

## Appendix A

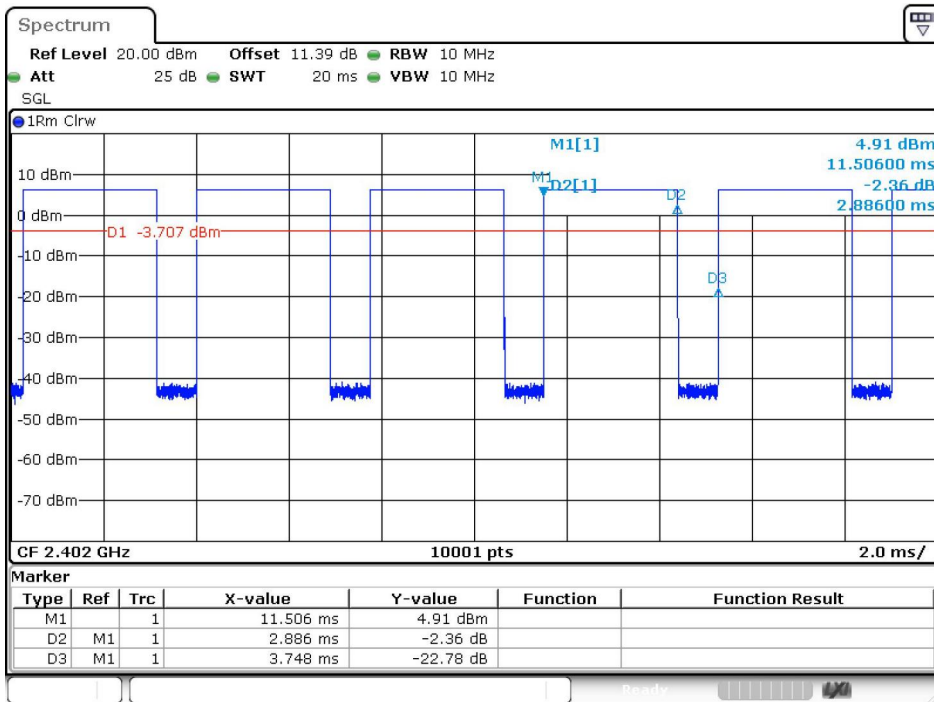
Report No.:	CISRR24082719801
FCC ID:	2BKVY-BCI-AIC
Product Name:	Smart EEG Glasses
Model No.:	BCI-AIC
Test Engineer:	Jimmy Huang
Supervised by:	Rory Huang

# 1) Duty Cycle

## Test Result

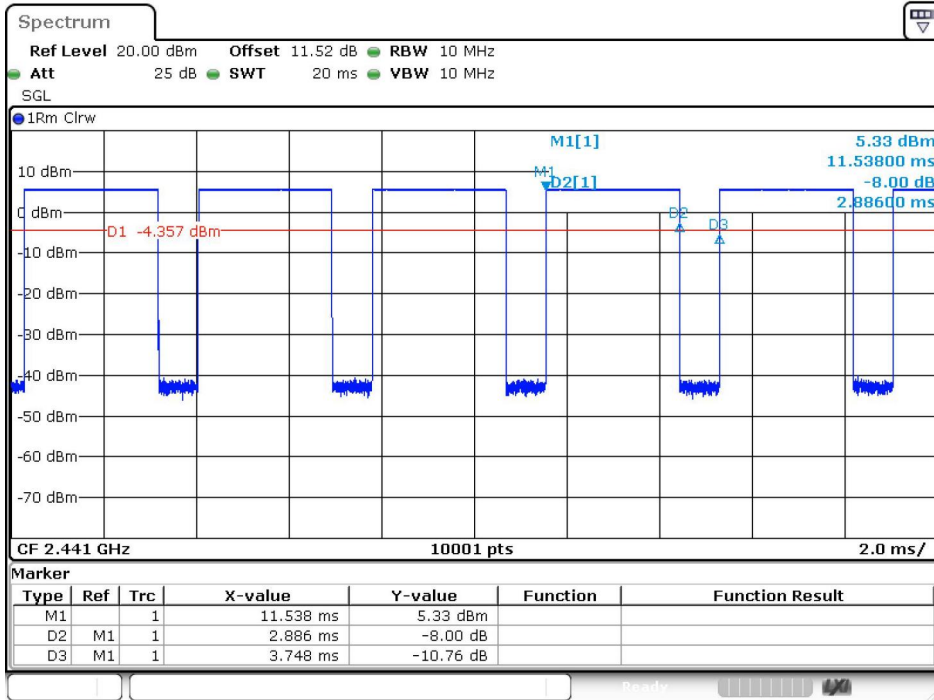
Modulation	Packets	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
GFSK	DH5	0	2.886	3.748	77.00	0.7700	1.1351	0.35
		39	2.886	3.748	77.00	0.7700	1.1351	0.35
		78	2.886	3.748	77.00	0.7700	1.1351	0.35
$\pi/4$ DQPSK	2-DH5	0	2.890	3.748	77.11	0.7711	1.1289	0.35
		39	2.890	3.748	77.11	0.7711	1.1289	0.35
		78	2.890	3.748	77.11	0.7711	1.1289	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

## Test Graphs



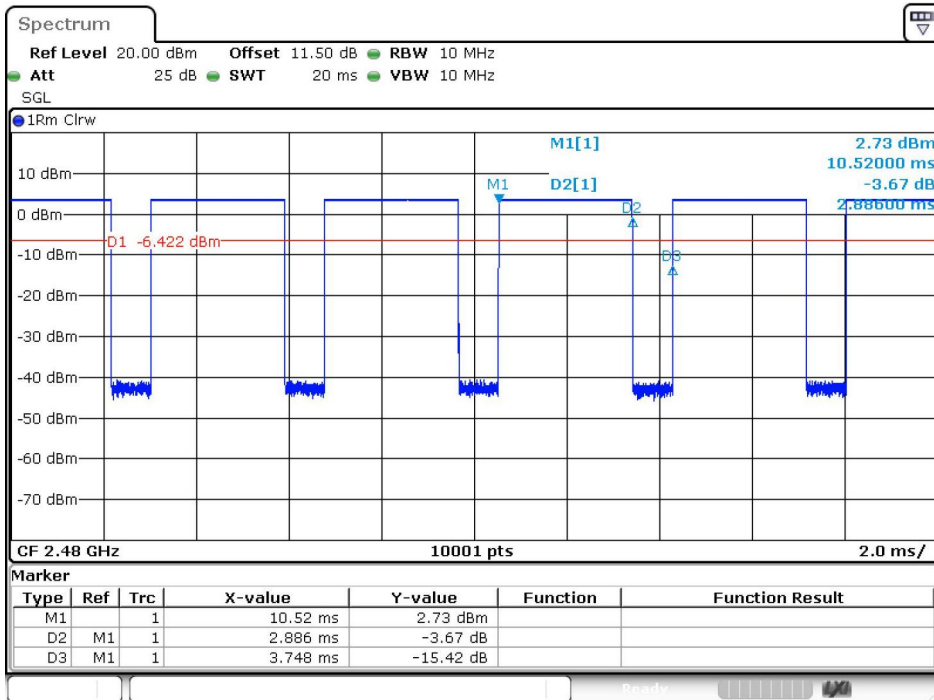
Date: 30.AUG.2024 16:16:48

GFSK(DH5)\_Channel 0



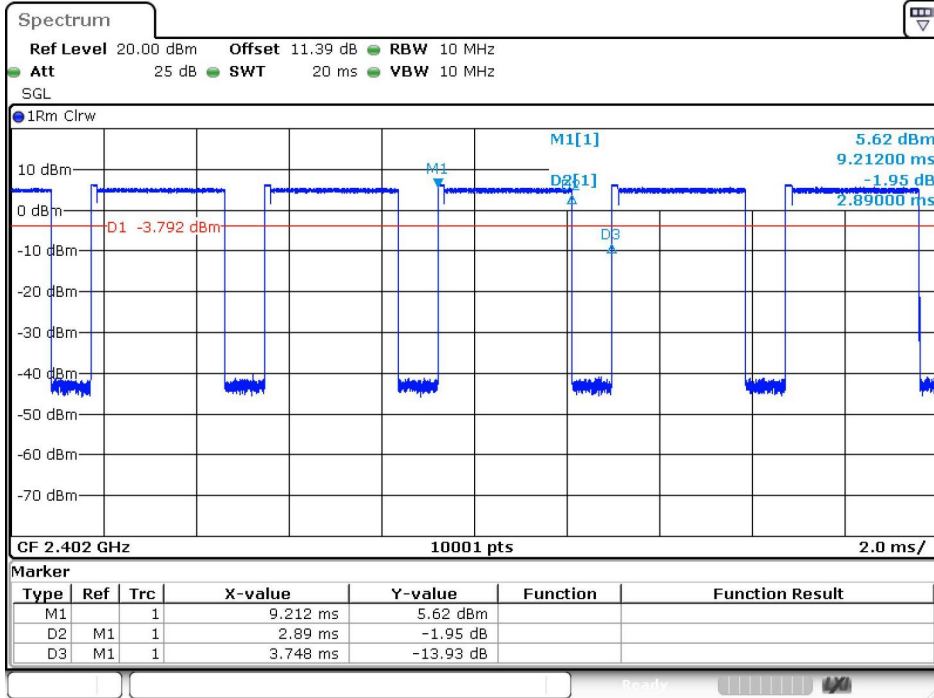
Date: 30.AUG.2024 16:26:28

GFSK(DH5)\_Channel 39



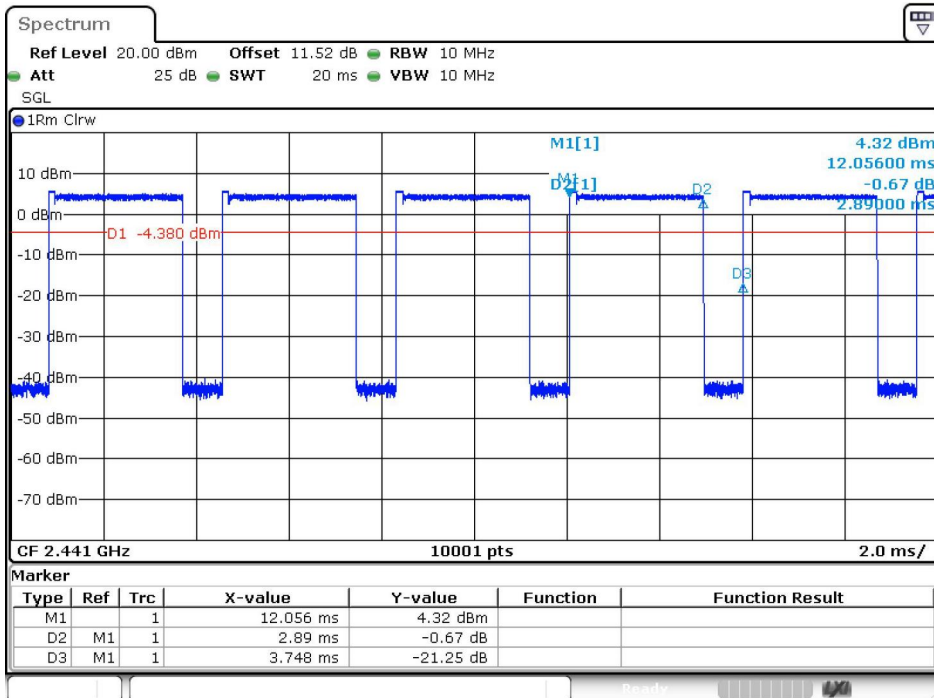
Date: 30.AUG.2024 16:31:29

GFSK(DH5)\_Channel 78



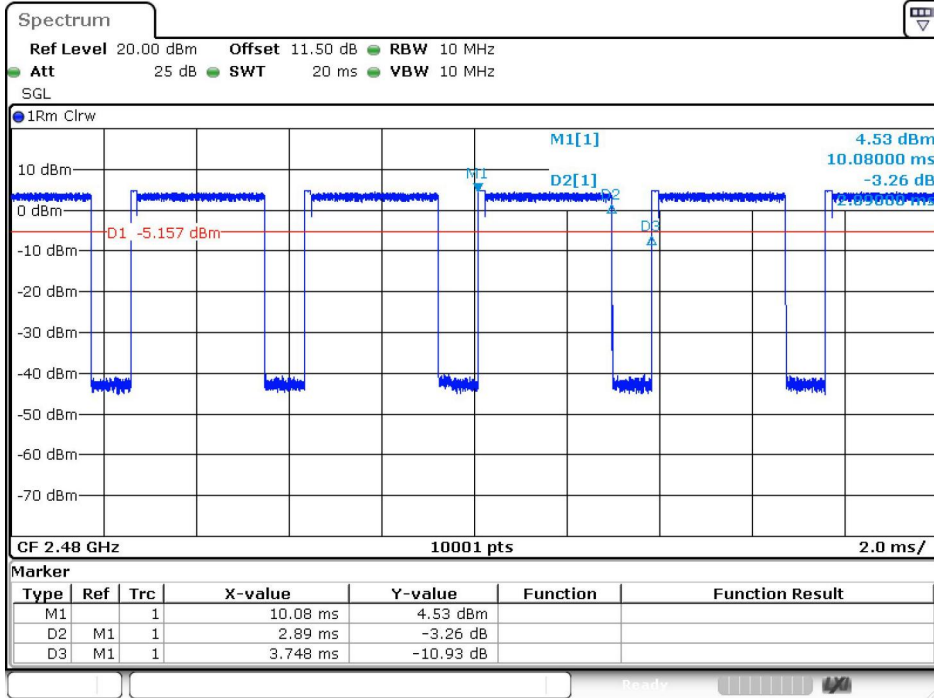
Date: 30.AUG.2024 16:34:10

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



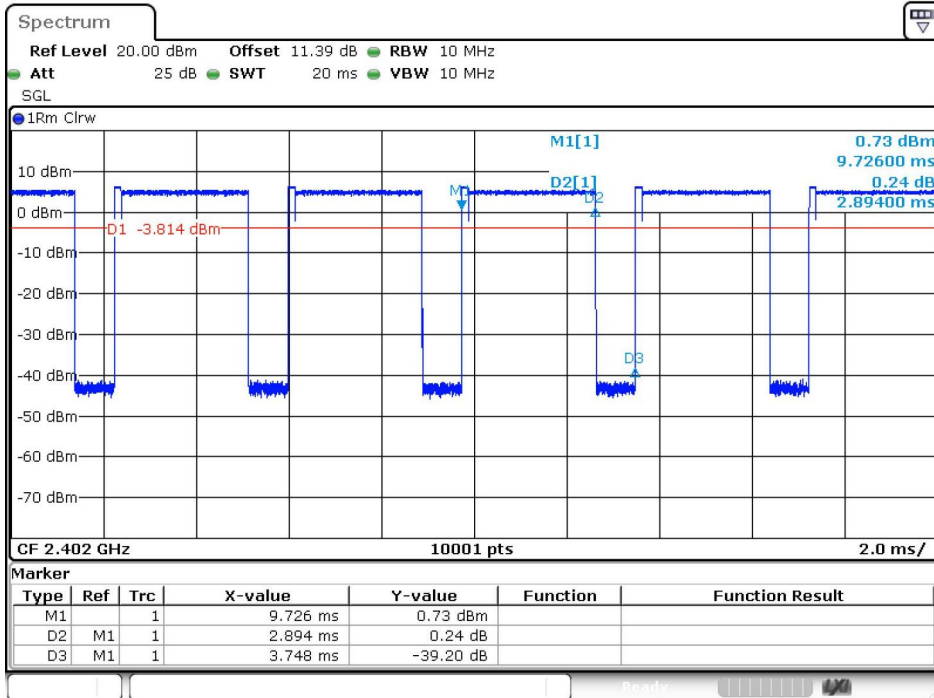
Date: 30.AUG.2024 16:40:17

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



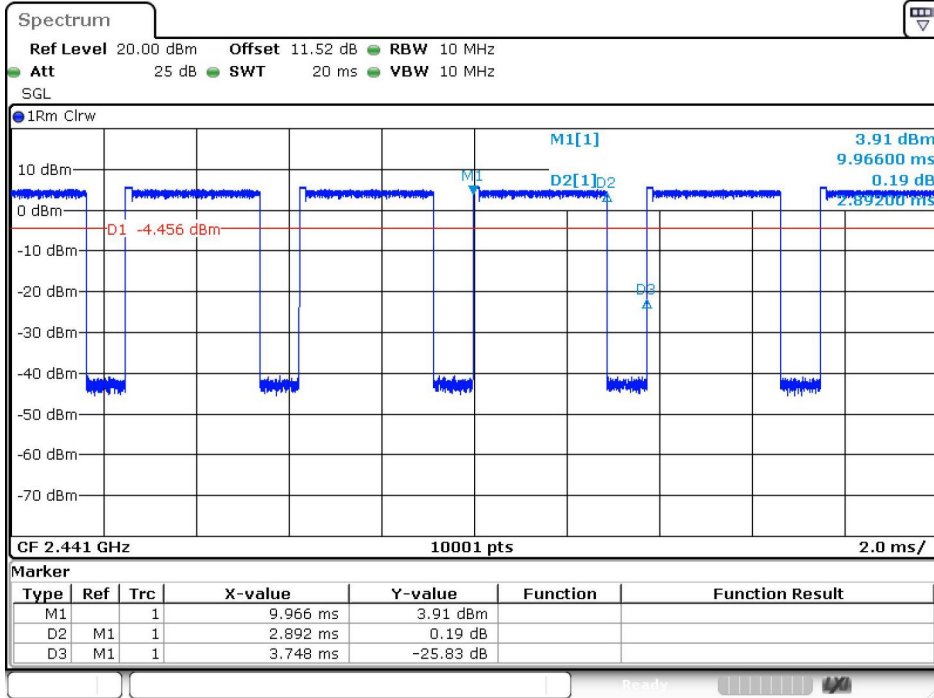
Date: 30.AUG.2024 16:42:24

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



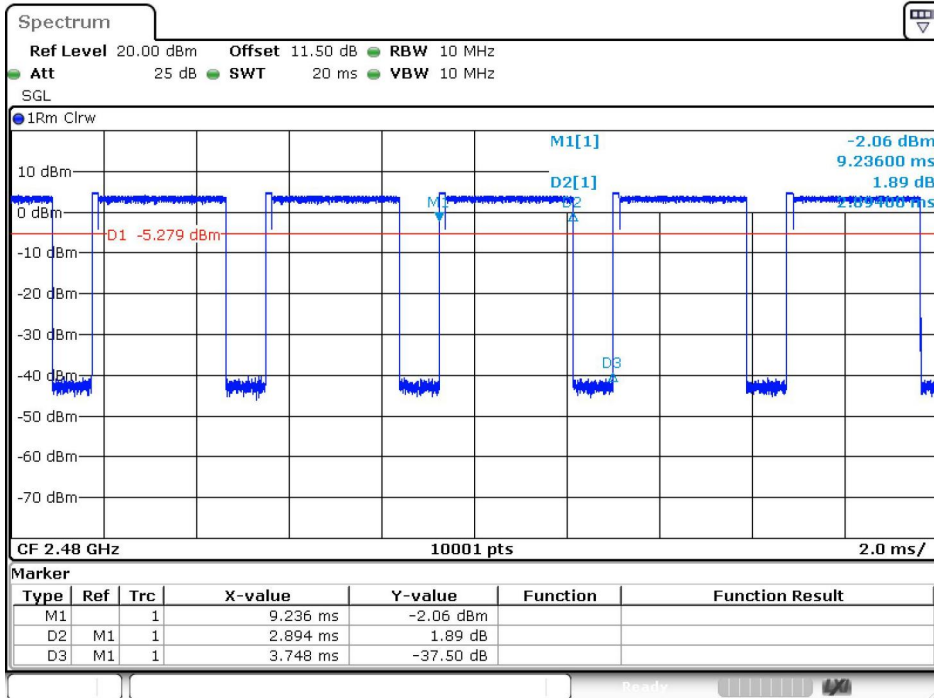
Date: 30.AUG.2024 16:44:44

8DPSK(3-DH5)\_Channel 0



Date: 30.AUG.2024 16:52:12

8DPSK(3-DH5)\_Channel 39



Date: 30.AUG.2024 16:54:22

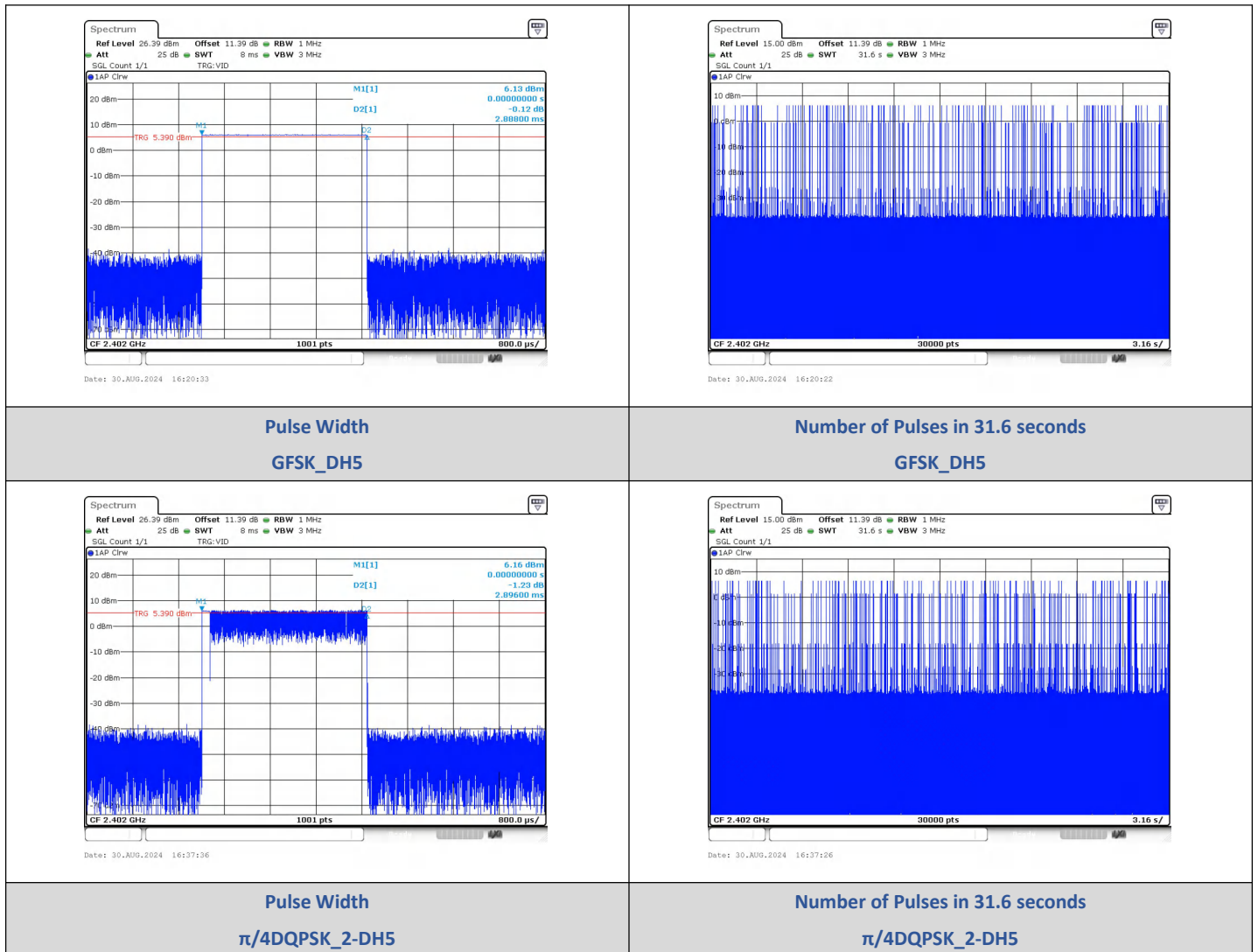
8DPSK(3-DH5)\_Channel 78

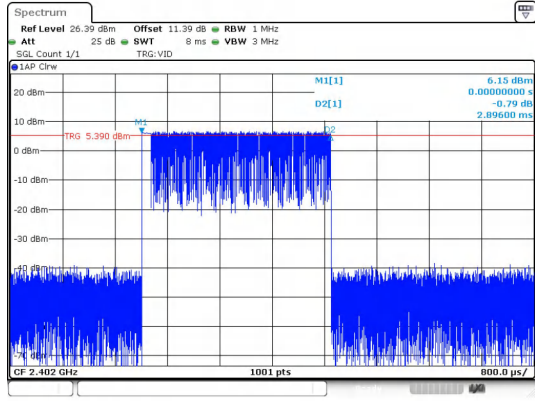
## 2) Dwell Time

### Test Result

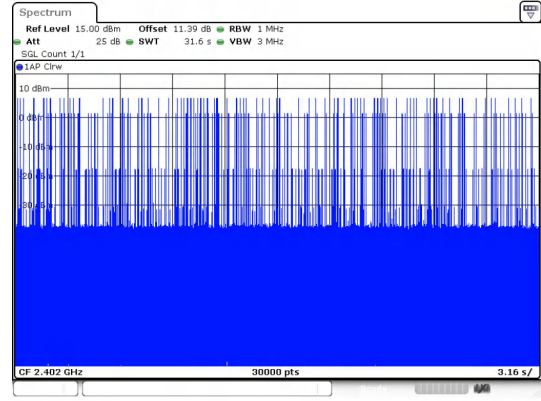
Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH5	CHO (2402MHz)	2.888	117	337.9	< 400	PASS
$\pi/4$ DQPSK	2-DH5		2.896	109	315.66		PASS
8DPSK	3-DH5		2.896	100	289.6		PASS

### Test Graphs





**Pulse Width**  
**8DPSK\_3-DH5**



**Number of Pulses in 31.6 seconds**  
**8DPSK\_3-DH5**



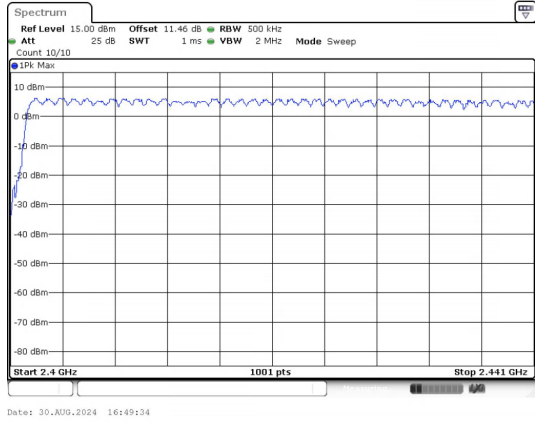
### 3) Number Of Hopping Channel

**Test Result**

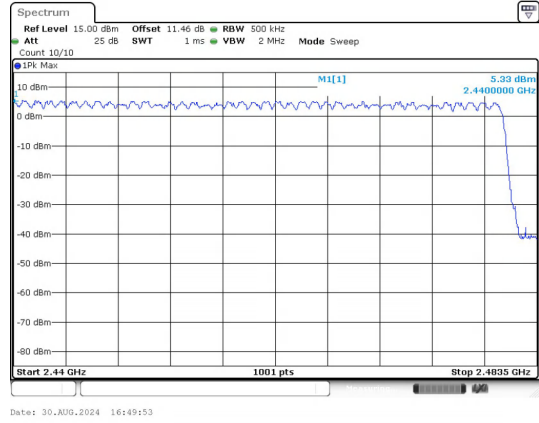
Modulation	Packet	Number of Hopping Channel	Limit	Result
GFSK	DH5	79	15	PASS
$\pi/4$ DQPSK	2-DH5	79	15	PASS
8DPSK	3-DH5	79	15	PASS

**Test Graphs**





**Low End Spectrum Channel Hopping Plot**  
**8DPSK**



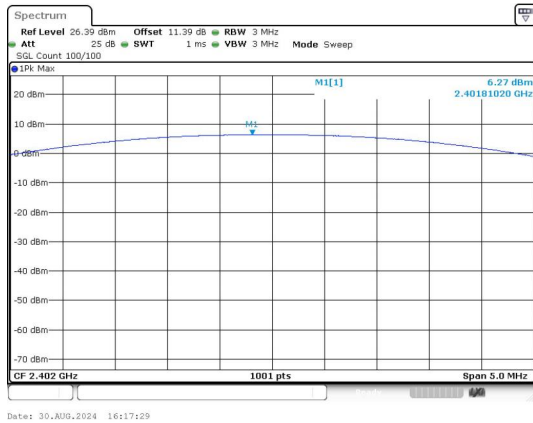
**High End Spectrum Channel Hopping Plot**  
**8DPSK**

## 4) Conducted Peak Output Power

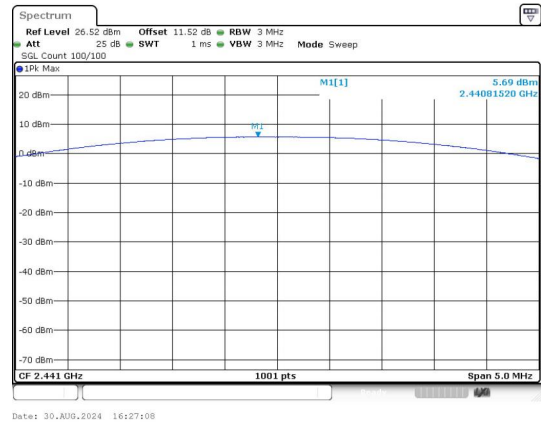
### Test Result

Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	Result
GFSK	DH5	0	6.27	4.24	≤30	PASS
		39	5.69	3.71		PASS
		78	4.87	3.07		PASS
π/4DQPSK	2-DH5	0	6.86	4.85	≤20.97	PASS
		39	6.16	4.13		PASS
		78	5.57	3.61		PASS
8DPSK	3-DH5	0	7.01	5.03	≤20.97	PASS
		39	6.37	4.34		PASS
		78	3.43	2.20		PASS

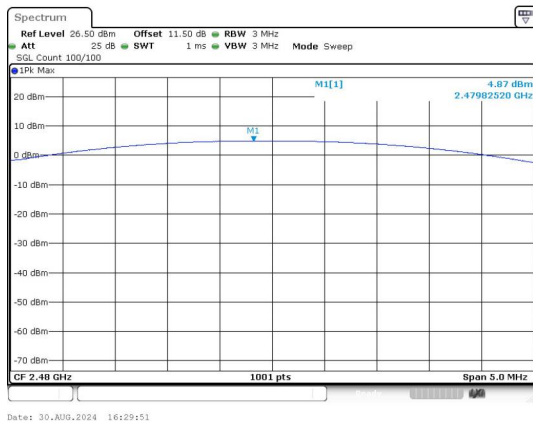
### Test Graphs



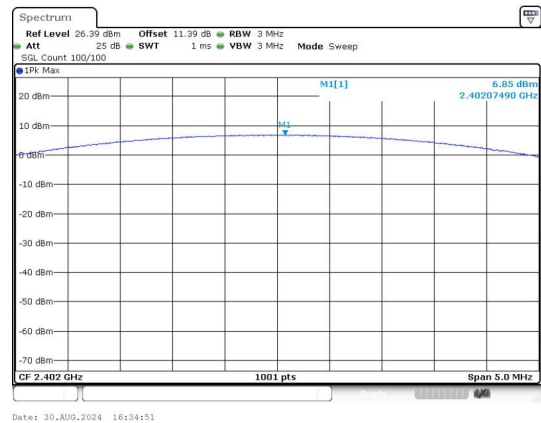
Peak Output Power  
GFSK\_Channel 0



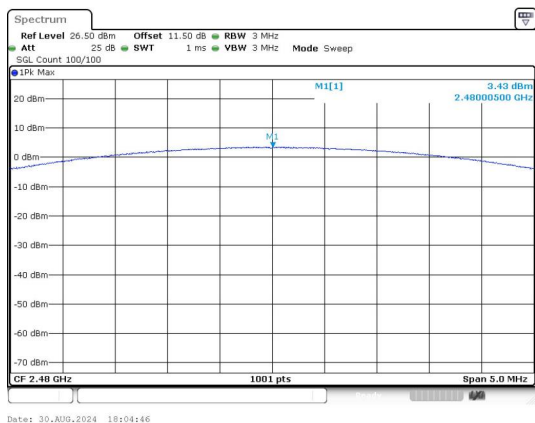
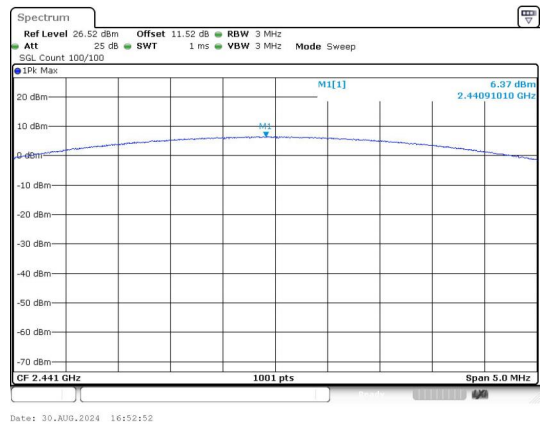
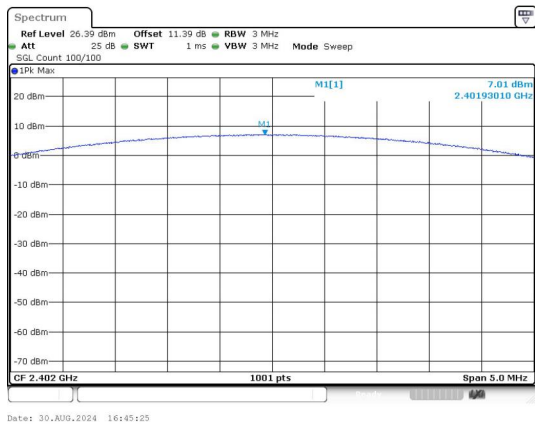
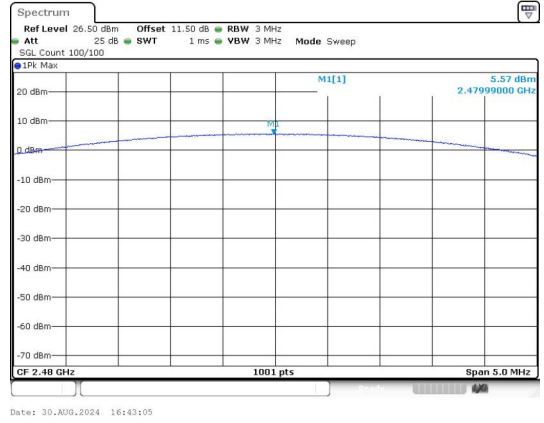
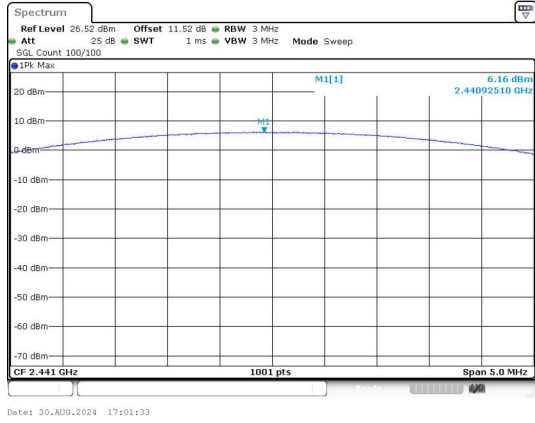
Peak Output Power  
GFSK\_Channel 39



Peak Output Power  
GFSK\_Channel 78



Peak Output Power  
π/4DQPSK\_Channel 0

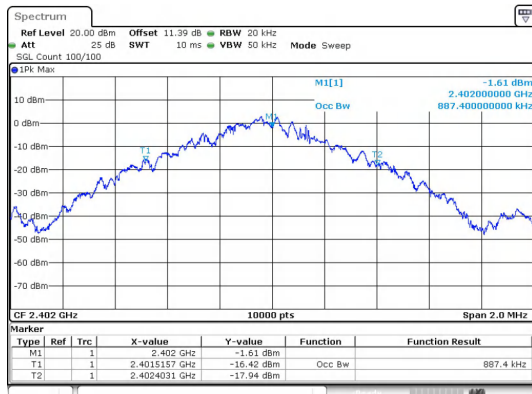


# 5) 99% Bandwidth

## Test Result

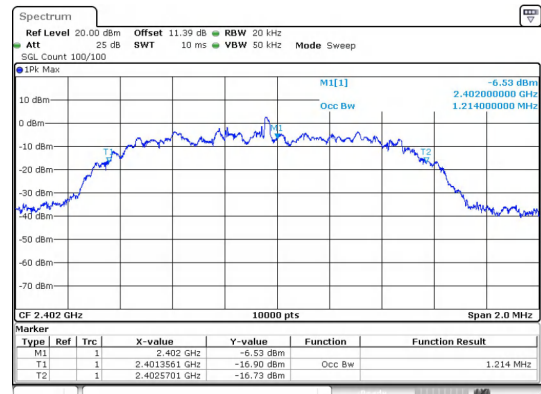
Modulation	Channel	Center Frequency (MHz)	99% BW (MHz)
GFSK	0	2402	0.88740
	39	2441	0.89420
	78	2480	0.87720
$\pi/4$ DQPSK	0	2402	1.2140
	39	2441	1.2044
	78	2480	1.1972
8DPSK	0	2402	1.2168
	39	2441	1.2086
	78	2480	1.2046

## Test Graphs



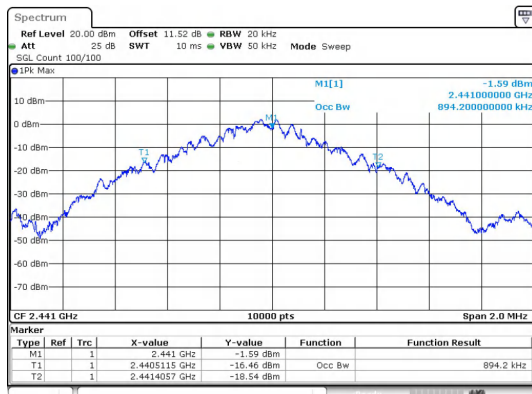
Date: 30.AUG.2024 16:17:02

GFSK\_DH5\_Channel 0



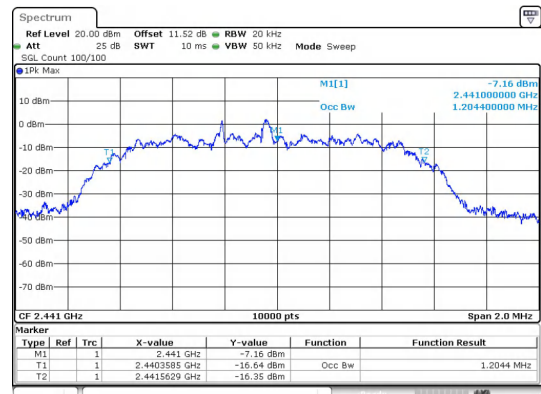
Date: 30.AUG.2024 16:34:25

$\pi/4$ DQPSK\_2-DH5\_Channel 0



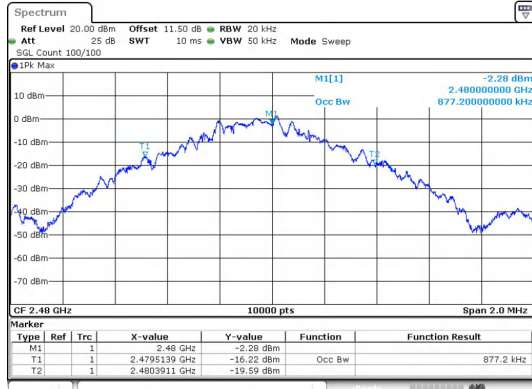
Date: 30.AUG.2024 16:26:42

GFSK\_DH5\_Channel 39



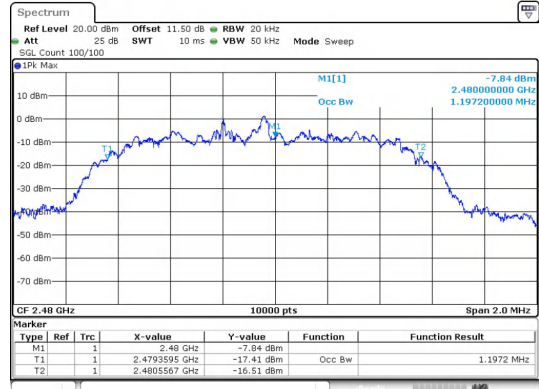
Date: 30.AUG.2024 16:40:32

$\pi/4$ DQPSK\_2-DH5\_Channel 39



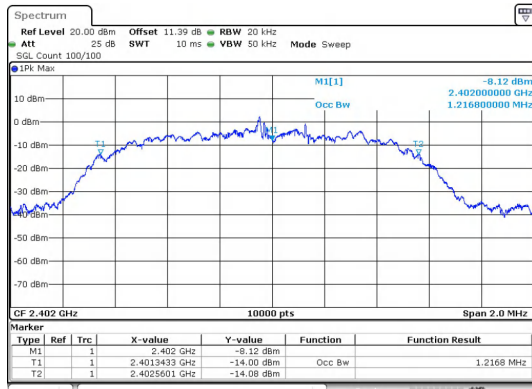
Date: 30.AUG.2024 16:29:25

GFSK\_DH5\_Channel 78



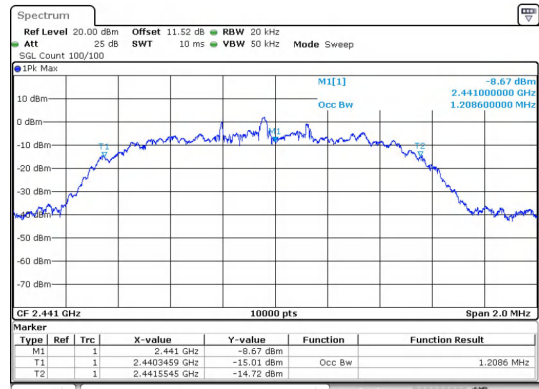
Date: 30.AUG.2024 16:42:39

$\pi/4$ DQPSK\_2-DH5\_Channel 78



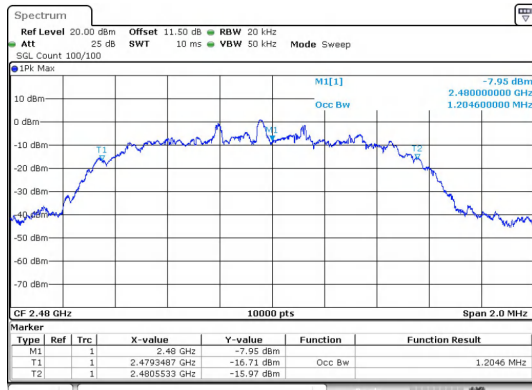
Date: 30.AUG.2024 16:44:59

8DPSK\_3-DH5\_Channel 0



Date: 30.AUG.2024 16:52:26

8DPSK\_3-DH5\_Channel 39



Date: 30.AUG.2024 16:54:37

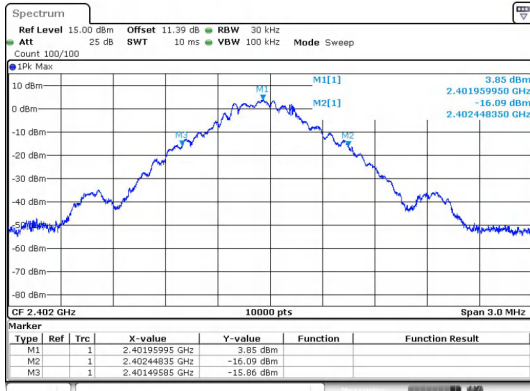
8DPSK\_3-DH5\_Channel 78

## 6) 20dB Bandwidth

### Test Result

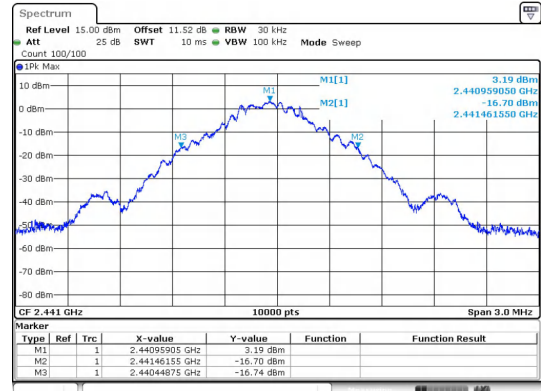
Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	0.9500
	39	2441 MHz	1.010
	78	2480 MHz	0.9800
$\pi/4$ DQPSK	0	2402 MHz	1.310
	39	2441 MHz	1.310
	78	2480 MHz	1.300
8DPSK	0	2402 MHz	1.300
	39	2441 MHz	1.300
	78	2480 MHz	1.300

### Test Graphs



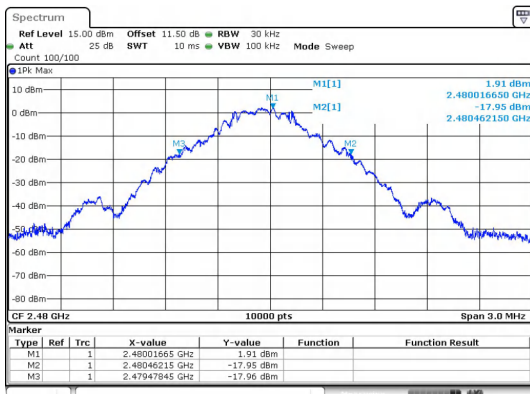
Date: 30.AUG.2024 16:17:18

GFSK\_DH5\_Channel 0



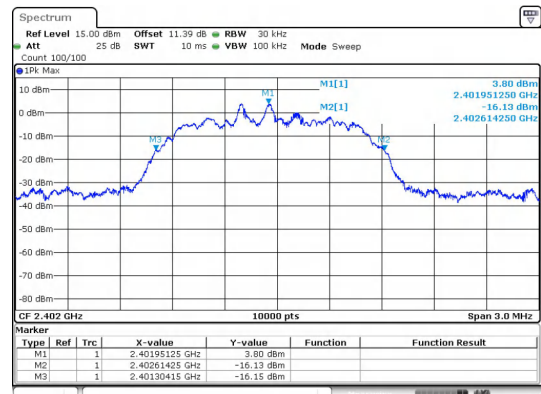
Date: 30.AUG.2024 16:26:58

GFSK\_DH5\_Channel 39



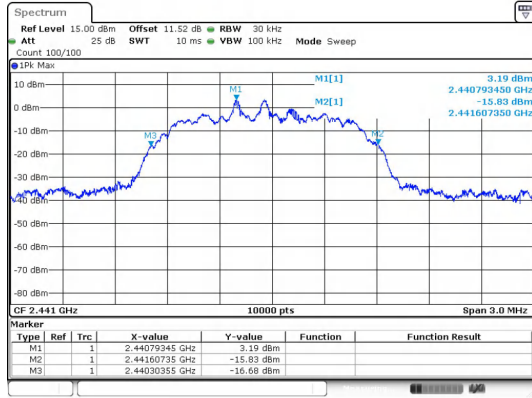
Date: 30.AUG.2024 16:29:40

GFSK\_DH5\_Channel 78



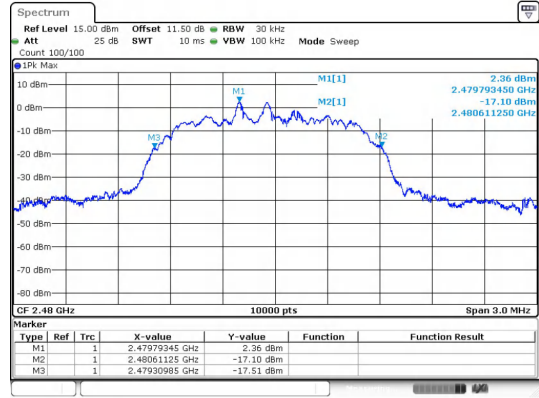
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$\pi/4$ DQPSK\_2-DH5\_Channel 0



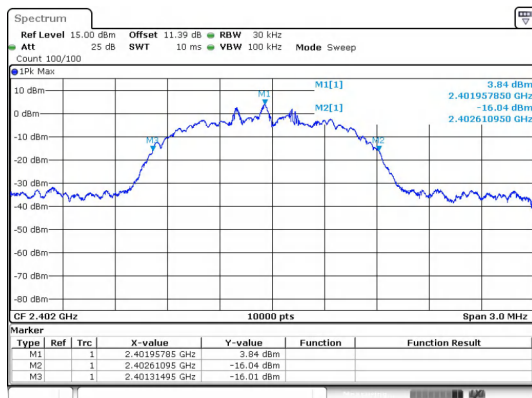
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$\pi/4$ DQPSK\_2-DH5\_Channel 39



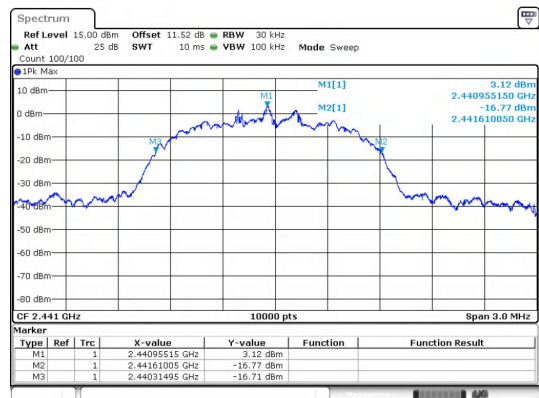
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$\pi/4$ DQPSK\_2-DH5\_Channel 78



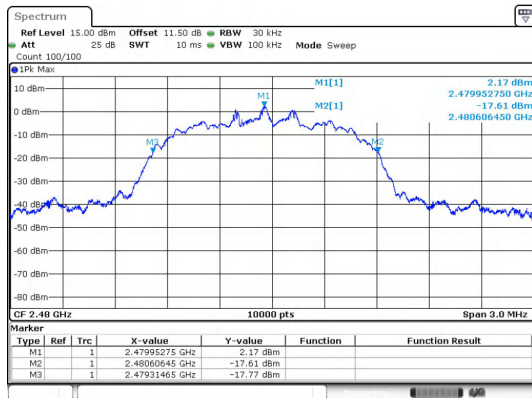
Date: 30.AUG.2024 16:45:15

8DPSK\_3-DH5\_Channel 30



Date: 30.AUG.2024 16:52:42

8DPSK\_3-DH5\_Channel 39



Date: 30.AUG.2024 16:54:53

8DPSK\_3-DH5\_Channel 78

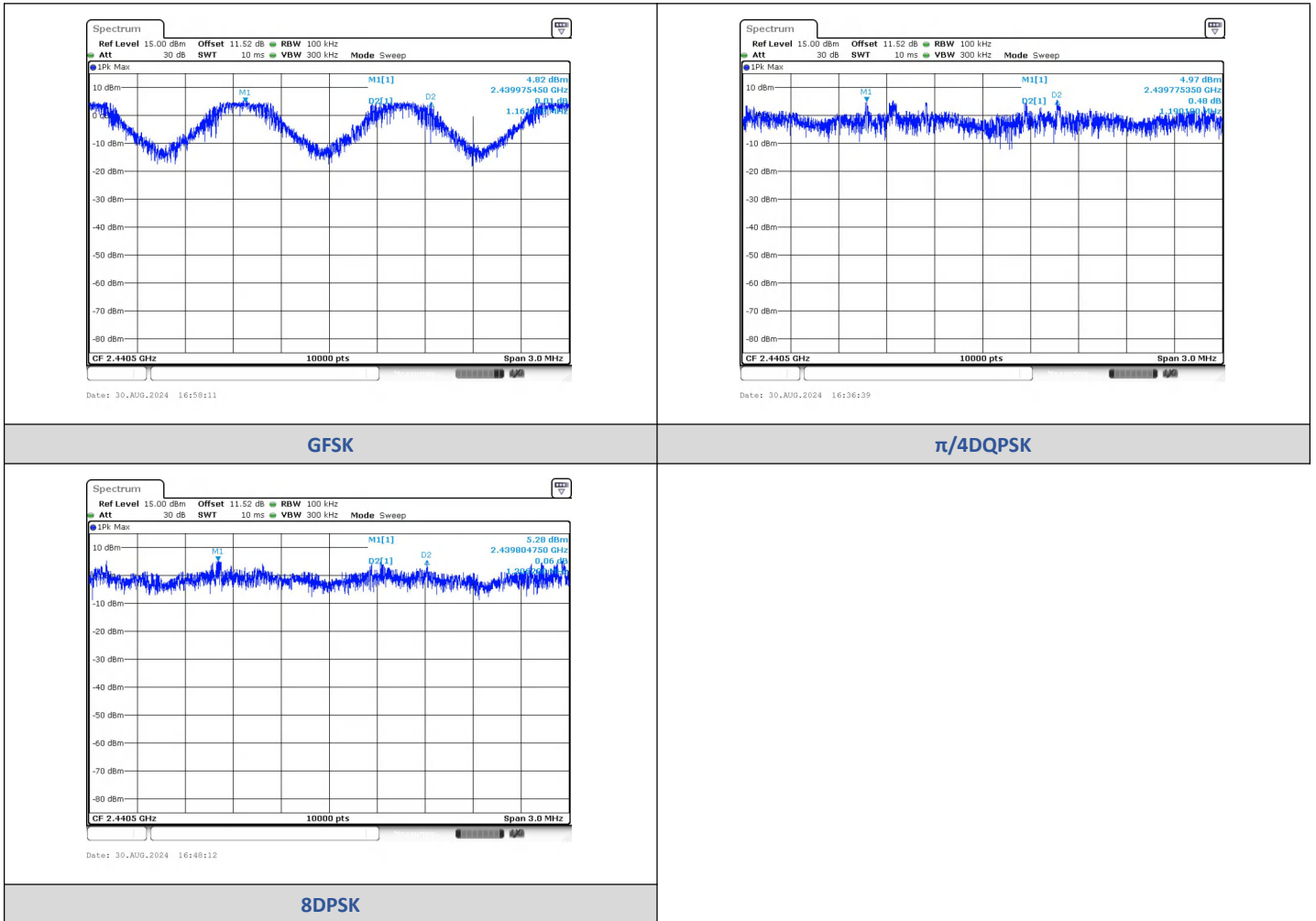


## 7) Carrier Frequencies Separation

### Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2439.9754	2441.1368	1.1613	1.010	PASS
$\pi/4$ DQPSK	2-DH5	2439.7753	2440.9655	1.1901	0.873	PASS
8DPSK	3-DH5	2439.8047	2441.1109	1.3062	0.867	PASS

### Test Graphs



## 8) Conducted Out Of Band Emission

### Test Result

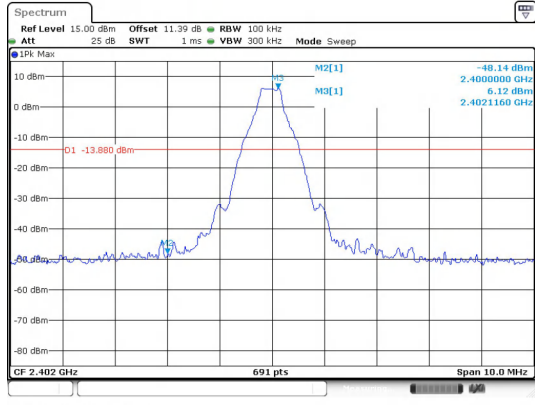
#### Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2400.00	-48.143	-13.88	-34.263	PASS
			7206.79	-38.542	-13.88	-24.662	PASS
		39	2249.42	-41.845	-14.47	-27.375	PASS
		78	2287.70	-40.976	-15.29	-25.686	PASS
			2483.50	-49.639	-15.29	-34.349	PASS
$\pi/4$ DQPSK	2-DH5	0	2400.00	-44.524	-13.9	-30.624	PASS
			7205.13	-43.644	-13.9	-29.744	PASS
		39	2248.58	-42.106	-14.7	-27.406	PASS
		78	2287.70	-41.905	-15.28	-26.625	PASS
			2483.50	-50.152	-15.28	-34.872	PASS
8DPSK	3-DH5	0	2400.00	-43.617	-13.88	-29.736	PASS
			7205.96	-41.559	-13.88	-27.679	PASS
		39	2248.58	-45.932	-14.6	-31.332	PASS
		78	2483.50	-50.876	-17.61	-33.266	PASS
			9920.20	-38.128	-17.61	-20.518	PASS

#### Hopping

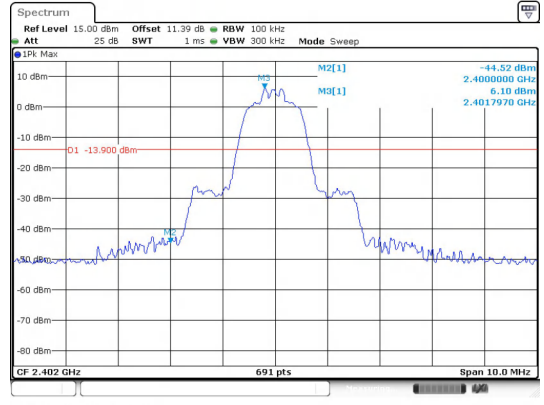
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2397.48	-48.017	-14.25	-33.767	PASS
			2400.00	-48.230	-14.25	-33.980	PASS
			2483.50	-48.352	-15.33	-33.022	PASS
$\pi/4$ DQPSK	2-DH5		2397.79	-47.664	-14.0	-33.664	PASS
			2400.00	-49.655	-14.0	-35.655	PASS
			2483.50	-49.061	-15.25	-33.811	PASS
8DPSK	3-DH5		2395.14	-47.199	-14.03	-33.169	PASS
			2400.00	-49.181	-14.03	-35.151	PASS
			2483.50	-50.521	-15.38	-35.141	PASS

#### Test Graphs



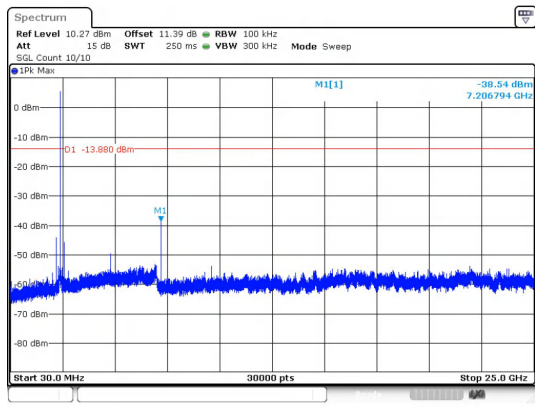
Date: 30.AUG.2024 16:18:10

Out Of Band Emission  
GFSK\_DH5\_Channel 0



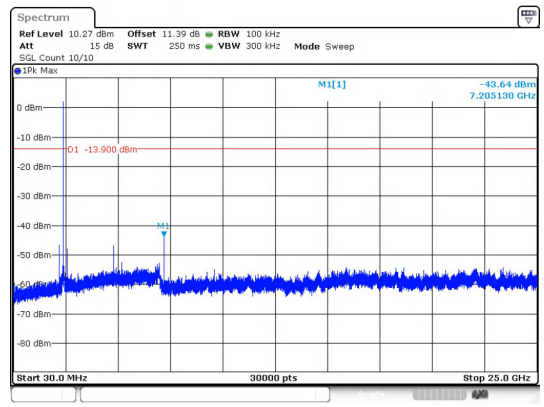
Date: 30.AUG.2024 16:35:33

Out Of Band Emission  
 $\pi/4$ DQPSK\_2-DH5\_Channel 0



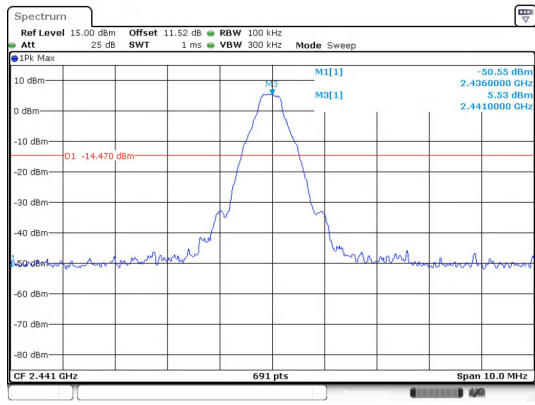
Date: 30.AUG.2024 16:18:32

30.0 MHz - 25000.0 MHz  
GFSK\_DH5\_Channel 0



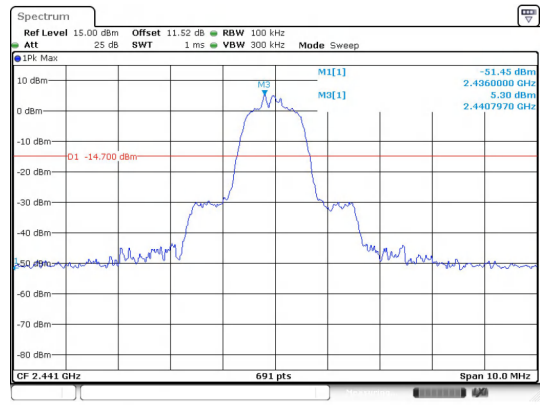
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30.0 MHz - 25000.0 MHz  
 $\pi/4$ DQPSK\_2-DH5\_Channel 0



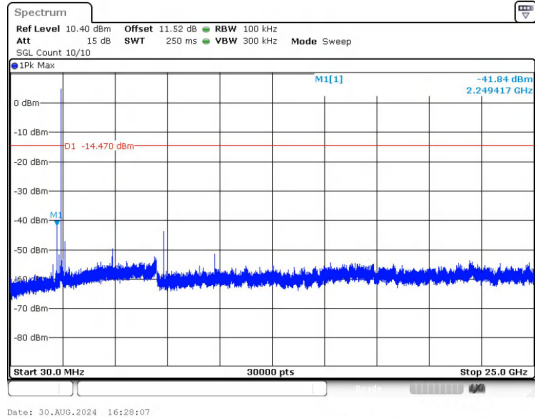
Date: 30.AUG.2024 16:27:45

Out Of Band Emission  
GFSK\_DH5\_Channel 39

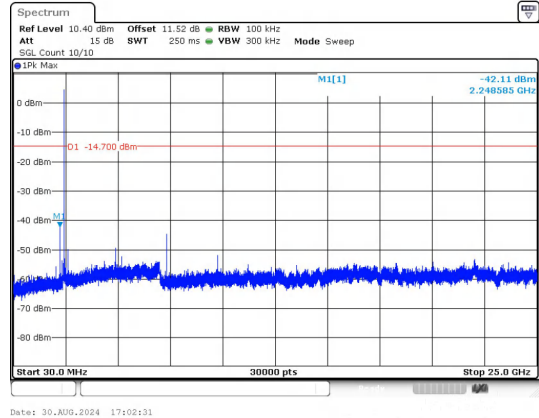


Date: 30.AUG.2024 17:02:09

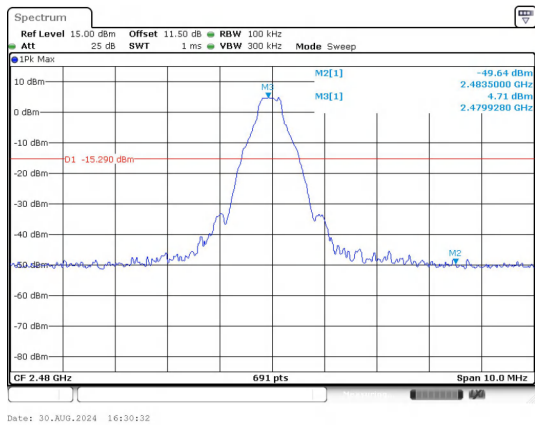
Out Of Band Emission  
 $\pi/4$ DQPSK\_2-DH5\_Channel 39



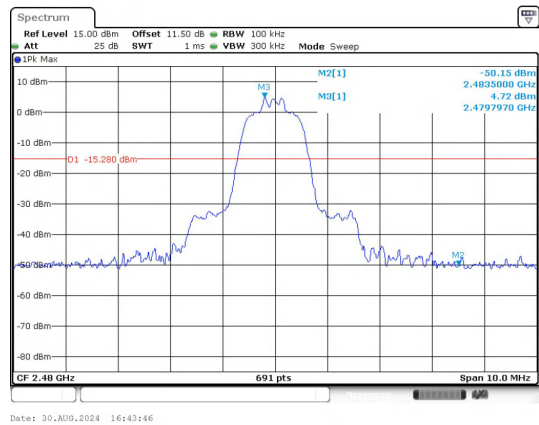
30.0 MHz - 25000.0 MHz  
GFSK\_DH5\_Channel 39



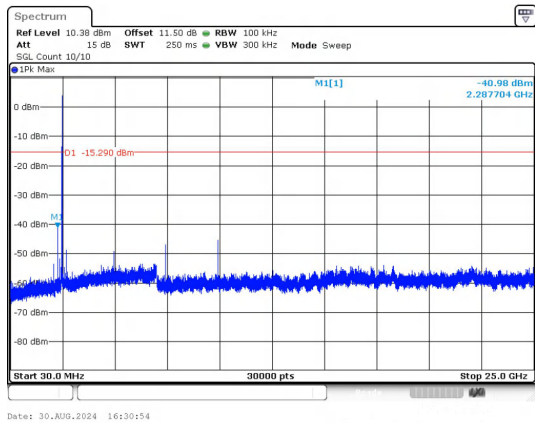
30.0 MHz - 25000.0 MHz  
 $\pi/4$ DQPSK\_2-DH5\_Channel 39



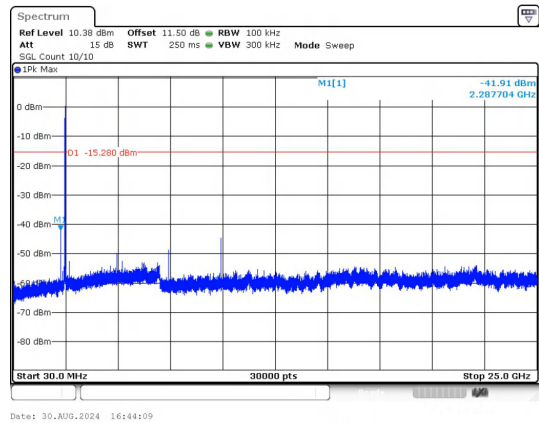
Out Of Band Emission  
GFSK\_DH5\_Channel 78



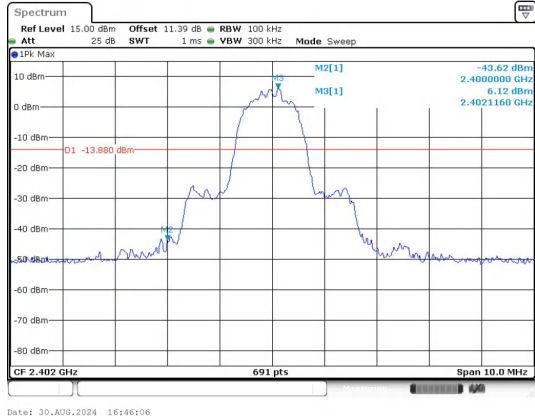
Out Of Band Emission  
 $\pi/4$ DQPSK\_2-DH5\_Channel 78



30.0 MHz - 25000.0 MHz  
GFSK\_DH5\_Channel 78

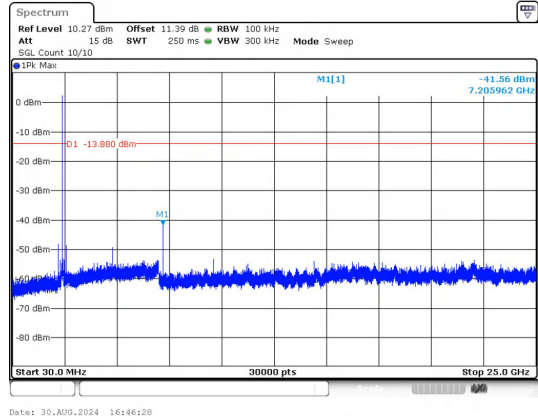


30.0 MHz - 25000.0 MHz  
 $\pi/4$ DQPSK\_2-DH5\_Channel 78



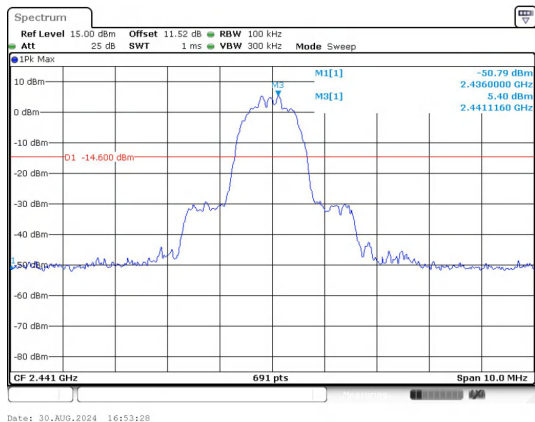
Date: 30.AUG.2024 16:46:106

**Out Of Band Emission**  
**8DPSK\_3-DH5\_Channel 0**



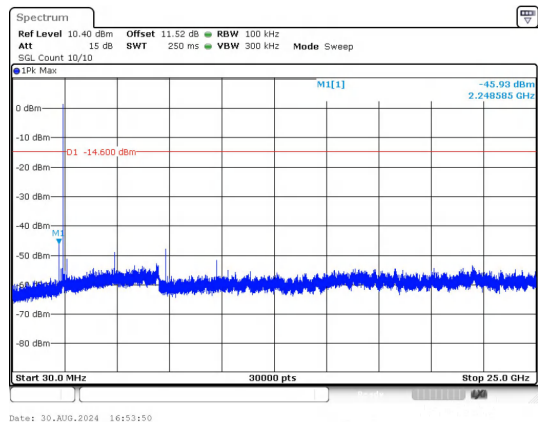
Date: 30.AUG.2024 16:46:28

**30.0 MHz - 25000.0 MHz**  
**8DPSK\_3-DH5\_Channel 0**



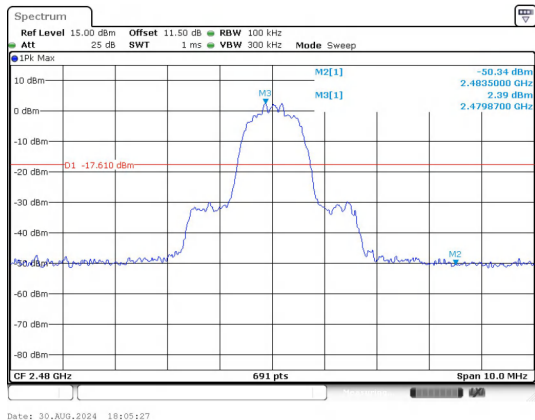
Date: 30.AUG.2024 16:53:128

**Out Of Band Emission**  
**8DPSK\_3-DH5\_Channel 39**



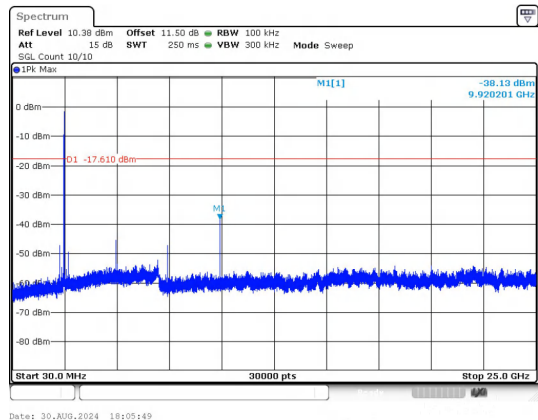
Date: 30.AUG.2024 16:53:150

**30.0 MHz - 25000.0 MHz**  
**8DPSK\_3-DH5\_Channel 39**



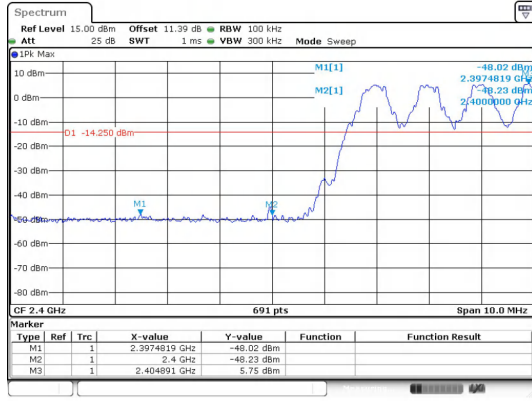
Date: 30.AUG.2024 18:05:127

**Out Of Band Emission**  
**8DPSK\_3-DH5\_Channel 78**



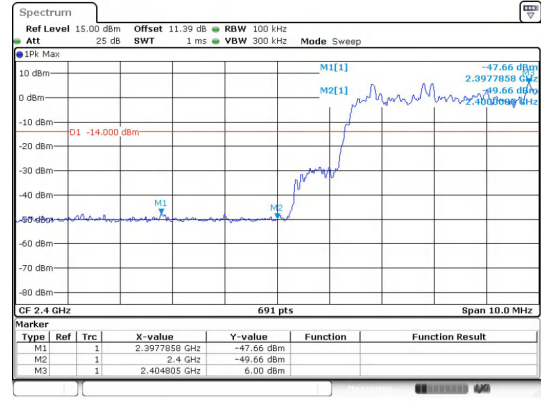
Date: 30.AUG.2024 18:05:149

**30.0 MHz - 25000.0 MHz**  
**8DPSK\_3-DH5\_Channel 78**



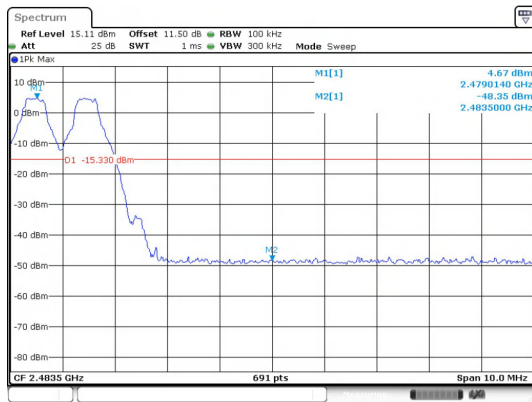
Date: 30.AUG.2024 16:12:51

Out Of Band Emission(Left)  
GFSK\_DH5\_Channel Hopping



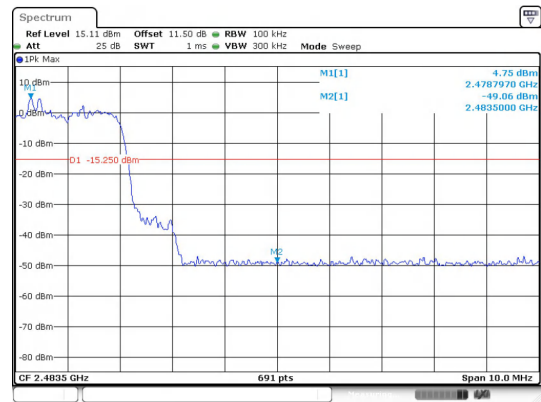
Date: 30.AUG.2024 16:13:54

Out Of Band Emission(Left)  
 $\pi/4$ DQPSK\_2-DH5\_Channel Hopping



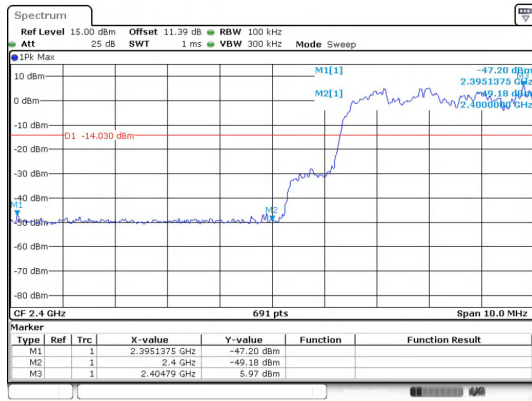
Date: 30.AUG.2024 16:12:52

Out Of Band Emission(Right)  
GFSK\_DH5\_Channel Hopping



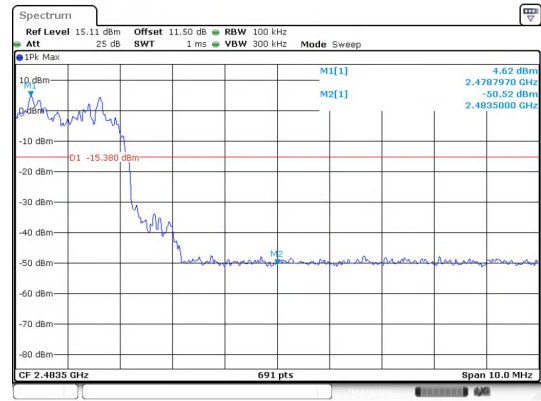
Date: 30.AUG.2024 16:13:43

Out Of Band Emission(Right)  
 $\pi/4$ DQPSK\_2-DH5\_Channel Hopping



Date: 30.AUG.2024 16:51:15

Out Of Band Emission(Left)  
8DPSK\_3-DH5\_Channel Hopping



Date: 30.AUG.2024 16:51:36

Out Of Band Emission(Right)  
8DPSK\_3-DH5\_Channel Hopping