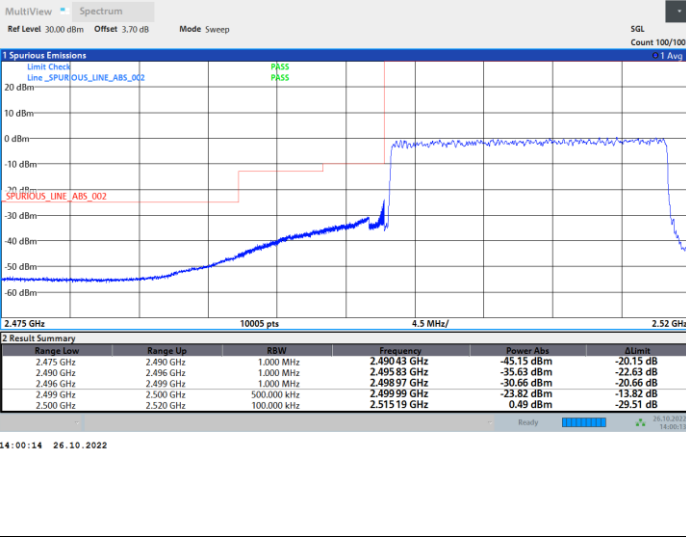


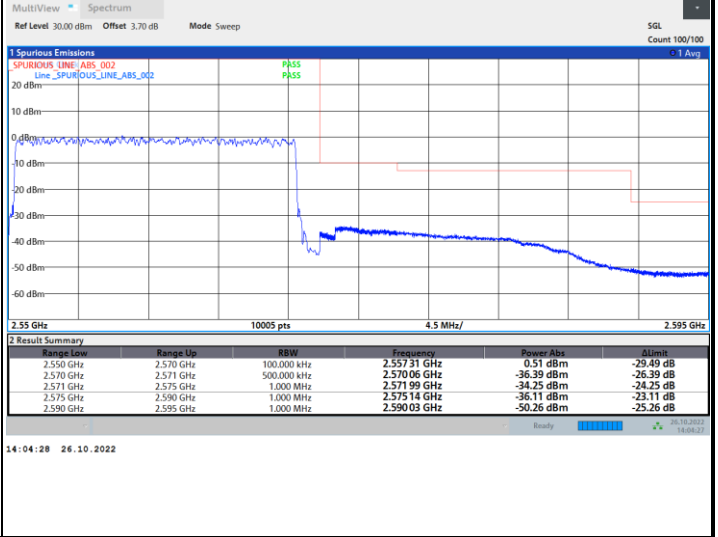


FR1 n7 / 20MHz / DFT-s-OFDM / 256QAM

Lowest Band Edge / Full RB

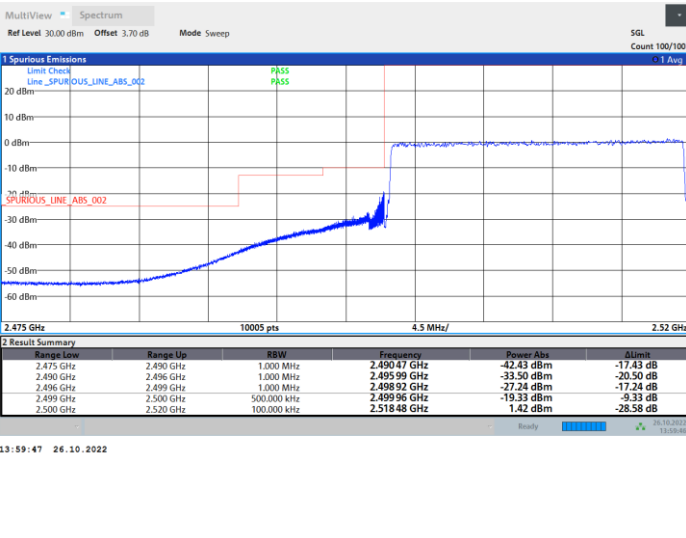


Highest Band Edge / Full RB

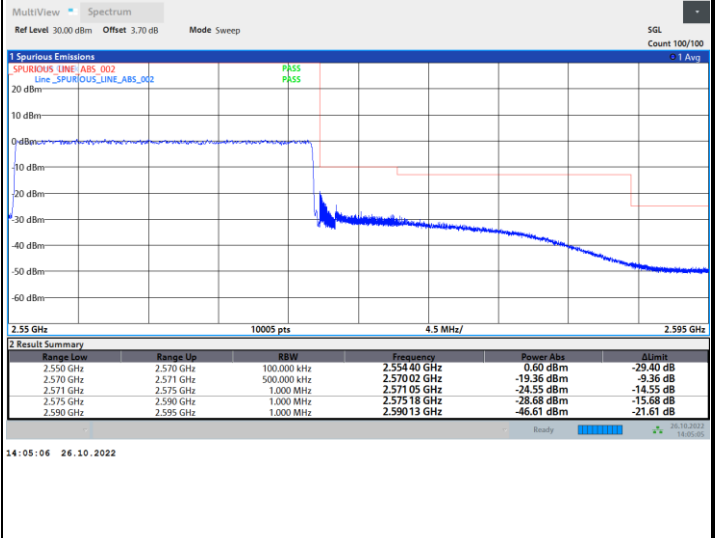


FR1 n7 / 20MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge



Highest Band Edge

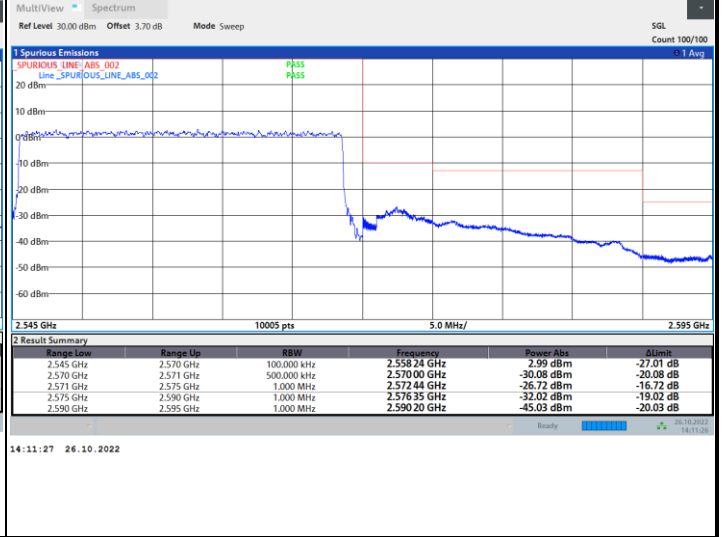
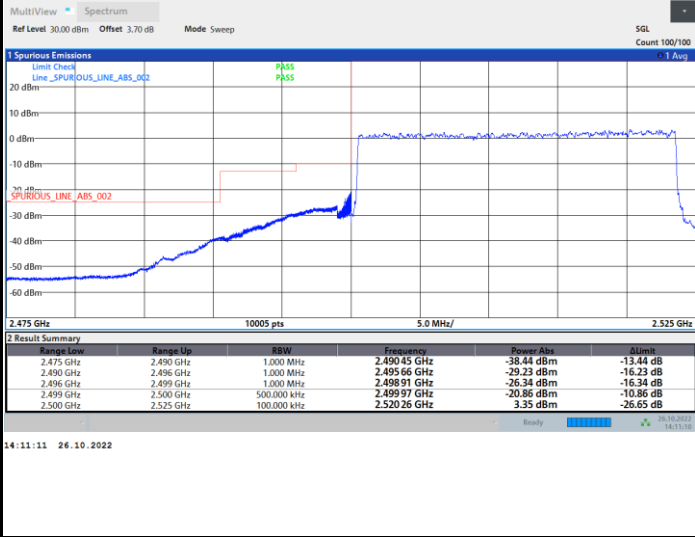




FR1 n7 / 25MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

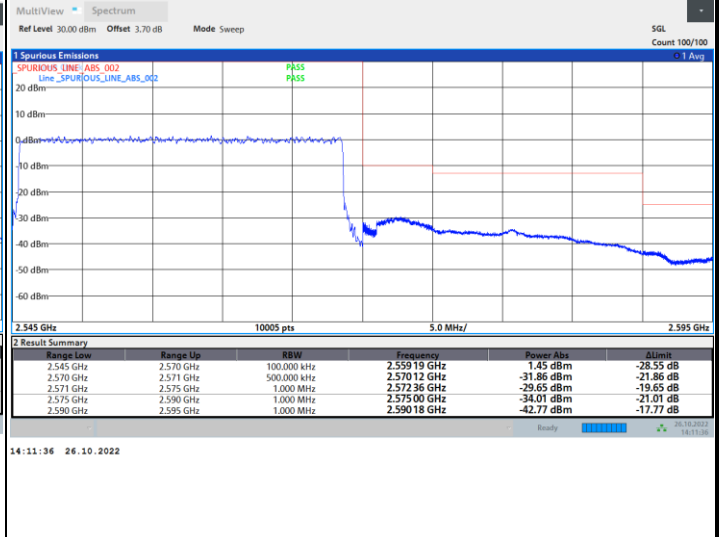
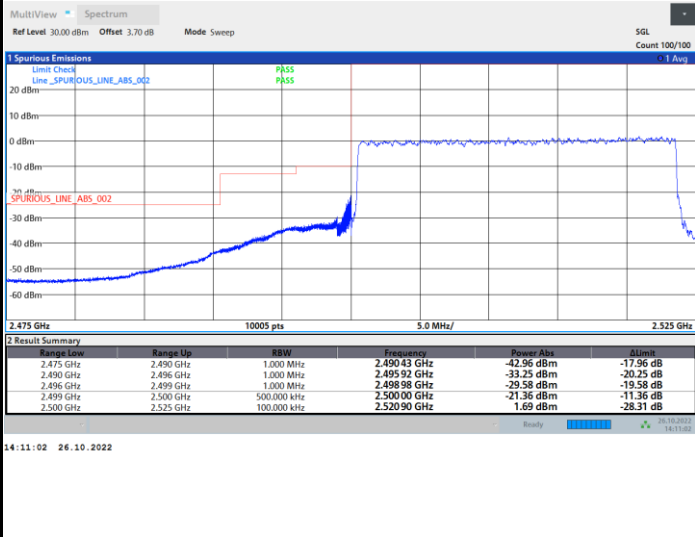
Highest Band Edge / Full RB



FR1 n7 / 25MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / Full RB

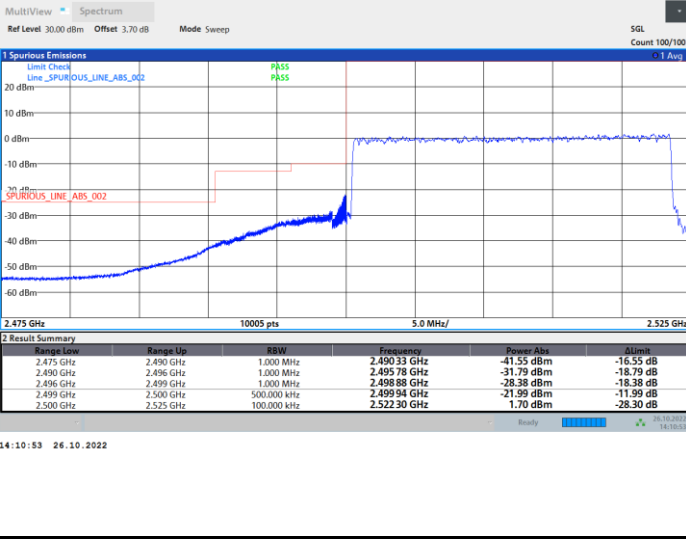
Highest Band Edge / Full RB



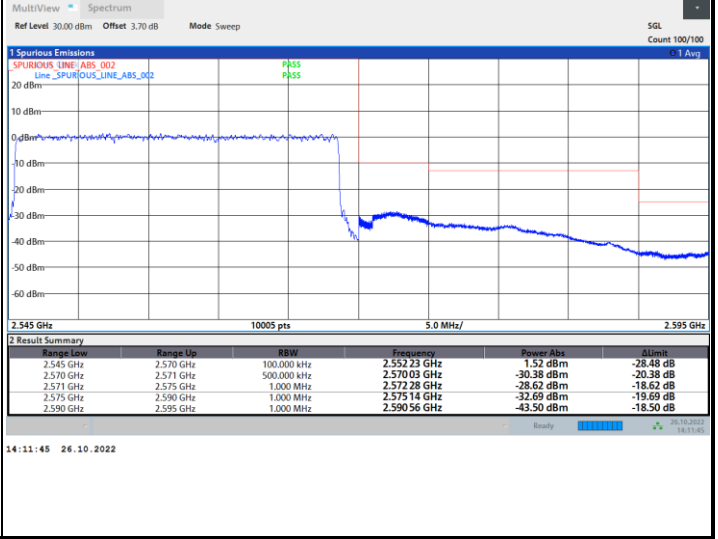


FR1 n7 / 25MHz / DFT-s-OFDM / 16QAM

Lowest Band Edge / Full RB

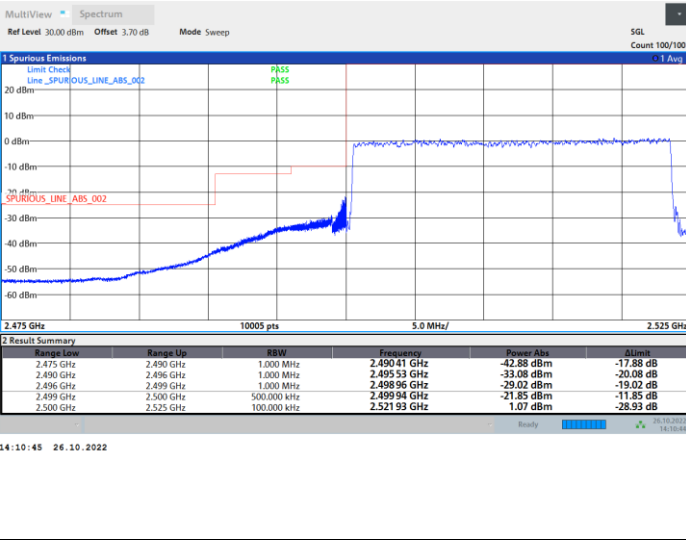


Highest Band Edge / Full RB

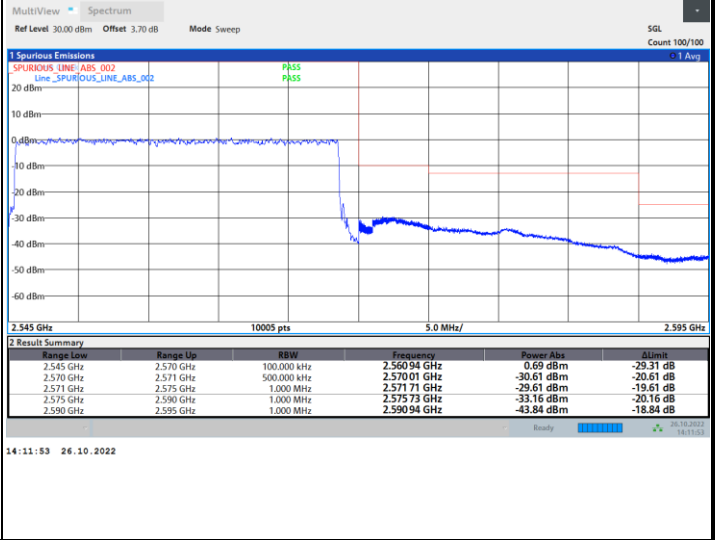


FR1 n7 / 25MHz / DFT-s-OFDM / 64QAM

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

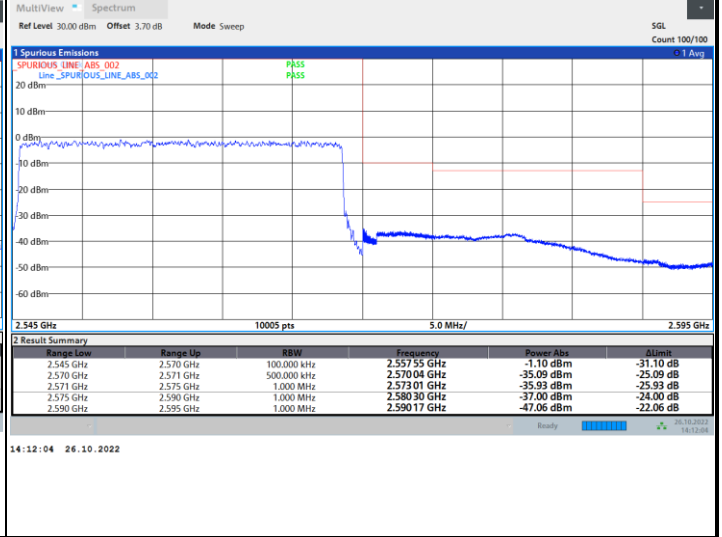
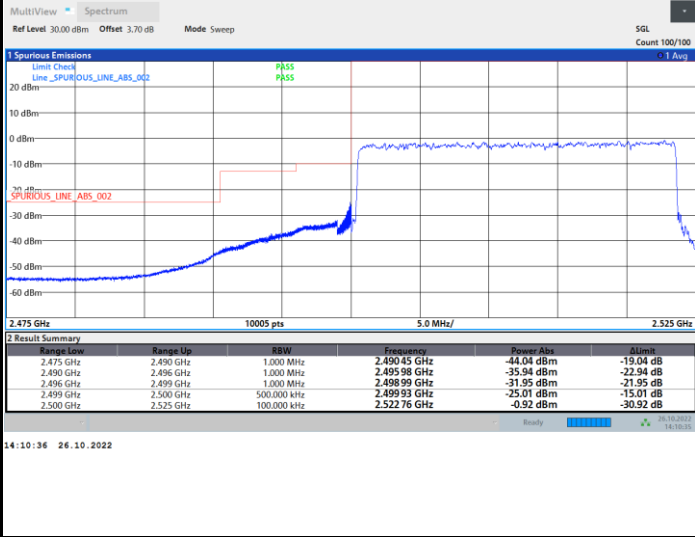




FR1 n7 / 25MHz / DFT-s-OFDM / 256QAM

Lowest Band Edge / Full RB

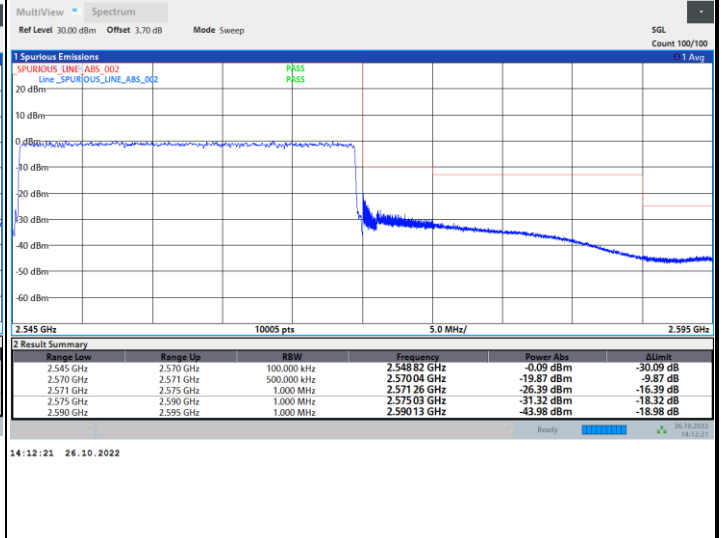
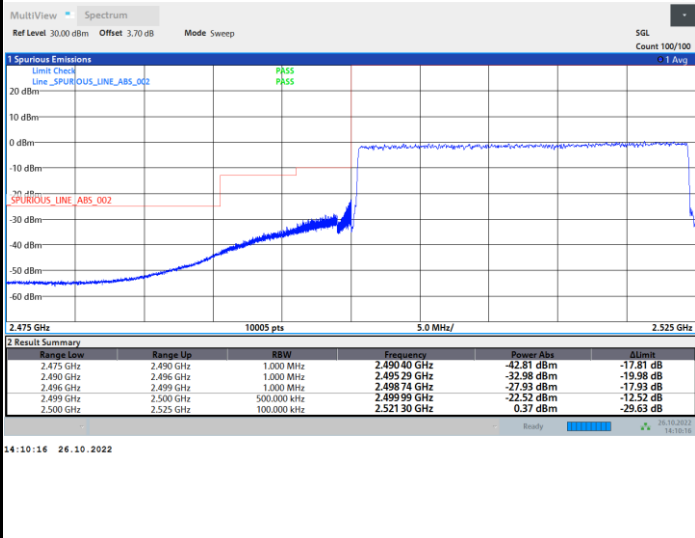
Highest Band Edge / Full RB



FR1 n7 / 25MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge

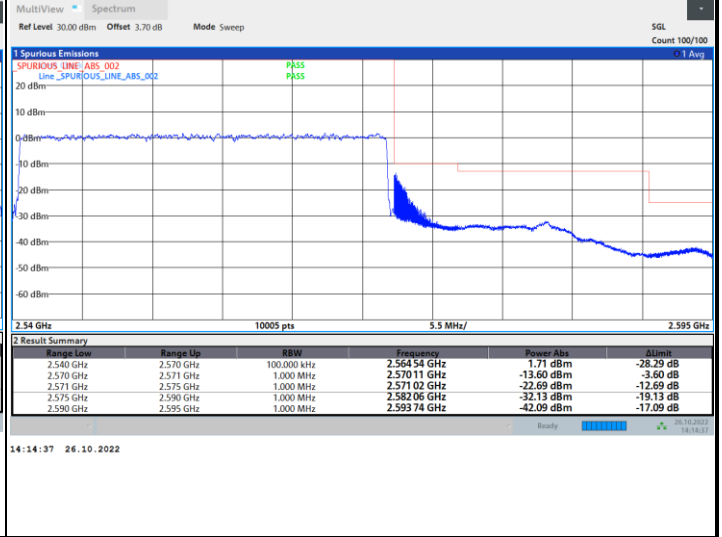
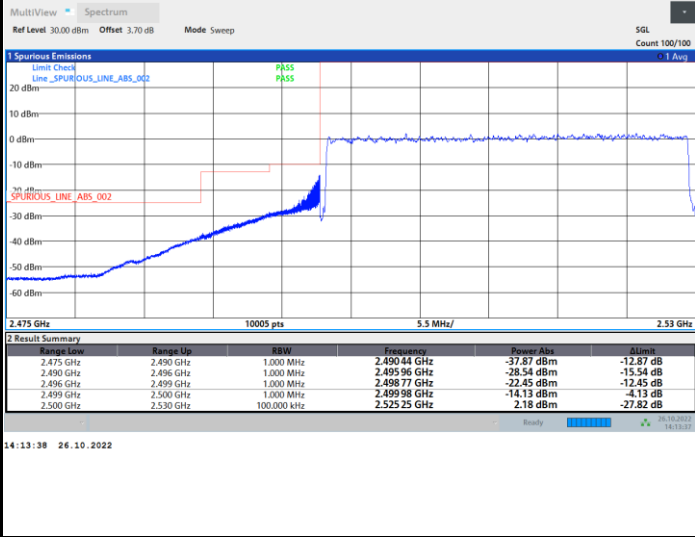




FR1 n7 / 30MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

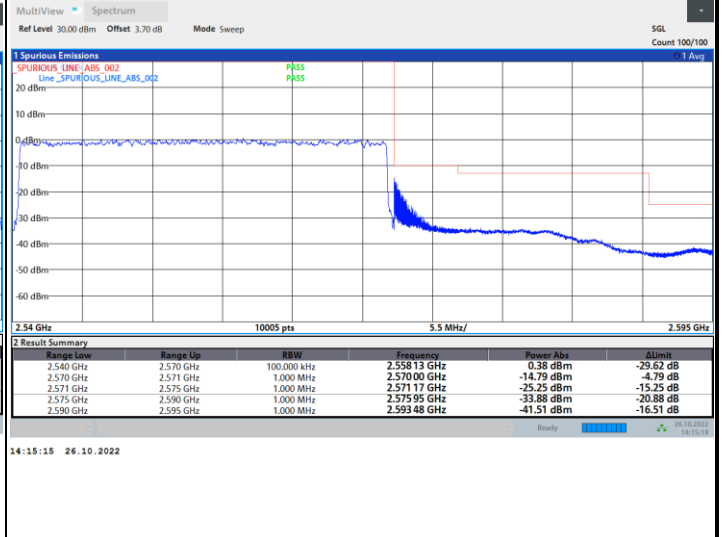
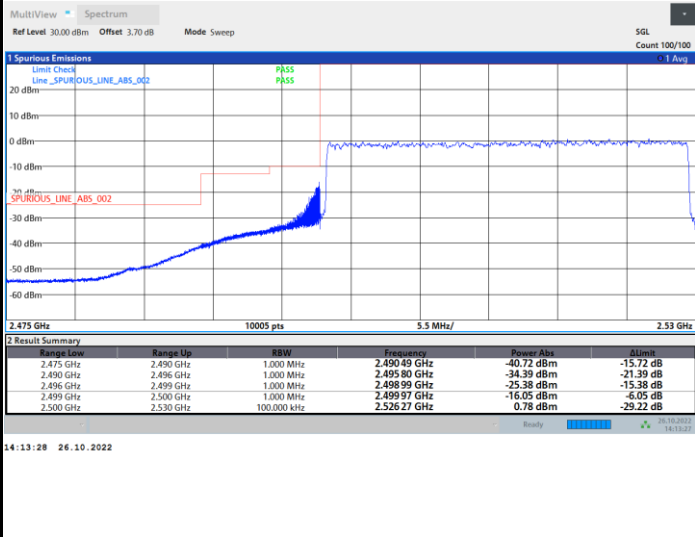
Highest Band Edge / Full RB



FR1 n7 / 30MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / Full RB

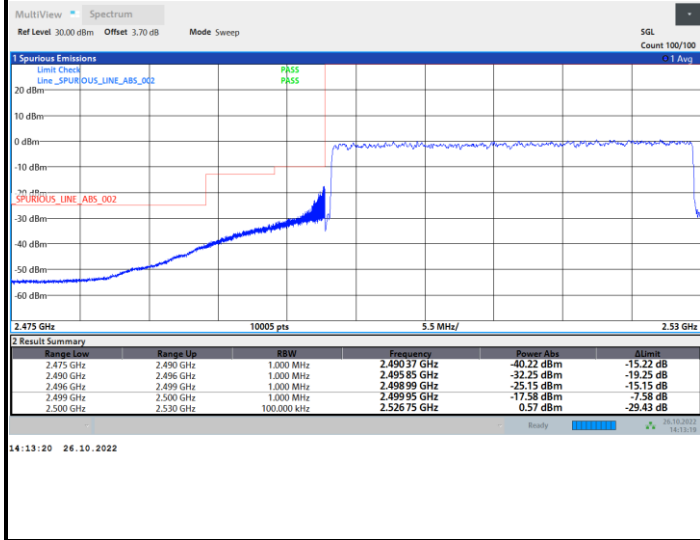
Highest Band Edge / Full RB



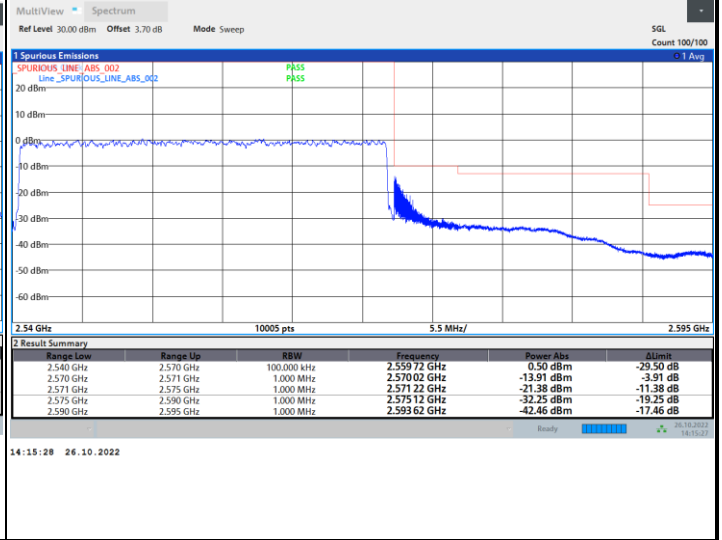


FR1 n7 / 30MHz / DFT-s-OFDM / 16QAM

Lowest Band Edge / Full RB

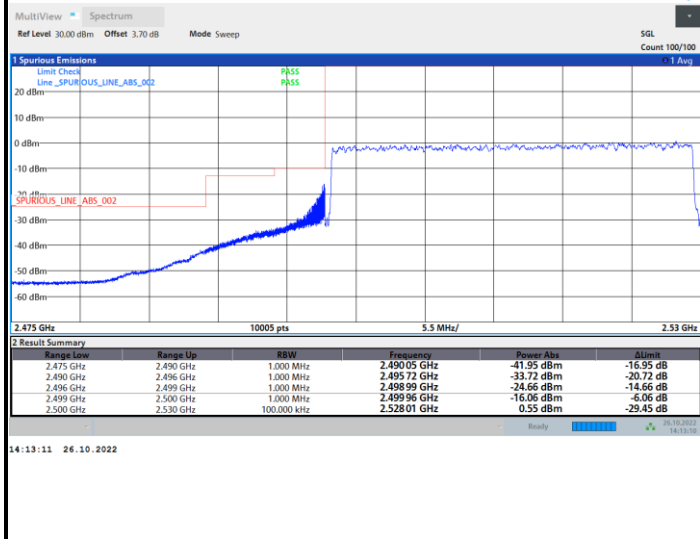


Highest Band Edge / Full RB

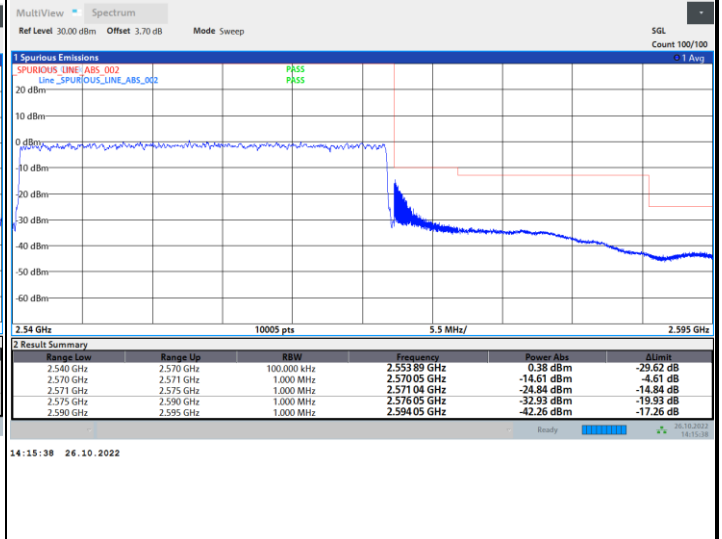


FR1 n7 / 30MHz / DFT-s-OFDM / 64QAM

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

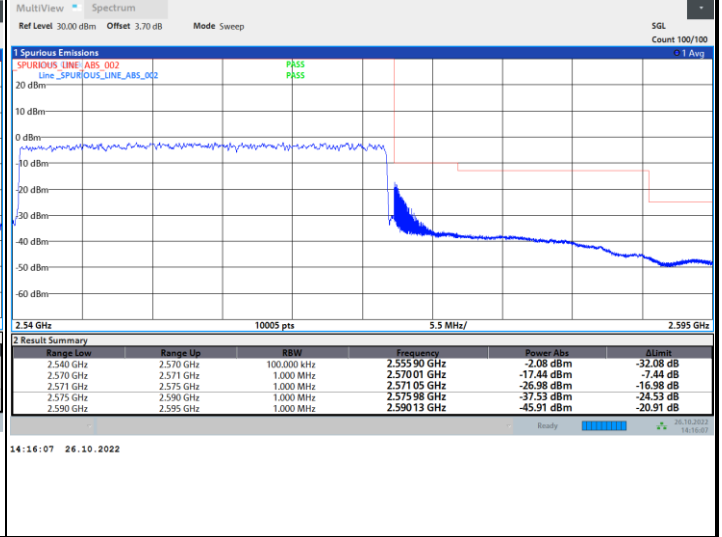
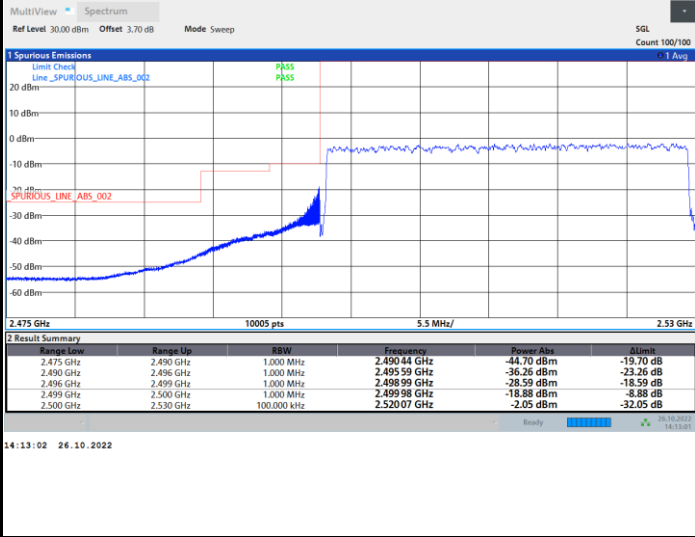




FR1 n7 / 30MHz / DFT-s-OFDM / 256QAM

Lowest Band Edge / Full RB

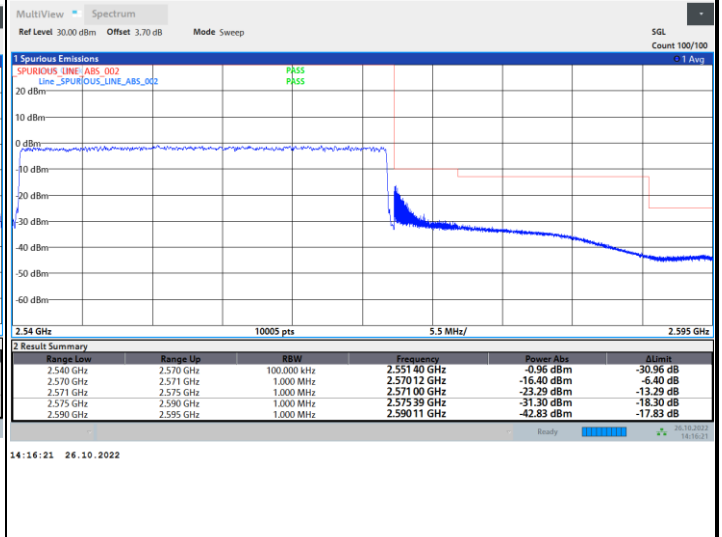
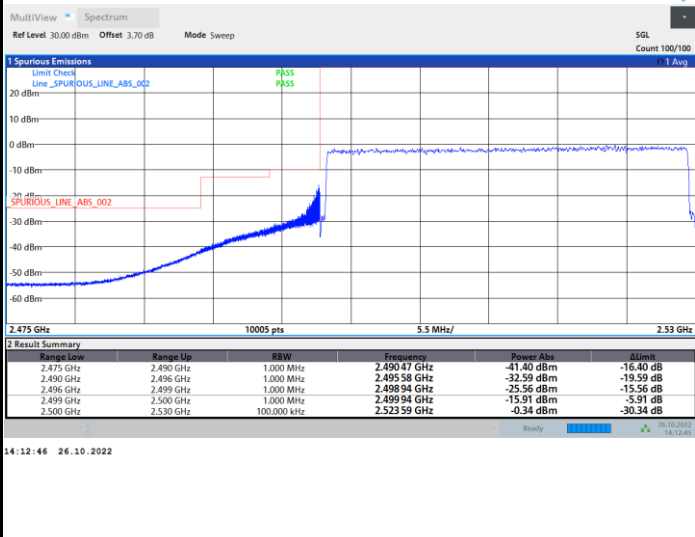
Highest Band Edge / Full RB



FR1 n7 / 30MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

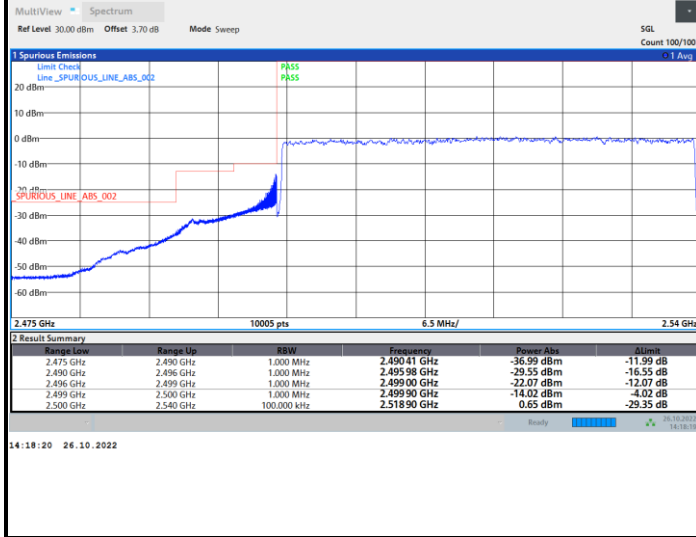
Highest Band Edge



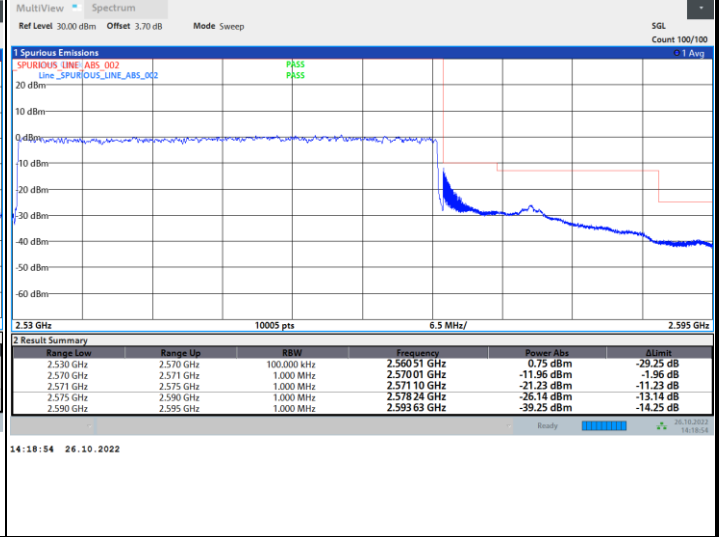


FR1 n7 / 40MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

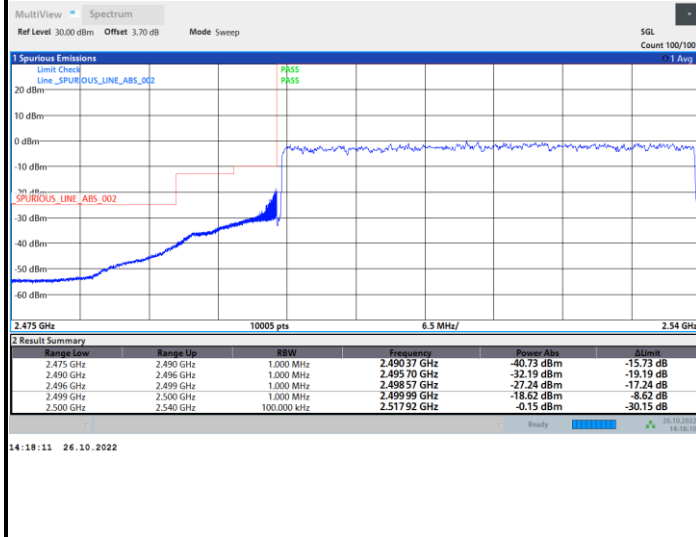


Highest Band Edge / Full RB

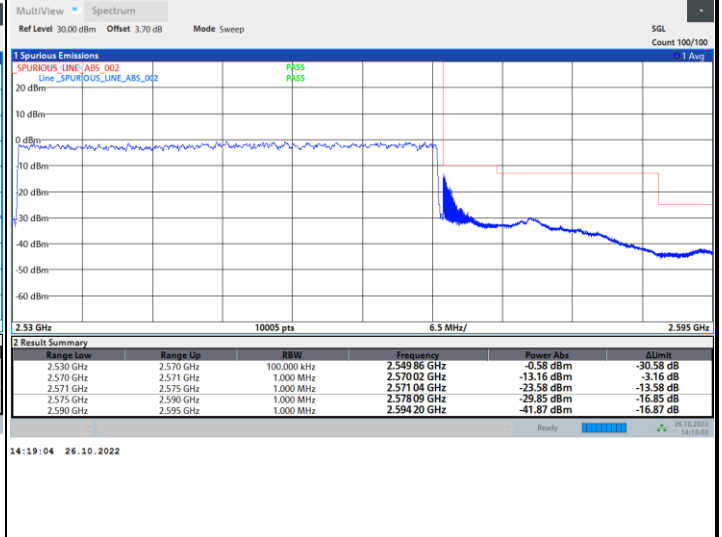


FR1 n7 / 40MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

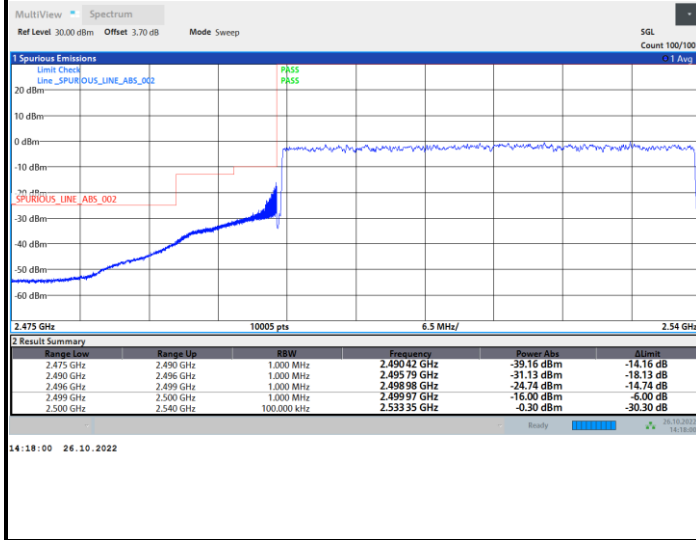




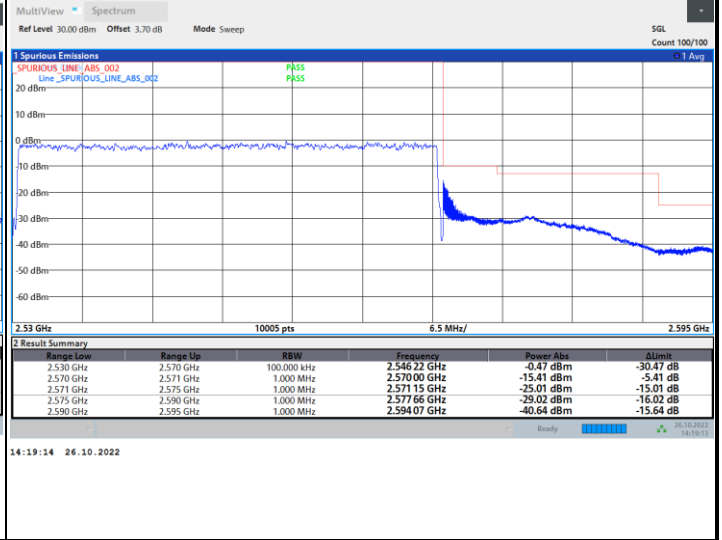


FR1 n7 / 40MHz / DFT-s-OFDM / 16QAM

Lowest Band Edge / Full RB

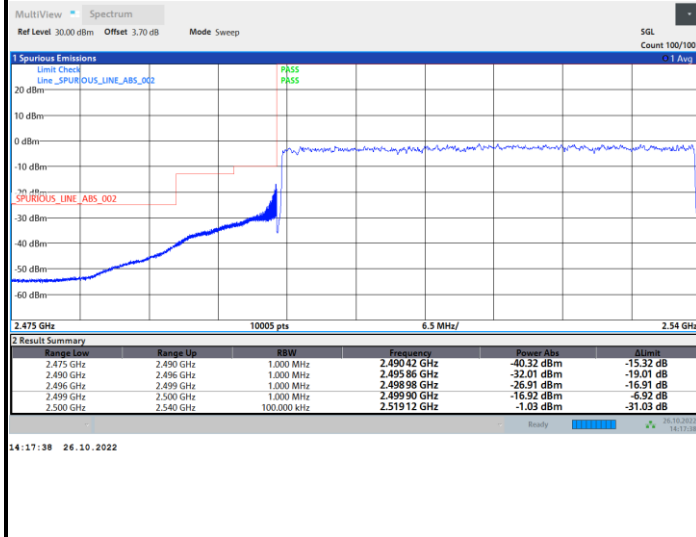


Highest Band Edge / Full RB

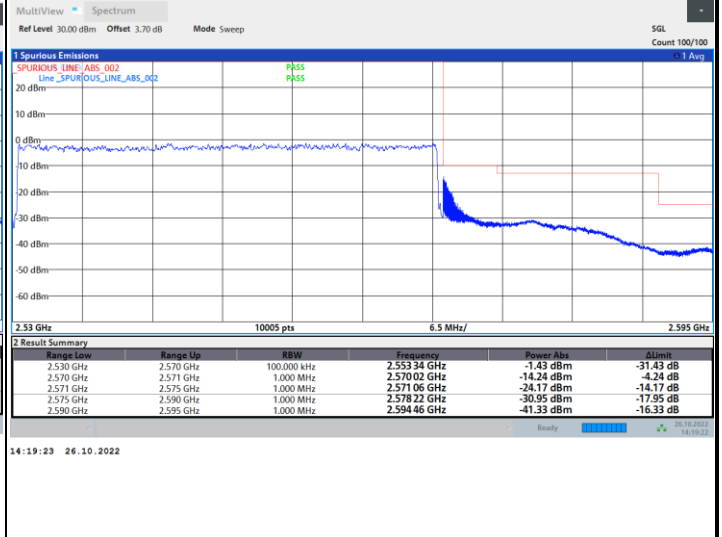


FR1 n7 / 40MHz / DFT-s-OFDM / 64QAM

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

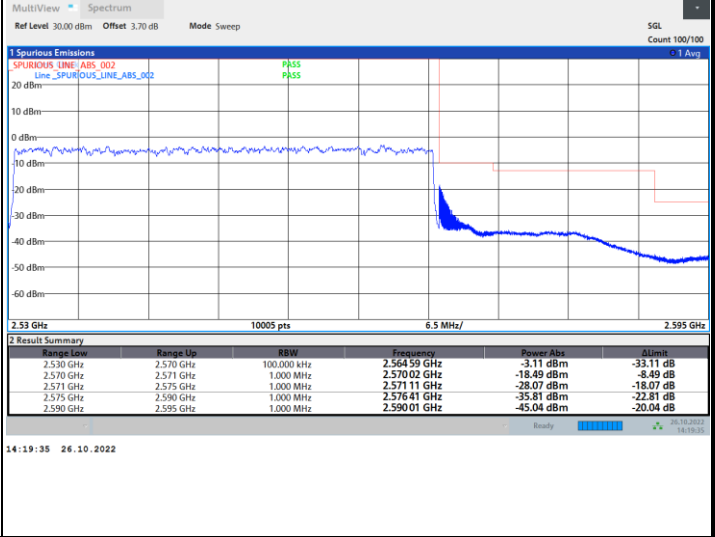
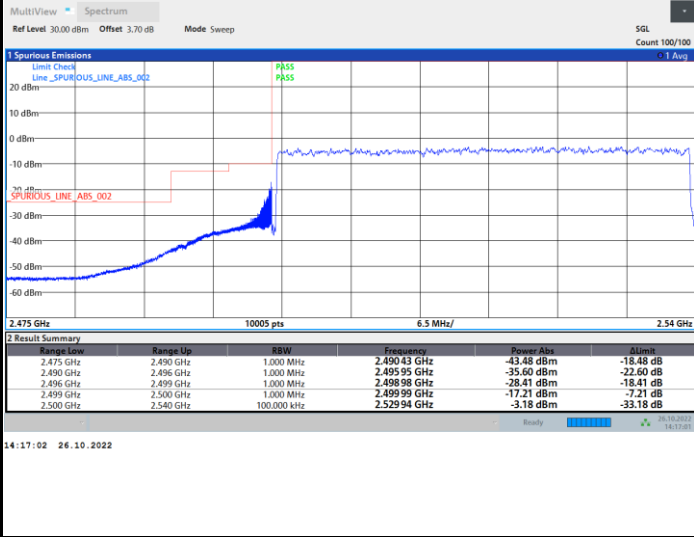




FR1 n7 / 40MHz / DFT-s-OFDM / 256QAM

Lowest Band Edge / Full RB

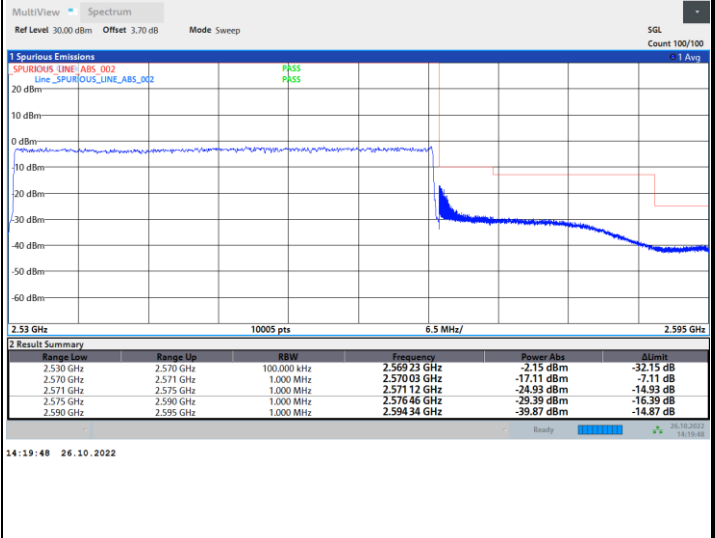
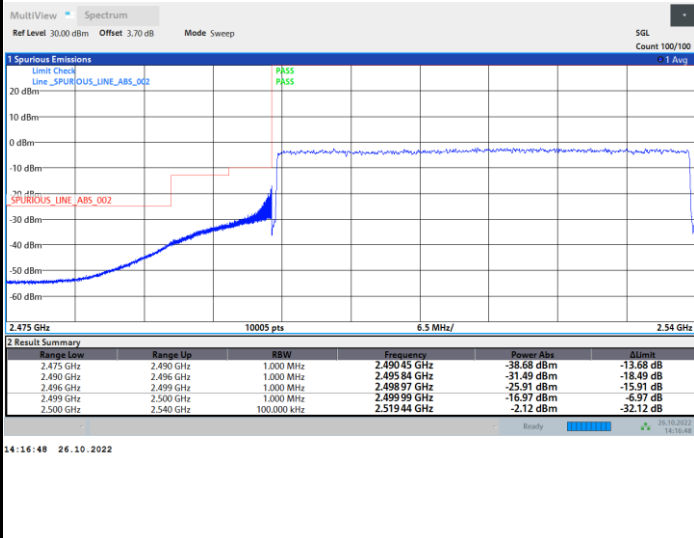
Highest Band Edge / Full RB



FR1 n7 / 40MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

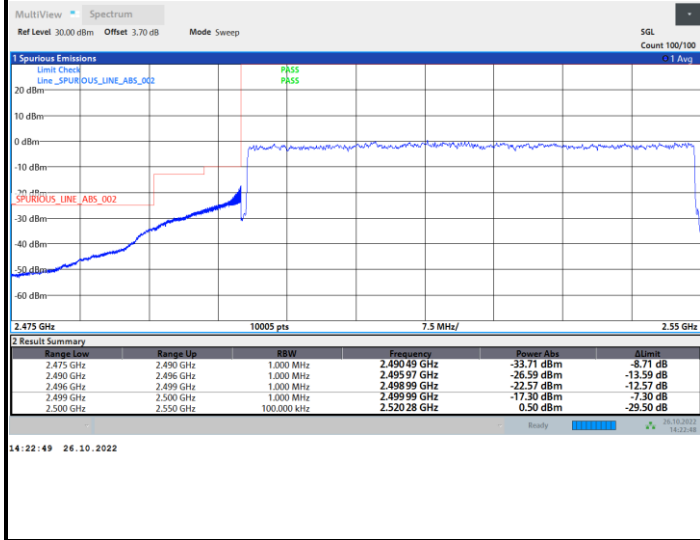
Highest Band Edge



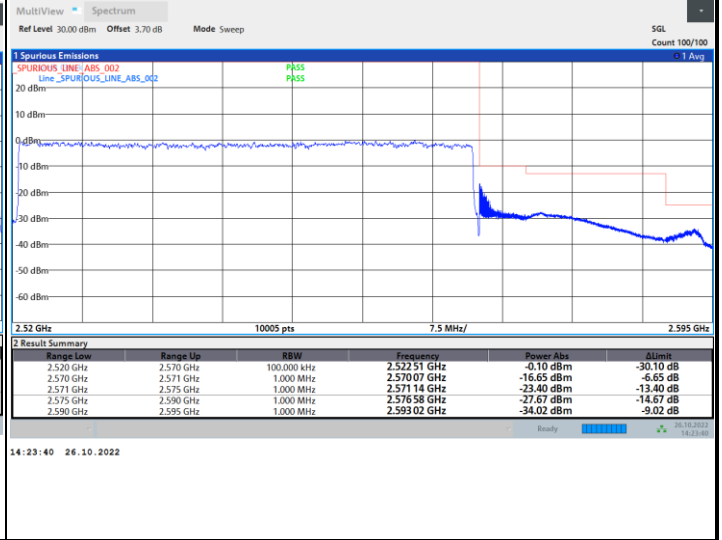


FR1 n7 / 50MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

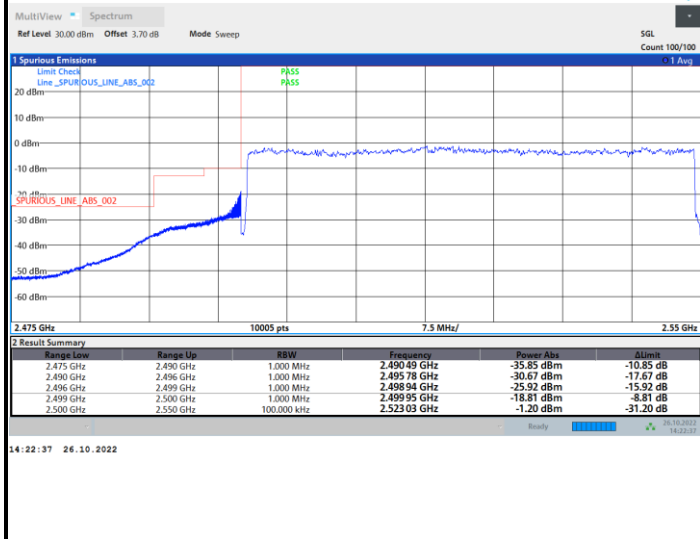


Highest Band Edge / Full RB

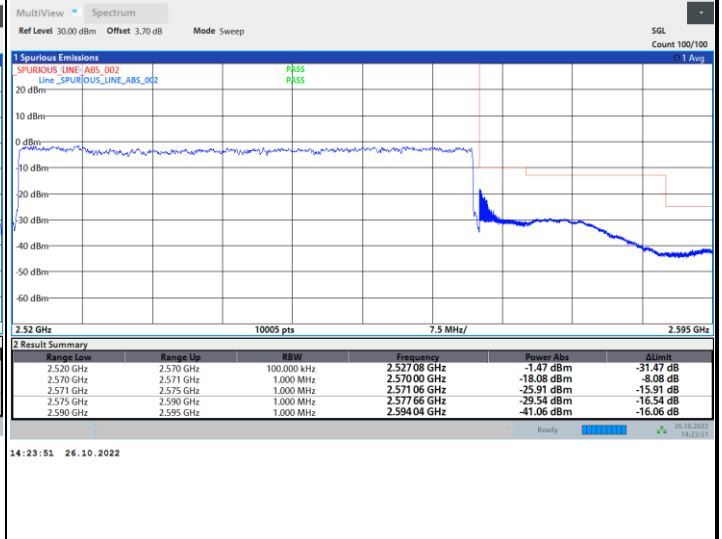


FR1 n7 / 50MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / Full RB



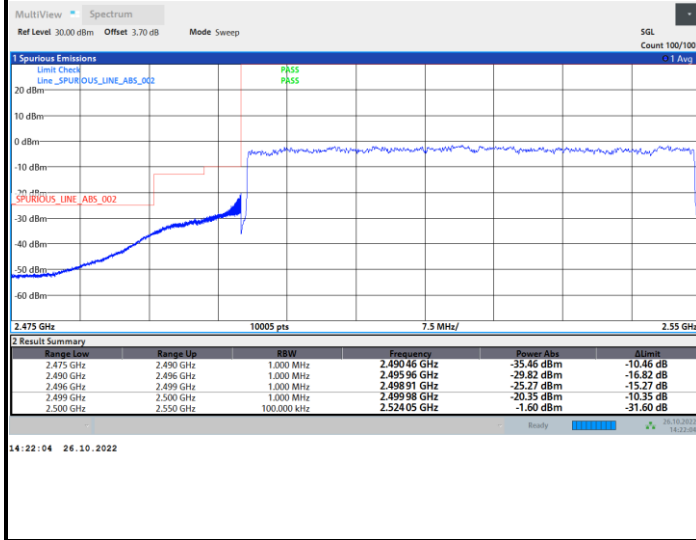
Highest Band Edge / Full RB



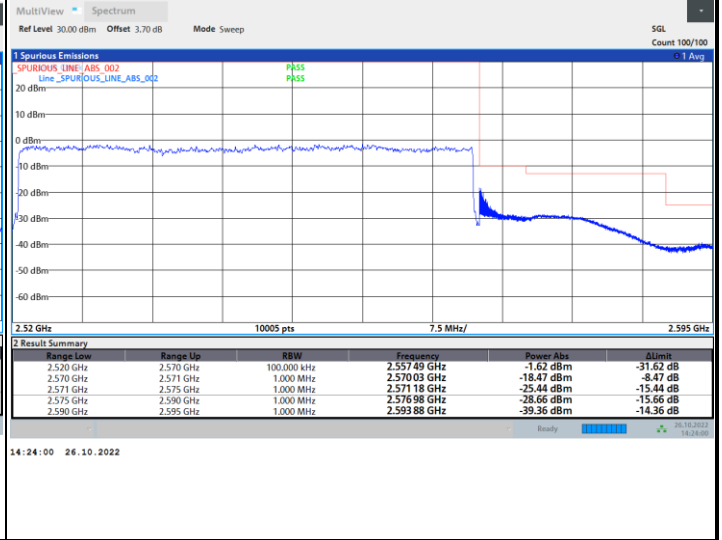


FR1 n7 / 50MHz / DFT-s-OFDM / 16QAM

Lowest Band Edge / Full RB

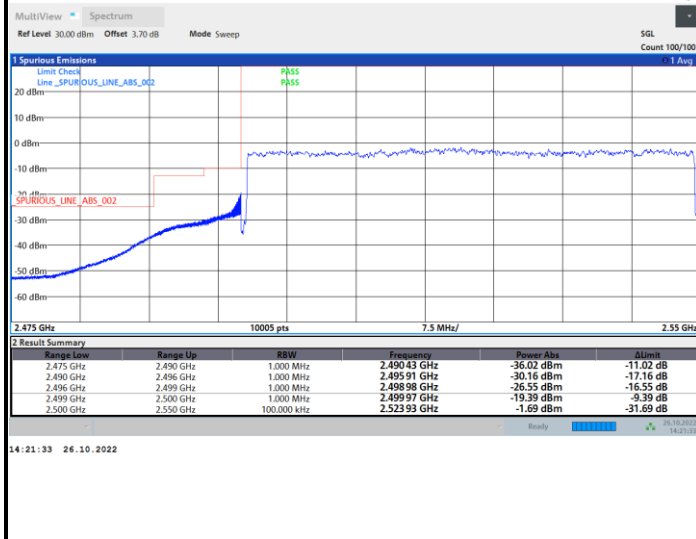


Highest Band Edge / Full RB

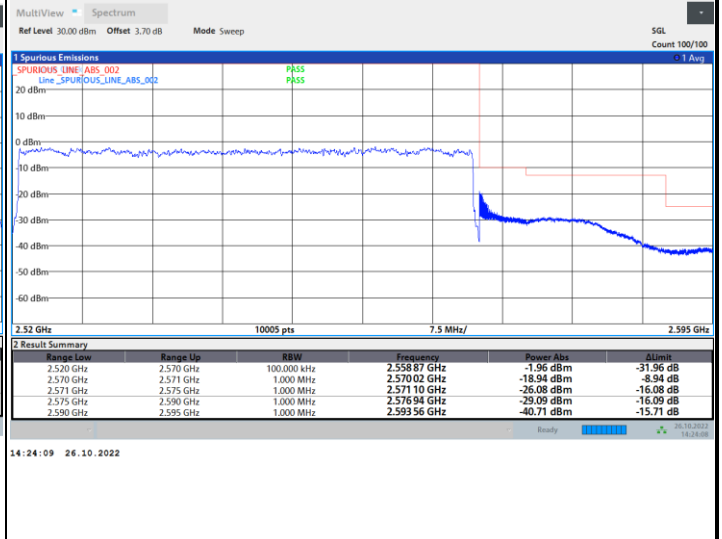


FR1 n7 / 50MHz / DFT-s-OFDM / 64QAM

Lowest Band Edge / Full RB



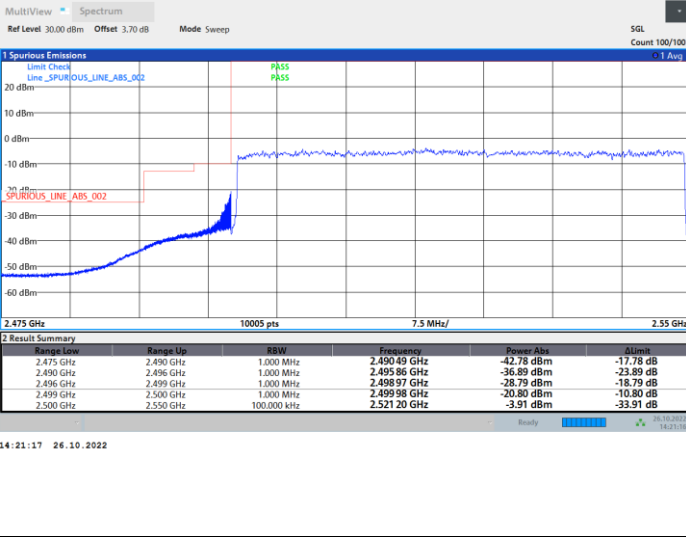
Highest Band Edge / Full RB



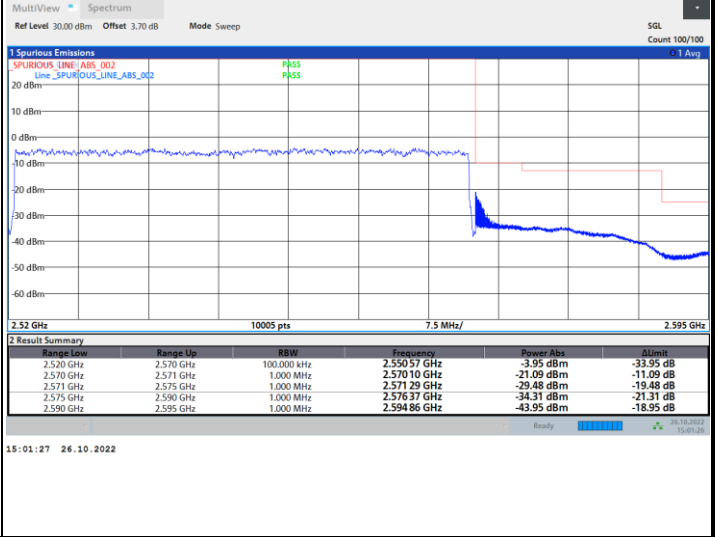


FR1 n7 / 50MHz / DFT-s-OFDM / 256QAM

Lowest Band Edge / Full RB

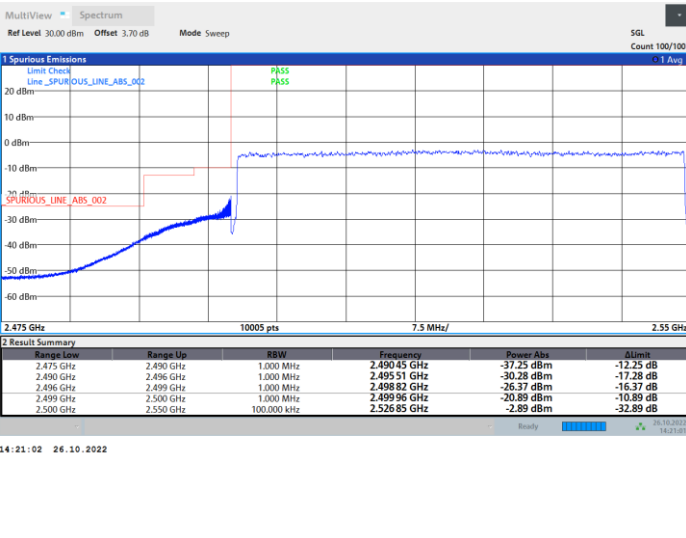


Highest Band Edge / Full RB

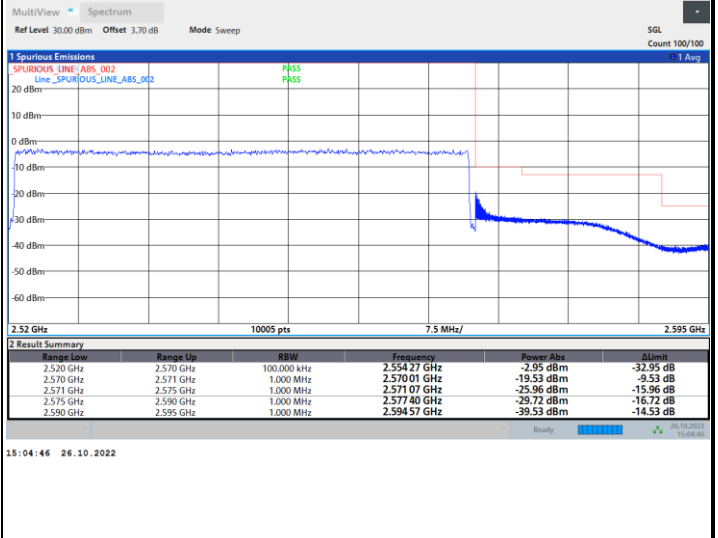


FR1 n7 / 50MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge



Highest Band Edge

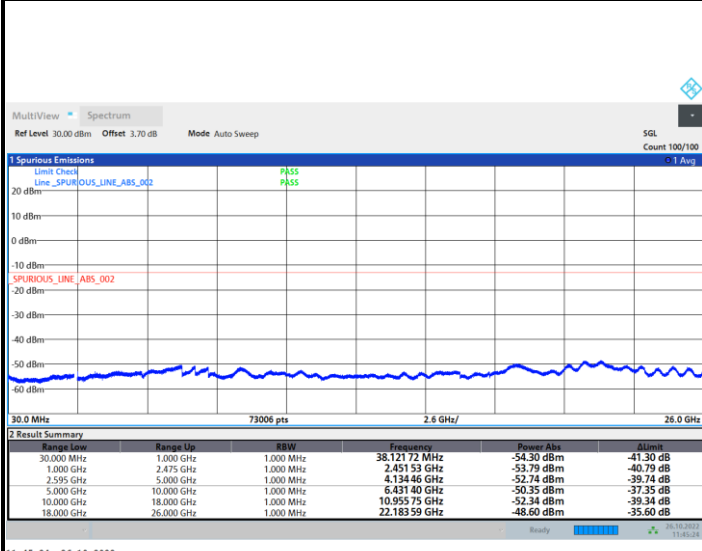




# Conducted Spurious Emission

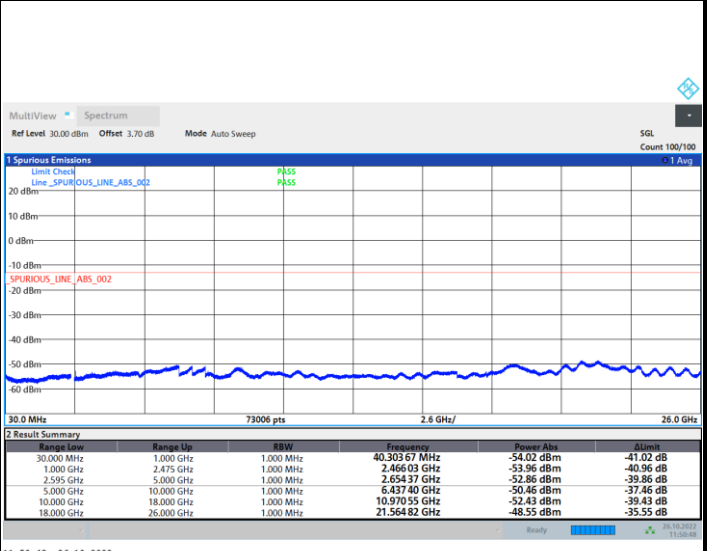
FR1 n7 / 5MHz / DFT-S OFDM / QPSK / 1RB1

## Lowest Channel



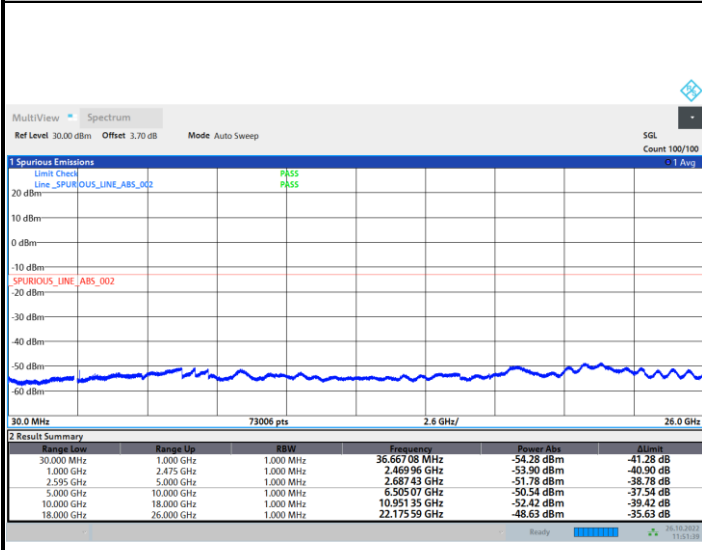
11:45:24 26.10.2022

## Middle Channel



11:50:48 26.10.2022

## Highest Channel



11:51:40 26.10.2022



### Frequency Stability

Test Conditions		FR1 n7 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0010	PASS
40	Normal Voltage	0.0033	
30	Normal Voltage	0.0025	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0028	
0	Normal Voltage	0.0004	
-10	Normal Voltage	0.0011	
-20	Normal Voltage	0.0015	
-30	Normal Voltage	0.0000	
20	Maximum Voltage	0.0011	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0028	

**Note:**

1. Normal Voltage = 3.85 V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage = 4.45 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



## FR1 n12

### Peak-to-Average Ratio

Mode	FR1 n12 / 15MHz / 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	4.80	6.00	6.48	6.52	PASS
Mode	FR1 n12 / 15MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.80				PASS

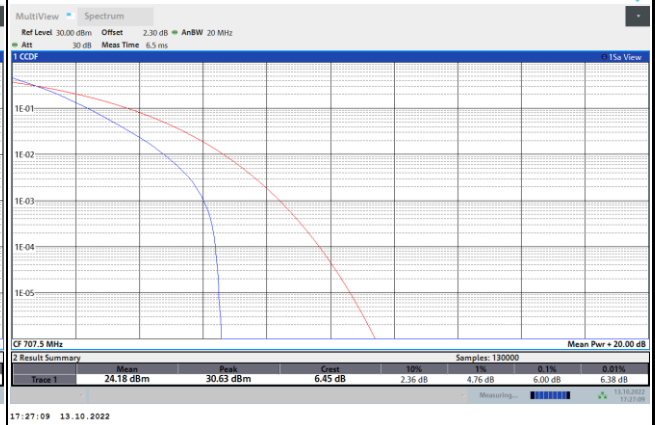
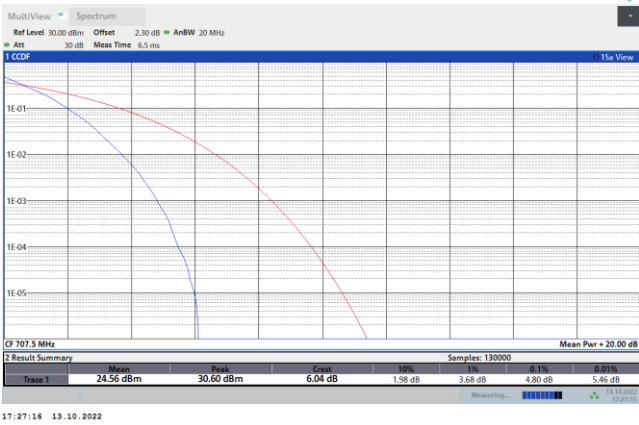




FR1 n12 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

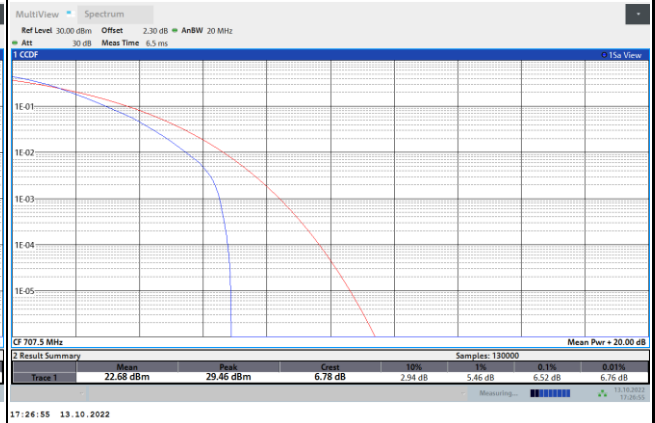
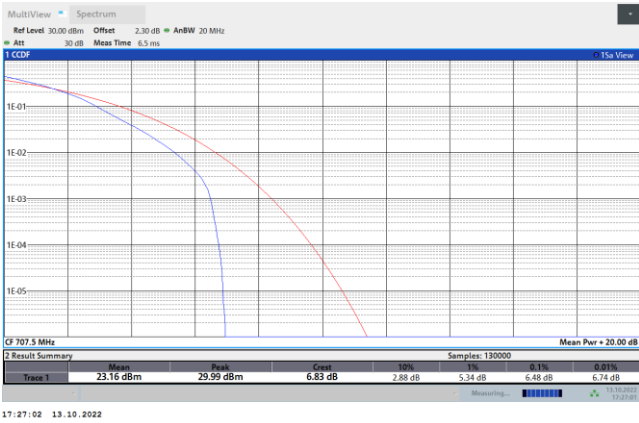
PI/2 BPSK

QPSK

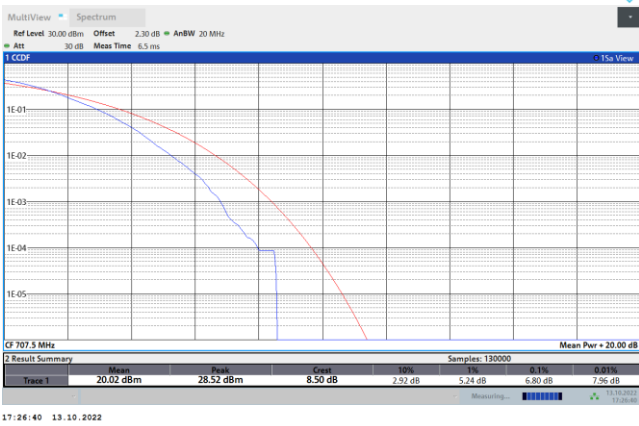


16QAM

64QAM



256QAM





**26dB Bandwidth**

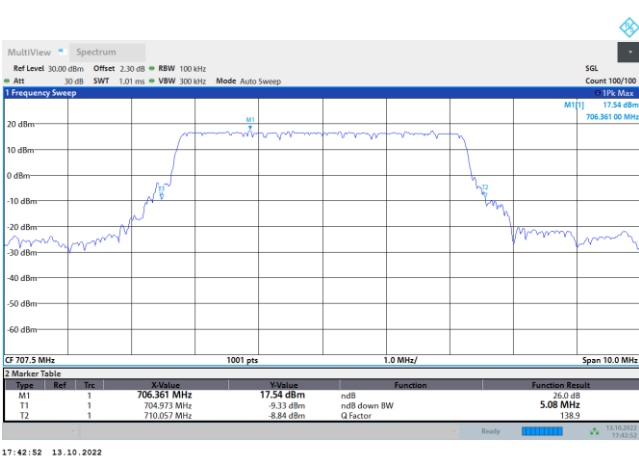
Mode	FR1 n12 : 26dB BW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK			
Middle CH	5.09		9.53		14.30			

Mode	FR1 n12 : 26dB BW(MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM		
Middle CH	5.07	5.01	9.97	9.95	15.05	14.99		
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM		
Middle CH	5.03	5.00	9.97	9.77	15.29	15.20		



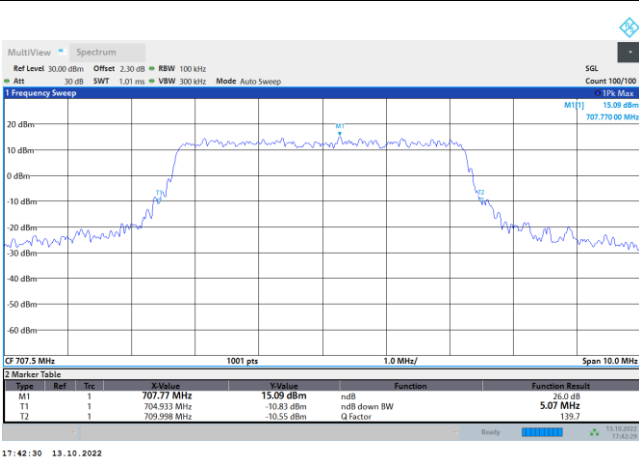
FR1 n12 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

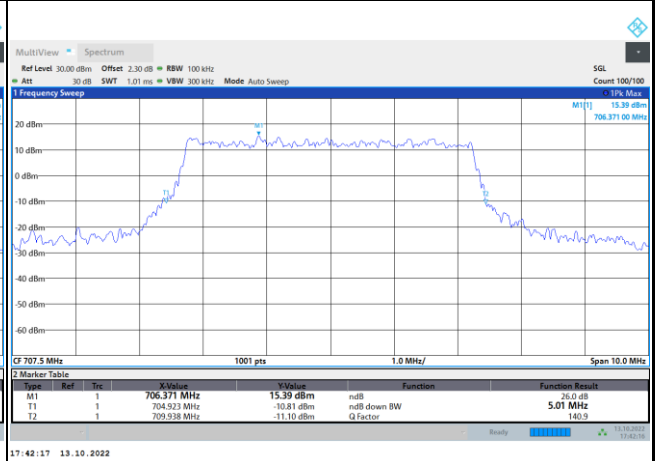


FR1 n12 / 5MHz / CP OFDM / Middle Channel / Full RB

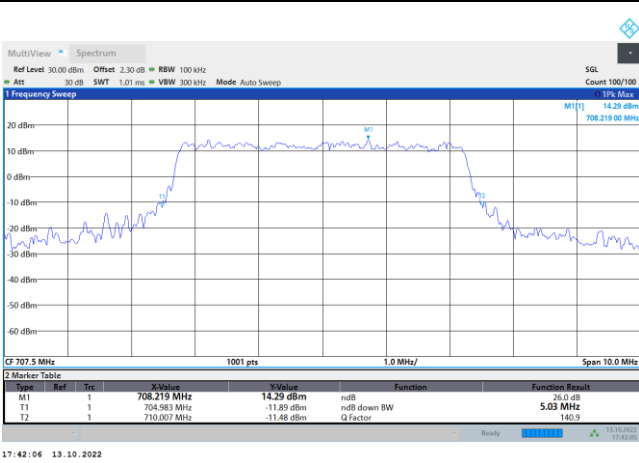
QPSK



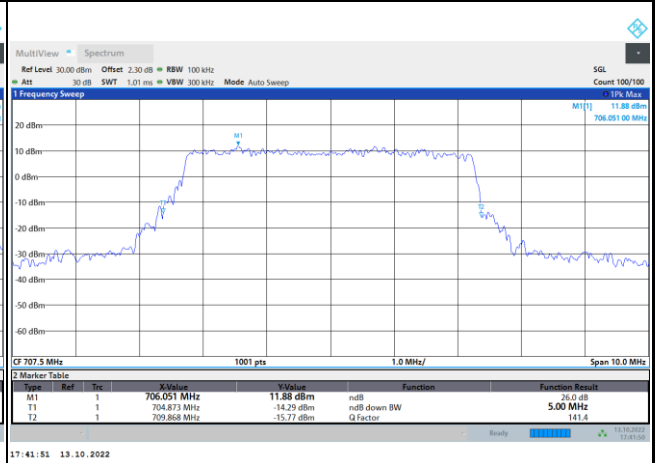
16QAM



64QAM



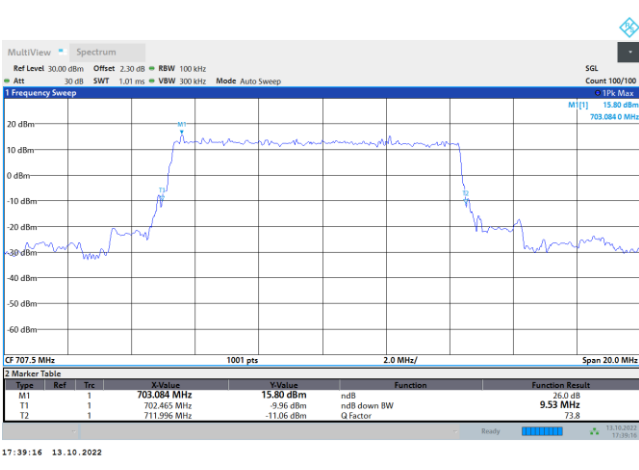
256QAM





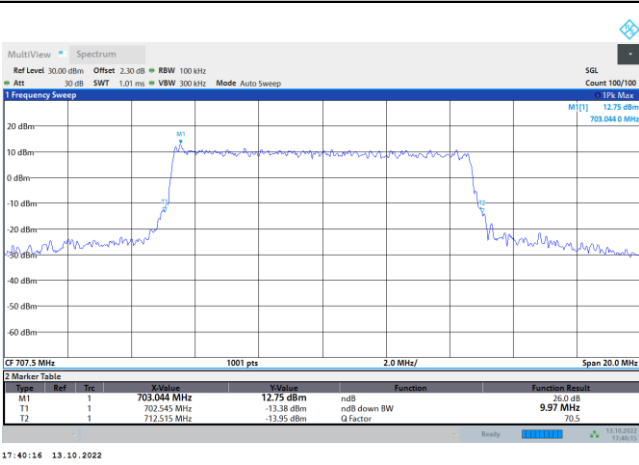
FR1 n12 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

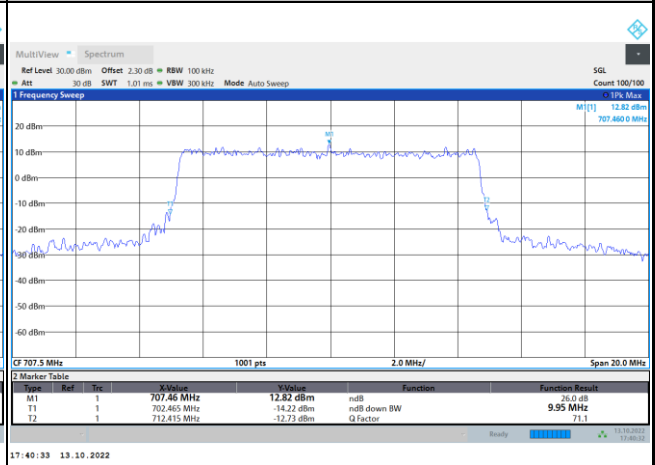


FR1 n12 / 10MHz / CP OFDM / Middle Channel / Full RB

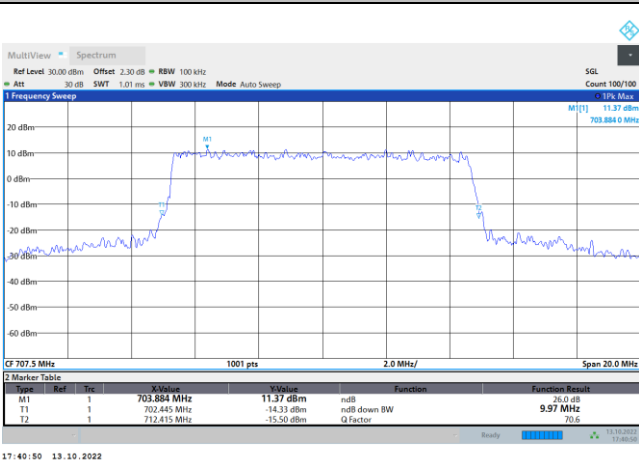
QPSK



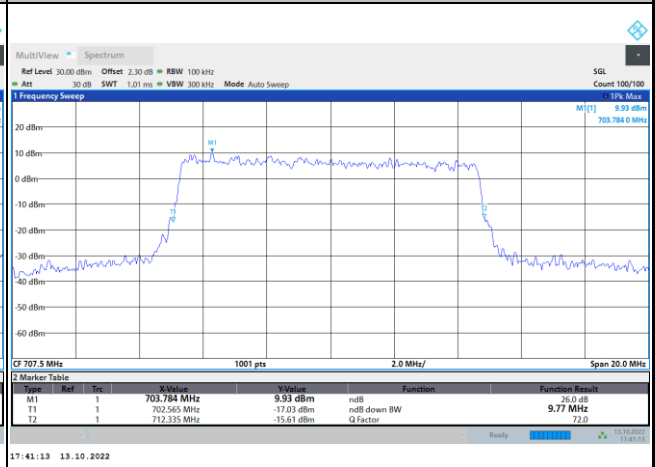
16QAM



64QAM



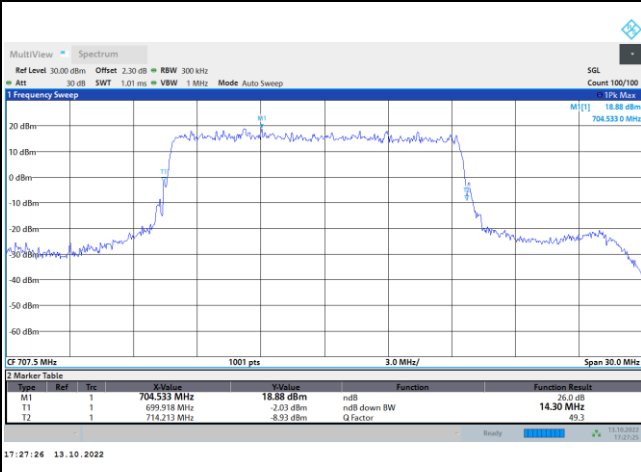
256QAM





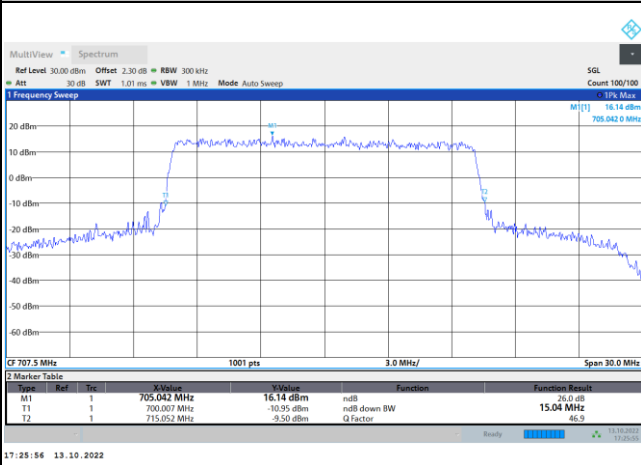
FR1 n12 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

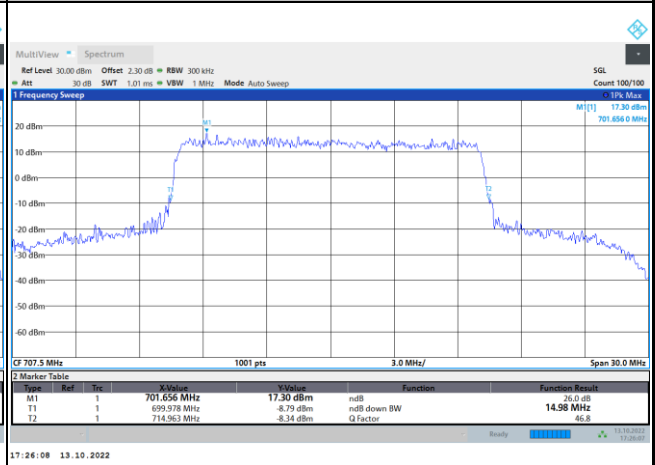


FR1 n12 / 15MHz / CP OFDM / Middle Channel / Full RB

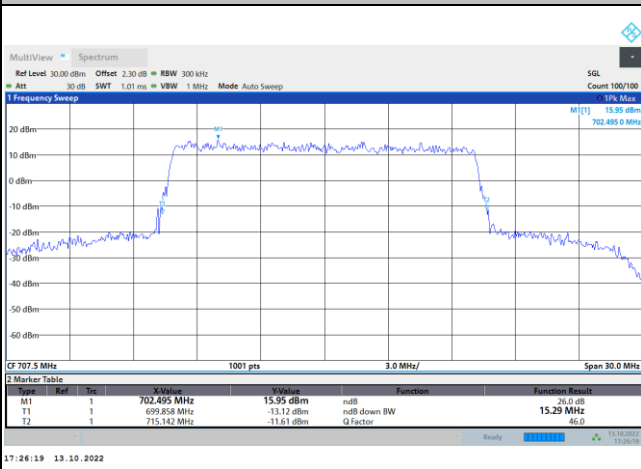
QPSK



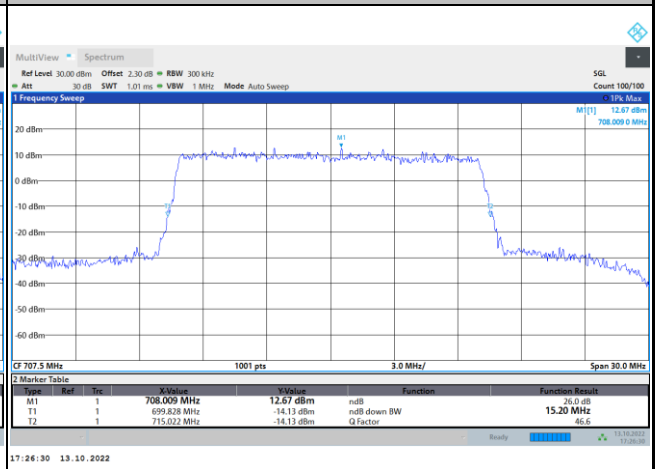
16QAM



64QAM



256QAM





### Occupied Bandwidth

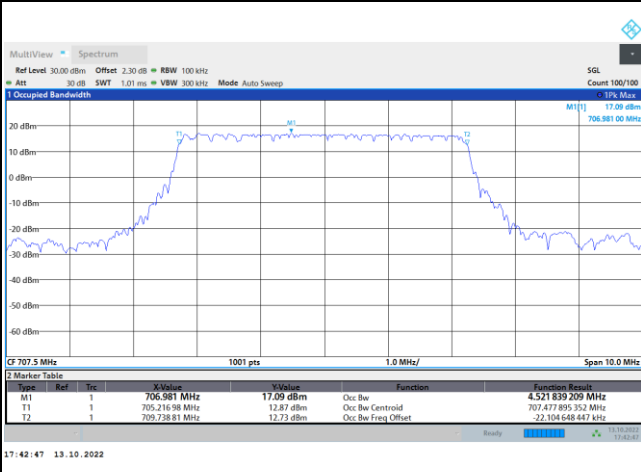
Mode	FR1 n12 : 99%OBW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK			
Middle CH	4.52		8.94		13.48			

Mode	FR1 n12 : 99%OBW (MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM		
Middle CH	4.50	4.49	9.26	9.28	14.12	14.16		
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM		
Middle CH	4.51	4.50	9.27	9.29	14.15	14.14		



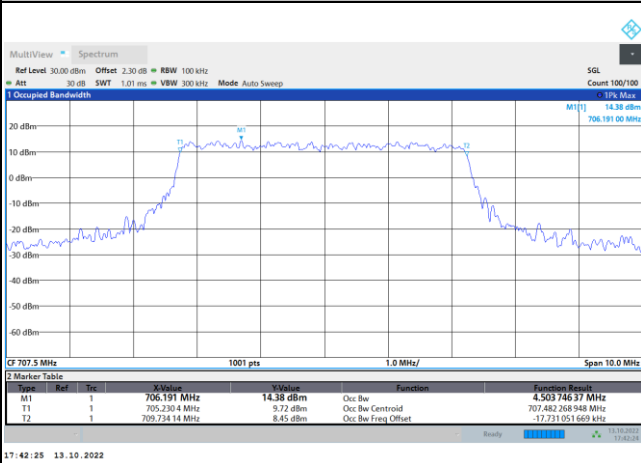
FR1 n12 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

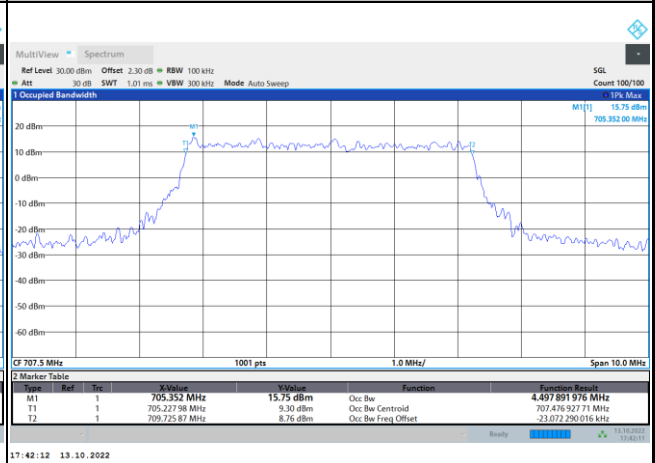


FR1 n12 / 5MHz / CP OFDM / Middle Channel / Full RB

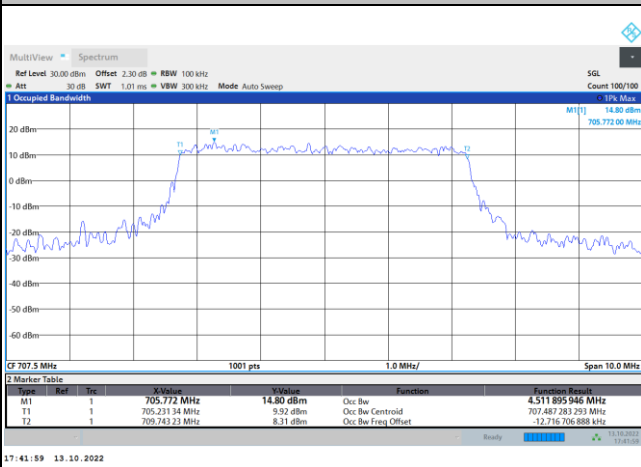
QPSK



16QAM



64QAM



256QAM

