

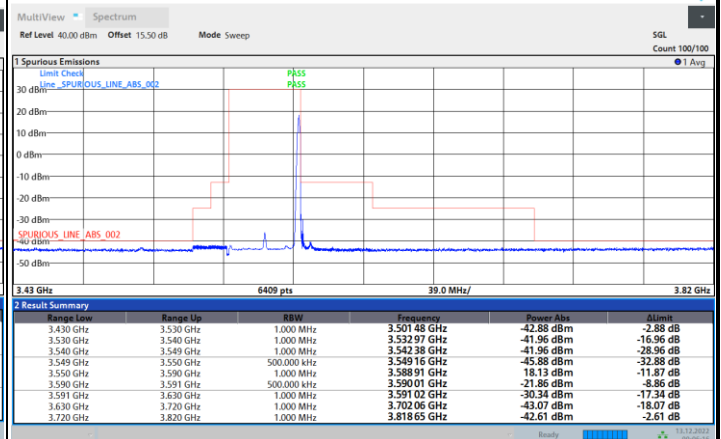
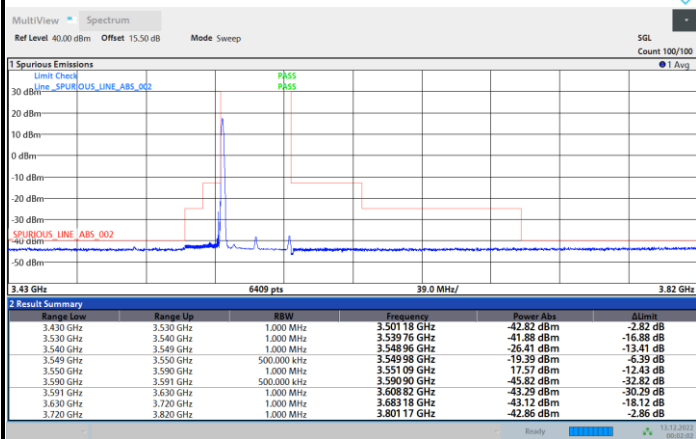


FR1 n48 / 40MHz / CP OFDM / 64QAM

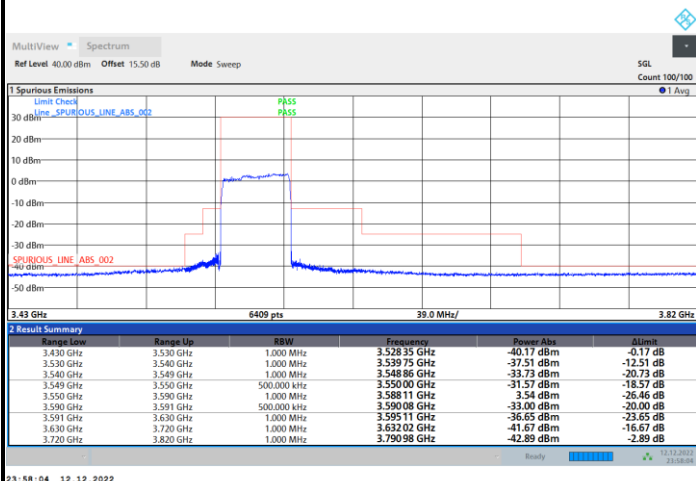
Lowest Channel

1RB0

1RBmax



Full RB



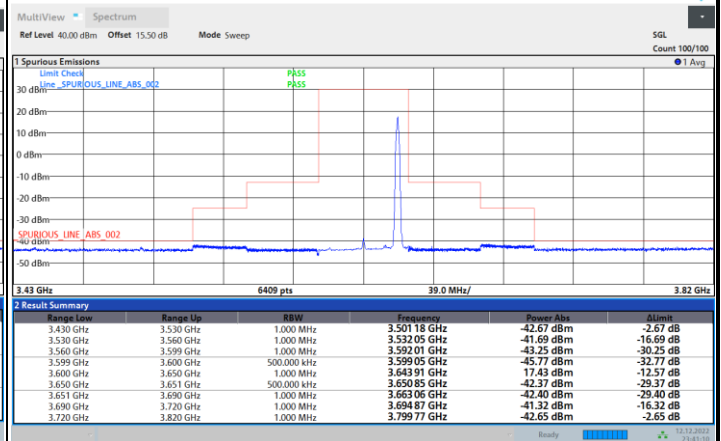
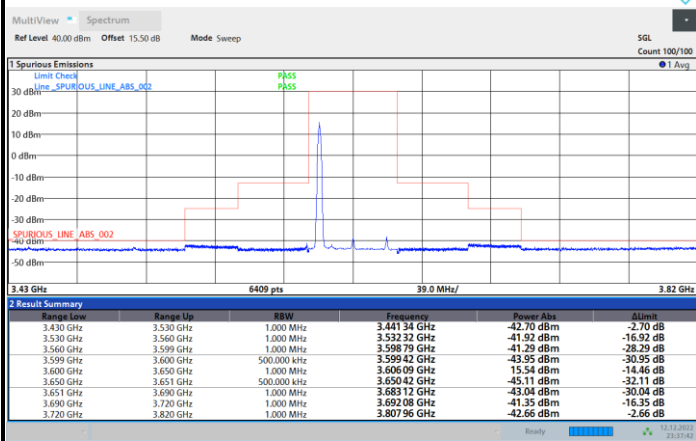


FR1 n48 / 40MHz / CP OFDM / 64QAM

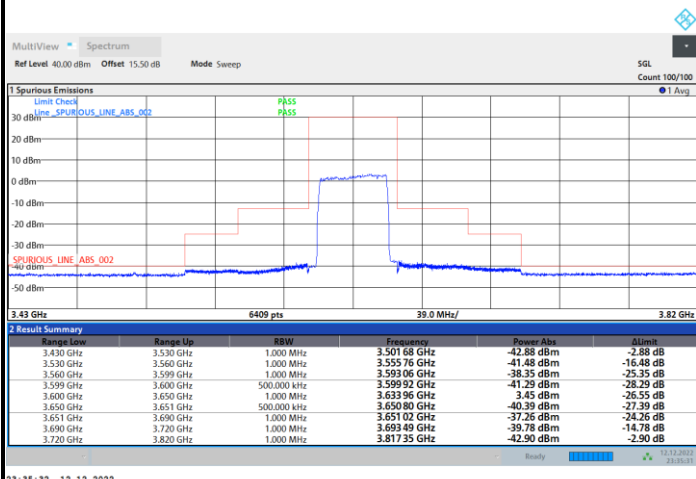
Middle Channel

1RB0

1RBmax



Full RB



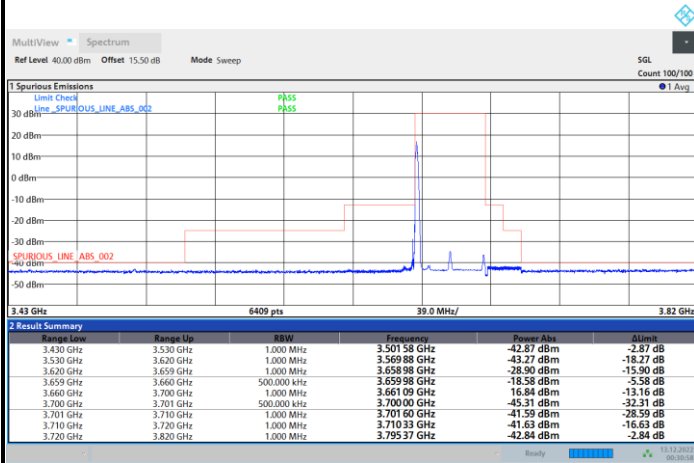


FR1 n48 / 40MHz / CP OFDM / 64QAM

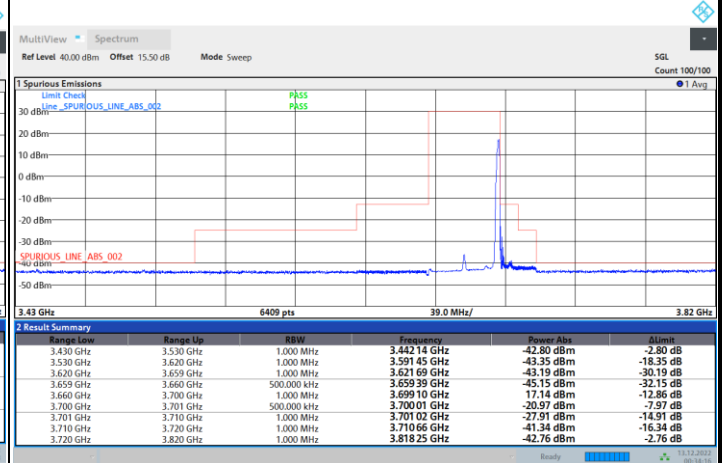
Highest Channel

1RB0

1RBmax

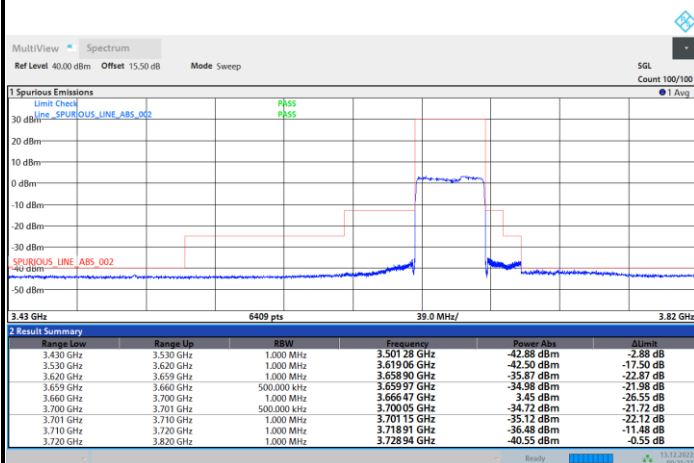


00:30:58 13.12.2022



00:34:17 13.12.2022

Full RB



00:25:23 13.12.2022

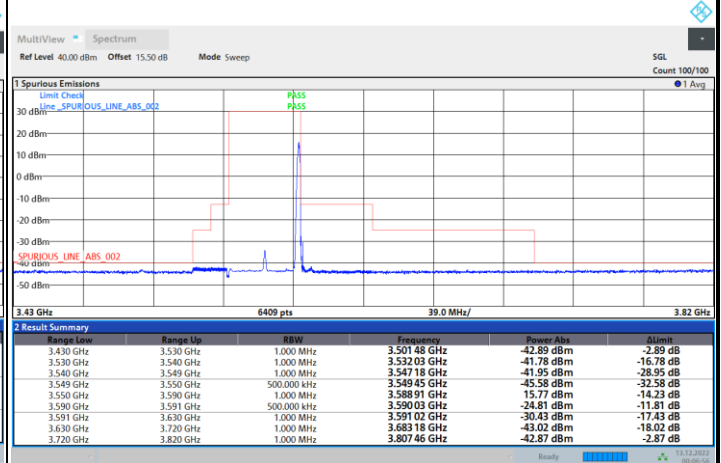
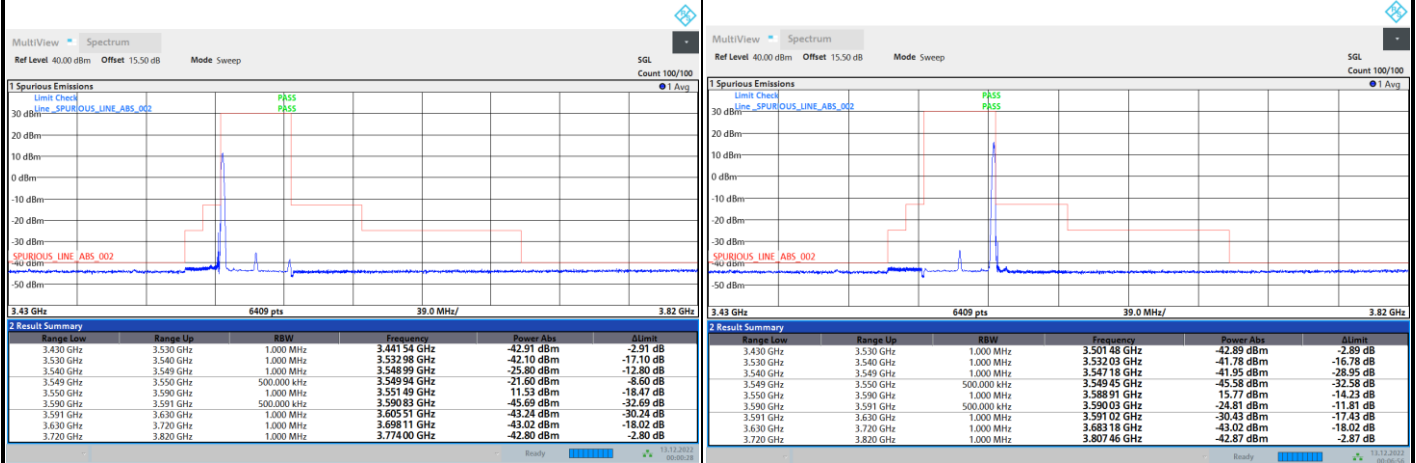


FR1 n48 / 40MHz / CP OFDM / 256QAM

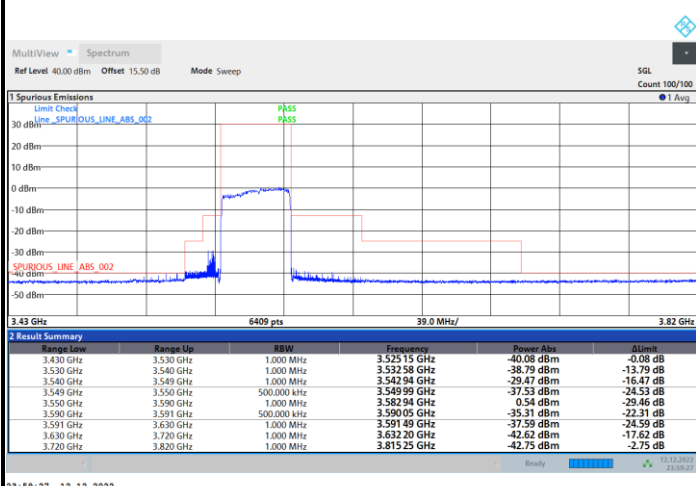
Lowest Channel

1RB0

1RBmax



Full RB



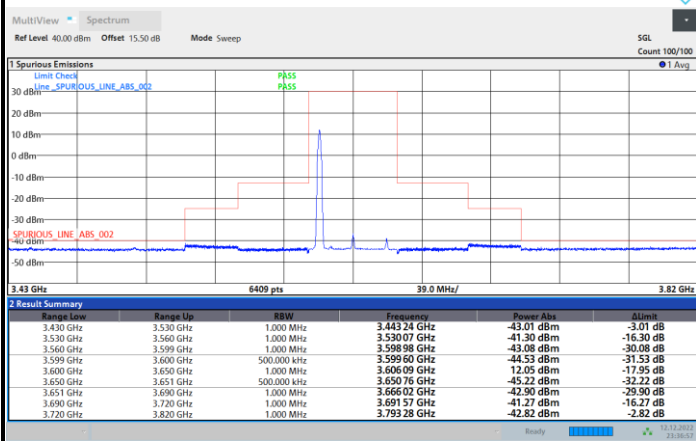


FR1 n48 / 40MHz / CP OFDM / 256QAM

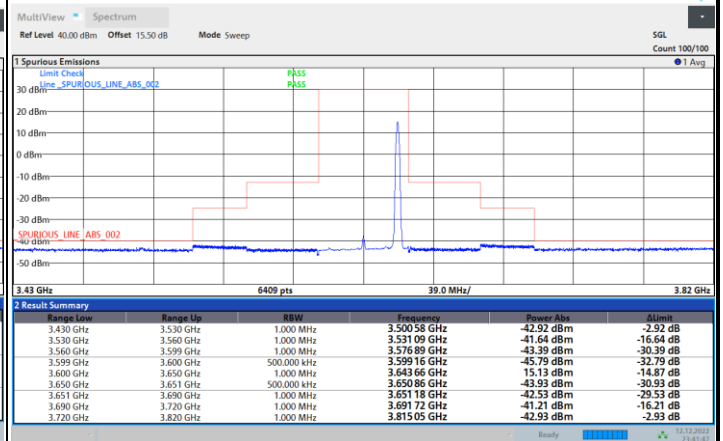
Middle Channel

1RB0

1RBmax

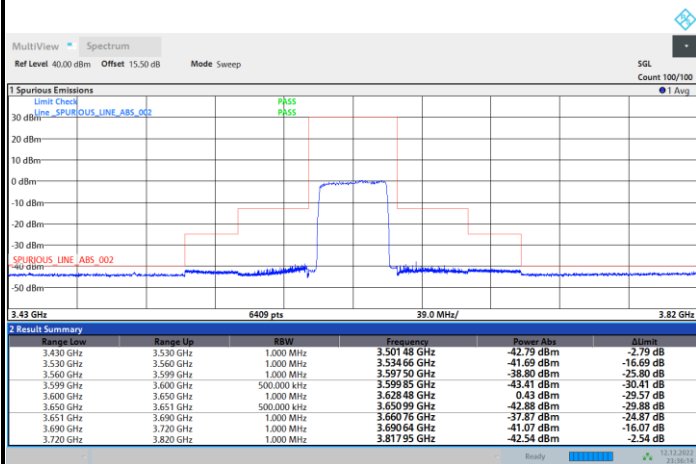


23:36:58 12.12.2022



23:41:47 12.12.2022

Full RB



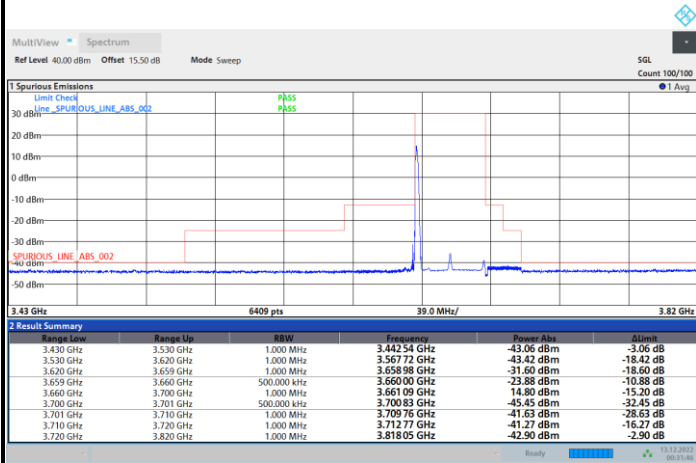
23:36:14 12.12.2022



FR1 n48 / 40MHz / CP OFDM / 256QAM

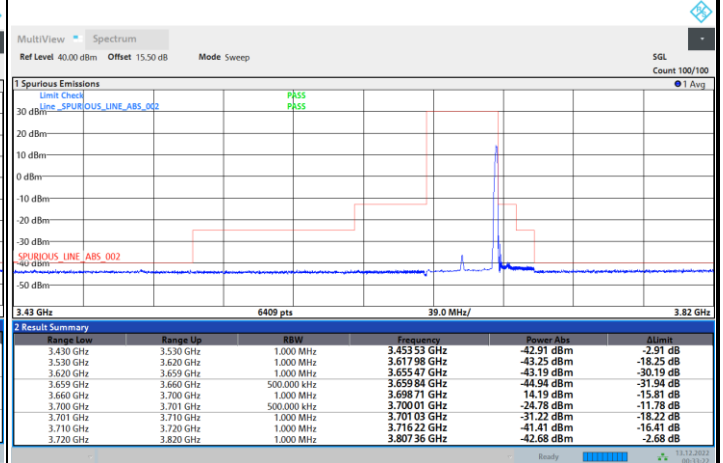
Highest Channel

1RB0



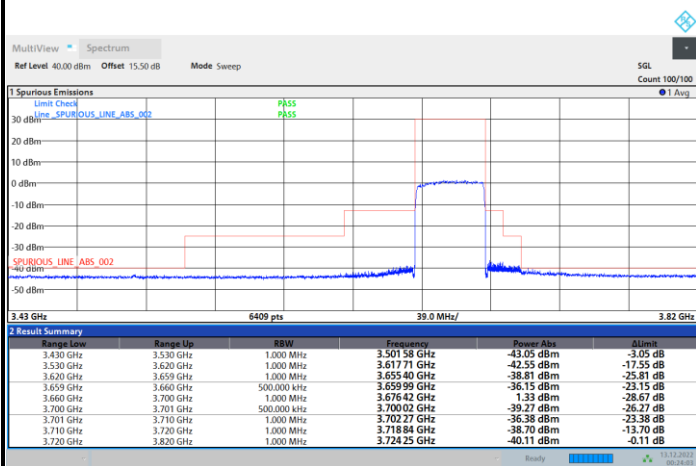
00:31:46 13.12.2022

1RBmax



00:33:23 13.12.2022

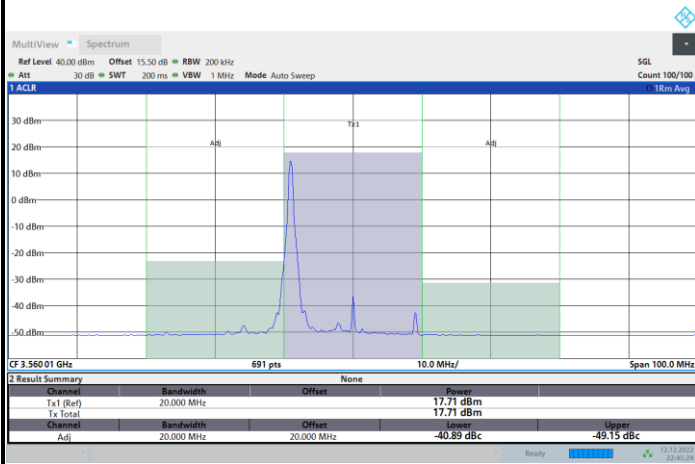
Full RB



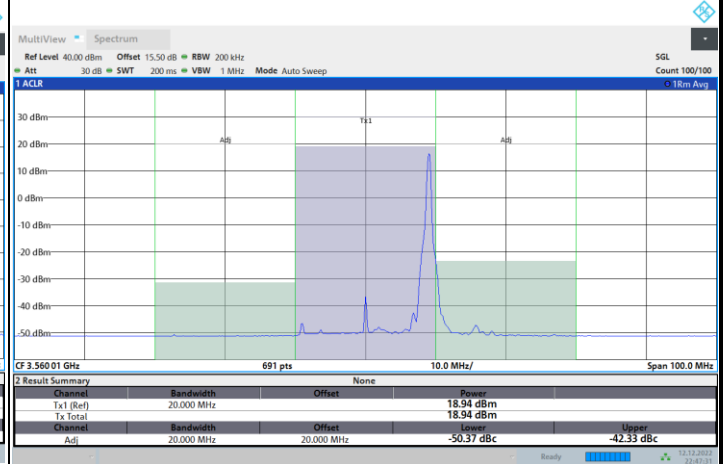
00:24:04 13.12.2022

**Adjacent Channel Leakage Ratio (ACLR)**

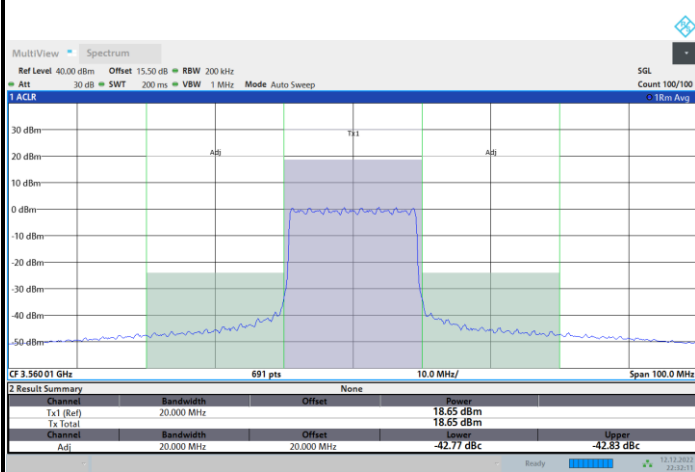
FR1 n48 / 20MHz / CP OFDM / QPSK

Lowest Channel**1RB0**

22:45:30 12.12.2022

1RBmax

22:47:32 12.12.2022

Full RB

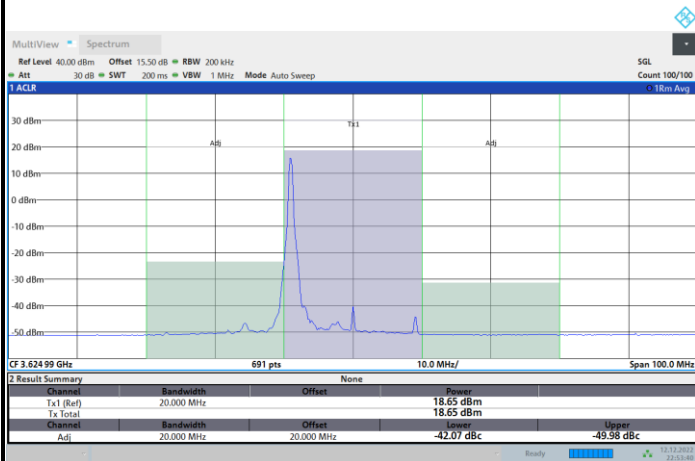
22:32:11 12.12.2022



FR1 n48 / 20MHz / CP OFDM / QPSK

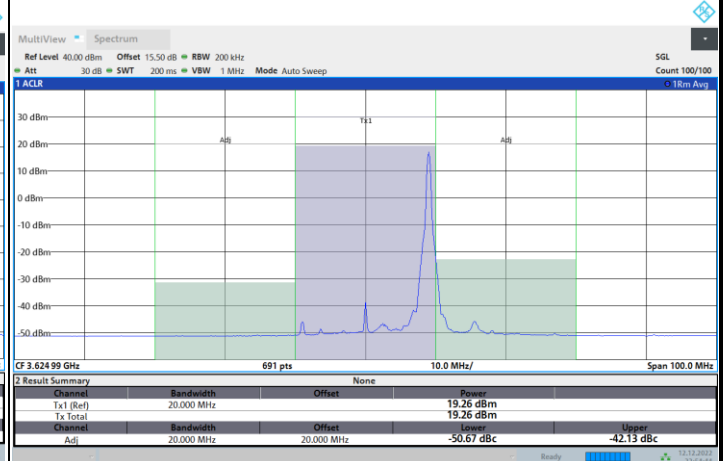
Middle Channel

1RB0



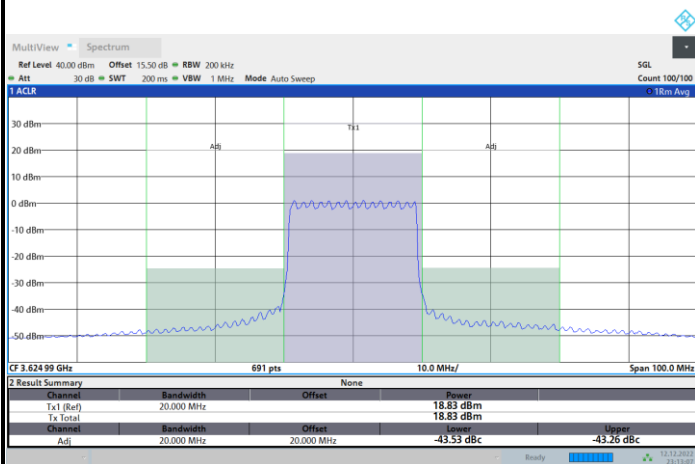
22:53:40 12.12.2022

1RBmax



22:54:45 12.12.2022

Full RB



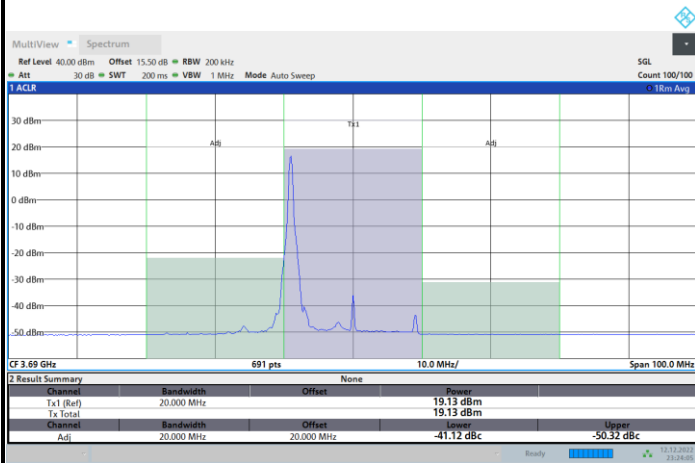
23:13:07 12.12.2022



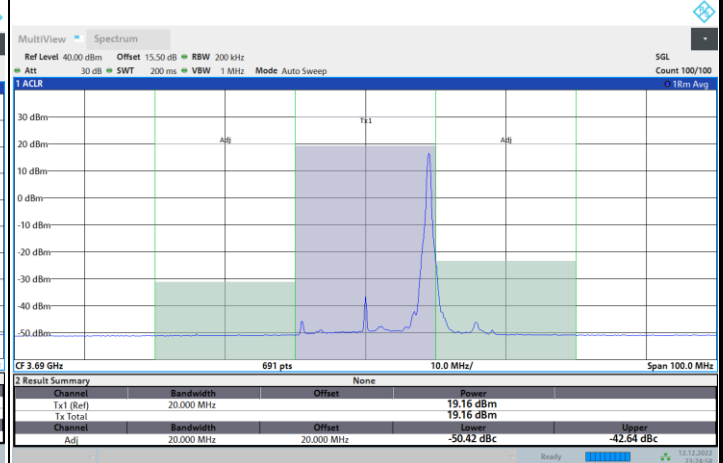
FR1 n48 / 20MHz / CP OFDM / QPSK

Highest Channel

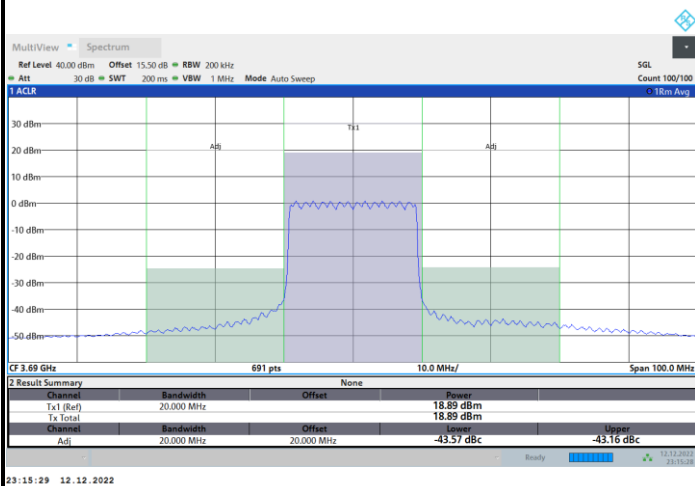
1RB0



1RBmax



Full RB

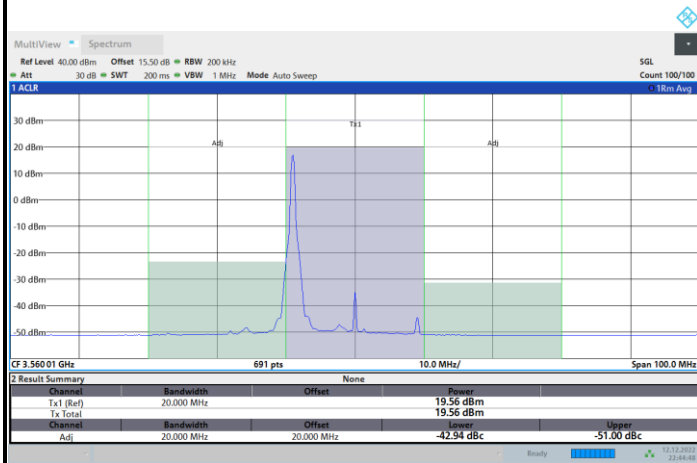




FR1 n48 / 20MHz / CP OFDM / 16QAM

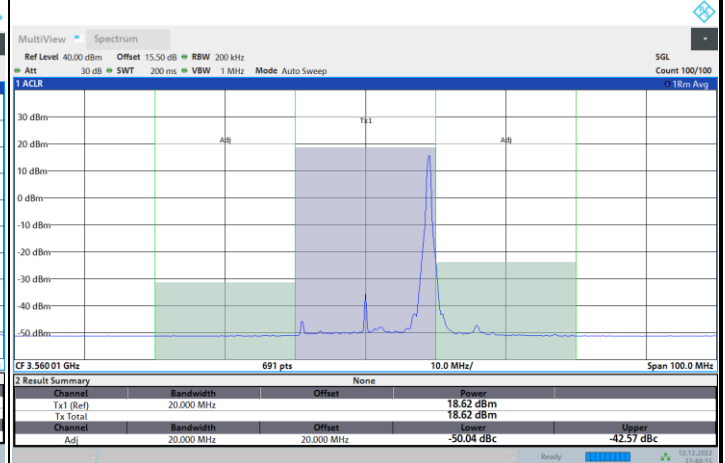
Lowest Channel

1RB0



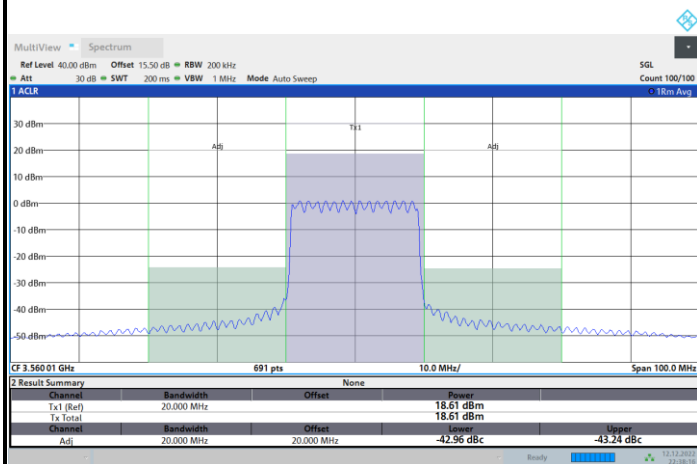
22:44:48 12.12.2022

1RBmax



22:48:16 12.12.2022

Full RB



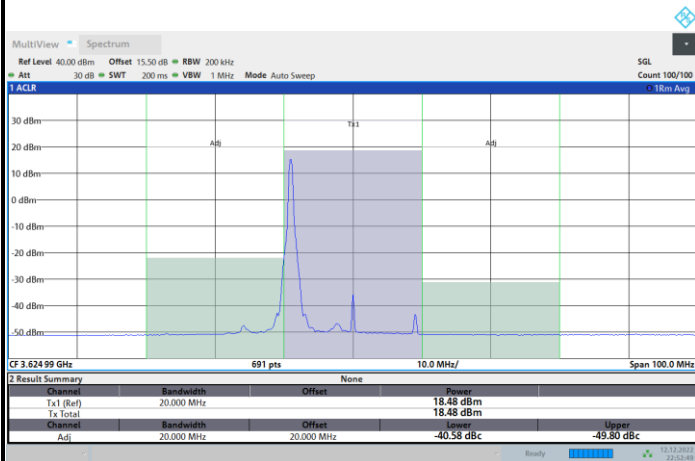
22:38:16 12.12.2022



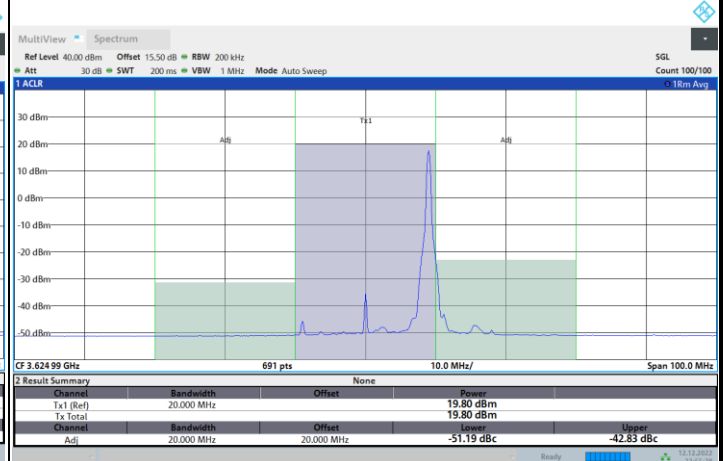
FR1 n48 / 20MHz / CP OFDM / 16QAM

Middle Channel

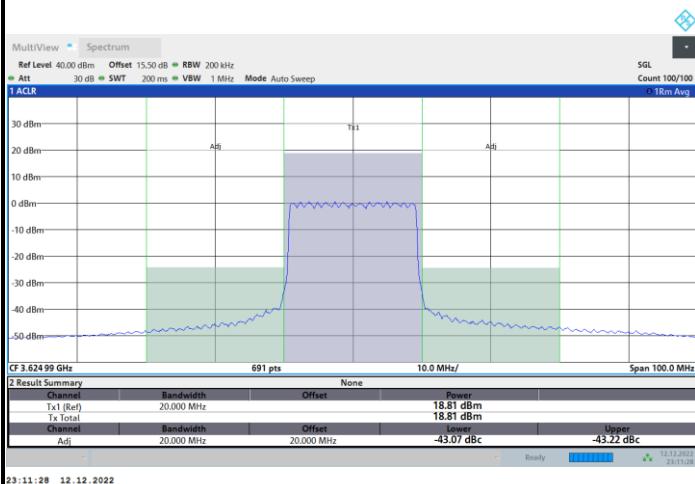
1RB0



1RBmax



Full RB

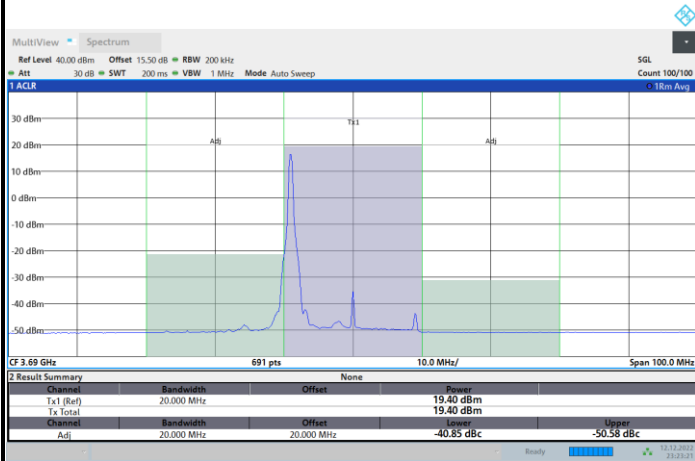




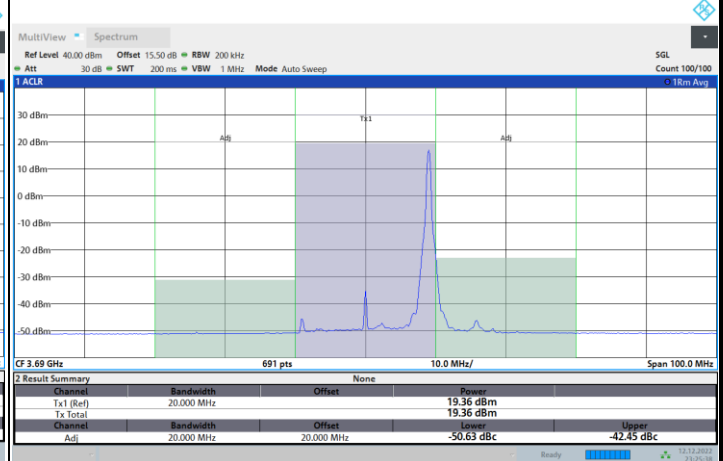
FR1 n48 / 20MHz / CP OFDM / 16QAM

Highest Channel

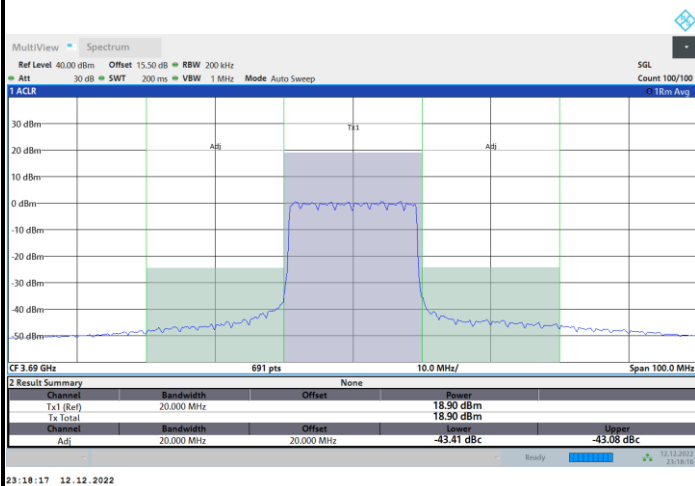
1RB0



1RBmax



Full RB

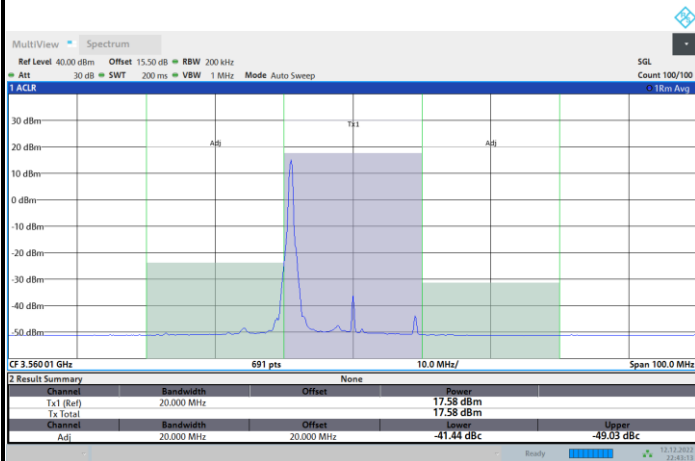




FR1 n48 / 20MHz / CP OFDM / 64QAM

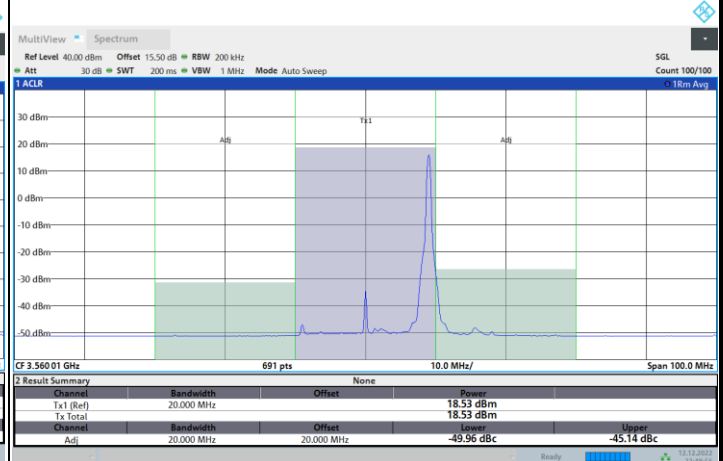
Lowest Channel

1RB0



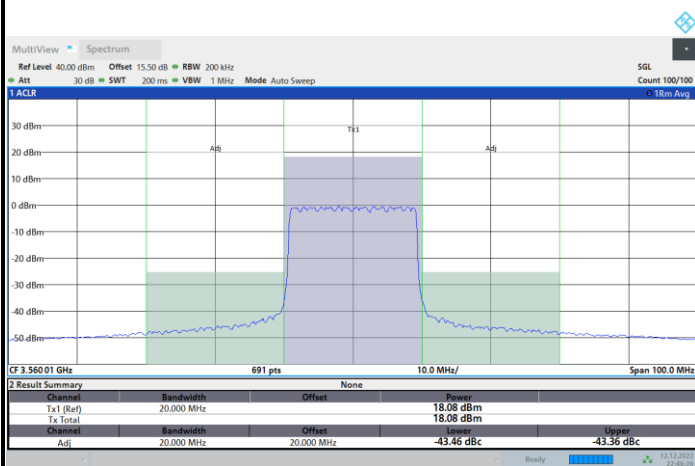
22:43:13 12.12.2022

1RBmax



22:48:57 12.12.2022

Full RB



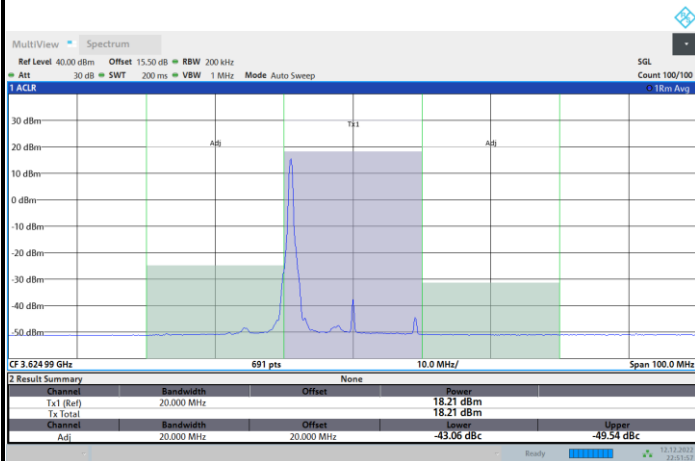
22:46:26 12.12.2022



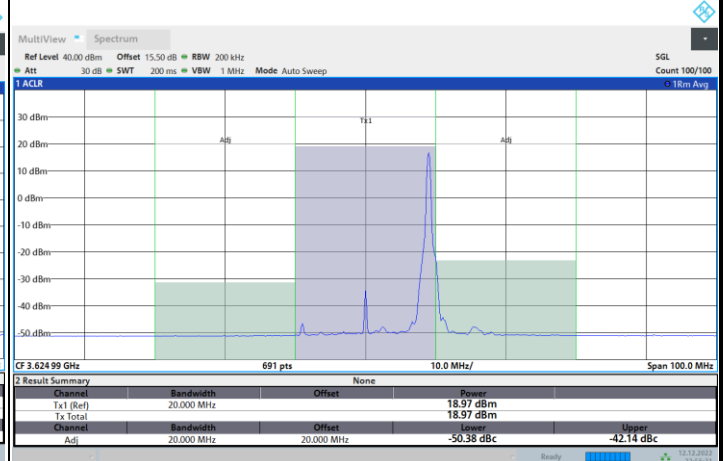
FR1 n48 / 20MHz / CP OFDM / 64QAM

Middle Channel

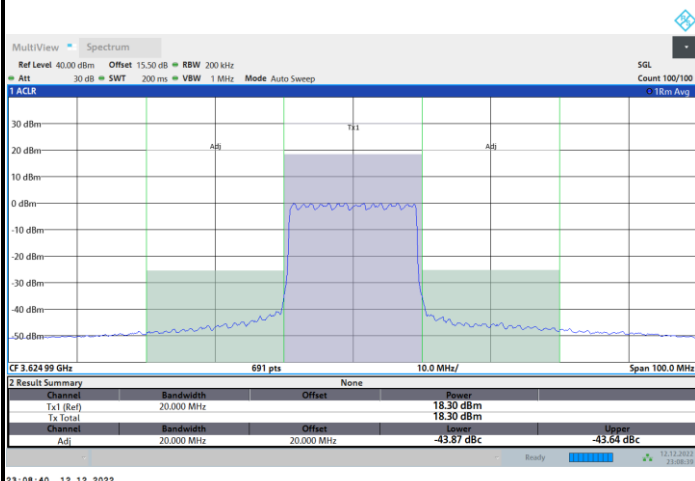
1RB0



1RBmax



Full RB

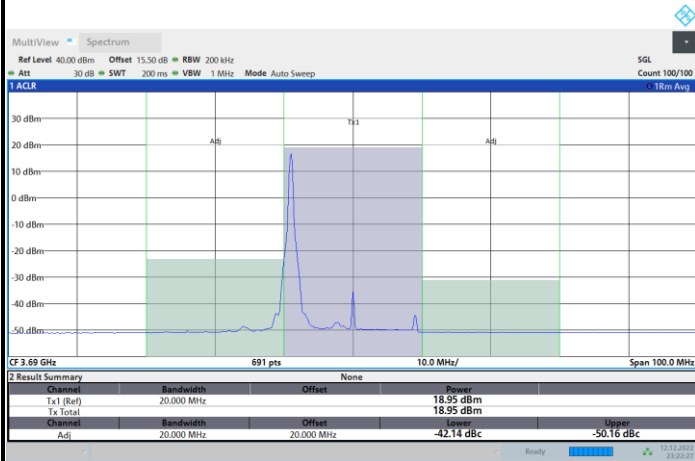




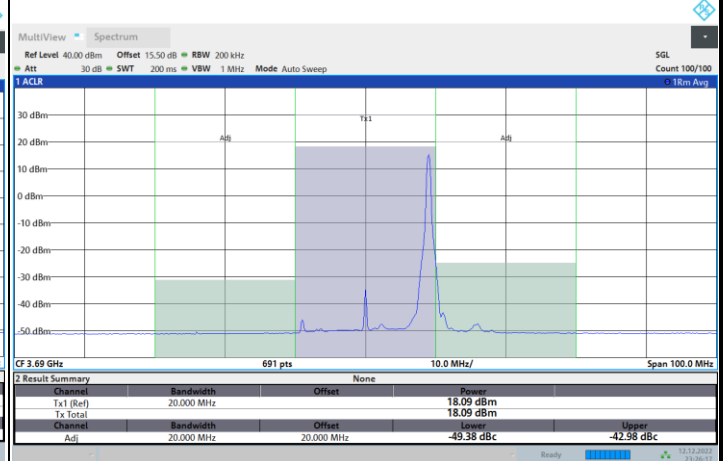
FR1 n48 / 20MHz / CP OFDM / 64QAM

Highest Channel

1RB0



1RBmax



Full RB

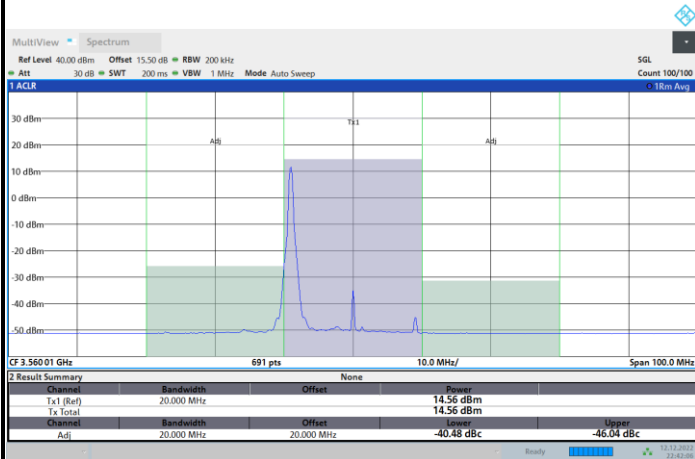




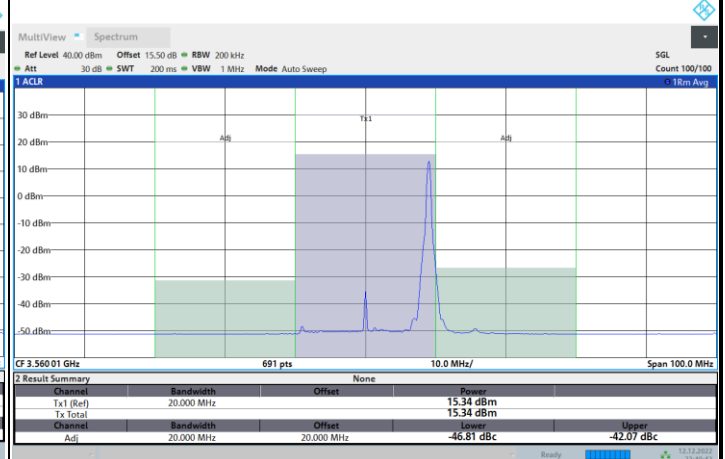
FR1 n48 / 20MHz / CP OFDM / 256QAM

Lowest Channel

1RB0



1RBmax



Full RB

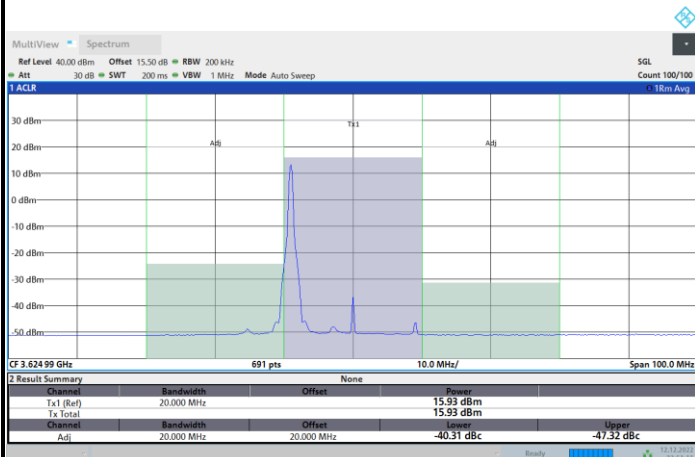




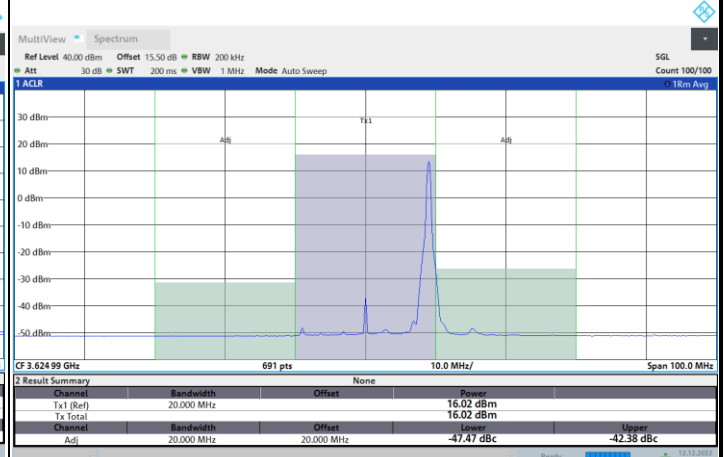
FR1 n48 / 20MHz / CP OFDM / 256QAM

Middle Channel

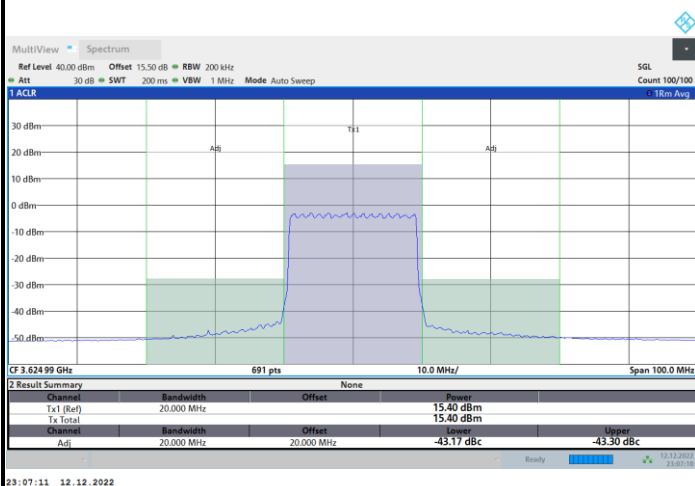
1RB0



1RBmax



Full RB

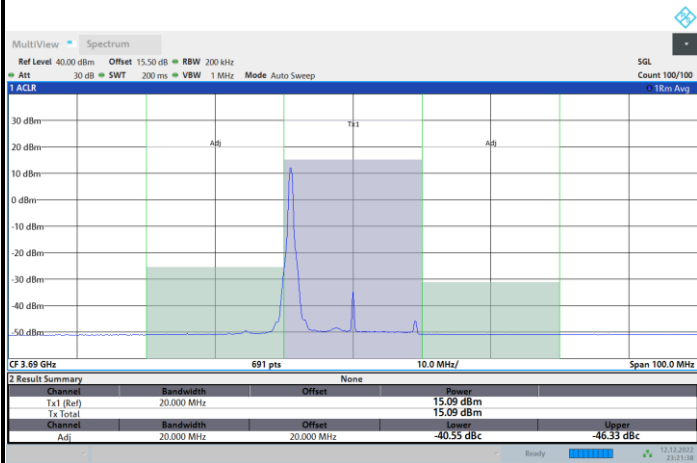




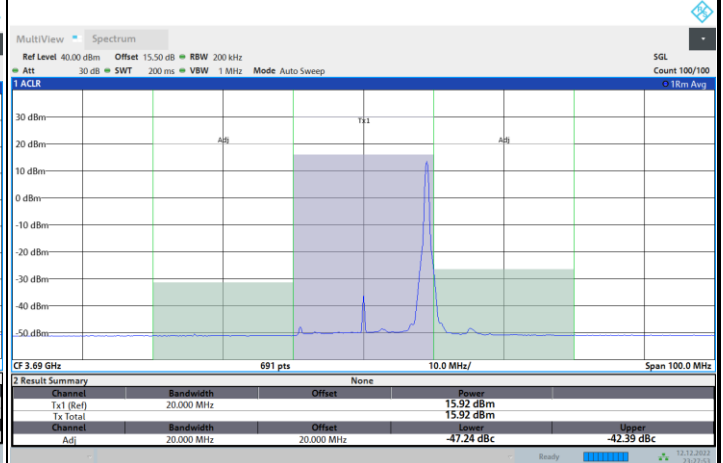
FR1 n48 / 20MHz / CP OFDM / 256QAM

Highest Channel

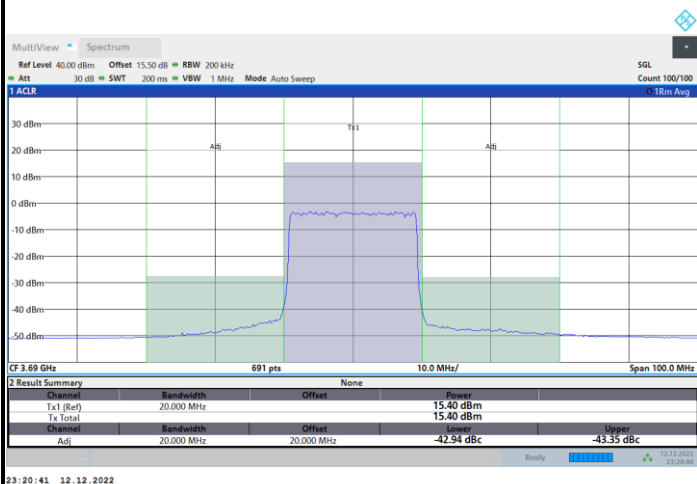
1RB0



1RBmax



Full RB

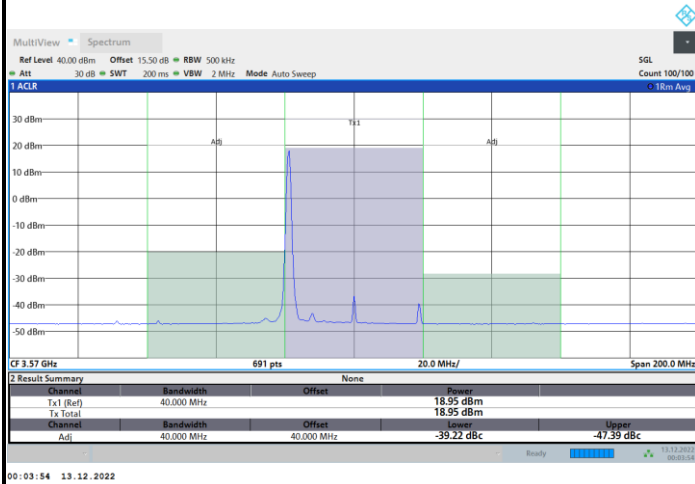




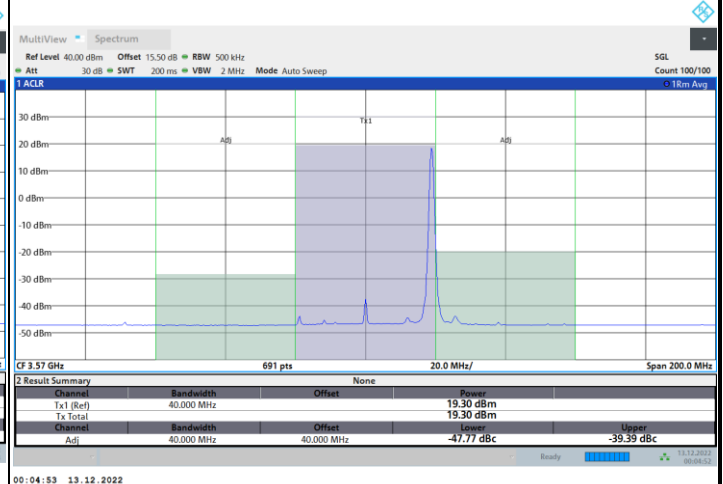
FR1 n48 / 40MHz / CP OFDM / QPSK

Lowest Channel

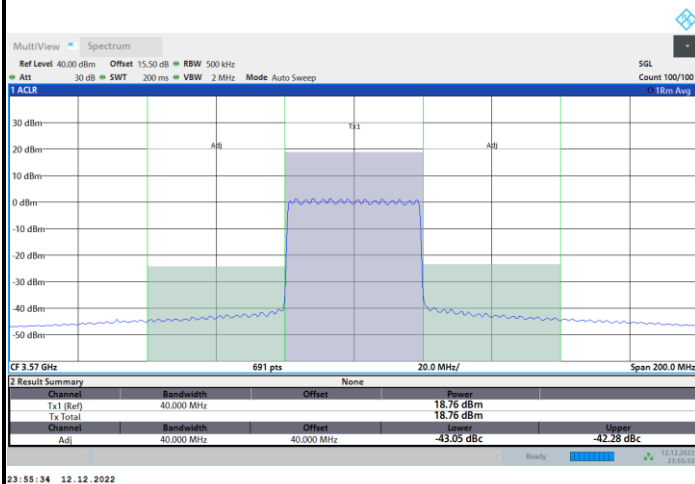
1RB0



1RBmax



Full RB

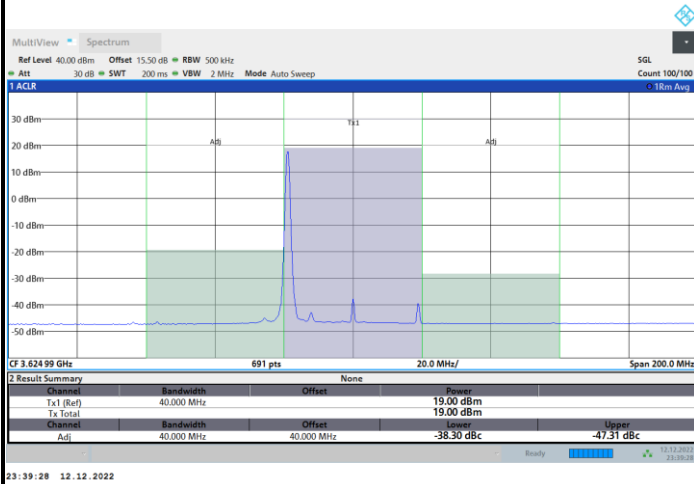




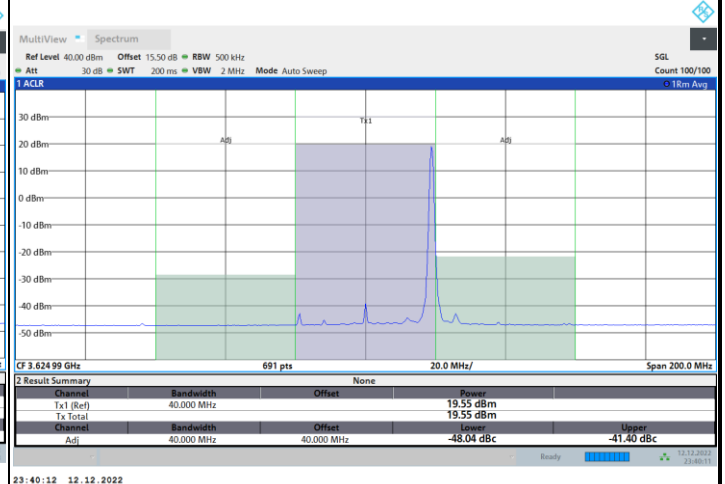
FR1 n48 / 40MHz / CP OFDM / QPSK

Middle Channel

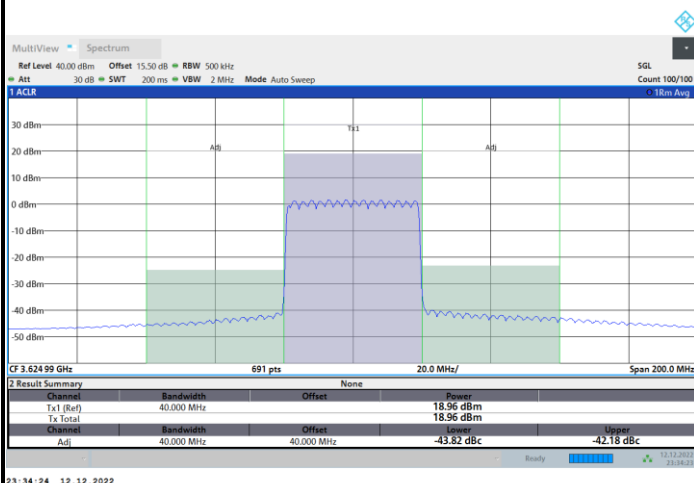
1RB0



1RBmax



Full RB

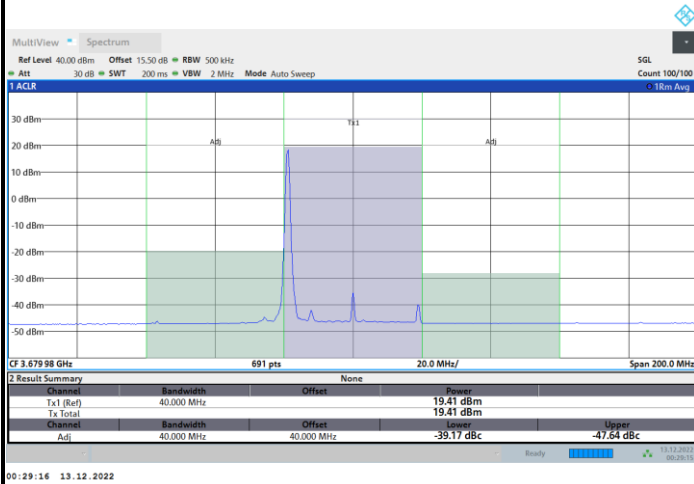




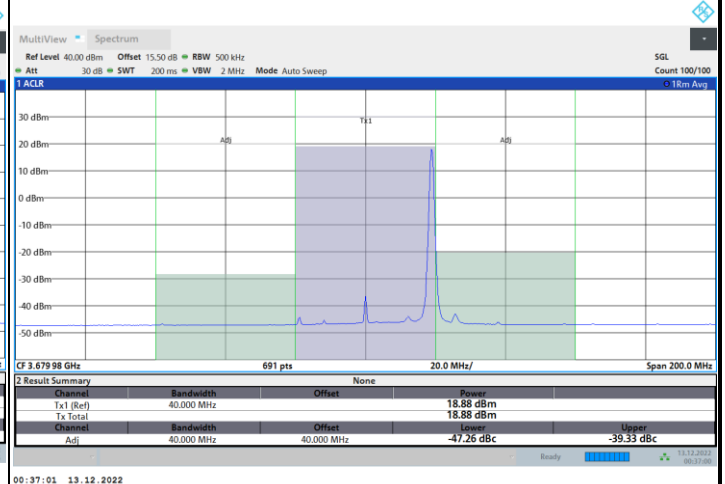
FR1 n48 / 40MHz / CP OFDM / QPSK

Highest Channel

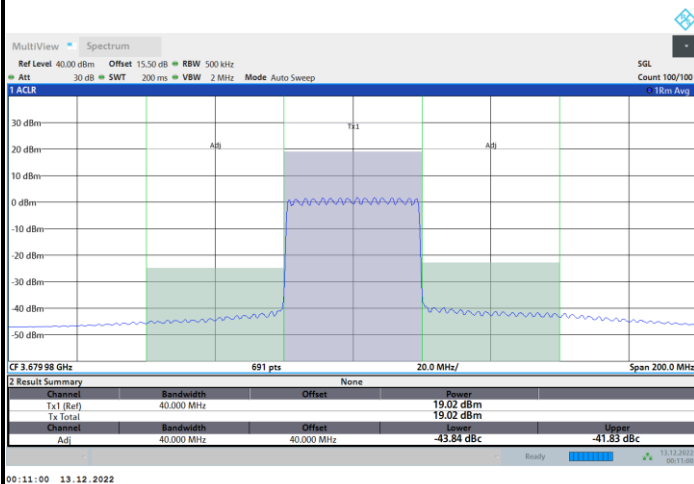
1RB0



1RBmax



Full RB

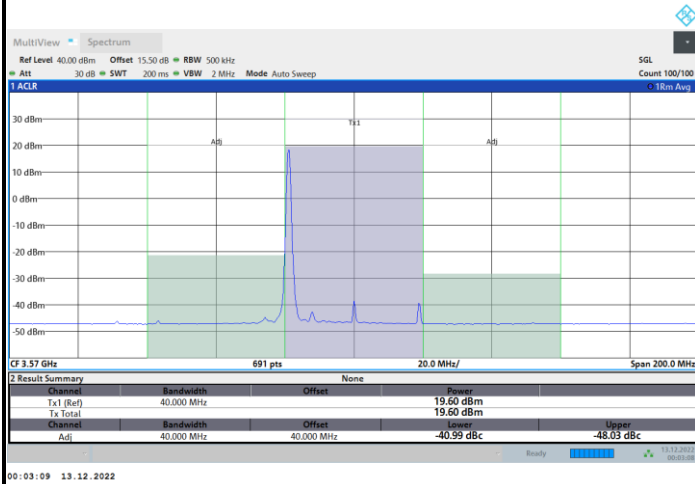




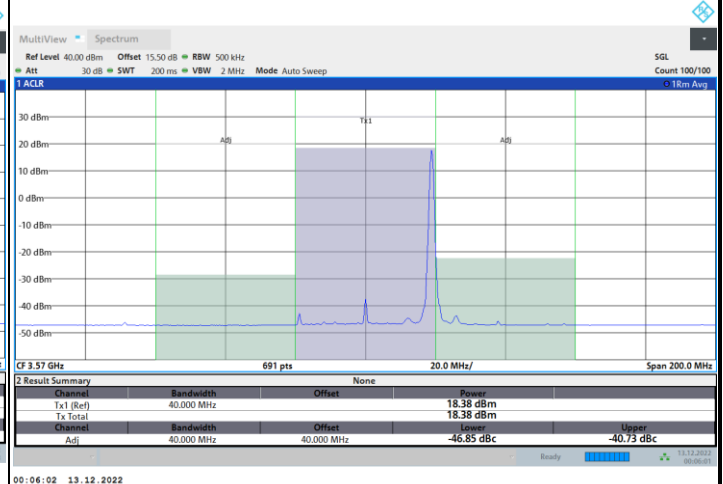
FR1 n48 / 40MHz / CP OFDM / 16QAM

Lowest Channel

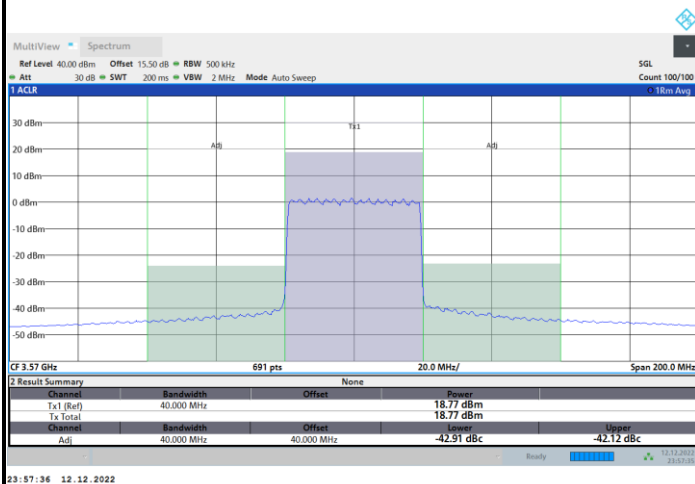
1RB0



1RBmax



Full RB

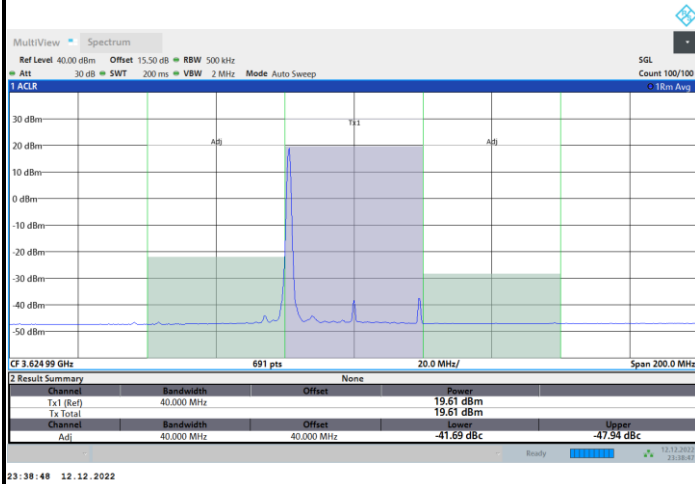




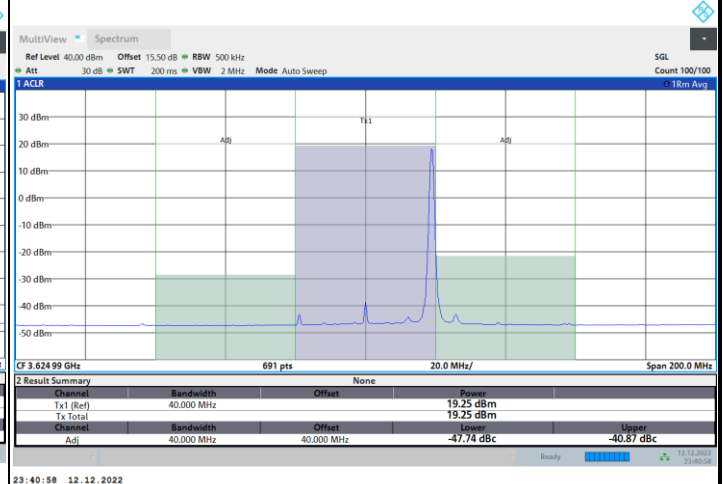
FR1 n48 / 40MHz / CP OFDM / 16QAM

Middle Channel

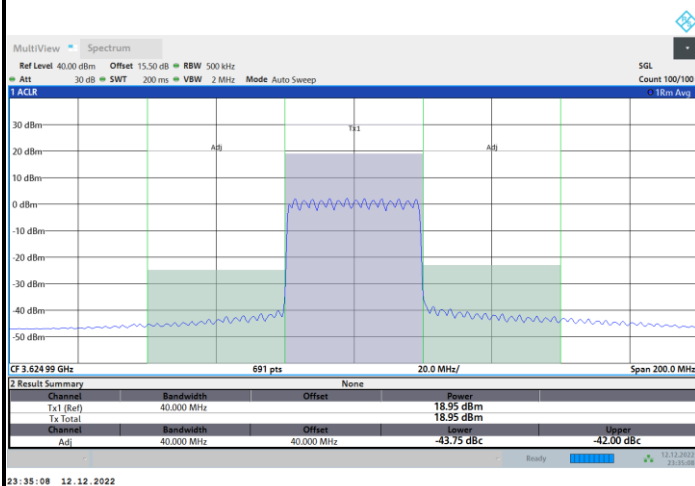
1RB0



1RBmax



Full RB

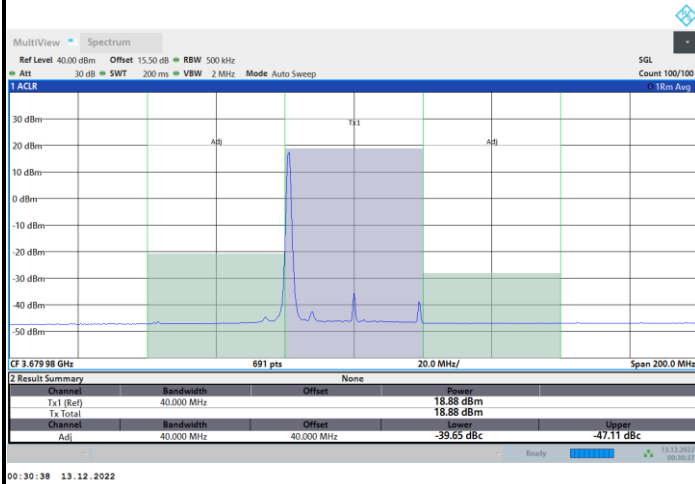




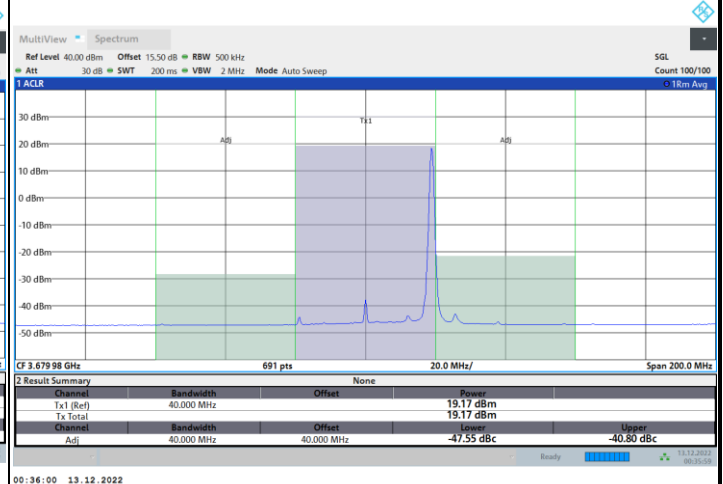
FR1 n48 / 40MHz / CP OFDM / 16QAM

Highest Channel

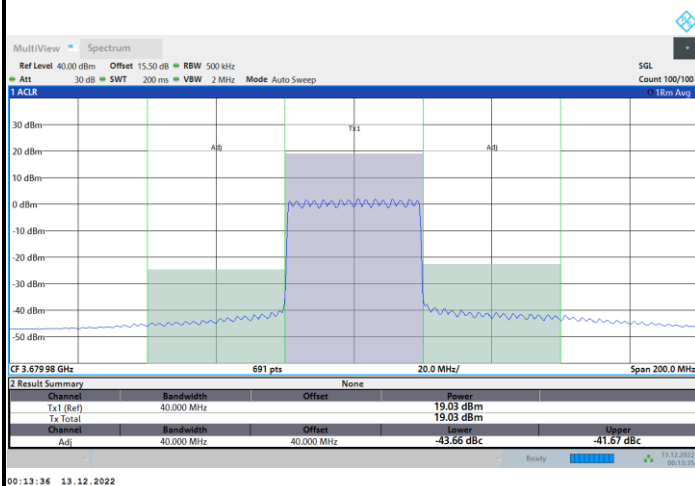
1RB0



1RBmax



Full RB

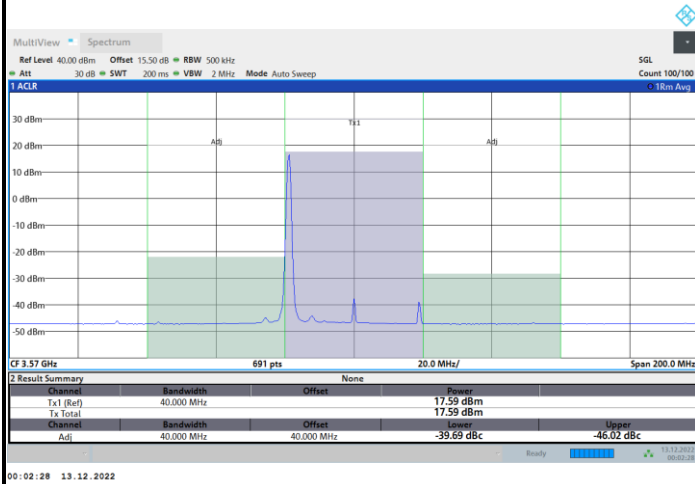




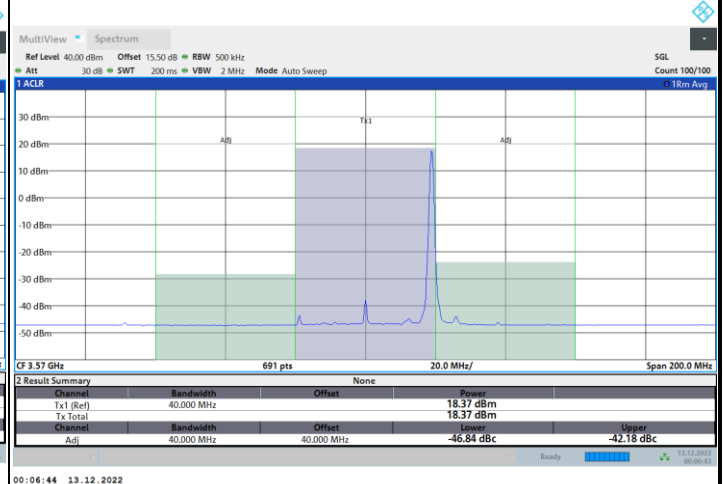
FR1 n48 / 40MHz / CP OFDM / 64QAM

Lowest Channel

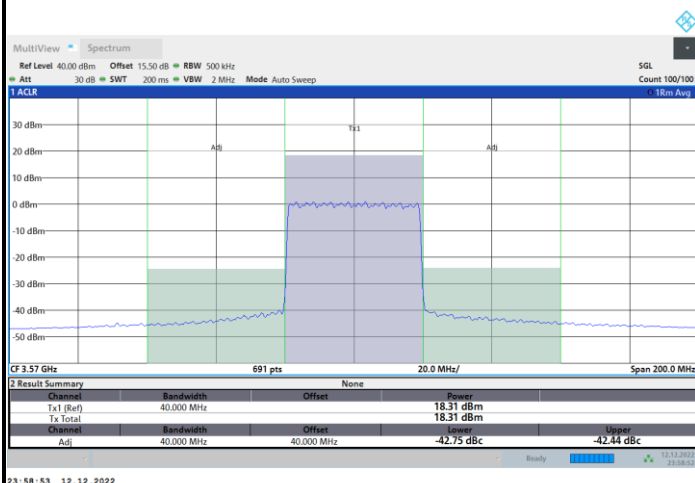
1RB0



1RBmax



Full RB

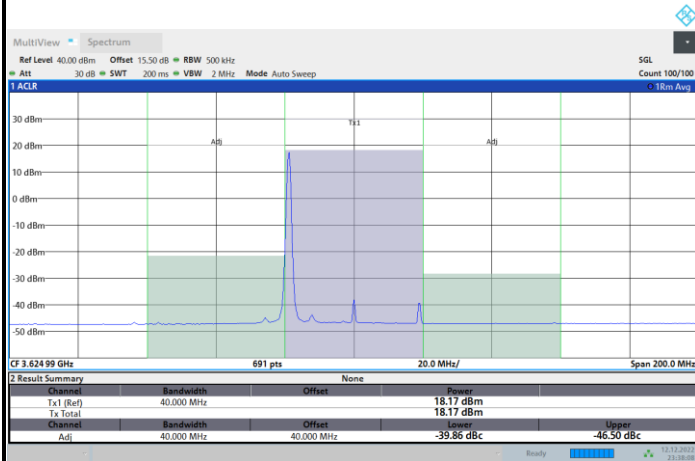




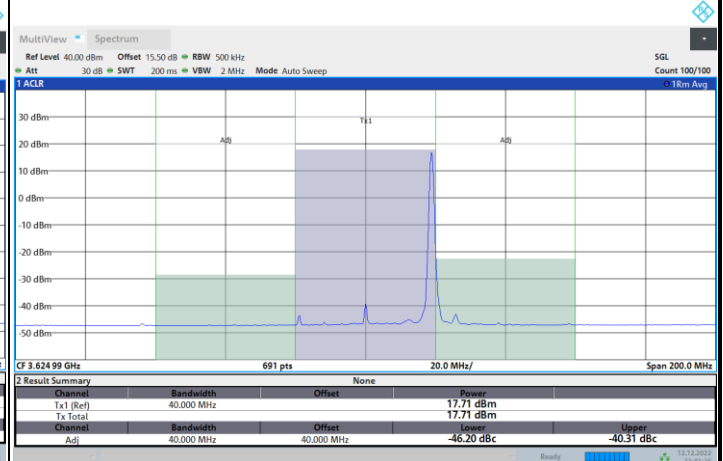
FR1 n48 / 40MHz / CP OFDM / 64QAM

Middle Channel

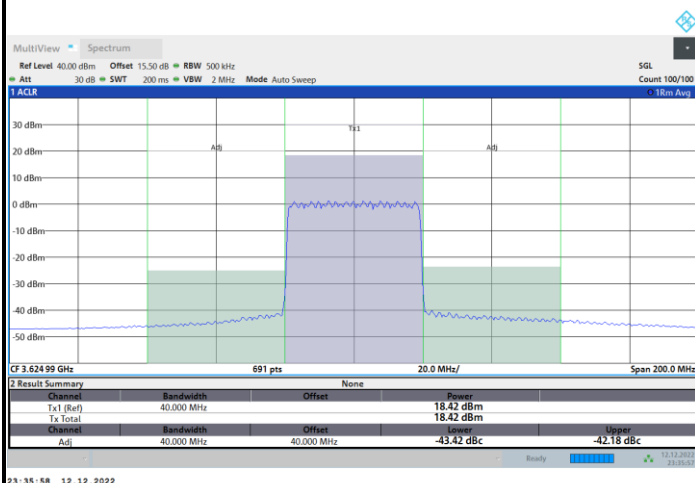
1RB0



1RBmax



Full RB

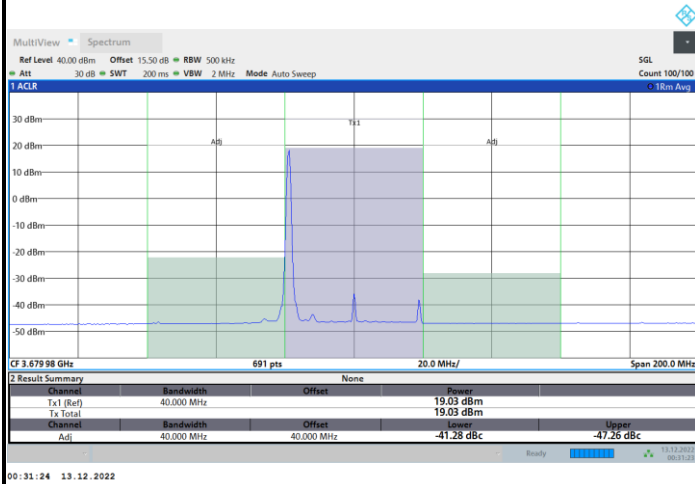




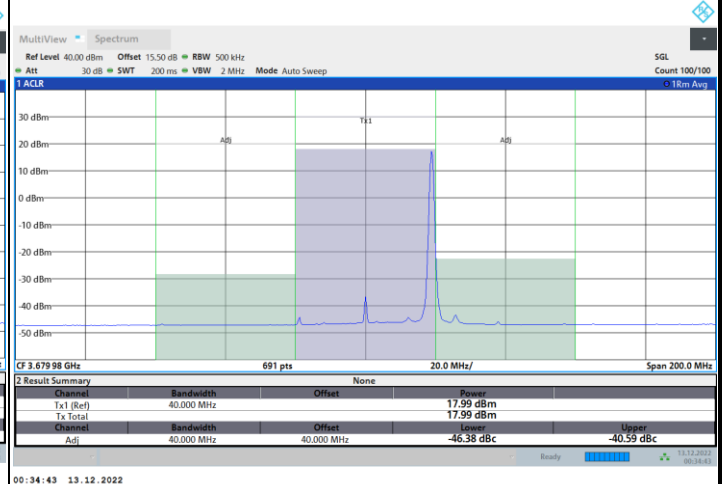
FR1 n48 / 40MHz / CP OFDM / 64QAM

Highest Channel

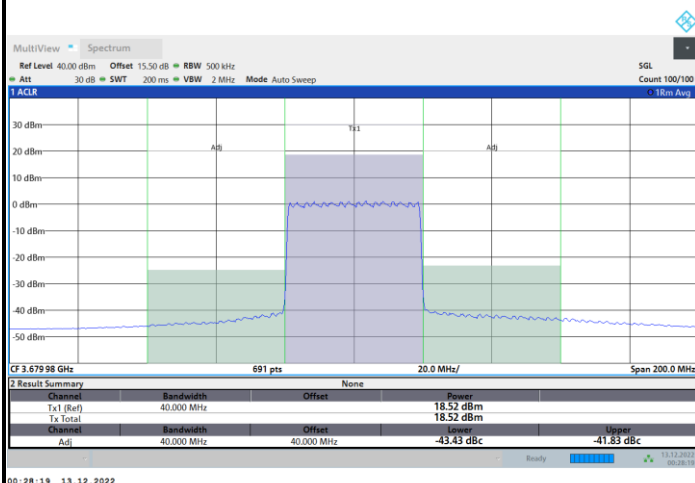
1RB0

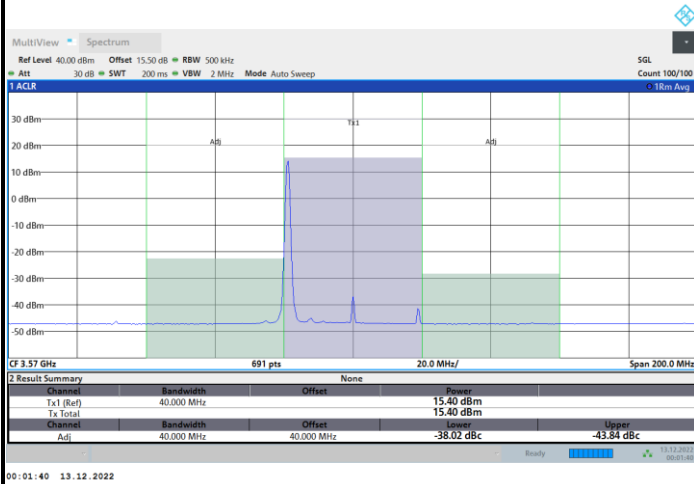
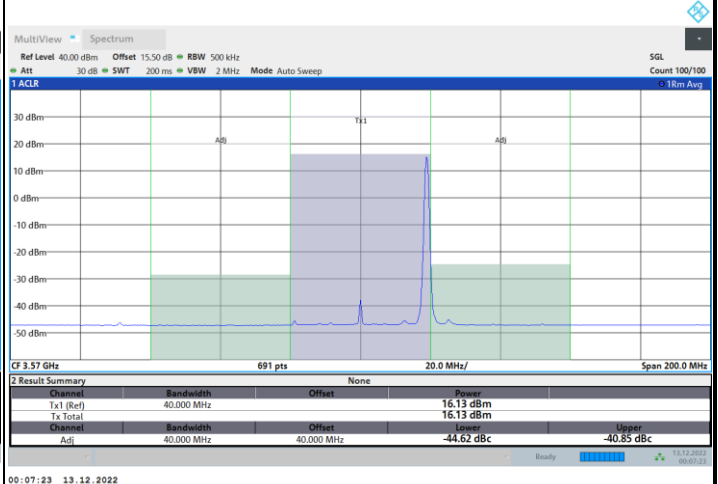
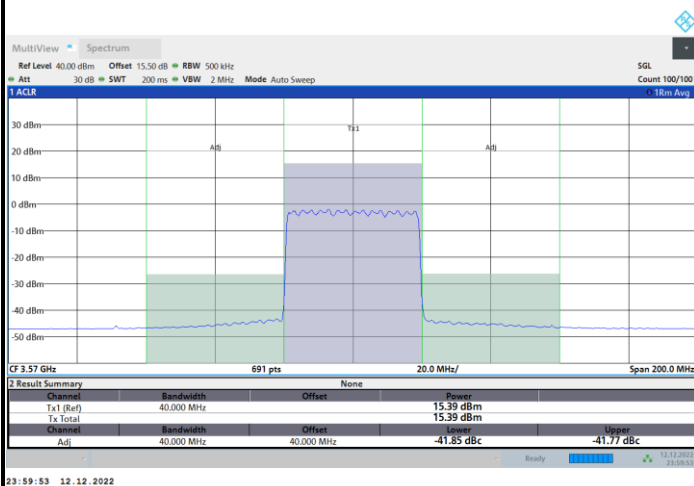


1RBmax



Full RB



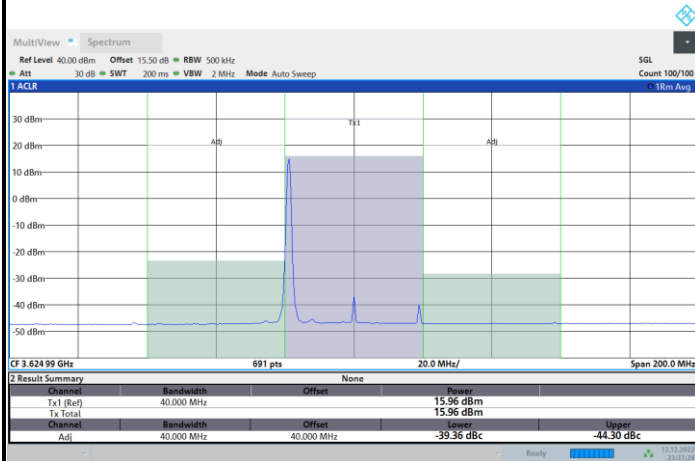
**FR1 n48 / 40MHz / CP OFDM / 256QAM****Lowest Channel****1RB0****1RBmax****Full RB**



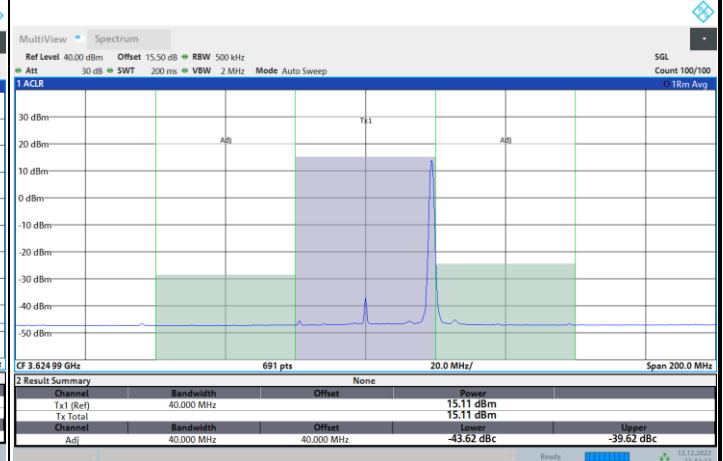
FR1 n48 / 40MHz / CP OFDM / 256QAM

Middle Channel

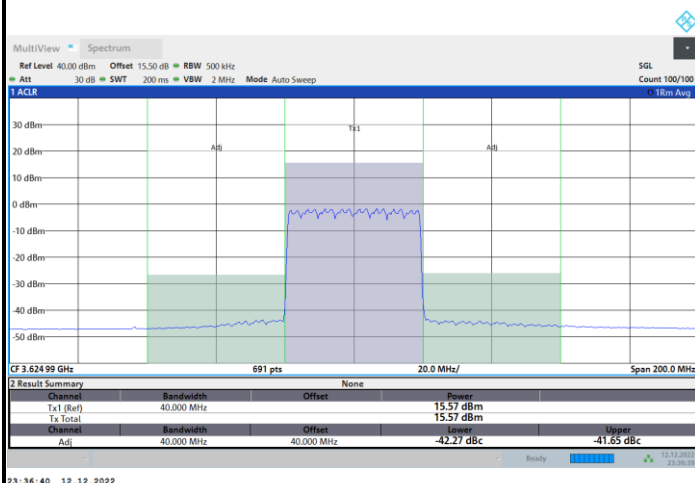
1RB0



1RBmax



Full RB

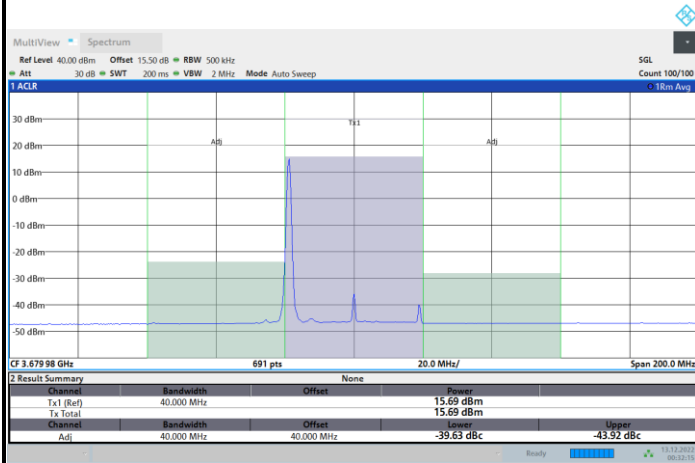




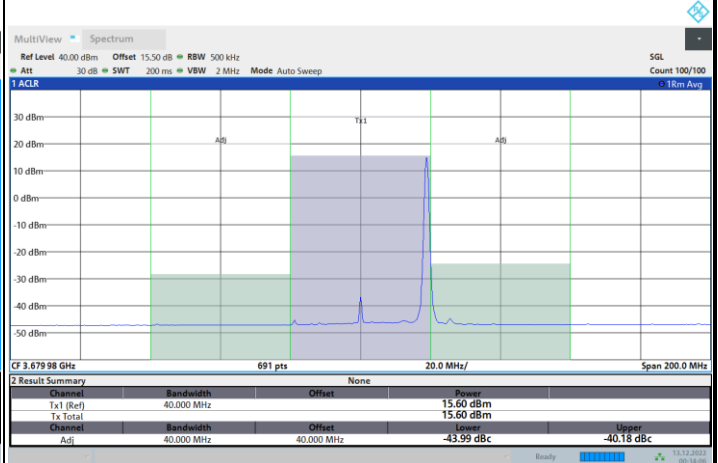
FR1 n48 / 40MHz / CP OFDM / 256QAM

Highest Channel

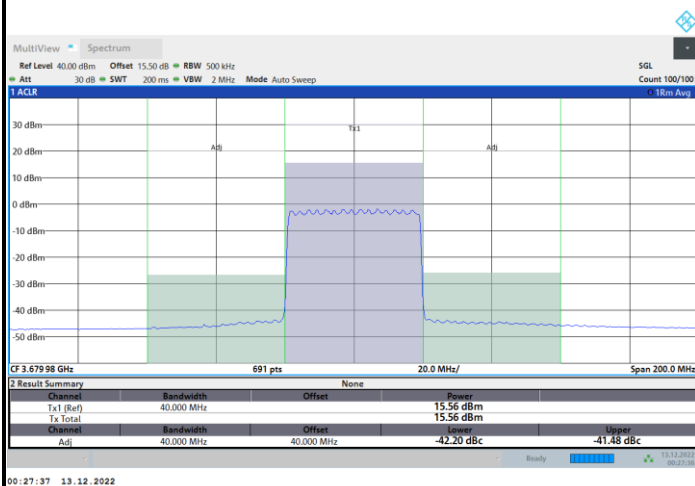
1RB0



1RBmax



Full RB

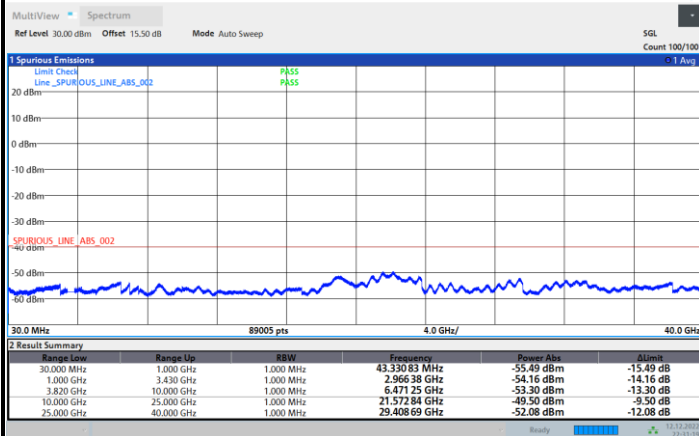




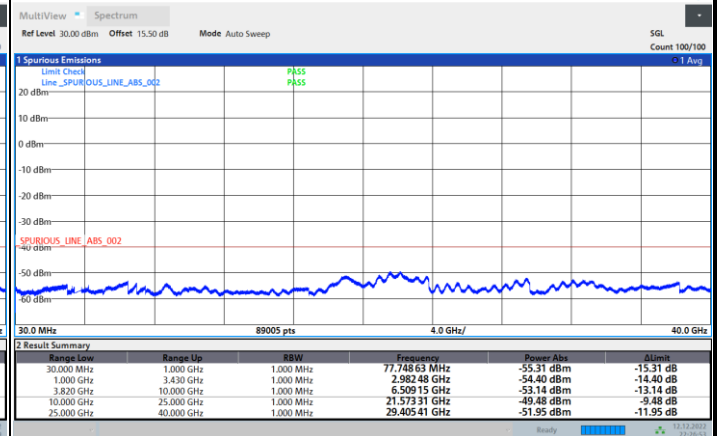
Conducted Spurious Emission

FR1 n48 / 20MHz / CP OFDM / QPSK / 1RB1

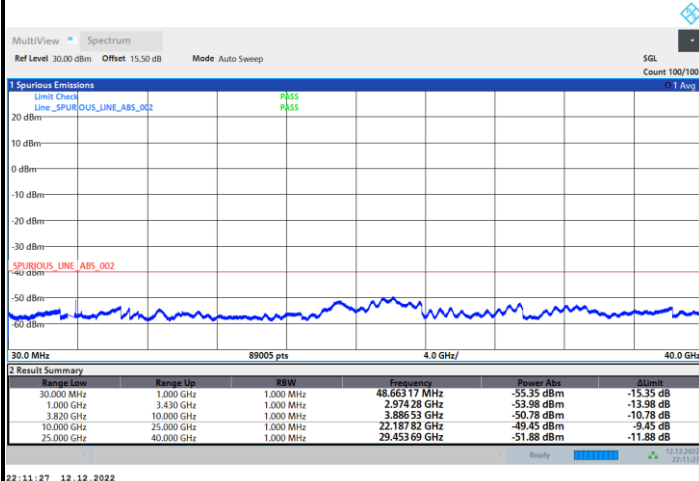
Lowest Channel



Middle Channel



Highest Channel



Frequency Stability

Test Conditions		FR1 n48 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0010	PASS
40	Normal Voltage	0.0033	
30	Normal Voltage	0.0014	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0010	
0	Normal Voltage	0.0034	
-10	Normal Voltage	0.0013	
-20	Normal Voltage	0.0000	
-30	Normal Voltage	0.0008	
20	Maximum Voltage	0.0010	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0031	

Note:

1. Normal Voltage = 3.3 V. ; Battery End Point (BEP) = 3.135 V. ; Maximum Voltage = 4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of Radiated Test

5G NR n48

5G NR n48 / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	7102	-56.03	-40	-16.03	-54.14	-65.73	1.84	11.55	H
	10653	-52.50	-40	-12.50	-55.1	-60.97	2.23	10.71	H
	14204	-49.02	-40	-9.02	-57.75	-58.65	2.65	12.28	H
	21306	-62.21	-40	-22.21	-76.58	-77.06	3.32	18.17	H
	24857	-58.93	-40	-18.93	-77.21	-73.70	3.71	18.49	H
	28408	-56.30	-40	-16.30	-76.81	-71.77	3.99	19.46	H
									H
	7102	-56.52	-40	-16.52	-54.88	-66.22	1.84	11.55	V
	10653	-49.17	-40	-9.17	-51.36	-57.64	2.23	10.71	V
	14204	-49.26	-40	-9.26	-57.86	-58.89	2.65	12.28	V
	21306	-62.79	-40	-22.79	-76.85	-77.64	3.32	18.17	V
	24857	-59.54	-40	-19.54	-77.5	-74.31	3.71	18.49	V
	28408	-56.38	-40	-16.38	-76.48	-71.85	3.99	19.46	V
Middle	7232	-57.25	-40	-17.25	-55.73	-66.71	1.86	11.32	H
	10848	-51.03	-40	-11.03	-54.02	-59.41	2.22	10.59	H
	14464	-49.14	-40	-9.14	-58.11	-58.64	2.62	12.12	H
	18080	-60.50	-40	-20.50	-71.98	-74.87	3.23	17.60	H
	21696	-60.56	-40	-20.56	-75.72	-75.73	3.42	18.60	H
	25312	-58.77	-40	-18.77	-77.09	-73.77	3.77	18.77	H
									H
	7232	-56.54	-40	-16.54	-55.36	-66.00	1.86	11.32	V
	10848	-47.56	-40	-7.56	-50.32	-55.94	2.22	10.59	V
	14464	-48.58	-40	-8.58	-57.99	-58.08	2.62	12.12	V
	18080	-57.17	-40	-17.17	-68.35	-71.54	3.23	17.60	V
	21696	-61.31	-40	-21.31	-76.14	-76.48	3.42	18.60	V
	25312	-59.15	-40	-19.15	-77.18	-74.15	3.77	18.77	V



Highest	7362	-55.57	-40	-15.57	-54.36	-65.03	1.92	11.38	H
	11043	-49.90	-40	-9.90	-53.32	-58.23	2.22	10.55	H
	14724	-49.10	-40	-9.10	-58.19	-59.10	2.59	12.59	H
	18405	-62.25	-40	-22.25	-74.04	-76.61	3.24	17.60	H
	22086	-61.53	-40	-21.53	-77.1	-76.90	3.52	18.88	H
	25767	-58.78	-40	-18.78	-77.44	-73.95	3.88	19.05	H
									H
	7362	-55.38	-40	-15.38	-54.32	-64.84	1.92	11.38	V
	11043	-47.44	-40	-7.44	-50.79	-55.77	2.22	10.55	V
	14724	-47.80	-40	-7.80	-57.84	-57.80	2.59	12.59	V
	18405	-58.94	-40	-18.94	-70.5	-73.30	3.24	17.60	V
	22086	-61.70	-40	-21.70	-76.89	-77.07	3.52	18.88	V
	25767	-58.84	-40	-18.84	-77.21	-74.01	3.88	19.05	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

**5G NR n48 MIMO**

5G NR n48 MIMO / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	7103	-57.50	-40	-17.50	-55.62	-67.20	1.84	11.54	H
	10654	-53.74	-40	-13.74	-56.34	-62.21	2.23	10.71	H
	14205	-48.62	-40	-8.62	-57.35	-58.25	2.65	12.28	H
	21307	-63.08	-40	-23.08	-75.95	-77.93	3.32	18.17	H
	24858	-58.27	-40	-18.27	-76.56	-73.04	3.71	18.49	H
	28410	-55.38	-40	-15.38	-75.93	-70.85	3.99	19.45	H
									H
	7103	-57.24	-40	-17.24	-55.61	-66.94	1.84	11.54	V
	10654	-53.55	-40	-13.55	-55.74	-62.02	2.23	10.71	V
	14205	-49.55	-40	-9.55	-58.15	-59.18	2.65	12.28	V
	21307	-63.13	-40	-23.13	-75.69	-77.98	3.32	18.17	V
	24858	-58.79	-40	-18.79	-76.76	-73.56	3.71	18.49	V
	28410	-55.97	-40	-15.97	-76.11	-71.44	3.99	19.45	V
									V
Middle	7233	-57.37	-40	-17.37	-55.85	-66.83	1.86	11.32	H
	10849	-52.50	-40	-12.50	-55.49	-60.88	2.22	10.59	H
	14465	-49.48	-40	-9.48	-58.45	-58.98	2.62	12.12	H
	18081	-61.48	-40	-21.48	-71.16	-75.85	3.23	17.60	H
	21697	-61.52	-40	-21.52	-75.26	-76.69	3.43	18.60	H
	25313	-59.09	-40	-19.09	-77.57	-74.09	3.78	18.78	H
									H
	7233	-57.19	-40	-17.19	-56.01	-66.65	1.86	11.32	V
	10849	-52.07	-40	-12.07	-54.83	-60.45	2.22	10.59	V
	14465	-48.34	-40	-8.34	-57.75	-57.84	2.62	12.12	V
	18081	-61.28	-40	-21.28	-70.66	-75.65	3.23	17.60	V
	21697	-61.89	-40	-21.89	-75.3	-77.06	3.43	18.60	V
	25313	-59.58	-40	-19.58	-77.77	-74.58	3.78	18.78	V
									V



Highest	7360	-55.75	-40	-15.75	-54.53	-65.21	1.92	11.38	H
	11045	-51.14	-40	-11.14	-54.56	-59.48	2.22	10.55	H
	14724	-49.01	-40	-9.01	-58.1	-59.01	2.59	12.59	H
	18406	-63.19	-40	-23.19	-73.57	-77.55	3.24	17.60	H
	22087	-62.27	-40	-22.27	-76.56	-77.64	3.52	18.88	H
	25768	-58.75	-40	-18.75	-77.5	-73.92	3.88	19.05	H
									H
	7360	-55.90	-40	-15.90	-54.84	-65.36	1.92	11.38	V
	11045	-50.34	-40	-10.34	-53.69	-58.68	2.22	10.55	V
	14724	-48.10	-40	-8.10	-58.14	-58.10	2.59	12.59	V
	18406	-63.05	-40	-23.05	-73.19	-77.41	3.24	17.60	V
	22087	-62.58	-40	-22.58	-76.49	-77.95	3.52	18.88	V
	25768	-59.17	-40	-19.17	-77.63	-74.34	3.88	19.05	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.