

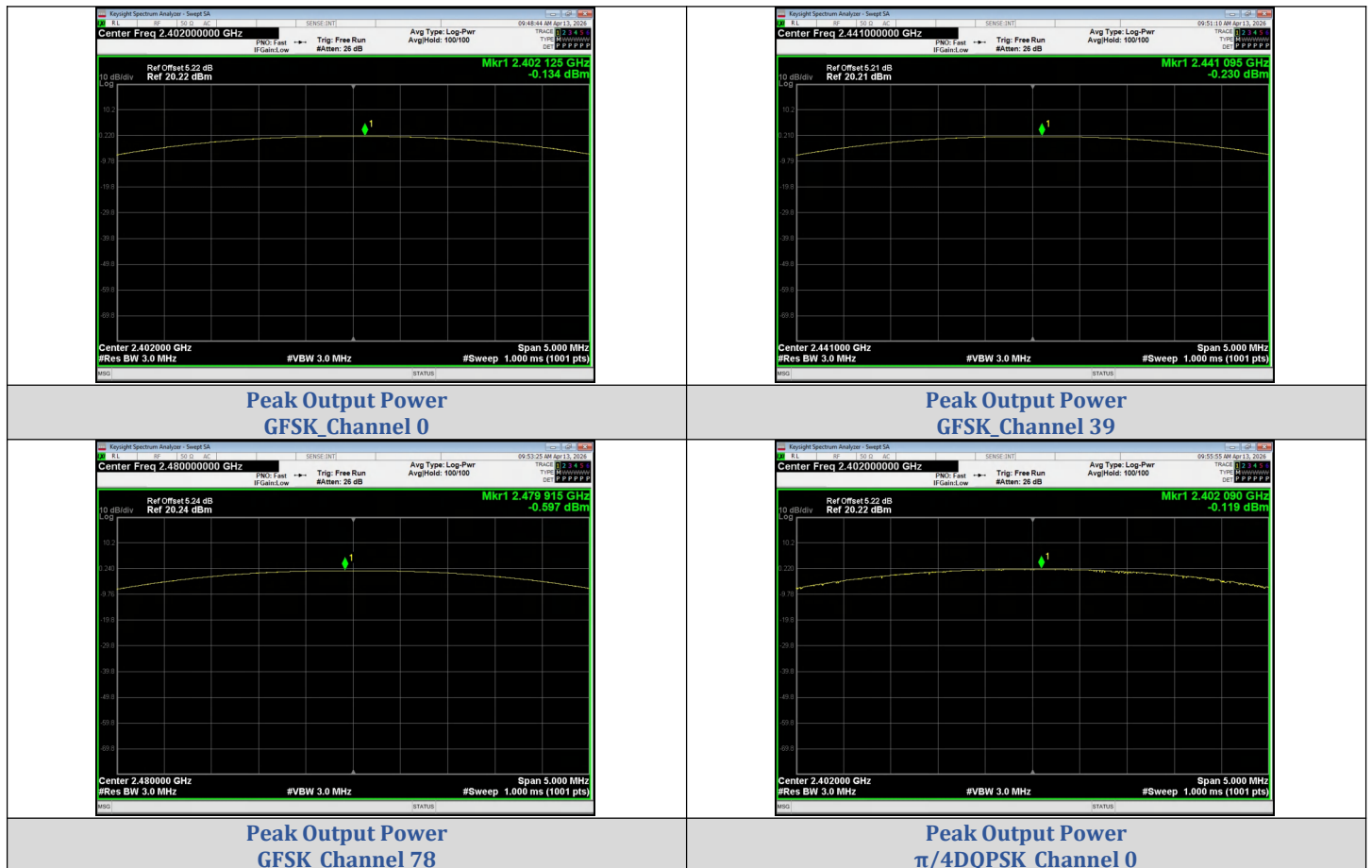
Appendix A: Test Results of Bluetooth BR & EDR

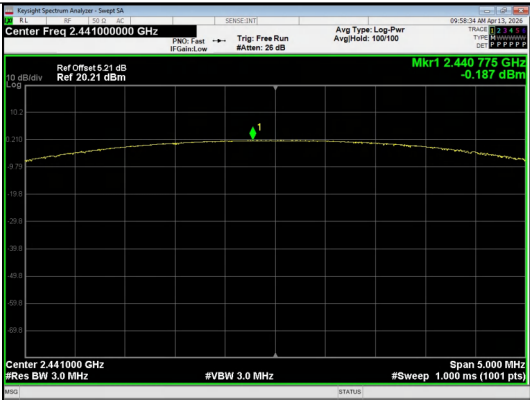
Conducted Output Power

Test Result

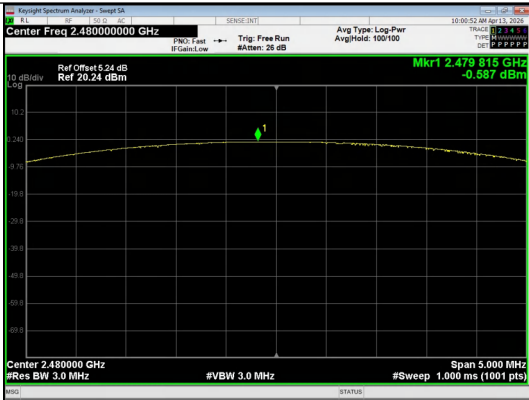
Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Max. Avg. Power (dBm)	Limit (dBm)	Result
GFSK	DH5	0	-0.13	0.97	None	≤30	PASS
		39	-0.23	0.95	None		PASS
		78	-0.60	0.87	None		PASS
$\pi/4$ DQPSK	2-DH5	0	-0.12	0.97	None		PASS
		39	-0.19	0.96	None		PASS
		78	-0.59	0.87	None		PASS
8DPSK	3-DH5	0	-0.10	0.98	None		PASS
		39	-0.12	0.97	None		PASS
		78	-0.56	0.88	None		PASS

Test Graphs

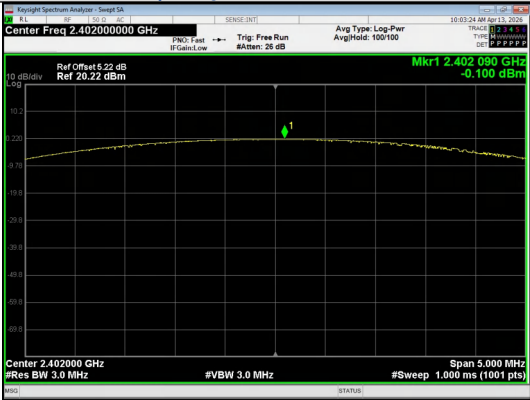




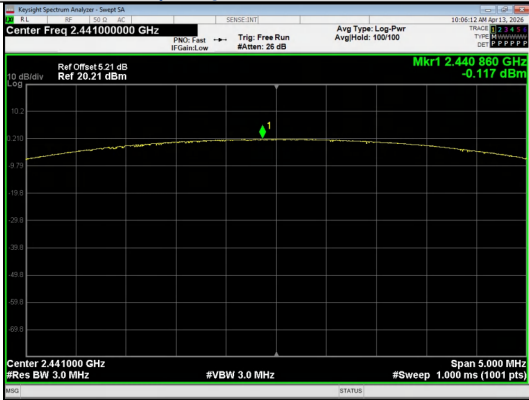
Peak Output Power
 $\pi/4$ DQPSK_Channel 39



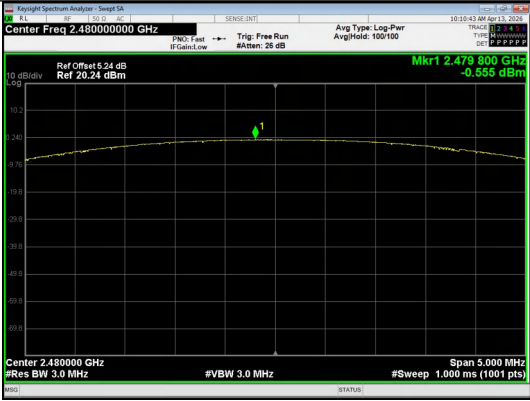
Peak Output Power
 $\pi/4$ DQPSK_Channel 78



Peak Output Power
8DPSK_Channel 0



Peak Output Power
8DPSK_Channel 39



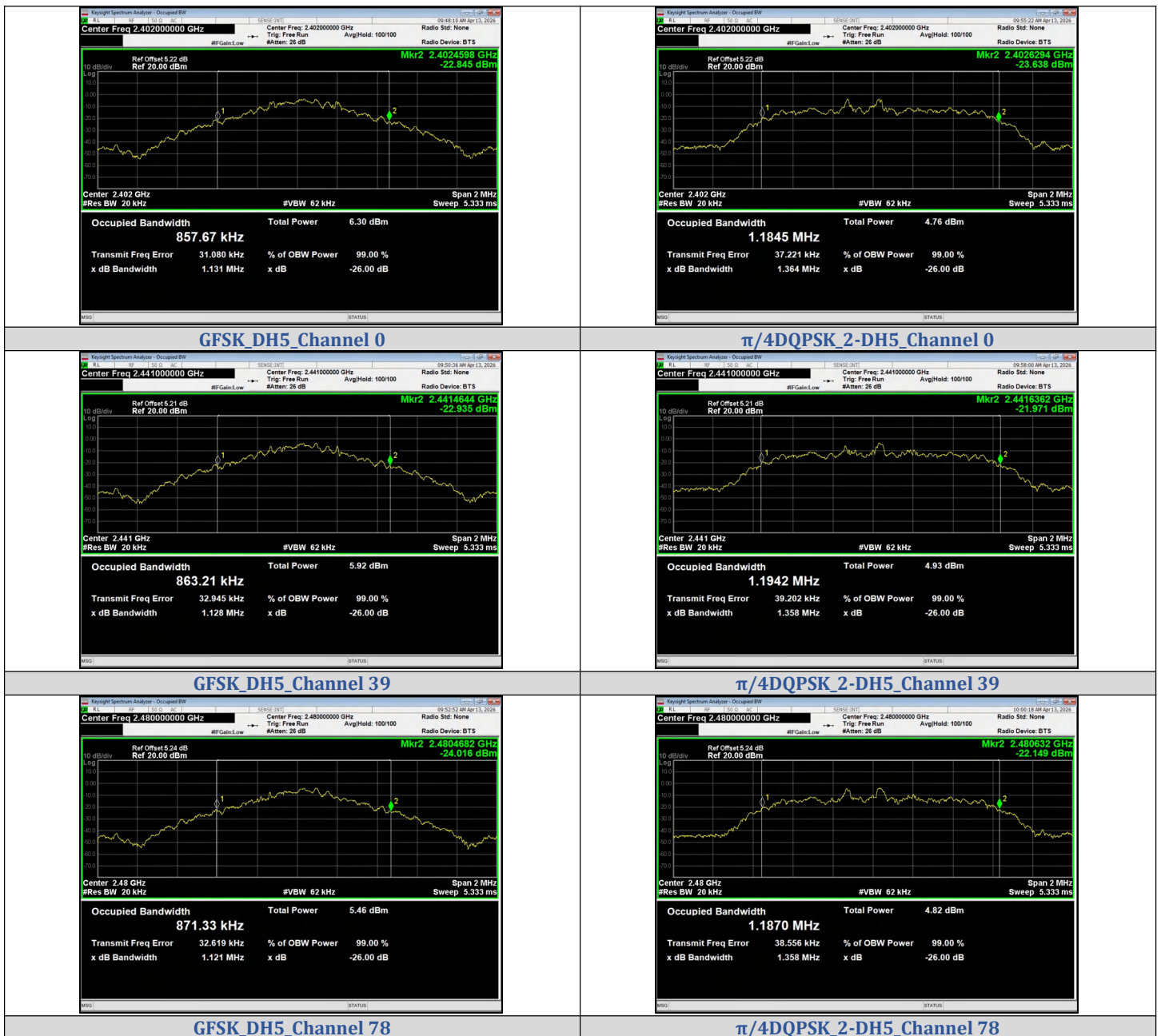
Peak Output Power
8DPSK_Channel 78

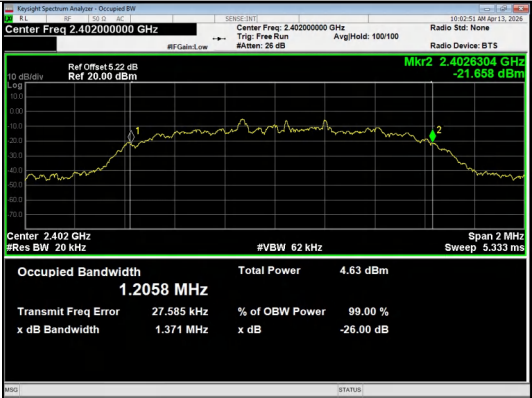
99% Bandwidth

Test Result

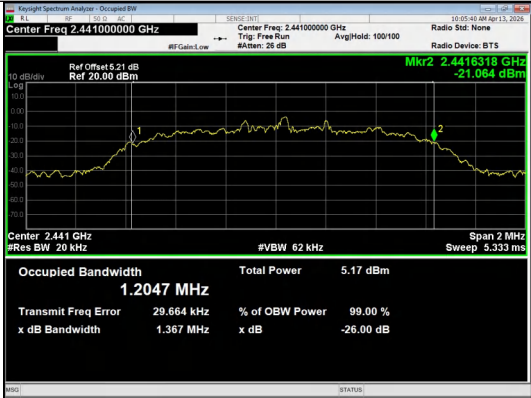
Modulation	Channel	Center Frequency (MHz)	99% BW (MHz)
GFSK	0	2402	0.85767
	39	2441	0.86321
	78	2480	0.87133
$\pi/4$ DQPSK	0	2402	1.1845
	39	2441	1.1942
	78	2480	1.1870
8DPSK	0	2402	1.2058
	39	2441	1.2047
	78	2480	1.2109

Test Graphs

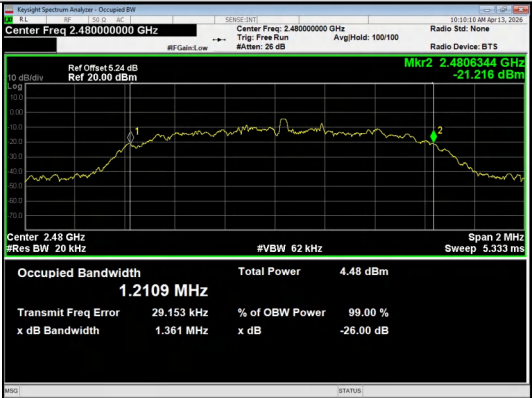




8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



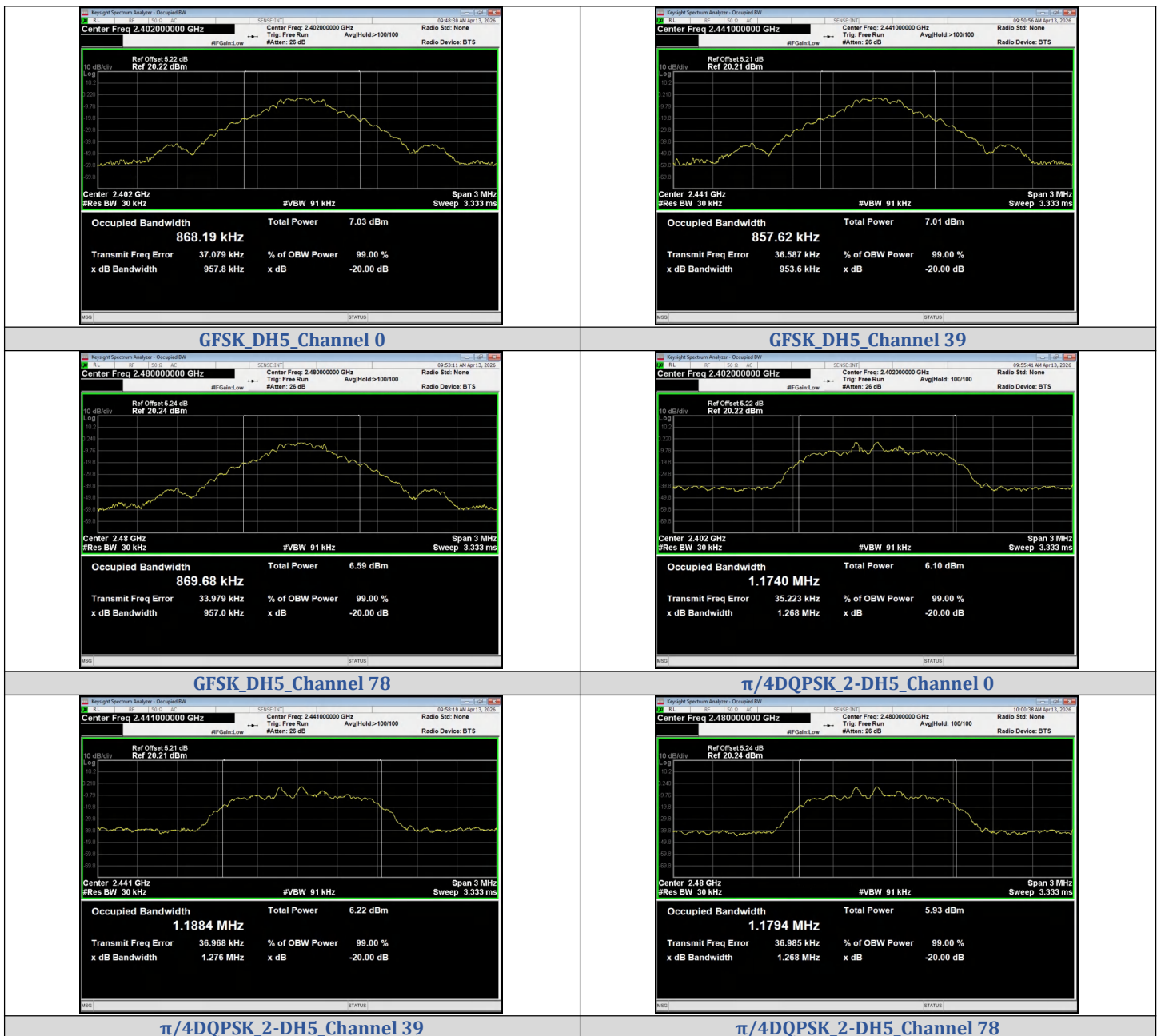
8DPSK_3-DH5_Channel 78

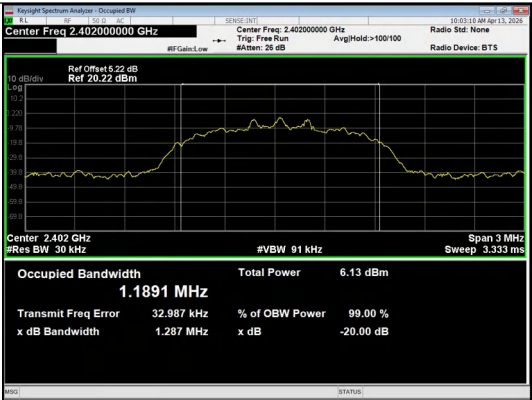
20dB Bandwidth

Test Result

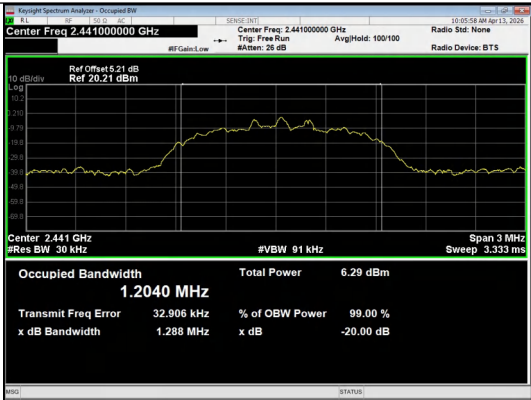
Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	0.9578
	39	2441 MHz	0.9536
	78	2480 MHz	0.9570
$\pi/4$ DQPSK	0	2402 MHz	1.268
	39	2441 MHz	1.276
	78	2480 MHz	1.268
8DPSK	0	2402 MHz	1.287
	39	2441 MHz	1.288
	78	2480 MHz	1.286

Test Graphs

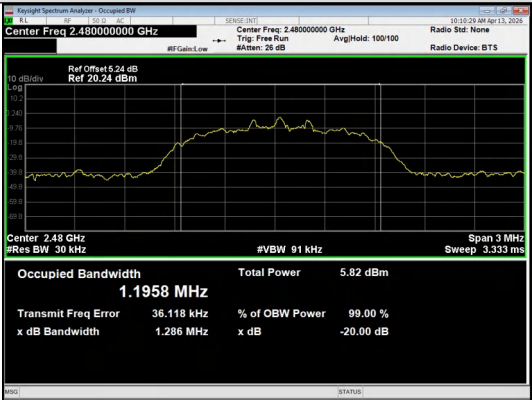




8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



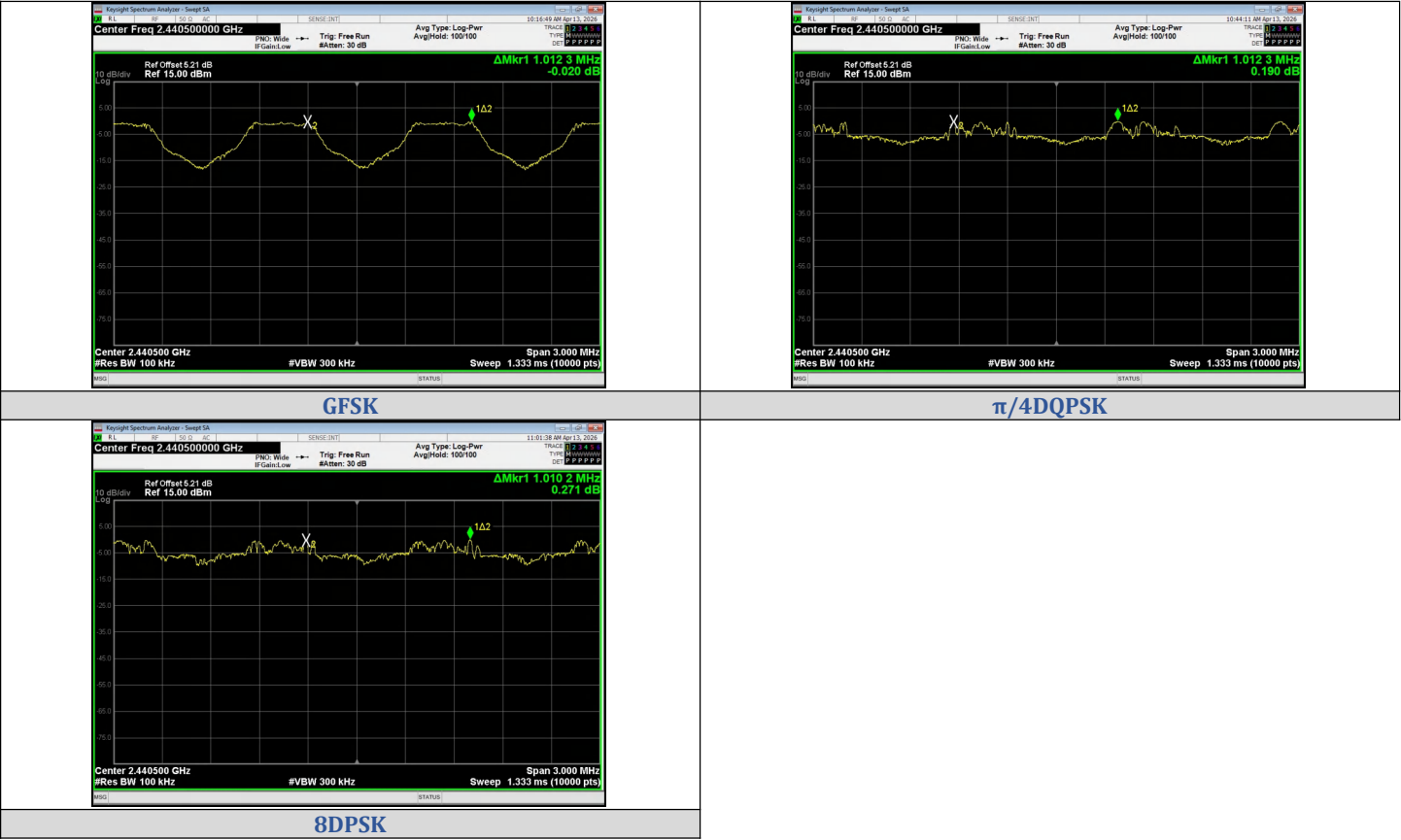
8DPSK_3-DH5_Channel 78

Carrier Frequencies Separation

Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2440.1944	2441.2067	1.0123	0.639	PASS
$\pi/4$ DQPSK	2-DH5	2439.8659	2440.8782	1.0123	0.851	PASS
8DPSK	3-DH5	2440.1866	2441.1968	1.0102	0.859	PASS

Test Graphs



Conducted Spurious & Band Edge Emission

Test Result

Non-Hopping

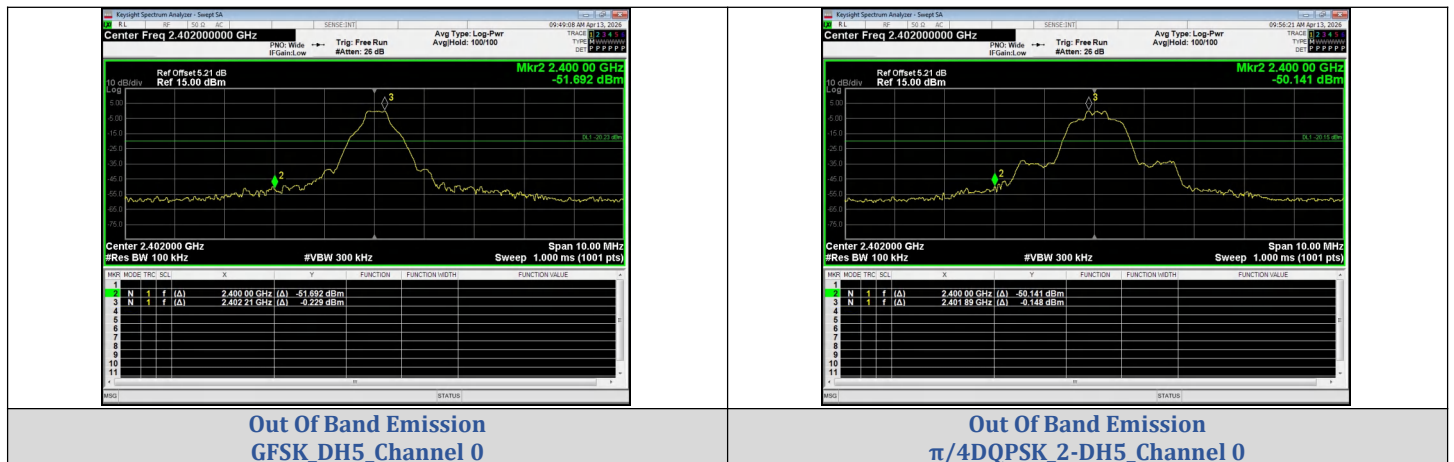
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2400.00	-51.692	-20.23	-31.462	PASS
			7206.38	-42.623	-20.23	-22.393	PASS
		39	7322.49	-44.269	-20.24	-24.029	PASS
		78	2483.50	-56.888	-20.67	-36.218	PASS
			7440.47	-48.338	-20.67	-27.668	PASS
$\pi/4$ DQPSK	2-DH5	0	2400.00	-50.141	-20.15	-29.991	PASS
			7205.75	-52.436	-20.15	-32.286	PASS
		39	7322.49	-45.988	-20.27	-25.718	PASS
		78	2287.91	-47.632	-20.6	-27.032	PASS
			2483.50	-57.594	-20.6	-36.994	PASS
8DPSK	3-DH5	0	2400.00	-53.038	-20.09	-32.948	PASS
			4804.26	-50.708	-20.09	-30.618	PASS
		39	9763.93	-50.765	-20.23	-30.535	PASS
		78	2483.50	-58.322	-20.64	-37.682	PASS
			7439.85	-47.034	-20.64	-26.394	PASS

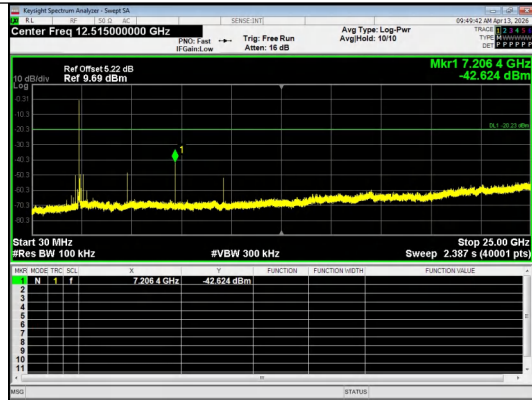
Note: input compensation coefficient (dB)= Cable Loss (dB)

Hopping

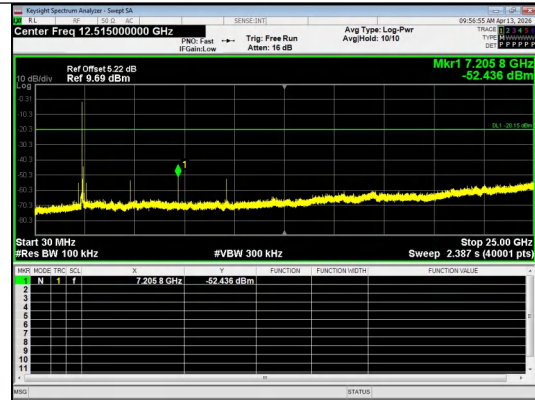
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2400.00	-50.233	-20.07	-30.163	PASS
			2483.50	-56.156	-20.45	-35.706	PASS
$\pi/4$ DQPSK	2-DH5		2400.00	-53.570	-19.99	-33.580	PASS
			2483.50	-56.904	-20.41	-36.494	PASS
8DPSK	3-DH5		2400.00	-52.554	-20.06	-32.494	PASS
			2483.50	-56.593	-20.63	-35.963	PASS
Note: input compensation coefficient (dB)= Cable Loss (dB)							

Test Graphs

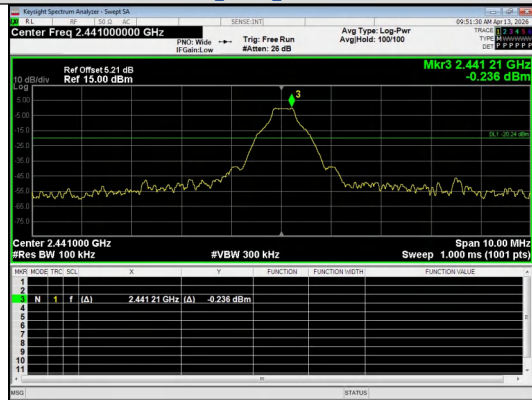




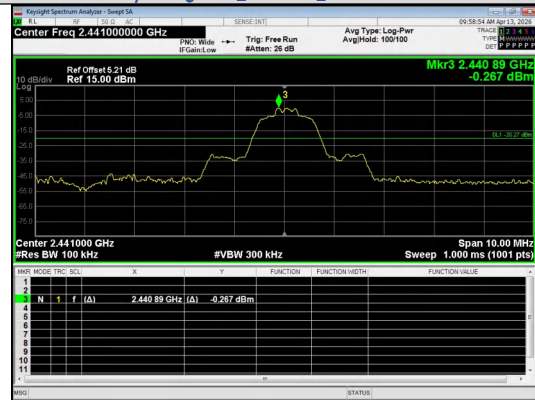
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 0



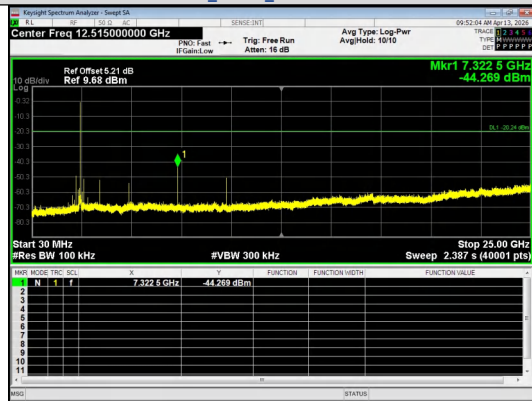
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 0



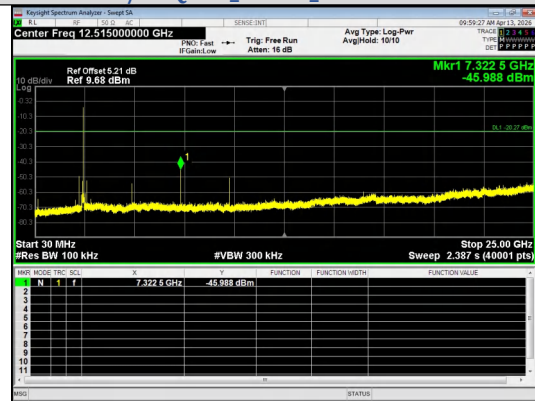
Out Of Band Emission
GFSK_DH5_Channel 39



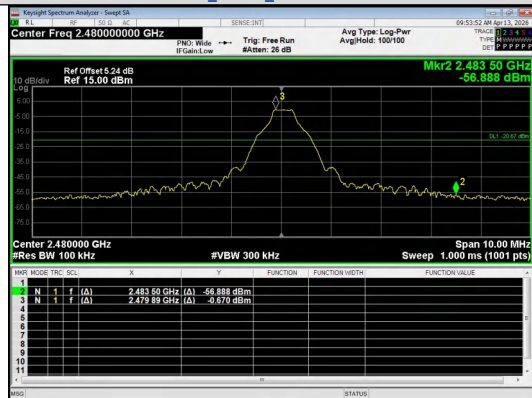
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 39



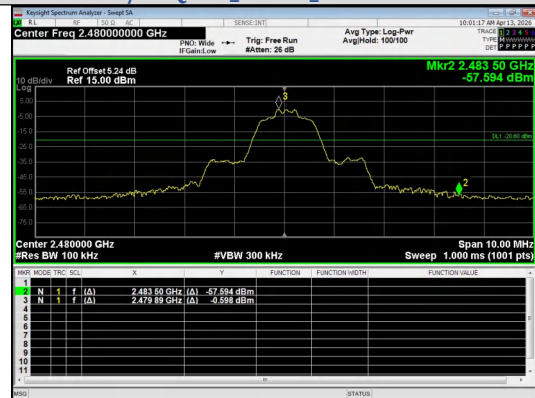
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 39



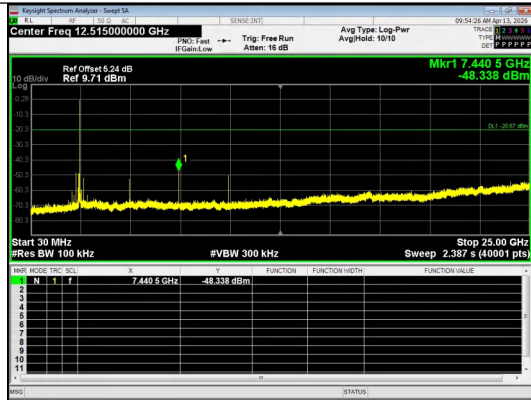
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 39



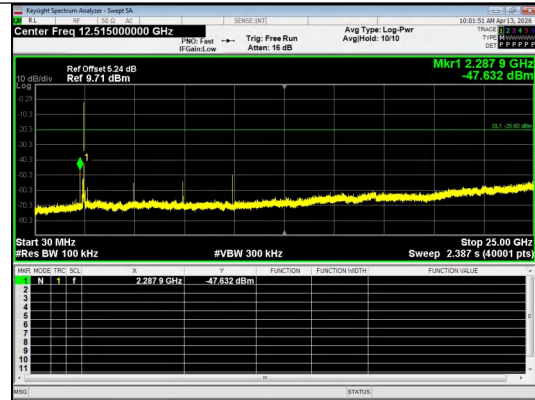
Out Of Band Emission
GFSK_DH5_Channel 78



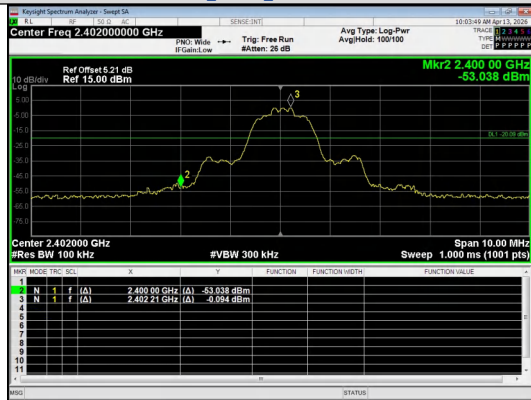
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 78



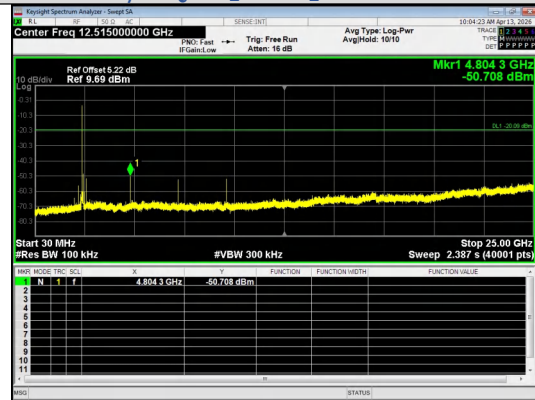
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 78



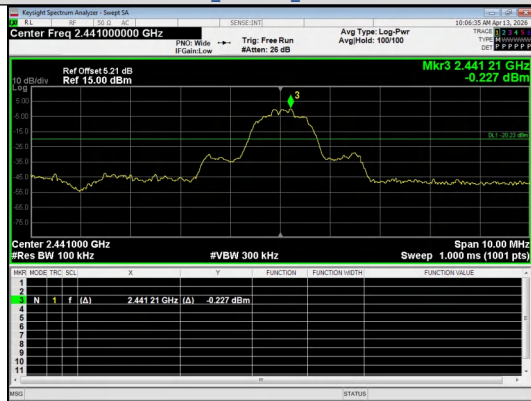
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 78



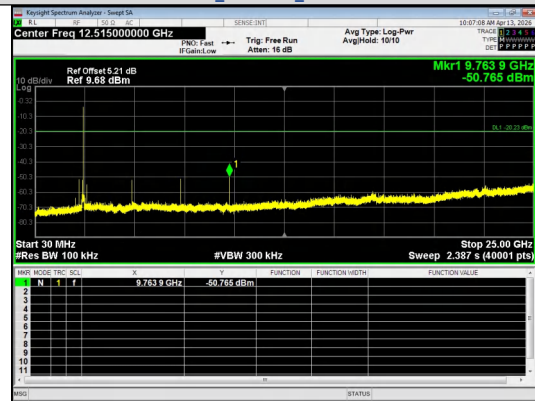
Out Of Band Emission
8DPSK_3-DH5_Channel 0



30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 0



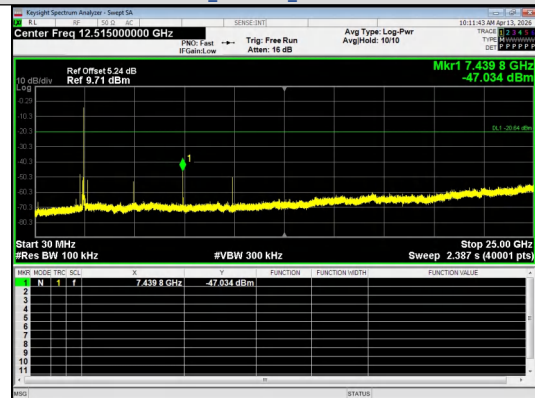
Out Of Band Emission
8DPSK_3-DH5_Channel 39



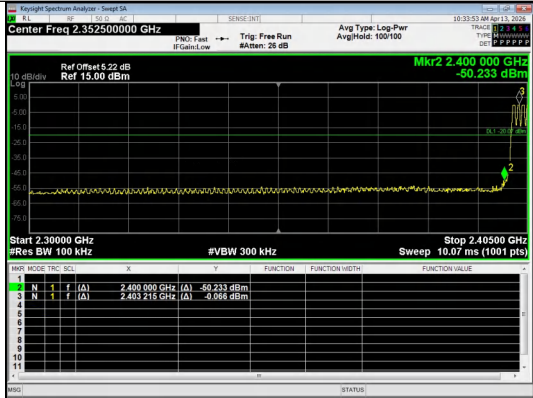
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 39



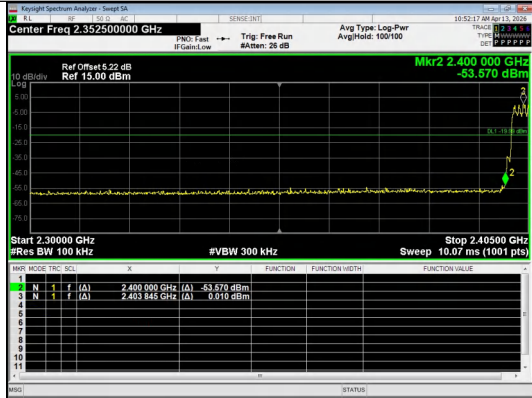
Out Of Band Emission
8DPSK_3-DH5_Channel 78



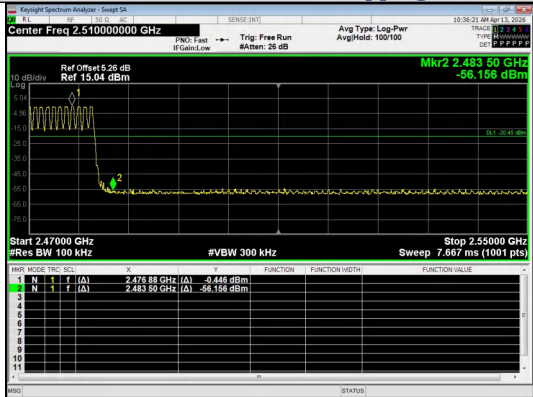
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 78



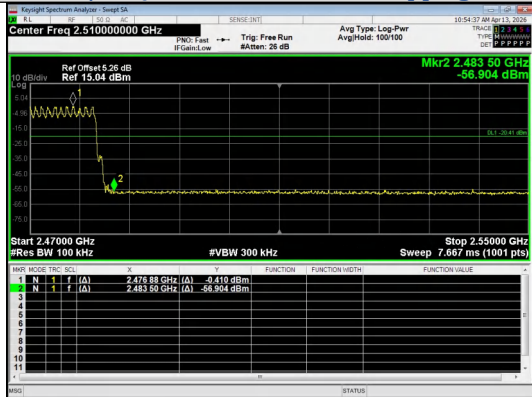
Out Of Band Emission(Left)
GFSK_DH5_Channel Hopping



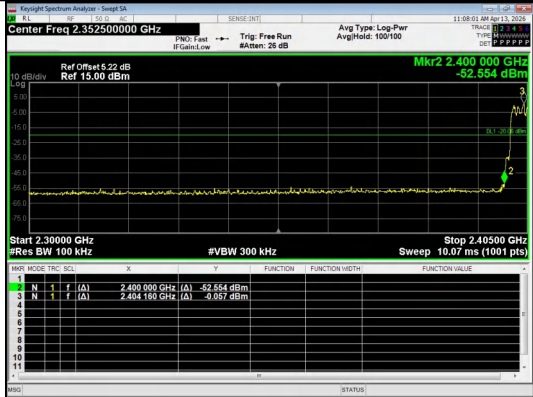
Out Of Band Emission(Left)
 $\pi/4$ DQPSK_2-DH5_Channel Hopping



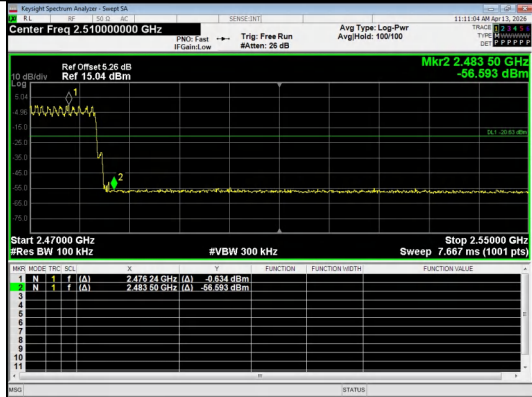
Out Of Band Emission(Right)
GFSK_DH5_Channel Hopping



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

Dwell Time

Test Result

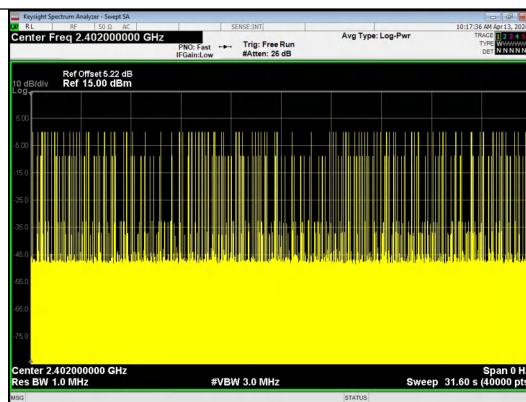
Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH5	Hopping	2.880	111	319.68	< 400	PASS
$\pi/4$ DQPSK	2-DH5		2.880	118	339.84		PASS
8DPSK	3-DH5		2.896	104	301.18		PASS

Note: Dwell time=Pulse time(ms)*Number of Pulses in 31.6 seconds

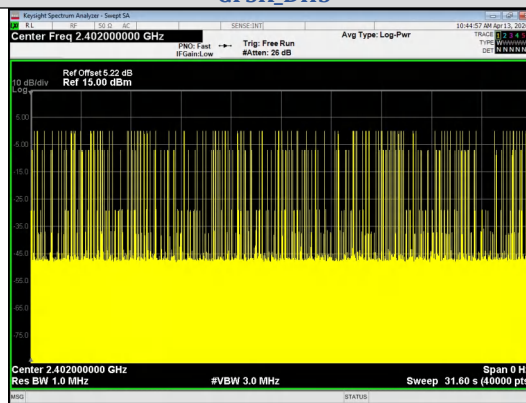
Test Graphs



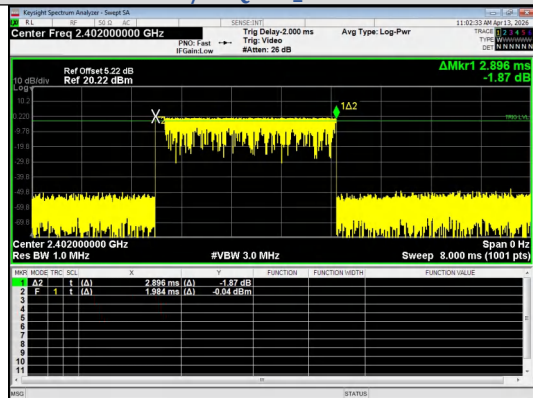
Pulse Width GFSK DH5



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

