

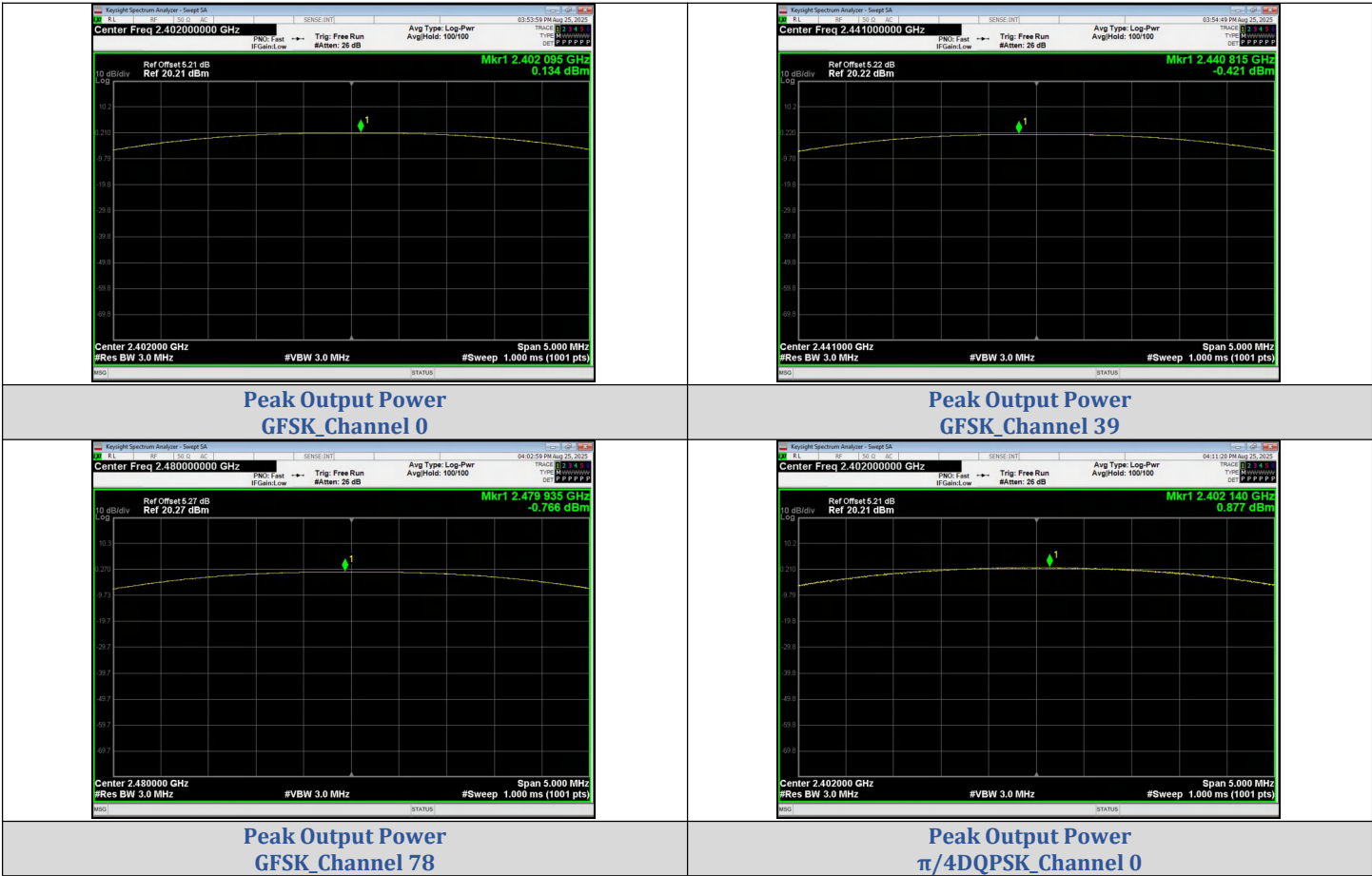
Appendix A Test Results of Bluetooth BR & EDR

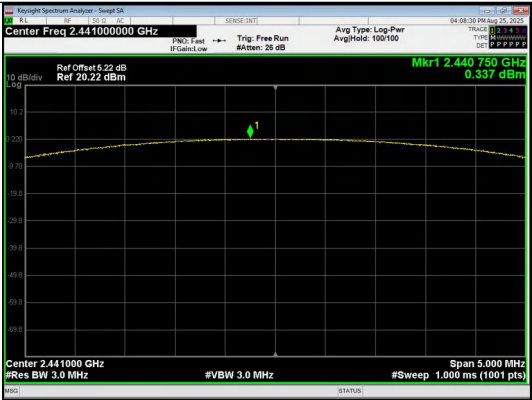
Conducted Output Power

Test Result

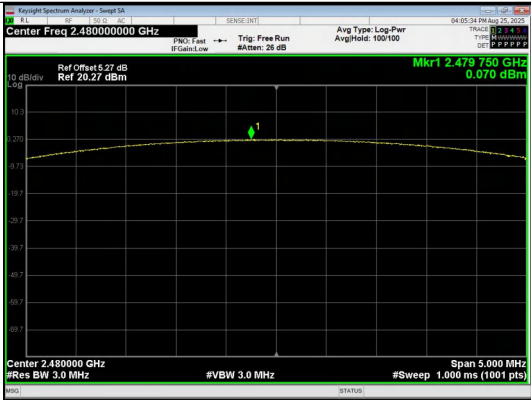
Modulation	Packet Type	Channel	Peak Output Power (dBm)	Limit (dBm)	Result
GFSK	DH5	0	0.13	≤20.97	PASS
		39	-0.42		PASS
		78	-0.77		PASS
$\pi/4$ DQPSK	2-DH5	0	0.88		PASS
		39	0.34		PASS
		78	0.07		PASS
8DPSK	3-DH5	0	1.26		PASS
		39	0.74		PASS
		78	0.45		PASS

Test Graphs

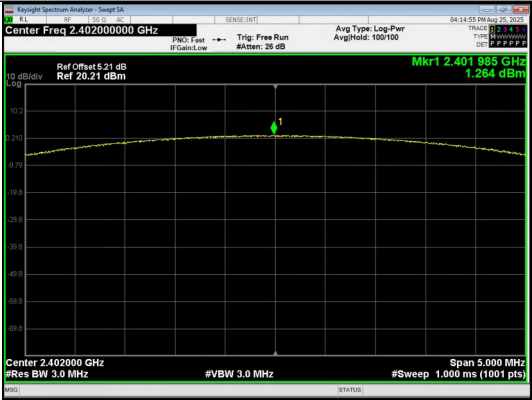




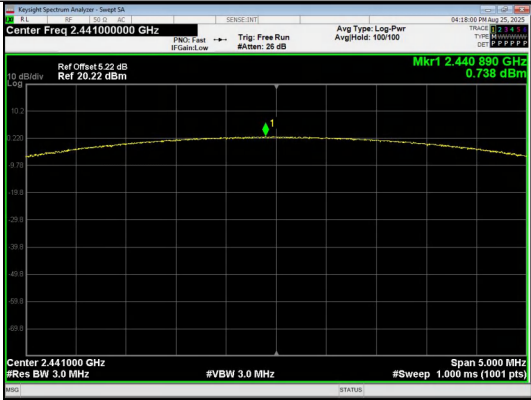
Peak Output Power
 $\pi/4$ DQPSK_Channel 39



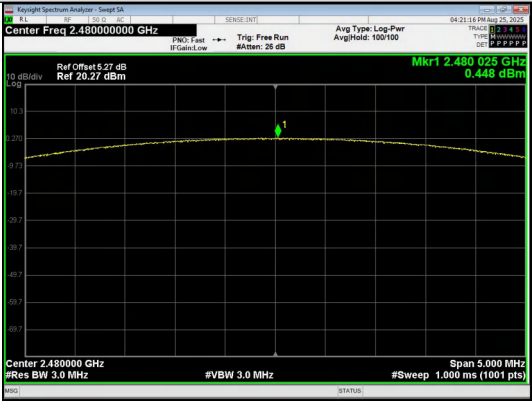
Peak Output Power
 $\pi/4$ DQPSK_Channel 78



Peak Output Power
8DPSK_Channel 0



Peak Output Power
8DPSK_Channel 39



Peak Output Power
8DPSK_Channel 78

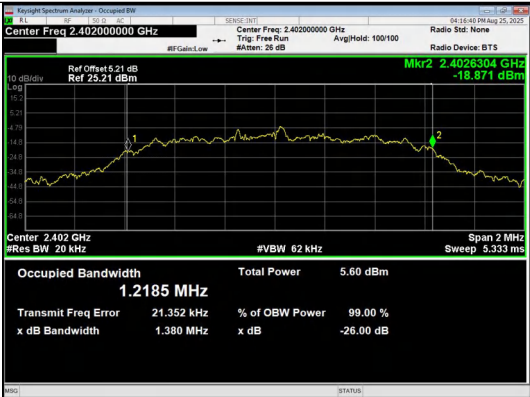
99% Bandwidth

Test Result

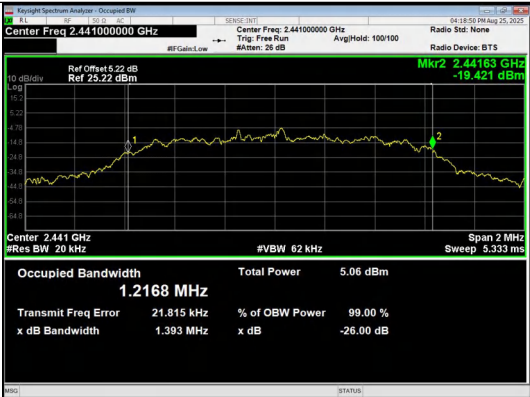
Modulation	Channel	Center Frequency (MHz)	99% BW (MHz)
GFSK	0	2402	0.95350
	39	2441	0.96052
	78	2480	0.95797
$\pi/4$ DQPSK	0	2402	1.2187
	39	2441	1.2218
	78	2480	1.2255
8DPSK	0	2402	1.2185
	39	2441	1.2168
	78	2480	1.1972

Test Graphs

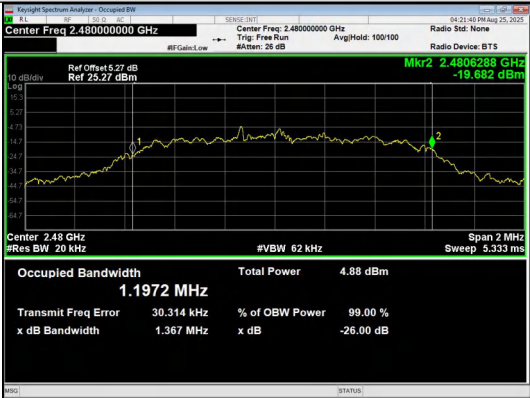




8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



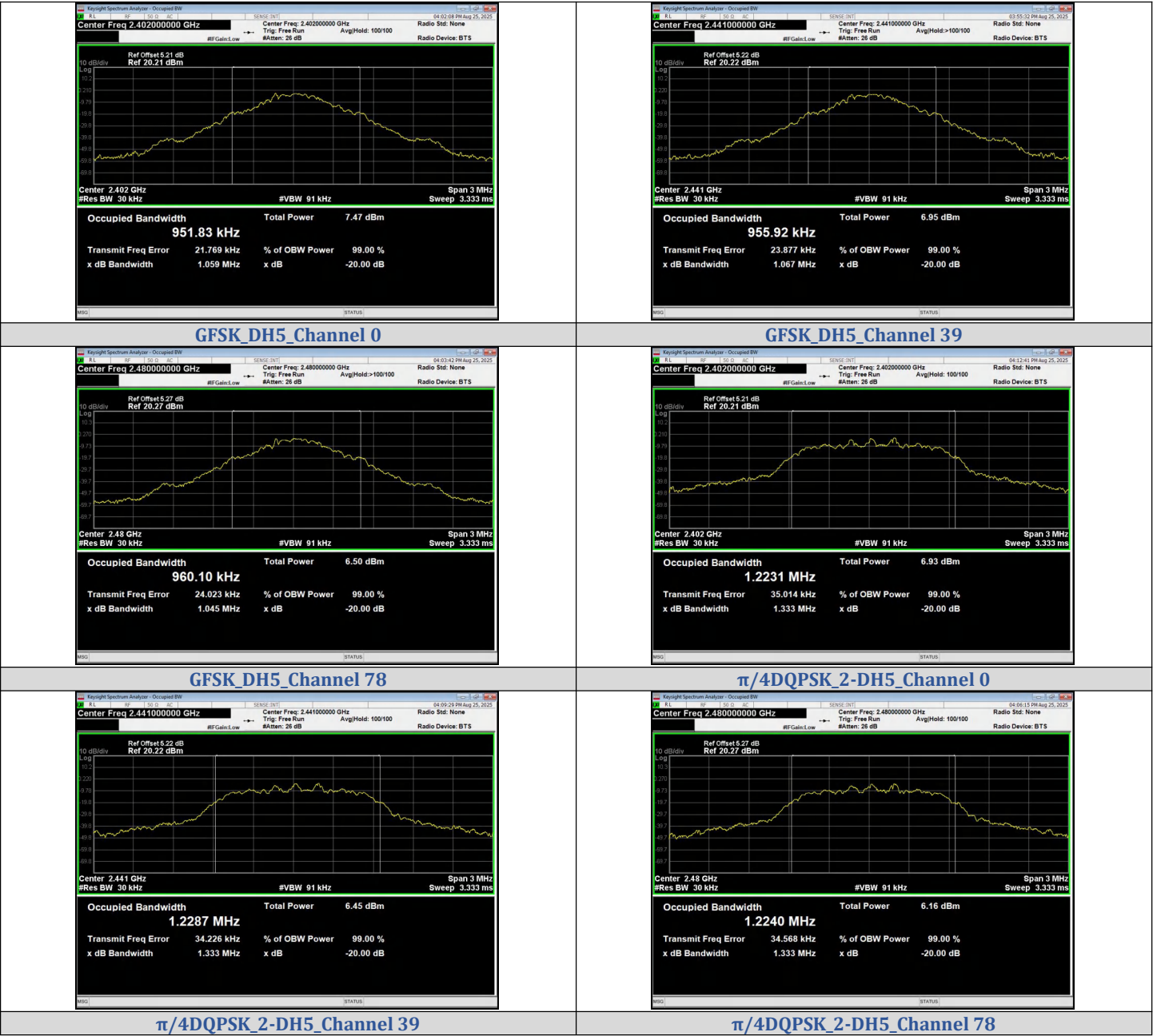
8DPSK_3-DH5_Channel 78

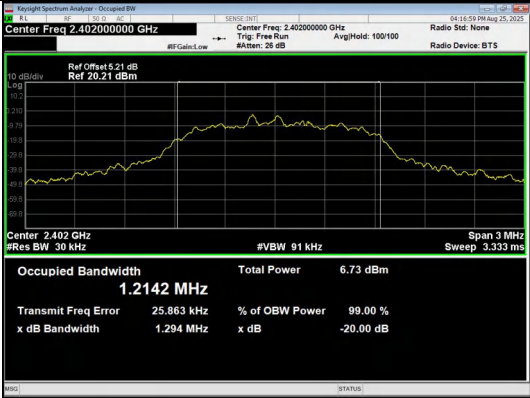
20dB Bandwidth

Test Result

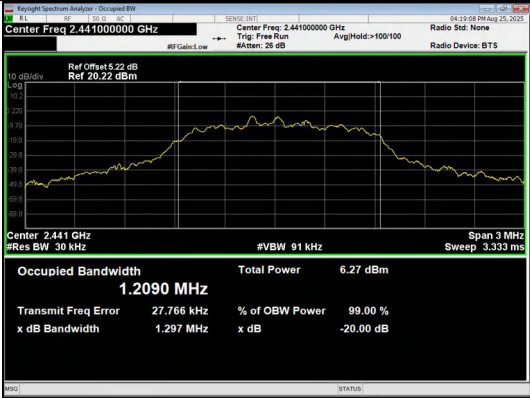
Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	1.059
	39	2441 MHz	1.067
	78	2480 MHz	1.045
$\pi/4$ DQPSK	0	2402 MHz	1.333
	39	2441 MHz	1.333
	78	2480 MHz	1.333
8DPSK	0	2402 MHz	1.294
	39	2441 MHz	1.297
	78	2480 MHz	1.291

Test Graphs

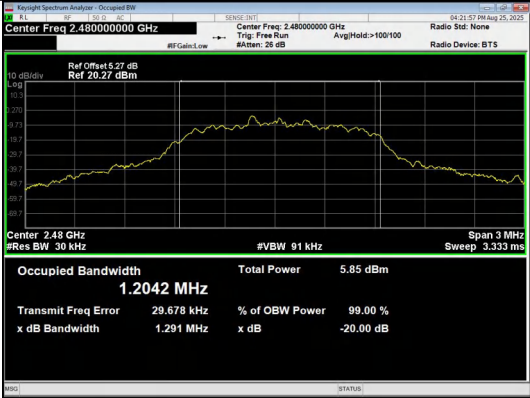




8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



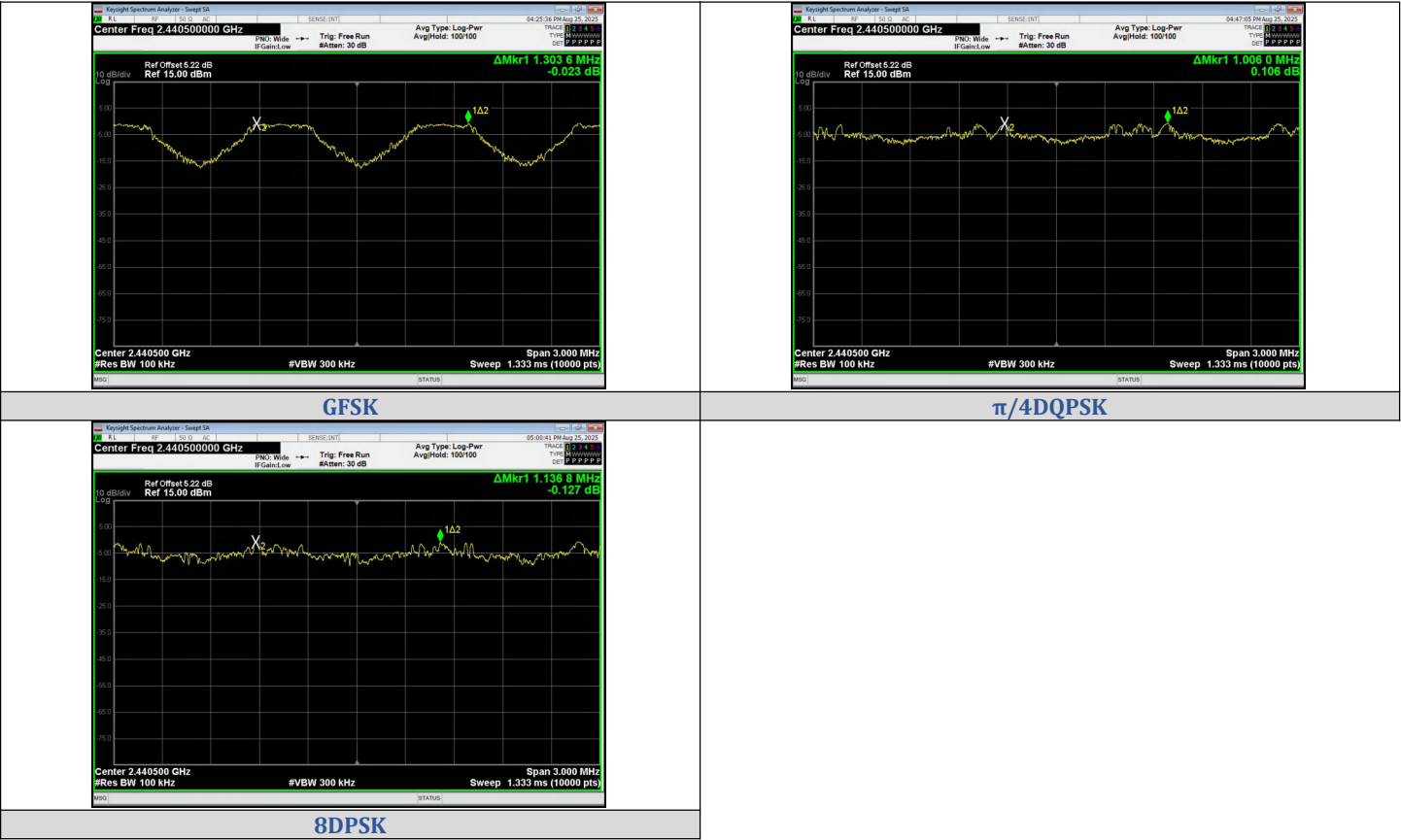
8DPSK_3-DH5_Channel 78

Carrier Frequencies Separation

Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2439.8821	2441.1857	1.3036	0.713	PASS
$\pi/4$ DQPSK	2-DH5	2440.1788	2441.1848	1.0060	0.887	PASS
8DPSK	3-DH5	2439.877	2441.0138	1.1368	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	-51.180	-19.94	-31.240	PASS
			4804.26	-49.462	-19.94	-29.522	PASS
		39	4882.30	-45.633	-20.66	-24.973	PASS
		78	2483.50	-56.220	-20.96	-35.260	PASS
			4960.33	-46.157	-20.96	-25.197	PASS
π /4DQPSK	2-DH5	0	2400.00	-51.880	-20.12	-31.760	PASS
			4804.26	-45.804	-20.12	-25.684	PASS
		39	4881.67	-47.290	-20.68	-26.610	PASS
		78	2483.50	-57.540	-20.97	-36.570	PASS
			3419.05	-44.536	-20.97	-23.566	PASS
8DPSK	3-DH5	0	2381.48	-53.324	-20.11	-33.214	PASS
			2400.00	-54.720	-20.11	-34.610	PASS
			4804.30	-47.119	-20.11	-27.009	PASS
		39	4882.30	-45.634	-20.82	-24.814	PASS
		78	2483.50	-57.670	-21.03	-36.640	PASS
			4960.33	-47.287	-21.03	-26.257	PASS

Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2389.25	-53.876	-20.0	-33.876	PASS
			2400.00	-56.050	-20.0	-36.050	PASS
			2483.50	-55.950	-21.04	-34.910	PASS
π /4DQPSK	2-DH5		2394.50	-53.842	-20.08	-33.762	PASS
			2400.00	-54.220	-20.08	-34.140	PASS
			2483.50	-55.160	-21.04	-34.120	PASS
8DPSK	3-DH5		2384.84	-52.759	-20.31	-32.449	PASS
			2400.00	-56.370	-20.31	-36.060	PASS
			2483.50	-56.730	-21.33	-35.400	PASS

Test Graphs

Center Freq 2.352500000 GHz

Ref Offset 5.21 dB

Ref 15.00 dBm

Mkr2 2.400 000 GHz -51.182 dBm

Start 2.30000 GHz

Stop 2.40500 GHz

#VBW 300 kHz

Sweep 10.07 ms (1001 pts)

MARK	MODE	TRIG	SOL	X	Y	FUNCTION	FUNCTION (MATH)	FUNCTION VALUE
1	N	1	F	(A)	2.400 000 GHz (A)	-51.182 dBm		
2	N	1	F	(A)	2.401 745 GHz (A)	0.062 dBm		

Out Of Band Emission
GFSK_DH5_Channel 0

Center Freq 2.352500000 GHz

Ref Offset 5.21 dB

Ref 15.00 dBm

Mkr2 2.400 000 GHz -51.876 dBm

Start 2.30000 GHz

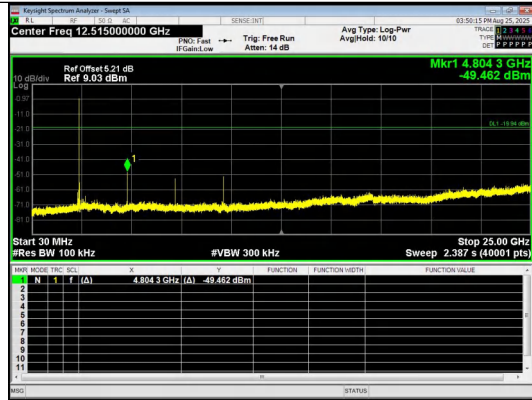
Stop 2.40500 GHz

#VBW 300 kHz

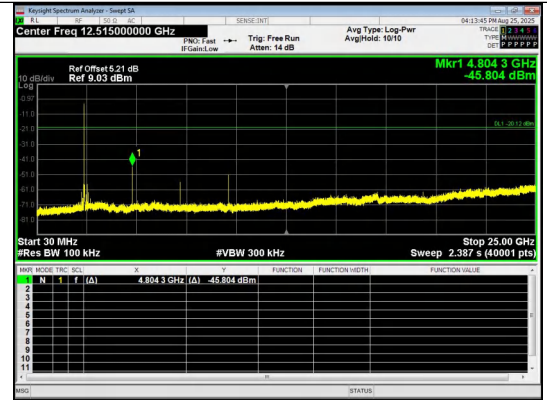
Sweep 10.07 ms (1001 pts)

MARK	MODE	TRIG	SOL	X	Y	FUNCTION	FUNCTION (MATH)	FUNCTION VALUE
1	N	1	F	(A)	2.400 000 GHz (A)	-51.876 dBm		
2	N	1	F	(A)	2.401 880 GHz (A)	-0.124 dBm		

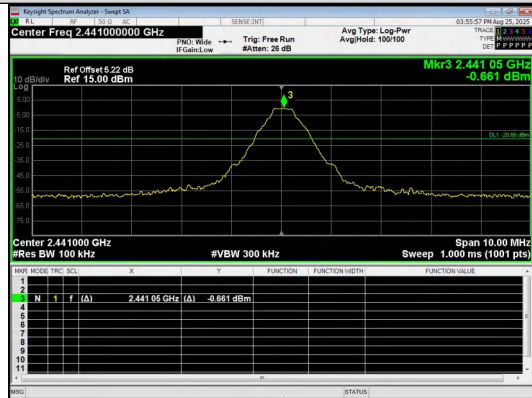
Out Of Band Emission
 π /4DQPSK_2-DH5_Channel 0



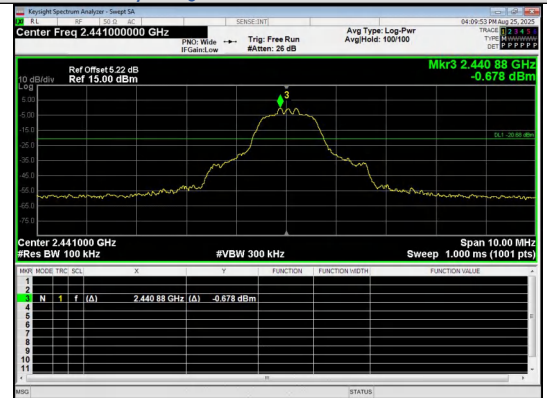
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 0



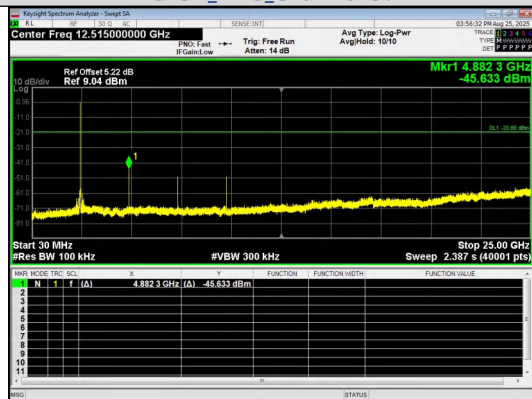
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 0



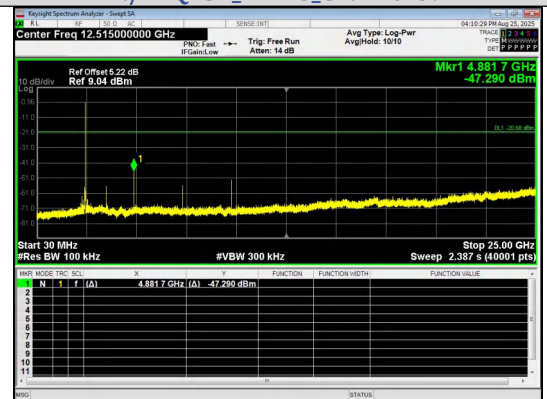
Out Of Band Emission
GFSK_DH5_Channel 39



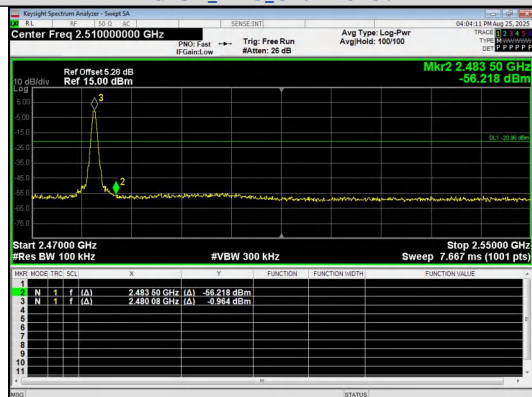
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 39



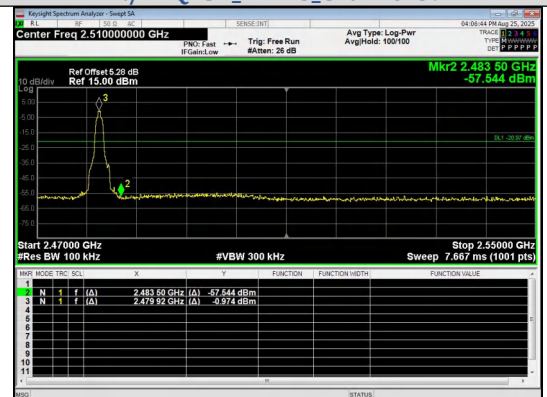
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 39



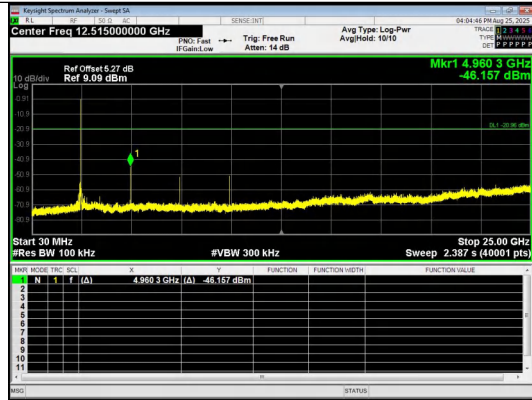
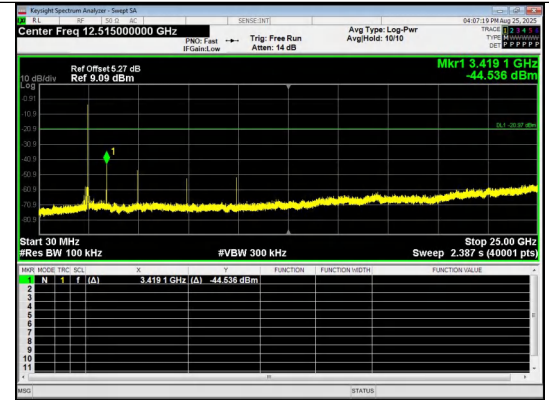
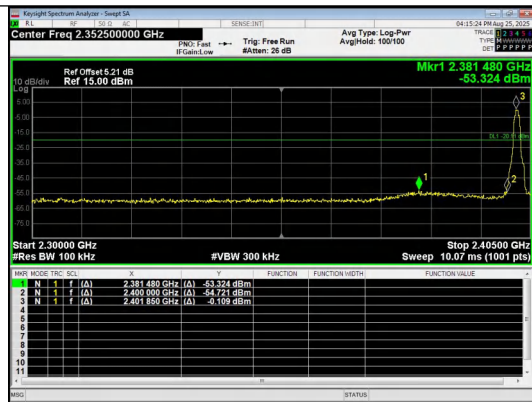
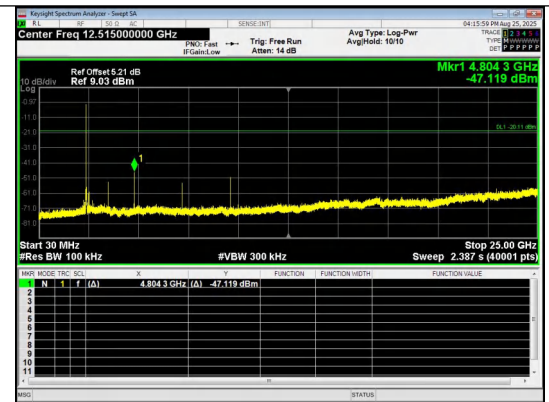
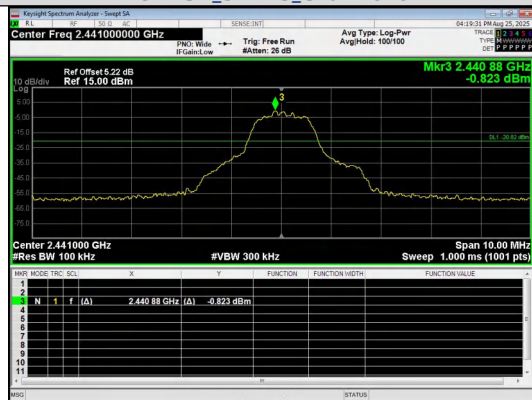
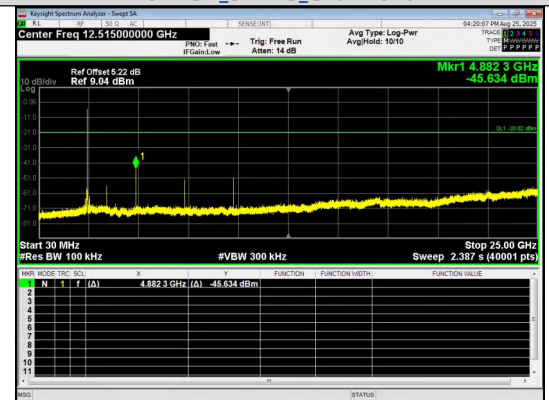
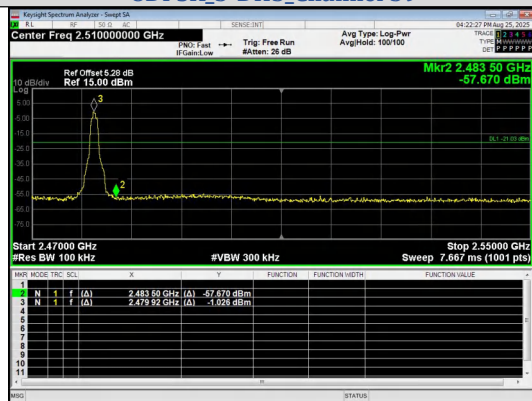
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 39



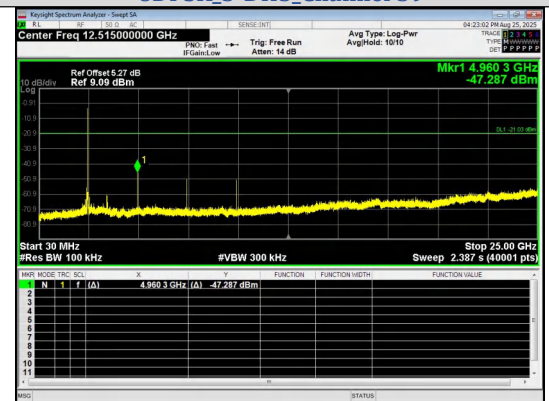
Out Of Band Emission
GFSK_DH5_Channel 78



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

30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 7830.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 78Out Of Band Emission
8DPSK_3-DH5_Channel 030.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 0Out Of Band Emission
8DPSK_3-DH5_Channel 3930.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 39

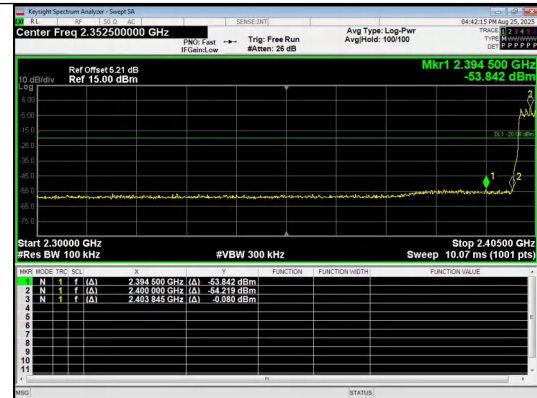
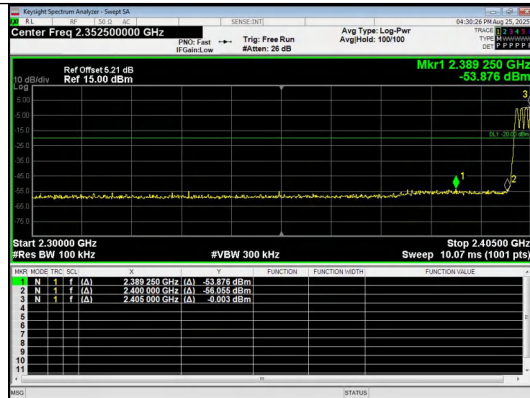
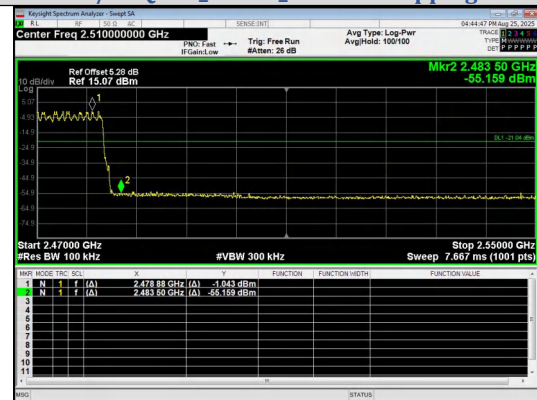
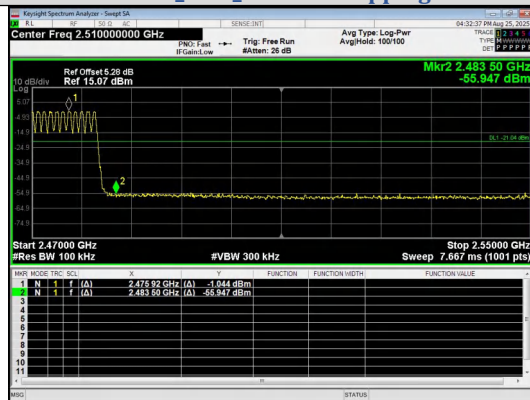
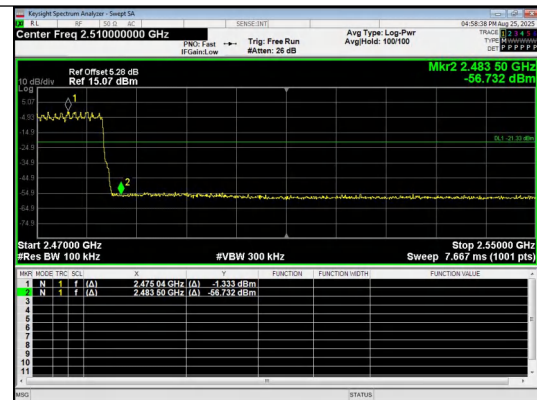
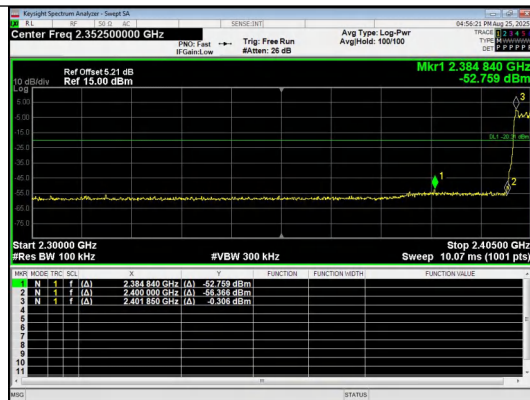
Out Of Band Emission



30.0 MHz - 25000.0 MHz

8DPSK_3-DH5_Channel 78

8DPSK_3-DH5_Channel 78

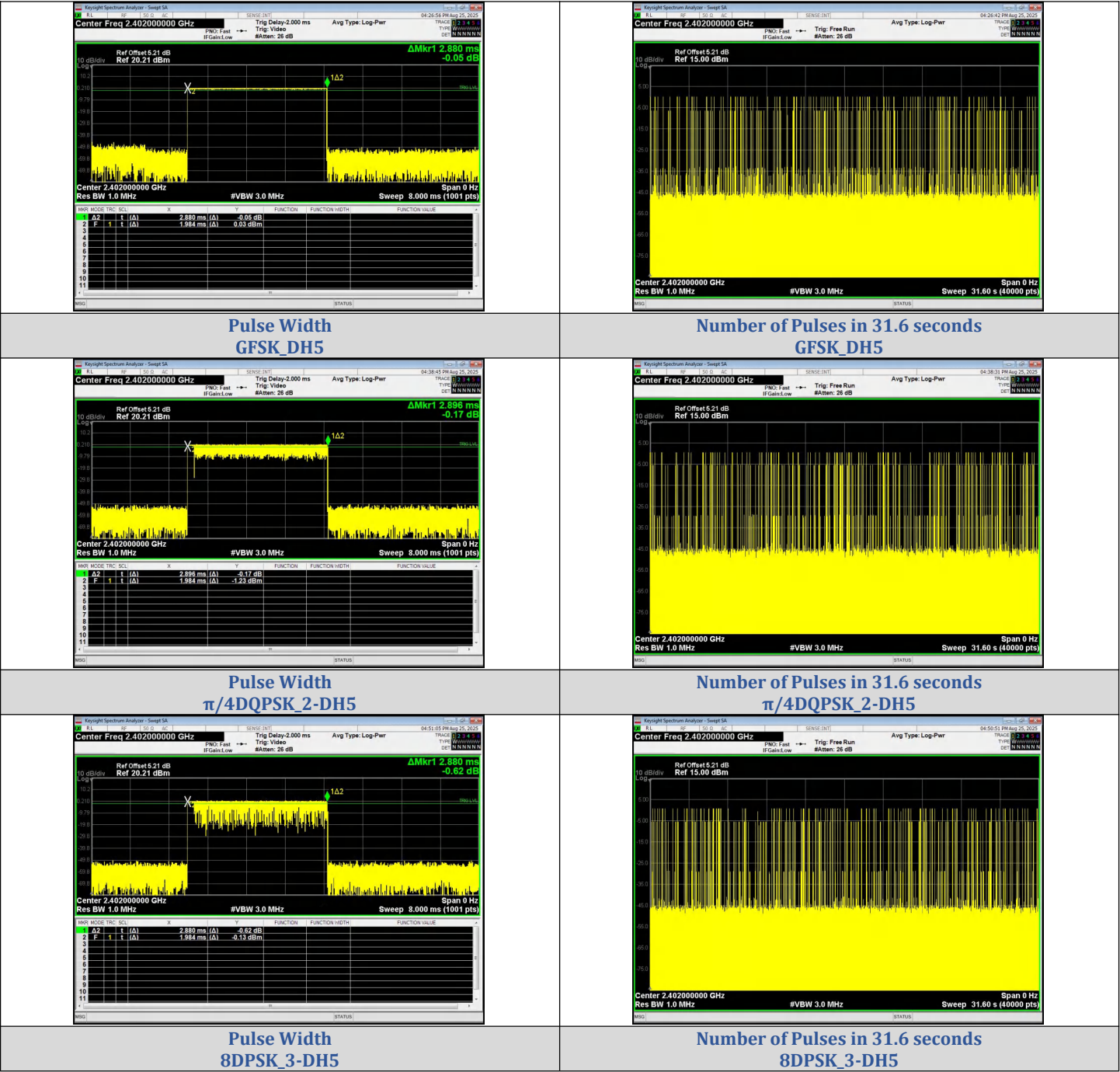
Out Of Band Emission(Left)
GFSK_DH5_Channel HoppingOut Of Band Emission(Left)
 $\pi/4$ DQPSK_2-DH5_Channel HoppingOut Of Band Emission(Right)
GFSK_DH5_Channel HoppingOut Of Band Emission(Right)
 $\pi/4$ DQPSK_2-DH5_Channel HoppingOut Of Band Emission(Left)
8DPSK_3-DH5_Channel HoppingOut Of Band Emission(Right)
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	109	313.92	< 400	PASS
$\pi/4$ DQPSK	2-DH5		2.896	117	338.83		PASS
8DPSK	3-DH5		2.880	110	316.8		PASS

Test Graphs



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

