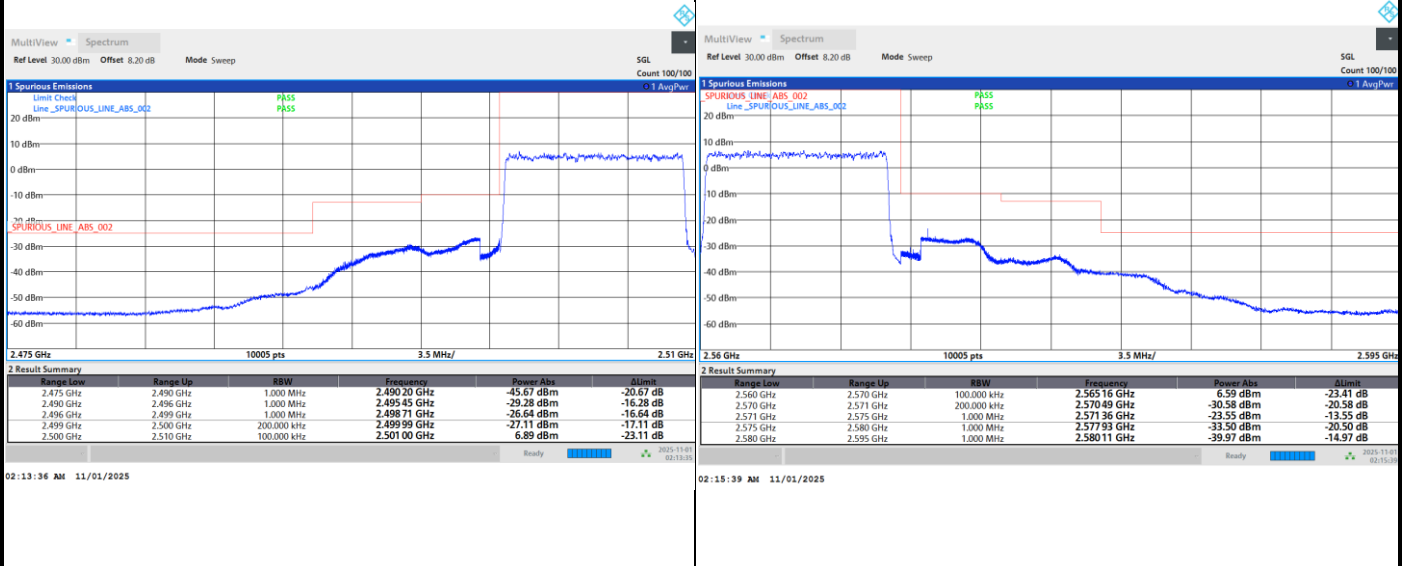




FR1 n7 / 10MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

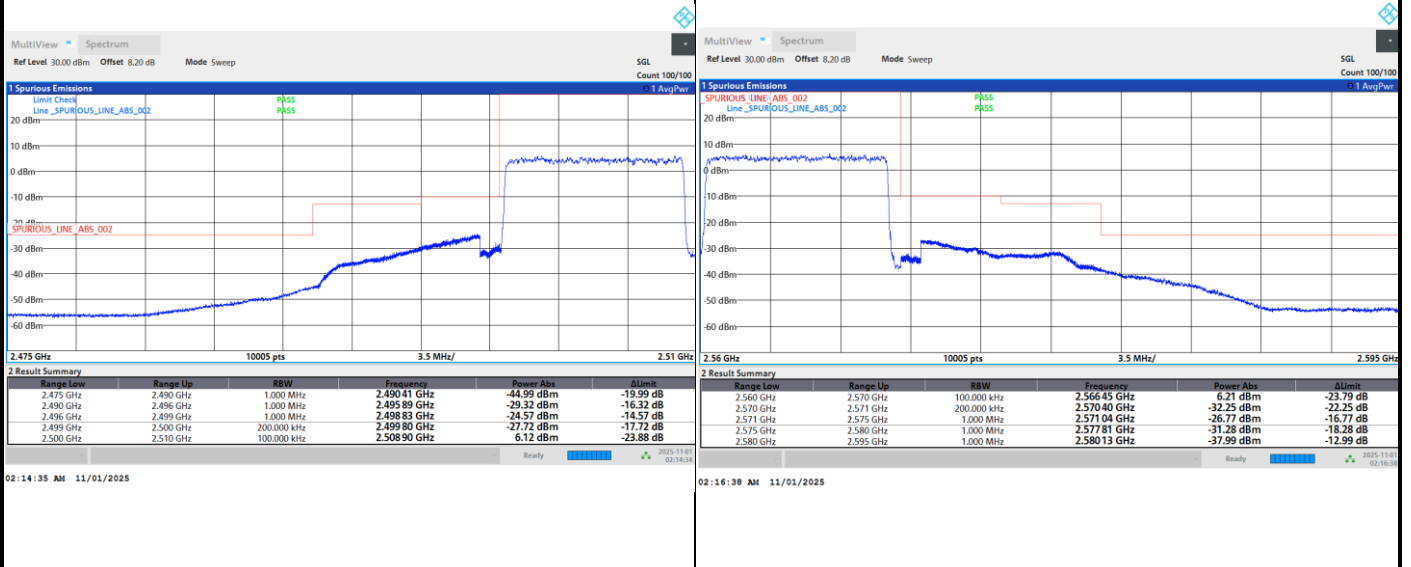
Highest Band Edge / Full RB



FR1 n7 / 10MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

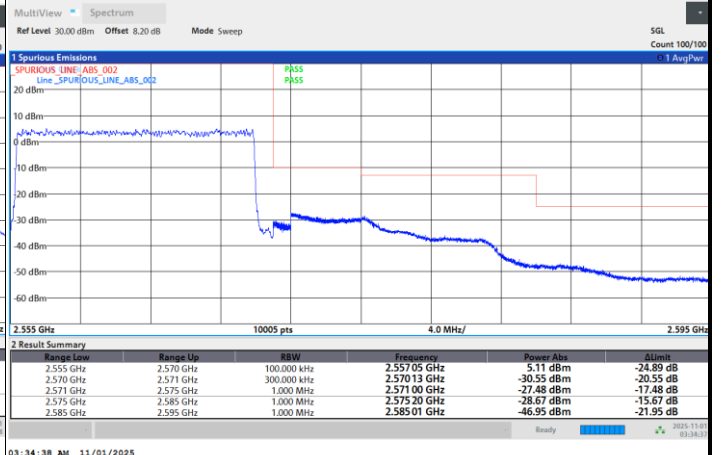
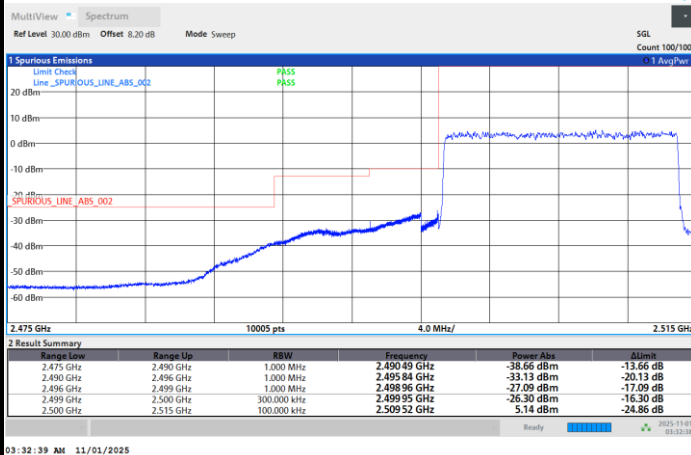




FR1 n7 / 15MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

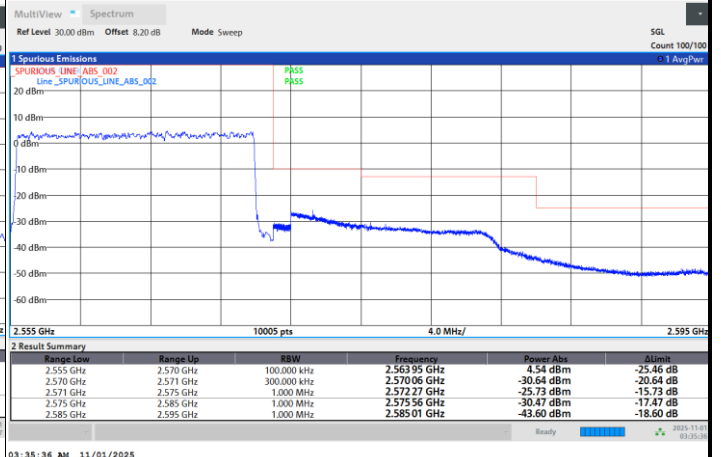
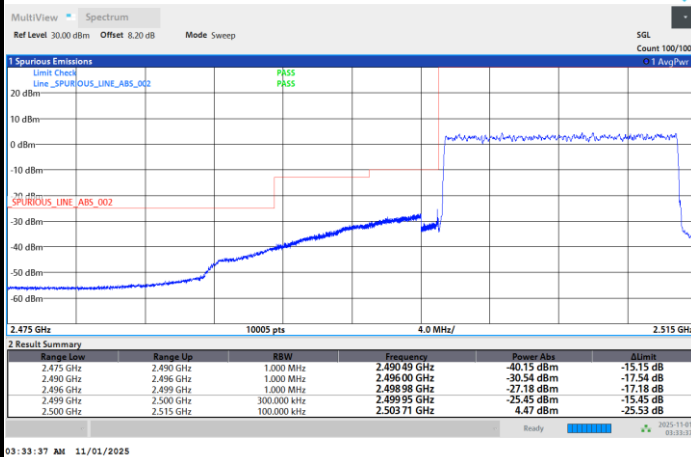
Highest Band Edge / Full RB



FR1 n7 / 15MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

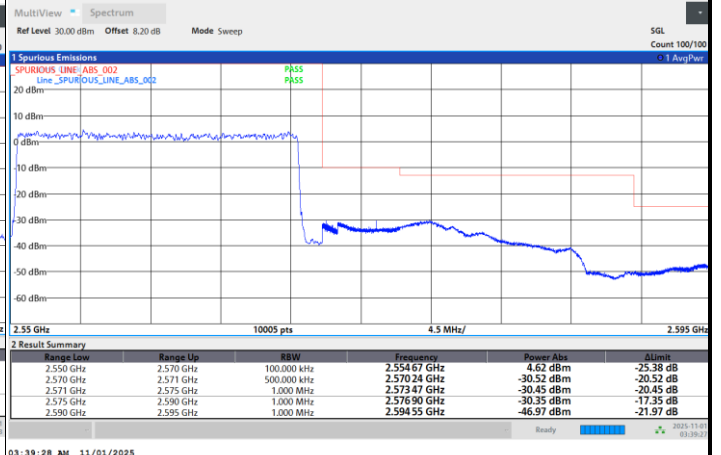
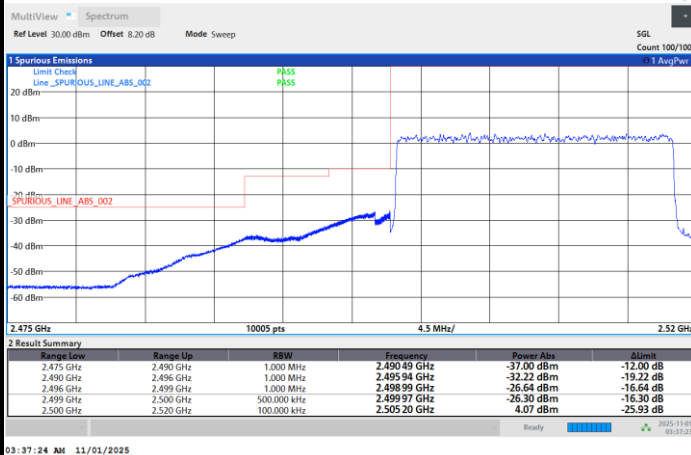




FR1 n7 / 20MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

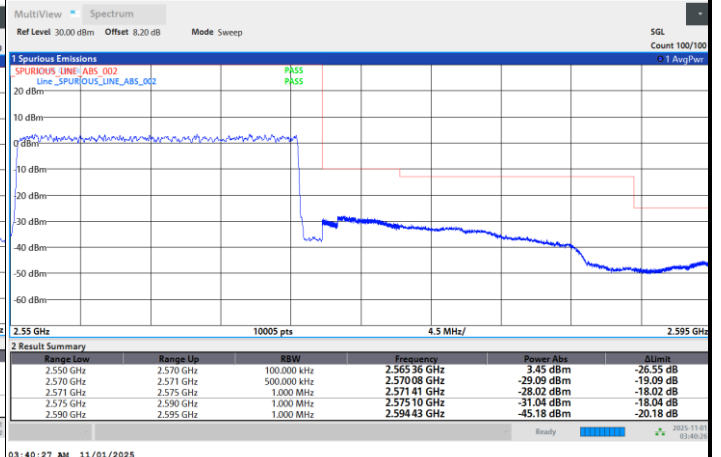
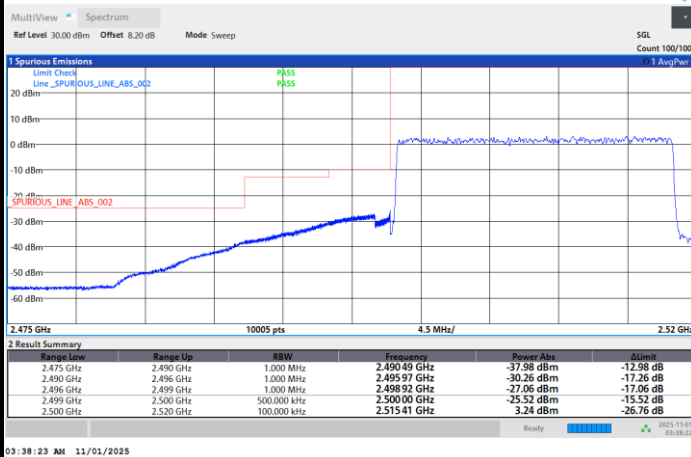
Highest Band Edge / Full RB



FR1 n7 / 20MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

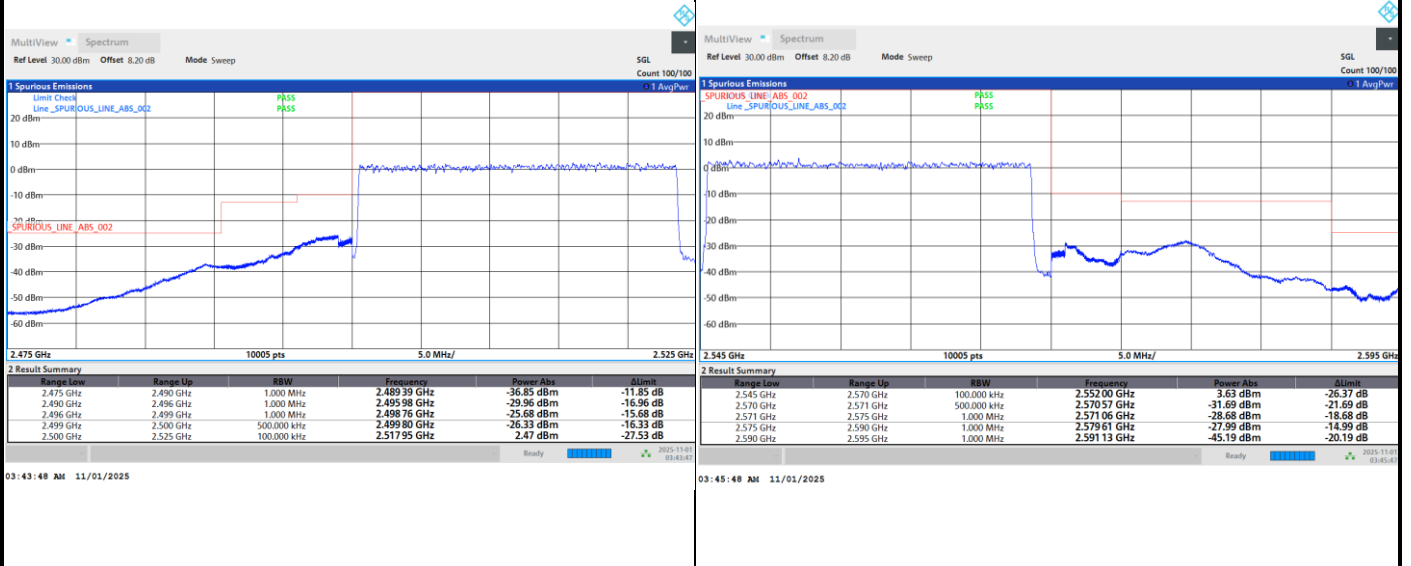




FR1 n7 / 25MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

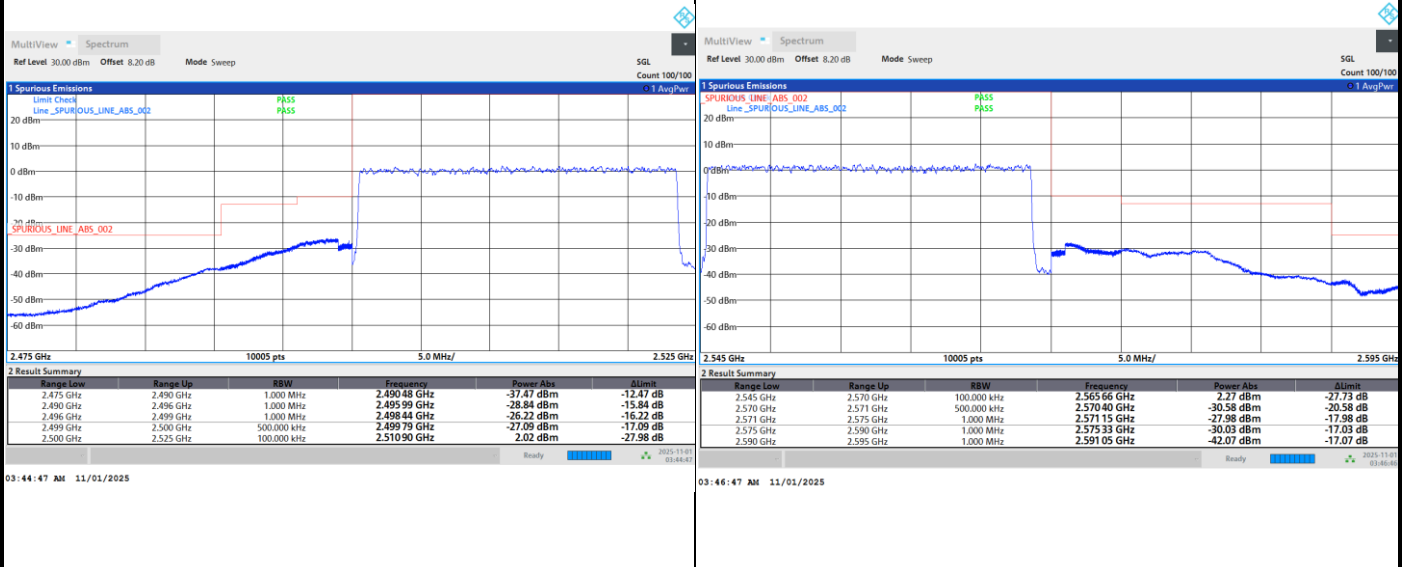
Highest Band Edge / Full RB



FR1 n7 / 25MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

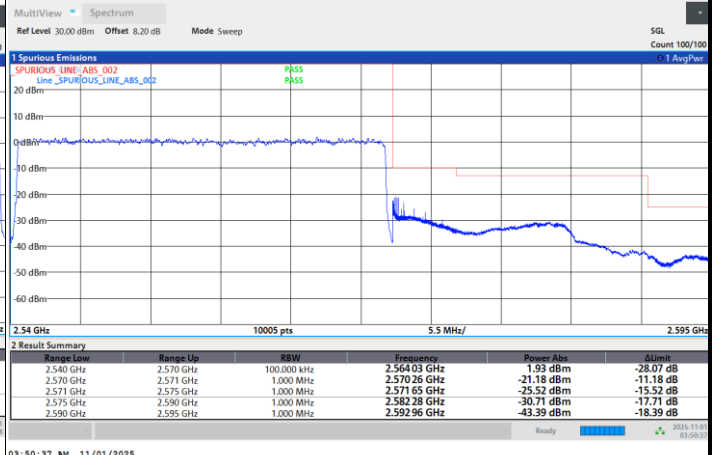
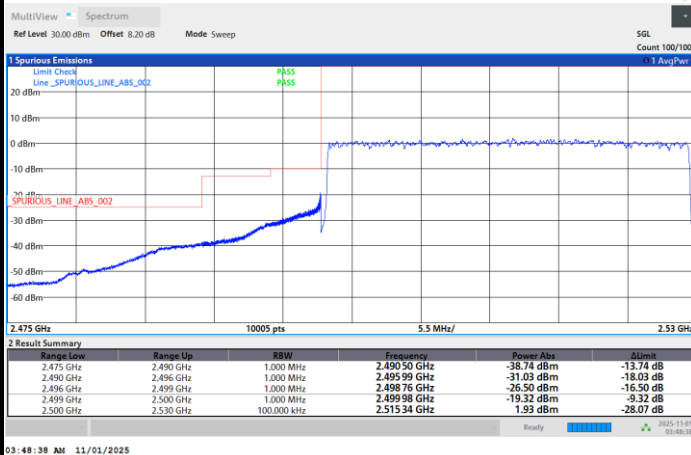




FR1 n7 / 30MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

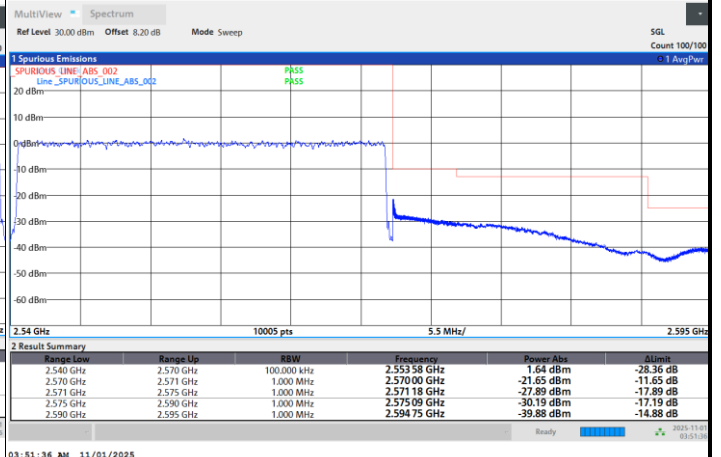
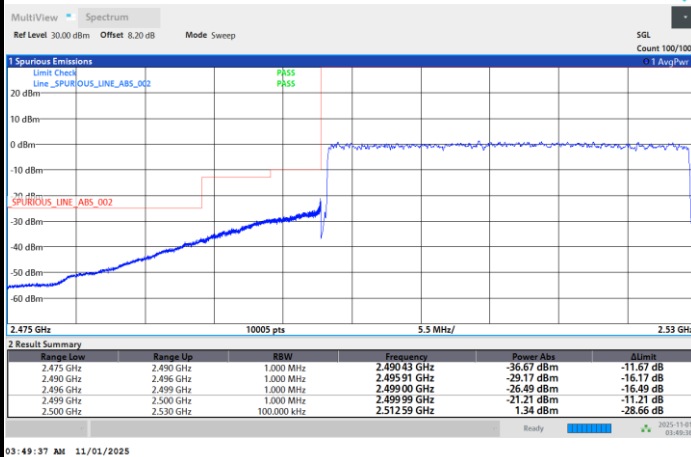
Highest Band Edge / Full RB



FR1 n7 / 30MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

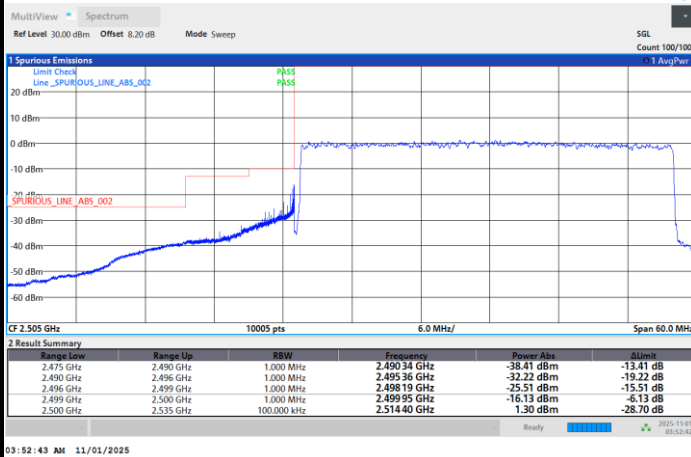




FR1 n7 / 35MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

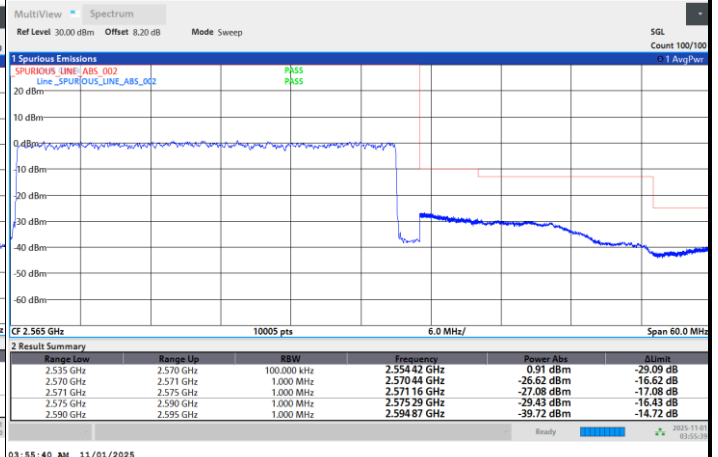
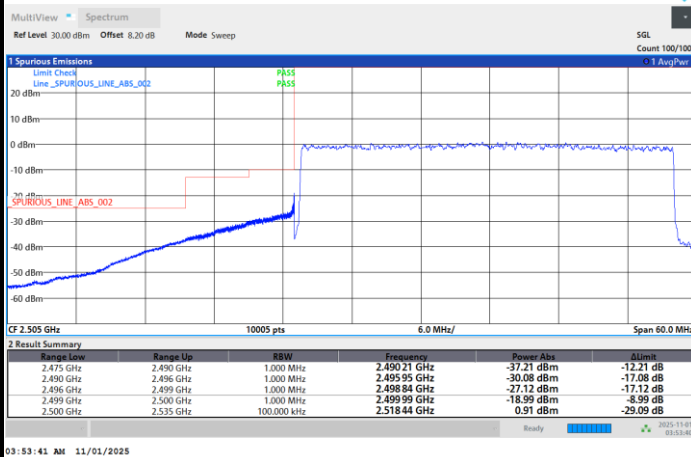
Highest Band Edge / Full RB



FR1 n7 / 35MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

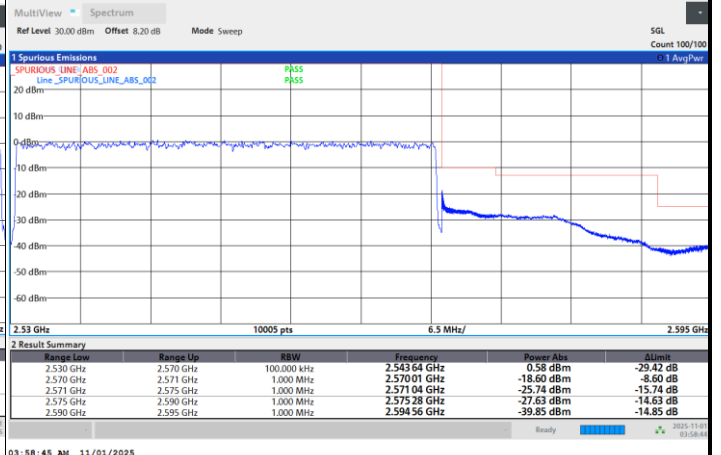
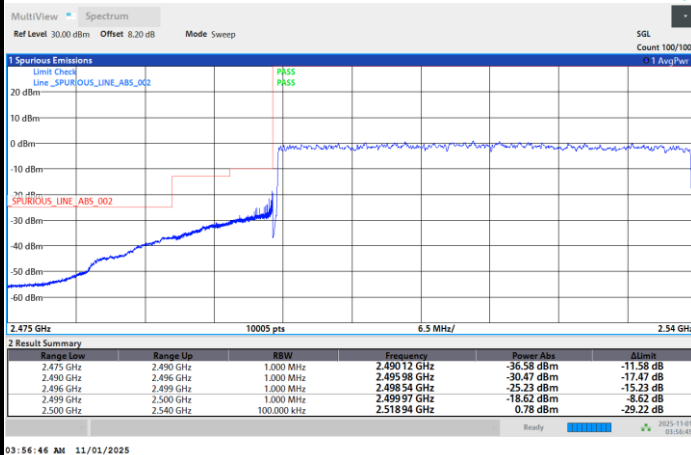




FR1 n7 / 40MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

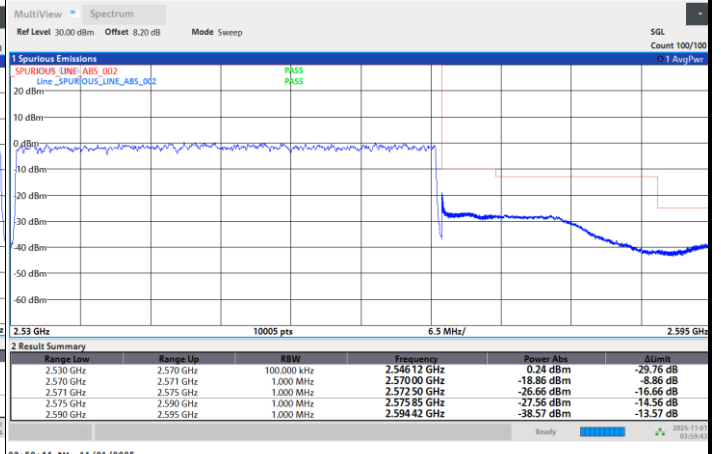
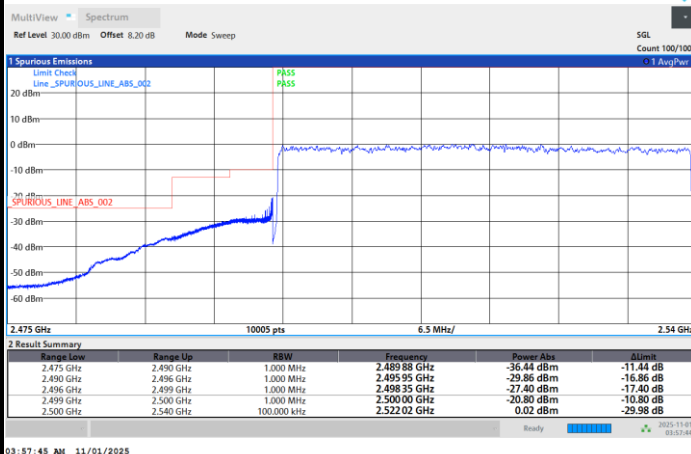
Highest Band Edge / Full RB



FR1 n7 / 40MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

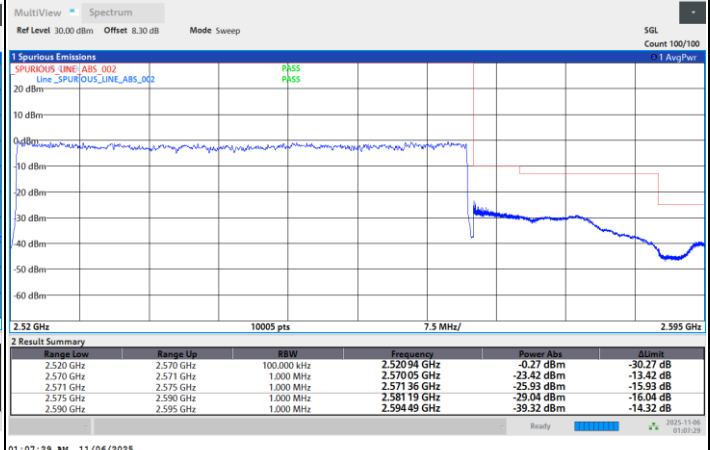
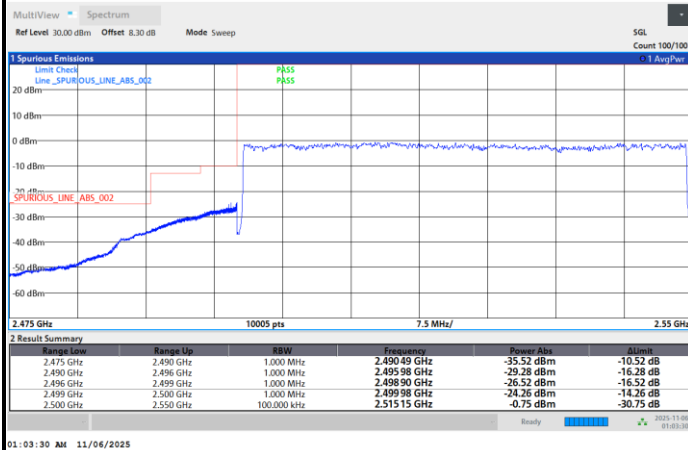




FR1 n7 / 50MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

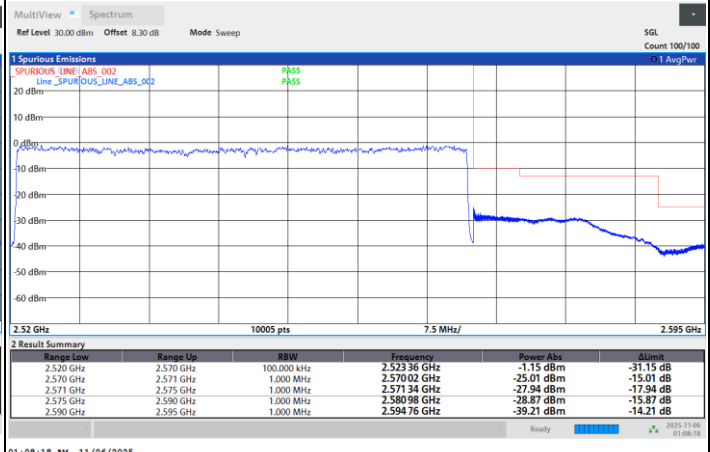
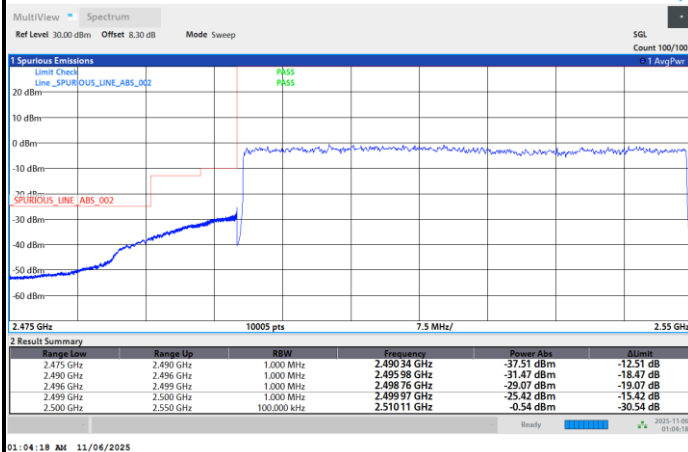
Highest Band Edge / Full RB



FR1 n7 / 50MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



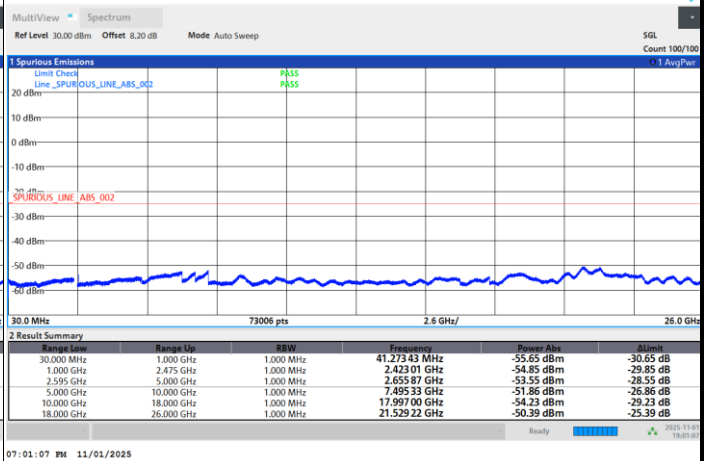
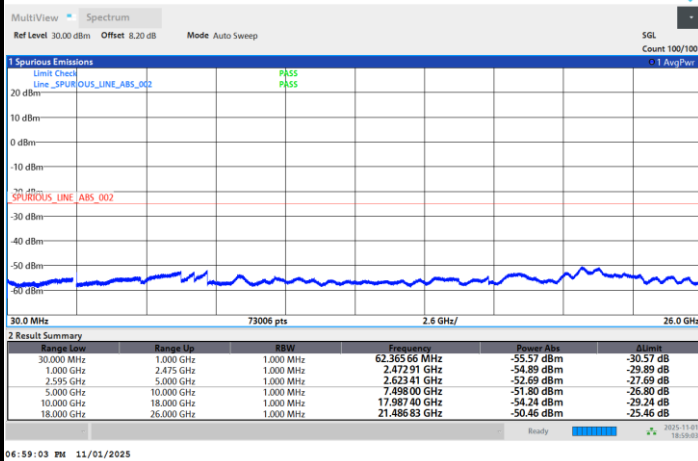


Conducted Spurious Emission

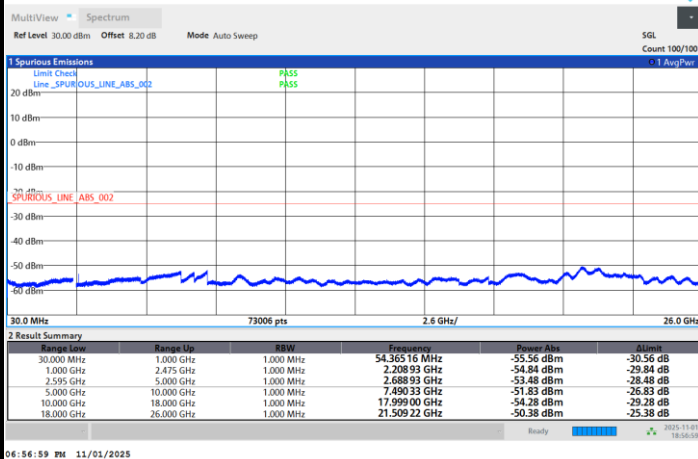
FR1 n7 / 5MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel

Middle Channel



Highest Channel



Frequency Stability

Test Conditions		FR1 n7 (BPSK) / Middle Channel 10M			
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Frequency Offset (Δf) (Hz)	Within Authorized Frequency Block(Hz)	Result
50	Normal Voltage	0.0034	-8.6	Yes	PASS
40	Normal Voltage	0.0024	6.1	Yes	
30	Normal Voltage	0.0012	-3.1	Yes	
20(Ref.)	Normal Voltage	0.0000	0	Yes	
10	Normal Voltage	0.0023	-5.8	Yes	
0	Normal Voltage	0.0011	-2.7	Yes	
-10	Normal Voltage	0.0003	-0.7	Yes	
-20	Normal Voltage	0.0032	-8.1	Yes	
-30	Normal Voltage	0.0015	3.9	Yes	
20	Maximum Voltage	0.0011	-2.8	Yes	
20	Normal Voltage	0.0000	0	Yes	
20	Minimum Voltage	0.0022	5.5	Yes	

Note:

1. Normal Voltage = 3.3 V. ; Minimum Voltage = 3.05 V. ; Maximum Voltage = 4.4 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.

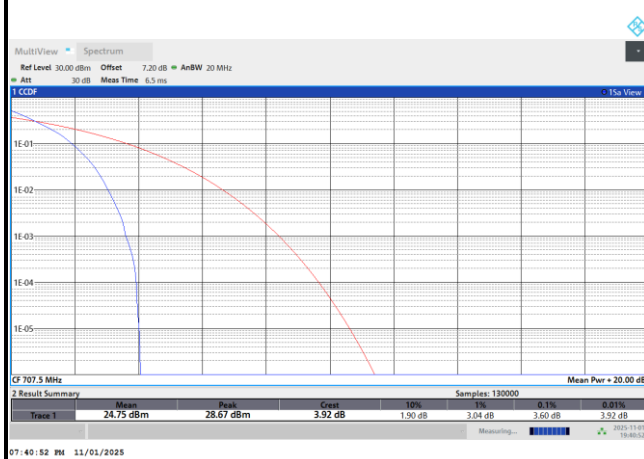
**FR1 n12****<SISO Mode>****Peak-to-Average Ratio**

Mode	FR1 n12 / 15MHz / 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	3.60	4.46	5.24	5.66	PASS
Mode	FR1 n12 / 15MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.48				PASS

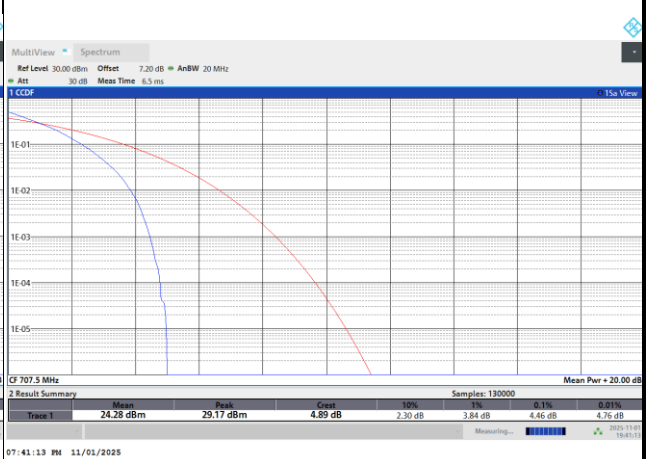


FR1 n12 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

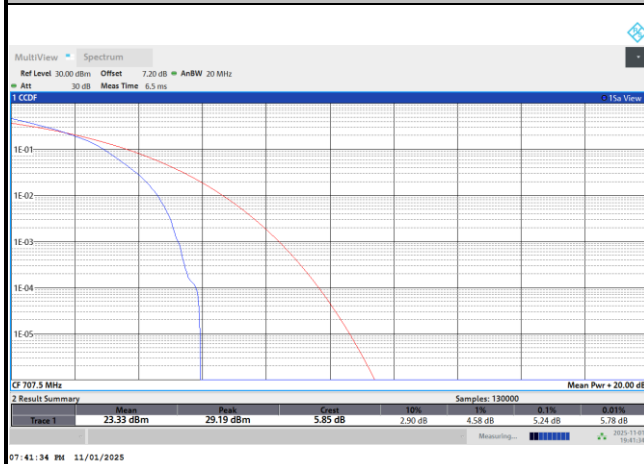
PI/2 BPSK



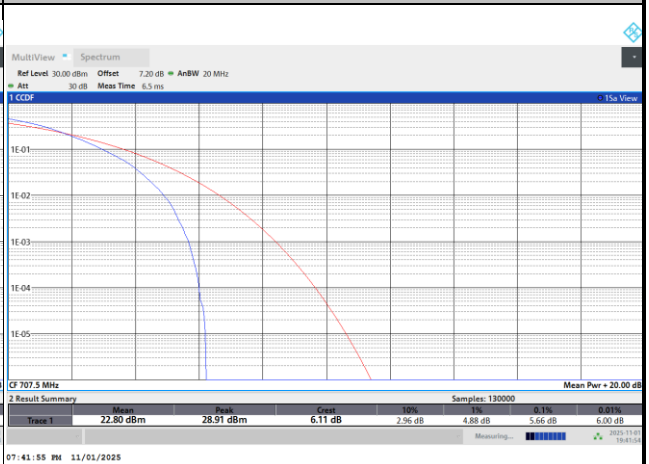
QPSK



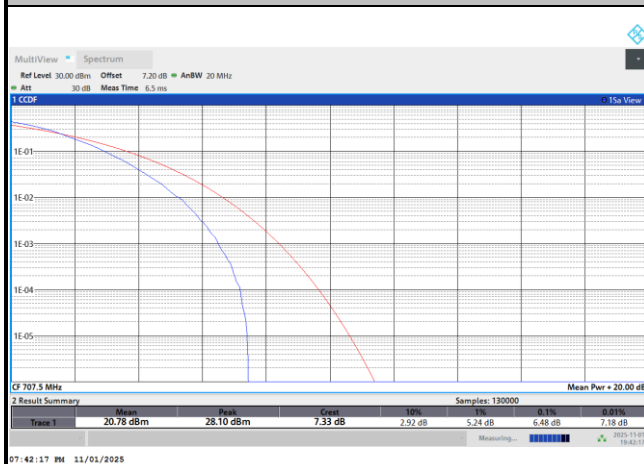
16QAM



64QAM



256QAM



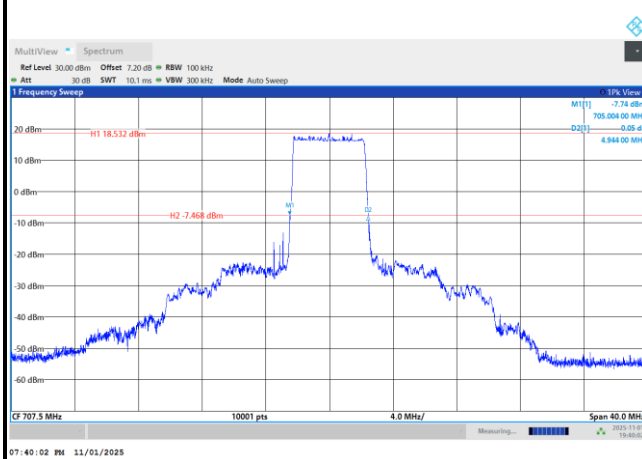
**26dB Bandwidth**

Mode	FR1 n12 : 26dB BW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK		
Middle CH	4.94	4.92	9.56	9.58	14.93	14.36		
Mod.	16QAM		16QAM		16QAM			
Middle CH	4.94		9.52		14.65			

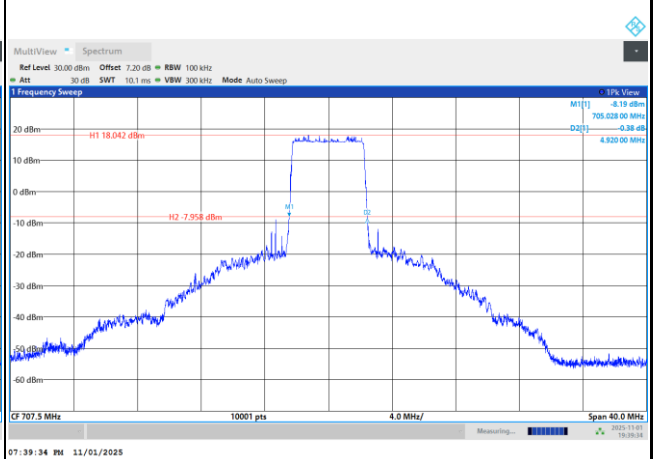


FR1 n12 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

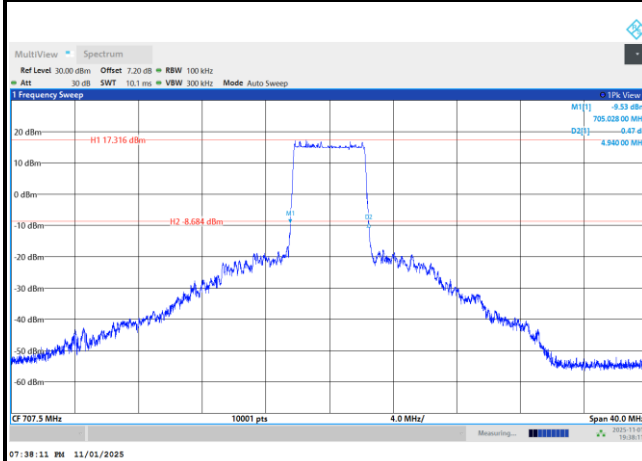
PI/2 BPSK



QPSK



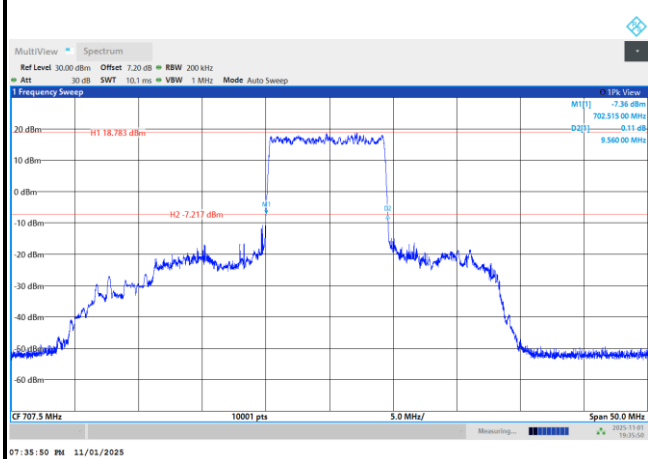
16QAM



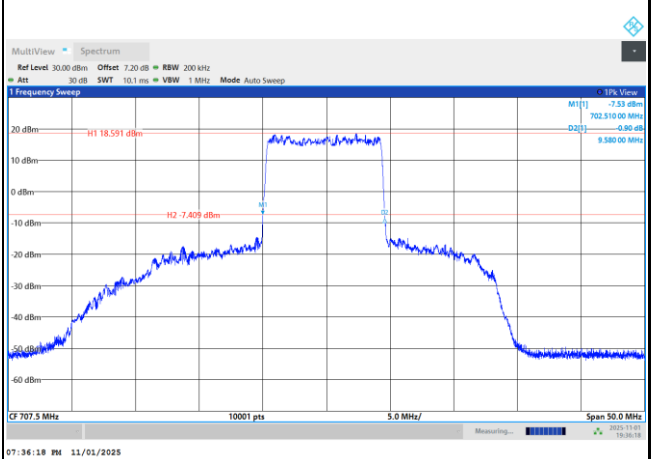


FR1 n12 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

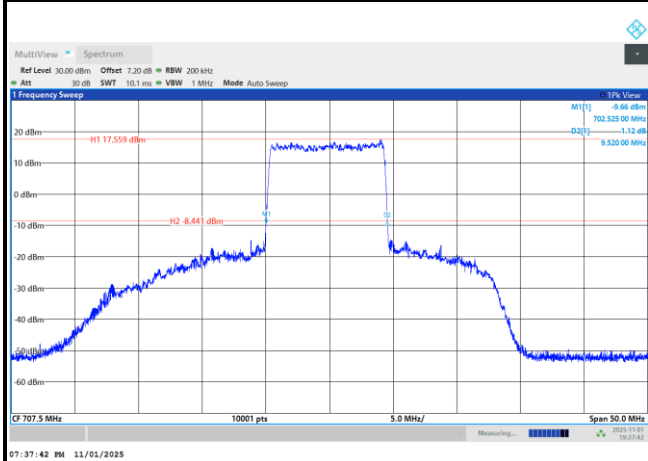
PI/2 BPSK



QPSK



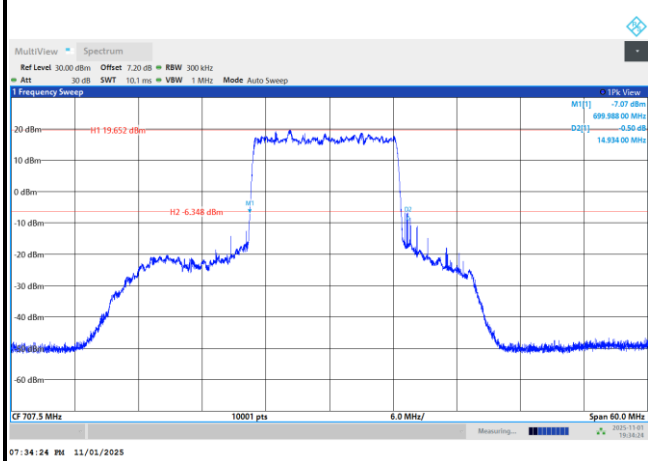
16QAM



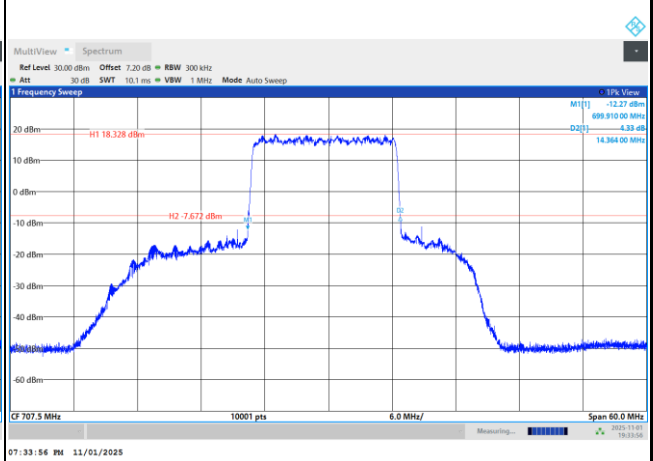


FR1 n12 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

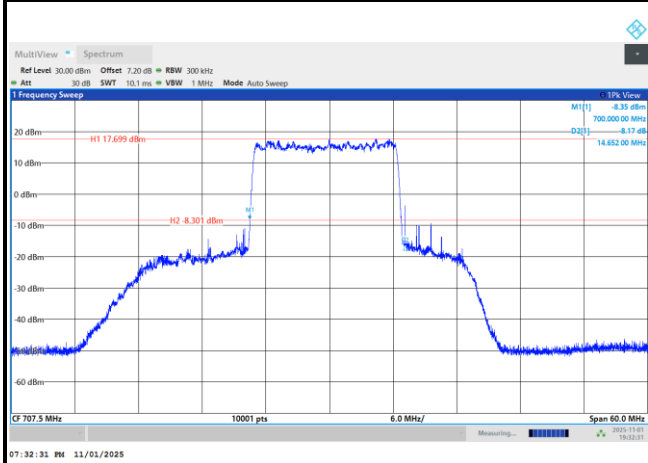
QPSK



QPSK



16QAM



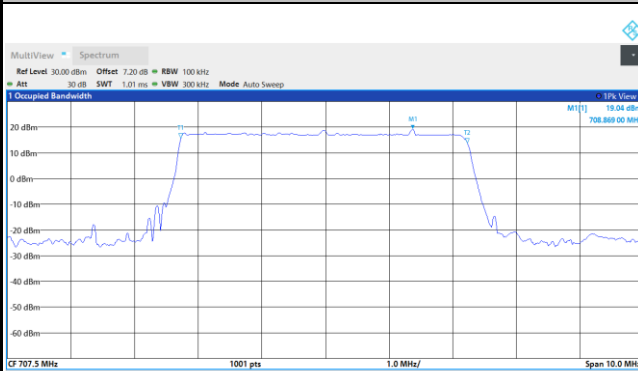
**Occupied Bandwidth**

Mode	FR1 n12 : 99%OBW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK		
Middle CH	4.49	4.50	9.02	8.97	13.47	13.46		
Mod.	16QAM		16QAM		16QAM			
Middle CH	4.49		8.98		13.45			



FR1 n12 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	708.869 MHz	19.04 dBm	Occ Bw	4,498,431,342 MHz
T1		1	705.22849 MHz	15.74 dBm	Occ Bw Centroid	707,477,709,242 MHz
T2		1	709.72692 MHz	13.80 dBm	Occ Bw Freq Offset	-22,290,757,505 kHz

07:40:30 PM 11/01/2025

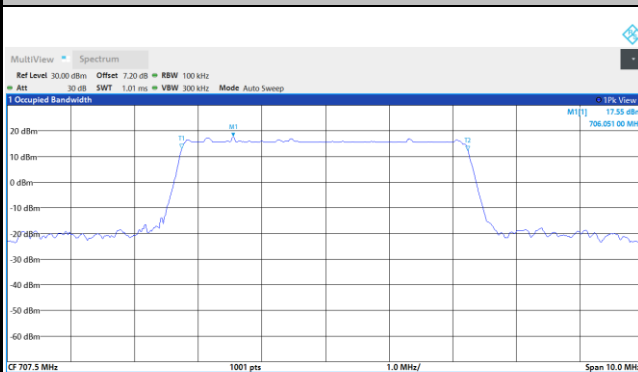
QPSK



Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		709.558 MHz	17.90 dBm	Occ Bw	4.503 748 77 MHz
			705.227 56 MHz	14.97 dBm	Occ Bw Centroid	707.479 432 99 MHz
T2	1		709.731 31 MHz	13.89 dBm	Occ Bw Freq Offset	-20.567 009 746 kHz

07:39:07 PM 11/01/2025

16QAM



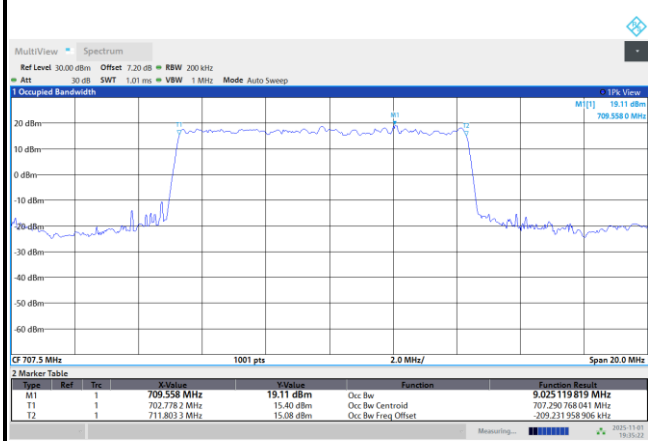
Type	Ref	Trc	XValue	YValue	Function	Function Result
M1		1	706.051 MHz	17.55 dBm	Occ bw	4.491 124 755 MHz
T1		1	705.242 18 MHz	12.95 dBm	Occ bw Centroid	707.487 737 827 MHz
T2		1	709.733 3 MHz	12.35 dBm	Occ bw Freq Offset	-12.262 172 798 kHz

07:38:39 PM 11/01/2025

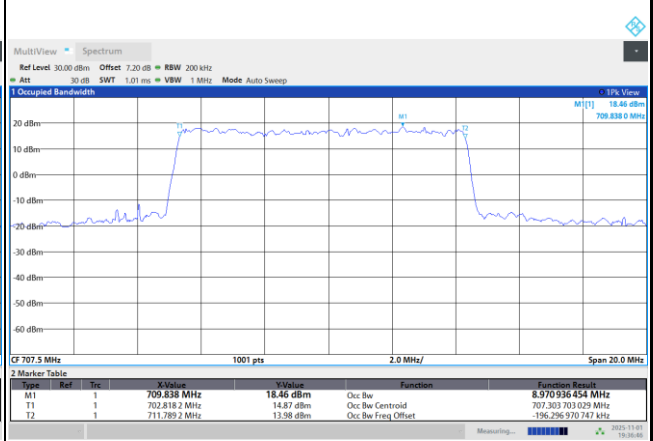


FR1 n12 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

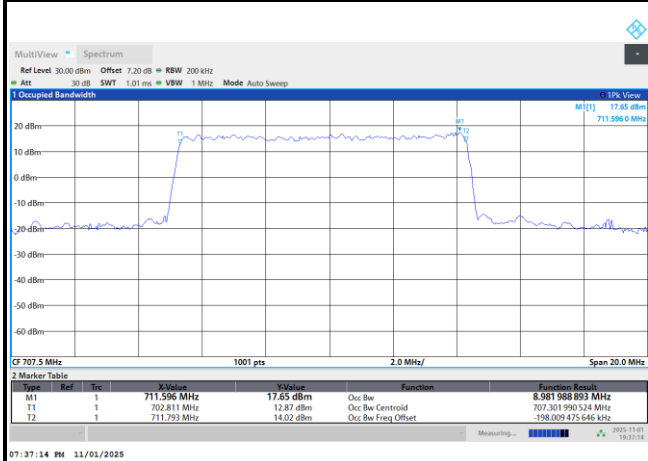
PI/2 BPSK



QPSK



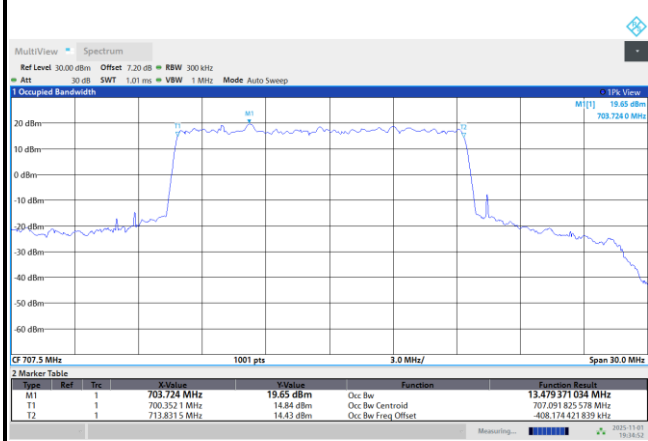
16QAM



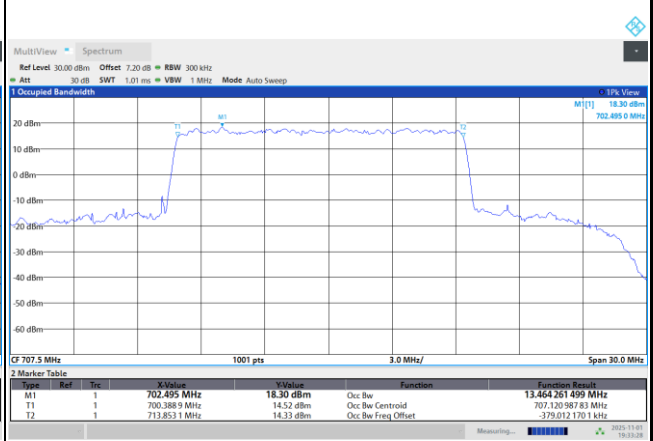


FR1 n12 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

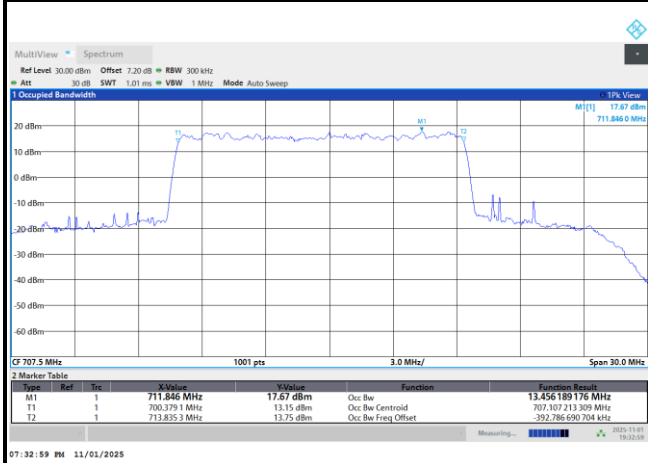
PI/2 BPSK



QPSK



16QAM

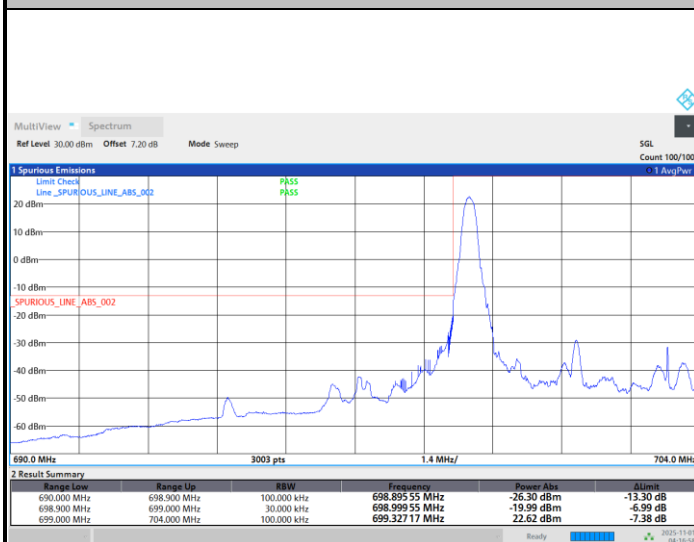




Conducted Band Edge

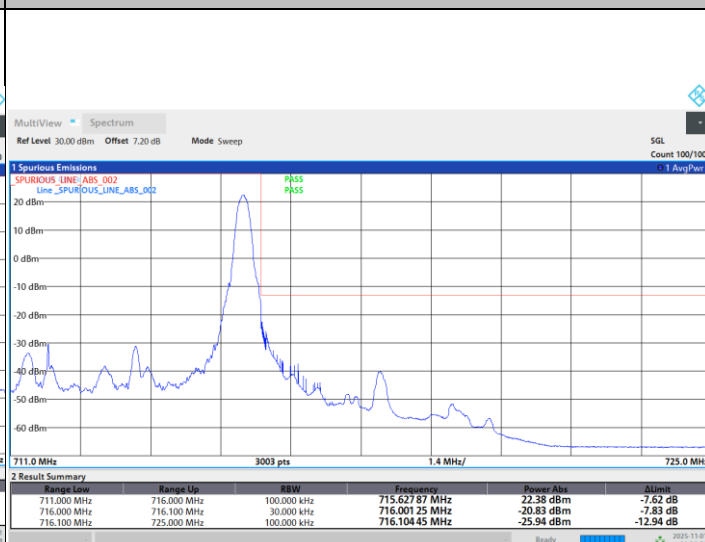
FR1 n12 / 5MHz / DFT-S OFDM / PI/2 BPSK

Lowest Band Edge / 1RB0



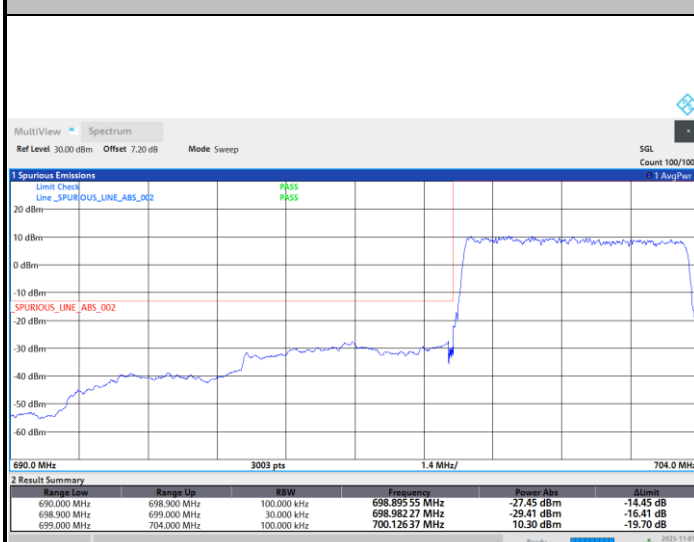
04:16:59 AM 11/01/2025

Highest Band Edge / 1RBmax



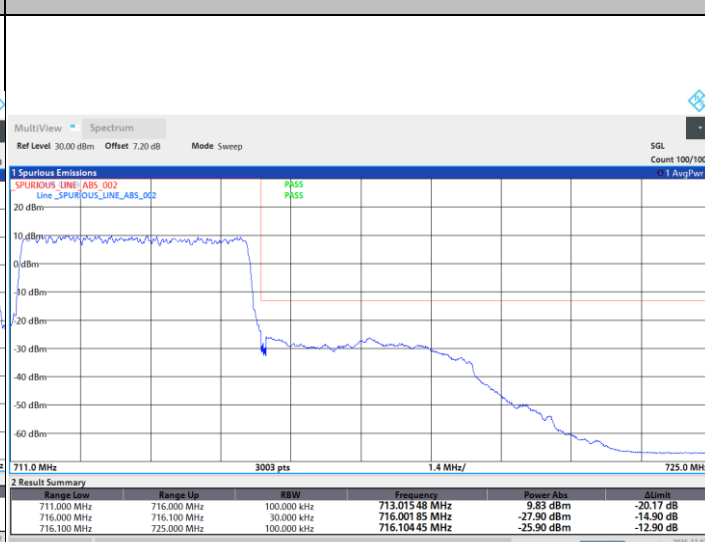
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Lowest Band Edge / Full RB



04:17:58 AM 11/01/2025

Highest Band Edge / Full RB



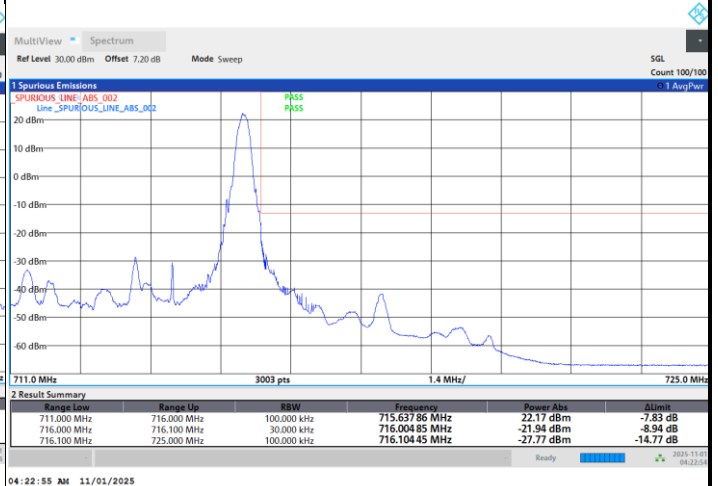
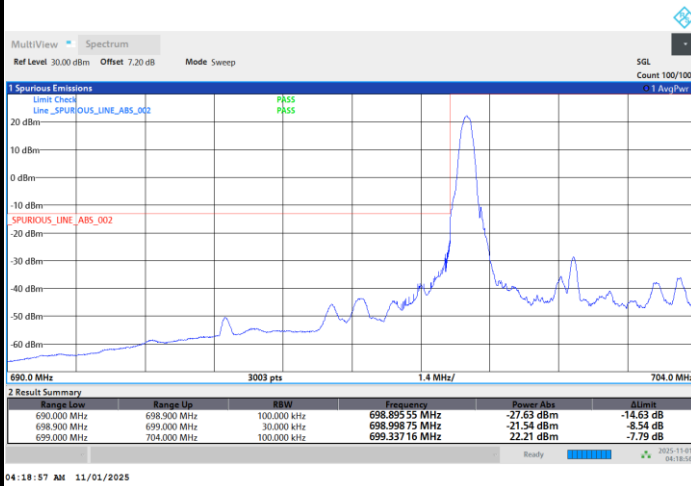
04:21:55 AM 11/01/2025



FR1 n12 / 5MHz / DFT-S OFDM / QPSK

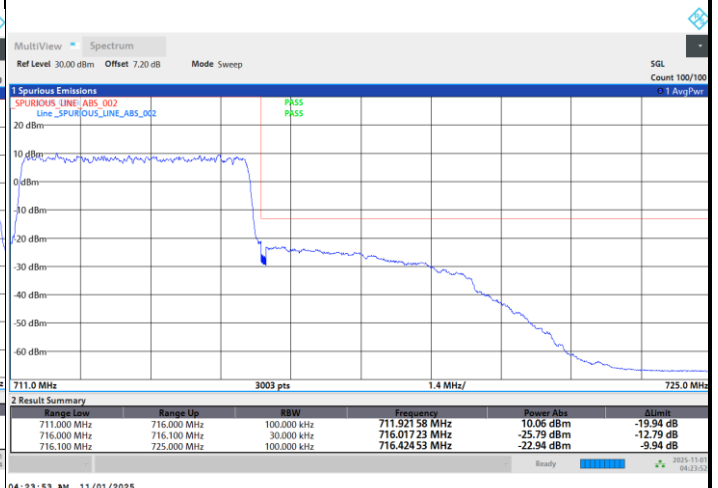
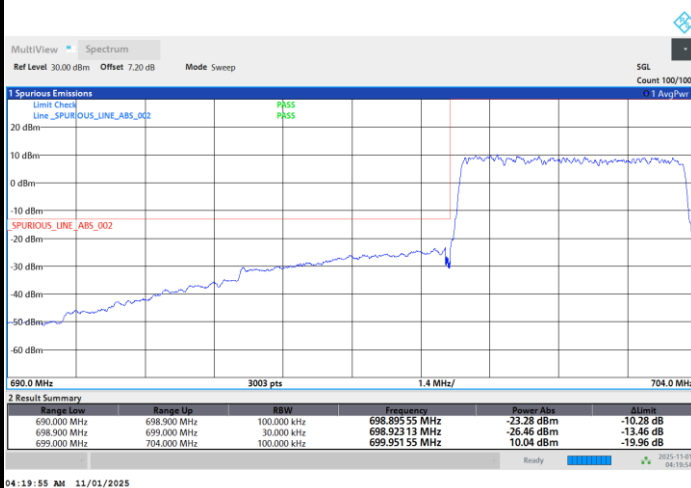
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



Lowest Band Edge / Full RB

Highest Band Edge / Full RB

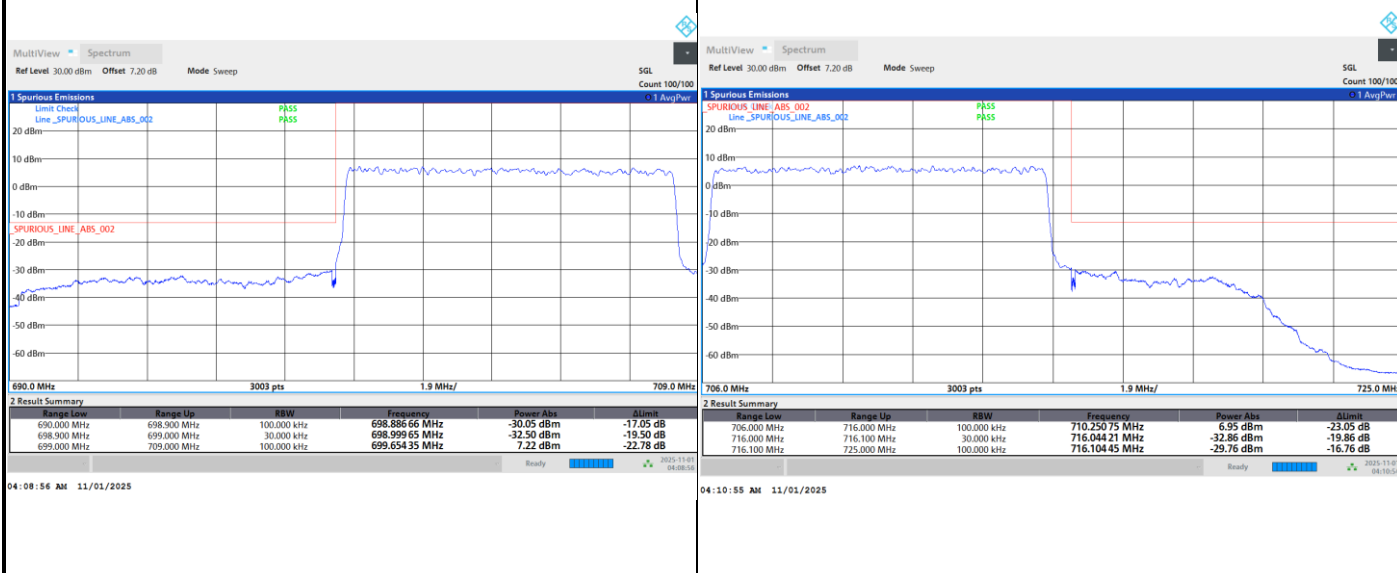




FR1 n12 / 10MHz / DFT-s-OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

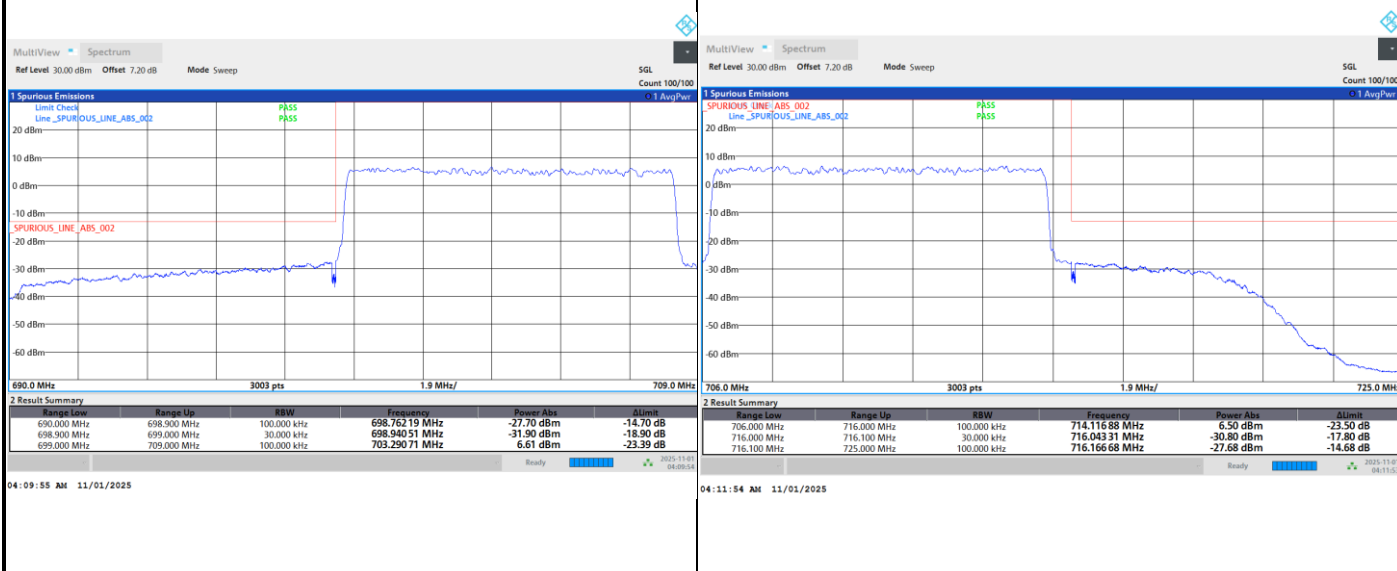
Highest Band Edge



FR1 n12 / 10MHz / DFT-s-OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge

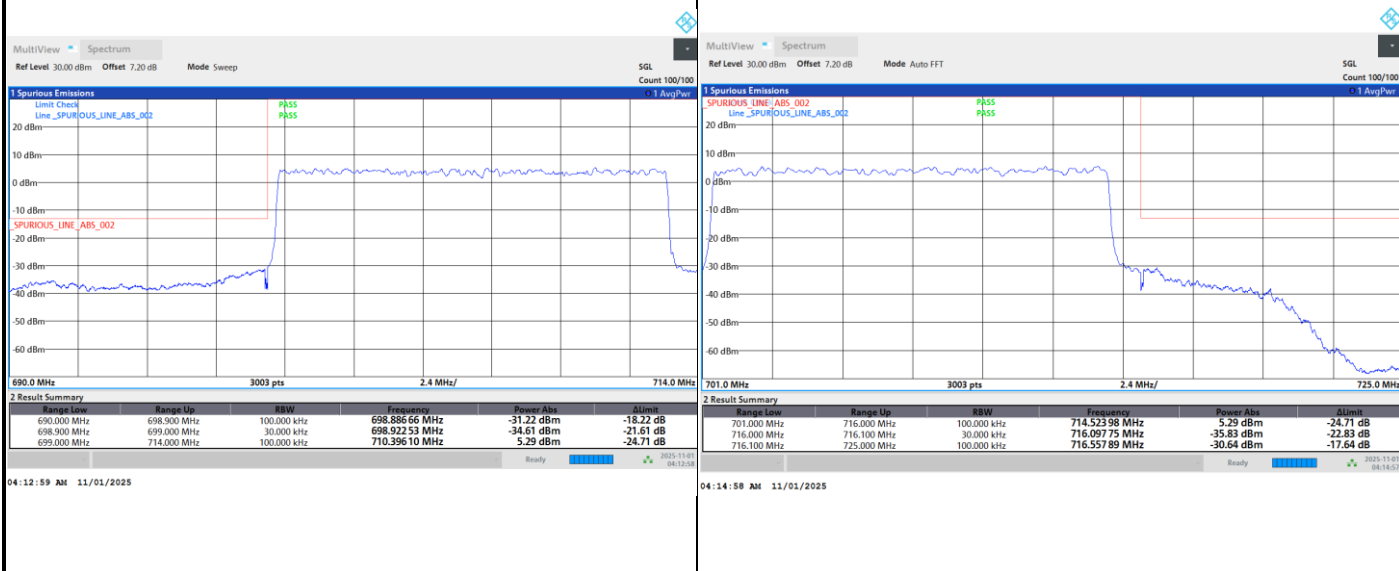




FR1 n12 / 15MHz / DFT-s-OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

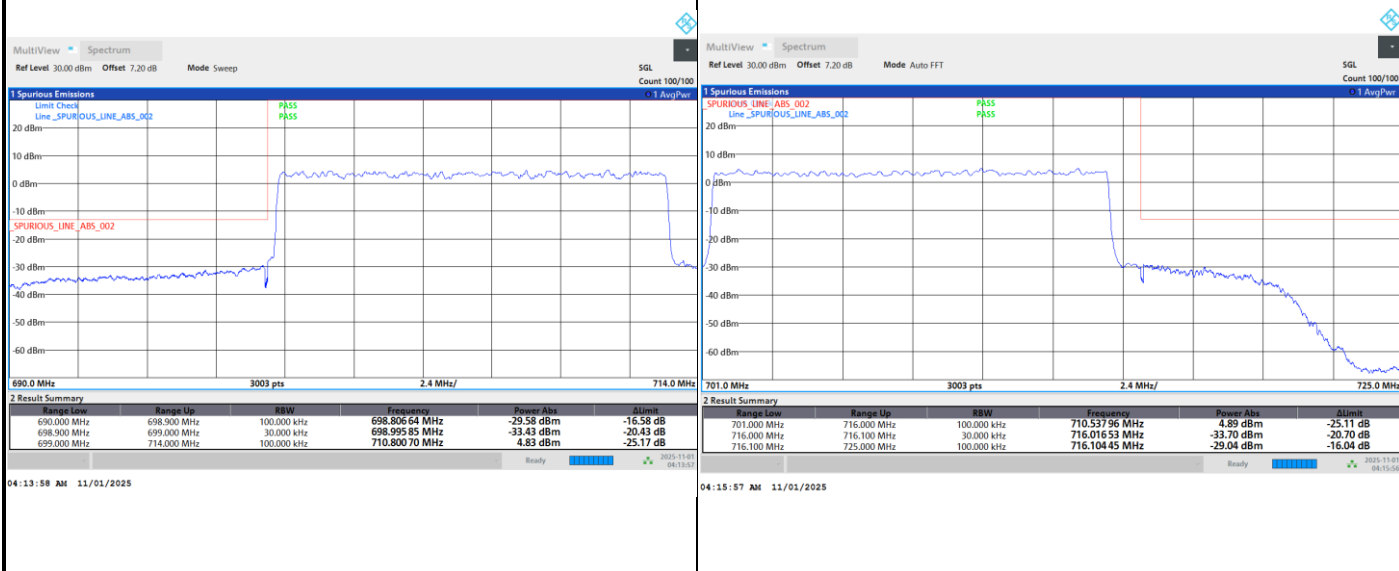
Highest Band Edge



FR1 n12 / 15MHz / DFT-s-OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge



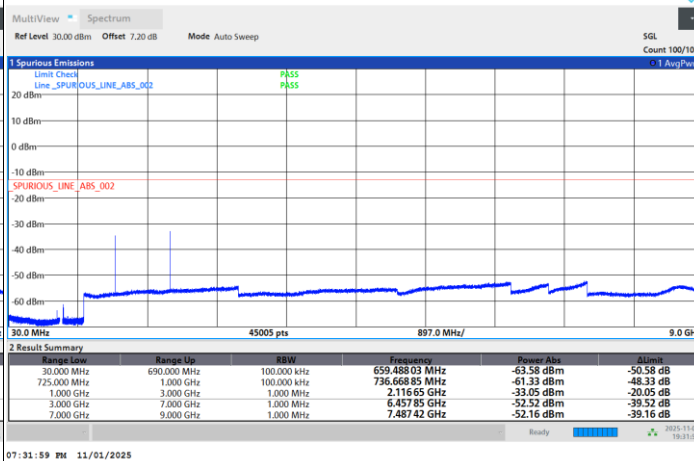
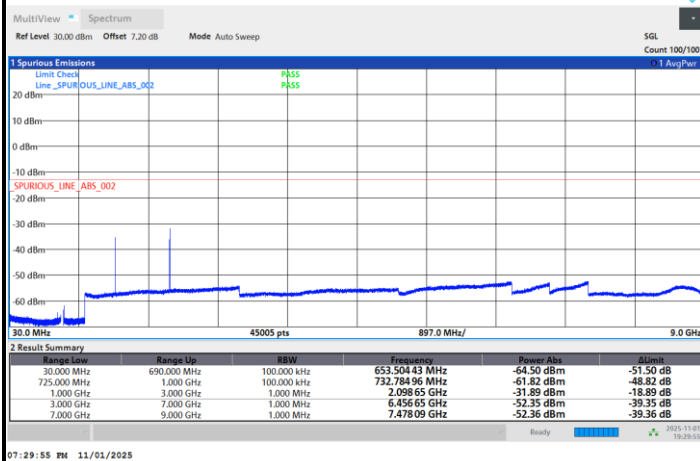


Conducted Spurious Emission

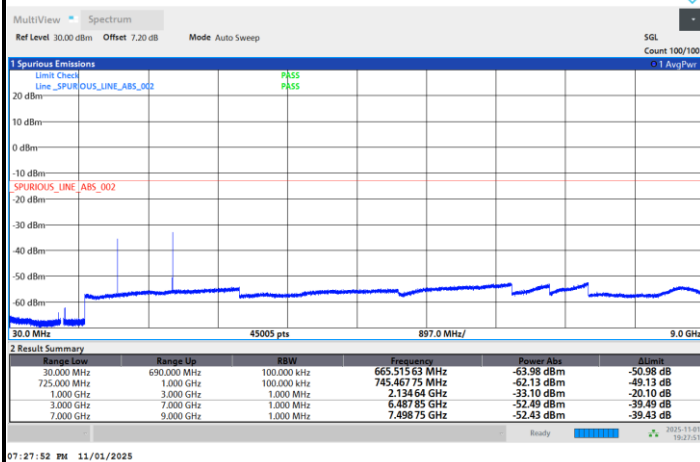
FR1 n12 / 5MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel

Middle Channel



Highest Channel



Frequency Stability

Test Conditions		FR1 n12 (BPSK) / Middle Channel 10M			
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Frequency Offset (Δf) (Hz)	Within Authorized Frequency Block(Hz)	Result
50	Normal Voltage	0.0058	-4.1	Yes	PASS
40	Normal Voltage	0.0038	2.7	Yes	
30	Normal Voltage	0.0057	-4	Yes	
20(Ref.)	Normal Voltage	0.0000	0	Yes	
10	Normal Voltage	0.0065	-4.6	Yes	
0	Normal Voltage	0.0030	2.1	Yes	
-10	Normal Voltage	0.0042	3	Yes	
-20	Normal Voltage	0.0017	-1.2	Yes	
-30	Normal Voltage	0.0071	5	Yes	
20	Maximum Voltage	0.0114	-8.1	Yes	
20	Normal Voltage	0.0000	0	Yes	
20	Minimum Voltage	0.0057	4	Yes	

Note:

1. Normal Voltage = 3.3 V. ; Minimum Voltage = 3.05 V. ; Maximum Voltage = 4.4 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.

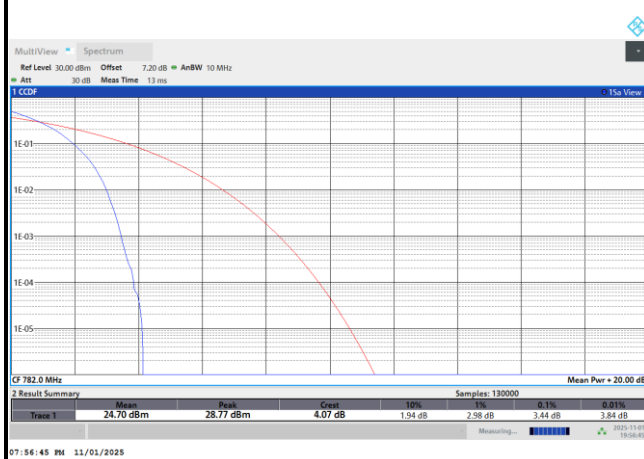
**FR1 n13****<SISO Mode>****Peak-to-Average Ratio**

Mode	FR1 n13 / 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	3.44	4.36	5.16	5.52	PASS
Mode	FR1 n13 / 20MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.36				PASS

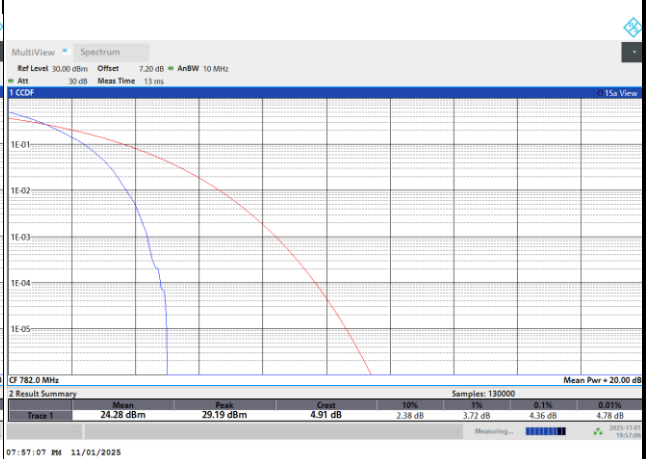


FR1 n13 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

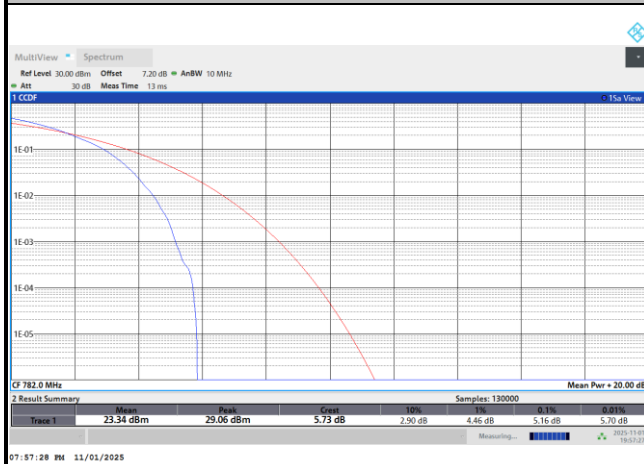
PI/2 BPSK



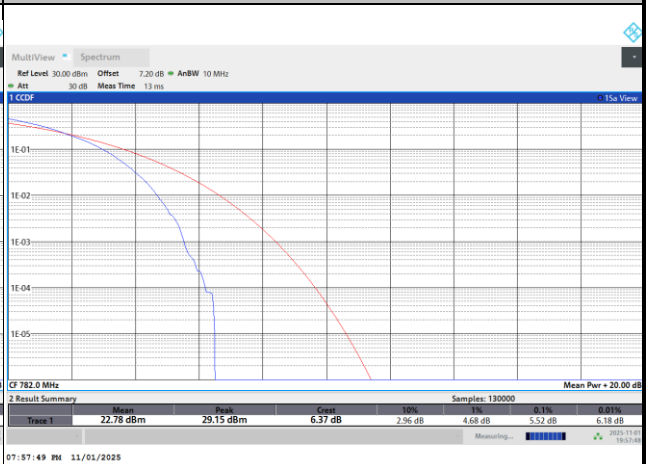
QPSK



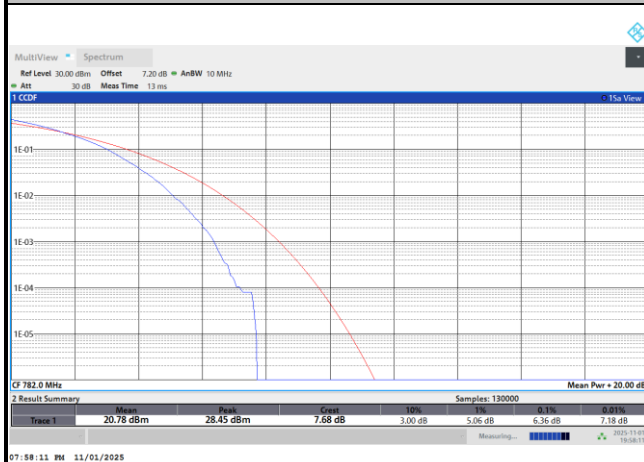
16QAM



64QAM



256QAM



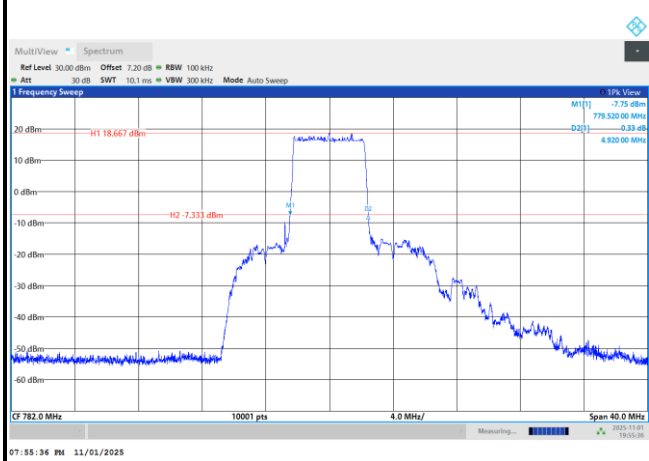
**26dB Bandwidth**

Mode	FR1 n13 : 26dB BW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz					
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK				
Middle CH	4.92	5.02	9.52	9.56				
Mod.	16QAM		16QAM					
Middle CH	4.93		9.53					

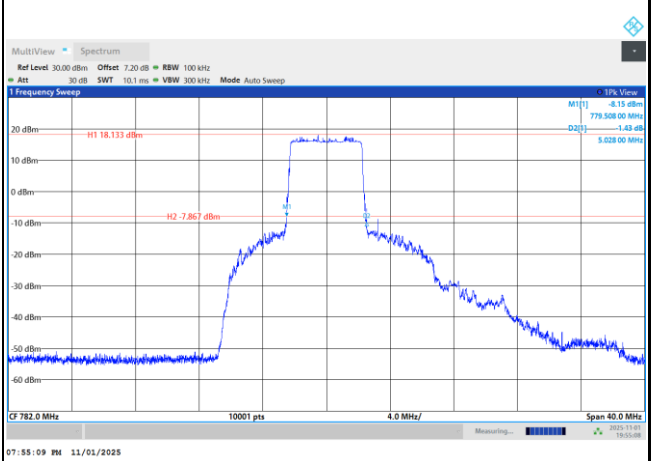


FR1 n13 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



QPSK



16QAM

