

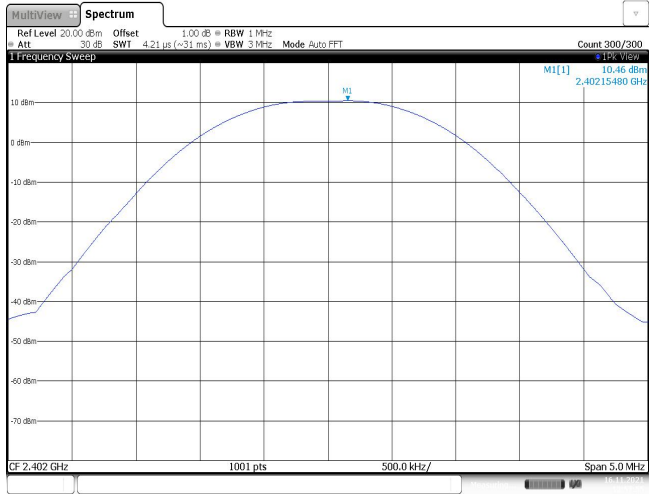
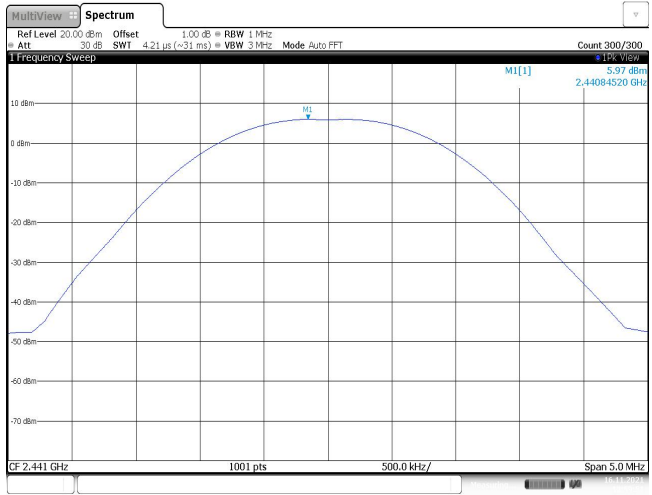
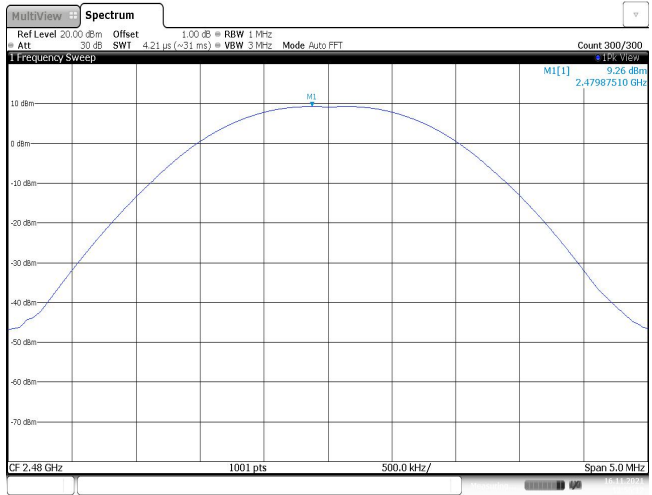
APPENDIX REPORT

Project No.	SHT2111020903EW	Radio Specification	Bluetooth EDR
Test sample No.	YPHT21061170008	Model No.	BX6100
Start test date	2021-11-16	Finish date	2021-11-17
Temperature	24.1℃	Humidity	38%
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	10.46	10.33	≤ 30.00	Pass
	39	5.97	5.68		
	78	9.26	8.98		
$\pi/4$ DQPSK	00	10.45	9.83	≤ 21.00	Pass
	39	5.85	5.23		
	78	9.25	8.64		
8DPSK	00	10.48	9.87	≤ 21.00	Pass
	39	5.71	5.00		
	78	9.31	8.67		

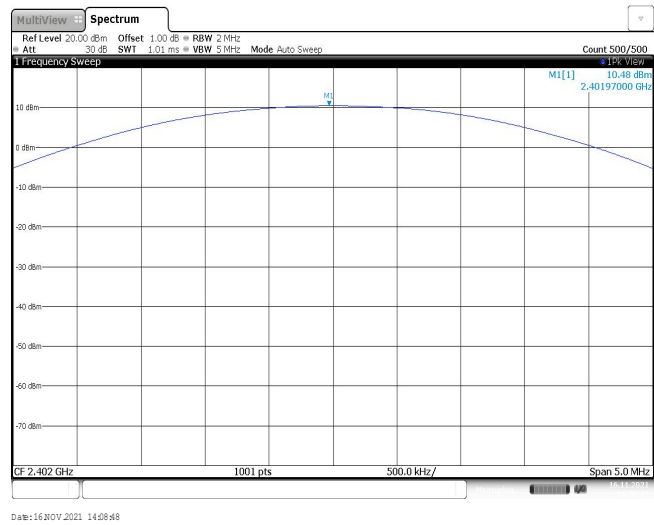
Modulation Type:	GFSK
CH00	 The spectrum plot for CH00 shows a GFSK signal centered at 2.402 GHz. The peak level is 10.46 dBm. The plot includes a frequency sweep from 2.402 GHz to 2.40215490 GHz. The y-axis represents power in dBm, ranging from -70 to 10. The x-axis represents frequency in GHz, ranging from 2.402 to 2.40215490. The plot shows a single peak at the center frequency. Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWI 4.21 us (~31 ms) VBW 3 MHz Mode Auto FFT Count 300/300 1 Frequency Sweep M1[1] 10.46 dBm 2.40215490 GHz CF 2.402 GHz 1001 pts 500.0 kHz/ Span 5.0 MHz Date: 16 NOV 2021 13:57:56
CH39	 The spectrum plot for CH39 shows a GFSK signal centered at 2.441 GHz. The peak level is 5.97 dBm. The plot includes a frequency sweep from 2.441 GHz to 2.44084520 GHz. The y-axis represents power in dBm, ranging from -70 to 10. The x-axis represents frequency in GHz, ranging from 2.441 to 2.44084520. The plot shows a single peak at the center frequency. Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWI 4.21 us (~31 ms) VBW 3 MHz Mode Auto FFT Count 300/300 1 Frequency Sweep M1[1] 5.97 dBm 2.44084520 GHz CF 2.441 GHz 1001 pts 500.0 kHz/ Span 5.0 MHz Date: 16 NOV 2021 13:59:50
CH78	 The spectrum plot for CH78 shows a GFSK signal centered at 2.48 GHz. The peak level is 9.26 dBm. The plot includes a frequency sweep from 2.48 GHz to 2.47987510 GHz. The y-axis represents power in dBm, ranging from -70 to 10. The x-axis represents frequency in GHz, ranging from 2.48 to 2.47987510. The plot shows a single peak at the center frequency. Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz Att 30 dB SWI 4.21 us (~31 ms) VBW 3 MHz Mode Auto FFT Count 300/300 1 Frequency Sweep M1[1] 9.26 dBm 2.47987510 GHz CF 2.48 GHz 1001 pts 500.0 kHz/ Span 5.0 MHz Date: 16 NOV 2021 13:56:12

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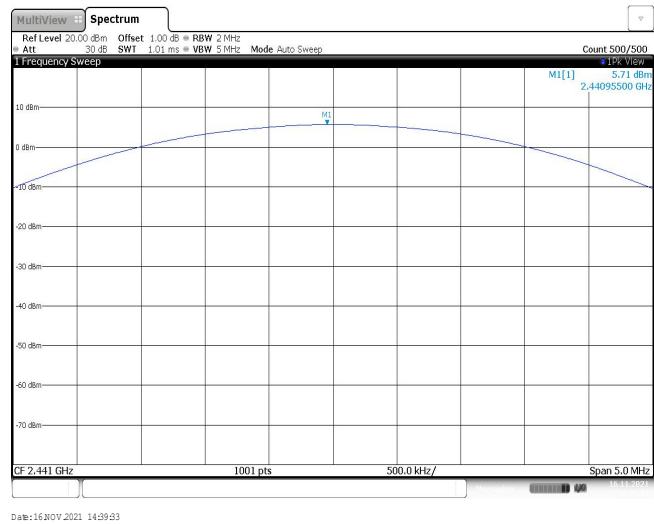
Modulation Type:

8DPSK

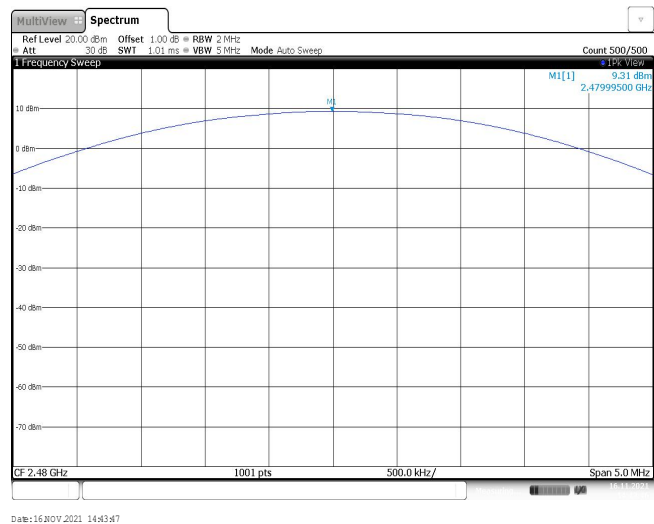
CH00



CH39



CH78



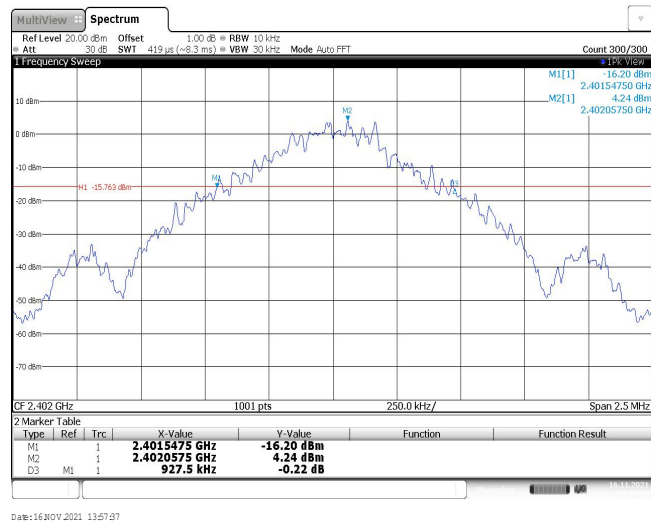
Appendix B : 20 dB Bandwidth

Modulation type	Channel	20 dB Bandwidth (kHz)	Limit (kHz)	Result
GFSK	00	927.50	-	Pass
	39	927.50		
	78	927.50		
$\pi/4$ DQPSK	00	1285.00	-	Pass
	39	1285.00		
	78	1292.50		
8DPSK	00	1292.50	-	Pass
	39	1295.00		
	78	1292.50		

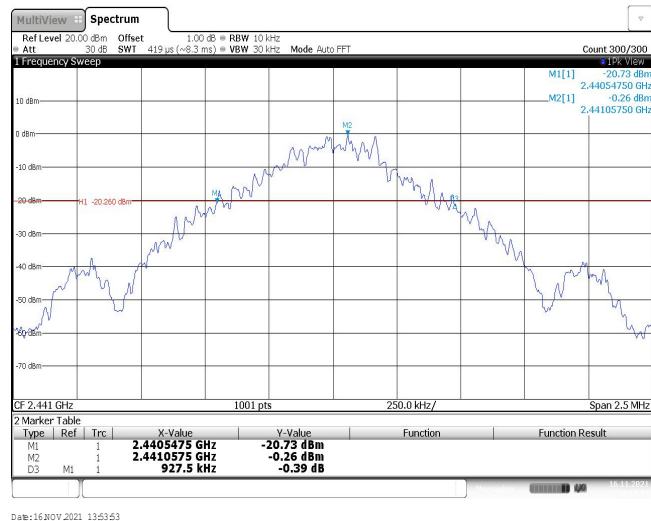
Modulation Type:

GFSK

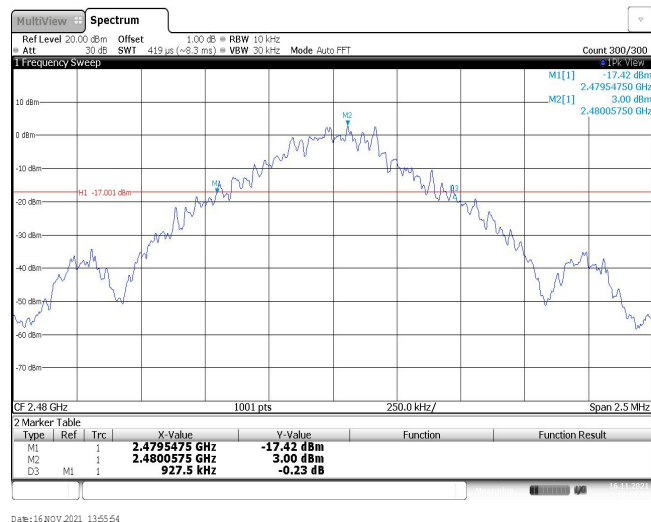
CH00



CH39



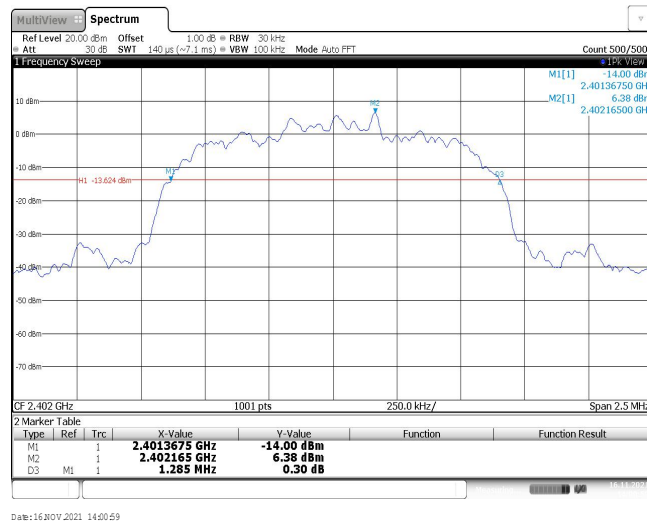
CH78



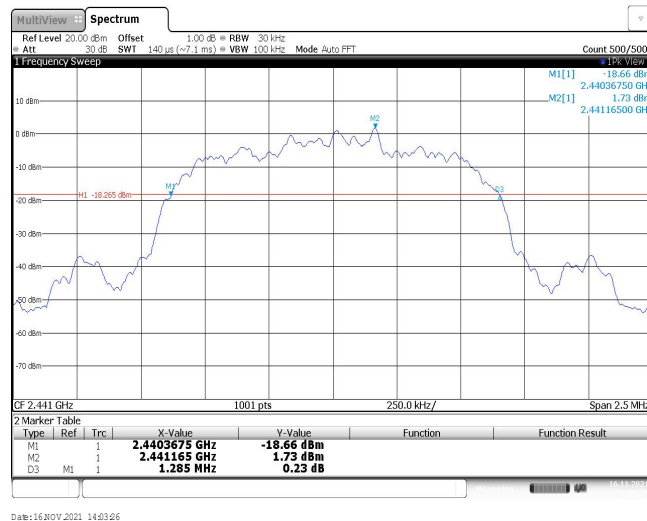
Modulation Type:

 $\pi/4$ DQPSK

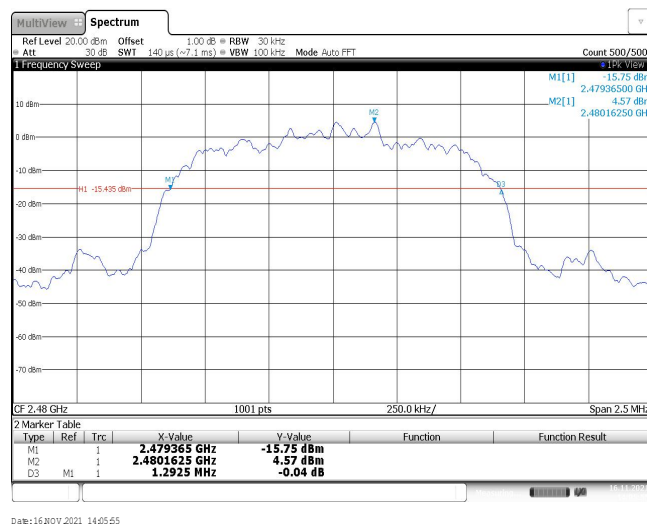
CH00



CH39



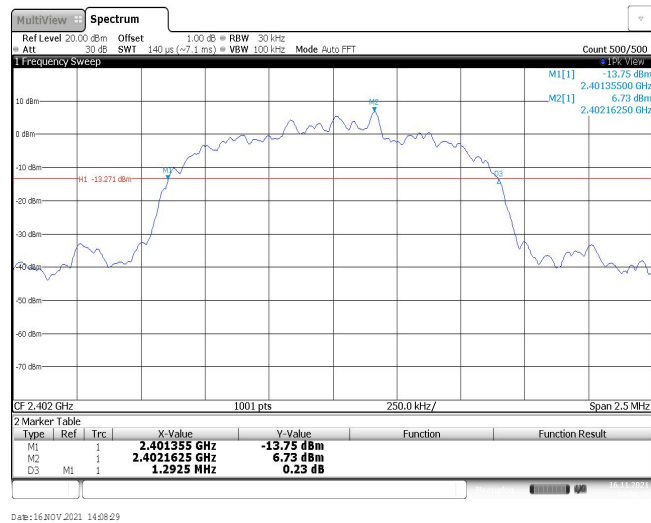
CH78



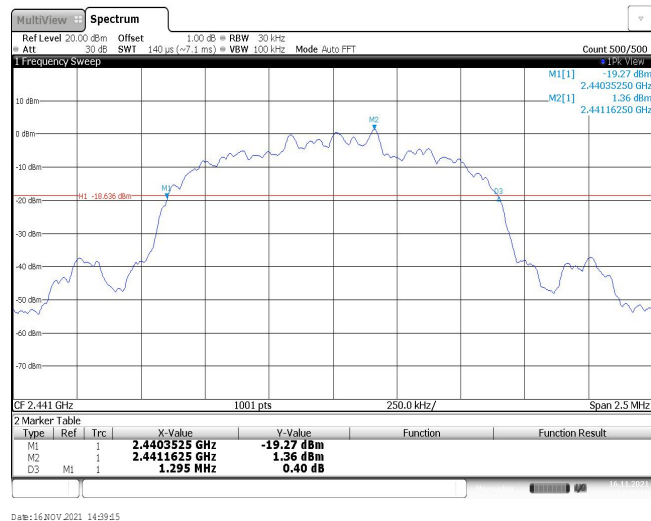
Modulation Type:

8DPSK

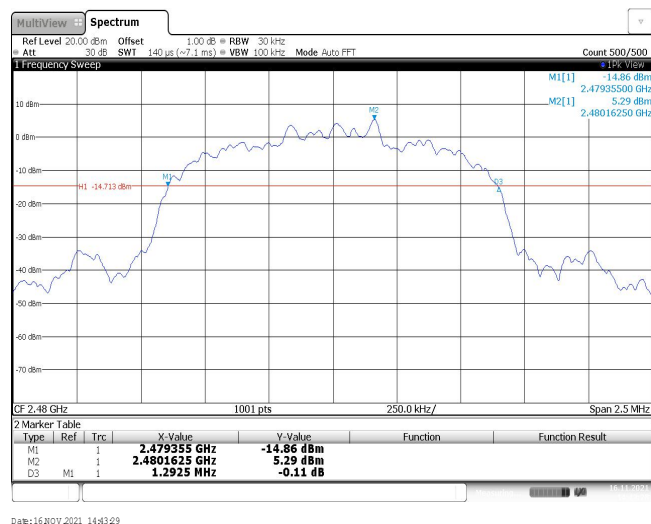
CH00



CH39



CH78



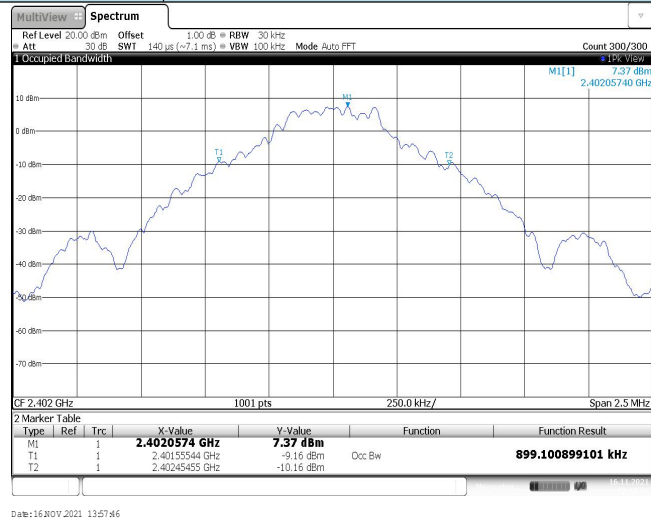
Appendix C: 99% Occupied Bandwidth

Modulation type	Channel	99% Occupied Bandwidth (MHz)	Limit (MHz)	Result
GFSK	00	0.90	-	Pass
	39	0.89		
	78	0.90		
$\pi/4$ DQPSK	00	1.17	-	Pass
	39	1.16		
	78	1.17		
8DPSK	00	1.17	-	Pass
	39	1.16		
	78	1.17		

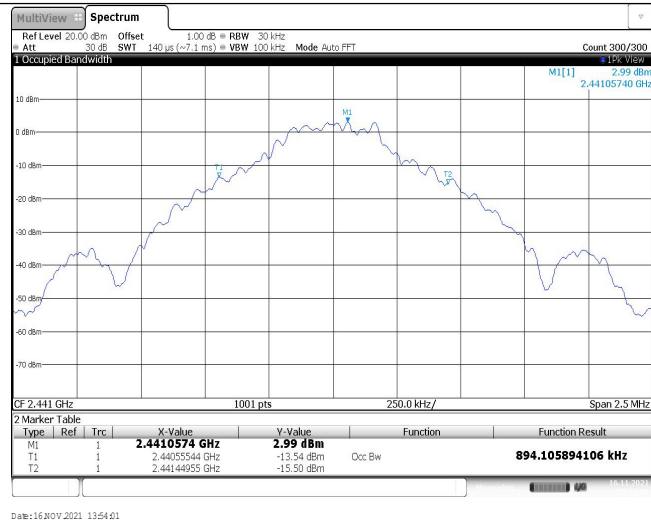
Modulation Type:

GFSK

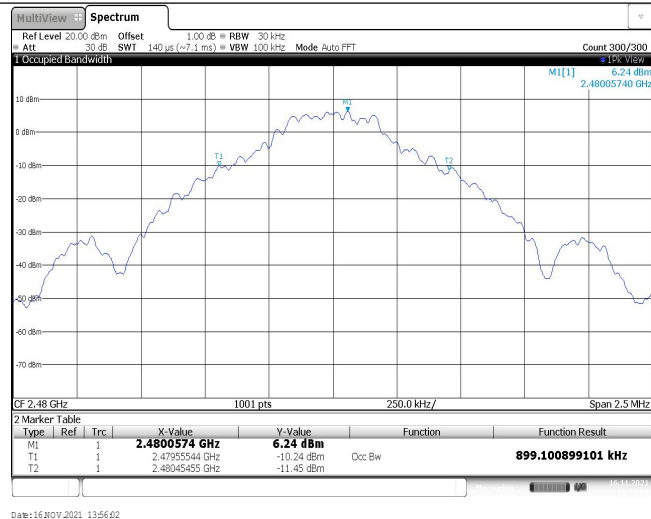
CH00



CH39



CH78



Modulation Type:

 π /4DQPSK

CH00



Date: 16 NOV 2021 14:01:08

CH39



Date: 16 NOV 2021 14:03:05

CH78



Date: 16 NOV 2021 14:06:04

Modulation Type:

8DPSK

CH00



Date:16 NOV 2021 14:08:38

CH39



Date:16 NOV 2021 14:39:24

CH78



Date:16 NOV 2021 14:43:37

Appendix D: Carrier Frequencies Separation

Modulation type	Channel	Carrier Frequencies Separation (MHz)	Limit (kHz) *	Result
GFSK	39	1.00	≥ 927.50	Pass
$\pi/4$ DQPSK	39	1.00	≥ 861.67	Pass
8DPSK	39	1.00	≥ 863.33	Pass

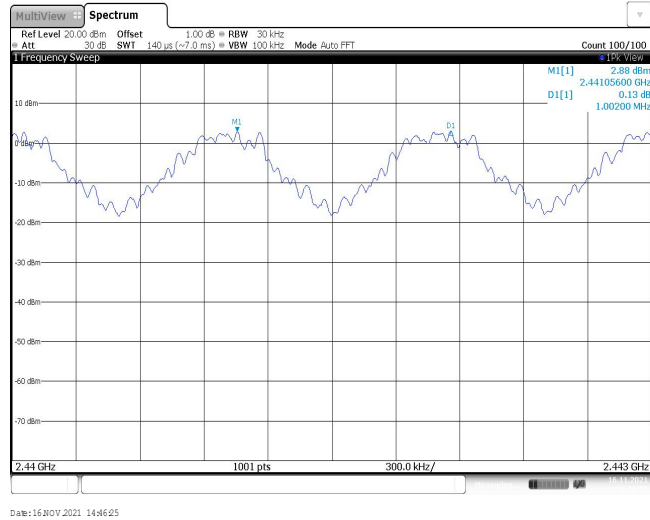
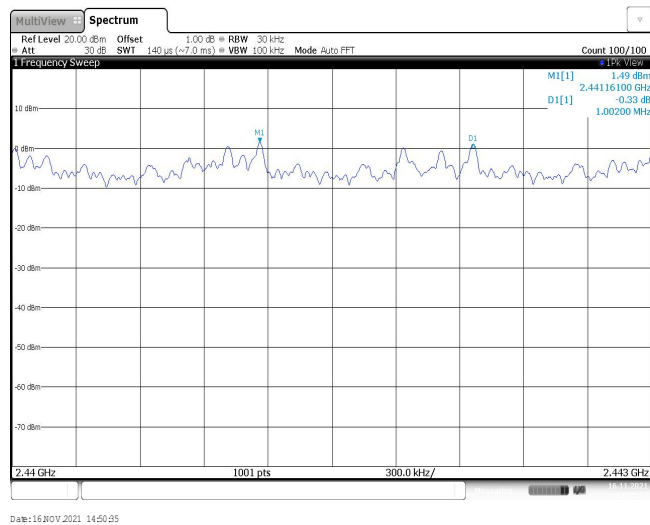
Note:

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

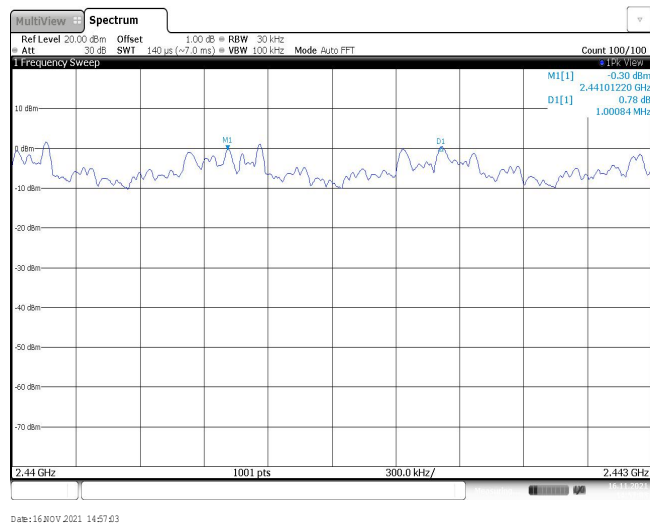
$\pi/4$ DQPSK limit = $2/3$ * The maximum 20 dB Bandwidth for $\pi/4$ DQPSK modulation on the appendix B.

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

GFSK

 $\pi/4$ DQPSK

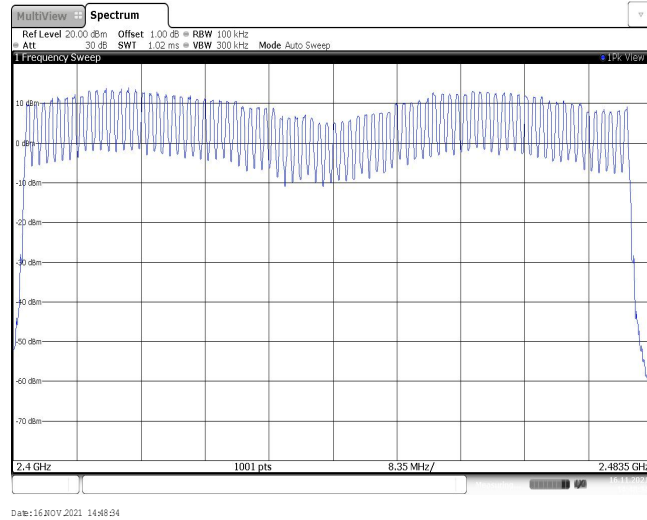
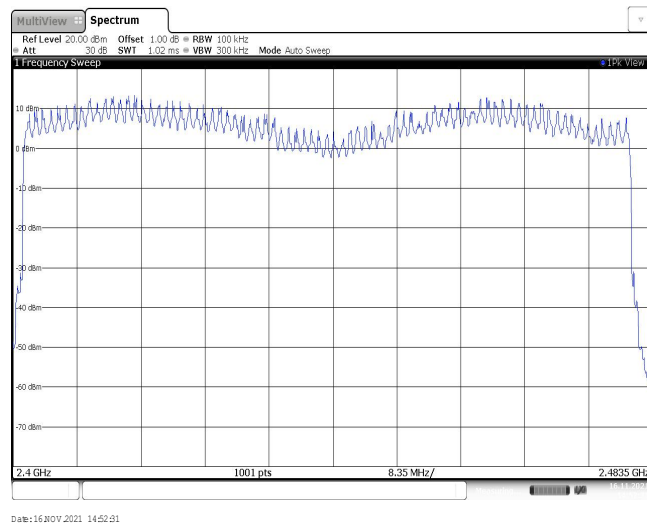
8DPSK



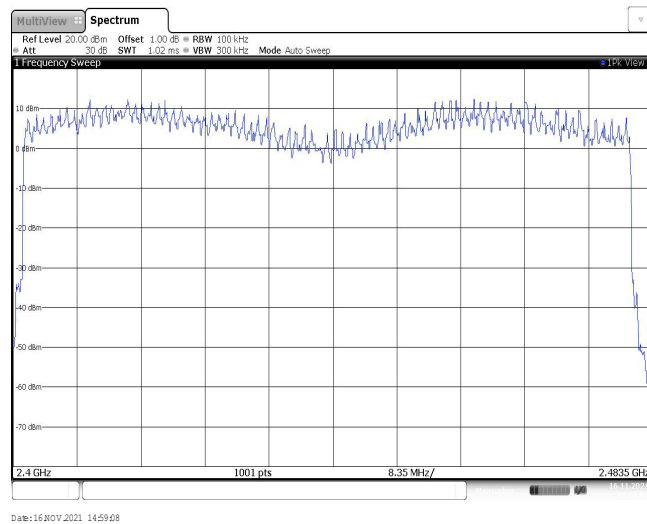
Appendix E: Hopping Channel Number

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

GFSK

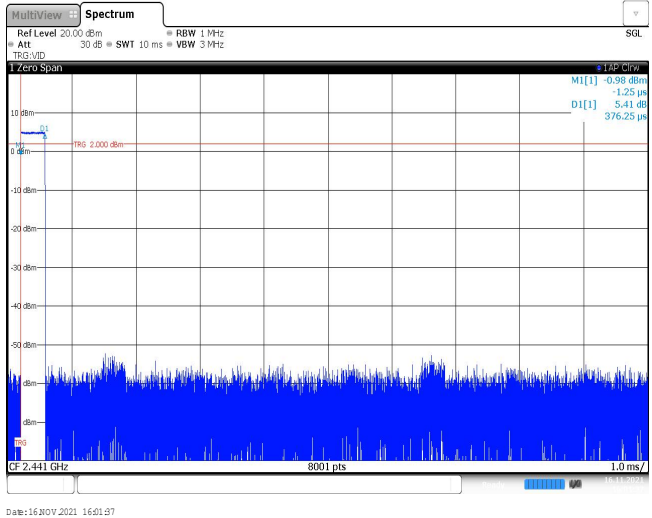
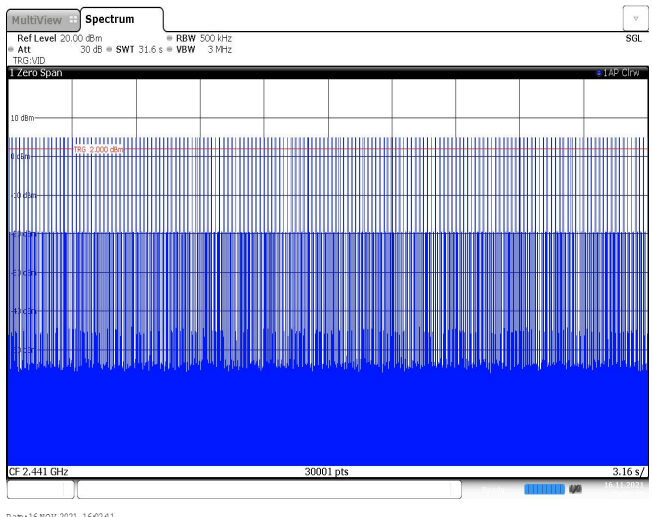
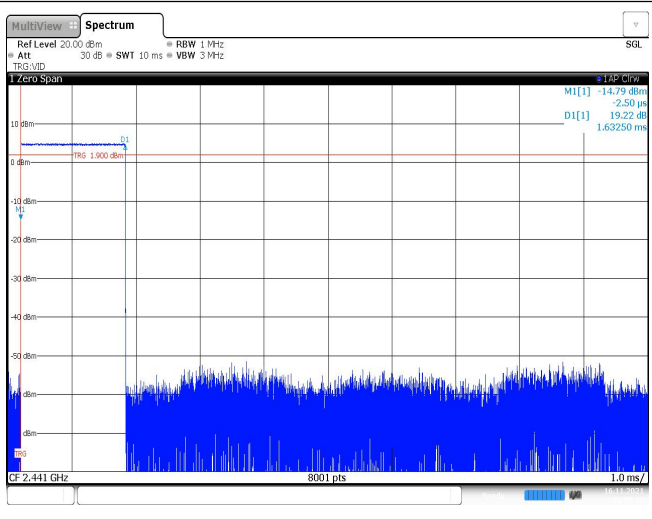
 $\pi/4$ DQPSK

8DPSK

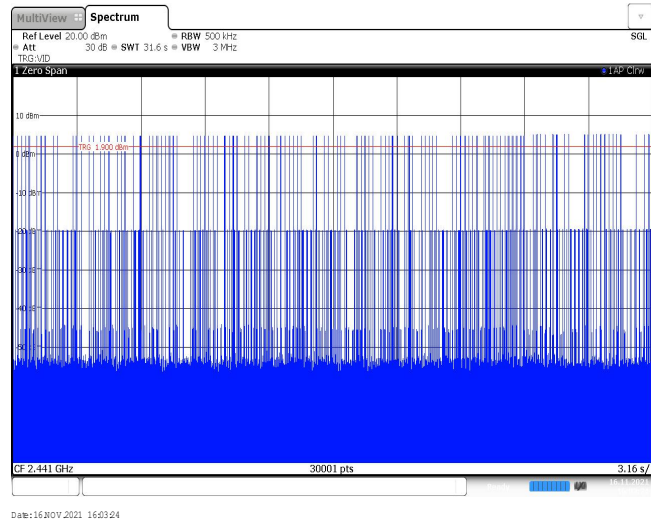


Appendix F: Dwell Time

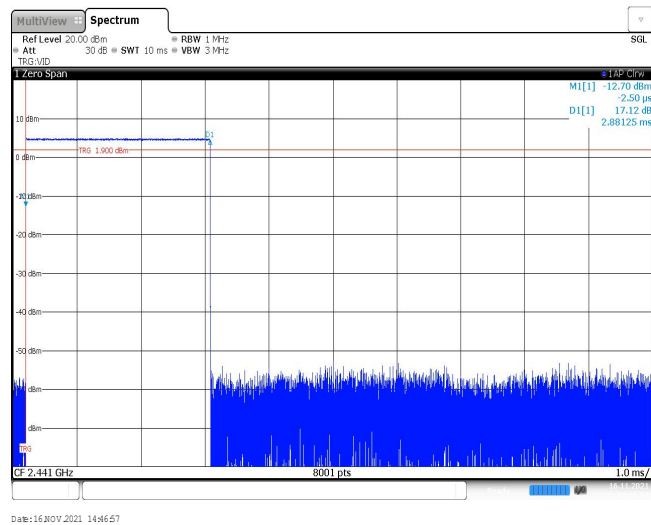
Modulation type	Packet	Burst Width [ms]	Total Hops[hop*ch]	Dwell time (Second)	Limit (Second)	Result
GFSK	DH1	0.38	317	0.12	≤ 0.40	Pass
	DH3	1.63	159	0.26		
	DH5	2.88	115	0.33		
$\pi/4$ DQPSK	2DH1	0.38	315	0.12	≤ 0.40	Pass
	2DH3	1.64	159	0.26		
	2DH5	2.88	106	0.31		
8DPSK	3DH1	0.38	313	0.12	≤ 0.40	Pass
	3DH3	1.64	158	0.26		
	3DH5	2.89	107	0.31		

Modulation Type: GFSK	
DH1 Burst width	
DH1 Burst number	
DH3 Burst width	

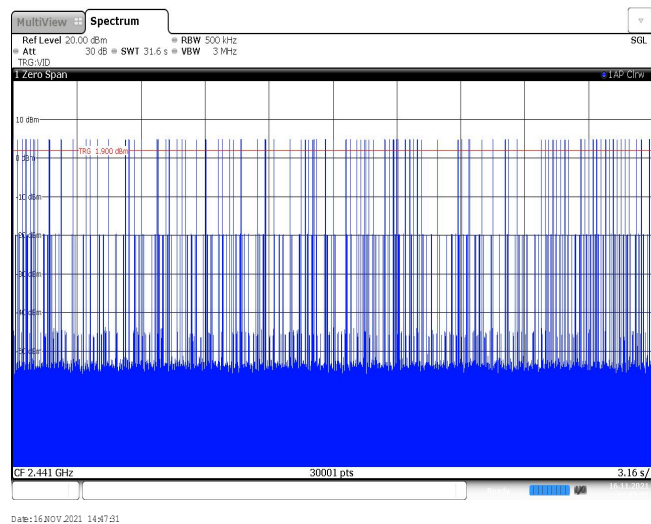
DH3
Burst number

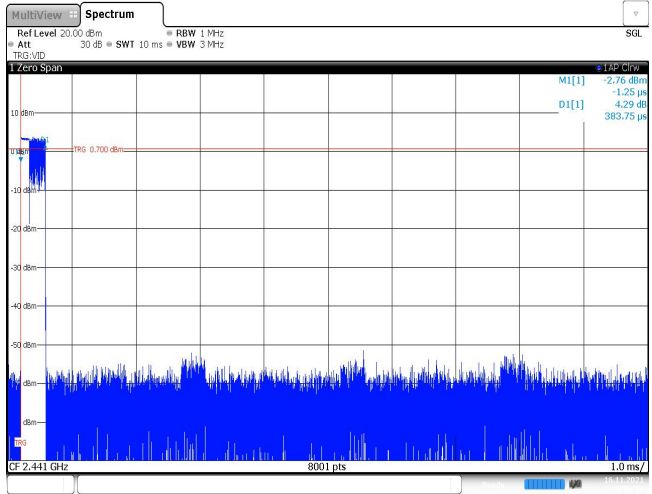
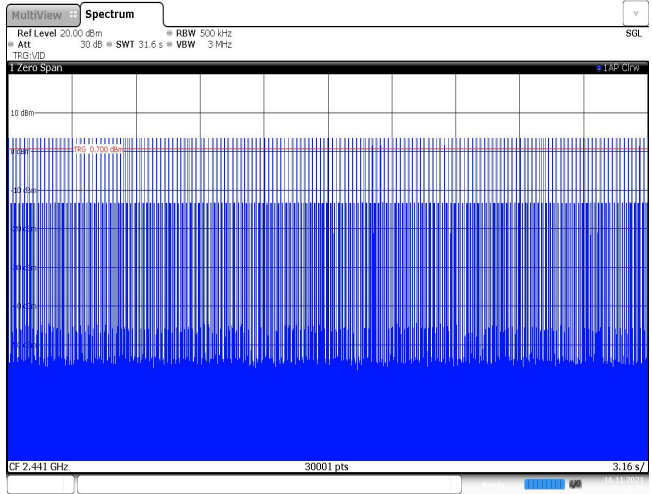
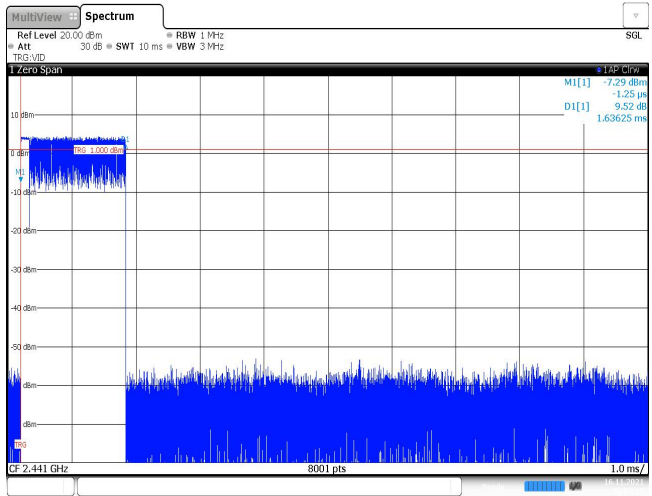


DH5
Burst width



DH5
Burst number



Modulation Type:	$\pi/4$ DQPSK
2DH1 Burst width	 The spectrum plot shows a single burst of data. The y-axis represents power in dBm, ranging from -90 to 10. The x-axis represents frequency in GHz, centered at 2.441 GHz. A red trace line indicates a power level of 0.700 dBm. The plot shows a sharp peak at the center frequency, with a bandwidth of approximately 1 MHz. The data is captured at 8001 pts with a resolution bandwidth (RBW) of 1 MHz and a video bandwidth (VBW) of 3 MHz. The date and time are 16 NOV 2021 16:03:58.
2DH1 Burst number	 The spectrum plot shows a continuous burst of data. The y-axis represents power in dBm, ranging from -90 to 10. The x-axis represents frequency in GHz, centered at 2.441 GHz. A red trace line indicates a power level of 0.700 dBm. The plot shows a dense, continuous signal across the frequency range. The data is captured at 30001 pts with a resolution bandwidth (RBW) of 500 kHz and a video bandwidth (VBW) of 3 MHz. The date and time are 16 NOV 2021 16:04:04.
2DH3 Burst width	 The spectrum plot shows a single burst of data. The y-axis represents power in dBm, ranging from -90 to 10. The x-axis represents frequency in GHz, centered at 2.441 GHz. A red trace line indicates a power level of 1.000 dBm. The plot shows a sharp peak at the center frequency, with a bandwidth of approximately 1 MHz. The data is captured at 8001 pts with a resolution bandwidth (RBW) of 1 MHz and a video bandwidth (VBW) of 3 MHz. The date and time are 16 NOV 2021 16:05:05.