

APPENDIX REPORT

Project No.	SHT2203115005EW	Radio Specification	Bluetooth EDR
Test sample No.	YPHT22031150007	Model No.	GT20
Start test date	2022-05-11	Finish date	2022-05-11
Temperature	24.2°C	Humidity	44%
Test Engineer	Xiaoqin Li	Auditor	Xiaodong Zhuo

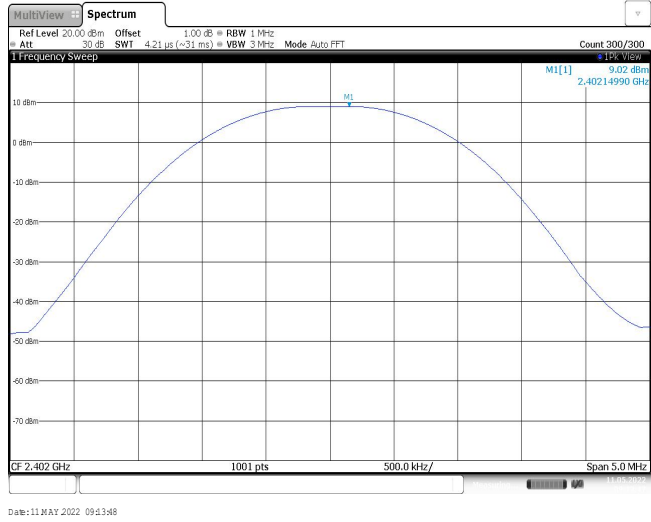
Appendix clause	Test item	Result
A	Peak Output Power	PASS
B	20 dB Bandwidth	PASS
C	99% Occupied Bandwidth	PASS
D	Carrier Frequencies Separation	PASS
E	Hopping Channel Number	PASS
F	Dwell Time	PASS
G	Duty Cycle Correction Factor (DCCF)	PASS
H	Band edge and Spurious Emissions(coducted)	PASS

Appendix A: Peak Output Power

Modulation type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
GFSK	00	9.02	9.00	≤ 30.00	Pass
	39	9.82	9.81		
	78	9.09	9.06		
π/4DQPSK	00	9.69	9.30	≤ 21.00	Pass
	39	10.72	10.25		
	78	9.97	9.55		
8DPSK	00	9.74	9.34	≤ 21.00	Pass
	39	10.85	10.35		
	78	10.05	9.58		

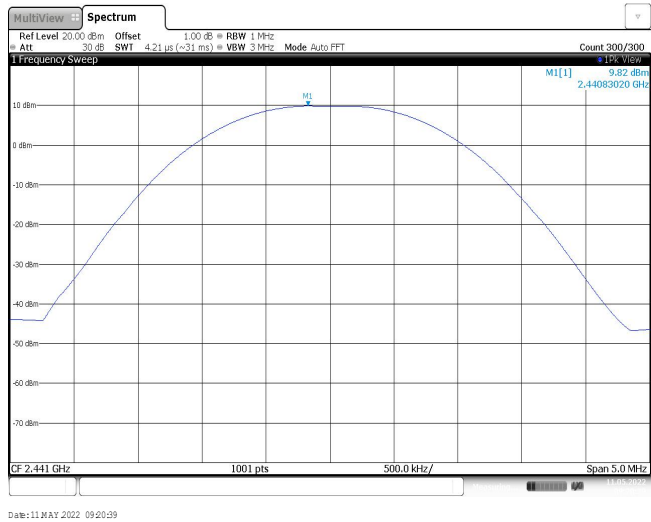
Modulation Type: GFSK

CH00



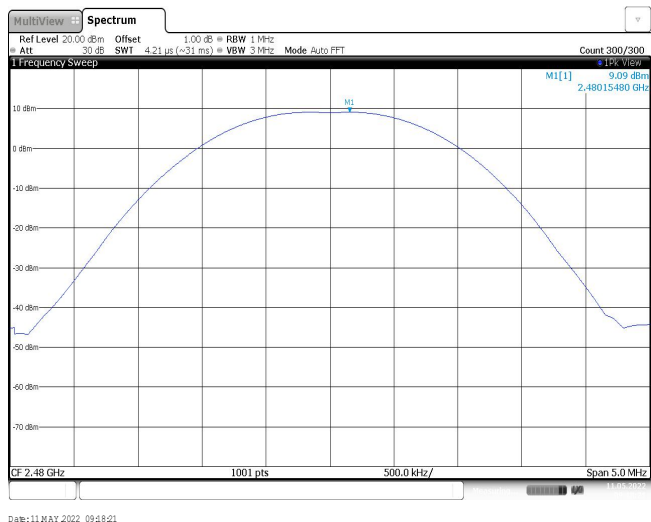
Date: 11 MAY 2022 09:13:48

CH39



Date: 11 MAY 2022 09:20:39

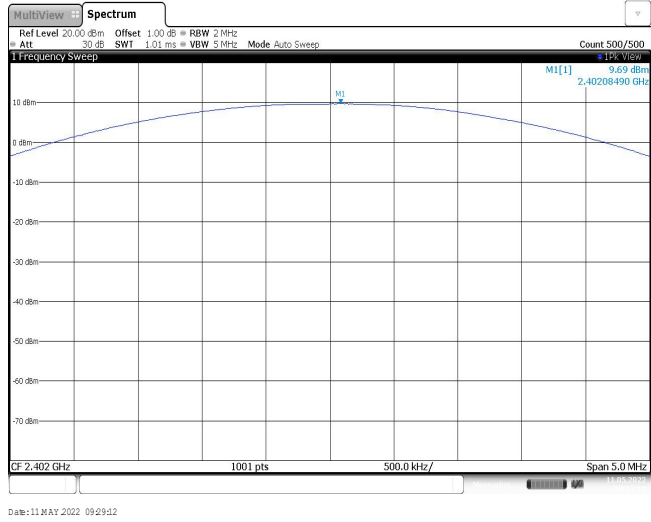
CH78



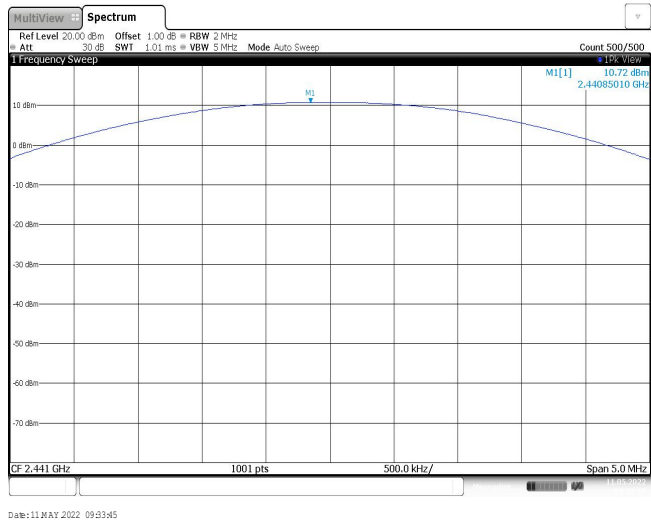
Date: 11 MAY 2022 09:18:21

Modulation Type: $\pi/4$ DQPSK

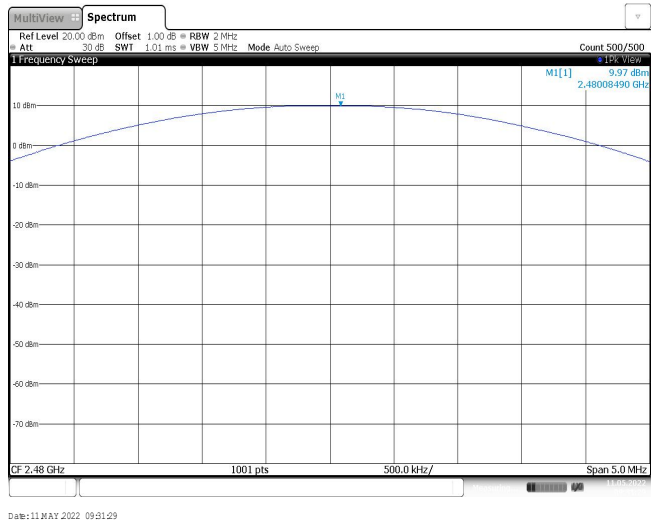
CH00



CH39

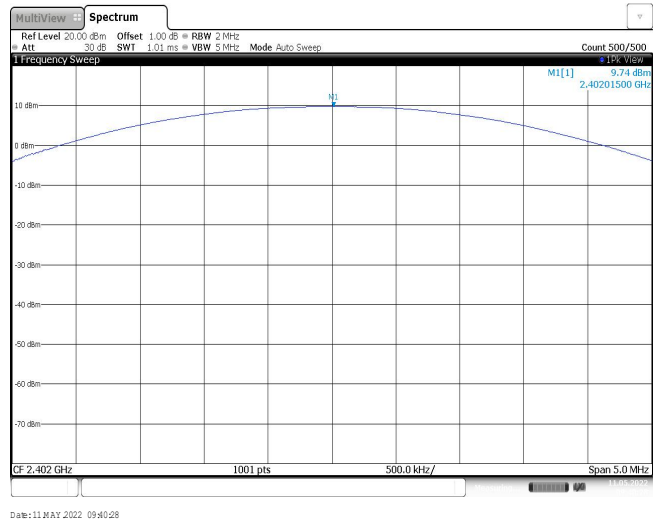


CH78

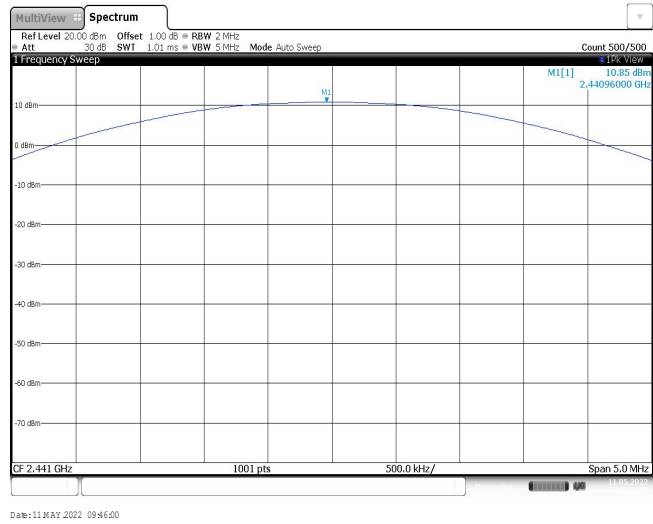


Modulation Type: 8DPSK

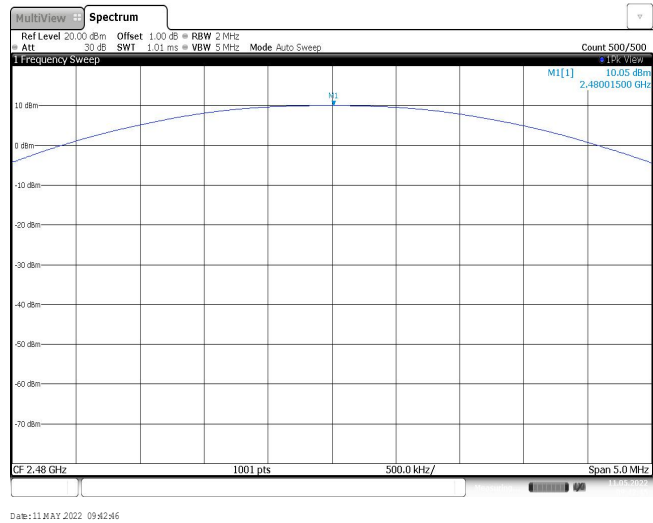
CH00



CH39



CH78



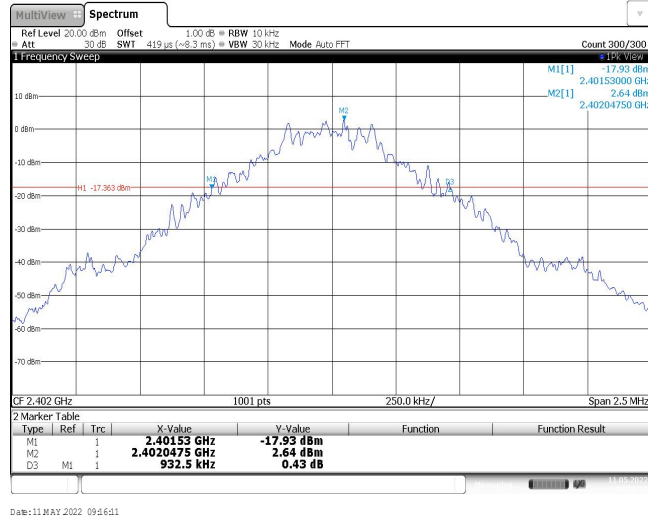
Appendix B : 20 dB Bandwidth

Modulation type	Channel	20 dB Bandwidth (kHz)	Limit (kHz)	Result
GFSK	00	932.50	-	Pass
	39	932.50		
	78	932.50		
$\pi/4$ DQPSK	00	1322.50	-	Pass
	39	1307.50		
	78	1305.00		
8DPSK	00	1305.00	-	Pass
	39	1300.00		
	78	1310.00		

Modulation Type:

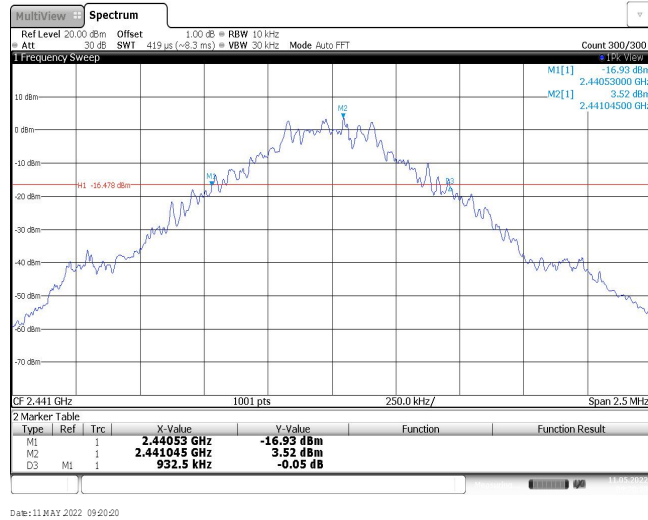
GFSK

CH00



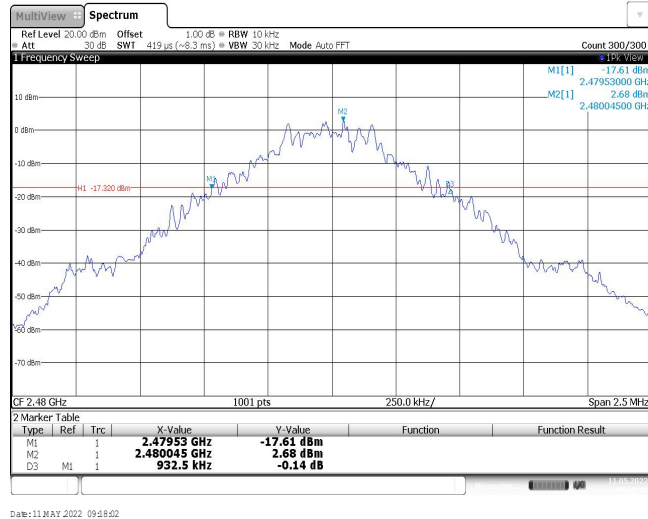
Date:11.MAY.2022 09:46:11

CH39



Date:11.MAY.2022 09:20:20

CH78

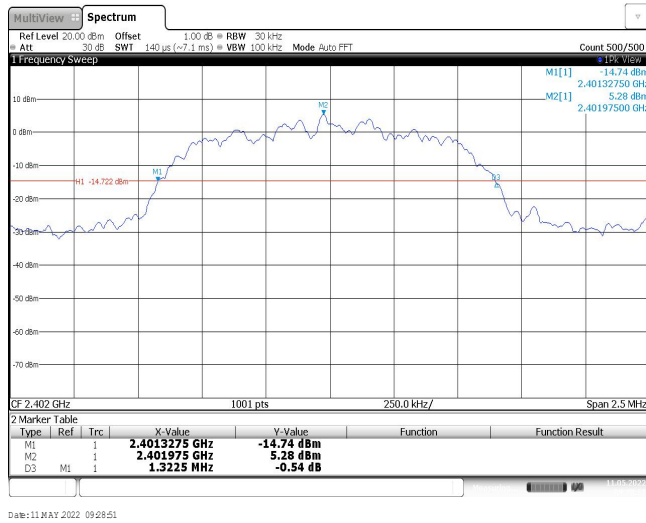


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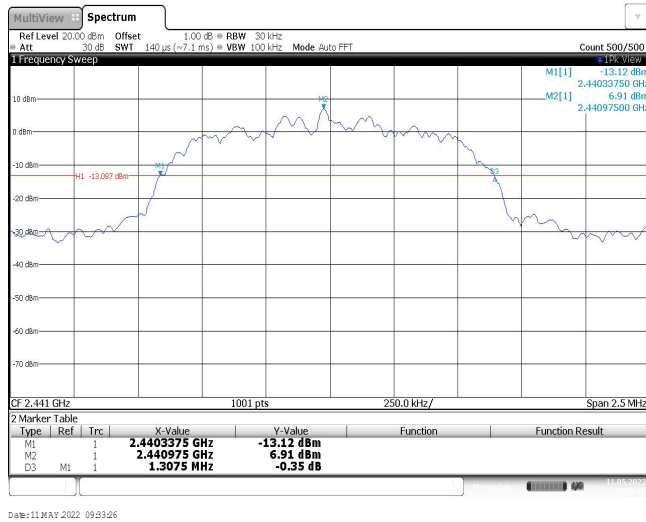
Modulation Type:

$\pi/4$ DQPSK

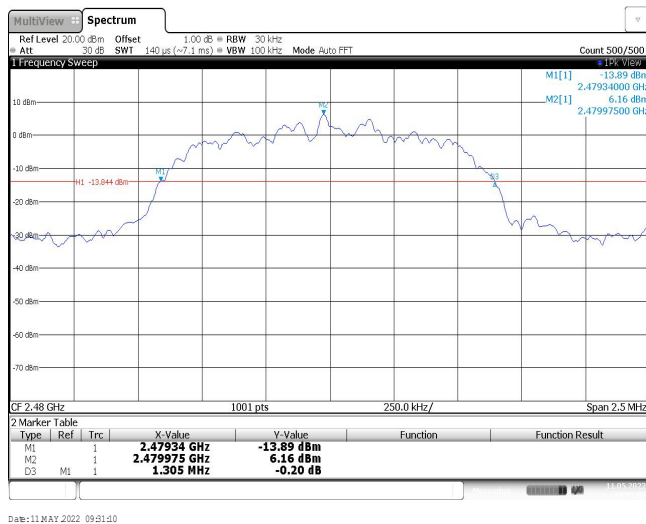
CH00



CH39



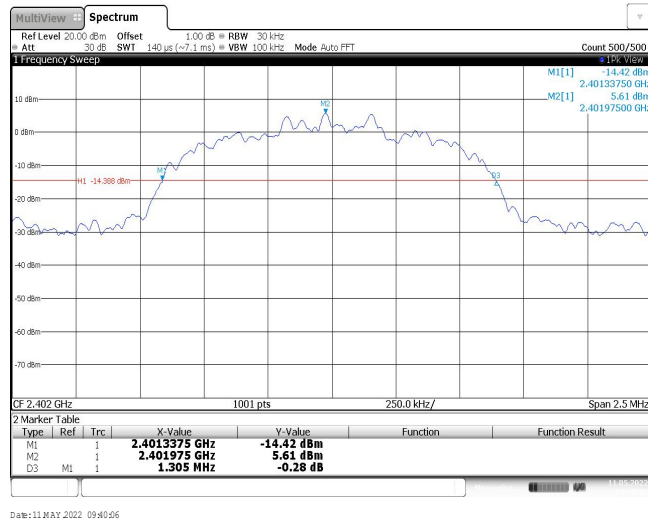
CH78



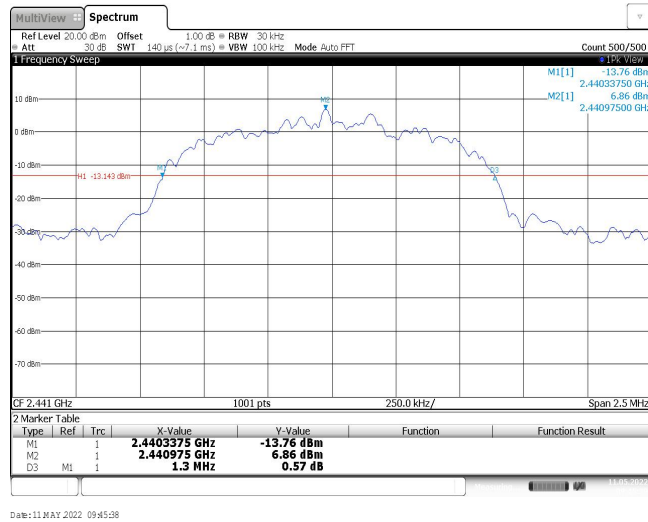
Modulation Type:

8DPSK

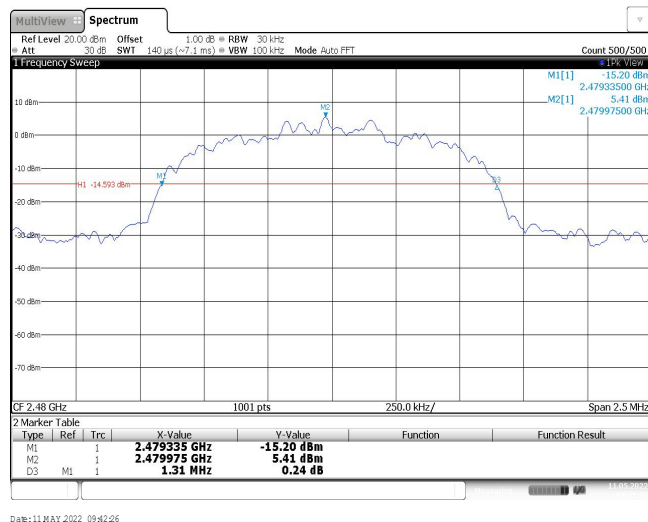
CH00



CH39



CH78



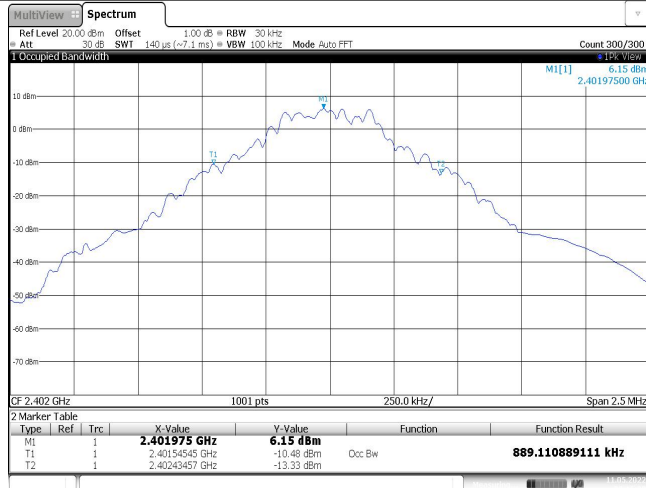
Appendix C: 99% Occupied Bandwidth

Modulation type	Channel	99% Occupied Bandwidth (MHz)	Limit (MHz)	Result
GFSK	00	0.89	-	Pass
	39	0.90		
	78	0.90		
$\pi/4$ DQPSK	00	1.20	-	Pass
	39	1.19		
	78	1.19		
8DPSK	00	1.21	-	Pass
	39	1.20		
	78	1.20		

Modulation Type:

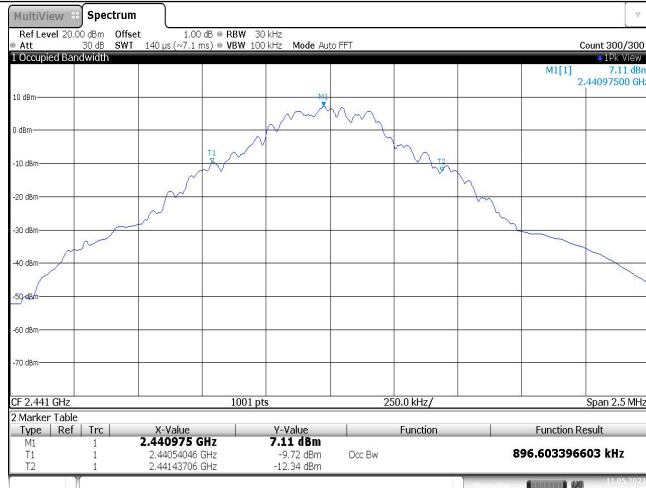
GFSK

CH00



Date: 11 MAY 2022 09:16:20

CH39



Date: 11 MAY 2022 09:20:30

CH78



Date: 11 MAY 2022 09:18:10

Modulation Type:

$\pi/4$ DQPSK

CH00



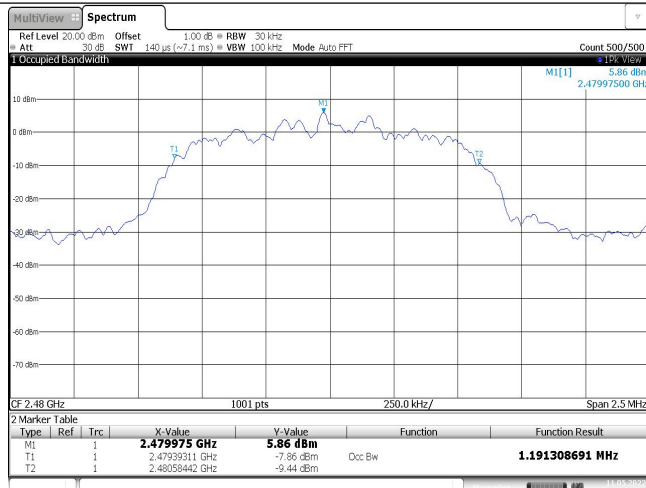
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CH39



Date: 11 MAY 2022 09:33:04

CH78

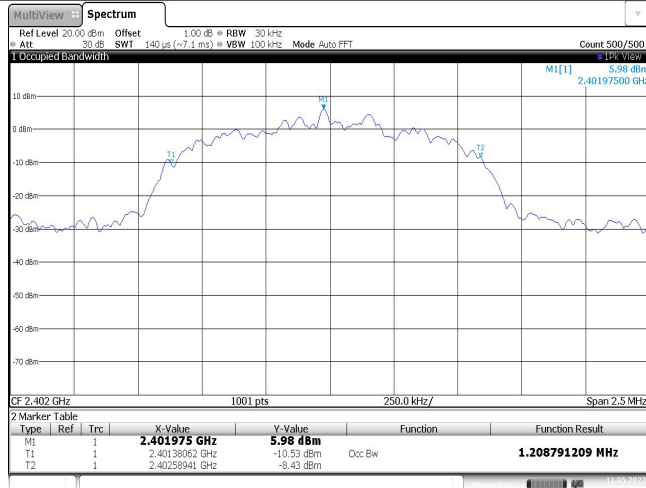


Date: 11 MAY 2022 09:31:19

Modulation Type:

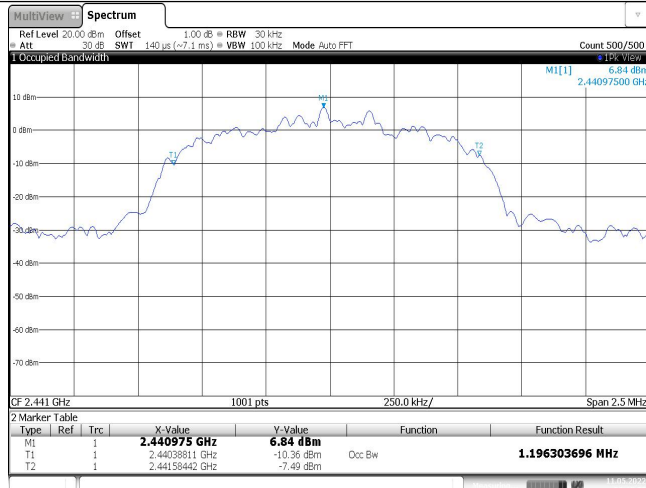
8DPSK

CH00



Date: 11 MAY 2022 09:40:18

CH39



Date: 11 MAY 2022 09:45:50

CH78



Date: 11 MAY 2022 09:42:35

Appendix D: Carrier Frequencies Separation

Modulation type	Channel	Carrier Frequencies Separation (MHz)	Limit (kHz) *	Result
GFSK	39	1.00	≥932.50	Pass
π/4DQPSK	39	1.00	≥881.67	Pass
8DPSK	39	1.00	≥873.33	Pass

Note:

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

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

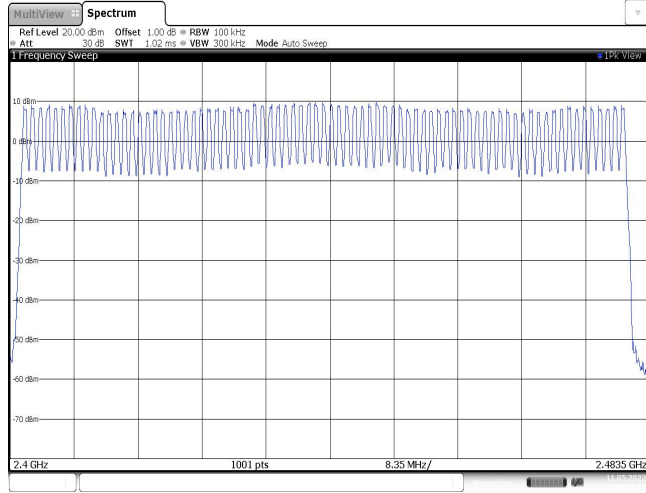
8DPSK limit = 2/3 * The maximum 20 dB Bandwidth for 8DPSK modulation on the appendix B

<p style="text-align: center;">GFSK</p>	
<p style="text-align: center;">$\pi/4$DQPSK</p>	
<p style="text-align: center;">8DPSK</p>	

Appendix E: Hopping Channel Number

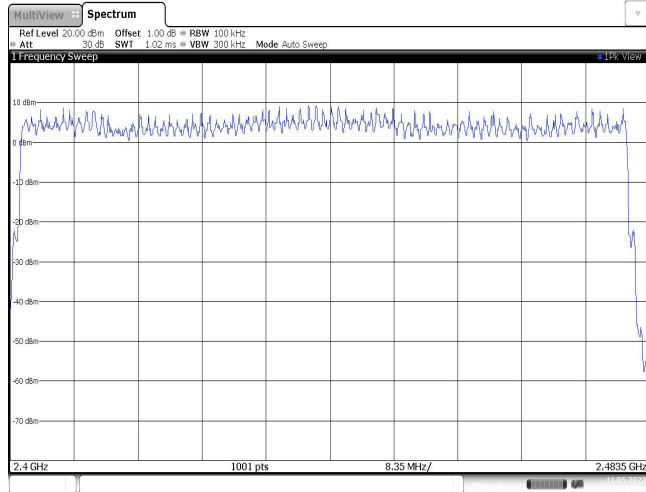
Modulation type	Channel number	Limit	Result
GFSK	79	≥15.00	Pass
π/4DQPSK	79		
8DPSK	79		

GFSK



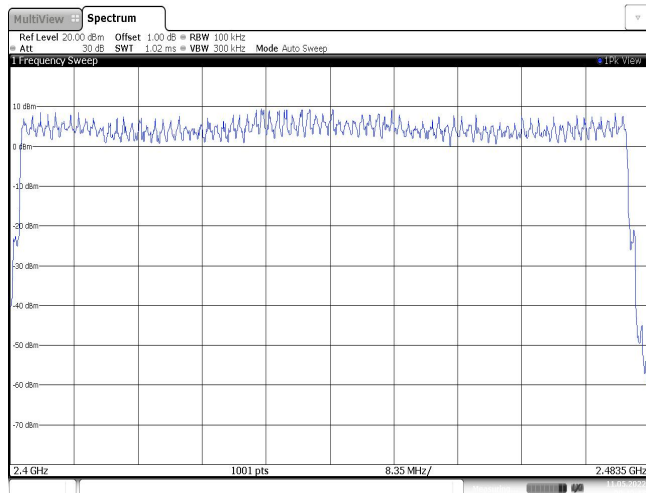
Date:11 MAY 2022 09:24:50

$\pi/4$ DQPSK



Date:11 MAY 2022 09:27:51

8DPSK



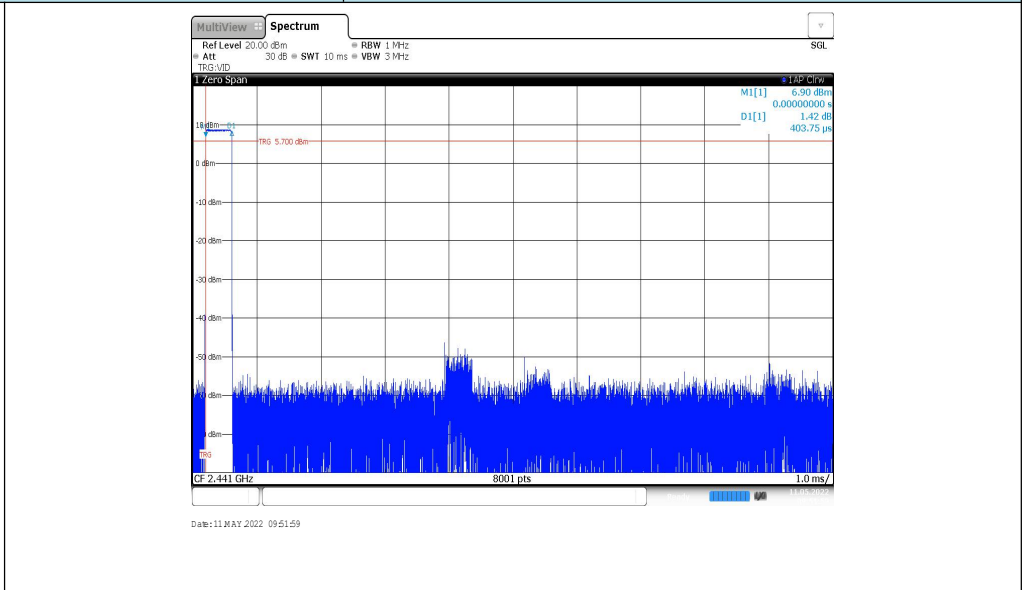
Date:11 MAY 2022 09:49:44

Appendix F: Dwell Time

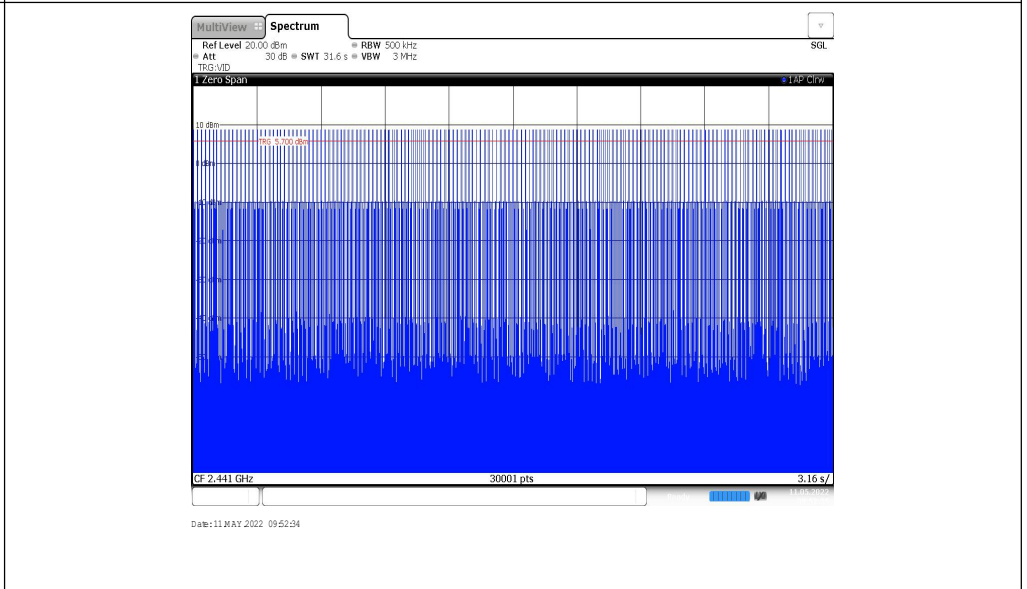
Modulation type	Packet	Burst Width [ms]	Total Hops[hop*ch]	Dwell time (Second)	Limit (Second)	Result
GFSK	DH1	0.40	321	0.13	≤ 0.40	Pass
	DH3	1.66	157	0.26		
	DH5	2.91	113	0.33		
π/4DQPSK	2DH1	0.40	320	0.13	≤ 0.40	Pass
	2DH3	1.65	152	0.25		
	2DH5	2.90	103	0.30		
8DPSK	3DH1	0.39	315	0.12	≤ 0.40	Pass
	3DH3	1.65	169	0.28		
	3DH5	2.90	108	0.31		

Modulation Type: GFSK

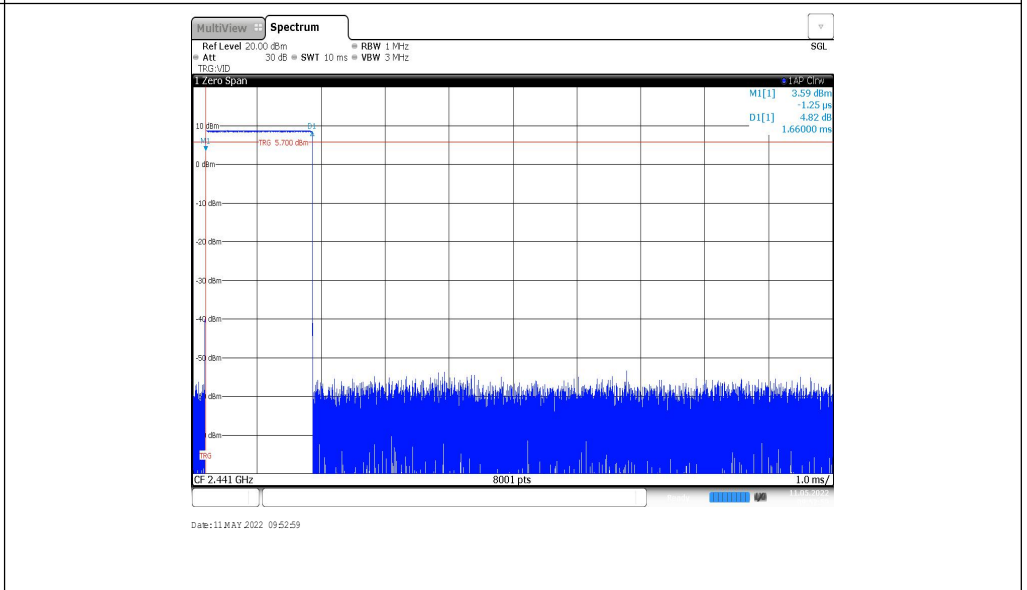
DH1
Burst width



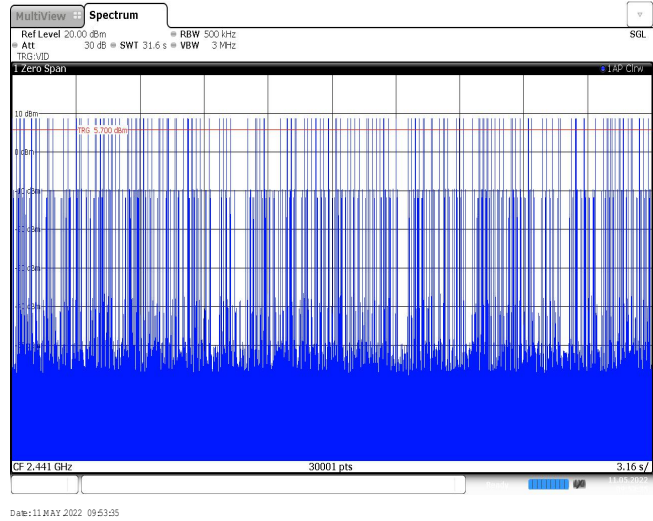
DH1
Burst number



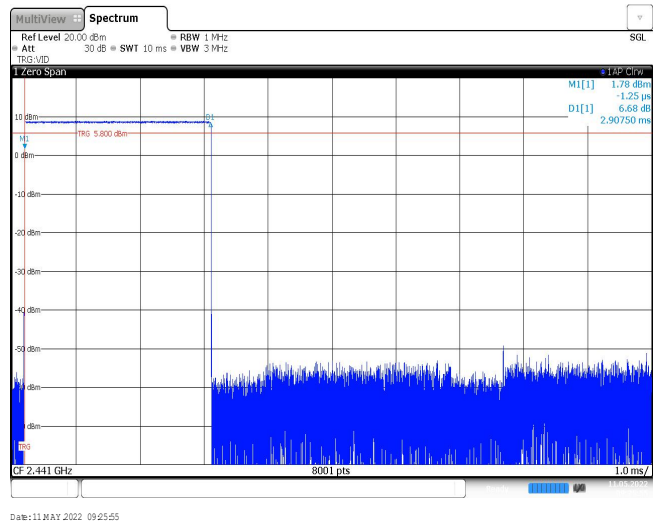
DH3
Burst width



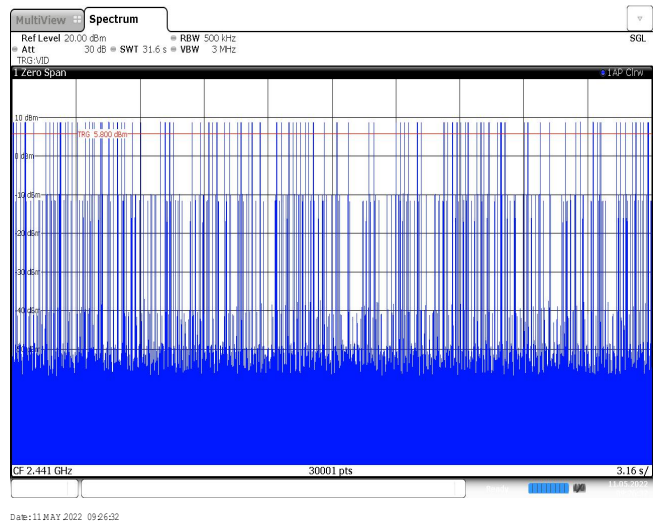
DH3
Burst number



DH5
Burst width

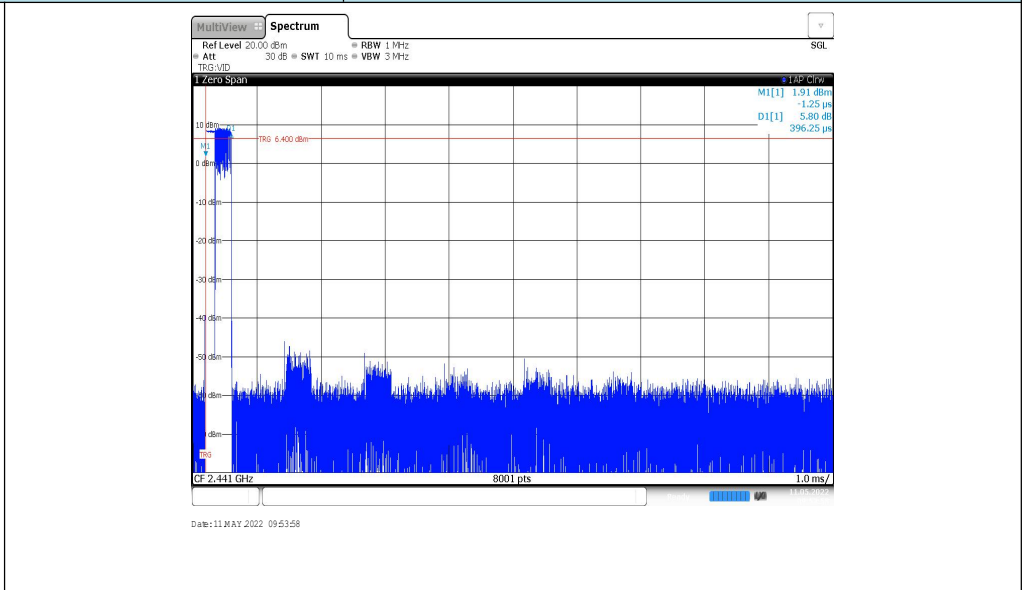


DH5
Burst number

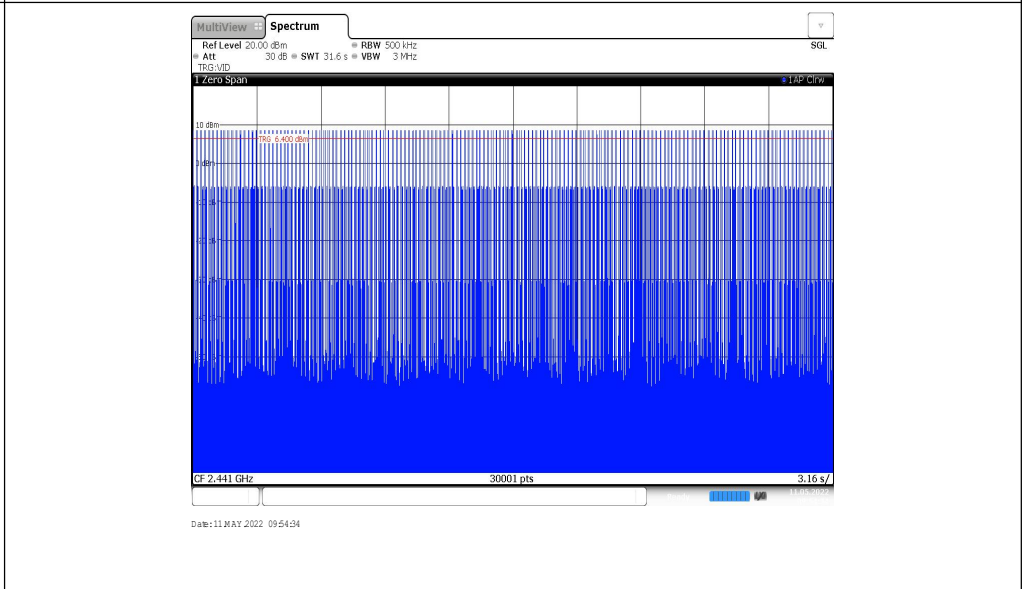


Modulation Type: $\pi/4$ DQPSK

2DH1
Burst width



2DH1
Burst number



2DH3
Burst width

