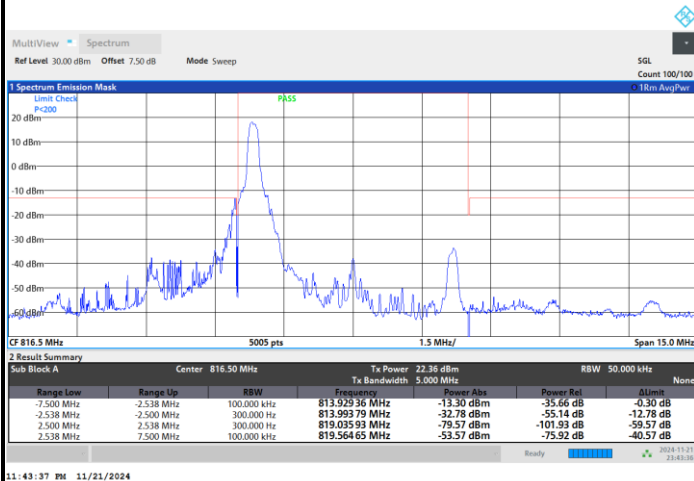




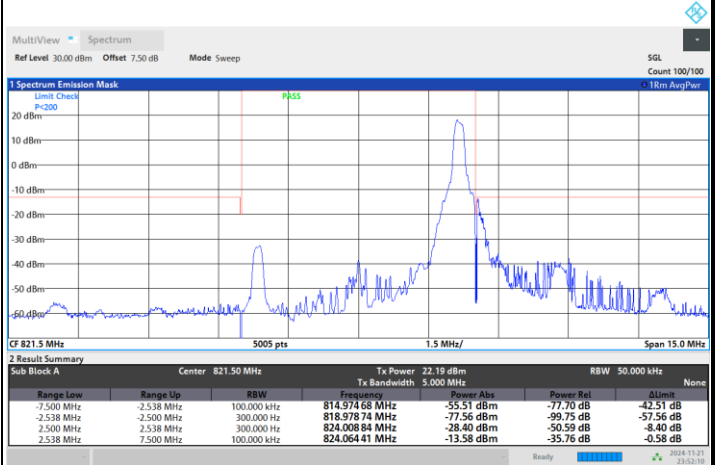
FR1 n26 / 5MHz / DFT-S OFDM / 16QAM

Lowest MASK / 1RB0



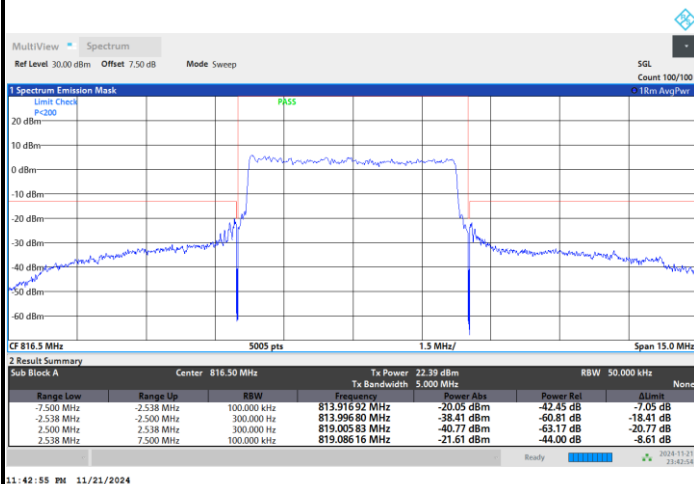
11:43:37 PM 11/21/2024

Highest MASK / 1RBmax



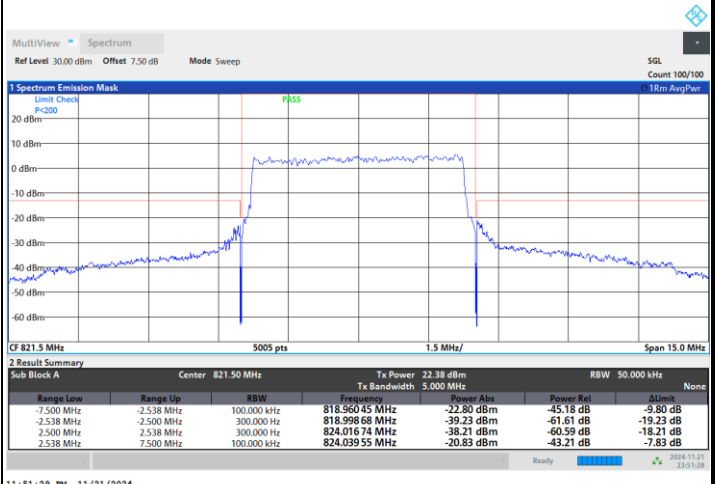
11:52:11 PM 11/21/2024

Lowest MASK / Full RB



11:42:58 PM 11/21/2024

Highest MASK / Full RB

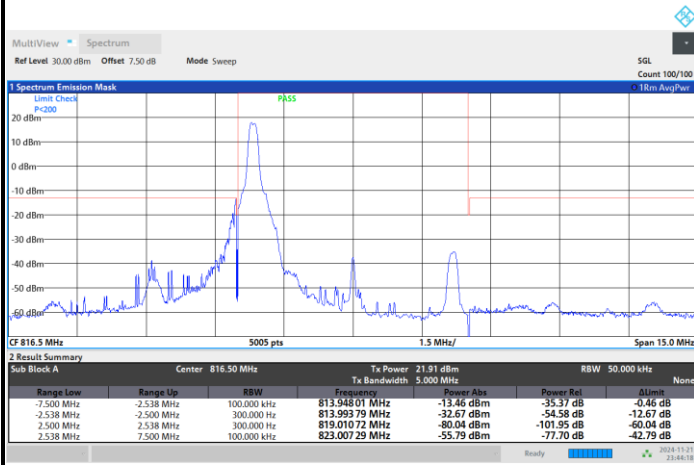


11:51:29 PM 11/21/2024



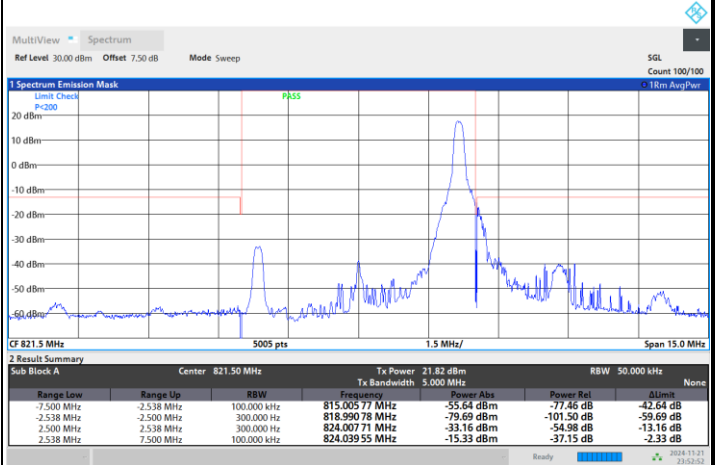
FR1 n26 / 5MHz / DFT-S OFDM / 64QAM

Lowest MASK / 1RB0



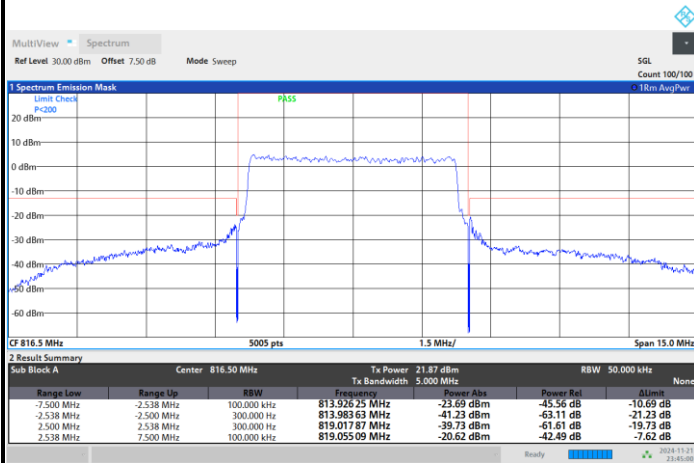
11:44:19 PM 11/21/2024

Highest MASK / 1RBmax



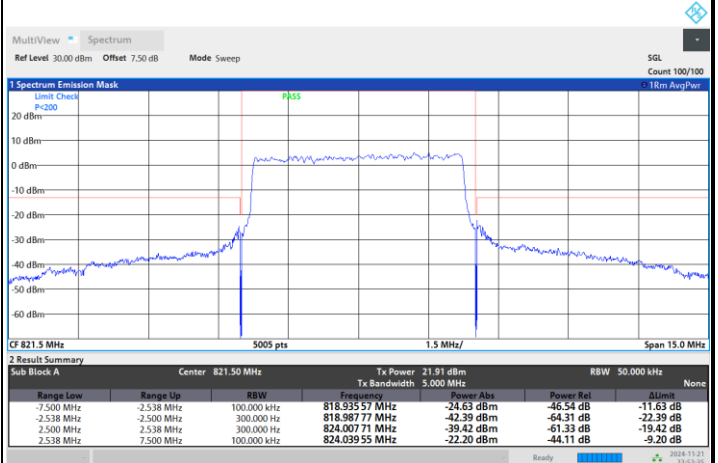
11:52:53 PM 11/21/2024

Lowest MASK / Full RB



11:45:01 PM 11/21/2024

Highest MASK / Full RB

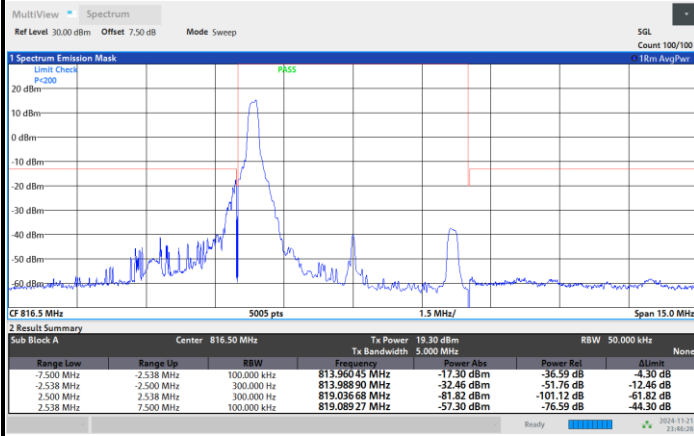


11:53:36 PM 11/21/2024



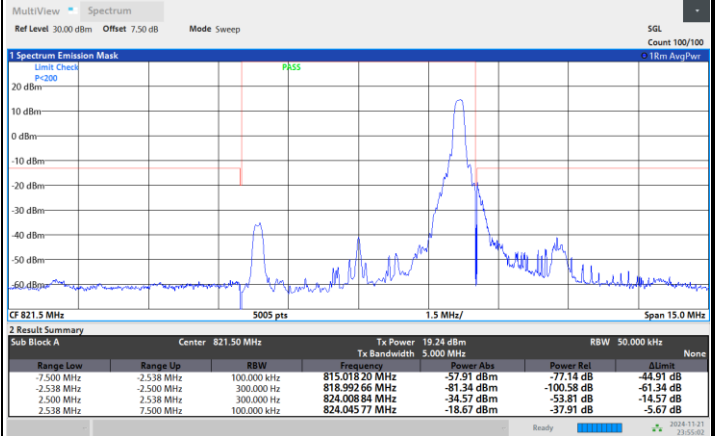
FR1 n26 / 5MHz / DFT-S OFDM / 256QAM

Lowest MASK / 1RB0



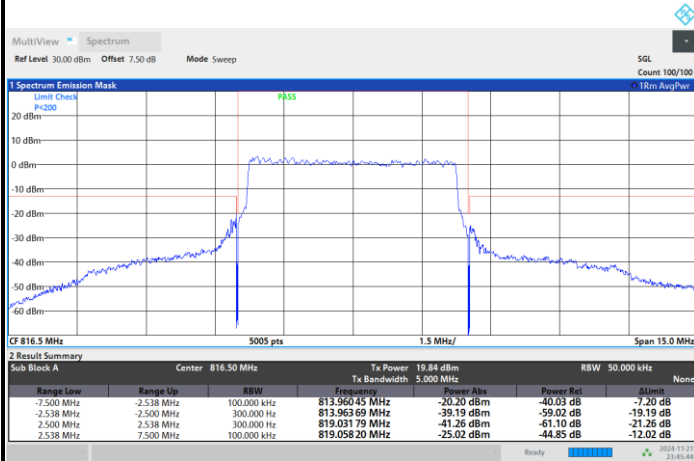
11:46:27 PM 11/21/2024

Highest MASK / 1RBmax



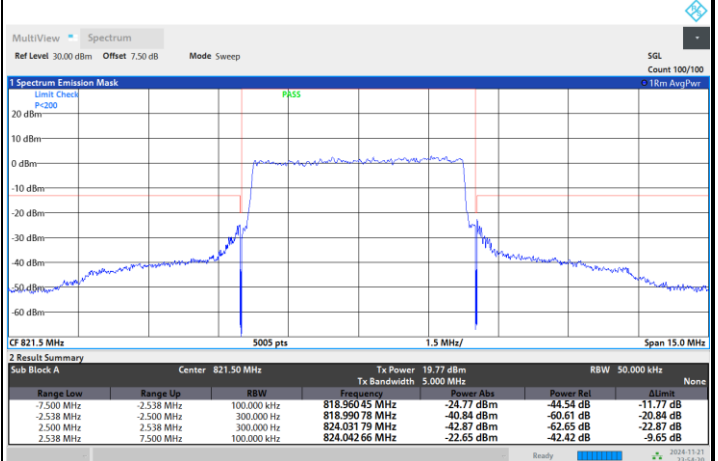
11:55:03 PM 11/21/2024

Lowest MASK / Full RB



11:48:48 PM 11/21/2024

Highest MASK / Full RB

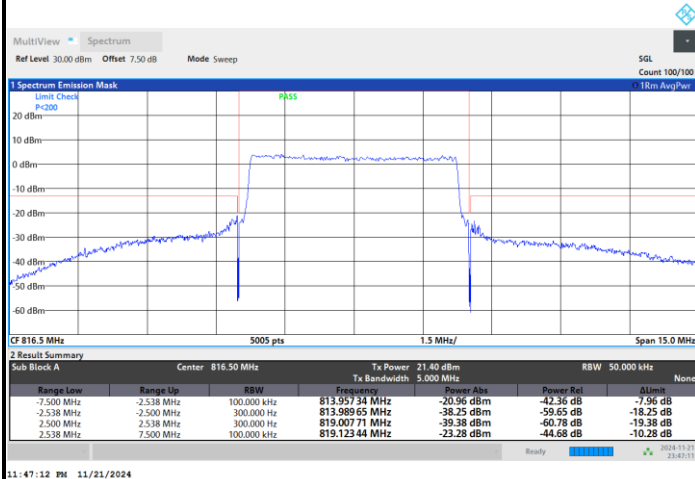


11:54:21 PM 11/21/2024



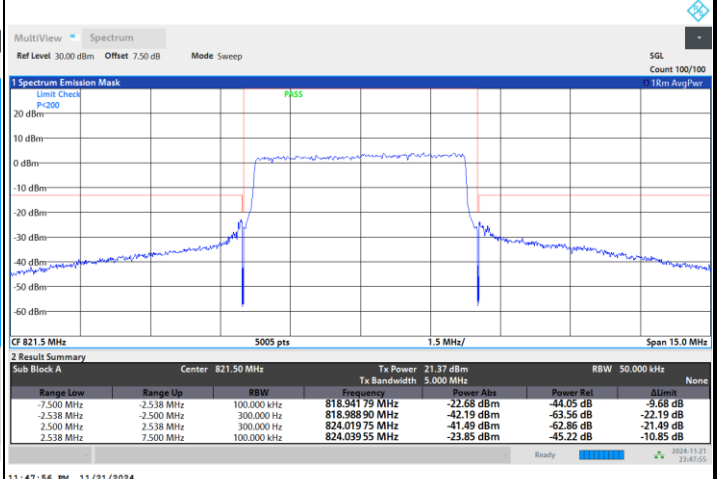
FR1 n26 / 5MHz / CP OFDM / QPSK / Full RB

Lowest MASK

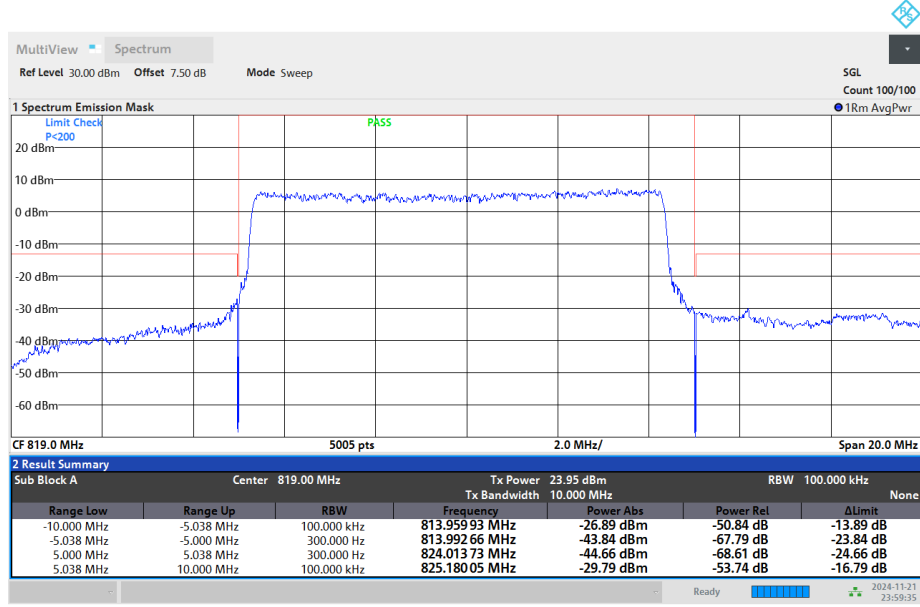


11:47:12 PM 11/21/2024

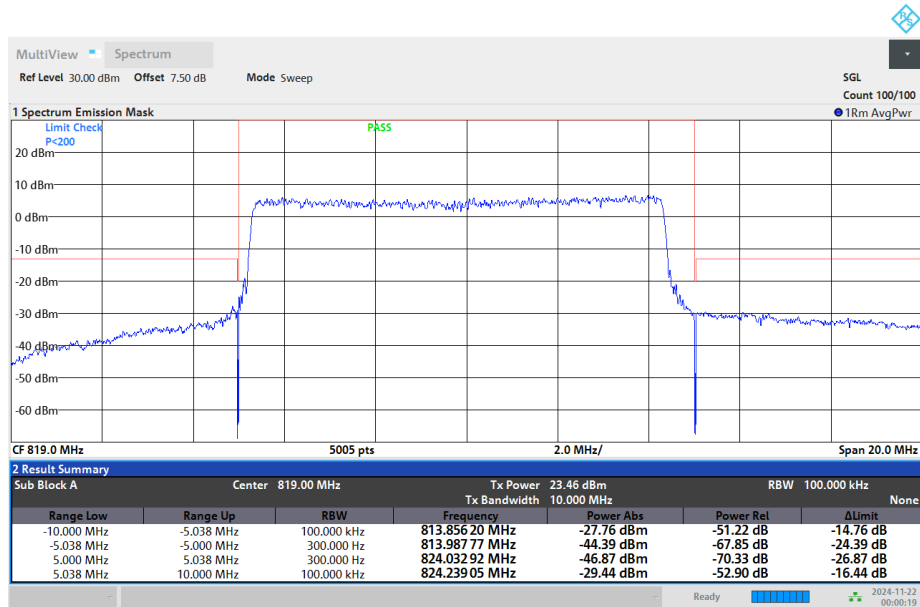
Highest MASK



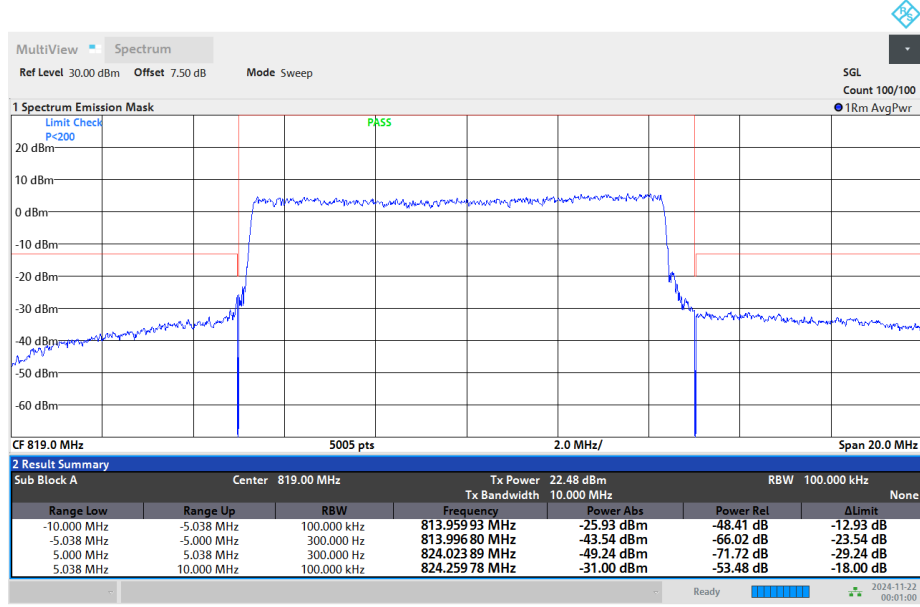
11:47:56 PM 11/21/2024

**FR1 n26 / 10MHz / DFT-s-OFDM / PI/2 BPSK****Middle MASK / Full RB**

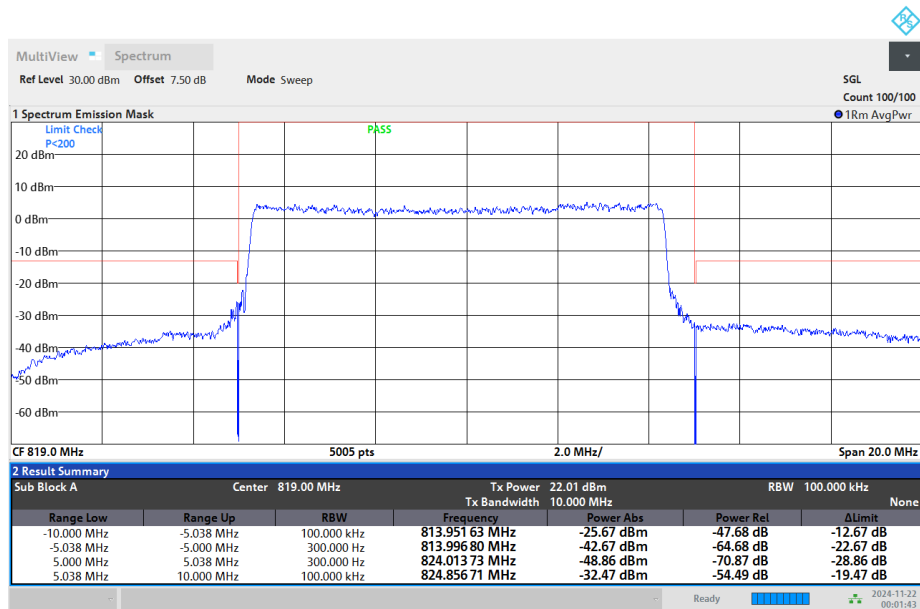
11:59:36 PM 11/21/2024

FR1 n26 / 10MHz / DFT-s-OFDM / QPSK**Lowest MASK / Full RB**

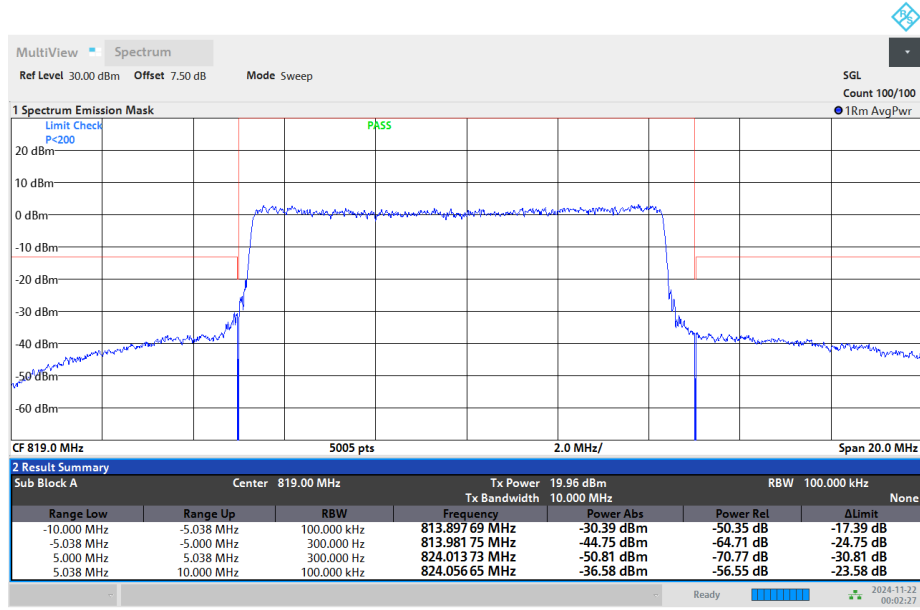
12:00:20 AM 11/22/2024

**FR1 n26 / 10MHz / DFT-s-OFDM / 16QAM****Middle MASK / Full RB**

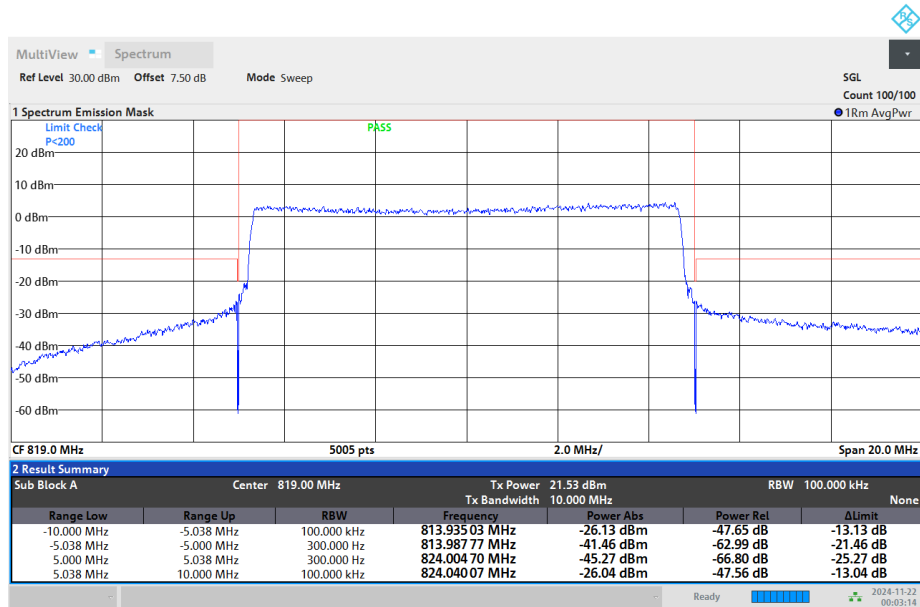
12:01:01 AM 11/22/2024

FR1 n26 / 10MHz / DFT-s-OFDM / 64QAM**Middle MASK / Full RB**

12:01:44 AM 11/22/2024

**FR1 n26 / 10MHz / DFT-s-OFDM / 256QAM****Middle MASK / Full RB**

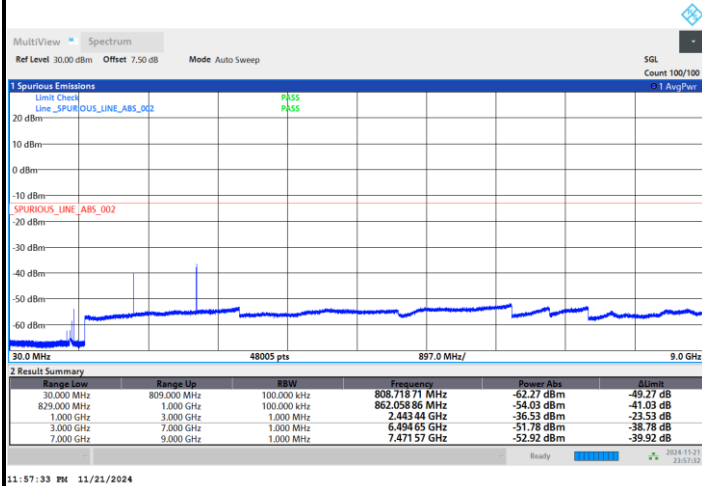
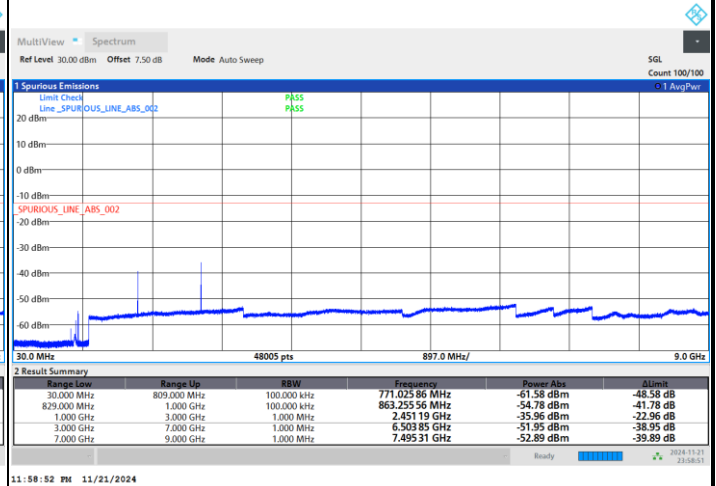
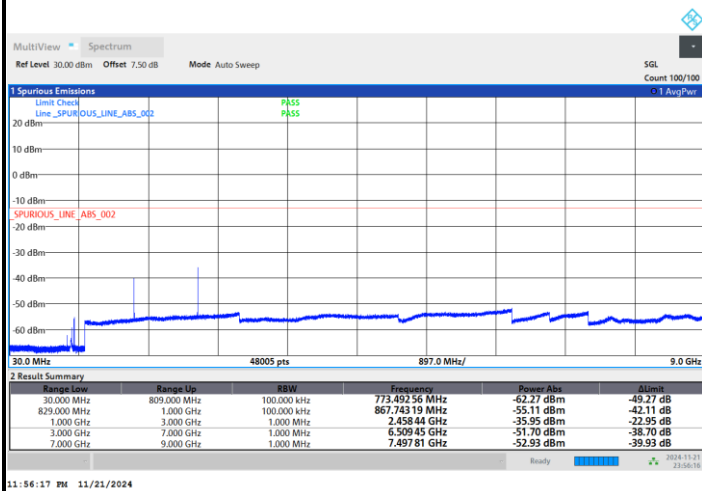
12:02:28 AM 11/22/2024

FR1 n26 / 10MHz / CP OFDM / QPSK / Full RB**Middle MASK**

12:03:14 AM 11/22/2024

**Emission masks – Out of band emissions**

FR1 n26 / 5MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel**Middle Channel****Highest Channel**

Frequency Stability

Test Conditions		FR1 n26 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5 ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0046	PASS
40	Normal Voltage	0.0038	
30	Normal Voltage	0.0034	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0025	
0	Normal Voltage	0.0022	
-10	Normal Voltage	0.0022	
-20	Normal Voltage	0.0019	
20	Maximum Voltage	0.0039	
20	Normal Voltage	0.0000	
20	Minimum Voltage	0.0008	

Note: Normal Voltage = 3.8 V. ; Minimum Voltage = 3.6 V. ; Maximum Voltage = 4.2 V.



Test Conditions		FR1 n26 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 5MHz	2.5 ppm
		Result	Result
50	Normal Voltage	0.0014	PASS
40	Normal Voltage	0.0035	
30	Normal Voltage	0.0029	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0013	
0	Normal Voltage	0.0002	
-10	Normal Voltage	0.0018	
-20	Normal Voltage	0.0024	
20	Maximum Voltage	0.0023	
20	Normal Voltage	0.0000	
20	Minimum Voltage	0.0004	

Note: Normal Voltage = 3.8 V. ; Minimum Voltage = 3.6 V. ; Maximum Voltage = 4.2 V.

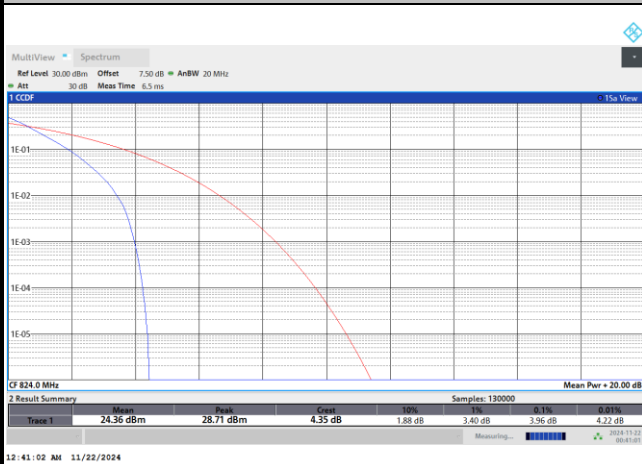
**FR1 n26 Part90s Straddle Channel****Peak-to-Average Ratio**

Mode	FR1 n26 / 20MHz / DFT-S OFDM				
Mod.	PI/2 BPSK	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
824MHz	3.96	4.76	5.78	6.10	PASS
Mode	FR1 n26 / 20MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
824MHz	6.76				PASS

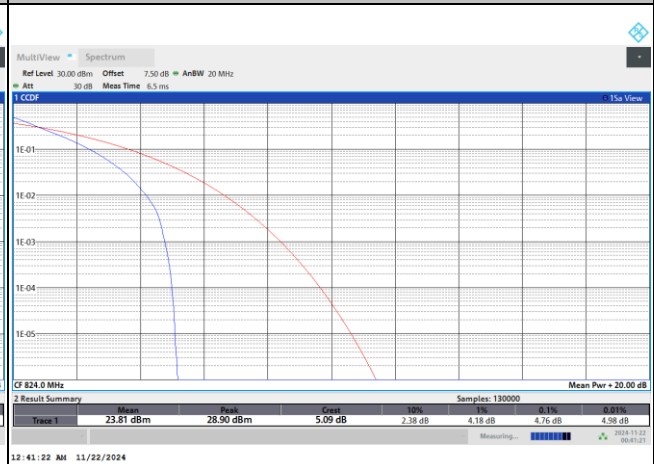


FR1 n26 / 20MHz / DFT-S OFDM / 824MHz / Full RB

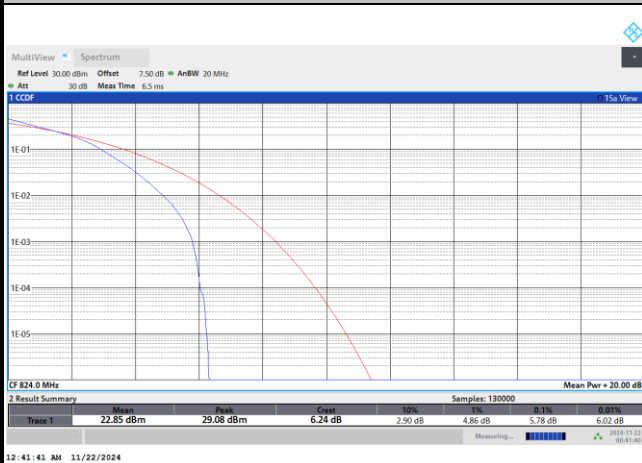
PI/2 BPSK



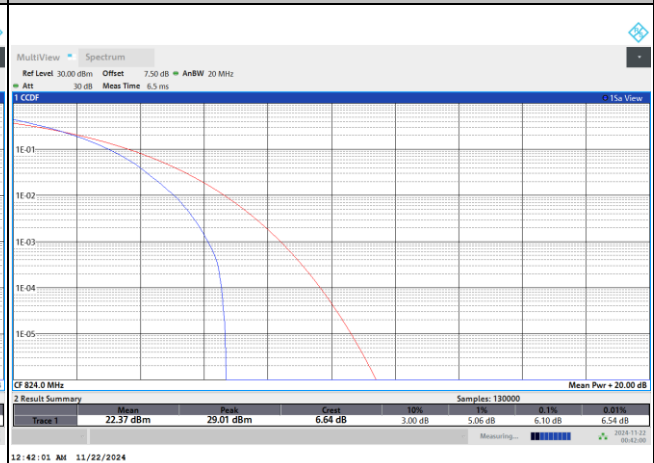
QPSK



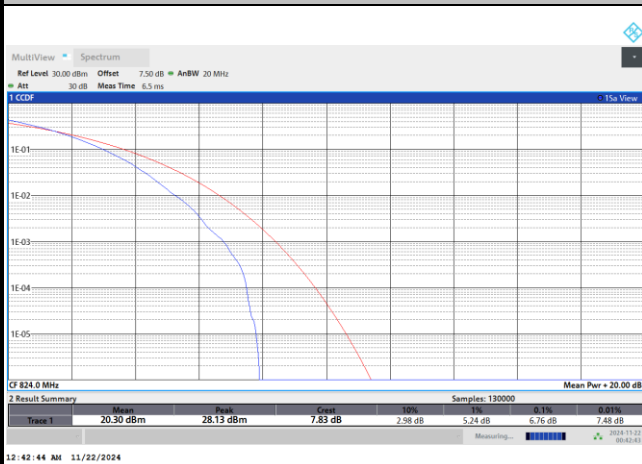
16QAM



64QAM



256QAM



**26dB Bandwidth**

Mode	FR1 n26 : 26dB BW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK		PI/2 BPSK	
824MHz	5.05		9.81		14.47		19.39	

Mode	FR1 n26 : 26dB BW(MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
824MHz	5.41	5.25	10.31	10.23	15.25	15.33	20.44	20.55
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
824MHz	5.27	5.24	10.16	10.25	15.27	15.43	20.39	20.47



MultiView Spectrum

Ref Level 30.00 dBm Att 30 dB Offset 7.50 dB RBW 100 kHz Mode Auto Sweep

1 Frequency Sweep 10% View

Span 40.0 MHz

CF 824.0 MHz 10001 pts 4.0 MHz

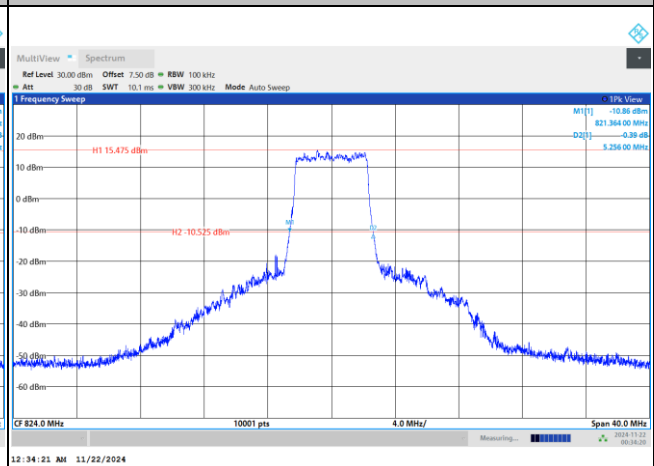
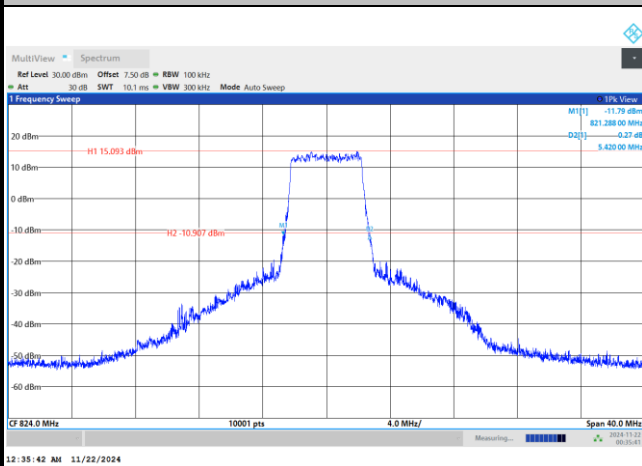
Measurement: 0.001122 (0.36 dB)

Markers:

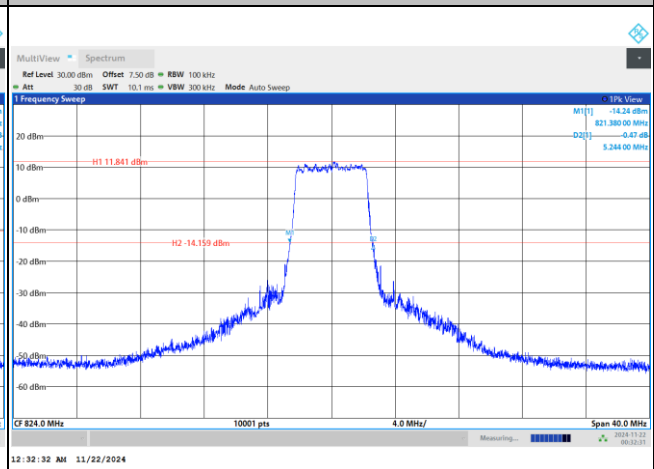
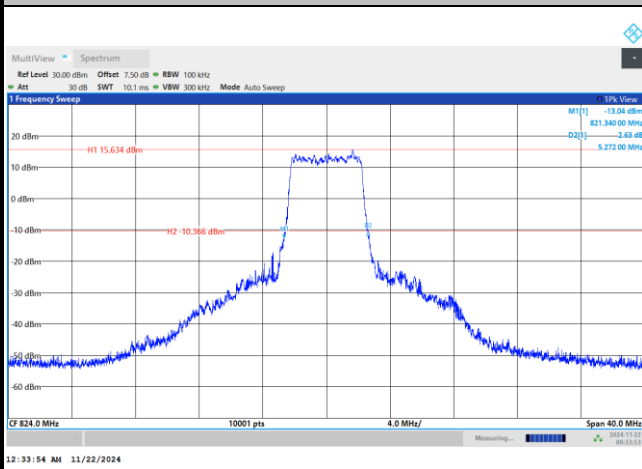
- M1: -7.76 dBm 821.520 00 MHz
- M2: -1.06 dBm 821.520 00 MHz
- M3: -1.06 dBm 821.520 00 MHz

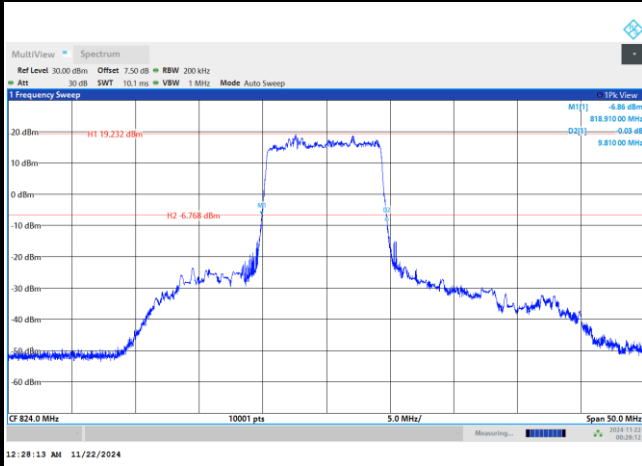
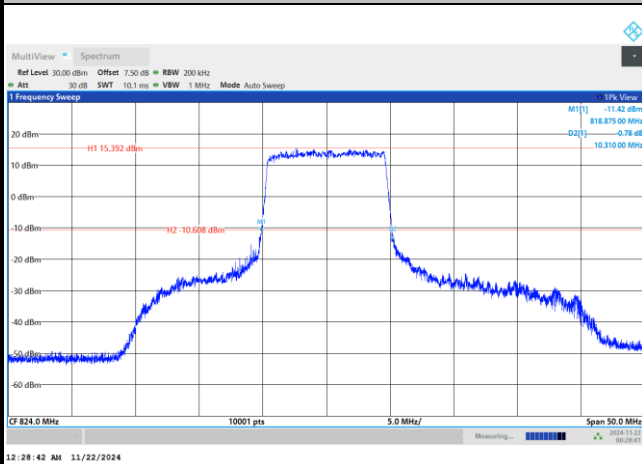
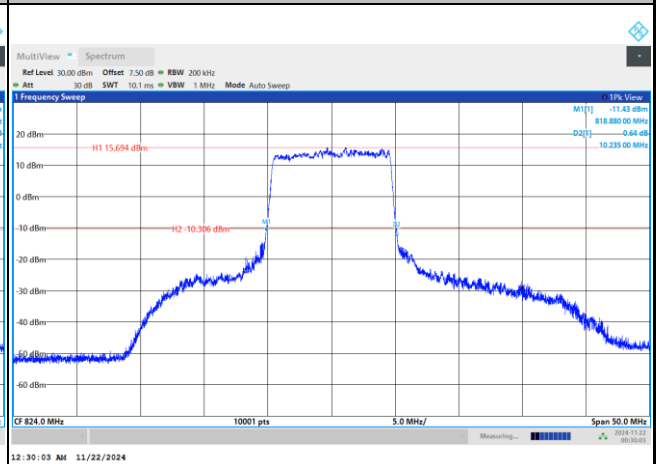
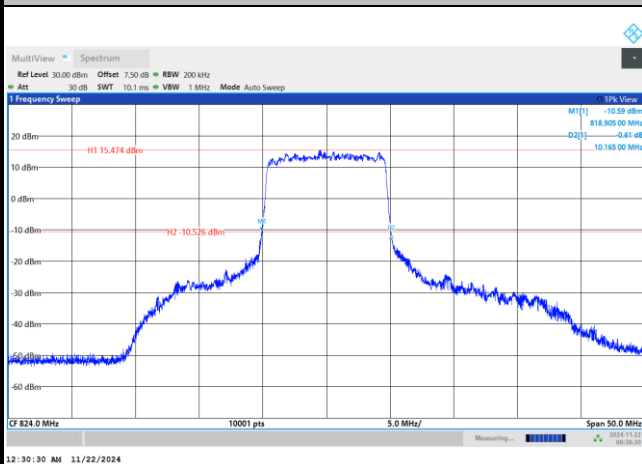
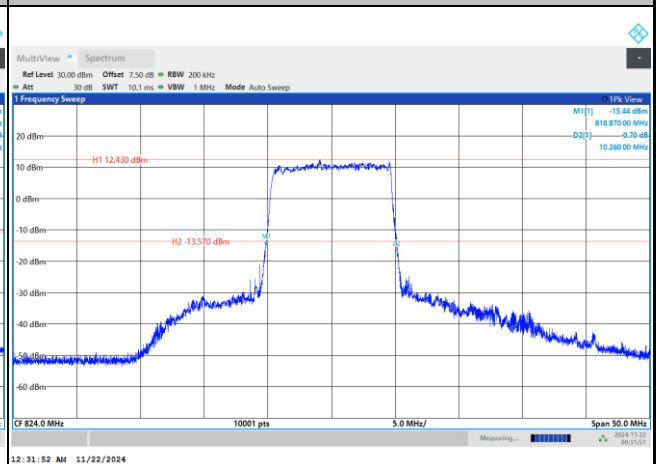
Grid lines: H1 19.359 dBm, H2 -6.641 dBm

16QAM



256QAM



**FR1 n26 / 10MHz / DFT-S OFDM / 824MHz / Full RB****PI/2 BPSK****FR1 n26 / 10MHz / CP OFDM / 824MHz / Full RB****QPSK****16QAM****64QAM****256QAM**



MultiView Spectrum

Ref Level 30.00 dBm Offset 7.50 dB RBW 300 kHz

Att 30 dB SWT 10.1 ms VBW 1 MHz Mode Auto Sweep

1 Frequency Sweep

10% View

M1 0.00 dBm
816.422 00 MHz

D2 0.00 dBm
14.472 00 MHz

H1 19.783 dBm

H2 4.217 dBm

M1

M2

CF 824.0 MHz 10001 pts 6.0 MHz/ Span 60.0 MHz

Measuring 2024-11-22 08:26:49

12:26:50 AM 11/22/2024

MultiView Spectrum

Ref Level 30.00 dBm Offset 7.50 dB RBW 300 kHz

Att 30 dB SWT 10.1 ms VBW 1 MHz Mode Auto Sweep

1 Frequency Sweep

10% View

M1[1] -0.00 dBm
 D2[1] -0.07 dBm
 816.366 00 MHz
 15.288 00 MHz

H1 15.573 dBm
 H2 -10.427 dBm

20 dBm
 10 dBm
 0 dBm
 -10 dBm
 -20 dBm
 -30 dBm
 -40 dBm
 -50 dBm
 -60 dBm

C 824.0 MHz 10001 pts 6.0 MHz/ Span 60.0 MHz

Measuring 11/22/2024 12:25:56 AM

MultiView Spectrum

Ref Level 30.00 dBm Offset 7.50 dB RBW 300 kHz

Att 30 dB SWT 10.1 ms VBW 1 MHz Mode Auto Sweep

1 Frequency Sweep

10% View

M1 [1] -13.77 dBm
M2 [1] 816.300 00 MHz
D2 [1] -3.28 dB
15.276 00 MHz

H1 15.622 dBm

H2 10.378 dBm

CF 824.0 MHz 10001 pts 6.0 MHz/ Span 60.0 MHz

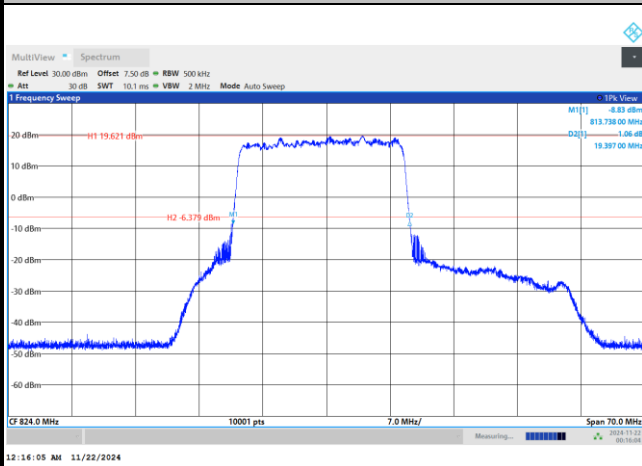
Measuring...

11:24:06 AM 11/22/2014



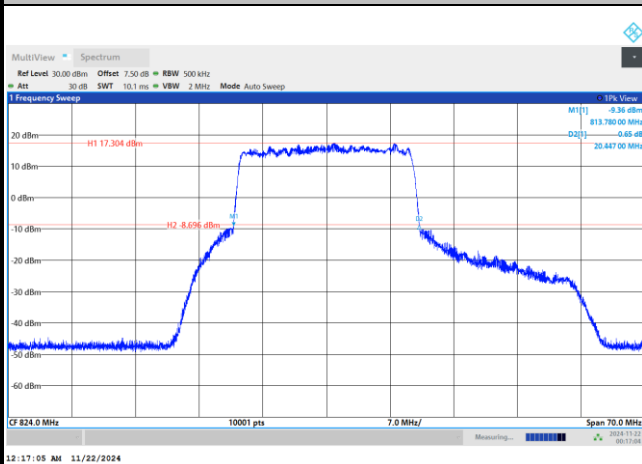
FR1 n26 / 20MHz / DFT-S OFDM / 824MHz / Full RB

PI/2 BPSK

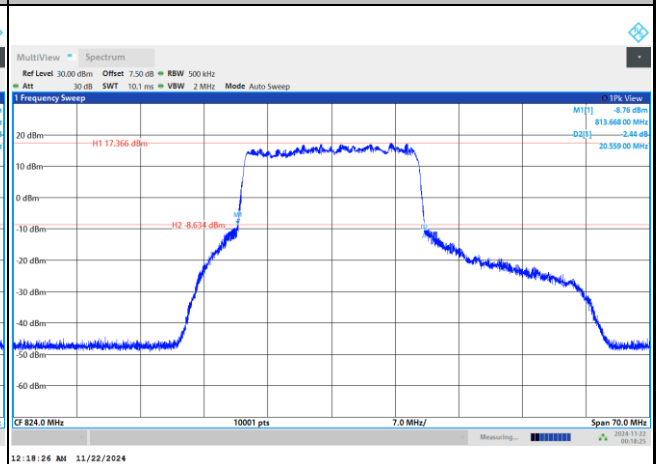


FR1 n26 / 20MHz / CP OFDM / 824MHz / Full RB

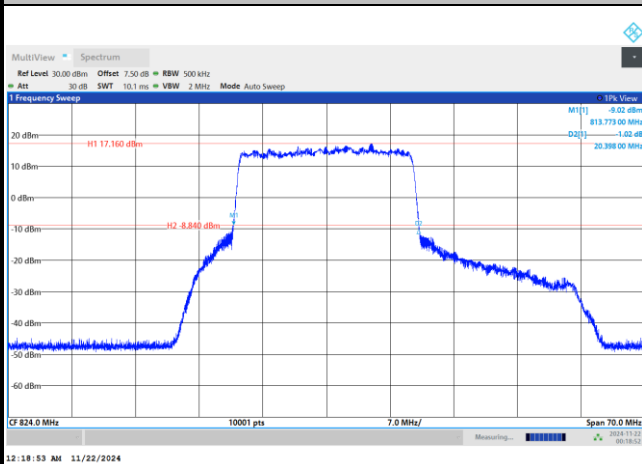
QPSK



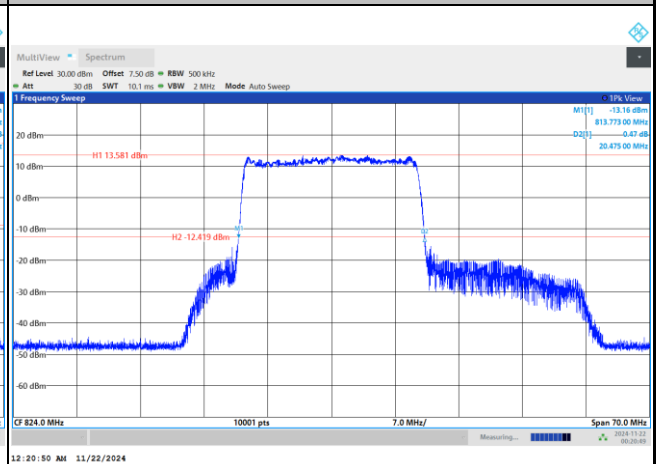
16QAM



64QAM



256QAM



**Occupied Bandwidth**

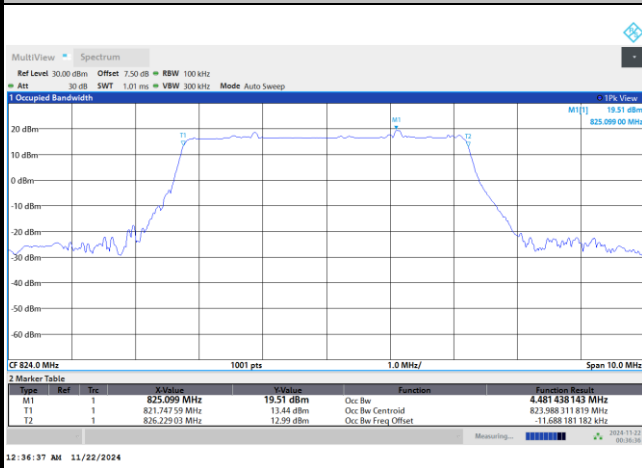
Mode	FR1 n26 : 99%OBW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK		PI/2 BPSK	
824MHz	4.48		8.96		13.44		17.99	

Mode	FR1 n26 : 99%OBW (MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
824MHz	4.53	4.54	9.30	9.31	14.11	14.14	19.00	19.05
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
824MHz	4.52	4.51	9.28	9.33	14.18	14.09	19.02	19.11



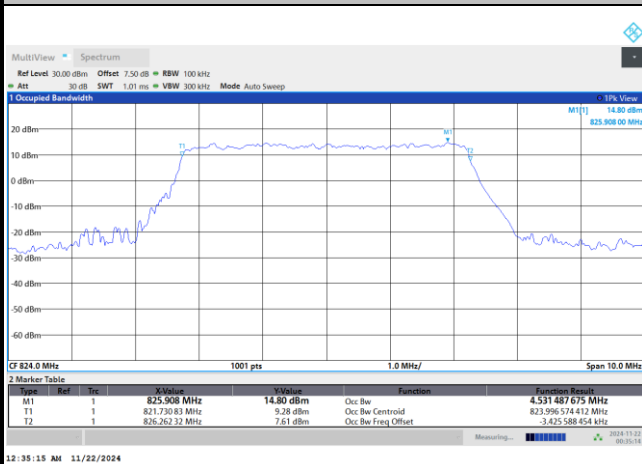
FR1 n26 / 5MHz / DFT-S OFDM / 824MHz / Full RB

PI/2 BPSK

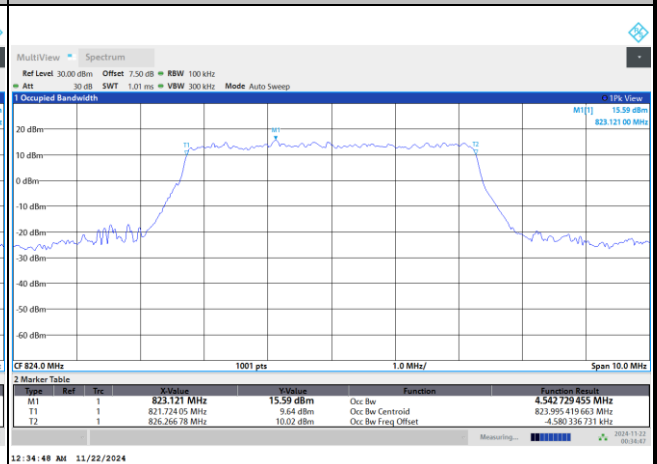


FR1 n26 / 5MHz / CP OFDM / 824MHz / Full RB

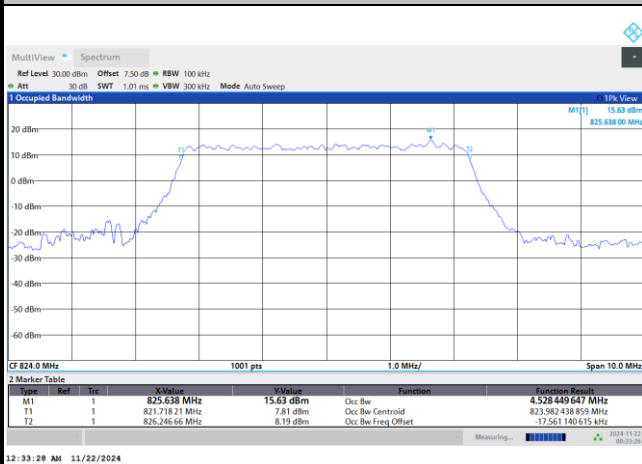
QPSK



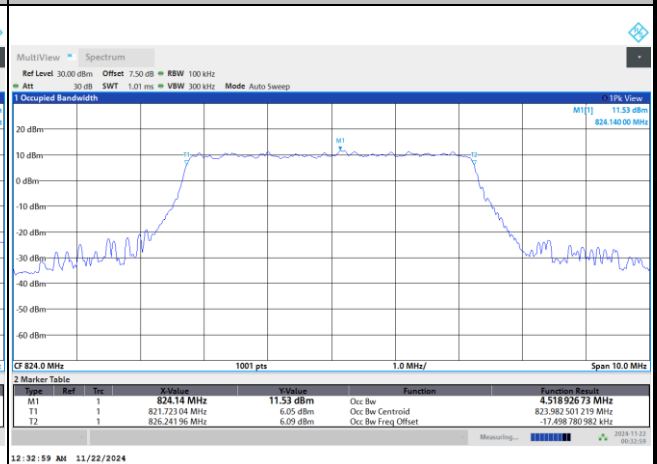
16QAM



64QAM



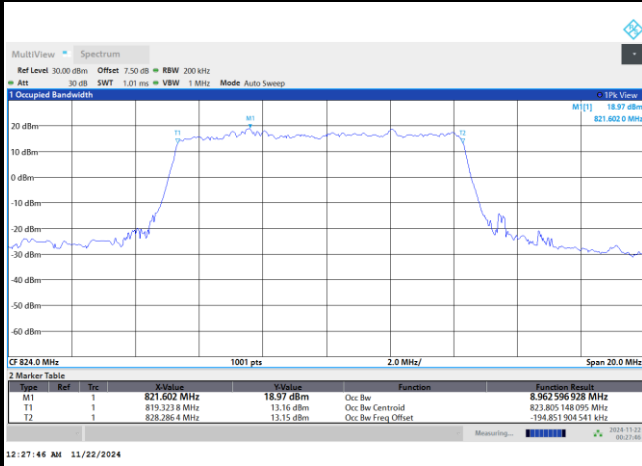
256QAM





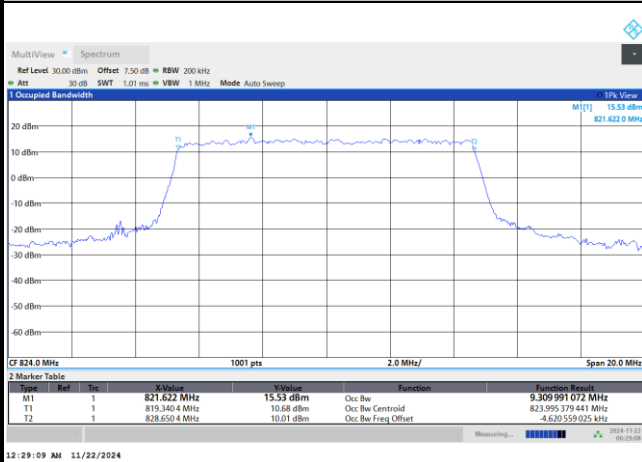
FR1 n26 / 10MHz / DFT-S OFDM / 824MHz / Full RB

PI/2 BPSK

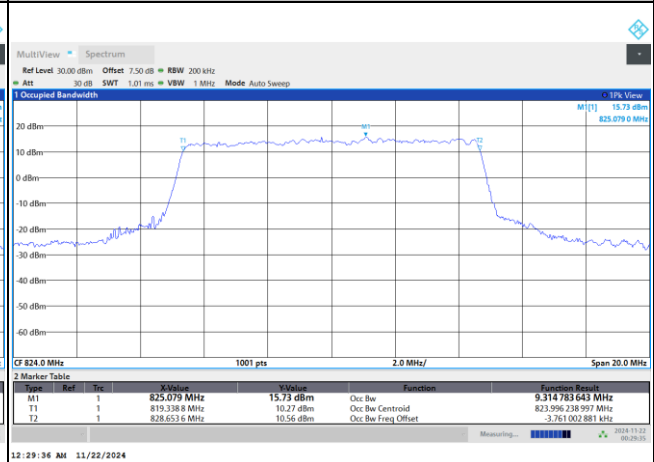


FR1 n26 / 10MHz / CP OFDM / 824MHz / Full RB

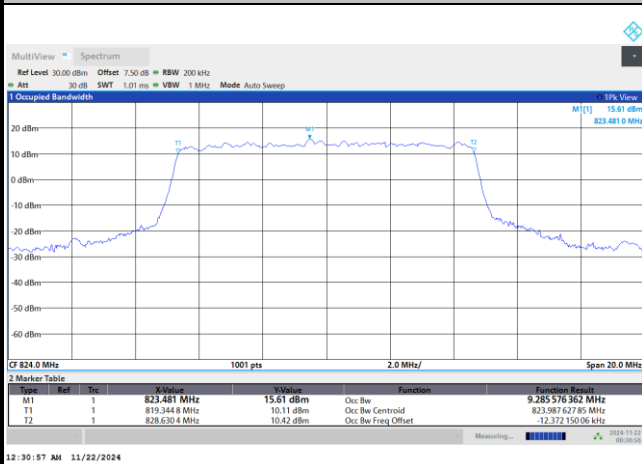
QPSK



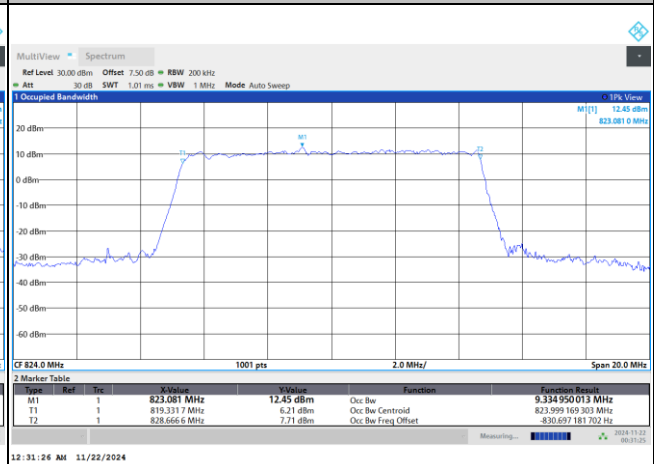
16QAM



64QAM

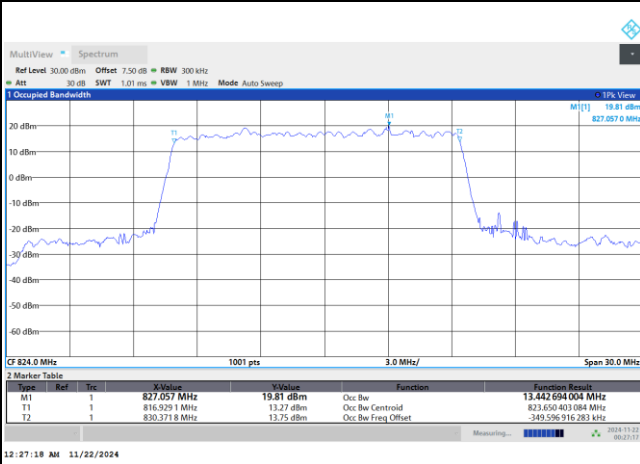


256QAM



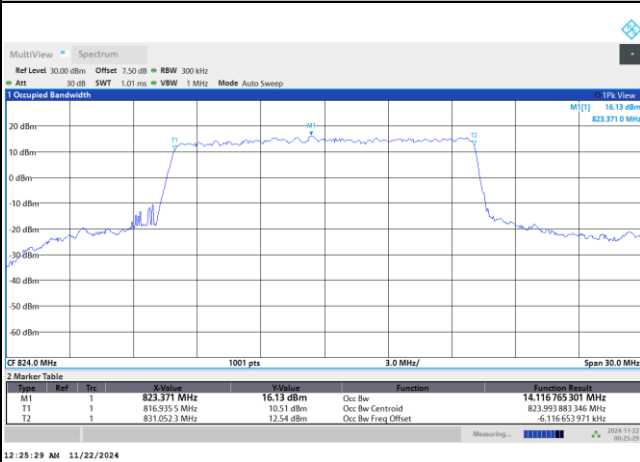
FR1 n26 / 15MHz / DFT-S OFDM / 824MHz / Full RB

PI/2 BPSK

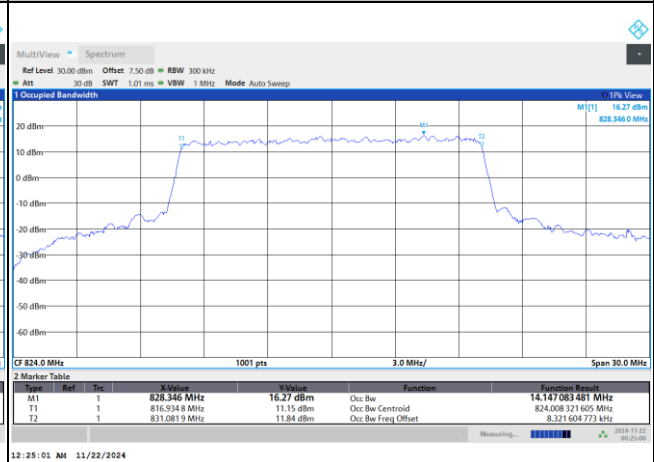


FR1 n26 / 15MHz / CP OFDM / 824MHz / Full RB

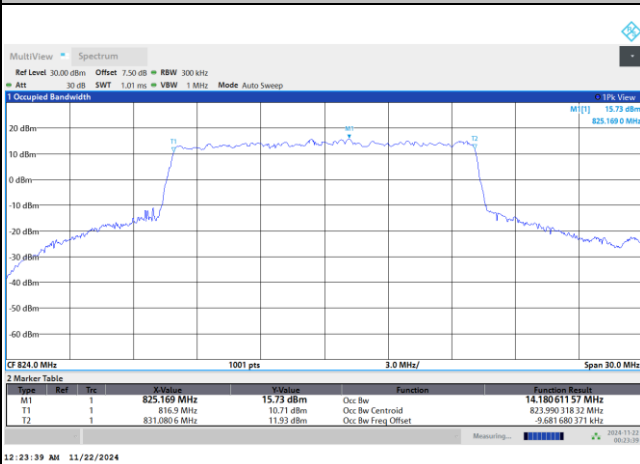
QPSK



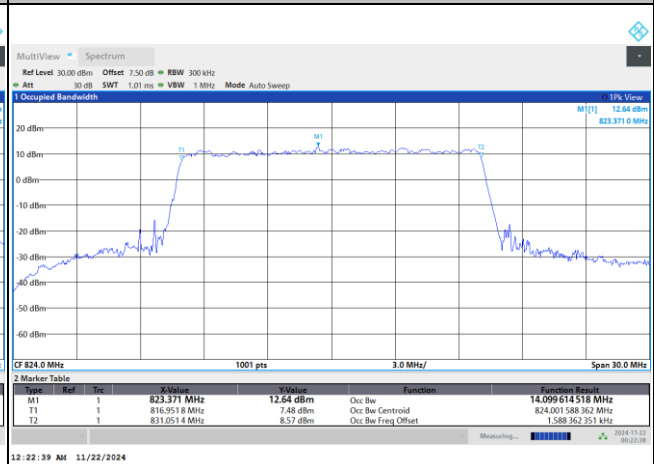
16QAM



64QAM



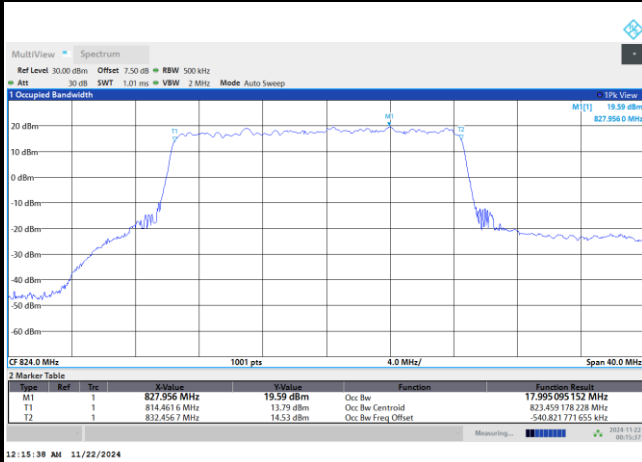
256QAM





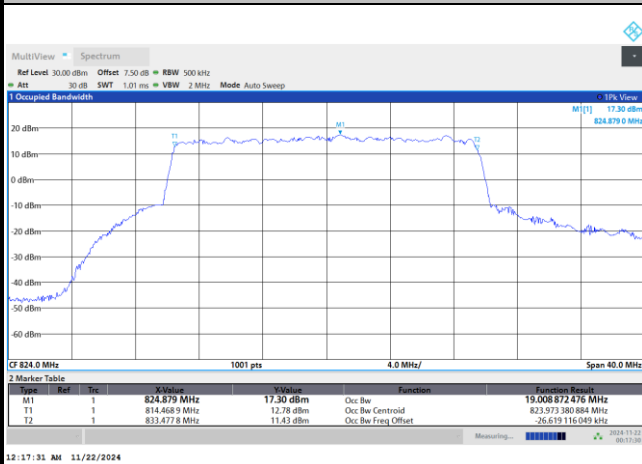
FR1 n26 / 20MHz / DFT-S OFDM / 824MHz / Full RB

PI/2 BPSK

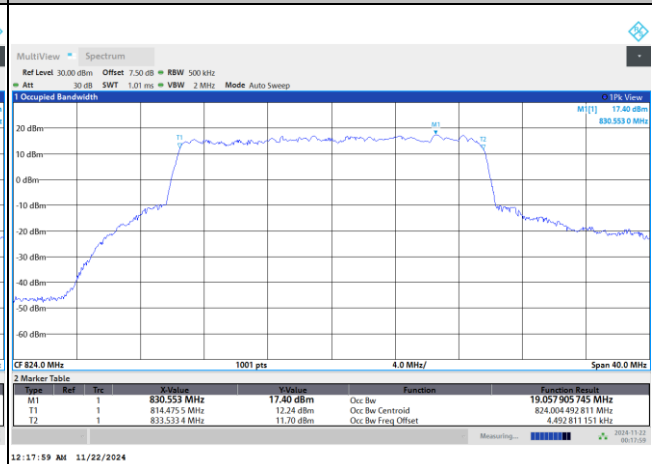


FR1 n26 / 20MHz / CP OFDM / 824MHz / Full RB

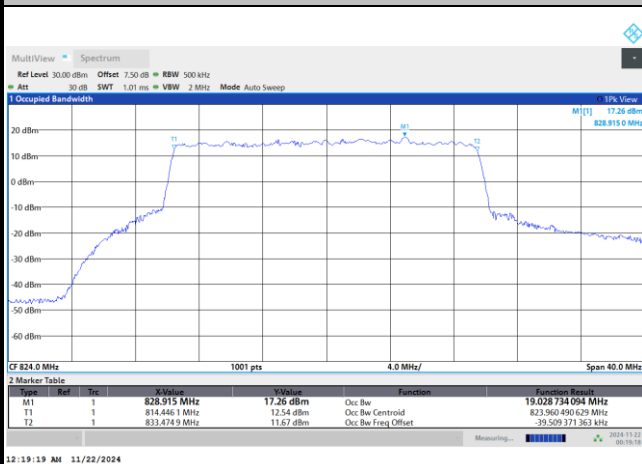
QPSK



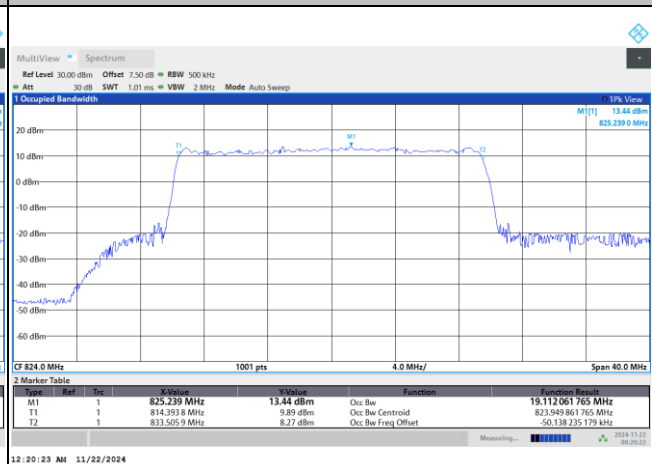
16QAM



64QAM



256QAM



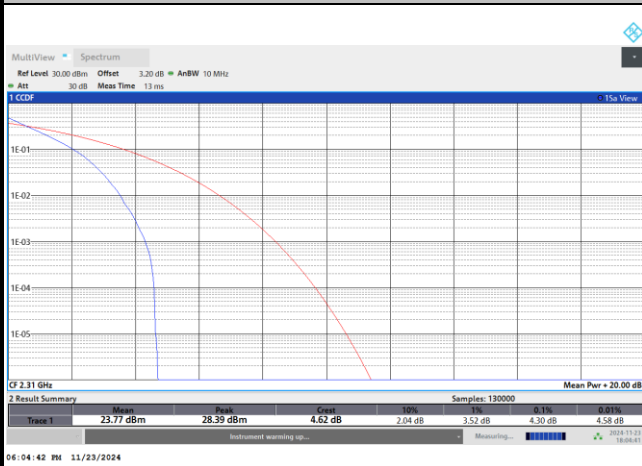
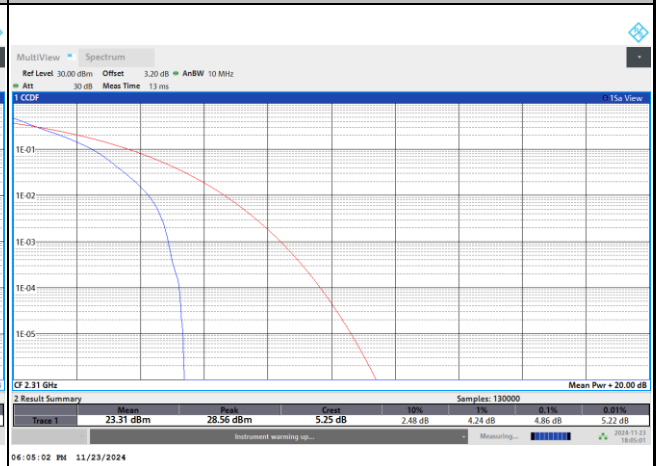
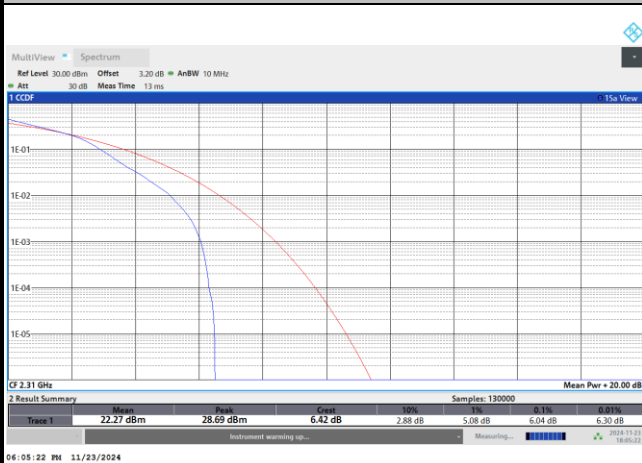
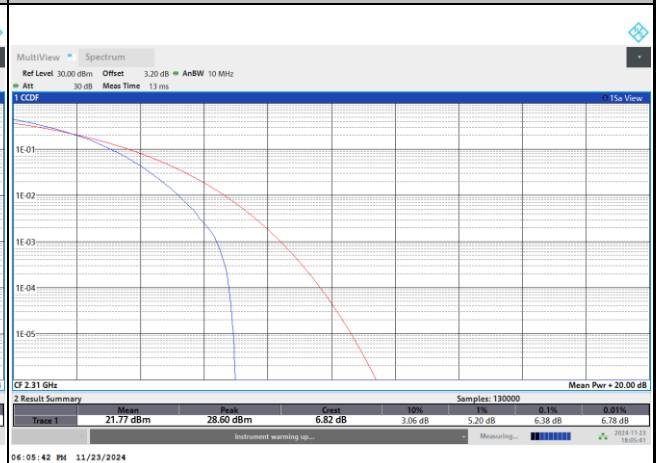
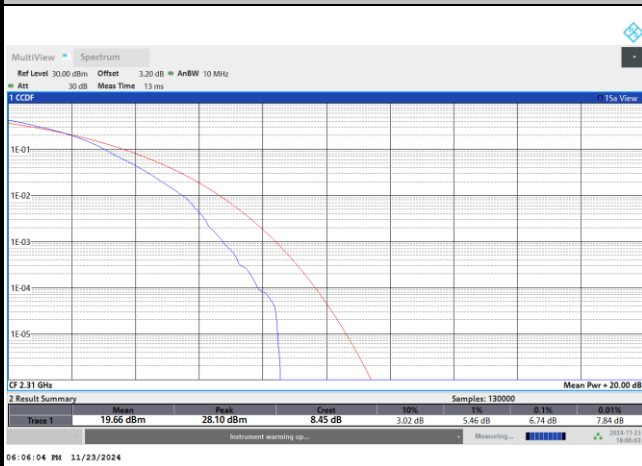
Frequency Stability

Test Conditions		FR1 n26 (BPSK) / 824MHz	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	2.5 ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0013	PASS
40	Normal Voltage	0.0027	
30	Normal Voltage	0.0016	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0012	
0	Normal Voltage	0.0024	
-10	Normal Voltage	0.0019	
-20	Normal Voltage	0.0003	
20	Maximum Voltage	0.0009	
20	Normal Voltage	0.0000	
20	Minimum Voltage	0.0023	

Note: Normal Voltage = 3.8 V. ; Minimum Voltage = 3.6 V. ; Maximum Voltage = 4.2 V.

**FR1 n30****Peak-to-Average Ratio**

Mode	FR1 n30 / 10MHz / DFT-S OFDM				
Mod.	PI/2 BPSK	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.30	4.86	6.04	6.38	PASS
Mode	FR1 n30 / 10MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.74				PASS

**FR1 n30 / 10MHz / DFT-S OFDM / Middle Channel / Full RB****PI/2 BPSK****QPSK****16QAM****64QAM****256QAM**

**26dB Bandwidth**

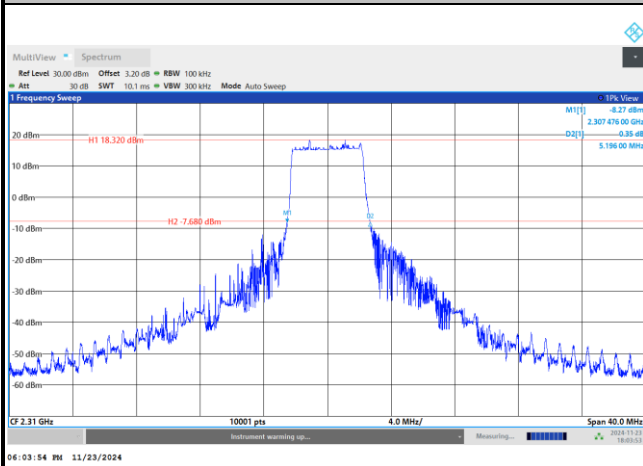
Mode	FR1 n30 : 26dB BW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz					
Mod.	PI/2 BPSK		PI/2 BPSK					
Middle CH	5.19		11.07					

Mode	FR1 n30 : 26dB BW(MHz) / CP OFDM							
BW	5MHz		10MHz					
Mod.	QPSK	16QAM	QPSK	16QAM				
Middle CH	6.08	6.29	11.81	11.00				
Mod.	64QAM	256QAM	64QAM	256QAM				
Middle CH	7.52	5.66	11.68	10.53				



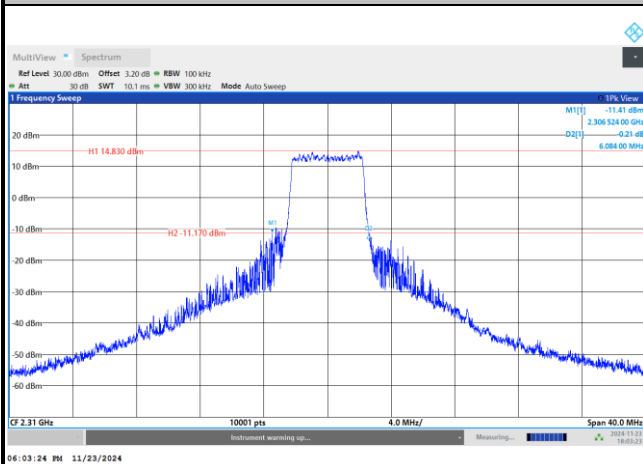
FR1 n30 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

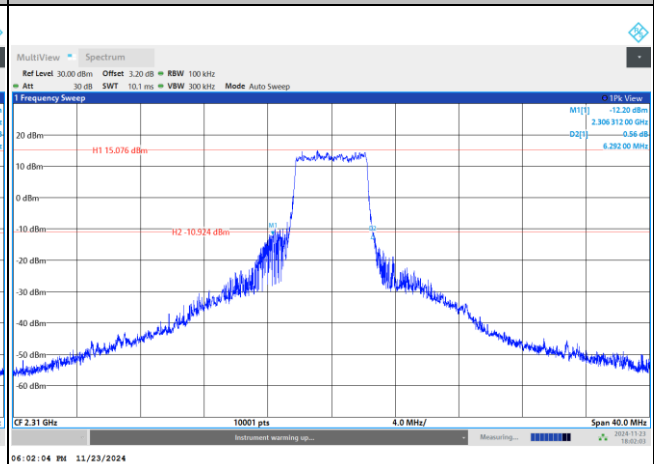


FR1 n30 / 5MHz / CP OFDM / Middle Channel / Full RB

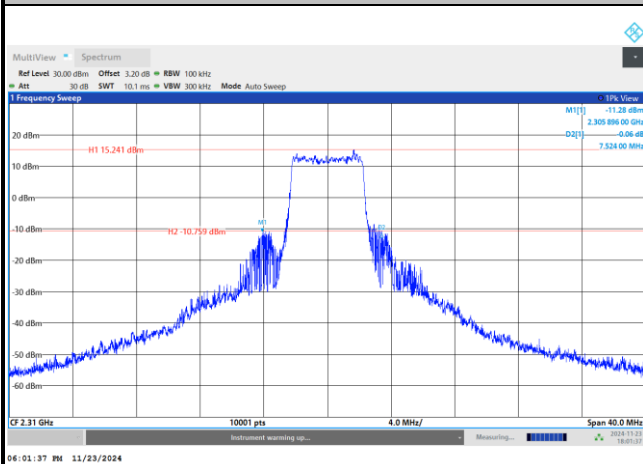
QPSK



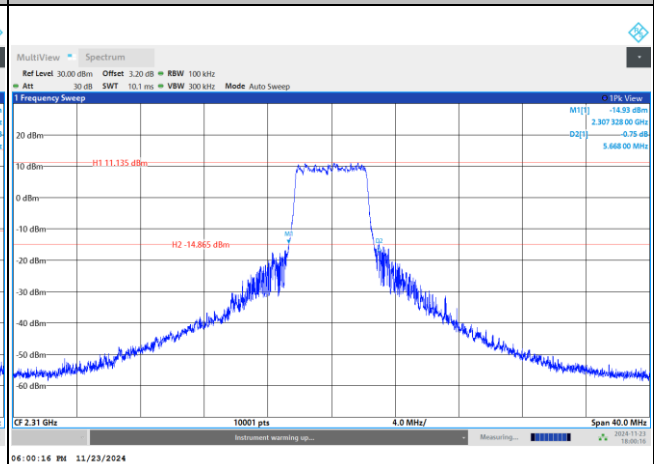
16QAM



64QAM



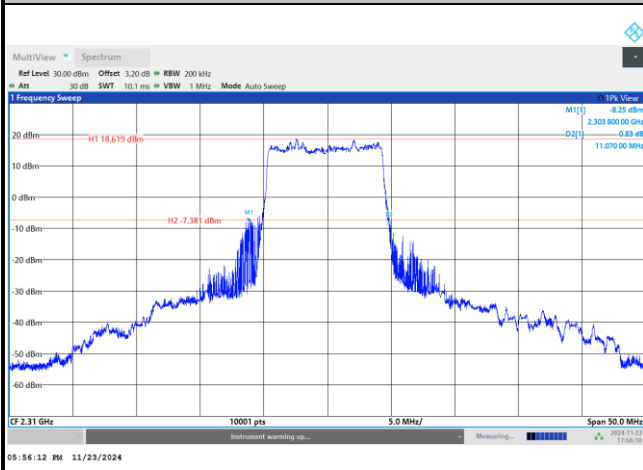
256QAM





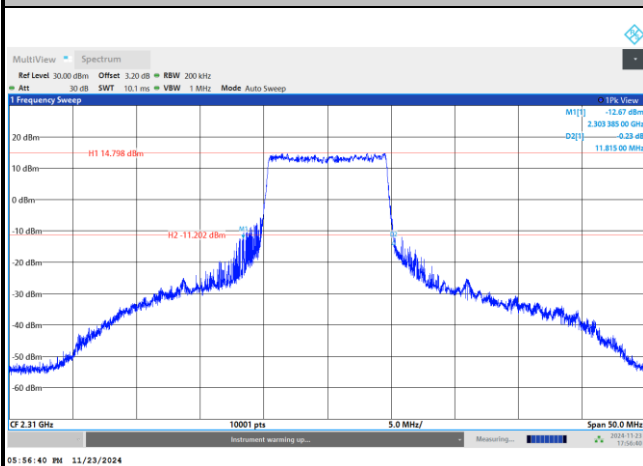
FR1 n30 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

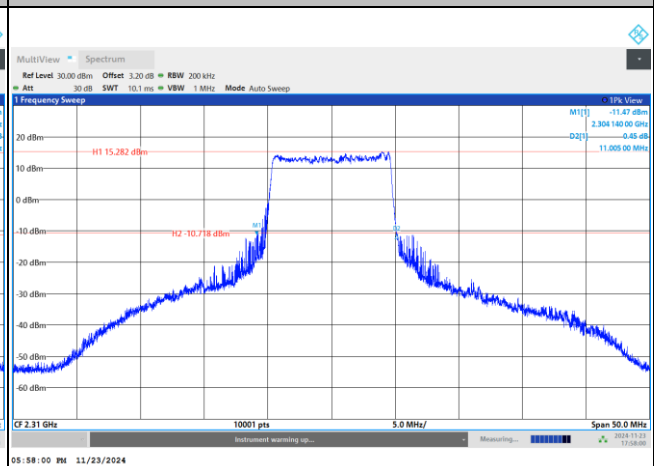


FR1 n30 / 10MHz / CP OFDM / Middle Channel / Full RB

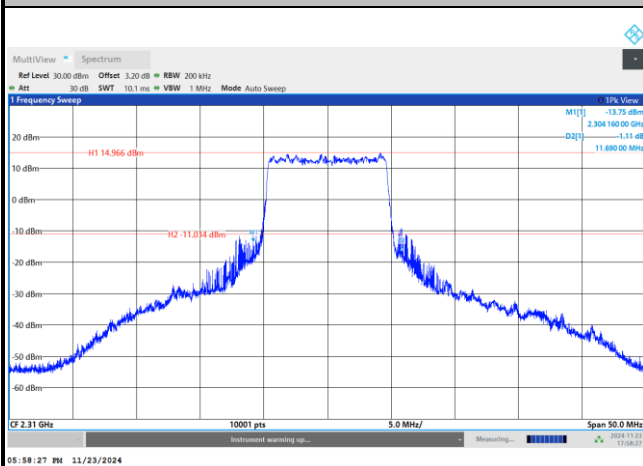
QPSK



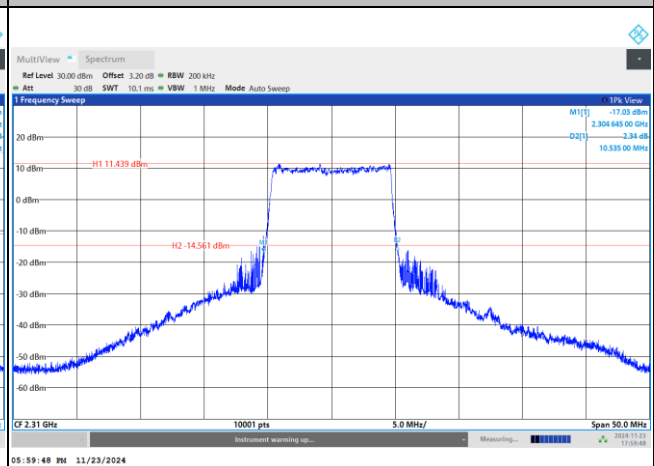
16QAM



64QAM



256QAM



**Occupied Bandwidth**

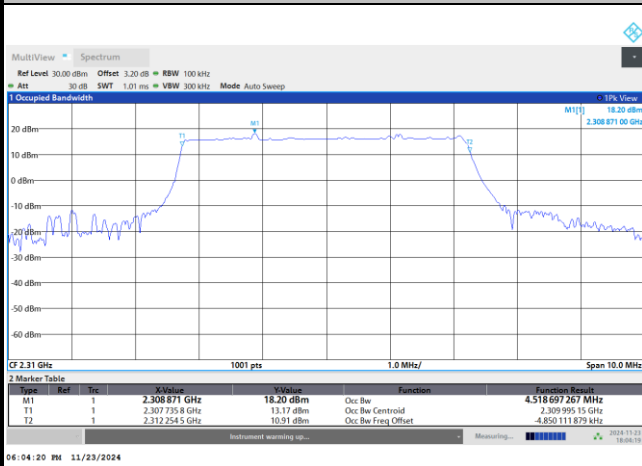
Mode	FR1 n30 : 99%OBW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz					
Mod.	PI/2 BPSK		PI/2 BPSK					
Middle CH	4.51		9.02					

Mode	FR1 n30 : 99%OBW (MHz) / CP OFDM							
BW	5MHz		10MHz					
Mod.	QPSK	16QAM	QPSK	16QAM				
Middle CH	4.54	4.55	9.37	9.38				
Mod.	64QAM	256QAM	64QAM	256QAM				
Middle CH	4.55	4.53	9.36	9.39				



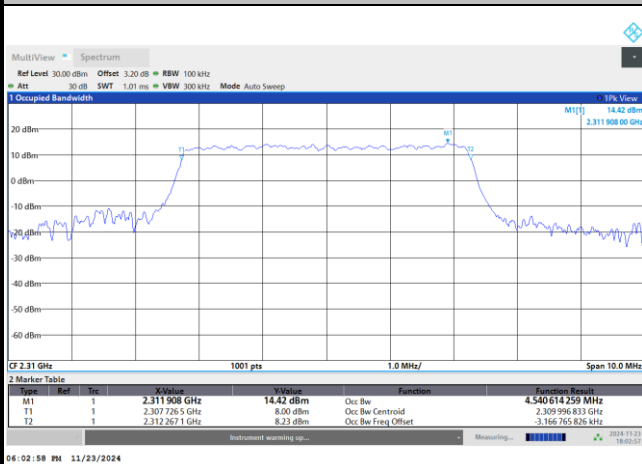
FR1 n30 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

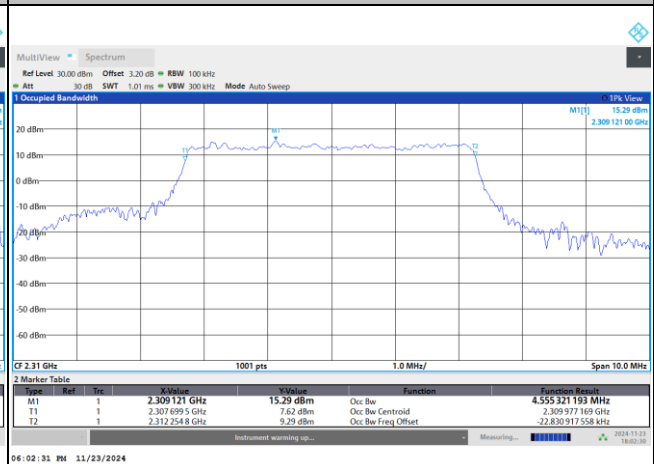


FR1 n30 / 5MHz / CP OFDM / Middle Channel / Full RB

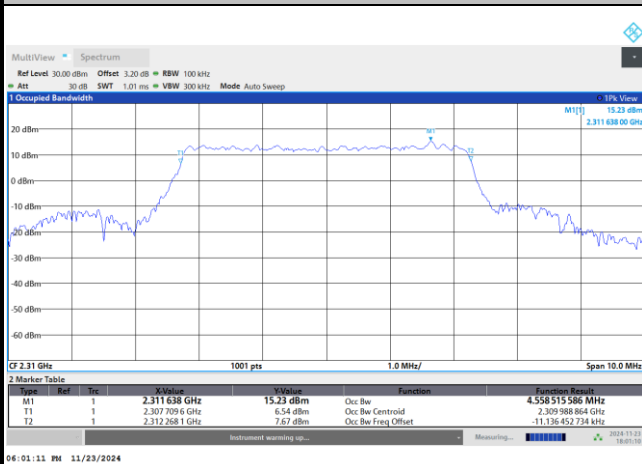
QPSK



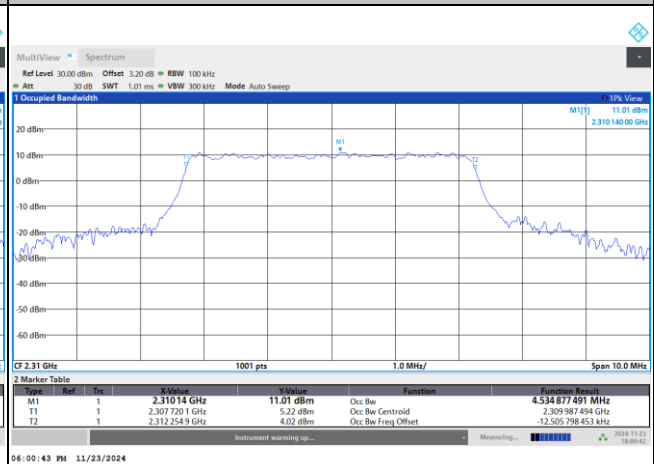
16QAM



64QAM



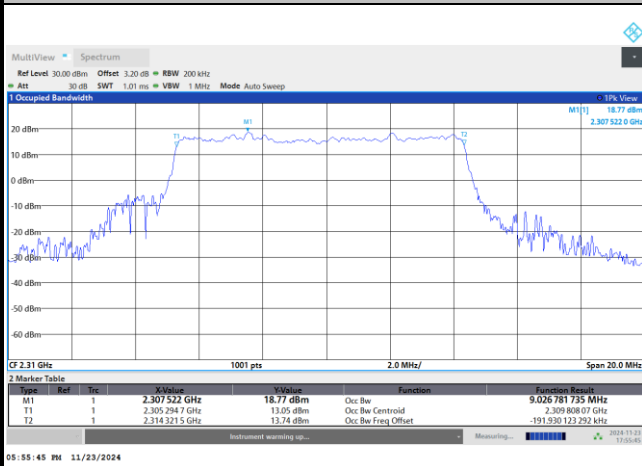
256QAM





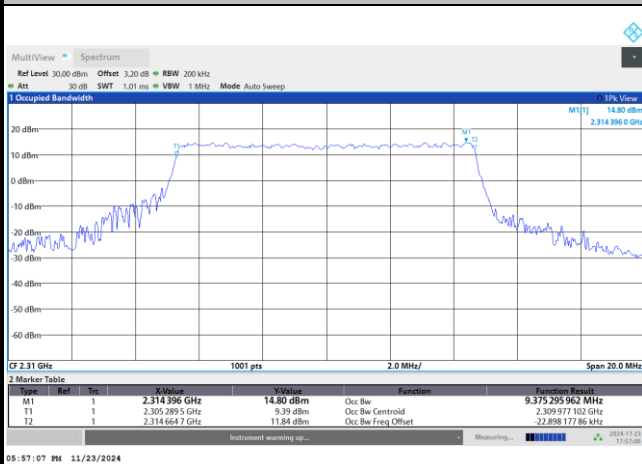
FR1 n30 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

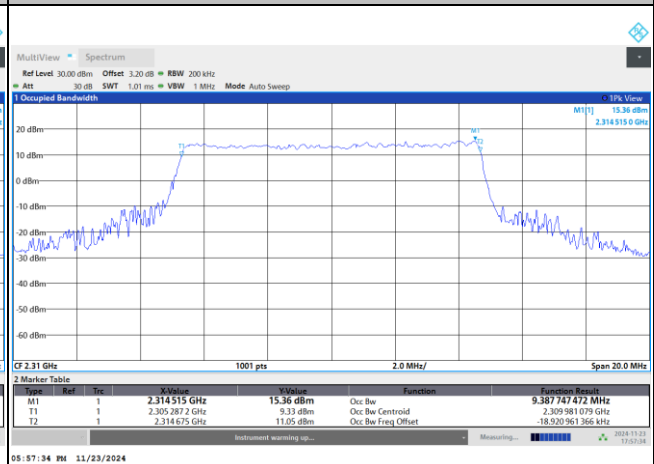


FR1 n30 / 10MHz / CP OFDM / Middle Channel / Full RB

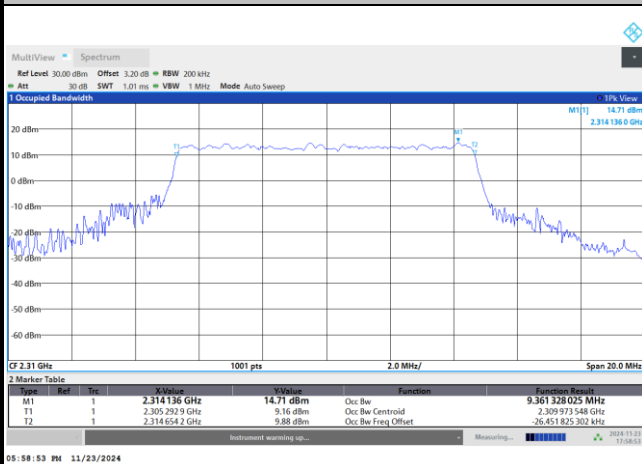
QPSK



16QAM



64QAM



256QAM

