

APPENDIX REPORT

Project No.	SHT2111009103EW	Radio Specification	Bluetooth EDR
Test sample No.	YPHT21110091014	Model No.	Note1
Start test date	2021-11-17	Finish date	2021-11-18
Temperature	24.0℃	Humidity	31%
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(coducted)	PASS

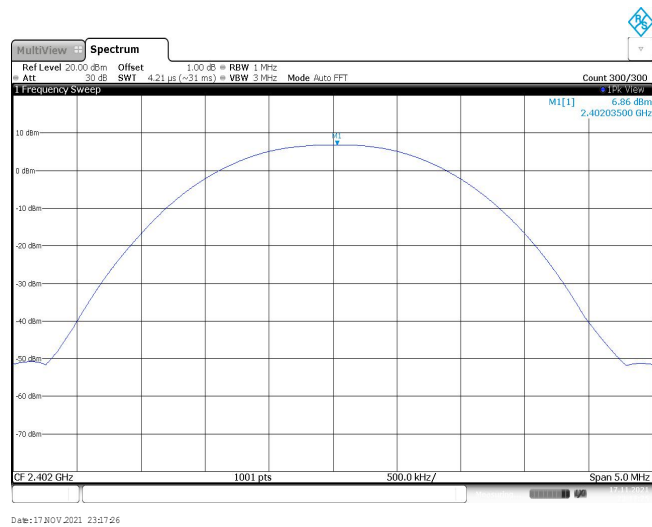
Appendix A: Peak Output Power

Modulation type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
GFSK	00	6.86	6.84	≤ 30.00	Pass
	39	6.18	6.17		
	78	7.46	7.44		
$\pi/4$ DQPSK	00	6.02	5.95	≤ 21.00	Pass
	39	5.70	5.64		
	78	7.00	6.93		
8DPSK	00	6.03	5.96	≤ 21.00	Pass
	39	5.68	5.62		
	78	7.01	6.92		

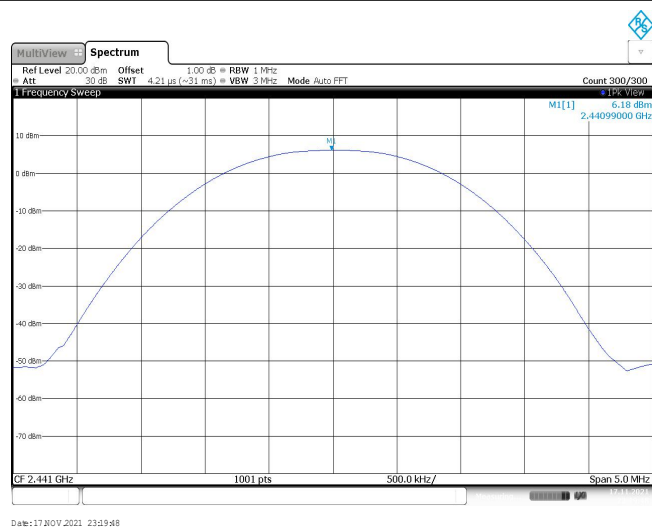
Modulation Type:

GFSK

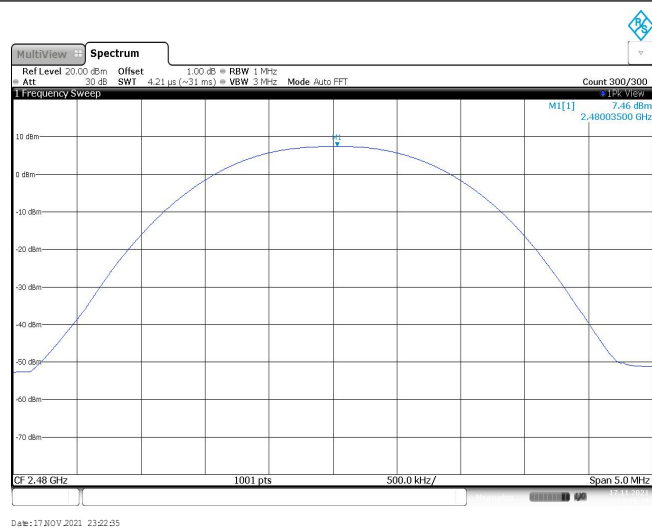
CH00



CH39



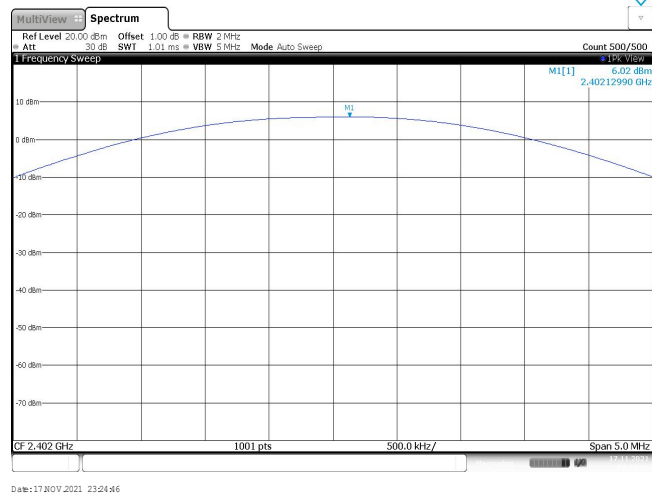
CH78



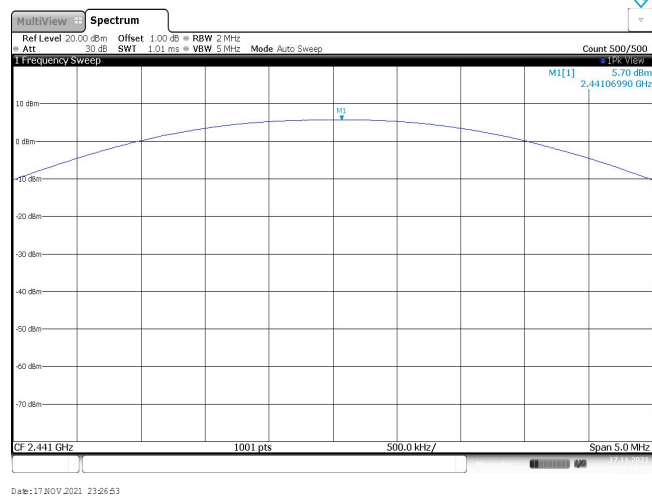
Modulation Type:

 $\pi/4$ DQPSK

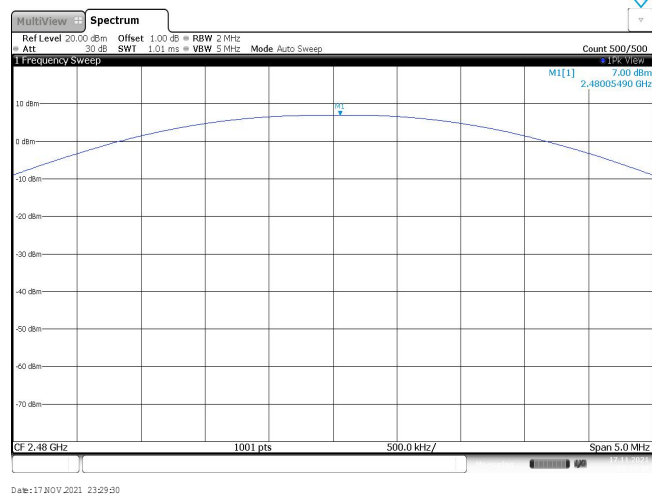
CH00



CH39



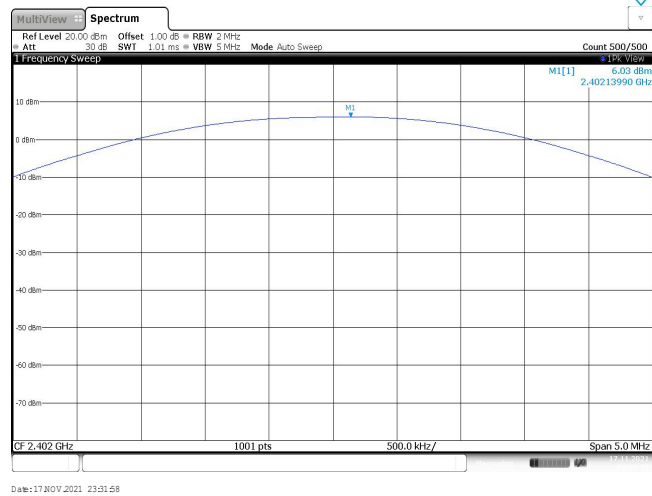
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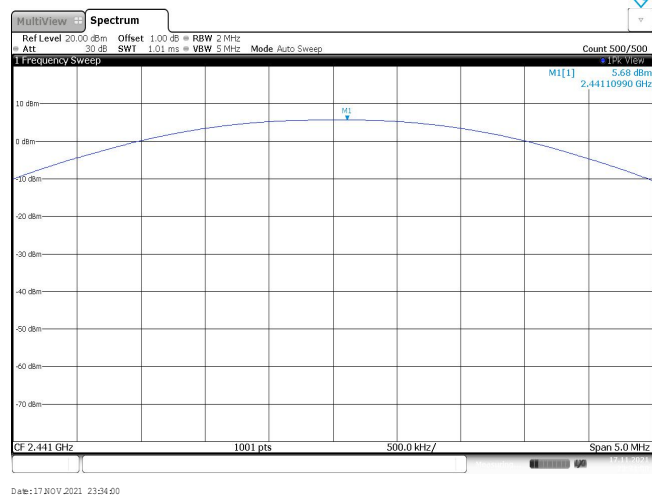
Modulation Type:

8DPSK

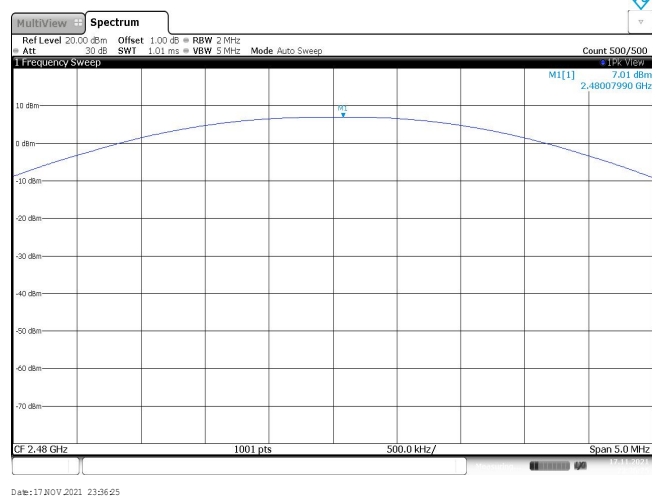
CH00



CH39



CH78



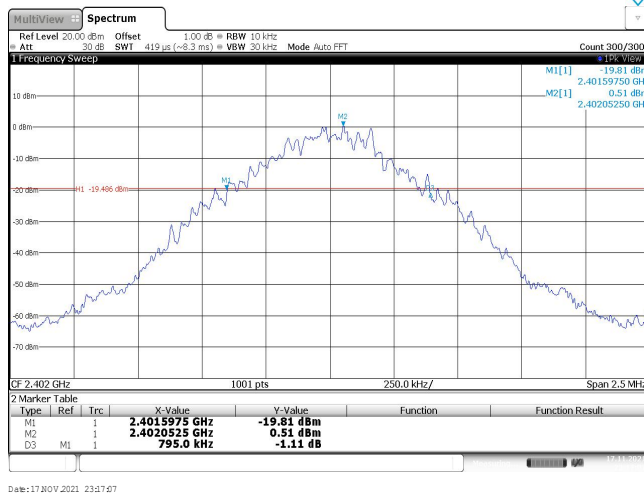
Appendix B : 20 dB Bandwidth

Modulation type	Channel	20 dB Bandwidth (kHz)	Limit (kHz)	Result
GFSK	00	795.00	-	Pass
	39	795.00		
	78	795.00		
$\pi/4$ DQPSK	00	1280.00	-	Pass
	39	1277.50		
	78	1282.50		
8DPSK	00	1282.50	-	Pass
	39	1277.50		
	78	1275.00		

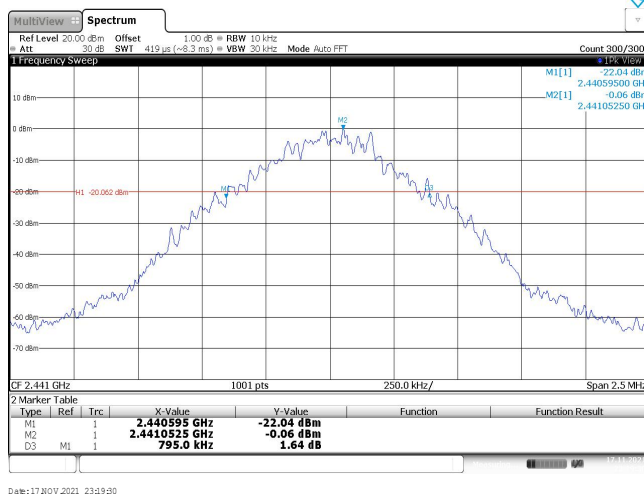
Modulation Type:

GFSK

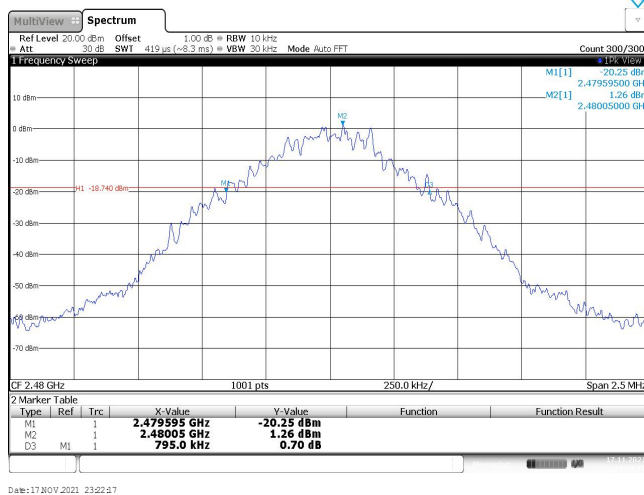
CH00



CH39



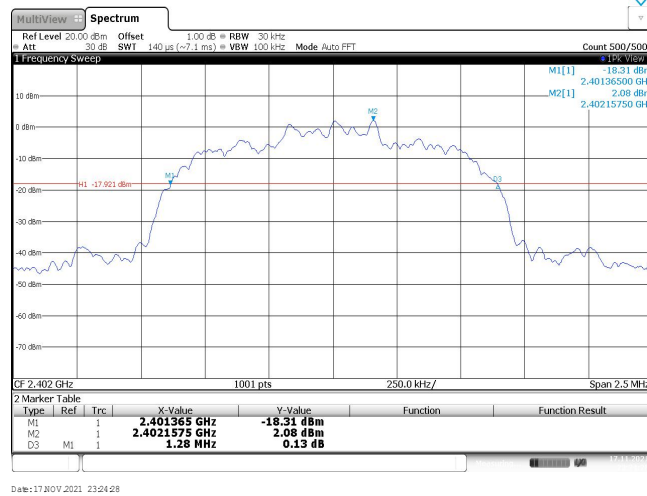
CH78



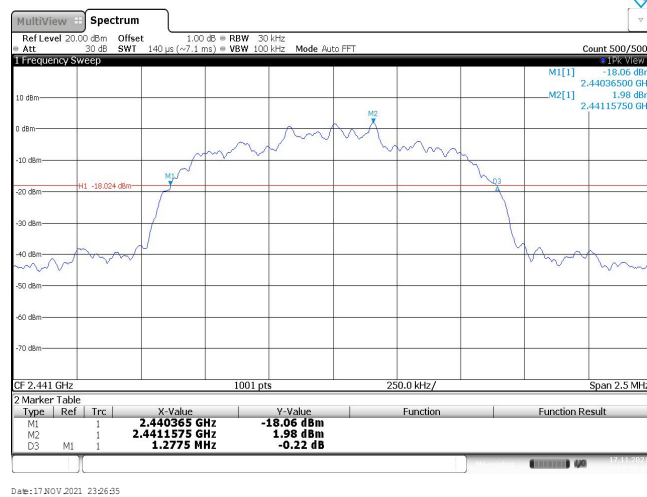
Modulation Type:

 $\pi/4$ DQPSK

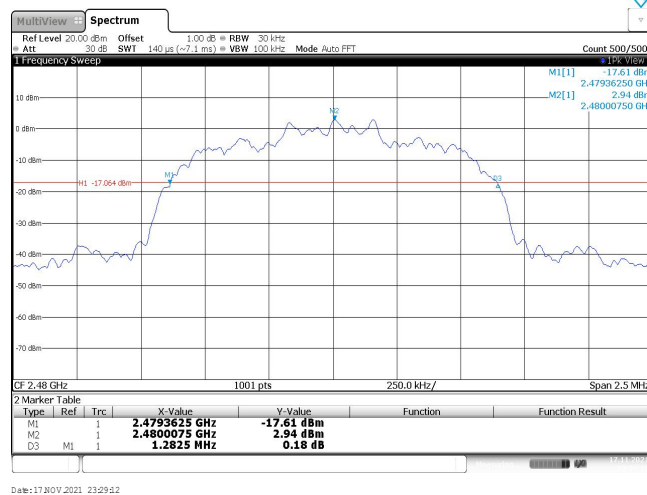
CH00



CH39



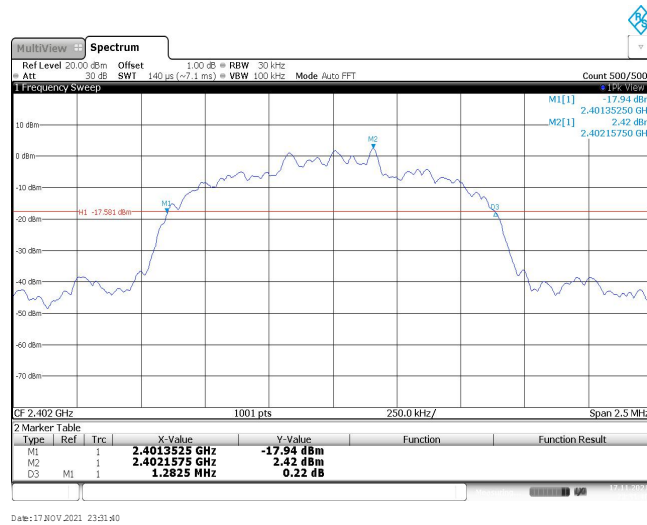
CH78



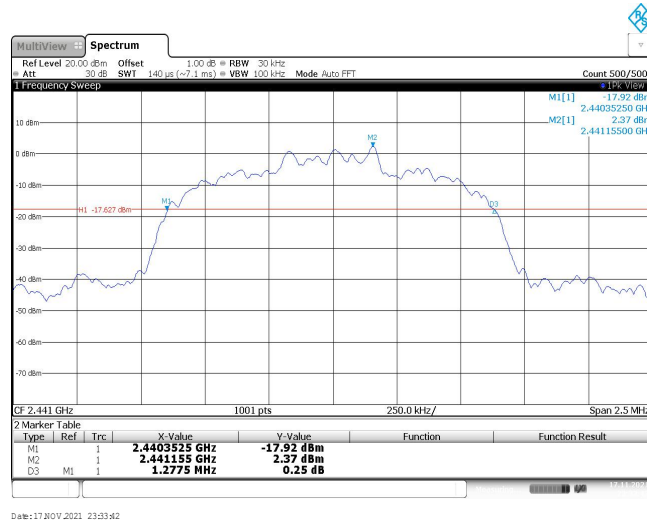
Modulation Type:

8DPSK

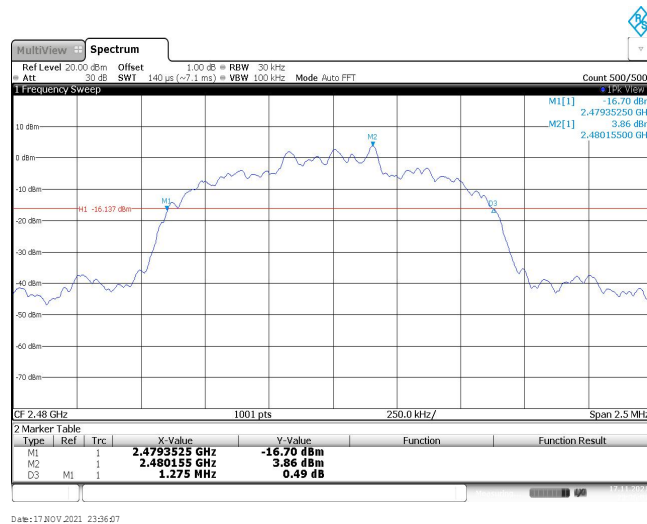
CH00



CH39



CH78



Appendix C: 99% Occupied Bandwidth

Modulation type	Channel	99% Occupied Bandwidth (MHz)	Limit (MHz)	Result
GFSK	00	0.77	-	Pass
	39	0.76		
	78	0.76		
$\pi/4$ DQPSK	00	1.15	-	Pass
	39	1.15		
	78	1.15		
8DPSK	00	1.15	-	Pass
	39	1.15		
	78	1.15		

Modulation Type:

GFSK

CH00



Date: 17 NOV 2021 23:17:26

CH39



Date: 17 NOV 2021 23:19:39

CH78



Date: 17 NOV 2021 23:22:26

Modulation Type:

 $\pi/4$ DQPSK

CH00



Date: 17 NOV 2021 23:24:37

CH39



Date: 17 NOV 2021 23:26:44

CH78



Date: 17 NOV 2021 23:29:21

Modulation Type:

8DPSK

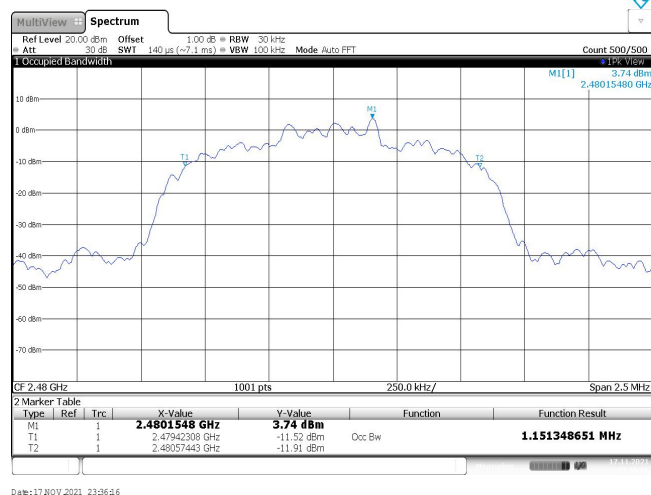
CH00



CH39



CH78



Appendix D: Carrier Frequencies Separation

Modulation type	Channel	Carrier Frequencies Separation (MHz)	Limit (kHz) *	Result
GFSK	39	1.00	≥795.00	Pass
π/4DQPSK	39	1.00	≥855.00	Pass
8DPSK	39	1.00	≥855.00	Pass

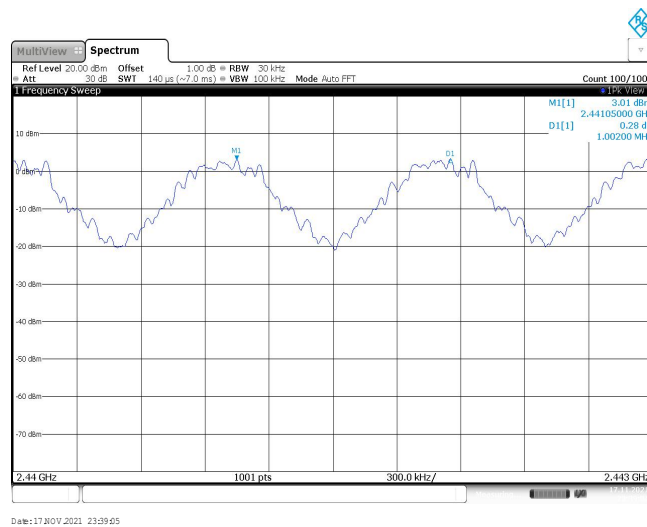
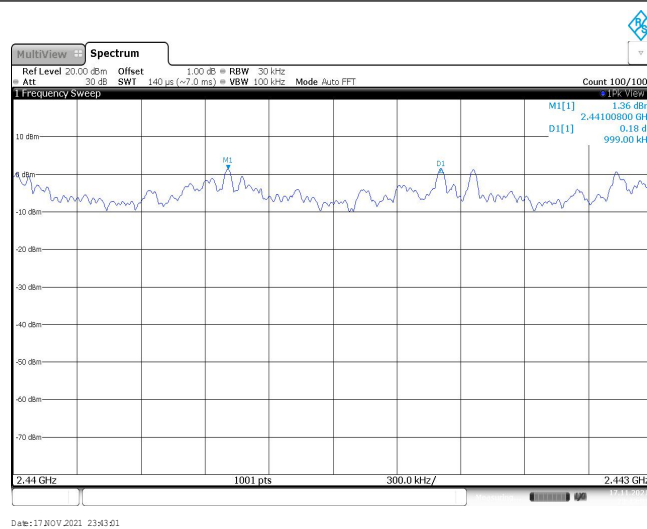
Note:

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

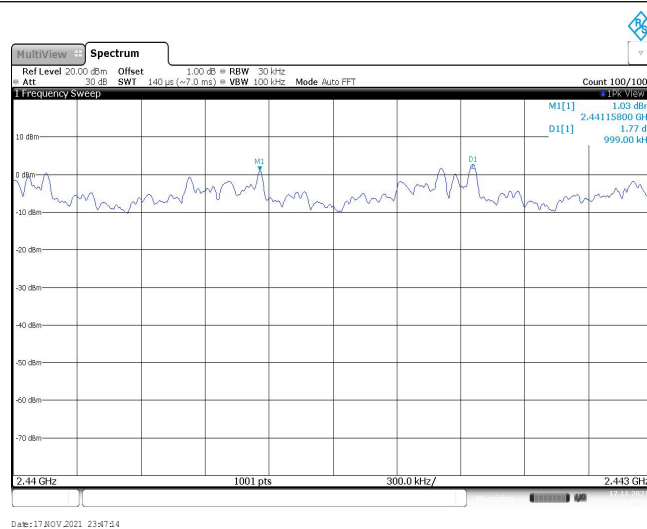
π/4DQPSK limit = $\frac{2}{3}$ * The maximum 20 dB Bandwidth for π/4DQPSK modulation on the appendix B.

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

GFSK

 π /4DQPSK

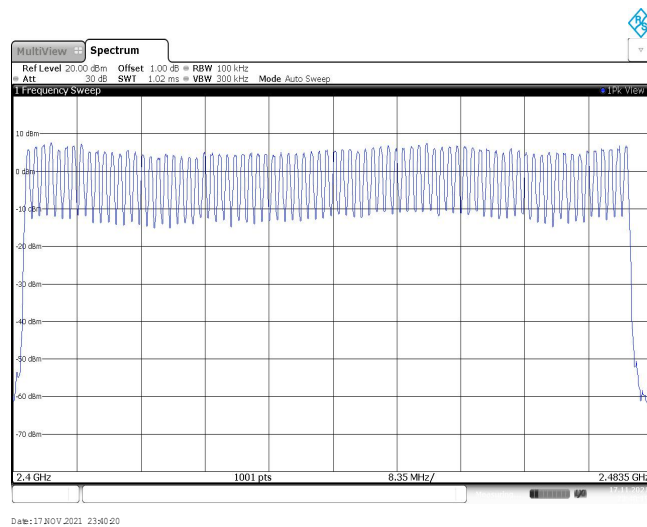
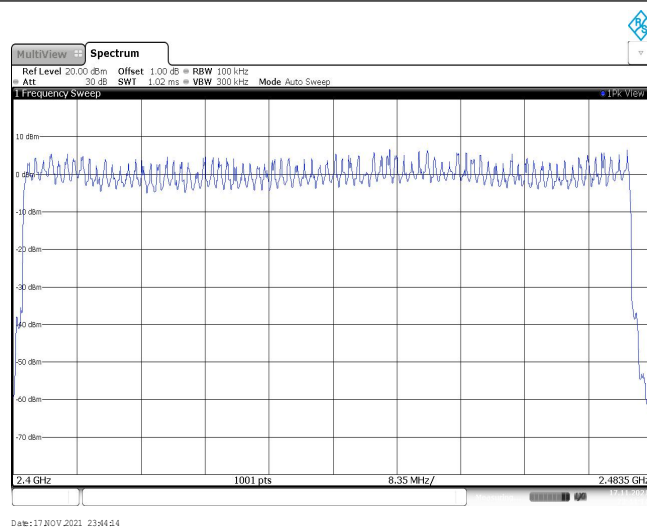
8DPSK



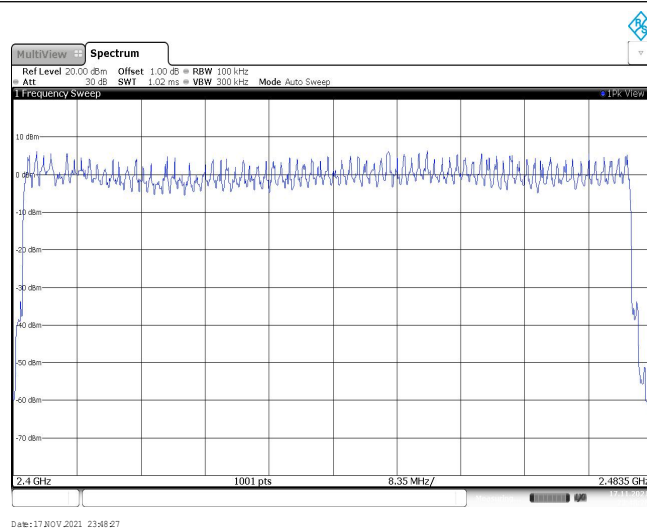
Appendix E: Hopping Channel Number

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

GFSK

 $\pi/4$ DQPSK

8DPSK

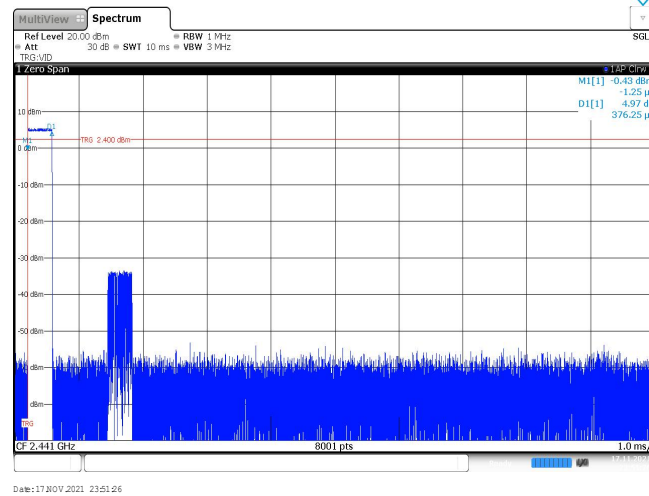
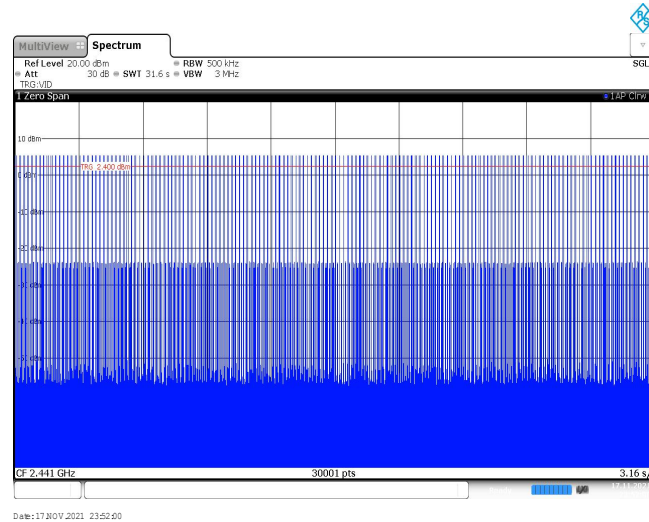
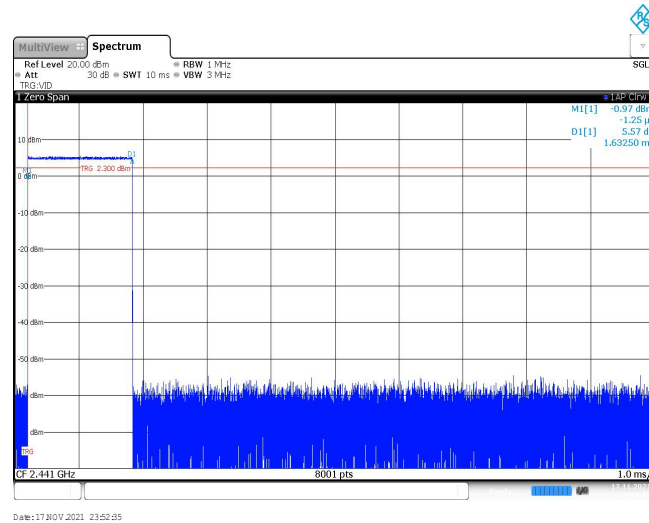


Appendix F: Dwell Time

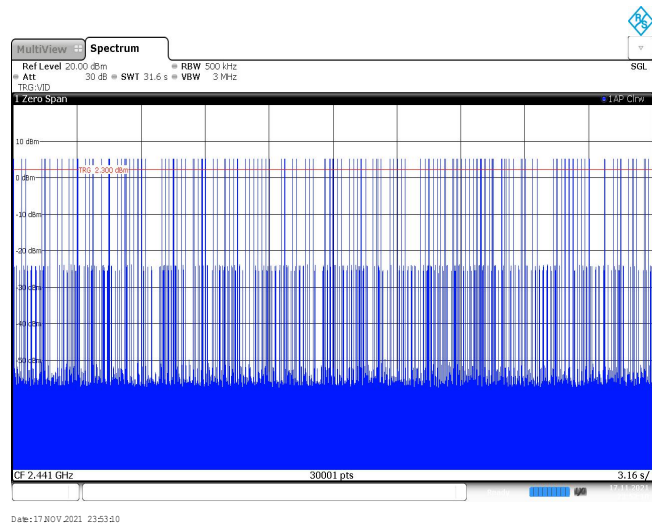
Modulation type	Packet	Burst Width [ms]	Total Hops[hop*ch]	Dwell time (Second)	Limit (Second)	Result
GFSK	DH1	0.38	314	0.12	≤ 0.40	Pass
	DH3	1.63	157	0.26		
	DH5	2.88	107	0.31		
$\pi/4$ DQPSK	2DH1	0.38	314	0.12	≤ 0.40	Pass
	2DH3	1.64	157	0.26		
	2DH5	2.88	110	0.32		
8DPSK	3DH1	0.39	313	0.12	≤ 0.40	Pass
	3DH3	1.64	158	0.26		
	3DH5	2.89	96	0.28		

Modulation Type:

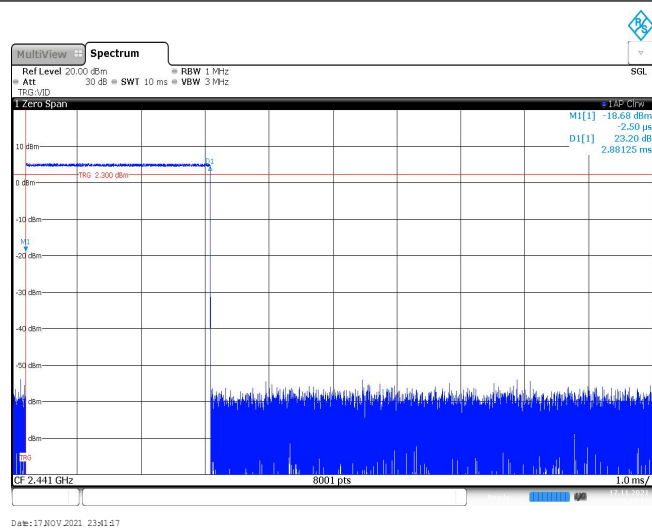
GFSK

DH1
Burst widthDH1
Burst numberDH3
Burst width

DH3
Burst number



DH5
Burst width



DH5
Burst number

