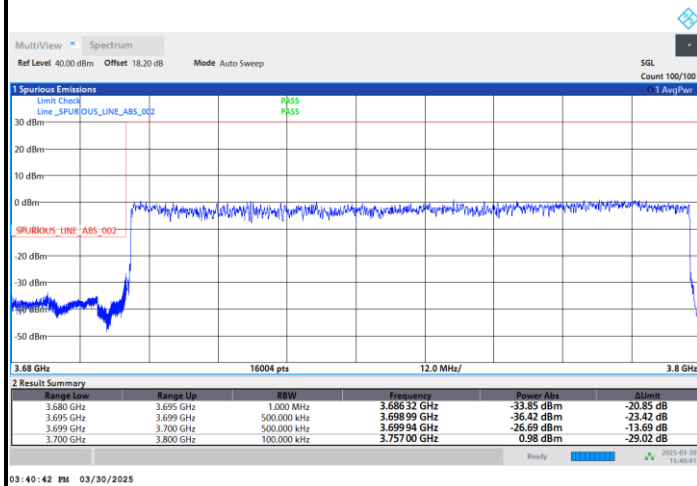


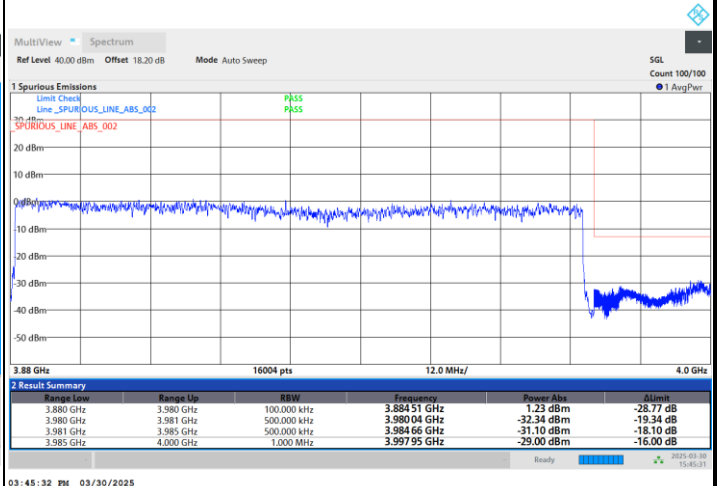


FR1 n77 / 100MHz / DFT-S OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

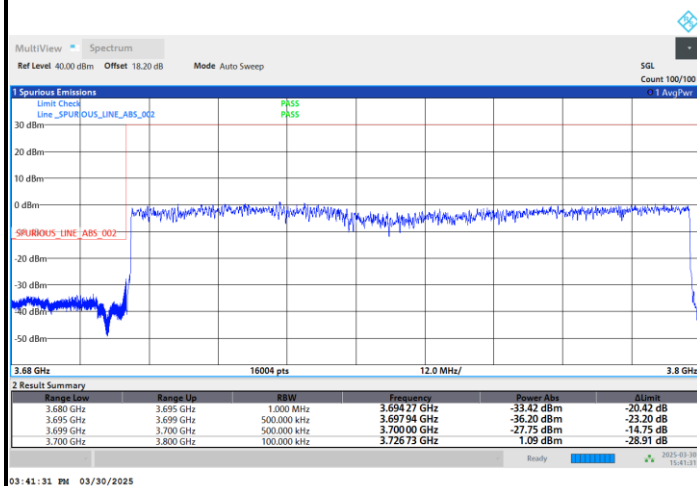


Highest Band Edge / Full RB

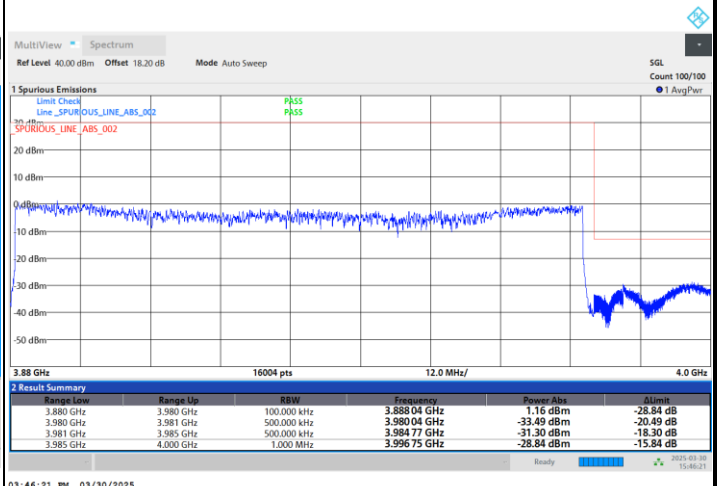


FR1 n77 / 100MHz / DFT-S OFDM / QPSK

Lowest Band Edge / Full RB



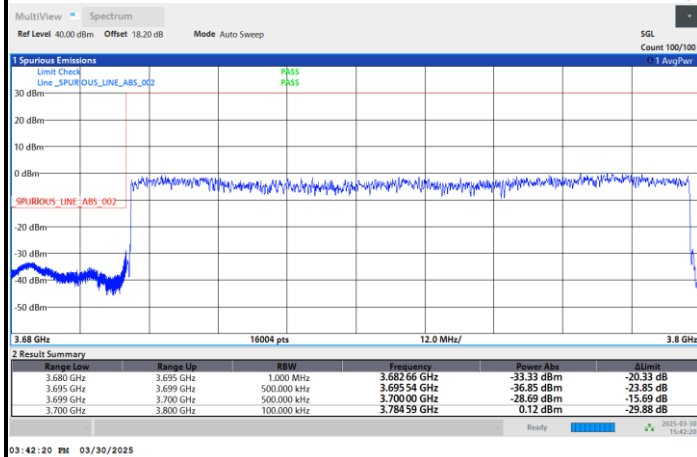
Highest Band Edge / Full RB



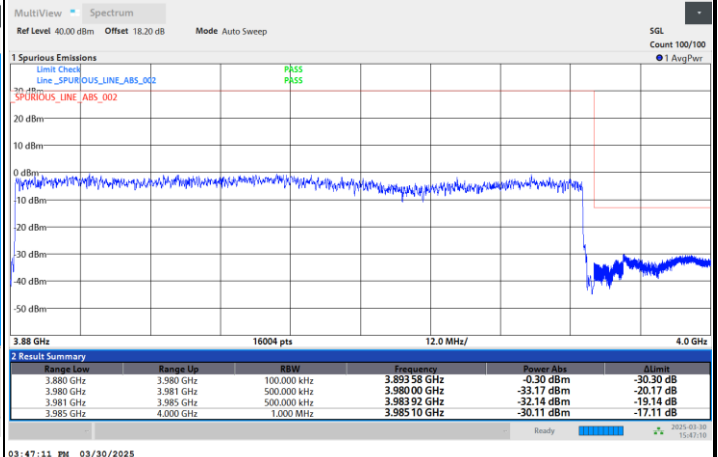


FR1 n77 / 100MHz / DFT-S OFDM / 16QAM

Lowest Band Edge / Full RB

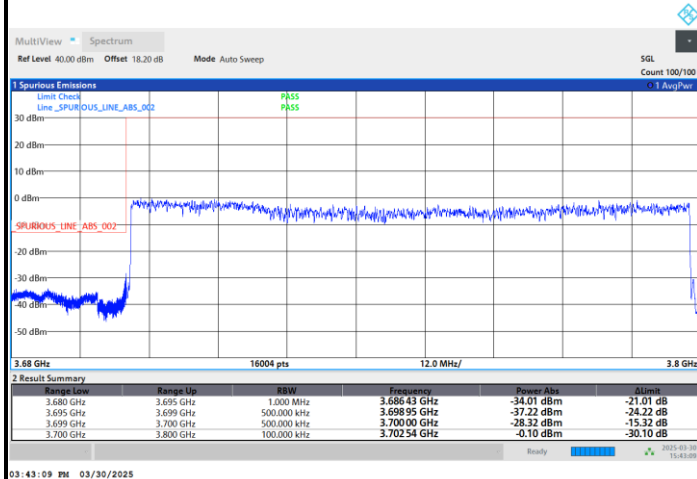


Highest Band Edge / Full RB

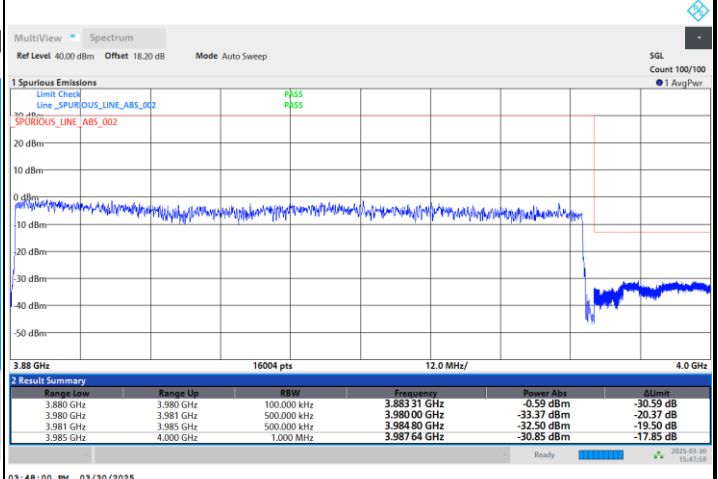


FR1 n77 / 100MHz / DFT-S OFDM / 64QAM

Lowest Band Edge / Full RB



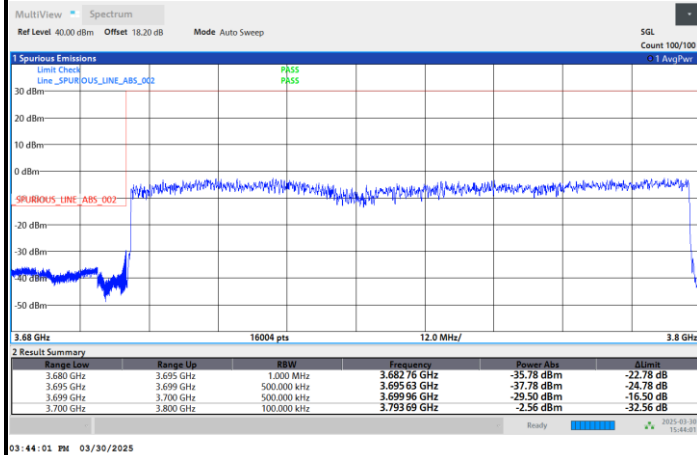
Highest Band Edge / Full RB



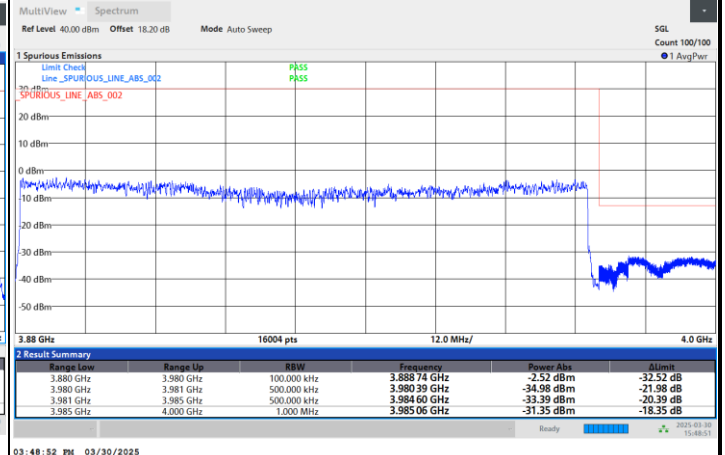


FR1 n77 / 100MHz / DFT-S OFDM / 256QAM

Lowest Band Edge / Full RB

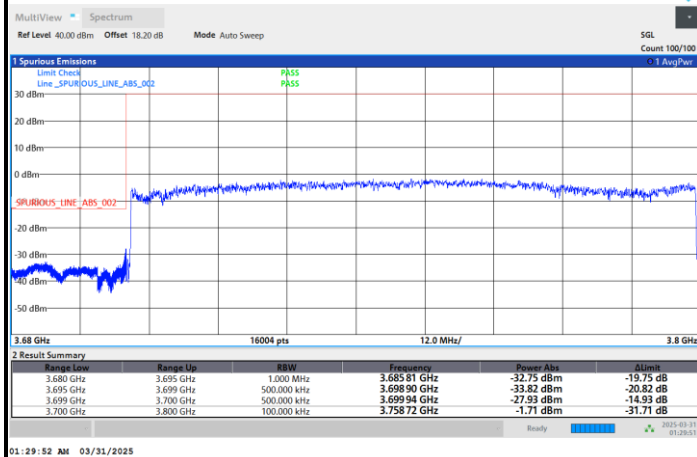


Highest Band Edge / Full RB

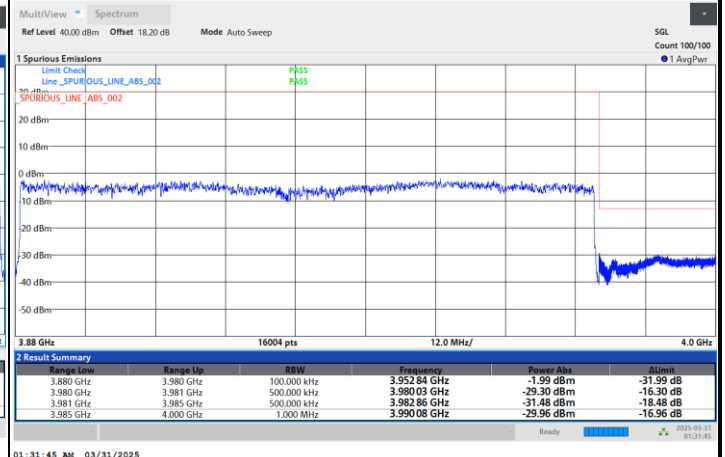


FR1 n77 / 100MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge



Highest Band Edge

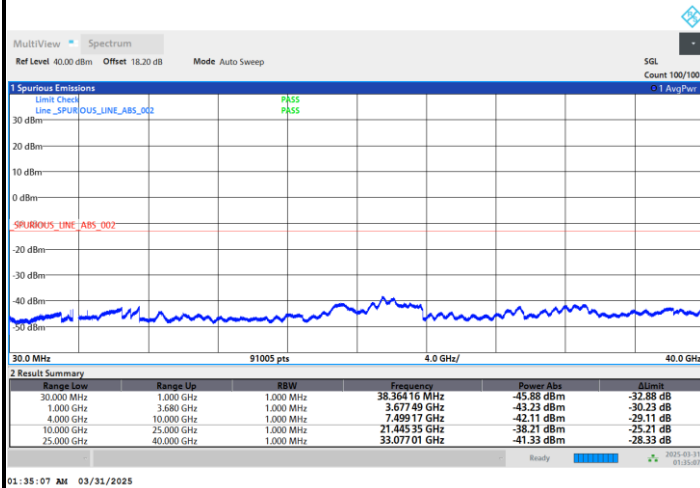




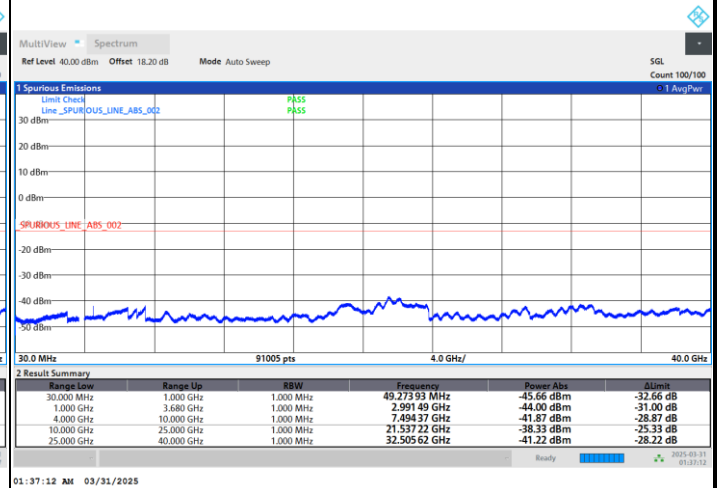
Conducted Spurious Emission

FR1 n77 / 10MHz / DFT-S OFDM / QPSK / 1RB1

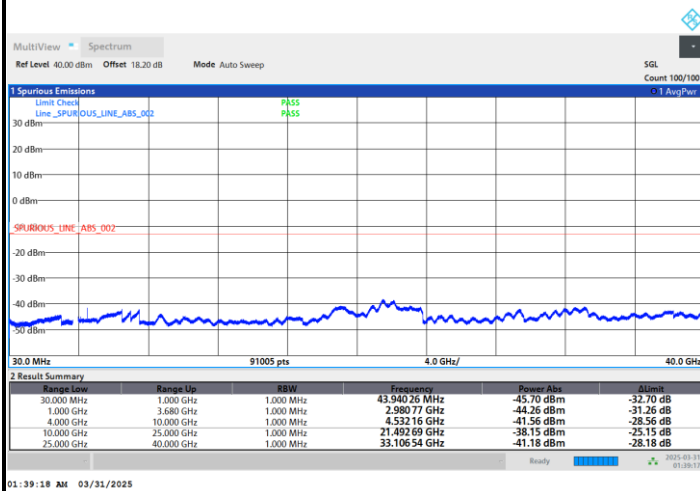
Lowest Channel



Middle Channel



Highest Channel



Frequency Stability

Test Conditions		FR1 n77 (PI/2 BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0019	PASS
40	Normal Voltage	0.0003	
30	Normal Voltage	0.0019	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0051	
0	Normal Voltage	0.0005	
-10	Normal Voltage	0.0052	
-20	Normal Voltage	0.0038	
-30	Normal Voltage	0.0007	
20	Maximum Voltage	0.0021	
20	Normal Voltage	0.0000	
20	Minimum Voltage	0.0036	

Note:

1. Normal Voltage = 3.8 V. ; Minimum Voltage = 3.135 V. ; Maximum Voltage = 4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



FR1 n77 Part 27Q

<SISO Mode>

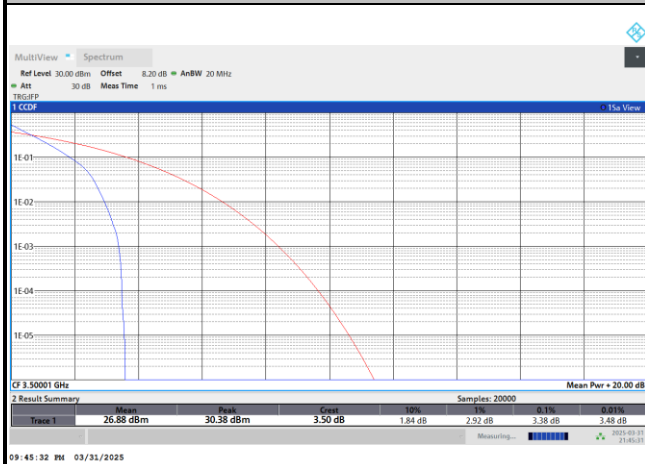
Peak-to-Average Ratio

Mode	FR1 n77 / 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	3.38	14.26	5.20	5.44	PASS
Mode	FR1 n77 / 20MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.44				PASS

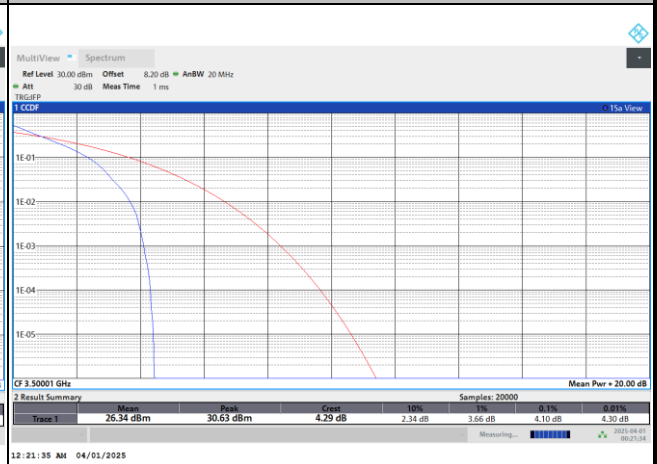


FR1 n77 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

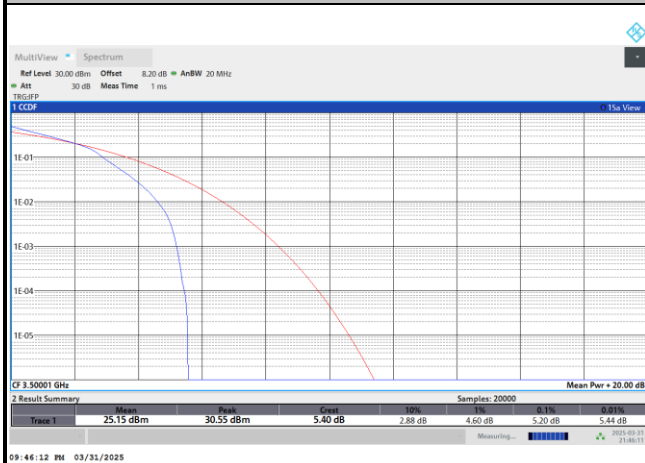
PI/2 BPSK



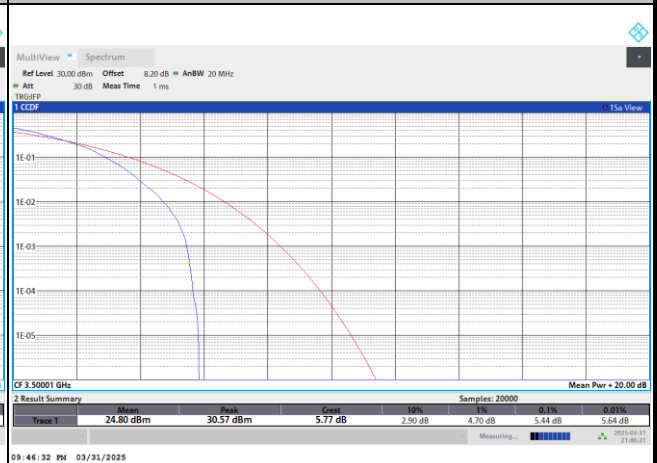
QPSK



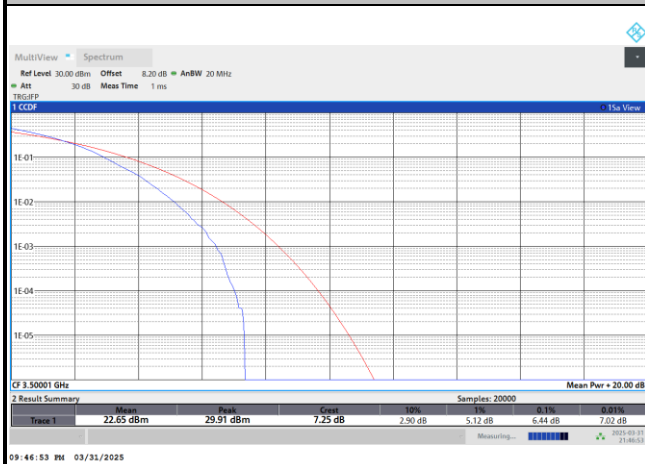
16QAM



64QAM



256QAM



**26dB Bandwidth**

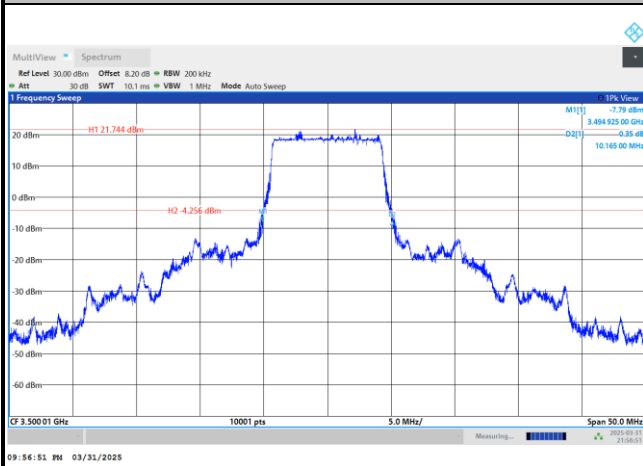
Mode	FR1 n77 : 26dB BW(MHz) / DFT-S OFDM							
BW	10MHz	15MHz	20MHz	25MHz	30MHz	40MHz	50MHz	60MHz
Mod.	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK
Middle CH	10.16	14.52	19.81	24.88	29.73	38.75	48.93	62.97
BW	70MHz	80MHz	90MHz	100MHz				
Mod.	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK				
Middle CH	69.41	80.23	91.87	101.89				

Mode	FR1 n77 : 26dB BW(MHz) / CP OFDM							
BW	10MHz		15MHz		20MHz		25MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	10.27	10.13	15.57	15.67	20.51	20.88	25.75	27.24
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	10.36	9.91	15.35	15.45	20.86	20.31	27.23	25.45
BW	30MHz		40MHz		50MHz		60MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	34.14	34.55	41.34	44.08	50.67	50.66	63.15	65.41
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	32.25	30.87	45.63	40.96	53.27	50.28	67.08	62.71
BW	70MHz		80MHz		90MHz		100MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	72.77	72.89	80.86	80.92	92.86	94.01	103.13	103.29
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	75.10	72.48	80.95	80.84	94.14	92.58	103.20	102.67



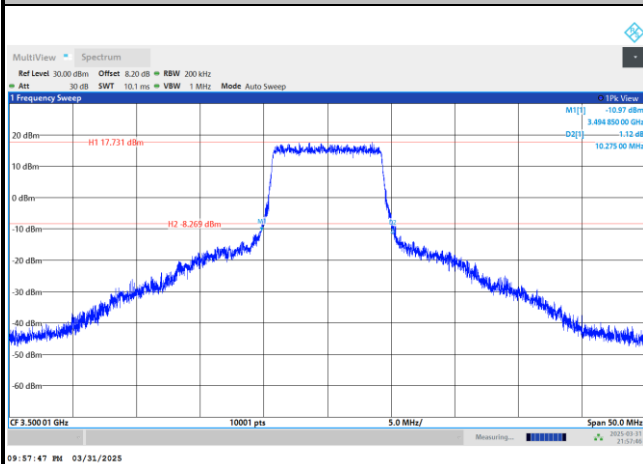
FR1 n77 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

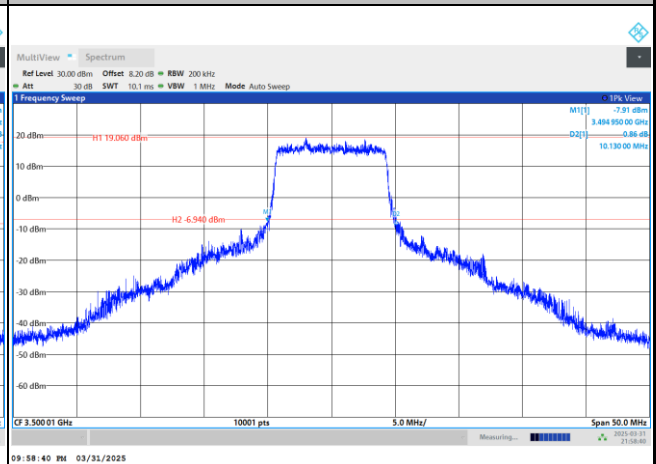


FR1 n77 / 10MHz / CP OFDM / Middle Channel / Full RB

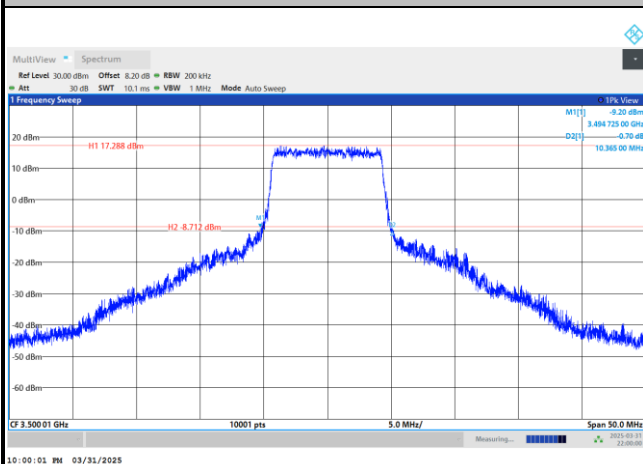
QPSK



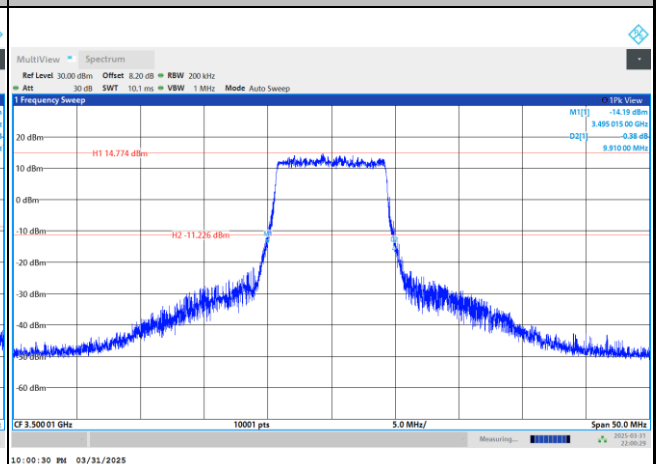
16QAM



64QAM



256QAM





MultiView Spectrum

Ref Level 30.00 dBm Offset 8.20 dB RBW 300 kHz

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

1 Frequency Sweep

10% View

H1 21.705 dBm

H2 -4.295 dBm

M1(f) -4.32 dBm

3.402 GHz

D2(f) -0.87 dBm

14.520 MHz

20 dBm

10 dBm

0 dBm

-10 dBm

-20 dBm

-30 dBm

-40 dBm

-50 dBm

-60 dBm

CF 3.5001 GHz

10001 pts

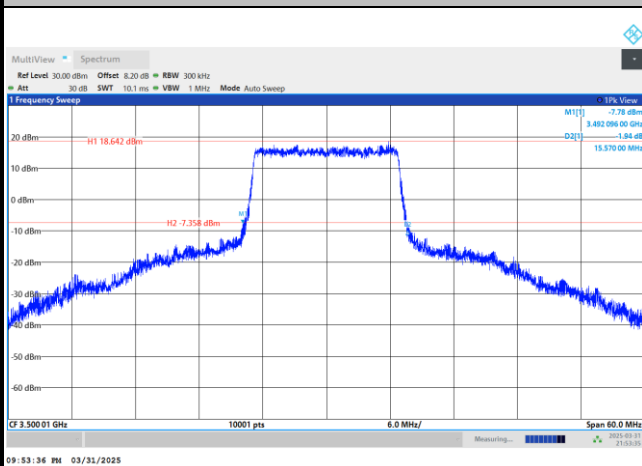
6.0 MHz/

Span 6.0 MHz

Measuring...

09:52:13 PM 03/31/2025

QPSK



MultiView Spectrum

Ref Level 30.00 dBm Offset 8.20 dB RBW 300 kHz

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

1 Frequency Sweep

0 1PK View

M1[1] -8.59 dBm

D2[1] 3.492 096 00 GHz

0.12 dB

15.678 00 MHz

20 dBm

10 dBm

0 dBm

-10 dBm

-20 dBm

-30 dBm

-40 dBm

-50 dBm

-60 dBm

H1 18.023 dBm

H2 -7.977 dBm

CF 3.50001 GHz

10001 pts

6.0 MHz/

Span 60.0 MHz

Measuring...

09:54:02 PM 03/31/2025

MultiView Spectrum

Ref Level 30.00 dBm Offset 8.20 dB RBW 300 kHz

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

1 Frequency Sweep 10% View

M1[1] -0.03 dBm
3.402 284.00 GHz
-0.53 dBm
15.354 00 MHz

H1 18.174 dBm

H2 -7.826 dBm

CF 3.500 01 GHz 10001 pts 6.0 MHz/ Span 60.0 MHz

09:55:23 PM 03/31/2025

MultiView Spectrum

Ref Level 30.00 dBm Offset 8.20 dB RBW 300 kHz

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

1 Frequency Sweep

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

H1 14.406 dBm
H2 -13.594 dBm

M1[1] -12.87 dBm
1.482 192.00 GHz
D2[1] -0.23 dB
15.450 00 MHz

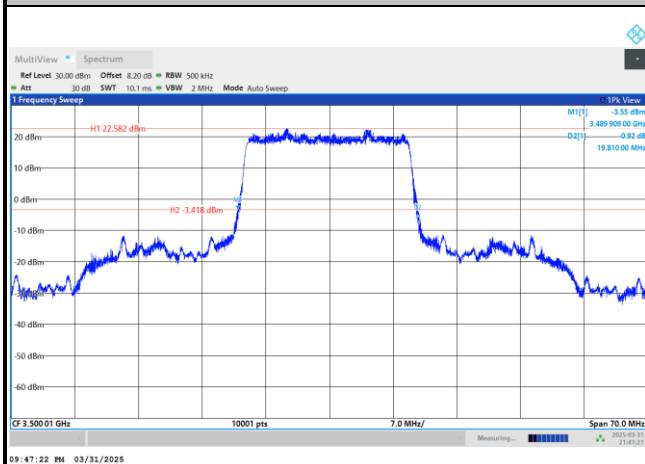
CF 3.500 01 GHz 10001 pts 6.0 MHz/ Span 60.0 MHz

09:55:52 PM 03/31/2025



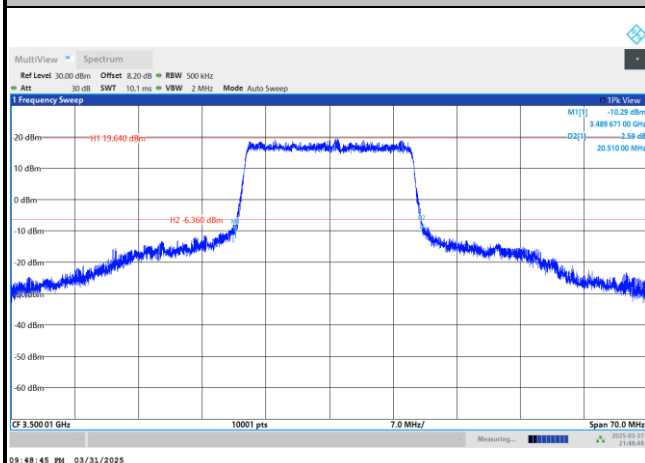
FR1 n77 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

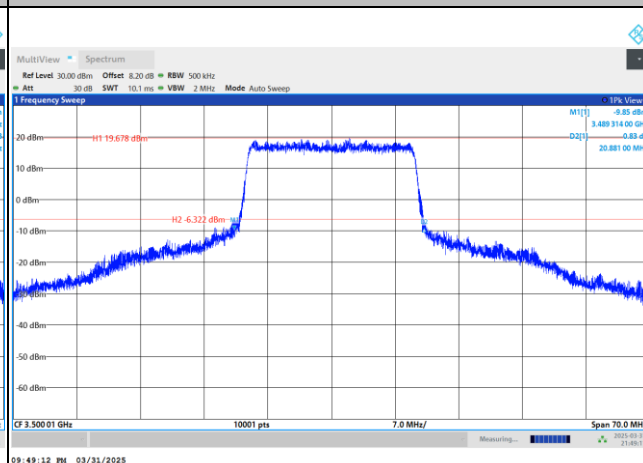


FR1 n77 / 20MHz / CP OFDM / Middle Channel / Full RB

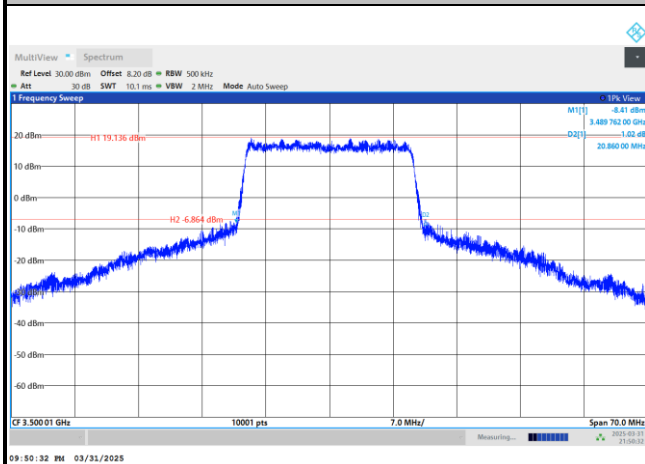
QPSK



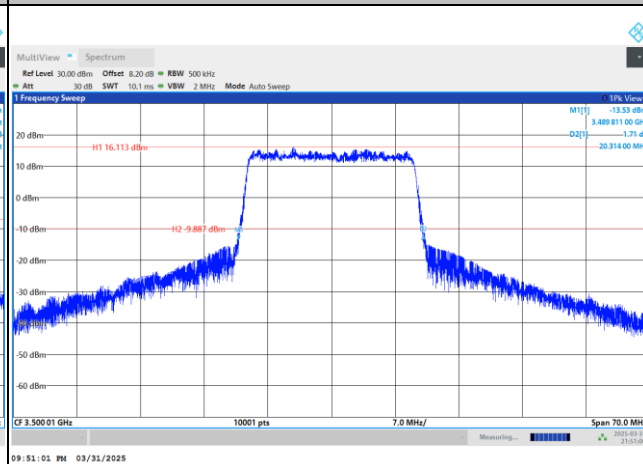
16QAM



64QAM



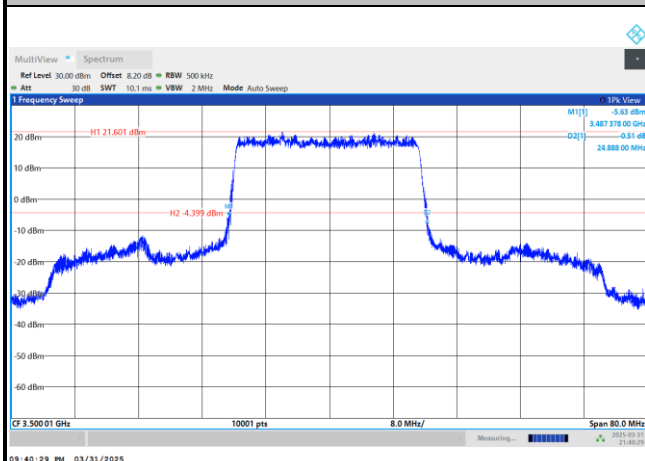
256QAM





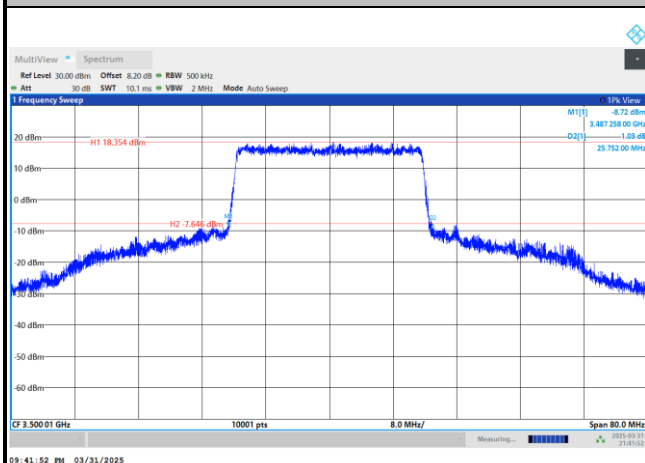
FR1 n77 / 25MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

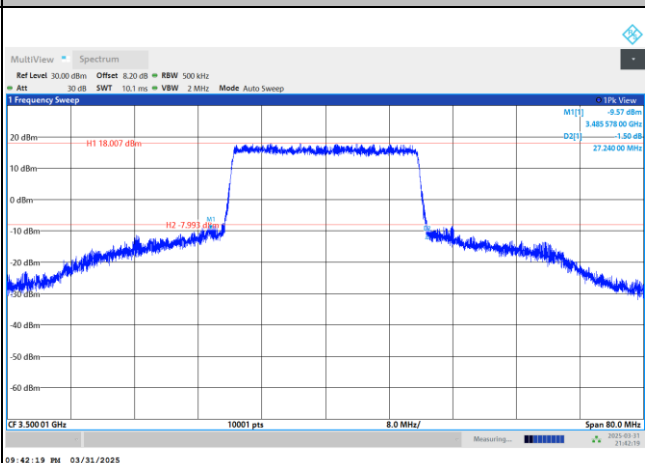


FR1 n77 / 25MHz / CP OFDM / Middle Channel / Full RB

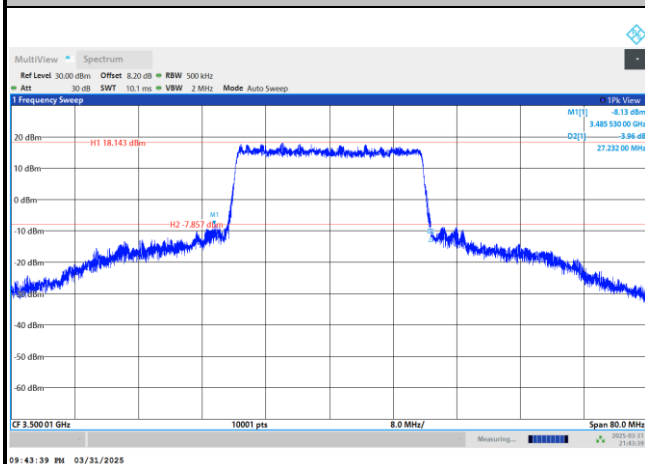
QPSK



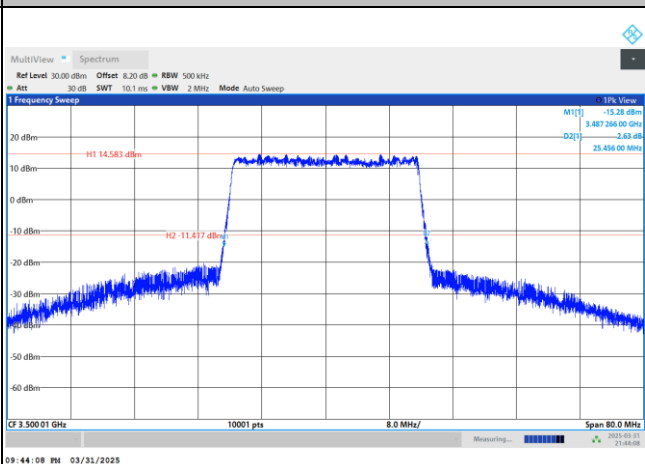
16QAM



64QAM



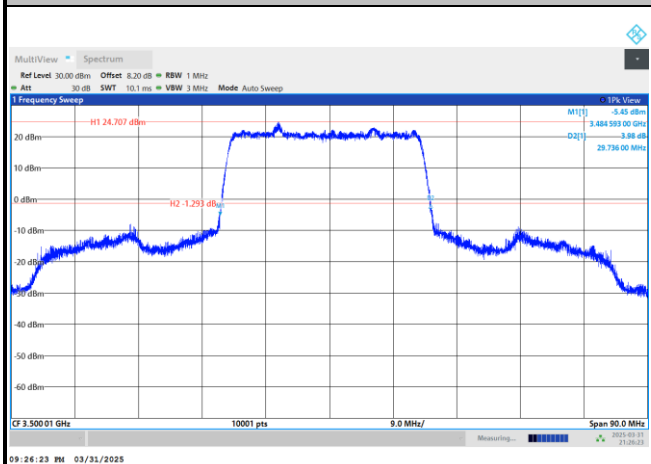
256QAM





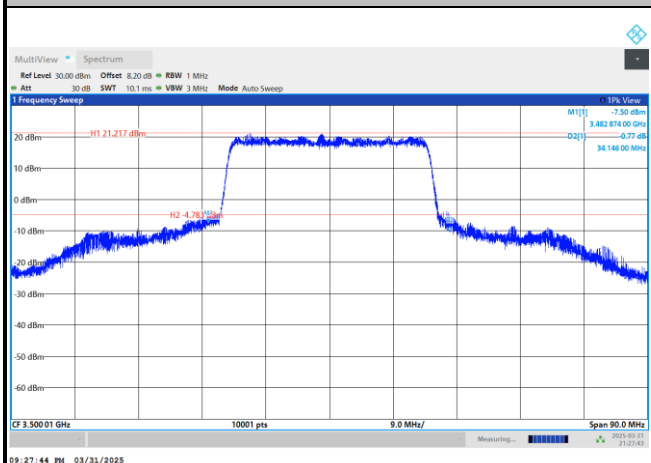
FR1 n77 / 30MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

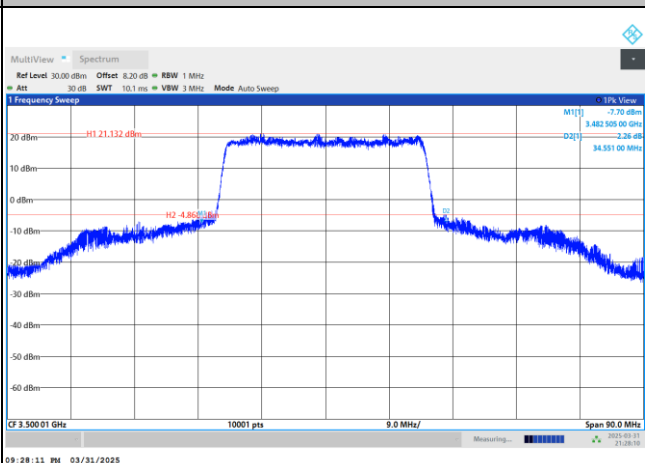


FR1 n77 / 30MHz / CP OFDM / Middle Channel / Full RB

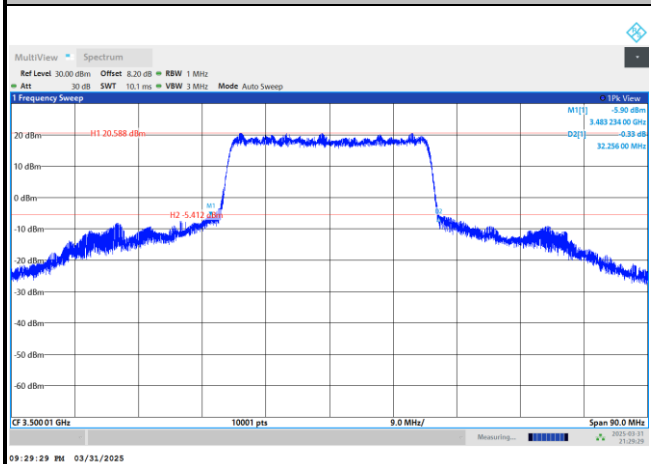
QPSK



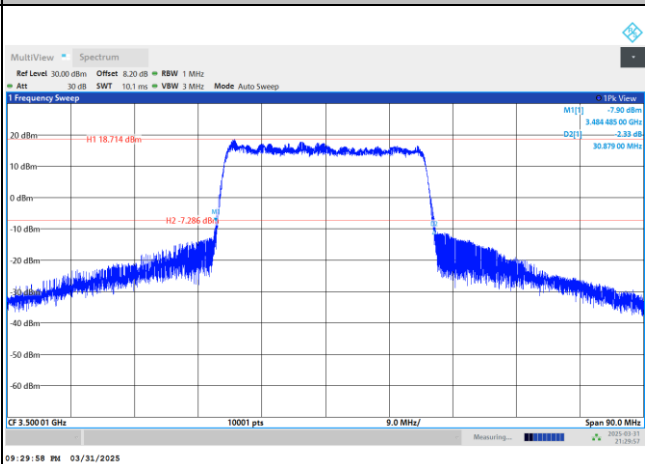
16QAM



64QAM



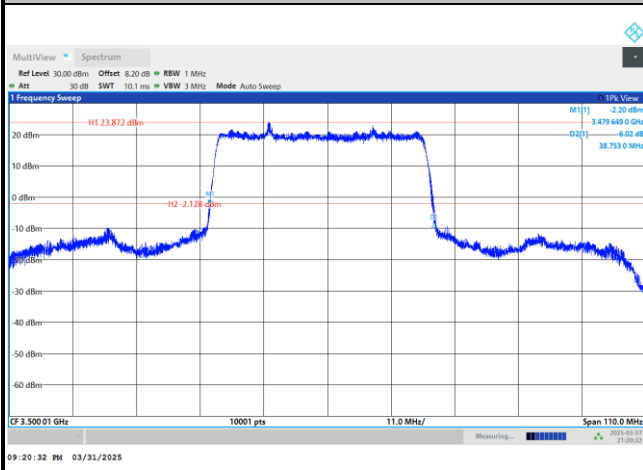
256QAM





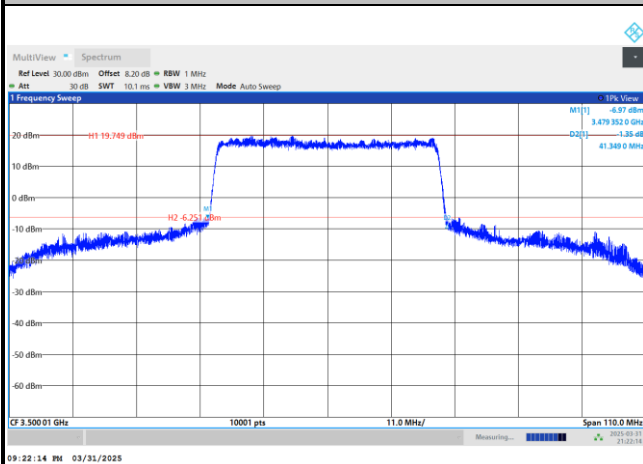
FR1 n77 / 40MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

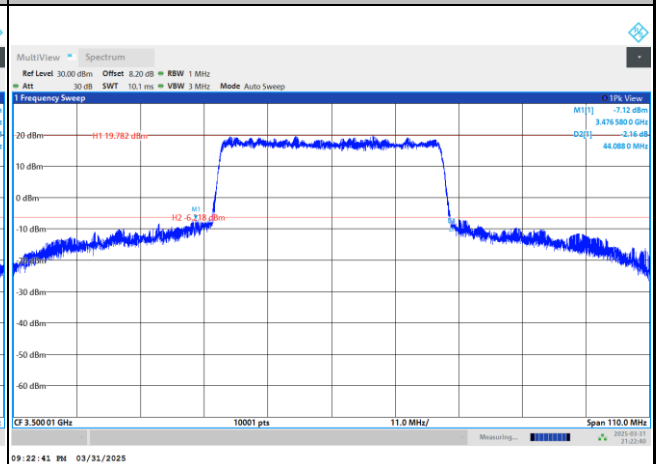


FR1 n77 / 40MHz / CP OFDM / Middle Channel / Full RB

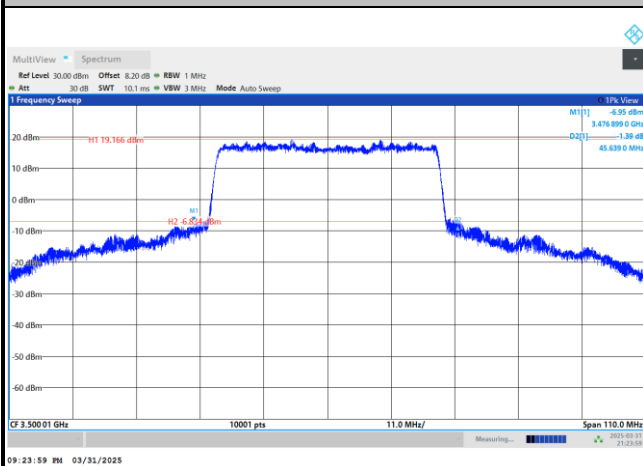
QPSK



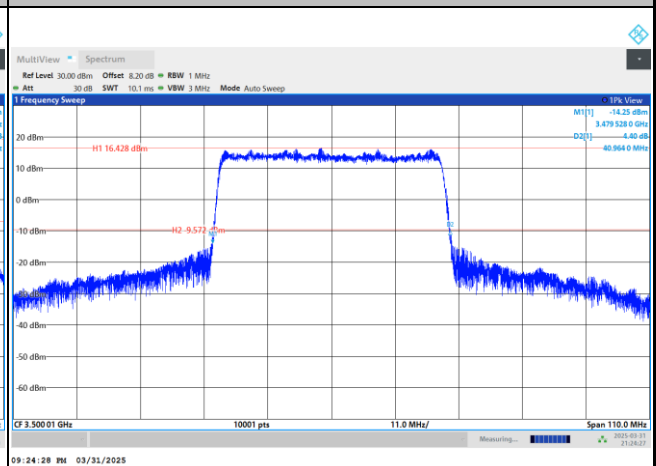
16QAM



64QAM



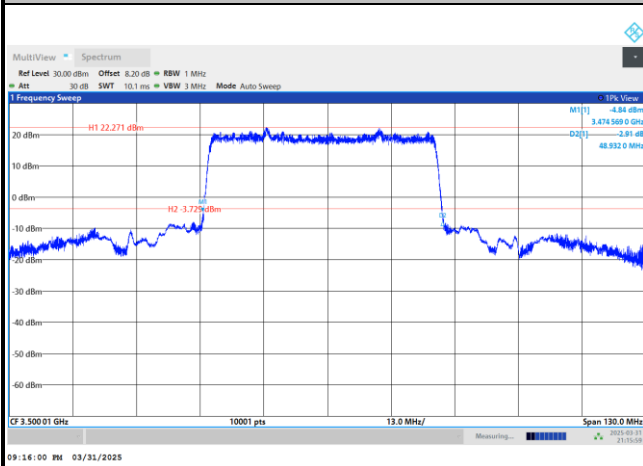
256QAM





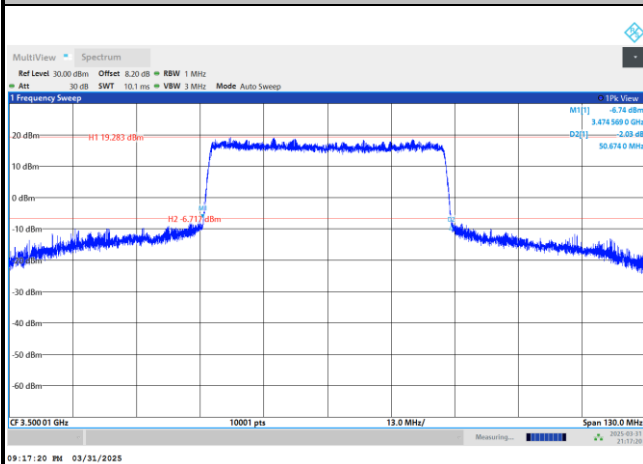
FR1 n77 / 50MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

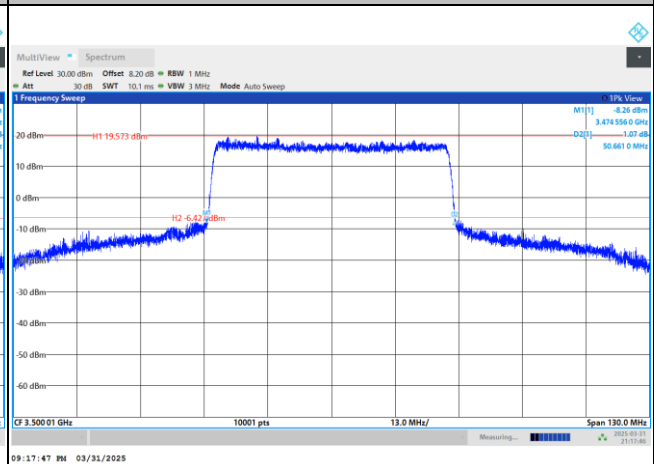


FR1 n77 / 50MHz / CP OFDM / Middle Channel / Full RB

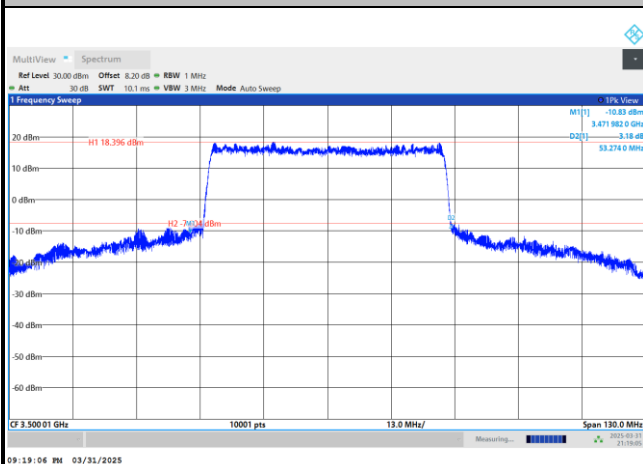
QPSK



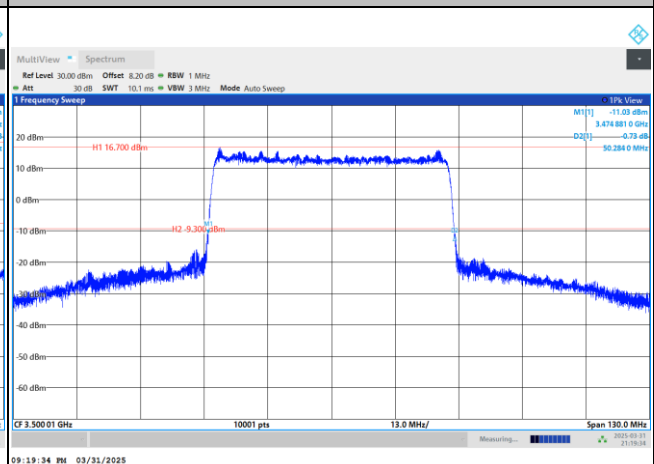
16QAM



64QAM



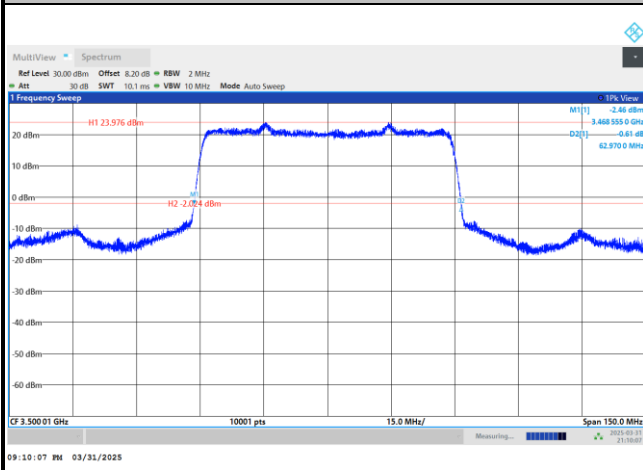
256QAM





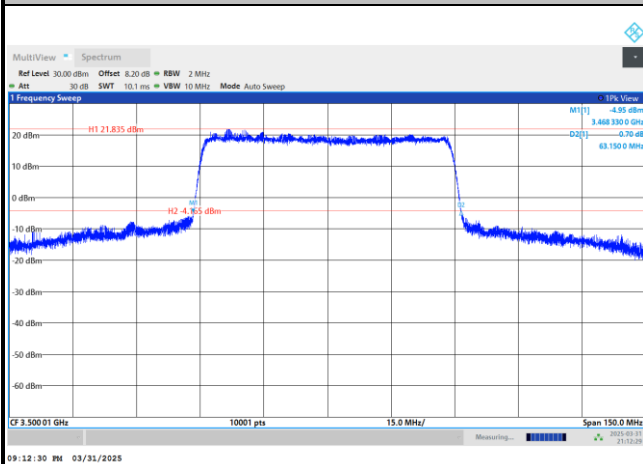
FR1 n77 / 60MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

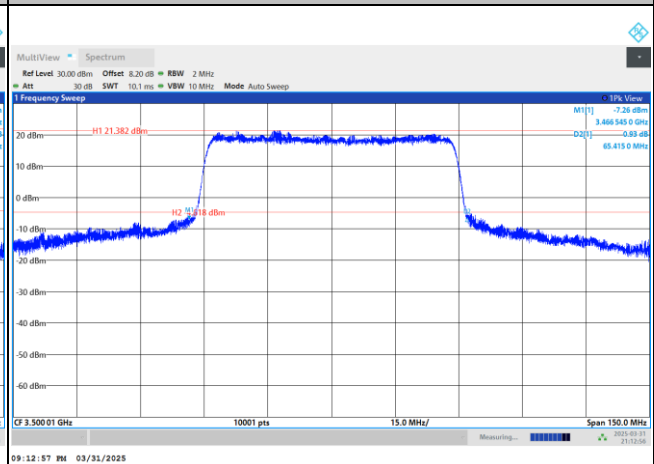


FR1 n77 / 60MHz / CP OFDM / Middle Channel / Full RB

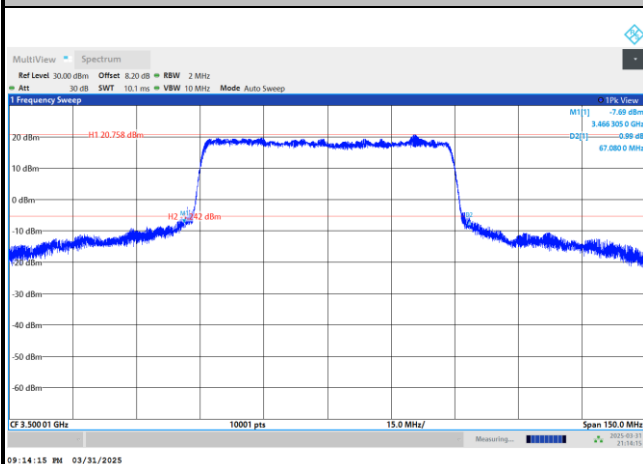
QPSK



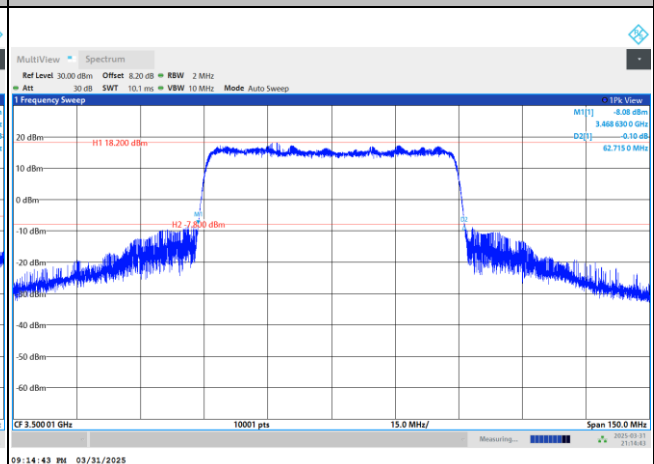
16QAM



64QAM



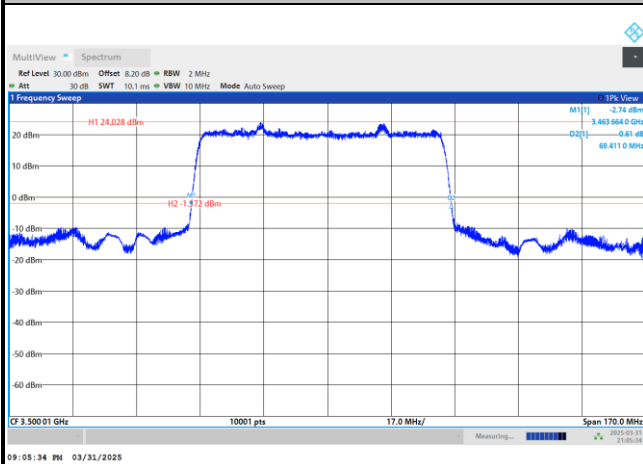
256QAM





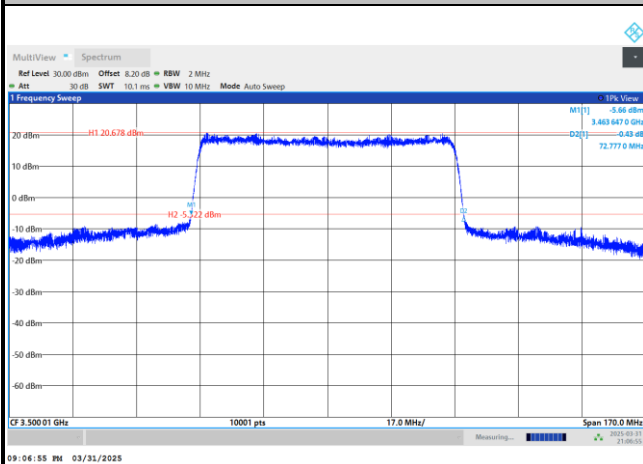
FR1 n77 / 70MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

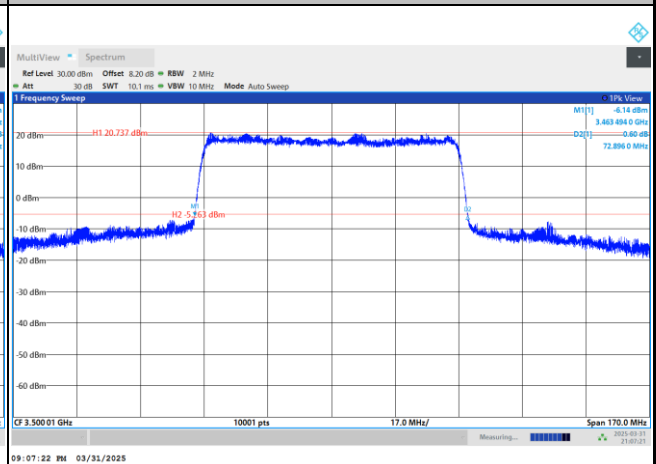


FR1 n77 / 70MHz / CP OFDM / Middle Channel / Full RB

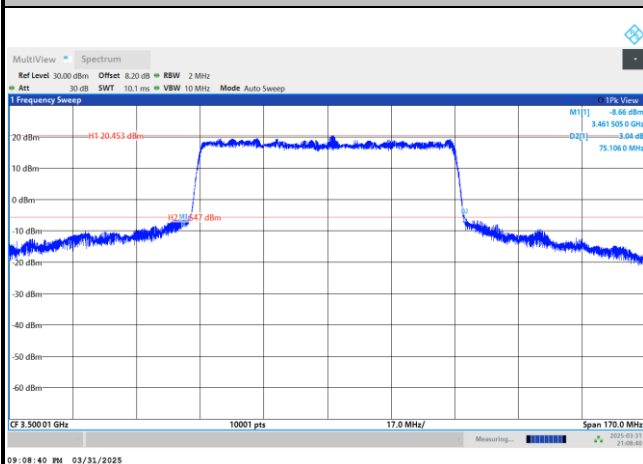
QPSK



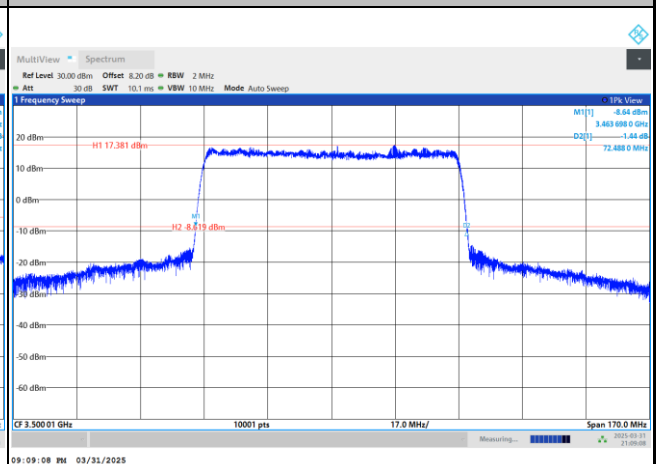
16QAM



64QAM



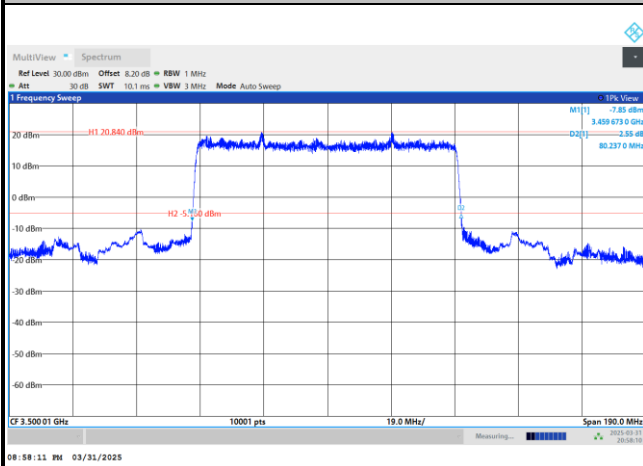
256QAM





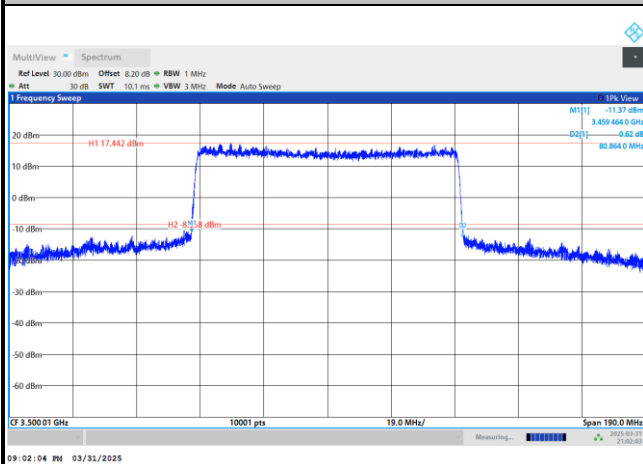
FR1 n77 / 80MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

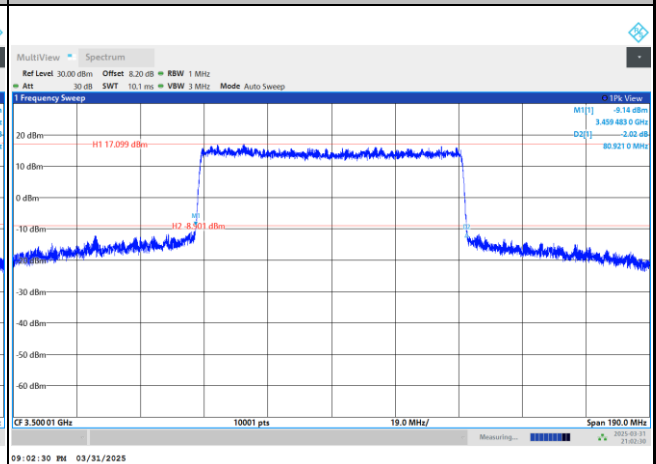


FR1 n77 / 80MHz / CP OFDM / Middle Channel / Full RB

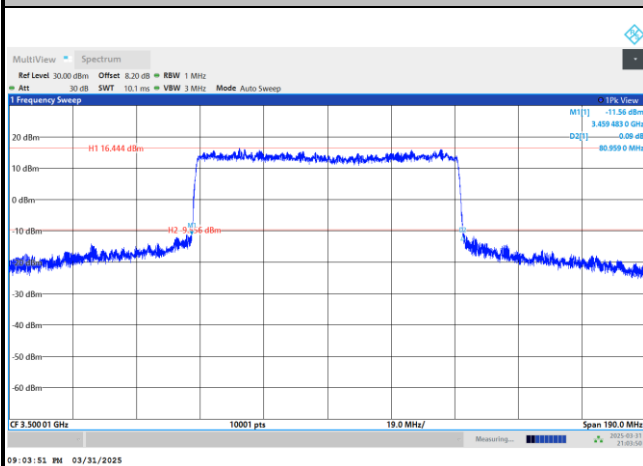
QPSK



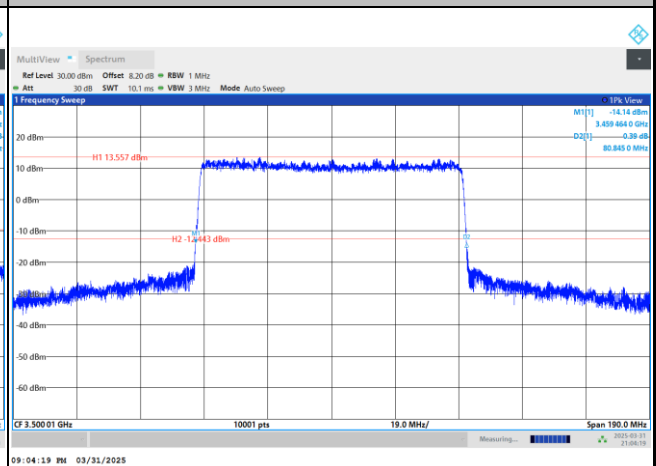
16QAM



64QAM



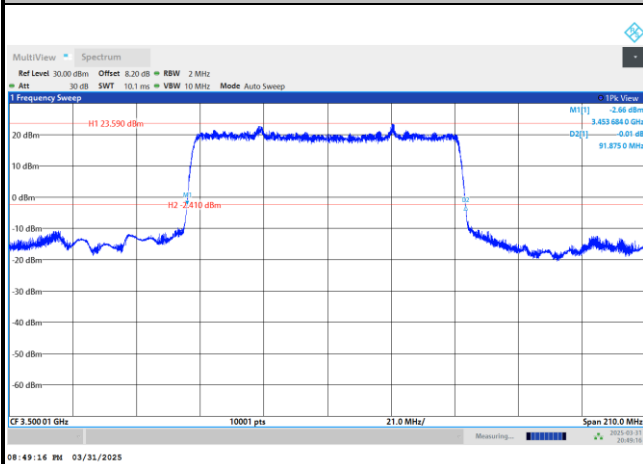
256QAM





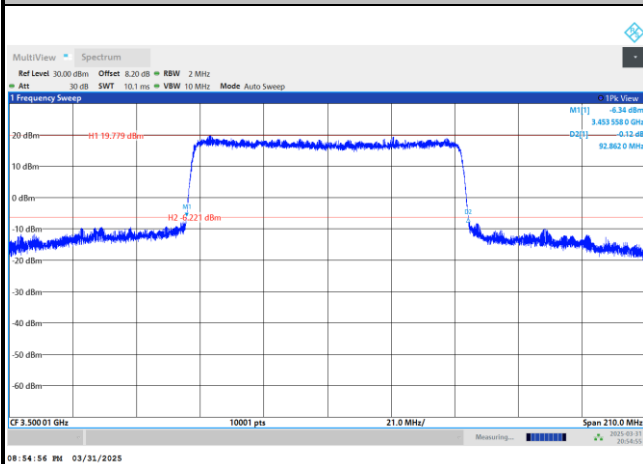
FR1 n77 / 90MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

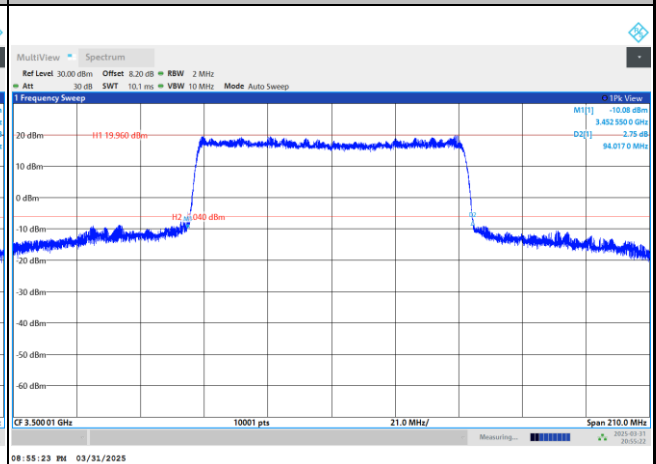


FR1 n77 / 90MHz / CP OFDM / Middle Channel / Full RB

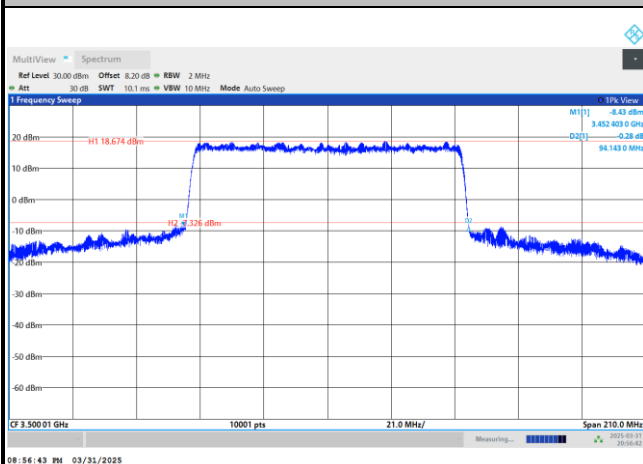
QPSK



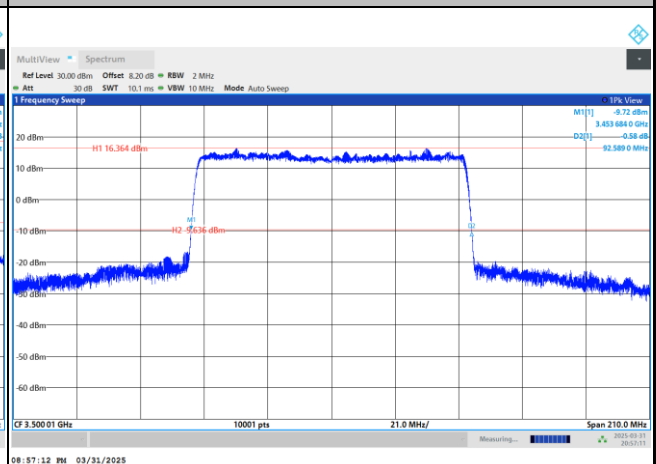
16QAM



64QAM



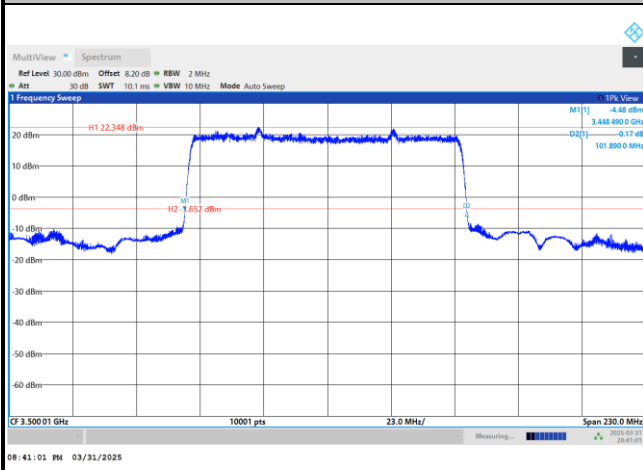
256QAM





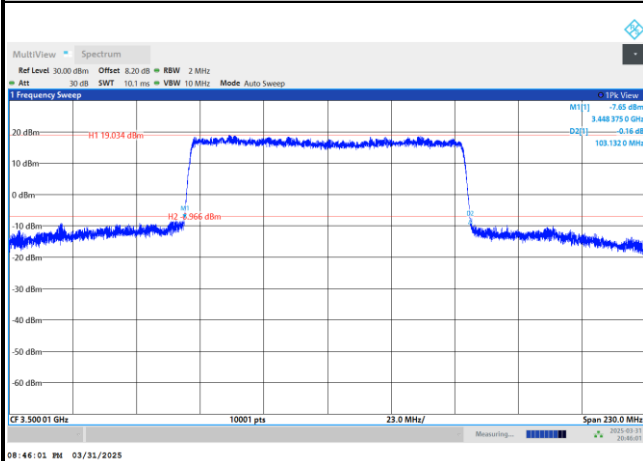
FR1 n77 / 100MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

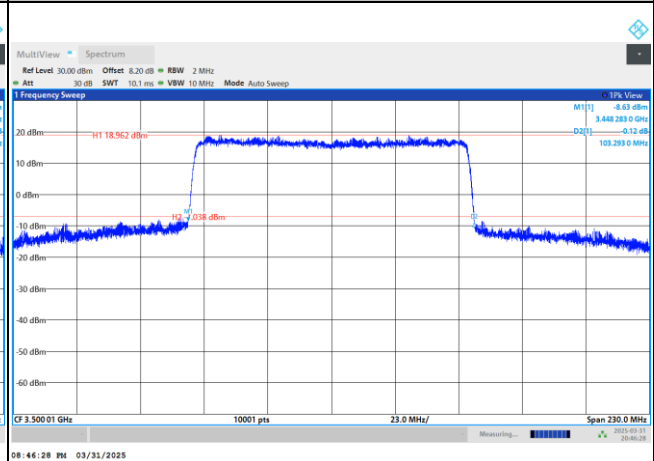


FR1 n77 / 100MHz / CP OFDM / Middle Channel / Full RB

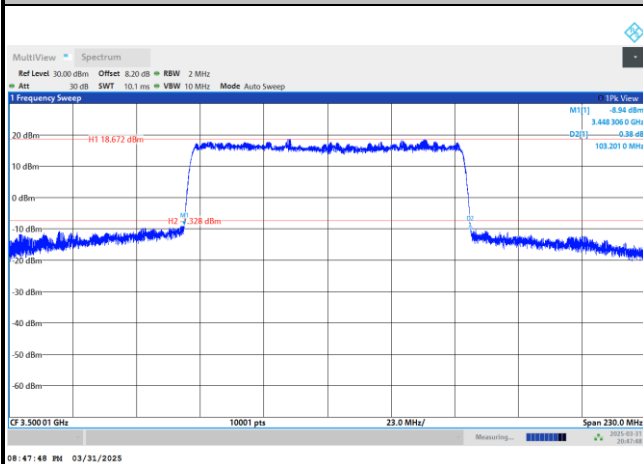
QPSK



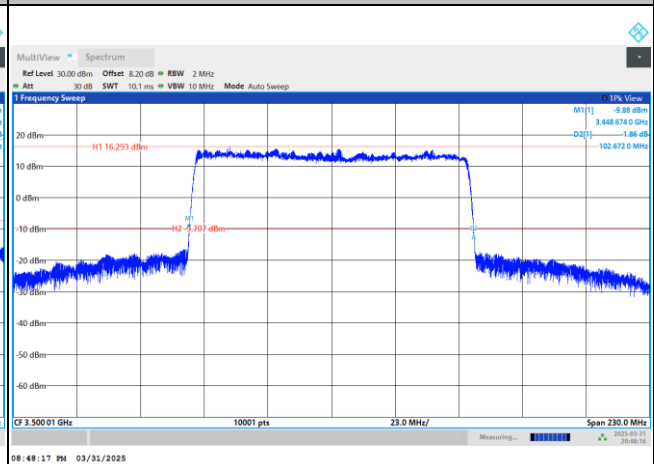
16QAM



64QAM



256QAM



**Occupied Bandwidth**

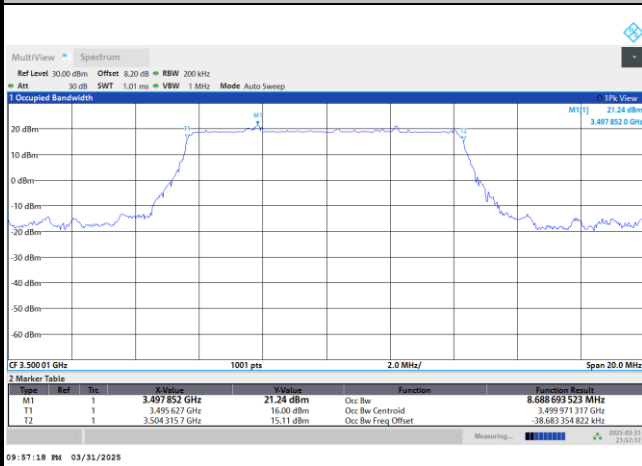
Mode	FR1 n77 : OB BW(MHz) / DFT-S OFDM							
BW	10MHz	15MHz	20MHz	25MHz	30MHz	40MHz	50MHz	60MHz
Mod.	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK
Middle CH	8.68	12.95	17.99	22.95	27.22	35.94	46.00	58.64
BW	70MHz	80MHz	90MHz	100MHz				
Mod.	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK				
Middle CH	65.03	77.65	87.19	96.97				

Mode	FR1 n77 : OB BW(MHz) / CP OFDM							
BW	10MHz		15MHz		20MHz		25MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	8.66	8.72	13.69	13.69	18.38	18.39	23.35	23.34
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	8.69	8.63	13.68	13.68	18.39	18.32	23.40	23.34
BW	30MHz		40MHz		50MHz		60MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	28.32	28.38	38.17	38.18	47.83	47.82	58.72	58.48
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	28.32	28.29	38.26	38.25	47.75	47.71	58.81	58.68
BW	70MHz		80MHz		90MHz		100MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	68.25	68.23	78.03	78.24	87.99	87.97	98.08	98.00
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	68.23	67.98	78.14	77.85	88.19	88.10	97.89	97.86



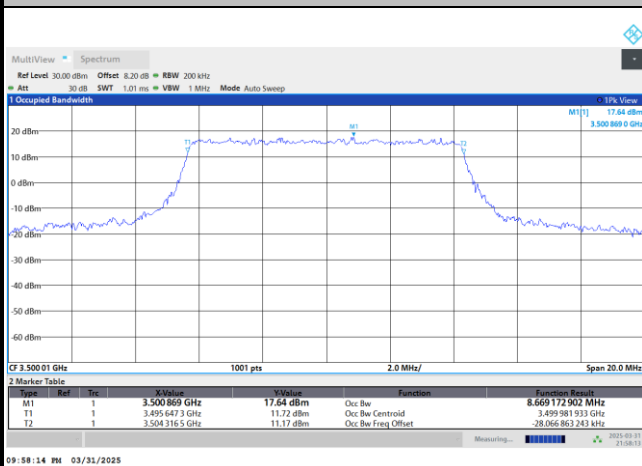
FR1 n77 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

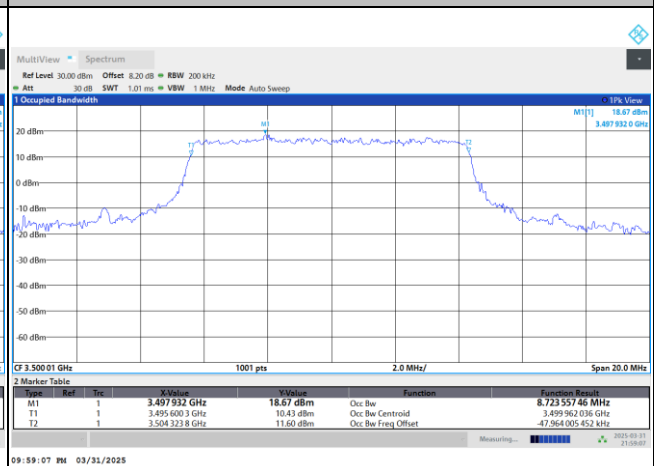


FR1 n77 / 10MHz / CP OFDM / Middle Channel / Full RB

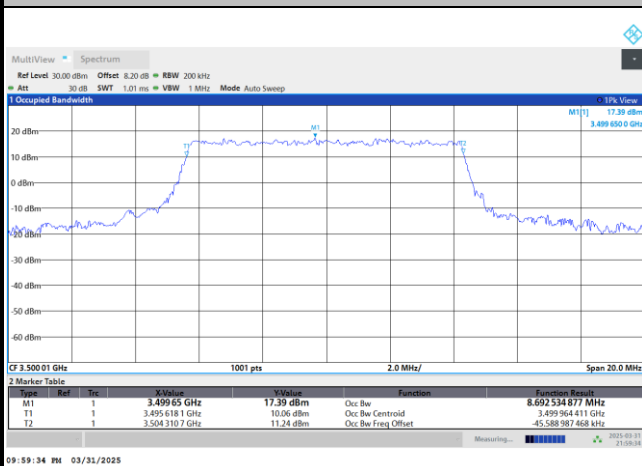
QPSK



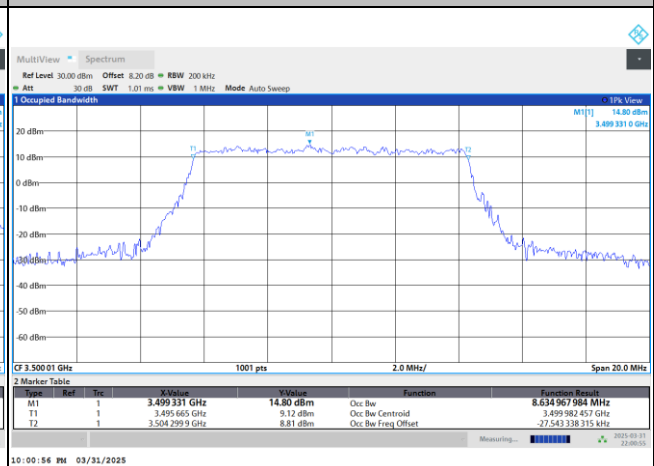
16QAM

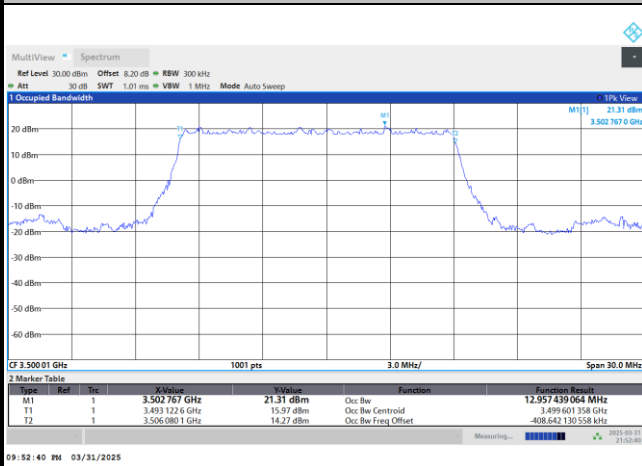
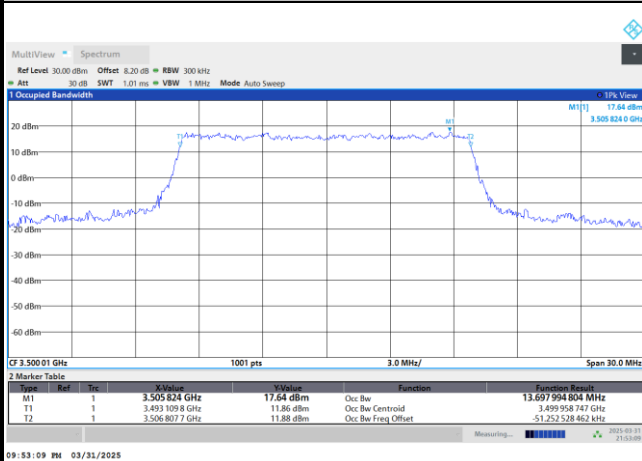
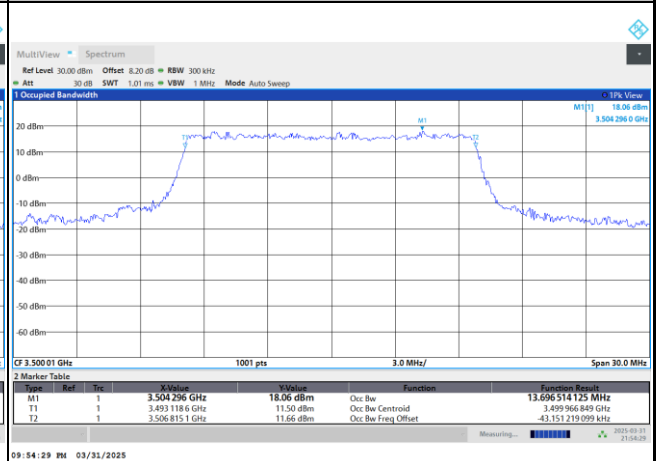
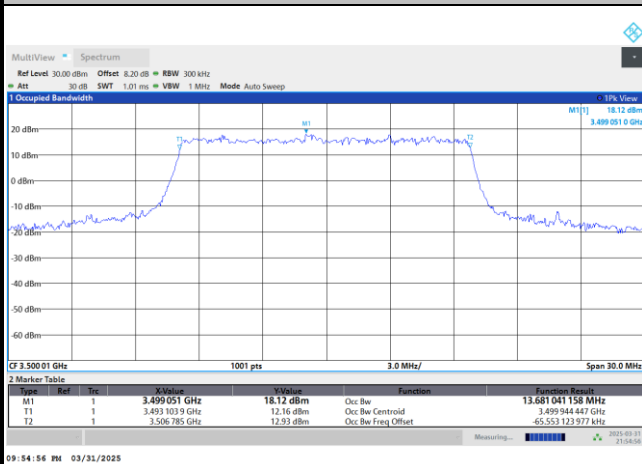
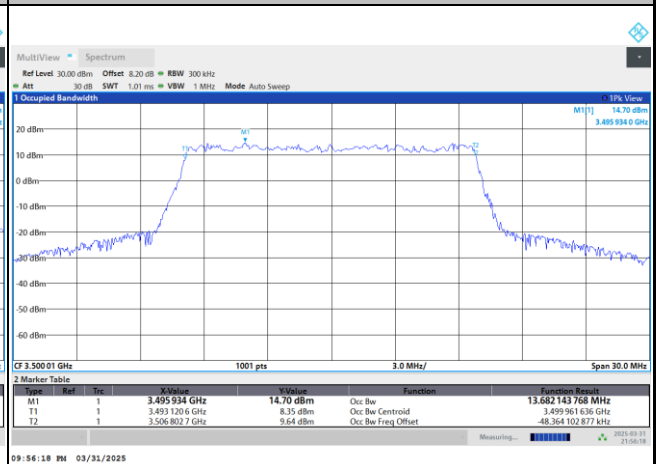


64QAM



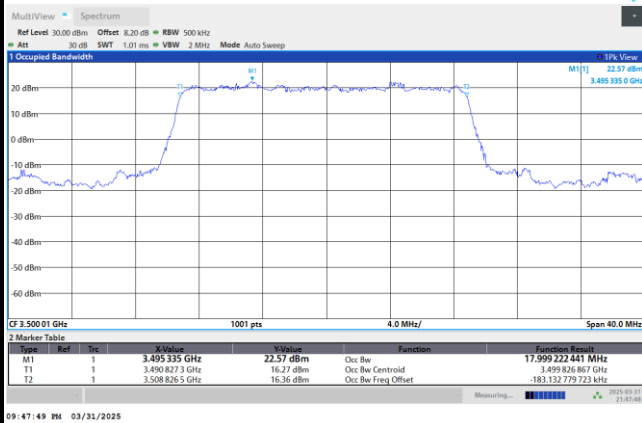
256QAM



FR1 n77 / 15MHz / DFT-S OFDM / Middle Channel / Full RB
PI/2 BPSK

FR1 n77 / 15MHz / CP OFDM / Middle Channel / Full RB
QPSK

16QAM

64QAM

256QAM


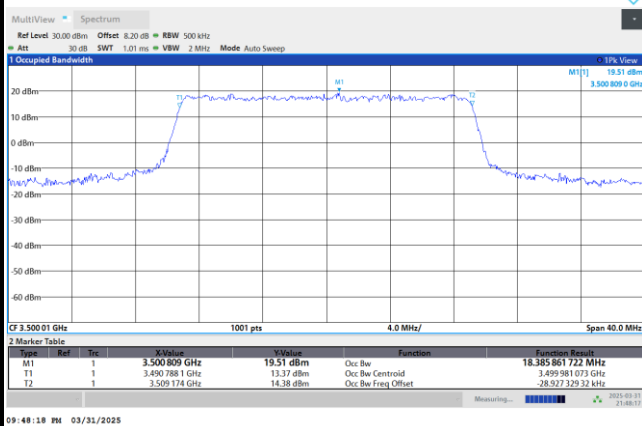
FR1 n77 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

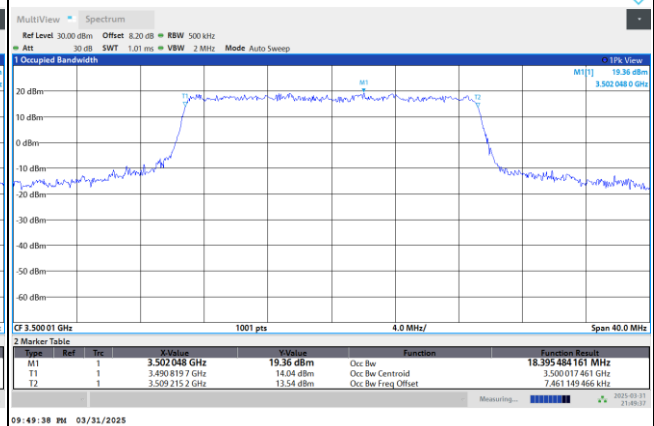


FR1 n77 / 20MHz / CP OFDM / Middle Channel / Full RB

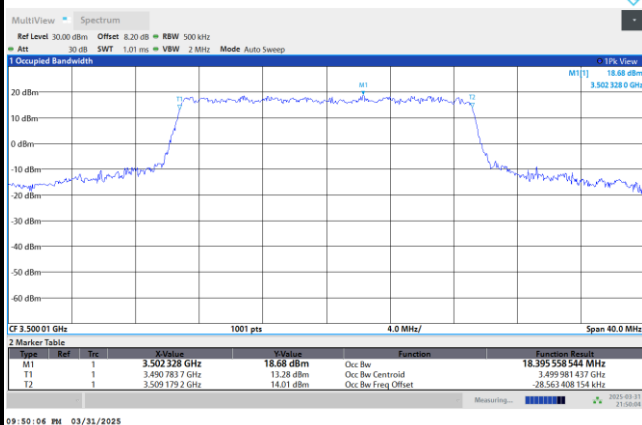
QPSK



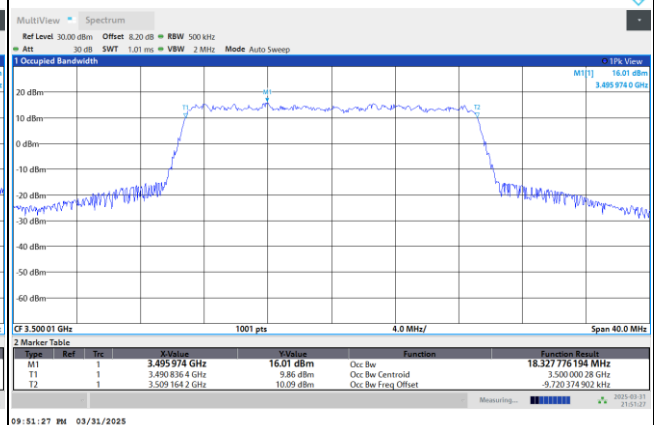
16QAM



64QAM

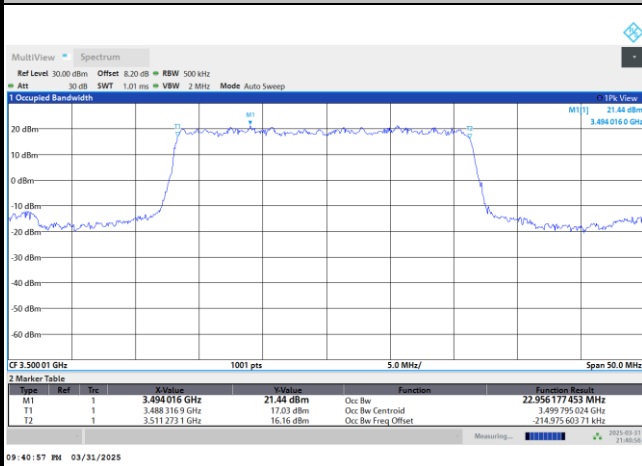


256QAM



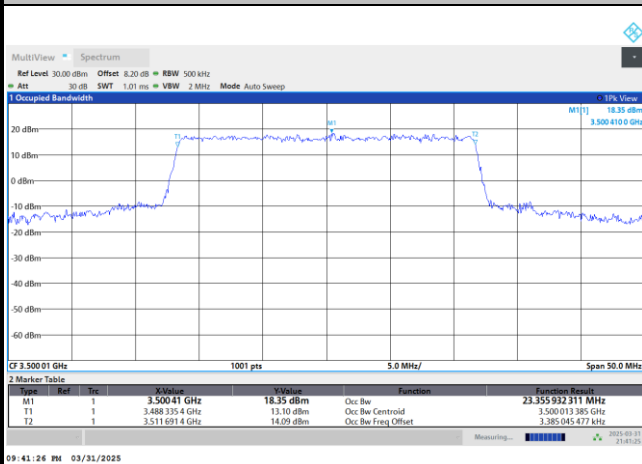
FR1 n77 / 25MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

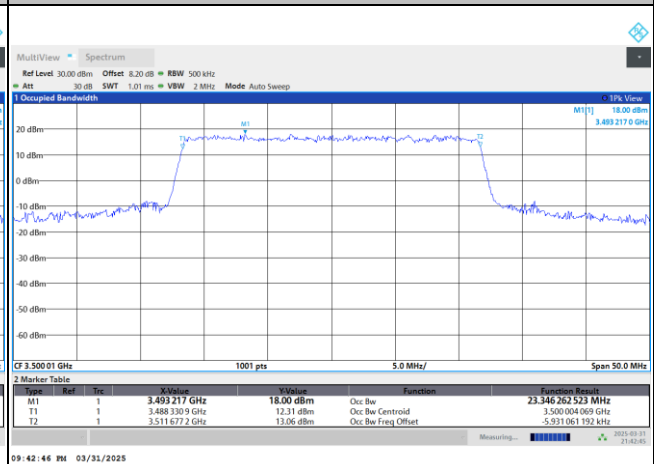


FR1 n77 / 25MHz / CP OFDM / Middle Channel / Full RB

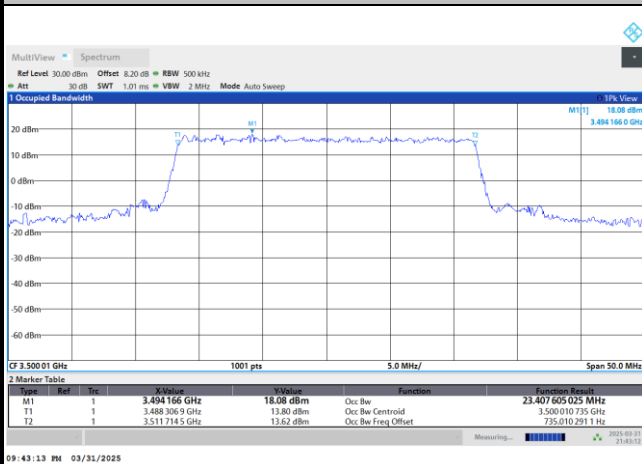
QPSK



16QAM



64QAM



256QAM

