

Appendix RF test data for BT

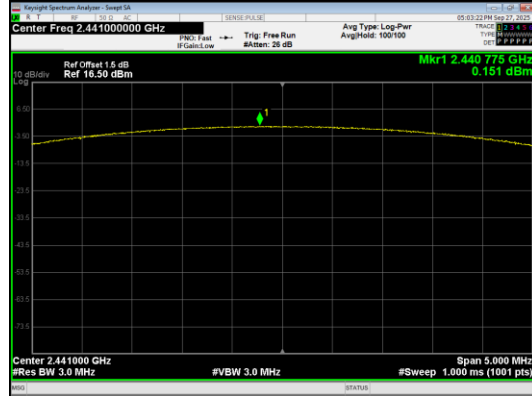
Conducted Output Power

Test Result

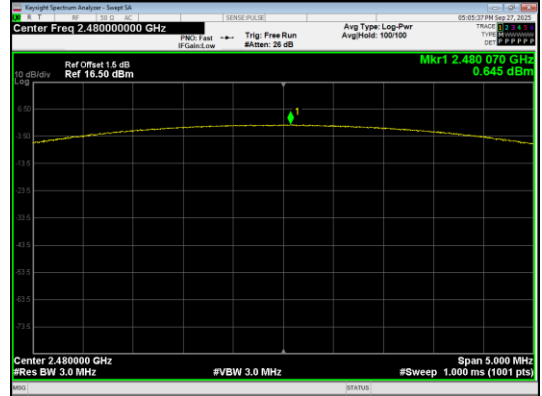
Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
GFSK	DH5	0	-0.88	0.82	≤20.97	PASS
		39	-0.70	0.85		PASS
		78	-0.22	0.95		PASS
$\pi/4$ DQPSK	2-DH5	0	0.04	1.01		PASS
		39	0.15	1.04		PASS
		78	0.65	1.16		PASS
8DPSK	3-DH5	0	0.41	1.10		PASS
		39	0.55	1.14		PASS
		78	1.03	1.27		PASS

Test Graphs

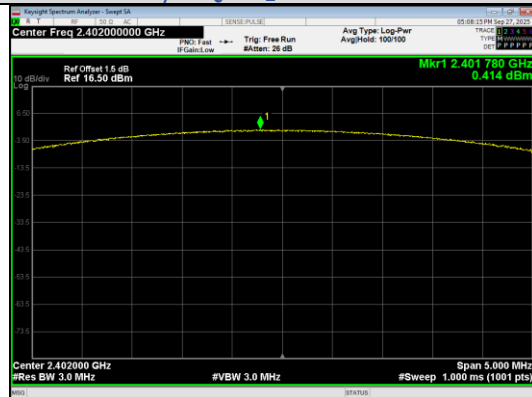




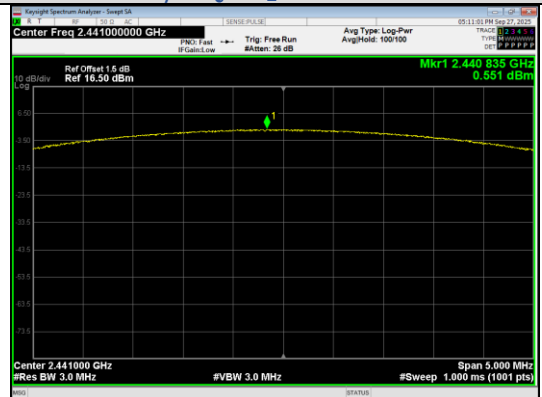
Peak Output Power
 $\pi/4$ DQPSK_Channel 39



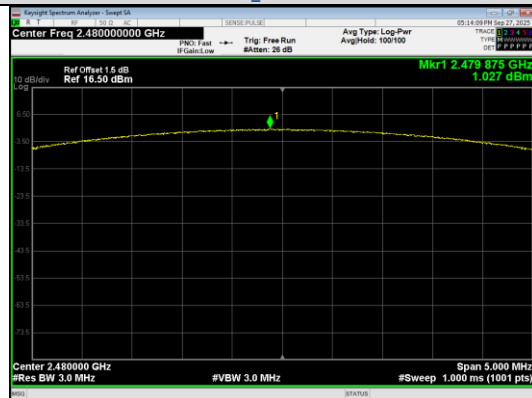
Peak Output Power
 $\pi/4$ DQPSK_Channel 78



Peak Output Power
8DPSK_Channel 0



Peak Output Power
8DPSK_Channel 39



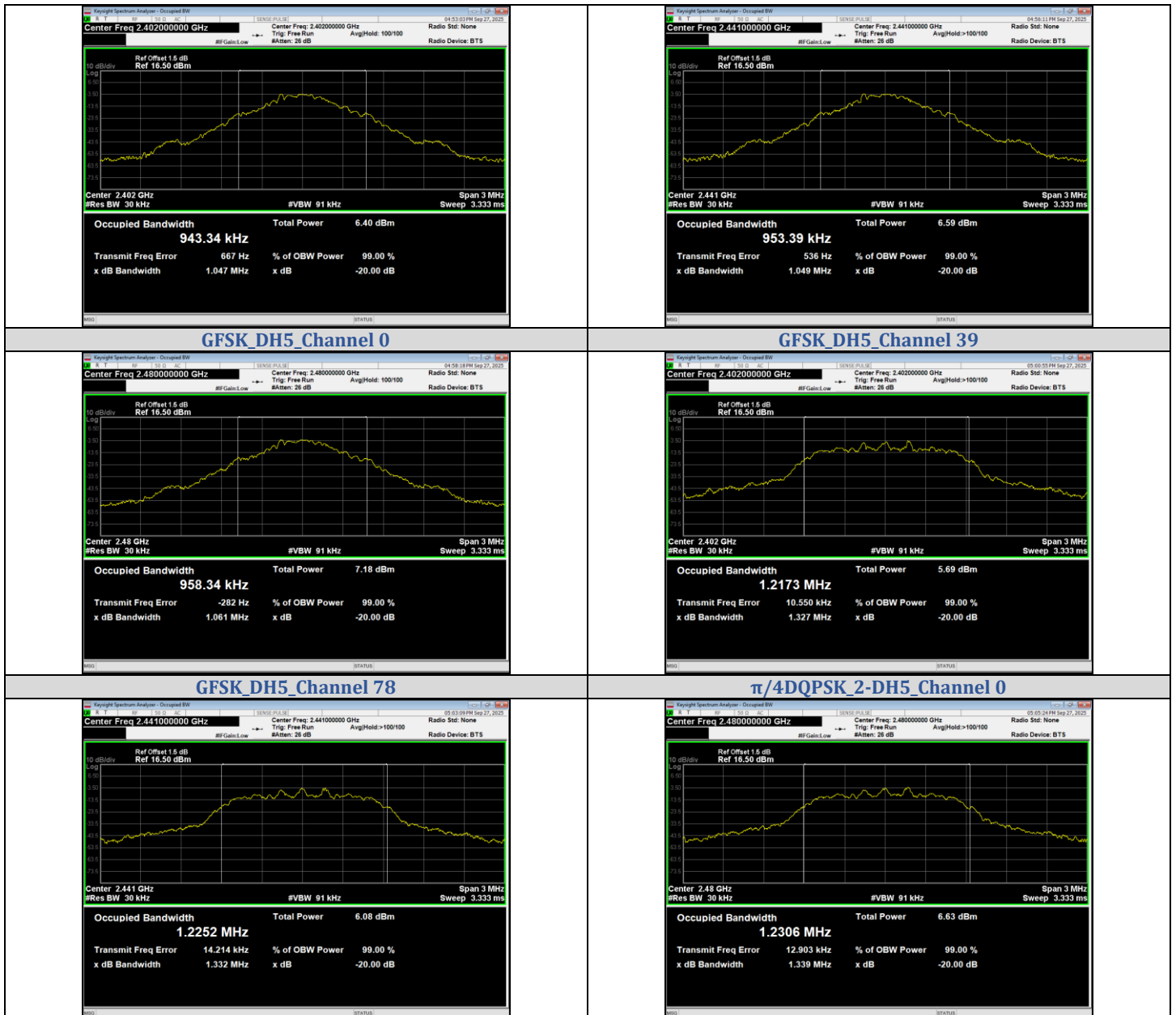
Peak Output Power
8DPSK_Channel 78

20dB Bandwidth

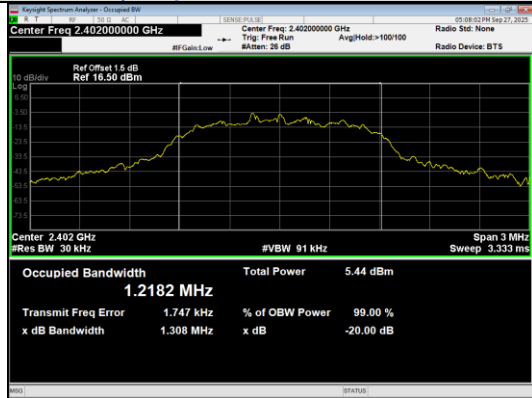
Test Result

Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	1.050
	39	2441 MHz	1.050
	78	2480 MHz	1.060
$\pi/4$ DQPSK	0	2402 MHz	1.330
	39	2441 MHz	1.330
	78	2480 MHz	1.340
8DPSK	0	2402 MHz	1.310
	39	2441 MHz	1.290
	78	2480 MHz	1.290

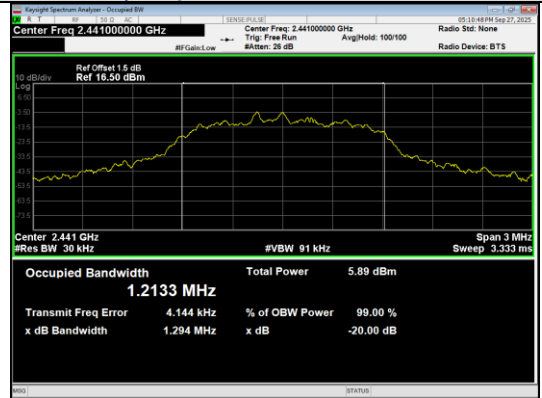
Test Graphs



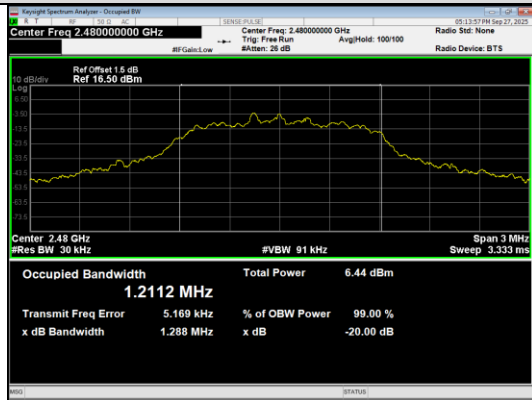
$\pi/4$ DQPSK 2-DH5_Channel 39



$\pi/4$ DQPSK 2-DH5_Channel 78



8DPSK 3-DH5_Channel 0



8DPSK 3-DH5_Channel 39

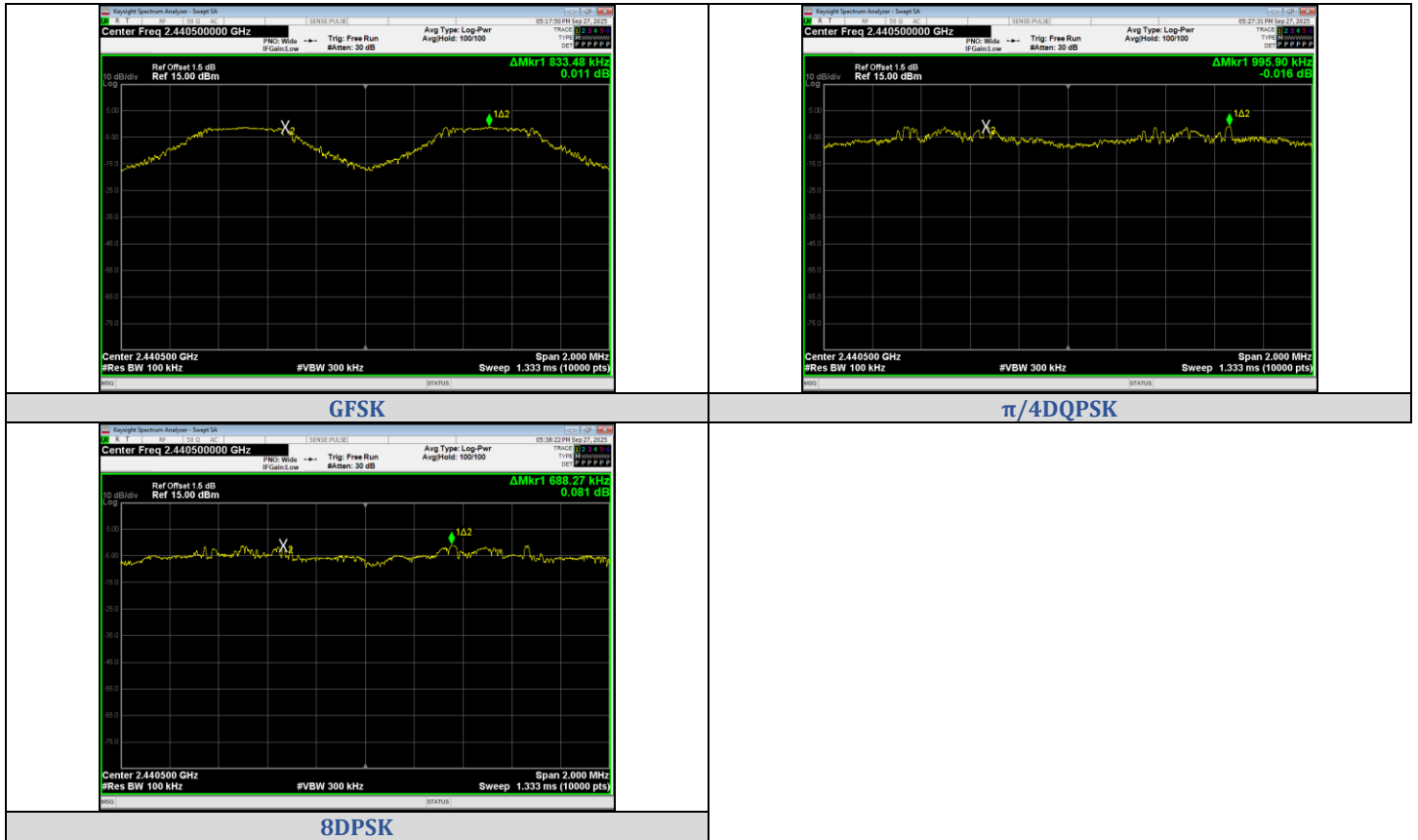
8DPSK 3-DH5_Channel 78

Carrier Frequencies Separation

Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2440.1717	2441.0052	0.8335	0.99	PASS
$\pi/4$ DQPSK	2-DH5	2440.1643	2441.1602	0.9959	0.99	PASS
8DPSK	3-DH5	2440.1649	2440.8531	0.6883	0.99	PASS

Test Graphs



Conducted Out Of Band Emission

Test Result

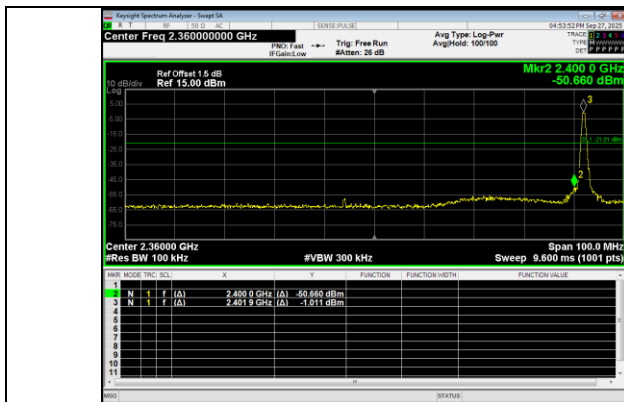
Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2400.00	-50.660	-21.01	-29.650	PASS
			24364.5	-49.330	-21.01	-28.320	PASS
		39	24999.4	-49.136	-20.96	-28.176	PASS
		78	2483.50	-56.070	-20.42	-35.650	PASS
$\pi/4$ DQPSK	2-DH5	0	2400.00	-50.360	-21.02	-29.340	PASS
			24882.0	-49.665	-21.02	-28.645	PASS
		39	24930.1	-49.389	-20.95	-28.439	PASS
		78	2483.50	-59.840	-20.45	-39.390	PASS
8DPSK	3-DH5	0	2400.00	-50.900	-21.11	-29.790	PASS
			24825.8	-48.875	-21.11	-27.765	PASS
		39	24896.4	-49.051	-21.06	-27.991	PASS
		78	2483.50	-59.470	-20.5	-38.970	PASS
			24937.0	-48.028	-20.5	-27.528	PASS

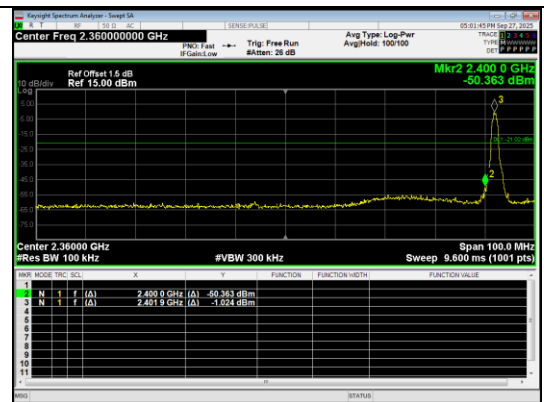
Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2400.00	-52.700	-21.03	-31.670	PASS
			2483.50	-56.860	-20.5	-36.360	PASS
$\pi/4$ DQPSK	2-DH5		2400.00	-53.210	-21.09	-32.120	PASS
			2483.50	-57.270	-20.56	-36.710	PASS
8DPSK	3-DH5		2400.00	-52.630	-21.09	-31.540	PASS
			2483.50	-57.530	-20.62	-36.910	PASS

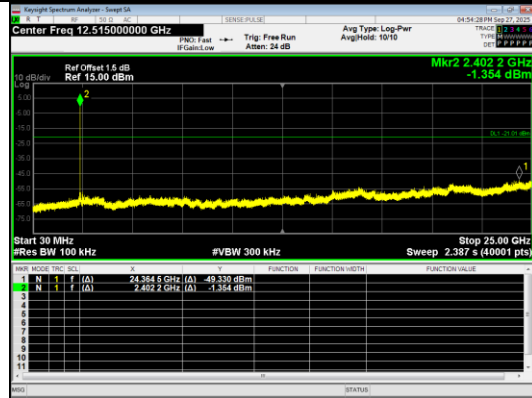
Test Graphs



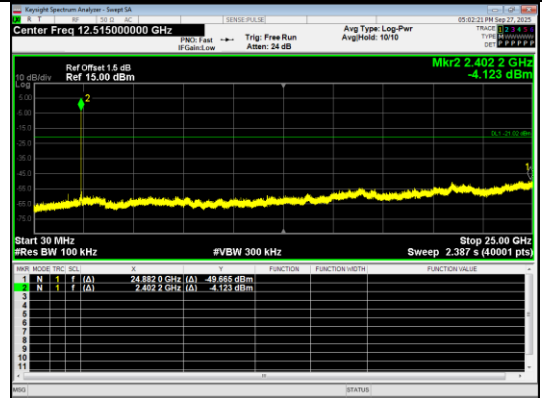
Out Of Band Emission
GFSK_DH5_Channel 0



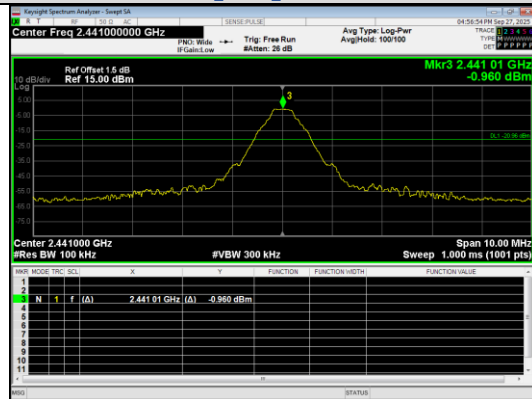
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 0



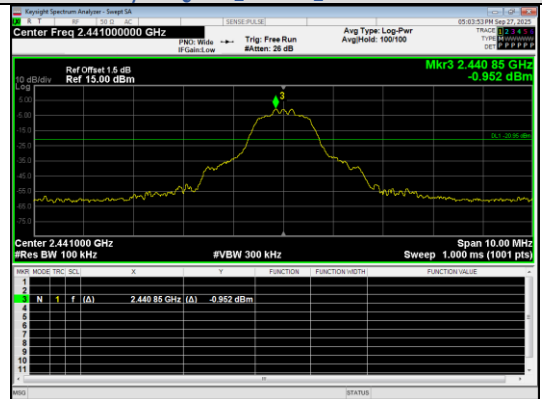
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 0



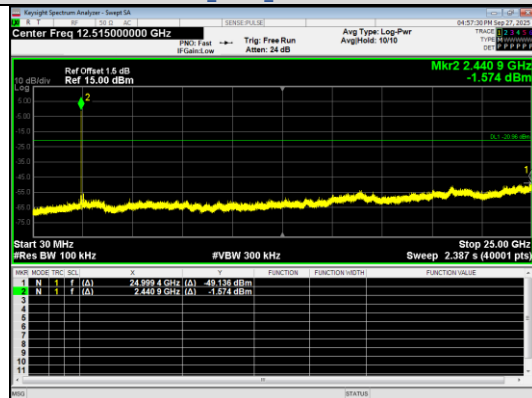
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 0



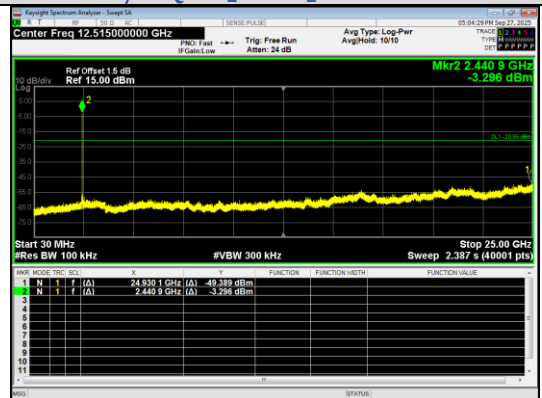
Out Of Band Emission
GFSK_DH5_Channel 39



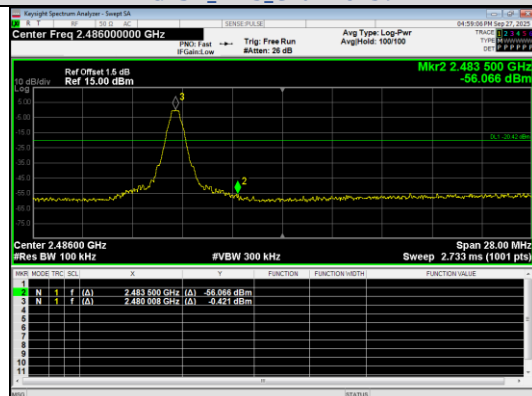
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 39



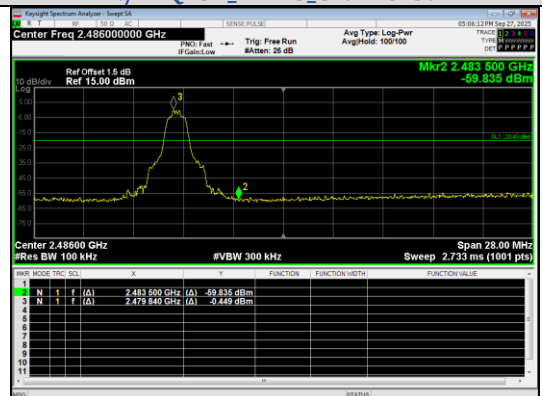
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 39



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

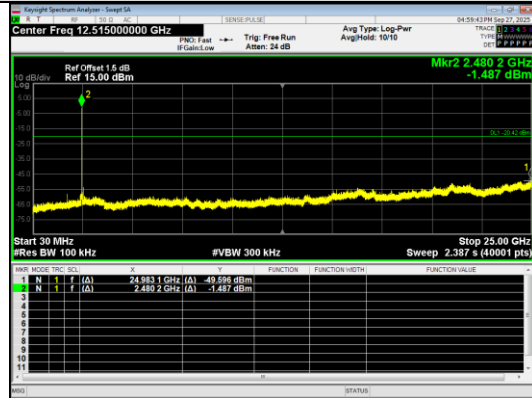


Out Of Band Emission



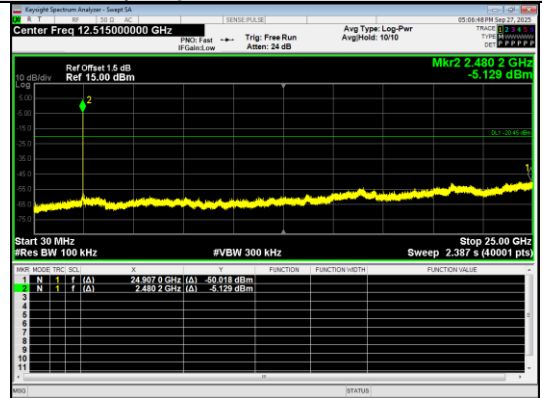
Out Of Band Emission

GFSK_DH5_Channel 78

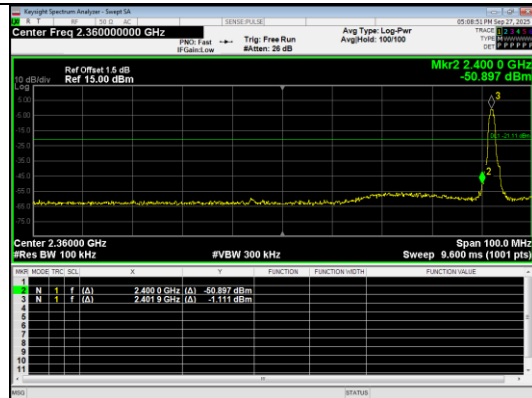


30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 78

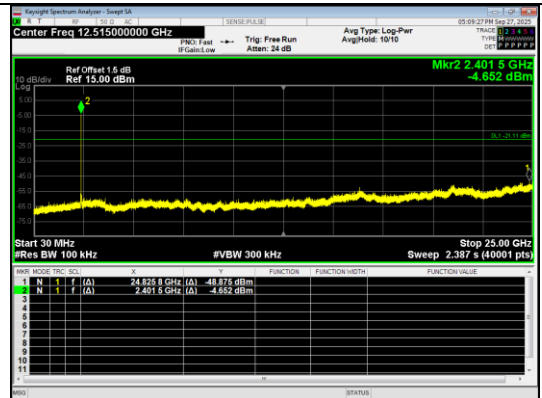
$\pi/4$ DQPSK_2-DH5_Channel 78



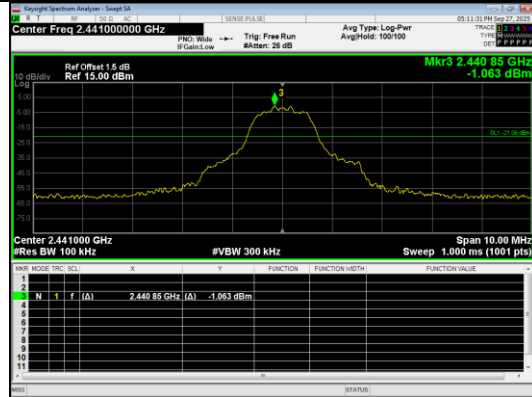
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 78



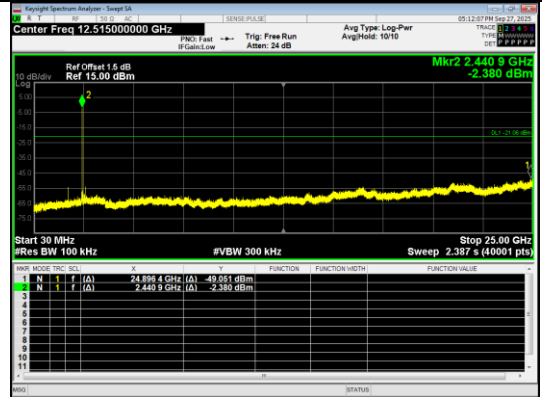
Out Of Band Emission
8DPSK_3-DH5_Channel 0



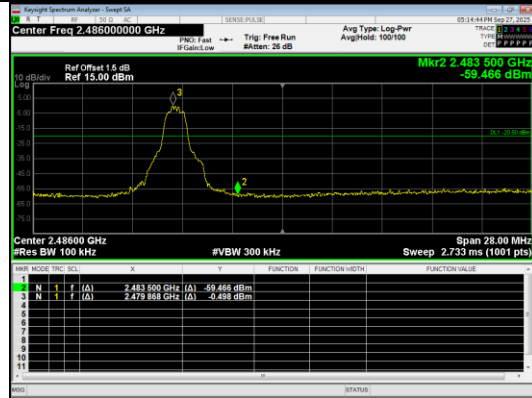
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 0



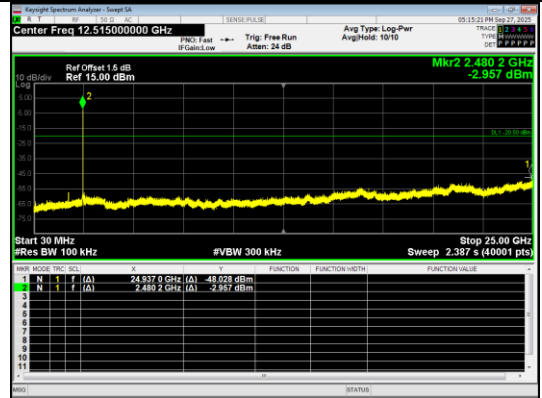
Out Of Band Emission
8DPSK_3-DH5_Channel 39



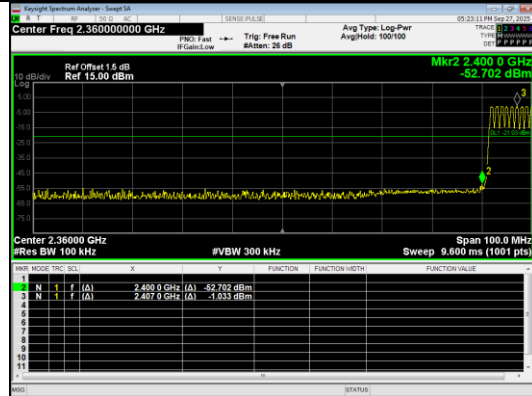
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 39



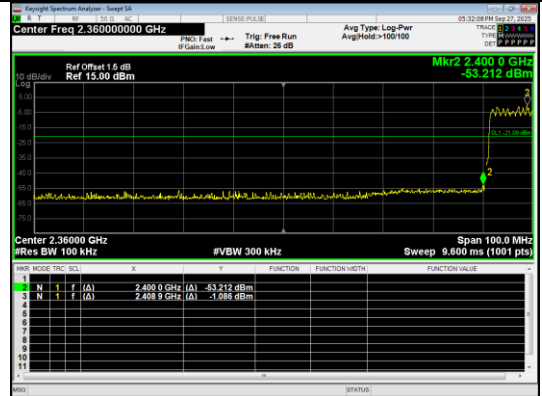
Out Of Band Emission
8DPSK_3-DH5_Channel 78



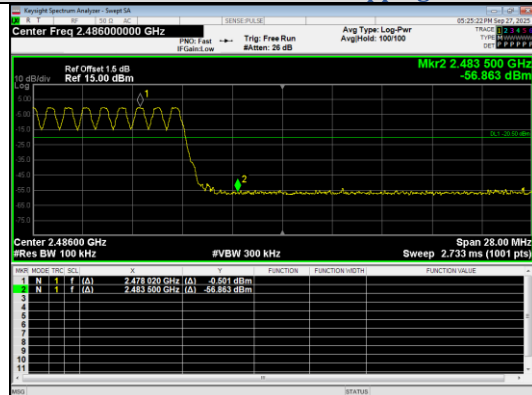
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 78



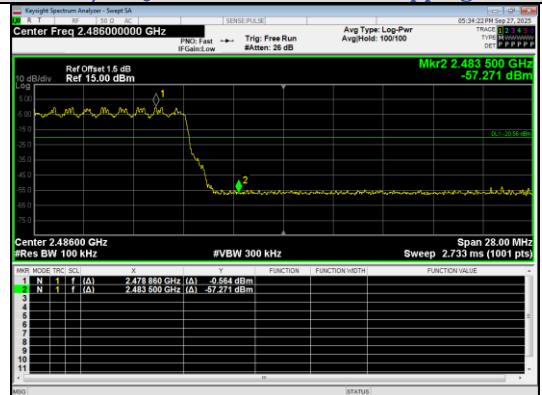
Out Of Band Emission(Left)
GFSK_DH5_Channel Hopping



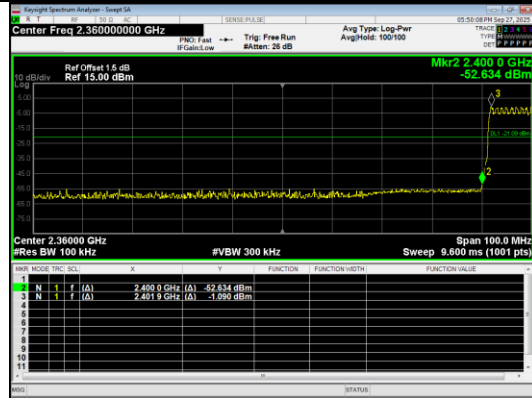
Out Of Band Emission(Left)
 $\pi/4$ DQPSK_2-DH5_Channel Hopping



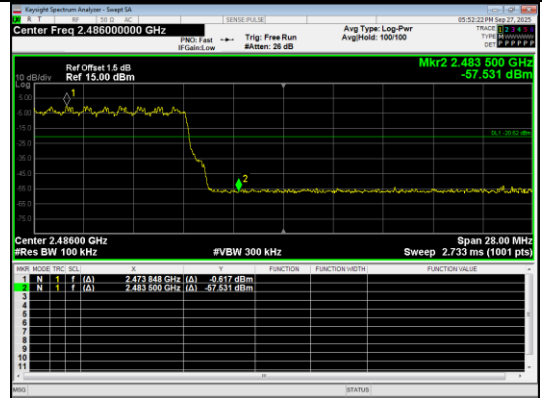
Out Of Band Emission(Right)
GFSK_DH5_Channel Hopping



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



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



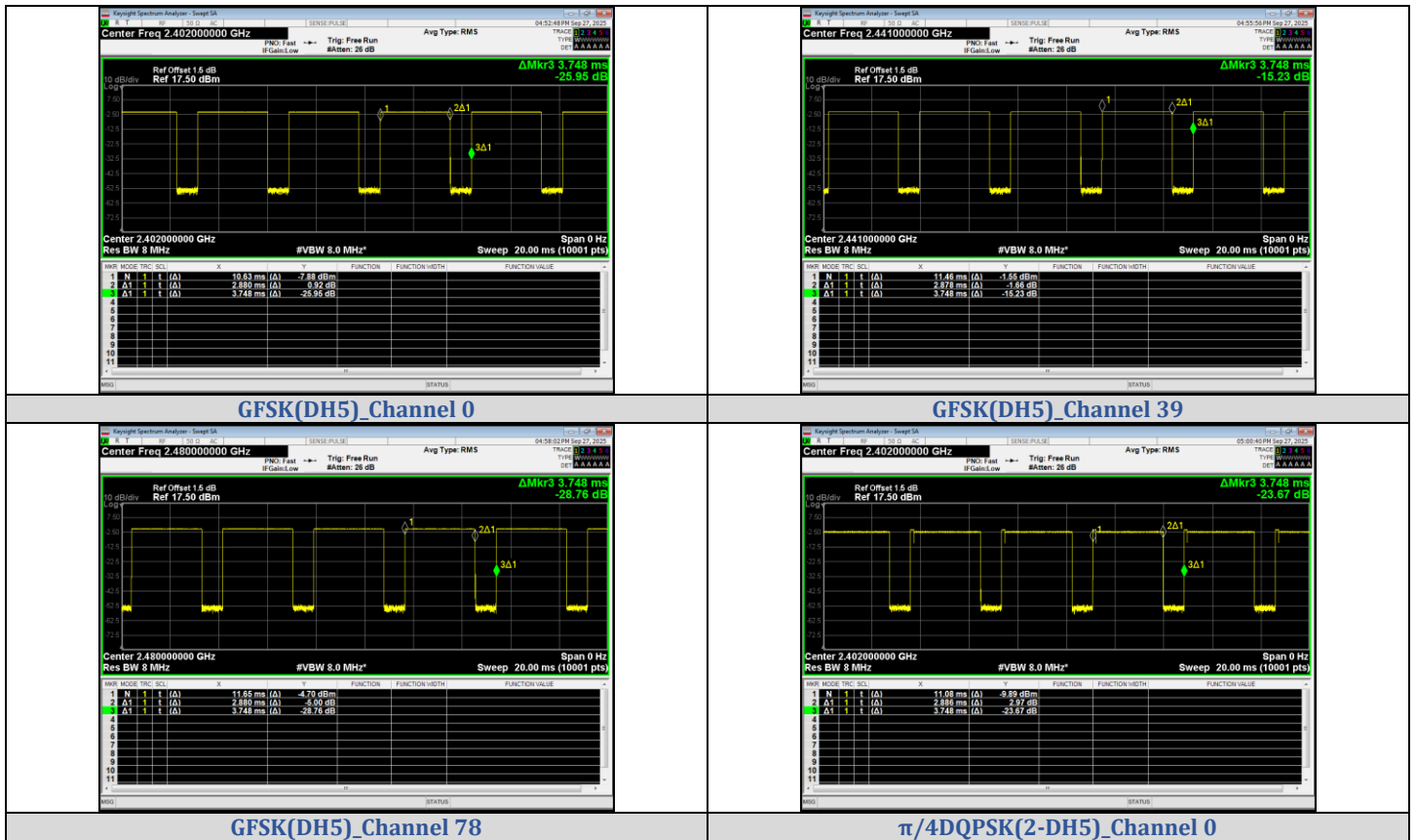
Out Of Band Emission(Right)
8DPSK_3-DH5_Channel Hopping

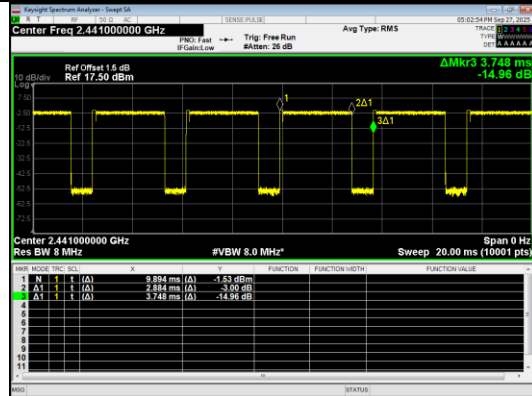
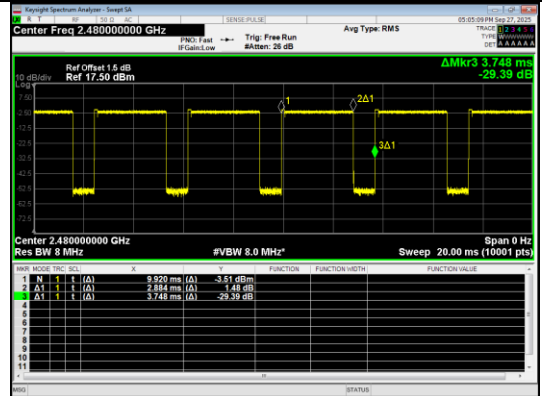
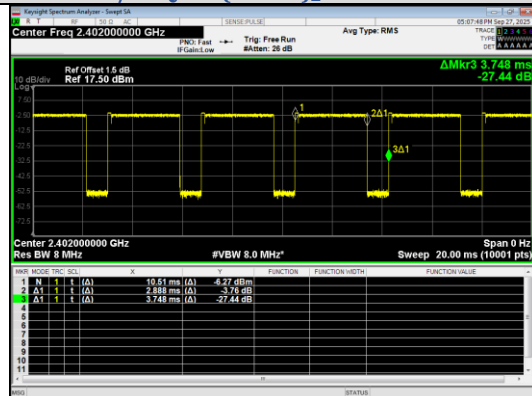
Duty Cycle

Test Result

Modulation	Packets	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
GFSK	DH5	0	2.880	3.748	76.84	0.7684	1.1441	0.3472
		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	2.884	3.748	76.95	0.7695	1.1379	0.3467
8DPSK	3-DH5	0	2.888	3.748	77.05	0.7705	1.1323	0.3463
		39	2.888	3.748	77.05	0.7705	1.1323	0.3463
		78	2.886	3.748	77.00	0.7700	1.1351	0.3465

Test Graphs

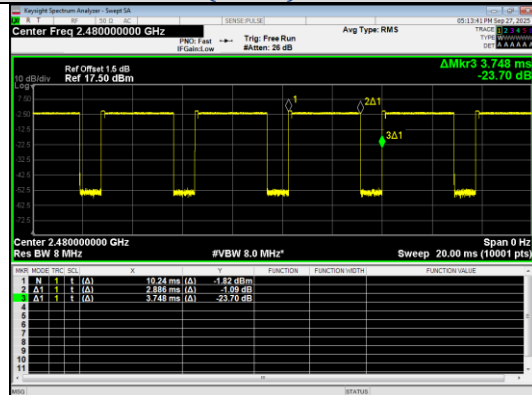



 $\pi/4$ DQPSK(2-DH5)_Channel 39

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


8DPSK(3-DH5)_Channel 0



8DPSK(3-DH5)_Channel 39



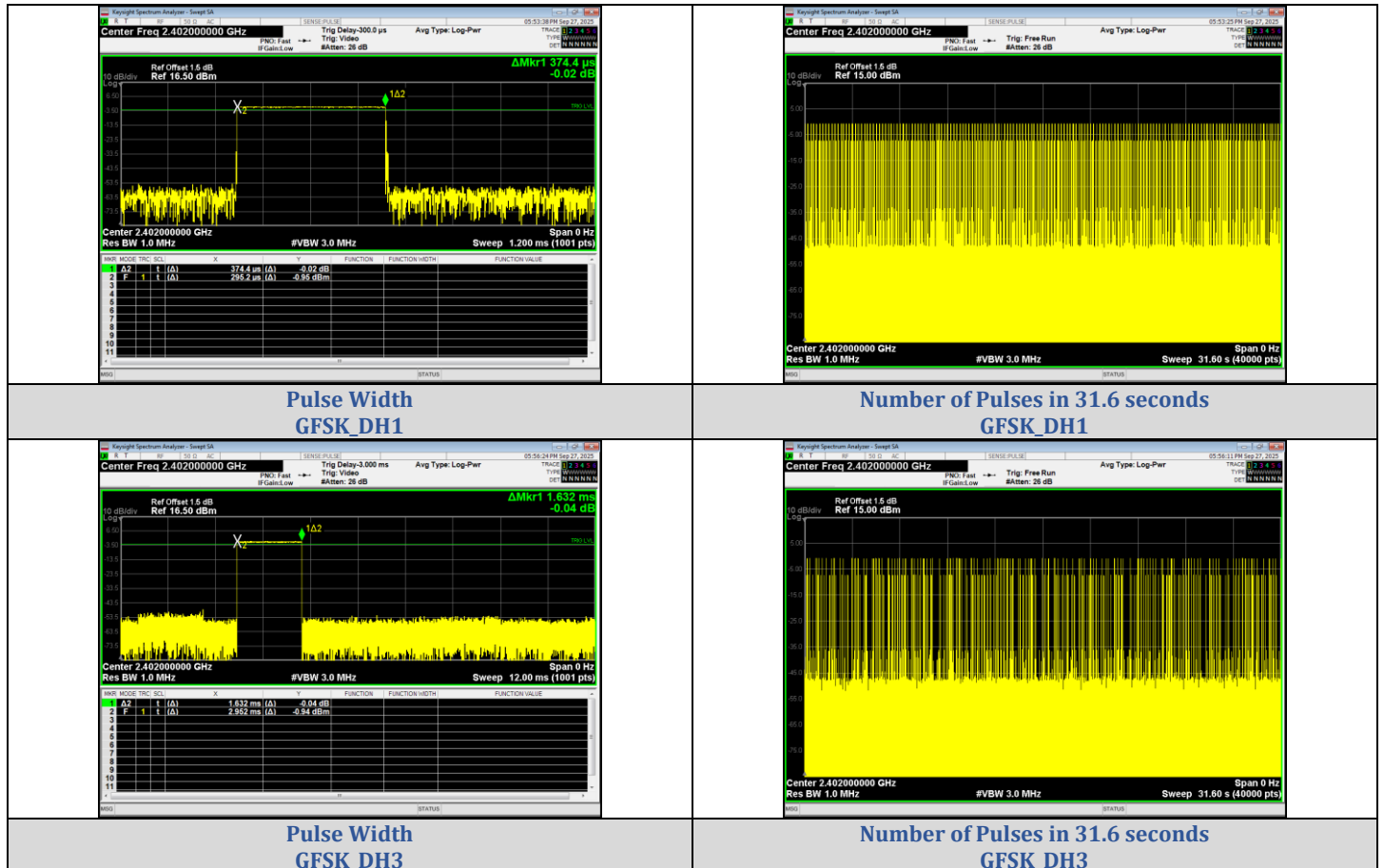
8DPSK(3-DH5)_Channel 78

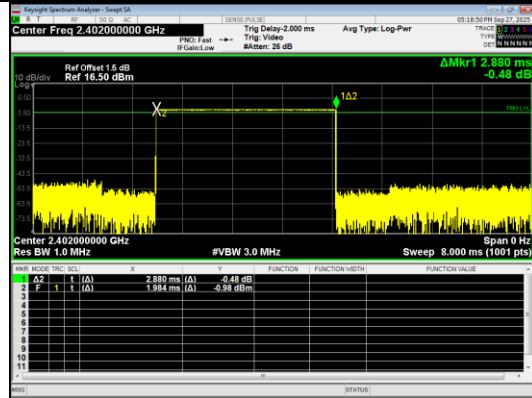
Dwell Time

Test Result

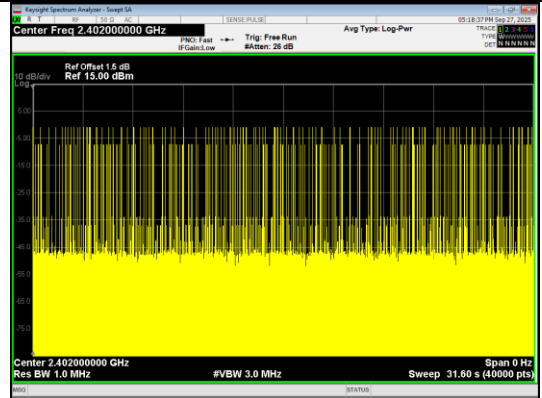
Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH1	Hopping	0.3744	318	119.06	< 400	PASS
	DH3		1.632	160	261.12		PASS
	DH5		2.880	119	342.72		PASS
$\pi/4$ DQPSK	2-DH1		0.3828	318	121.73		PASS
	2-DH3		1.656	160	264.96		PASS
	2-DH5		2.880	101	290.88		PASS
8DPSK	3-DH1		0.3852	318	122.49		PASS
	3-DH3		1.632	153	249.7		PASS
	3-DH5		2.896	114	330.14		PASS

Test Graphs

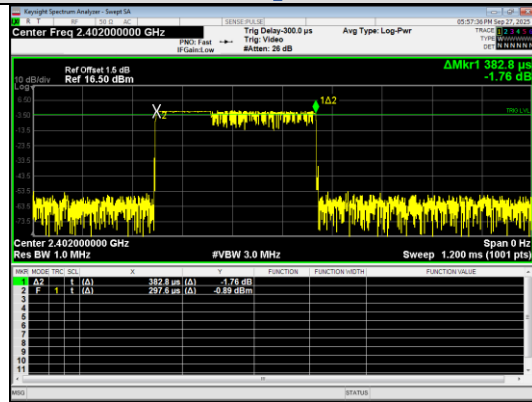




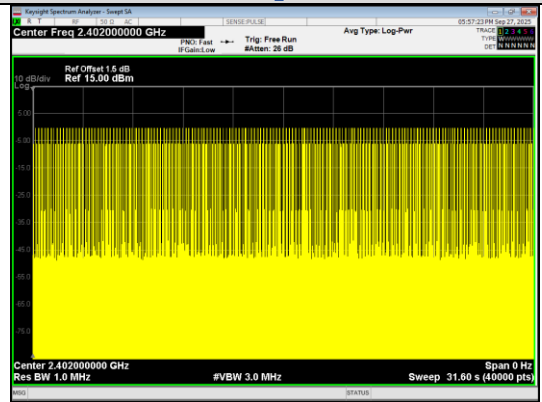
Pulse Width
GFSK_DH5



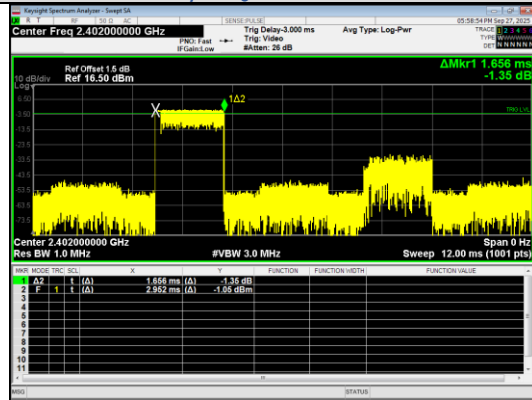
Number of Pulses in 31.6 seconds
GFSK_DH5



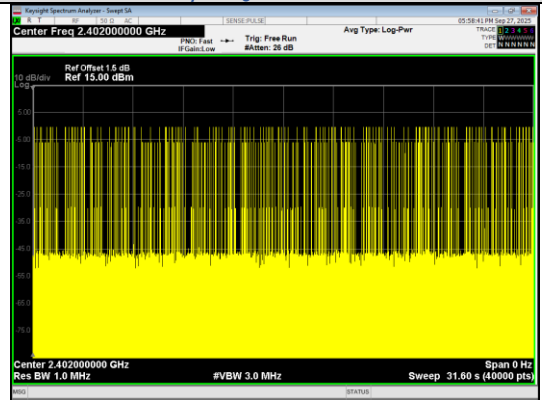
Pulse Width
 $\pi/4$ DQPSK_2-DH1



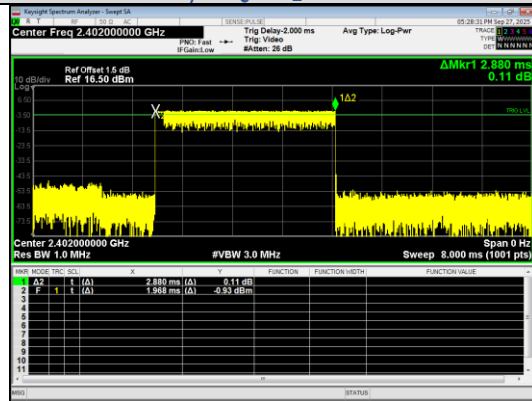
Number of Pulses in 31.6 seconds
 $\pi/4$ DQPSK_2-DH1



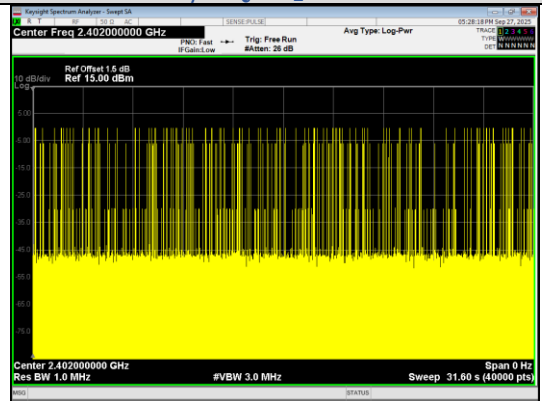
Pulse Width
 $\pi/4$ DQPSK_2-DH3



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

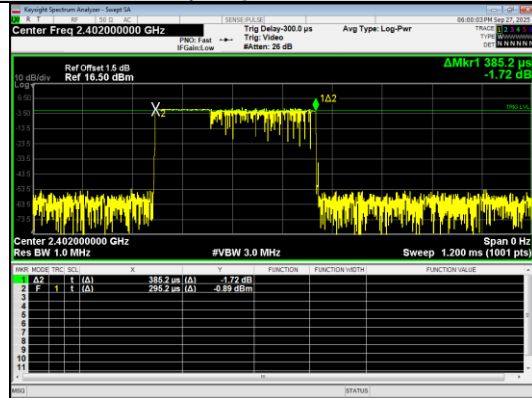


Pulse Width

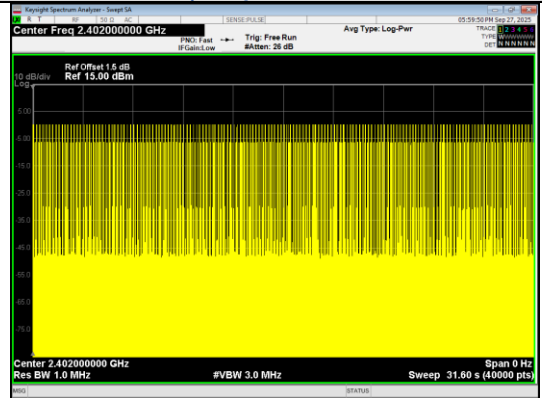


Number of Pulses in 31.6 seconds

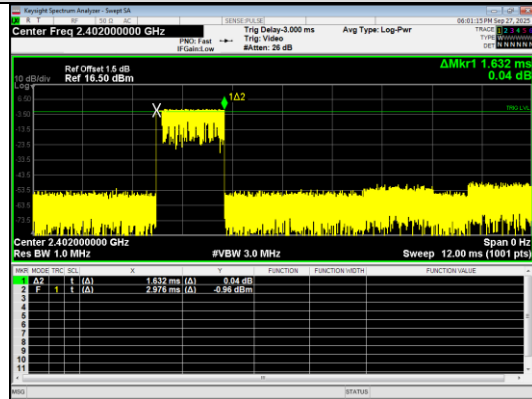
$\pi/4$ DQPSK_2-DH5



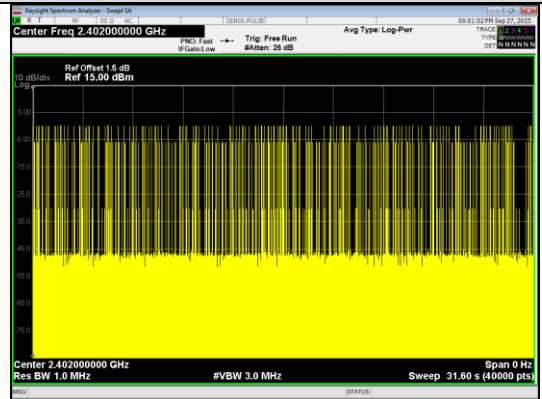
$\pi/4$ DQPSK_2-DH5



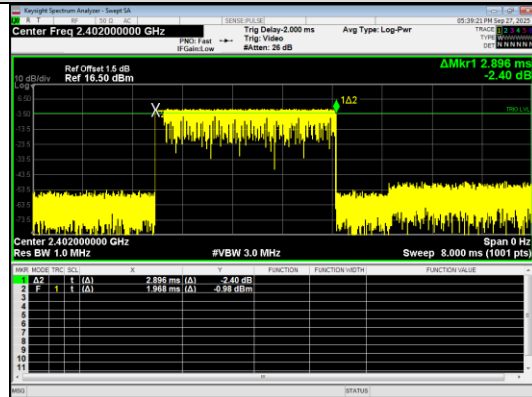
Pulse Width 8DPSK_3-DH1



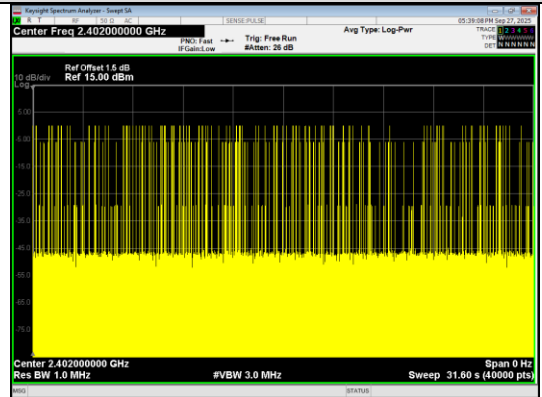
Number of Pulses in 31.6 seconds 8DPSK_3-DH1



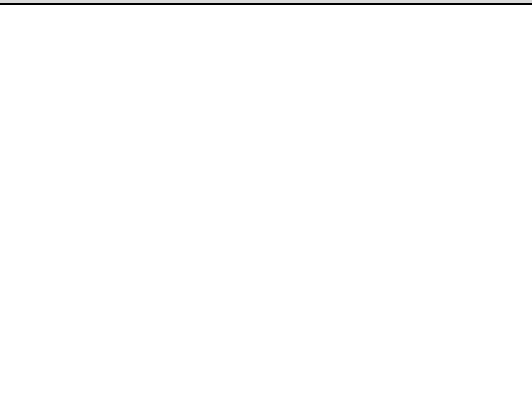
Pulse Width 8DPSK_3-DH3



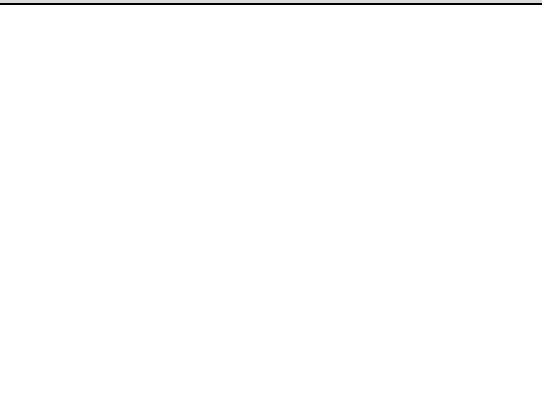
Number of Pulses in 31.6 seconds 8DPSK_3-DH3



Pulse Width 8DPSK_3-DH5



Number of Pulses in 31.6 seconds 8DPSK_3-DH5

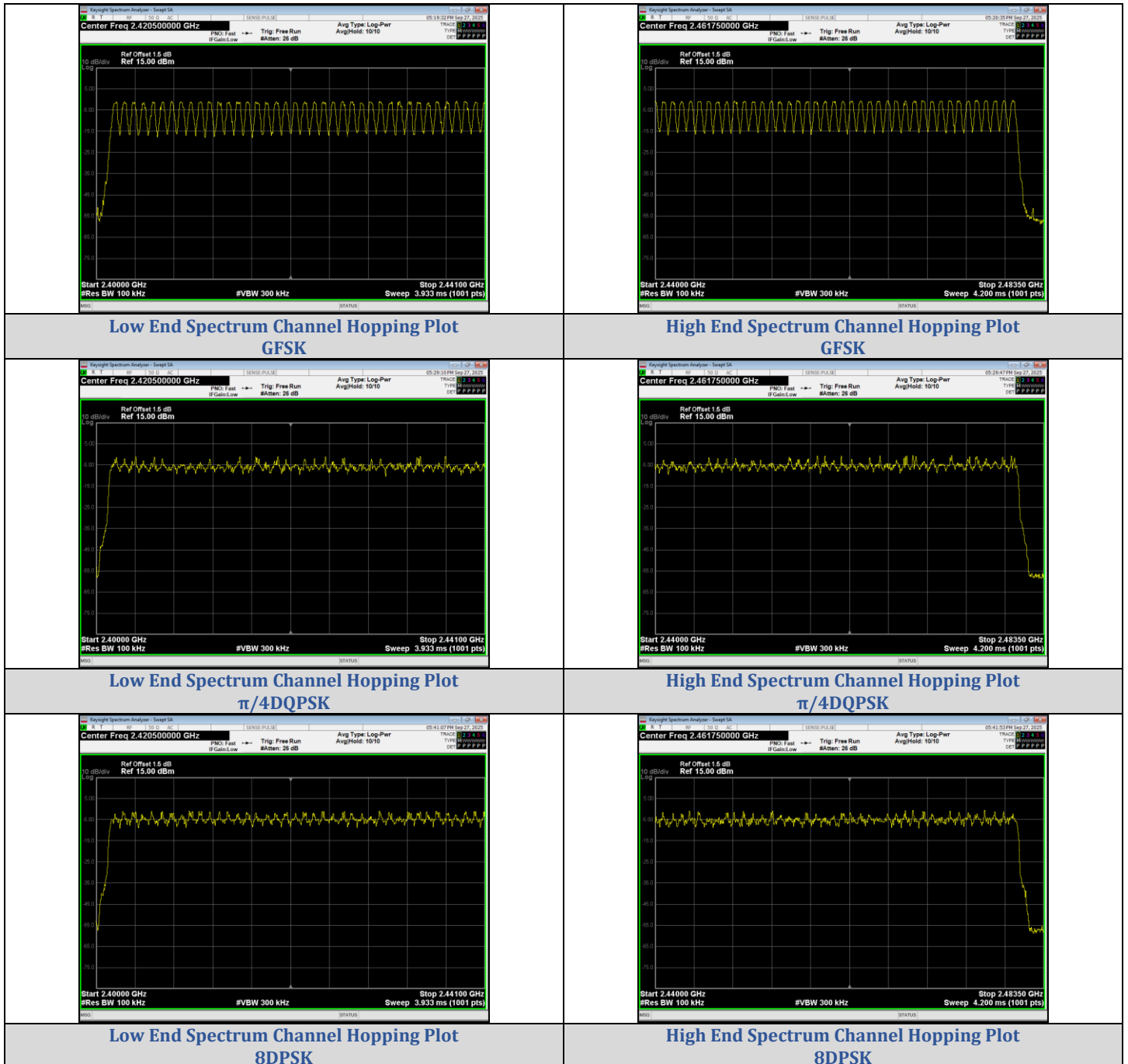


Number Of Hopping Channel

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 *****