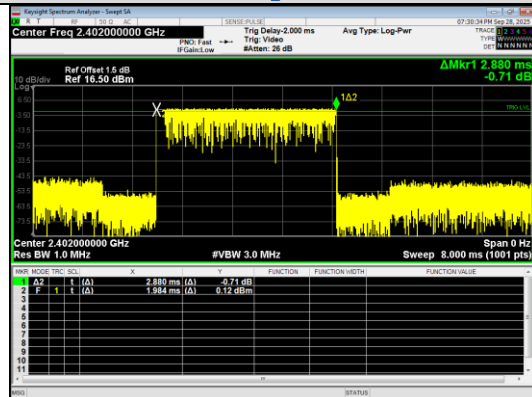
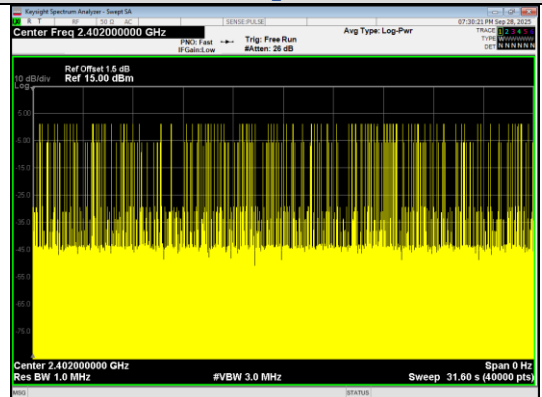
Number of Pulses in 31.6 seconds
 $\pi/4$ DQPSK_2-DH3



Pulse Width



Number of Pulses in 31.6 seconds

$\pi/4$ DQPSK_2-DH5

 $\pi/4$ DQPSK_2-DH5

Pulse Width
8DPSK_3-DH1

Number of Pulses in 31.6 seconds
8DPSK_3-DH1

Pulse Width
8DPSK_3-DH3

Number of Pulses in 31.6 seconds
8DPSK_3-DH3

Pulse Width
8DPSK_3-DH5

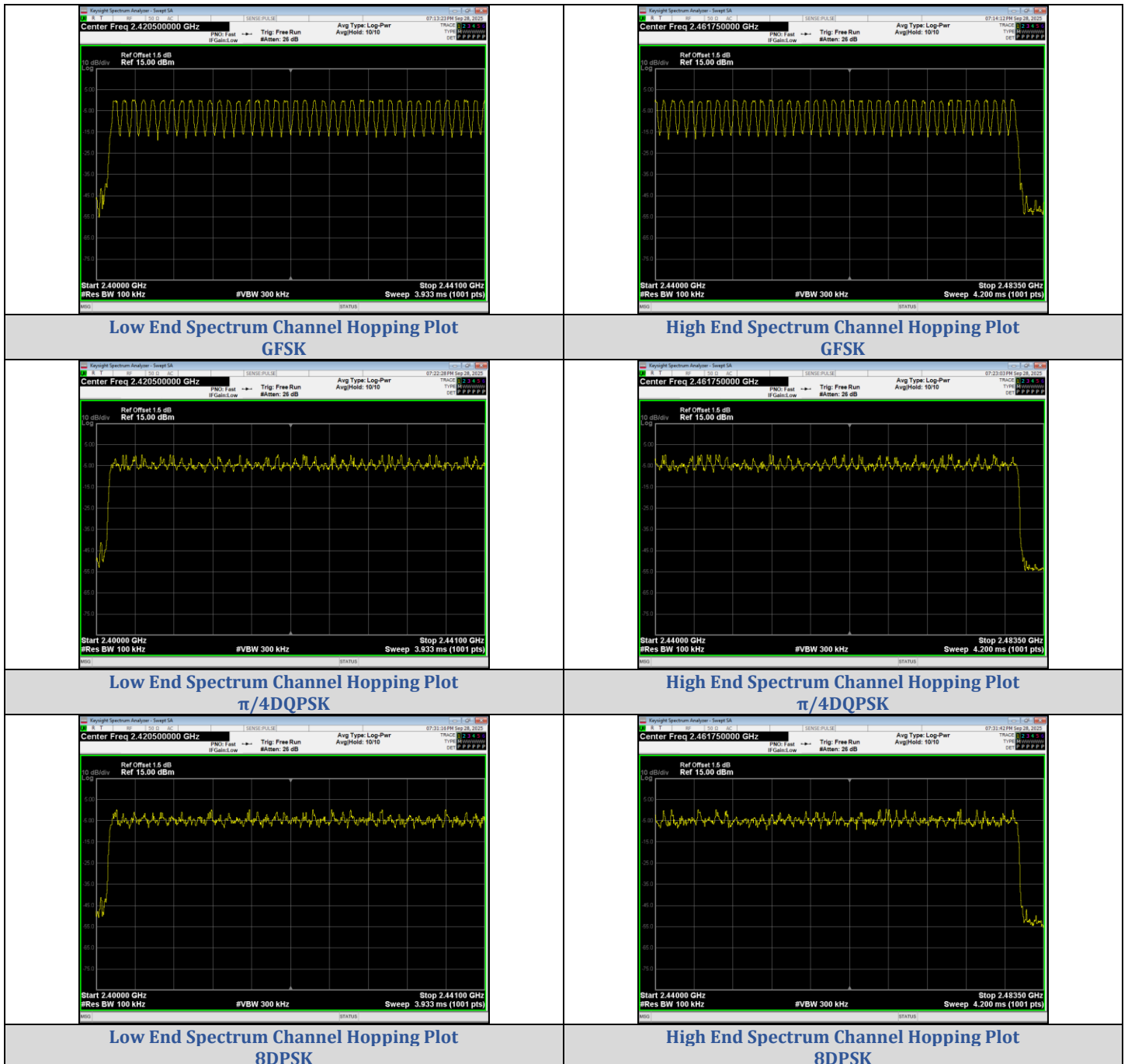
Number of Pulses in 31.6 seconds
8DPSK_3-DH5

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



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