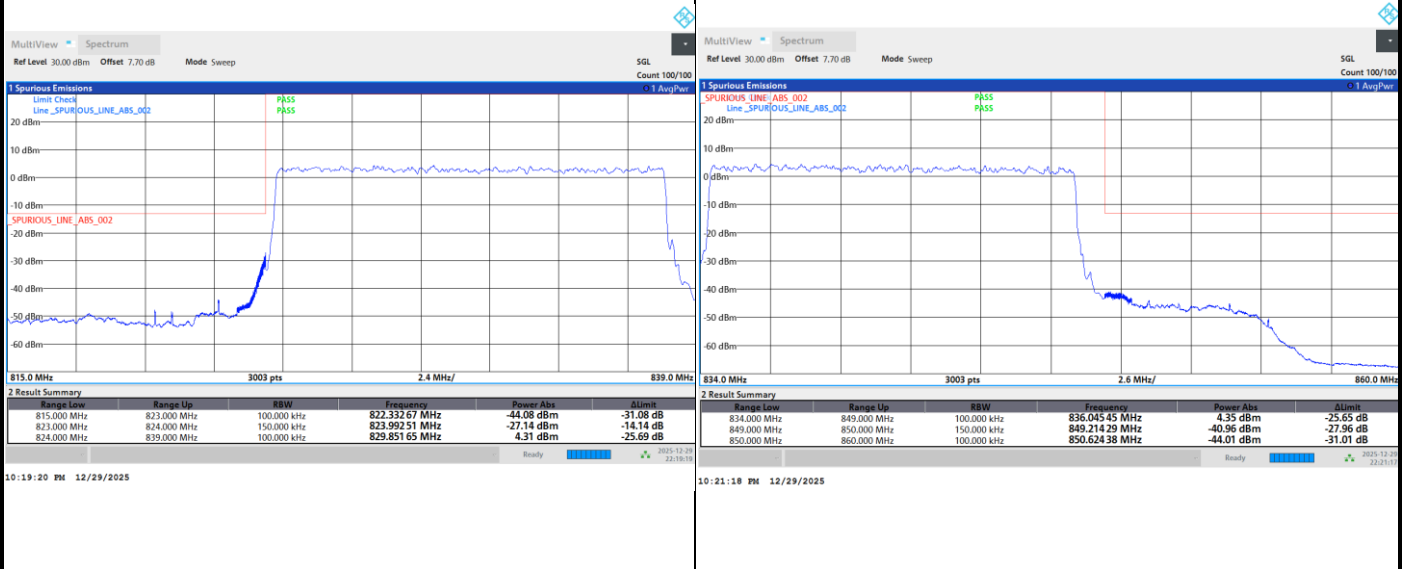




FR1 n5 / 15MHz / DFT-s-OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

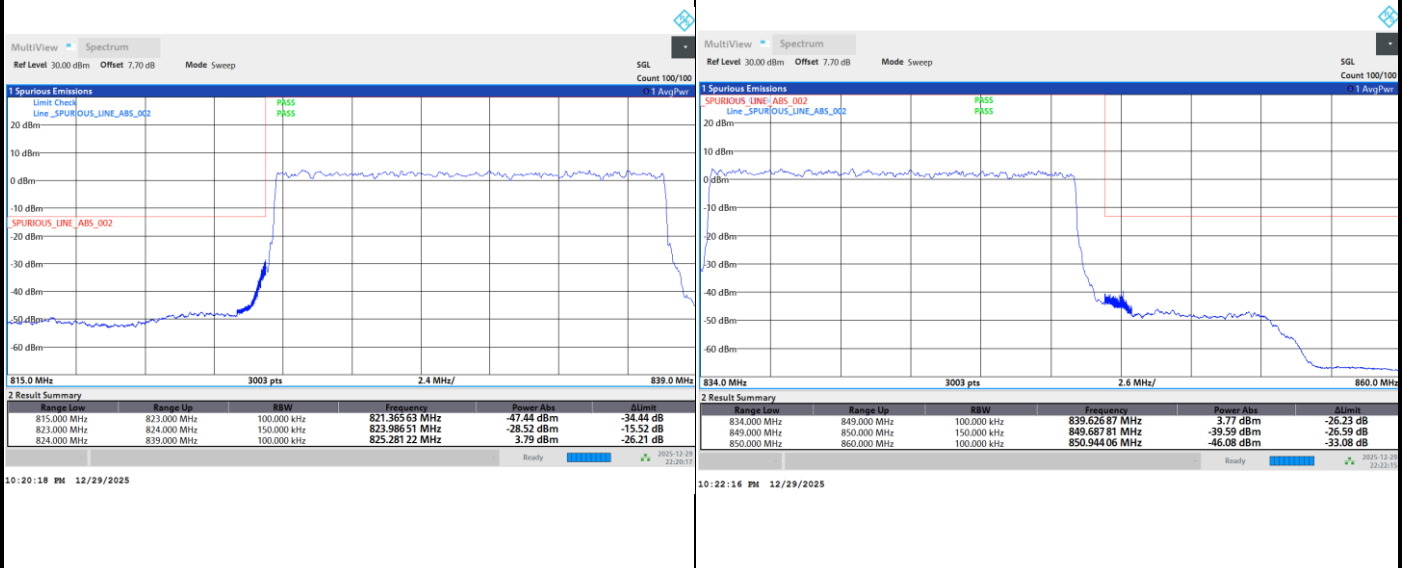
Highest Band Edge



FR1 n5 / 15MHz / DFT-s-OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge

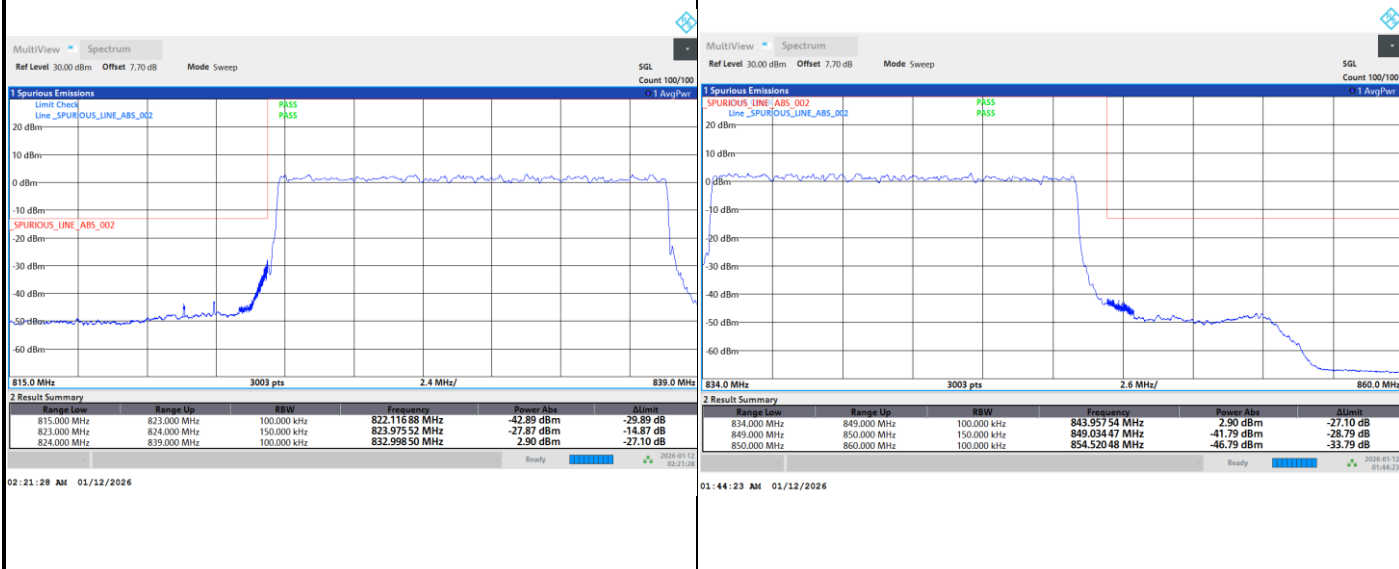




FR1 n5 / 15MHz / DFT-s-OFDM / 16QAM / Full RB

Lowest Band Edge

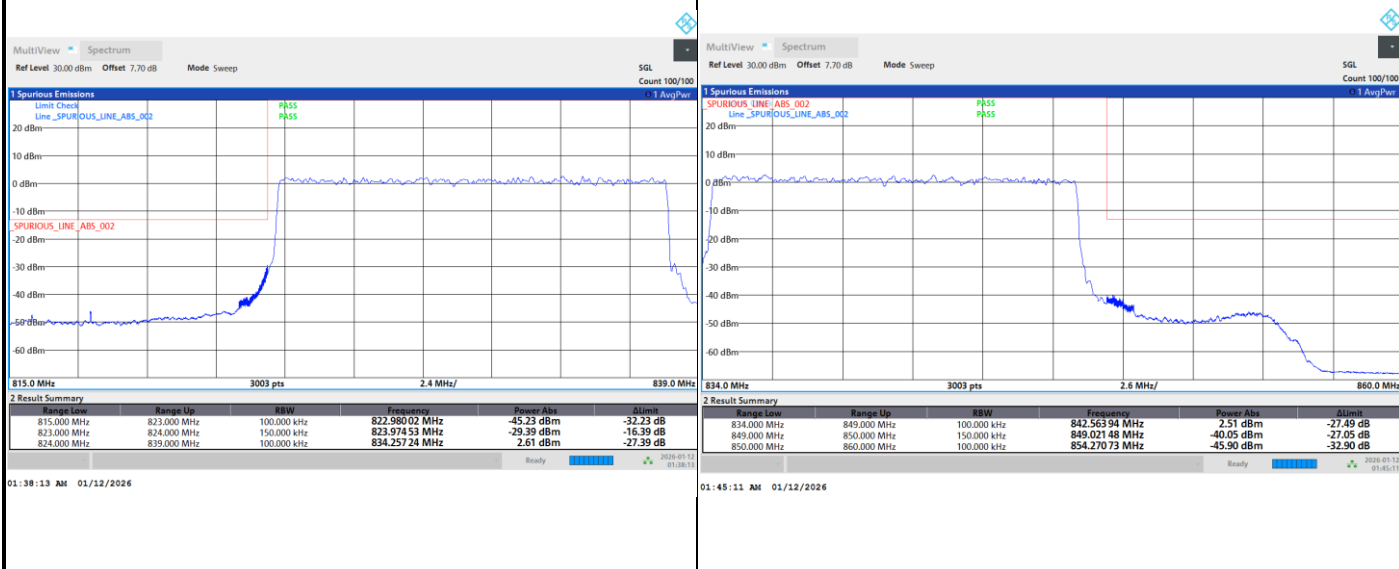
Highest Band Edge



FR1 n5 / 15MHz / DFT-s-OFDM / 64QAM / Full RB

Lowest Band Edge

Highest Band Edge

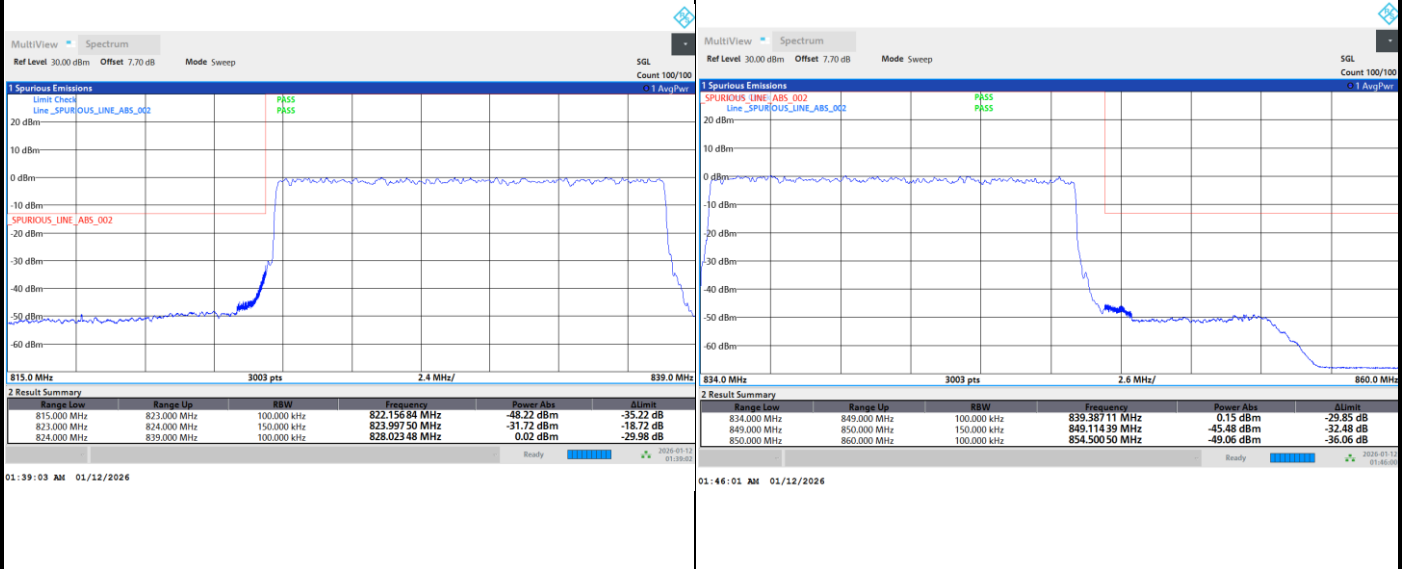




FR1 n5 / 15MHz / DFT-s-OFDM / 256QAM / Full RB

Lowest Band Edge

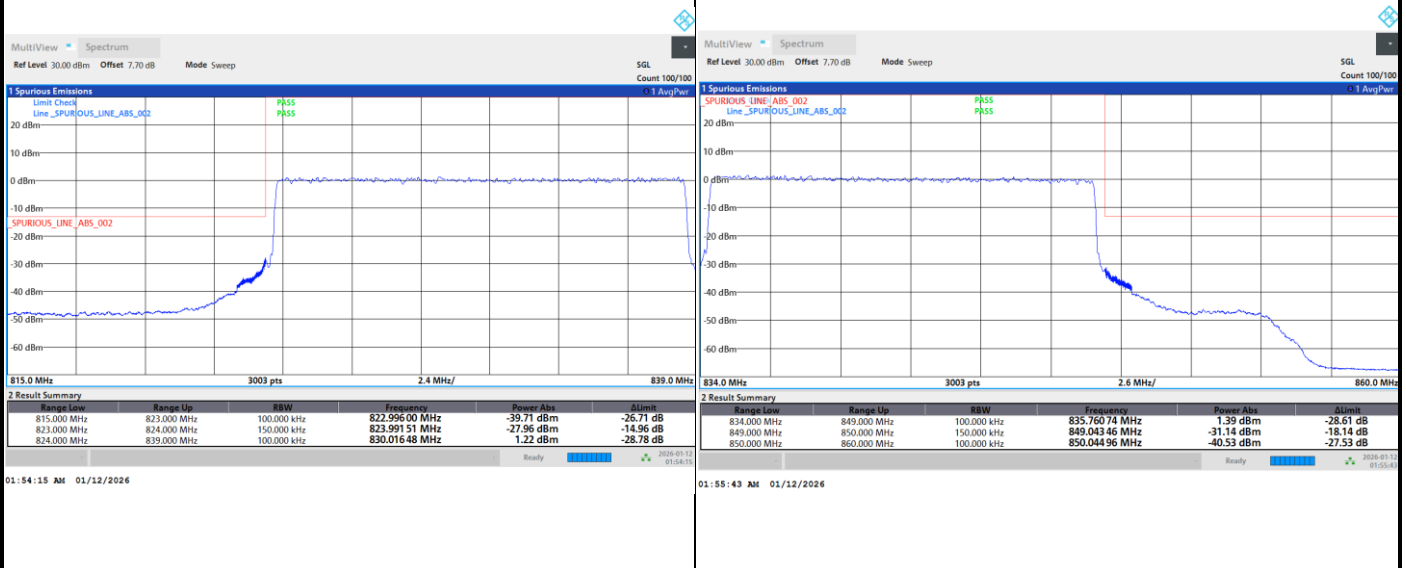
Highest Band Edge



FR1 n5 / 15MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge

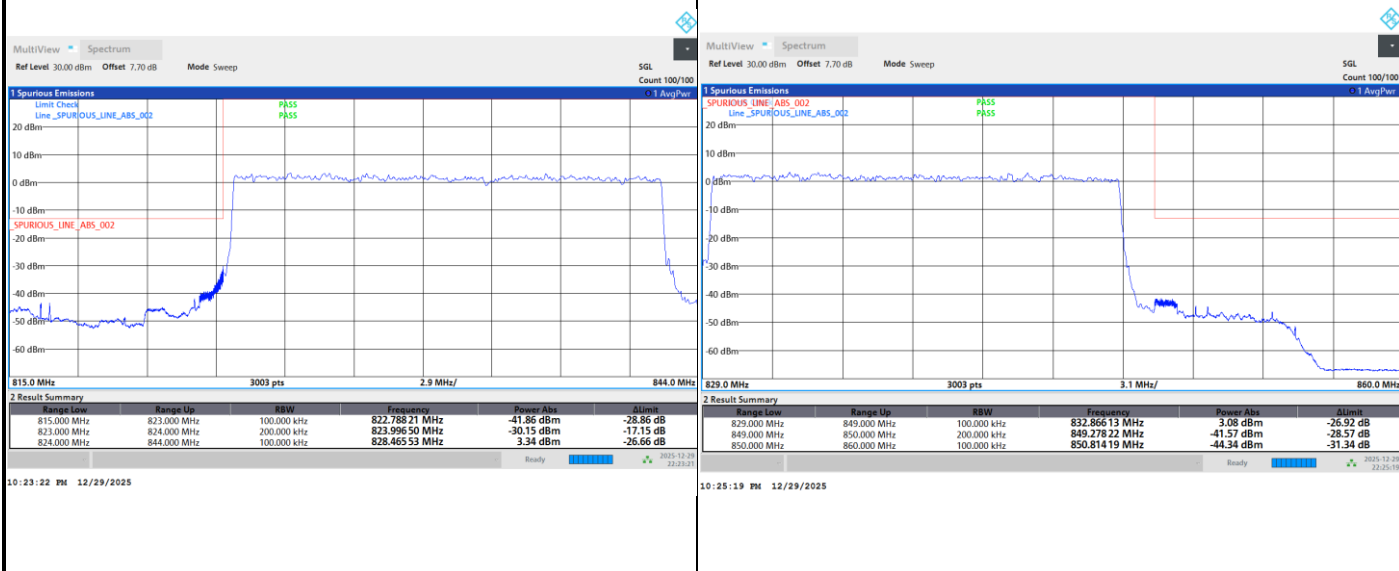




FR1 n5 / 20MHz / DFT-s-OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

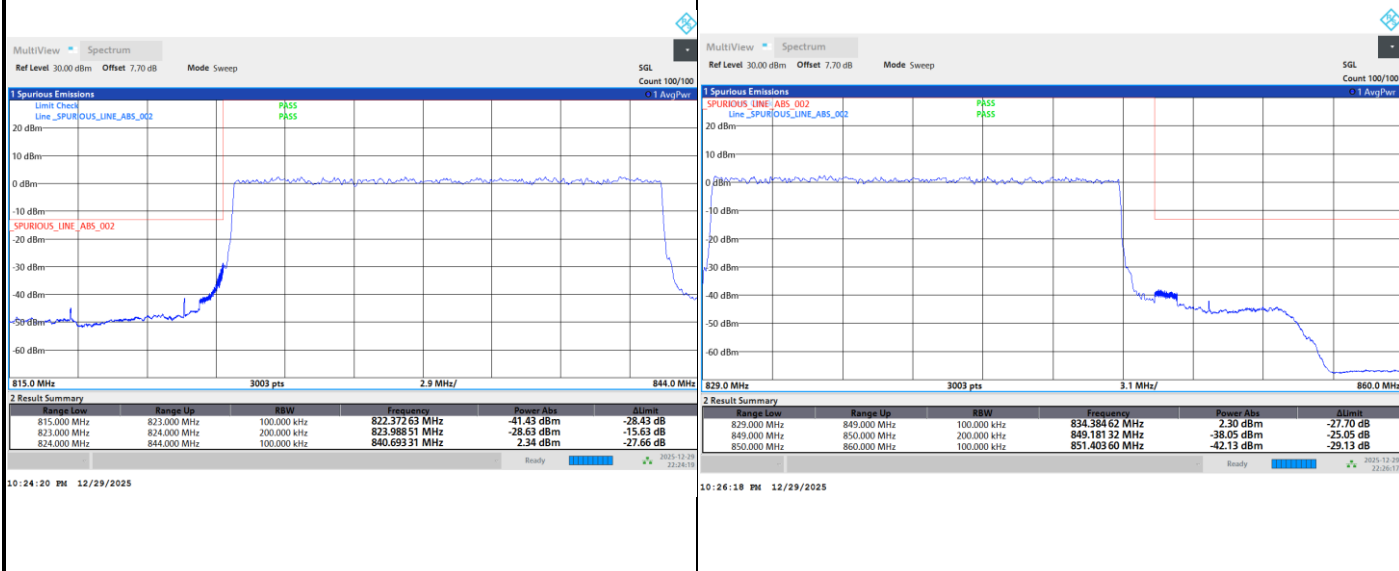
Highest Band Edge



FR1 n5 / 20MHz / DFT-s-OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge

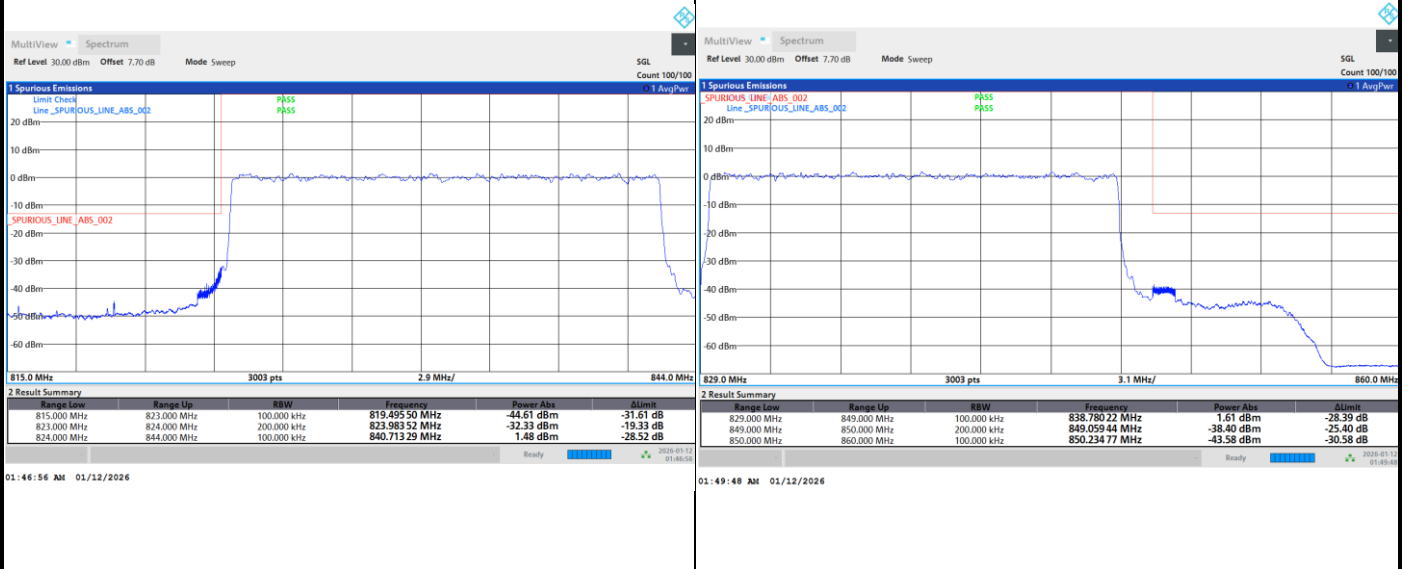




FR1 n5 / 20MHz / DFT-s-OFDM / 16QAM / Full RB

Lowest Band Edge

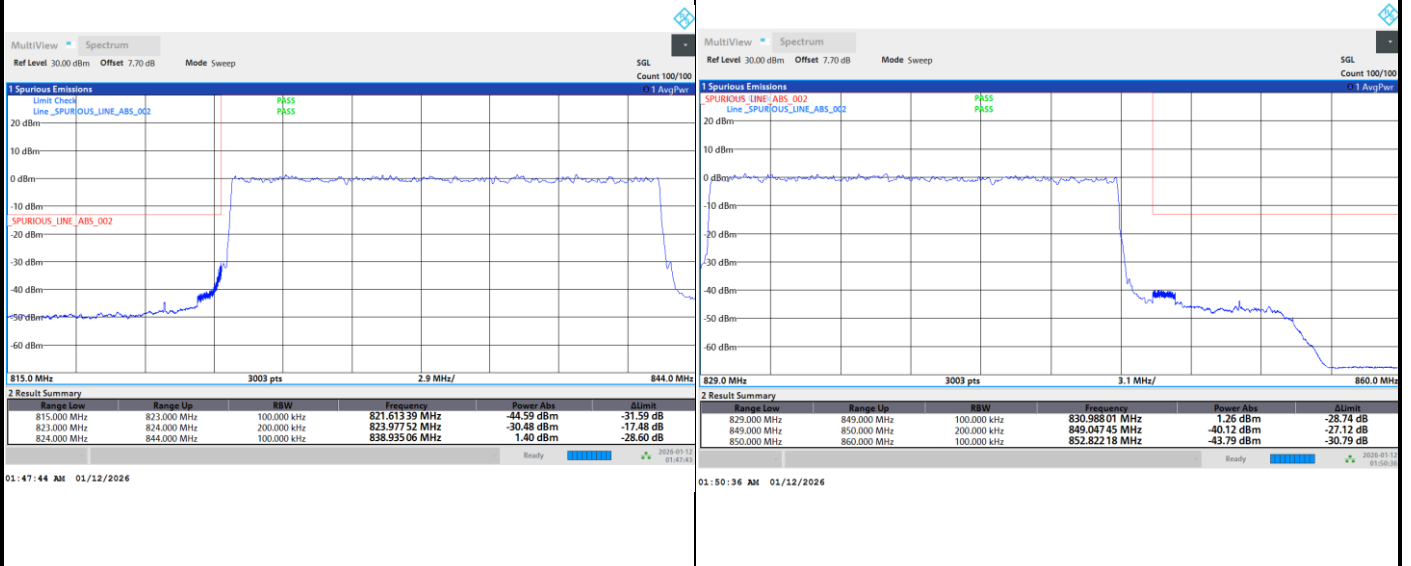
Highest Band Edge



FR1 n5 / 20MHz / DFT-s-OFDM / 64QAM / Full RB

Lowest Band Edge

Highest Band Edge

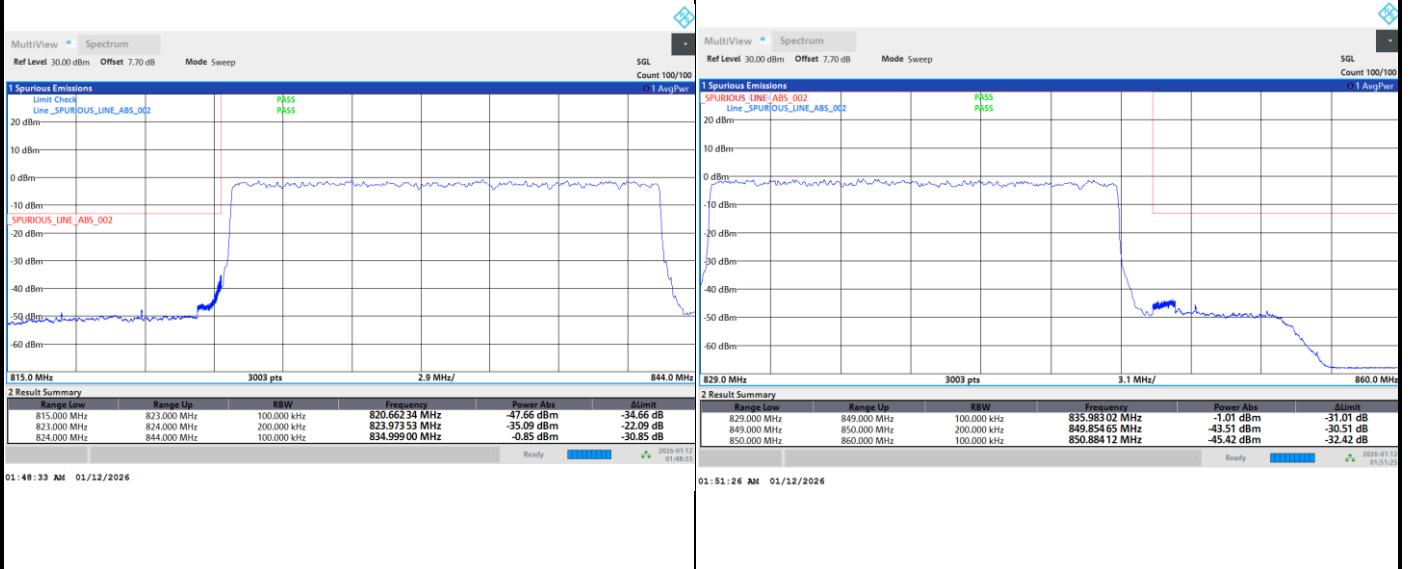




FR1 n5 / 20MHz / DFT-s-OFDM / 256QAM / Full RB

Lowest Band Edge

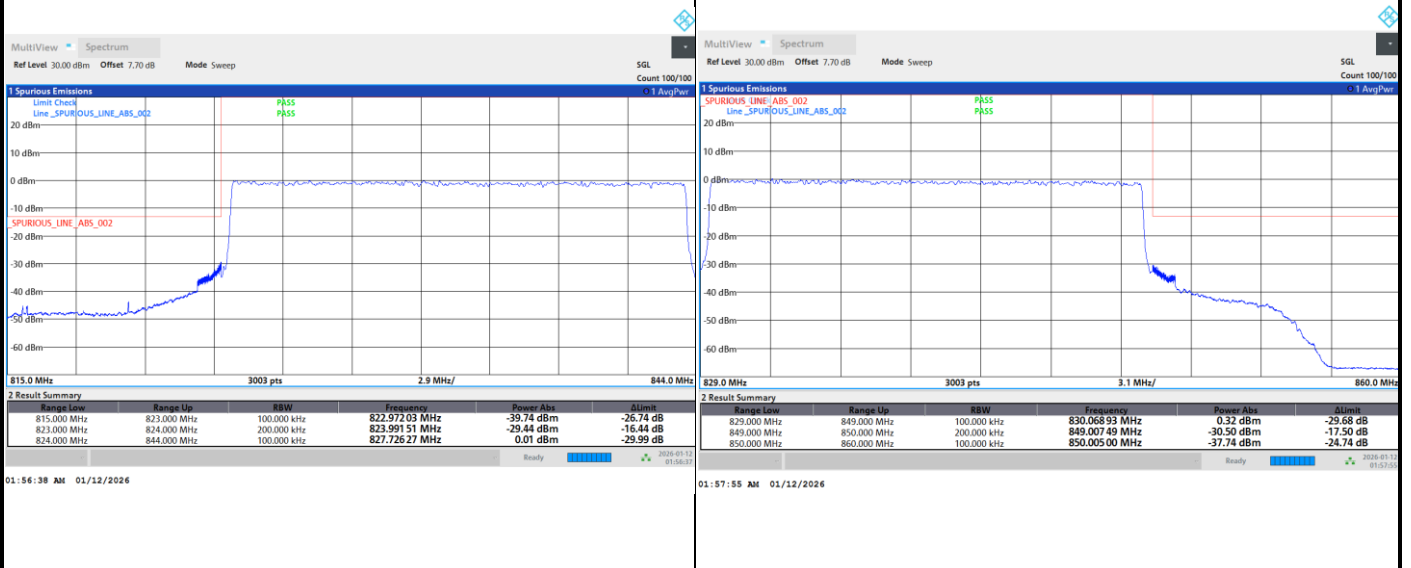
Highest Band Edge



FR1 n5 / 20MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge

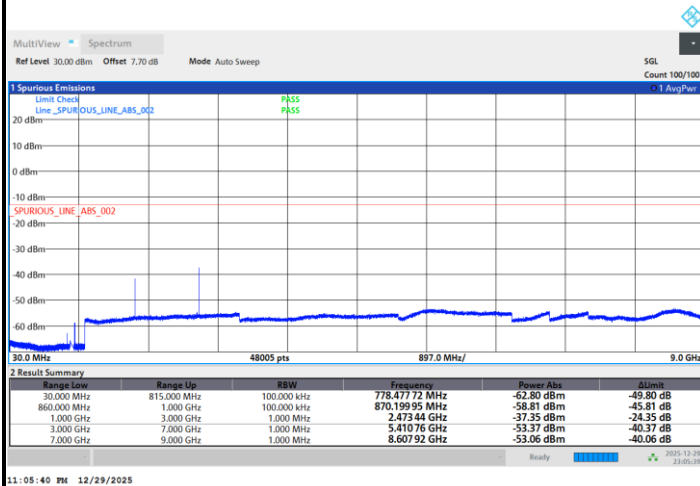




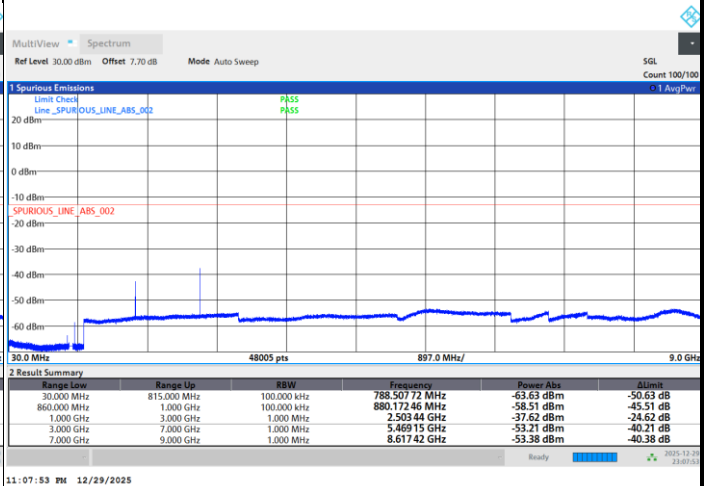
Conducted Spurious Emission

FR1 n5 / 5MHz / DFT-S OFDM / QPSK / 1RB1

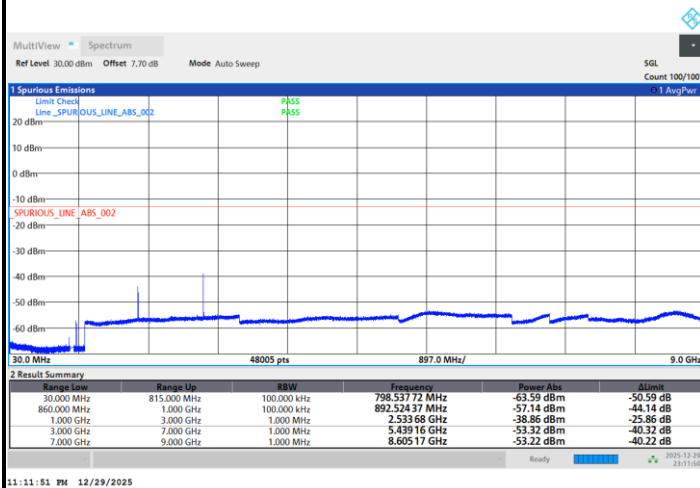
Lowest Channel



Middle Channel



Highest Channel



**Frequency Stability**

Test Conditions		FR1 n5 (BPSK) / Middle Channel 10M			
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Frequency Offset (Δf) (Hz)	Within Authorized Frequency Block(Hz)	Result
50	Normal Voltage	0.0120	-10	Yes	PASS
40	Normal Voltage	0.0013	-1.1	Yes	
30	Normal Voltage	0.0024	-2	Yes	
20(Ref.)	Normal Voltage	0.0000	0	Yes	
10	Normal Voltage	0.0037	-3.1	Yes	
0	Normal Voltage	0.0012	1	Yes	
-10	Normal Voltage	0.0071	-5.9	Yes	
-20	Normal Voltage	0.0173	-14.5	Yes	
-30	Normal Voltage	0.0033	-2.8	Yes	
20	Maximum Voltage	0.0191	-16	Yes	
20	Normal Voltage	0.0000	0	Yes	
20	Minimum Voltage	0.0016	-1.3	Yes	

Note:

1. Normal Voltage = 3.89 V. ; Minimum Voltage = 3.5 V. ; Maximum Voltage = 4.28 V.
2. The frequency fundamental emissions stay within the authorized frequency block.
3. The frequency variation is sufficient to ensure that the occupied bandwidth of all operation channels stay within the operating frequency block or frequency block group.

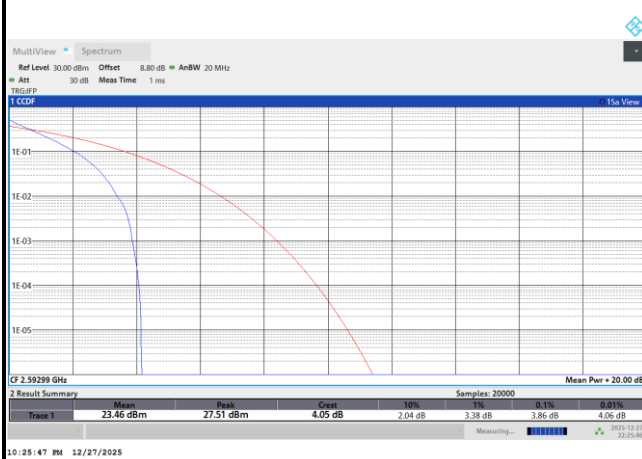
**FR1 n41****<SISO Mode>****Peak-to-Average Ratio**

Mode	FR1 n41 / 20MHz / 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	3.86	4.48	5.38	5.88	PASS
Mode	FR1 n41 / 20MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.44				PASS

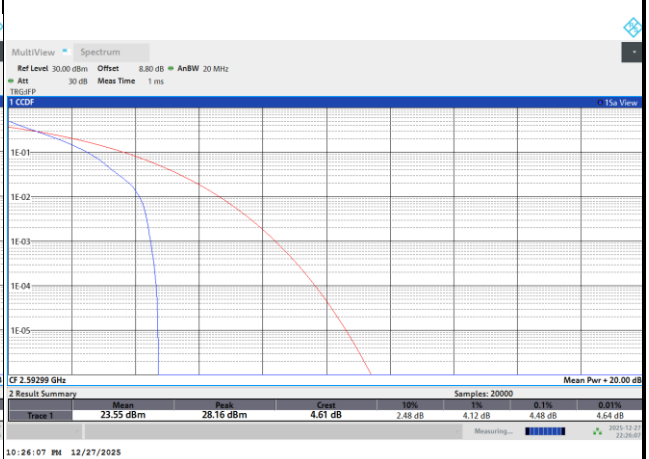


FR1 n41 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

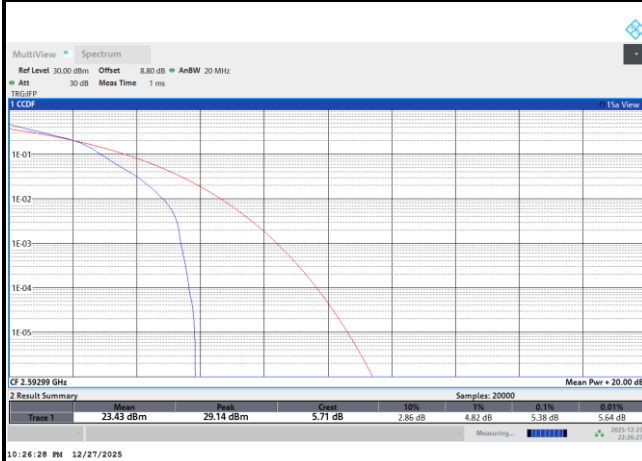
PI/2 BPSK



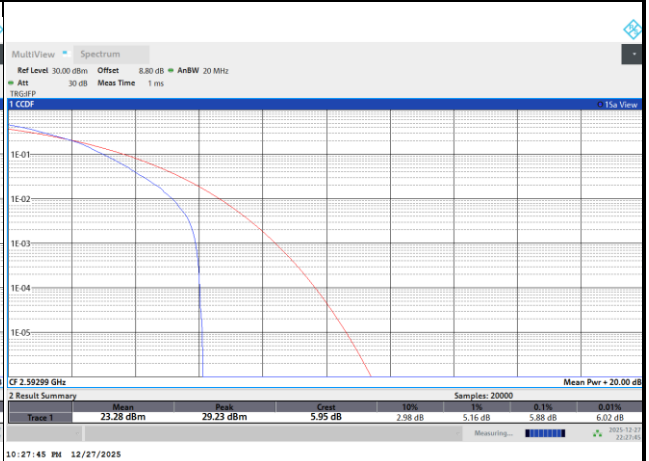
QPSK



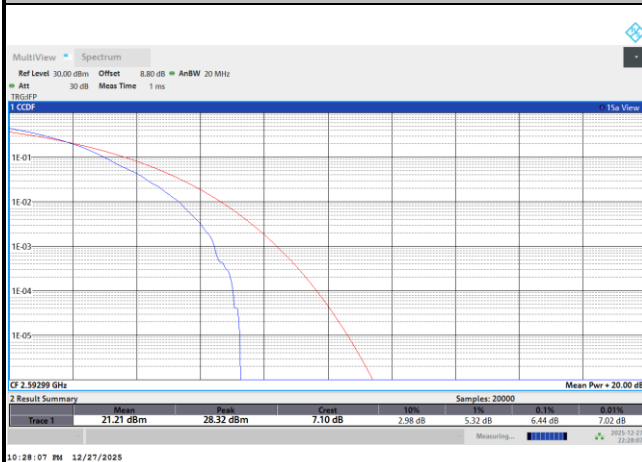
16QAM



64QAM



256QAM



**26dB Bandwidth**

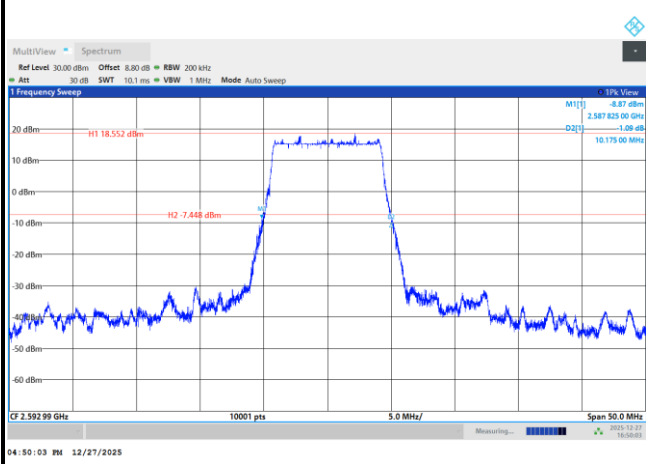
Mode	FR1 n41 : 26dB BW(MHz) / DFT-S OFDM							
BW	10MHz	15MHz	20MHz	25MHz	30MHz	35MHz	40MHz	45MHz
Mod.	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK
Middle CH	10.17	-	19.64	-	29.92	-	38.50	-
BW	50MHz	60MHz	70MHz	80MHz	90MHz	100MHz		
Mod.	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK		
Middle CH	48.69	62.70	69.24	82.06	91.89	101.52		

Mode	FR1 n41 : 26dB BW(MHz) / CP OFDM							
BW	10MHz		15MHz		20MHz		25MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	10.16	10.20	-	-	19.97	20.07	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	10.23	9.96	-	-	19.95	20.25	-	-
BW	30MHz		35MHz		40MHz		45MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	31.10	30.72	-	-	40.89	40.85	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	30.96	30.76	-	-	40.95	40.97	-	-
BW	50MHz		60MHz		70MHz		80MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	50.70	50.58	62.86	62.92	72.48	72.31	82.68	82.53
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	50.73	50.36	62.83	62.85	72.43	72.50	82.47	82.51
BW	90MHz		100MHz					
Mod.	QPSK	16QAM	QPSK	16QAM				
Middle CH	92.56	92.67	102.78	102.55				
Mod.	64QAM	256QAM	64QAM	256QAM				
Middle CH	92.56	92.50	102.60	102.64				



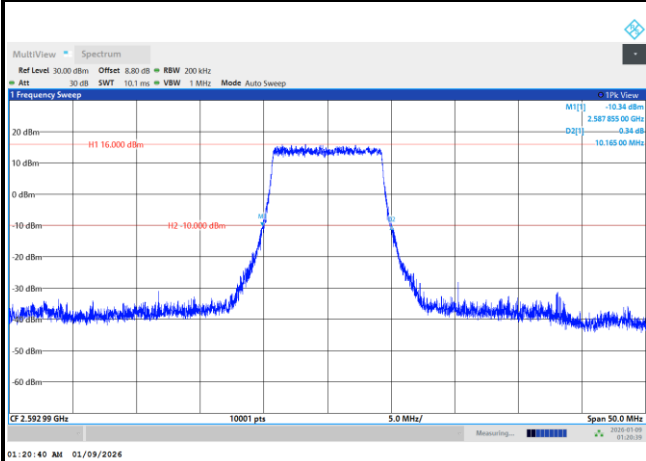
FR1 n41 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

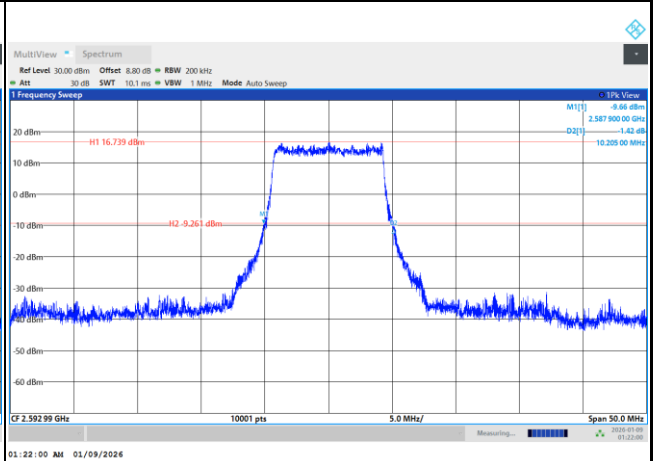


FR1 n41 / 10MHz / CP OFDM / Middle Channel / Full RB

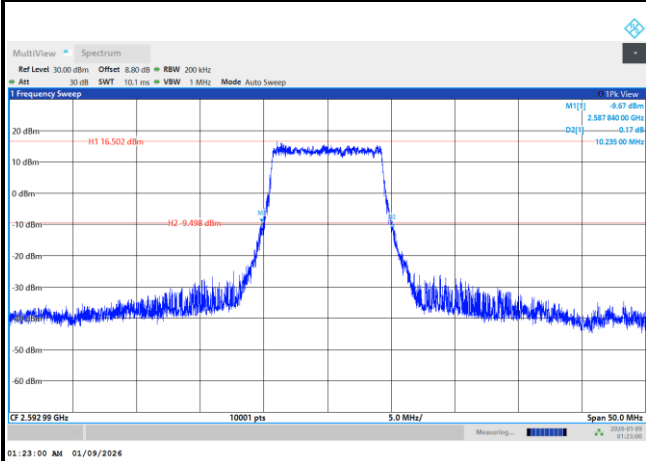
QPSK



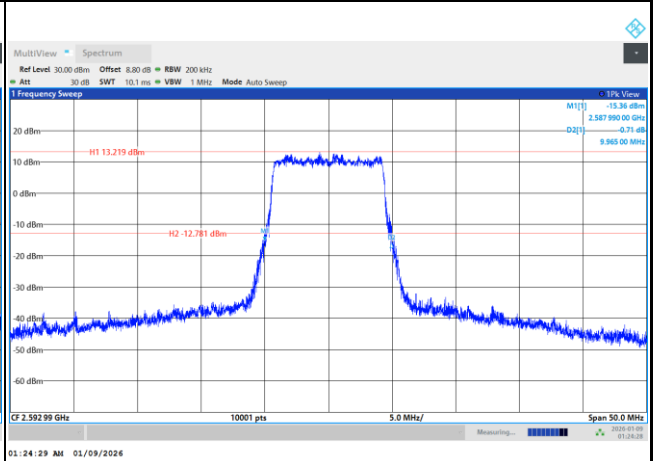
16QAM



64QAM



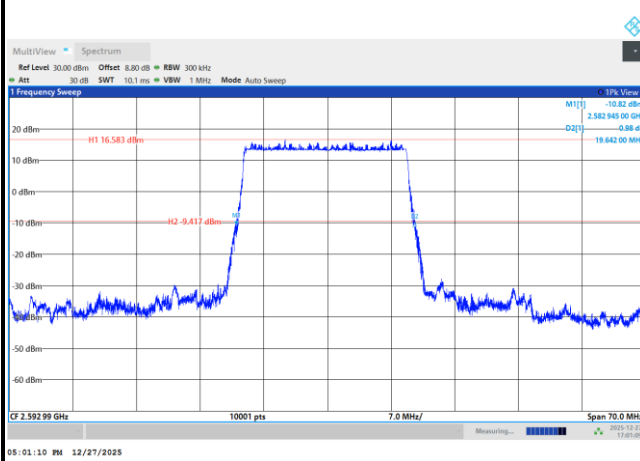
256QAM





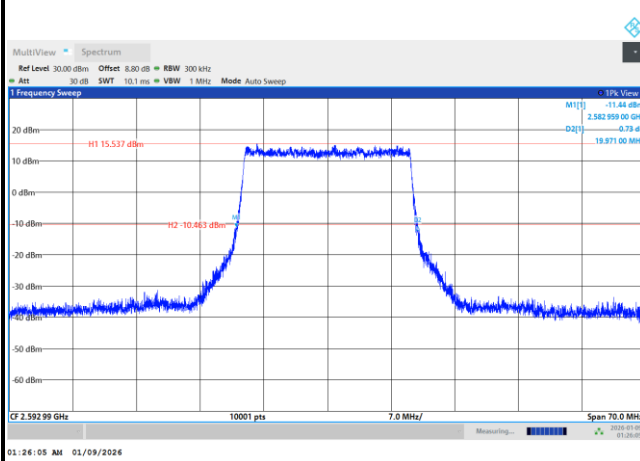
FR1 n41 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

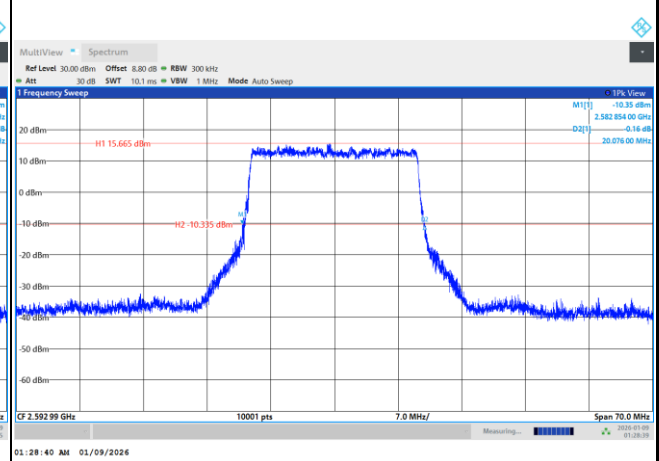


FR1 n41 / 20MHz / CP OFDM / Middle Channel / Full RB

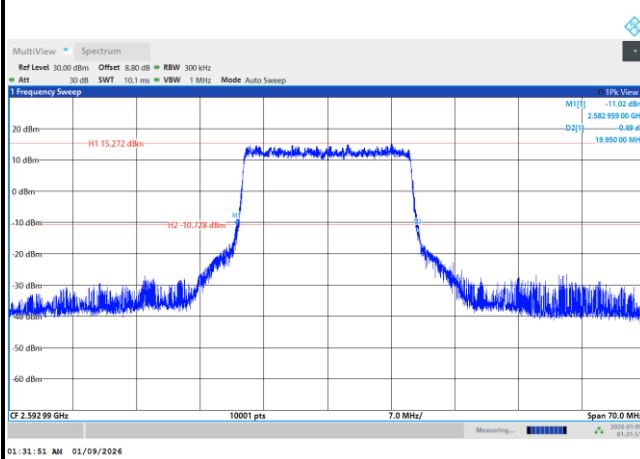
QPSK



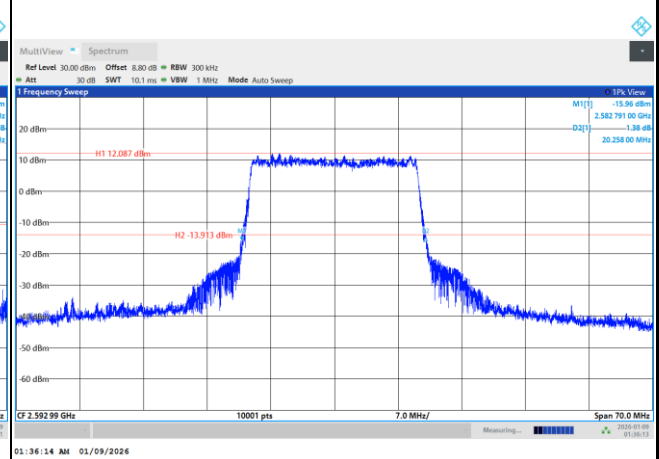
16QAM



64QAM



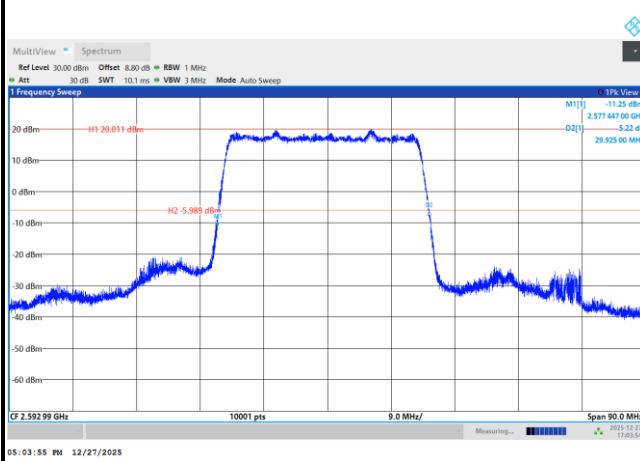
256QAM





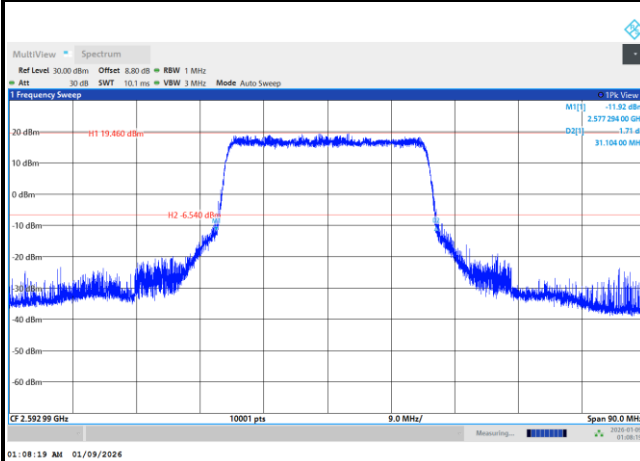
FR1 n41 / 30MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

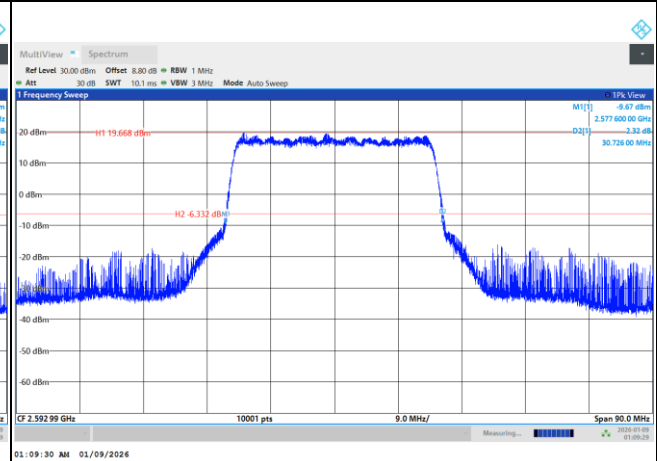


FR1 n41 / 30MHz / CP OFDM / Middle Channel / Full RB

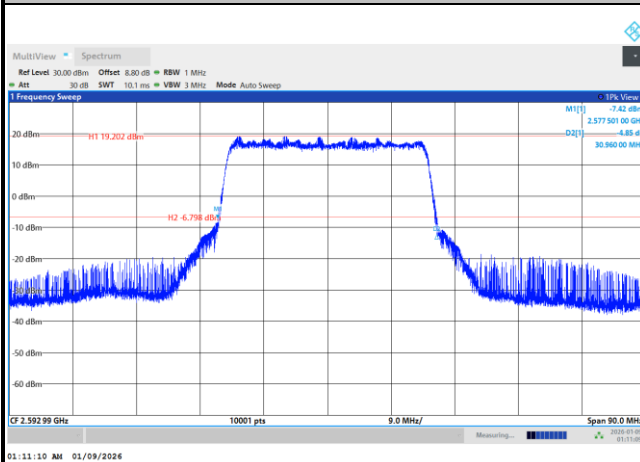
QPSK



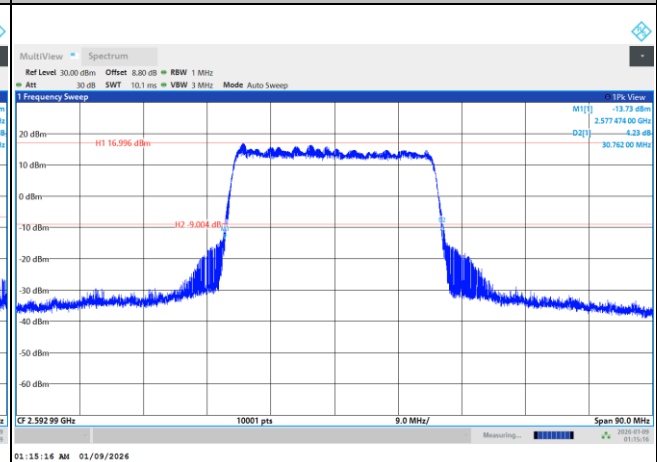
16QAM



64QAM



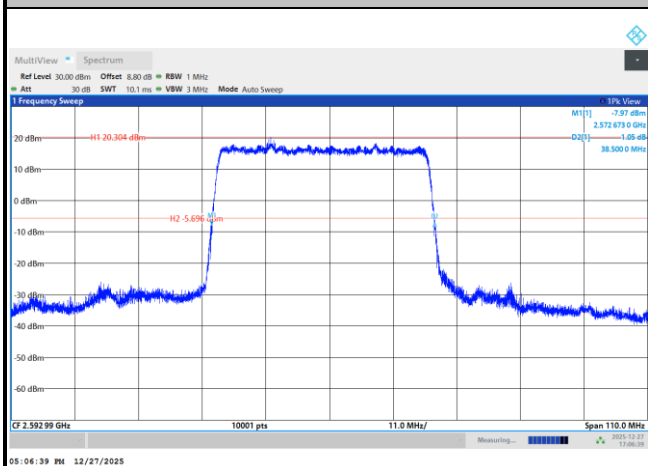
256QAM





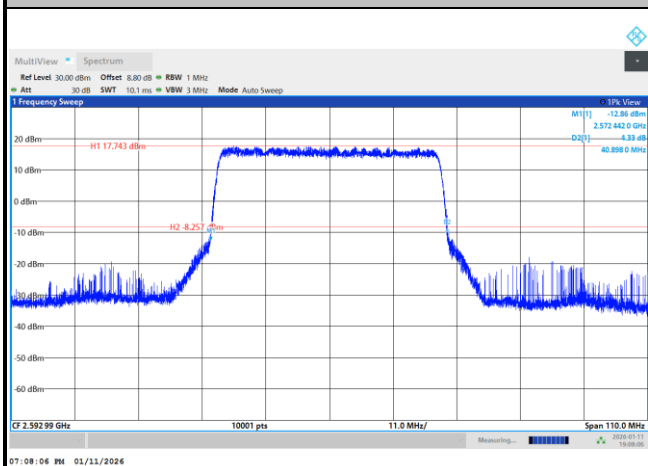
FR1 n41 / 40MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

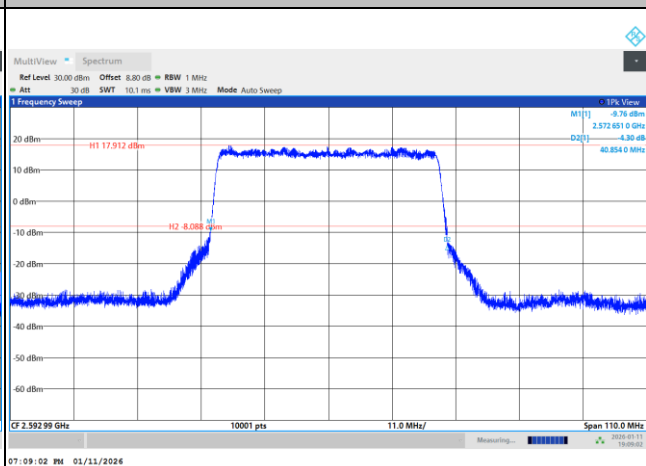


FR1 n41 / 40MHz / CP OFDM / Middle Channel / Full RB

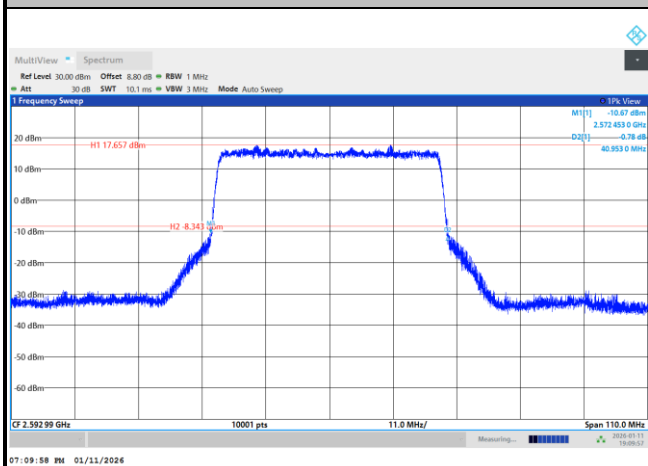
QPSK



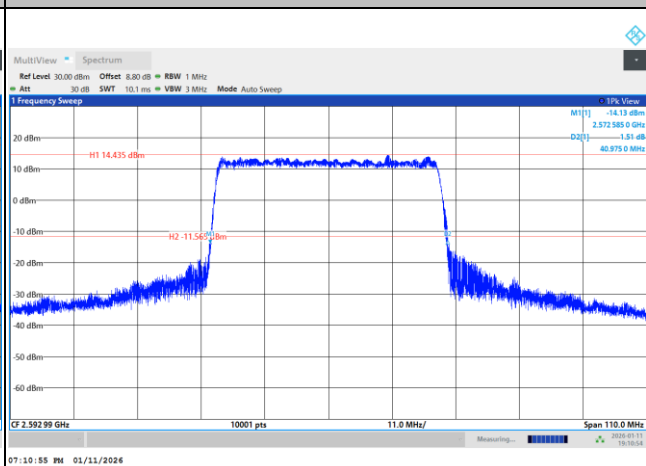
16QAM

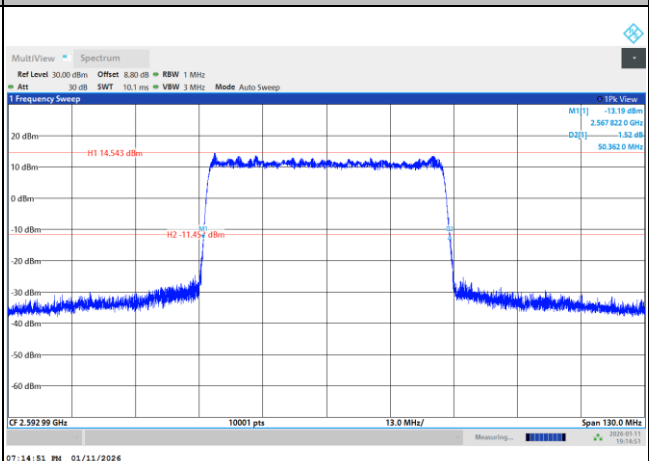


64QAM



256QAM

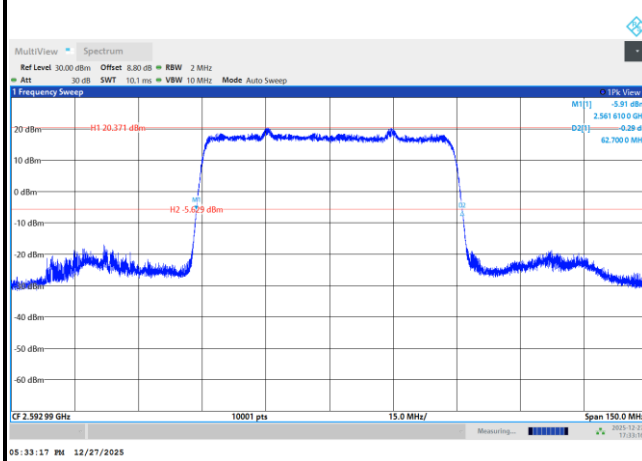






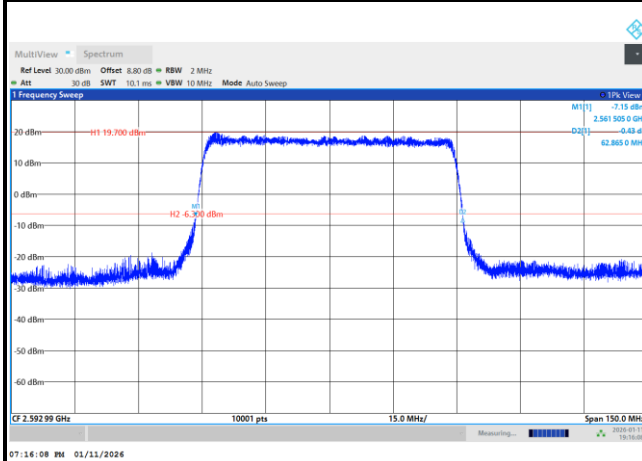
FR1 n41 / 60MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

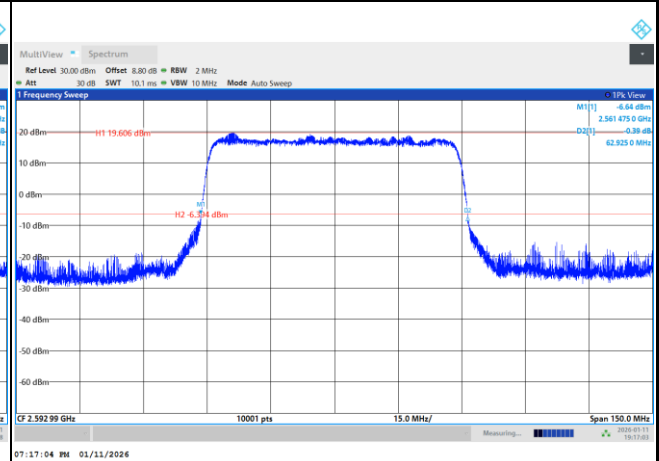


FR1 n41 / 60MHz / CP OFDM / Middle Channel / Full RB

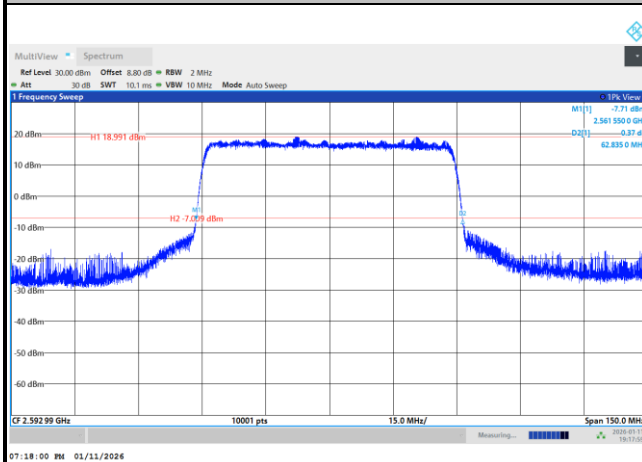
QPSK



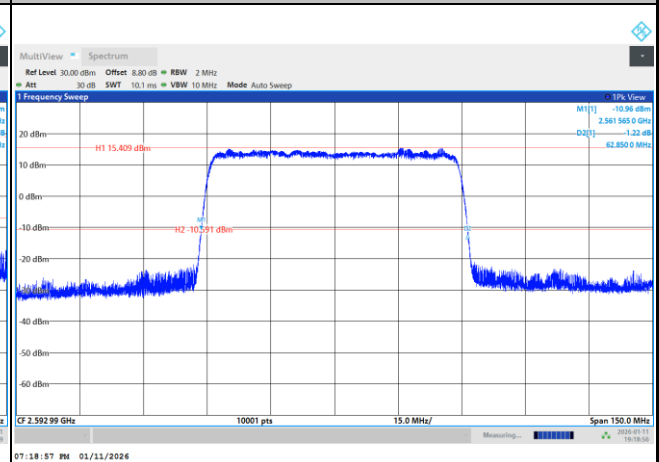
16QAM



64QAM



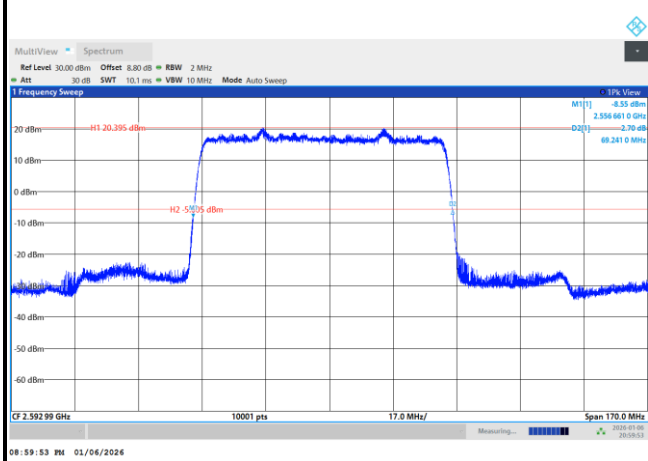
256QAM





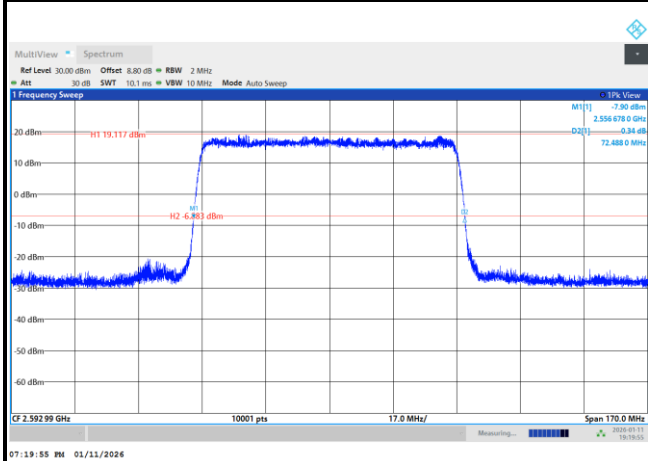
FR1 n41 / 70MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

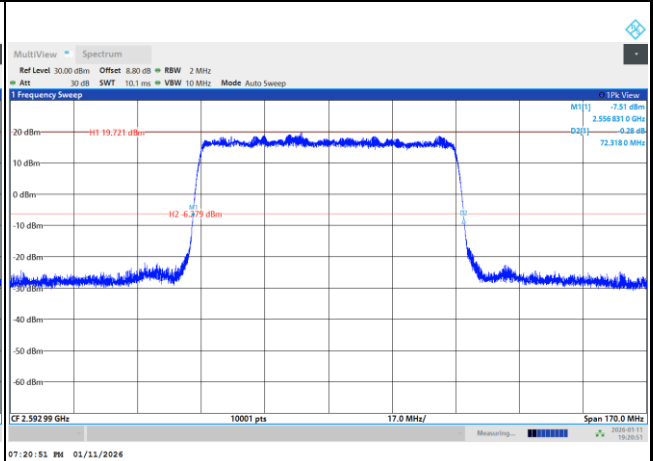


FR1 n41 / 70MHz / CP OFDM / Middle Channel / Full RB

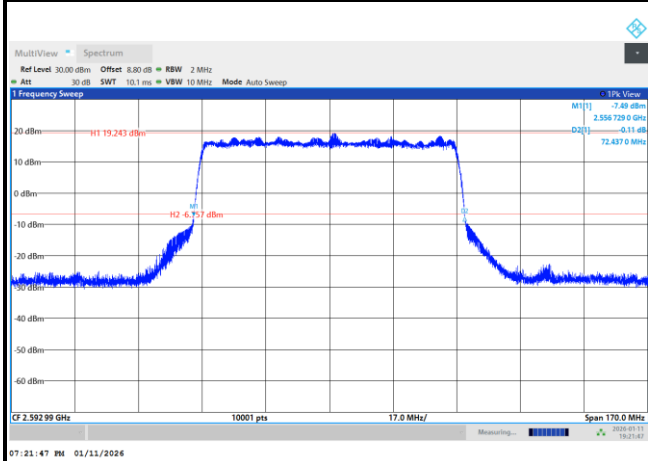
QPSK



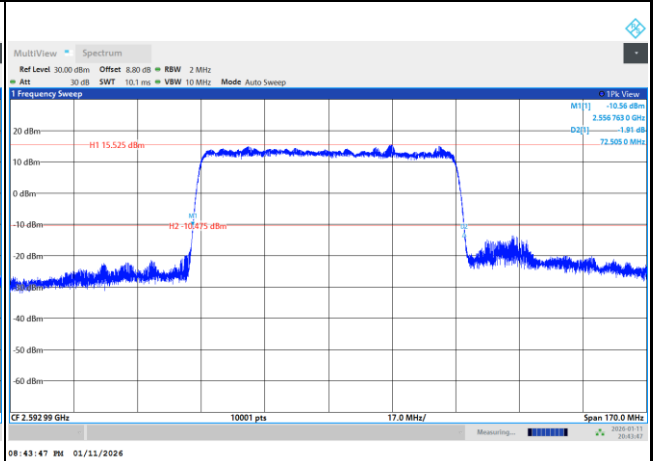
16QAM



64QAM



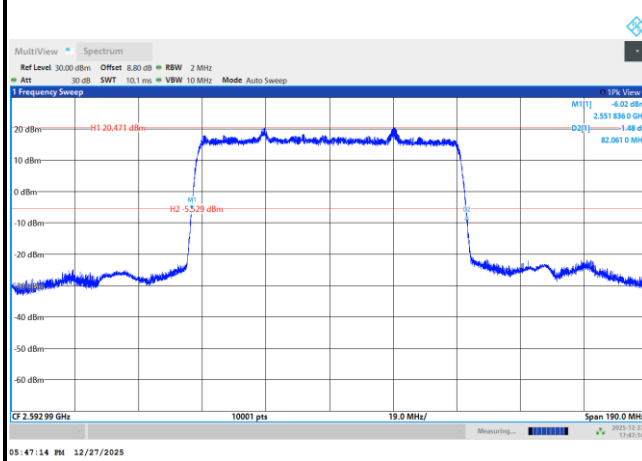
256QAM





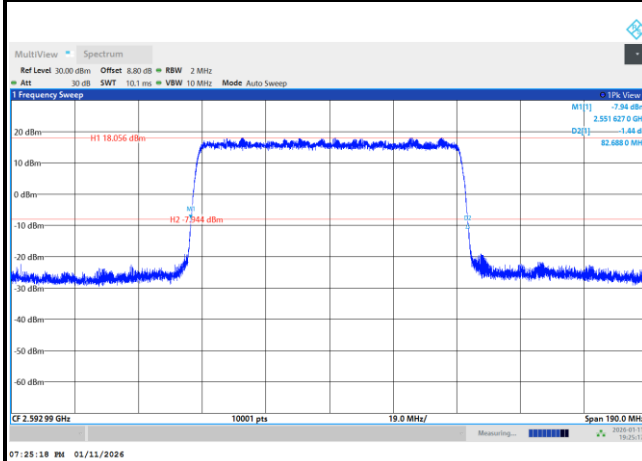
FR1 n41 / 80MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

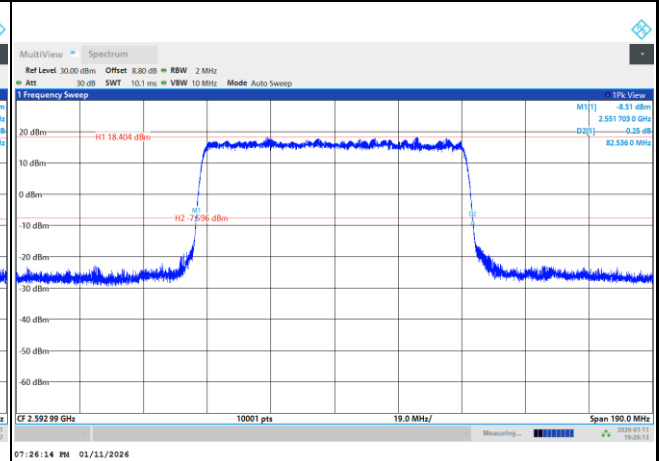


FR1 n41 / 80MHz / CP OFDM / Middle Channel / Full RB

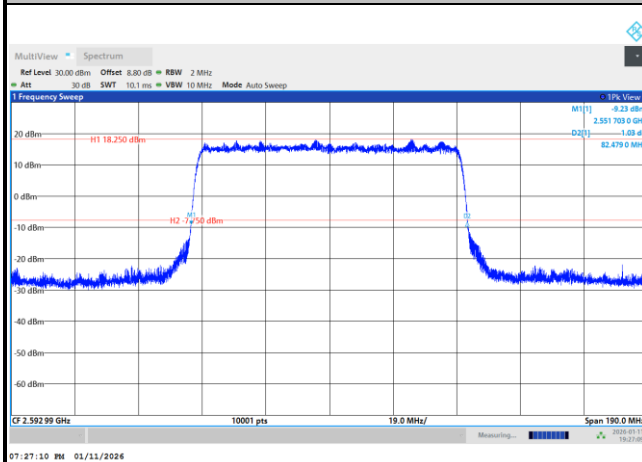
QPSK



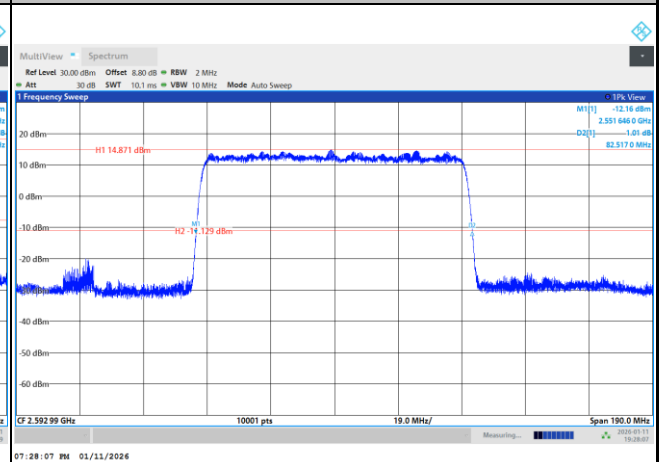
16QAM



64QAM



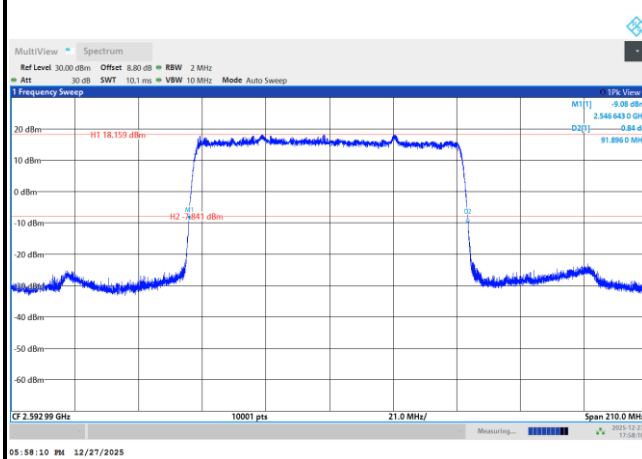
256QAM





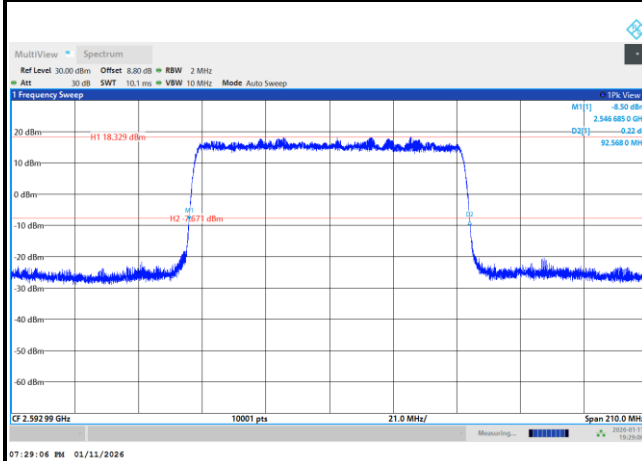
FR1 n41 / 90MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

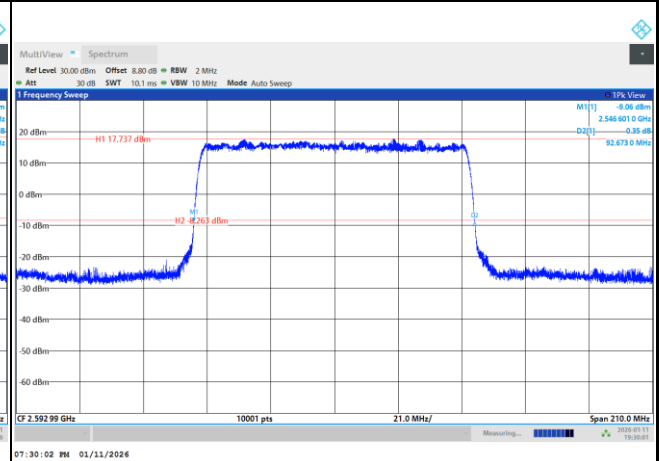


FR1 n41 / 90MHz / CP OFDM / Middle Channel / Full RB

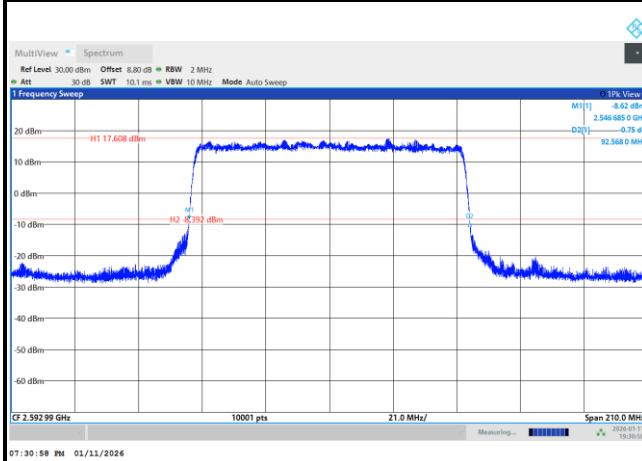
QPSK



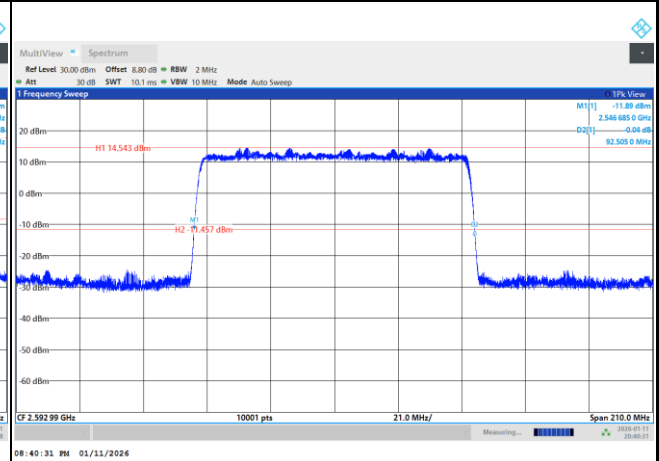
16QAM



64QAM



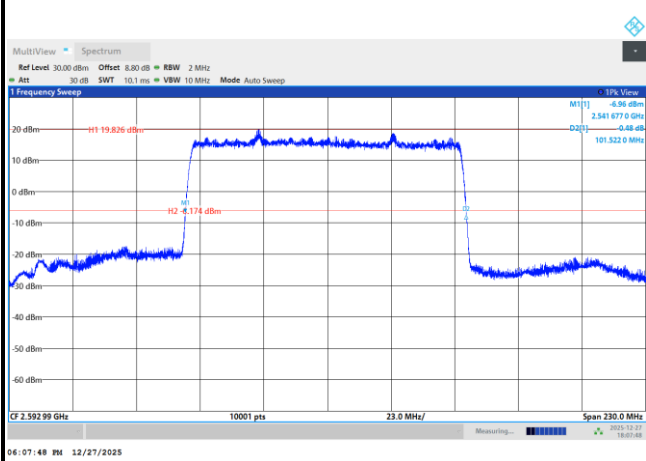
256QAM





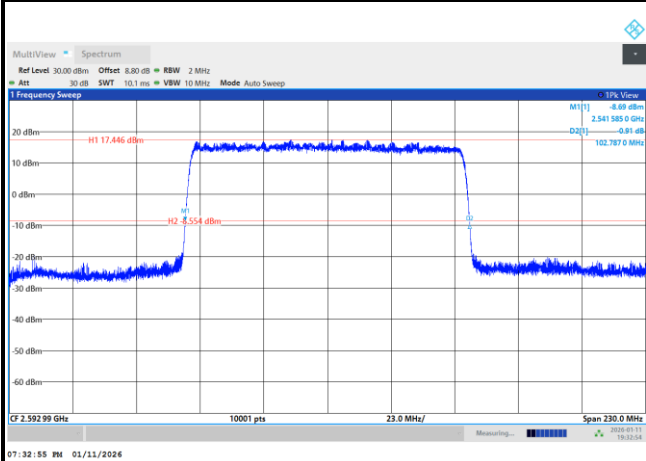
FR1 n41 / 100MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

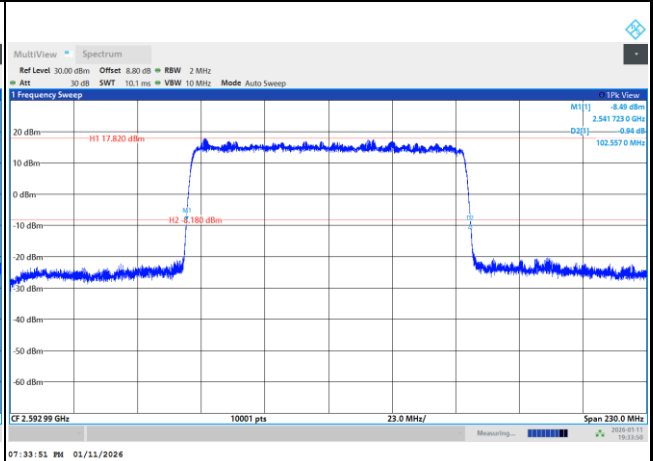


FR1 n41 / 100MHz / CP OFDM / Middle Channel / Full RB

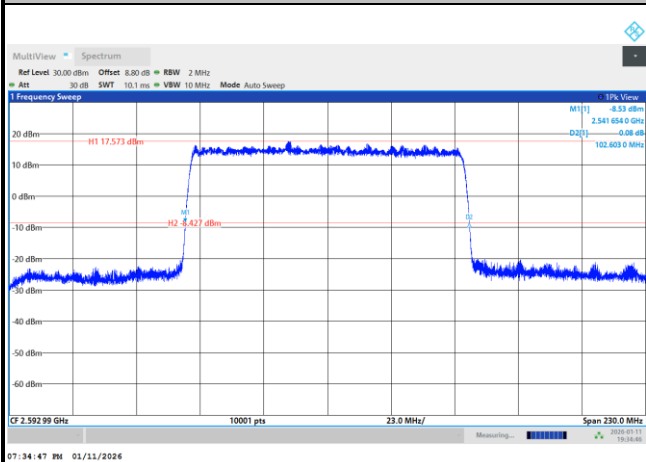
QPSK



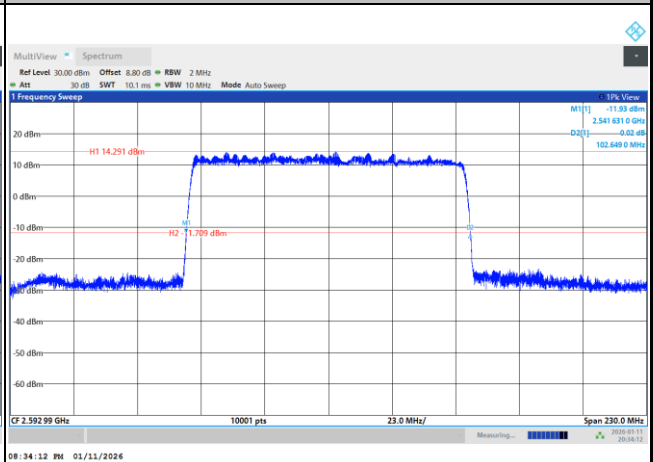
16QAM



64QAM



256QAM



**Occupied Bandwidth**

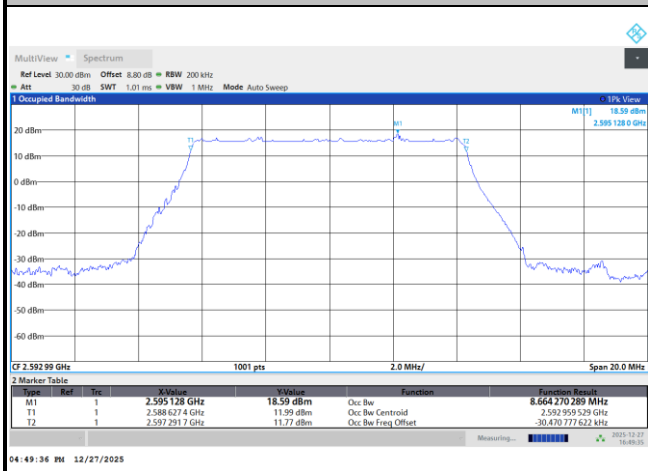
Mode	FR1 n41 : OB BW(MHz) / DFT-S OFDM							
BW	10MHz	15MHz	20MHz	25MHz	30MHz	35MHz	40MHz	45MHz
Mod.	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK
Middle CH	8.66	-	17.90	-	27.29	-	36.05	-
BW	50MHz	60MHz	70MHz	80MHz	90MHz	100MHz		
Mod.	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK		
Middle CH	45.84	58.48	64.73	77.34	87.13	96.91		

Mode	FR1 n41 : OB BW(MHz) / CP OFDM							
BW	10MHz		15MHz		20MHz		25MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	8.65	8.66	-	-	18.25	18.25	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	8.69	8.67	-	-	18.26	18.30	-	-
BW	30MHz		35MHz		40MHz		45MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	28.18	28.15	-	-	38.04	38.05	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	28.16	28.24	-	-	38.20	38.21	-	-
BW	50MHz		60MHz		70MHz		80MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	47.67	47.67	58.57	58.44	68.01	67.91	77.78	77.84
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	47.61	47.65	58.51	58.40	67.98	67.98	77.91	77.73
BW	90MHz		100MHz					
Mod.	QPSK	16QAM	QPSK	16QAM				
Middle CH	87.55	87.65	97.64	97.62				
Mod.	64QAM	256QAM	64QAM	256QAM				
Middle CH	88.04	87.92	97.58	97.75				



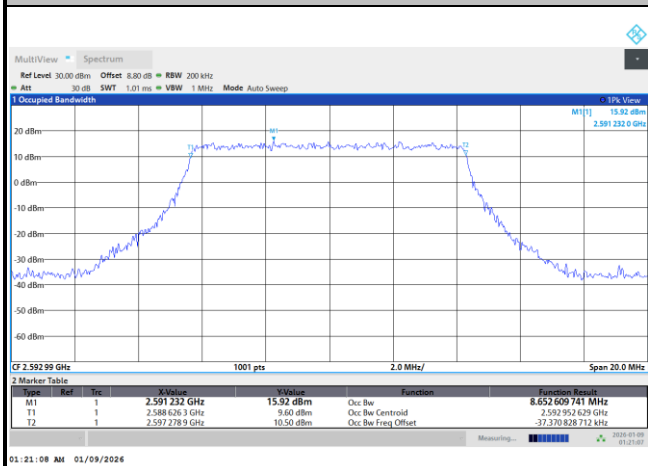
FR1 n41 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

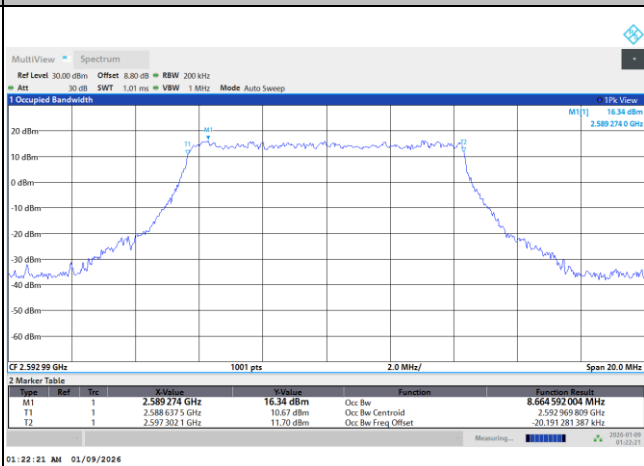


FR1 n41 / 10MHz / CP OFDM / Middle Channel / Full RB

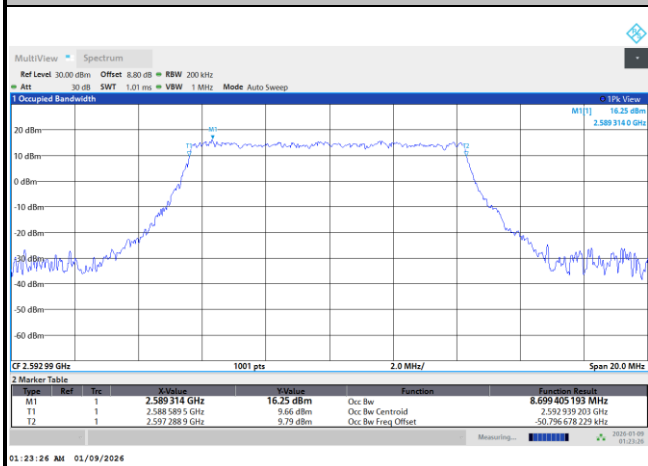
QPSK



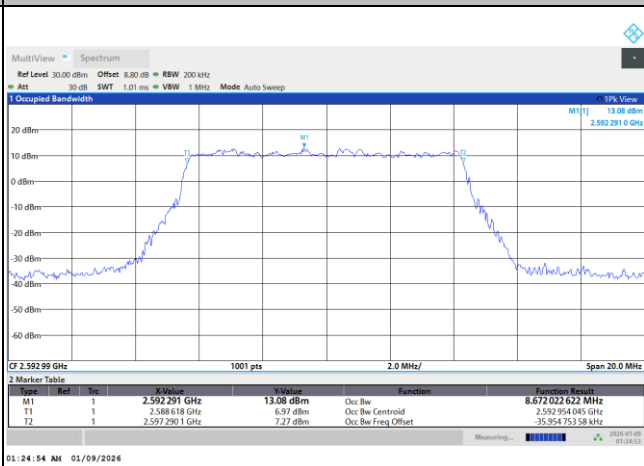
16QAM



64QAM



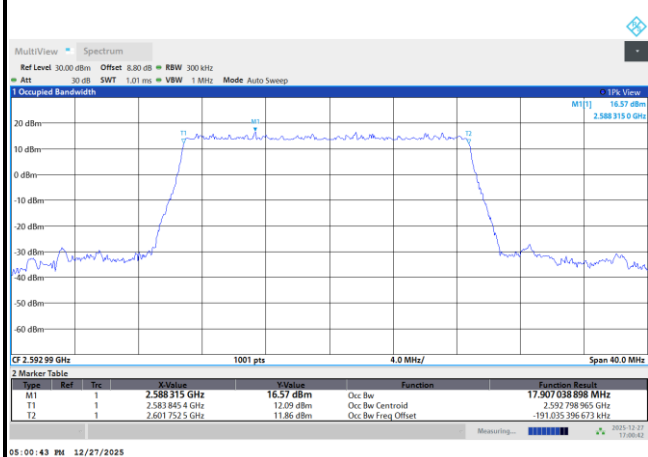
256QAM





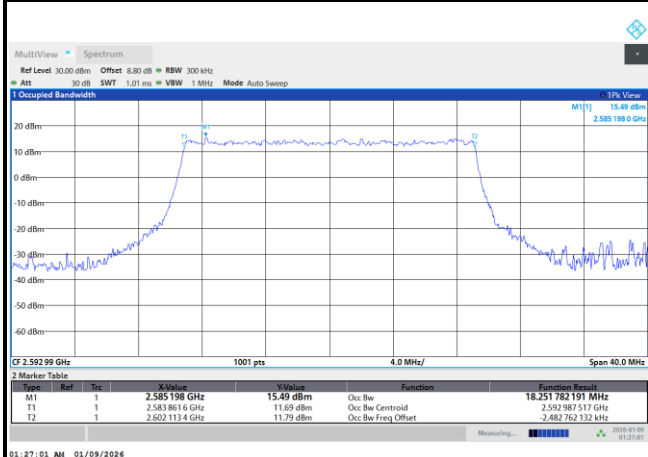
FR1 n41 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

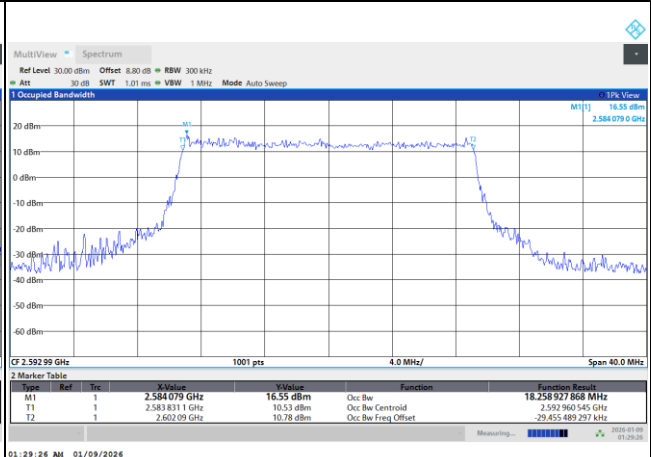


FR1 n41 / 20MHz / CP OFDM / Middle Channel / Full RB

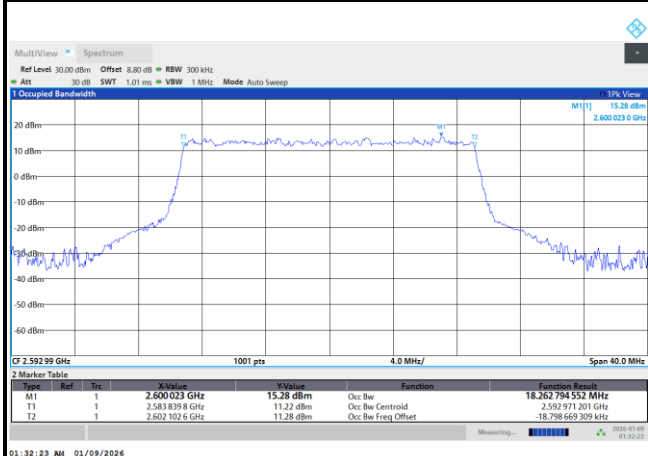
QPSK



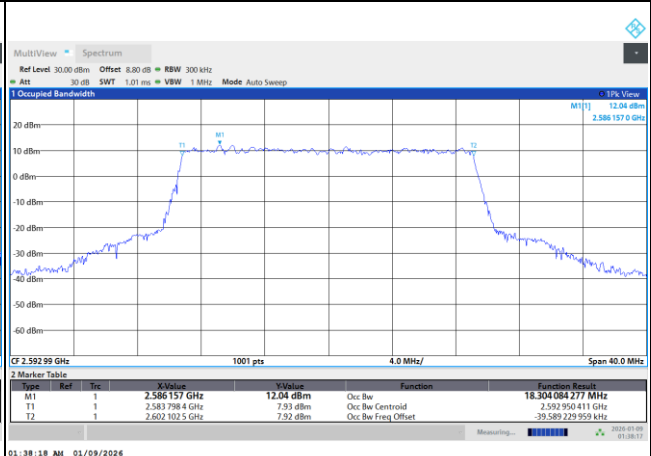
16QAM



64QAM



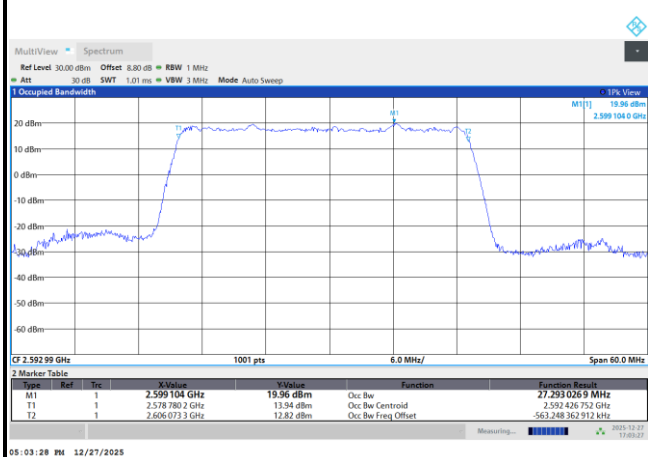
256QAM





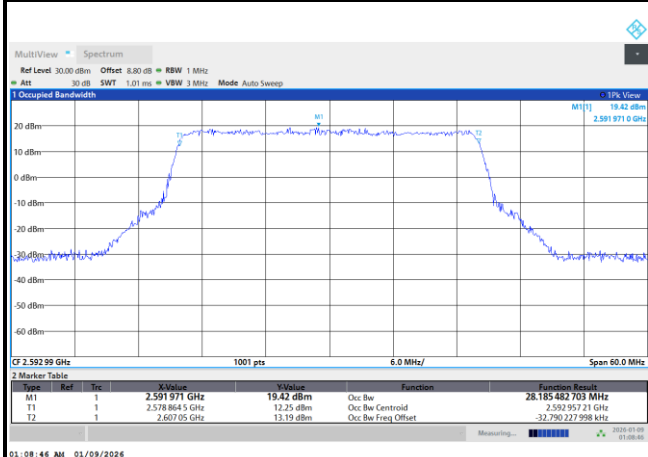
FR1 n41 / 30MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

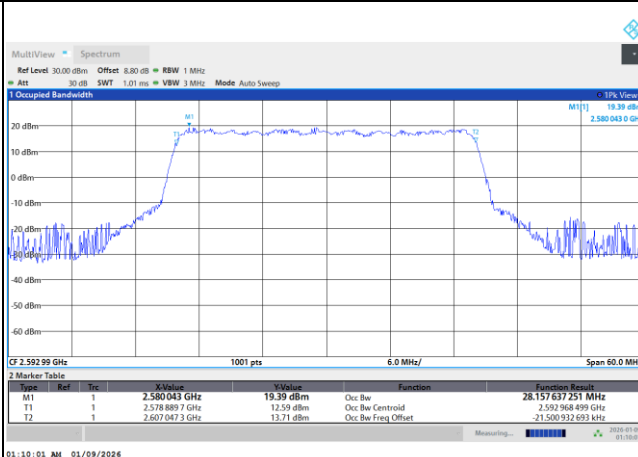


FR1 n41 / 30MHz / CP OFDM / Middle Channel / Full RB

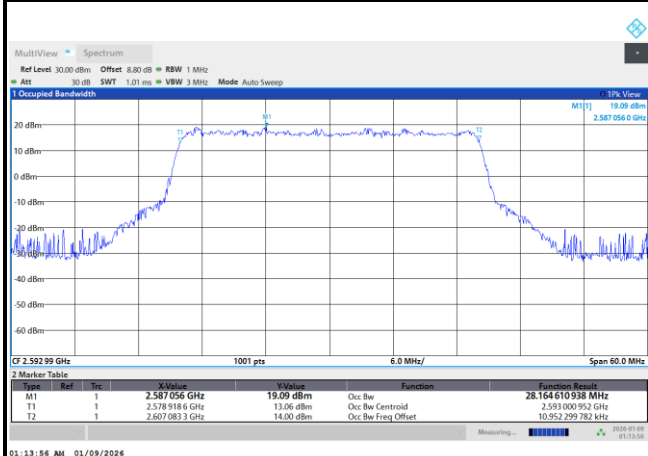
QPSK



16QAM



64QAM



256QAM

