

APPENDIX REPORT

Project No.	SHT2409005202W	Radio Specification	Bluetooth EDR
Test sample No.	YPHT24090052001	Model No.	425HD
Start test date	2024-10-25	Finish date	2024-10-28
Temperature	25.0℃	Humidity	46%
Test Engineer	Chenxin Ling	Auditor	Xiaodong Zheo

Appendix clause	Test item	Result
A	Peak Output Power	Pass
B	20 dB Bandwidth	Pass
C	99% Occupied Bandwidth	Pass
D	Carrier Frequencies Separation	Pass
E	Hopping Channel Number	Pass
F	Dwell Time	Pass
G	Duty Cycle Correction Factor (DCCF)	Pass
H	Band edge and Spurious Emissions(coducted)	Pass

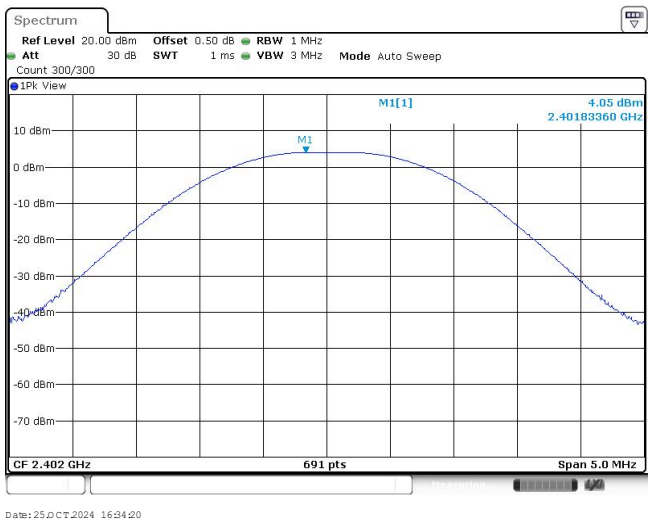
Appendix A: Peak Output Power

Modulation type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
GFSK	00	4.05	3.94	≤ 30.00	Pass
	39	3.78	3.69		
	78	3.33	3.25		
$\pi/4$ DQPSK	00	6.88	6.76	≤ 21.00	Pass
	39	6.67	6.57		
	78	6.21	6.12		
8DPSK	00	7.39	7.30	≤ 21.00	Pass
	39	7.20	7.08		
	78	6.72	6.64		

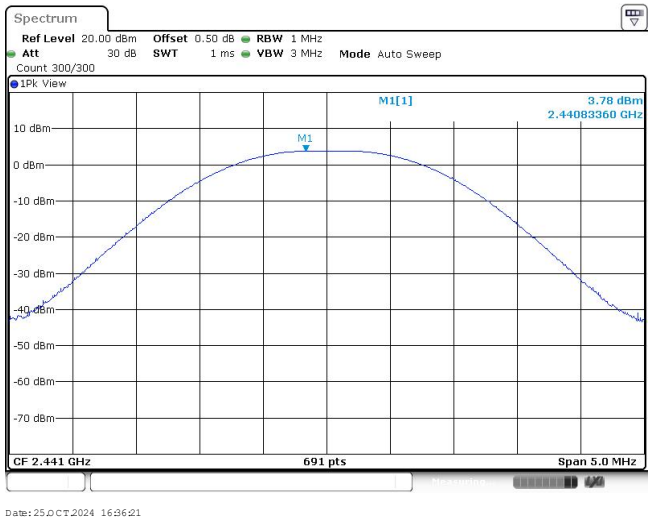
Modulation Type:

GFSK

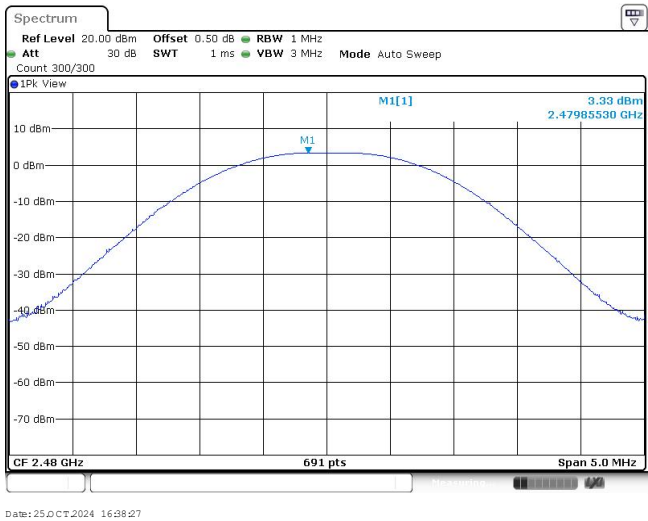
CH00



CH39



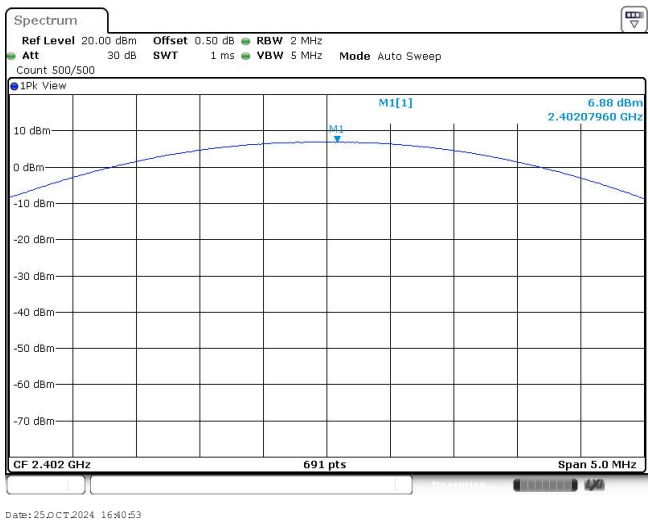
CH78



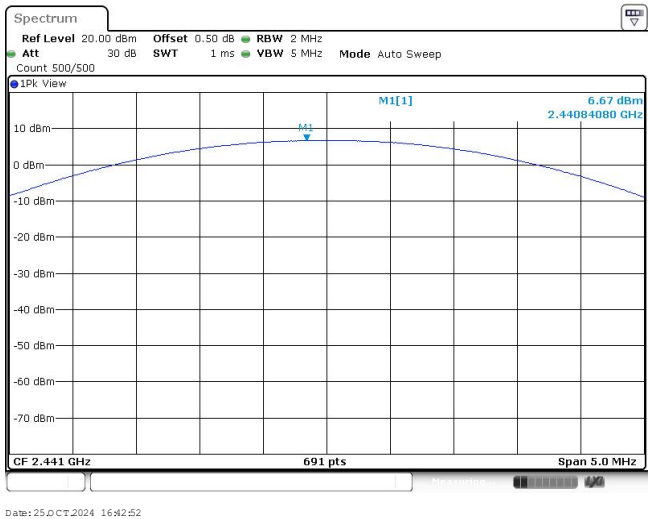
Modulation Type:

π /4DQPSK

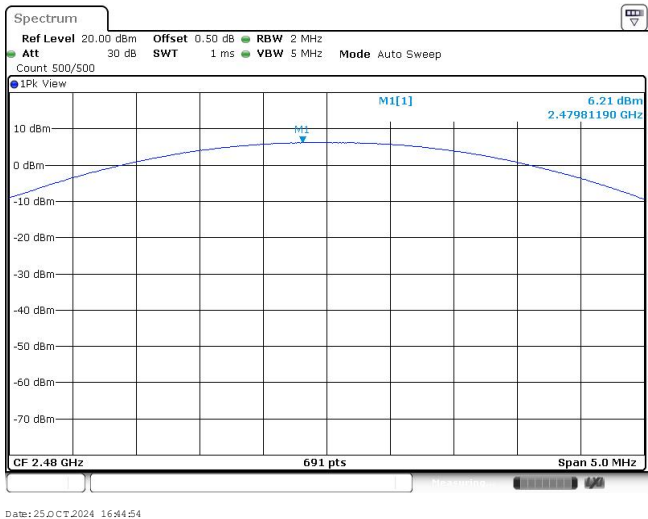
CH00



CH39



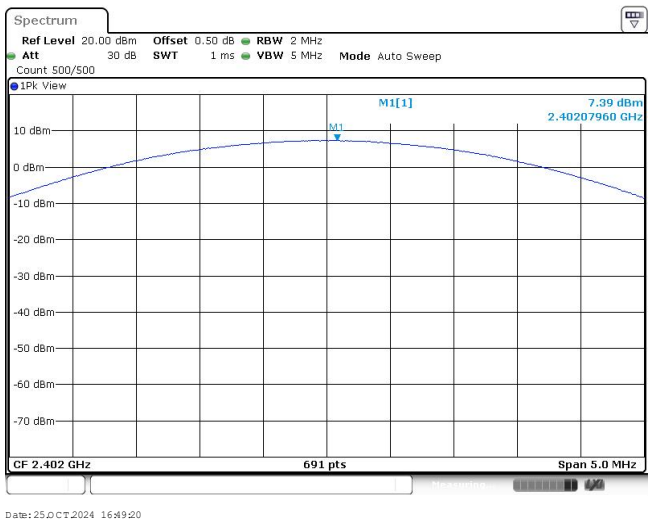
CH78



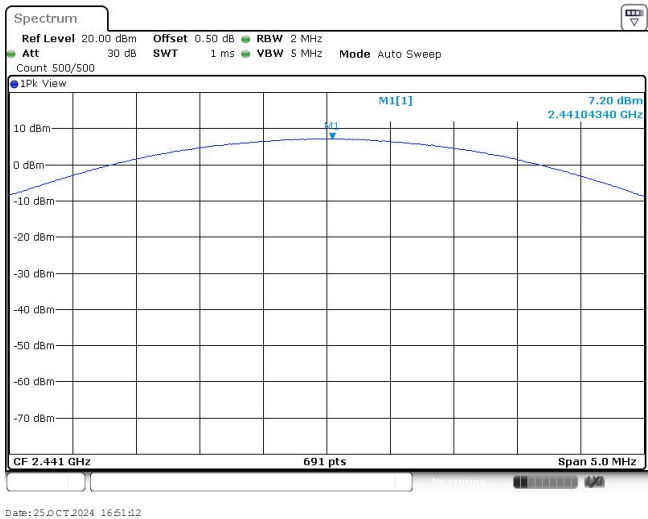
Modulation Type:

8DPSK

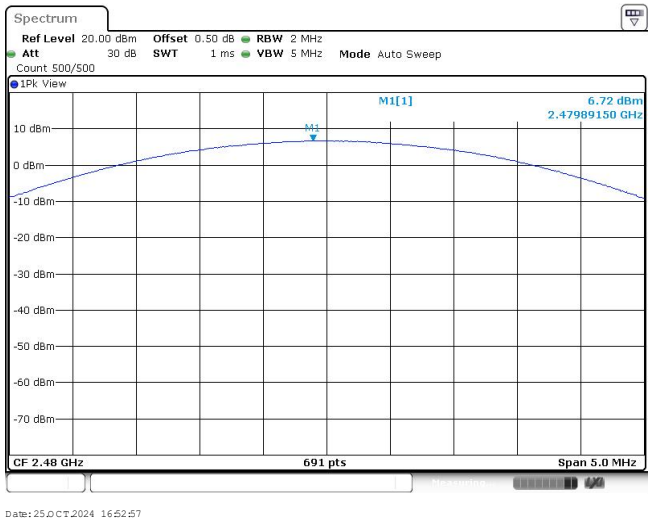
CH00



CH39



CH78



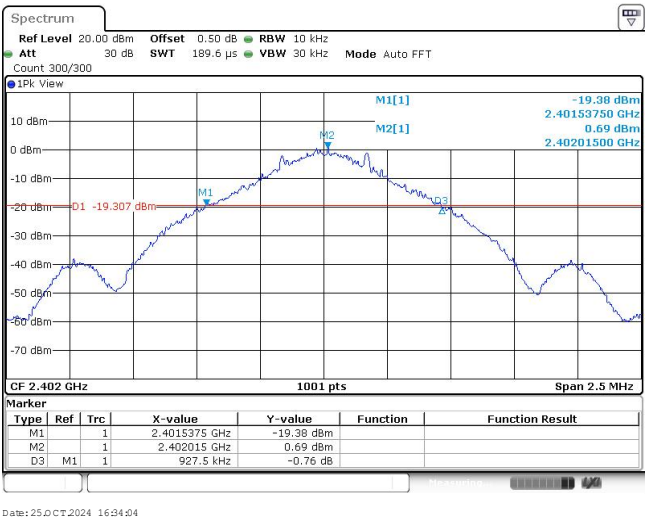
Appendix B : 20 dB Bandwidth

Modulation type	Channel	20 dB Bandwidth (kHz)	Limit (kHz)	Result
GFSK	00	928.00	-	Pass
	39	930.00		
	78	925.00		
$\pi/4$ DQPSK	00	1315.00	-	Pass
	39	1313.00		
	78	1298.00		
8DPSK	00	1305.00	-	Pass
	39	1325.00		
	78	1293.00		

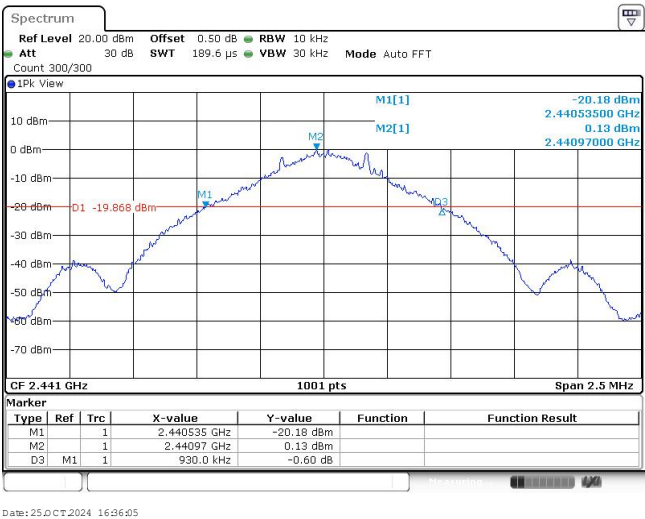
Modulation Type:

GFSK

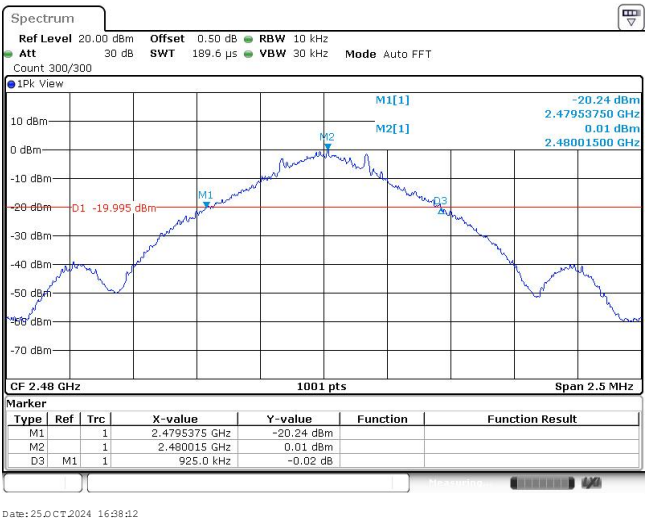
CH00



CH39



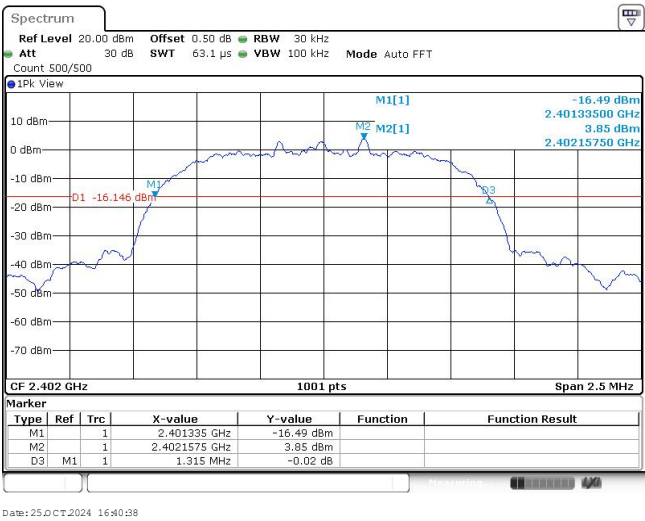
CH78



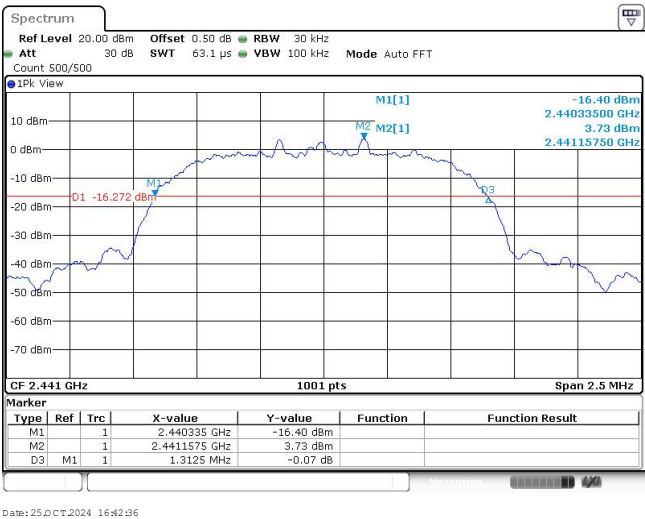
Modulation Type:

π /4DQPSK

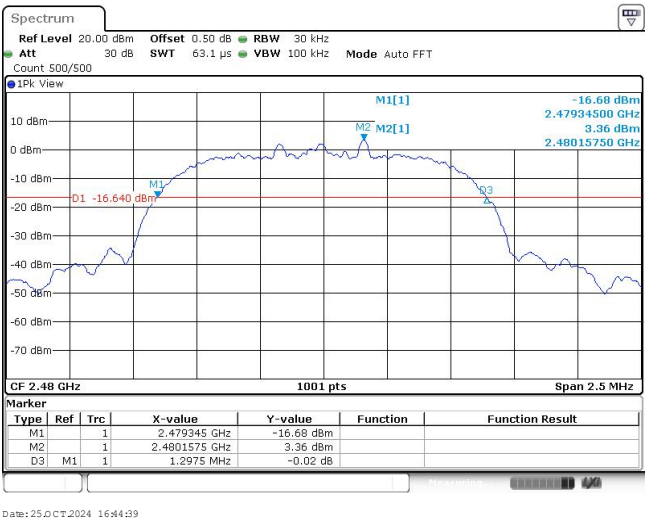
CH00



CH39



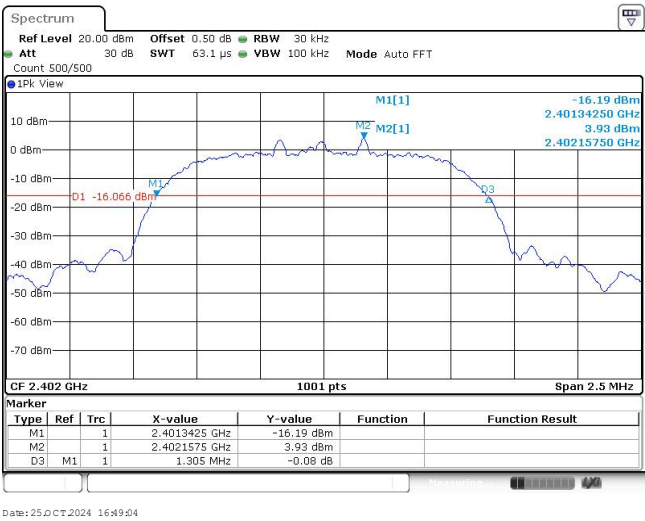
CH78



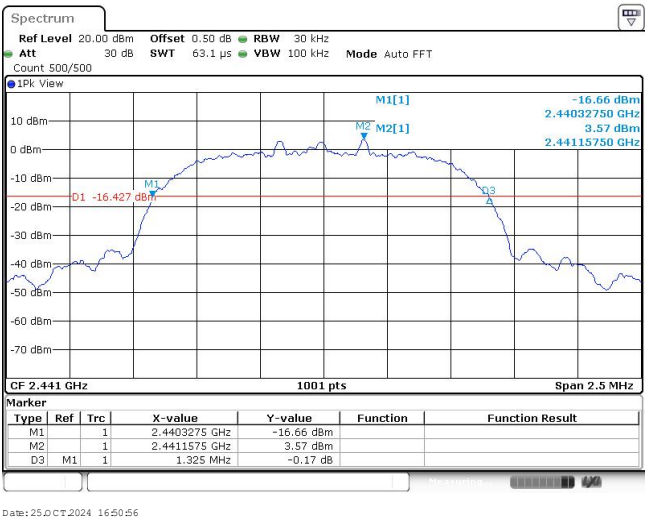
Modulation Type:

8DPSK

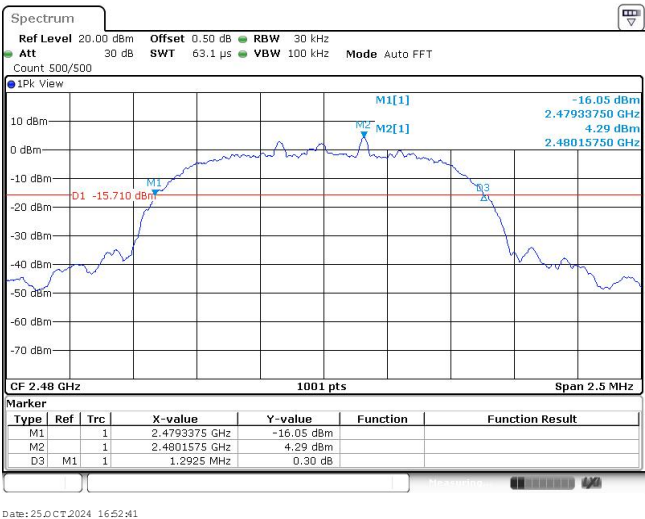
CH00



CH39



CH78



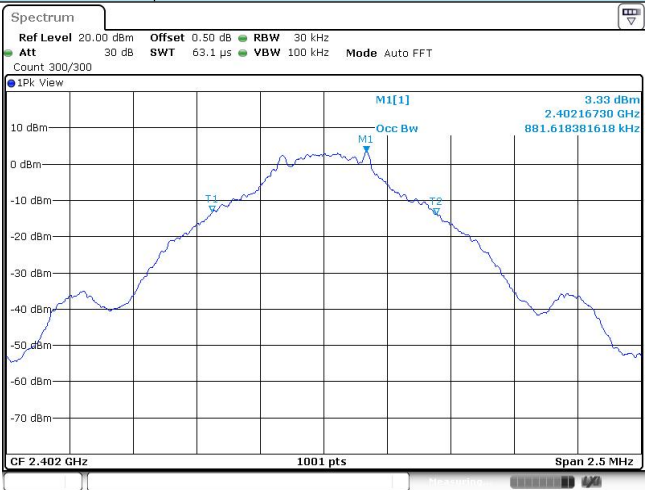
Appendix C: 99% Occupied Bandwidth

Modulation type	Channel	99% Occupied Bandwidth (MHz)	Limit (MHz)	Result
GFSK	00	0.88	-	Pass
	39	0.90		
	78	0.89		
$\pi/4$ DQPSK	00	1.18	-	Pass
	39	1.18		
	78	1.19		
8DPSK	00	1.18	-	Pass
	39	1.18		
	78	1.18		

Modulation Type:

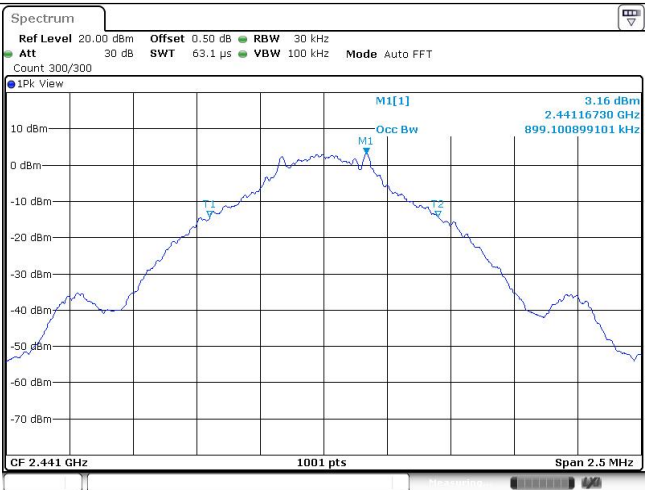
GFSK

CH00



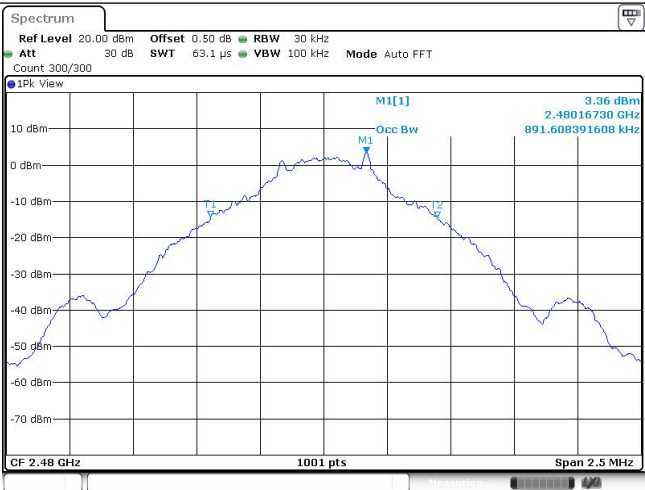
Date: 25/OCT/2024 16:34:12

CH39



Date: 25/OCT/2024 16:36:13

CH78

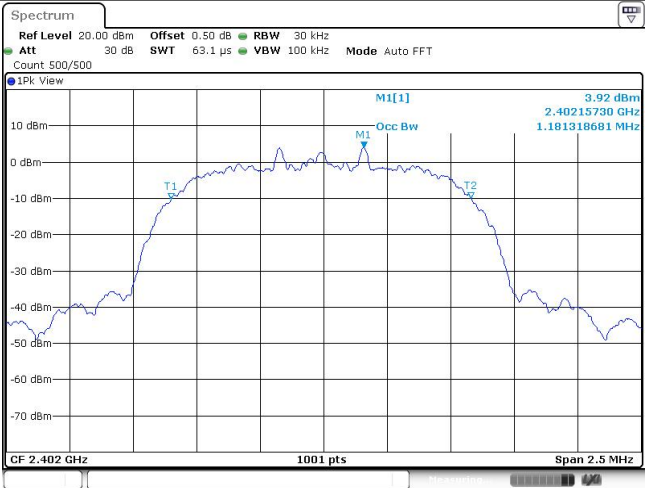


Date: 25/OCT/2024 16:38:19

Modulation Type:

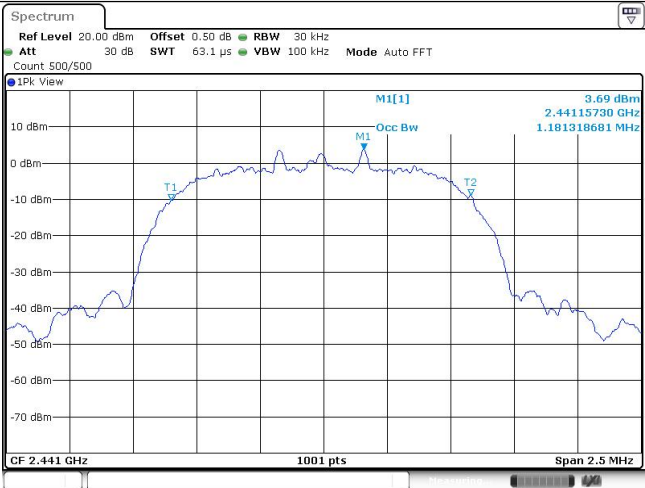
$\pi/4$ DQPSK

CH00



Date: 25/OCT/2024 16:40:45

CH39



Date: 25/OCT/2024 16:42:44

CH78

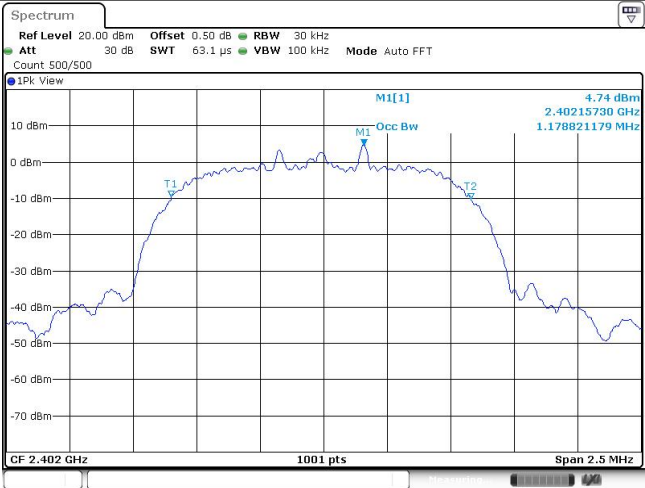


Date: 25/OCT/2024 16:44:46

Modulation Type:

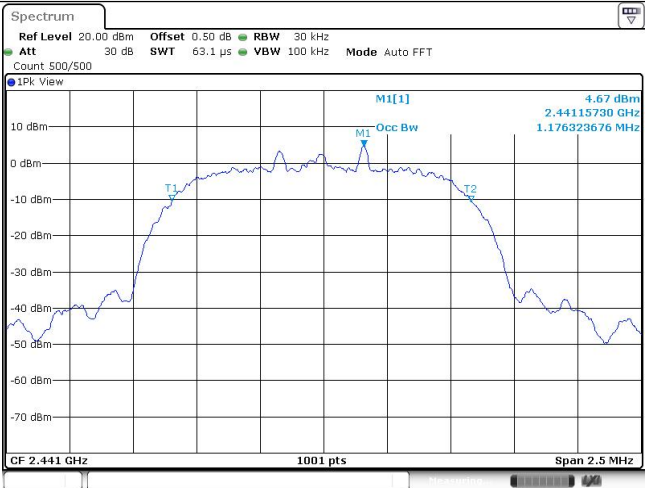
8DPSK

CH00



Date: 25/OCT/2024 16:49:12

CH39



Date: 25/OCT/2024 16:51:04

CH78



Date: 25/OCT/2024 16:52:49

Appendix D: Carrier Frequencies Separation

Modulation type	Channel	Carrier Frequencies Separation (MHz)	Limit (kHz) *	Result
GFSK	39	1.05	≥930.00	Pass
π/4DQPSK	39	1.00	≥876.67	Pass
8DPSK	39	1.00	≥883.33	Pass

Note:

*: GFSK limit = The maximum 20 dB Bandwidth for GFSK modulation on the appendix B.

π/4DQPSK limit = $\frac{2}{3}$ * The maximum 20 dB Bandwidth for π/4DQPSK modulation on the appendix B.

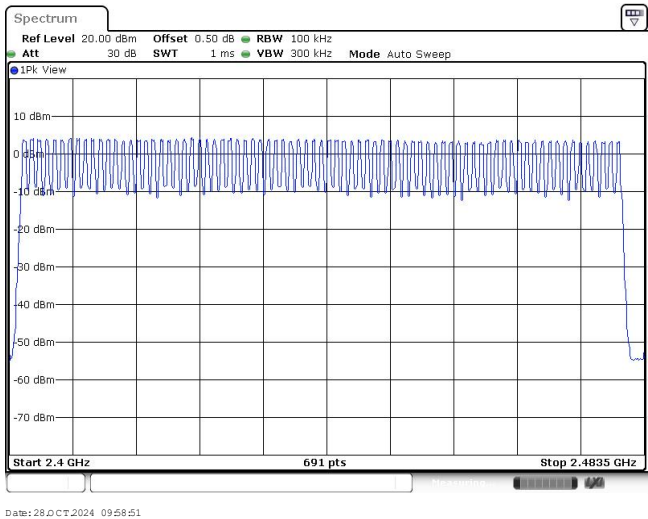
8DPSK limit = $\frac{2}{3}$ * The maximum 20 dB Bandwidth for 8DPSK modulation on the appendix B

GFSK	Spectrum Ref Level 20.00 dBm Offset 0.50 dB RBW 30 kHz Att 30 dB SWT 63.2 μs VBW 100 kHz Mode Auto FFT Count 100/100 1Pk View M1[1] 2.37 dBm 2.44098261 GHz 0.38 dB 1.05217 MHz D1[1] Start 2.44 GHz 691 pts Stop 2.443 GHz Date: 28 OCT 2024 13:08:17
π /4DQPSK	Spectrum Ref Level 20.00 dBm Offset 0.50 dB RBW 30 kHz Att 30 dB SWT 63.2 μs VBW 100 kHz Mode Auto FFT Count 100/100 1Pk View M1[1] 2.48 dBm 2.44082706 GHz 0.05 dB 1.00289 MHz D1[1] Start 2.44 GHz 691 pts Stop 2.443 GHz Date: 28 OCT 2024 13:04:05
8DPSK	Spectrum Ref Level 20.00 dBm Offset 0.50 dB RBW 30 kHz Att 30 dB SWT 63.2 μs VBW 100 kHz Mode Auto FFT Count 100/100 1Pk View M1[1] 3.43 dBm 2.44115652 GHz -0.49 dB 1.00000 MHz D1[1] Start 2.44 GHz 691 pts Stop 2.443 GHz Date: 28 OCT 2024 13:14:54

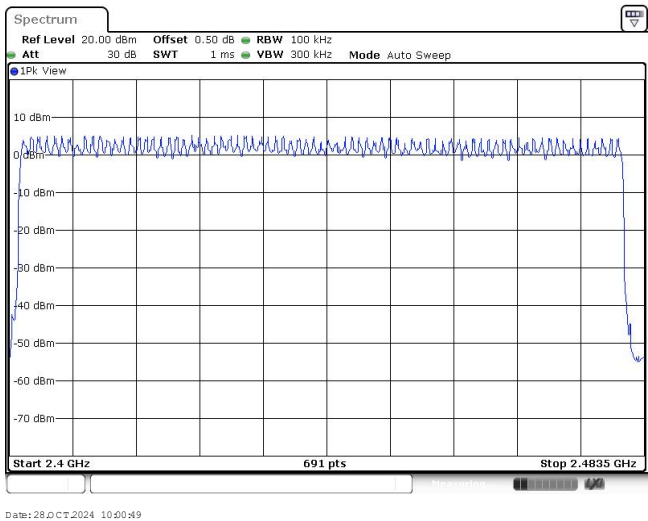
Appendix E: Hopping Channel Number

Modulation type	Channel number	Limit	Result
GFSK	79	≥15.00	Pass
π/4DQPSK	79		
8DPSK	79		

GFSK



$\pi/4$ DQPSK



8DPSK

