

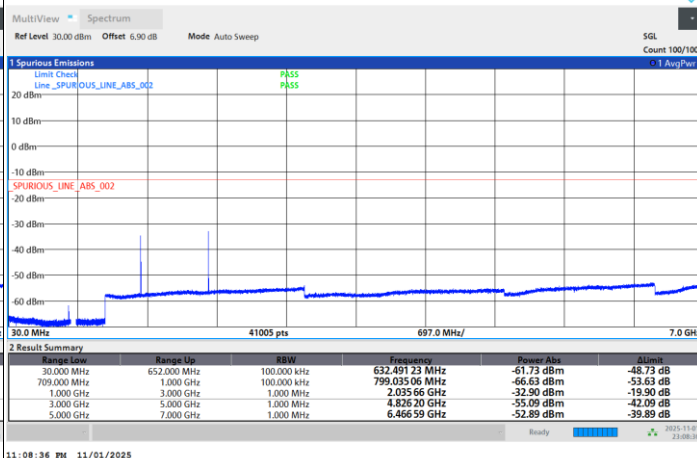
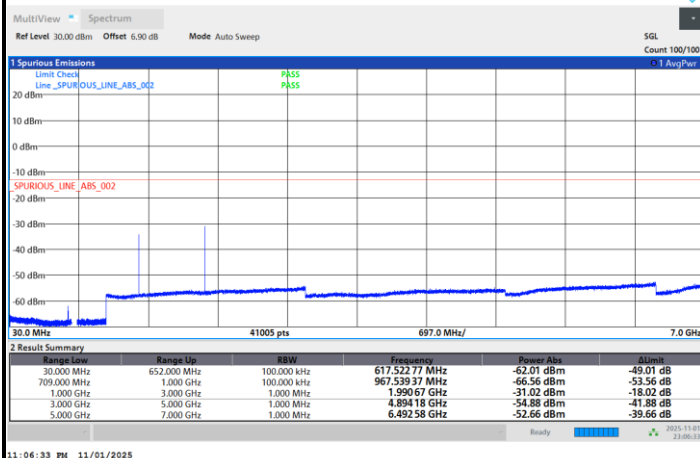


Conducted Spurious Emission

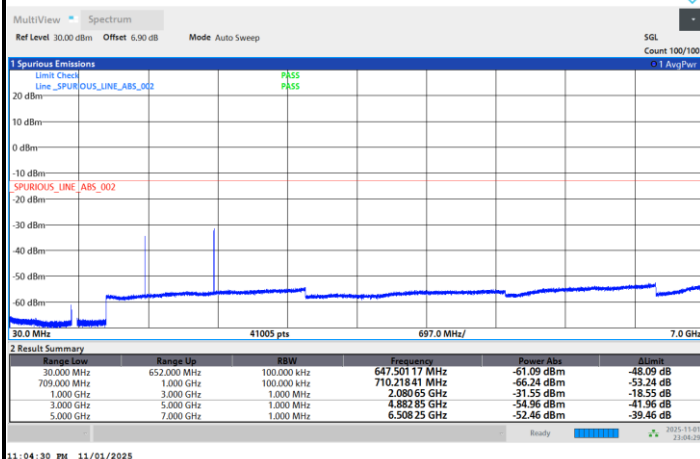
FR1 n71 / 5MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel

Middle Channel



Highest Channel



Frequency Stability

Test Conditions		FR1 n71 (BPSK) / Middle Channel 10M			
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Frequency Offset (Δf) (Hz)	Within Authorized Frequency Block(Hz)	Result
50	Normal Voltage	0.0107	-7.3	Yes	PASS
40	Normal Voltage	0.0059	-4	Yes	
30	Normal Voltage	0.0053	-3.6	Yes	
20(Ref.)	Normal Voltage	0.0000	0	Yes	
10	Normal Voltage	0.0001	0.1	Yes	
0	Normal Voltage	0.0040	-2.7	Yes	
-10	Normal Voltage	0.0034	2.3	Yes	
-20	Normal Voltage	0.0034	-2.3	Yes	
-30	Normal Voltage	0.0010	0.7	Yes	
20	Maximum Voltage	0.0137	9.3	Yes	
20	Normal Voltage	0.0000	0	Yes	
20	Minimum Voltage	0.0024	-1.6	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.

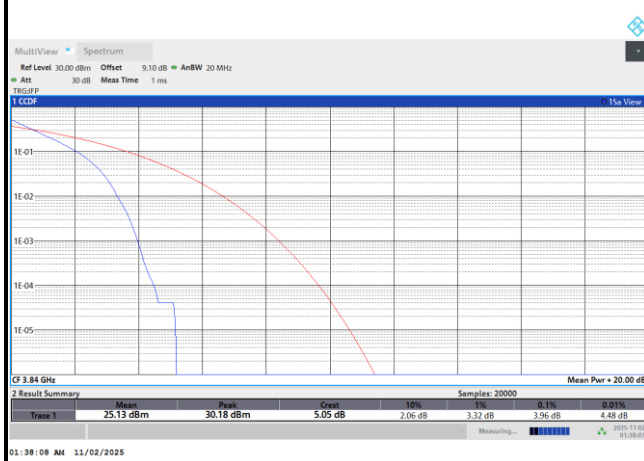
**FR1 n77_Part27O****<SISO Mode>****Peak-to-Average Ratio**

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	3.96	5.02	5.92	6.22	PASS
Mode	FR1 n77 / 20MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.58				PASS

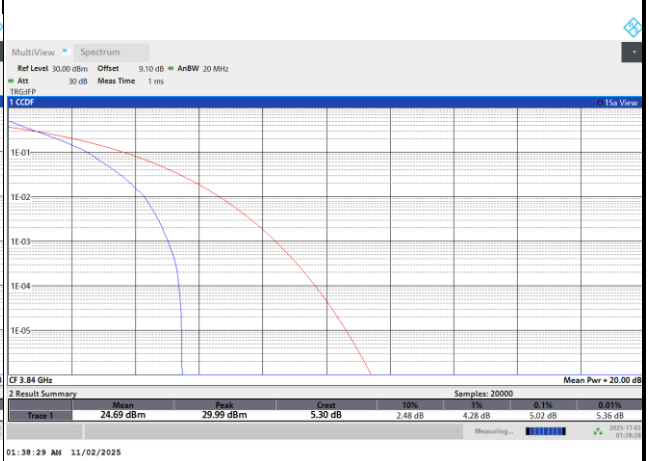


FR1 n77 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

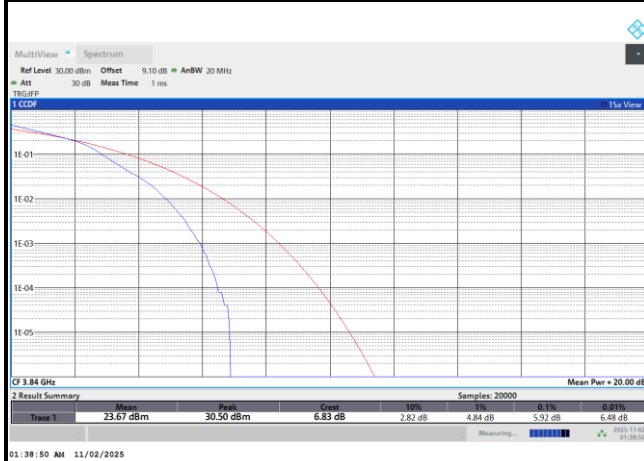
PI/2 BPSK



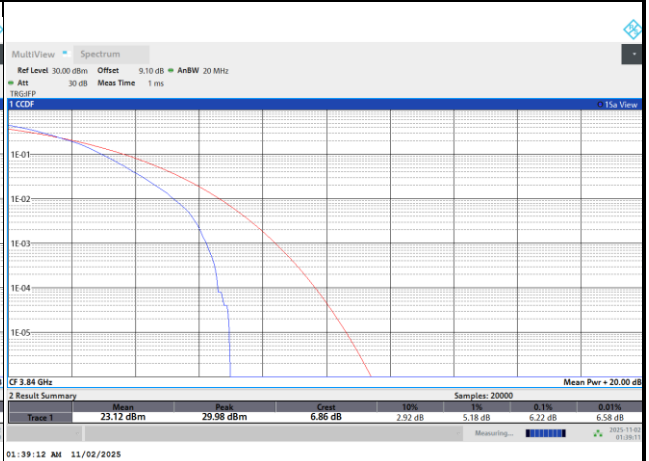
QPSK



16QAM



64QAM



256QAM



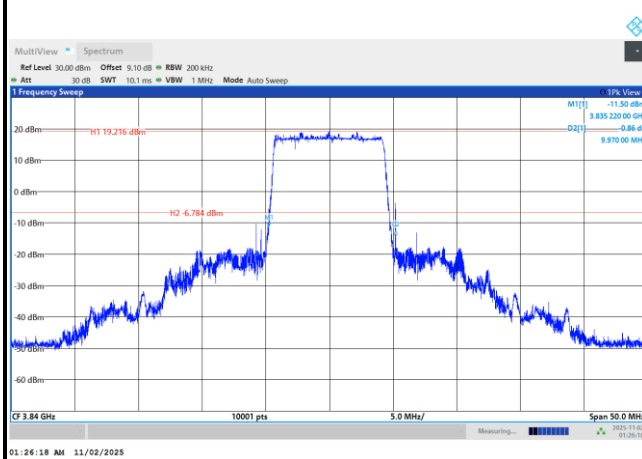
**26dB Bandwidth**

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	9.97	9.45	13.91	13.86	19.57	20.00	24.76	25.56
Mod.	16QAM		16QAM		16QAM		16QAM	
Middle CH	9.76		13.93		19.17		24.64	
BW	30MHz		40MHz		50MHz		60MHz	
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK
Middle CH	29.40	29.46	38.23	38.26	48.41	48.34	62.71	63.06
Mod.	16QAM		16QAM		16QAM		16QAM	
Middle CH	29.35		38.41		48.30		62.83	
BW	70MHz		80MHz		90MHz		100MHz	
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK
Middle CH	69.22	69.22	82.23	82.13	91.81	92.06	101.63	101.72
Mod.	16QAM		16QAM		16QAM		16QAM	
Middle CH	69.24		82.15		91.89		101.52	

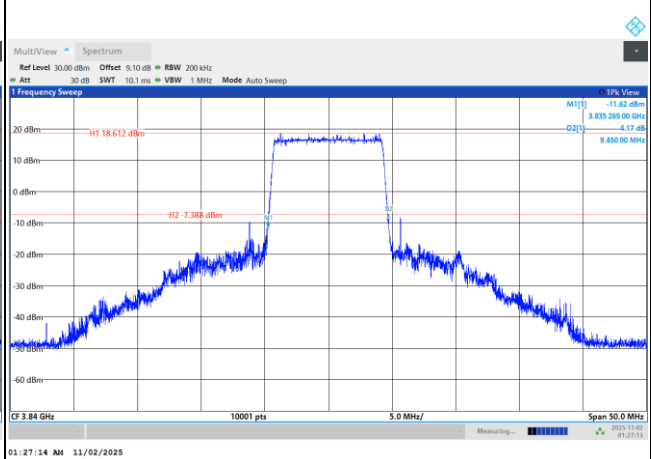


FR1 n77 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

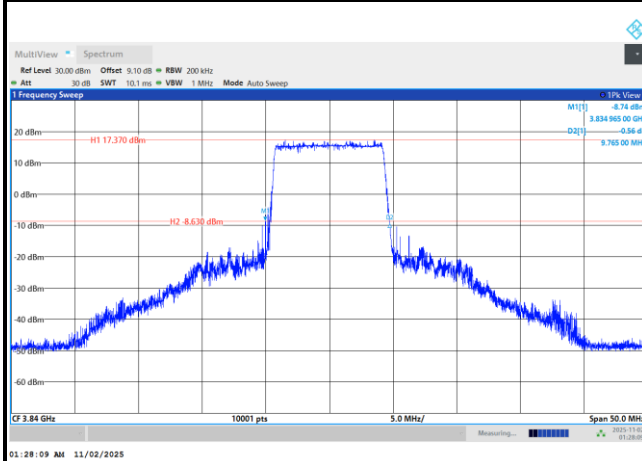
PI/2 BPSK



QPSK



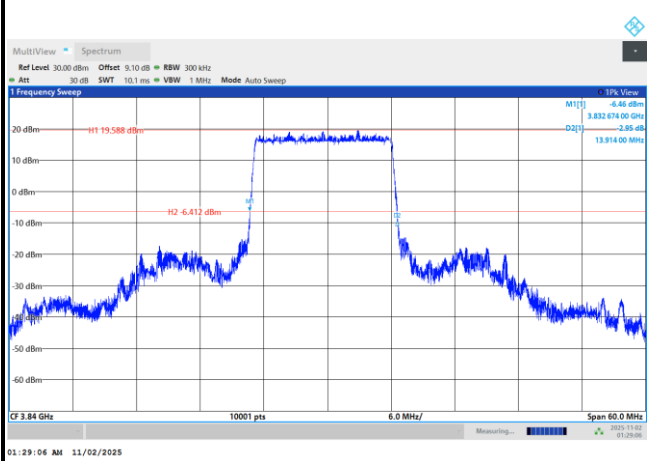
16QAM



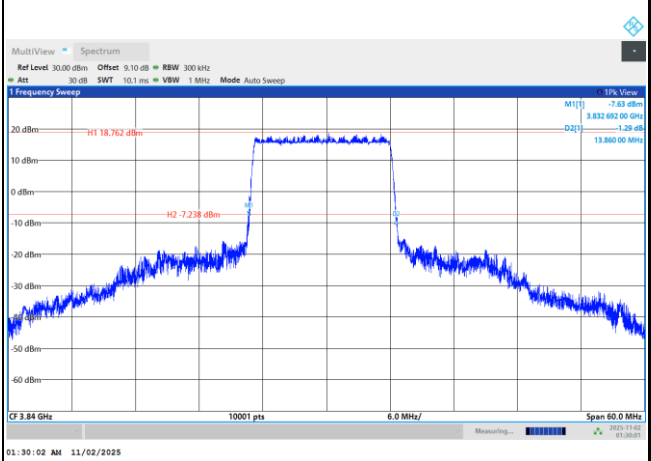


FR1 n77 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

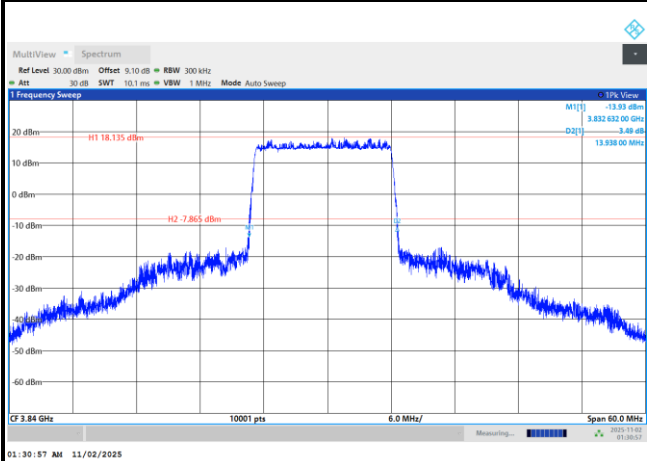
QPSK



QPSK



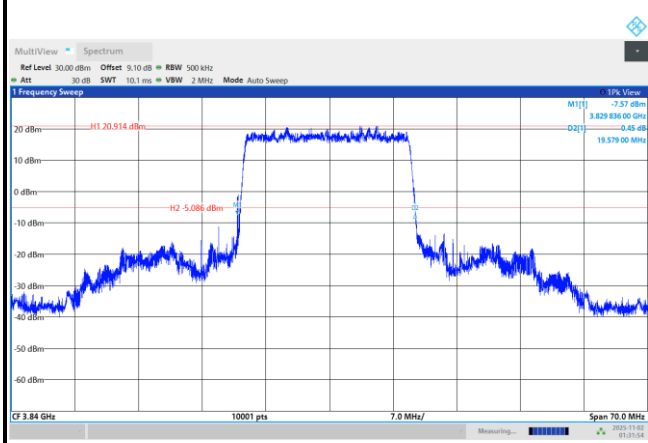
16QAM



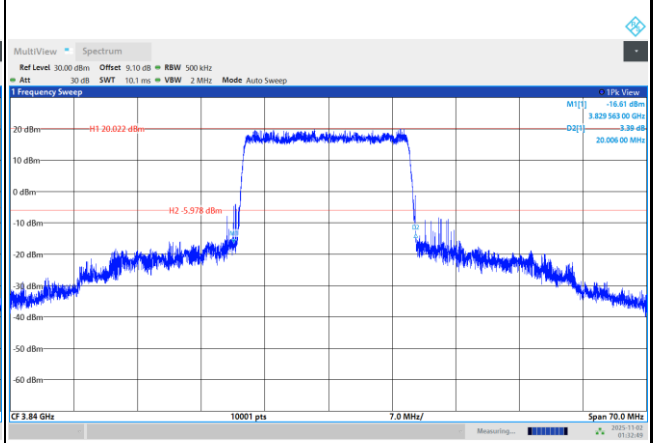


FR1 n77 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

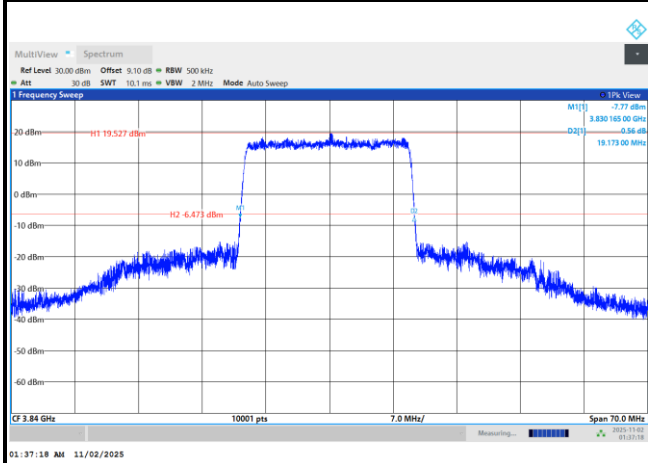
PI/2 BPSK



QPSK



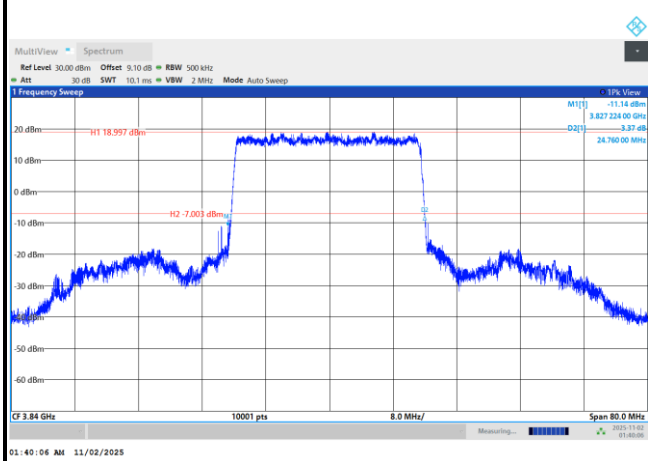
16QAM



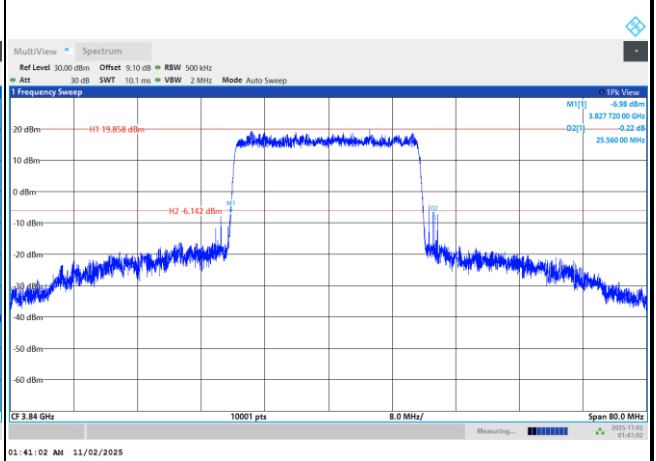


FR1 n77 / 25MHz / DFT-S OFDM / Middle Channel / Full RB

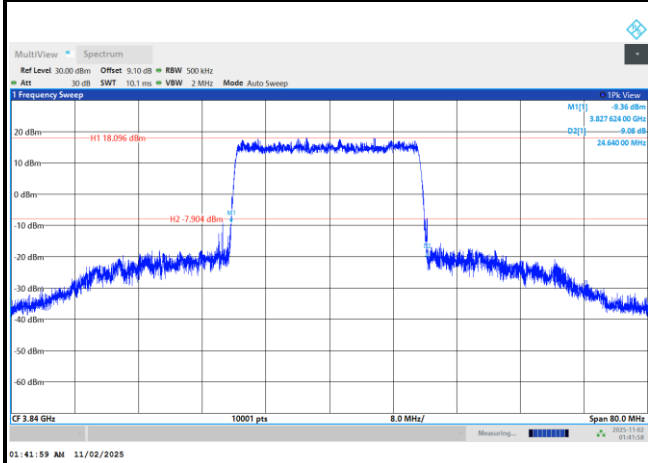
PI/2 BPSK



QPSK



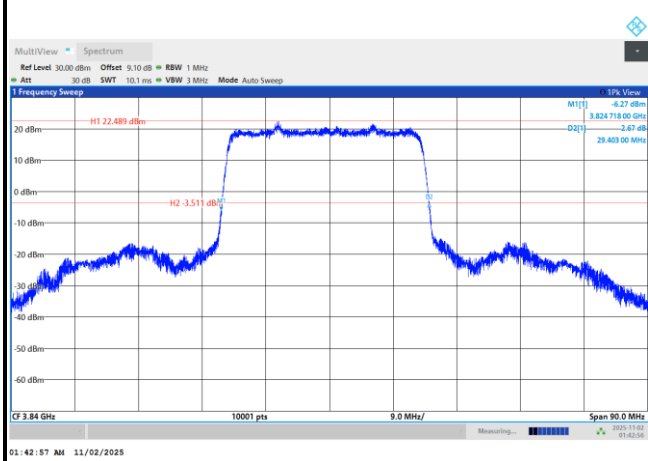
16QAM



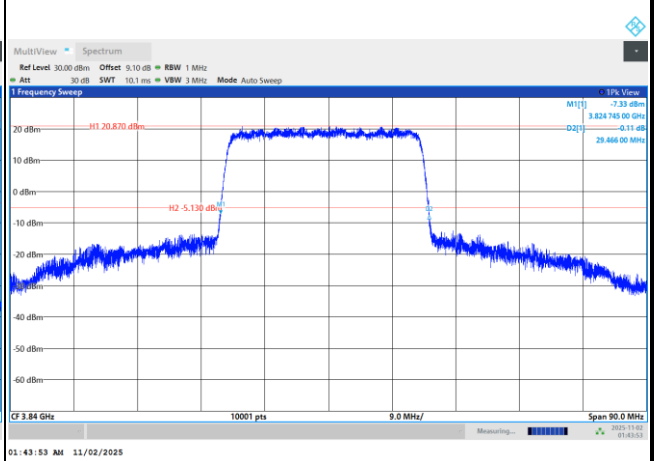


FR1 n77 / 30MHz / DFT-S OFDM / Middle Channel / Full RB

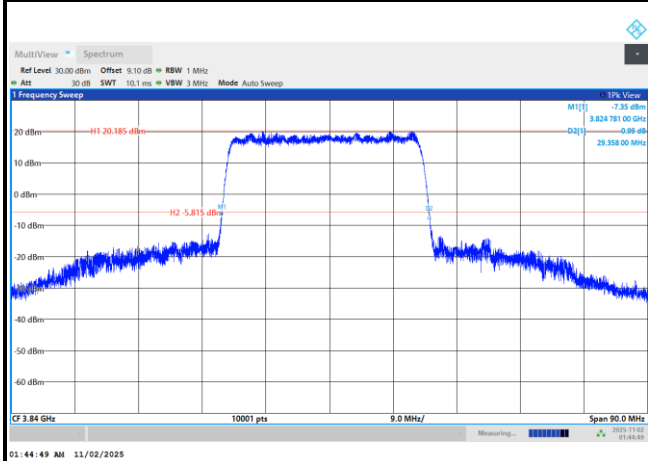
PI/2 BPSK



QPSK



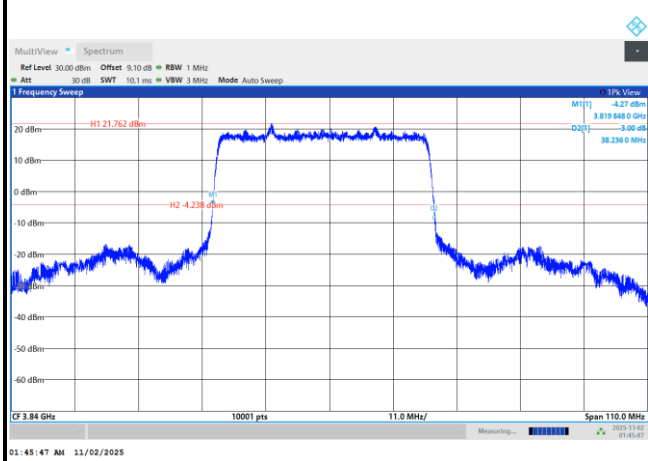
16QAM



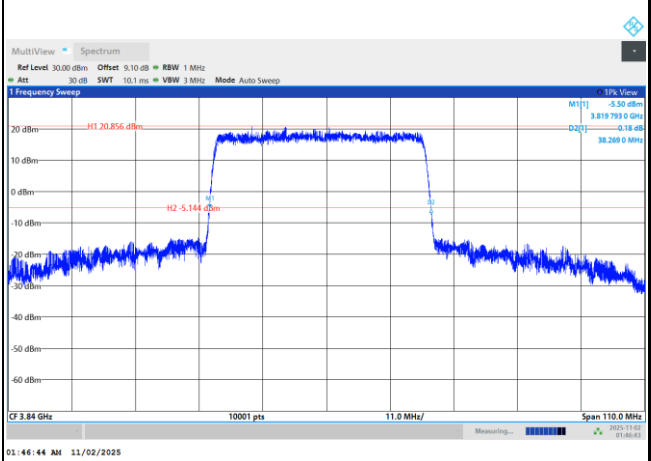


FR1 n77 / 40MHz / DFT-S OFDM / Middle Channel / Full RB

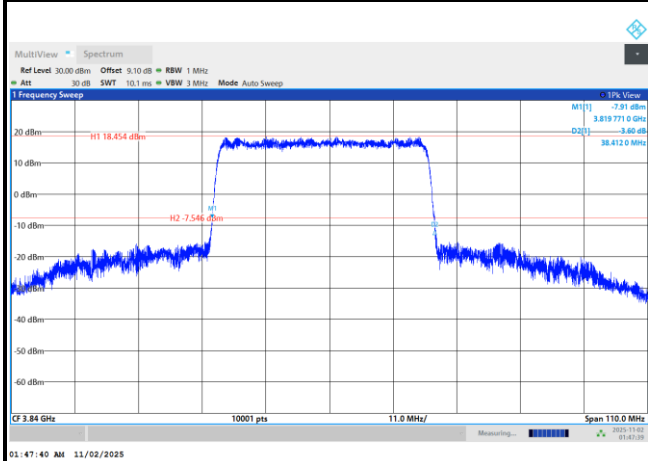
PI/2 BPSK



QPSK



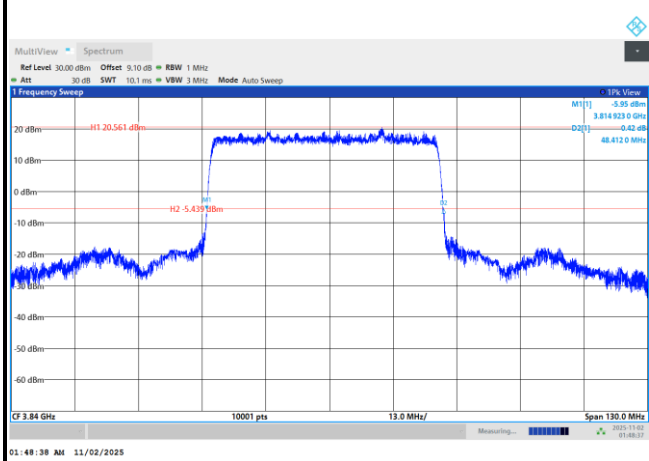
16QAM



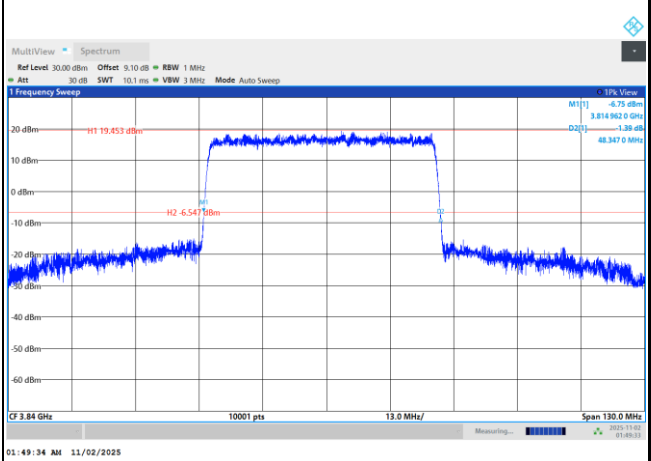


FR1 n77 / 50MHz / DFT-S OFDM / Middle Channel / Full RB

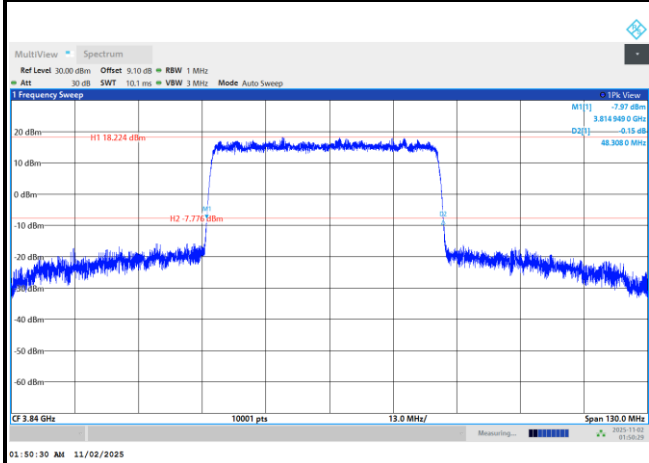
PI/2 BPSK



QPSK



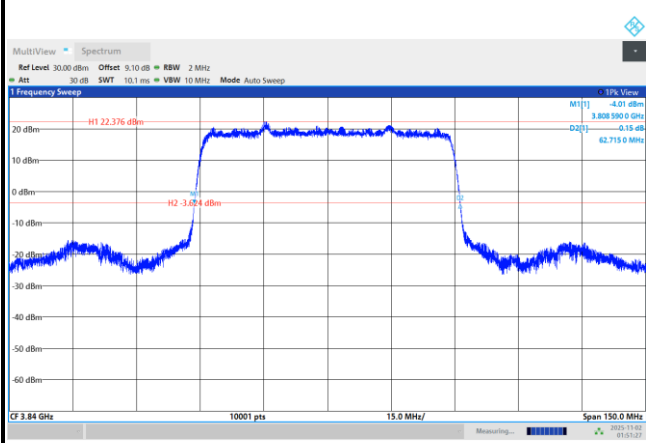
16QAM



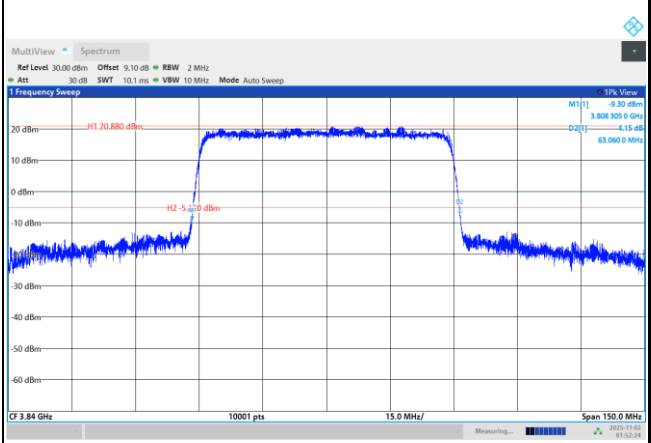


FR1 n77 / 60MHz / DFT-S OFDM / Middle Channel / Full RB

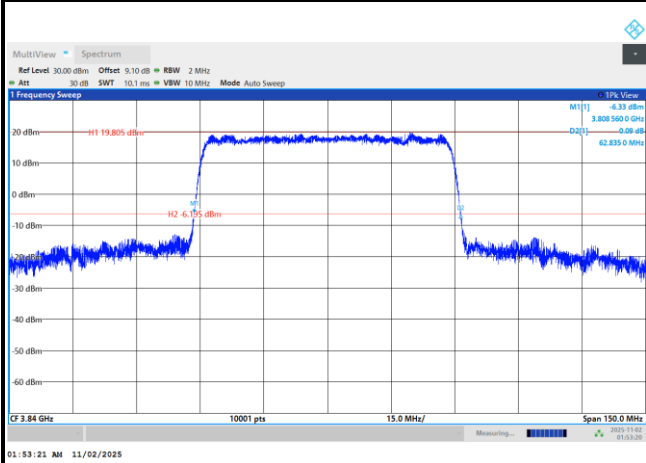
PI/2 BPSK



QPSK



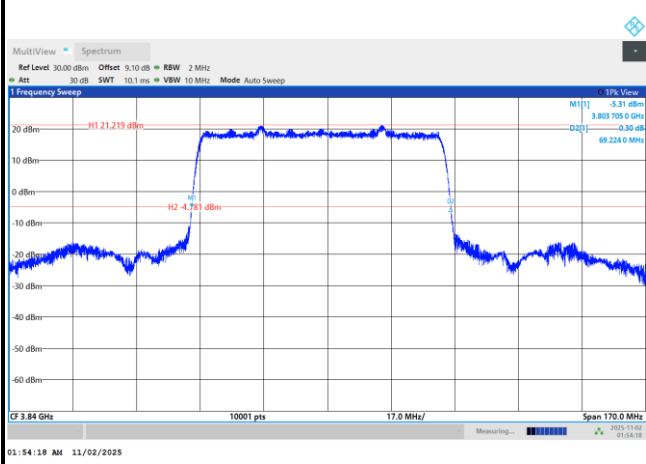
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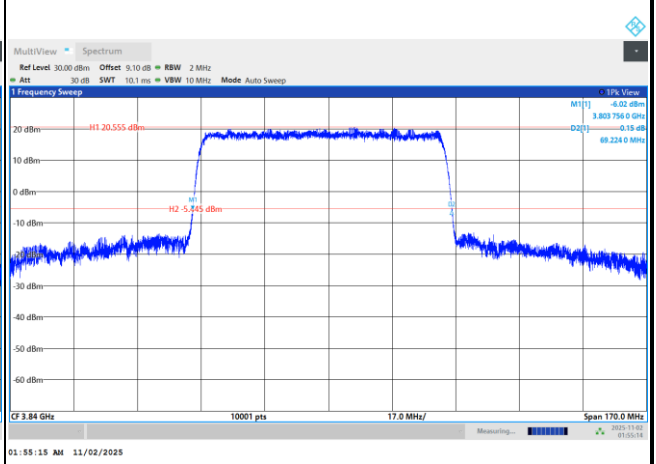


FR1 n77 / 70MHz / DFT-S OFDM / Middle Channel / Full RB

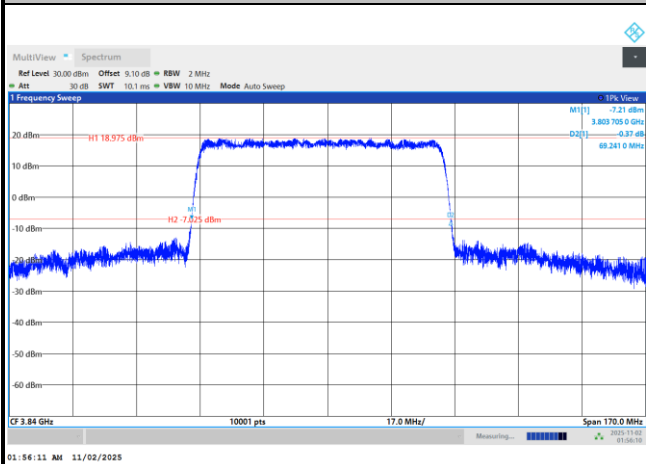
PI/2 BPSK



QPSK



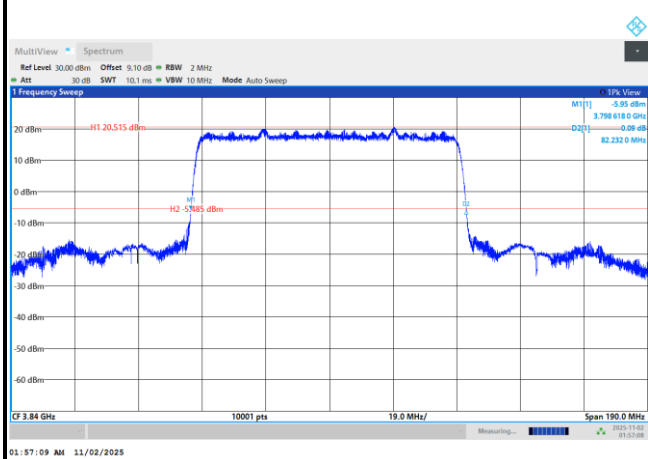
16QAM



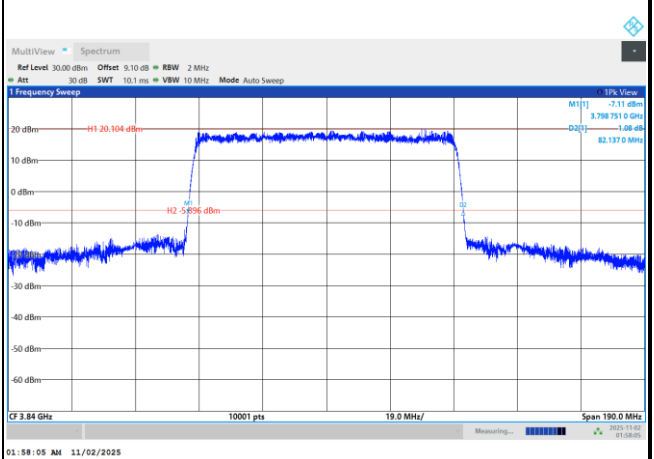


FR1 n77 / 80MHz / DFT-S OFDM / Middle Channel / Full RB

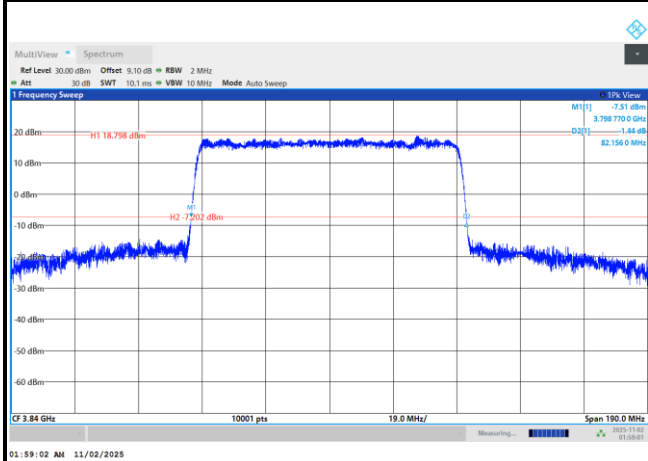
PI/2 BPSK



QPSK



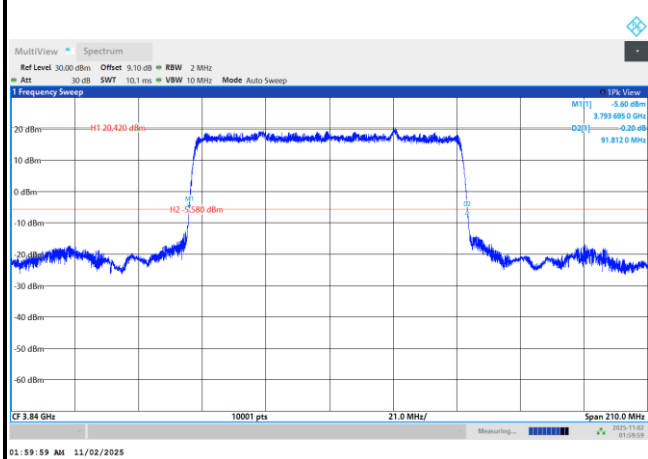
16QAM



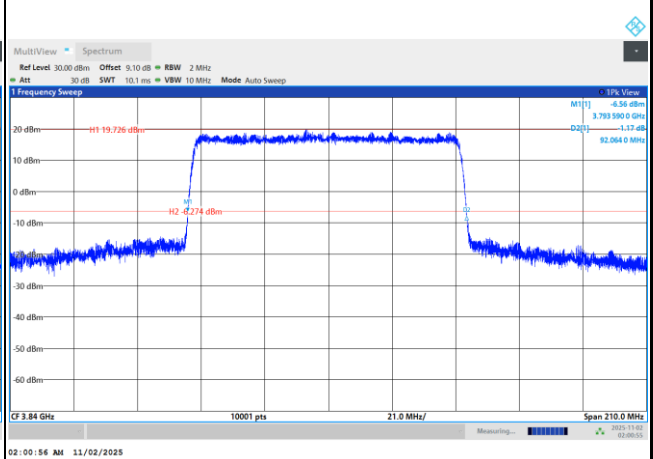


FR1 n77 / 90MHz / DFT-S OFDM / Middle Channel / Full RB

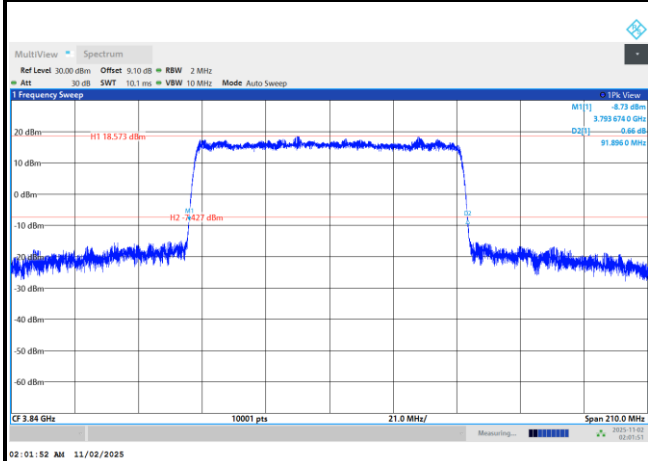
PI/2 BPSK

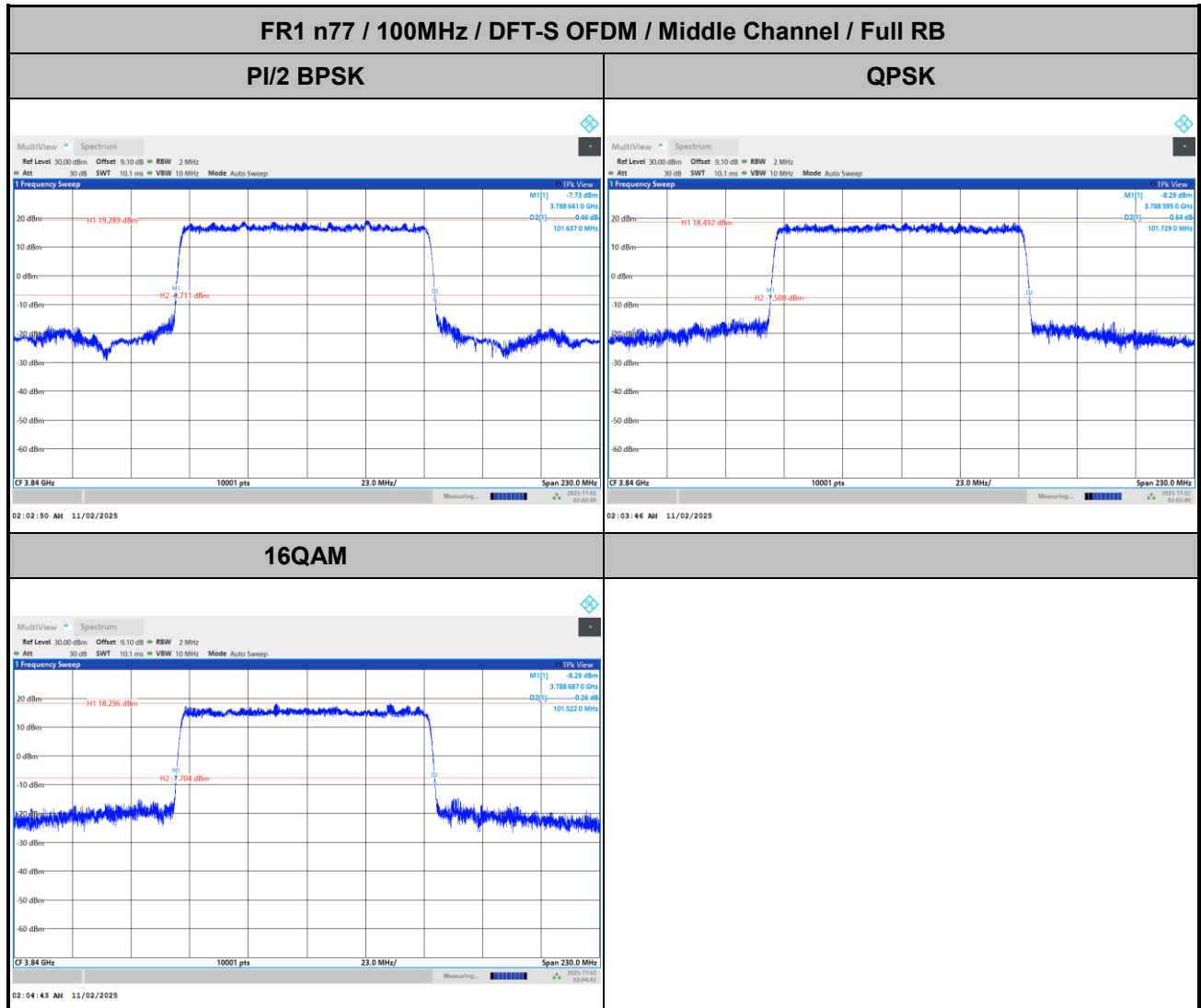


QPSK



16QAM





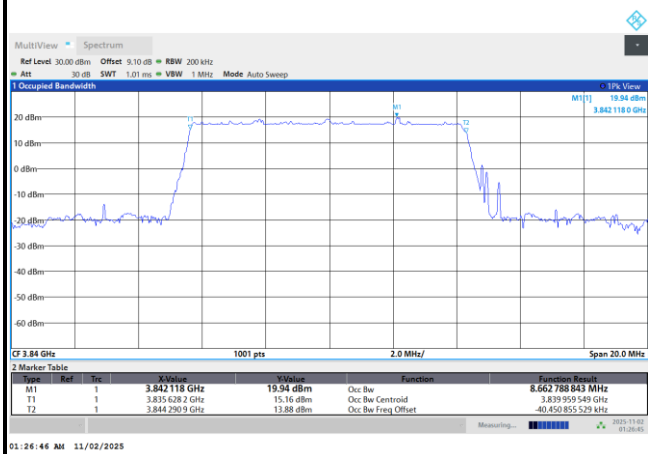
**Occupied Bandwidth**

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	8.66	8.61	12.96	12.95	18.03	18.02	23.13	22.95
Mod.	16QAM		16QAM		16QAM		16QAM	
Middle CH	8.59		12.92		18.05		22.93	
BW	30MHz		40MHz		50MHz		60MHz	
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK
Middle CH	27.19	27.16	36.09	35.94	45.83	45.74	58.60	58.50
Mod.	16QAM		16QAM		16QAM		16QAM	
Middle CH	27.07		35.90		45.73		58.41	
BW	70MHz		80MHz		90MHz		100MHz	
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK
Middle CH	64.86	64.64	77.54	77.36	87.29	87.05	96.67	96.66
Mod.	16QAM		16QAM		16QAM		16QAM	
Middle CH	64.77		77.53		87.00		96.53	

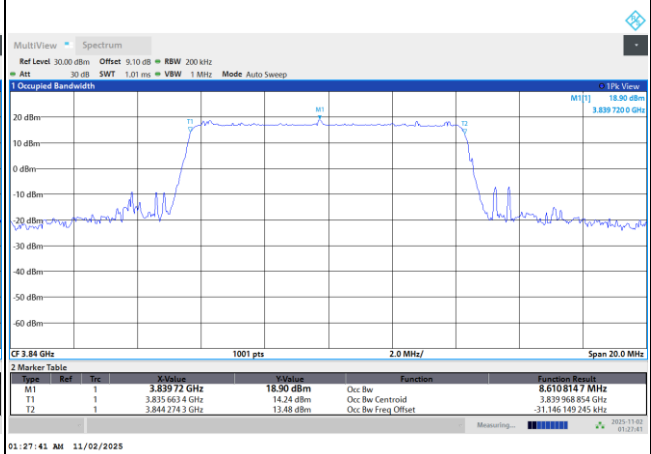


FR1 n77 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

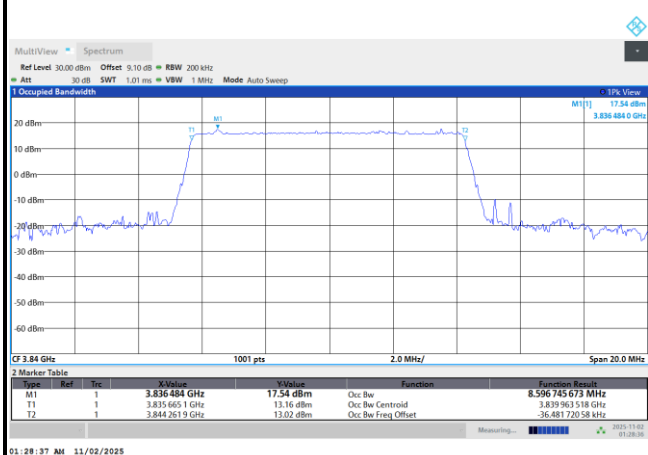
PI/2 BPSK



QPSK



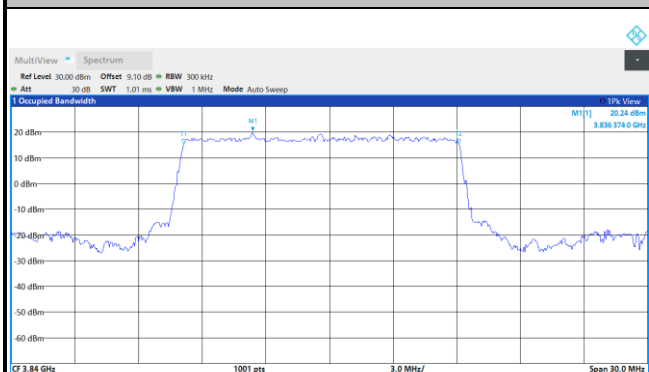
16QAM





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

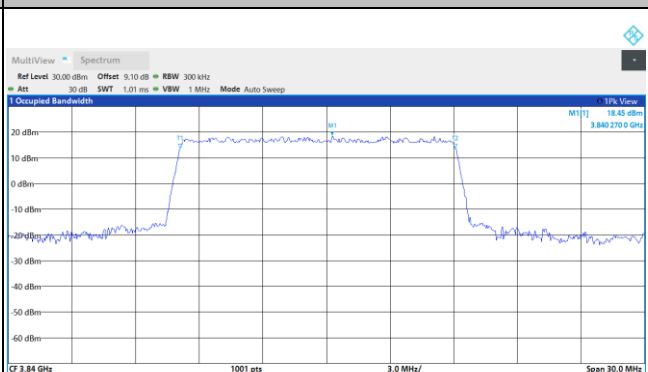
QPSK



Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		3.836 374 GHz	20.24 dBm	Occ Bw	12.968 713 771 MHz
T1	1		3.833 124.2 GHz	15.45 dBm	Occ Bw Centroid	3.839 608 555 GHz
T2	1		3.846 052.9 GHz	15.47 dBm	Occ Bw Freq Offset	-391.444 743 566 kHz

01:29:34 AM 11/02/2025

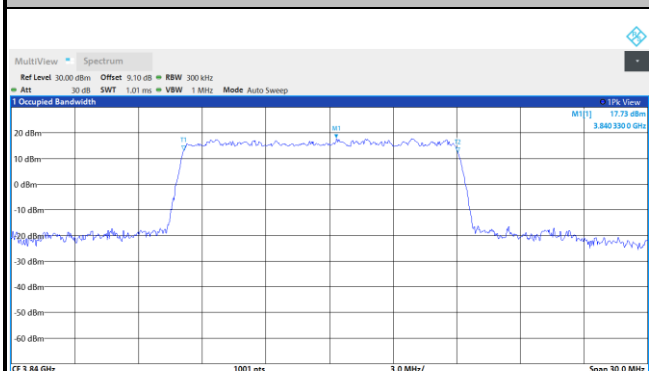
QPSK



Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		3.840 27 GHz	18.45 dBm	Occ Bw	12.956 183 489 MHz
T1	1		3.833 116.6 GHz	13.59 dBm	Occ Bw Centroid	3.839 594 658 GHz
T2	1		3.846 072.7 GHz	13.68 dBm	Occ Bw Freq Offset	-405.342 258 27 kHz

01:30:29 AM 11/02/2025

16QAM



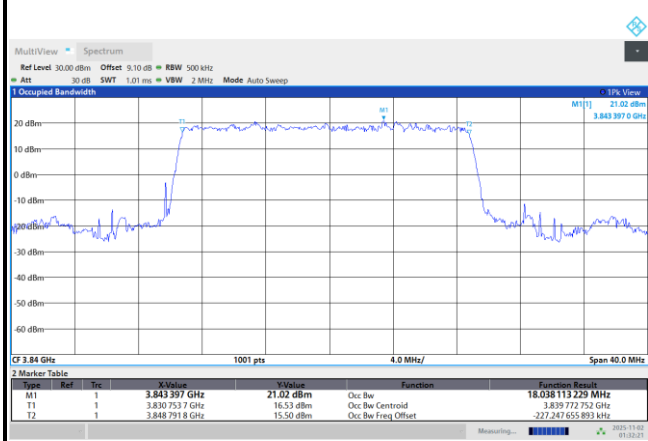
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		3.840 33 GHz	17.73 dBm	Occ Bw	12.925 496 482 MHz
T1	1		3.833 122.7 GHz	13.27 dBm	Occ Bw Centroid	3.839 585 443 GHz
T2	1		3.846 048.2 GHz	12.53 dBm	Occ Bw Freq Offset	-414.557 140 509 kHz

01:31:25 AM 11/02/2025

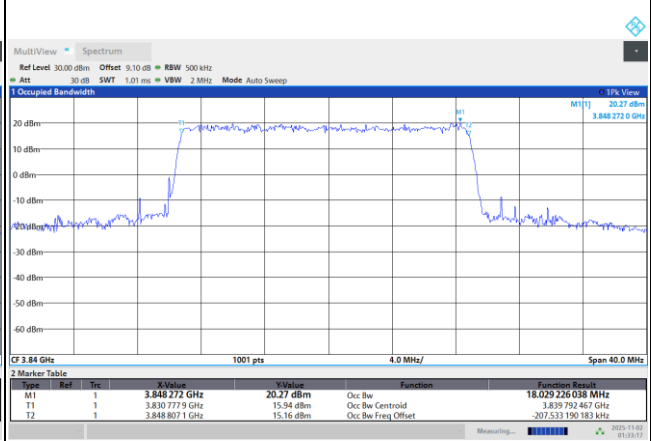


FR1 n77 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

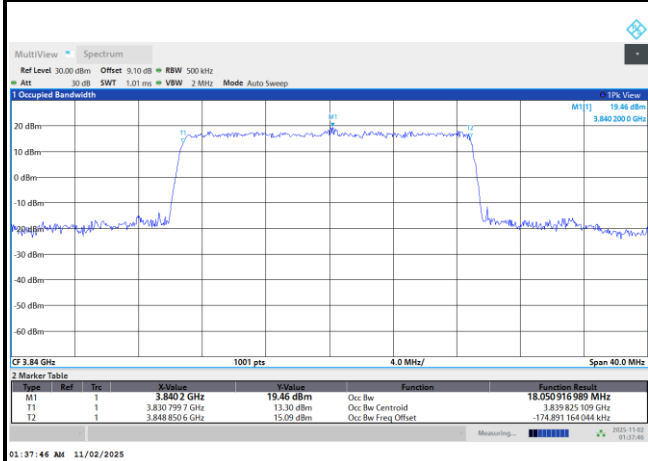
PI/2 BPSK



QPSK



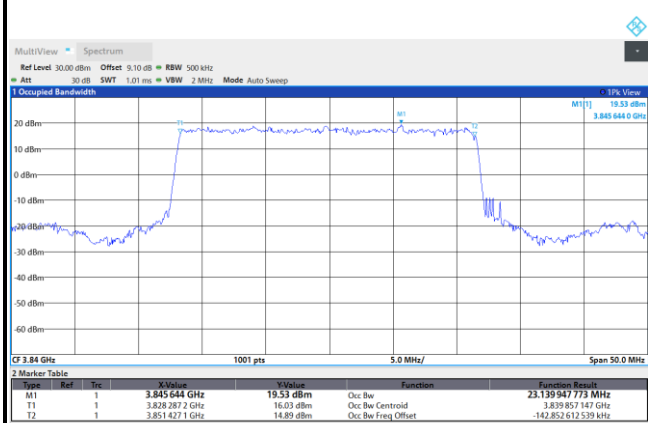
16QAM





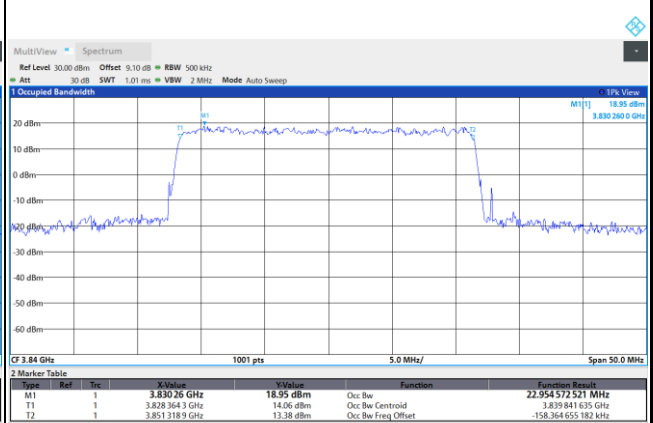
FR1 n77 / 25MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



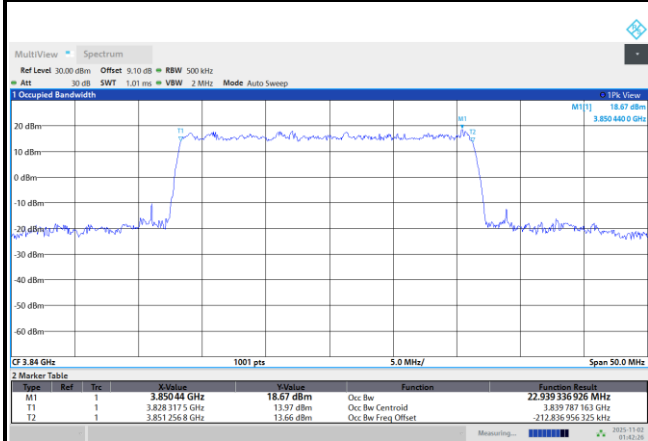
01:40:34 AM 11/02/2025

QPSK



01:41:31 AM 11/02/2025

16QAM

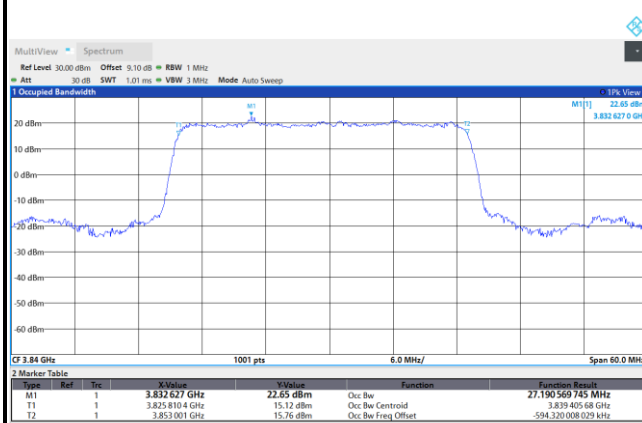


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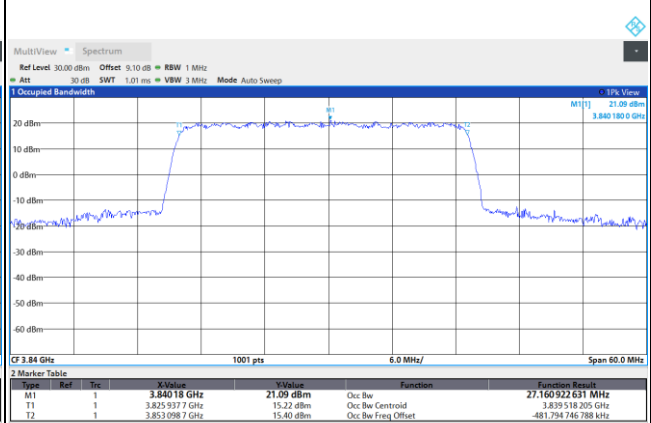
FR1 n77 / 30MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



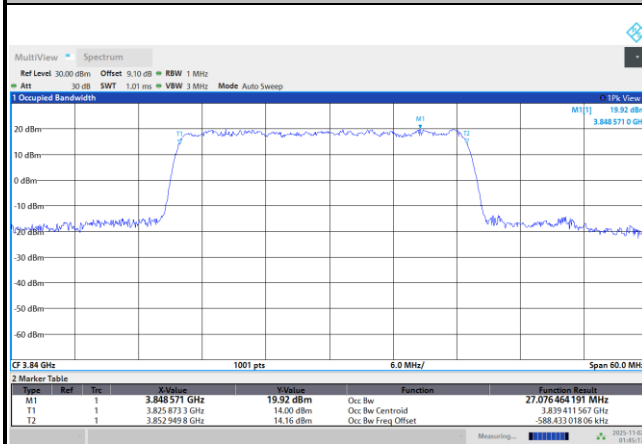
01:43:25 AM 11/02/2025

QPSK



01:44:21 AM 11/02/2025

16QAM

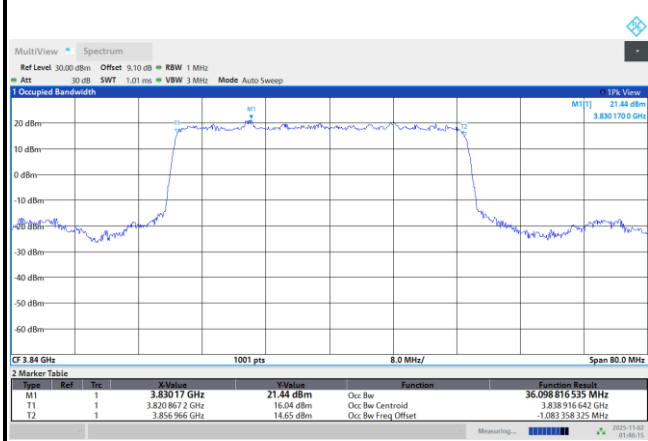


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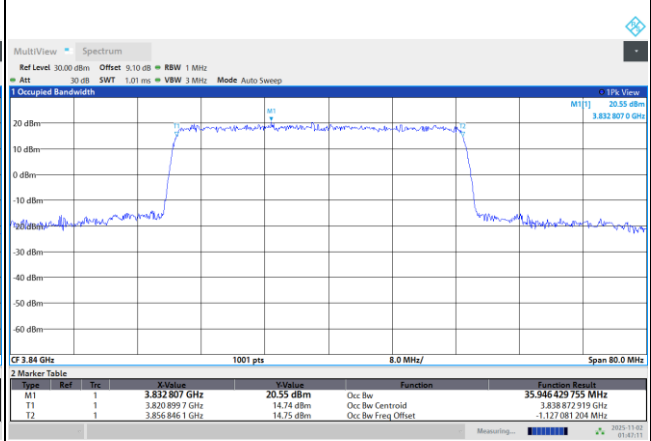


FR1 n77 / 40MHz / DFT-S OFDM / Middle Channel / Full RB

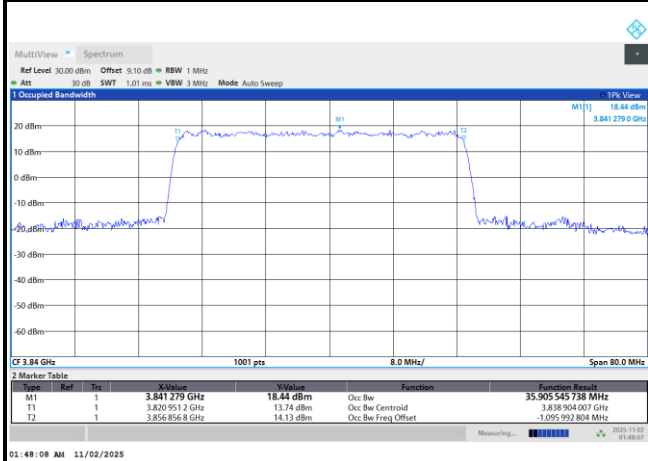
PI/2 BPSK



QPSK



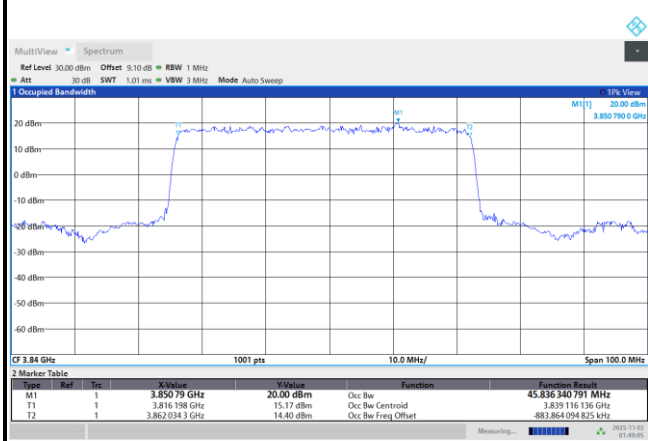
16QAM



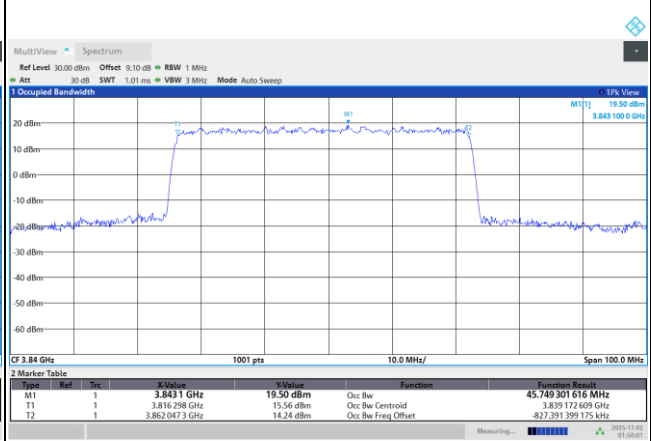


FR1 n77 / 50MHz / DFT-S OFDM / Middle Channel / Full RB

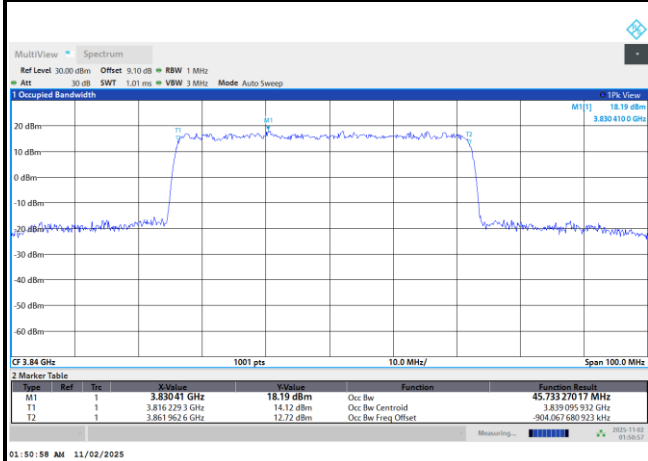
PI/2 BPSK



QPSK



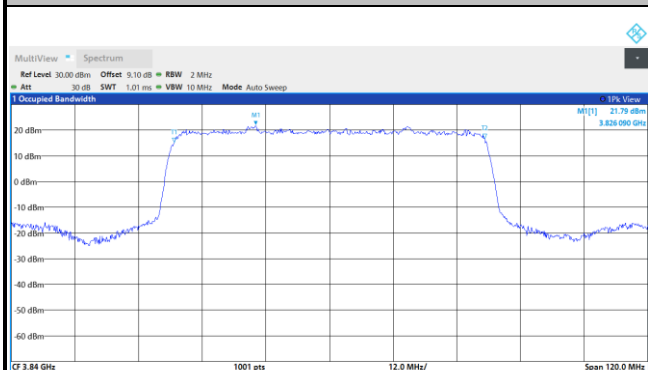
16QAM





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

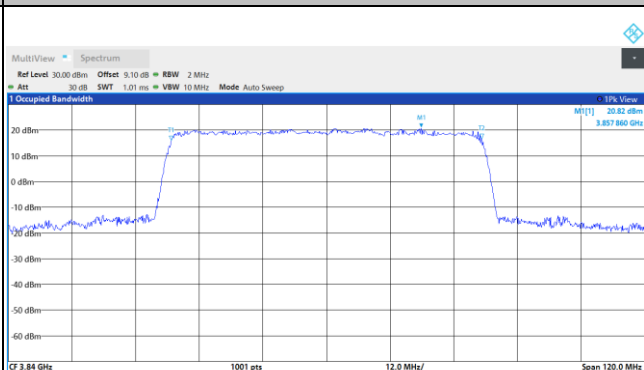
PI/2 BPSK



Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		3.826 09 GHz	21.79 dBm	Occ Bw	58.606 254 389 MHz
T1	1		3.810 704 GHz	15.26 dBm	Occ Bw Centroid	3.840 007 054 GHz
T2	1		3.869 31 GHz	16.67 dBm	Occ Bw Freq Offset	7.054 257 863 kHz

01:51:56 AM 11/02/2025

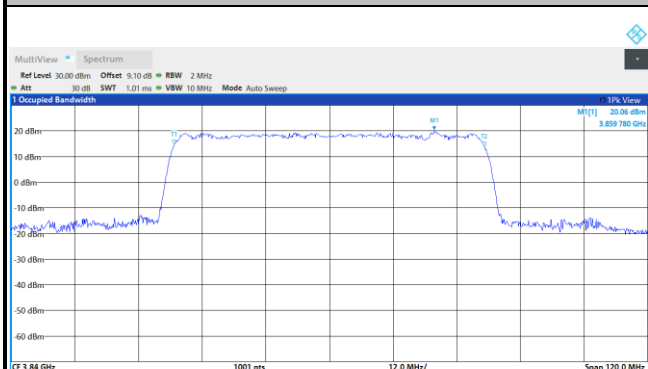
QPSK



Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		3.857 86 GHz	20.82 dBm	Occ Bw	58.505 650 243 MHz
T1	1		3.810 753 GHz	16.01 dBm	Occ Bw Centroid	3.840 006 194 GHz
T2	1		3.869 259 GHz	16.68 dBm	Occ Bw Freq Offset	5.193 509 393 kHz

01:52:52 AM 11/02/2025

16QAM



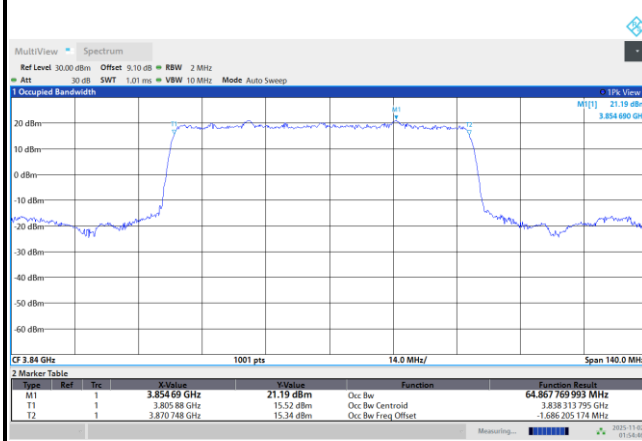
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		3.859 78 GHz	20.96 dBm	Occ Bw	58.412 692 925 MHz
T1	1		3.810 736 GHz	14.66 dBm	Occ Bw Centroid	3.839 942 415 GHz
T2	1		3.869 149 GHz	13.88 dBm	Occ Bw Freq Offset	-57.585 111 057 kHz

01:53:49 AM 11/02/2025



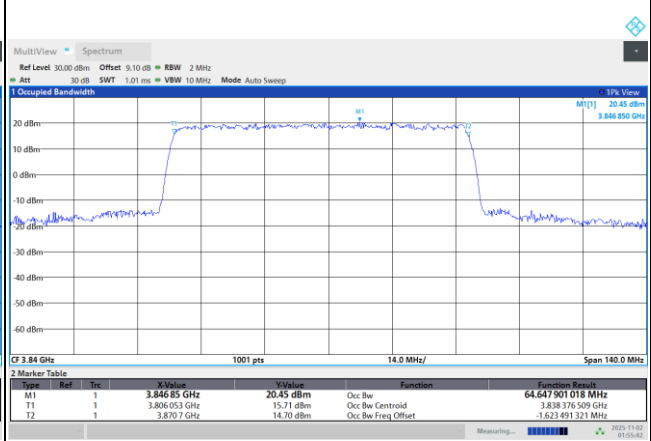
FR1 n77 / 70MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



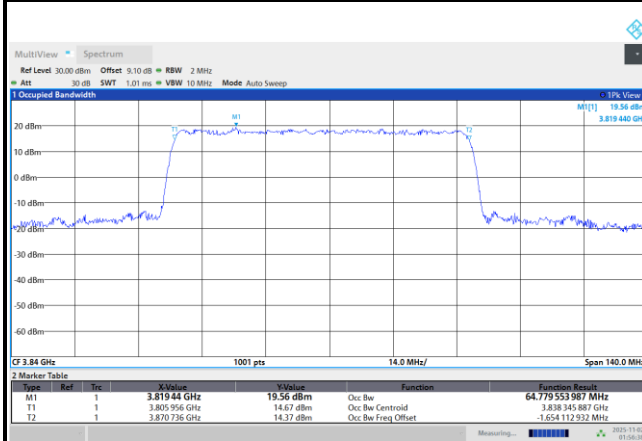
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QPSK



01:55:43 AM 11/02/2025

16QAM

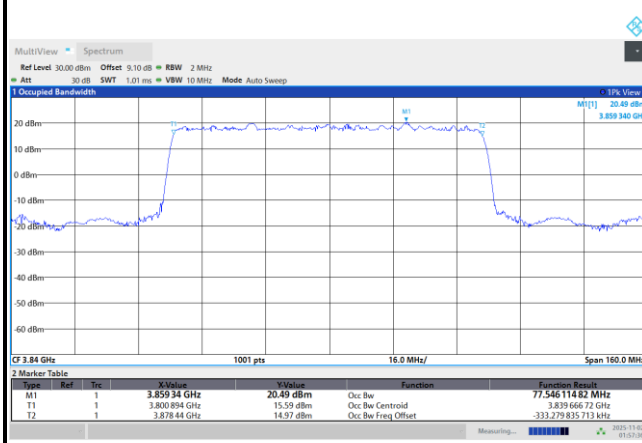


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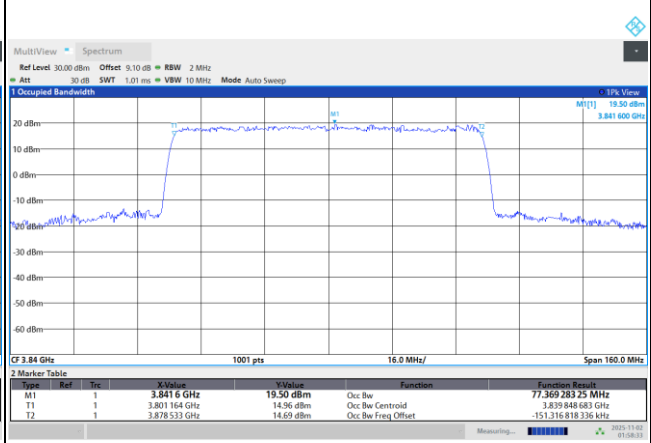
FR1 n77 / 80MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



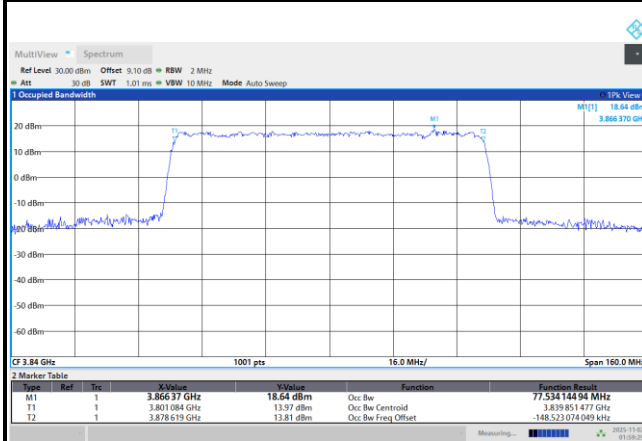
01:57:37 AM 11/02/2025

QPSK



01:58:33 AM 11/02/2025

16QAM

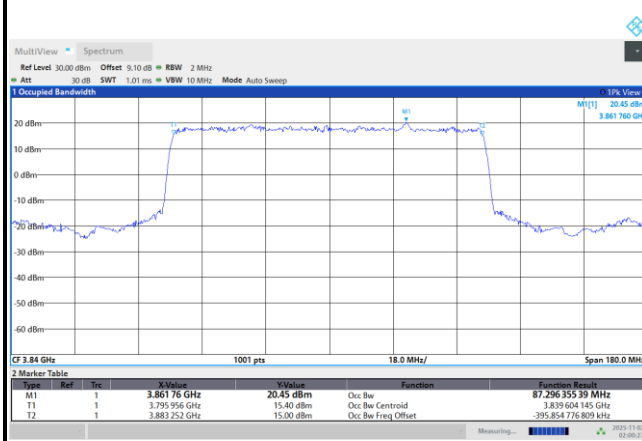


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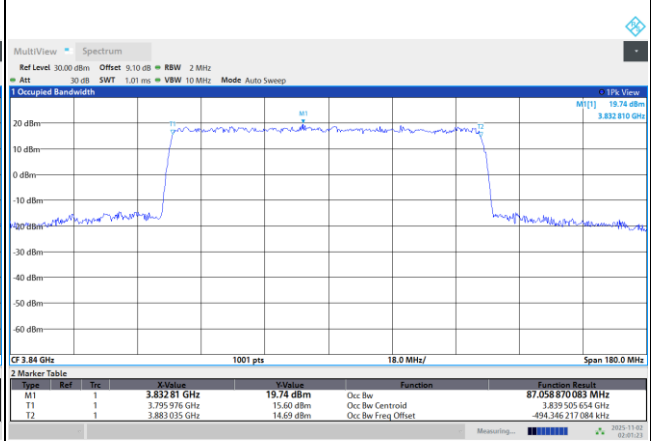


FR1 n77 / 90MHz / DFT-S OFDM / Middle Channel / Full RB

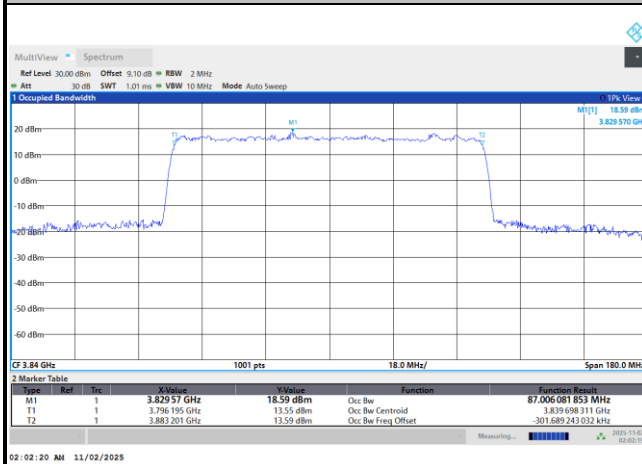
PI/2 BPSK



QPSK



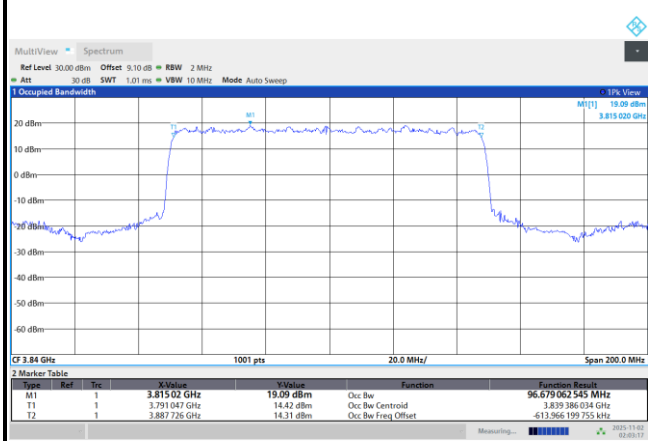
16QAM



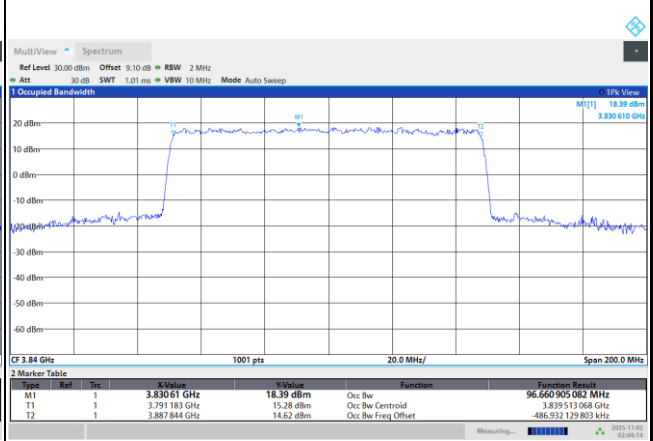


FR1 n77 / 100MHz / DFT-S OFDM / Middle Channel / Full RB

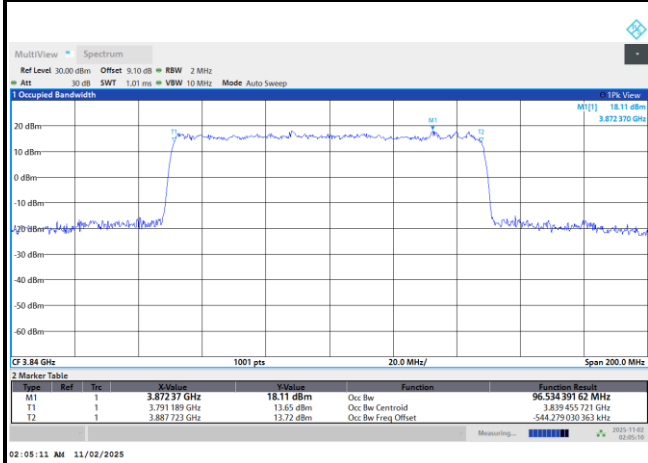
PI/2 BPSK



QPSK



16QAM



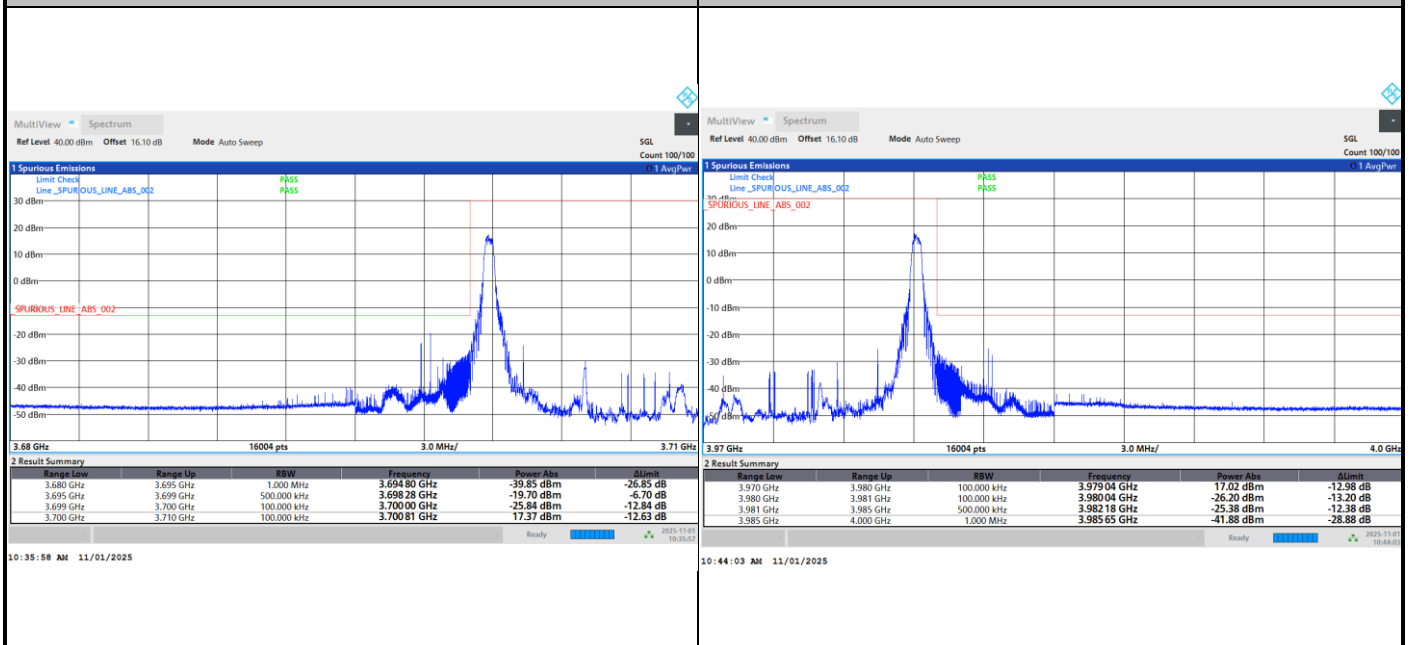


Conducted Band Edge

FR1 n77 / 10MHz / DFT-S OFDM / PI/2 BPSK

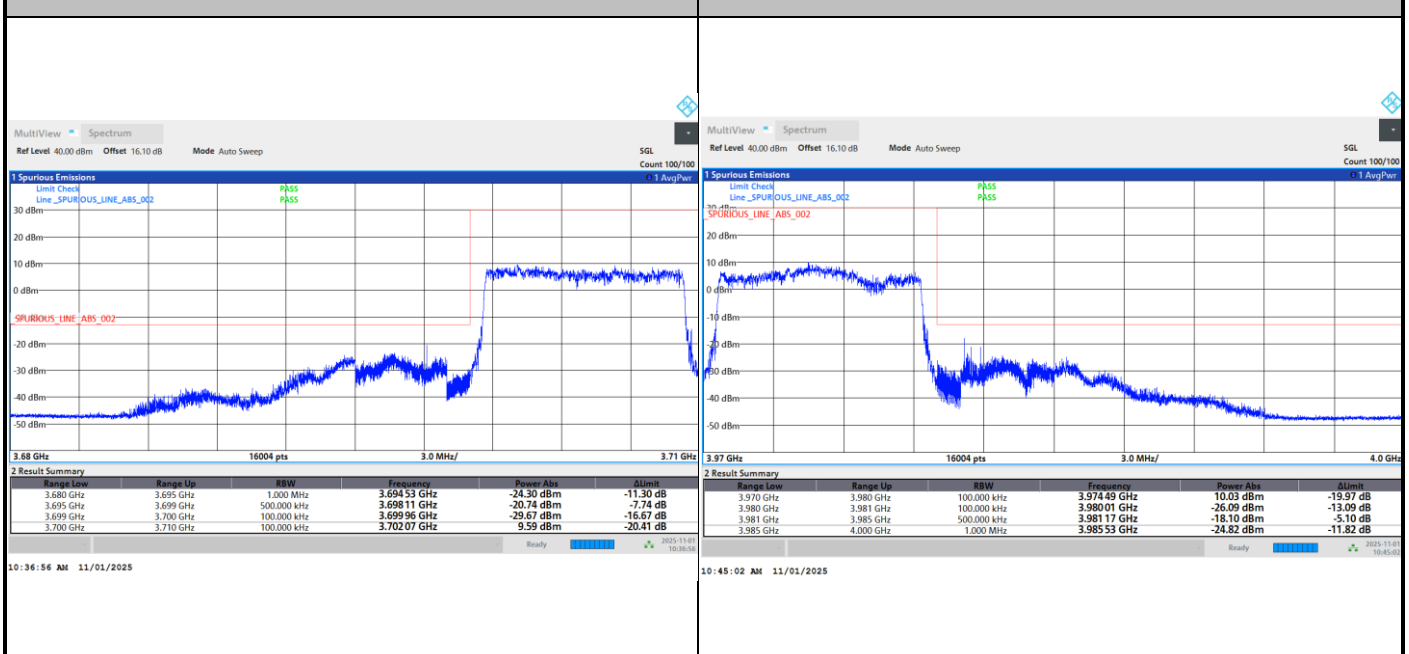
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



Lowest Band Edge / Full RB

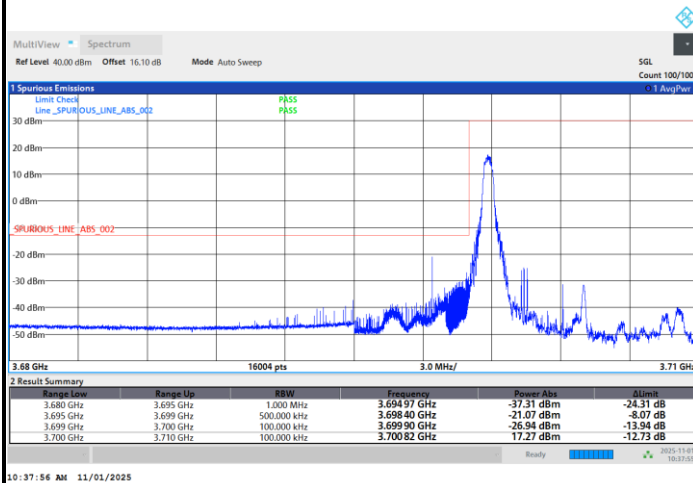
Highest Band Edge / Full RB



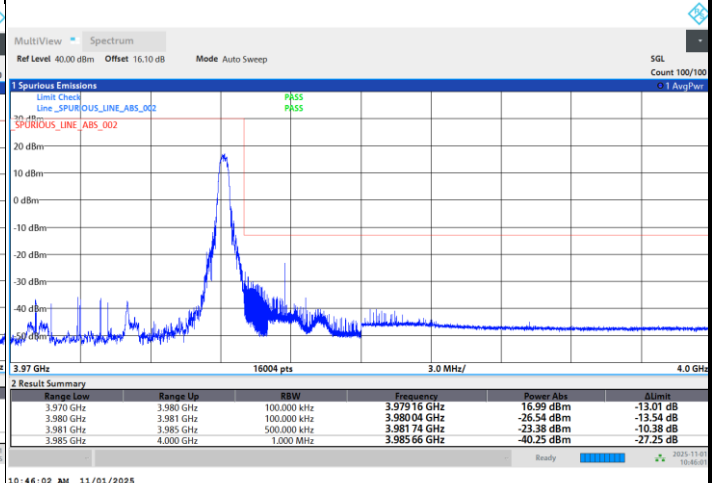


FR1 n77 / 10MHz / DFT-S OFDM / QPSK

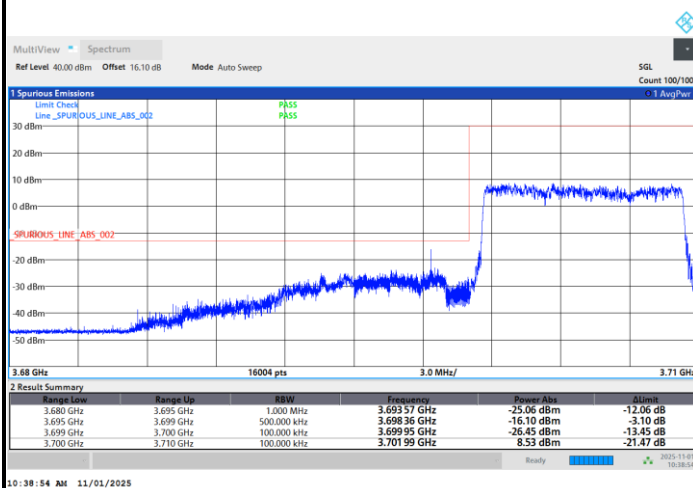
Lowest Band Edge / 1RB0



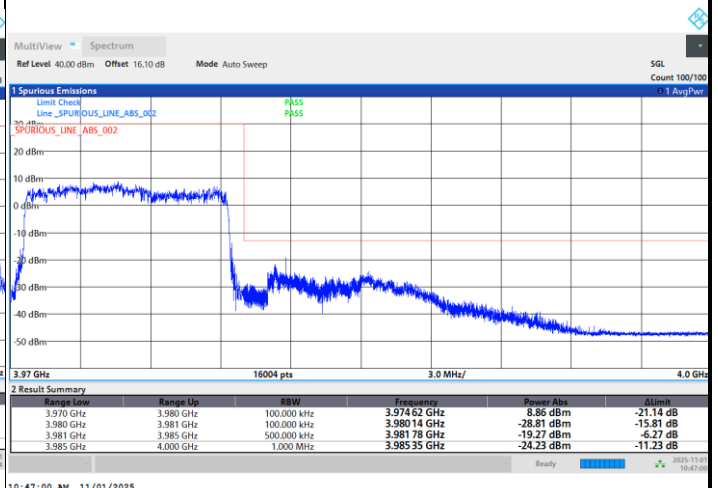
Highest Band Edge / 1RBmax



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

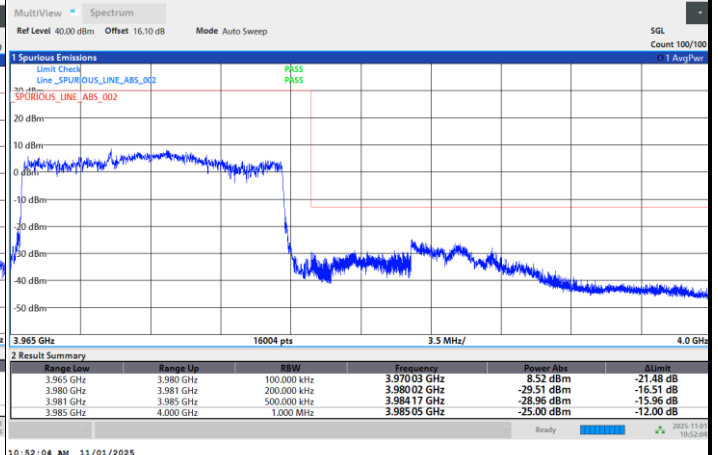
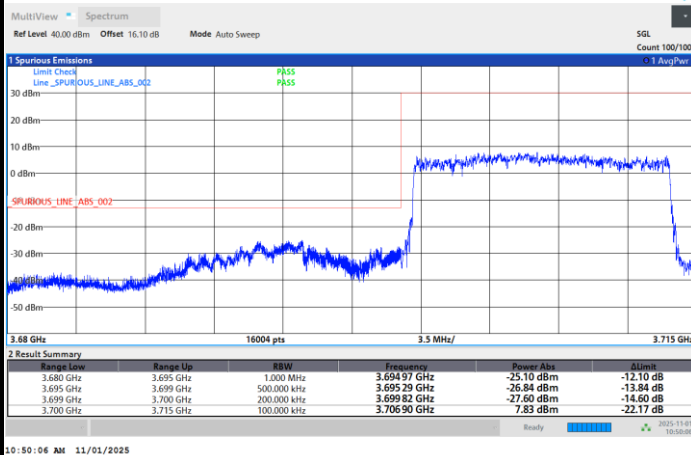




FR1 n77 / 15MHz / DFT-S OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



FR1 n77 / 15MHz / DFT-S OFDM / QPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

