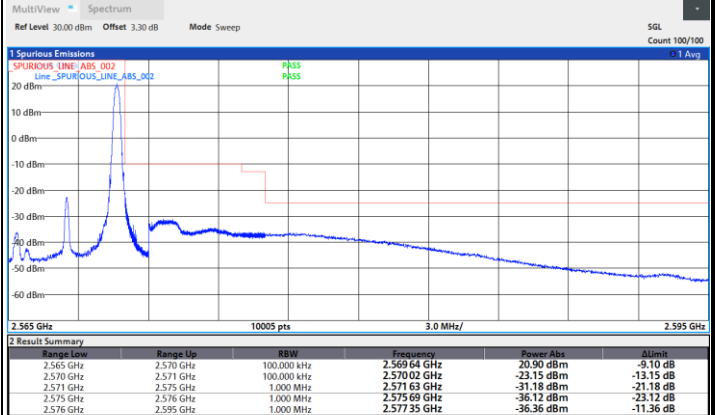
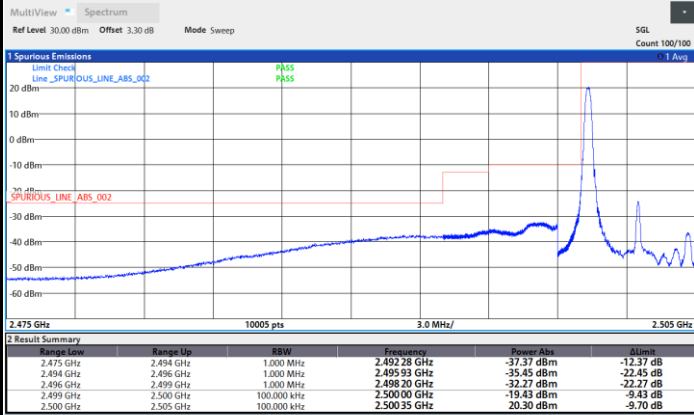




FR1 n7 / 5MHz / DFT-S OFDM / 64QAM

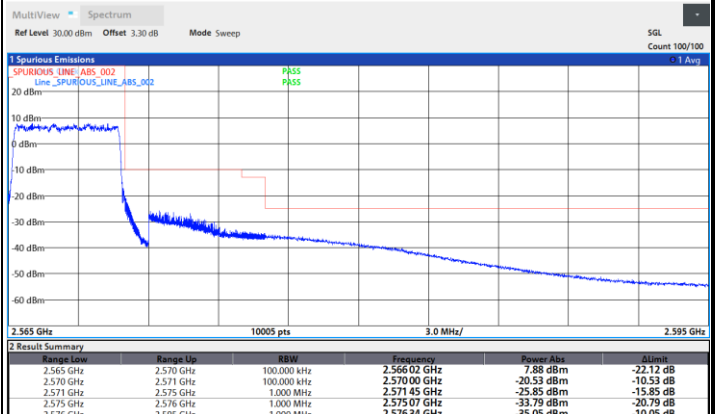
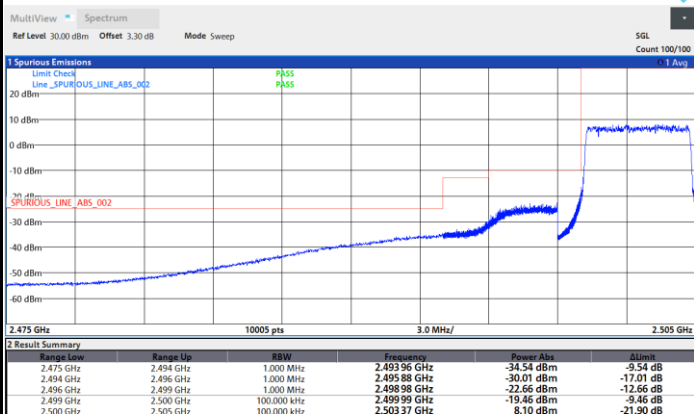
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



Lowest Band Edge / Full RB

Highest Band Edge / Full RB

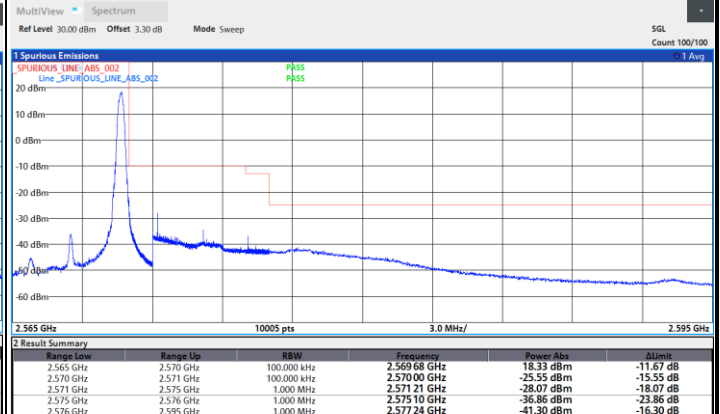
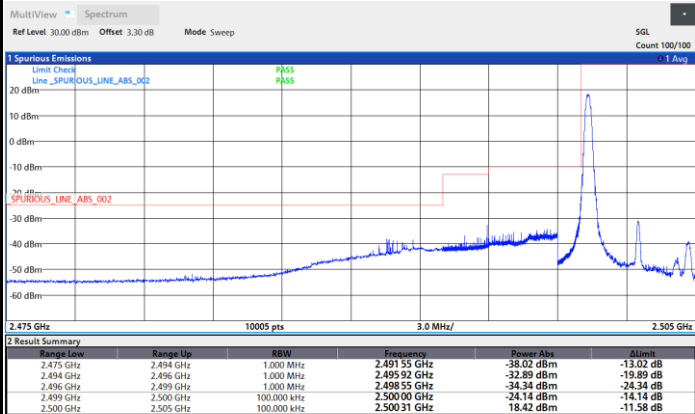




FR1 n7 / 5MHz / DFT-S OFDM / 256QAM

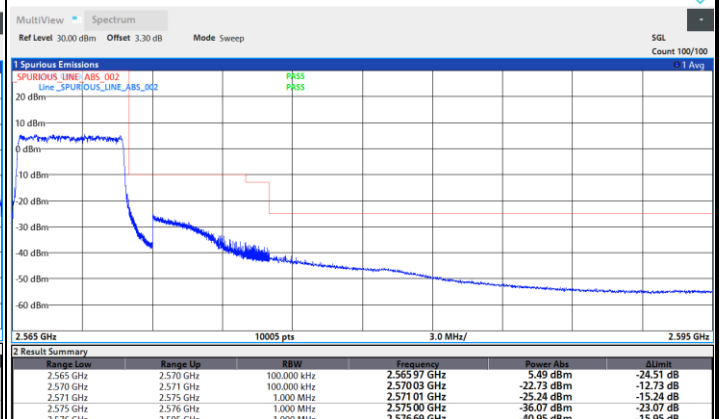
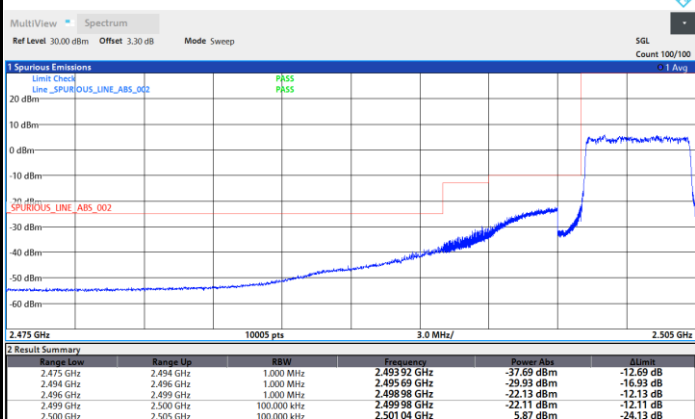
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



Lowest Band Edge / Full RB

Highest Band Edge / Full RB

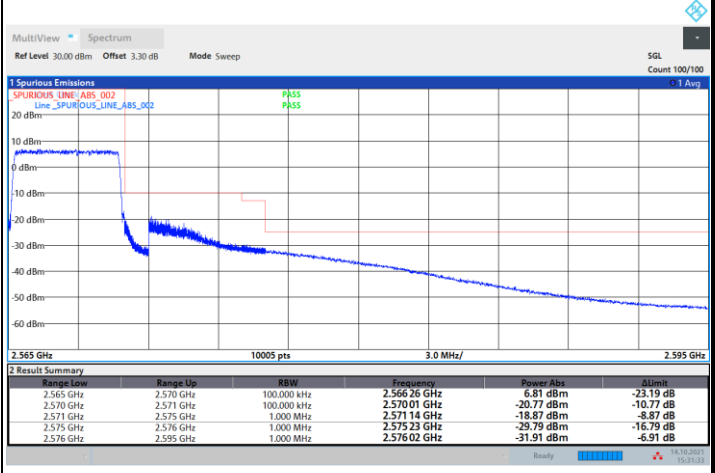
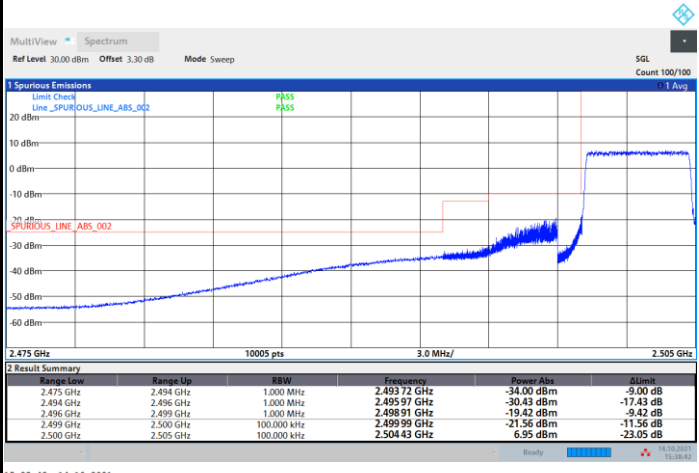




FR1 n7 / 5MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge

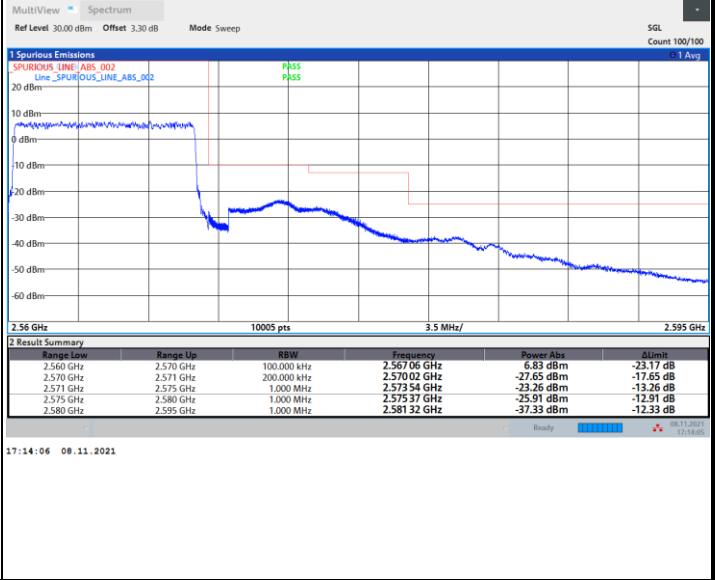
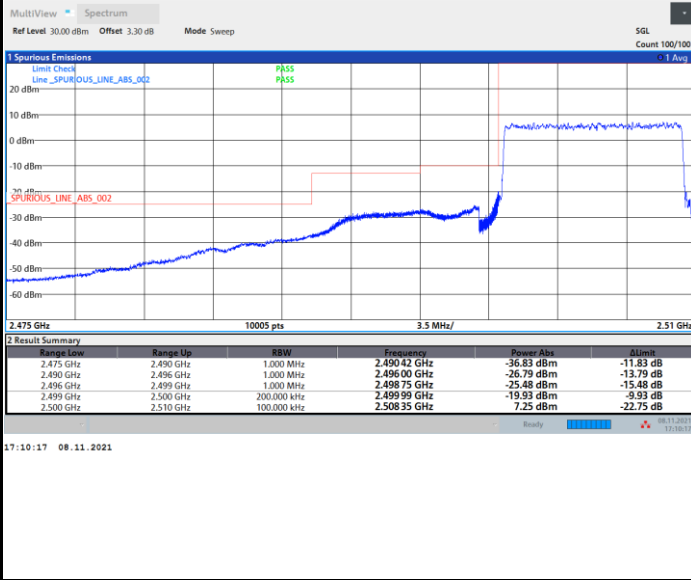




FR1 n7 / 10MHz / DFT-s-OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

Highest Band Edge

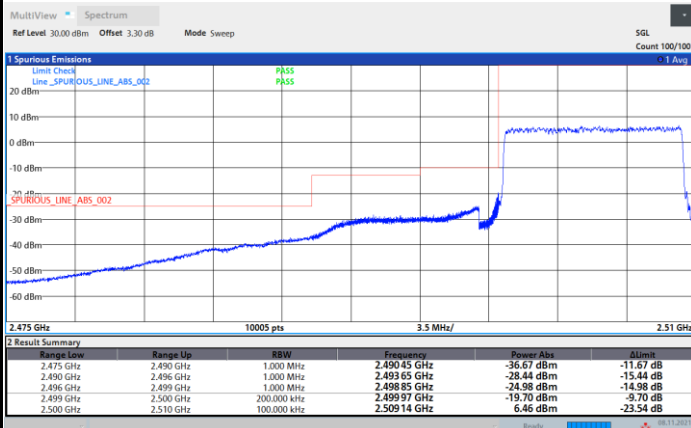




FR1 n7 / 10MHz / DFT-s-OFDM / QPSK / Full RB

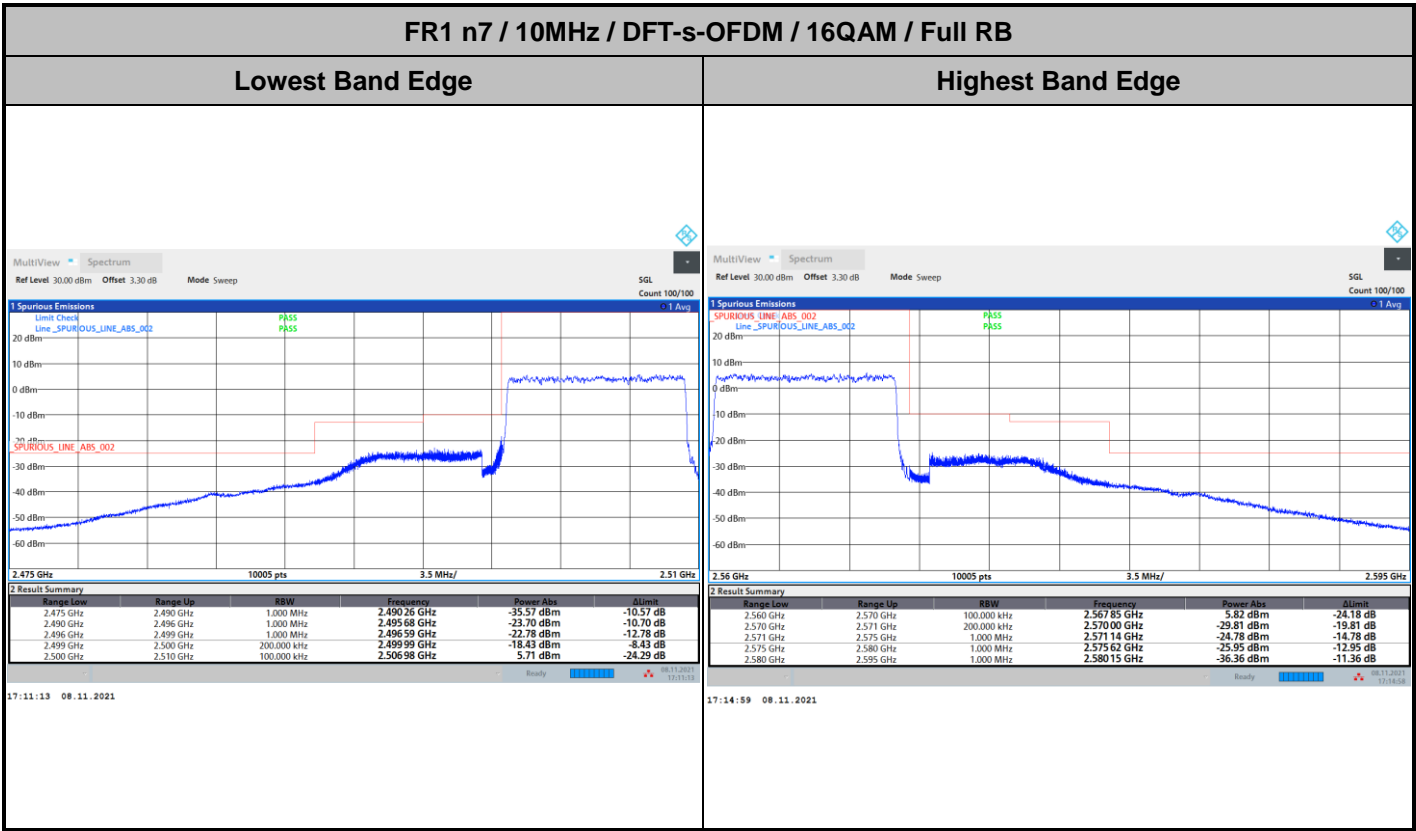
Lowest Band Edge

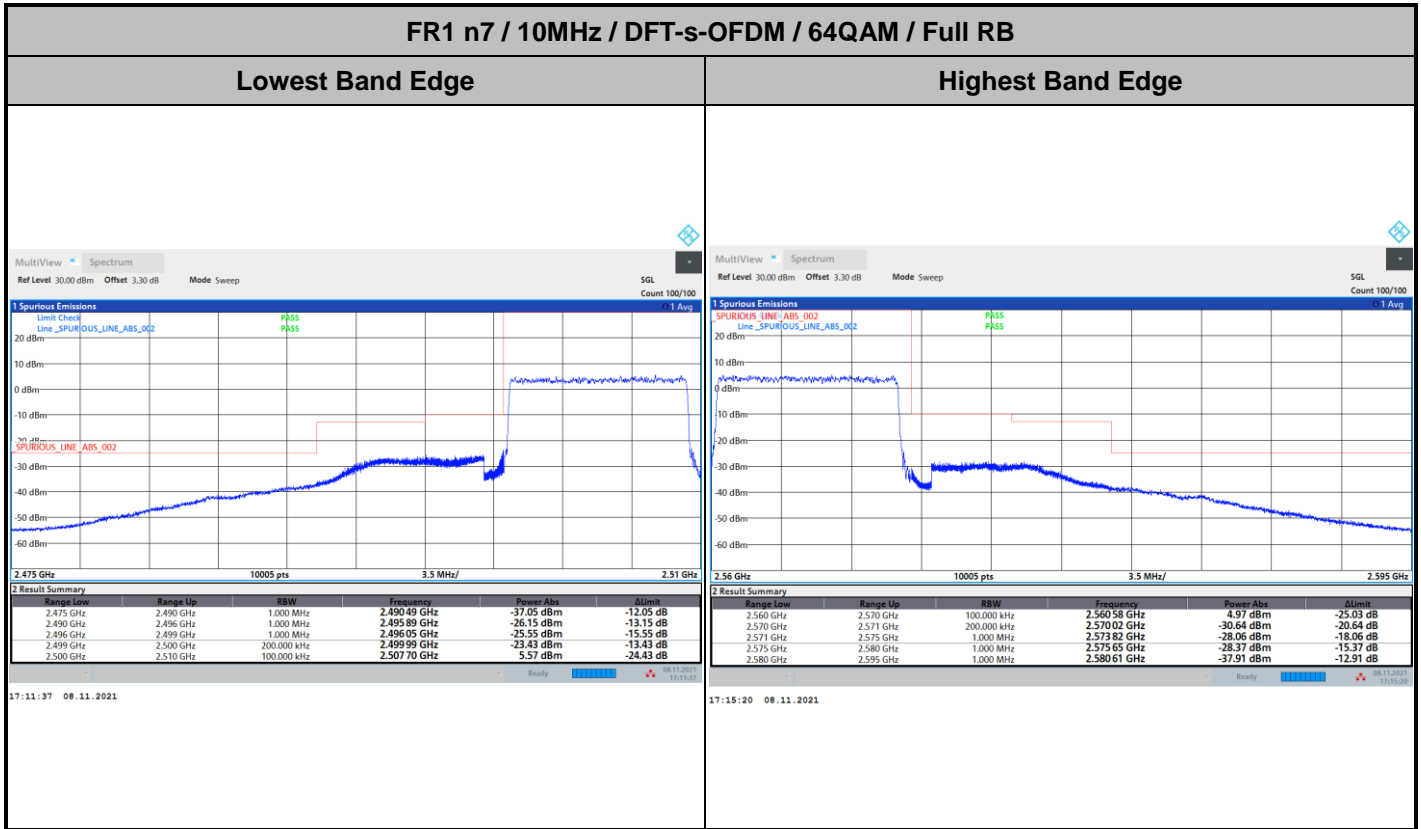
Highest Band Edge

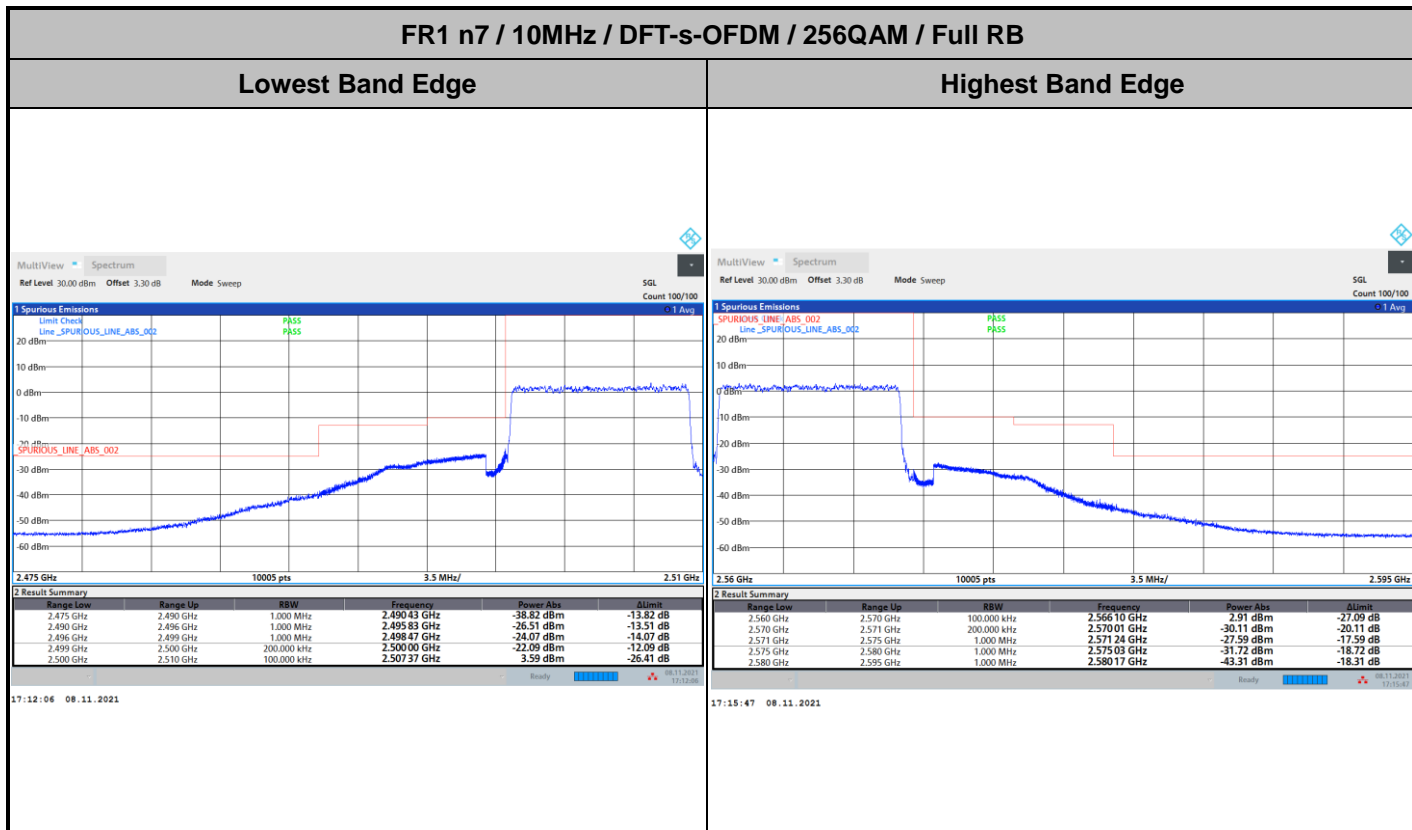


17:10:49 08.11.2021

17:14:38 08.11.2021





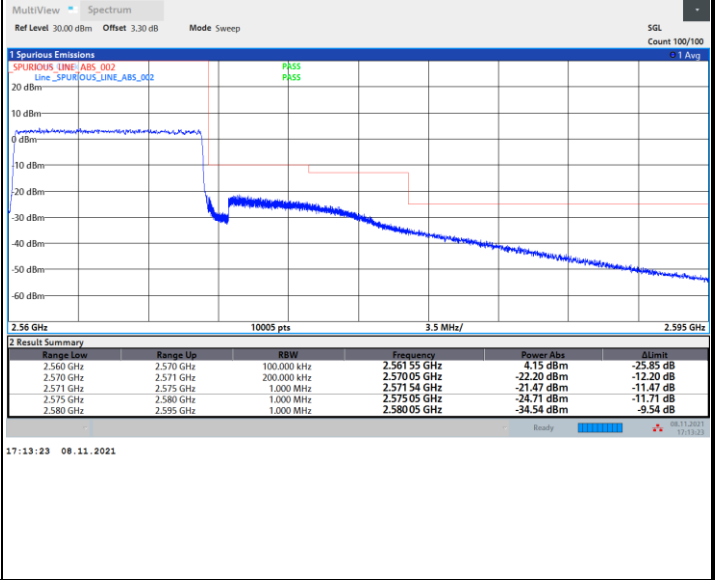
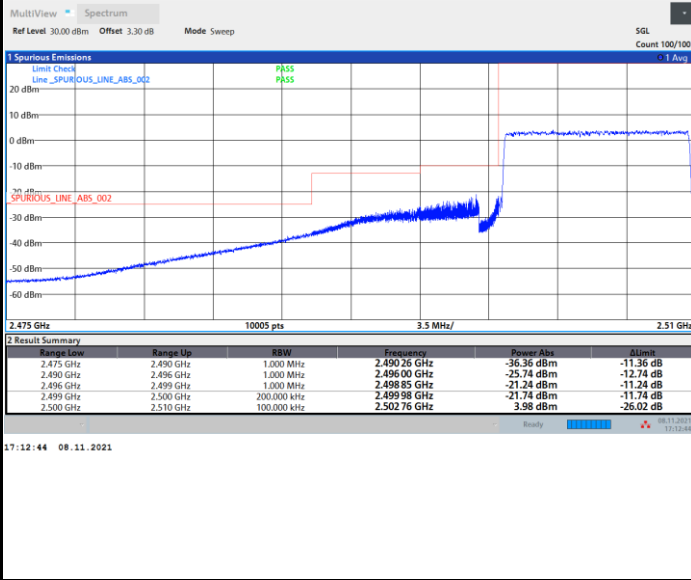




FR1 n7 / 10MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge

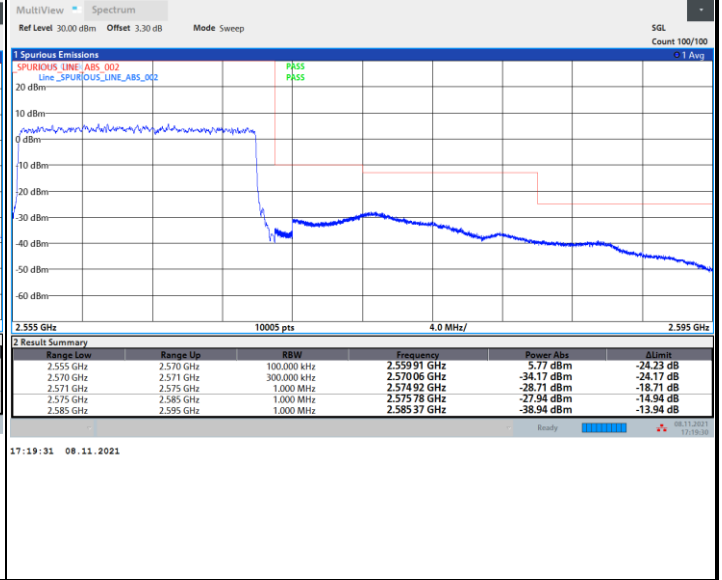
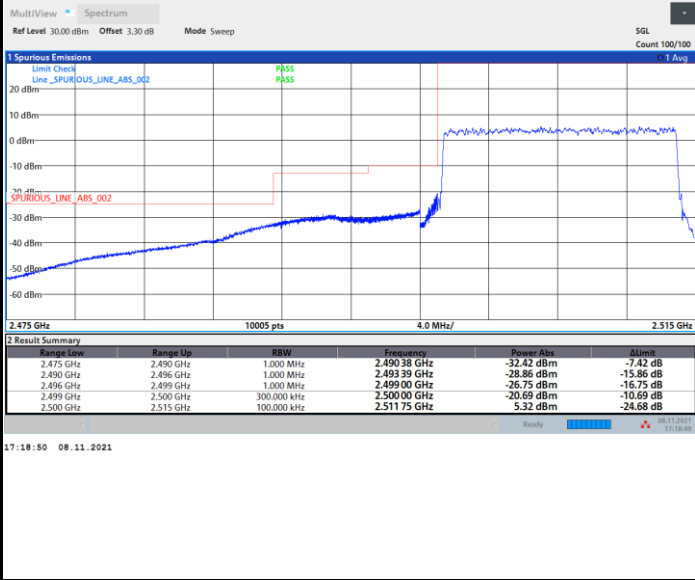




FR1 n7 / 15MHz / DFT-s-OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

Highest Band Edge

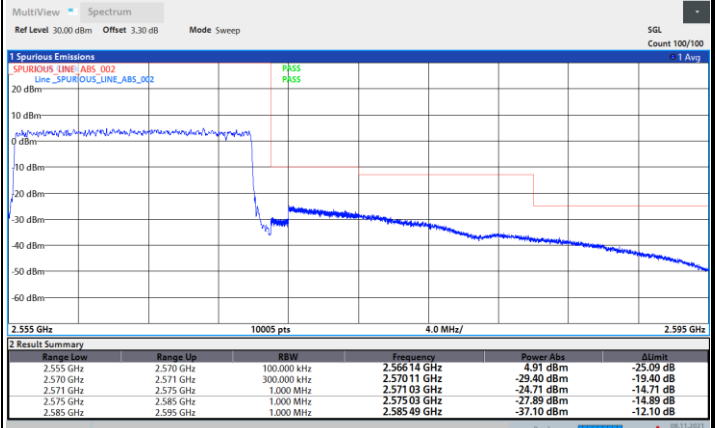
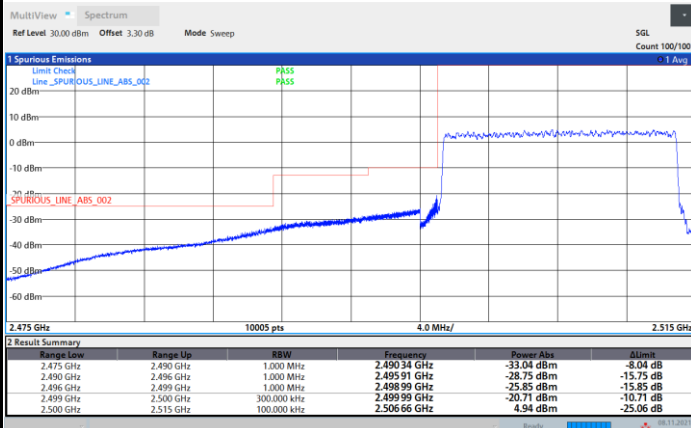




FR1 n7 / 15MHz / DFT-s-OFDM / QPSK / Full RB

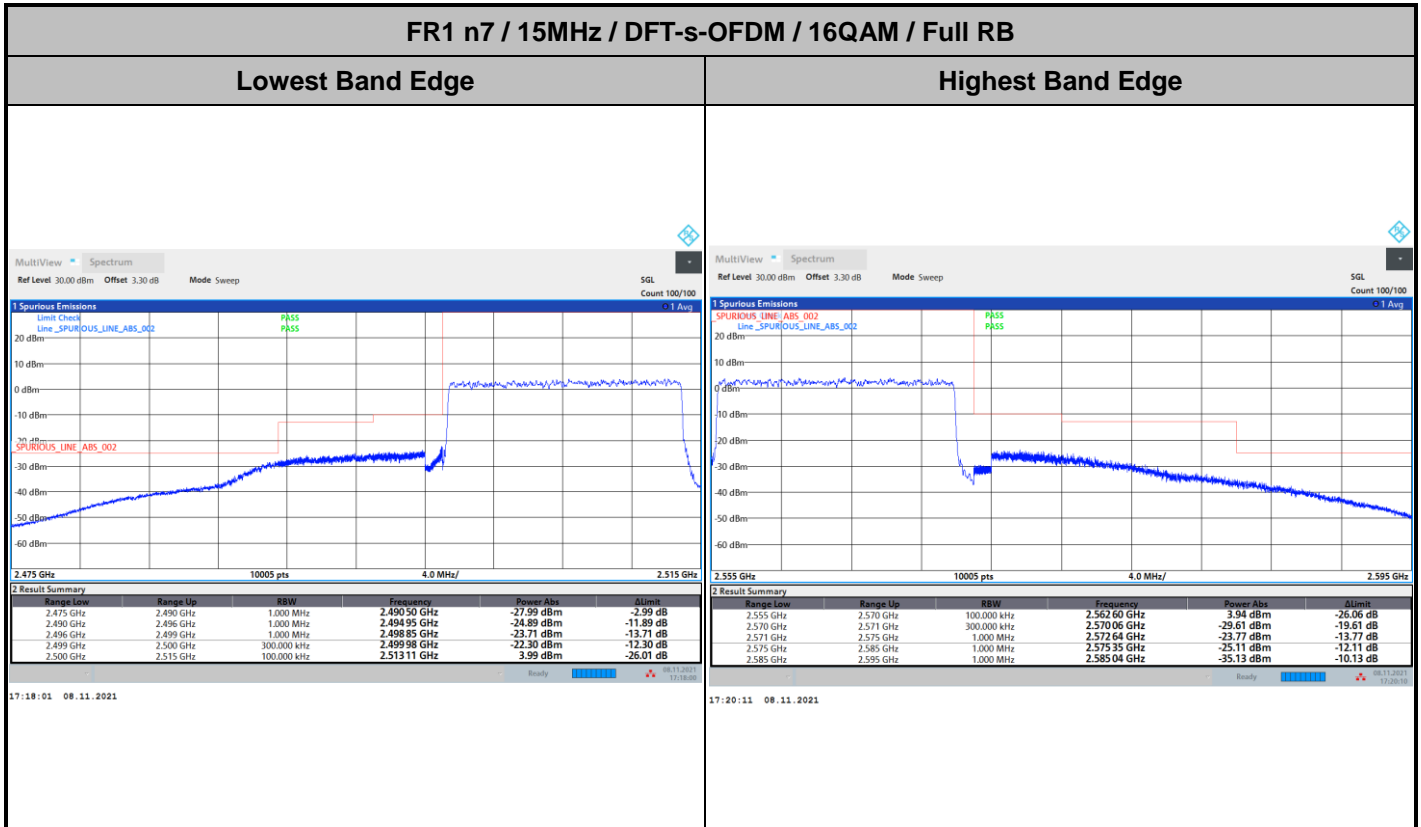
Lowest Band Edge

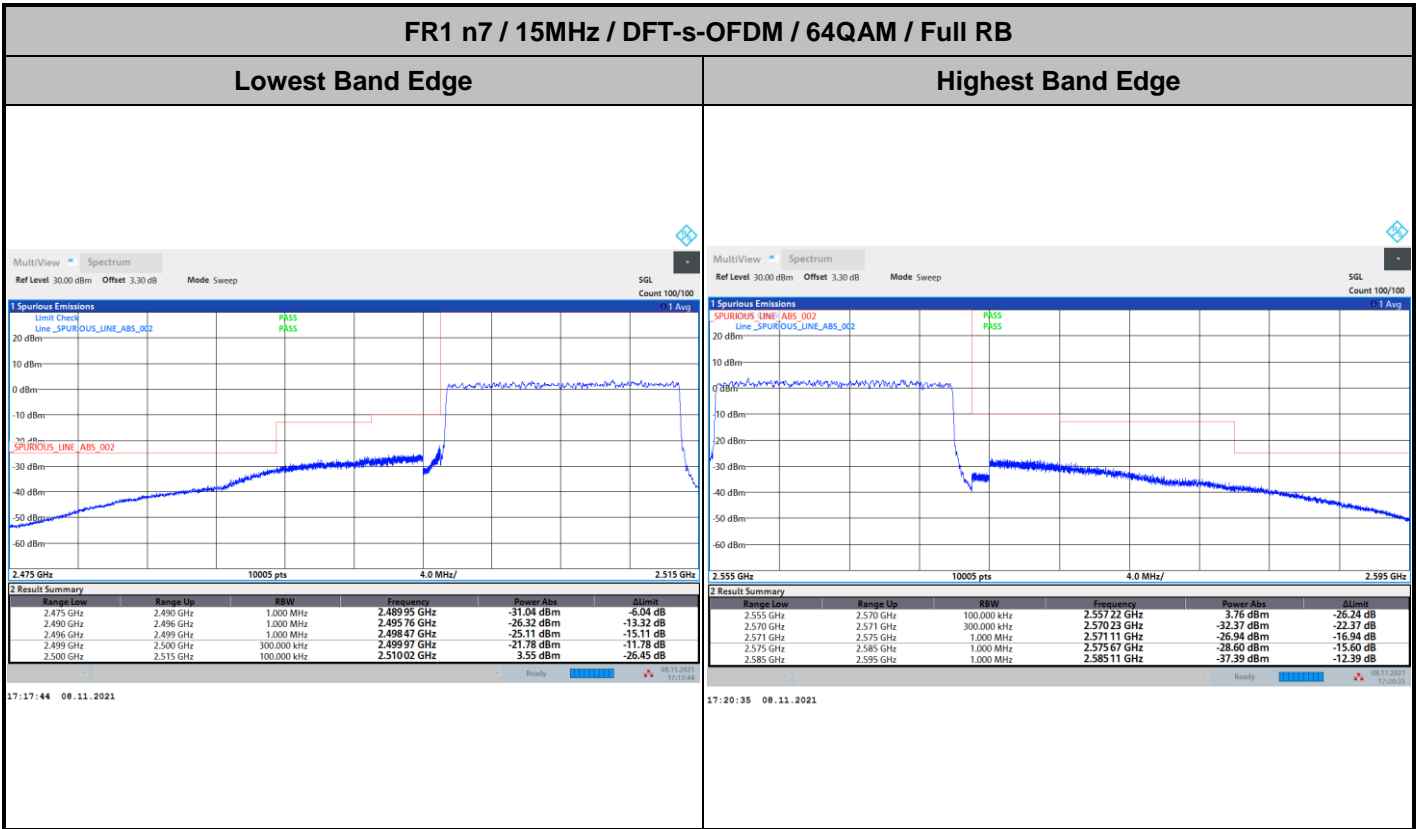
Highest Band Edge

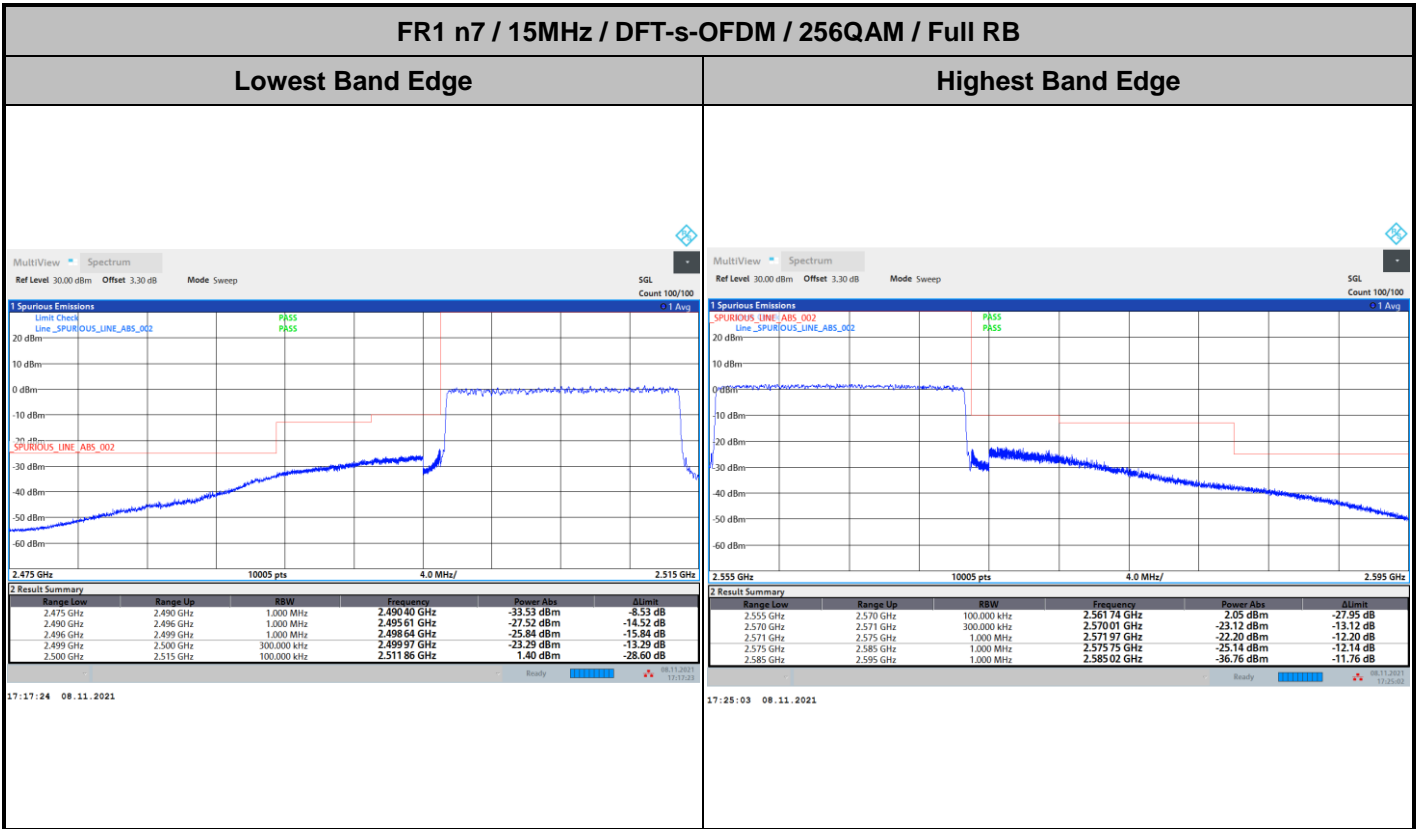


17:18:24 08.11.2021

17:19:52 08.11.2021





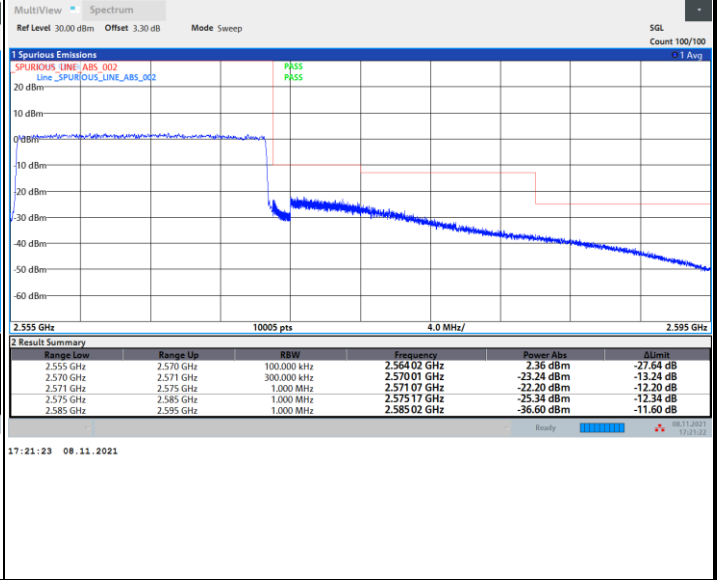
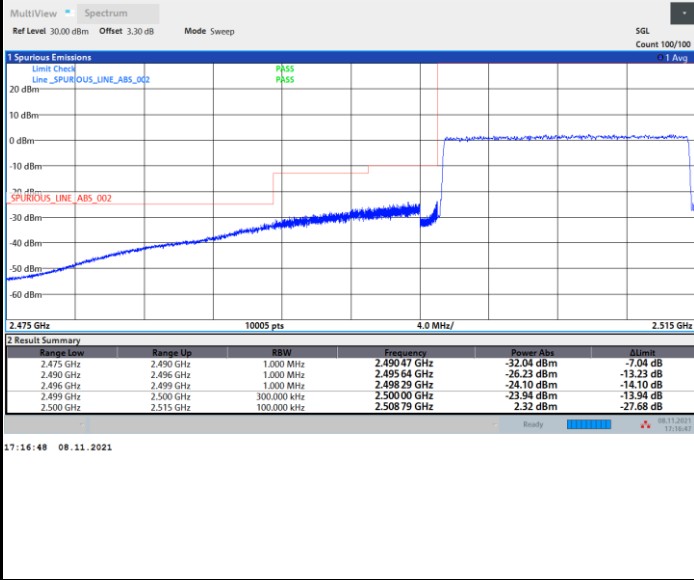




FR1 n7 / 15MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge

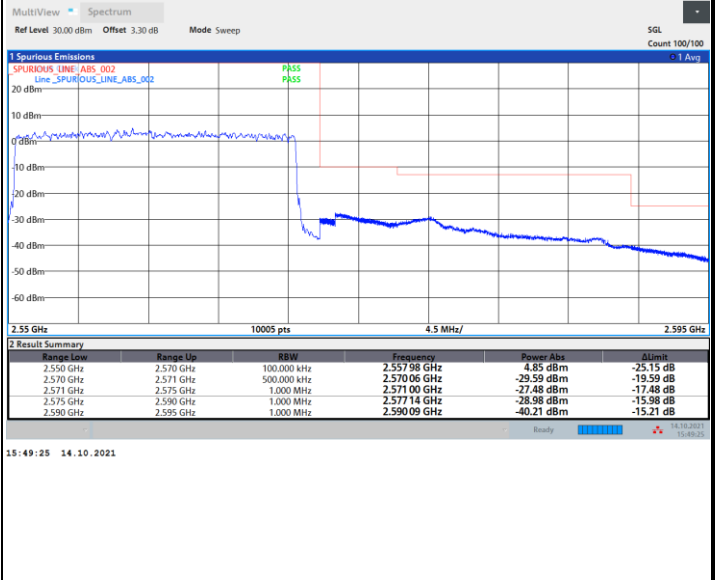




FR1 n7 / 20MHz / DFT-s-OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

Highest Band Edge

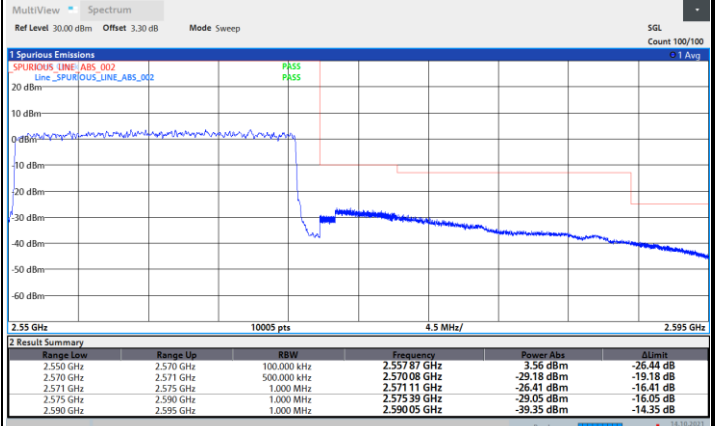
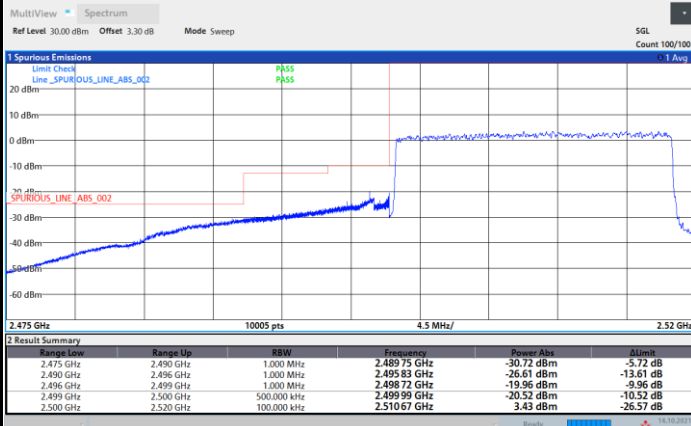




FR1 n7 / 20MHz / DFT-s-OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge



15:46:08 14.10.2021

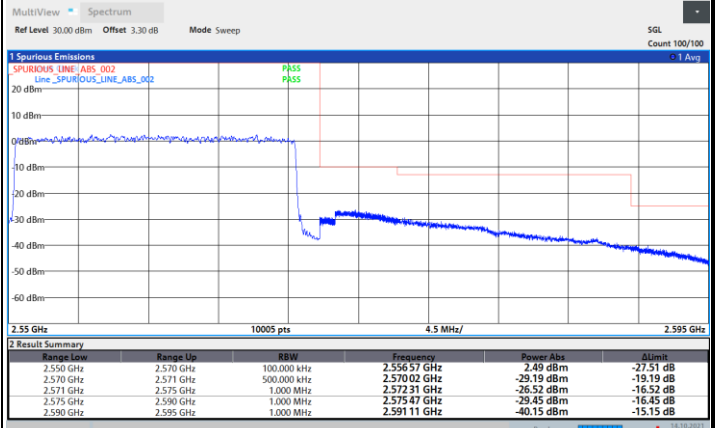
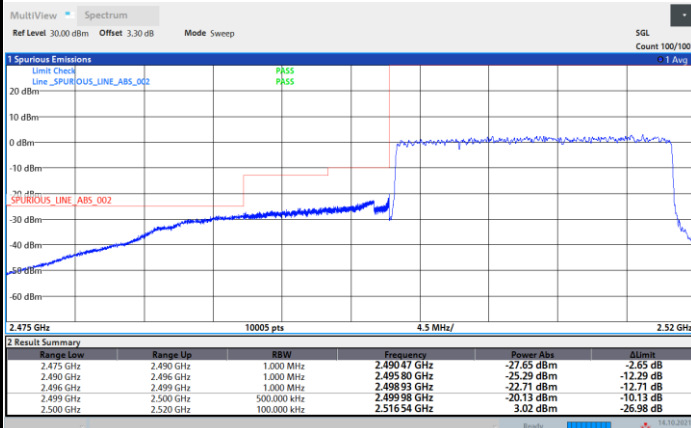
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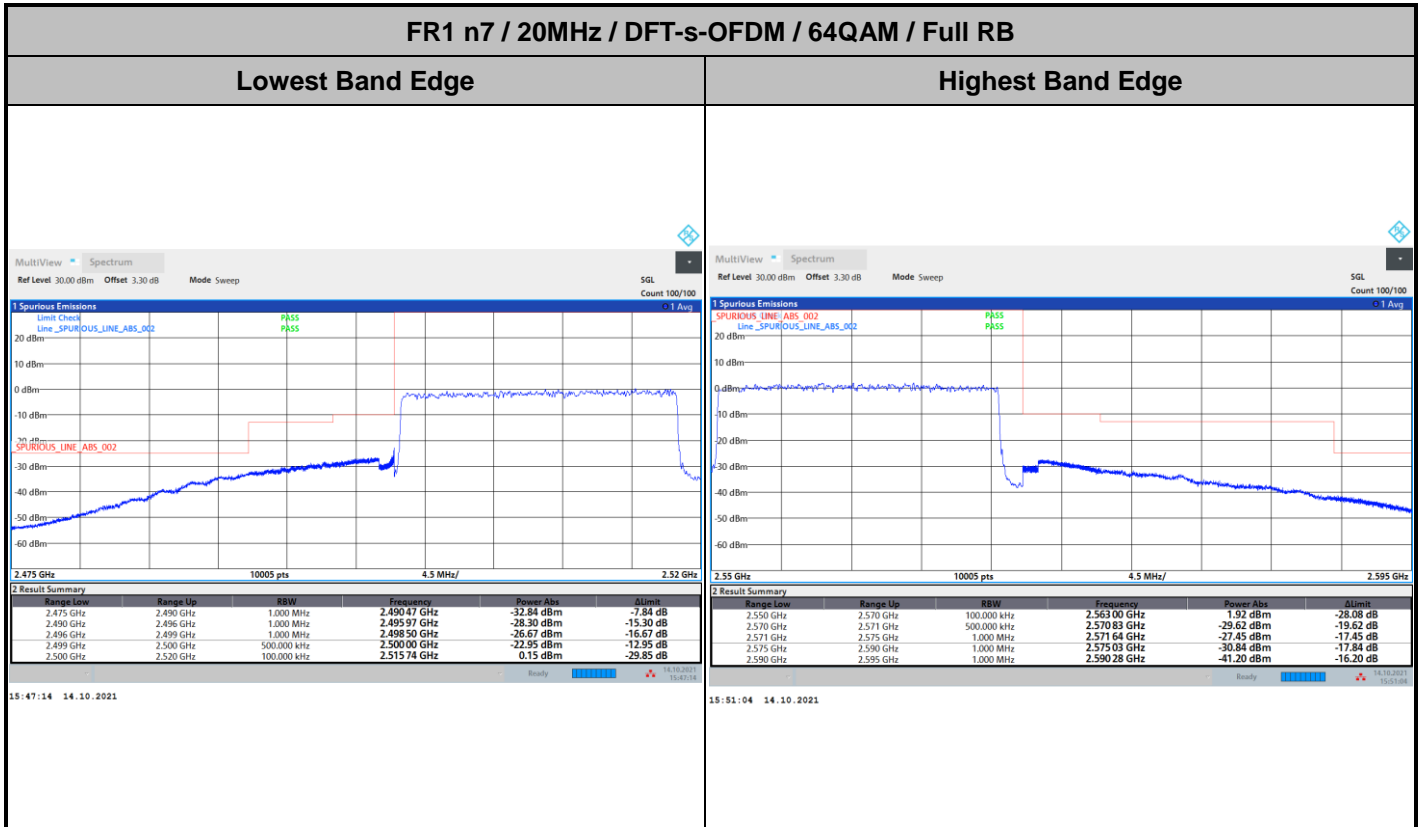


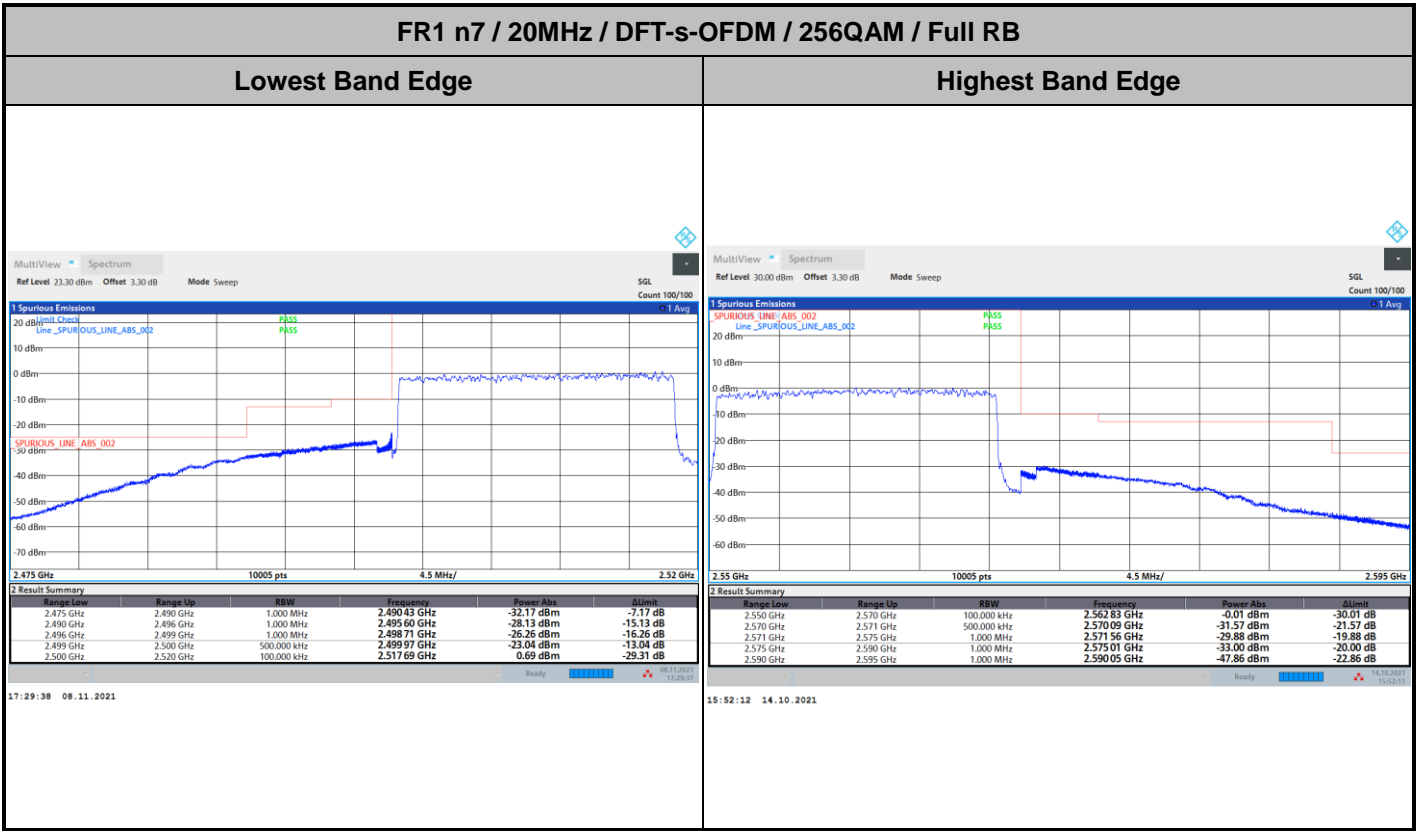
FR1 n7 / 20MHz / DFT-s-OFDM / 16QAM / Full RB

Lowest Band Edge

Highest Band Edge





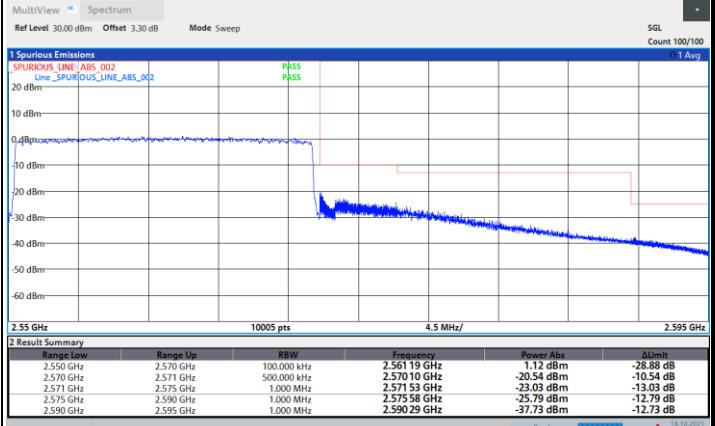
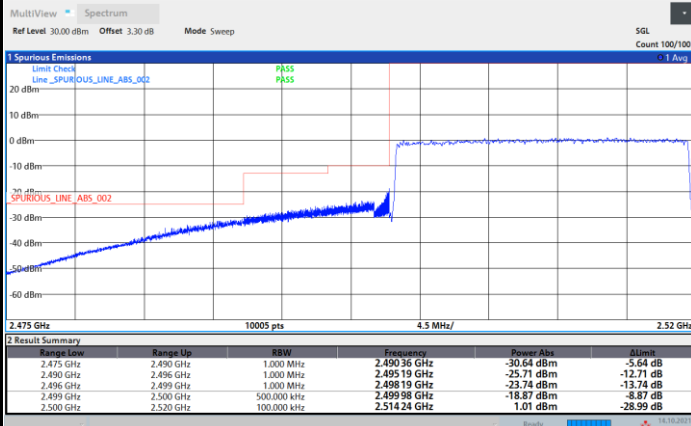




FR1 n7 / 20MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge



15:47:56 14.10.2021

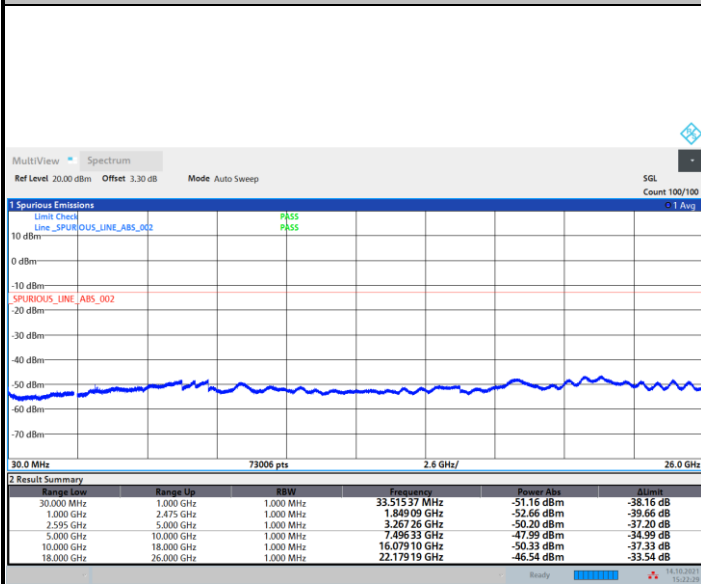
15:48:44 14.10.2021



Conducted Spurious Emission

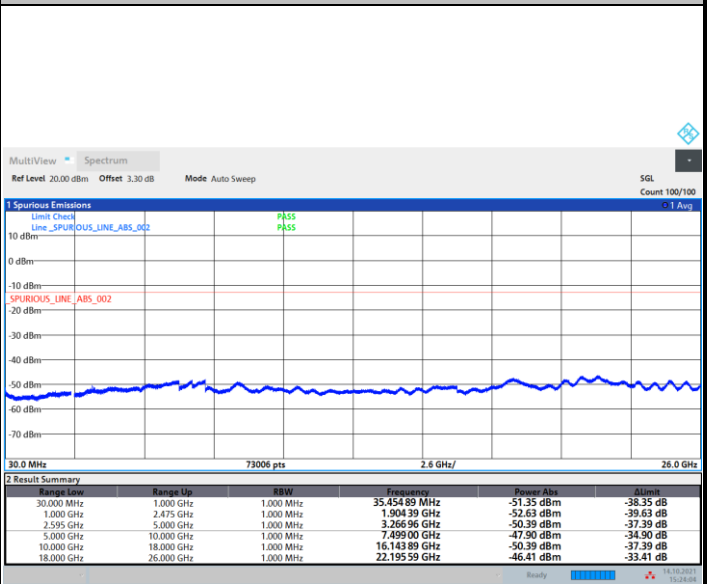
FR1 n7 / 5MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel



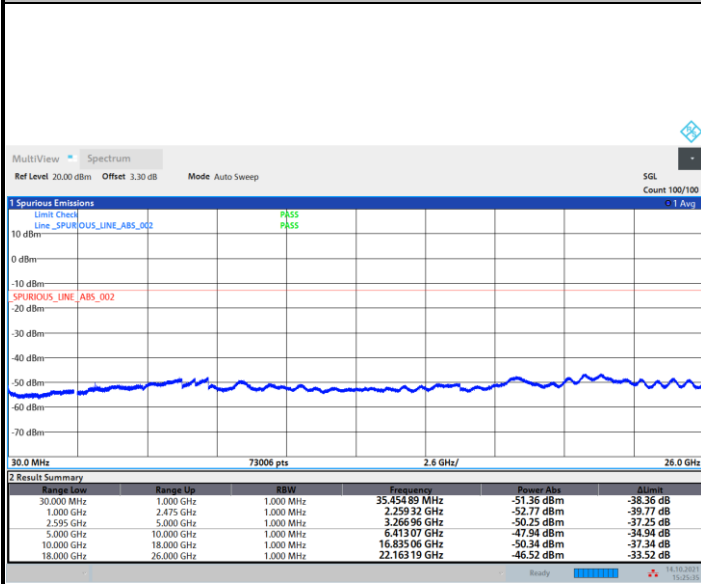
15:22:29 14.10.2021

Middle Channel



15:24:05 14.10.2021

Highest Channel



15:25:35 14.10.2021



Frequency Stability

Test Conditions		FR1 n7 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0054	PASS
40	Normal Voltage	0.0050	
30	Normal Voltage	0.0002	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0001	
0	Normal Voltage	0.0004	
-10	Normal Voltage	0.0047	
-20	Normal Voltage	0.0051	
-30	Normal Voltage	0.0053	
20	Maximum Voltage	0.0043	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0004	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.60 V. ; Maximum Voltage =4.40 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



FR1 n12

Peak-to-Average Ratio

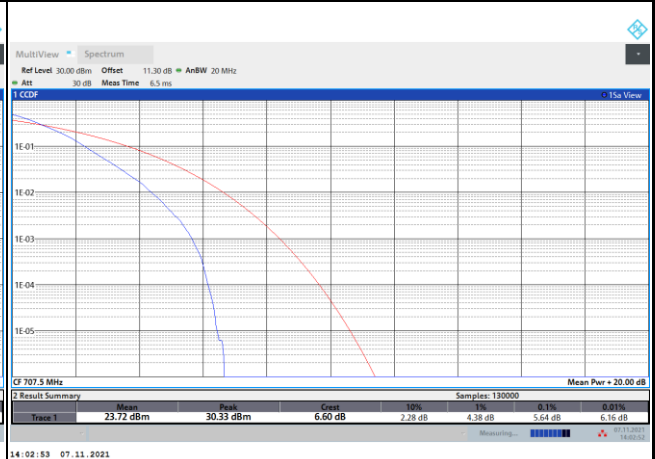
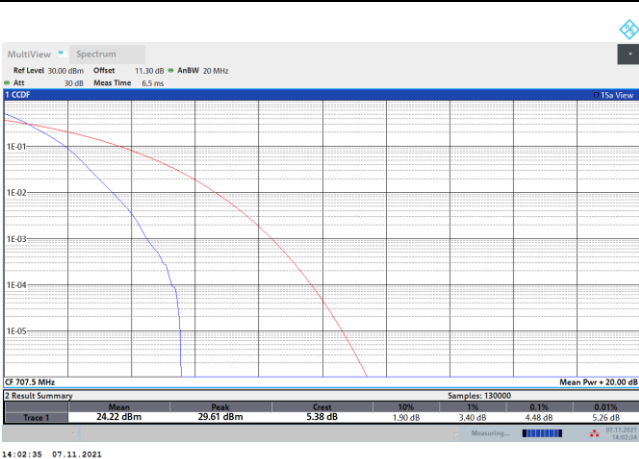
Mode	FR1 n12 / 15MHz / DFT-S OFDM				
Mod.	PI/2 BPSK	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.48	5.64	6.42	6.68	PASS
Mode	FR1 n12 / 15MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.66				PASS



FR1 n12 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

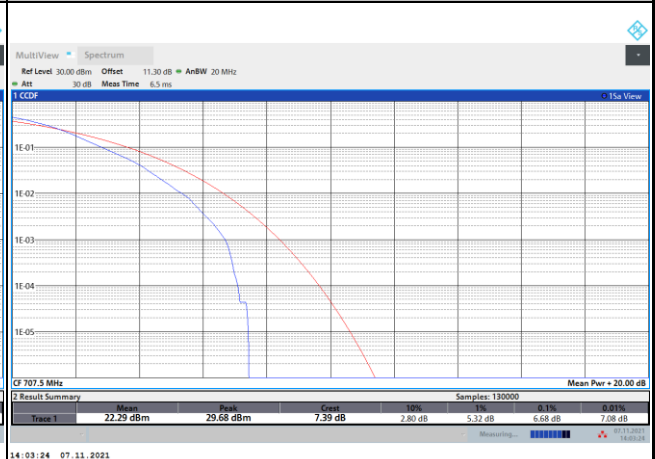
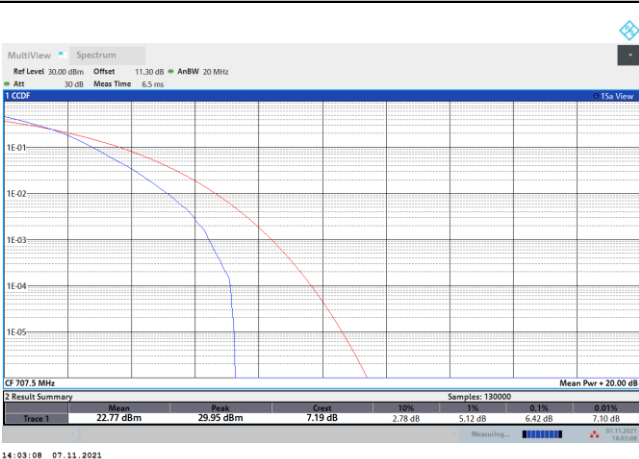
PI/2 BPSK

QPSK

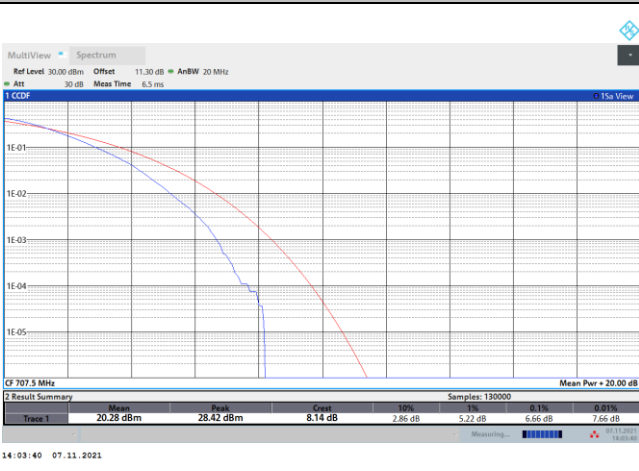


16QAM

64QAM



256QAM





26dB Bandwidth

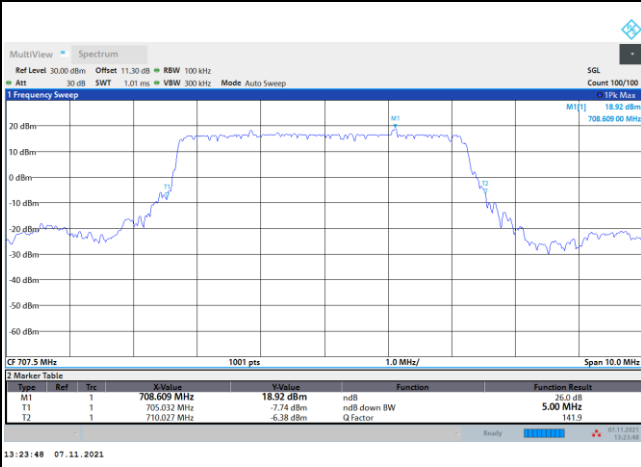
Mode	FR1 n12 : 26dB BW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK			
Middle CH	5.00		9.57		14.48			

Mode	FR1 n12 : 26dB BW(MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM		
Middle CH	5.22	5.13	9.95	9.85	15.11	15.05		
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM		
Middle CH	5.01	5.08	9.97	10.07	15.32	15.23		



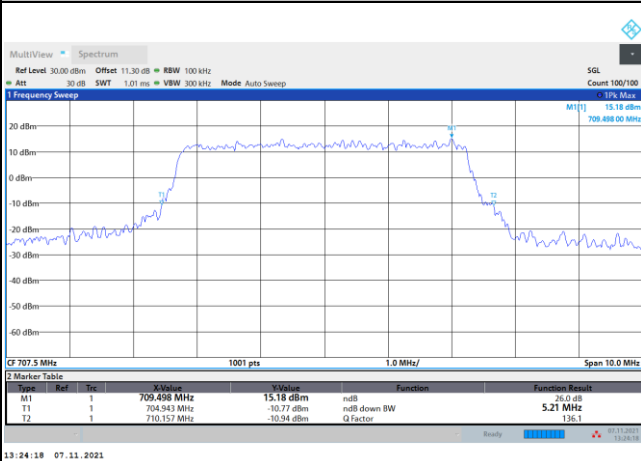
FR1 n12 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

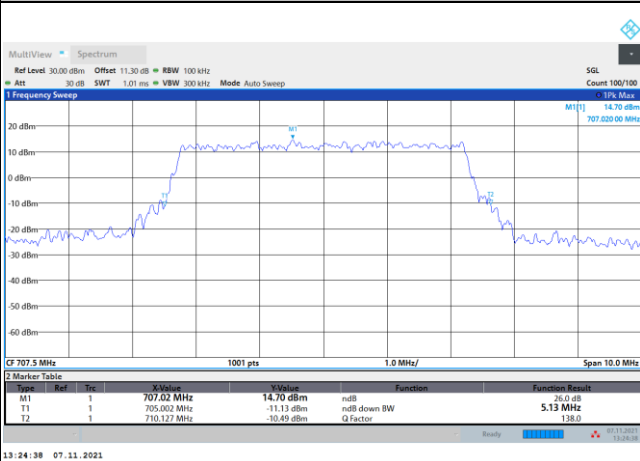


FR1 n12 / 5MHz / CP OFDM / Middle Channel / Full RB

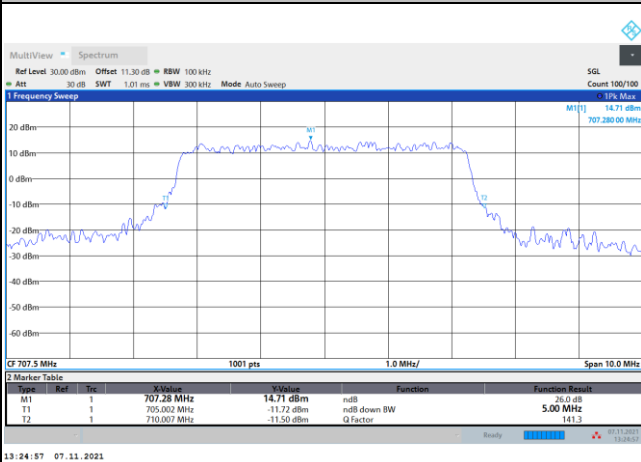
QPSK



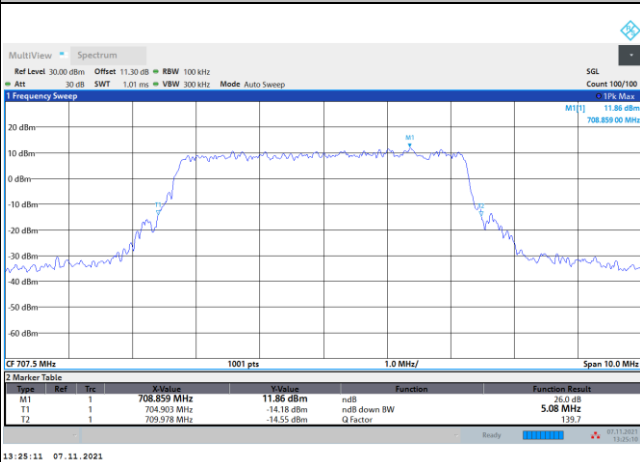
16QAM



64QAM



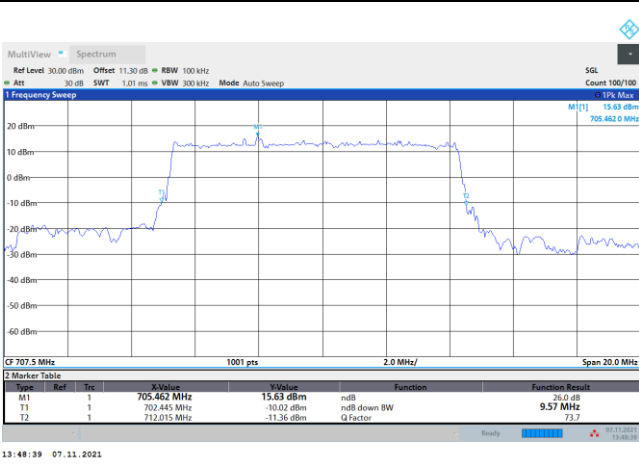
256QAM





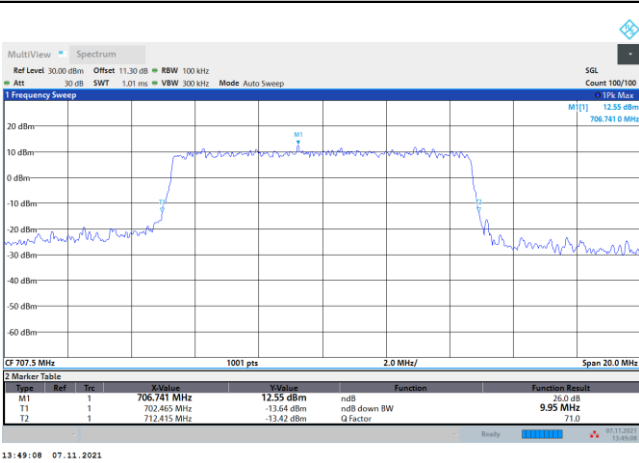
FR1 n12 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

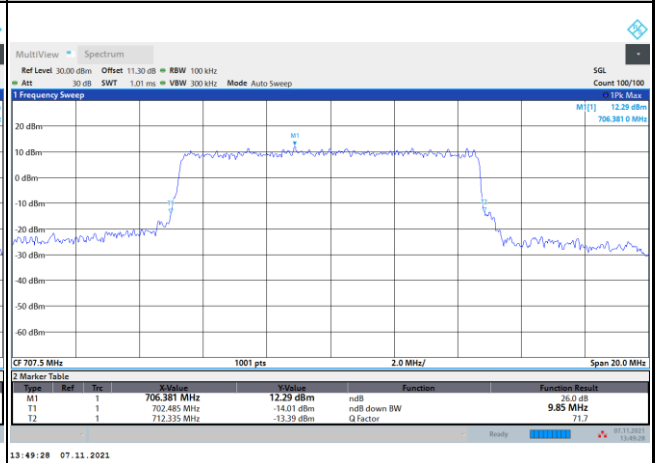


FR1 n12 / 10MHz / CP OFDM / Middle Channel / Full RB

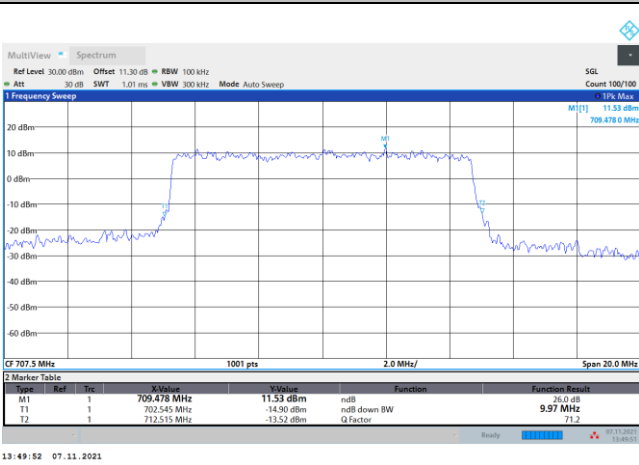
QPSK



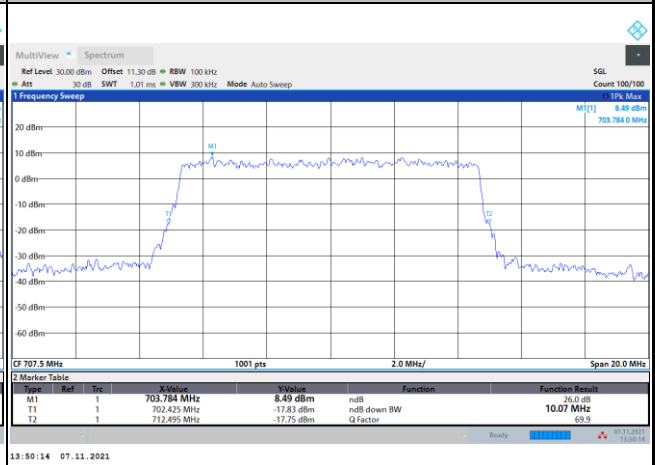
16QAM



64QAM



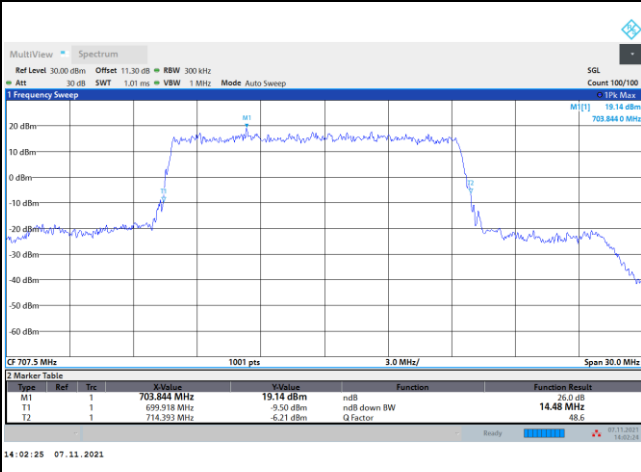
256QAM





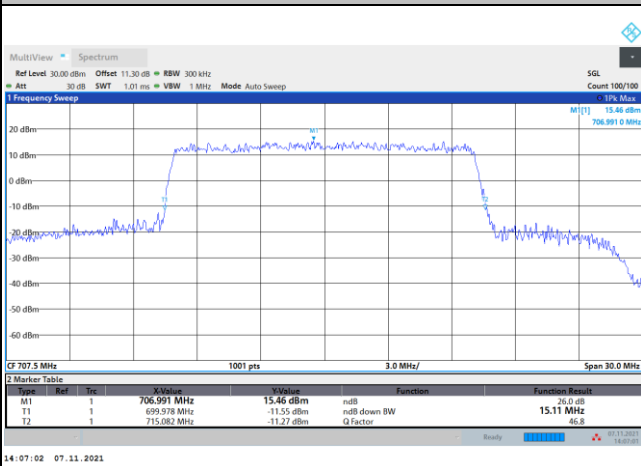
FR1 n12 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

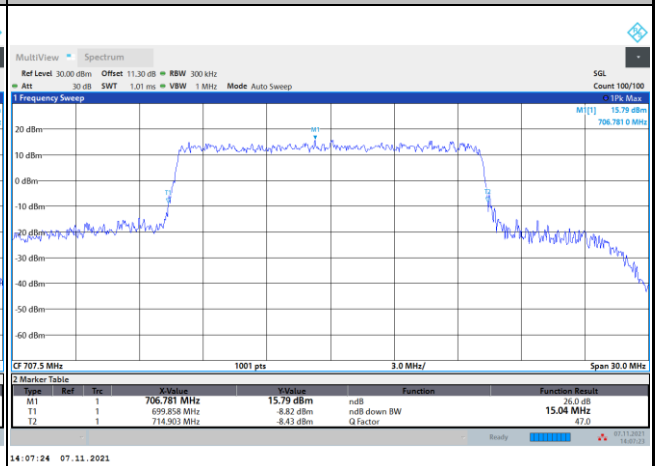


FR1 n12 / 15MHz / CP OFDM / Middle Channel / Full RB

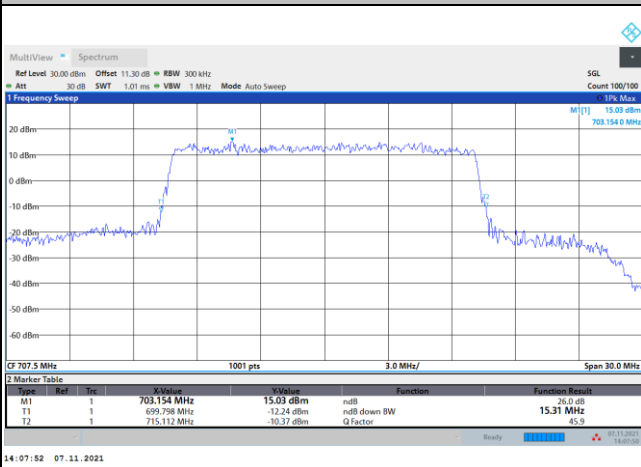
QPSK



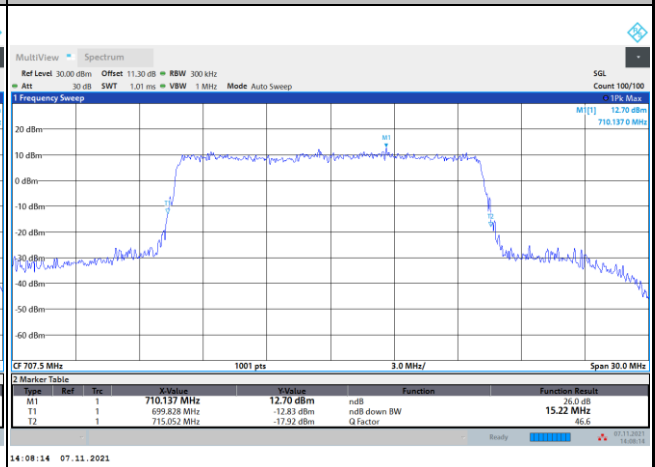
16QAM



64QAM



256QAM





Occupied Bandwidth

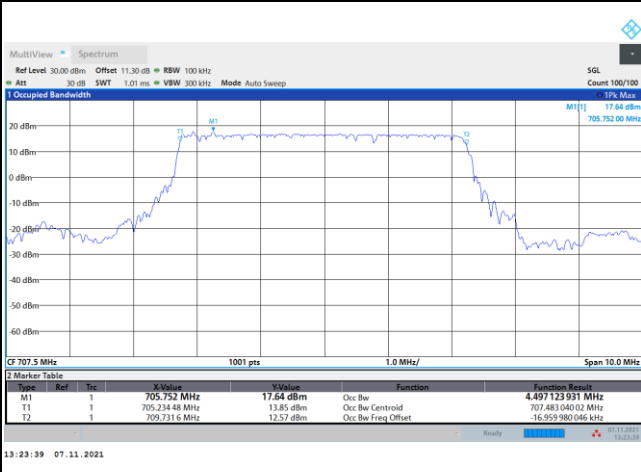
Mode	FR1 n12 : 99%OBW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK			
Middle CH	4.50		8.92		13.48			

Mode	FR1 n12 : 99%OBW (MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM		
Middle CH	4.50	4.51	9.27	9.28	14.13	14.17		
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM		
Middle CH	4.49	4.50	9.29	9.29	14.19	14.19		



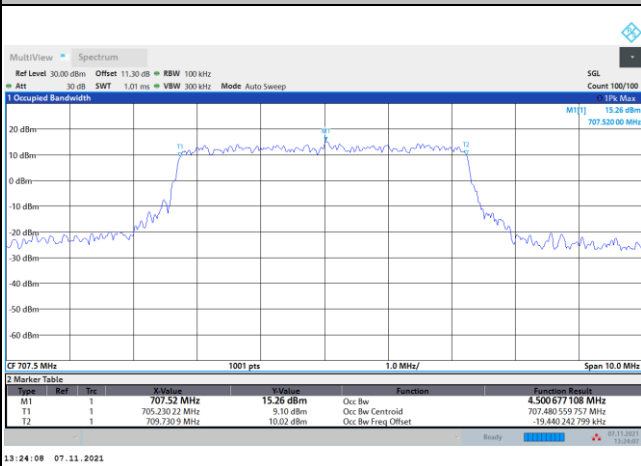
FR1 n12 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

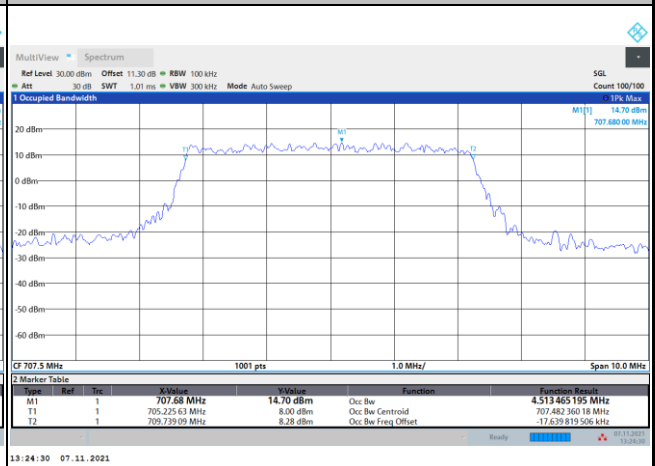


FR1 n12 / 5MHz / CP OFDM / Middle Channel / Full RB

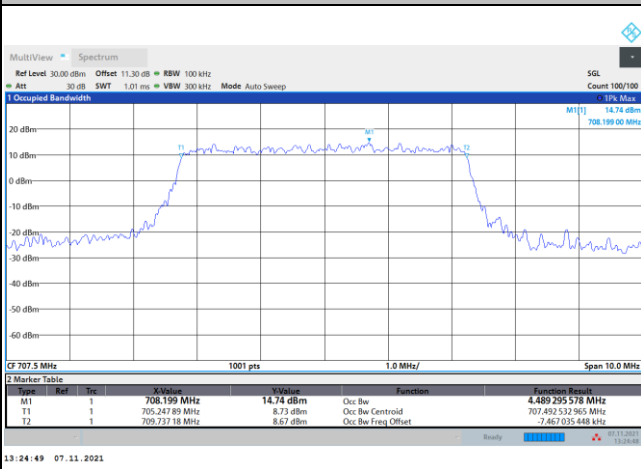
QPSK



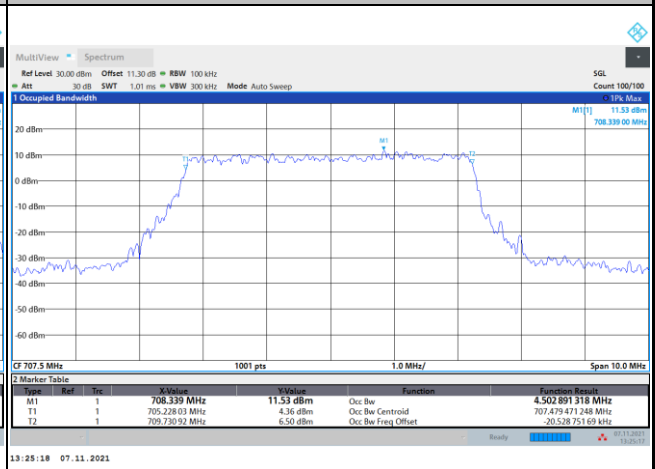
16QAM



64QAM



256QAM





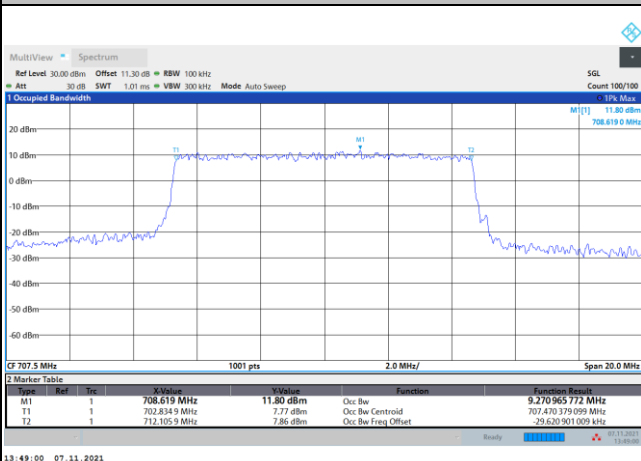
FR1 n12 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

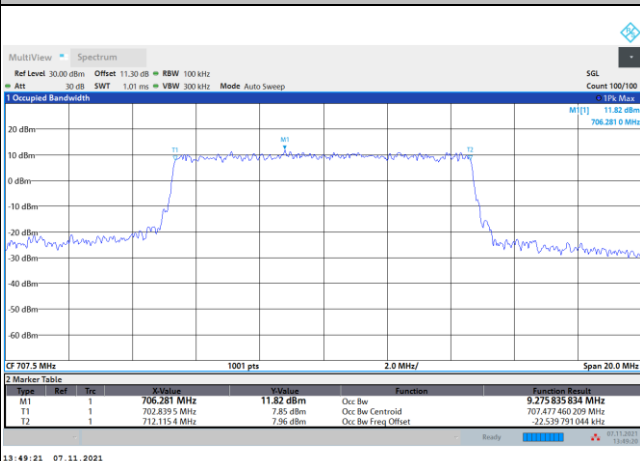


FR1 n12 / 10MHz / CP OFDM / Middle Channel / Full RB

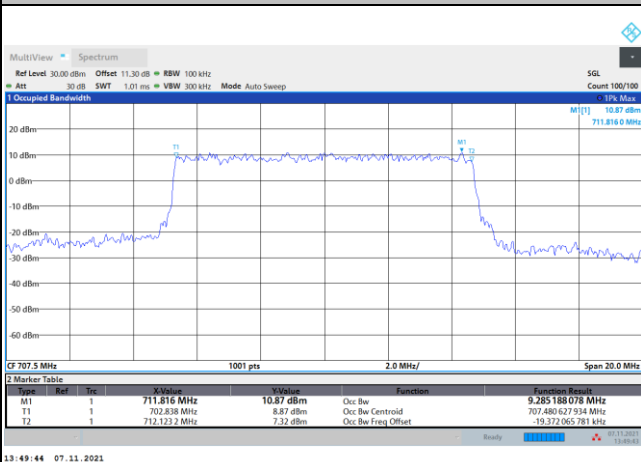
QPSK



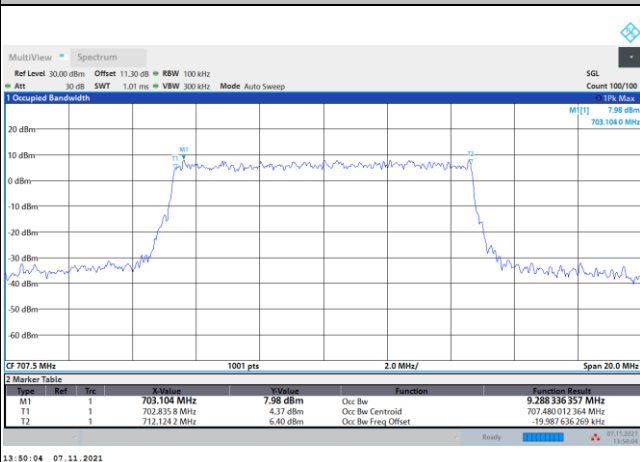
16QAM



64QAM



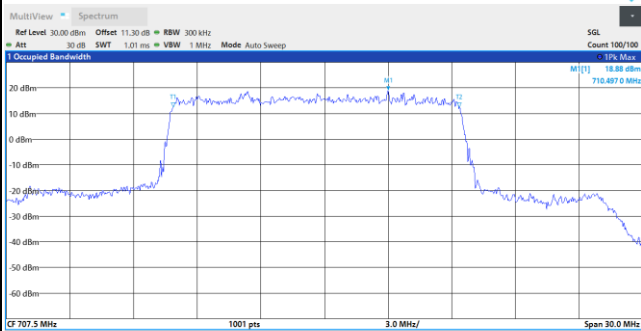
256QAM





FR1 n12 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

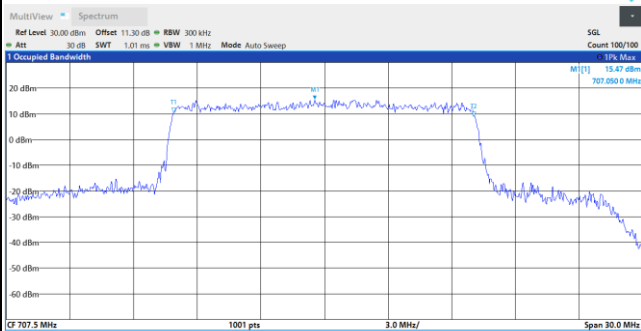


Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		710.497 MHz	18.88 dBm	Occ Bw	13.482994781 MHz
T1	1		700.3598 MHz	12.50 dBm	Occ Bw Centroid	707.101330078 MHz
T2	1		713.8428 MHz	12.44 dBm	Occ Bw Freq Offset	-298.669321953 kHz

14:02:17 07.11.2021

FR1 n12 / 15MHz / CP OFDM / Middle Channel / Full RB

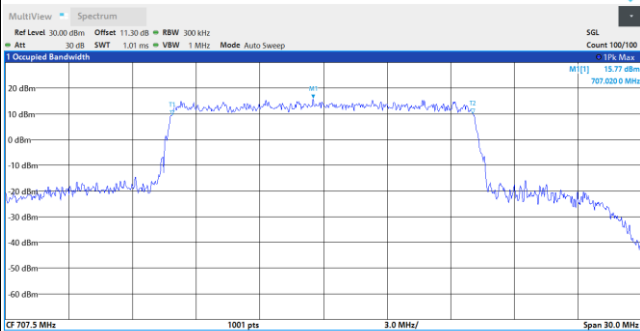
QPSK



Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		707.05 MHz	15.47 dBm	Occ Bw	14.131174856 MHz
T1	1		700.3959 MHz	10.52 dBm	Occ Bw Centroid	707.461482679 MHz
T2	1		714.5271 MHz	9.03 dBm	Occ Bw Freq Offset	-38.517321314 kHz

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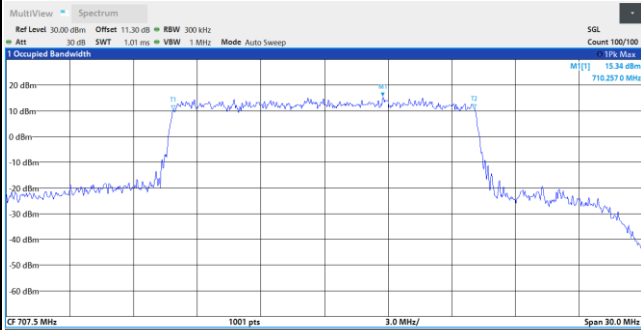
16QAM



Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		707.02 MHz	15.77 dBm	Occ Bw	14.174287686 MHz
T1	1		700.3613 MHz	9.63 dBm	Occ Bw Centroid	707.448438938 MHz
T2	1		714.5356 MHz	10.06 dBm	Occ Bw Freq Offset	-51.561161744 kHz

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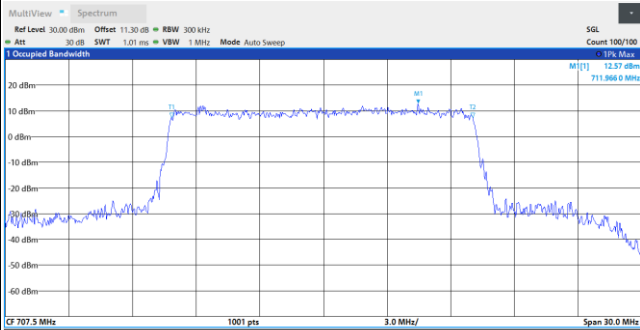
64QAM



Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		710.257 MHz	15.34 dBm	Occ Bw	14.188770071 MHz
T1	1		700.3797 MHz	10.36 dBm	Occ Bw Centroid	707.474085726 MHz
T2	1		714.5685 MHz	10.75 dBm	Occ Bw Freq Offset	-25.91427367 kHz

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256QAM



Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1	1		711.966 MHz	12.57 dBm	Occ Bw	14.190184875 MHz
T1	1		700.341 MHz	7.42 dBm	Occ Bw Centroid	707.43609957 MHz
T2	1		714.5372 MHz	7.39 dBm	Occ Bw Freq Offset	-63.900429543 kHz

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