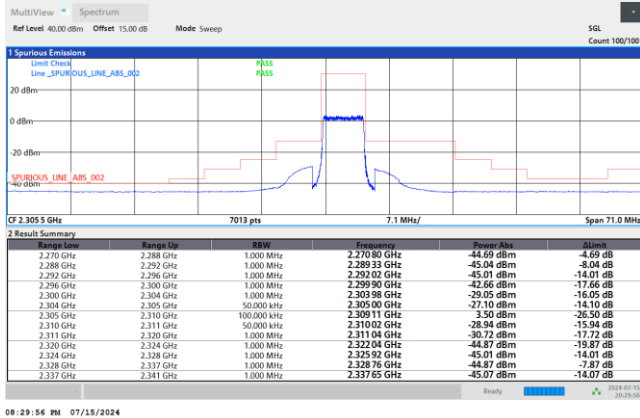
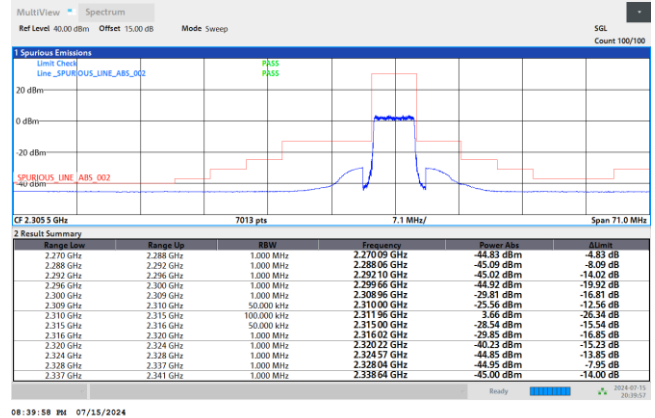




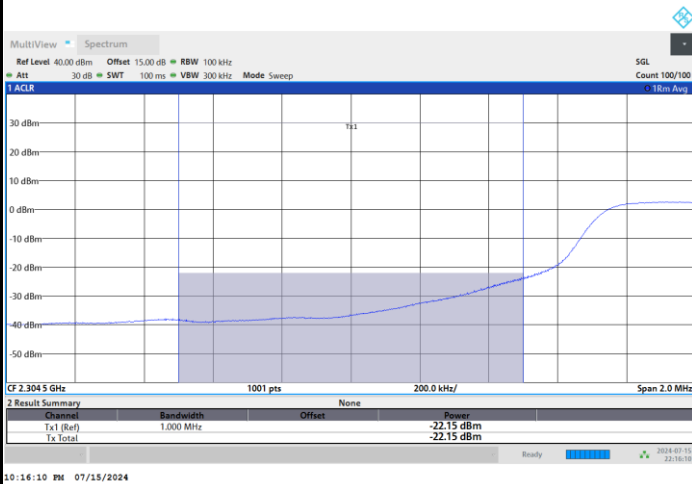
Lowest Band Edge / Full RB



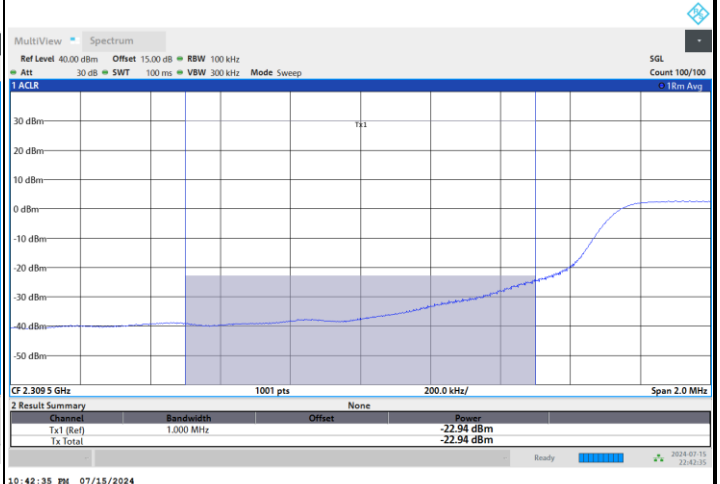
Highest Band Edge / Full RB



Lowest Band Edge / Full RB / Lower zoom in



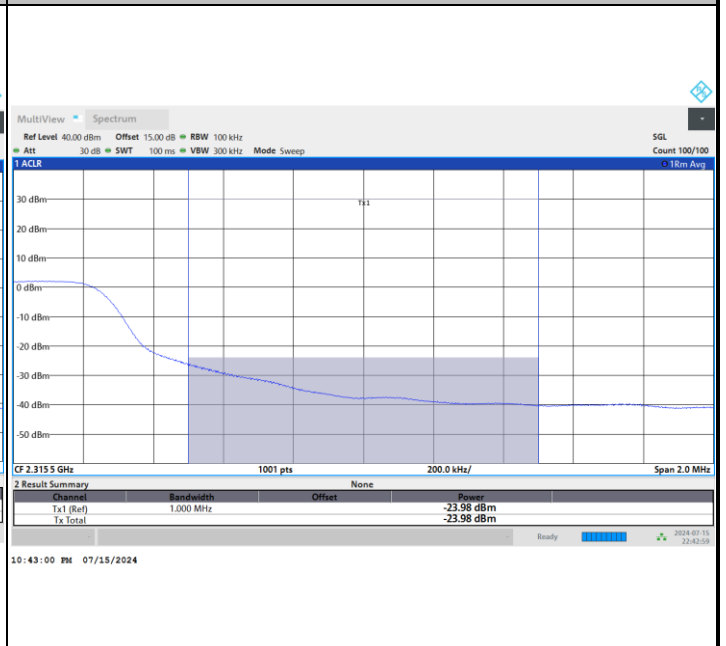
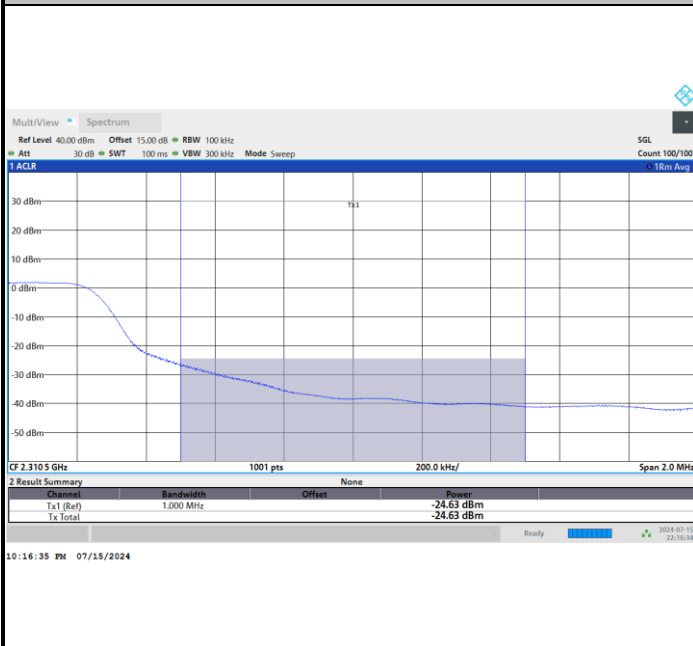
Highest Band Edge / Full RB / Lower zoom in





Lowest Band Edge / Full RB / Upper zoom in

Highest Band Edge / Full RB / Upper zoom in

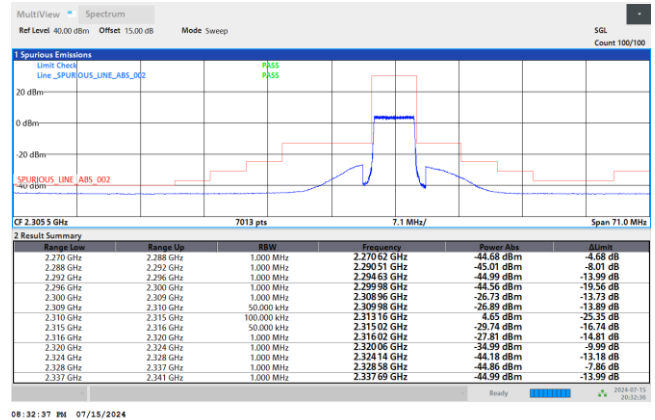
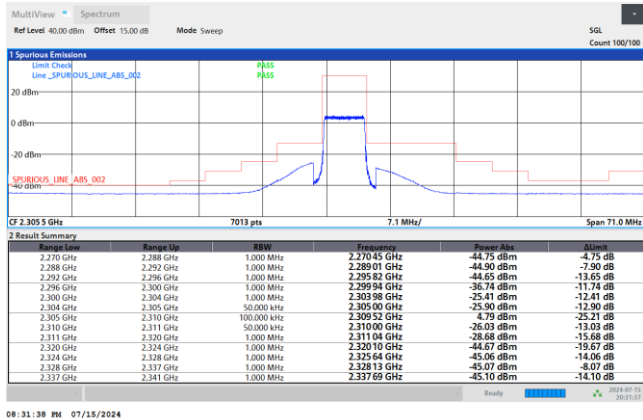




FR1 n30 / 5MHz / CP OFDM / QPSK / Full RB

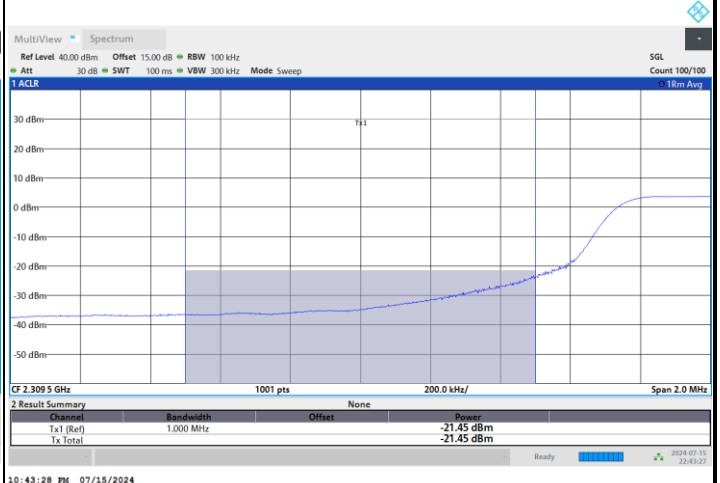
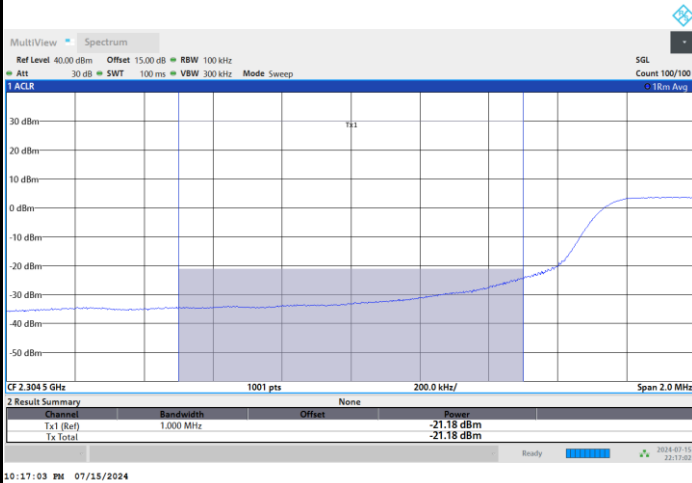
Lowest Band Edge

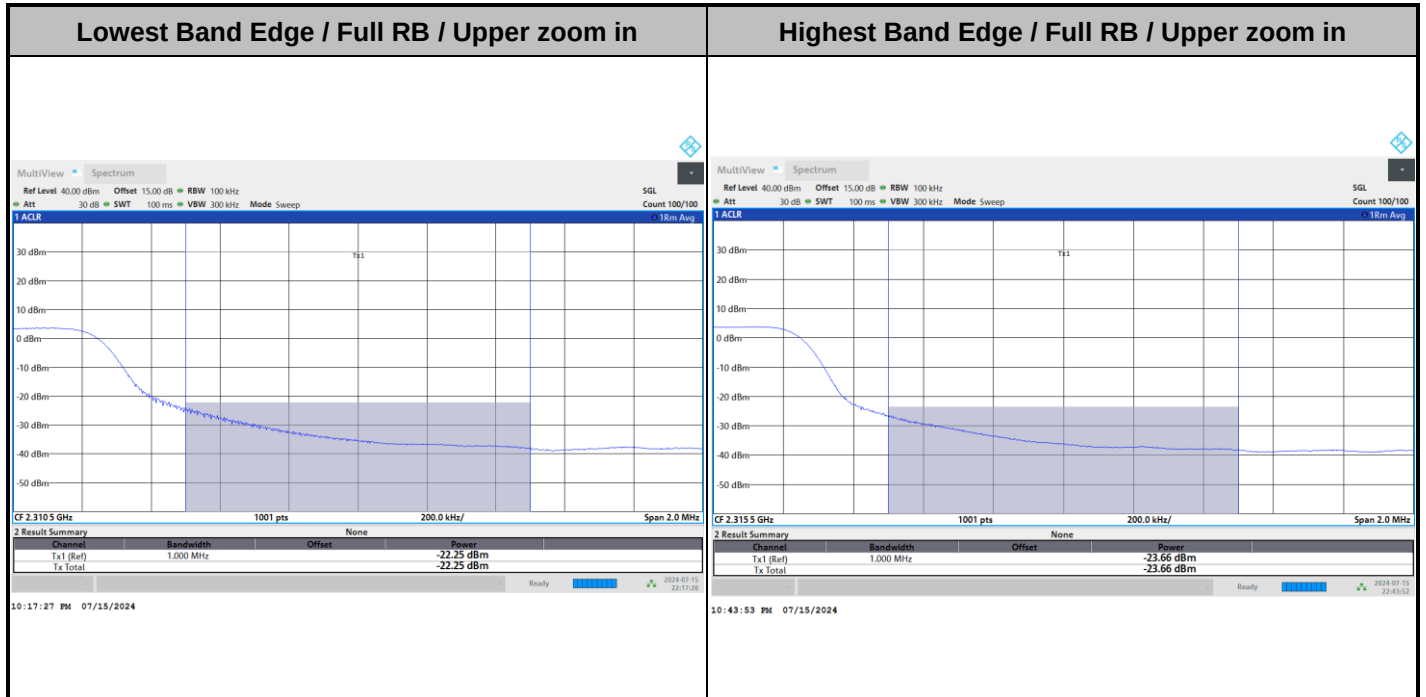
Highest Band Edge



Lowest Band Edge / Full RB / Lower zoom in

Highest Band Edge / Full RB / Lower zoom in

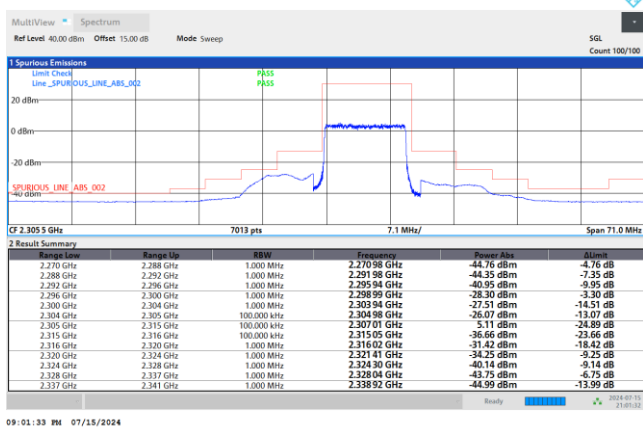






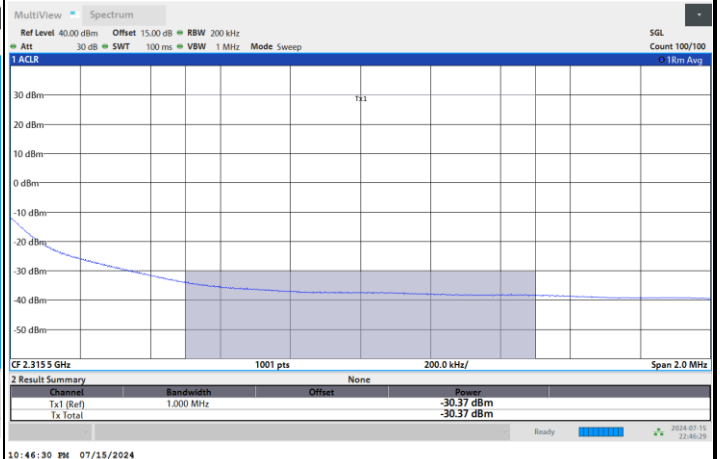
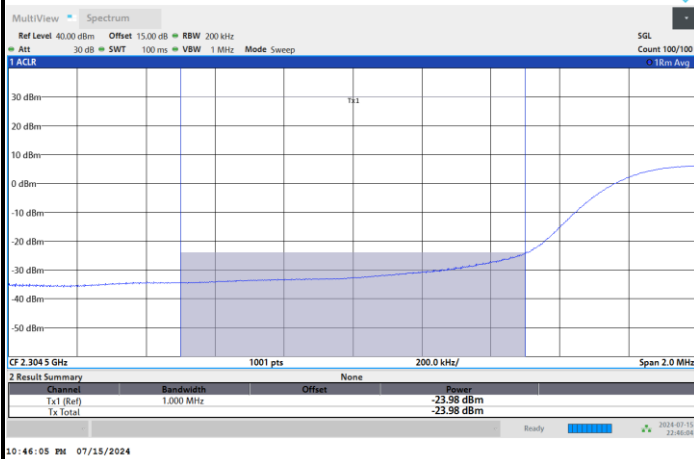
FR1 n30 / 10MHz / DFT-s-OFDM / PI/2 BPSK

Middle Band Edge / Full RB



Middle Band Edge / Full RB / Lower zoom in

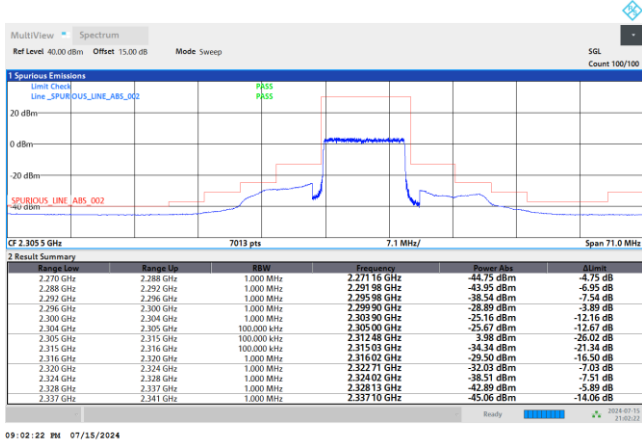
Middle Band Edge / Full RB / Upper zoom in





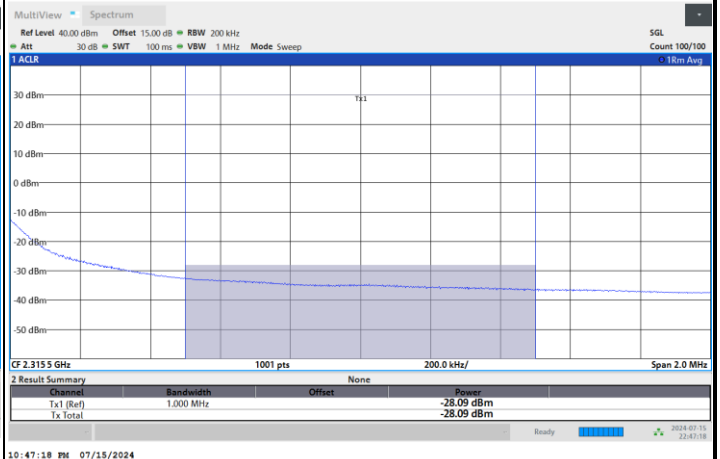
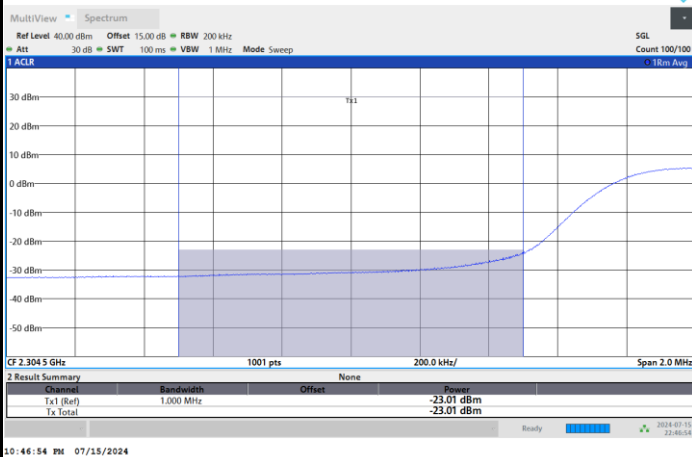
FR1 n30 / 10MHz / DFT-s-OFDM / QPSK

Middle Band Edge / Full RB



Middle Band Edge / Full RB / Lower zoom in

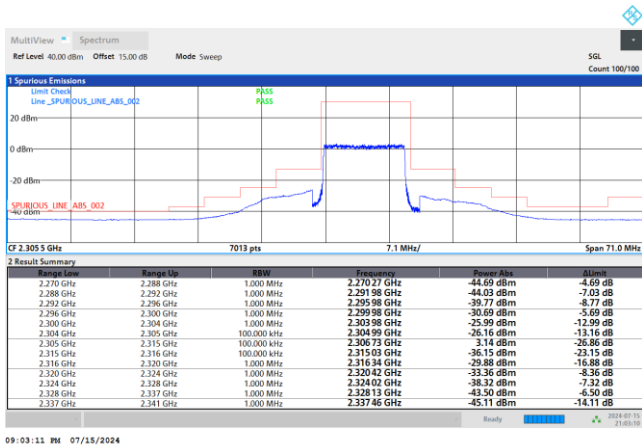
Middle Band Edge / Full RB / Upper zoom in





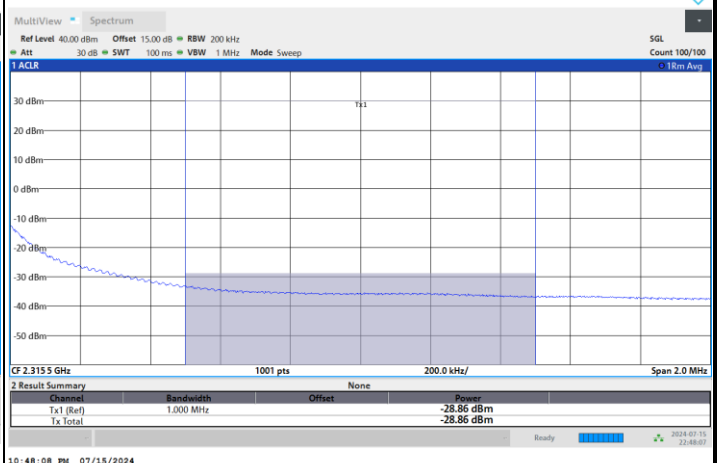
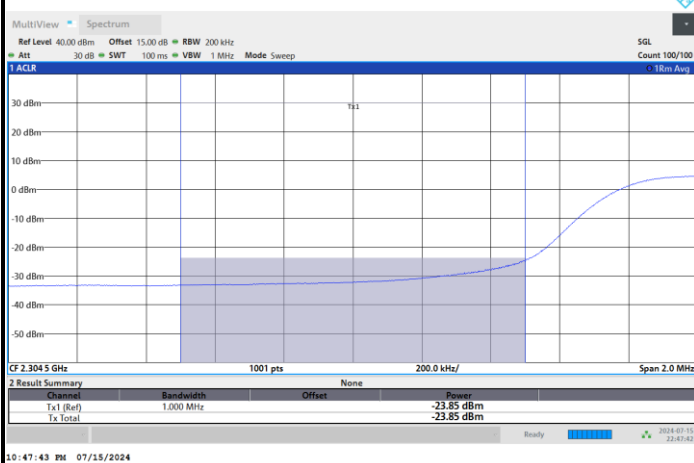
FR1 n30 / 10MHz / DFT-s-OFDM / 16QAM

Middle Band Edge / Full RB



Middle Band Edge / Full RB / Lower zoom in

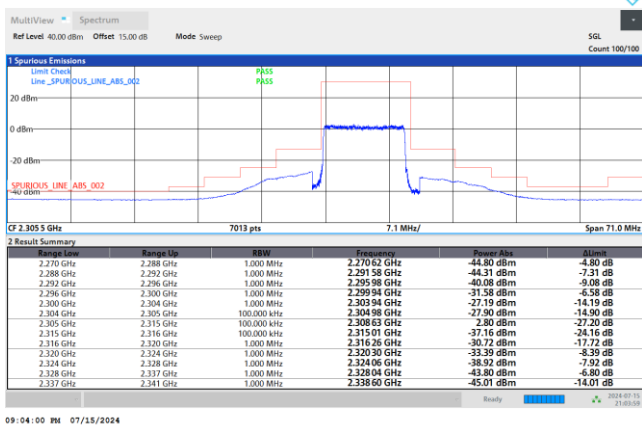
Middle Band Edge / Full RB / Upper zoom in





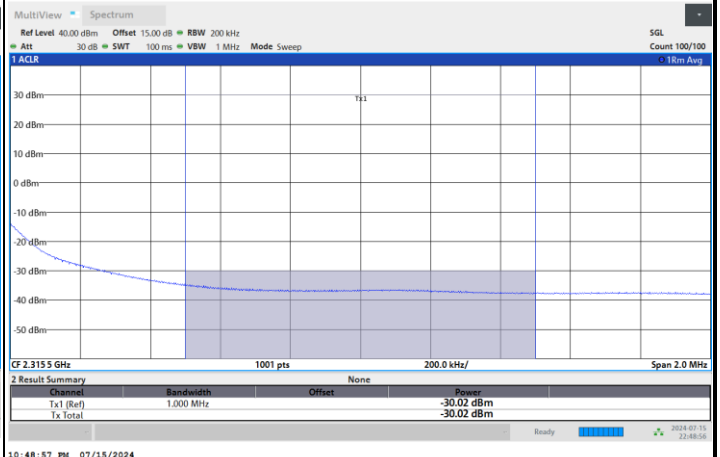
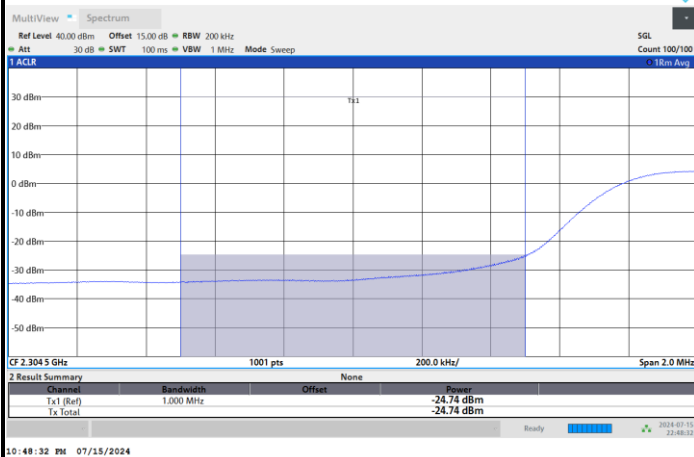
FR1 n30 / 10MHz / DFT-s-OFDM / 64QAM

Middle Band Edge / Full RB



Middle Band Edge / Full RB / Lower zoom in

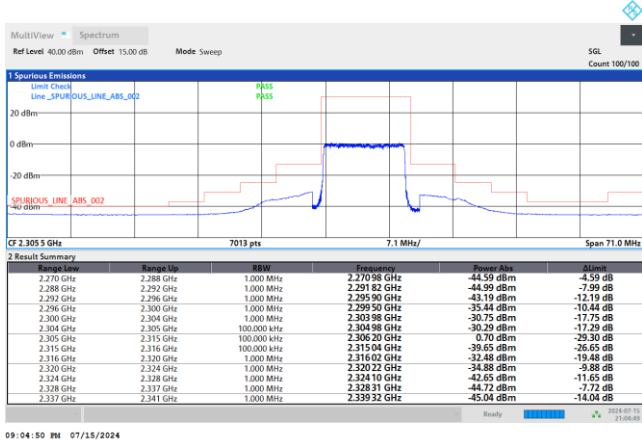
Middle Band Edge / Full RB / Upper zoom in





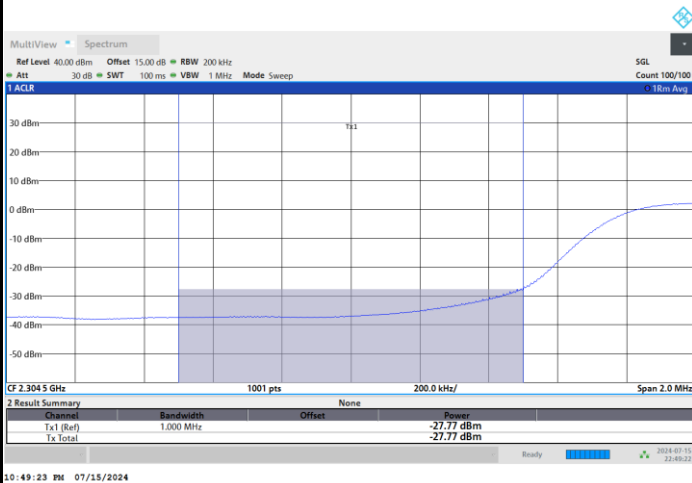
FR1 n30 / 10MHz / DFT-s-OFDM / 256QAM

Middle Band Edge / Full RB



Middle Band Edge / Full RB / Lower zoom in

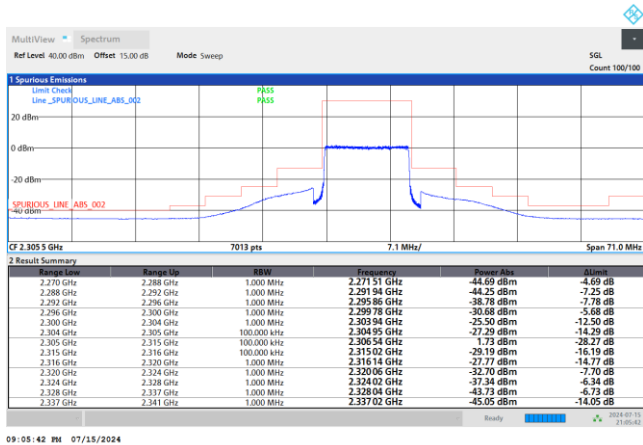
Middle Band Edge / Full RB / Upper zoom in





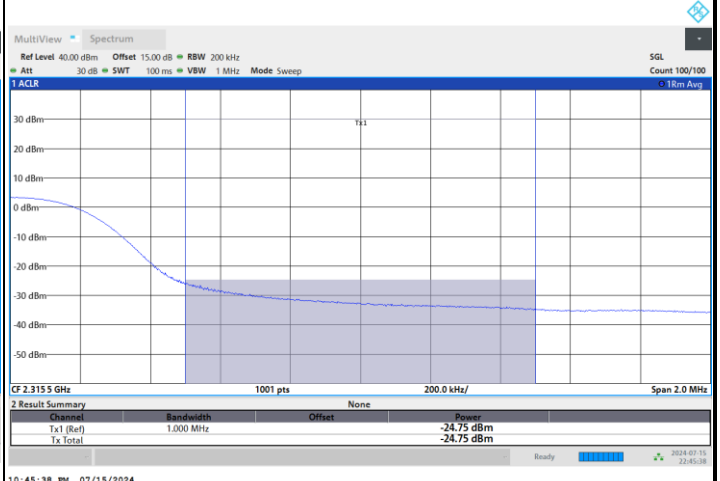
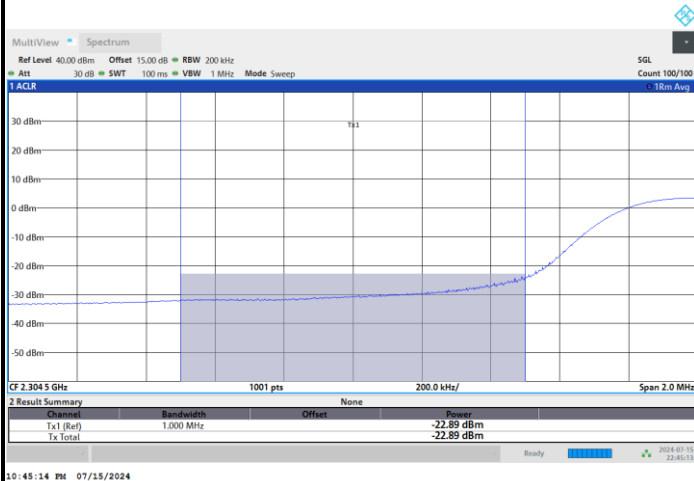
FR1 n30 / 10MHz / CP OFDM / QPSK / Full RB

Middle Band Edge / Full RB



Middle Band Edge / Full RB / Lower zoom in

Middle Band Edge / Full RB / Upper zoom in

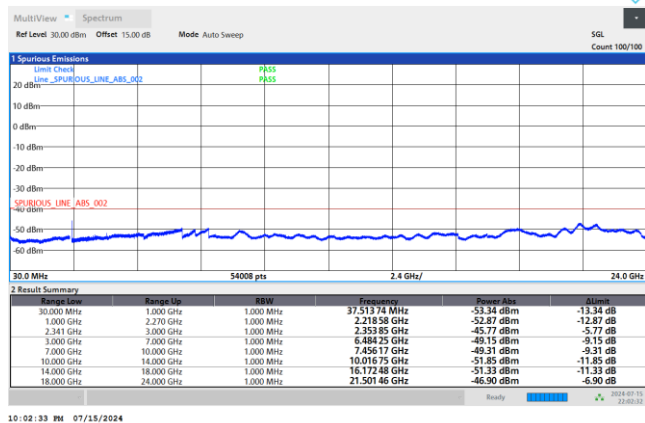




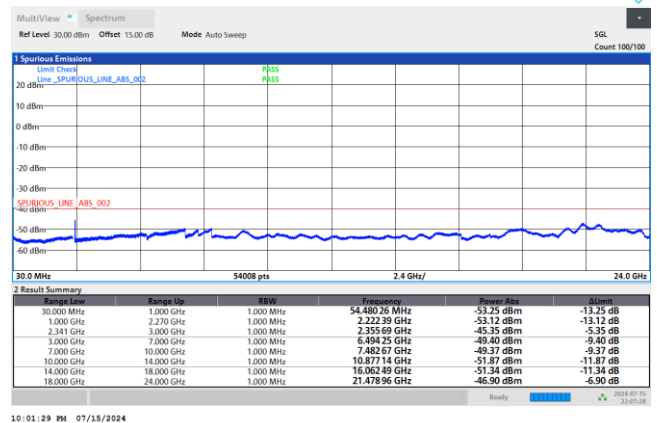
Conducted Spurious Emission

FR1 n30 / 5MHz / DFT-S OFDM / QPSK / 1RB1

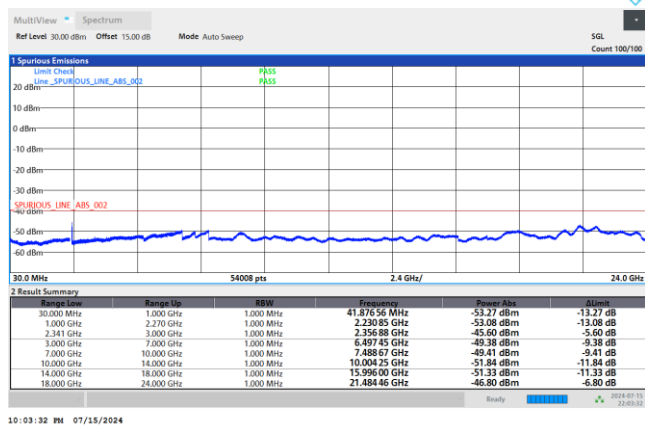
Lowest Channel



Middle Channel



Highest Channel



Frequency Stability

Test Conditions		FR1 n30 (PI/2 BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0018	PASS
40	Normal Voltage	0.0049	
30	Normal Voltage	0.0037	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0030	
0	Normal Voltage	0.0005	
-10	Normal Voltage	0.0024	
-20	Normal Voltage	0.0048	
-30	Normal Voltage	0.0000	
20	Maximum Voltage	0.0034	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0032	

Note:

1. Normal Voltage = 3.85 V. ; Battery End Point (BEP) = 3.3 V. ; Maximum Voltage = 4.25 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

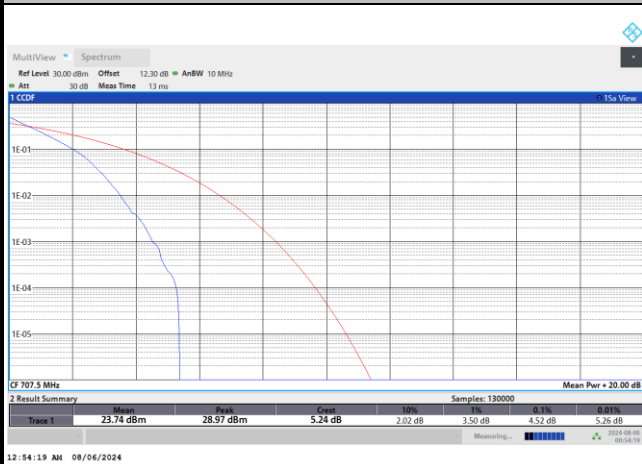
**FR1 n12****Peak-to-Average Ratio**

Mode	FR1 n12 / 10MHz / 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	4.52	5.58	6.32	6.62	PASS
Mode	FR1 n12 / 10MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.58				PASS

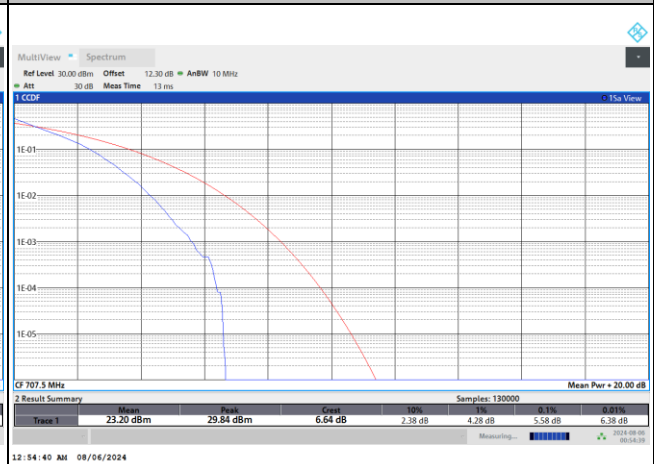


FR1 n12 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

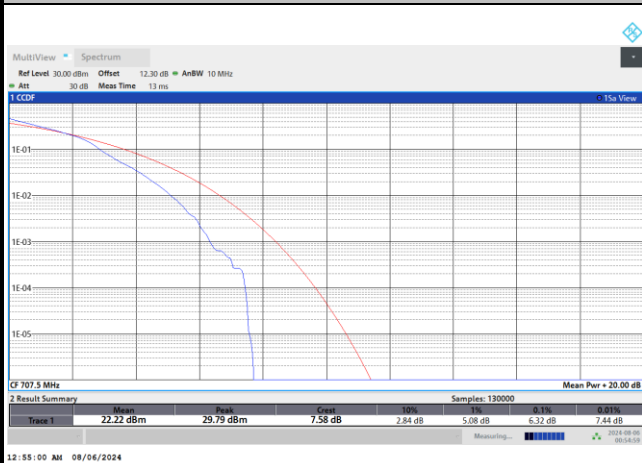
PI/2 BPSK



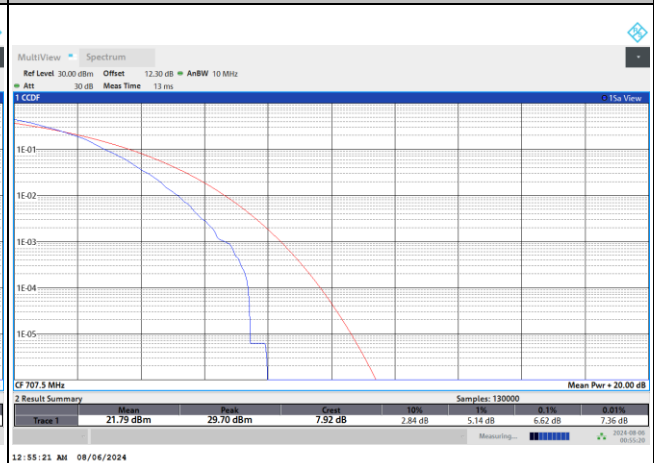
QPSK



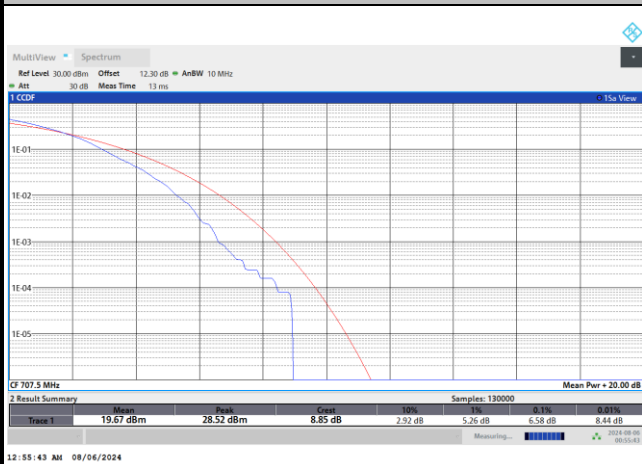
16QAM



64QAM



256QAM



**26dB Bandwidth**

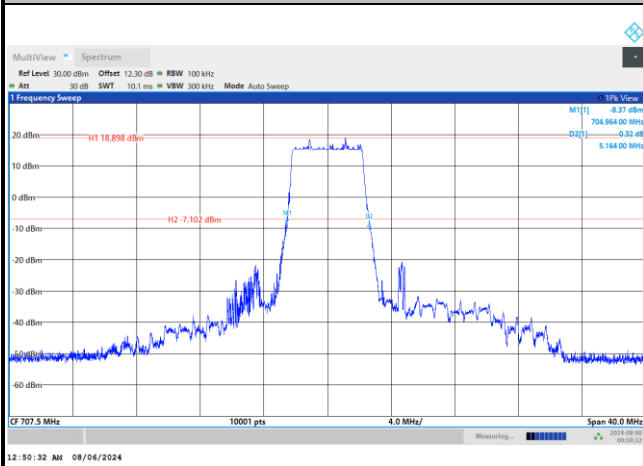
Mode	FR1 n12 : 26dB BW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK			
Middle CH	5.16		9.79		-			

Mode	FR1 n12 : 26dB BW(MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM		
Middle CH	5.27	5.30	10.29	10.30	-	-		
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM		
Middle CH	5.28	5.29	10.24	10.28	-	-		



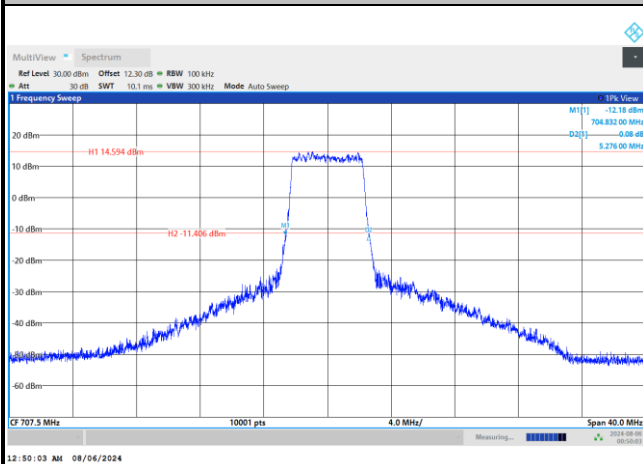
FR1 n12 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

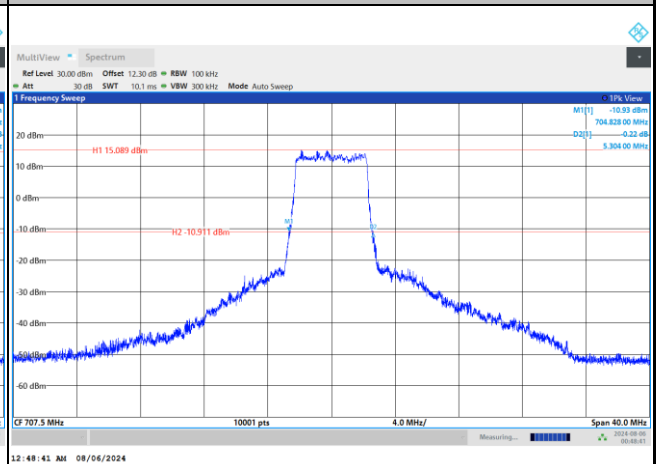


FR1 n12 / 5MHz / CP OFDM / Middle Channel / Full RB

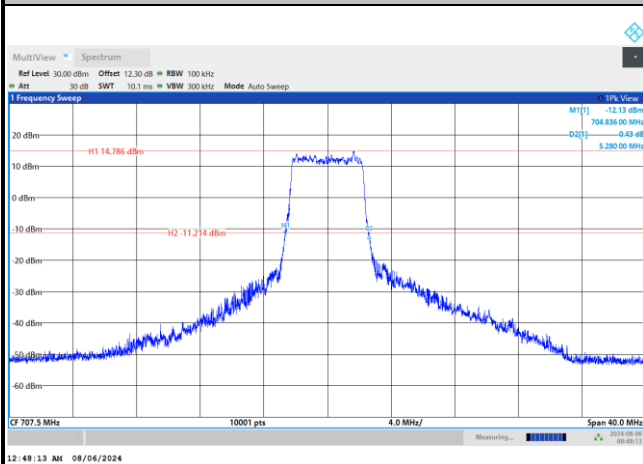
QPSK



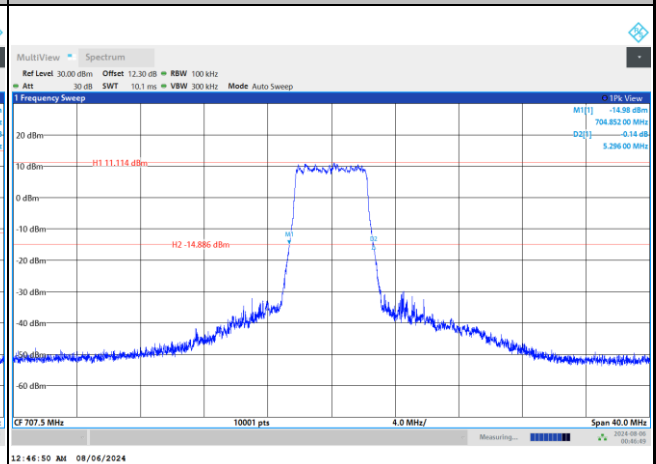
16QAM



64QAM



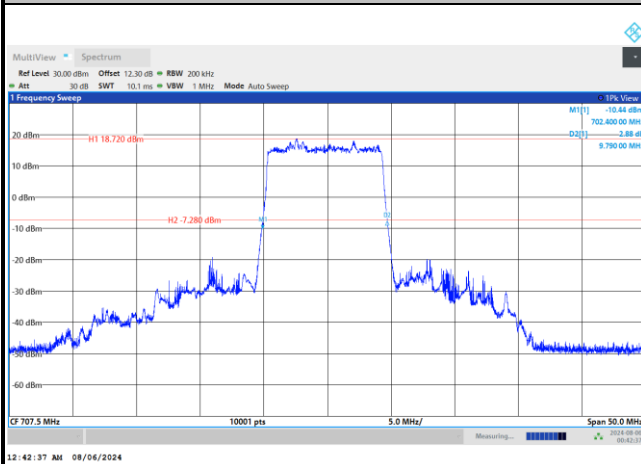
256QAM





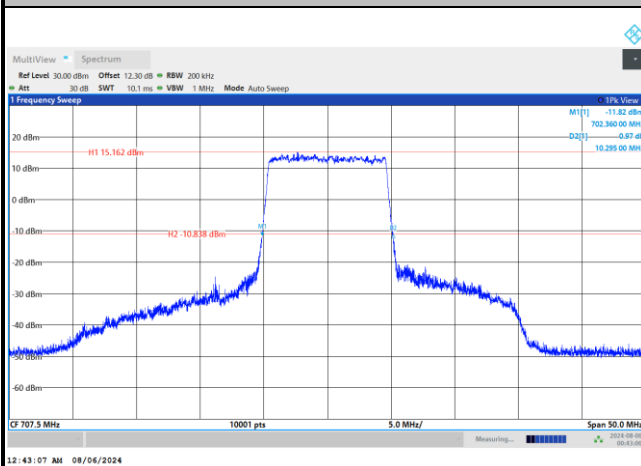
FR1 n12 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

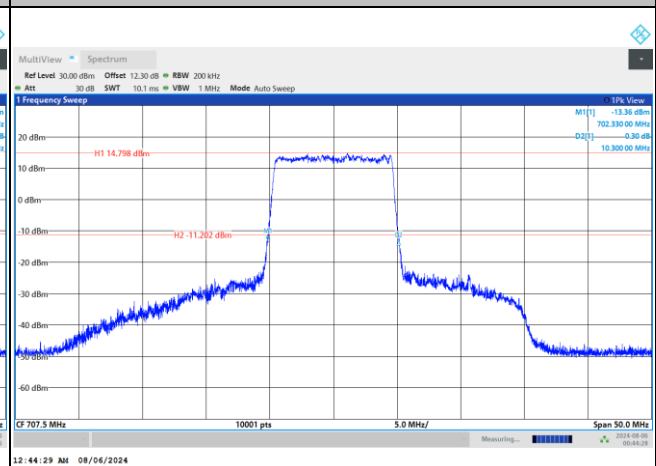


FR1 n12 / 10MHz / CP OFDM / Middle Channel / Full RB

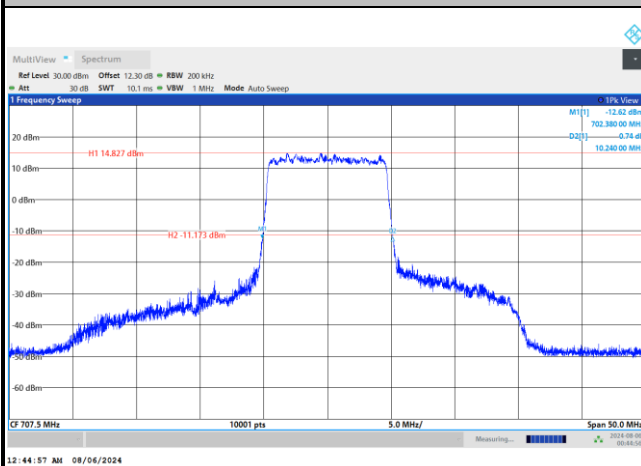
QPSK



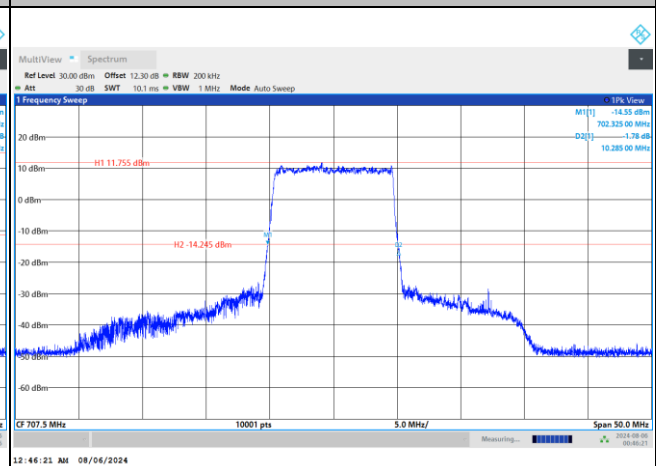
16QAM



64QAM



256QAM



**Occupied Bandwidth**

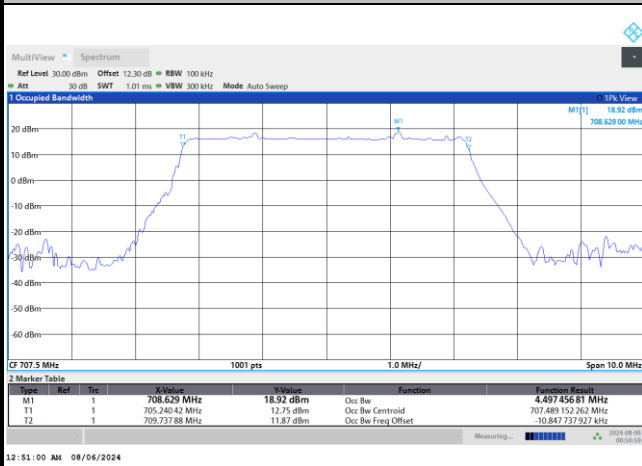
Mode	FR1 n12 : 99%OBW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK			
Middle CH	4.49		8.98		-			

Mode	FR1 n12 : 99%OBW (MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz			
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM		
Middle CH	4.52	4.52	9.30	9.30	-	-		
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM		
Middle CH	4.52	4.52	9.29	9.34	-	-		



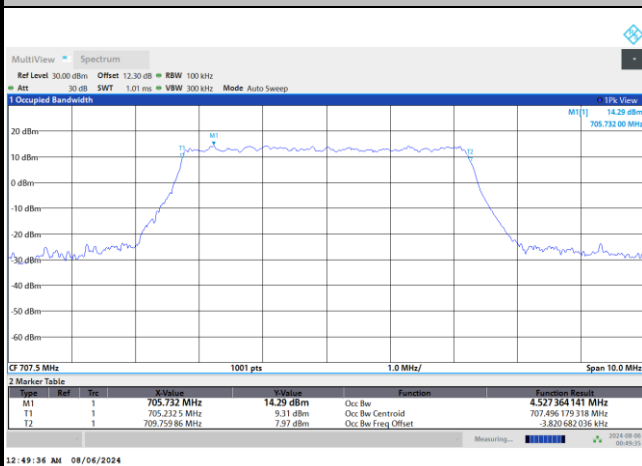
FR1 n12 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

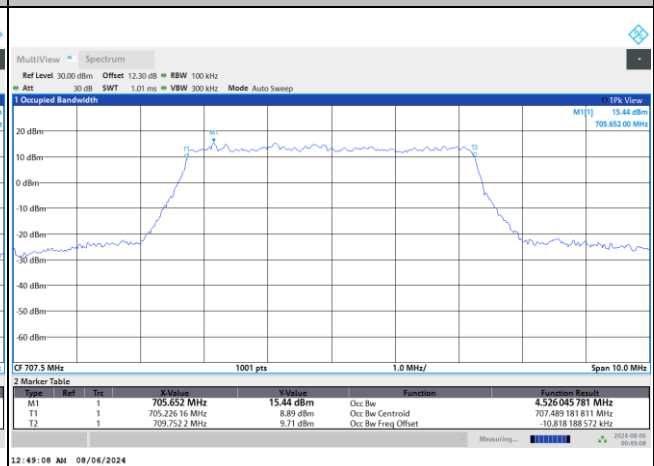


FR1 n12 / 5MHz / CP OFDM / Middle Channel / Full RB

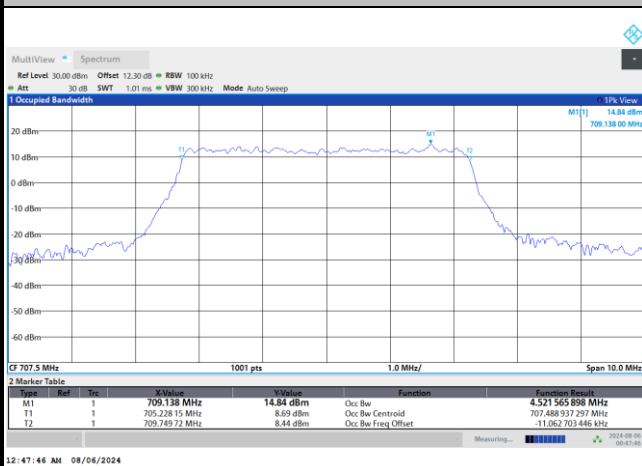
QPSK



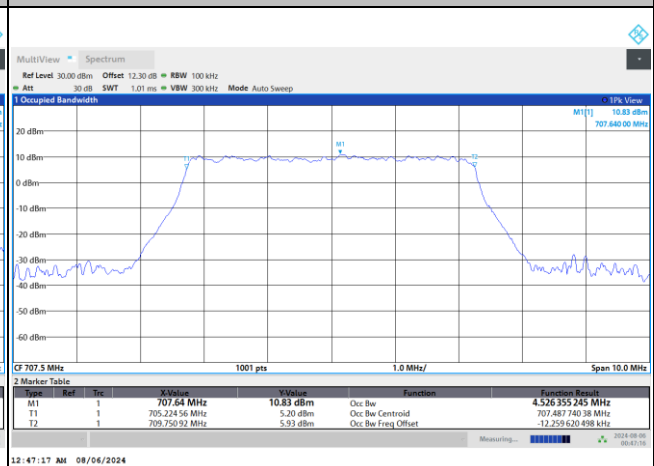
16QAM



64QAM



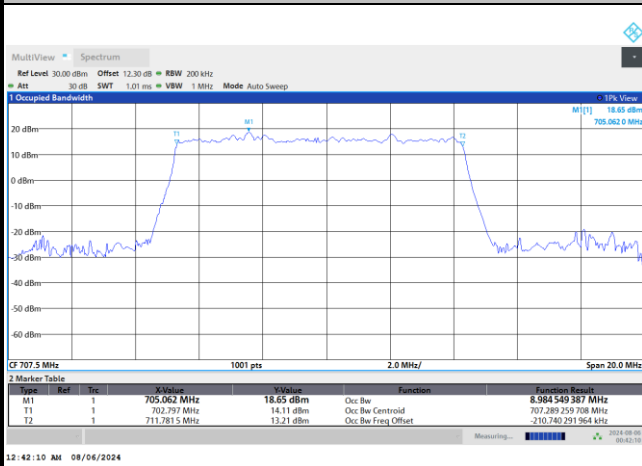
256QAM





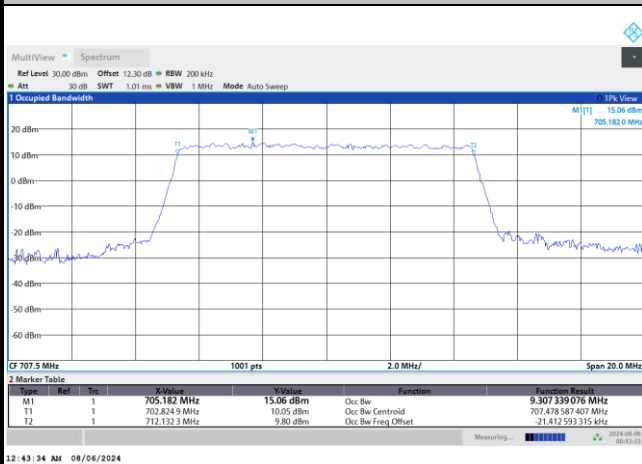
FR1 n12 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

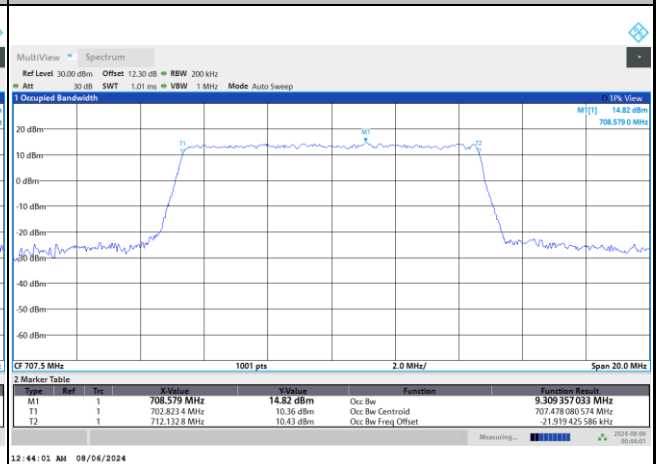


FR1 n12 / 10MHz / CP OFDM / Middle Channel / Full RB

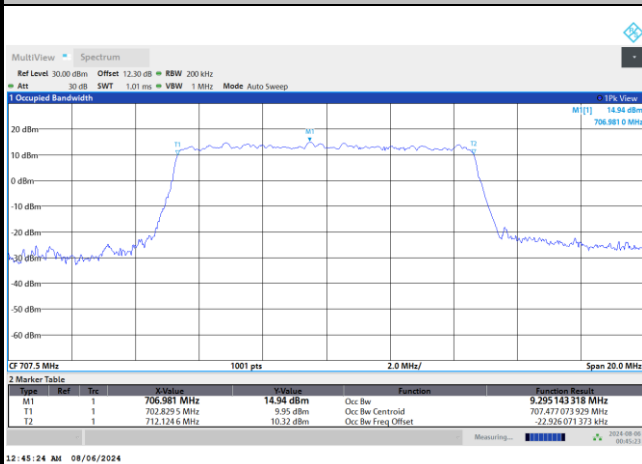
QPSK



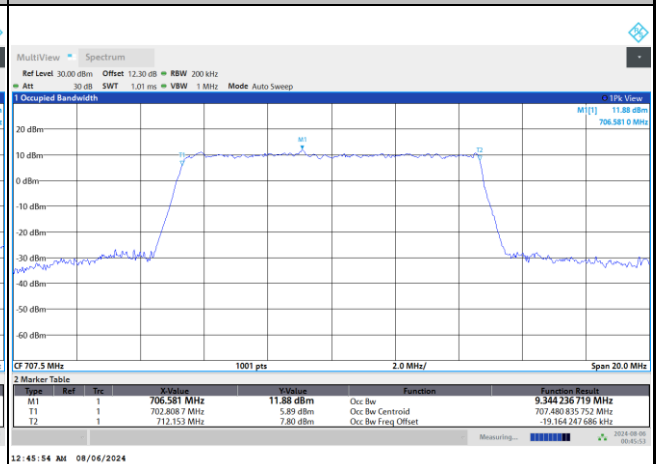
16QAM



64QAM



256QAM

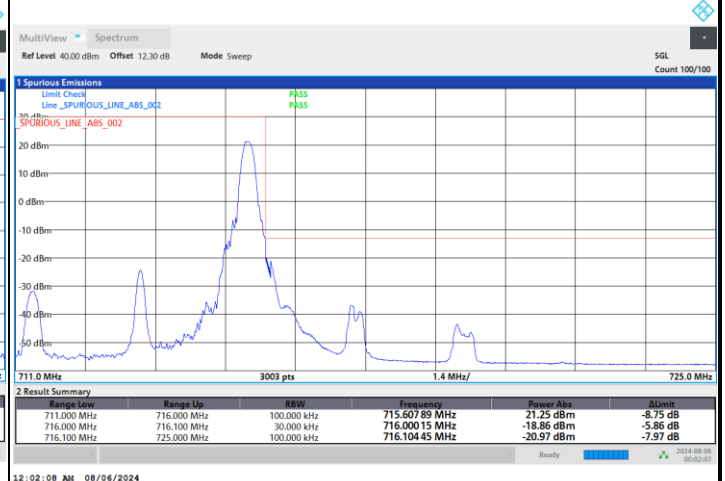
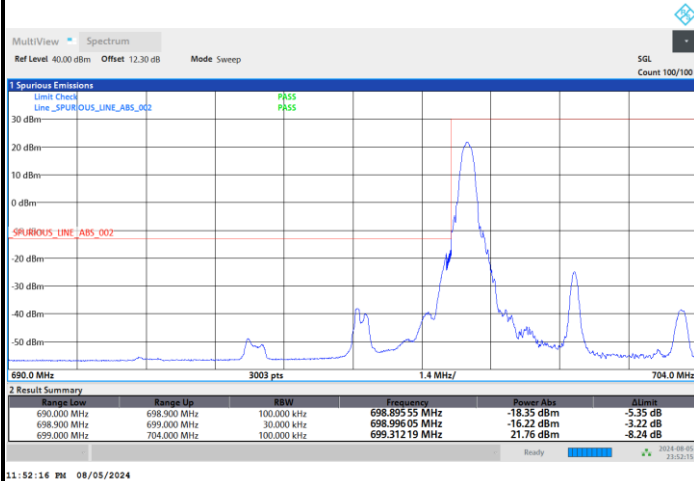


**Conducted Band Edge**

FR1 n12 / 5MHz / DFT-S OFDM / PI/2 BPSK

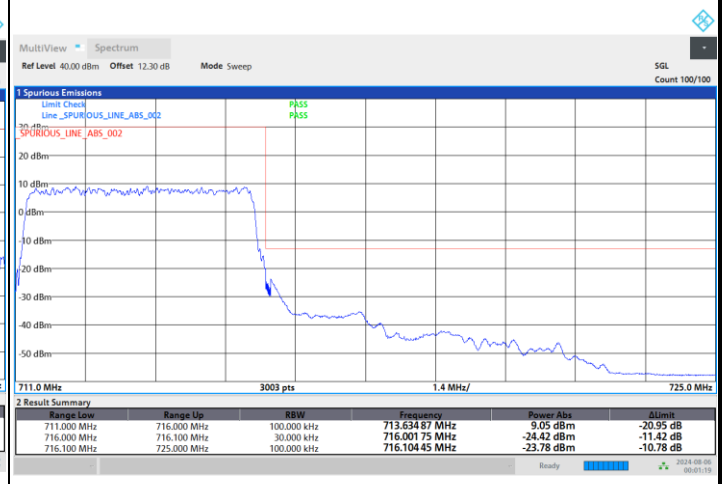
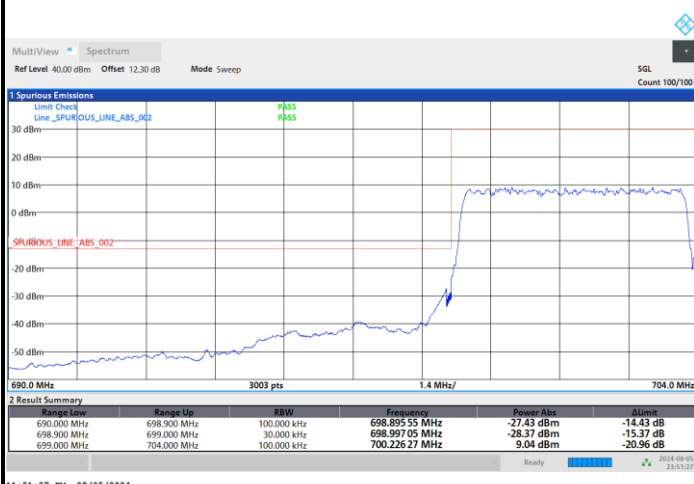
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



Lowest Band Edge / Full RB

Highest Band Edge / Full RB

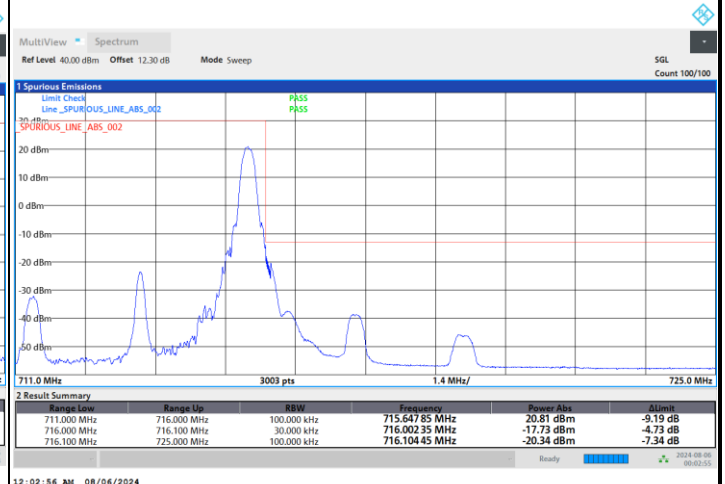
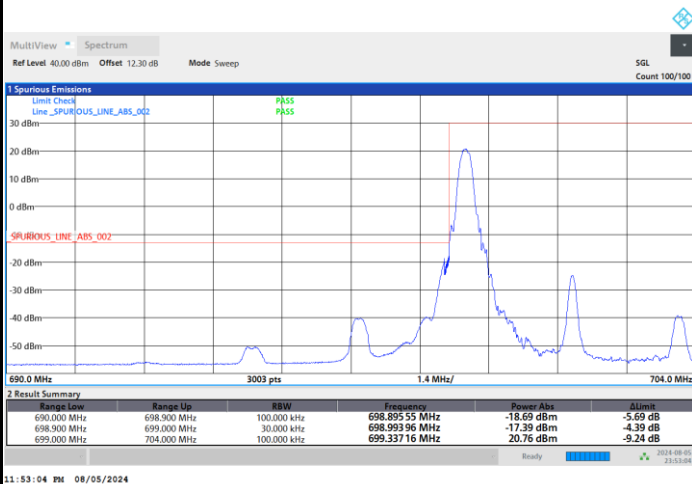




FR1 n12 / 5MHz / DFT-S OFDM / QPSK

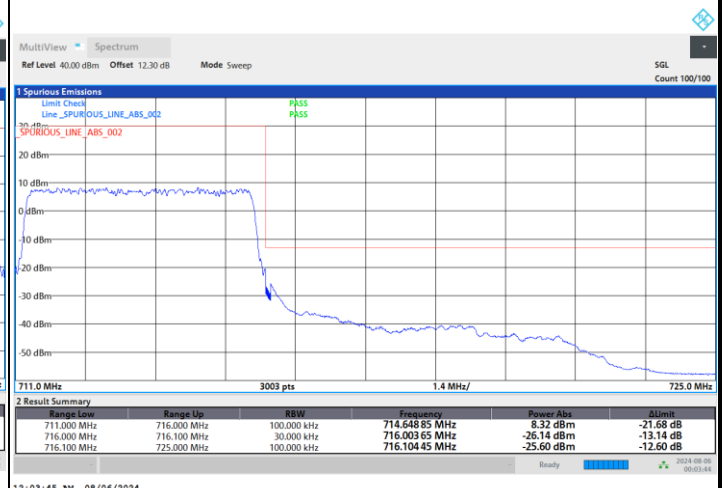
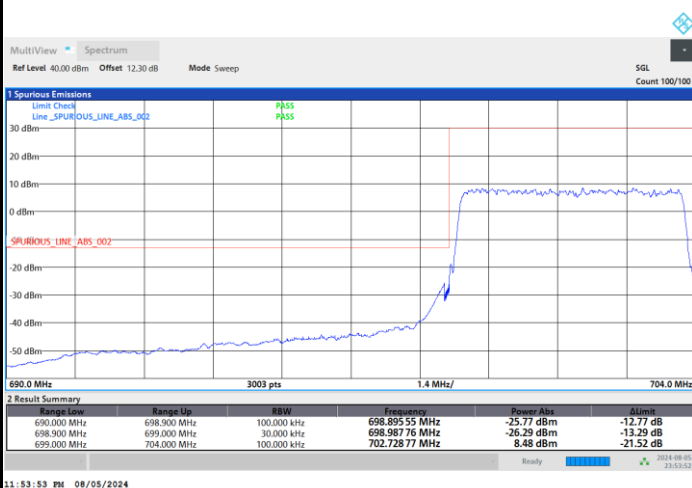
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



Lowest Band Edge / Full RB

Highest Band Edge / Full RB

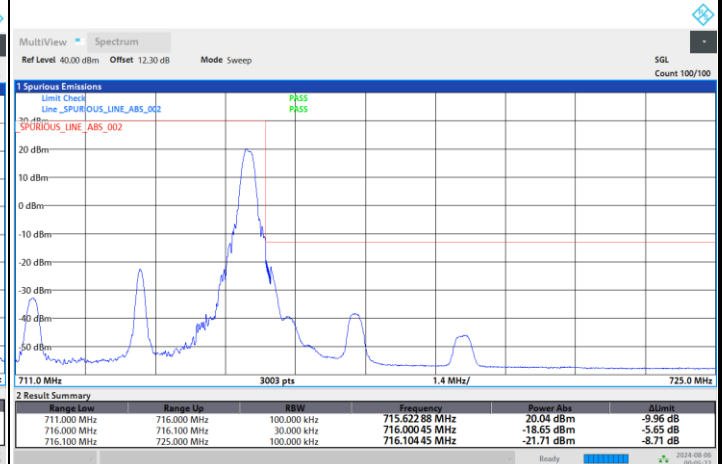
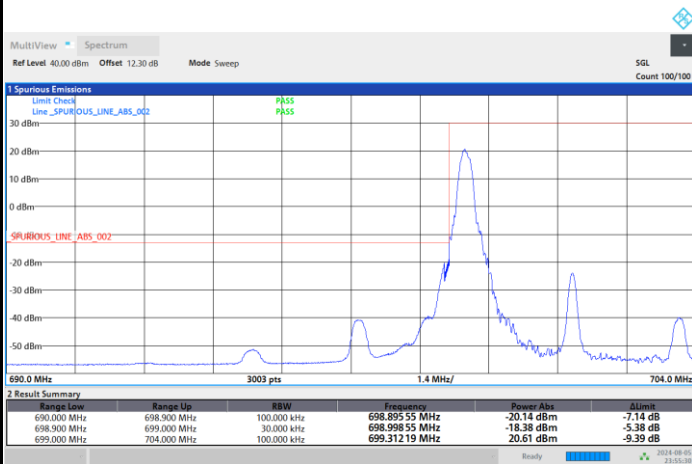




FR1 n12 / 5MHz / DFT-S OFDM / 16QAM

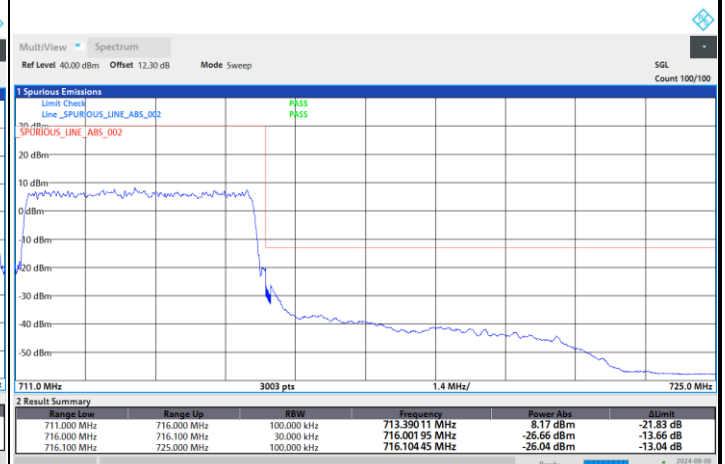
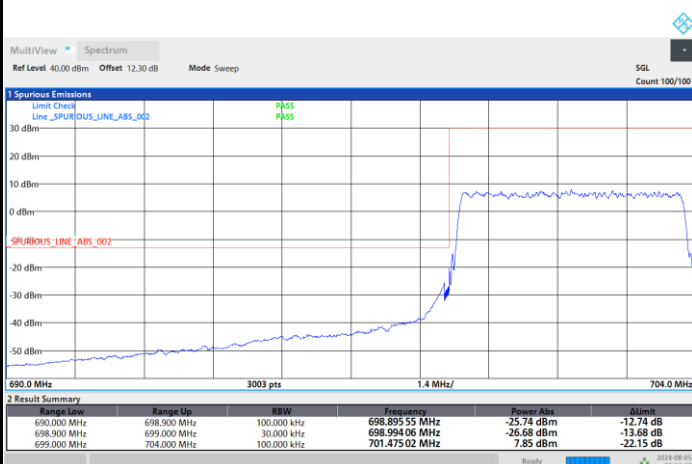
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



Lowest Band Edge / Full RB

Highest Band Edge / Full RB

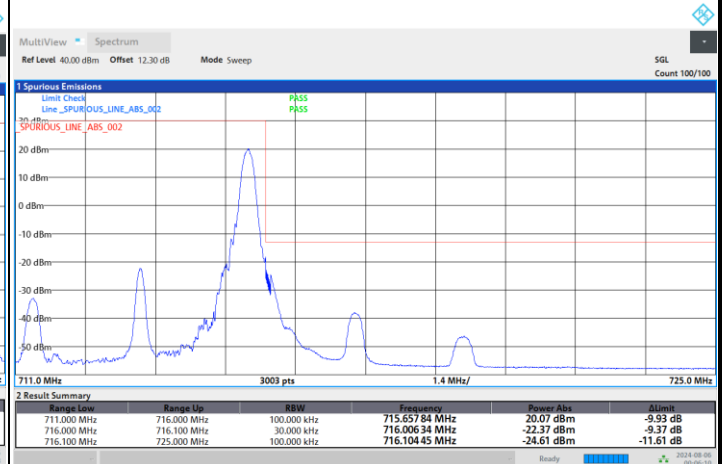
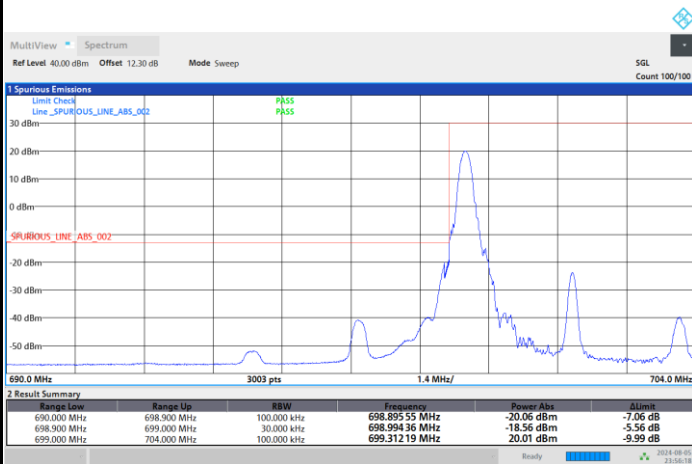




FR1 n12 / 5MHz / DFT-S OFDM / 64QAM

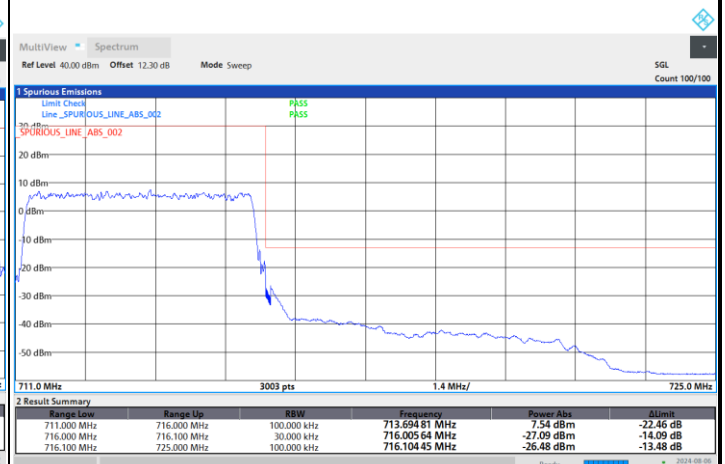
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



Lowest Band Edge / Full RB

Highest Band Edge / Full RB

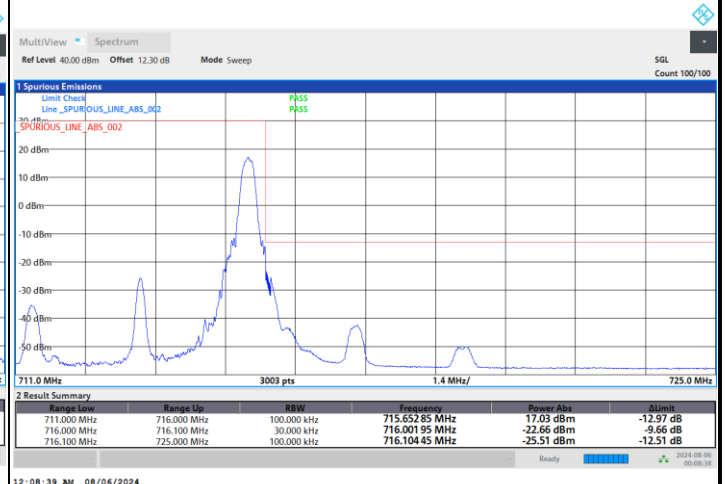
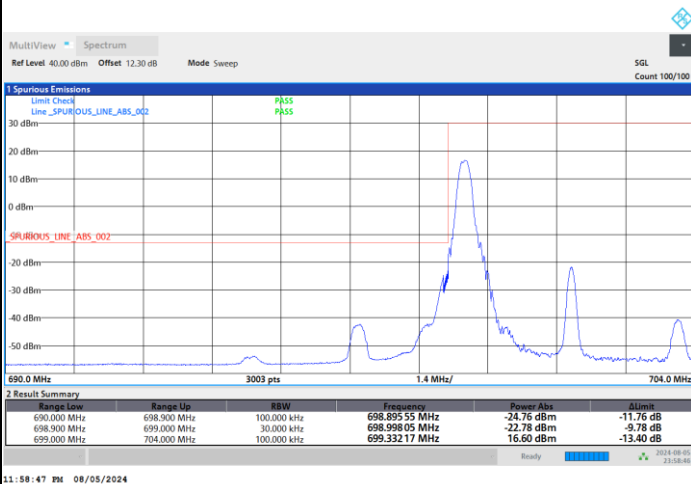




FR1 n12 / 5MHz / DFT-S OFDM / 256QAM

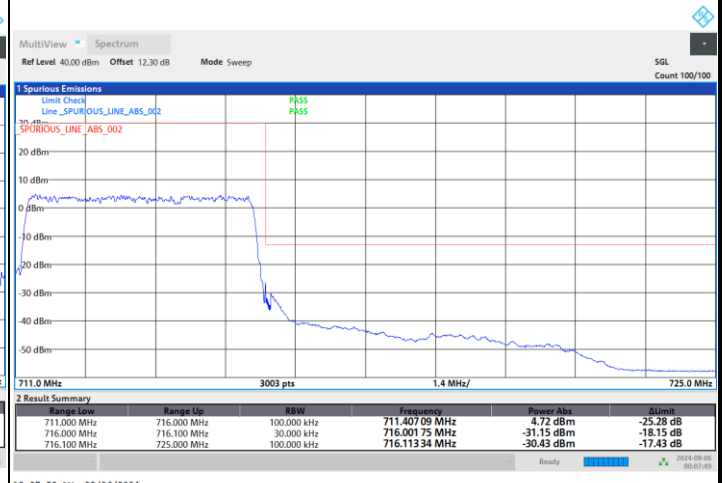
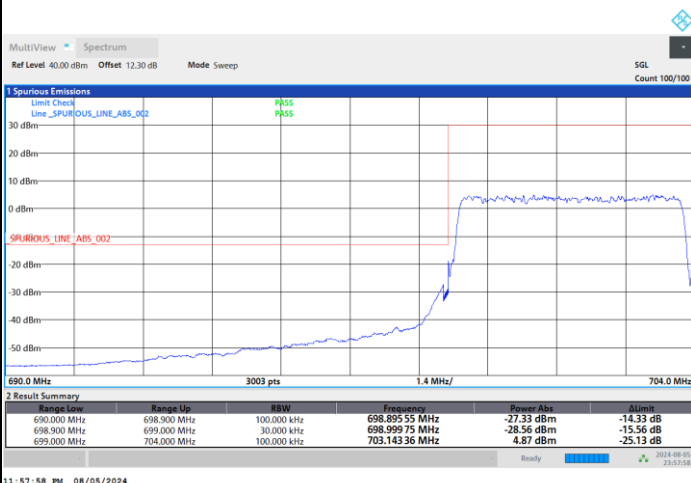
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



Lowest Band Edge / Full RB

Highest Band Edge / Full RB

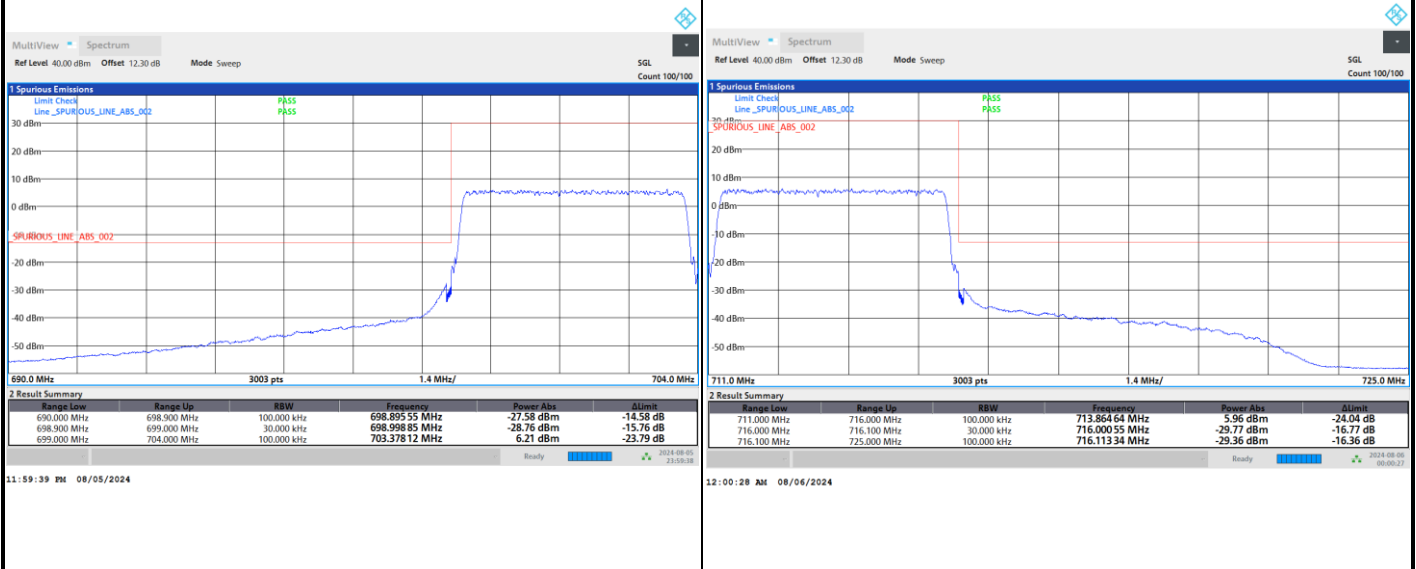




FR1 n12 / 5MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

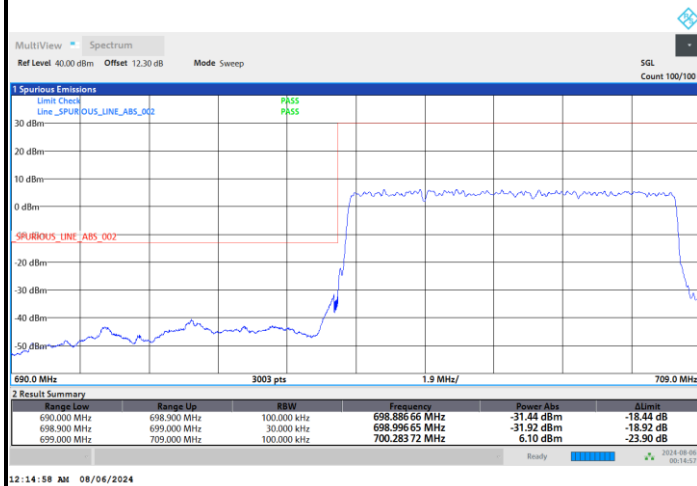
Highest Band Edge



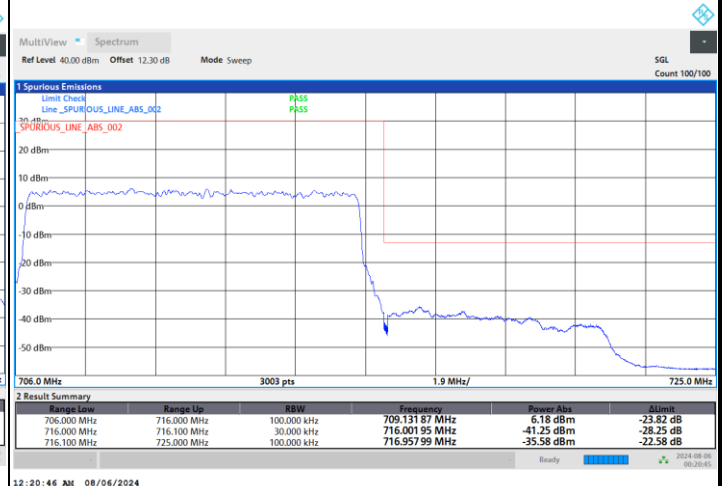


FR1 n12 / 10MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

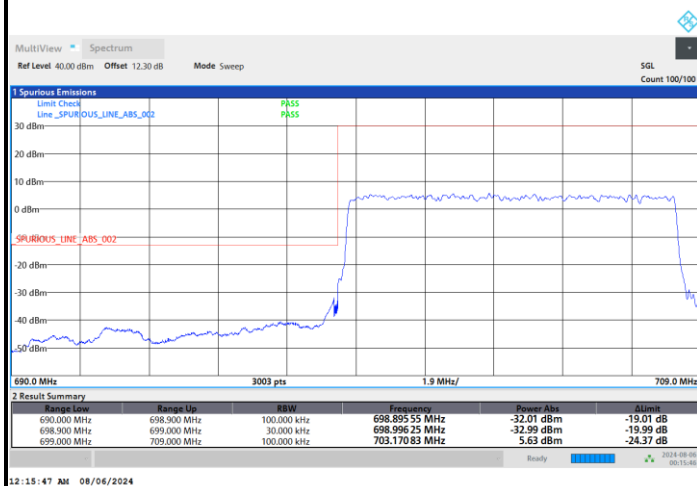


Highest Band Edge / Full RB

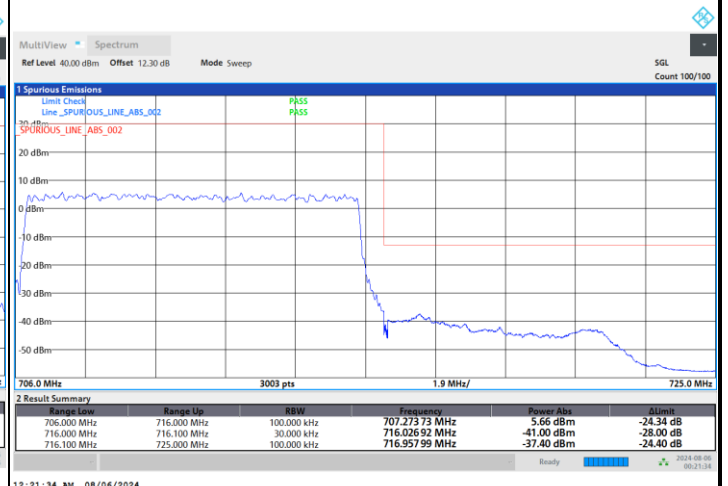


FR1 n12 / 10MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / Full RB



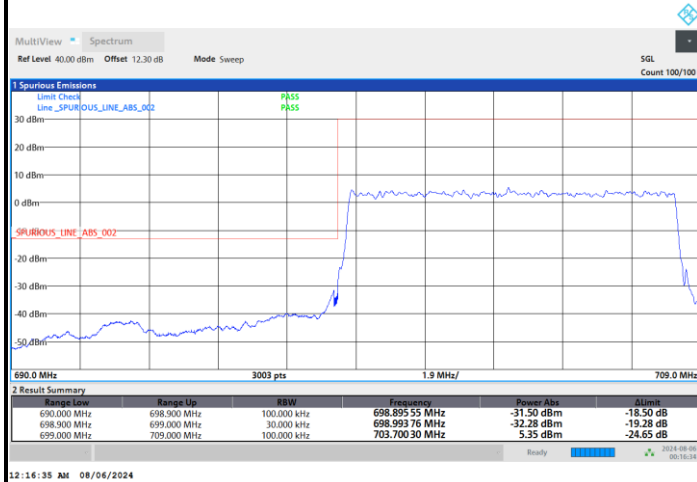
Highest Band Edge / Full RB



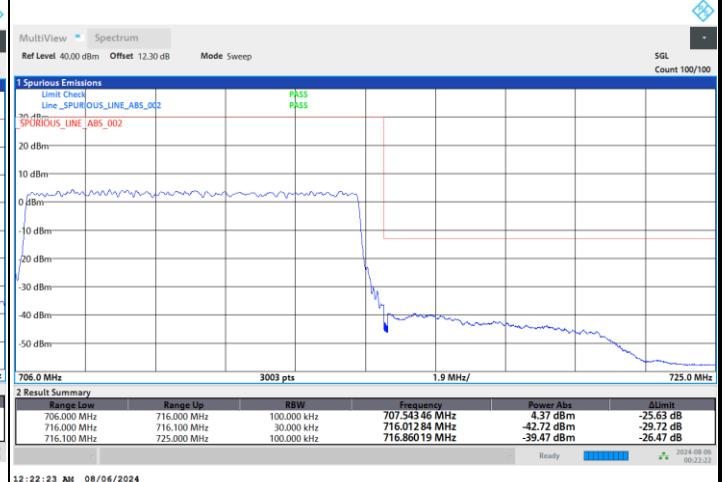


FR1 n12 / 10MHz / DFT-s-OFDM / 16QAM

Lowest Band Edge / Full RB

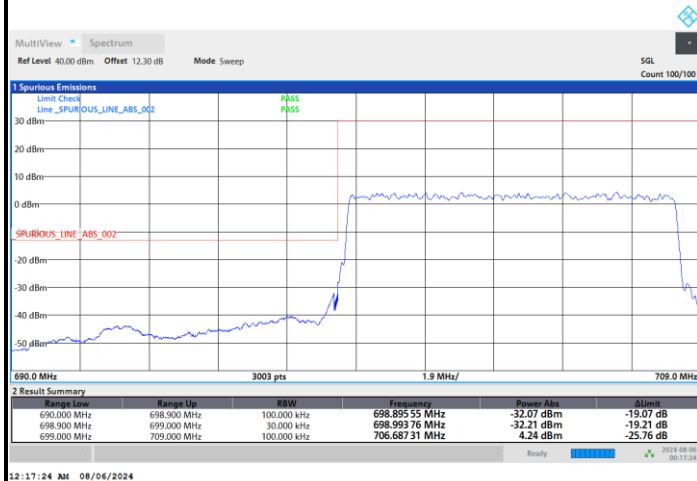


Highest Band Edge / Full RB



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

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

