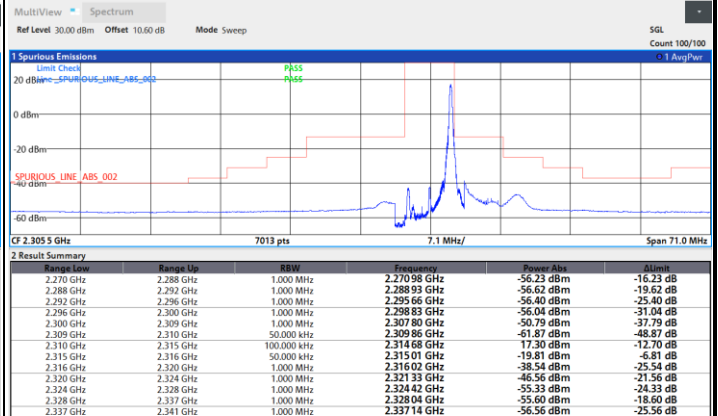
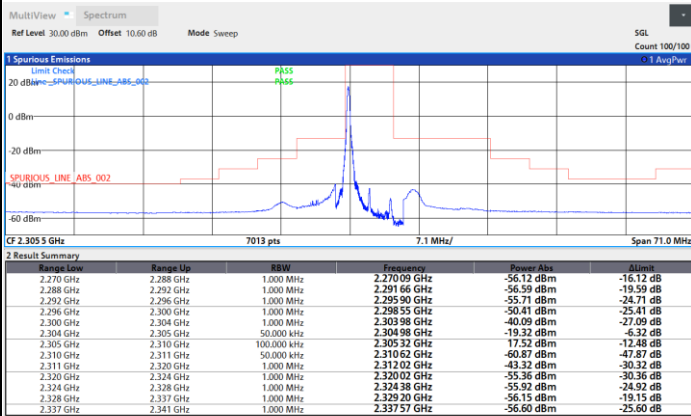




FR1 n30 / 5MHz / CP OFDM / 64QAM

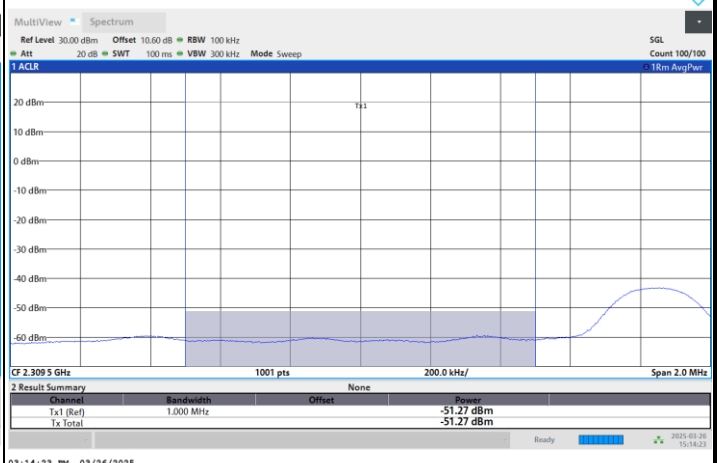
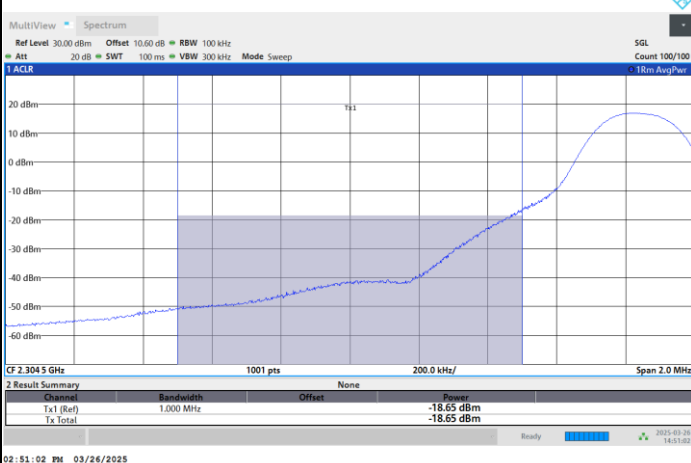
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



Lowest Band Edge / 1 RB / Lower zoom in

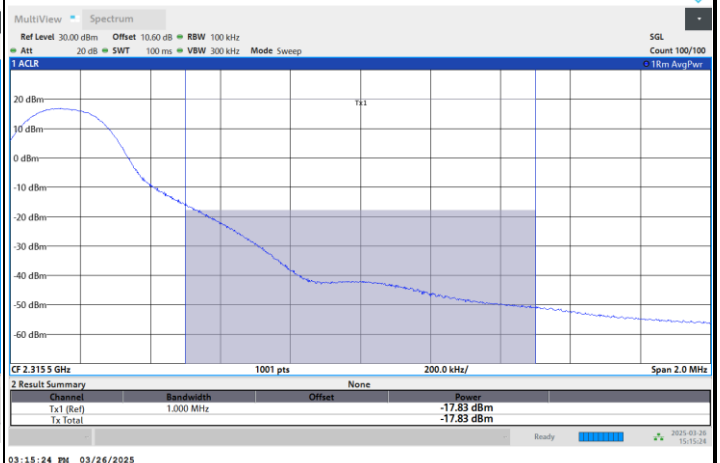
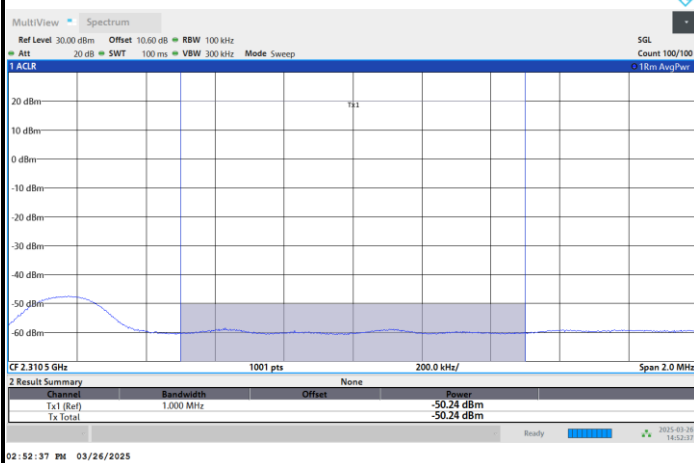
Highest Band Edge / 1 RB / Lower zoom in





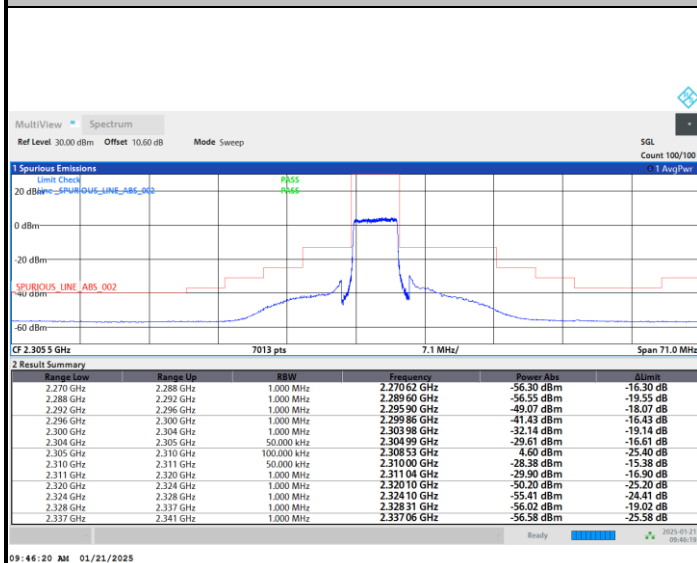
Lowest Band Edge / 1 RB / Upper zoom in

Highest Band Edge / 1 RB / Upper zoom in

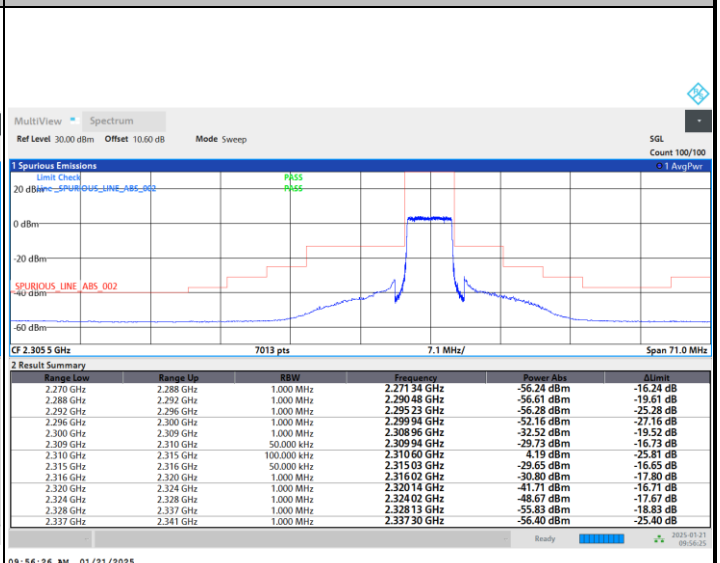




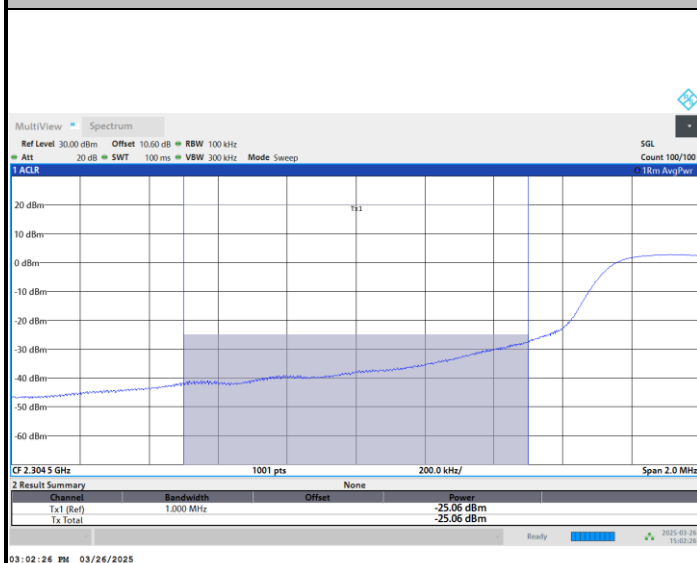
Lowest Band Edge / Full RB



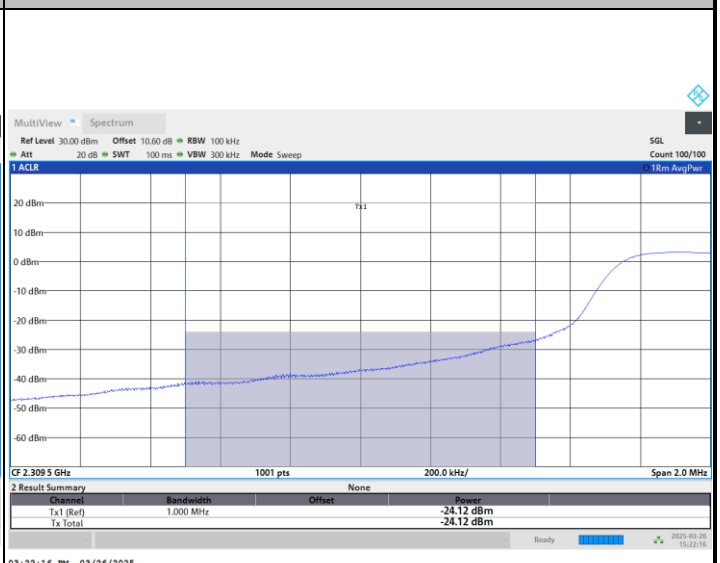
Highest Band Edge / Full RB



Lowest Band Edge / Full RB / Lower zoom in



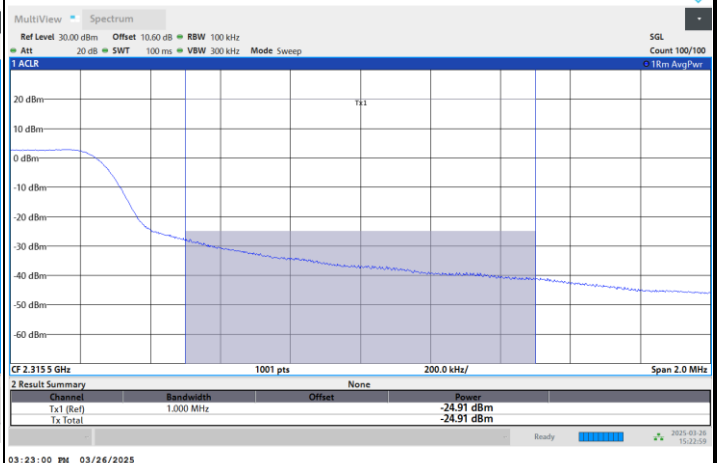
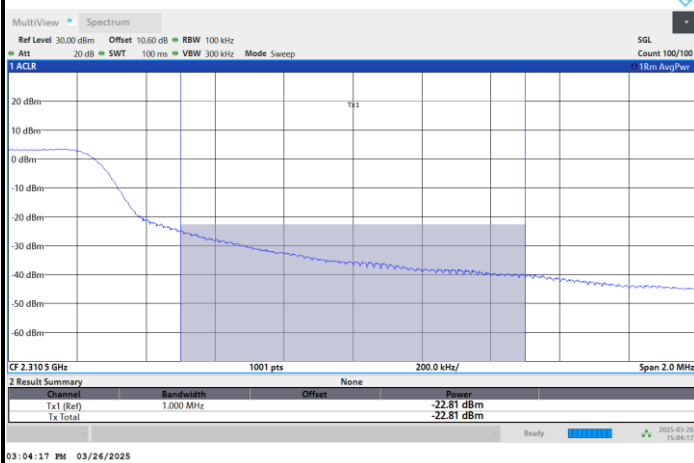
Highest Band Edge / Full RB / Lower zoom in





Lowest Band Edge / Full RB / Upper zoom in

Highest Band Edge / Full RB / Upper zoom in

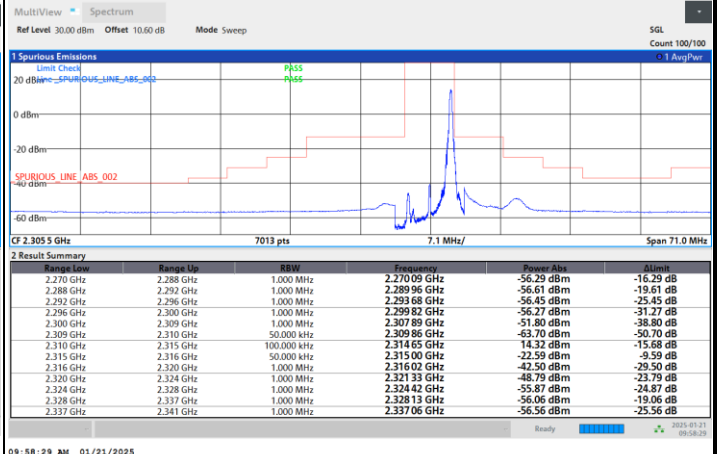
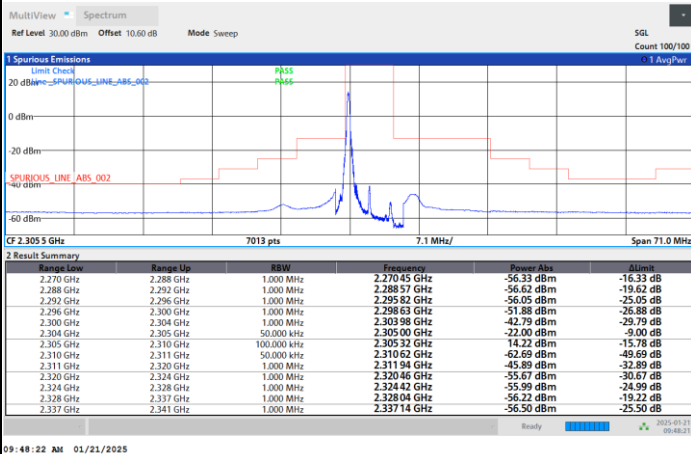




FR1 n30 / 5MHz / CP OFDM / 256QAM

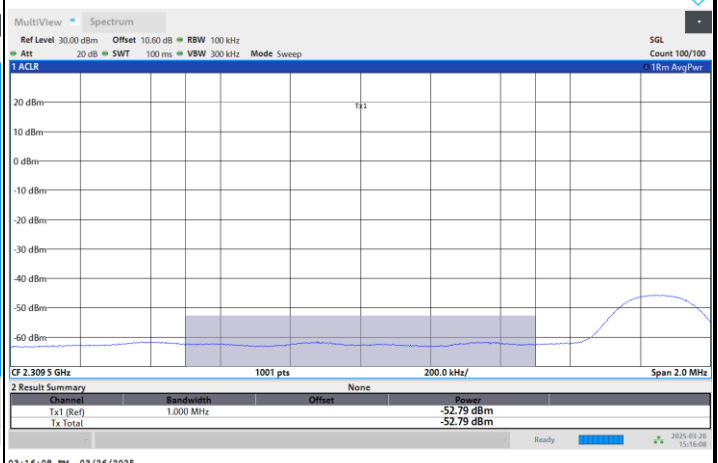
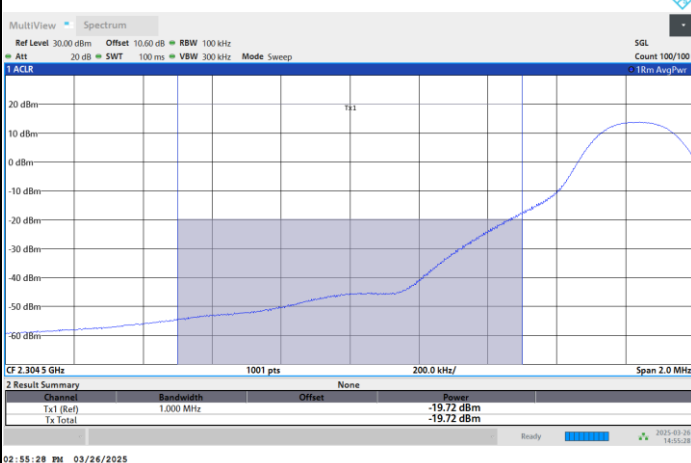
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



Lowest Band Edge / 1 RB / Lower zoom in

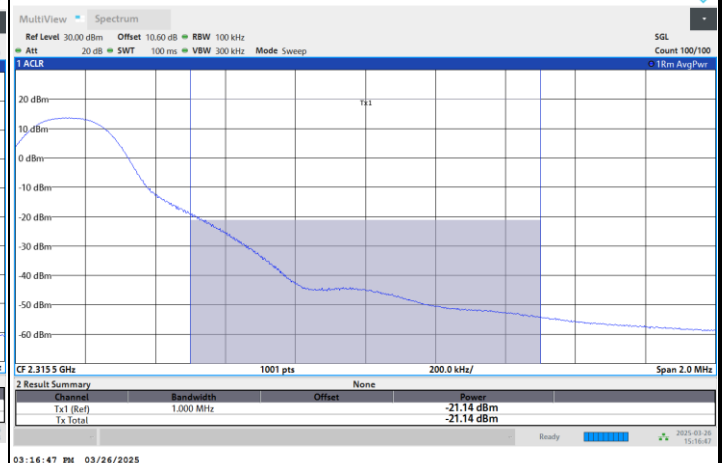
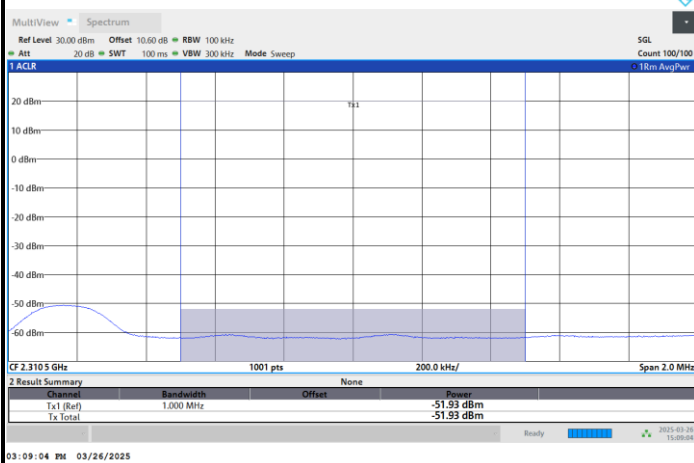
Highest Band Edge / 1 RB / Lower zoom in





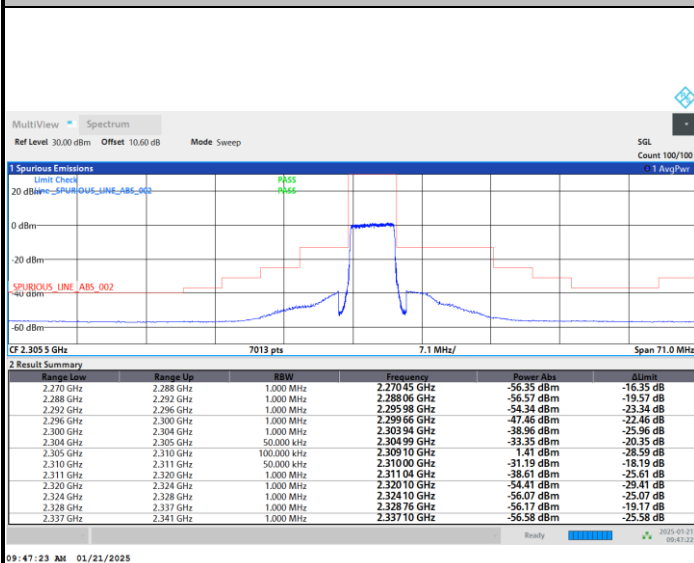
Lowest Band Edge / 1 RB / Upper zoom in

Highest Band Edge / 1 RB / Upper zoom in

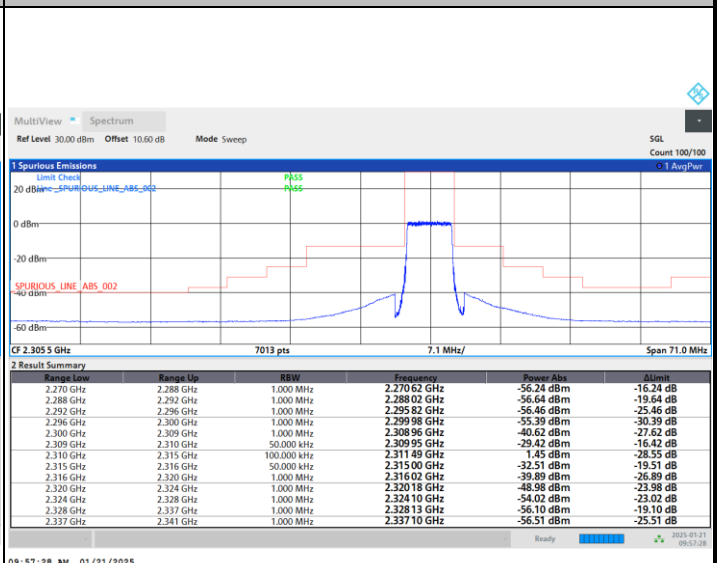




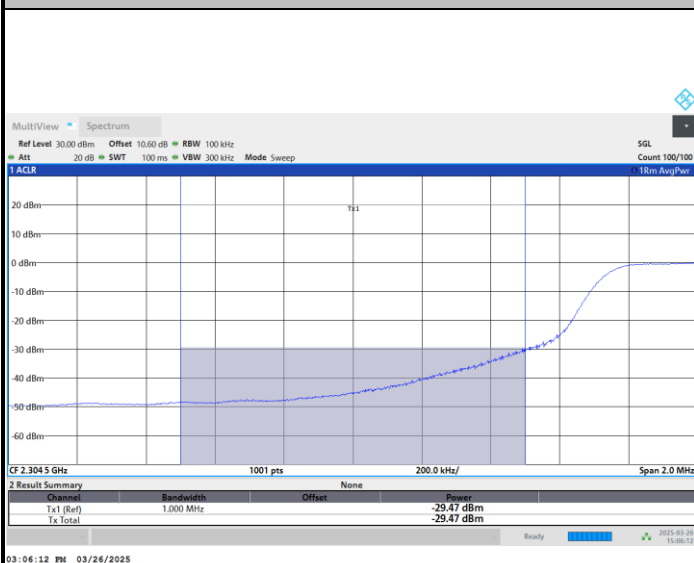
Lowest Band Edge / Full RB



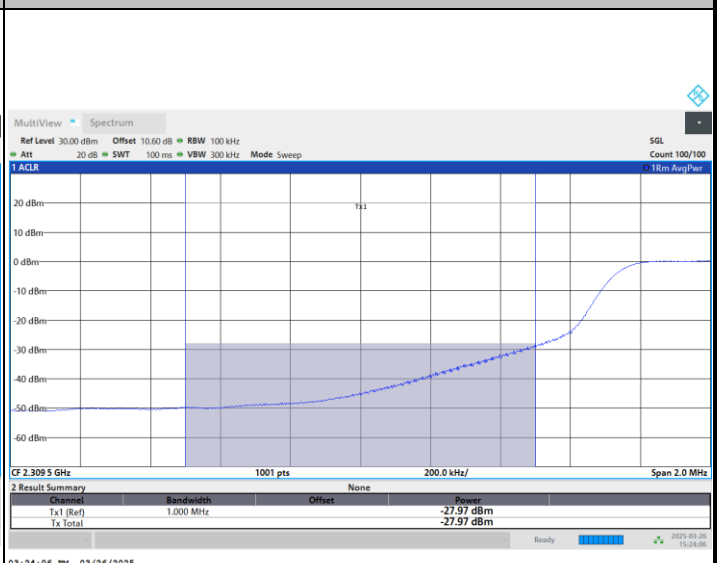
Highest Band Edge / Full RB



Lowest Band Edge / Full RB / Lower zoom in



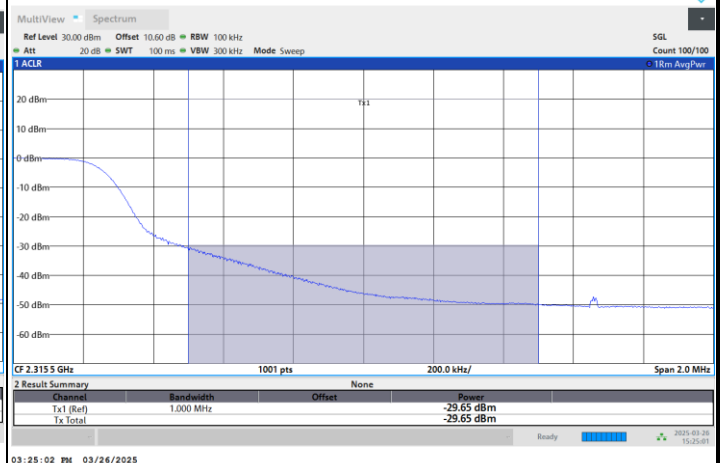
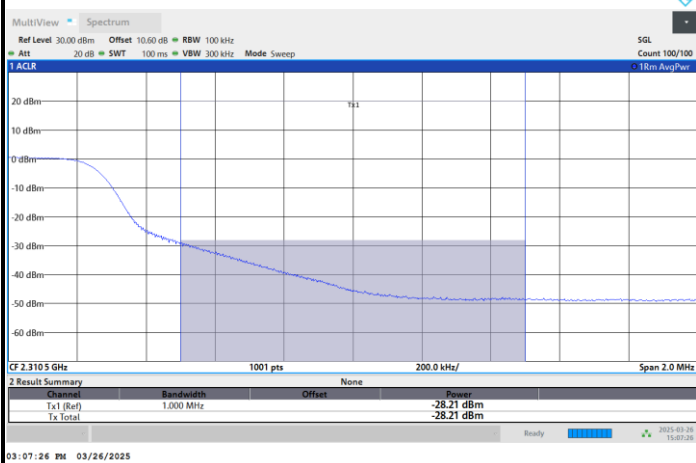
Highest Band Edge / Full RB / Lower zoom in





Lowest Band Edge / Full RB / Upper zoom in

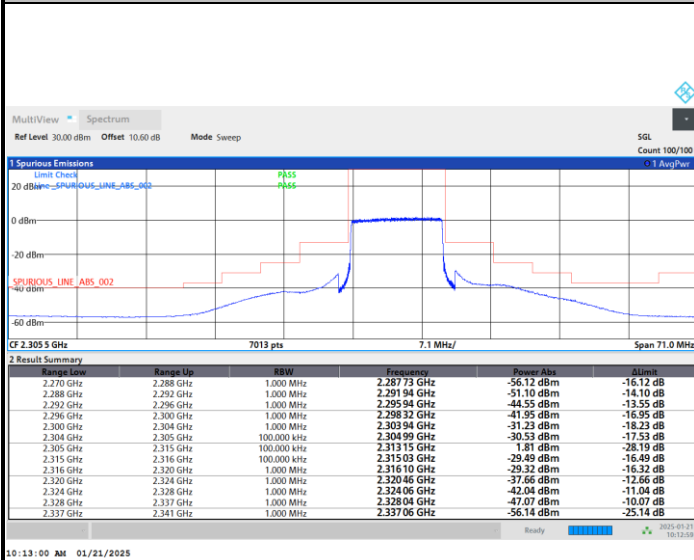
Highest Band Edge / Full RB / Upper zoom in



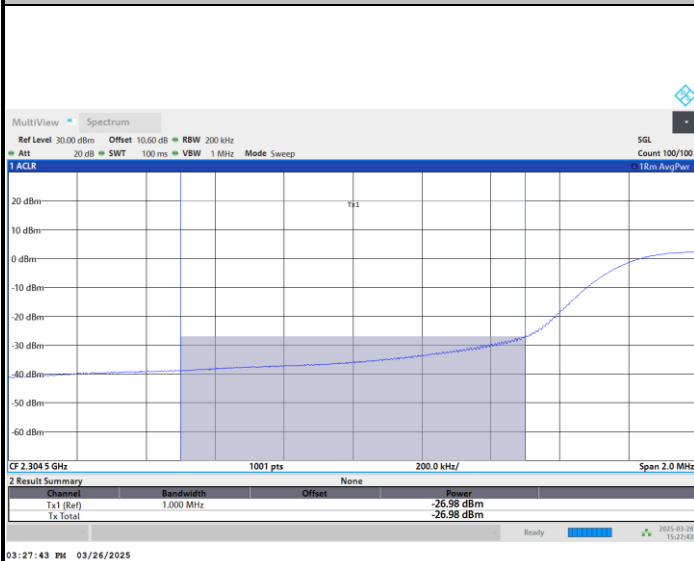


FR1 n30 / 10MHz / CP OFDM / QPSK

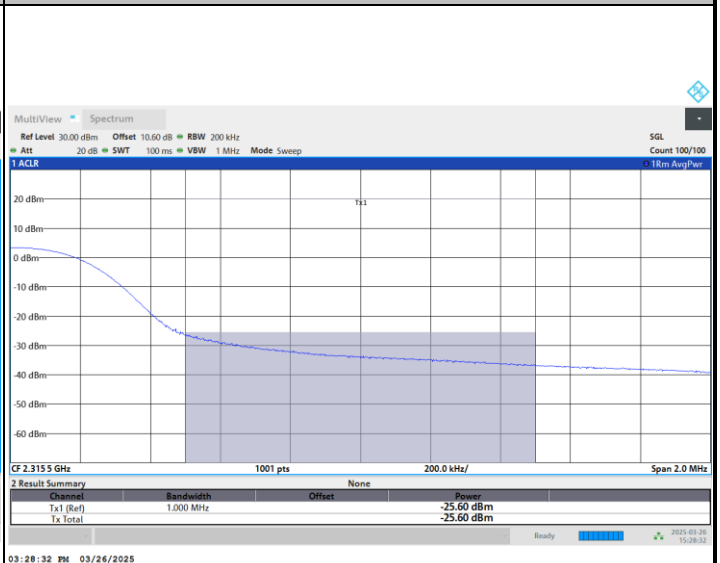
Middle Band Edge / Full RB



Middle Band Edge / Full RB / Lower zoom in



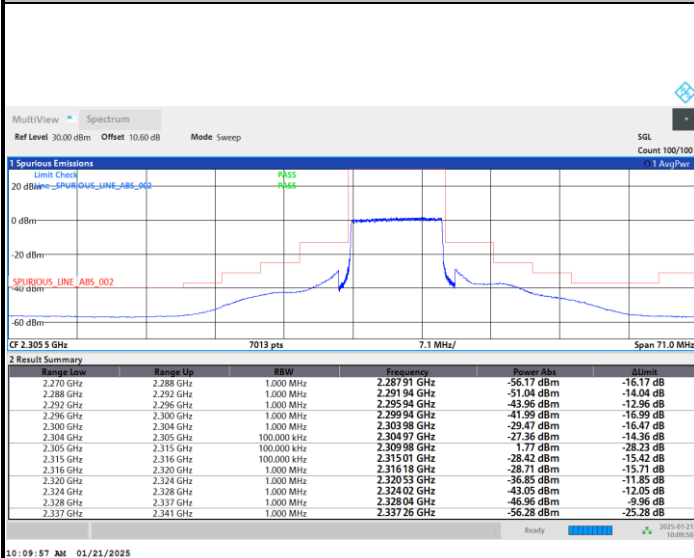
Middle Band Edge / Full RB / Upper zoom in



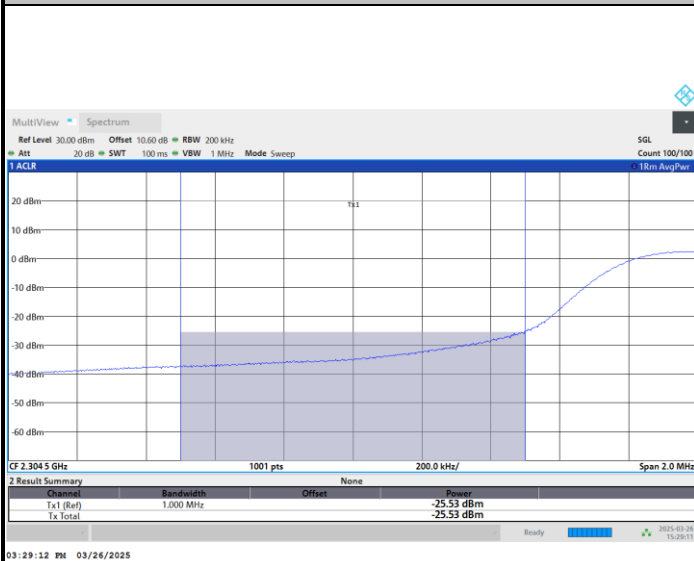


FR1 n30 / 10MHz / CP OFDM / 16QAM

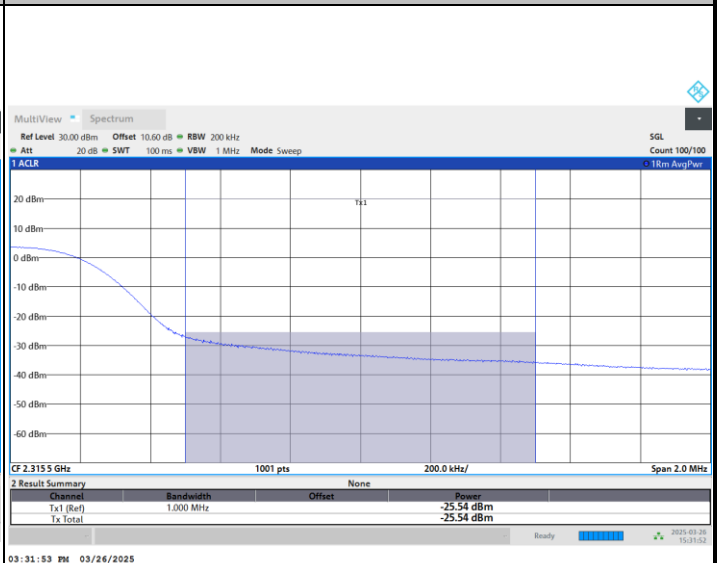
Middle Band Edge / Full RB



Middle Band Edge / Full RB / Lower zoom in



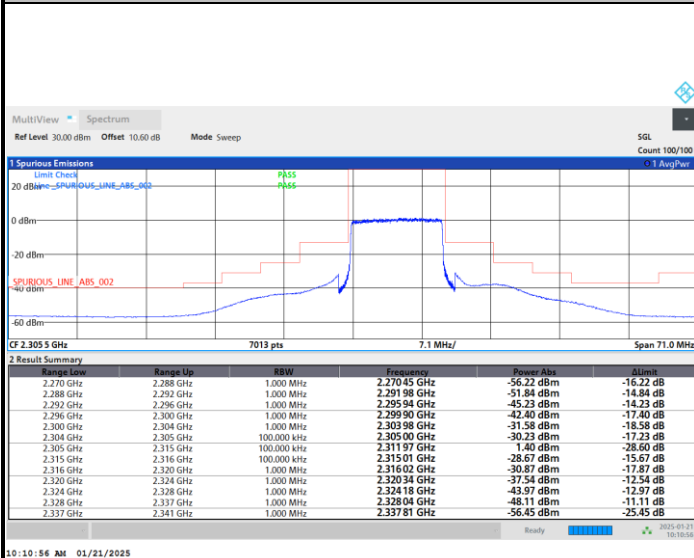
Middle Band Edge / Full RB / Upper zoom in



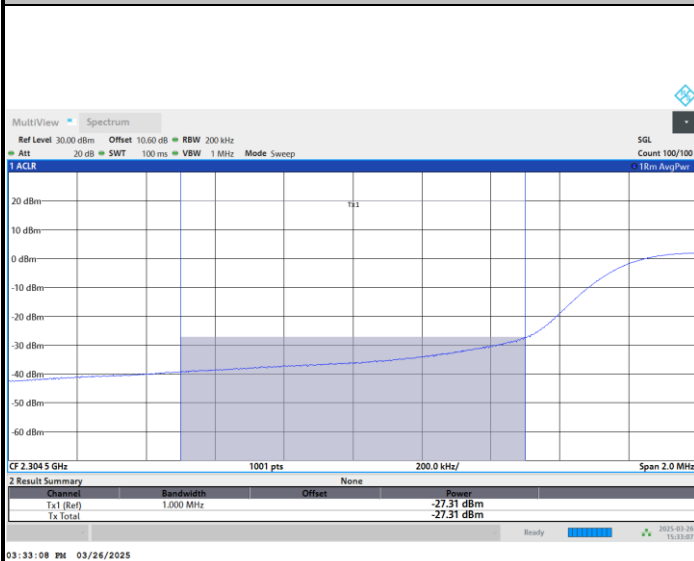


FR1 n30 / 10MHz / CP OFDM / 64QAM

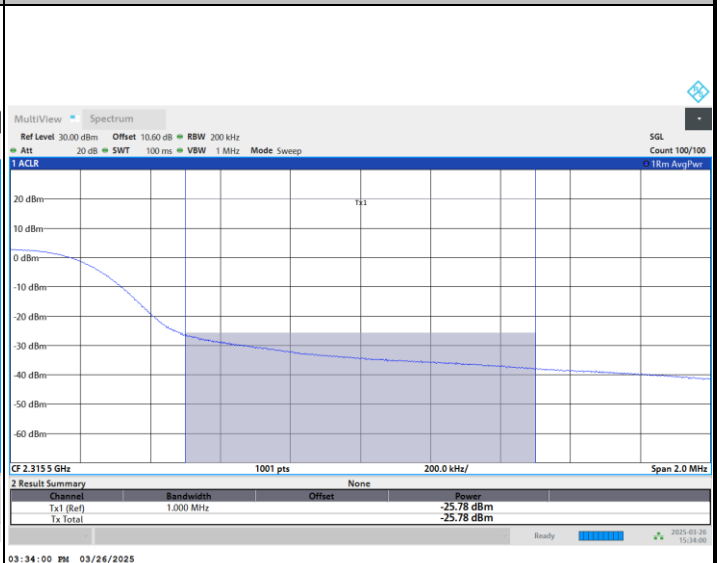
Middle Band Edge / Full RB



Middle Band Edge / Full RB / Lower zoom in



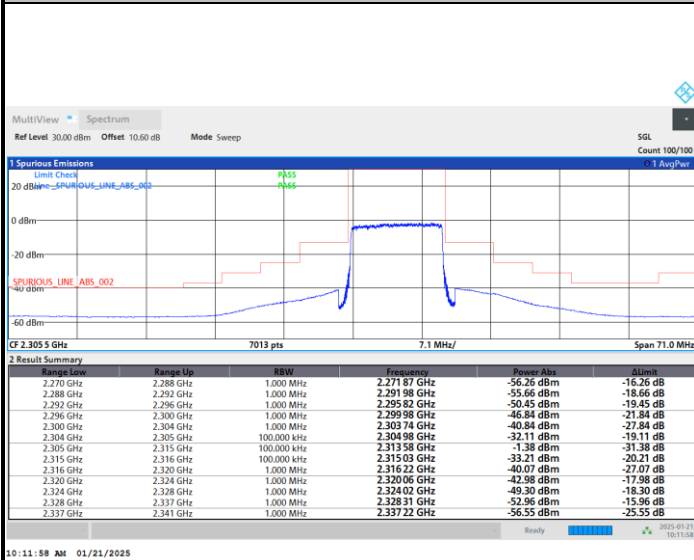
Middle Band Edge / Full RB / Upper zoom in



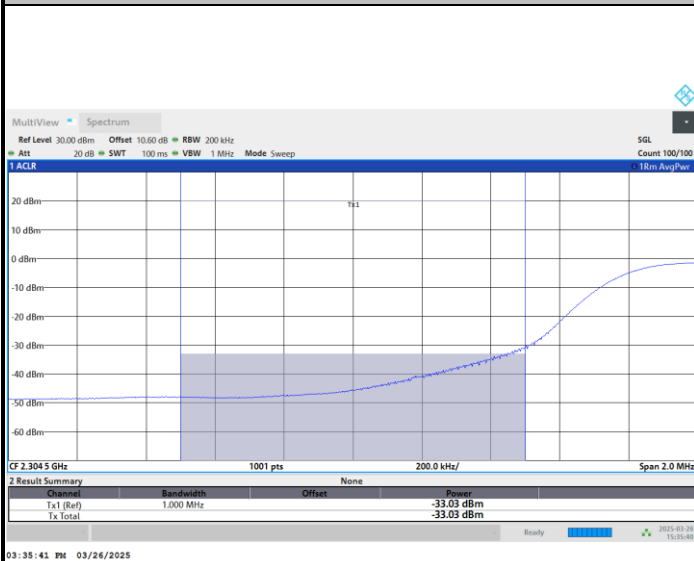


FR1 n30 / 10MHz / CP OFDM / 256QAM

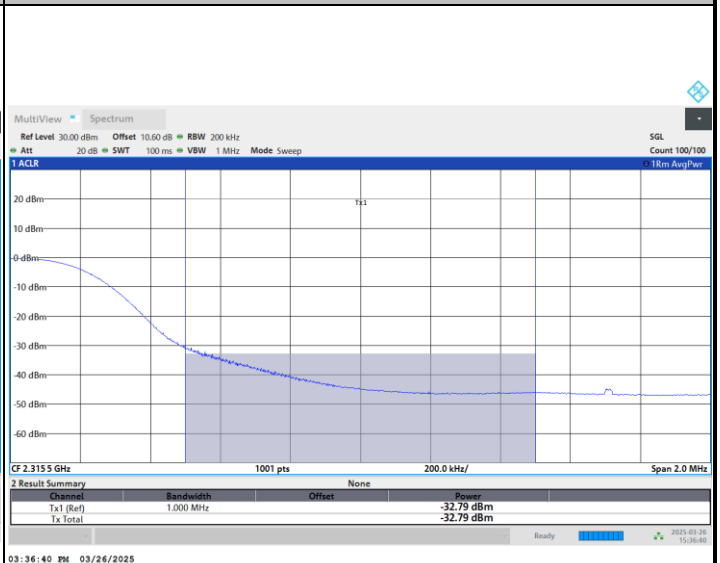
Middle Band Edge / Full RB



Middle Band Edge / Full RB / Lower zoom in



Middle Band Edge / Full RB / Upper zoom in

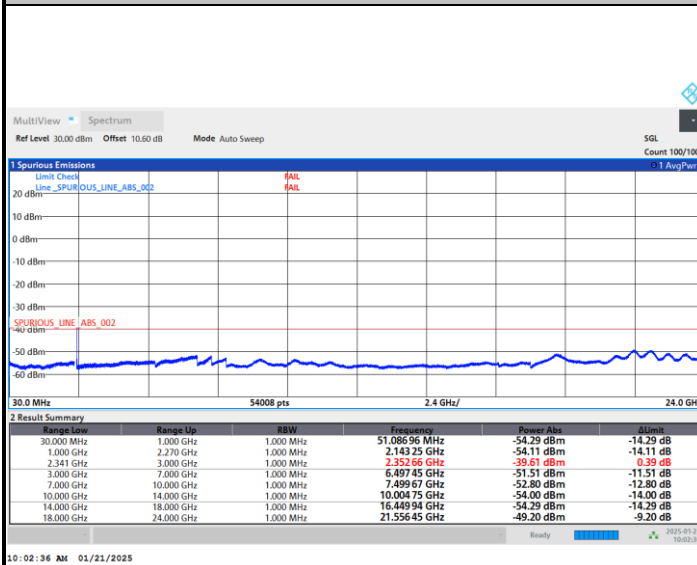




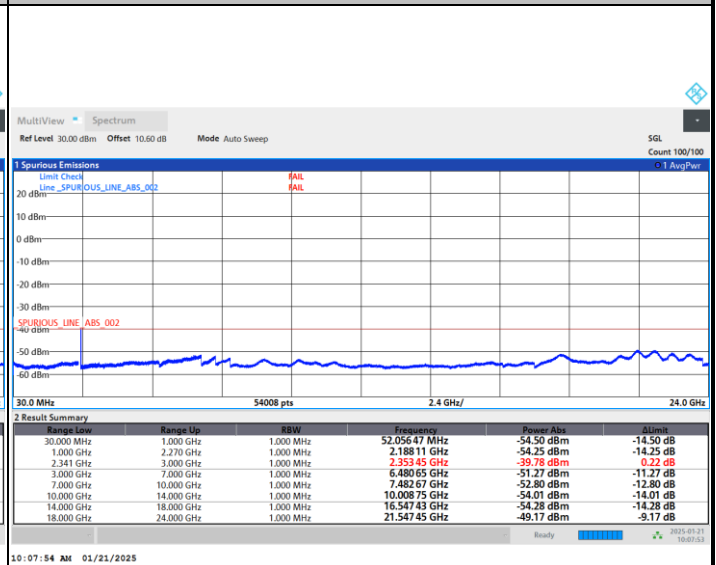
Conducted Spurious Emission

FR1 n30 / 5MHz / CP OFDM / QPSK / 1RB1

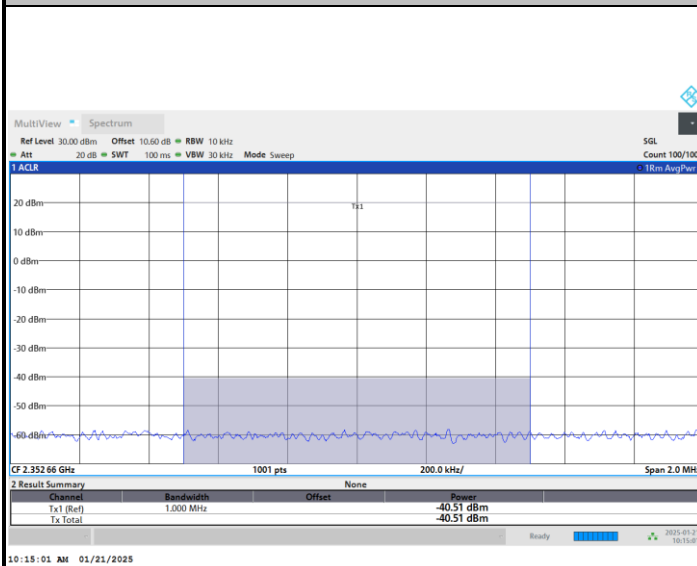
Lowest Channel



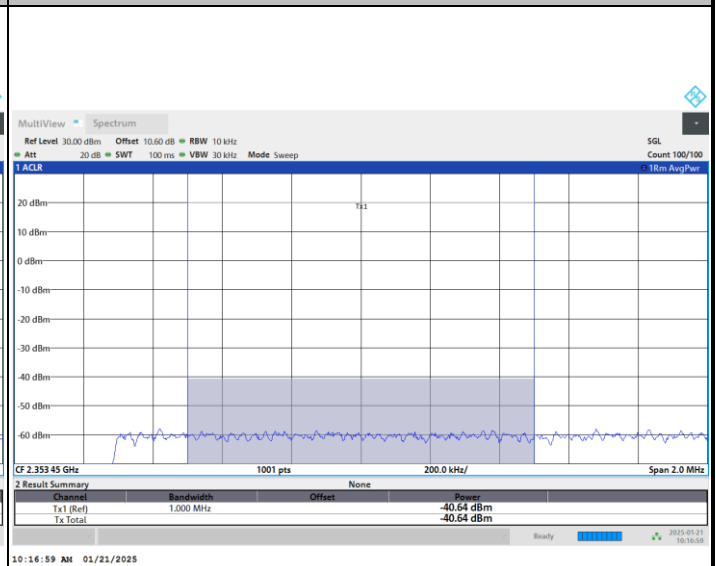
Middle Channel



Channel power -40dBm > -40.51dBm (PASS)



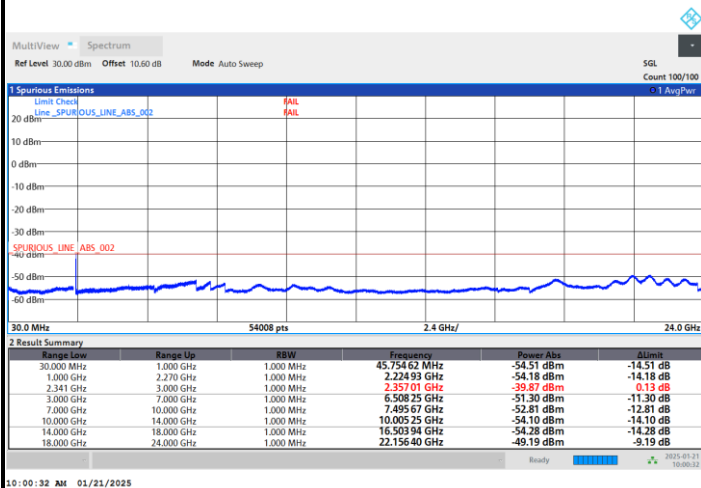
Channel power -40dBm > -40.64dBm (PASS)





FR1 n30 / 5MHz / CP OFDM / QPSK / 1RB1

Highest Channel



Channel power -40dBm > -40.95dBm (PASS)



Frequency Stability

Test Conditions		FR1 n30 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0015	PASS
40	Normal Voltage	0.0025	
30	Normal Voltage	0.0000	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0007	
0	Normal Voltage	0.0023	
-10	Normal Voltage	0.0005	
-20	Normal Voltage	0.0009	
-30	Normal Voltage	0.0015	
20	Maximum Voltage	0.0022	
20	Normal Voltage	0.0000	
20	Minimum Voltage	0.0006	

Note:

1. Normal Voltage = 3.3 V. ; Minimum Voltage = 3.135 V. ; Maximum Voltage = 4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

Test Conditions		FR1 n30 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 5MHz	Within Band
		Frequency Offset (Δf) (Hz)	Result
50	Normal Voltage	7.5	PASS
40	Normal Voltage	5.5	
30	Normal Voltage	7.1	
20(Ref.)	Normal Voltage	0	
10	Normal Voltage	-6	
0	Normal Voltage	-4.3	
-10	Normal Voltage	2.6	
-20	Normal Voltage	6.4	
-30	Normal Voltage	6.8	
20	Maximum Voltage	-7.2	
20	Normal Voltage	0	
20	Minimum Voltage	-0.7	

Note:

1. Normal Voltage = 3.3 V. ; Minimum Voltage = 3.135 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 n41

<SISO Mode>

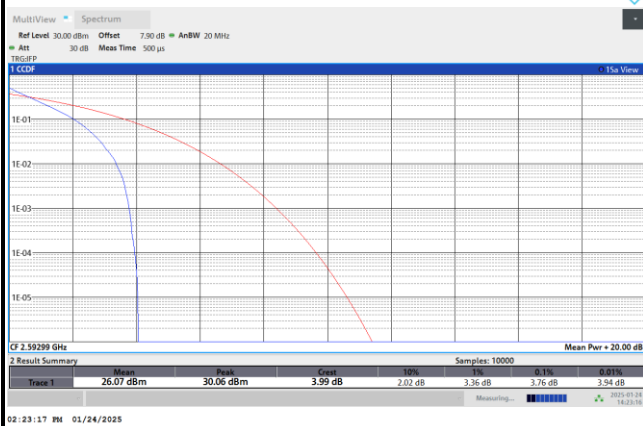
Peak-to-Average Ratio

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	3.76	4.50	5.40	5.84	PASS
Mode	FR1 n41 / 20MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.40				PASS

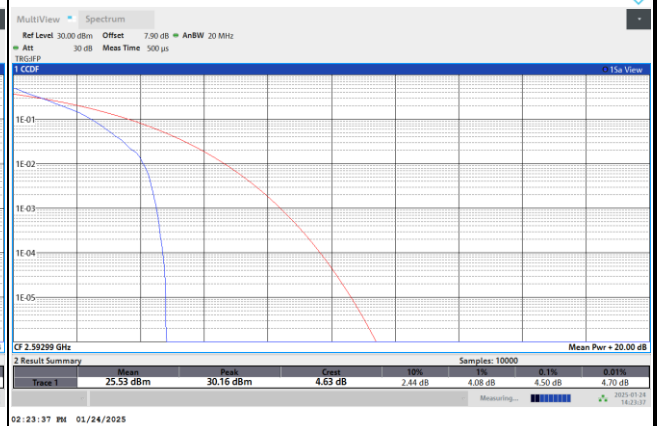


FR1 n41 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

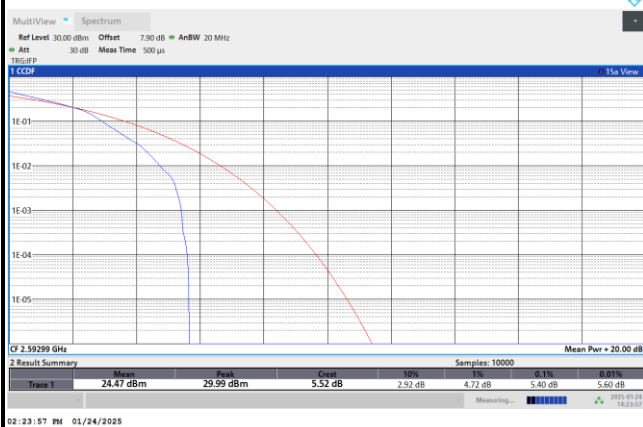
PI/2 BPSK



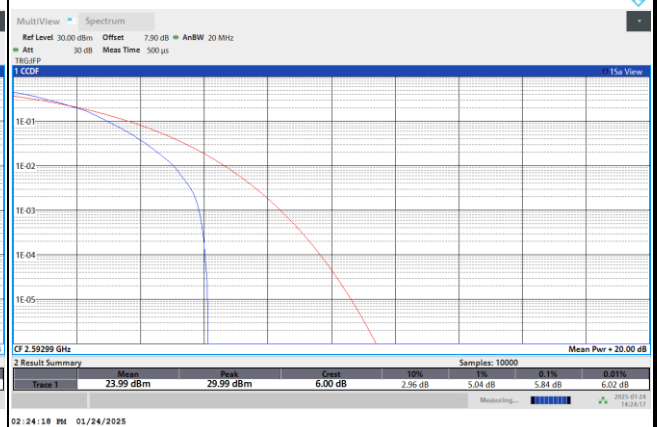
QPSK



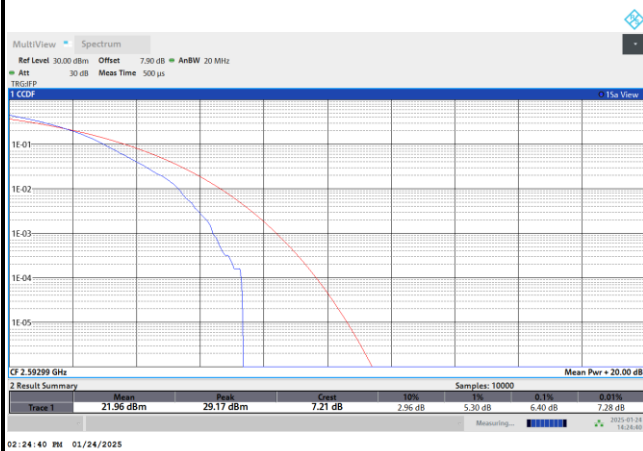
16QAM



64QAM



256QAM



**26dB Bandwidth**

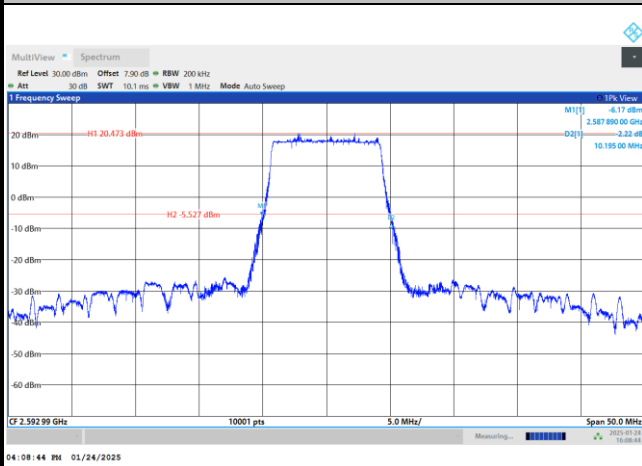
Mode	FR1 n41 : 26dB BW(MHz) / DFT-S OFDM							
BW	10MHz	15MHz	20MHz	25MHz	30MHz	40MHz	50MHz	60MHz
Mod.	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK
Middle CH	10.19	14.47	19.87	24.88	29.74	38.58	48.55	62.77
BW	70MHz	80MHz	90MHz	100MHz				
Mod.	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK				
Middle CH	69.17	80.40	91.77	101.63				

Mode	FR1 n41 : 26dB BW(MHz) / CP OFDM							
BW	10MHz		15MHz		20MHz		25MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	10.13	10.26	15.52	15.51	20.45	20.25	25.24	25.44
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	10.28	10.10	15.54	15.29	20.34	20.11	25.47	25.24
BW	30MHz		40MHz		50MHz		60MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	30.79	30.85	40.92	40.96	50.44	50.58	62.65	62.71
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	30.74	30.88	41.01	40.98	50.60	50.31	64.02	62.56
BW	70MHz		80MHz		90MHz		100MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	72.50	72.50	80.59	80.71	92.63	92.48	102.67	102.58
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	72.64	72.30	80.99	80.63	92.65	92.25	102.67	102.71



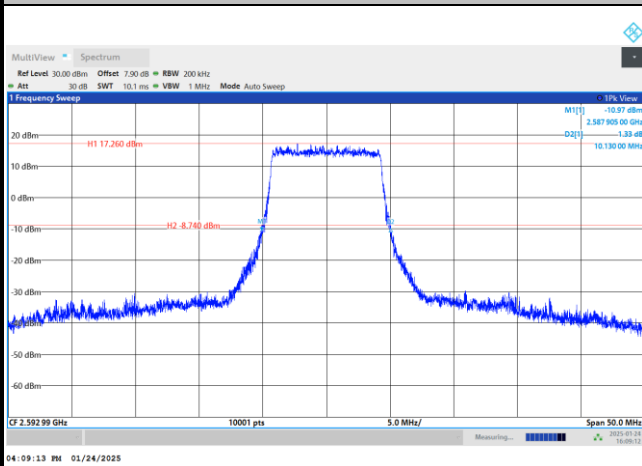
FR1 n41 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

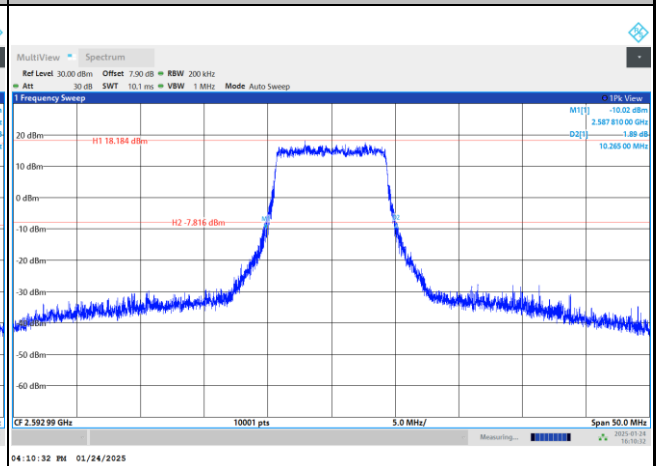


FR1 n41 / 10MHz / CP OFDM / Middle Channel / Full RB

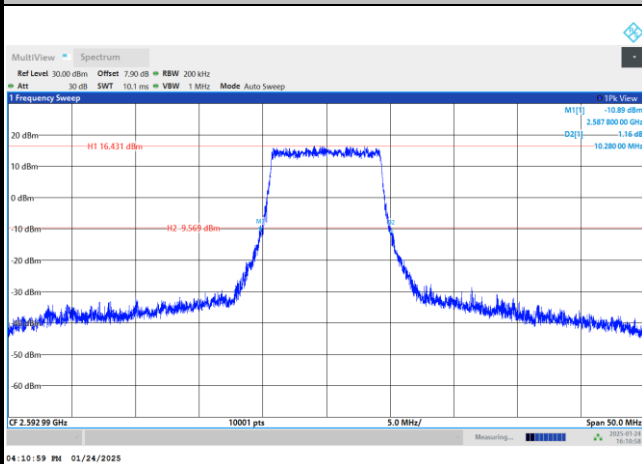
QPSK



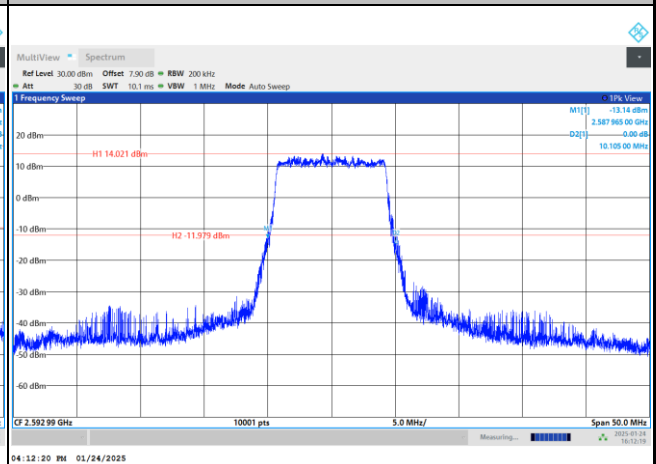
16QAM



64QAM



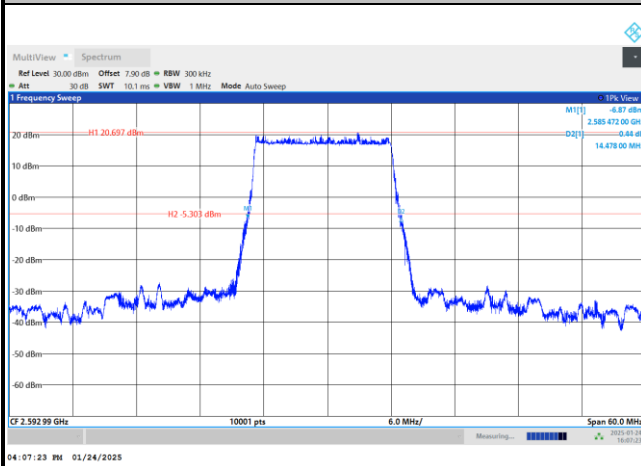
256QAM





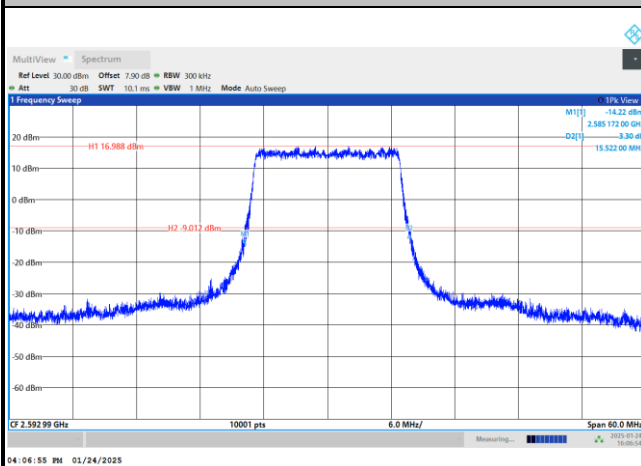
FR1 n41 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

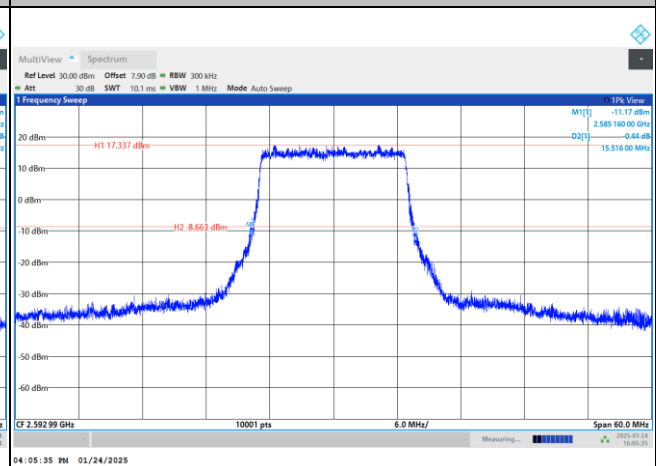


FR1 n41 / 15MHz / CP OFDM / Middle Channel / Full RB

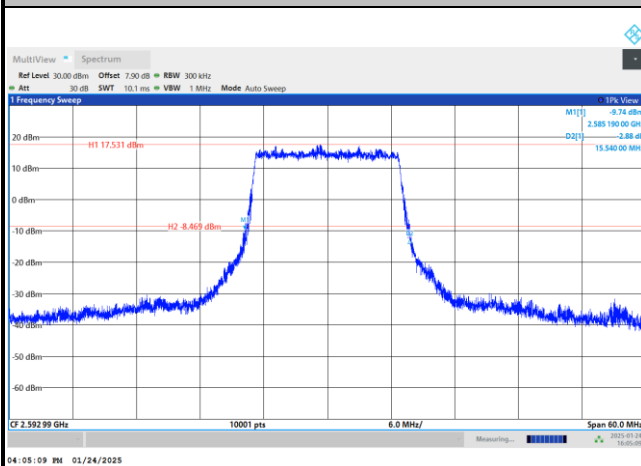
QPSK



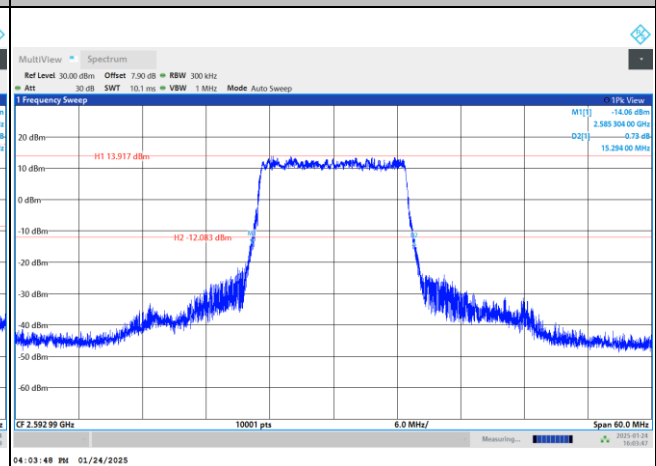
16QAM



64QAM



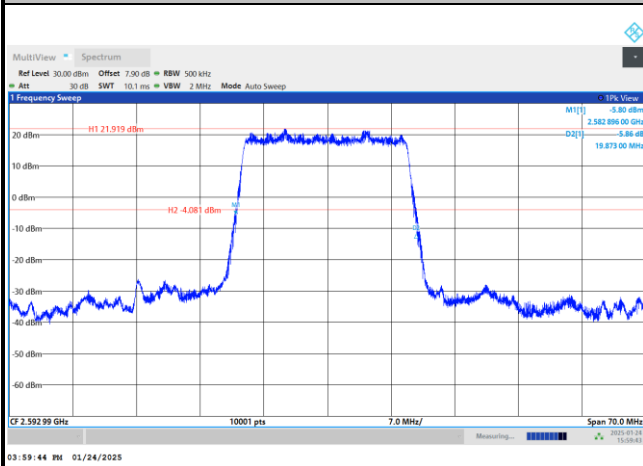
256QAM





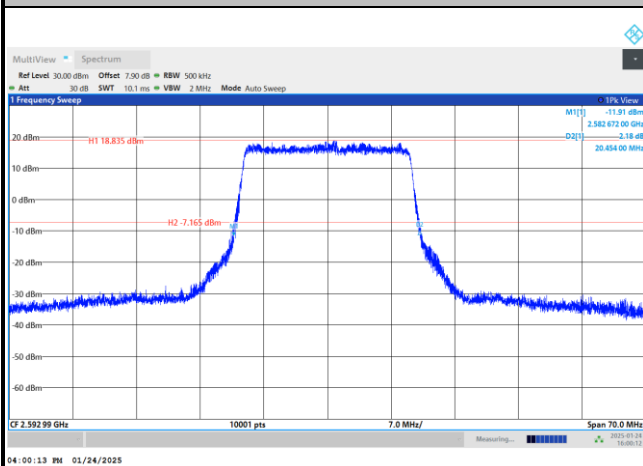
FR1 n41 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

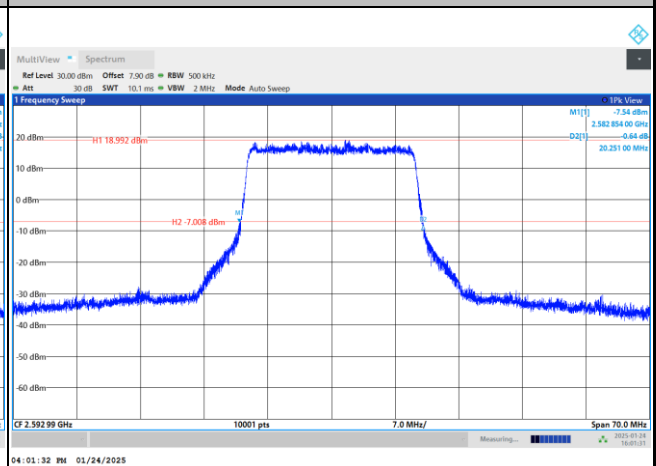


FR1 n41 / 20MHz / CP OFDM / Middle Channel / Full RB

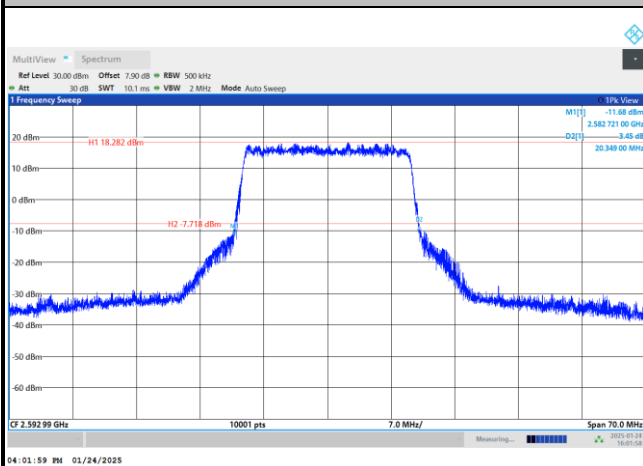
QPSK



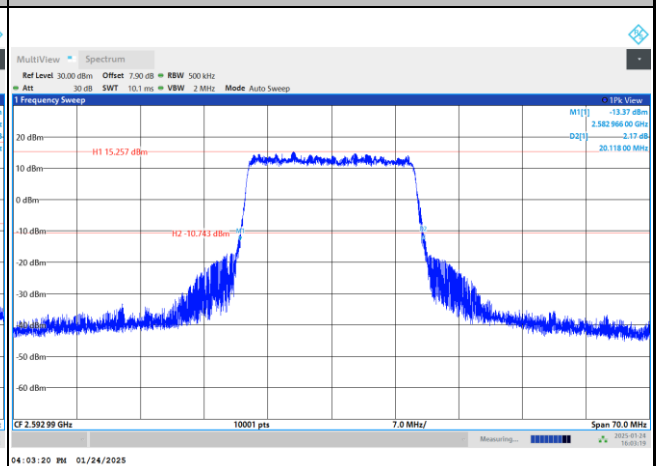
16QAM



64QAM



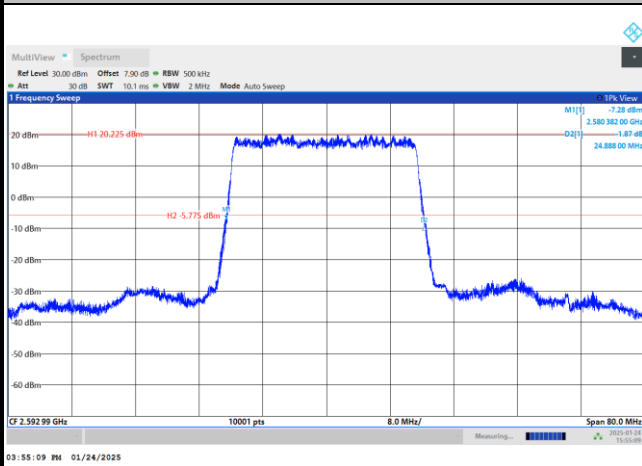
256QAM





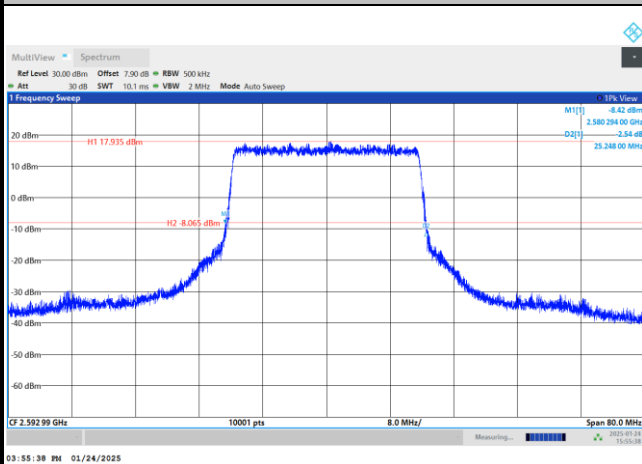
FR1 n41 / 25MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

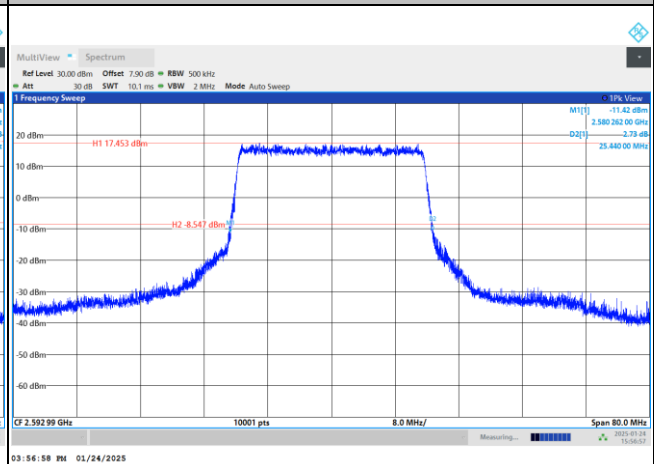


FR1 n41 / 25MHz / CP OFDM / Middle Channel / Full RB

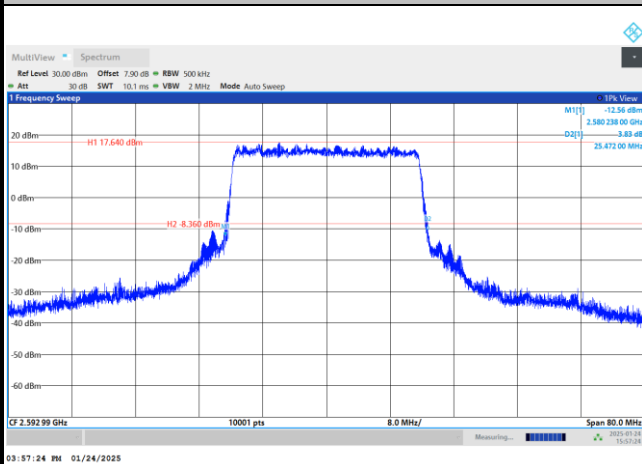
QPSK



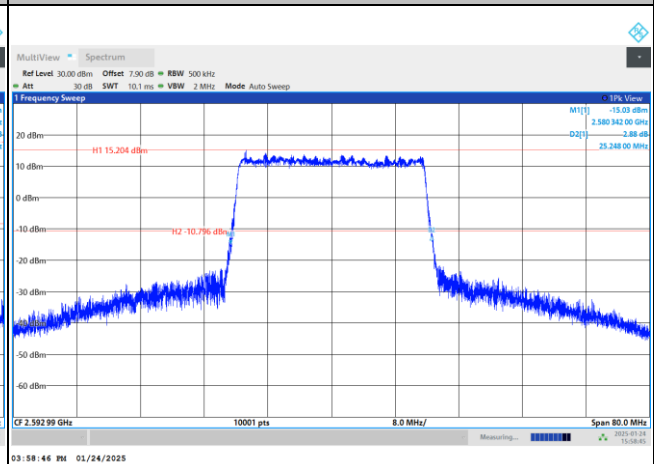
16QAM



64QAM



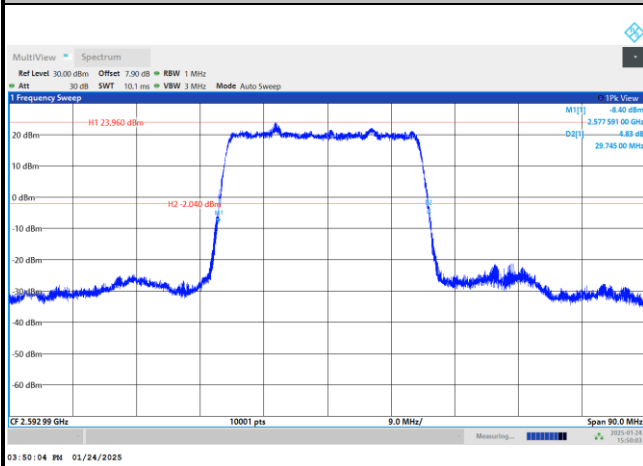
256QAM





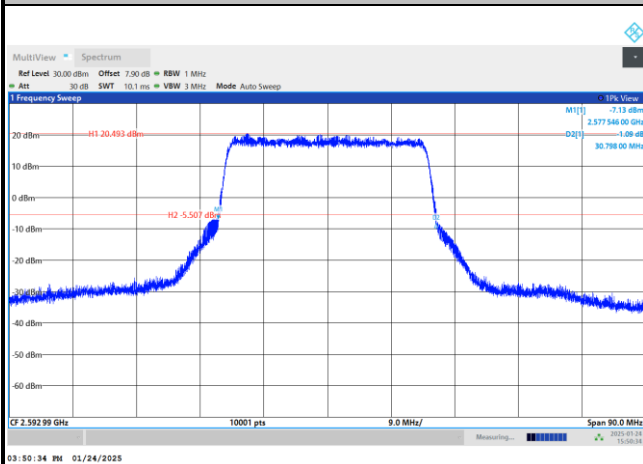
FR1 n41 / 30MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

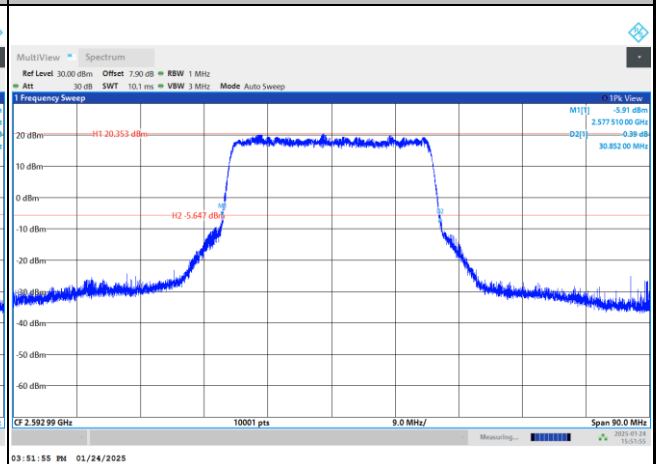


FR1 n41 / 30MHz / CP OFDM / Middle Channel / Full RB

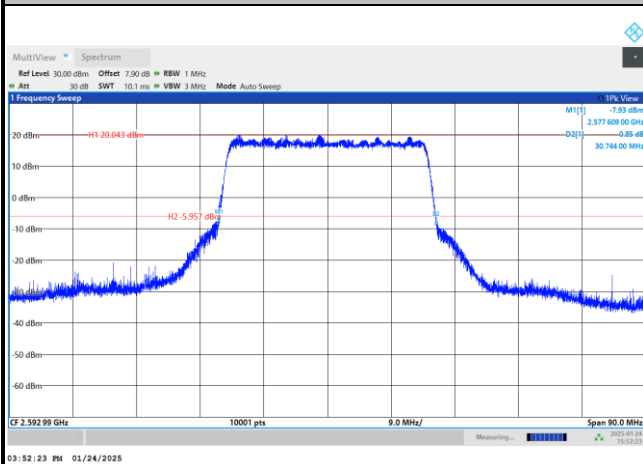
QPSK



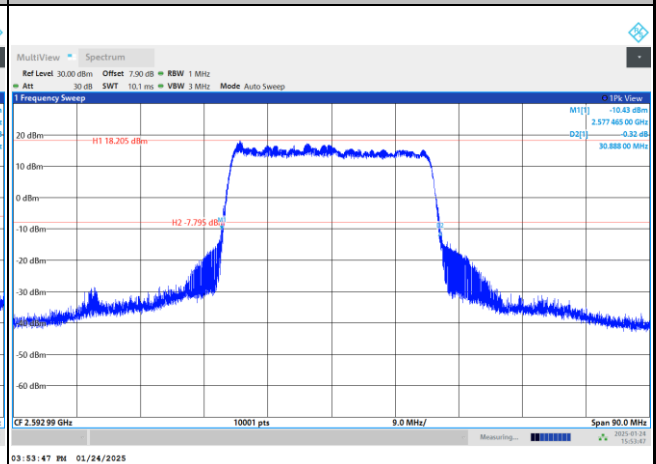
16QAM



64QAM



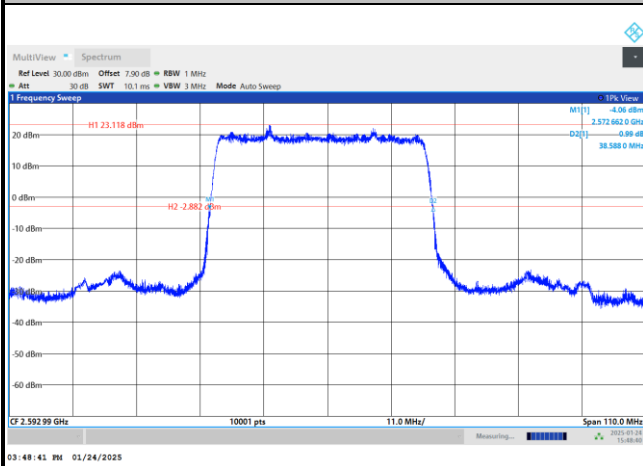
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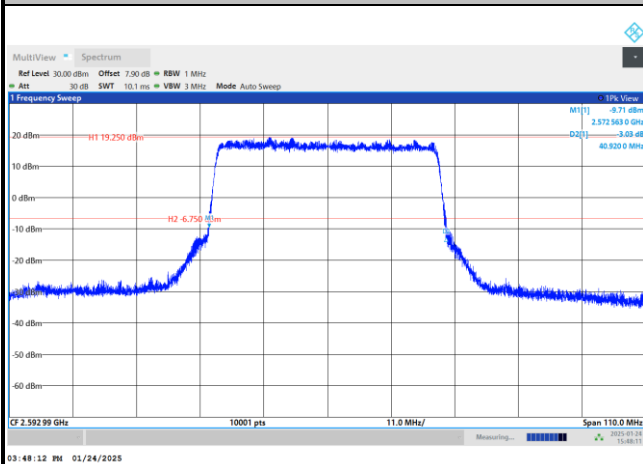
FR1 n41 / 40MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

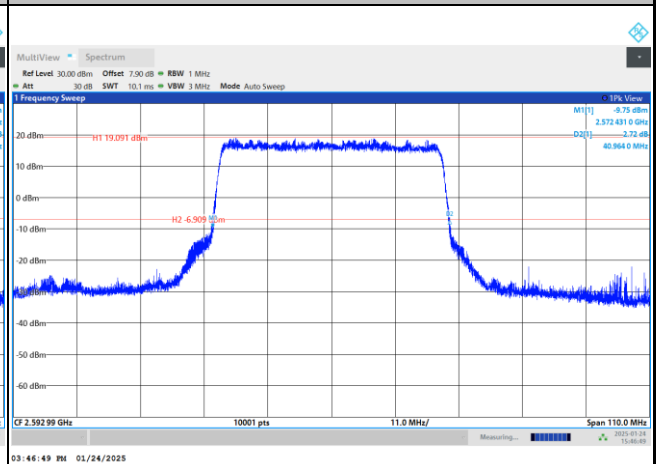


FR1 n41 / 40MHz / CP OFDM / Middle Channel / Full RB

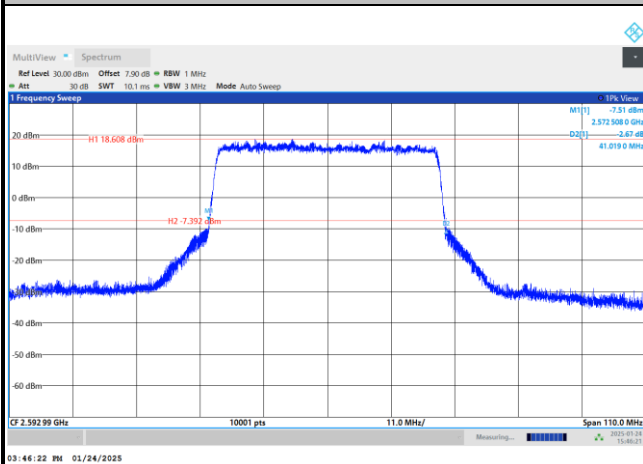
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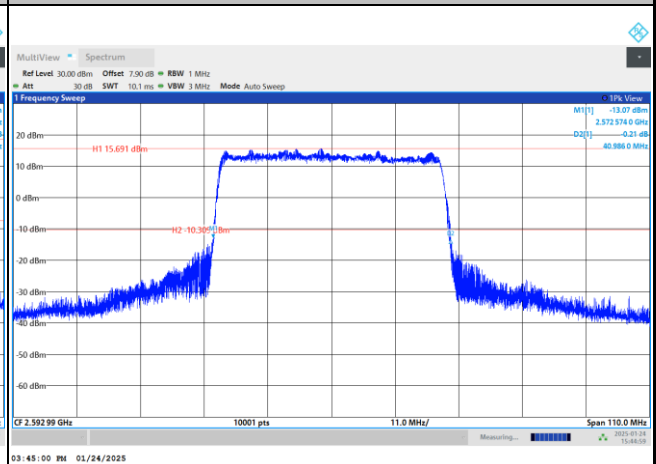
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64QAM



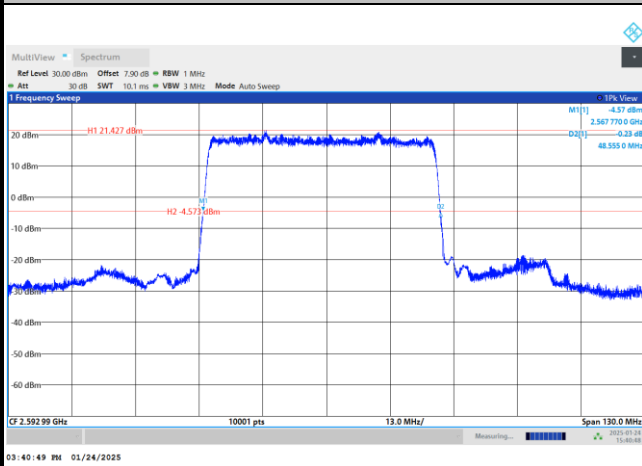
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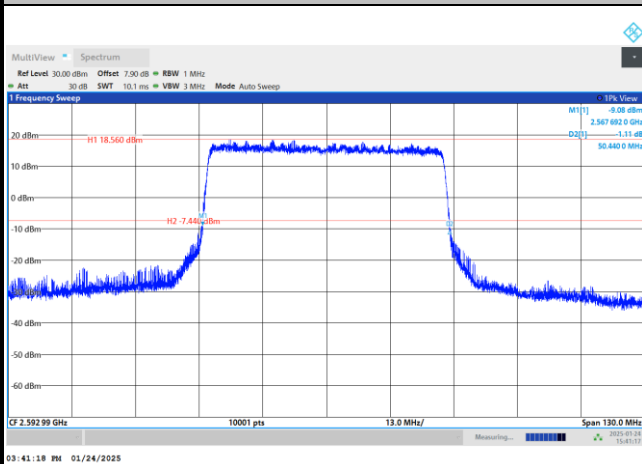
FR1 n41 / 50MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

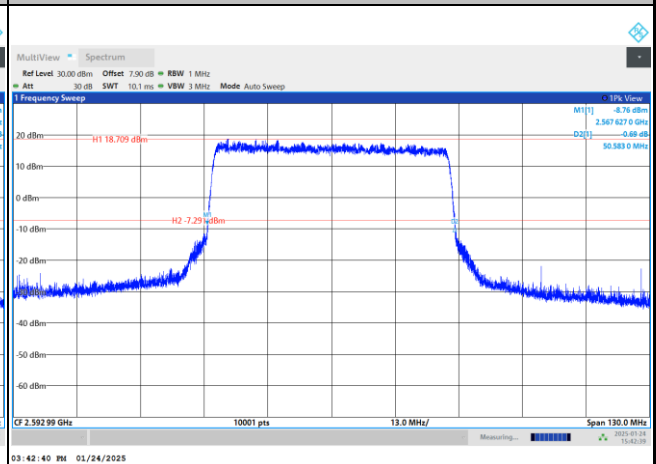


FR1 n41 / 50MHz / CP OFDM / Middle Channel / Full RB

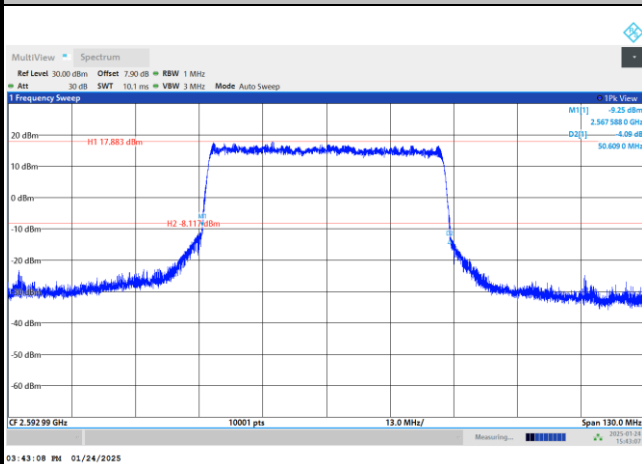
QPSK



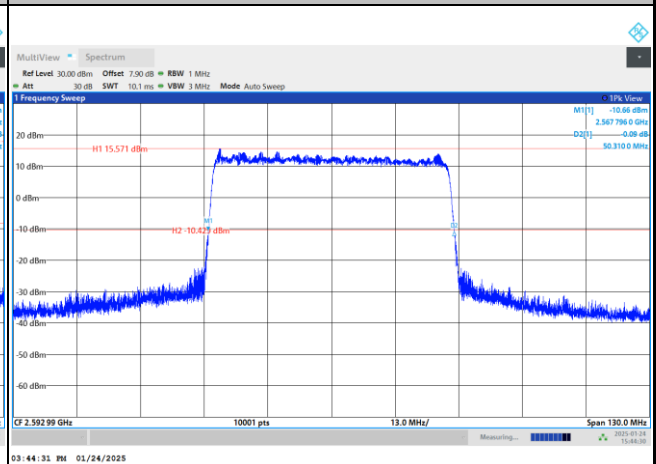
16QAM



64QAM



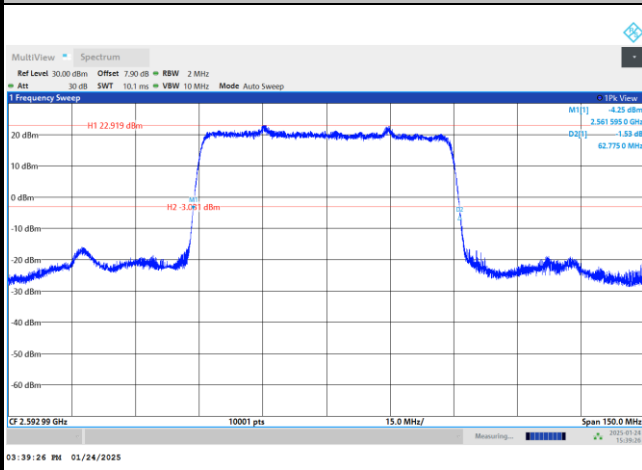
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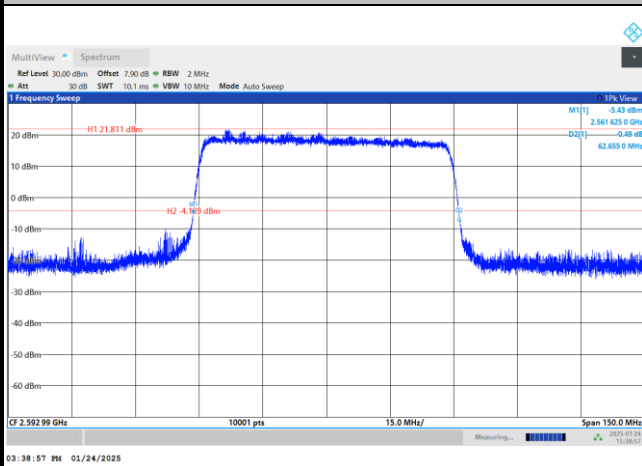
FR1 n41 / 60MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

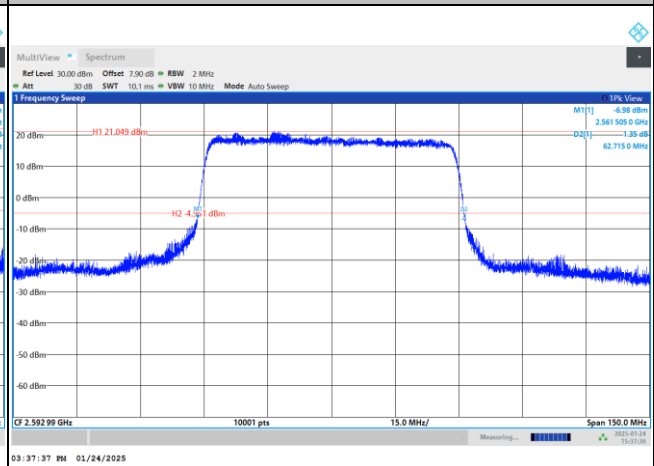


FR1 n41 / 60MHz / CP OFDM / Middle Channel / Full RB

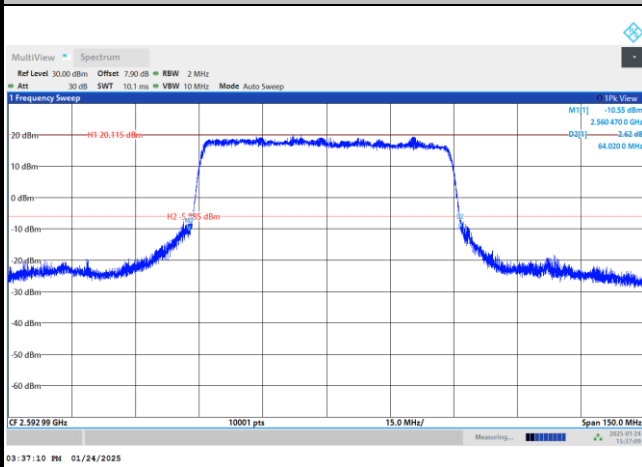
QPSK



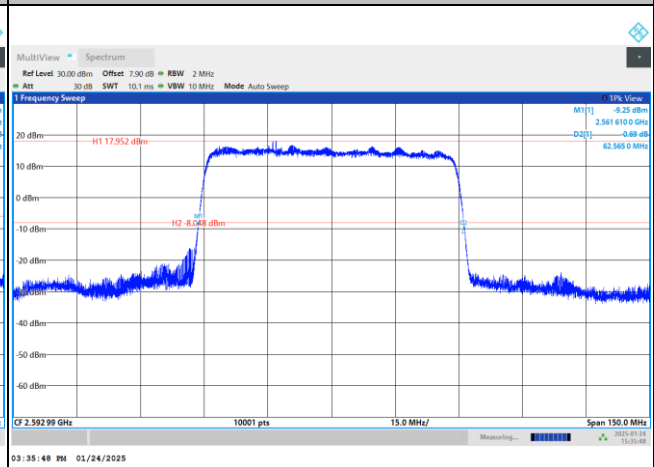
16QAM



64QAM



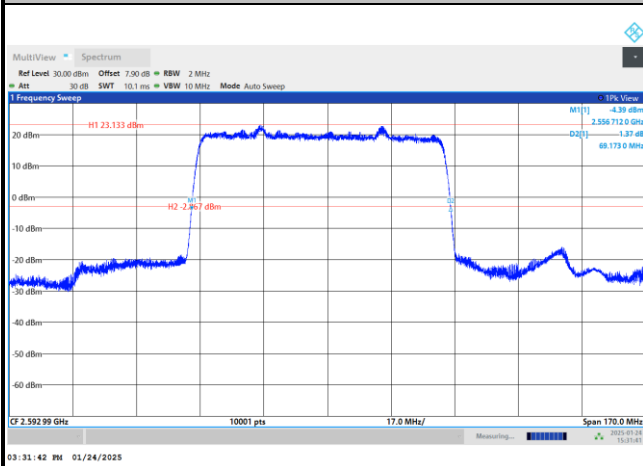
256QAM





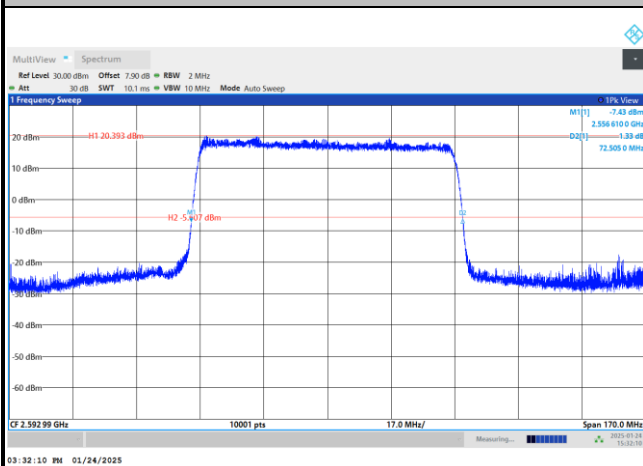
FR1 n41 / 70MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

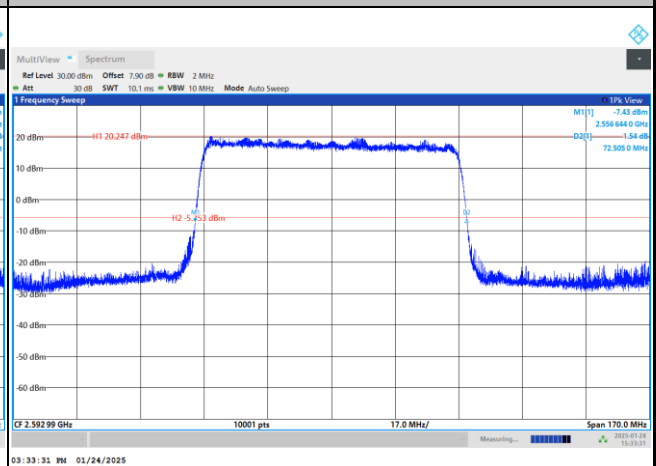


FR1 n41 / 70MHz / CP OFDM / Middle Channel / Full RB

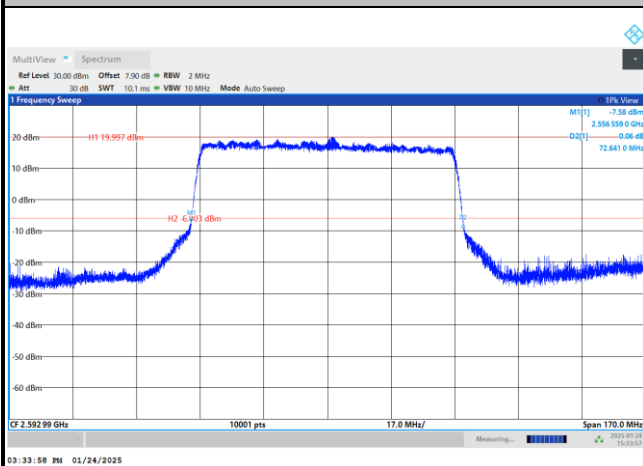
QPSK



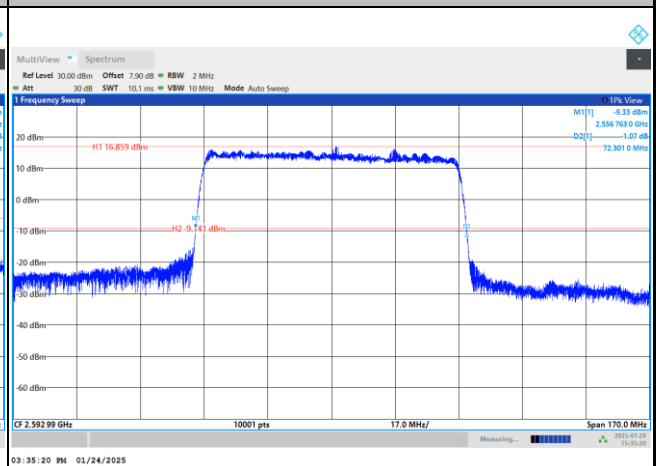
16QAM



64QAM

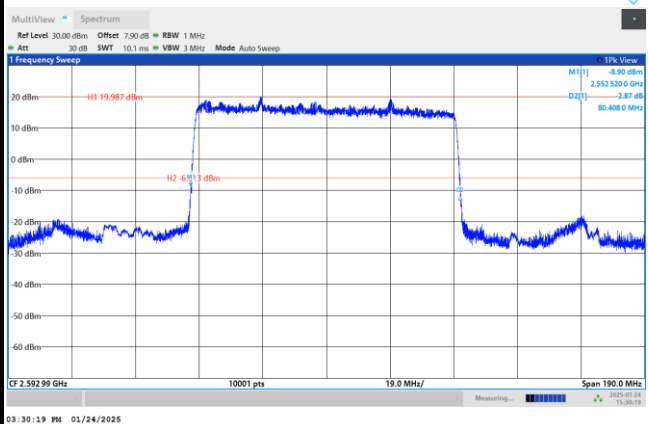


256QAM



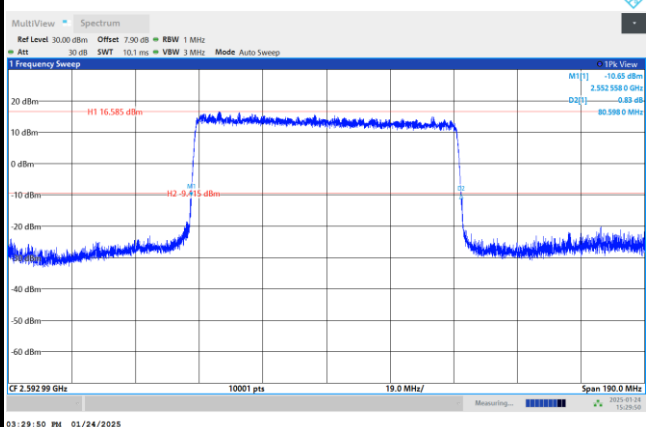
**FR1 n41 / 80MHz / DFT-S OFDM / Middle Channel / Full RB**

PI/2 BPSK

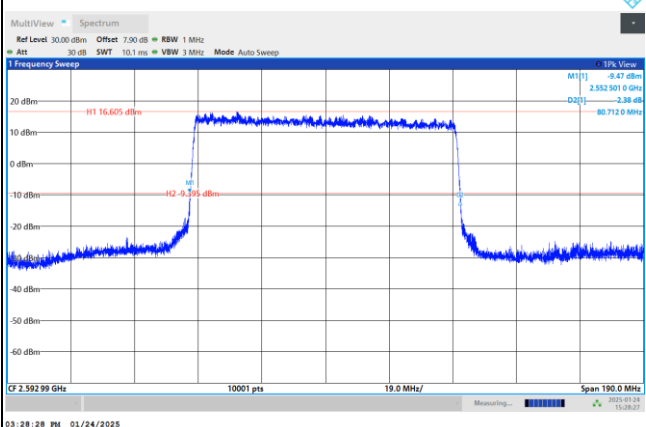


FR1 n41 / 80MHz / CP OFDM / Middle Channel / Full RB

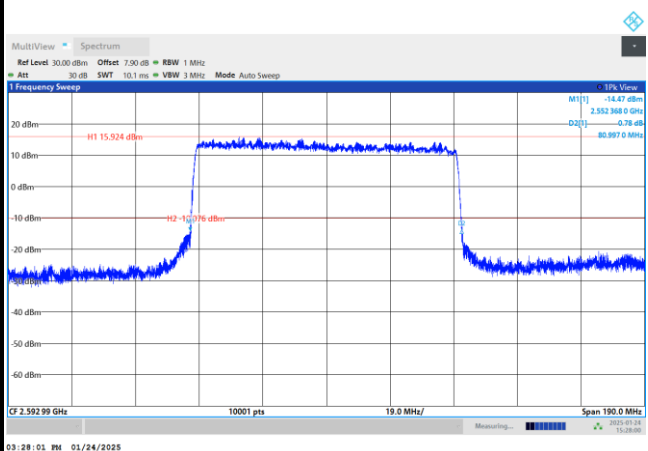
QPSK



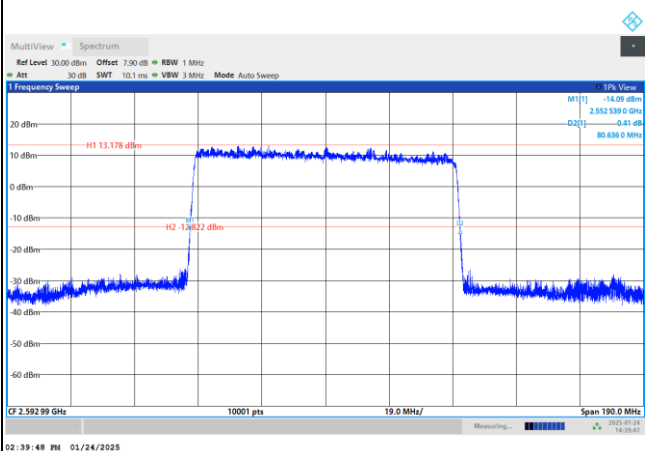
16QAM



64QAM



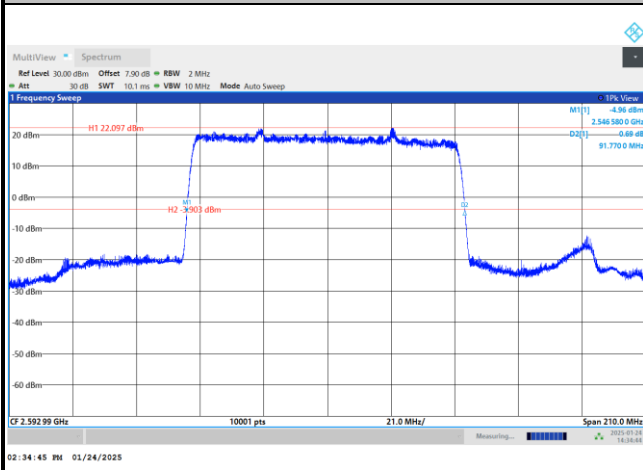
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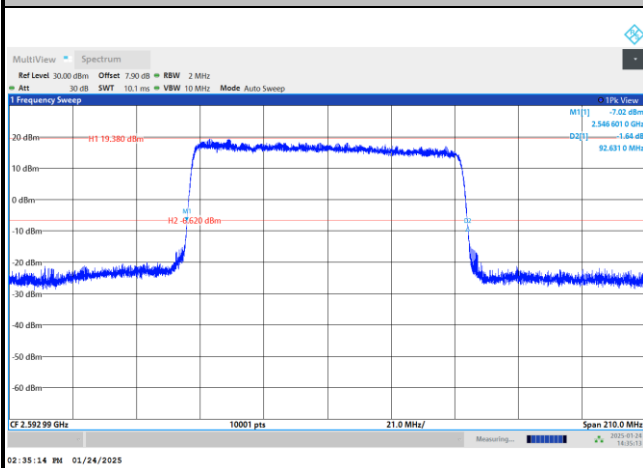
FR1 n41 / 90MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

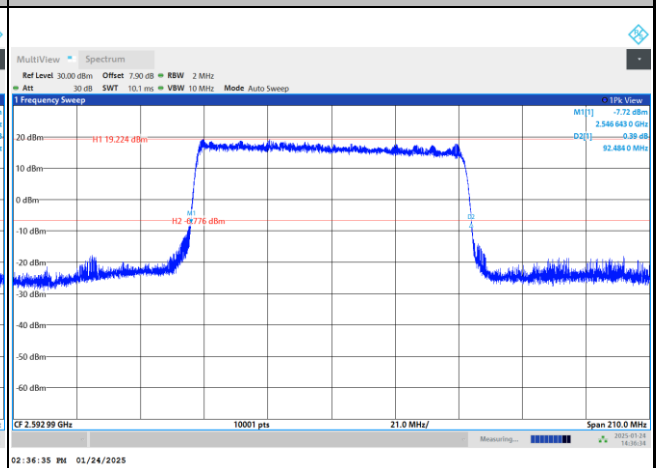


FR1 n41 / 90MHz / CP OFDM / Middle Channel / Full RB

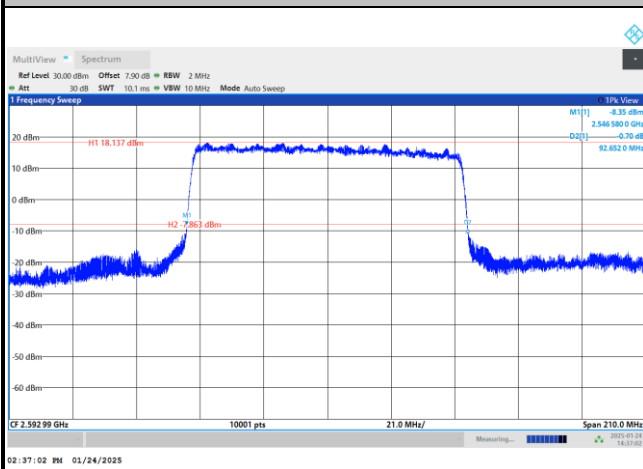
QPSK



16QAM



64QAM



256QAM

