

Frequency Stability

Test Conditions		FR1 n26 (BPSK) / Middle Channel 10M			
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Frequency Offset (Δf) (Hz)	Within Authorized Frequency Block(Hz)	Result
50	Normal Voltage	0.0028	-2.3	Yes	PASS
40	Normal Voltage	0.0011	0.9	Yes	
30	Normal Voltage	0.0033	-2.7	Yes	
20(Ref.)	Normal Voltage	0.0000	0	Yes	
10	Normal Voltage	0.0006	-0.5	Yes	
0	Normal Voltage	0.0071	5.8	Yes	
-10	Normal Voltage	0.0107	-8.8	Yes	
-20	Normal Voltage	0.0028	-2.3	Yes	
-30	Normal Voltage	0.0056	-4.6	Yes	
20	Maximum Voltage	0.0044	-3.6	Yes	
20	Normal Voltage	0.0000	0	Yes	
20	Minimum Voltage	0.0049	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.

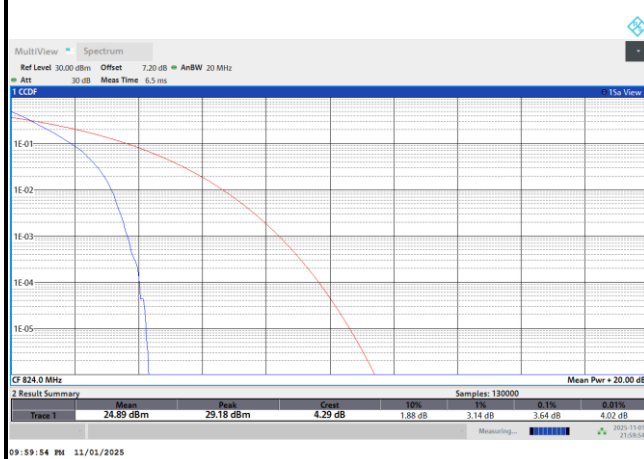
**FR1 n26 Part90s Straddle Channel****<SISO Mode>****Peak-to-Average Ratio**

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
Middle CH	3.64	4.60	5.48	6.02	PASS
Mode	FR1 n26 / 20MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.76				PASS

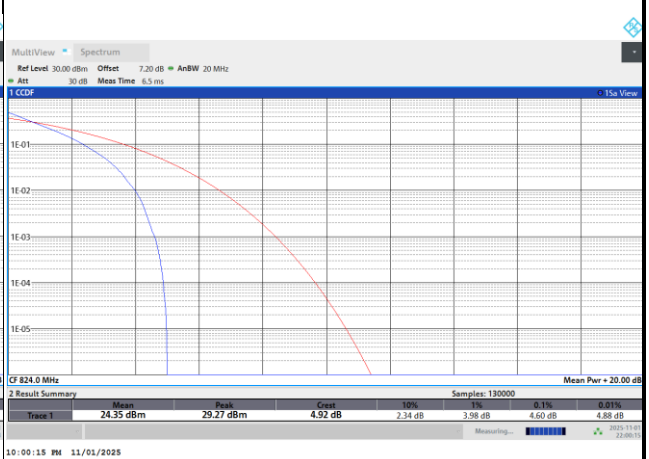


FR1 n26 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

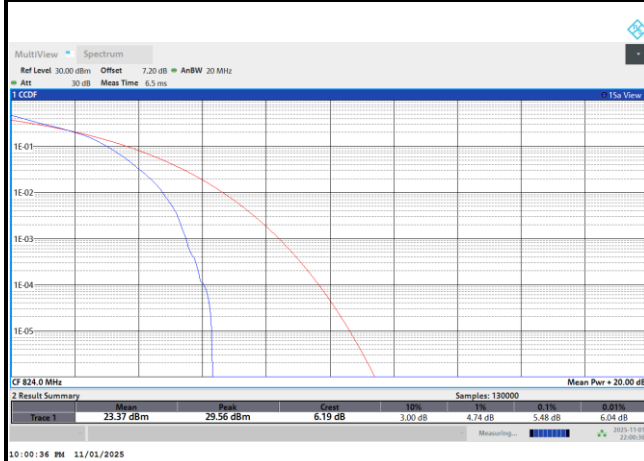
PI/2 BPSK



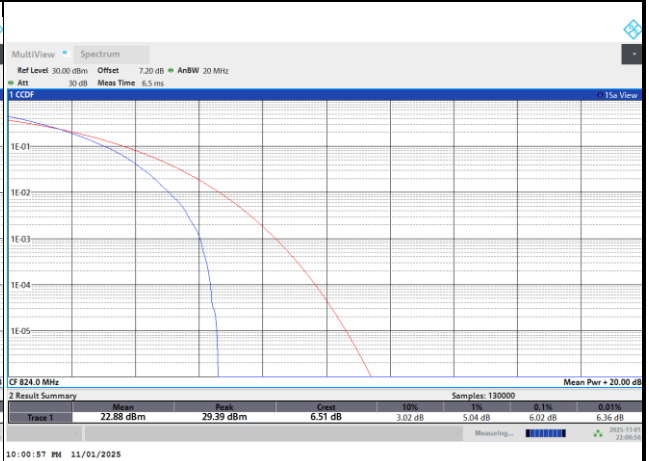
QPSK



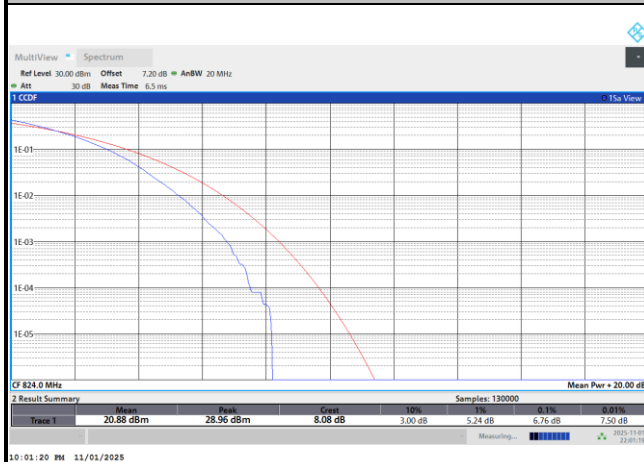
16QAM



64QAM



256QAM



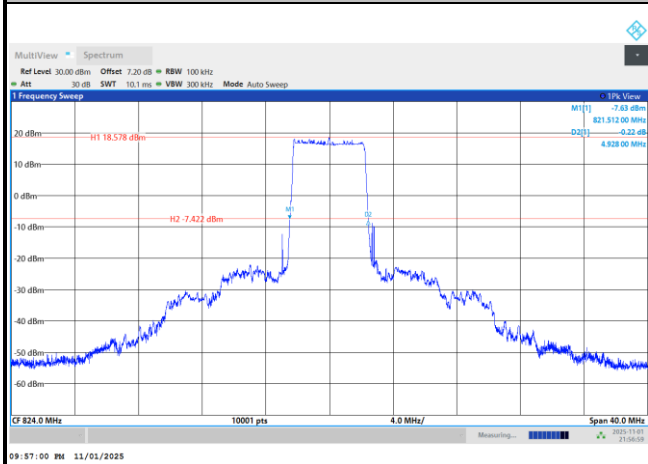
**26dB Bandwidth**

Mode	FR1 n26 : 26dB BW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK
Middle CH	4.92	5.56	9.59	9.53	14.73	14.51	19.32	19.16
Mod.	16QAM		16QAM		16QAM		16QAM	
Middle CH	4.91		9.80		14.89		19.15	
BW	25MHz		30MHz		30MHz			
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK				
Middle CH	24.24	24.21	31.86	31.43				
Mod.	16QAM		16QAM					
Middle CH	24.26		31.31					

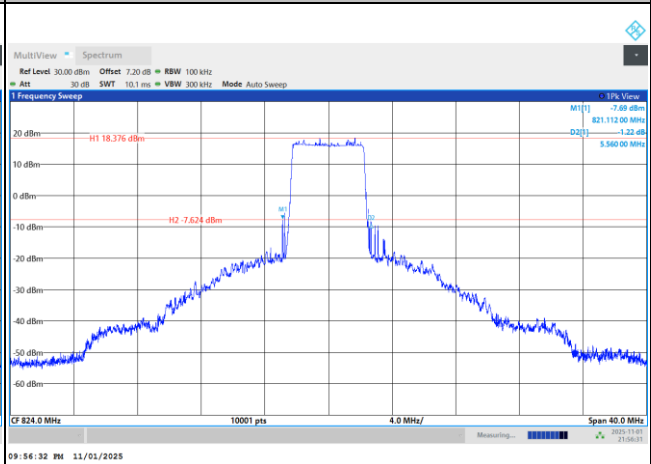


FR1 n26 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

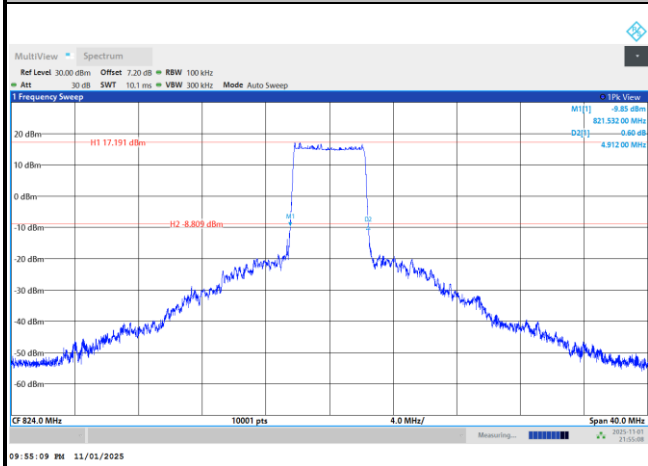
PI/2 BPSK



QPSK



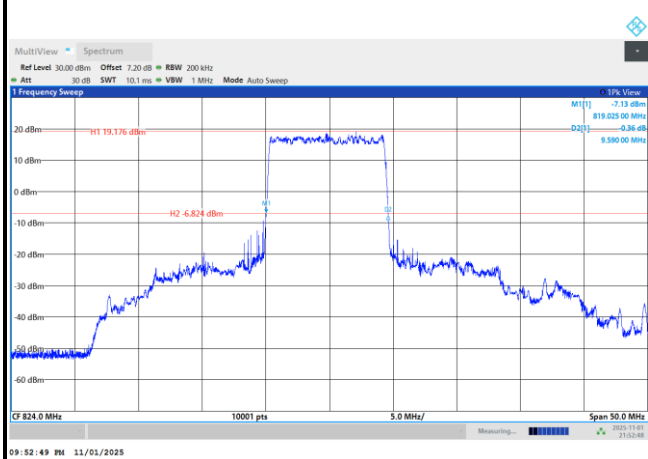
16QAM



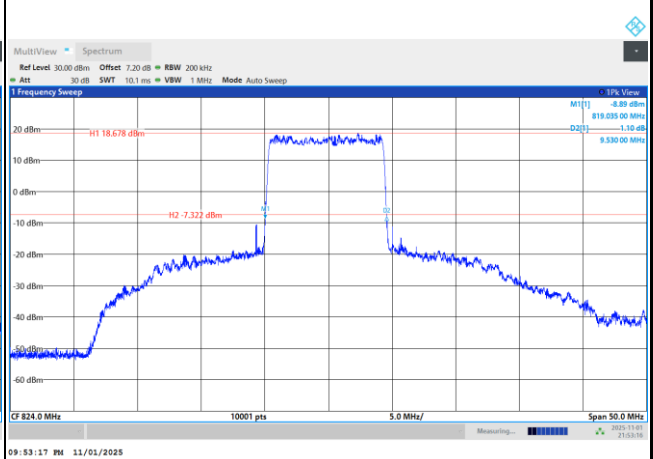


FR1 n26 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

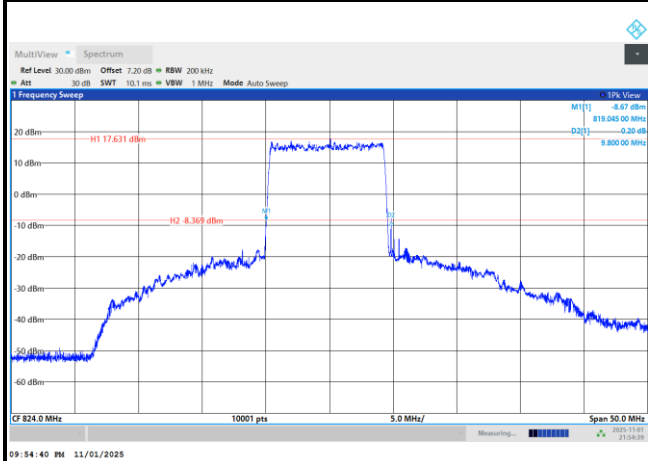
PI/2 BPSK



QPSK



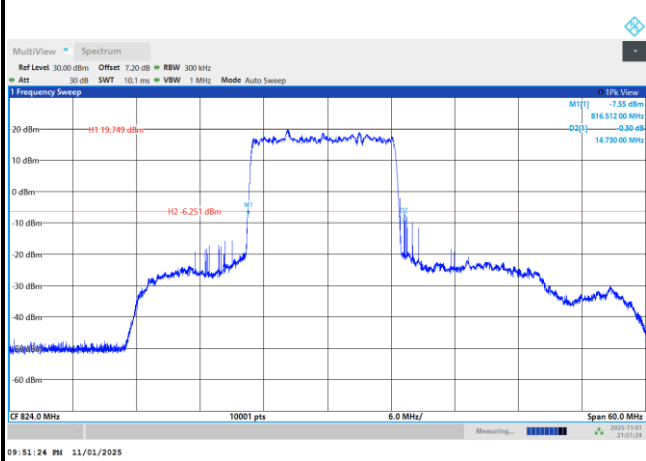
16QAM



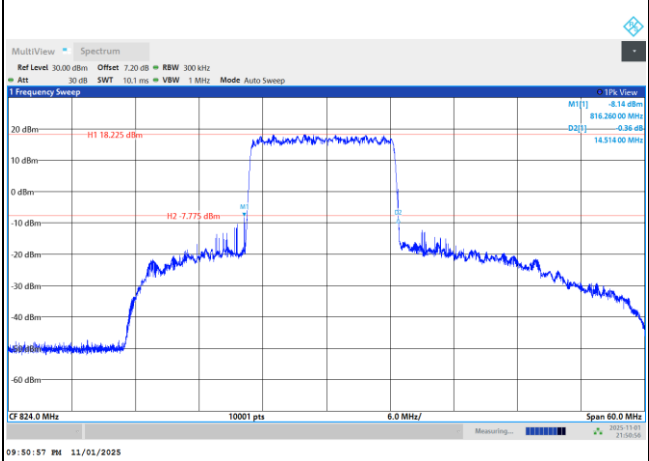


FR1 n26 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

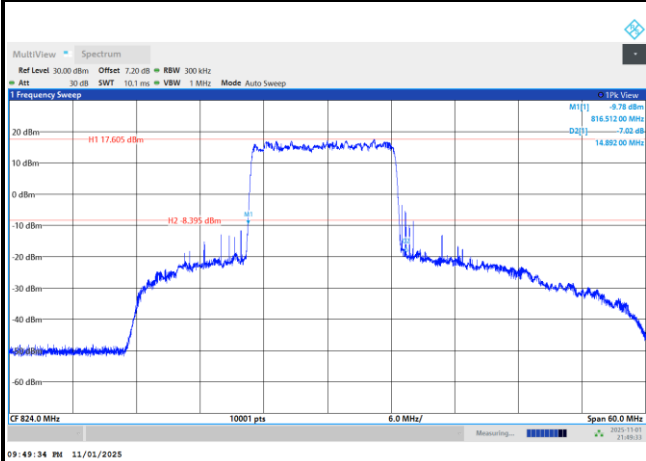
QPSK



QPSK



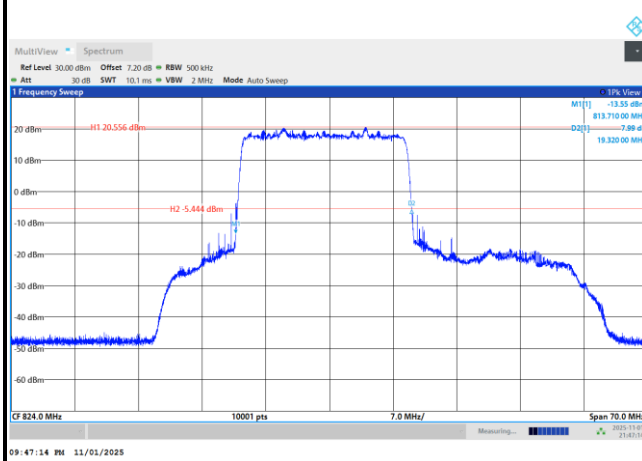
16QAM



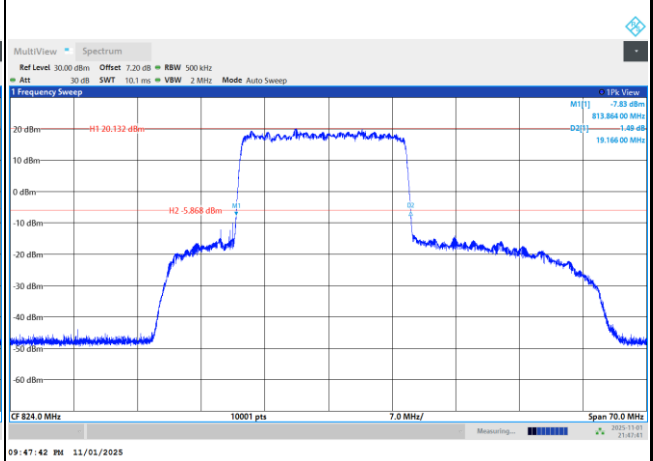


FR1 n26 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

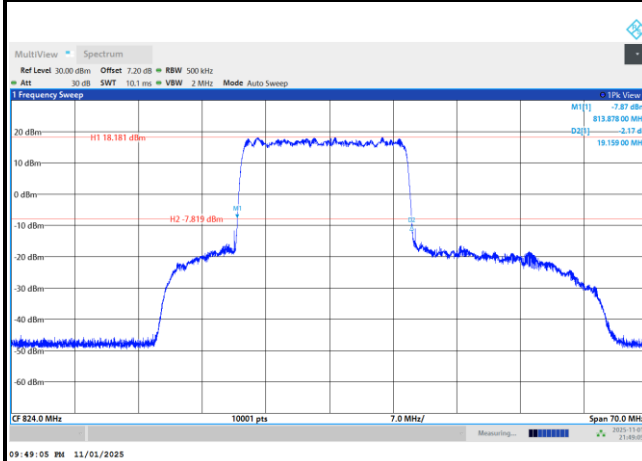
PI/2 BPSK



QPSK



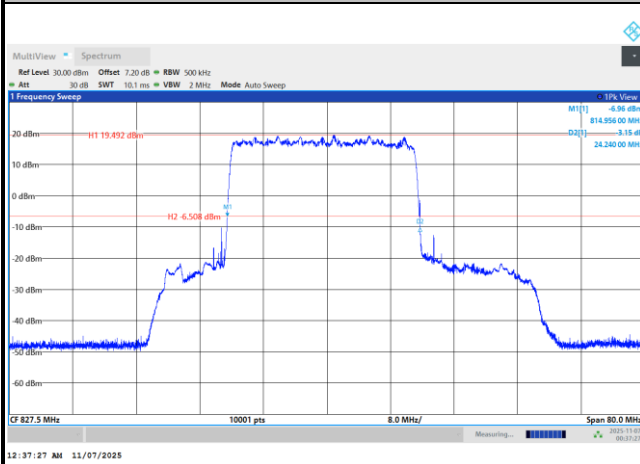
16QAM



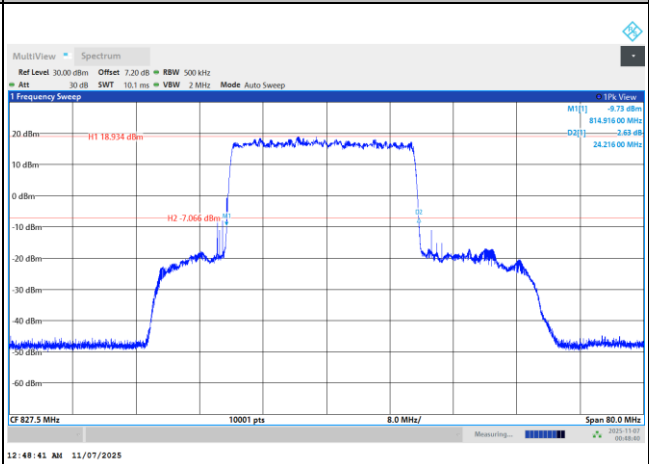


FR1 n26 / 25MHz / DFT-S OFDM / Middle Channel / Full RB

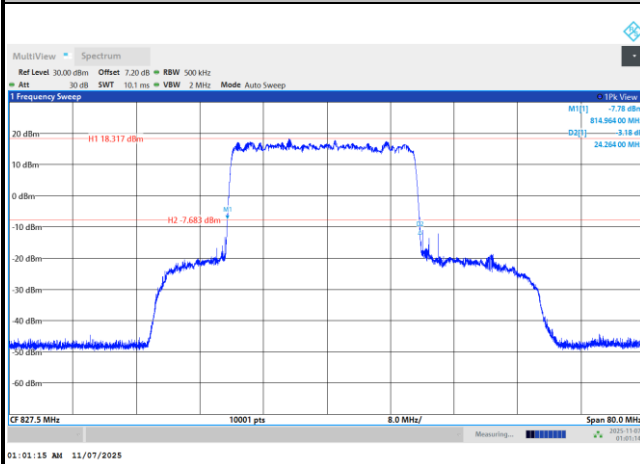
PI/2 BPSK



QPSK



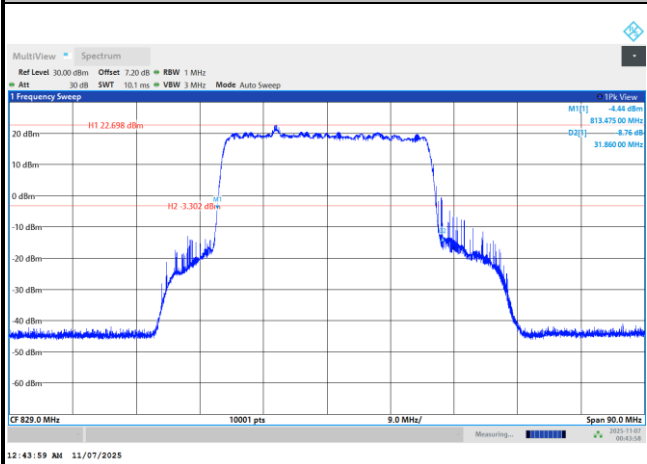
16QAM



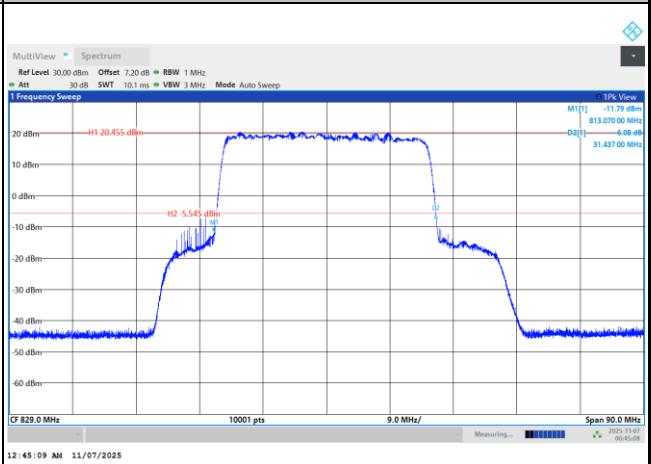


FR1 n26 / 30MHz / DFT-S OFDM / Middle Channel / Full RB

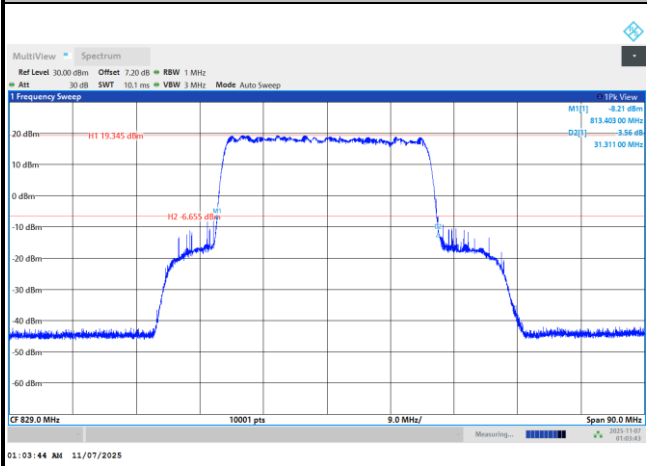
PI/2 BPSK



QPSK



16QAM



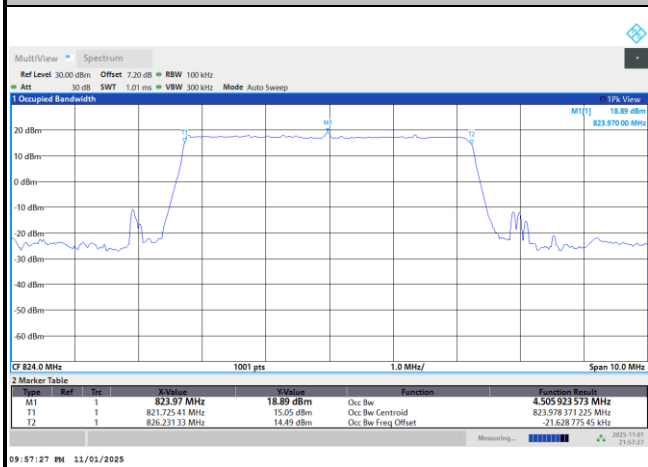
**Occupied Bandwidth**

Mode	FR1 n26 : 99%OBW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK
Middle CH	4.50	4.51	9.03	8.96	13.46	13.45	18.02	17.97
Mod.	16QAM		16QAM		16QAM		16QAM	
Middle CH	4.49		8.97		13.43		17.95	
BW	25MHz		30MHz					
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK				
Middle CH	22.98	22.90	28.96	28.90				
Mod.	16QAM		16QAM					
Middle CH	22.89		28.84					

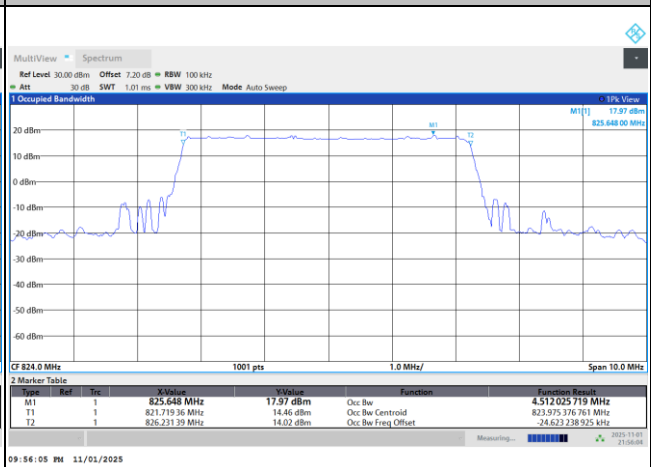


FR1 n26 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

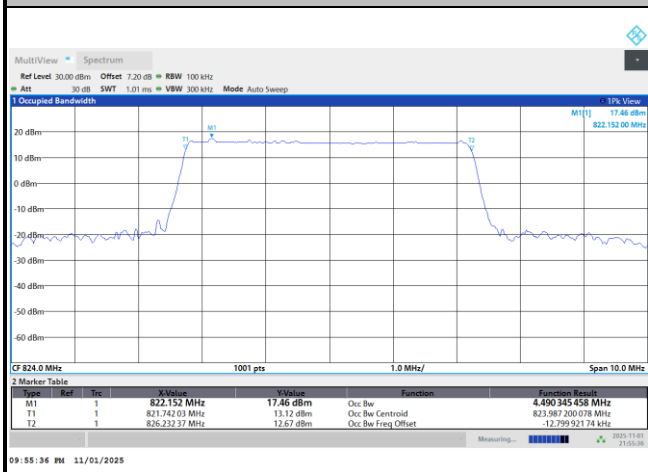
PI/2 BPSK



QPSK



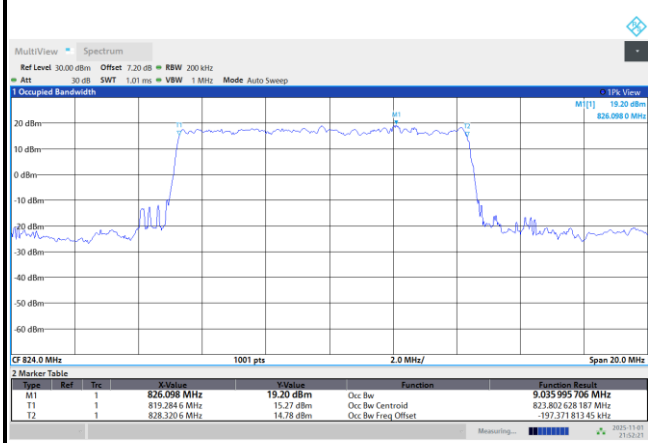
16QAM





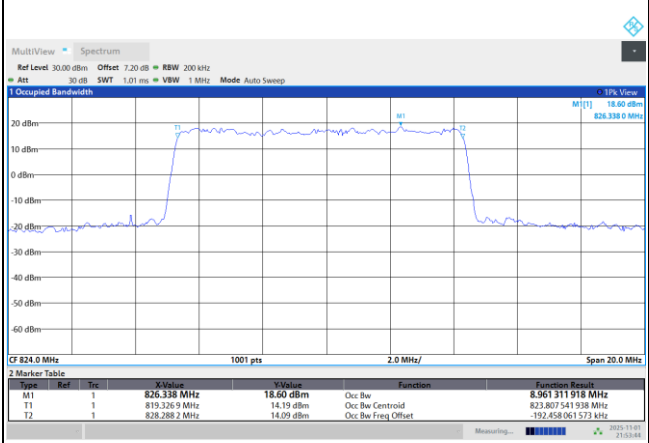
FR1 n26 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



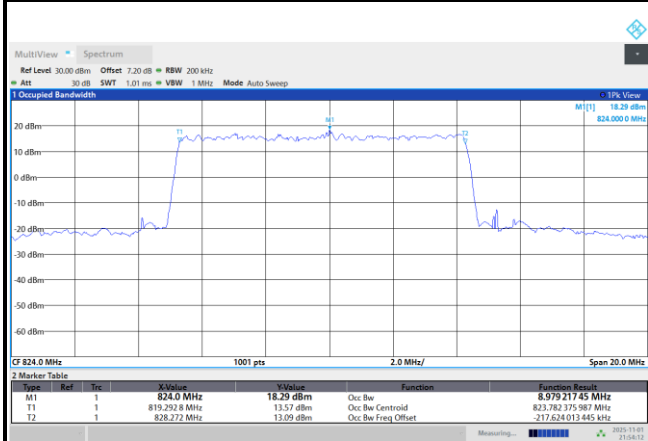
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QPSK



09:53:44 PM 11/01/2025

16QAM

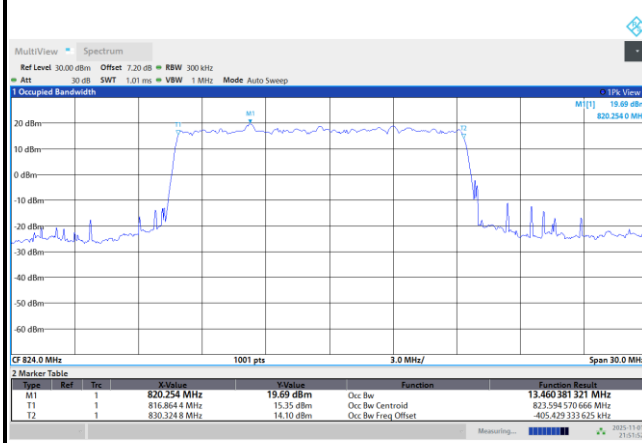


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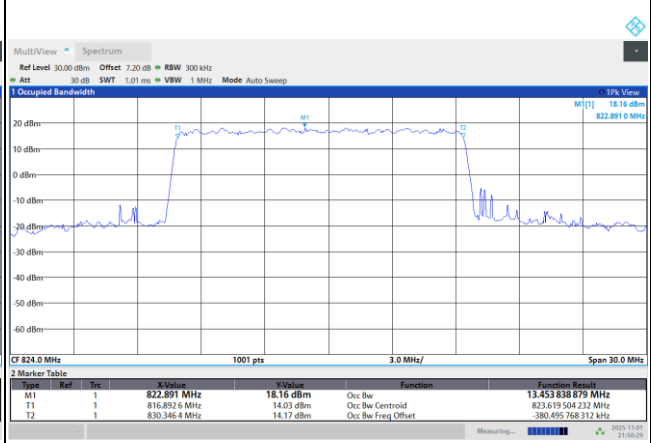
FR1 n26 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



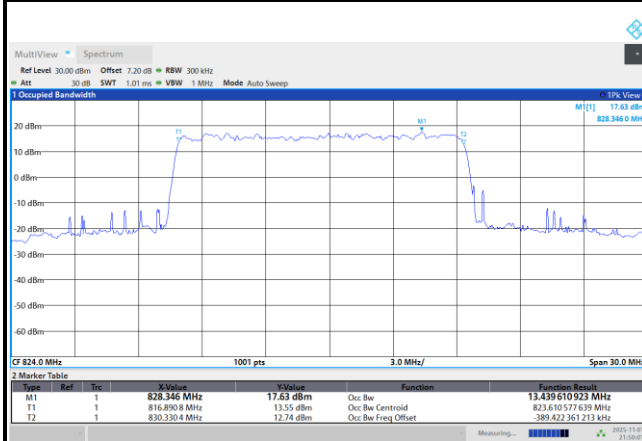
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QPSK



09:50:29 PM 11/01/2025

16QAM

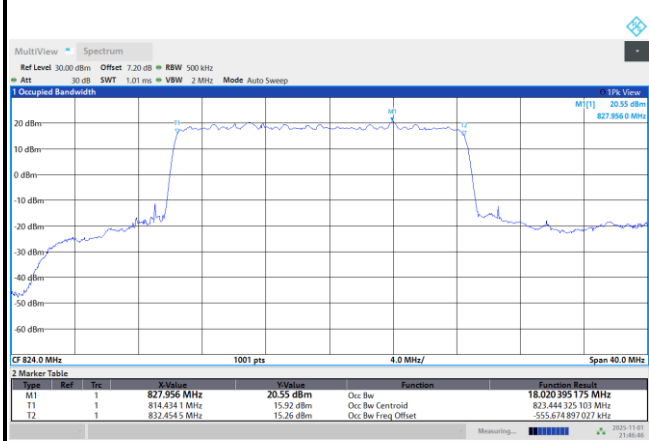


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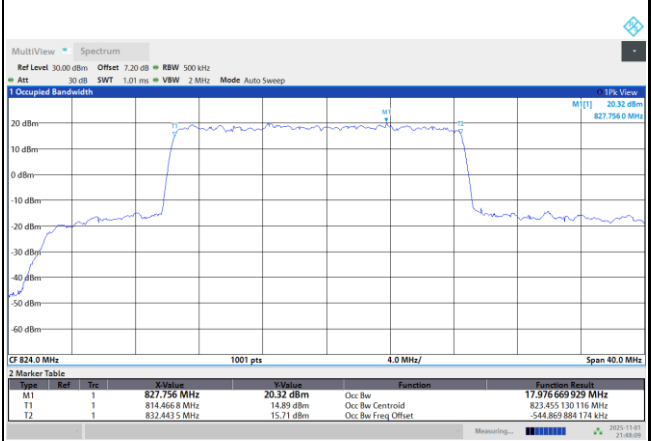
FR1 n26 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



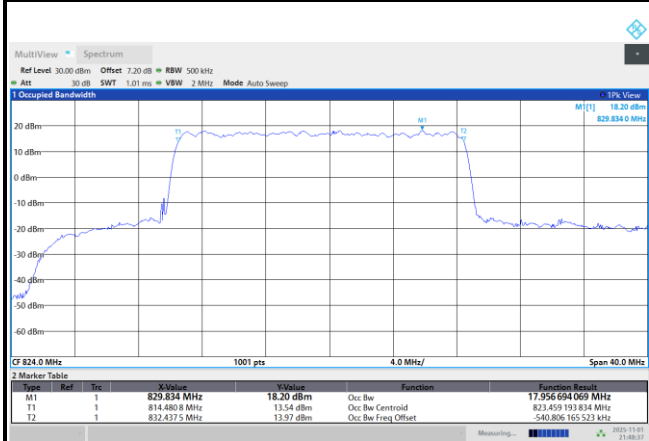
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QPSK



09:48:09 PM 11/01/2025

16QAM

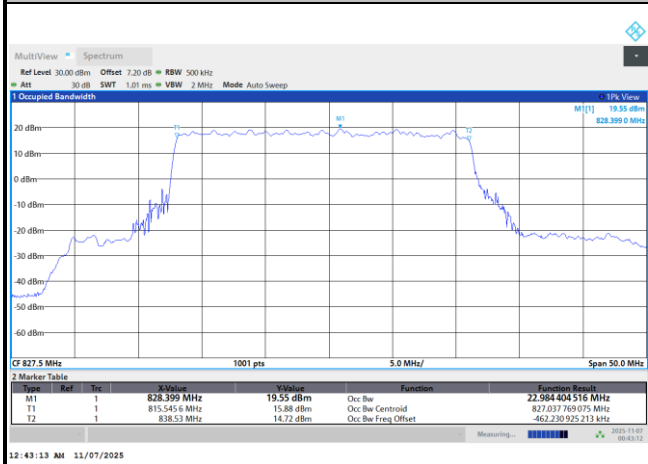


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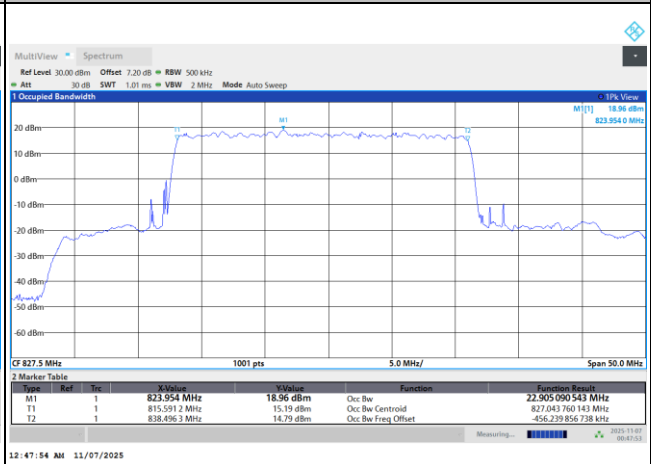


FR1 n26 / 25MHz / DFT-S OFDM / Middle Channel / Full RB

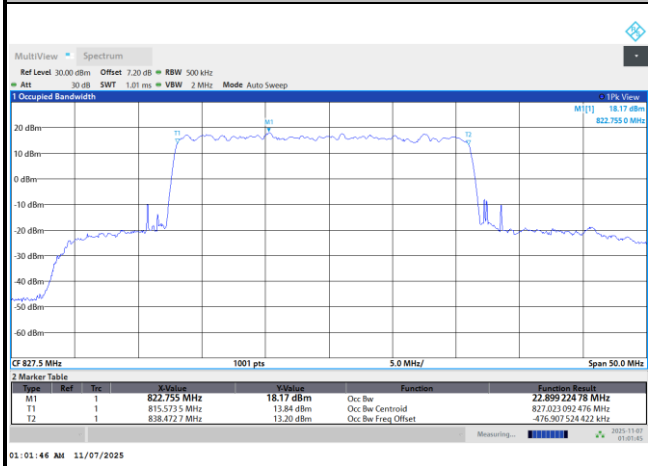
PI/2 BPSK



QPSK



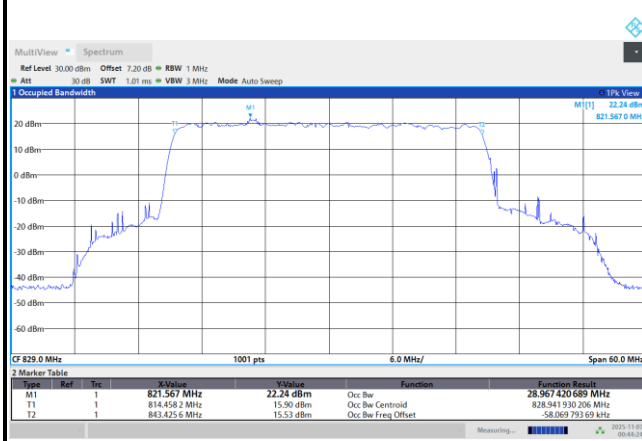
16QAM



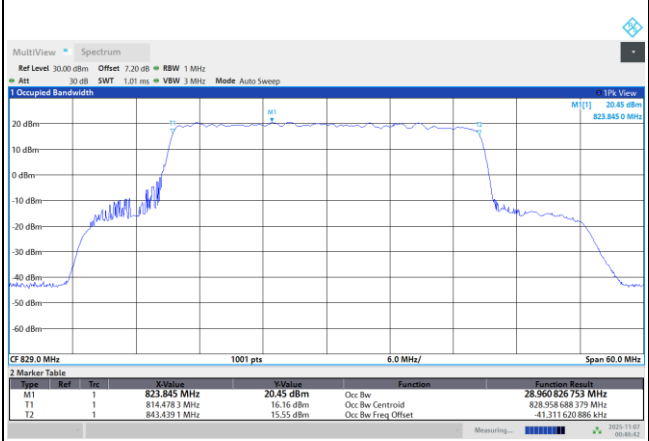


FR1 n26 / 30MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



QPSK



16QAM

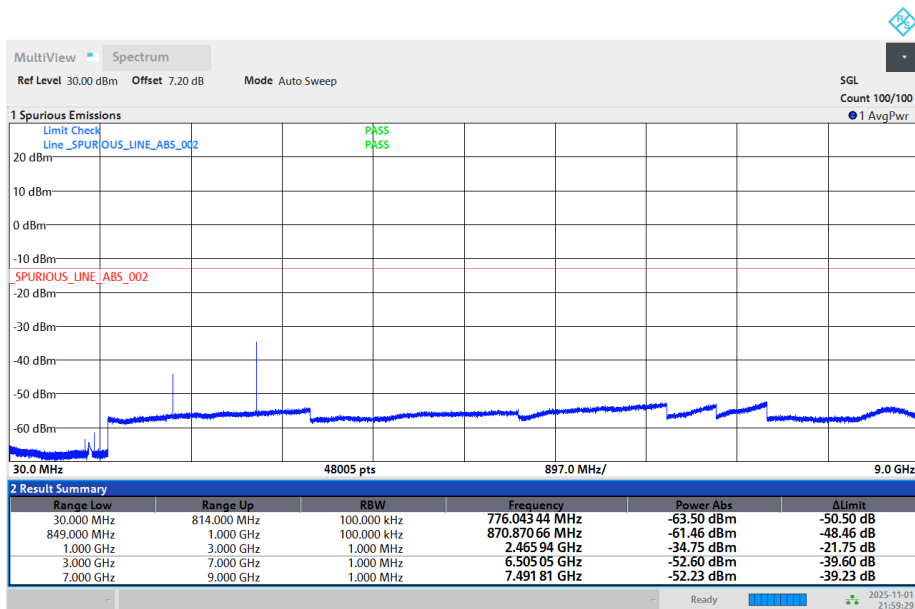




Emission masks – Out of band emissions

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

Middle MASK / Full RB



09:59:29 PM 11/01/2025

Frequency Stability

Test Conditions		FR1 n26 (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	2.8	Yes	PASS
40	Normal Voltage	0.0115	-9.5	Yes	
30	Normal Voltage	0.0106	8.7	Yes	
20(Ref.)	Normal Voltage	0.0000	0	Yes	
10	Normal Voltage	0.0100	-8.2	Yes	
0	Normal Voltage	0.0061	-5	Yes	
-10	Normal Voltage	0.0084	-6.9	Yes	
-20	Normal Voltage	0.0090	7.4	Yes	
-30	Normal Voltage	0.0086	-7.1	Yes	
20	Maximum Voltage	0.0085	7	Yes	
20	Normal Voltage	0.0000	0	Yes	
20	Minimum Voltage	0.0072	5.9	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.

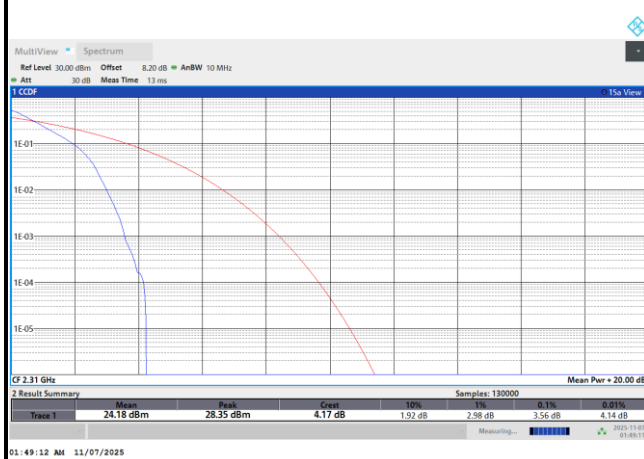
**FR1 n30****<SISO Mode>****Peak-to-Average Ratio**

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	3.56	4.78	5.46	5.68	PASS
Mode	FR1 n30 / 10MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.30				PASS

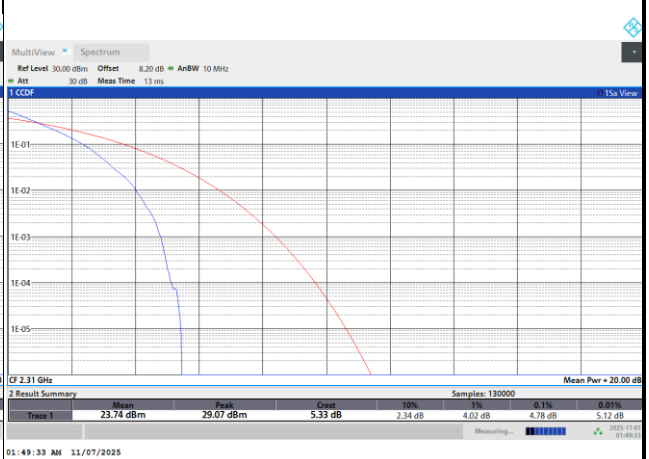


FR1 n30 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

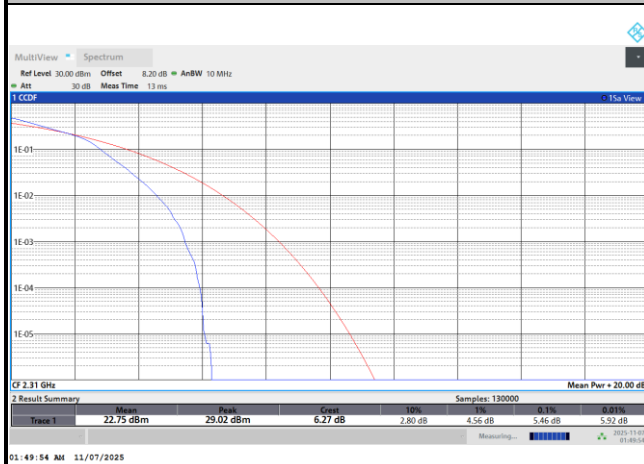
PI/2 BPSK



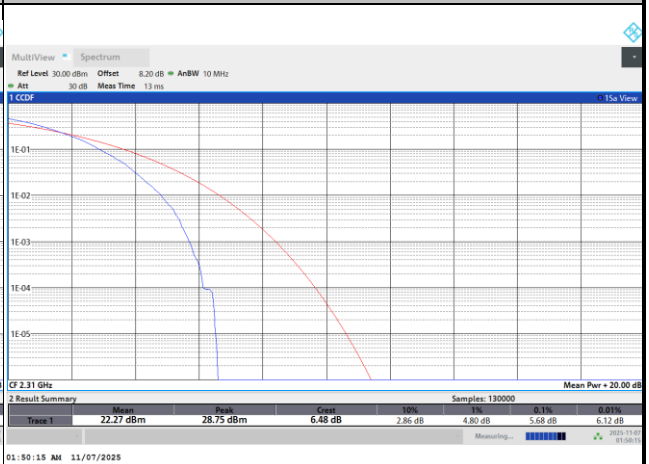
QPSK



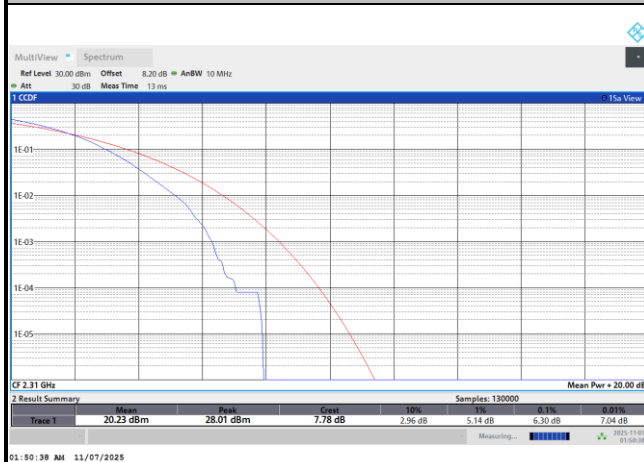
16QAM



64QAM



256QAM



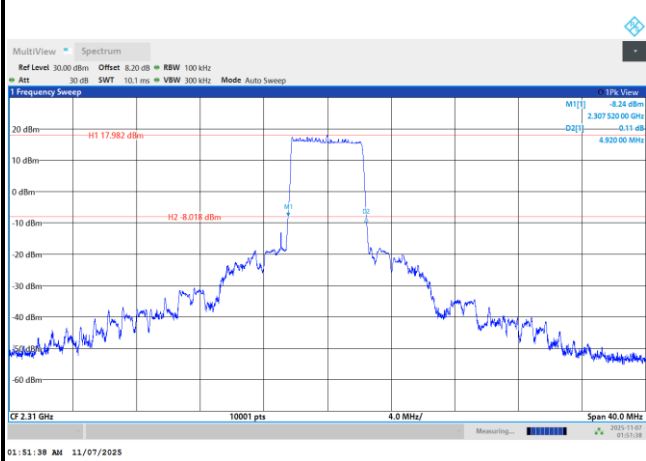
**26dB Bandwidth**

Mode	FR1 n30 : 26dB BW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz					
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK				
Middle CH	4.92	5.43	9.58	9.56				
Mod.	16QAM		16QAM					
Middle CH	4.91		9.56					

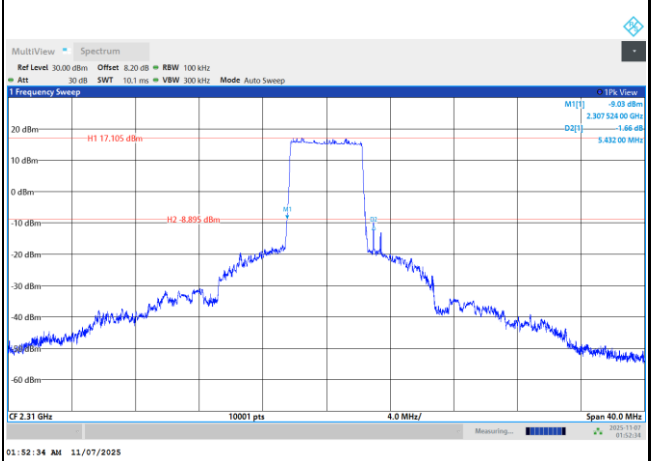


FR1 n30 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

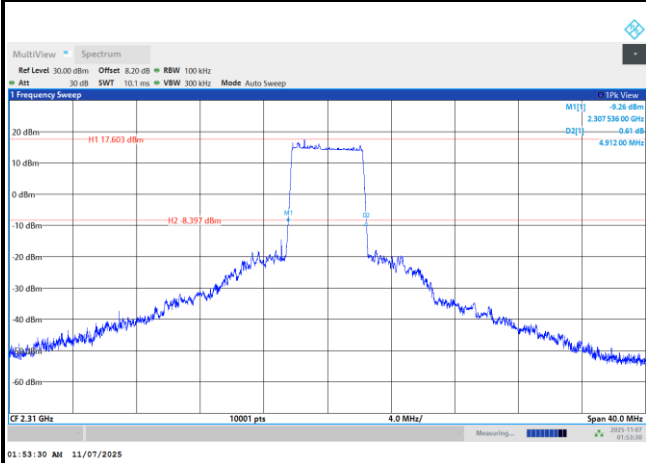
PI/2 BPSK



QPSK



16QAM



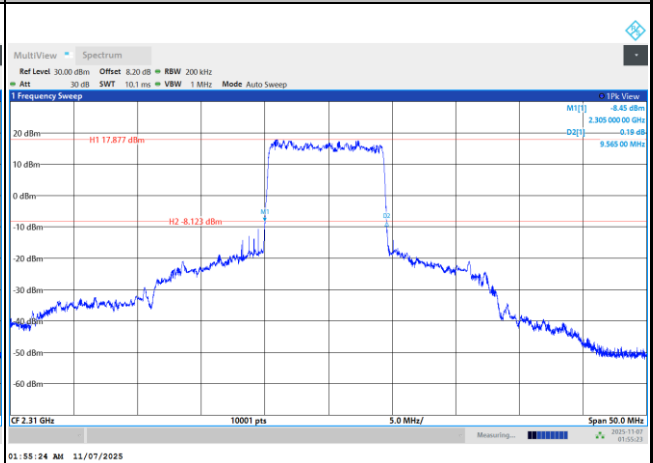


FR1 n30 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

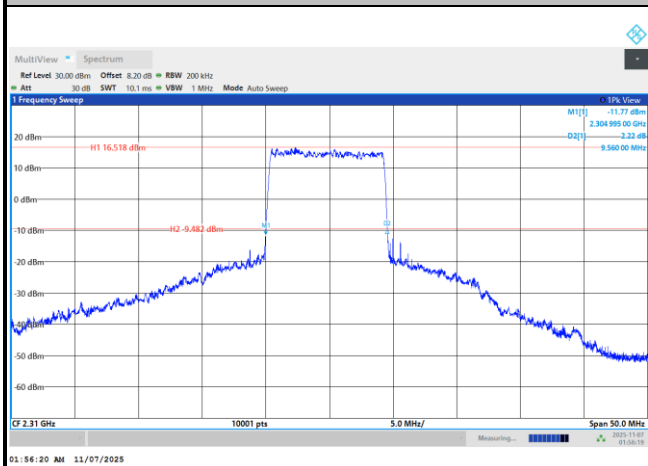
PI/2 BPSK



QPSK



16QAM



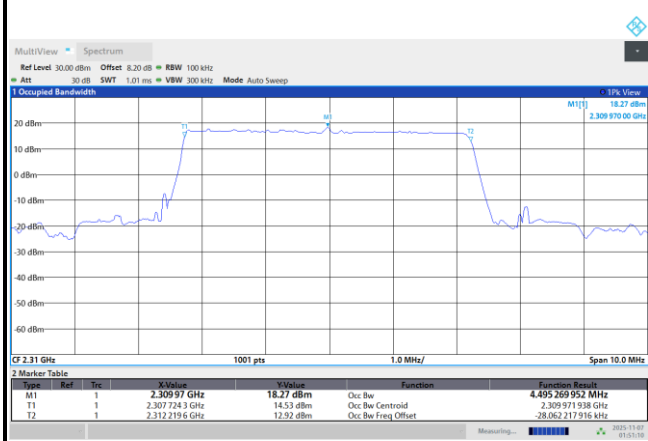
**Occupied Bandwidth**

Mode	FR1 n30 : 99%OBW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz					
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK				
Middle CH	4.49	4.52	9.00	8.95				
Mod.	16QAM		16QAM					
Middle CH	4.49		8.95					



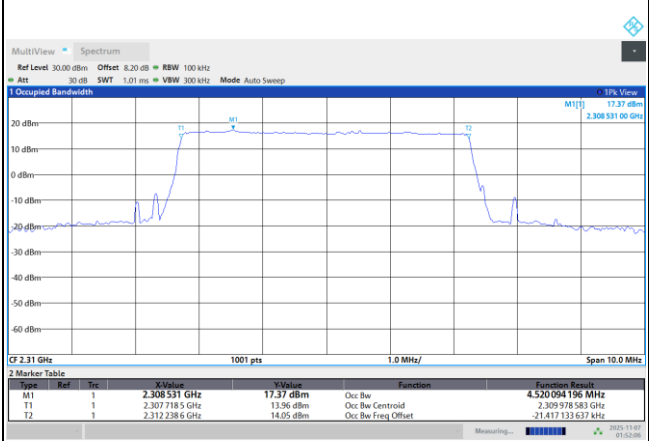
FR1 n30 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



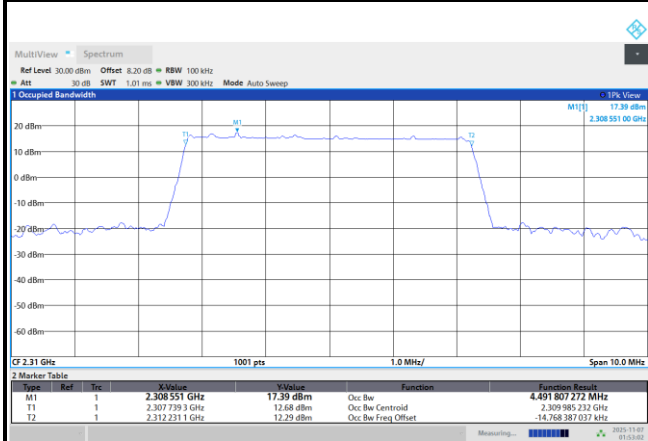
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QPSK



01:52:07 AM 11/07/2025

16QAM

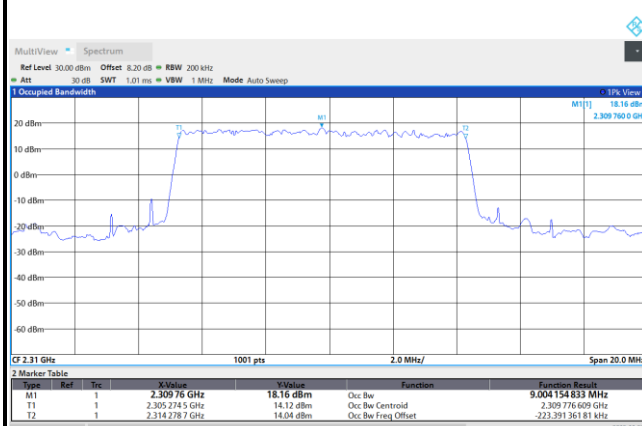


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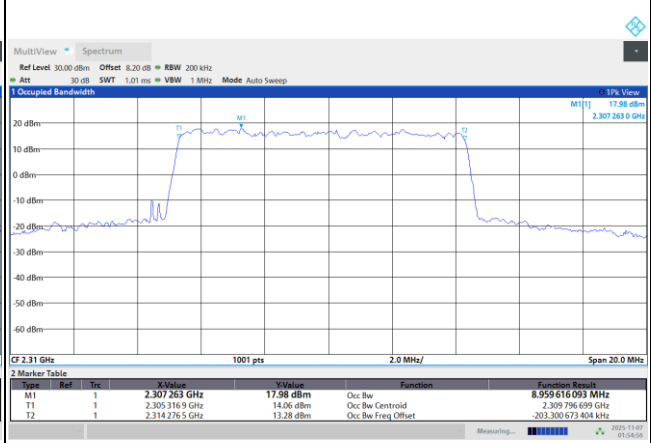


FR1 n30 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

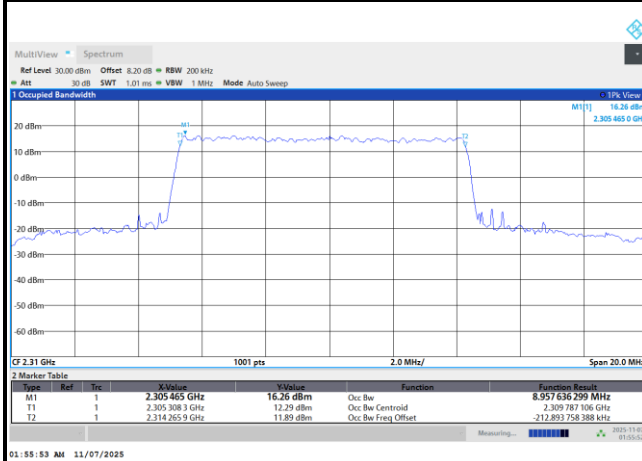
PI/2 BPSK



QPSK



16QAM



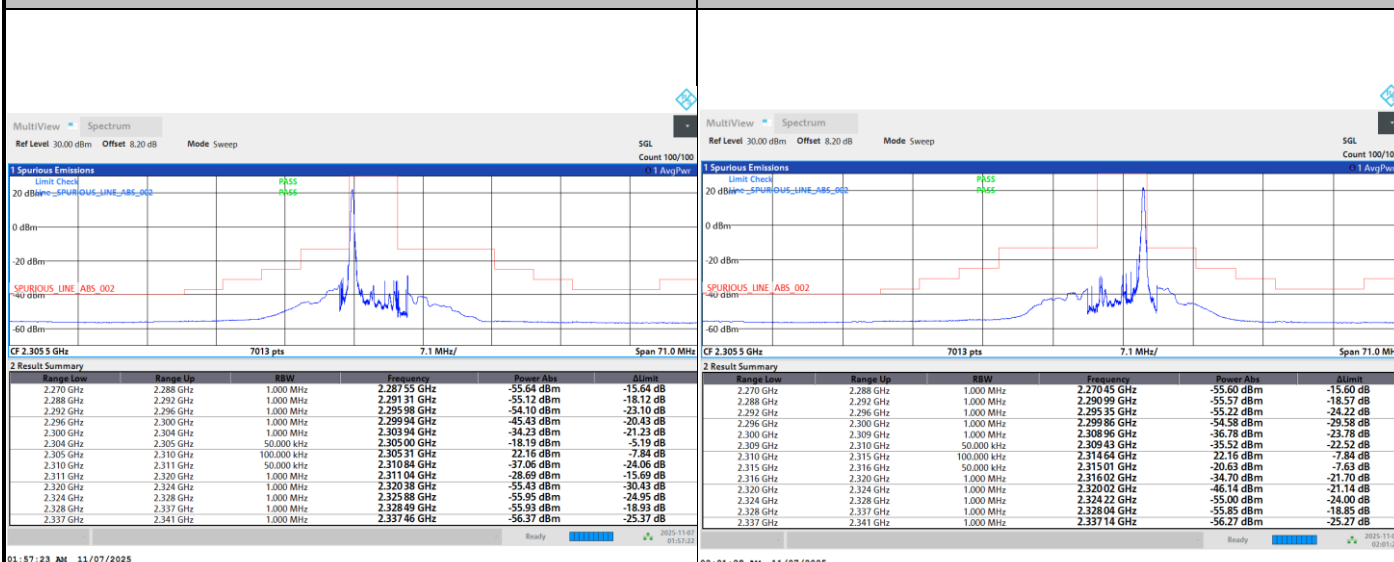


Conducted Band Edge

FR1 n30 / 5MHz / DFT-S OFDM / PI/2 BPSK

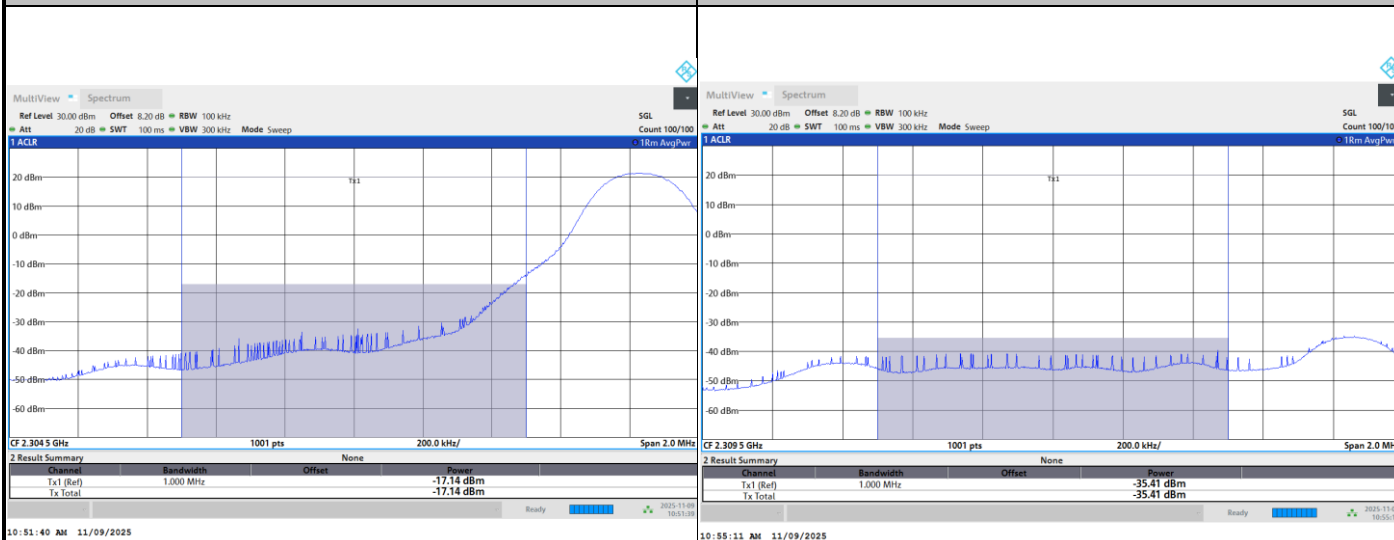
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



Lowest Band Edge / 1 RB / Lower zoom in

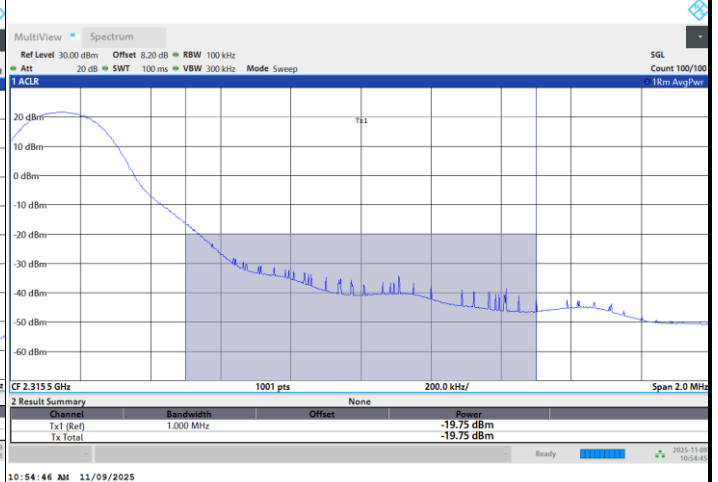
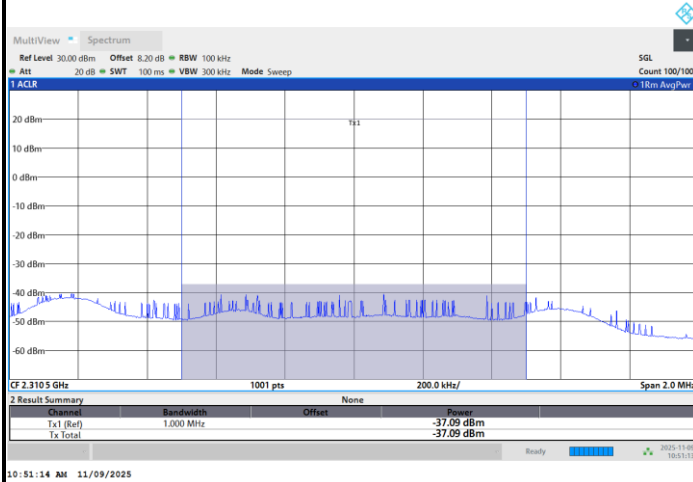
Highest Band Edge / 1 RB / Lower zoom in





Lowest Band Edge / 1 RB / Upper zoom in

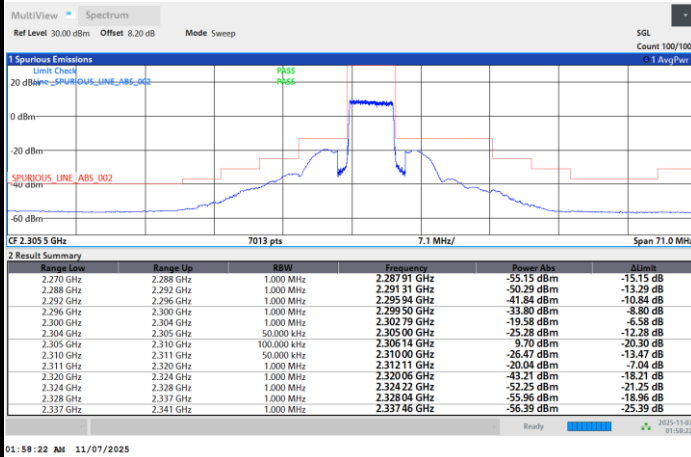
Highest Band Edge / 1 RB / Upper zoom in



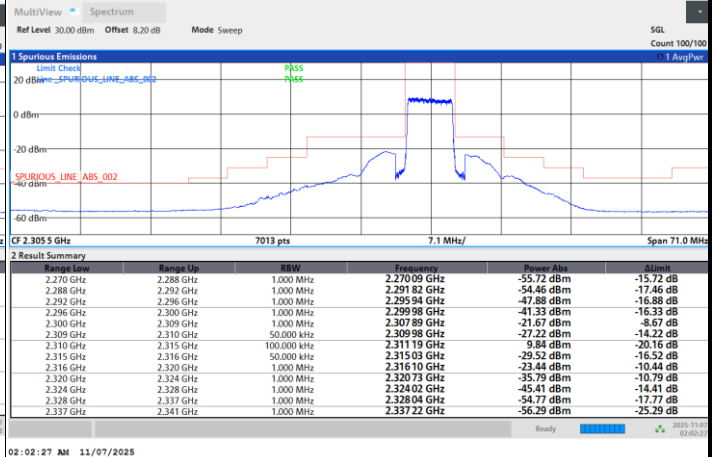


Lowest Band Edge / Full RB

Highest Band Edge / Full RB



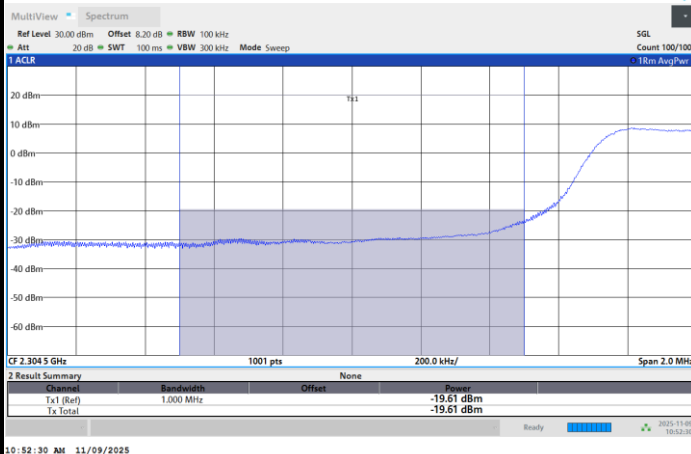
01:58:22 AM 11/07/2025



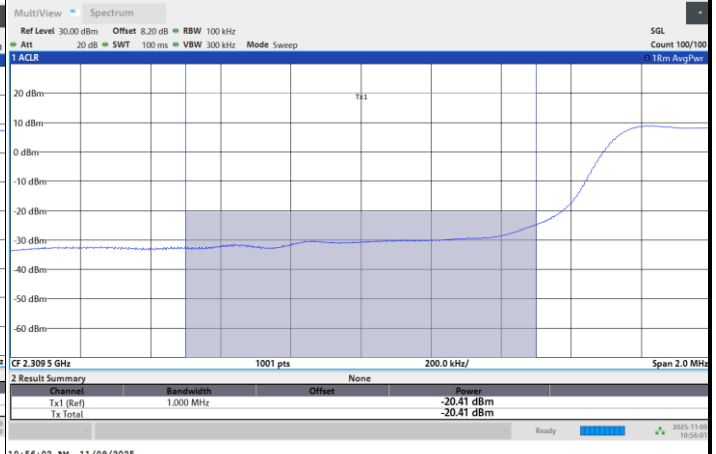
02:02:27 AM 11/07/2025

Lowest Band Edge / Full RB / Lower zoom in

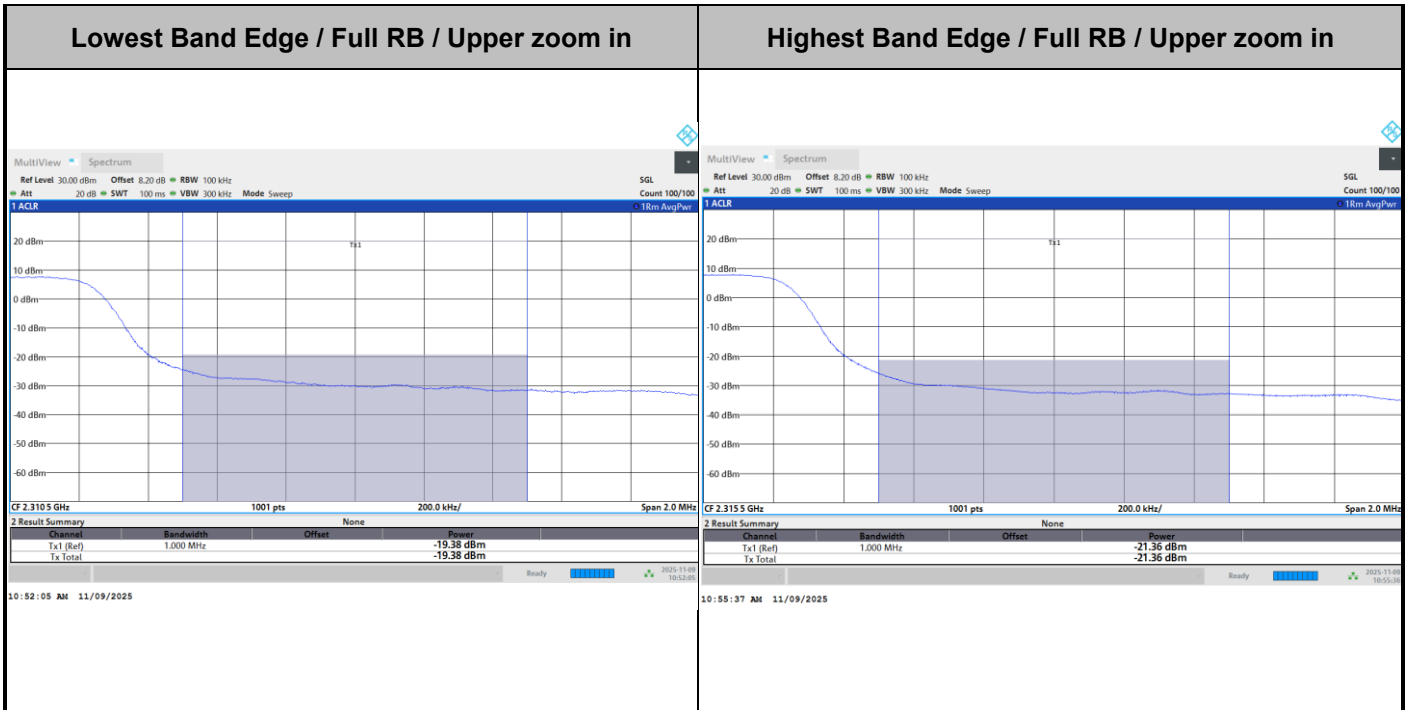
Highest Band Edge / Full RB / Lower zoom in



10:52:30 AM 11/09/2025



10:56:02 AM 11/09/2025

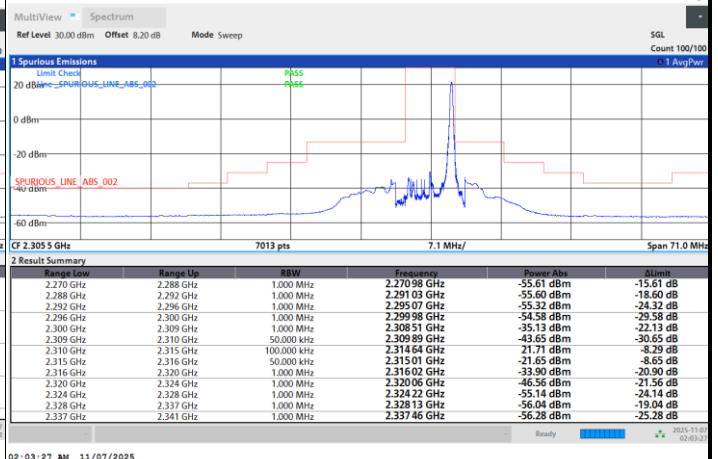
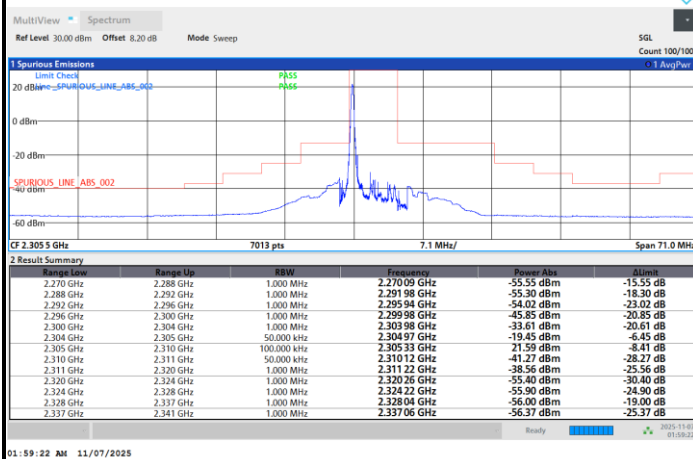




FR1 n30 / 5MHz / DFT-S OFDM / QPSK

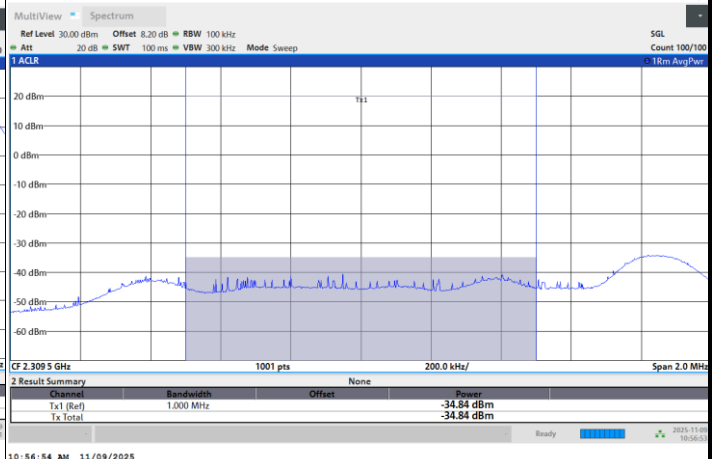
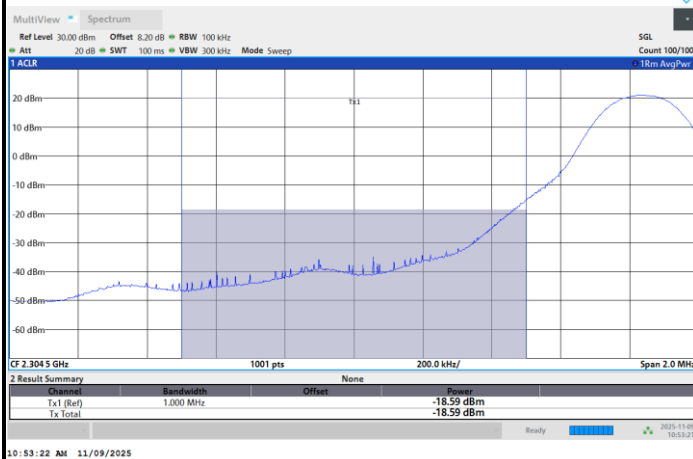
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



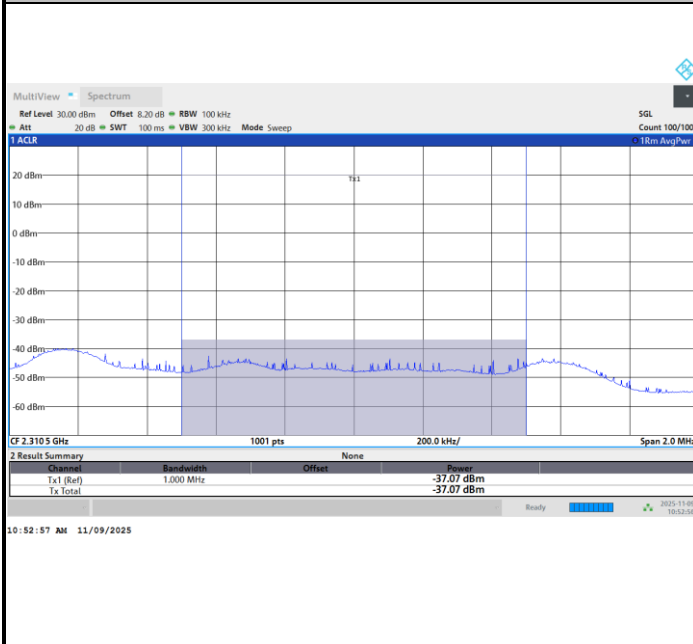
Lowest Band Edge / 1 RB / Lower zoom in

Highest Band Edge / 1 RB / Lower zoom in

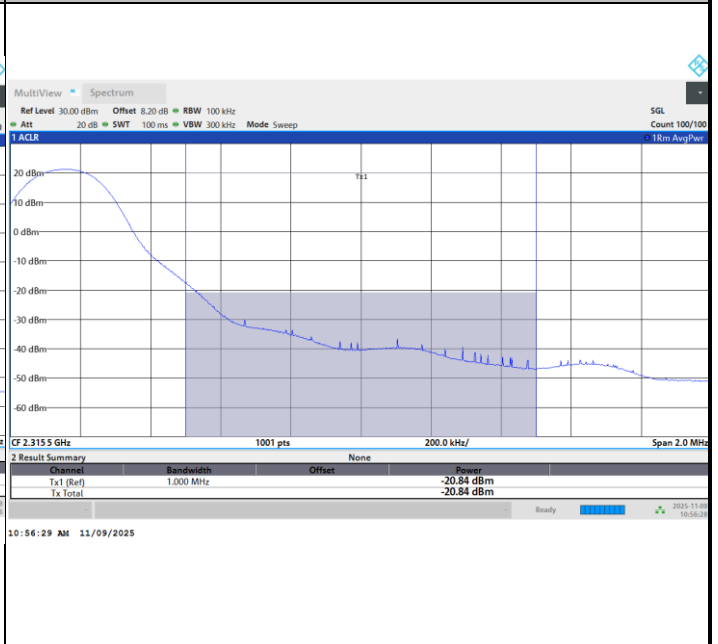




Lowest Band Edge / 1 RB / Upper zoom in



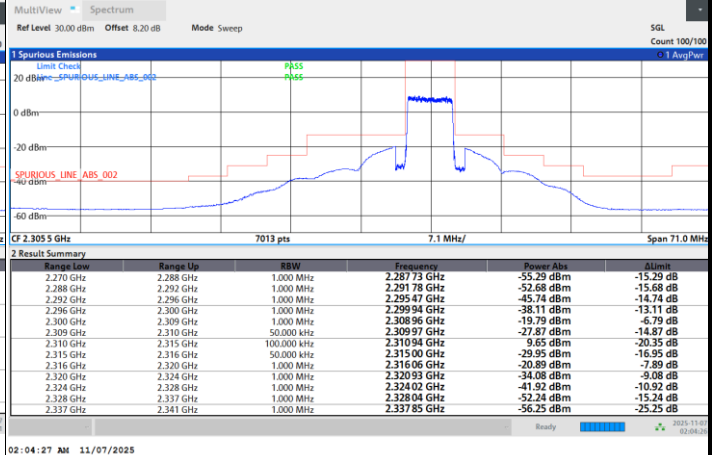
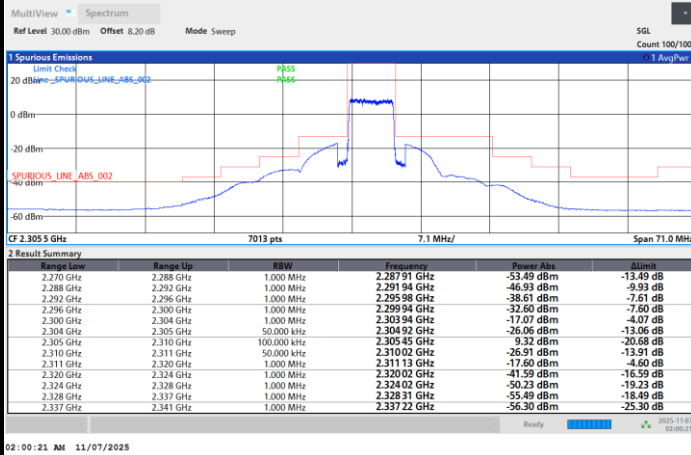
Highest Band Edge / 1 RB / Upper zoom in





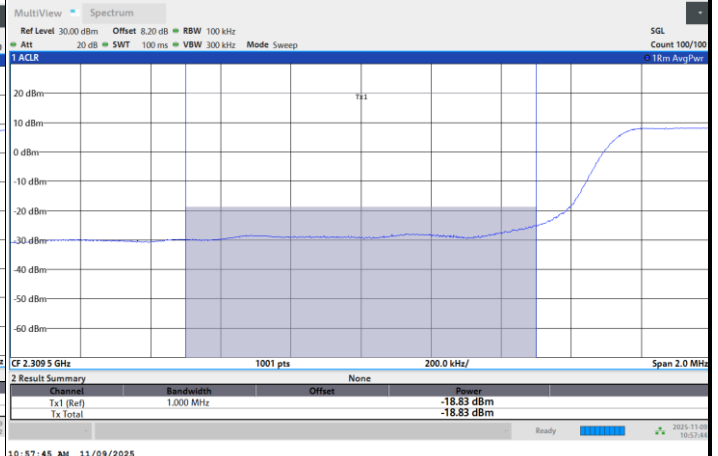
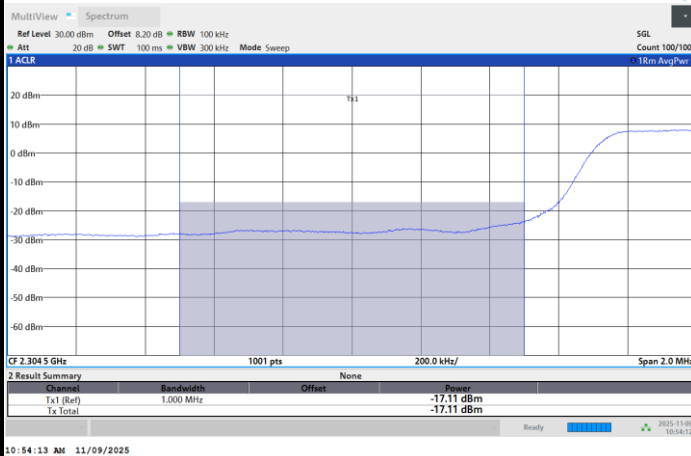
Lowest Band Edge / Full RB

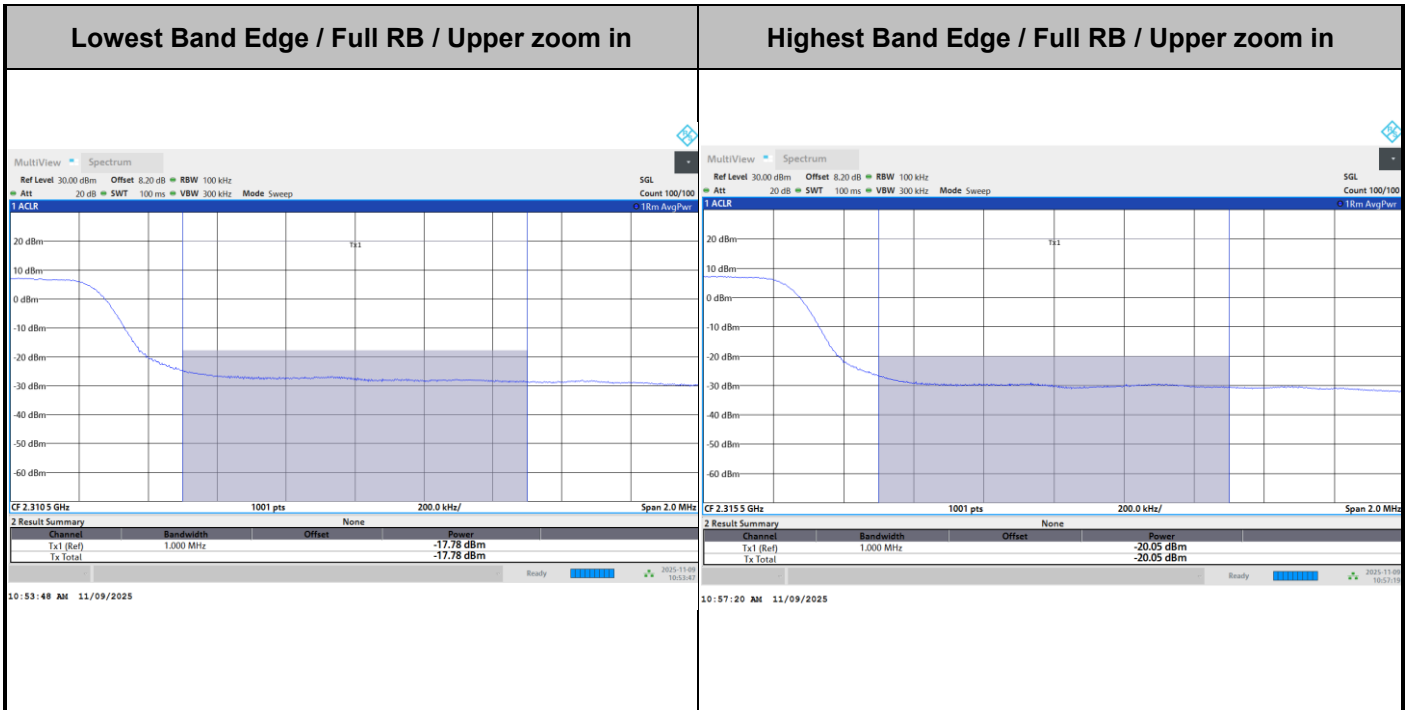
Highest Band Edge / Full RB



Lowest Band Edge / Full RB / Lower zoom in

Highest Band Edge / Full RB / Lower zoom in

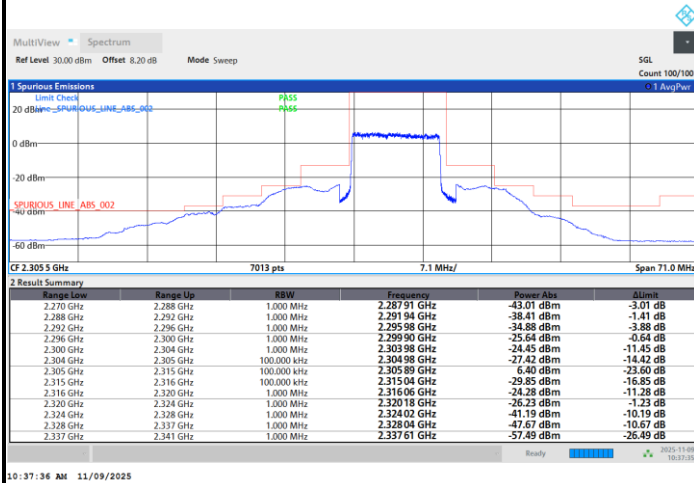




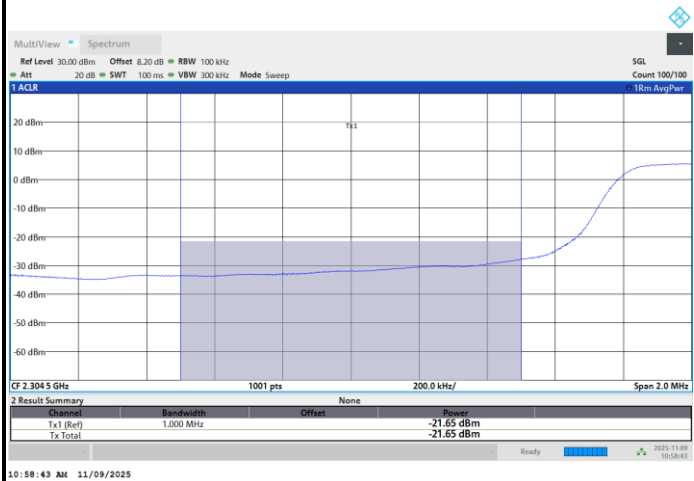


FR1 n30 / 10MHz / DFT-s-OFDM / PI/2 BPSK

Middle Band Edge / Full RB



Middle Band Edge / Full RB / Lower zoom in



Middle Band Edge / Full RB / Upper zoom in

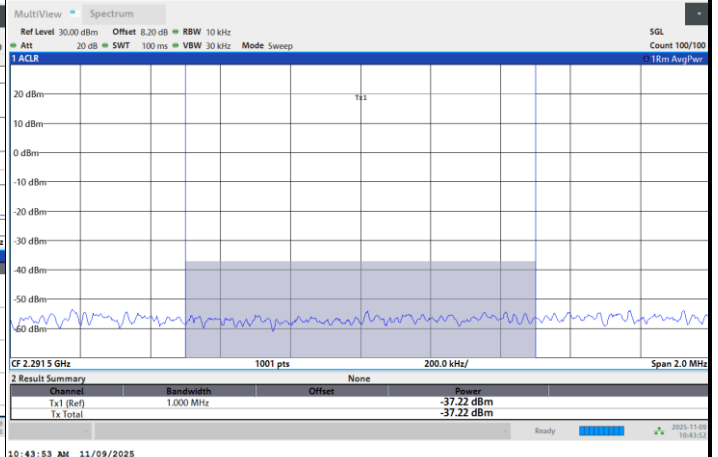
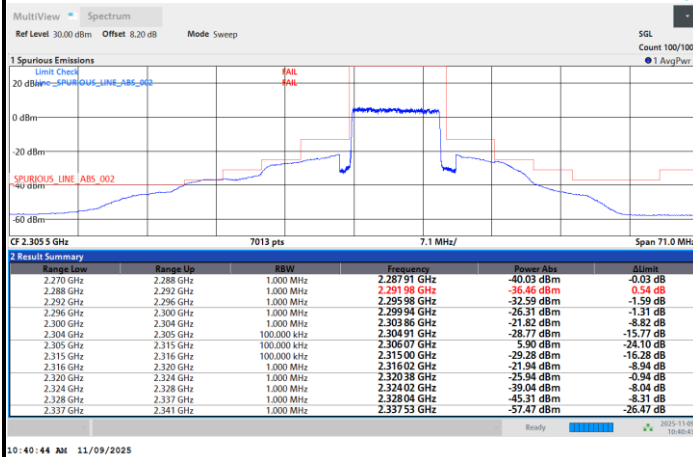




FR1 n30 / 10MHz / DFT-s-OFDM / QPSK

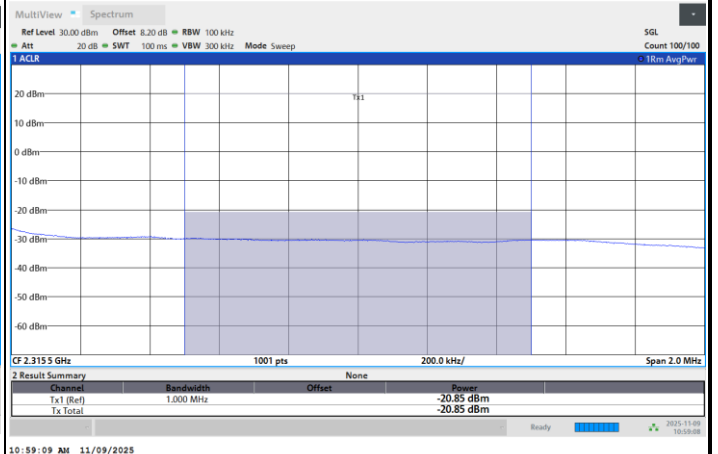
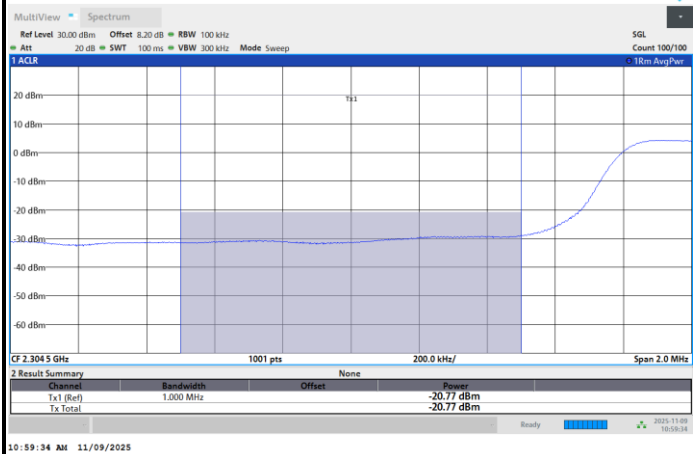
Middle Band Edge / Full RB

Channel power -37dBm > -37.22dBm (PASS)



Middle Band Edge / Full RB / Lower zoom in

Middle Band Edge / Full RB / Upper zoom in



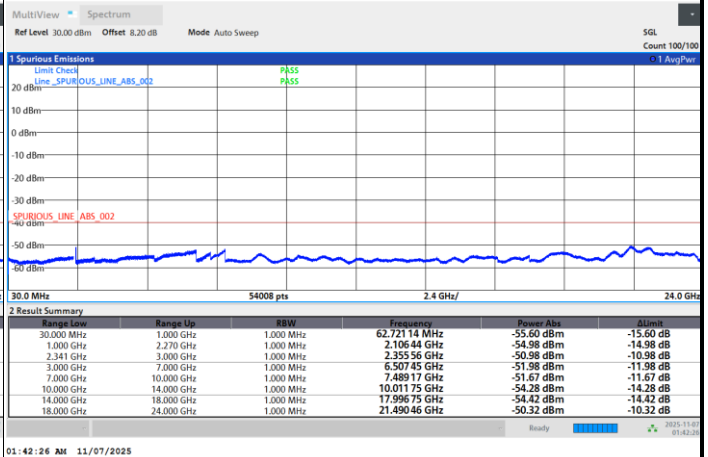
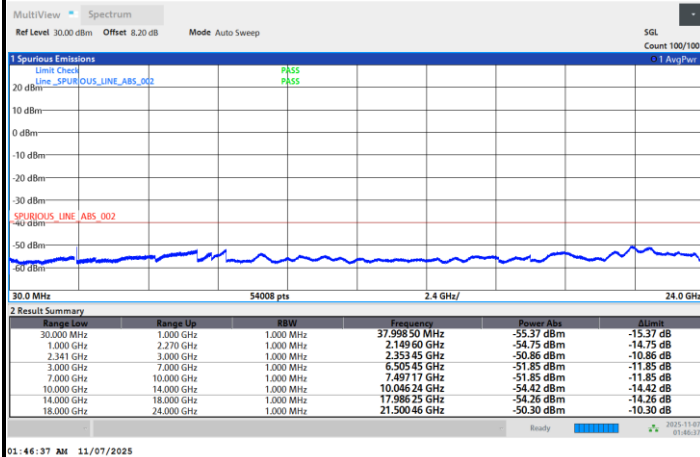


Conducted Spurious Emission

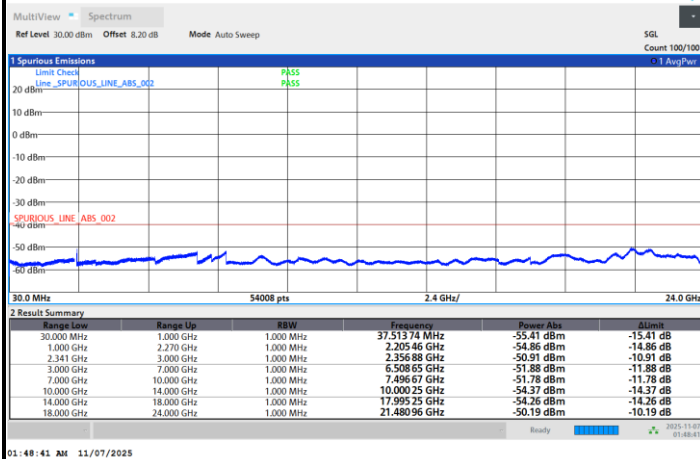
FR1 n30 / 5MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel

Middle Channel



Highest Channel



Frequency Stability

Test Conditions		FR1 n30 (BPSK) / Middle Channel 10M			
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Frequency Offset (Δf) (Hz)	Within Authorized Frequency Block(Hz)	Result
50	Normal Voltage	0.0030	-7	Yes	PASS
40	Normal Voltage	0.0025	5.7	Yes	
30	Normal Voltage	0.0028	6.5	Yes	
20(Ref.)	Normal Voltage	0.0000	0	Yes	
10	Normal Voltage	0.0030	-6.9	Yes	
0	Normal Voltage	0.0001	0.2	Yes	
-10	Normal Voltage	0.0004	0.9	Yes	
-20	Normal Voltage	0.0020	4.6	Yes	
-30	Normal Voltage	0.0039	-9	Yes	
20	Maximum Voltage	0.0023	5.4	Yes	
20	Normal Voltage	0.0000	0	Yes	
20	Minimum Voltage	0.0029	-6.6	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.