

APPENDIX REPORT

Project No.	SHT2111009301EW	Radio Specification	Bluetooth EDR
Test sample No.	YPHT21110093003	Model No.	T60
Start test date	2021-11-18	Finish date	2021-11-19
Temperature	25.1℃	Humidity	36%
Test Engineer	Weiyang Xiang	Auditor	Xiaodong Zhu

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(ducted)	PASS

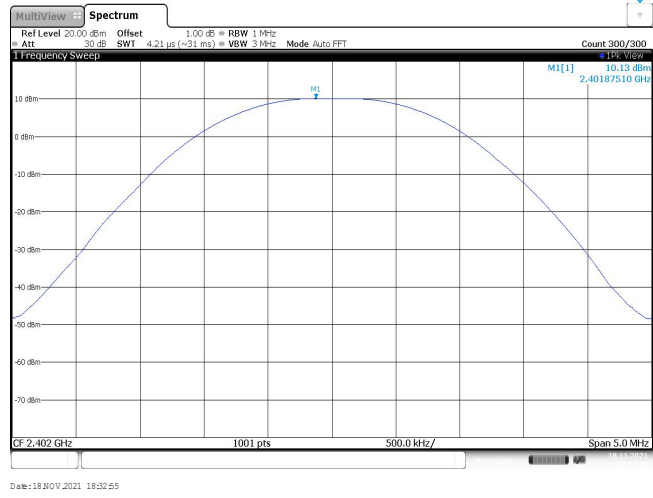
Appendix A: Peak Output Power

Modulation type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
GFSK	00	10.13	10.11	≤ 30.00	Pass
	39	8.83	8.82		
	78	10.48	10.45		
π/4DQPSK	00	10.17	9.76	≤ 21.00	Pass
	39	8.77	8.32		
	78	10.56	10.08		
8DPSK	00	10.38	9.74	≤ 21.00	Pass
	39	8.97	8.42		
	78	10.76	10.17		

Modulation Type:

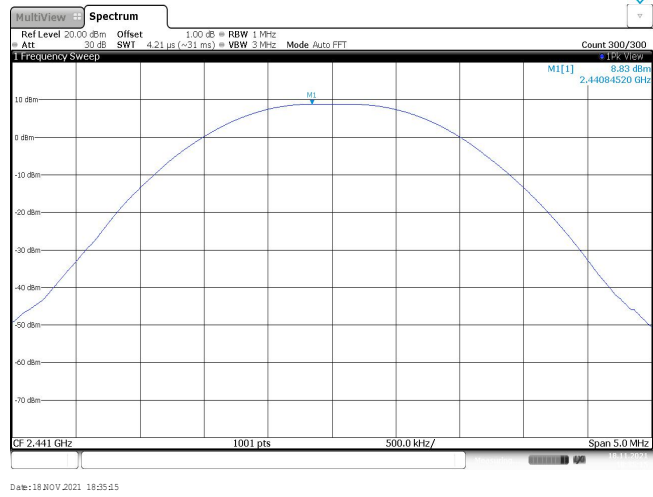
GFSK

CH00



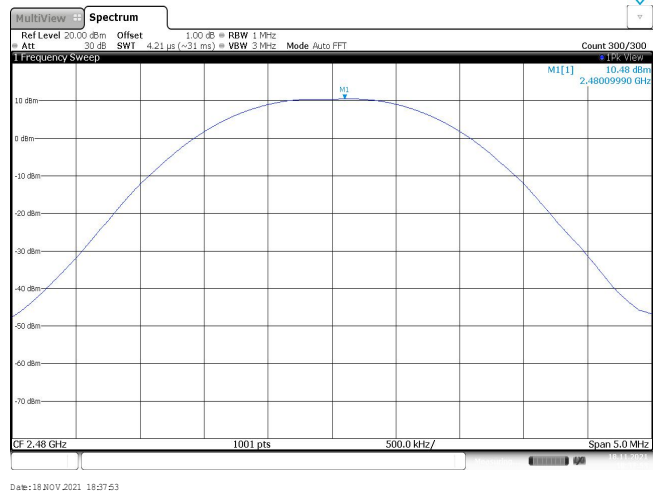
Date: 18 NOV 2021 18:32:55

CH39



Date: 18 NOV 2021 18:35:55

CH78

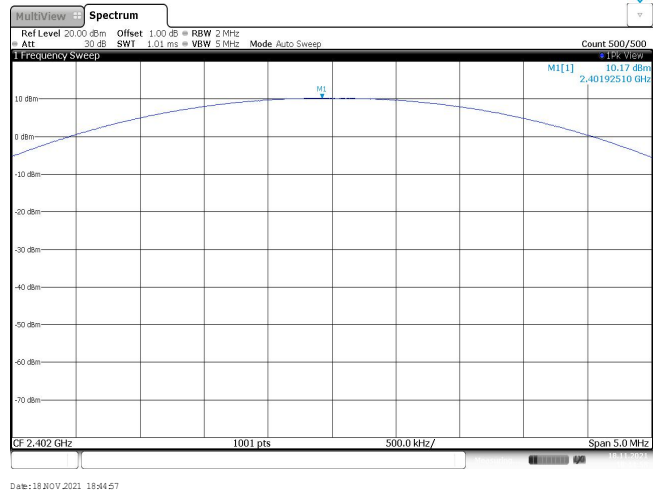


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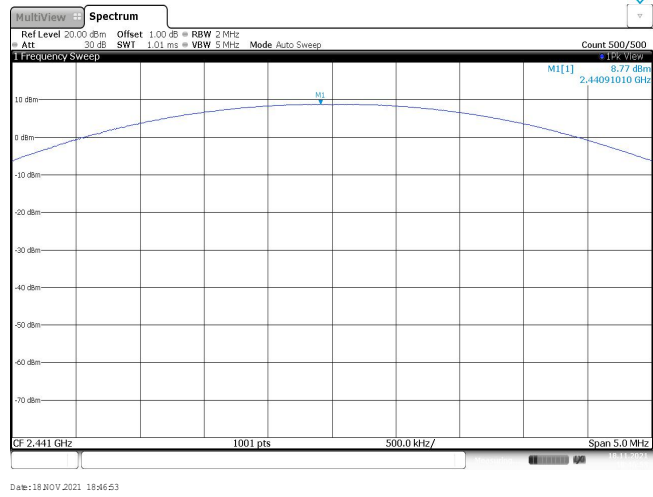
Modulation Type:

$\pi/4$ DQPSK

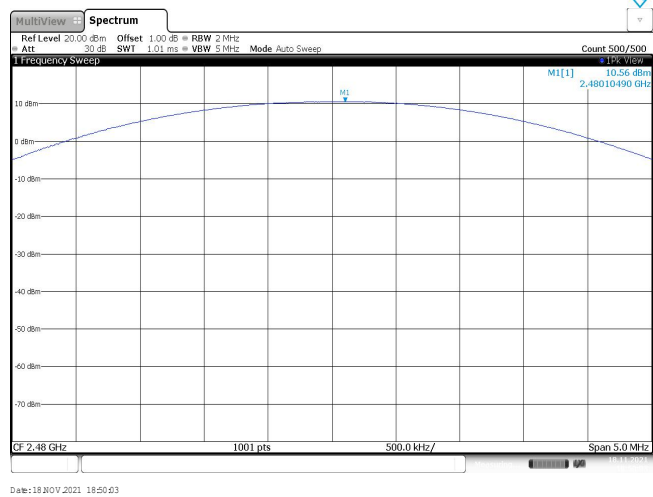
CH00



CH39



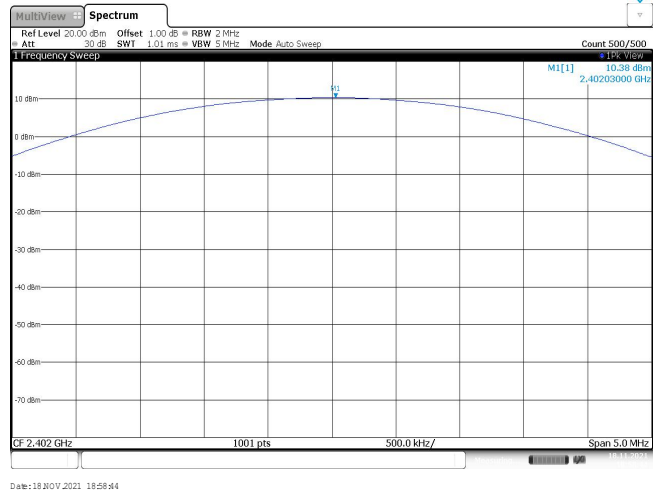
CH78



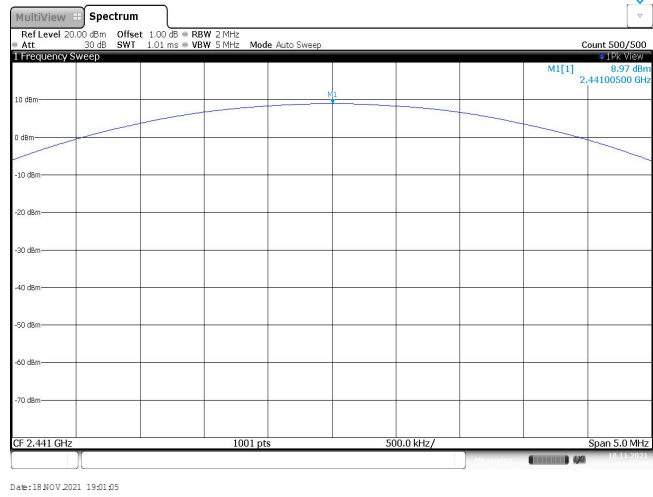
Modulation Type:

8DPSK

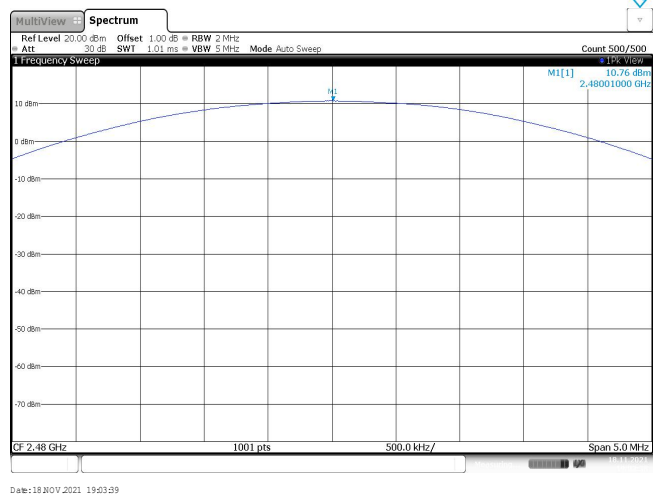
CH00



CH39



CH78



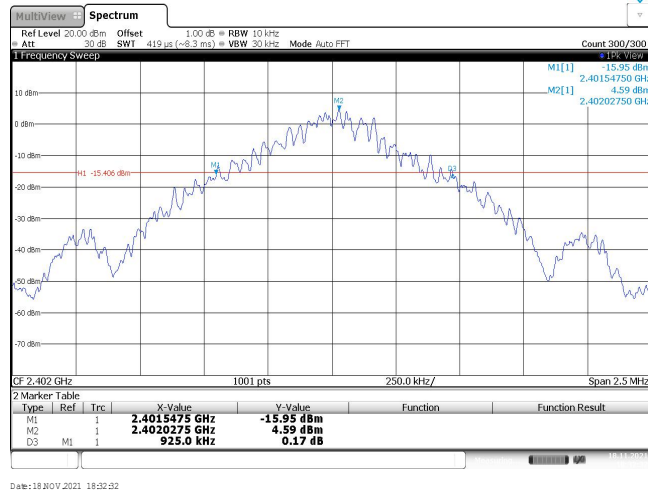
Appendix B : 20 dB Bandwidth

Modulation type	Channel	20 dB Bandwidth (kHz)	Limit (kHz)	Result
GFSK	00	925.00	-	Pass
	39	925.00		
	78	925.00		
$\pi/4$ DQPSK	00	1322.50	-	Pass
	39	1322.50		
	78	1322.50		
8DPSK	00	1305.00	-	Pass
	39	1300.00		
	78	1300.00		

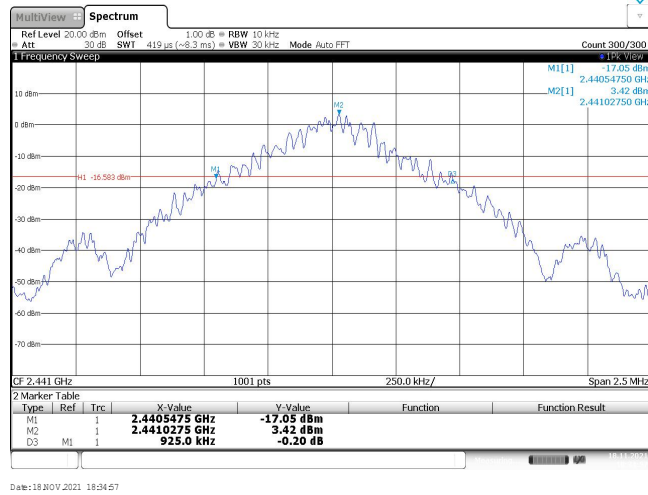
Modulation Type:

GFSK

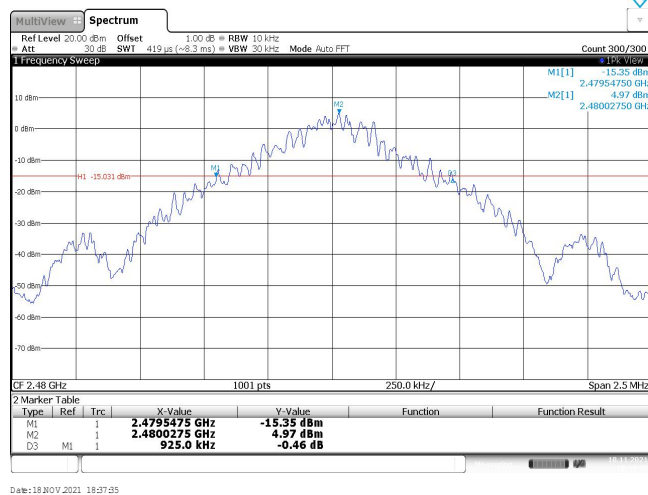
CH00



CH39



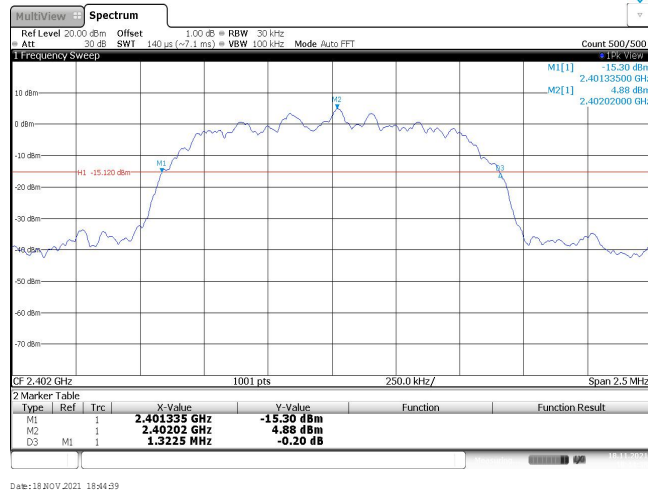
CH78



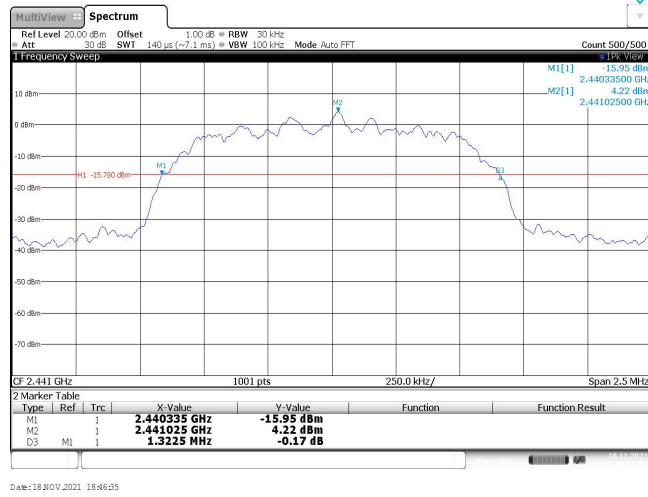
Modulation Type:

$\pi/4$ DQPSK

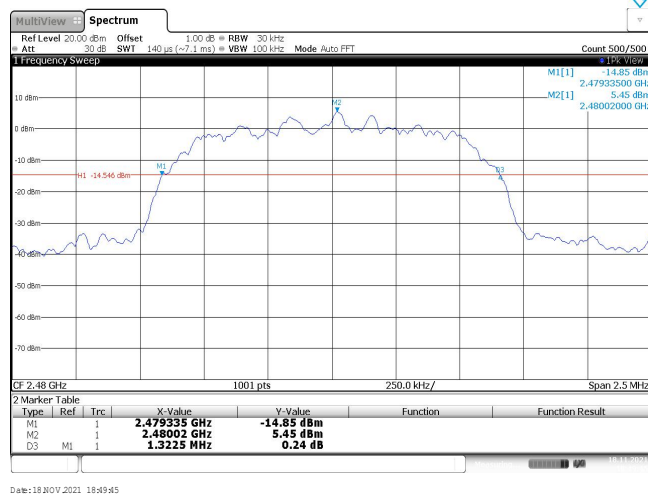
CH00



CH39



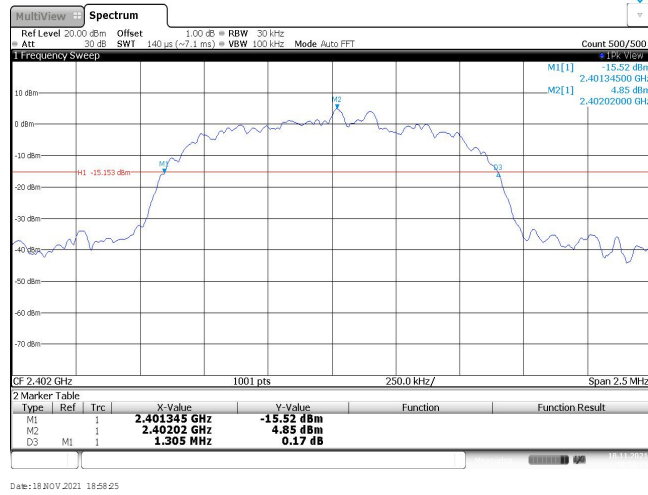
CH78



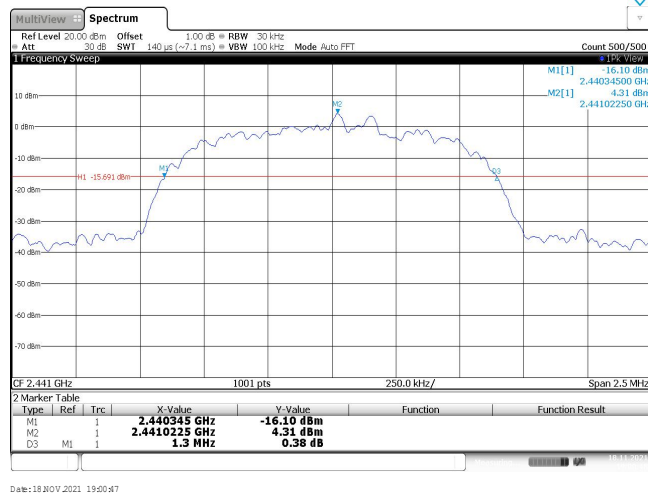
Modulation Type:

8DPSK

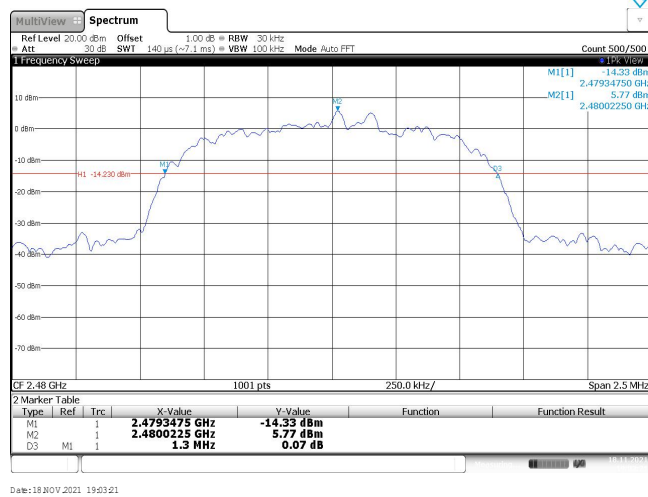
CH00



CH39



CH78

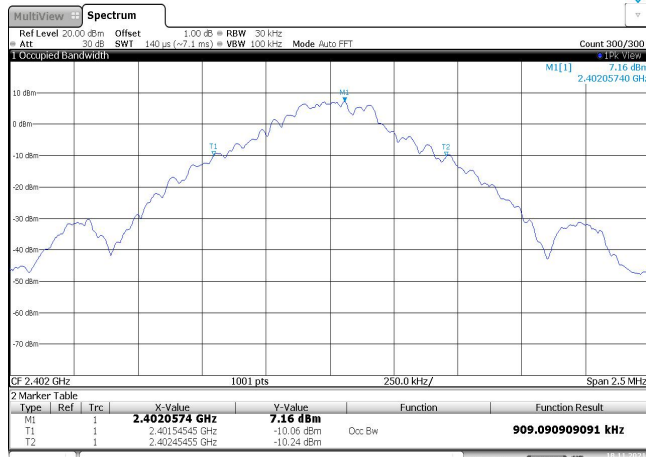


Appendix C: 99% Occupied Bandwidth

Modulation type	Channel	99% Occupied Bandwidth (MHz)	Limit (MHz)	Result
GFSK	00	0.91	-	Pass
	39	0.91		
	78	0.91		
$\pi/4$ DQPSK	00	1.18	-	Pass
	39	1.18		
	78	1.18		
8DPSK	00	1.18	-	Pass
	39	1.18		
	78	1.18		

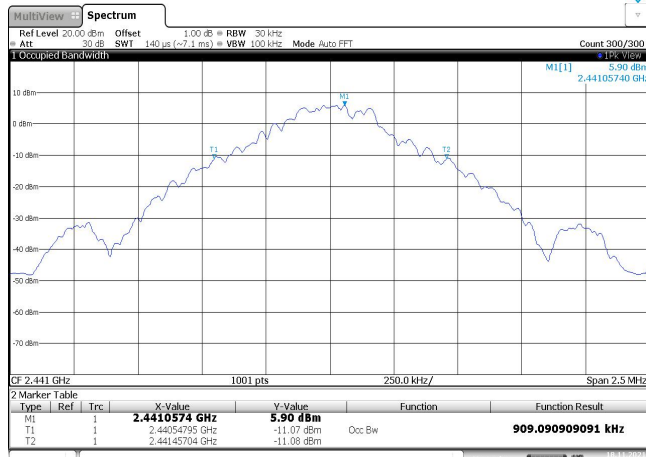
Modulation Type: GFSK

CH00



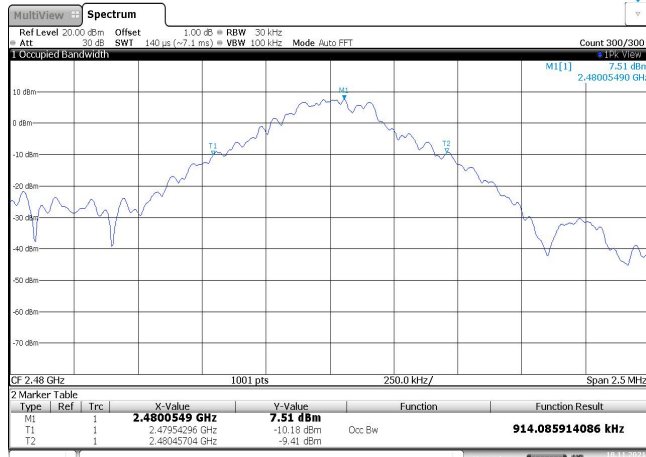
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CH39



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CH78

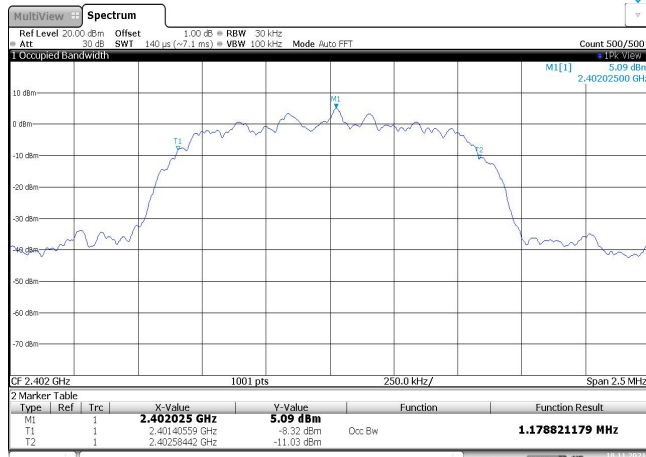


Date: 19 NOV 2021 19:37:44

Modulation Type:

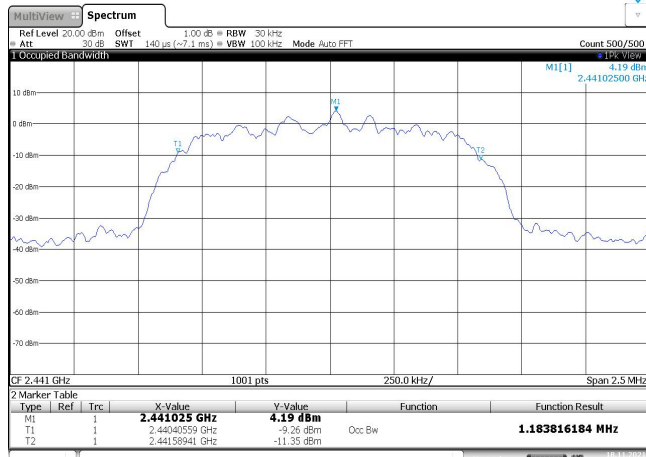
$\pi/4$ DQPSK

CH00



Date: 19 NOV 2021 18:44:47

CH39



Date: 19 NOV 2021 18:46:44

CH78



Date: 19 NOV 2021 18:49:44

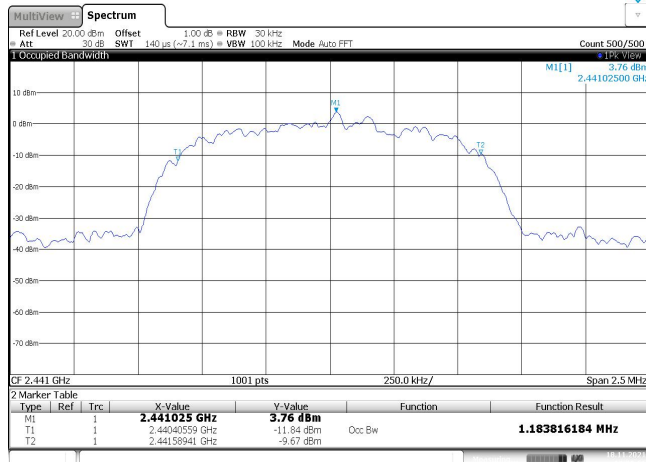
Modulation Type: 8DPSK

CH00



Date: 19 NOV 2021 18:58:24

CH39



Date: 19 NOV 2021 19:00:66

CH78



Date: 19 NOV 2021 19:03:29

Appendix D: Carrier Frequencies Separation

Modulation type	Channel	Carrier Frequencies Separation (MHz)	Limit (kHz) *	Result
GFSK	39	1.00	≥925.00	Pass
π/4DQPSK	39	1.00	≥881.67	Pass
8DPSK	39	1.00	≥870.00	Pass

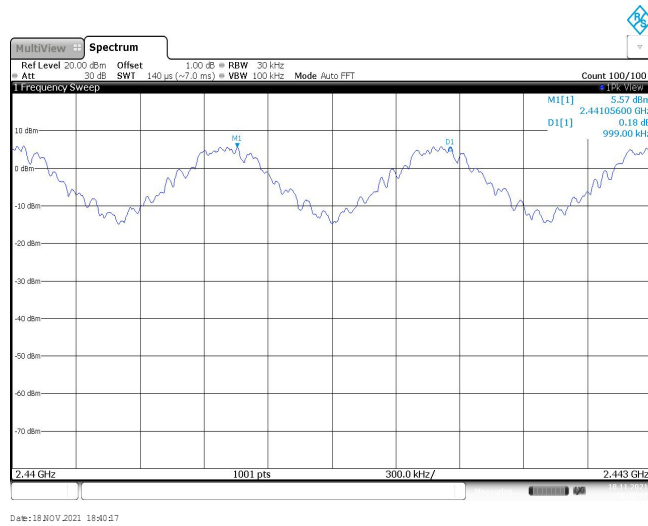
Note:

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

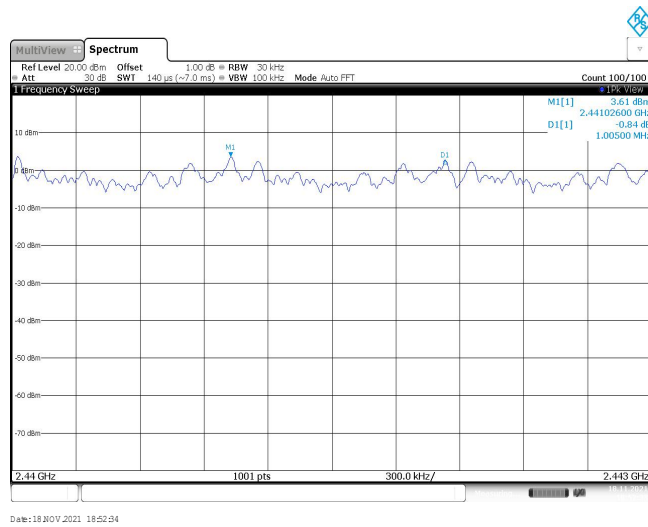
π/4DQPSK limit = 2/3 * The maximum 20 dB Bandwidth for π/4DQPSK modulation on the appendix B.

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

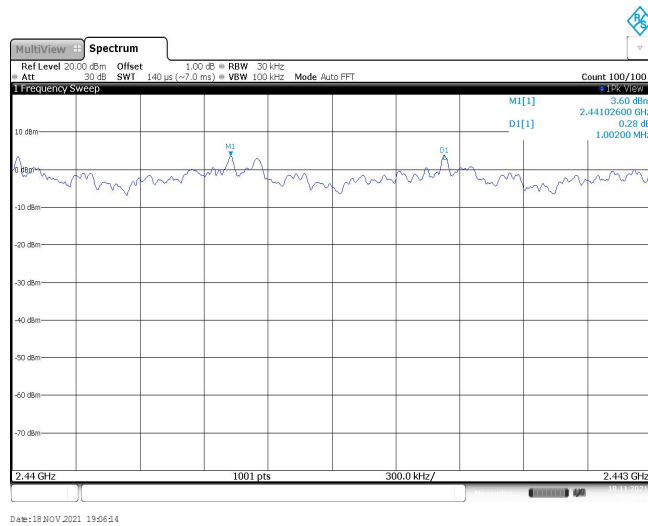
GFSK



$\pi/4$ DQPSK



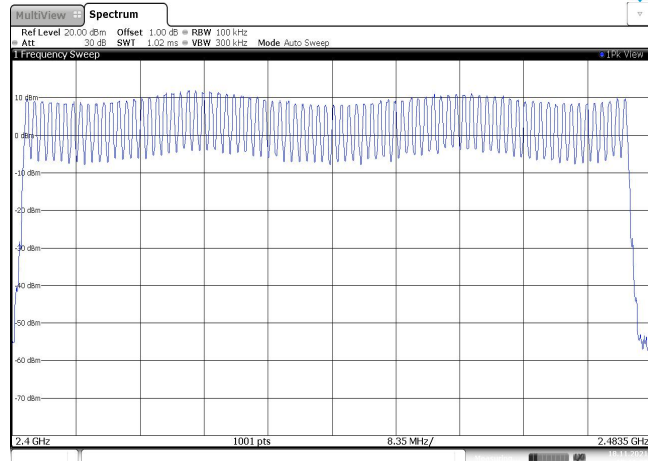
8DPSK



Appendix E: Hopping Channel Number

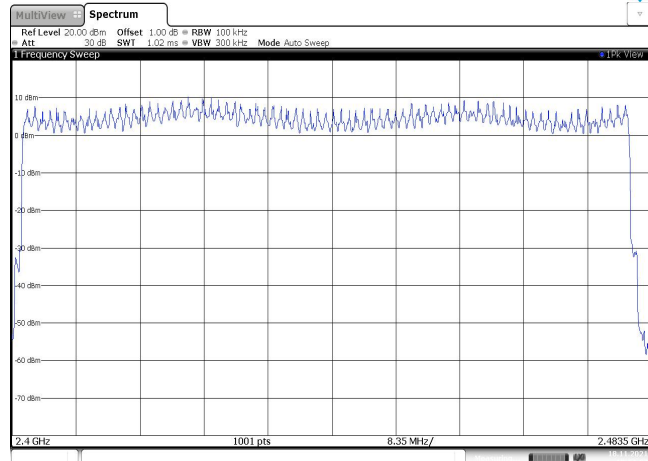
Modulation type	Channel number	Limit	Result
GFSK	79	≥15.00	Pass
π/4DQPSK	79		
8DPSK	79		

GFSK



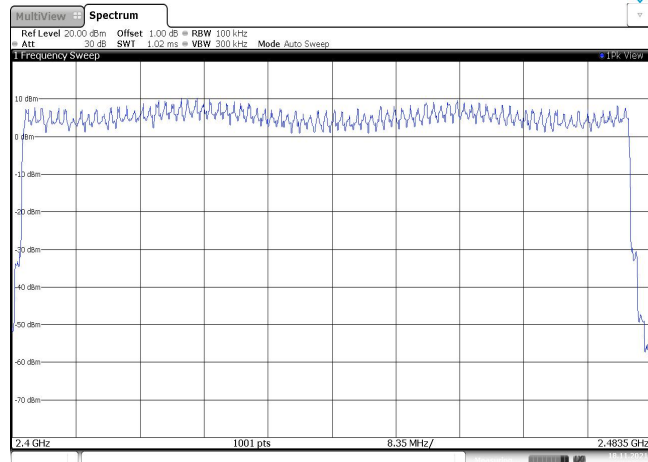
Date: 18 NOV 2021 18:41:31

$\pi/4$ DQPSK



Date: 18 NOV 2021 18:54:56

8DPSK



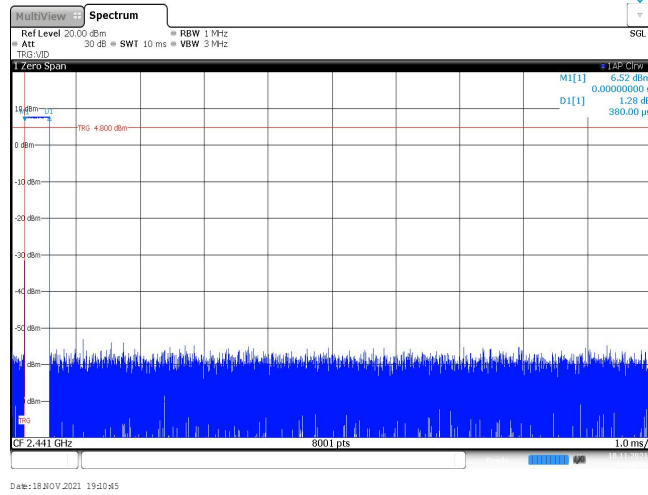
Date: 18 NOV 2021 19:08:24

Appendix F: Dwell Time

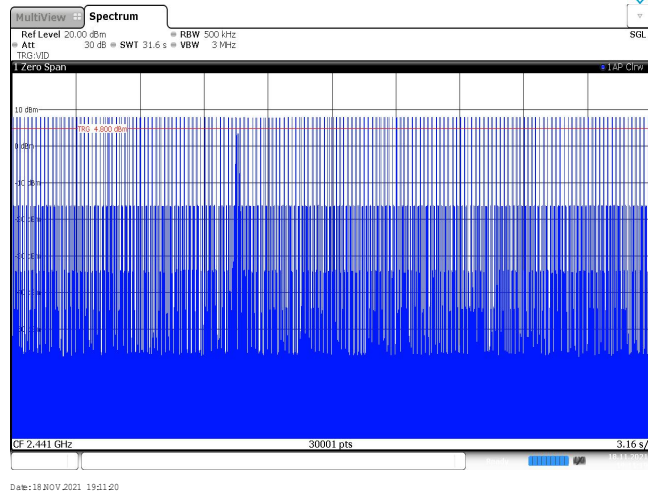
Modulation type	Packet	Burst Width [ms]	Total Hops[hop*ch]	Dwell time (Second)	Limit (Second)	Result
GFSK	DH1	0.38	316	0.12	≤ 0.40	Pass
	DH3	1.64	159	0.26		
	DH5	2.88	96	0.28		
π/4DQPSK	2DH1	0.39	314	0.12	≤ 0.40	Pass
	2DH3	1.64	160	0.26		
	2DH5	2.89	112	0.32		
8DPSK	3DH1	0.39	316	0.12	≤ 0.40	Pass
	3DH3	1.64	173	0.28		
	3DH5	2.89	109	0.32		

Modulation Type: GFSK

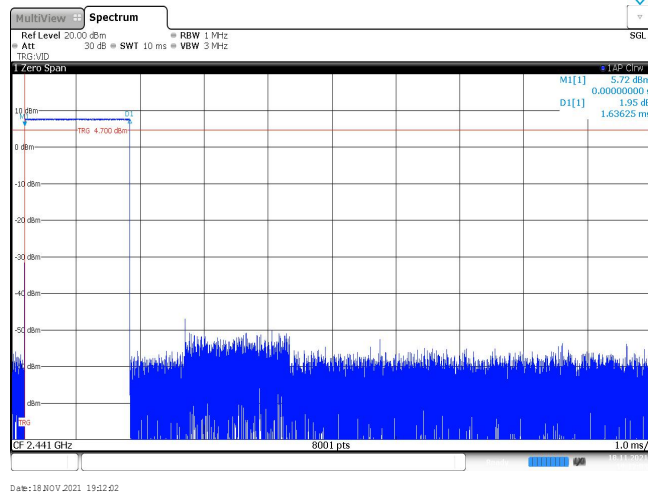
DH1
Burst width



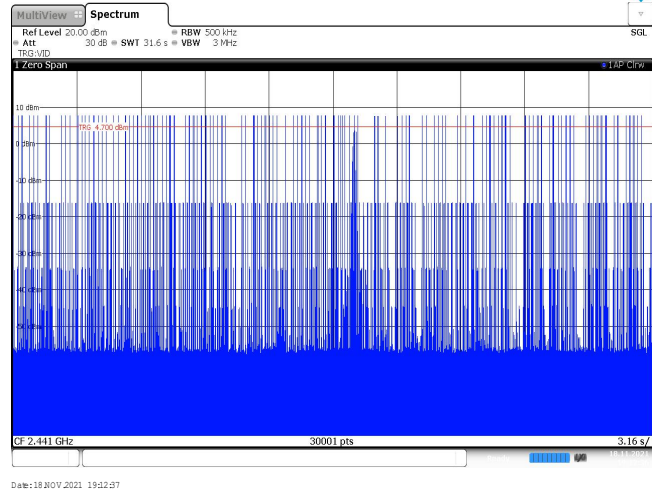
DH1
Burst number



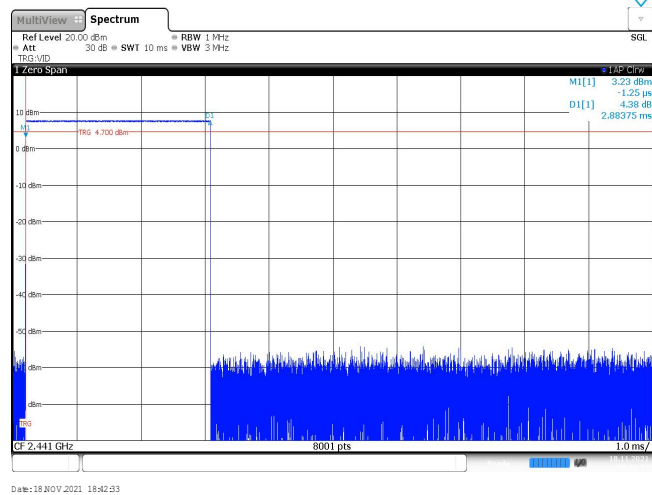
DH3
Burst width



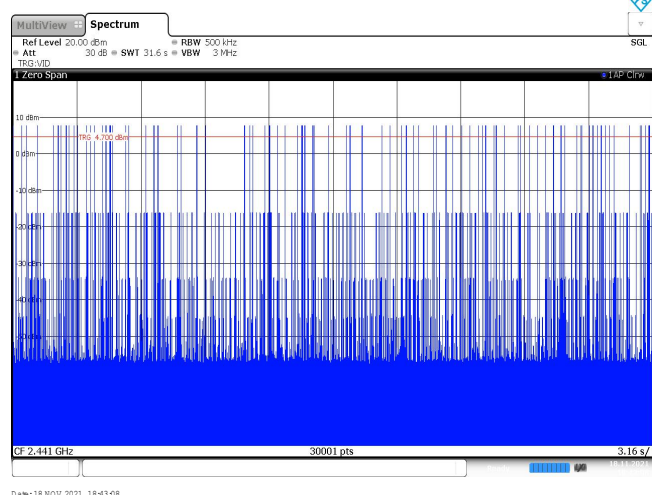
DH3
Burst number



DH5
Burst width

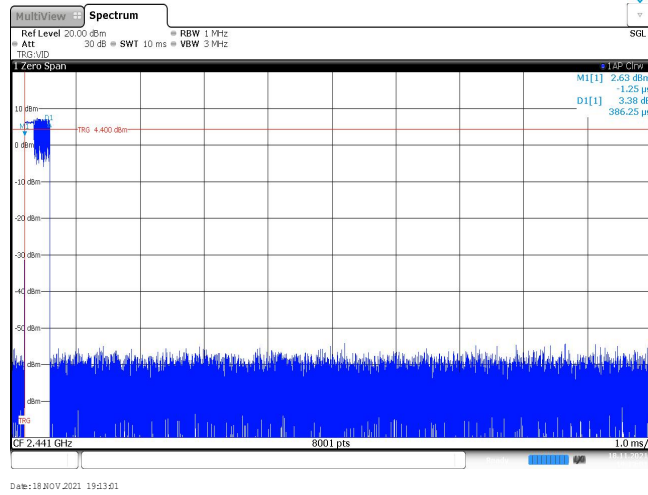


DH5
Burst number

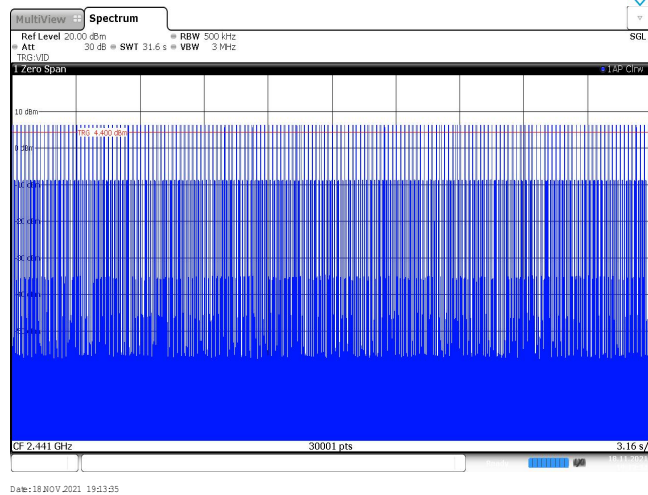


Modulation Type: $\pi/4$ DQPSK

2DH1
Burst width



2DH1
Burst number



2DH3
Burst width

