Appendix

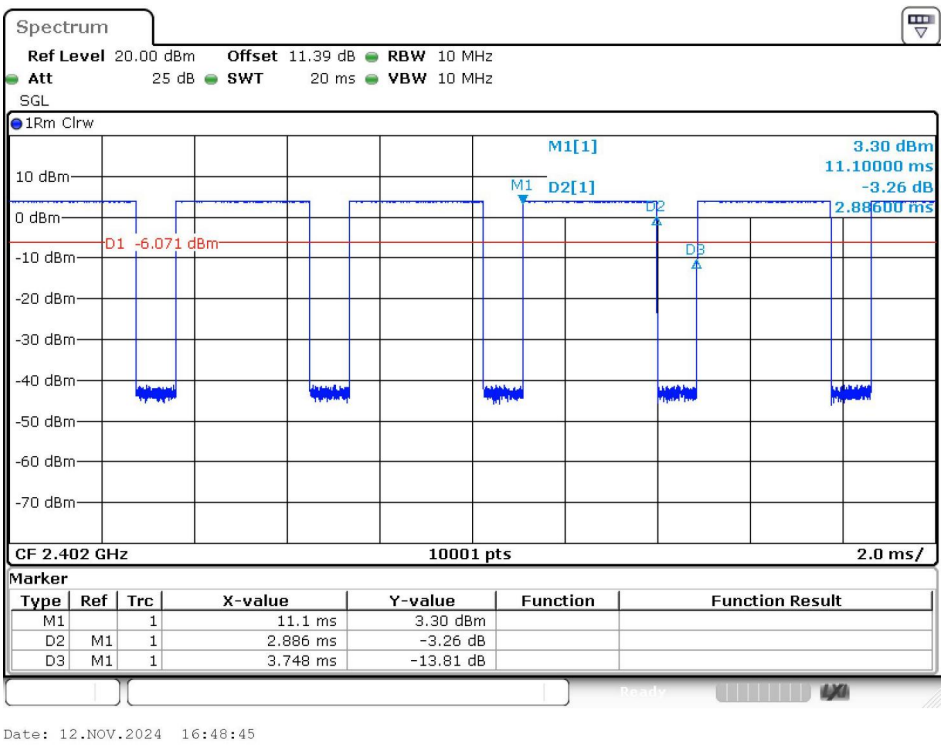
Report No.:	CISRR241112084
FCC ID:	2BGWC-YZS02
Product Name:	Wireless headset
Model No.:	YZS02
Test Engineer:	Lucas Huang
Supervised by:	Rory Huang

1) Duty Cycle

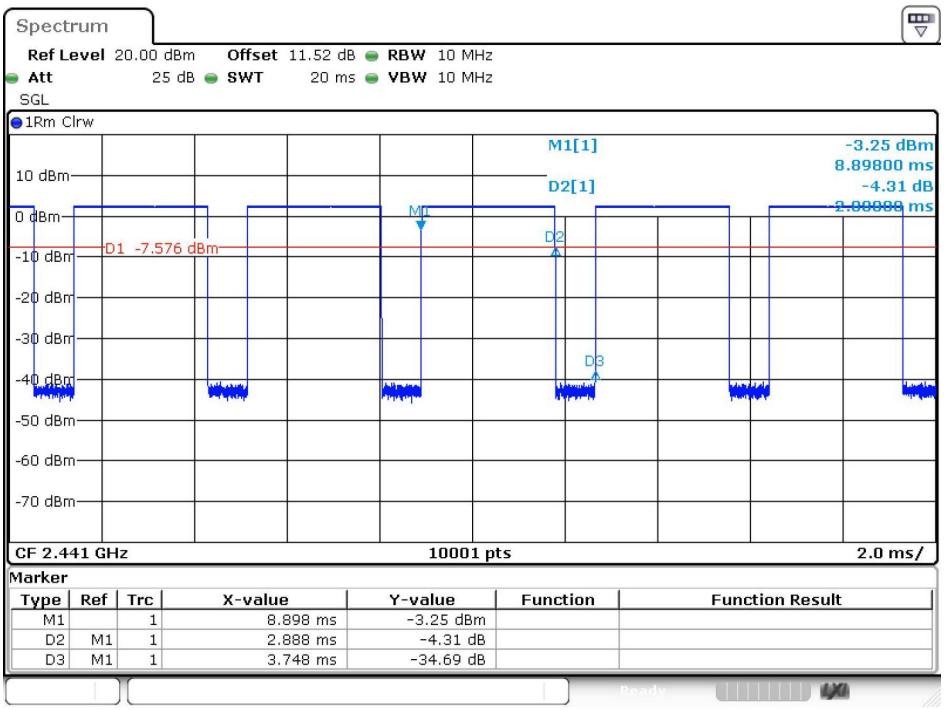
Test Result

Modulation	Packets	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
GFSK	DH5	0	2.886	3.748	77.00	0.7700	1.1351	0.3465
		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
π/4DQPSK	2-DH5	0	2.892	3.748	77.16	0.7716	1.1261	0.3458
		39	2.890	3.748	77.11	0.7711	1.1289	0.3460
		78	2.892	3.748	77.16	0.7716	1.1261	0.3458
8DPSK	3-DH5	0	2.894	3.748	77.21	0.7721	1.1233	0.3455
		39	2.894	3.748	77.21	0.7721	1.1233	0.3455
		78	2.894	3.748	77.21	0.7721	1.1233	0.3455

Test Graphs

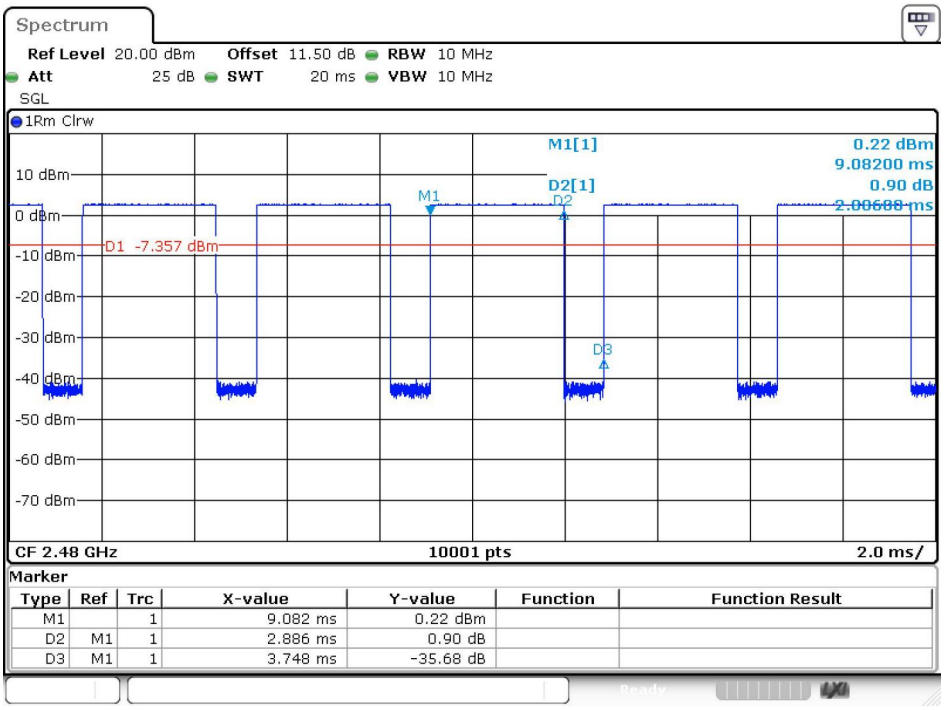


GFSK(DH5)_Channel 0



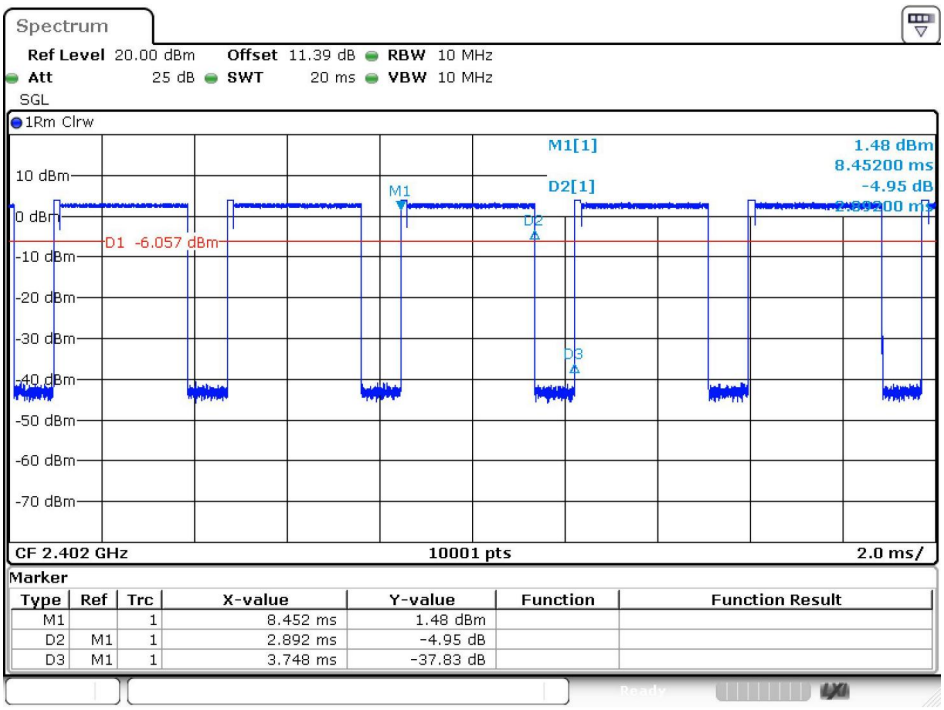
Date: 12.NOV.2024 16:56:42

GFSK(DH5)_Channel 39



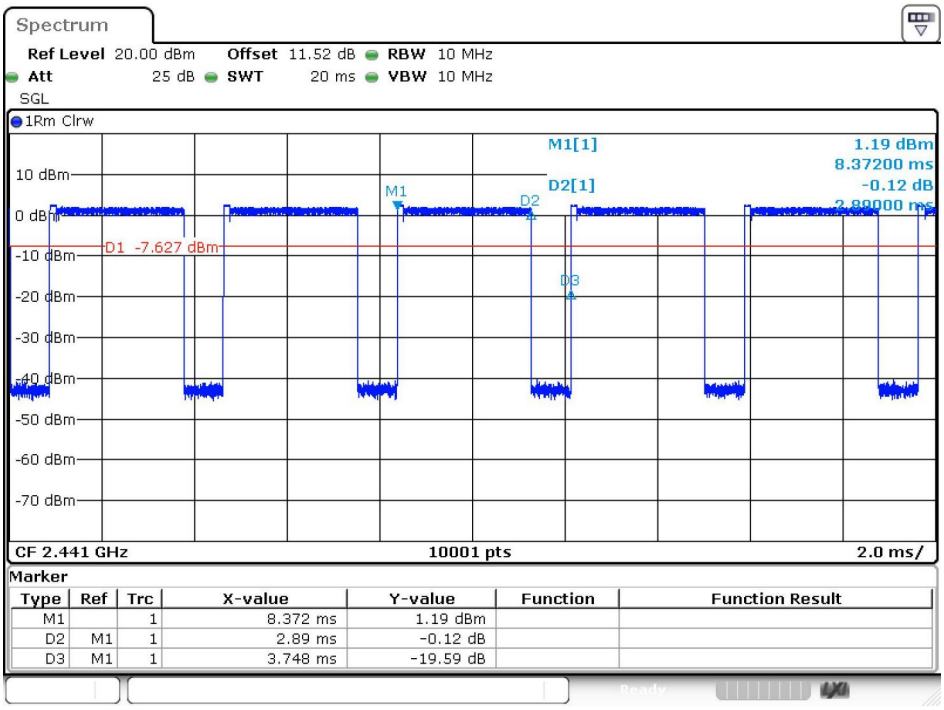
Date: 12.NOV.2024 17:00:48

GFSK(DH5)_Channel 78



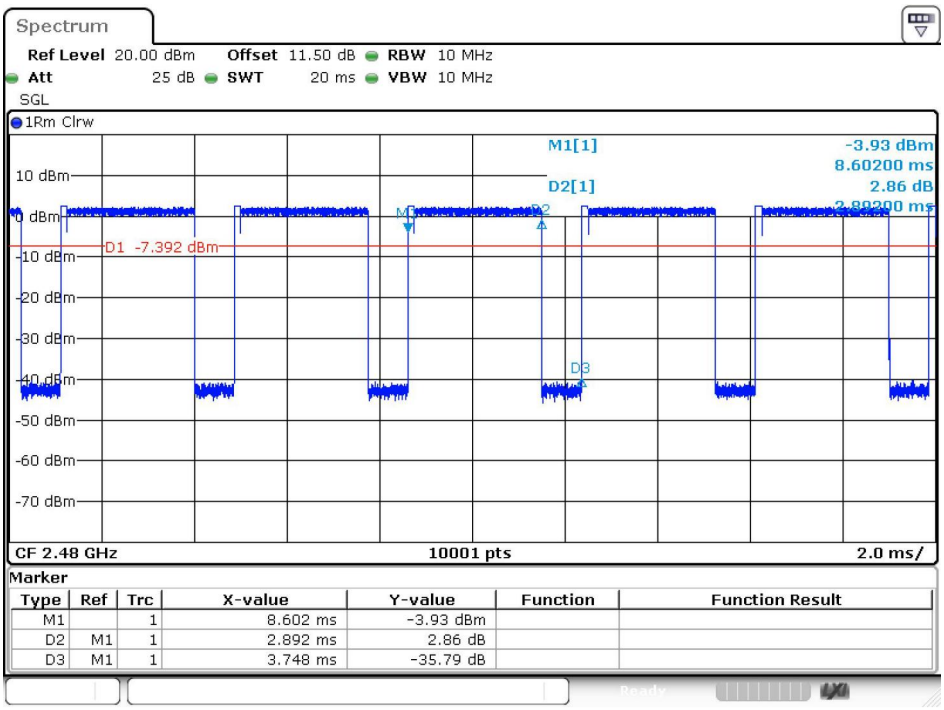
Date: 12.NOV.2024 17:03:36

π/4DQPSK(2-DH5)_Channel 0



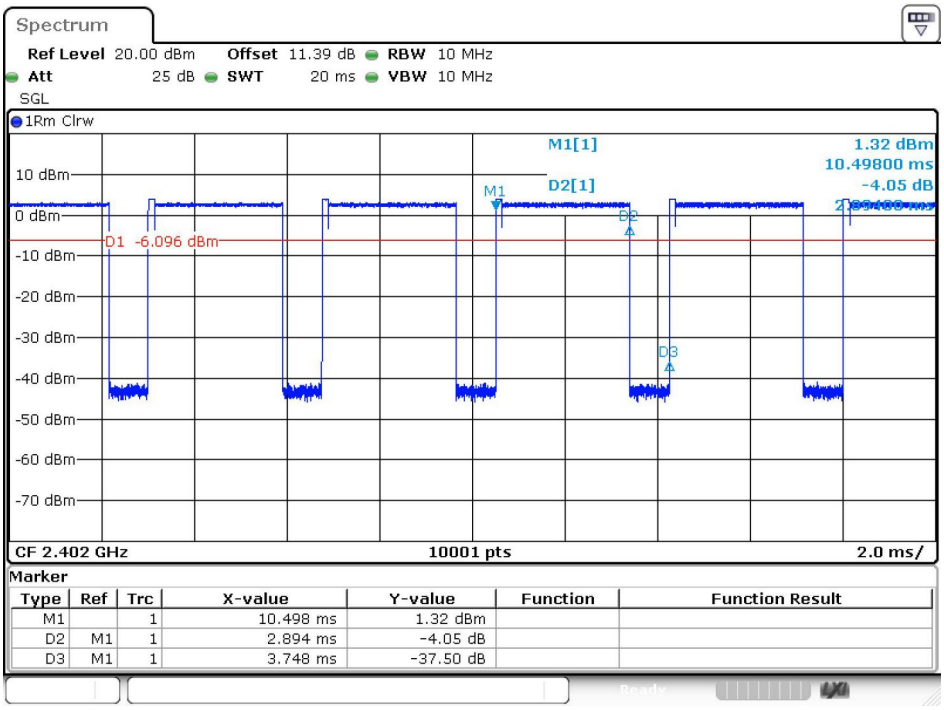
Date: 12.NOV.2024 17:14:42

π/4DQPSK(2-DH5)_Channel 39



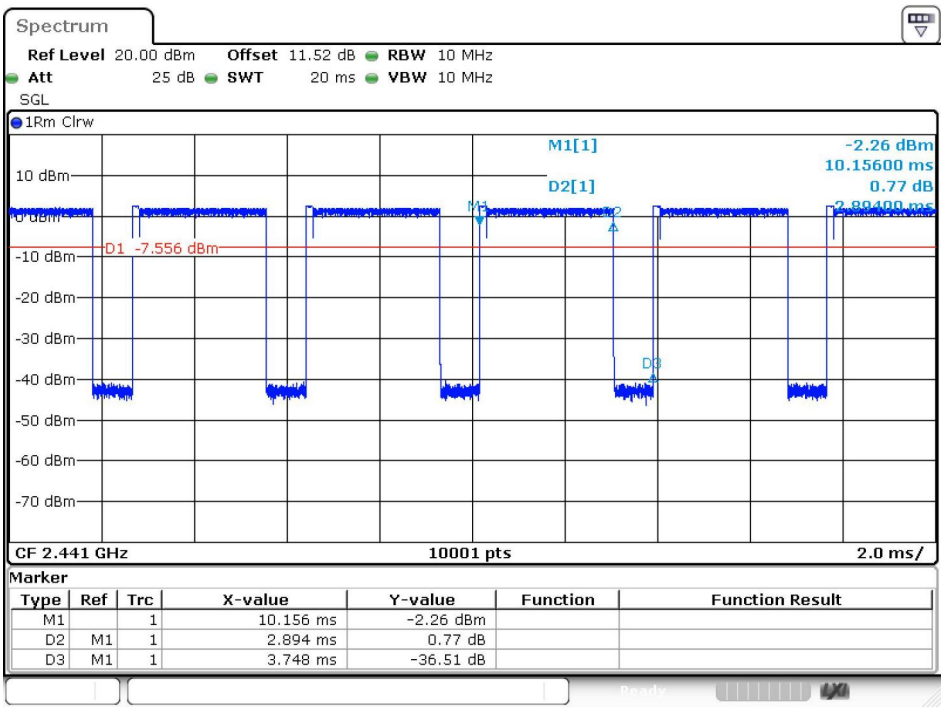
Date: 12.NOV.2024 17:16:55

π/4DQPSK(2-DH5)_Channel 78

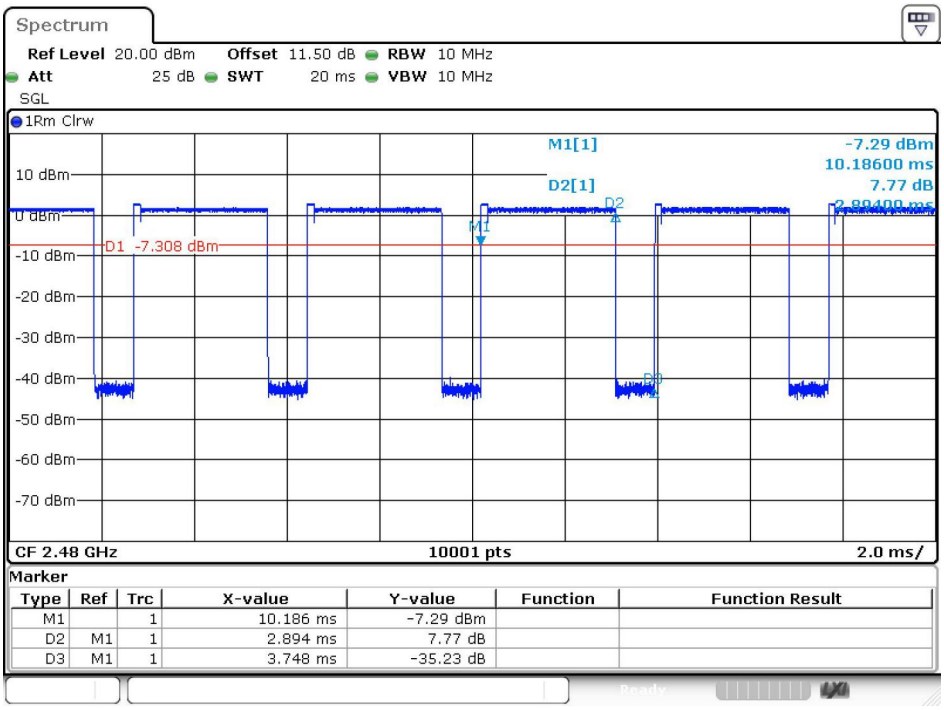


Date: 12.NOV.2024 17:20:01

8DPSK(3-DH5)_Channel 0



8DPSK(3-DH5)_Channel 39



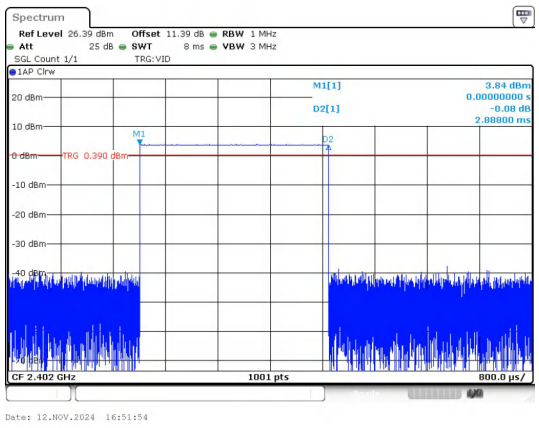
8DPSK(3-DH5)_Channel 78

2) Dwell Time

Test Result

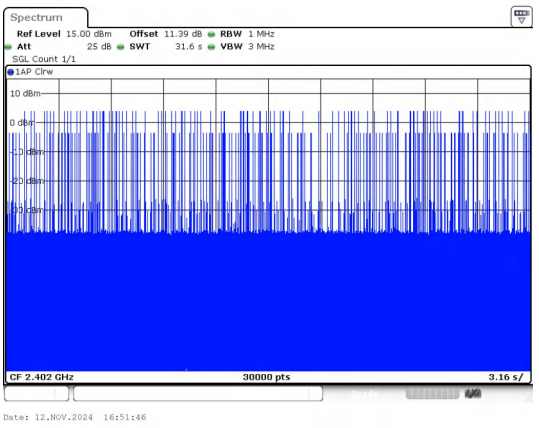
Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH5	CH0 (2402MHz)	2.888	103	297.46	< 400	PASS
π/4DQPSK	2-DH5		2.896	104	301.18		PASS
8DPSK	3-DH5		2.896	106	306.98		PASS

Test Graphs



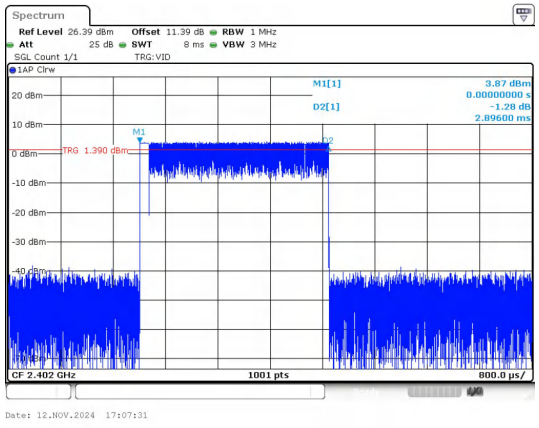
Pulse Width

GFSK_DH5



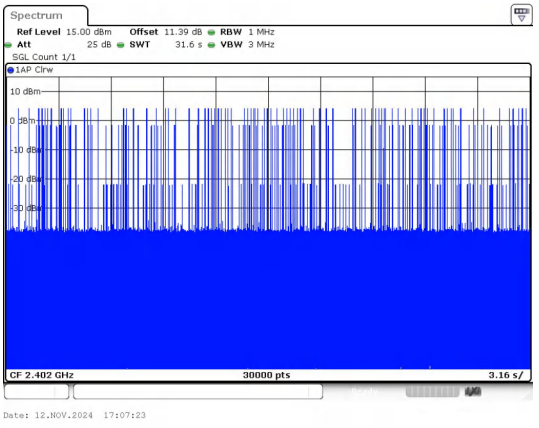
Number of Pulses in 31.6 seconds

GFSK_DH5



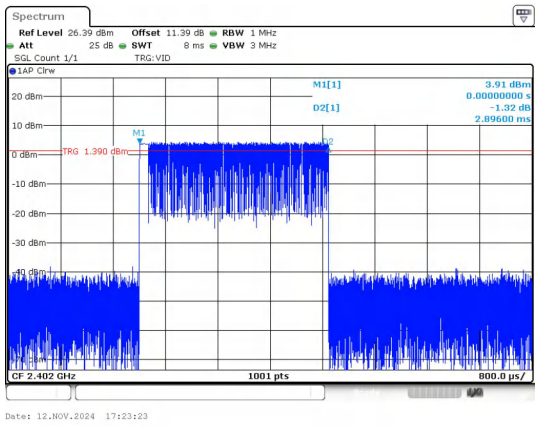
Pulse Width

π/4DQPSK_2-DH5



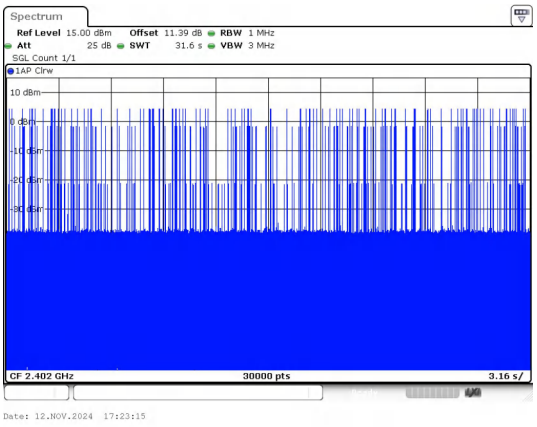
Number of Pulses in 31.6 seconds

π/4DQPSK_2-DH5



Pulse Width

8DPSK_3-DH5



Number of Pulses in 31.6 seconds

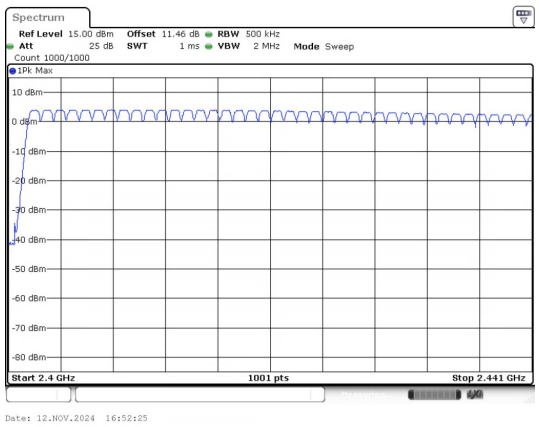
8DPSK_3-DH5

3) Number Of Hopping Channel

Test Result

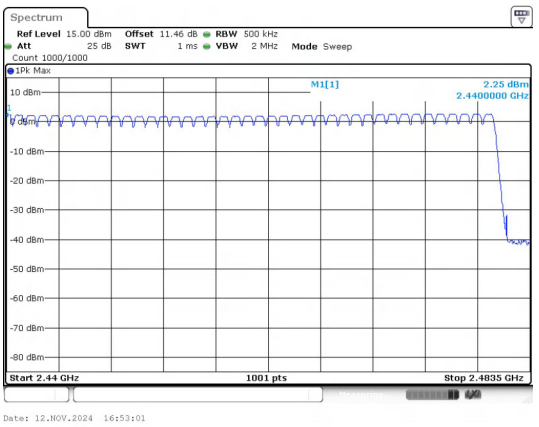
Modulation	Packet	Number of Hopping Channel	Limit	Result
GFSK	DH5	79	15	PASS
π/4DQPSK	2-DH5	79	15	PASS
8DPSK	3-DH5	79	15	PASS

Test Graphs



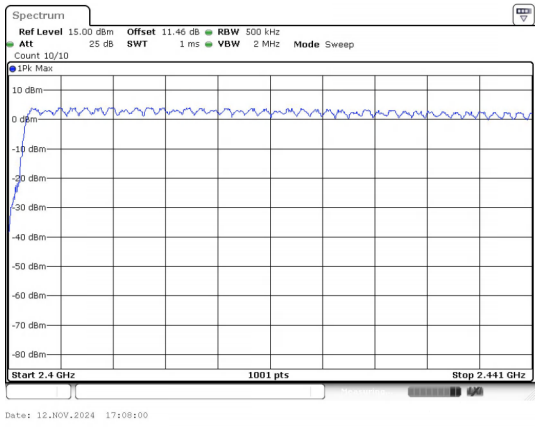
Low End Spectrum Channel Hopping Plot

GFSK



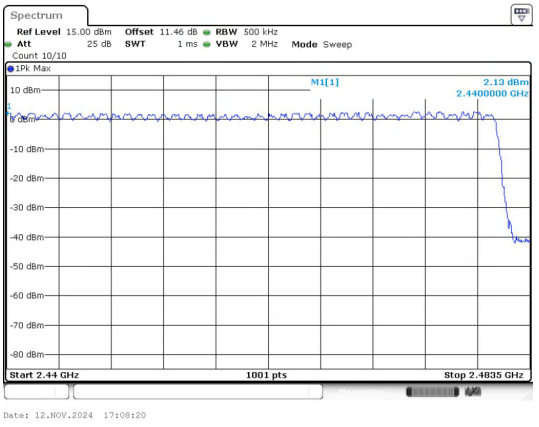
High End Spectrum Channel Hopping Plot

GFSK



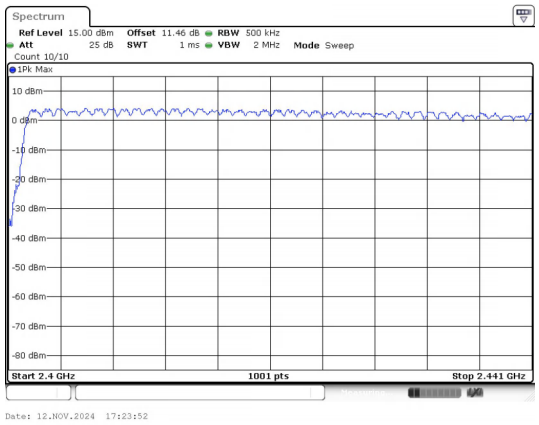
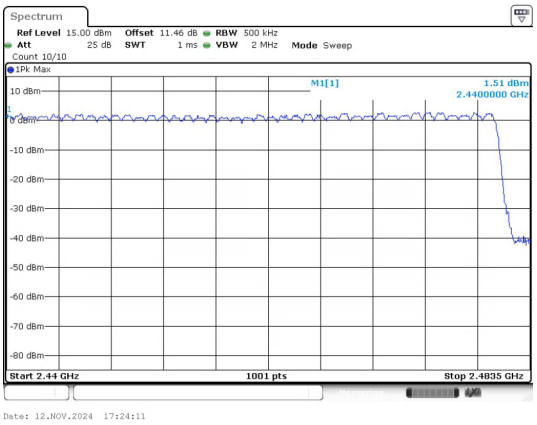
Low End Spectrum Channel Hopping Plot

π/4DQPSK



High End Spectrum Channel Hopping Plot

π/4DQPSK

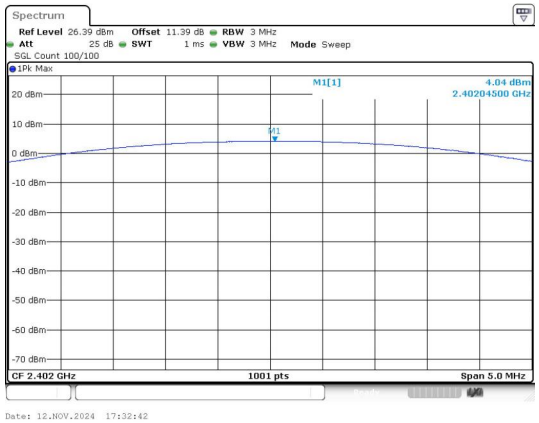
	
Low End Spectrum Channel Hopping Plot **8DPSK**	**High End Spectrum Channel Hopping Plot** **8DPSK**

4) Conducted Peak Output Power

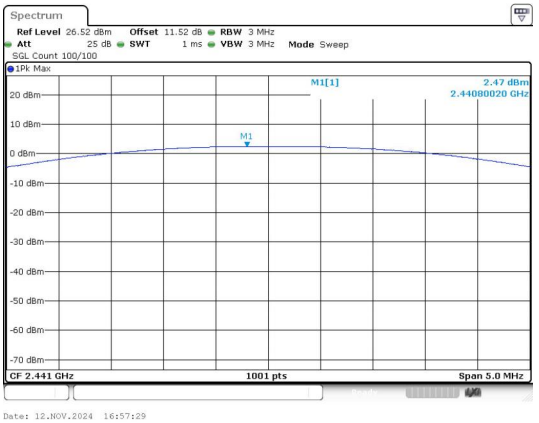
Test Result

Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
GFSK	DH5	0	4.04	2.54	≤30	PASS
		39	2.47	1.77		PASS
		78	2.72	1.87		PASS
π/4DQPSK	2-DH5	0	4.60	2.88	≤20.97	PASS
		39	2.98	1.99		PASS
		78	3.28	2.13		PASS
8DPSK	3-DH5	0	4.79	3.01		PASS
		39	3.25	2.11		PASS
		78	3.58	2.28		PASS

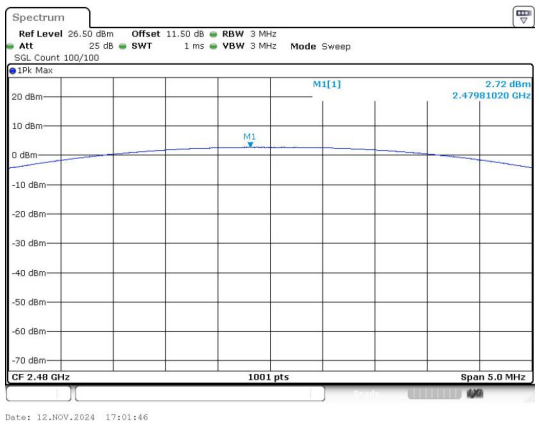
Test Graphs



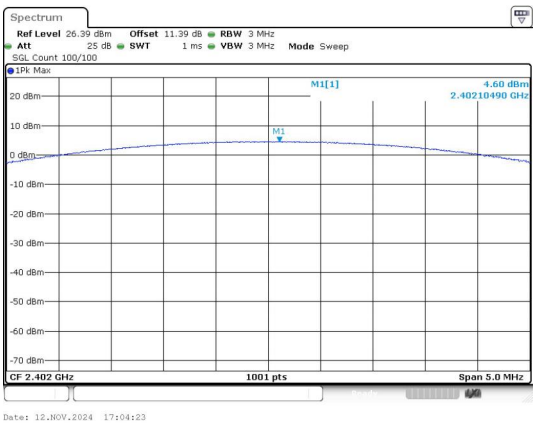
Peak Output Power
GFSK_Channel 0



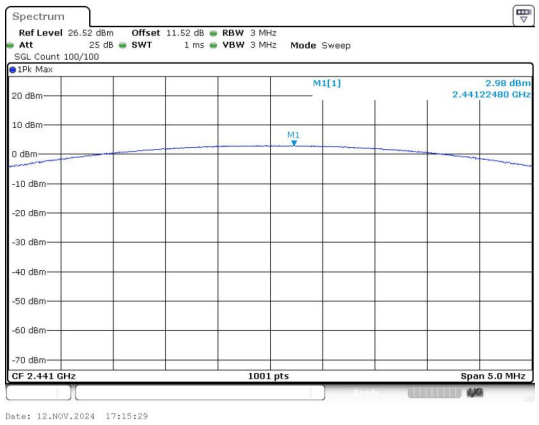
Peak Output Power
GFSK_Channel 39



Peak Output Power
GFSK_Channel 78

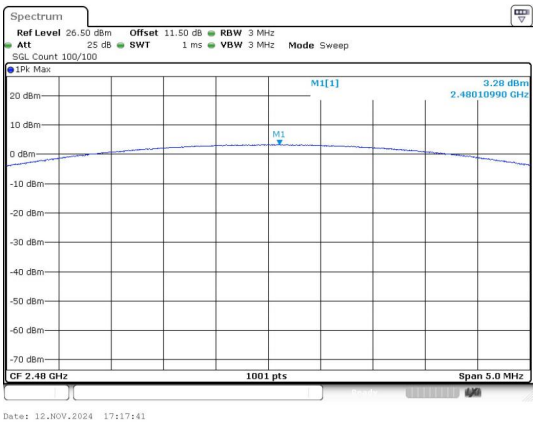


Peak Output Power
π/4DQPSK_Channel 0



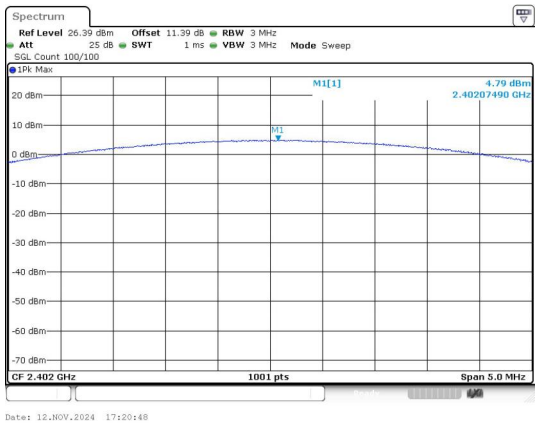
Peak Output Power

π/4DQPSK_Channel 39



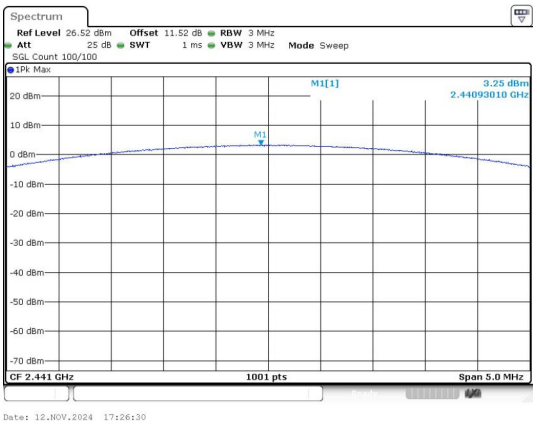
Peak Output Power

π/4DQPSK_Channel 78



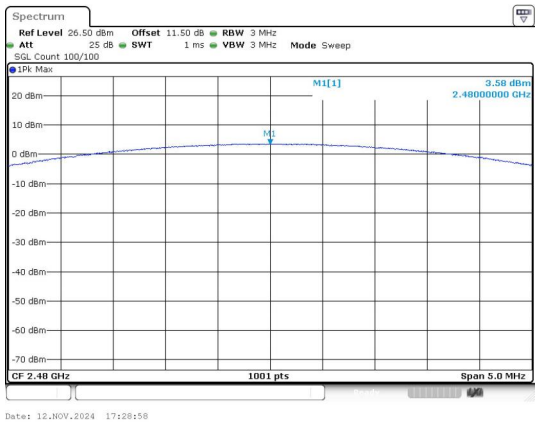
Peak Output Power

8DPSK_Channel 0



Peak Output Power

8DPSK_Channel 39



Peak Output Power

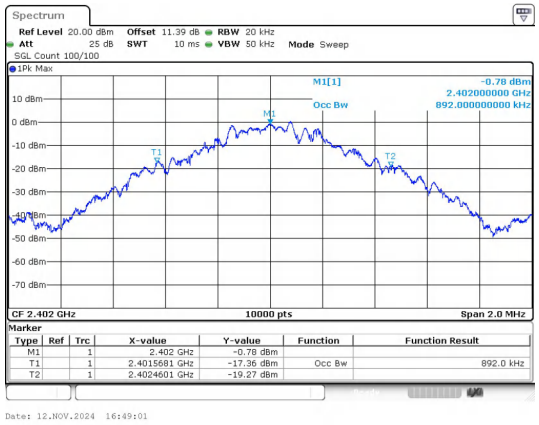
8DPSK_Channel 78

5) 99% Bandwidth

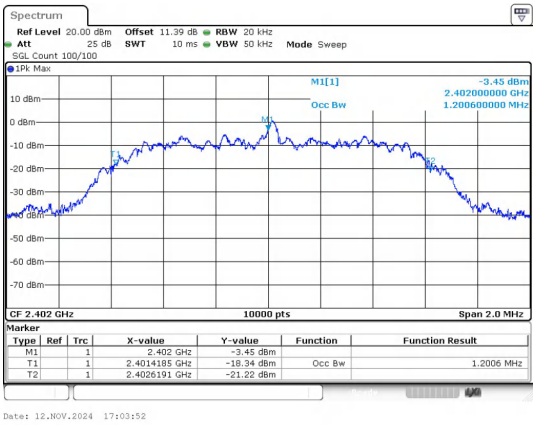
Test Result

Modulation	Channel	Center Frequency (MHz)	99% BW (MHz)
GFSK	0	2402	0.89200
	39	2441	0.90080
	78	2480	0.88460
π/4DQPSK	0	2402	1.2006
	39	2441	1.2110
	78	2480	1.2126
8DPSK	0	2402	1.2220
	39	2441	1.2164
	78	2480	1.2130

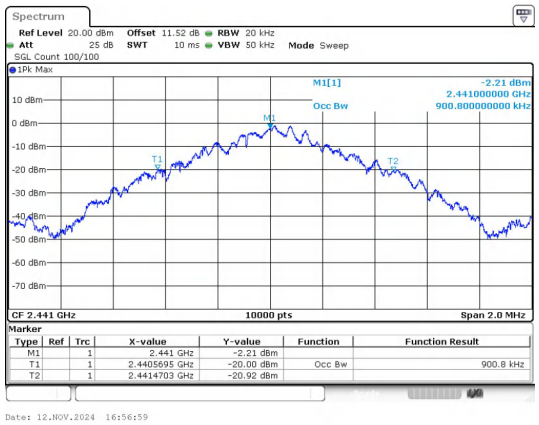
Test Graphs



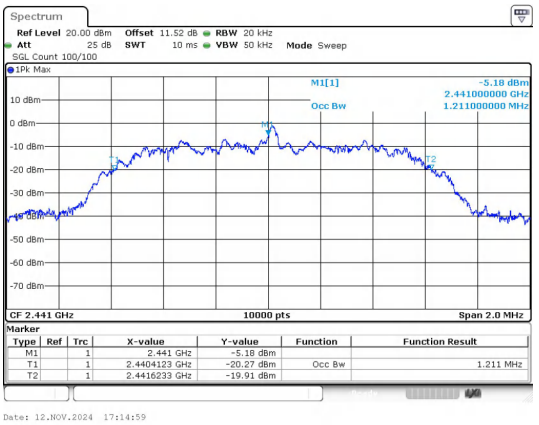
GFSK_DH5_Channel 0



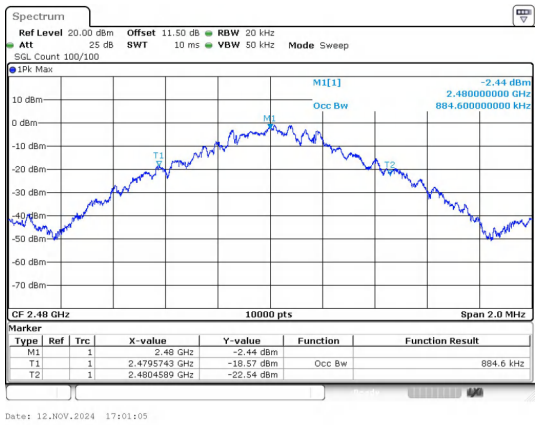
π/4DQPSK_2-DH5_Channel 0



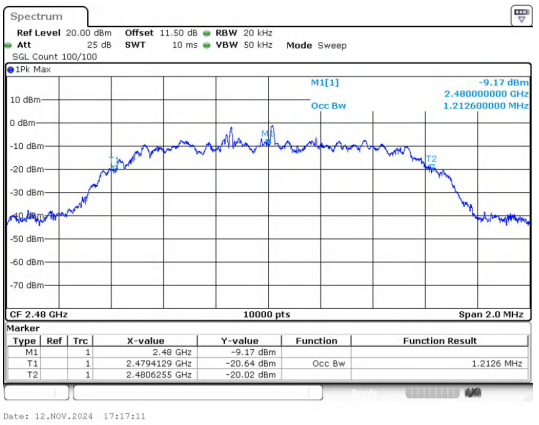
GFSK_DH5_Channel 39



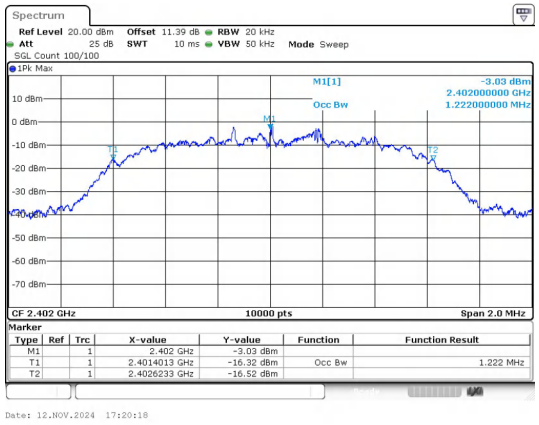
π/4DQPSK_2-DH5_Channel 39



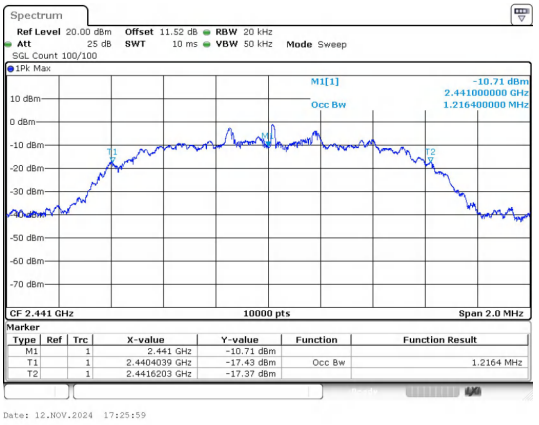
GFSK_DH5_Channel 78



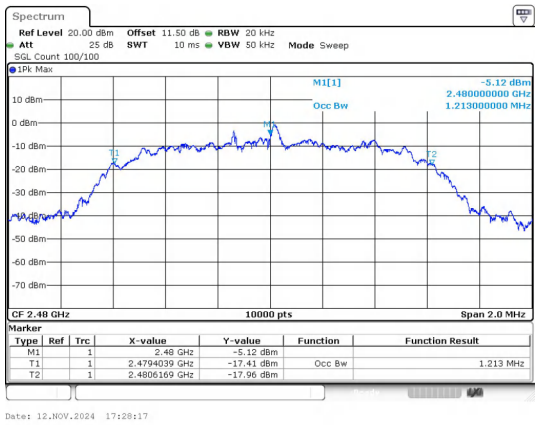
π/4DQPSK_2-DH5_Channel 78



8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



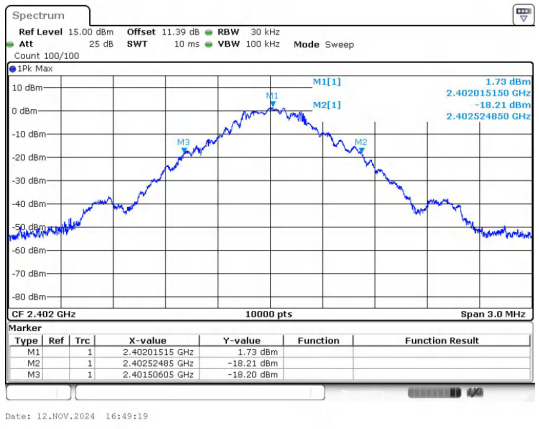
8DPSK_3-DH5_Channel 78

6) 20dB Bandwidth

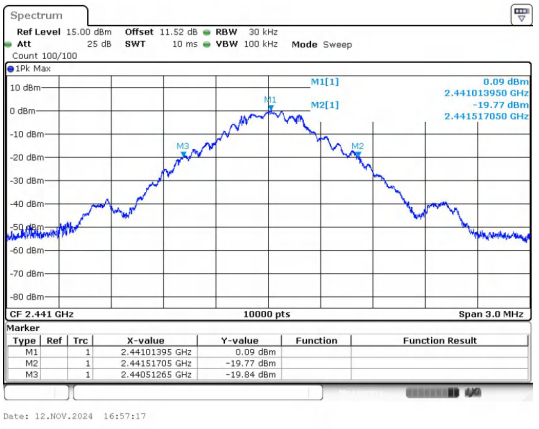
Test Result

Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	1.010
	39	2441 MHz	1.010
	78	2480 MHz	1.020
π/4DQPSK	0	2402 MHz	1.280
	39	2441 MHz	1.310
	78	2480 MHz	1.310
8DPSK	0	2402 MHz	1.310
	39	2441 MHz	1.290
	78	2480 MHz	1.290

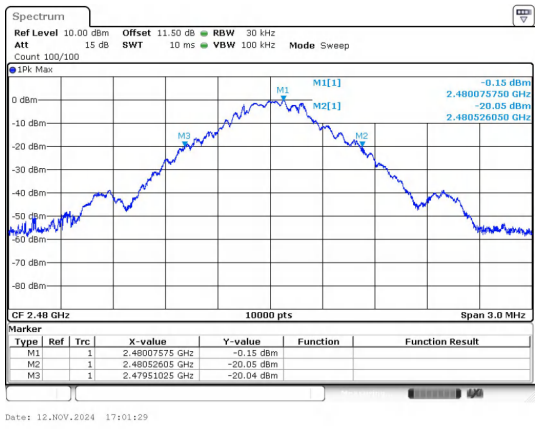
Test Graphs



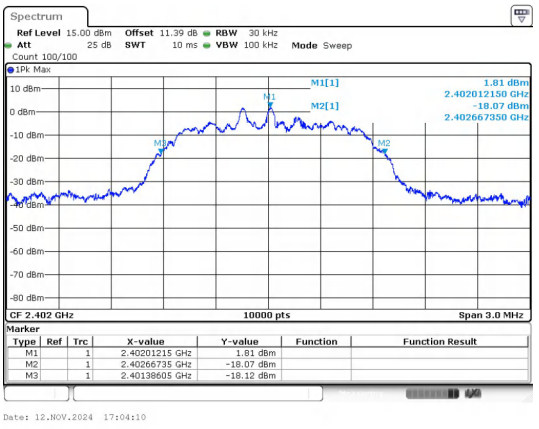
GFSK_DH5_Channel 0



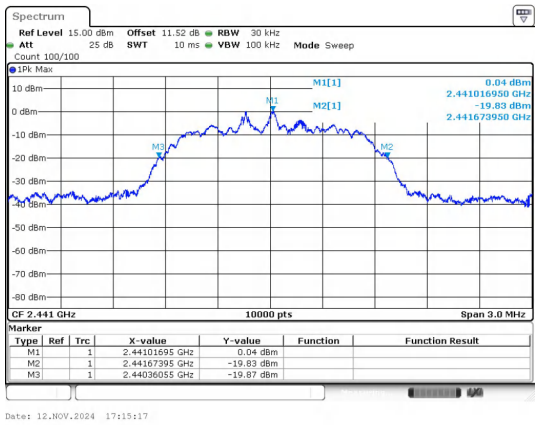
GFSK_DH5_Channel 39



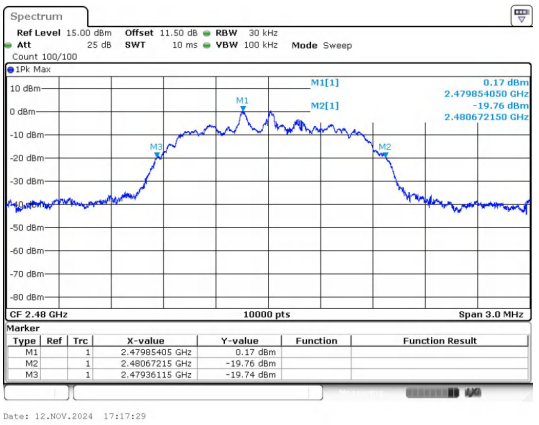
GFSK_DH5_Channel 78



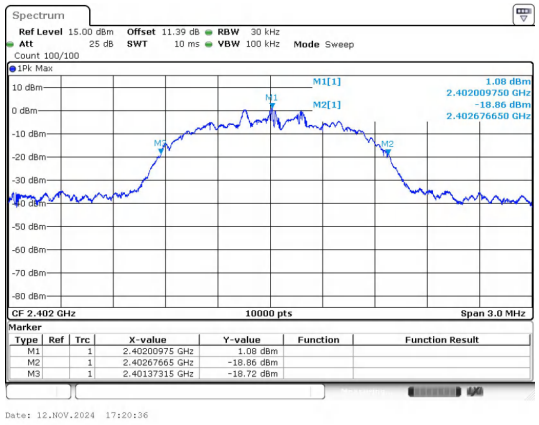
π/4DQPSK_2-DH5_Channel 0



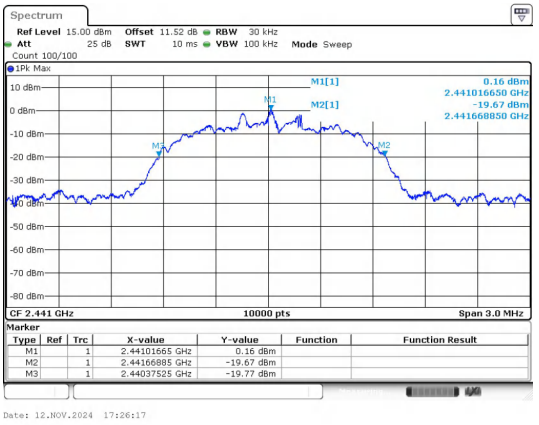
π/4DQPSK_2-DH5_Channel 39



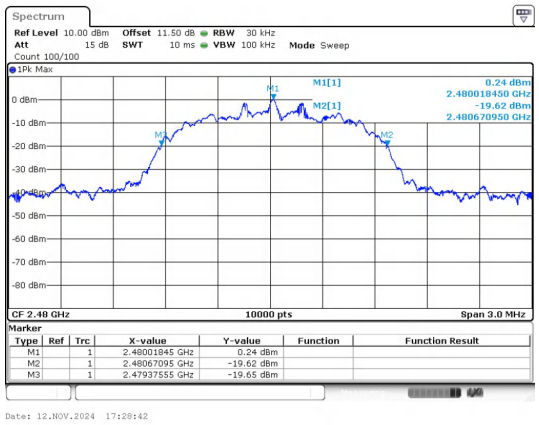
π/4DQPSK_2-DH5_Channel 78



8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



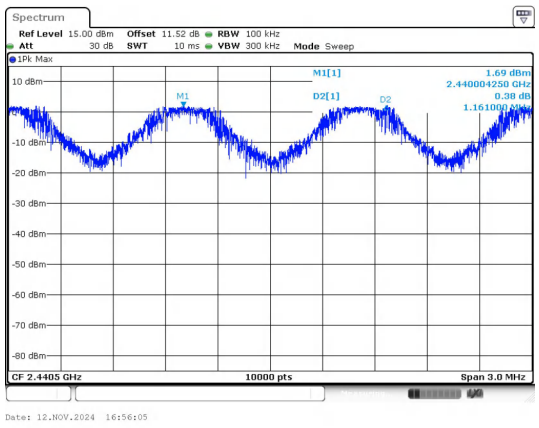
8DPSK_3-DH5_Channel 78

7) Carrier Frequencies Separation

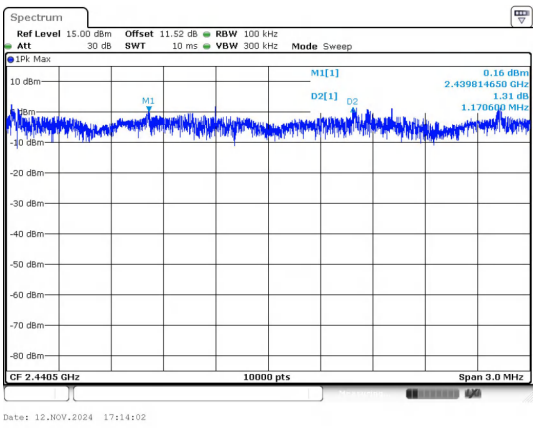
Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2440.0042	2441.1653	1.1610	1.02	PASS
π/4DQPSK	2-DH5	2439.8146	2440.9853	1.1706	0.853	PASS
8DPSK	3-DH5	2439.8479	2441.0248	1.1769	0.873	PASS

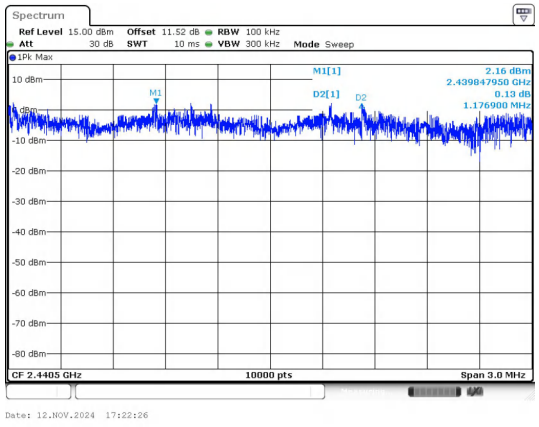
Test Graphs



GFSK



π/4DQPSK



8DPSK

8) Conducted Out Of Band Emission

Test Result

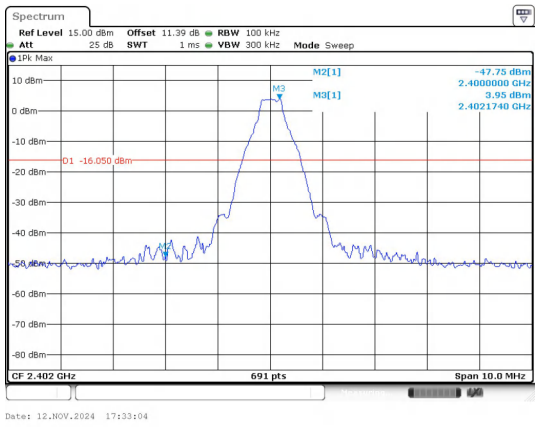
Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2400.00	-47.750	-16.05	-31.700	PASS
			4803.85	-44.382	-16.05	-28.332	PASS
		39	9763.72	-40.023	-17.68	-22.343	PASS
		78	2483.50	-49.770	-17.45	-32.320	PASS
			9920.20	-41.007	-17.45	-23.557	PASS
π/4DQPSK	2-DH5	0	2400.00	-48.090	-16.22	-31.870	PASS
			4803.85	-45.179	-16.22	-28.959	PASS
		39	9763.72	-39.730	-17.7	-22.030	PASS
		78	2483.50	-50.290	-17.62	-32.670	PASS
			9920.20	-40.828	-17.62	-23.208	PASS
8DPSK	3-DH5	0	2400.00	-47.520	-16.31	-31.210	PASS
			4803.85	-45.398	-16.31	-29.088	PASS
		39	9763.72	-39.687	-17.65	-22.037	PASS
		78	2483.50	-50.700	-17.57	-33.130	PASS
			9920.20	-40.431	-17.57	-22.861	PASS

Hopping

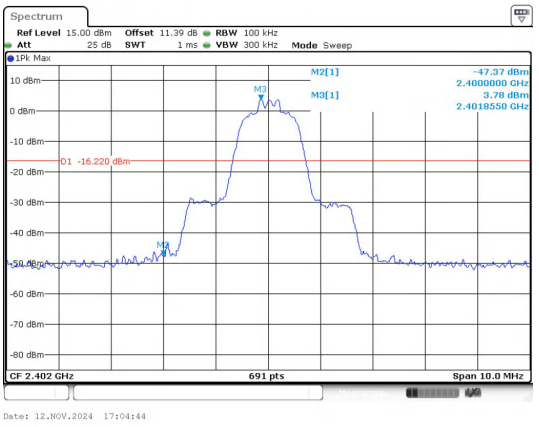
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2396.28	-48.270	-16.2	-32.070	PASS
			2400.00	-49.830	-16.2	-33.630	PASS
			2483.50	-50.150	-17.7	-32.450	PASS
π/4DQPSK	2-DH5		2397.22	-47.670	-16.21	-31.460	PASS
			2400.00	-48.950	-16.21	-32.740	PASS
			2483.50	-48.570	-17.79	-30.780	PASS
8DPSK	3-DH5		2397.70	-48.600	-16.27	-32.330	PASS
			2400.00	-50.100	-16.27	-33.830	PASS
			2483.50	-50.140	-17.88	-32.260	PASS

Test Graphs



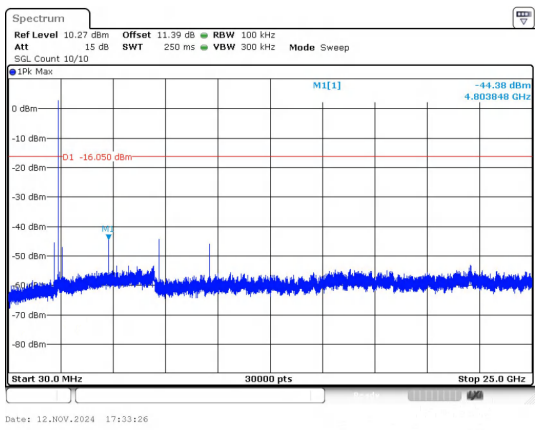
Out Of Band Emission

GFSK_DH5_Channel 0



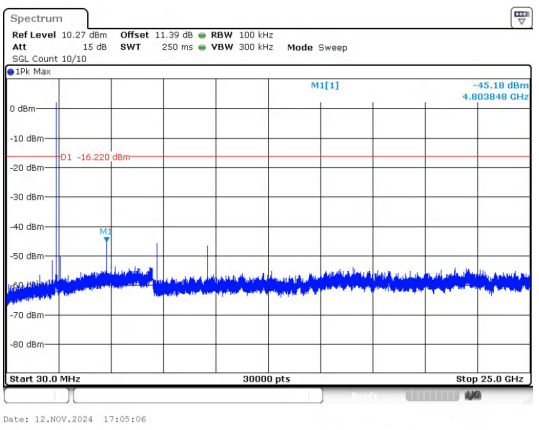
Out Of Band Emission

π/4DQPSK_2-DH5_Channel 0



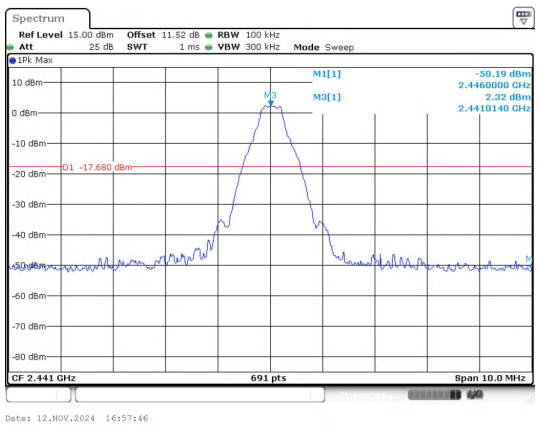
30.0 MHz - 25000.0 MHz

GFSK_DH5_Channel 0



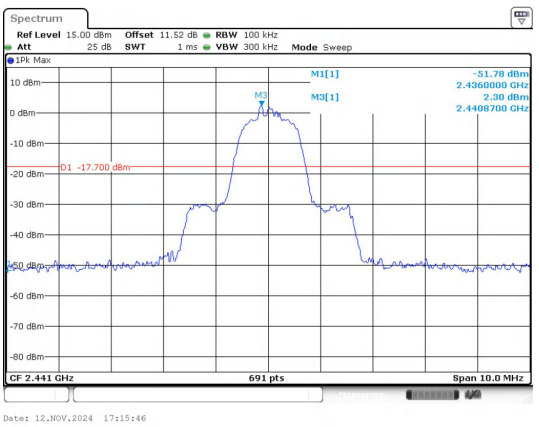
30.0 MHz - 25000.0 MHz

π/4DQPSK_2-DH5_Channel 0



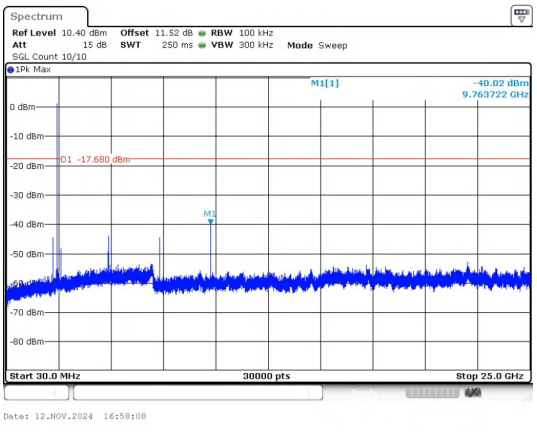
Out Of Band Emission

GFSK_DH5_Channel 39



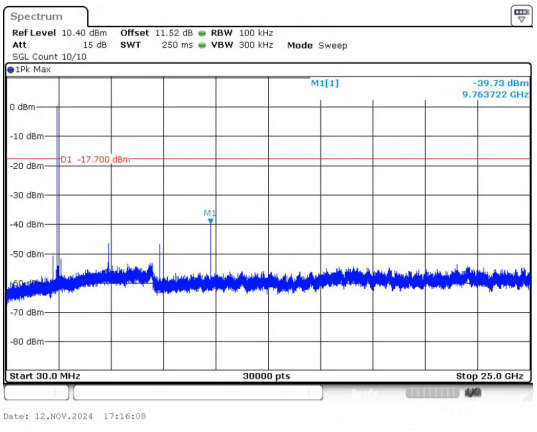
Out Of Band Emission

π/4DQPSK_2-DH5_Channel 39



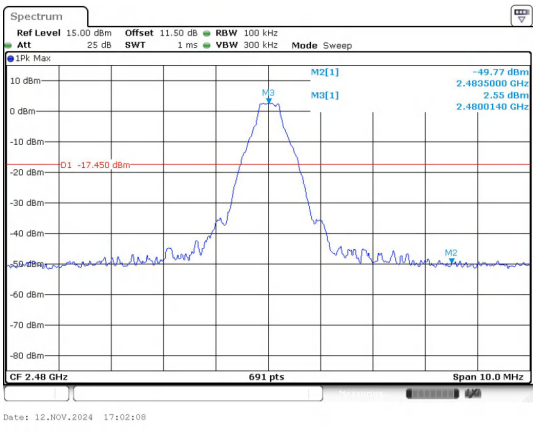
30.0 MHz - 25000.0 MHz

GFSK_DH5_Channel 39



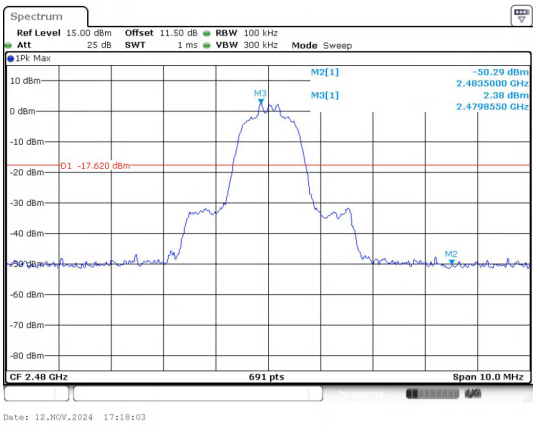
30.0 MHz - 25000.0 MHz

π/4DQPSK_2-DH5_Channel 39



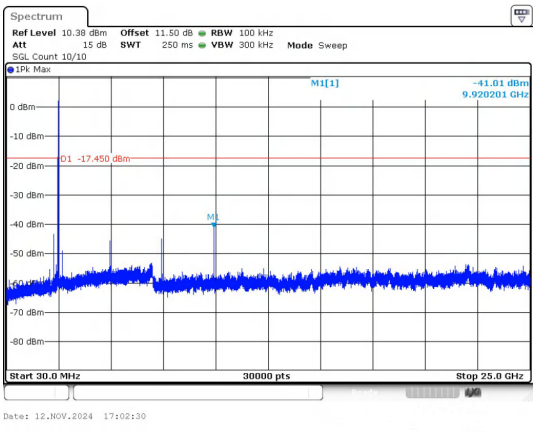
Out Of Band Emission

GFSK_DH5_Channel 78



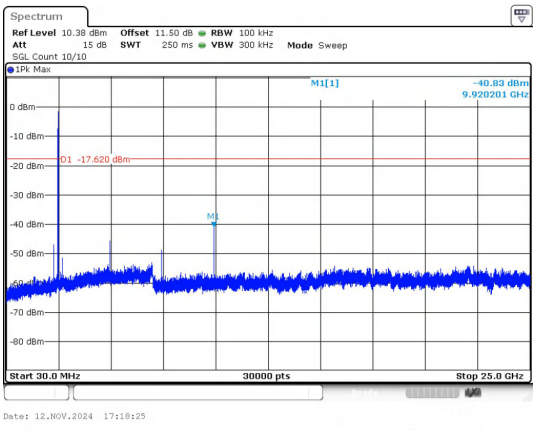
Out Of Band Emission

π/4DQPSK_2-DH5_Channel 78



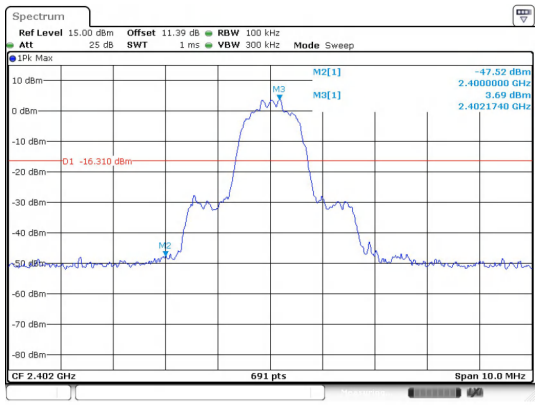
30.0 MHz - 25000.0 MHz

GFSK_DH5_Channel 78



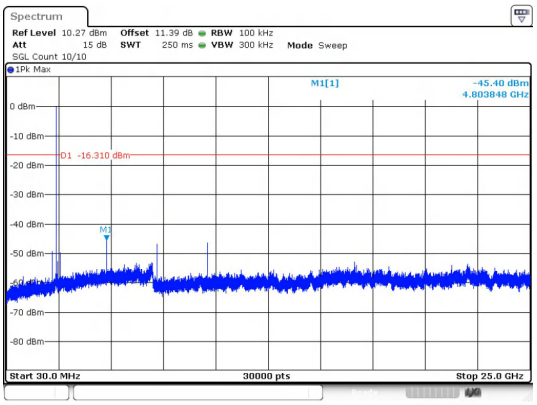
30.0 MHz - 25000.0 MHz

π/4DQPSK_2-DH5_Channel 78



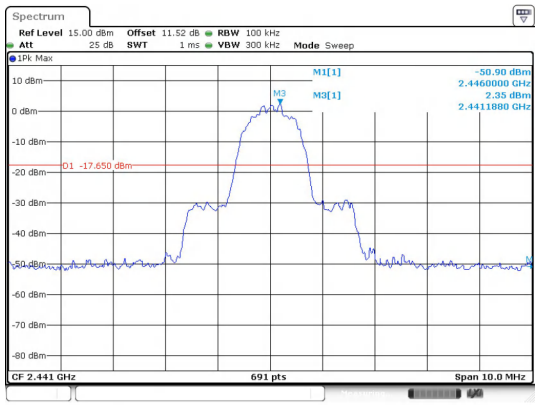
Out Of Band Emission

8DPSK_3-DH5_Channel 0



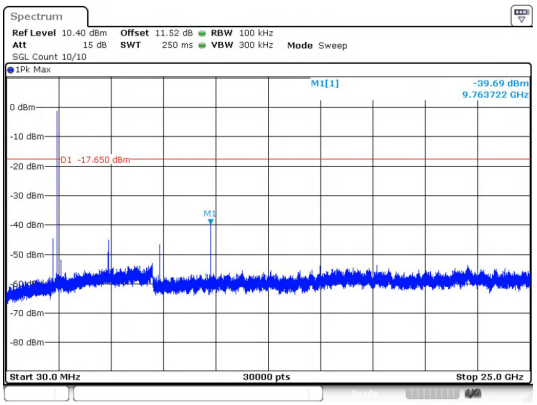
30.0 MHz - 25000.0 MHz

8DPSK_3-DH5_Channel 0



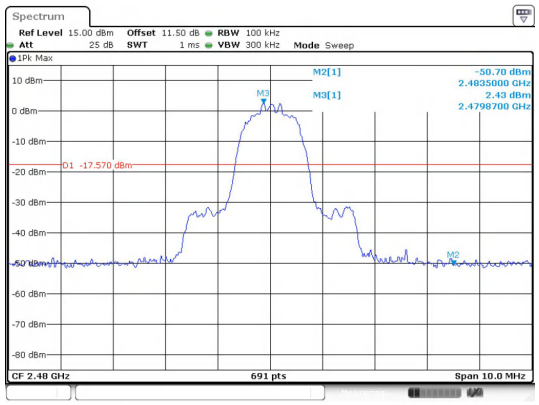
Out Of Band Emission

8DPSK_3-DH5_Channel 39



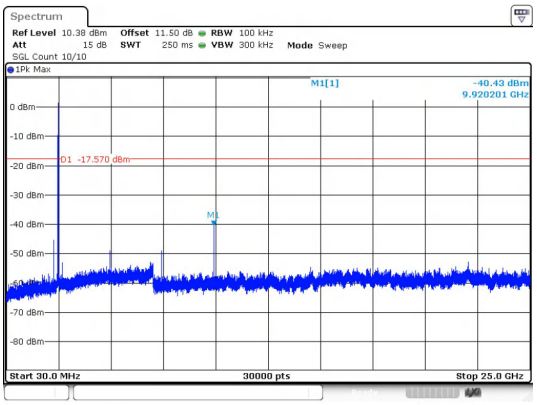
30.0 MHz - 25000.0 MHz

8DPSK_3-DH5_Channel 39



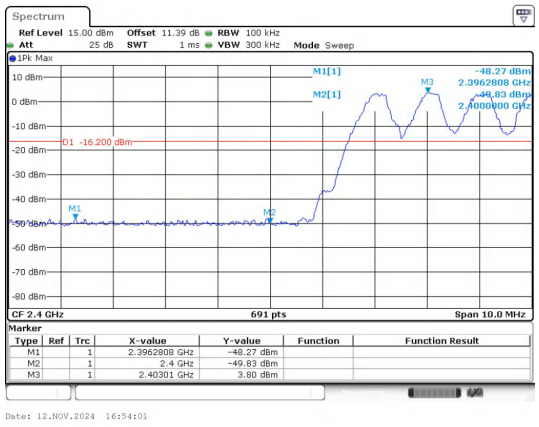
Out Of Band Emission

8DPSK_3-DH5_Channel 78



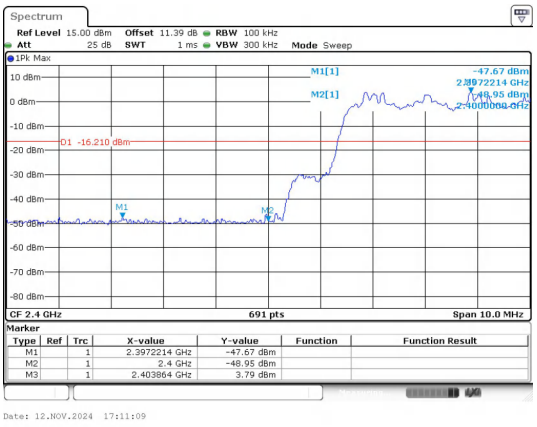
30.0 MHz - 25000.0 MHz

8DPSK_3-DH5_Channel 78



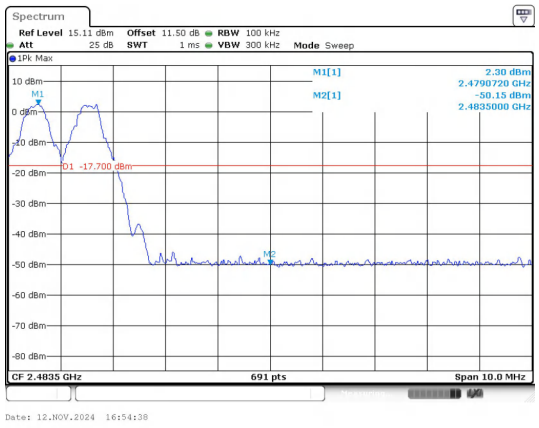
Out Of Band Emission(Left)

GFSK_DH5_Channel Hopping



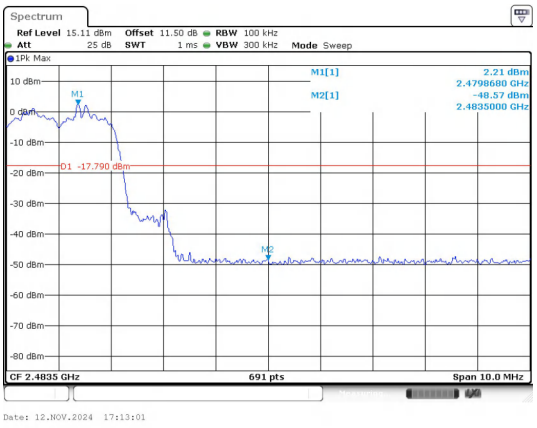
Out Of Band Emission(Left)

π/4DQPSK_2-DH5_Channel Hopping



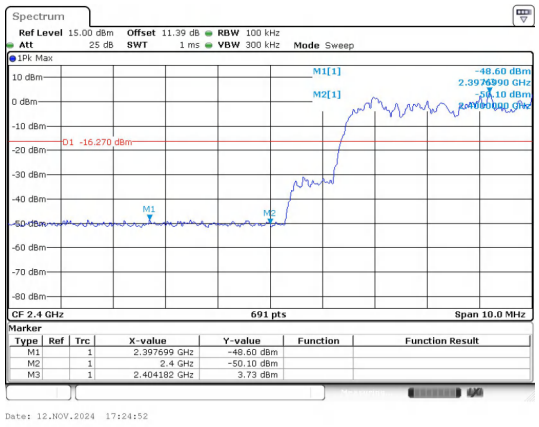
Out Of Band Emission(Right)

GFSK_DH5_Channel Hopping



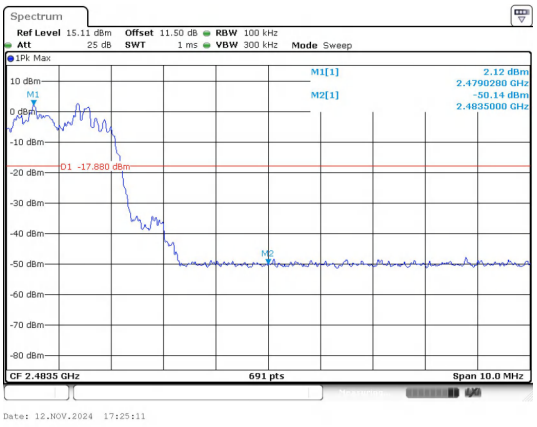
Out Of Band Emission(Right)

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

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