

Appendix B

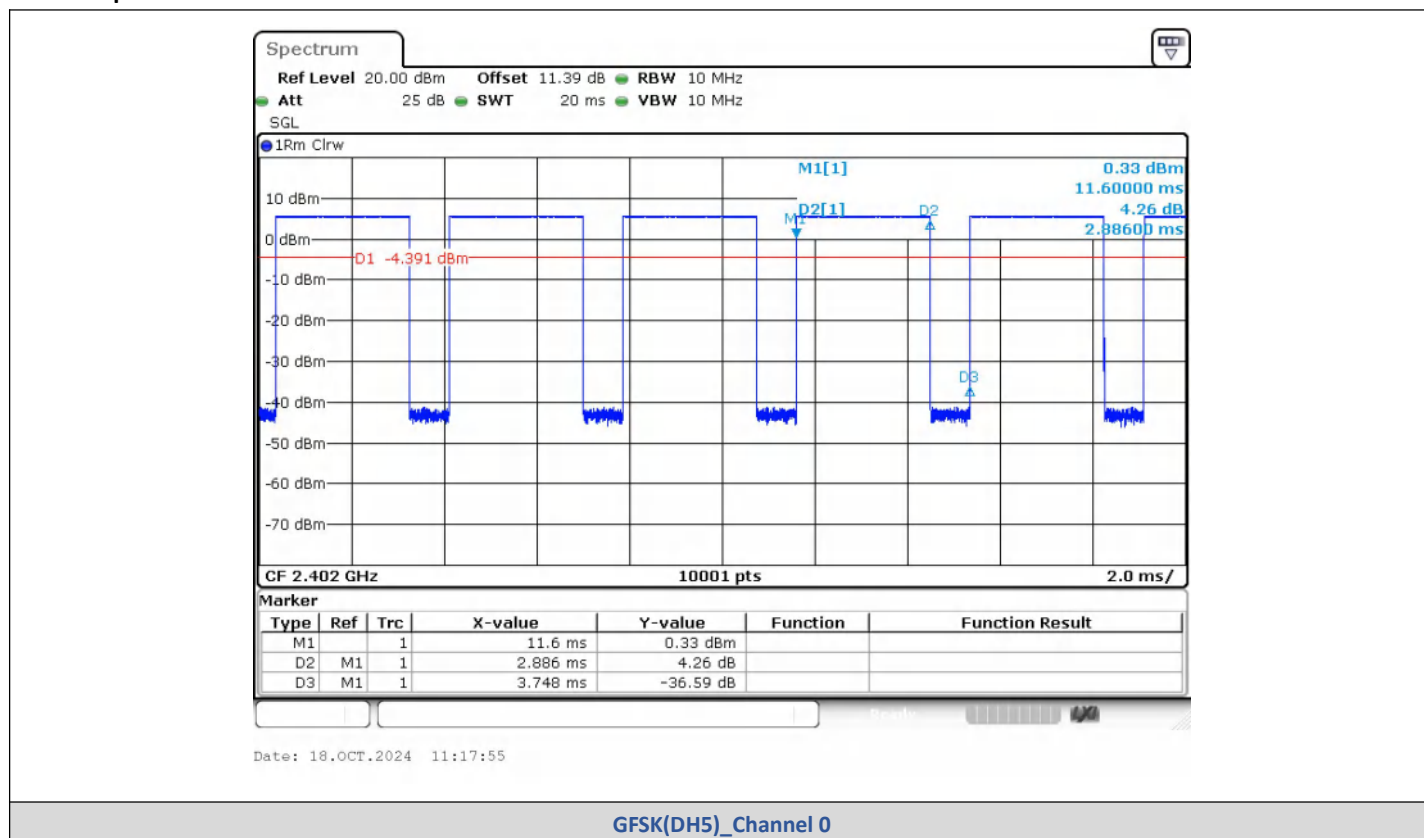
Report No.:	CISRR24090301002
FCC ID:	R56-F34911
Product Name:	PORTABLE Stereo CD Player
Model No.:	F3491D
Test Engineer:	Lucas Huang
Supervised by:	Rory Huang

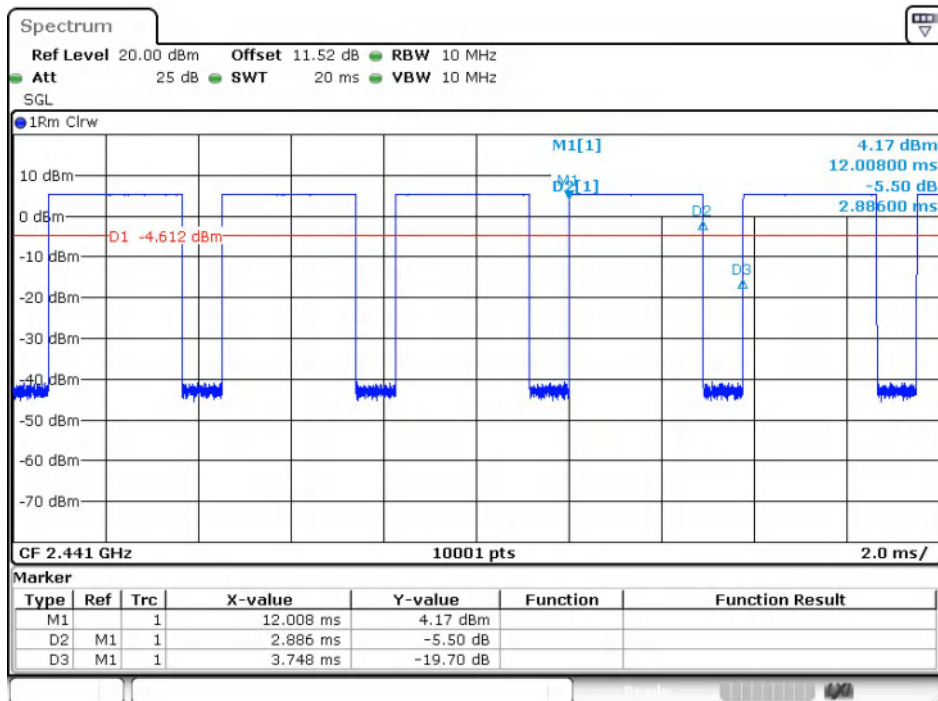
1) Duty Cycle

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	0.35
		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	2.892	3.748	77.16	0.7716	1.1261	0.35
		39	2.894	3.748	77.21	0.7721	1.1233	0.35
		78	2.894	3.748	77.21	0.7721	1.1233	0.35

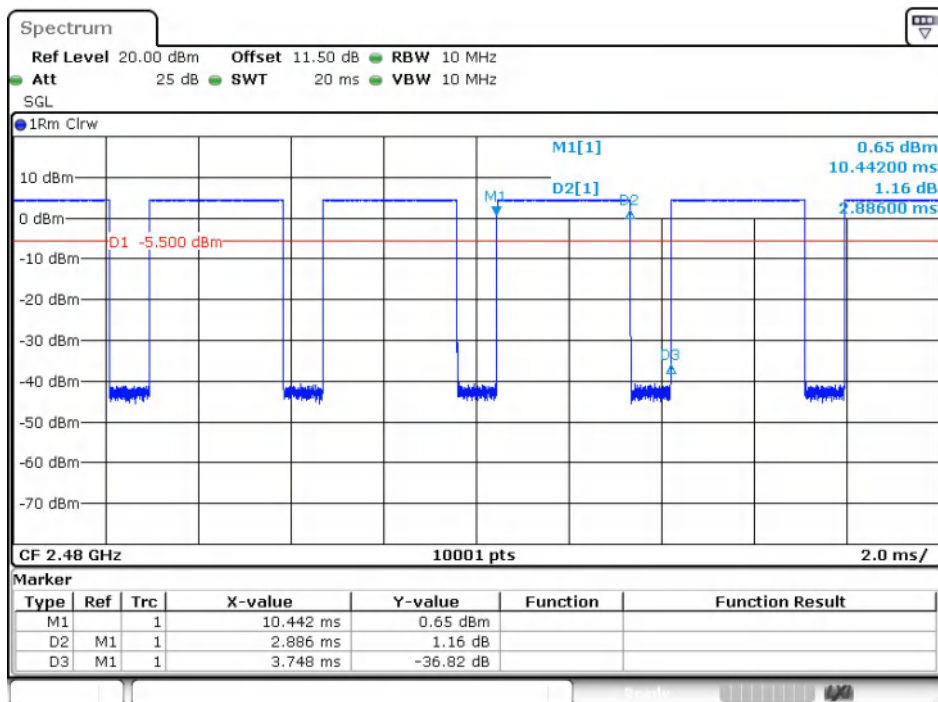
Test Graphs





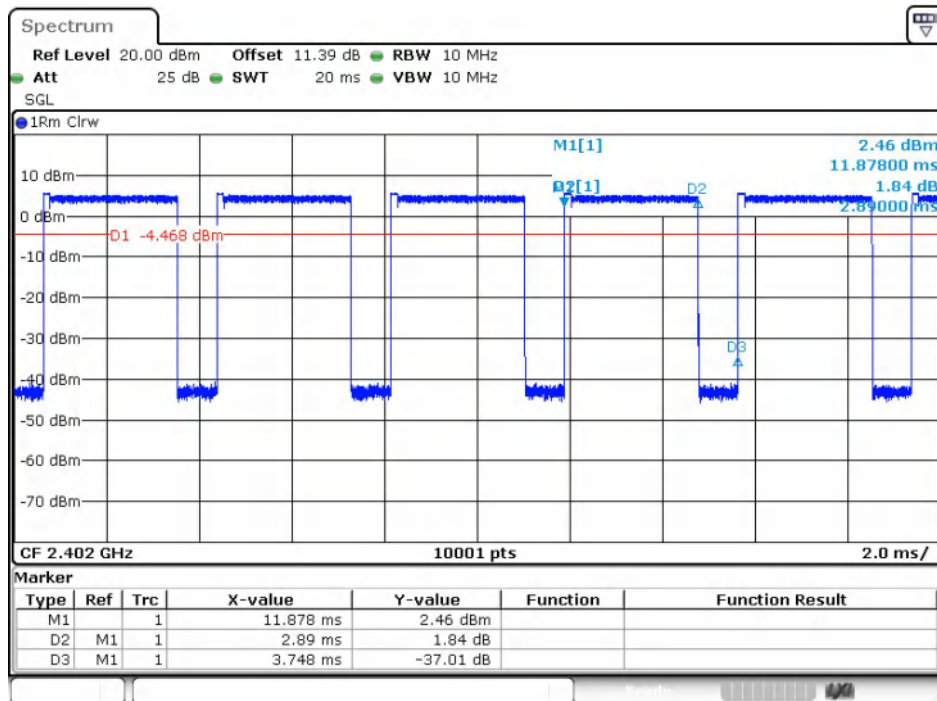
Date: 18.OCT.2024 11:32:42

GFSK(DH5)_Channel 39



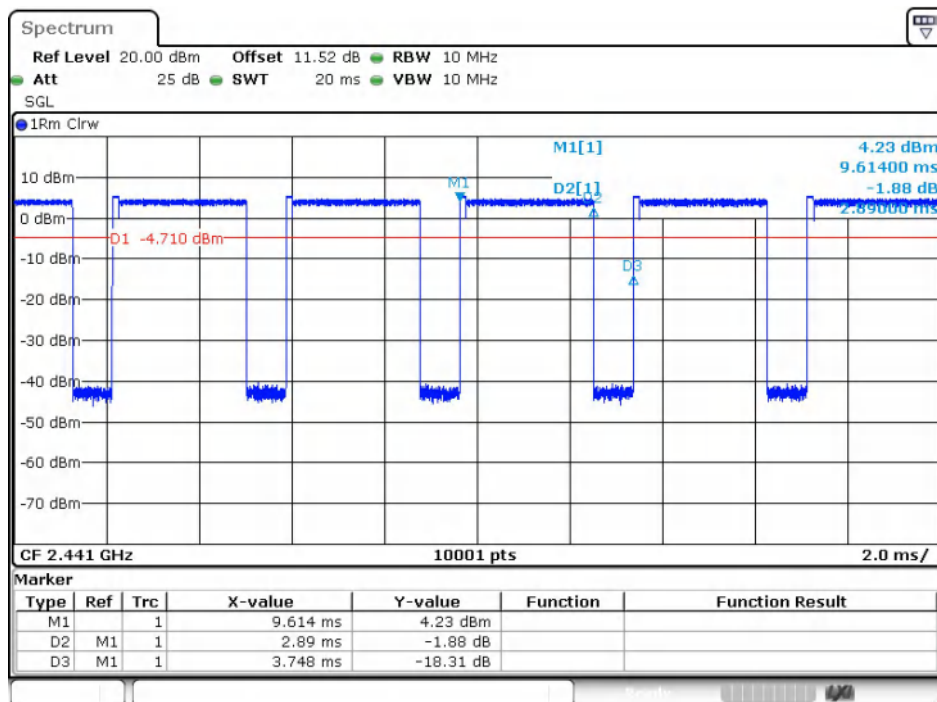
Date: 18.OCT.2024 11:34:52

GFSK(DH5)_Channel 78



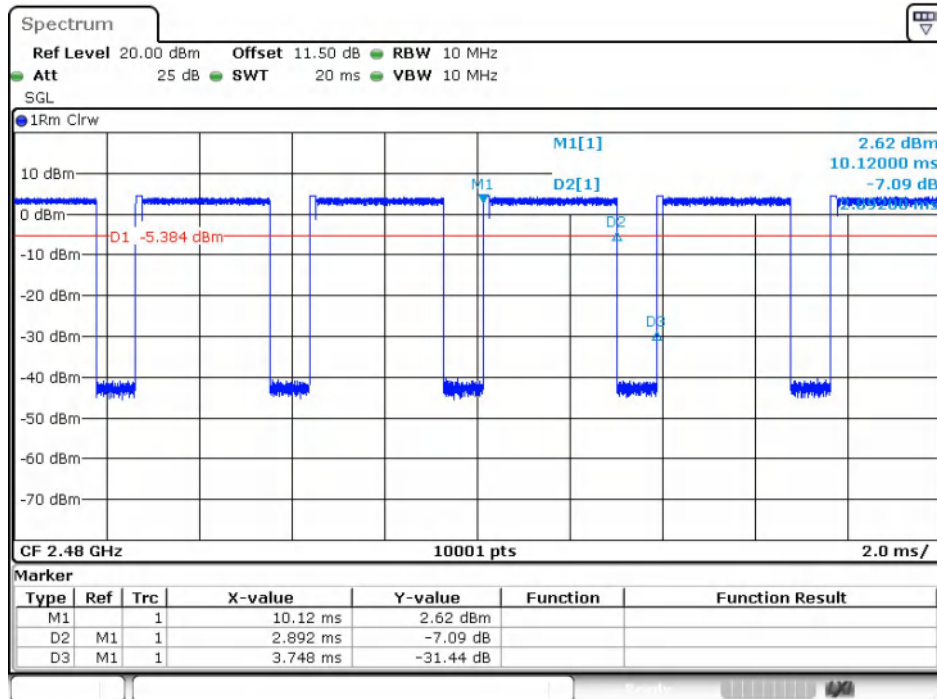
Date: 18.OCT.2024 11:37:06

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



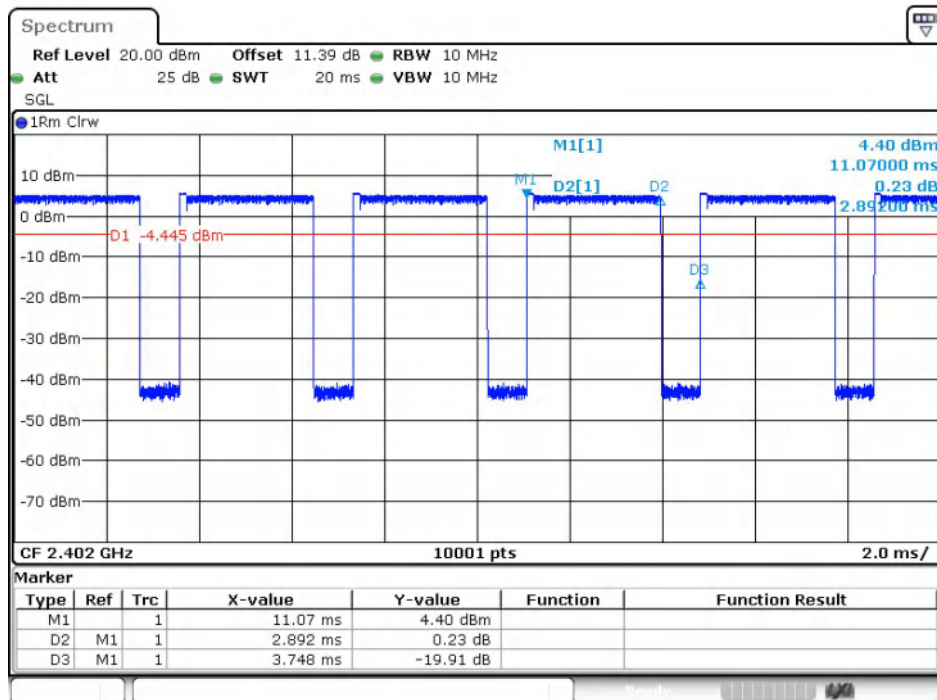
Date: 18.OCT.2024 11:42:31

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



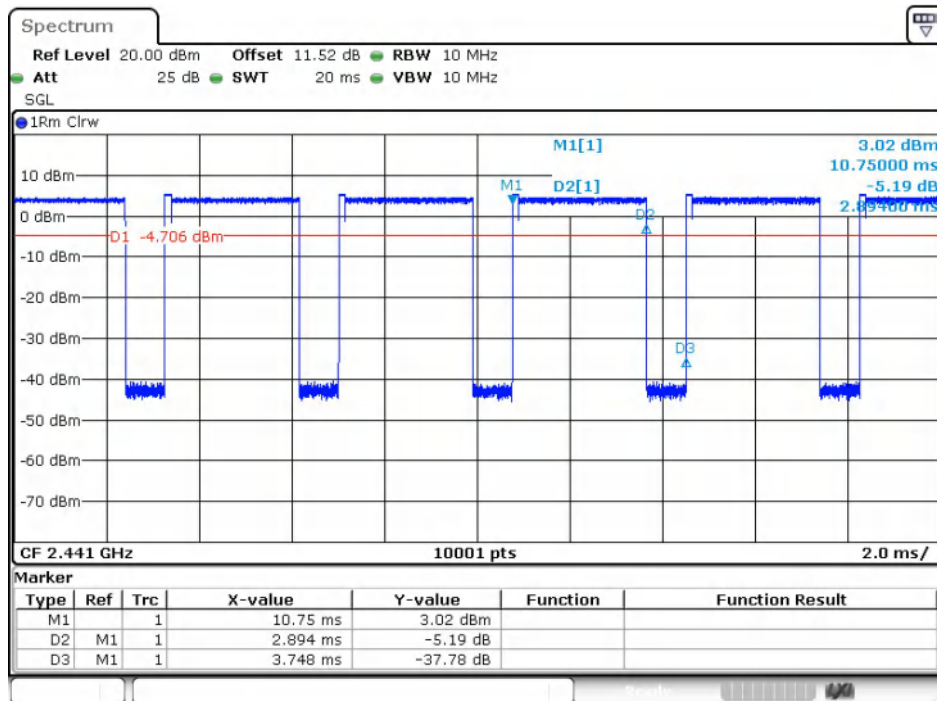
Date: 18.OCT.2024 11:48:11

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



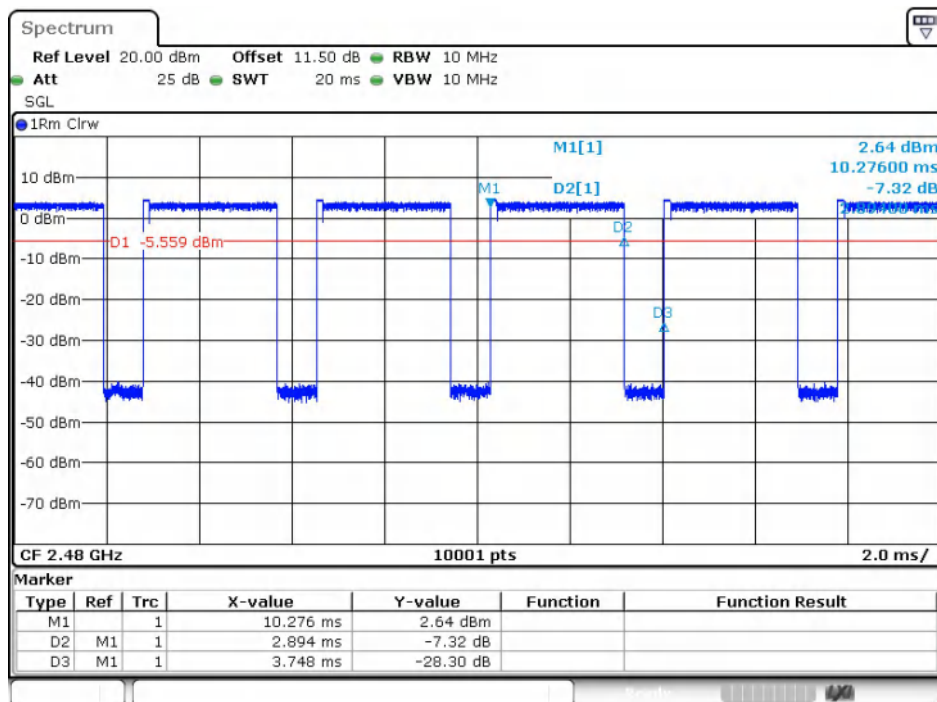
Date: 18.OCT.2024 11:50:49

8DPSK(3-DH5)_Channel 0



Date: 18.OCT.2024 11:57:19

8DPSK(3-DH5)_Channel 39



Date: 18.OCT.2024 12:01:36

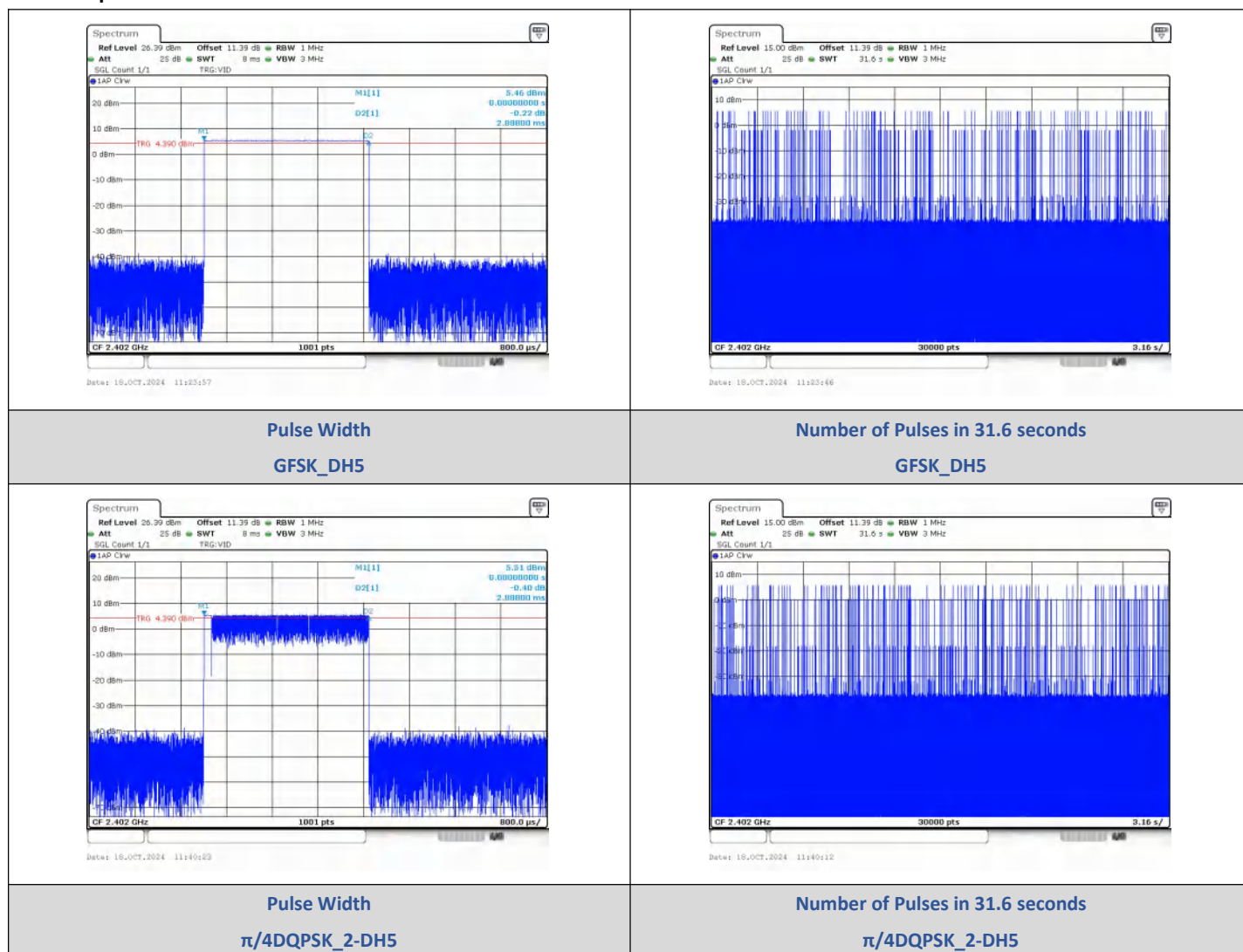
8DPSK(3-DH5)_Channel 78

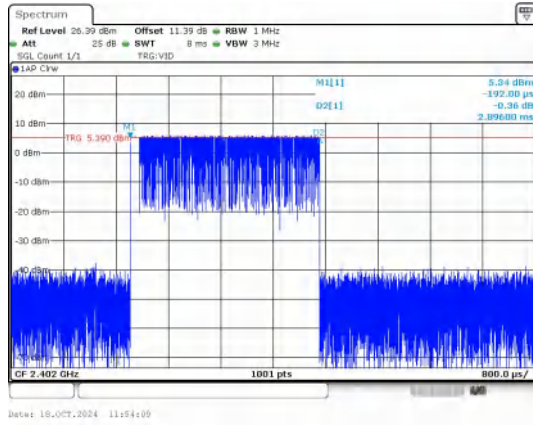
2) Dwell Time

Test Result

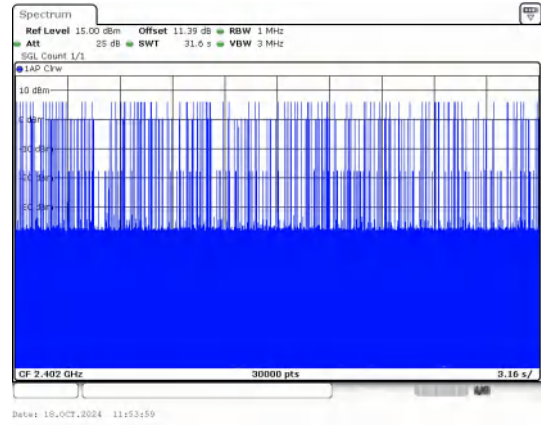
Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH5	CH0 (2402MHz)	2.888	98	283.02	< 400	PASS
$\pi/4$ DQPSK	2-DH5		2.888	105	303.24		PASS
8DPSK	3-DH5		2.896	96	278.02		PASS

Test Graphs





Pulse Width
8DPSK_3-DH5



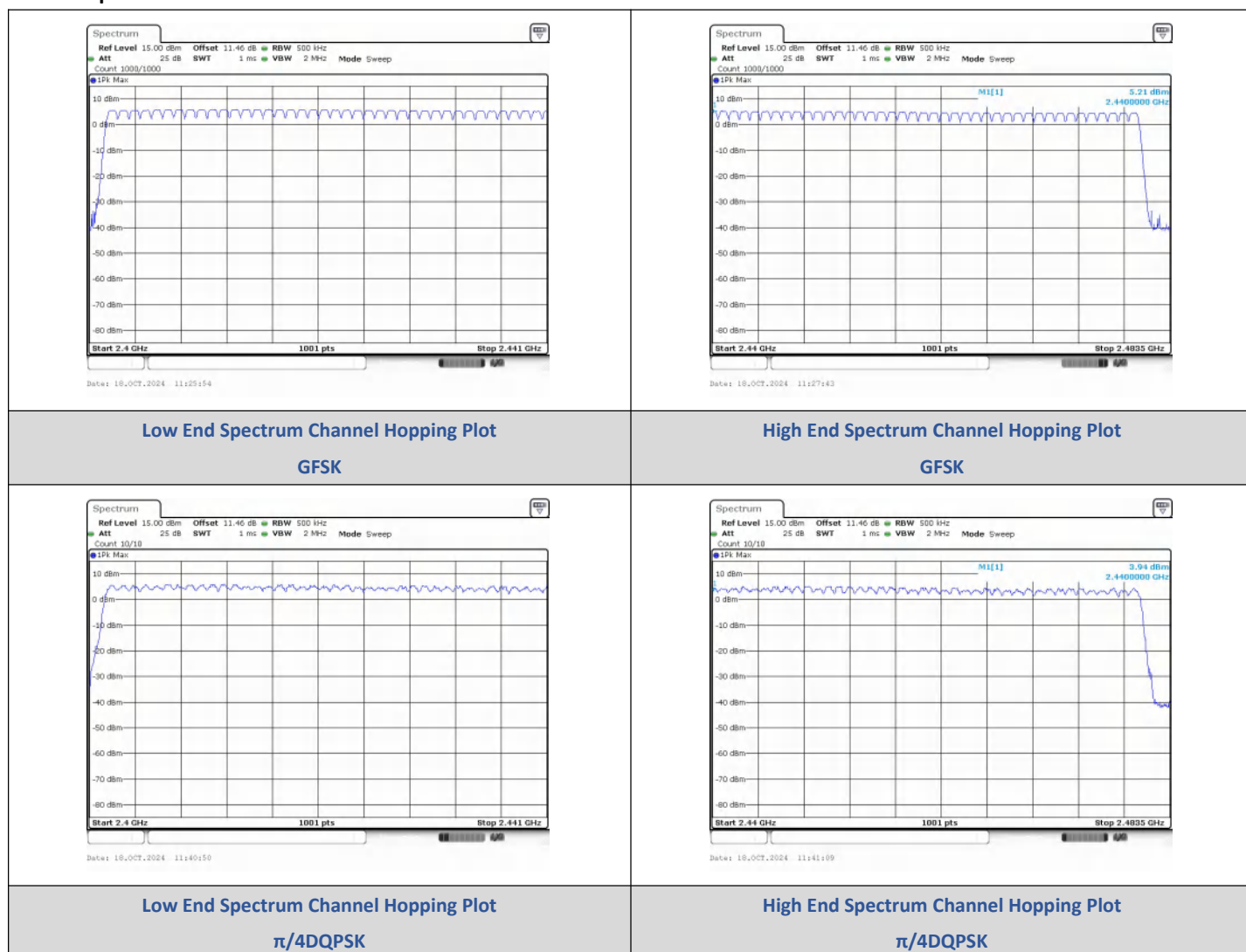
Number of Pulses in 31.6 seconds
8DPSK_3-DH5

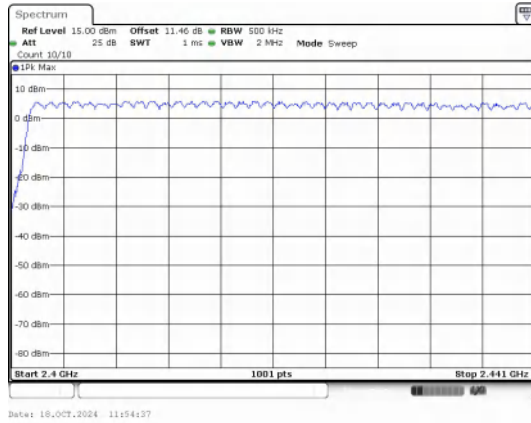
3) Number Of Hopping Channel

Test Result

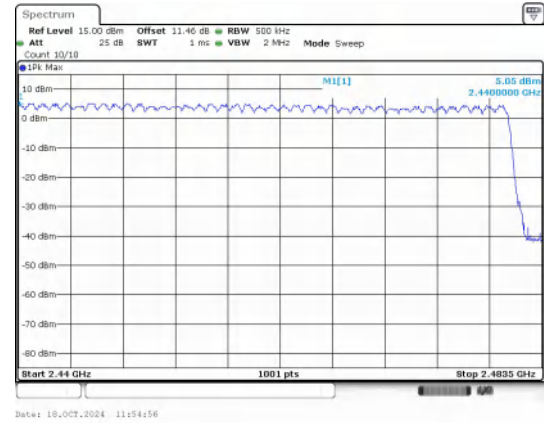
Modulation	Packet	Number of Hopping Channel	Limit	Result
GFSK	DH5	79	15	PASS
$\pi/4$ DQPSK	2-DH5	79	15	PASS
8DPSK	3-DH5	79	15	PASS

Test Graphs





Low End Spectrum Channel Hopping Plot
8DPSK



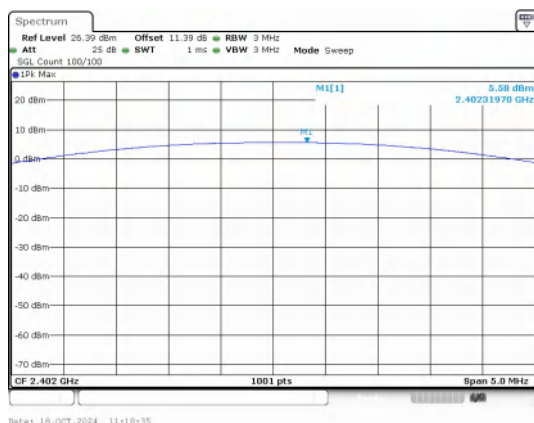
High End Spectrum Channel Hopping Plot
8DPSK

4) Conducted Peak Output Power

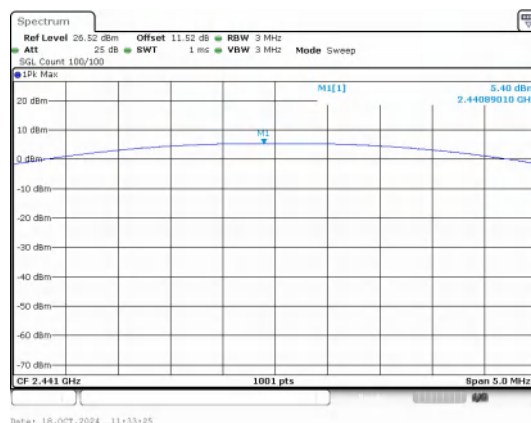
Test Result

Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
GFSK	DH5	0	5.58	3.61	≤30	PASS
		39	5.40	3.47		PASS
		78	4.57	2.86		PASS
$\pi/4$ DQPSK	2-DH5	0	6.12	4.09	≤20.97	PASS
		39	6.01	3.99		PASS
		78	5.28	3.37		PASS
8DPSK	3-DH5	0	6.28	4.24		PASS
		39	6.17	4.14		PASS
		78	5.37	3.44		PASS

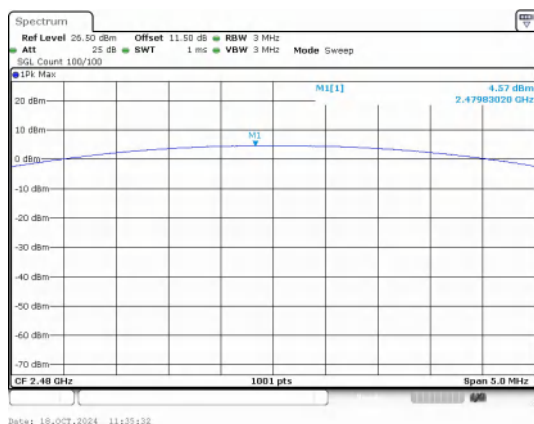
Test Graphs



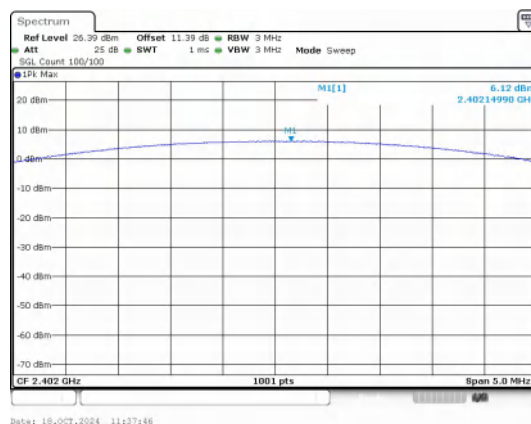
Peak Output Power
GFSK_Channel 0



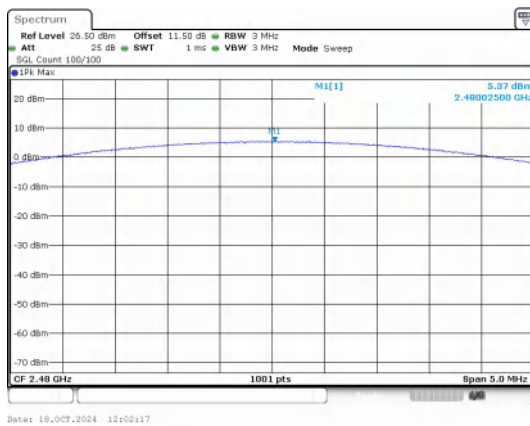
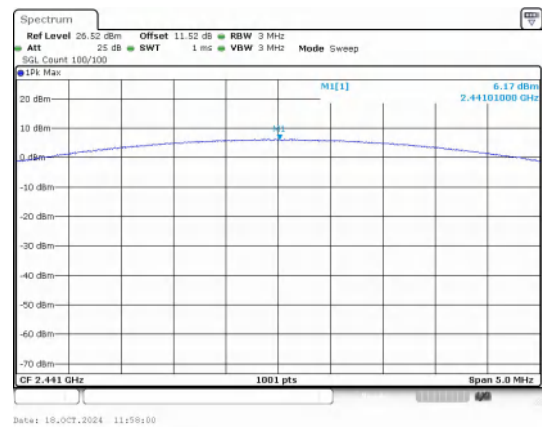
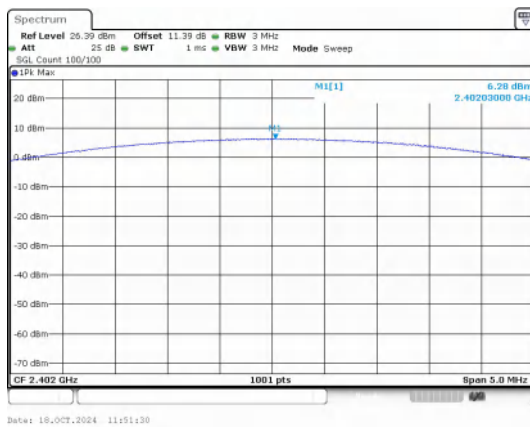
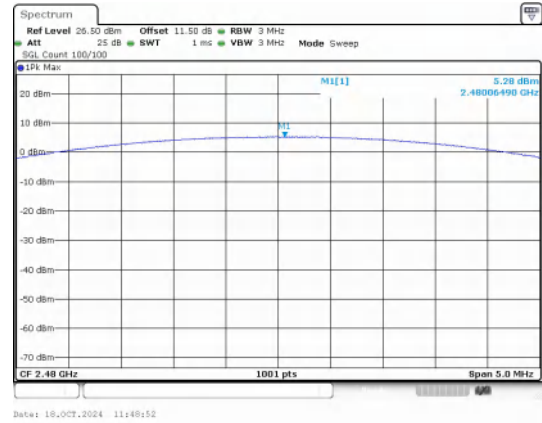
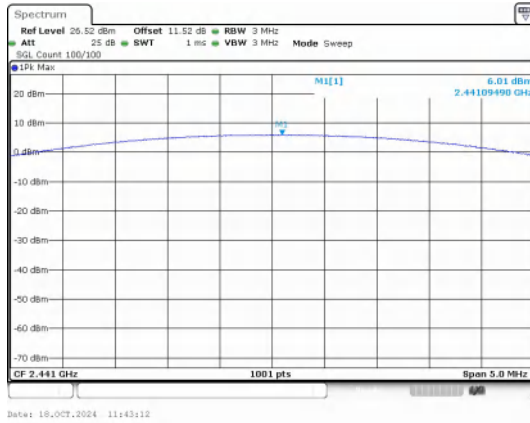
Peak Output Power
GFSK_Channel 39



Peak Output Power
GFSK_Channel 78



Peak Output Power
 $\pi/4$ DQPSK_Channel 0

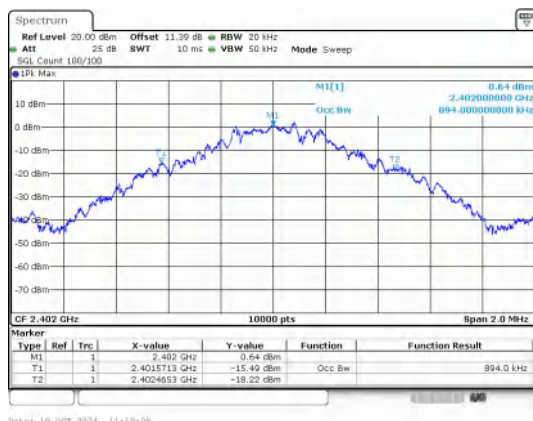


5) 99% Bandwidth

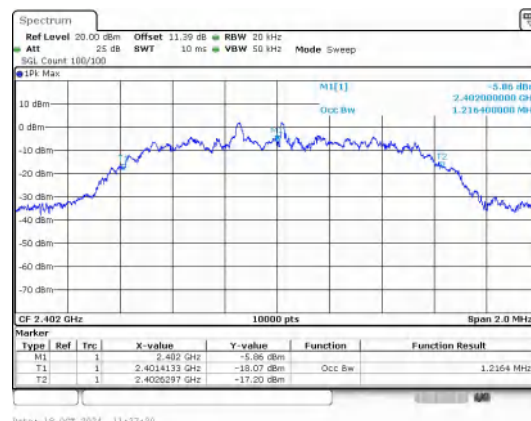
Test Result

Modulation	Channel	Center Frequency (MHz)	99% BW (MHz)
GFSK	0	2402	0.89400
	39	2441	0.90200
	78	2480	0.88960
π /4DQPSK	0	2402	1.2164
	39	2441	1.2026
	78	2480	1.1976
8DPSK	0	2402	1.2214
	39	2441	1.2172
	78	2480	1.2096

Test Graphs

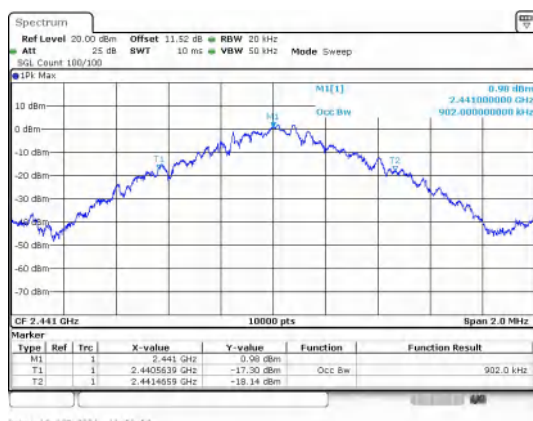


Date: 18-OCT-2024 11:18:09

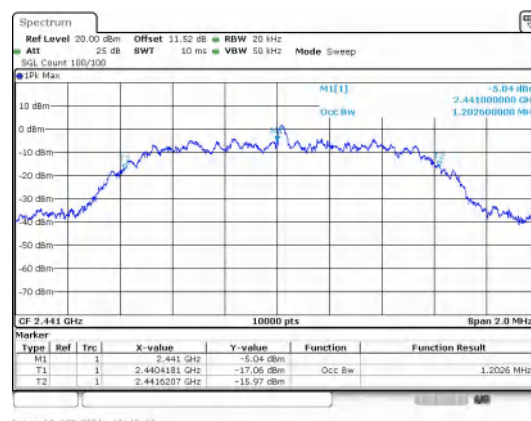


Date: 18-OCT-2024 11:17:20

GFSK_DH5_Channel 0

 π /4DQPSK_2-DH5_Channel 0


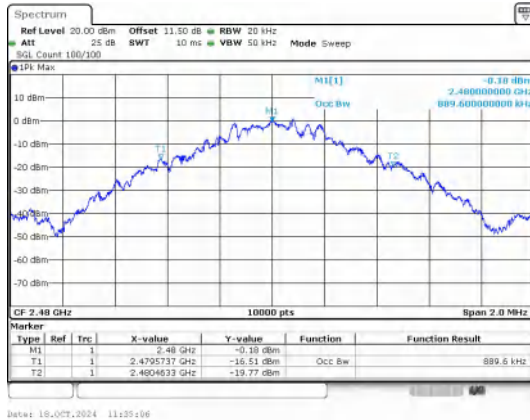
Date: 18-OCT-2024 11:13:56



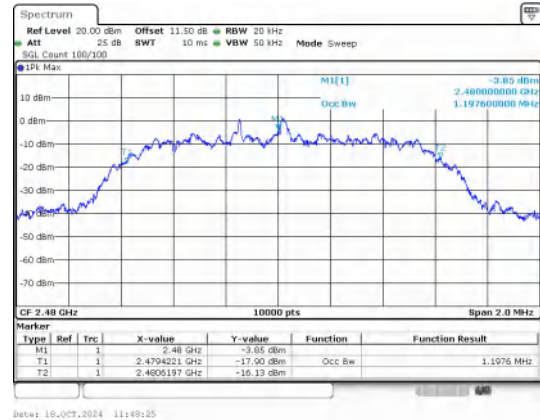
Date: 18-OCT-2024 11:14:26

GFSK_DH5_Channel 39

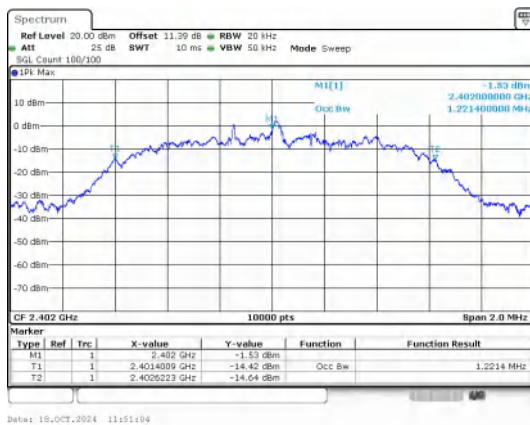
 π /4DQPSK_2-DH5_Channel 39



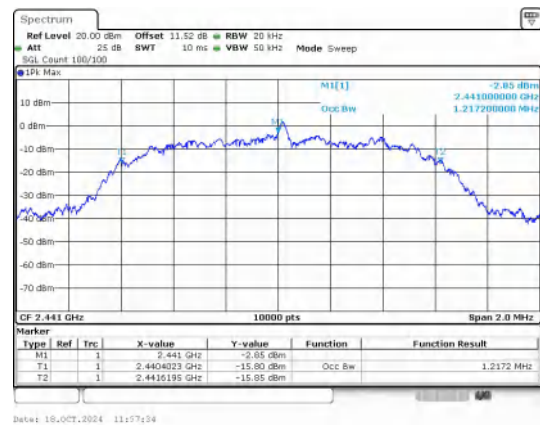
GFSK_DH5_Channel 78



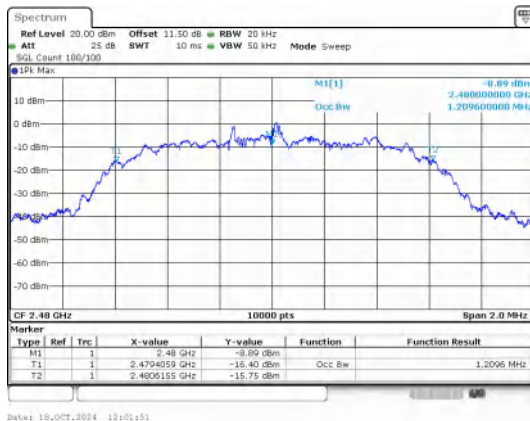
$\pi/4$ DQPSK_2-DH5_Channel 78



8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



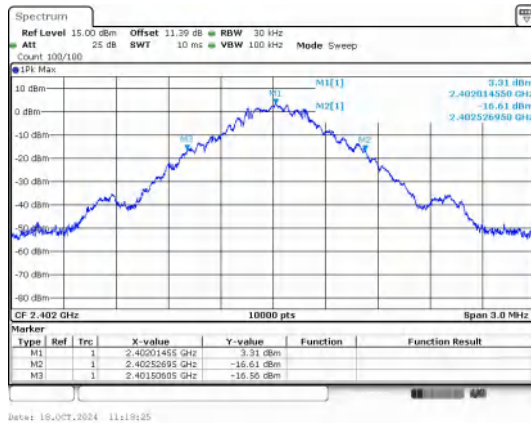
8DPSK_3-DH5_Channel 78

6) 20dB Bandwidth

Test Result

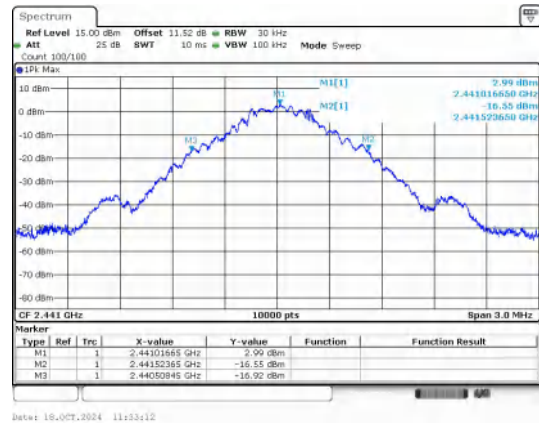
Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	1.020
	39	2441 MHz	1.010
	78	2480 MHz	1.030
$\pi/4$ DQPSK	0	2402 MHz	1.320
	39	2441 MHz	1.320
	78	2480 MHz	1.320
8DPSK	0	2402 MHz	1.300
	39	2441 MHz	1.290
	78	2480 MHz	1.290

Test Graphs



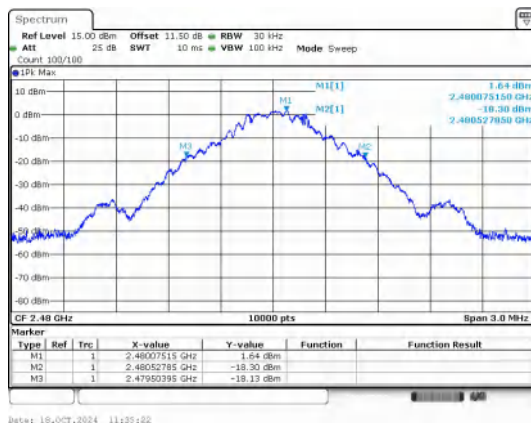
Date: 18-OCT-2024 11:11:25

GFSK_DH5_Channel 0



Date: 18-OCT-2024 11:13:12

GFSK_DH5_Channel 39



Date: 18-OCT-2024 11:13:22

GFSK_DH5_Channel 78



Date: 18-OCT-2024 11:17:36

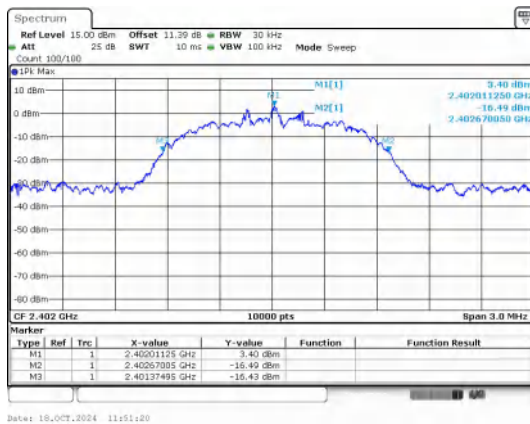
 $\pi/4$ DQPSK_2-DH5_Channel 0



$\pi/4$ DQPSK_2-DH5_Channel 39



$\pi/4$ DQPSK_2-DH5_Channel 78



8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



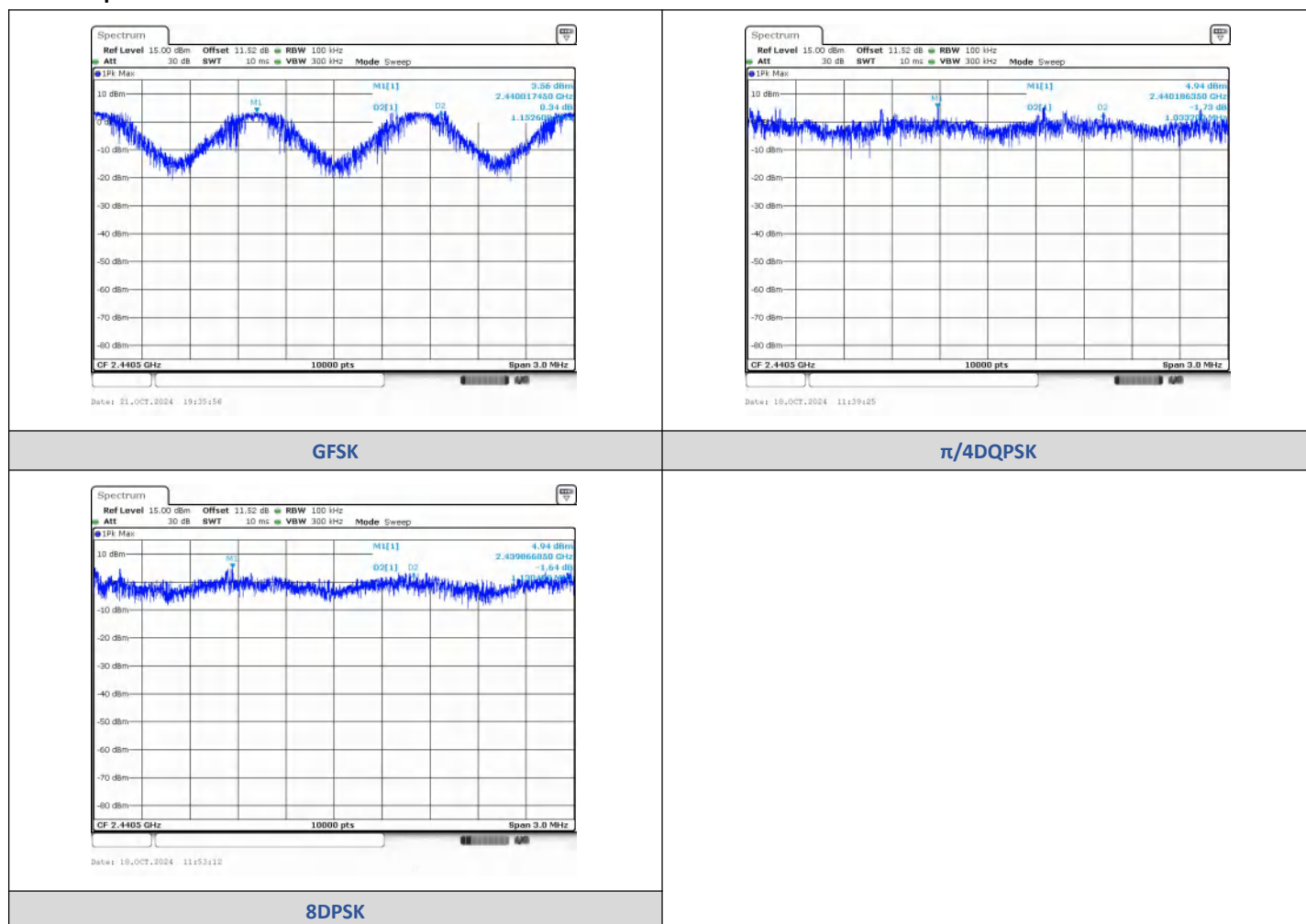
8DPSK_3-DH5_Channel 78

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	2440.0174	2441.1701	1.1526	1.03	PASS
$\pi/4$ QPSK	2-DH5	2440.1863	2441.2195	1.0332	0.88	PASS
8DPSK	3-DH5	2439.8668	2440.9972	1.1304	0.867	PASS

Test Graphs



8) Conducted Out Of Band Emission

Test Result

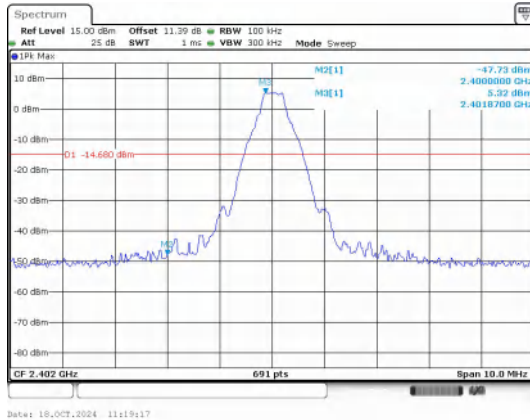
Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2400.00	-47.728	-14.68	-33.048	PASS
			7205.96	-37.344	-14.68	-22.664	PASS
		39	9763.72	-41.018	-14.76	-26.258	PASS
		78	2483.50	-50.142	-15.57	-34.572	PASS
			9920.20	-38.173	-15.57	-22.603	PASS
$\pi/4$ DQPSK	2-DH5	0	2400.00	-45.212	-14.69	-30.522	PASS
			7205.96	-41.187	-14.69	-26.497	PASS
		39	9763.72	-40.127	-14.79	-25.337	PASS
		78	2483.50	-50.821	-15.57	-35.251	PASS
			9920.20	-38.061	-15.57	-22.491	PASS
8DPSK	3-DH5	0	2400.00	-44.050	-14.64	-29.410	PASS
			7205.96	-41.357	-14.64	-26.717	PASS
		39	9763.72	-39.807	-14.88	-24.927	PASS
		78	2483.50	-50.426	-15.7	-34.726	PASS
			9920.20	-38.018	-15.7	-22.318	PASS

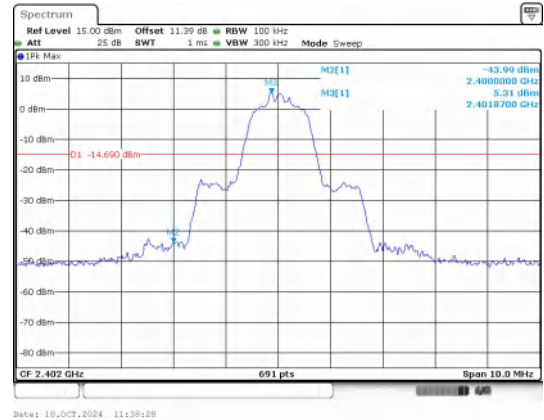
Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2400.00	-47.324	-14.45	-32.874	PASS
			2483.50	-50.950	-15.98	-34.970	PASS
π/4DQPSK	2-DH5		2396.66	-48.172	-14.62	-33.552	PASS
			2400.00	-50.444	-14.62	-35.824	PASS
			2483.50	-48.691	-19.09	-29.601	PASS
8DPSK	3-DH5		2400.00	-45.893	-15.35	-30.543	PASS
			2483.50	-49.447	-16.9	-32.547	PASS

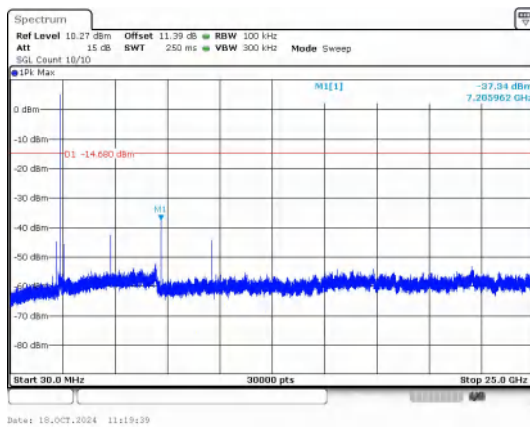
Test Graphs



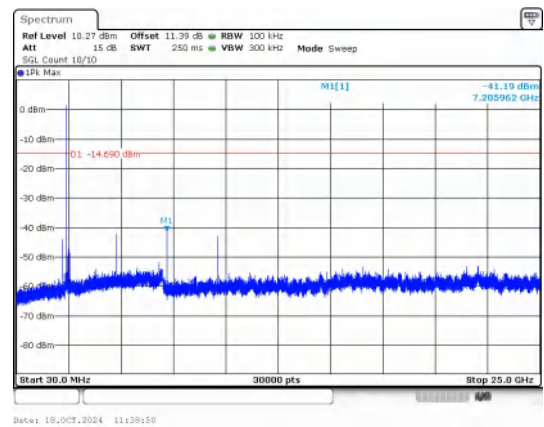
Out Of Band Emission
GFSK_DH5_Channel 0



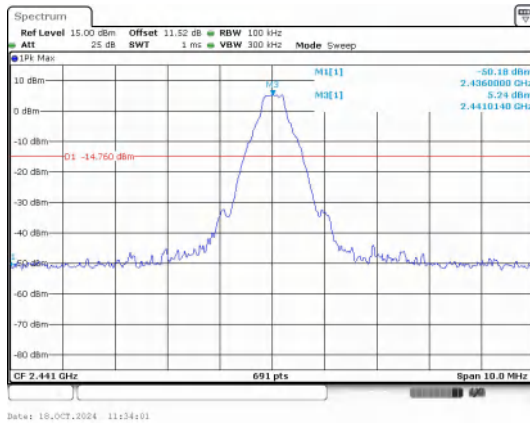
Out Of Band Emission
 $\pi/4$ QPSK_2-DH5_Channel 0



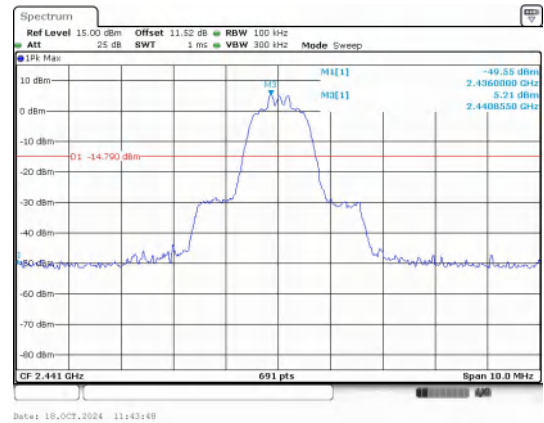
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 0



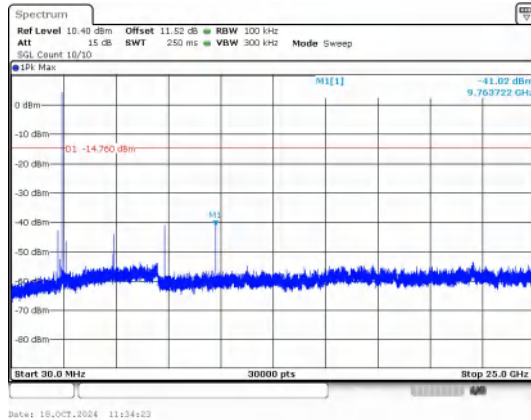
30.0 MHz - 25000.0 MHz
 $\pi/4$ QPSK_2-DH5_Channel 0



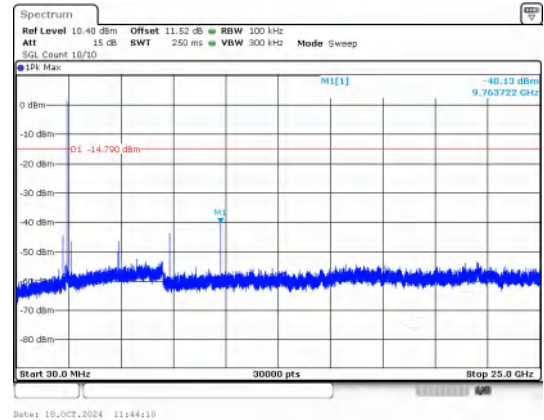
Out Of Band Emission
GFSK_DH5_Channel 39



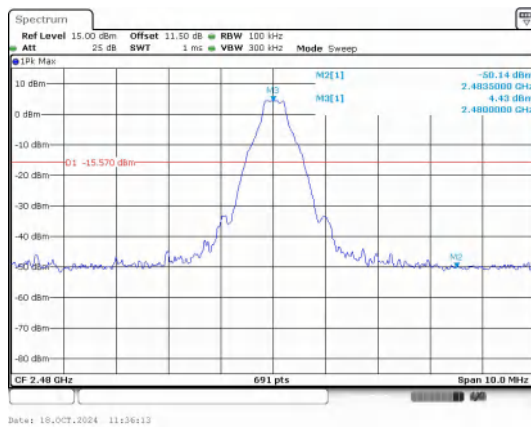
Out Of Band Emission
 $\pi/4$ QPSK_2-DH5_Channel 39



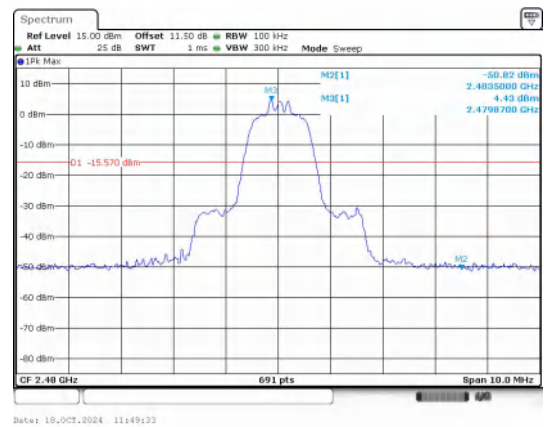
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 39



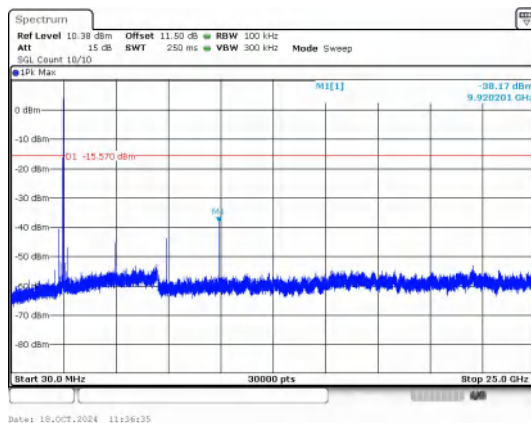
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 39



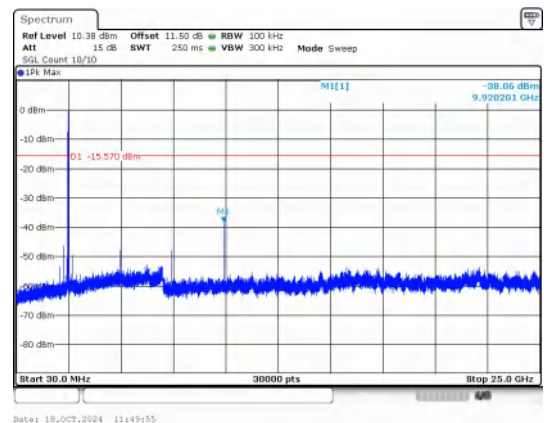
Out Of Band Emission
GFSK_DH5_Channel 78



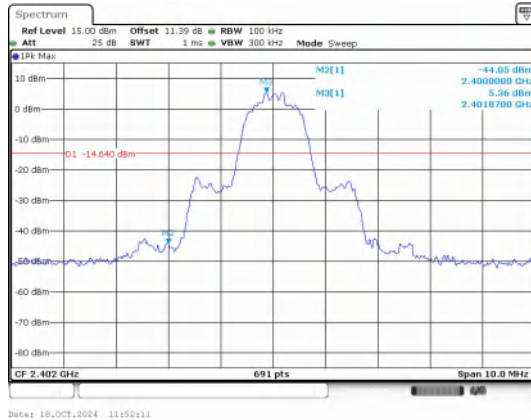
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 78



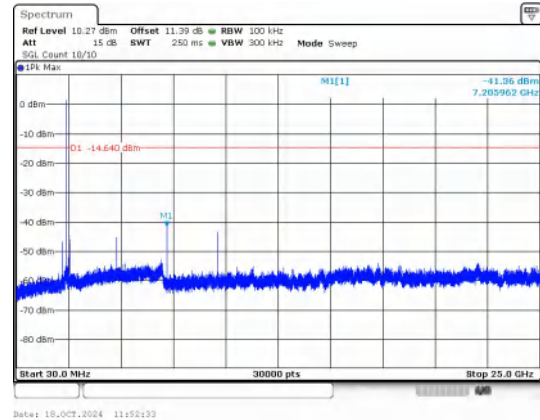
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 78



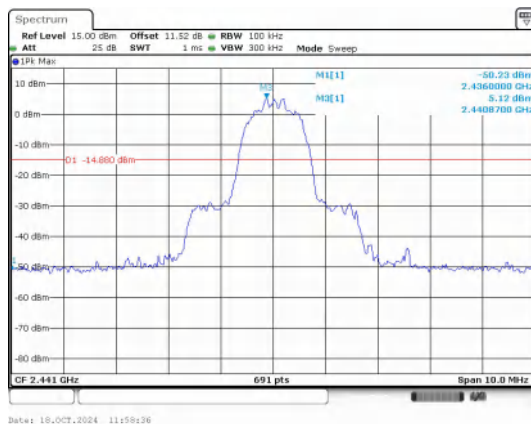
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 78



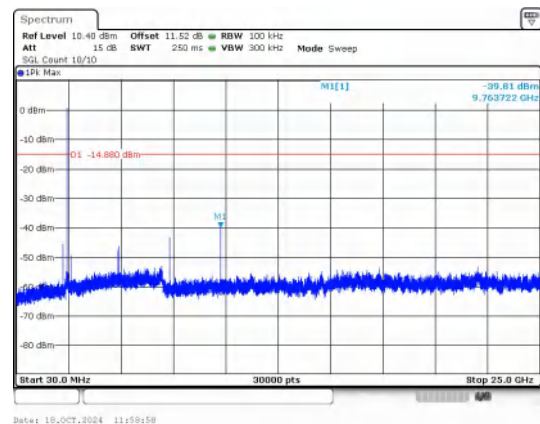
Out Of Band Emission
8DPSK_3-DH5_Channel 0



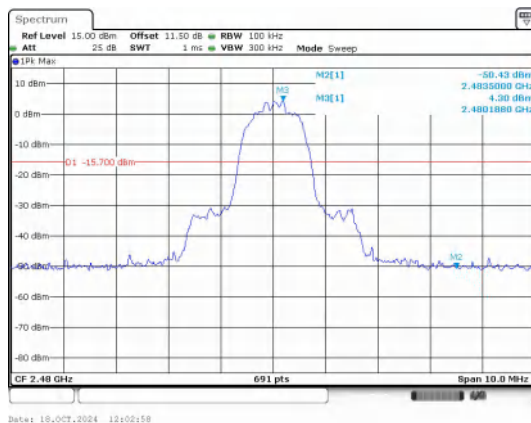
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 0



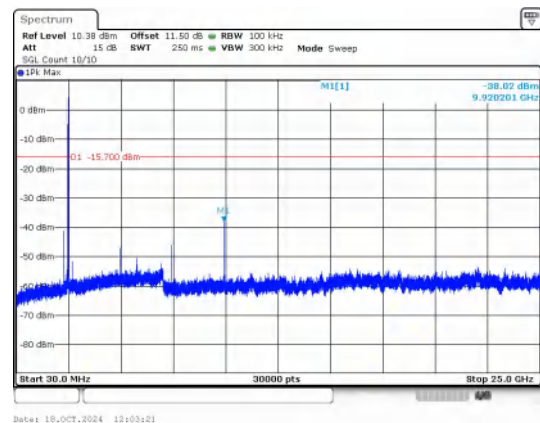
Out Of Band Emission
8DPSK_3-DH5_Channel 39



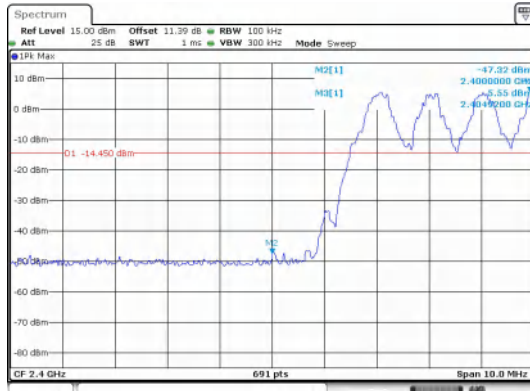
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 39



Out Of Band Emission
8DPSK_3-DH5_Channel 78



30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 78



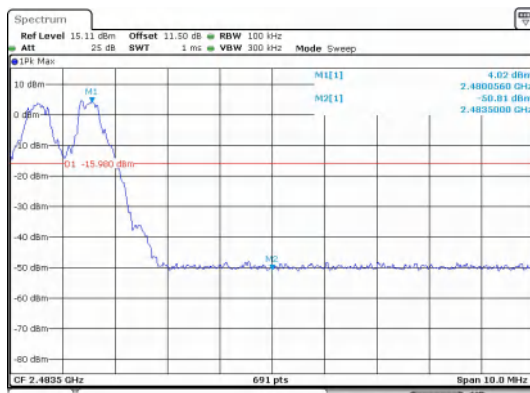
Date: 18.OCT.2024 11:13:45

Out Of Band Emission(Left)
GFSK_DH5_Channel Hopping



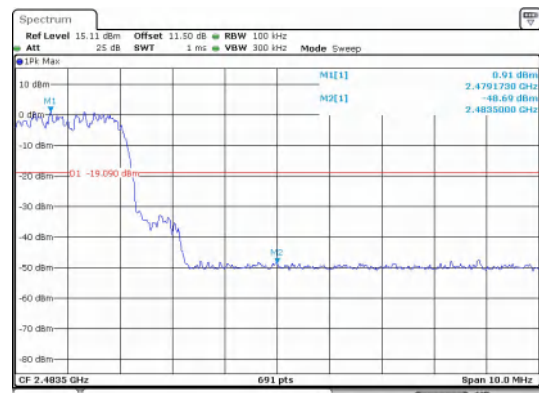
Date: 18.OCT.2024 11:41:39

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



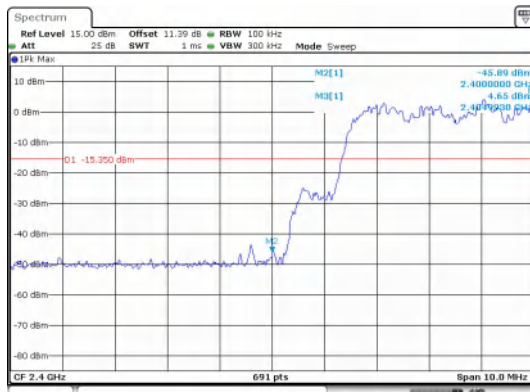
Date: 18.OCT.2024 11:32:06

Out Of Band Emission(Right)
GFSK_DH5_Channel Hopping



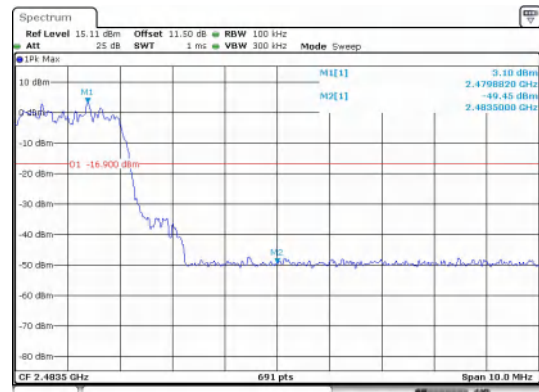
Date: 18.OCT.2024 11:41:59

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



Date: 18.OCT.2024 11:56:02

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



Date: 18.OCT.2024 11:56:05

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