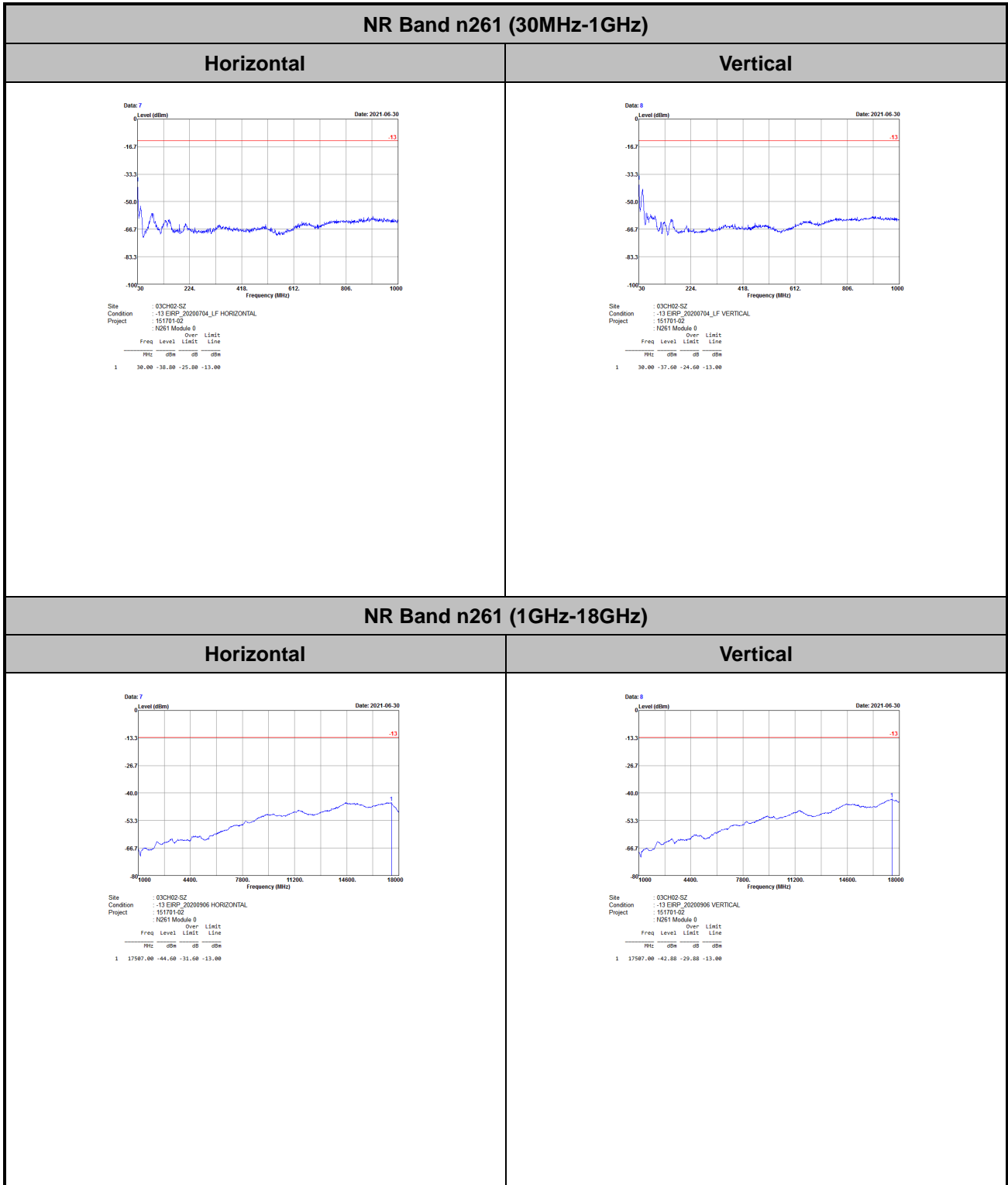




# Spurious Emission

There is no significant spurious emission signal found for frequency started from 30MHz up to 18GHz. Only the noise floor is reported.

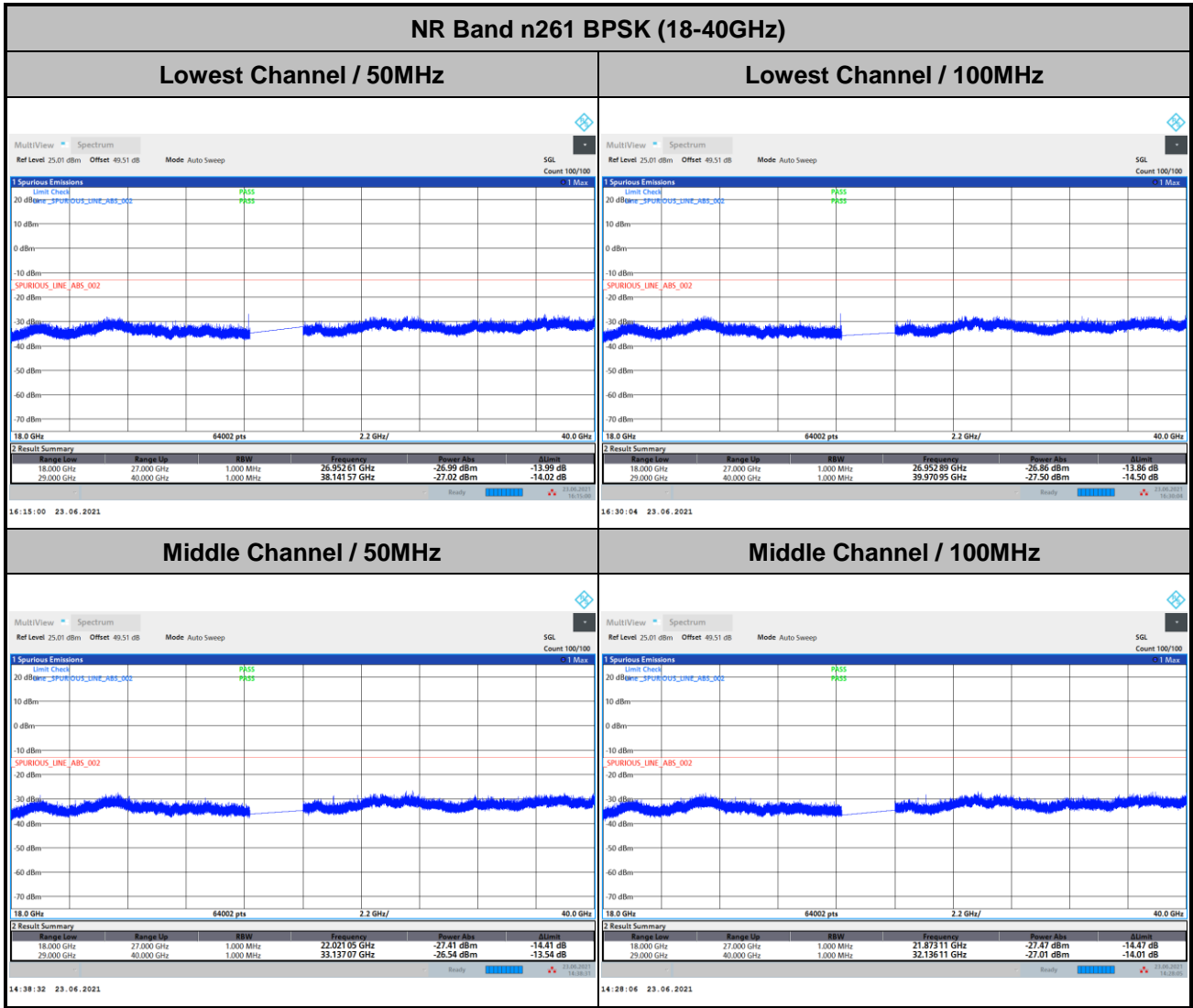


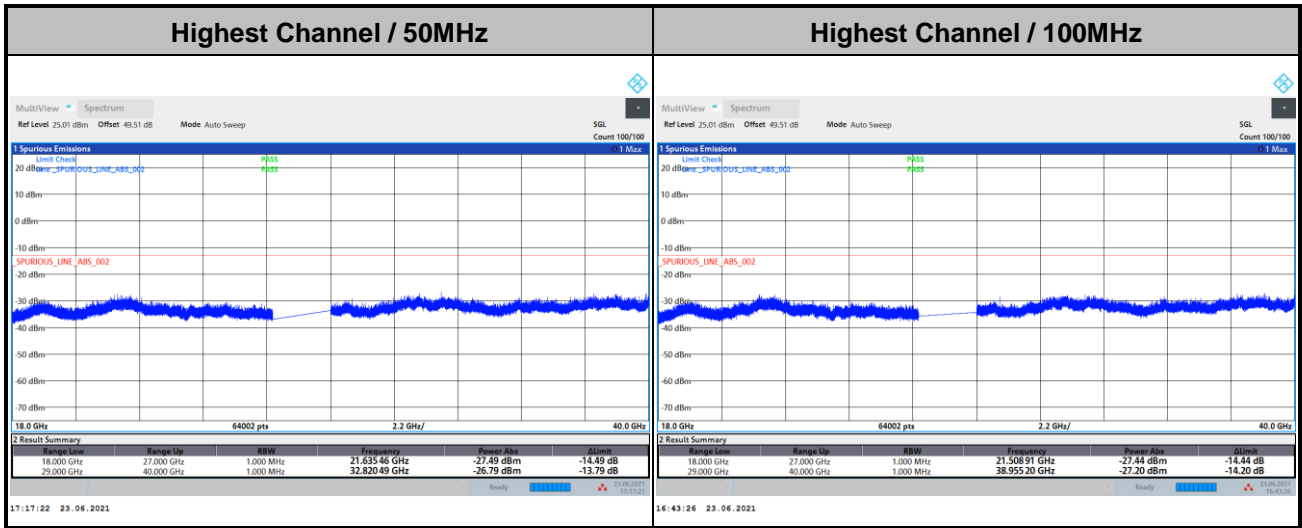


Spurious emission between 18GHz to 40GHz worst case plot is reported as following.

Remark: Below plots, the spurious emissions were measured from 18GHz to 27GHz and 29GHz to 40GHz. The test results within the omitted frequency 27GHz to 29GHz were measured and reported in the section of Radiated Out of Band Emission with frequency range, 27GHz to 29GHz, and all spurious comply with limits.

DFT-s-OFDM Module 0





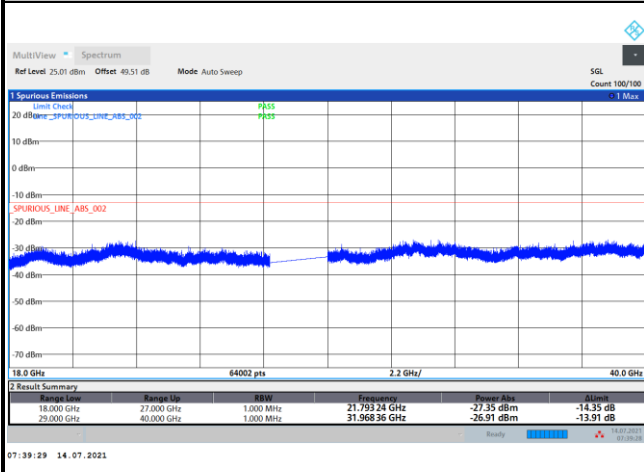
Remark: In band and out of band frequencies are omitted.



DFT-s-OFDM Module 0

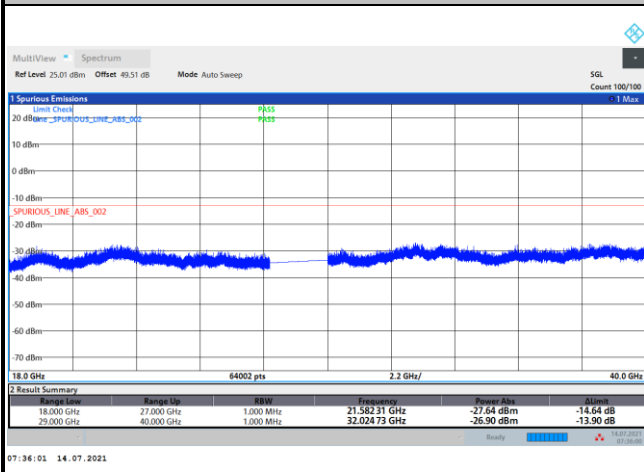
NR Band n261 BPSK (18-40GHz)

Lowest Channel / 200MHz



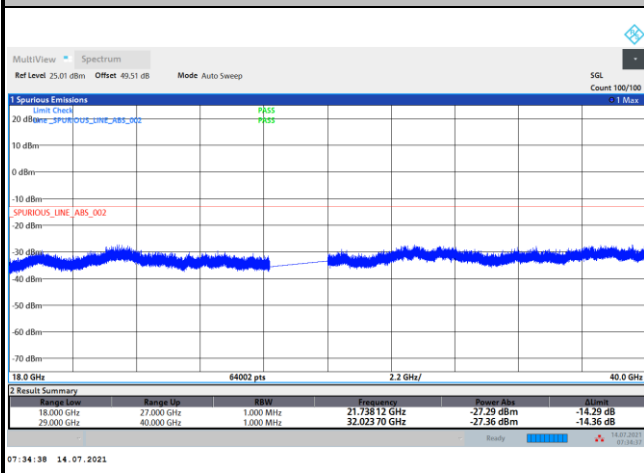
intentionally blank

Middle Channel / 200MHz



intentionally blank

Highest Channel / 200MHz



intentionally blank

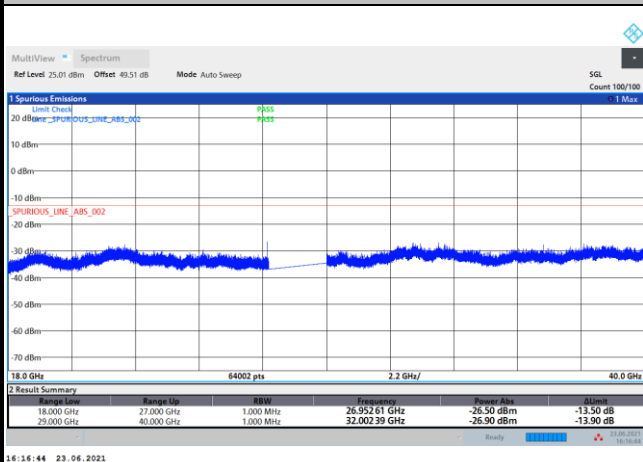
Remark: In band and out of band frequencies are omitted.



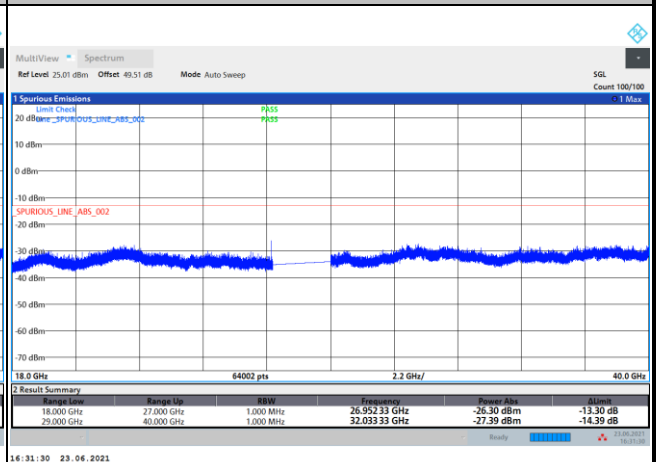
DFT-s-OFDM Module 0

NR Band n261 QPSK (18-40GHz)

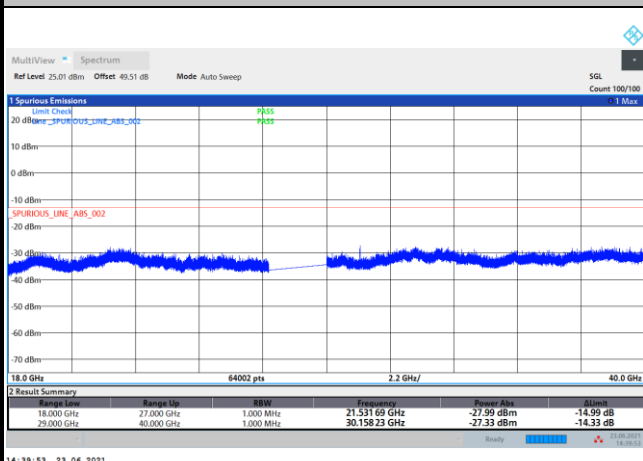
Lowest Channel / 50MHz



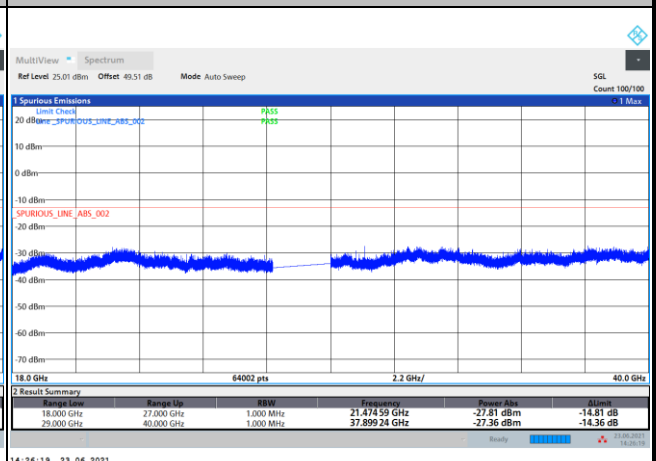
Lowest Channel / 100MHz



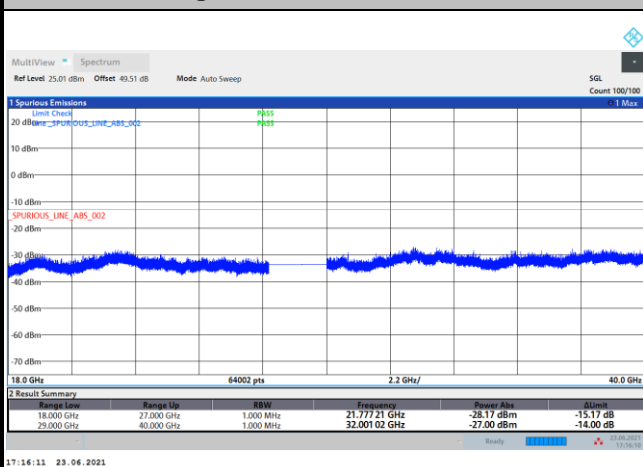
Middle Channel / 50MHz



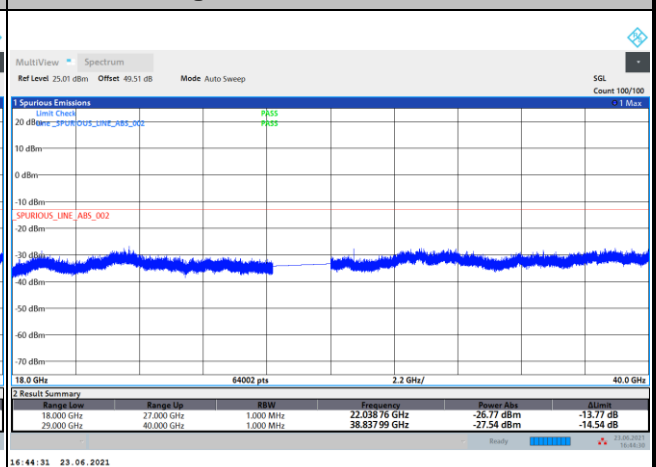
Middle Channel / 100MHz



Highest Channel / 50MHz



Highest Channel / 100MHz



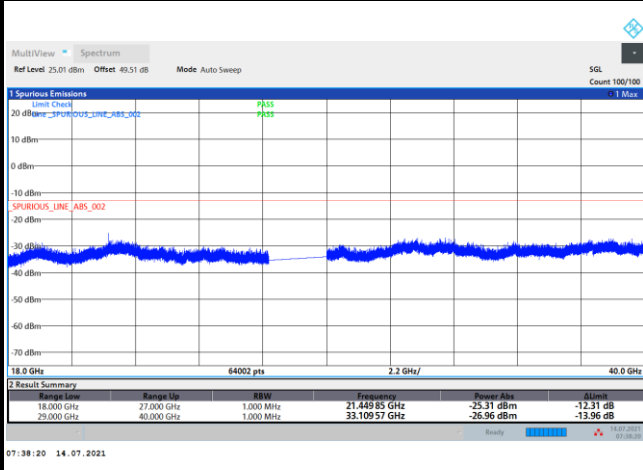
Remark: In band and out of band frequencies are omitted.



DFT-s-OFDM Module 0

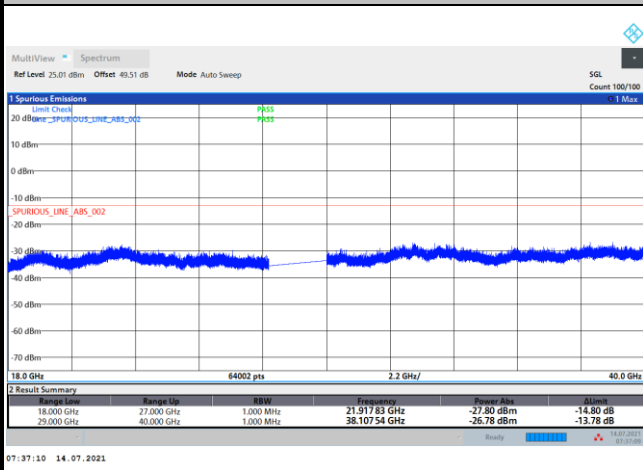
NR Band n261 QPSK (18-40GHz)

Lowest Channel / 200MHz



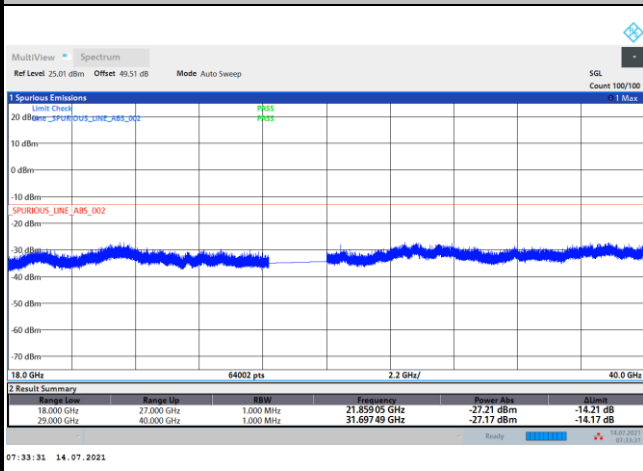
intentionally blank

Middle Channel / 200MHz



intentionally blank

Highest Channel / 200MHz

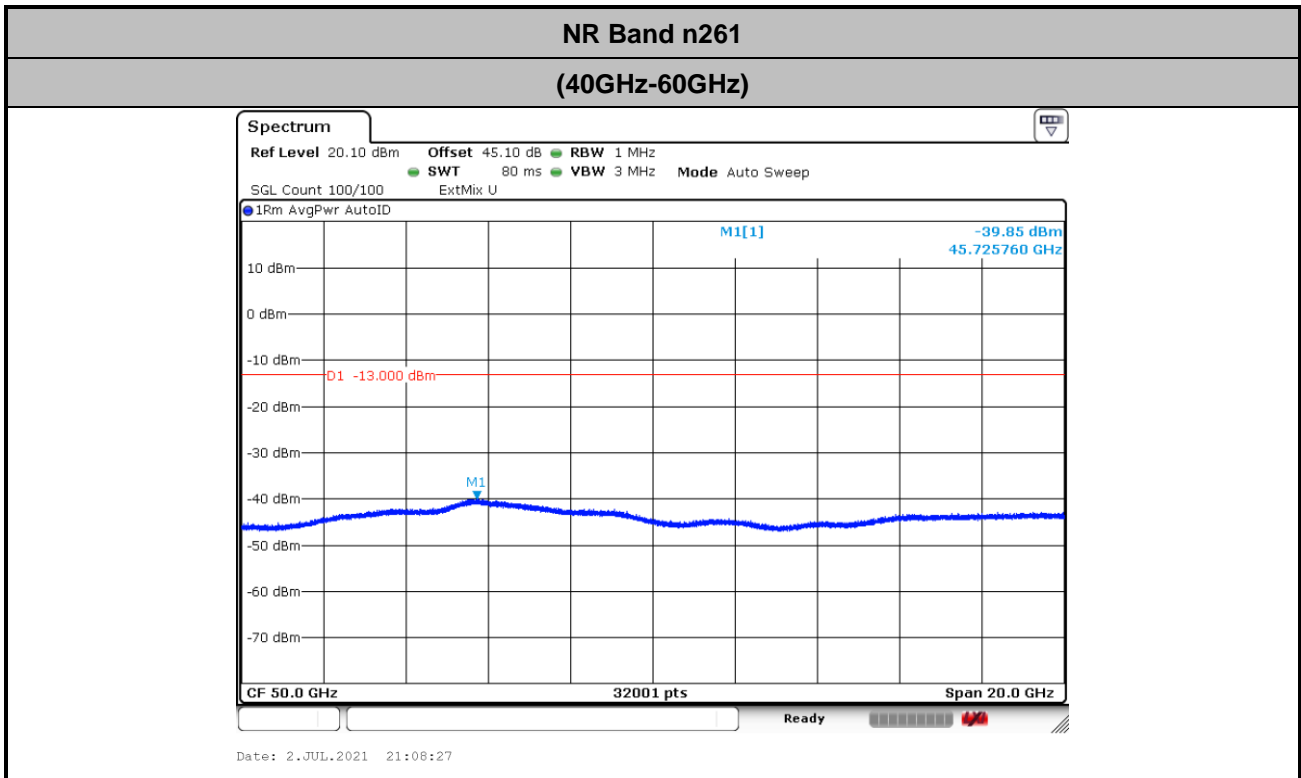


intentionally blank

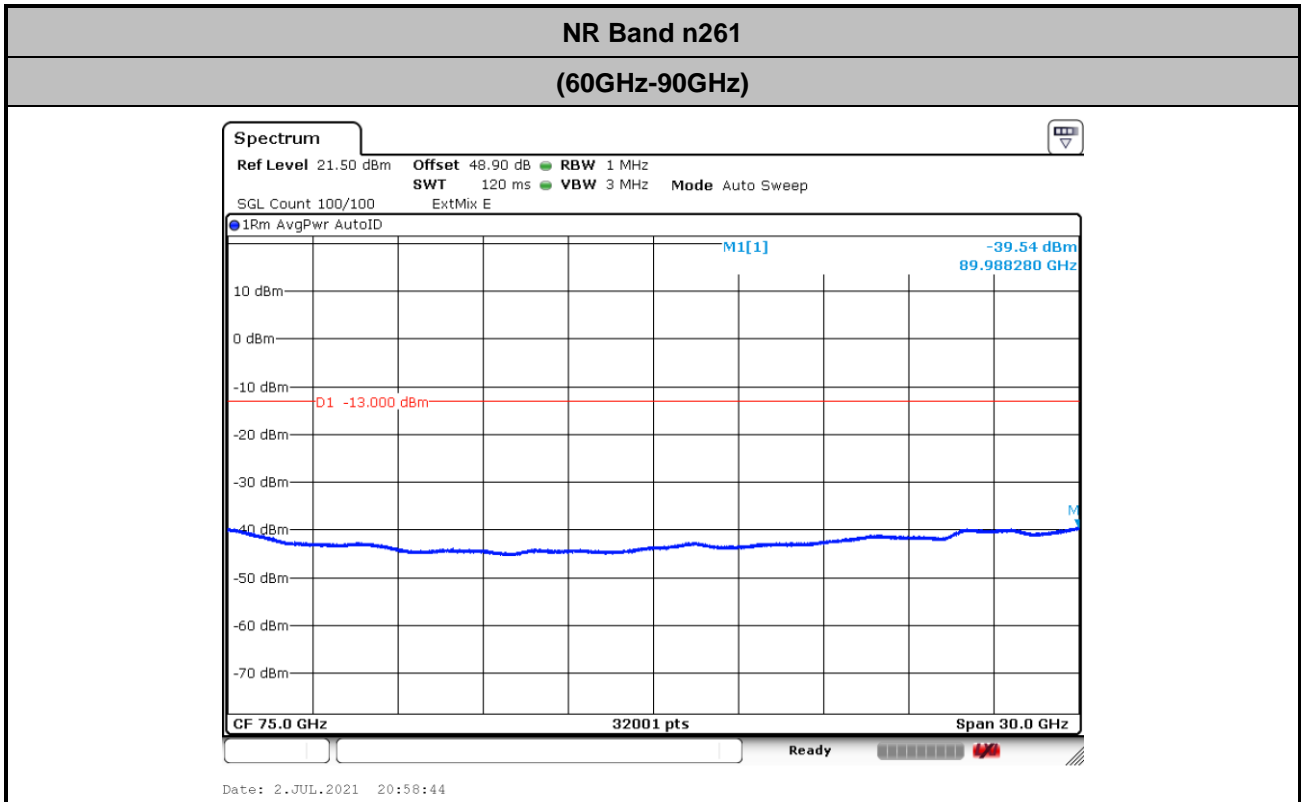
Remark: In band and out of band frequencies are omitted.



There is no significant spurious emission signal found for frequency started from 40GHz up to 100GHz. Only the noise floor is reported.

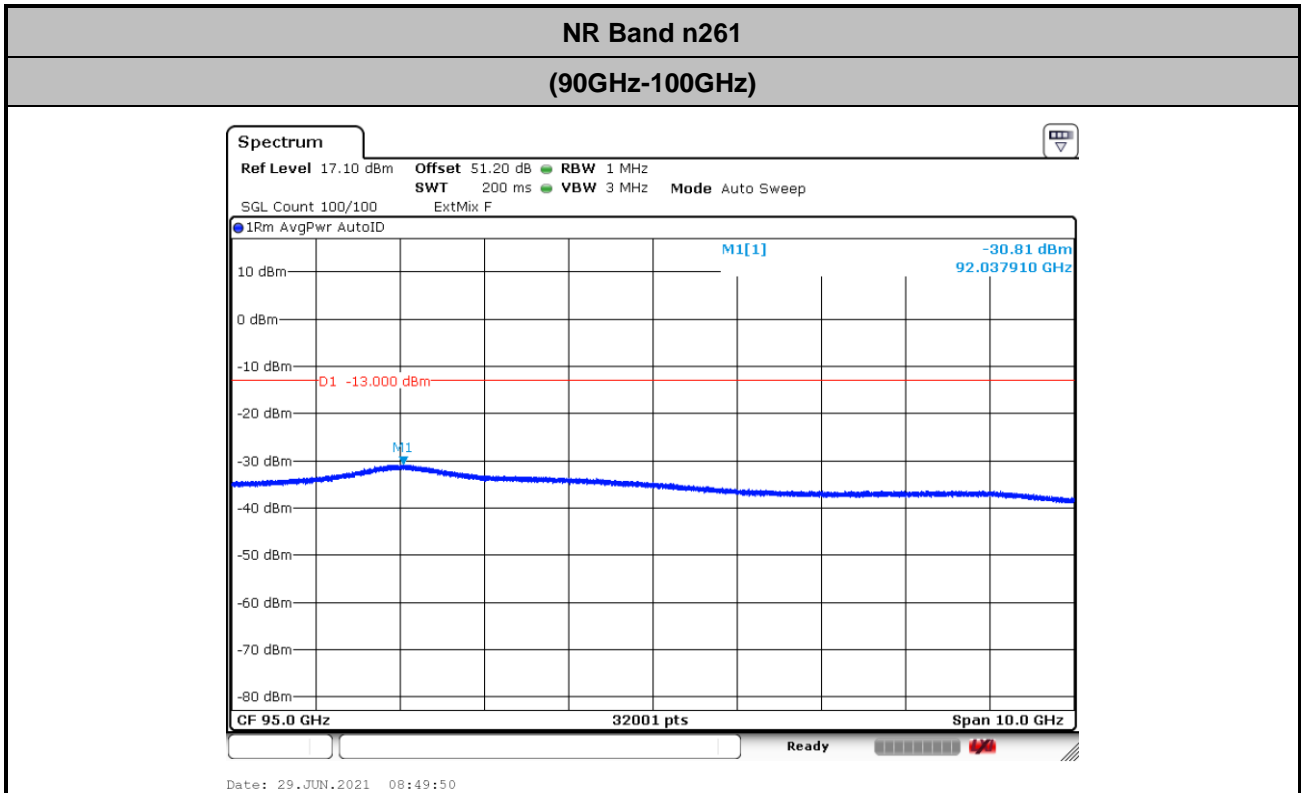


$$\begin{aligned}
 \text{Offset} &= \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8 \\
 &= 42.5 + 0.4 + 107 + 20\log(1) - 104.8 = 45.1 \text{ (dB)}
 \end{aligned}$$



$$\begin{aligned}
 \text{Offset} &= \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8 \\
 &= 46.3 + 0.4 + 107 + 20\log(1) - 104.8 = 48.9 \text{ (dB)}
 \end{aligned}$$





$$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$$

$$= 48.6 + 0.4 + 107 + 20\log(1) - 104.8 = 51.2 \text{ (dB)}$$



**Frequency Stability**

Test Conditions		NR Band n261 / Middle Channel			Limit
Temperature (°C)	Voltage (Volt)	CW tone			Note 2.
		Frequency (GHz)	Deviation (kHz)	Deviation (ppm)	Result
50	Normal Voltage	27.9249421	57.900	2.073	PASS
40	Normal Voltage	27.9249537	46.300	1.658	
30	Normal Voltage	27.9249919	8.100	0.290	
20(Ref.)	Normal Voltage	27.925	0.000	0.000	
10	Normal Voltage	27.925081	-81.000	2.901	
0	Normal Voltage	27.9251123	-112.300	4.021	
-10	Normal Voltage	27.9251459	-145.900	5.225	
-20	Normal Voltage	27.9251864	-186.400	6.675	
-30	Normal Voltage	27.9252443	-244.300	8.748	
20	Maximum Voltage	27.92500145	-1.450	0.052	
20	Normal Voltage	27.925	0.000	0.000	
20	Battery End Point	27.92499783	2.170	0.078	

**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.4 V.
2. The frequency fundamental emissions stay within the operation band.



# NR Band n261 Module 0

## AG1

### Occupied Bandwidth

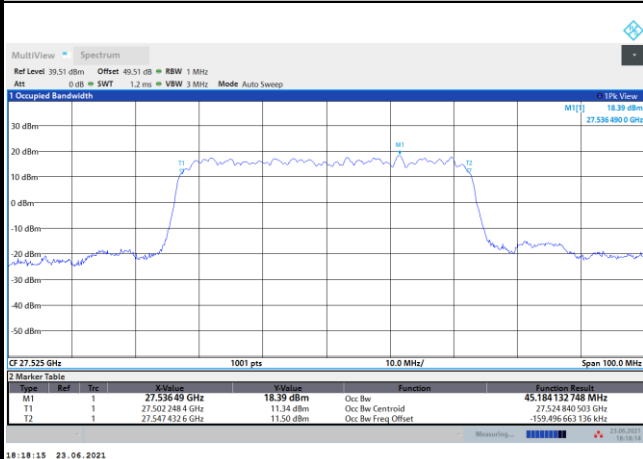
Mode	DFT-s-OFDM Module 0 NR Band n261 : 99%OBW(MHz)											
BW	50MHz				100MHz				200MHz			
Mod.	BPSK	QPSK	16QAM	64QAM	BPSK	QPSK	16QAM	64QAM	BPSK	QPSK	16QAM	64QAM
Lowest CH	45.18	45.20	45.19	45.16	90.31	90.00	90.55	90.05	184.16	184.88	185.77	184.89
Middle CH	45.21	45.23	45.23	45.15	90.10	90.19	90.52	90.32	185.76	185.21	185.43	185.29
Highest CH	45.26	45.22	45.23	44.99	90.45	90.30	90.75	90.30	182.82	184.25	183.69	184.16



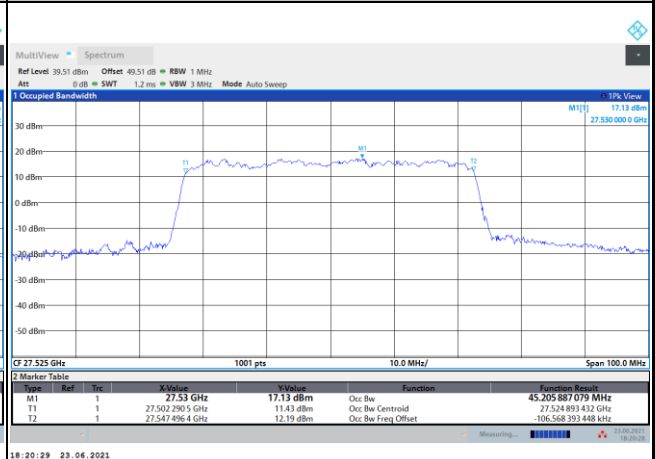
DFT-s-OFDM Module 0

NR Band n261

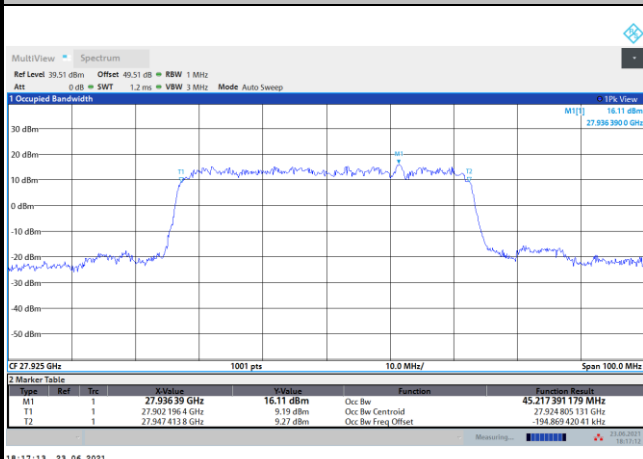
Lowest Channel / 50MHz / BPSK



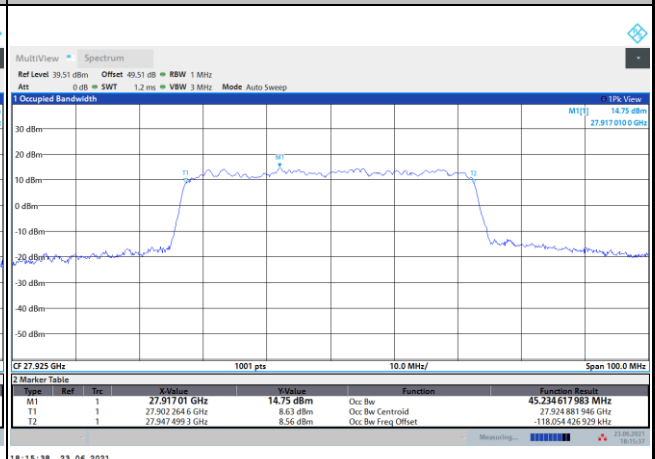
Lowest Channel / 50MHz / QPSK



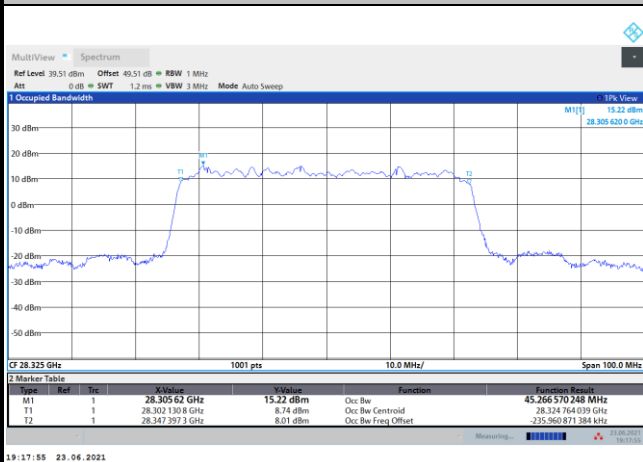
Middle Channel / 50MHz / BPSK



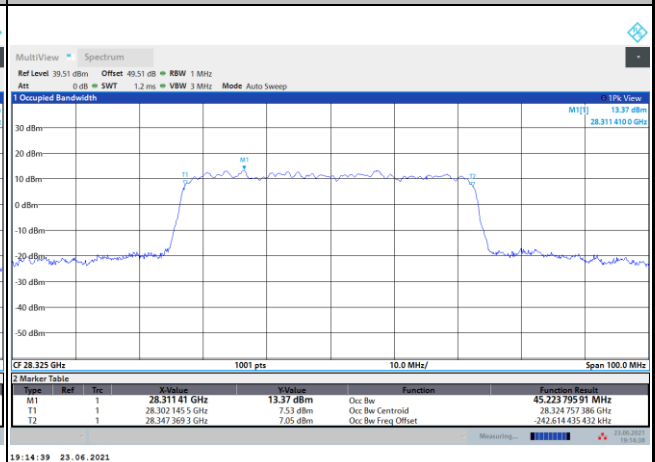
Middle Channel / 50MHz / QPSK



Highest Channel / 50MHz / BPSK



Highest Channel / 50MHz / QPSK

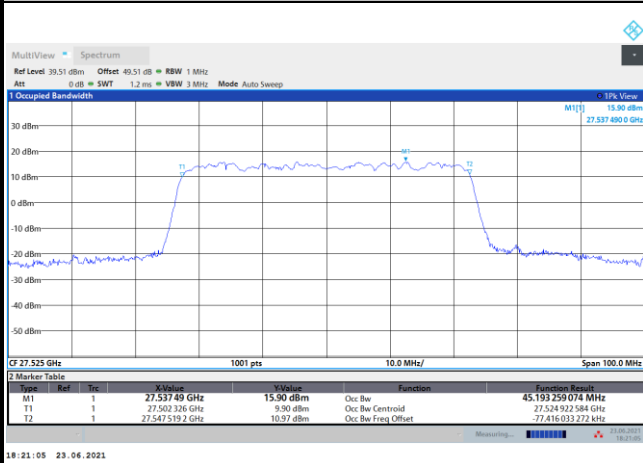




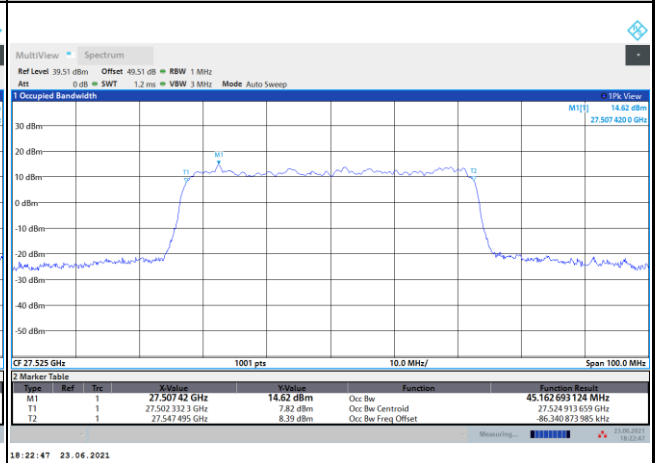
DFT-s-OFDM Module 0

NR Band n261

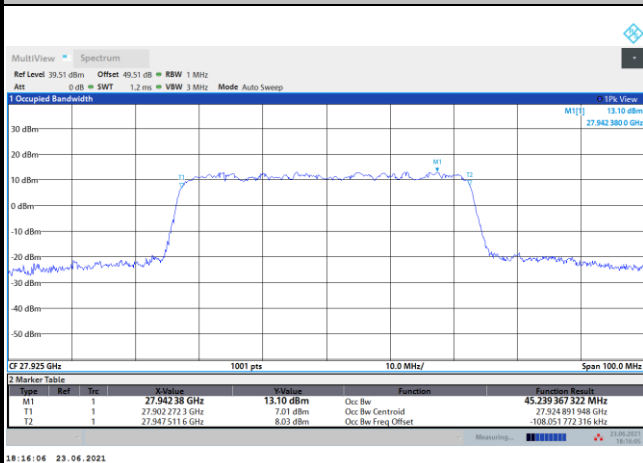
Lowest Channel / 50MHz / 16QAM



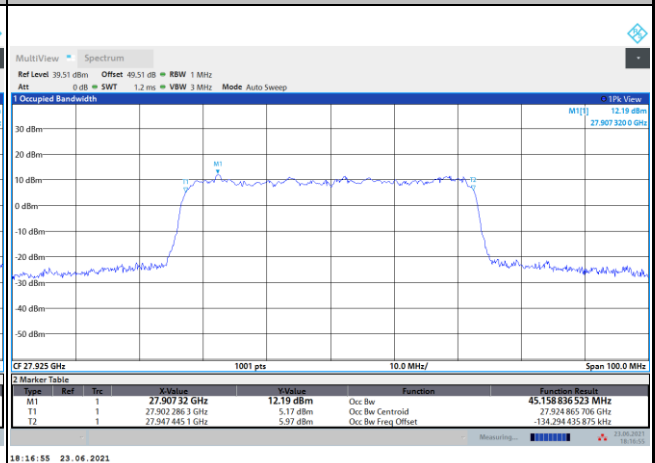
Lowest Channel / 50MHz / 64QAM



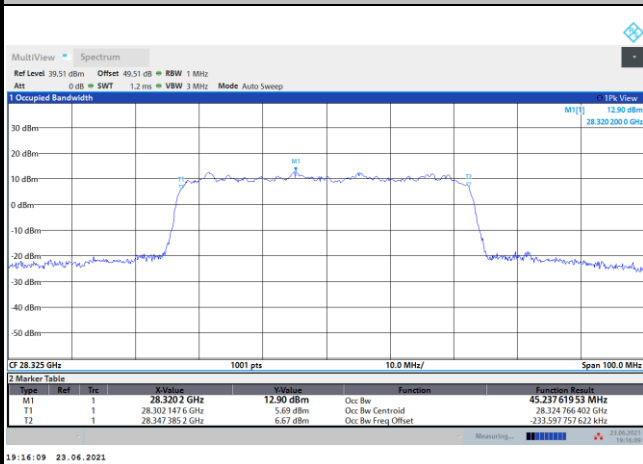
Middle Channel / 50MHz / 16QAM



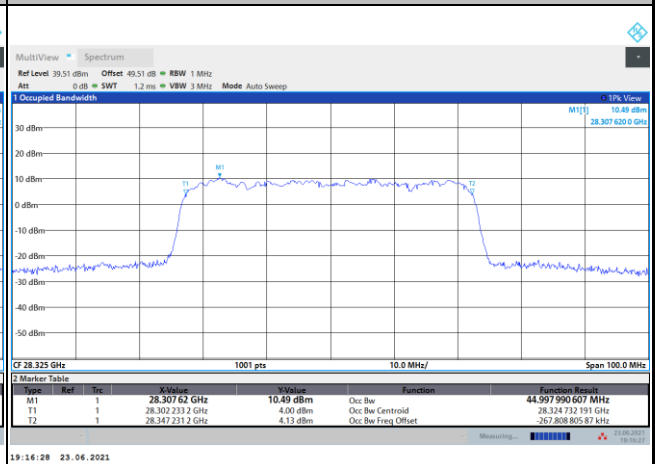
Middle Channel / 50MHz / 64QAM



Highest Channel / 50MHz / 16QAM



Highest Channel / 50MHz / 64QAM

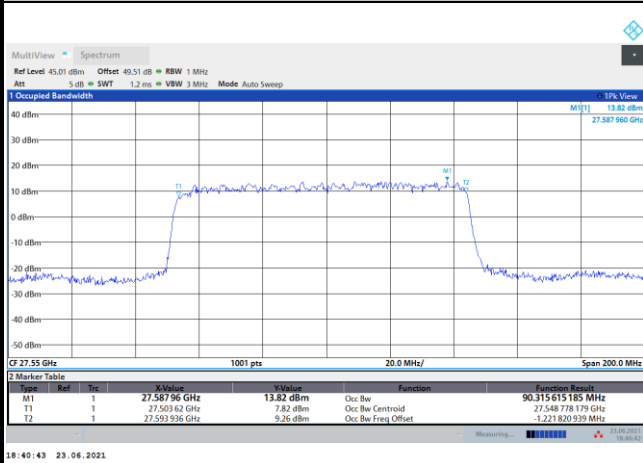




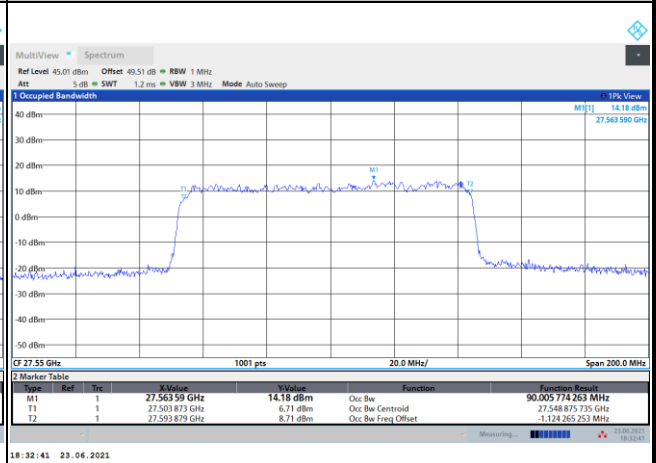
DFT-s-OFDM Module 0

NR Band n261

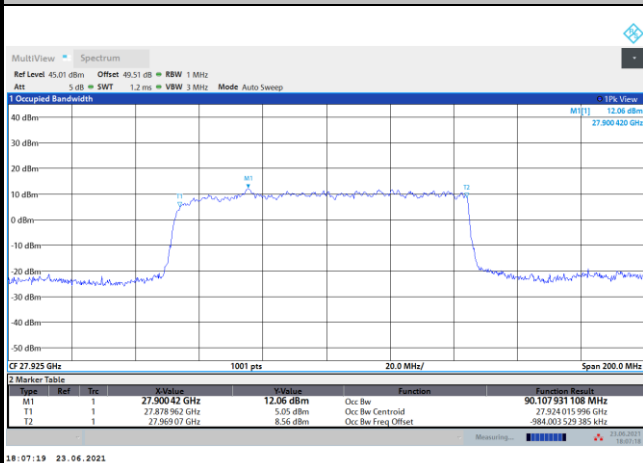
Lowest Channel / 100MHz / BPSK



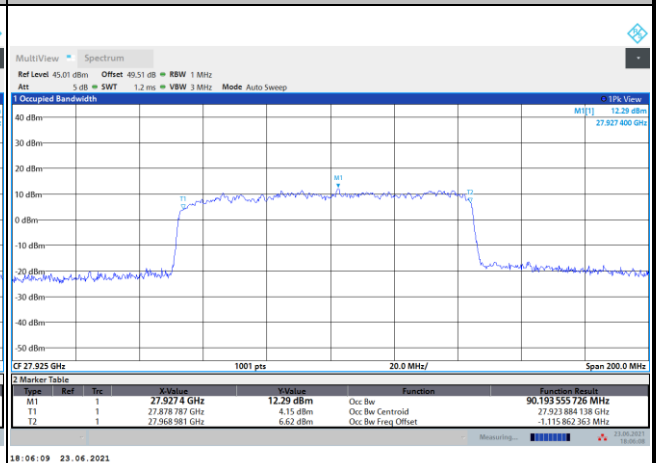
Lowest Channel / 100MHz / QPSK



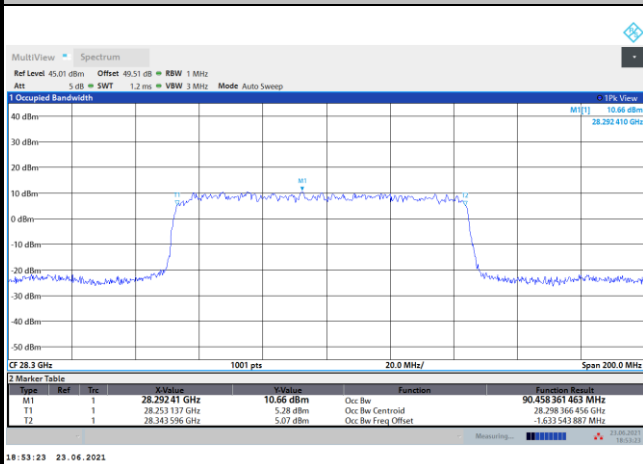
Middle Channel / 100MHz / BPSK



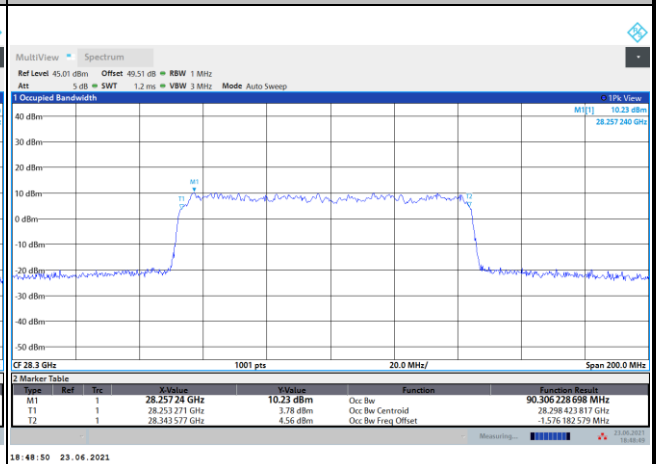
Middle Channel / 100MHz / QPSK



Highest Channel / 100MHz / BPSK



Highest Channel / 100MHz / QPSK

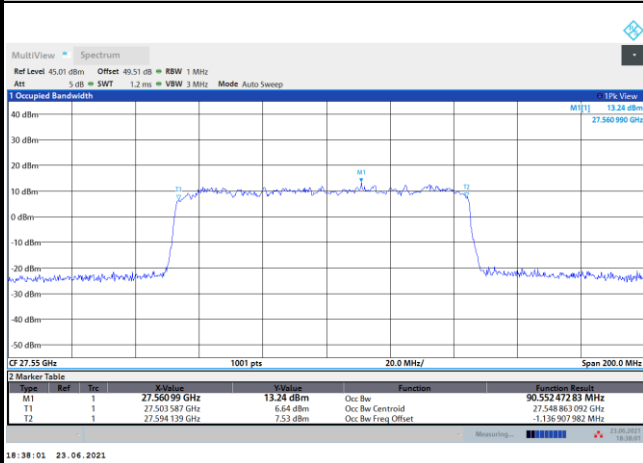




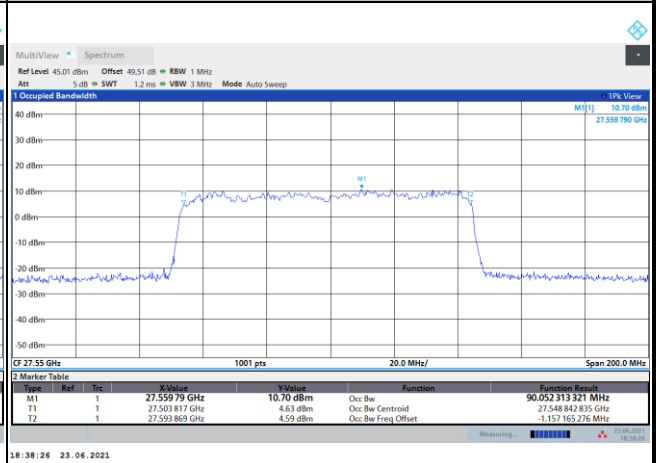
DFT-s-OFDM Module 0

NR Band n261

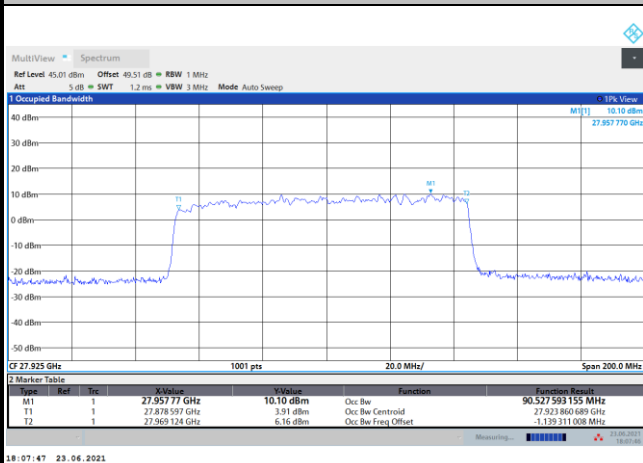
Lowest Channel / 100MHz / 16QAM



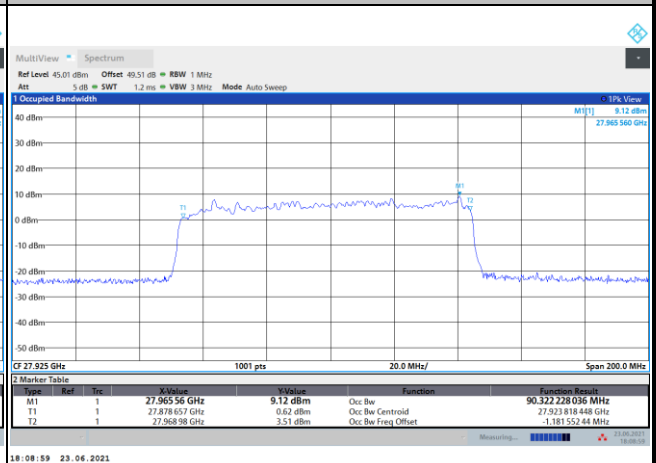
Lowest Channel / 100MHz / 64QAM



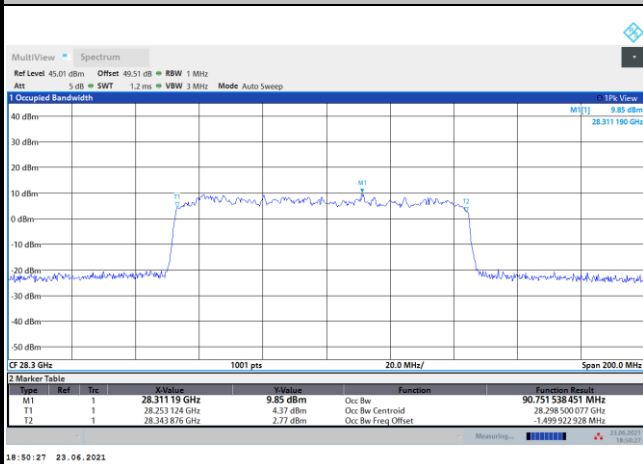
Middle Channel / 100MHz / 16QAM



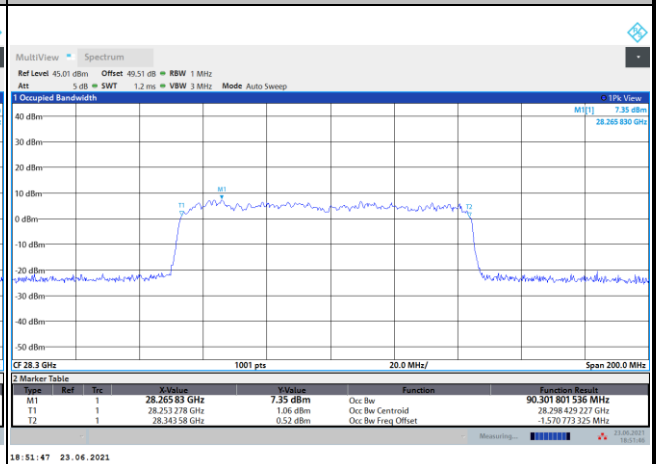
Middle Channel / 100MHz / 64QAM



Highest Channel / 100MHz / 16QAM



Highest Channel / 100MHz / 64QAM

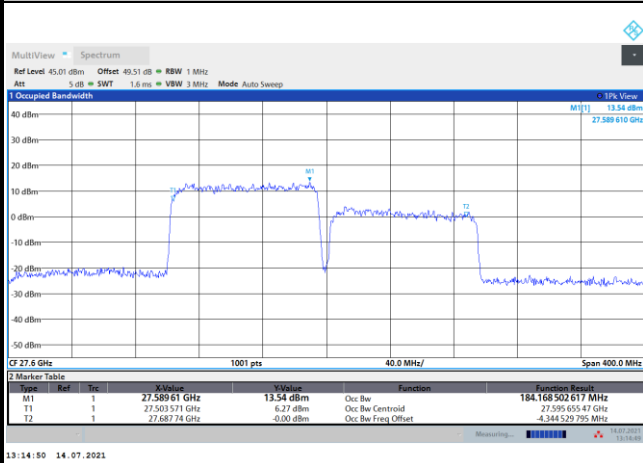




DFT-s-OFDM Module 0

NR Band n261

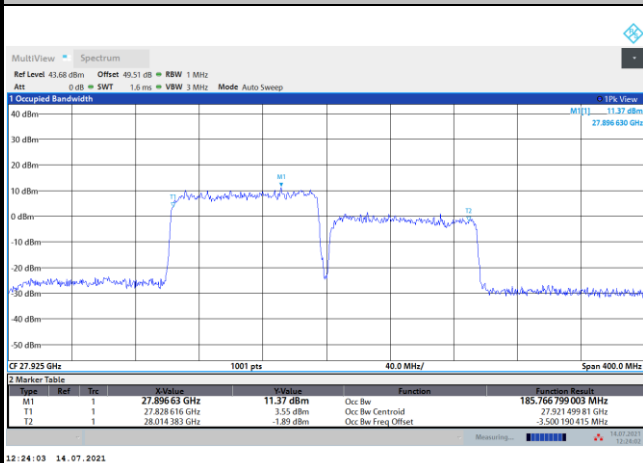
Lowest Channel / 200MHz / BPSK



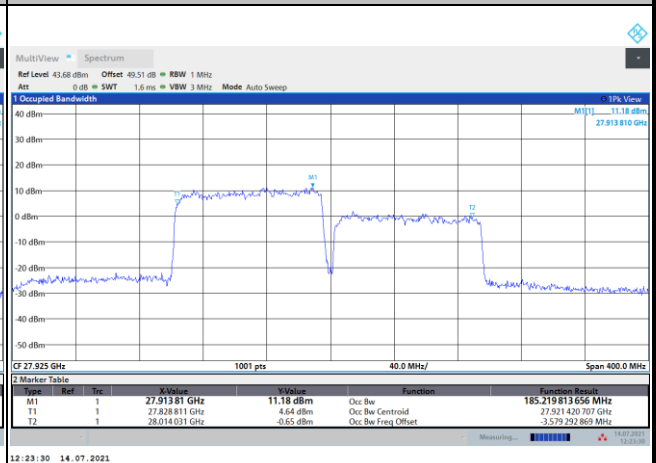
Lowest Channel / 200MHz / QPSK



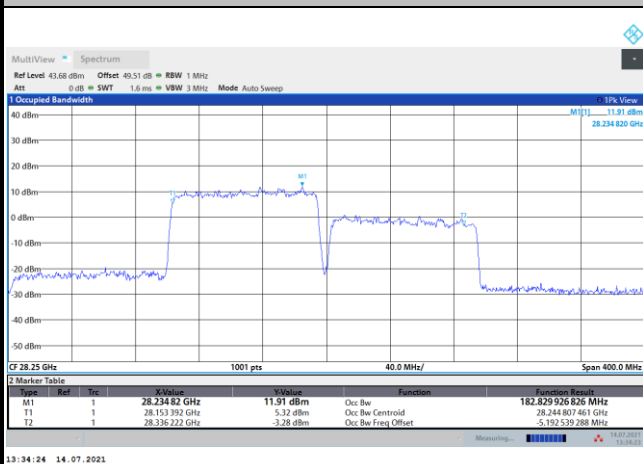
Middle Channel / 200MHz / BPSK



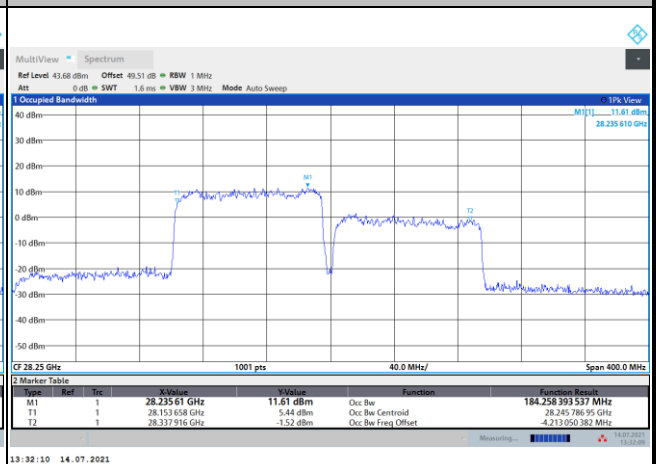
Middle Channel / 200MHz / QPSK



Highest Channel / 200MHz / BPSK



Highest Channel / 200MHz / QPSK



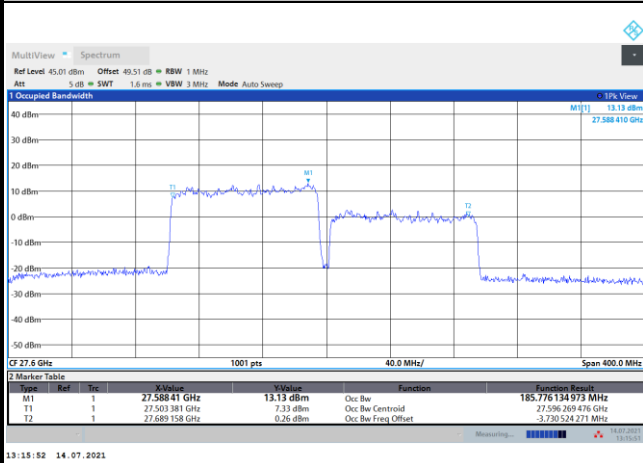




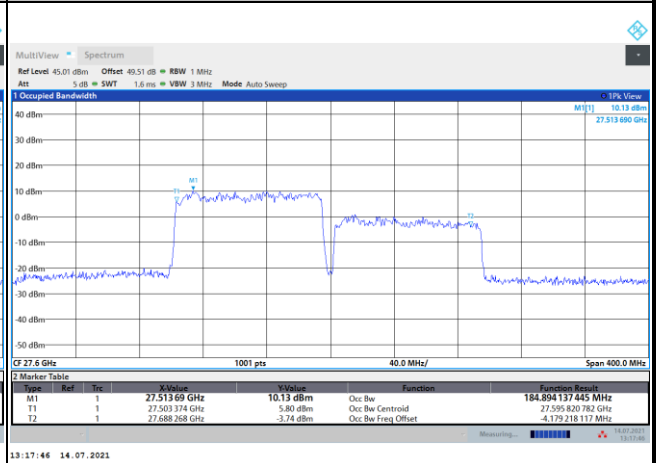
DFT-s-OFDM Module 0

NR Band n261

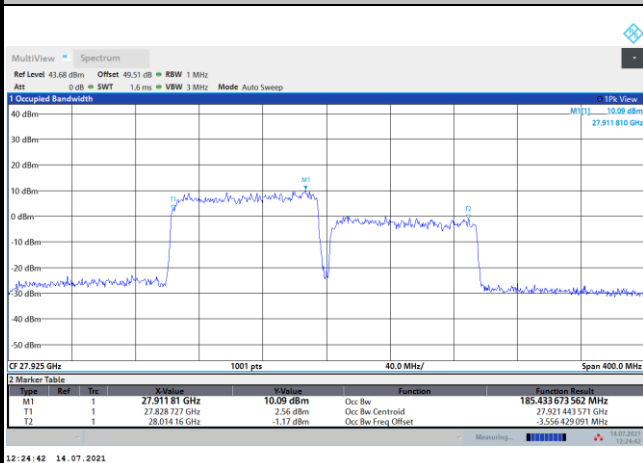
Lowest Channel / 200MHz / 16QAM



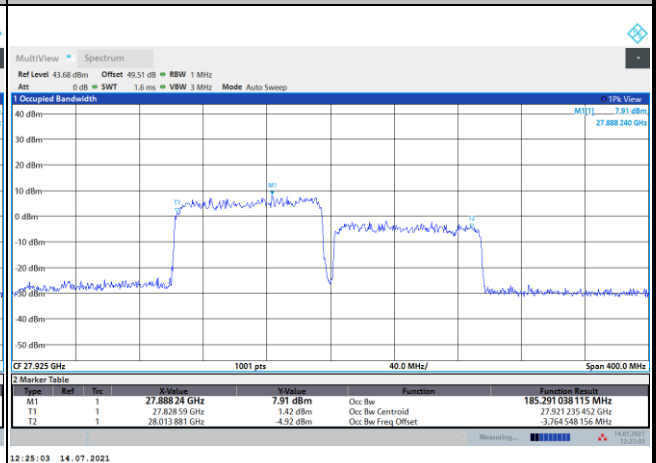
Lowest Channel / 200MHz / 64QAM



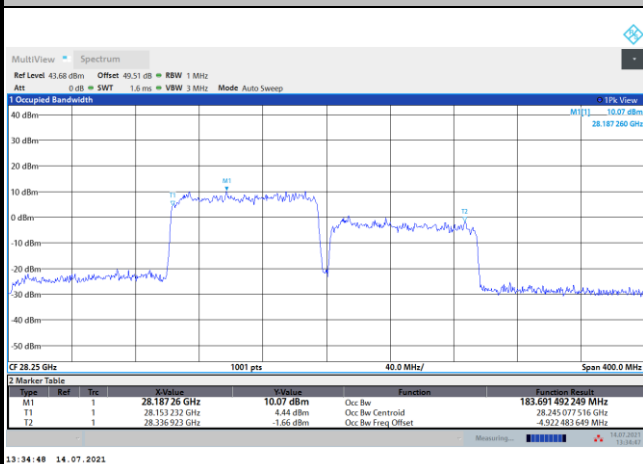
Middle Channel / 200MHz / 16QAM



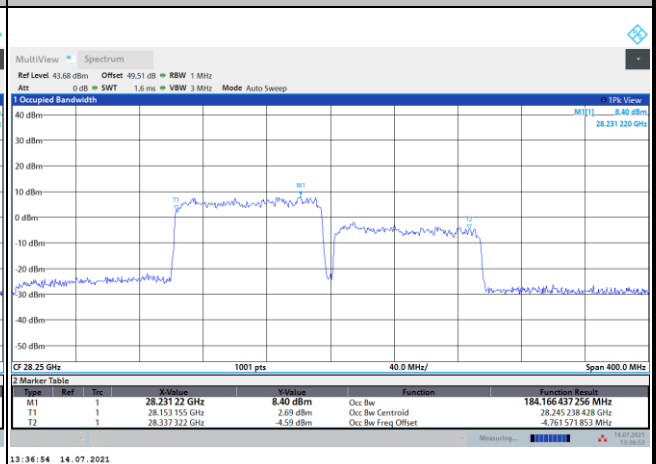
Middle Channel / 200MHz / 64QAM



Highest Channel / 200MHz / 16QAM



Highest Channel / 200MHz / 64QAM





**Radiated Out of Band Emissions**

Mode			DFT-s-OFDM Module 0 NR Band n261 : BE (dBm) 1 RB											
BW			50MHz				100MHz				200MHz			
Limit (dBm)			BPSK	QPSK	16QAM	64QAM	BPSK	QPSK	16QAM	64QAM	BPSK	QPSK	16QAM	64QAM
Low CH	0~10%OB	≅ -5	-10.83	-10.3	-9.97	-12.85	-9.77	-10.71	-10.85	-13.6	-17.3	-15.6	-17.03	-17.74
	>10%OB	≅ -13	-27.26	-27.03	-26.65	-28.69	-24.93	-25.48	-26.39	-27.76	-22.79	-21.9	-22.74	-23.31
High CH	0~10%OB	≅ -5	-15.23	-15.53	-17.76	-18.36	-15.75	-16.23	-17.8	-17.98	-33.68	-34.07	-33.83	-32.79
	>10%OB	≅ -13	-27.41	-28.15	-30.47	-31.65	-29.78	-29.92	-30.59	-31.85	-33.71	-33.49	-33.99	-33.28
Result			Compliance											

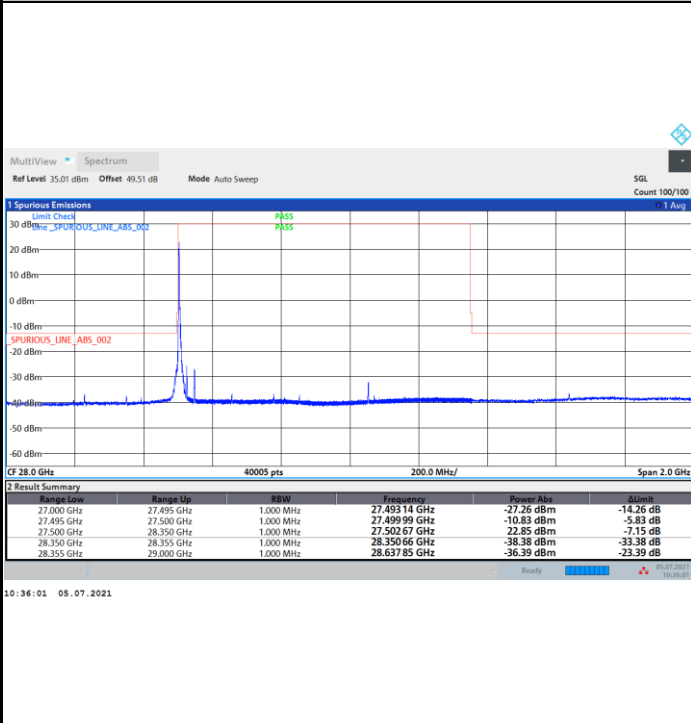
Mode			DFT-s-OFDM Module 0 NR Band n261 : BE (dBm) Full RB											
BW			50MHz				100MHz				200MHz			
Limit (dBm)			BPSK	QPSK	16QAM	64QAM	BPSK	QPSK	16QAM	64QAM	BPSK	QPSK	16QAM	64QAM
Low CH	0~10%OB	≅ -5	-22.83	-21.67	-23.99	-25.52	-25.45	-24.71	-27.79	-28.25	-29.8	-29.27	-30.36	-31.43
	>10%OB	≅ -13	-28.5	-24.95	-28.37	-29.25	-28.36	-26.86	-29.28	-29.91	-29.49	-29.86	-31.05	-31.74
High CH	0~10%OB	≅ -5	-24.37	-23.73	-26.7	-28.57	-27.63	-26.78	-28.69	-30.33	-35.8	-34.94	-35.64	-36.18
	>10%OB	≅ -13	-29.67	-26.53	-28.79	-30.98	-30.68	-29.23	-30.27	-31.53	-36.4	-35.93	-36.13	-36.51
Result			Compliance											



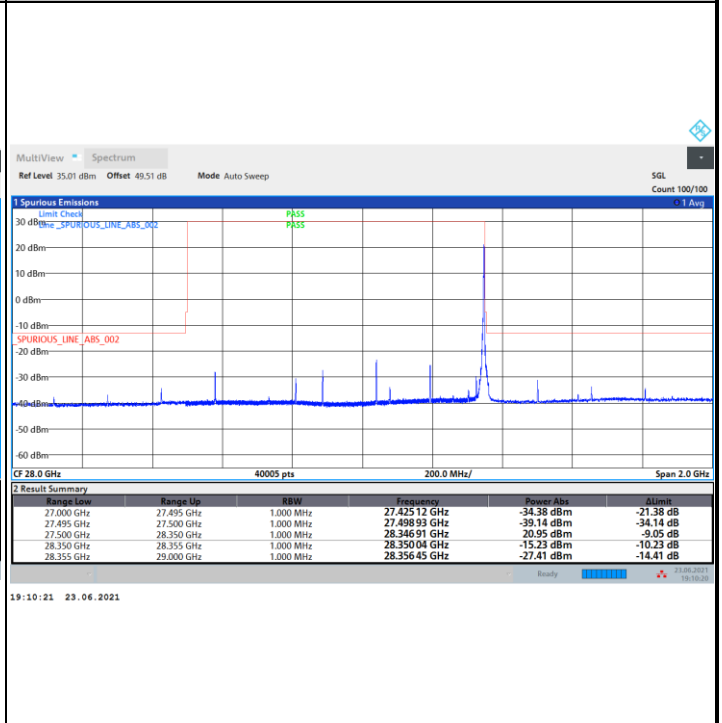
DFT-s-OFDM Module 0

NR Band n261 / 50MHz / BPSK

Lowest Band Edge / 1 RB

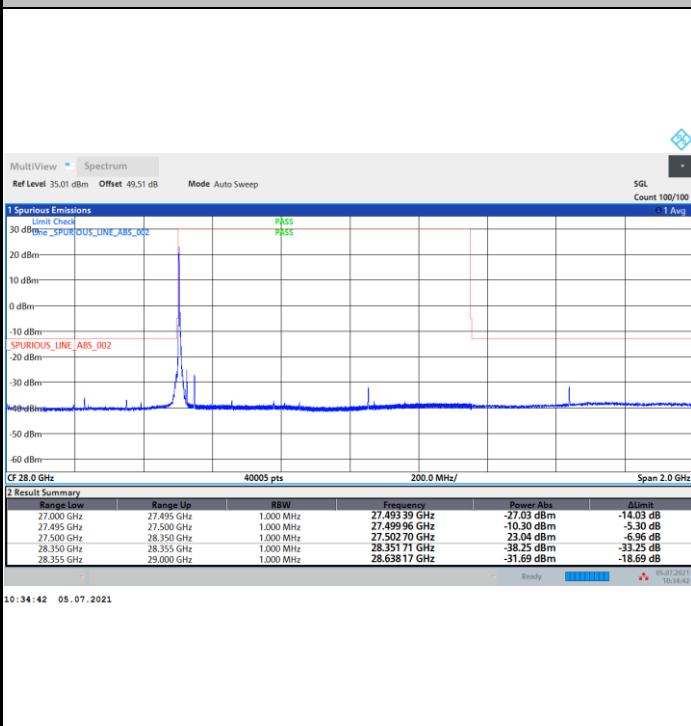


Highest Band Edge / 1 RB

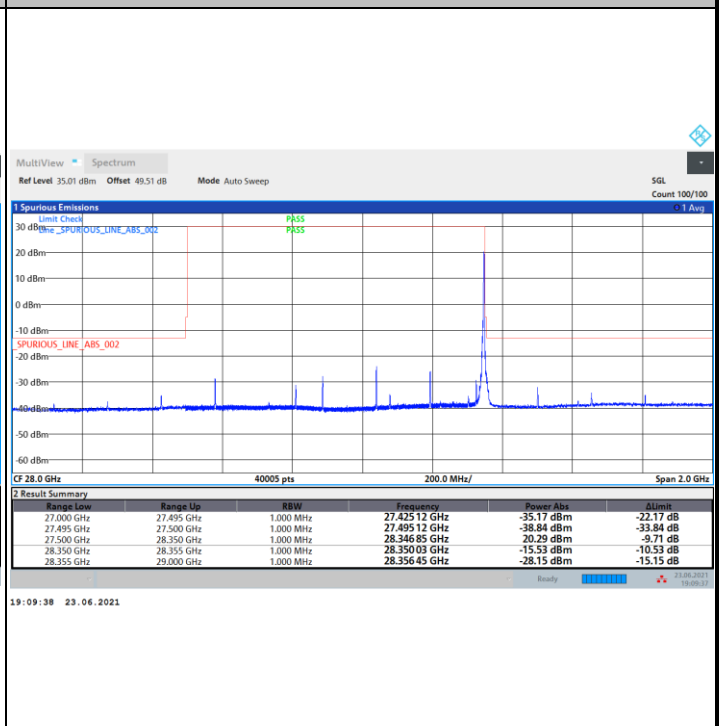


NR Band n261 / 50MHz / QPSK

Lowest Band Edge / 1 RB



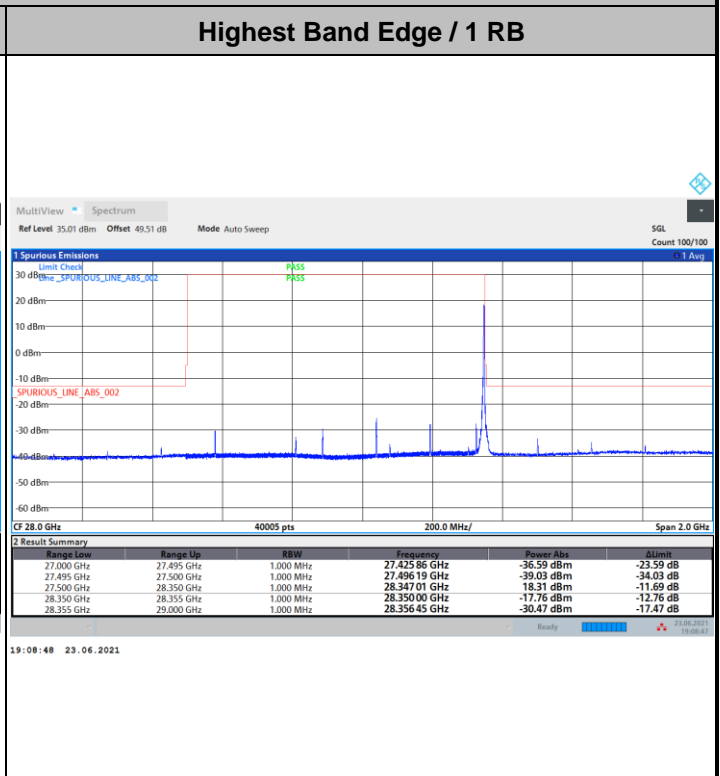
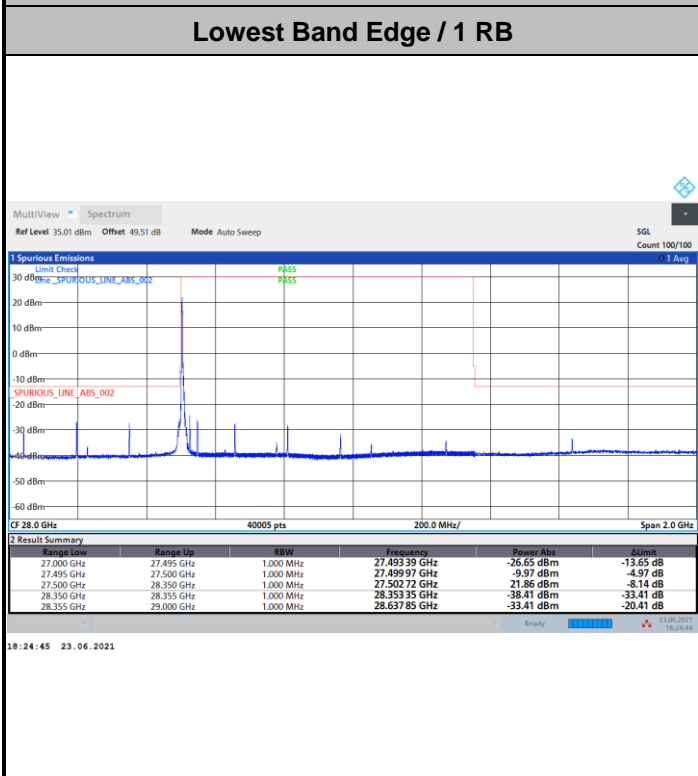
Highest Band Edge / 1 RB



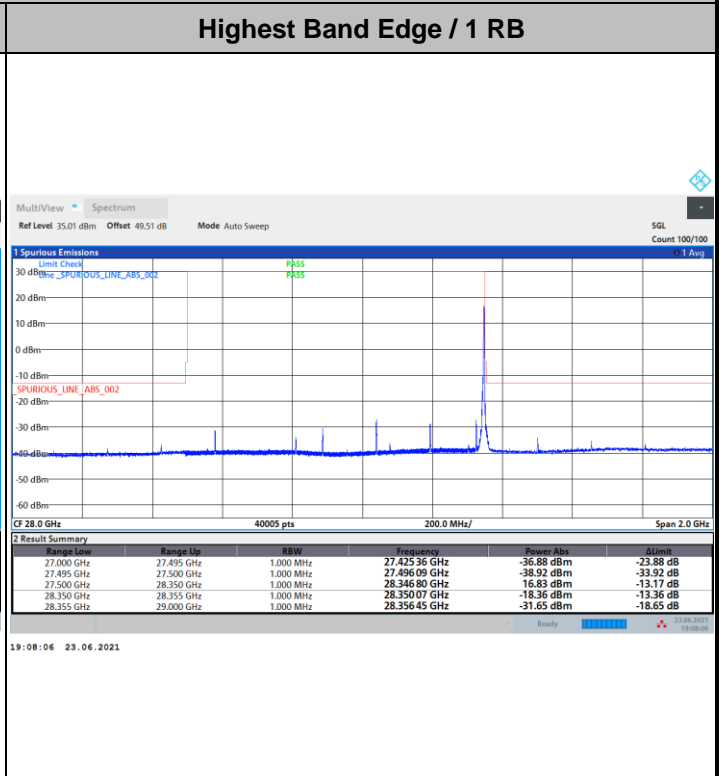
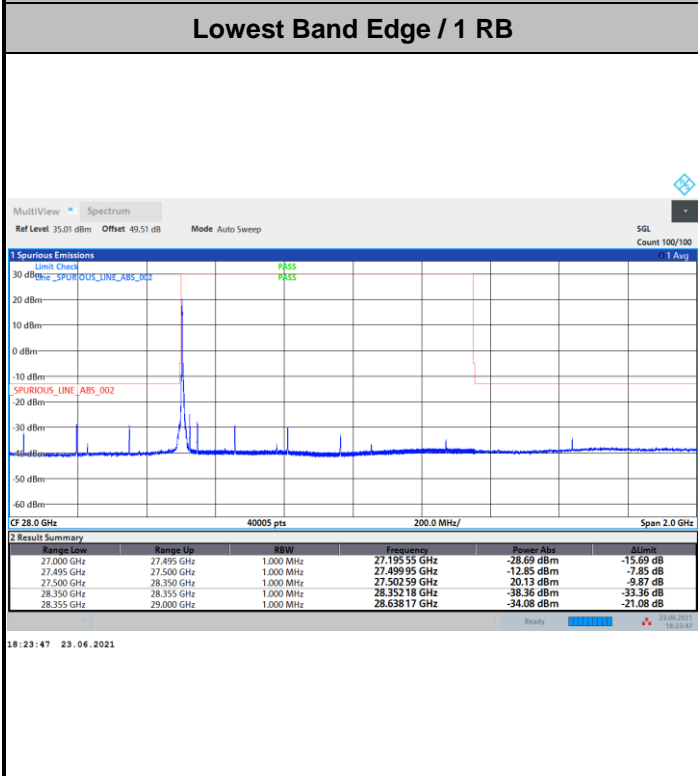


DFT-s-OFDM Module 0

NR Band n261 / 50MHz / 16QAM



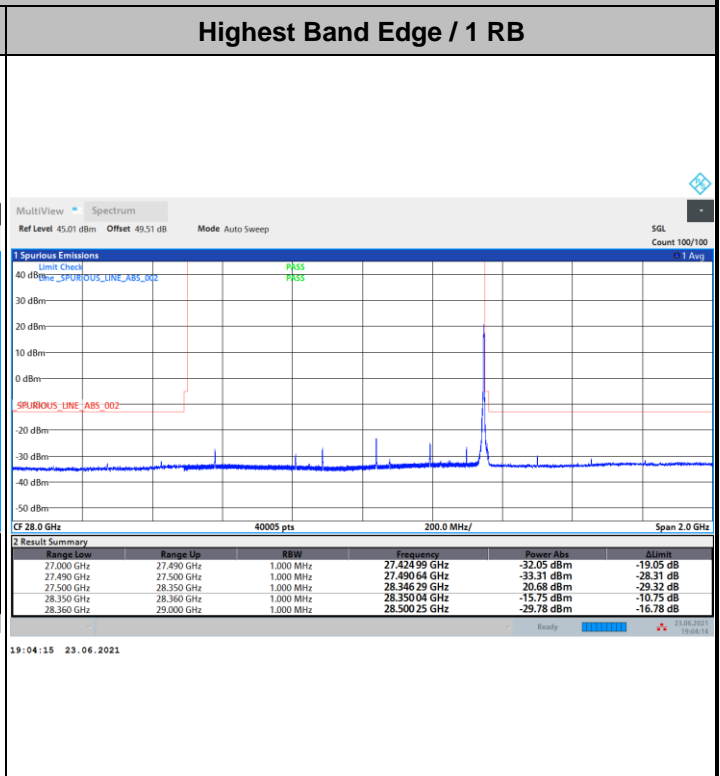
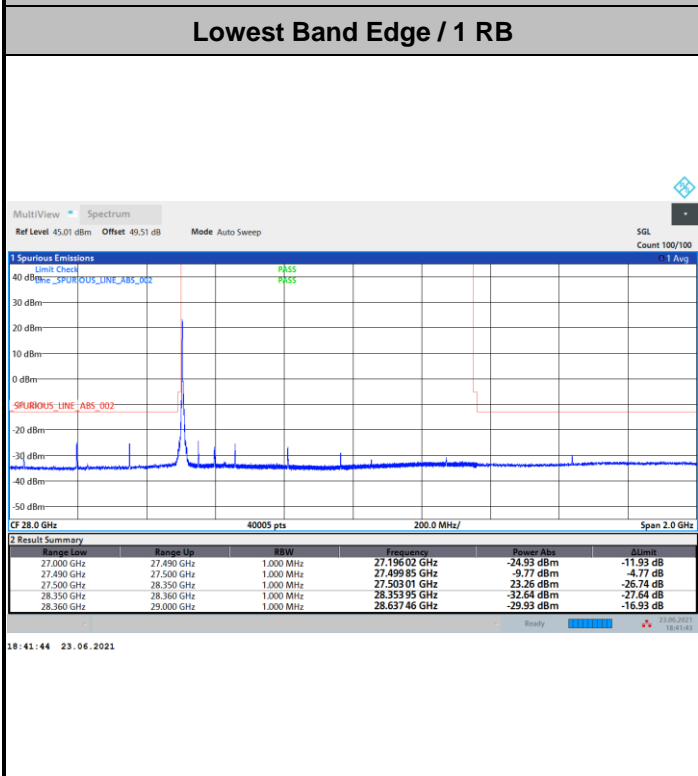
NR Band n261 / 50MHz / 64QAM



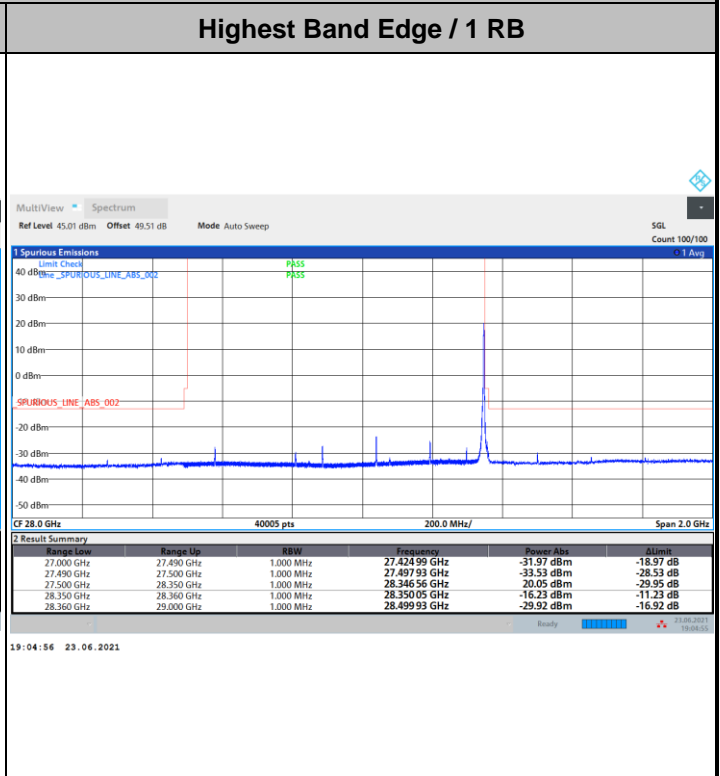
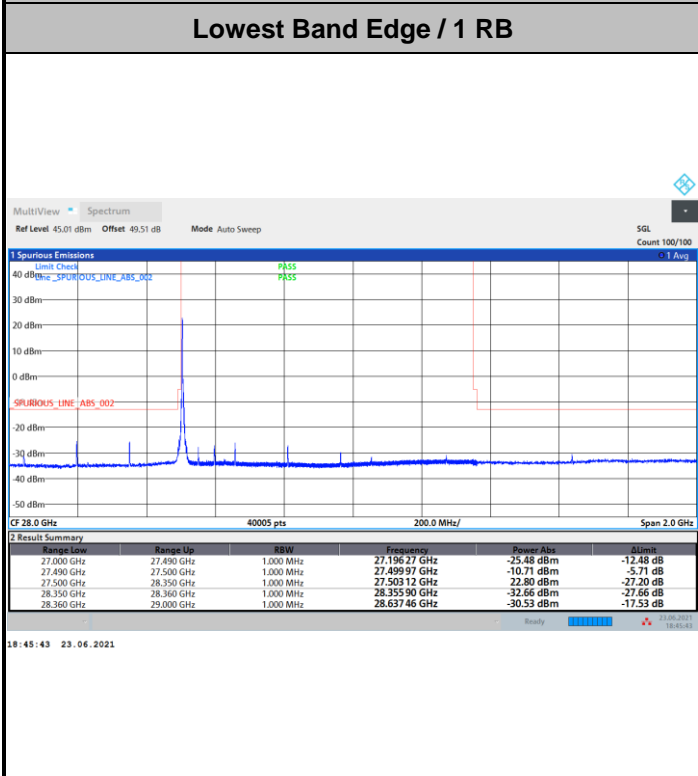


DFT-s-OFDM Module 0

NR Band n261 / 100MHz / BPSK



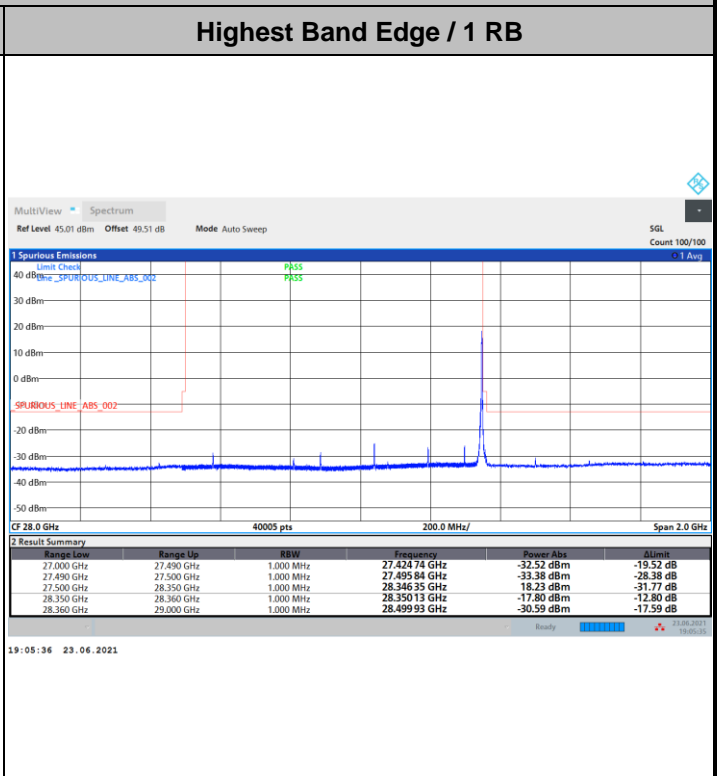
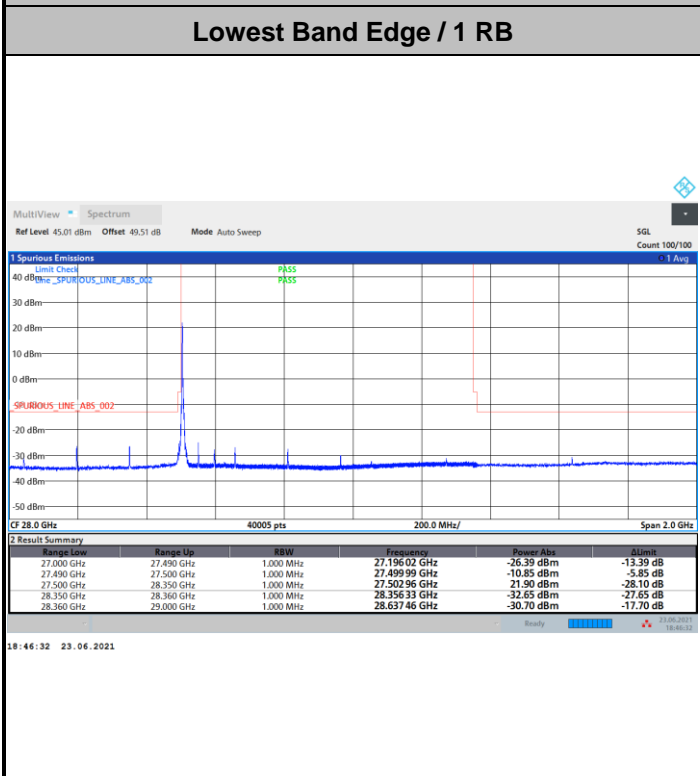
NR Band n261 / 100MHz / QPSK



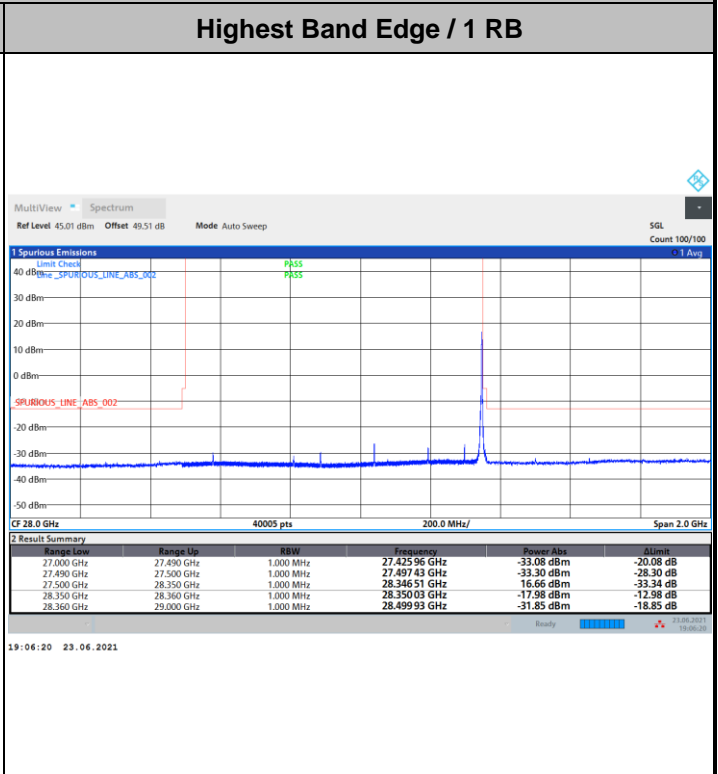
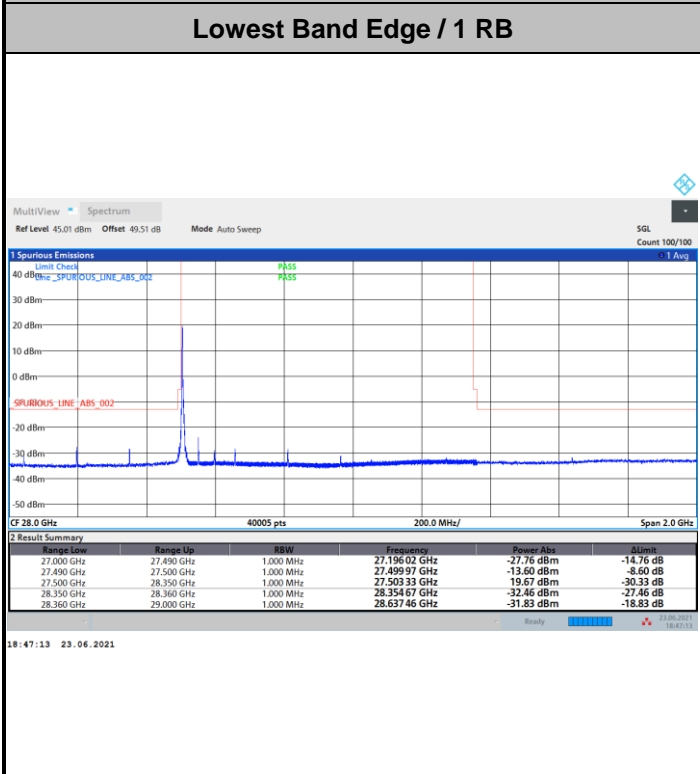


DFT-s-OFDM Module 0

NR Band n261 / 100MHz / 16QAM



NR Band n261 / 100MHz / 64QAM

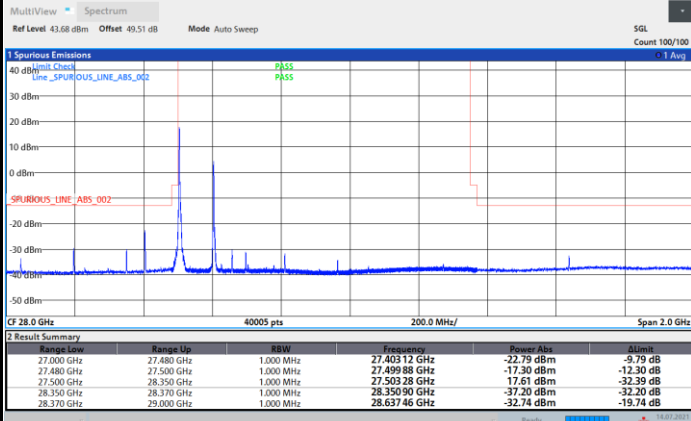




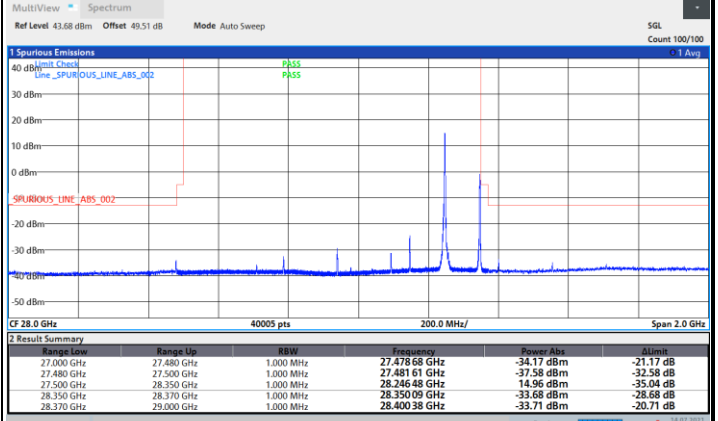
DFT-s-OFDM Module 0

NR Band n261 / 200MHz / BPSK

Lowest Band Edge / 1 RB

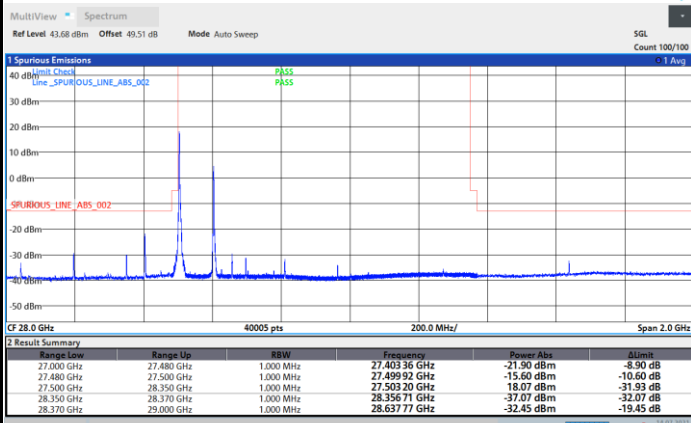


Highest Band Edge / 1 RB

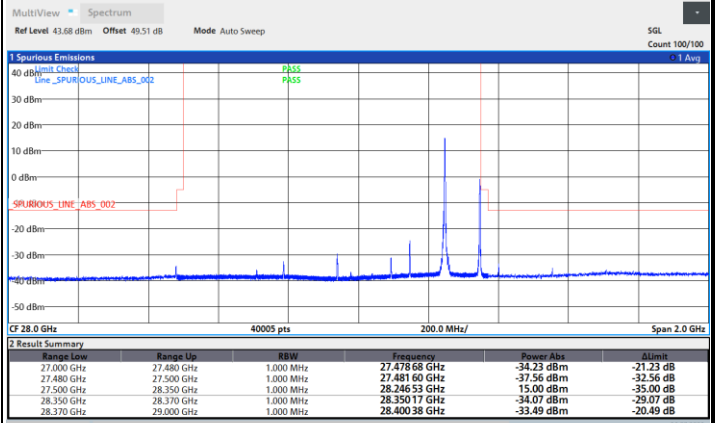


NR Band n261 / 200MHz / QPSK

Lowest Band Edge / 1 RB



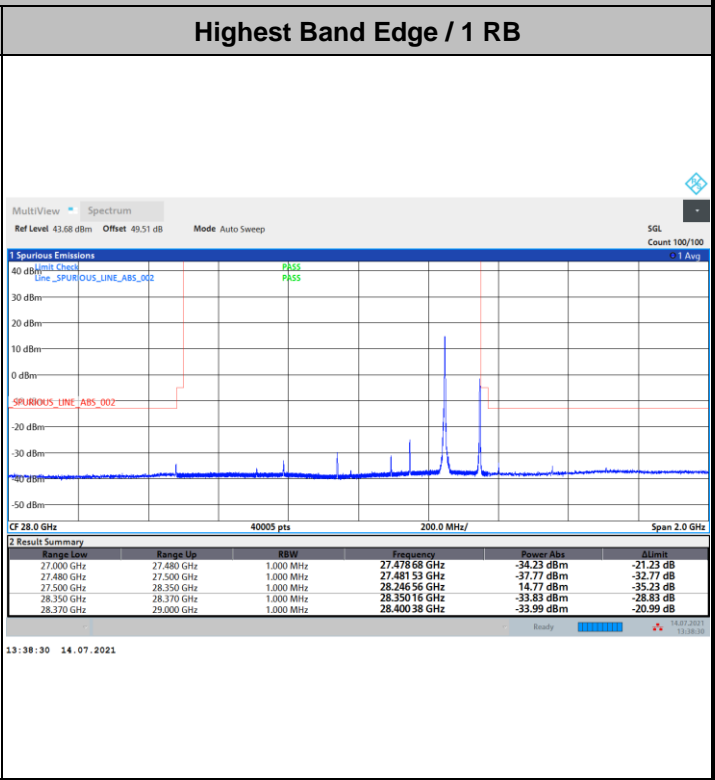
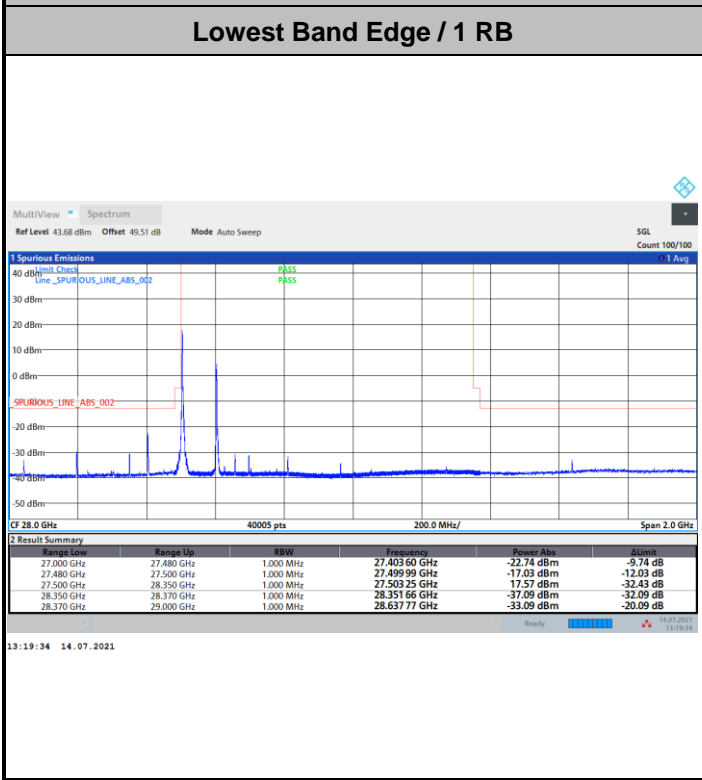
Highest Band Edge / 1 RB



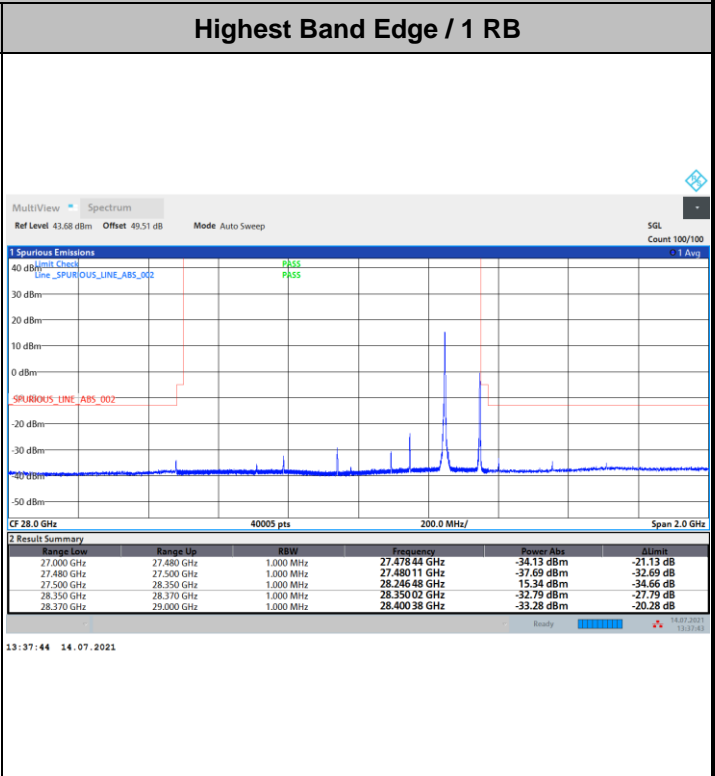
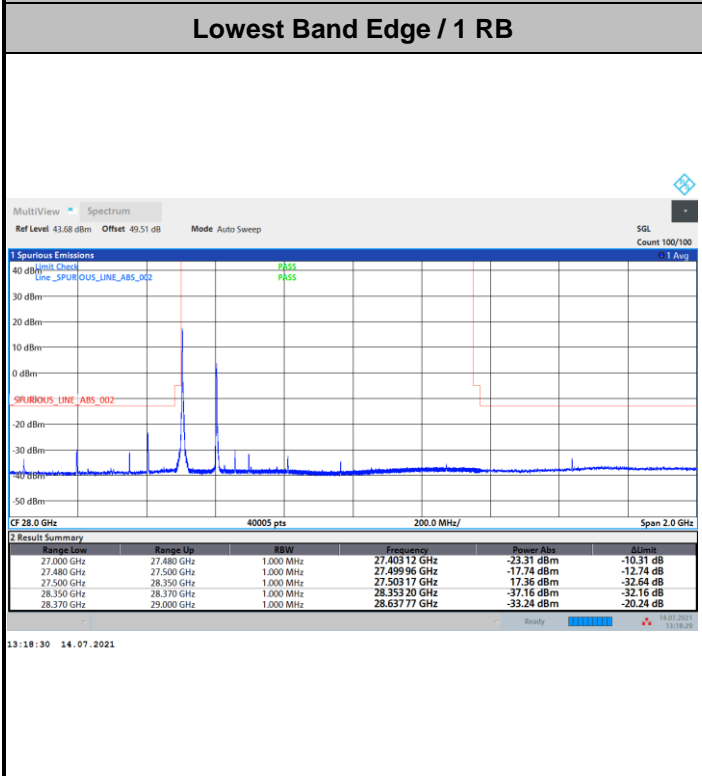


DFT-s-OFDM Module 0

NR Band n261 / 200MHz / 16QAM



NR Band n261 / 200MHz / 64QAM



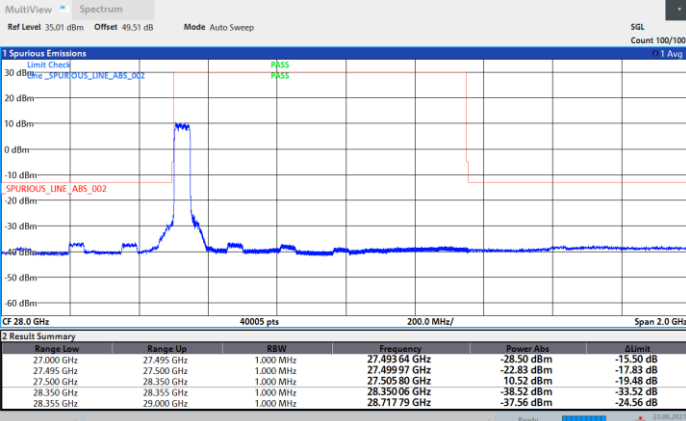




DFT-s-OFDM Module 0

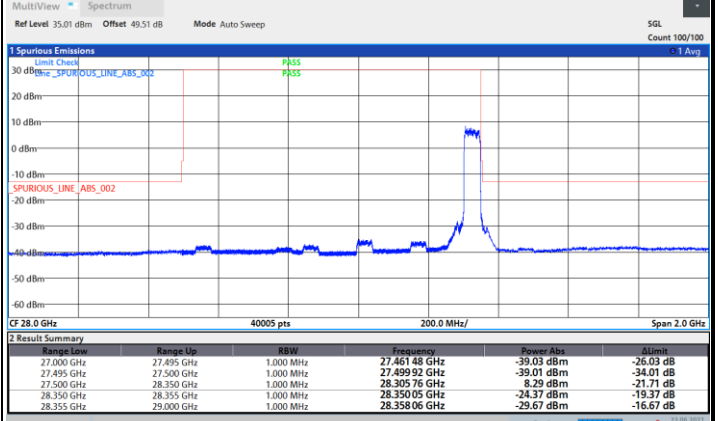
NR Band n261 / 50MHz / BPSK

Lowest Band Edge / Full RB



18:19:01 23.06.2021

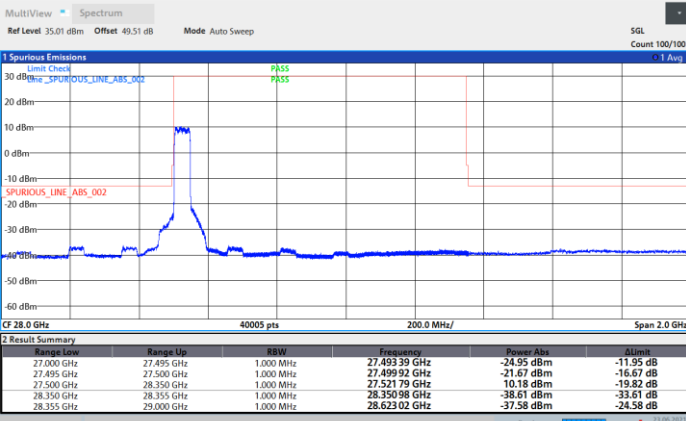
Highest Band Edge / Full RB



19:17:45 23.06.2021

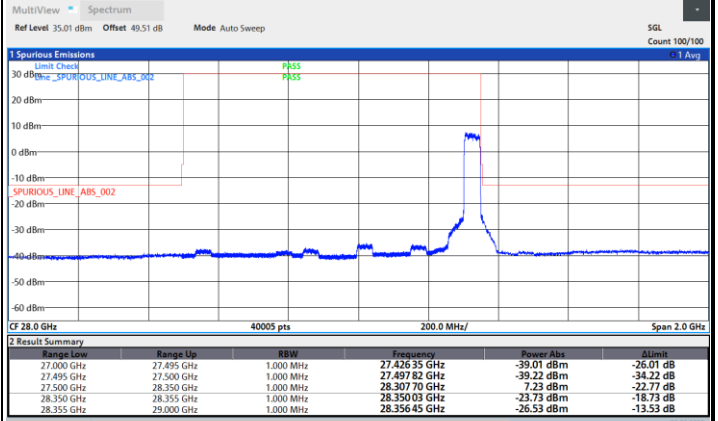
NR Band n261 / 50MHz / QPSK

Lowest Band Edge / Full RB



18:19:56 23.06.2021

Highest Band Edge / Full RB

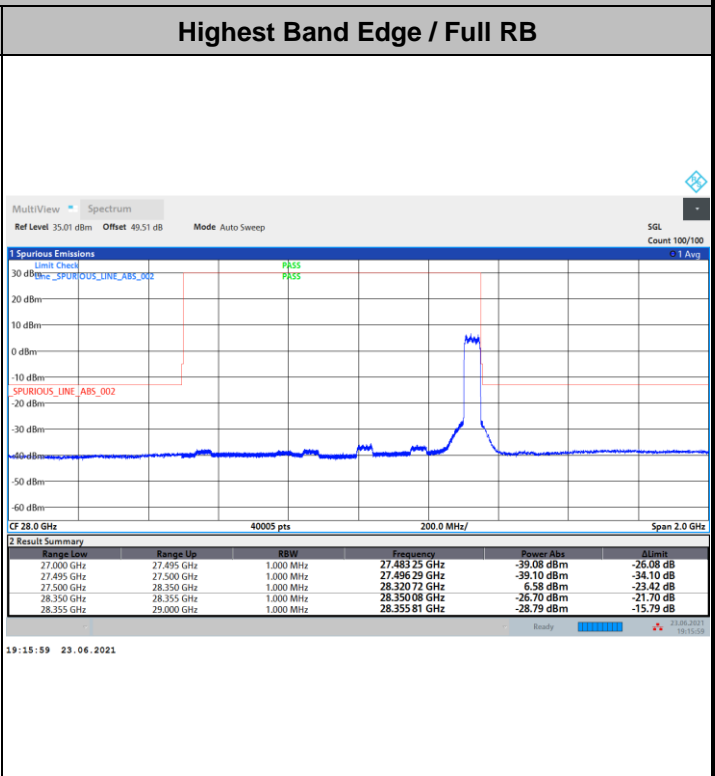
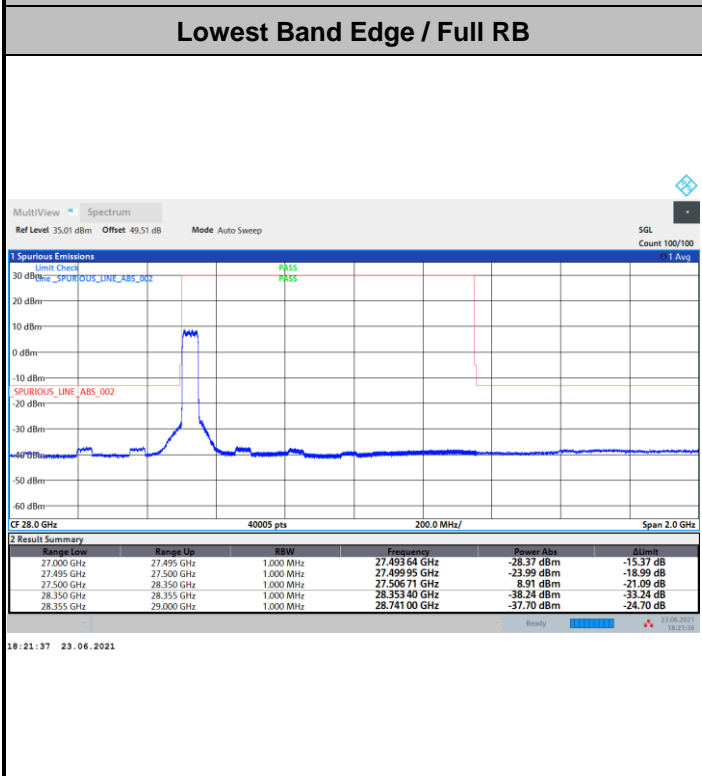


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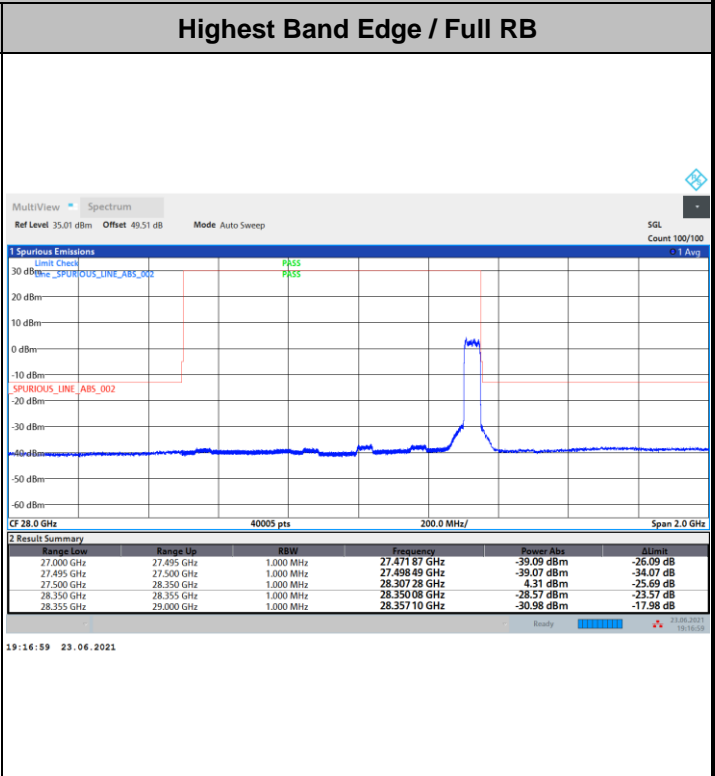
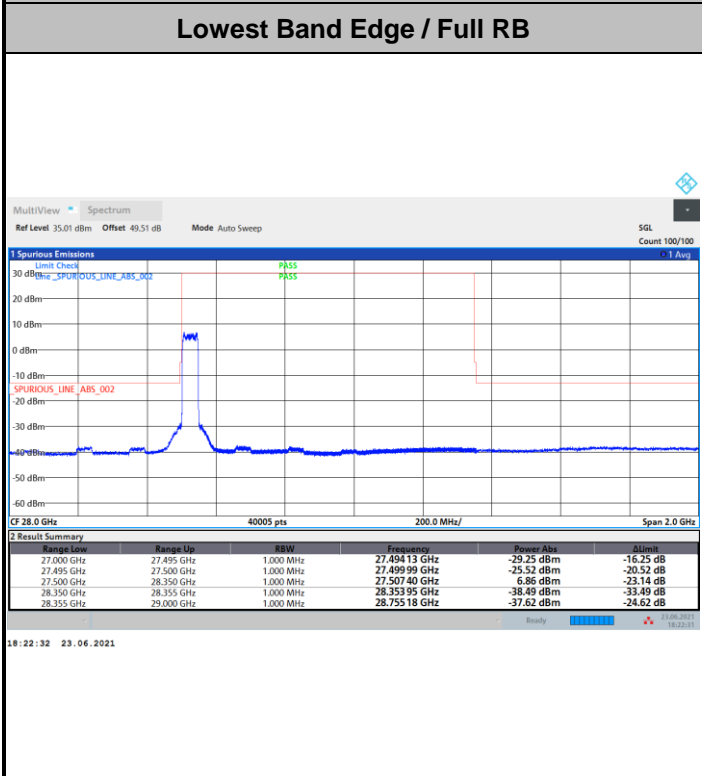


DFT-s-OFDM Module 0

NR Band n261 / 50MHz / 16QAM



NR Band n261 / 50MHz / 64QAM





DFT-s-OFDM Module 0

