

Appendix A

Report No.:	CISRR24081007301
FCC ID:	2BKFO-JHY-81
Product Name:	Wireless Bluetooth earphones
Model No.:	JHY-81
Test Engineer:	Mark Fu
Supervised by:	Rory Huang

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	0.35
		39	2.886	3.748	77.00	0.7700	1.1351	0.35
		78	2.886	3.748	77.00	0.7700	1.1351	0.35
$\pi/4$ DQPSK	2-DH5	0	2.890	3.748	77.11	0.7711	1.1289	0.35
		39	2.890	3.748	77.11	0.7711	1.1289	0.35
		78	2.892	3.748	77.16	0.7716	1.1261	0.35
8DPSK	3-DH5	0	2.894	3.748	77.21	0.7721	1.1233	0.35
		39	2.892	3.748	77.16	0.7716	1.1261	0.35
		78	2.894	3.748	77.21	0.7721	1.1233	0.35

Spectrum

Ref Level 20.00 dBm Offset 11.39 dB RBW 10 MHz
 Att 25 dB SWT 20 ms VBW 10 MHz
 SGL

● 1Rm Clrw

10 dBm
 0 dBm
 -10 dBm
 -20 dBm
 -30 dBm
 -40 dBm
 -50 dBm
 -60 dBm
 -70 dBm

M1 0.95 dBm 9.65400 ms -0.26 dB
 D2 2.88600 ms
 D3 3.74800 ms

01 -7.192 dBm

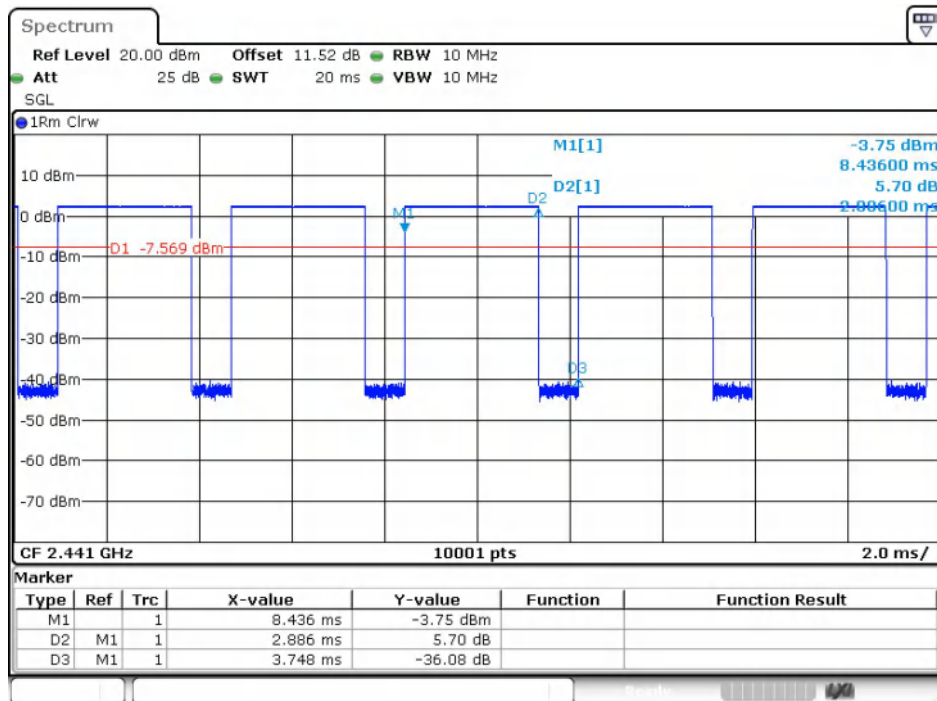
CF 2.402 GHz 10001 pts 2.0 ms/

Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	9.654 ms	0.95 dBm		
D2	M1	1	2.886 ms	-0.26 dB		
D3	M1	1	3.748 ms	-32.62 dB		

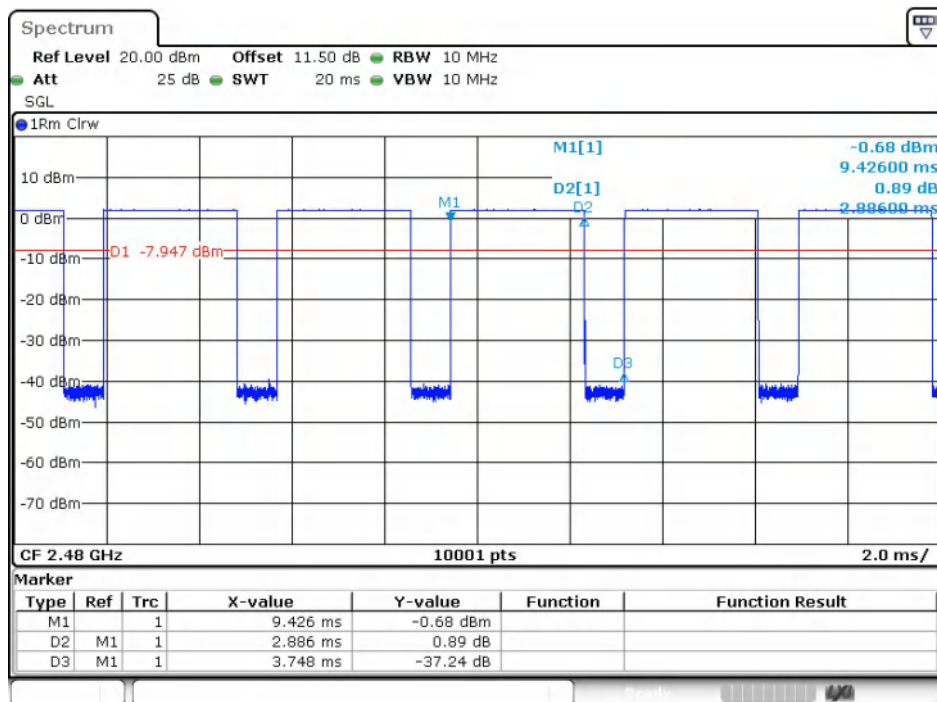
Date: 12.AUG.2024 15:29:13

GFSK(DH5)_Channel 0



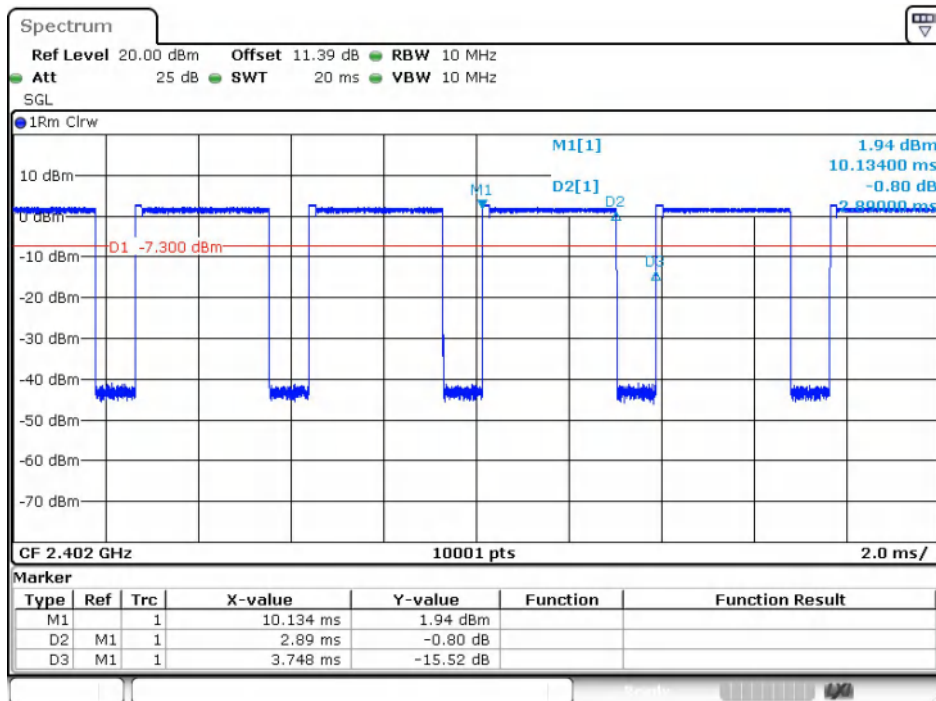
Date: 12.AUG.2024 15:36:12

GFSK(DH5)_Channel 39



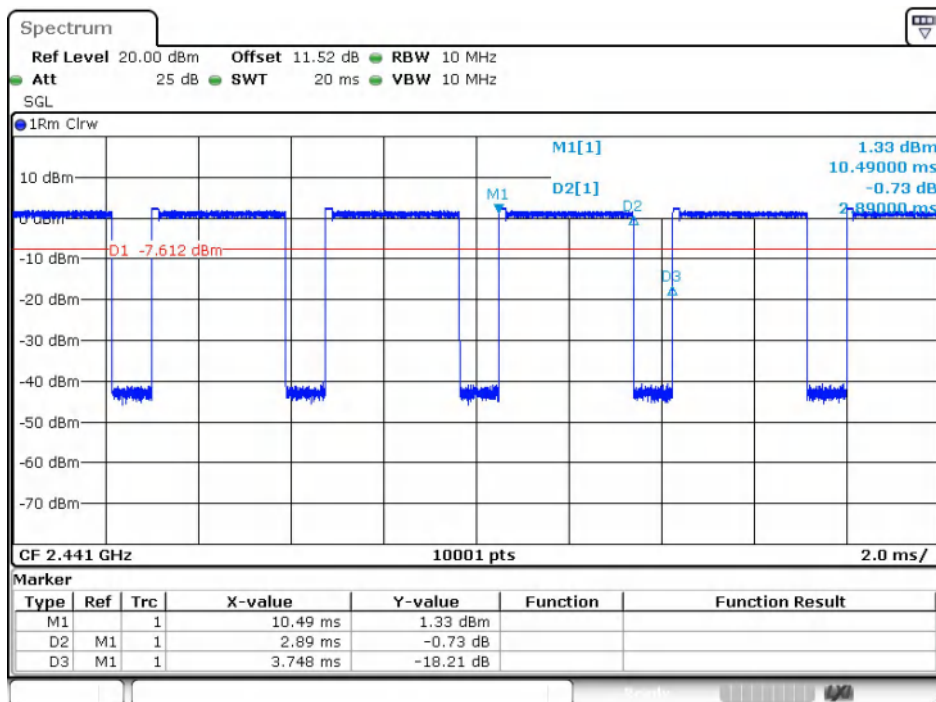
Date: 12.AUG.2024 15:38:23

GFSK(DH5)_Channel 78



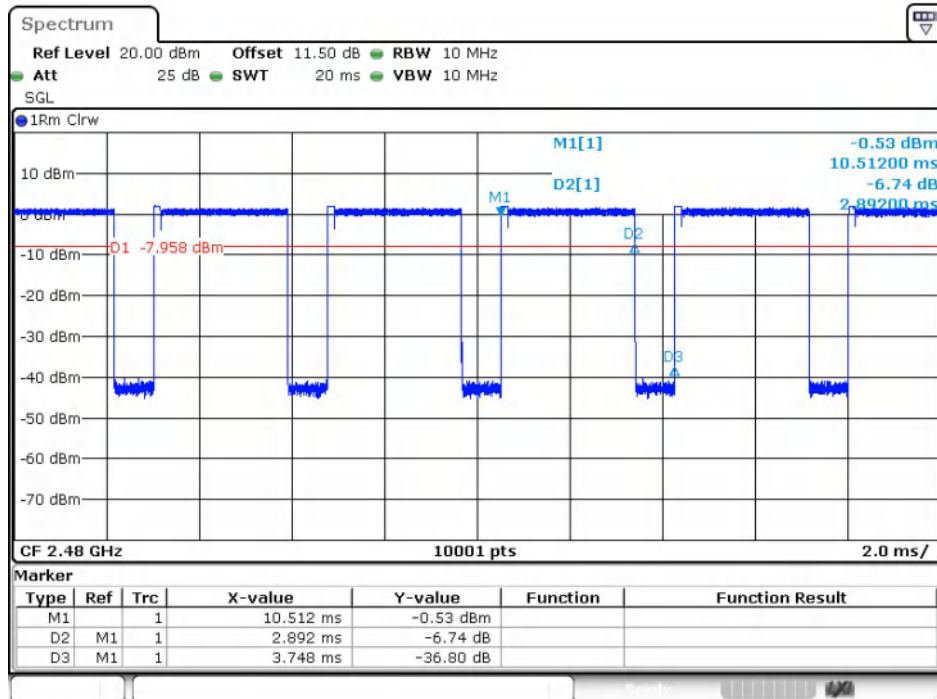
Date: 12.AUG.2024 15:43:50

$\pi/4$ QPSK(2-DH5)_Channel 0



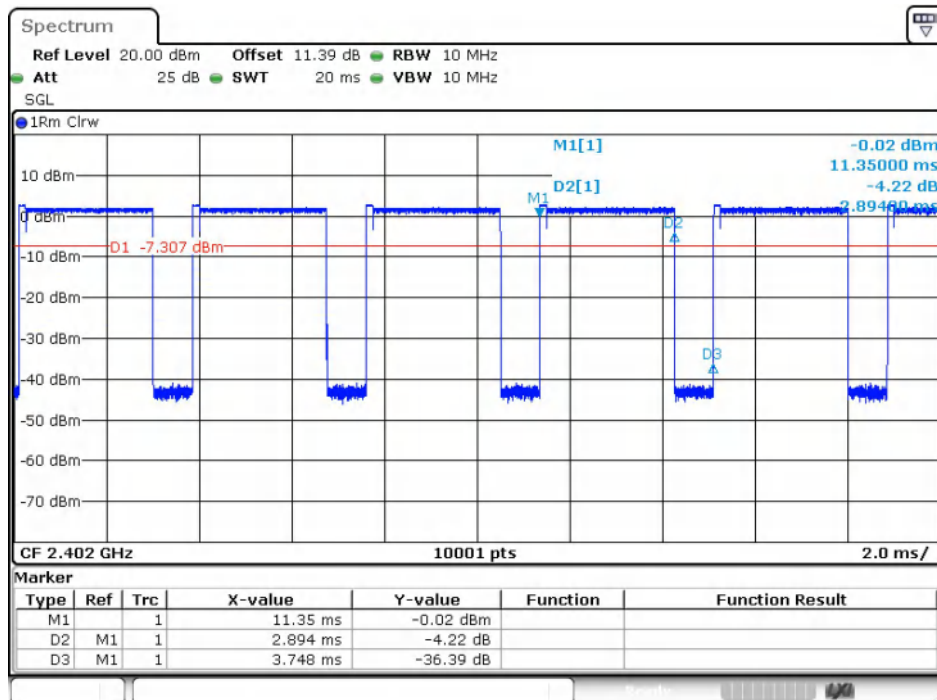
Date: 12.AUG.2024 15:50:35

$\pi/4$ QPSK(2-DH5)_Channel 39



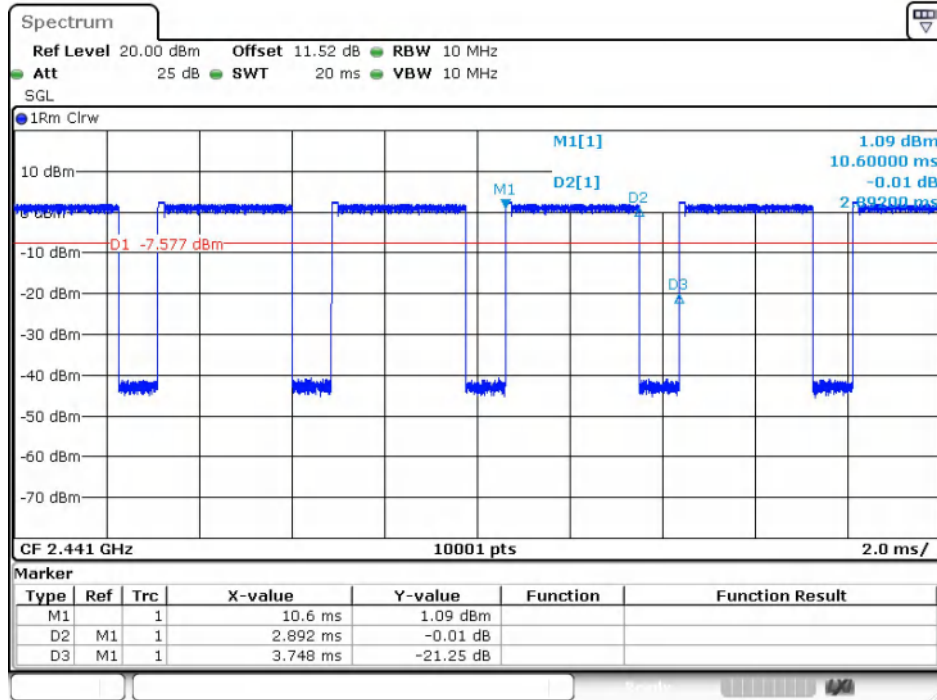
Date: 12.AUG.2024 15:53:21

$\pi/4$ DQPSK(2-DH5)_Channel 78



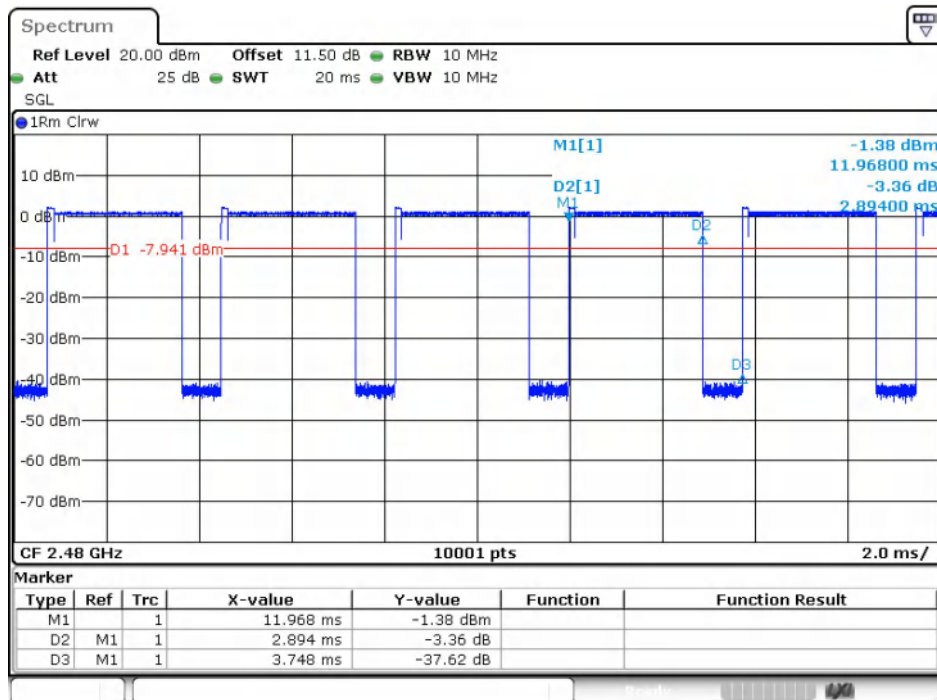
Date: 12.AUG.2024 16:01:04

8DPSK(3-DH5)_Channel 0



Date: 12.AUG.2024 16:08:36

8DPSK(3-DH5)_Channel 39



Date: 12.AUG.2024 16:11:21

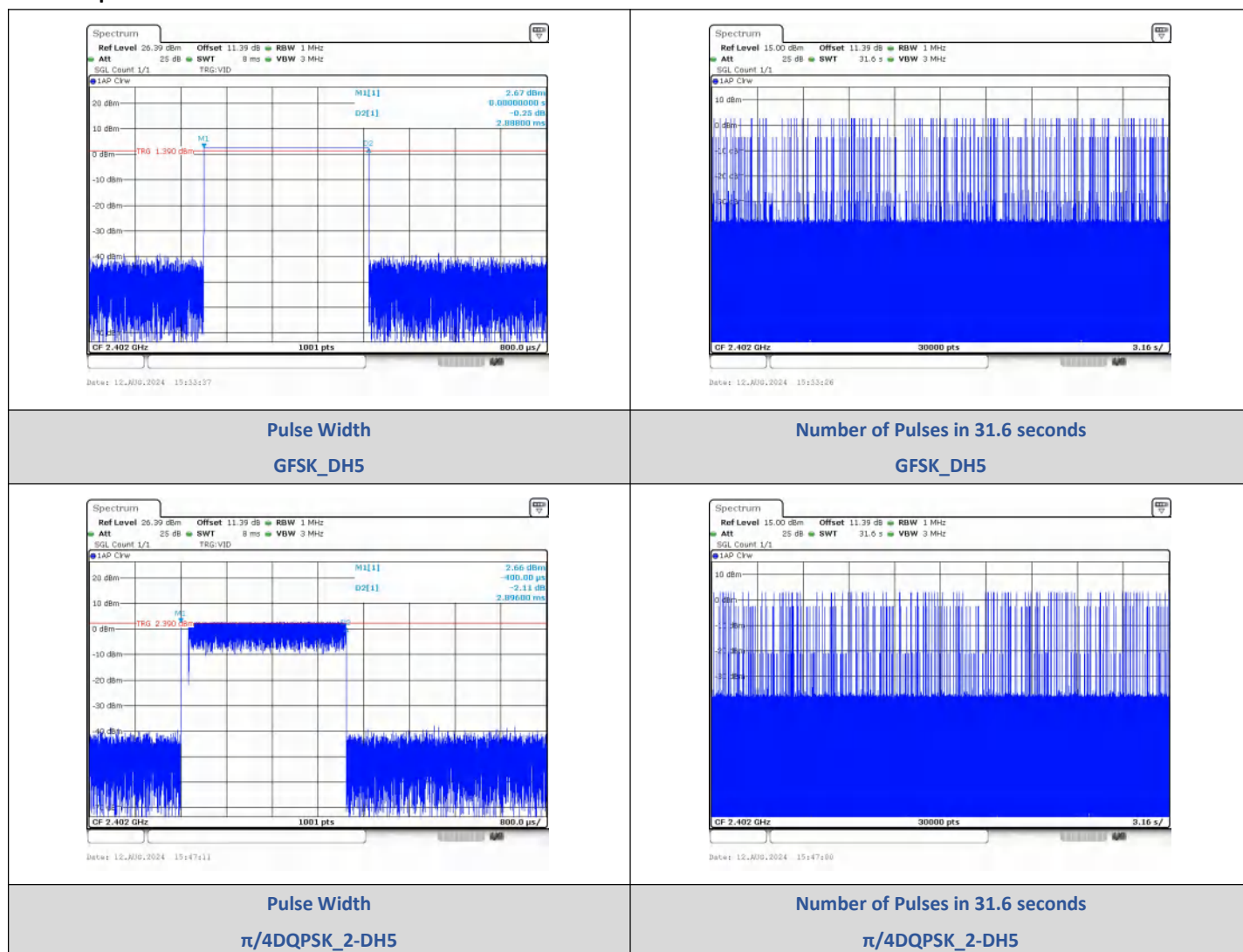
8DPSK(3-DH5)_Channel 78

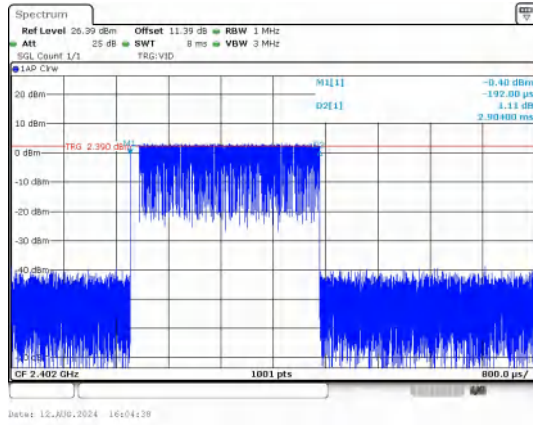
2) Dwell Time

Test Result

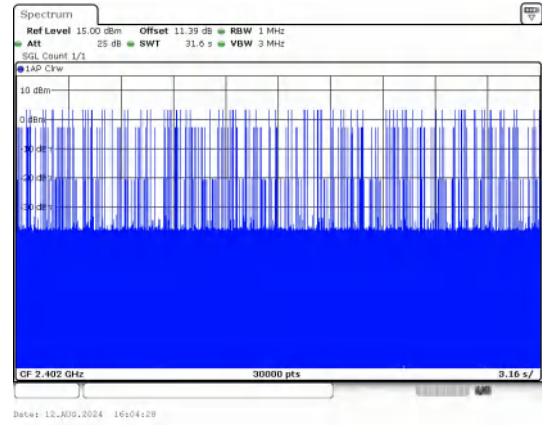
Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH5	CH0 (2402MHz)	2.888	106	306.13	< 400	PASS
$\pi/4$ DQPSK	2-DH5		2.896	109	315.66		PASS
8DPSK	3-DH5		2.904	91	264.26		PASS

Test Graphs





Pulse Width
8DPSK_3-DH5



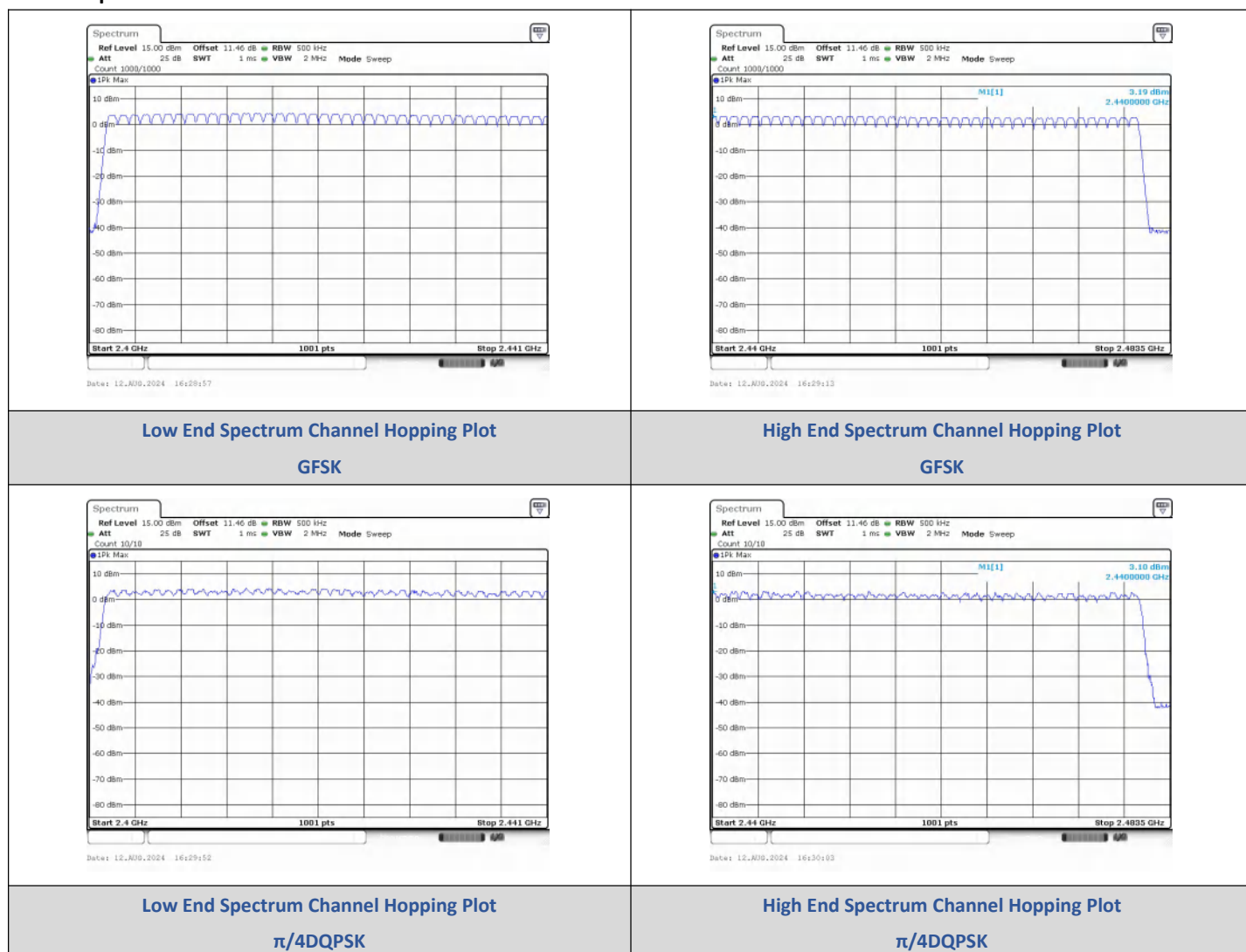
Number of Pulses in 31.6 seconds
8DPSK_3-DH5

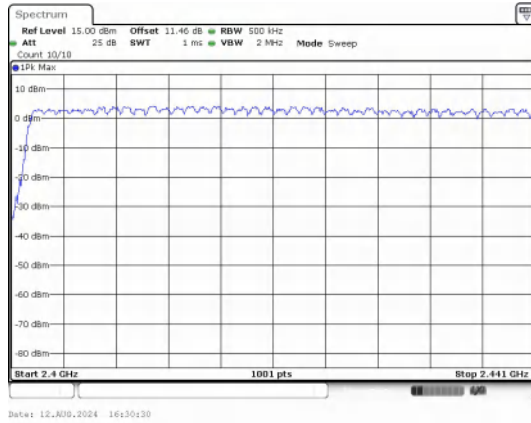
3) Number Of Hopping Channel

Test Result

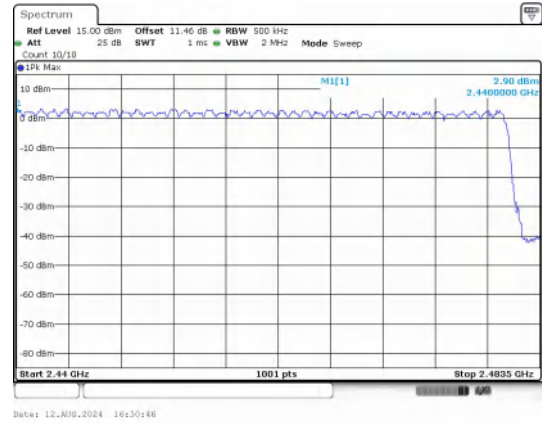
Modulation	Packet	Number of Hopping Channel	Limit	Result
GFSK	DH5	79	15	PASS
$\pi/4$ DQPSK	2-DH5	79	15	PASS
8DPSK	3-DH5	79	15	PASS

Test Graphs





Low End Spectrum Channel Hopping Plot
8DPSK



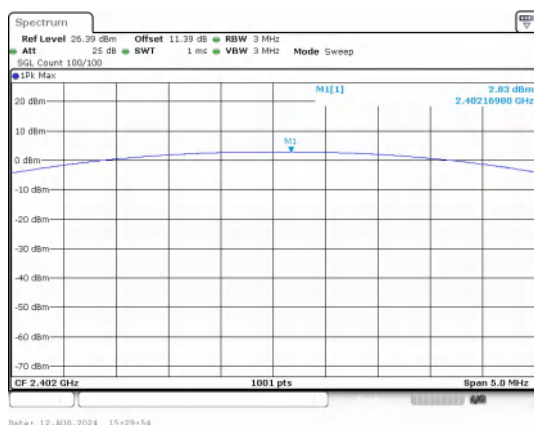
High End Spectrum Channel Hopping Plot
8DPSK

4) Conducted Peak Output Power

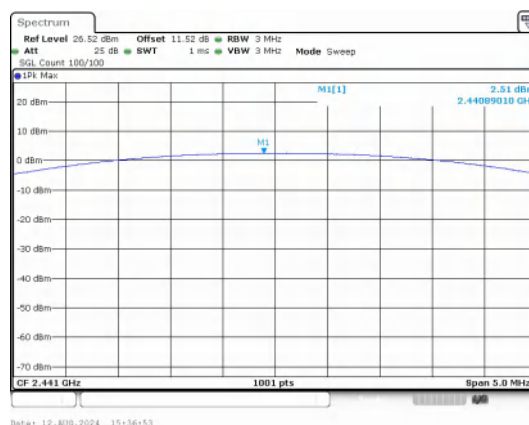
Test Result

Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
GFSK	DH5	0	2.83	1.918	≤30	PASS
		39	2.51	1.781		PASS
		78	2.14	1.636		PASS
$\pi/4$ DQPSK	2-DH5	0	3.27	2.124	≤20.97	PASS
		39	3.12	2.051		PASS
		78	2.79	1.900		PASS
8DPSK	3-DH5	0	3.43	2.204		PASS
		39	3.35	2.165		PASS
		78	3.02	2.003		PASS

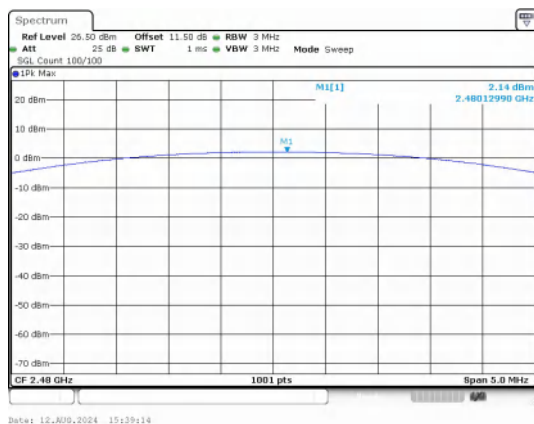
Test Graphs



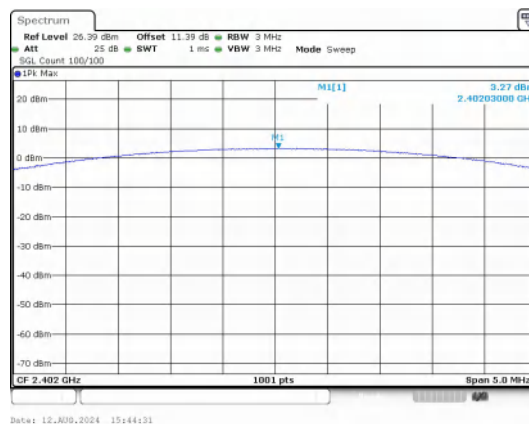
Peak Output Power
GFSK_Channel 0



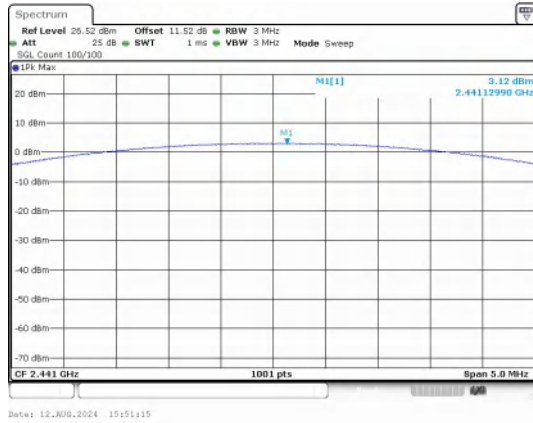
Peak Output Power
GFSK_Channel 39



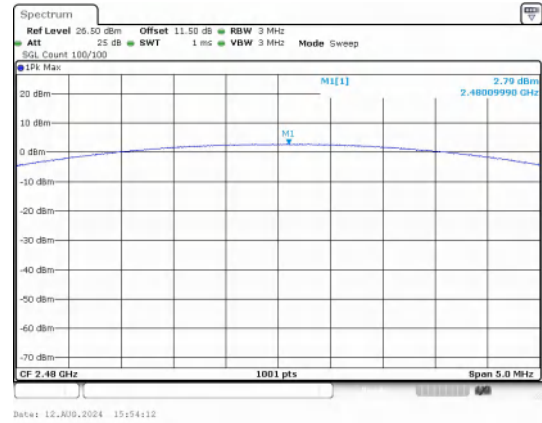
Peak Output Power
GFSK_Channel 78



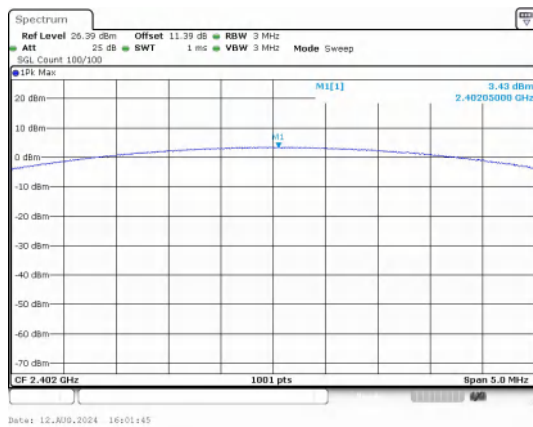
Peak Output Power
 $\pi/4$ DQPSK_Channel 0



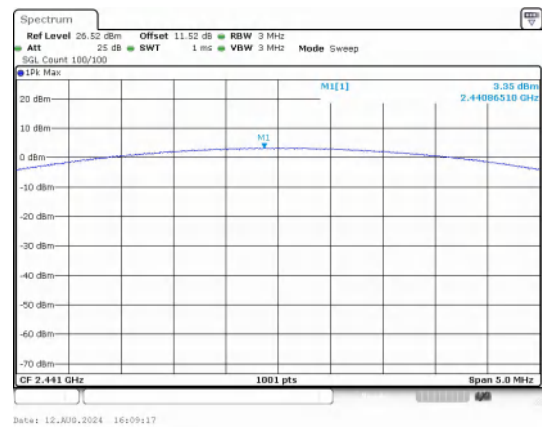
Peak Output Power
 $\pi/4$ DQPSK_Channel 39



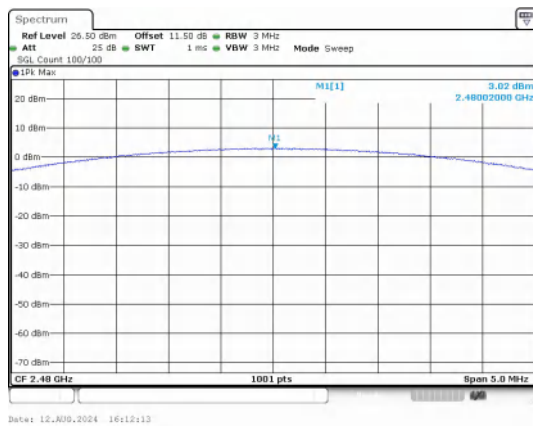
Peak Output Power
 $\pi/4$ DQPSK_Channel 78



Peak Output Power
8DPSK_Channel 0



Peak Output Power
8DPSK_Channel 39



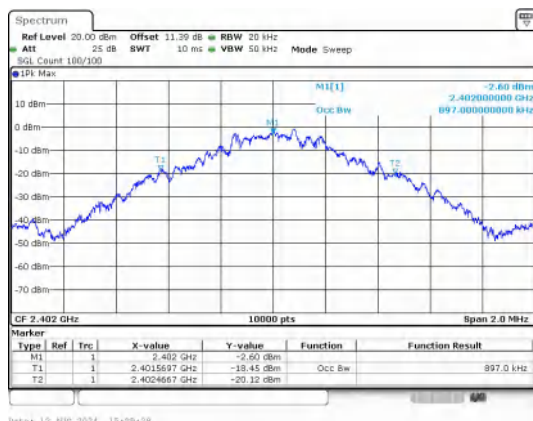
Peak Output Power
8DPSK_Channel 78

5) 99% Bandwidth

Test Result

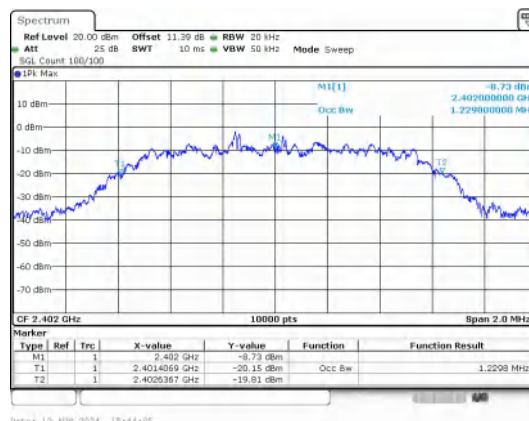
Modulation	Channel	Center Frequency (MHz)	99% BW (MHz)
GFSK	0	2402	0.89700
	39	2441	0.89780
	78	2480	0.88200
$\pi/4$ DQPSK	0	2402	1.2298
	39	2441	1.2150
	78	2480	1.2006
8DPSK	0	2402	1.2274
	39	2441	1.2150
	78	2480	1.2102

Test Graphs

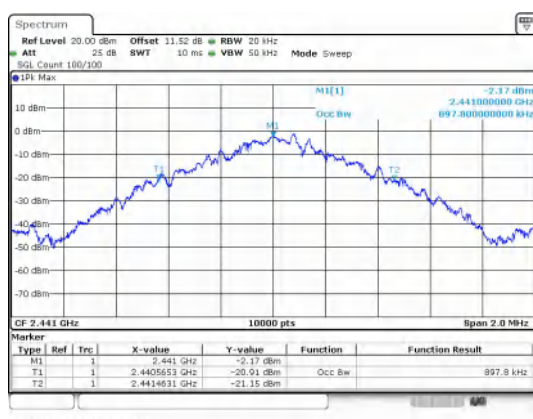


Date: 12.10.2024 15:13:29

GFSK_DH5_Channel 0

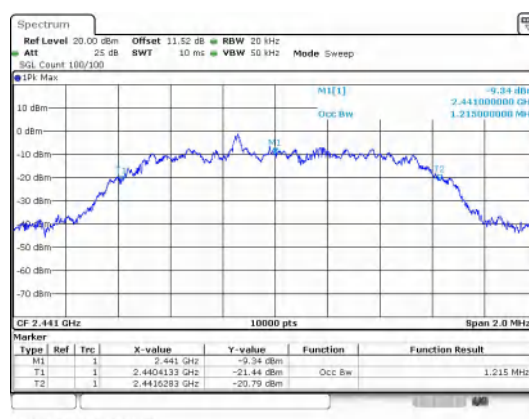


Date: 12.10.2024 15:14:05

 $\pi/4$ DQPSK_2-DH5_Channel 0


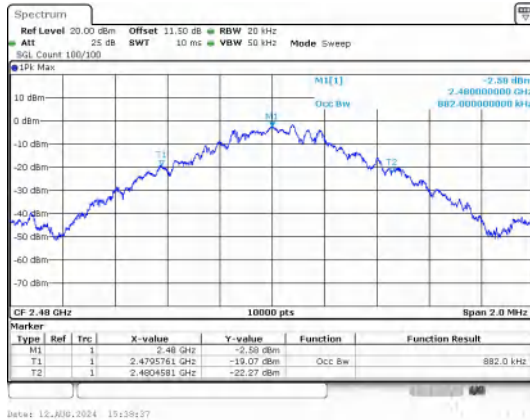
Date: 12.10.2024 15:13:27

GFSK_DH5_Channel 39

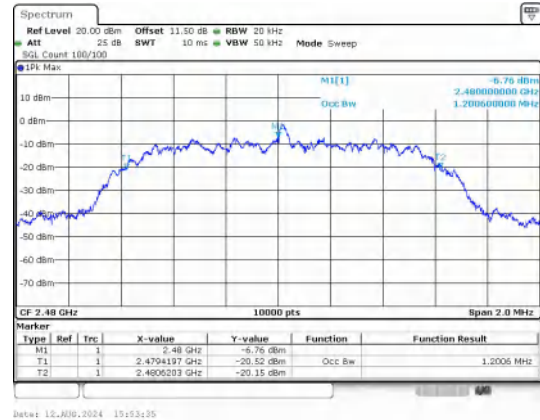


Date: 12.10.2024 15:15:49

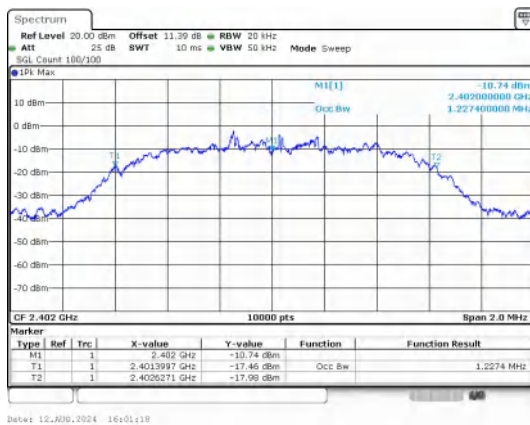
 $\pi/4$ DQPSK_2-DH5_Channel 39



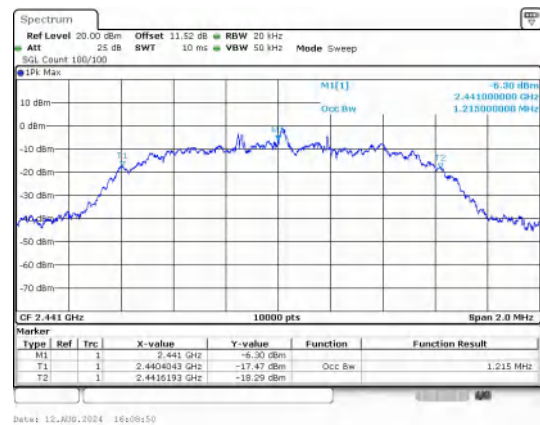
GFSK_DH5_Channel 78



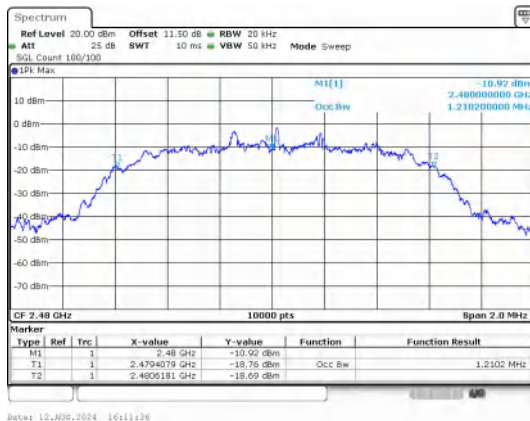
$\pi/4$ DQPSK_2-DH5_Channel 78



8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



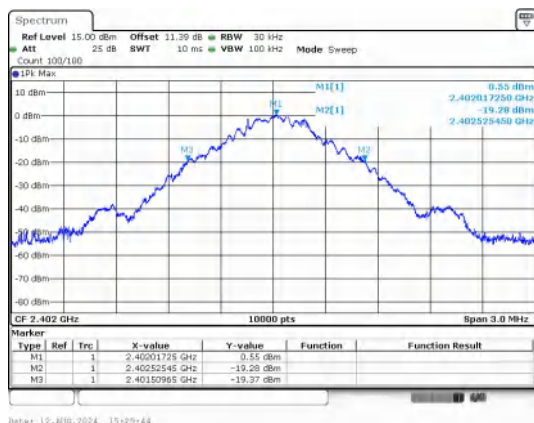
8DPSK_3-DH5_Channel 78

6) 20dB Bandwidth

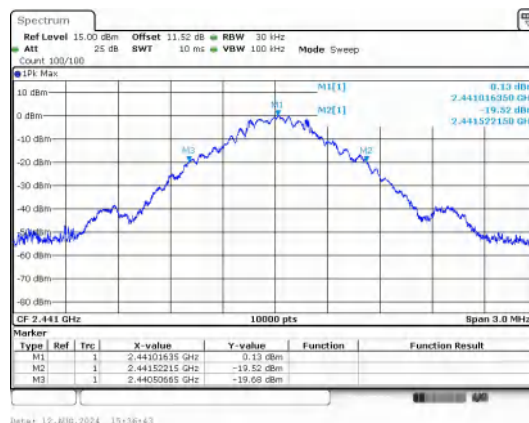
Test Result

Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	1.020
	39	2441 MHz	1.010
	78	2480 MHz	1.030
$\pi/4$ DQPSK	0	2402 MHz	1.310
	39	2441 MHz	1.320
	78	2480 MHz	1.310
8DPSK	0	2402 MHz	1.300
	39	2441 MHz	1.290
	78	2480 MHz	1.290

Test Graphs



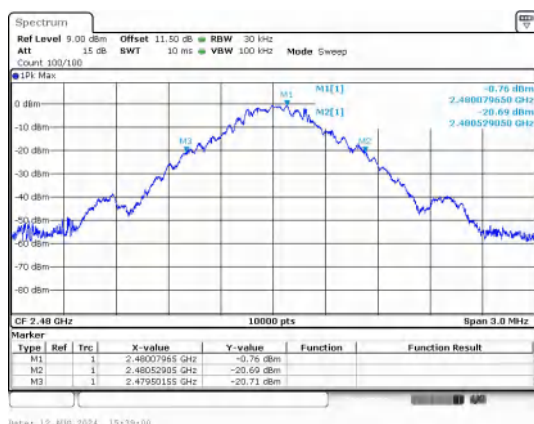
Date: 12/30/2024 15:13:44



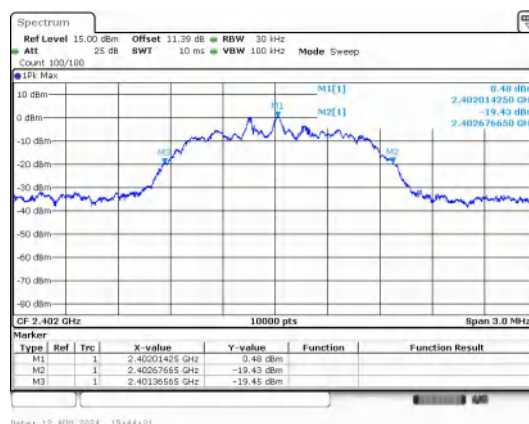
Date: 12/30/2024 15:13:43

GFSK_DH5_Channel 0

GFSK_DH5_Channel 39



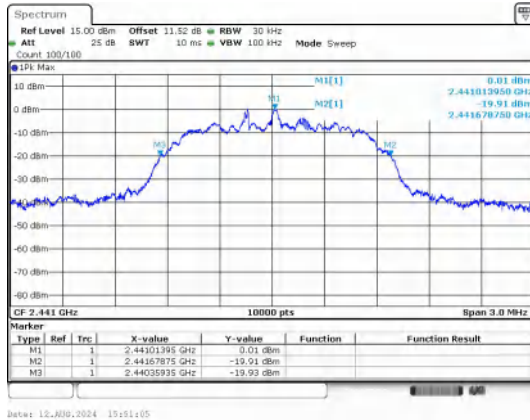
Date: 12/30/2024 15:13:40



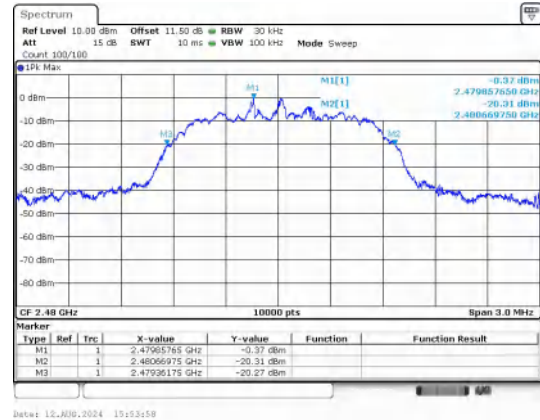
Date: 12/30/2024 15:14:21

GFSK_DH5_Channel 78

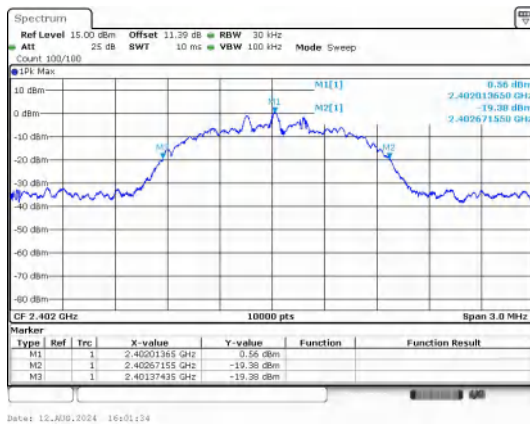
 $\pi/4$ DQPSK_2-DH5_Channel 0



$\pi/4$ DQPSK_2-DH5_Channel 39



$\pi/4$ DQPSK_2-DH5_Channel 78



8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



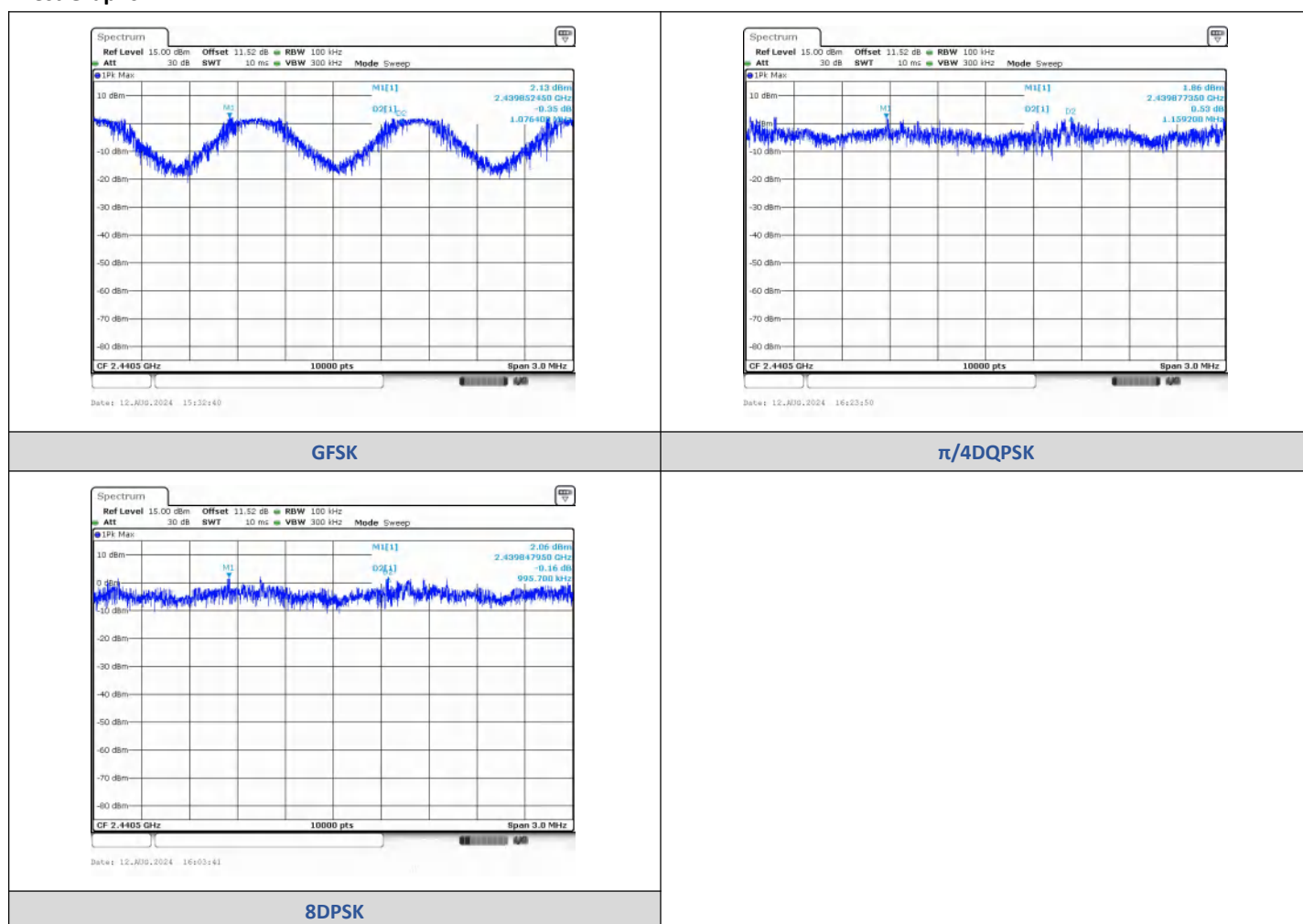
8DPSK_3-DH5_Channel 78

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	2439.8524	2440.9288	1.0764	1.030	PASS
$\pi/4$ DQPSK	2-DH5	2439.8774	2441.0365	1.1592	0.873	PASS
8DPSK	3-DH5	2439.8479	2440.8436	0.9957	0.867	PASS

Test Graphs



8) Conducted Out Of Band Emission

Test Result

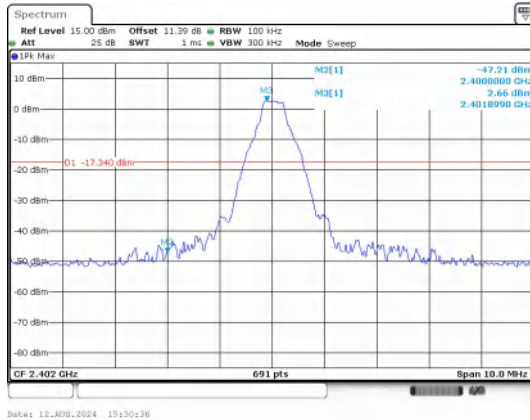
Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2400.00	-47.210	-17.34	-29.870	PASS
			7205.96	-40.027	-17.34	-22.687	PASS
		39	9763.72	-39.747	-17.62	-22.127	PASS
		78	2483.50	-50.838	-18.03	-32.808	PASS
			9920.20	-39.282	-18.03	-21.252	PASS
$\pi/4$ DQPSK	2-DH5	0	2400.00	-47.594	-17.38	-30.214	PASS
			7206.79	-42.929	-17.38	-25.549	PASS
		39	9763.72	-40.720	-17.77	-22.950	PASS
		78	2483.50	-50.372	-18.02	-32.352	PASS
			9920.20	-39.044	-18.02	-21.024	PASS
8DPSK	3-DH5	0	2400.00	-47.199	-17.51	-29.689	PASS
			7205.96	-41.468	-17.51	-23.958	PASS
		39	9763.72	-40.248	-17.97	-22.278	PASS
		78	2483.50	-50.202	-18.05	-32.152	PASS
			9920.20	-38.770	-18.05	-20.720	PASS

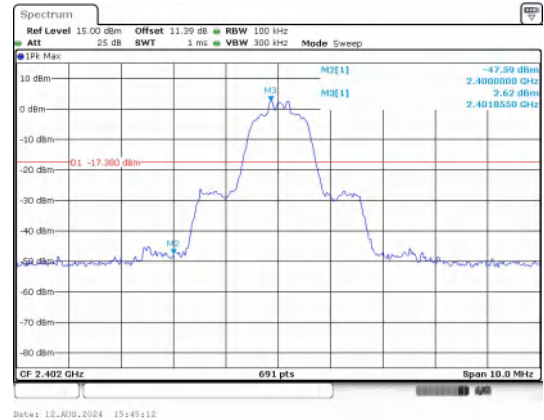
Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2396.34	-48.582	-17.13	-31.452	PASS
			2400.00	-50.119	-17.13	-32.989	PASS
			2483.50	-48.459	-18.11	-30.349	PASS
π/4DQPSK	2-DH5		2400.00	-48.447	-18.76	-29.687	PASS
			2483.50	-50.026	-18.1	-31.926	PASS
8DPSK	3-DH5		2395.73	-48.232	-17.3	-30.932	PASS
			2400.00	-48.538	-17.3	-31.238	PASS
			2483.50	-48.647	-19.39	-29.257	PASS

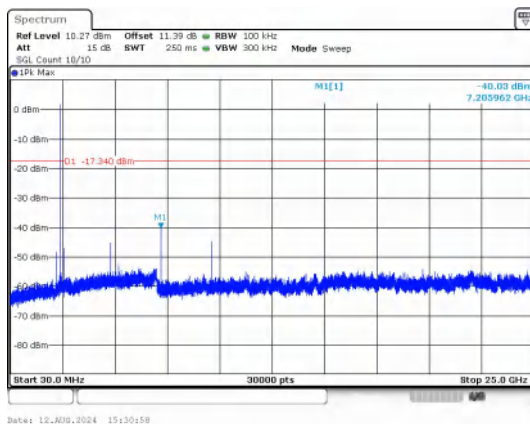
Test Graphs



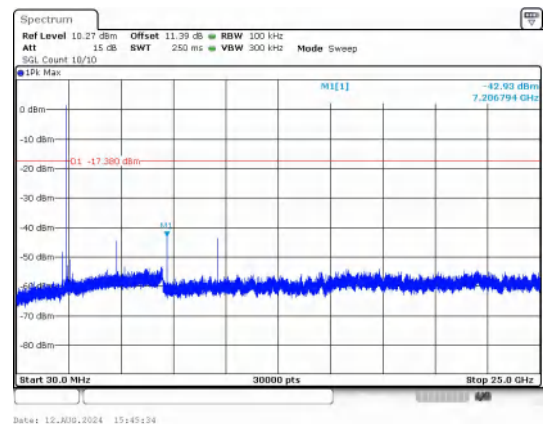
Out Of Band Emission
GFSK_DH5_Channel 0



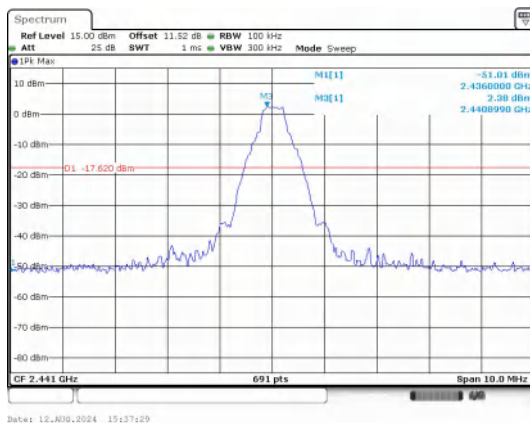
Out Of Band Emission
 $\pi/4$ QPSK_2-DH5_Channel 0



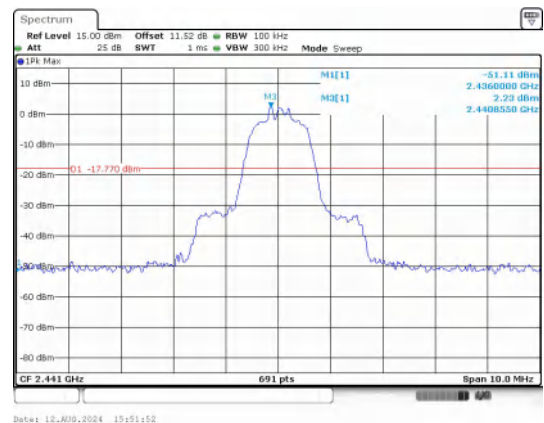
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 0



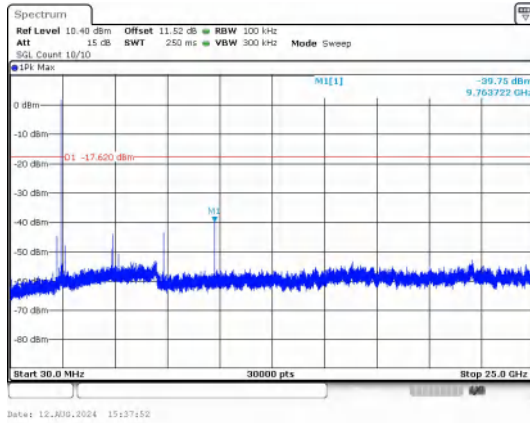
30.0 MHz - 25000.0 MHz
 $\pi/4$ QPSK_2-DH5_Channel 0



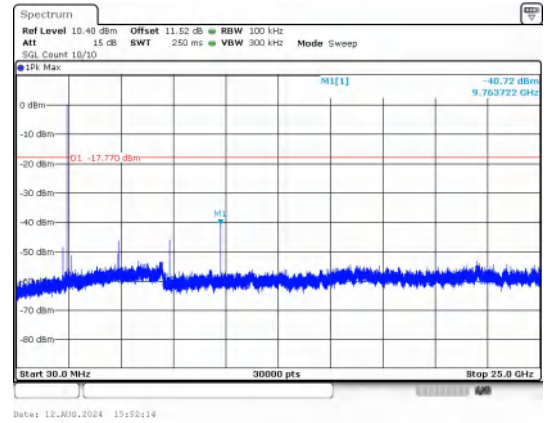
Out Of Band Emission
GFSK_DH5_Channel 39



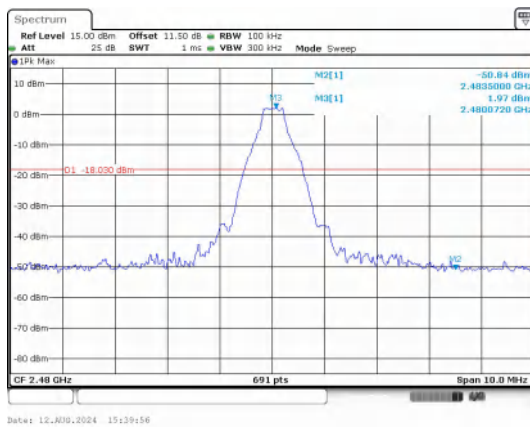
Out Of Band Emission
 $\pi/4$ QPSK_2-DH5_Channel 39



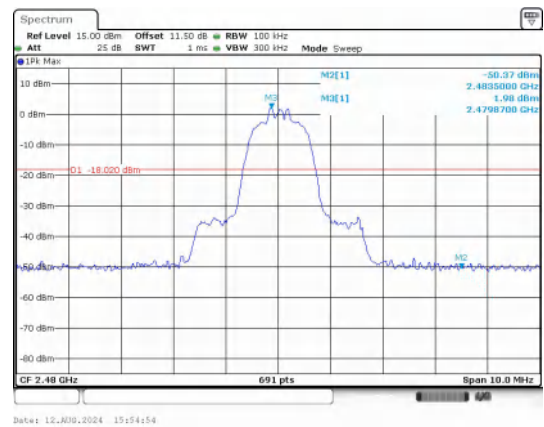
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 39



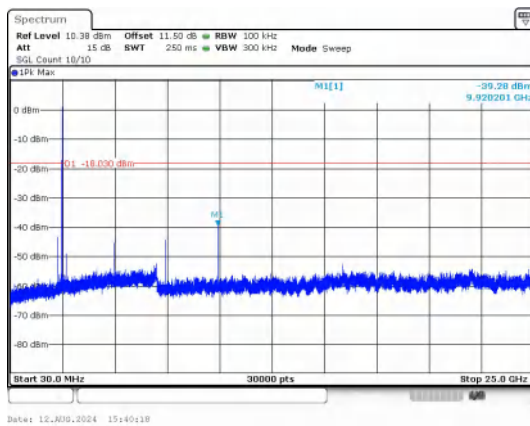
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 39



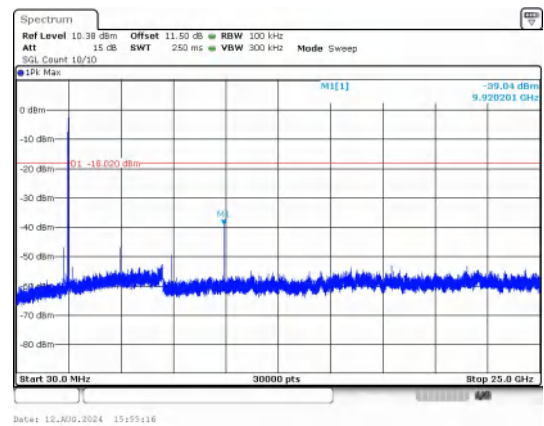
Out Of Band Emission
GFSK_DH5_Channel 78



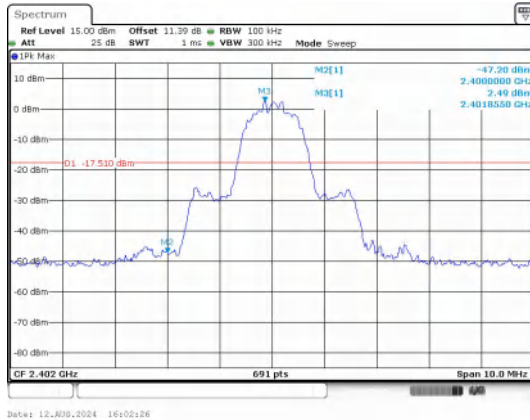
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 78



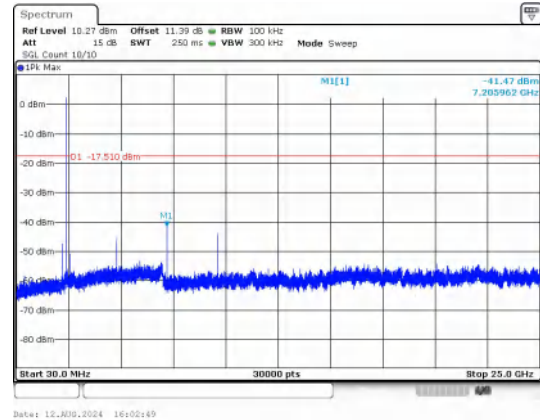
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 78



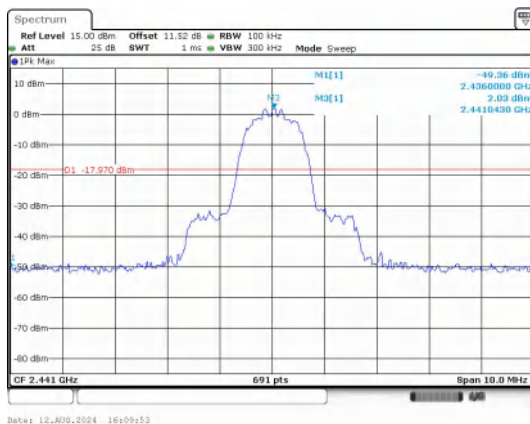
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 78



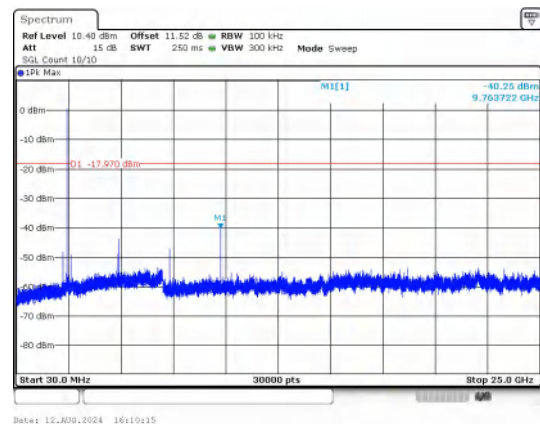
Out Of Band Emission
8DPSK_3-DH5_Channel 0



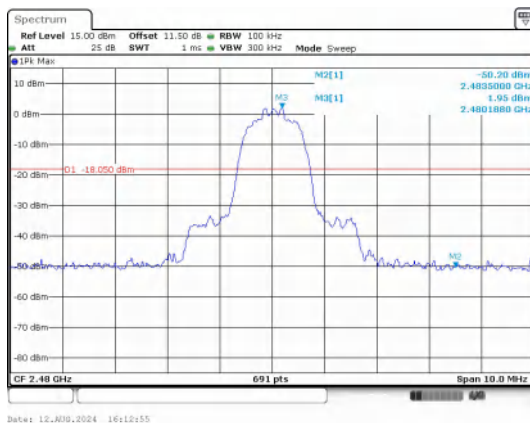
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 0



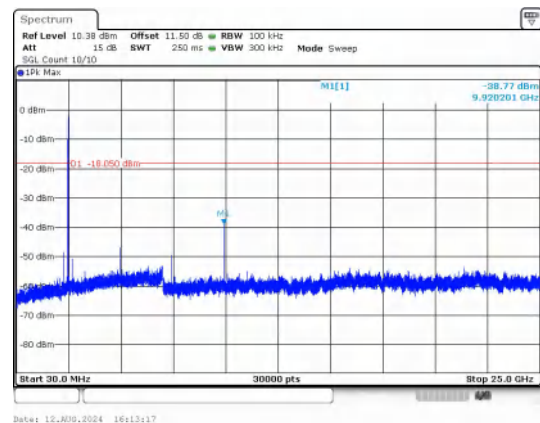
Out Of Band Emission
8DPSK_3-DH5_Channel 39



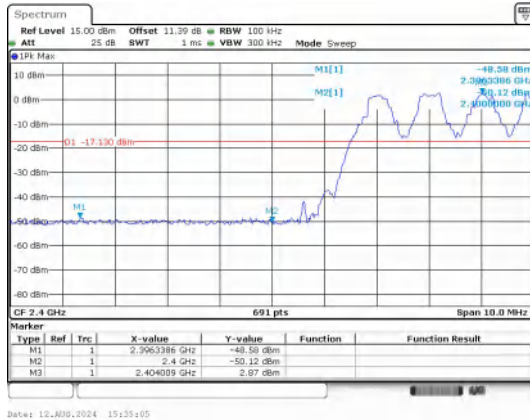
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 39



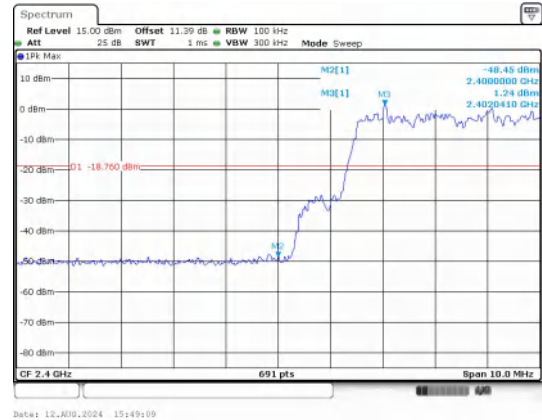
Out Of Band Emission
8DPSK_3-DH5_Channel 78



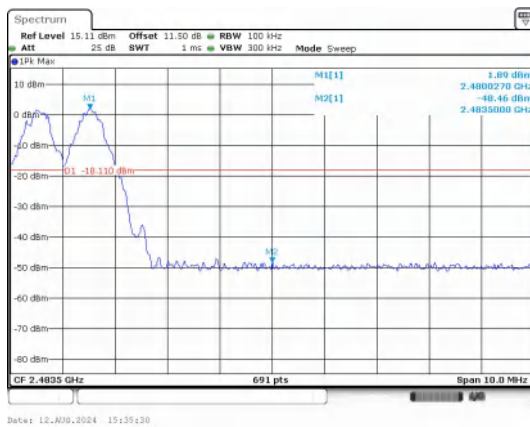
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 78



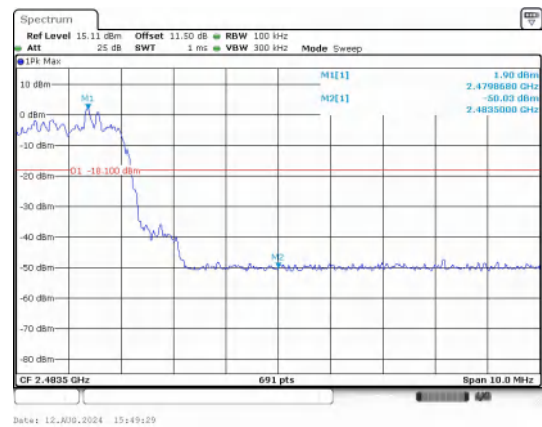
Out Of Band Emission(Left)
GFSK_DH5_Channel Hopping



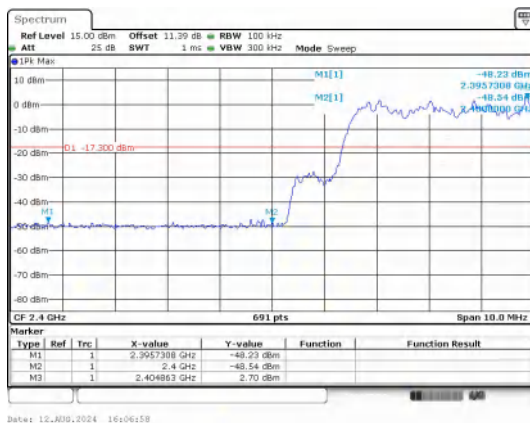
Out Of Band Emission(Left)
 $\pi/4$ DQPSK_2-DH5_Channel Hopping



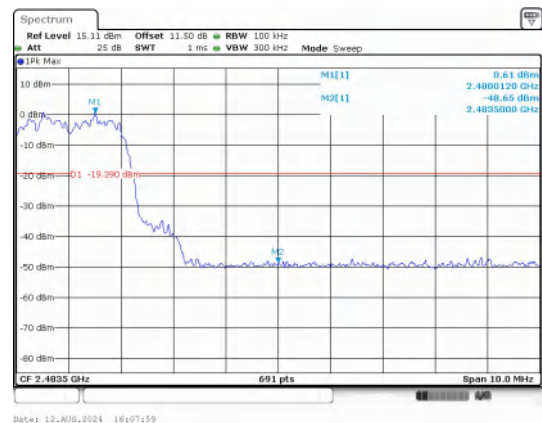
Out Of Band Emission(Right)
GFSK_DH5_Channel Hopping



Out Of Band Emission(Right)
 $\pi/4$ DQPSK_2-DH5_Channel Hopping



Out Of Band Emission(Left)
8DPSK_3-DH5_Channel Hopping



Out Of Band Emission(Right)
8DPSK_3-DH5_Channel Hopping