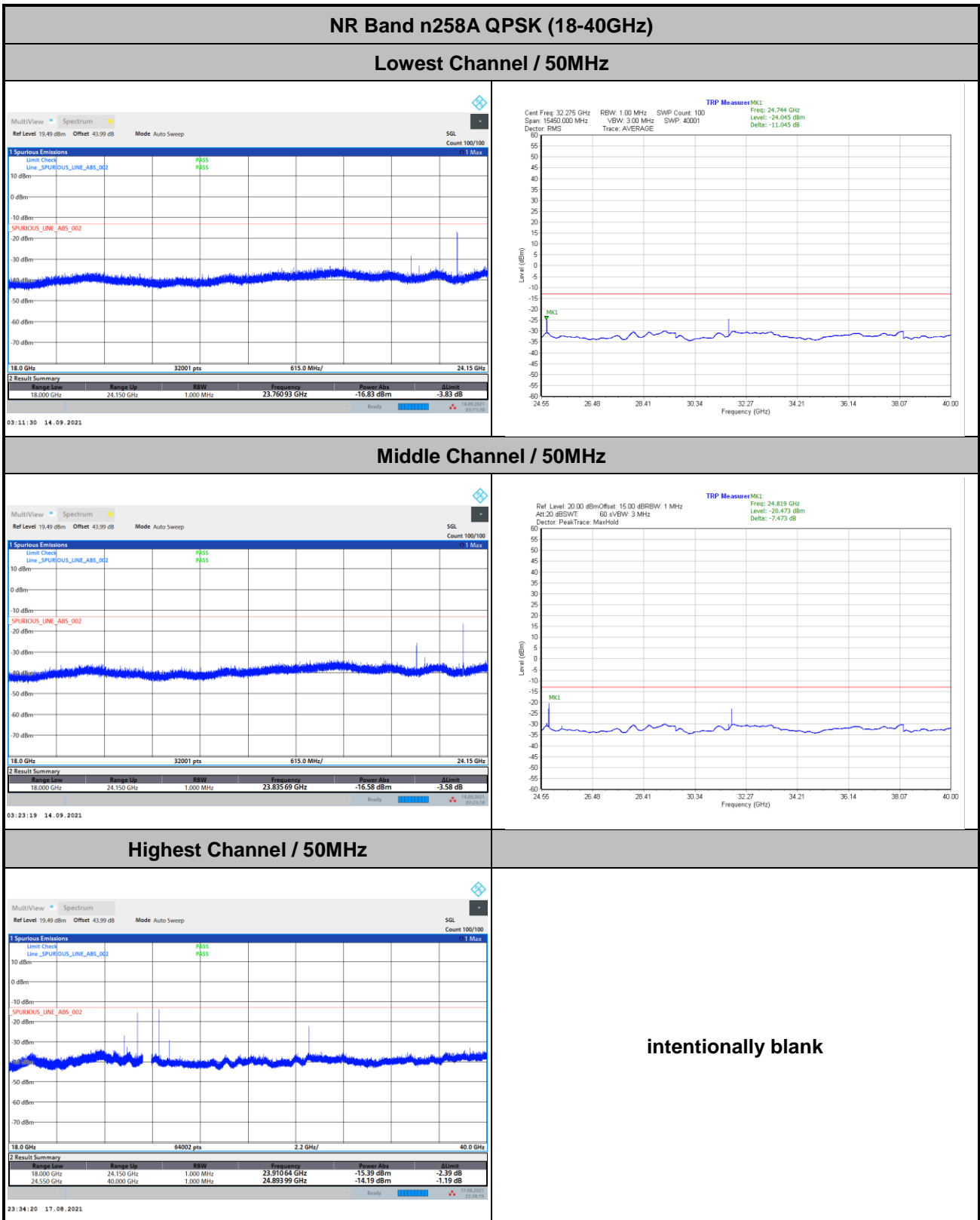




Spurious emission between 18GHz to 40GHz worst case plot is reported as following.

DFT-s-OFDM Module A



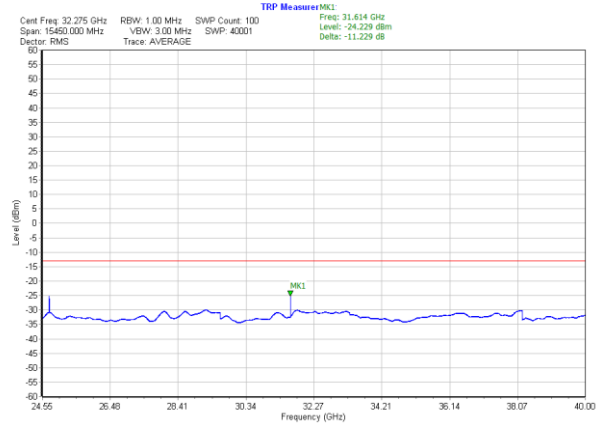
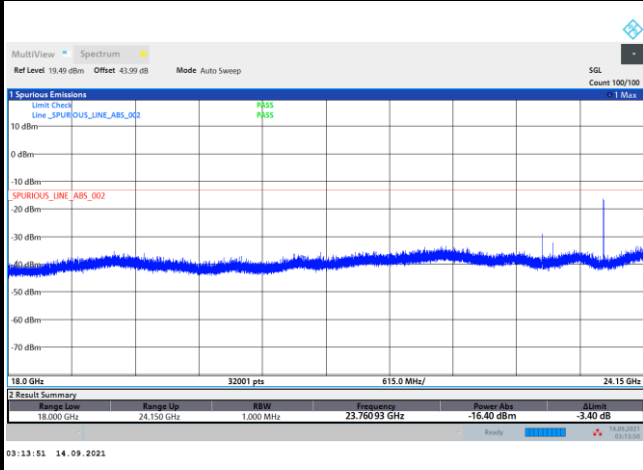
Remark: In band and out of band frequencies that has reported in previous results are omitted.



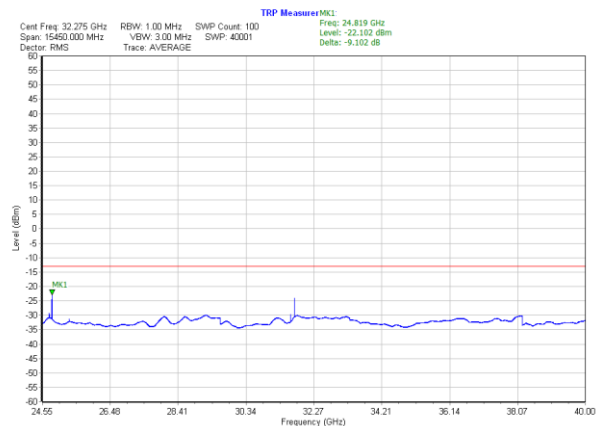
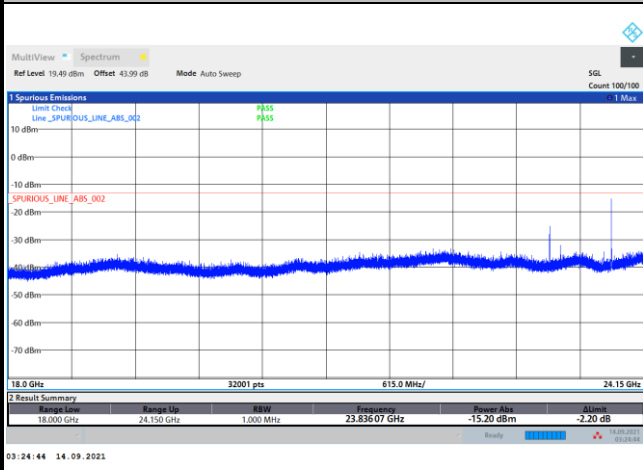
CP-OFDM Module A

NR Band n258A QPSK (18-40GHz)

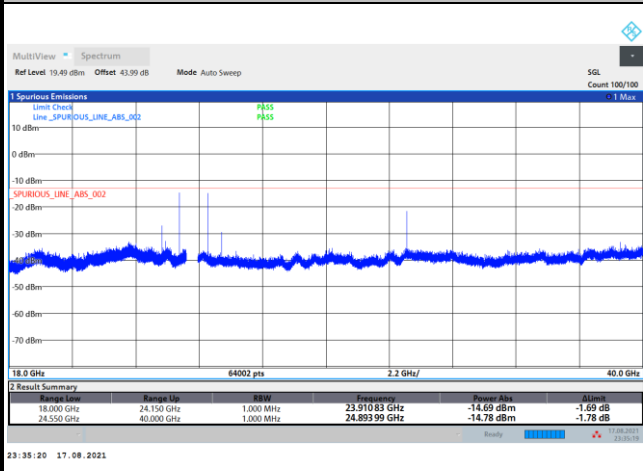
Lowest Channel / 50MHz



Middle Channel / 50MHz



Highest Channel / 50MHz



intentionally blank

Remark: In band and out of band frequencies that has reported in previous results are omitted.



NR Band n258A Module A Beam H+V

Occupied Bandwidth

Mode	DFT-s-OFDM Module A NR Band n258A : 99%OBW(MHz)		
BW	50MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	46.09	46.31	46.22
Middle CH	46.10	46.29	46.21
Highest CH	46.08	46.37	46.23

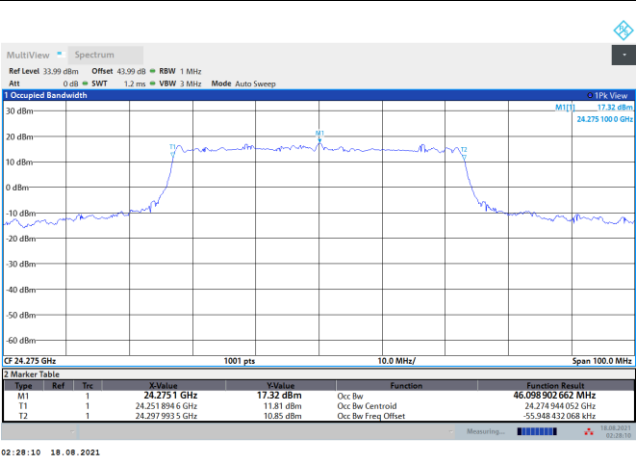
Mode	CP-OFDM Module A NR Band n258A : 99%OBW(MHz)
BW	50MHz
Mod.	QPSK
Lowest CH	46.85
Middle CH	46.65
Highest CH	46.59



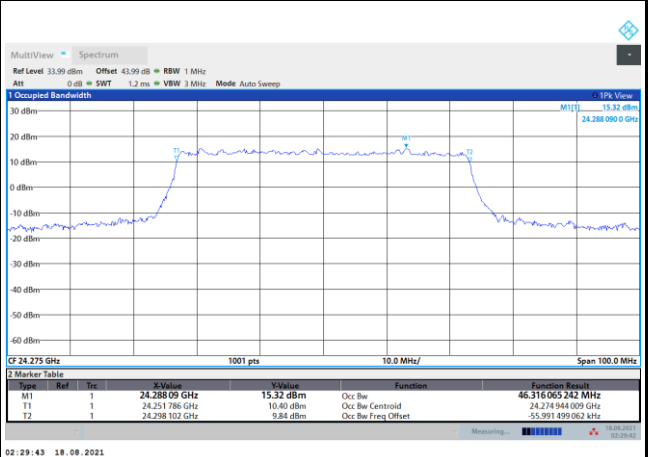
DFT-s-OFDM Module A

NR Band n258A

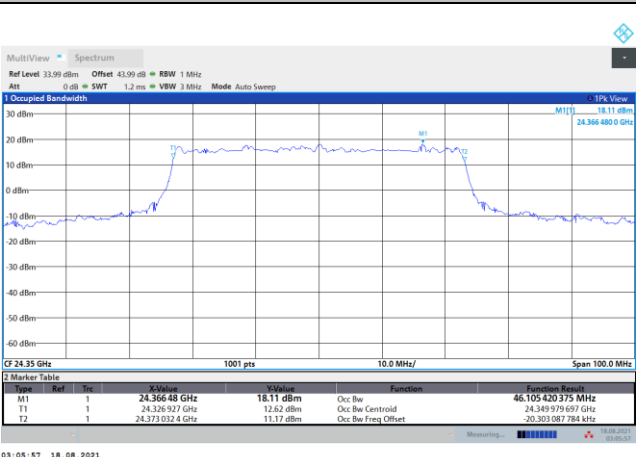
Lowest Channel / 50MHz / QPSK



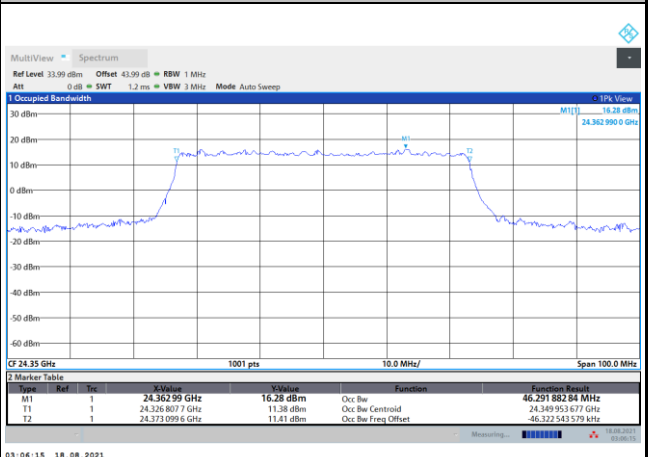
Lowest Channel / 50MHz / 16QAM



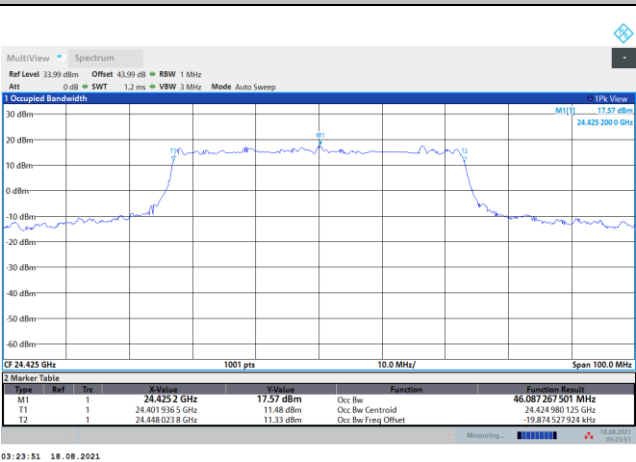
Middle Channel / 50MHz / QPSK



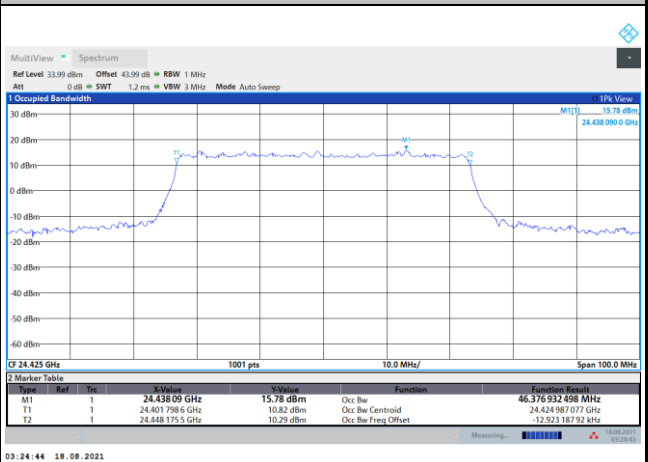
Middle Channel / 50MHz / 16QAM



Highest Channel / 50MHz / QPSK



Highest Channel / 50MHz / 16QAM

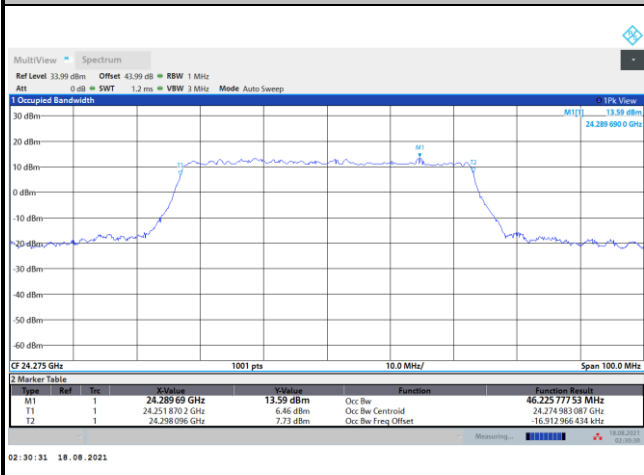




DFT-s-OFDM Module A

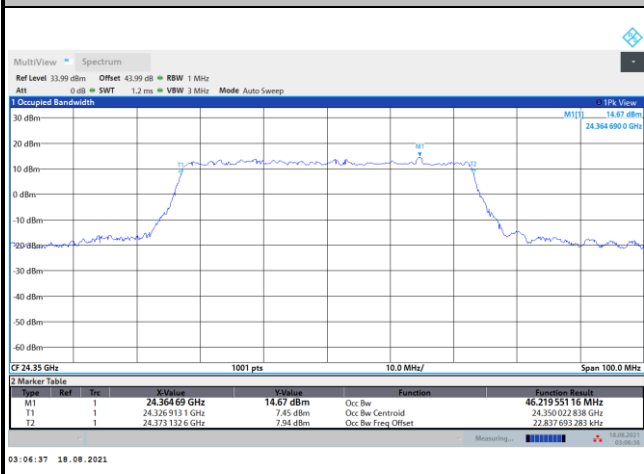
NR Band n258A

Lowest Channel / 50MHz / 64QAM



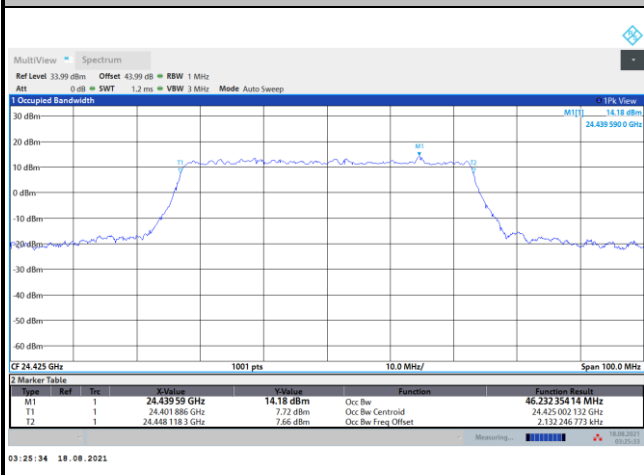
intentionally blank

Middle Channel / 50MHz / 64QAM



intentionally blank

Highest Channel / 50MHz / 64QAM



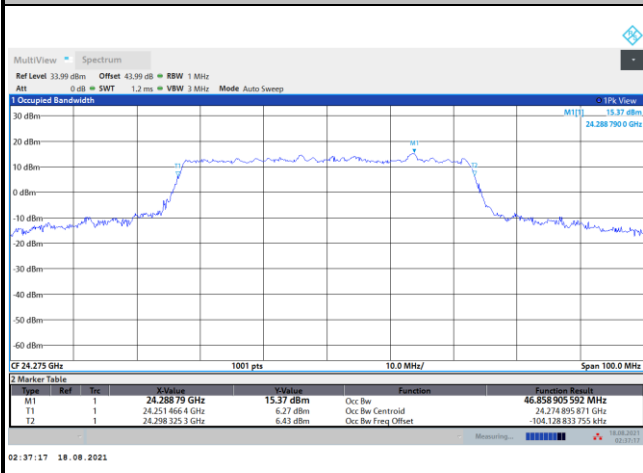
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CP-OFDM Module A

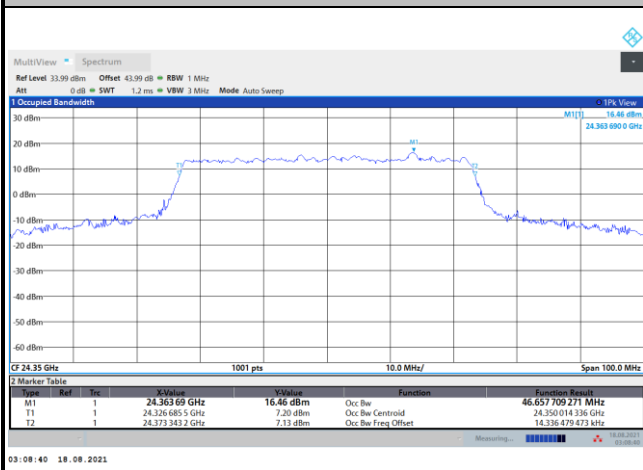
NR Band n258A

Lowest Channel / 50MHz / QPSK



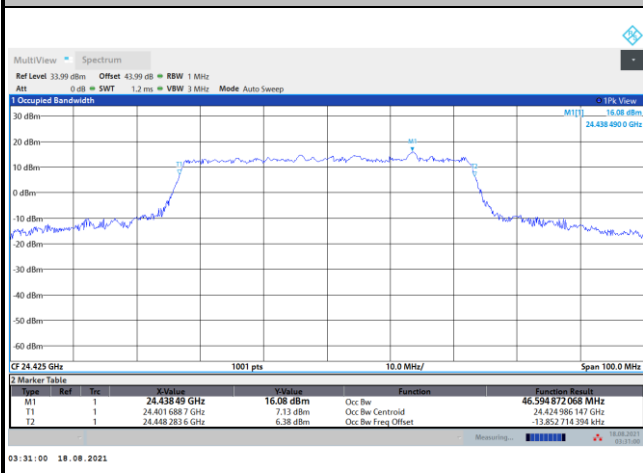
intentionally blank

Middle Channel / 50MHz / QPSK



intentionally blank

Highest Channel / 50MHz / QPSK



intentionally blank



Radiated Out of Band Emissions

Mode			DFT-s-OFDM Module A NR Band n258A : BE (dBm) 1 RB		
BW			50MHz		
Limit (dBm)			QPSK	16QAM	64QAM
Low CH	0~10%OB	≤ -5	-7.29	-9.57	-10.88
	>10%OB	≤ -13	-36.66	-37.97	-39.75
HighCH	0~10%OB	≤ -5	-8.25	-10.70	-11.98
	>10%OB	≤ -13	-36.43	-38.54	-39.62
Result			Compliance		

Mode			CP-OFDM Module A NR Band n258A : BE (dBm) 1 RB		
BW			50MHz		
Limit (dBm)			QPSK		
Low CH	0~10%OB	≤ -5	-9.69		
	>10%OB	≤ -13	-38.47		
High CH	0~10%OB	≤ -5	-9.66		
	>10%OB	≤ -13	-38.25		
Result			Compliance		

Mode			DFT-s-OFDM Module A NR Band n258A : BE (dBm) Full RB		
BW			50MHz		
Limit (dBm)			QPSK	16QAM	64QAM
Low CH	0~10%OB	≤ -5	-15.40	-17.91	-20.14
	>10%OB	≤ -13	-18.34	-21.00	-25.53
HighCH	0~10%OB	≤ -5	-16.00	-17.64	-20.46
	>10%OB	≤ -13	-18.53	-21.86	-26.13
Result			Compliance		

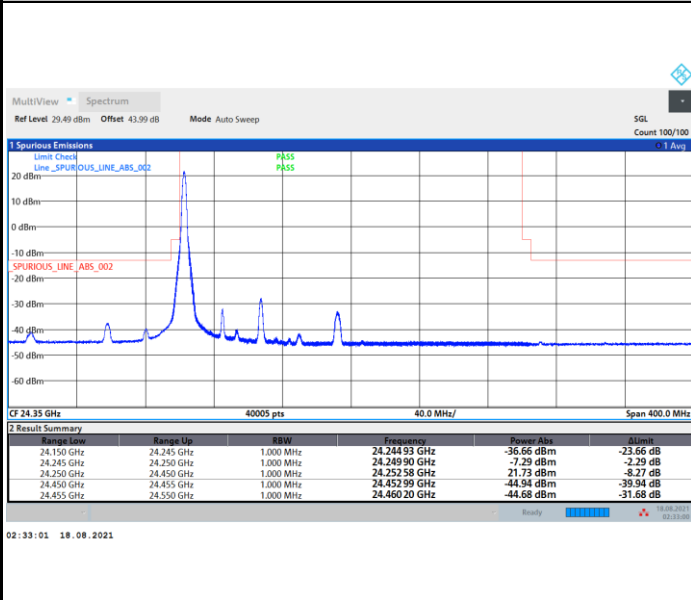
Mode			CP-OFDM Module A NR Band n258A : BE (dBm) Full RB		
BW			50MHz		
Limit (dBm)			QPSK		
Low CH	0~10%OB	≤ -5	-17.08		
	>10%OB	≤ -13	-19.22		
High CH	0~10%OB	≤ -5	-17.05		
	>10%OB	≤ -13	-19.82		
Result			Compliance		



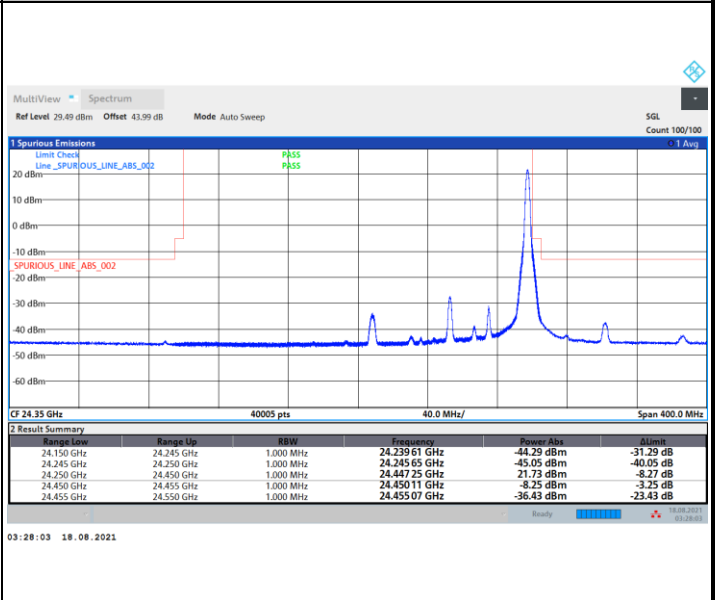
DFT-s-OFDM Module A

NR Band n258A / 50MHz / QPSK

Lowest Band Edge / 1 RB

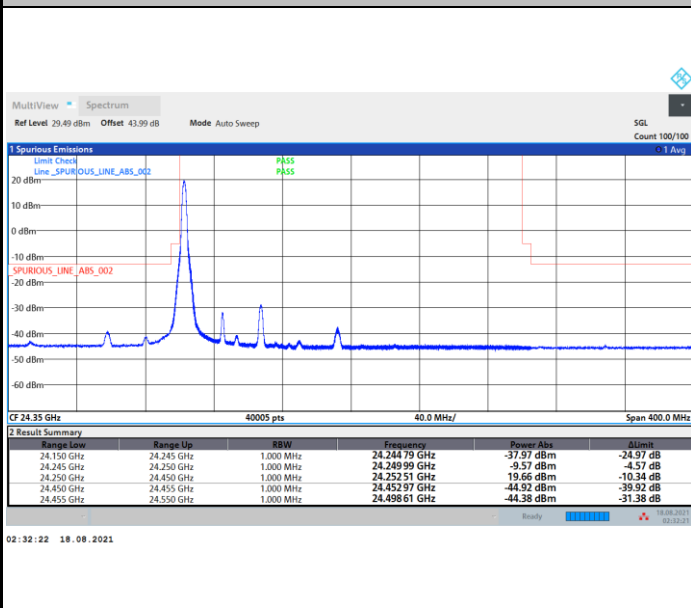


Highest Band Edge / 1 RB

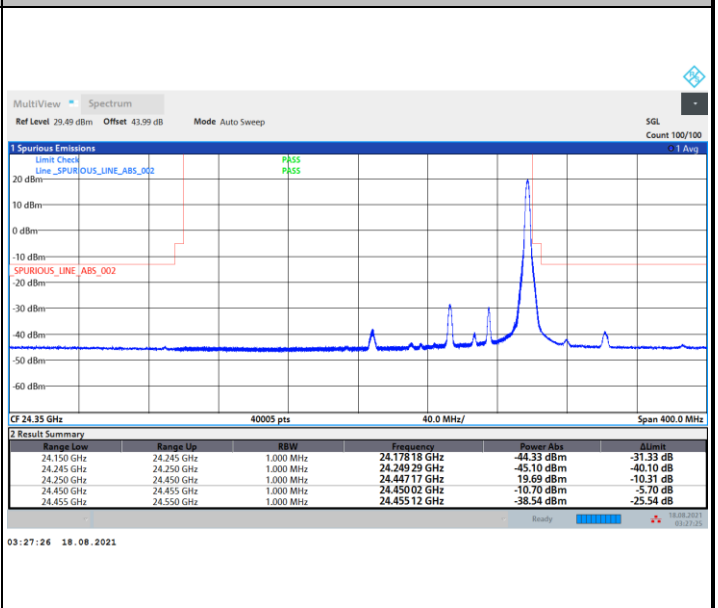


NR Band n258A / 50MHz / 16QAM

Lowest Band Edge / 1 RB

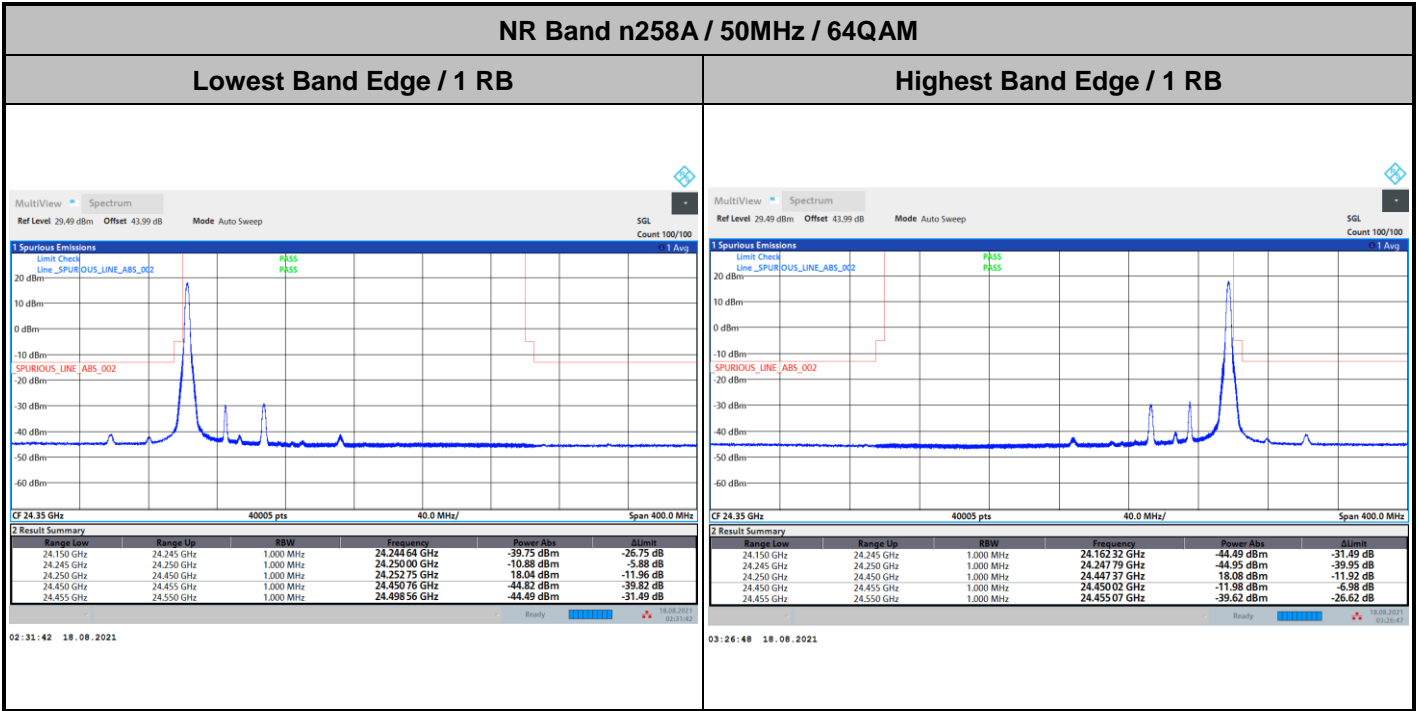


Highest Band Edge / 1 RB

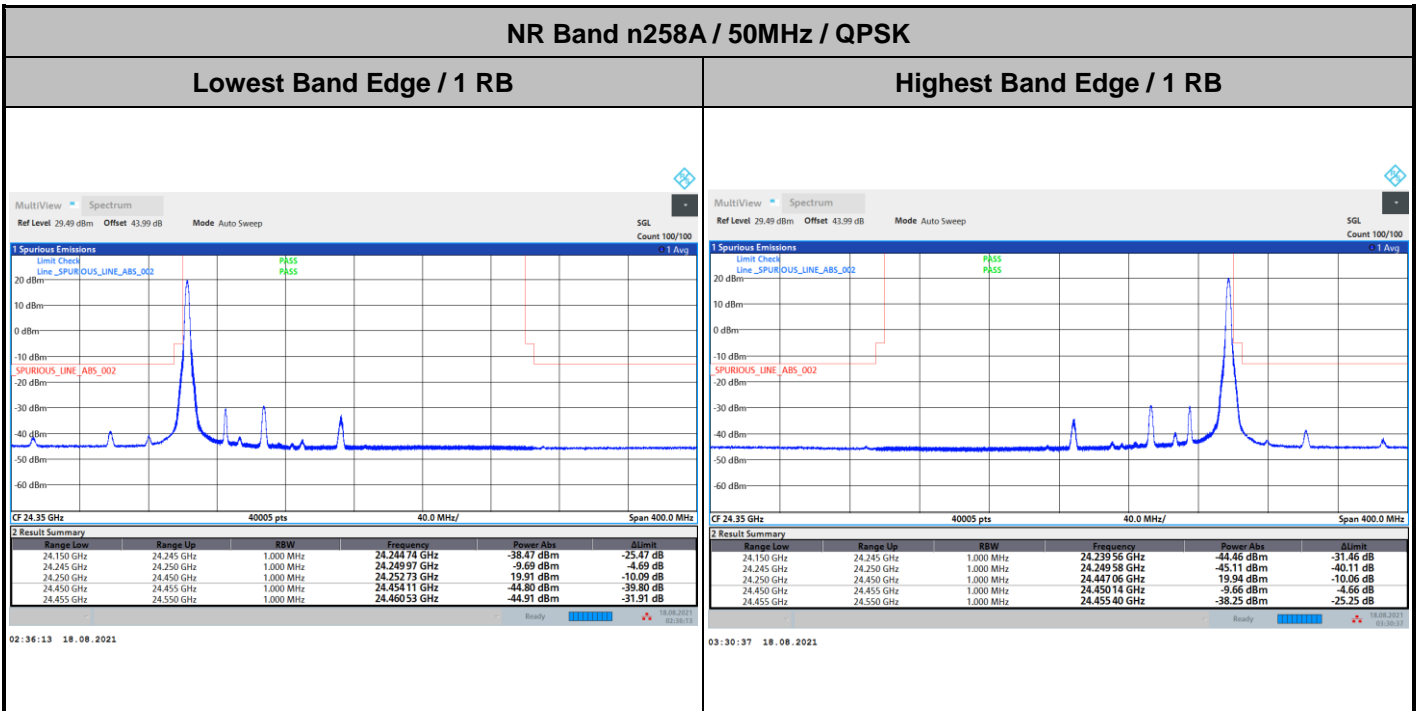




DFT-s-OFDM Module A



CP-OFDM Module A

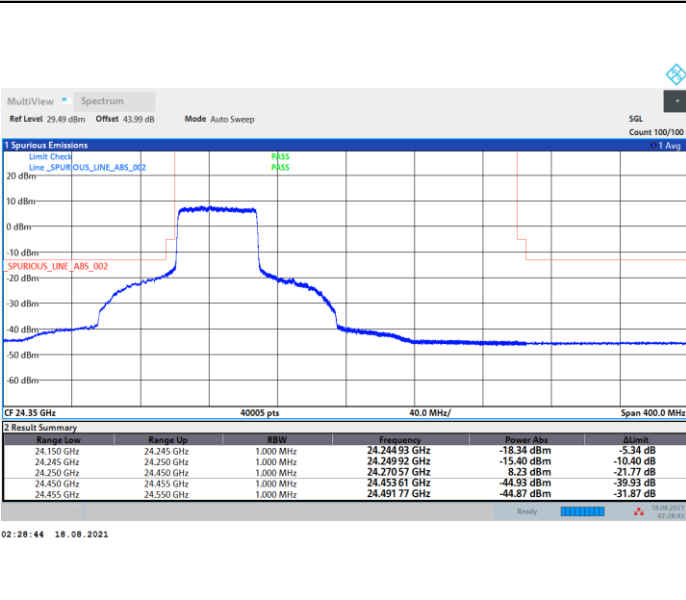




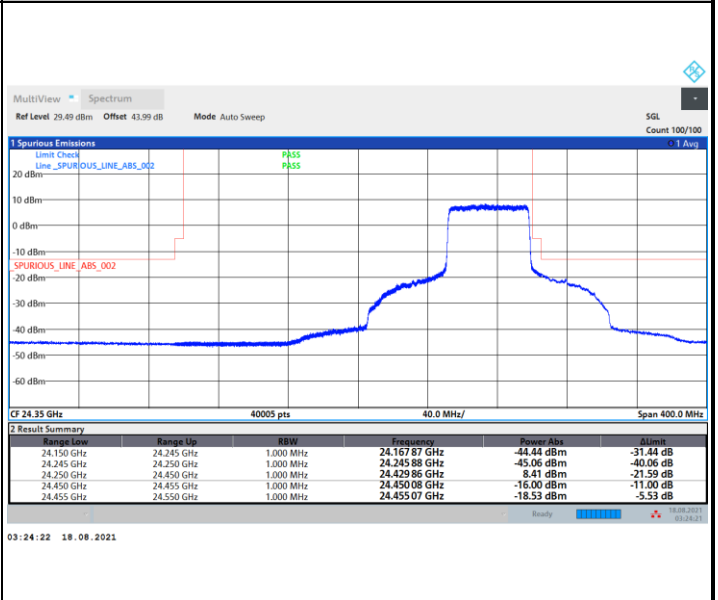
DFT-s-OFDM Module A

NR Band n258A / 50MHz / QPSK

Lowest Band Edge / Full RB

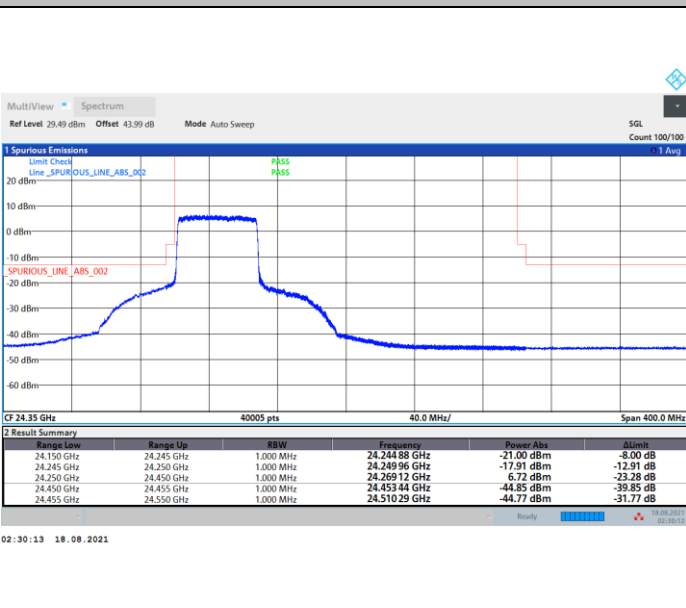


Highest Band Edge / Full RB

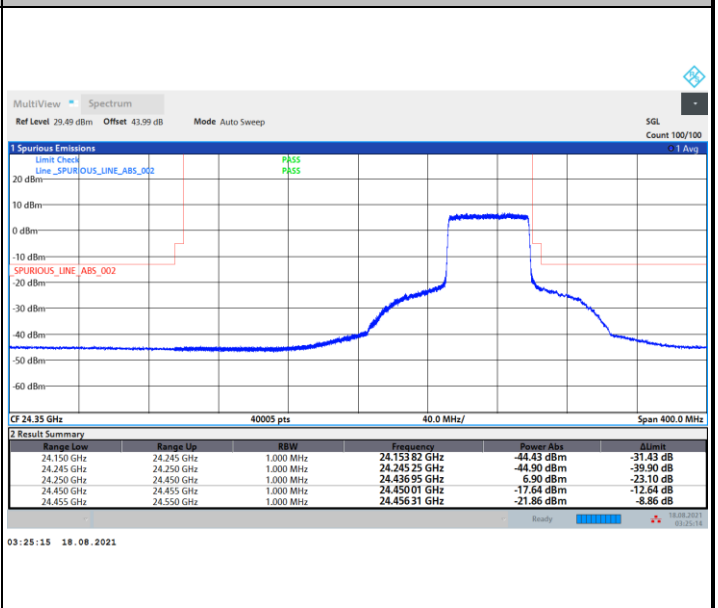


NR Band n258A / 50MHz / 16QAM

Lowest Band Edge / Full RB

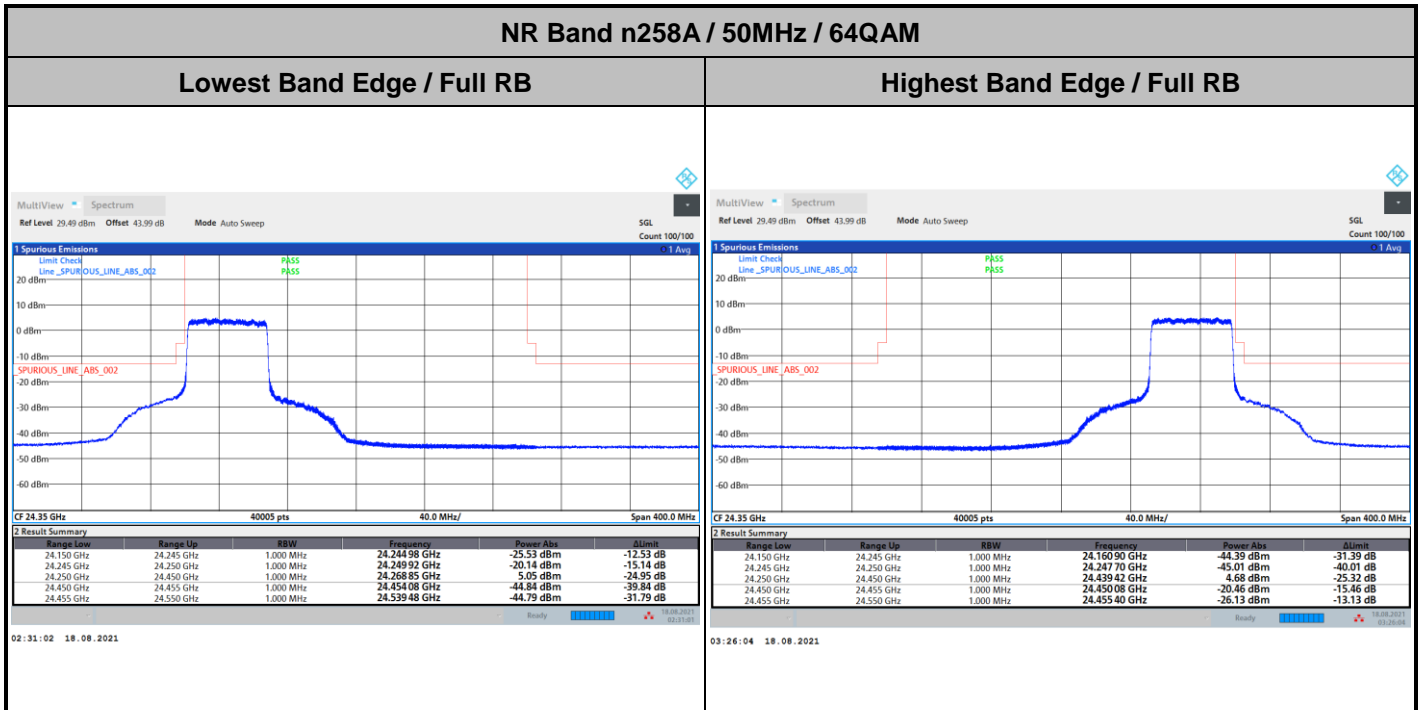


Highest Band Edge / Full RB

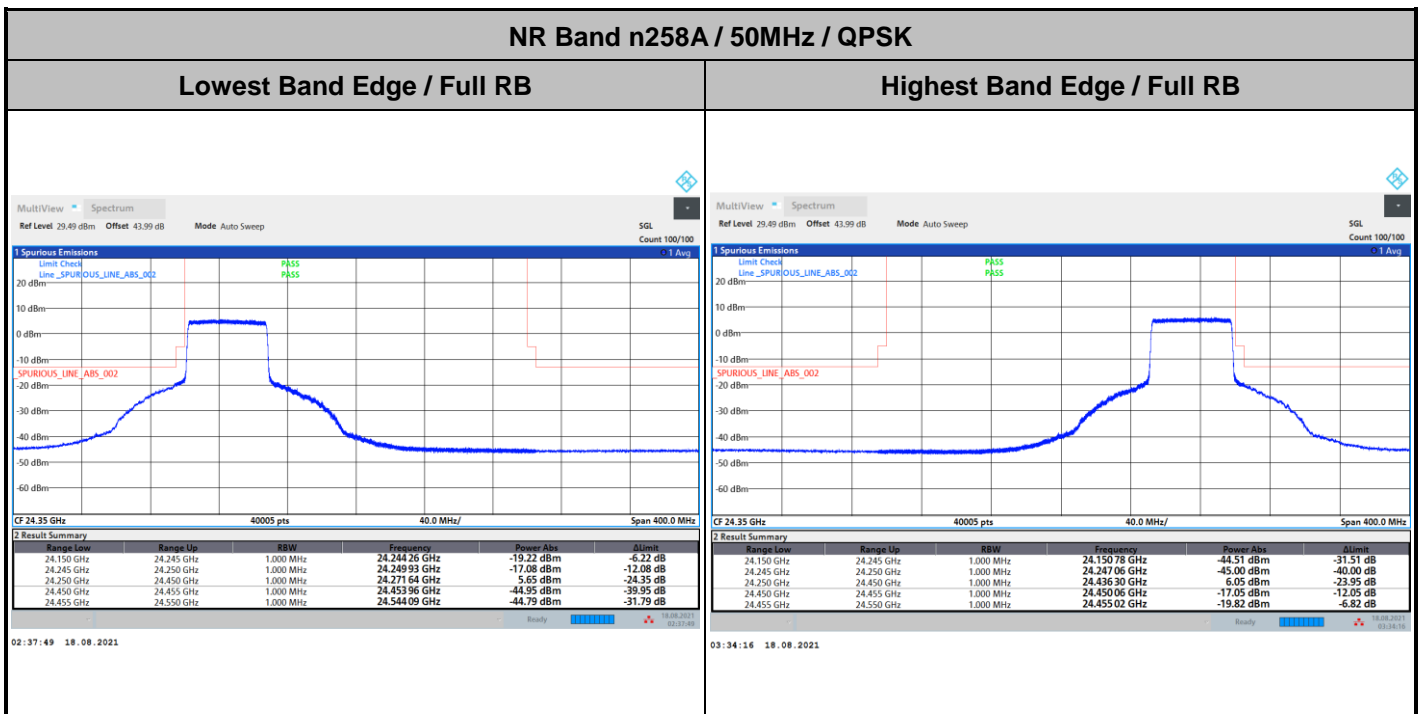




DFT-s-OFDM Module A



CP-OFDM Module A



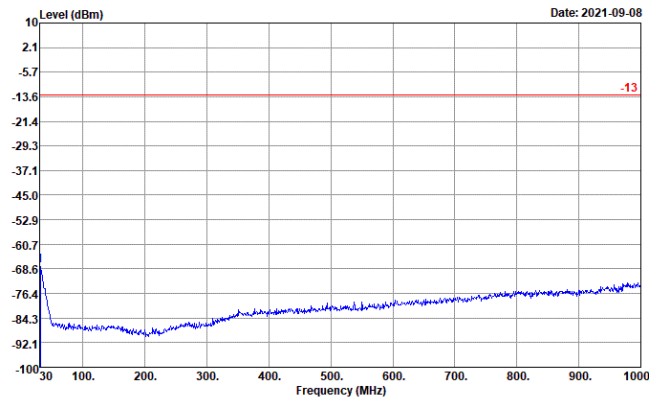


Spurious Emission

There is no significant spurious emission signal found for frequency started from 30MHz up to 18GHz.

NR Band n258A (30MHz-1GHz)

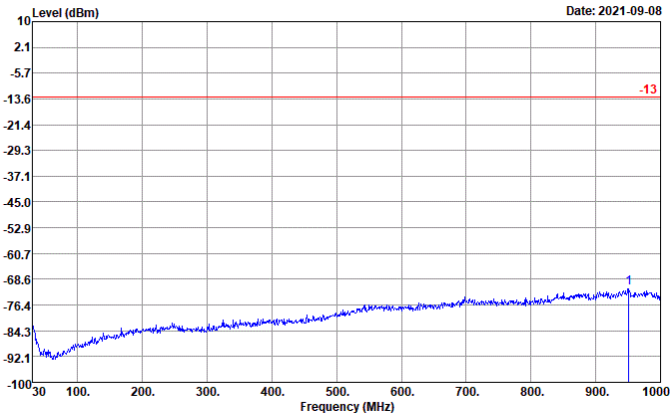
Horizontal



Site : 03CH19-HY
Condition : -13 ERP EIRP_20210305 HORIZONTAL

: n258a											
1	30.99	-67.55	-54.55	-13.00	-78.41	46.59	0.00	35.73	---	---	Peak

Vertical



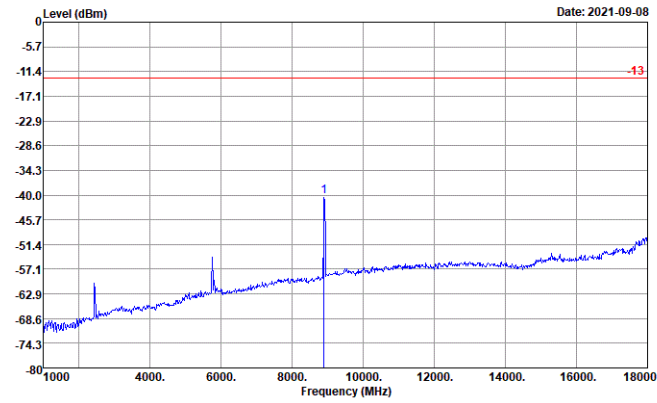
Site : 03CH19-HY
Condition : -13 ERP EIRP_20210305 VERTICAL

: n258a											
1	951.30	-71.23	-58.23	-13.00	-81.01	42.94	0.00	33.16	---	---	Peak



NR Band n258A (1GHz-18GHz)

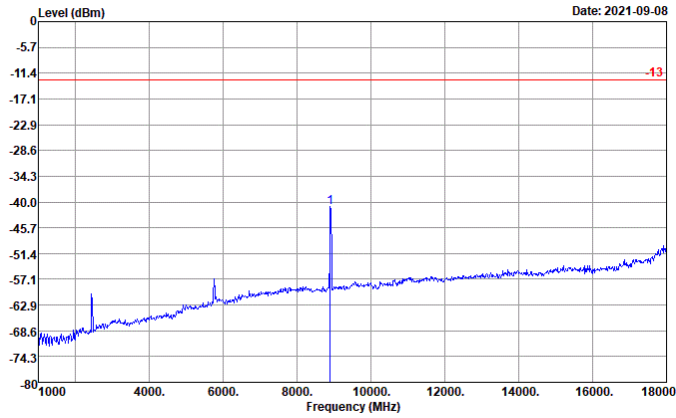
Horizontal



Site : 03CH19-HY
 Condition : -13 ERP EIRP_20210305 HORIZONTAL

: n258a											
Freq	Level	Over	Limit	Read	LISN	Cable	Preamp	A/Pos	T/Pos	Remark	
MHz	dBm	dB	dBm	dBm	dB	dB	dB	cm	deg		
1	8902.00	-40.35	-27.35	-13.00	-65.98	66.45	0.00	40.82	---	---	Peak

Vertical



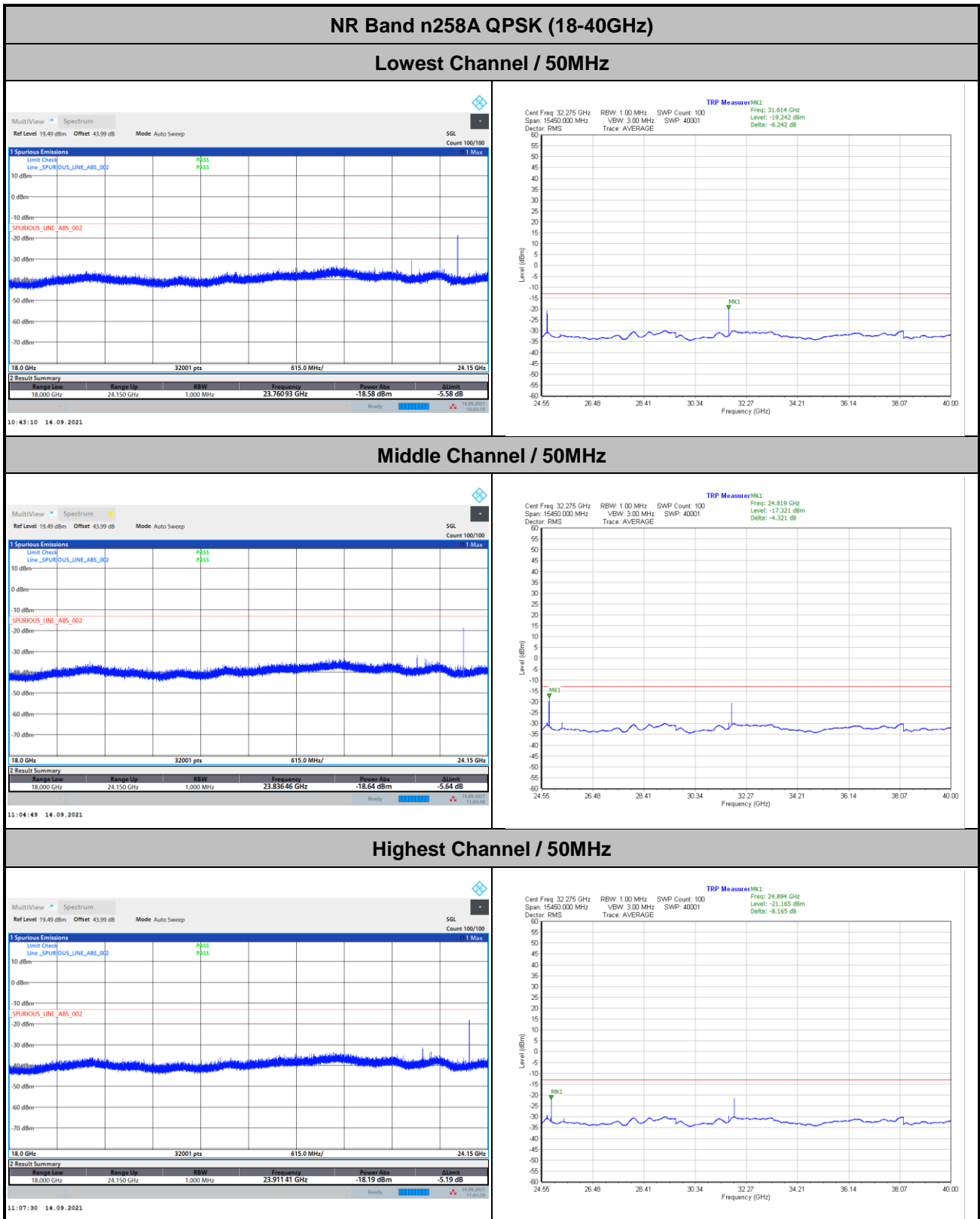
Site : 03CH19-HY
 Condition : -13 ERP EIRP_20210305 VERTICAL

: n258a											
Freq	Level	Over	Limit	Read	LISN	Cable	Preamp	A/Pos	T/Pos	Remark	
MHz	dBm	dB	dBm	dBm	dB	dB	dB	cm	deg		
1	8902.00	-41.24	-28.24	-13.00	-66.33	65.91	0.00	40.82	---	---	Peak



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

DFT-s-OFDM Module A



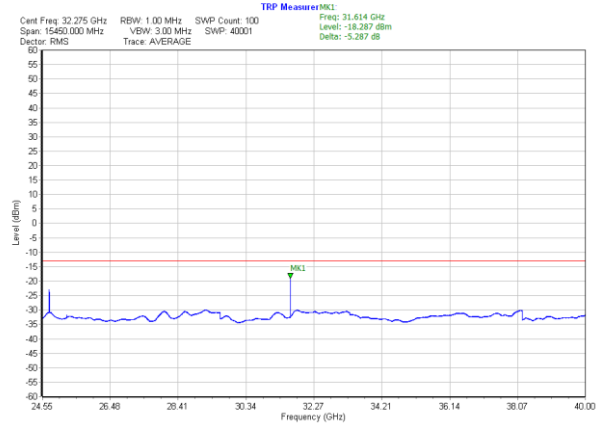
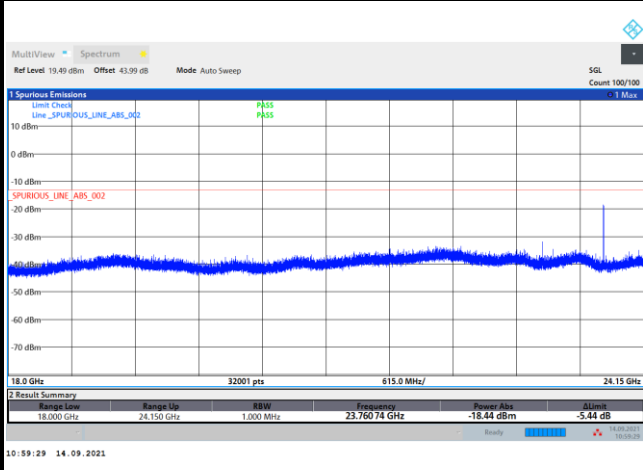
Remark: In band and out of band frequencies that has reported in previous results are omitted.



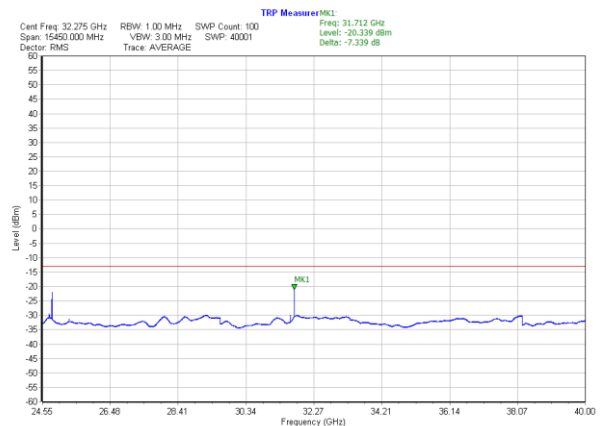
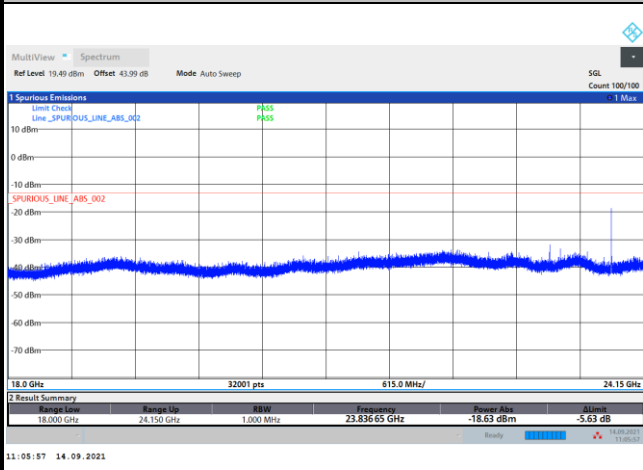
CP-OFDM Module A

NR Band n258A QPSK (18-40GHz)

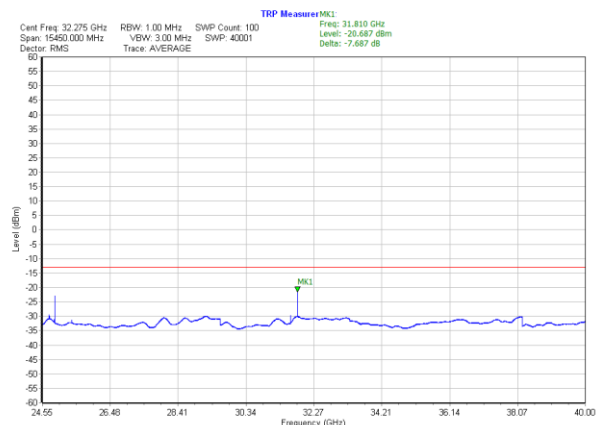
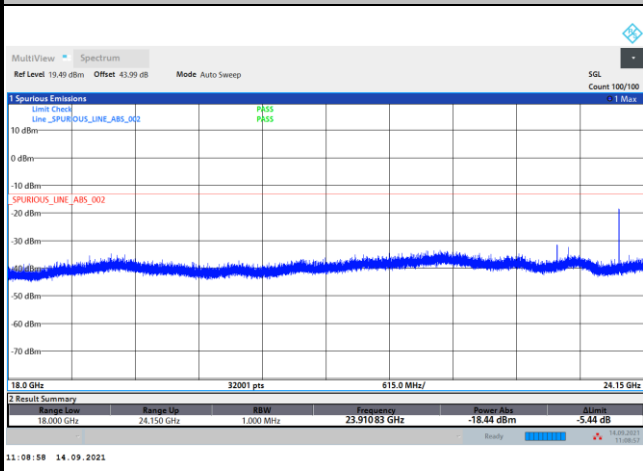
Lowest Channel / 50MHz



Middle Channel / 50MHz



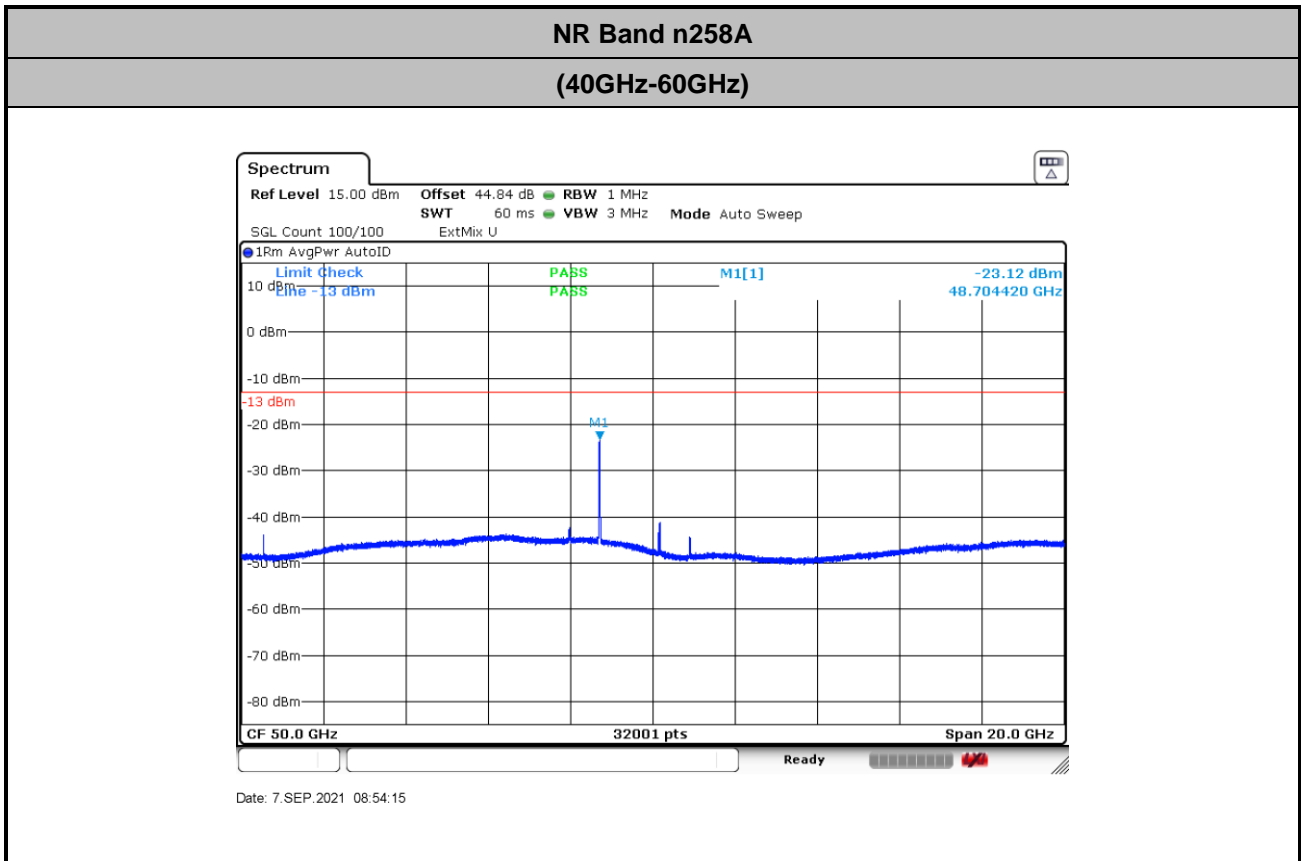
Highest Channel / 50MHz



Remark: In band and out of band frequencies that has reported in previous results are omitted.



There is no significant spurious emission signal found for frequency started from 40GHz up to 100GHz.

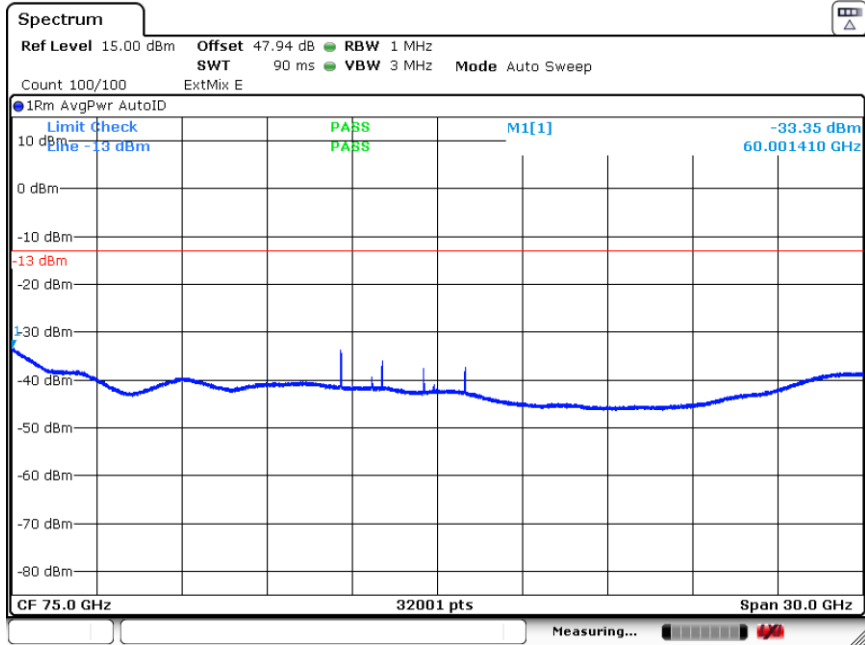


Note: Offset = Antenna Factor (dB/m) + Cable Loss (dB) + 107 + 20log(D) – 104.8
= 42.3 + 0.34 + 107 + 20log(1) – 104.8 = 44.84 (dB)



NR Band n258A

(60GHz-90GHz)

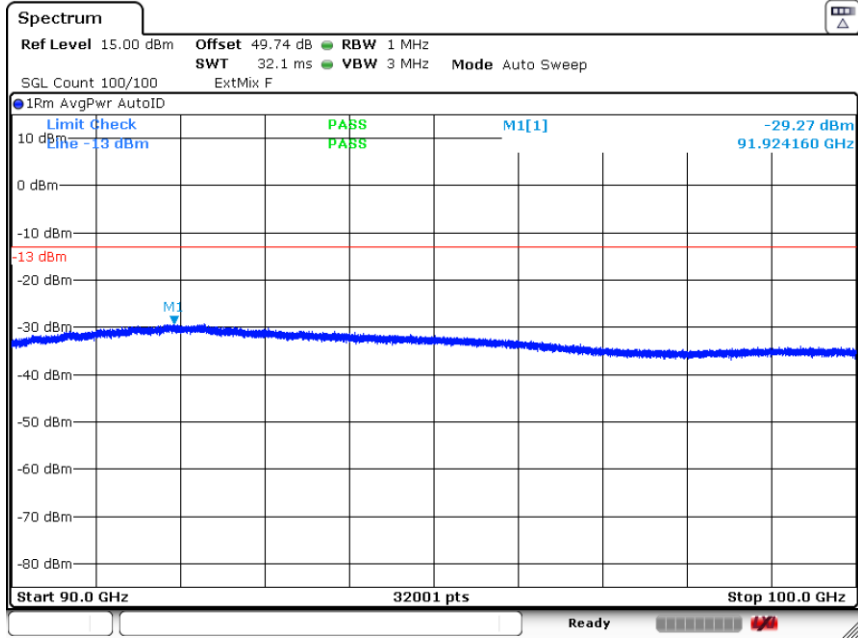


Note: Offset = Antenna Factor (dB/m) + Cable Loss (dB) + 107 + 20log(D) – 104.8
= 45.4 + 0.34 + 107 + 20log(1) – 104.8 = 47.94 (dB)



NR Band n258A

(90GHz-100GHz)



Date: 7.SEP.2021 08:59:39

Note: Offset = Antenna Factor (dB/m) + Cable Loss (dB) + 107 + 20log(D) – 104.8
= 47.2 + 0.34 + 107 + 20log(1) – 104.8 = 49.74 (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	24.35103295	0.250	0.010	Pass
40	Normal Voltage	24.3510332	0.000	0.000	
30	Normal Voltage	24.3510332	0.000	0.000	
20(Ref.)	Normal Voltage	24.3510332	0.000	0.000	
10	Normal Voltage	24.35103295	0.250	0.010	
0	Normal Voltage	24.35103295	0.250	0.010	
-10	Normal Voltage	24.35103295	0.250	0.010	
-20	Normal Voltage	24.35103295	0.250	0.010	
-30	Normal Voltage	24.35103295	0.250	0.010	
20	Maximum Voltage	24.3510332	0.000	0.000	
20	Normal Voltage	24.3510332	0.000	0.000	
20	Battery End Point	24.3510332	0.000	0.000	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.60 V. ; Maximum Voltage =4.45 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



NR Band n258A Module B Beam H

Occupied Bandwidth

Mode	DFT-s-OFDM Module B NR Band n258A : 99%OBW(MHz)		
BW	50MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	45.98	46.26	46.35
Middle CH	45.96	46.24	46.38
Highest CH	45.96	46.25	46.41

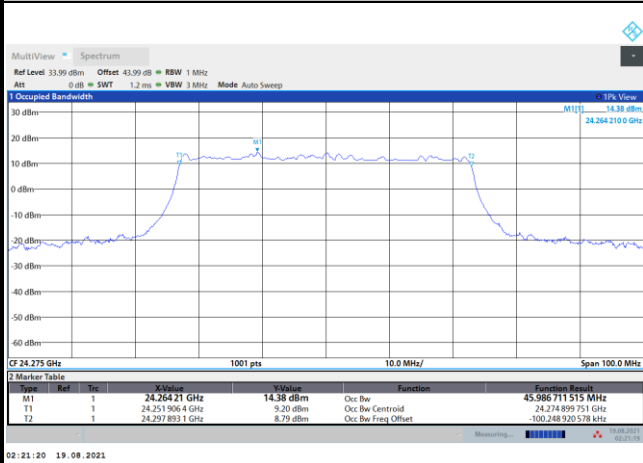
Mode	CP-OFDM Module B NR Band n258A : 99%OBW(MHz)	
BW	50MHz	
Mod.	QPSK	
Lowest CH	46.28	
Middle CH	46.23	
Highest CH	46.13	



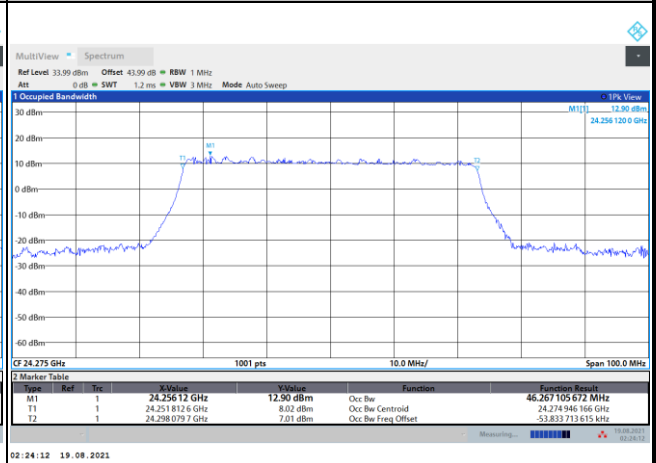
DFT-s-OFDM Module B

NR Band n258A

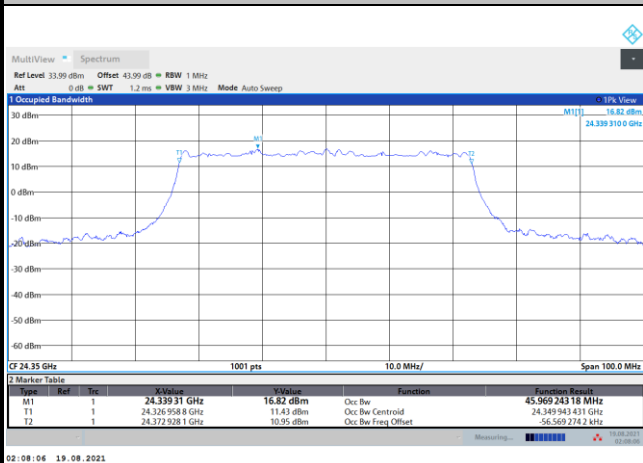
Lowest Channel / 50MHz / QPSK



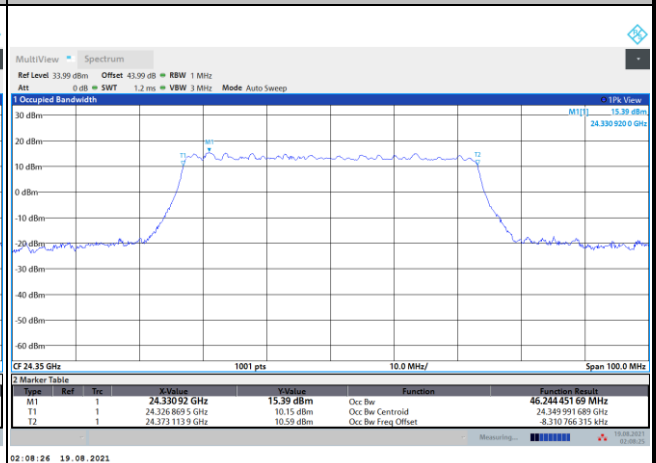
Lowest Channel / 50MHz / 16QAM



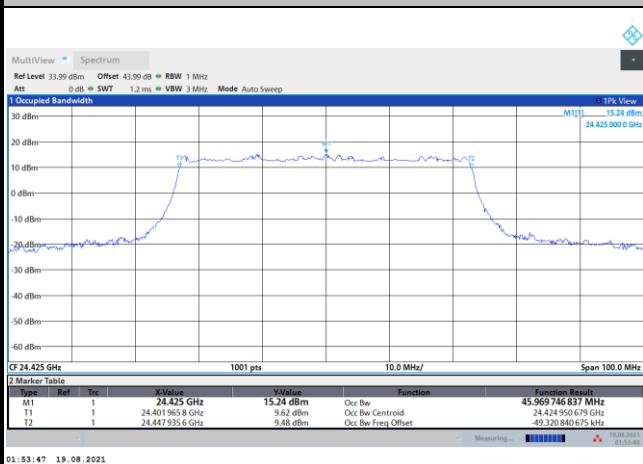
Middle Channel / 50MHz / QPSK



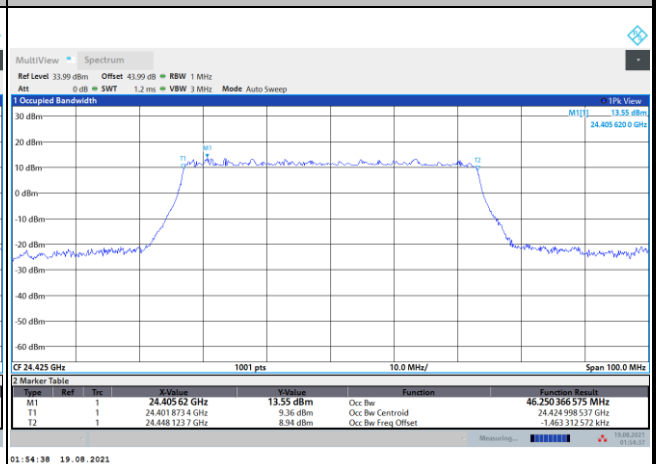
Middle Channel / 50MHz / 16QAM



Highest Channel / 50MHz / QPSK



Highest Channel / 50MHz / 16QAM

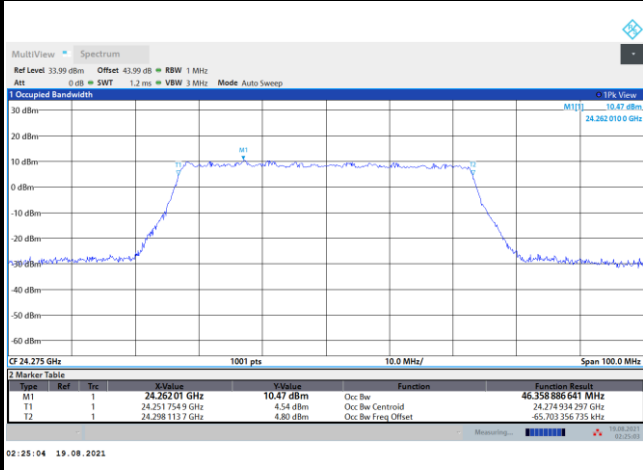




DFT-s-OFDM Module B

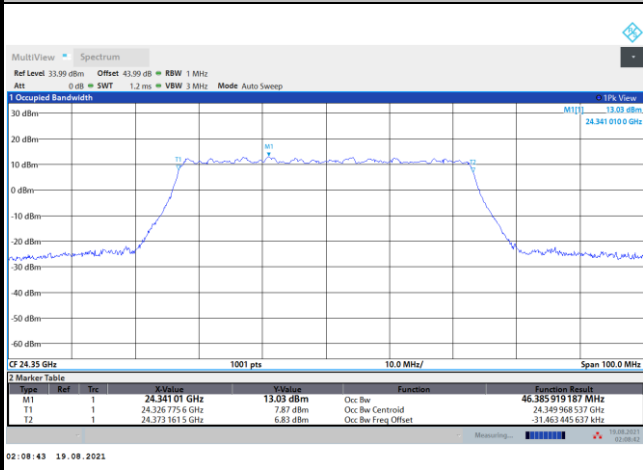
NR Band n258A

Lowest Channel / 50MHz / 64QAM



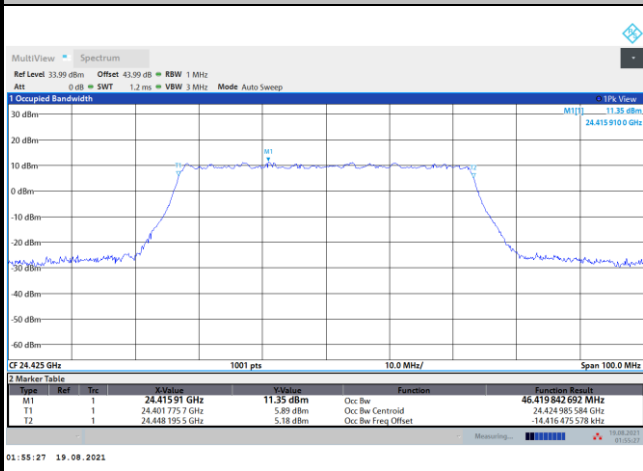
intentionally blank

Middle Channel / 50MHz / 64QAM



intentionally blank

Highest Channel / 50MHz / 64QAM



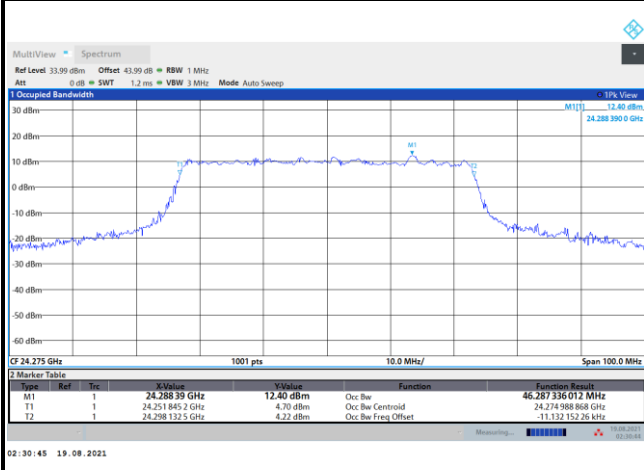
intentionally blank



CP-OFDM Module B

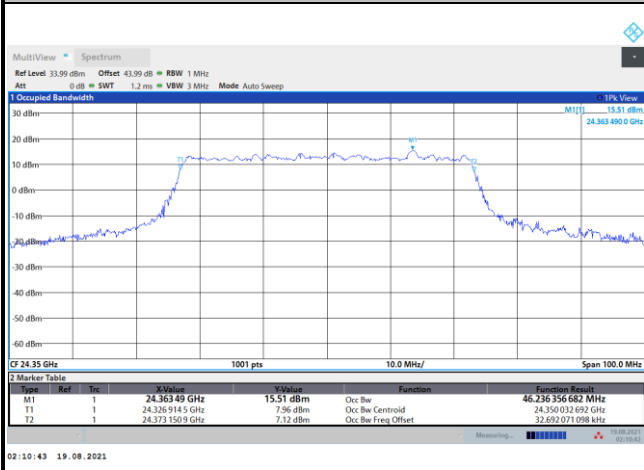
NR Band n258A

Lowest Channel / 50MHz / QPSK



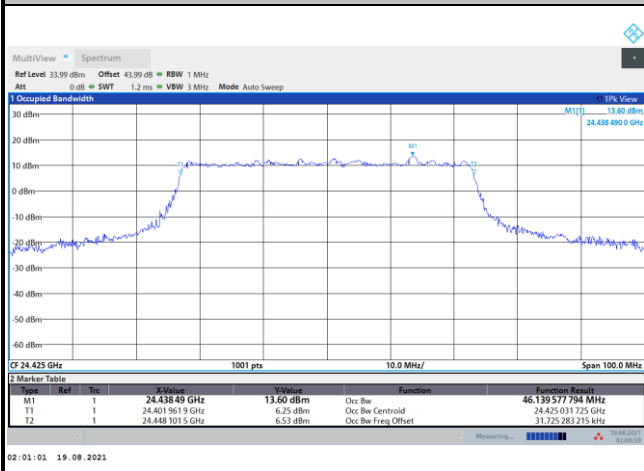
intentionally blank

Middle Channel / 50MHz / QPSK



intentionally blank

Highest Channel / 50MHz / QPSK



intentionally blank



Radiated Out of Band Emissions

Mode			DFT-s-OFDM Module B NR Band n258A : BE (dBm) 1 RB		
BW			50MHz		
Limit (dBm)			QPSK	16QAM	64QAM
Low CH	0~10%OB	≤ -5	-10.96	-10.62	-14.65
	>10%OB	≤ -13	-38.84	-38.94	-40.66
HighCH	0~10%OB	≤ -5	-11.49	-12.26	-14.31
	>10%OB	≤ -13	-37.59	-37.78	-39.55
Result			Compliance		

Mode			CP-OFDM Module B NR Band n258A : BE (dBm) 1 RB		
BW			50MHz		
Limit (dBm)			QPSK		
Low CH	0~10%OB	≤ -5	-12.51		
	>10%OB	≤ -13	-40.28		
High CH	0~10%OB	≤ -5	-13.22		
	>10%OB	≤ -13	-38.82		
Result			Compliance		

Mode			DFT-s-OFDM Module B NR Band n258A : BE (dBm) Full RB		
BW			50MHz		
Limit (dBm)			QPSK	16QAM	64QAM
Low CH	0~10%OB	≤ -5	-20.74	-22.12	-23.85
	>10%OB	≤ -13	-27.90	-31.21	-35.44
HighCH	0~10%OB	≤ -5	-20.41	-21.21	-23.00
	>10%OB	≤ -13	-25.73	-30.24	-34.29
Result			Compliance		

Mode			CP-OFDM Module B NR Band n258A : BE (dBm) Full RB		
BW			50MHz		
Limit (dBm)			QPSK		
Low CH	0~10%OB	≤ -5	-22.10		
	>10%OB	≤ -13	-28.10		
High CH	0~10%OB	≤ -5	-21.15		
	>10%OB	≤ -13	-26.46		
Result			Compliance		

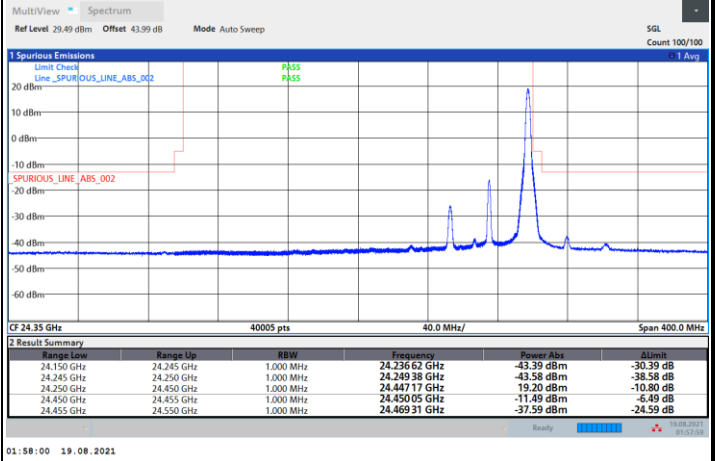
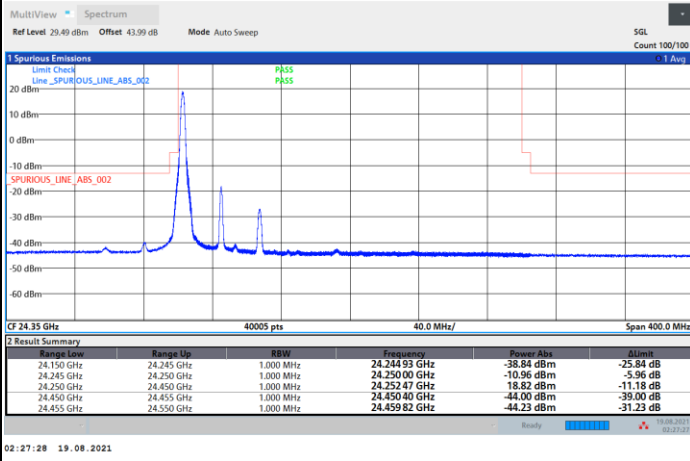


DFT-s-OFDM Module B

NR Band n258A / 50MHz / QPSK

Lowest Band Edge / 1 RB

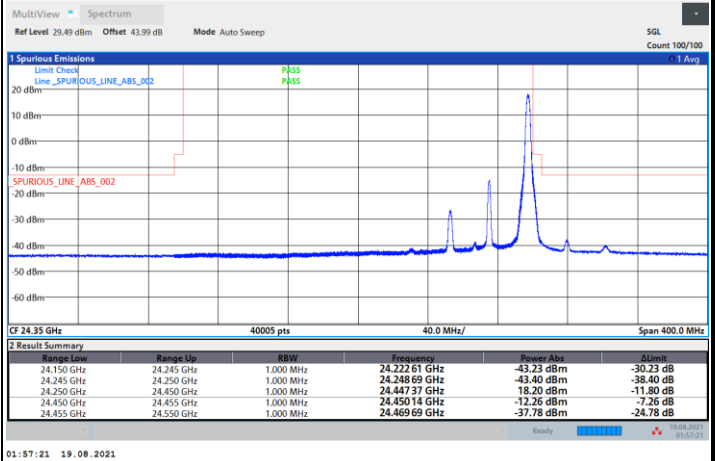
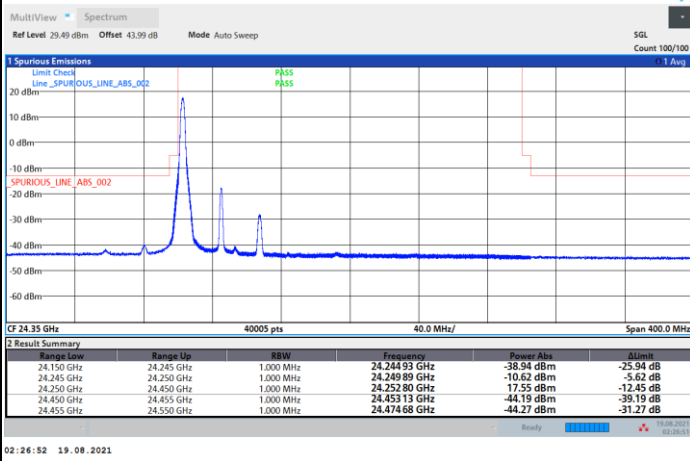
Highest Band Edge / 1 RB



NR Band n258A / 50MHz / 16QAM

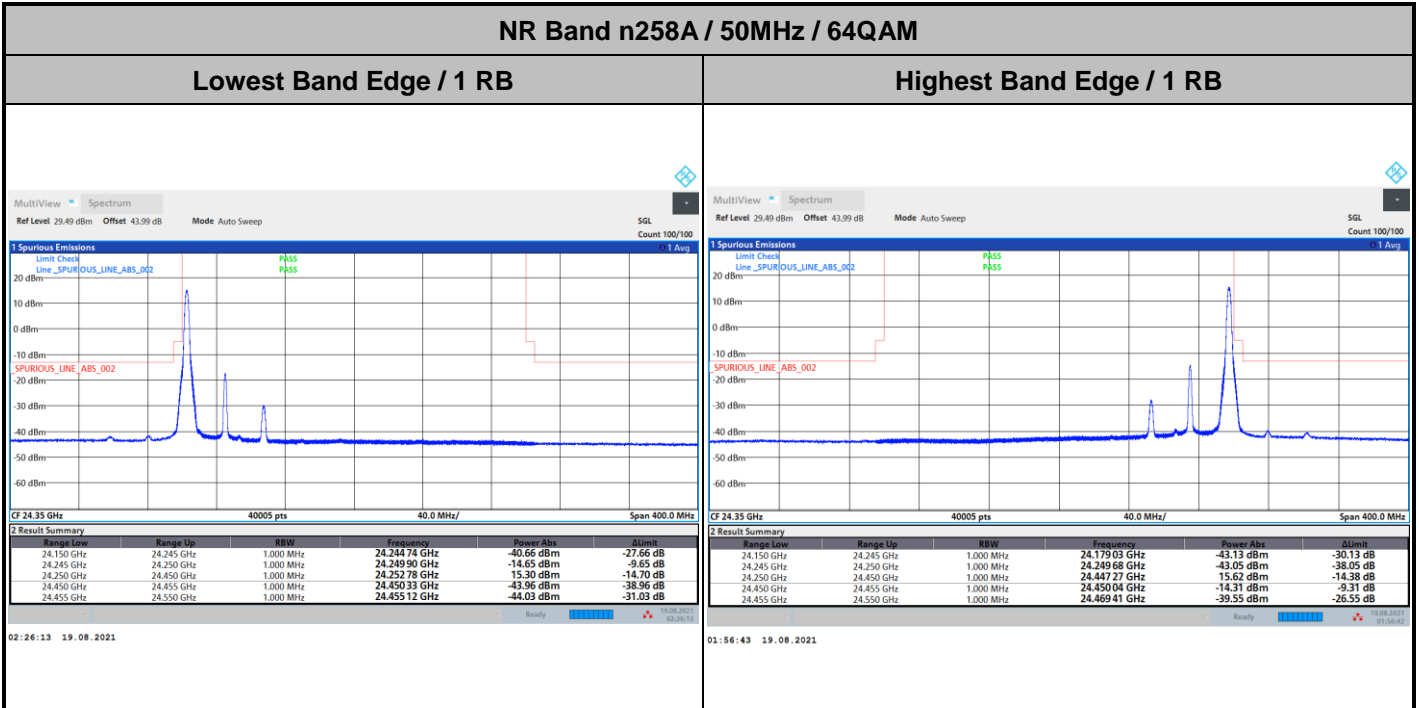
Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

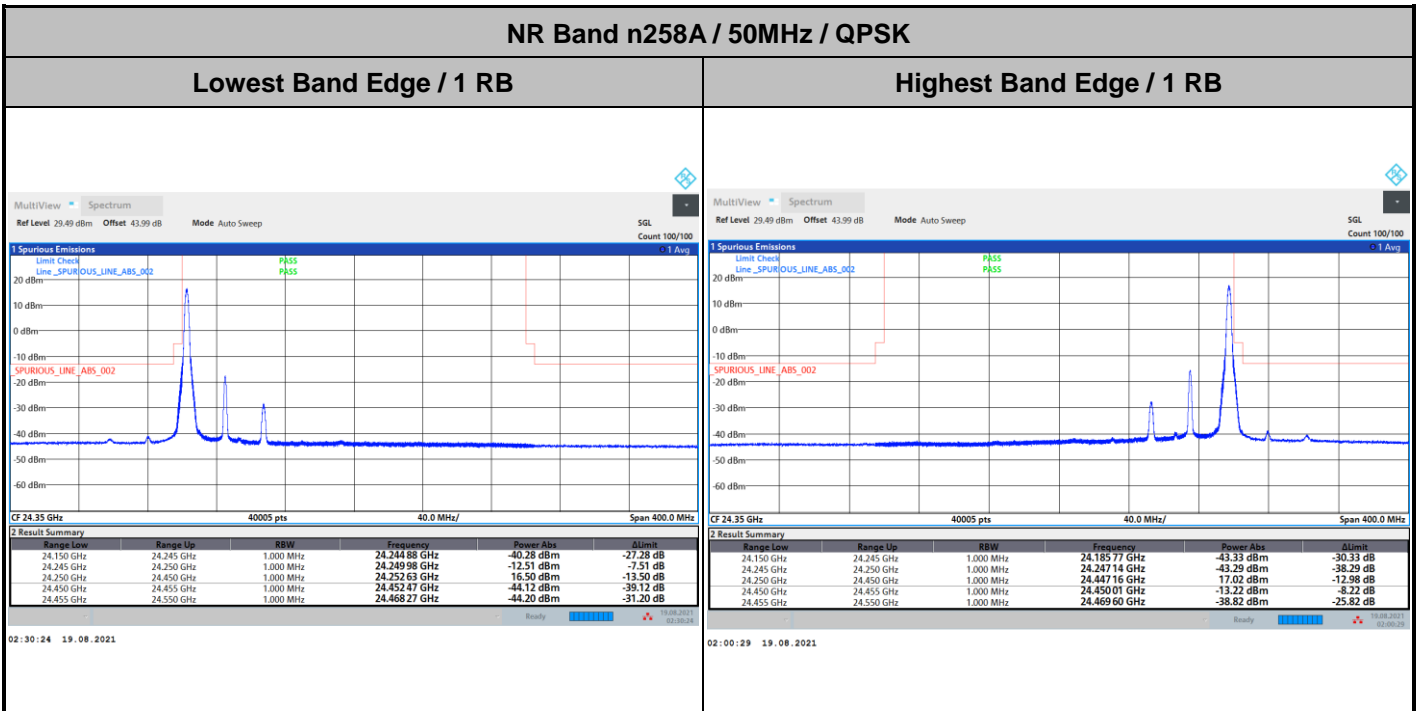




DFT-s-OFDM Module B



CP-OFDM Module B



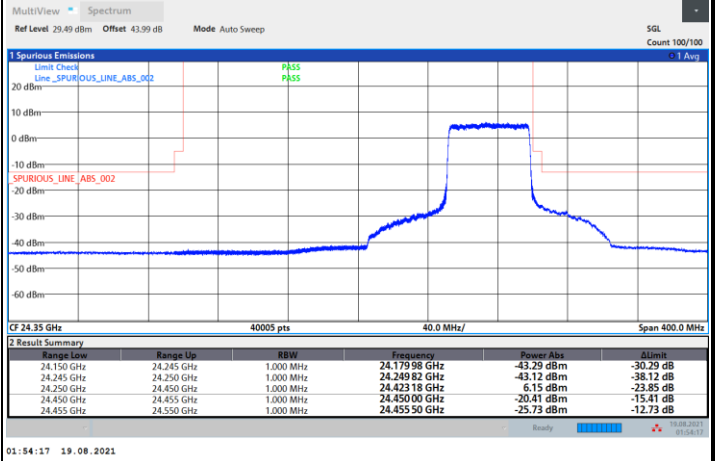
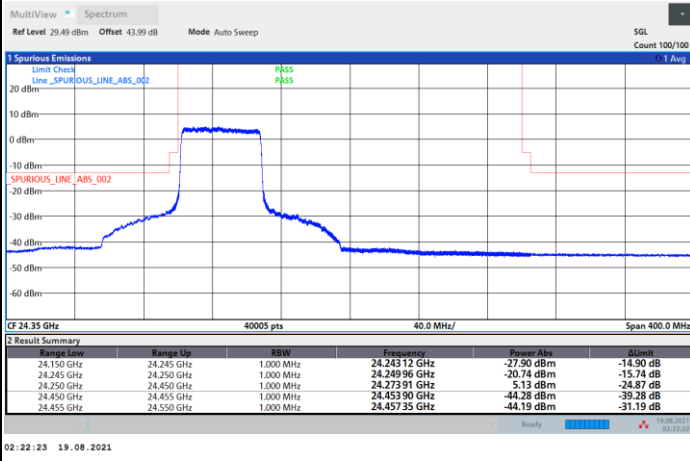


DFT-s-OFDM Module B

NR Band n258A / 50MHz / QPSK

Lowest Band Edge / Full RB

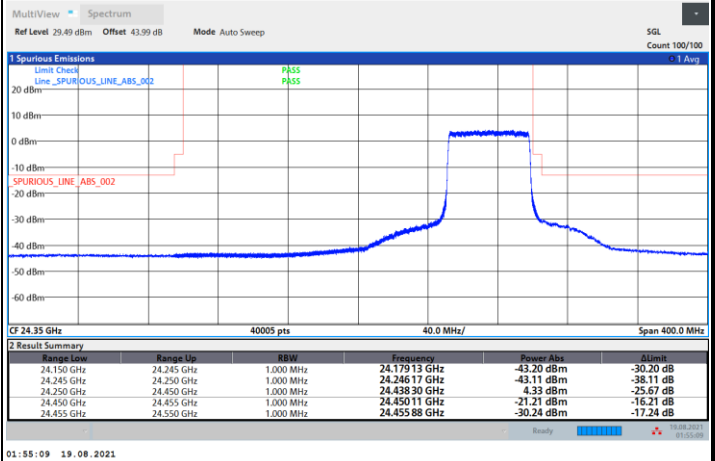
Highest Band Edge / Full RB



NR Band n258A / 50MHz / 16QAM

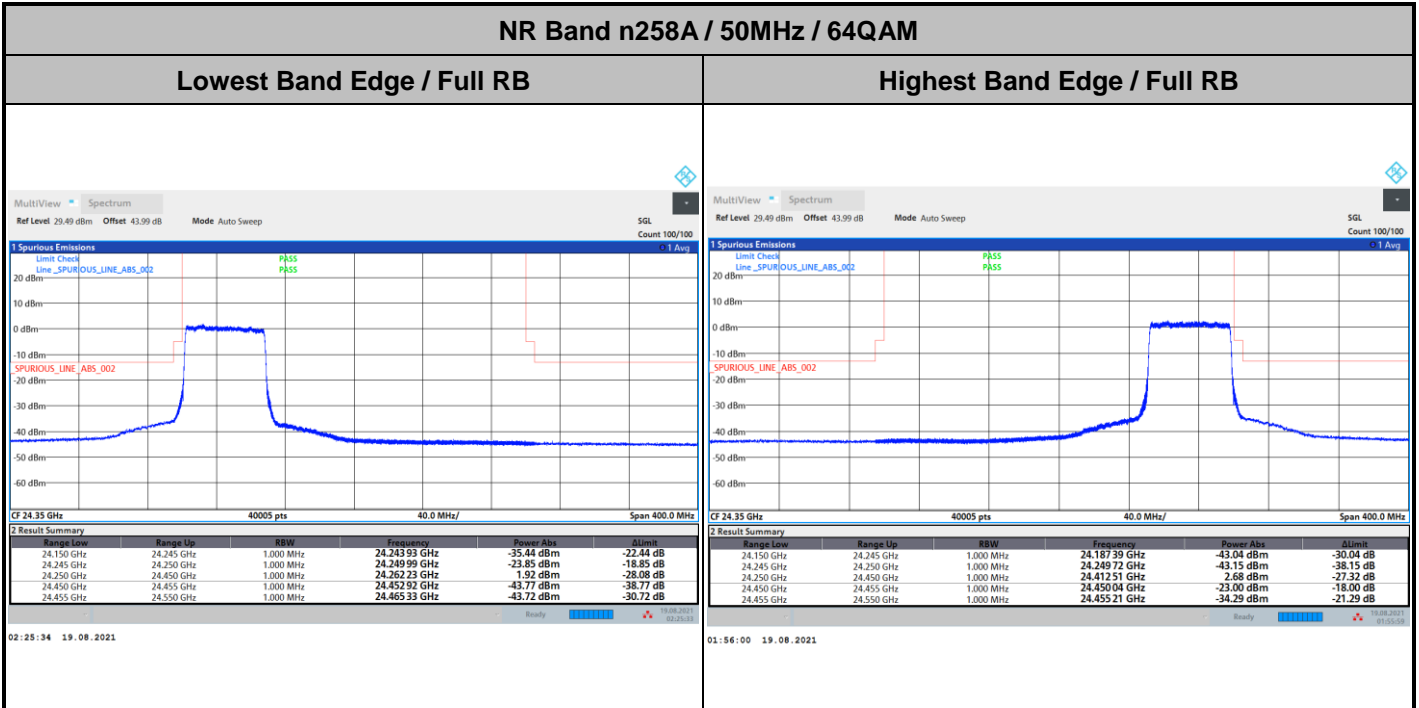
Lowest Band Edge / Full RB

Highest Band Edge / Full RB

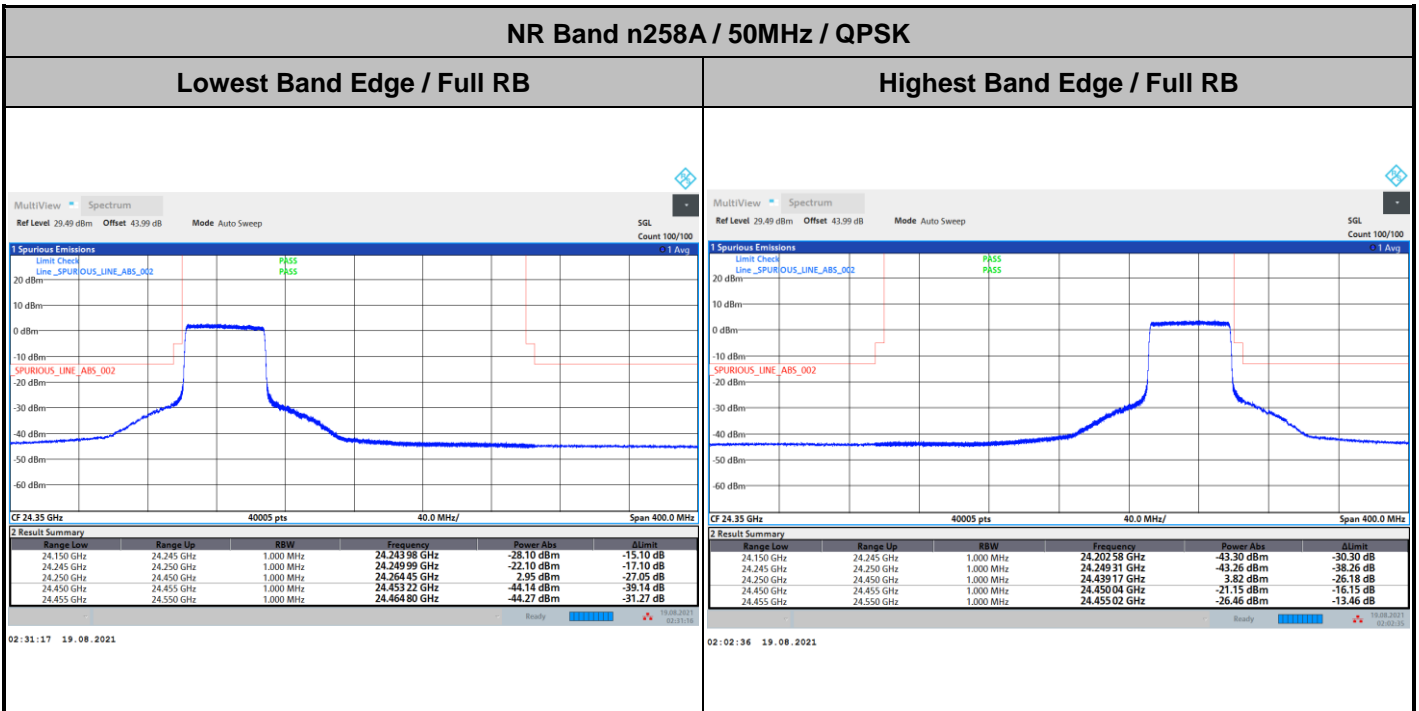




DFT-s-OFDM Module B



CP-OFDM Module B





Spurious Emission

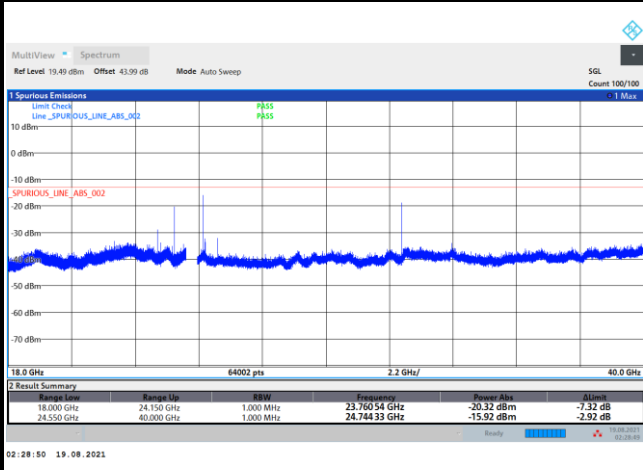


Spurious emission between 18GHz to 40GHz worst case plot is reported as following.

DFT-s-OFDM Module B

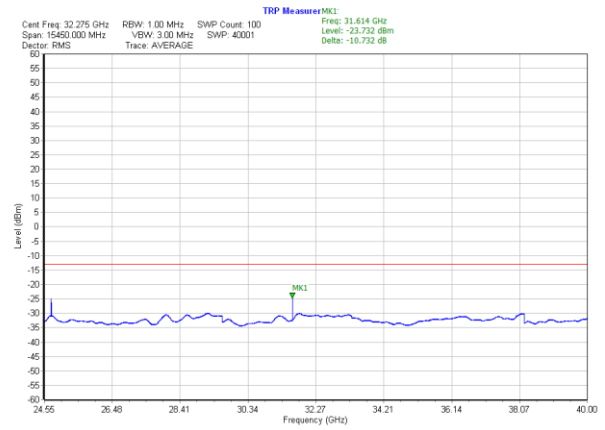
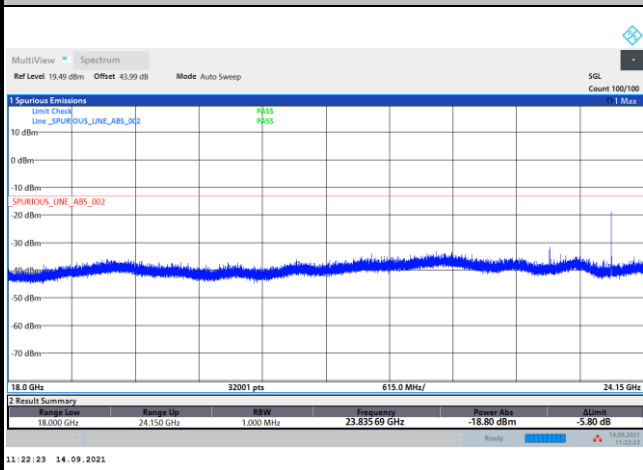
NR Band n258A QPSK (18-40GHz)

Lowest Channel / 50MHz

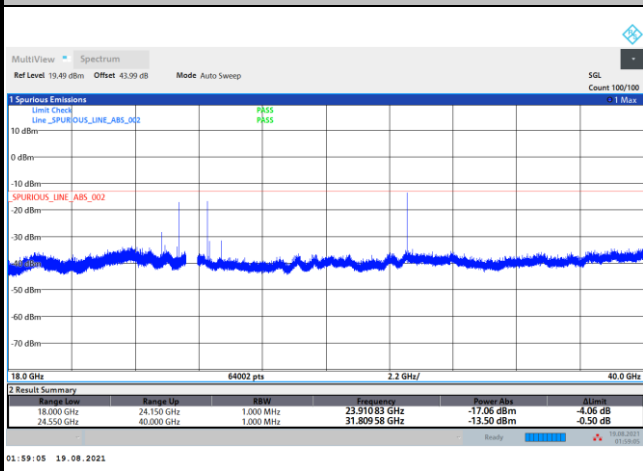


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Middle Channel / 50MHz



Highest Channel / 50MHz



intentionally blank

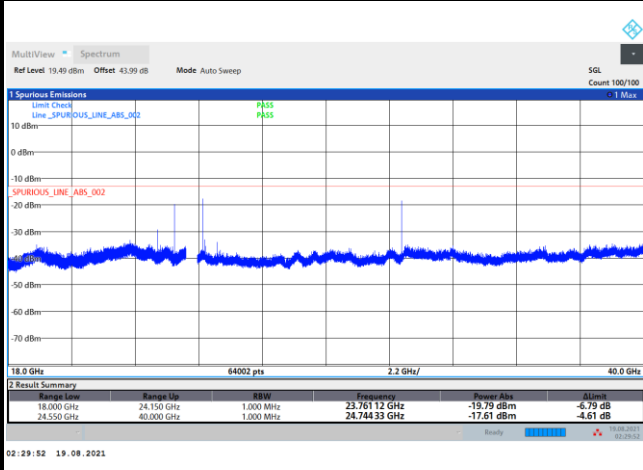
Remark: In band and out of band frequencies that has reported in previous results are omitted.



CP-OFDM Module B

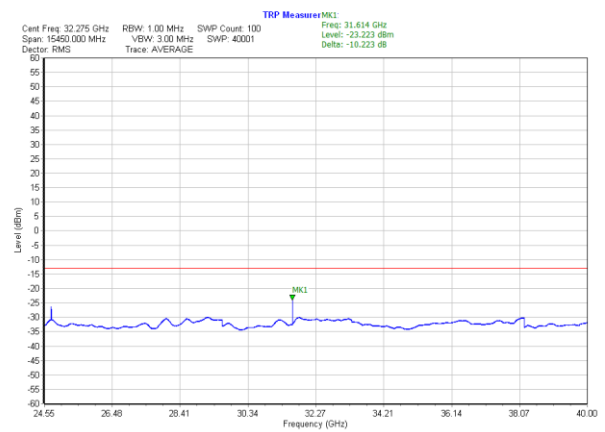
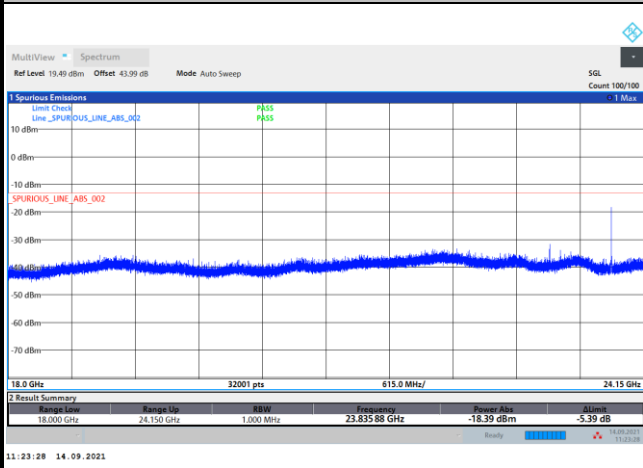
NR Band n258A QPSK (18-40GHz)

Lowest Channel / 50MHz

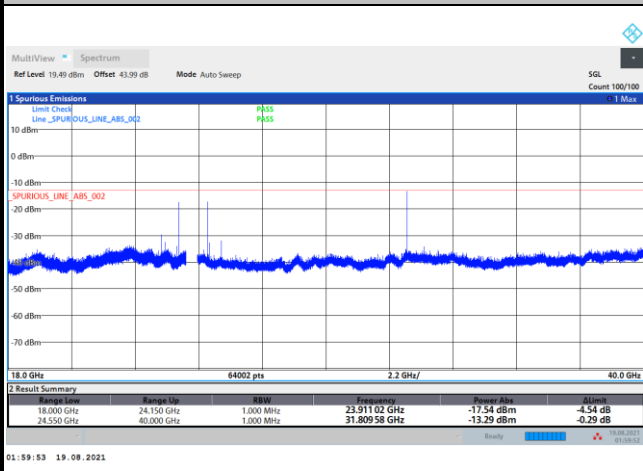


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Middle Channel / 50MHz



Highest Channel / 50MHz



intentionally blank

Remark: In band and out of band frequencies that has reported in previous results are omitted.



NR Band n258A Module B Beam V

Occupied Bandwidth

Mode	DFT-s-OFDM Module B NR Band n258A : 99%OBW(MHz)		
BW	50MHz		
Mod.	QPSK	16QAM	64QAM
Lowest CH	45.94	46.27	46.35
Middle CH	45.97	46.27	46.35
Highest CH	46.00	46.27	46.36

Mode	CP-OFDM Module B NR Band n258A : 99%OBW(MHz)
BW	50MHz
Mod.	QPSK
Lowest CH	46.18
Middle CH	46.26
Highest CH	46.26