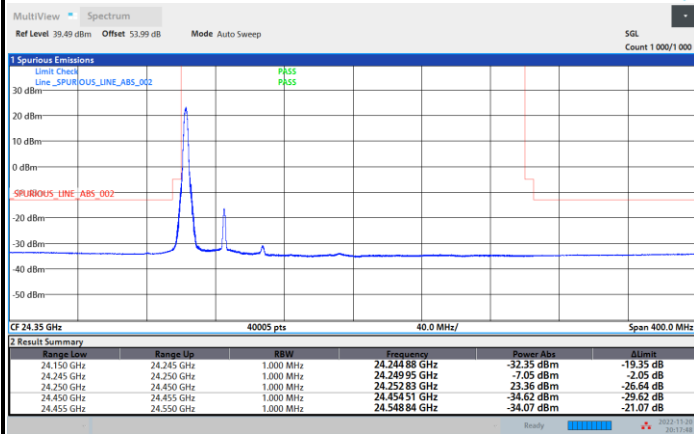




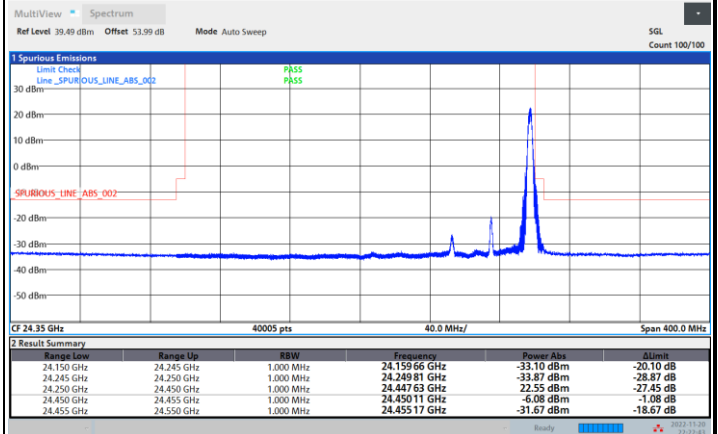
CP-OFDM Module A

NR Band n258A/ 50MHz / QPSK

Lowest Band Edge / 1 RB

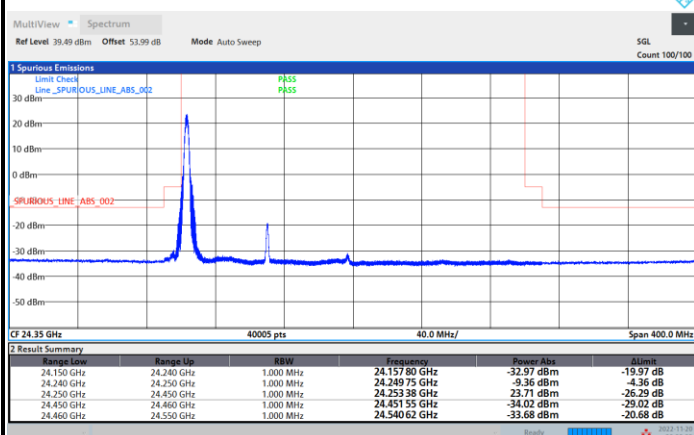


Highest Band Edge / 1 RB

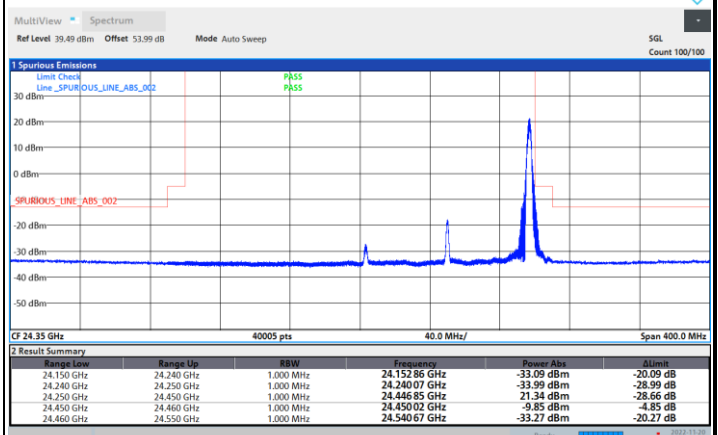


NR Band n258A/ 100MHz / QPSK

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

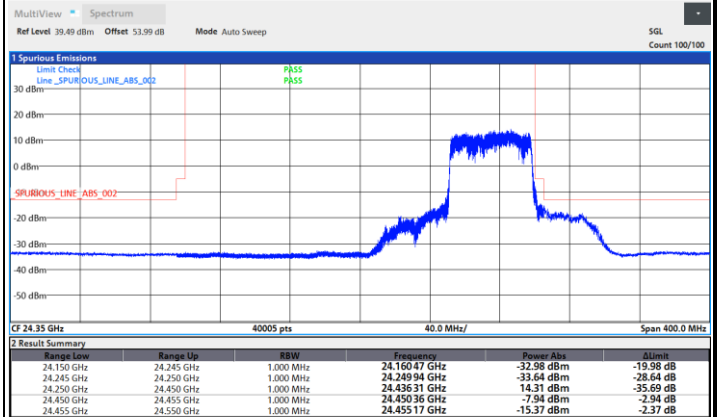
NR Band n258A/ 50MHz / QPSK

Lowest Band Edge / Full RB



07:47:18 PM 11/20/2022

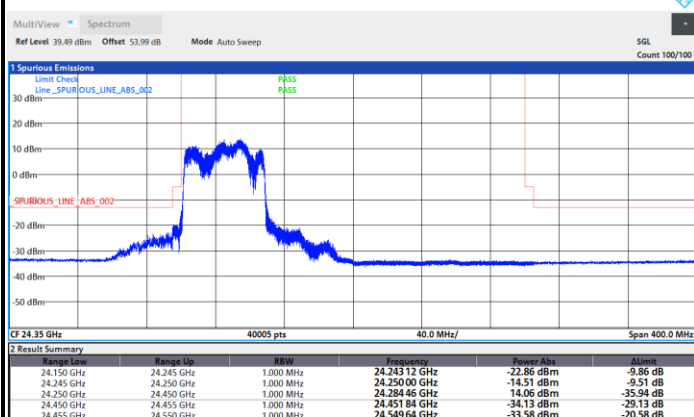
Highest Band Edge / Full RB



10:00:44 PM 11/20/2022

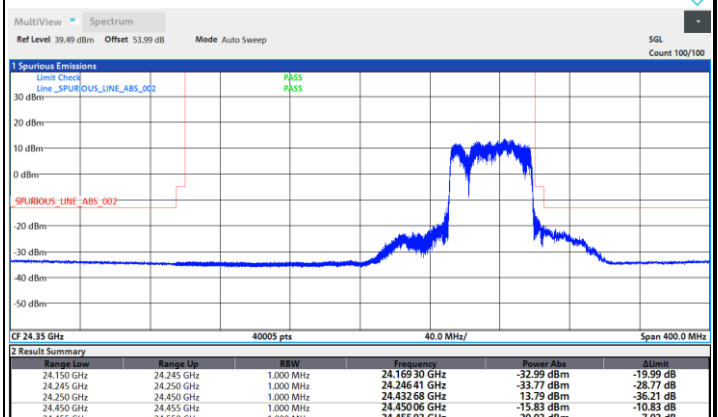
NR Band n258A/ 50MHz / 16QAM

Lowest Band Edge / Full RB



07:49:21 PM 11/20/2022

Highest Band Edge / Full RB



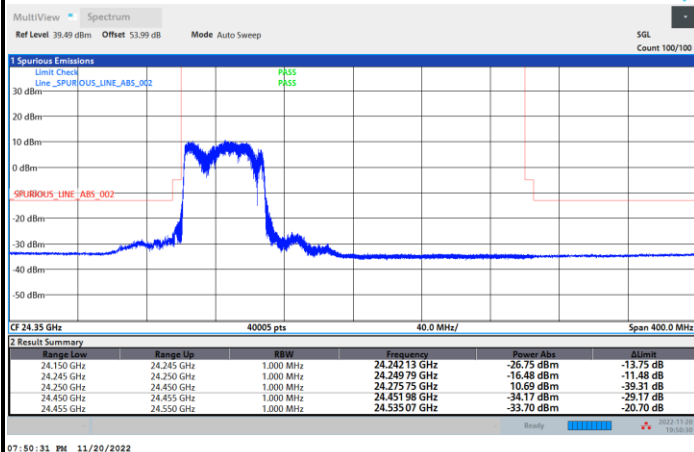
10:01:50 PM 11/20/2022



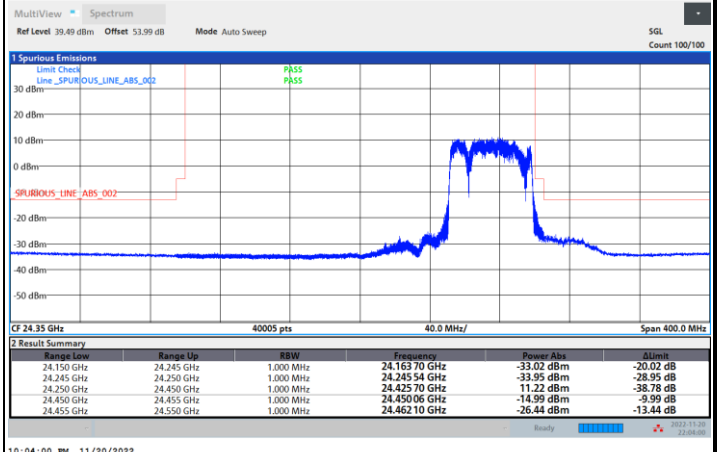
DFT-s-OFDM Module A

NR Band n258A/ 50MHz / 64QAM

Lowest Band Edge / Full RB

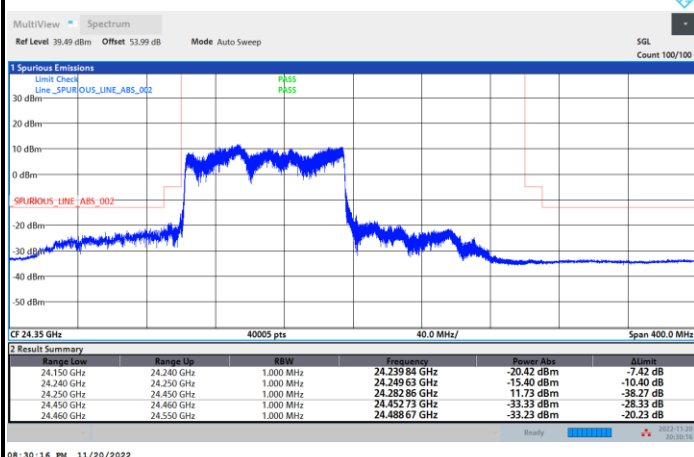


Highest Band Edge / Full RB

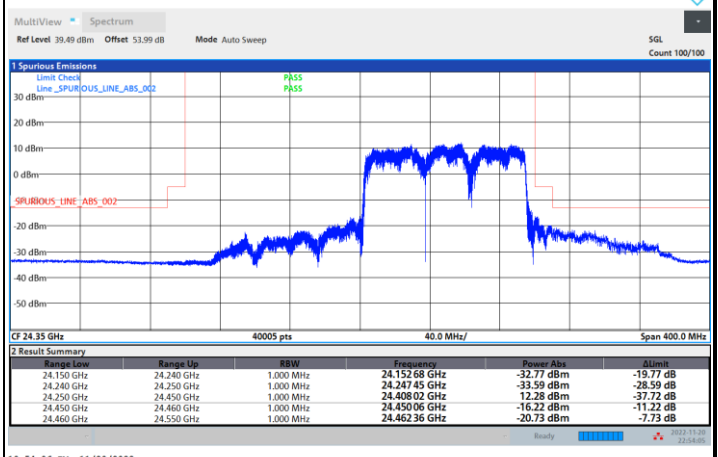


NR Band n258A/ 100MHz / QPSK

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

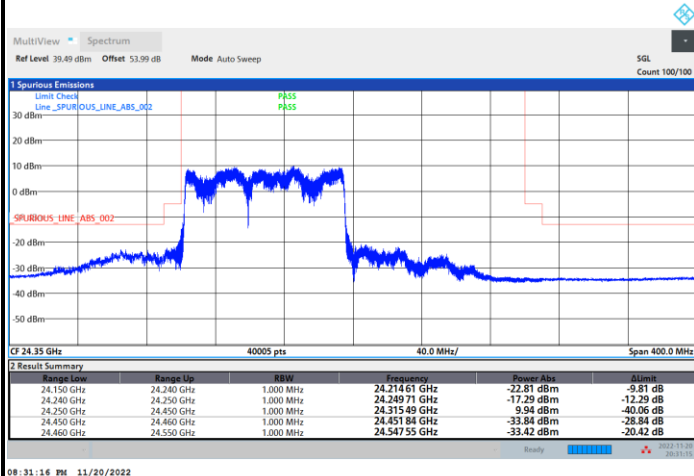




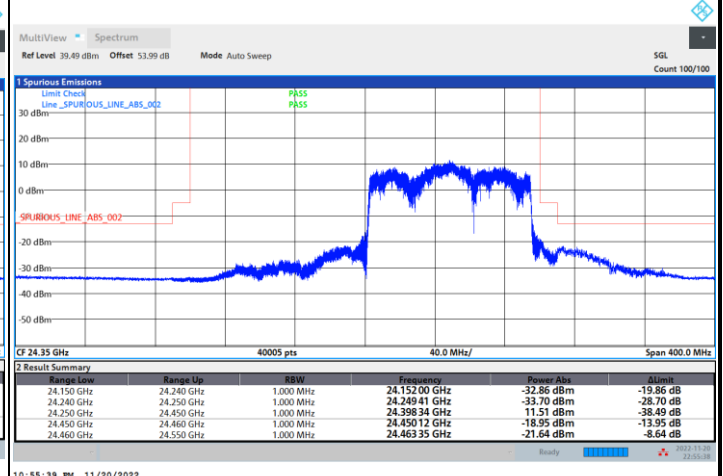
DFT-s-OFDM Module A

NR Band n258A/ 100MHz / 16QAM

Lowest Band Edge / Full RB

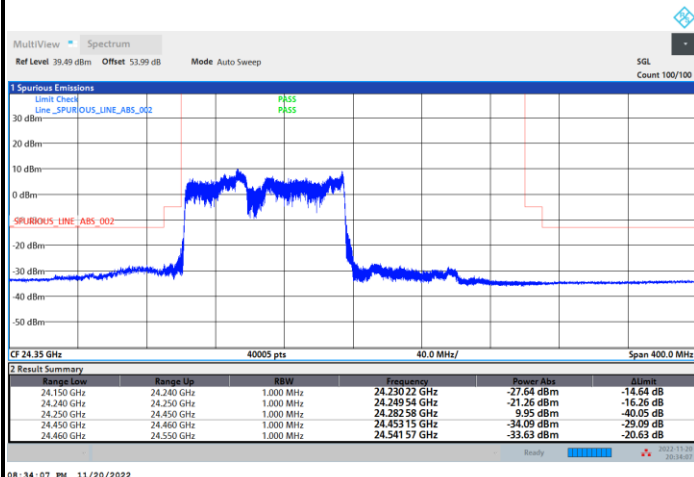


Highest Band Edge / Full RB

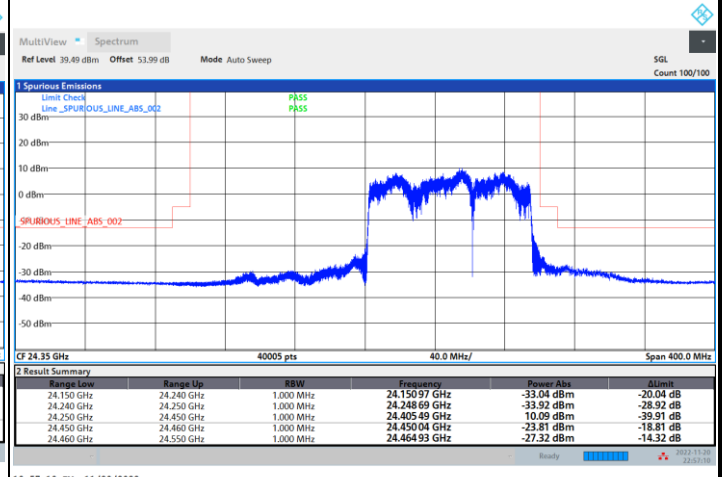


NR Band n258A/ 100MHz / 64QAM

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

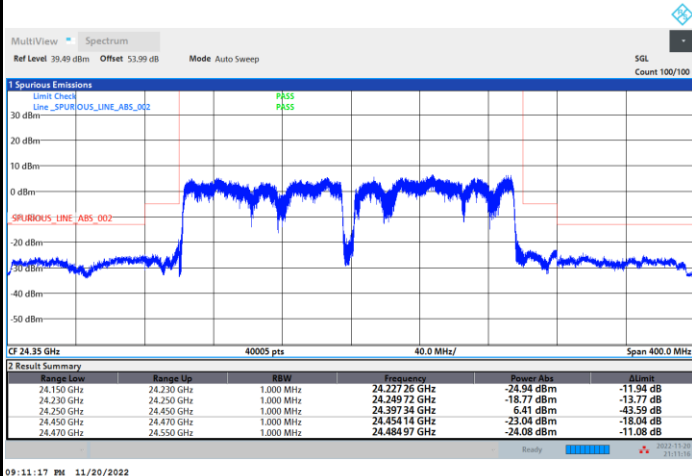




DFT-s-OFDM Module A

NR Band n258A/ 200MHz / QPSK

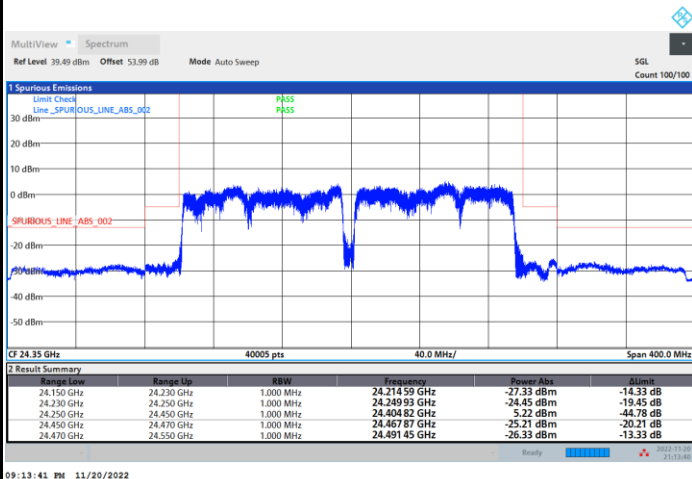
Middle Band Edge / Full RB



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NR Band n258A/ 200MHz / 16QAM

Middle Band Edge / Full RB



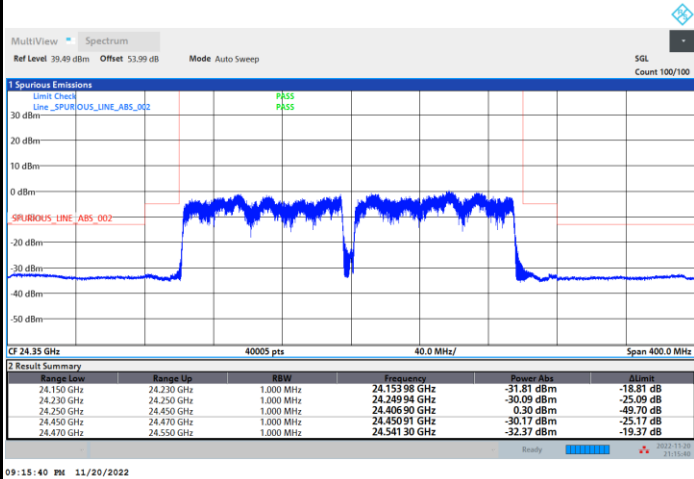
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DFT-s-OFDM Module A

NR Band n258A/ 200MHz / 64QAM

Middle Band Edge / Full RB



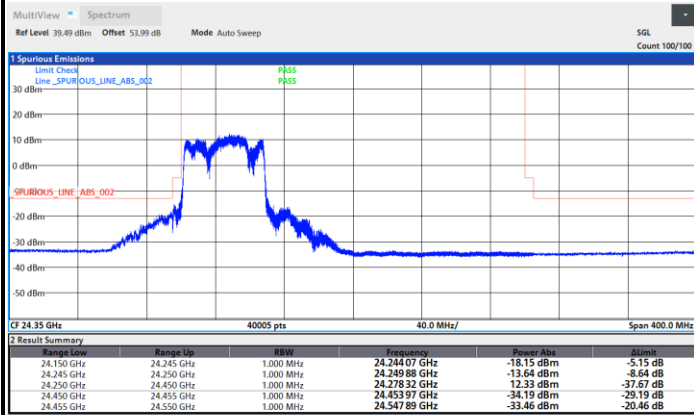
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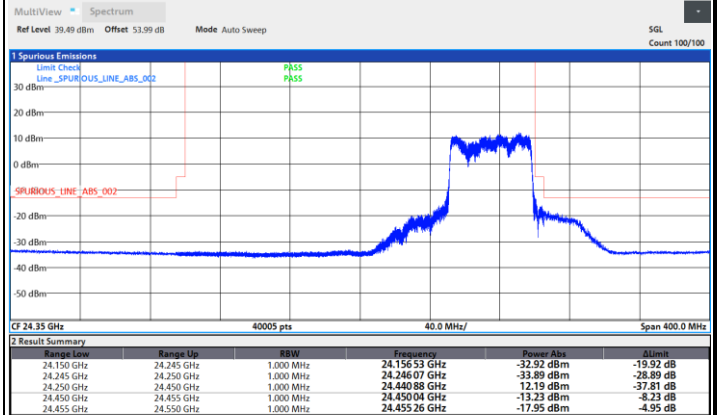
CP-OFDM Module A

NR Band n258A/ 50MHz / QPSK

Lowest Band Edge / Full RB

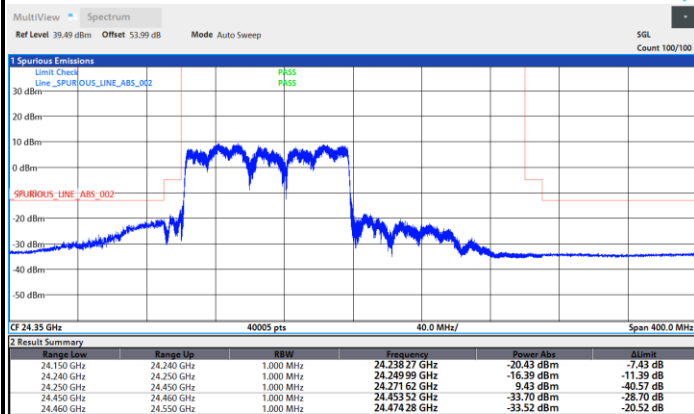


Highest Band Edge / Full RB

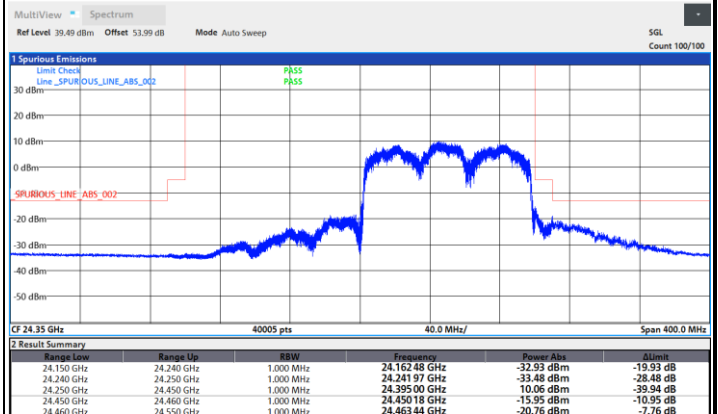


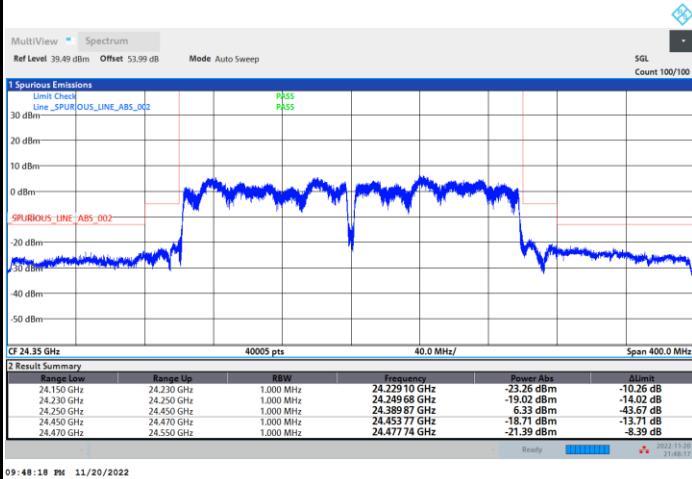
NR Band n258A/ 100MHz / QPSK

Lowest Band Edge / Full RB



Highest Band Edge / Full RB



**CP-OFDM Module A****NR Band n258A/ 200MHz / QPSK****Middle Band Edge / Full RB**

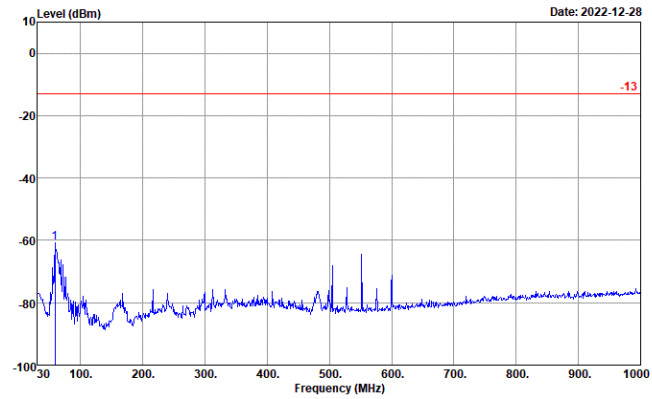
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Spurious Emission

NR Band n258A (30MHz-1GHz)

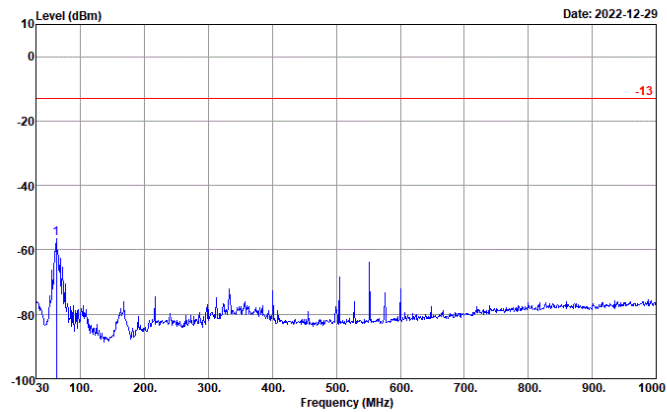
Horizontal



Site : 03CH10-HY
Condition : -13 EIRP_WO HORIZONTAL
Project : 262403-03
: n258a MA

Freq	Level	Over Limit	Limit Line	Read Level
MHz	dBm	dB	dBm	dBm
59.10	-60.85	-47.85	-13.00	-55.82

Vertical



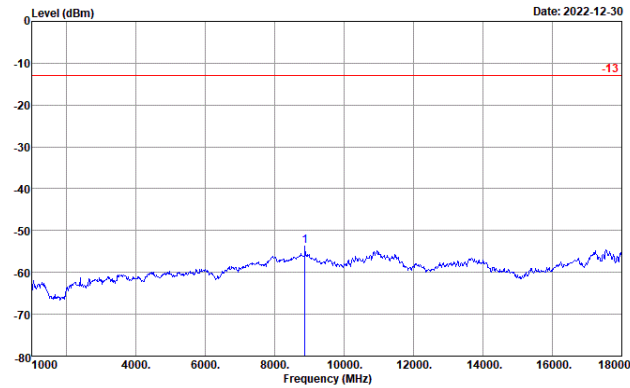
Site : 03CH10-HY
Condition : -13 EIRP_WO HORIZONTAL
Project : 262403-03
: n258a MB

	Freq	Level	Over Limit	Limit Line	Read Level
	MHz	dBm	dB	dBm	dBm
1	62.01	-56.61	-43.61	-13.00	-51.60



NR Band n258A (1GHz-18GHz)

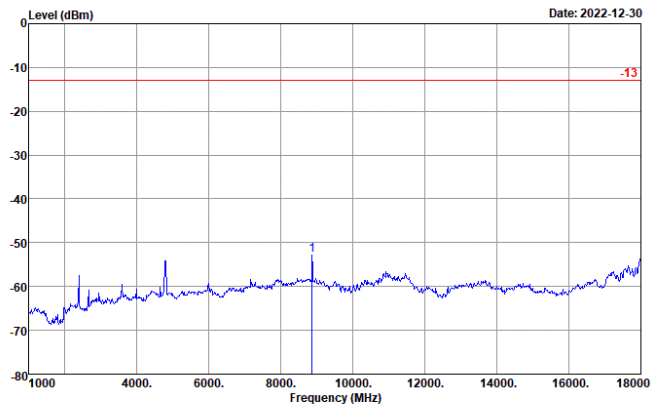
Horizontal



Site : 03CH10-HY
Condition : -13 EIRP_WO HORIZONTAL
Project : 262403-03
 : n258a MA

	Freq	Level	Over	Limit	Read
	MHz	dBm	Limit	Line	Level
1	8871.00	-53.70	-40.70	-13.00	-54.55

Vertical



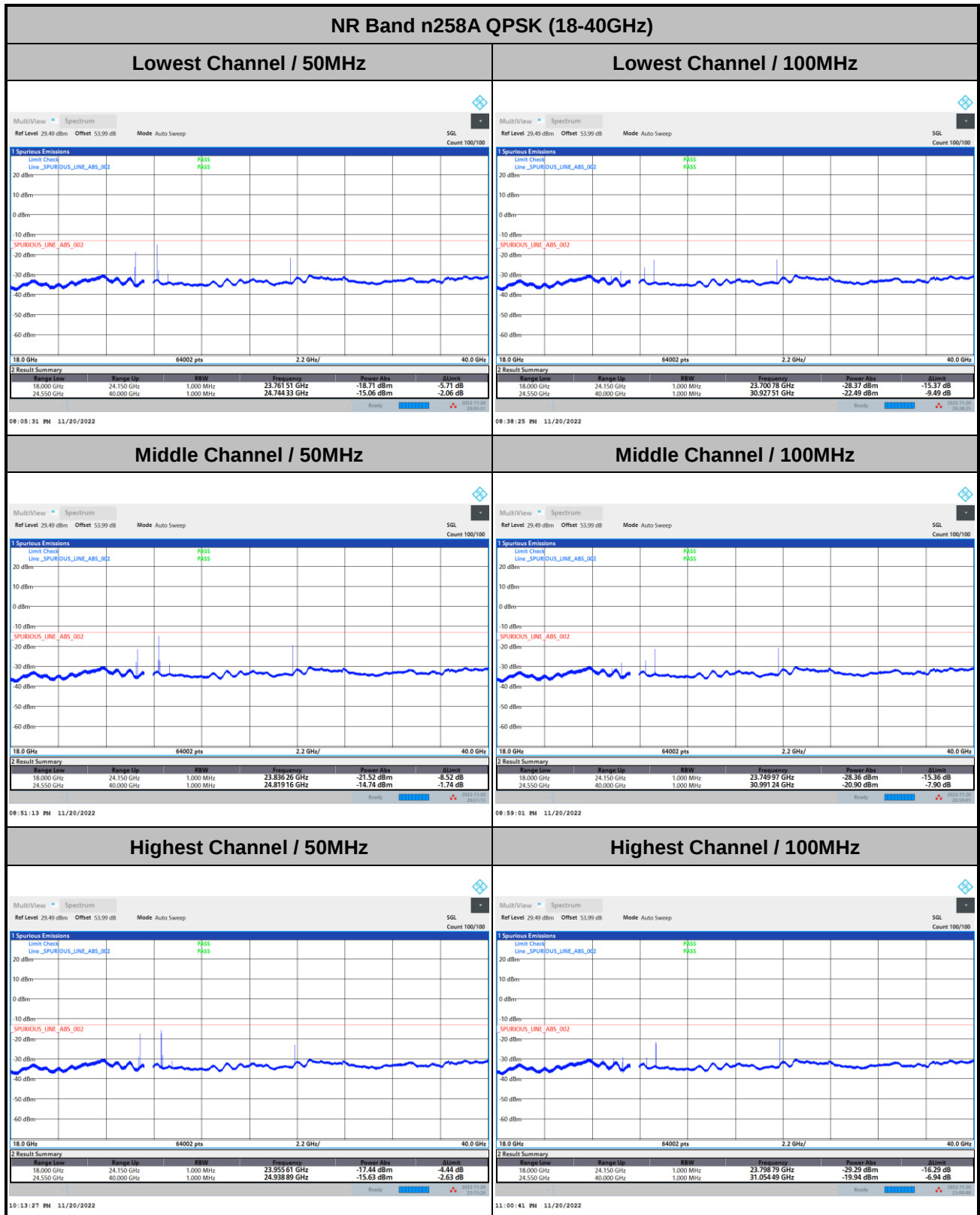
Site : 03CH10-HY
Condition : -13 EIRP_WO VERTICAL
Project : 262403-03
 : n258a MA

	Freq	Level	Over	Limit	Read
	MHz	dBm	Limit	Line	Level
1	8871.00	-52.90	-39.90	-13.00	-53.19



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

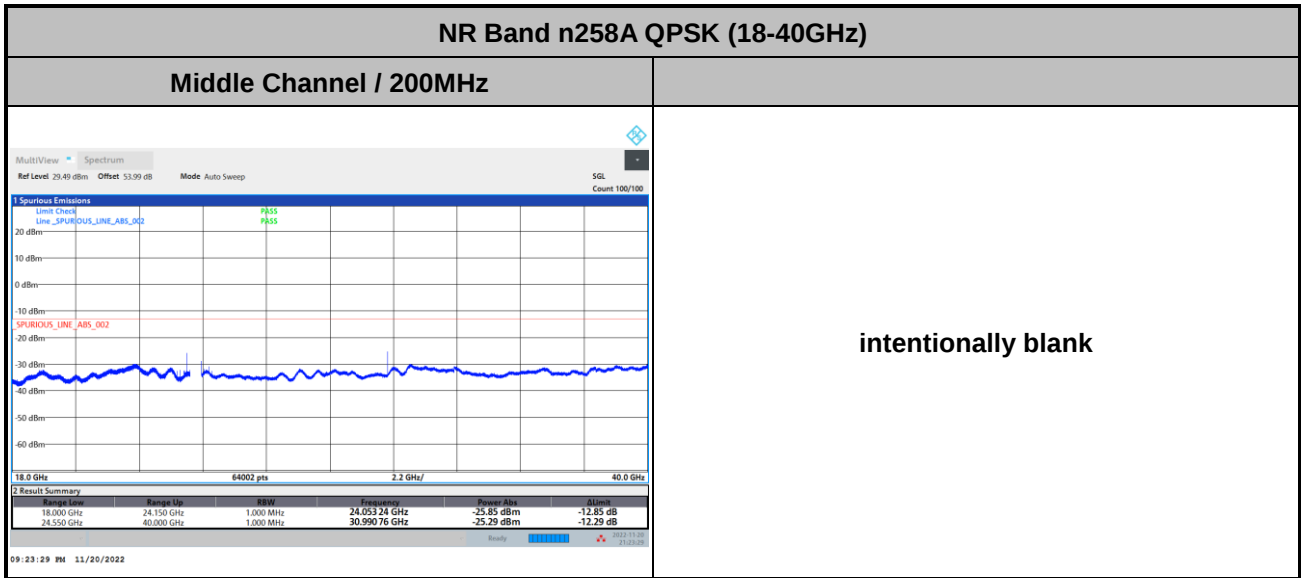
DFT-s-OFDM Module A



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



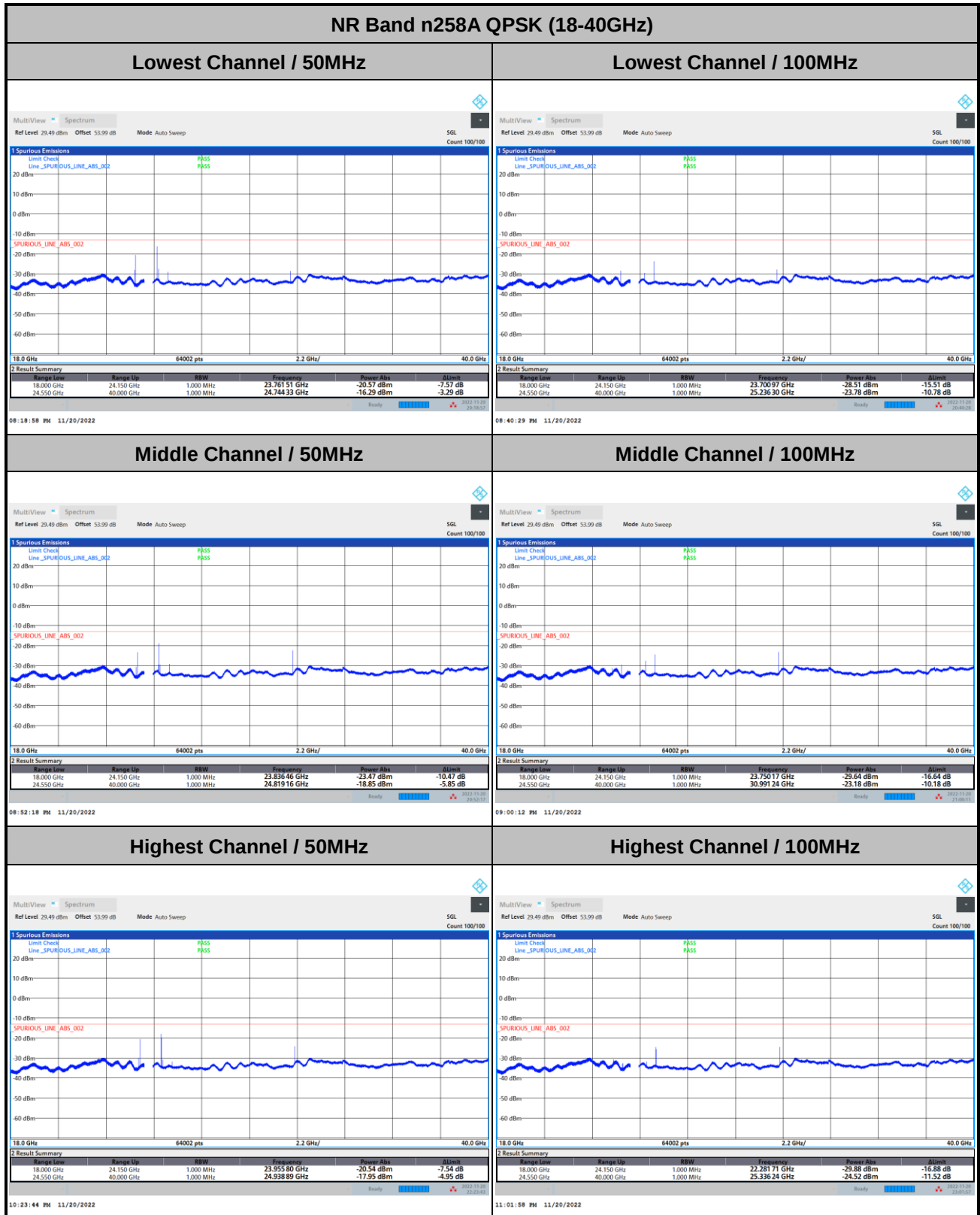
DFT-s-OFDM Module A



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



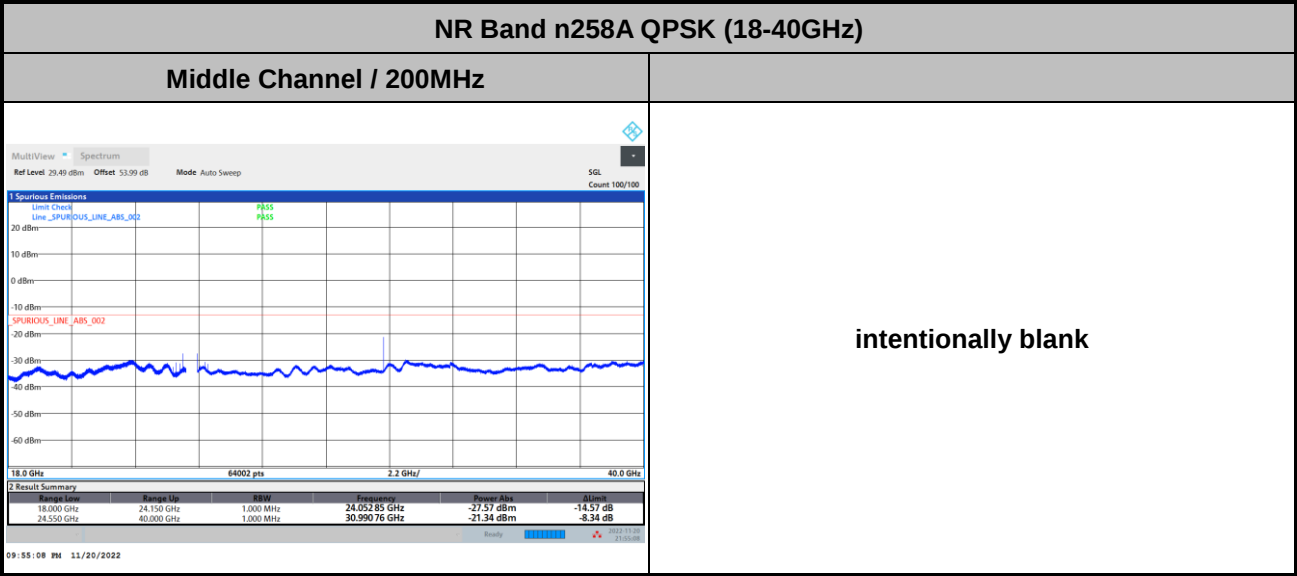
CP-OFDM Module A



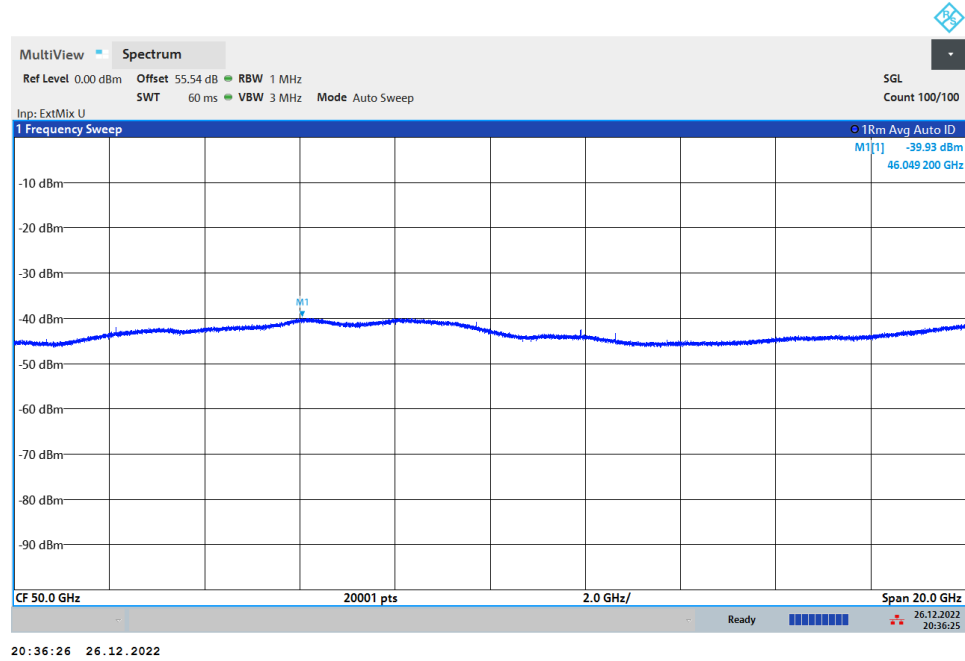
Remark: In band and out of band frequencies are omitted.



CP-OFDM Module A

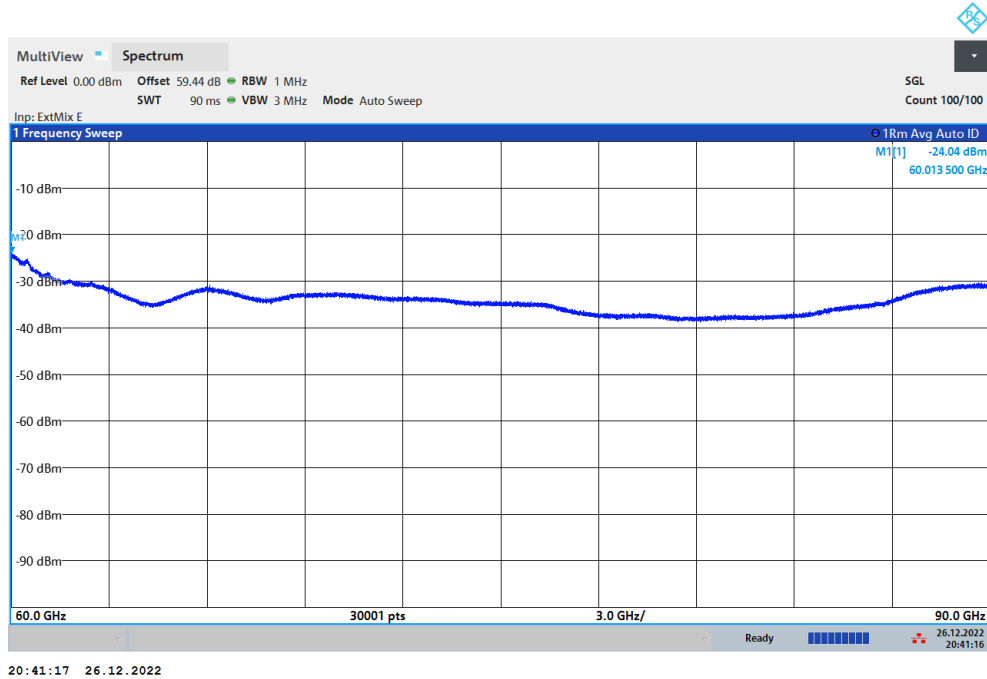


Remark: In band and out of band frequencies are omitted.

NR Band n258A
(40GHz-60GHz)


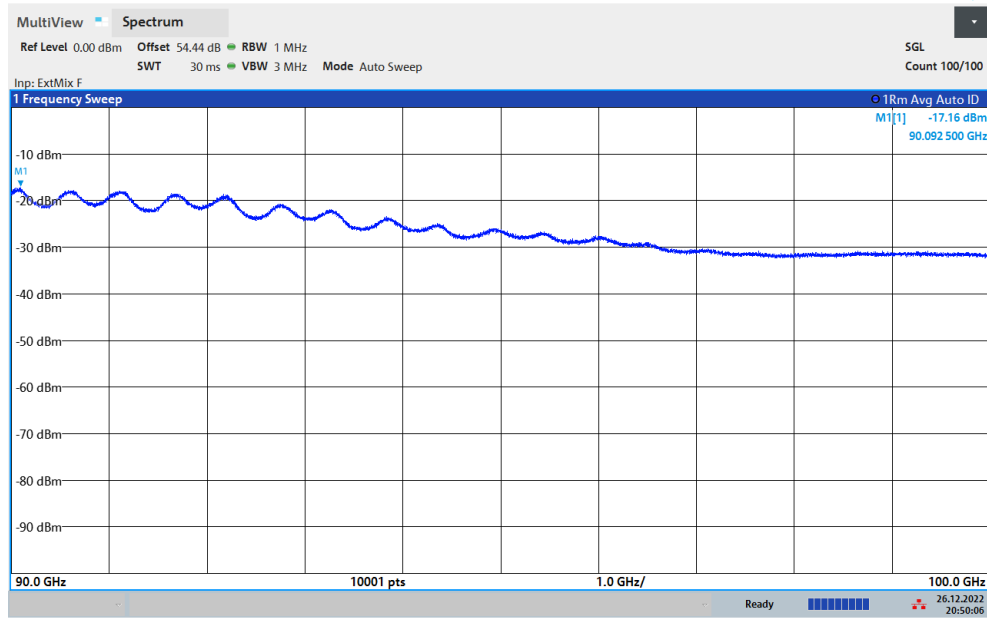
$$\text{Offset} = \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8 + \text{Duty Factor}$$

$$= 43 + 0.43 + 107 + 20\log(1) - 104.8 + 9.91 = 55.54(\text{dB})$$

NR Band n258A
(60GHz-90GHz)


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

$$= 46.9 + 0.43 + 107 + 20\log(1) - 104.8 + 9.91 = 59.44 \text{ (dB)}$$

NR Band n258A
(90GHz-100GHz)


20:50:06 26.12.2022

$$\begin{aligned} \text{Offset} &= \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} + 107 + 20\log(D) - 104.8 + \text{Duty Factor} \\ &= 47.92 + 0.43 + 107 + 20\log(0.5) - 104.8 + 9.91 = 54.44 \text{ (dB)} \end{aligned}$$

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	24.34998831	11.690	0.419	Pass
40	Normal Voltage	24.34998731	12.690	0.454	
30	Normal Voltage	24.3499962	3.800	0.136	
20(Ref.)	Normal Voltage	24.35	0.000	0.000	
10	Normal Voltage	24.3500984	-98.400	3.524	
0	Normal Voltage	24.35011988	-119.880	4.293	
-10	Normal Voltage	24.35017932	-179.320	6.421	
-20	Normal Voltage	24.35017183	-171.830	6.153	
-30	Normal Voltage	24.35016843	-168.430	6.032	
20	Maximum Voltage	24.35001289	-12.890	0.462	
20	Normal Voltage	24.35001429	-14.290	0.512	
20	Battery End Point	24.35001189	-11.890	0.426	

Note:

1. Normal Voltage =3.88 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	45.93	45.96	45.75	91.35	91.32	91.21	-	-	-
Middle CH	45.84	45.93	45.82	91.38	91.274	91.29	190.42	190.54	190.49
Highest CH	45.86	45.82	45.73	91.16	90.98	90.77	-	-	-

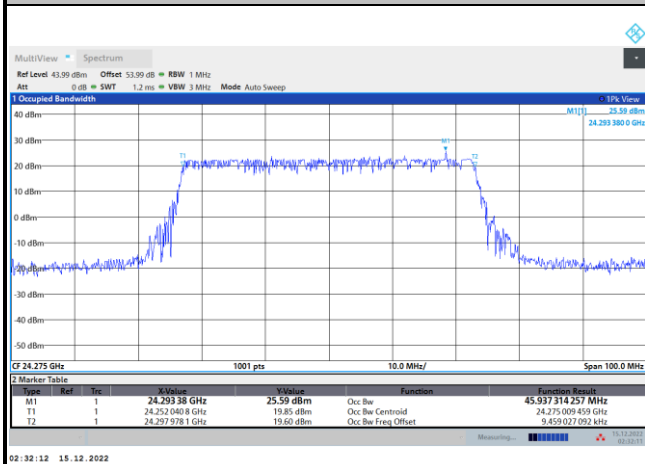
Mode	CP-OFDM Module B NR Band n258A : 99%OBW(MHz)		
BW	50MHz	100MHz	200MHz
Mod.	QPSK	QPSK	QPSK
Lowest CH	45.92	94.15	-
Middle CH	45.99	93.99	193.46
Highest CH	45.92	93.86	-



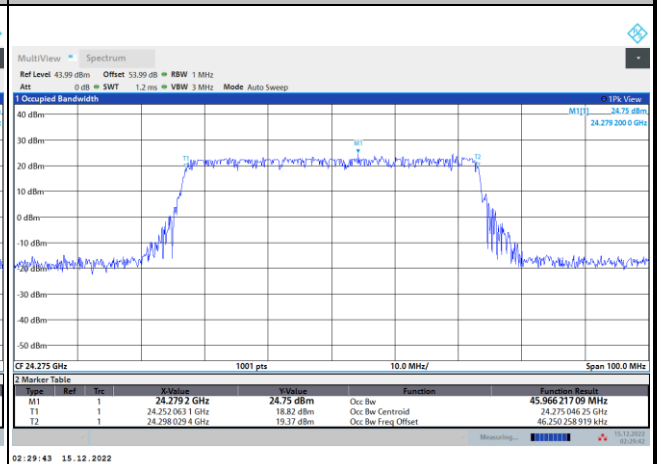
DFT-s-OFDM Module B

NR Band n258A

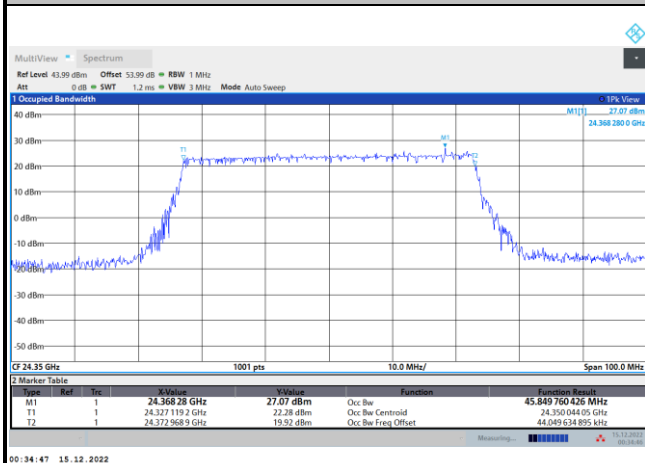
Lowest Channel / 50MHz / QPSK



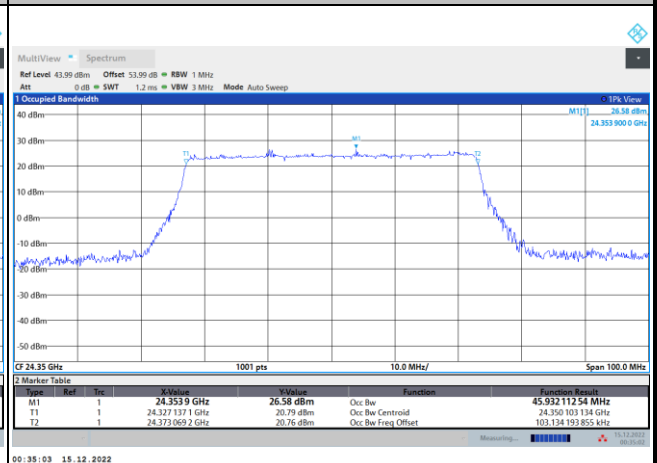
Lowest Channel / 50MHz / 16QAM



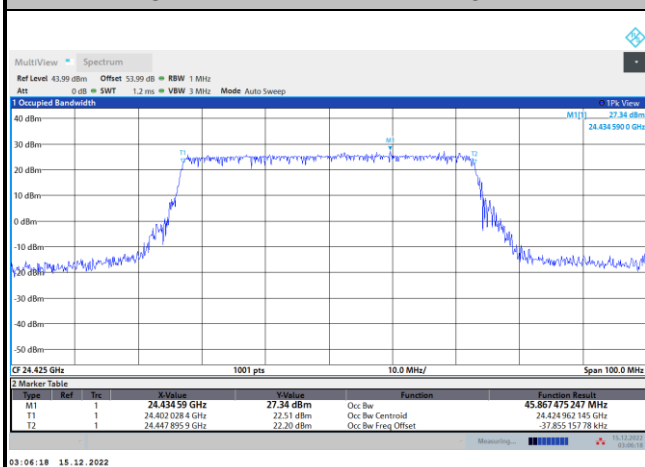
Middle Channel / 50MHz / QPSK



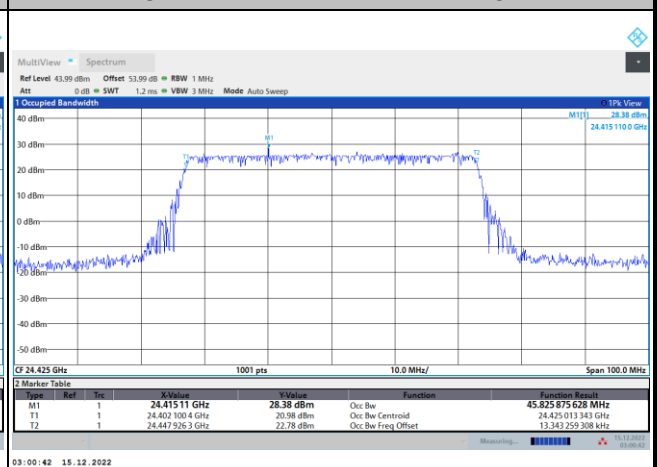
Middle Channel / 50MHz / 16QAM



Highest Channel / 50MHz / QPSK



Highest Channel / 50MHz / 16QAM

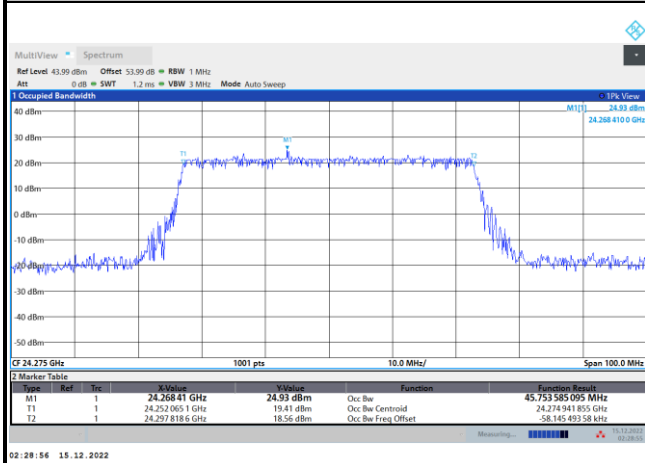




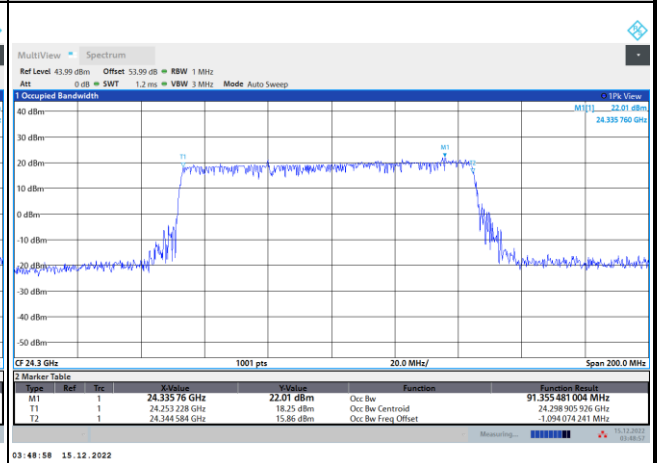
DFT-s-OFDM Module B

NR Band n258A

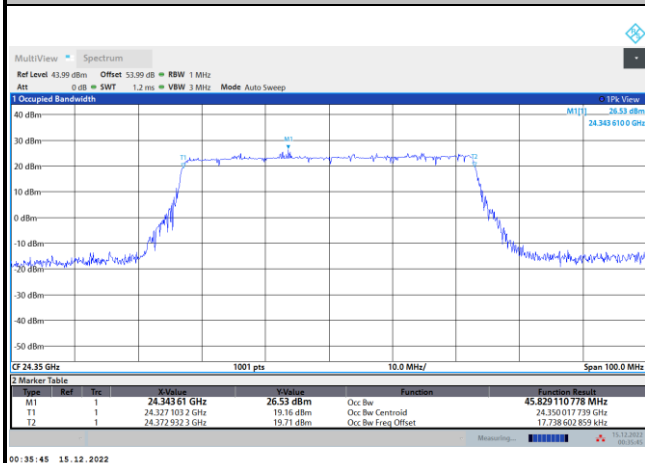
Lowest Channel / 50MHz / 64QAM



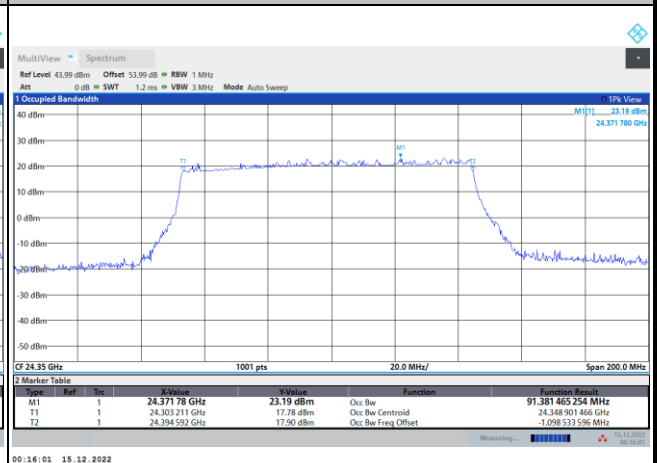
Lowest Channel / 100MHz / QPSK



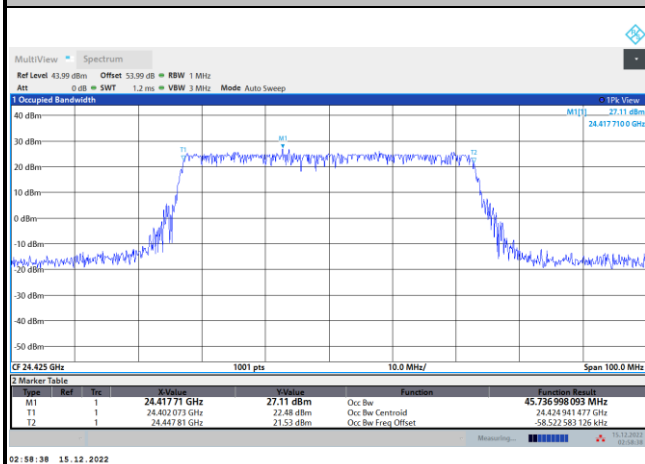
Middle Channel / 50MHz / 64QAM



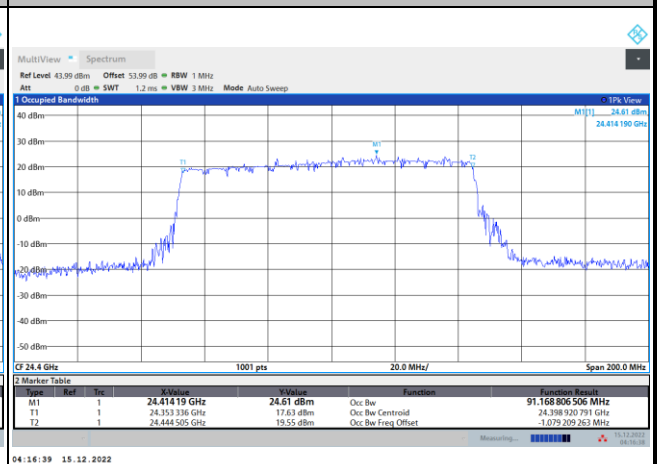
Middle Channel / 100MHz / QPSK



Highest Channel / 50MHz / 64QAM



Highest Channel / 100MHz / QPSK

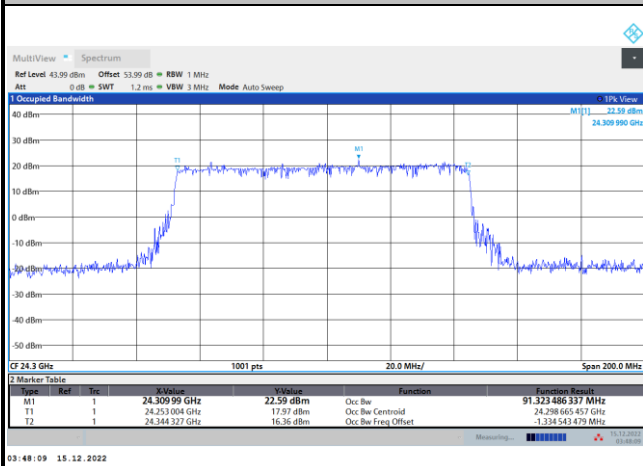




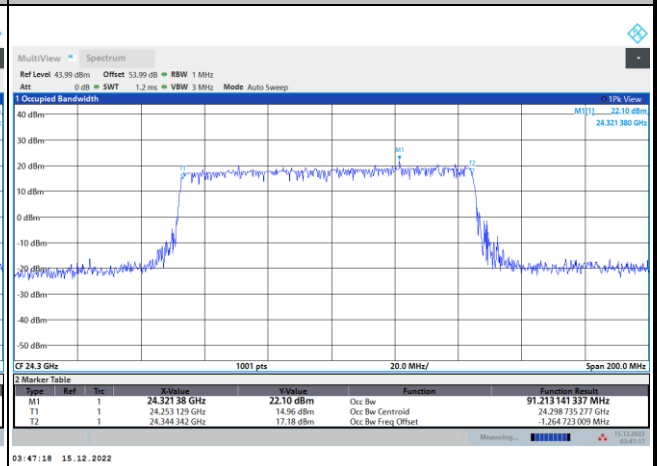
DFT-s-OFDM Module B

NR Band n258A

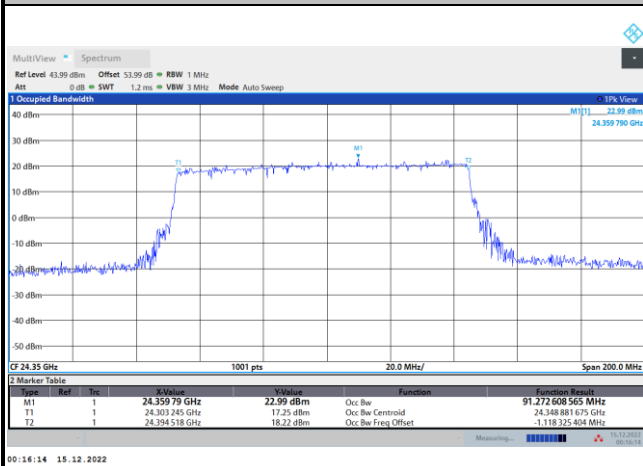
Lowest Channel / 100MHz / 16QAM



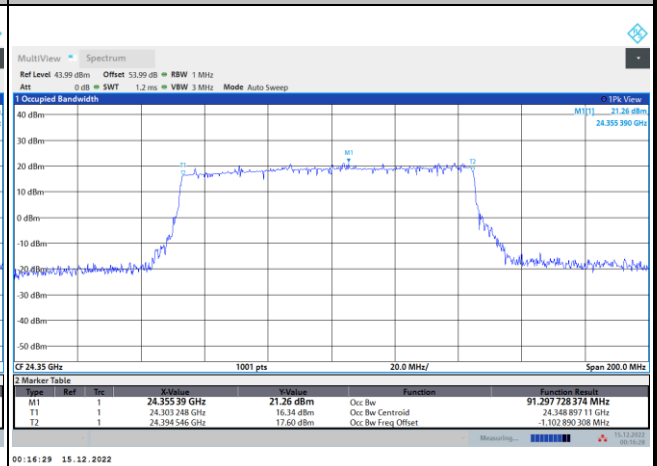
Lowest Channel / 100MHz / 64QAM



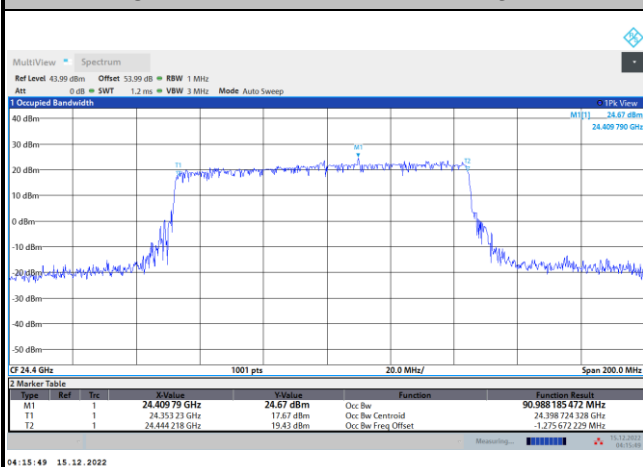
Middle Channel / 100MHz / 16QAM



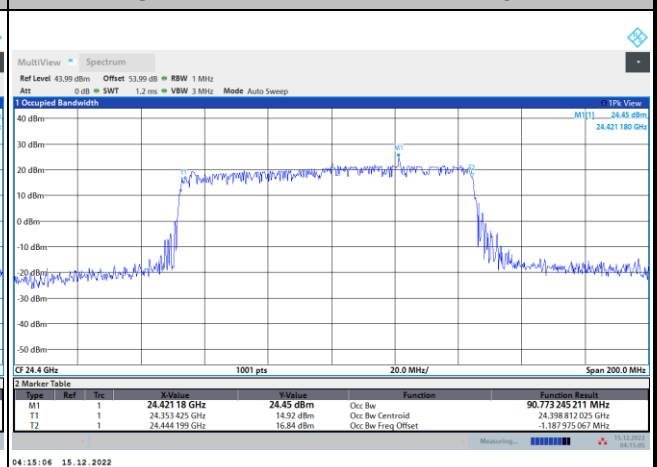
Middle Channel / 100MHz / 64QAM



Highest Channel / 100MHz / 16QAM



Highest Channel / 100MHz / 64QAM

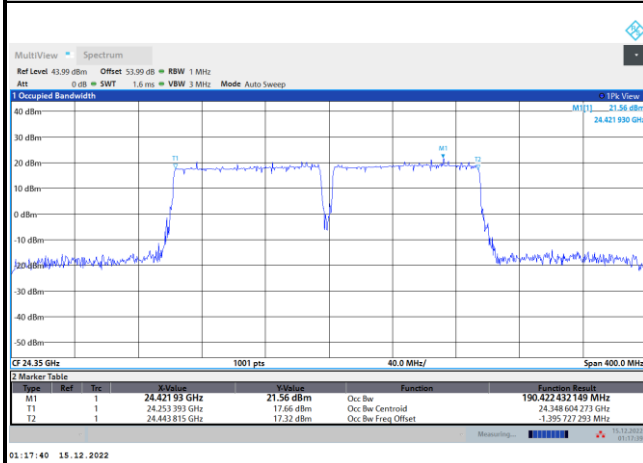




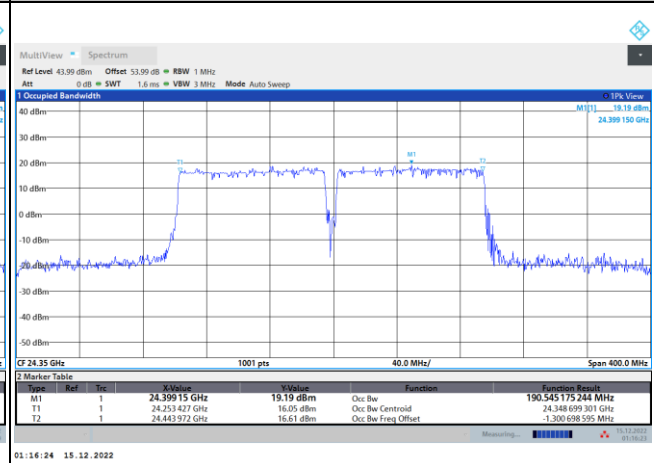
DFT-s-OFDM Module B

NR Band n258A

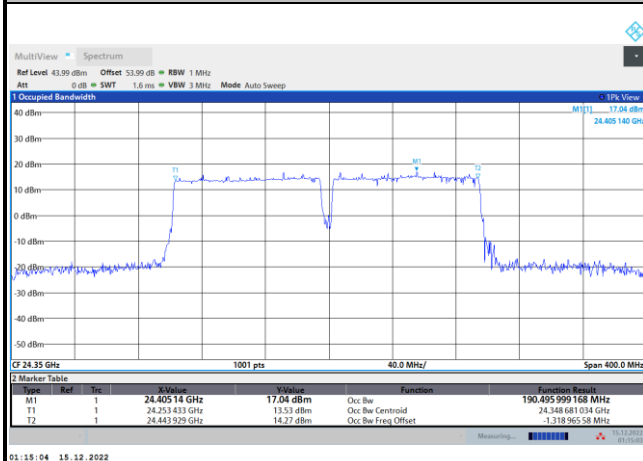
Middle Channel / 200MHz / QPSK



Middle Channel / 200MHz / 16QAM



Middle Channel / 200MHz / 64QAM



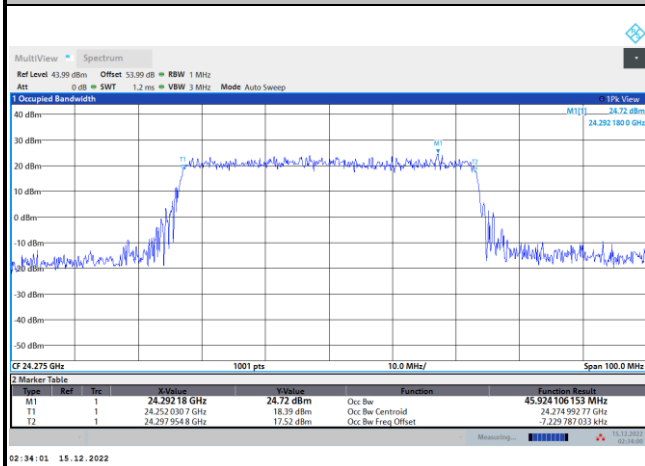
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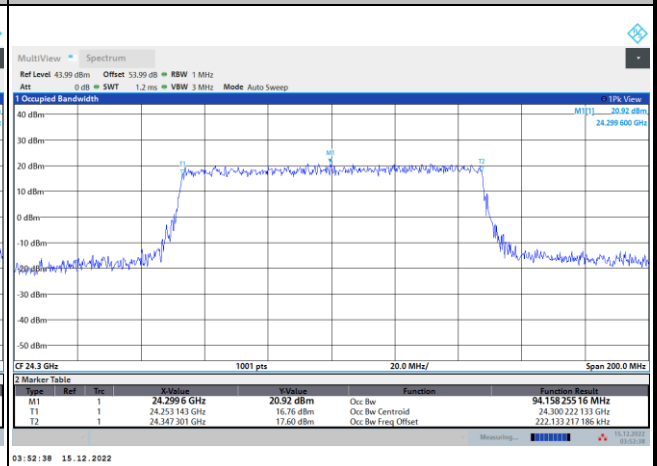
CP-OFDM Module B

NR Band n258A

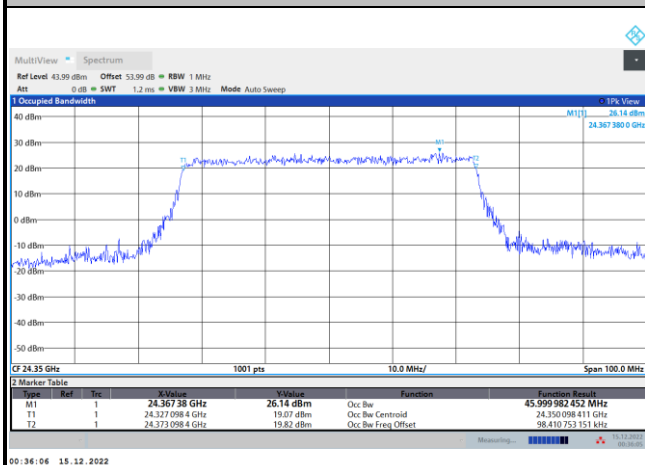
Lowest Channel / 50MHz / QPSK



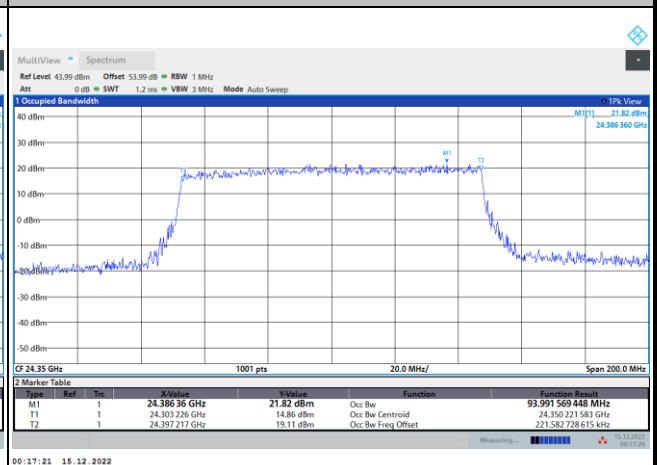
Lowest Channel / 100MHz / QPSK



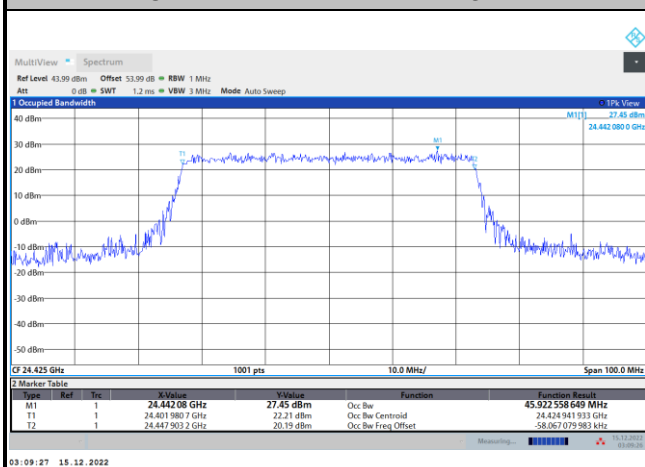
Middle Channel / 50MHz / QPSK



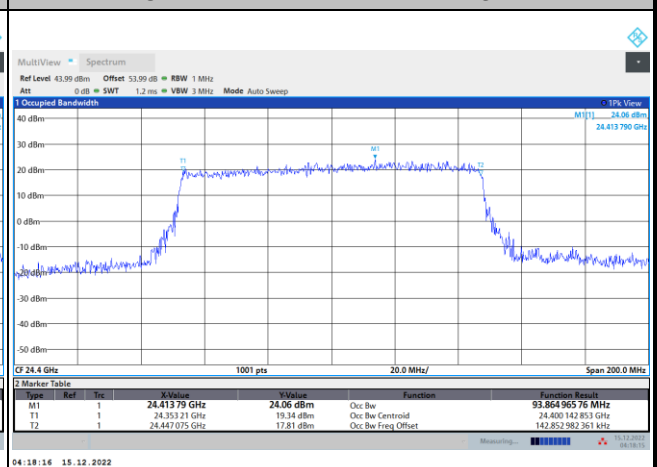
Middle Channel / 100MHz / QPSK



Highest Channel / 50MHz / QPSK

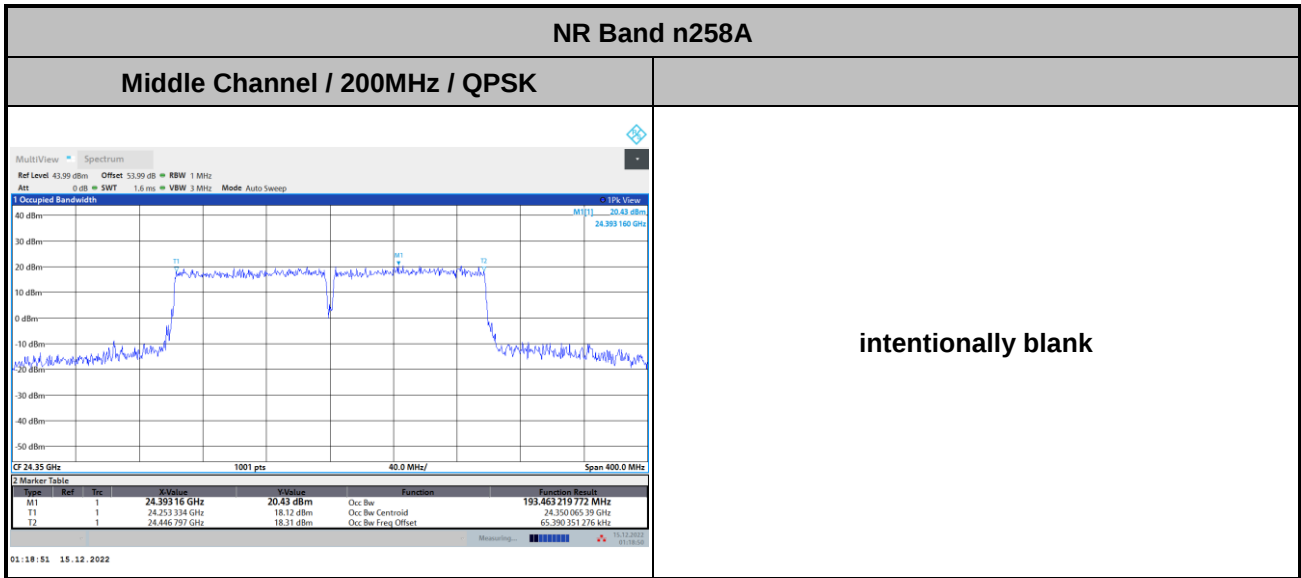


Highest Channel / 100MHz / QPSK





CP-OFDM Module B



Radiated Out of Band Emissions

Mode			DFT-s-OFDM Module A NR Band n258A : BE (dBm) 1 RB					
BW			50MHz			100MHz		
Limit (dBm)			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Low CH	0~10%OB	≤ -5	-5.75	-5.95	-6.55	-6.72	-7.71	-9.38
	>10%OB	≤ -13	-31.63	-30.30	-31.41	-31.67	-32.56	-32.52
High CH	0~10%OB	≤ -5	-5.81	-6.39	-7.68	-9.88	-10.97	-12.87
	>10%OB	≤ -13	-28.78	-29.05	-29.35	-30.62	-30.14	-30.62
Result			Compliance					

Mode			CP-OFDM Module A NR Band n258A : BE (dBm) 1 RB	
BW			50MHz	100MHz
Limit (dBm)			QPSK	QPSK
Low CH	0~10%OB	≤ -5	-5.69	-8.18
	>10%OB	≤ -13	-31.18	-32.47
High CH	0~10%OB	≤ -5	-6.96	-11.71
	>10%OB	≤ -13	-29.88	-30.84
Result			Compliance	

Mode			DFT-s-OFDM Module A NR Band n258A : BE (dBm) 1 RB		
BW			200MHz		
Limit (dBm)			QPSK	16QAM	64QAM
Mid CH	0~10%OB	≤ -5	-12.92	-16.18	-20.32
	>10%OB	≤ -13	-21.51	-22.82	-31.94

Mode			CP-OFDM Module A NR Band n258A : BE (dBm) 1 RB	
BW			200MHz	
Limit (dBm)			QPSK	
Mid CH	0~10%OB	≤ -5	-13.37	
	>10%OB	≤ -13	-17.83	

Mode			DFT-s-OFDM Module A NR Band n258A : BE (dBm) Full RB					
BW			50MHz			100MHz		
Limit (dBm)			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Low CH	0~10%OB	≤-5	-14.47	-16.01	-17.36	-20.47	-19.26	-21.68
	>10%OB	≤-13	-28.76	-28.97	-28.88	-31.21	-31.45	-30.6
High CH	0~10%OB	≤-5	-14.22	-16.43	-15.9	-21.47	-24.68	-24
	>10%OB	≤-13	-27.6	-27.54	-27.64	-29.68	-29.02	-30.4
Result			Compliance					

Mode			CP-OFDM Module A NR Band n258A : BE (dBm) Full RB	
BW			50MHz	100MHz
Limit (dBm)			QPSK	QPSK
Low CH	0~10%OB	≤-5	-16.14	-18.6
	>10%OB	≤-13	-27.72	-30.04
High CH	0~10%OB	≤-5	-16.23	-18.81
	>10%OB	≤-13	-25.79	-27.34
Result			Compliance	

Mode			DFT-s-OFDM Module A NR Band n258A : BE (dBm) Full RB		
BW			200MHz		
Limit (dBm)			QPSK	16QAM	64QAM
Mid CH	0~10%OB	≤-5	-26.84	-26.2	-26.9
	>10%OB	≤-13	-29.17	-29.77	-30.74

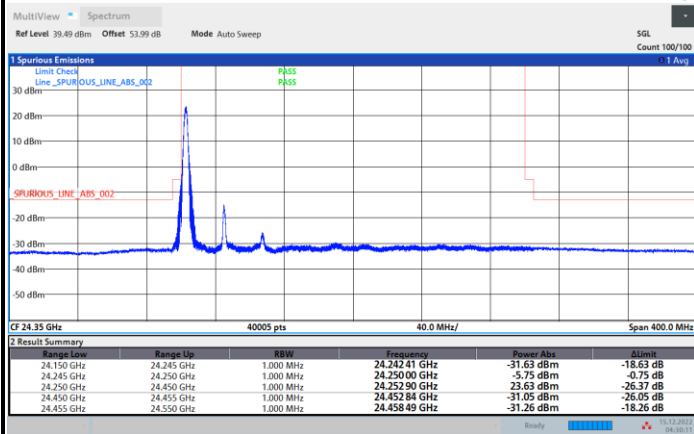
Mode			CP-OFDM Module A NR Band n258A : BE (dBm) Full RB	
BW			200MHz	
Limit (dBm)			QPSK	
Mid CH	0~10%OB	≤-5	-21.85	
	>10%OB	≤-13	-26.26	



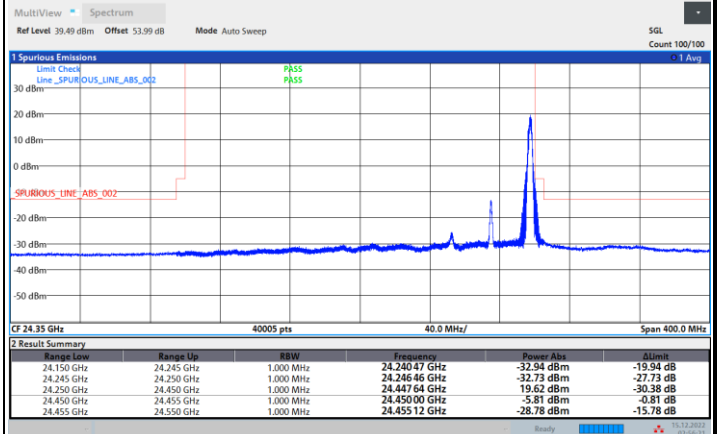
DFT-s-OFDM Module B

NR Band n258A/ 50MHz / QPSK

Lowest Band Edge / 1 RB

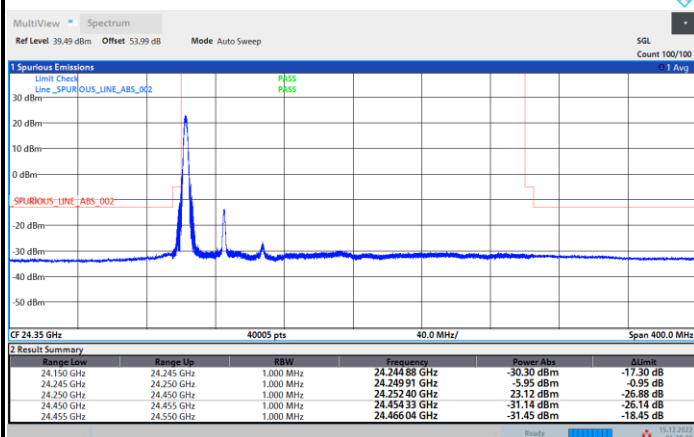


Highest Band Edge / 1 RB

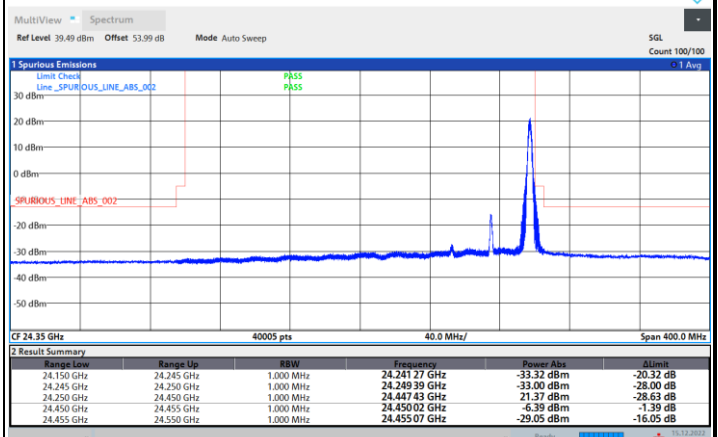


NR Band n258A/ 50MHz / 16QAM

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB

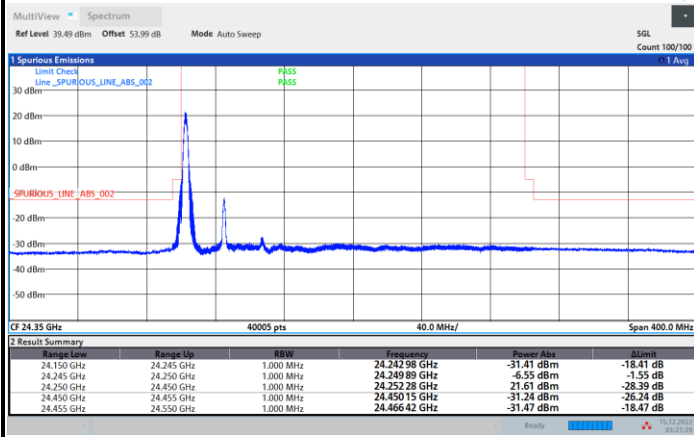




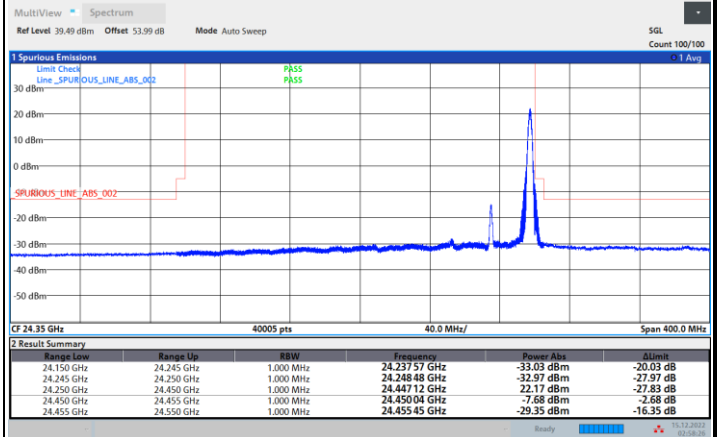
DFT-s-OFDM Module B

NR Band n258A/ 50MHz / 64QAM

Lowest Band Edge / 1 RB

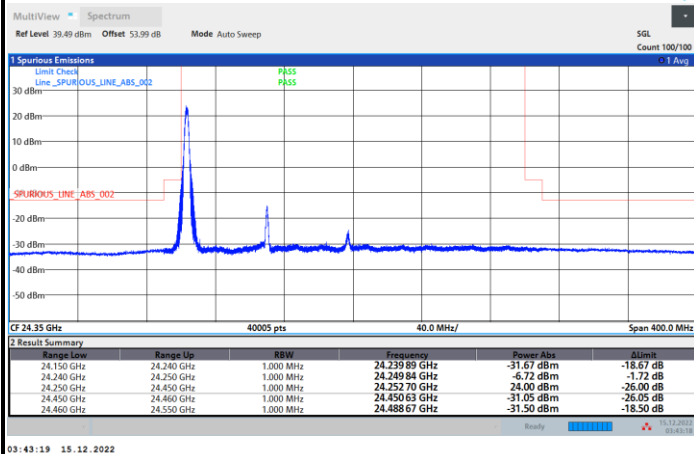


Highest Band Edge / 1 RB

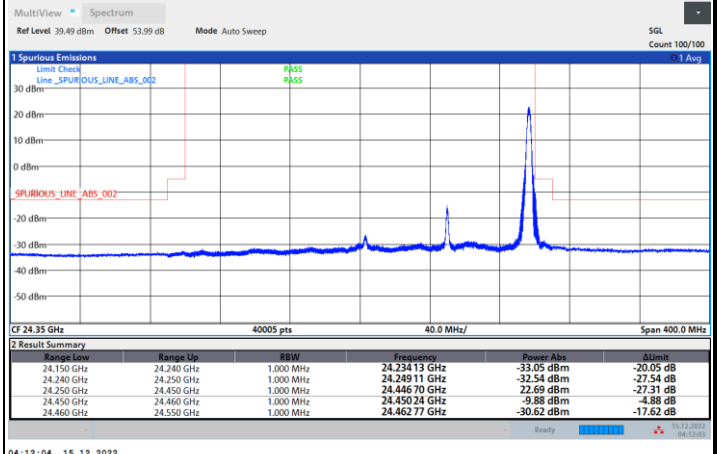


NR Band n258A/ 100MHz / QPSK

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB

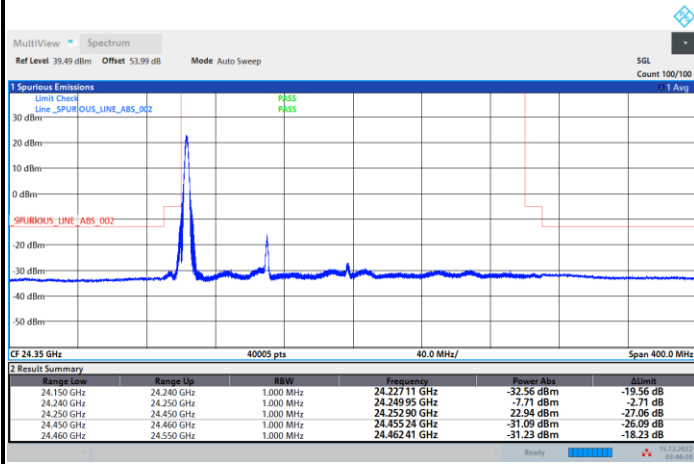




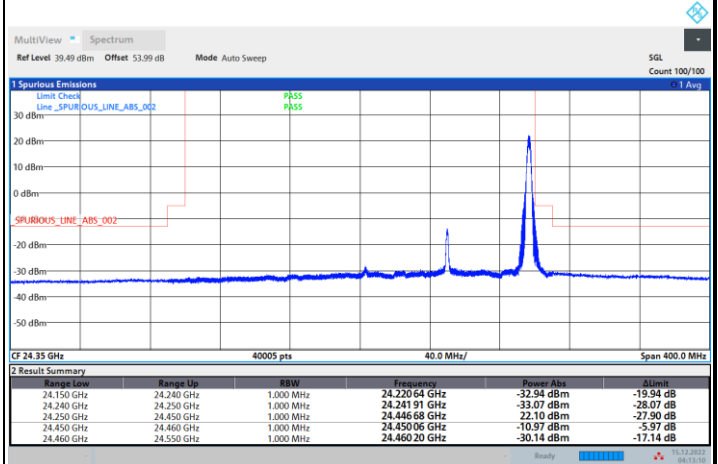
DFT-s-OFDM Module B

NR Band n258A/ 100MHz / 16QAM

Lowest Band Edge / 1 RB

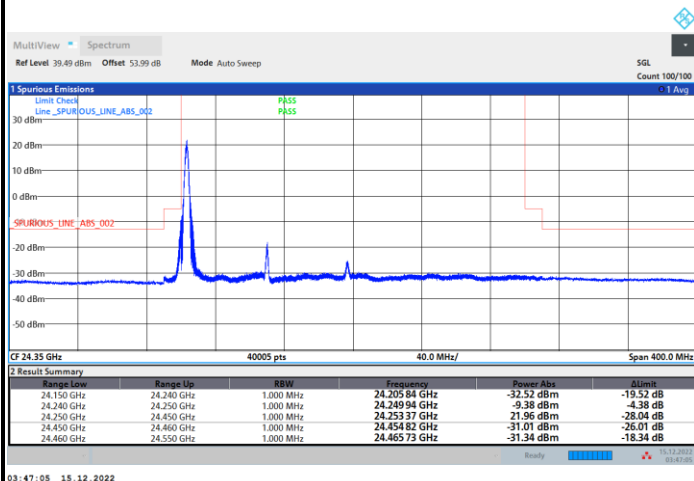


Highest Band Edge / 1 RB

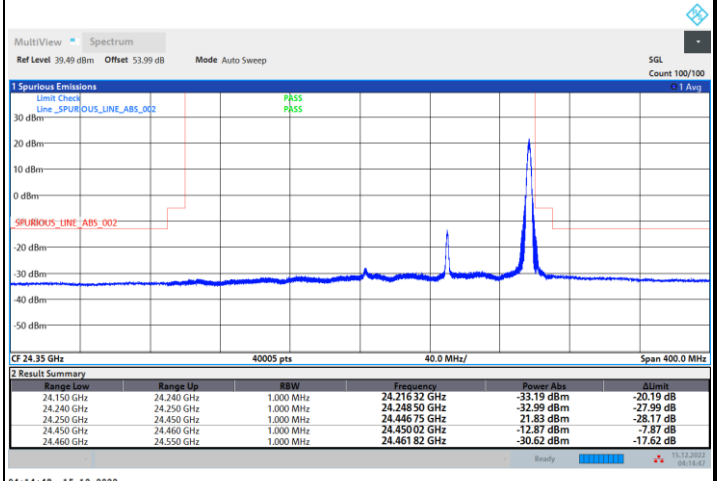


NR Band n258A/ 100MHz / 64QAM

Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB

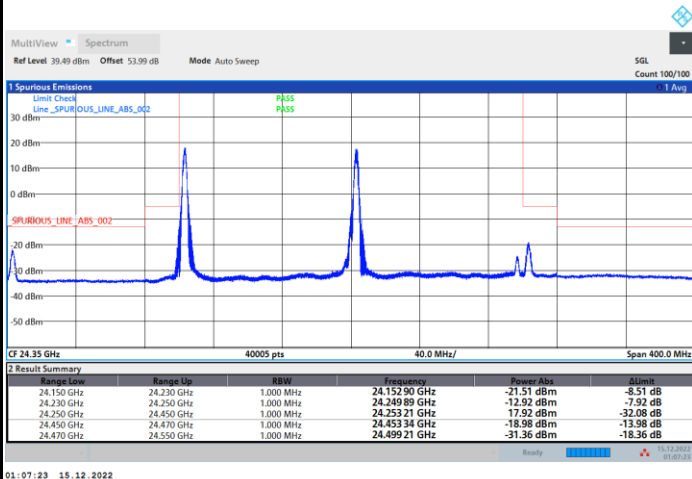




DFT-s-OFDM Module B

NR Band n258A/ 200MHz / QPSK

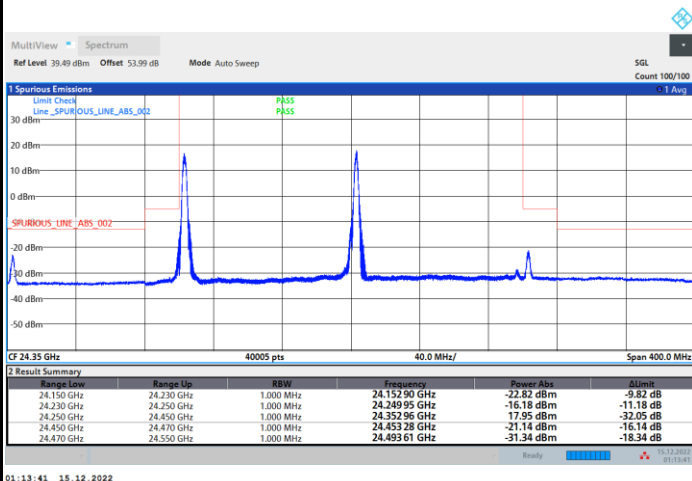
Middle Band Edge / 1 RB



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NR Band n258A/ 200MHz / 16QAM

Middle Band Edge / 1 RB



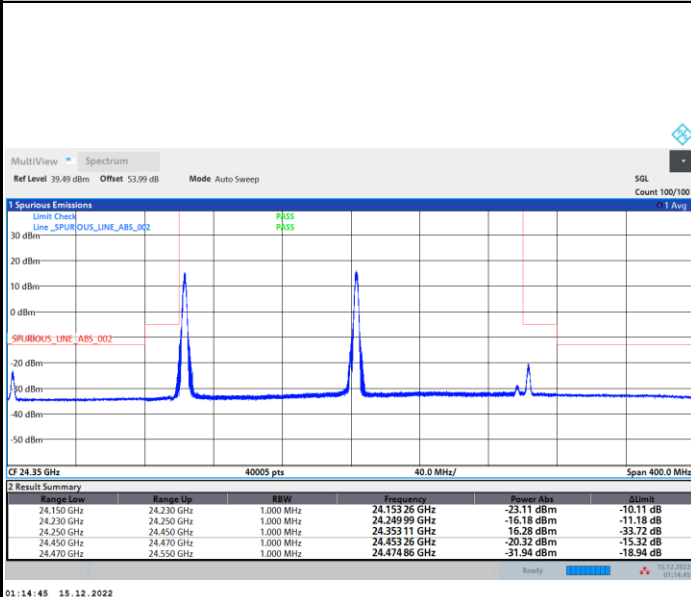
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DFT-s-OFDM Module B

NR Band n258A/ 200MHz / 64QAM

Middle Band Edge / 1 RB



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