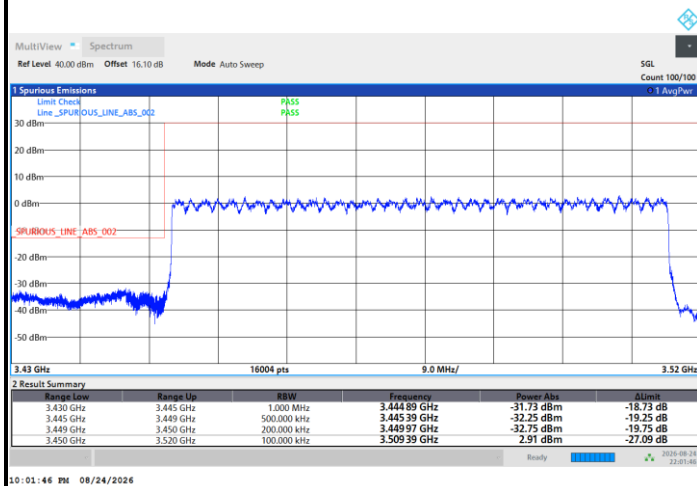


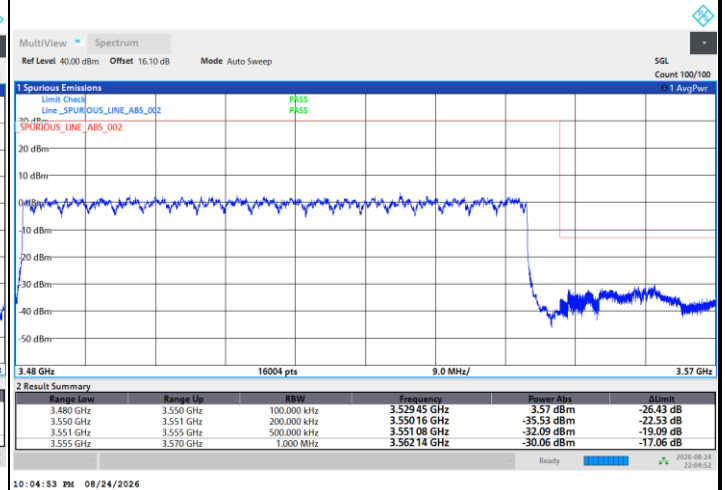


FR1 n77 / 70MHz / DFT-S OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

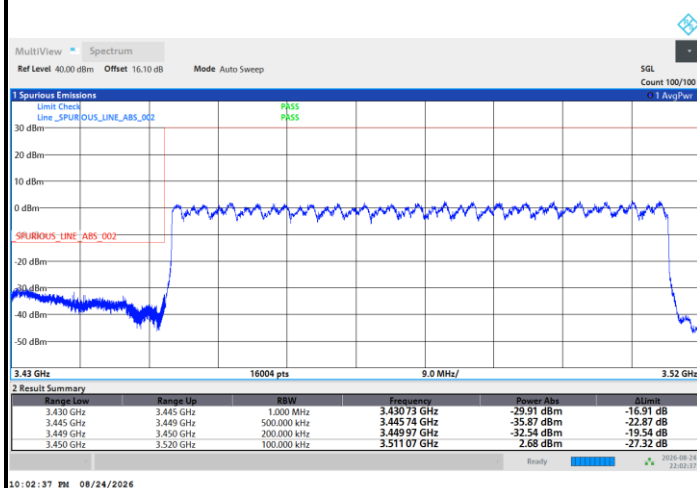


Highest Band Edge / Full RB

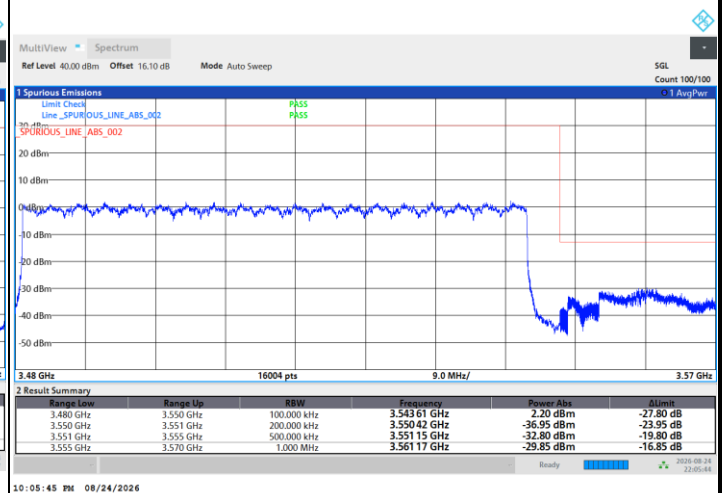


FR1 n77 / 70MHz / DFT-S OFDM / QPSK

Lowest Band Edge / Full RB



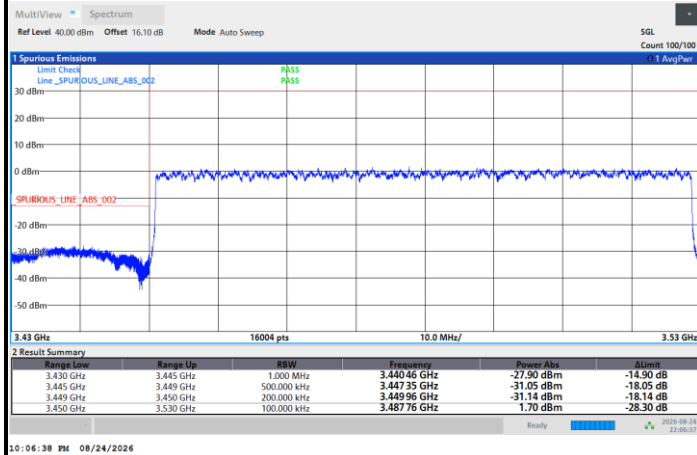
Highest Band Edge / Full RB



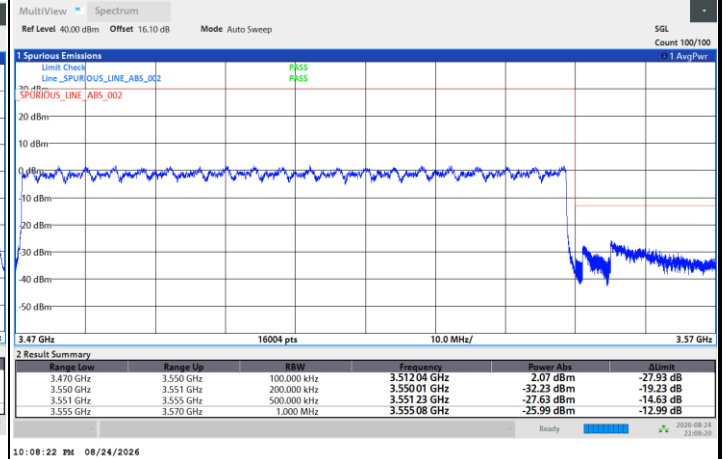


FR1 n77 / 80MHz / DFT-S OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

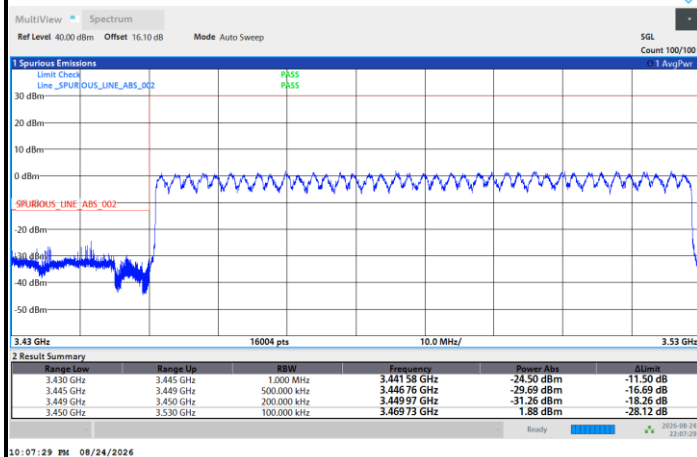


Highest Band Edge / Full RB

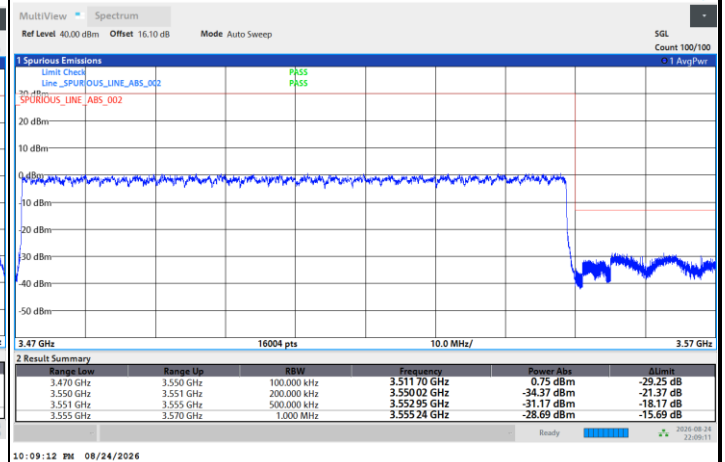


FR1 n77 / 80MHz / DFT-S OFDM / QPSK

Lowest Band Edge / Full RB



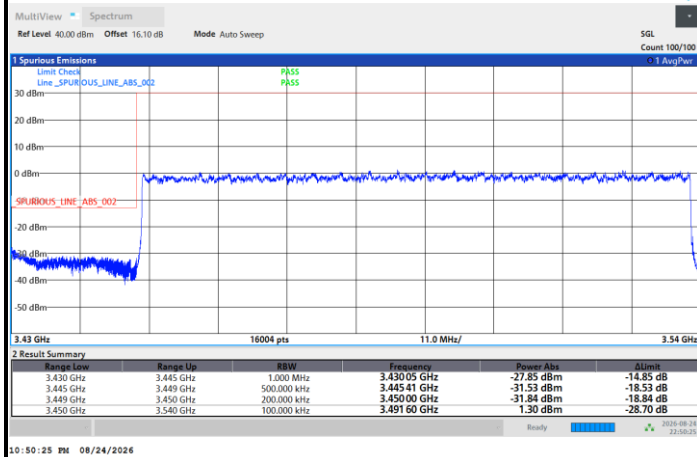
Highest Band Edge / Full RB



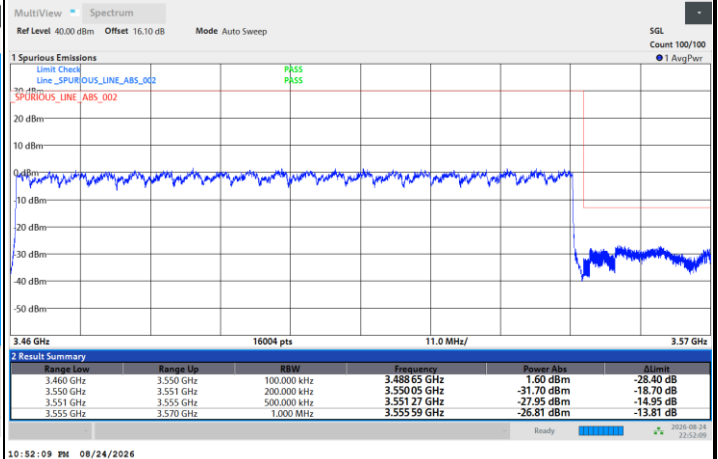


FR1 n77 / 90MHz / DFT-S OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

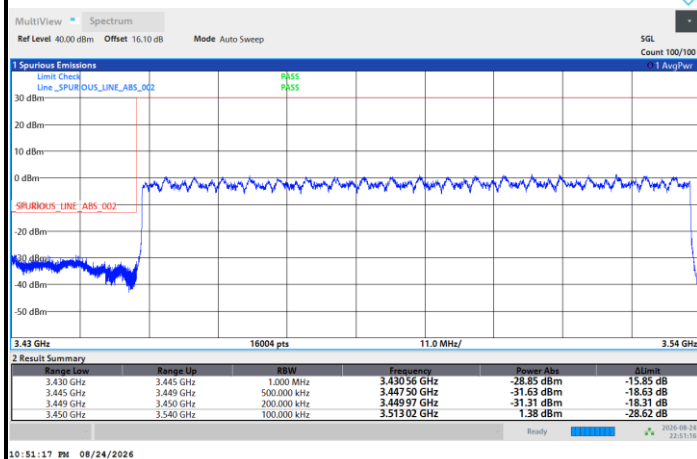


Highest Band Edge / Full RB

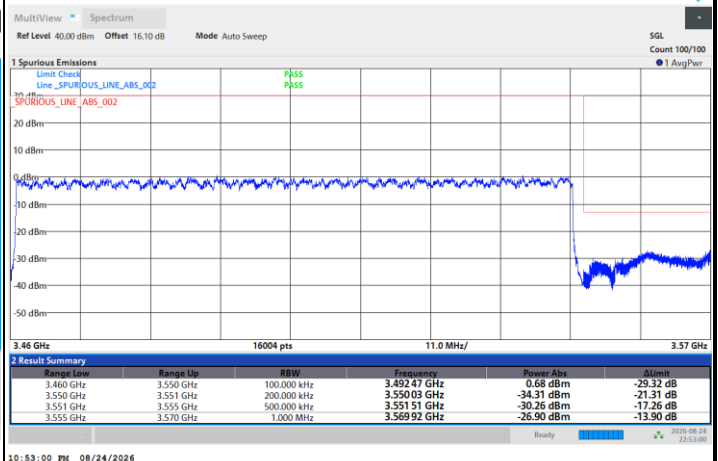


FR1 n77 / 90MHz / DFT-S OFDM / QPSK

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

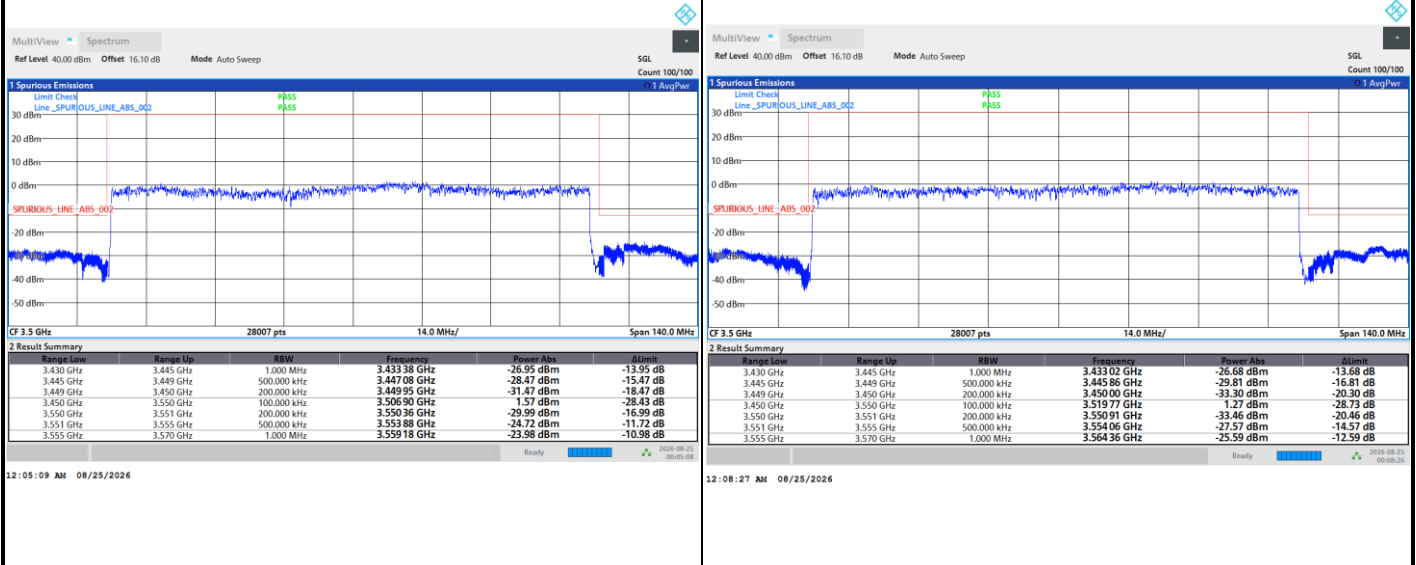




FR1 n77 / 100MHz / DFT-S OFDM

Middle Band Edge / Full RB / PI/2 BPSK

Middle Band Edge / Full RB / QPSK

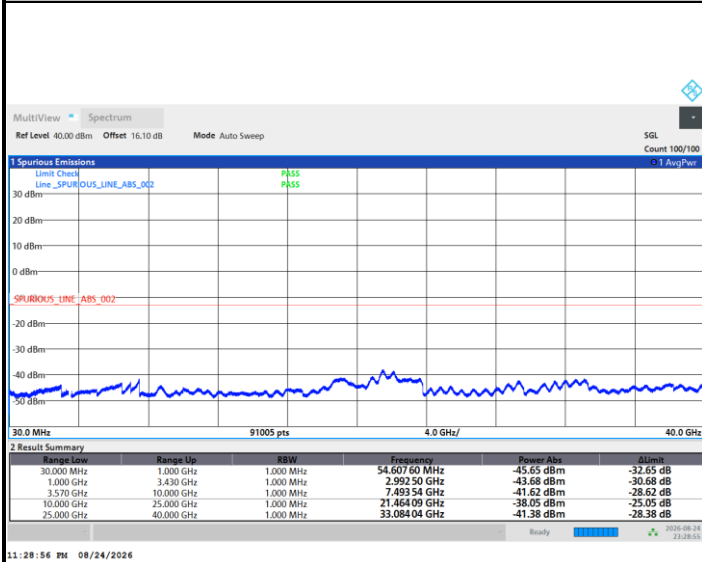




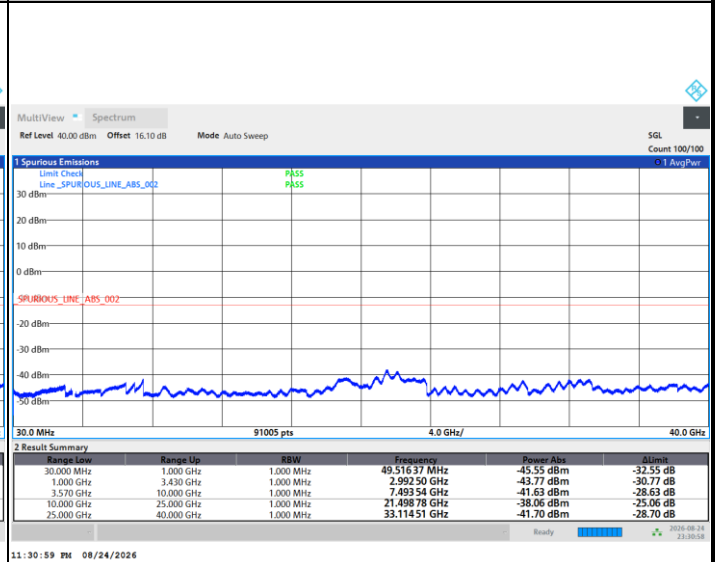
Conducted Spurious Emission

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

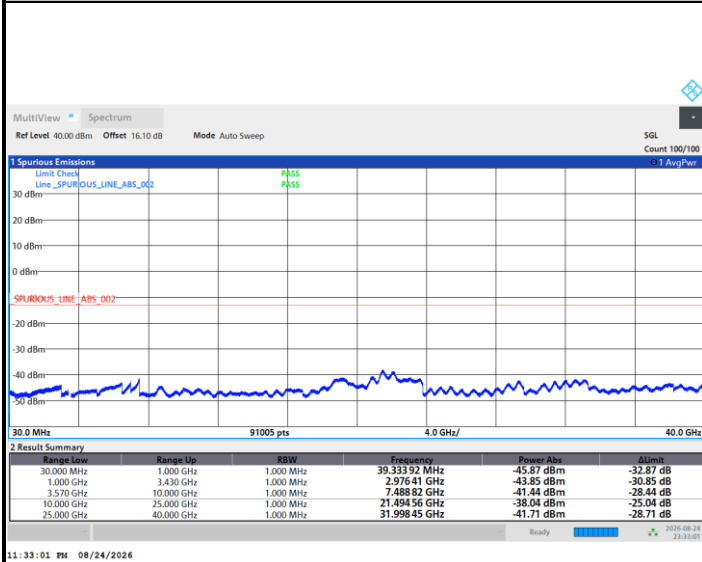
Lowest Channel



Middle Channel



Highest Channel



**Frequency Stability**

Test Conditions		FR1 n77 (BPSK) / Middle Channel 10M			
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Frequency Offset (Δf) (Hz)	Within Authorized Frequency Block(Hz)	Result
50	Normal Voltage	0.0029	-10.2	Yes	PASS
40	Normal Voltage	0.0003	-1.1	Yes	
30	Normal Voltage	0.0022	-7.7	Yes	
20(Ref.)	Normal Voltage	0.0000	0	Yes	
10	Normal Voltage	0.0025	-8.9	Yes	
0	Normal Voltage	0.0031	-11	Yes	
-10	Normal Voltage	0.0015	-5.4	Yes	
-20	Normal Voltage	0.0023	-8	Yes	
-30	Normal Voltage	0.0005	1.6	Yes	
20	Maximum Voltage	0.0011	-3.9	Yes	
20	Normal Voltage	0.0000	0	Yes	
20	Minimum Voltage	0.0000	0.1	Yes	

Note:

1. Normal Voltage = 3.75 V. ; Minimum Voltage = 3.5 V. ; Maximum Voltage = 4.57 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 n77_Part27Q for PA Reference Designator—ANT4**

<SISO Mode>

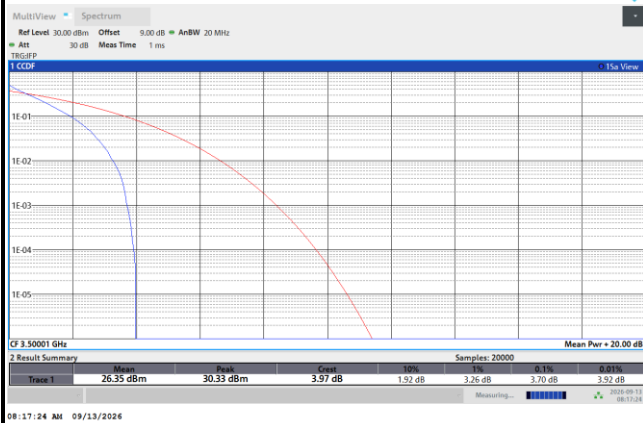
Peak-to-Average Ratio

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	3.70	4.38	5.36	5.80	PASS
Mode	FR1 n77 / 20MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.42				PASS

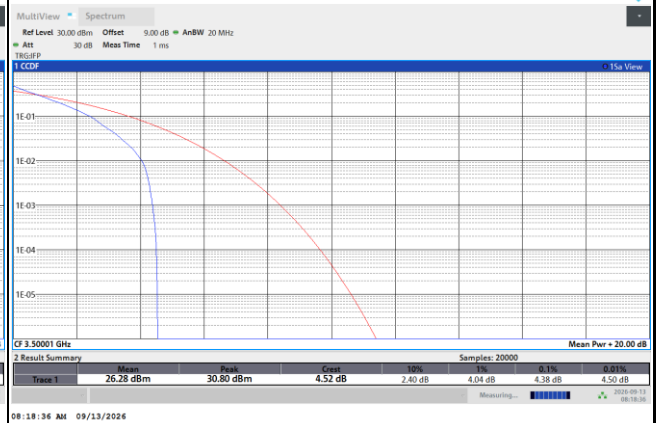


FR1 n77 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

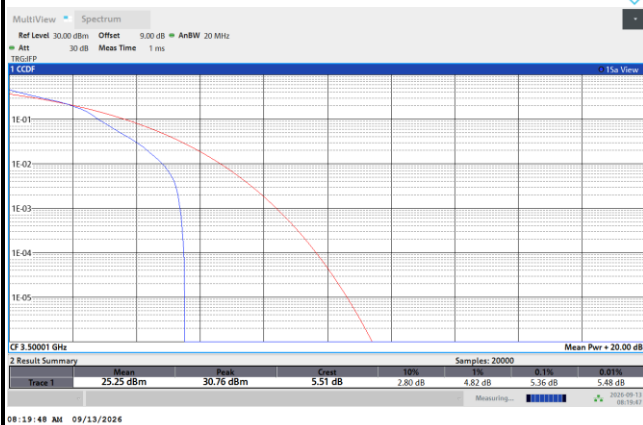
PI/2 BPSK



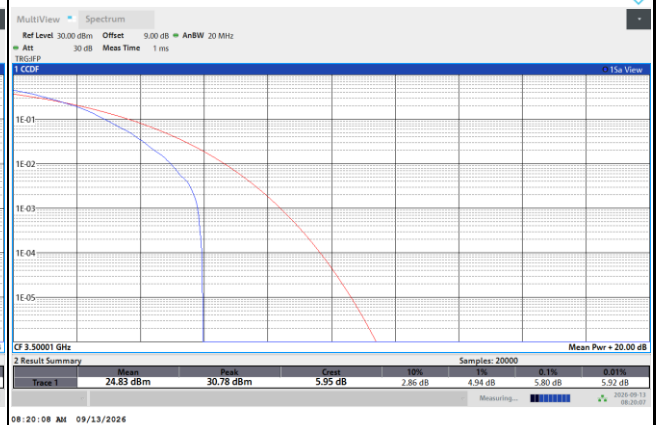
QPSK



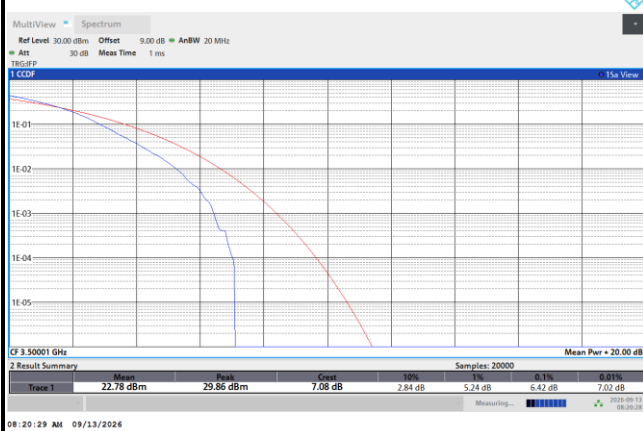
16QAM



64QAM



256QAM



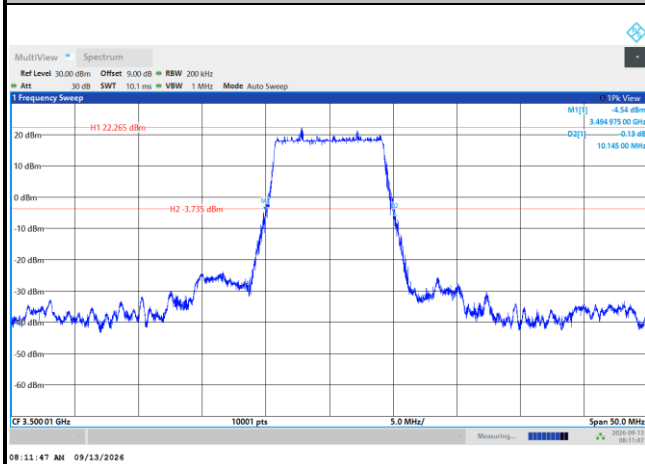
**26dB Bandwidth**

Mode	FR1 n77 : 26dB BW(MHz) / DFT-S OFDM							
BW	10MHz		15MHz		20MHz		25MHz	
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK
Middle CH	10.14	10.12	14.67	14.79	19.91	19.92	25.00	24.97
Mod.	16QAM		16QAM		16QAM		16QAM	
Middle CH	10.27		14.39		19.95		25.12	
BW	30MHz		40MHz		50MHz		60MHz	
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK
Middle CH	29.68	29.97	38.81	38.73	48.64	48.89	62.62	62.79
Mod.	16QAM		16QAM		16QAM		16QAM	
Middle CH	30.05		38.67		48.64		62.79	
BW	70MHz		80MHz		90MHz		100MHz	
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK
Middle CH	69.37	69.44	81.92	82.46	91.93	92.00	101.66	101.72
Mod.	16QAM		16QAM		16QAM		16QAM	
Middle CH	69.32		82.21		91.87		101.70	

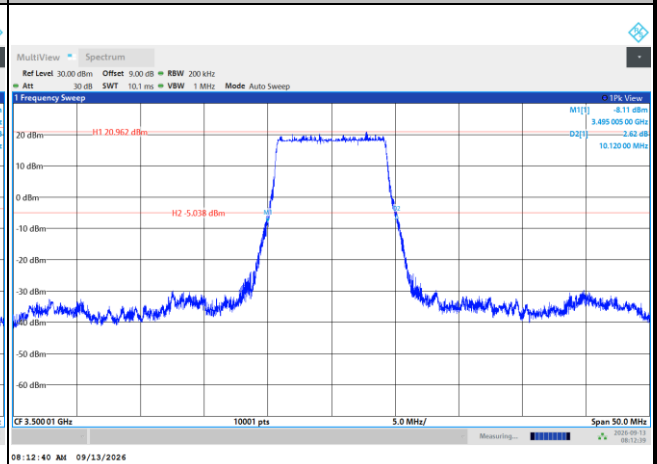


FR1 n77 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

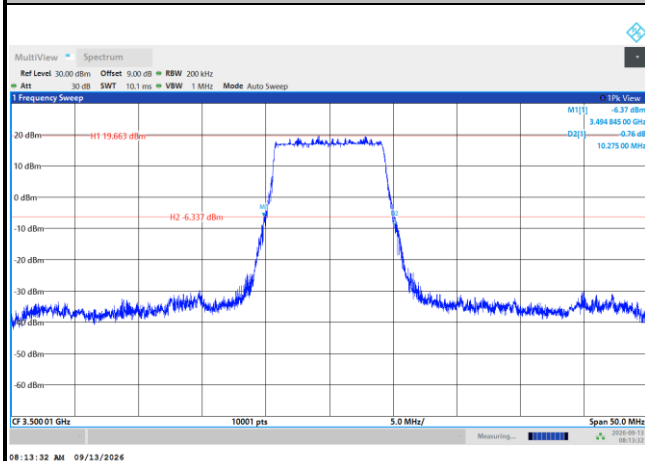
PI/2 BPSK



QPSK



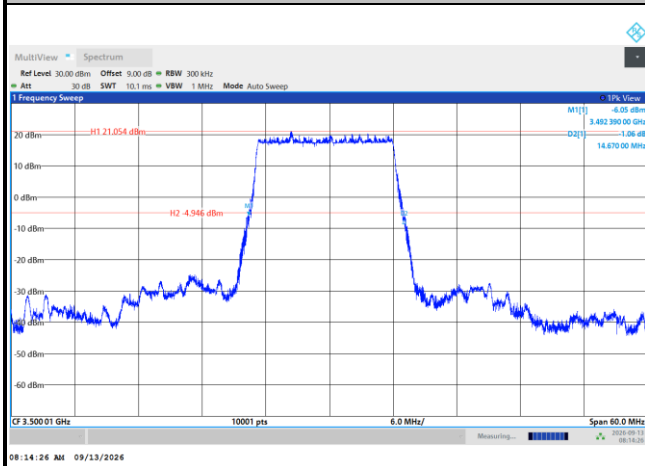
16QAM



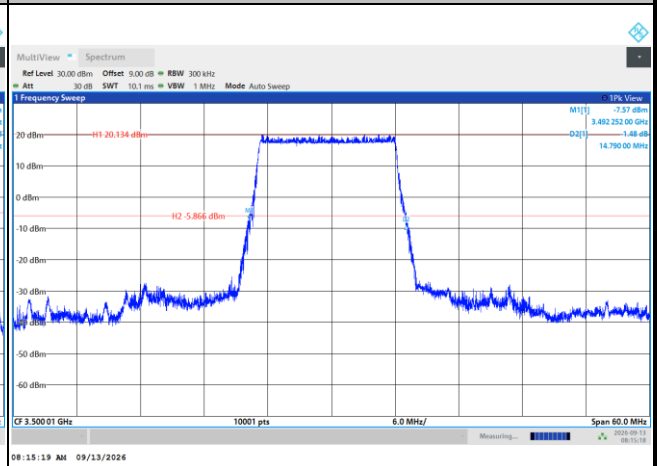


FR1 n77 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

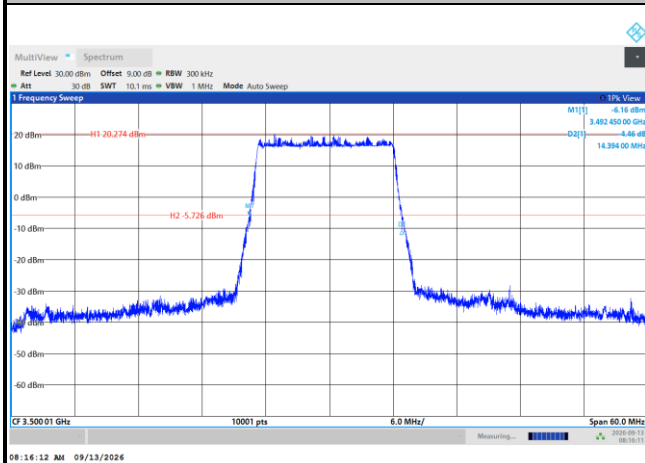
PI/2 BPSK



QPSK



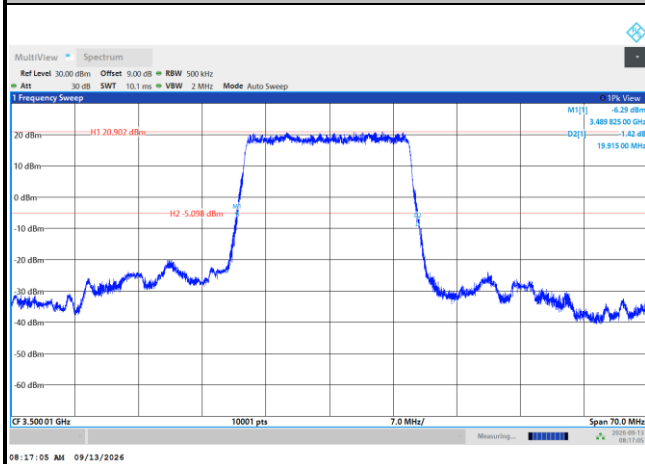
16QAM



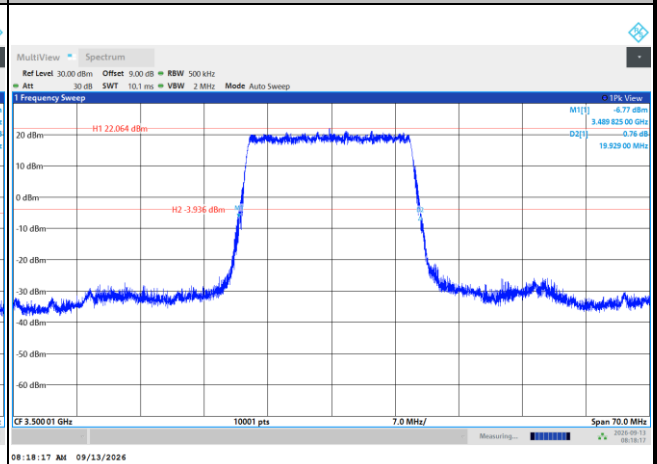


FR1 n77 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

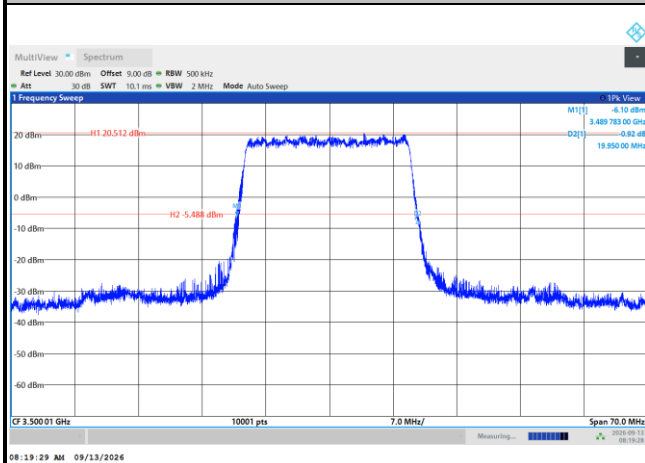
PI/2 BPSK



QPSK



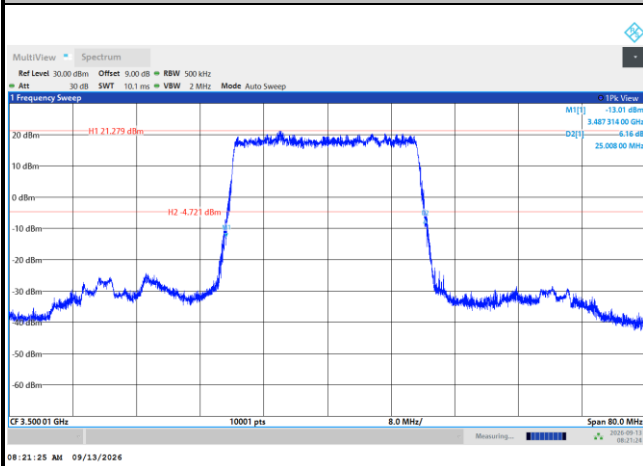
16QAM



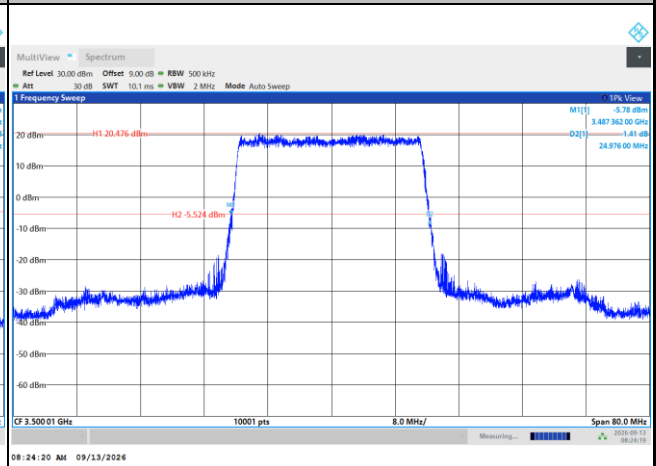


FR1 n77 / 25MHz / DFT-S OFDM / Middle Channel / Full RB

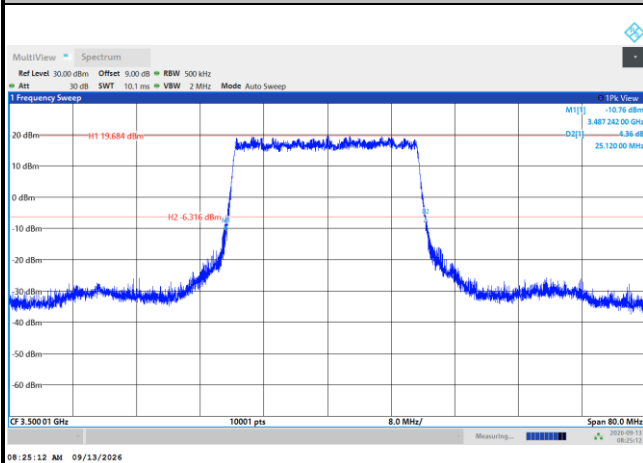
PI/2 BPSK



QPSK



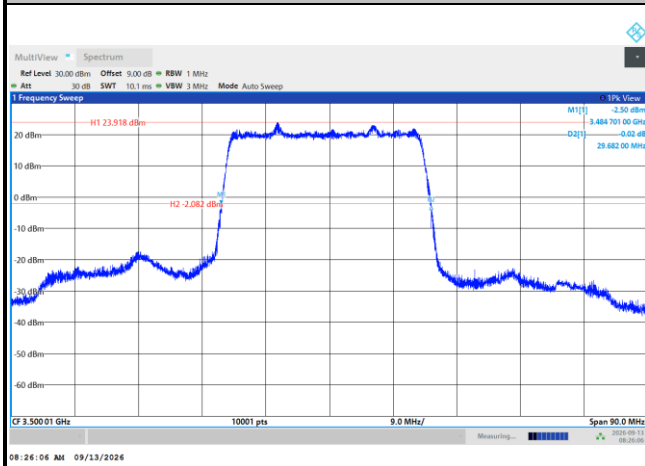
16QAM





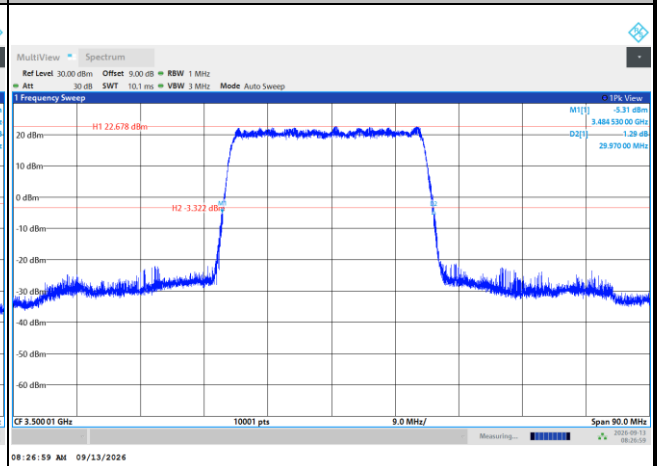
FR1 n77 / 30MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



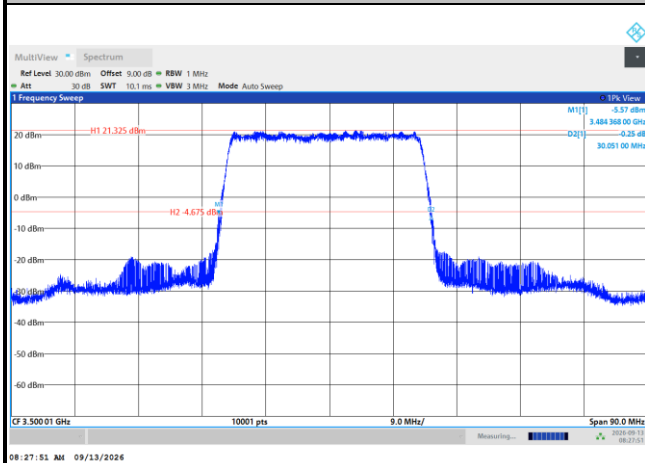
08:26:06 AM 09/13/2026

QPSK



08:26:59 AM 09/13/2026

16QAM

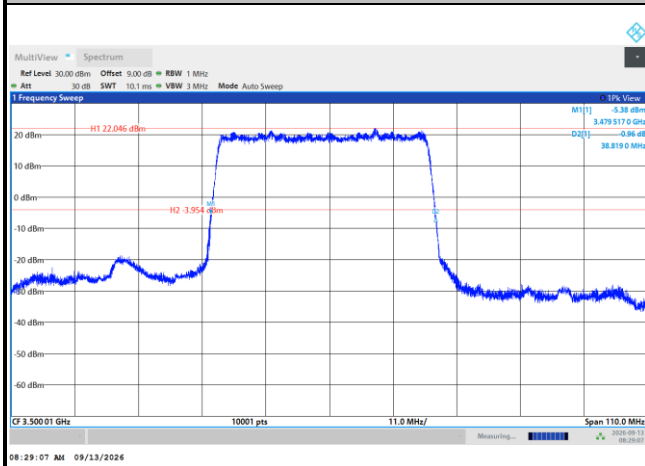


08:27:51 AM 09/13/2026

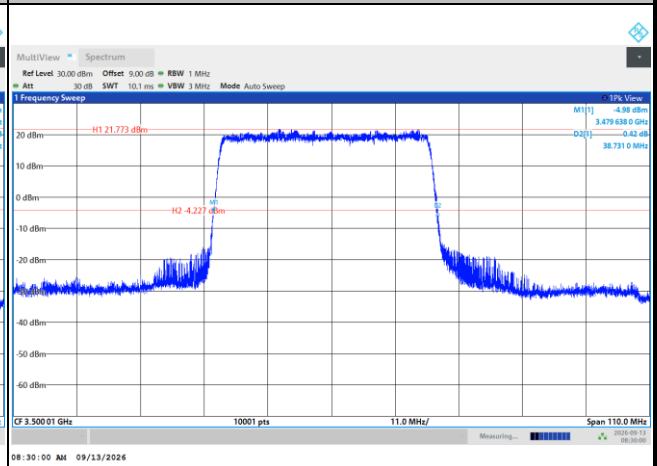


FR1 n77 / 40MHz / DFT-S OFDM / Middle Channel / Full RB

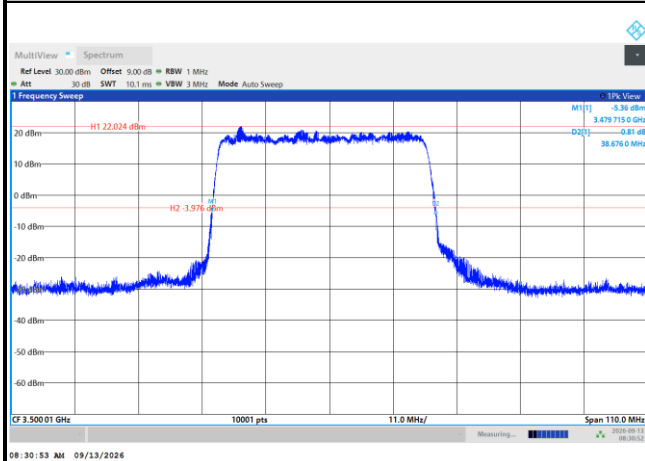
PI/2 BPSK



QPSK



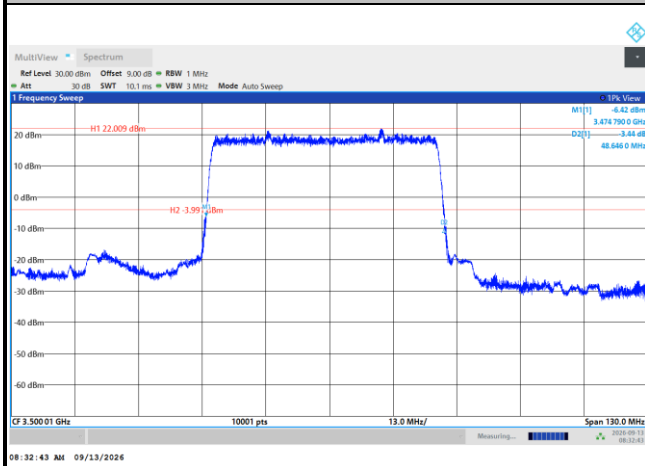
16QAM



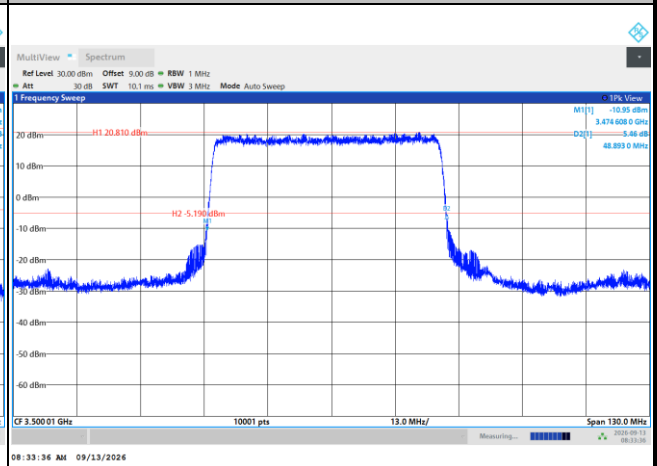


FR1 n77 / 50MHz / DFT-S OFDM / Middle Channel / Full RB

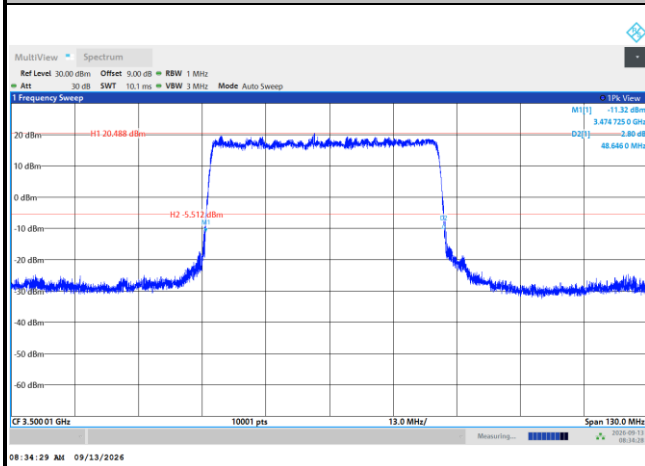
PI/2 BPSK



QPSK



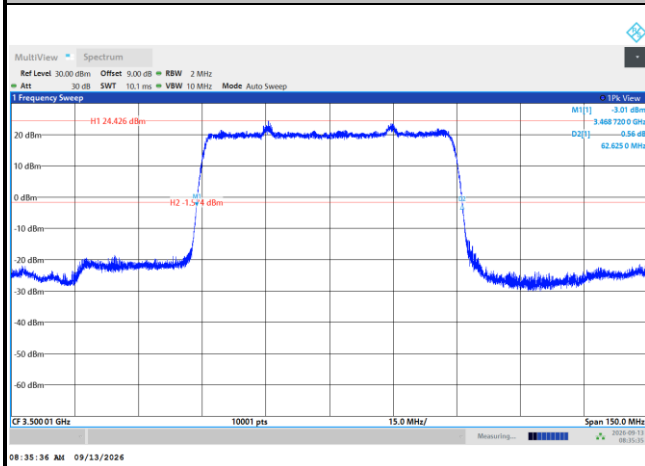
16QAM



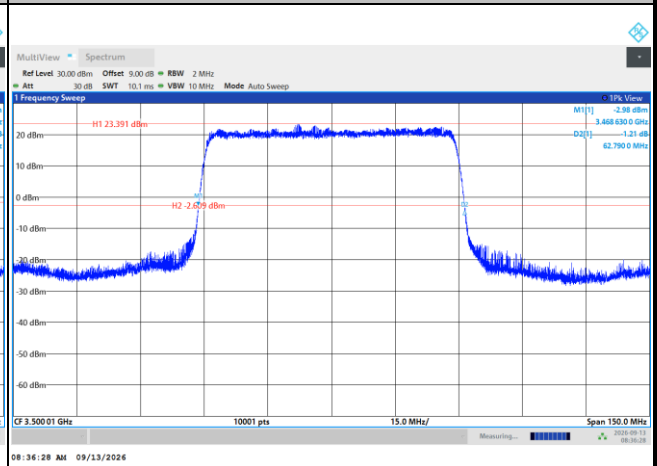


FR1 n77 / 60MHz / DFT-S OFDM / Middle Channel / Full RB

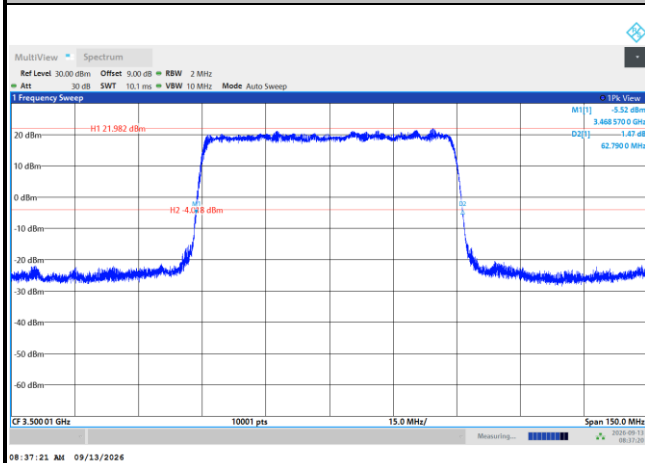
PI/2 BPSK



QPSK



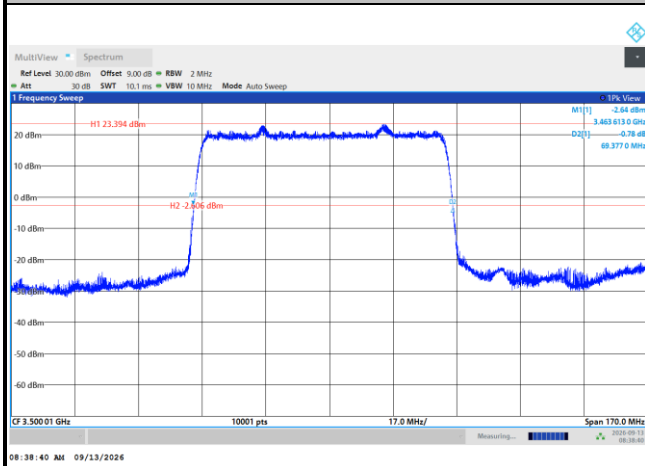
16QAM



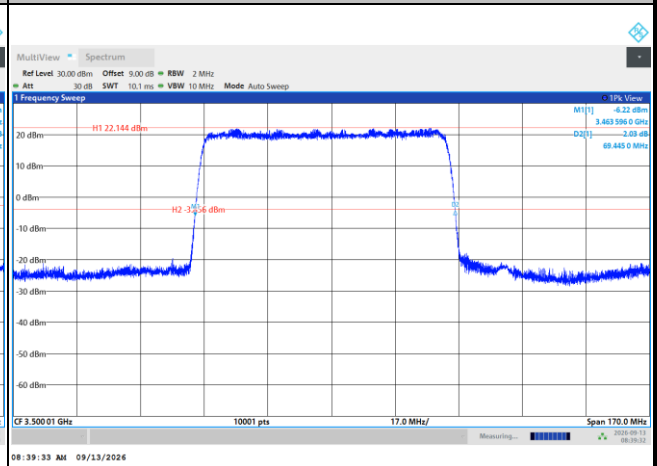


FR1 n77 / 70MHz / DFT-S OFDM / Middle Channel / Full RB

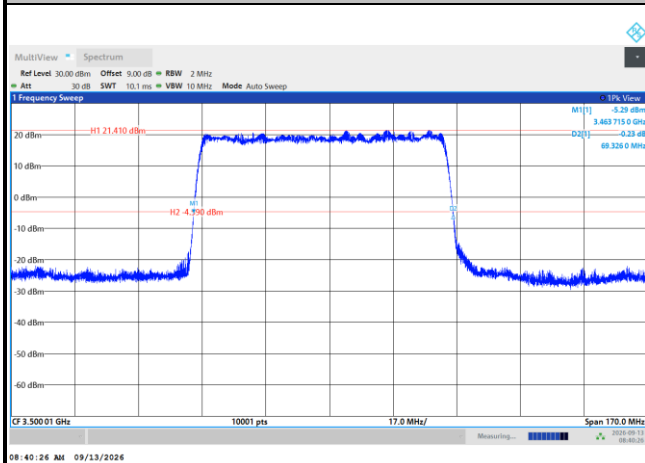
PI/2 BPSK



QPSK



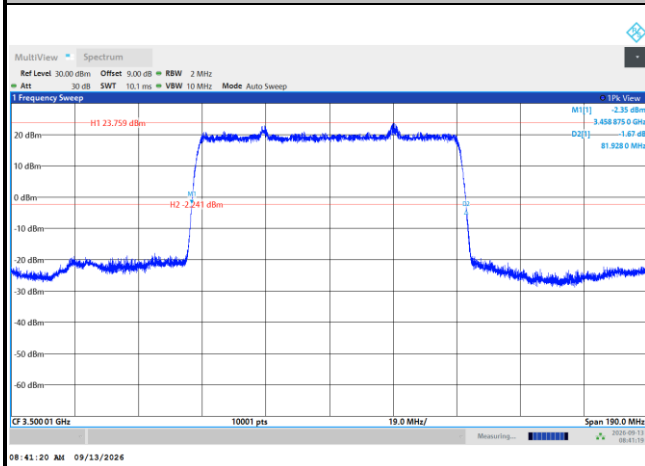
16QAM



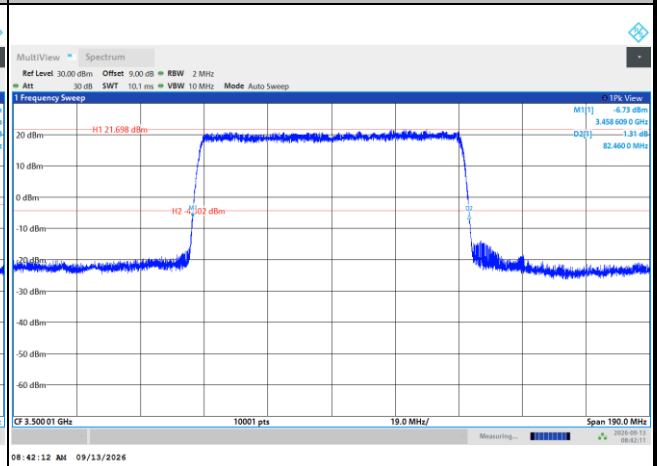


FR1 n77 / 80MHz / DFT-S OFDM / Middle Channel / Full RB

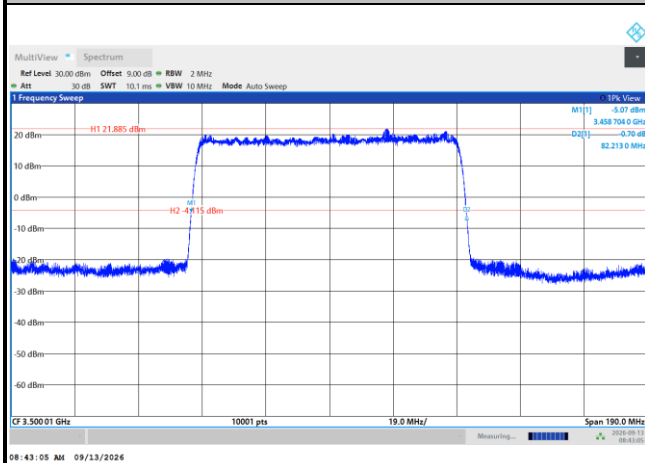
PI/2 BPSK



QPSK

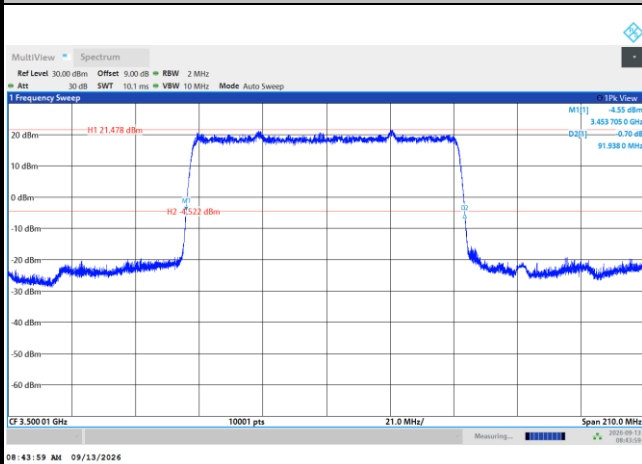


16QAM

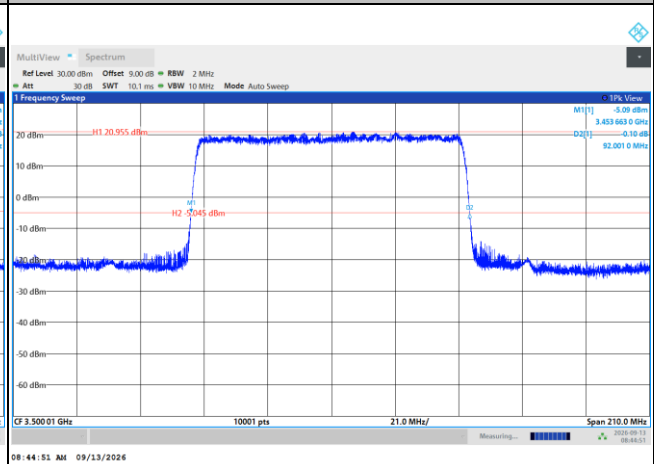




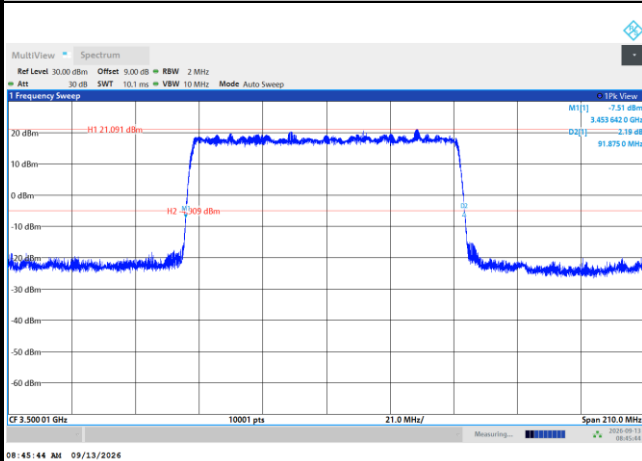
FR1 n77 / 90MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

QPSK



16QAM

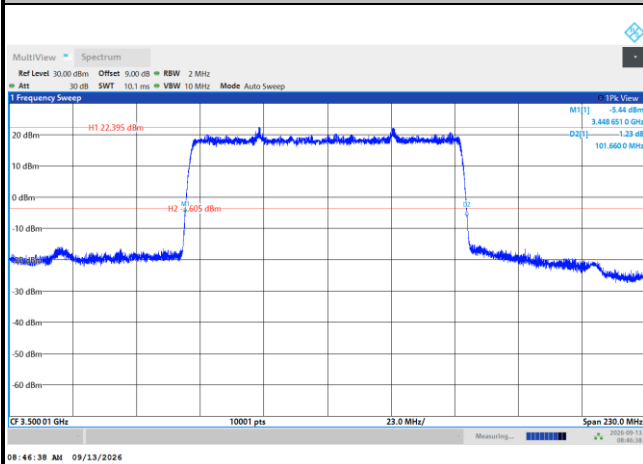




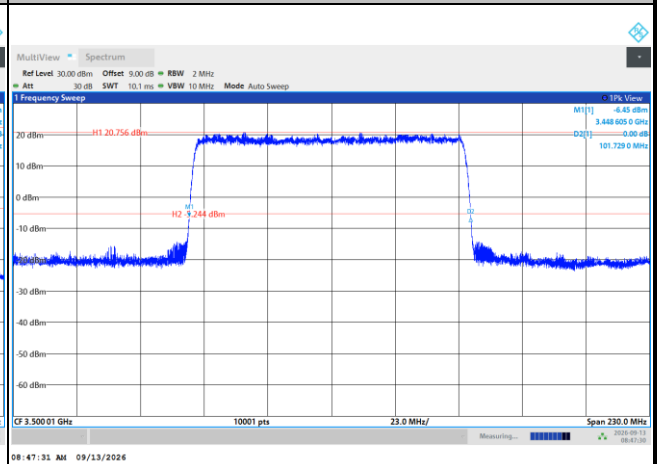
Report No. : FG672112C

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

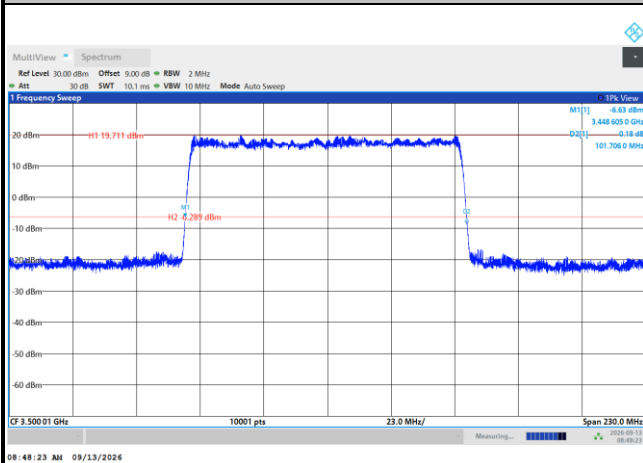
PI/2 BPSK



QPSK



16QAM



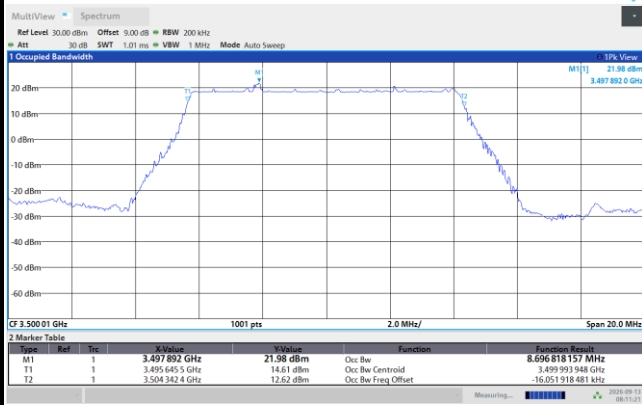
**Occupied Bandwidth**

Mode	FR1 n77 : 99%OBW(MHz) / DFT-S OFDM							
BW	10MHz		15MHz		20MHz		25MHz	
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK
Middle CH	8.69	8.67	12.97	13.01	18.02	18.02	23.00	23.07
Mod.	16QAM		16QAM		16QAM		16QAM	
Middle CH	8.71		13.01		18.04		23.04	
BW	30MHz		40MHz		50MHz		60MHz	
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK
Middle CH	27.29	27.21	36.08	36.02	45.86	45.98	58.58	58.39
Mod.	16QAM		16QAM		16QAM		16QAM	
Middle CH	27.22		35.84		46.09		58.77	
BW	70MHz		80MHz		90MHz		100MHz	
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK
Middle CH	64.80	64.94	77.48	77.79	87.17	87.14	96.87	96.66
Mod.	16QAM		16QAM		16QAM		16QAM	
Middle CH	65.06		77.64		87.59		96.96	



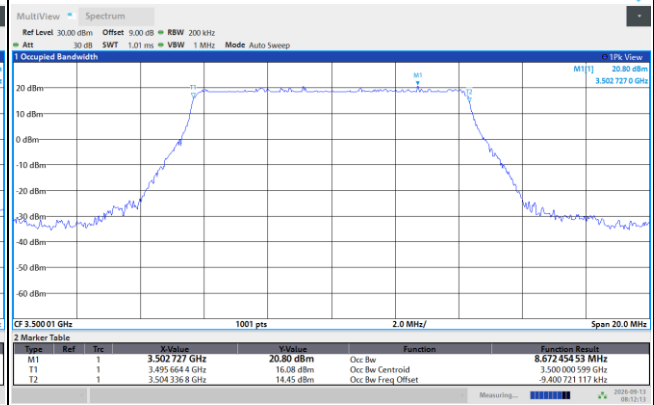
FR1 n77 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



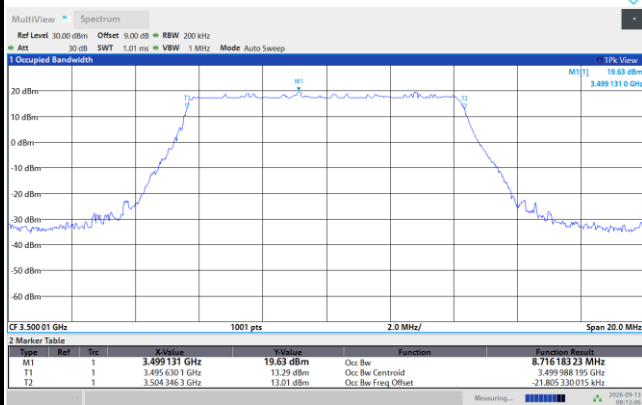
09:11:21 AM 09/13/2024

QPSK



09:12:14 AM 09/13/2024

16QAM

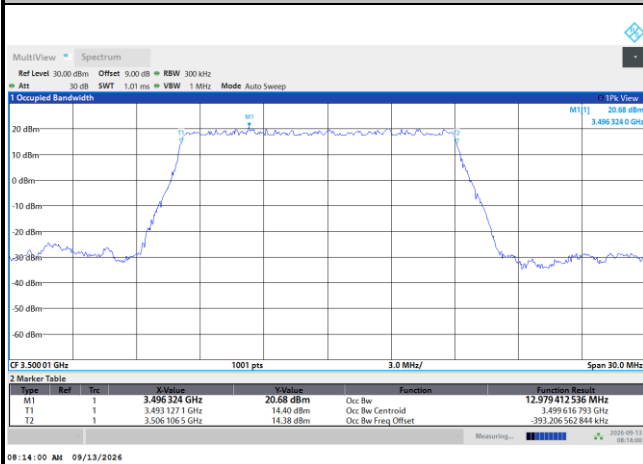


09:13:06 AM 09/13/2024

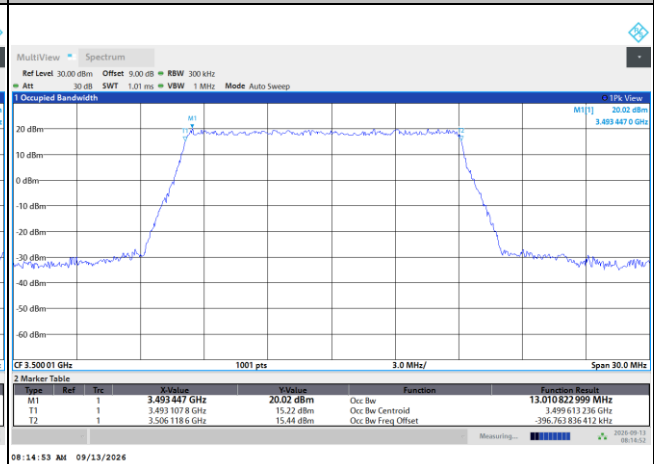


FR1 n77 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

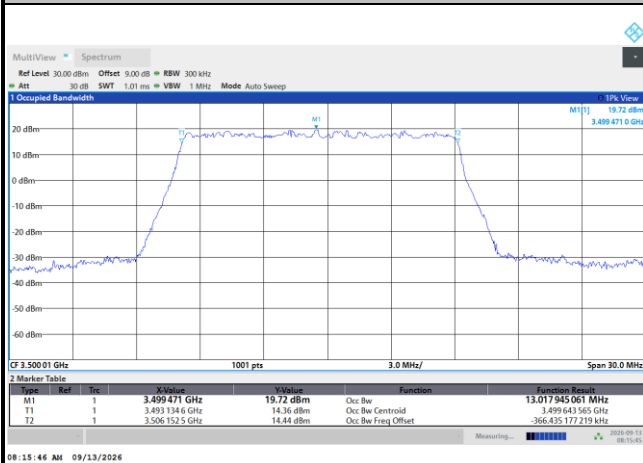
PI/2 BPSK



QPSK



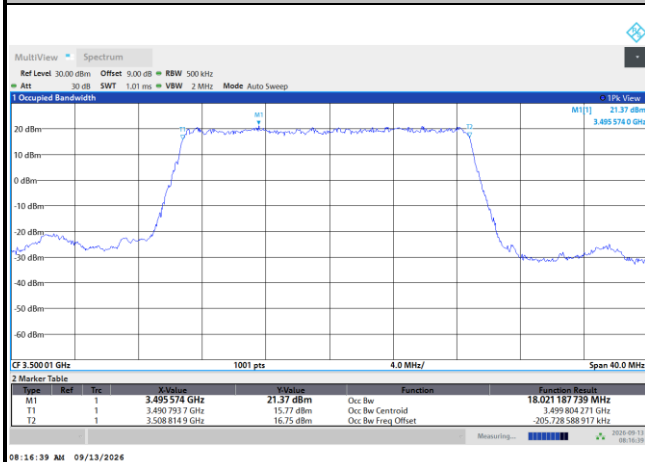
16QAM



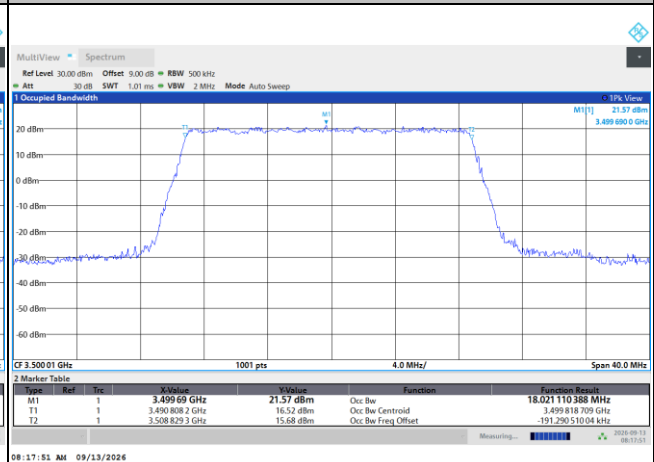


FR1 n77 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

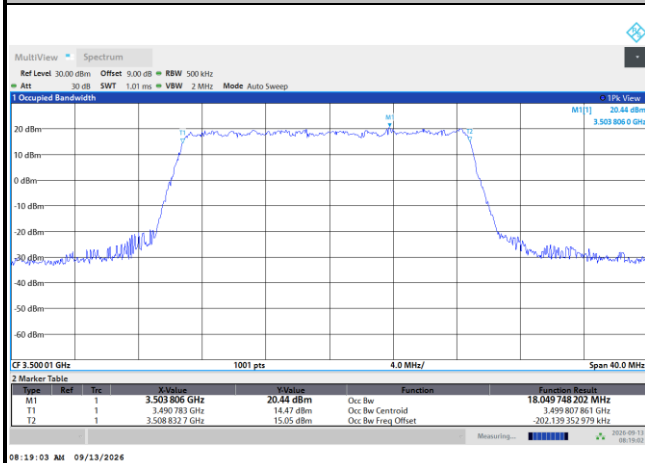
PI/2 BPSK



QPSK



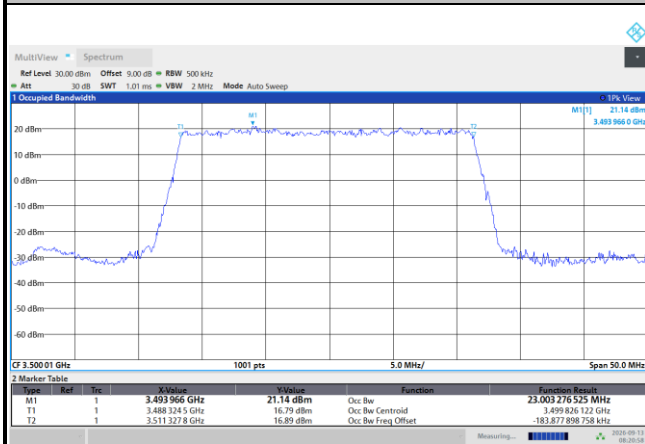
16QAM



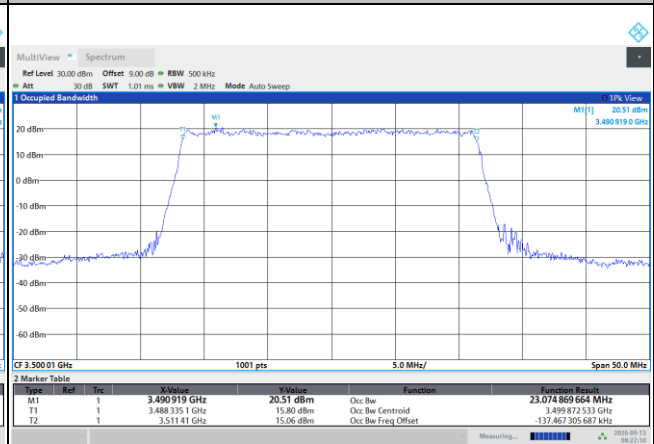


FR1 n77 / 25MHz / DFT-S OFDM / Middle Channel / Full RB

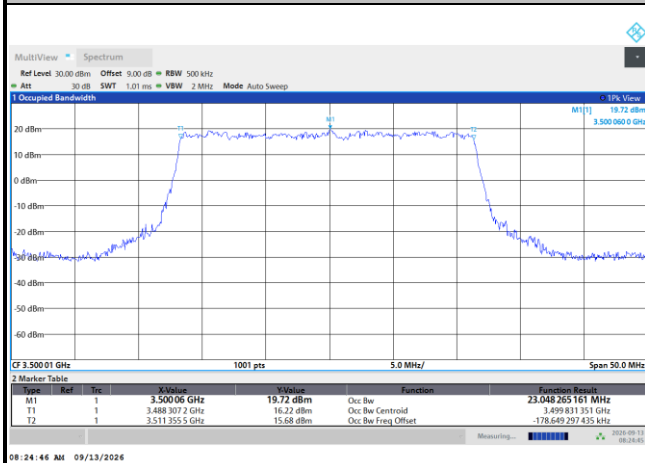
PI/2 BPSK



QPSK



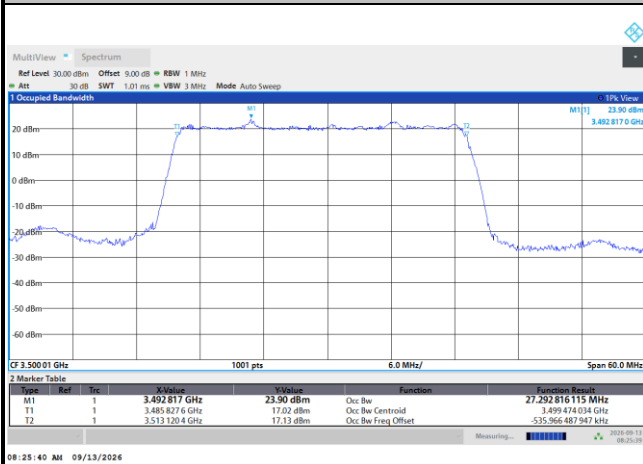
16QAM



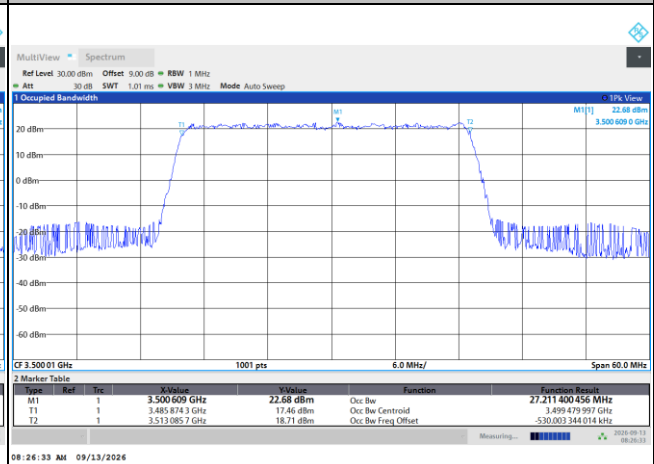


FR1 n77 / 30MHz / DFT-S OFDM / Middle Channel / Full RB

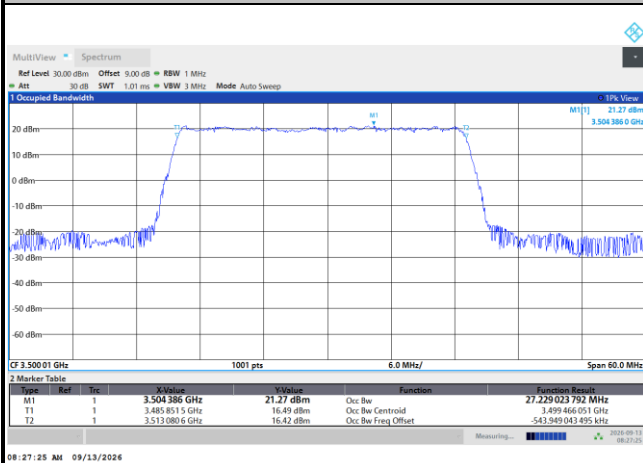
PI/2 BPSK



QPSK



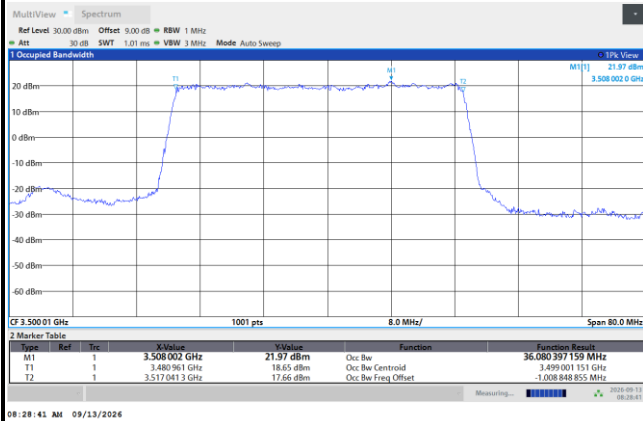
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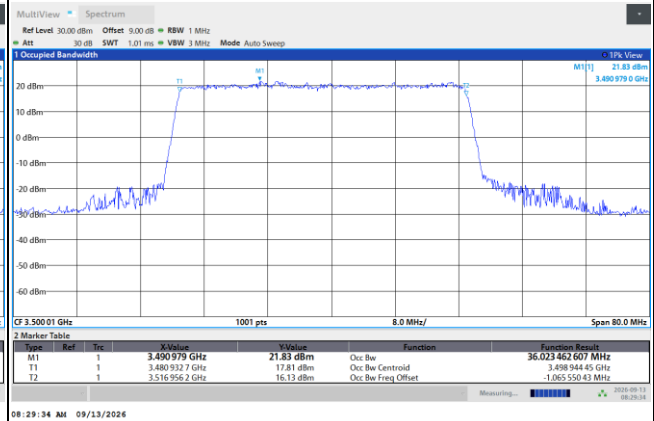


FR1 n77 / 40MHz / DFT-S OFDM / Middle Channel / Full RB

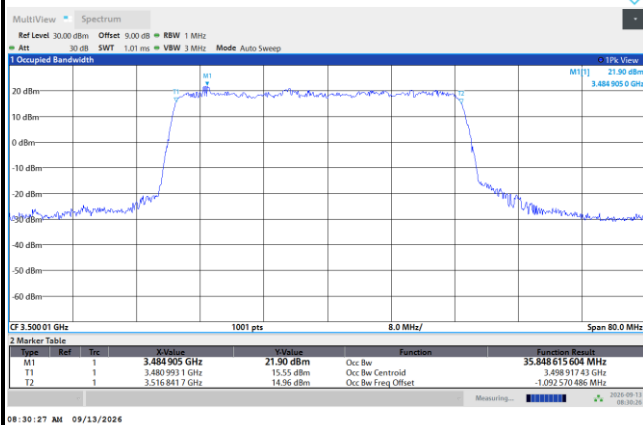
PI/2 BPSK



QPSK



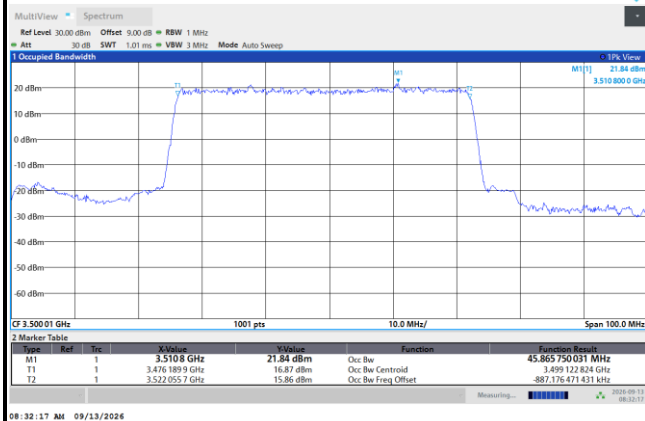
16QAM



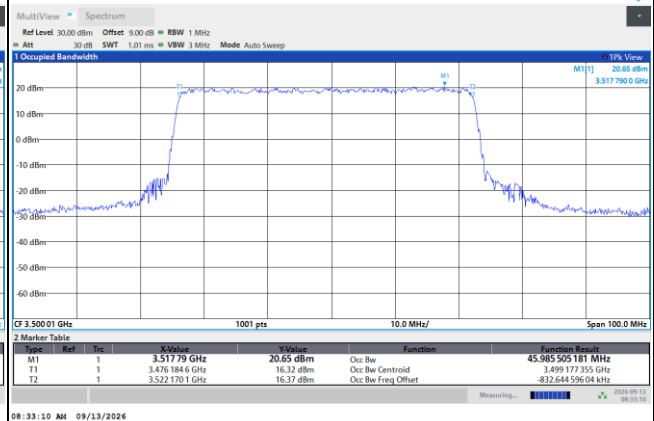


FR1 n77 / 50MHz / DFT-S OFDM / Middle Channel / Full RB

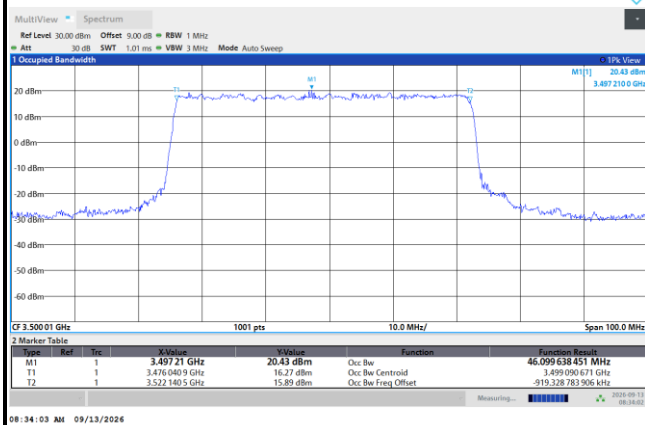
PI/2 BPSK



QPSK



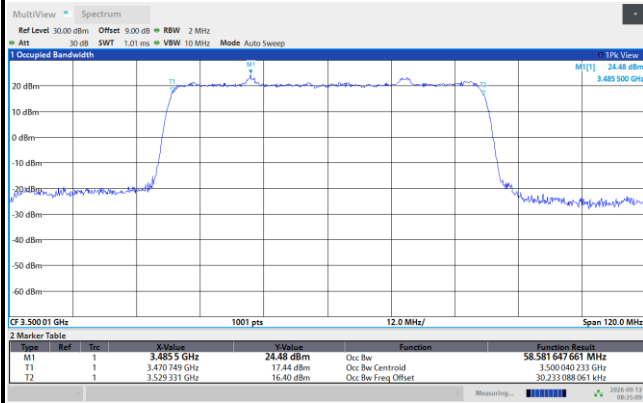
16QAM



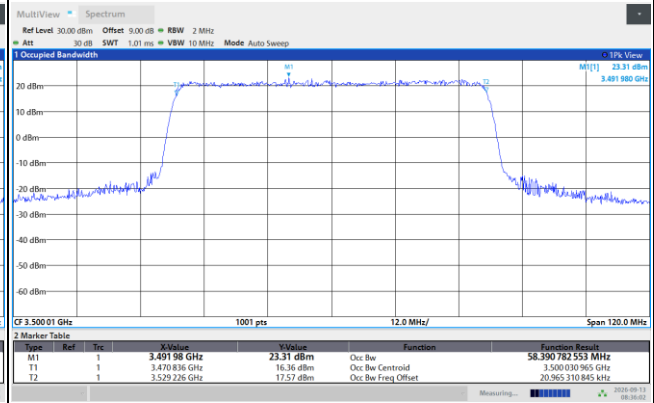


FR1 n77 / 60MHz / DFT-S OFDM / Middle Channel / Full RB

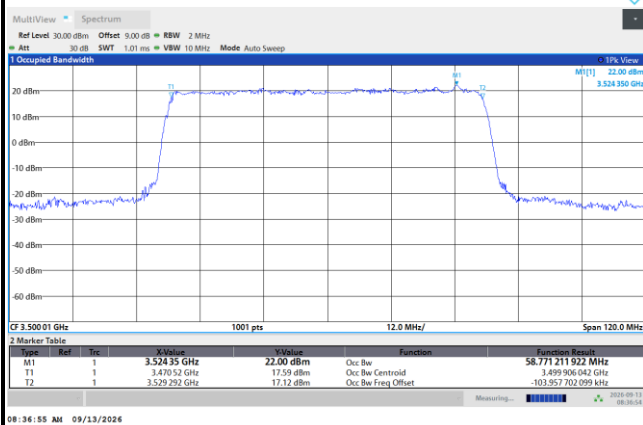
PI/2 BPSK



QPSK



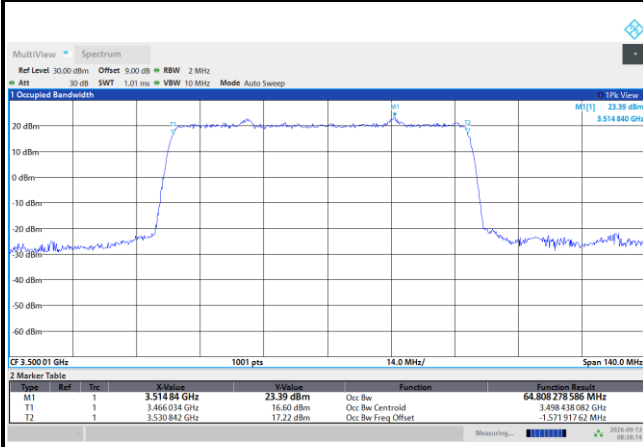
16QAM





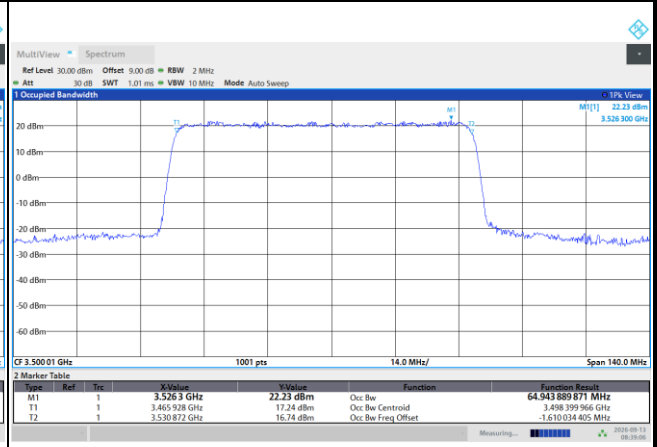
FR1 n77 / 70MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



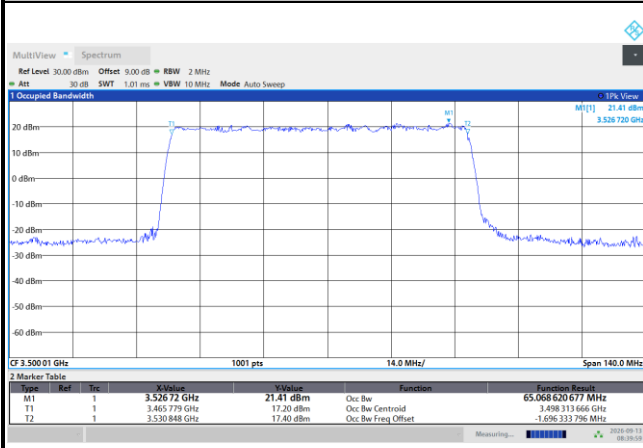
09:38:14 AM 09/13/2024

QPSK



09:39:07 AM 09/13/2024

16QAM

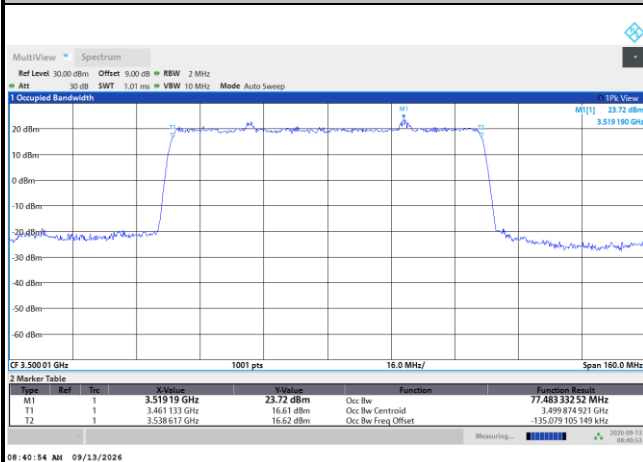


09:40:00 AM 09/13/2024



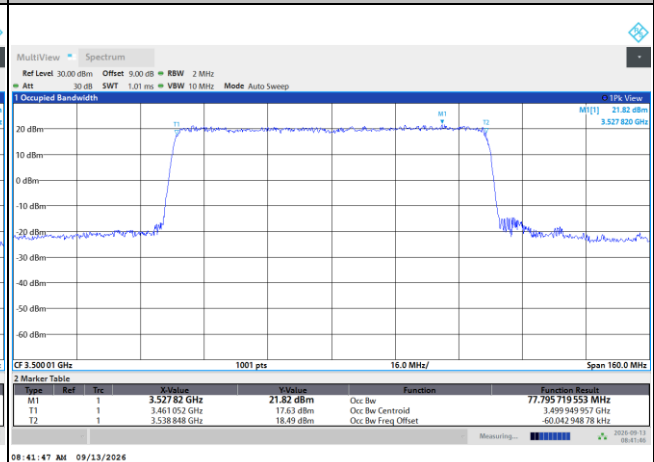
FR1 n77 / 80MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



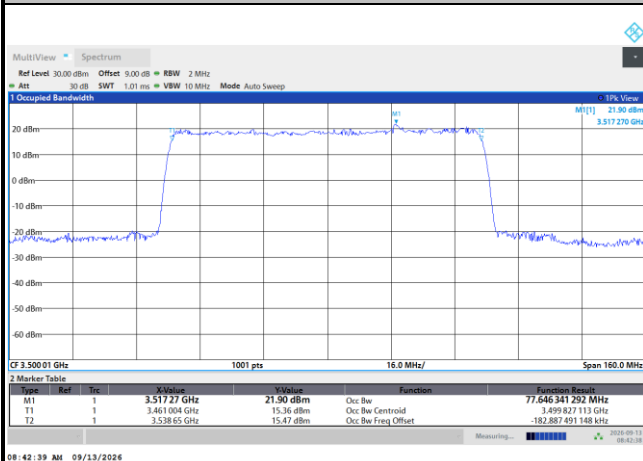
08:40:54 AM 09/13/2026

QPSK



08:41:47 AM 09/13/2026

16QAM

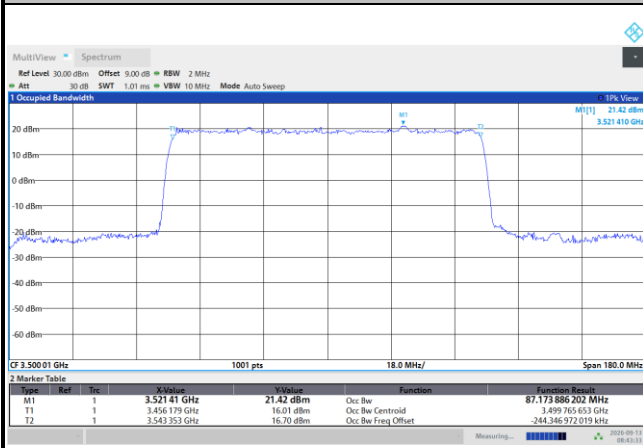


08:42:39 AM 09/13/2026



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

PI/2 BPSK



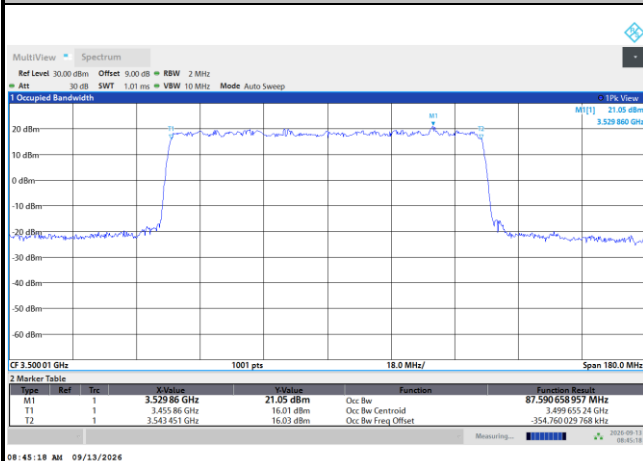
08:43:33 AM 09/13/2024

QPSK



08:44:25 AM 09/13/2024

16QAM

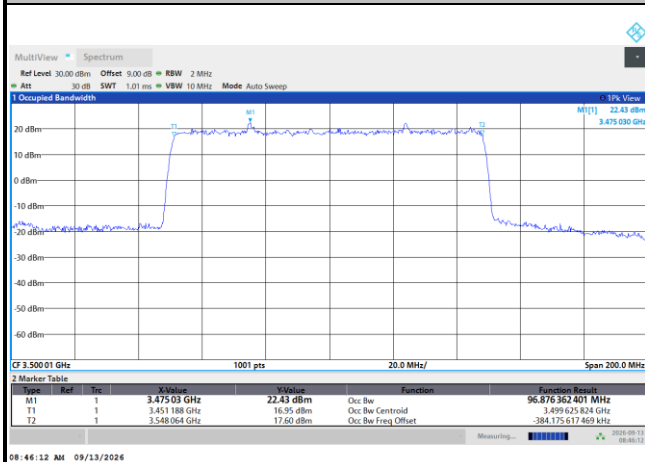


08:45:18 AM 09/13/2024



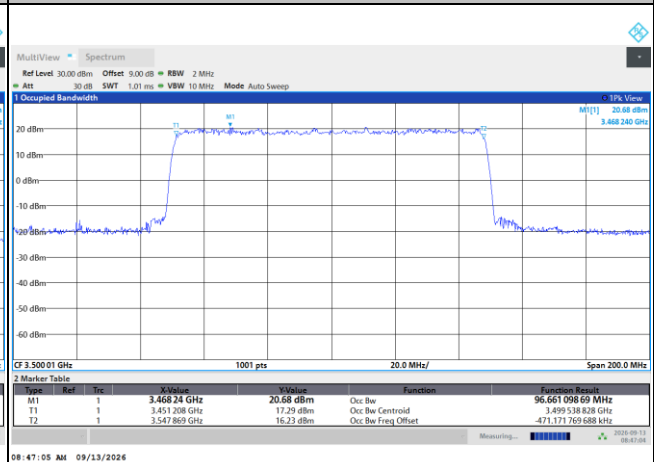
FR1 n77 / 100MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



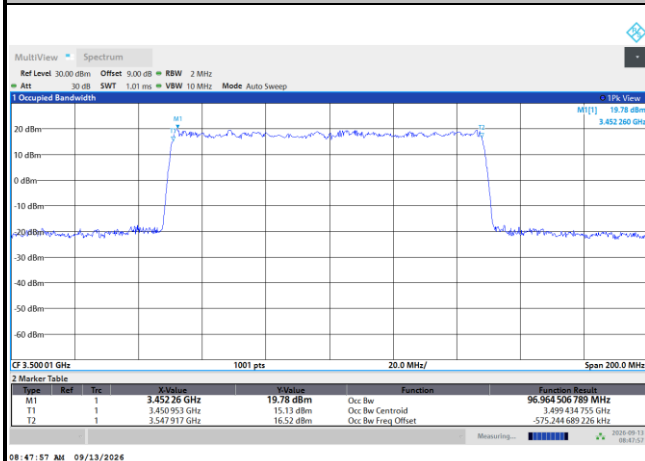
08:46:12 AM 09/13/2024

QPSK



08:47:05 AM 09/13/2024

16QAM



08:47:57 AM 09/13/2024