

Appendix

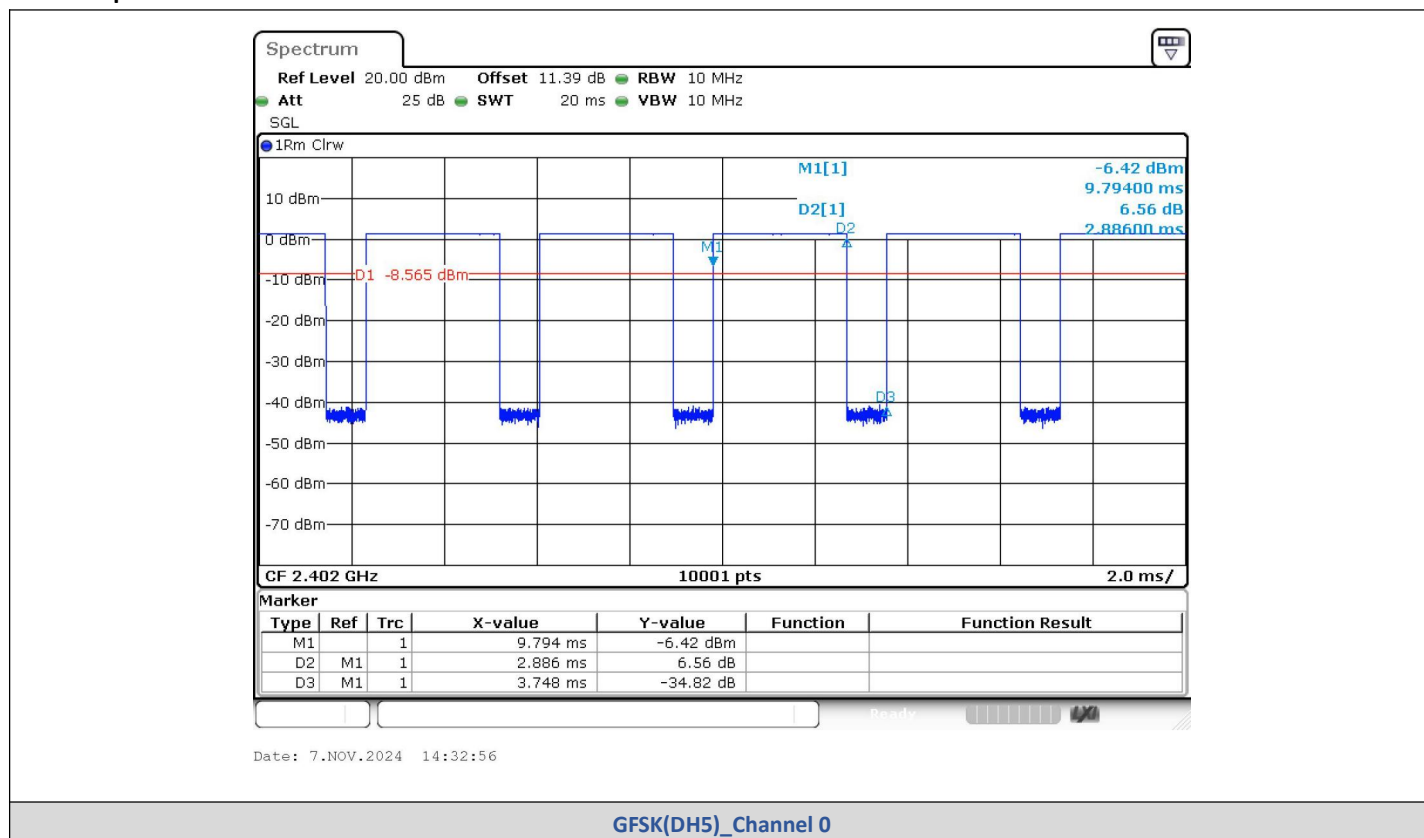
Report No.:	CISRR241106036
FCC ID:	2BD9D-JMK-D01
Product Name:	Fragrance diffuserStereo Audio speaker
Model No.:	JMK-D01
Test Engineer:	Lucas Huang
Supervised by:	Rory Huang

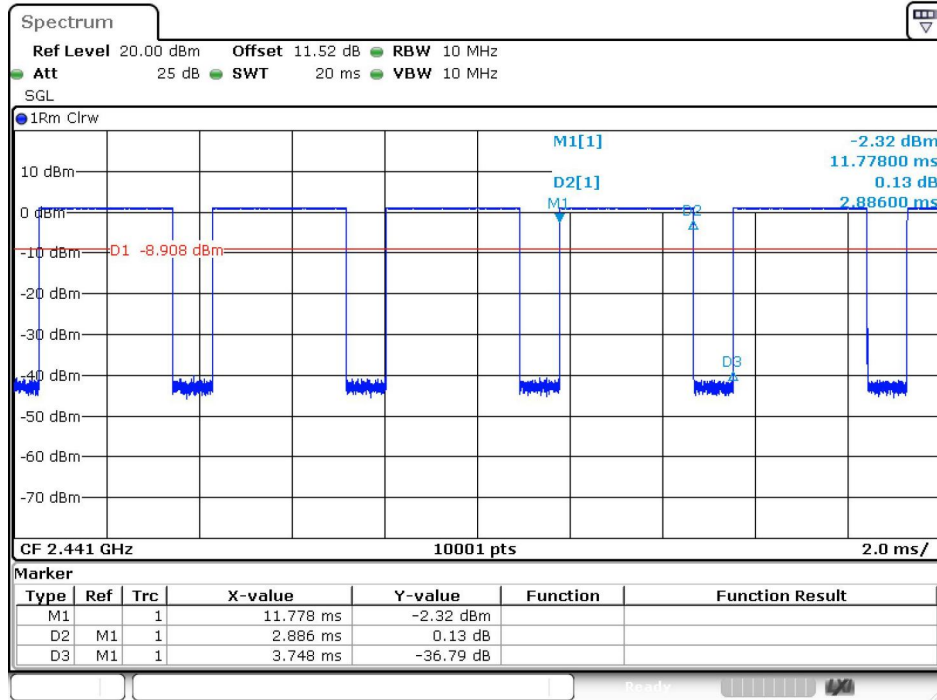
1) Duty Cycle

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	2.886	3.748	77.00	0.7700	1.1351	0.3465
		78	2.886	3.748	77.00	0.7700	1.1351	0.3465
$\pi/4$ DQPSK	2-DH5	0	2.890	3.748	77.11	0.7711	1.1289	0.3460
		39	2.890	3.748	77.11	0.7711	1.1289	0.3460
		78	2.890	3.748	77.11	0.7711	1.1289	0.3460
8DPSK	3-DH5	0	2.892	3.748	77.16	0.7716	1.1261	0.3458
		39	2.892	3.748	77.16	0.7716	1.1261	0.3458
		78	2.892	3.748	77.16	0.7716	1.1261	0.3458

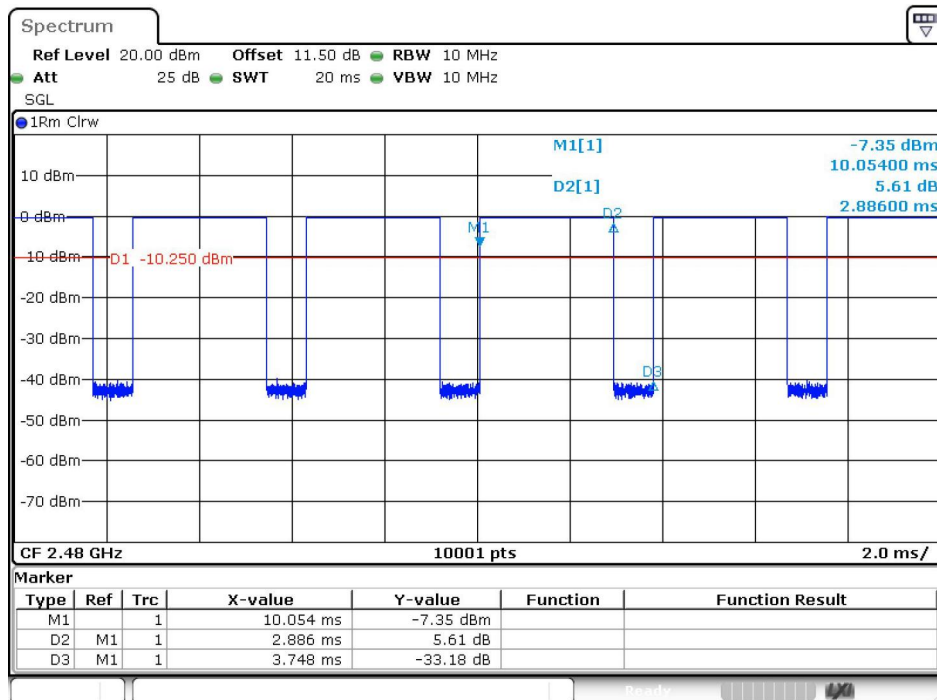
Test Graphs





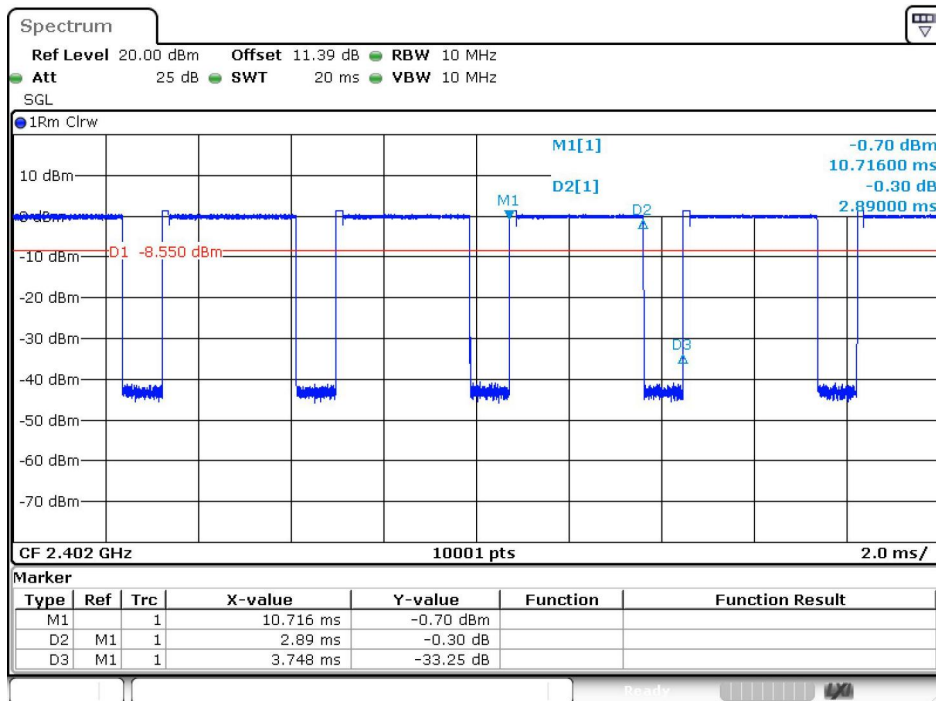
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GFSK(DH5)_Channel 39



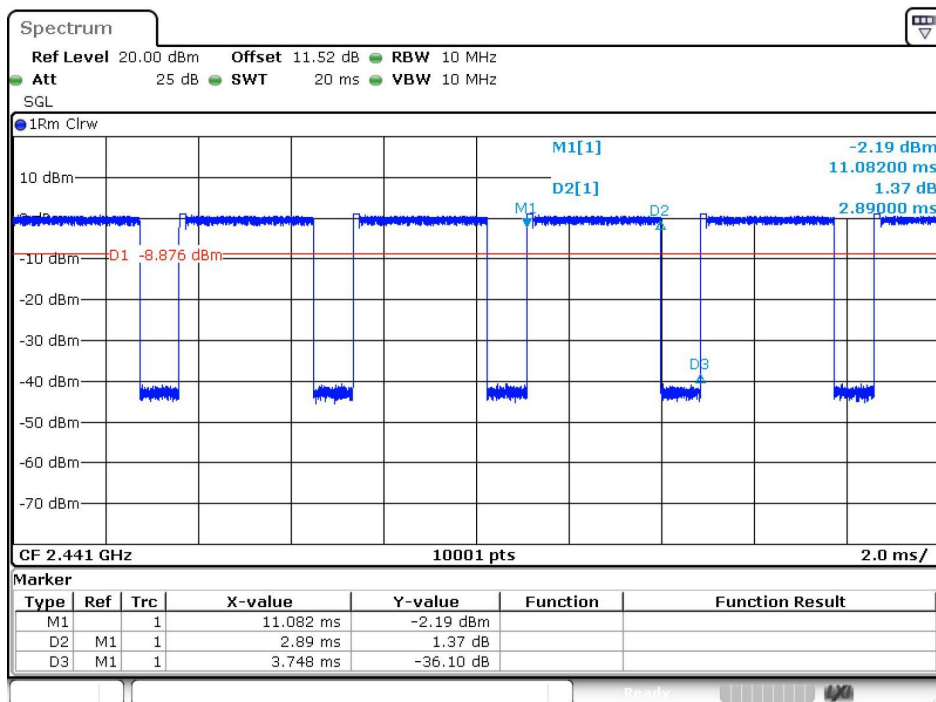
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GFSK(DH5)_Channel 78



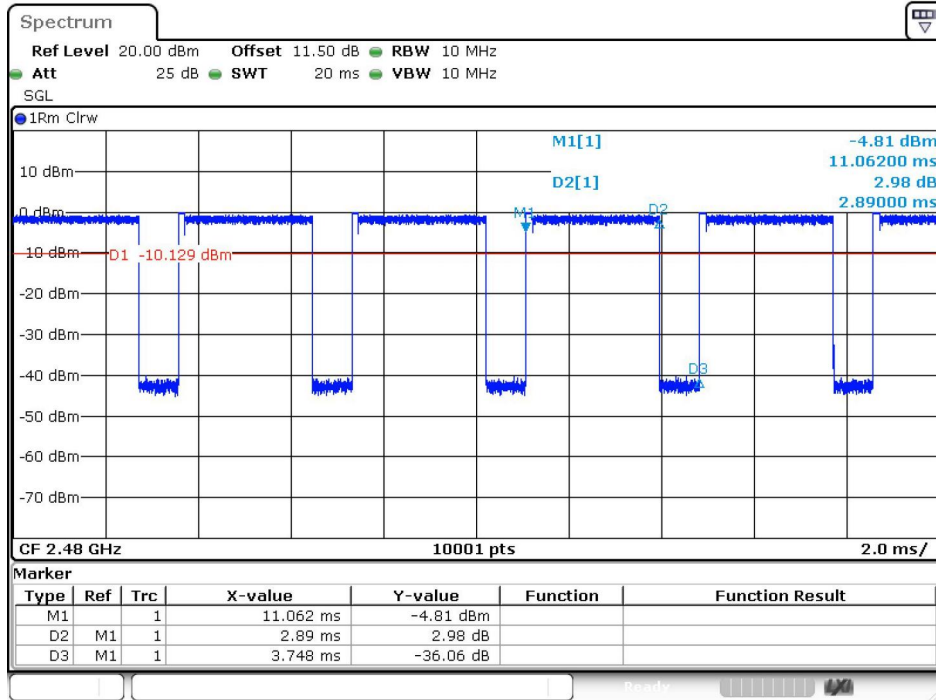
Date: 7.NOV.2024 14:44:52

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



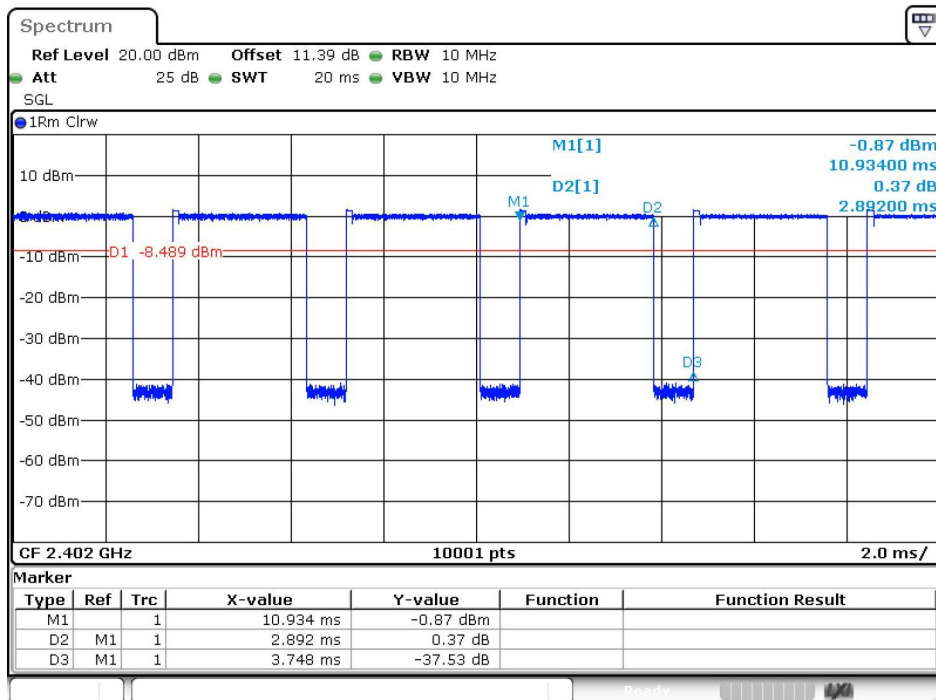
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$\pi/4$ DQPSK(2-DH5)_Channel 39



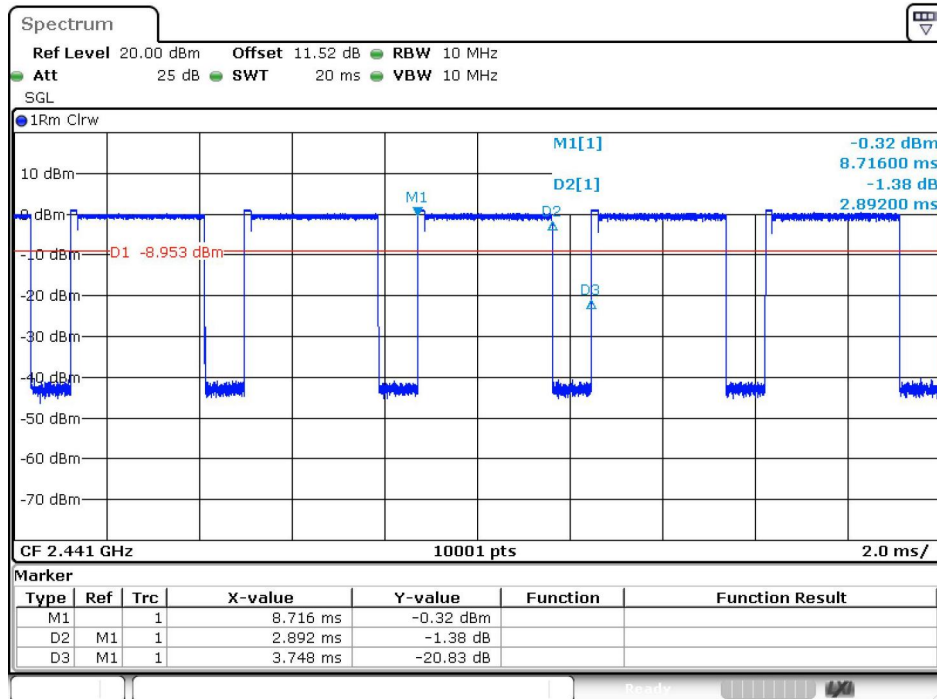
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$\pi/4$ DQPSK(2-DH5)_Channel 78



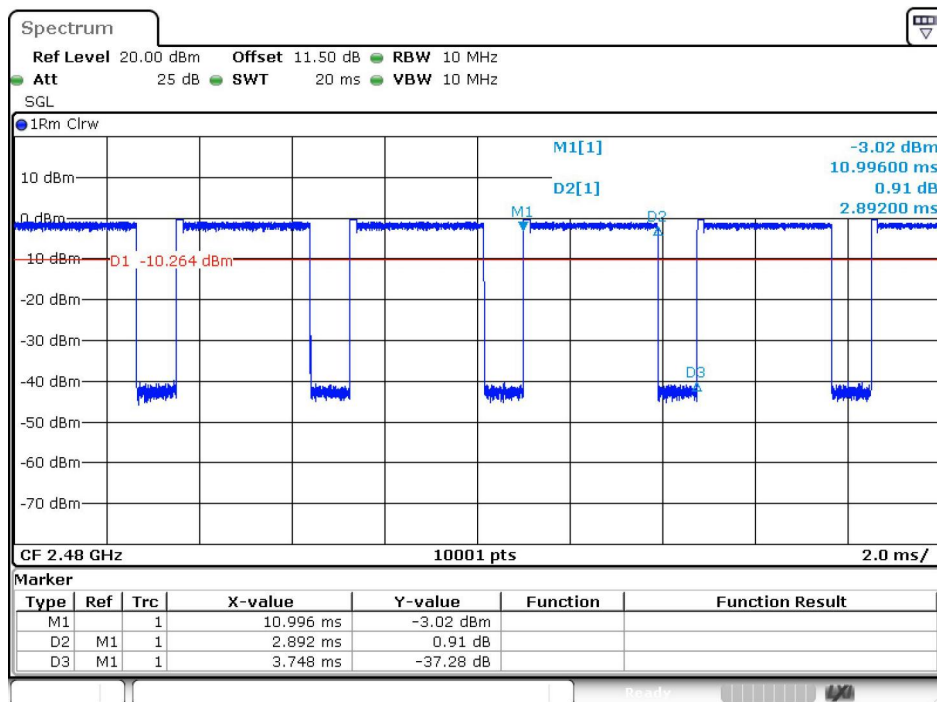
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8DPSK(3-DH5)_Channel 0



Date: 7.NOV.2024 15:01:36

8DPSK(3-DH5)_Channel 39



Date: 7.NOV.2024 15:03:48

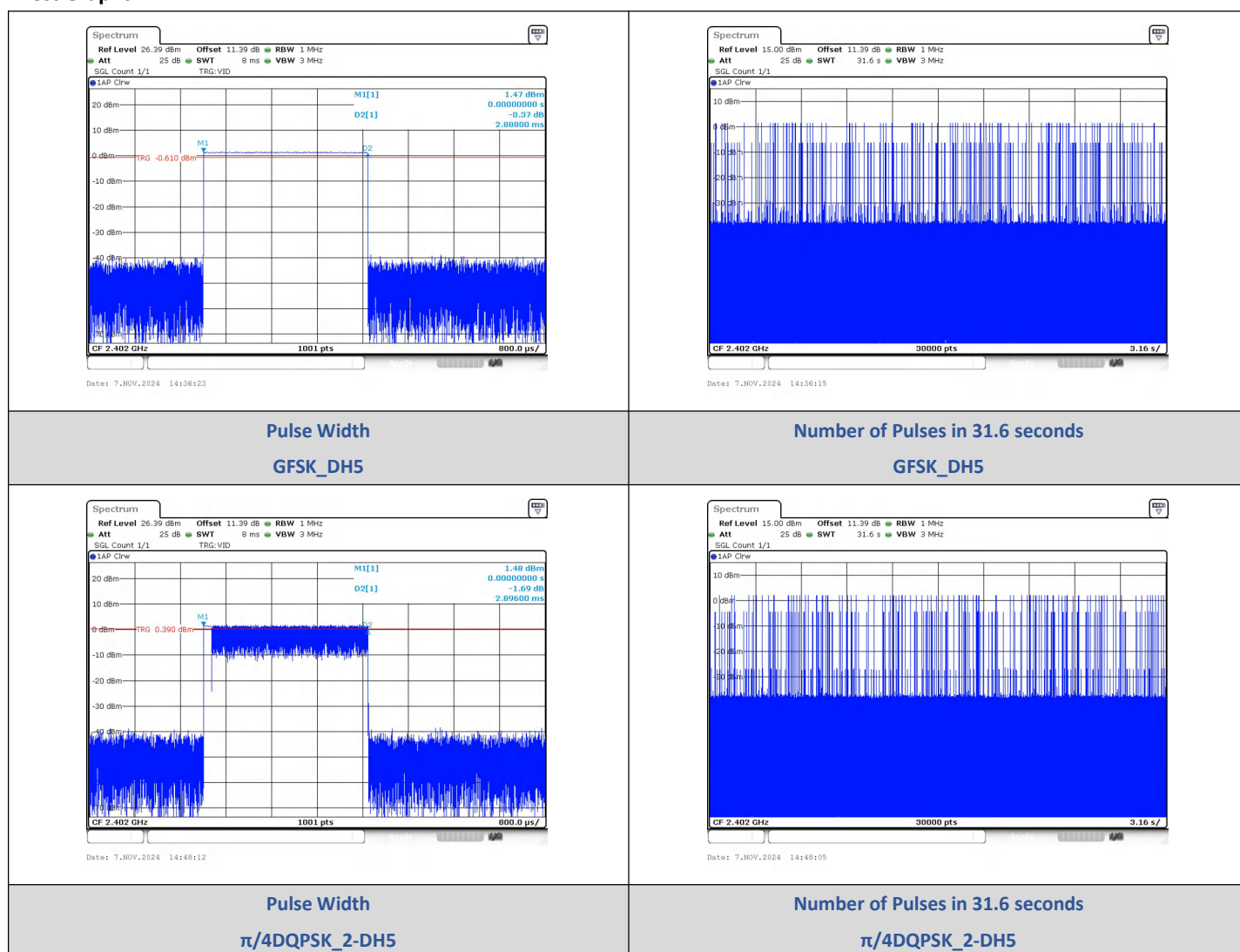
8DPSK(3-DH5)_Channel 78

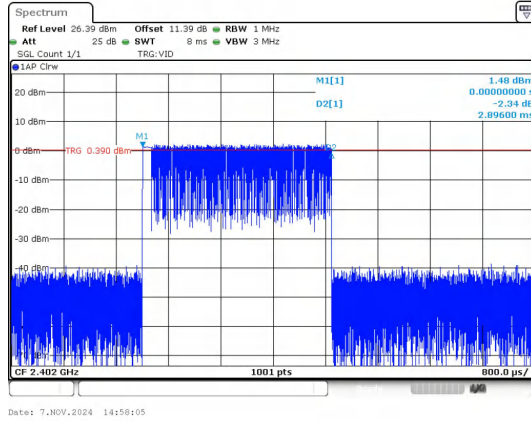
2) Dwell Time

Test Result

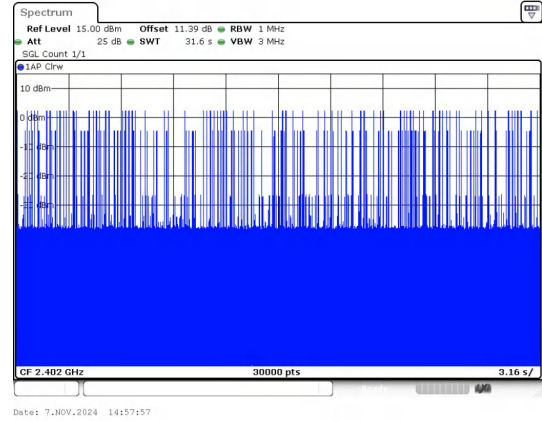
Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH5	CH0 (2402MHz)	2.888	97	280.14	< 400	PASS
$\pi/4$ DQPSK	2-DH5		2.896	104	301.18		PASS
8DPSK	3-DH5		2.896	104	301.18		PASS

Test Graphs





Pulse Width
8DPSK_3-DH5



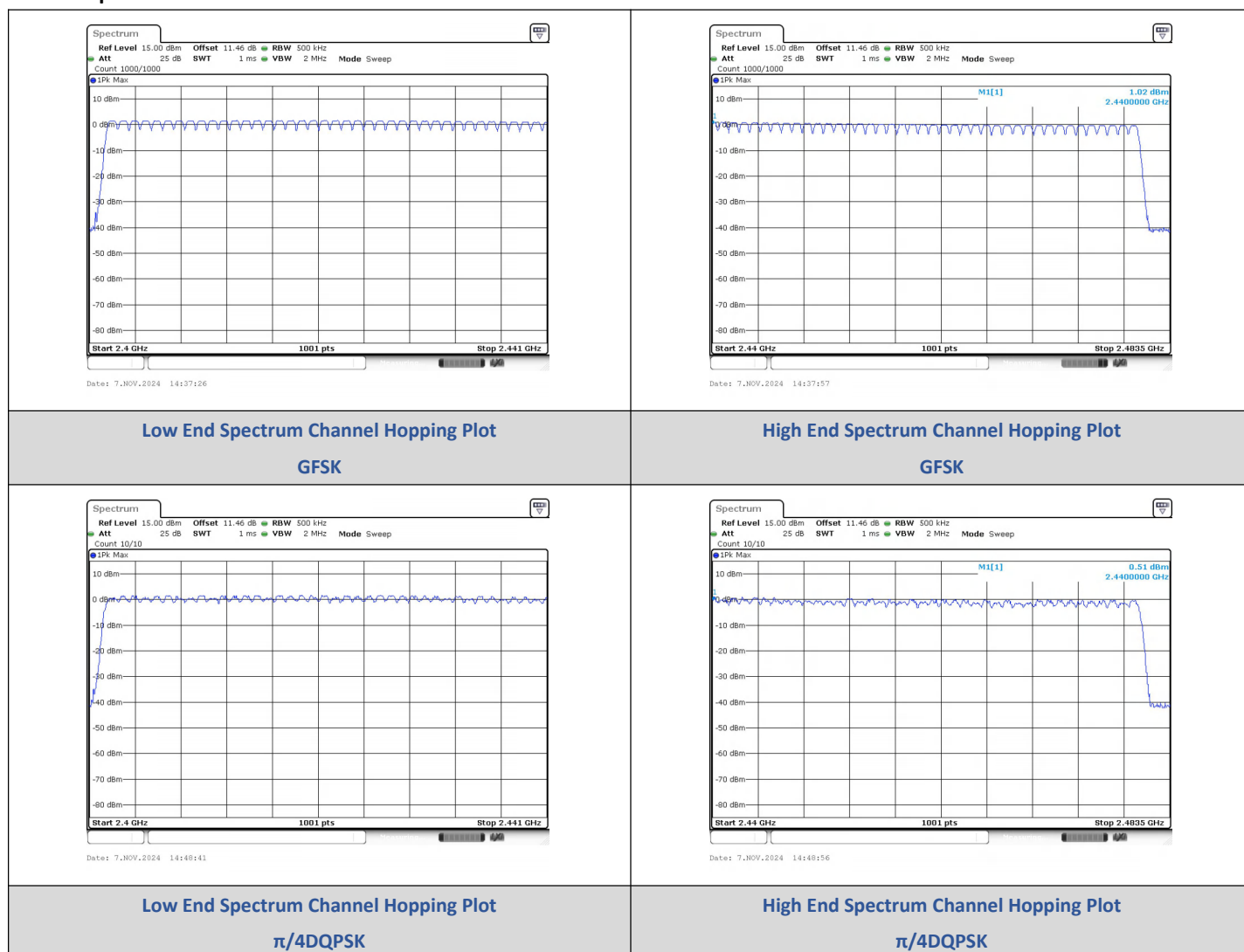
Number of Pulses in 31.6 seconds
8DPSK_3-DH5

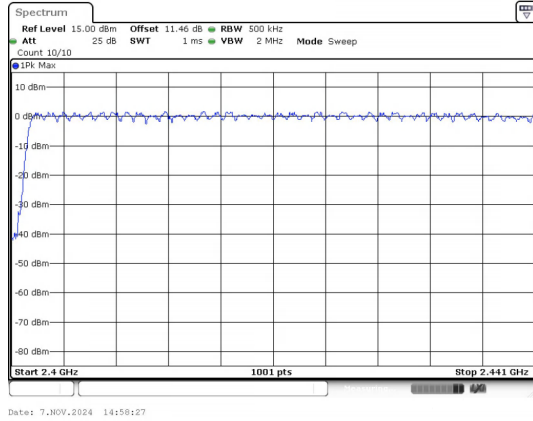
3) Number Of Hopping Channel

Test Result

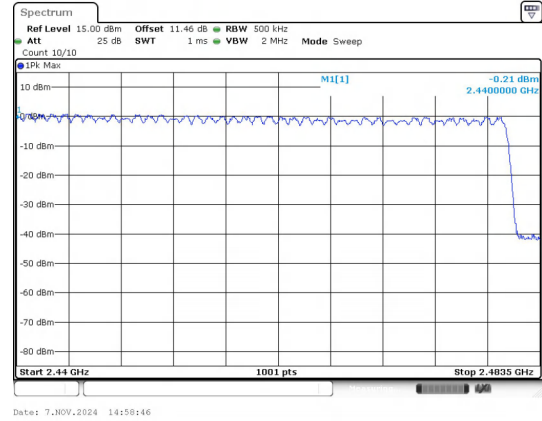
Modulation	Packet	Number of Hopping Channel	Limit	Result
GFSK	DH5	79	15	PASS
$\pi/4$ DQPSK	2-DH5	79	15	PASS
8DPSK	3-DH5	79	15	PASS

Test Graphs





Low End Spectrum Channel Hopping Plot
8DPSK



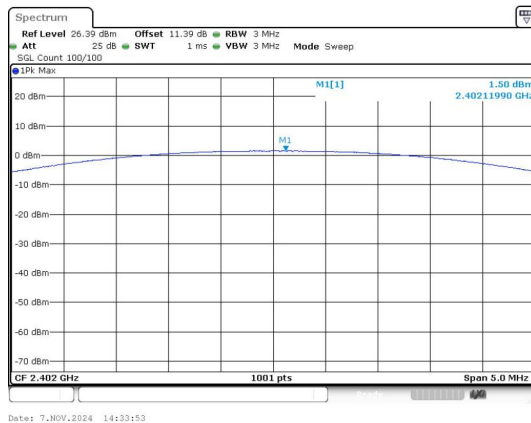
High End Spectrum Channel Hopping Plot
8DPSK

4) Conducted Peak Output Power

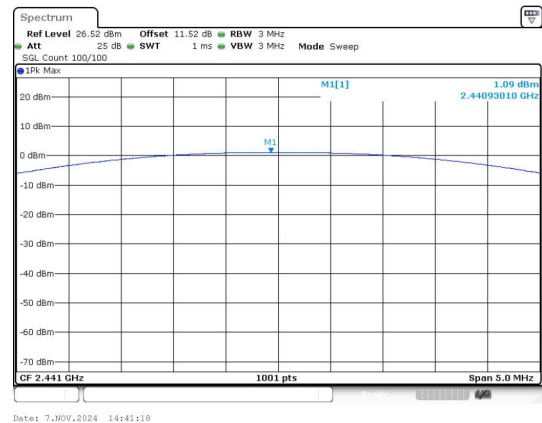
Test Result

Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
GFSK	DH5	0	1.50	1.41	≤30	PASS
		39	1.09	1.29		PASS
		78	-0.15	0.97		PASS
$\pi/4$ DQPSK	2-DH5	0	2.35	1.72	≤20.97	PASS
		39	2.03	1.60		PASS
		78	0.75	1.19		PASS
8DPSK	3-DH5	0	2.73	1.87		PASS
		39	2.27	1.69		PASS
		78	0.97	1.25		PASS

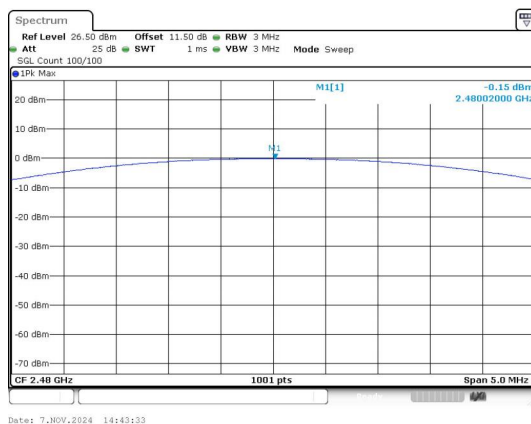
Test Graphs



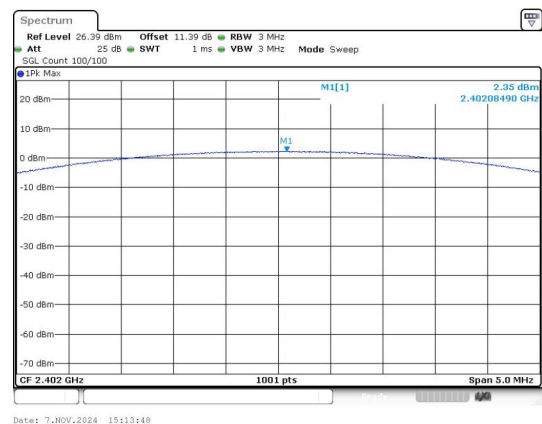
Peak Output Power
GFSK_Channel 0



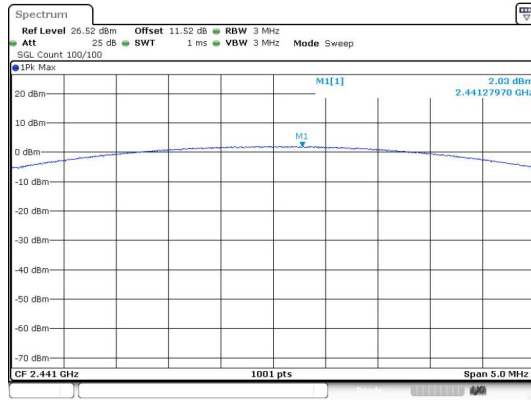
Peak Output Power
GFSK_Channel 39



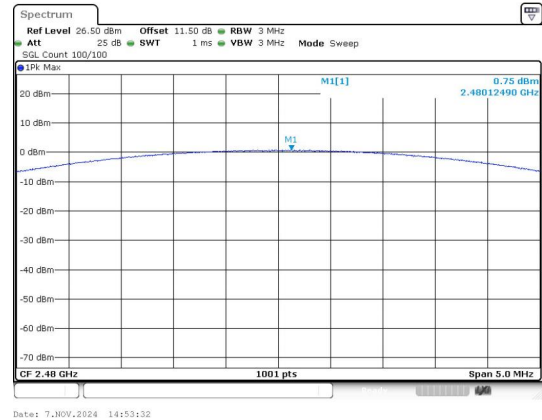
Peak Output Power
GFSK_Channel 78



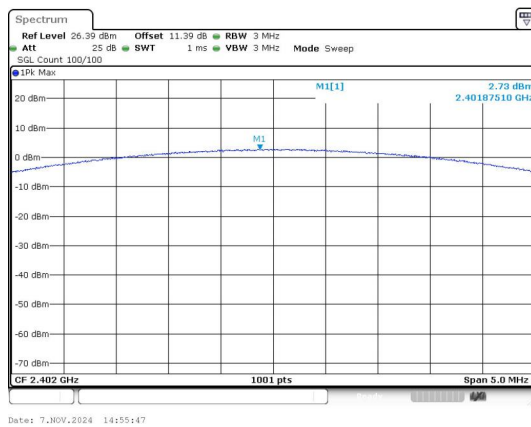
Peak Output Power
 $\pi/4$ DQPSK_Channel 0



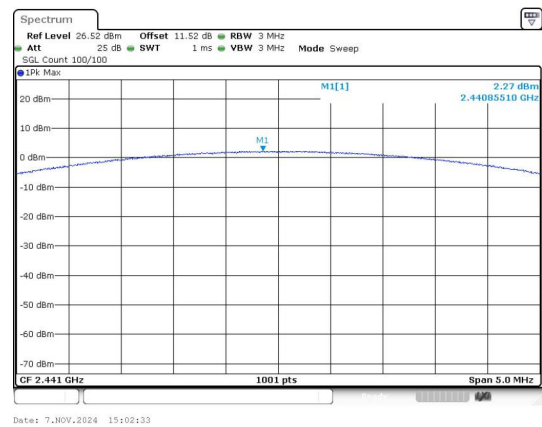
Peak Output Power
 $\pi/4$ DQPSK_Channel 39



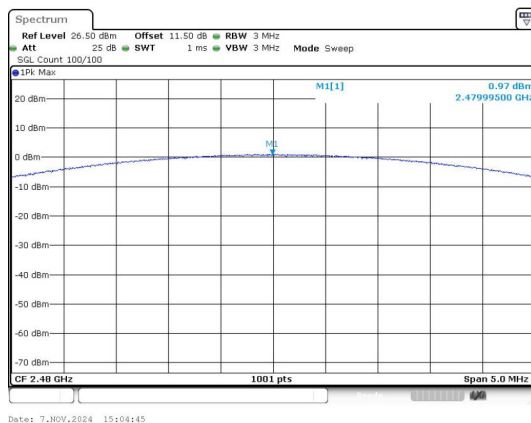
Peak Output Power
 $\pi/4$ DQPSK_Channel 78



Peak Output Power
8DPSK_Channel 0



Peak Output Power
8DPSK_Channel 39



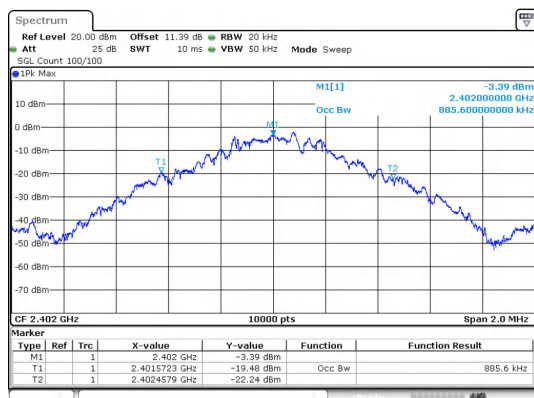
Peak Output Power
8DPSK_Channel 78

5) 99% Bandwidth

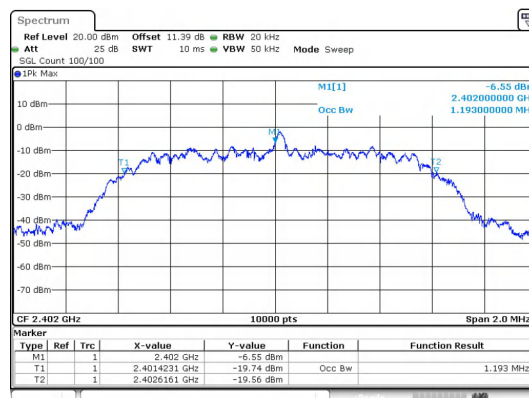
Test Result

Modulation	Channel	Center Frequency (MHz)	99% BW (MHz)
GFSK	0	2402	0.88560
	39	2441	0.89880
	78	2480	0.87620
$\pi/4$ DQPSK	0	2402	1.1930
	39	2441	1.1946
	78	2480	1.1974
8DPSK	0	2402	1.2104
	39	2441	1.2034
	78	2480	1.2022

Test Graphs

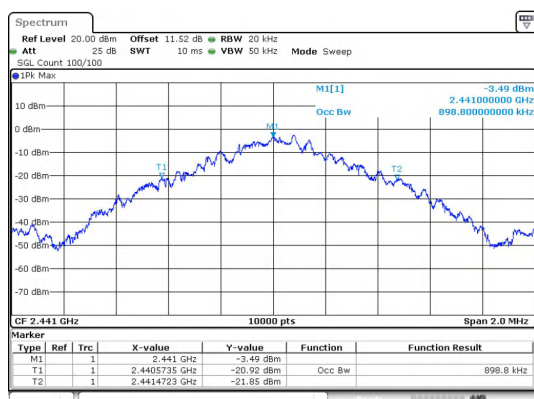


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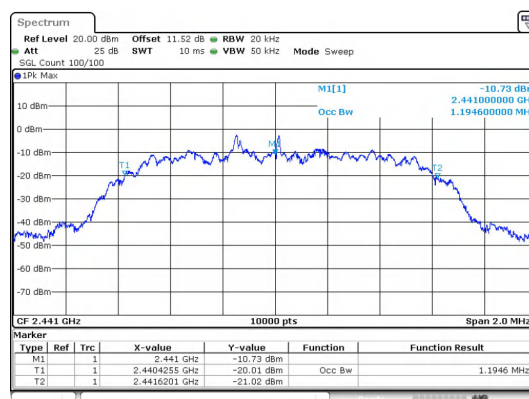


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GFSK_DH5_Channel 0

 $\pi/4$ DQPSK_2-DH5_Channel 0


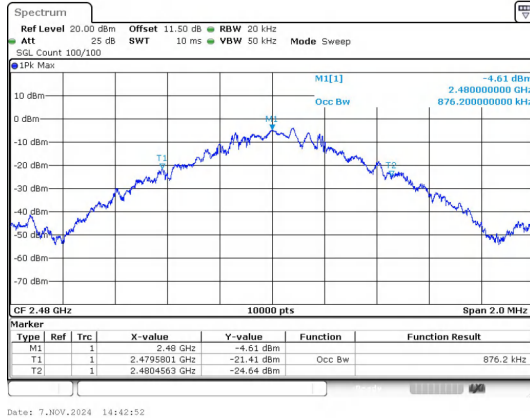
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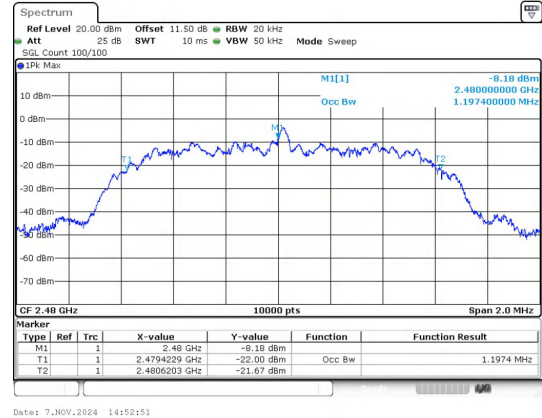
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GFSK_DH5_Channel 39

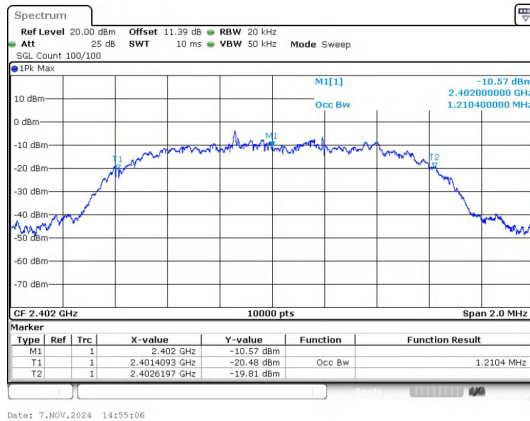
 $\pi/4$ DQPSK_2-DH5_Channel 39



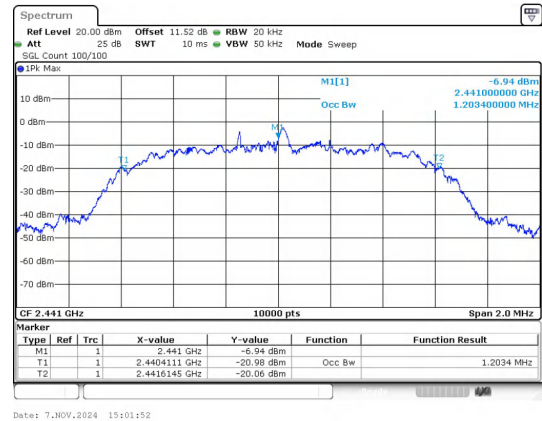
GFSK_DH5_Channel 78



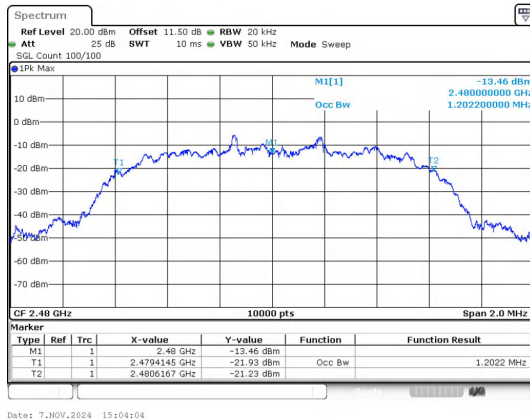
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8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



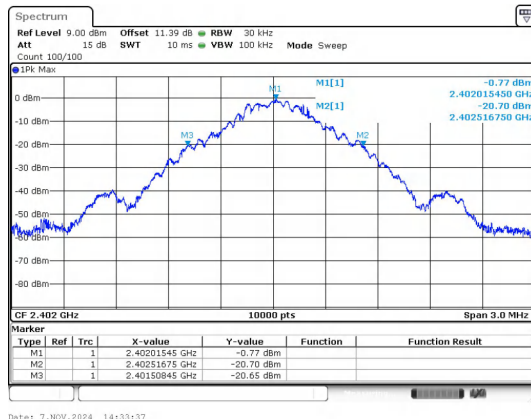
8DPSK_3-DH5_Channel 78

6) 20dB Bandwidth

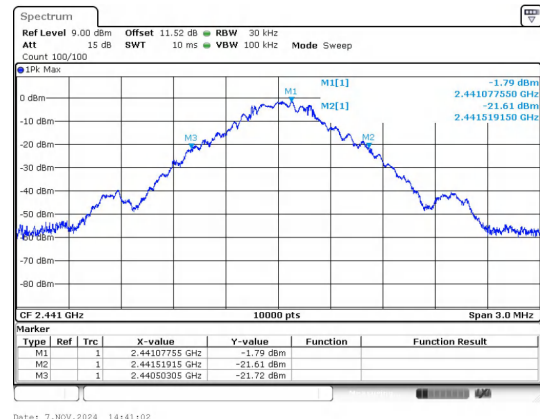
Test Result

Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	1.010
	39	2441 MHz	1.020
	78	2480 MHz	0.9800
$\pi/4$ DQPSK	0	2402 MHz	1.270
	39	2441 MHz	1.280
	78	2480 MHz	1.280
8DPSK	0	2402 MHz	1.280
	39	2441 MHz	1.290
	78	2480 MHz	1.290

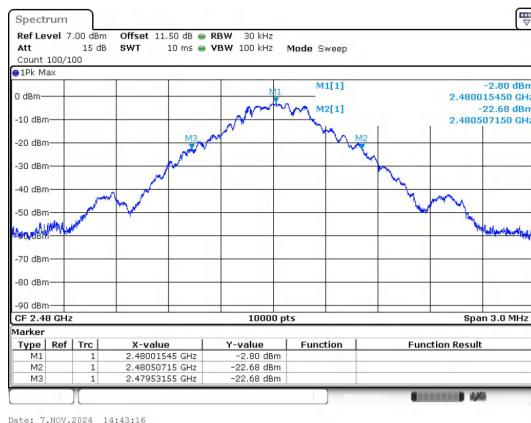
Test Graphs



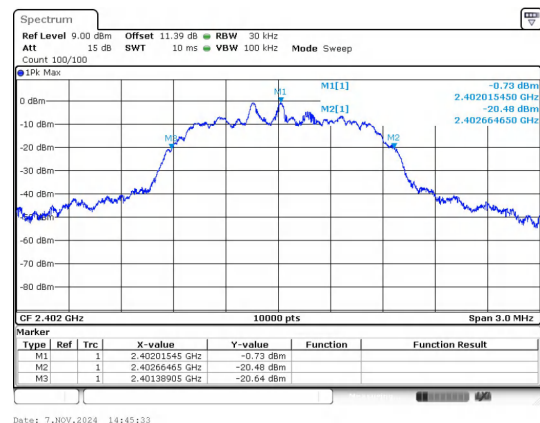
GFSK_DH5_Channel 0



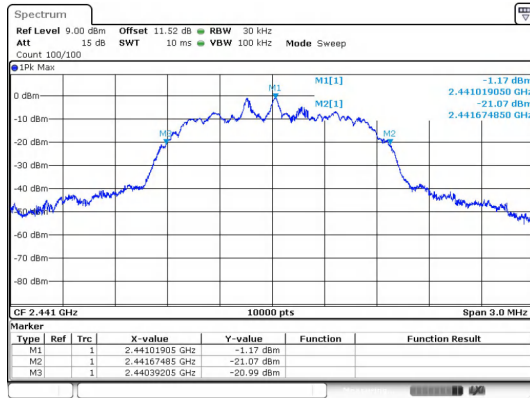
GFSK_DH5_Channel 39



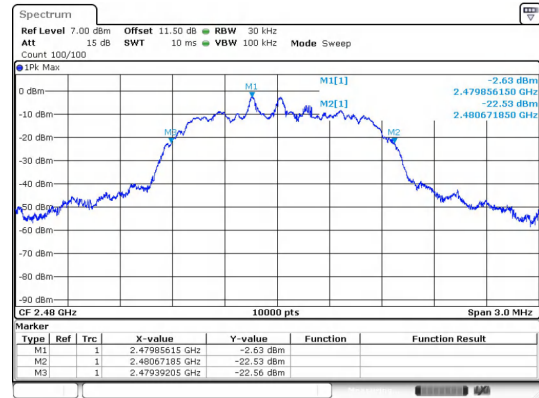
GFSK_DH5_Channel 78



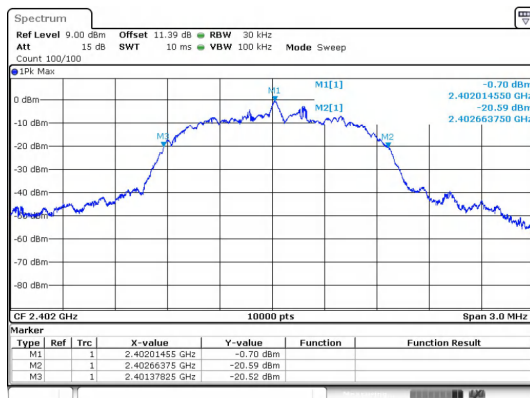
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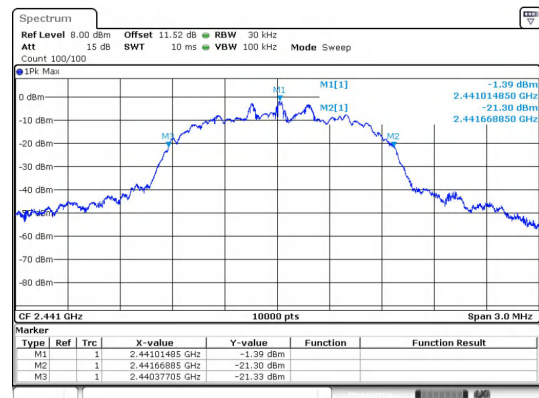
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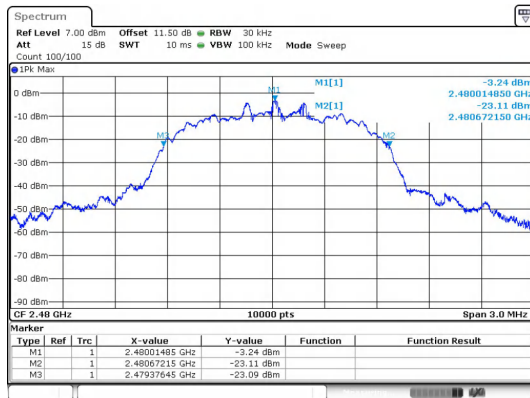
$\pi/4$ DQPSK_2-DH5_Channel 78



8DPSK_3-DH5_Channel 0



8DPSK_3-DH5_Channel 39



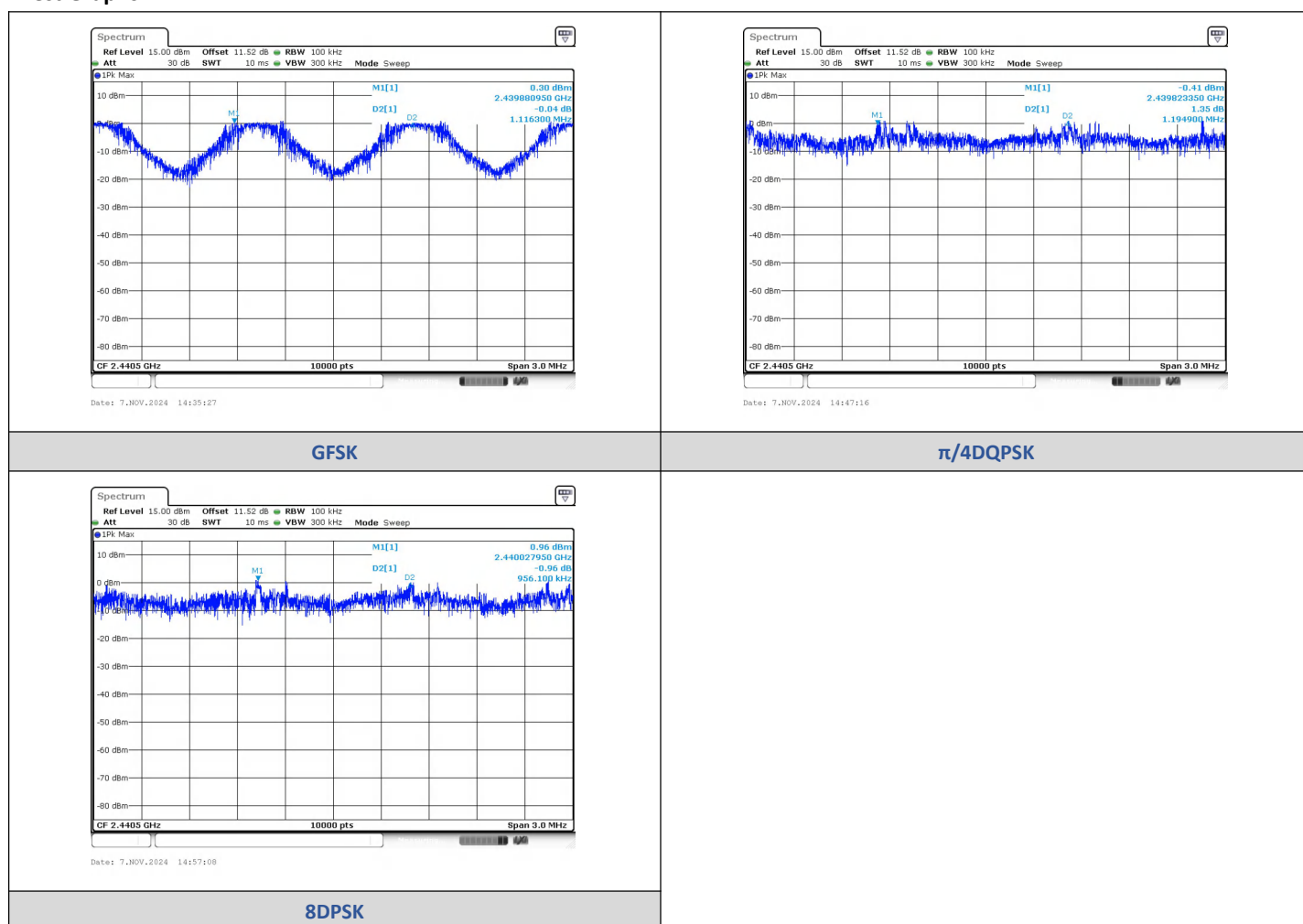
8DPSK_3-DH5_Channel 78

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	2439.881	2440.9972	1.1163	1.02	PASS
$\pi/4$ DQPSK	2-DH5	2439.8234	2441.0183	1.1949	0.847	PASS
8DPSK	3-DH5	2440.028	2440.9841	0.9561	0.853	PASS

Test Graphs



8) Conducted Out Of Band Emission

Test Result

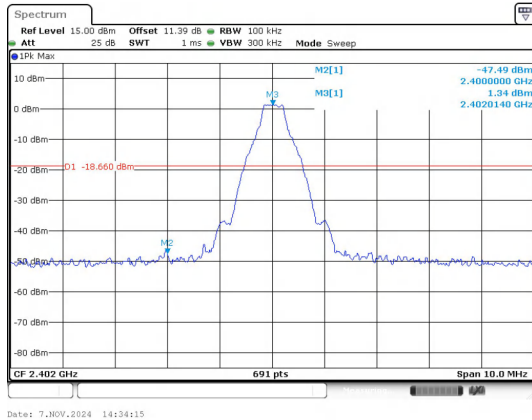
Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2400.00	-47.490	-18.66	-28.830	PASS
			4803.85	-45.532	-18.66	-26.872	PASS
		39	9763.72	-42.445	-19.1	-23.345	PASS
		78	2483.50	-49.360	-20.31	-29.050	PASS
			9920.20	-41.779	-20.31	-21.469	PASS
$\pi/4$ DQPSK	2-DH5	0	2400.00	-48.720	-18.7	-30.020	PASS
			4803.85	-46.234	-18.7	-27.534	PASS
		39	9763.72	-41.756	-18.95	-22.806	PASS
		78	2483.50	-50.560	-20.24	-30.320	PASS
			9920.20	-41.849	-20.24	-21.609	PASS
8DPSK	3-DH5	0	2400.00	-47.480	-18.86	-28.620	PASS
			9608.08	-45.904	-18.86	-27.044	PASS
		39	9763.72	-41.871	-19.25	-22.621	PASS
		78	2483.50	-48.950	-20.41	-28.540	PASS
			9920.20	-42.050	-20.41	-21.640	PASS

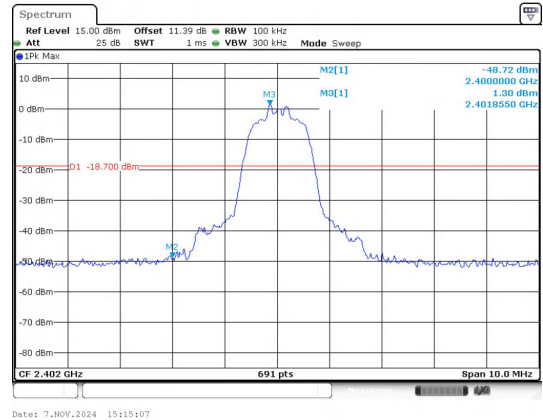
Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2398.64	-48.401	-18.64	-29.761	PASS
			2400.00	-50.290	-18.64	-31.650	PASS
			2483.50	-49.170	-20.77	-28.400	PASS
$\pi/4$ DQPSK	2-DH5		2397.79	-48.729	-19.22	-29.509	PASS
			2400.00	-50.600	-19.22	-31.380	PASS
			2483.50	-49.150	-22.11	-27.040	PASS
8DPSK	3-DH5		2398.97	-47.516	-19.79	-27.726	PASS
			2400.00	-51.730	-19.79	-31.940	PASS
			2483.50	-49.190	-20.68	-28.510	PASS

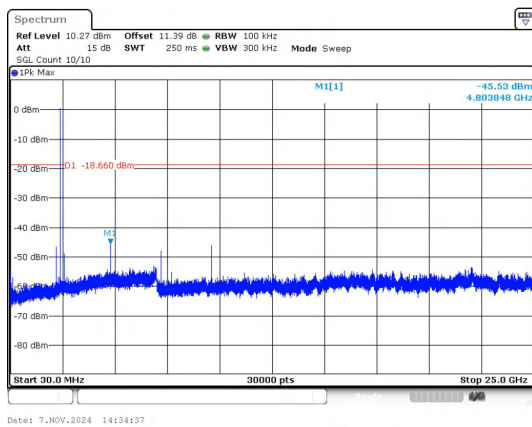
Test Graphs



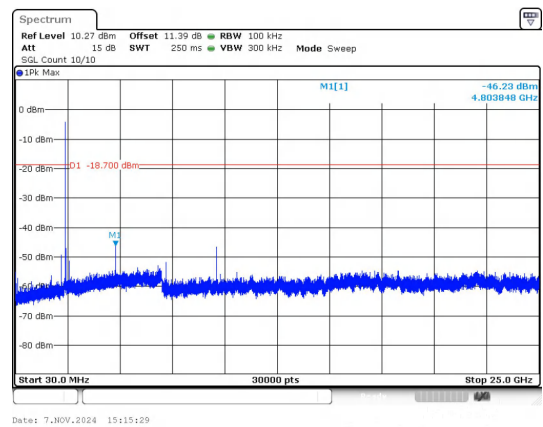
Out Of Band Emission
GFSK_DH5_Channel 0



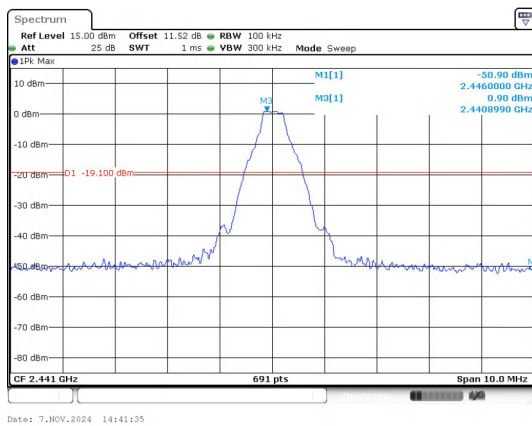
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 0



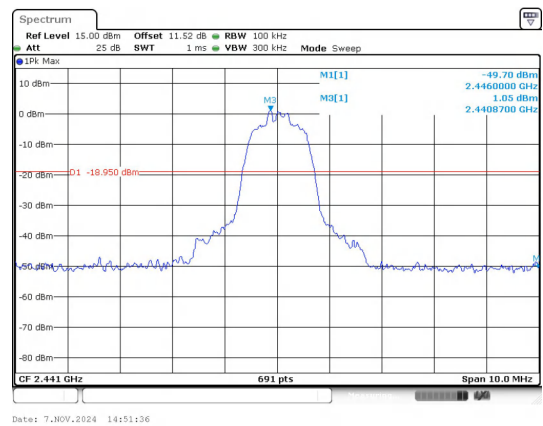
30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 0



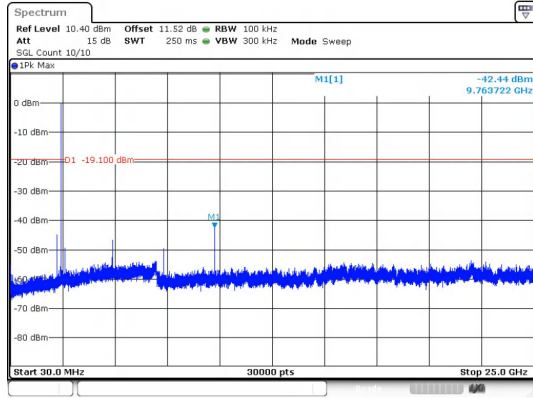
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 0



Out Of Band Emission
GFSK_DH5_Channel 39

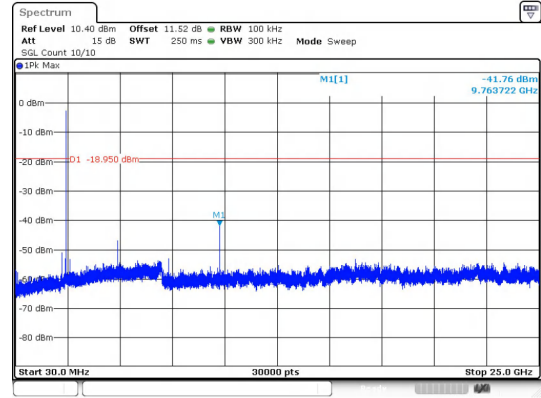


Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 39



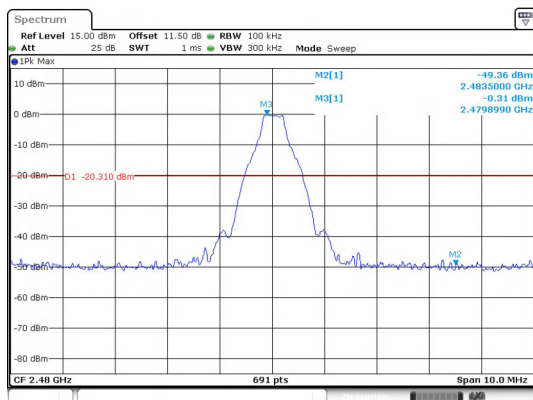
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30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 39



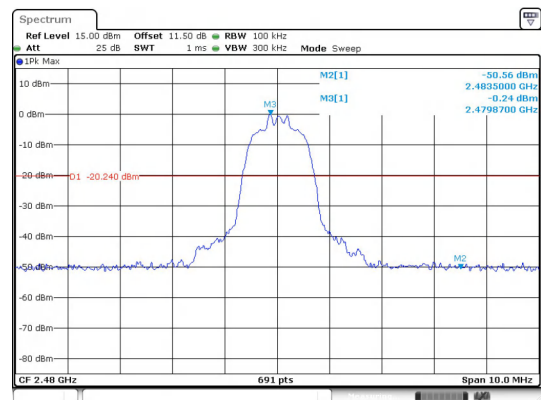
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30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 39



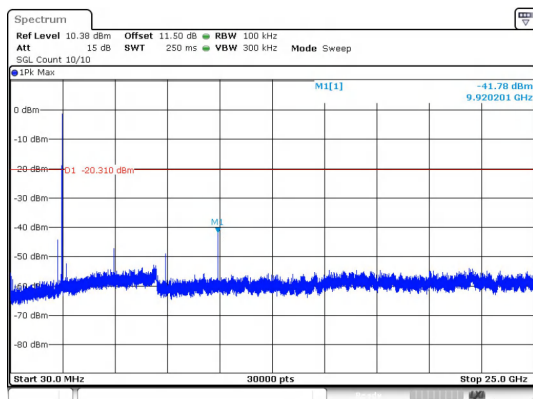
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Out Of Band Emission
GFSK_DH5_Channel 78



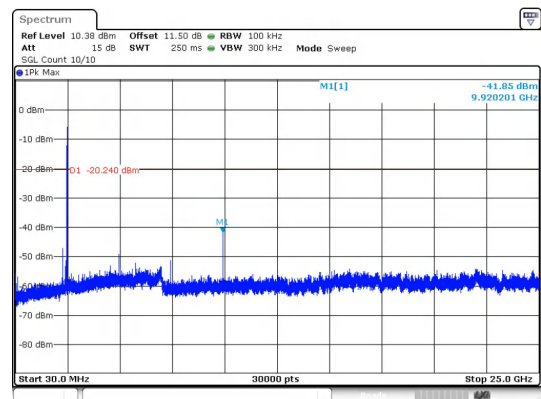
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Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 78



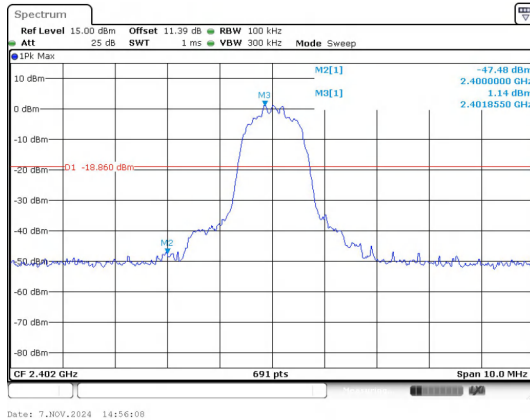
Date: 7.NOV.2024 14:44:16

30.0 MHz - 25000.0 MHz
GFSK_DH5_Channel 78

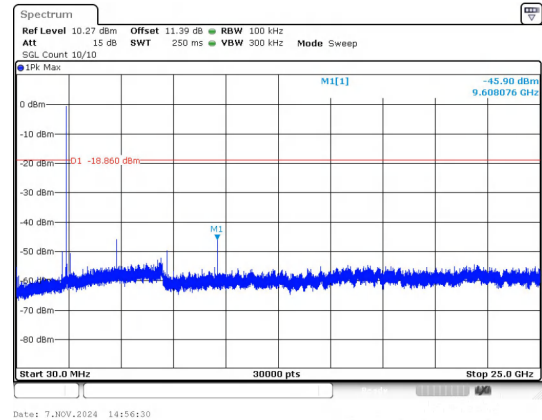


Date: 7.NOV.2024 14:54:15

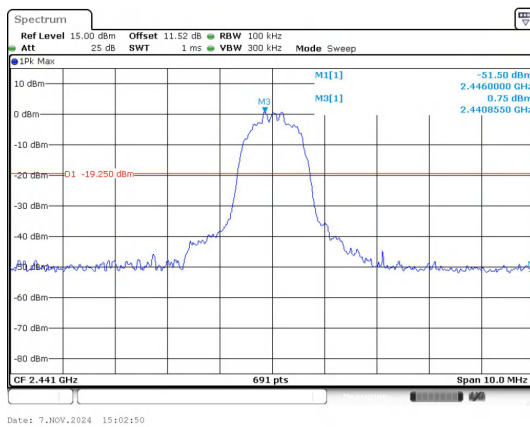
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH5_Channel 78



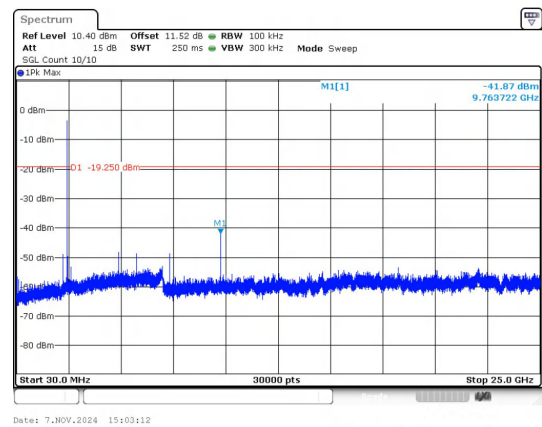
Out Of Band Emission
8DPSK_3-DH5_Channel 0



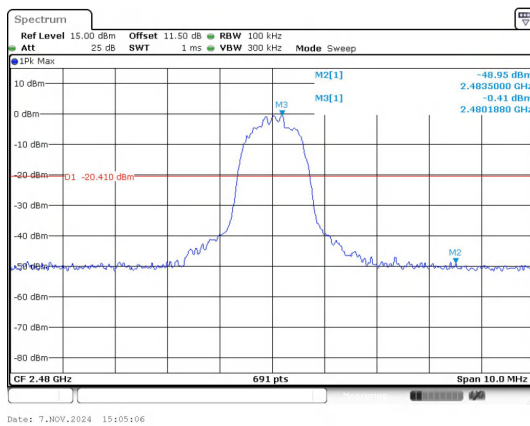
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8DPSK_3-DH5_Channel 0



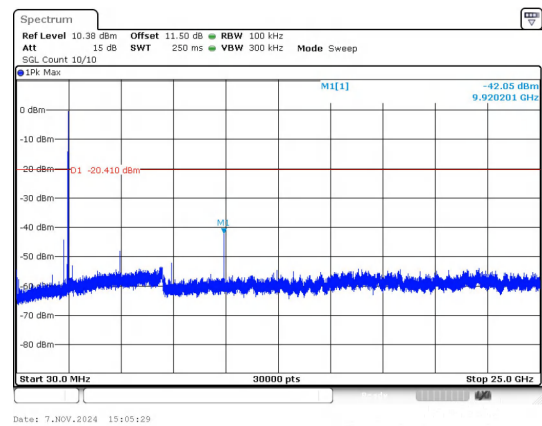
Out Of Band Emission
8DPSK_3-DH5_Channel 39



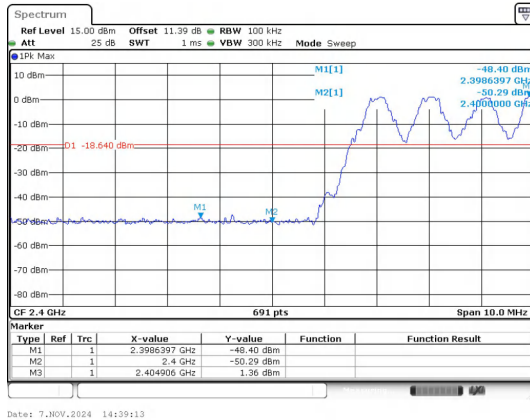
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8DPSK_3-DH5_Channel 39



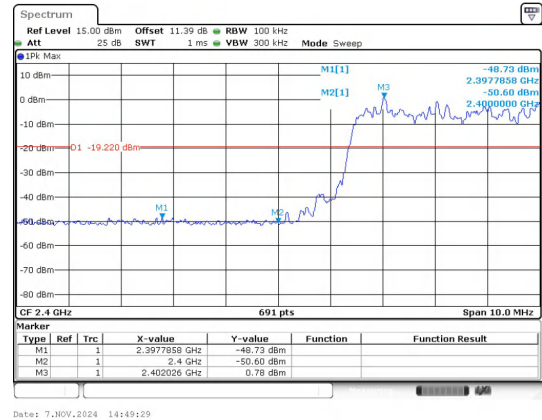
Out Of Band Emission
8DPSK_3-DH5_Channel 78



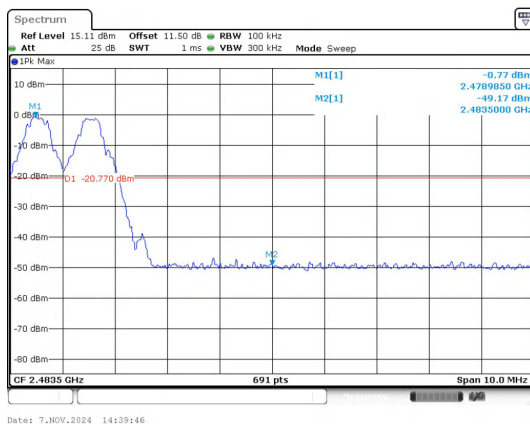
30.0 MHz - 25000.0 MHz
8DPSK_3-DH5_Channel 78



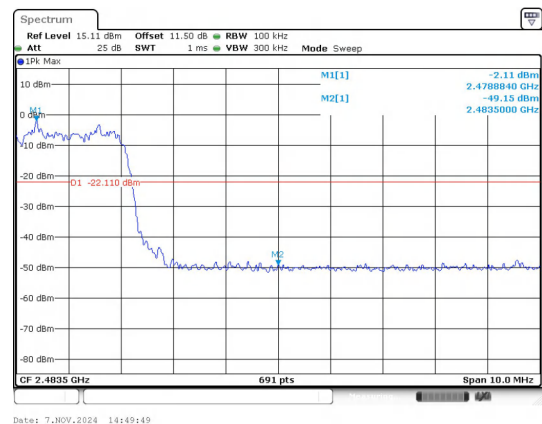
Out Of Band Emission(Left)
GFSK_DH5_Channel Hopping



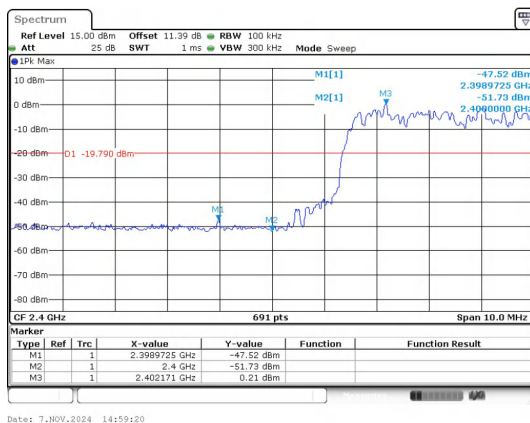
Out Of Band Emission(Left)
 $\pi/4$ DQPSK_2-DH5_Channel Hopping



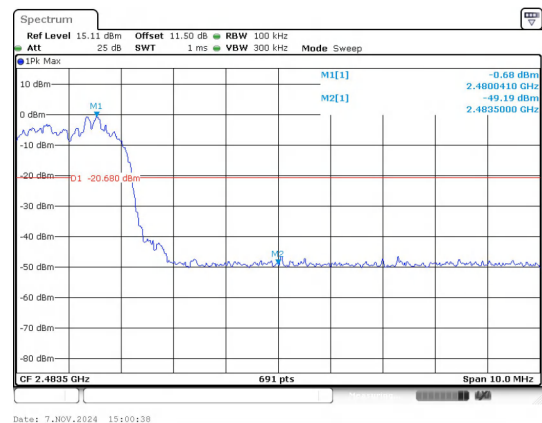
Out Of Band Emission(Right)
GFSK_DH5_Channel Hopping



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

-----The End-----