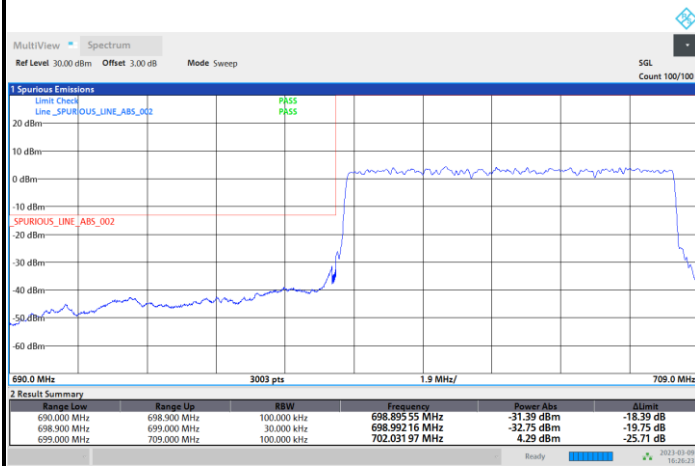


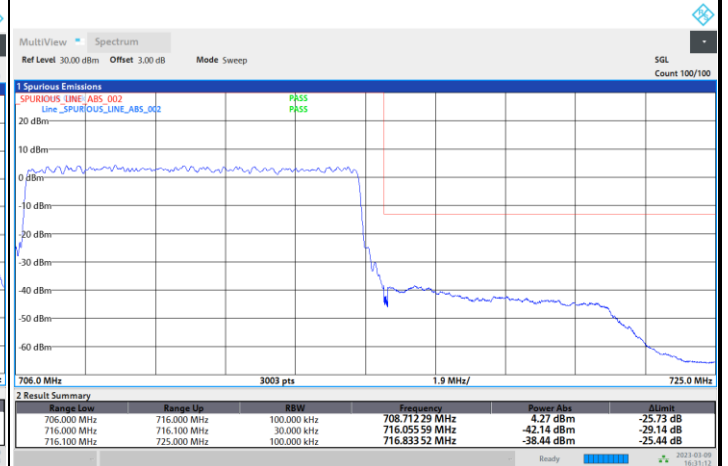


FR1 n12 / 10MHz / DFT-s-OFDM / 16QAM / Full RB

Lowest Band Edge

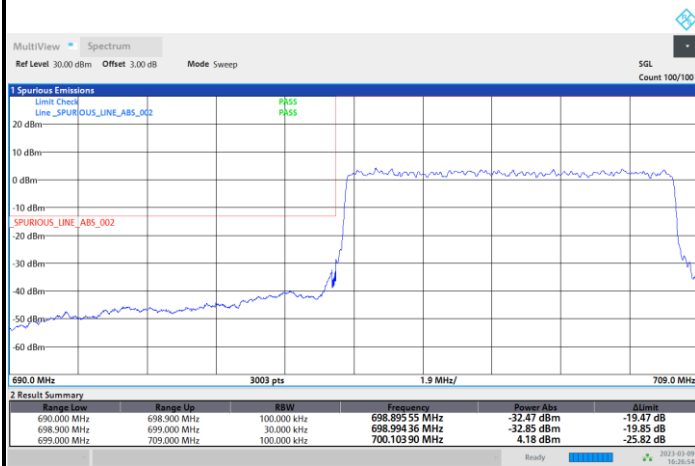


Highest Band Edge

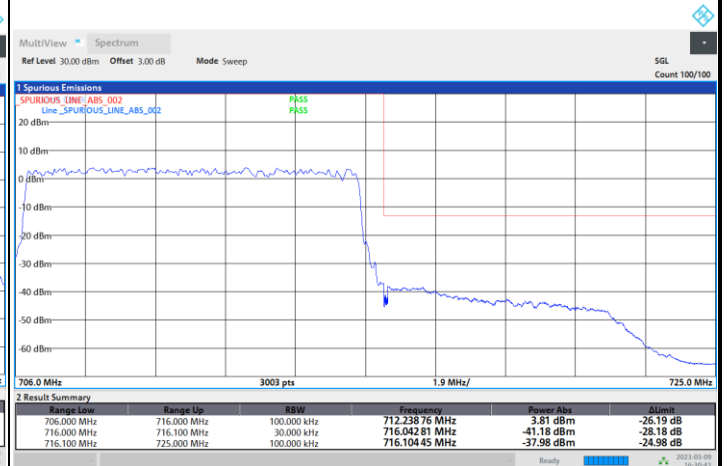


FR1 n12 / 10MHz / DFT-s-OFDM / 64QAM / Full RB

Lowest Band Edge



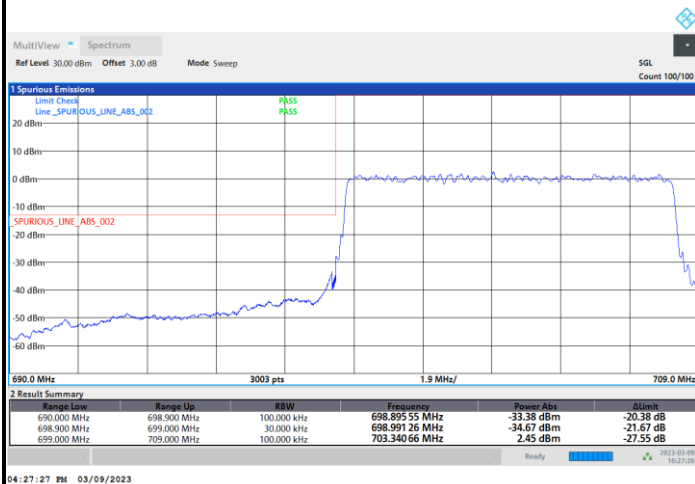
Highest Band Edge



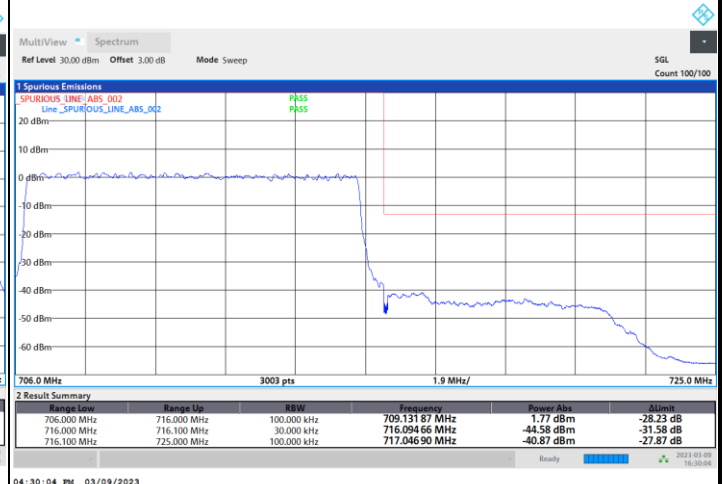


FR1 n12 / 10MHz / DFT-s-OFDM / 256QAM / Full RB

Lowest Band Edge

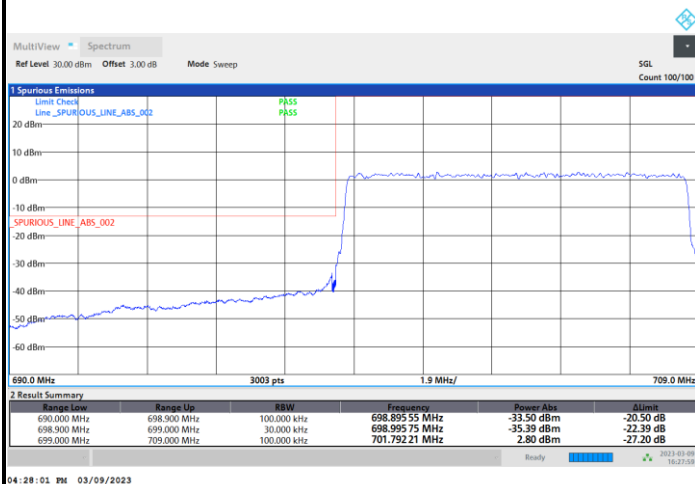


Highest Band Edge

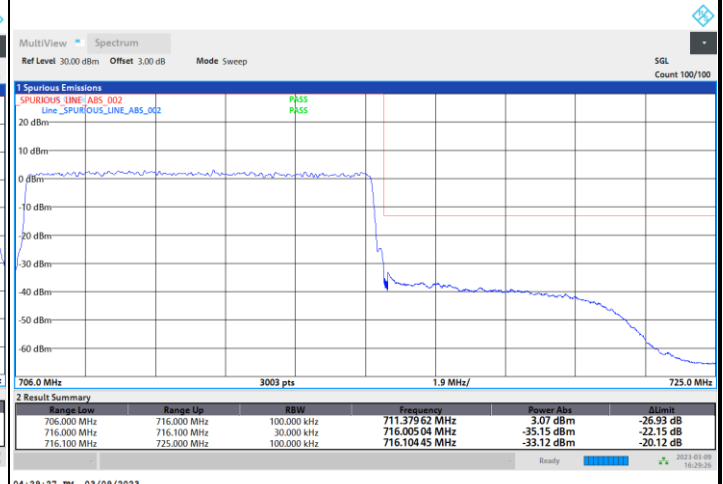


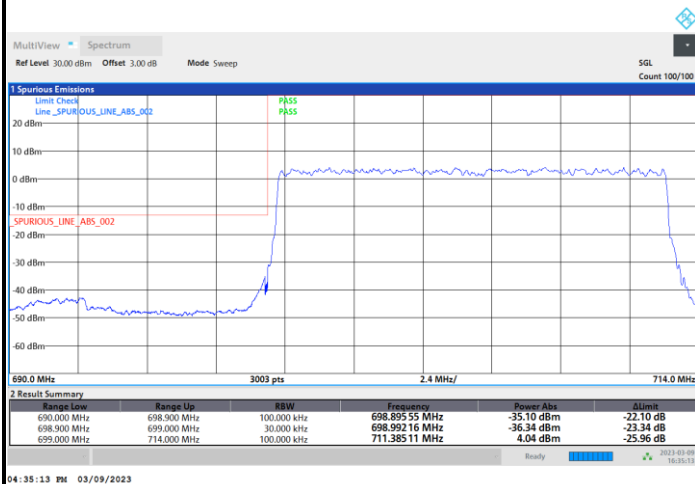
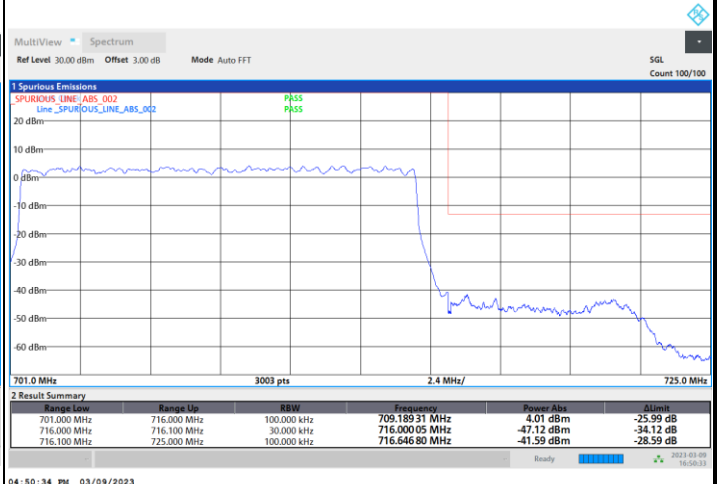
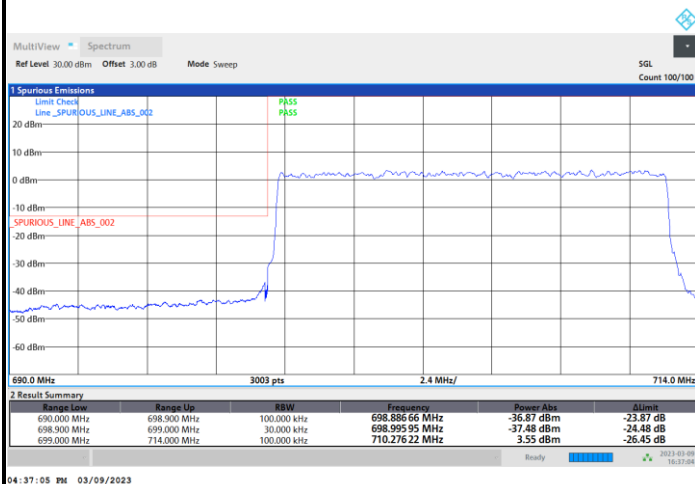
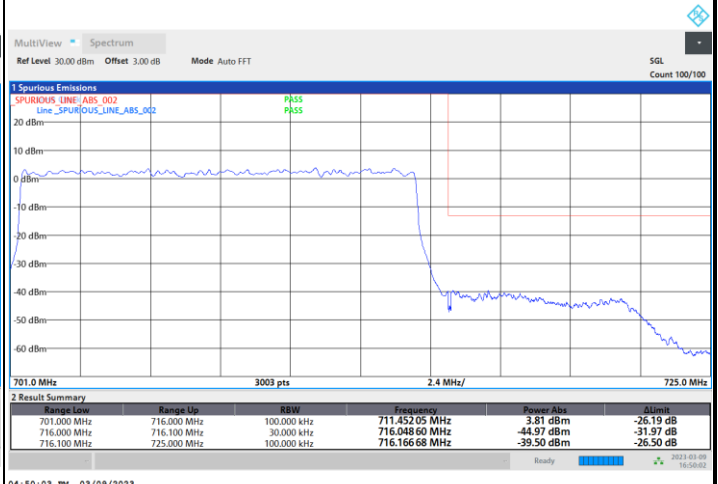
FR1 n12 / 10MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge



Highest Band Edge

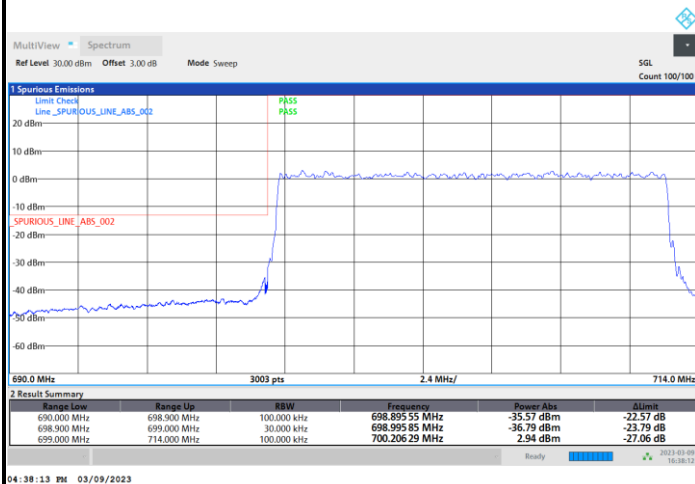


**FR1 n12 / 15MHz / DFT-s-OFDM / PI/2 BPSK / Full RB****Lowest Band Edge****Highest Band Edge****FR1 n12 / 15MHz / DFT-s-OFDM / QPSK / Full RB****Lowest Band Edge****Highest Band Edge**

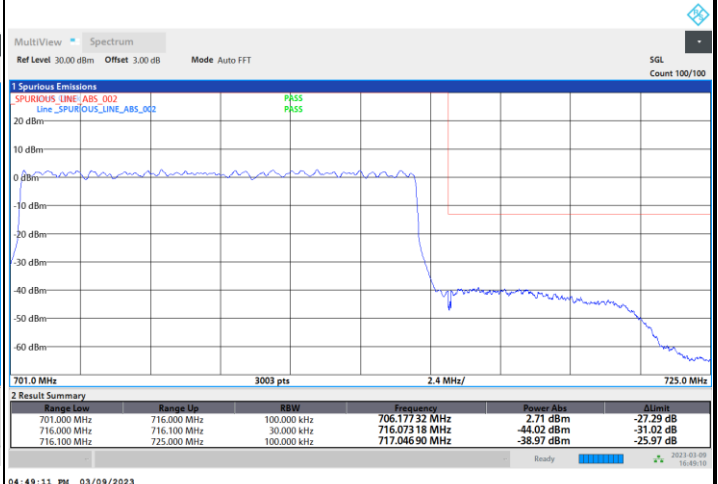


FR1 n12 / 15MHz / DFT-s-OFDM / 16QAM / Full RB

Lowest Band Edge

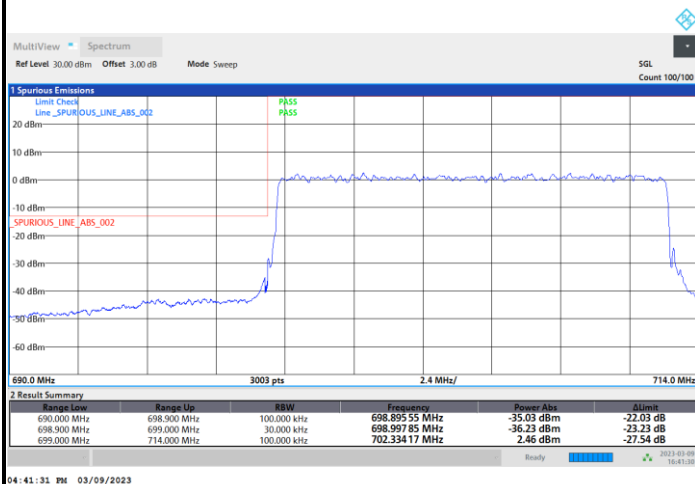


Highest Band Edge

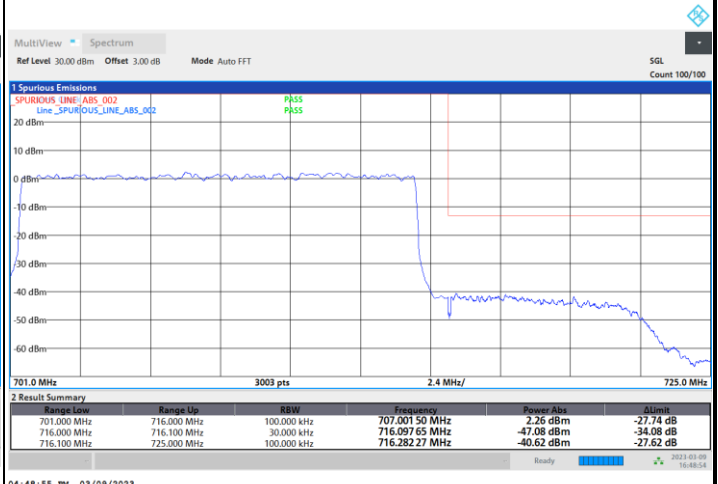


FR1 n12 / 15MHz / DFT-s-OFDM / 64QAM / Full RB

Lowest Band Edge



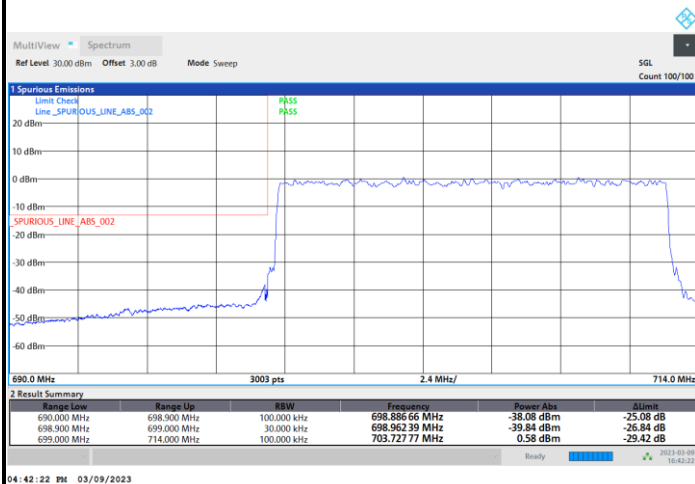
Highest Band Edge



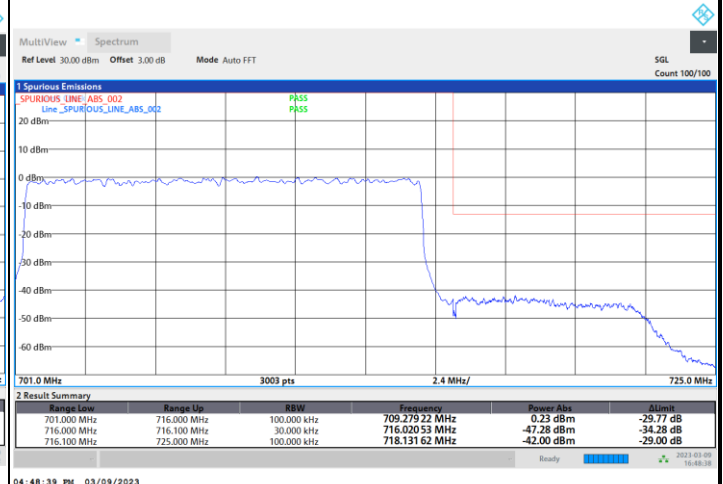


FR1 n12 / 15MHz / DFT-s-OFDM / 256QAM / Full RB

Lowest Band Edge

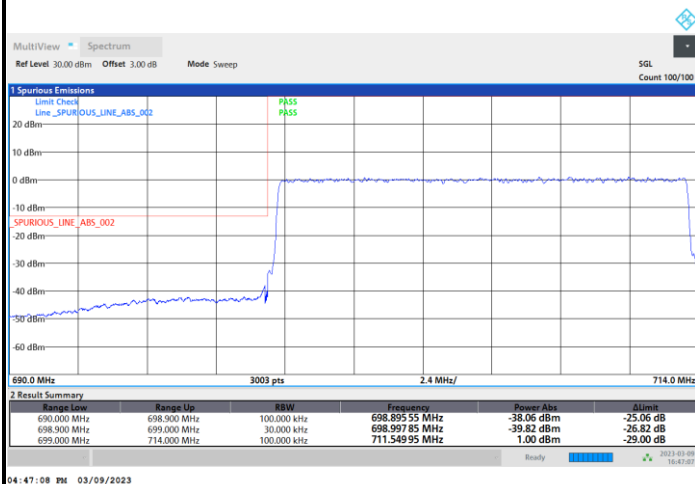


Highest Band Edge

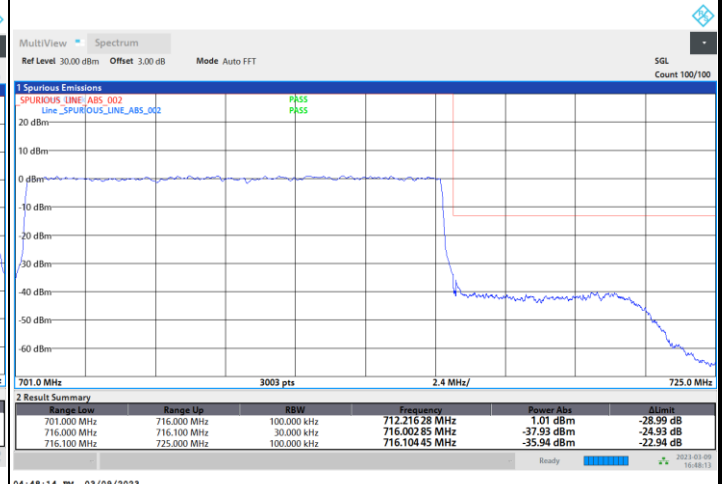


FR1 n12 / 15MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge



Highest Band Edge

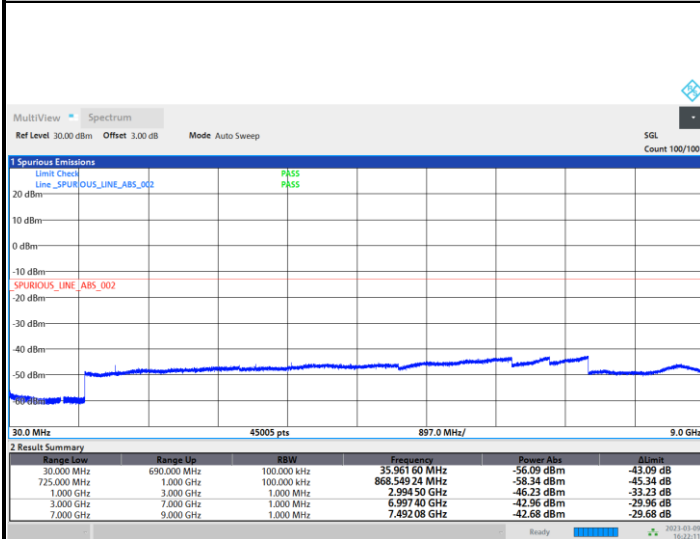




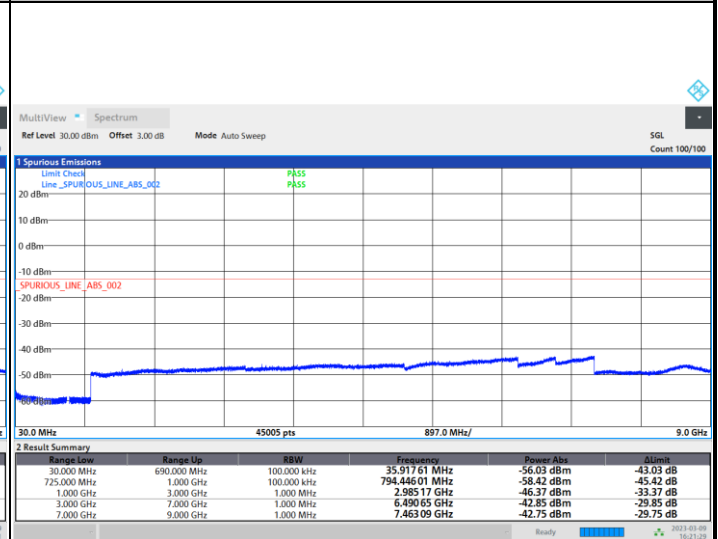
Conducted Spurious Emission

FR1 n12 / 5MHz / DFT-S OFDM / QPSK / 1RB1

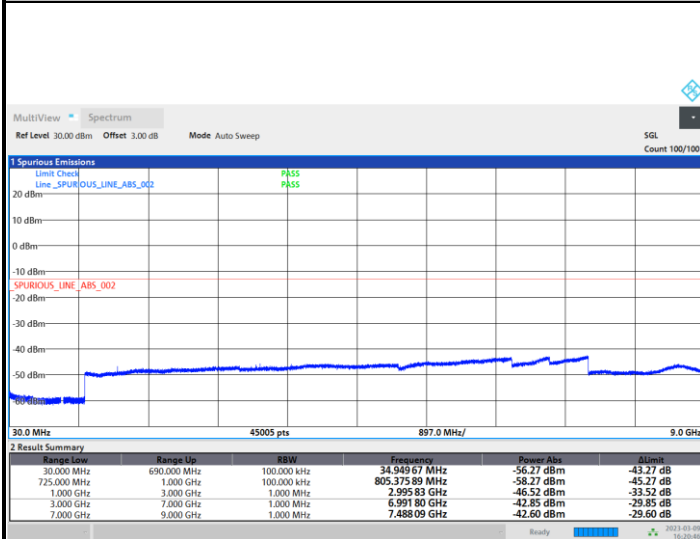
Lowest Channel



Middle Channel



Highest Channel



Frequency Stability

Test Conditions		FR1 n12 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 15MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0074	PASS
40	Normal Voltage	0.0092	
30	Normal Voltage	0.0038	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0030	
0	Normal Voltage	0.0082	
-10	Normal Voltage	0.0038	
-20	Normal Voltage	0.0060	
-30	Normal Voltage	0.0029	
20	Maximum Voltage	0.0071	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0045	

Note:

1. Normal Voltage = 12 V. ; Battery End Point (BEP) = 9 V. ; Maximum Voltage = 14 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

**FR1 n25****26dB Bandwidth**

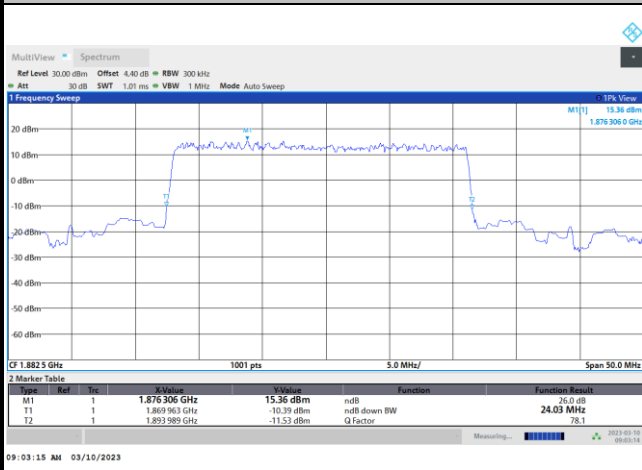
Mode	FR1 n25 : 26dB BW(MHz) / DFT-S OFDM							
BW	25MHz							
Mod.	PI/2 BPSK							
Middle CH	24.03							

Mode	FR1 n25 : 26dB BW(MHz) / CP OFDM							
BW	25MHz							
Mod.	QPSK	16QAM						
Middle CH	25.03	24.98						
Mod.	64QAM	256QAM						
Middle CH	24.98	24.83						



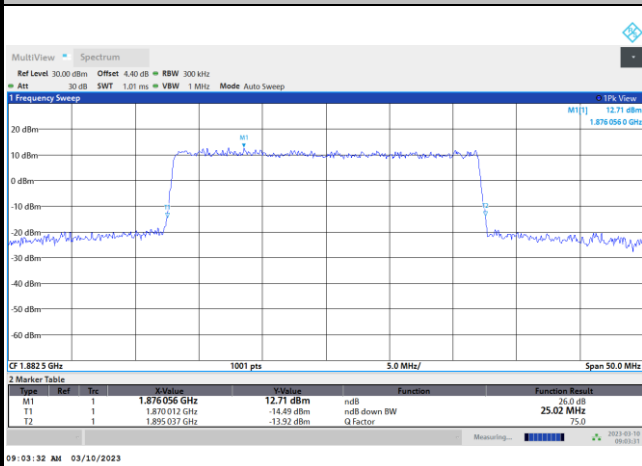
FR1 n25 / 25MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

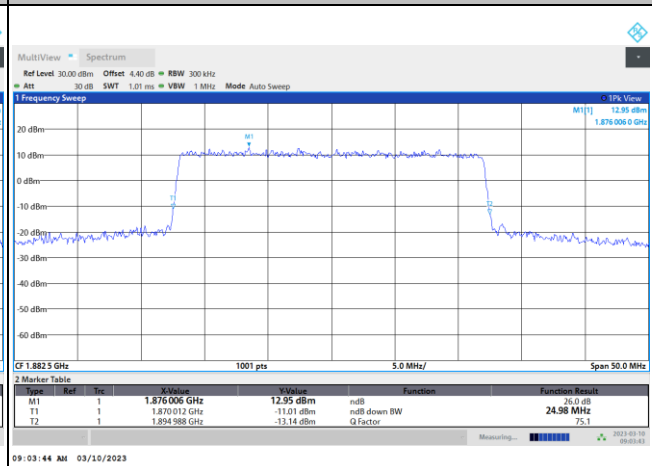


FR1 n25 / 25MHz / CP OFDM / Middle Channel / Full RB

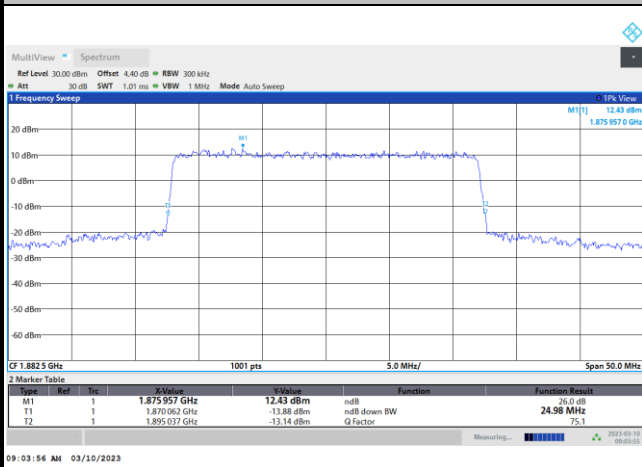
QPSK



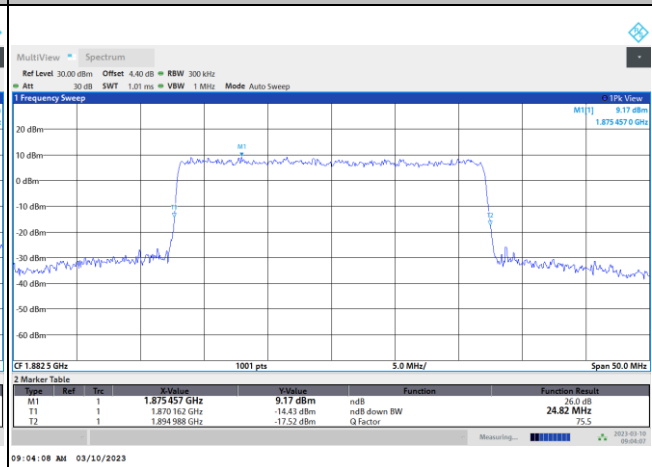
16QAM



64QAM



256QAM



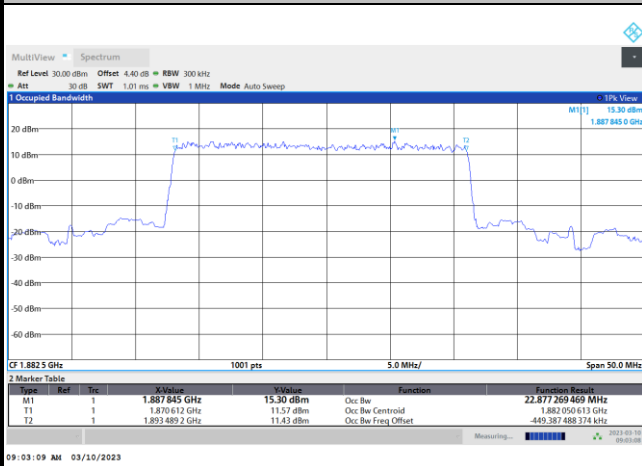
**Occupied Bandwidth**

Mode	FR1 n25 : 99%OBW(MHz) / DFT-S OFDM							
BW	25MHz							
Mod.	PI/2 BPSK							
Middle CH	22.87							

Mode	FR1 n25 : 99%OBW (MHz) / CP OFDM							
BW	25MHz							
Mod.	QPSK	16QAM						
Middle CH	23.80	23.79						
Mod.	64QAM	256QAM						
Middle CH	23.78	23.79						

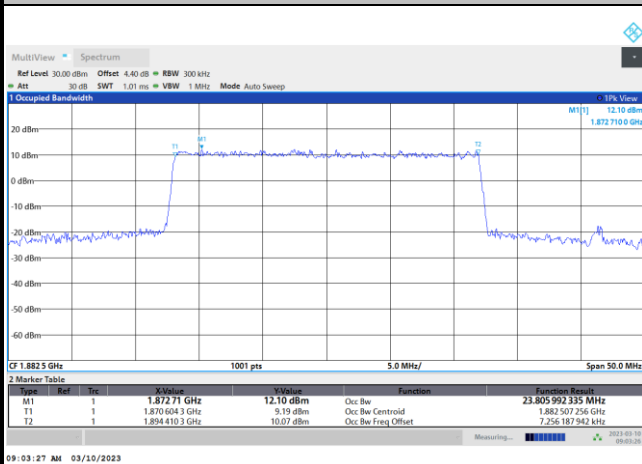
FR1 n25 / 25MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

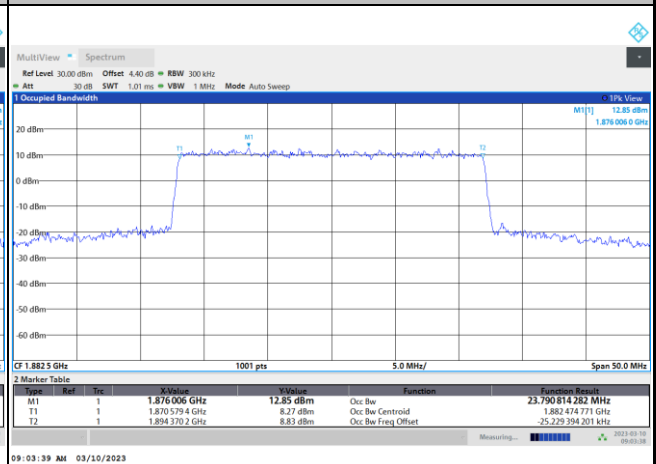


FR1 n25 / 25MHz / CP OFDM / Middle Channel / Full RB

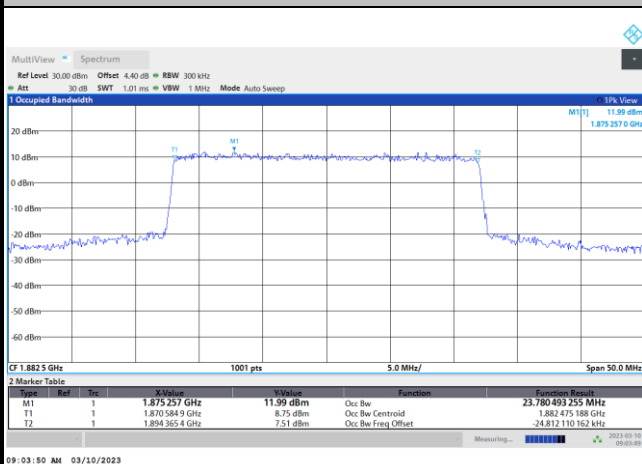
QPSK



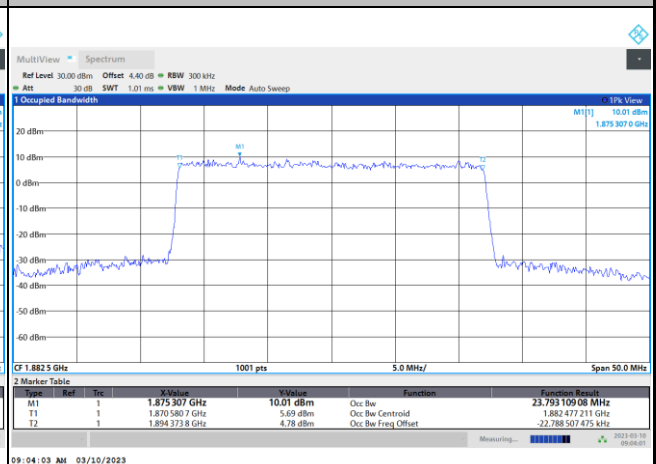
16QAM



64QAM



256QAM

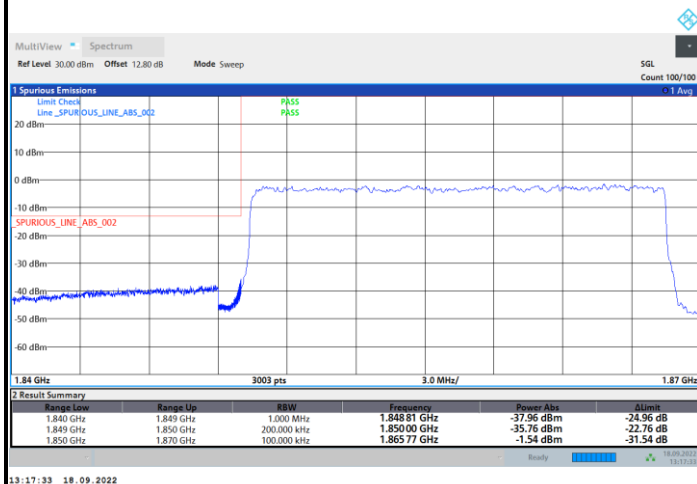




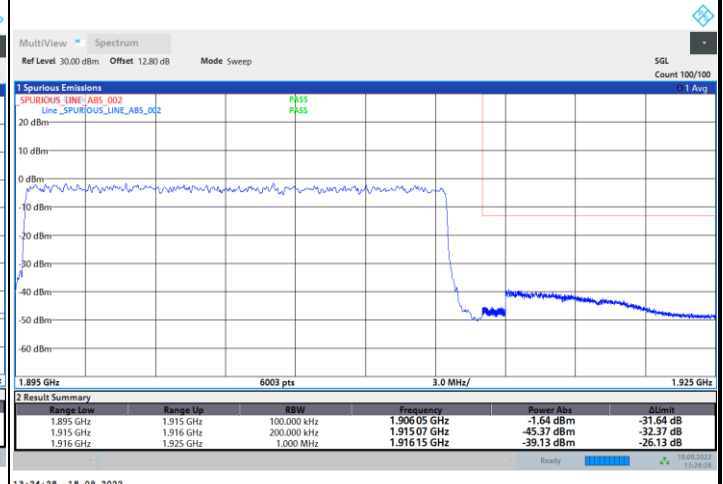
Conducted Band Edge

FR1 n25 / 20MHz / DFT-s-OFDM / 256QAM

Lowest Band Edge / Full RB

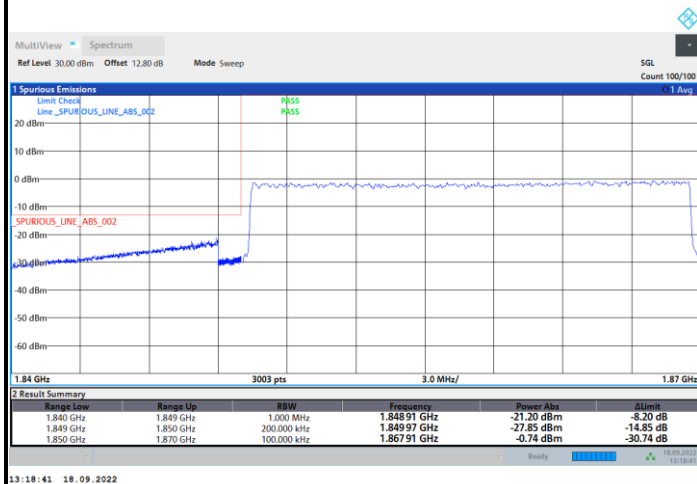


Highest Band Edge / Full RB

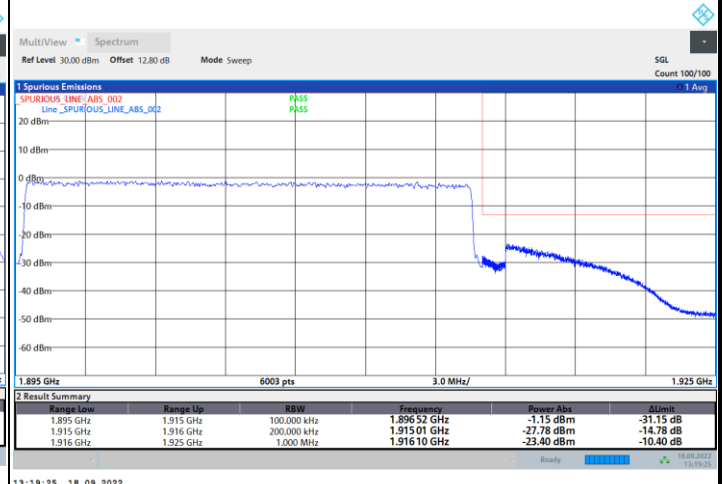


FR1 n25 / 20MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge



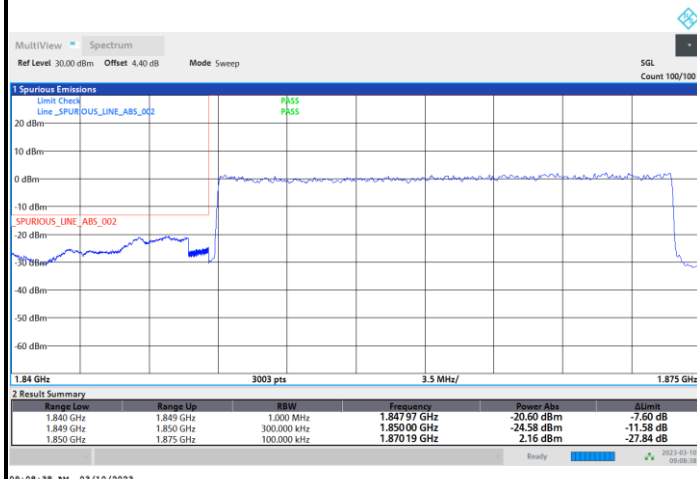
Highest Band Edge



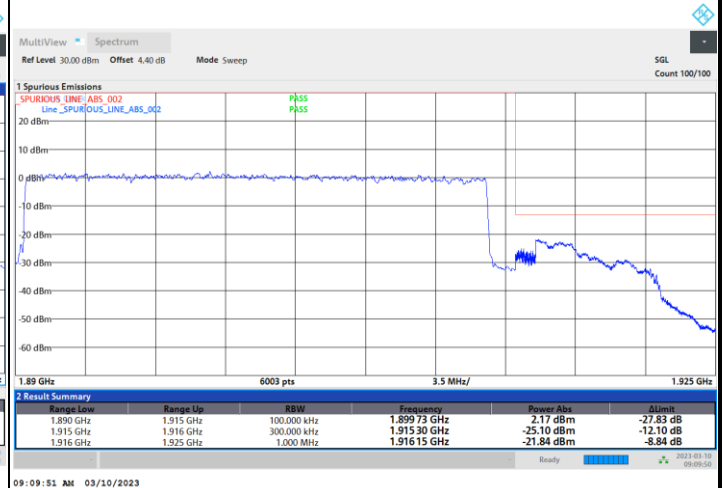


FR1 n25 / 25MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

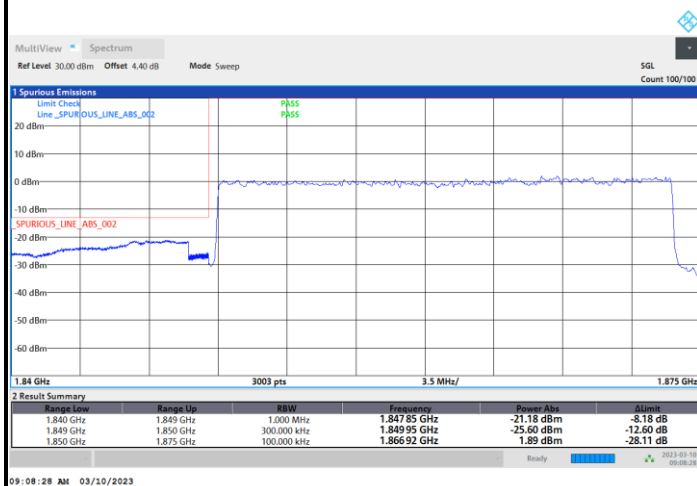


Highest Band Edge / Full RB

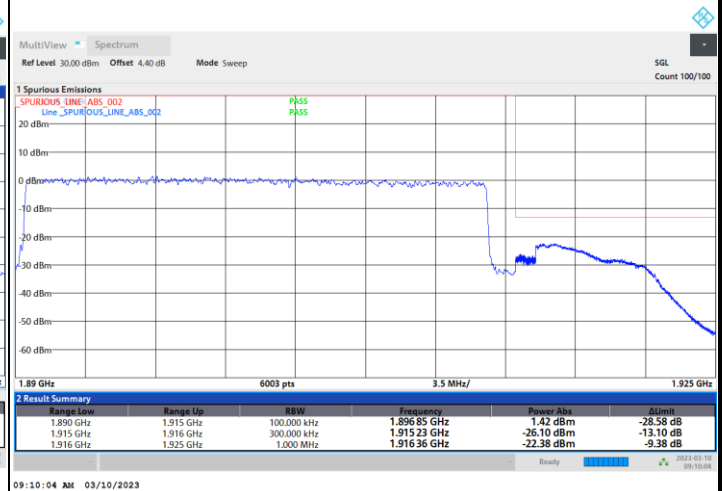


FR1 n25 / 25MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / Full RB



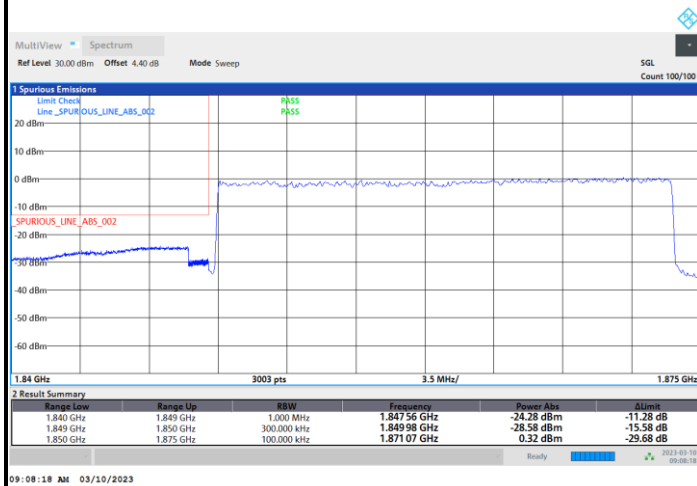
Highest Band Edge / Full RB



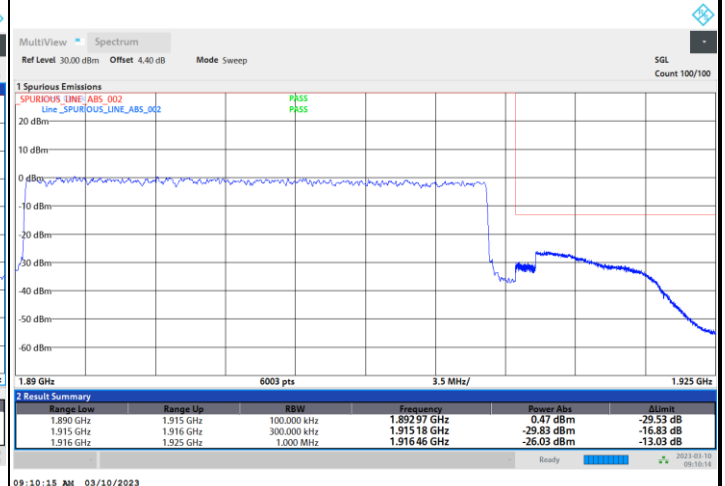


FR1 n25 / 25MHz / DFT-s-OFDM / 16QAM

Lowest Band Edge / Full RB

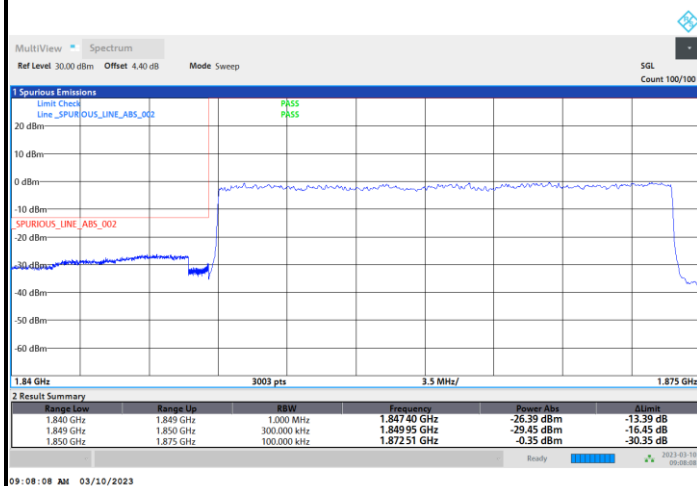


Highest Band Edge / Full RB

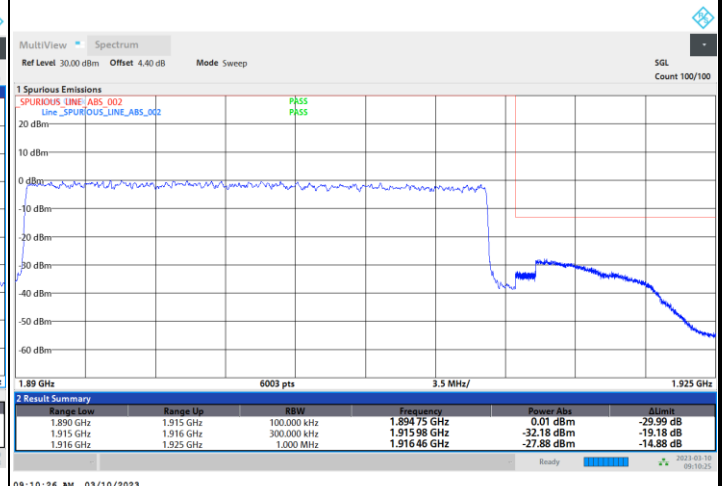


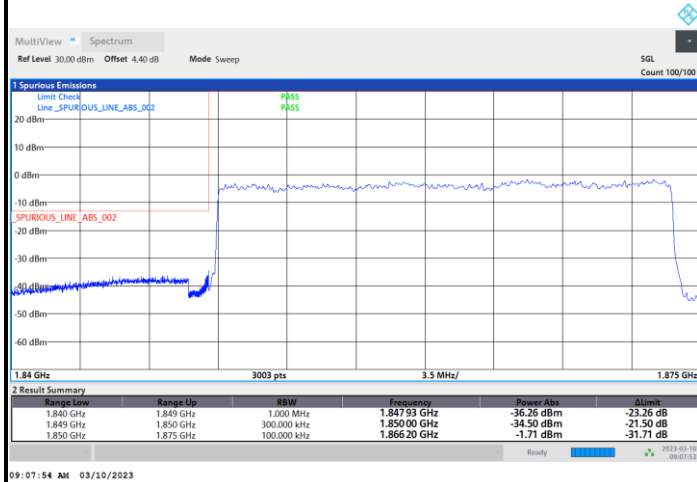
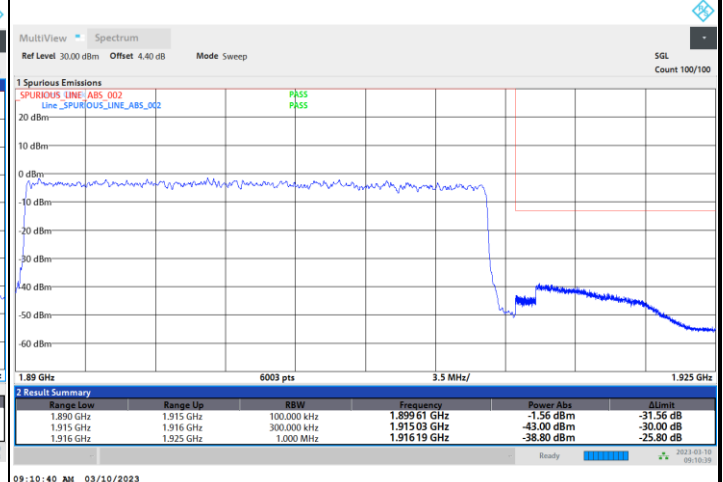
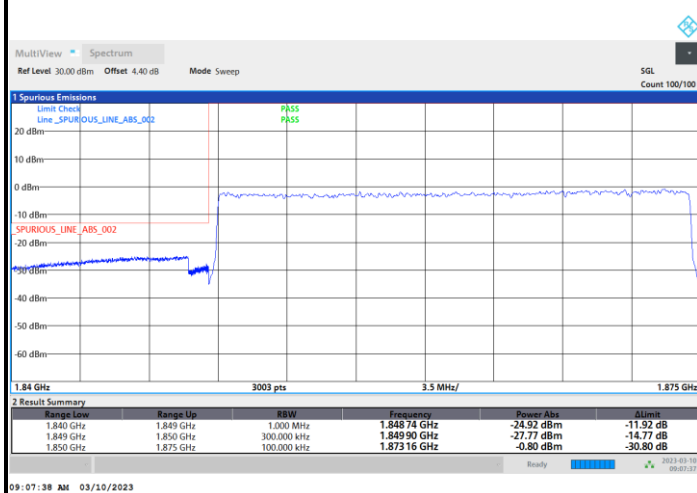
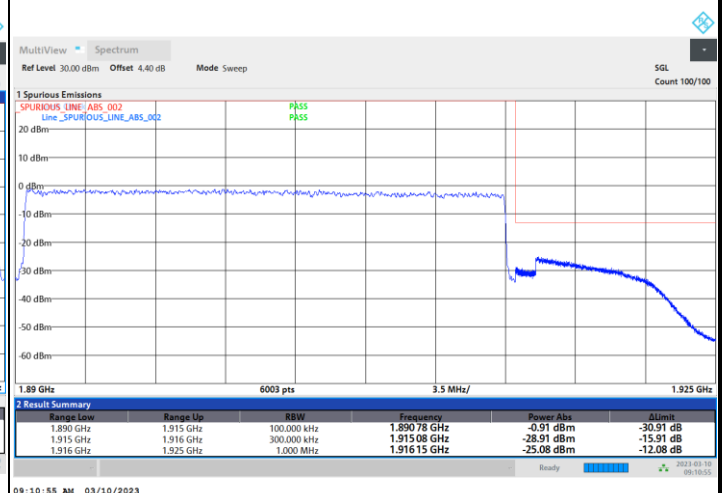
FR1 n25 / 25MHz / DFT-s-OFDM / 64QAM

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

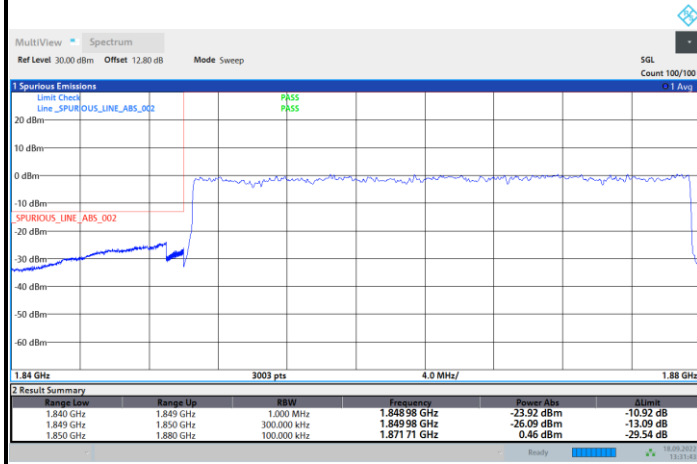


**FR1 n25 / 25MHz / DFT-s-OFDM / 256QAM****Lowest Band Edge / Full RB****Highest Band Edge / Full RB****FR1 n25 / 25MHz / CP OFDM / QPSK / Full RB****Lowest Band Edge****Highest Band Edge**

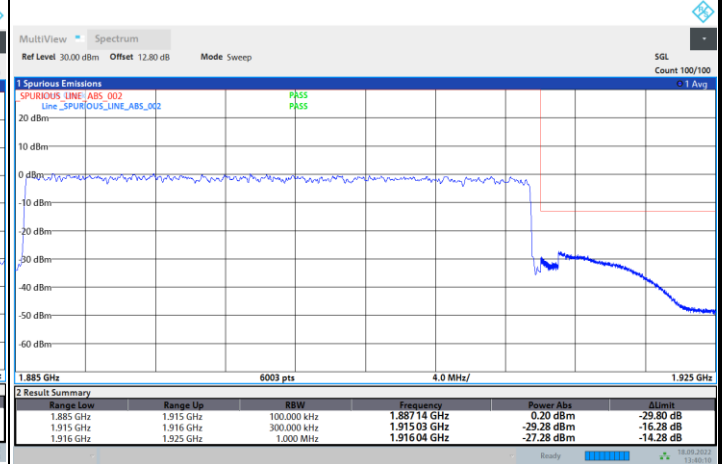


FR1 n25 / 30MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

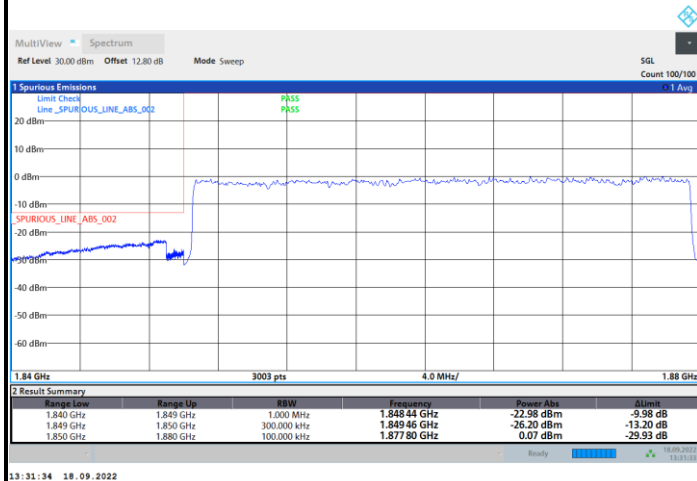


Highest Band Edge / Full RB

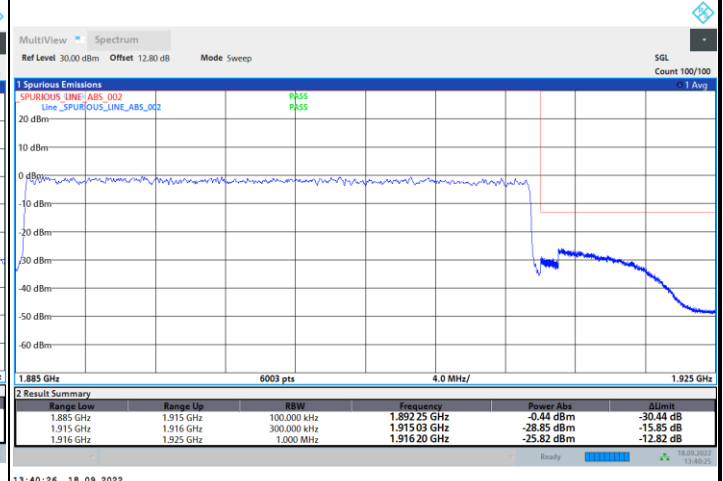


FR1 n25 / 30MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / Full RB



Highest Band Edge / Full RB



Frequency Stability

Test Conditions		FR1 n25 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0041	PASS
40	Normal Voltage	0.0067	
30	Normal Voltage	0.0006	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0027	
0	Normal Voltage	0.0057	
-10	Normal Voltage	0.0133	
-20	Normal Voltage	0.0080	
-30	Normal Voltage	0.0159	
20	Maximum Voltage	0.0020	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0029	

Note:

1. Normal Voltage = 12 V. ; Battery End Point (BEP) = 9 V. ; Maximum Voltage = 14 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

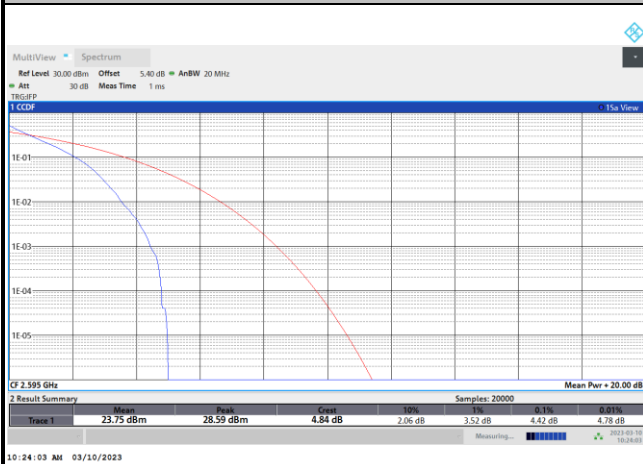
**FR1 n38****Peak-to-Average Ratio**

Mode	FR1 n38 / 20MHz / 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	4.42	5.14	6.18	6.50	PASS
Mode	FR1 n38 / 20MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.66				PASS

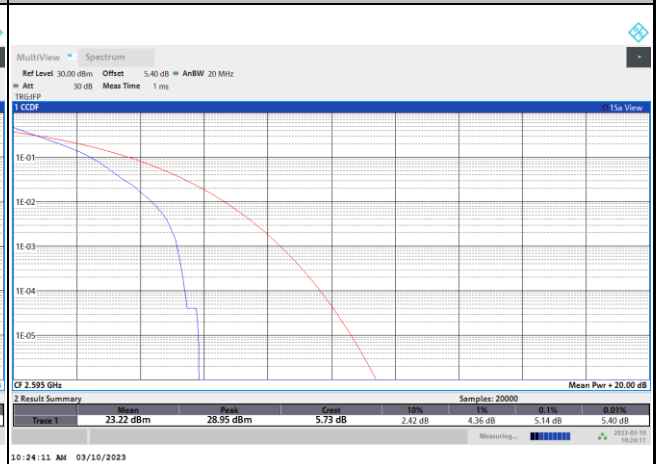


FR1 n38 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

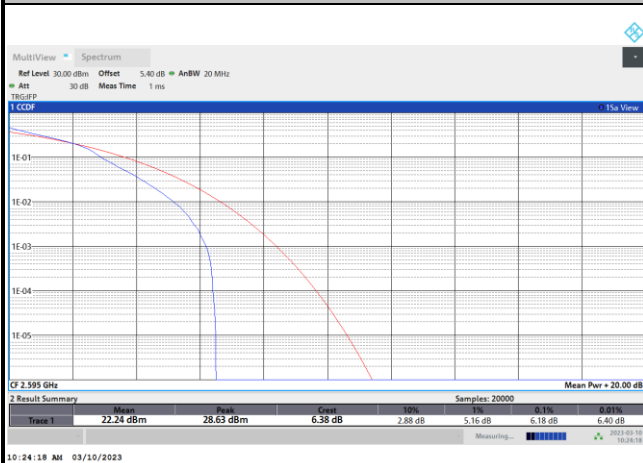
PI/2 BPSK



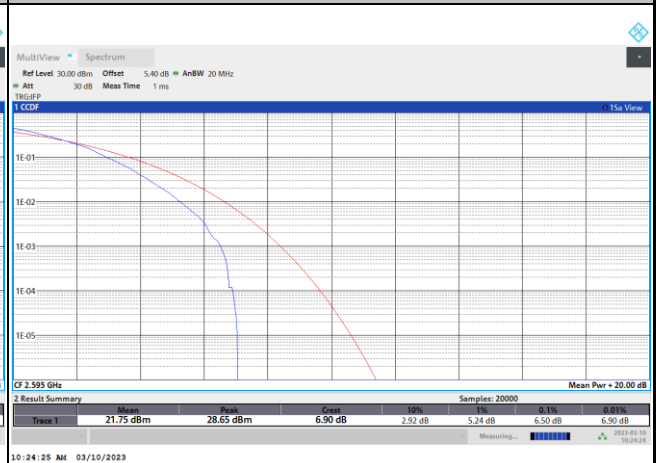
QPSK



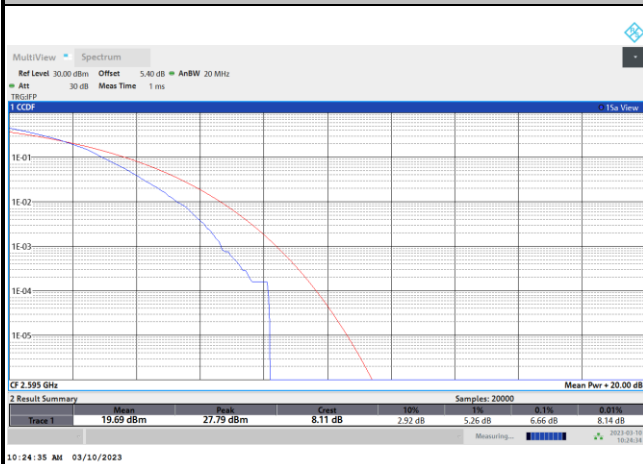
16QAM



64QAM



256QAM



**26dB Bandwidth**

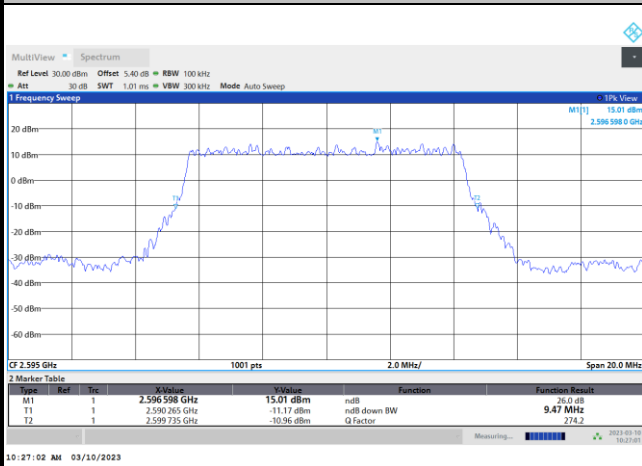
Mode	FR1 n38 : 26dB BW(MHz) / DFT-S OFDM				
BW	10MHz	15MHz	20MHz	30MHz	40MHz
Mod.	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK
Middle CH	9.47	14.36	18.98	28.41	38.52

Mode	FR1 n38 : 26dB BW(MHz) / CP OFDM									
BW	10MHz		15MHz		20MHz		30MHz		40MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	9.81	9.93	14.93	15.20	19.54	19.90	29.49	29.31	40.36	40.60
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	9.69	9.61	15.05	14.75	19.82	19.54	29.49	29.31	40.44	40.52



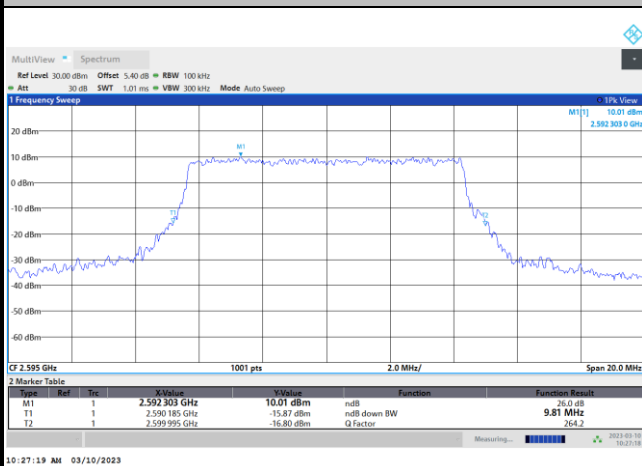
FR1 n38 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

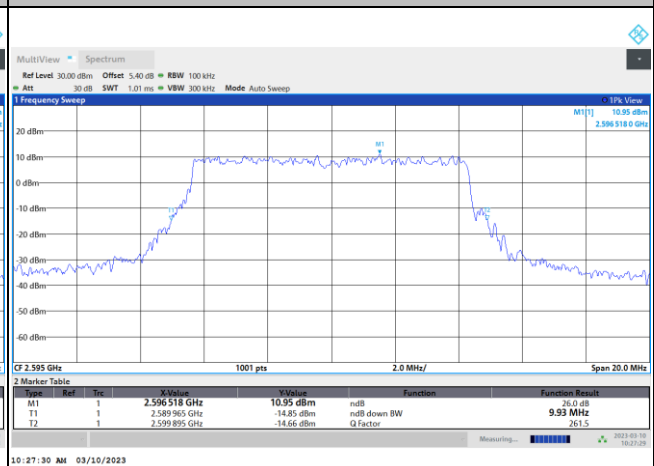


FR1 n38 / 10MHz / CP OFDM / Middle Channel / Full RB

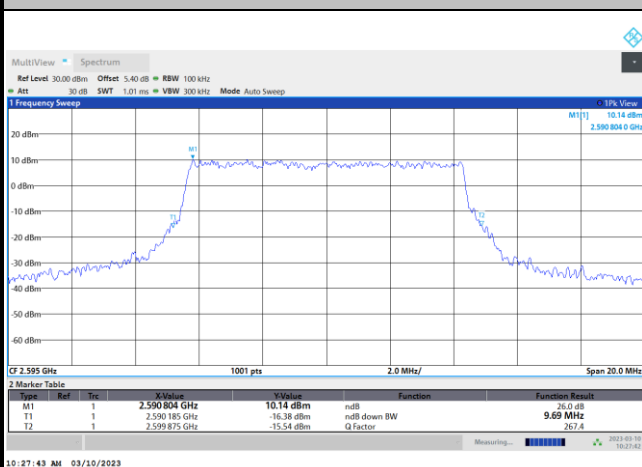
QPSK



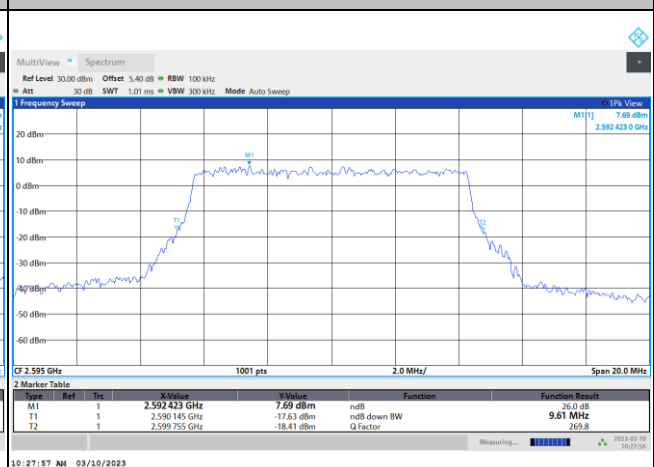
16QAM



64QAM



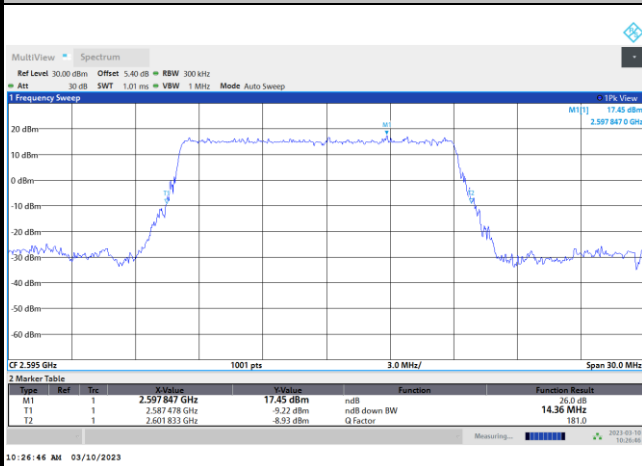
256QAM





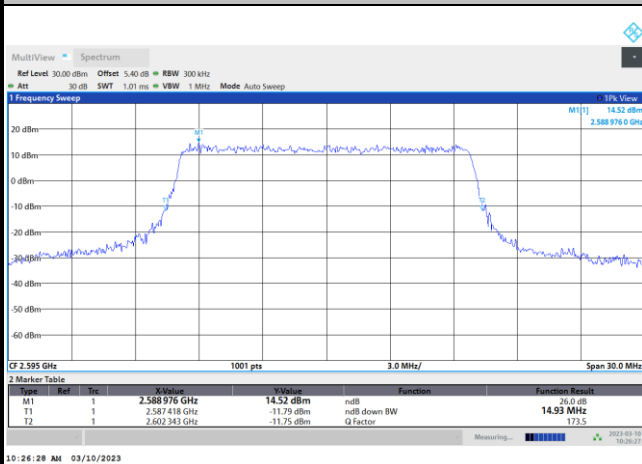
FR1 n38 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

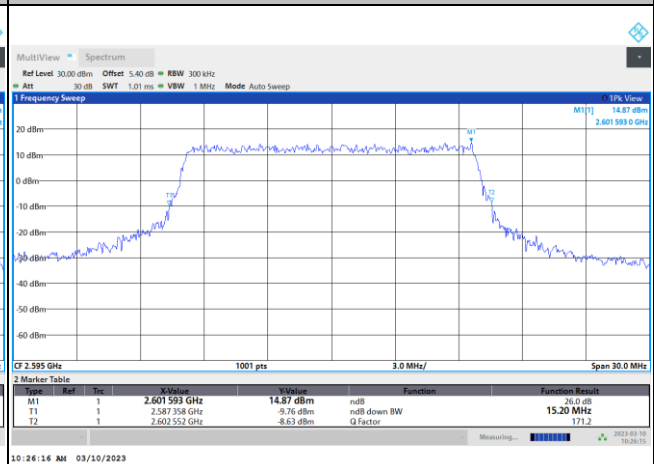


FR1 n38 / 15MHz / CP OFDM / Middle Channel / Full RB

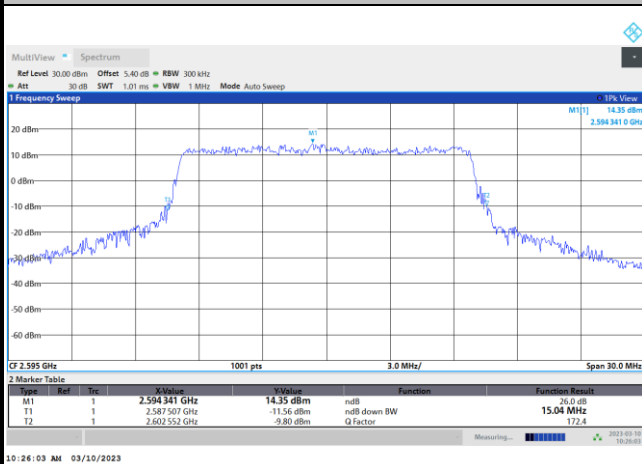
QPSK



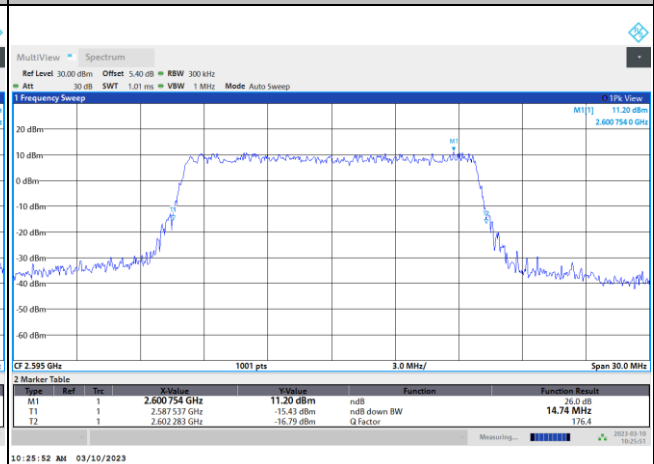
16QAM



64QAM



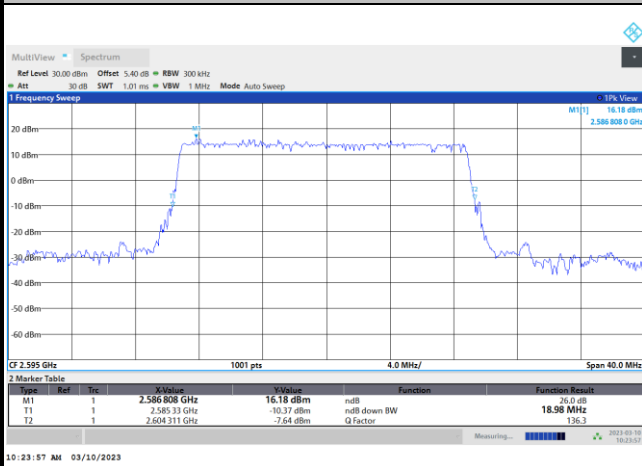
256QAM





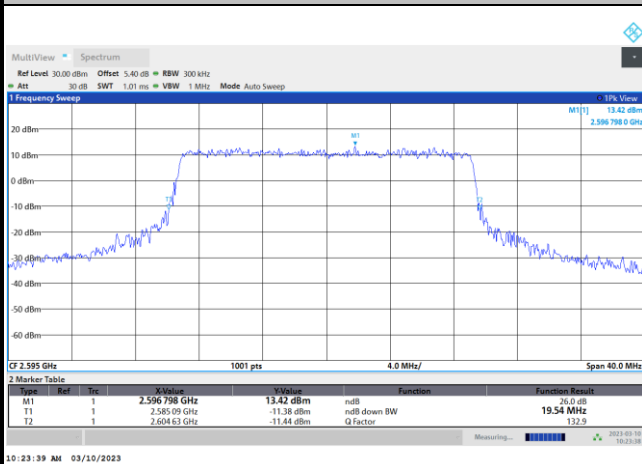
FR1 n38 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

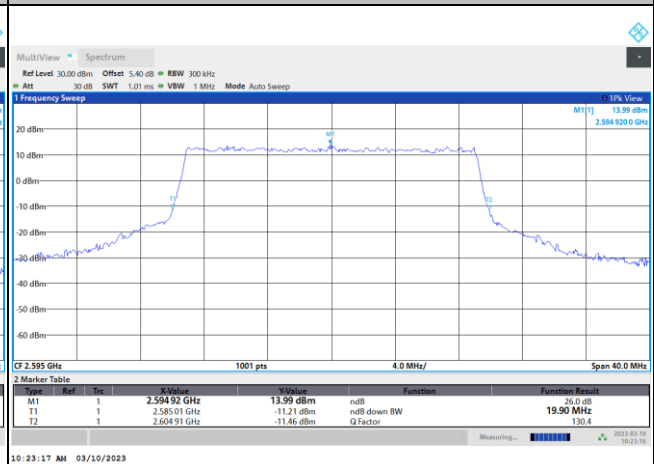


FR1 n38 / 20MHz / CP OFDM / Middle Channel / Full RB

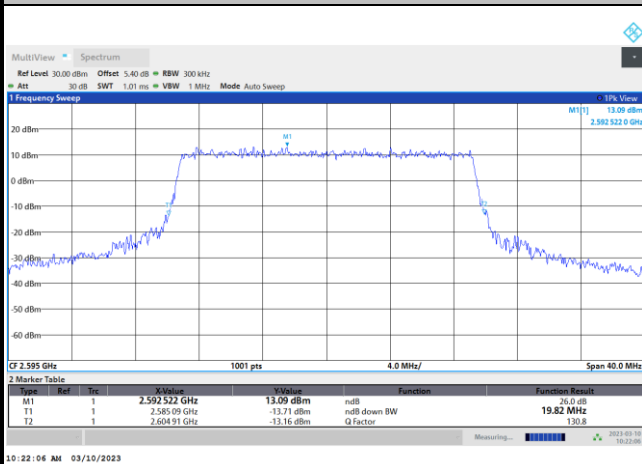
QPSK



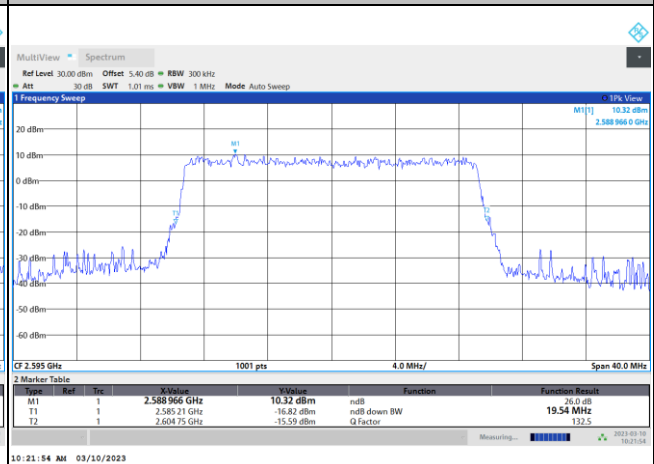
16QAM



64QAM



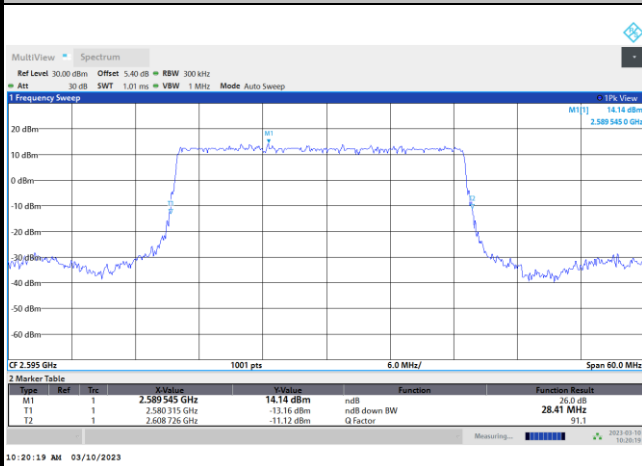
256QAM





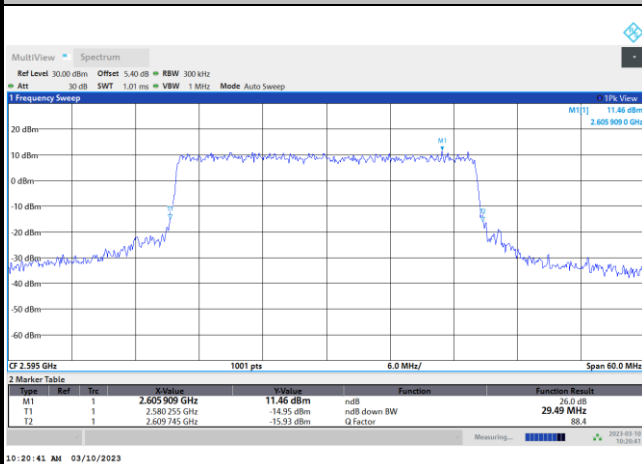
FR1 n38 / 30MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

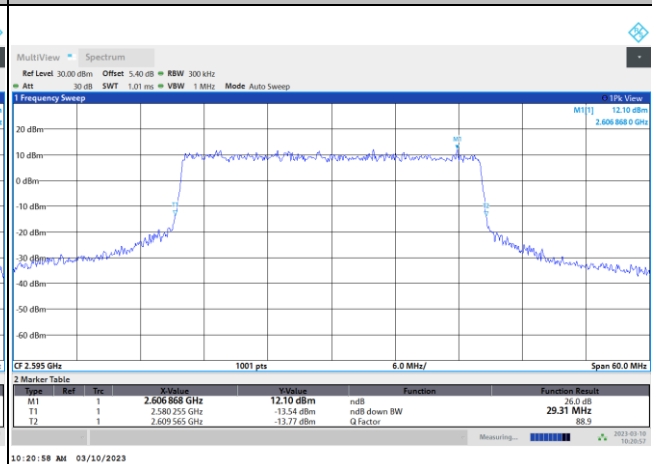


FR1 n38 / 30MHz / CP OFDM / Middle Channel / Full RB

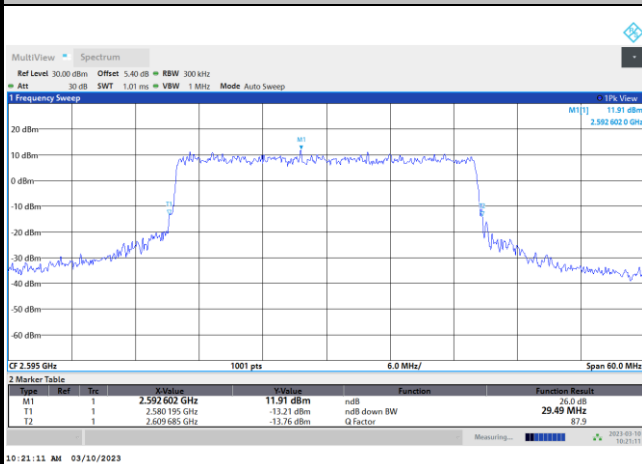
QPSK



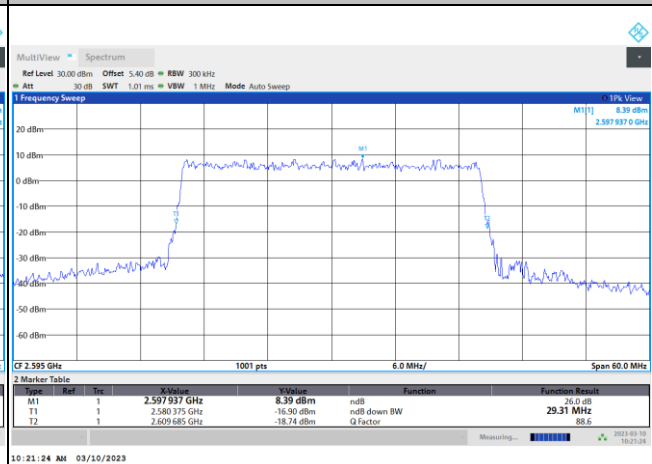
16QAM



64QAM



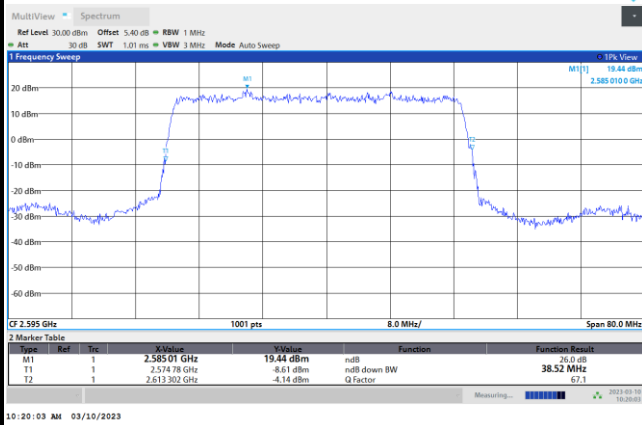
256QAM





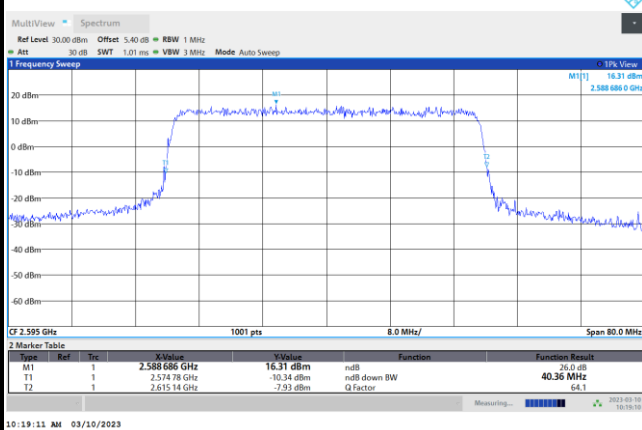
FR1 n38 / 40MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

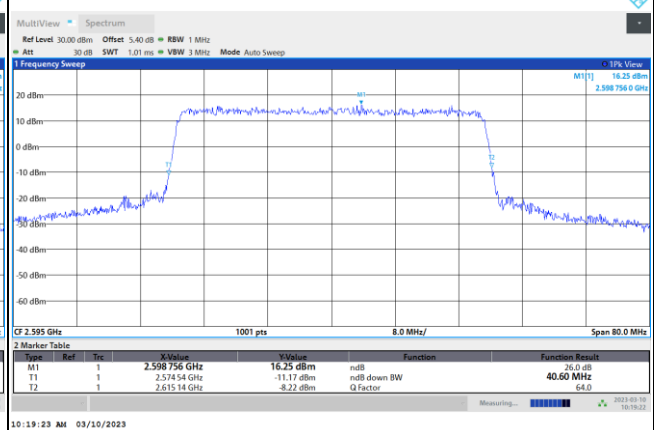


FR1 n38 / 40MHz / CP OFDM / Middle Channel / Full RB

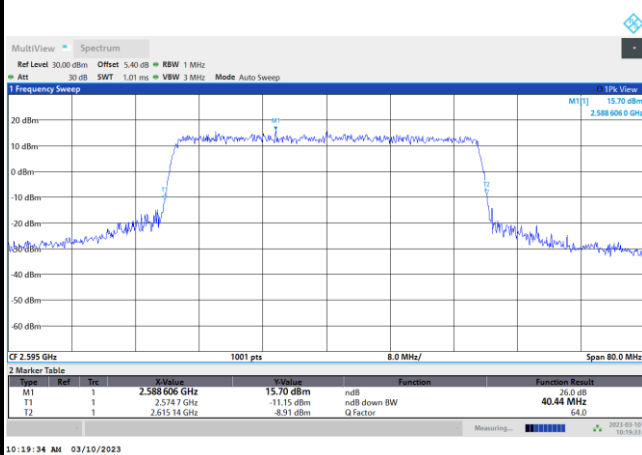
QPSK



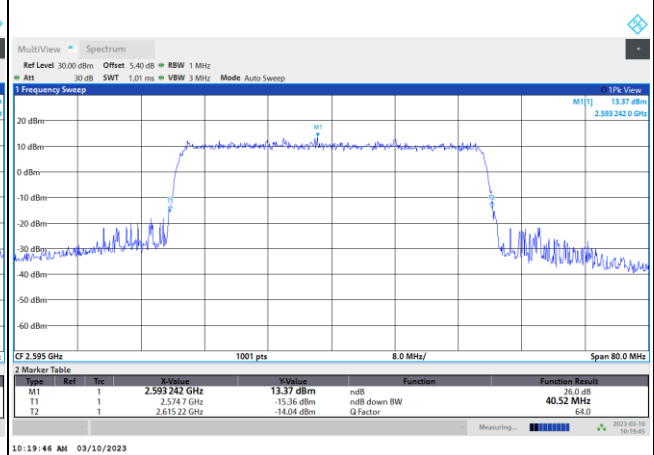
16QAM



64QAM



256QAM



**Occupied Bandwidth**

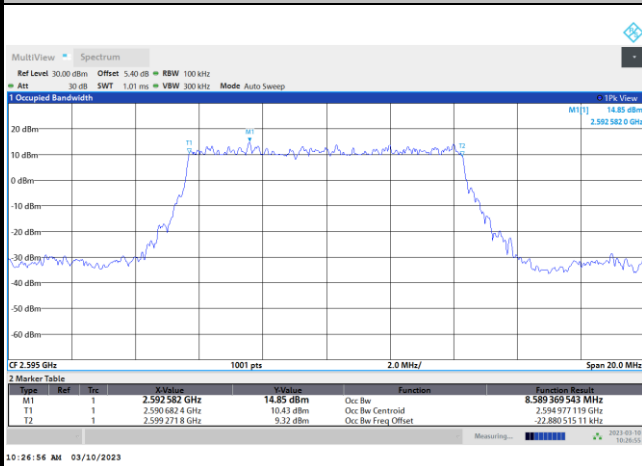
Mode	FR1 n38 : OB BW(MHz) / DFT-S OFDM				
BW	10MHz	15MHz	20MHz	30MHz	40MHz
Mod.	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK
Middle CH	8.58	12.91	17.87	26.76	35.95

Mode	FR1 n38 : OB BW(MHz) / CP OFDM									
BW	10MHz		15MHz		20MHz		30MHz		40MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	8.61	8.61	13.65	13.67	18.19	18.22	27.85	27.82	38.00	38.18
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	8.60	8.58	13.64	13.64	18.25	18.23	27.89	27.87	37.97	38.17



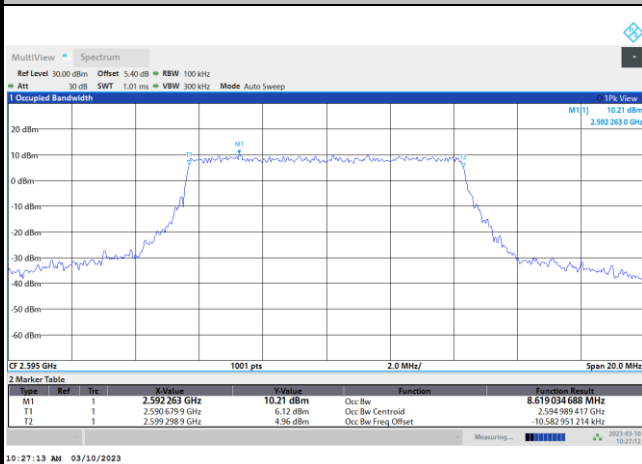
FR1 n38 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

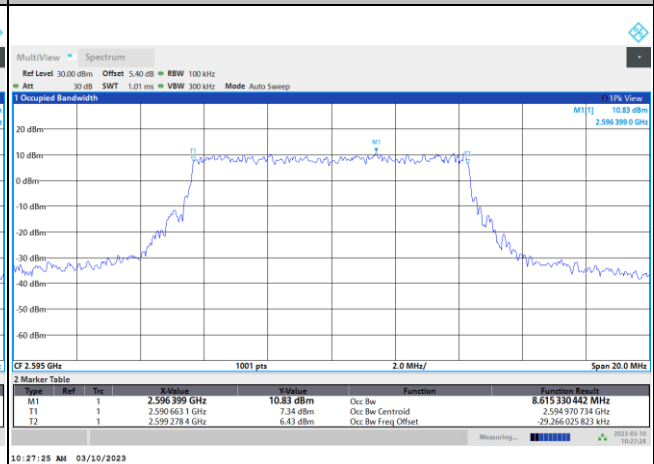


FR1 n38 / 10MHz / CP OFDM / Middle Channel / Full RB

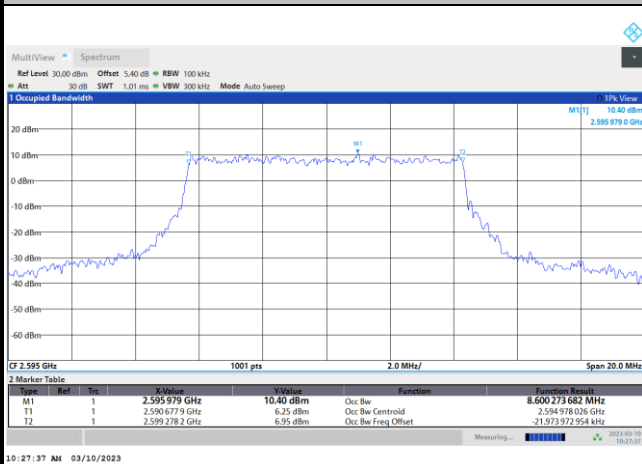
QPSK



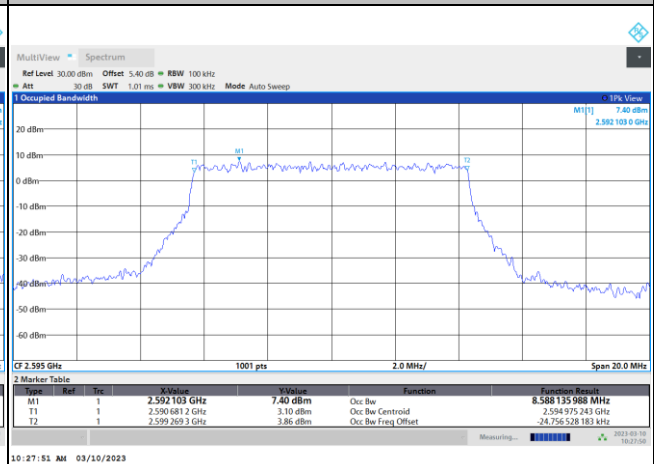
16QAM



64QAM



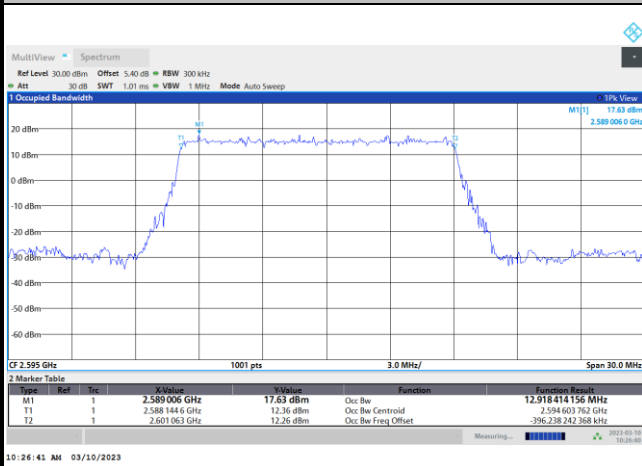
256QAM





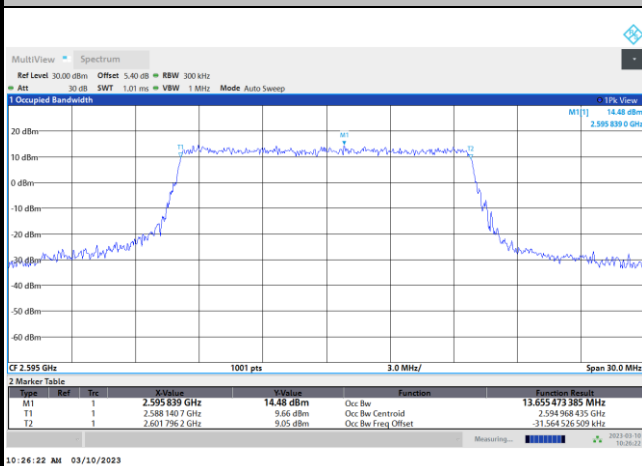
FR1 n38 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

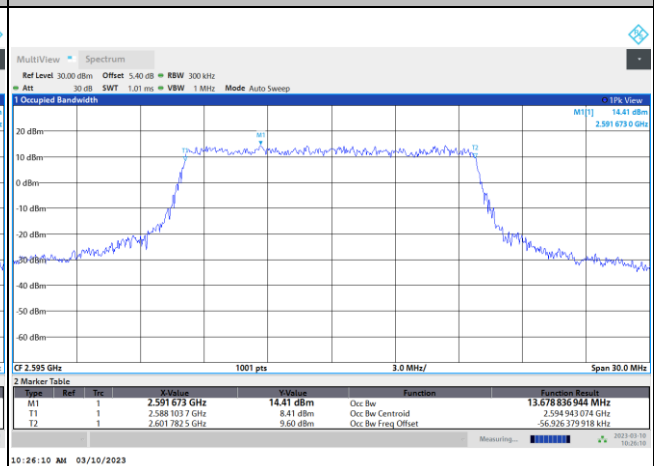


FR1 n38 / 15MHz / CP OFDM / Middle Channel / Full RB

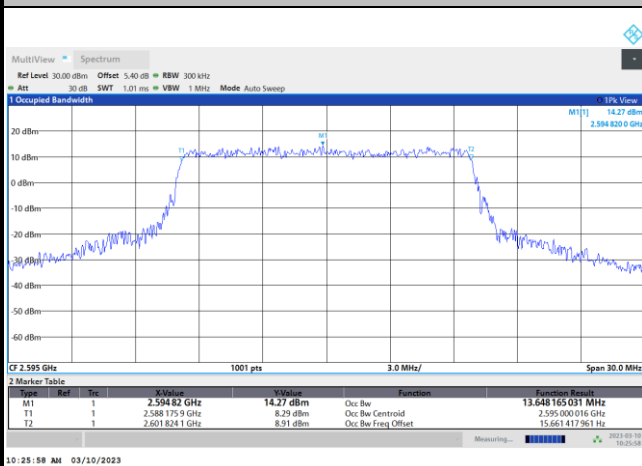
QPSK



16QAM



64QAM



256QAM

