

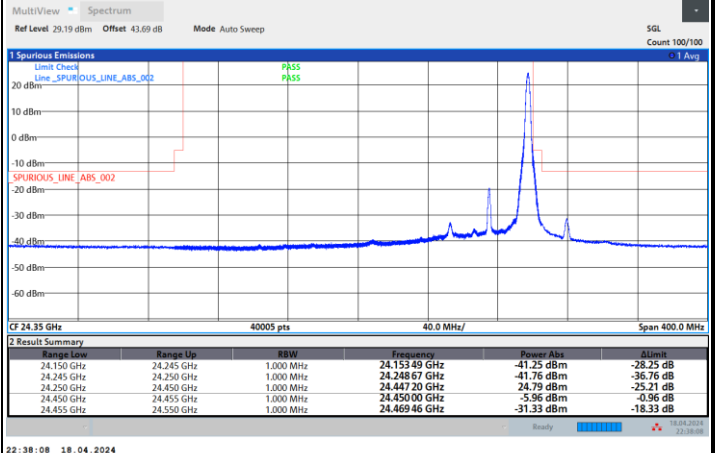
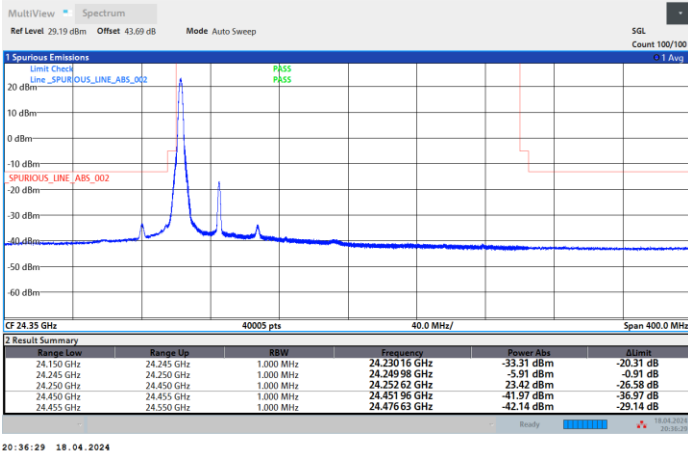


CP-OFDM Module A

NR Band n258A/ 50MHz / QPSK

Lowest Band Edge / 1 RB

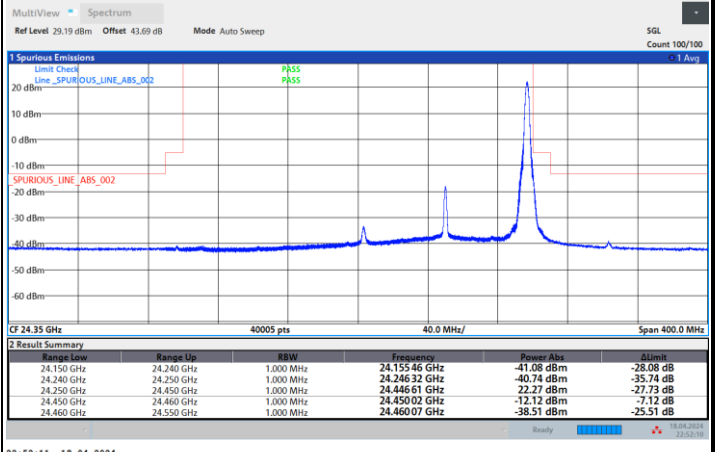
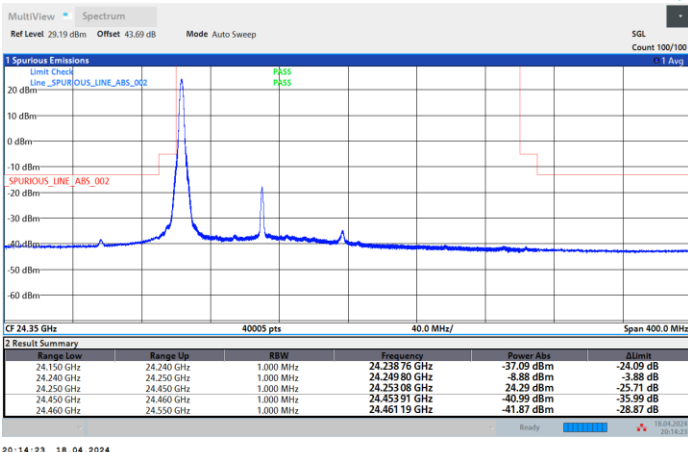
Highest Band Edge / 1 RB



NR Band n258A/ 100MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

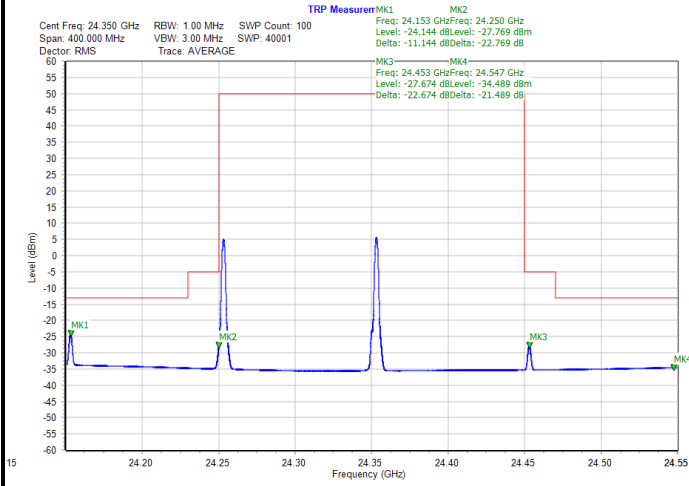




CP-OFDM Module A

NR Band n258A/ 200MHz / QPSK

Middle Band Edge / 1 RB



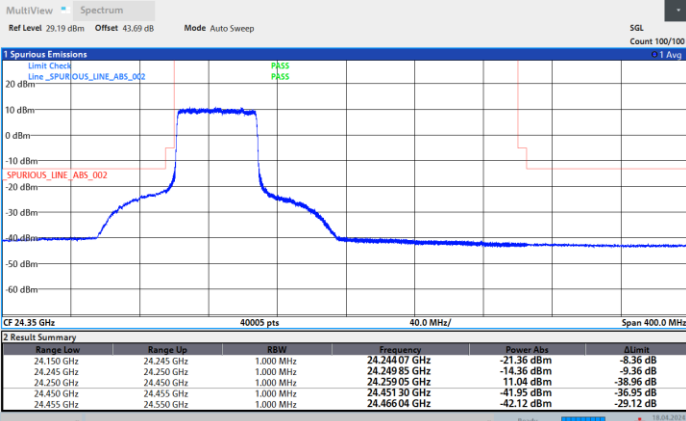
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DFT-s-OFDM Module A

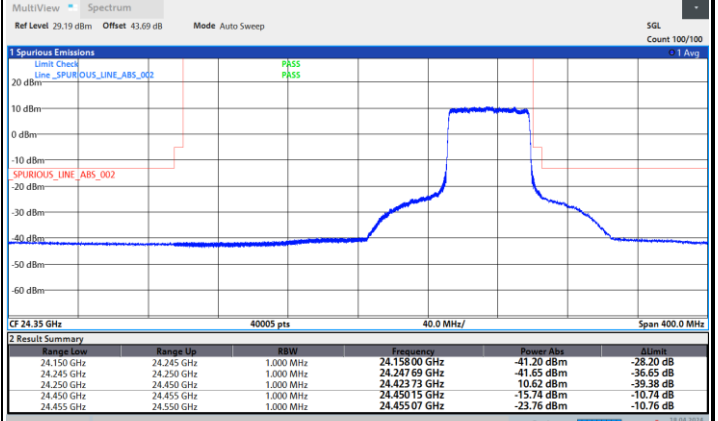
NR Band n258A/ 50MHz / QPSK

Lowest Band Edge / Full RB



20:32:59 18.04.2024

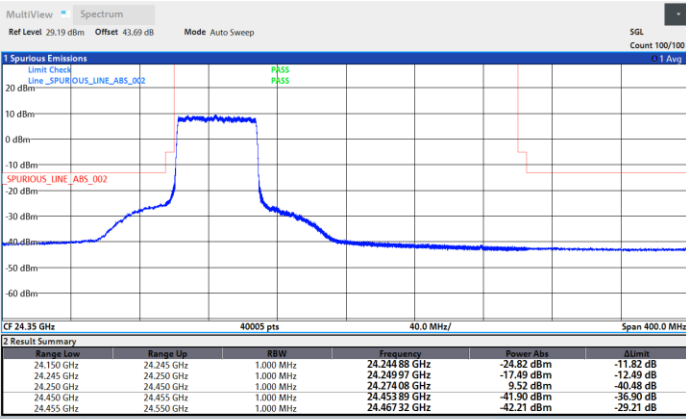
Highest Band Edge / Full RB



22:36:09 18.04.2024

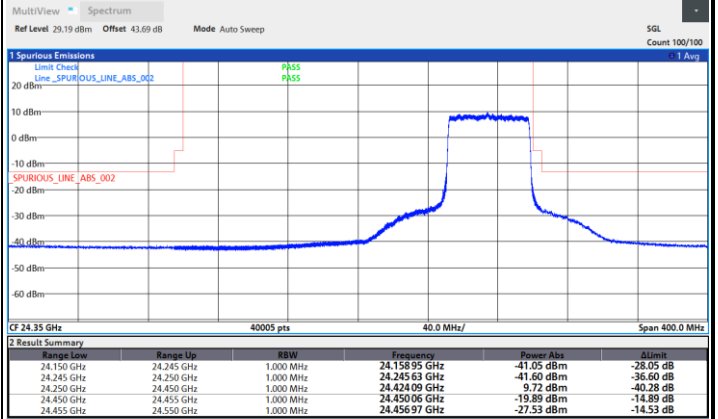
NR Band n258A/ 50MHz / 16QAM

Lowest Band Edge / Full RB



20:30:51 18.04.2024

Highest Band Edge / Full RB



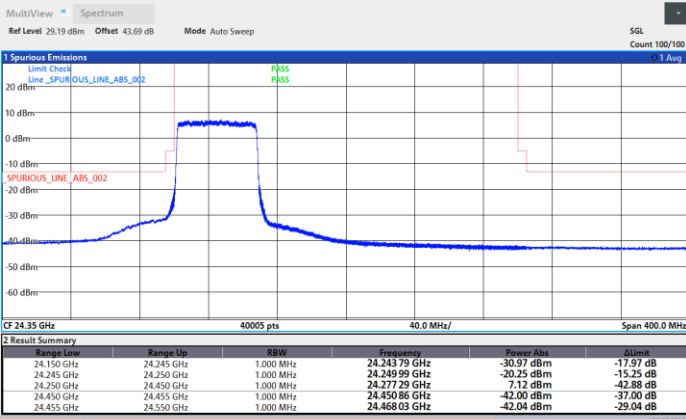
22:35:19 18.04.2024



DFT-s-OFDM Module A

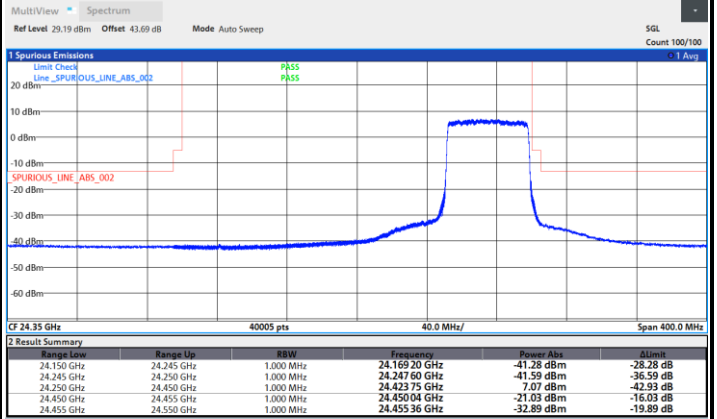
NR Band n258A/ 50MHz / 64QAM

Lowest Band Edge / Full RB



20:29:33 18. 04. 2024

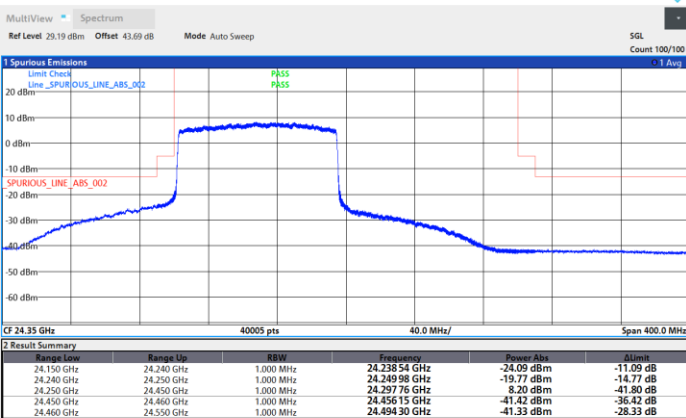
Highest Band Edge / Full RB



22:34:27 18. 04. 2024

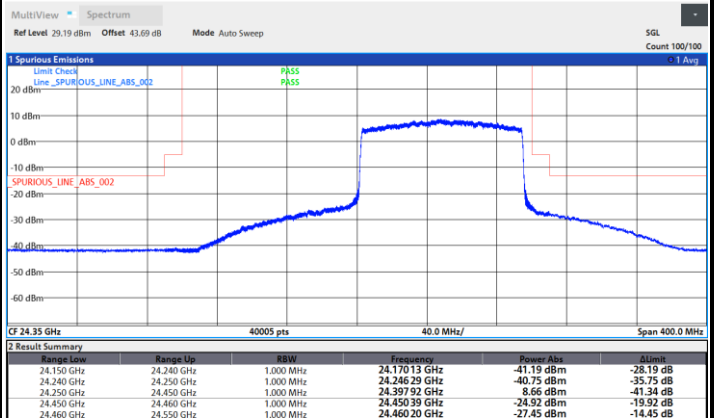
NR Band n258A/ 100MHz / QPSK

Lowest Band Edge / Full RB



20:09:01 18. 04. 2024

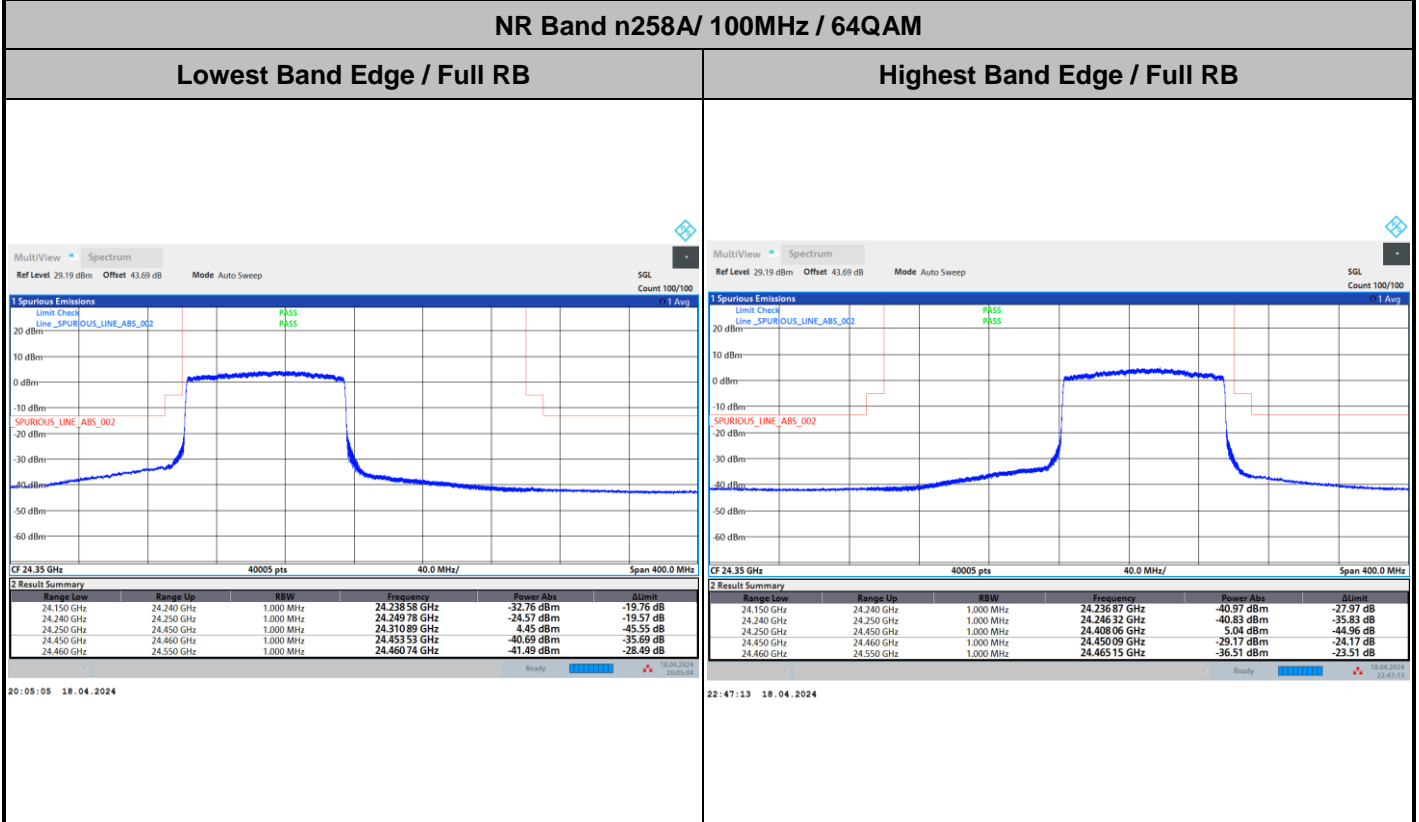
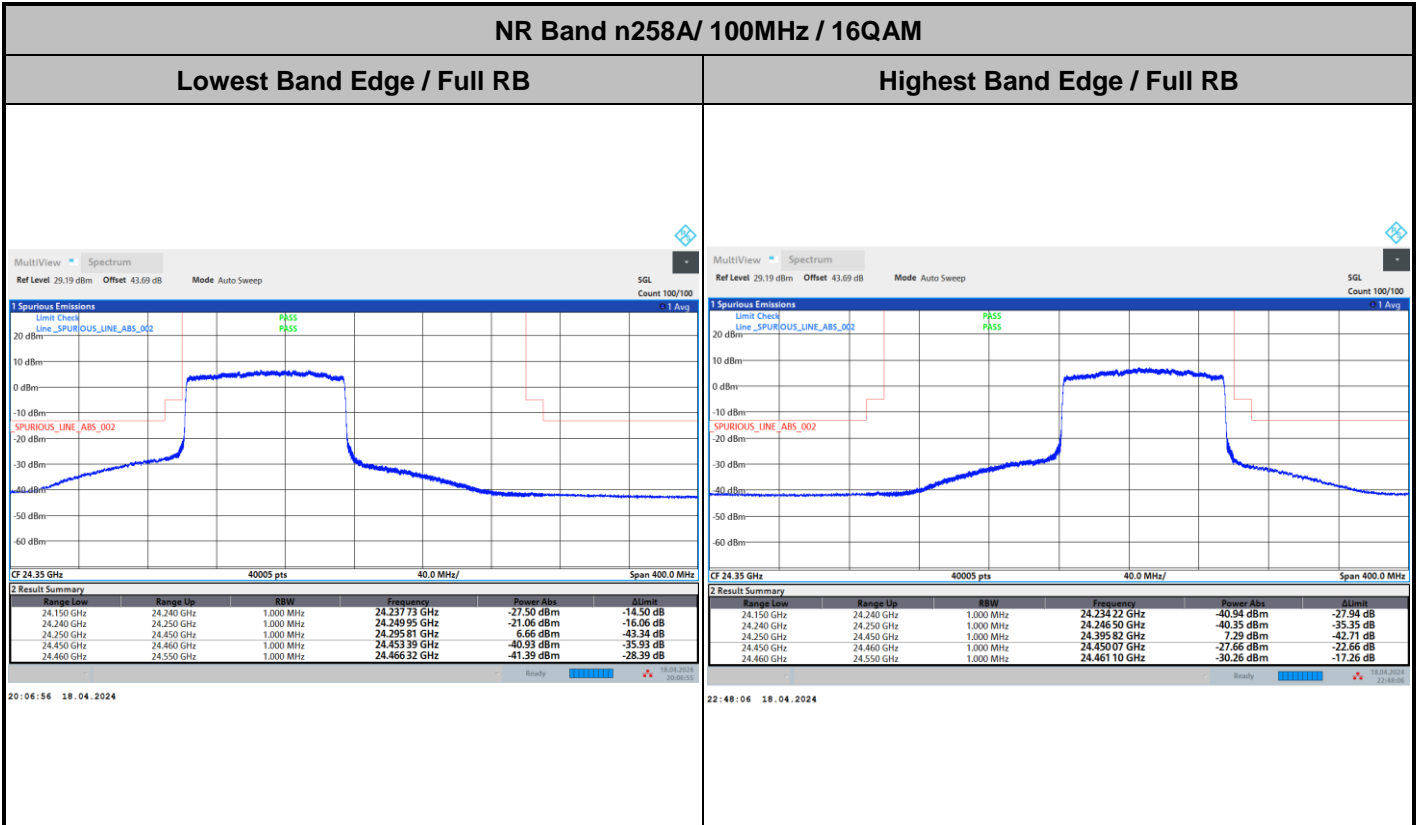
Highest Band Edge / Full RB



22:49:47 18. 04. 2024



DFT-s-OFDM Module A

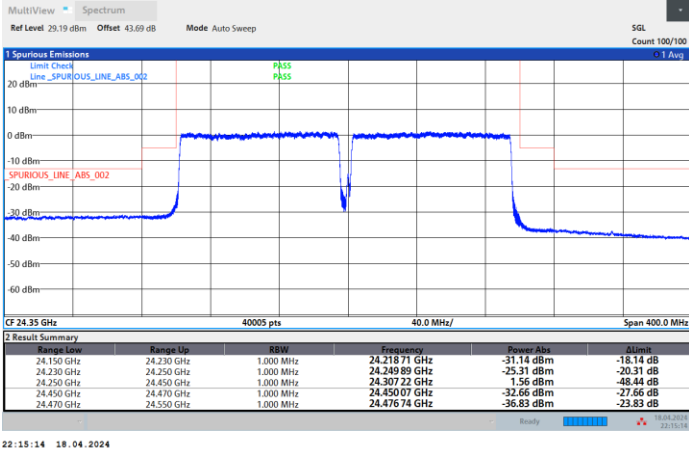




DFT-s-OFDM Module A

NR Band n258A/ 200MHz / QPSK

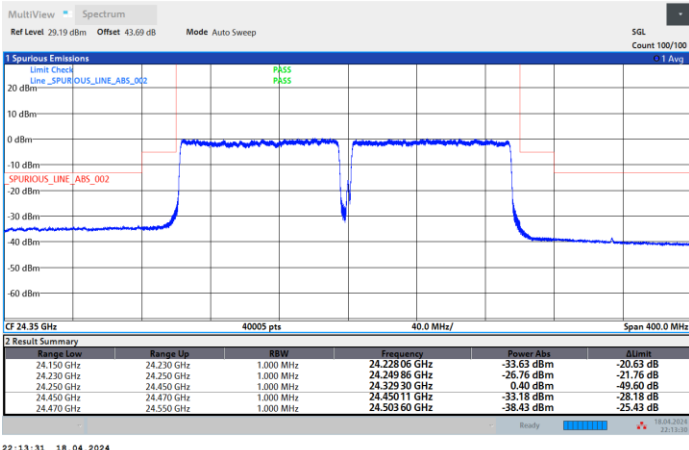
Middle Band Edge / Full RB



intentionally blank

NR Band n258A/ 200MHz / 16QAM

Middle Band Edge / Full RB



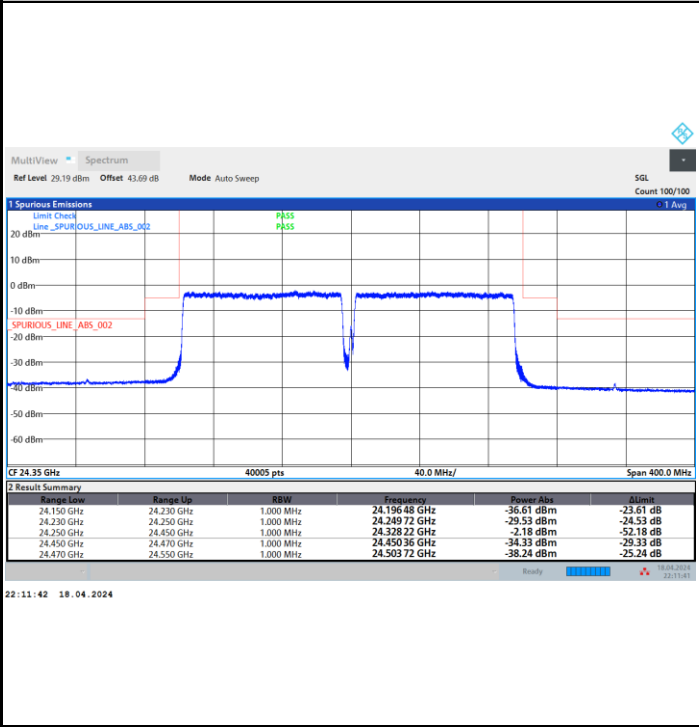
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DFT-s-OFDM Module A

NR Band n258A/ 200MHz / 64QAM

Middle Band Edge / Full RB



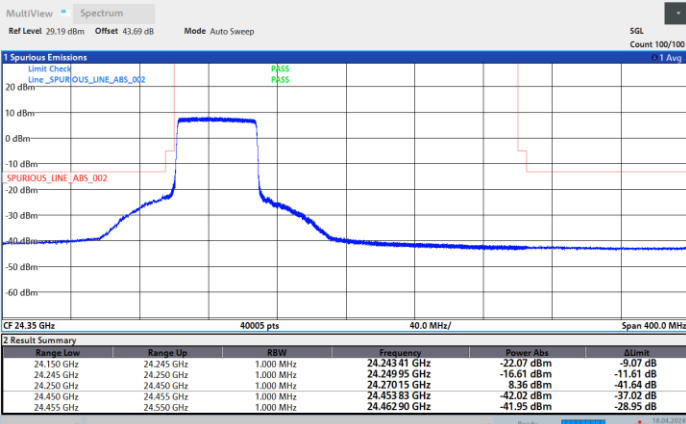
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CP-OFDM Module A

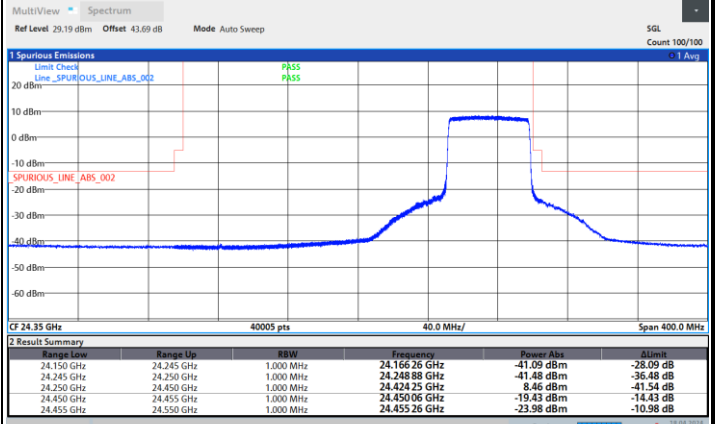
NR Band n258A/ 50MHz / QPSK

Lowest Band Edge / Full RB



20:33:54 18.04.2024

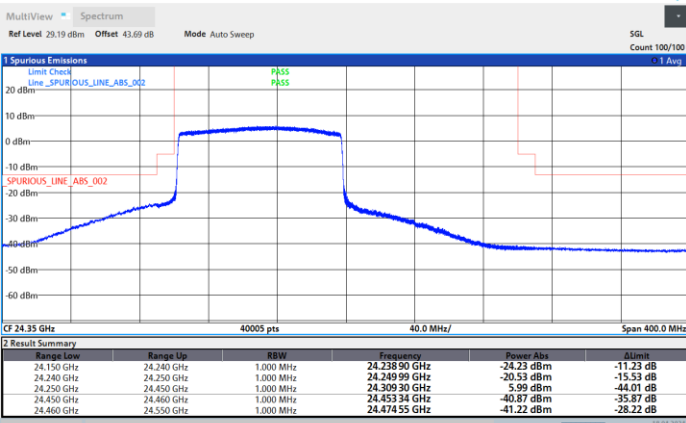
Highest Band Edge / Full RB



22:37:12 18.04.2024

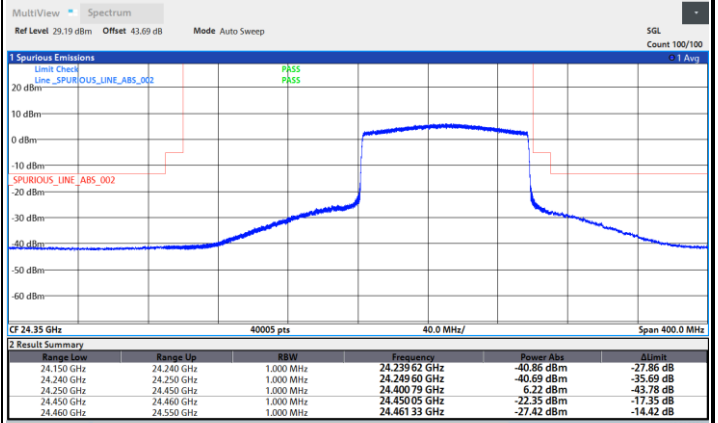
NR Band n258A/ 100MHz / QPSK

Lowest Band Edge / Full RB



20:11:59 18.04.2024

Highest Band Edge / Full RB



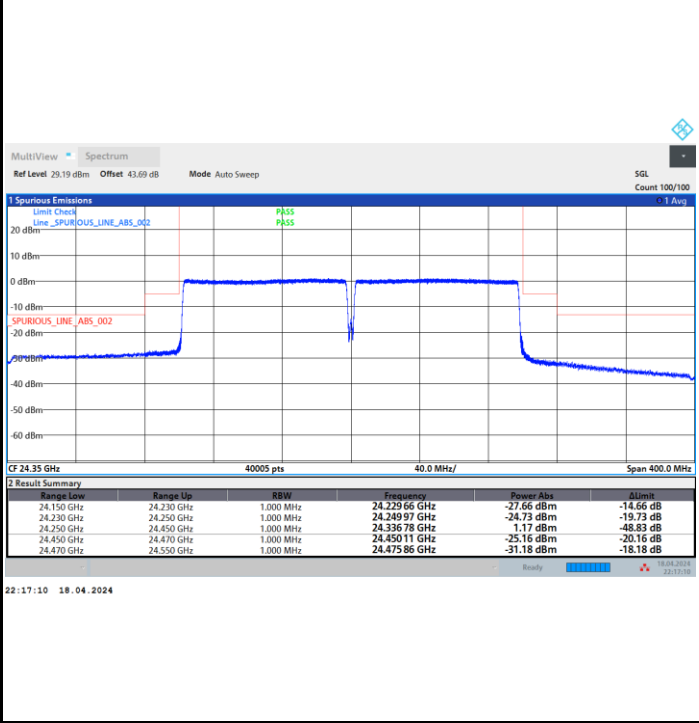
22:50:56 18.04.2024



CP-OFDM Module A

NR Band n258A/ 200MHz / QPSK

Middle Band Edge / Full RB



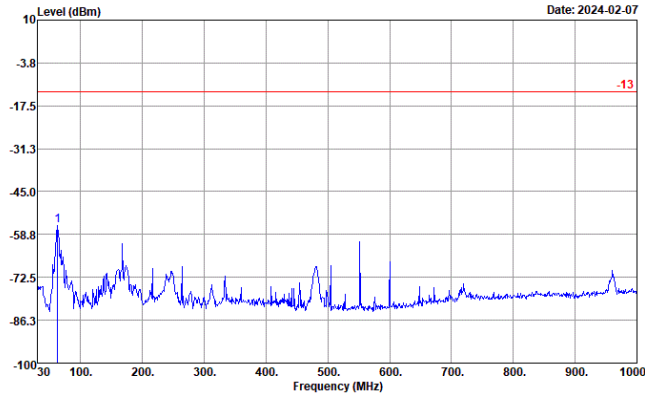
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Spurious Emission

NR Band n258A (30MHz-1GHz)

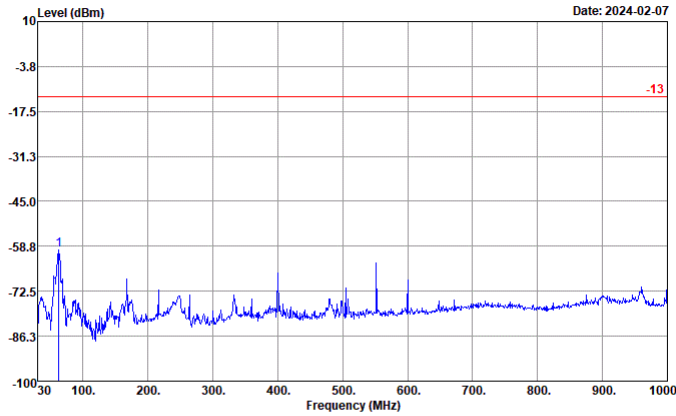
Horizontal



Site : 03CH10-HY
 Condition : -13 EIRP_WO HORIZONTAL
 Project : 3N2326
 : n258a MA

Over	Limit
Freq	Level
MHz	dBm
1	62.98 -55.83

Vertical



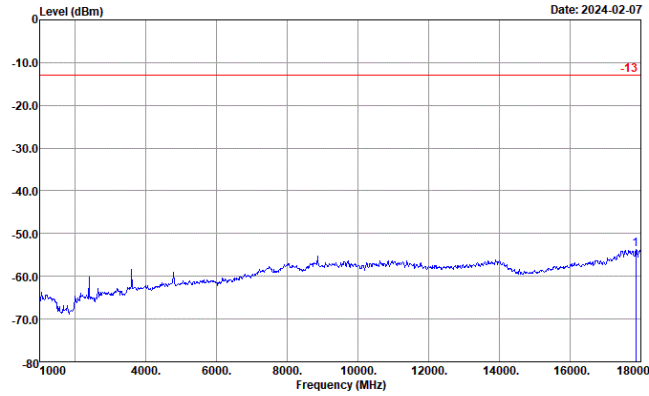
Site : 03CH10-HY
 Condition : -13 EIRP_WO VERTICAL
 Project : 3N2326
 : n258a MA

Over	Limit
Freq	Level
MHz	dBm
1	62.98 -59.92



NR Band n258A (1GHz-18GHz)

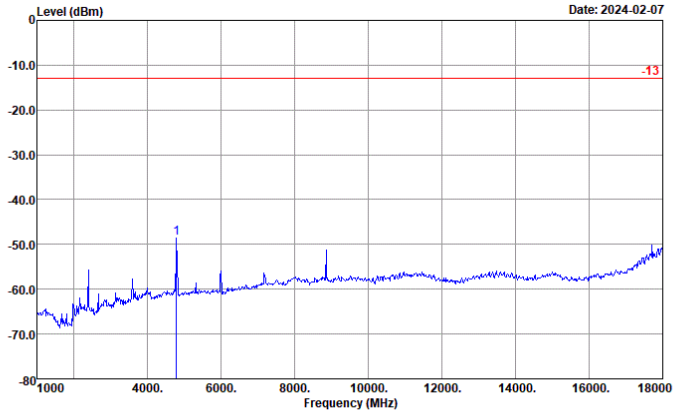
Horizontal



Site : 03CH10-HY
 Condition : -13 EIRP_WO HORIZONTAL
 Project : 3N2326
 : n258a MA

Freq	Level	Over	Limit
MHz	dBm	dB	dBm
1 17864.00	-53.69	-40.69	-13.00

Vertical



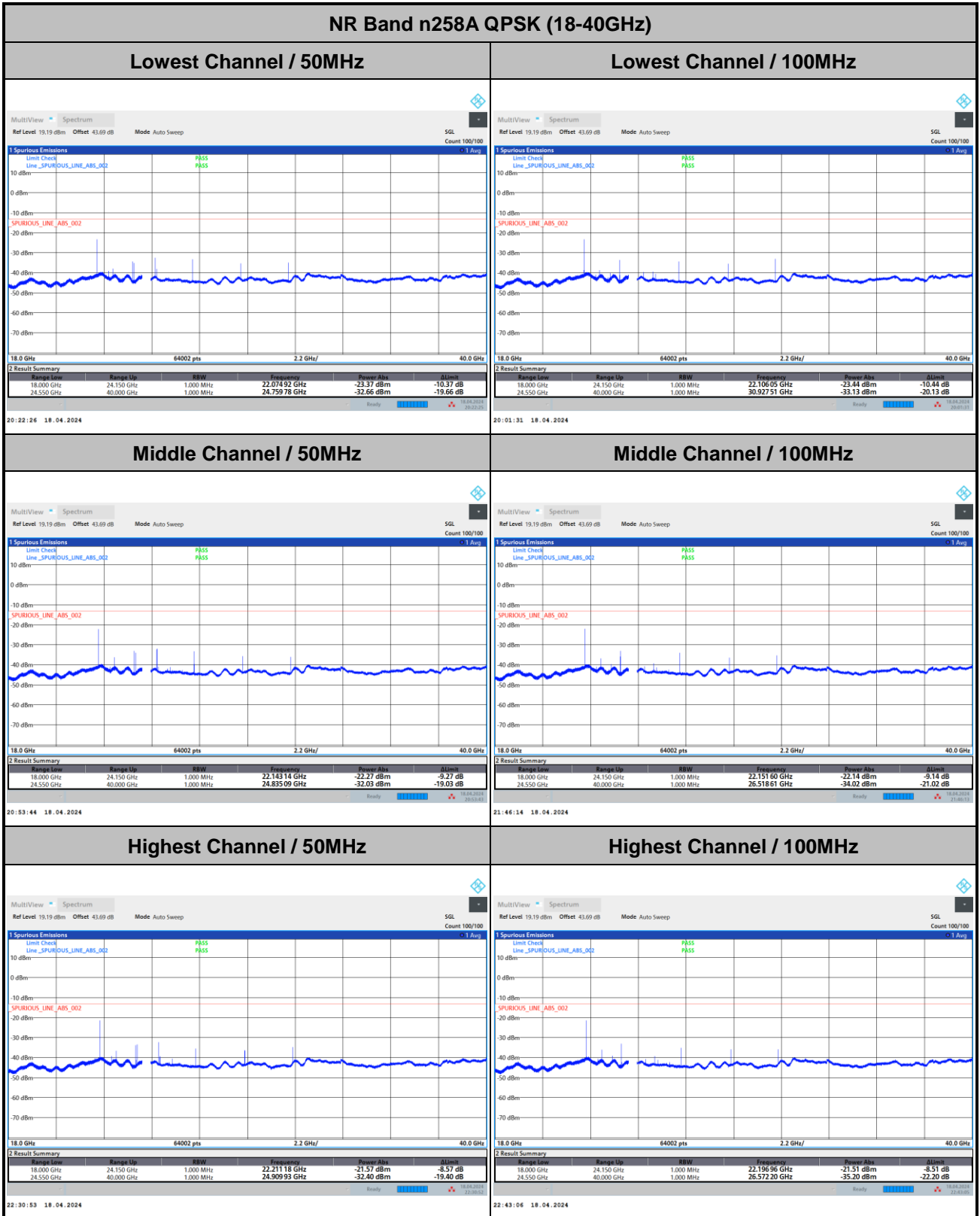
Site : 03CH10-HY
 Condition : -13 EIRP_WO VERTICAL
 Project : 3N2326
 : n258a MA

Freq	Level	Over	Limit
MHz	dBm	dB	dBm
1 4791.00	-48.47	-35.47	-13.00



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

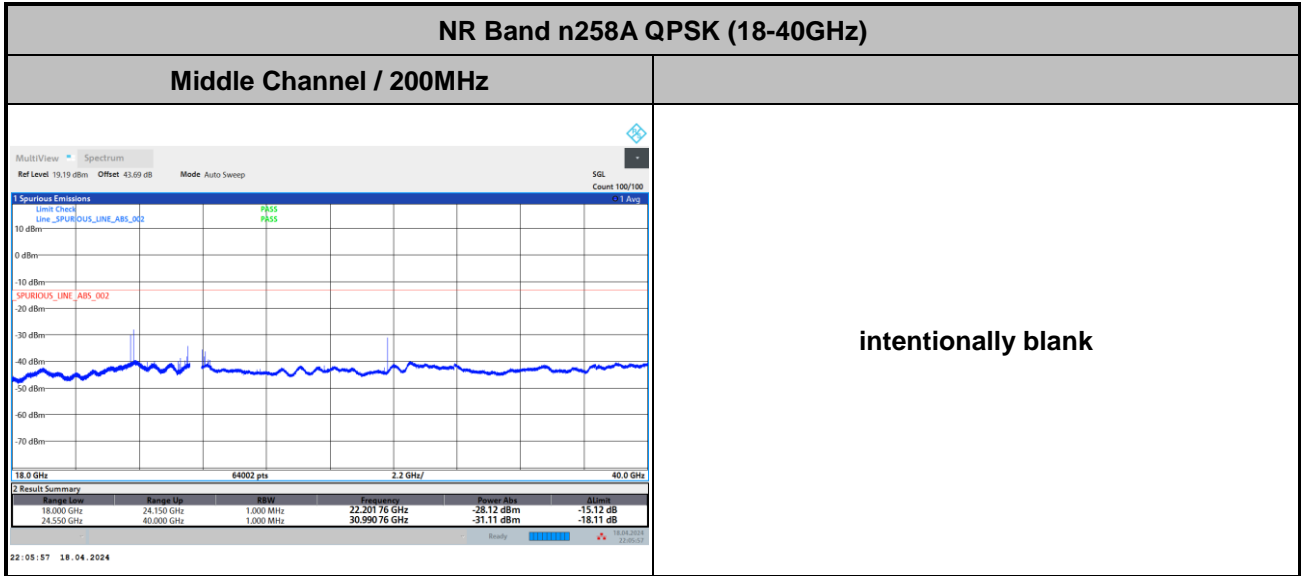
DFT-s-OFDM Module A



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



DFT-s-OFDM Module A



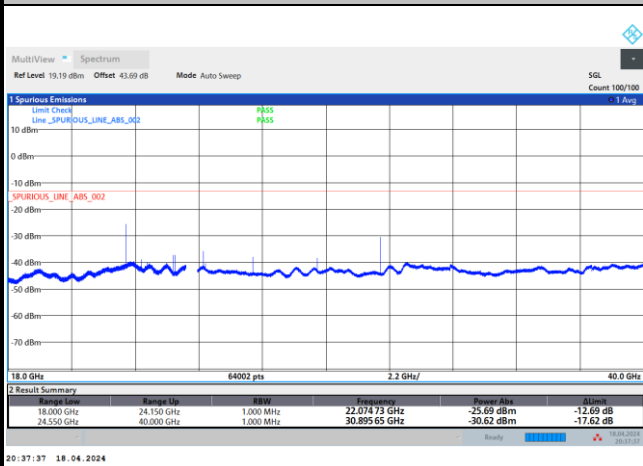
Remark: In band and out of band frequencies are omitted.



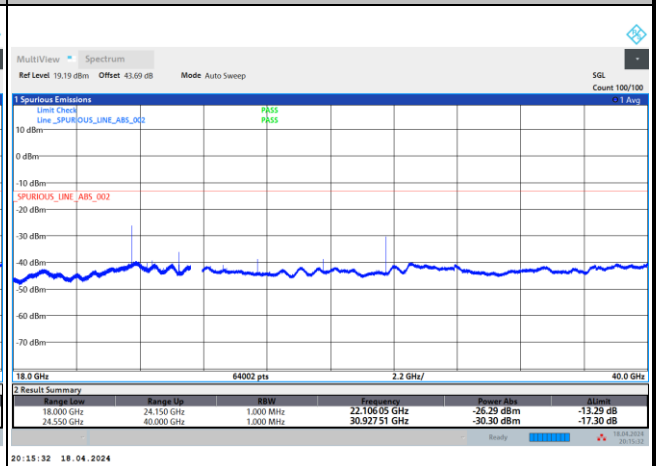
CP-OFDM Module A

NR Band n258A QPSK (18-40GHz)

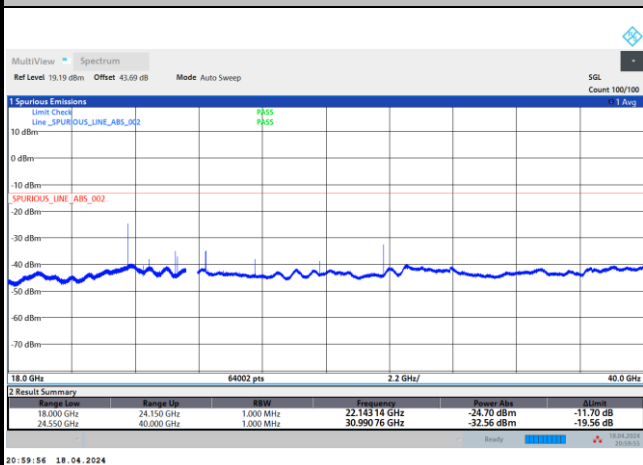
Lowest Channel / 50MHz



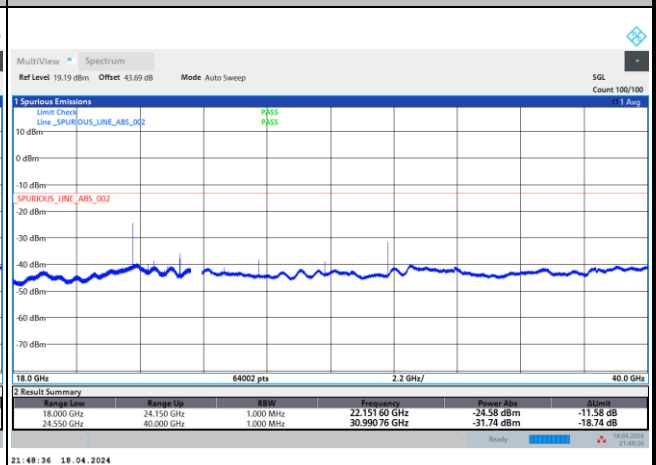
Lowest Channel / 100MHz



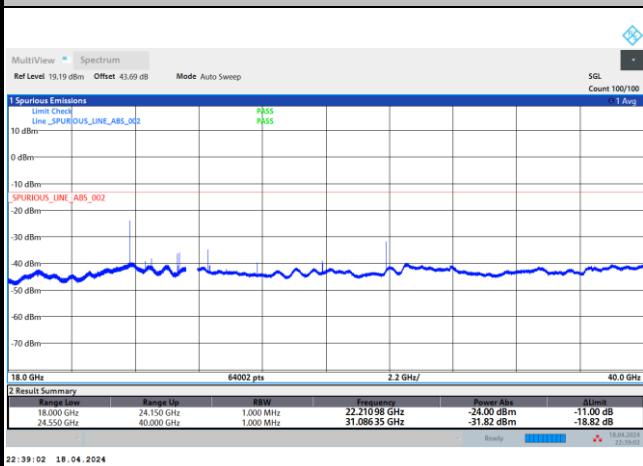
Middle Channel / 50MHz



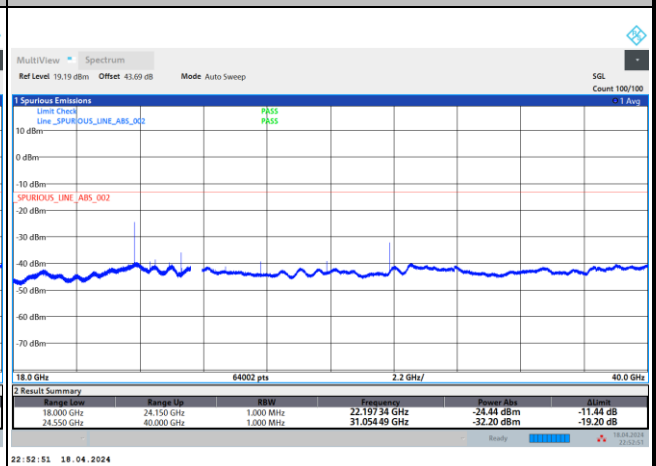
Middle Channel / 100MHz



Highest Channel / 50MHz



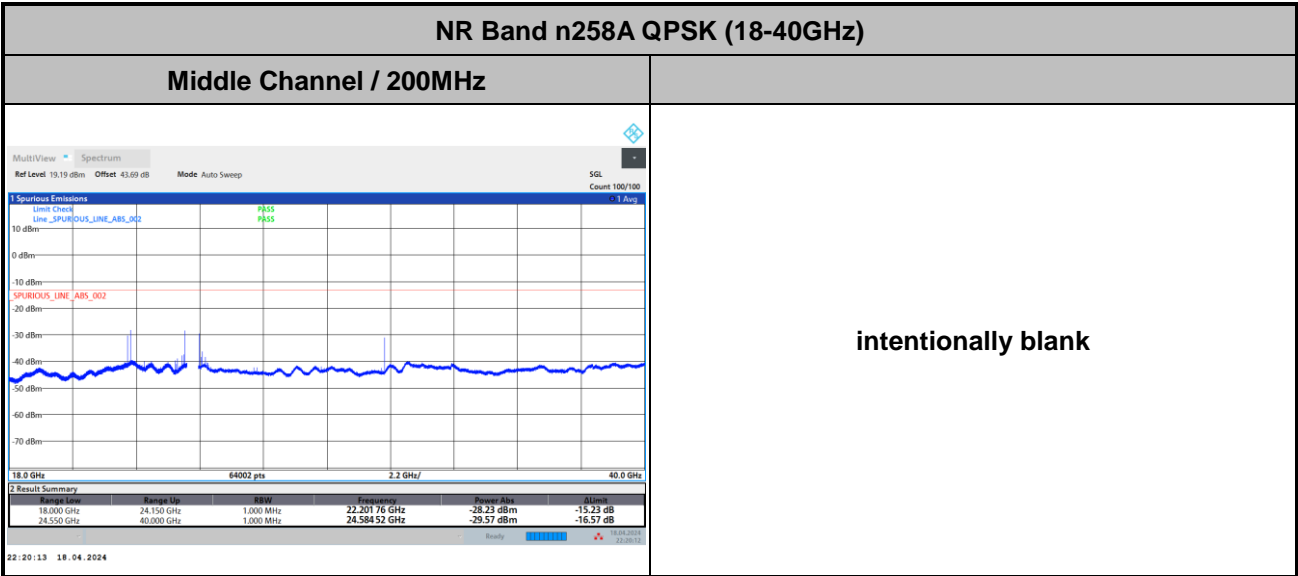
Highest Channel / 100MHz



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



CP-OFDM Module A

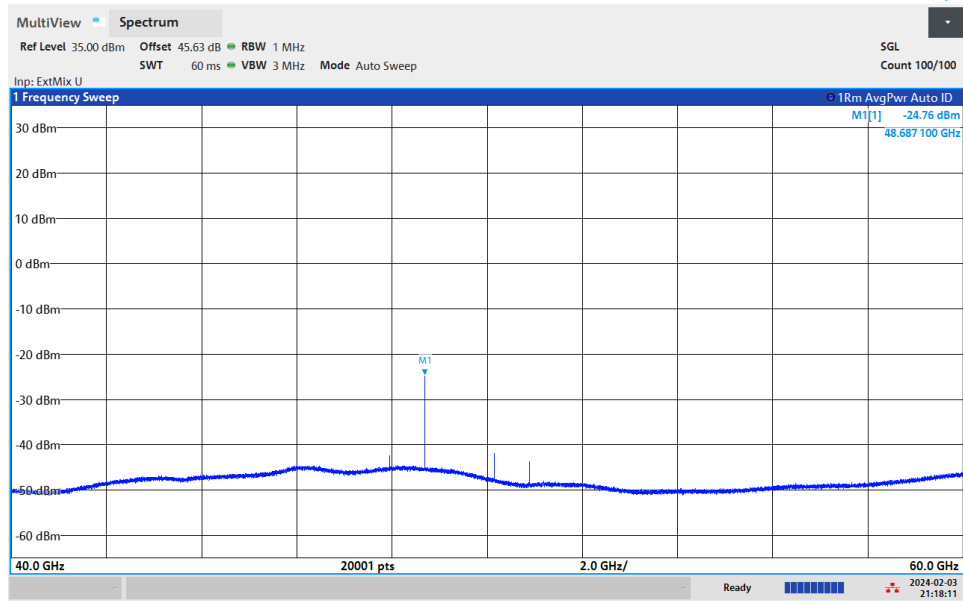


Remark: In band and out of band frequencies are omitted.



NR Band n258A

(40GHz-60GHz)



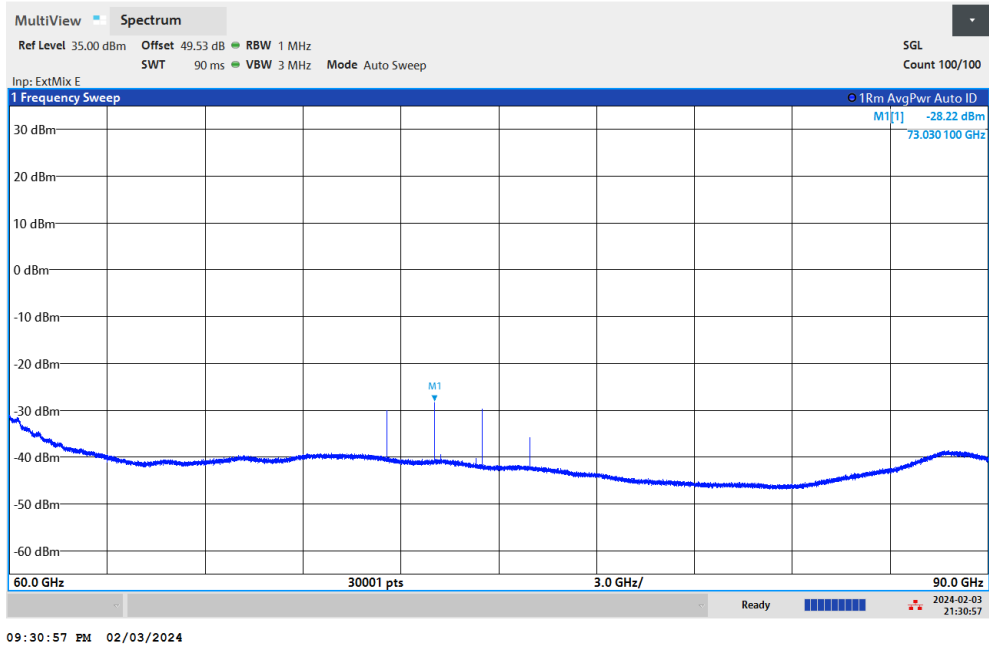
$$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$$

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



NR Band n258A

(60GHz-90GHz)

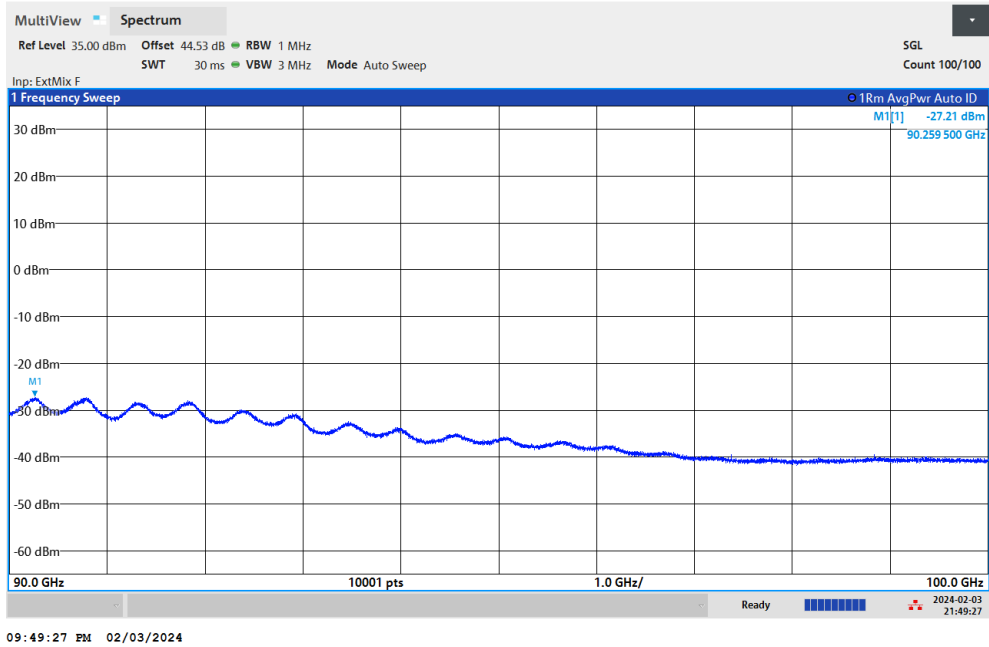


$$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8$$
$$= 46.9 + 0.43 + 107 + 20\log(1) - 104.8 = 49.53 \text{ (dB)}$$



NR Band n258A

(90GHz-100GHz)



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



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	24.349983	109.900	4.513	Pass
40	Normal Voltage	24.350012	80.900	3.322	
30	Normal Voltage	24.3500669	26.000	1.068	
20(Ref.)	Normal Voltage	24.3500929	0.000	0.000	
10	Normal Voltage	24.3501399	-47.000	1.930	
0	Normal Voltage	24.3501429	-50.000	2.053	
-10	Normal Voltage	24.3501319	-39.000	1.602	
-20	Normal Voltage	24.3501259	-33.000	1.355	
-30	Normal Voltage	24.3501079	-15.000	0.616	
20	Maximum Voltage	24.3500989	-6.000	0.246	
20	Normal Voltage	24.3501079	-15.000	0.616	
20	Battery End Point	24.3501039	-11.000	0.452	

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	46.00	45.86	45.83	91.19	91.00	91.20	-	-	-
Middle CH	45.96	45.89	45.91	90.83	90.77	90.88	190.42	189.69	189.90
Highest CH	46.09	45.98	46.09	91.09	91.00	91.12	-	-	-

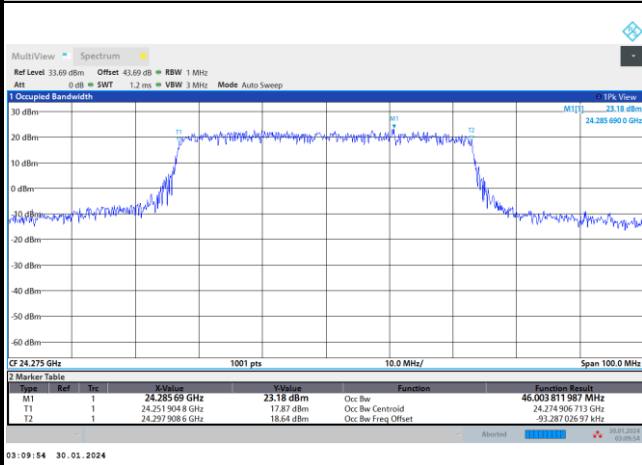
Mode	CP-OFDM Module B NR Band n258A : 99%OBW(MHz)		
BW	50MHz	100MHz	200MHz
Mod.	QPSK	QPSK	QPSK
Lowest CH	45.97	94.29	-
Middle CH	45.92	93.88	194.26
Highest CH	46.29	94.18	-



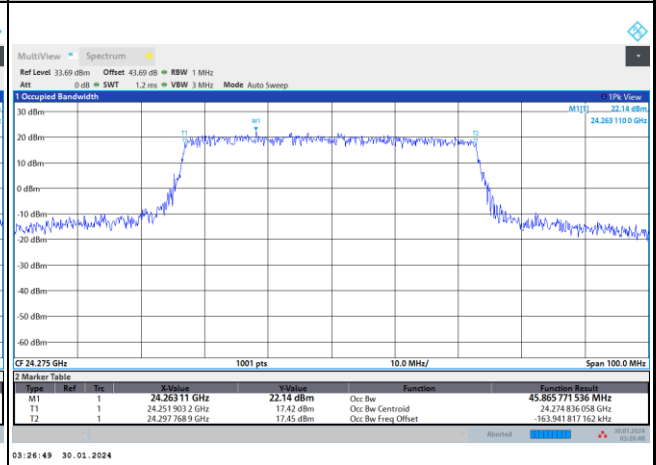
DFT-s-OFDM Module B

NR Band n258A

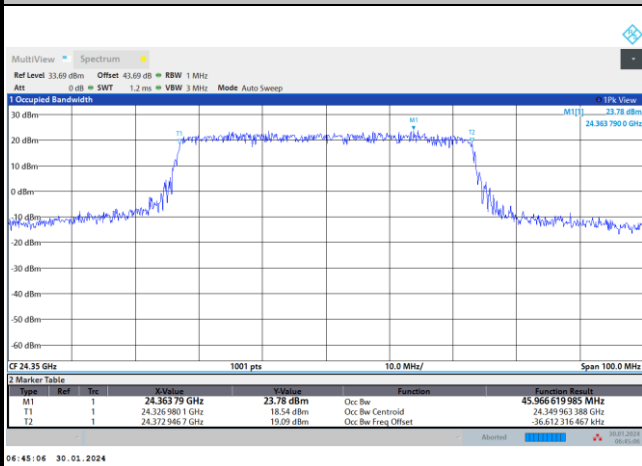
Lowest Channel / 50MHz / QPSK



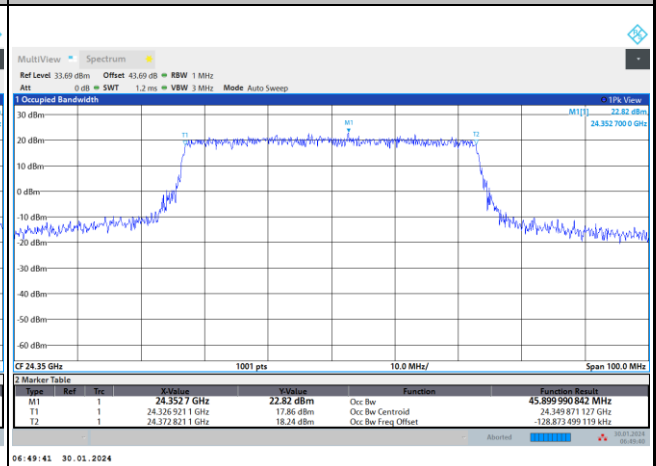
Lowest Channel / 50MHz / 16QAM



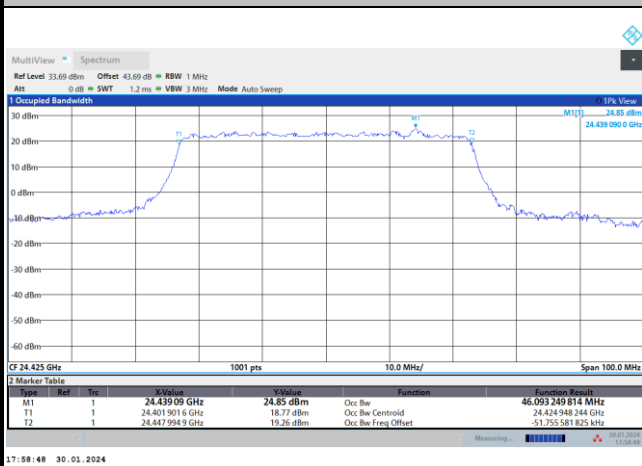
Middle Channel / 50MHz / QPSK



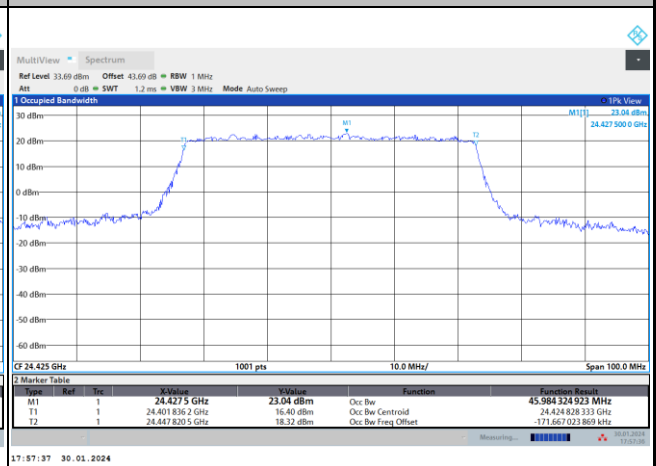
Middle Channel / 50MHz / 16QAM



Highest Channel / 50MHz / QPSK



Highest Channel / 50MHz / 16QAM

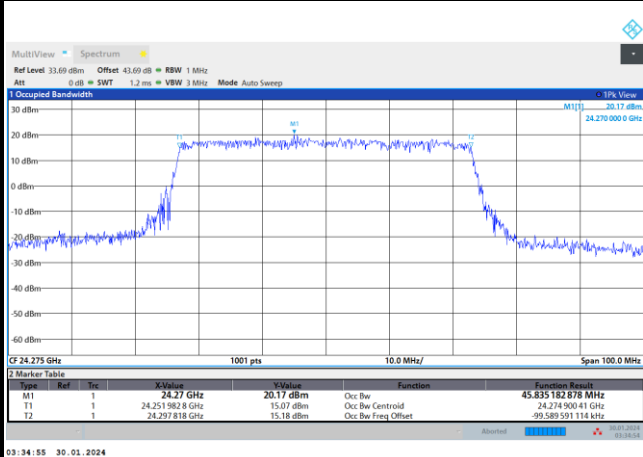




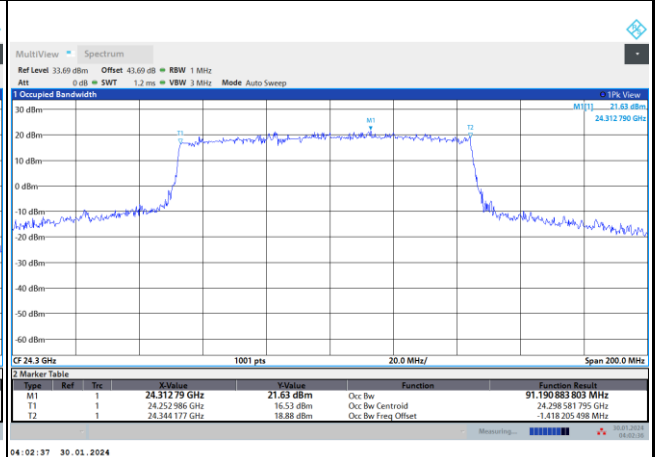
DFT-s-OFDM Module B

NR Band n258A

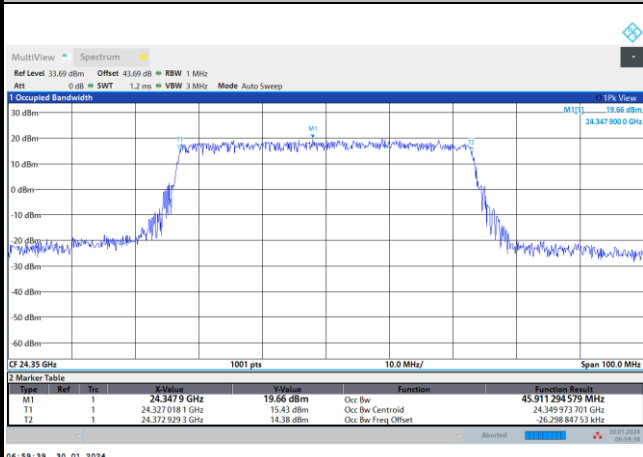
Lowest Channel / 50MHz / 64QAM



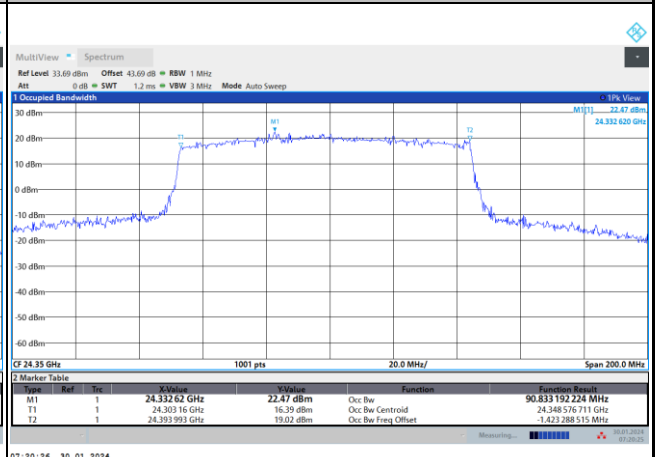
Lowest Channel / 100MHz / QPSK



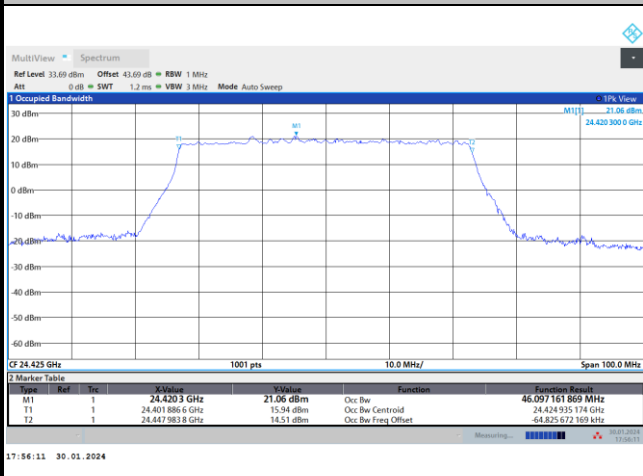
Middle Channel / 50MHz / 64QAM



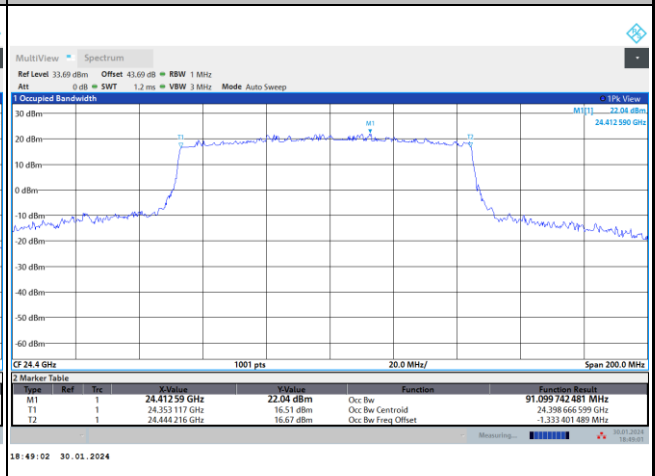
Middle Channel / 100MHz / QPSK



Highest Channel / 50MHz / 64QAM



Highest Channel / 100MHz / QPSK

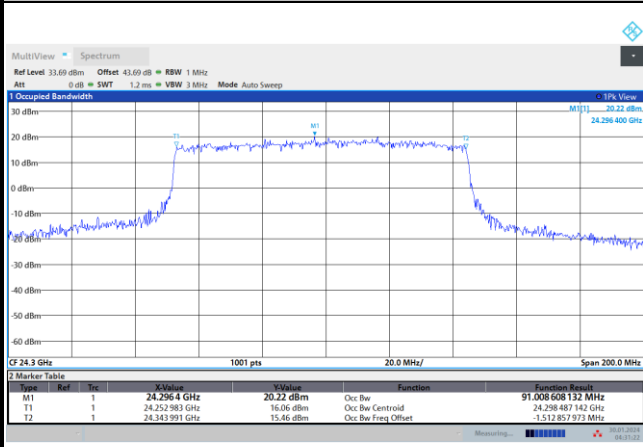




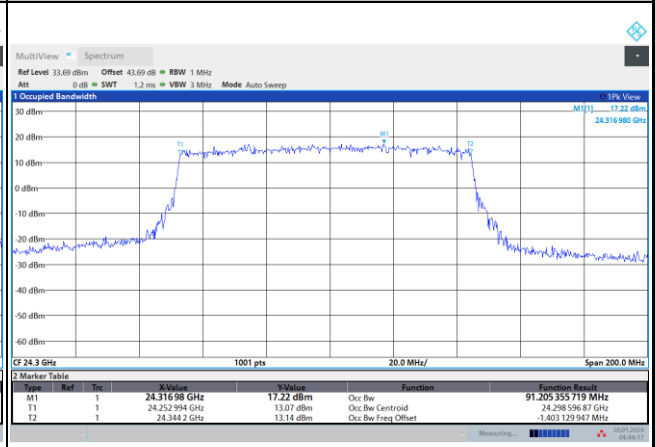
DFT-s-OFDM Module B

NR Band n258A

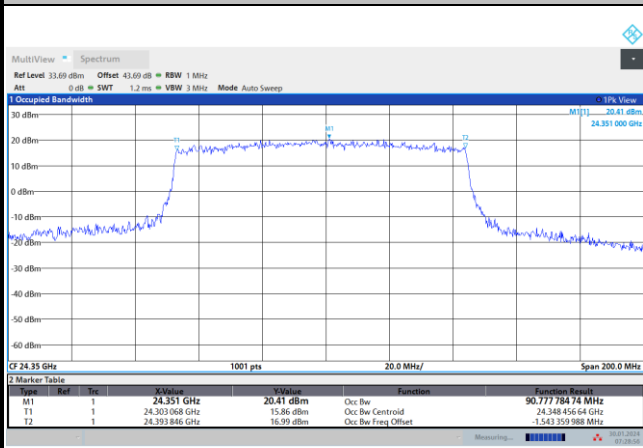
Lowest Channel / 100MHz / 16QAM



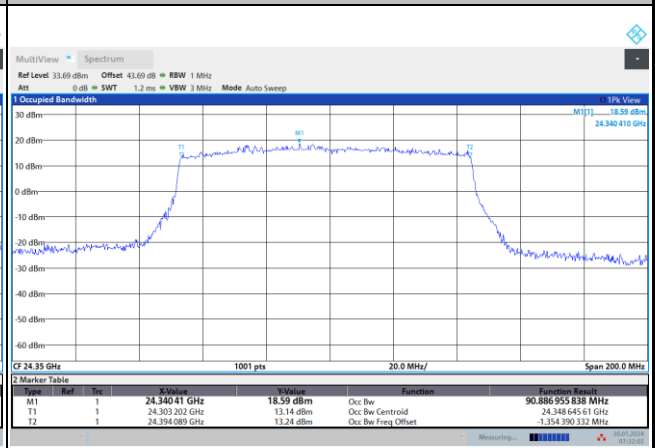
Lowest Channel / 100MHz / 64QAM



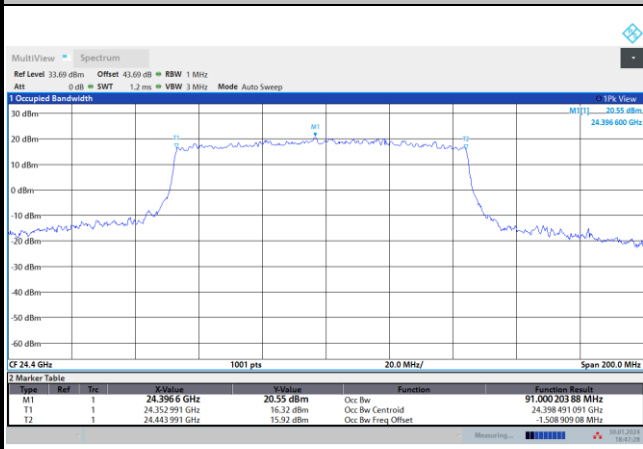
Middle Channel / 100MHz / 16QAM



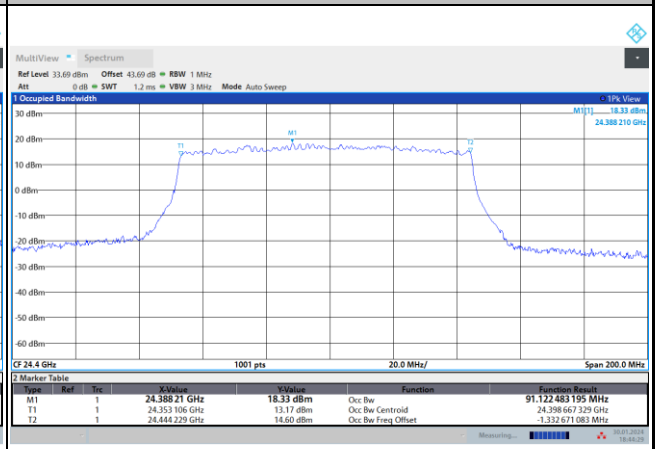
Middle Channel / 100MHz / 64QAM



Highest Channel / 100MHz / 16QAM



Highest Channel / 100MHz / 64QAM

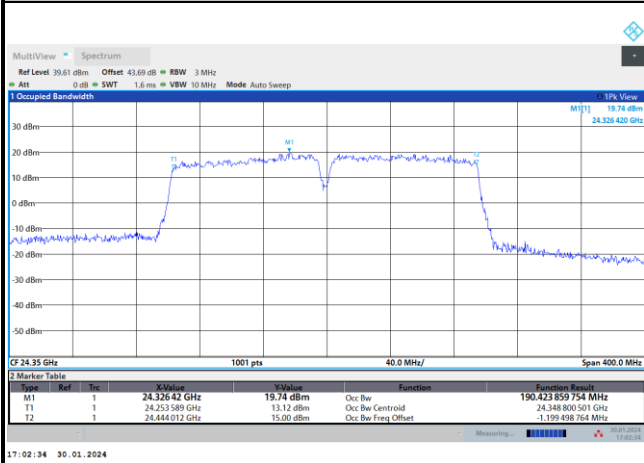




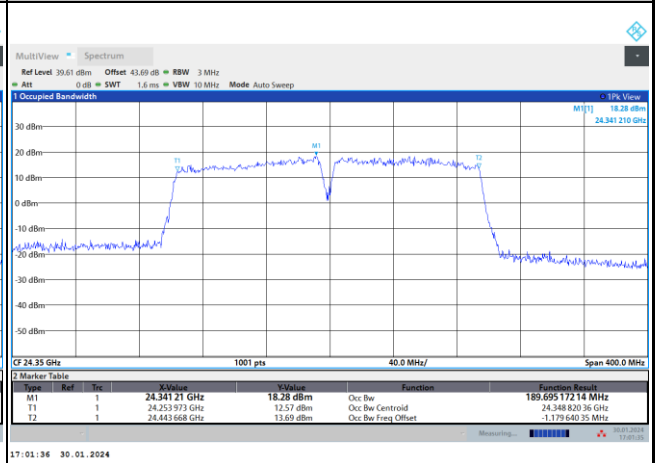
DFT-s-OFDM Module B

NR Band n258A

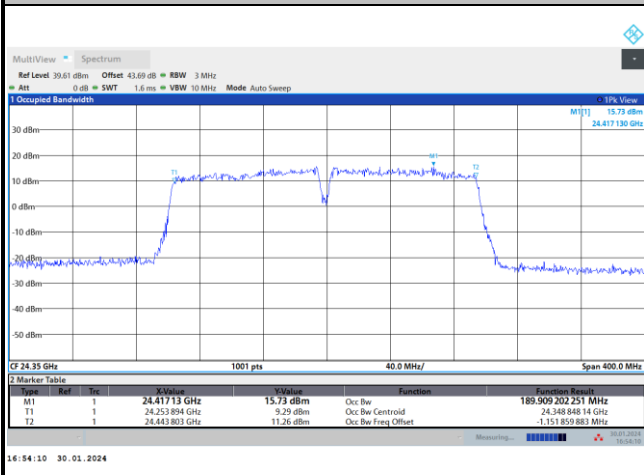
Middle Channel / 200MHz / QPSK



Middle Channel / 200MHz / 16QAM



Middle Channel / 200MHz / 64QAM



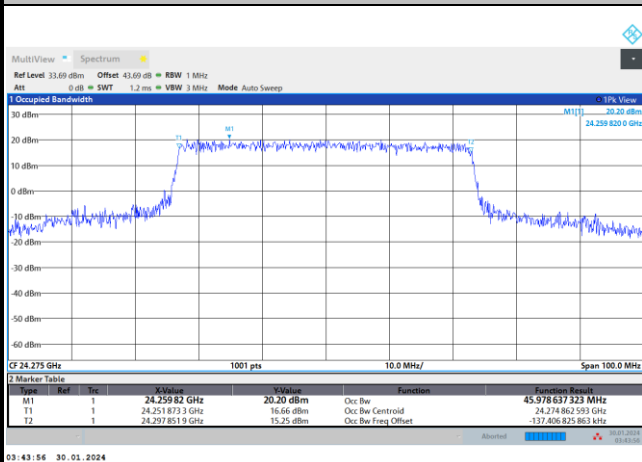
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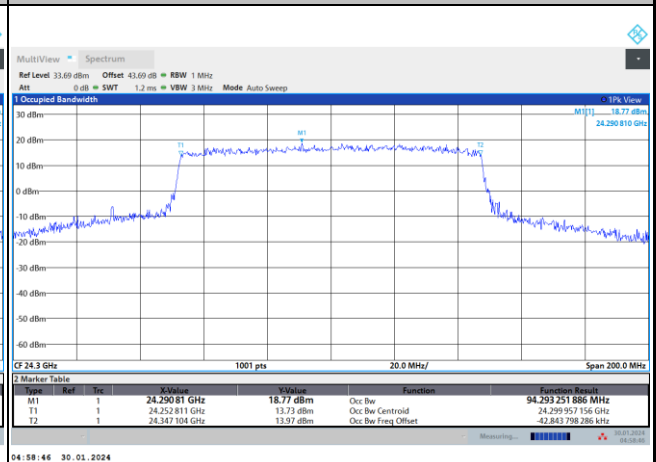
CP-OFDM Module B

NR Band n258A

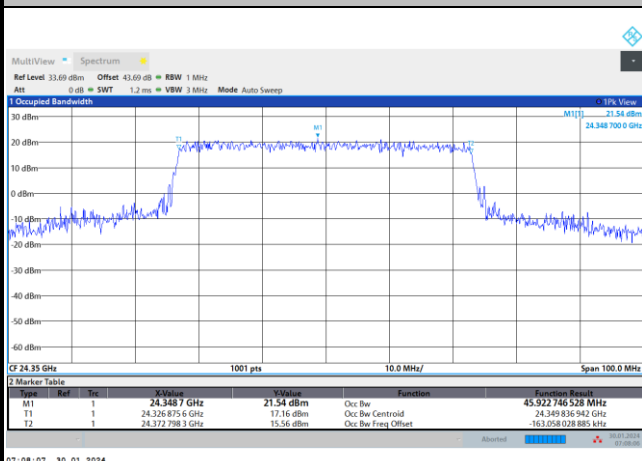
Lowest Channel / 50MHz / QPSK



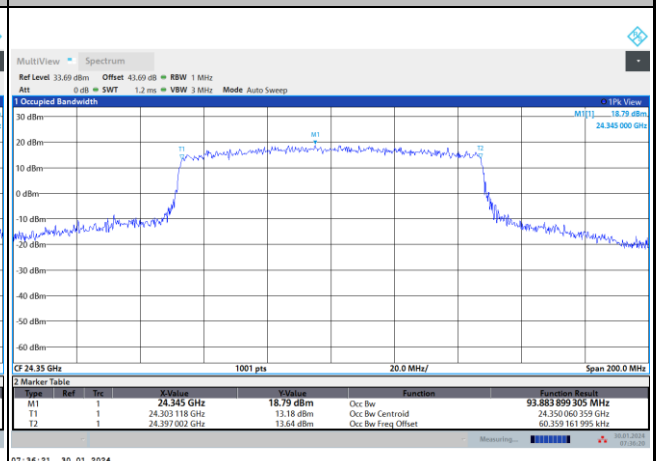
Lowest Channel / 100MHz / QPSK



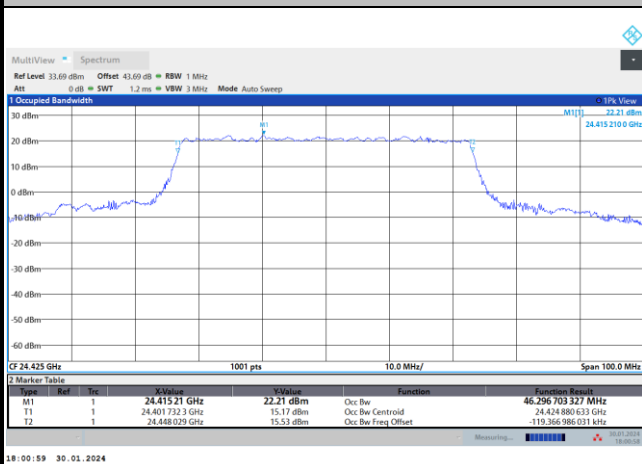
Middle Channel / 50MHz / QPSK



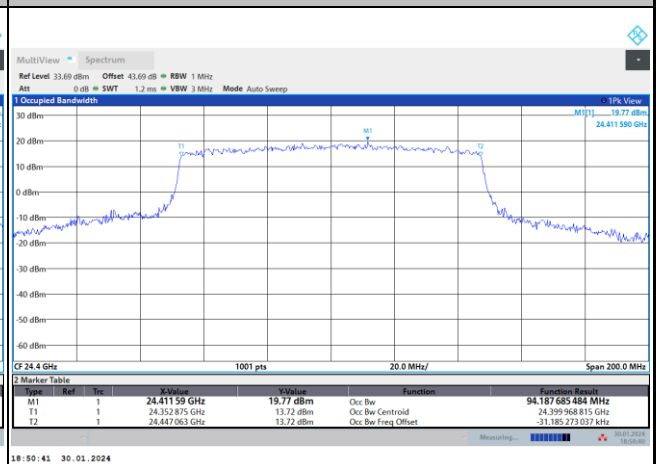
Middle Channel / 100MHz / QPSK



Highest Channel / 50MHz / QPSK

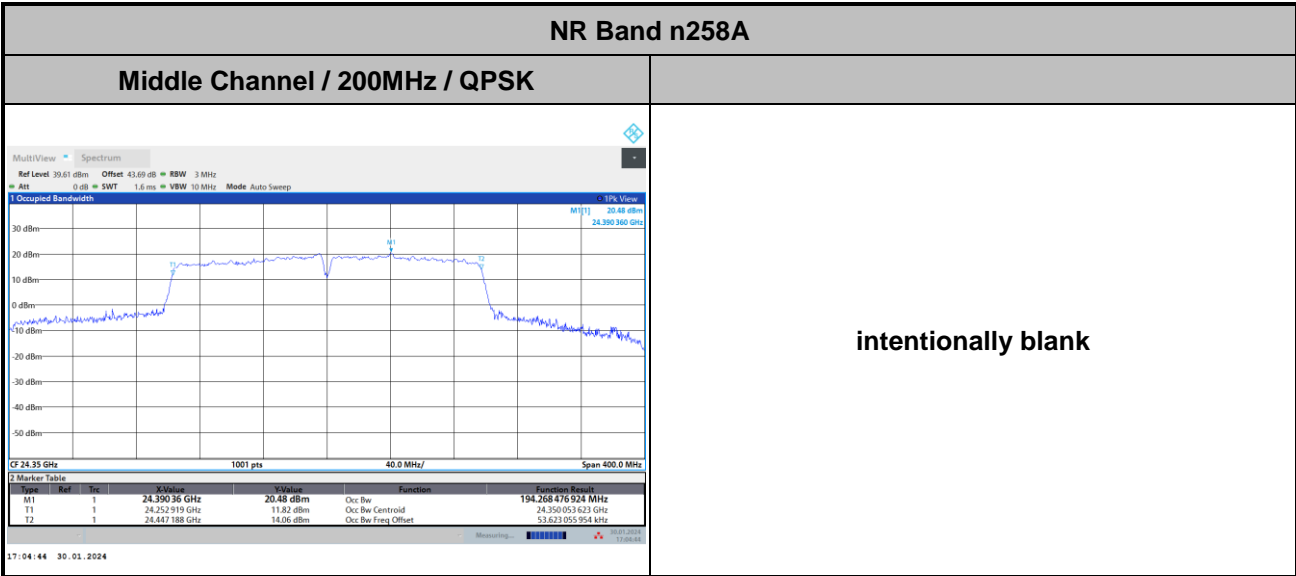


Highest Channel / 100MHz / QPSK





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	-14.372	-14.824	-18.380	-16.388	-17.600	-6.44
	>10%OB	≤-13	-33.957	-33.946	-33.878	-33.820	-33.887	-33.84
High CH	0~10%OB	≤-5	-14.208	-5.03	-6.01	-6.40	-8.80	-9.09
	>10%OB	≤-13	-33.676	-30.64	-31.40	-34.30	-34.67	-35.70
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	-14.885		-18.107
	>10%OB	≤-13	-33.566		-33.428
High CH	0~10%OB	≤-5	-17.264		-8.32
	>10%OB	≤-13	-33.961		-34.57
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	-25.939	-15.03	-15.83
	>10%OB	≤-13	-23.785	-14.56	-20.13

Mode			CP-OFDM Module B NR Band n258A : BE (dBm) 1 RB	
BW			200MHz	
Limit (dBm)			QPSK	
Mid CH	0~10%OB	≤-5	-22.985	
CH	>10%OB	≤-13	-20.470	



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	-8.80	-12.32	-15.93	-12.97	-16.25	-19.60
	>10%OB	≤-13	-14.42	-18.43	-26.05	-16.72	-20.54	-27.52
High CH	0~10%OB	≤-5	-10.53	-14.22	-16.85	-18.12	-22.06	-25.33
	>10%OB	≤-13	-16.09	-19.76	-28.88	-20.17	-24.62	-32.33
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	-11.87		-14.98
	>10%OB	≤-13	-15.68		-17.31
High CH	0~10%OB	≤-5	-13.47		-16.08
	>10%OB	≤-13	-16.62		-20.85
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	-21.51	-23.24	-26.50
	>10%OB	≤-13	-25.14	-28.94	-33.39

Mode			CP-OFDM Module B NR Band n258A : BE (dBm) Full RB	
BW			200MHz	
Limit (dBm)			QPSK	
Mid CH	0~10%OB	≤-5	-20.05	
	>10%OB	≤-13	-21.30	

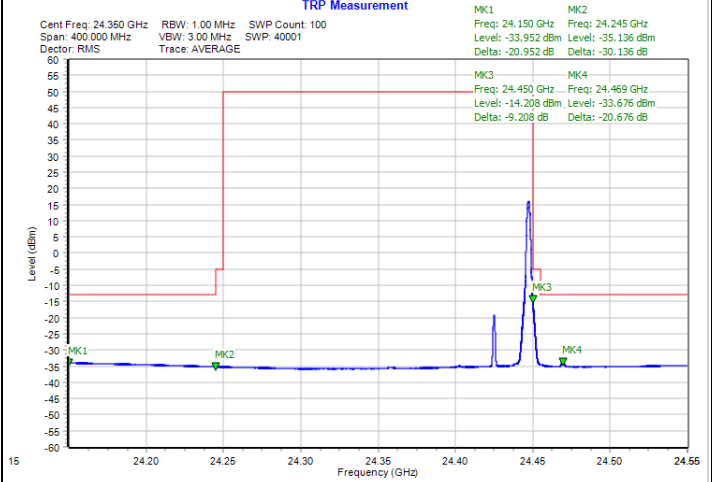
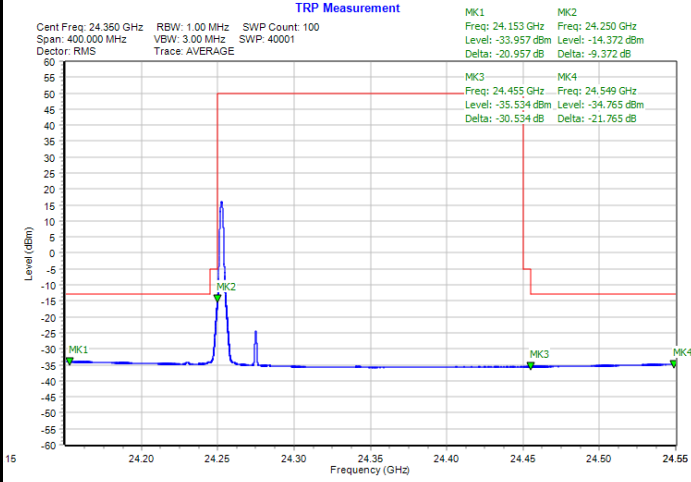


DFT-s-OFDM Module B

NR Band n258A/ 50MHz / QPSK

Lowest Band Edge / 1 RB

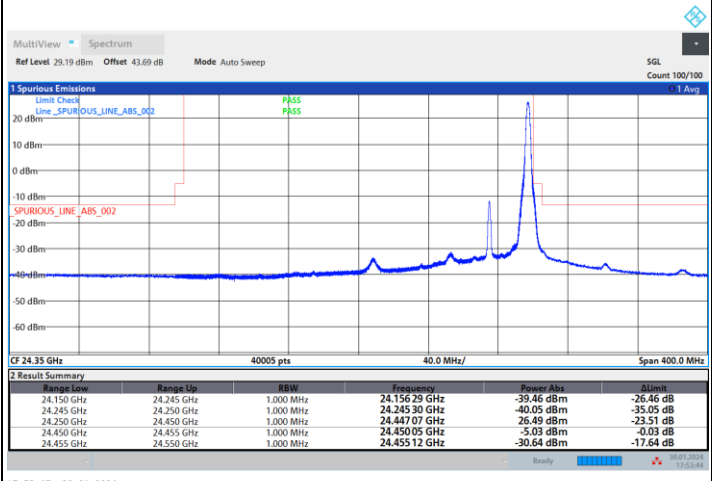
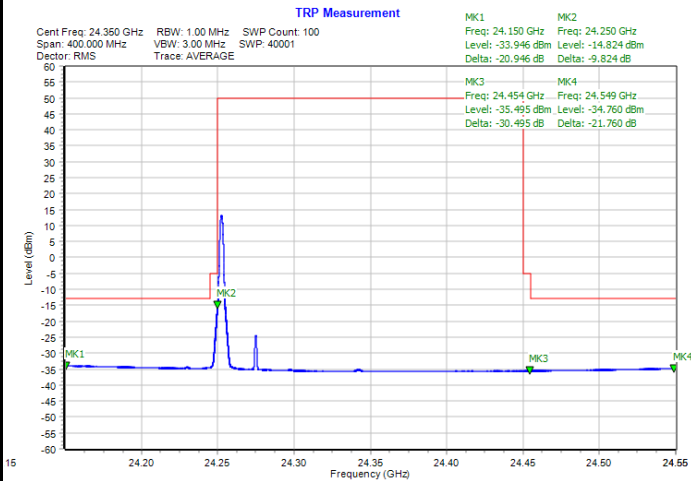
Highest Band Edge / 1 RB



NR Band n258A/ 50MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



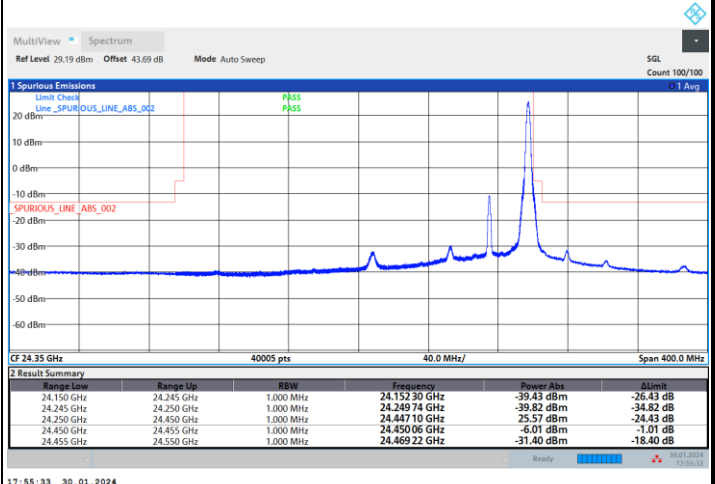
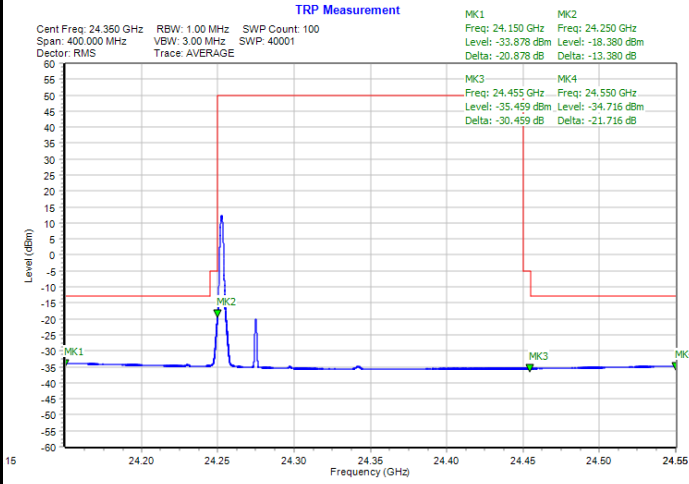


DFT-s-OFDM Module B

NR Band n258A/ 50MHz / 64QAM

Lowest Band Edge / 1 RB

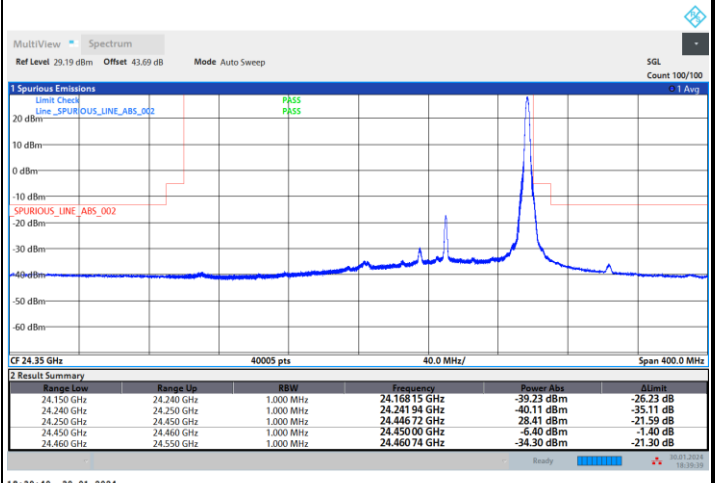
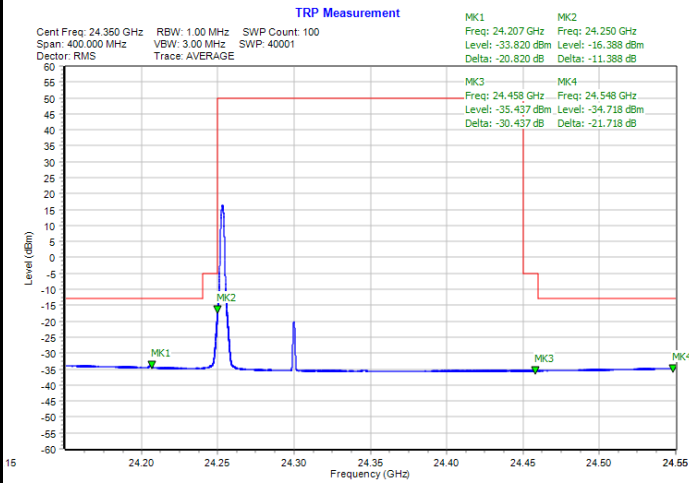
Highest Band Edge / 1 RB



NR Band n258A/ 100MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



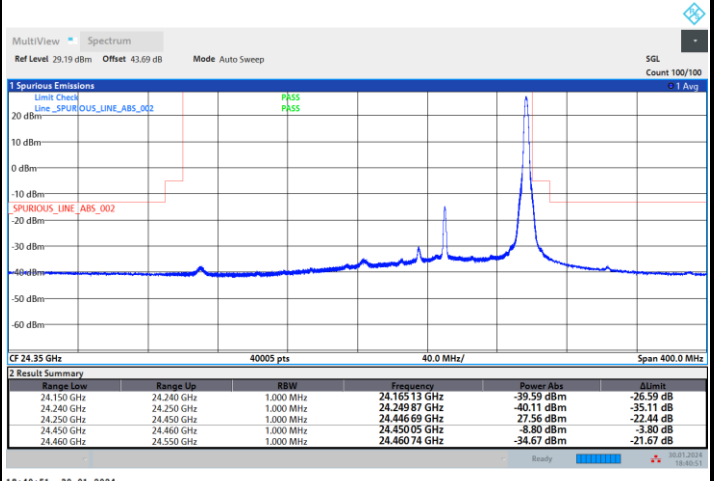
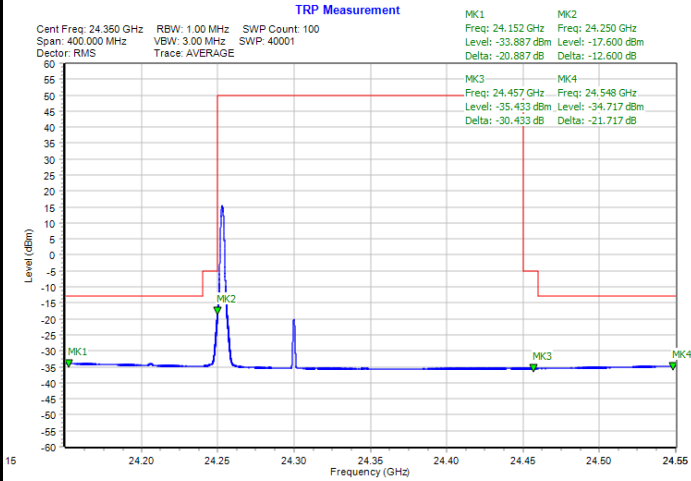


DFT-s-OFDM Module B

NR Band n258A/ 100MHz / 16QAM

Lowest Band Edge / 1 RB

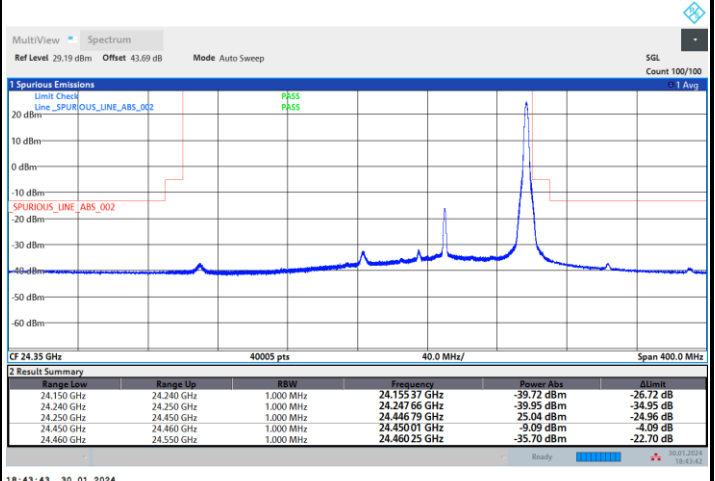
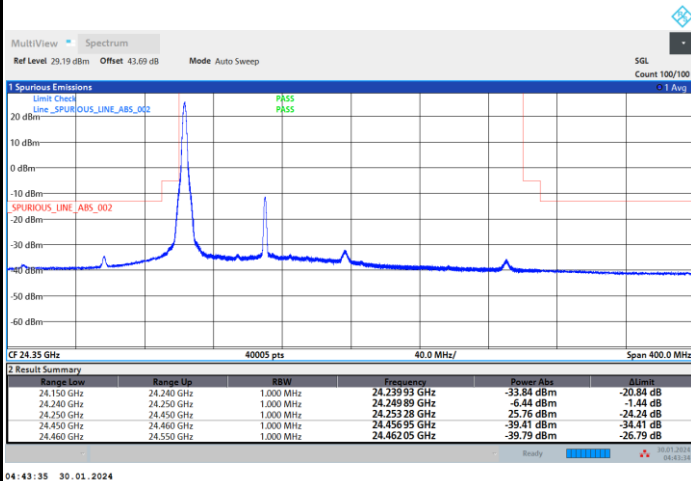
Highest Band Edge / 1 RB



NR Band n258A/ 100MHz / 64QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

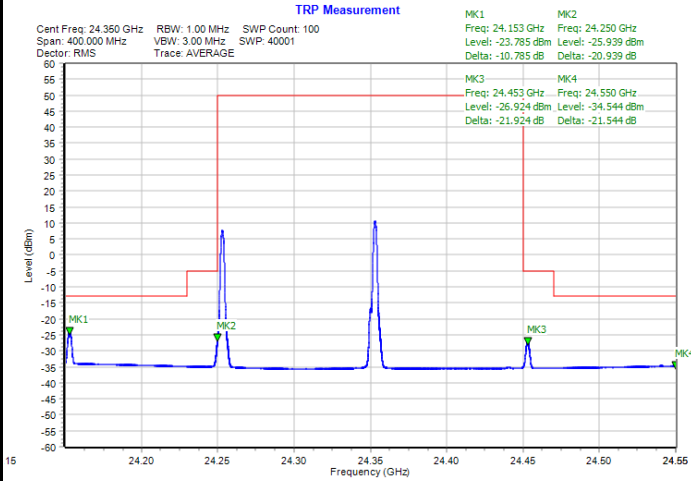




DFT-s-OFDM Module B

NR Band n258A/ 200MHz / QPSK

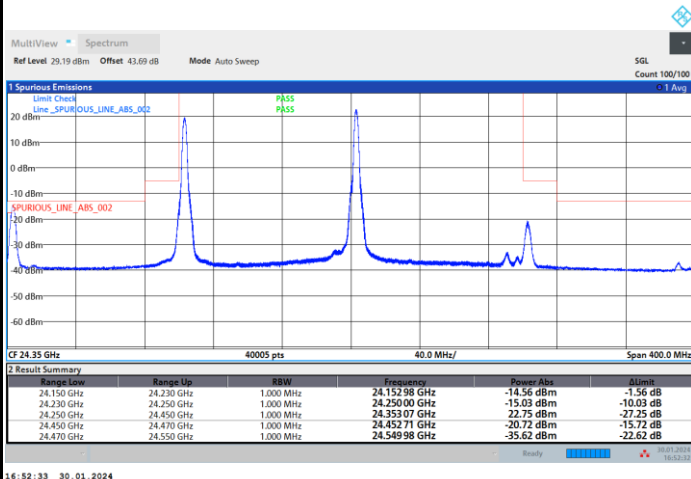
Middle Band Edge / 1 RB



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NR Band n258A/ 200MHz / 16QAM

Middle Band Edge / 1 RB



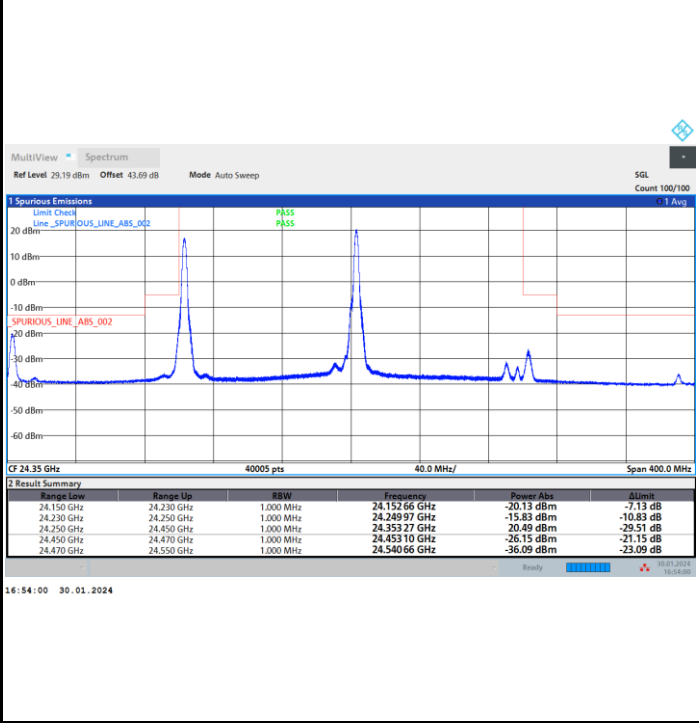
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DFT-s-OFDM Module B

NR Band n258A/ 200MHz / 64QAM

Middle Band Edge / 1 RB



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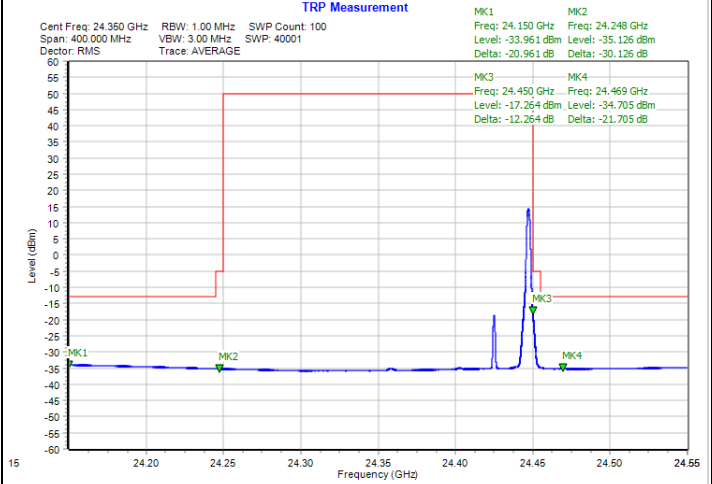
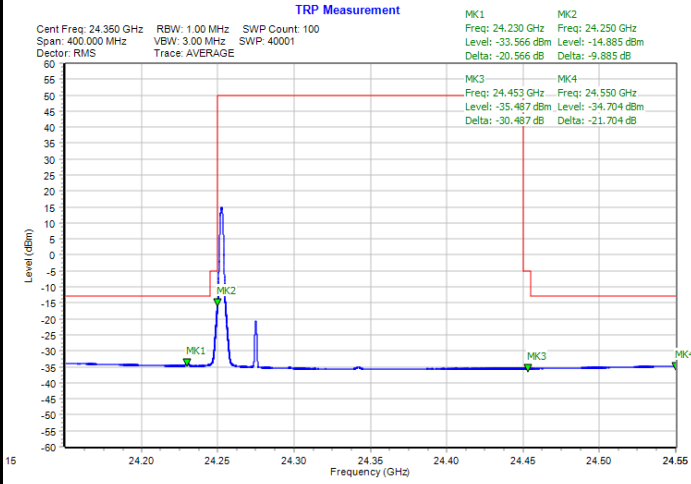


CP-OFDM Module B

NR Band n258A/ 50MHz / QPSK

Lowest Band Edge / 1 RB

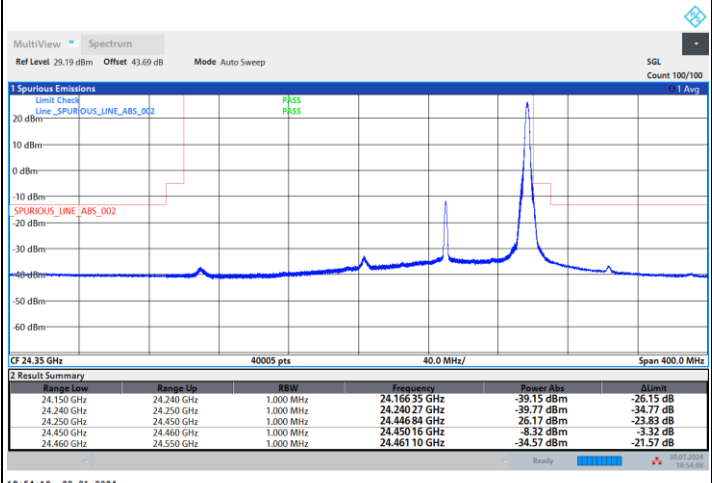
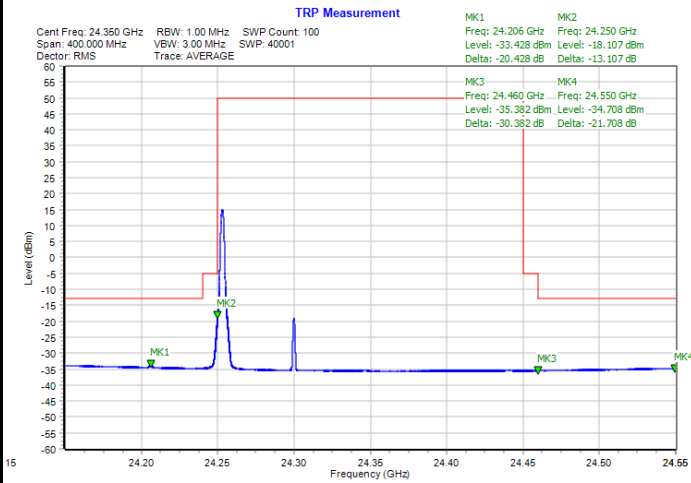
Highest Band Edge / 1 RB



NR Band n258A/ 100MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

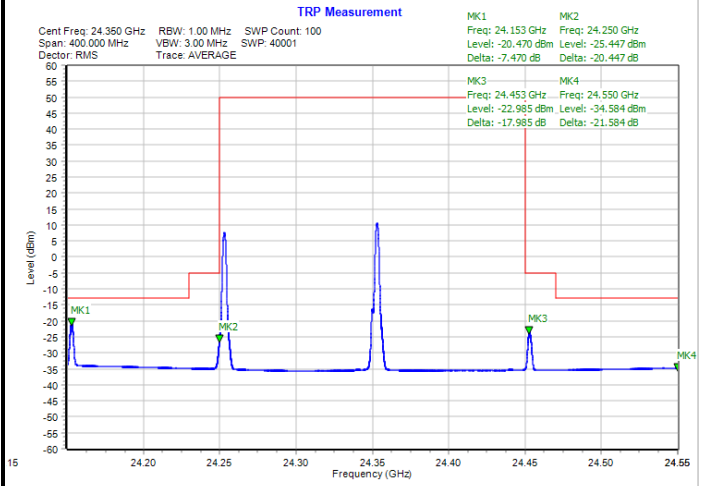




CP-OFDM Module B

NR Band n258A/ 200MHz / QPSK

Middle Band Edge / 1 RB



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DFT-s-OFDM Module B

