Appendix Report

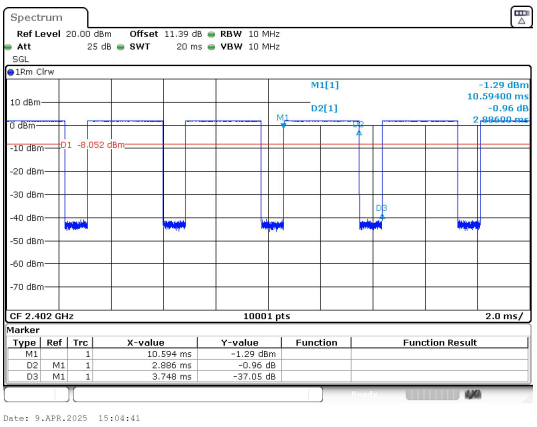
Project No.:	CISR250402050
Test Engineer:	James Wang
Supervised by:	Rory Huang

1) Duty Cycle

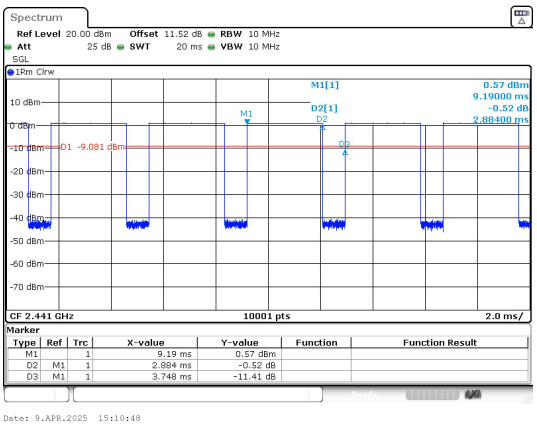
Test Result

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	2.884	3.748	76.95	0.7695	1.1379	0.3467
		78	2.884	3.748	76.95	0.7695	1.1379	0.3467

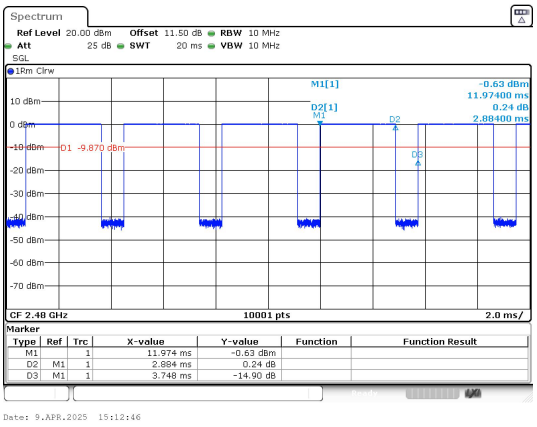
Test Graphs



GFSK(DH5)_Channel 0



GFSK(DH5)_Channel 39



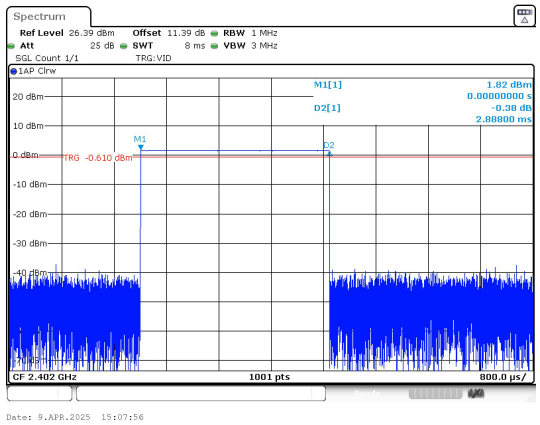
GFSK(DH5)_Channel 78

2) Dwell Time

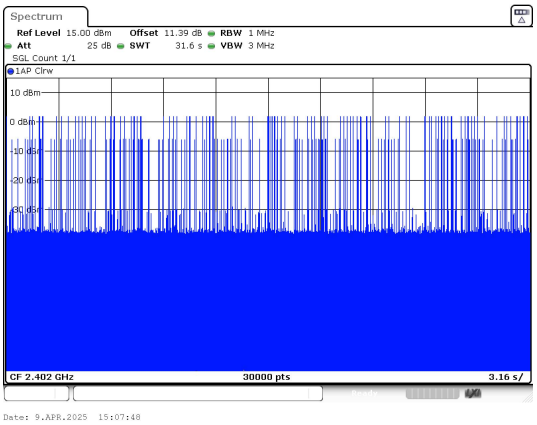
Test Result

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	105	303.24	< 400	PASS

Test Graphs



Pulse Width
GFSK_DH5



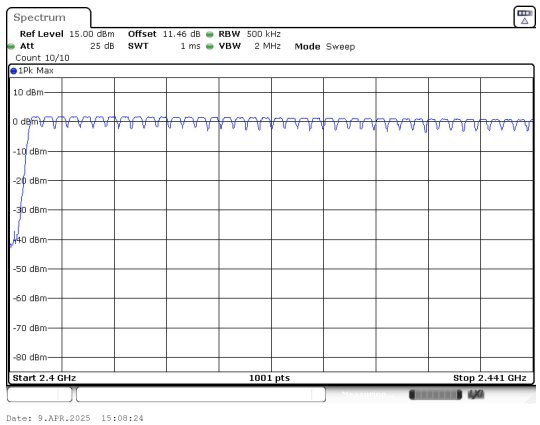
Number of Pulses in 31.6 seconds
GFSK_DH5

3) Number Of Hopping Channel

Test Result

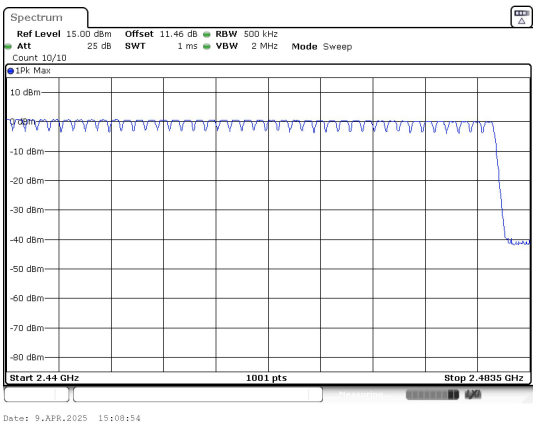
Modulation	Packet	Number of Hopping Channel	Limit	Result
GFSK	DH5	79	15	PASS

Test Graphs



Low End Spectrum Channel Hopping Plot

GFSK



High End Spectrum Channel Hopping Plot

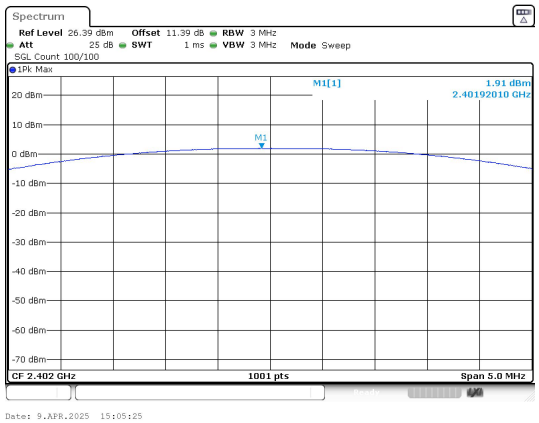
GFSK

4) Conducted Output Power

Test Result

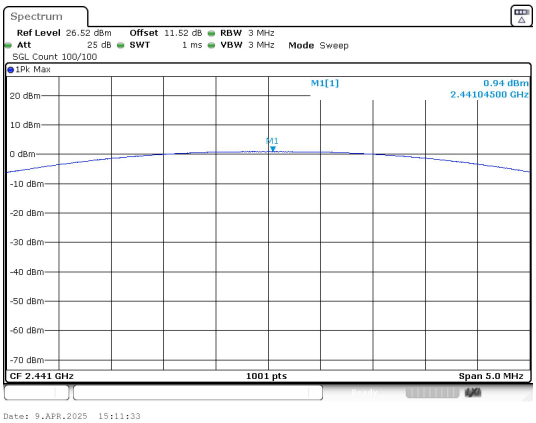
Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
GFSK	DH5	0	1.91	1.55	≤30	PASS
		39	0.94	1.24		PASS
		78	0.23	1.05		PASS

Test Graphs



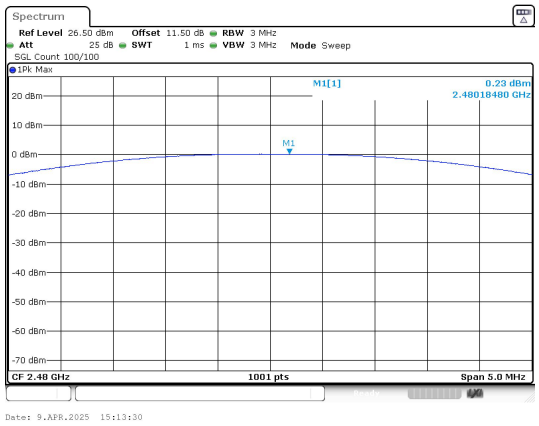
Peak Output Power

GFSK_Channel 0



Peak Output Power

GFSK_Channel 39



Peak Output Power

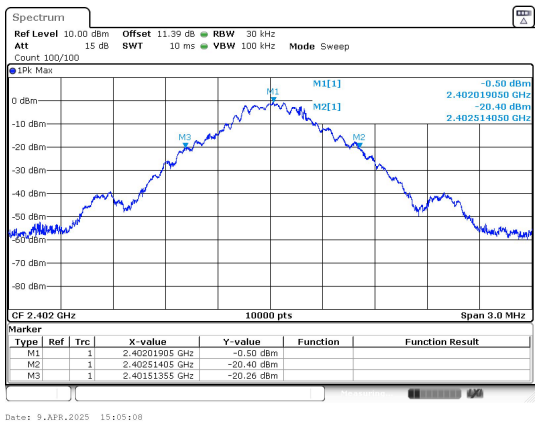
GFSK_Channel 78

5) 20dB Bandwidth

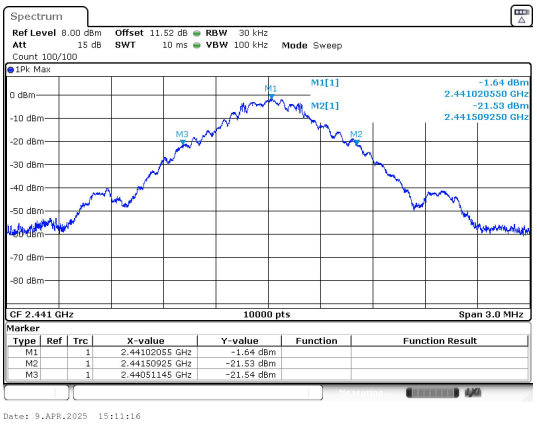
Test Result

Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	1.0
	39	2441 MHz	1.0
	78	2480 MHz	1.0

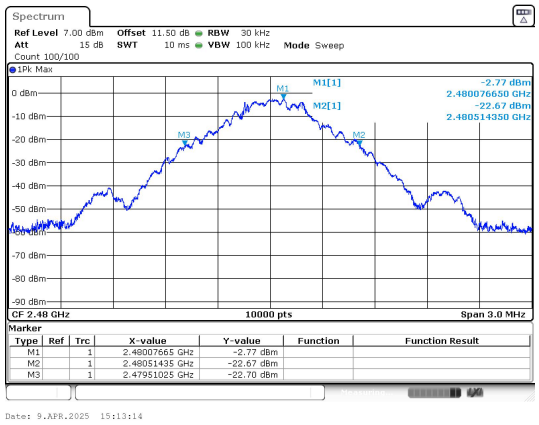
Test Graphs



GFSK_DH5_Channel 0



GFSK_DH5_Channel 39



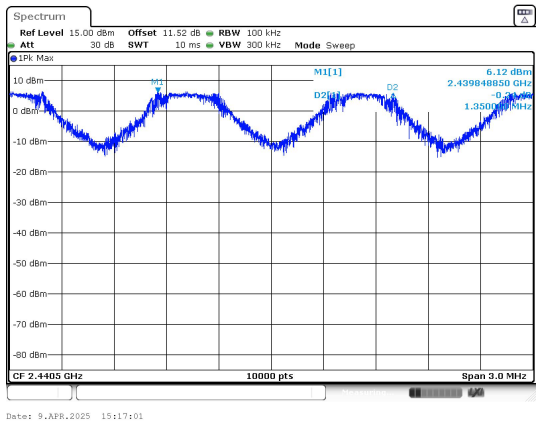
GFSK_DH5_Channel 78

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	2439.8488	2441.1989	1.3500	1.0	PASS

Test Graphs



GFSK

7) Conducted Out Of Band Emission

Test Result

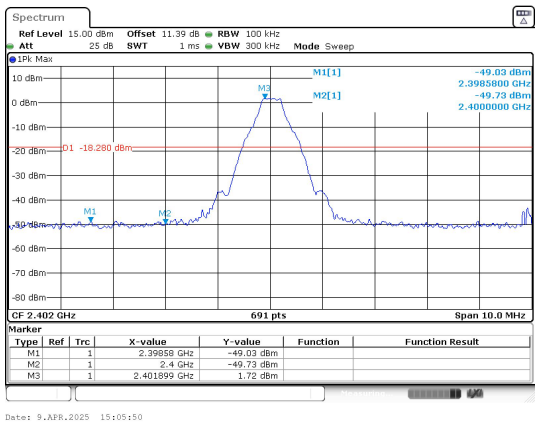
Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2398.58	-49.027	-18.28	-30.747	PASS
			2400.00	-49.730	-18.28	-31.450	PASS
			9608.10	-43.725	-18.28	-25.445	PASS
		39	9763.72	-42.775	-19.35	-23.425	PASS
		78	2483.50	-49.130	-19.89	-29.240	PASS
			9920.20	-39.788	-19.89	-19.898	PASS

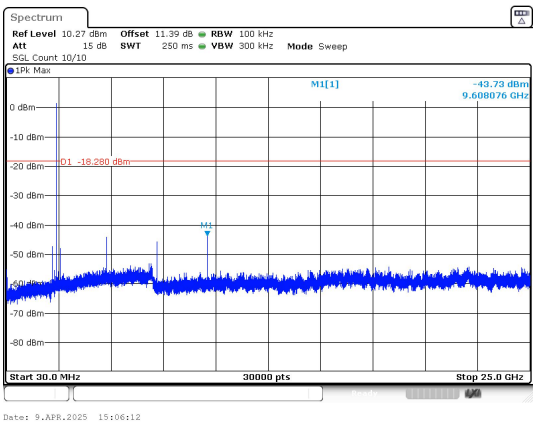
Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2398.90	-48.241	-18.67	-29.571	PASS
			2400.00	-49.740	-18.67	-31.070	PASS
			2483.50	-50.720	-20.05	-30.670	PASS

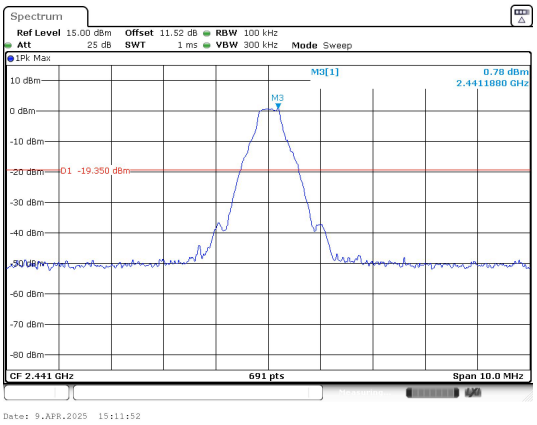
Test Graphs



Out Of Band Emission
GFSK_DH5_Channel 0

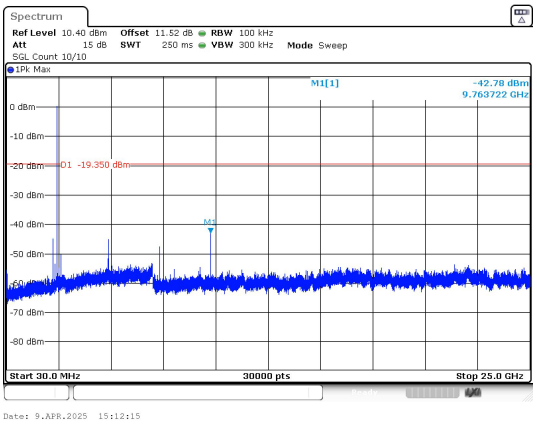


30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 0



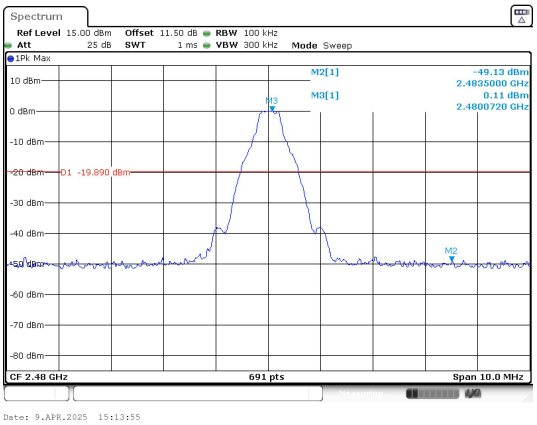
Out Of Band Emission

GFSK_DH5_Channel 39



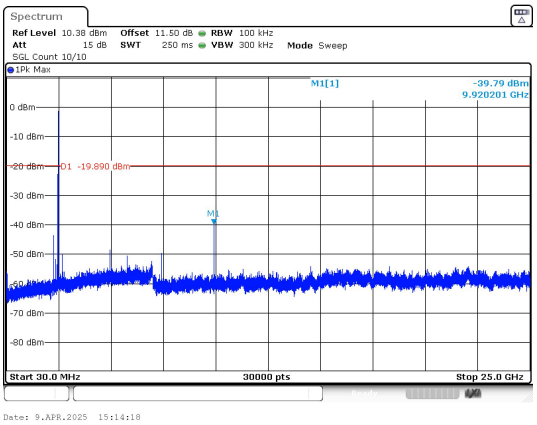
30.0 MHz - 25000.0 MHz

GFSK_DH5_Channel 39



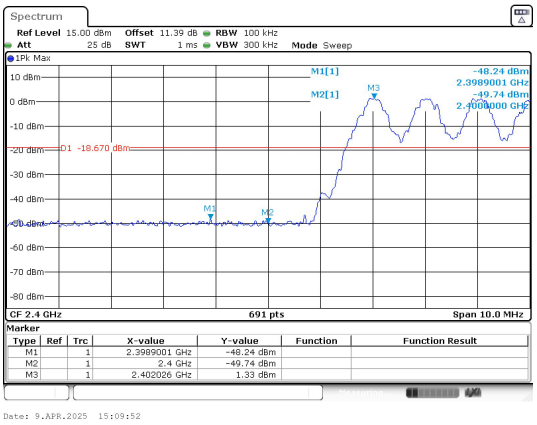
Out Of Band Emission

GFSK_DH5_Channel 78



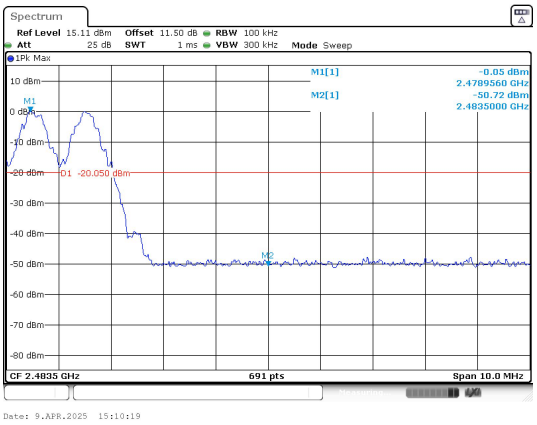
30.0 MHz - 25000.0 MHz

GFSK_DH5_Channel 78



Out Of Band Emission(Left)

GFSK_DH5_Channel Hopping



Out Of Band Emission(Right)

GFSK_DH5_Channel Hopping

------End of the report-----