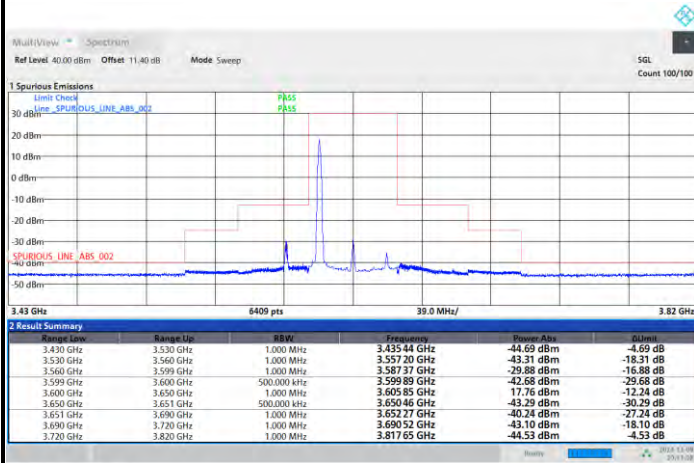




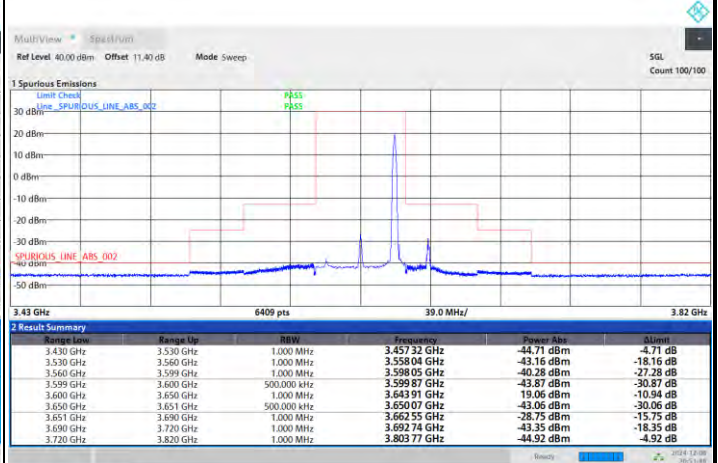
FR1 n48 / 40MHz / DFT-S OFDM / 64QAM

Middle Channel

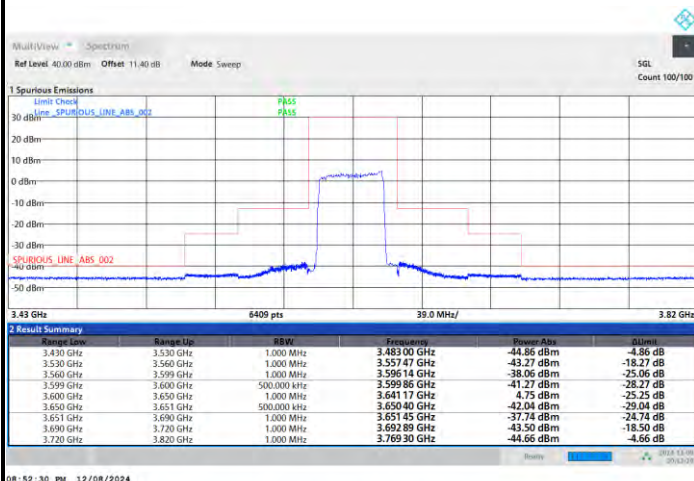
1RB0



1RBmax



Full RB

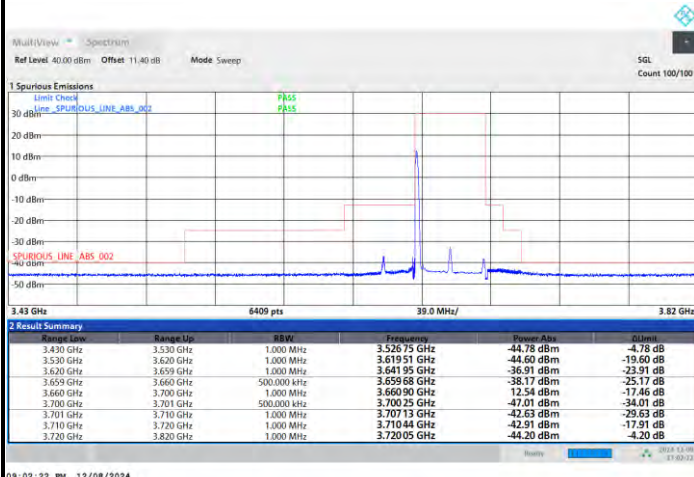




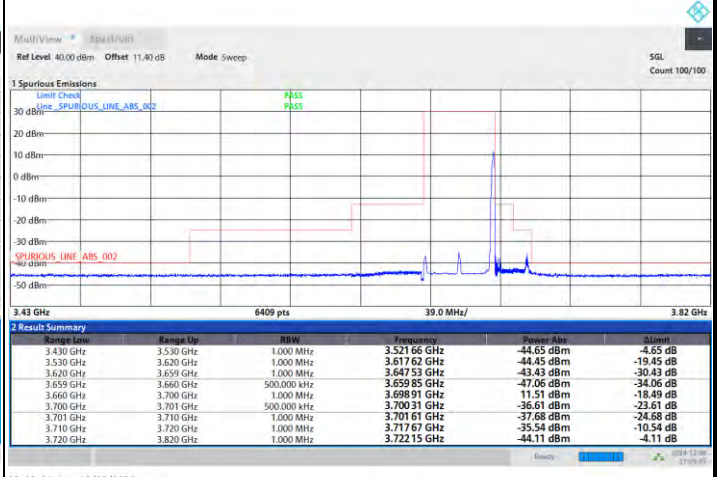
FR1 n48 / 40MHz / DFT-S OFDM / 64QAM

Highest Channel

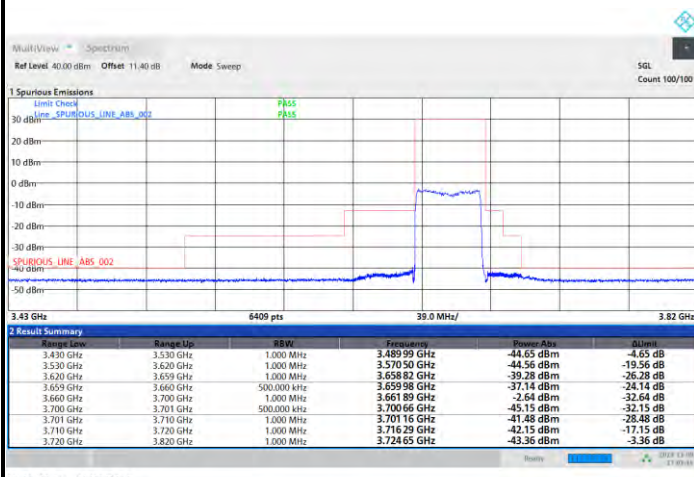
1RB0



1RBmax



Full RB

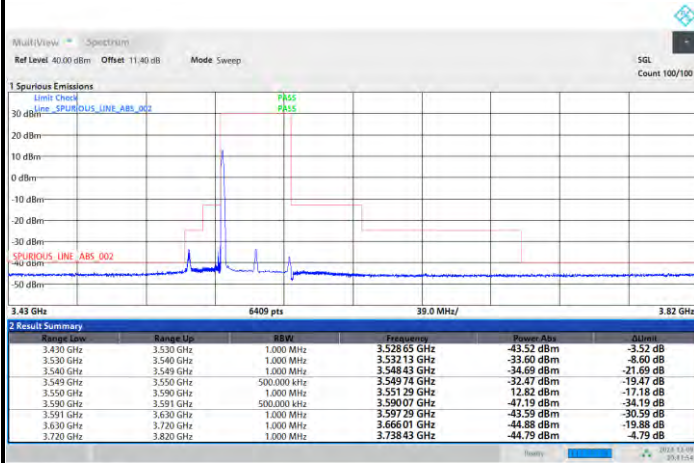




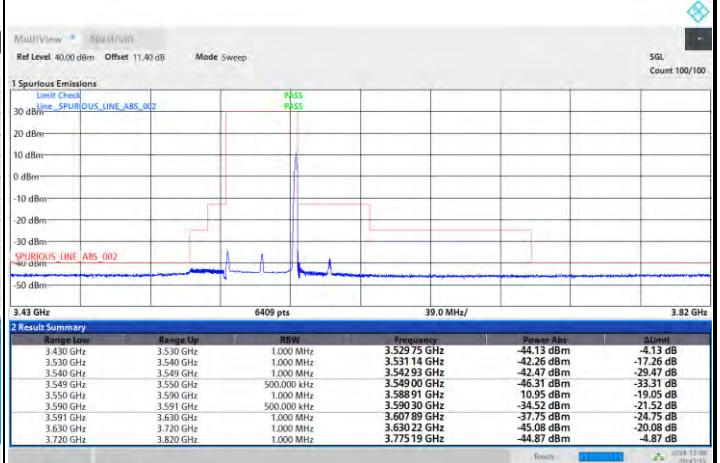
FR1 n48 / 40MHz / DFT-S OFDM / 256QAM

Lowest Channel

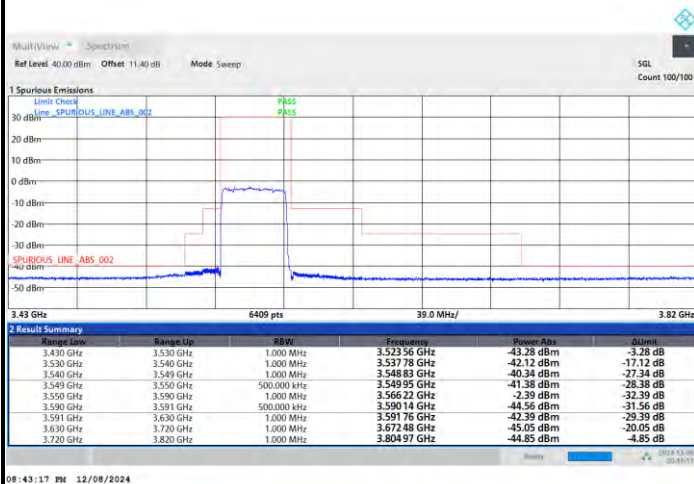
1RB0



1RBmax



Full RB

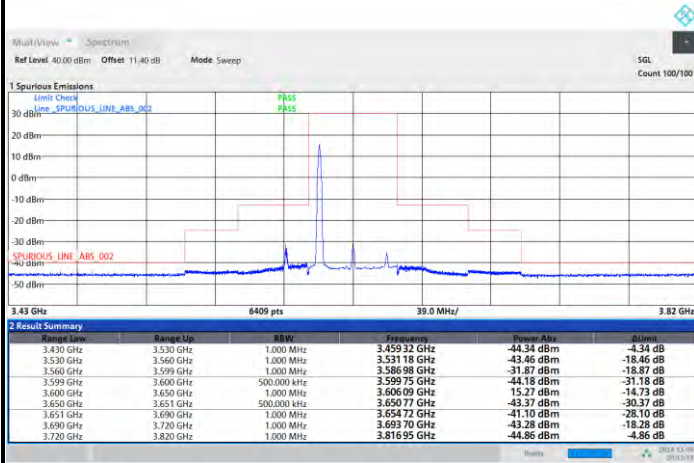




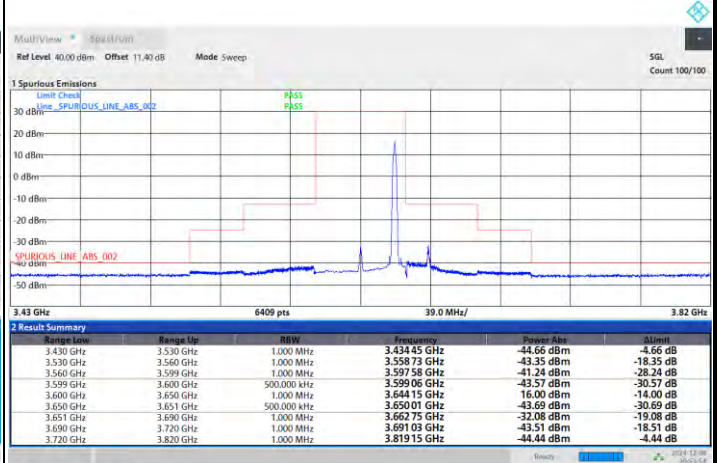
FR1 n48 / 40MHz / DFT-S OFDM / 256QAM

Middle Channel

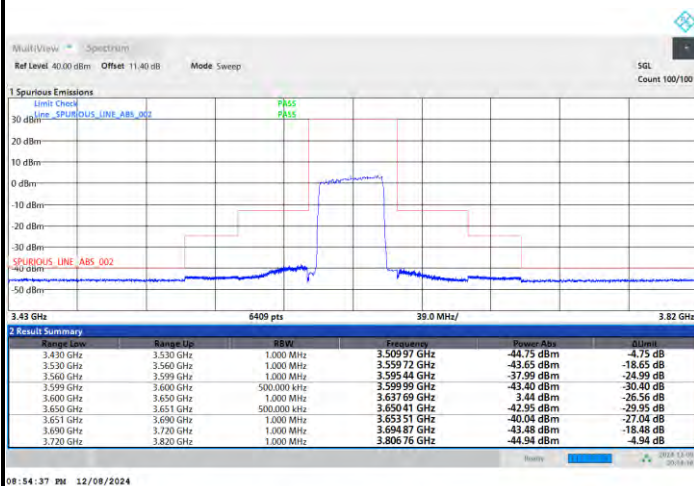
1RB0



1RBmax



Full RB

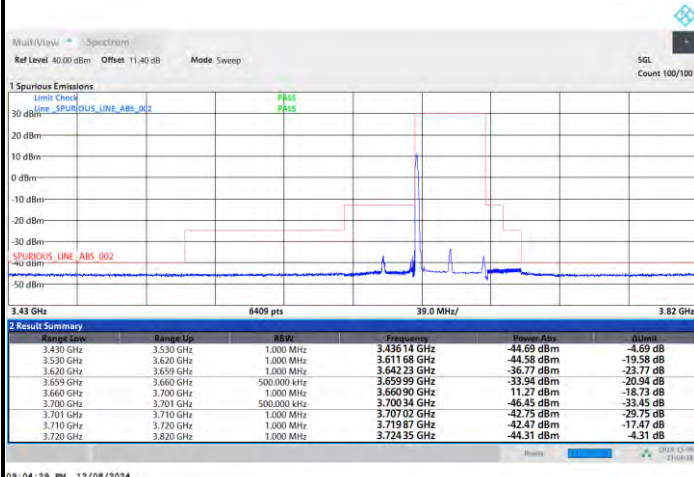




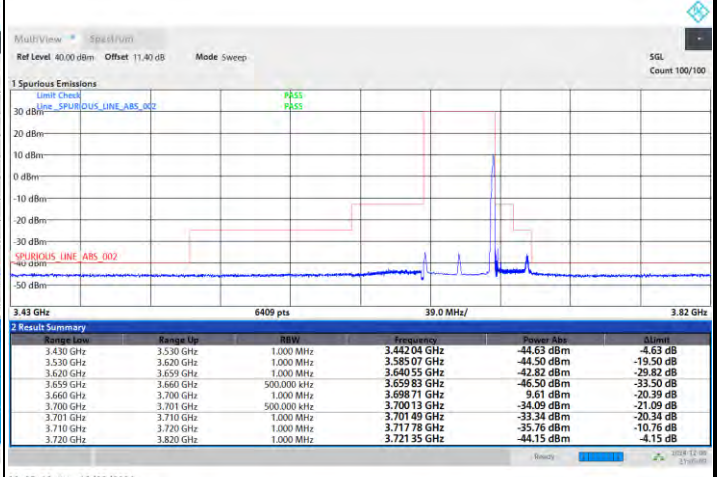
FR1 n48 / 40MHz / DFT-S OFDM / 256QAM

Highest Channel

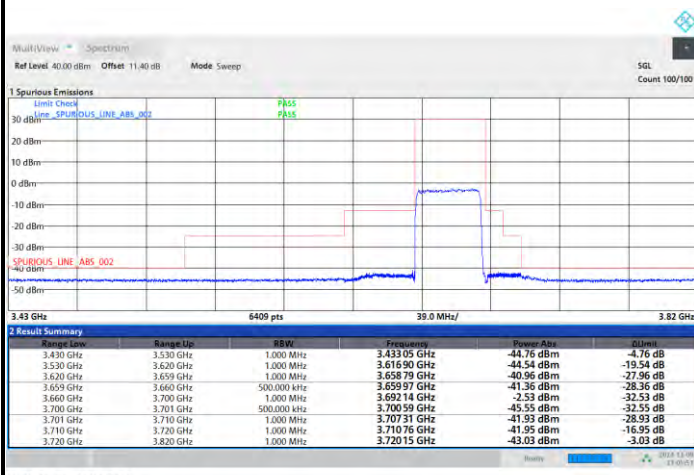
1RB0



1RBmax



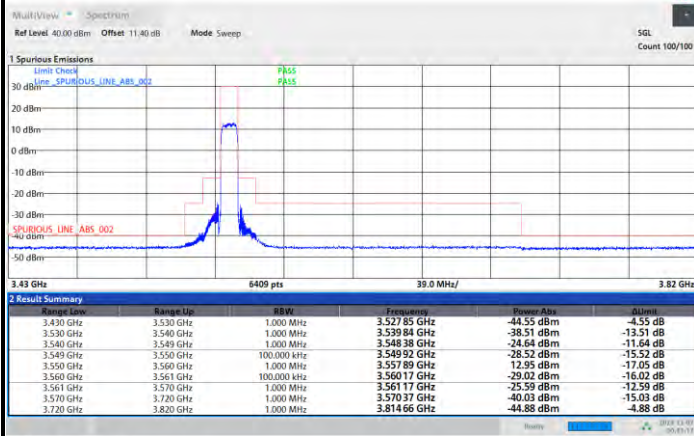
Full RB



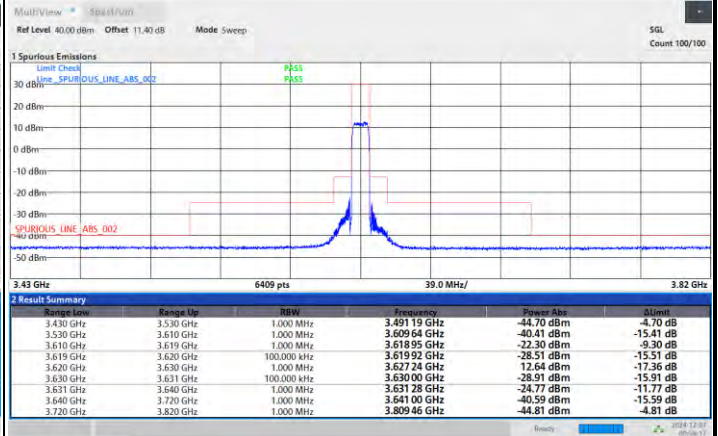


FR1 n48 / 10MHz / CP OFDM / QPSK / Full RB

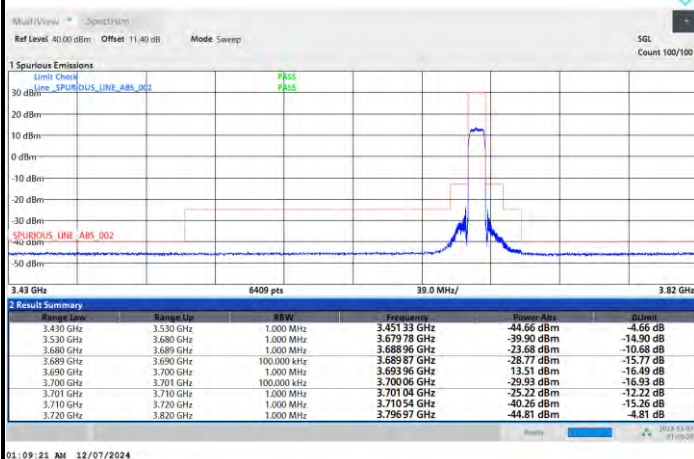
Lowest Channel



Middle Channel



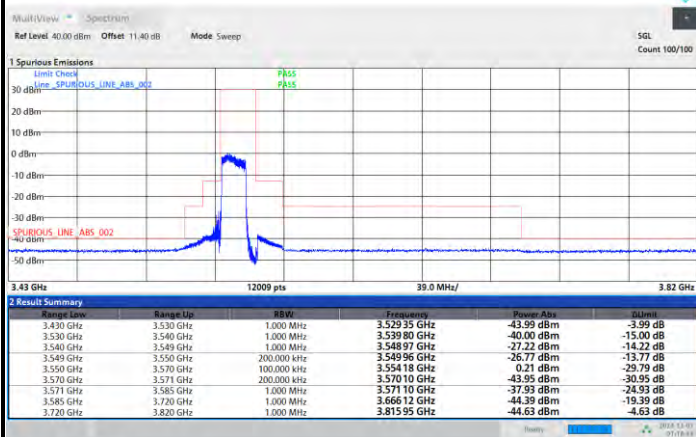
Highest Channel



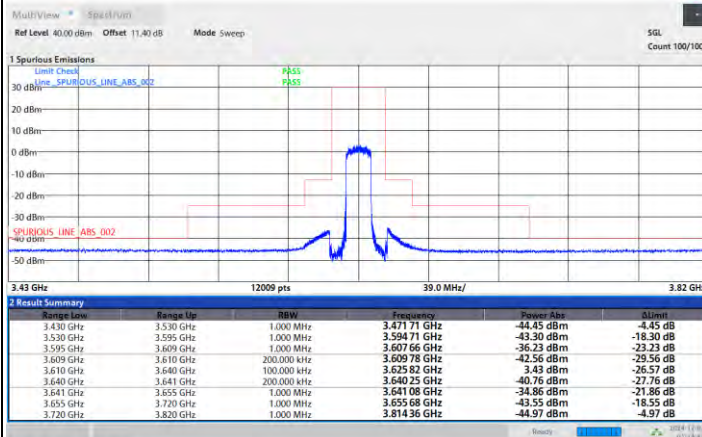


FR1 n48 / 15MHz / CP OFDM / QPSK / Full RB

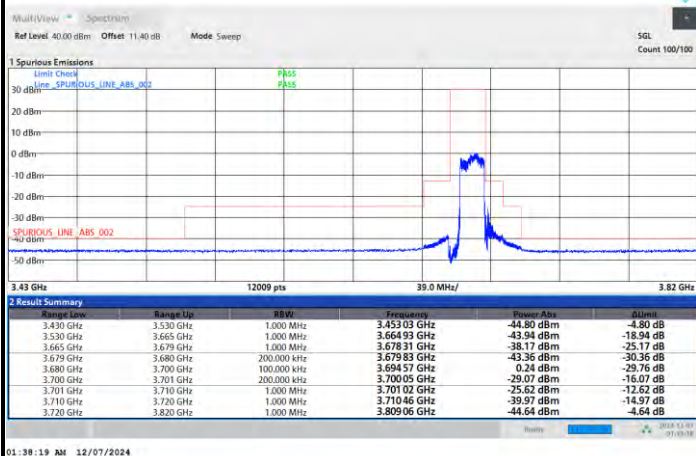
Lowest Channel



Middle Channel



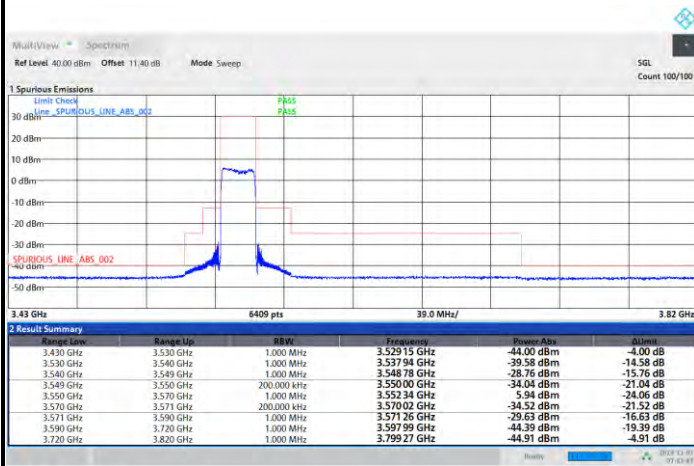
Highest Channel



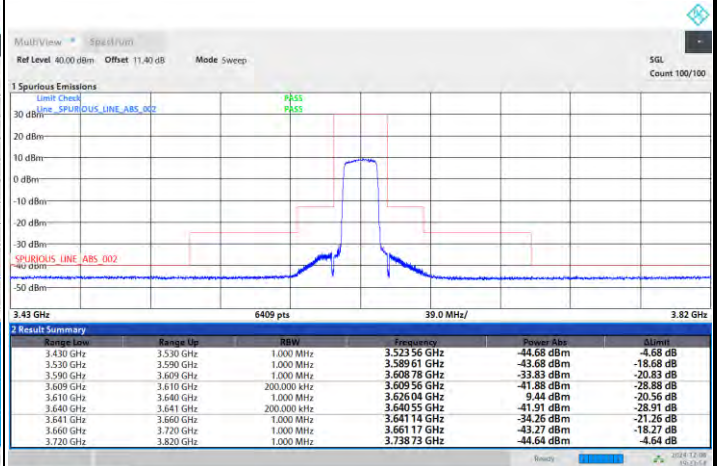


FR1 n48 / 20MHz / CP OFDM / QPSK / Full RB

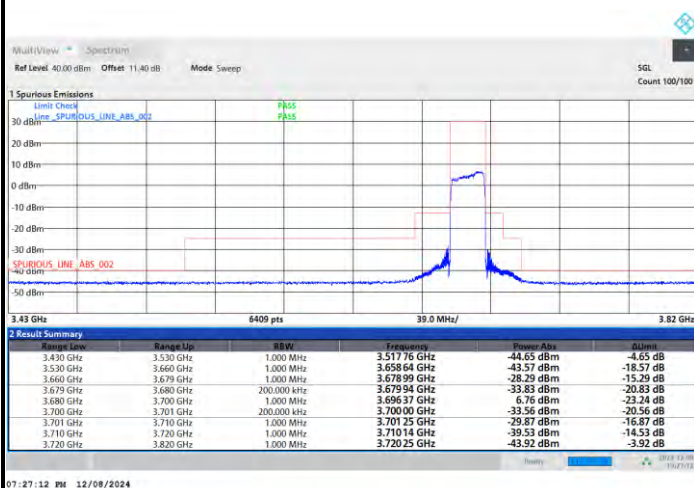
Lowest Channel



Middle Channel



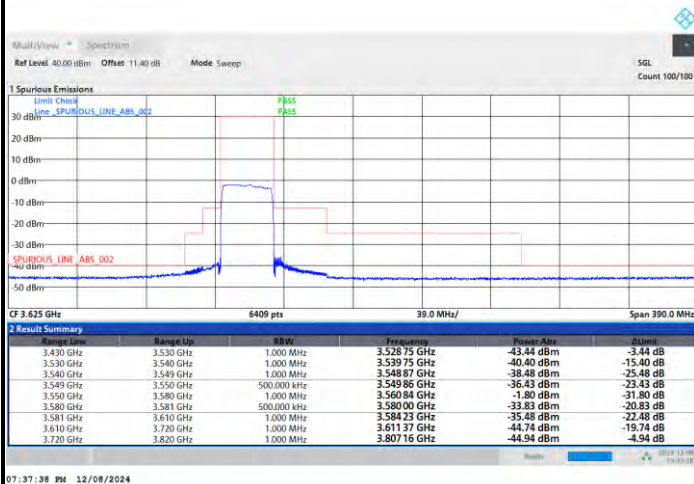
Highest Channel



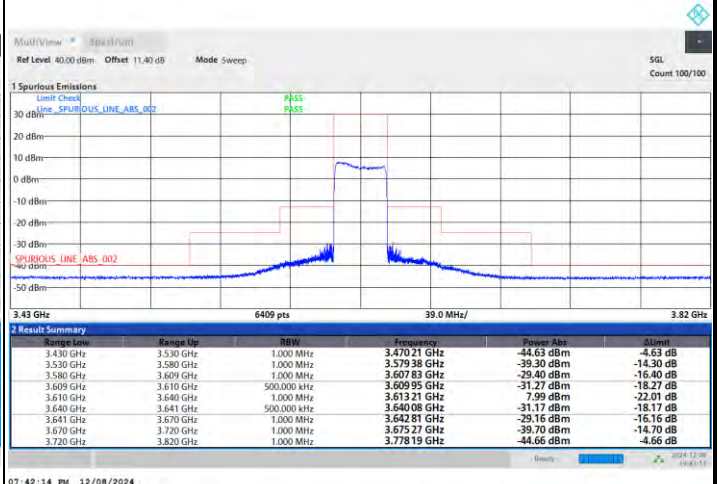


FR1 n48 / 30MHz / CP OFDM / QPSK / Full RB

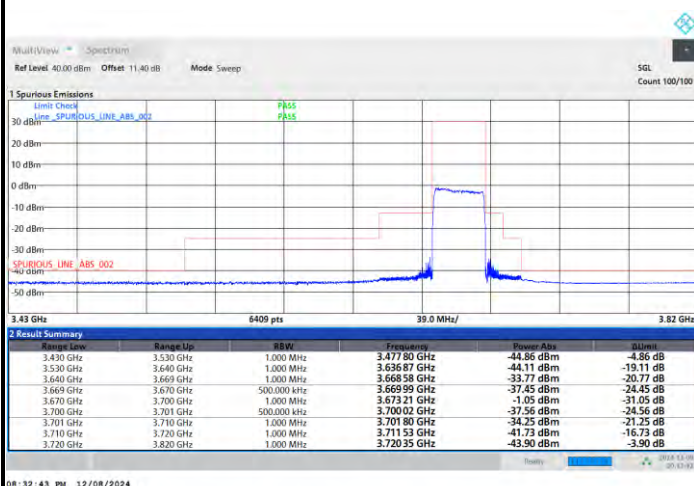
Lowest Channel



Middle Channel



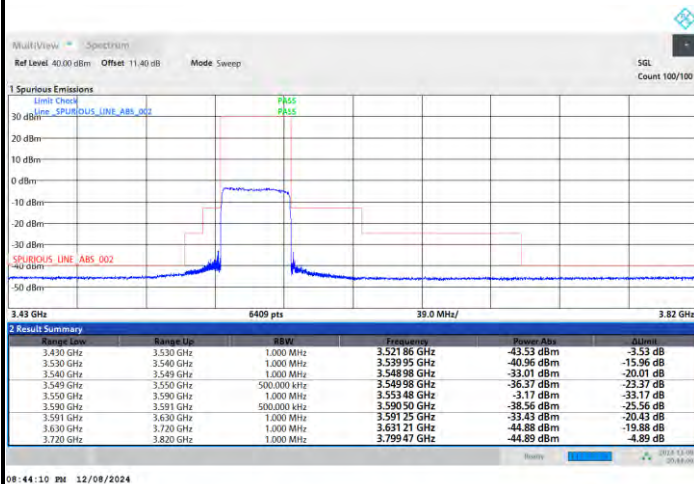
Highest Channel



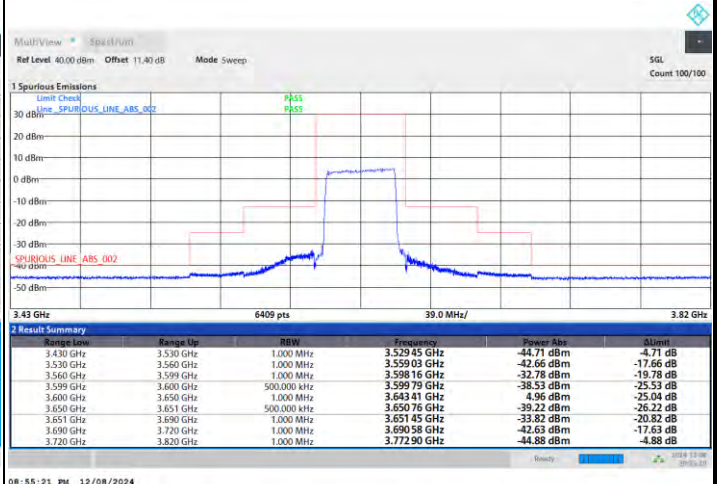


FR1 n48 / 40MHz / CP OFDM / QPSK / Full RB

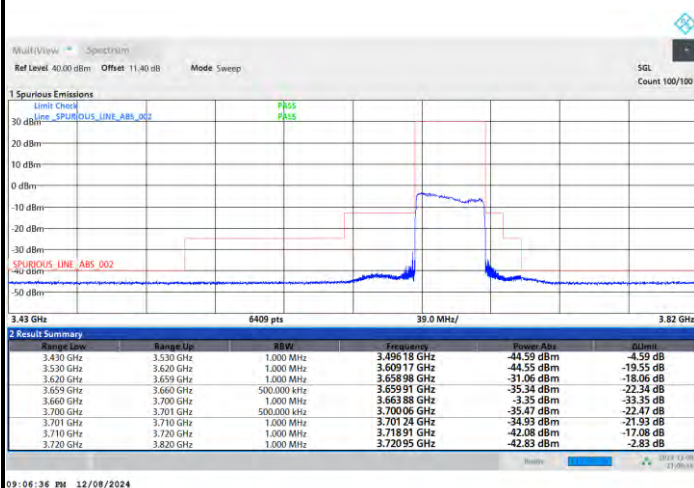
Lowest Channel



Middle Channel



Highest Channel

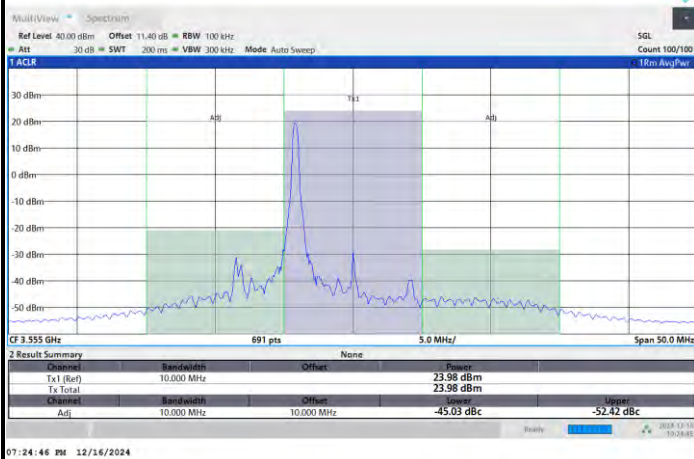


**Adjacent Channel Leakage Ratio (ACLR)**

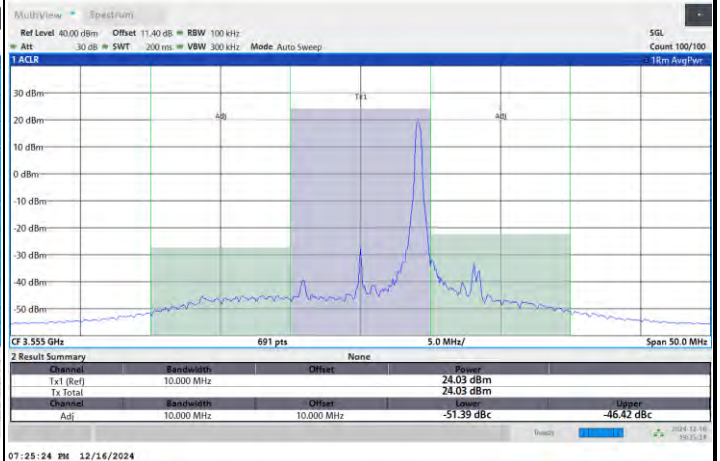
FR1 n48 / 10MHz / DFT-S OFDM / PI/2 BPSK

Lowest Channel

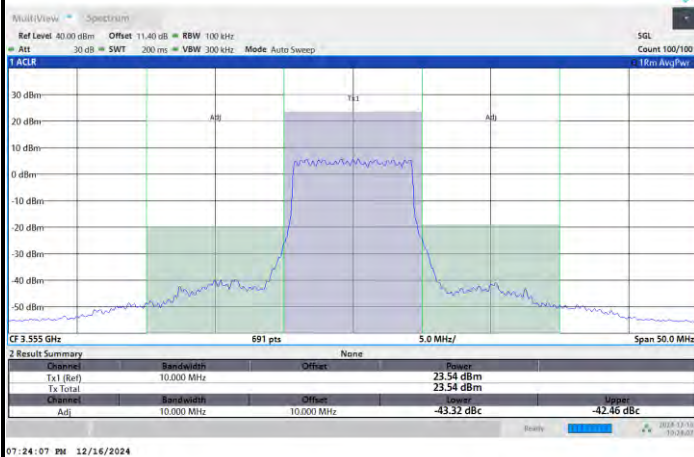
1RB0



1RBmax



Full RB

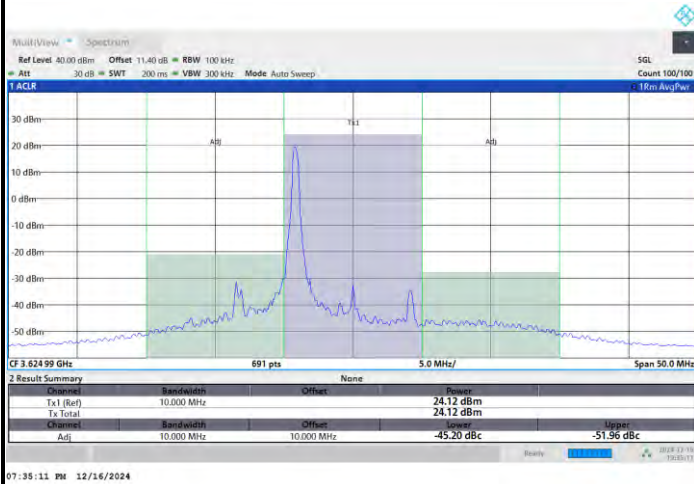




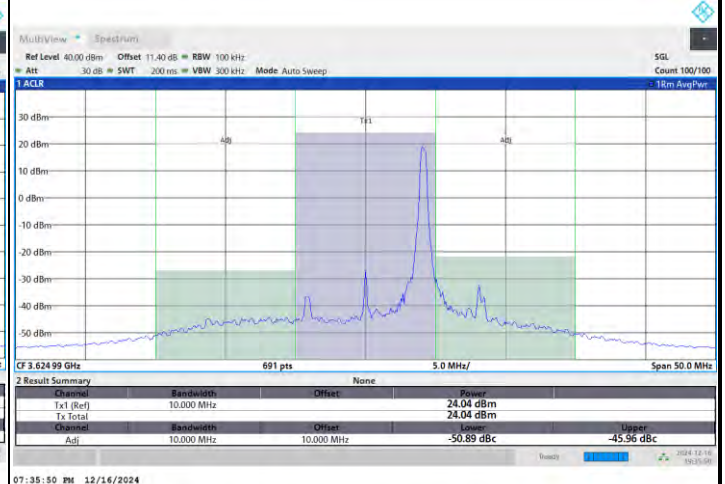
FR1 n48 / 10MHz / DFT-S OFDM / PI/2 BPSK

Middle Channel

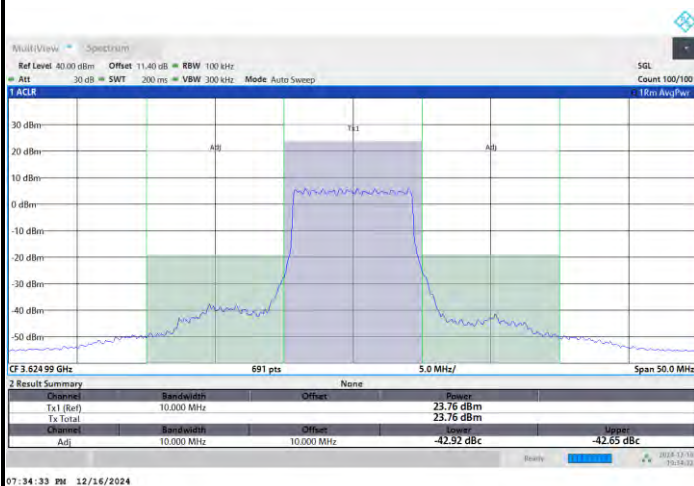
1RB0



1RBmax



Full RB

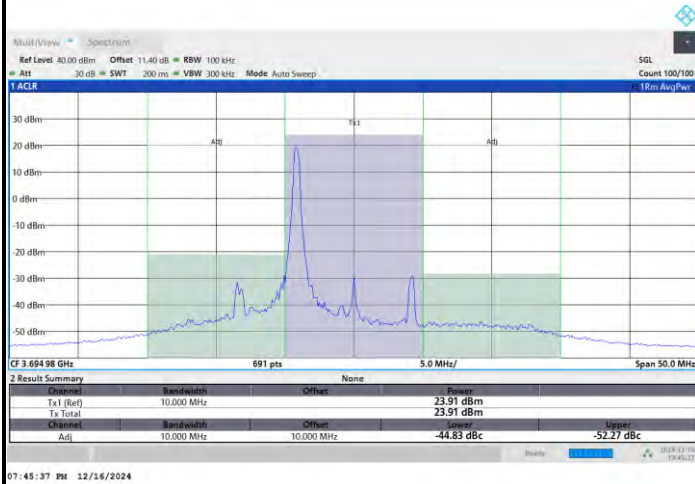




FR1 n48 / 10MHz / DFT-S OFDM / PI/2 BPSK

Highest Channel

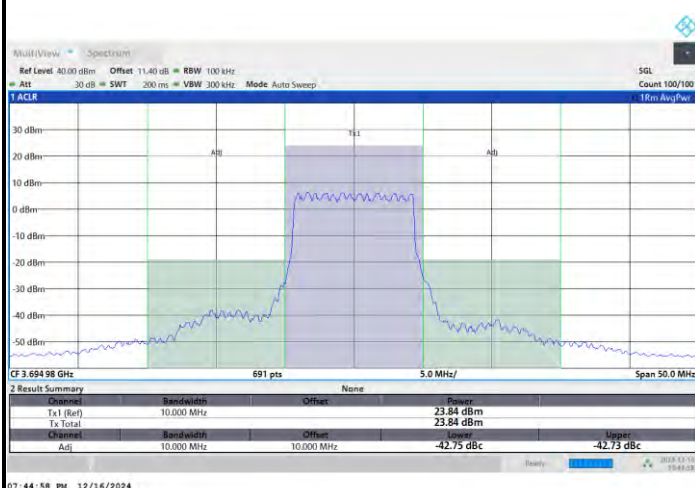
1RB0



1RBmax

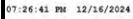


Full RB

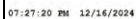




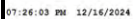
1RB0



1RBmax



Full RB

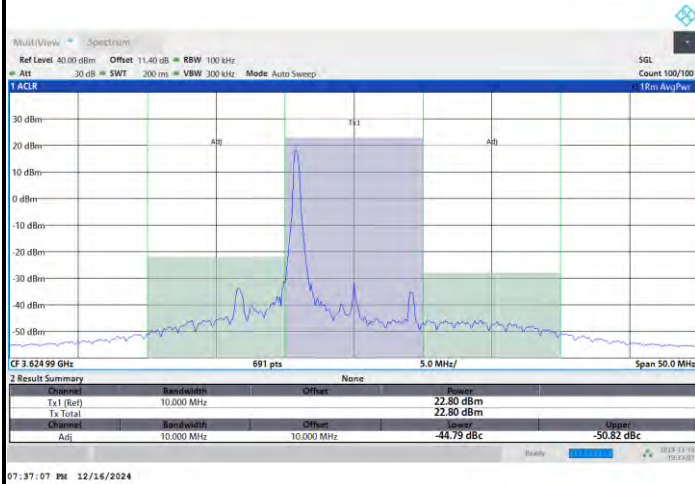




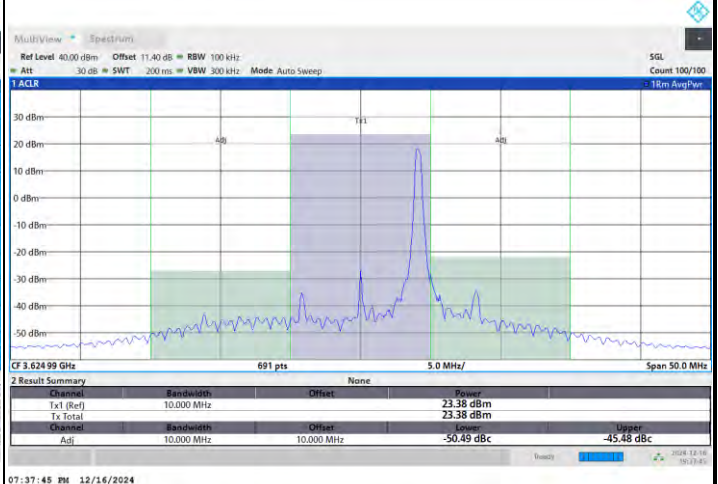
FR1 n48 / 10MHz / DFT-S OFDM / QPSK

Middle Channel

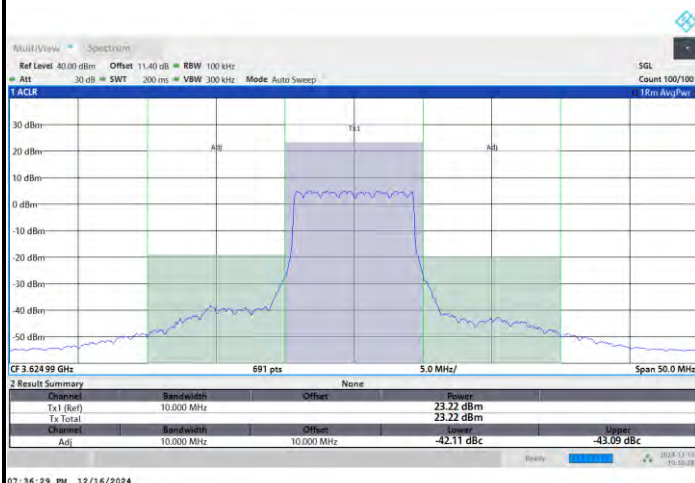
1RB0



1RBmax



Full RB

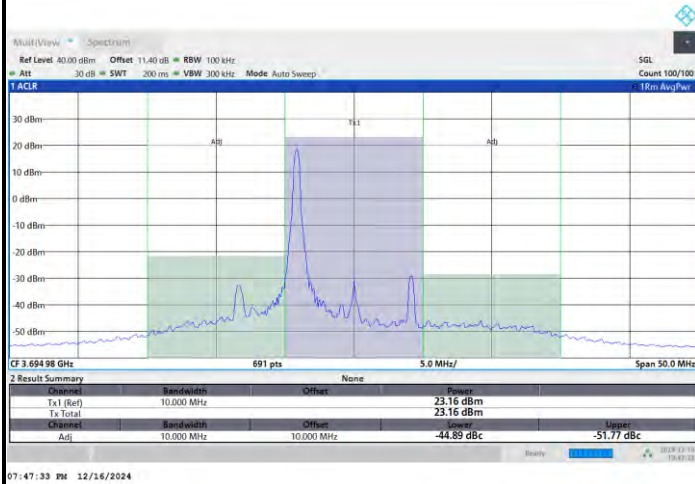




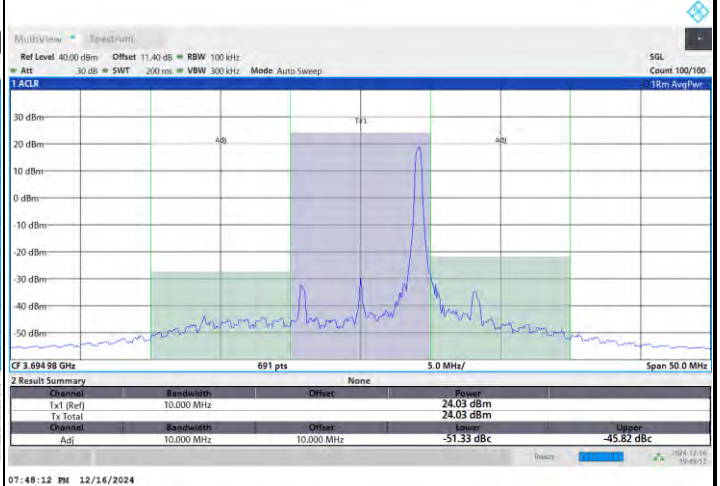
FR1 n48 / 10MHz / DFT-S OFDM / QPSK

Highest Channel

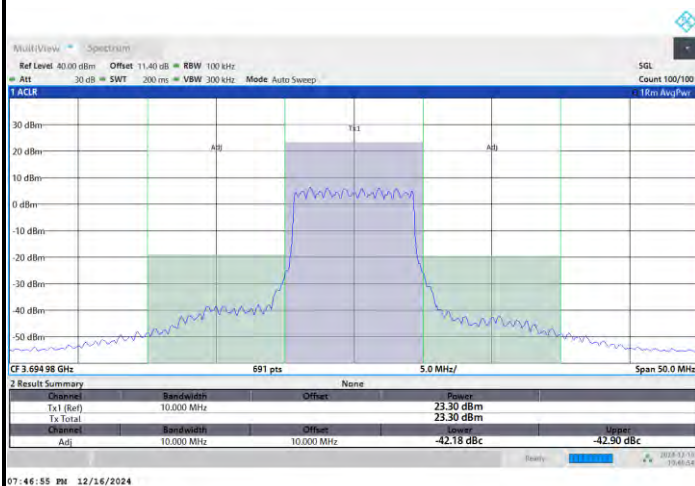
1RB0



1RBmax



Full RB

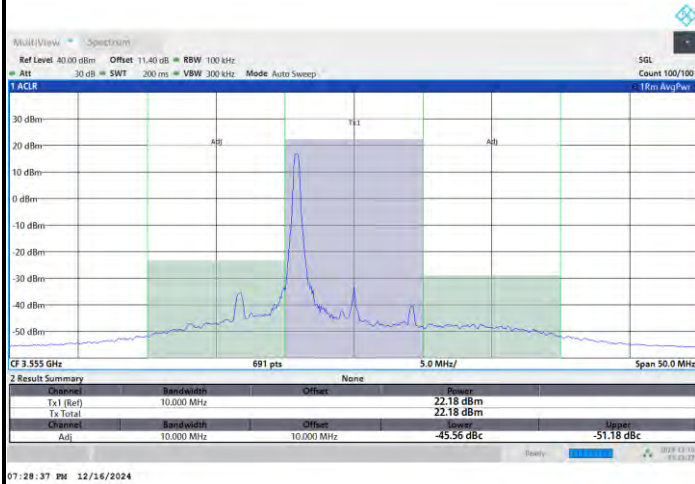




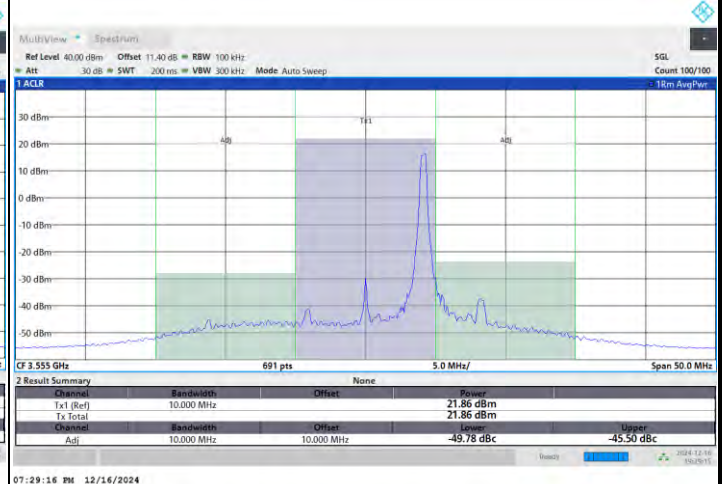
FR1 n48 / 10MHz / DFT-S OFDM / 16QAM

Lowest Channel

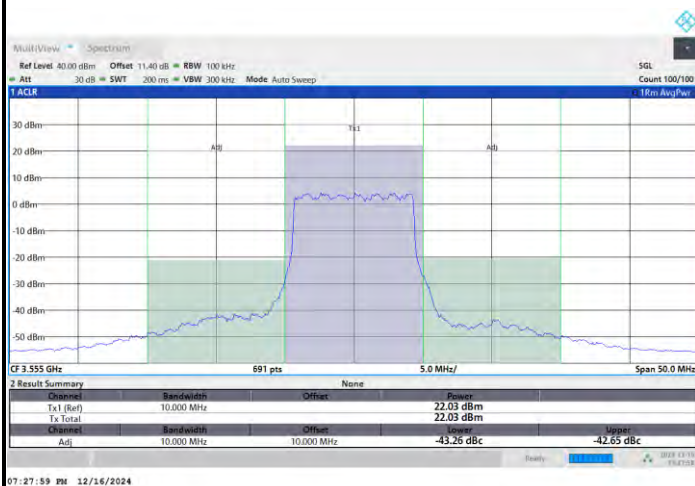
1RB0



1RBmax



Full RB

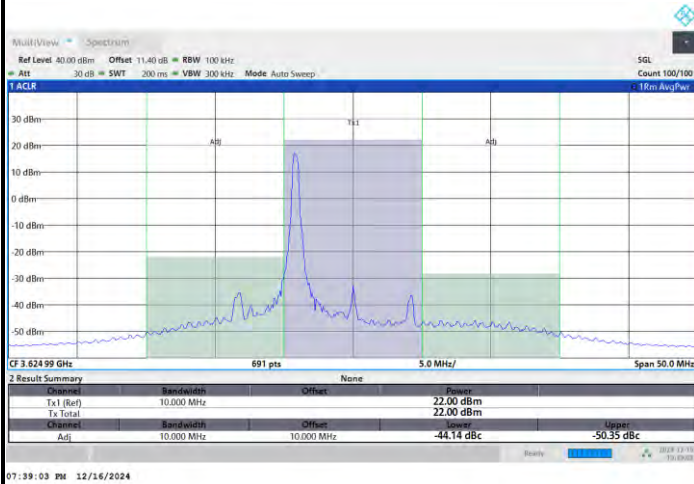




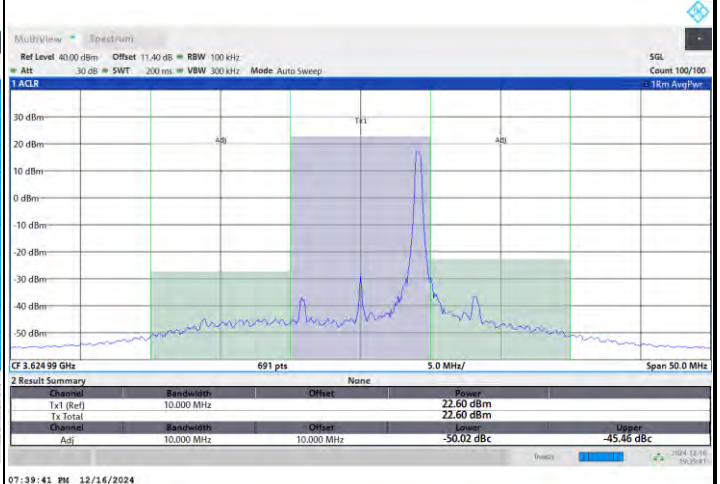
FR1 n48 / 10MHz / DFT-S OFDM / 16QAM

Middle Channel

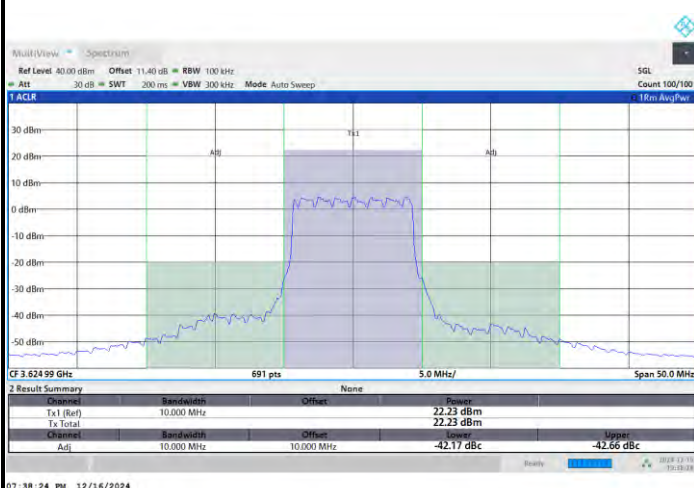
1RB0



1RBmax



Full RB





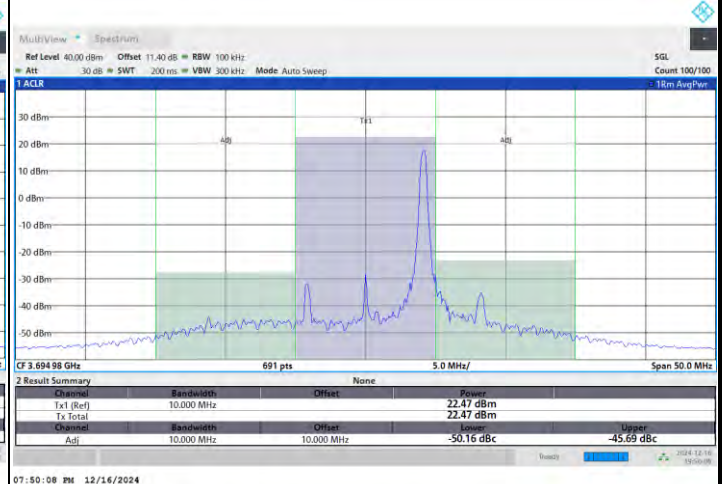
FR1 n48 / 10MHz / DFT-S OFDM / 16QAM

Highest Channel

1RB0



1RBmax



Full RB

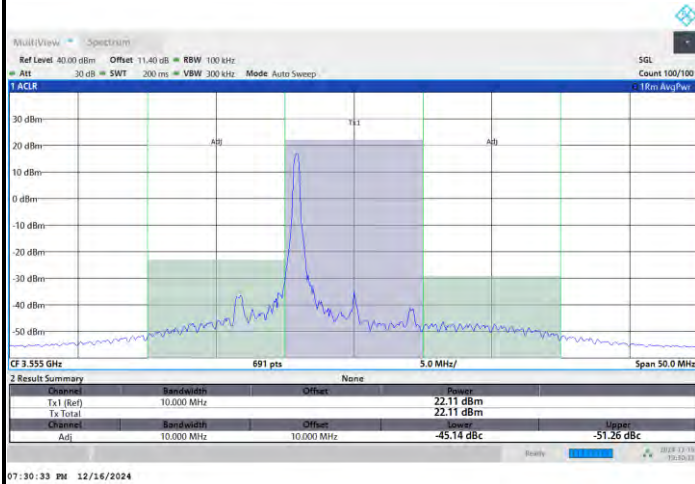




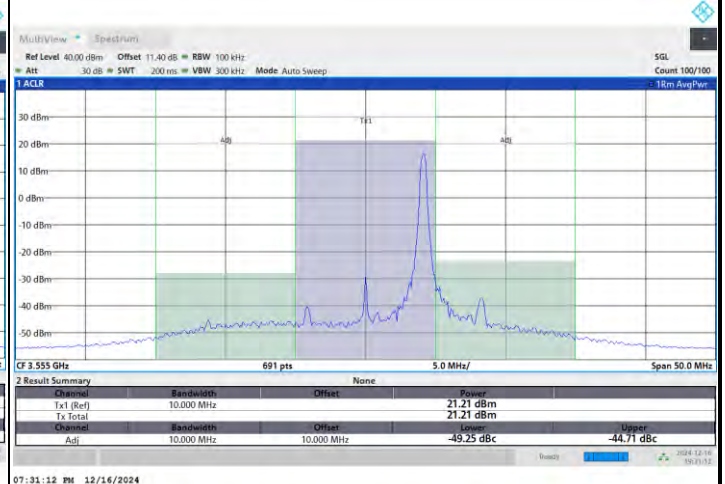
FR1 n48 / 10MHz / DFT-S OFDM / 64QAM

Lowest Channel

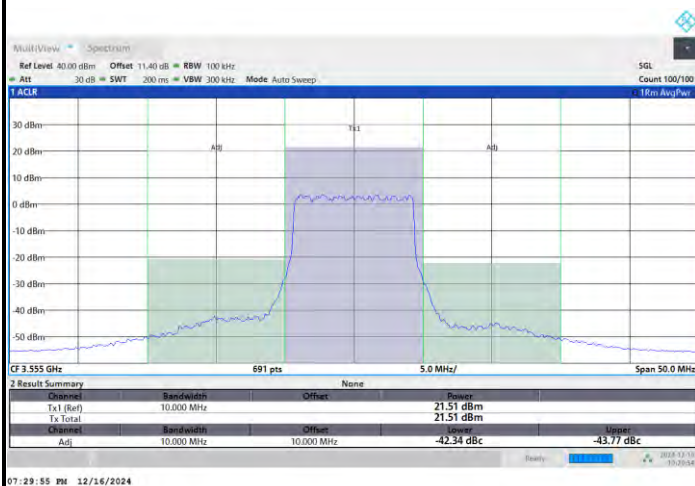
1RB0



1RBmax



Full RB

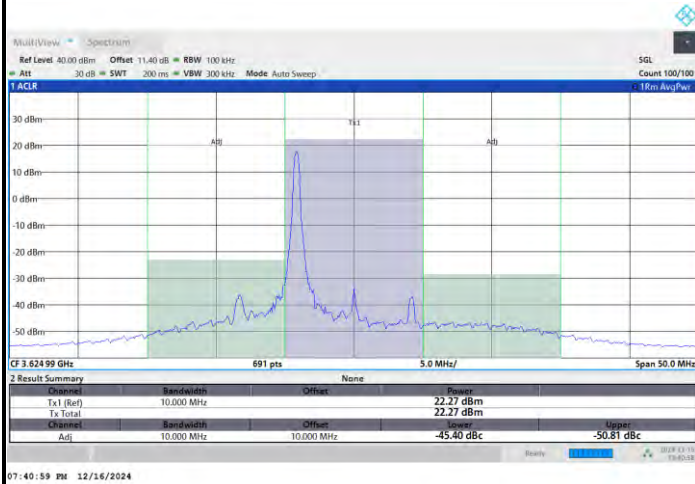




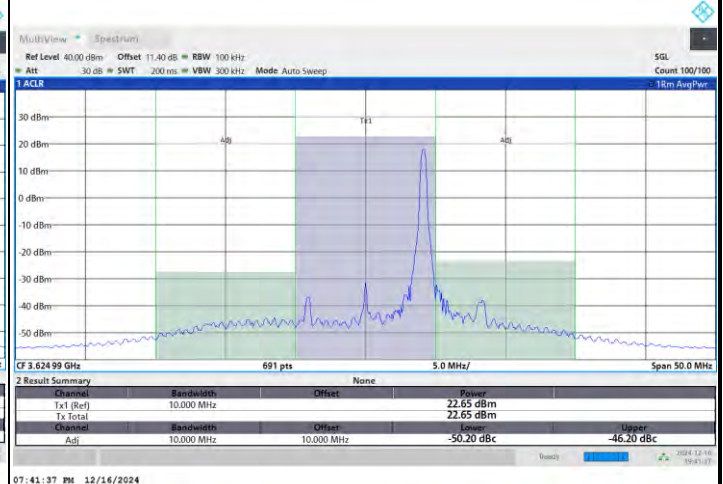
FR1 n48 / 10MHz / DFT-S OFDM / 64QAM

Middle Channel

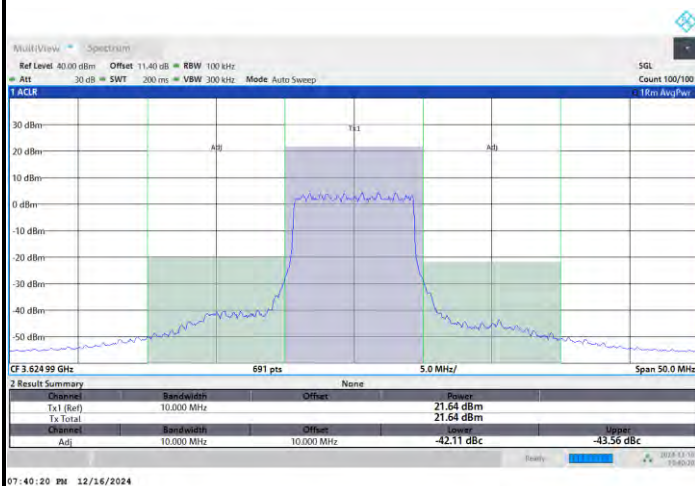
1RB0



1RBmax



Full RB

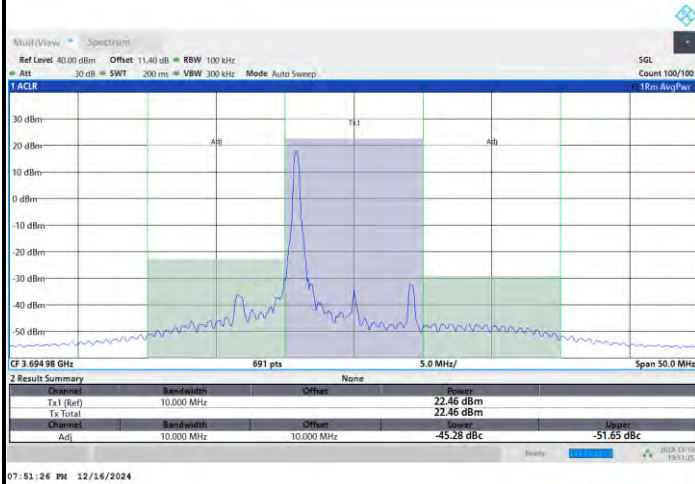




FR1 n48 / 10MHz / DFT-S OFDM / 64QAM

Highest Channel

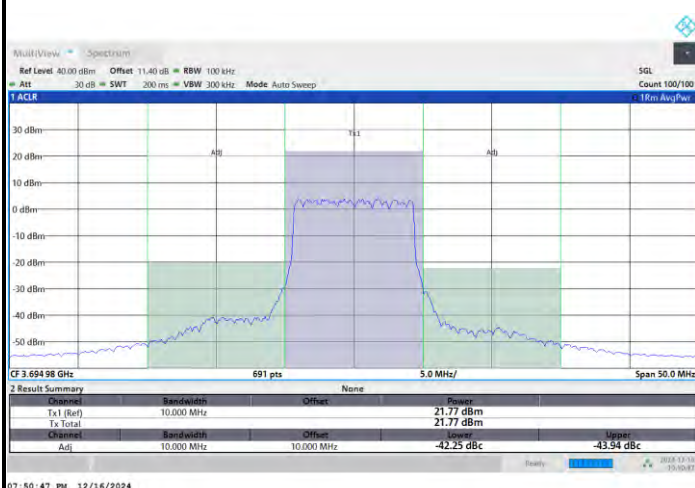
1RB0



1RBmax



Full RB

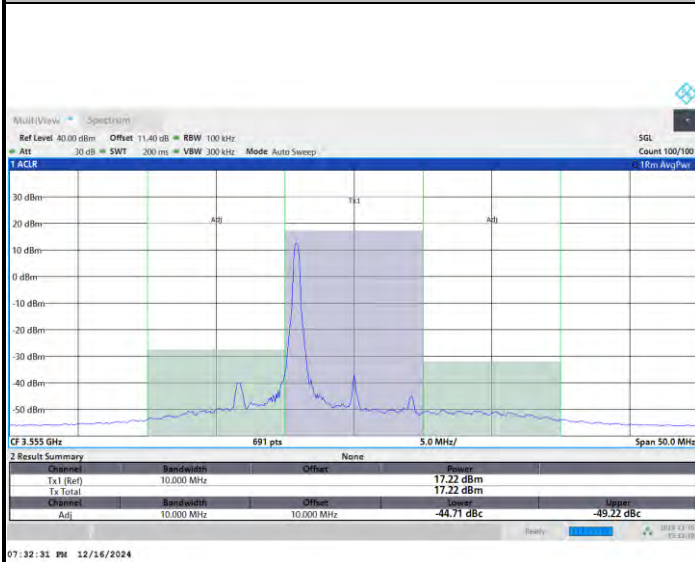




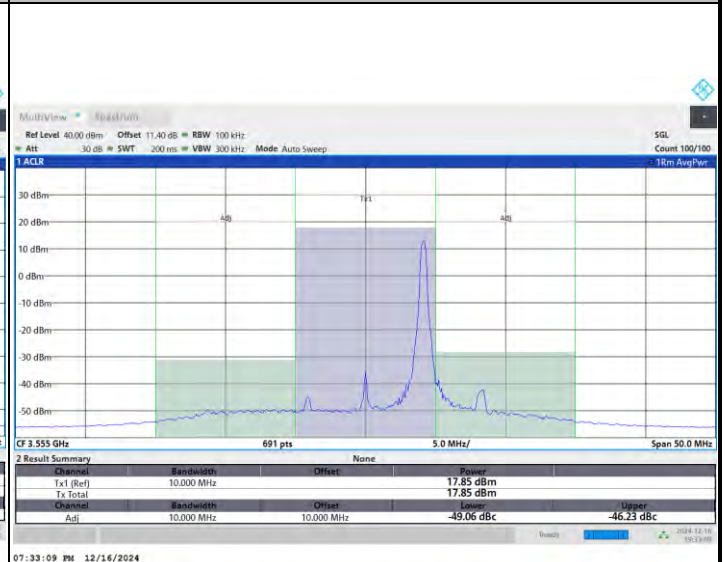
FR1 n48 / 10MHz / DFT-S OFDM / 256QAM

Lowest Channel

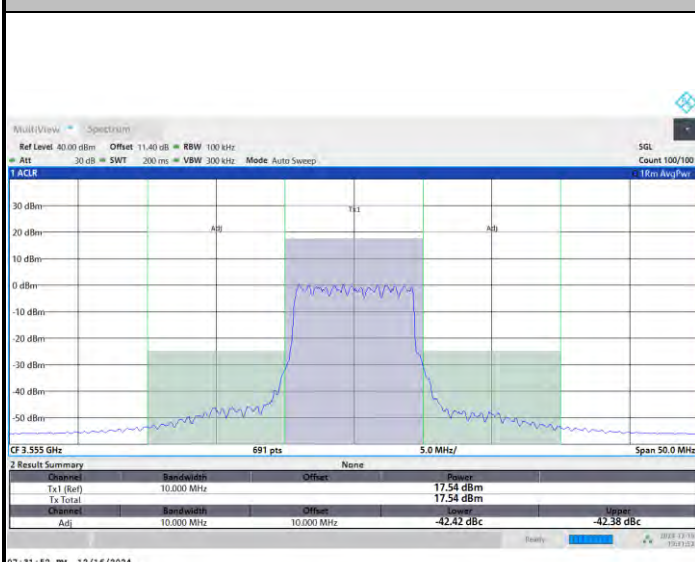
1RB0



1RBmax



Full RB

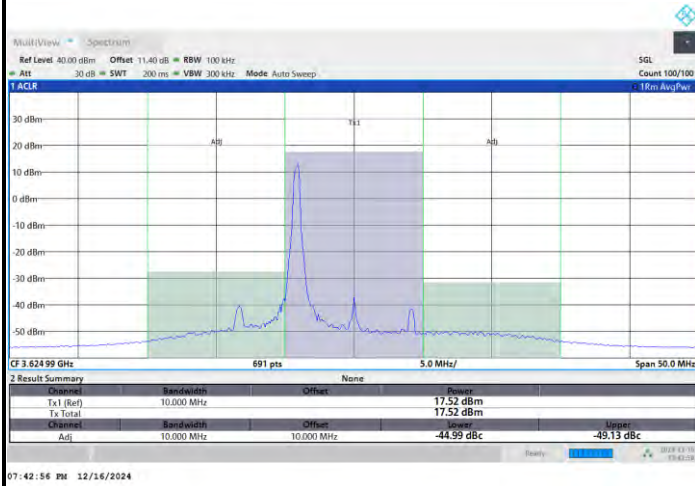




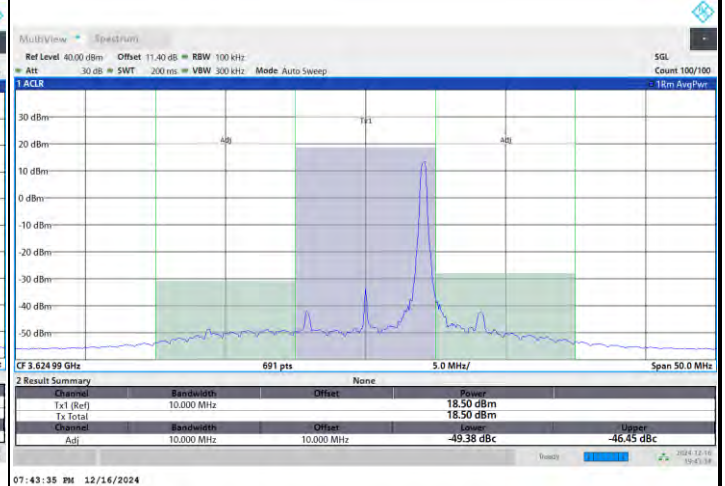
FR1 n48 / 10MHz / DFT-S OFDM / 256QAM

Middle Channel

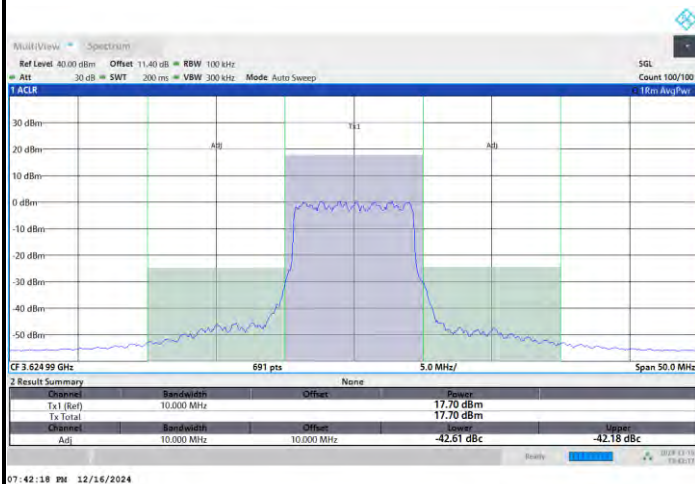
1RB0



1RBmax



Full RB

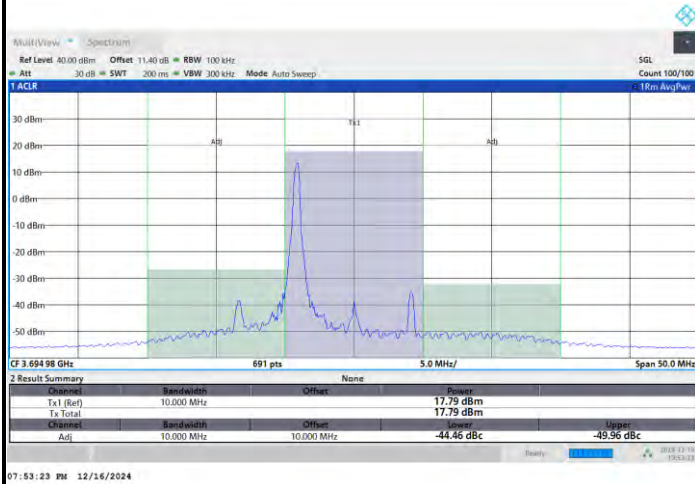




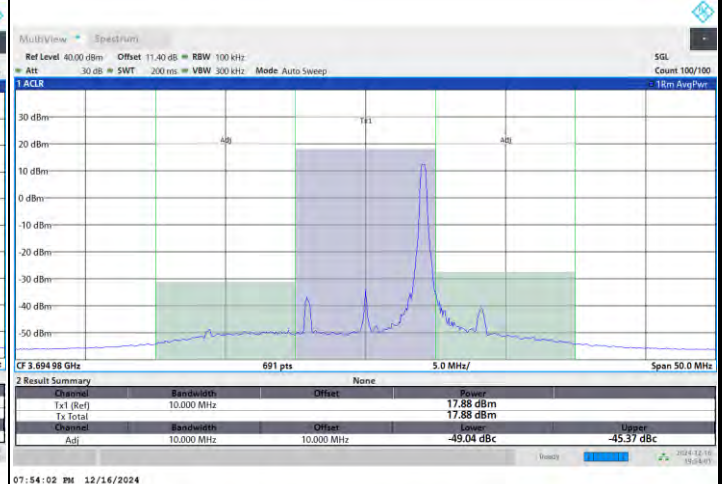
FR1 n48 / 10MHz / DFT-S OFDM / 256QAM

Highest Channel

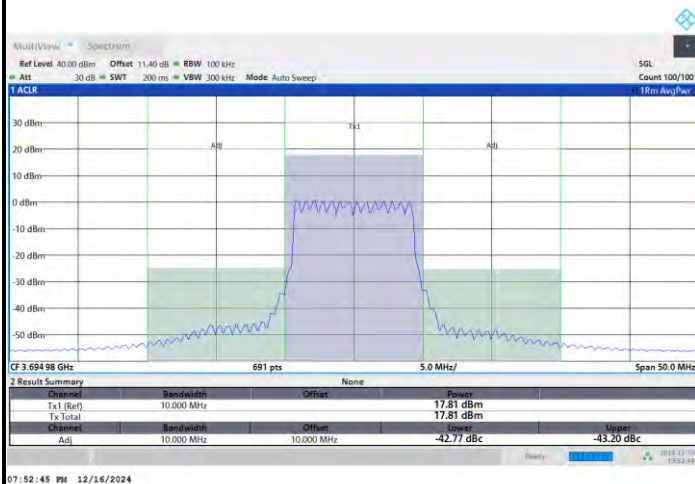
1RB0



1RBmax



Full RB

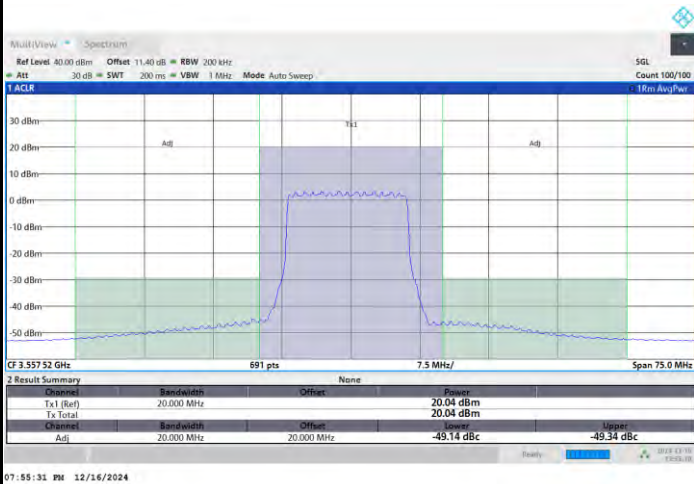




FR1 n48 / 15MHz / DFT-S OFDM / PI/2 BPSK

Lowest Channel

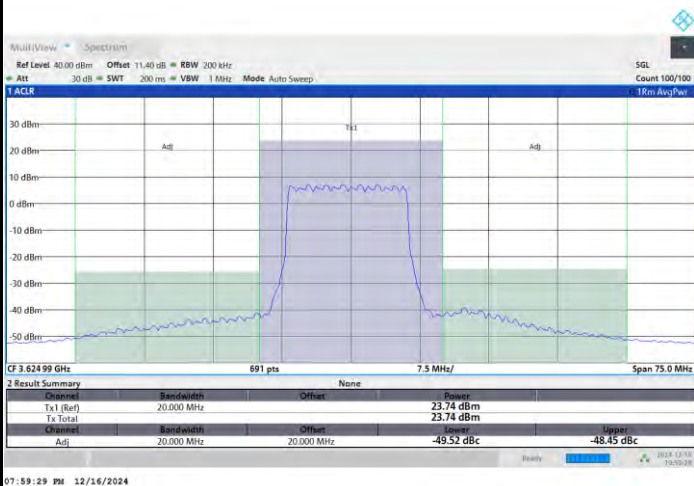
Full RB



FR1 n48 / 15MHz / DFT-S OFDM / PI/2 BPSK

Middle Channel

Full RB

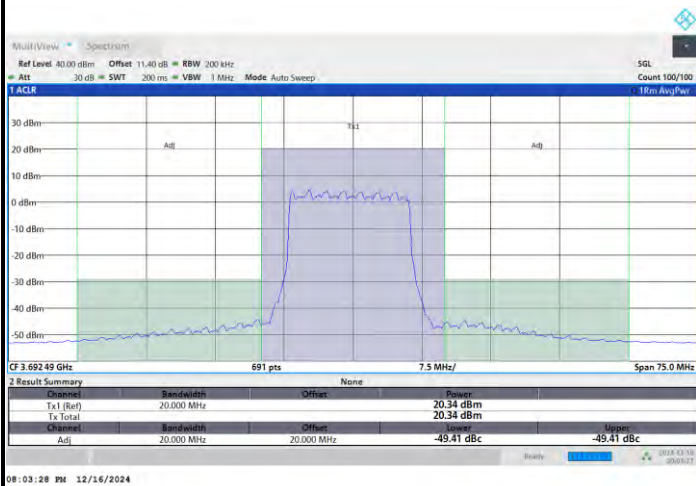




FR1 n48 / 15MHz / DFT-S OFDM / PI/2 BPSK

Highest Channel

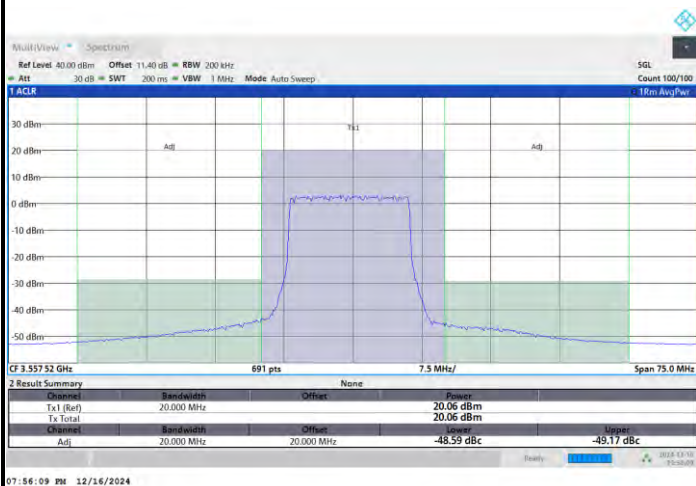
Full RB



FR1 n48 / 15MHz / DFT-S OFDM / QPSK

Lowest Channel

Full RB

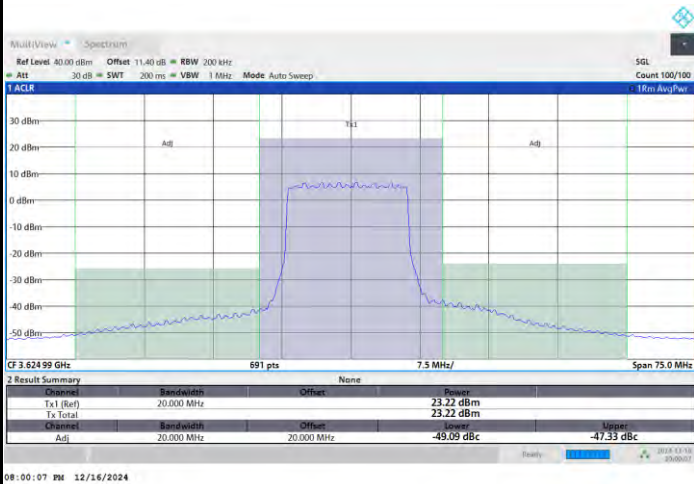




FR1 n48 / 15MHz / DFT-S OFDM / QPSK

Middle Channel

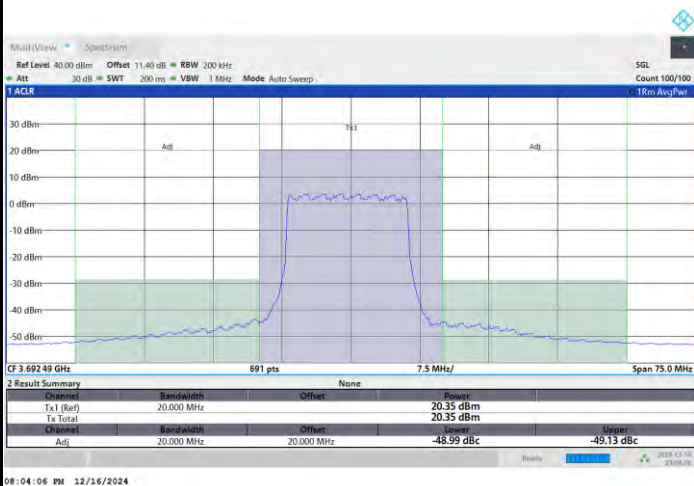
Full RB



FR1 n48 / 15MHz / DFT-S OFDM / QPSK

Highest Channel

Full RB

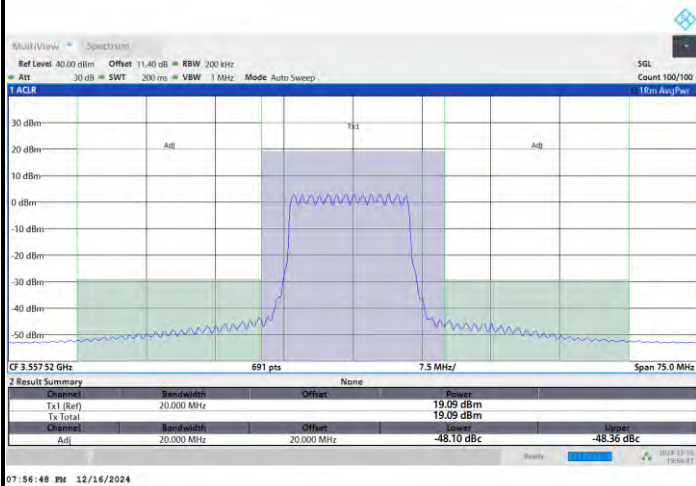




FR1 n48 / 15MHz / DFT-S OFDM / 16QAM

Lowest Channel

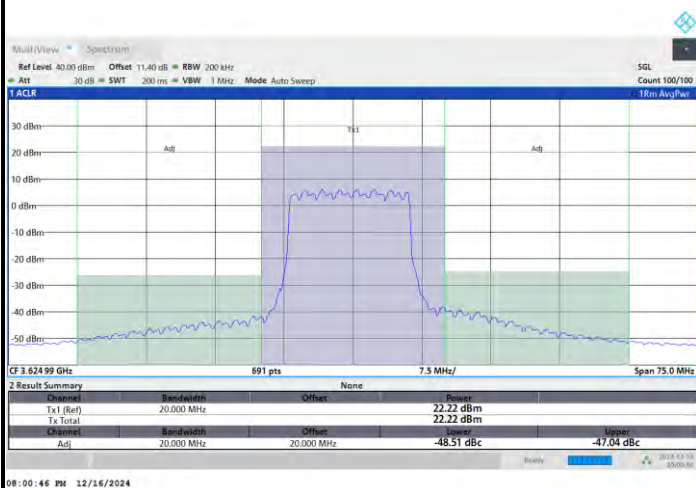
Full RB



FR1 n48 / 15MHz / DFT-S OFDM / 16QAM

Middle Channel

Full RB

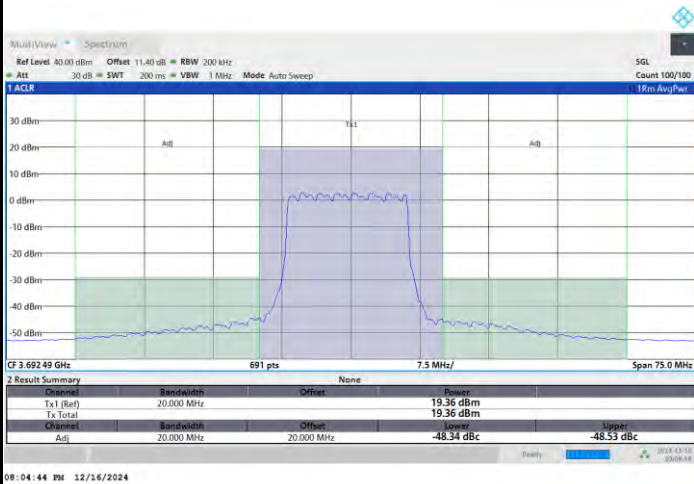




FR1 n48 / 15MHz / DFT-S OFDM / 16QAM

Highest Channel

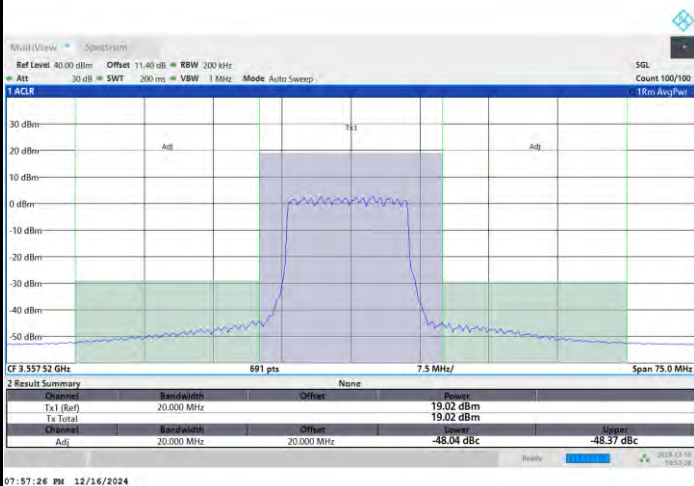
Full RB



FR1 n48 / 15MHz / DFT-S OFDM / 64QAM

Lowest Channel

Full RB

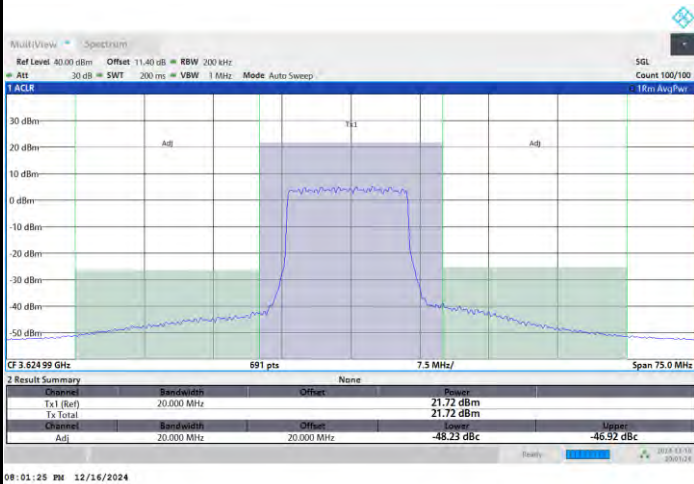




FR1 n48 / 15MHz / DFT-S OFDM / 64QAM

Middle Channel

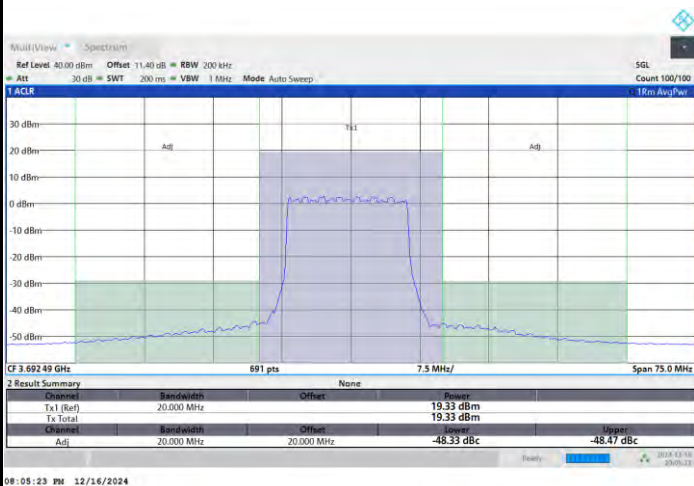
Full RB



FR1 n48 / 15MHz / DFT-S OFDM / 64QAM

Highest Channel

Full RB

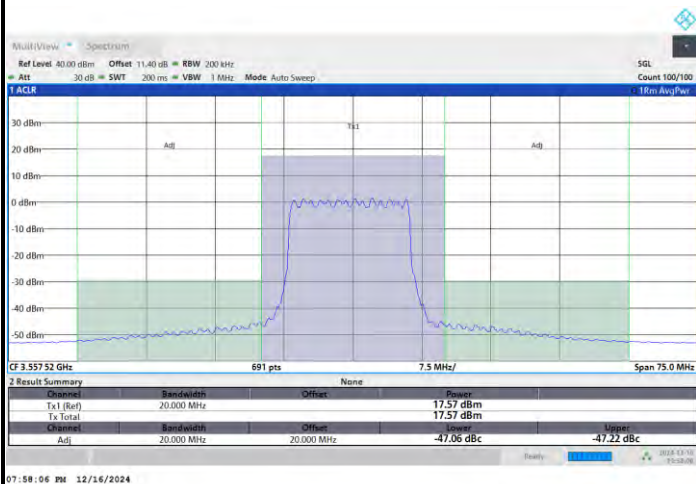




FR1 n48 / 15MHz / DFT-S OFDM / 256QAM

Lowest Channel

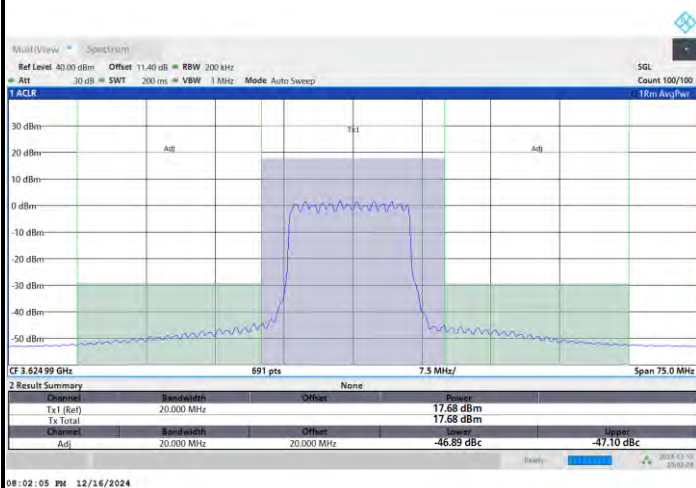
Full RB



FR1 n48 / 15MHz / DFT-S OFDM / 256QAM

Middle Channel

Full RB

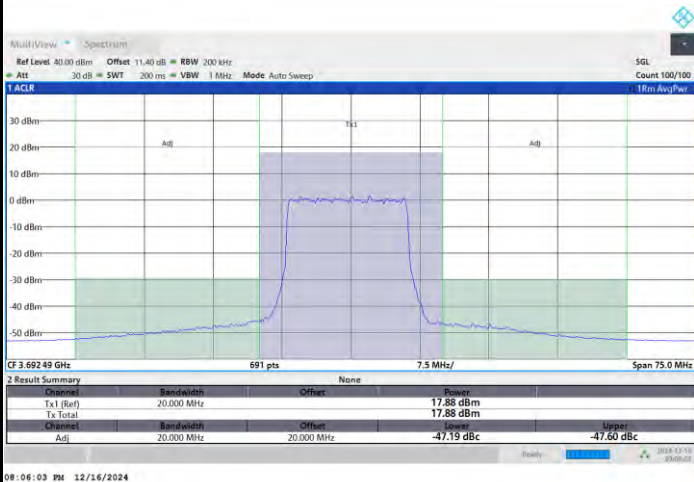




FR1 n48 / 15MHz / DFT-S OFDM / 256QAM

Highest Channel

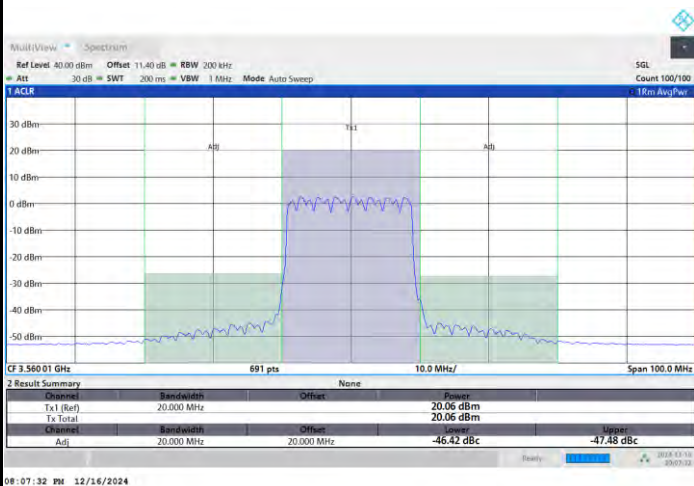
Full RB



FR1 n48 / 20MHz / DFT-S OFDM / PI/2 BPSK

Lowest Channel

Full RB

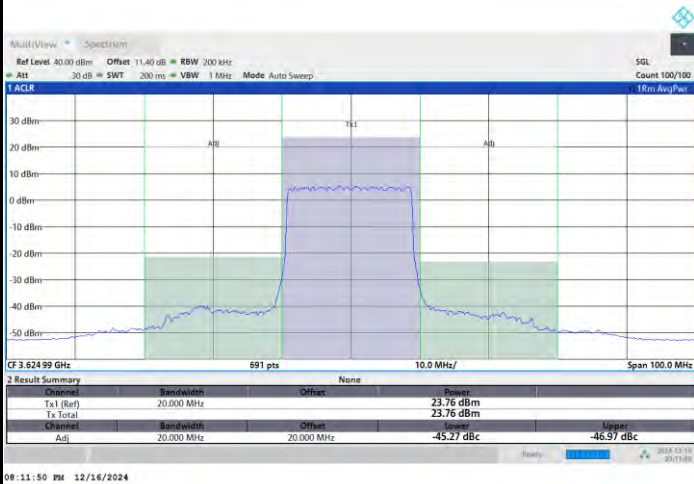




FR1 n48 / 20MHz / DFT-S OFDM / PI/2 BPSK

Middle Channel

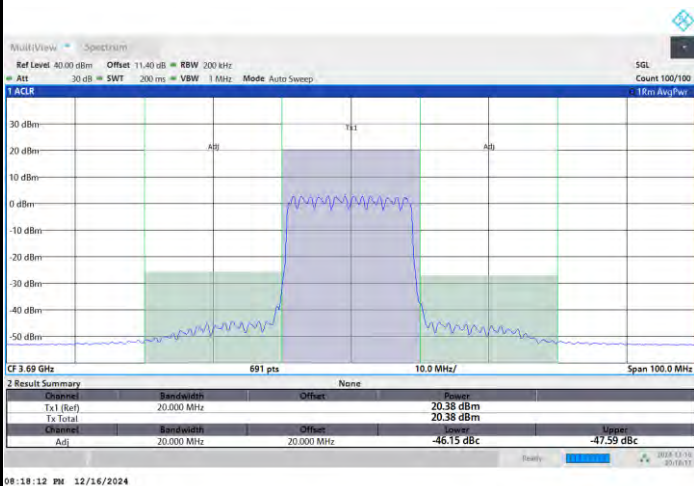
Full RB



FR1 n48 / 20MHz / DFT-S OFDM / PI/2 BPSK

Highest Channel

Full RB

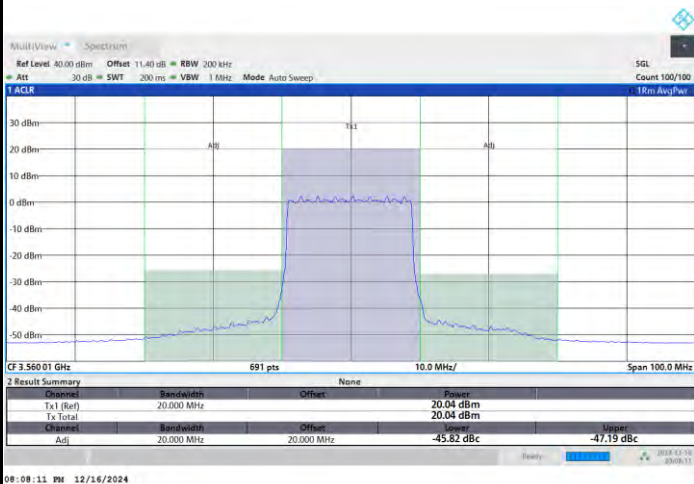




FR1 n48 / 20MHz / DFT-S OFDM / QPSK

Lowest Channel

Full RB



FR1 n48 / 20MHz / DFT-S OFDM / QPSK

Middle Channel

Full RB

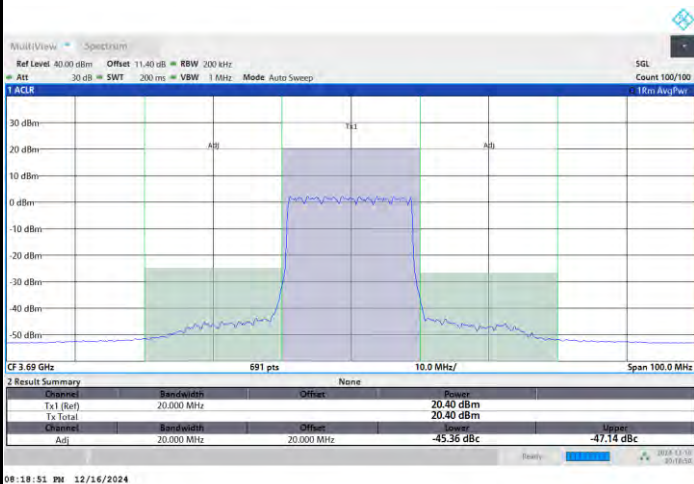




FR1 n48 / 20MHz / DFT-S OFDM / QPSK

Highest Channel

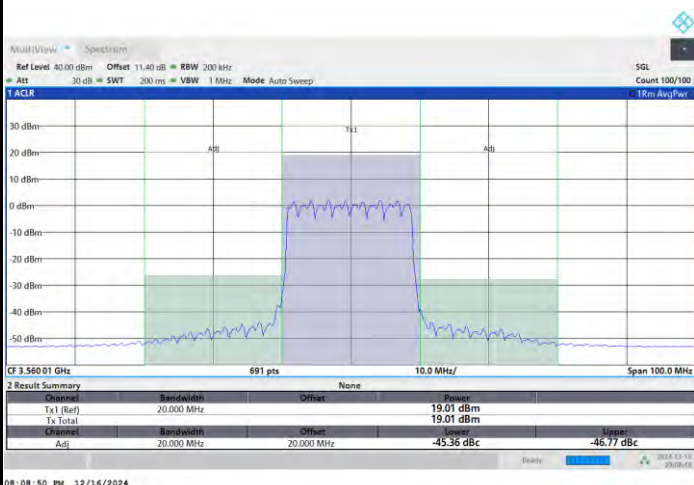
Full RB



FR1 n48 / 20MHz / DFT-S OFDM / 16QAM

Lowest Channel

Full RB

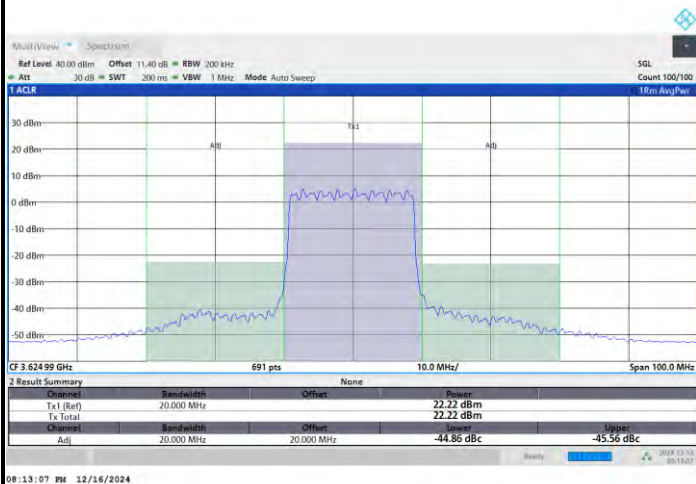




FR1 n48 / 20MHz / DFT-S OFDM / 16QAM

Middle Channel

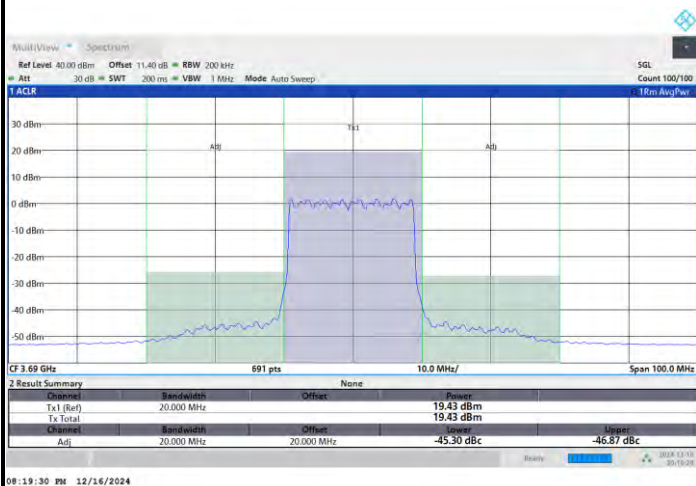
Full RB



FR1 n48 / 20MHz / DFT-S OFDM / 16QAM

Highest Channel

Full RB

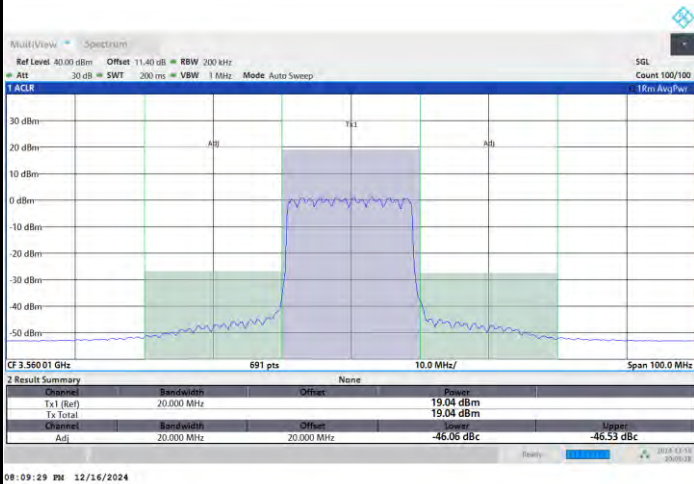




FR1 n48 / 20MHz / DFT-S OFDM / 64QAM

Lowest Channel

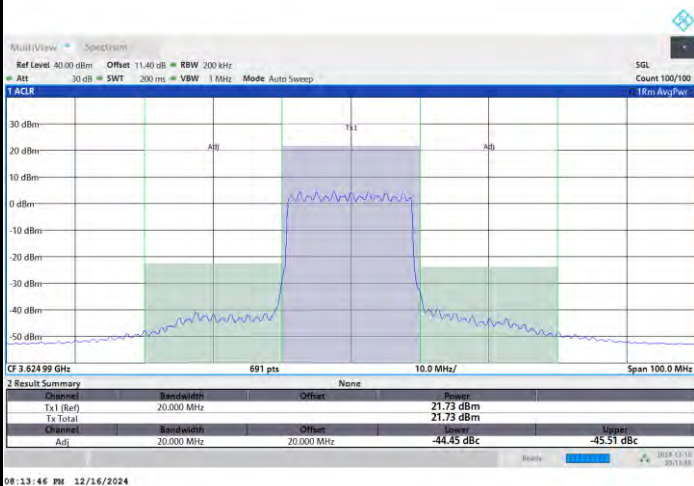
Full RB



FR1 n48 / 20MHz / DFT-S OFDM / 64QAM

Middle Channel

Full RB

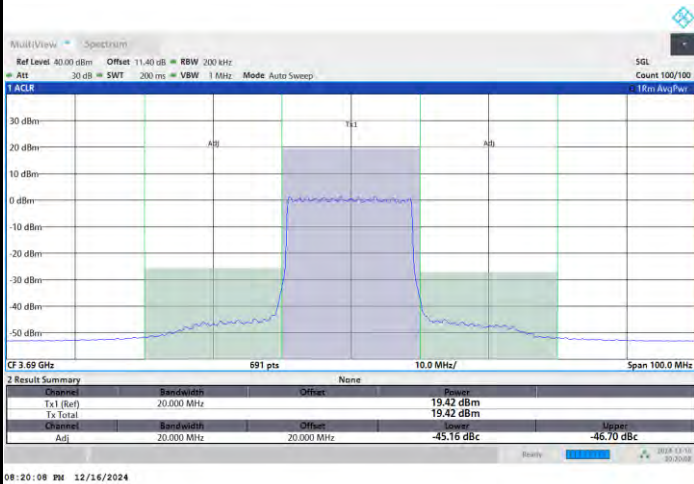




FR1 n48 / 20MHz / DFT-S OFDM / 64QAM

Highest Channel

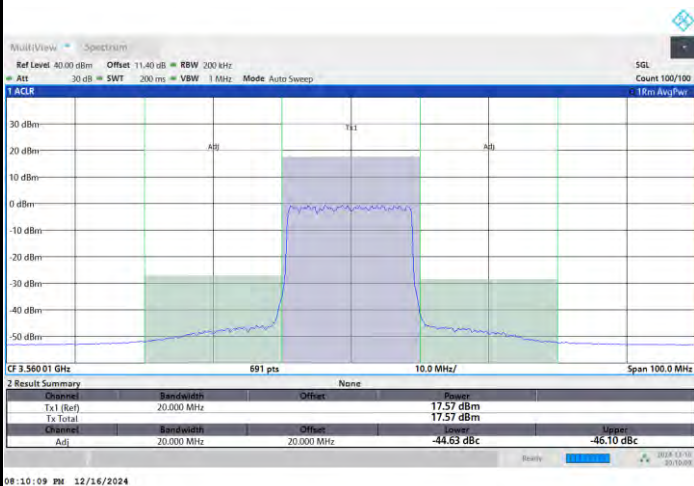
Full RB



FR1 n48 / 20MHz / DFT-S OFDM / 256QAM

Lowest Channel

Full RB

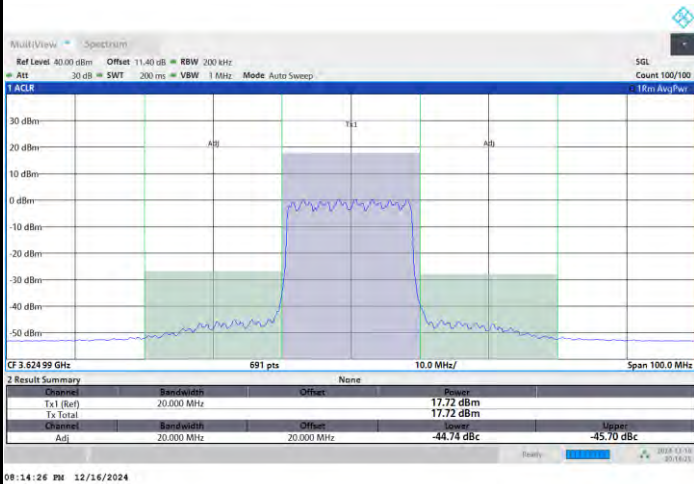




FR1 n48 / 20MHz / DFT-S OFDM / 256QAM

Middle Channel

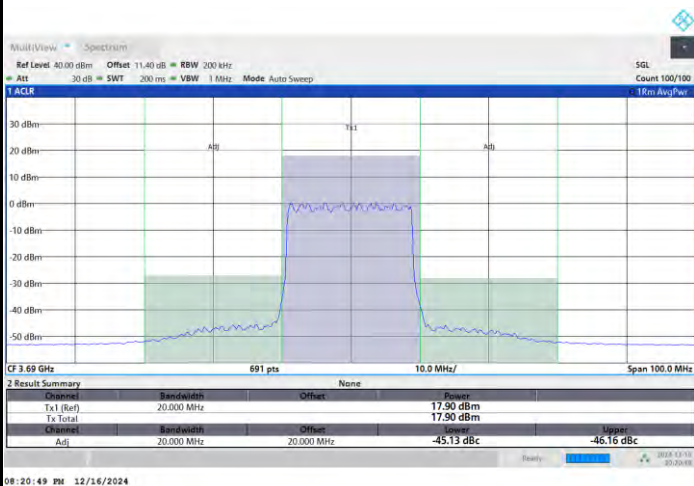
Full RB



FR1 n48 / 20MHz / DFT-S OFDM / 256QAM

Highest Channel

Full RB

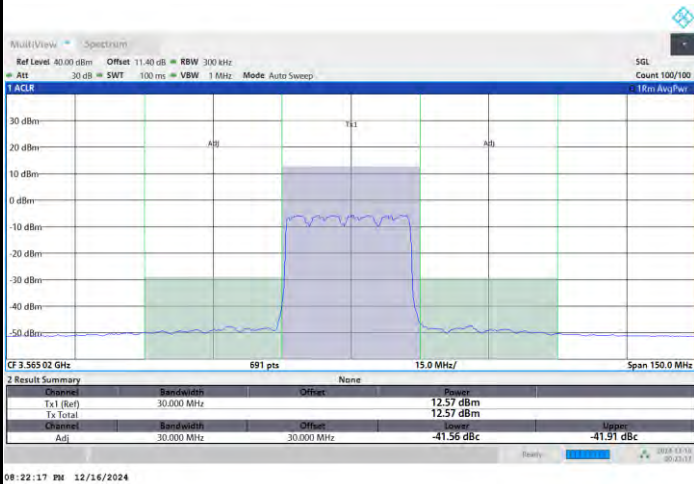




FR1 n48 / 30MHz / DFT-S OFDM / PI/2 BPSK

Lowest Channel

Full RB



FR1 n48 / 30MHz / DFT-S OFDM / PI/2 BPSK

Middle Channel

Full RB

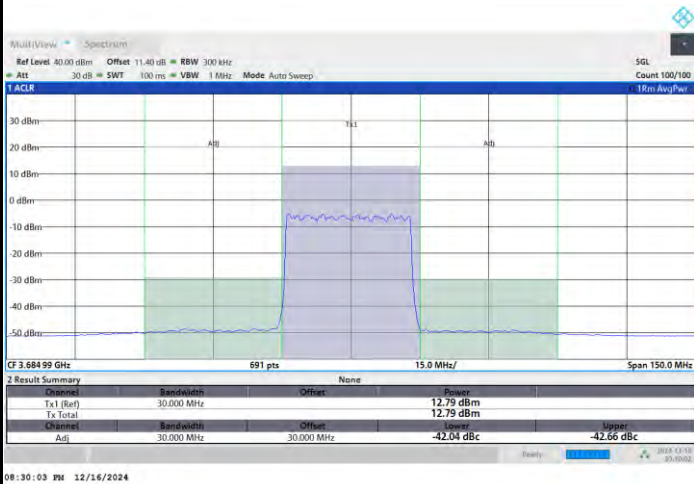




FR1 n48 / 30MHz / DFT-S OFDM / PI/2 BPSK

Highest Channel

Full RB



FR1 n48 / 30MHz / DFT-S OFDM / QPSK

Lowest Channel

Full RB





FR1 n48 / 30MHz / DFT-S OFDM / QPSK

Middle Channel

Full RB



FR1 n48 / 30MHz / DFT-S OFDM / QPSK

Highest Channel

Full RB

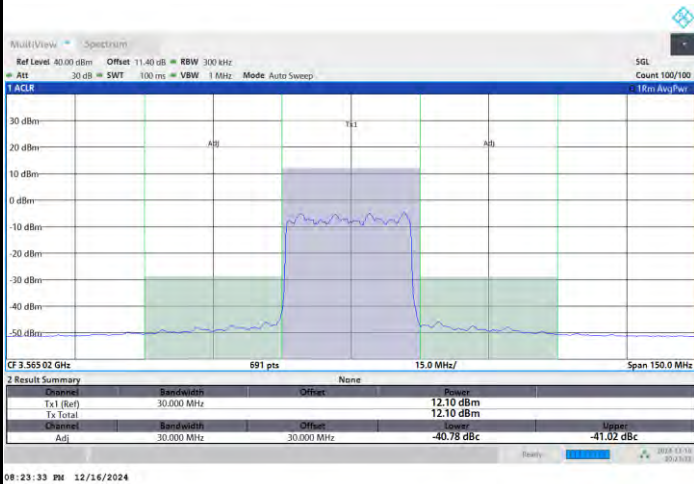




FR1 n48 / 30MHz / DFT-S OFDM / 16QAM

Lowest Channel

Full RB



FR1 n48 / 30MHz / DFT-S OFDM / 16QAM

Middle Channel

Full RB

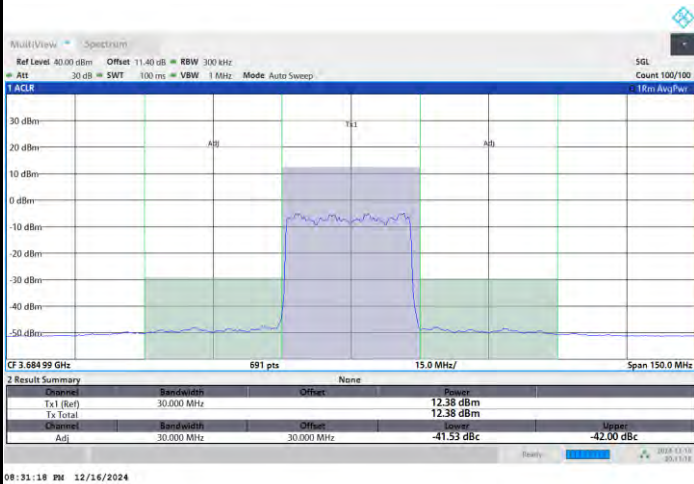




FR1 n48 / 30MHz / DFT-S OFDM / 16QAM

Highest Channel

Full RB



FR1 n48 / 30MHz / DFT-S OFDM / 64QAM

Lowest Channel

Full RB





FR1 n48 / 30MHz / DFT-S OFDM / 64QAM

Middle Channel

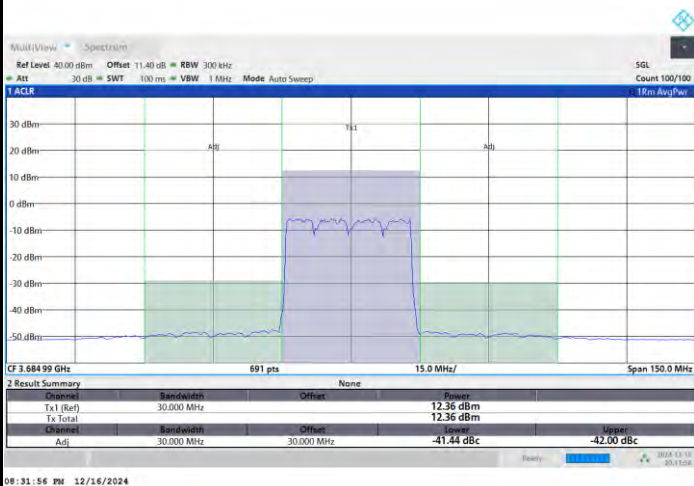
Full RB



FR1 n48 / 30MHz / DFT-S OFDM / 64QAM

Highest Channel

Full RB





FR1 n48 / 30MHz / DFT-S OFDM / 256QAM

Lowest Channel

Full RB



FR1 n48 / 30MHz / DFT-S OFDM / 256QAM

Middle Channel

Full RB

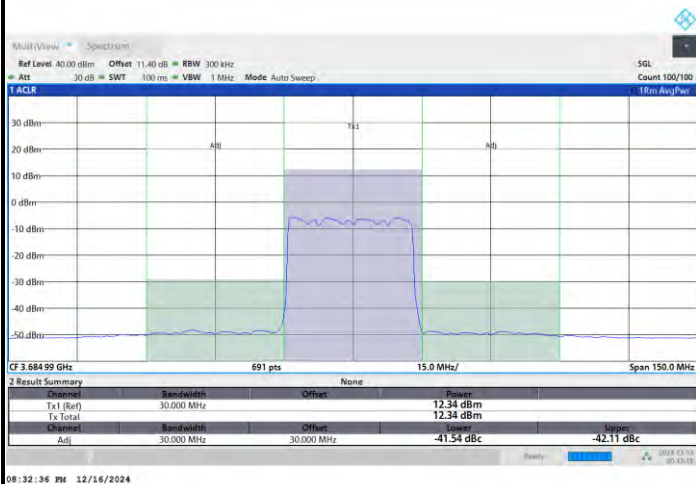




FR1 n48 / 30MHz / DFT-S OFDM / 256QAM

Highest Channel

Full RB

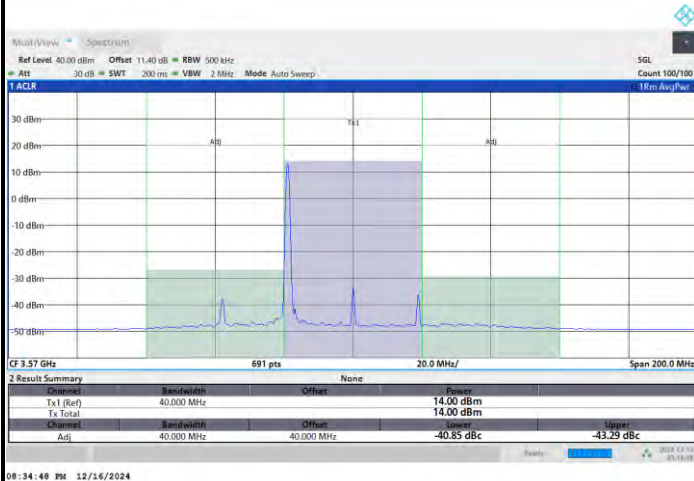




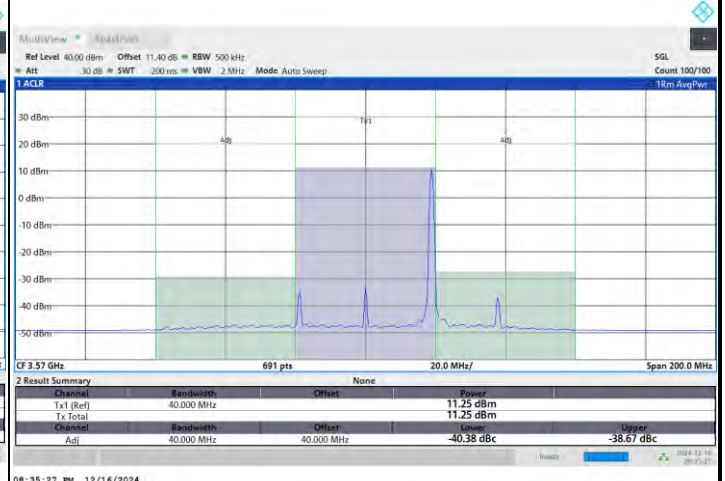
FR1 n48 / 40MHz / DFT-S OFDM / PI/2 BPSK

Lowest Channel

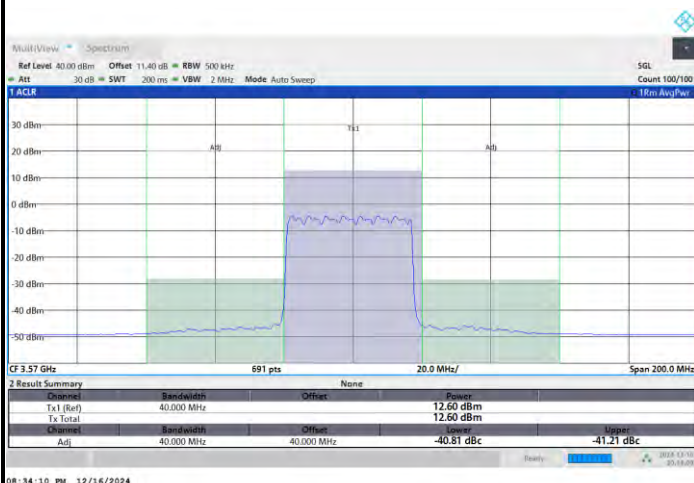
1RB0



1RBmax



Full RB

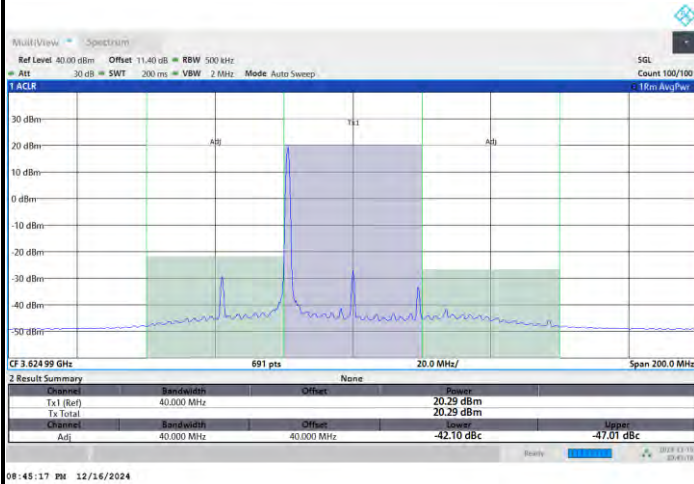




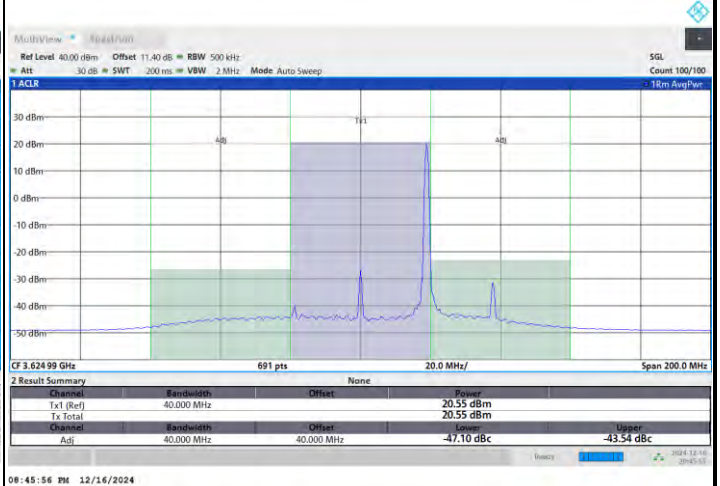
FR1 n48 / 40MHz / DFT-S OFDM / PI/2 BPSK

Middle Channel

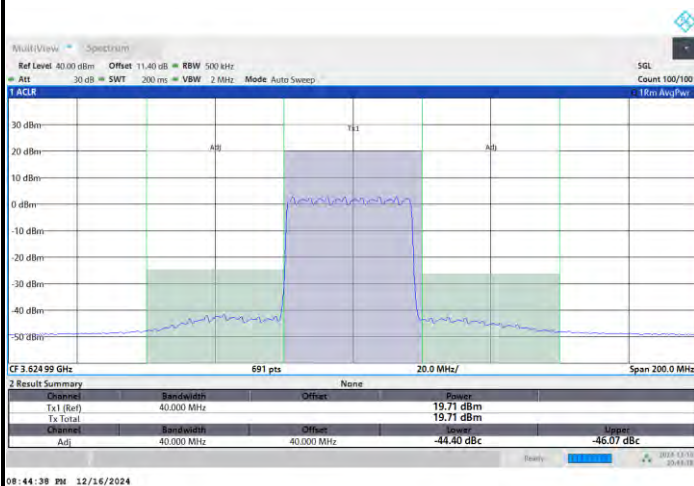
1RB0



1RBmax



Full RB

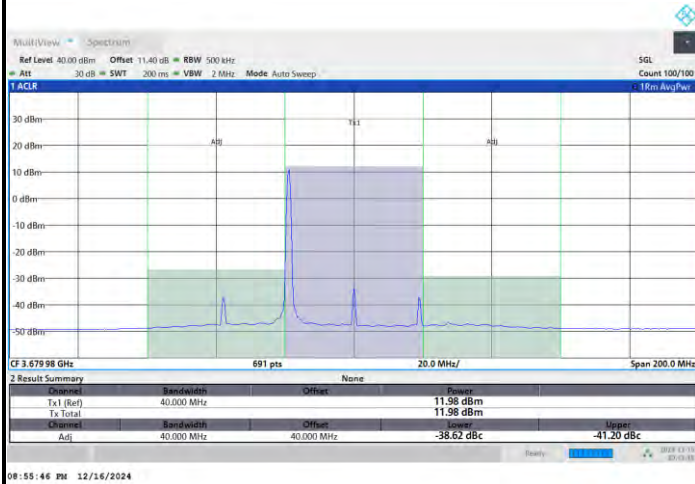




FR1 n48 / 40MHz / DFT-S OFDM / PI/2 BPSK

Highest Channel

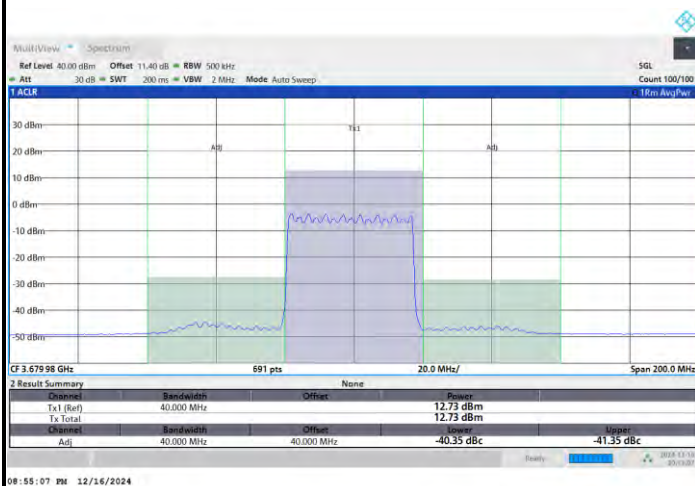
1RB0



1RBmax



Full RB

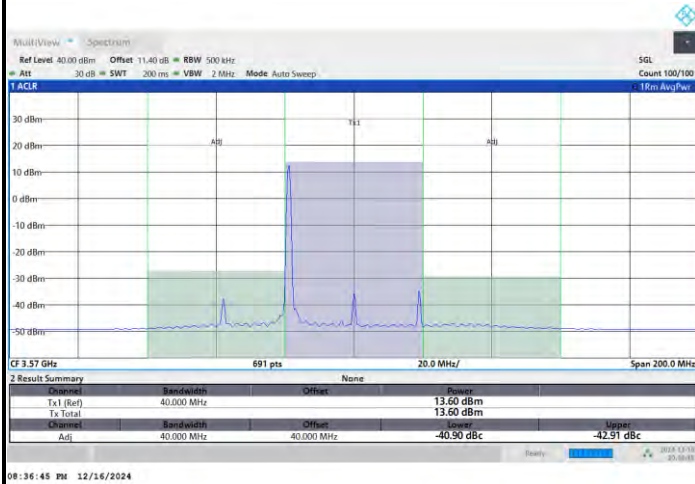




FR1 n48 / 40MHz / DFT-S OFDM / QPSK

Lowest Channel

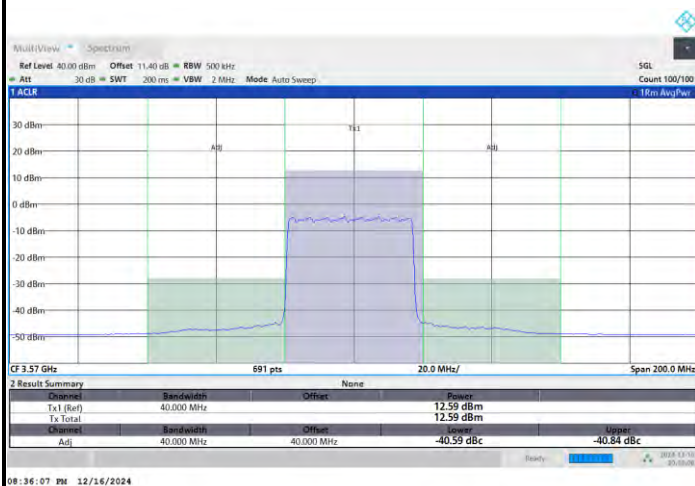
1RB0



1RBmax



Full RB

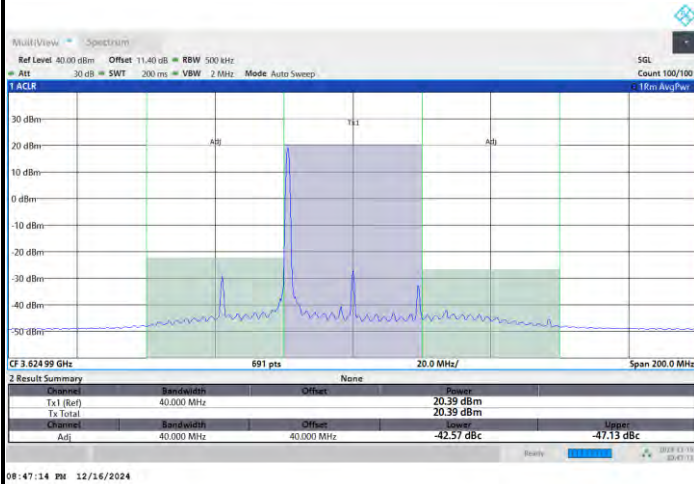




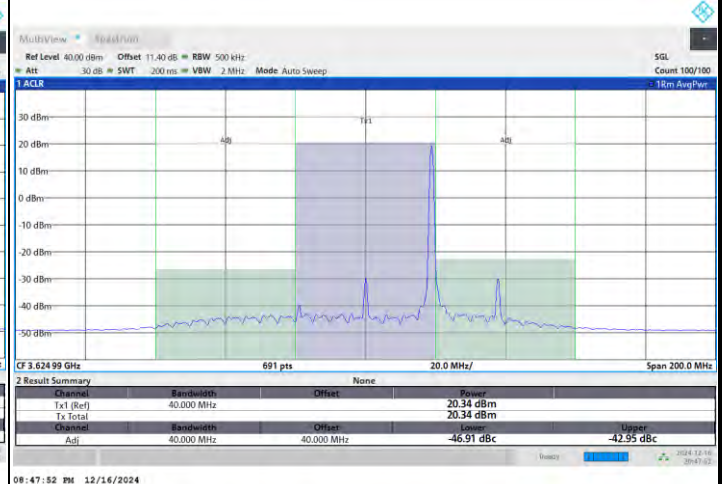
FR1 n48 / 40MHz / DFT-S OFDM / QPSK

Middle Channel

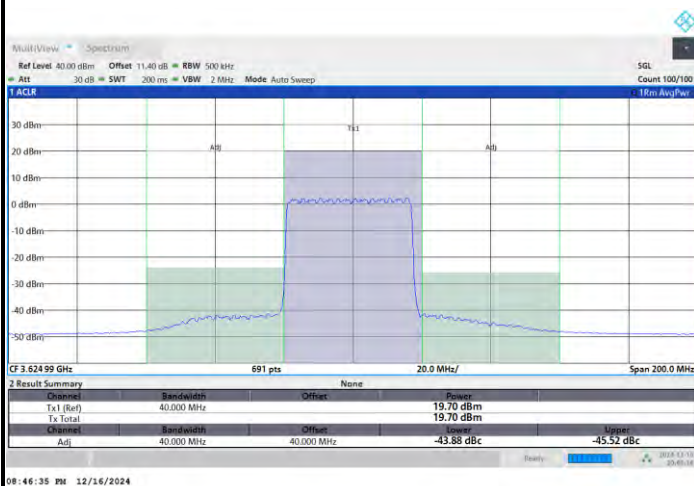
1RB0



1RBmax



Full RB

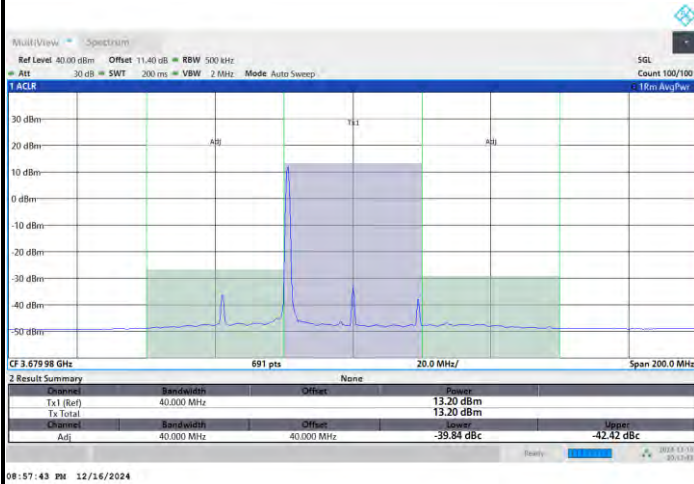




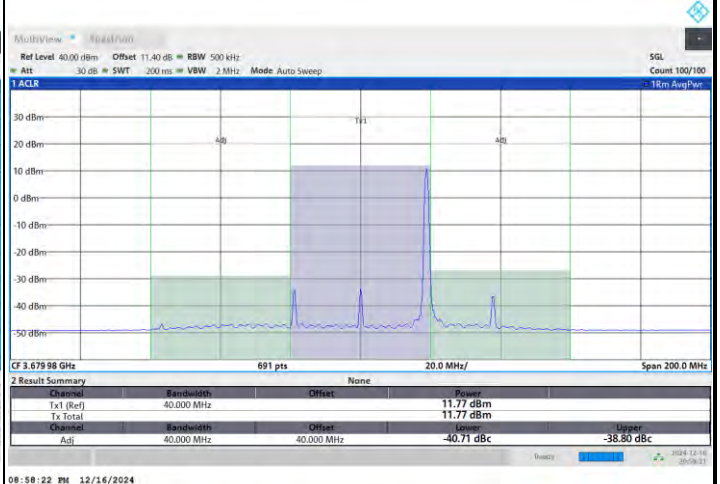
FR1 n48 / 40MHz / DFT-S OFDM / QPSK

Highest Channel

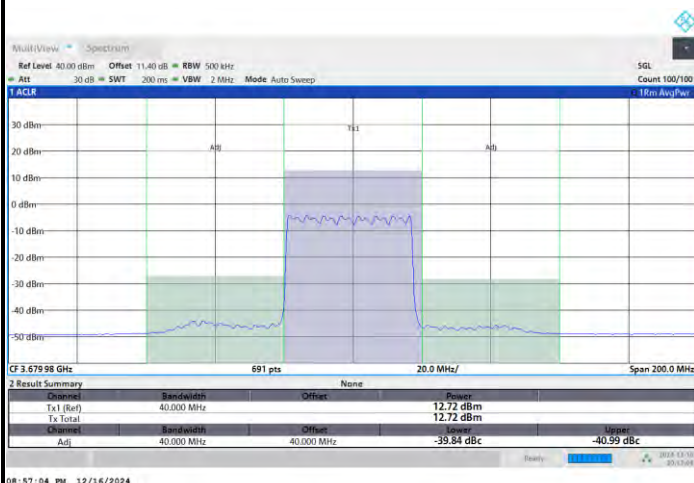
1RB0



1RBmax



Full RB

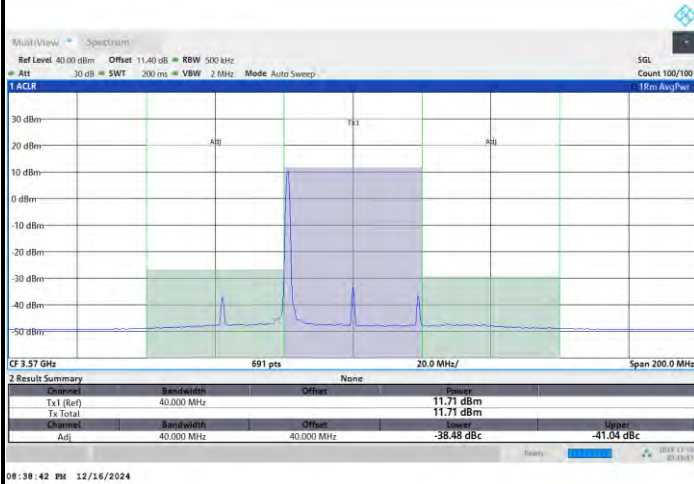




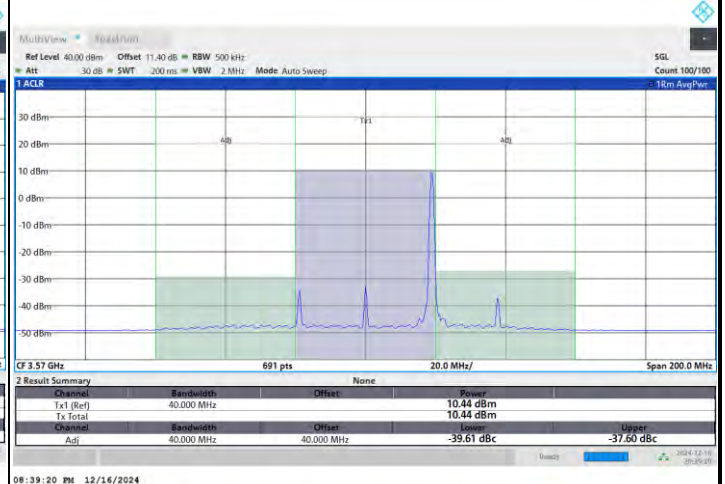
FR1 n48 / 40MHz / DFT-S OFDM / 16QAM

Lowest Channel

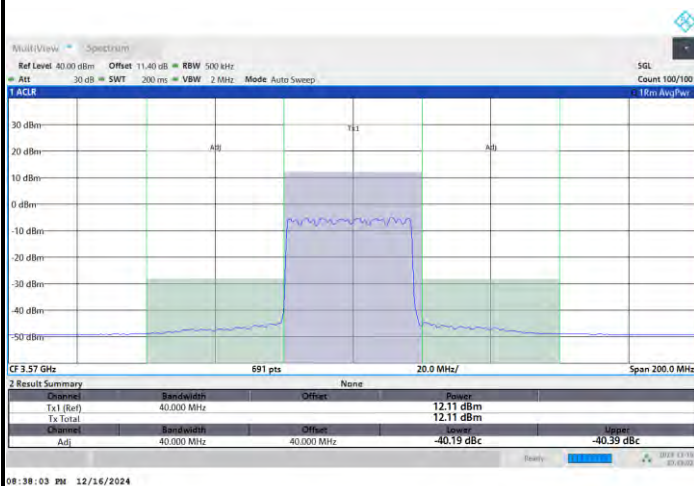
1RB0



1RBmax



Full RB

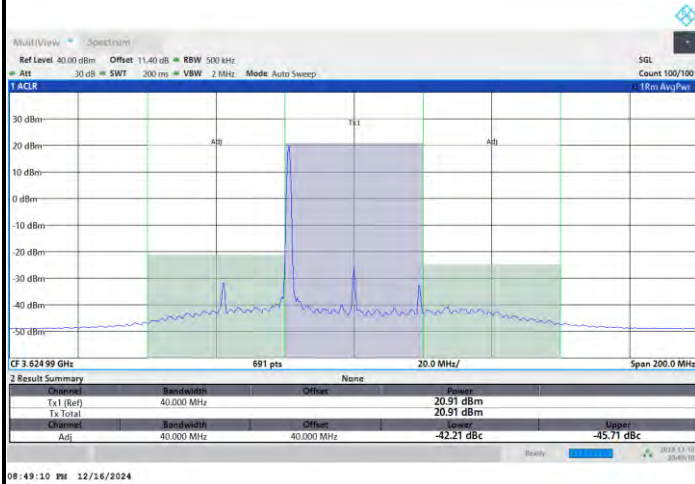




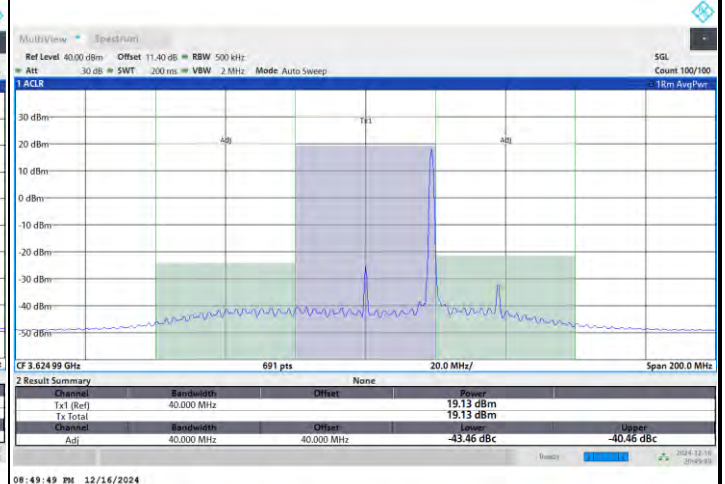
FR1 n48 / 40MHz / DFT-S OFDM / 16QAM

Middle Channel

1RB0



1RBmax



Full RB

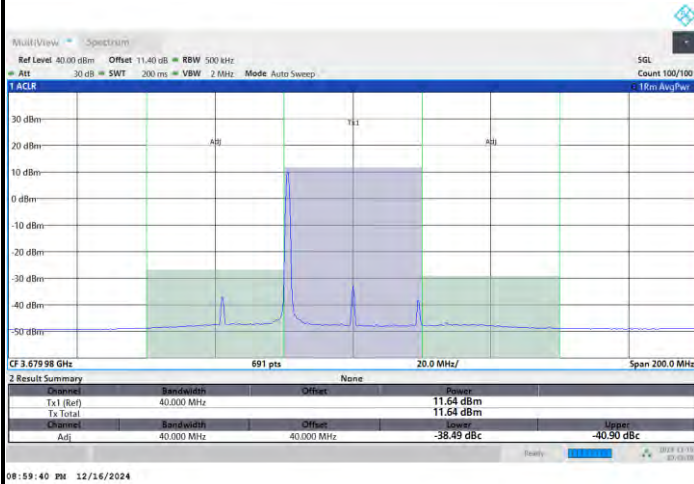




FR1 n48 / 40MHz / DFT-S OFDM / 16QAM

Highest Channel

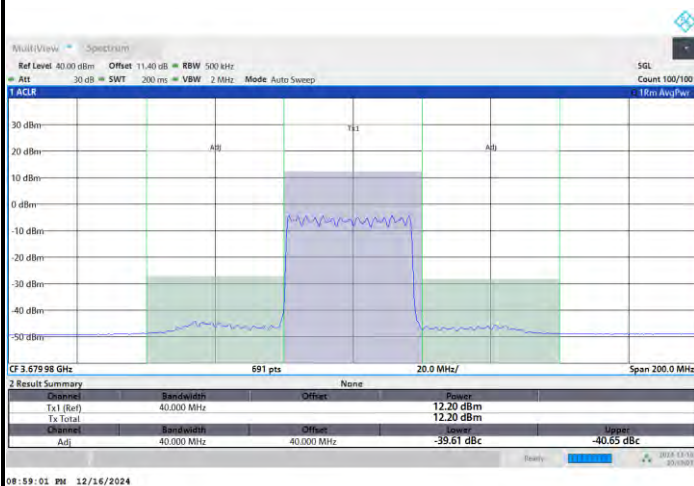
1RB0



1RBmax



Full RB

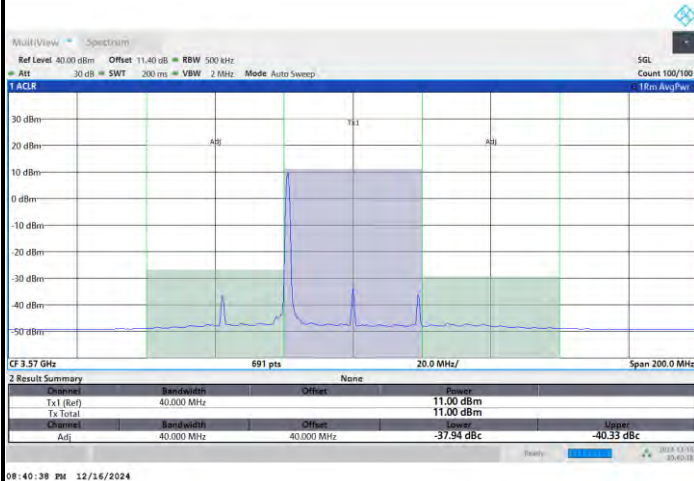




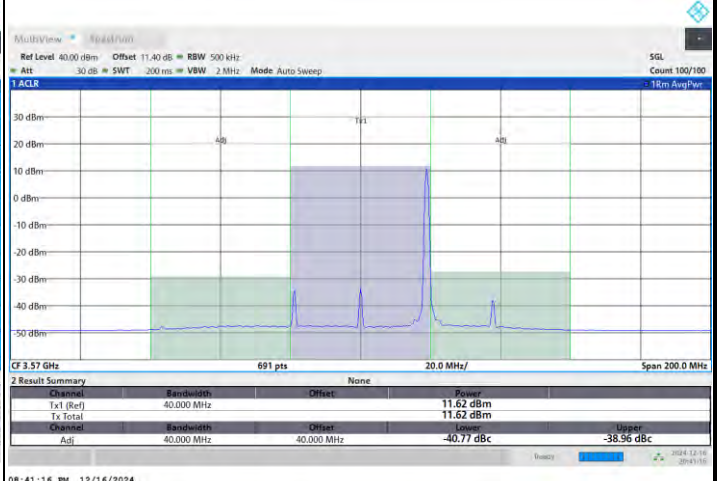
FR1 n48 / 40MHz / DFT-S OFDM / 64QAM

Lowest Channel

1RB0



1RBmax



Full RB

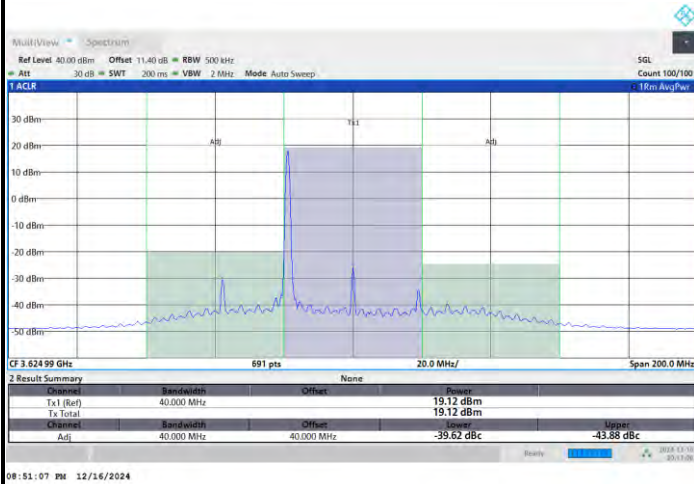




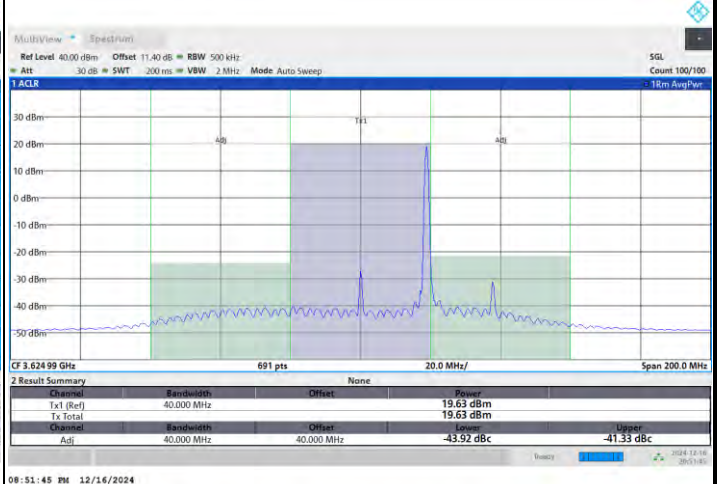
FR1 n48 / 40MHz / DFT-S OFDM / 64QAM

Middle Channel

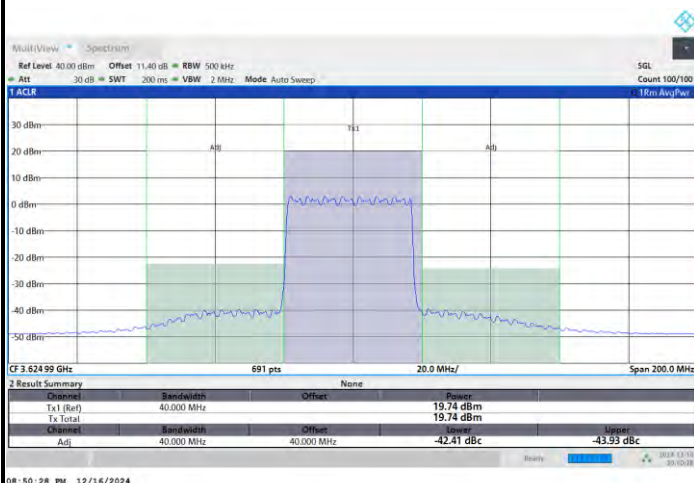
1RB0



1RBmax



Full RB

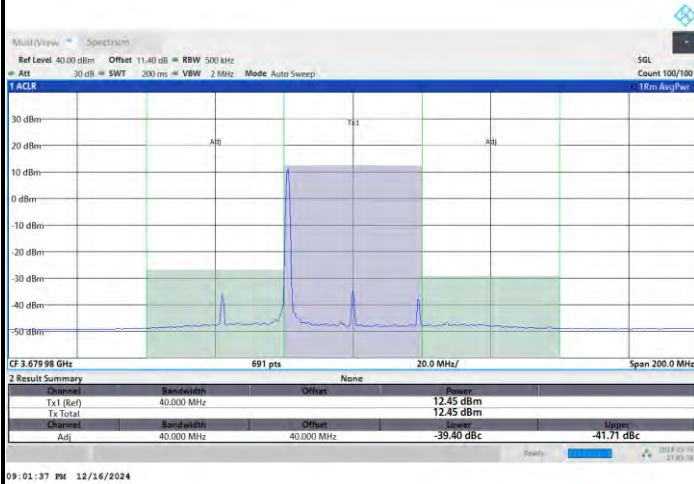




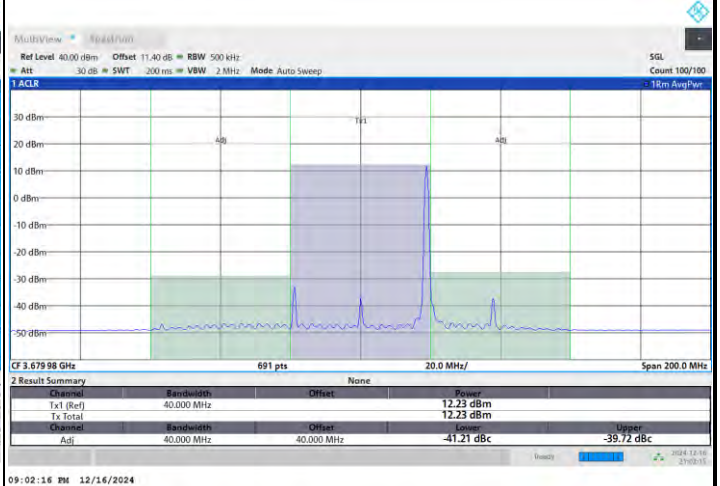
FR1 n48 / 40MHz / DFT-S OFDM / 64QAM

Highest Channel

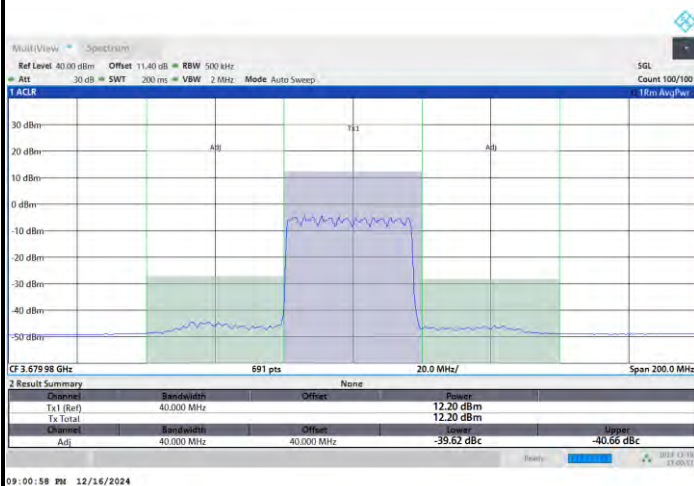
1RB0



1RBmax



Full RB

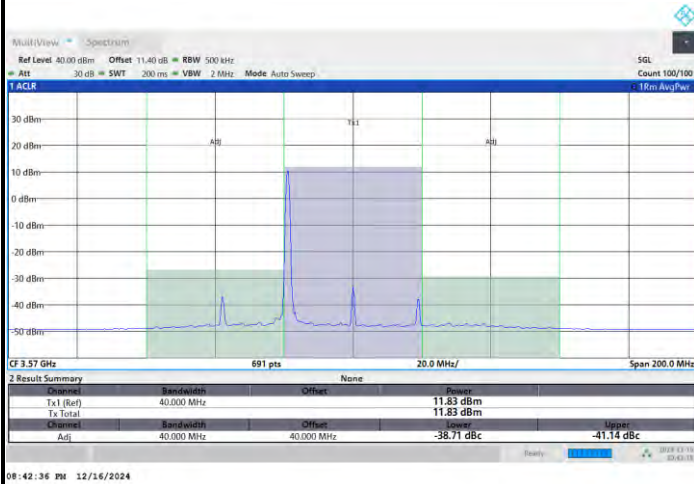




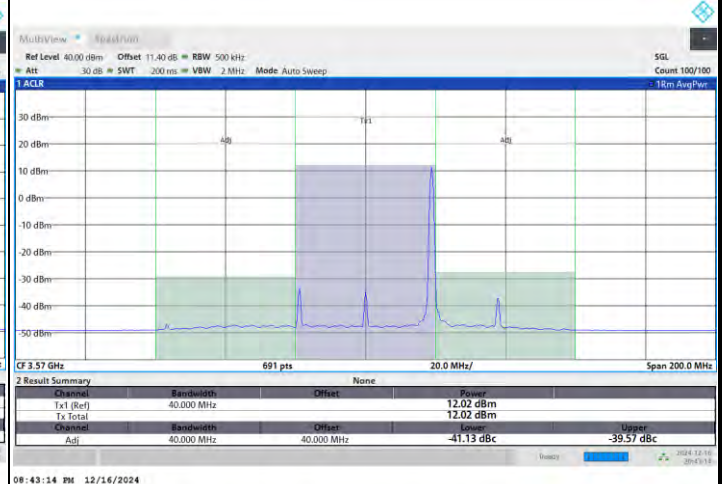
FR1 n48 / 40MHz / DFT-S OFDM / 256QAM

Lowest Channel

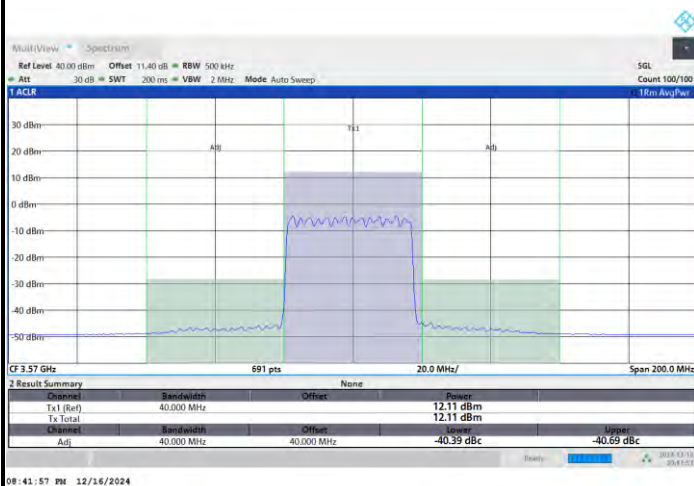
1RB0



1RBmax



Full RB

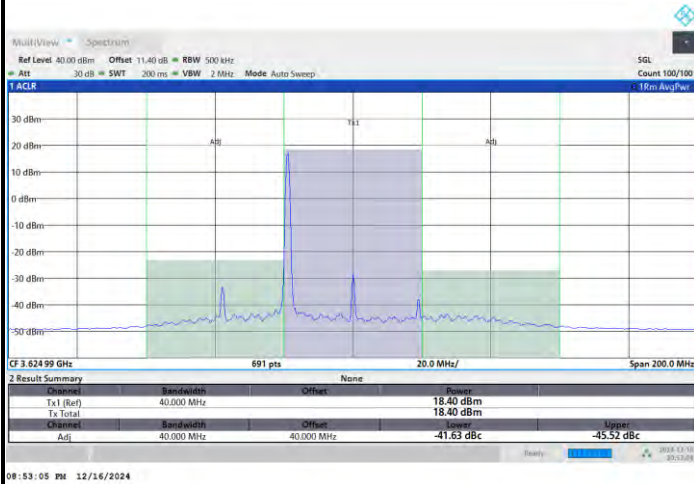




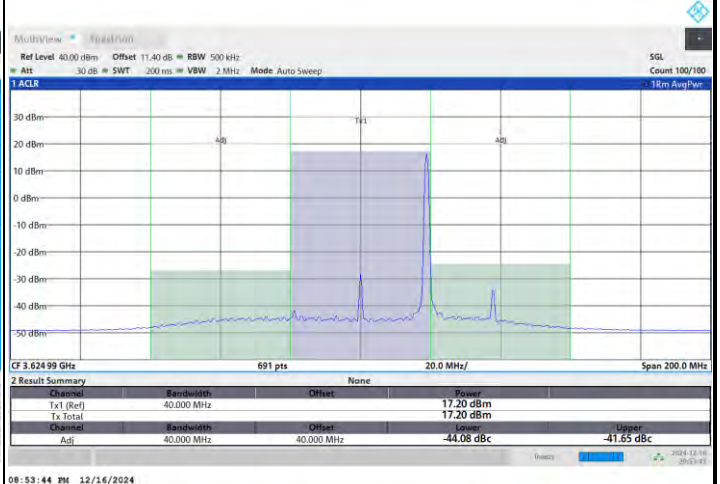
FR1 n48 / 40MHz / DFT-S OFDM / 256QAM

Middle Channel

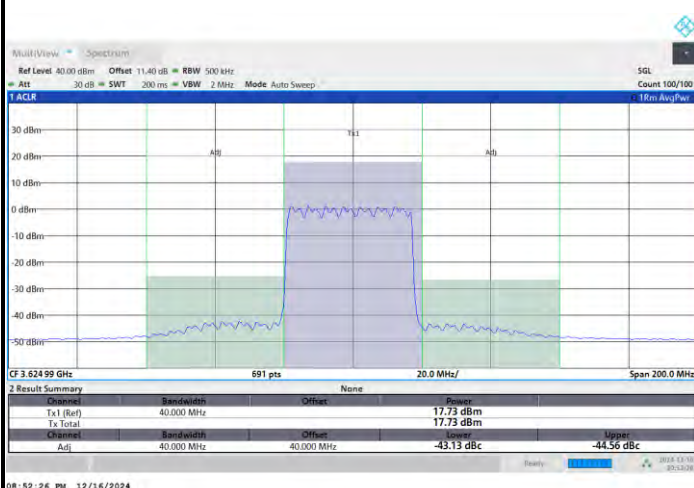
1RB0



1RBmax



Full RB

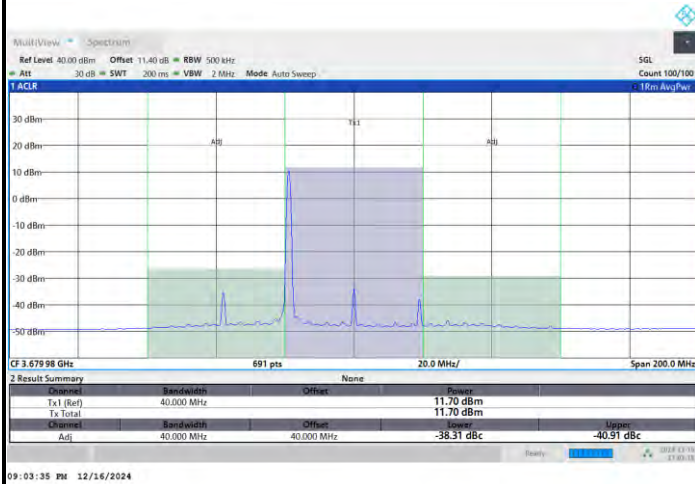




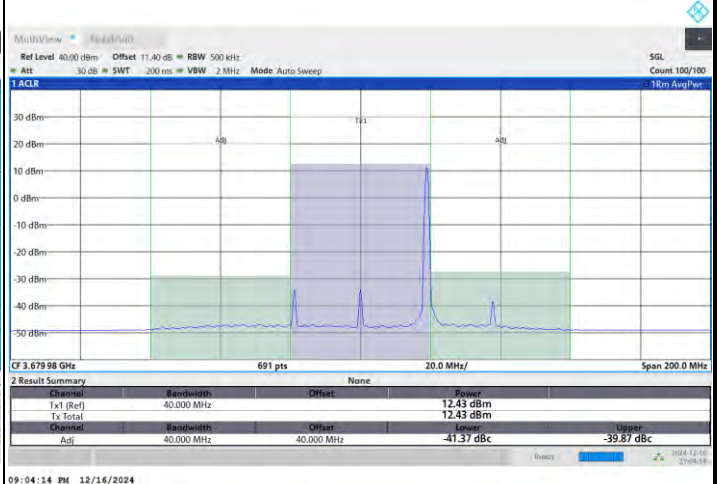
FR1 n48 / 40MHz / DFT-S OFDM / 256QAM

Highest Channel

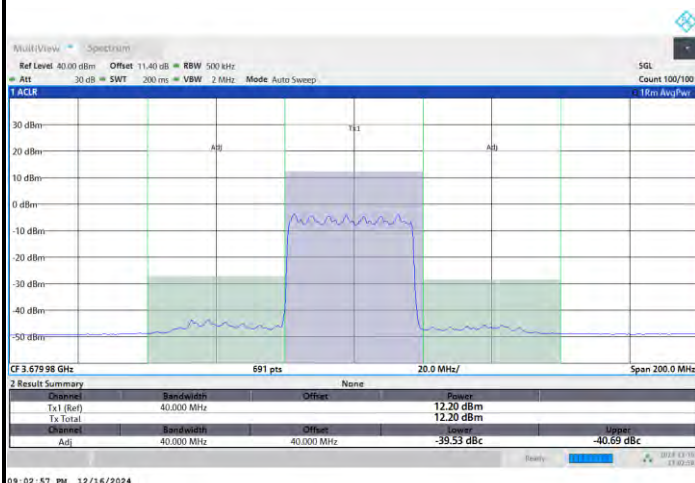
1RB0



1RBmax



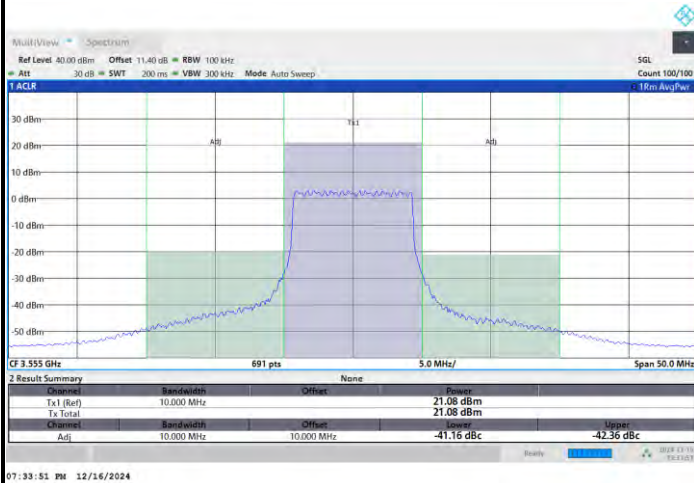
Full RB



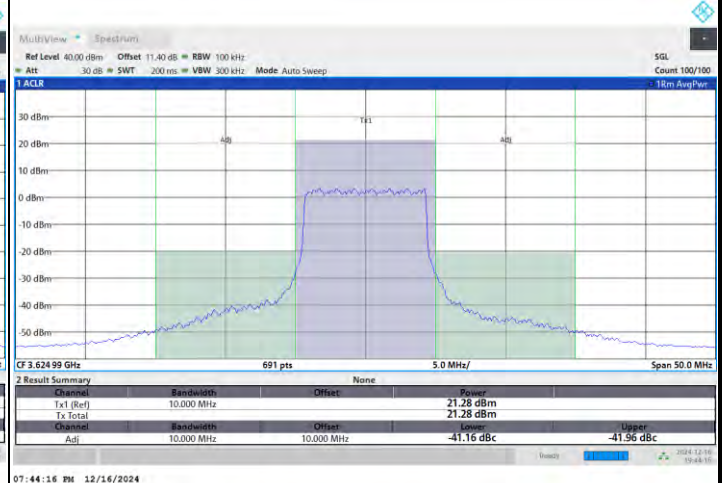


FR1 n48 / 10MHz / CP OFDM / QPSK / Full RB

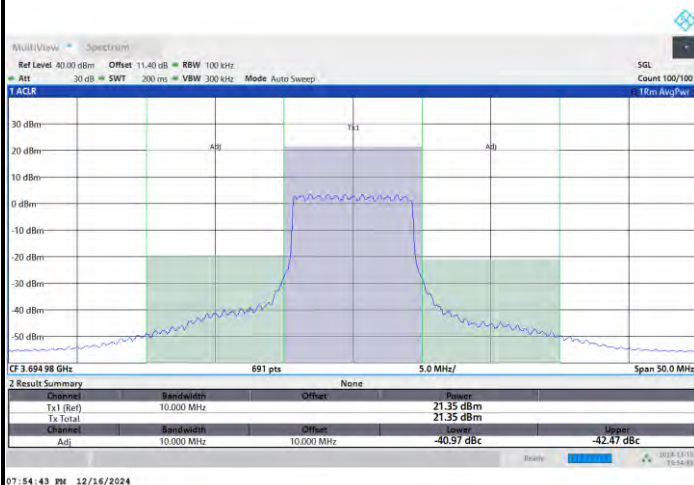
Lowest Channel



Middle Channel



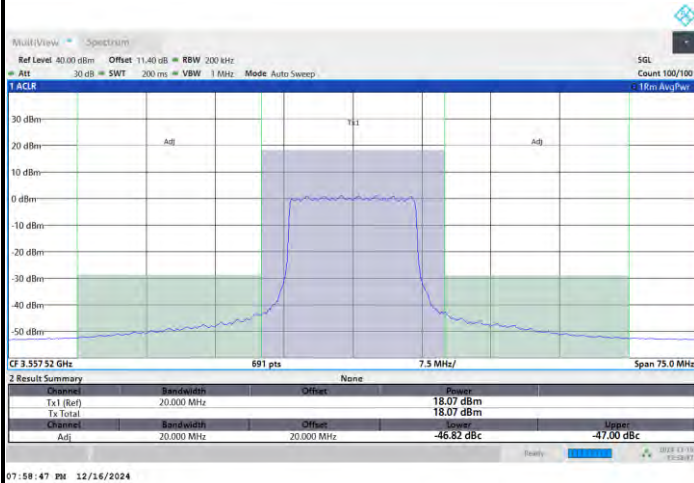
Highest Channel



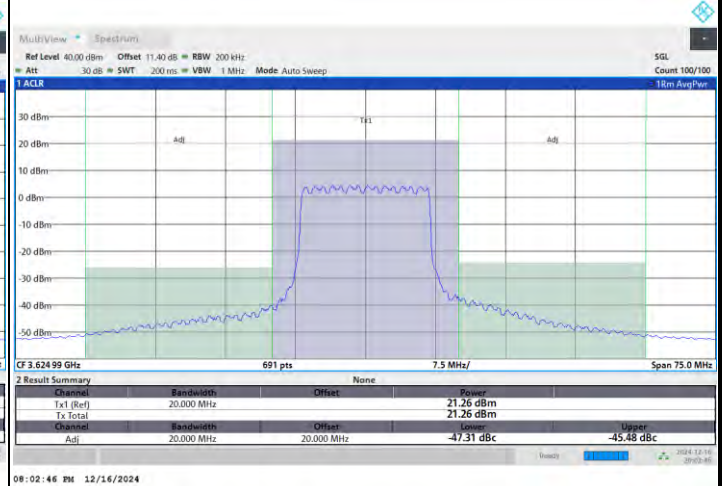


FR1 n48 / 15MHz / CP OFDM / QPSK / Full RB

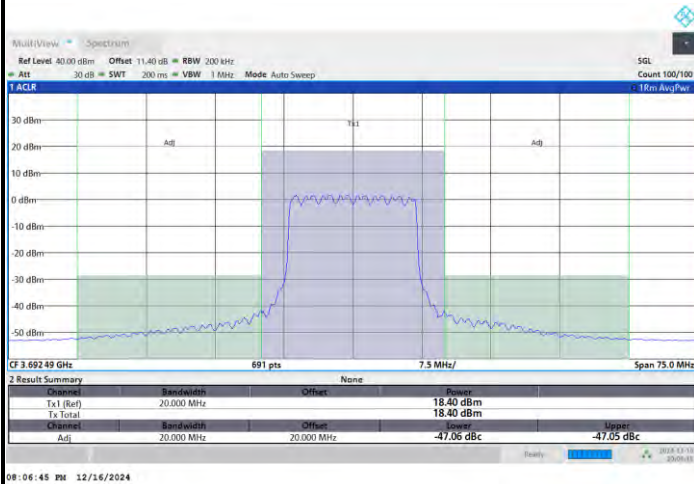
Lowest Channel



Middle Channel



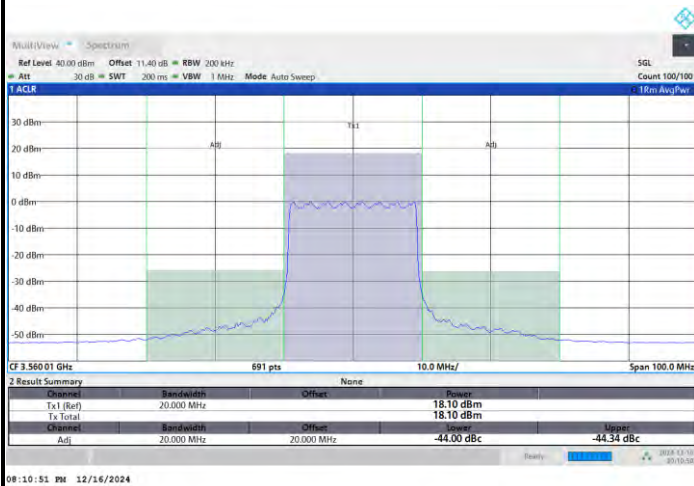
Highest Channel



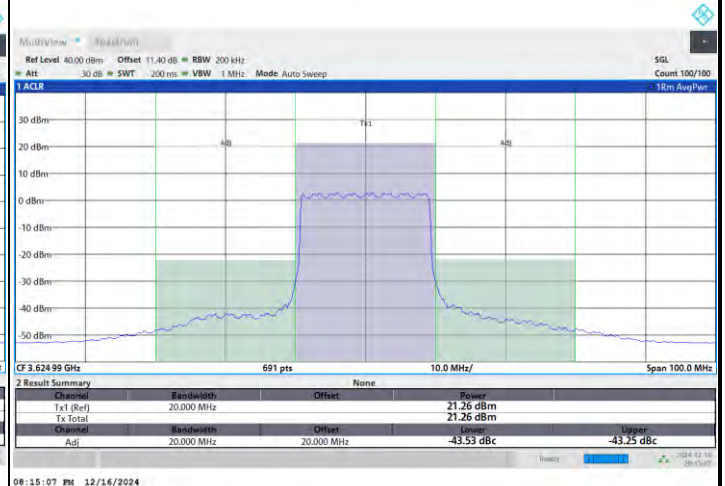


FR1 n48 / 20MHz / CP OFDM / QPSK / Full RB

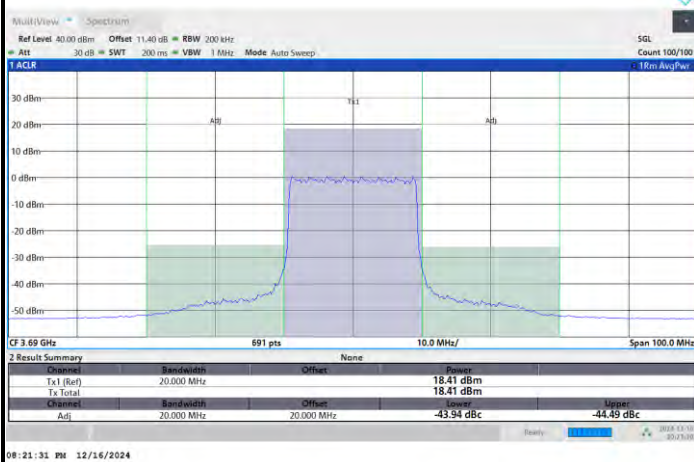
Lowest Channel



Middle Channel



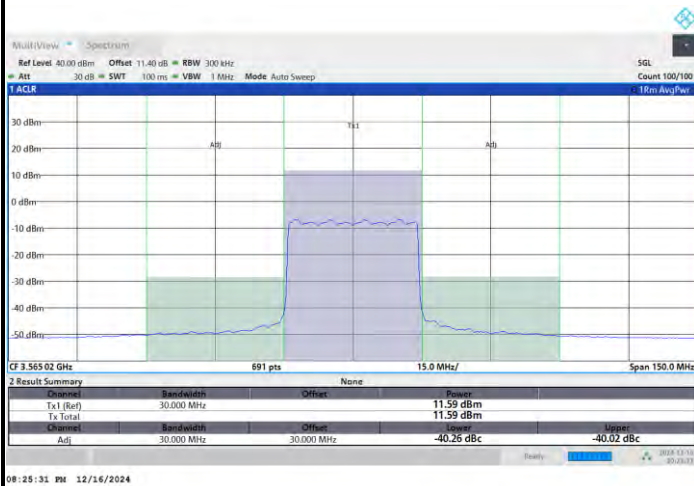
Highest Channel





FR1 n48 / 30MHz / CP OFDM / QPSK / Full RB

Lowest Channel



Middle Channel



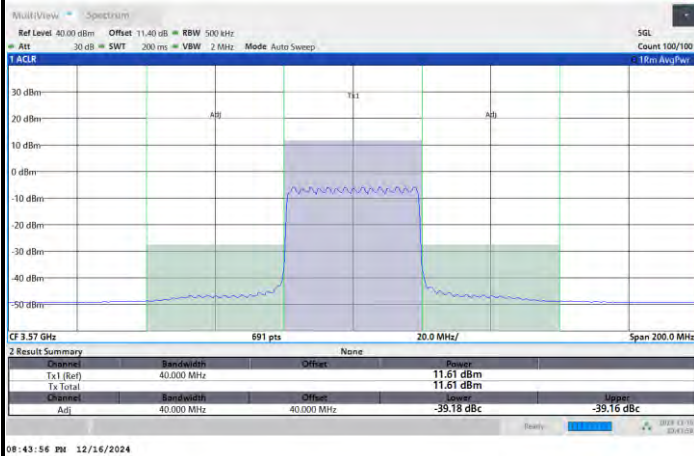
Highest Channel



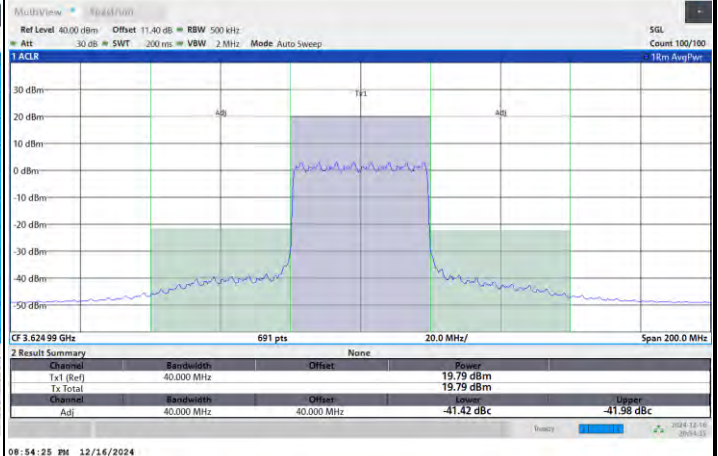


FR1 n48 / 40MHz / CP OFDM / QPSK / Full RB

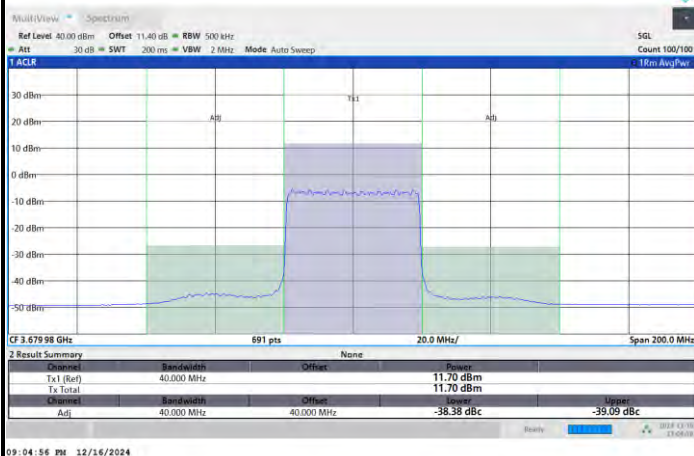
Lowest Channel



Middle Channel



Highest Channel

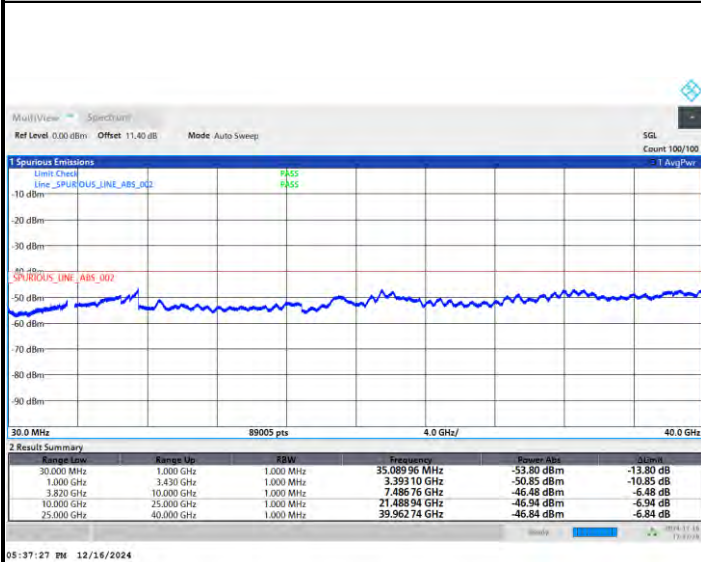




Conducted Spurious Emission

FR1 n48 / 10MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel



Middle Channel



Highest Channel





FR1 n48 / 15MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel



Middle Channel



Highest Channel





FR1 n48 / 20MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel



Middle Channel



Highest Channel





FR1 n48 / 30MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel



Middle Channel



Highest Channel





FR1 n48 / 40MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel



Middle Channel



Highest Channel



Frequency Stability

Test Conditions		FR1 n48 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0057	PASS
40	Normal Voltage	0.0023	
30	Normal Voltage	0.0008	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0030	
0	Normal Voltage	0.0035	
-10	Normal Voltage	0.0015	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0041	
20	Maximum Voltage	0.0027	
20	Normal Voltage	0.0003	
20	Minimum Voltage	0.0031	

Note:

1. Normal Voltage = 3.9 V. ; Minimum Voltage= 3.6 V. ; Maximum Voltage = 4.5 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



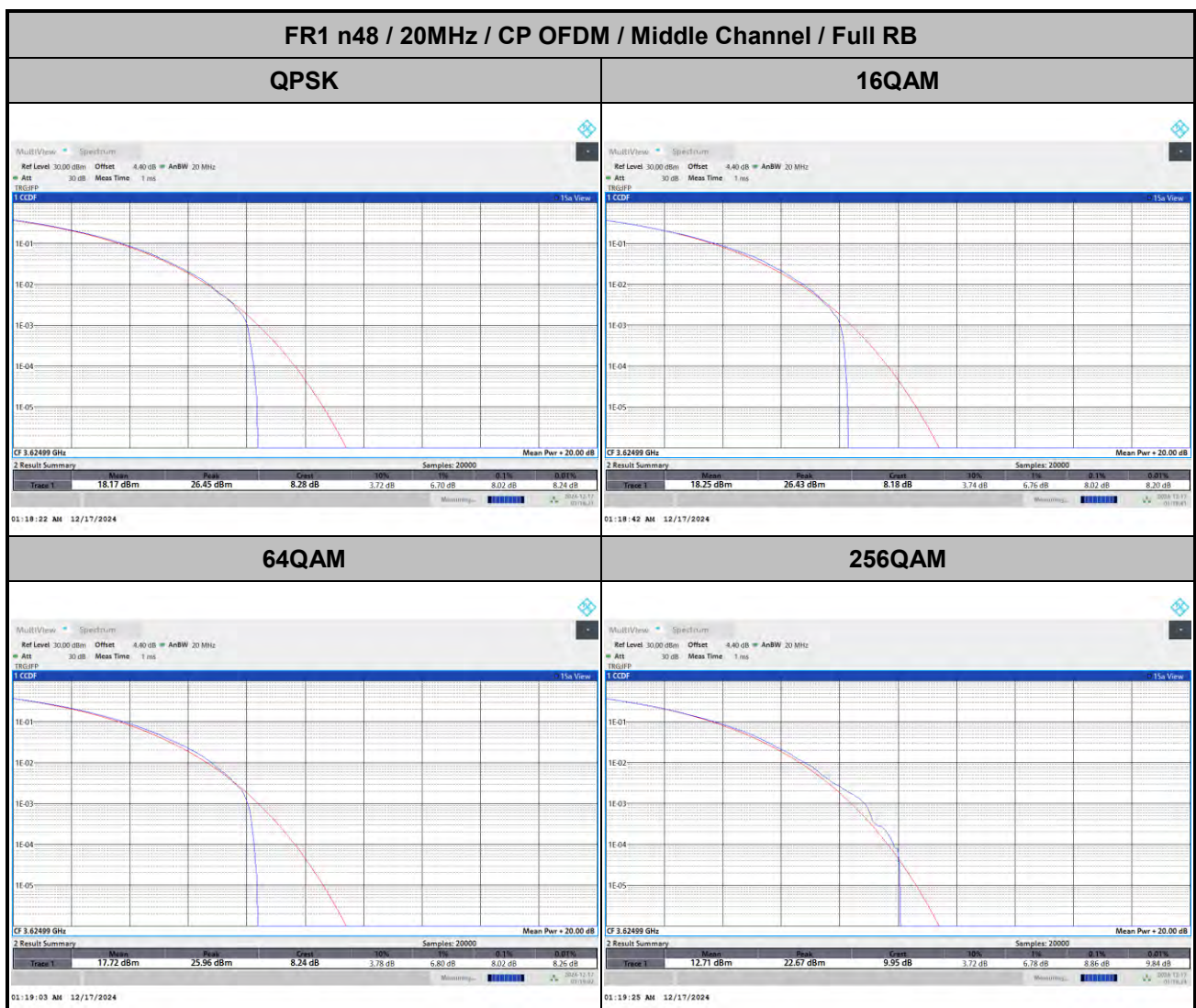
FR1 n48

<MIMO Mode>

<Ant. 7+1(7)>

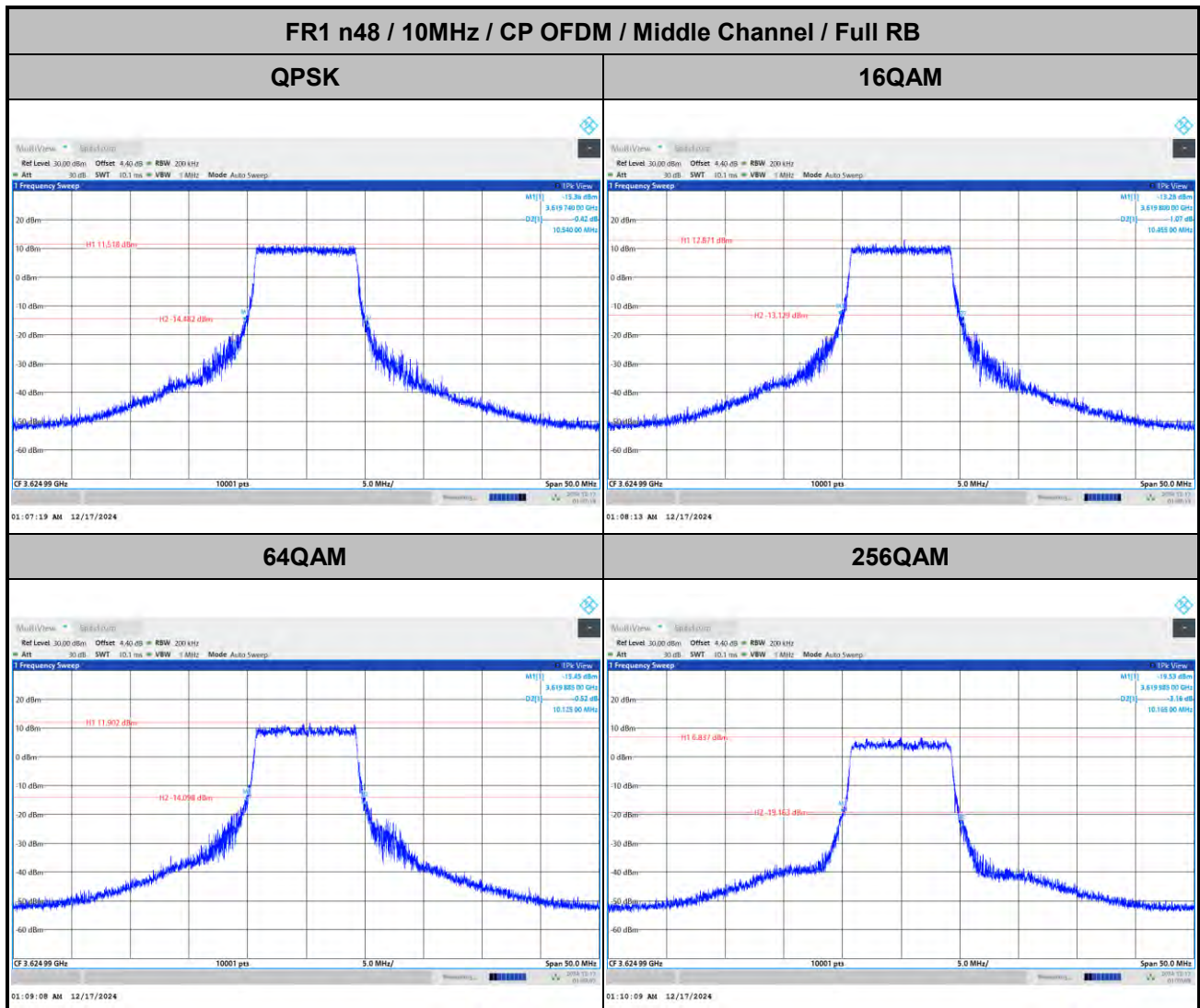
Peak-to-Average Ratio

Mode	FR1 n48 / 20MHz / CP OFDM				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	8.02	8.02	8.02	8.86	PASS



**26dB Bandwidth**

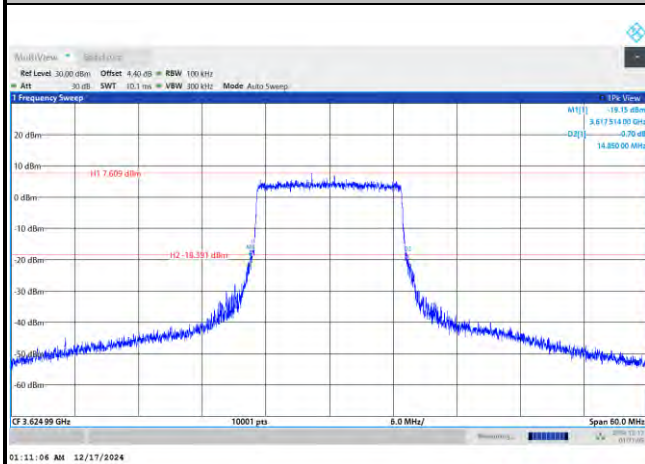
Mode	FR1 n48 : 26dB BW(MHz) / CP OFDM							
BW	10MHz		15MHz		20MHz		25MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	10.54	10.45	14.85	14.95	20.62	20.58	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	10.12	10.16	15.06	14.83	20.64	20.67	-	-
BW	30MHz		40MHz		50MHz		60MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	31.15	31.15	42.80	42.27	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	31.15	31.14	42.38	42.85	-	-	-	-
BW	70MHz		80MHz		90MHz		100MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	-	-	-	-	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	-	-	-	-	-	-	-	-



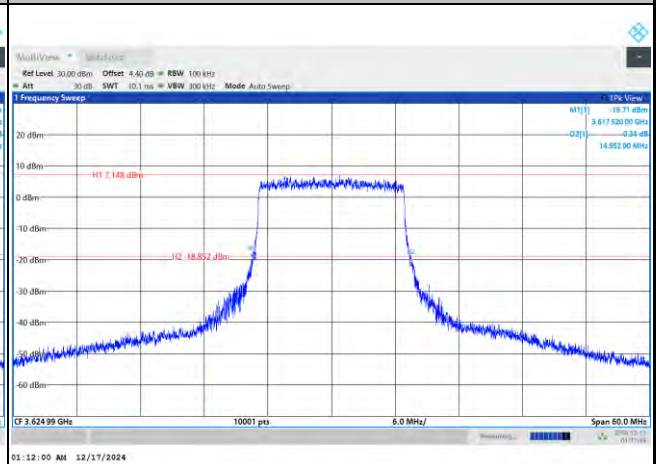


FR1 n48 / 15MHz / CP OFDM / Middle Channel / Full RB

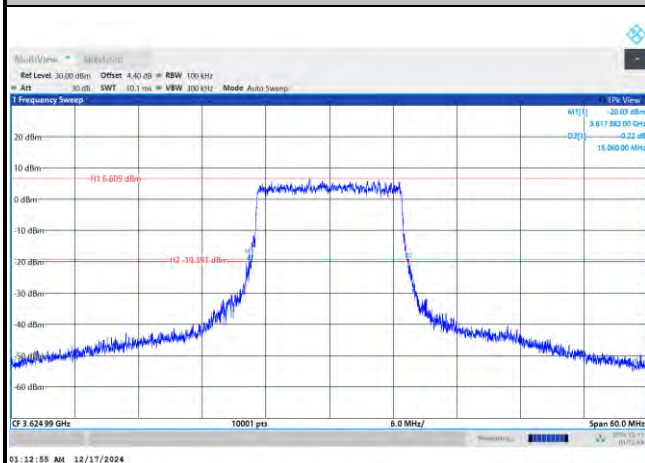
QPSK



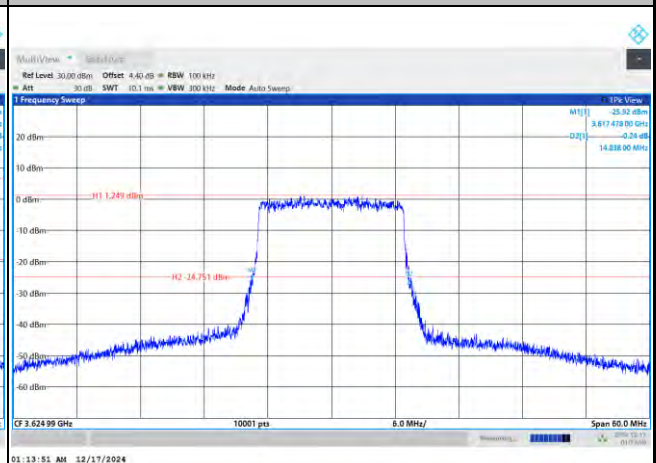
16QAM



64QAM



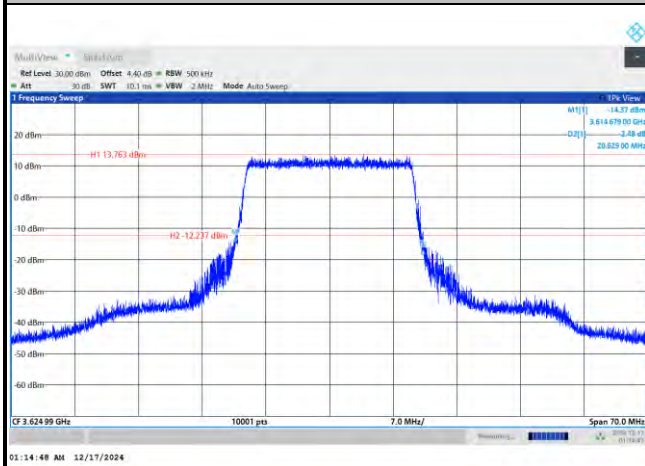
256QAM



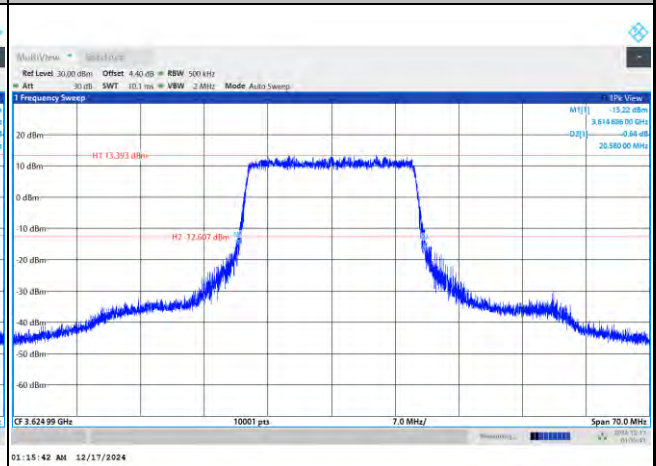


FR1 n48 / 20MHz / CP OFDM / Middle Channel / Full RB

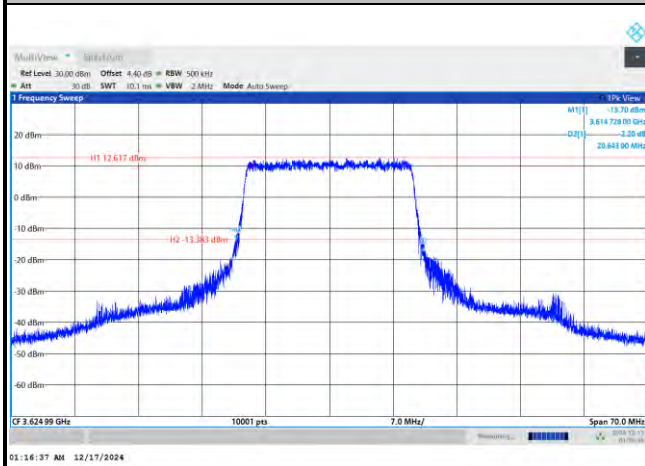
QPSK



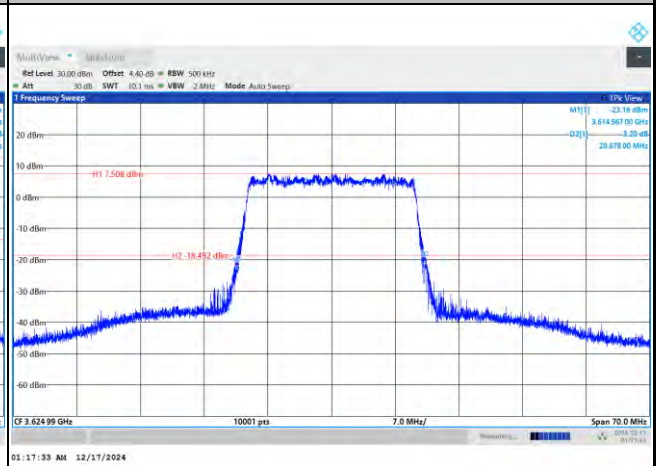
16QAM

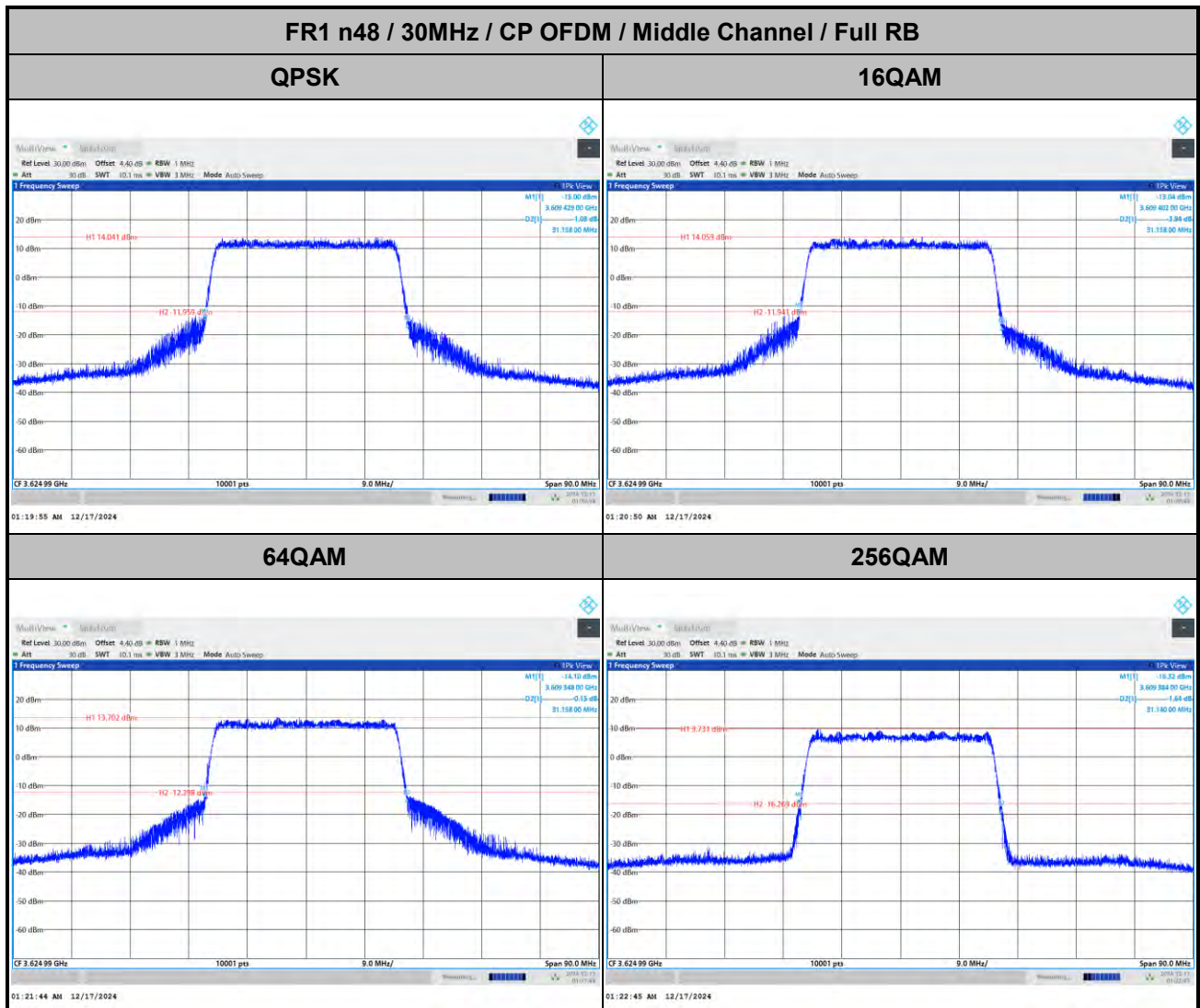


64QAM



256QAM

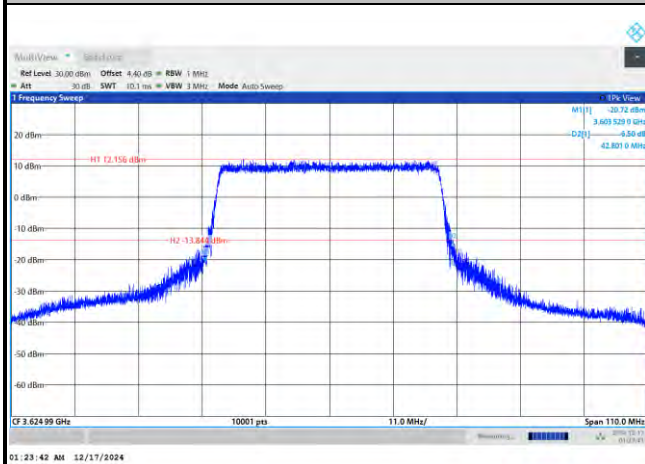




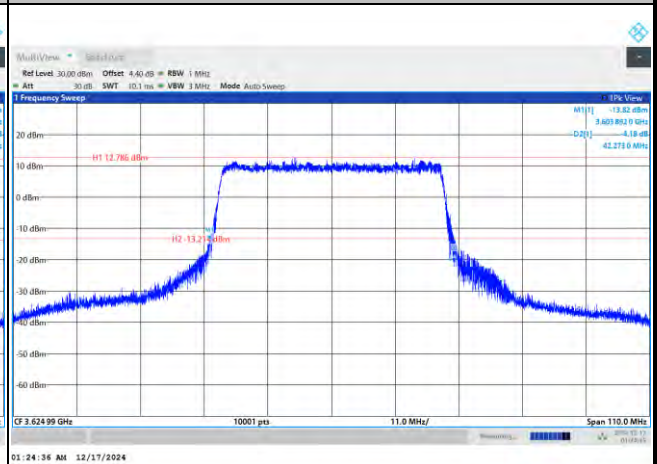


FR1 n48 / 40MHz / CP OFDM / Middle Channel / Full RB

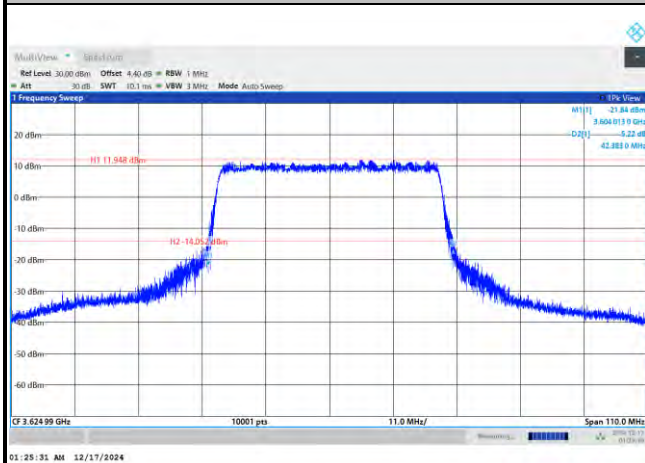
QPSK



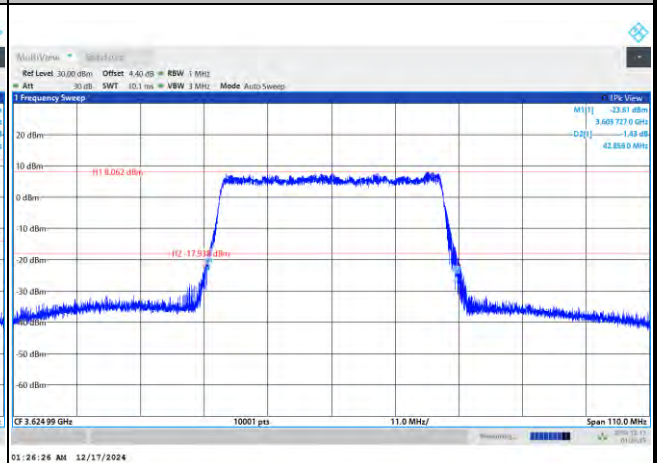
16QAM



64QAM



256QAM



**Occupied Bandwidth**

Mode	FR1 n48 : OB BW(MHz) / CP OFDM							
BW	10MHz		15MHz		20MHz		25MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	8.69	8.71	13.56	13.58	18.37	18.41	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	8.66	8.63	13.58	13.56	18.33	18.39	-	-
BW	30MHz		40MHz		50MHz		60MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	28.24	28.16	38.16	38.18	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	28.22	28.18	38.16	38.17	-	-	-	-
BW	70MHz		80MHz		90MHz		100MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	-	-	-	-	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	-	-	-	-	-	-	-	-