

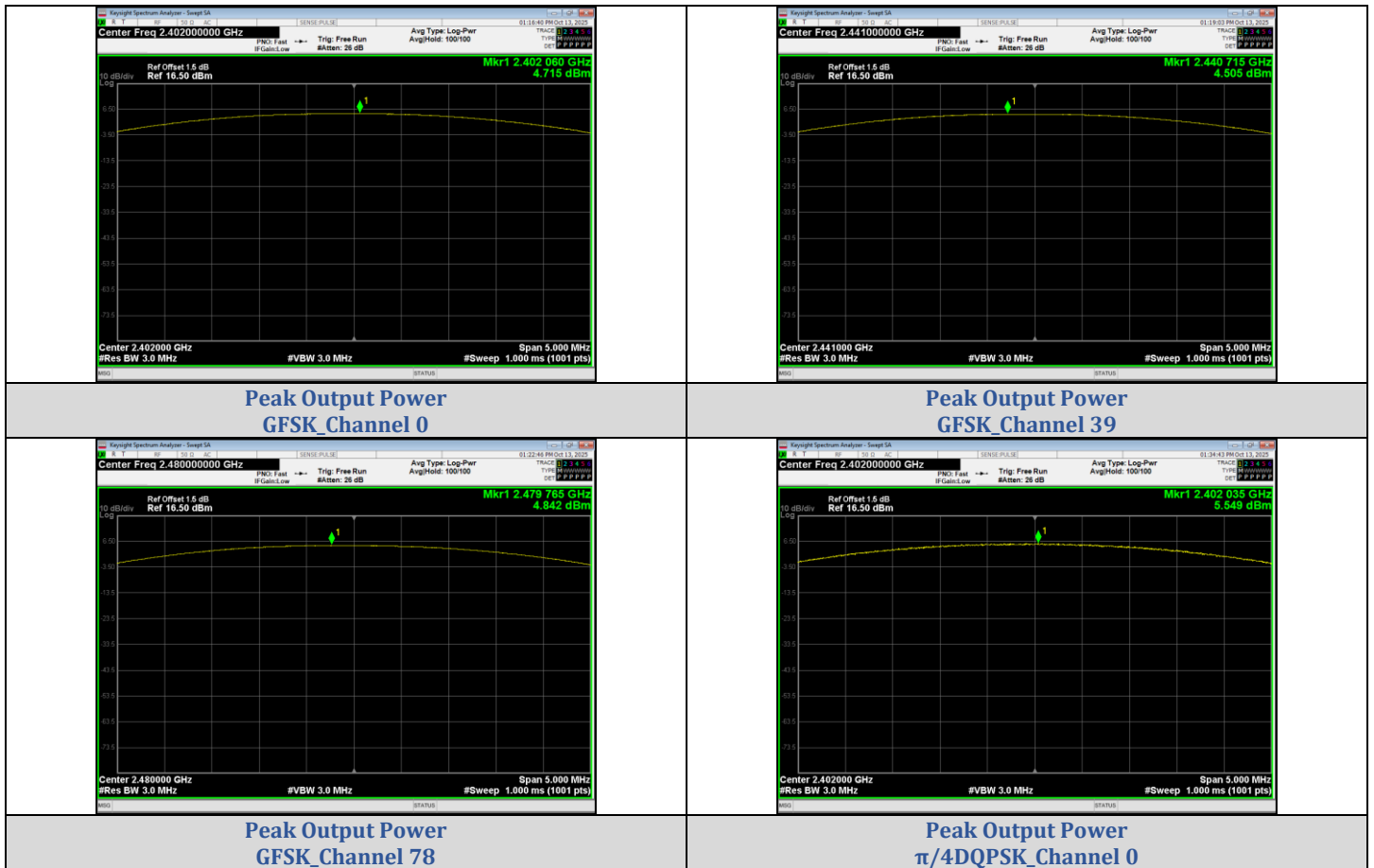
Appendix RF test data for BT

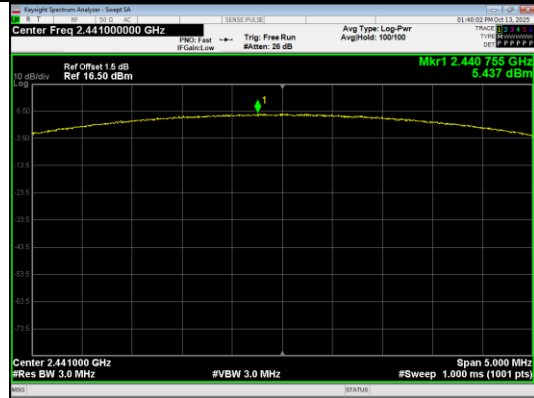
Conducted Output Power

Test Result

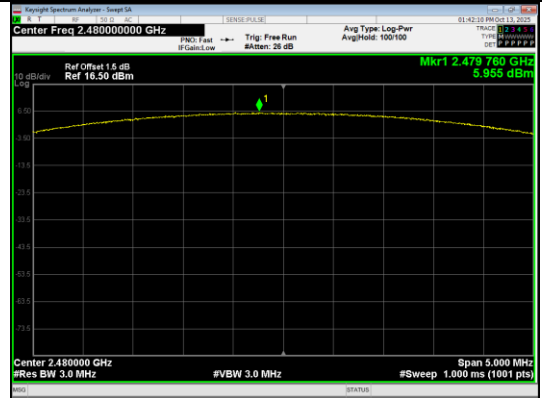
Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
GFSK	DH5	0	4.71	2.96	≤20.97	PASS
		39	4.50	2.82		PASS
		78	4.84	3.05		PASS
$\pi/4$ DQPSK	2-DH5	0	5.55	3.59		PASS
		39	5.44	3.50		PASS
		78	5.96	3.94		PASS
8DPSK	3-DH5	0	5.76	3.77		PASS
		39	5.63	3.66		PASS
		78	6.22	4.19		PASS

Test Graphs

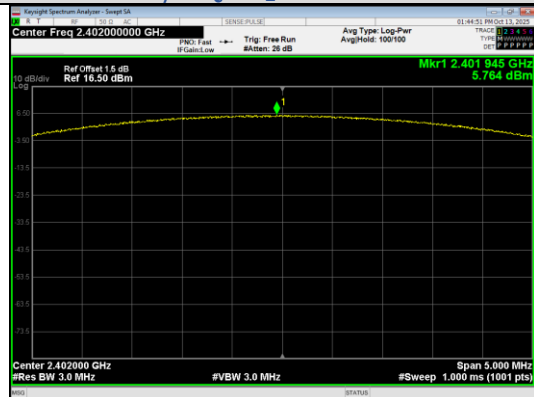




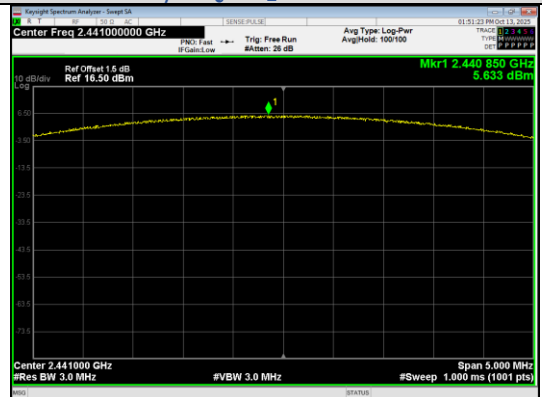
Peak Output Power
 $\pi/4$ DQPSK_Channel 39



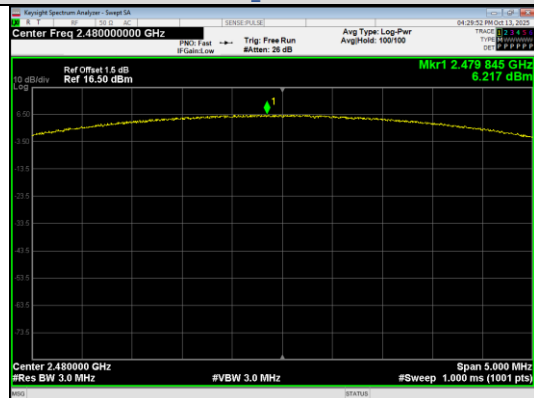
Peak Output Power
 $\pi/4$ DQPSK_Channel 78



Peak Output Power
8DPSK_Channel 0



Peak Output Power
8DPSK_Channel 39



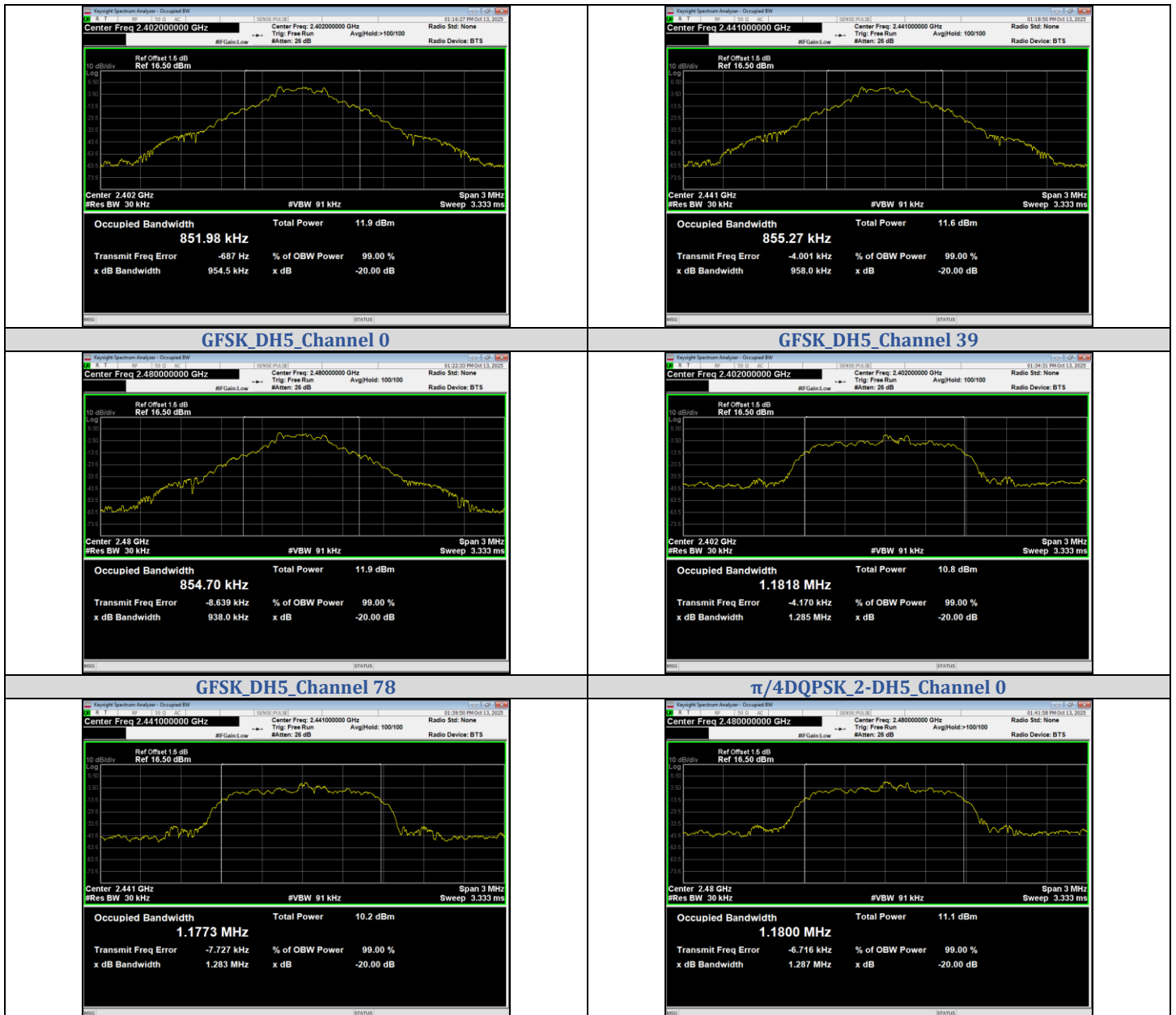
Peak Output Power
8DPSK_Channel 78

20dB Bandwidth

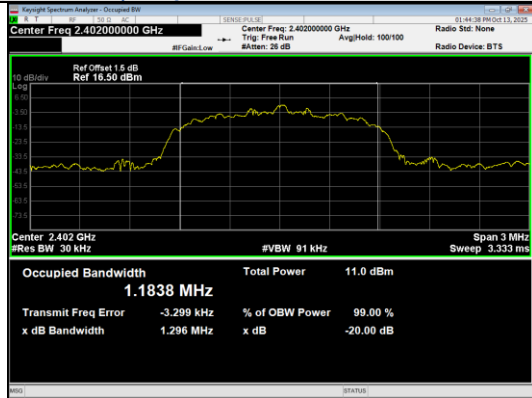
Test Result

Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	0.9500
	39	2441 MHz	0.9600
	78	2480 MHz	0.9400
$\pi/4$ DQPSK	0	2402 MHz	1.290
	39	2441 MHz	1.280
	78	2480 MHz	1.290
8DPSK	0	2402 MHz	1.300
	39	2441 MHz	1.300
	78	2480 MHz	1.300

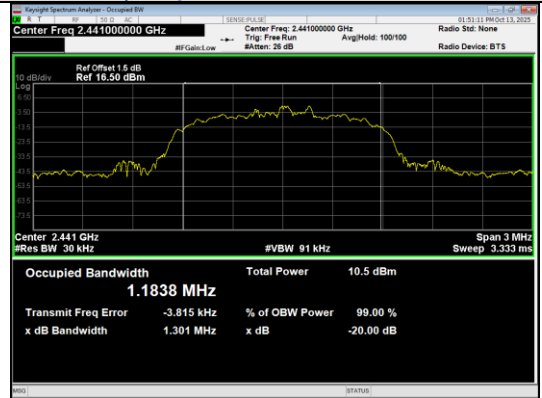
Test Graphs



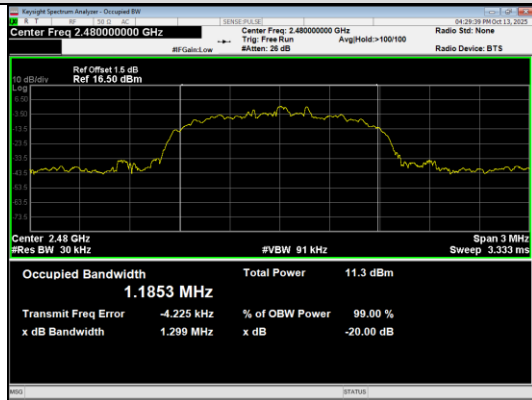
$\pi/4$ DQPSK 2-DH5_Channel 39



$\pi/4$ DQPSK 2-DH5_Channel 78



8DPSK 3-DH5_Channel 0



8DPSK 3-DH5_Channel 39

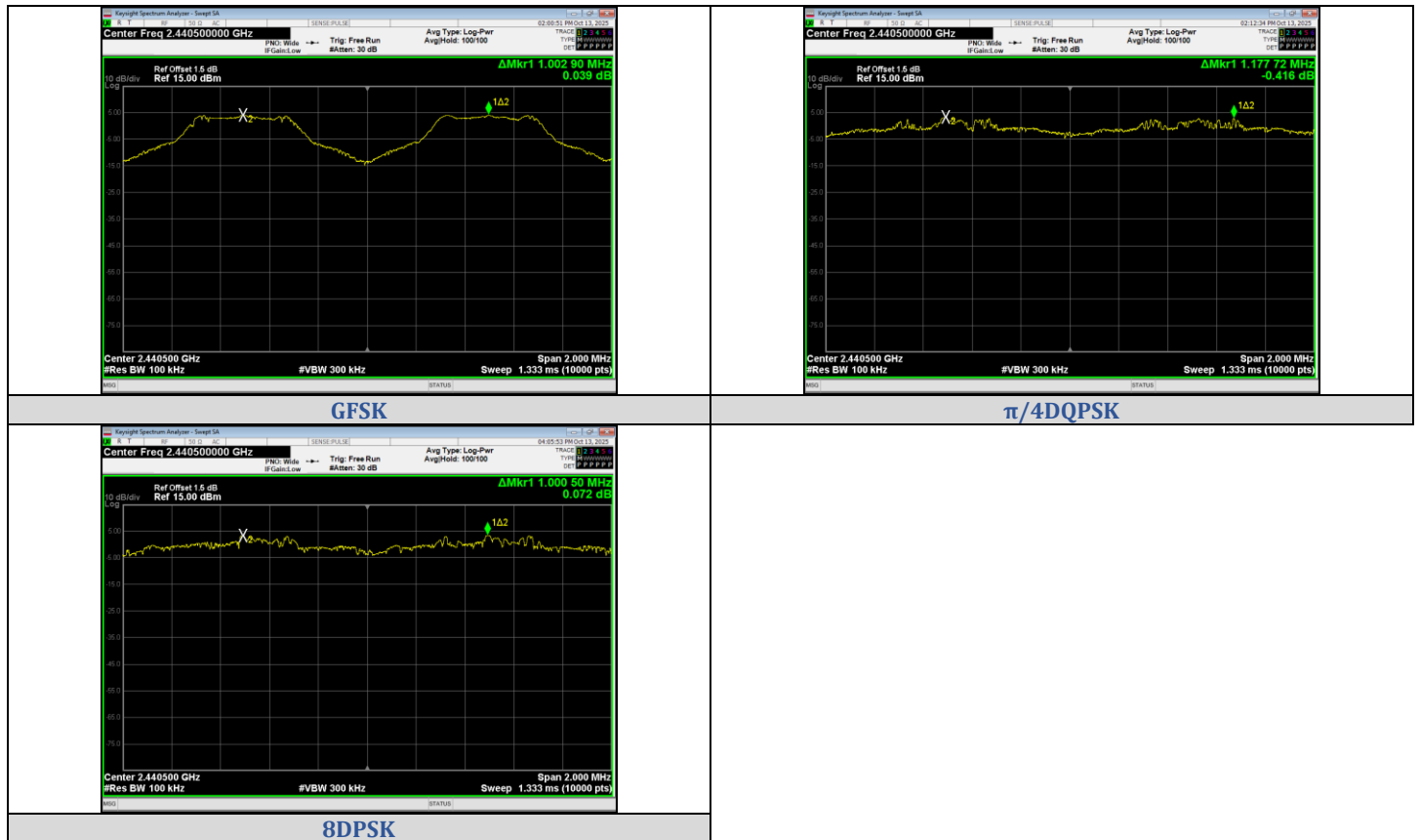
8DPSK 3-DH5_Channel 78

Carrier Frequencies Separation

Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2439.992	2440.9949	1.0029	0.99	PASS
$\pi/4$ DQPSK	2-DH5	2439.9914	2441.1692	1.1777	0.99	PASS
8DPSK	3-DH5	2439.9914	2440.9919	1.0005	0.99	PASS

Test Graphs



Conducted Out Of Band Emission

Test Result

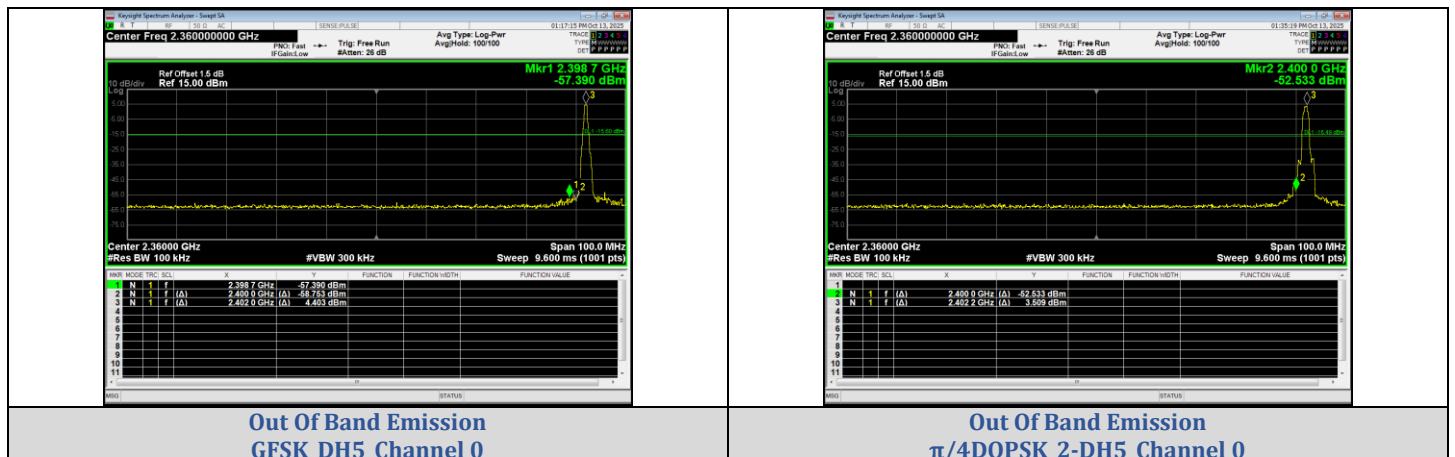
Non-Hopping

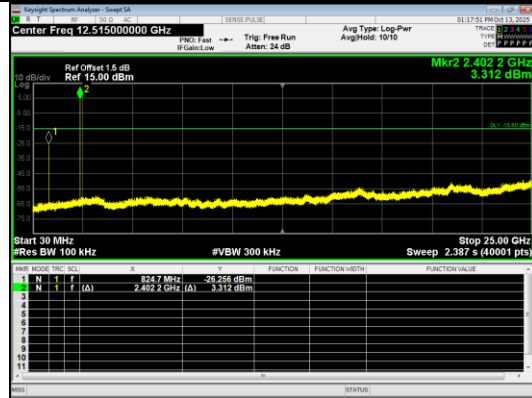
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	824.70	-26.256	-15.6	-10.656	PASS
			2398.70	-57.390	-15.6	-41.790	PASS
			2400.00	-58.750	-15.6	-43.150	PASS
		39	24355.8	-49.249	-15.86	-33.389	PASS
		78	2483.50	-60.150	-15.41	-44.740	PASS
			24925.7	-49.285	-15.41	-33.875	PASS
$\pi/4$ DQPSK	2-DH5	0	2400.00	-52.530	-16.49	-36.040	PASS
			24952.6	-49.313	-16.49	-32.823	PASS
		39	24983.2	-48.816	-16.67	-32.146	PASS
		78	1756.05	-36.731	-15.94	-20.791	PASS
			2483.50	-61.030	-15.94	-45.090	PASS
8DPSK	3-DH5	0	2400.00	-50.830	-16.25	-34.580	PASS
			24997.5	-49.790	-16.25	-33.540	PASS
		39	24946.9	-47.949	-16.69	-31.259	PASS
		78	1752.93	-38.557	-15.93	-22.627	PASS
			2483.50	-60.140	-15.93	-44.210	PASS

Hopping

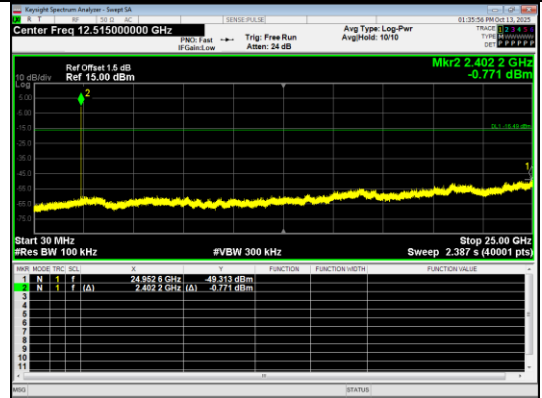
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2389.00	-57.136	-14.72	-42.416	PASS
			2400.00	-60.530	-14.72	-45.810	PASS
			2483.50	-59.320	-15.28	-44.040	PASS
$\pi/4$ DQPSK	2-DH5		2400.00	-52.910	-15.36	-37.550	PASS
			2483.50	-58.800	-15.63	-43.170	PASS
8DPSK	3-DH5		2400.00	-52.300	-15.4	-36.900	PASS
			2483.50	-60.540	-15.66	-44.880	PASS

Test Graphs

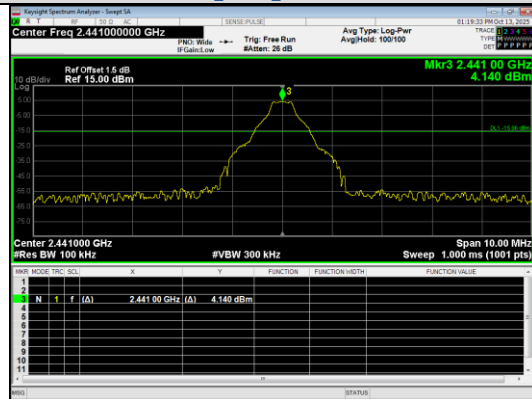




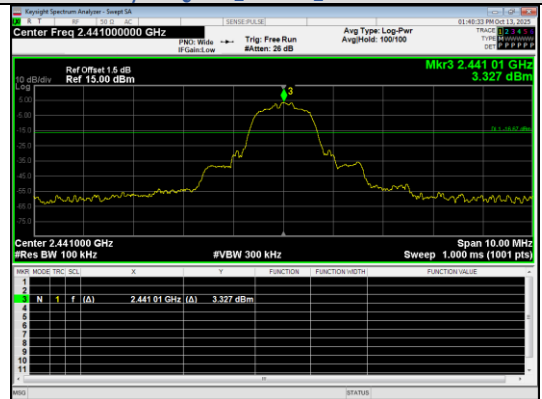
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 0



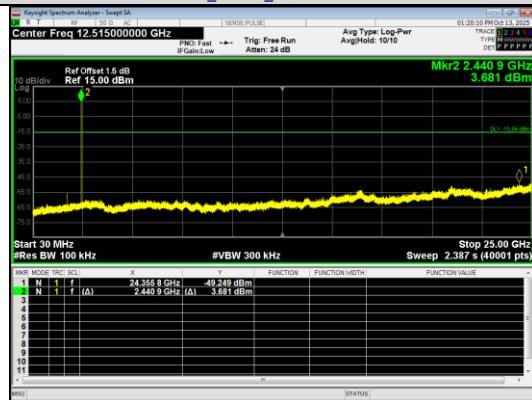
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 0



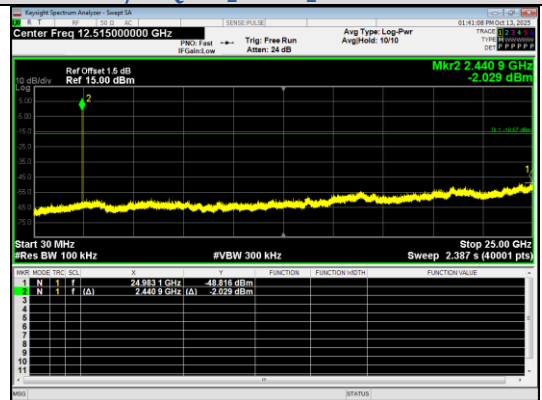
Out Of Band Emission
GFSK_DH5_Channel 39



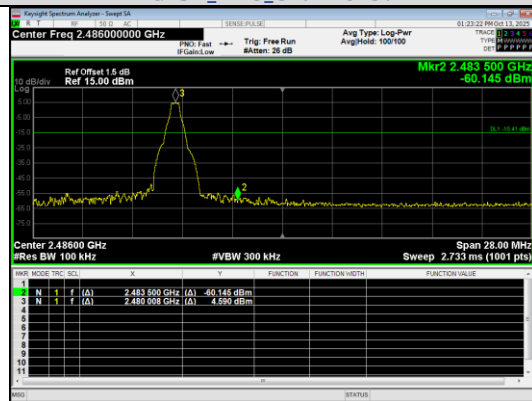
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 39



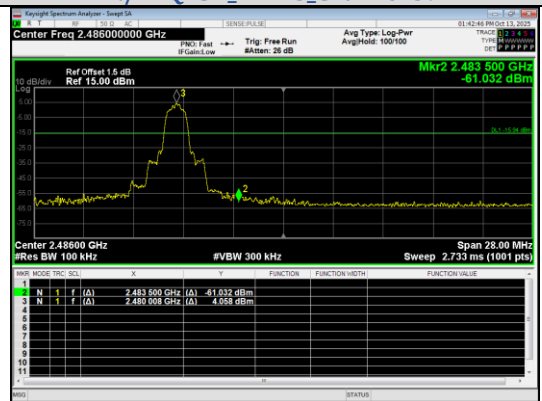
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 39



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

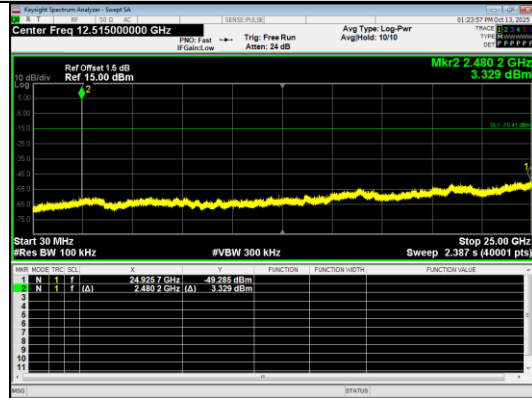


Out Of Band Emission



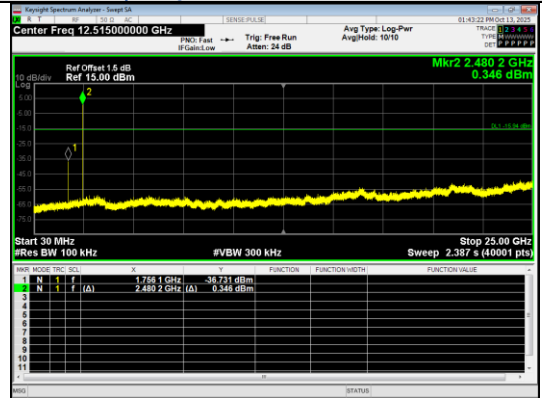
Out Of Band Emission

GFSK_DH5_Channel 78

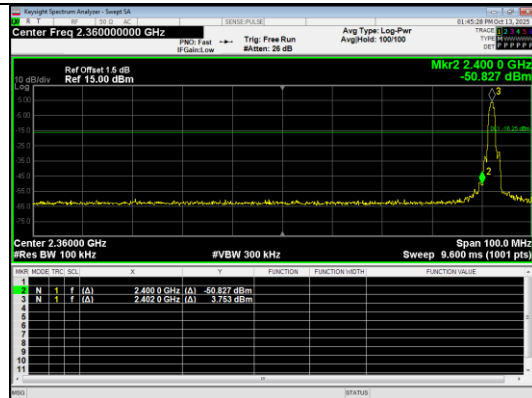


30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 78

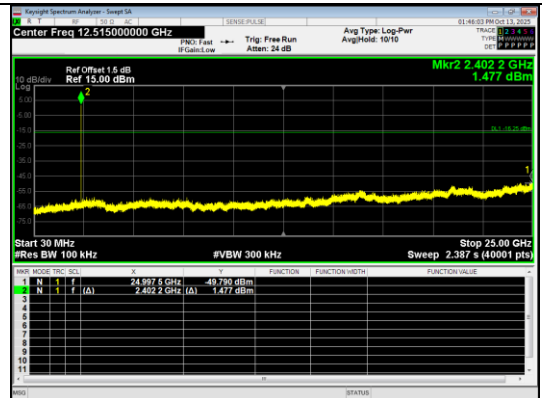
$\pi/4$ DQPSK_2-DH5_Channel 78



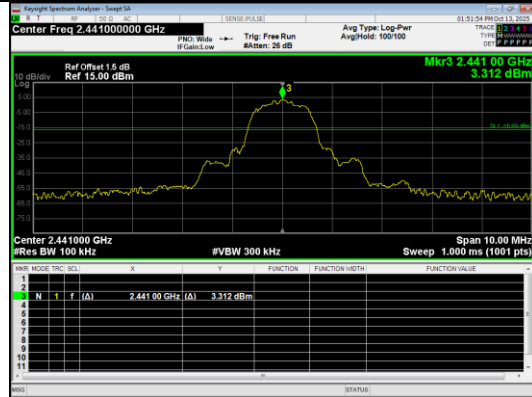
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 78



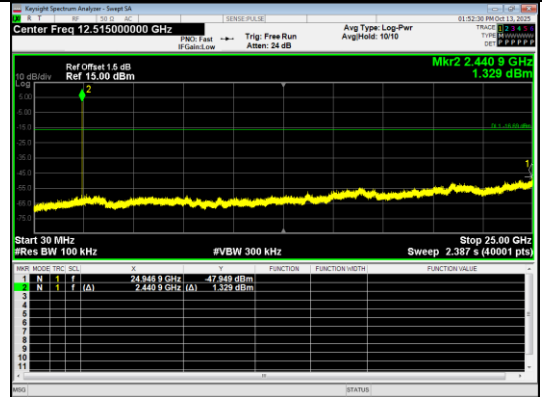
Out Of Band Emission
8DPSK_3-DH5_Channel 0



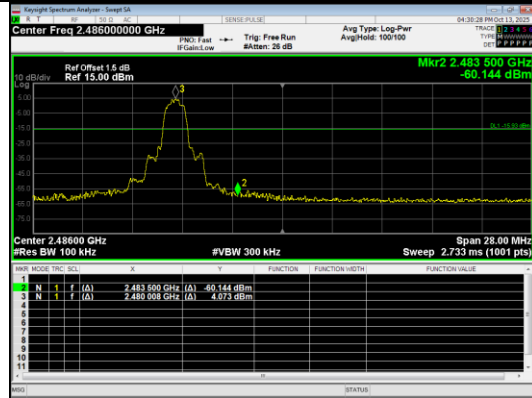
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 0



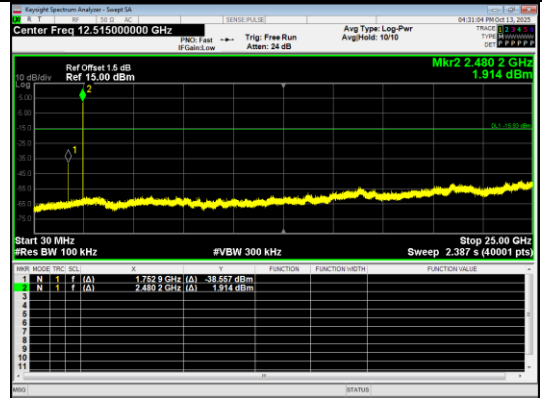
Out Of Band Emission
8DPSK_3-DH5_Channel 39



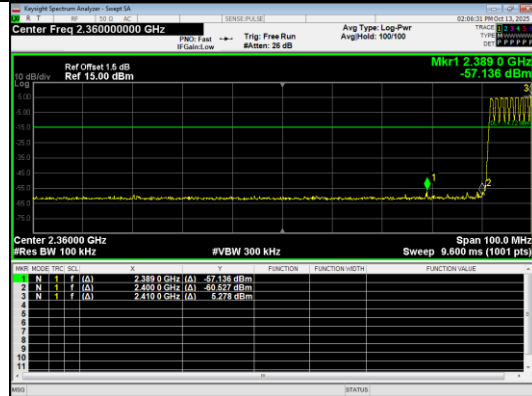
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 39



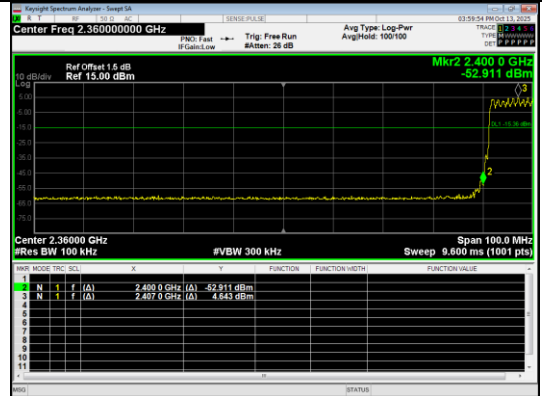
Out Of Band Emission
8DPSK_3-DH5_Channel 78



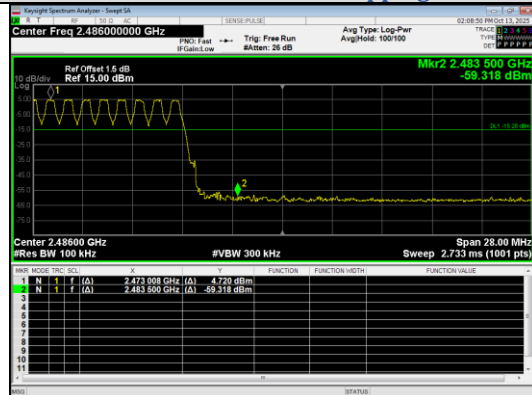
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 78



Out Of Band Emission(Left)
GFSK_DH5_Channel Hopping



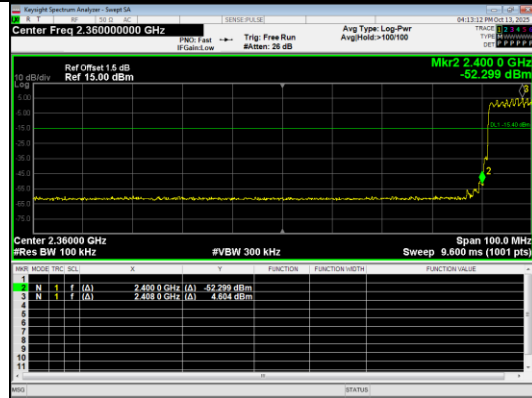
Out Of Band Emission(Left)
 $\pi/4$ DQPSK_2-DH5_Channel Hopping



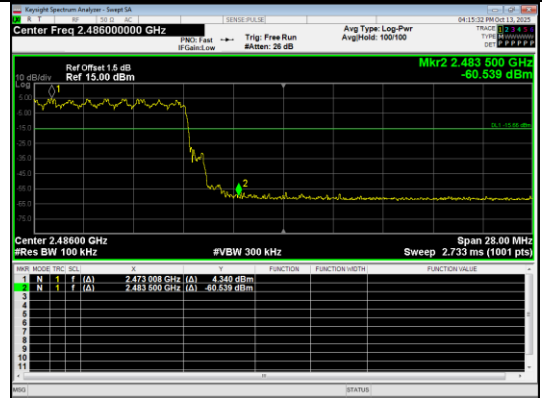
Out Of Band Emission(Right)
GFSK_DH5_Channel Hopping



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



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



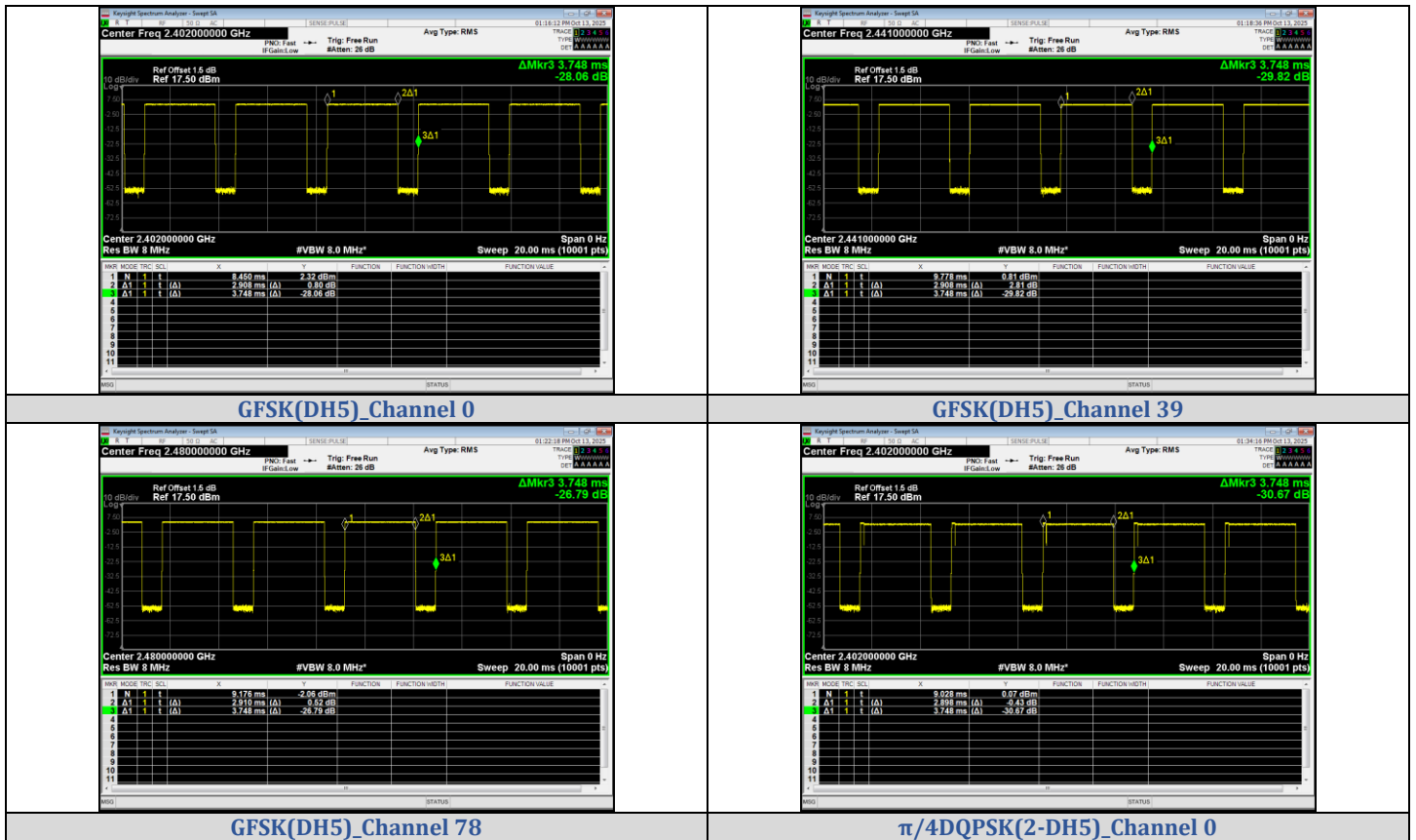
Out Of Band Emission(Right)
8DPSK_3-DH5_Channel Hopping

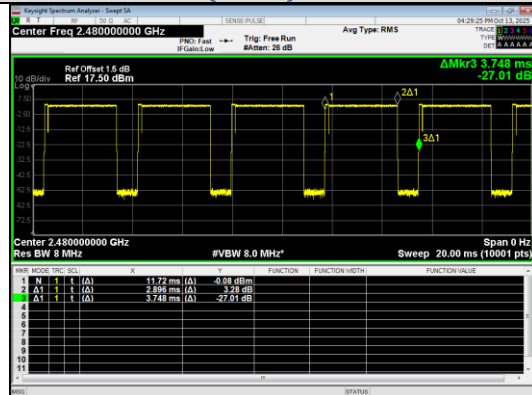
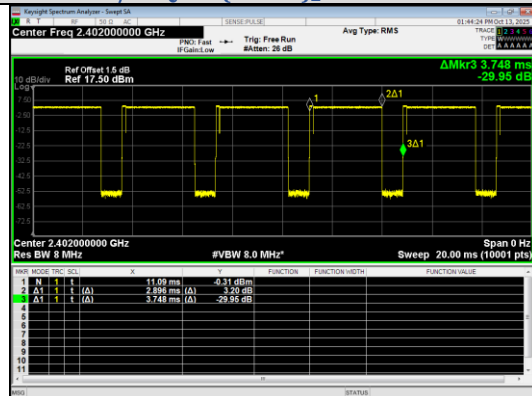
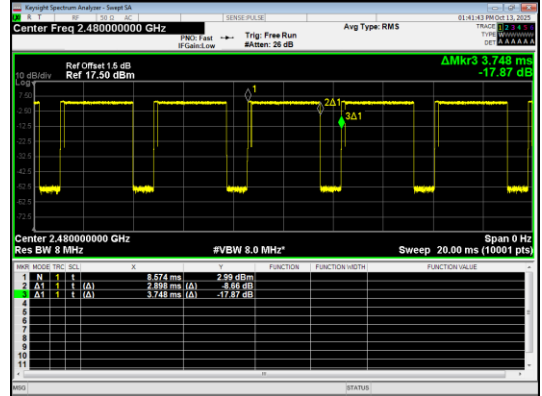
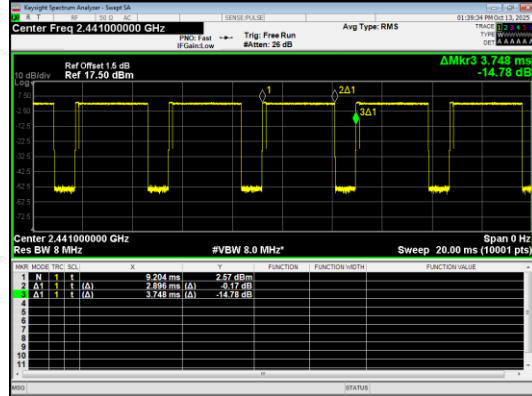
Duty Cycle

Test Result

Modulation	Packets	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
GFSK	DH5	0	2.908	3.748	77.59	0.7759	1.1019	0.3439
		39	2.908	3.748	77.59	0.7759	1.1019	0.3439
		78	2.910	3.748	77.64	0.7764	1.0991	0.3436
$\pi/4$ DQPSK	2-DH5	0	2.898	3.748	77.32	0.7732	1.1171	0.3451
		39	2.896	3.748	77.27	0.7727	1.1199	0.3453
		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	2.898	3.748	77.32	0.7732	1.1171	0.3451
		78	2.896	3.748	77.27	0.7727	1.1199	0.3453

Test Graphs



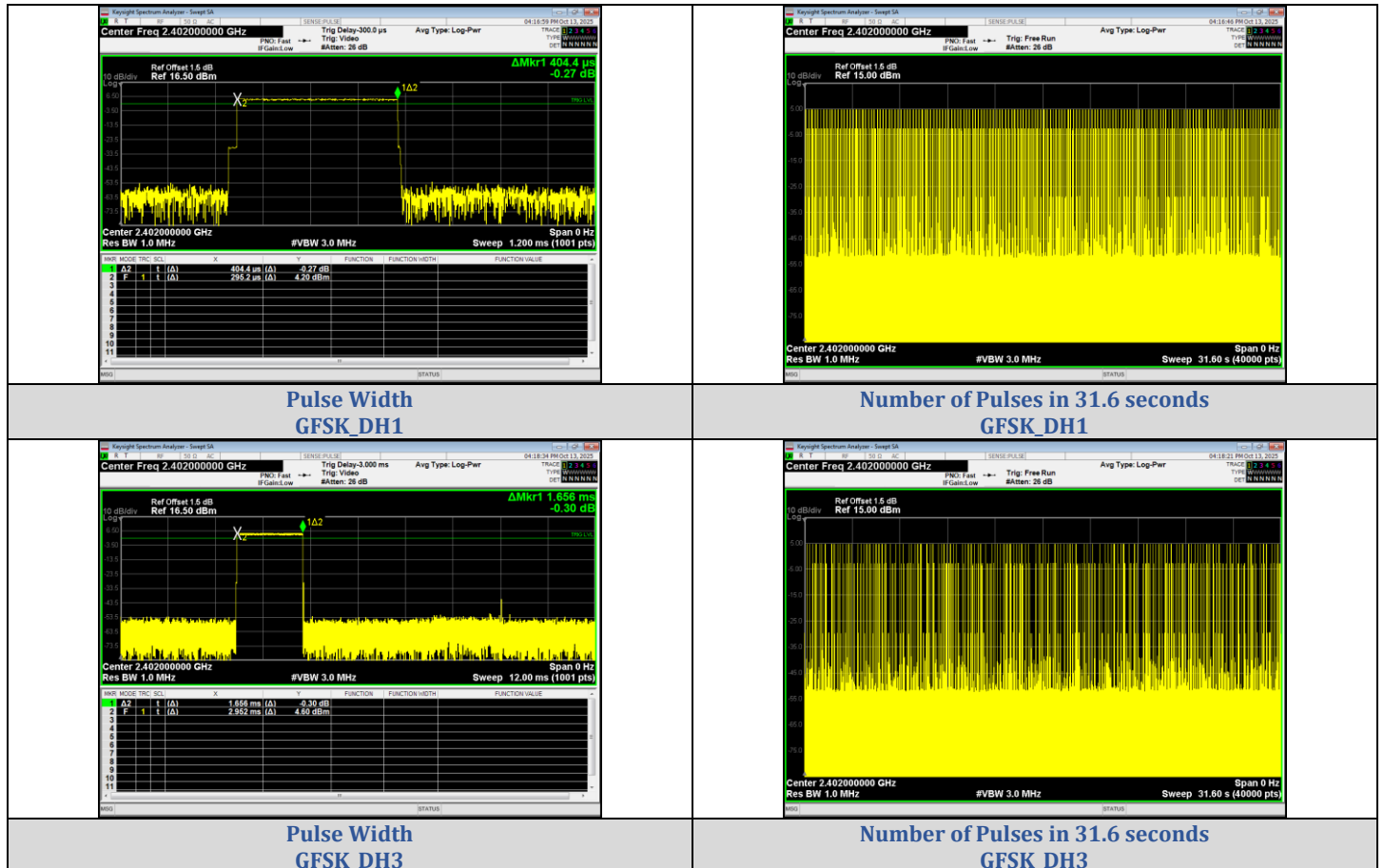


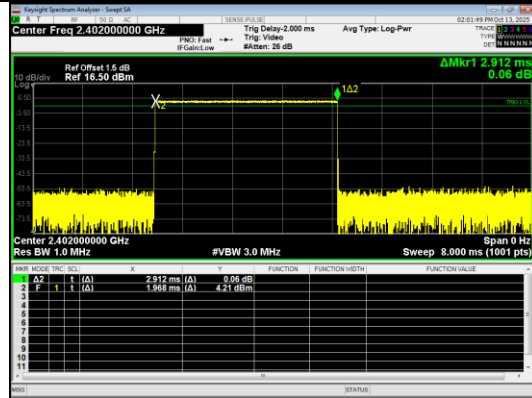
Dwell Time

Test Result

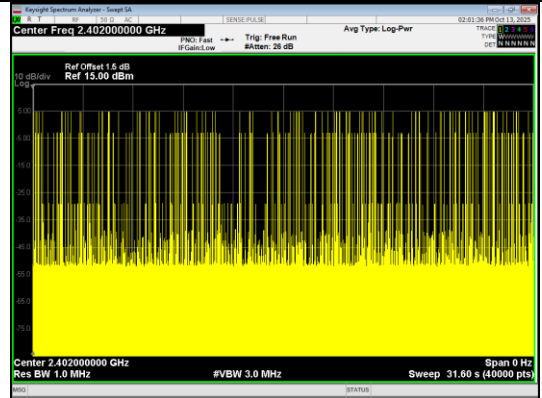
Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH1	Hopping	0.4044	317	128.19	< 400	PASS
	DH3		1.656	175	289.8		PASS
	DH5		2.912	102	297.02		PASS
$\pi/4$ DQPSK	2-DH1		0.3960	315	124.74		PASS
	2-DH3		1.656	157	259.99		PASS
	2-DH5		2.896	112	324.35		PASS
8DPSK	3-DH1		0.3960	319	126.32		PASS
	3-DH3		1.656	163	269.93		PASS
	3-DH5		2.896	96	278.02		PASS

Test Graphs

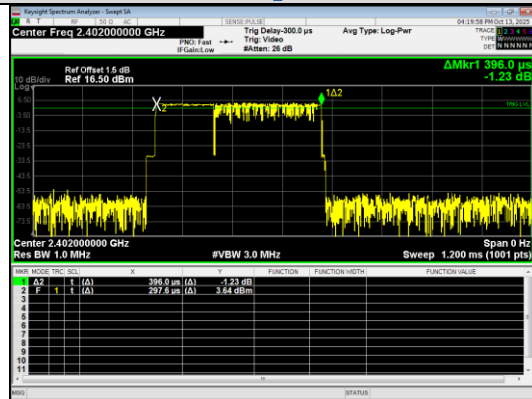




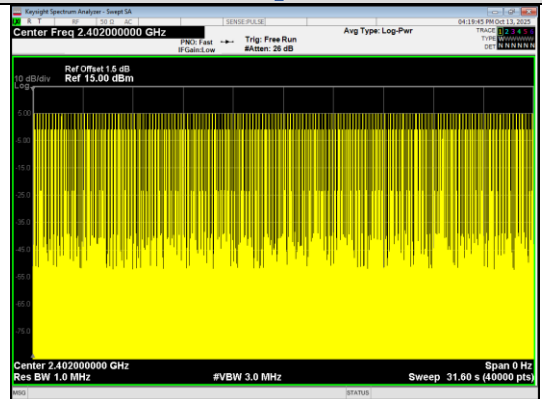
Pulse Width
GFSK_DH5



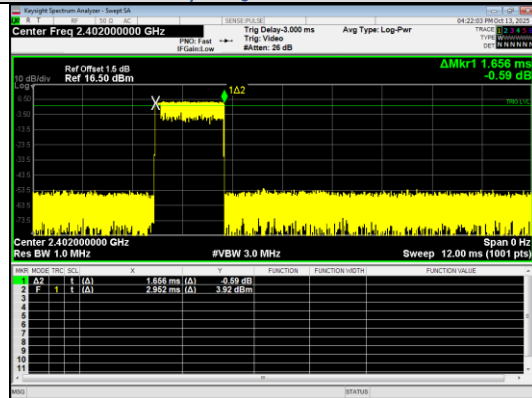
Number of Pulses in 31.6 seconds
GFSK_DH5



Pulse Width
 $\pi/4$ DQPSK_2-DH1



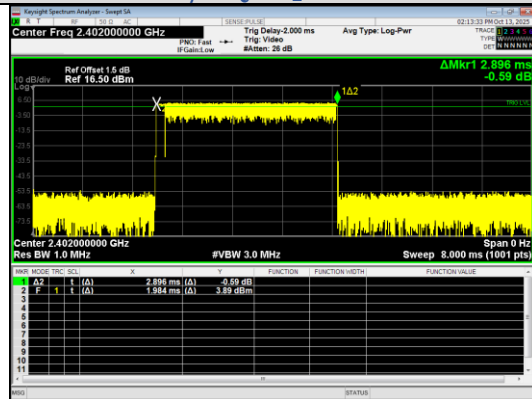
Number of Pulses in 31.6 seconds
 $\pi/4$ DQPSK_2-DH1



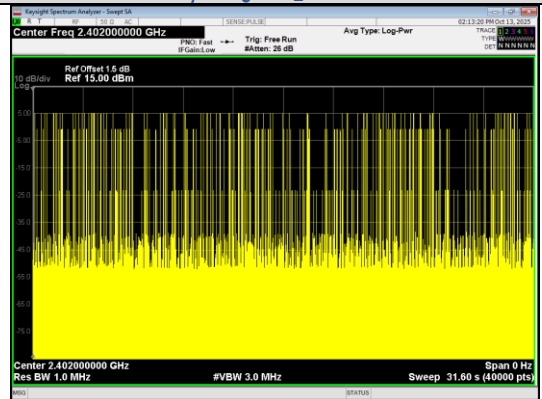
Pulse Width
 $\pi/4$ DQPSK_2-DH3



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

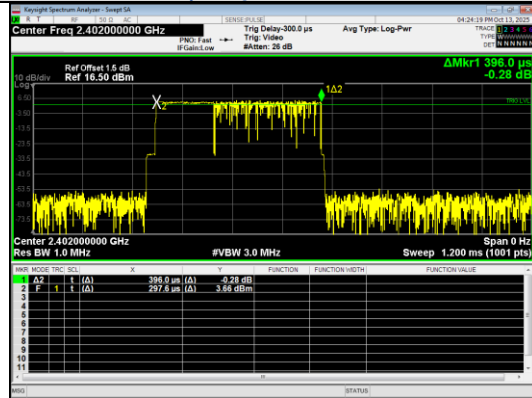


Pulse Width

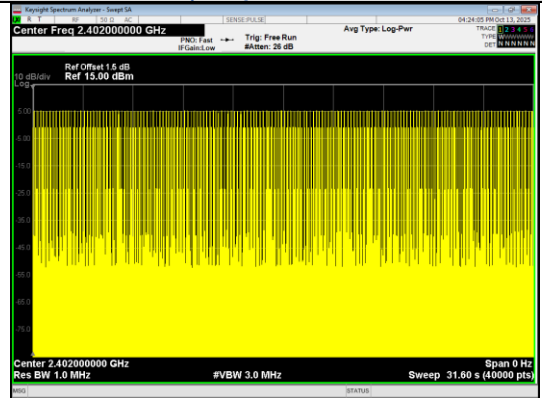


Number of Pulses in 31.6 seconds

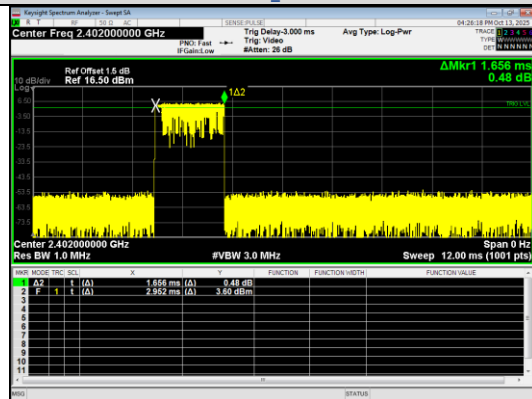
$\pi/4$ DQPSK_2-DH5



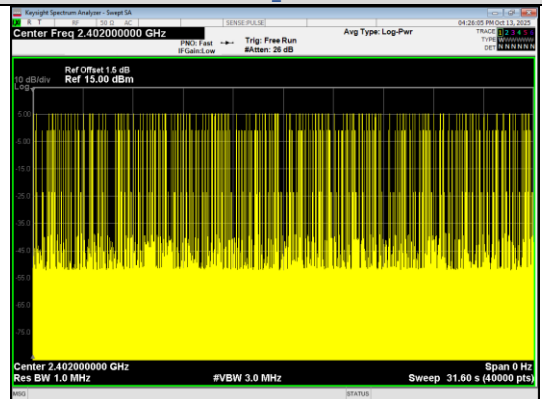
$\pi/4$ DQPSK_2-DH5



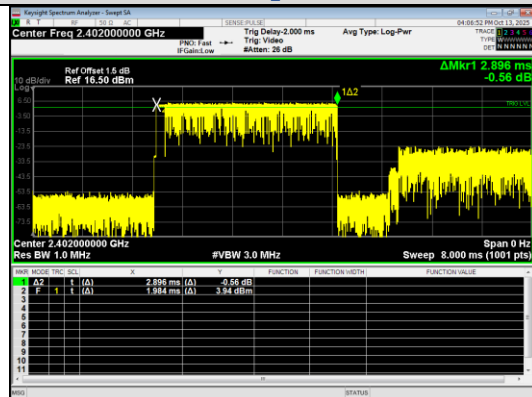
Pulse Width 8DPSK_3-DH1



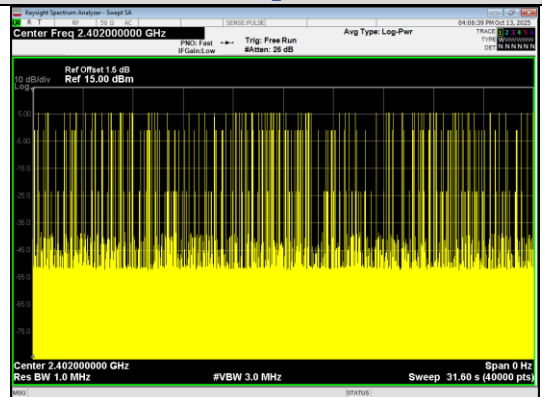
Number of Pulses in 31.6 seconds 8DPSK_3-DH1



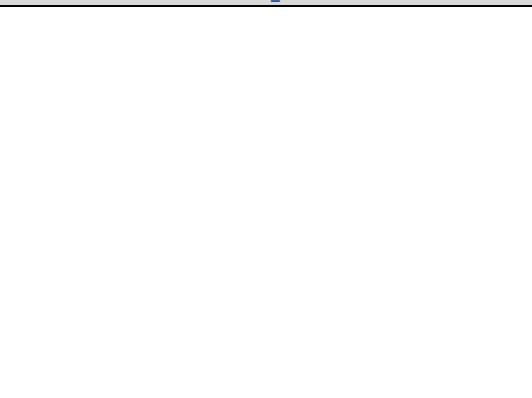
Pulse Width 8DPSK_3-DH3



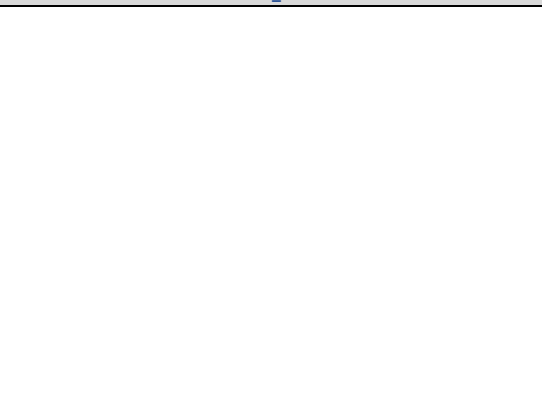
Number of Pulses in 31.6 seconds 8DPSK_3-DH3



Pulse Width 8DPSK_3-DH5



Number of Pulses in 31.6 seconds 8DPSK_3-DH5

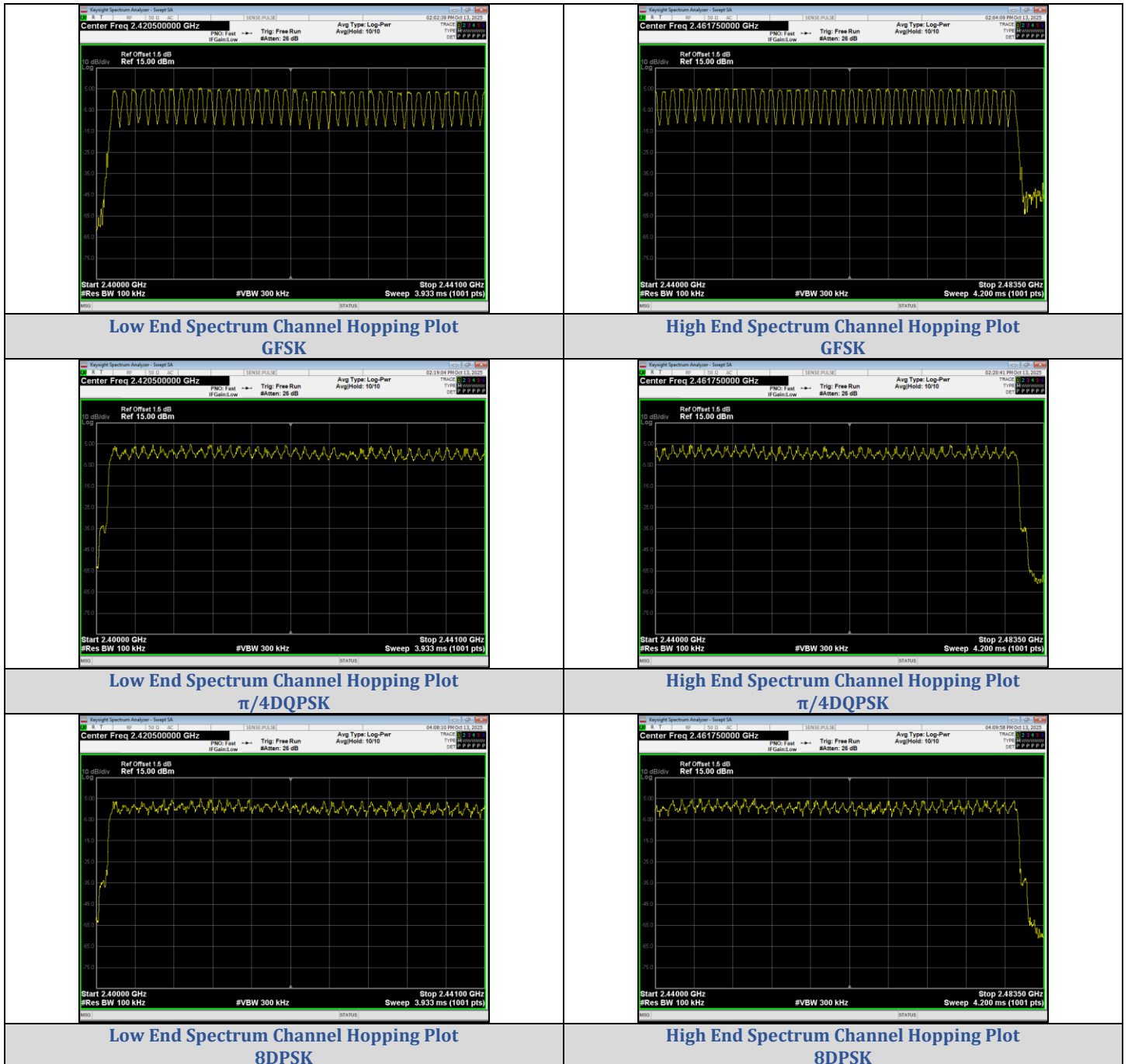


Number Of Hopping Channel

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 *****