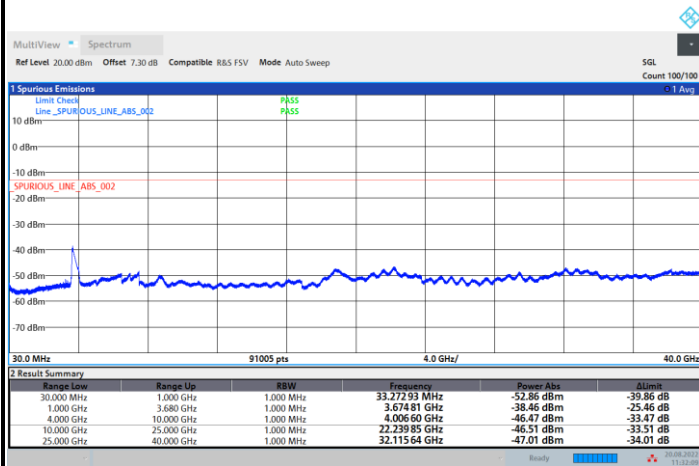


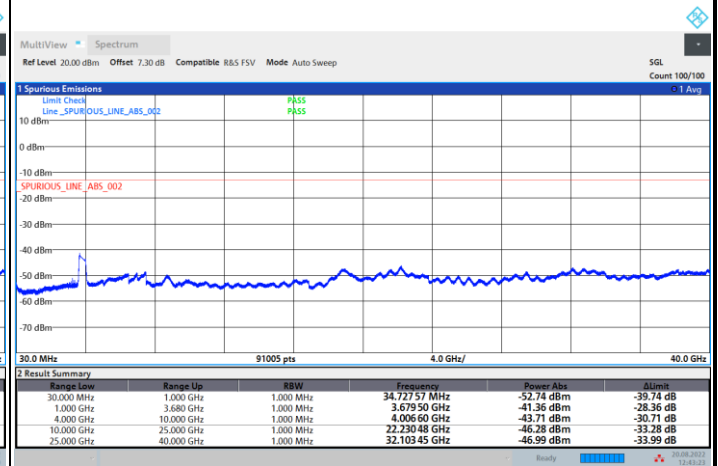


FR1 n77 / 100MHz / QPSK / CSE Emission Limit

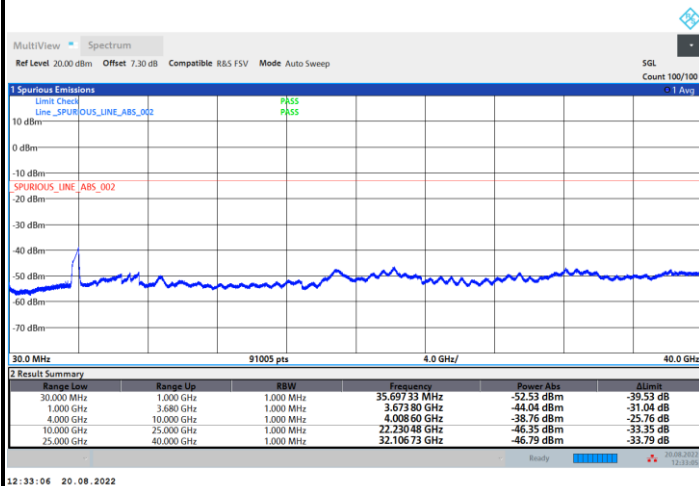
Lowest Channel



Middle Channel



Highest Channel



Frequency Stability

Test Conditions		FR1 n77 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 40MHz	Note 2.
		Frequency offset (ppm)	Result
50	Normal Voltage	0.0056	PASS
40	Normal Voltage	0.0015	
30	Normal Voltage	0.0042	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0069	
0	Normal Voltage	0.0029	
-10	Normal Voltage	0.0051	
-20	Normal Voltage	0.0046	
-30	Normal Voltage	0.0023	
20	Maximum Voltage	0.0050	
20	Normal Voltage	0.0003	
20	Minimum Voltage	0.0006	

Note:

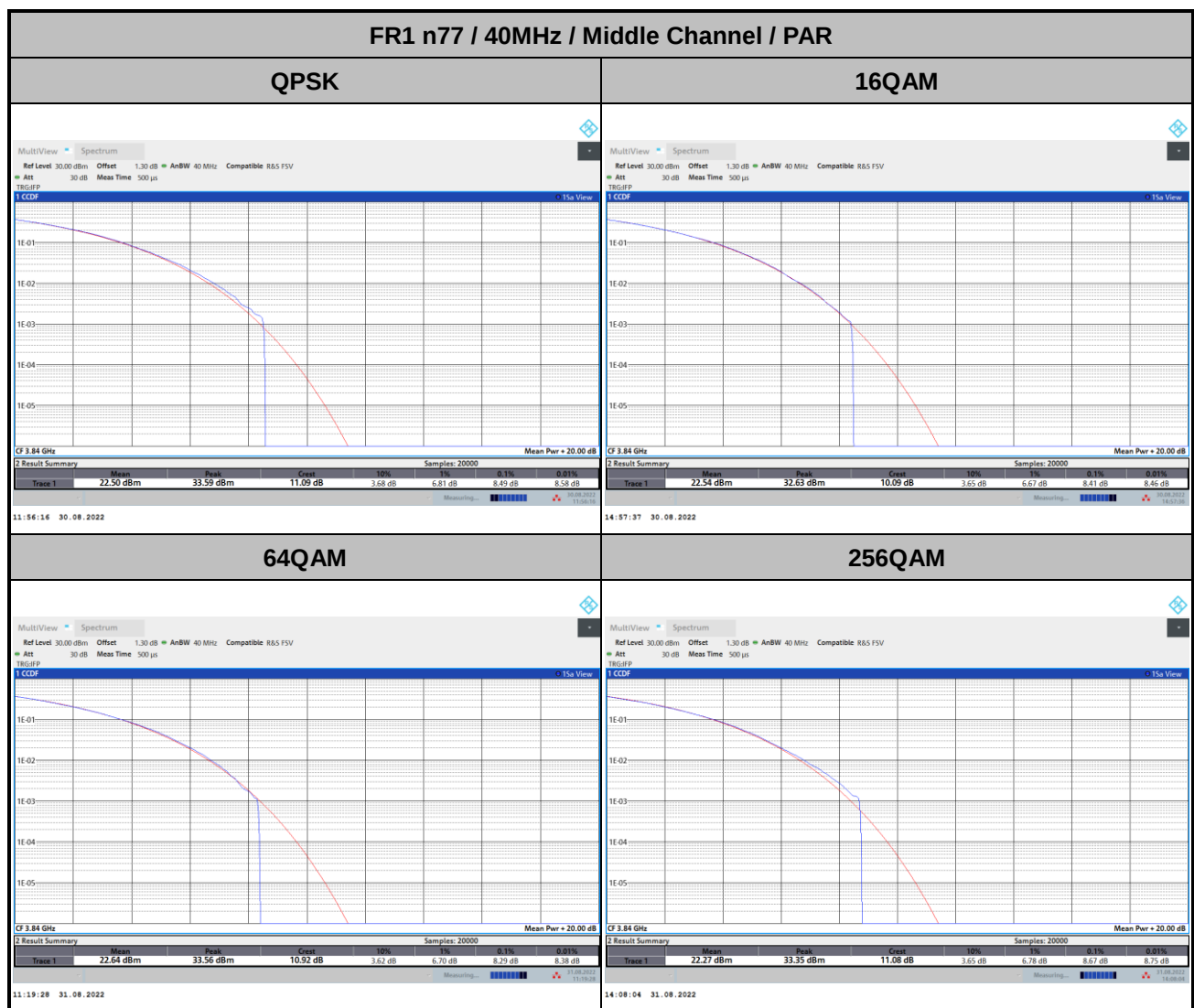
1. Normal Voltage = 48 V. ; Minimum Voltage = 36 V. ; Maximum Voltage = 60 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



<MIMO ANT 2>

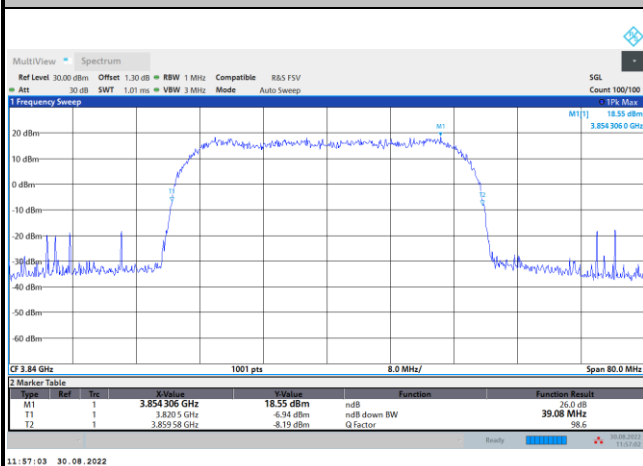
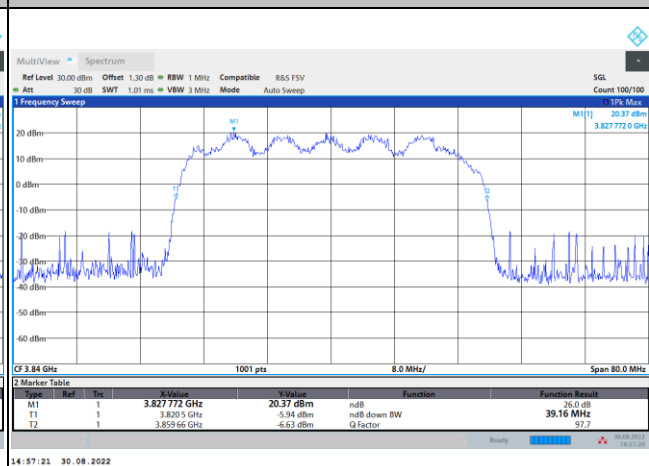
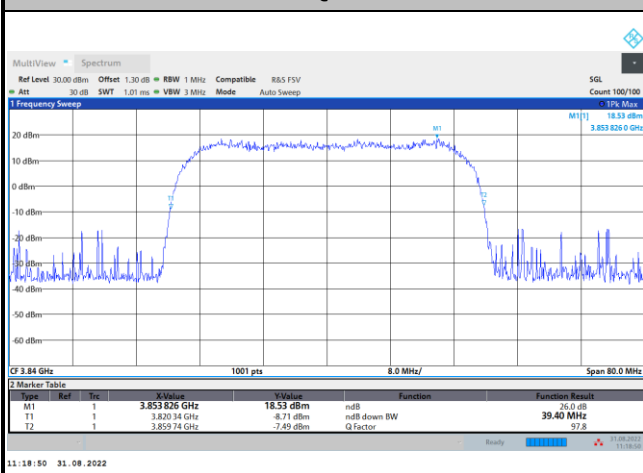
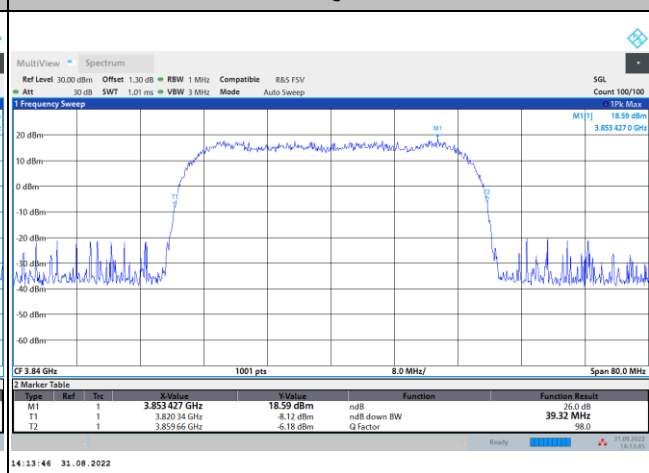
Peak-to-Average Ratio

Mode	FR1 n77 / 40MHz / PAR (dB)				Limit: 13dB
Mod.	QPSK	16QAM	64QAM	256QAM	Result
Middle CH	8.49	8.41	8.29	8.67	PASS



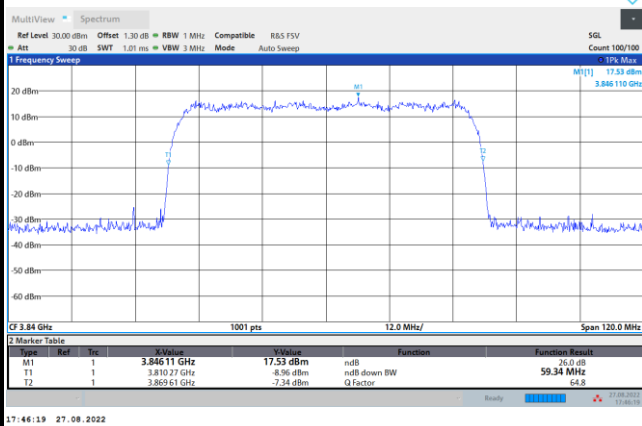
**26dB Bandwidth**

Mode	FR1 n77 : 26dB BW(MHz)					
BW	40MHz		60MHz		80MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	39.08	39.16	59.34	59.34	79.60	79.44
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	39.40	39.32	59.34	59.46	79.60	79.60
BW	100MHz					
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	99.50	99.50				
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	99.50	99.50				

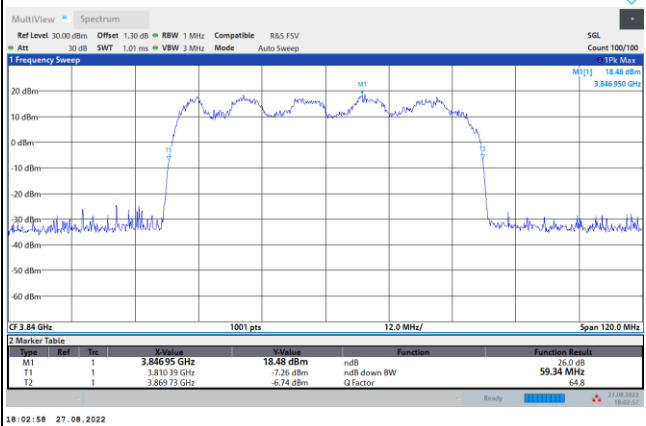
FR1 n77 / 40MHz / Middle Channel / 26dB BW**QPSK****16QAM****64QAM****256QAM**

FR1 n77 / 60MHz / Middle Channel / 26dB BW

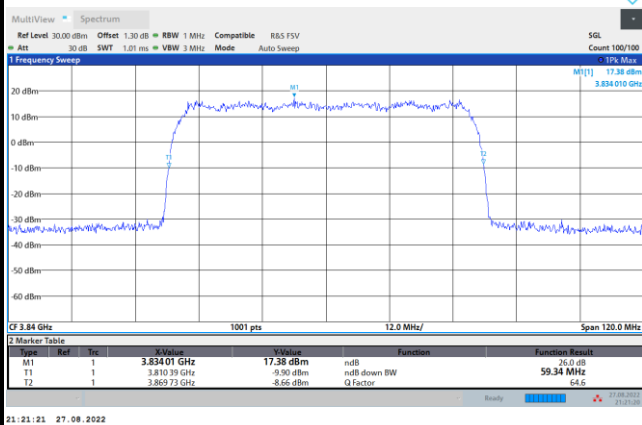
QPSK



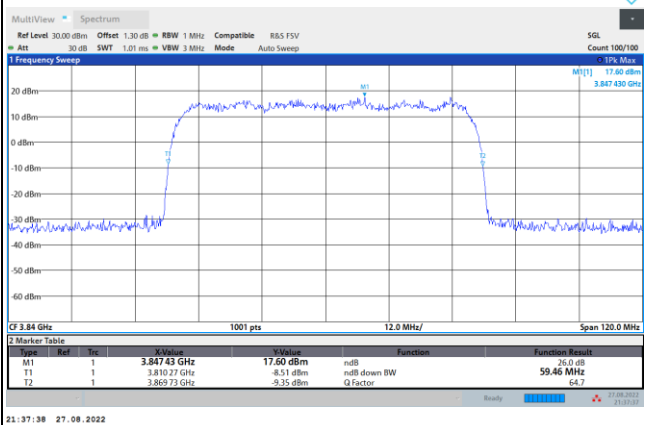
16QAM



64QAM

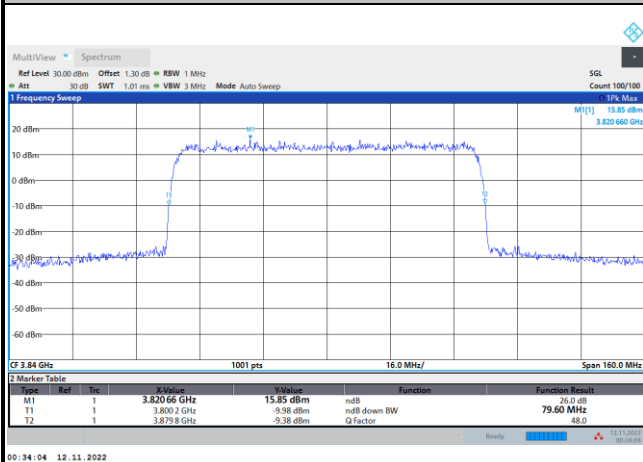


256QAM

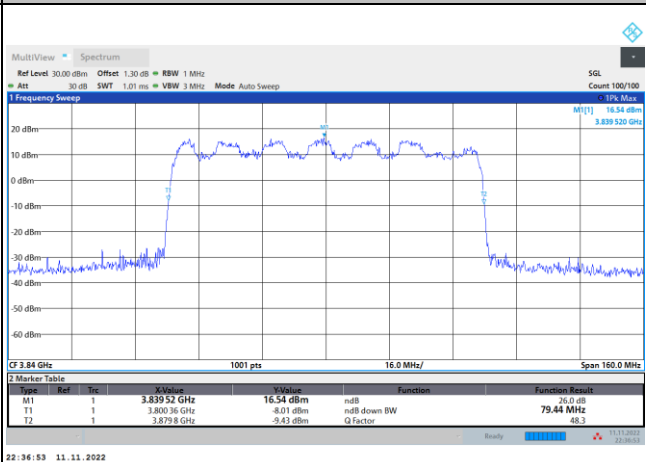


FR1 n77 / 80MHz / Middle Channel / 26dB BW

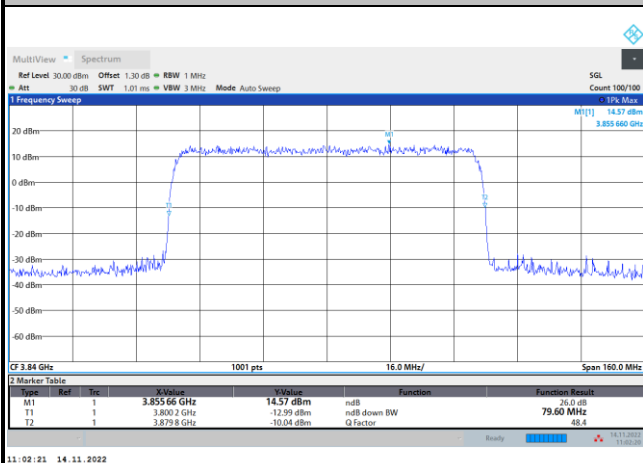
QPSK



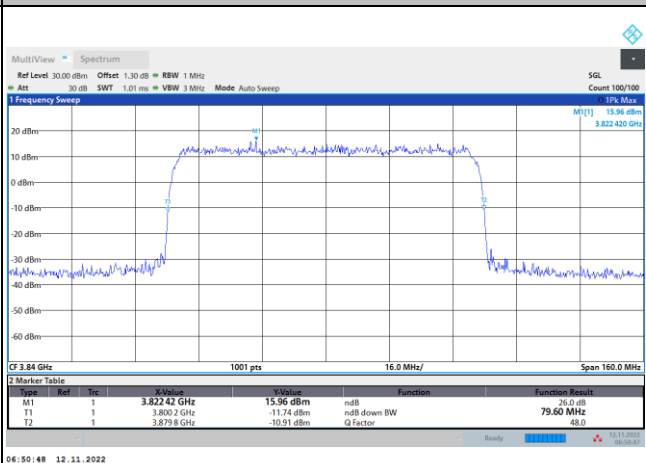
16QAM



64QAM

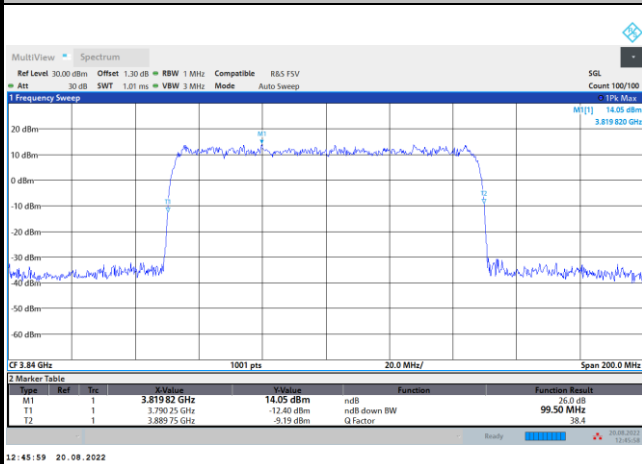


256QAM

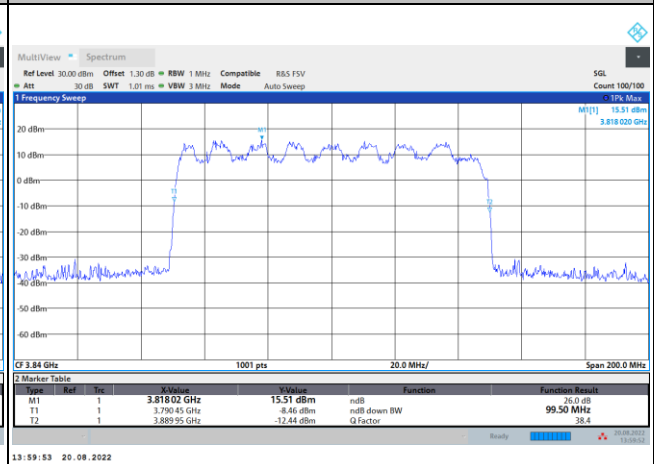


FR1 n77 / 100MHz / Middle Channel / 26dB BW

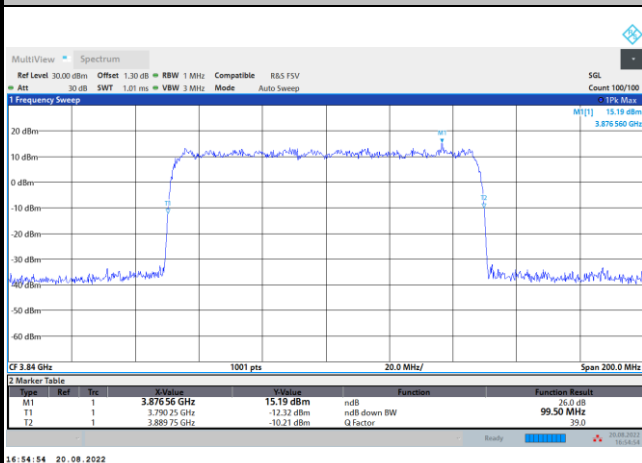
QPSK



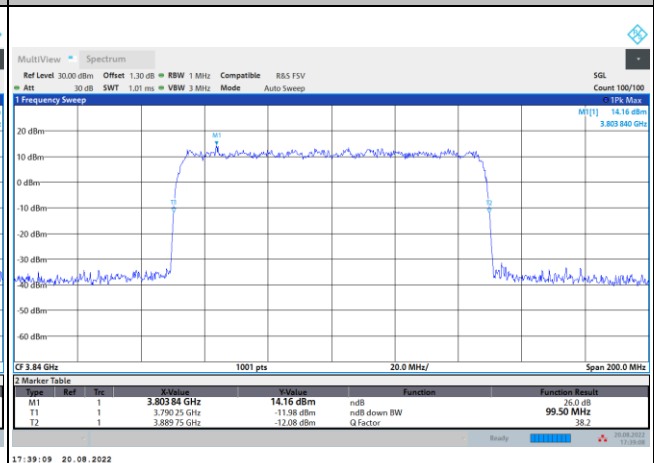
16QAM



64QAM



256QAM



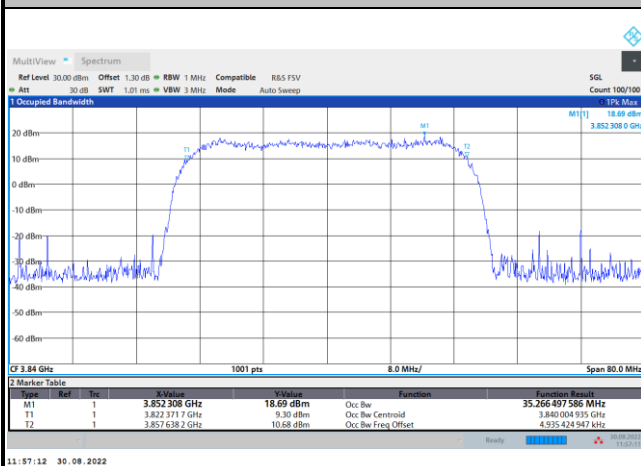


Occupied Bandwidth

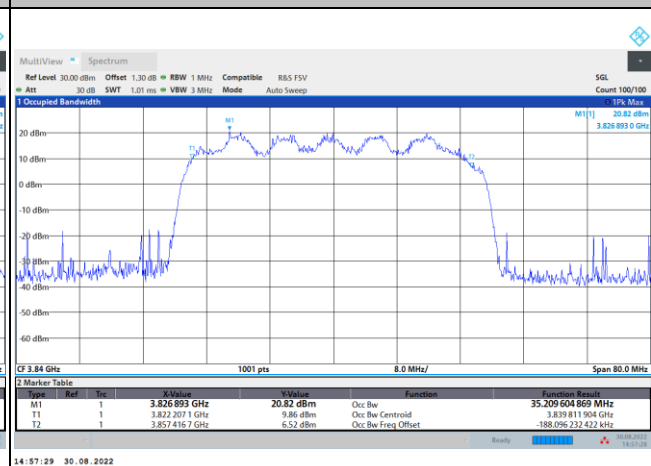
Mode	FR1 n77 : 99%OBW (MHz)					
BW	40MHz		60MHz		80MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	35.26	35.20	54.94	54.89	75.00	75.47
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	35.44	35.36	54.95	55.00	75.17	75.13
BW	100MHz					
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	94.40	93.87				
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	94.24	94.19				

FR1 n77 / 40MHz / Middle Channel / 99%OBW

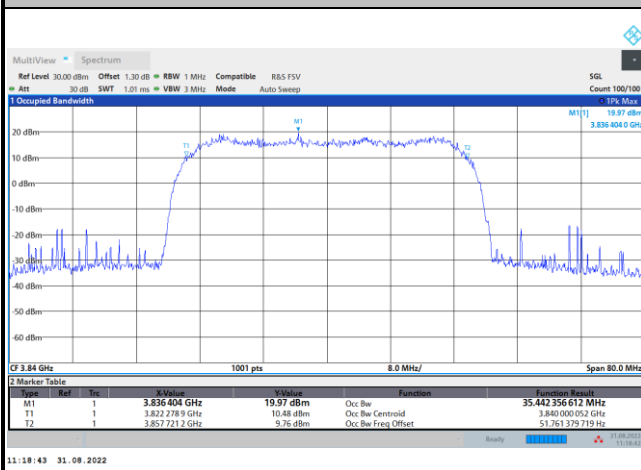
QPSK



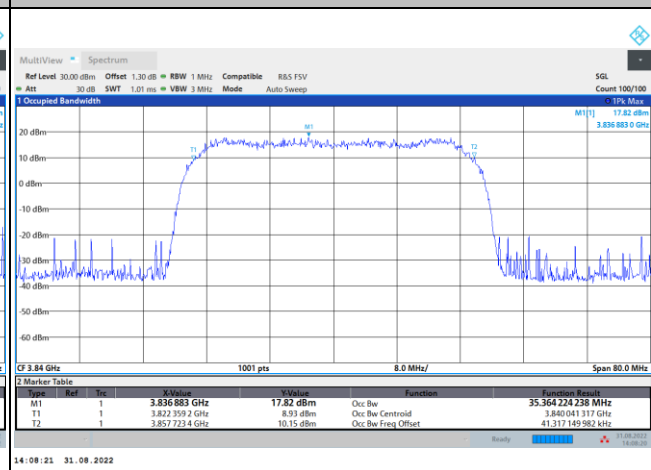
16QAM



64QAM

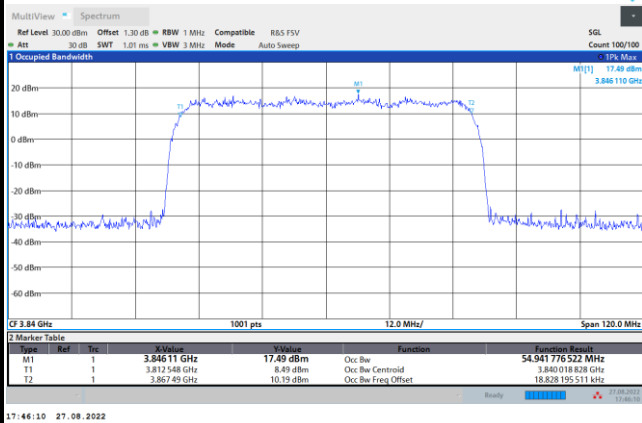


256QAM

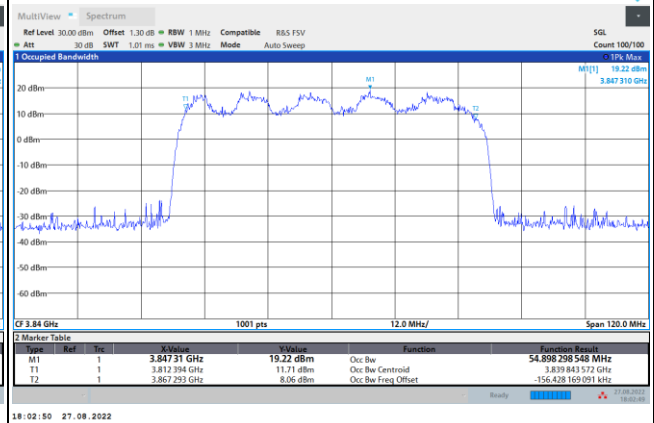


FR1 n77 / 60MHz / Middle Channel / 99%OBW

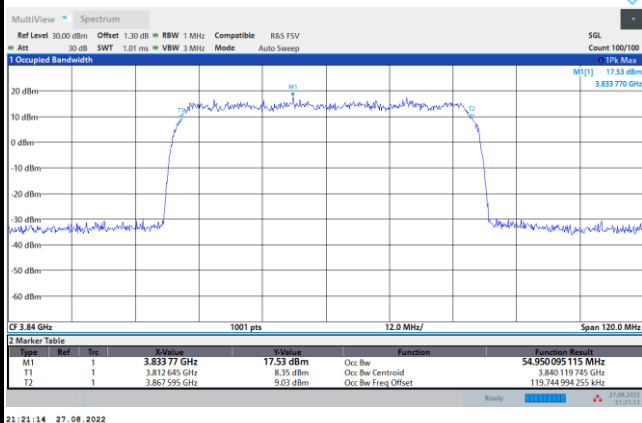
QPSK



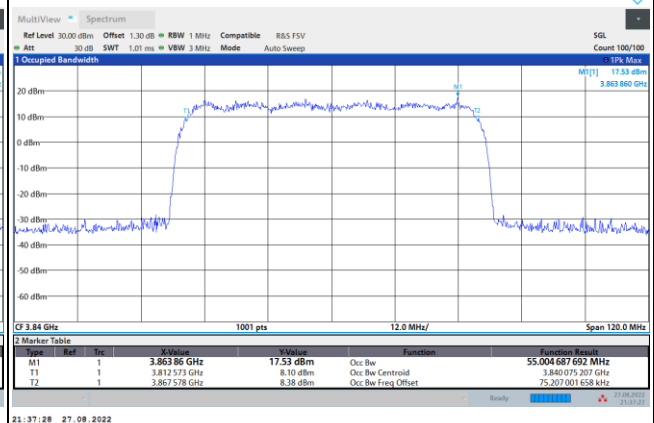
16QAM



64QAM



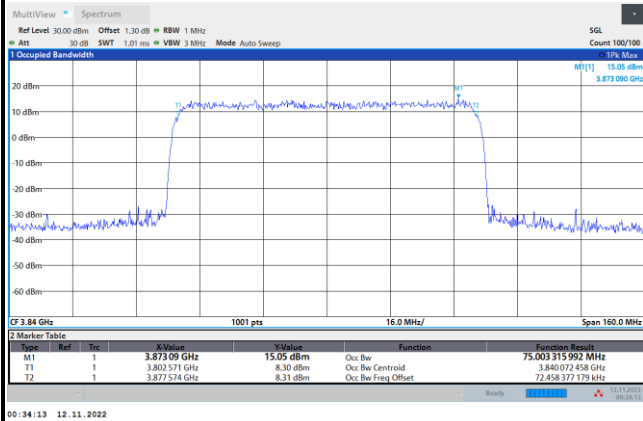
256QAM



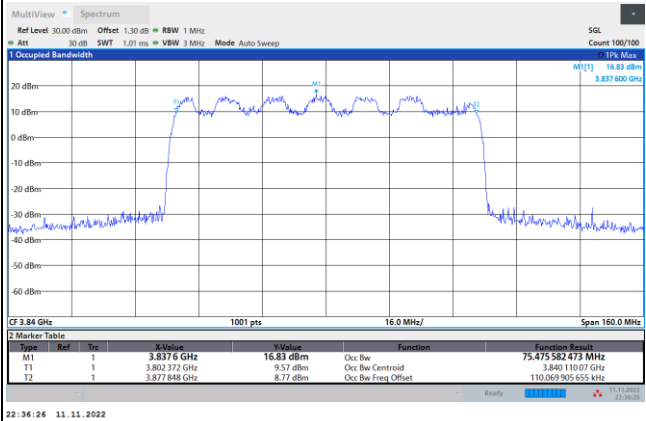


FR1 n77 / 80MHz / Middle Channel / 99%OBW

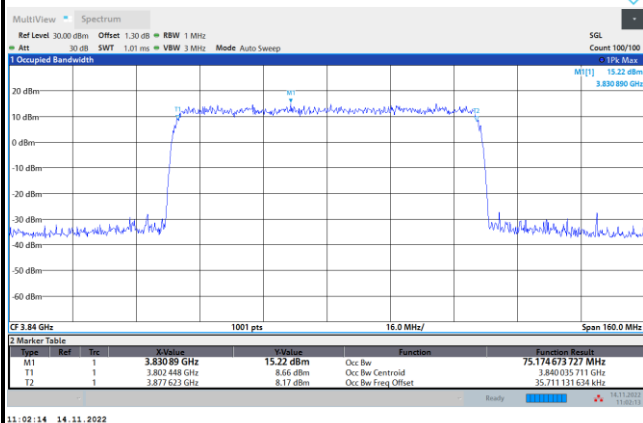
QPSK



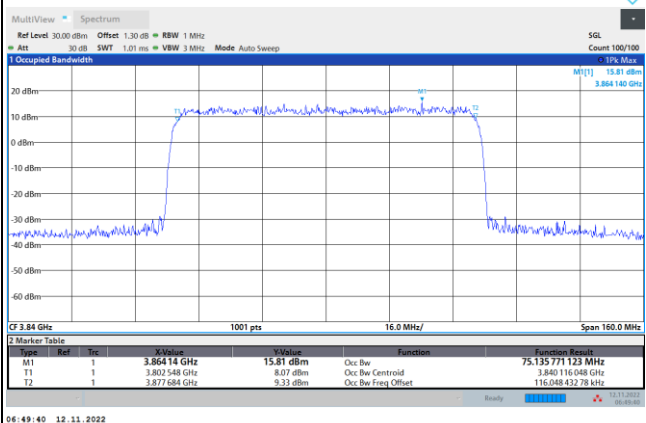
16QAM



64QAM

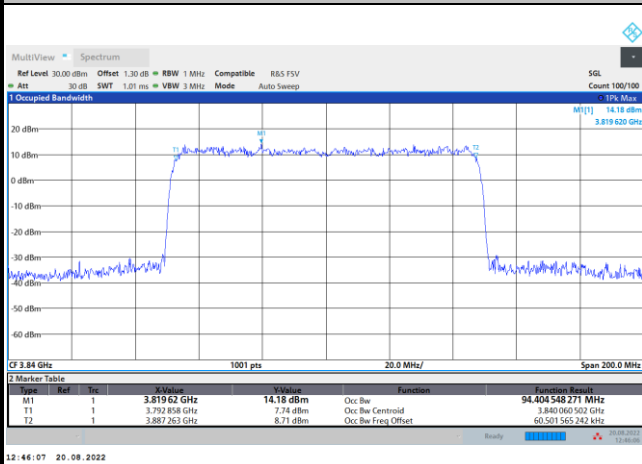


256QAM

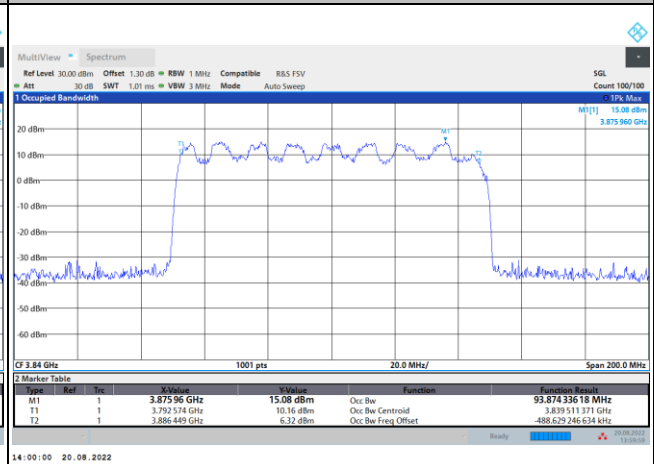


FR1 n77 / 100MHz / Middle Channel / 99%OBW

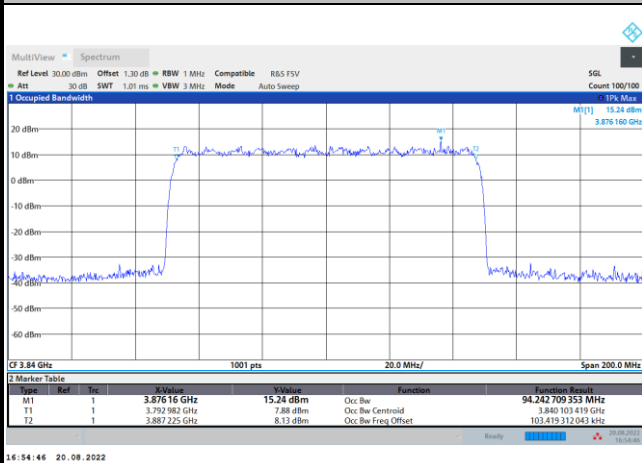
QPSK



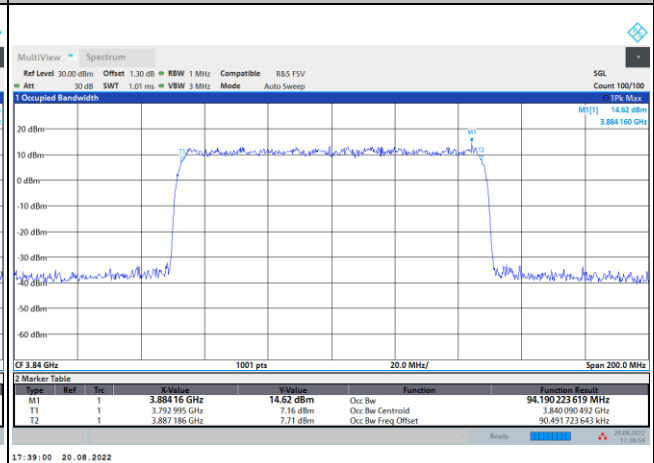
16QAM



64QAM



256QAM

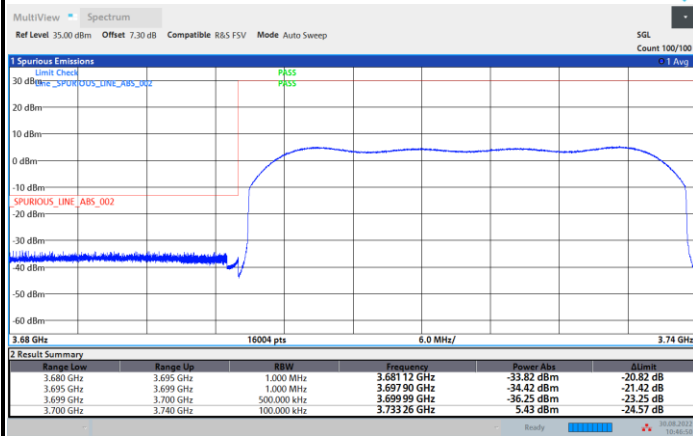




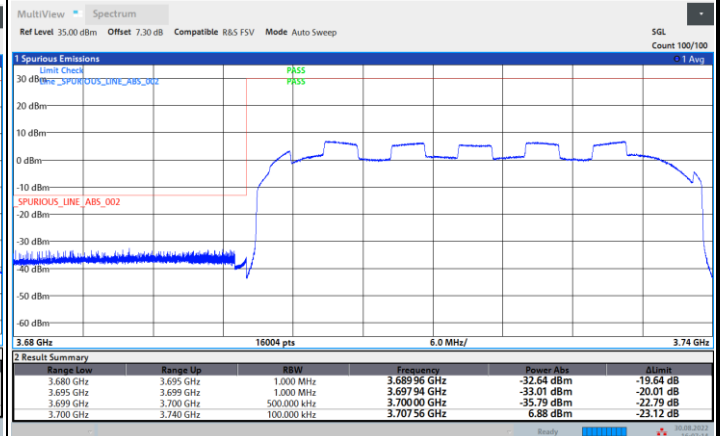
Conducted Band Edge

FR1 n77 / 40MHz / Lowest Band Edge / Full RB

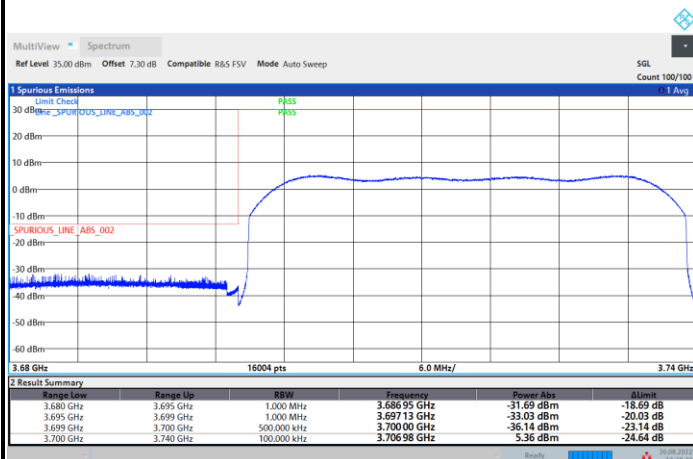
QPSK



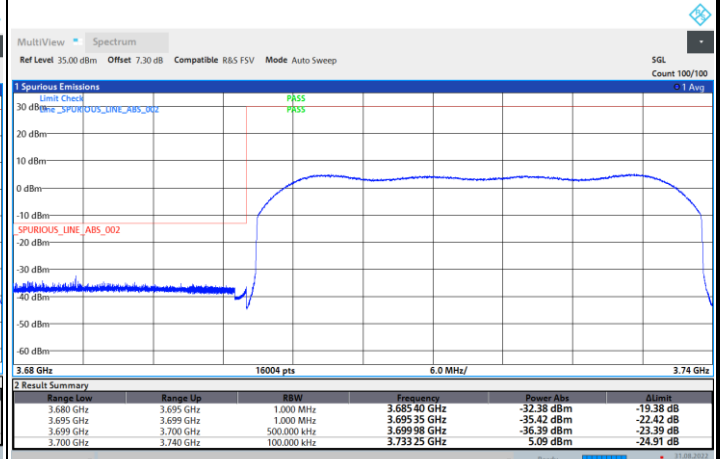
16QAM



64QAM



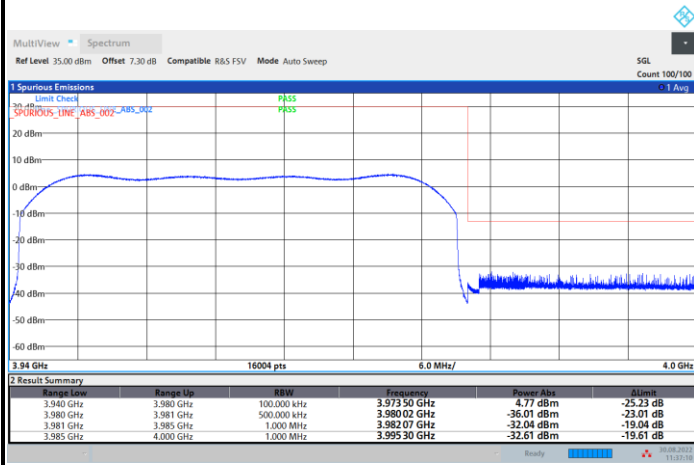
256QAM



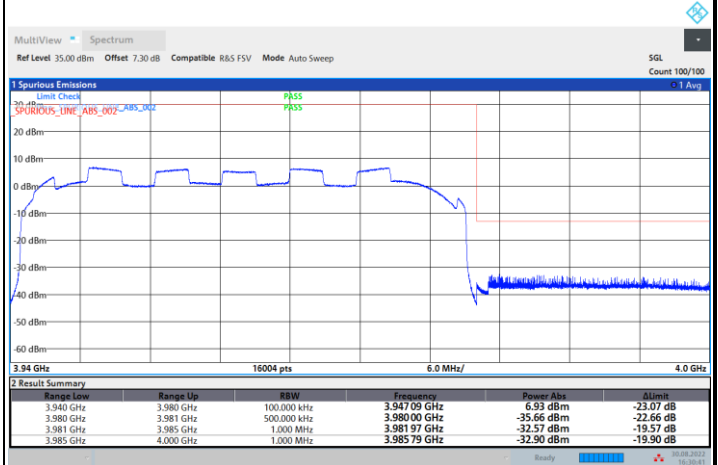


FR1 n77 / 40MHz / Highest Band Edge / Full RB

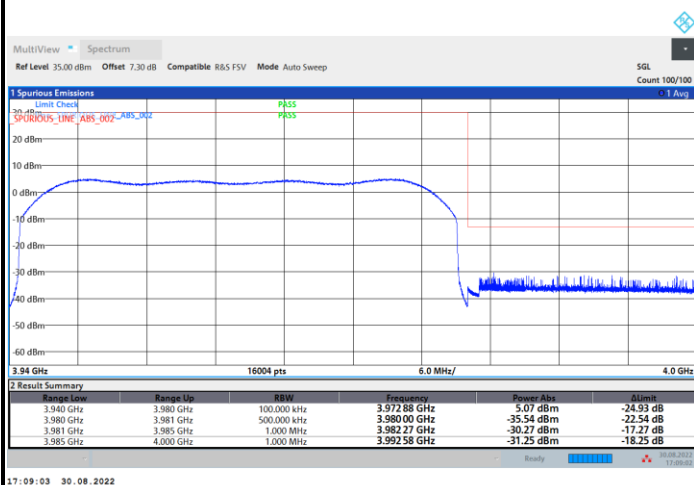
QPSK



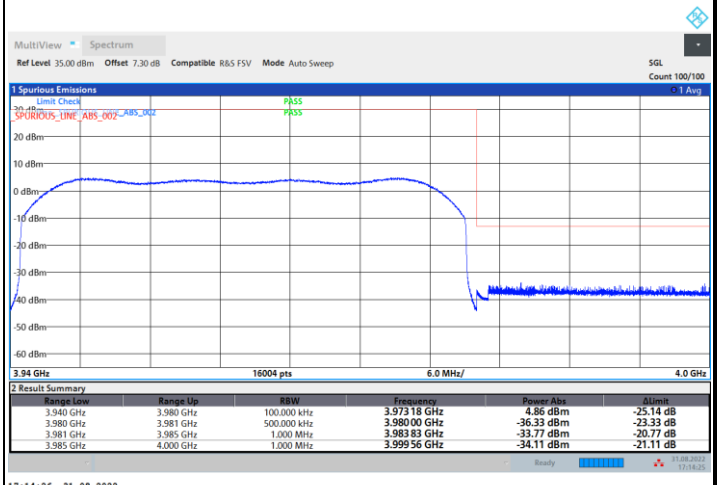
16QAM



64QAM



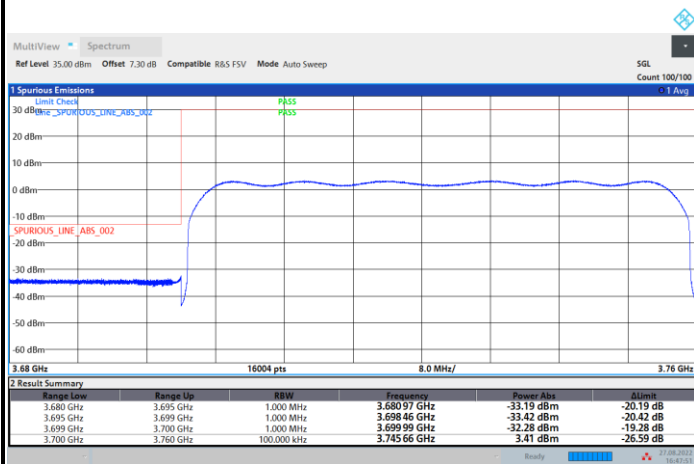
256QAM





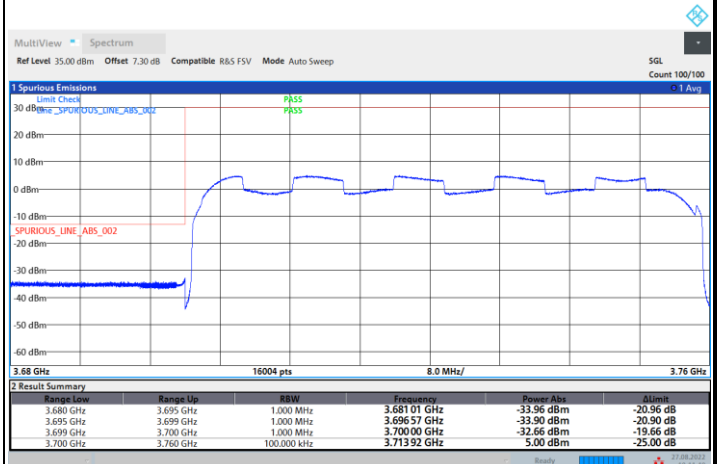
FR1 n77 / 60MHz / Lowest Band Edge / Full RB

QPSK



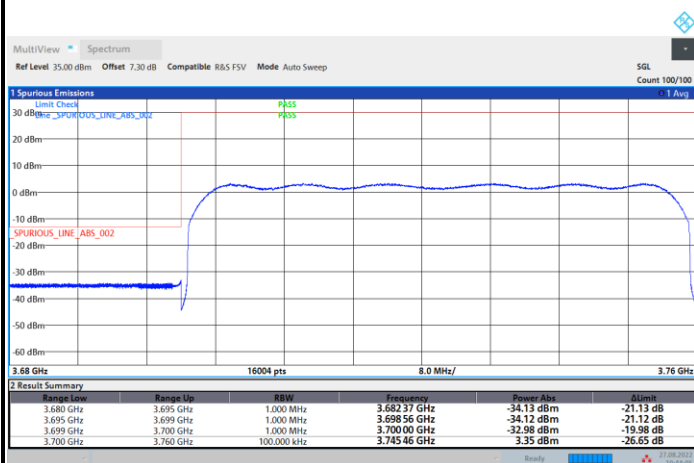
16:47:52 27.08.2022

16QAM



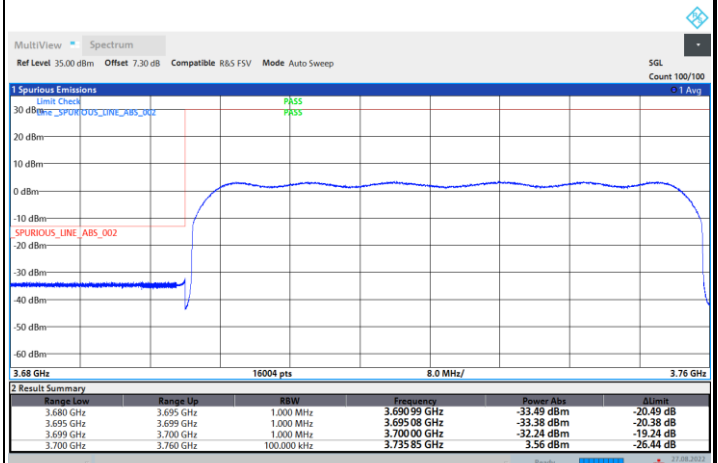
19:11:40 27.08.2022

64QAM



19:44:06 27.08.2022

256QAM

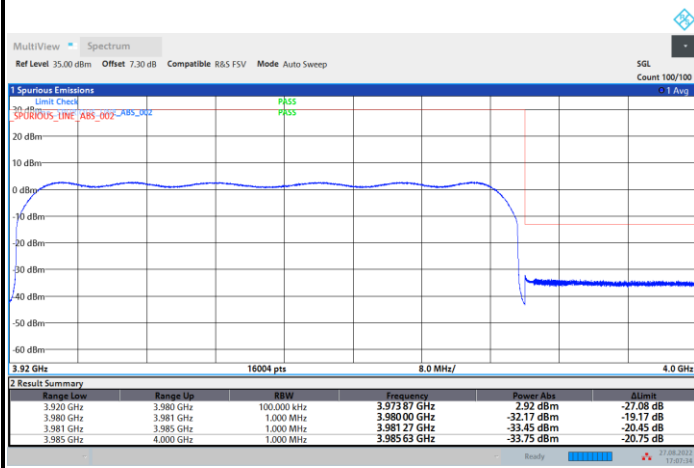


22:17:56 27.08.2022

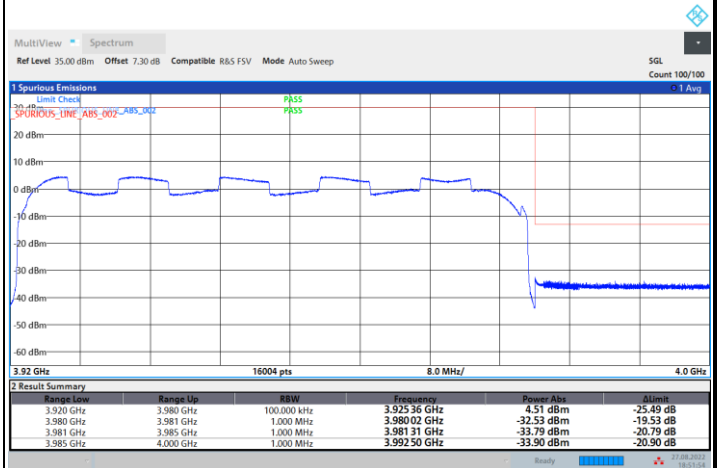


FR1 n77 / 60MHz / Highest Band Edge / Full RB

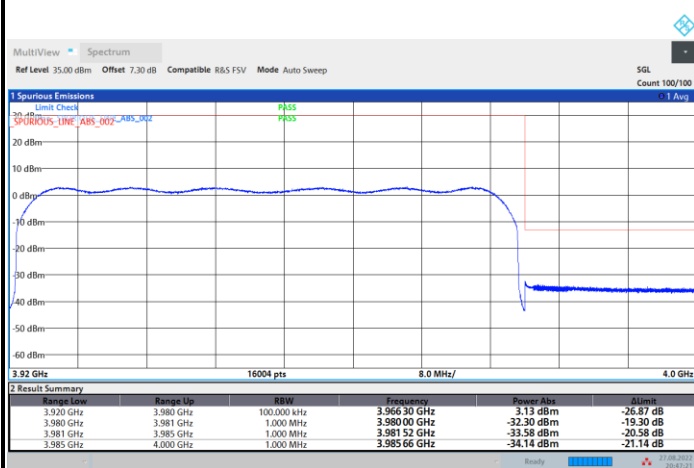
QPSK



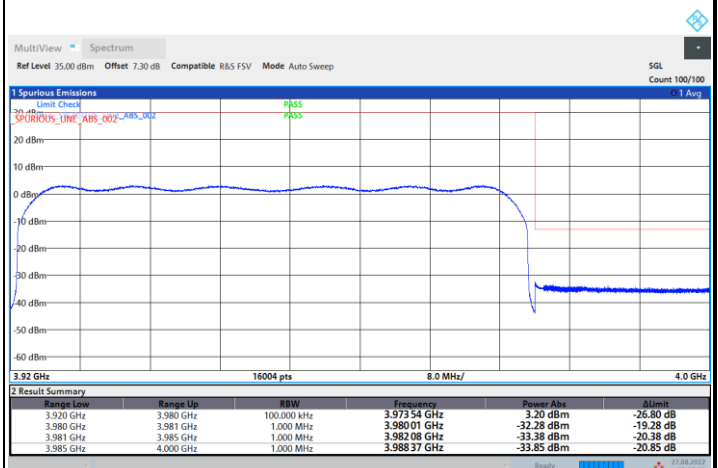
16QAM



64QAM



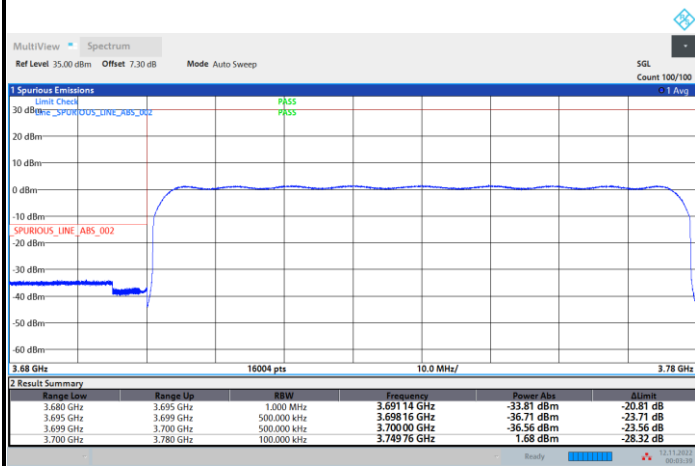
256QAM



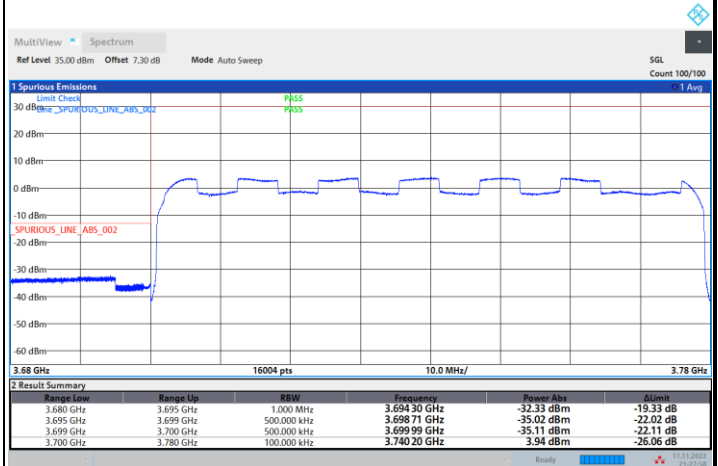


FR1 n77 / 80MHz / Lowest Band Edge / Full RB

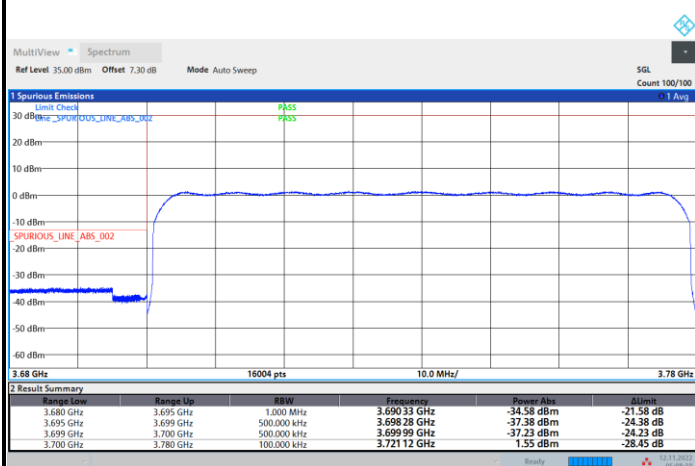
QPSK



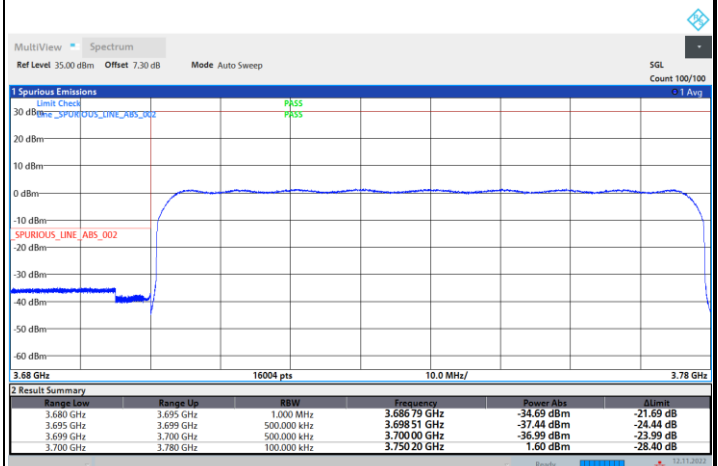
16QAM



64QAM



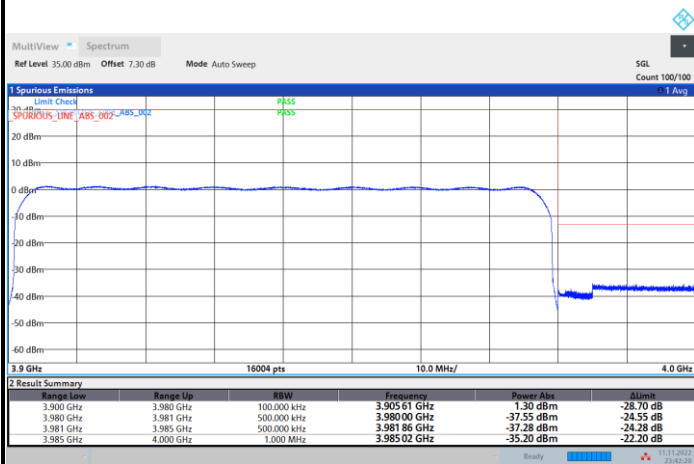
256QAM





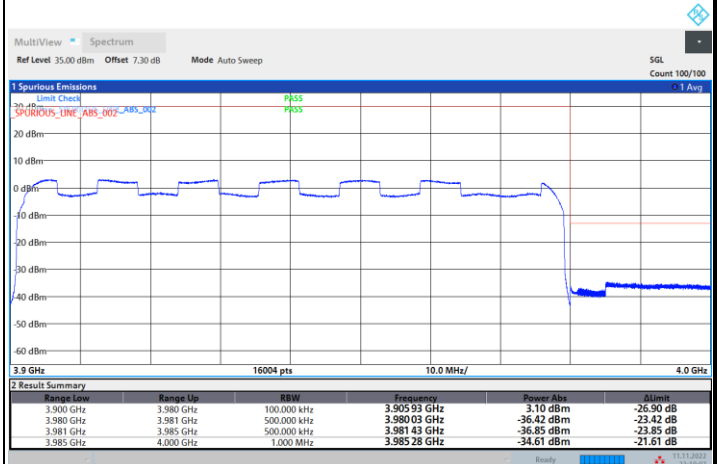
FR1 n77 / 80MHz / Highest Band Edge / Full RB

QPSK



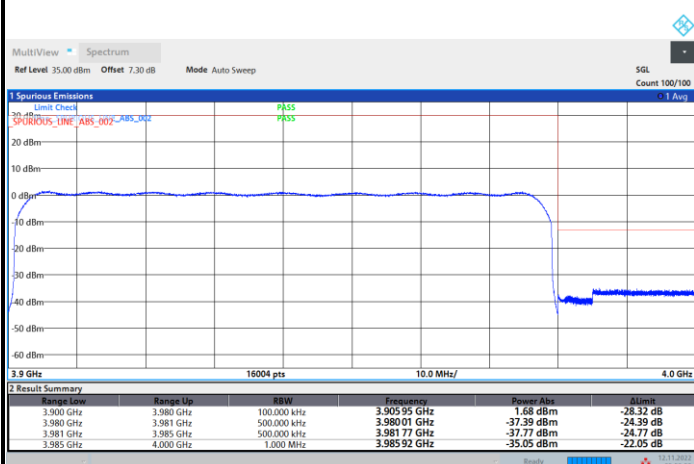
23:42:20 11.11.2022

16QAM



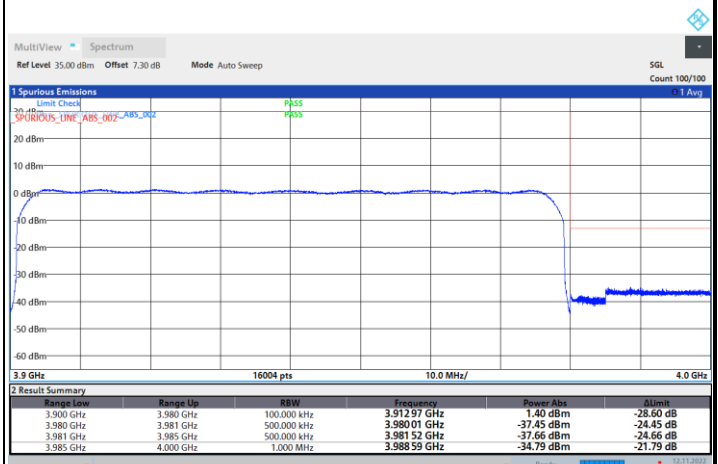
23:10:02 11.11.2022

64QAM



05:53:52 12.11.2022

256QAM

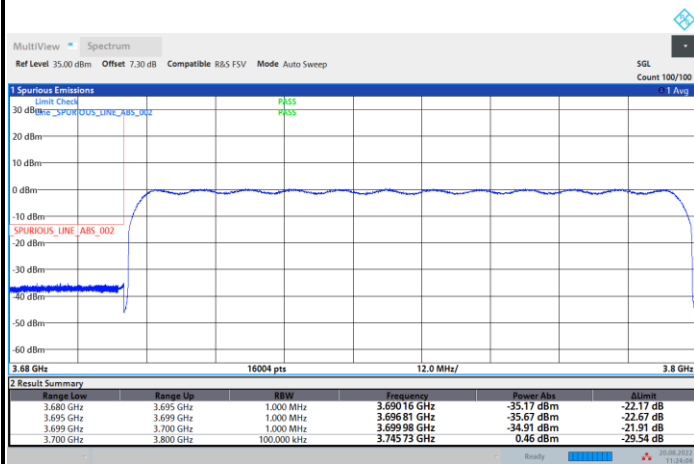


08:09:33 12.11.2022

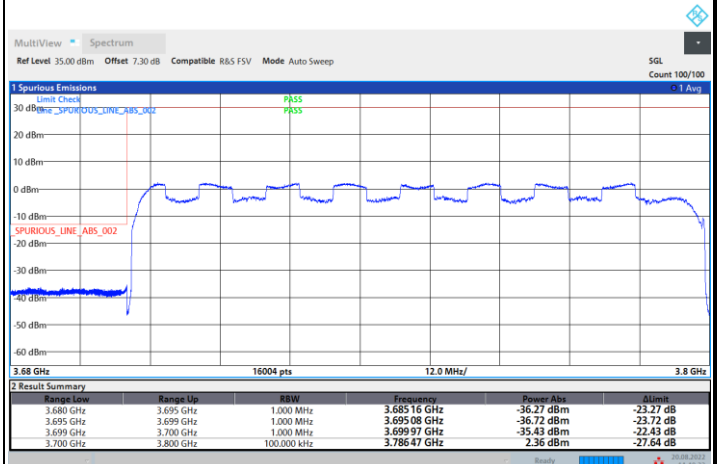


FR1 n77 / 100MHz / Lowest Band Edge / Full RB

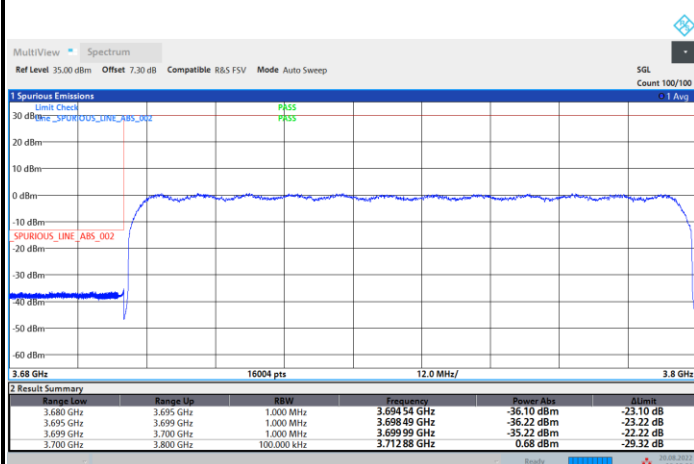
QPSK



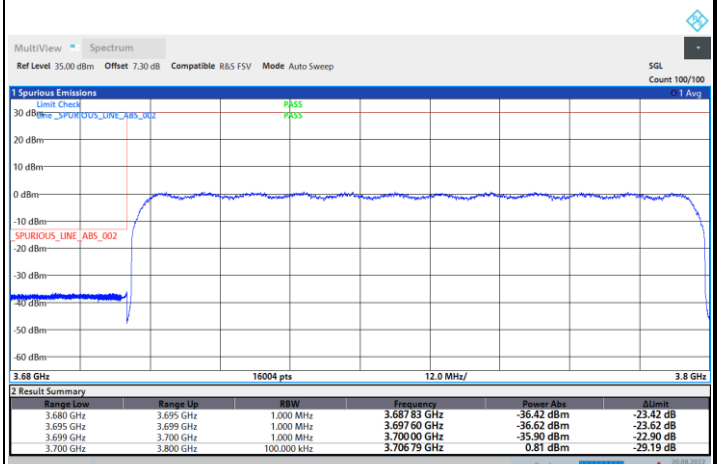
16QAM



64QAM



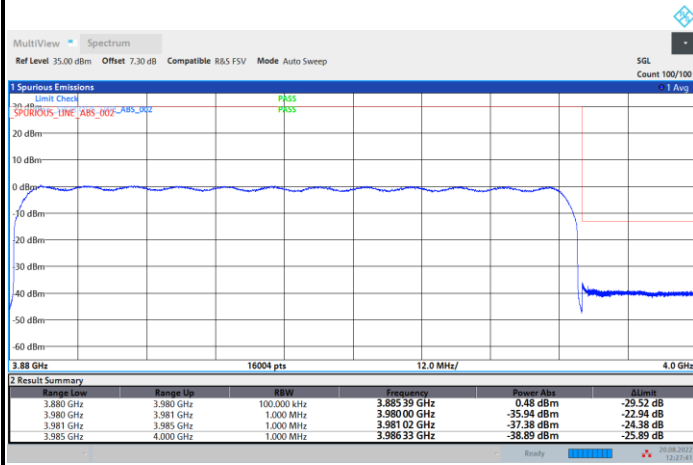
256QAM



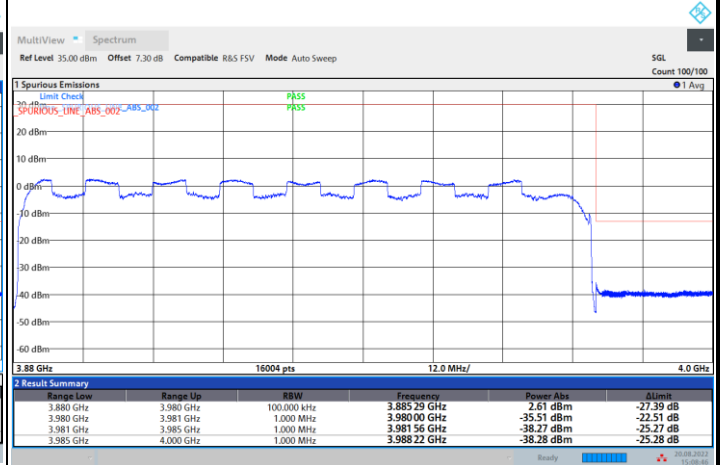


FR1 n77 / 100MHz / Highest Band Edge / Full RB

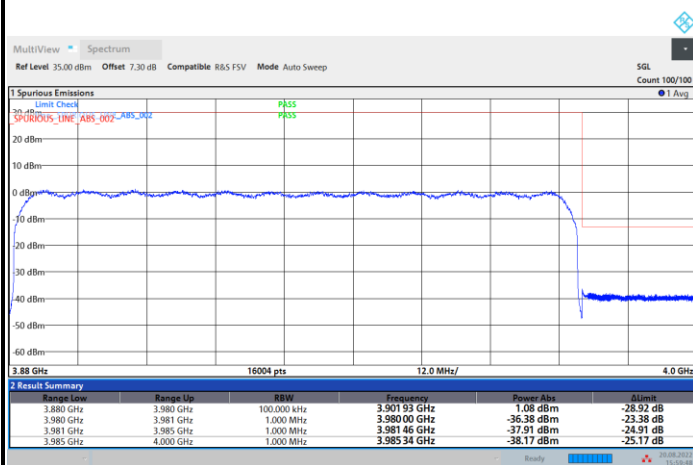
QPSK



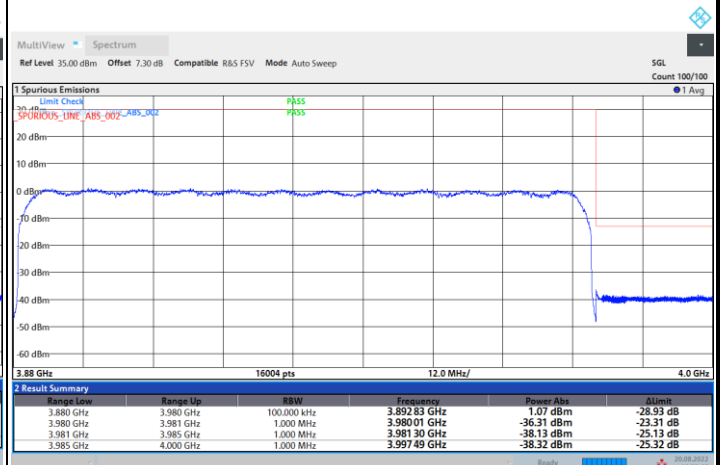
16QAM

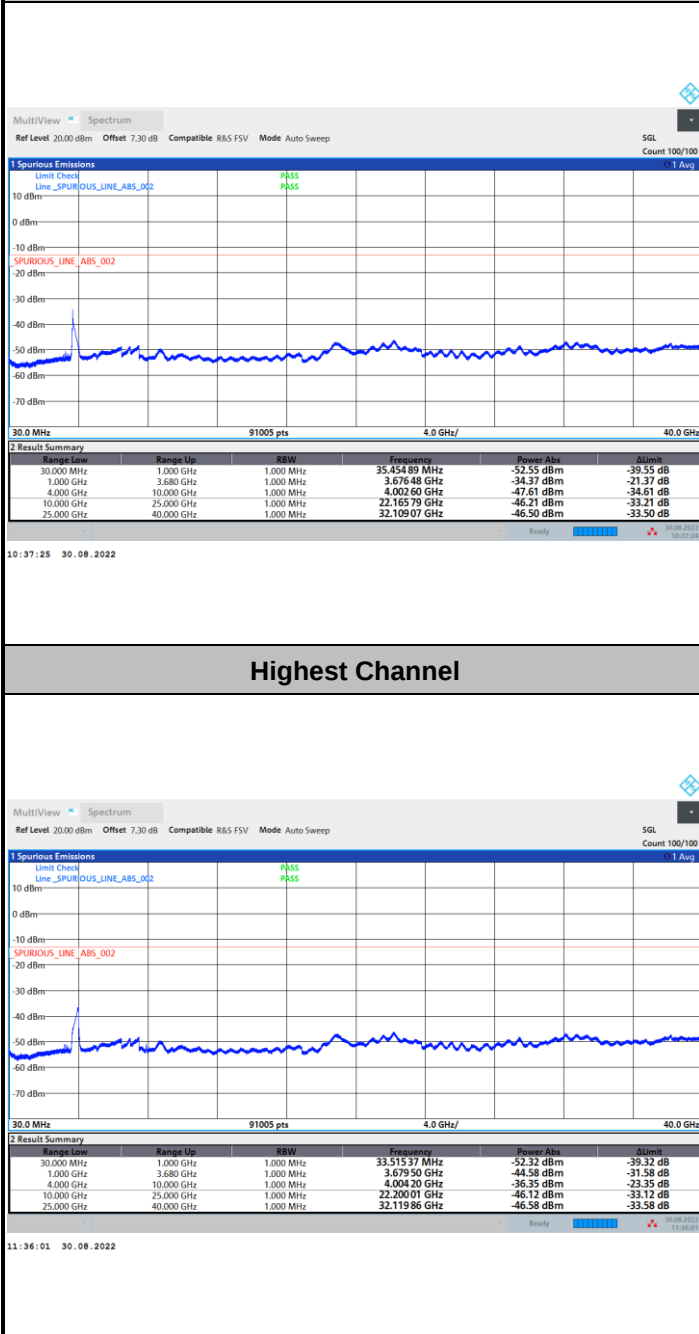
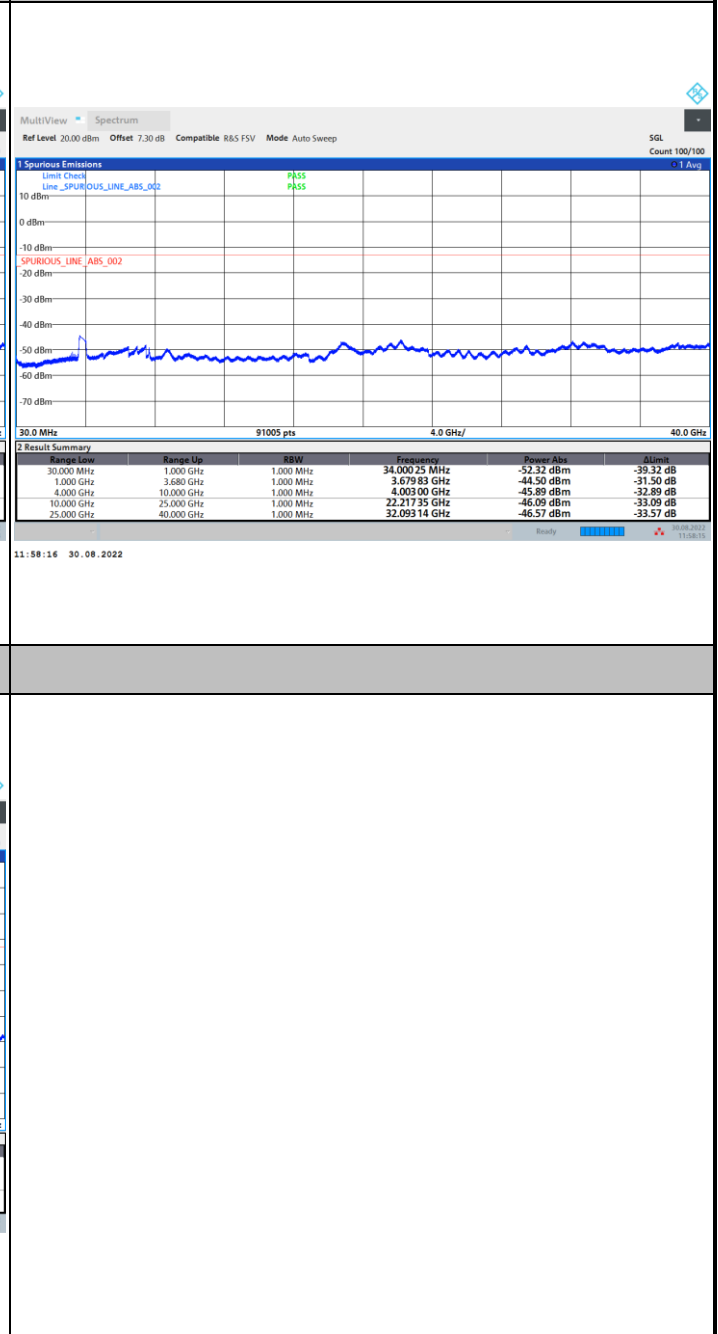
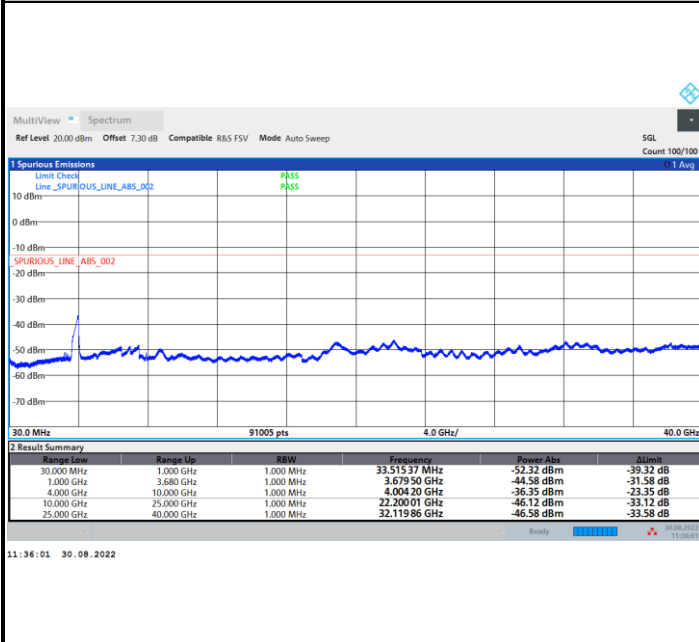


64QAM



256QAM

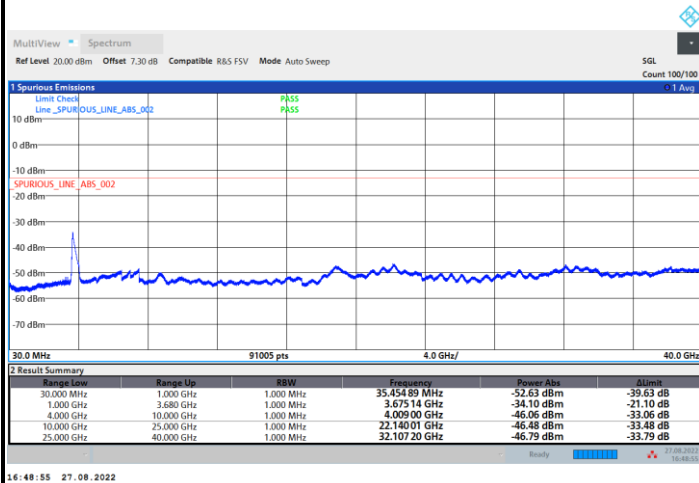


**Emission Limit****FR1 n77 / 40MHz / QPSK / CSE Emission Limit****Lowest Channel****Middle Channel****Highest Channel**

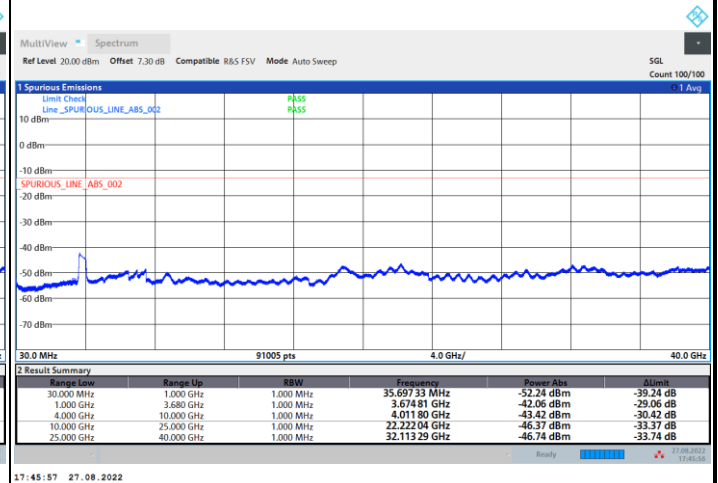


FR1 n77 / 60MHz / QPSK / CSE Emission Limit

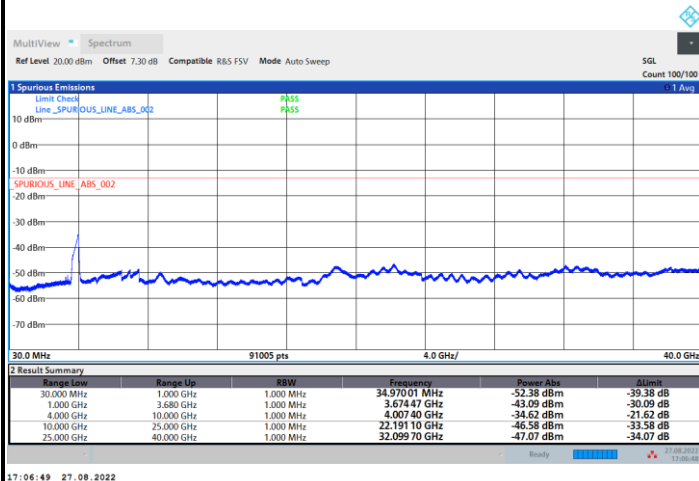
Lowest Channel



Middle Channel



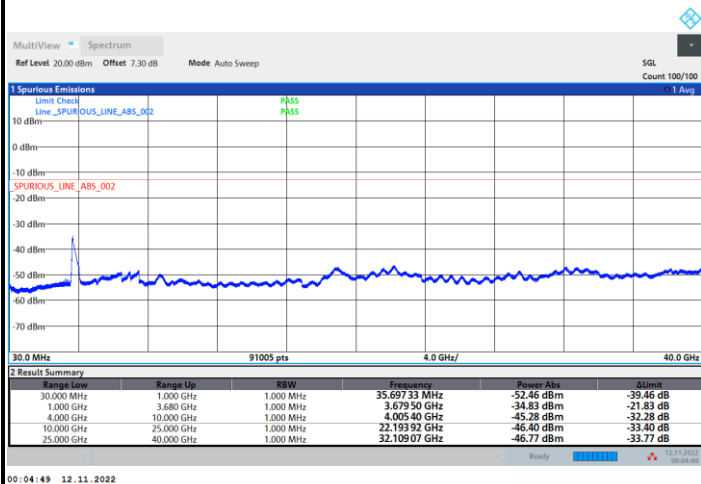
Highest Channel



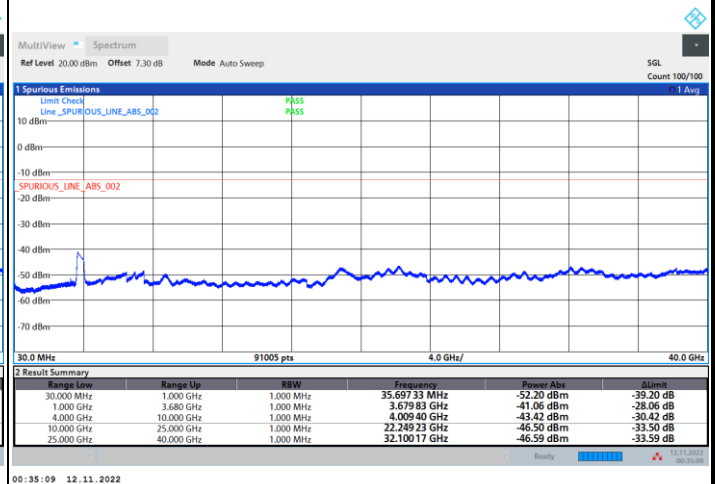


FR1 n77 / 80MHz / QPSK / Emission Limit

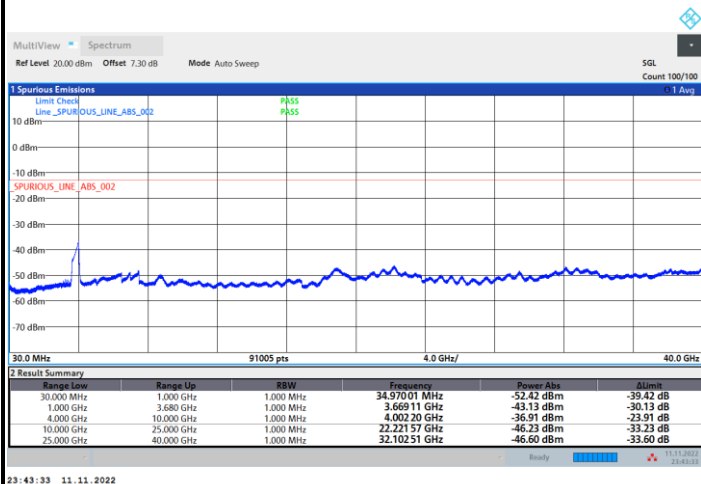
Lowest Channel



Middle Channel



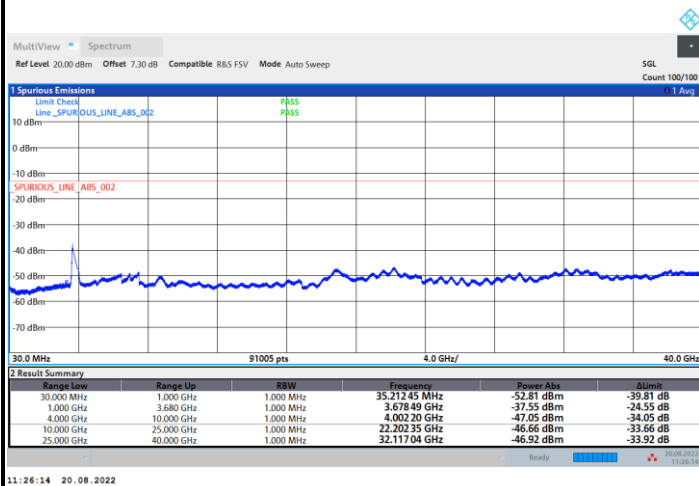
Highest Channel



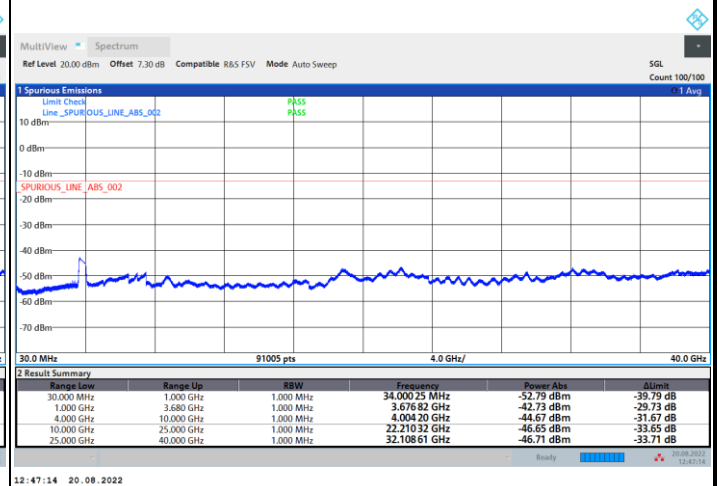


FR1 n77 / 100MHz / QPSK / CSE Emission Limit

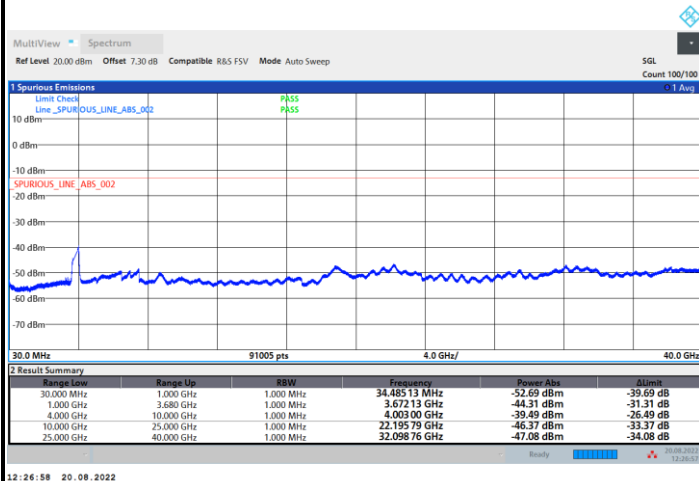
Lowest Channel



Middle Channel



Highest Channel



Frequency Stability

Test Conditions		FR1 n77 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 40MHz	Note 2.
		Frequency offset (ppm)	Result
50	Normal Voltage	0.0037	PASS
40	Normal Voltage	0.0012	
30	Normal Voltage	0.0018	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0056	
0	Normal Voltage	0.0019	
-10	Normal Voltage	0.0031	
-20	Normal Voltage	0.0045	
-30	Normal Voltage	0.0040	
20	Maximum Voltage	0.0014	
20	Normal Voltage	0.0014	
20	Minimum Voltage	0.0004	

Note:

1. Normal Voltage = 48 V. ; Minimum Voltage = 36 V. ; Maximum Voltage = 60 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



<MIMO ANT 3>

Peak-to-Average Ratio

Mode	FR1 n77 / 40MHz / PAR (dB)				Limit: 13dB
Mod.	QPSK	16QAM	64QAM	256QAM	Result
Middle CH	7.97	7.88	7.80	6.70	PASS

