

# APPENDIX REPORT

Project No.	SHT2011064601EW	Radio Specification	Bluetooth EDR
Test sample No.	YPHT20110646003	Model No.	LS140L
Start test date	2020-12-3	Finish date	2020-12-3
Temperature	24.7°C	Humidity	40%
Test Engineer	Qizhi Zhang	Auditor	Xiaodong Zhe

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**

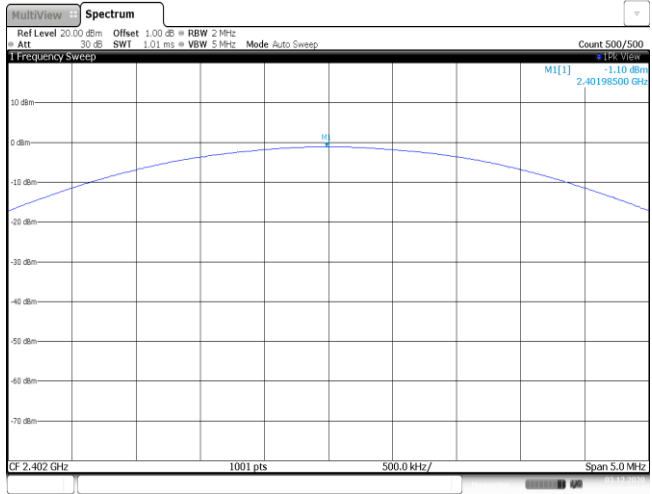
Modulation type	Channel	Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
GFSK	00	-3.28	-3.29	≤ 30.00	Pass
	39	-2.61	-2.63		
	78	-2.25	-2.26		
π/4DQPSK	00	-1.49	-2.15	≤ 21.00	Pass
	39	-0.95	-1.68		
	78	-1.07	-1.78		
8DPSK	00	-1.10	-1.92	≤ 21.00	Pass
	39	-0.64	-1.42		
	78	-0.70	-1.48		

Modulation Type:		GFSK
CH00	<p>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] -3.28 dBm 2.40208490 GHz CF 2.402 GHz 1001 pts 500.0 kHz/ Span 5.0 MHz Date: 3.DEC.2020 14:49:28</p>	
CH39	<p>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] -2.61 dBm 2.44088010 GHz CF 2.441 GHz 1001 pts 500.0 kHz/ Span 5.0 MHz Date: 3.DEC.2020 14:15:29</p>	
CH78	<p>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] -2.25 dBm 2.47985010 GHz CF 2.48 GHz 1001 pts 500.0 kHz/ Span 5.0 MHz Date: 3.DEC.2020 14:49:19</p>	

Modulation Type:	$\pi/4$ DQPSK
CH00	<p>Ref Level 20.00 dBm Offset 1.00 dB RBW 2 MHz          Att 30 dB SWI 1.01 ms VBW 5 MHz Mode Auto Sweep          Count 500/500          M1[1] -1.49 dBm          2.40216480 GHz          CF 2.402 GHz 1001 pts 500.0 kHz/ Span 5.0 MHz          Date: 3 DEC 2020 14:22:43</p>
CH39	<p>Ref Level 20.00 dBm Offset 1.00 dB RBW 2 MHz          Att 30 dB SWI 1.01 ms VBW 5 MHz Mode Auto Sweep          Count 500/500          M1[1] -0.95 dBm          2.44089510 GHz          CF 2.441 GHz 1001 pts 500.0 kHz/ Span 5.0 MHz          Date: 3 DEC 2020 14:22:10</p>
CH78	<p>Ref Level 20.00 dBm Offset 1.00 dB RBW 2 MHz          Att 30 dB SWI 1.01 ms VBW 5 MHz Mode Auto Sweep          Count 500/500          M1[1] -1.07 dBm          2.47985510 GHz          CF 2.48 GHz 1001 pts 500.0 kHz/ Span 5.0 MHz          Date: 3 DEC 2020 14:26:09</p>

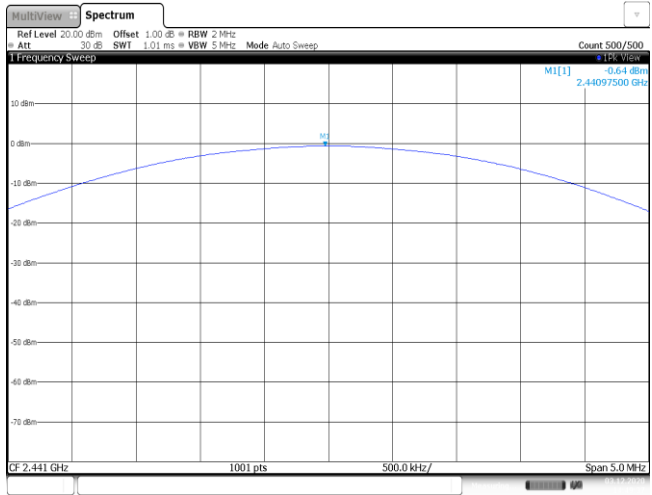
**Modulation Type:** 8DPSK

CH00



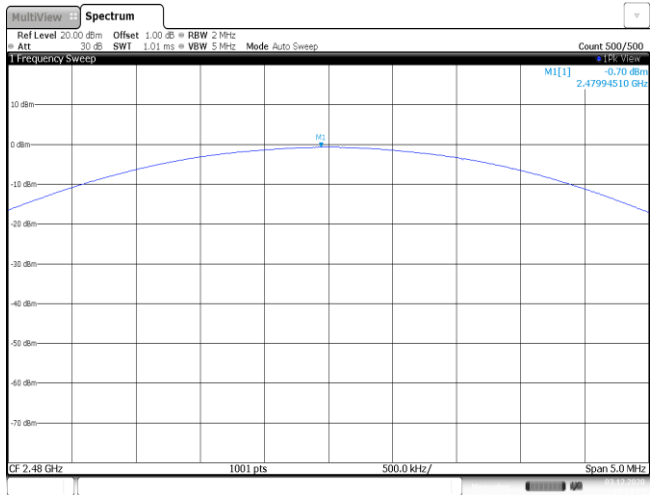
Date: 3 DEC 2020 14:46:01

CH39



Date: 3 DEC 2020 14:49:28

CH78



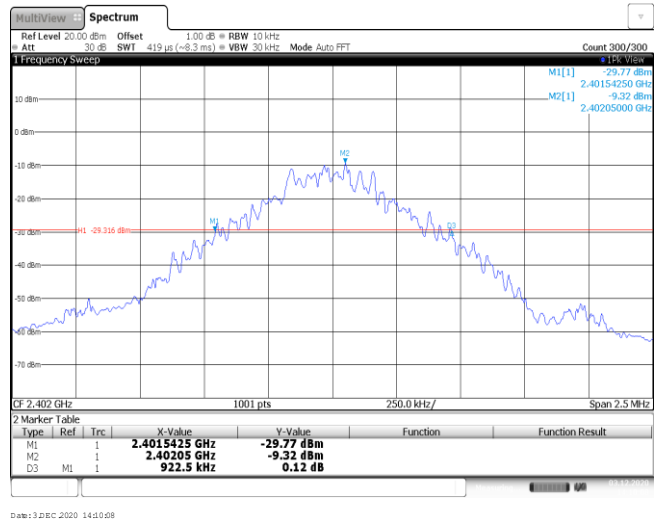
Date: 3 DEC 2020 14:53:19

**Appendix B : 20 dB Bandwidth**

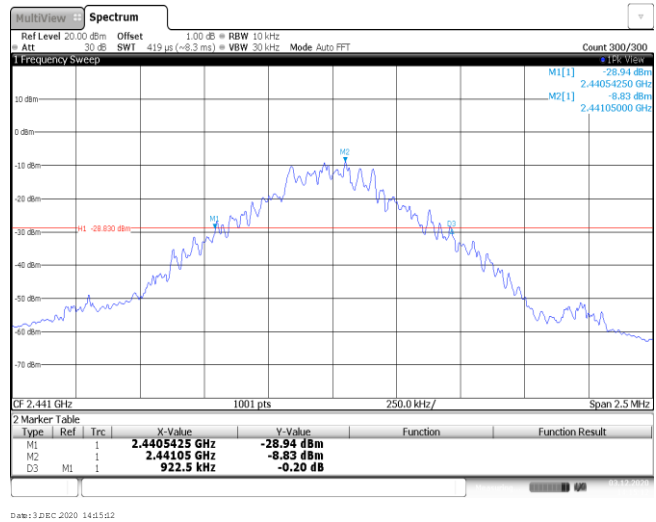
Modulation type	Channel	20 dB Bandwidth (kHz)	Limit (kHz)	Result
GFSK	00	922.50	-	Pass
	39	922.50		
	78	922.50		
$\pi/4$ DQPSK	00	1325.00	-	Pass
	39	1325.00		
	78	1325.00		
8DPSK	00	1310.00	-	Pass
	39	1307.50		
	78	1307.50		

**Modulation Type: GFSK**

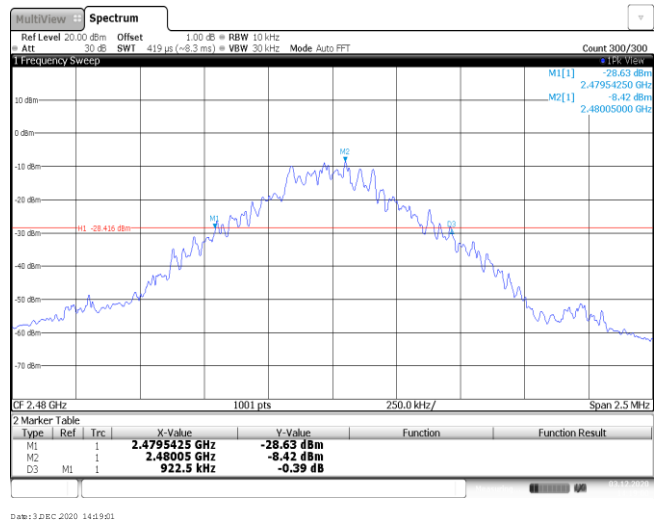
CH00



CH39

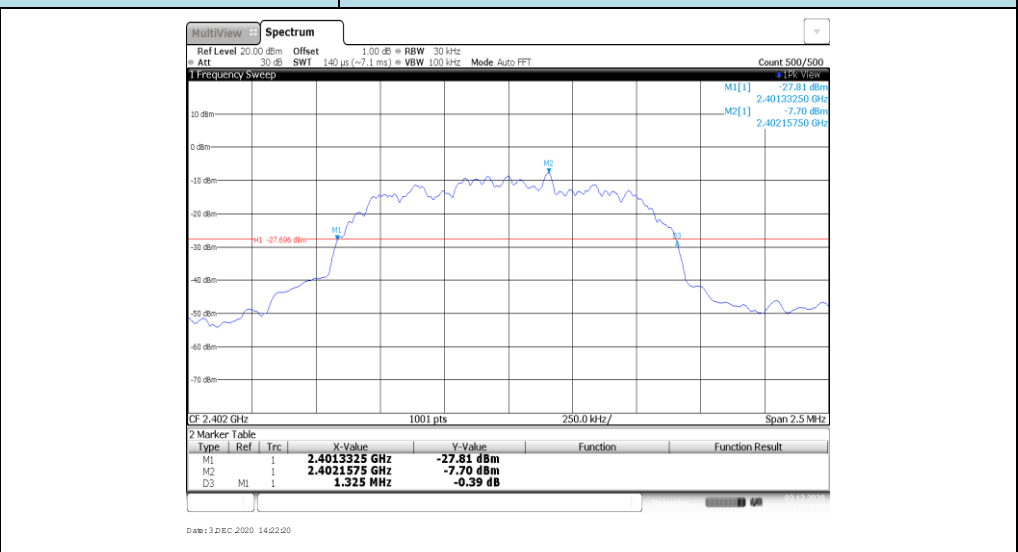


CH78

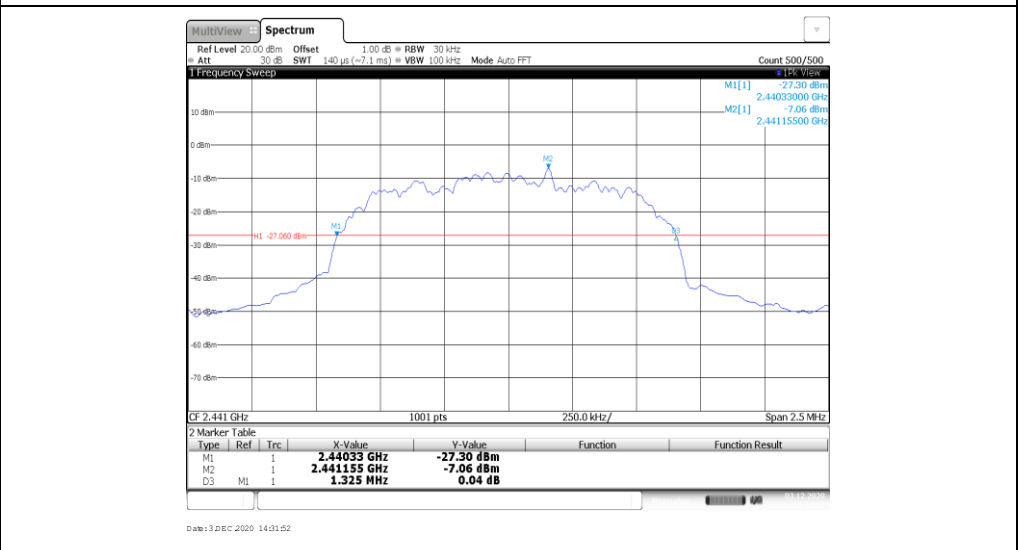


**Modulation Type:**  $\pi/4$ DQPSK

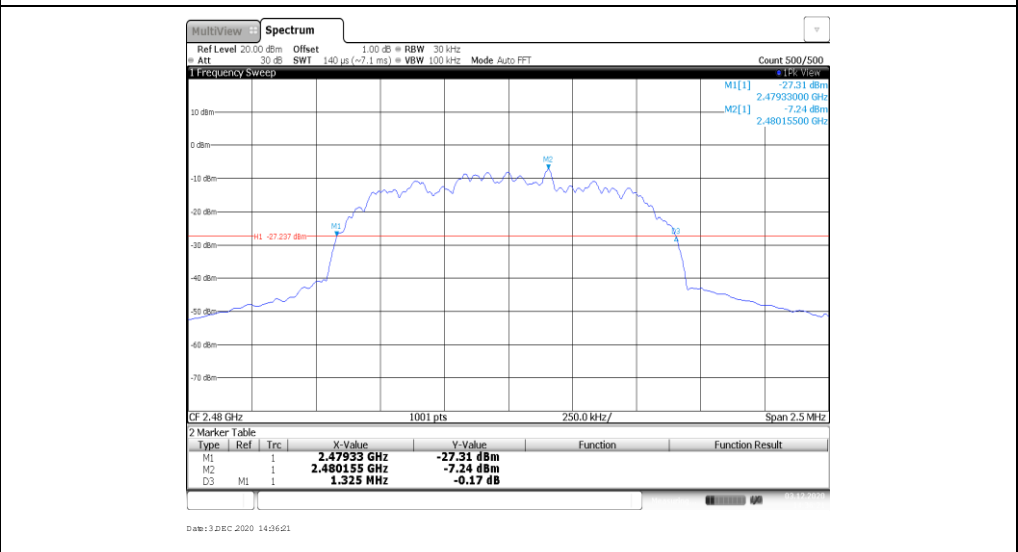
CH00



CH39



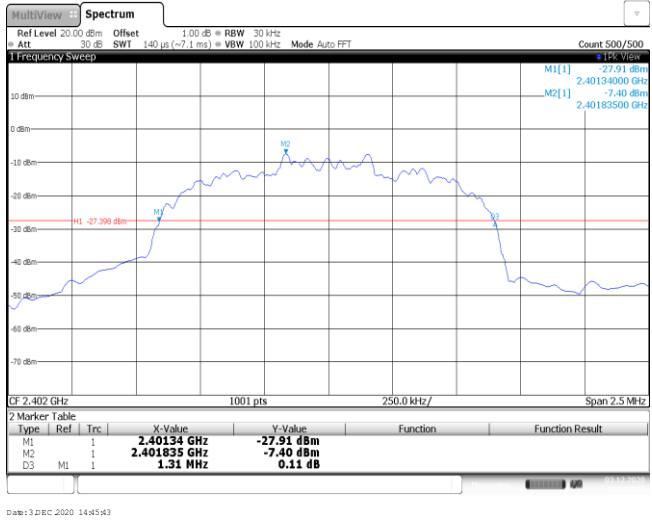
CH78



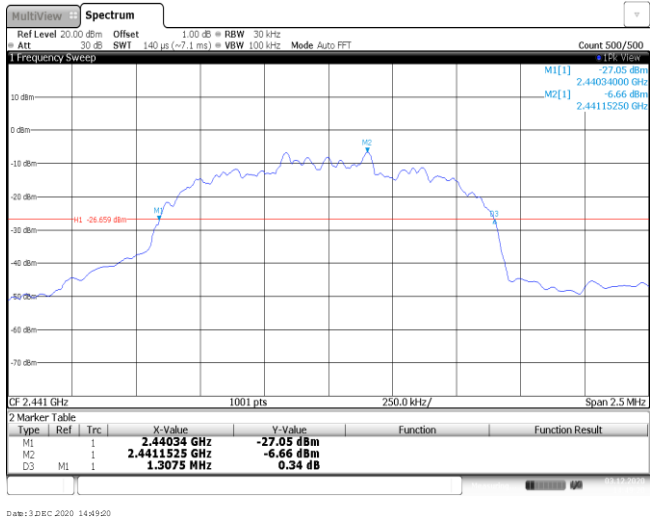


**Modulation Type: 8DPSK**

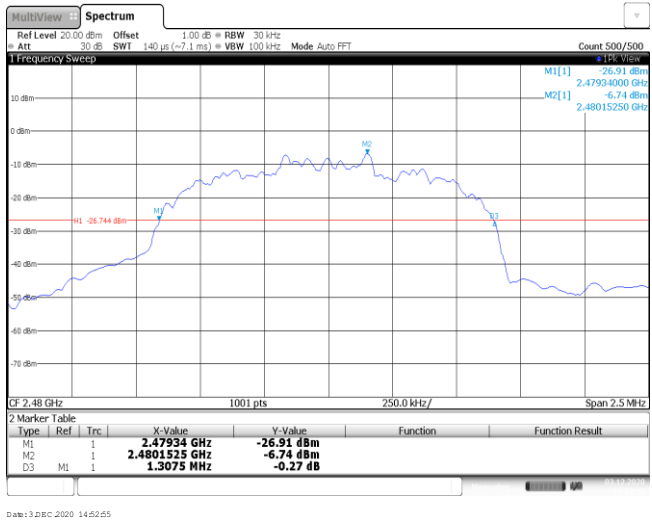
CH00



CH39



CH78

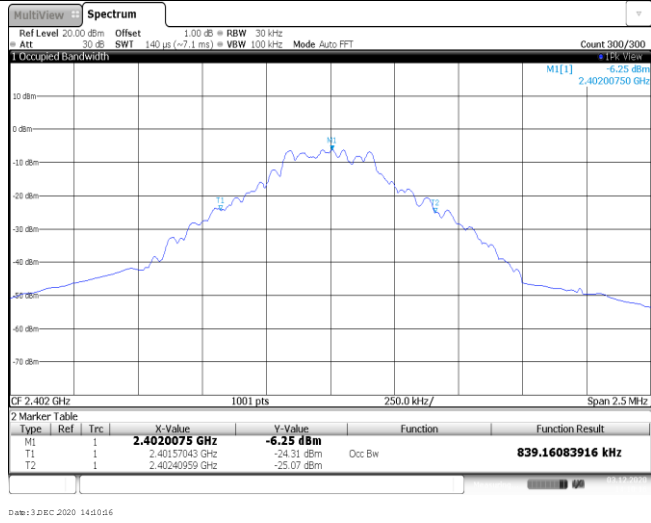


**Appendix C: 99% Occupied Bandwidth**

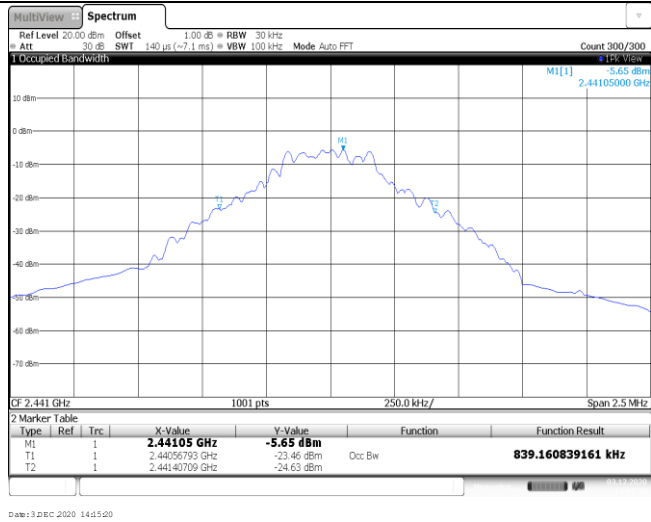
Modulation type	Channel	99% Occupied Bandwidth (MHz)	Limit (MHz)	Result
GFSK	00	0.84	-	Pass
	39	0.84		
	78	0.84		
$\pi/4$ DQPSK	00	1.19	-	Pass
	39	1.19		
	78	1.19		
8DPSK	00	1.18	-	Pass
	39	1.19		
	78	1.18		

**Modulation Type: GFSK**

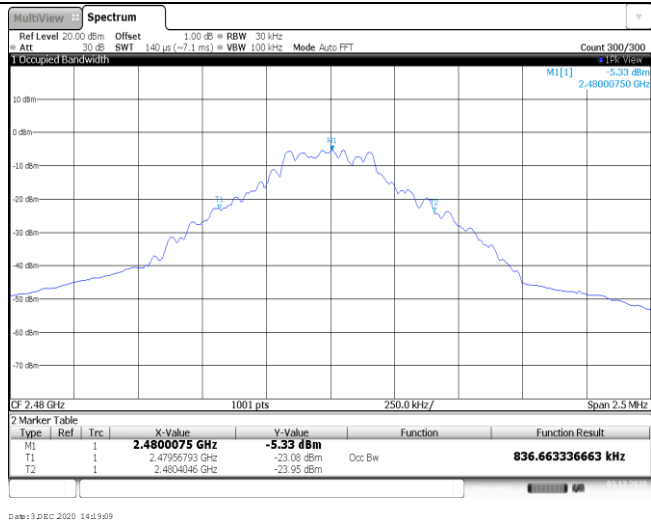
CH00



CH39

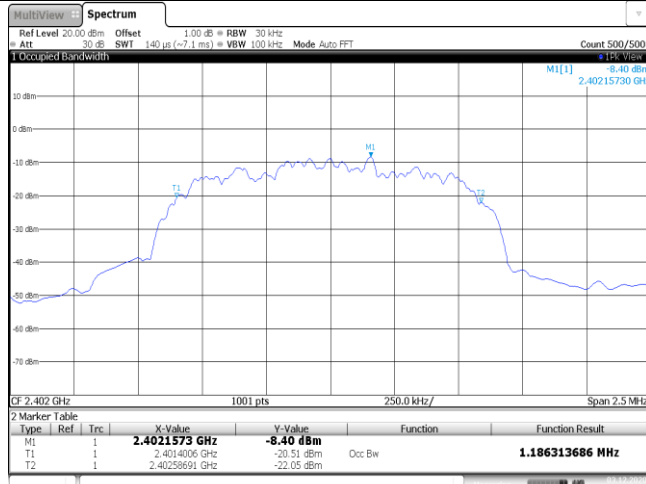


CH78



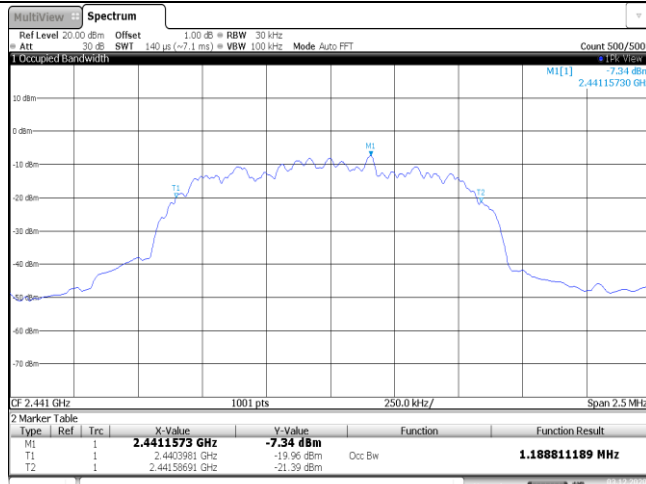
**Modulation Type:**  $\pi/4$ DQPSK

CH00



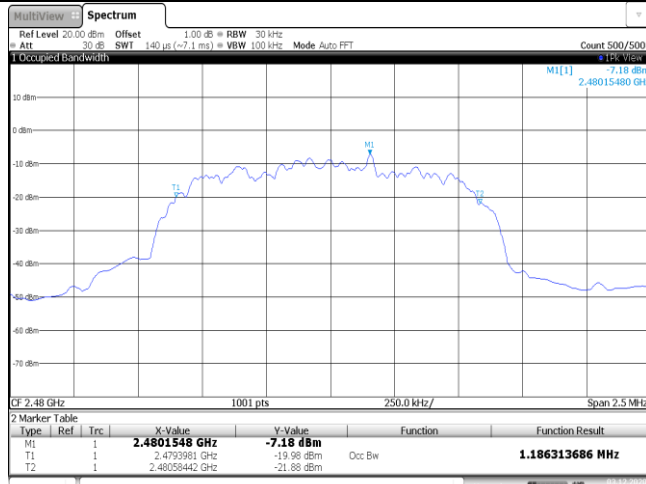
Date: 3 DEC 2020 14:22:29

CH39



Date: 3 DEC 2020 14:22:00

CH78



Date: 3 DEC 2020 14:26:29

**Modulation Type: 8DPSK**

CH00



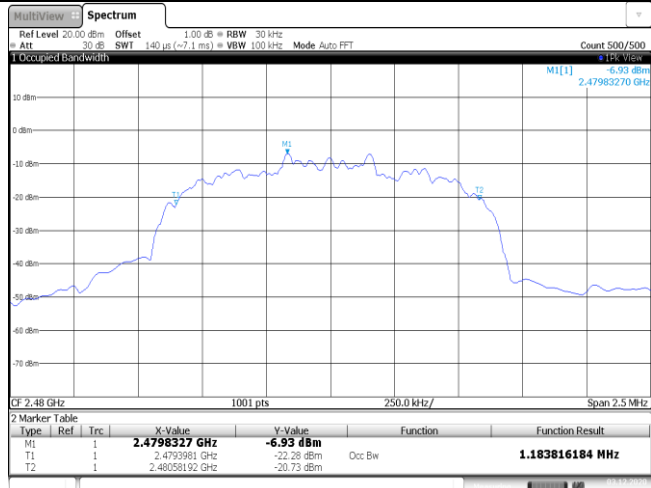
Date: 3.DEC 2020 14:45:51

CH39



Date: 3.DEC 2020 14:49:28

CH78



Date: 3.DEC 2020 14:53:04

**Appendix D: Carrier Frequencies Separation**

Modulation type	Channel	Carrier Frequencies Separation (MHz)	Limit (kHz) *	Result
GFSK	39	1.00	≥922.50	Pass
$\pi/4$ DQPSK	39	1.00	≥883.33	Pass
8DPSK	00	1.00	≥873.33	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

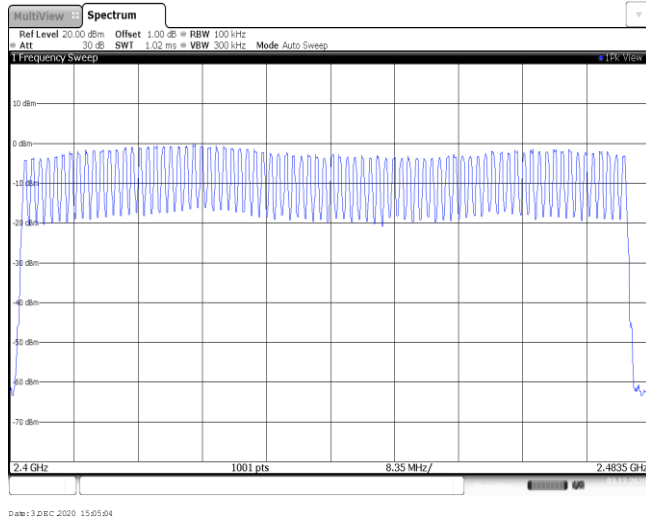
<p style="text-align: center;">GFSK</p>	<p style="text-align: center;">Date: 3.DEC 2020 14:14:28</p>
<p style="text-align: center;"><math>\pi/4</math>DQPSK</p>	<p style="text-align: center;">Date: 3.DEC 2020 14:40:10</p>
<p style="text-align: center;">8DPSK</p>	<p style="text-align: center;">Date: 3.DEC 2020 14:56:05</p>

**Appendix E: Hopping Channel Number**

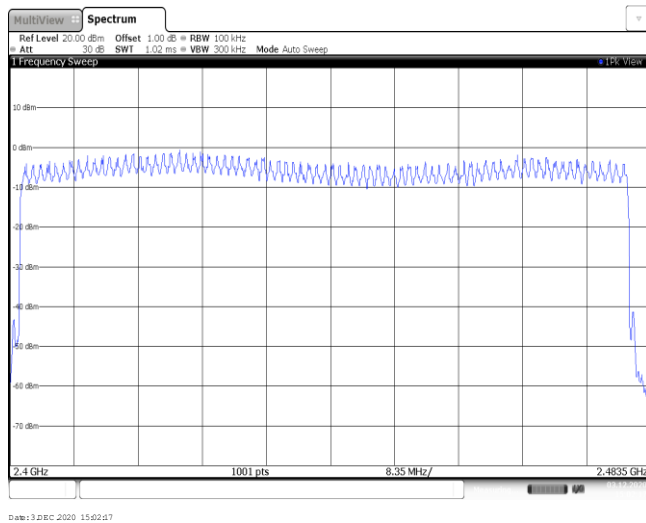
Modulation type	Channel number	Limit	Result
GFSK	79	≥15.00	Pass
π/4DQPSK	79		
8DPSK	79		



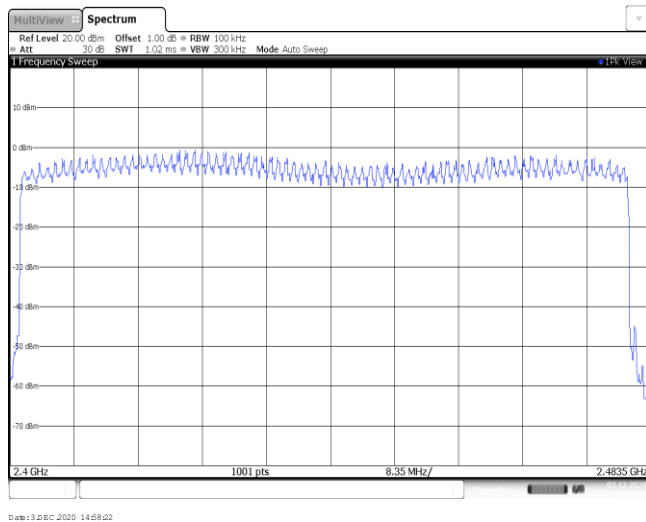
GFSK



$\pi/4$ DQPSK



8DPSK

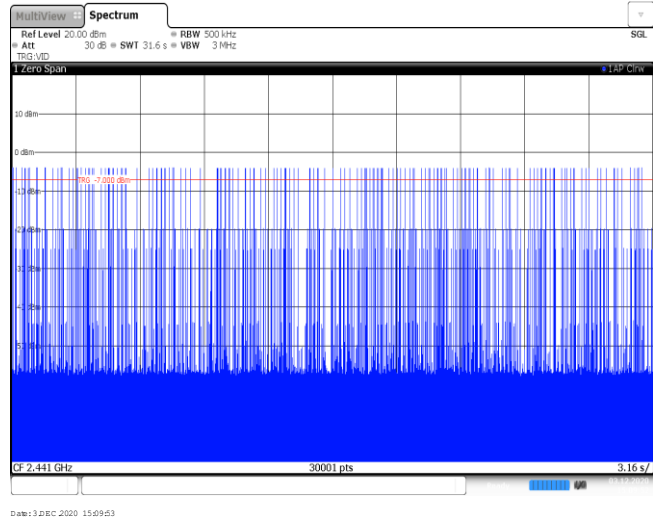


**Appendix F: Dwell Time**

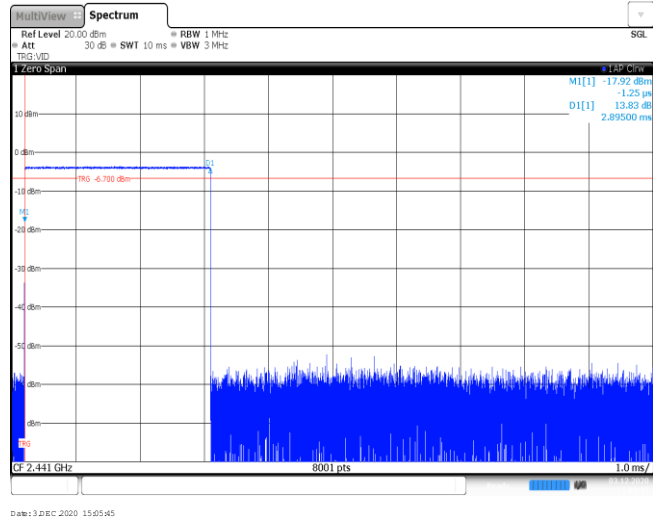
Modulation type	Packet	Burst Width [ms]	Total Hops[hop*ch]	Dwell time (Second)	Limit (Second)	Result
GFSK	DH1	0.39	318	0.12	≤ 0.40	Pass
	DH3	1.65	162	0.27		
	DH5	2.90	102	0.30		
π/4DQPSK	2DH1	0.38	320	0.12	≤ 0.40	Pass
	2DH3	1.64	160	0.26		
	2DH5	2.88	95	0.27		
8DPSK	3DH1	0.38	317	0.12	≤ 0.40	Pass
	3DH3	1.63	168	0.27		
	3DH5	2.88	110	0.32		

Modulation Type:	GFSK
<p>DH1 Burst width</p>	
<p>DH1 Burst number</p>	
<p>DH3 Burst width</p>	

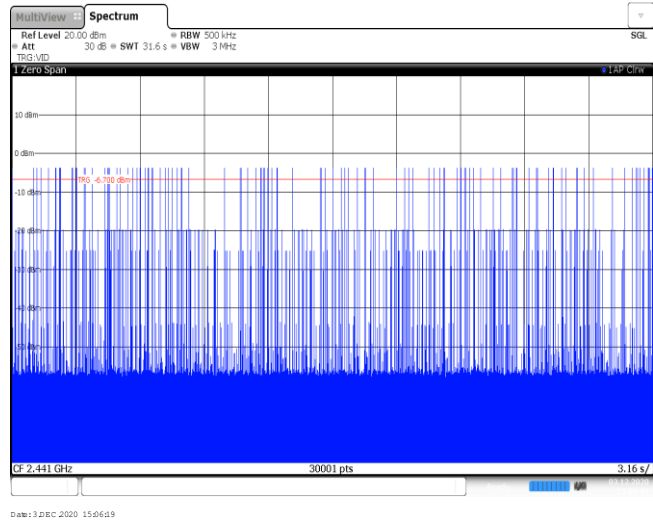
DH3  
Burst number



DH5  
Burst width

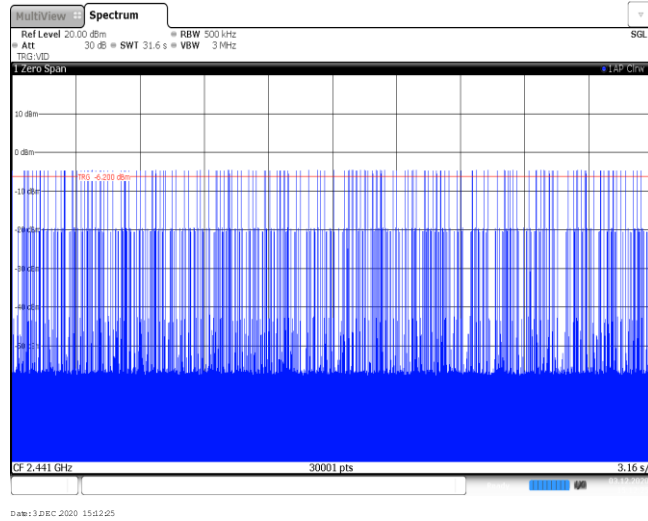


DH5  
Burst number

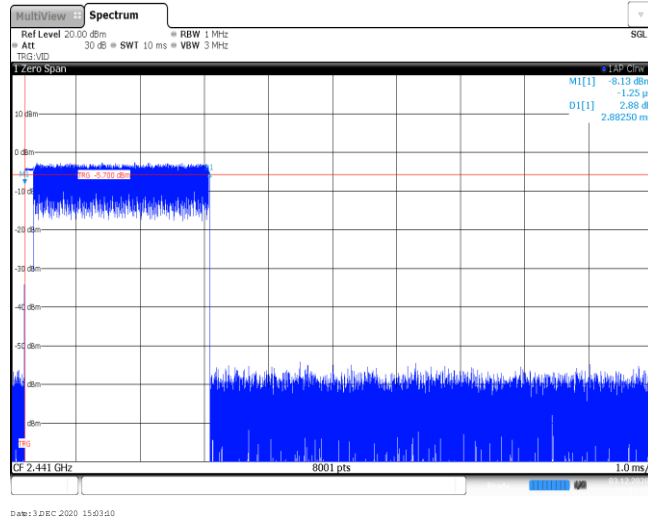


Modulation Type:	$\pi/4$ DQPSK
<p>2DH1 Burst width</p>	
<p>2DH1 Burst number</p>	
<p>2DH3 Burst width</p>	

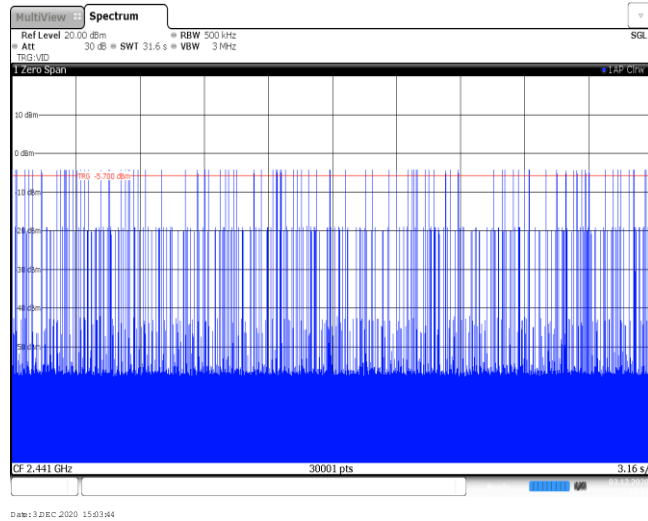
2DH3  
Burst number



2DH5  
Burst width

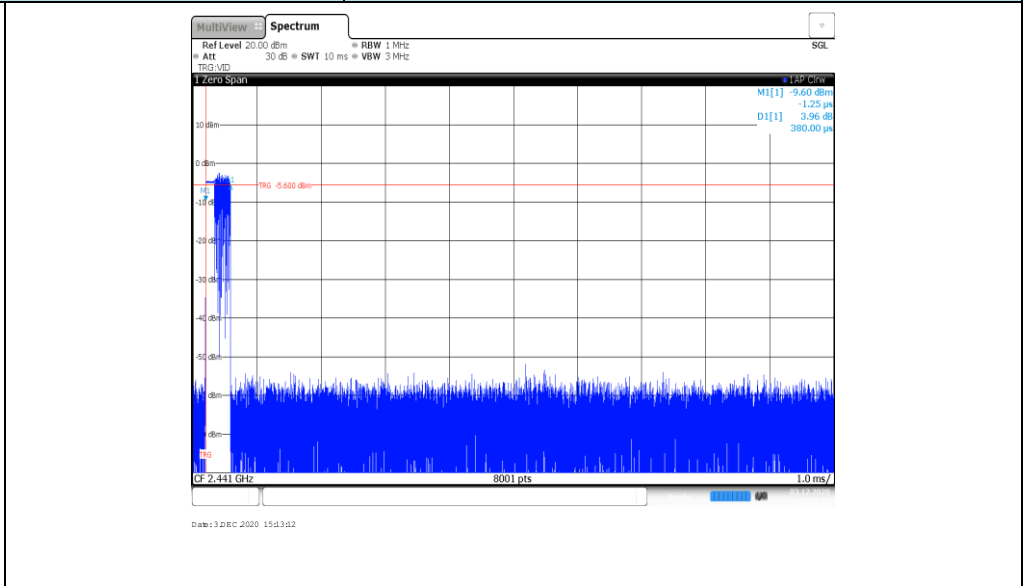


2DH5  
Burst number

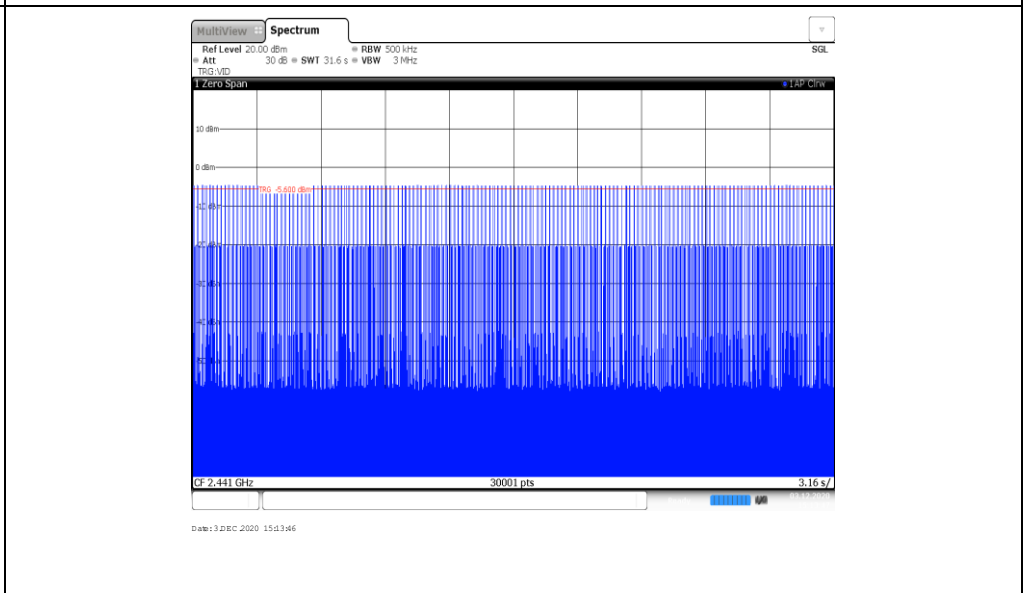


**Modulation Type: 8DPSK**

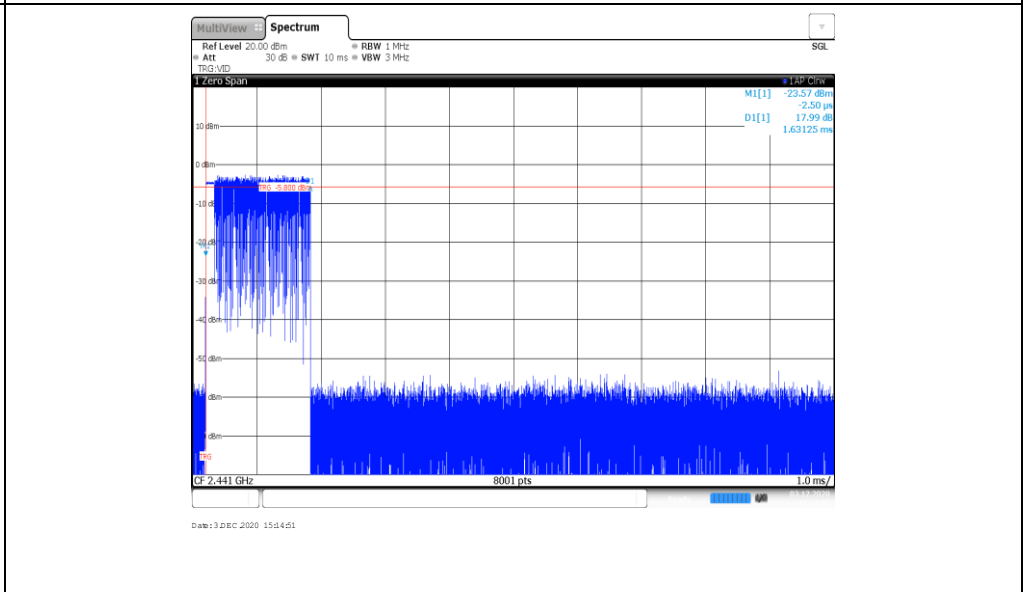
3DH1  
Burst width



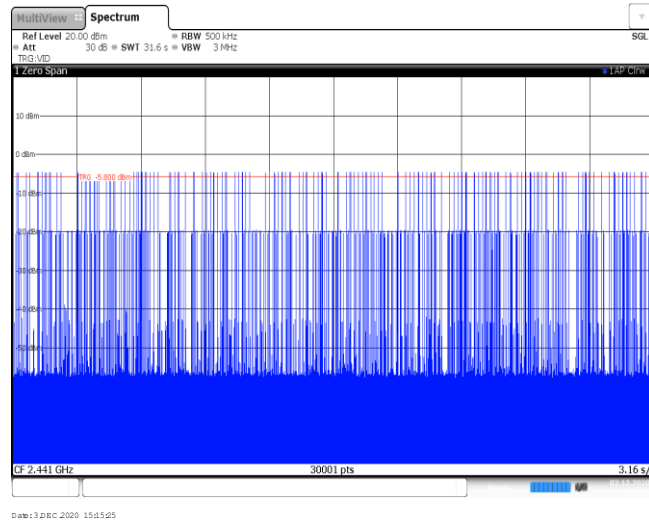
3DH1  
Burst number



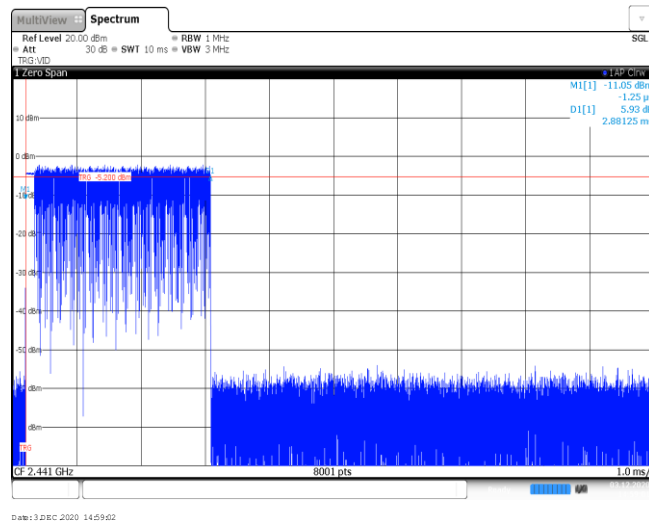
3DH3  
Burst width



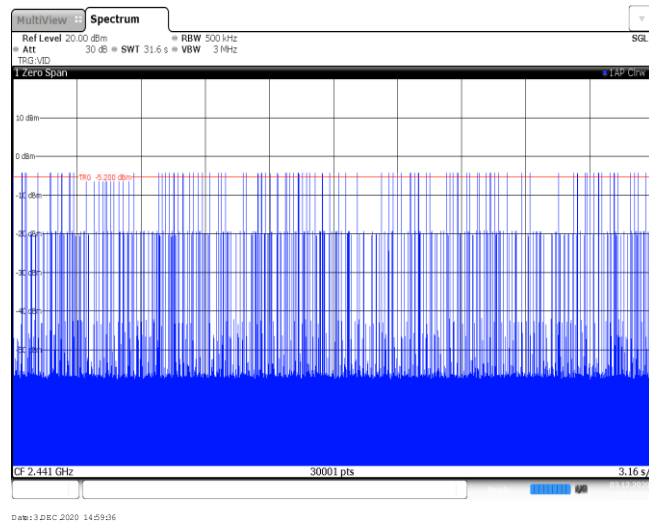
3DH3  
Burst number



3DH5  
Burst width



3DH5  
Burst number

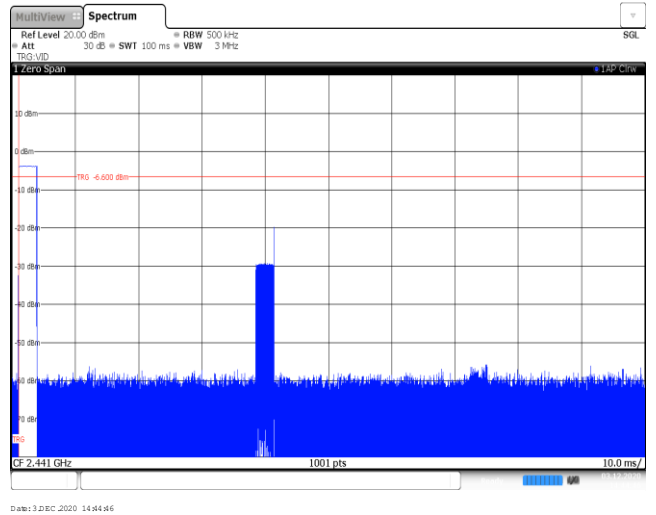
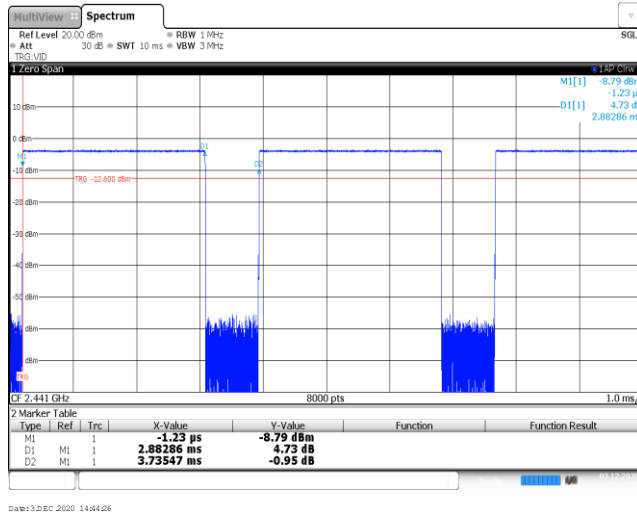




**Appendix G: Duty Cycle Correction Factor (DCCF)**

DCCF Calculate Formula					
DCCF=20 * Log(duty cycle) = 20 * Log( $T_{on\ time} / T_{period}$ )					
Modulation type	Test Frequency (MHz)	$T_{on\ time}$ for single burst [ms]	$T_{period}$ [ms]	Burst Quantity	DCCF [dB]
GFSK	2441	2.88	100	2	-24.79
$\pi/4$ DQPSK	2441	2.87	100	1	-30.84
8DPSK	2441	2.87	100	2	-24.82

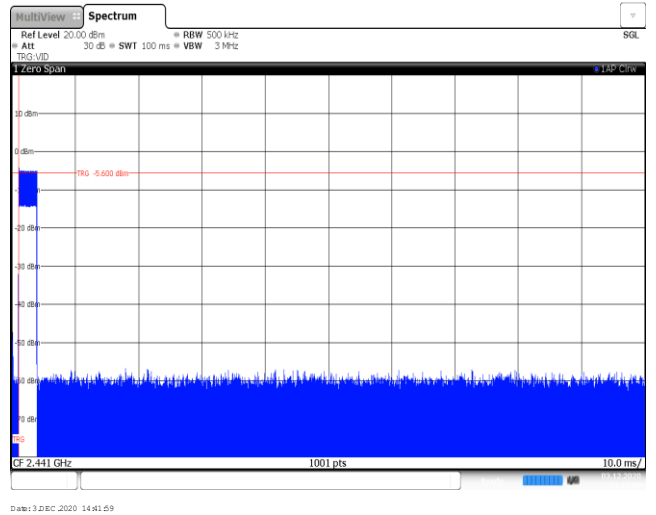
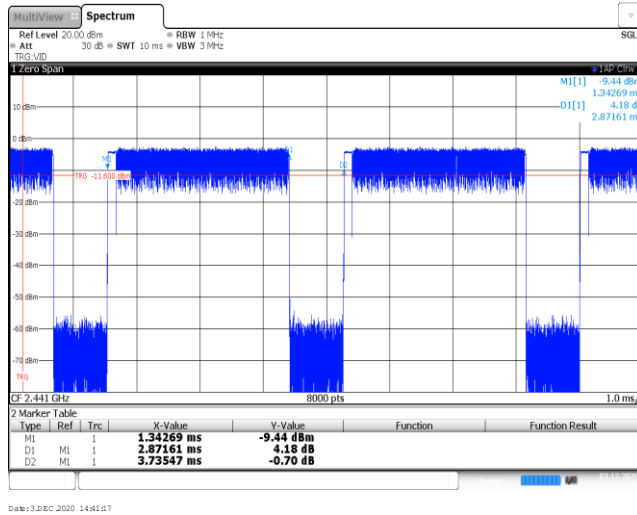
GFSK



T<sub>on</sub> time for single burst

Burst Quantity

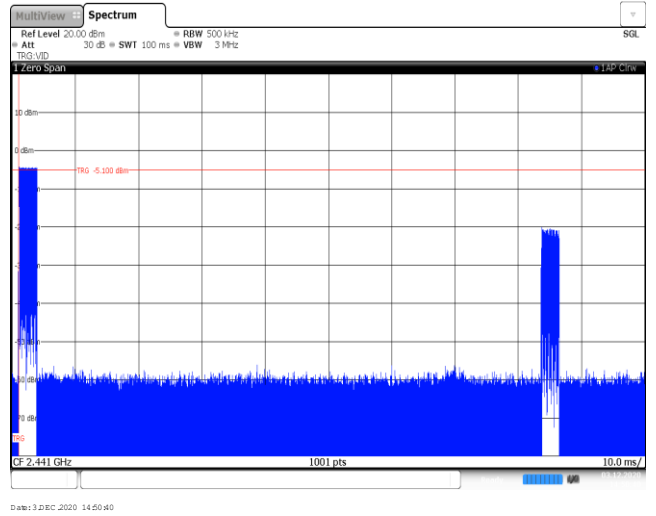
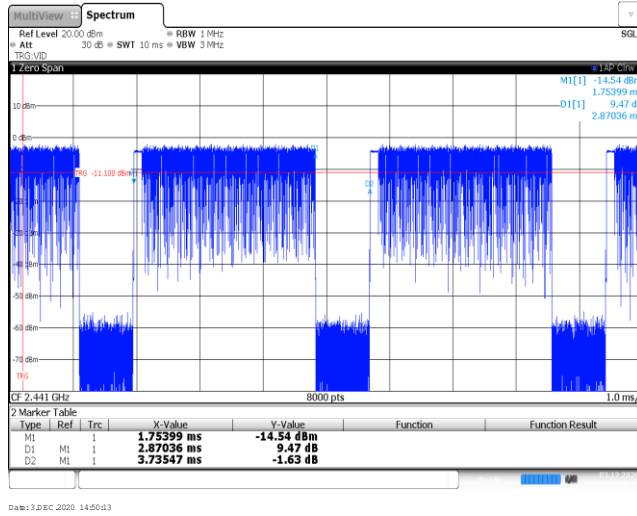
$\pi/4$  DQPSK



T<sub>on</sub> time for single burst

Burst Quantity

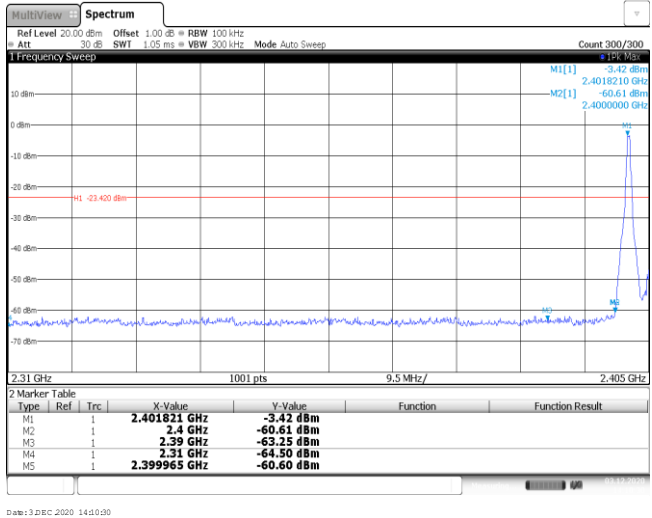
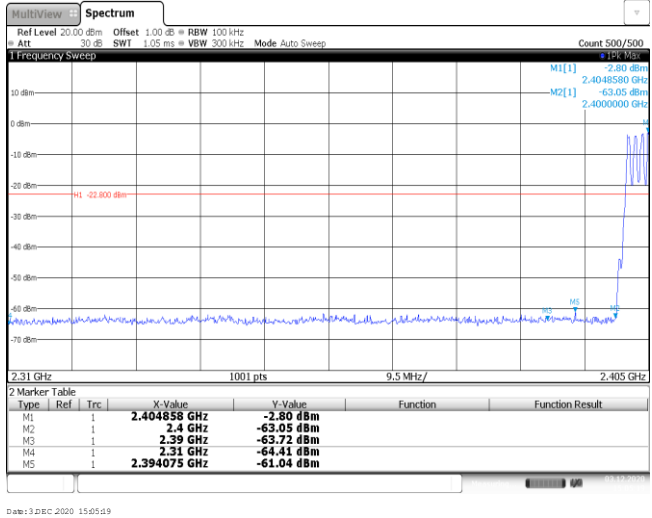
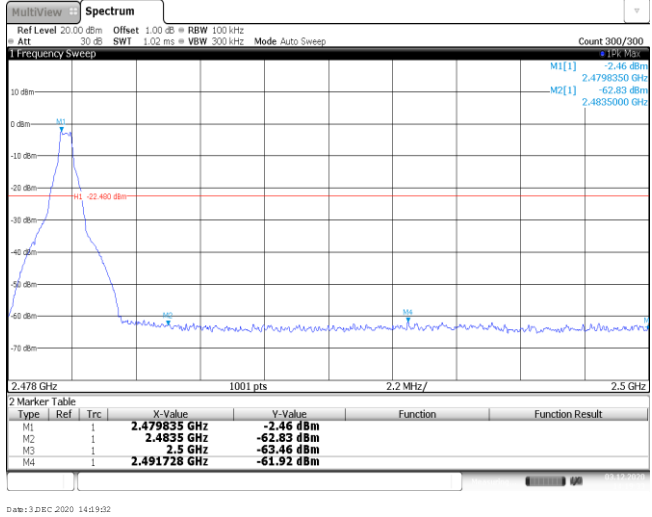
8DPSK



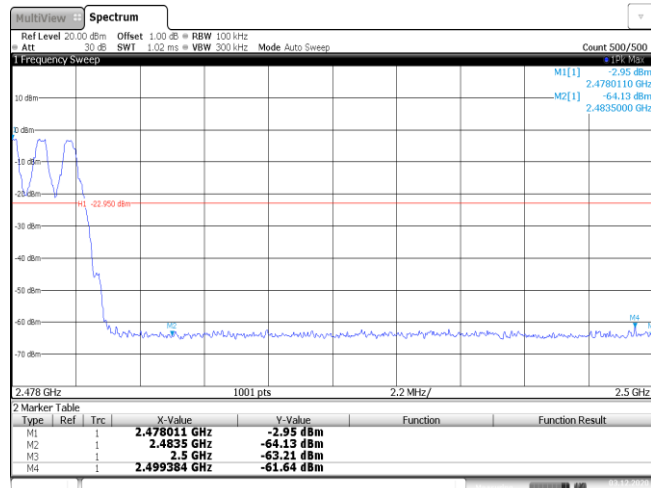
T<sub>on</sub> time for single burst

Burst Quantity

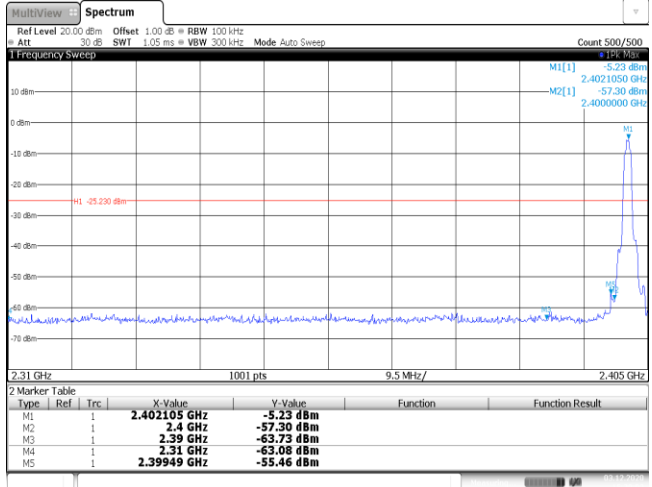
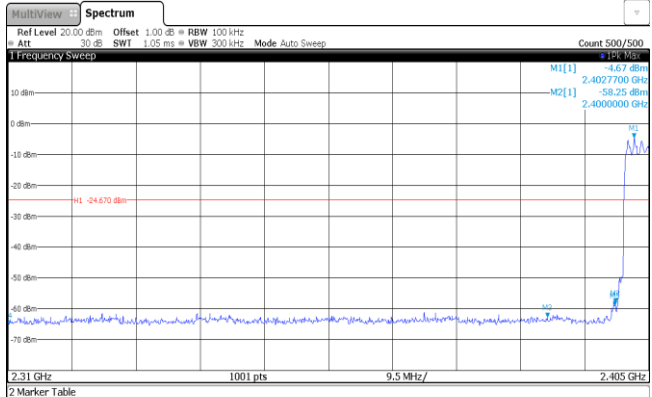
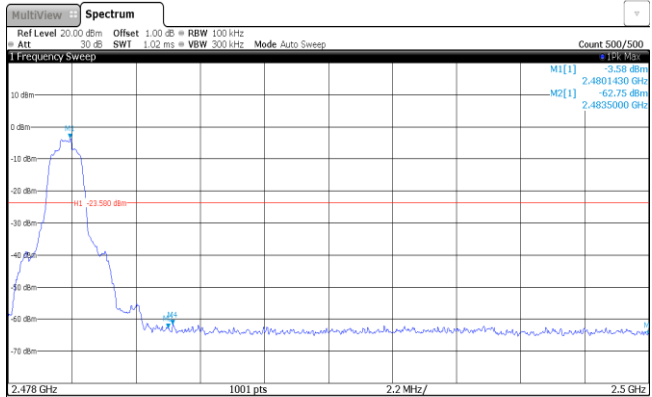
**Appendix H: Band edge and Spurious Emissions (conducted)**

Test Item:	Band edge	Modulation type:	GFSK
<p>CH00 No hopping mode</p>			
<p>CH00 Hopping mode</p>			
<p>CH78 No hopping mode</p>			

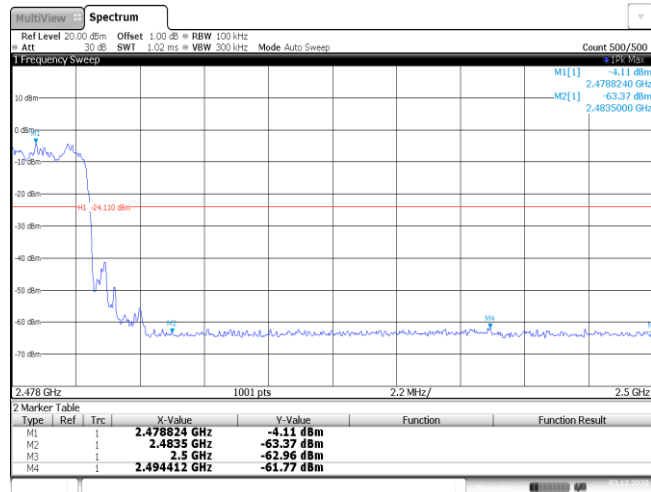
CH78  
Hopping mode



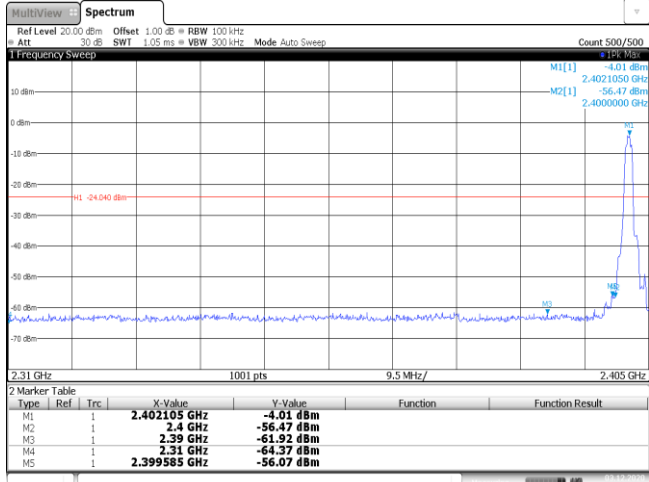
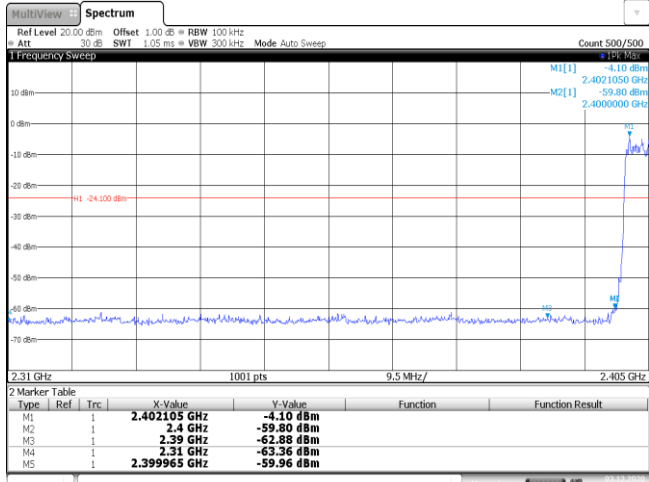
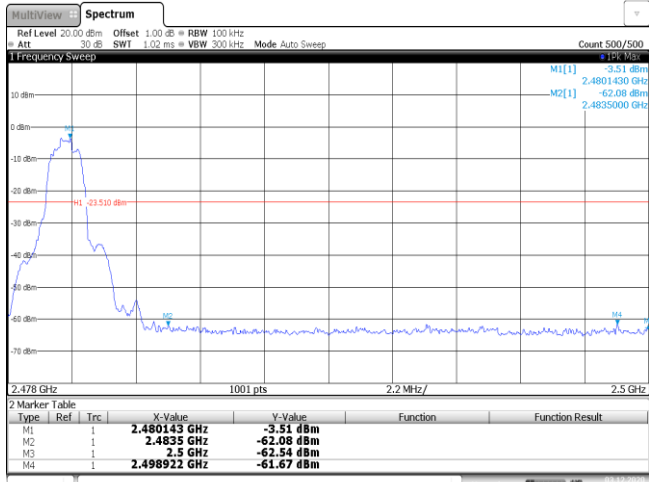
Date: 3 DEC 2020 15:05:33

Test Item:	Band edge	Modulation type:	$\pi/4$ DQPSK																																										
<p>CH00 No hopping mode</p>	 <table border="1" data-bbox="689 631 1331 734"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-Value</th> <th>Y-Value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.402105 GHz</td> <td>-5.23 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-57.30 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-63.73 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.31 GHz</td> <td>-63.08 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.39949 GHz</td> <td>-55.46 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 3.DEC 2020 15:39:02</p>			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.402105 GHz	-5.23 dBm			M2	1		2.4 GHz	-57.30 dBm			M3	1		2.39 GHz	-63.73 dBm			M4	1		2.31 GHz	-63.08 dBm			M5	1		2.39949 GHz	-55.46 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																							
M1	1		2.402105 GHz	-5.23 dBm																																									
M2	1		2.4 GHz	-57.30 dBm																																									
M3	1		2.39 GHz	-63.73 dBm																																									
M4	1		2.31 GHz	-63.08 dBm																																									
M5	1		2.39949 GHz	-55.46 dBm																																									
<p>CH00 Hopping mode</p>	 <table border="1" data-bbox="689 1178 1331 1281"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-Value</th> <th>Y-Value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.40277 GHz</td> <td>-4.67 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-58.25 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-62.79 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.31 GHz</td> <td>-64.31 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.39965 GHz</td> <td>-58.91 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 3.DEC 2020 15:02:21</p>			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.40277 GHz	-4.67 dBm			M2	1		2.4 GHz	-58.25 dBm			M3	1		2.39 GHz	-62.79 dBm			M4	1		2.31 GHz	-64.31 dBm			M5	1		2.39965 GHz	-58.91 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																							
M1	1		2.40277 GHz	-4.67 dBm																																									
M2	1		2.4 GHz	-58.25 dBm																																									
M3	1		2.39 GHz	-62.79 dBm																																									
M4	1		2.31 GHz	-64.31 dBm																																									
M5	1		2.39965 GHz	-58.91 dBm																																									
<p>CH78 No hopping mode</p>	 <table border="1" data-bbox="689 1724 1331 1827"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-Value</th> <th>Y-Value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.480143 GHz</td> <td>-3.58 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4835 GHz</td> <td>-62.75 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.5 GHz</td> <td>-63.96 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.483654 GHz</td> <td>-61.69 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 3.DEC 2020 14:57:53</p>			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.480143 GHz	-3.58 dBm			M2	1		2.4835 GHz	-62.75 dBm			M3	1		2.5 GHz	-63.96 dBm			M4	1		2.483654 GHz	-61.69 dBm									
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																							
M1	1		2.480143 GHz	-3.58 dBm																																									
M2	1		2.4835 GHz	-62.75 dBm																																									
M3	1		2.5 GHz	-63.96 dBm																																									
M4	1		2.483654 GHz	-61.69 dBm																																									

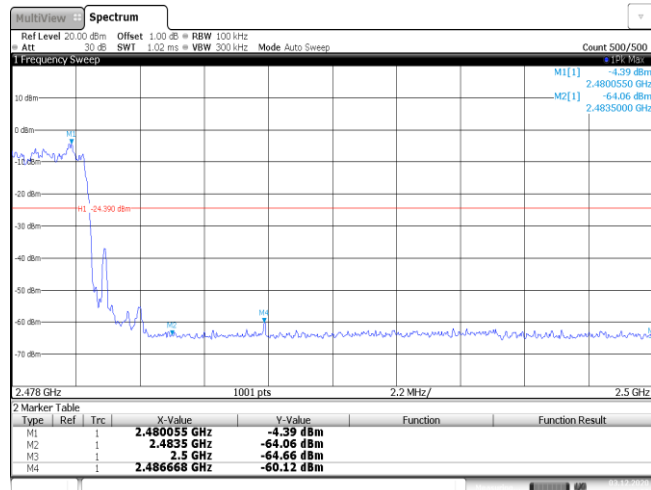
CH78  
Hopping mode



Date: 3 DEC 2020 15:02:58

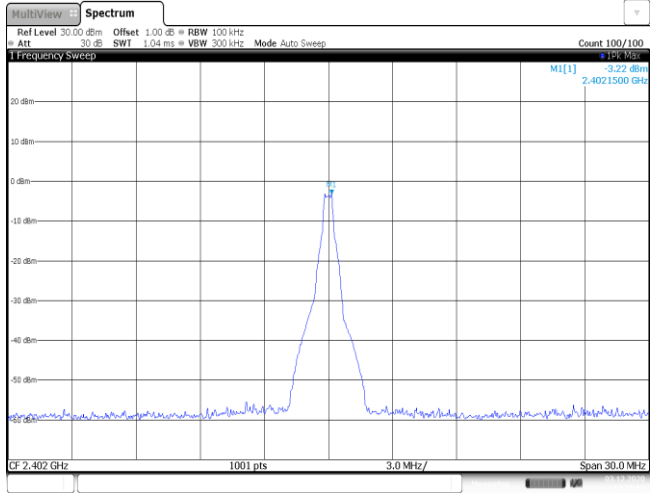
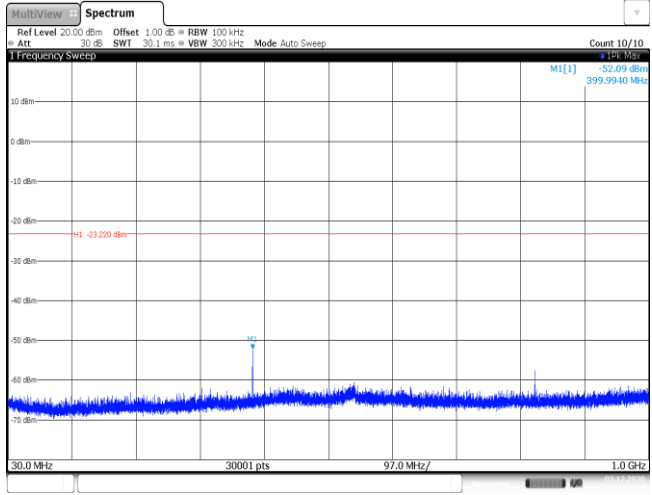
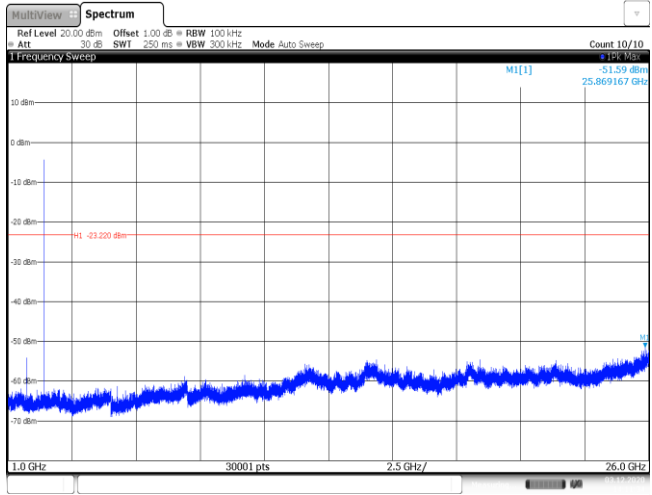
Test Item:	Band edge	Modulation type:	8DPSK																																										
<p>CH00 No hopping mode</p>	 <table border="1" data-bbox="683 636 1334 734"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-Value</th> <th>Y-Value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.402105 GHz</td> <td>-4.01 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-56.47 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-61.92 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.31 GHz</td> <td>-64.37 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.399585 GHz</td> <td>-56.07 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 3.DEC.2020 14:46:57</p>			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.402105 GHz	-4.01 dBm			M2	1		2.4 GHz	-56.47 dBm			M3	1		2.39 GHz	-61.92 dBm			M4	1		2.31 GHz	-64.37 dBm			M5	1		2.399585 GHz	-56.07 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																							
M1	1		2.402105 GHz	-4.01 dBm																																									
M2	1		2.4 GHz	-56.47 dBm																																									
M3	1		2.39 GHz	-61.92 dBm																																									
M4	1		2.31 GHz	-64.37 dBm																																									
M5	1		2.399585 GHz	-56.07 dBm																																									
<p>CH00 Hopping mode</p>	 <table border="1" data-bbox="683 1182 1334 1281"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-Value</th> <th>Y-Value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.402105 GHz</td> <td>-4.10 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-59.80 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-62.88 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.31 GHz</td> <td>-63.36 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.399965 GHz</td> <td>-59.96 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 3.DEC.2020 14:58:26</p>			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.402105 GHz	-4.10 dBm			M2	1		2.4 GHz	-59.80 dBm			M3	1		2.39 GHz	-62.88 dBm			M4	1		2.31 GHz	-63.36 dBm			M5	1		2.399965 GHz	-59.96 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																							
M1	1		2.402105 GHz	-4.10 dBm																																									
M2	1		2.4 GHz	-59.80 dBm																																									
M3	1		2.39 GHz	-62.88 dBm																																									
M4	1		2.31 GHz	-63.36 dBm																																									
M5	1		2.399965 GHz	-59.96 dBm																																									
<p>CH78 No hopping mode</p>	 <table border="1" data-bbox="683 1738 1334 1827"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-Value</th> <th>Y-Value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.480143 GHz</td> <td>-3.51 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4835 GHz</td> <td>-62.08 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.5 GHz</td> <td>-62.54 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.498922 GHz</td> <td>-61.67 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 3.DEC.2020 14:54:11</p>			Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.480143 GHz	-3.51 dBm			M2	1		2.4835 GHz	-62.08 dBm			M3	1		2.5 GHz	-62.54 dBm			M4	1		2.498922 GHz	-61.67 dBm									
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																							
M1	1		2.480143 GHz	-3.51 dBm																																									
M2	1		2.4835 GHz	-62.08 dBm																																									
M3	1		2.5 GHz	-62.54 dBm																																									
M4	1		2.498922 GHz	-61.67 dBm																																									

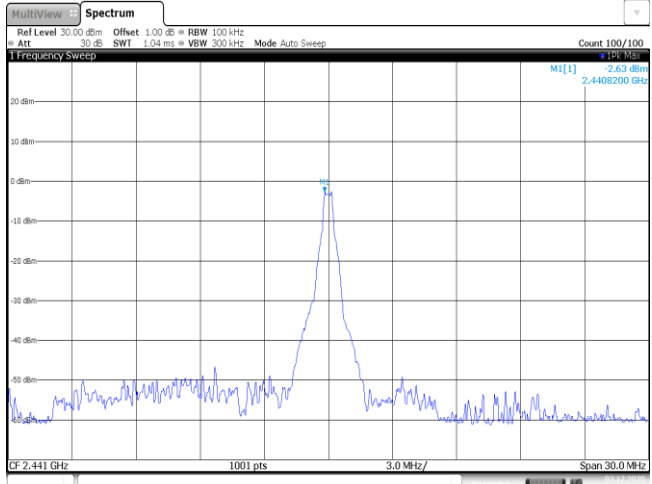
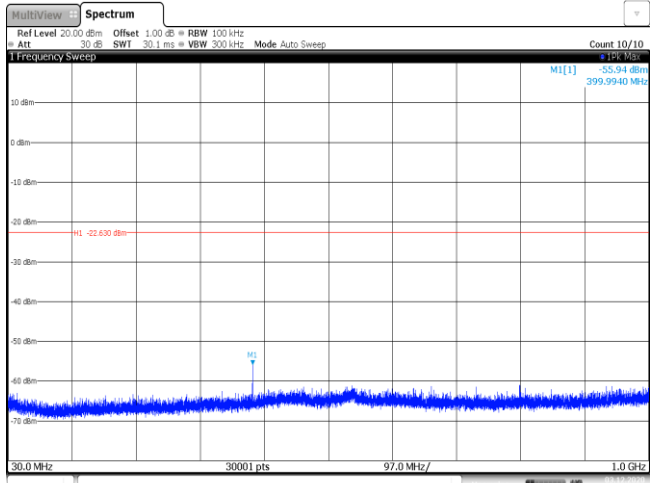
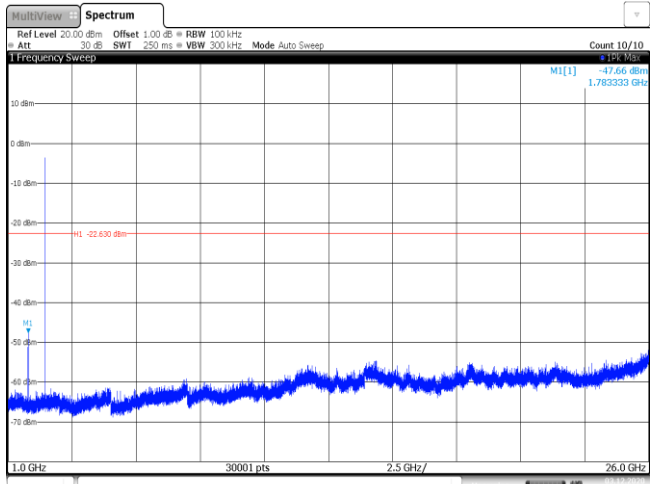
CH78  
Hoppig mode

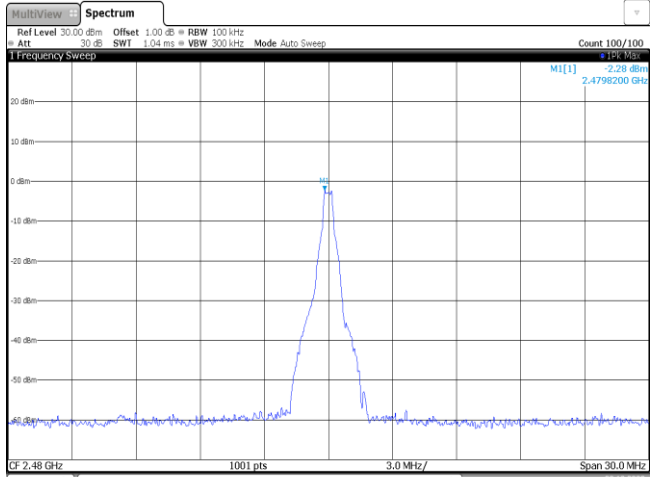
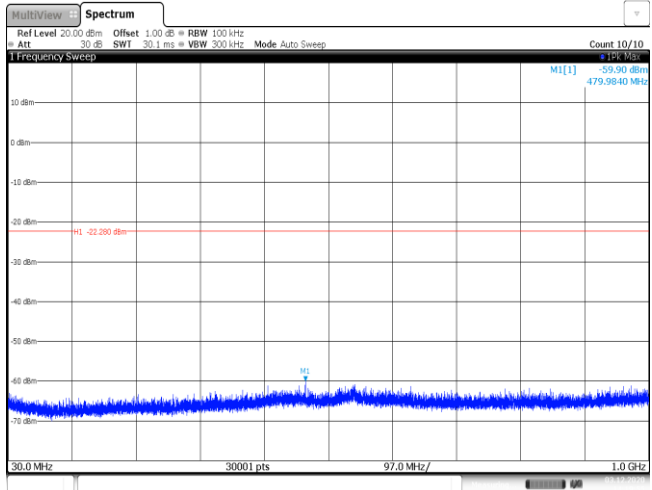
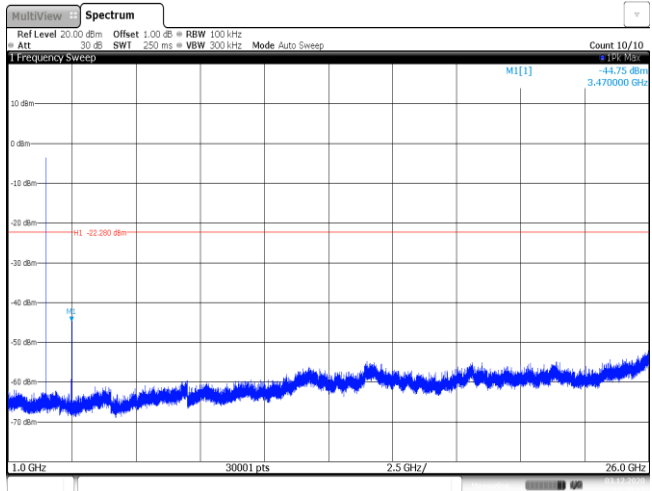


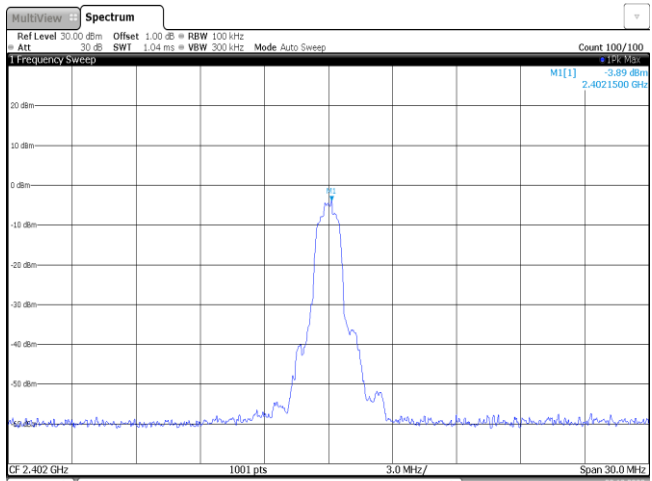
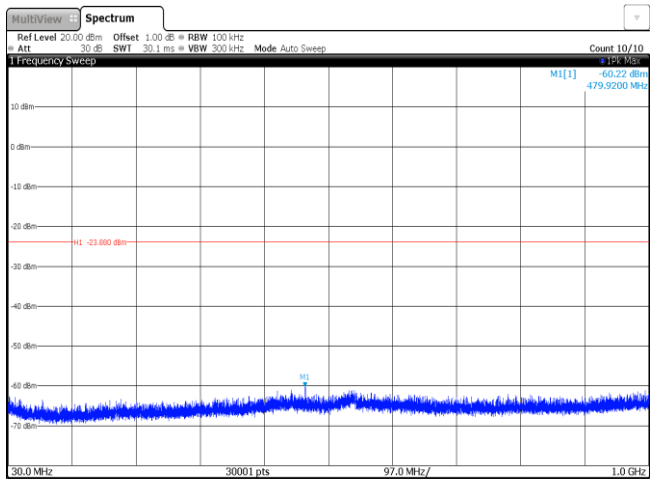
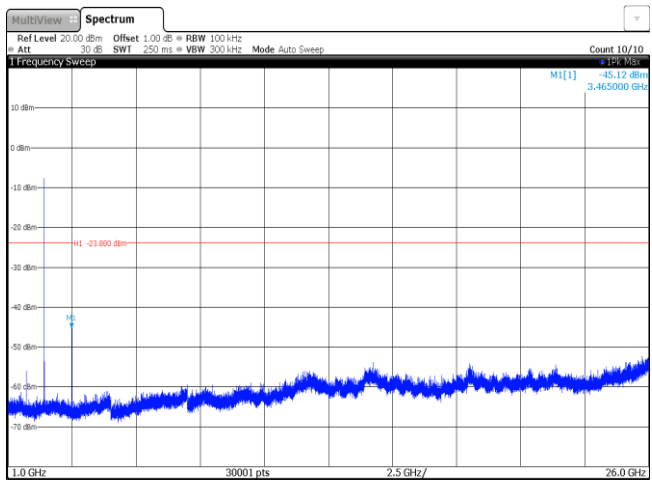
Date: 3 DEC 2020 14:58:50

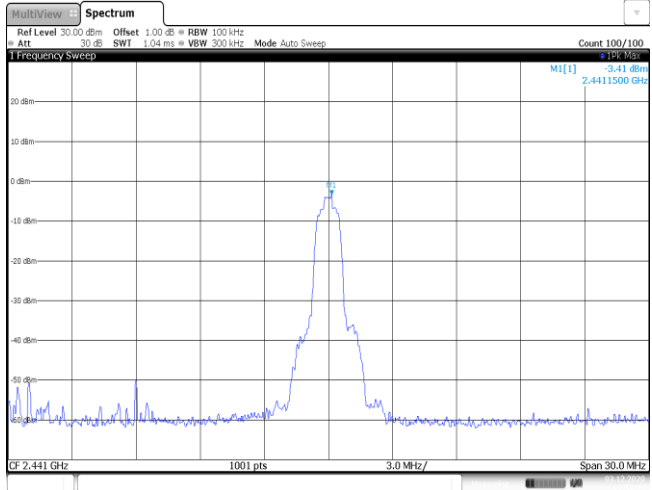
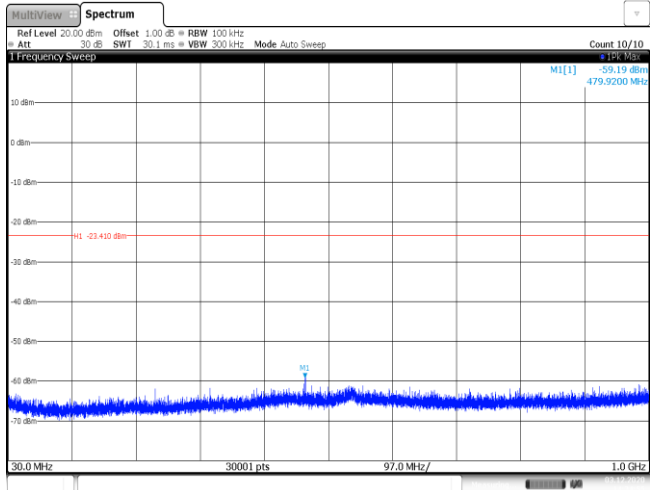
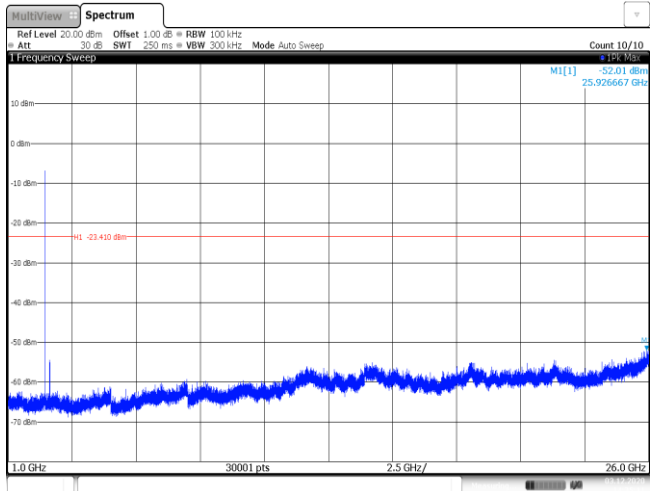


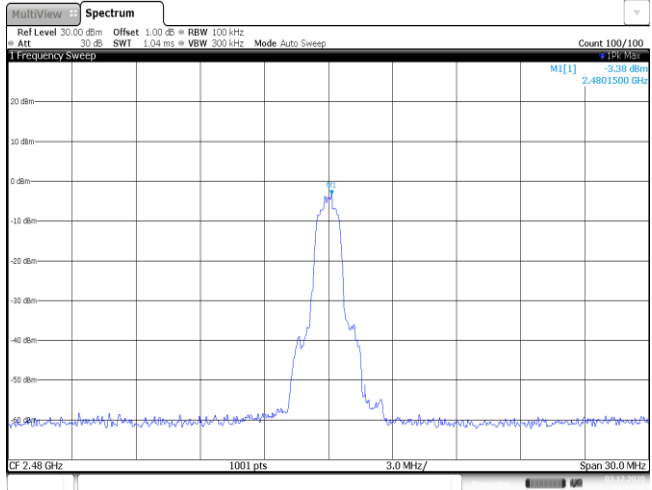
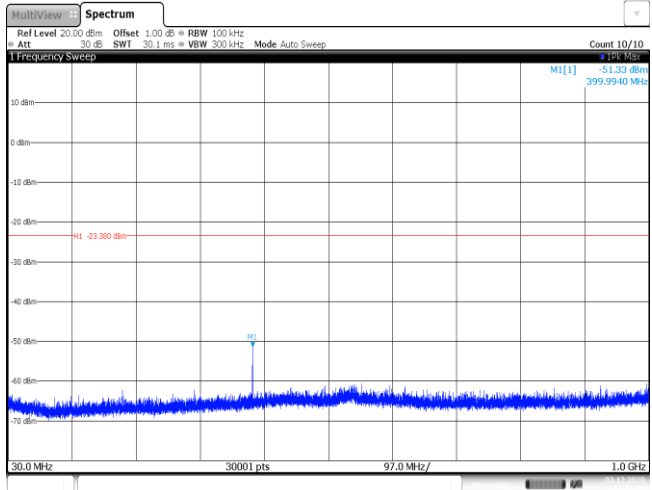
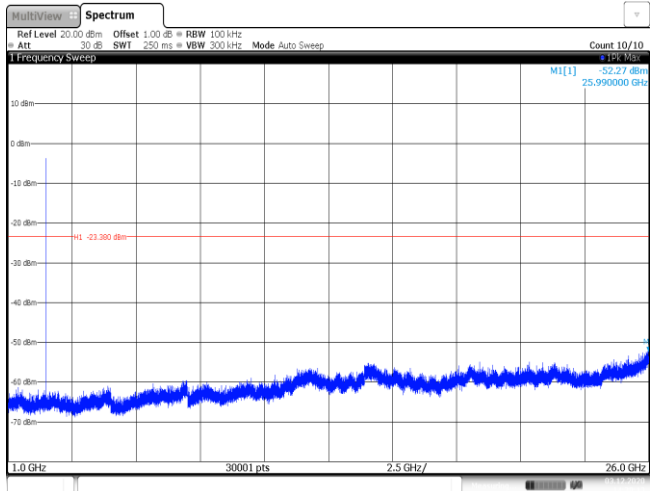
Test Item:	Spurious Emission	Modulation type:	GFSK
<p>CH00 Reference level</p>	 <p>MultiView Spectrum                      Ref Level 30.00 dBm Offset 1.00 dB RBW 100 kHz                      Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep                      Count 100/100                      Frequency Sweep                      MI[1] -9.22 dBm                      2.4021500 GHz                      CF 2.402 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz                      Date: 3 DEC 2020 14:11:02</p>		
<p>CH00 30MHz~1000MHz</p>	 <p>MultiView Spectrum                      Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz                      Att 30 dB SWI 30.1 ms VBW 300 kHz Mode Auto Sweep                      Count 10/10                      Frequency Sweep                      MI[1] -52.09 dBm                      399.9940 MHz                      H1 -33.220 dBm                      30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz                      Date: 3 DEC 2020 14:11:08</p>		
<p>CH00 1GHz~26GHz</p>	 <p>MultiView Spectrum                      Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz                      Att 30 dB SWI 250 ms VBW 300 kHz Mode Auto Sweep                      Count 10/10                      Frequency Sweep                      MI[1] -51.59 dBm                      25.869167 GHz                      H1 -33.220 dBm                      1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz                      Date: 3 DEC 2020 14:11:04</p>		

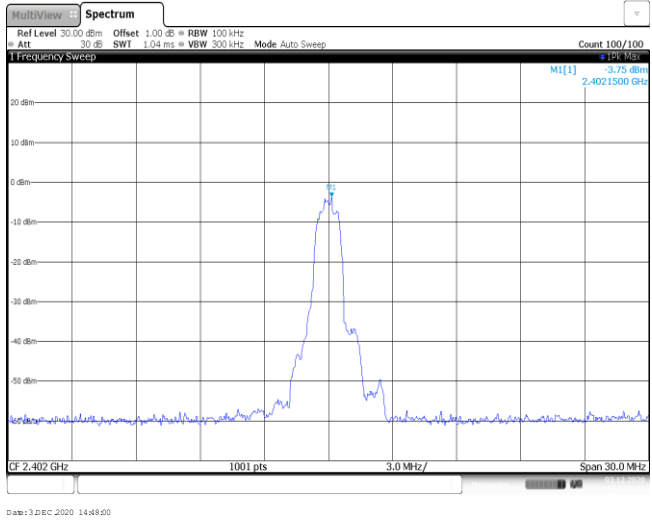
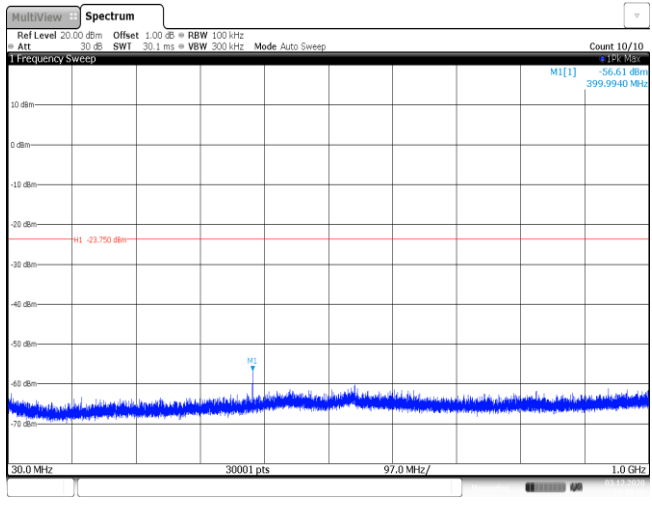
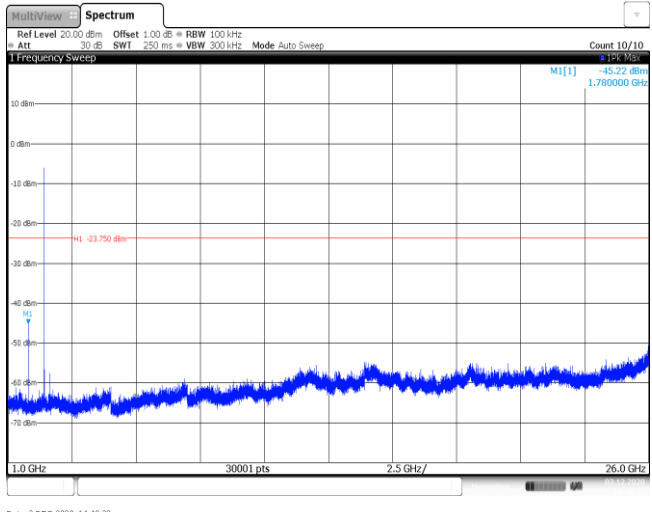
<p>CH39 Reference level</p>	 <p>MultiView Spectrum              Ref Level 30.00 dBm Offset 1.00 dB RBW 100 kHz              Att -30 dB SWT 1.04 ms VBW 300 kHz Mode Auto Sweep              Count 100/100              1 Frequency Sweep              MI[1] -2.63 dBm              2.4408200 GHz              CF 2.441 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz              Date: 3 DEC 2020 14:17:00</p>
<p>CH39 30MHz~1000MHz</p>	 <p>MultiView Spectrum              Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz              Att -30 dB SWT 30.1 ms VBW 300 kHz Mode Auto Sweep              Count 10/10              1 Frequency Sweep              MI[1] -55.94 dBm              399.9940 MHz              MI -22.630 dBm              30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz              Date: 3 DEC 2020 14:17:46</p>
<p>CH39 1GHz~26GHz</p>	 <p>MultiView Spectrum              Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz              Att -30 dB SWT 250 ms VBW 300 kHz Mode Auto Sweep              Count 10/10              1 Frequency Sweep              MI[1] -47.66 dBm              1.783333 GHz              MI -22.630 dBm              1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz              Date: 3 DEC 2020 14:18:23</p>

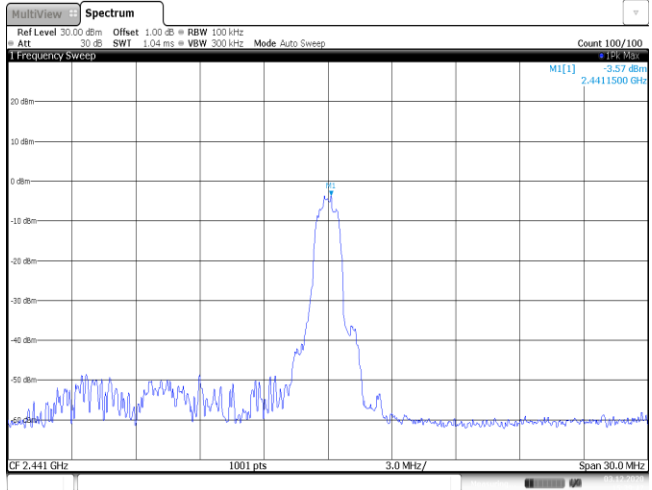
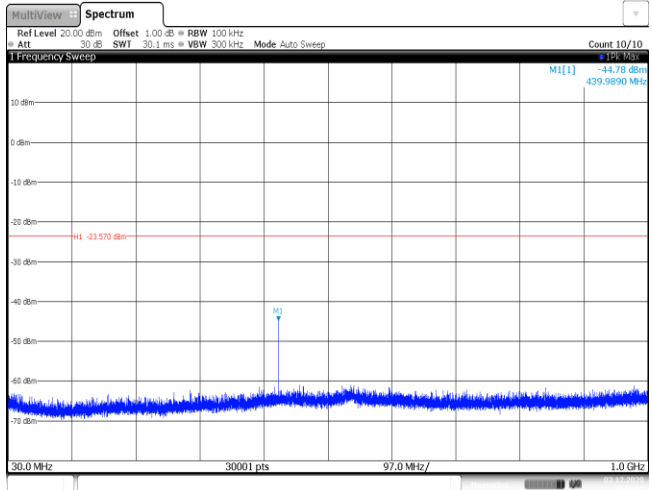
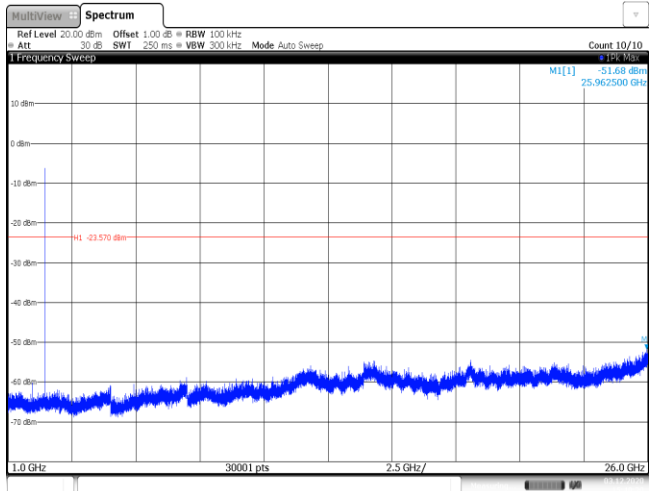
<p>CH78 Reference level</p>	 <p>Ref Level 30.00 dBm Offset 1.00 dB RBW 100 kHz Att -30 dB SWT 1.04 ms VBW 300 kHz Mode Auto Sweep Count 100/100 MI[1] -2.28 dBm 2.4796200 GHz</p> <p>CF 2.48 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz</p> <p>Date: 3 DEC 2020 14:19:29</p>
<p>CH78 30MHz~1000MHz</p>	 <p>Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att -30 dB SWT 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 MI[1] -59.90 dBm 479.9840 MHz</p> <p>MI -22.280 dBm</p> <p>30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz</p> <p>Date: 3 DEC 2020 14:19:56</p>
<p>CH78 1GHz~26GHz</p>	 <p>Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att -30 dB SWT 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 MI[1] -44.75 dBm 3.470000 GHz</p> <p>MI -22.280 dBm</p> <p>1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz</p> <p>Date: 3 DEC 2020 14:20:12</p>

Test Item:	Spurious Emission	Modulation type:	$\pi/4$ DQPSK
<p>CH00 Reference level</p>	 <p>Date: 3.DEC.2020 14:25:00</p>		
<p>CH00 30MHz~1000MHz</p>	 <p>Date: 3.DEC.2020 14:25:16</p>		
<p>CH00 1GHz~26GHz</p>	 <p>Date: 3.DEC.2020 14:25:23</p>		

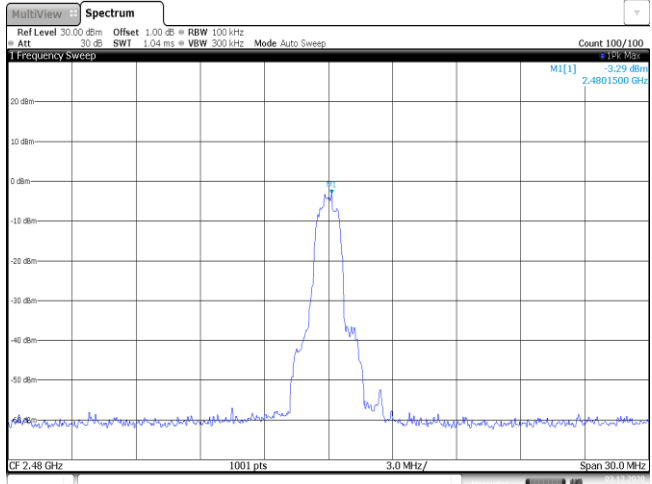
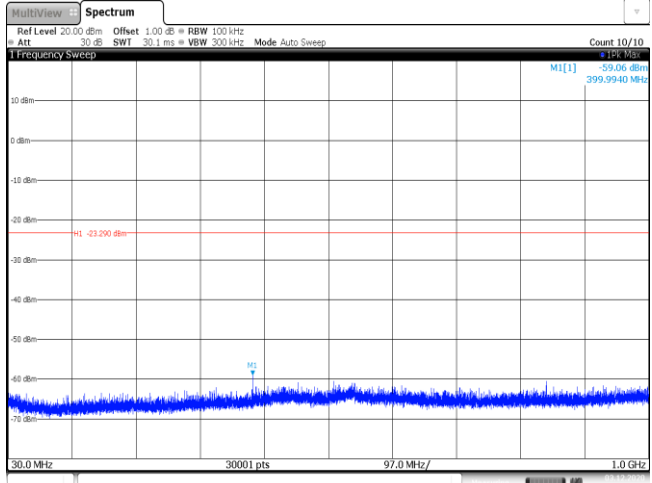
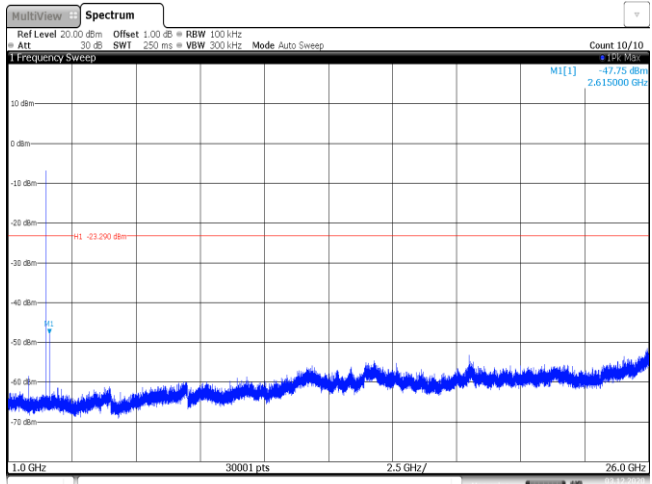
<p>CH39 Reference level</p>	 <p>The spectrum plot shows a single sharp peak at 2.441 GHz. The y-axis represents power in dBm, ranging from -60 to 20. The x-axis represents frequency in MHz, with a span of 30.0 MHz. The peak is labeled with a magnitude of -3.41 dBm. The plot includes technical parameters: Ref Level 30.00 dBm, Offset 1.00 dB, RBW 100 kHz, Att -30 dB, SWT 1.04 ms, VBW 300 kHz, Mode Auto Sweep, Count 100/100, and Date: 3 DEC 2020 14:24:28.</p>
<p>CH39 30MHz~1000MHz</p>	 <p>The spectrum plot shows a noise floor across the 30 MHz to 1000 MHz range. The y-axis ranges from -70 to 10 dBm. The x-axis ranges from 30.0 MHz to 1.0 GHz. A red horizontal line is drawn at -23.410 dBm. A peak is labeled with a magnitude of -59.19 dBm at 479.9200 MHz. The plot includes technical parameters: Ref Level 20.00 dBm, Offset 1.00 dB, RBW 100 kHz, Att -30 dB, SWT 30.1 ms, VBW 300 kHz, Mode Auto Sweep, Count 10/10, and Date: 3 DEC 2020 14:24:54.</p>
<p>CH39 1GHz~26GHz</p>	 <p>The spectrum plot shows a noise floor across the 1 GHz to 26 GHz range. The y-axis ranges from -70 to 10 dBm. The x-axis ranges from 1.0 GHz to 26.0 GHz. A red horizontal line is drawn at -23.410 dBm. A peak is labeled with a magnitude of -52.01 dBm at 25.926667 GHz. The plot includes technical parameters: Ref Level 20.00 dBm, Offset 1.00 dB, RBW 100 kHz, Att -30 dB, SWT 250 ms, VBW 300 kHz, Mode Auto Sweep, Count 10/10, and Date: 3 DEC 2020 14:25:11.</p>

<p>CH78 Reference level</p>	 <p>The spectrum plot shows a single sharp peak at 2.48 GHz. The y-axis represents power in dBm, ranging from -60 to 20. The x-axis represents frequency in MHz, with a span of 30.0 MHz. The peak is labeled with a magnitude of -3.38 dBm. The plot includes technical parameters: Ref Level 30.00 dBm, Offset 1.00 dB, RBW 100 kHz, Att 30 dB, SWF 1.04 ms, VBW 300 kHz, Mode Auto Sweep, Count 100/100, and Date: 3 DEC 2020 14:37:40.</p>
<p>CH78 30MHz~1000MHz</p>	 <p>The spectrum plot shows a peak at 399.9940 MHz. The y-axis ranges from -70 to 10 dBm. The x-axis ranges from 30.0 MHz to 1.0 GHz. The peak is labeled with a magnitude of -51.53 dBm. A red horizontal line is drawn at -23.90 dBm. The plot includes technical parameters: Ref Level 20.00 dBm, Offset 1.00 dB, RBW 100 kHz, Att 30 dB, SWF 30.1 ms, VBW 300 kHz, Mode Auto Sweep, Count 10/10, and Date: 3 DEC 2020 14:37:56.</p>
<p>CH78 1GHz~26GHz</p>	 <p>The spectrum plot shows a peak at 25.990000 GHz. The y-axis ranges from -70 to 10 dBm. The x-axis ranges from 1.0 GHz to 26.0 GHz. The peak is labeled with a magnitude of -52.27 dBm. A red horizontal line is drawn at -23.90 dBm. The plot includes technical parameters: Ref Level 20.00 dBm, Offset 1.00 dB, RBW 100 kHz, Att 30 dB, SWF 250 ms, VBW 300 kHz, Mode Auto Sweep, Count 10/10, and Date: 3 DEC 2020 14:38:13.</p>

Test Item:	Spurious Emission	Modulation type:	8DPSK
<p>CH00 Reference level</p>			
<p>CH00 30MHz~1000MHz</p>			
<p>CH00 1GHz~26GHz</p>			

<p>CH39 Reference level</p>	 <p>Ref Level 30.00 dBm Offset 1.00 dB BW 100 kHz Att -30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Count 100/100 MI[1] -3.57 dBm 2.441500 GHz</p> <p>CF 2.441 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz</p> <p>Date: 3.DEC 2020 15:29:47</p>
<p>CH39 30MHz~1000MHz</p>	 <p>Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att -30 dB SWI 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 MI[1] -4.78 dBm 439.9890 MHz</p> <p>MI -23.570 dBm</p> <p>30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz</p> <p>Date: 3.DEC 2020 15:40:04</p>
<p>CH39 1GHz~26GHz</p>	 <p>Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att -30 dB SWI 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 MI[1] -51.68 dBm 25.962500 GHz</p> <p>MI -23.570 dBm</p> <p>1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz</p> <p>Date: 3.DEC 2020 15:40:20</p>



<p>CH78 Reference level</p>	 <p>The plot shows a single sharp peak at 2.48 GHz. The y-axis ranges from -80 dBm to 20 dBm. The x-axis is centered at 2.48 GHz with a 3.0 MHz span. A peak marker shows a value of -3.29 dBm at 2.4801500 GHz.</p>
<p>CH78 30MHz~1000MHz</p>	 <p>The plot shows a wide frequency range from 30 MHz to 1.0 GHz. The y-axis ranges from -80 dBm to 10 dBm. The noise floor is approximately -70 dBm. A horizontal red line is drawn at -23.200 dBm. A peak marker shows a value of -59.06 dBm at 399.9940 MHz.</p>
<p>CH78 1GHz~26GHz</p>	 <p>The plot shows a wide frequency range from 1.0 GHz to 26.0 GHz. The y-axis ranges from -80 dBm to 10 dBm. The noise floor is approximately -70 dBm. A horizontal red line is drawn at -23.200 dBm. A peak marker shows a value of -47.75 dBm at 2.615000 GHz.</p>

-----End of Report-----