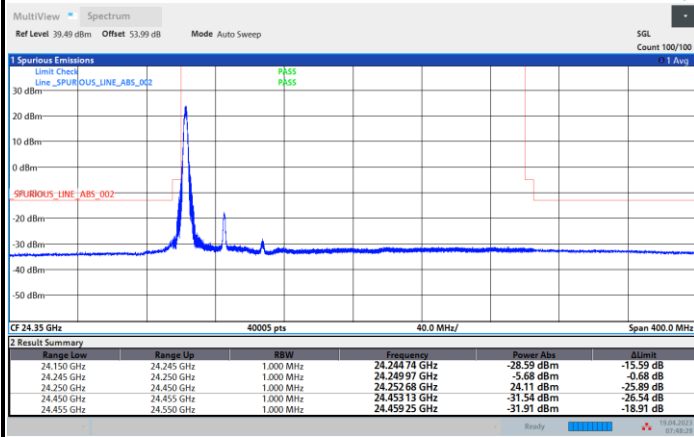




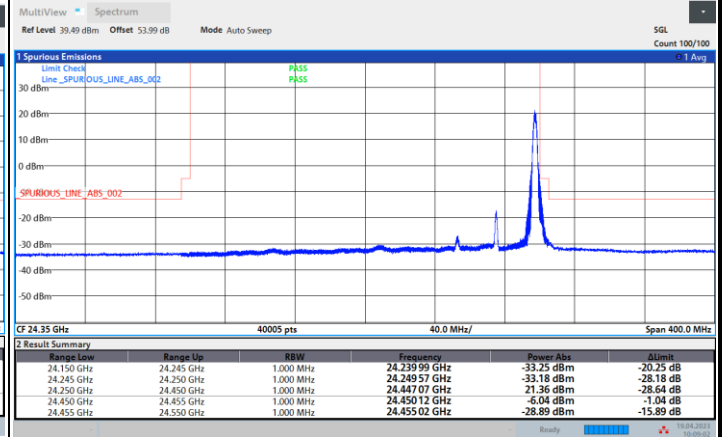
CP-OFDM Module A

NR Band n258A/ 50MHz / QPSK

Lowest Band Edge / 1 RB

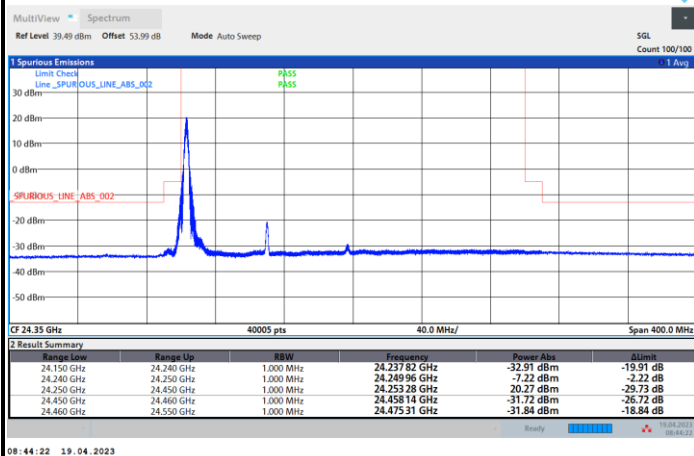


Highest Band Edge / 1 RB

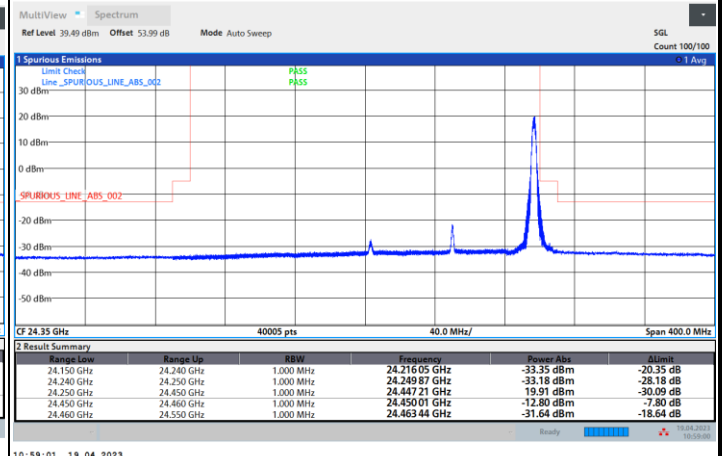


NR Band n258A/ 100MHz / QPSK

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB

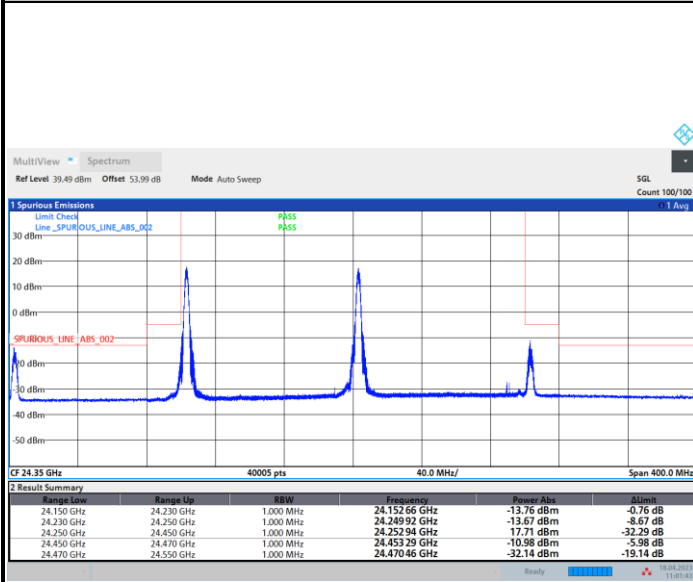




CP-OFDM Module A

NR Band n258A/ 200MHz / QPSK

Middle Band Edge / 1 RB



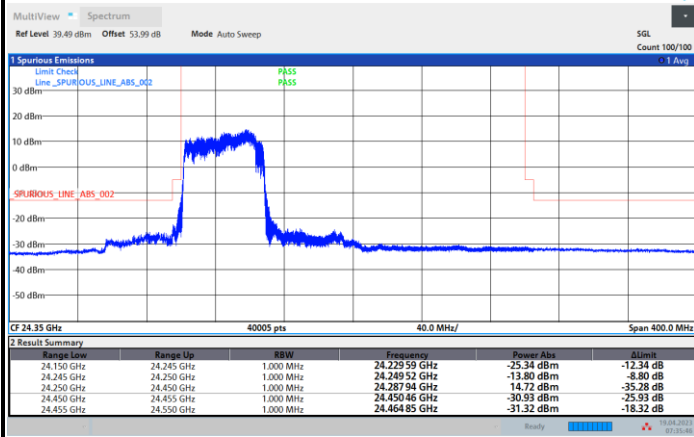
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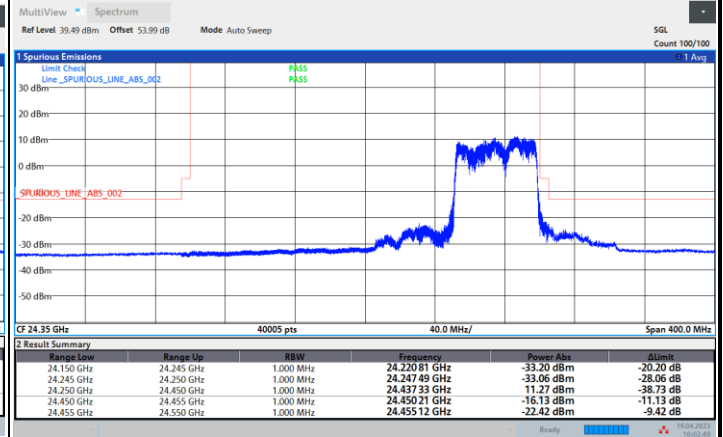
DFT-s-OFDM Module A

NR Band n258A/ 50MHz / QPSK

Lowest Band Edge / Full RB

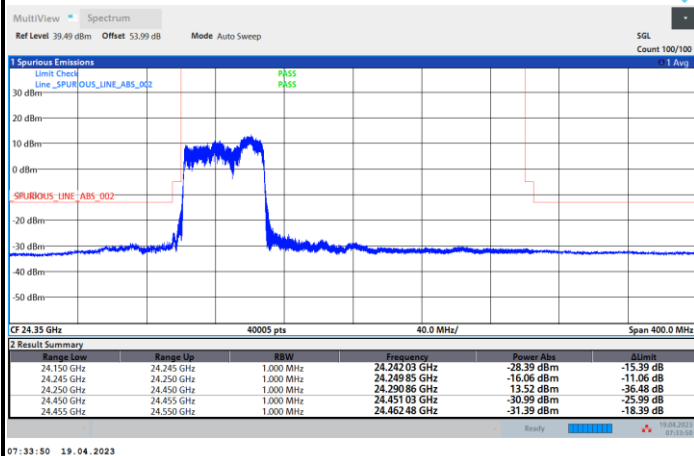


Highest Band Edge / Full RB

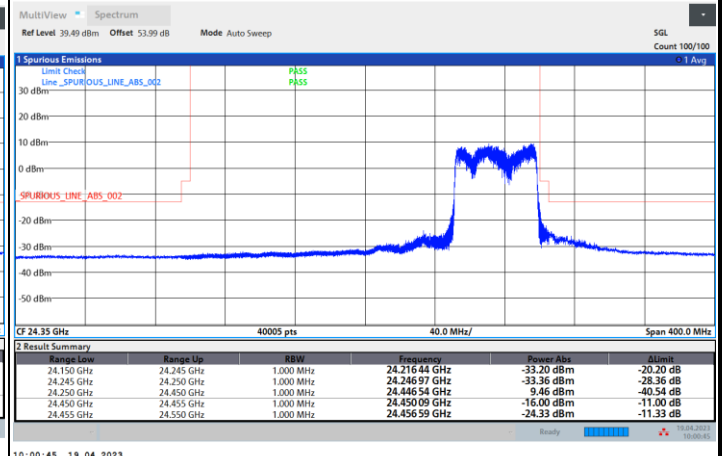


NR Band n258A/ 50MHz / 16QAM

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

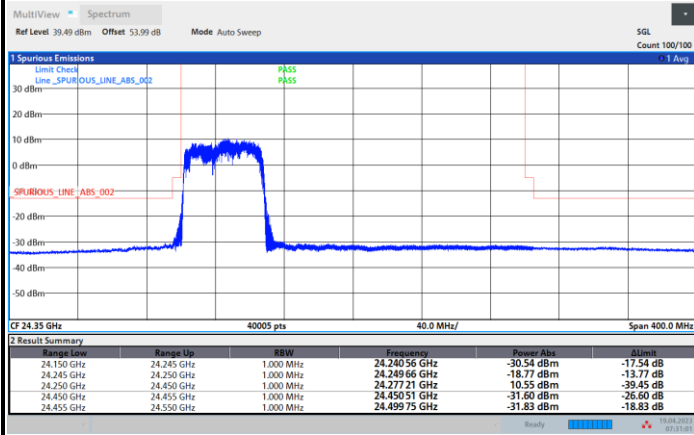




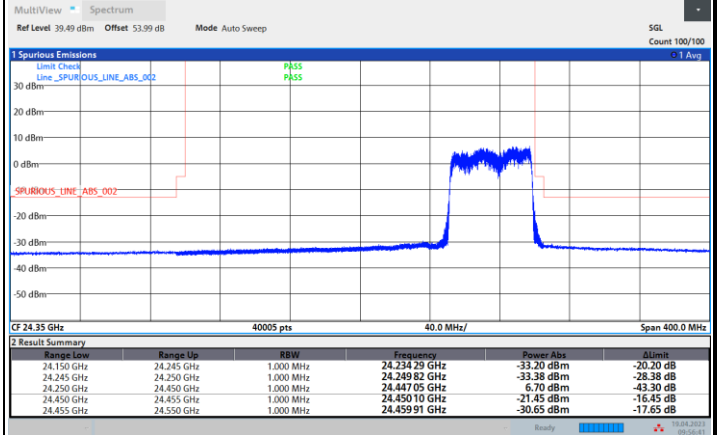
DFT-s-OFDM Module A

NR Band n258A/ 50MHz / 64QAM

Lowest Band Edge / Full RB

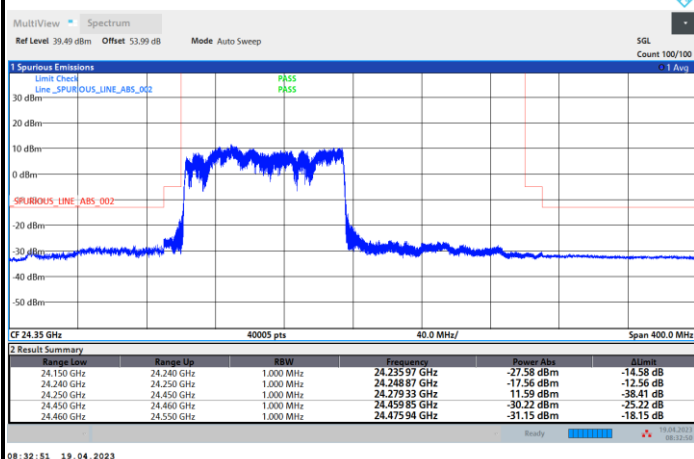


Highest Band Edge / Full RB

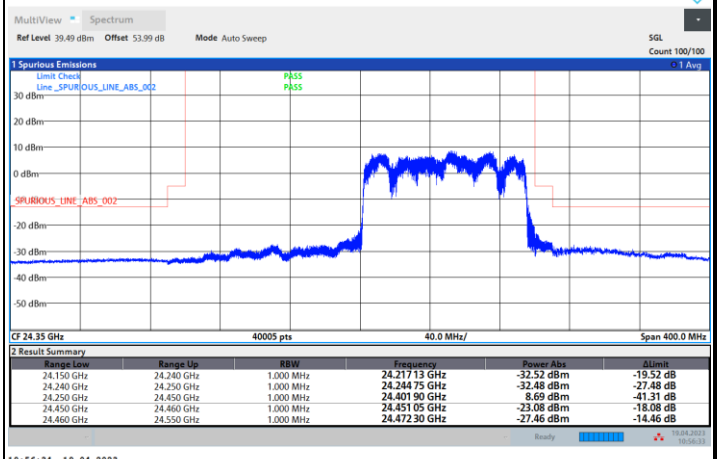


NR Band n258A/ 100MHz / QPSK

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

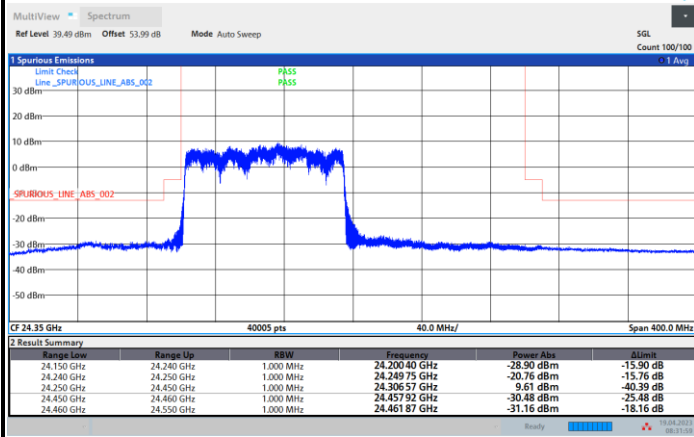




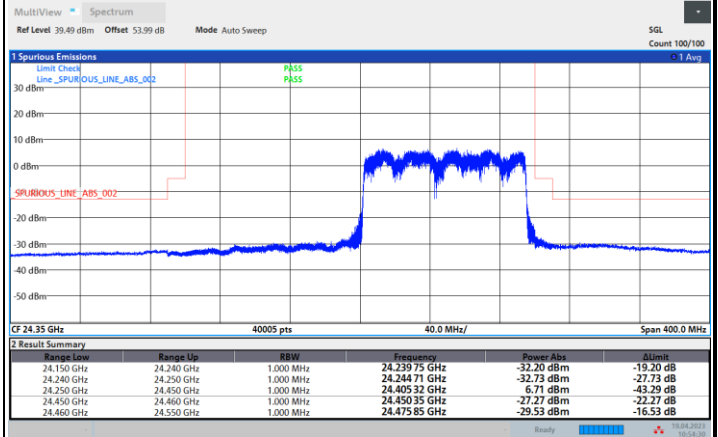
DFT-s-OFDM Module A

NR Band n258A/ 100MHz / 16QAM

Lowest Band Edge / Full RB

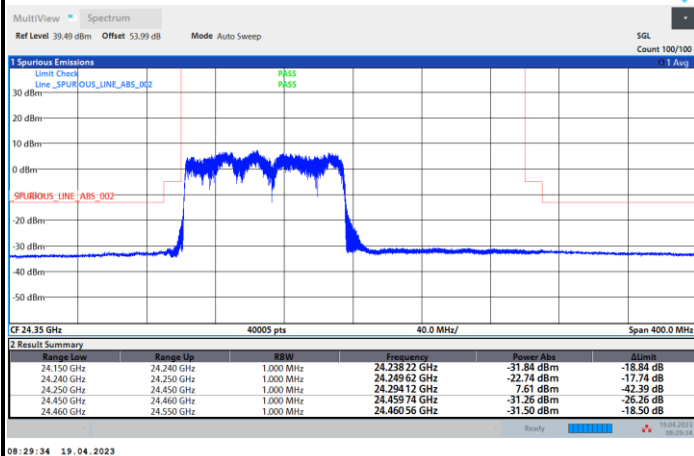


Highest Band Edge / Full RB

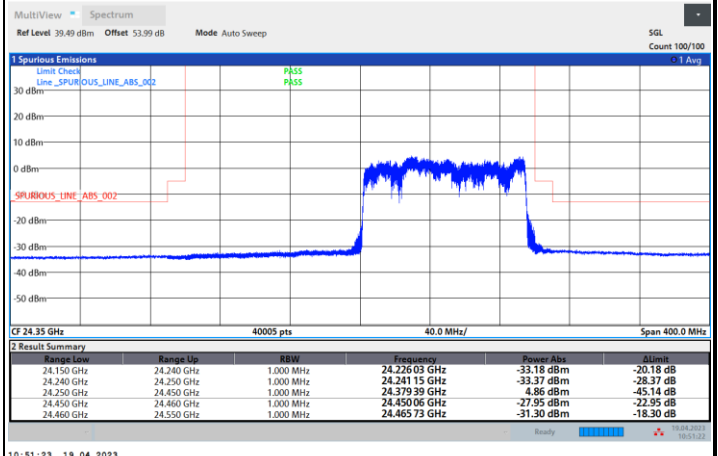


NR Band n258A/ 100MHz / 64QAM

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

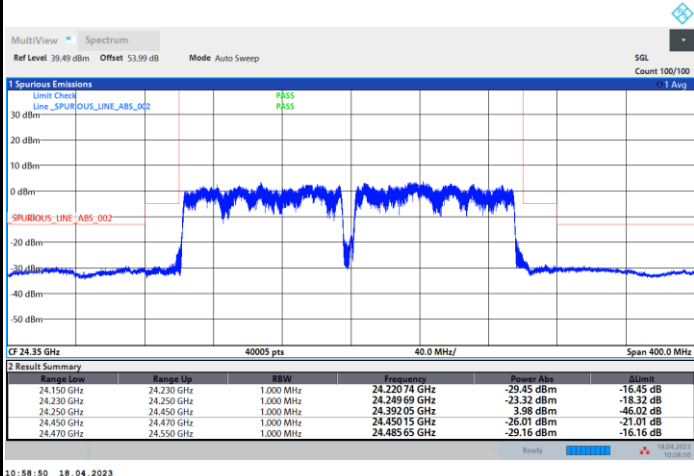




DFT-s-OFDM Module A

NR Band n258A/ 200MHz / QPSK

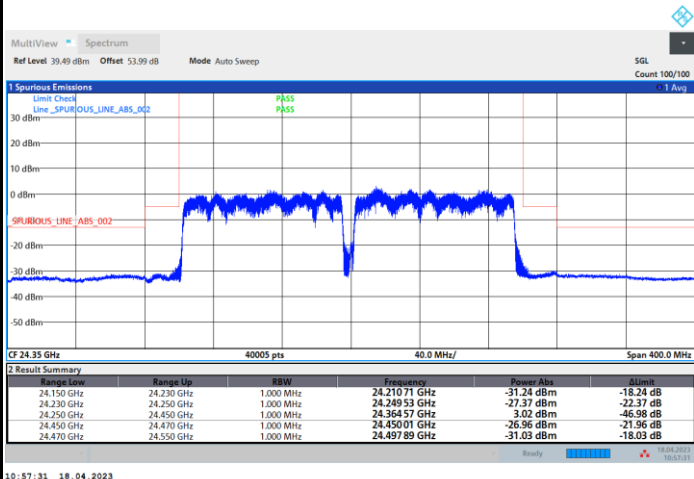
Middle Band Edge / Full RB



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NR Band n258A/ 200MHz / 16QAM

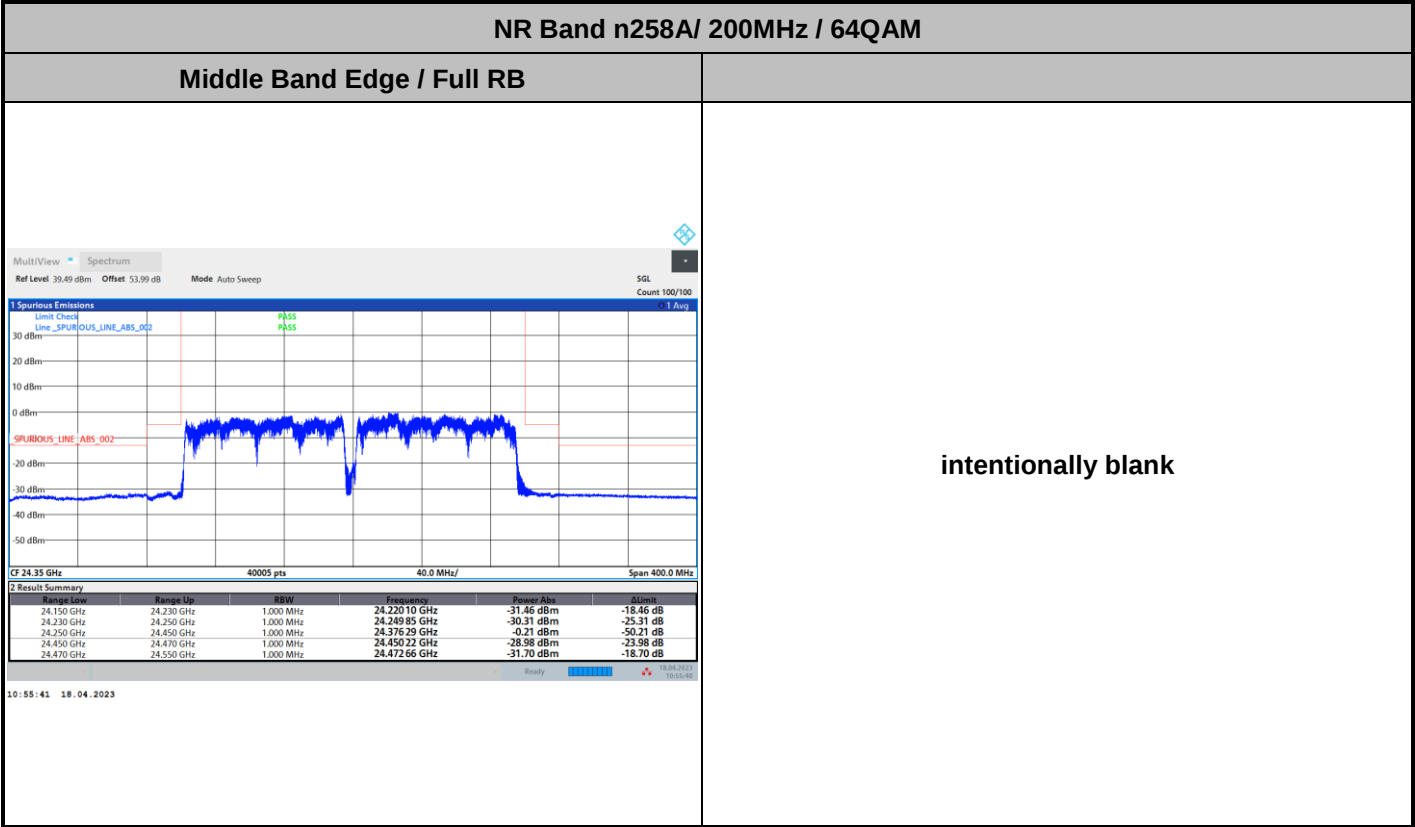
Middle Band Edge / Full RB



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DFT-s-OFDM Module A

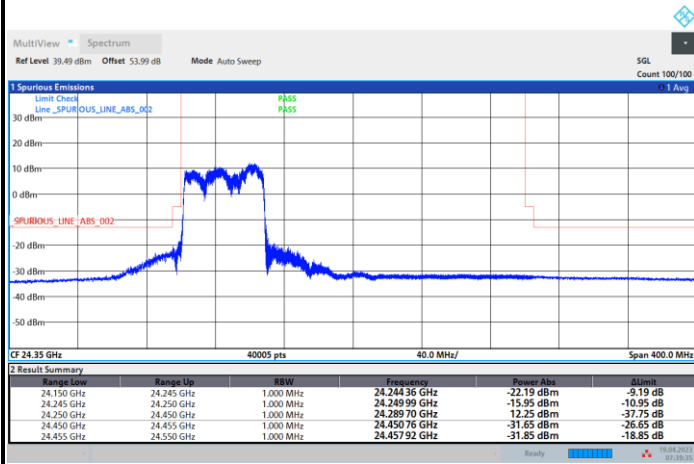




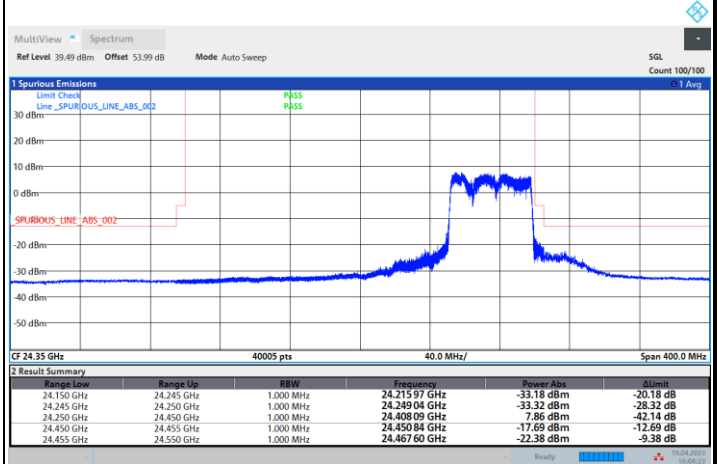
CP-OFDM Module A

NR Band n258A/ 50MHz / QPSK

Lowest Band Edge / Full RB

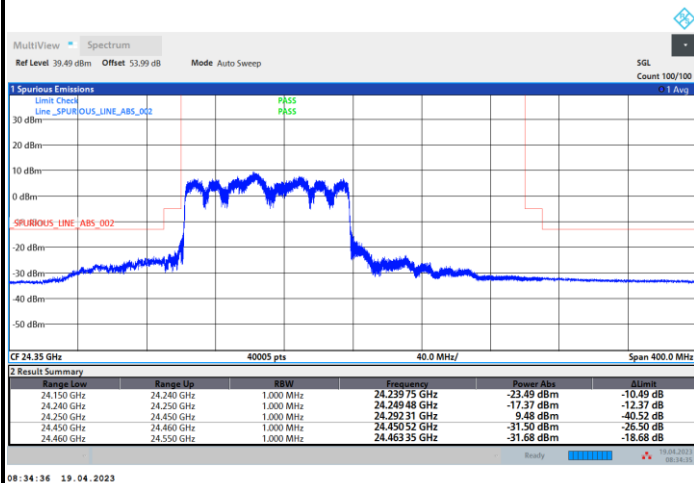


Highest Band Edge / Full RB

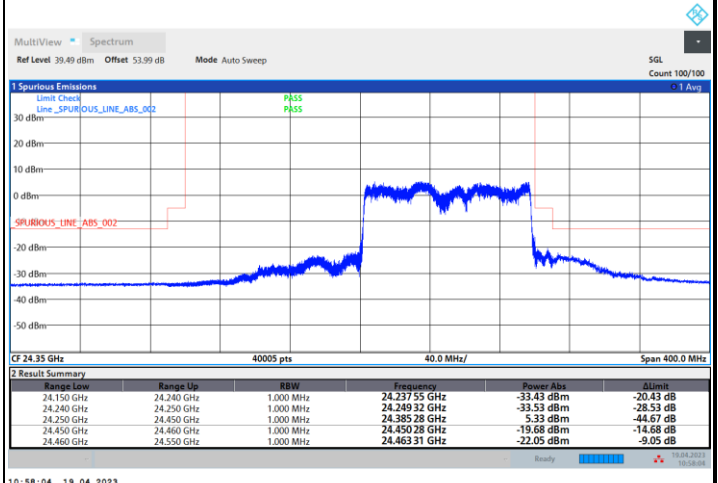


NR Band n258A/ 100MHz / QPSK

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

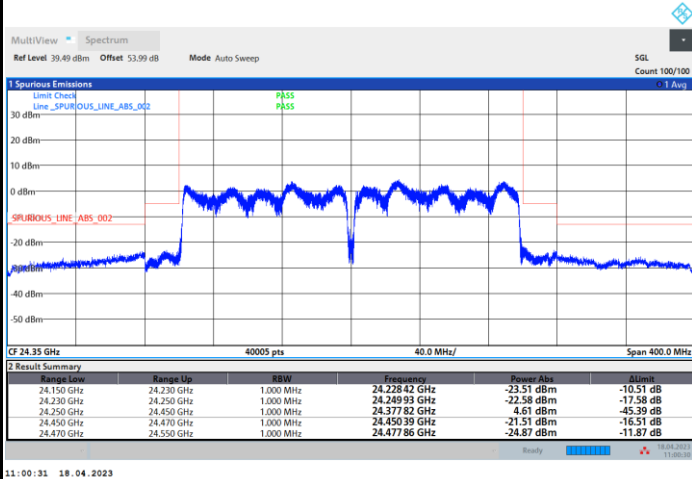




CP-OFDM Module A

NR Band n258A/ 200MHz / QPSK

Middle Band Edge / Full RB



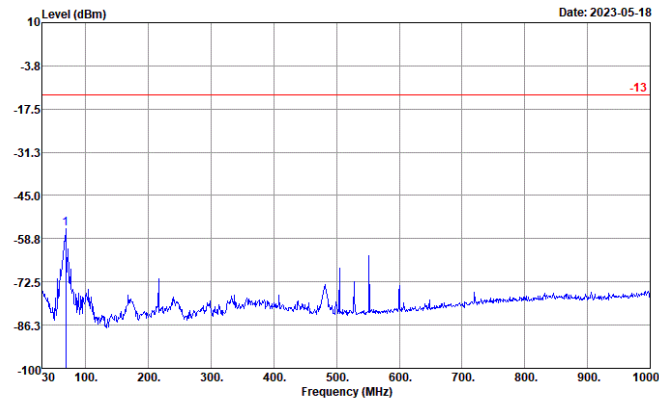
intentionally blank



Spurious Emission

NR Band n258A (30MHz-1GHz)

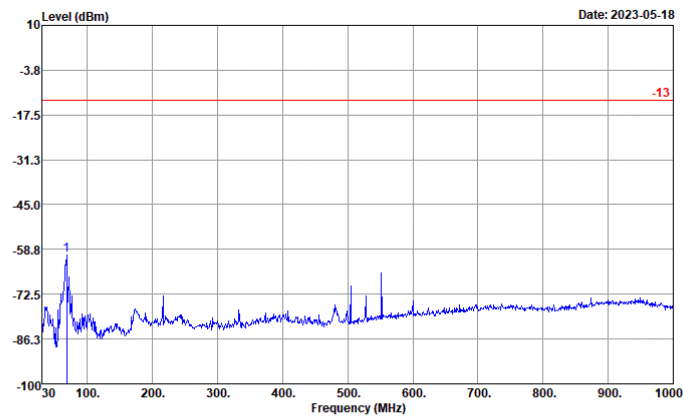
Horizontal



Site : 03CH10-HY
Condition : -13 EIRP_WO HORIZONTAL
Project : 2D0208-01
 : n258a MA

	Freq	Level	Over Limit	Limit Line	Read Level
	MHz	dBm	dB	dBm	dBm
1	67.83	-55.45	-42.45	-13.00	-50.49

Vertical



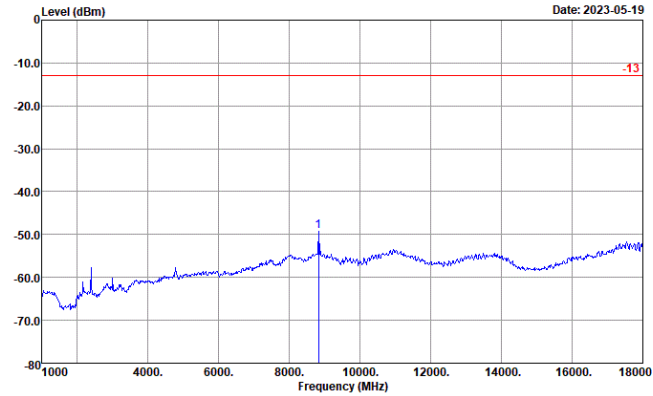
Site : 03CH10-HY
Condition : -13 EIRP_WO VERTICAL
Project : 2D0208-01
 : n258a MA

	Freq	Level	Over Limit	Limit Line	Read Level
	MHz	dBm	dB	dBm	dBm
1	67.83	-60.40	-47.40	-13.00	-52.22



NR Band n258A (1GHz-18GHz)

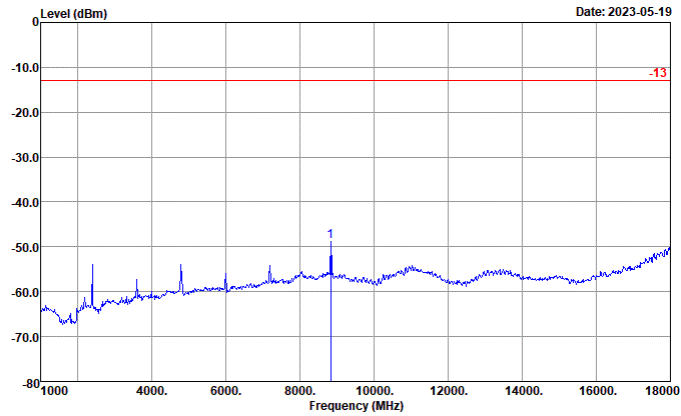
Horizontal



Site : 03CH10-HY
Condition : -13 EIRP_WO HORIZONTAL
Project : 2D0208-01
 : n258a MA

	Freq	Level	Over Limit	Limit Line	Read Level
	MHz	dBm	dB	dBm	dBm
1	8837.00	-49.16	-36.16	-13.00	-50.13

Vertical



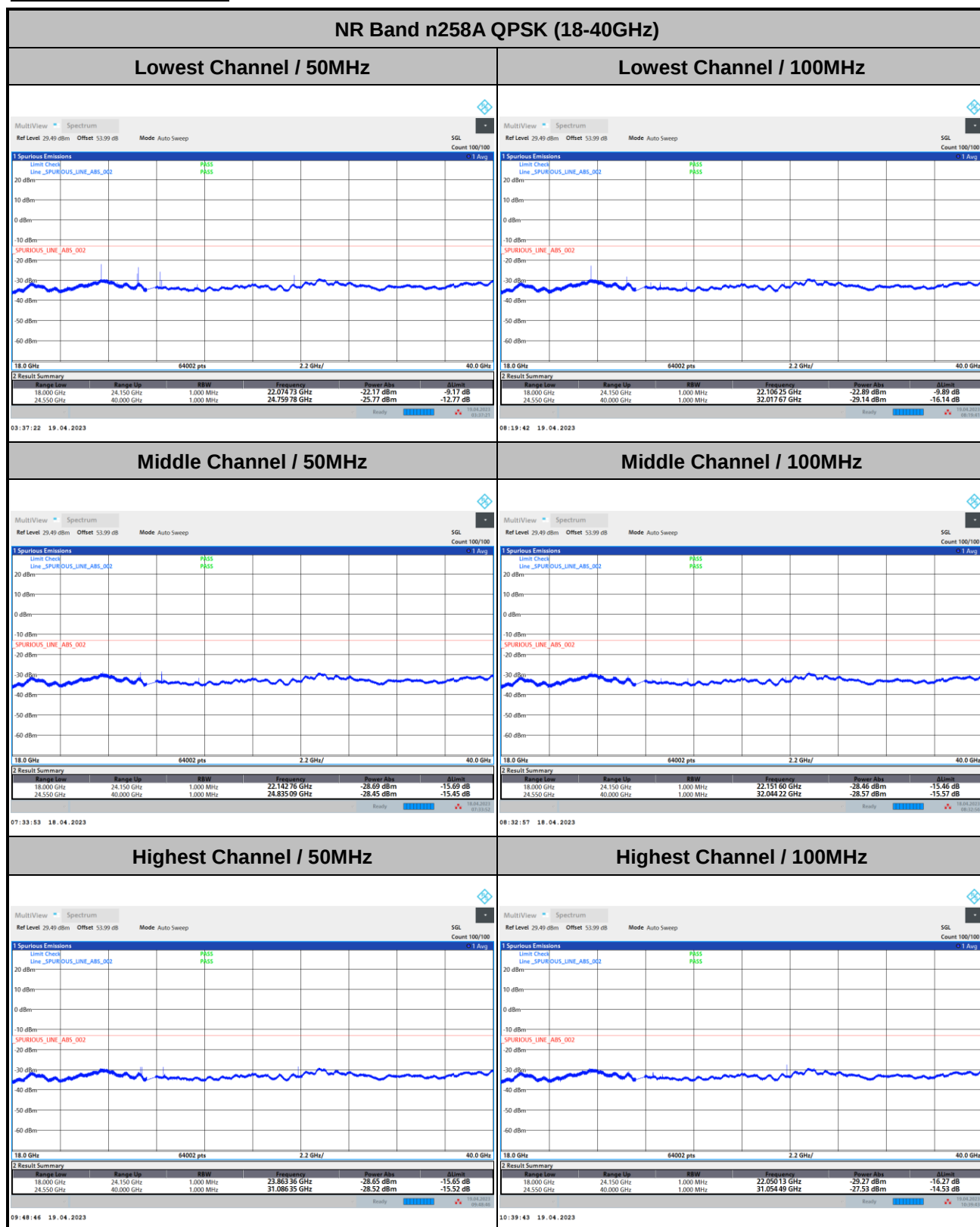
Site : 03CH10-HY
Condition : -13 EIRP_WO VERTICAL
Project : 2D0208-01
 : n258a MA

	Freq	Level	Over Limit	Limit Line	Read Level
	MHz	dBm	dB	dBm	dBm
1	8837.00	-48.74	-35.74	-13.00	-49.18



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

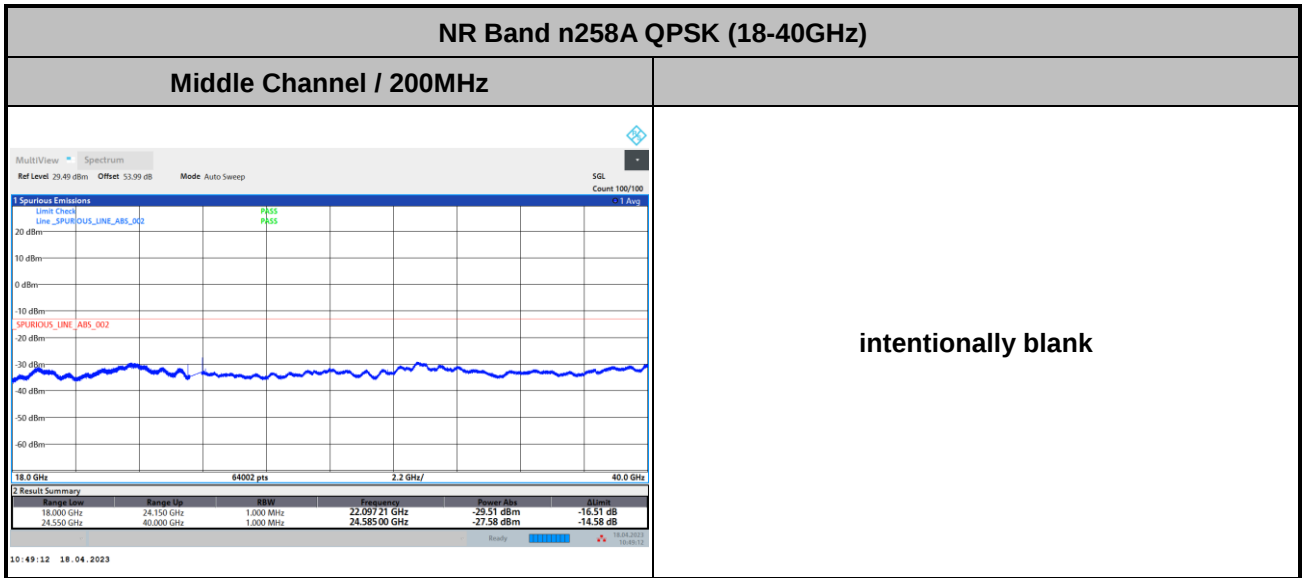
DFT-s-OFDM Module A



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



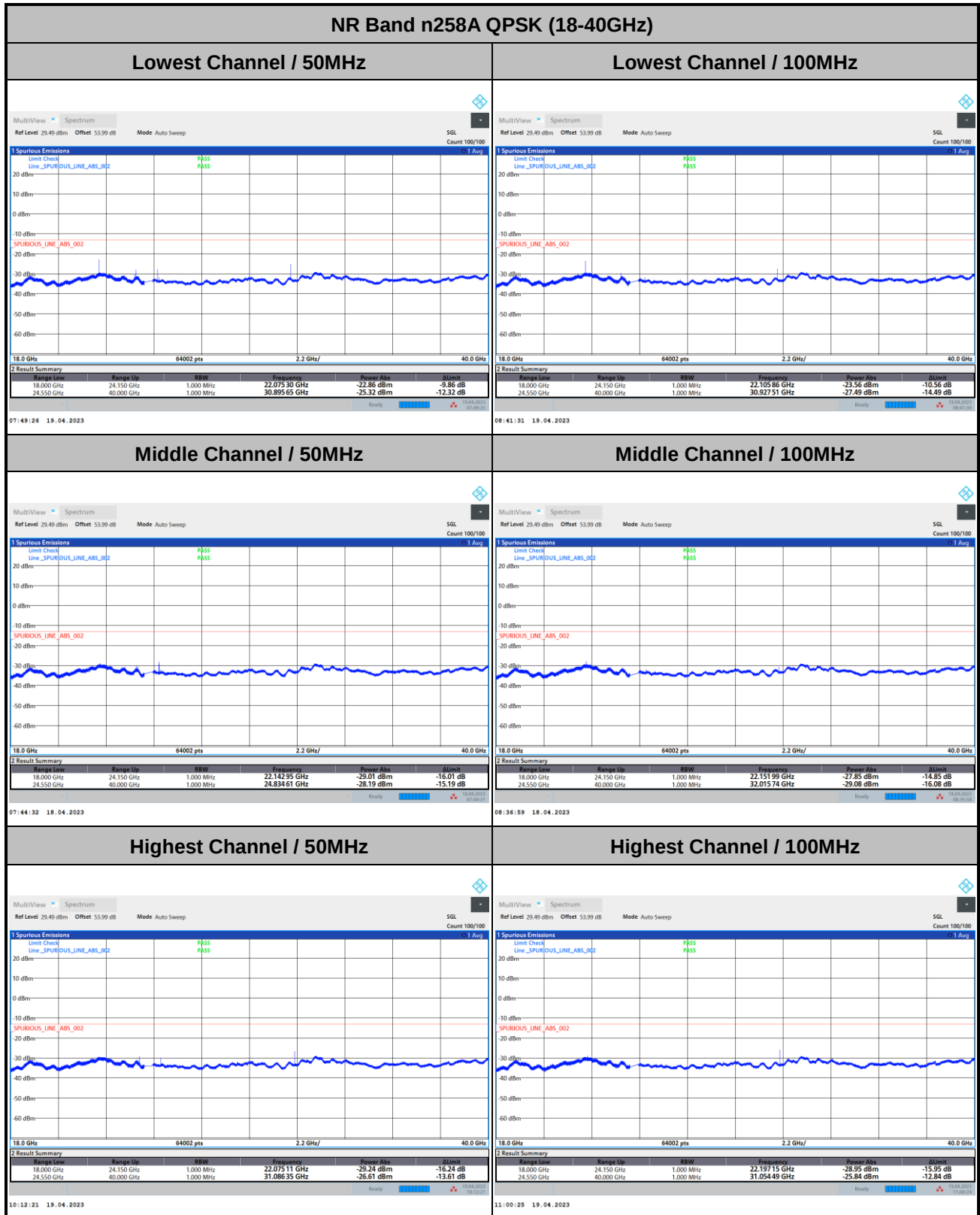
DFT-s-OFDM Module A



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



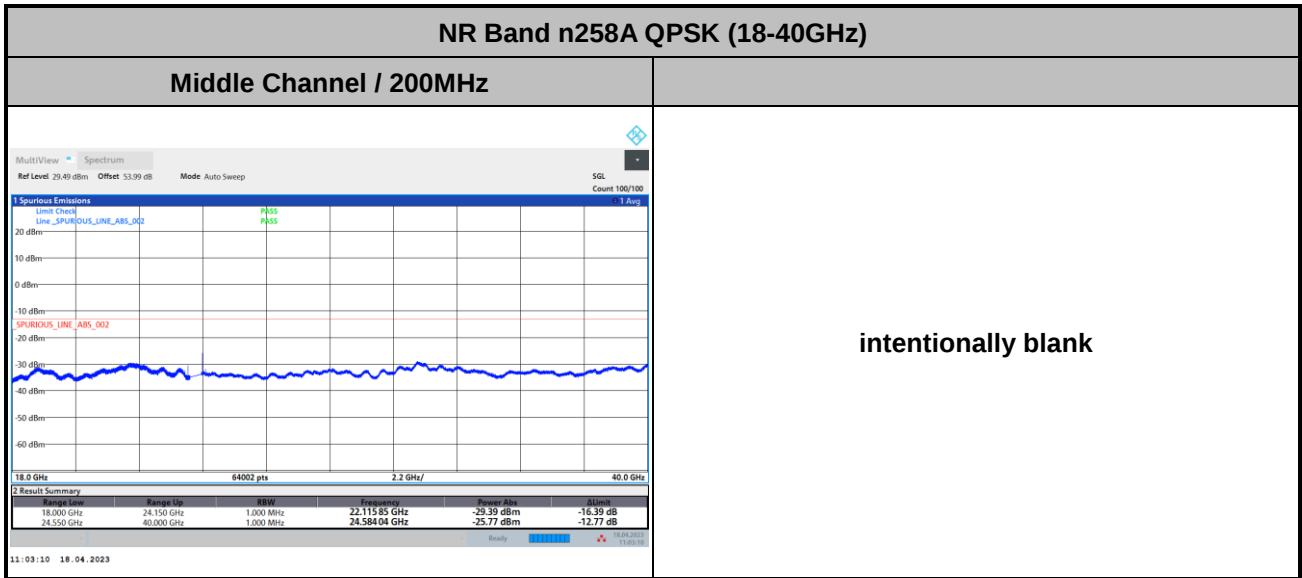
CP-OFDM Module A



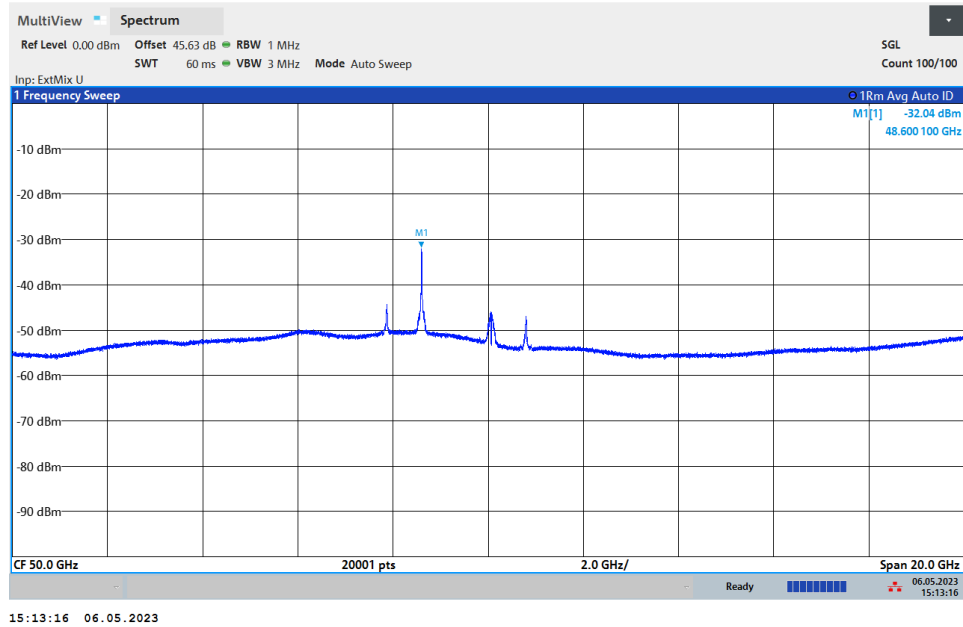
Remark: In band and out of band frequencies are omitted.



CP-OFDM Module A

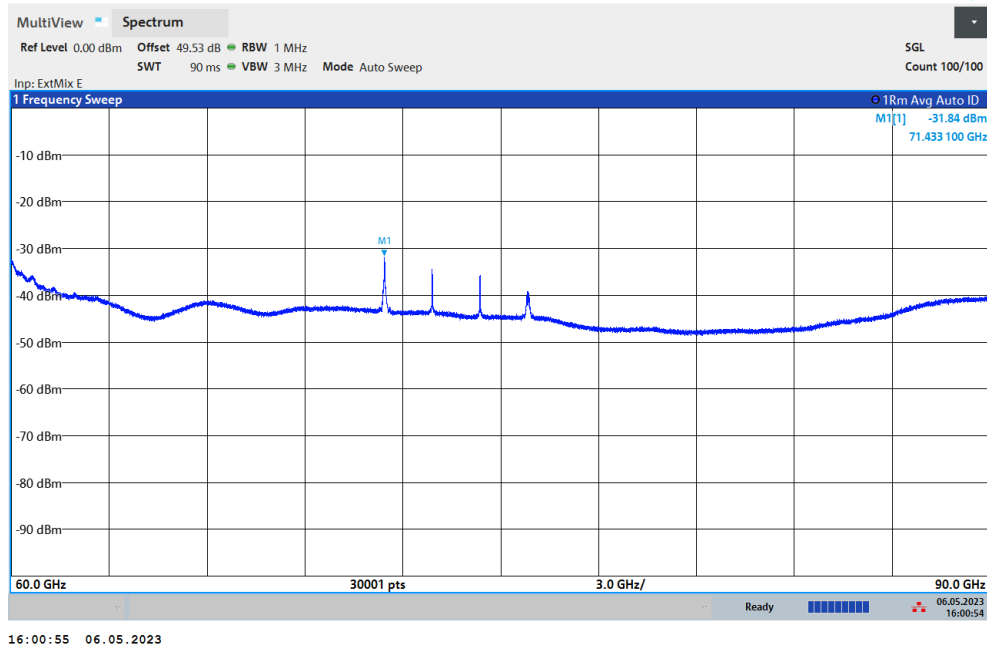


Remark: In band and out of band frequencies are omitted.

NR Band n258A
(40GHz-60GHz)


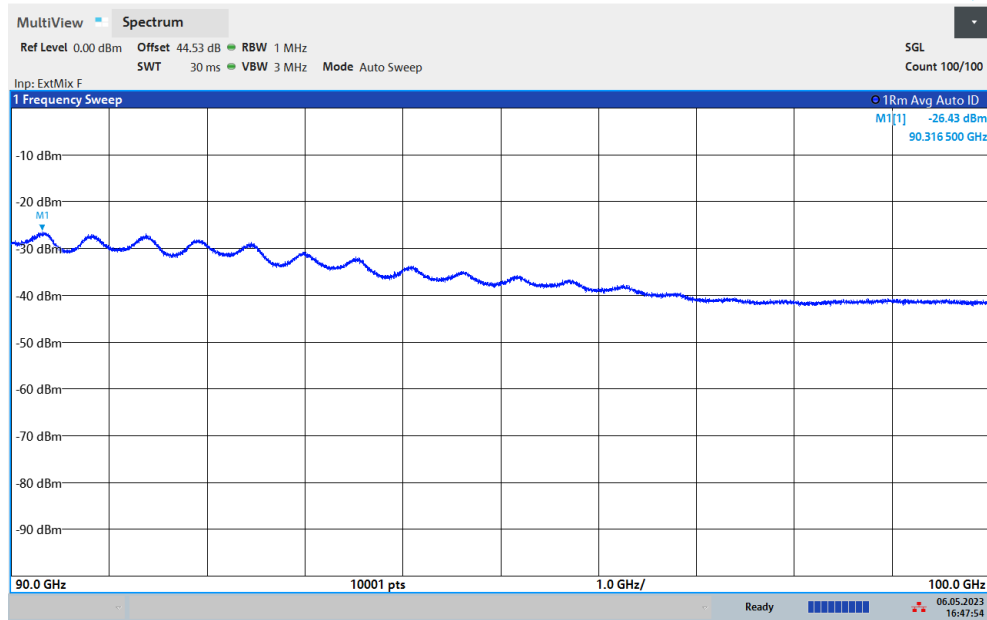
$$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8 + \text{Duty Factor}$$

$$= 43 + 0.43 + 107 + 20\log(1) - 104.8 = 45.63(\text{dB})$$

NR Band n258A
(60GHz-90GHz)


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

$$= 46.9 + 0.43 + 107 + 20\log(1) - 104.8 = 49.53 \text{ (dB)}$$

NR Band n258A
(90GHz-100GHz)


$$\begin{aligned} \text{Offset} &= \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8 + \text{Duty Factor} \\ &= 47.92 + 0.43 + 107 + 20\log(0.5) - 104.8 = 44.53 \text{ (dB)} \end{aligned}$$

Frequency Stability

Test Conditions		NR Band n258A / Middle Channel			Limit
Temperature (°C)	Voltage (Volt)	CW tone			Note 2.
		Frequency (GHz)	Deviation (kHz)	Deviation (ppm)	Result
50	Normal Voltage	24.350012	-12.000	0.430	Pass
40	Normal Voltage	24.350027	-27.000	0.967	
30	Normal Voltage	24.35004	-40.000	1.432	
20(Ref.)	Normal Voltage	24.35	0.000	0.000	
10	Normal Voltage	24.3500639	-63.900	2.288	
0	Normal Voltage	24.3500999	-99.900	3.577	
-10	Normal Voltage	24.3501189	-118.900	4.258	
-20	Normal Voltage	24.3501419	-141.900	5.081	
-30	Normal Voltage	24.3501538	-153.800	5.508	
20	Maximum Voltage	24.3500519	-51.900	1.859	
20	Normal Voltage	24.3500529	-52.900	1.894	
20	Battery End Point	24.35005	-50.000	1.791	

Note:

1. Normal Voltage =3.89 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. The frequency fundamental emissions stay within the operation band.

NR Band n258A Module B AGH+V

Occupied Bandwidth

Mode	DFT-s-OFDM Module B NR Band n258A : 99%OBW(MHz)								
BW	50MHz			100MHz			200MHz		
Mod.	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Lowest CH	46.02	46.01	45.85	91.18	91.11	91.16	-	-	-
Middle CH	45.91	45.85	45.93	91.33	91.41	91.38	190.61	190.41	190.54
Highest CH	46.14	46.06	46.01	91.24	91.31	91.13	-	-	-

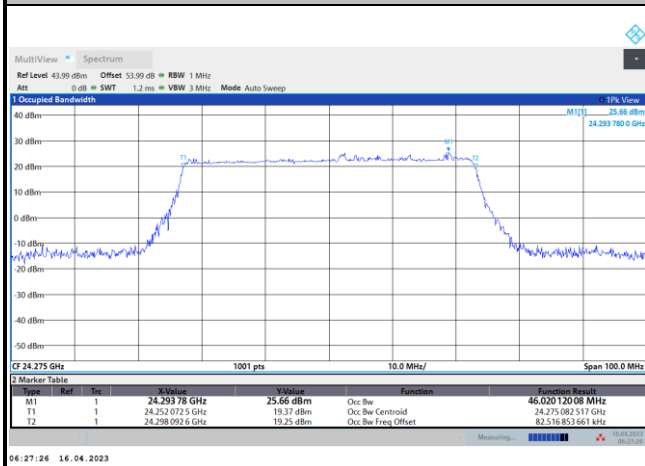
Mode	CP-OFDM Module B NR Band n258A : 99%OBW(MHz)		
BW	50MHz	100MHz	200MHz
Mod.	QPSK	QPSK	QPSK
Lowest CH	46.04	94.42	-
Middle CH	45.98	94.24	193.57
Highest CH	46.01	94.15	-



DFT-s-OFDM Module B

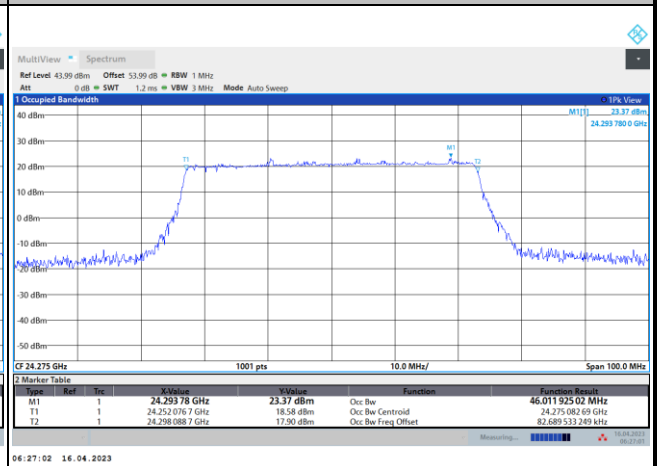
NR Band n258A

Lowest Channel / 50MHz / QPSK



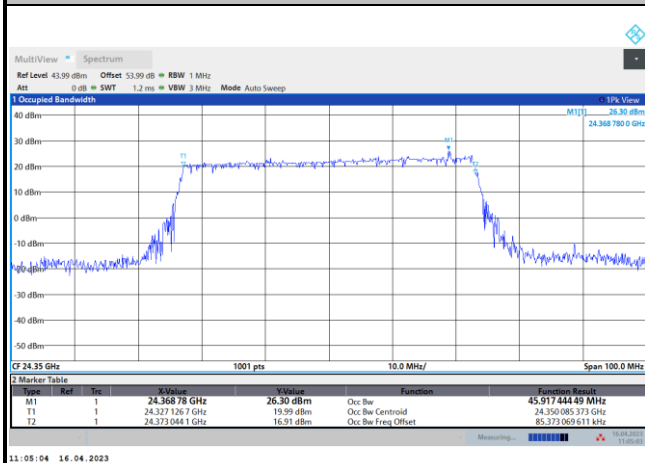
06:27:26 16.04.2023

Lowest Channel / 50MHz / 16QAM



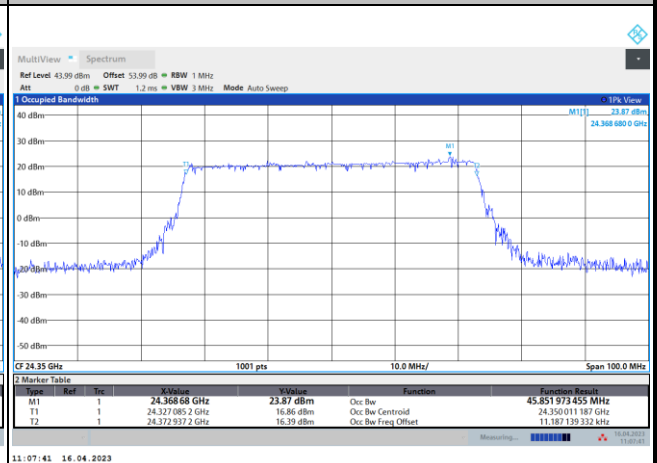
06:27:02 16.04.2023

Middle Channel / 50MHz / QPSK



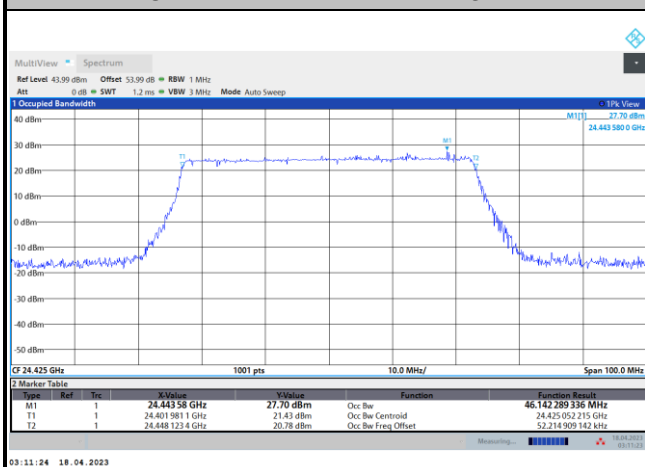
11:05:04 16.04.2023

Middle Channel / 50MHz / 16QAM



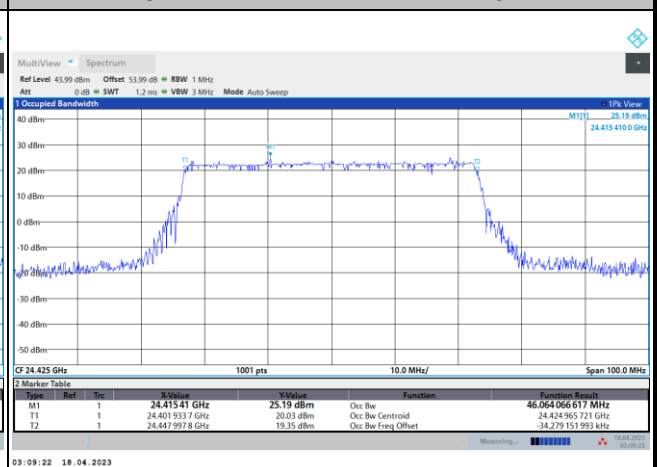
11:07:41 16.04.2023

Highest Channel / 50MHz / QPSK



03:11:24 18.04.2023

Highest Channel / 50MHz / 16QAM



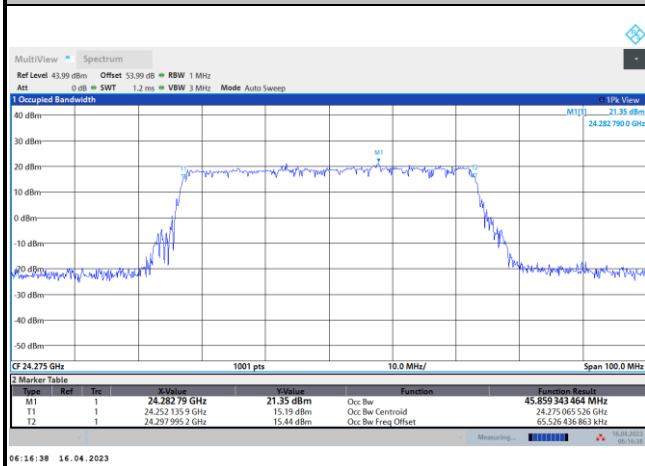
03:09:22 18.04.2023



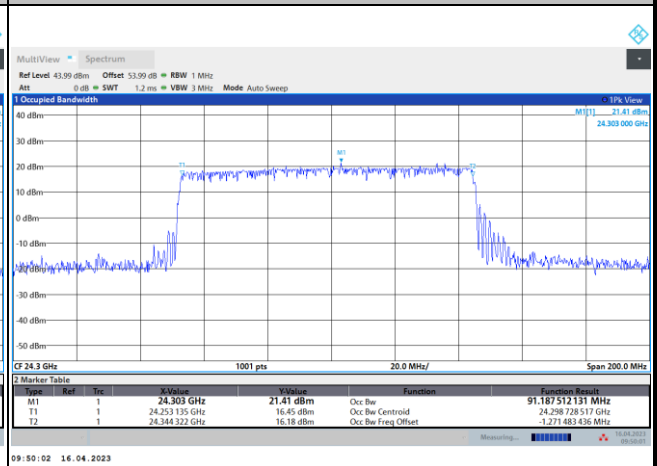
DFT-s-OFDM Module B

NR Band n258A

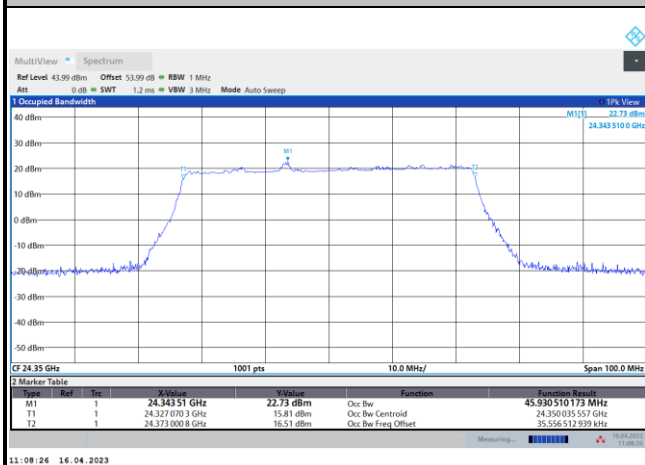
Lowest Channel / 50MHz / 64QAM



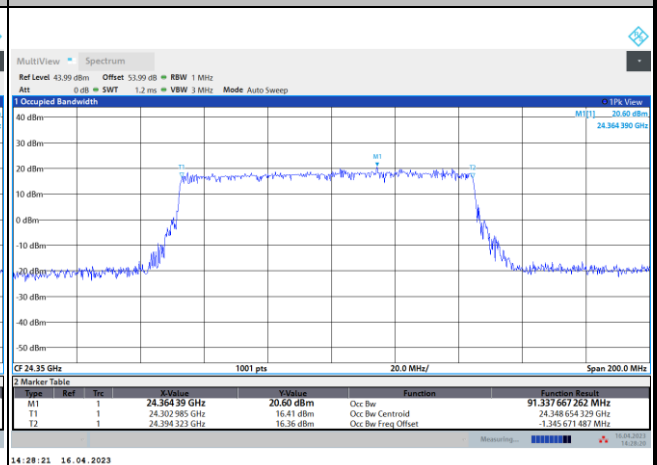
Lowest Channel / 100MHz / QPSK



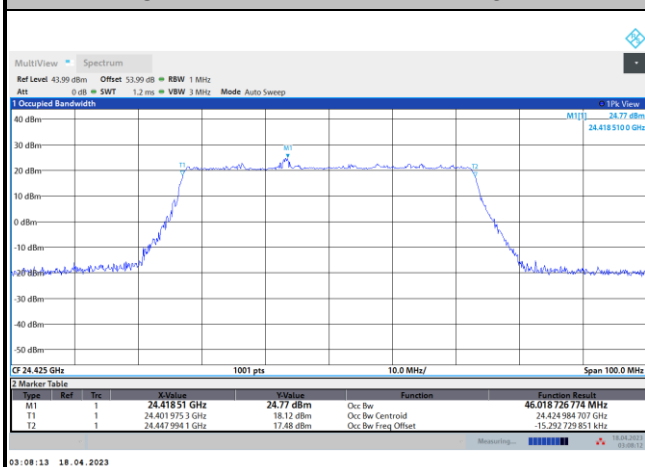
Middle Channel / 50MHz / 64QAM



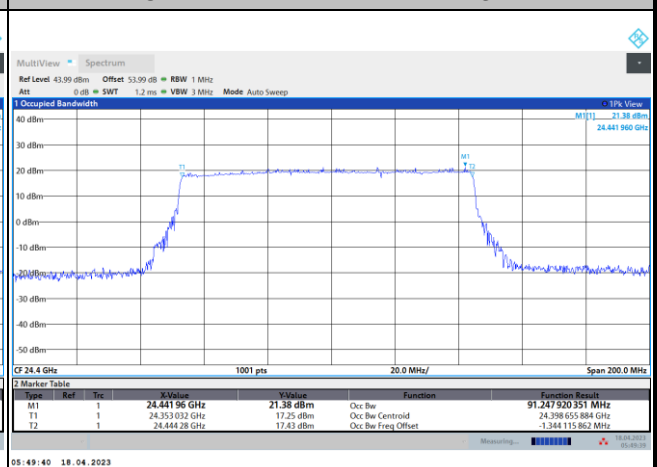
Middle Channel / 100MHz / QPSK



Highest Channel / 50MHz / 64QAM



Highest Channel / 100MHz / QPSK

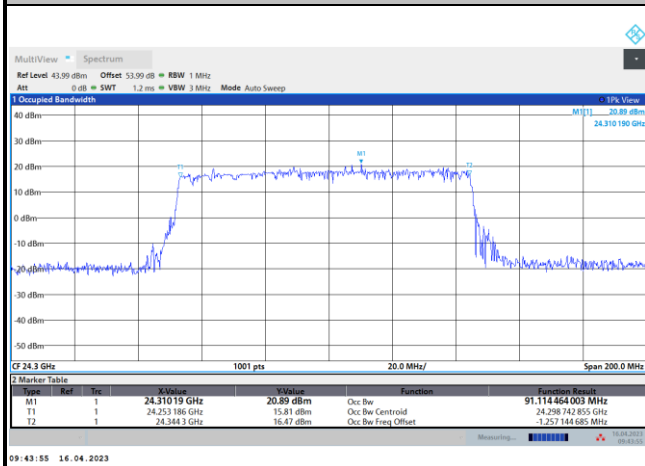




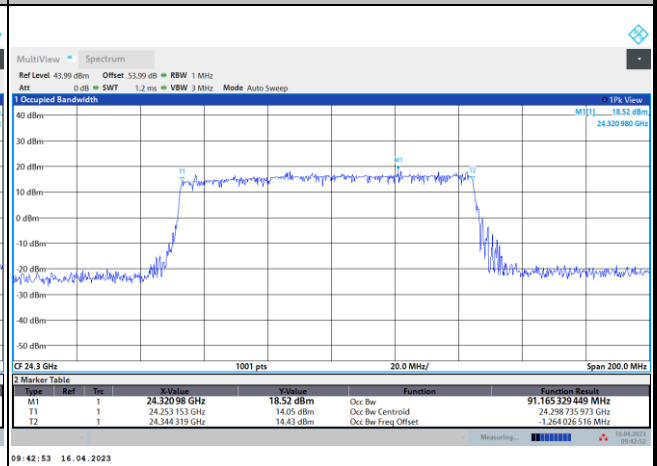
DFT-s-OFDM Module B

NR Band n258A

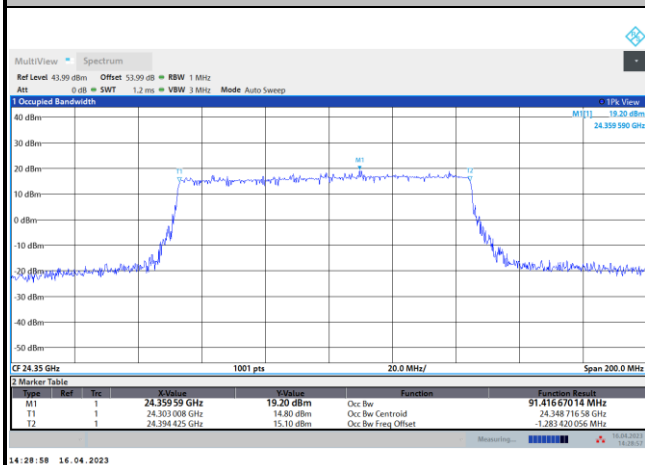
Lowest Channel / 100MHz / 16QAM



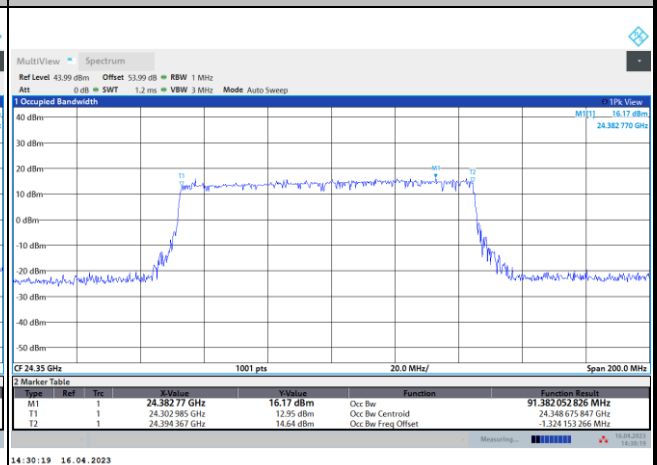
Lowest Channel / 100MHz / 64QAM



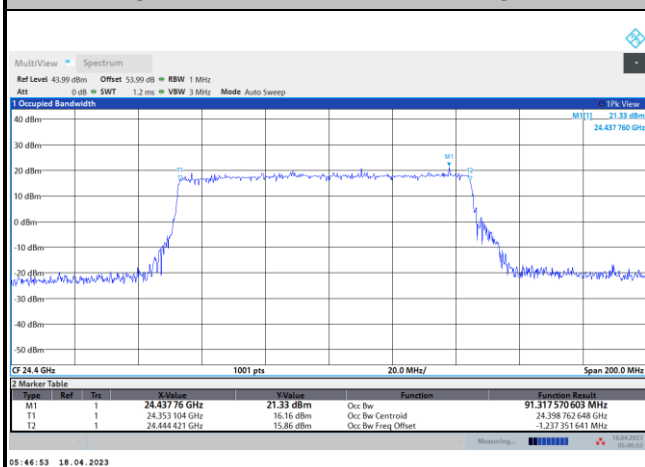
Middle Channel / 100MHz / 16QAM



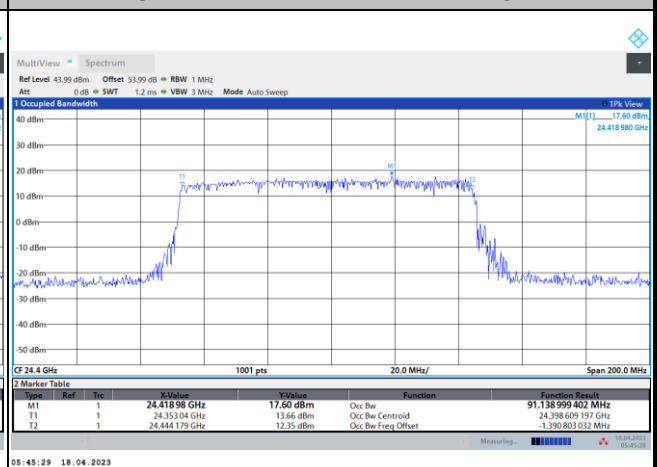
Middle Channel / 100MHz / 64QAM



Highest Channel / 100MHz / 16QAM

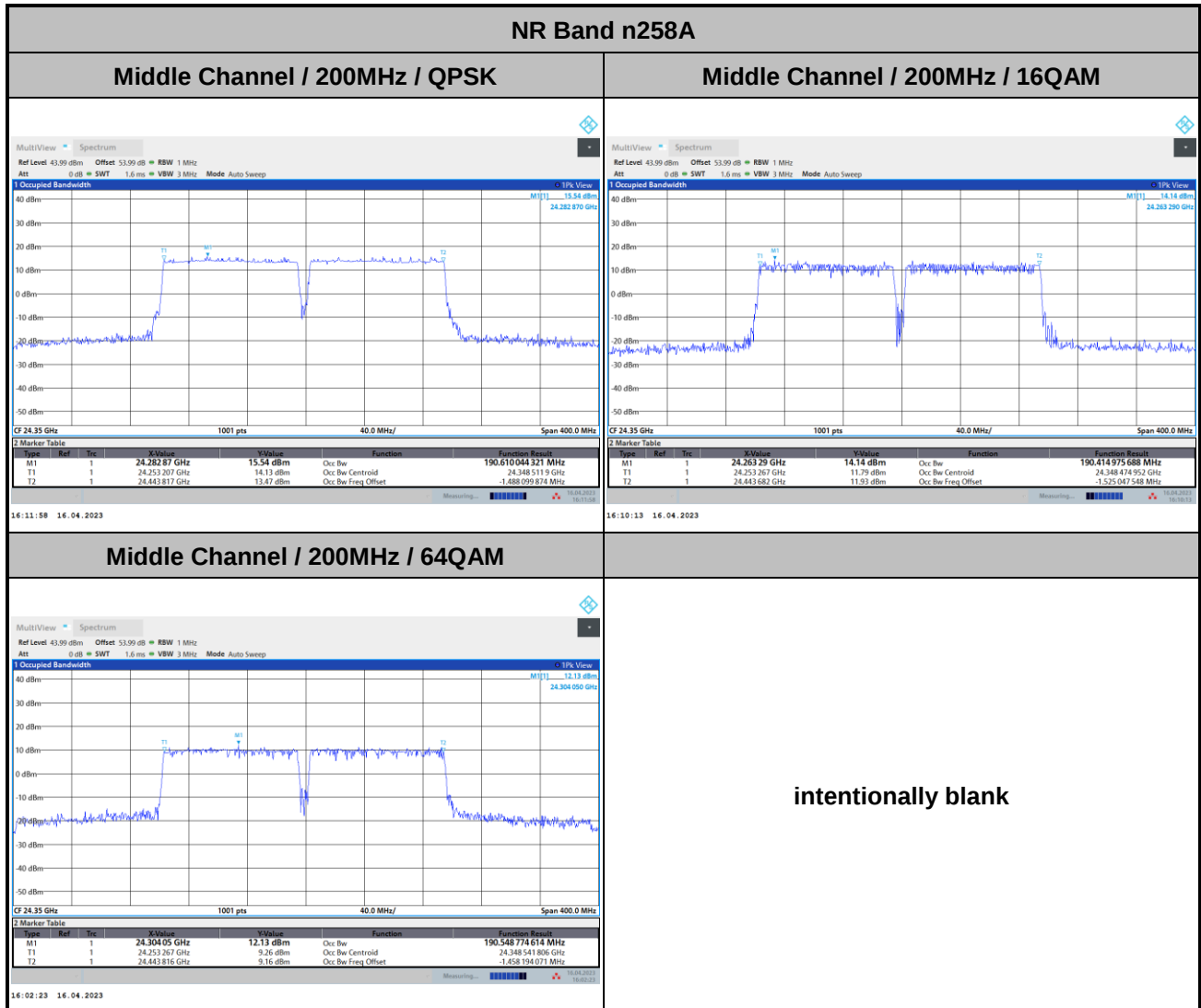


Highest Channel / 100MHz / 64QAM





DFT-s-OFDM Module B

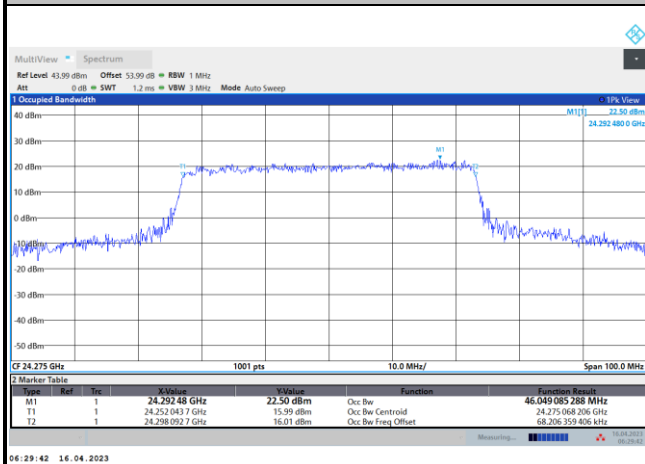




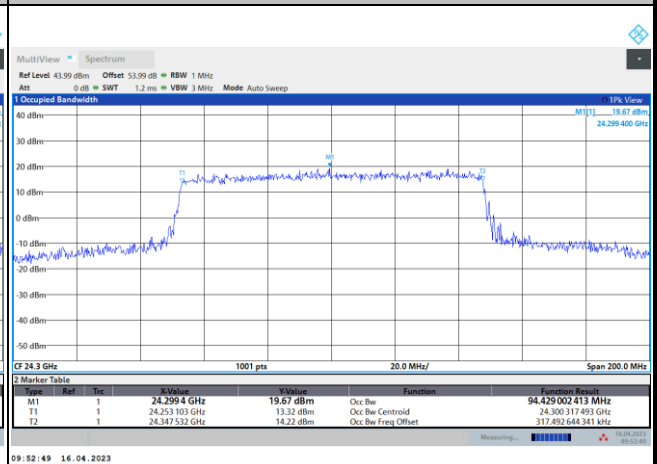
CP-OFDM Module B

NR Band n258A

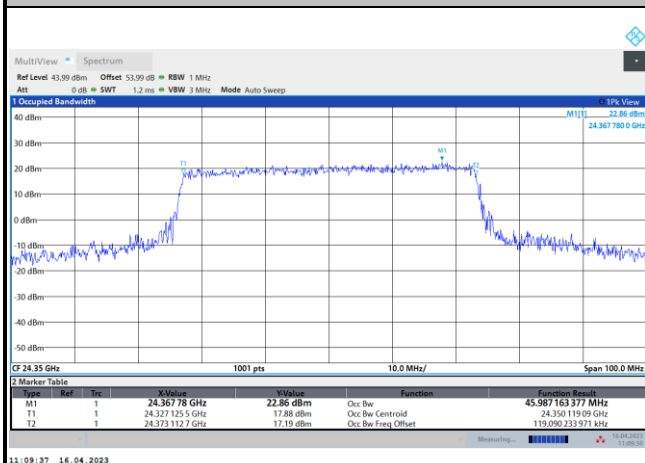
Lowest Channel / 50MHz / QPSK



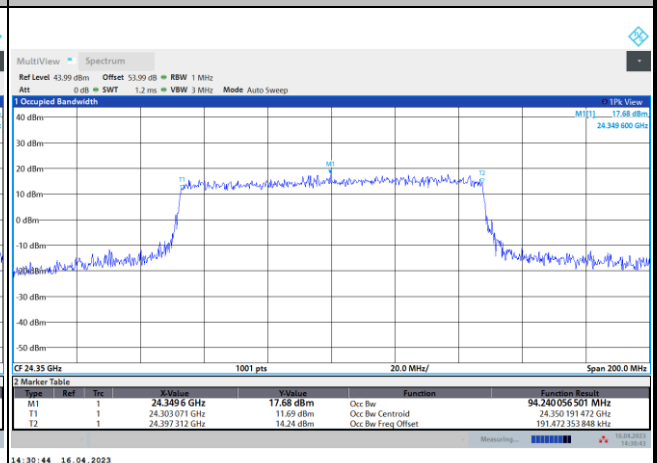
Lowest Channel / 100MHz / QPSK



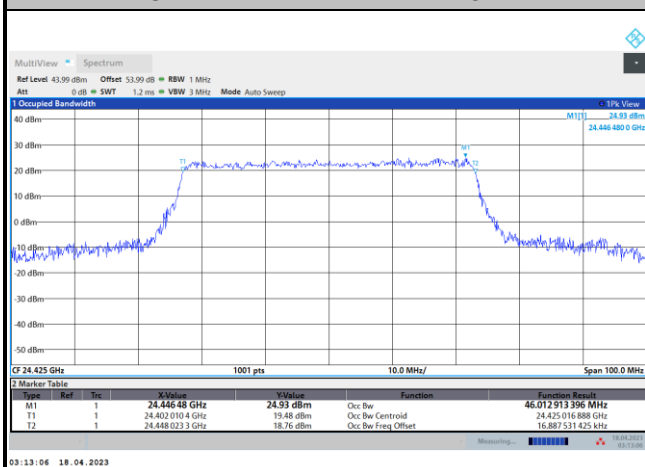
Middle Channel / 50MHz / QPSK



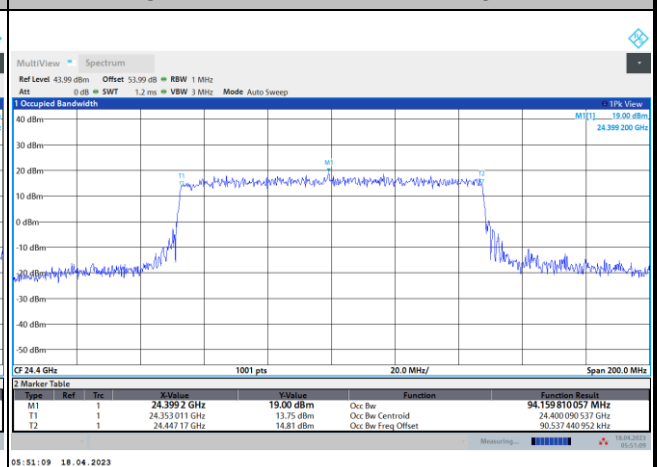
Middle Channel / 100MHz / QPSK



Highest Channel / 50MHz / QPSK

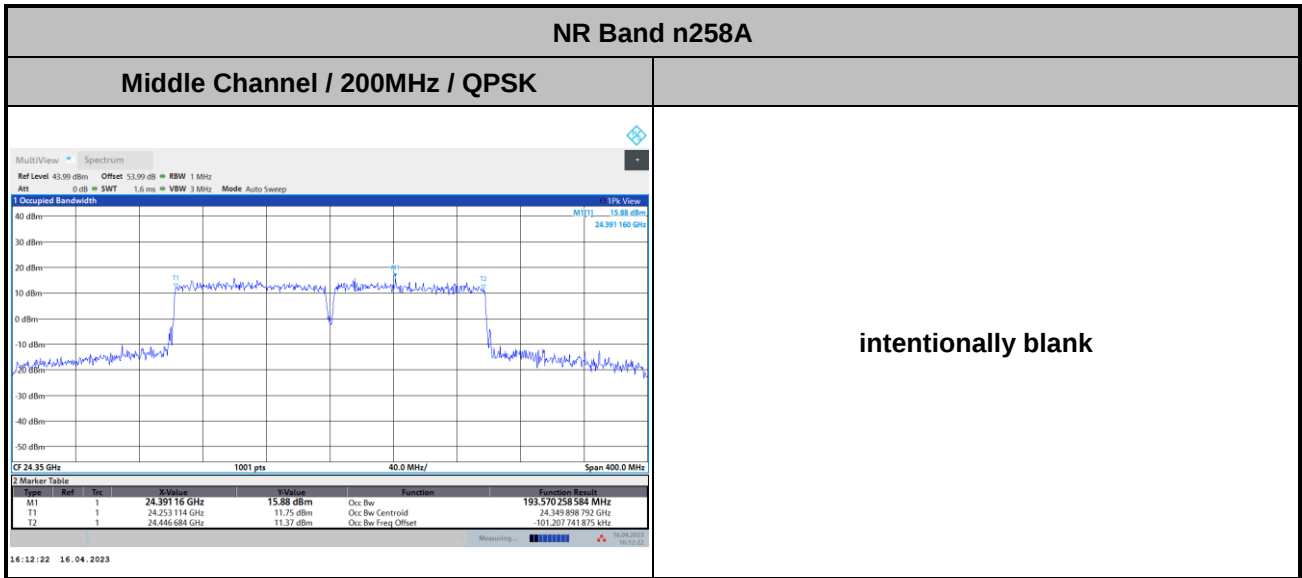


Highest Channel / 100MHz / QPSK





CP-OFDM Module B



Radiated Out of Band Emissions

Mode			DFT-s-OFDM Module B NR Band n258A : BE (dBm) 1 RB					
BW			50MHz			100MHz		
Limit (dBm)			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Low CH	0~10%OB	≤ -5	-5.37	-5.65	-8.89	-9.19	-10.05	-12.03
	>10%OB	≤ -13	-29.64	-30.08	-30.76	-30.16	-30.09	-32.26
High CH	0~10%OB	≤ -5	-6.60	-6.89	-10.10	-10.06	-11.82	-12.43
	>10%OB	≤ -13	-28.60	-29.53	-30.06	-31.05	-31.34	-31.59
Result			Compliance					

Mode			CP-OFDM Module B NR Band n258A : BE (dBm) 1 RB	
BW			50MHz	100MHz
Limit (dBm)			QPSK	QPSK
Low CH	0~10%OB	≤ -5	-5.91	-11.52
	>10%OB	≤ -13	-30.91	-32.47
High CH	0~10%OB	≤ -5	-7.57	-10.87
	>10%OB	≤ -13	-29.79	-31.25
Result			Compliance	

Mode			DFT-s-OFDM Module B NR Band n258A : BE (dBm) 1 RB		
BW			200MHz		
Limit (dBm)			QPSK	16QAM	64QAM
Mid CH	0~10%OB	≤ -5	-21.55	-22.28	-22.70
	>10%OB	≤ -13	-26.29	-27.47	-17.62

Mode			CP-OFDM Module B NR Band n258A : BE (dBm) 1 RB	
BW			200MHz	
Limit (dBm)			QPSK	
Mid CH	0~10%OB	≤ -5	-17.64	
	>10%OB	≤ -13	-21.28	

Mode			DFT-s-OFDM Module B NR Band n258A : BE (dBm) Full RB					
BW			50MHz			100MHz		
Limit (dBm)			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Low CH	0~10%OB	≤-5	-15.41	-17.42	-20.94	-21.71	-20.10	-24.70
	>10%OB	≤-13	-28.13	-29.70	-31.10	-28.62	-29.76	-32.70
High CH	0~10%OB	≤-5	-14.32	-18.70	-19.15	-24.22	-23.63	-25.52
	>10%OB	≤-13	-28.82	-30.53	-30.94	-29.69	-31.08	-31.26
Result			Compliance					

Mode			CP-OFDM Module B NR Band n258A : BE (dBm) Full RB	
BW			50MHz	100MHz
Limit (dBm)			QPSK	QPSK
Low CH	0~10%OB	≤-5	-18.10	-20.95
	>10%OB	≤-13	-22.95	-24.85
High CH	0~10%OB	≤-5	-19.07	-22.35
	>10%OB	≤-13	-26.51	-29.23
Result			Compliance	

Mode			DFT-s-OFDM Module B NR Band n258A : BE (dBm) Full RB		
BW			200MHz		
Limit (dBm)			QPSK	16QAM	64QAM
Mid CH	0~10%OB	≤-5	-27.39	-30.05	-31.50
	>10%OB	≤-13	-32.15	-32.60	-32.26

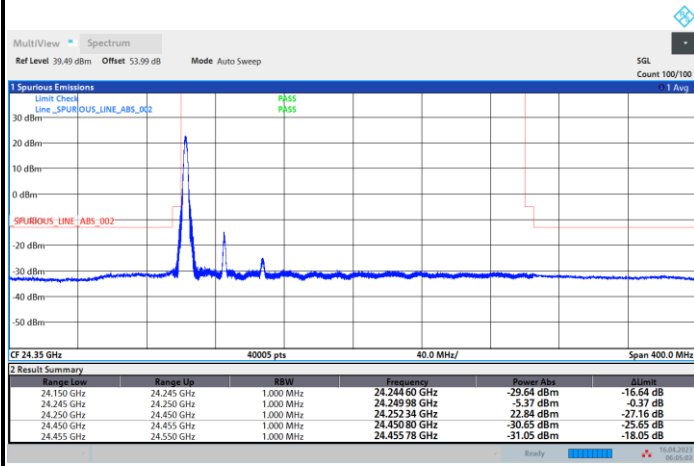
Mode			CP-OFDM Module B NR Band n258A : BE (dBm) Full RB	
BW			200MHz	
Limit (dBm)			QPSK	
Mid CH	0~10%OB	≤-5	-27.33	
	>10%OB	≤-13	-28.51	



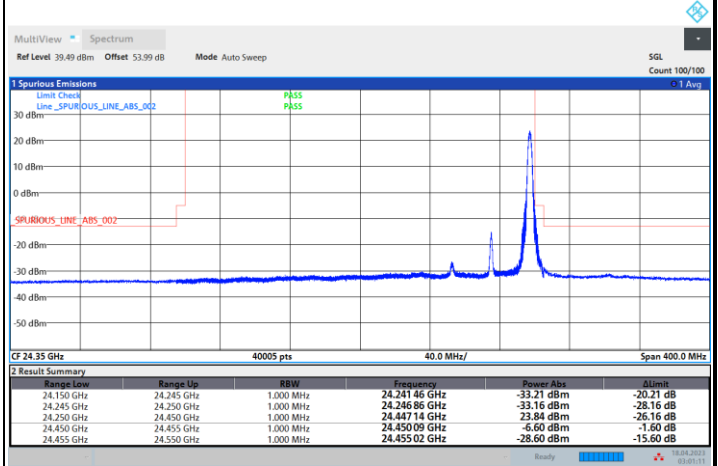
DFT-s-OFDM Module B

NR Band n258A/ 50MHz / QPSK

Lowest Band Edge / 1 RB

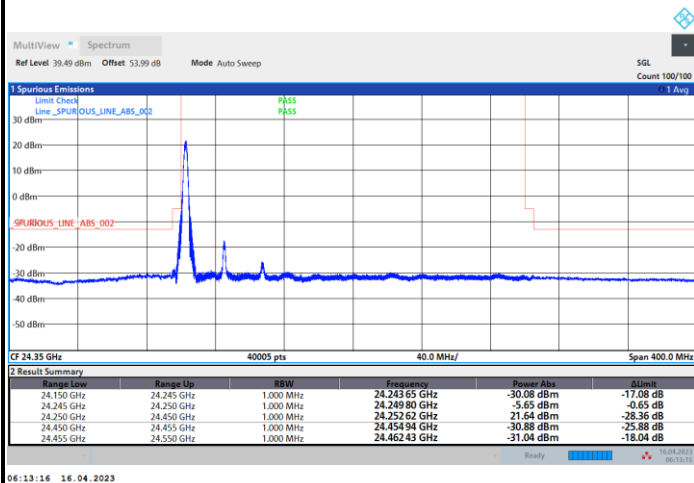


Highest Band Edge / 1 RB

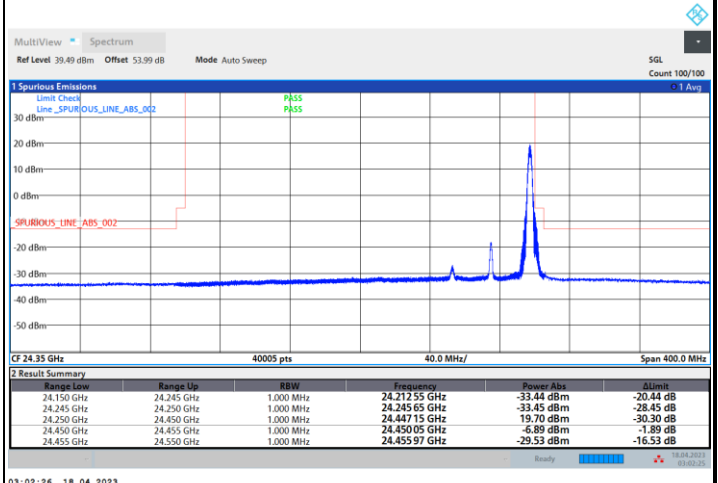


NR Band n258A/ 50MHz / 16QAM

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB

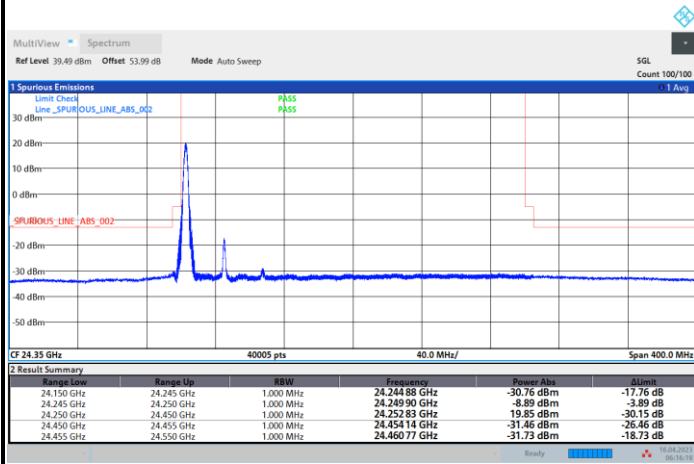




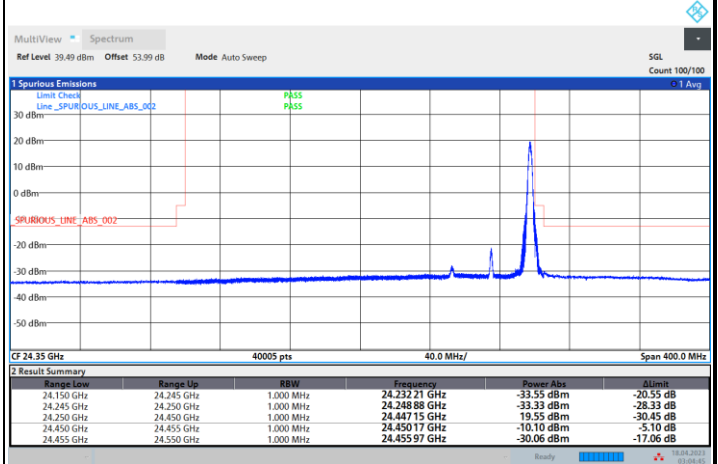
DFT-s-OFDM Module B

NR Band n258A/ 50MHz / 64QAM

Lowest Band Edge / 1 RB

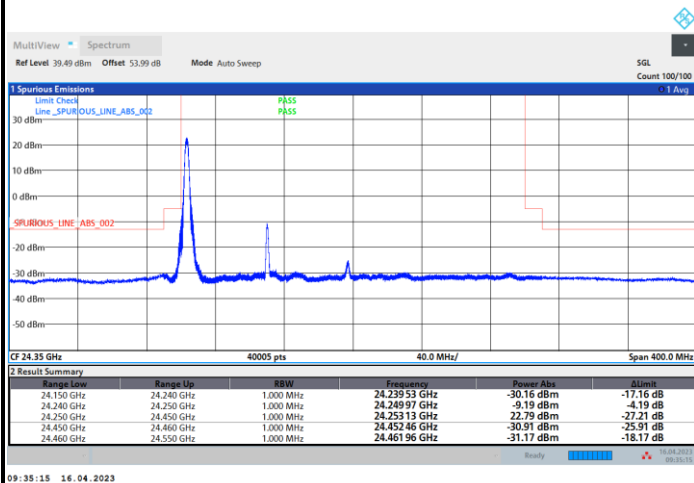


Highest Band Edge / 1 RB

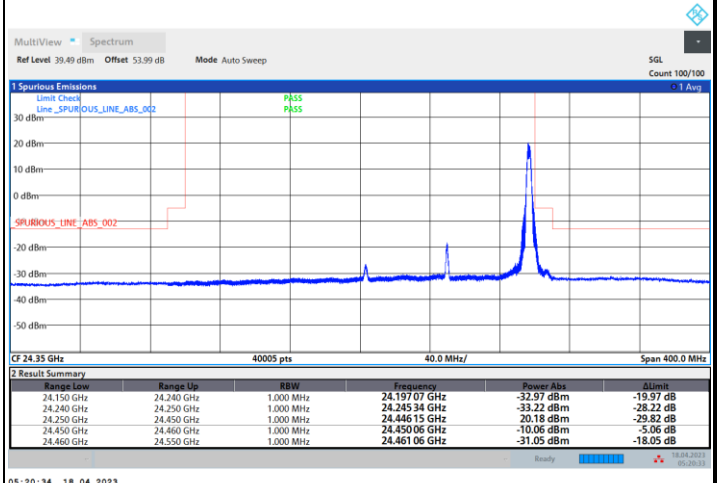


NR Band n258A/ 100MHz / QPSK

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB

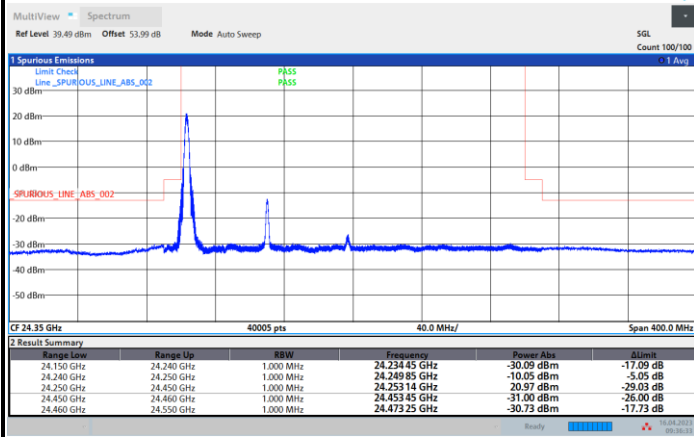




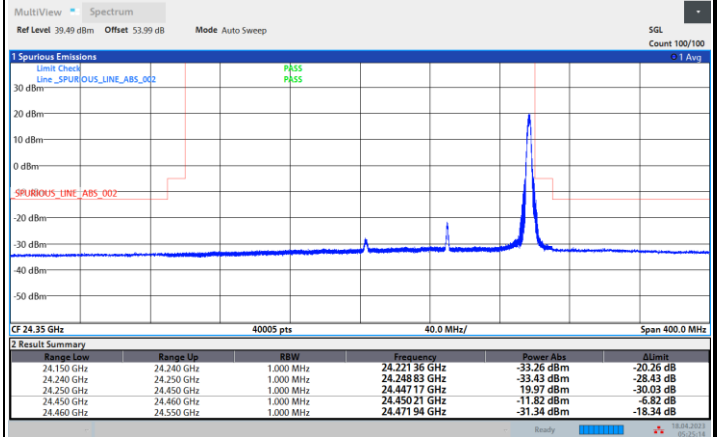
DFT-s-OFDM Module B

NR Band n258A/ 100MHz / 16QAM

Lowest Band Edge / 1 RB

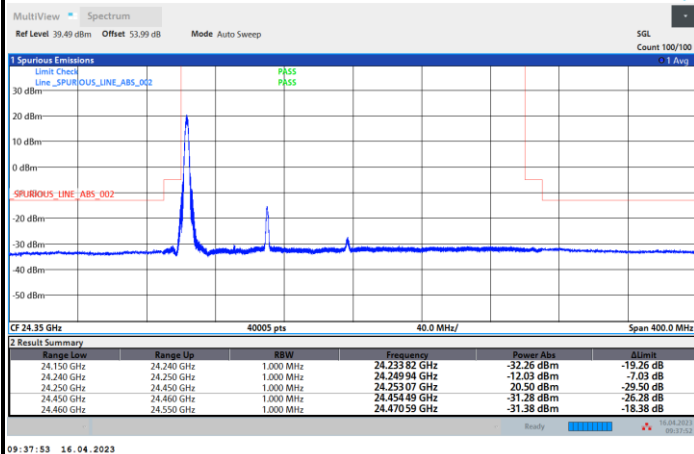


Highest Band Edge / 1 RB

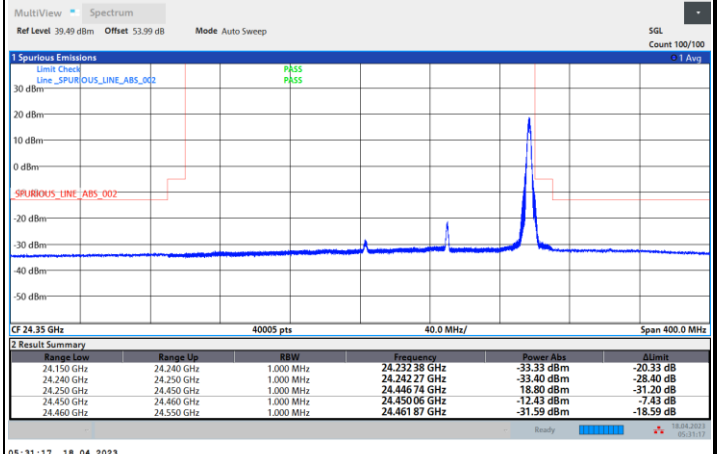


NR Band n258A/ 100MHz / 64QAM

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB

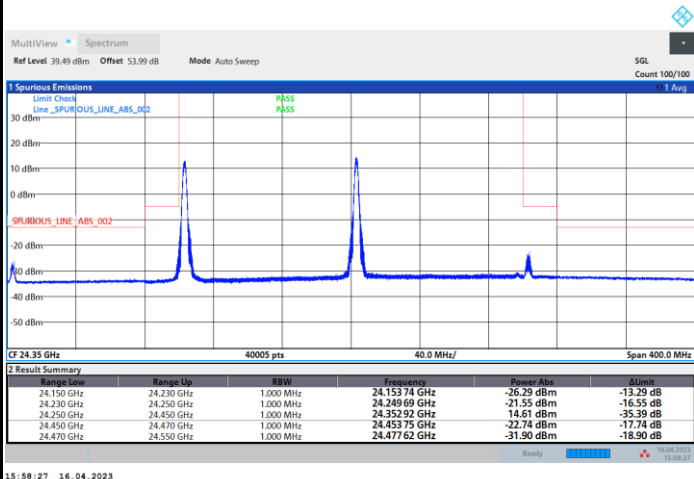




DFT-s-OFDM Module B

NR Band n258A/ 200MHz / QPSK

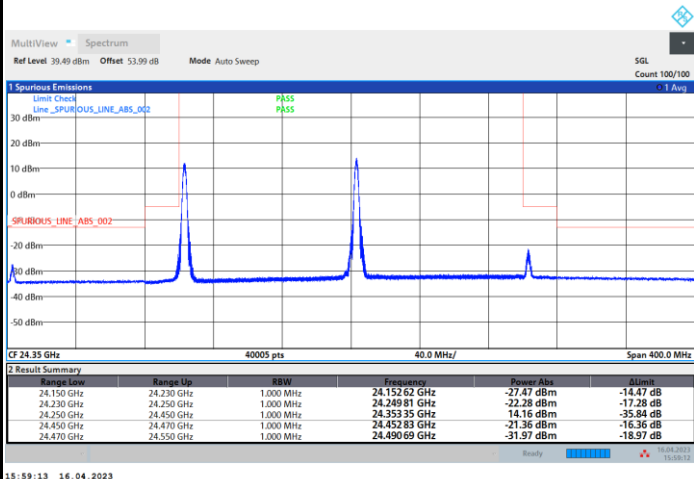
Middle Band Edge / 1 RB



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NR Band n258A/ 200MHz / 16QAM

Middle Band Edge / 1 RB



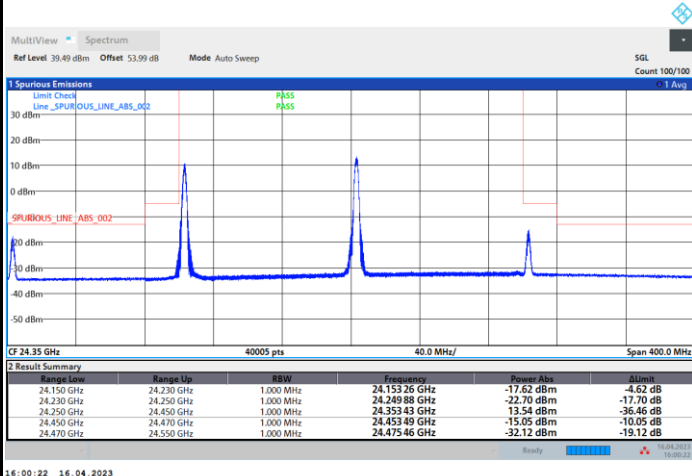
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DFT-s-OFDM Module B

NR Band n258A/ 200MHz / 64QAM

Middle Band Edge / 1 RB



intentionally blank