

Appendix RF test data for BT

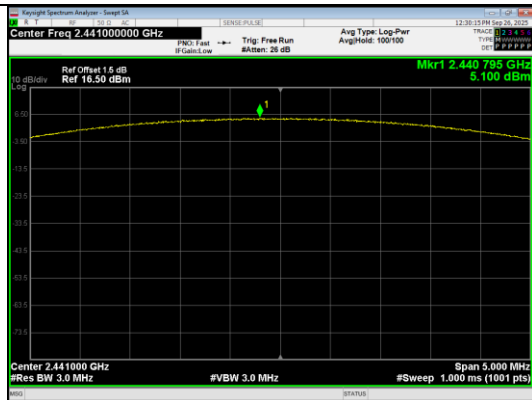
Conducted Output Power

Test Result

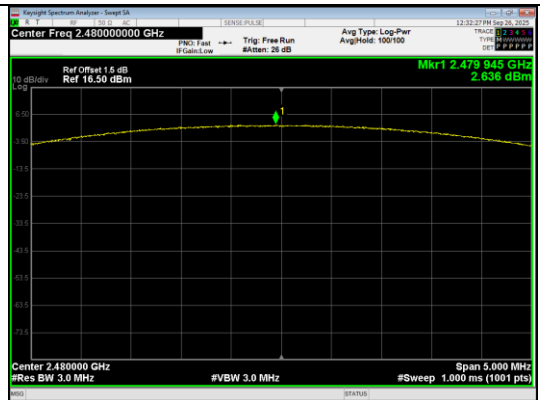
Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
GFSK	DH5	0	4.37	2.74	≤20.97	PASS
		39	4.05	2.54		PASS
		78	4.40	2.75		PASS
$\pi/4$ DQPSK	2-DH5	0	5.32	3.40		PASS
		39	5.10	3.24		PASS
		78	2.64	1.84		PASS
8DPSK	3-DH5	0	5.48	3.53		PASS
		39	5.26	3.36		PASS
		78	2.89	1.95		PASS

Test Graphs

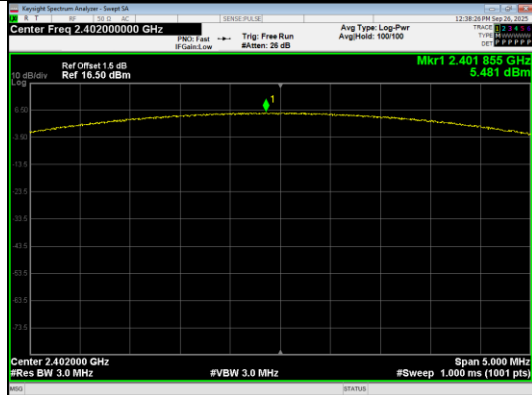




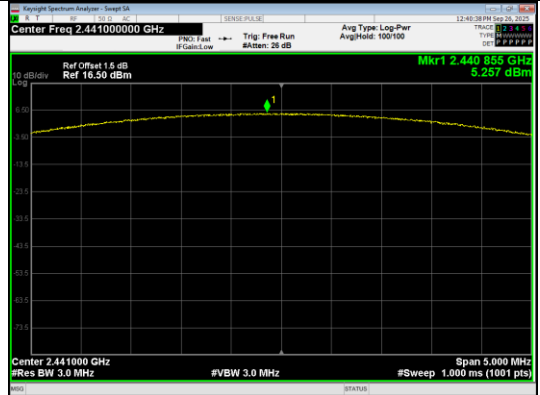
Peak Output Power
 $\pi/4$ DQPSK_Channel 39



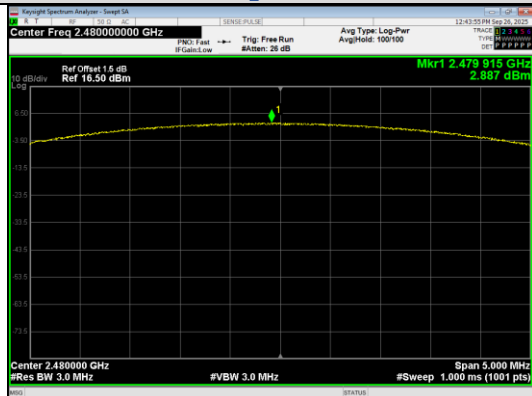
Peak Output Power
 $\pi/4$ DQPSK_Channel 78



Peak Output Power
8DPSK_Channel 0



Peak Output Power
8DPSK_Channel 39



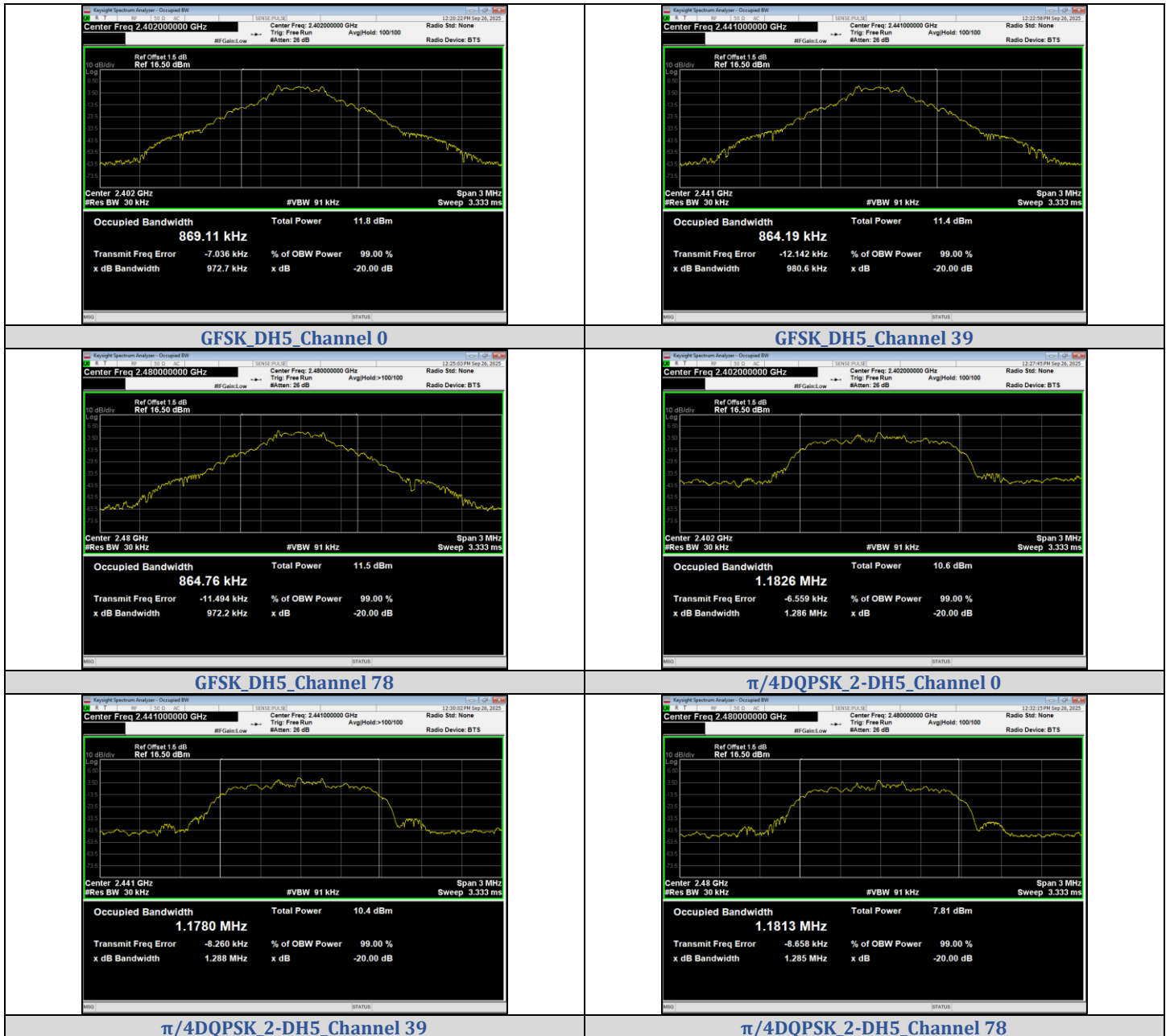
Peak Output Power
8DPSK_Channel 78

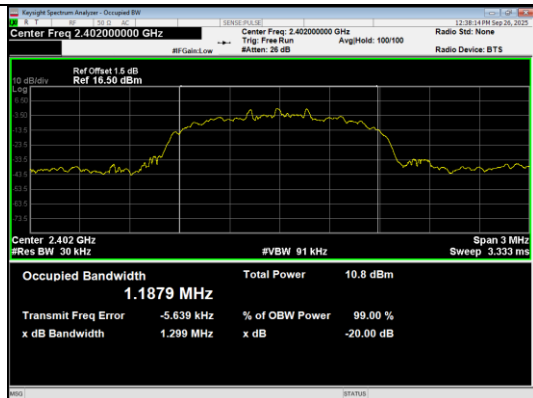
20dB Bandwidth

Test Result

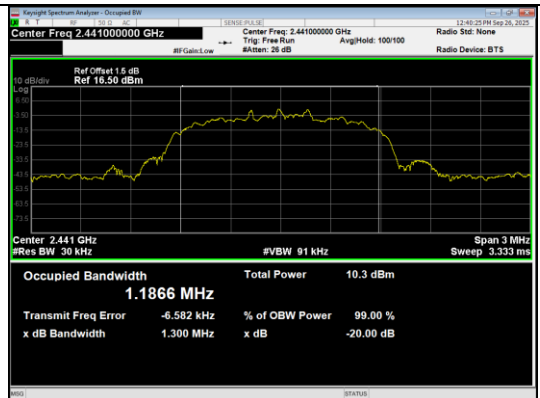
Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	0.9700
	39	2441 MHz	0.9800
	78	2480 MHz	0.9700
$\pi/4$ DQPSK	0	2402 MHz	1.290
	39	2441 MHz	1.290
	78	2480 MHz	1.280
8DPSK	0	2402 MHz	1.300
	39	2441 MHz	1.300
	78	2480 MHz	1.300

Test Graphs

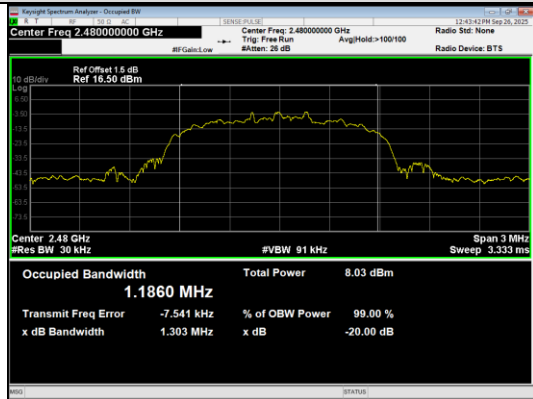




8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



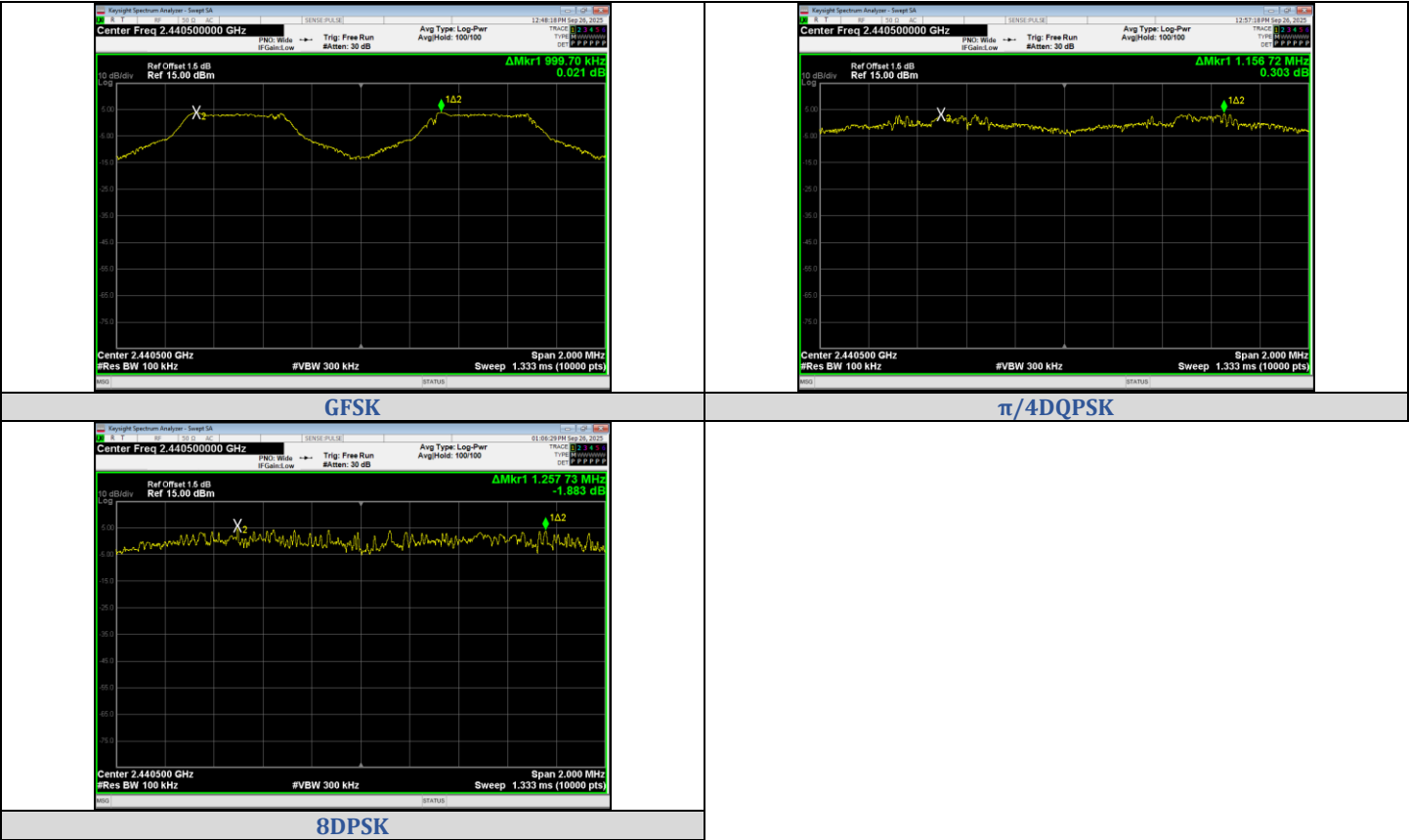
8DPSK_3-DH5_Channel 78

Carrier Frequencies Separation

Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2439.8278	2440.8275	0.9997	0.653	PASS
$\pi/4$ DQPSK	2-DH5	2439.9958	2441.1526	1.1567	0.860	PASS
8DPSK	3-DH5	2439.9965	2441.2542	1.2577	0.867	PASS

Test Graphs



Conducted Out Of Band Emission

Test Result

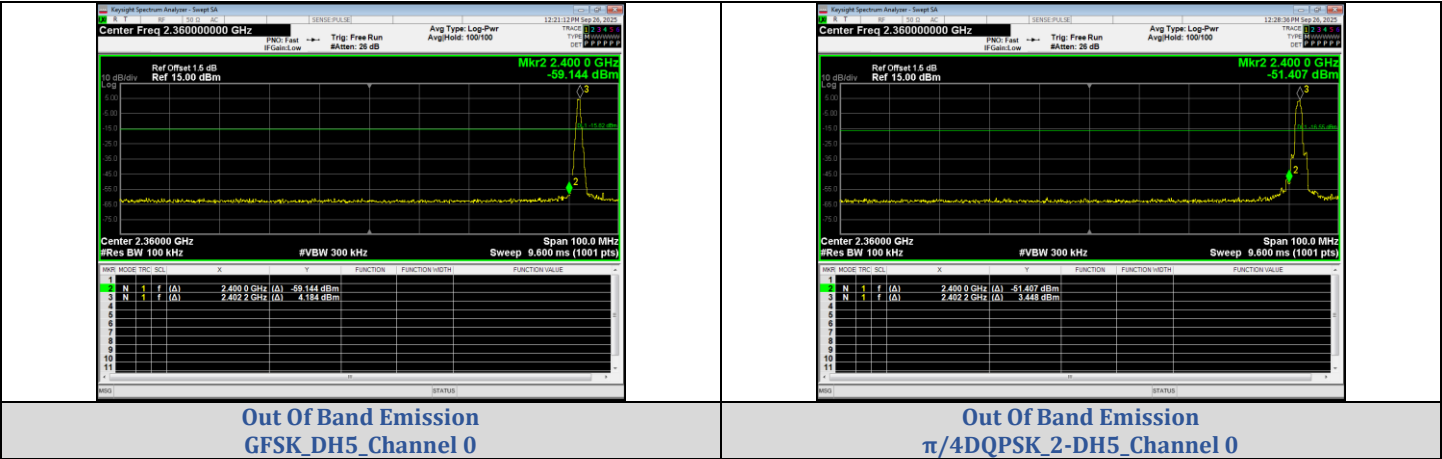
Non-Hopping

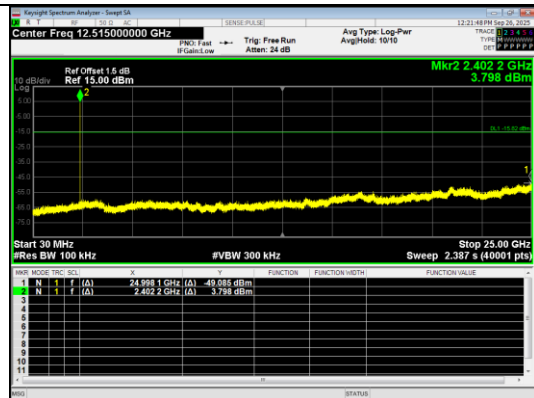
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2400.00	-59.140	-15.82	-43.320	PASS
			24998.1	-49.085	-15.82	-33.265	PASS
		39	1921.48	-46.244	-16.2	-30.044	PASS
		78	2483.50	-61.440	-15.79	-45.650	PASS
			24333.3	-49.523	-15.79	-33.733	PASS
π /4DQPSK	2-DH5	0	830.91	-28.676	-16.55	-12.126	PASS
			2400.00	-51.410	-16.55	-34.860	PASS
		39	24323.3	-49.385	-16.95	-32.435	PASS
		78	2483.50	-61.070	-19.6	-41.470	PASS
			24990.0	-48.815	-19.6	-29.215	PASS
8DPSK	3-DH5	0	2400.00	-51.450	-16.55	-34.900	PASS
			24993.8	-49.473	-16.55	-32.923	PASS
		39	24801.5	-49.301	-16.95	-32.351	PASS
		78	1764.17	-48.182	-19.35	-28.832	PASS
			2483.50	-57.800	-19.35	-38.450	PASS

Hopping

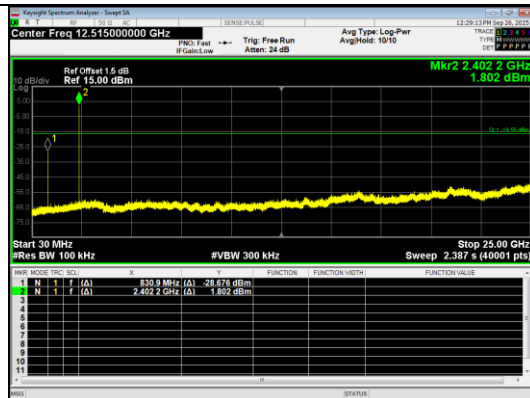
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2395.90	-42.038	-14.86	-27.178	PASS
			2400.00	-42.360	-14.86	-27.500	PASS
			2483.50	-60.300	-15.06	-45.240	PASS
π /4DQPSK	2-DH5		2400.00	-53.290	-15.65	-37.640	PASS
			2483.50	-60.470	-16.04	-44.430	PASS
8DPSK	3-DH5		2400.00	-51.370	-15.92	-35.450	PASS
			2483.50	-36.560	-15.5	-21.060	PASS

Test Graphs

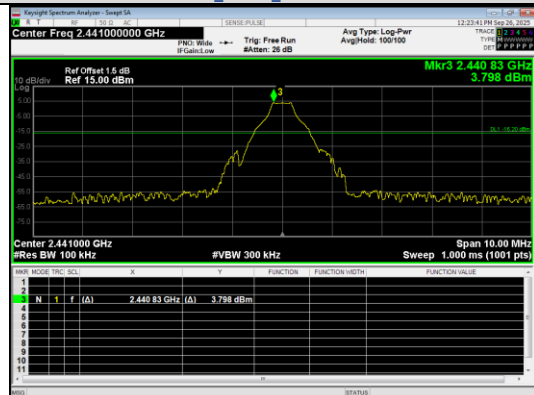




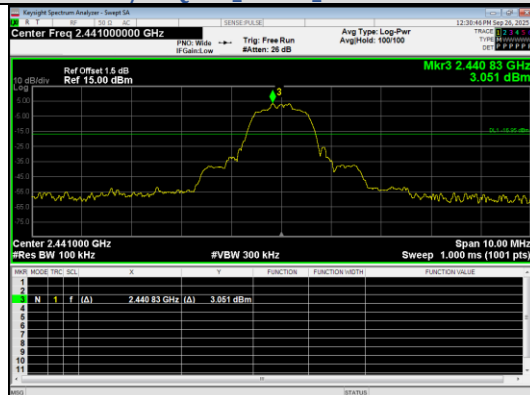
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 0



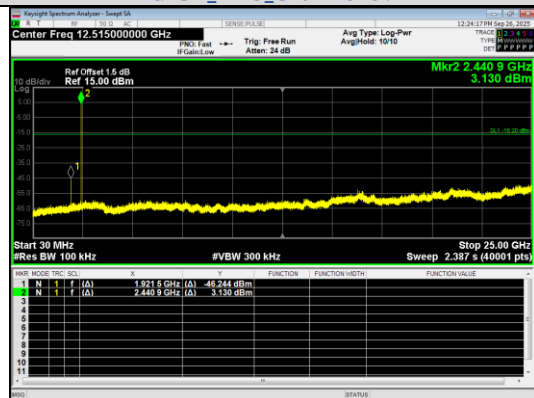
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 0



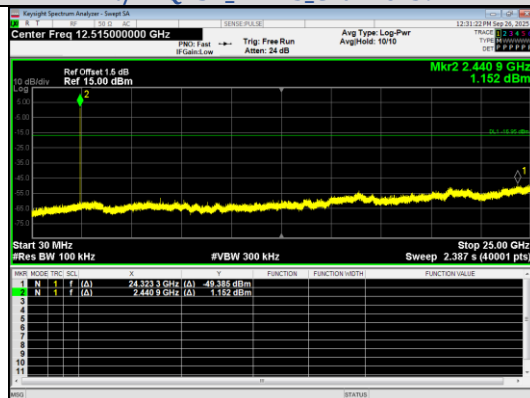
Out Of Band Emission
GFSK_DH5_Channel 39



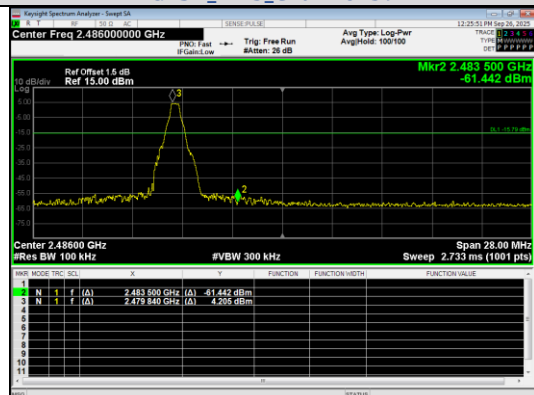
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 39



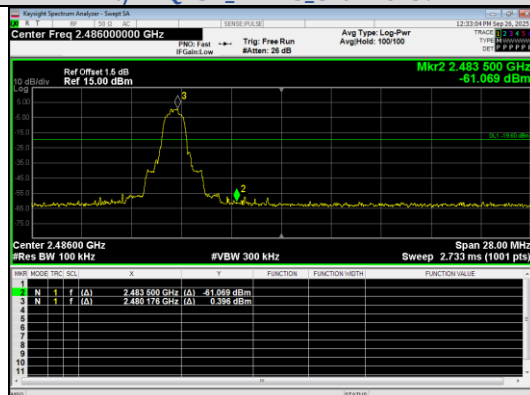
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 39



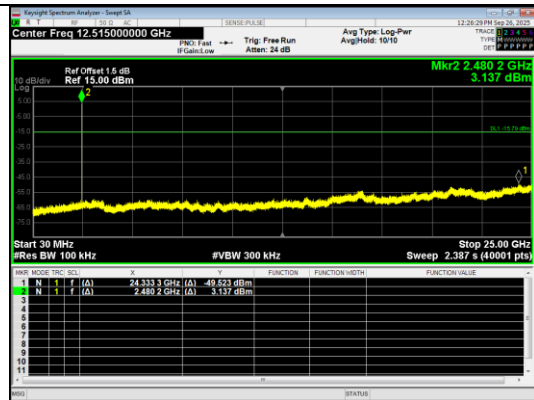
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 39



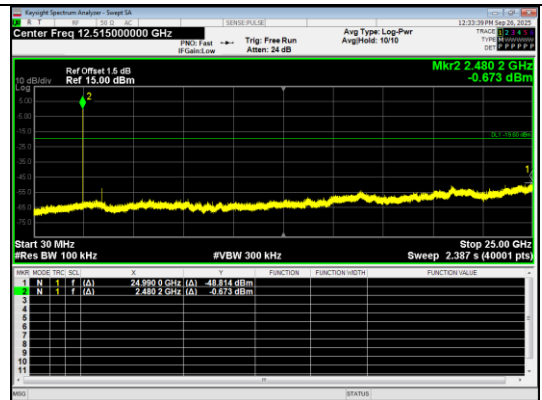
Out Of Band Emission
GFSK_DH5_Channel 78



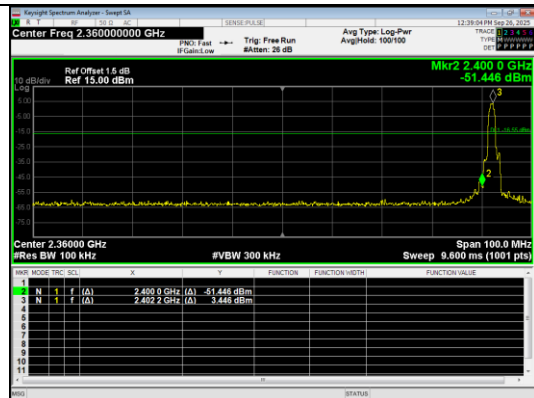
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 78



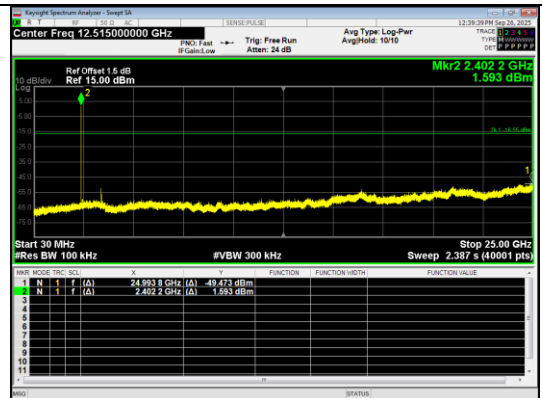
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 78



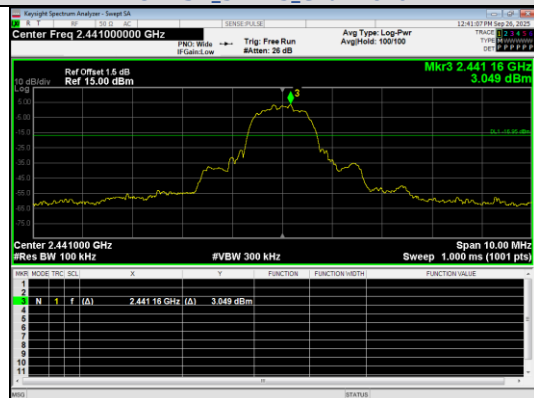
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 78



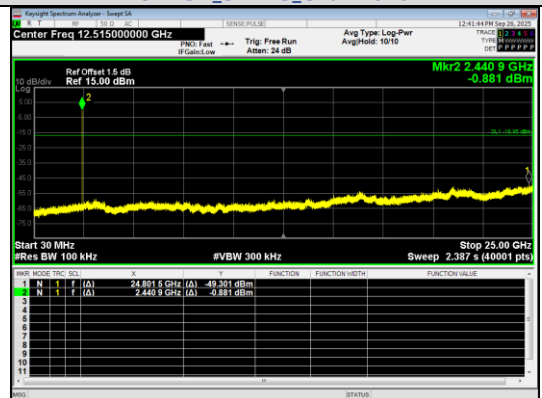
Out Of Band Emission
8DPSK_3-DH5_Channel 0



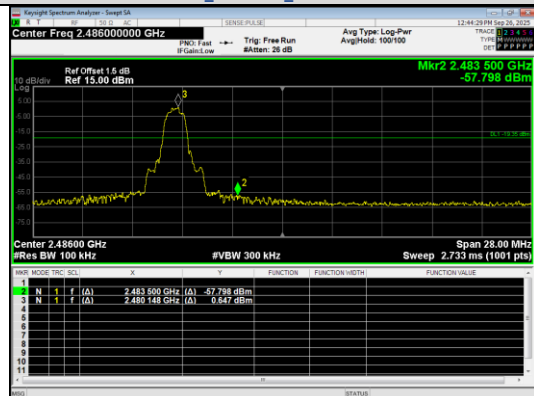
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 0



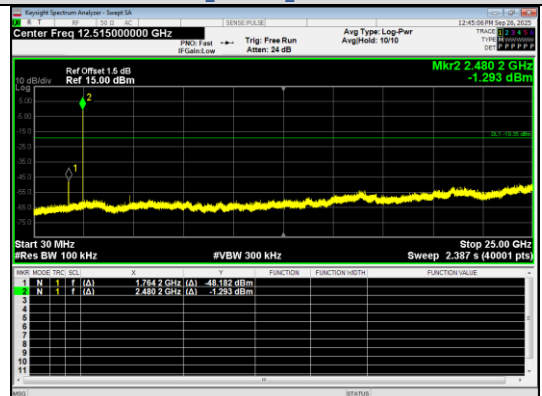
Out Of Band Emission
8DPSK_3-DH5_Channel 39



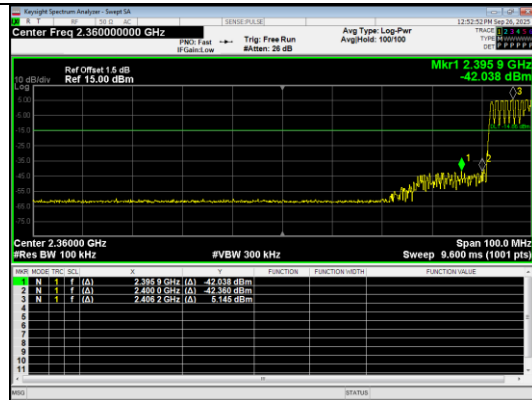
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 39



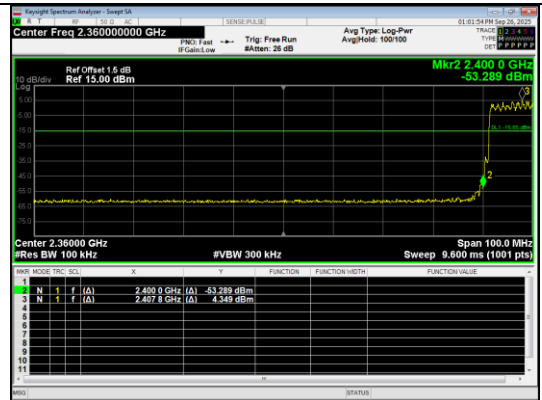
Out Of Band Emission
8DPSK_3-DH5_Channel 78



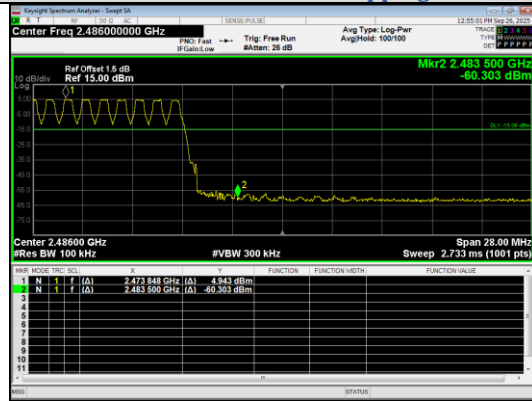
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 78



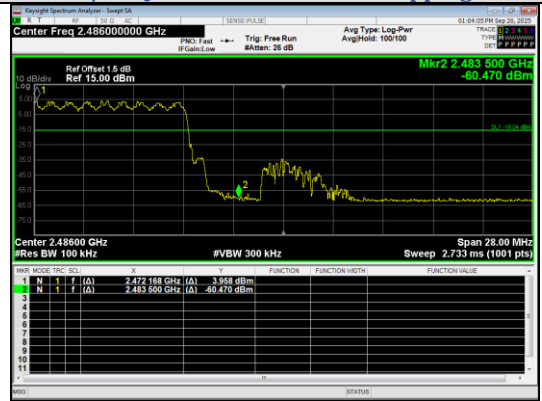
Out Of Band Emission(Left)
GFSK_DH5_Channel Hopping



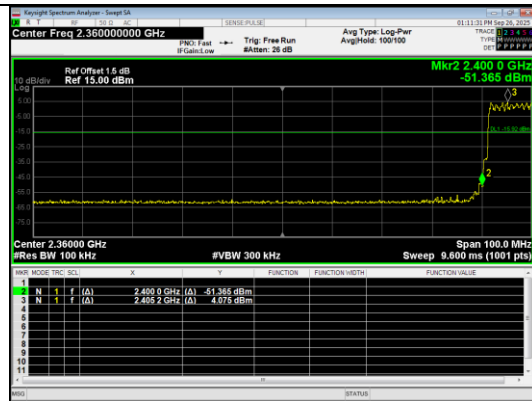
Out Of Band Emission(Left)
 $\pi/4$ DQPSK_2-DH5_Channel Hopping



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

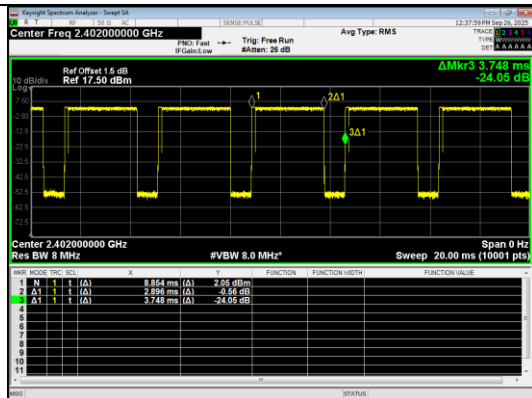
Duty Cycle

Test Result

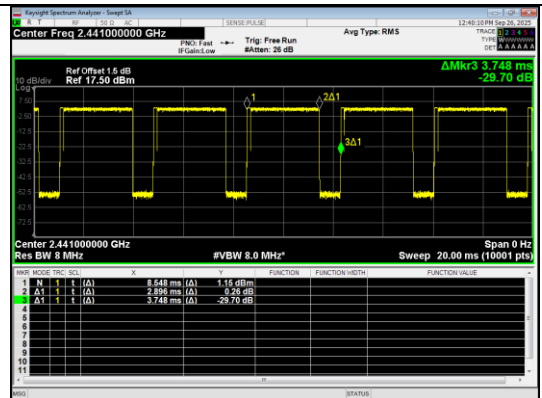
Modulation	Packets	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
GFSK	DH5	0	2.910	3.748	77.64	0.7764	1.0991	0.3436
		39	2.908	3.748	77.59	0.7759	1.1019	0.3439
		78	2.908	3.748	77.59	0.7759	1.1019	0.3439
$\pi/4$ DQPSK	2-DH5	0	2.898	3.748	77.32	0.7732	1.1171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

Test Graphs

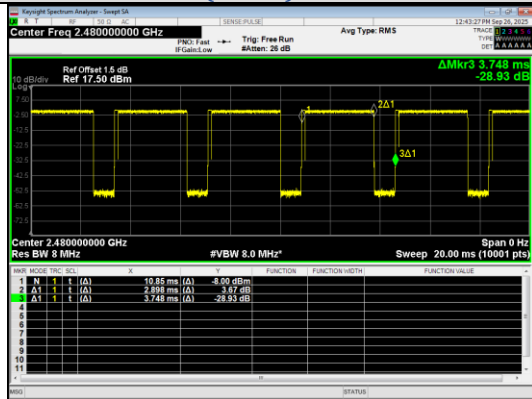




8DPSK(3-DH5)_Channel 0



8DPSK(3-DH5)_Channel 39



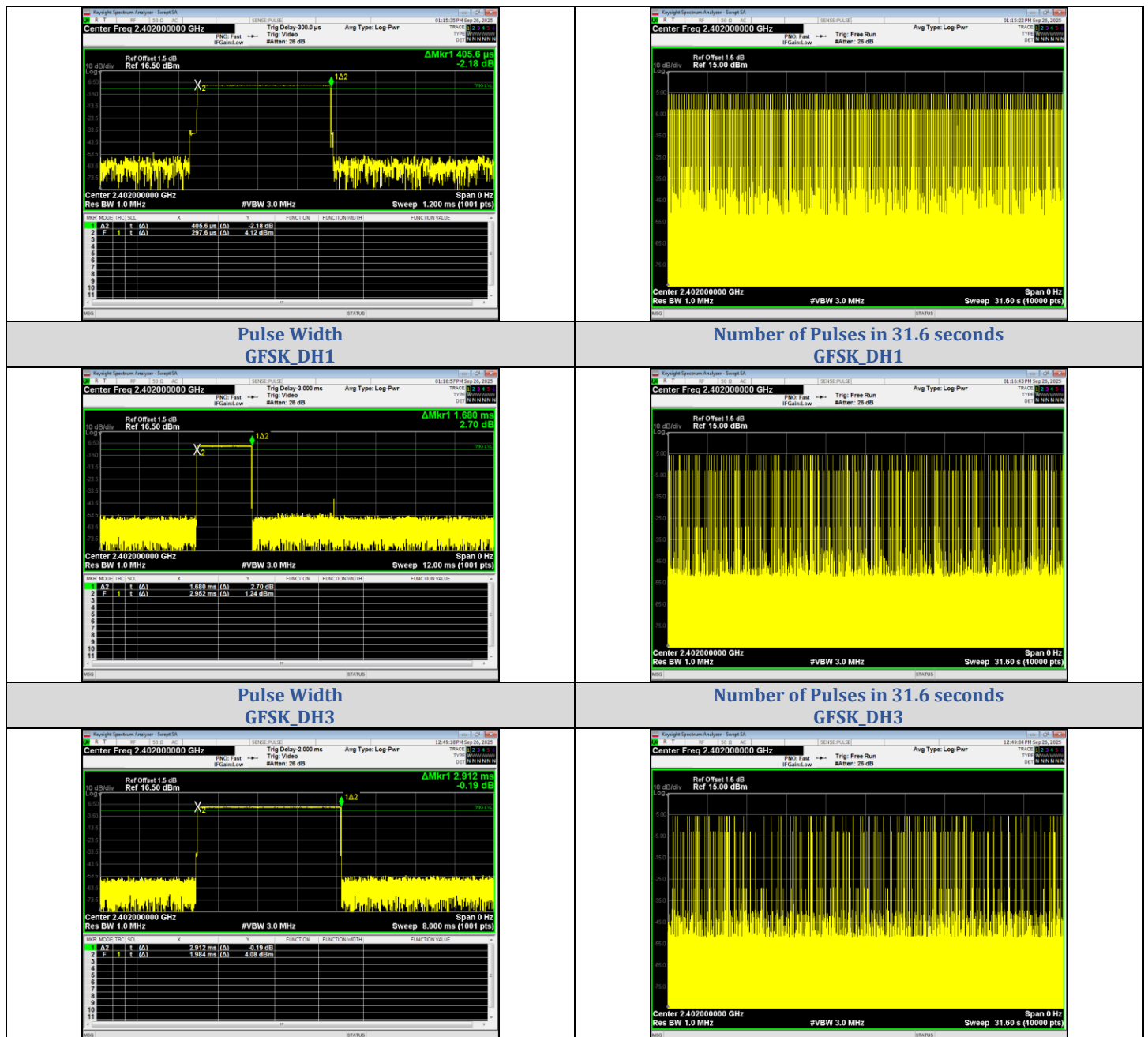
8DPSK(3-DH5)_Channel 78

Dwell Time

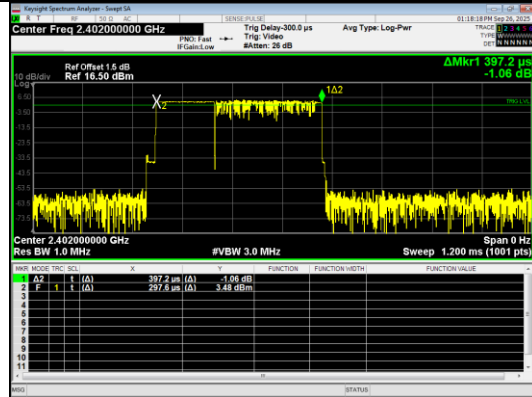
Test Result

Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH1	Hopping	0.4056	318	128.98	< 400	PASS
	DH3		1.680	157	263.76		PASS
	DH5		2.912	106	308.67		PASS
$\pi/4$ DQPSK	2-DH1		0.3972	310	123.13		PASS
	2-DH3		1.656	166	274.9		PASS
	2-DH5		2.896	102	295.39		PASS
8DPSK	3-DH1		0.3948	316	124.76		PASS
	3-DH3		1.656	161	266.62		PASS
	3-DH5		2.896	96	278.02		PASS

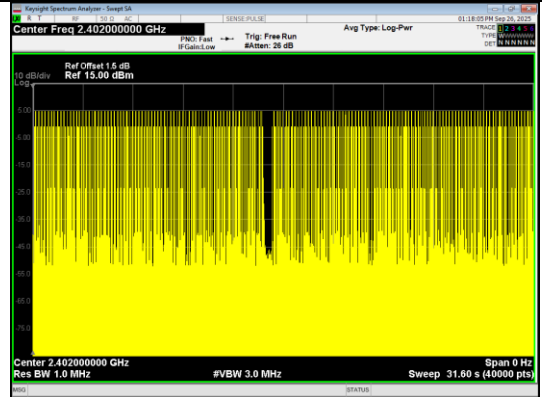
Test Graphs



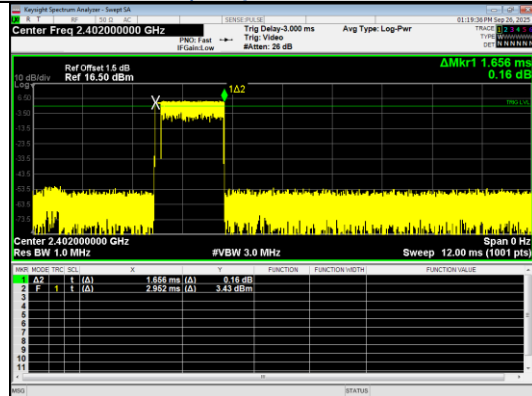
Pulse Width GFSK_DH5



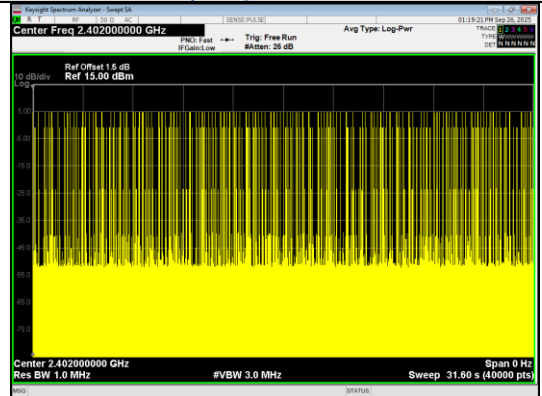
Number of Pulses in 31.6 seconds GFSK_DH5



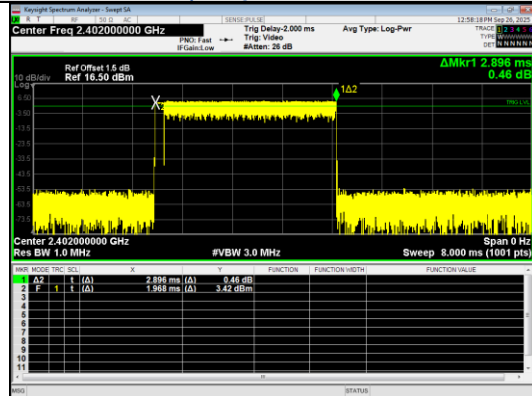
Pulse Width $\pi/4$ DQPSK_2-DH1



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



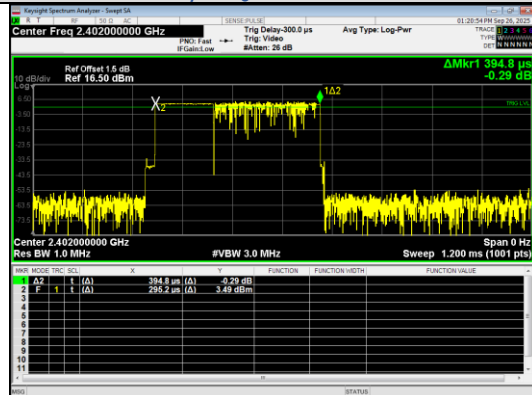
Pulse Width $\pi/4$ DQPSK_2-DH3



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



Pulse Width $\pi/4$ DQPSK_2-DH5

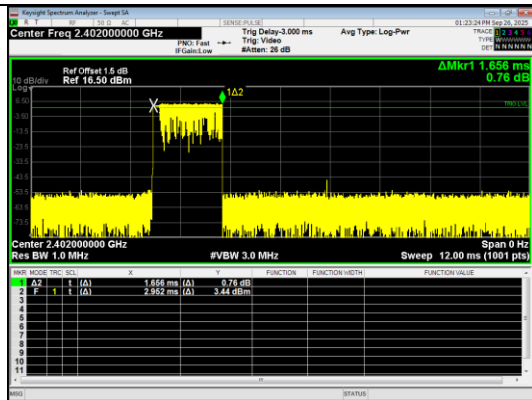


Number of Pulses in 31.6 seconds $\pi/4$ DQPSK_2-DH5



Pulse Width 8DPSK_3-DH1

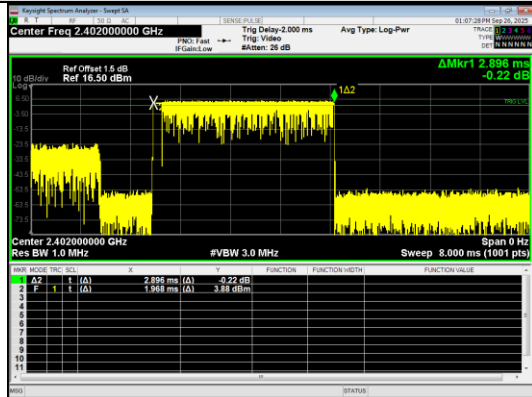
Number of Pulses in 31.6 seconds 8DPSK_3-DH1



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

