Appendix

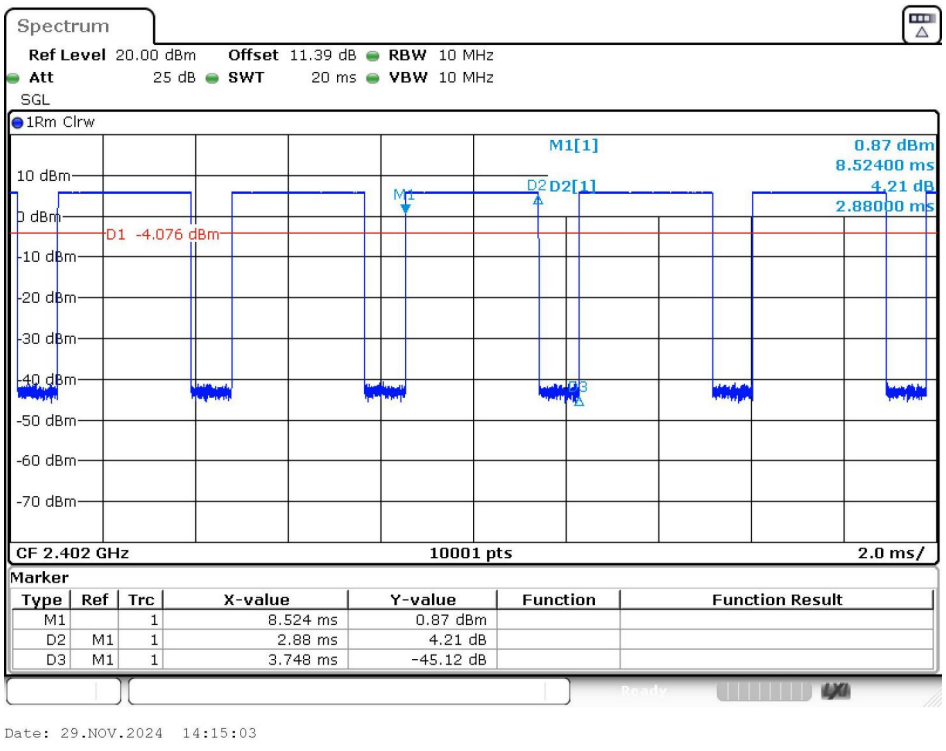
Report No.:	CISRR24112214307
FCC ID:	2BME5-D8
Product Name:	Handheld Translation Device
Model No.:	D8
Test Engineer:	Lucas Huang
Supervised by:	Rory Huang

1) Duty Cycle

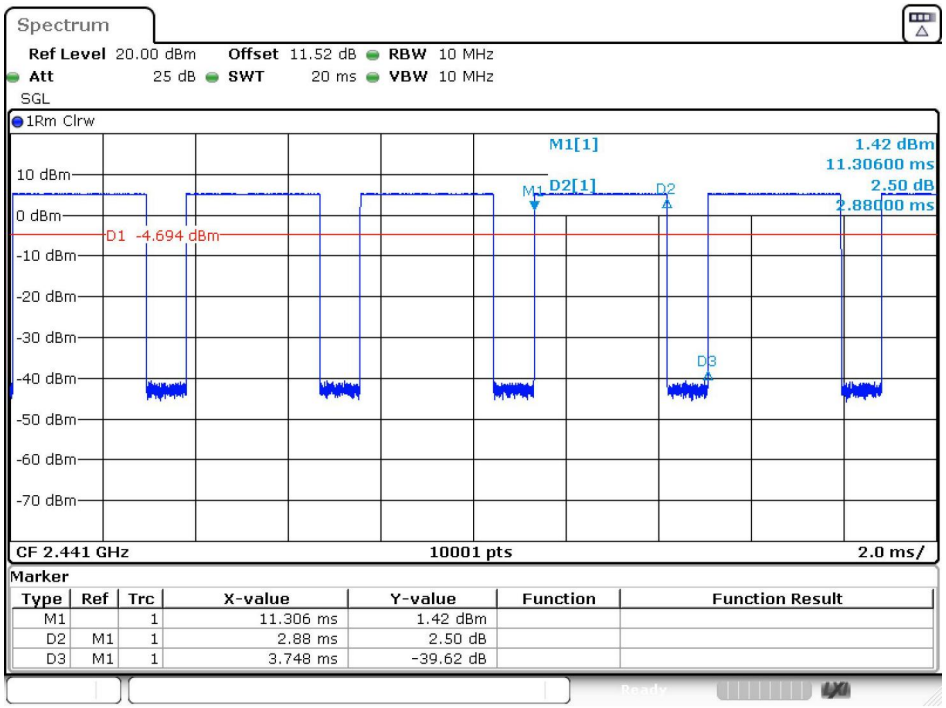
Test Result

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	2.880	3.748	76.84	0.7684	1.1441	0.3472
		78	2.880	3.748	76.84	0.7684	1.1441	0.3472
π/4DQPSK	2-DH5	0	2.880	3.748	76.84	0.7684	1.1441	0.3472
		39	2.875	3.741	76.84	0.7684	1.1441	0.3478
		78	2.878	3.748	76.79	0.7679	1.147	0.3475
8DPSK	3-DH5	0	2.886	3.750	76.96	0.7696	1.1373	0.3465
		39	2.880	3.741	76.98	0.7698	1.1362	0.3472
		78	2.886	3.748	77.00	0.7700	1.1351	0.3465

Test Graphs

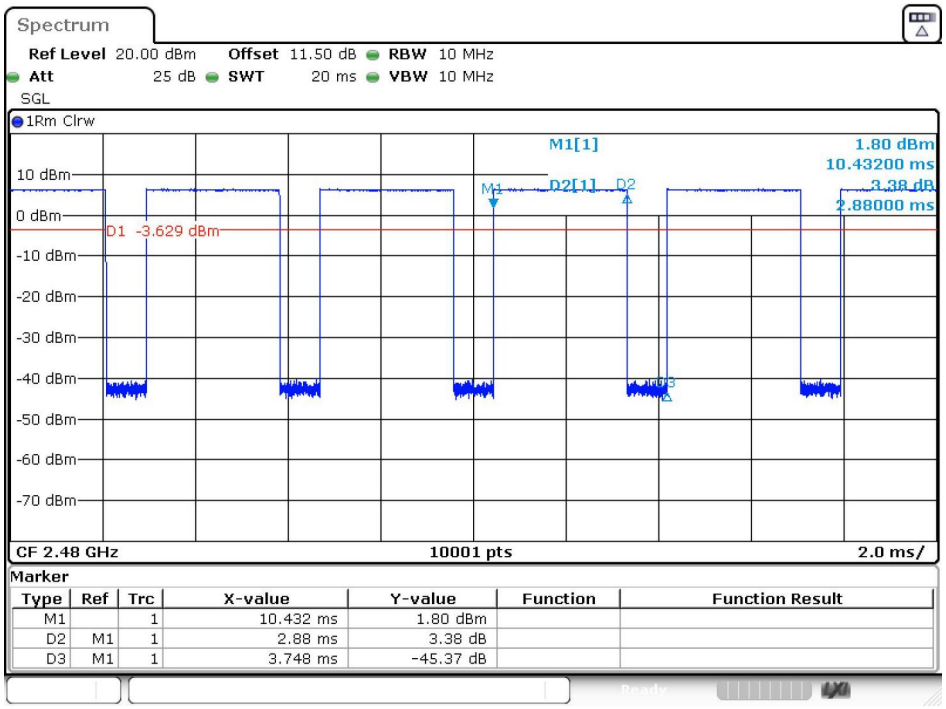


GFSK(DH5)_Channel 0



Date: 29.NOV.2024 14:22:15

GFSK(DH5)_Channel 39



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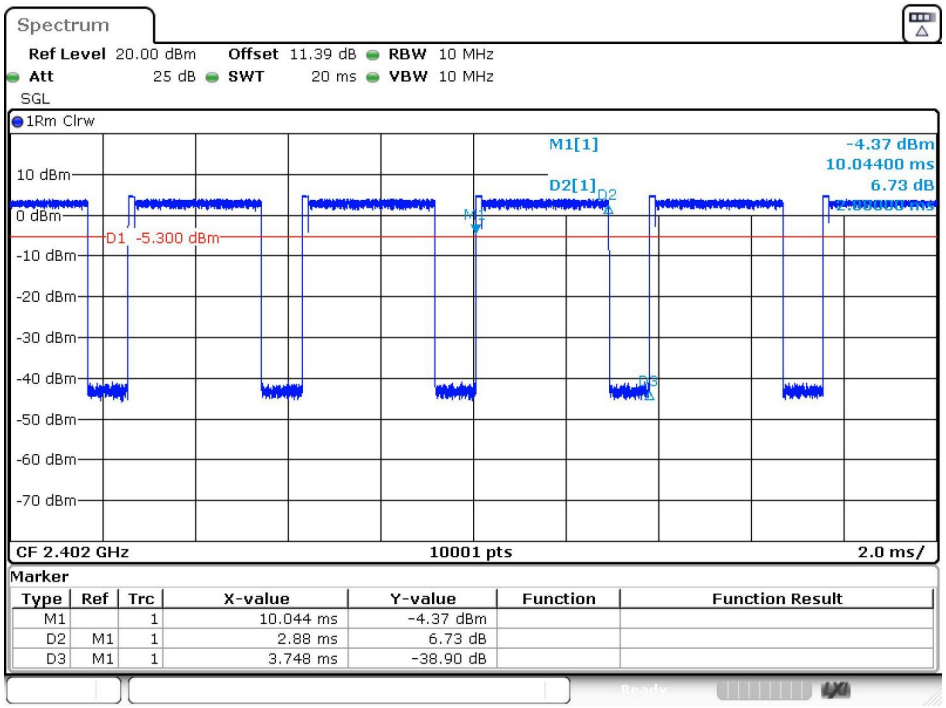
GFSK(DH5)_Channel 78



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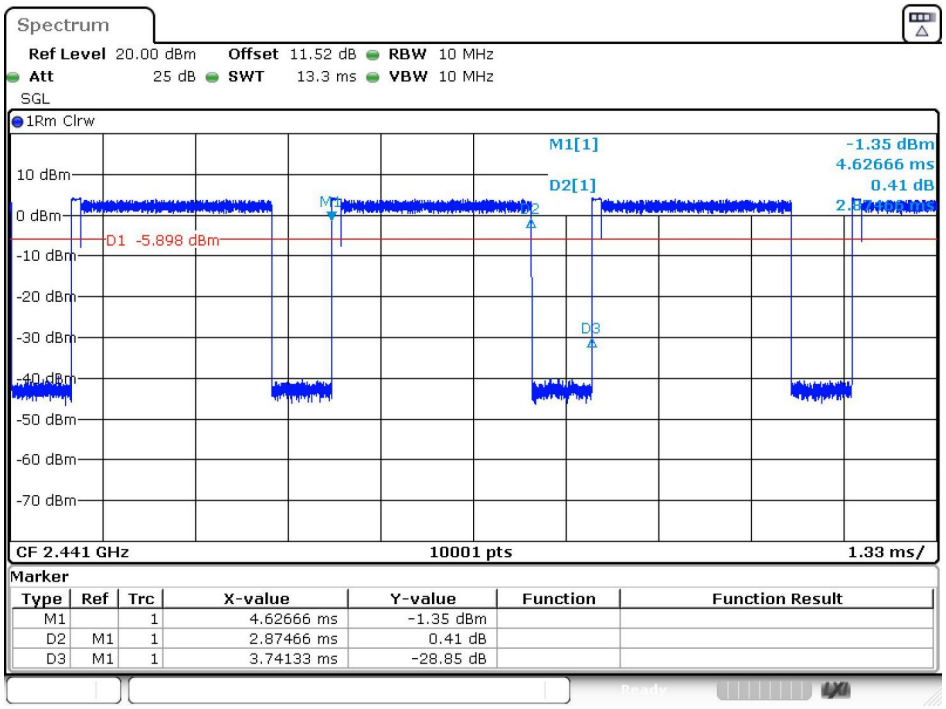
π/4DQPSK(2-DH5)_Channel 0



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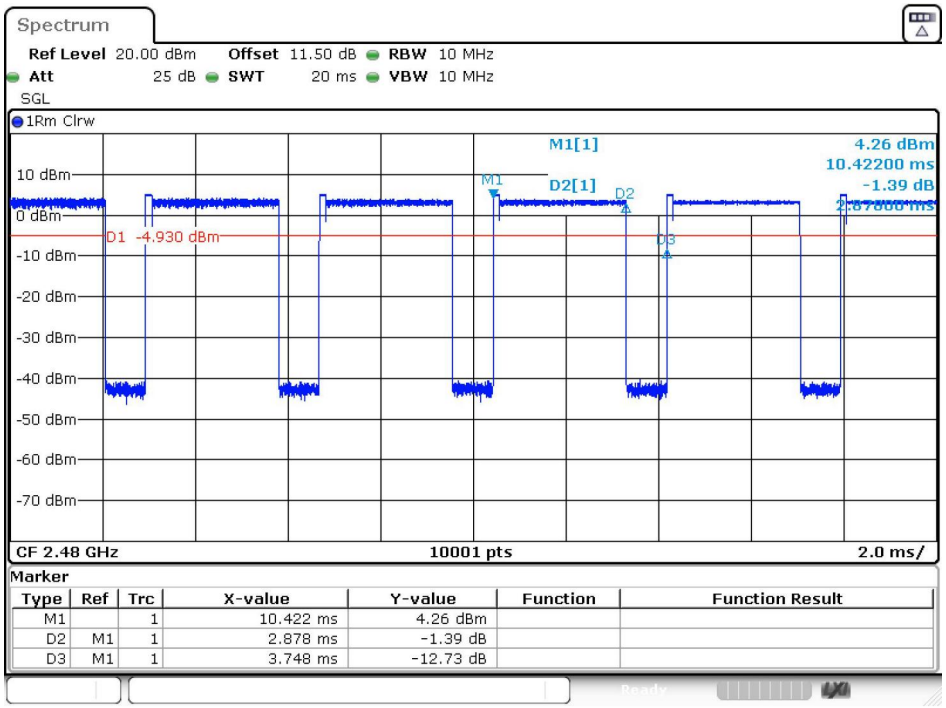
π/4DQPSK(2-DH5)_Channel 39



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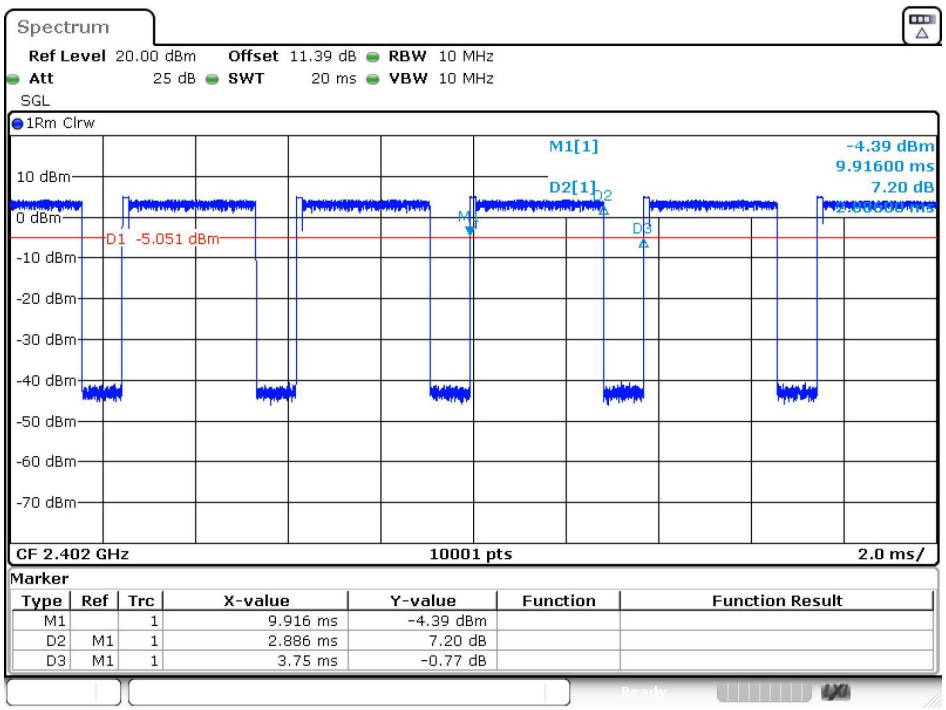
π/4DQPSK(2-DH5)_Channel 78



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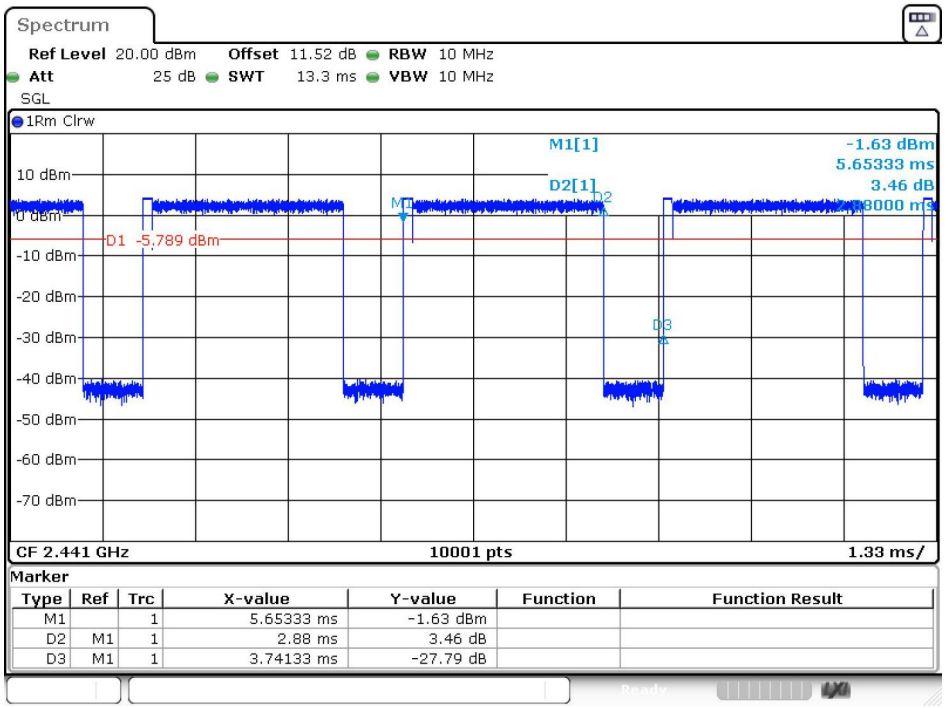
8DPSK(3-DH5)_Channel 0



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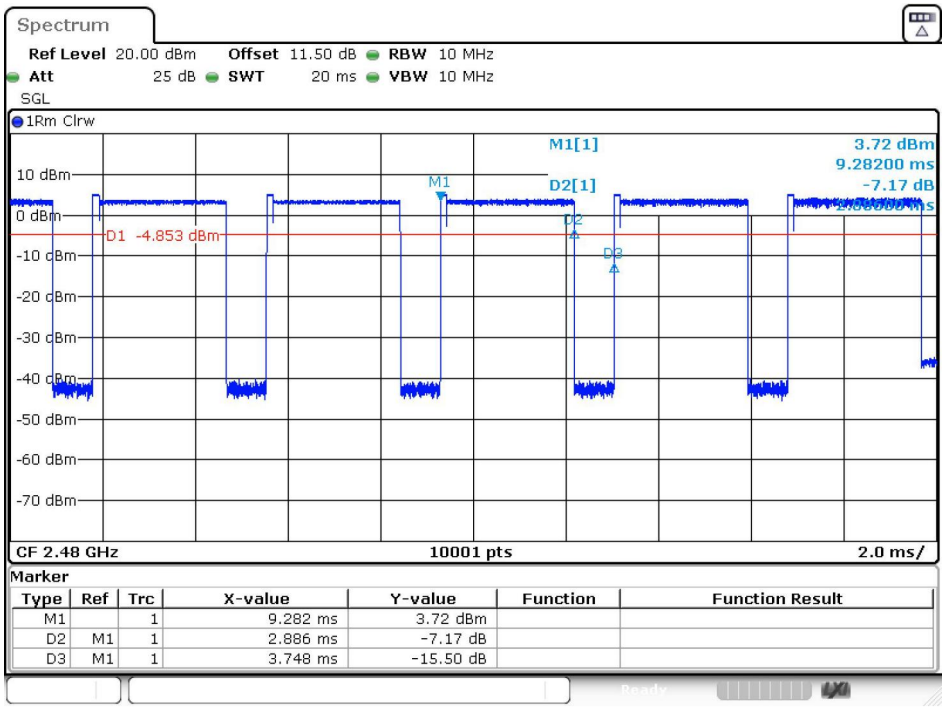
8DPSK(3-DH5)_Channel 39



Date: 29.NOV.2024 14:58:58

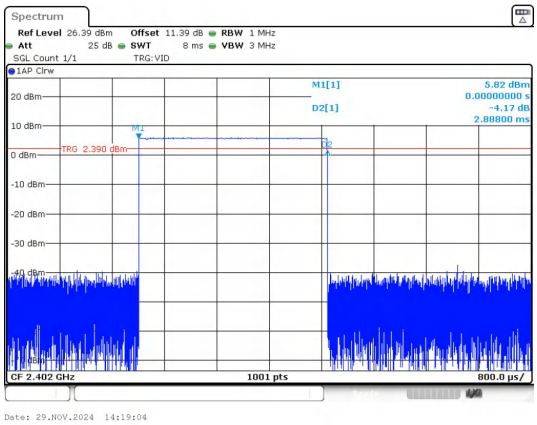
8DPSK(3-DH5)_Channel 78

2) Dwell Time

Test Result

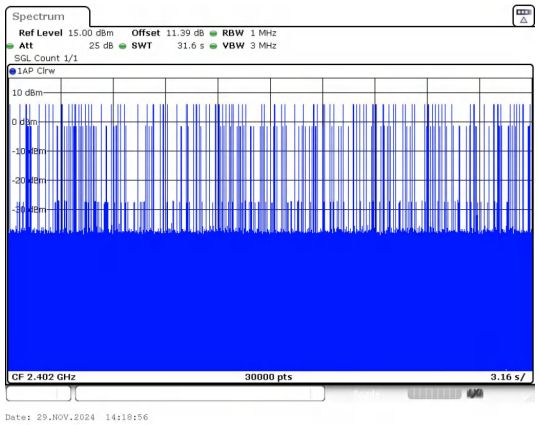
Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH5	CH0 (2402MHz)	2.888	113	326.34	< 400	PASS
π/4DQPSK	2-DH5		2.880	106	305.28		PASS
8DPSK	3-DH5		2.888	108	311.9		PASS

Test Graphs



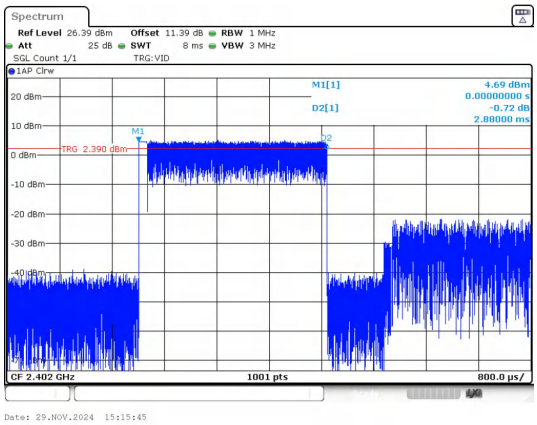
Pulse Width

GFSK_DH5



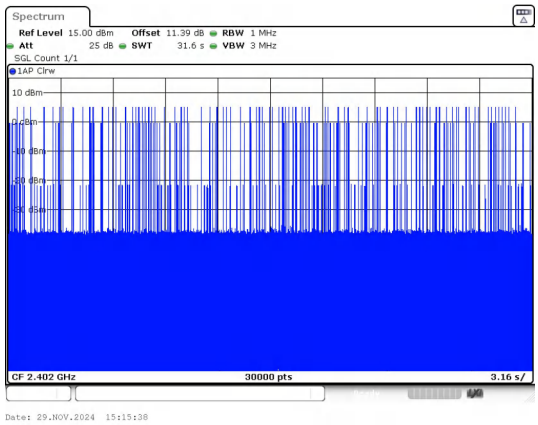
Number of Pulses in 31.6 seconds

GFSK_DH5



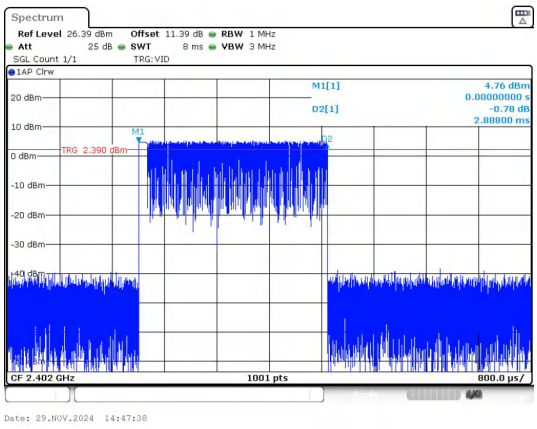
Pulse Width

π/4DQPSK_2-DH5



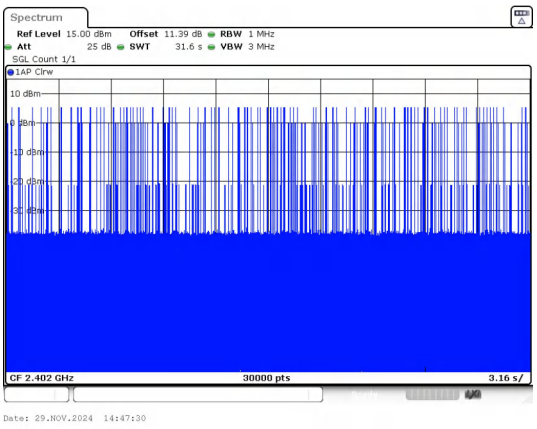
Number of Pulses in 31.6 seconds

π/4DQPSK_2-DH5



Pulse Width

8DPSK_3-DH5



Number of Pulses in 31.6 seconds

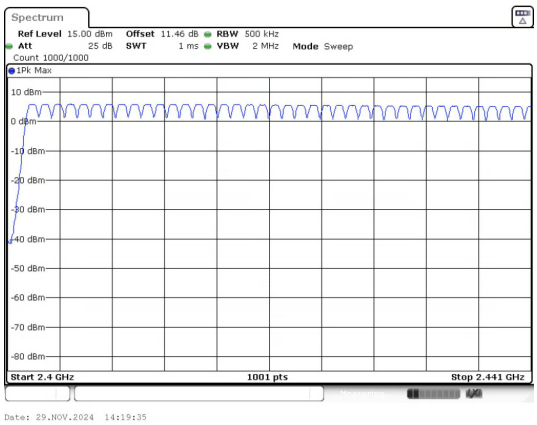
8DPSK_3-DH5

3) Number Of Hopping Channel

Test Result

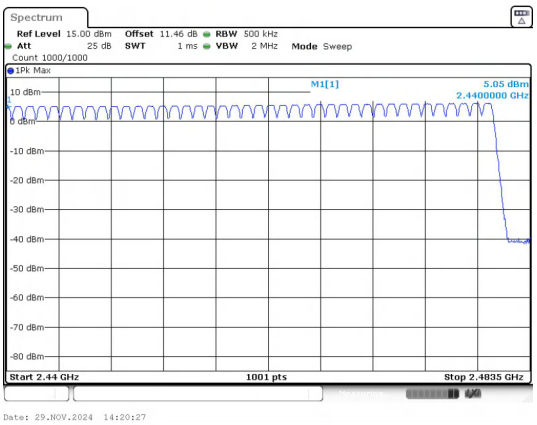
Modulation	Packet	Number of Hopping Channel	Limit	Result
GFSK	DH5	79	15	PASS
π/4DQPSK	2-DH5	79	15	PASS
8DPSK	3-DH5	79	15	PASS

Test Graphs



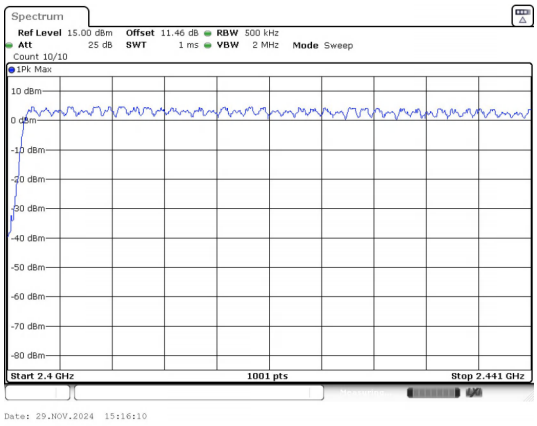
Low End Spectrum Channel Hopping Plot

GFSK



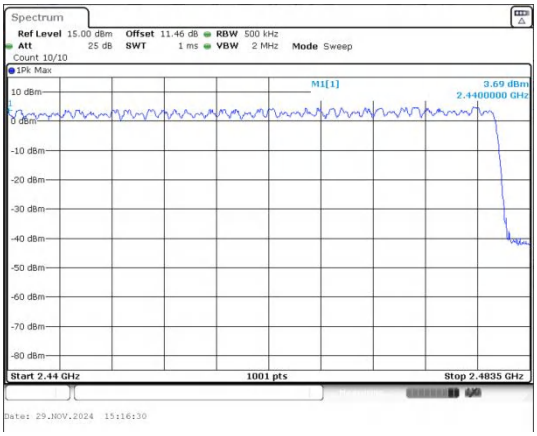
High End Spectrum Channel Hopping Plot

GFSK



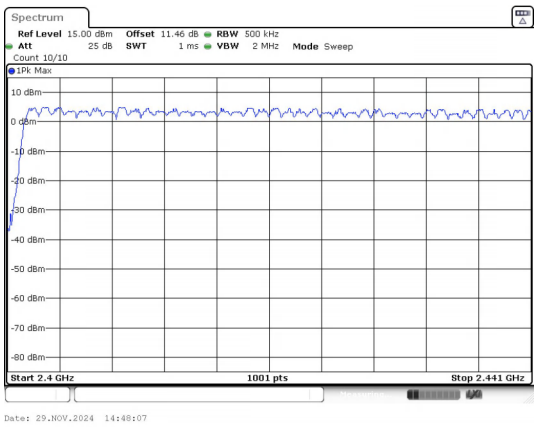
Low End Spectrum Channel Hopping Plot

π/4DQPSK



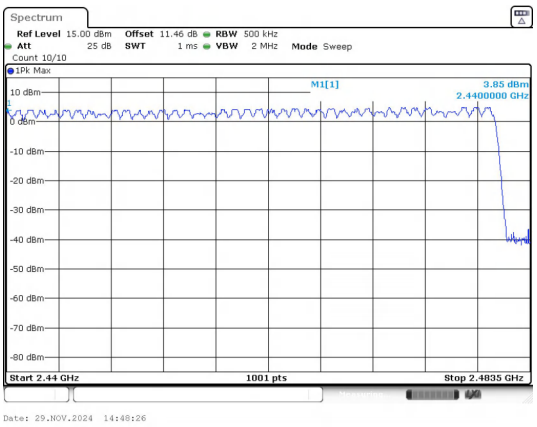
High End Spectrum Channel Hopping Plot

π/4DQPSK



Low End Spectrum Channel Hopping Plot

8DPSK



High End Spectrum Channel Hopping Plot

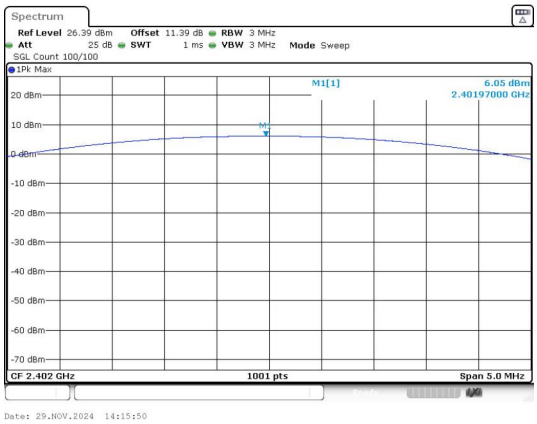
8DPSK

4) Conducted Peak Output Power

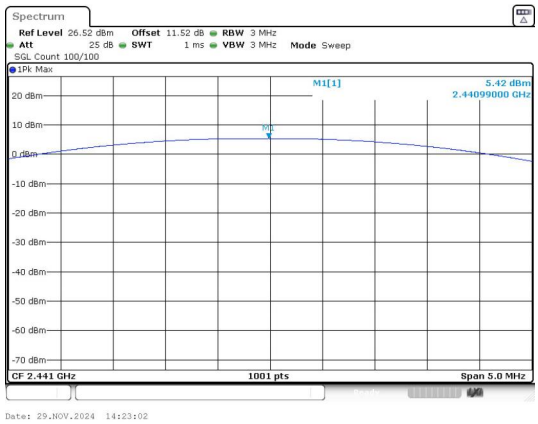
Test Result

Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
GFSK	DH5	0	6.05	4.03	≤30	PASS
		39	5.42	3.48		PASS
		78	6.49	4.46		PASS
π/4DQPSK	2-DH5	0	5.62	3.65	≤20.97	PASS
		39	5.01	3.17		PASS
		78	6.07	4.05		PASS
8DPSK	3-DH5	0	5.90	3.89		PASS
		39	5.21	3.32		PASS
		78	6.26	4.23		PASS

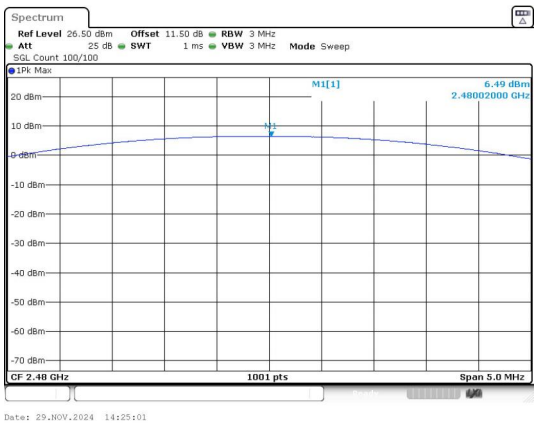
Test Graphs



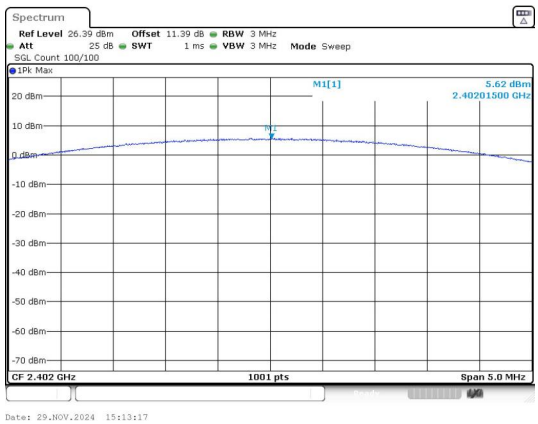
Peak Output Power
GFSK_Channel 0



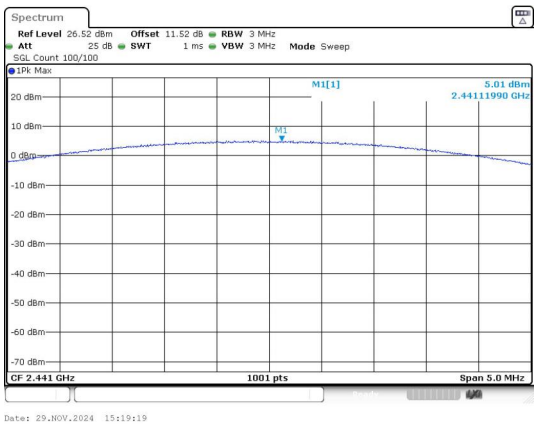
Peak Output Power
GFSK_Channel 39



Peak Output Power
GFSK_Channel 78

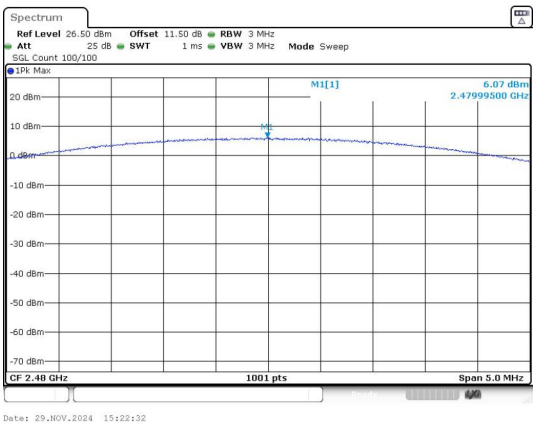


Peak Output Power
π/4DQPSK_Channel 0



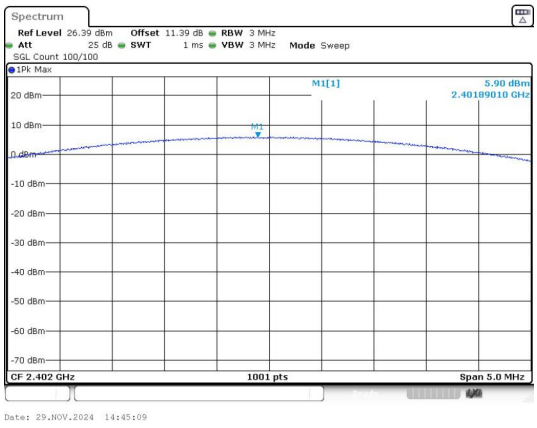
Peak Output Power

π/4DQPSK_Channel 39



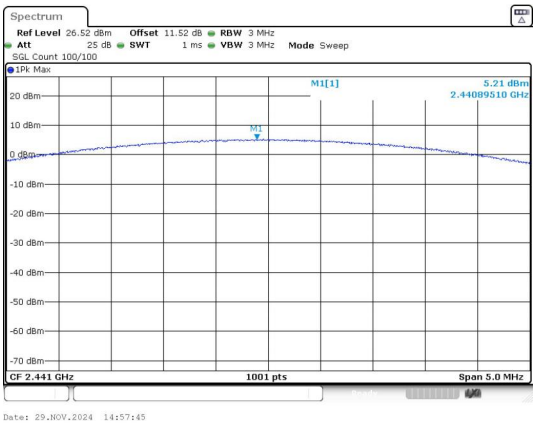
Peak Output Power

π/4DQPSK_Channel 78



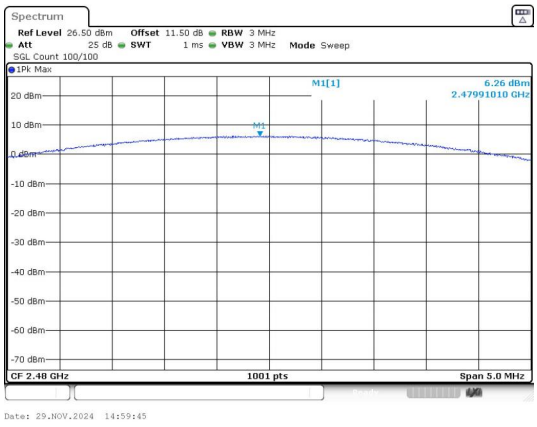
Peak Output Power

8DPSK_Channel 0



Peak Output Power

8DPSK_Channel 39



Peak Output Power

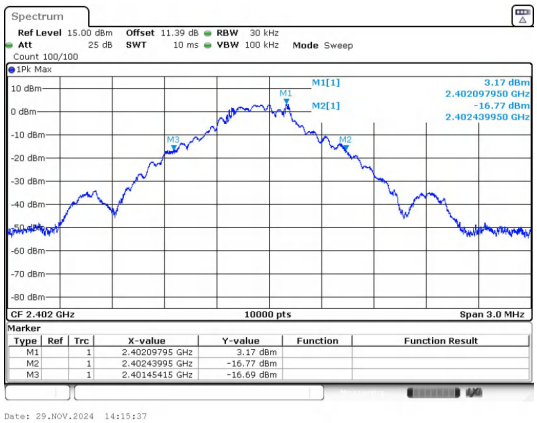
8DPSK_Channel 78

5) 20dB Bandwidth

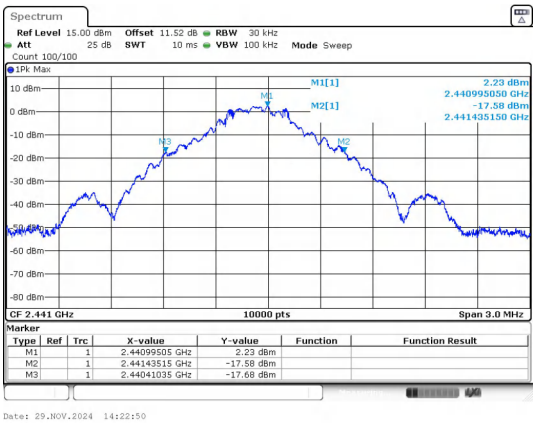
Test Result

Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	0.9900
	39	2441 MHz	1.030
	78	2480 MHz	0.9800
π/4DQPSK	0	2402 MHz	1.280
	39	2441 MHz	1.280
	78	2480 MHz	1.270
8DPSK	0	2402 MHz	1.290
	39	2441 MHz	1.270
	78	2480 MHz	1.270

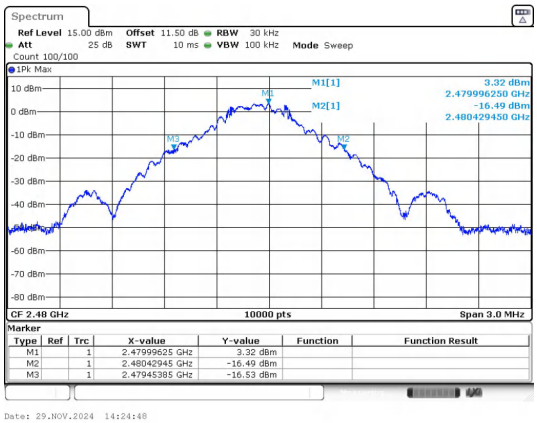
Test Graphs



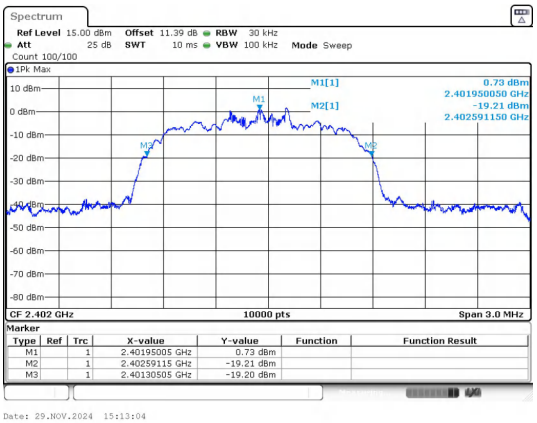
GFSK_DH5_Channel 0



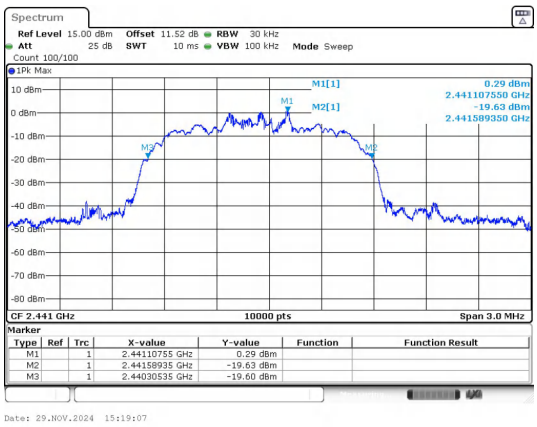
GFSK_DH5_Channel 39



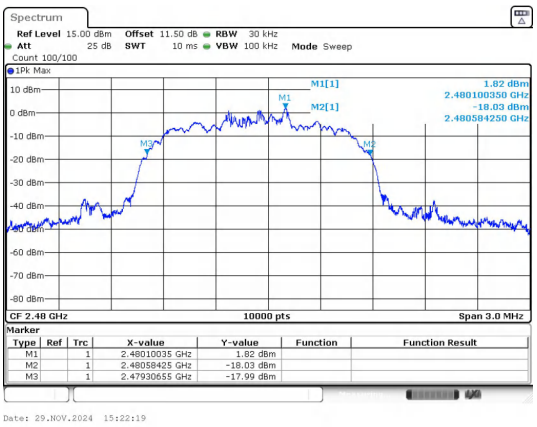
GFSK_DH5_Channel 78



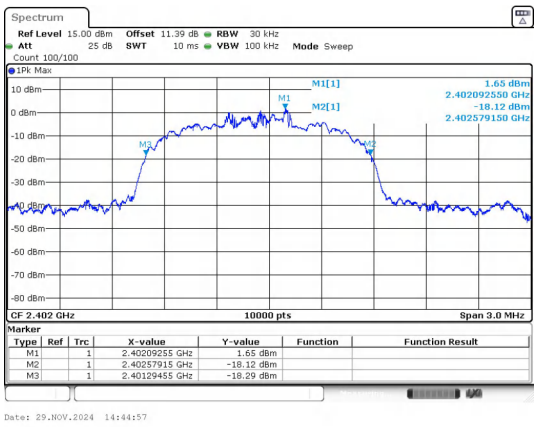
π/4DQPSK_2-DH5_Channel 0



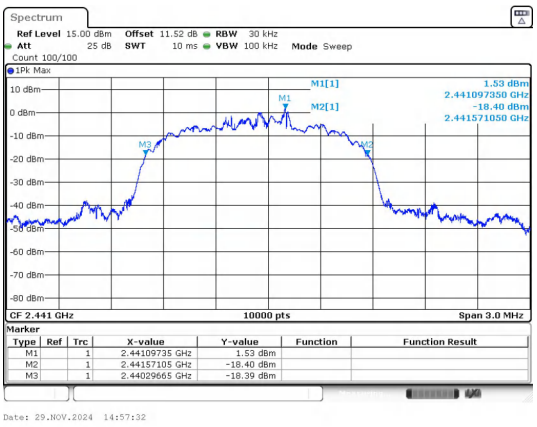
π/4DQPSK_2-DH5_Channel 39



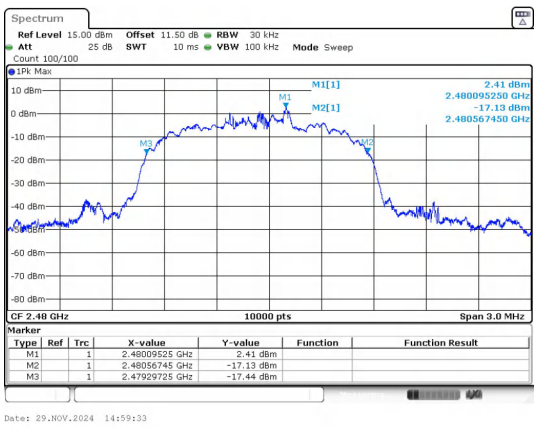
π/4DQPSK_2-DH5_Channel 78



8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



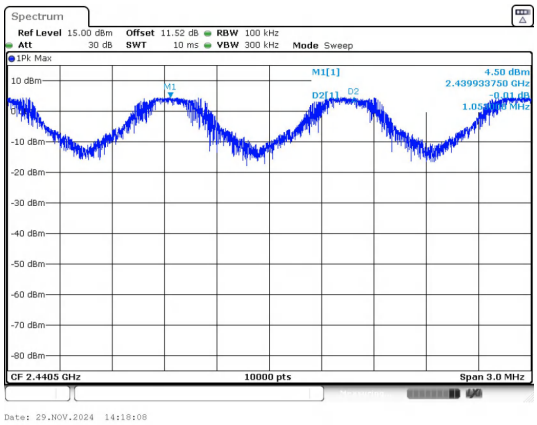
8DPSK_3-DH5_Channel 78

6) Carrier Frequencies Separation

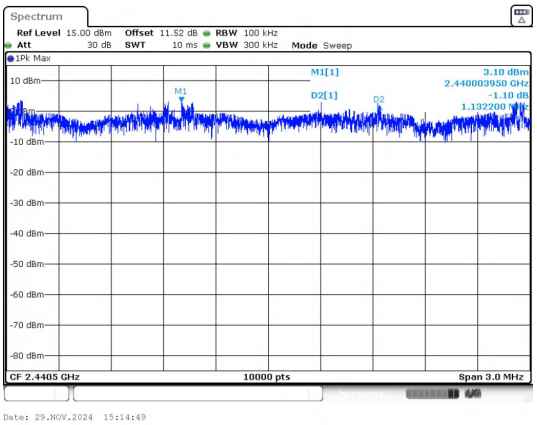
Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2439.9338	2440.9868	1.0530	0.99	PASS
π/4DQPSK	2-DH5	2440.0039	2441.1361	1.1322	0.853	PASS
8DPSK	3-DH5	2439.943	2441.0993	1.1562	0.86	PASS

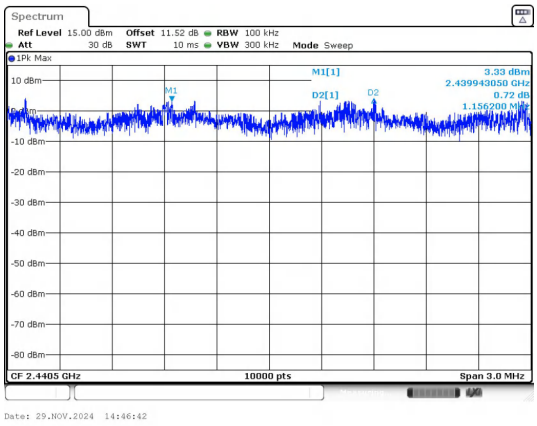
Test Graphs



GFSK



π/4DQPSK



8DPSK

7) Conducted Out Of Band Emission

Test Result

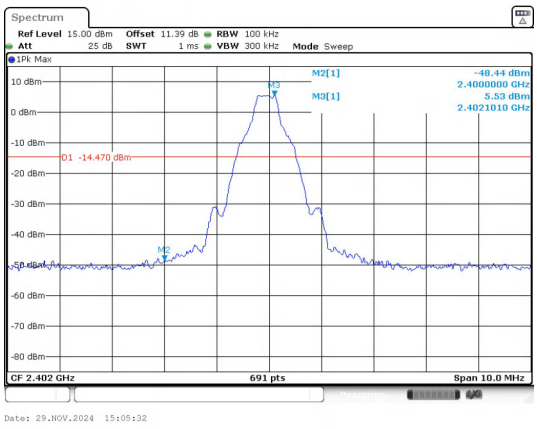
Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2400.00	-48.440	-14.47	-33.970	PASS
			5445.58	-53.771	-14.47	-39.301	PASS
		39	9763.72	-53.440	-14.87	-38.570	PASS
		78	2483.50	-48.540	-13.74	-34.800	PASS
			6902.99	-52.545	-13.74	-38.805	PASS
π/4DQPSK	2-DH5	0	2400.00	-47.680	-15.51	-32.170	PASS
			5180.06	-52.028	-15.51	-36.518	PASS
		39	6799.78	-53.031	-16.28	-36.751	PASS
		78	2483.50	-50.930	-15.08	-35.850	PASS
			5737.73	-49.564	-15.08	-34.484	PASS
8DPSK	3-DH5	0	2400.00	-47.290	-15.16	-32.130	PASS
			3418.85	-40.030	-15.16	-24.870	PASS
		39	5200.87	-52.530	-16.4	-36.130	PASS
		78	2483.50	-50.500	-15.26	-35.240	PASS
			5205.86	-50.378	-15.26	-35.118	PASS

Hopping

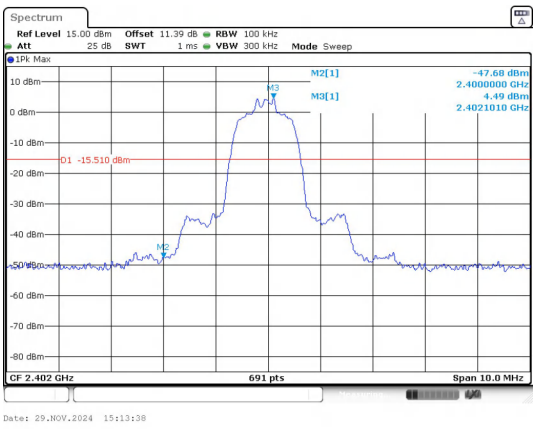
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2396.43	-48.731	-14.53	-34.201	PASS
			2400.00	-50.270	-14.53	-35.740	PASS
			2483.50	-50.000	-13.89	-36.110	PASS
π/4DQPSK	2-DH5		2398.41	-48.756	-17.86	-30.896	PASS
			2400.00	-50.180	-17.86	-32.320	PASS
			2483.50	-50.680	-15.31	-35.370	PASS
8DPSK	3-DH5		2397.73	-48.728	-15.41	-33.318	PASS
			2400.00	-50.530	-15.41	-35.120	PASS
			2483.50	-48.340	-19.17	-29.170	PASS

Test Graphs



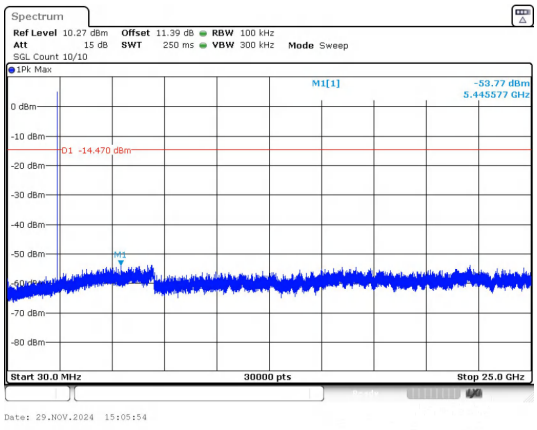
Out Of Band Emission

GFSK_DH5_Channel 0



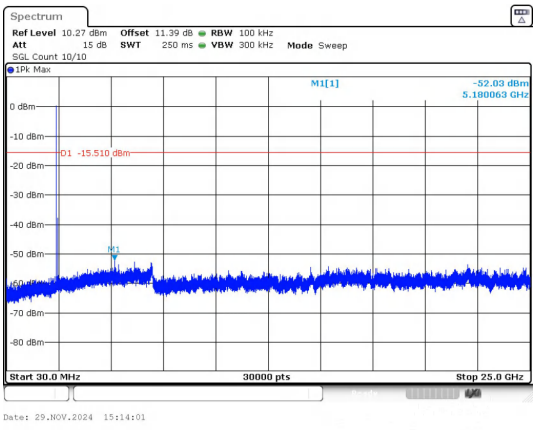
Out Of Band Emission

π/4DQPSK_2-DH5_Channel 0



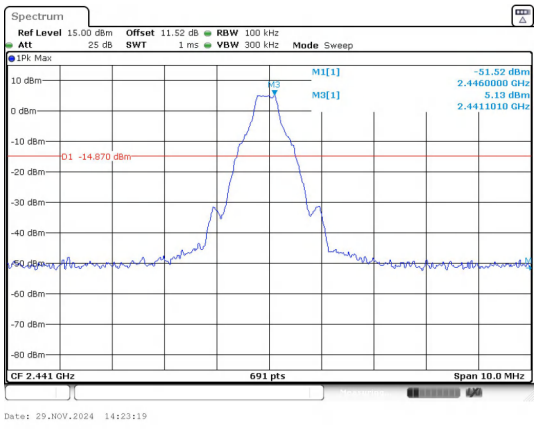
30.0 MHz - 25000.0 MHz

GFSK_DH5_Channel 0



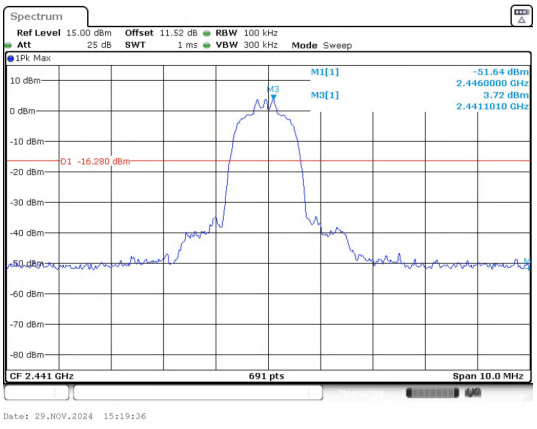
30.0 MHz - 25000.0 MHz

π/4DQPSK_2-DH5_Channel 0



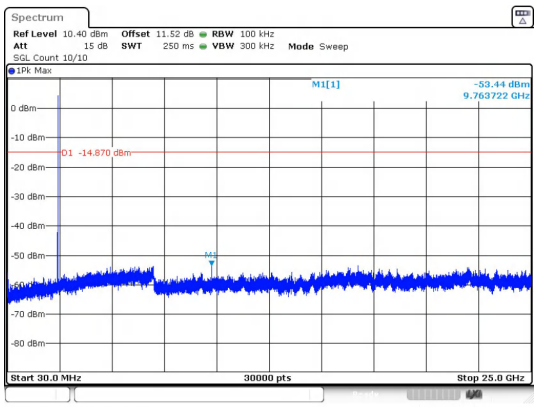
Out Of Band Emission

GFSK_DH5_Channel 39



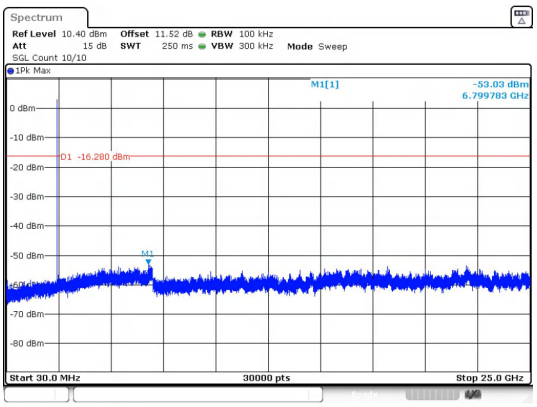
Out Of Band Emission

π/4DQPSK_2-DH5_Channel 39



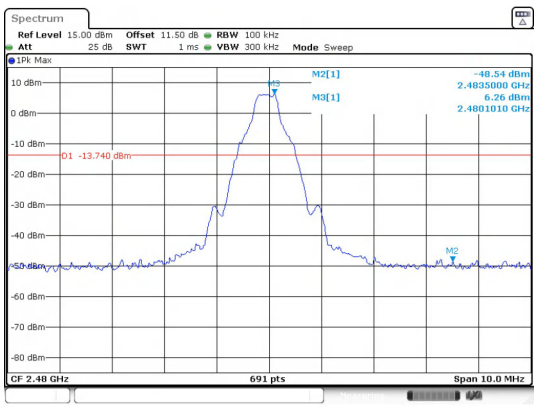
30.0 MHz - 25000.0 MHz

GFSK_DH5_Channel 39



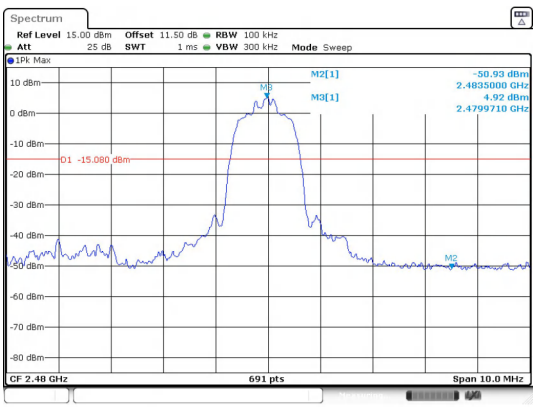
30.0 MHz - 25000.0 MHz

π/4DQPSK_2-DH5_Channel 39



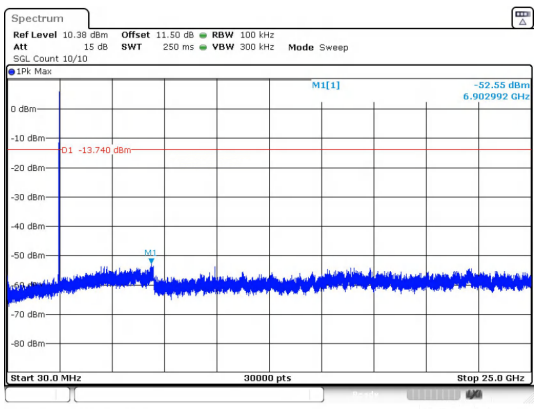
Out Of Band Emission

GFSK_DH5_Channel 78



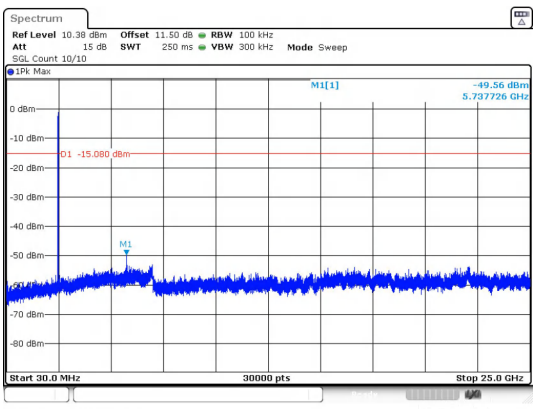
Out Of Band Emission

π/4DQPSK_2-DH5_Channel 78



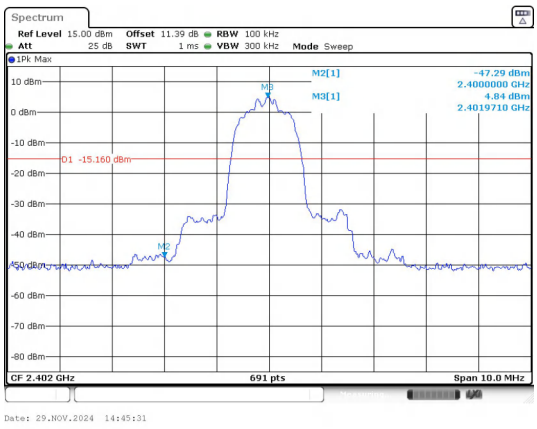
30.0 MHz - 25000.0 MHz

GFSK_DH5_Channel 78



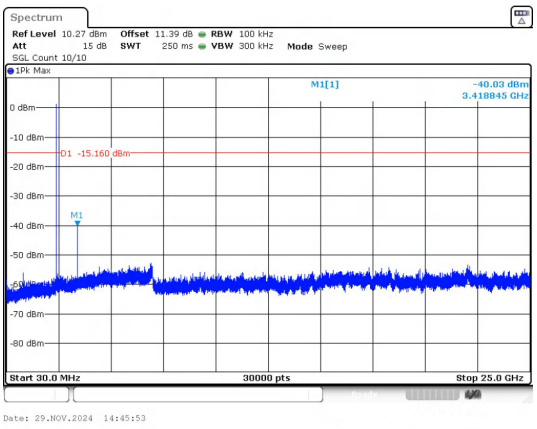
30.0 MHz - 25000.0 MHz

π/4DQPSK_2-DH5_Channel 78



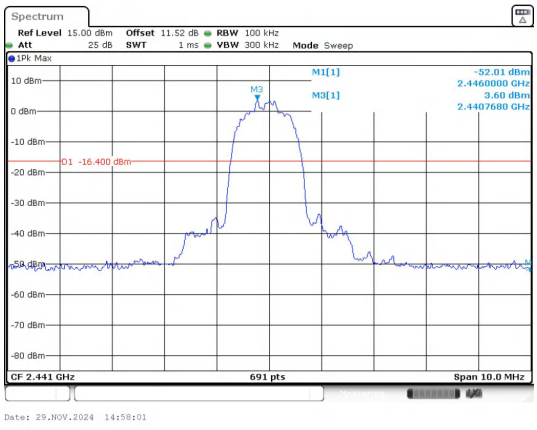
Out Of Band Emission

8DPSK_3-DH5_Channel 0



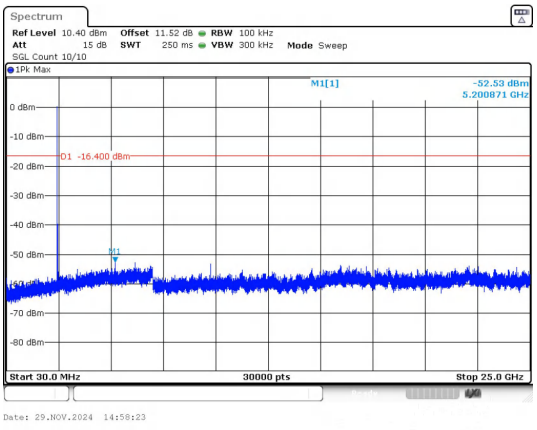
30.0 MHz - 25000.0 MHz

8DPSK_3-DH5_Channel 0



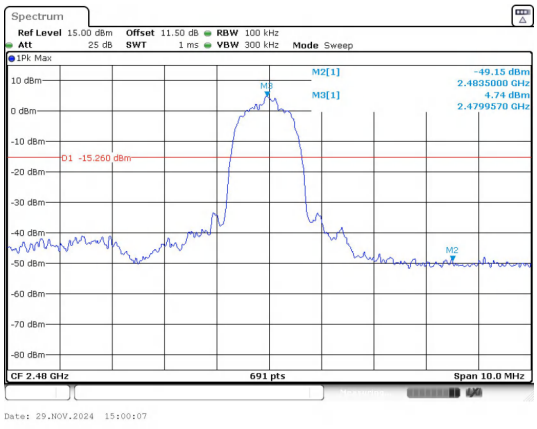
Out Of Band Emission

8DPSK_3-DH5_Channel 39



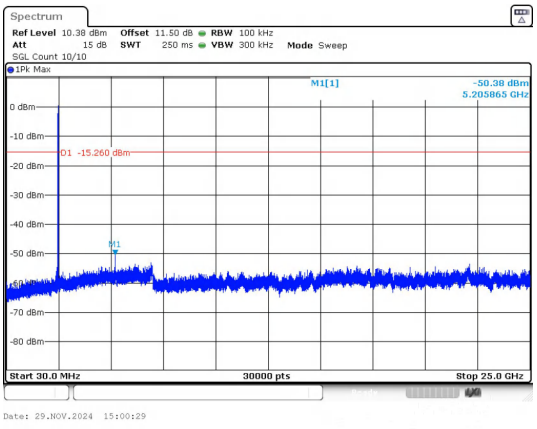
30.0 MHz - 25000.0 MHz

8DPSK_3-DH5_Channel 39



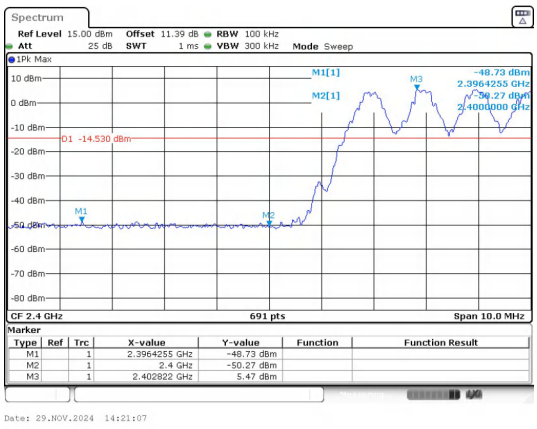
Out Of Band Emission

8DPSK_3-DH5_Channel 78



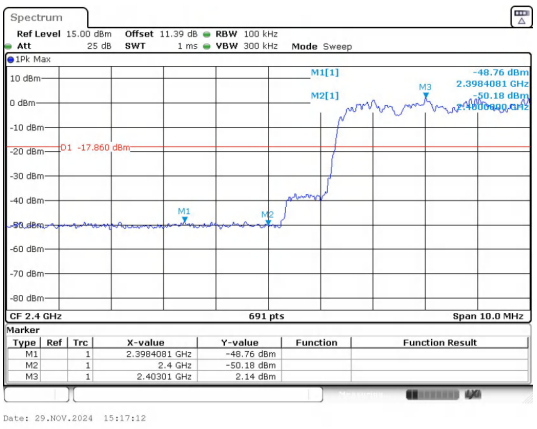
30.0 MHz - 25000.0 MHz

8DPSK_3-DH5_Channel 78



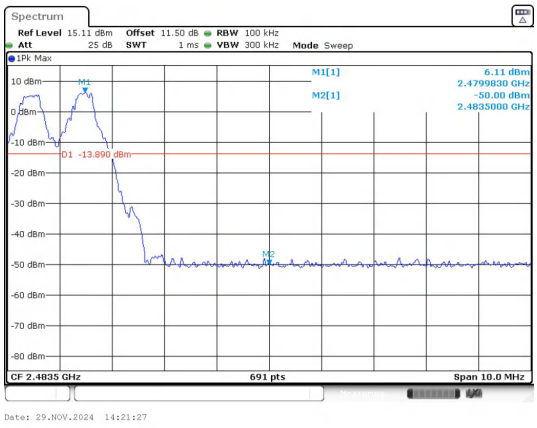
Out Of Band Emission(Left)

GFSK_DH5_Channel Hopping



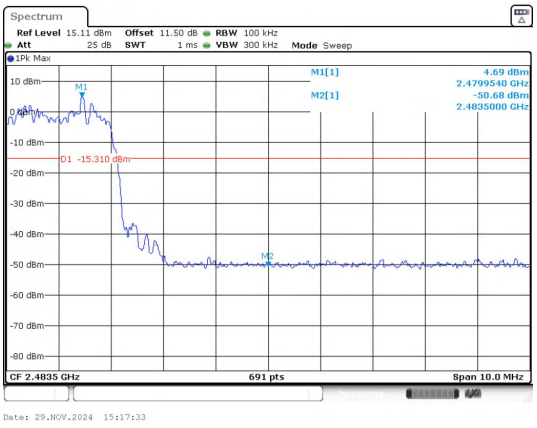
Out Of Band Emission(Left)

π/4DQPSK_2-DH5_Channel Hopping



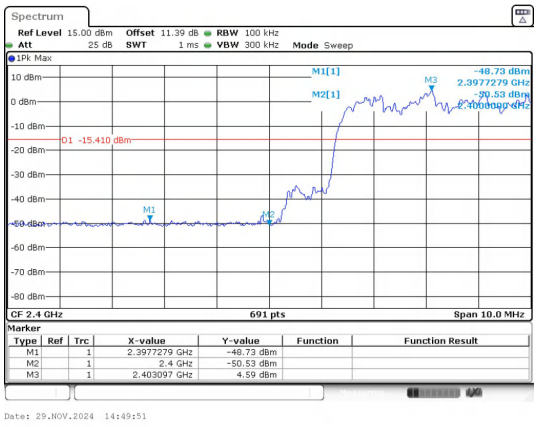
Out Of Band Emission(Right)

GFSK_DH5_Channel Hopping



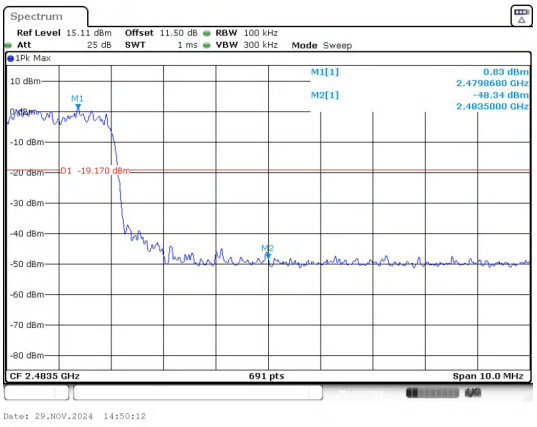
Out Of Band Emission(Right)

π/4DQPSK_2-DH5_Channel Hopping



Out Of Band Emission(Left)

8DPSK_3-DH5_Channel Hopping



Out Of Band Emission(Right)

8DPSK_3-DH5_Channel Hopping

------The End-----