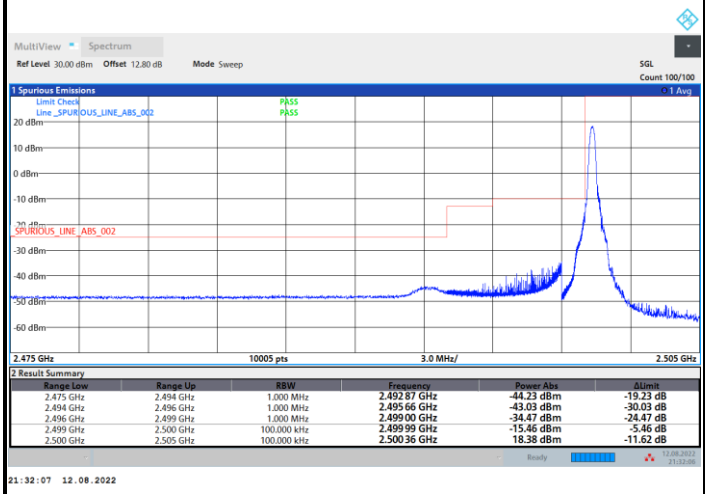
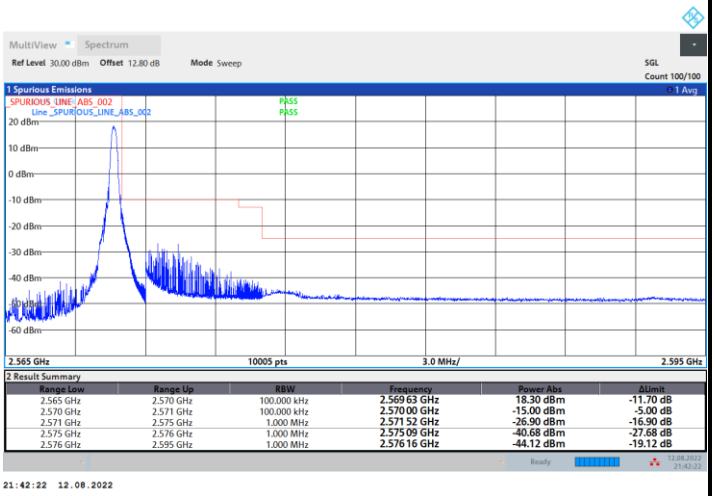
FR1 n7 / 5MHz / DFT-S OFDM / 64QAM

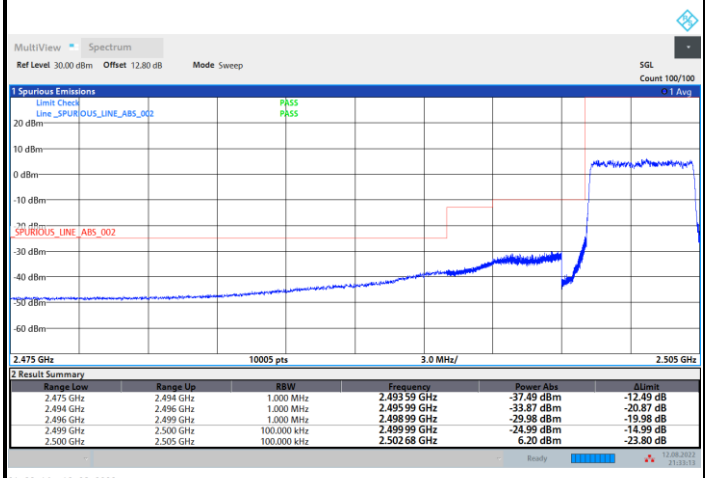
Lowest Band Edge / 1RB0



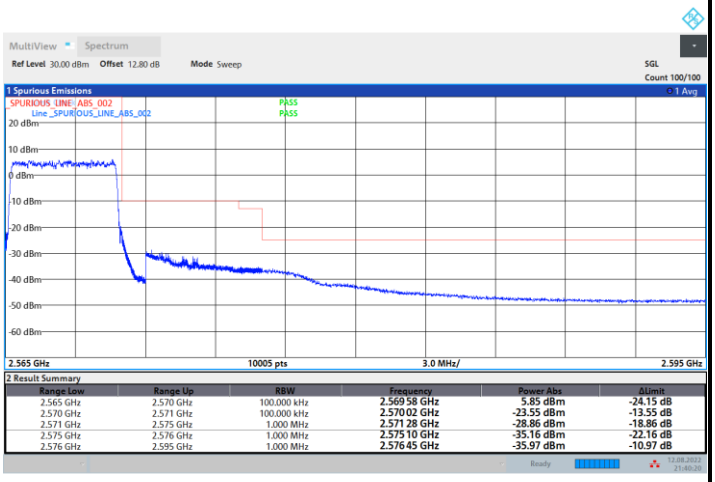
Highest Band Edge / 1RBmax



Lowest Band Edge / Full RB

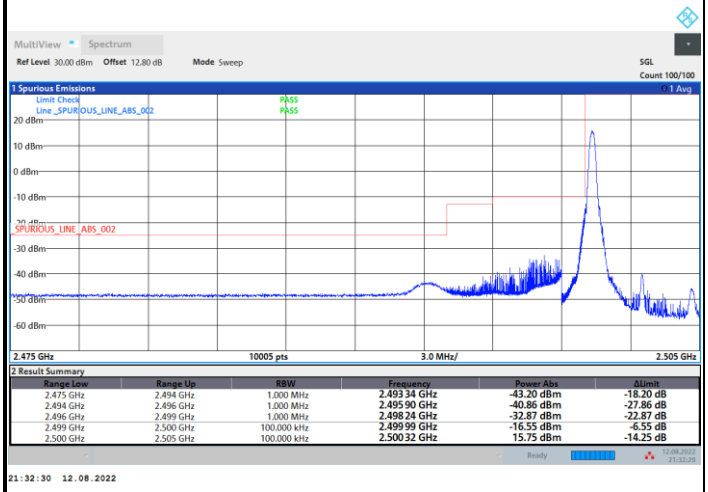


Highest Band Edge / Full RB



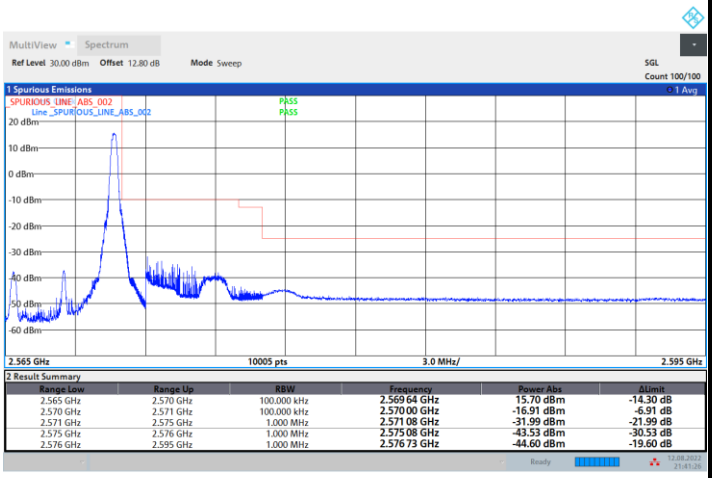
FR1 n7 / 5MHz / DFT-S OFDM / 256QAM

Lowest Band Edge / 1RB0



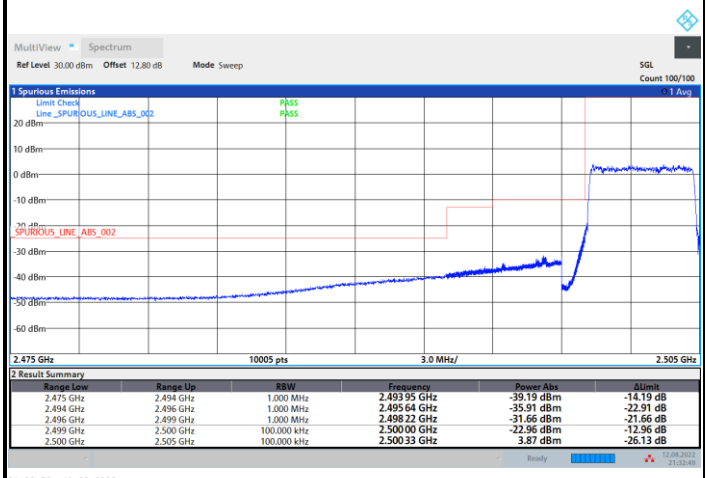
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.494 GHz	1.000 MHz	2.493 34 GHz	-43.20 dBm	-18.20 dB
2.494 GHz	2.496 GHz	1.000 MHz	2.495 90 GHz	-40.86 dBm	-27.86 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.498 24 GHz	-32.87 dBm	-22.87 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.499 99 GHz	-16.55 dBm	-6.55 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.500 32 GHz	15.75 dBm	-14.25 dB

Highest Band Edge / 1RBmax



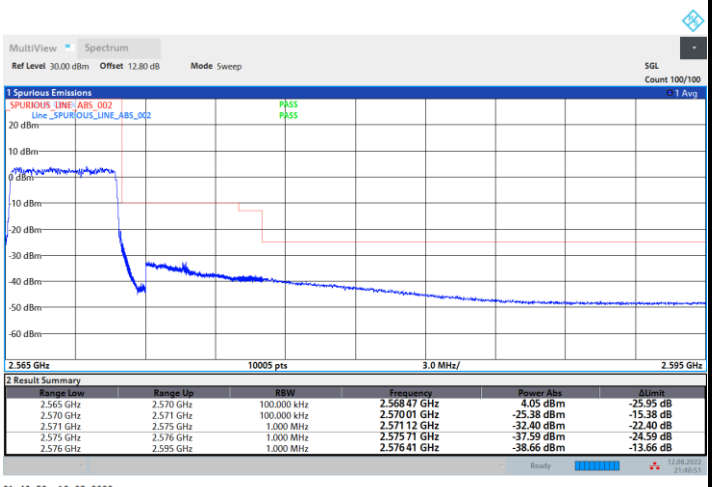
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.569 64 GHz	15.70 dBm	-14.30 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.570 00 GHz	-16.91 dBm	-6.91 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.571 08 GHz	-31.99 dBm	-21.99 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.575 08 GHz	-43.53 dBm	-30.53 dB
2.576 GHz	2.595 GHz	1.000 MHz	2.576 73 GHz	-44.60 dBm	-19.60 dB

Lowest Band Edge / Full RB

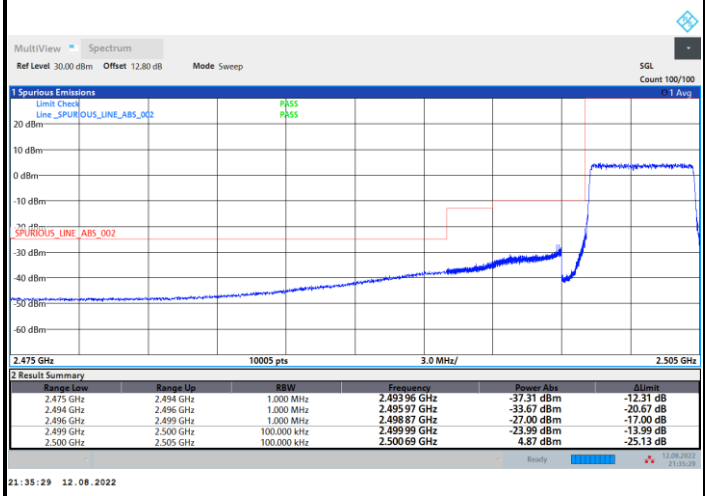
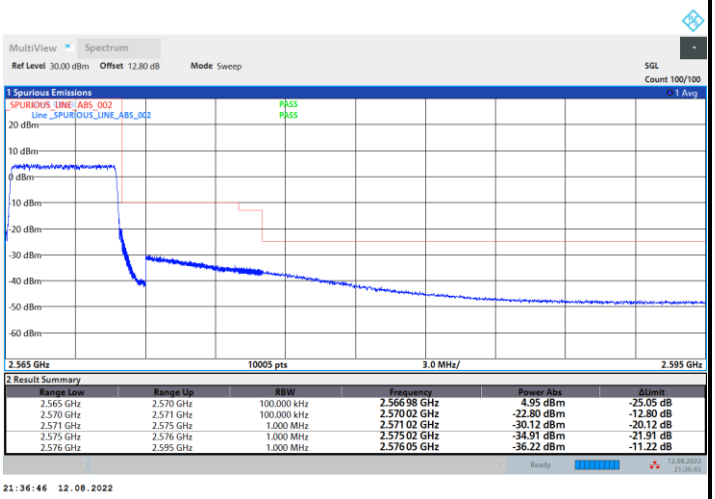


Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.494 GHz	1.000 MHz	2.493 95 GHz	-39.19 dBm	-14.19 dB
2.494 GHz	2.496 GHz	1.000 MHz	2.495 64 GHz	-35.91 dBm	-22.91 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.498 22 GHz	-31.66 dBm	-21.66 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.500 00 GHz	-22.96 dBm	-12.96 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.500 33 GHz	3.87 dBm	-26.13 dB

Highest Band Edge / Full RB

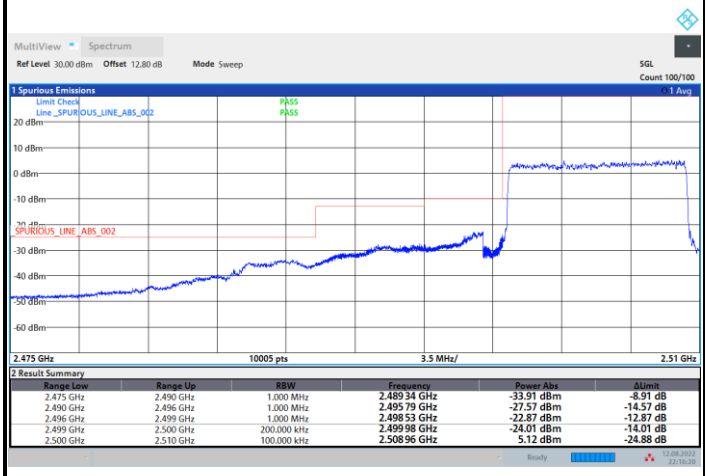


Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.568 47 GHz	4.05 dBm	-25.95 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.570 01 GHz	-25.38 dBm	-15.38 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.571 12 GHz	-32.40 dBm	-22.40 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.575 71 GHz	-37.59 dBm	-24.59 dB
2.576 GHz	2.595 GHz	1.000 MHz	2.576 41 GHz	-38.66 dBm	-13.66 dB

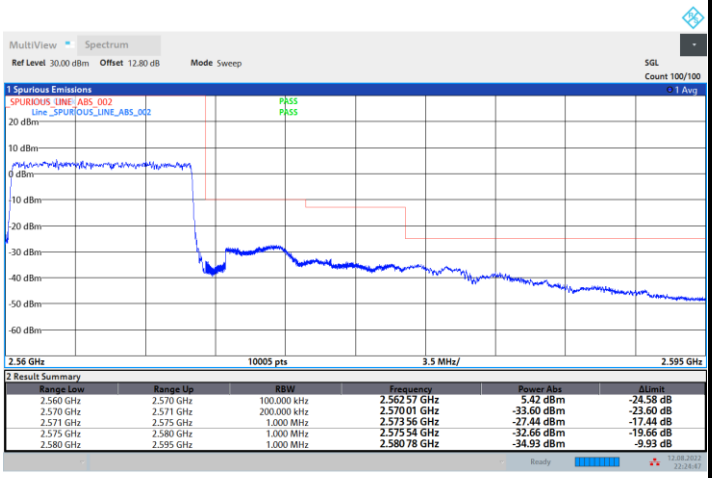
FR1 n7 / 5MHz / CP OFDM / QPSK / Full RB	
Lowest Band Edge	**Highest Band Edge**
	

FR1 n7 / 10MHz / DFT-s-OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

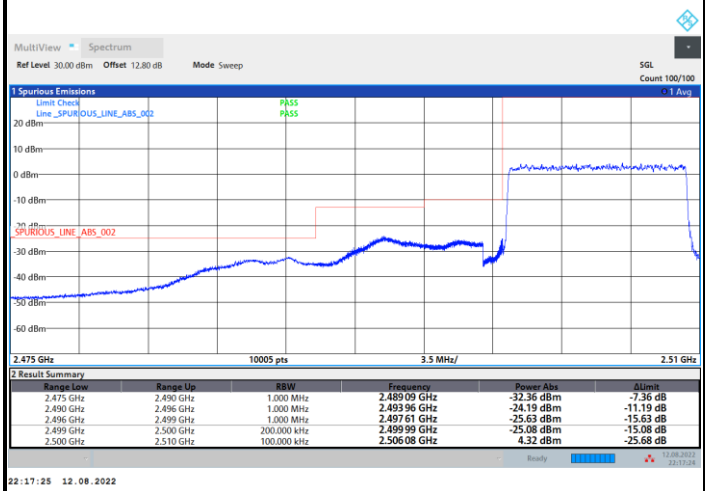


Highest Band Edge

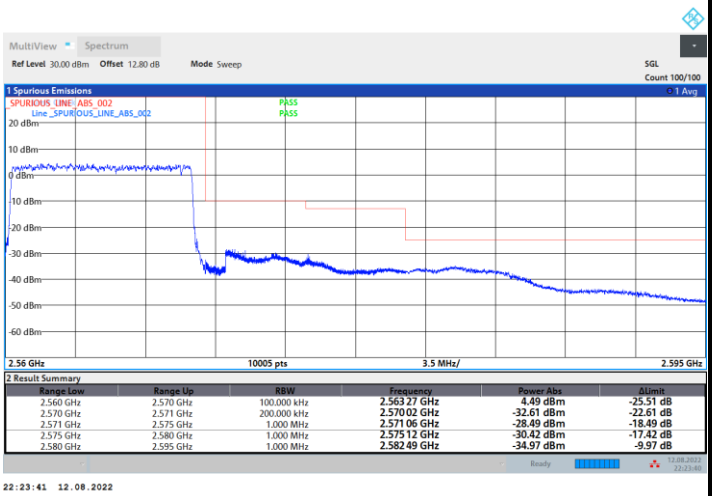


FR1 n7 / 10MHz / DFT-s-OFDM / QPSK / Full RB

Lowest Band Edge

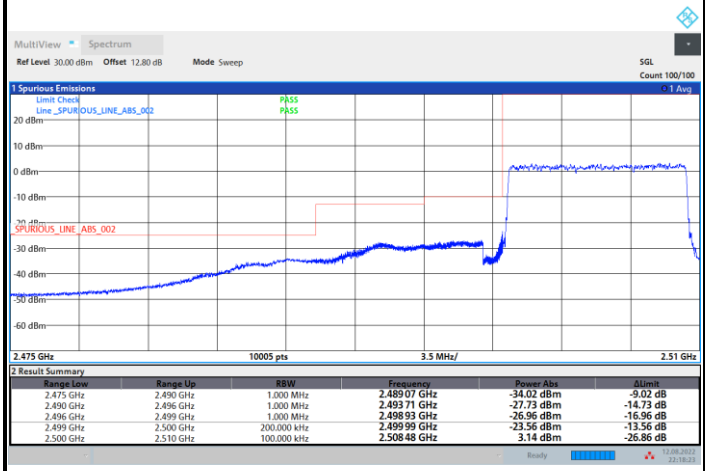


Highest Band Edge

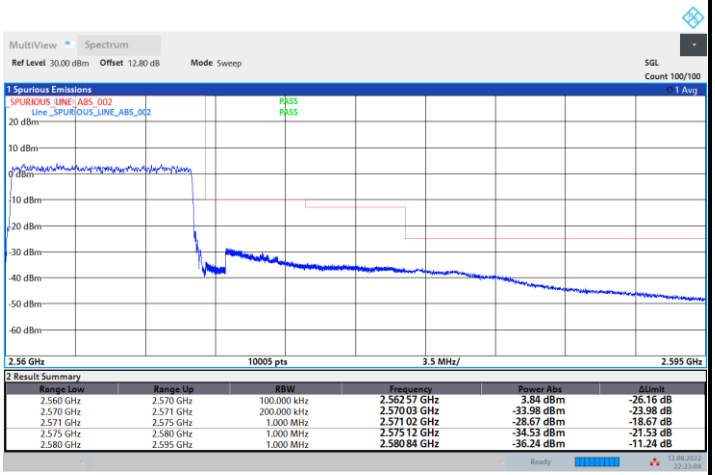


FR1 n7 / 10MHz / DFT-s-OFDM / 16QAM / Full RB

Lowest Band Edge

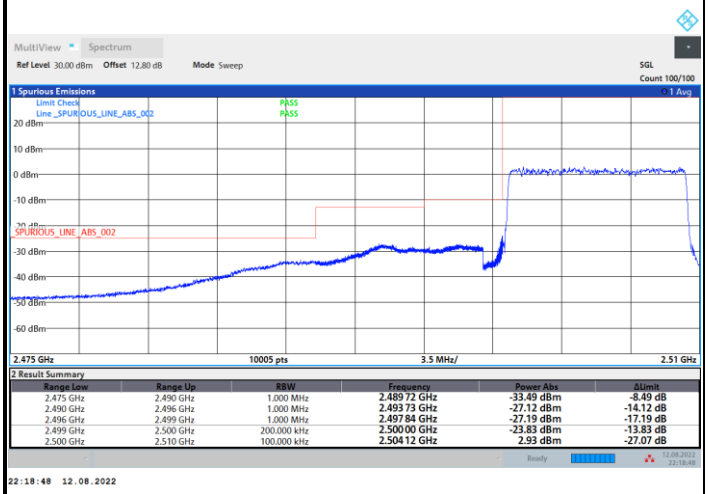


Highest Band Edge

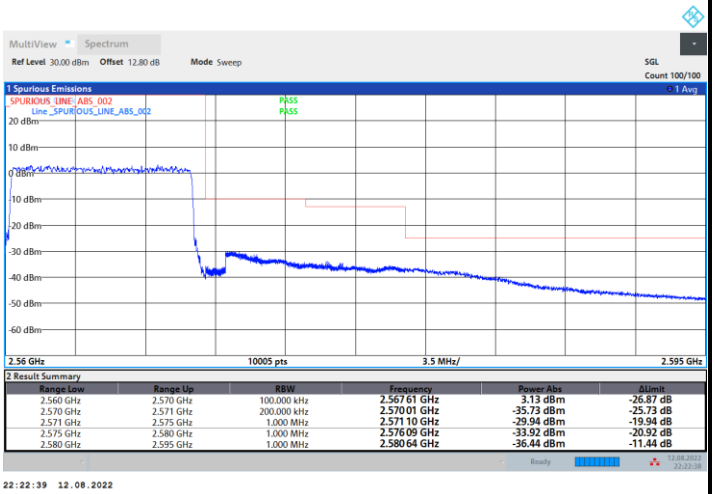


FR1 n7 / 10MHz / DFT-s-OFDM / 64QAM / Full RB

Lowest Band Edge

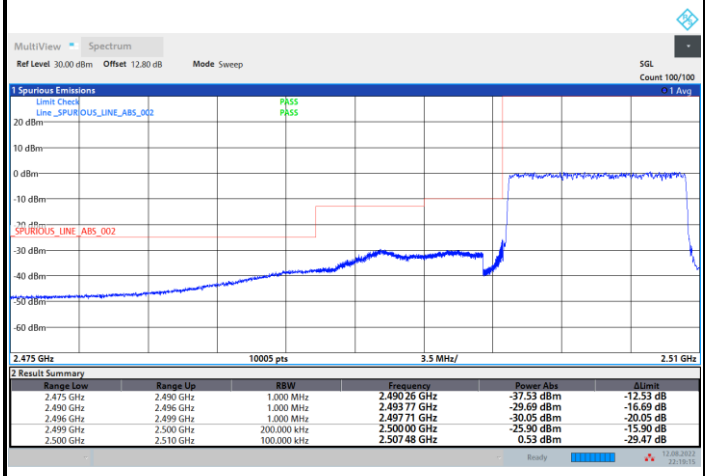


Highest Band Edge

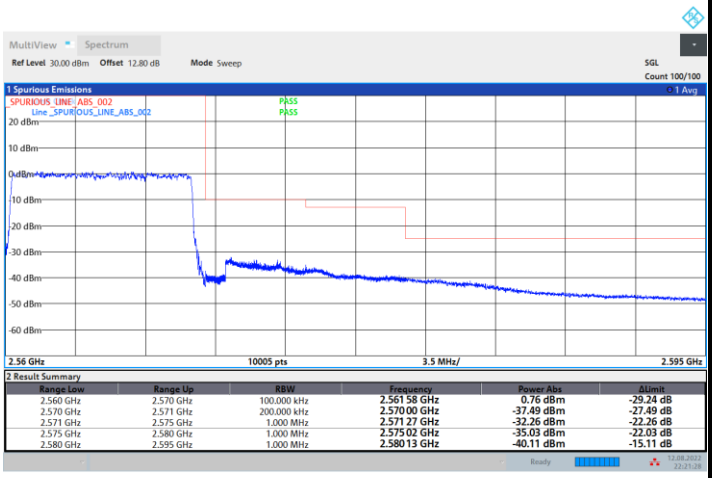


FR1 n7 / 10MHz / DFT-s-OFDM / 256QAM / Full RB

Lowest Band Edge

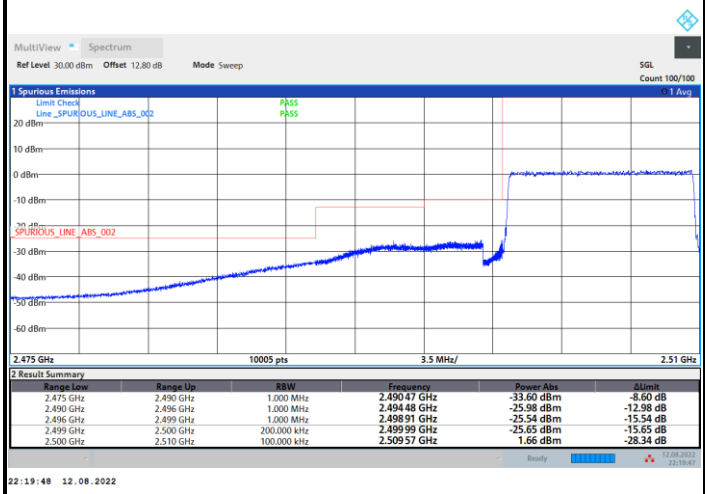


Highest Band Edge

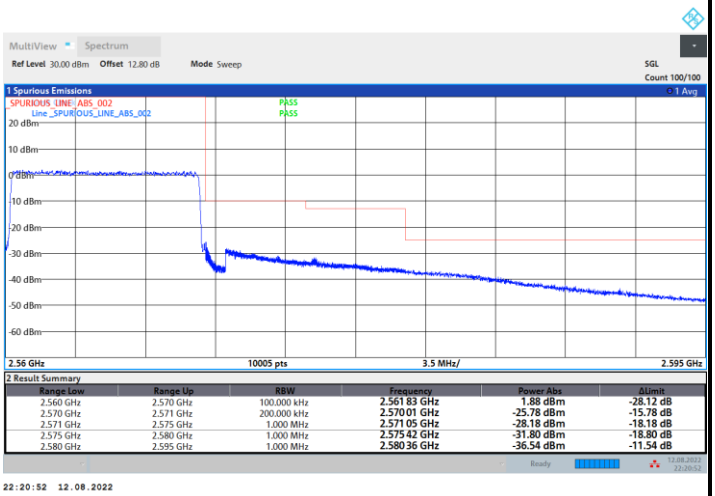


FR1 n7 / 10MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

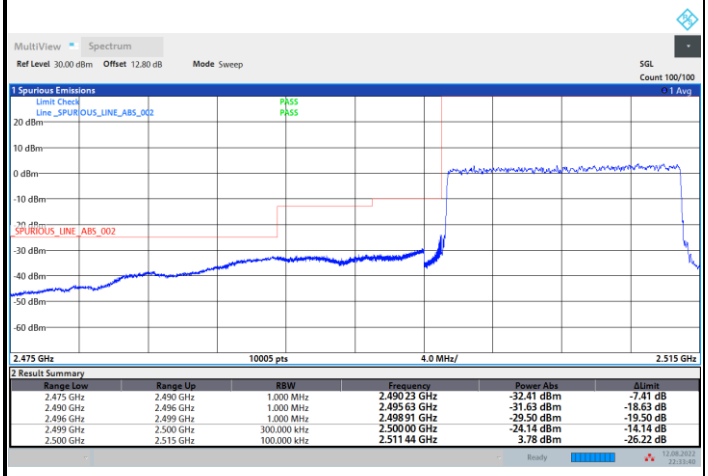


Highest Band Edge

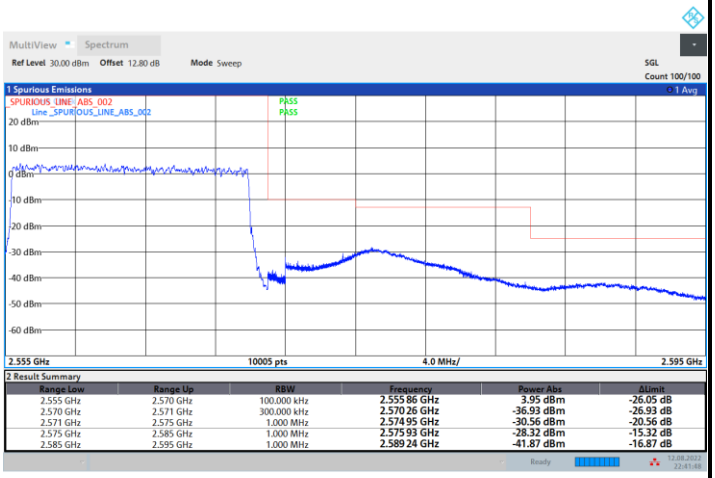


FR1 n7 / 15MHz / DFT-s-OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

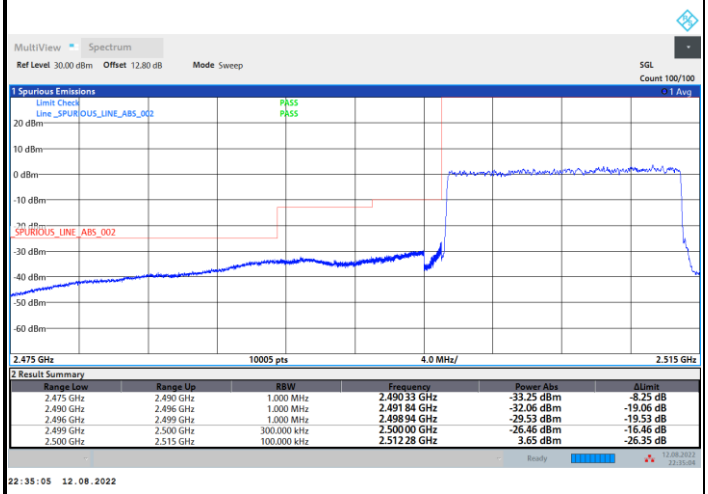


Highest Band Edge

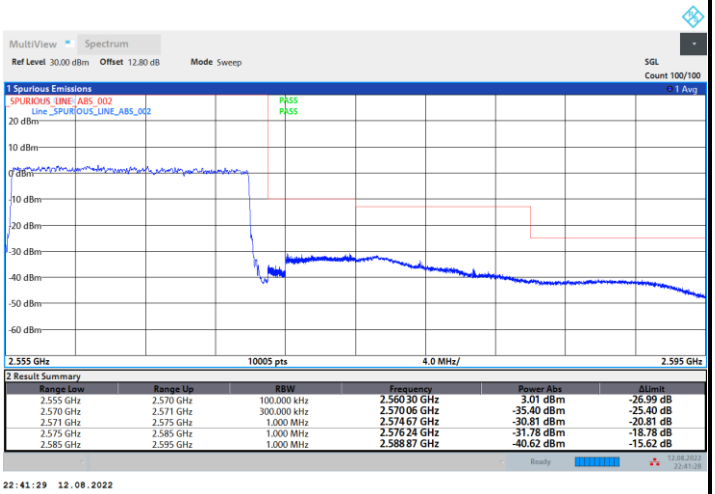


FR1 n7 / 15MHz / DFT-s-OFDM / QPSK / Full RB

Lowest Band Edge

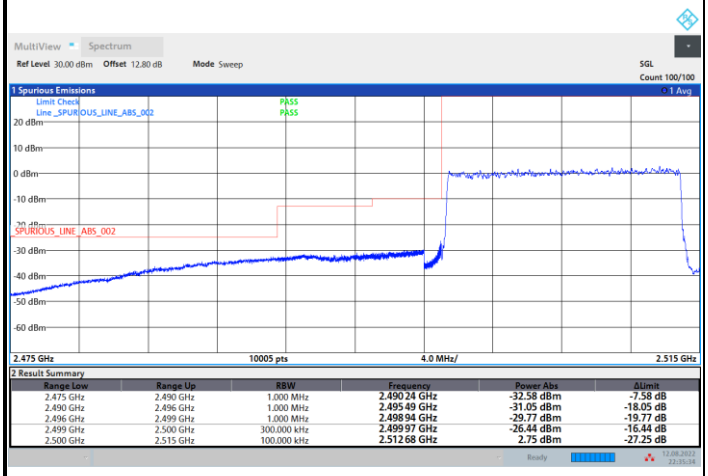


Highest Band Edge

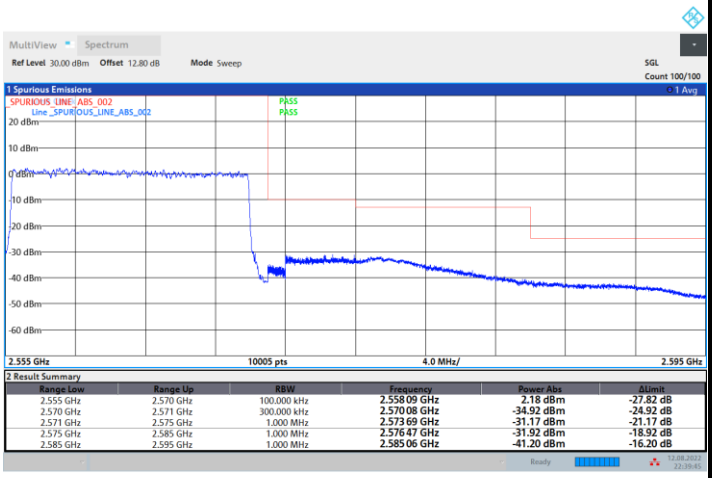


FR1 n7 / 15MHz / DFT-s-OFDM / 16QAM / Full RB

Lowest Band Edge

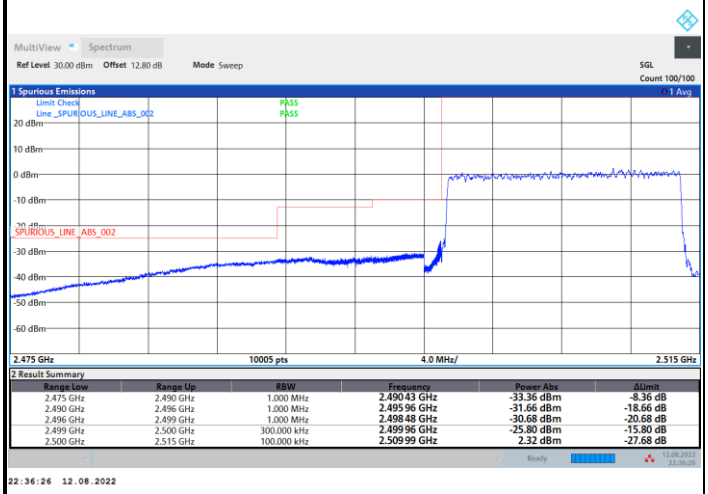


Highest Band Edge

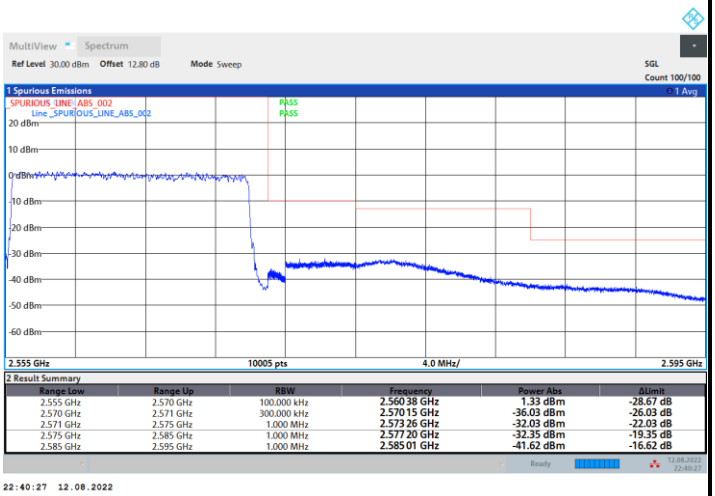


FR1 n7 / 15MHz / DFT-s-OFDM / 64QAM / Full RB

Lowest Band Edge

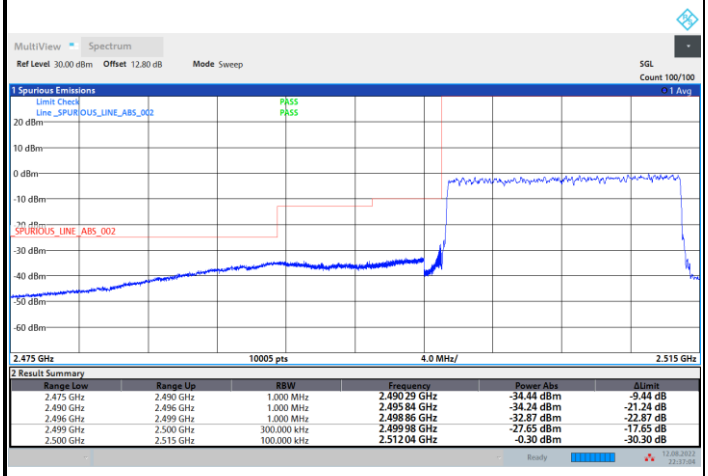


Highest Band Edge

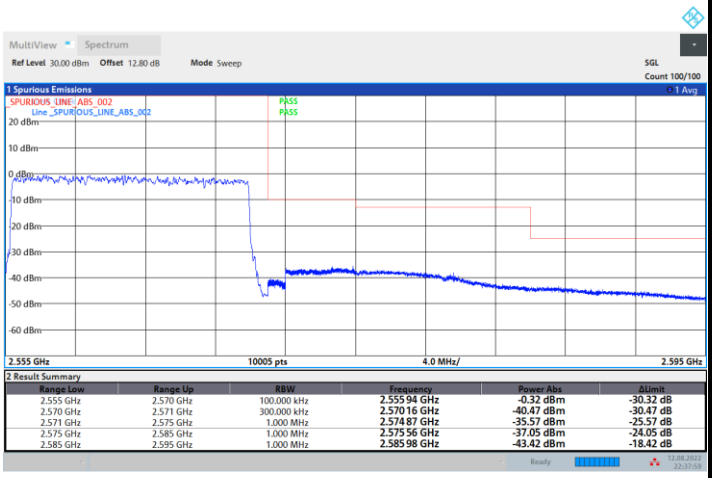


FR1 n7 / 15MHz / DFT-s-OFDM / 256QAM / Full RB

Lowest Band Edge

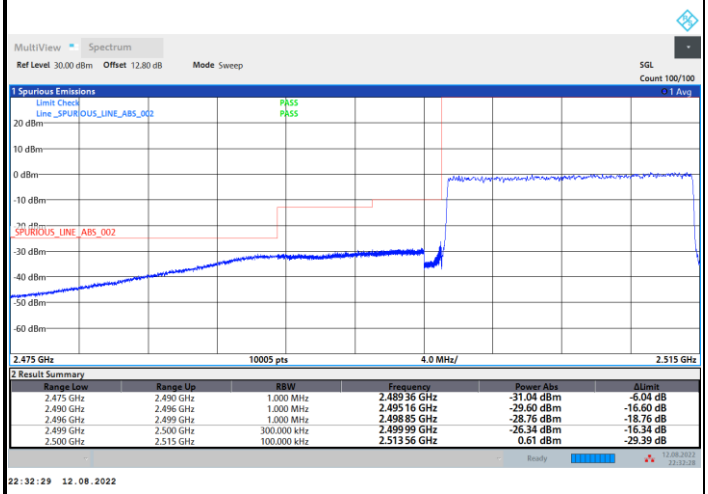


Highest Band Edge

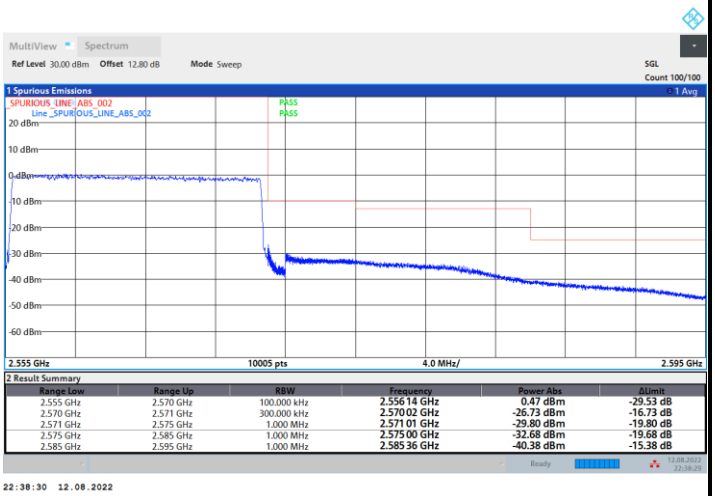


FR1 n7 / 15MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

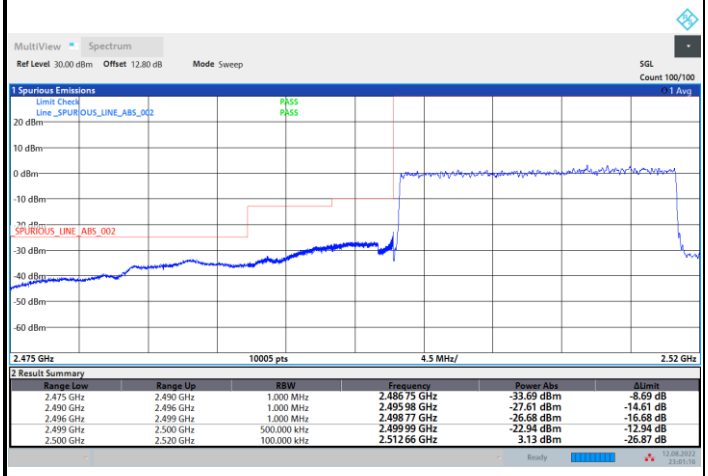


Highest Band Edge

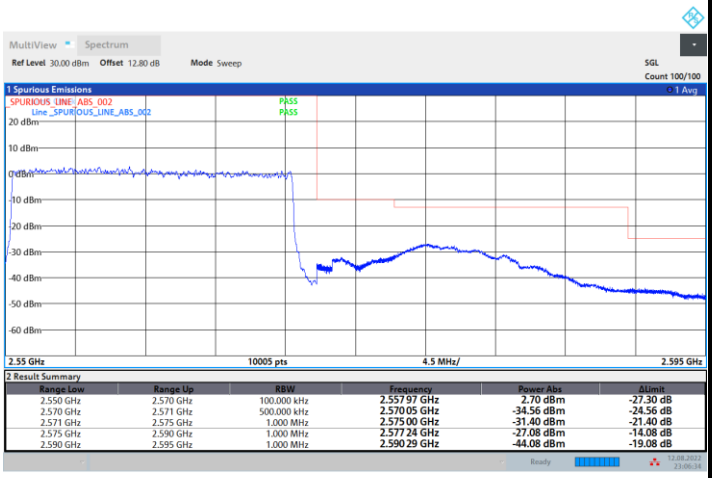


FR1 n7 / 20MHz / DFT-s-OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

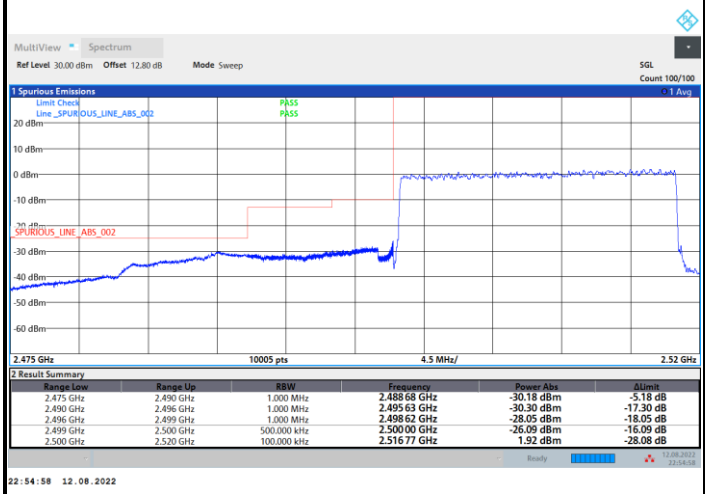


Highest Band Edge

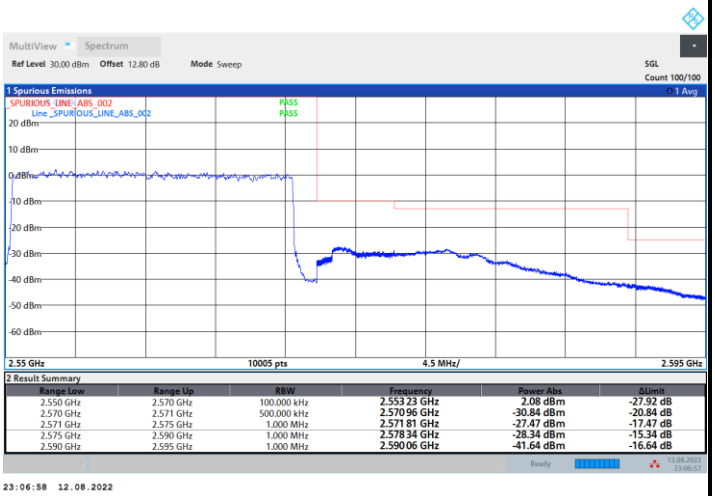


FR1 n7 / 20MHz / DFT-s-OFDM / QPSK / Full RB

Lowest Band Edge

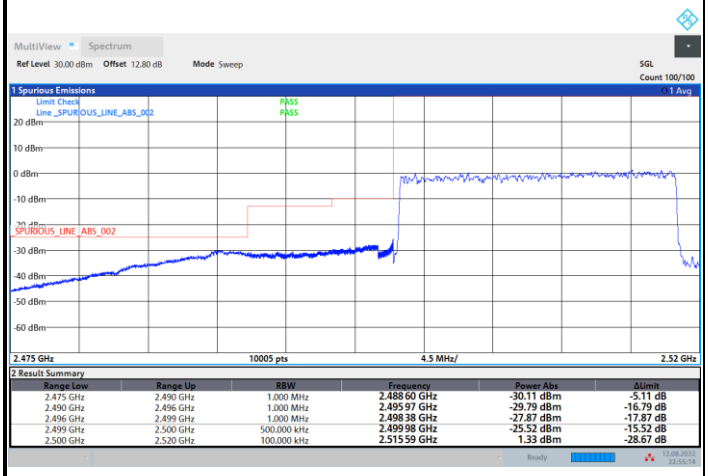


Highest Band Edge



FR1 n7 / 20MHz / DFT-s-OFDM / 16QAM / Full RB

Lowest Band Edge

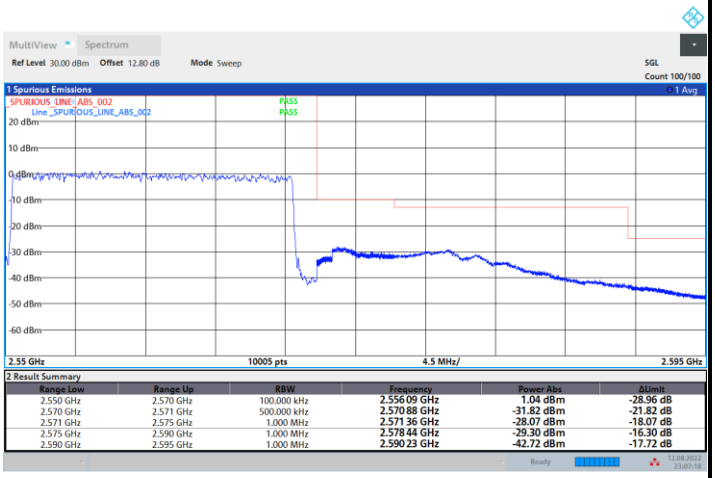


2 Result Summary

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.488 60 GHz	-30.11 dBm	-5.11 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.495 97 GHz	-29.79 dBm	-16.79 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.498 38 GHz	-27.87 dBm	-17.87 dB
2.499 GHz	2.500 GHz	500.000 kHz	2.499 98 GHz	-25.52 dBm	-15.52 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.515 59 GHz	1.33 dBm	-28.67 dB

22:55:15 12.08.2022

Highest Band Edge



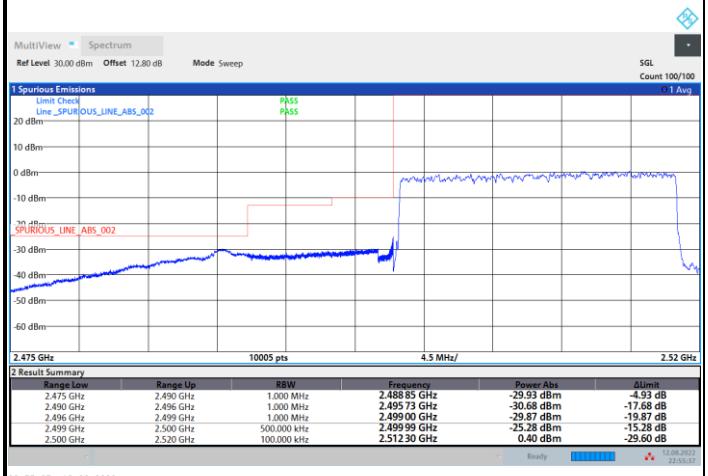
2 Result Summary

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.550 GHz	2.570 GHz	100.000 kHz	2.556 09 GHz	1.04 dBm	-28.96 dB
2.570 GHz	2.571 GHz	500.000 kHz	2.570 88 GHz	-31.82 dBm	-21.82 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.571 36 GHz	-28.07 dBm	-18.07 dB
2.575 GHz	2.590 GHz	1.000 MHz	2.578 44 GHz	-29.30 dBm	-16.30 dB
2.590 GHz	2.595 GHz	1.000 MHz	2.590 23 GHz	-42.72 dBm	-17.72 dB

23:07:19 12.08.2022

FR1 n7 / 20MHz / DFT-s-OFDM / 64QAM / Full RB

Lowest Band Edge

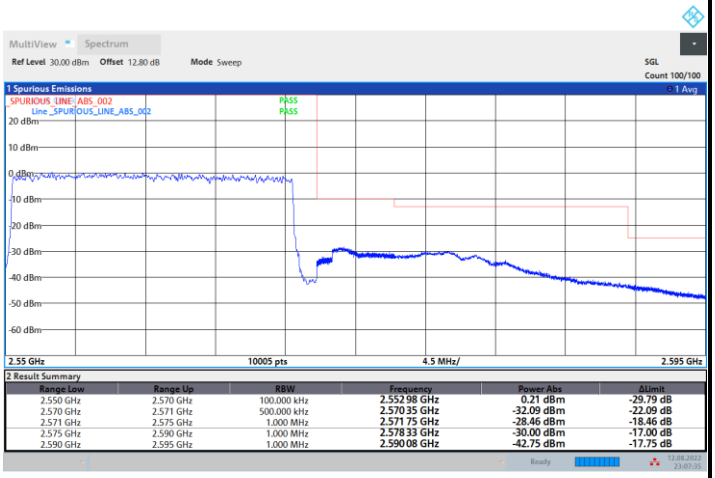


2 Result Summary

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.488 85 GHz	-29.93 dBm	-4.93 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.495 73 GHz	-30.68 dBm	-17.68 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.499 00 GHz	-29.87 dBm	-19.87 dB
2.499 GHz	2.500 GHz	500.000 kHz	2.499 99 GHz	-25.28 dBm	-15.28 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.512 30 GHz	0.40 dBm	-29.60 dB

22:55:37 12.08.2022

Highest Band Edge



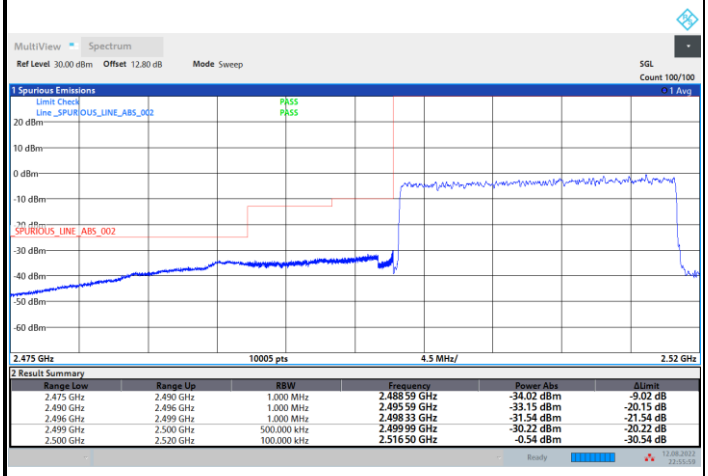
2 Result Summary

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.550 GHz	2.570 GHz	100.000 kHz	2.552 98 GHz	0.21 dBm	-29.79 dB
2.570 GHz	2.571 GHz	500.000 kHz	2.570 35 GHz	-32.09 dBm	-22.09 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.571 75 GHz	-28.46 dBm	-18.46 dB
2.575 GHz	2.590 GHz	1.000 MHz	2.578 33 GHz	-30.00 dBm	-17.00 dB
2.590 GHz	2.595 GHz	1.000 MHz	2.590 08 GHz	-42.75 dBm	-17.75 dB

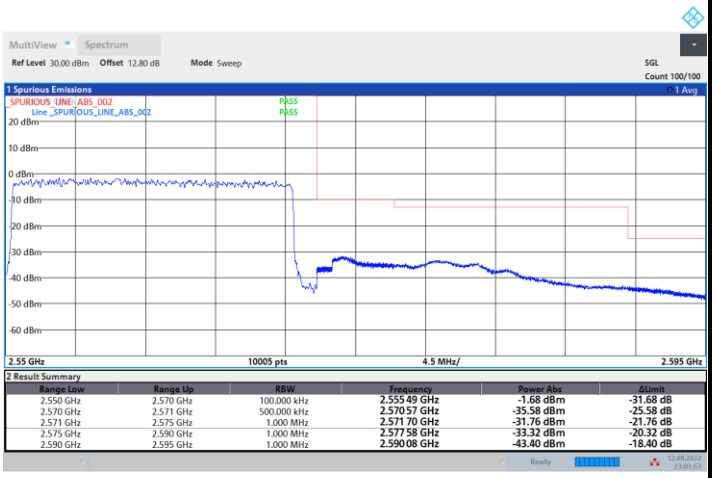
23:07:36 12.08.2022

FR1 n7 / 20MHz / DFT-s-OFDM / 256QAM / Full RB

Lowest Band Edge

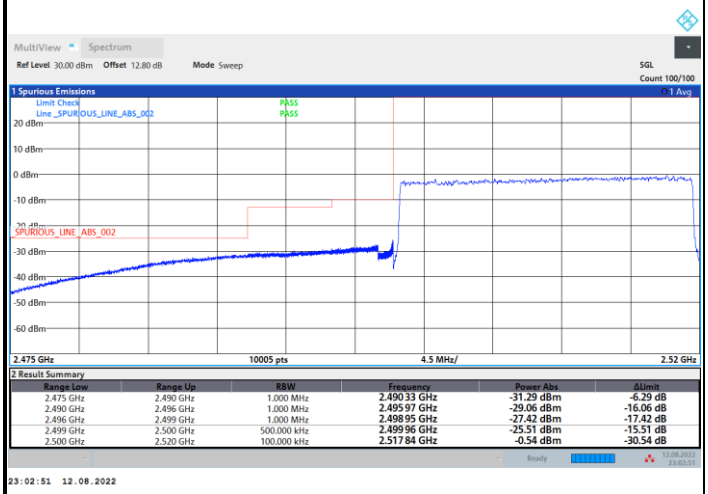


Highest Band Edge

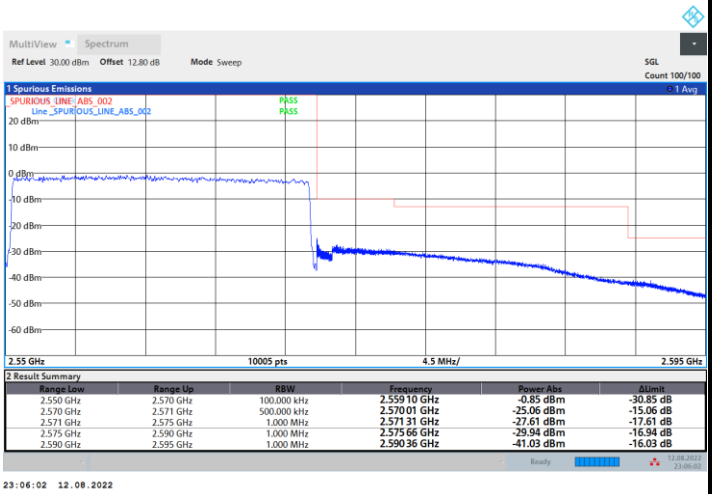


FR1 n7 / 20MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge



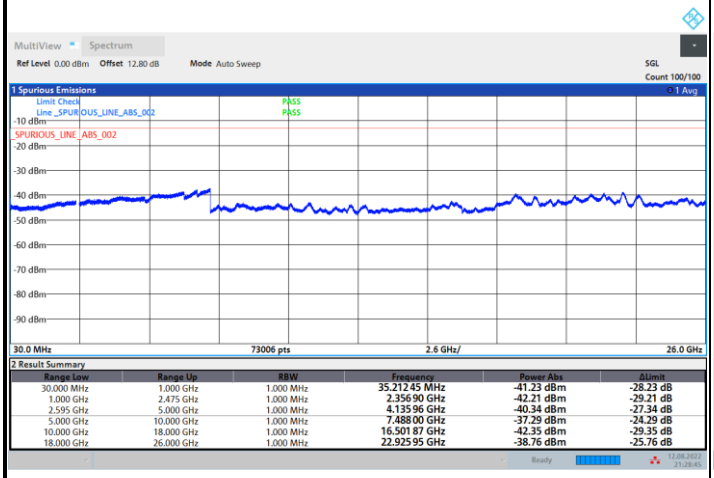
Highest Band Edge



Conducted Spurious Emission

FR1 n7 / 5MHz / DFT-S OFDM / QPSK / 1RB1

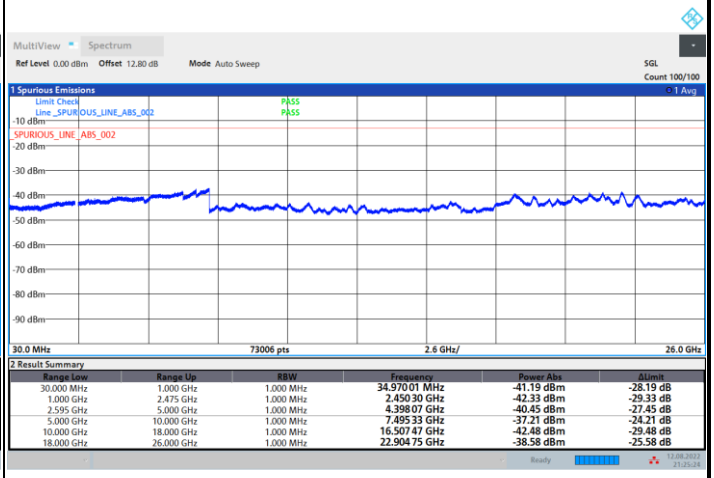
Lowest Channel



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	35.212 45 MHz	-41.23 dBm	-28.23 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.356 90 GHz	-42.21 dBm	-29.21 dB
2.595 GHz	5.000 GHz	1.000 MHz	4.135 96 GHz	-40.34 dBm	-27.34 dB
5.000 GHz	10.000 GHz	1.000 MHz	7.488 00 GHz	-37.29 dBm	-24.29 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.501 87 GHz	-42.35 dBm	-29.35 dB
18.000 GHz	26.000 GHz	1.000 MHz	22.925 95 GHz	-38.76 dBm	-25.76 dB

21:28:46 12.08.2022

Middle Channel



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	34.970 01 MHz	-41.19 dBm	-28.19 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.450 30 GHz	-42.33 dBm	-29.33 dB
2.595 GHz	5.000 GHz	1.000 MHz	4.398 07 GHz	-40.45 dBm	-27.45 dB
5.000 GHz	10.000 GHz	1.000 MHz	7.495 33 GHz	-37.21 dBm	-24.21 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.507 47 GHz	-42.48 dBm	-29.48 dB
18.000 GHz	26.000 GHz	1.000 MHz	22.904 75 GHz	-38.58 dBm	-25.58 dB

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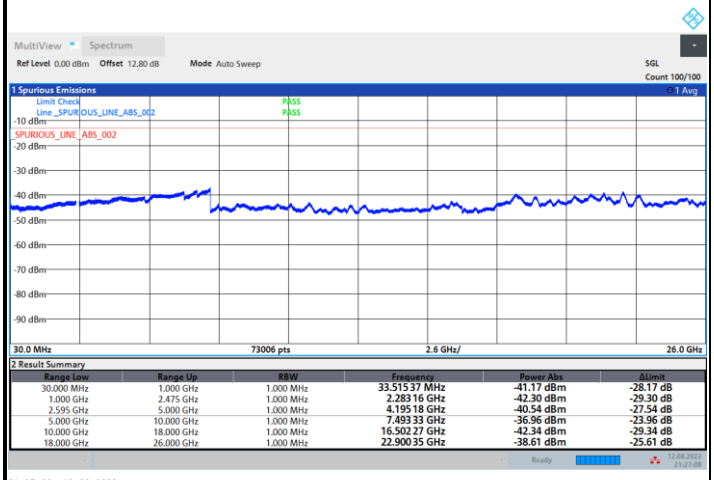
Highest Channel



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	33.515 37 MHz	-41.17 dBm	-28.17 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.283 16 GHz	-42.30 dBm	-29.30 dB
2.595 GHz	5.000 GHz	1.000 MHz	4.195 18 GHz	-40.54 dBm	-27.54 dB
5.000 GHz	10.000 GHz	1.000 MHz	7.493 33 GHz	-36.96 dBm	-23.96 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.502 27 GHz	-42.34 dBm	-29.34 dB
18.000 GHz	26.000 GHz	1.000 MHz	22.900 35 GHz	-38.61 dBm	-25.61 dB

21:27:09 12.08.2022

Frequency Stability

Test Conditions		FR1 n7 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0004	PASS
40	Normal Voltage	0.0043	
30	Normal Voltage	0.0040	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0021	
0	Normal Voltage	0.0057	
-10	Normal Voltage	0.0010	
-20	Normal Voltage	0.0002	
-30	Normal Voltage	0.0004	
20	Maximum Voltage	0.0034	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0052	

Note:

1. Normal Voltage = 3.3 V.；Battery End Point (BEP) = 3.135 V.；Maximum Voltage = 4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

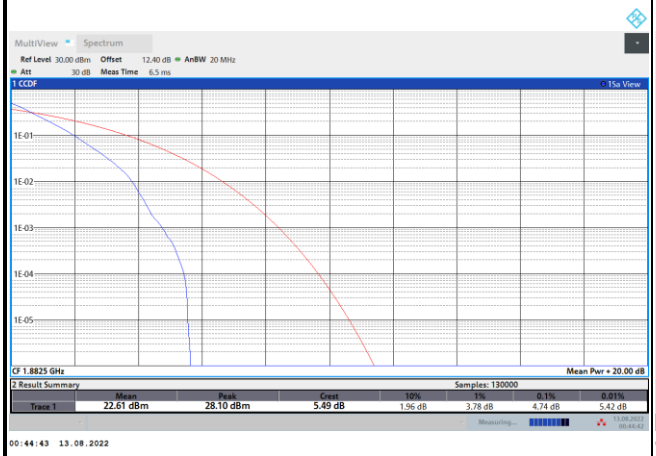
FR1 n25

Peak-to-Average Ratio

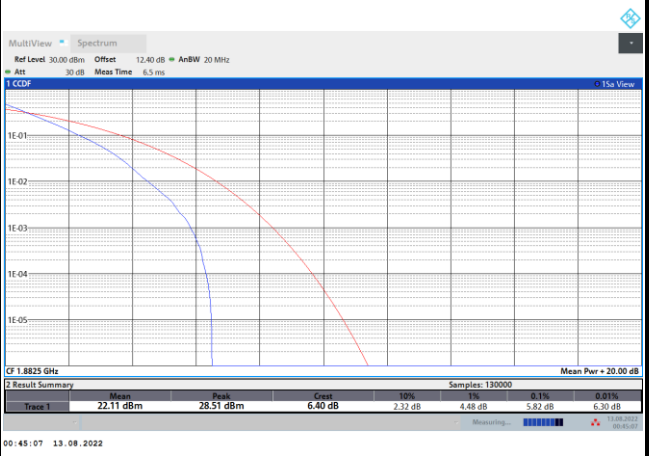
Mode	FR1 n25 / 20MHz / DFT-S OFDM				
Mod.	PI/2 BPSK	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.74	5.82	6.48	6.62	PASS
Mode	FR1 n25 / 20MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.82				PASS

FR1 n25 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

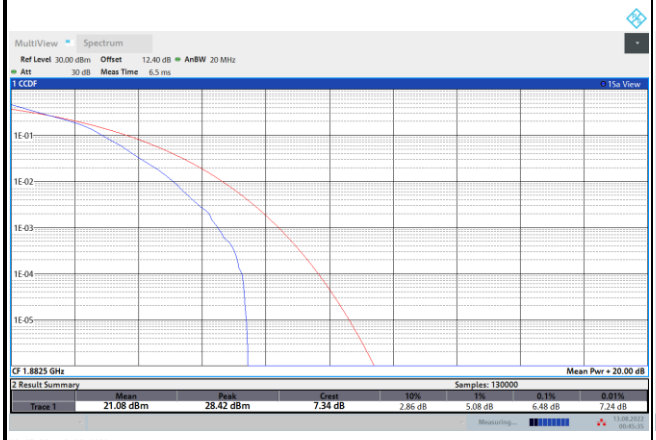
PI/2 BPSK



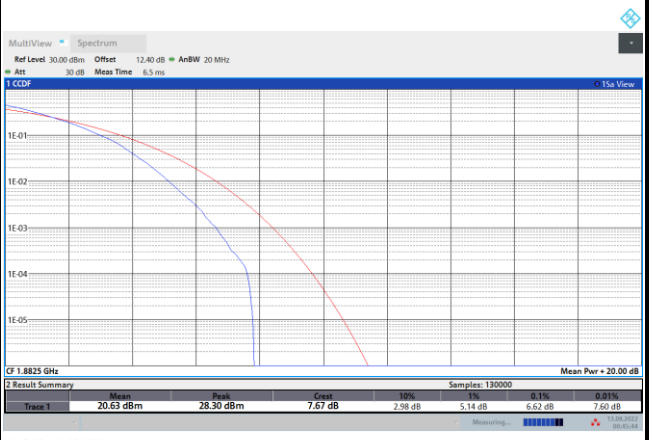
QPSK



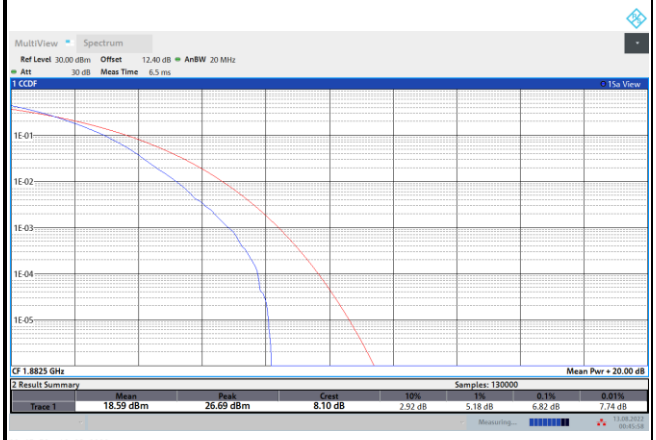
16QAM



64QAM



256QAM



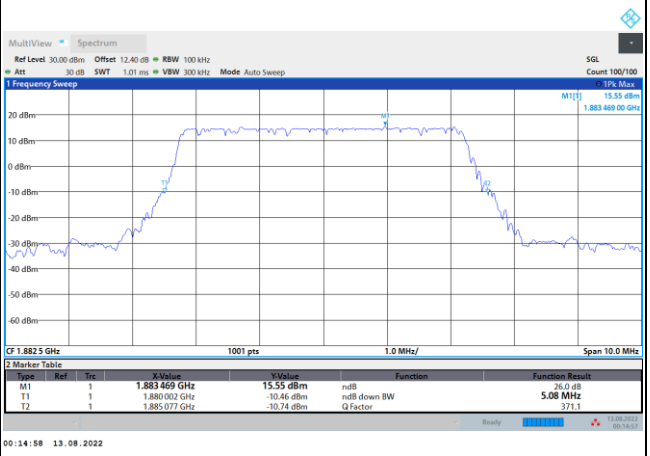
26dB Bandwidth

Mode	FR1 n25 : 26dB BW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK		PI/2 BPSK	
Middle CH	5.08		9.43		14.51		18.98	

Mode	FR1 n25 : 26dB BW(MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	5.03	5.09	9.91	9.95	15.08	15.08	19.94	20.02
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	5.00	5.21	9.93	9.95	14.99	15.11	20.10	19.98

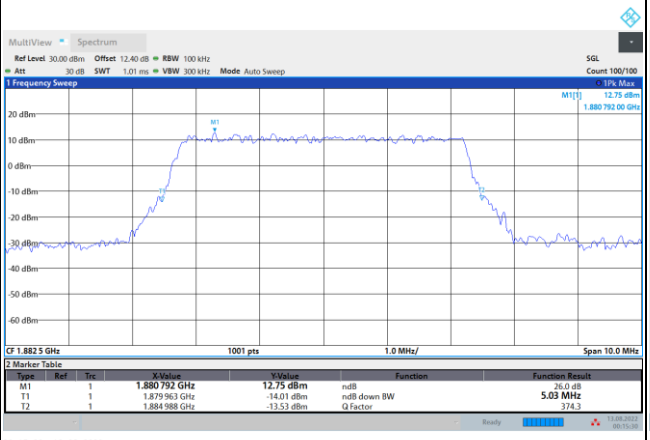
FR1 n25 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

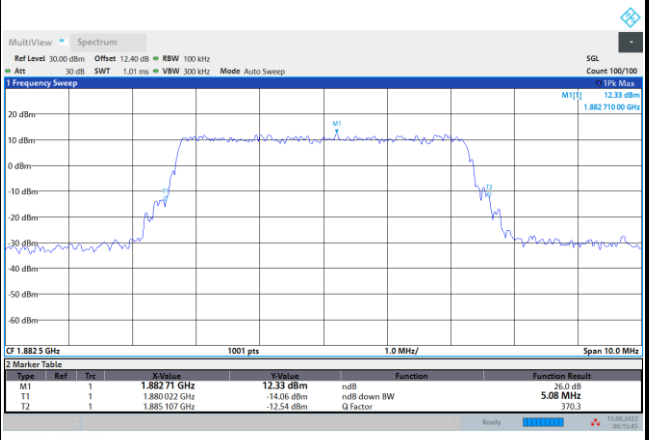


FR1 n25 / 5MHz / CP OFDM / Middle Channel / Full RB

QPSK



16QAM



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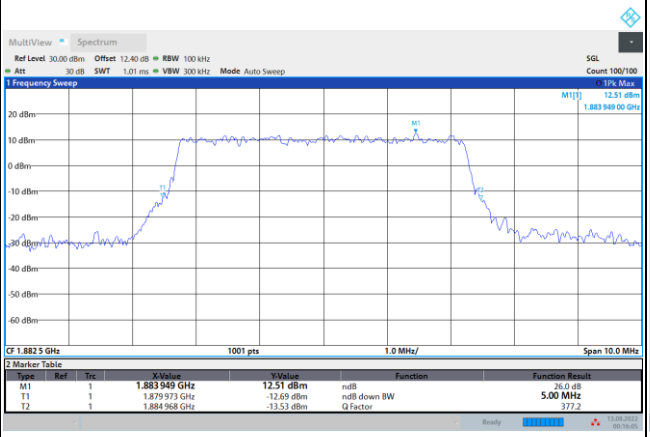
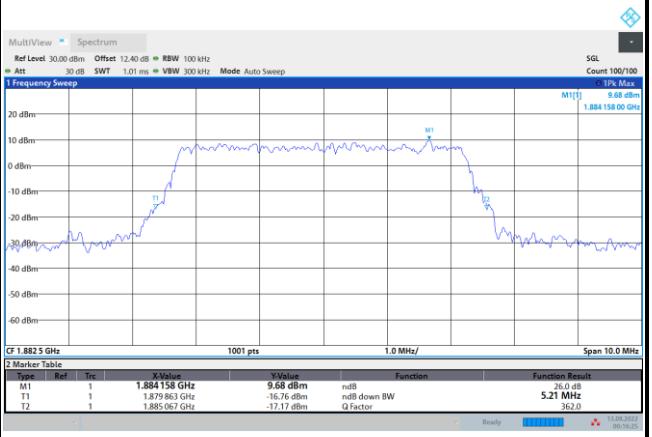
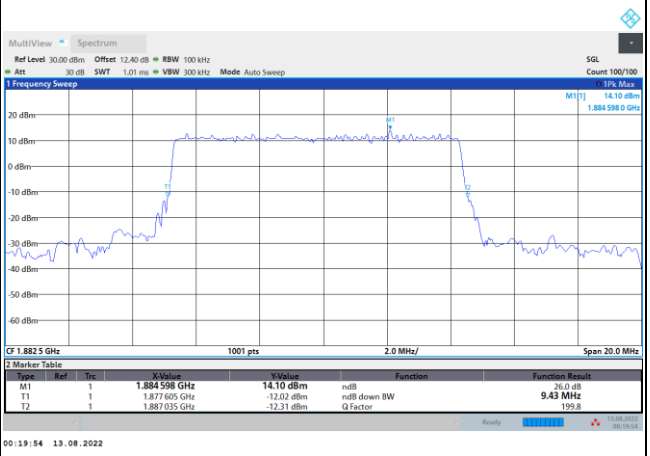


256QAM



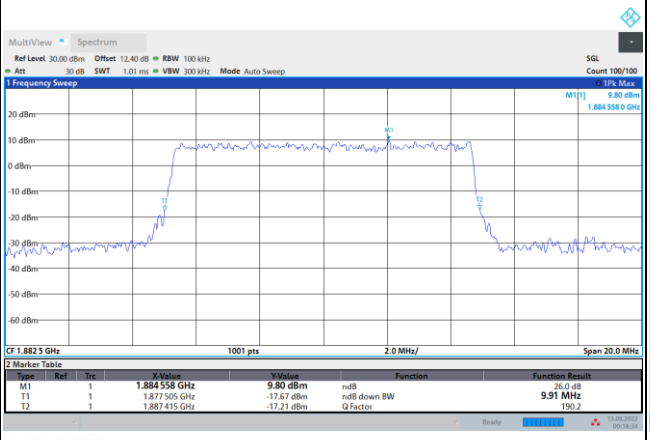
FR1 n25 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



FR1 n25 / 10MHz / CP OFDM / Middle Channel / Full RB

QPSK



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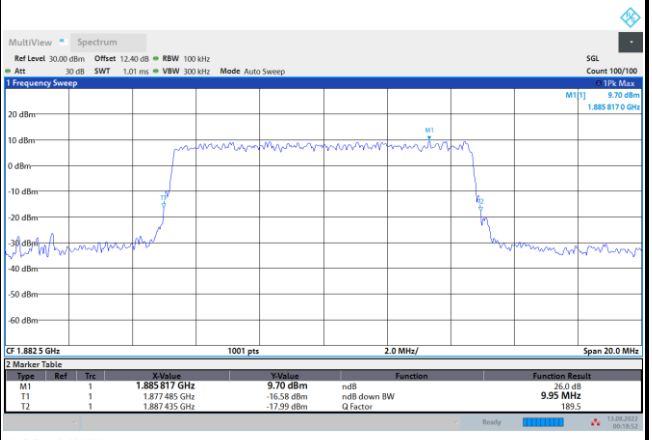

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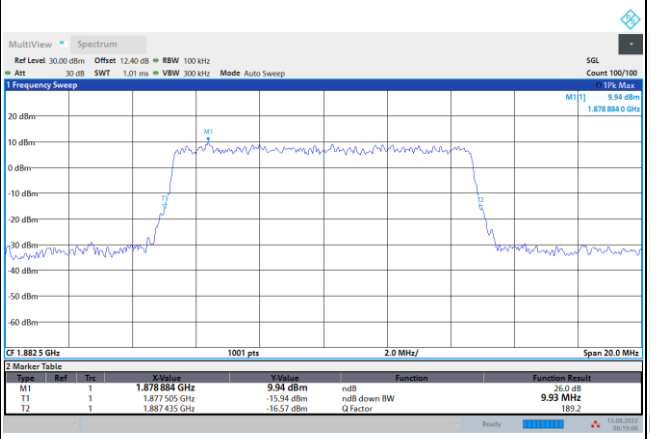

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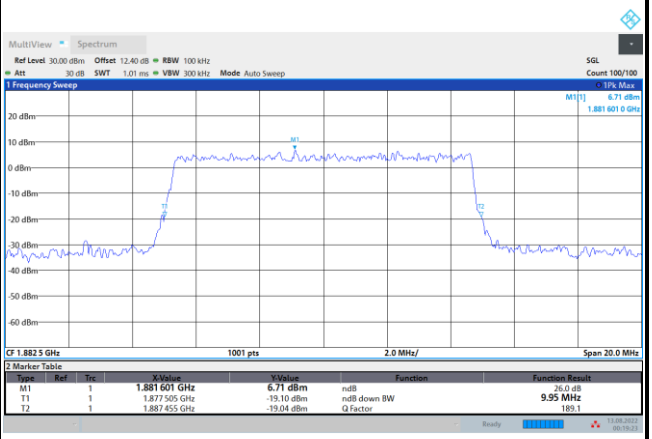
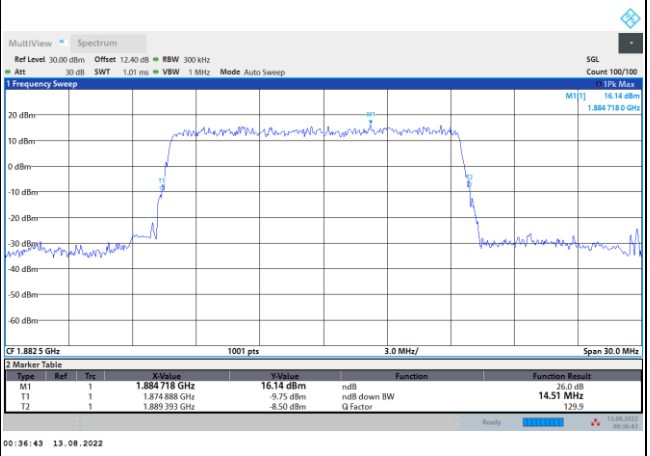


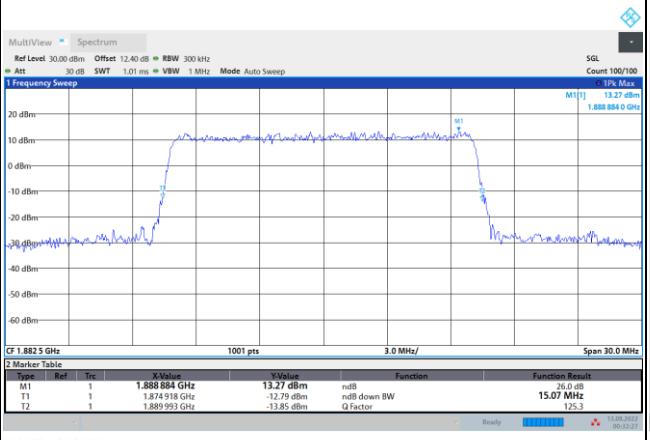
FR1 n25 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



FR1 n25 / 15MHz / CP OFDM / Middle Channel / Full RB

QPSK



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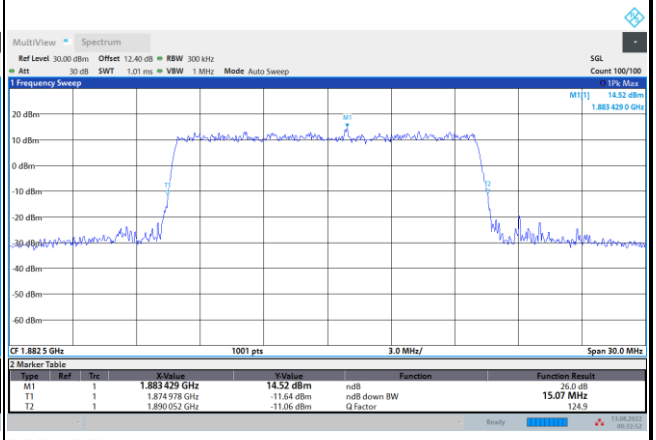

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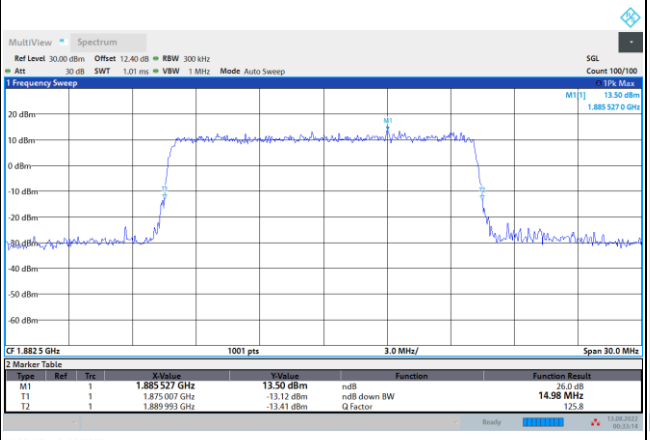

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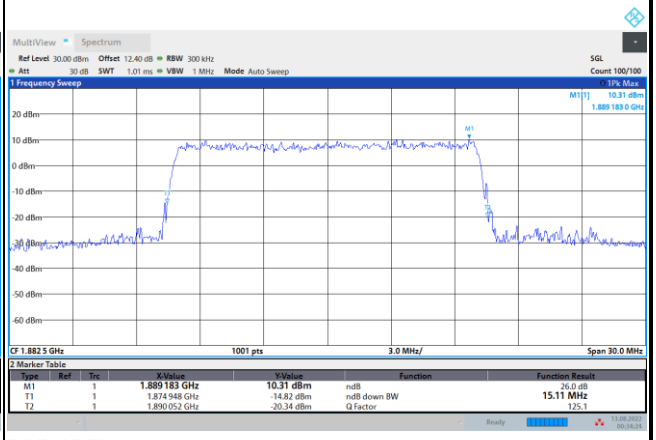
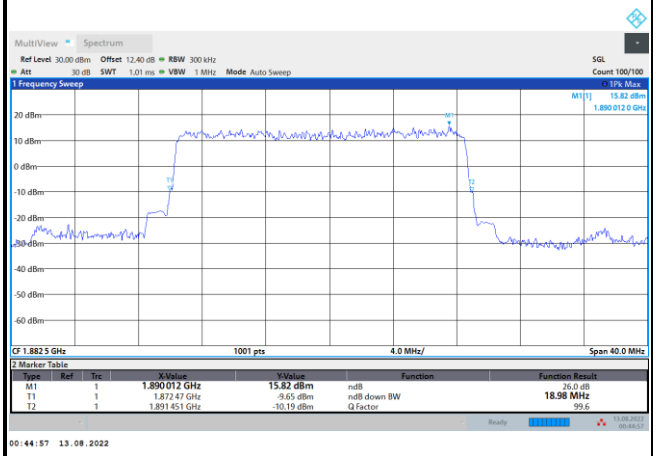


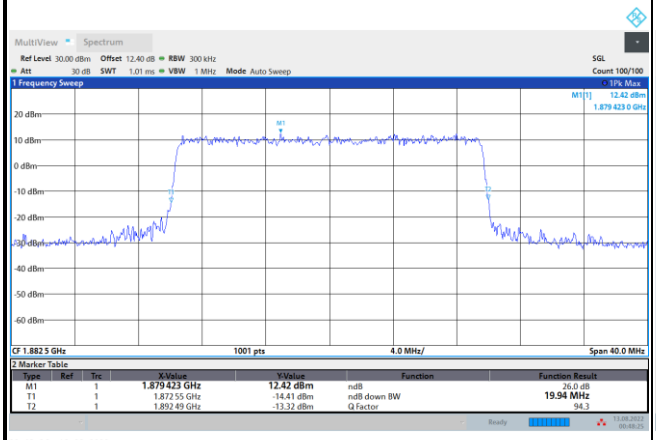
FR1 n25 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



FR1 n25 / 20MHz / CP OFDM / Middle Channel / Full RB

QPSK



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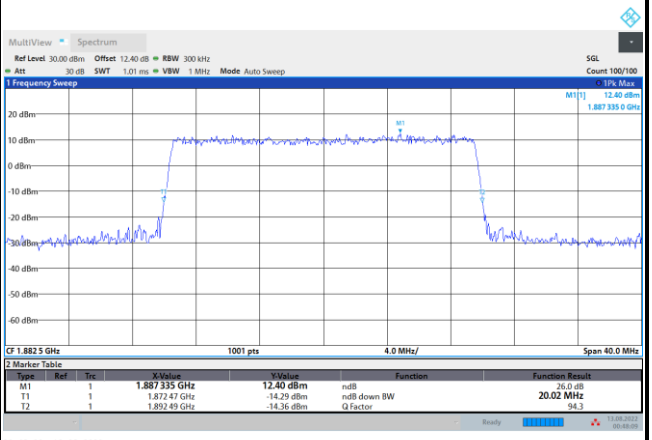

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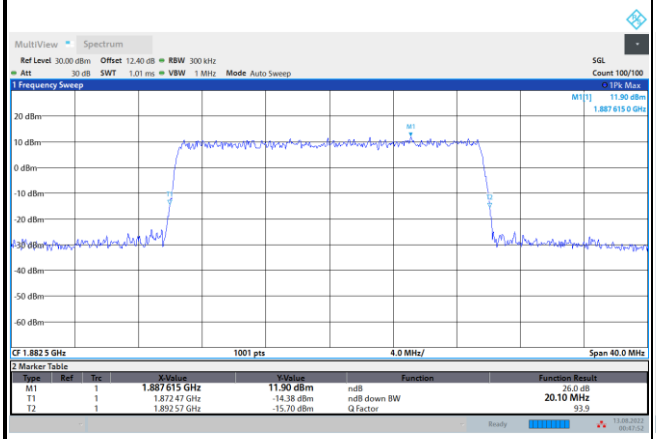

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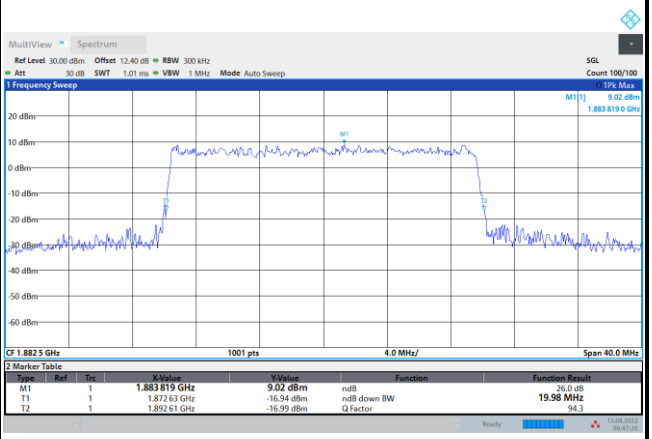


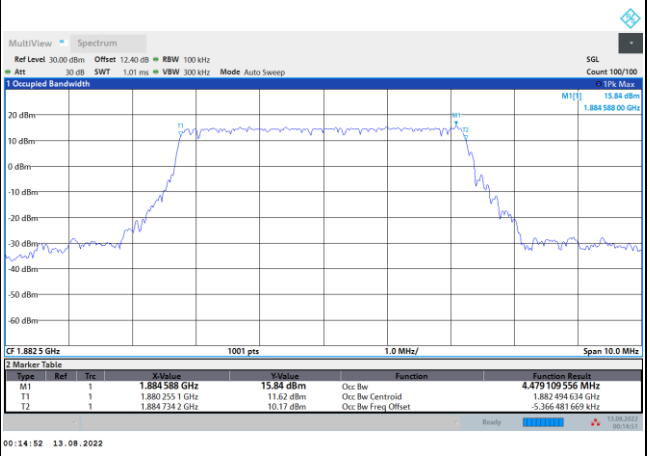
Occupied Bandwidth

Mode	FR1 n25 : 99%OBW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK		PI/2 BPSK	
Middle CH	4.47		8.91		13.50		17.92	

Mode	FR1 n25 : 99%OBW (MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	4.51	4.53	9.27	9.28	14.14	14.11	18.91	18.96
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	4.49	4.52	9.26	9.29	14.19	14.18	18.95	18.92

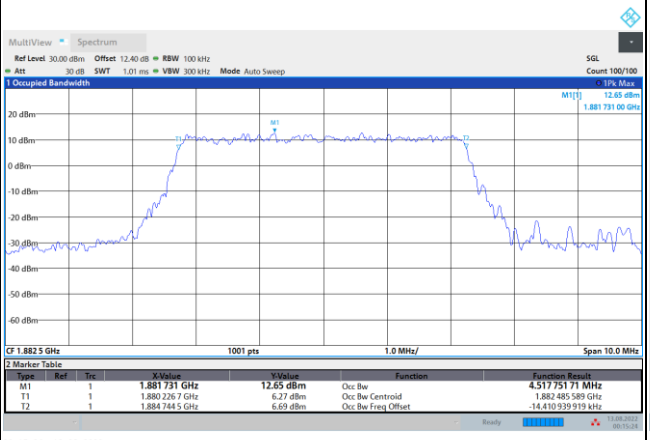
FR1 n25 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

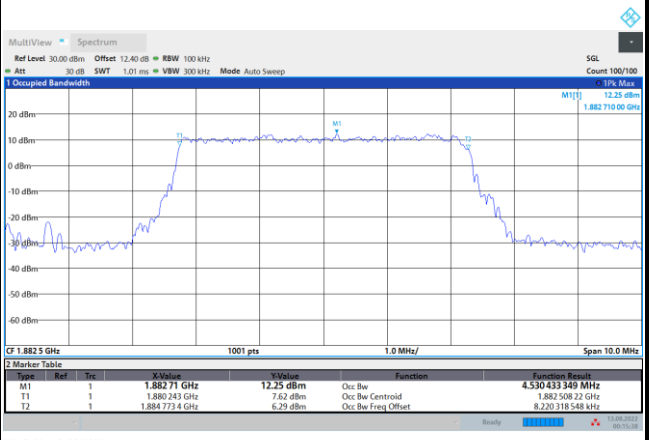


FR1 n25 / 5MHz / CP OFDM / Middle Channel / Full RB

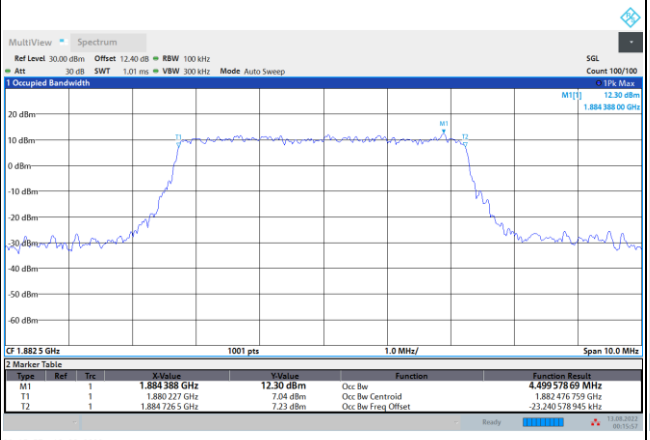
QPSK



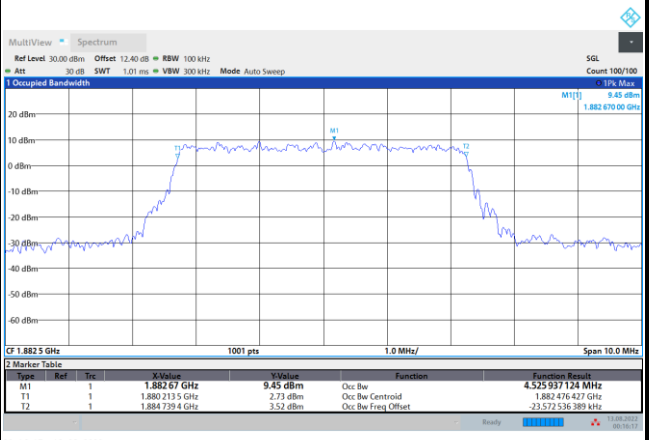
16QAM



64QAM

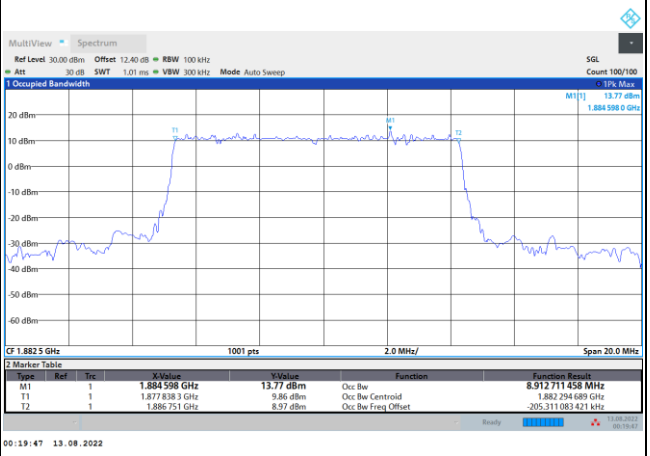


256QAM



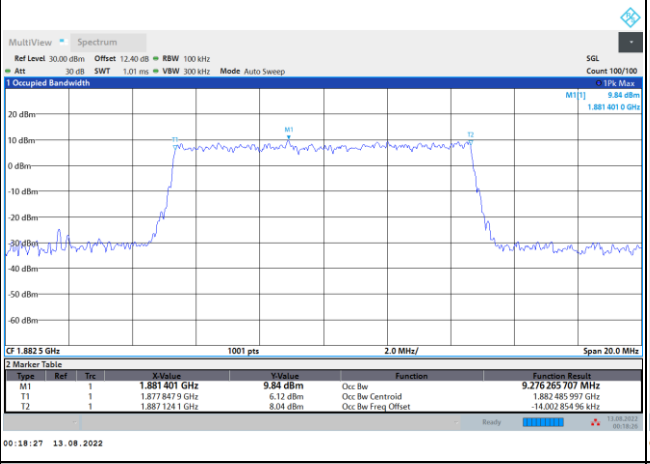
FR1 n25 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



FR1 n25 / 10MHz / CP OFDM / Middle Channel / Full RB

QPSK



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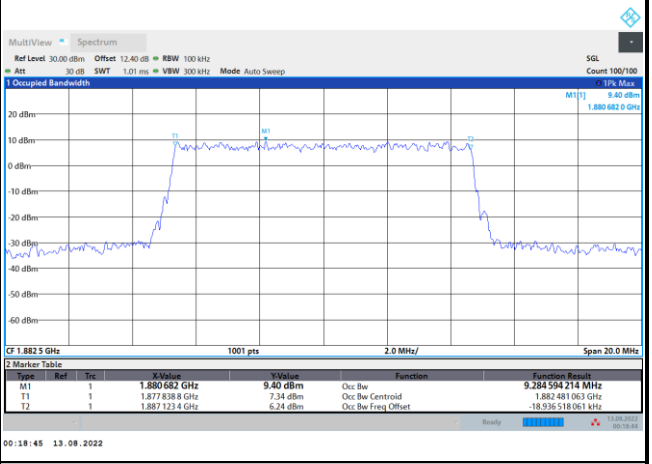
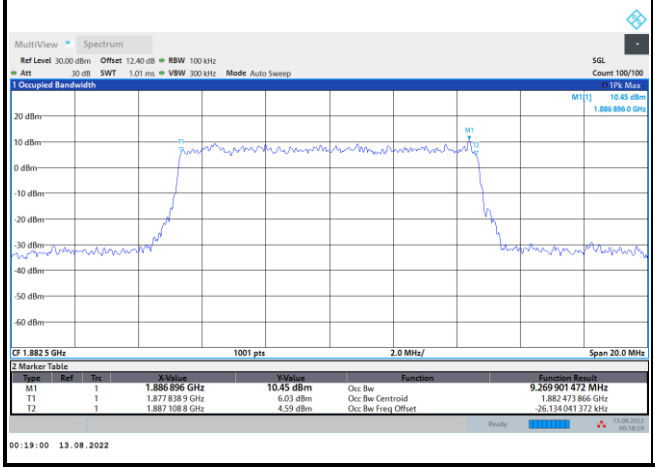


64QAM



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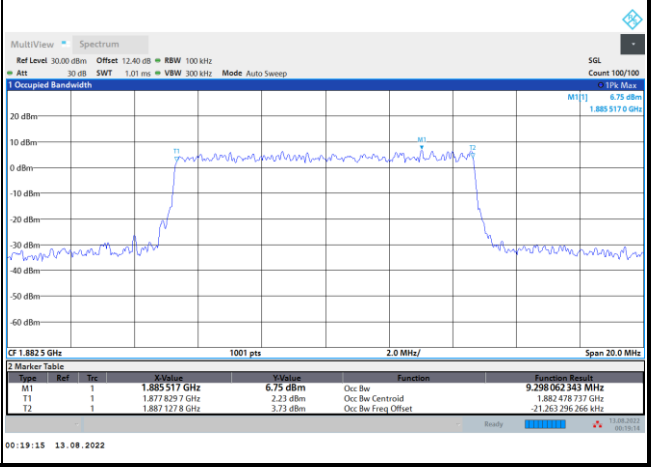
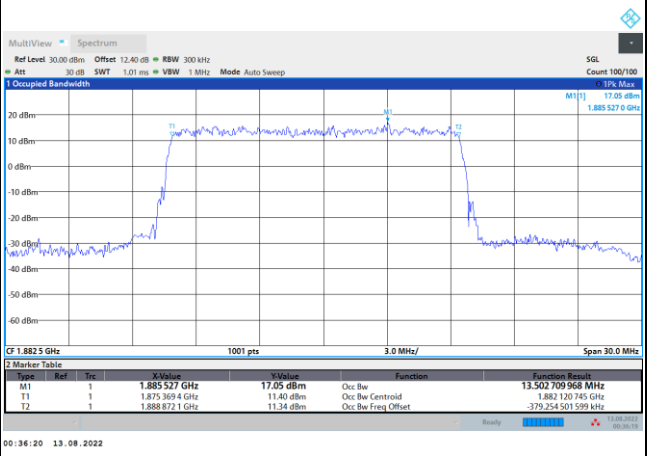


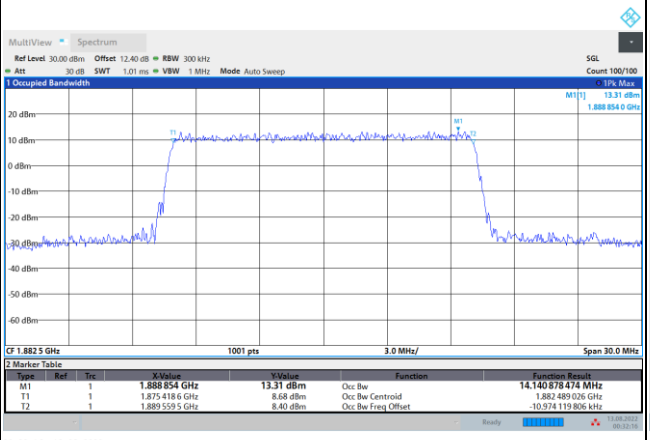
FR1 n25 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK



FR1 n25 / 15MHz / CP OFDM / Middle Channel / Full RB

QPSK



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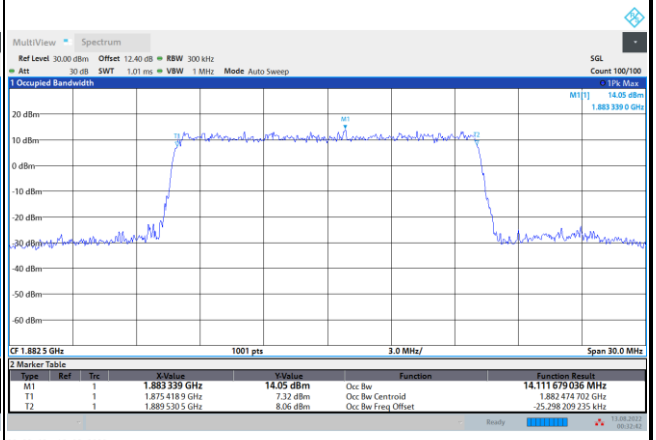

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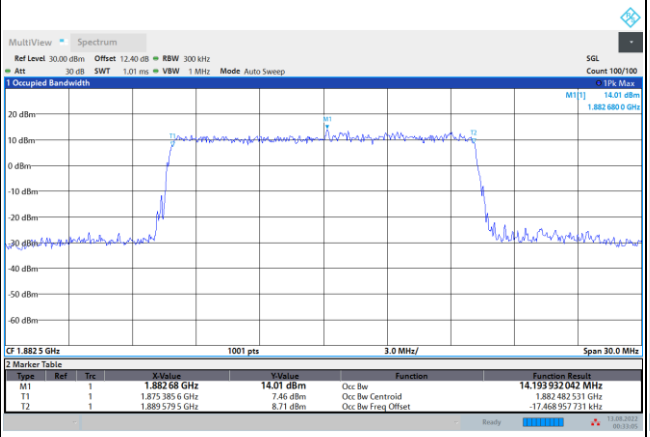
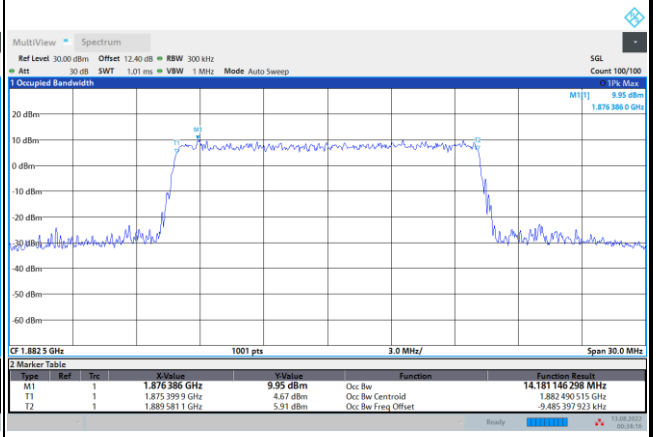
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