Appendix

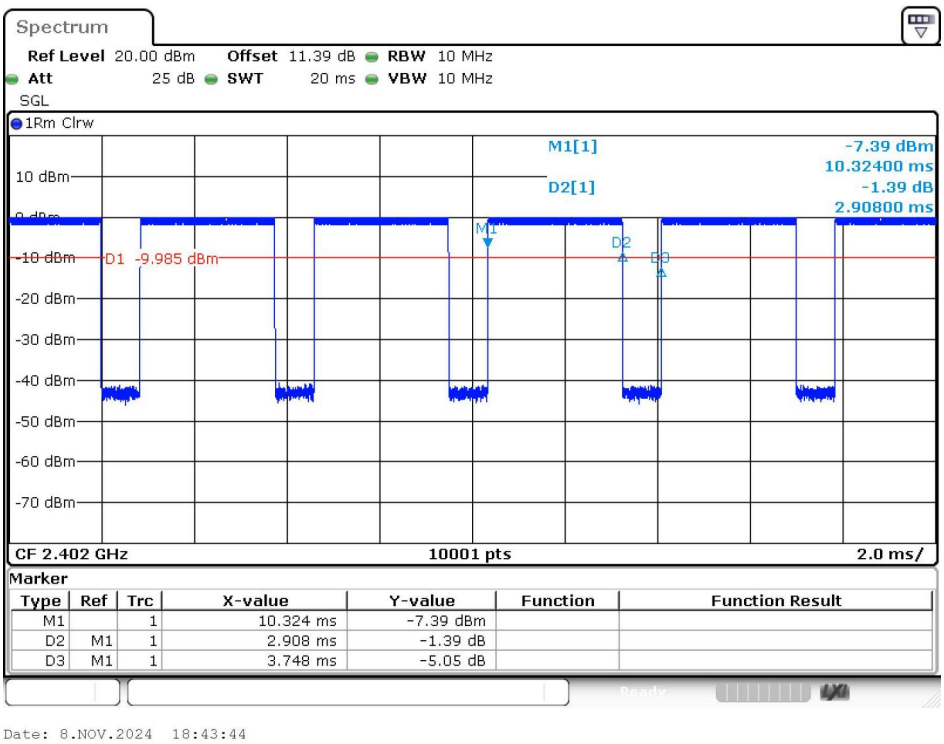
Report No.:	CISRR24110705004
FCC ID:	2BG83-JX-05
Product Name:	Mobile phone bluetooth Ring remote control
Model No.:	JX-05
Test Engineer:	Lucas Huang
Supervised by:	Rory Huang

1) Duty Cycle

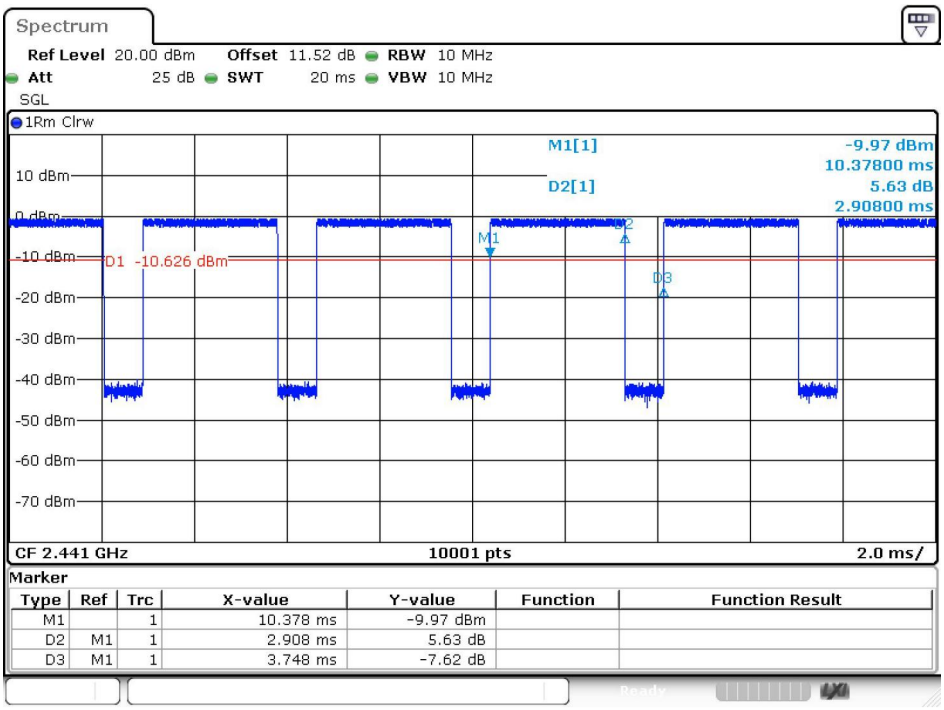
Test Result

Modulation	Packets	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
GFSK	DH5	0	2.908	3.748	77.59	0.7759	1.1019	0.3439
		39	2.908	3.748	77.59	0.7759	1.1019	0.3439
		78	2.908	3.748	77.59	0.7759	1.1019	0.3439
π/4DQPSK	2-DH5	0	2.912	3.748	77.69	0.7769	1.0963	0.3434
		39	2.912	3.748	77.69	0.7769	1.0963	0.3434
		78	2.912	3.748	77.69	0.7769	1.0963	0.3434
8DPSK	3-DH5	0	2.918	3.748	77.85	0.7785	1.0874	0.3427
		39	2.916	3.748	77.80	0.7780	1.0902	0.3429
		78	2.916	3.748	77.80	0.7780	1.0902	0.3429

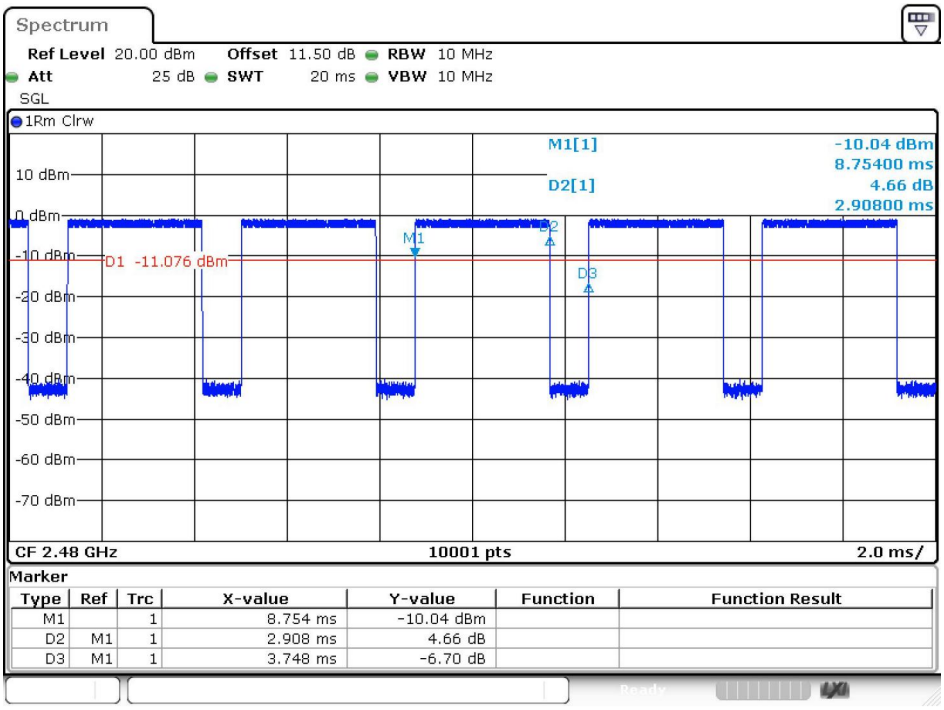
Test Graphs



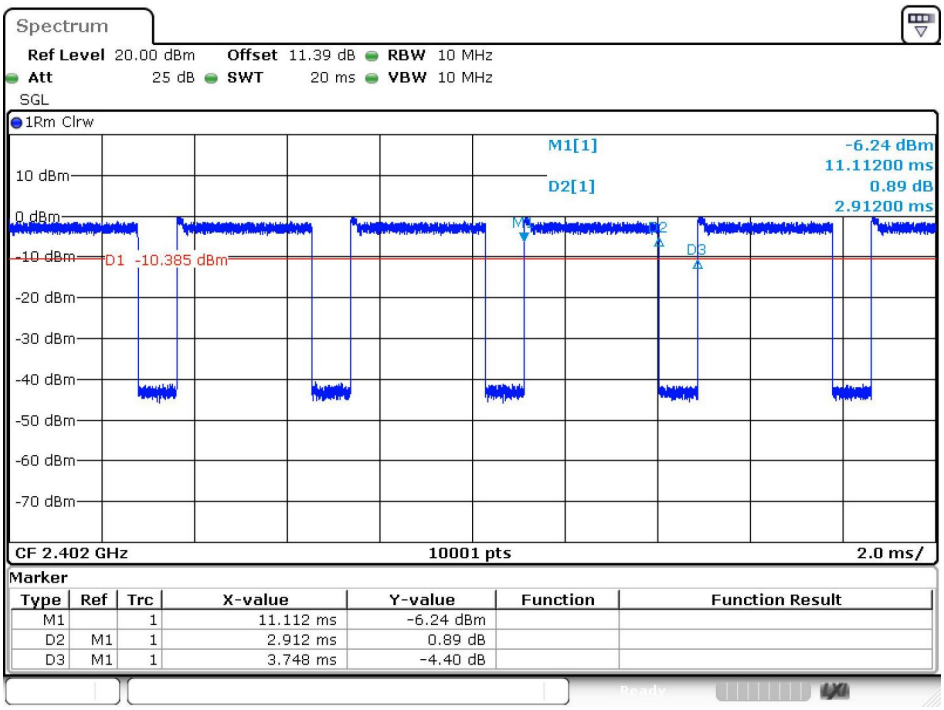
GFSK(DH5)_Channel 0



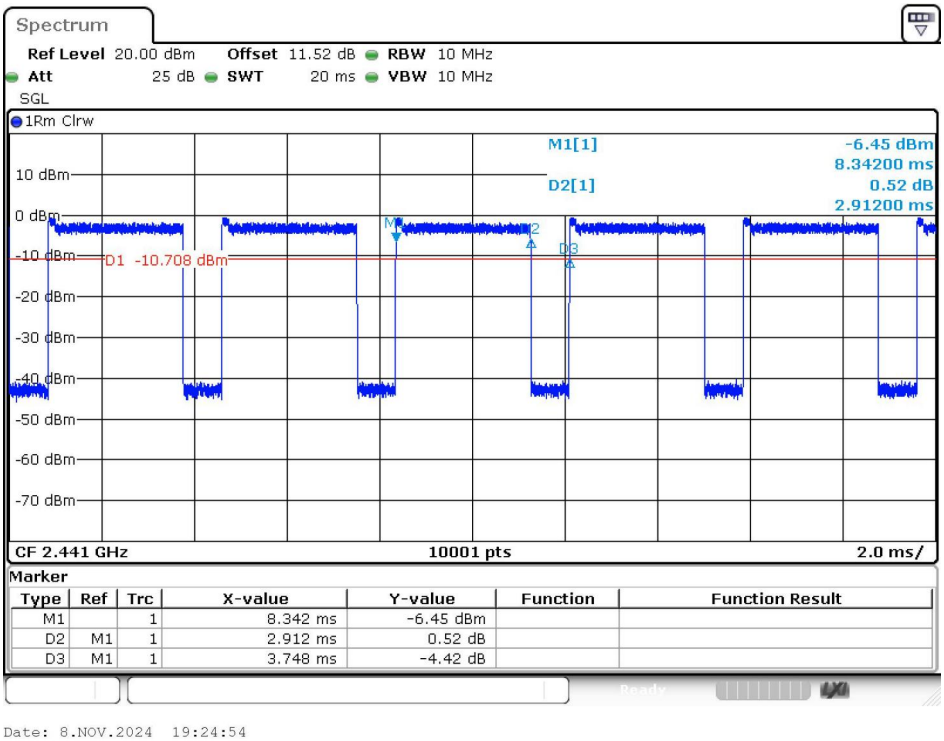
GFSK(DH5)_Channel 39



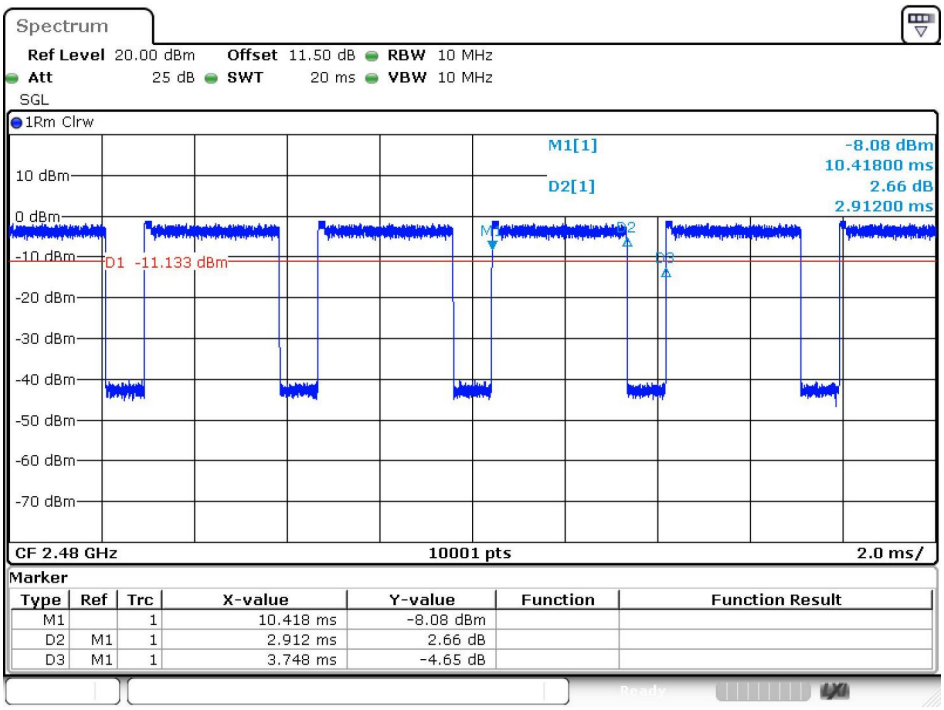
GFSK(DH5)_Channel 78



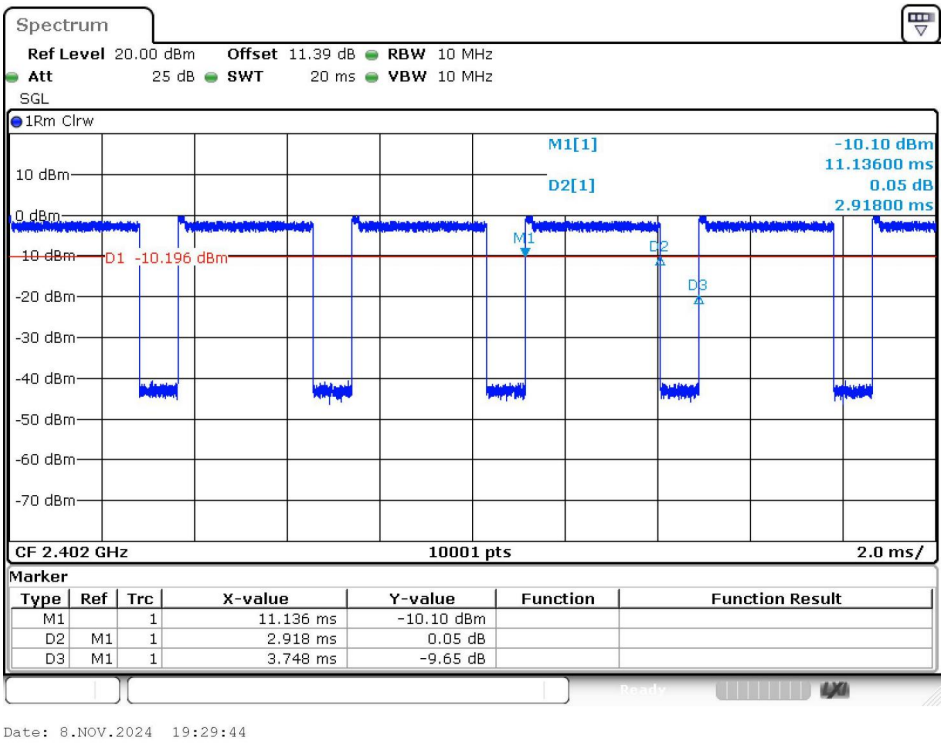
π/4DQPSK(2-DH5)_Channel 0



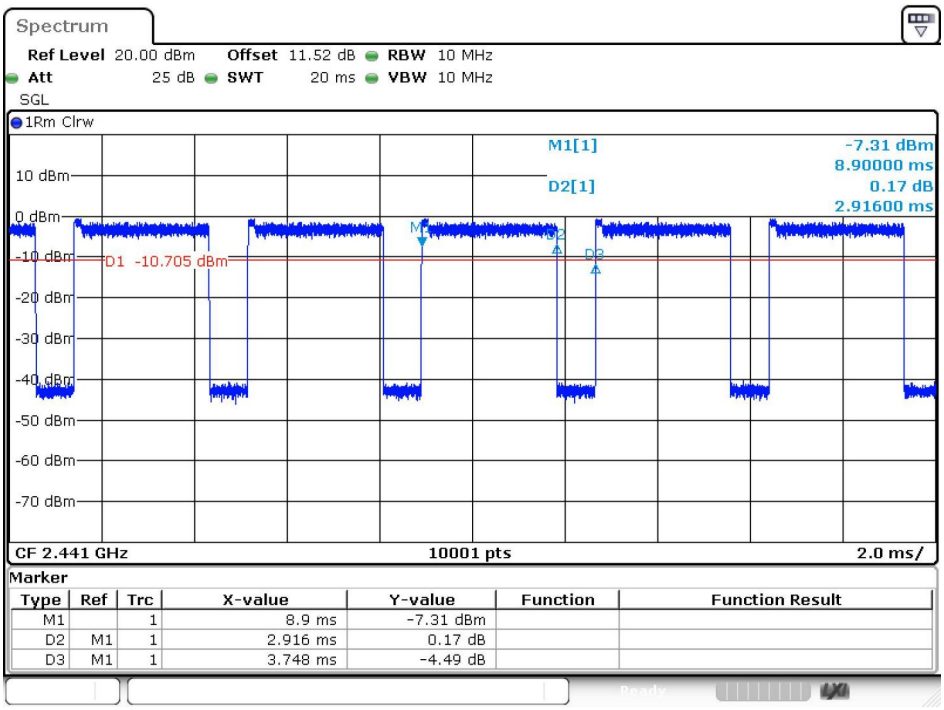
π/4DQPSK(2-DH5)_Channel 39



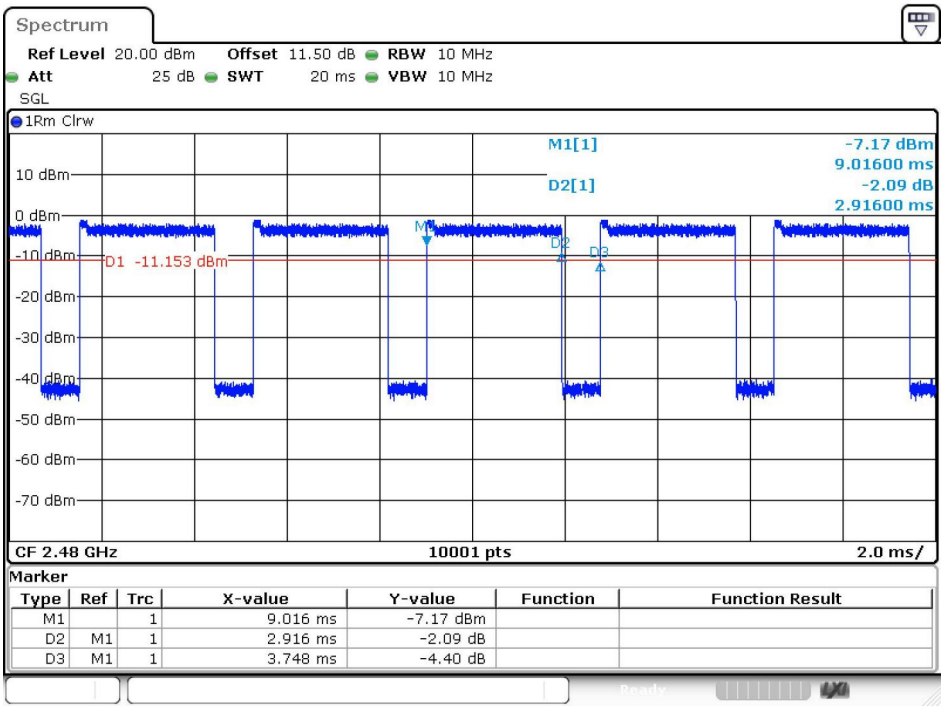
π/4DQPSK(2-DH5)_Channel 78



8DPSK(3-DH5)_Channel 0



8DPSK(3-DH5)_Channel 39



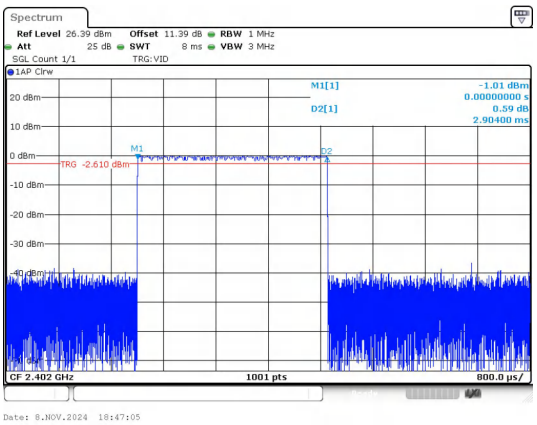
8DPSK(3-DH5)_Channel 78

2) Dwell Time

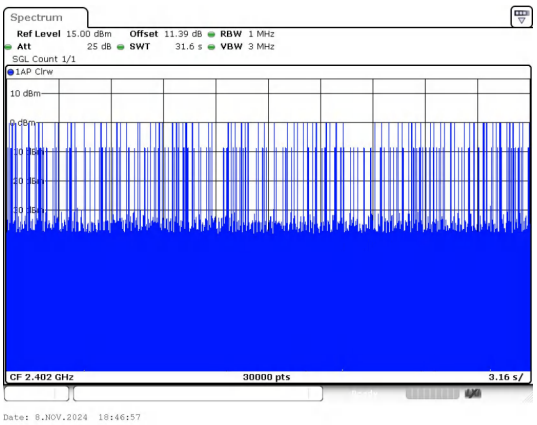
Test Result

Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH5	CH0 (2402MHz)	2.904	106	307.82	< 400	PASS
π/4DQPSK	2-DH5		2.912	104	302.85		PASS
8DPSK	3-DH5		2.920	107	312.44		PASS

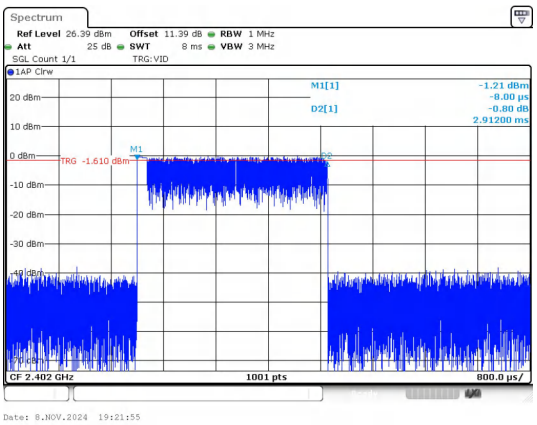
Test Graphs



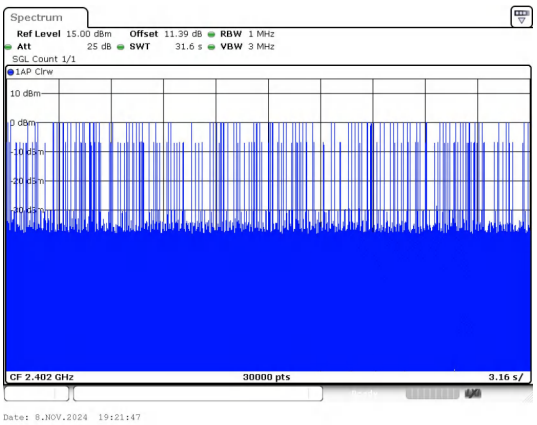
Pulse Width
GFSK_DH5



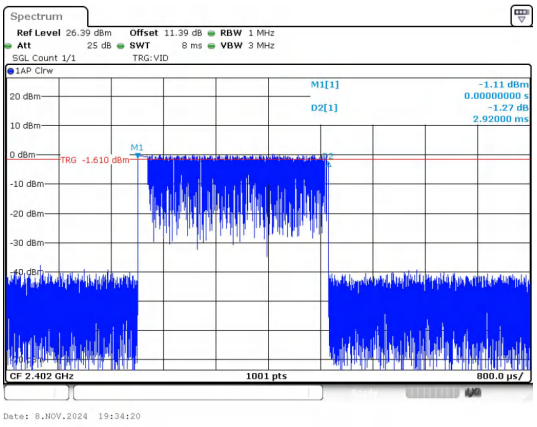
Number of Pulses in 31.6 seconds
GFSK_DH5



Pulse Width
π/4DQPSK_2-DH5

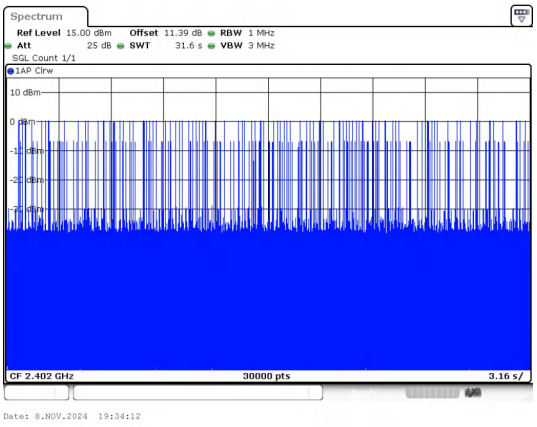


Number of Pulses in 31.6 seconds
π/4DQPSK_2-DH5



Pulse Width

8DPSK_3-DH5



Number of Pulses in 31.6 seconds

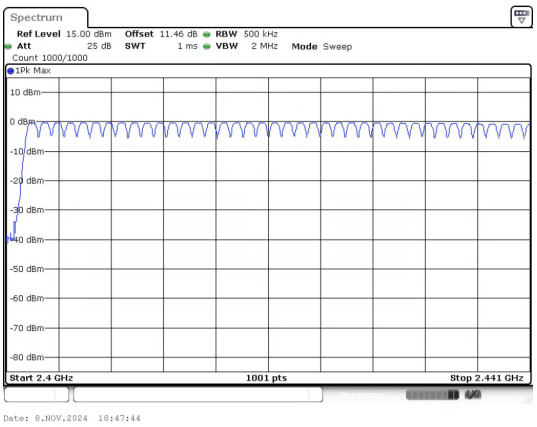
8DPSK_3-DH5

3) Number Of Hopping Channel

Test Result

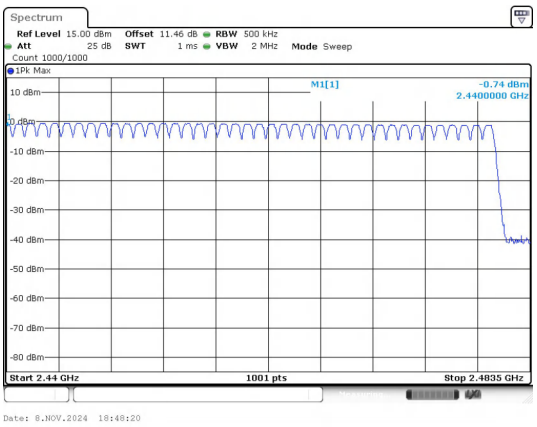
Modulation	Packet	Number of Hopping Channel	Limit	Result
GFSK	DH5	79	15	PASS
π/4DQPSK	2-DH5	79	15	PASS
8DPSK	3-DH5	79	15	PASS

Test Graphs



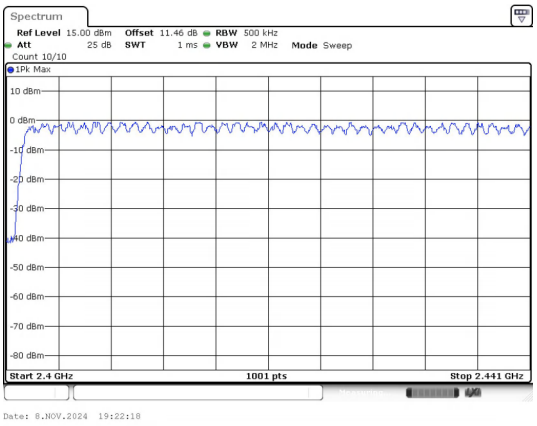
Low End Spectrum Channel Hopping Plot

GFSK



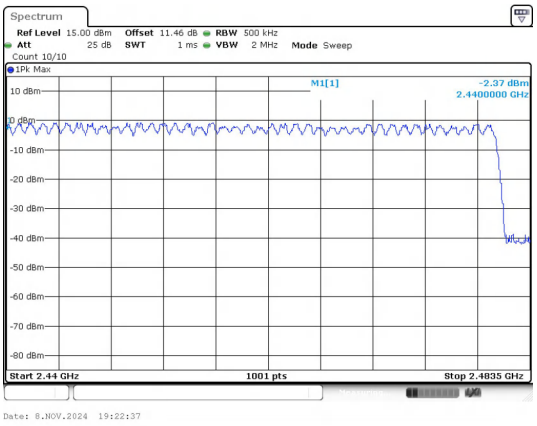
High End Spectrum Channel Hopping Plot

GFSK



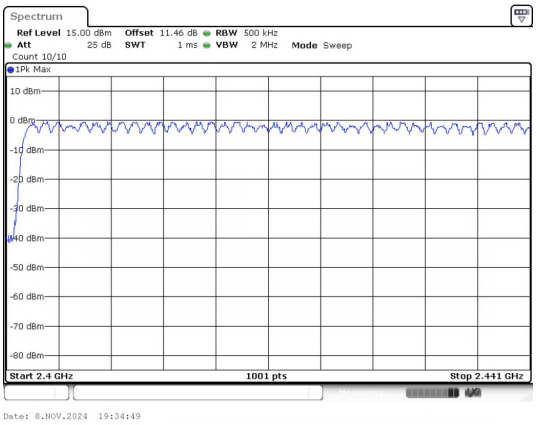
Low End Spectrum Channel Hopping Plot

π/4DQPSK



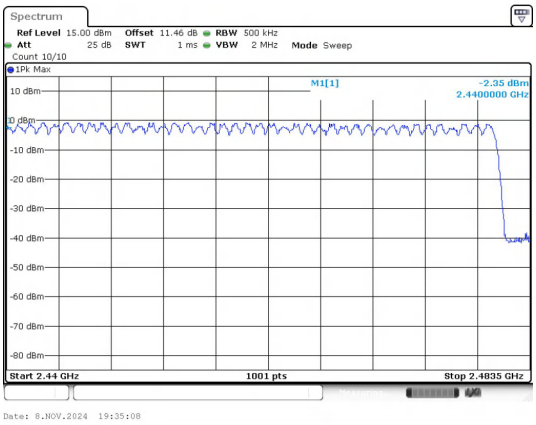
High End Spectrum Channel Hopping Plot

π/4DQPSK



Low End Spectrum Channel Hopping Plot

8DPSK



High End Spectrum Channel Hopping Plot

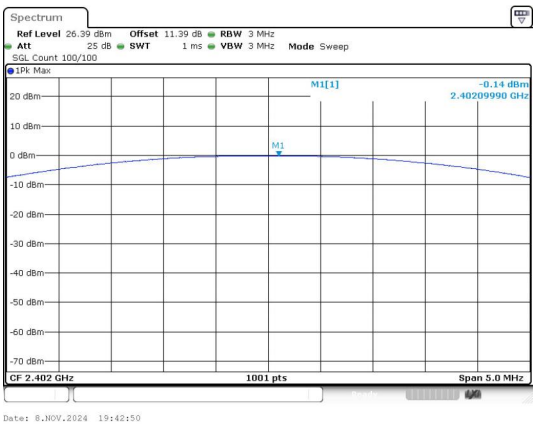
8DPSK

4) Conducted Peak Output Power

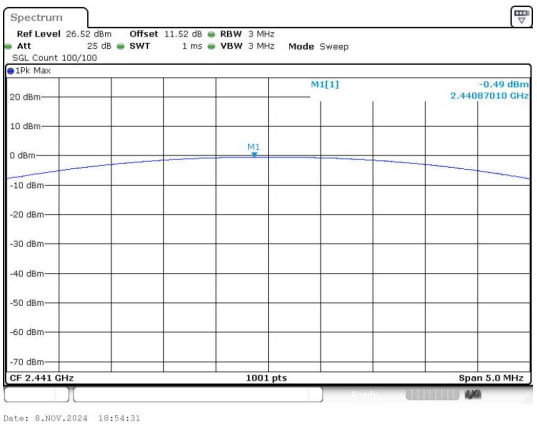
Test Result

Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
GFSK	DH5	0	-0.14	0.97	≤30	PASS
		39	-0.49	0.89		PASS
		78	-0.93	0.81		PASS
π/4DQPSK	2-DH5	0	0.69	1.17	≤20.97	PASS
		39	0.18	1.04		PASS
		78	-0.18	0.96		PASS
8DPSK	3-DH5	0	0.98	1.25		PASS
		39	0.35	1.08		PASS
		78	-0.01	1.00		PASS

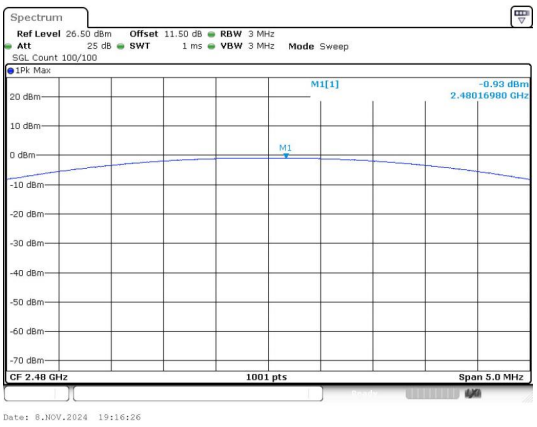
Test Graphs



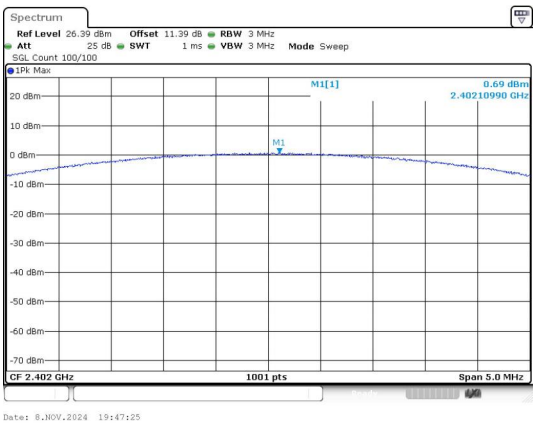
Peak Output Power
GFSK_Channel 0



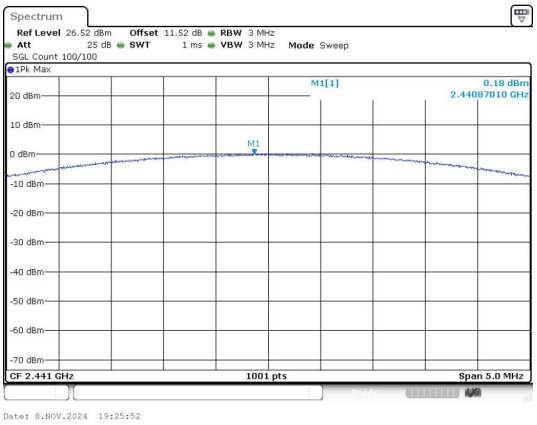
Peak Output Power
GFSK_Channel 39



Peak Output Power
GFSK_Channel 78

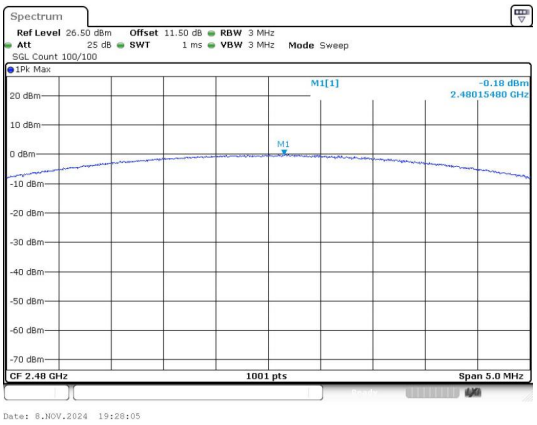


Peak Output Power
π/4DQPSK_Channel 0



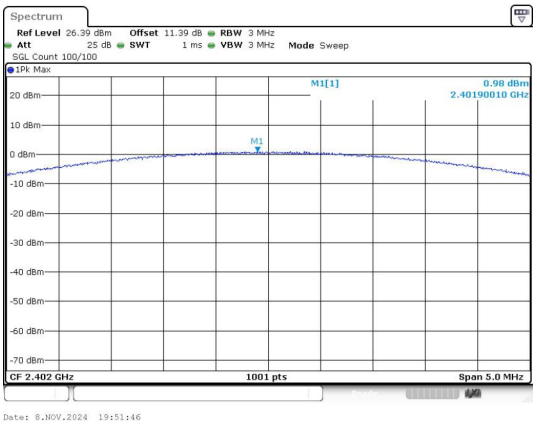
Peak Output Power

π/4DQPSK_Channel 39



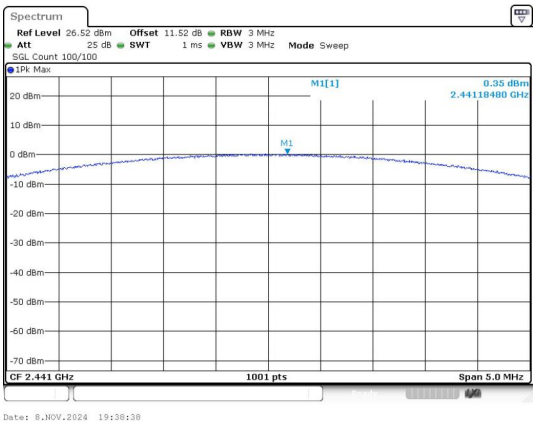
Peak Output Power

π/4DQPSK_Channel 78



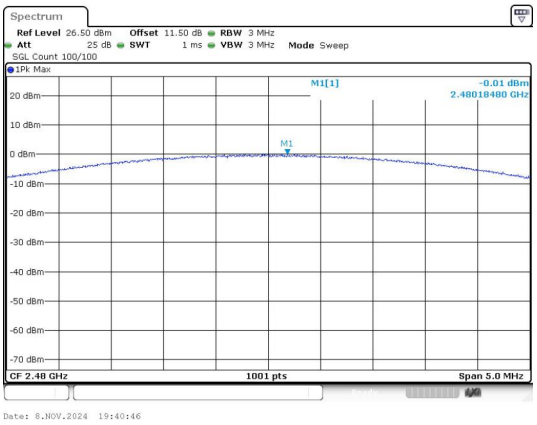
Peak Output Power

8DPSK_Channel 0



Peak Output Power

8DPSK_Channel 39



Peak Output Power

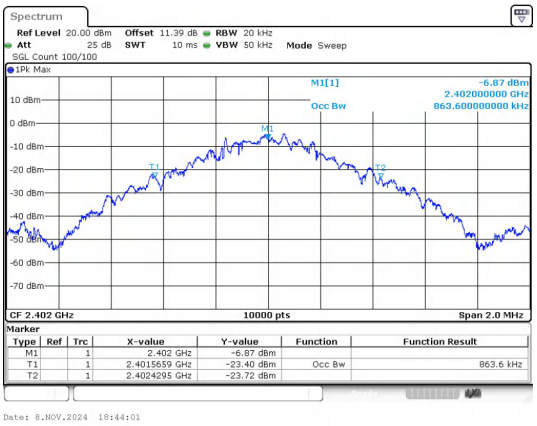
8DPSK_Channel 78

5) 99% Bandwidth

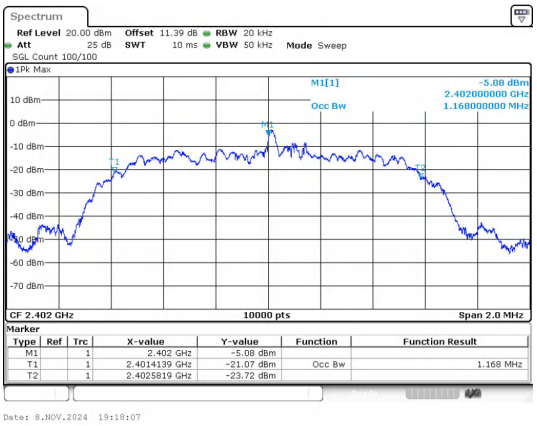
Test Result

Modulation	Channel	Center Frequency (MHz)	99% BW (MHz)
GFSK	0	2402	0.86360
	39	2441	0.84500
	78	2480	0.84720
π/4DQPSK	0	2402	1.1680
	39	2441	1.1828
	78	2480	1.1688
8DPSK	0	2402	1.1780
	39	2441	1.1738
	78	2480	1.1784

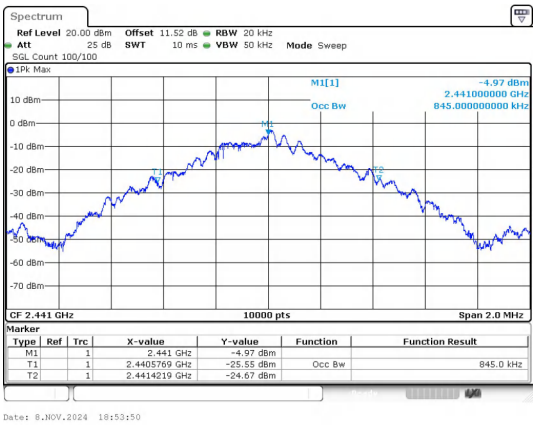
Test Graphs



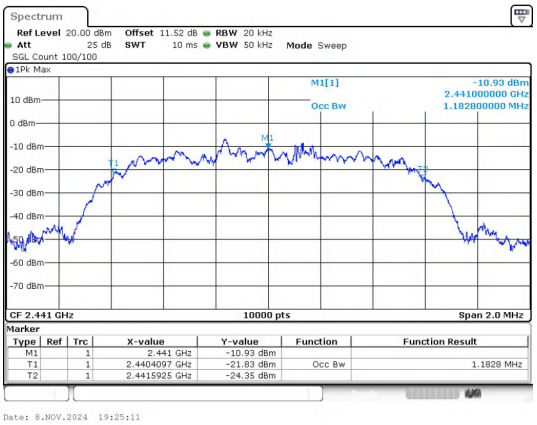
GFSK_DH5_Channel 0



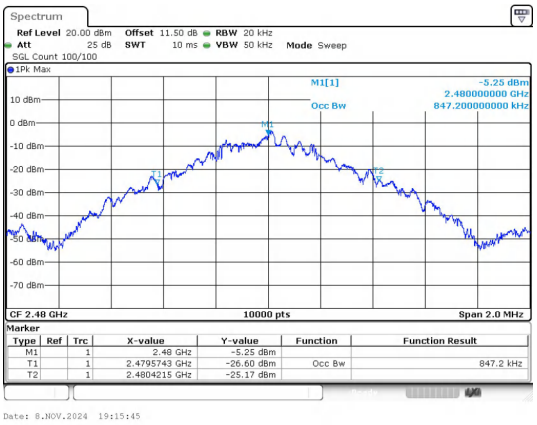
π/4DQPSK_2-DH5_Channel 0



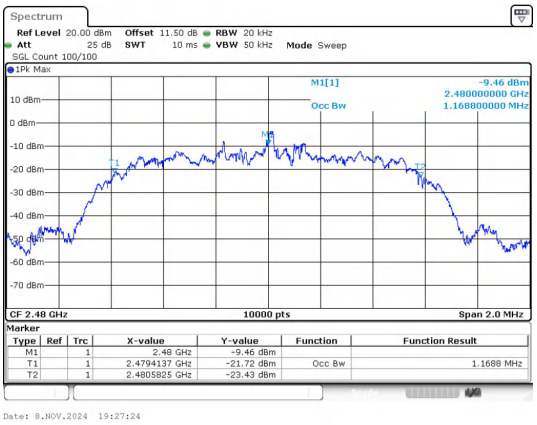
GFSK_DH5_Channel 39



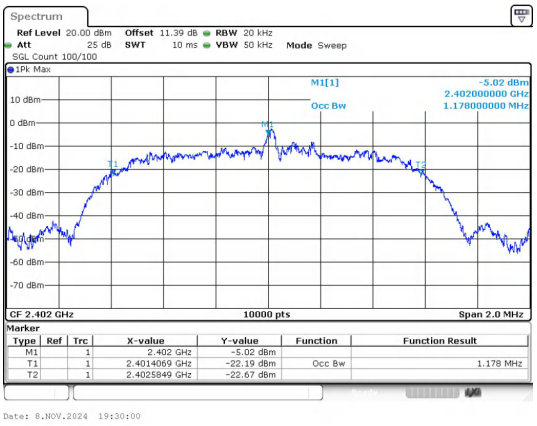
π/4DQPSK_2-DH5_Channel 39



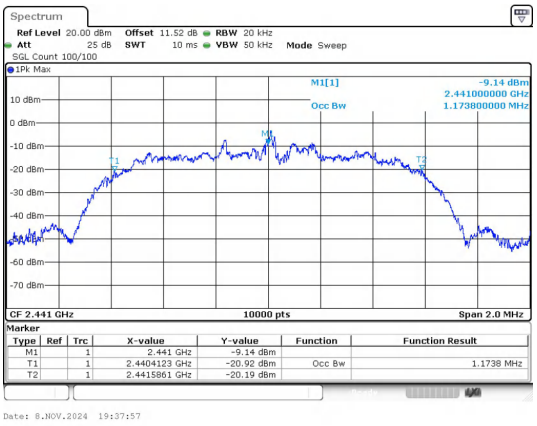
GFSK_DH5_Channel 78



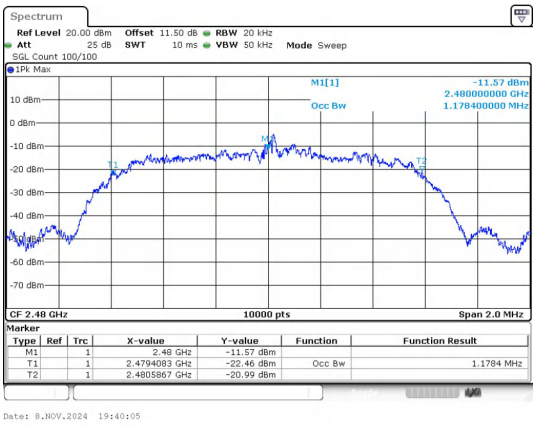
π/4DQPSK_2-DH5_Channel 78



8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



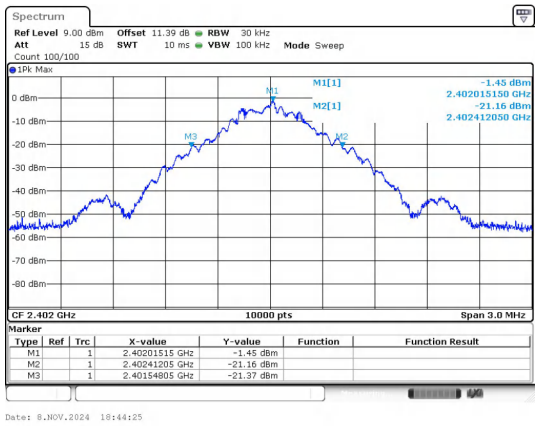
8DPSK_3-DH5_Channel 78

6) 20dB Bandwidth

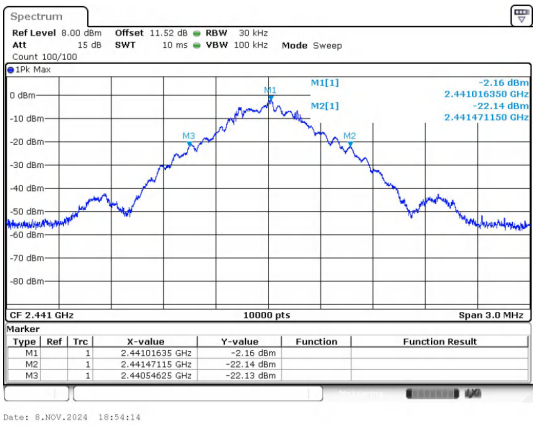
Test Result

Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	0.8600
	39	2441 MHz	0.9200
	78	2480 MHz	0.9400
π/4DQPSK	0	2402 MHz	1.200
	39	2441 MHz	1.200
	78	2480 MHz	1.200
8DPSK	0	2402 MHz	1.250
	39	2441 MHz	1.240
	78	2480 MHz	1.240

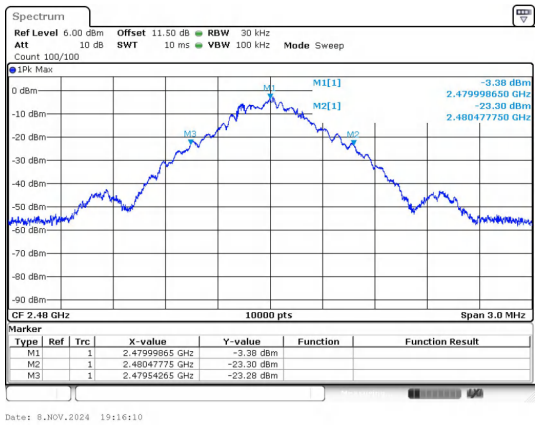
Test Graphs



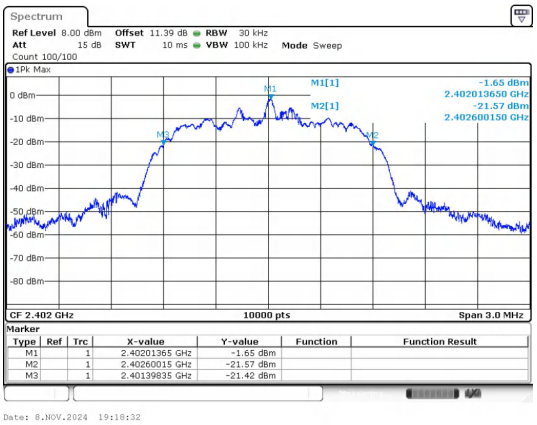
GFSK_DH5_Channel 0



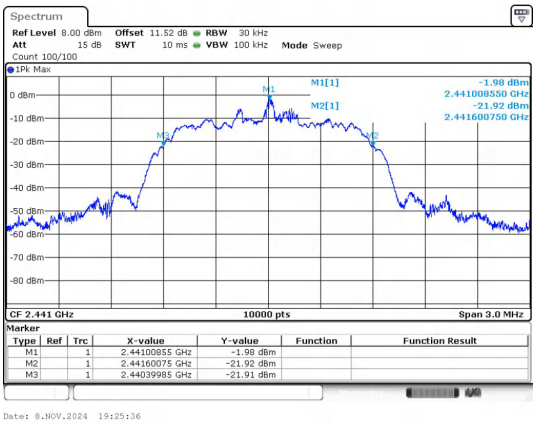
GFSK_DH5_Channel 39



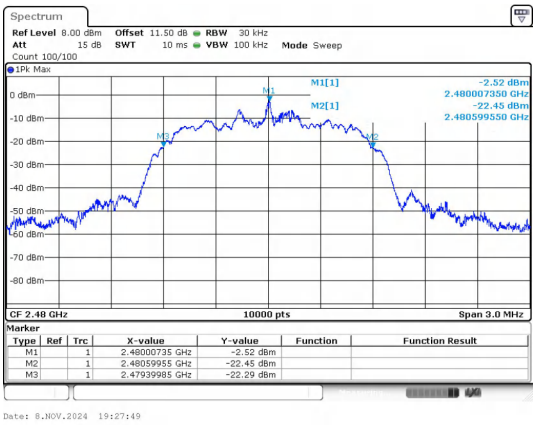
GFSK_DH5_Channel 78



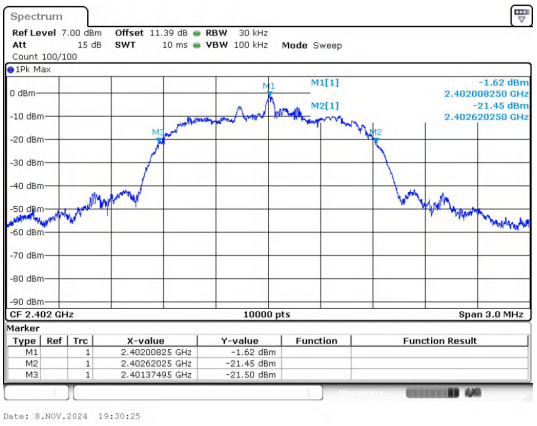
π/4DQPSK_2-DH5_Channel 0



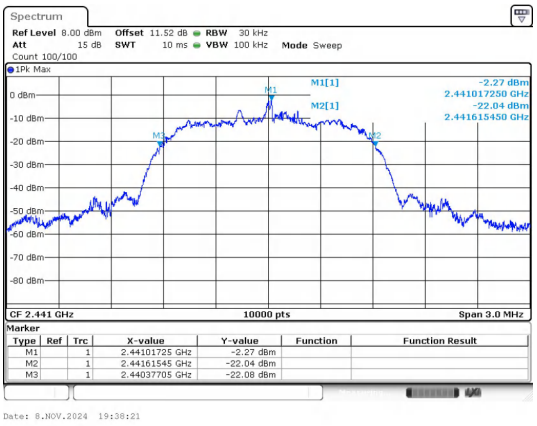
π/4DQPSK_2-DH5_Channel 39



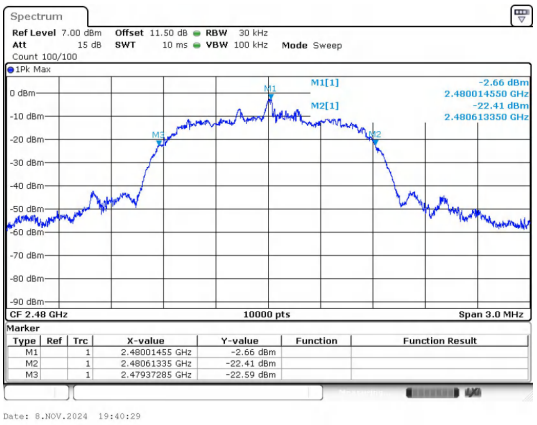
π/4DQPSK_2-DH5_Channel 78



8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



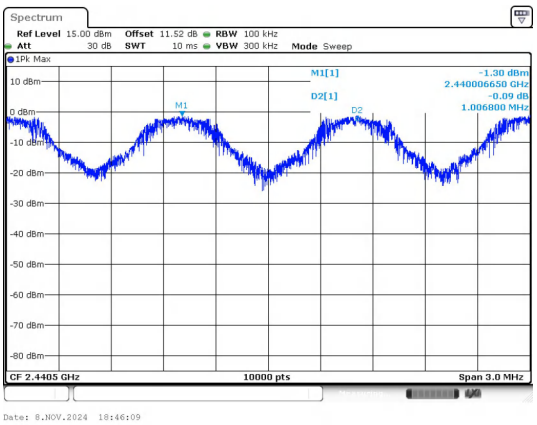
8DPSK_3-DH5_Channel 78

7) Carrier Frequencies Separation

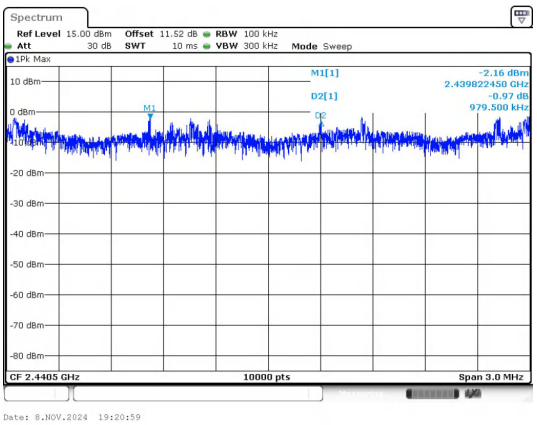
Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2440.0066	2441.0134	1.0068	0.86	PASS
π/4DQPSK	2-DH5	2439.8225	2440.802	0.9795	0.8	PASS
8DPSK	3-DH5	2439.9734	2440.9711	0.9978	0.833	PASS

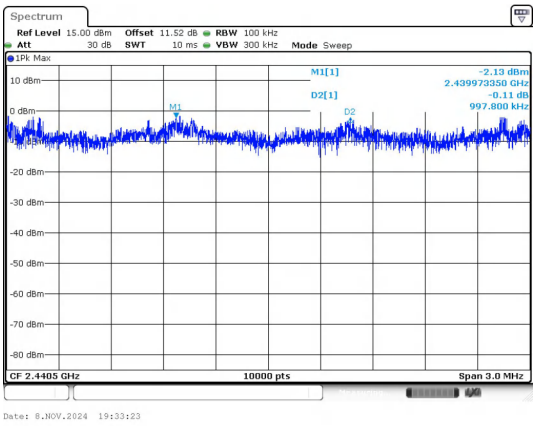
Test Graphs



GFSK



π/4DQPSK



8DPSK

8) Conducted Out Of Band Emission

Test Result

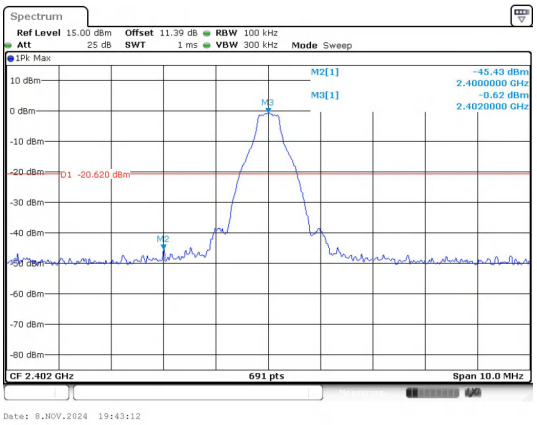
Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2400.00	-45.430	-20.62	-24.810	PASS
			4803.85	-47.250	-20.62	-26.630	PASS
		39	2363.45	-49.677	-21.03	-28.647	PASS
		78	2483.50	-49.730	-21.48	-28.250	PASS
			4960.33	-49.740	-21.48	-28.260	PASS
π/4DQPSK	2-DH5	0	2400.00	-46.330	-20.54	-25.790	PASS
			9608.08	-48.960	-20.54	-28.420	PASS
		39	9763.72	-49.681	-21.04	-28.641	PASS
		78	2483.50	-48.490	-21.56	-26.930	PASS
			2558.21	-50.881	-21.56	-29.321	PASS
8DPSK	3-DH5	0	2400.00	-46.080	-20.89	-25.190	PASS
			9608.08	-47.953	-20.89	-27.063	PASS
		39	9763.72	-50.552	-21.51	-29.042	PASS
		78	2483.50	-48.900	-21.73	-27.170	PASS
			6183.02	-53.033	-21.73	-31.303	PASS

Hopping

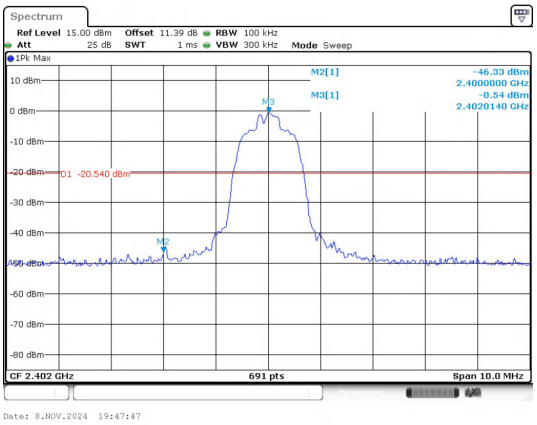
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2397.25	-46.283	-20.62	-25.663	PASS
			2400.00	-48.560	-20.62	-27.940	PASS
			2483.50	-47.630	-21.47	-26.160	PASS
π/4DQPSK	2-DH5		2397.89	-47.798	-22.37	-25.428	PASS
			2400.00	-49.420	-22.37	-27.050	PASS
			2483.50	-49.460	-24.23	-25.230	PASS
8DPSK	3-DH5		2398.99	-47.258	-21.5	-25.758	PASS
			2400.00	-49.490	-21.5	-27.990	PASS
			2483.50	-49.560	-23.0	-26.560	PASS

Test Graphs



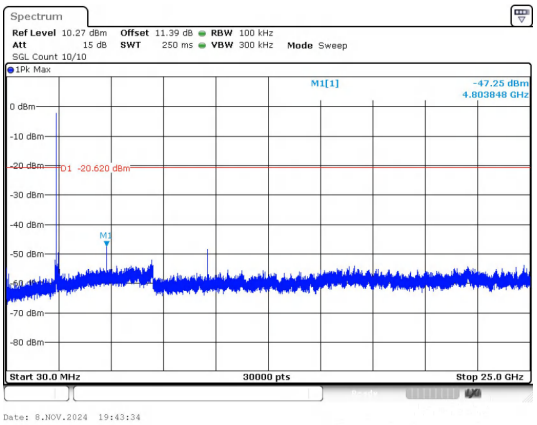
Out Of Band Emission

GFSK_DH5_Channel 0



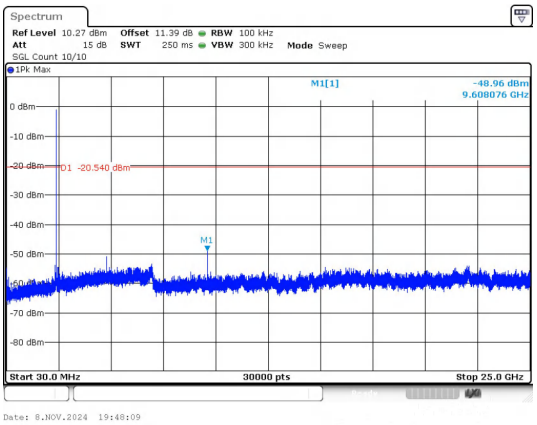
Out Of Band Emission

π/4DQPSK_2-DH5_Channel 0



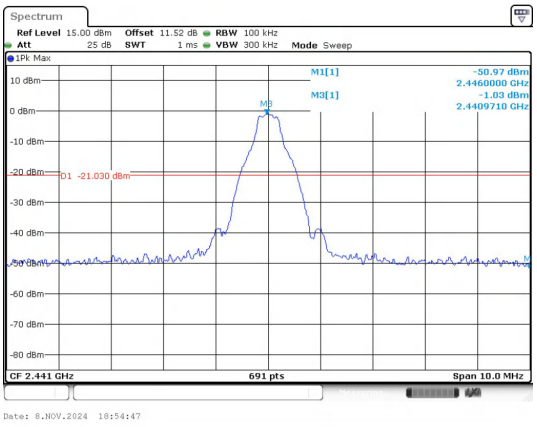
30.0 MHz - 25000.0 MHz

GFSK_DH5_Channel 0



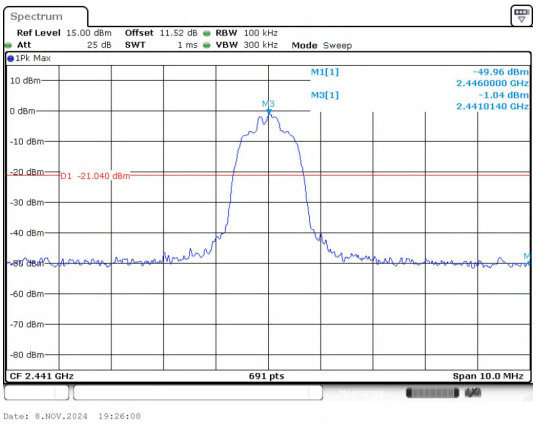
30.0 MHz - 25000.0 MHz

π/4DQPSK_2-DH5_Channel 0



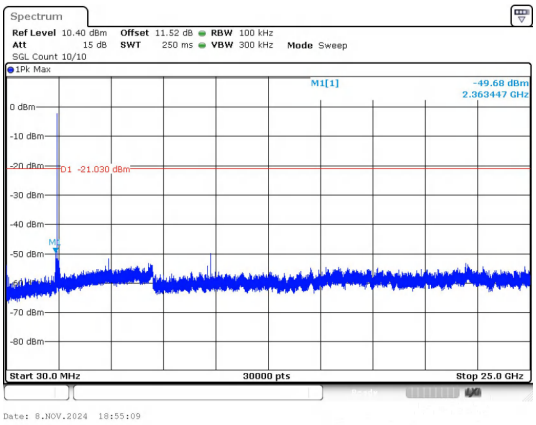
Out Of Band Emission

GFSK_DH5_Channel 39



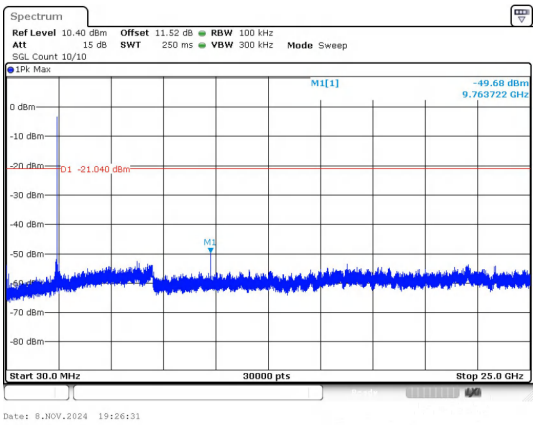
Out Of Band Emission

π/4DQPSK_2-DH5_Channel 39



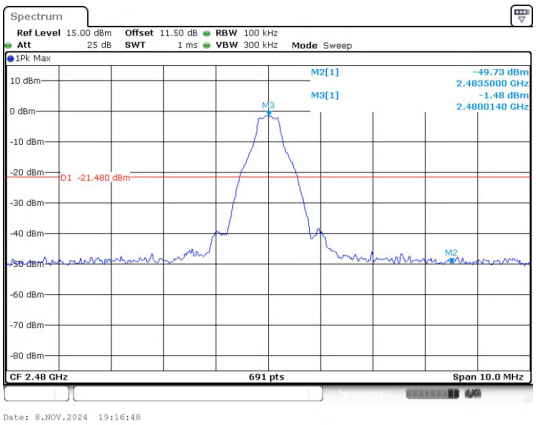
30.0 MHz - 25000.0 MHz

GFSK_DH5_Channel 39



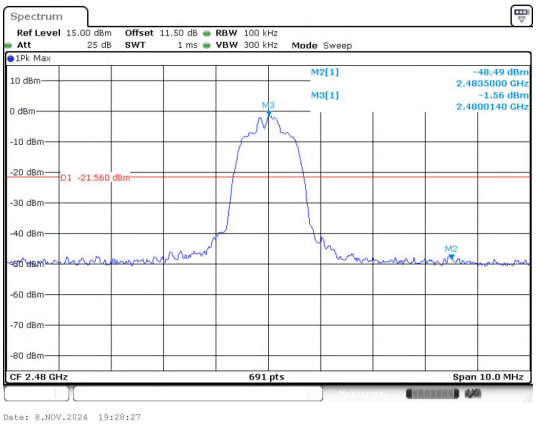
30.0 MHz - 25000.0 MHz

π/4DQPSK_2-DH5_Channel 39



Out Of Band Emission

GFSK_DH5_Channel 78



Out Of Band Emission

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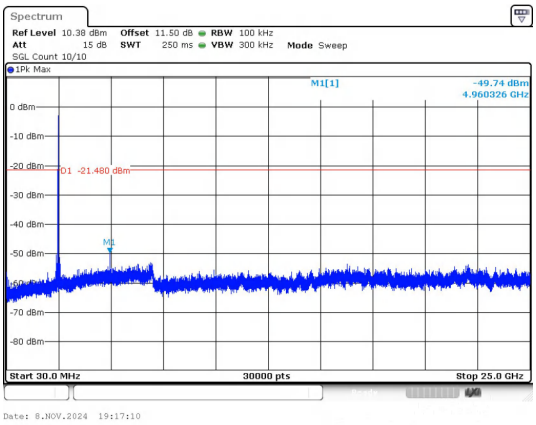
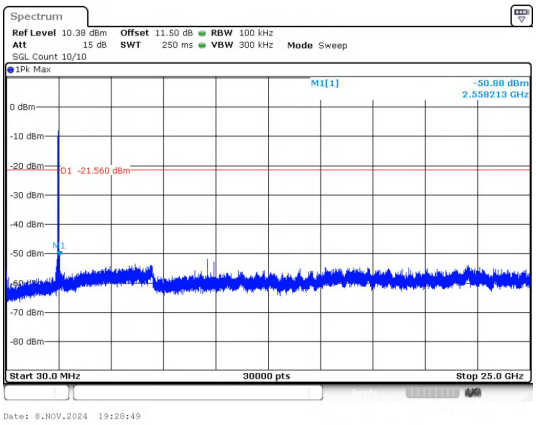


30.0 MHz - 25000.0 MHz

GFSK_DH5_Channel 78



30.0 MHz - 25000.0 MHz

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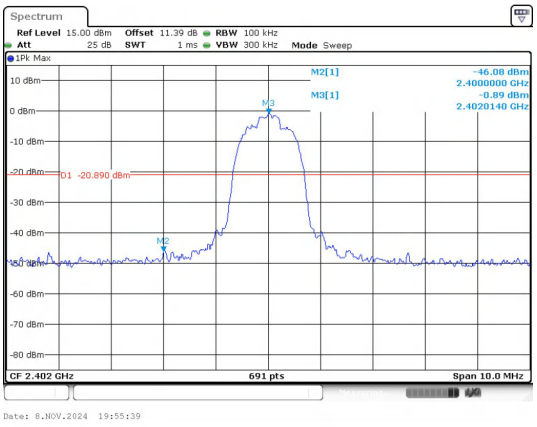
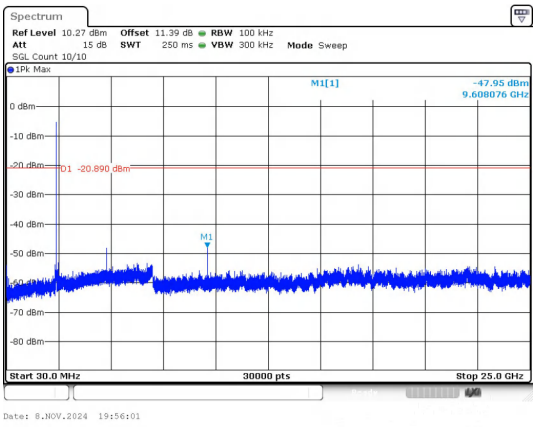


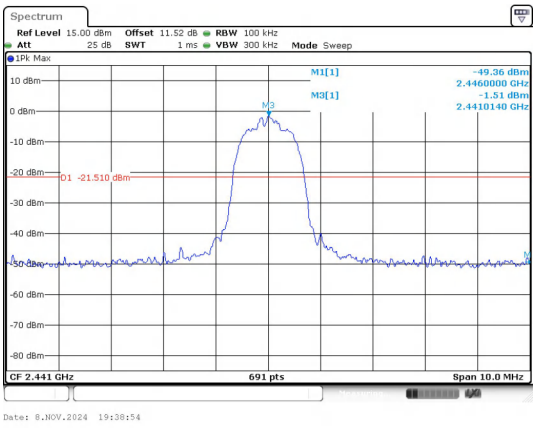
Out Of Band Emission

8DPSK_3-DH5_Channel 0



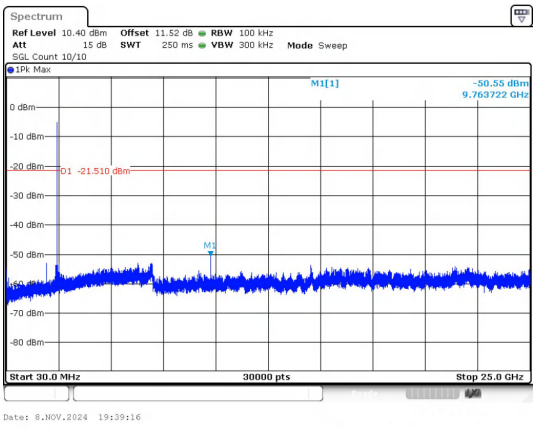
30.0 MHz - 25000.0 MHz

8DPSK_3-DH5_Channel 0



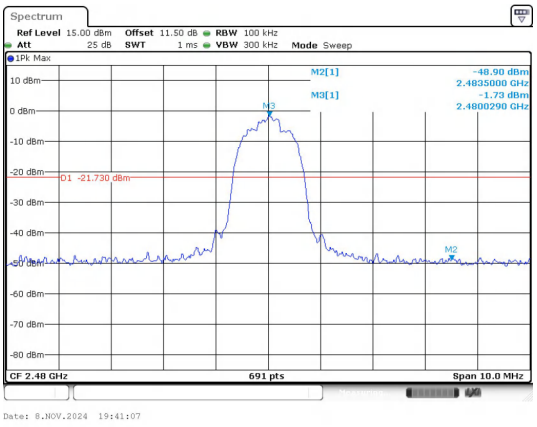
Out Of Band Emission

8DPSK_3-DH5_Channel 39



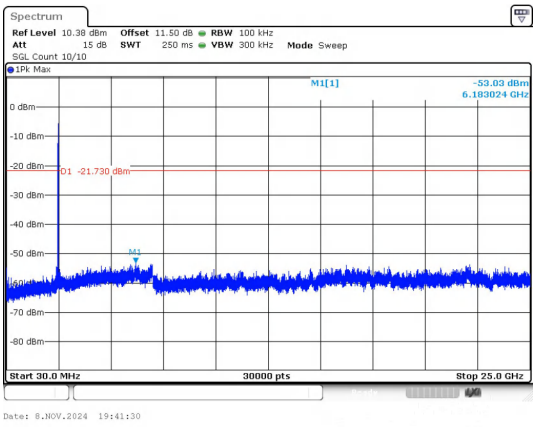
30.0 MHz - 25000.0 MHz

8DPSK_3-DH5_Channel 39



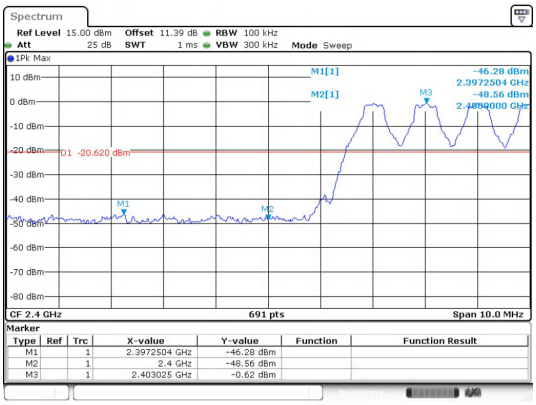
Out Of Band Emission

8DPSK_3-DH5_Channel 78



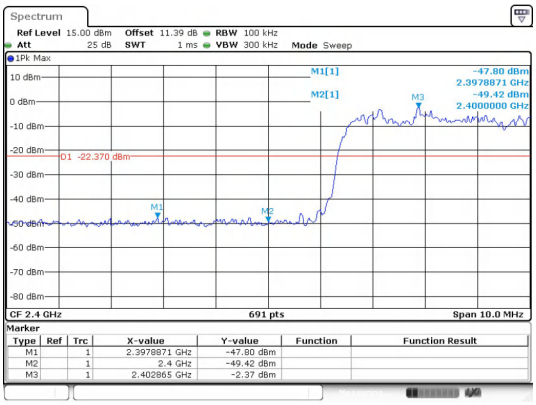
30.0 MHz - 25000.0 MHz

8DPSK_3-DH5_Channel 78



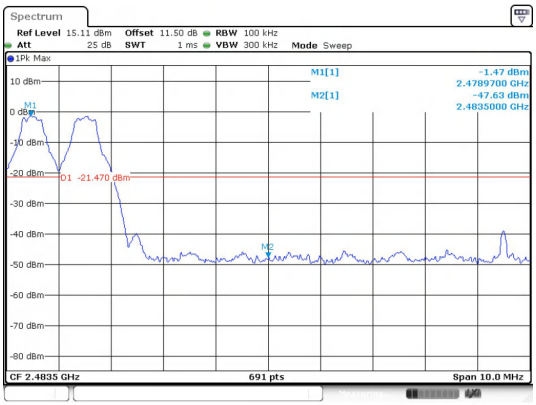
Out Of Band Emission(Left)

GFSK_DH5_Channel Hopping



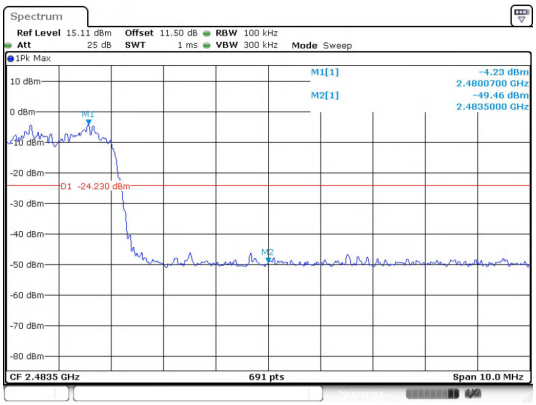
Out Of Band Emission(Left)

π/4DQPSK_2-DH5_Channel Hopping



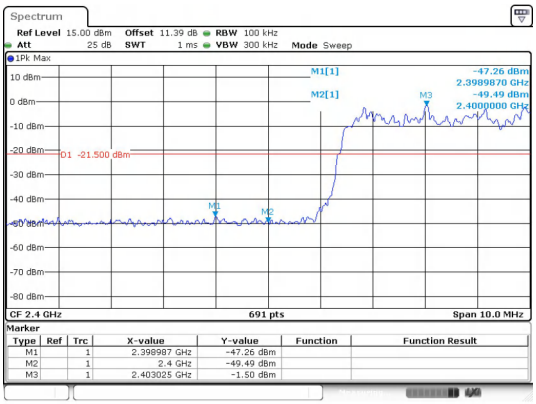
Out Of Band Emission(Right)

GFSK_DH5_Channel Hopping



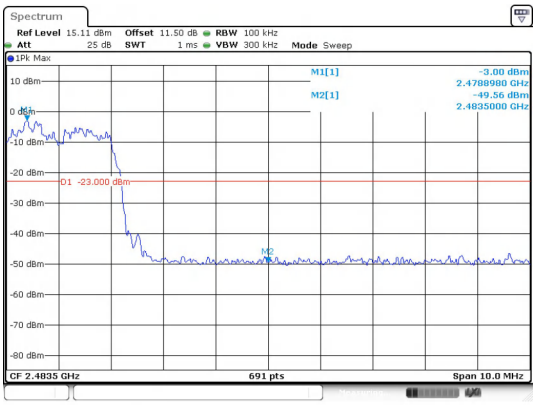
Out Of Band Emission(Right)

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-----