

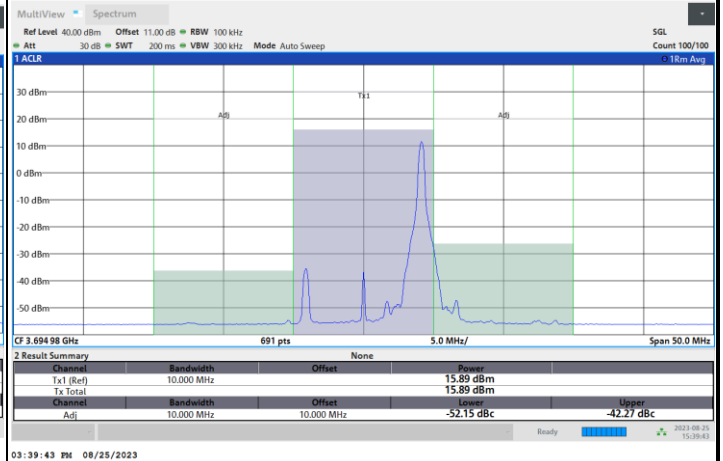
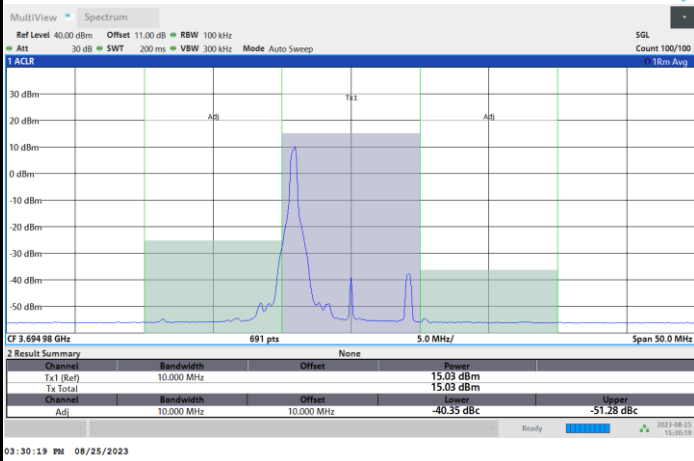


FR1 n48 / 10MHz / DFT-S OFDM / 256QAM

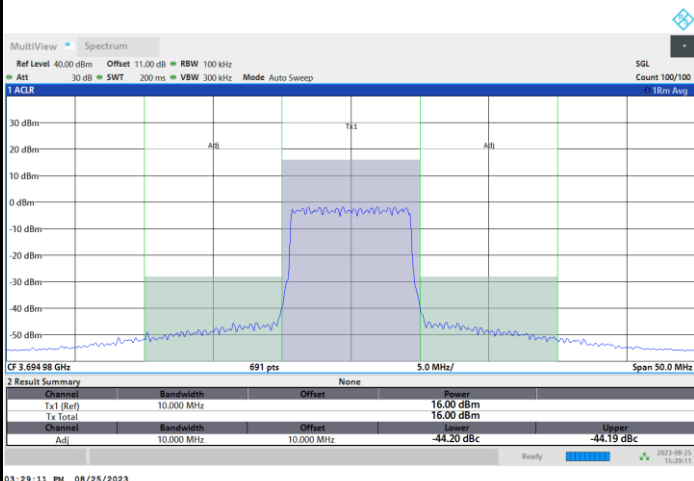
Highest Channel

1RB0

1RBmax



Full RB

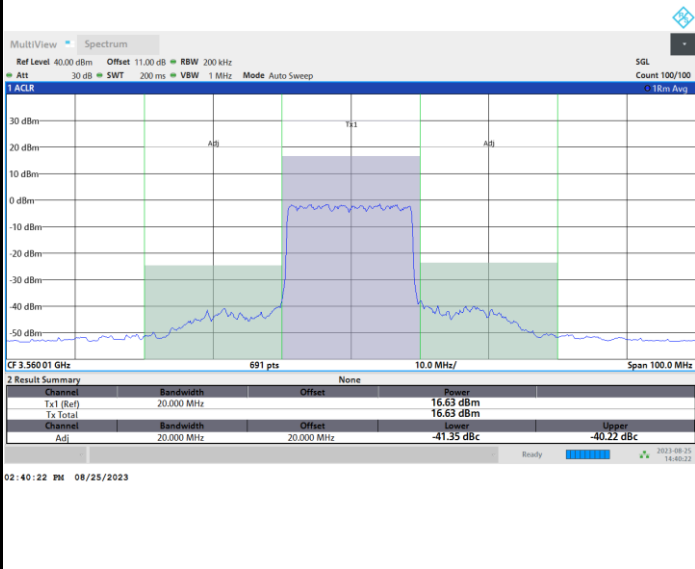




FR1 n48 / 20MHz / DFT-S OFDM / PI/2 BPSK

Lowest Channel

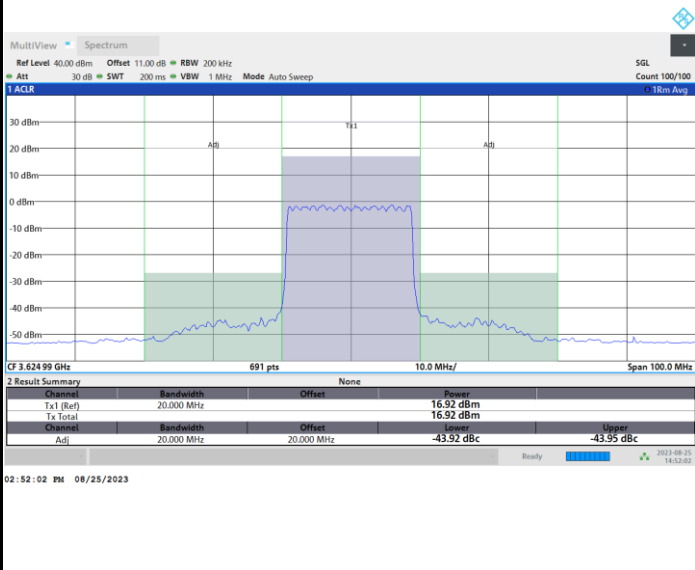
Full RB



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

Middle Channel

Full RB

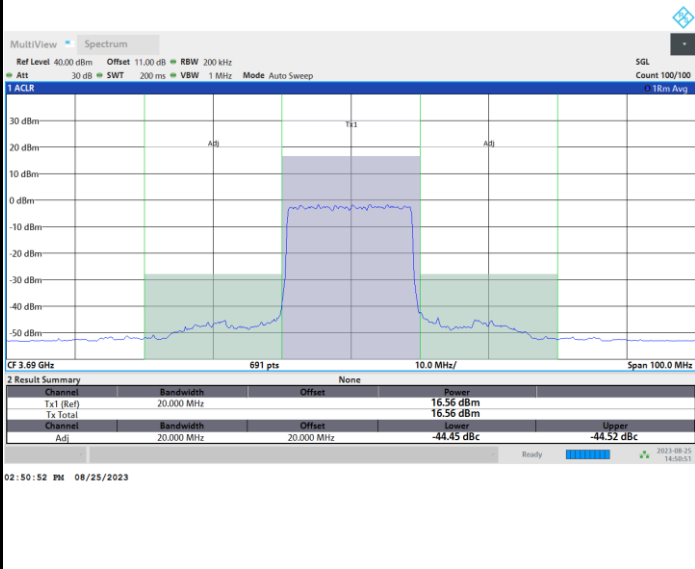




FR1 n48 / 20MHz / DFT-S OFDM / PI/2 BPSK

Highest Channel

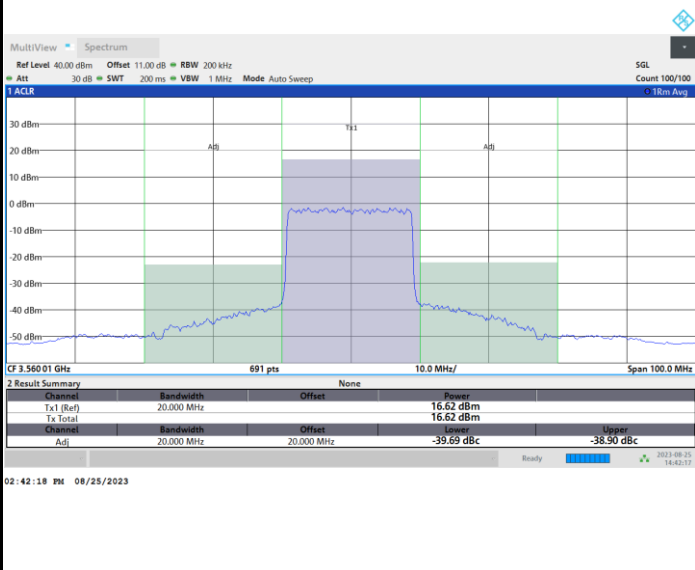
Full RB



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

Lowest Channel

Full RB

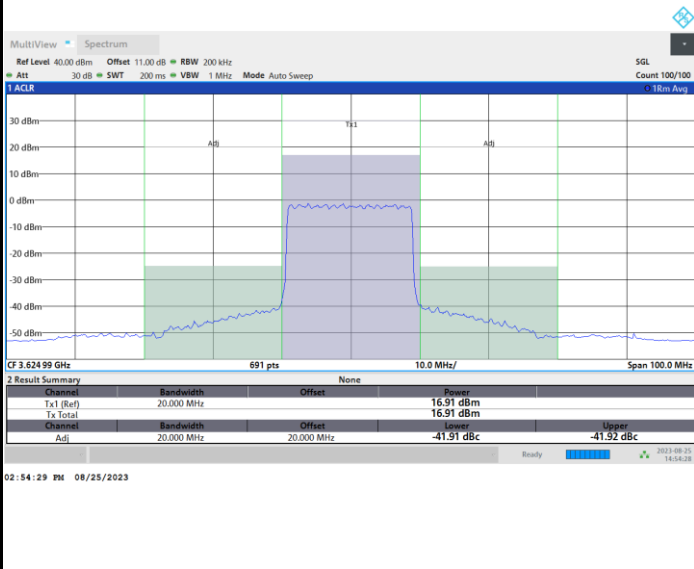




FR1 n48 / 20MHz / DFT-S OFDM / QPSK

Middle Channel

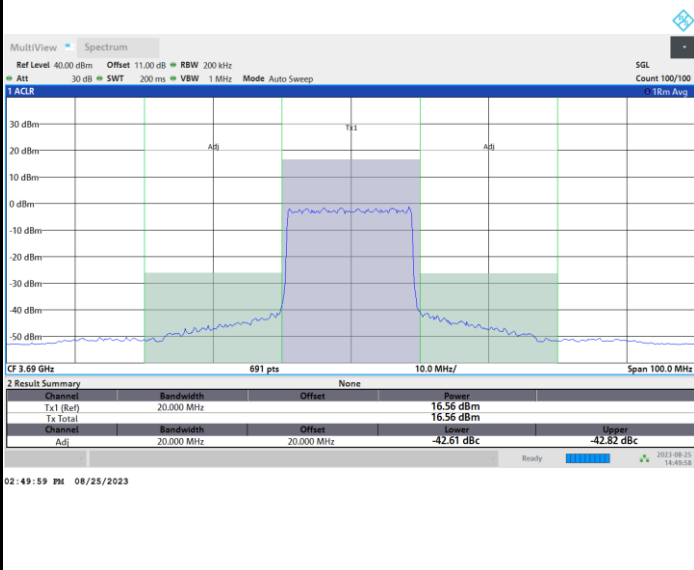
Full RB



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

Highest Channel

Full RB

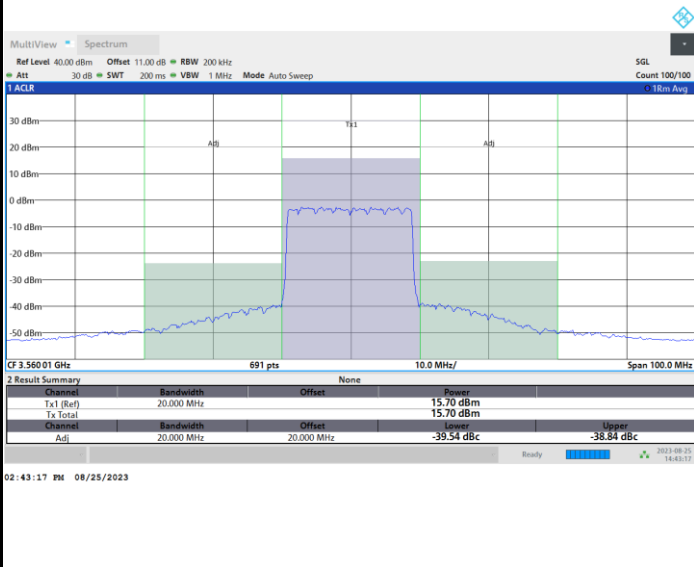




FR1 n48 / 20MHz / DFT-S OFDM / 16QAM

Lowest Channel

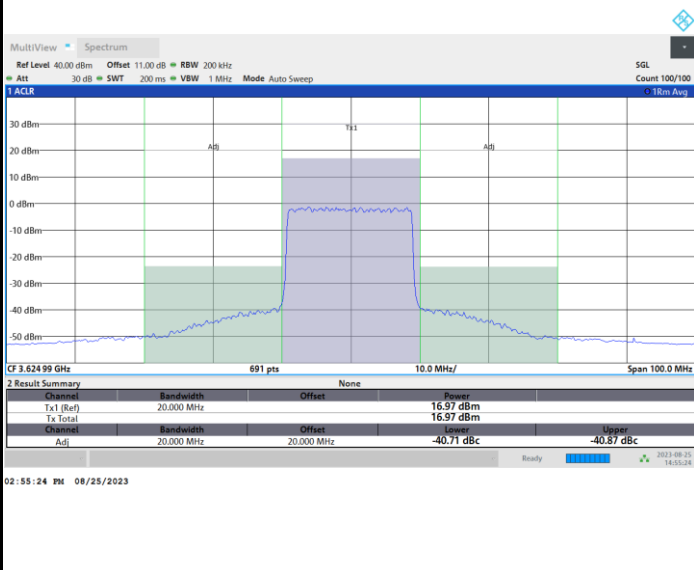
Full RB



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

Middle Channel

Full RB

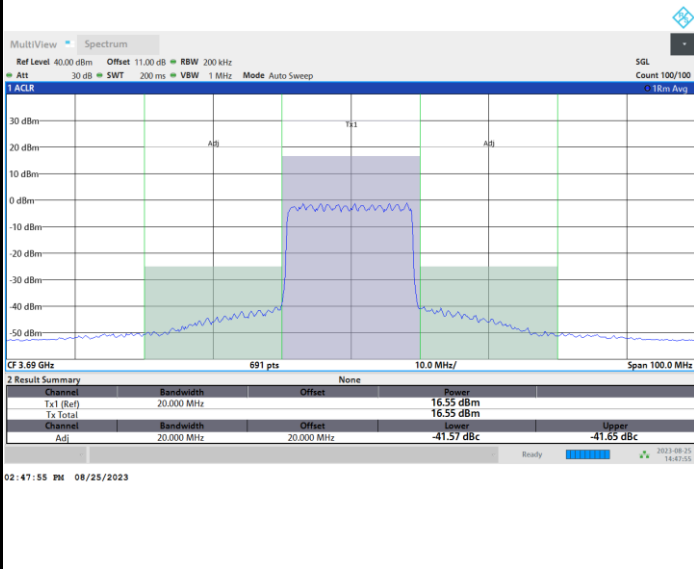




FR1 n48 / 20MHz / DFT-S OFDM / 16QAM

Highest Channel

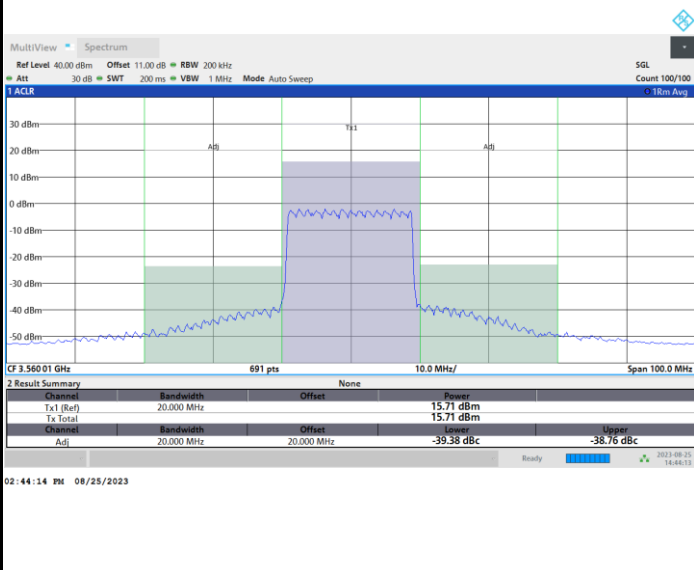
Full RB



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

Lowest Channel

Full RB

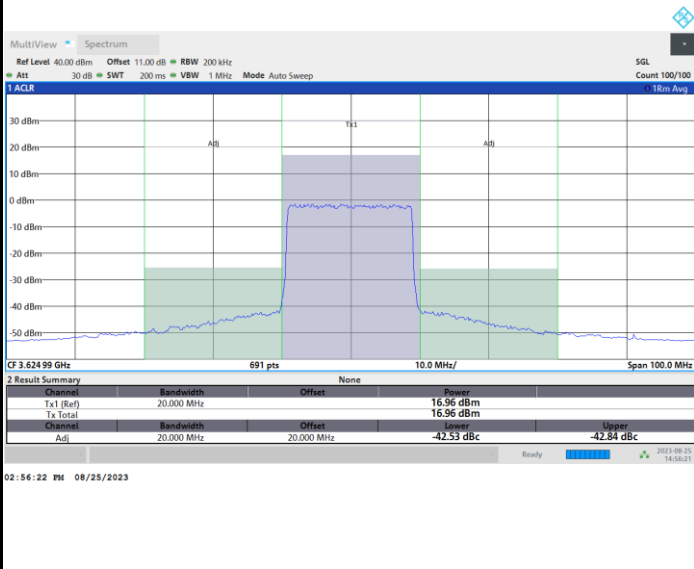




FR1 n48 / 20MHz / DFT-S OFDM / 64QAM

Middle Channel

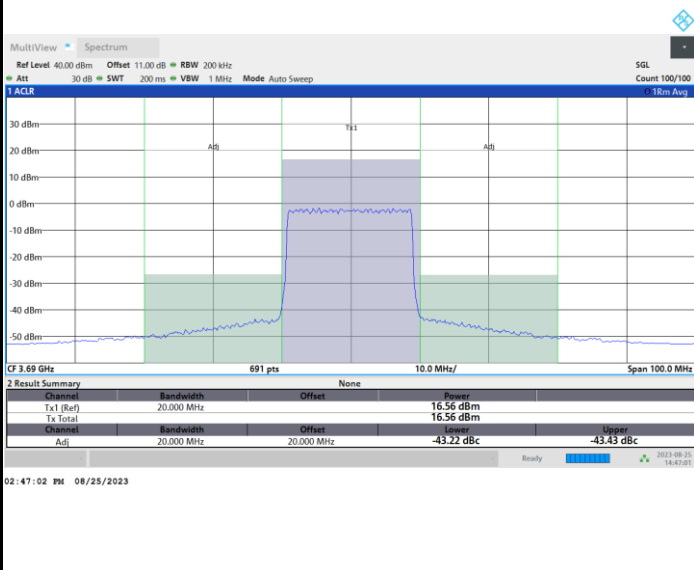
Full RB



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

Highest Channel

Full RB

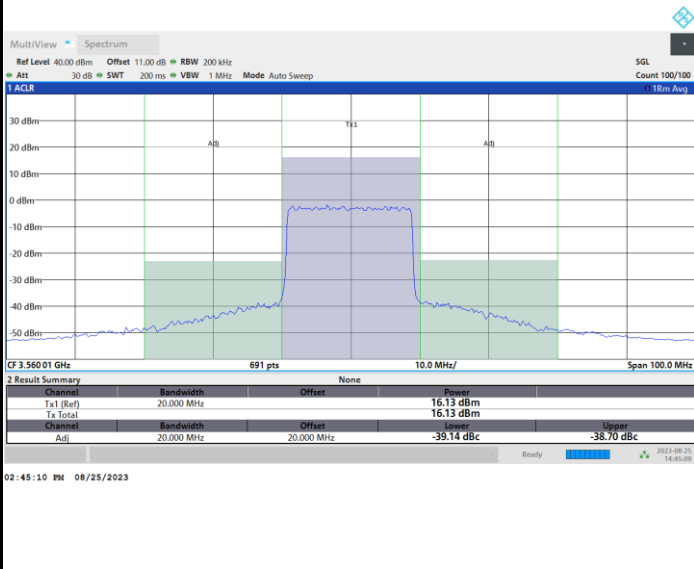




FR1 n48 / 20MHz / DFT-S OFDM / 256QAM

Lowest Channel

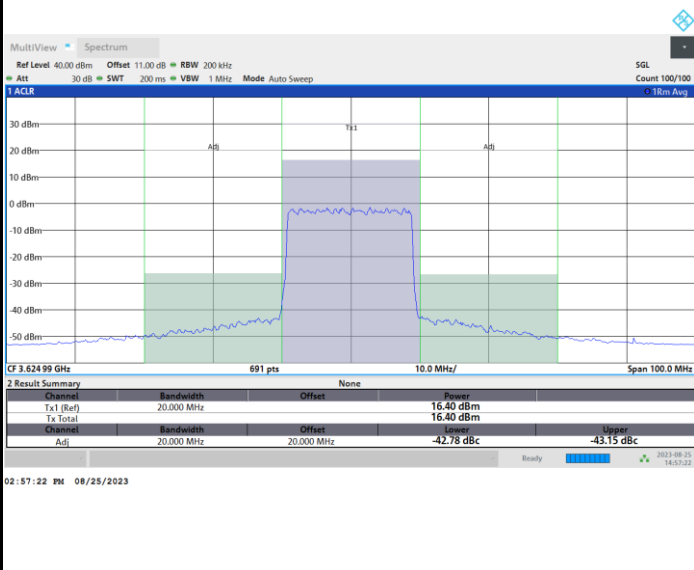
Full RB



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

Middle Channel

Full RB

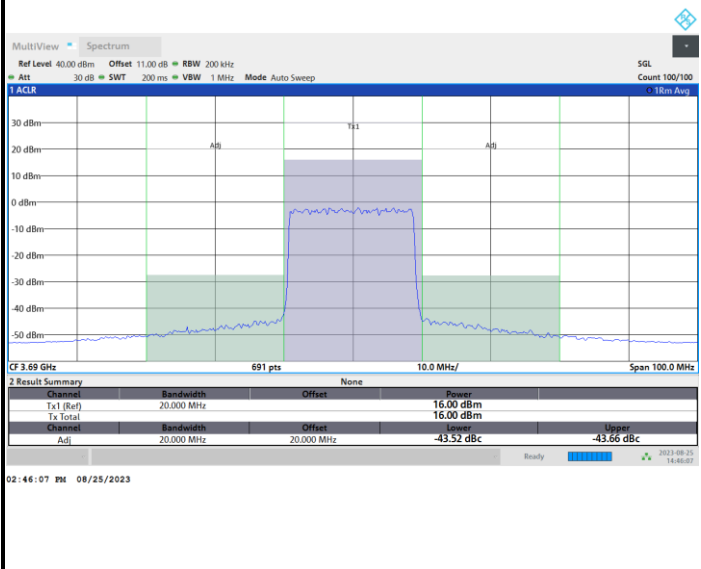




FR1 n48 / 20MHz / DFT-S OFDM / 256QAM

Highest Channel

Full RB



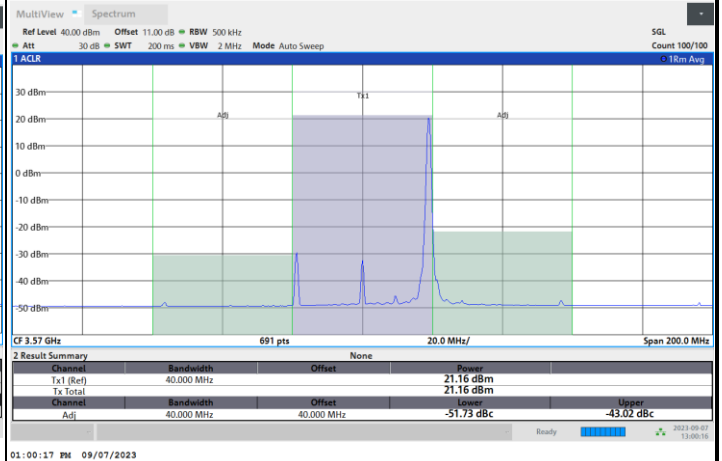
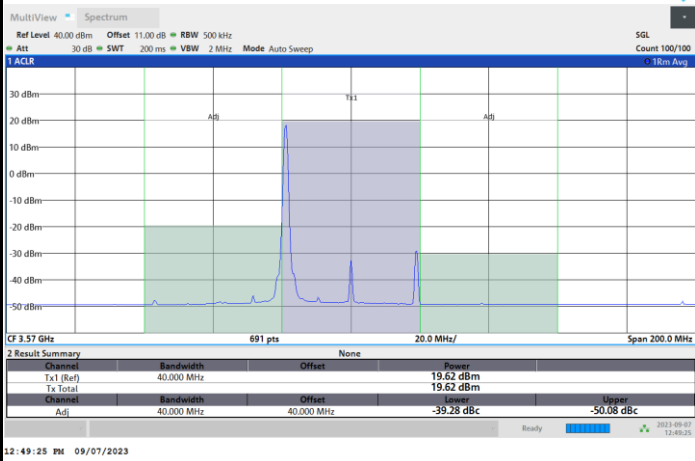


FR1 n48 / 40MHz / DFT-S OFDM / PI/2 BPSK

Lowest Channel

1RB0

1RBmax



Full RB



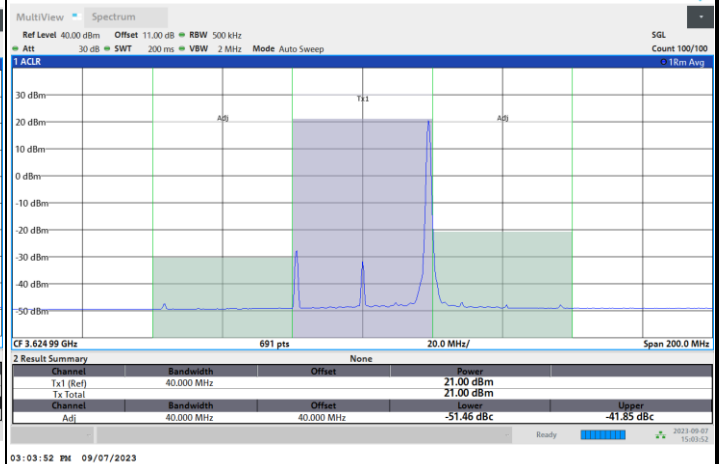
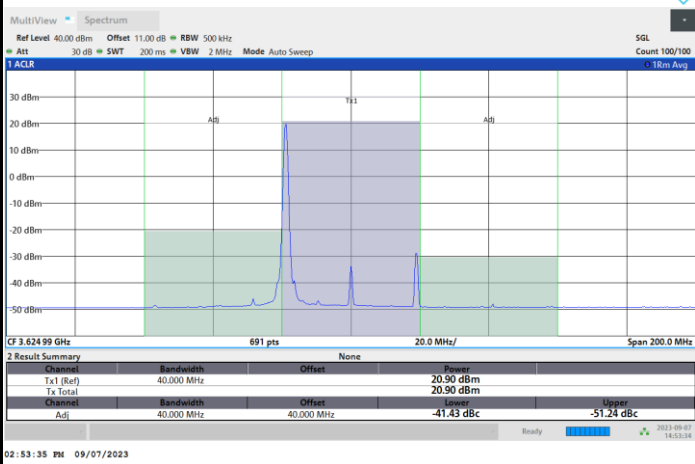


FR1 n48 / 40MHz / DFT-S OFDM / PI/2 BPSK

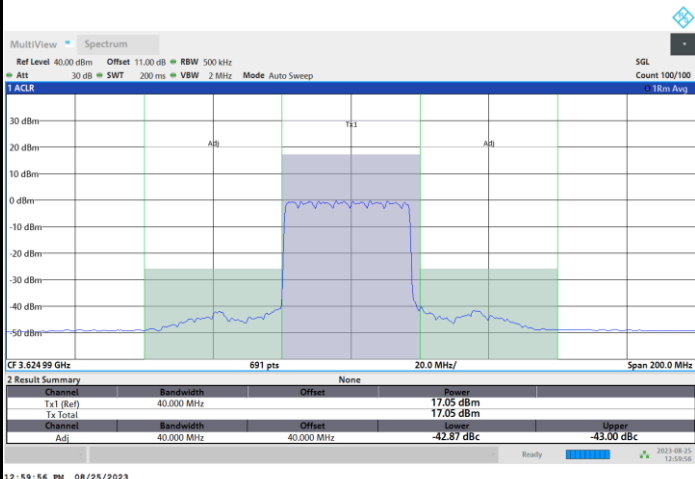
Middle Channel

1RB0

1RBmax



Full RB



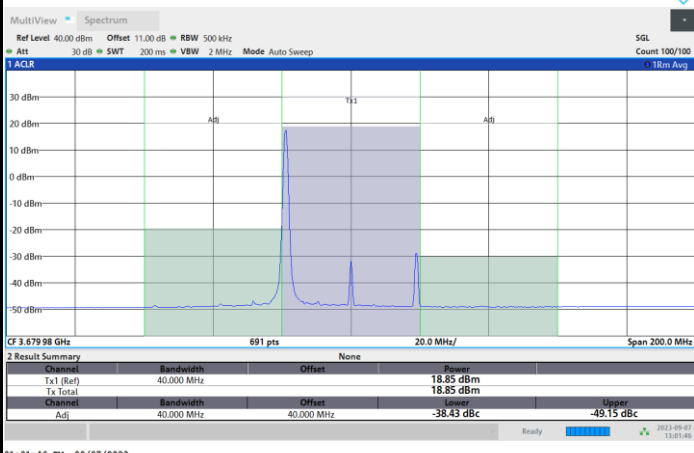


FR1 n48 / 40MHz / DFT-S OFDM / PI/2 BPSK

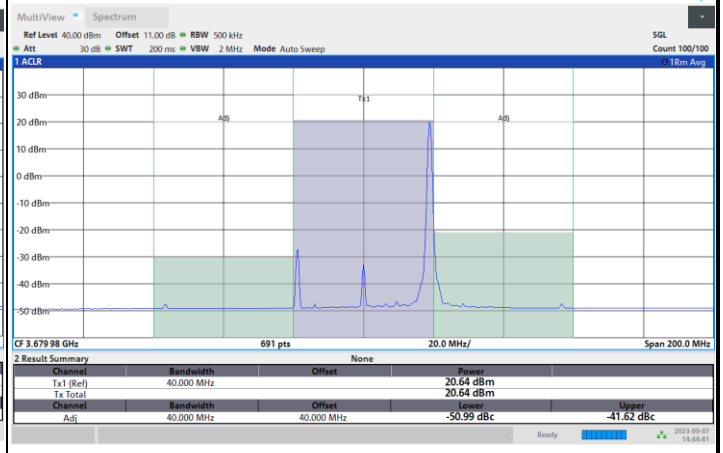
Highest Channel

1RB0

1RBmax

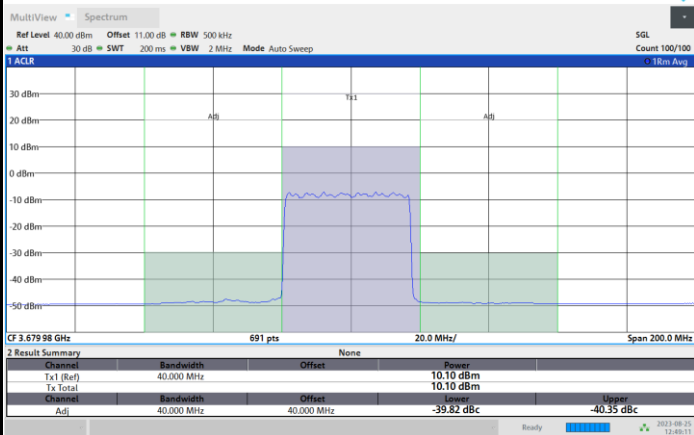


01:01:46 PM 09/07/2023



02:44:41 PM 09/07/2023

Full RB



12:49:12 PM 08/25/2023

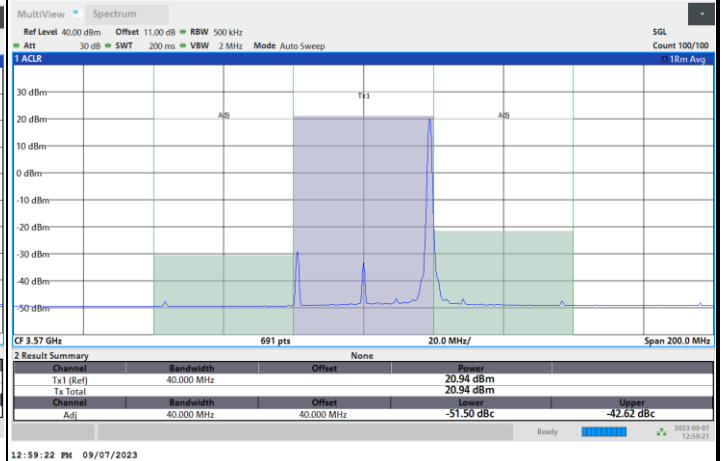
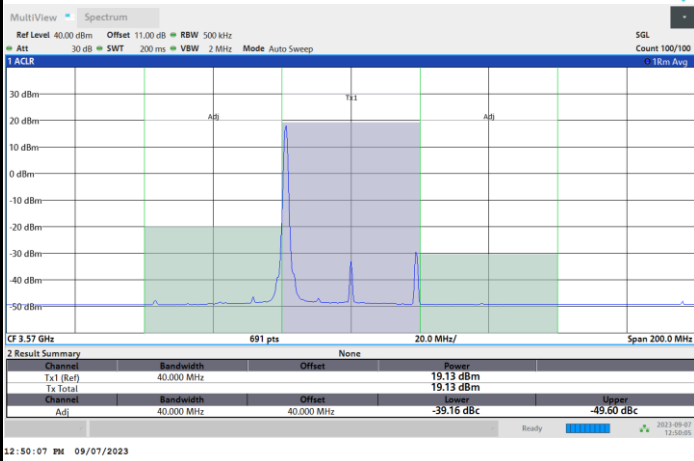


FR1 n48 / 40MHz / DFT-S OFDM / QPSK

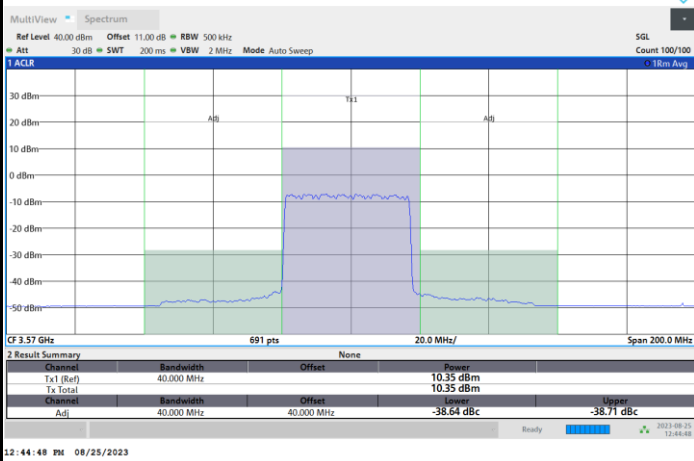
Lowest Channel

1RB0

1RBmax



Full RB



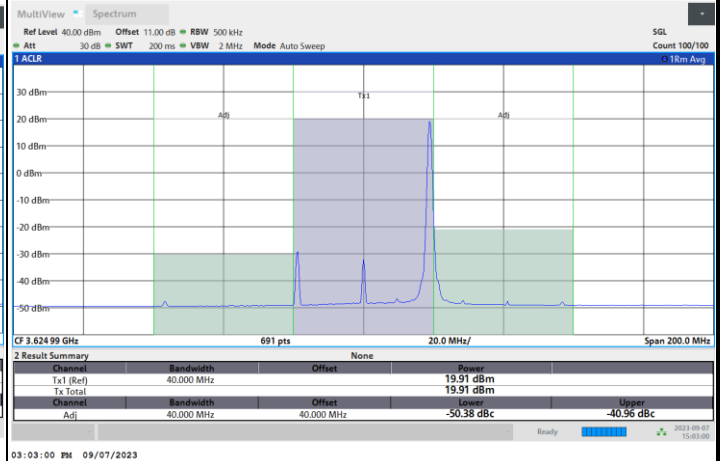
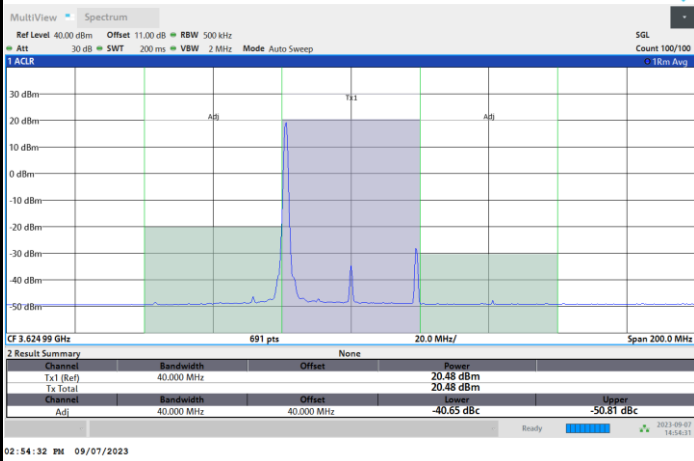


FR1 n48 / 40MHz / DFT-S OFDM / QPSK

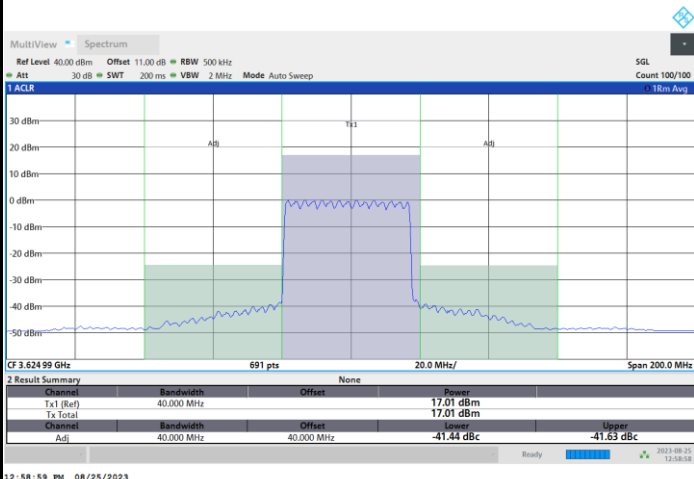
Middle Channel

1RB0

1RBmax



Full RB



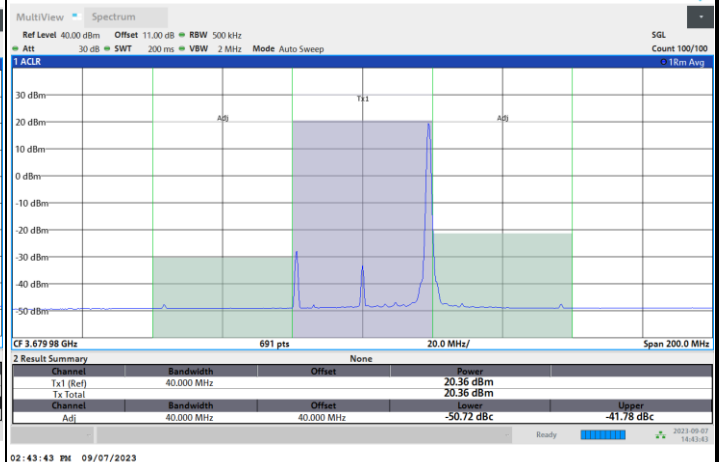
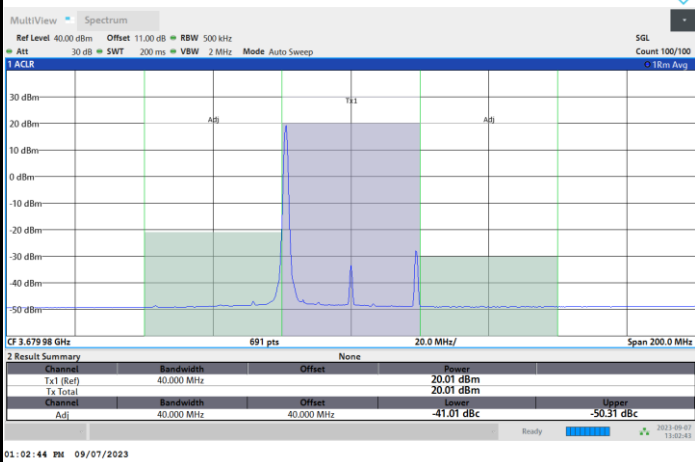


FR1 n48 / 40MHz / DFT-S OFDM / QPSK

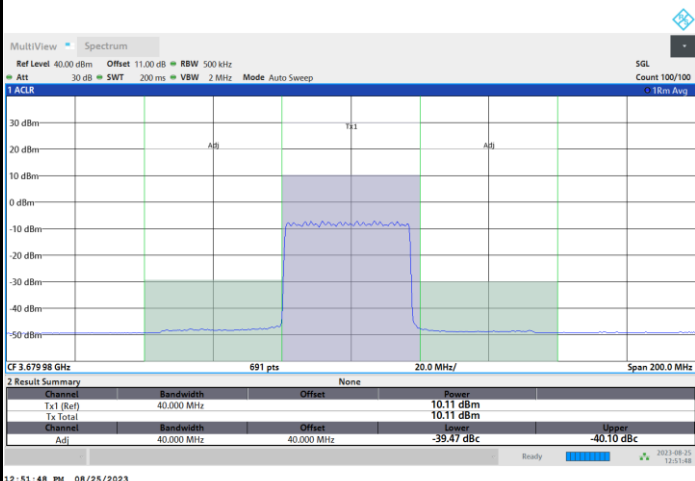
Highest Channel

1RB0

1RBmax



Full RB



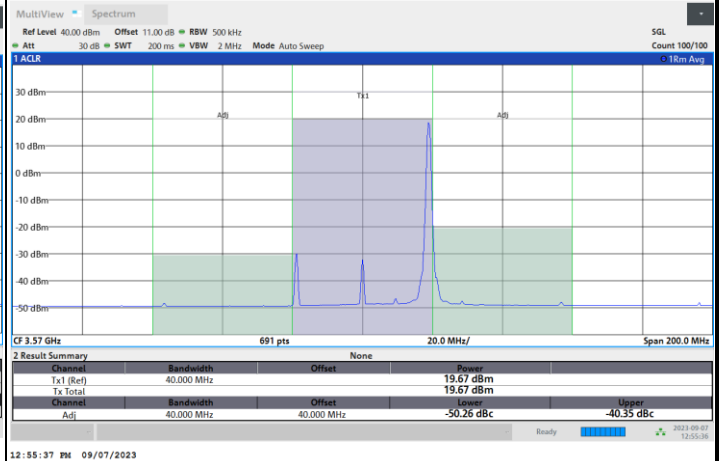
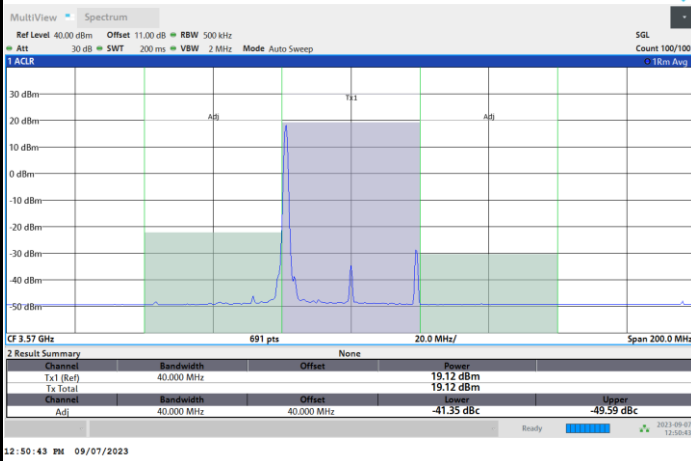


FR1 n48 / 40MHz / DFT-S OFDM / 16QAM

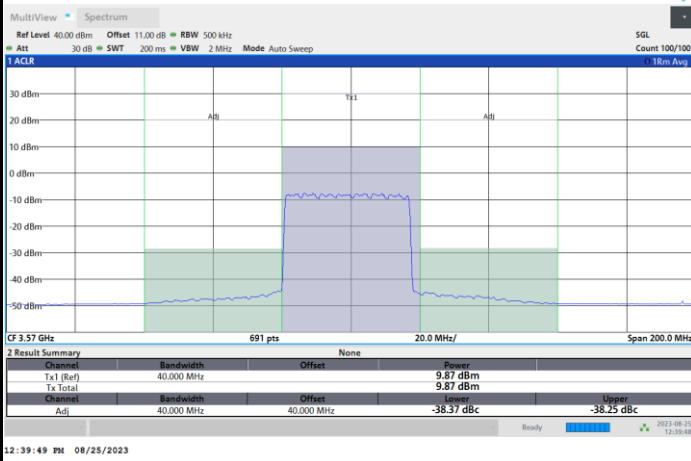
Lowest Channel

1RB0

1RBmax



Full RB



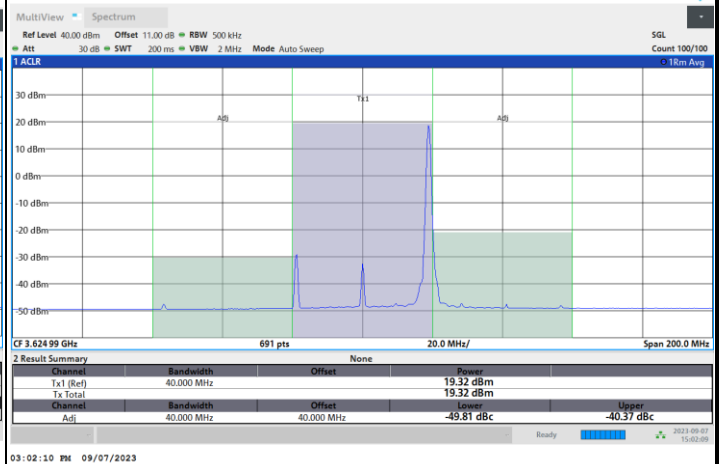
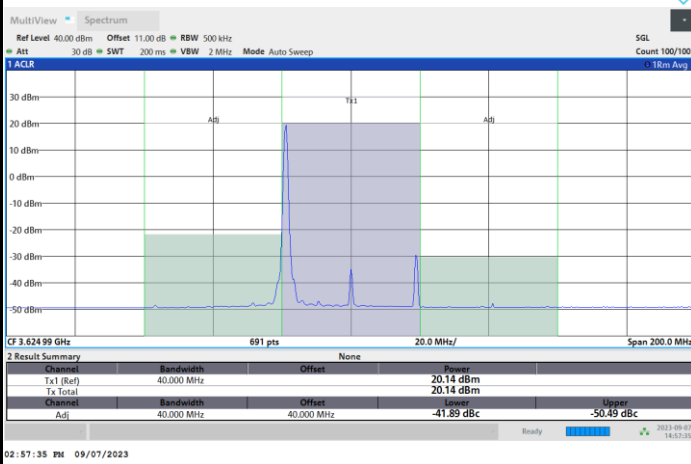


FR1 n48 / 40MHz / DFT-S OFDM / 16QAM

Middle Channel

1RB0

1RBmax



Full RB



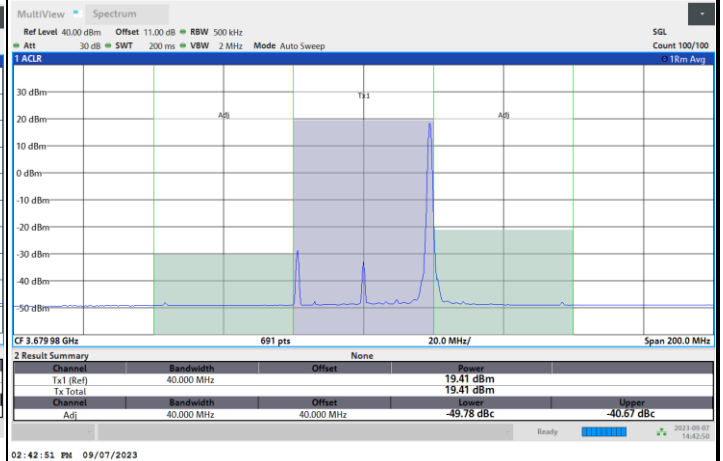
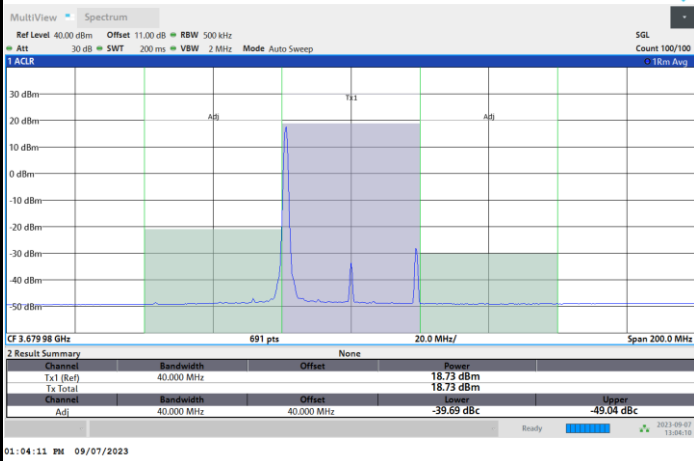


FR1 n48 / 40MHz / DFT-S OFDM / 16QAM

Highest Channel

1RB0

1RBmax



Full RB



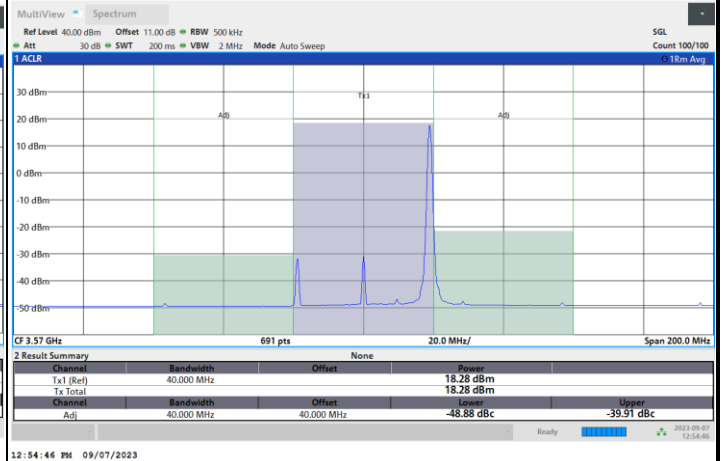
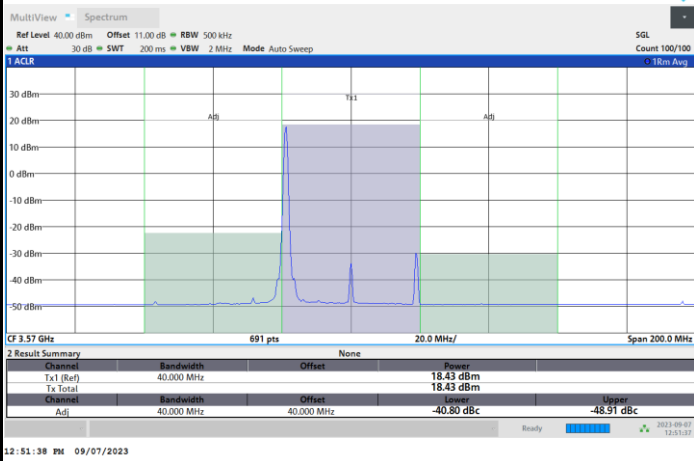


FR1 n48 / 40MHz / DFT-S OFDM / 64QAM

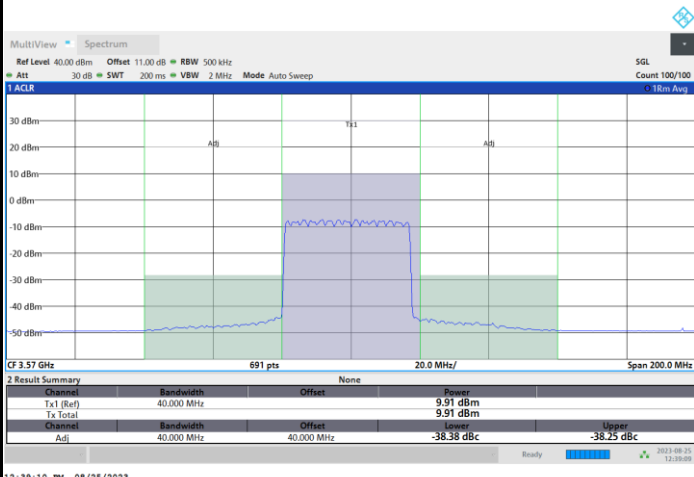
Lowest Channel

1RB0

1RBmax



Full RB



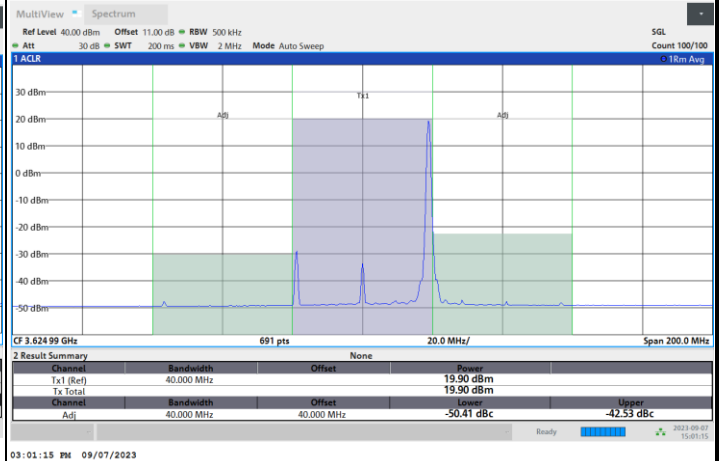
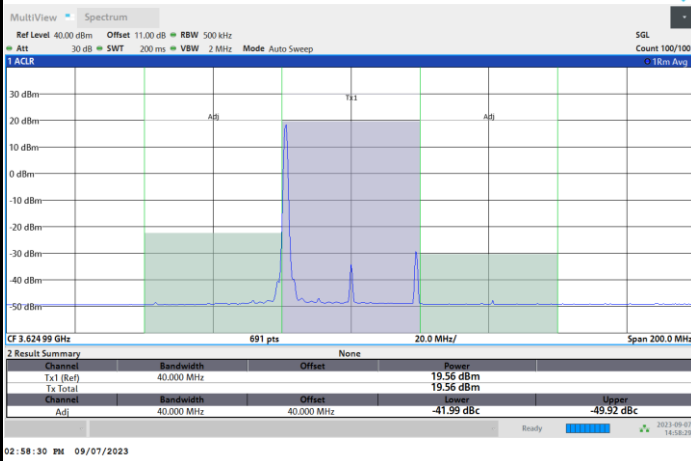


FR1 n48 / 40MHz / DFT-S OFDM / 64QAM

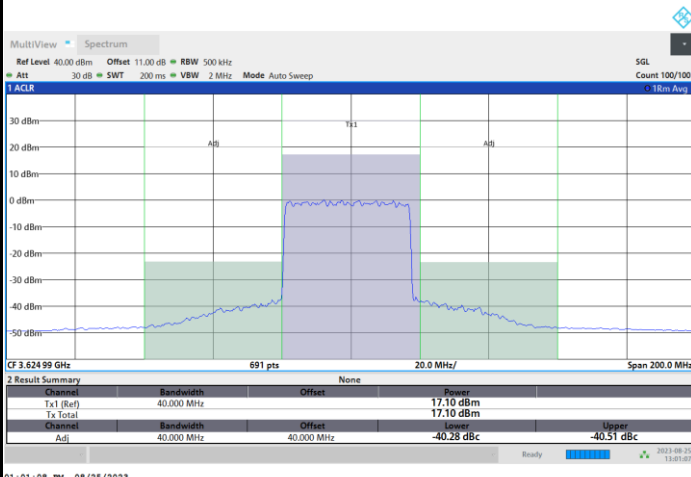
Middle Channel

1RB0

1RBmax



Full RB



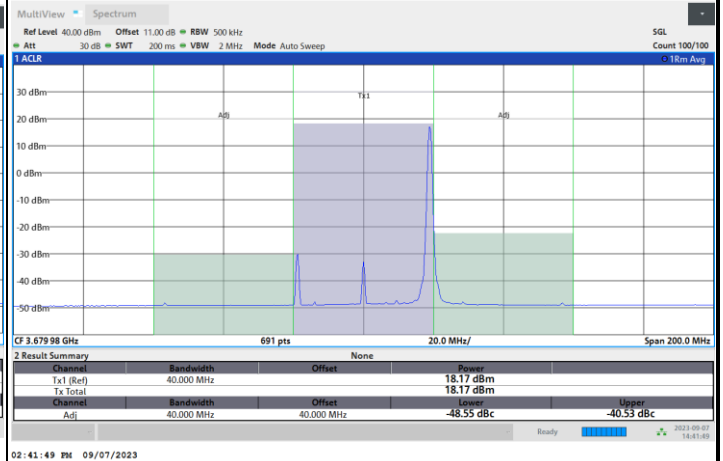
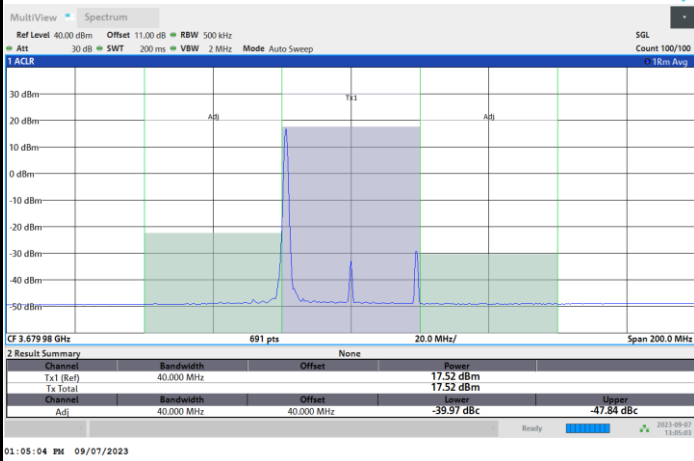


FR1 n48 / 40MHz / DFT-S OFDM / 64QAM

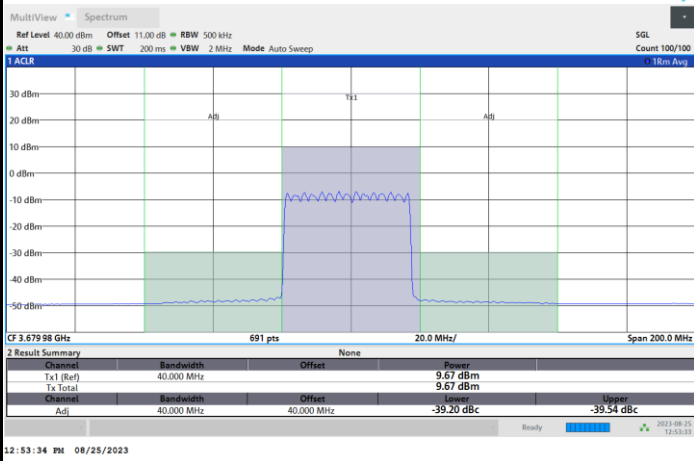
Highest Channel

1RB0

1RBmax



Full RB



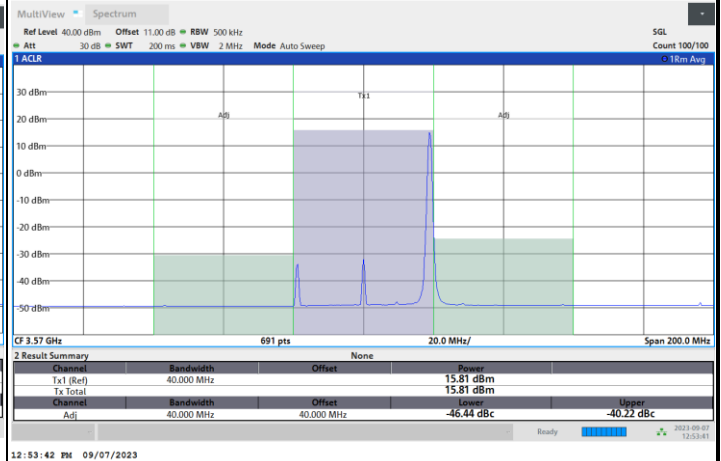
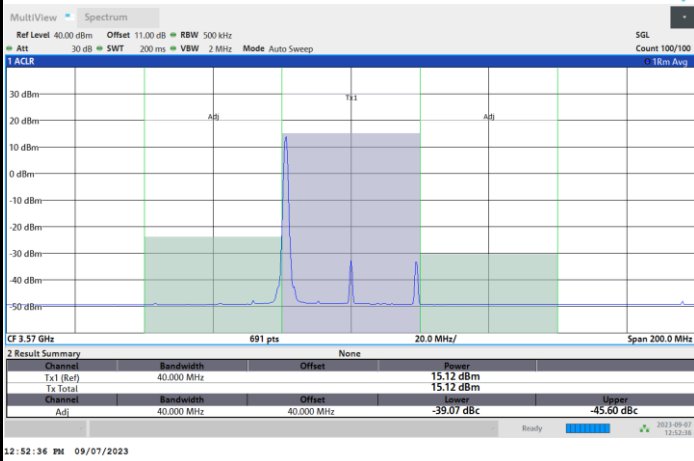


FR1 n48 / 40MHz / DFT-S OFDM / 256QAM

Lowest Channel

1RB0

1RBmax



Full RB



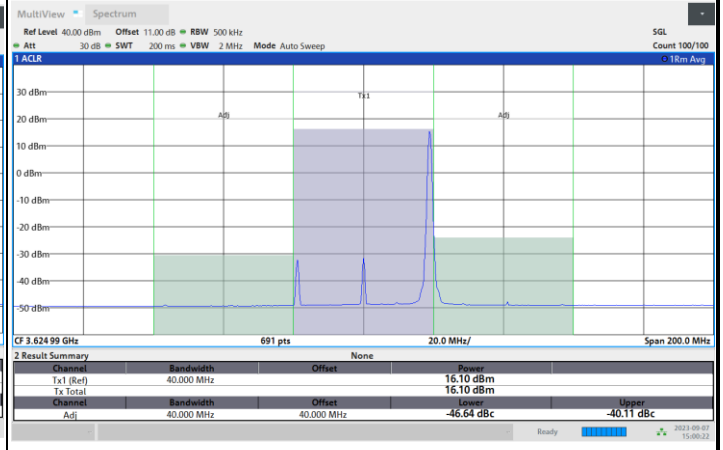
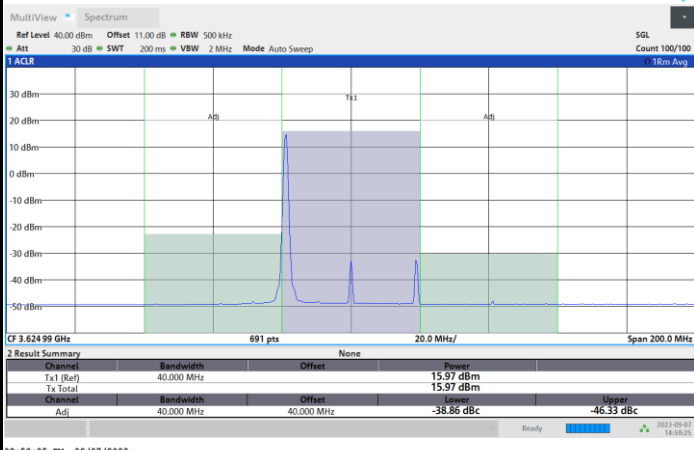


FR1 n48 / 40MHz / DFT-S OFDM / 256QAM

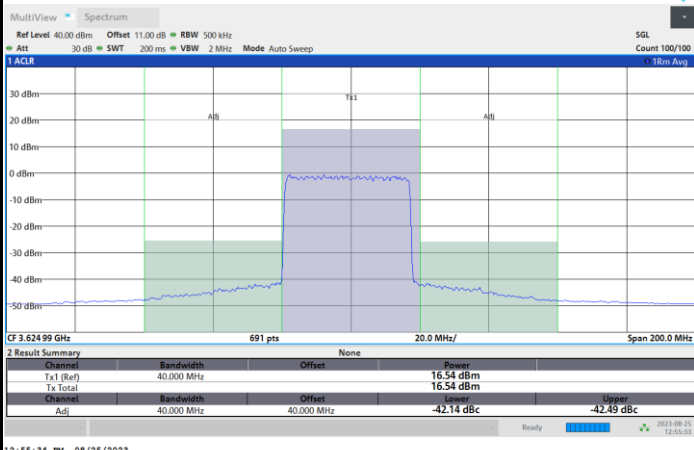
Middle Channel

1RB0

1RBmax



Full RB



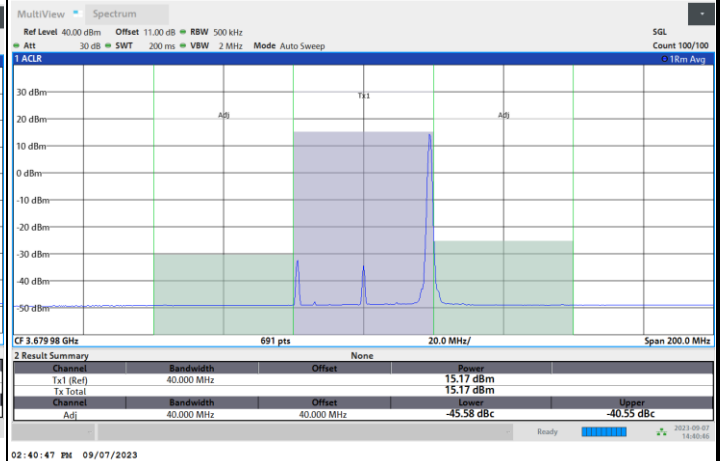
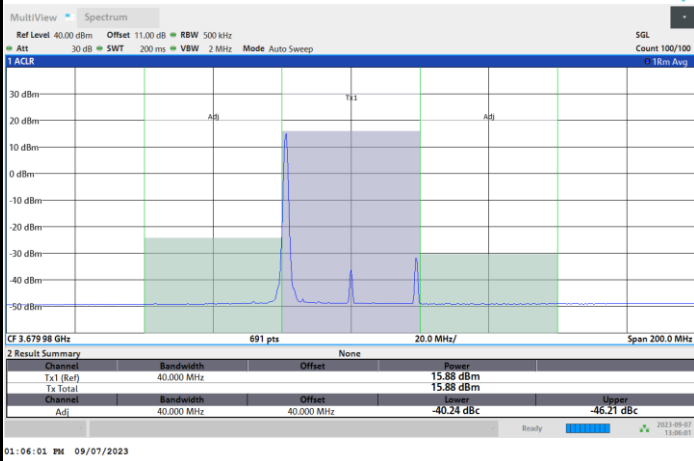


FR1 n48 / 40MHz / DFT-S OFDM / 256QAM

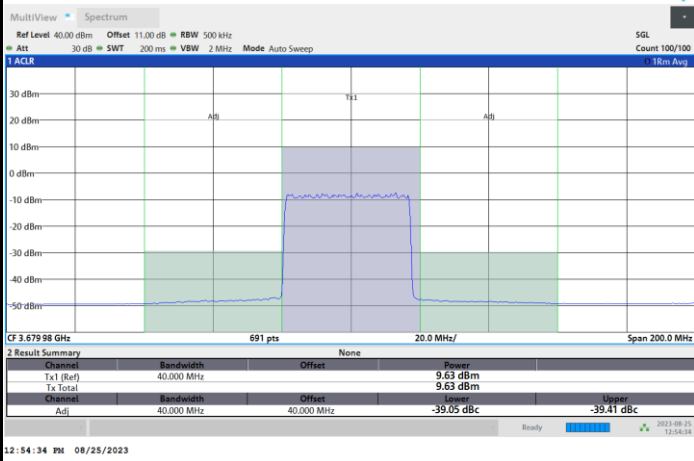
Highest Channel

1RB0

1RBmax



Full RB

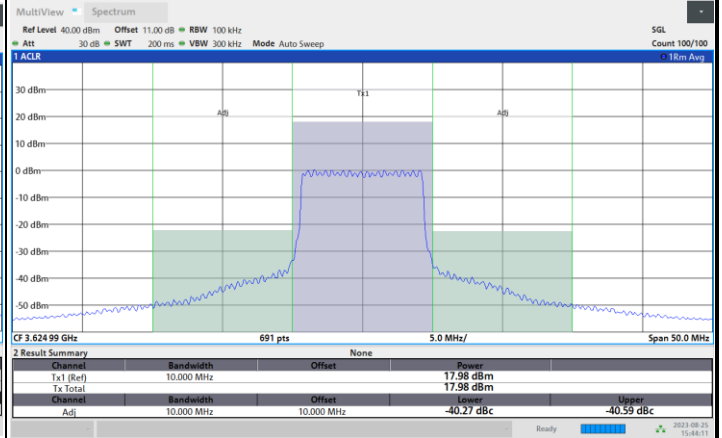
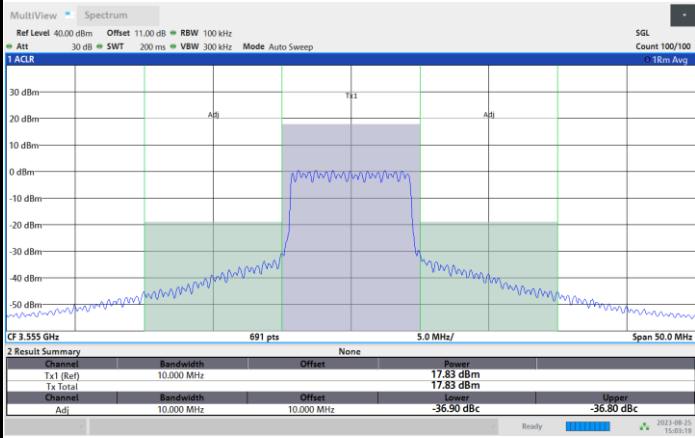




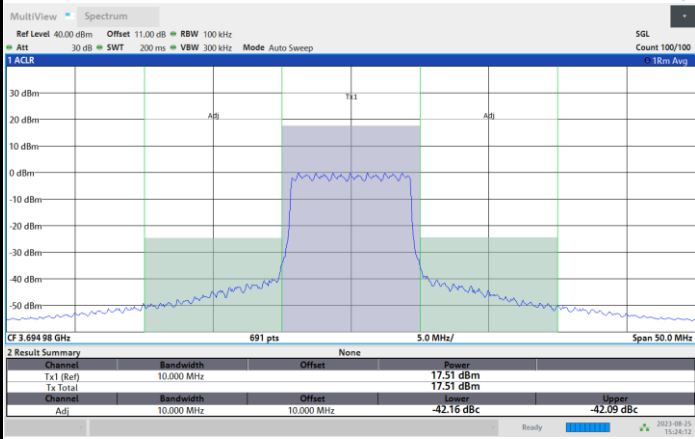
FR1 n48 / 10MHz / CP OFDM / QPSK / Full RB

Lowest Channel

Middle Channel



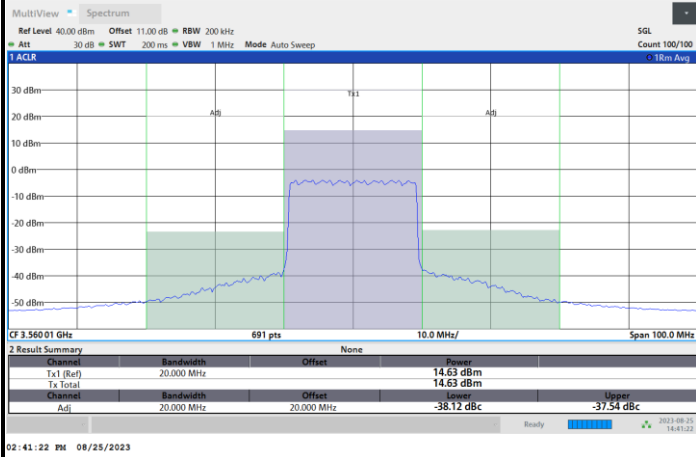
Highest Channel



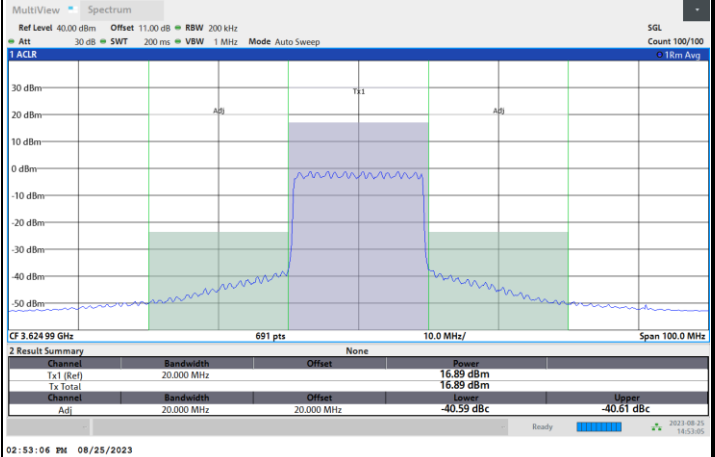


FR1 n48 / 20MHz / CP OFDM / QPSK / Full RB

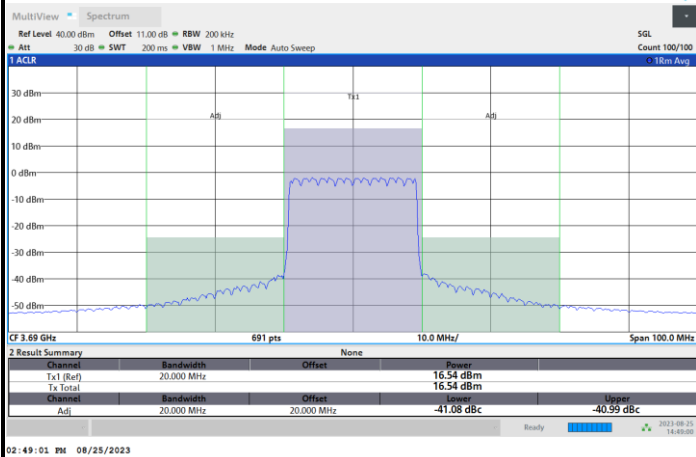
Lowest Channel



Middle Channel



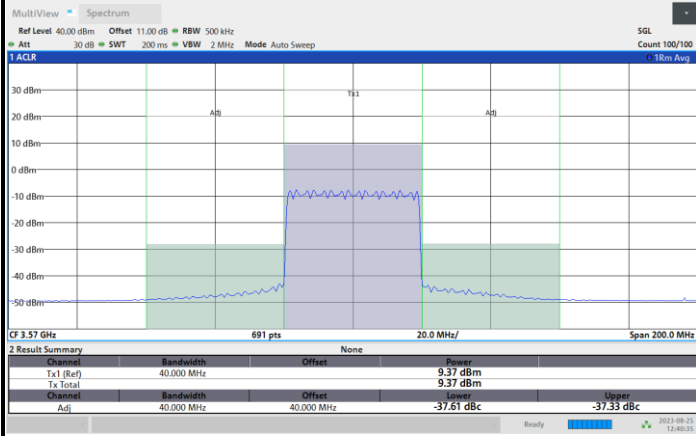
Highest Channel





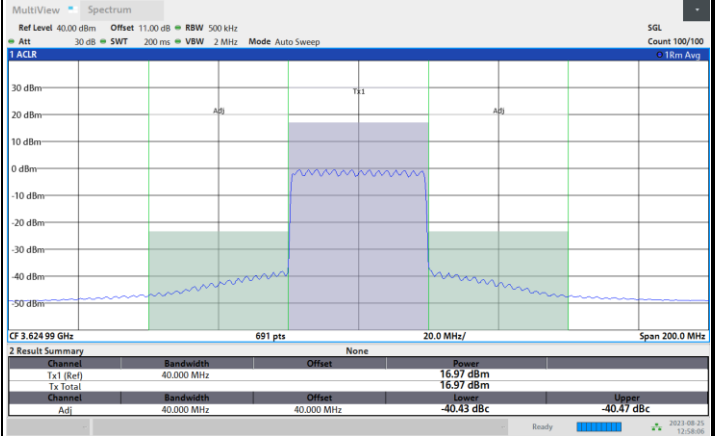
FR1 n48 / 40MHz / CP OFDM / QPSK / Full RB

Lowest Channel



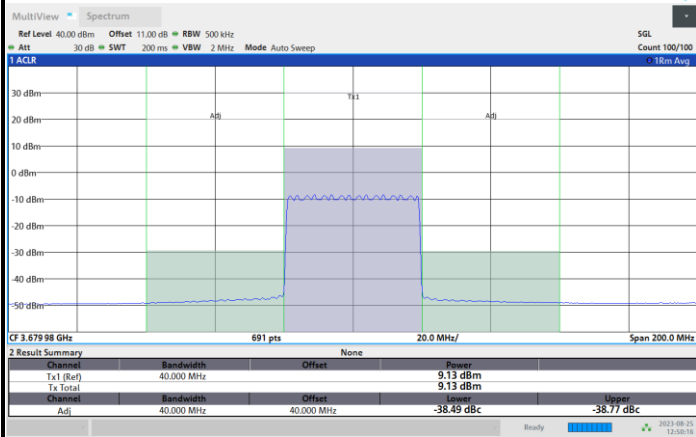
12:40:35 PM 08/25/2023

Middle Channel



12:58:06 PM 08/25/2023

Highest Channel



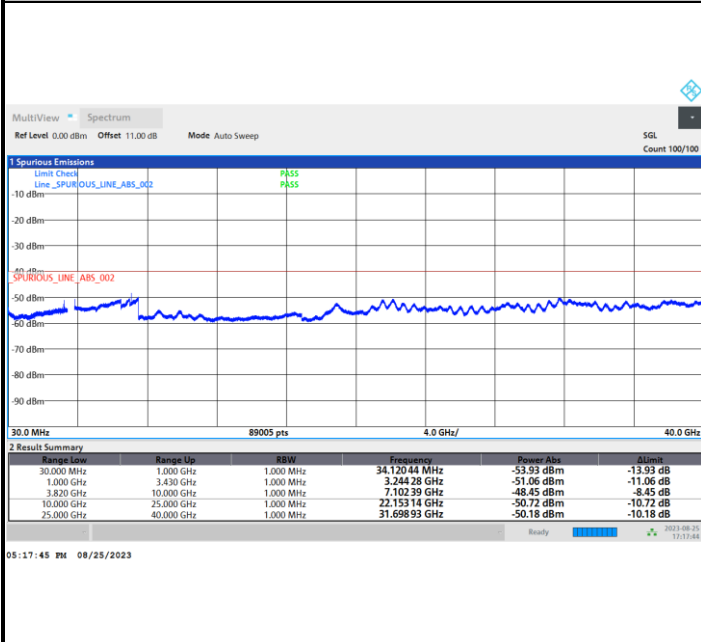
12:50:17 PM 08/25/2023



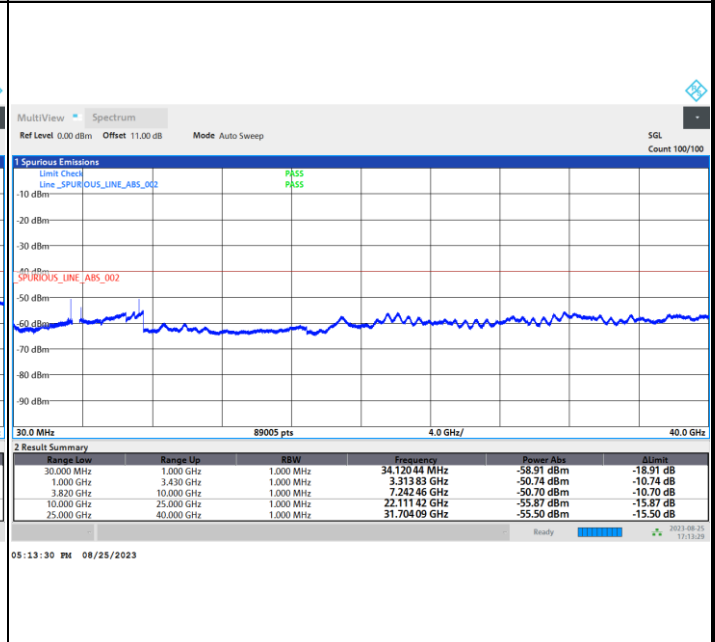
Conducted Spurious Emission

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

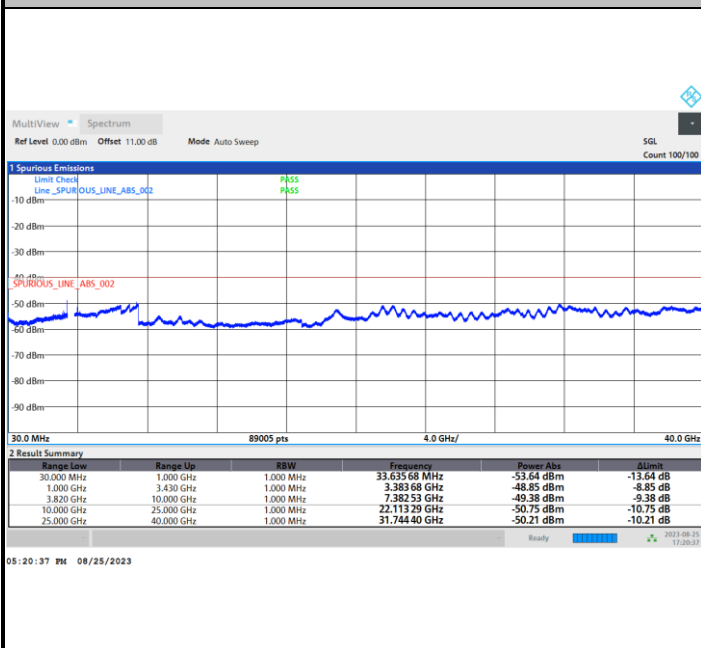
Lowest Channel



Middle Channel



Highest Channel

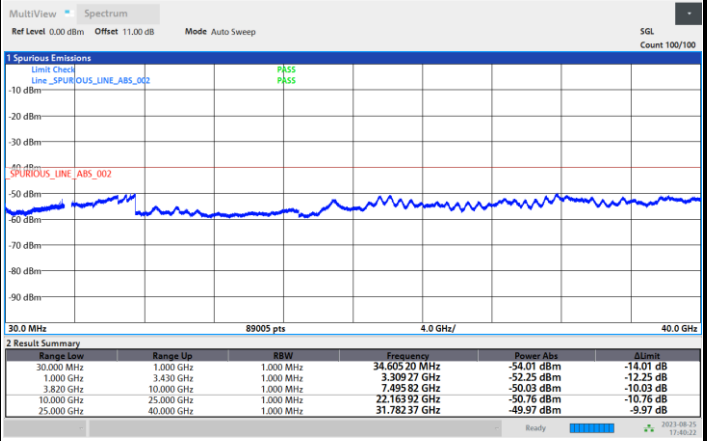
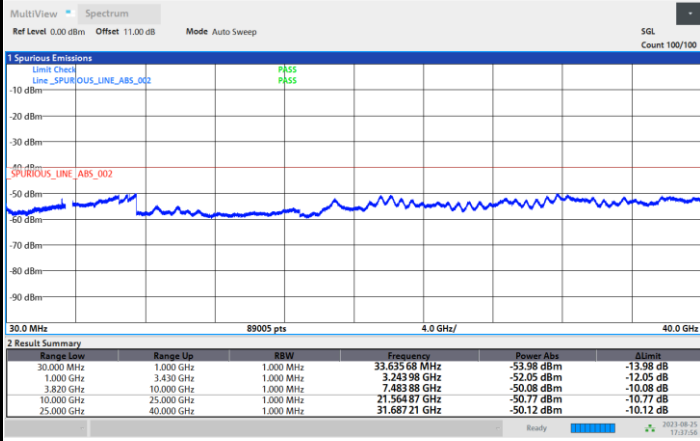




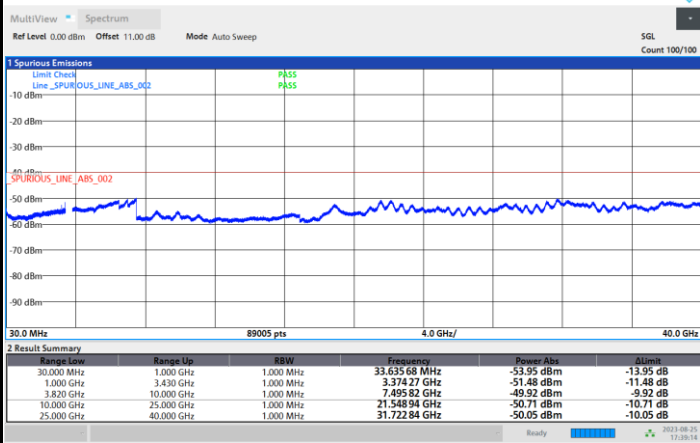
FR1 n48 / 20MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel

Middle Channel



Highest Channel

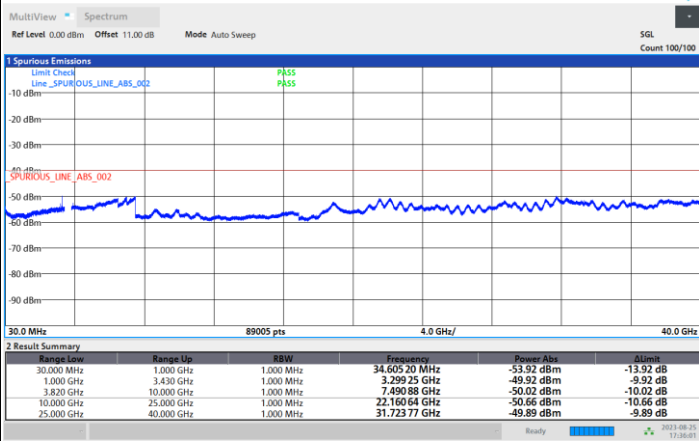
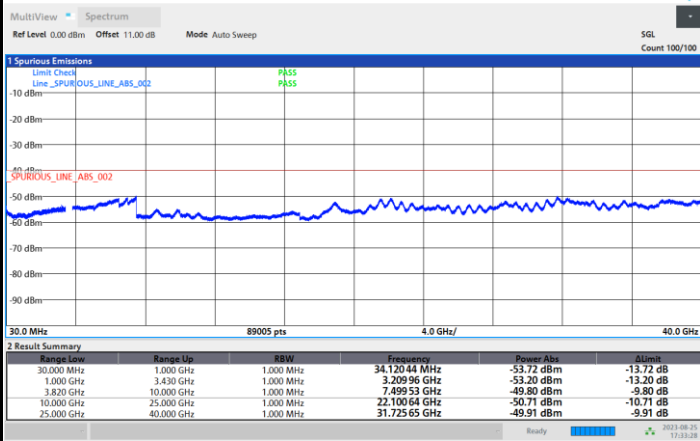




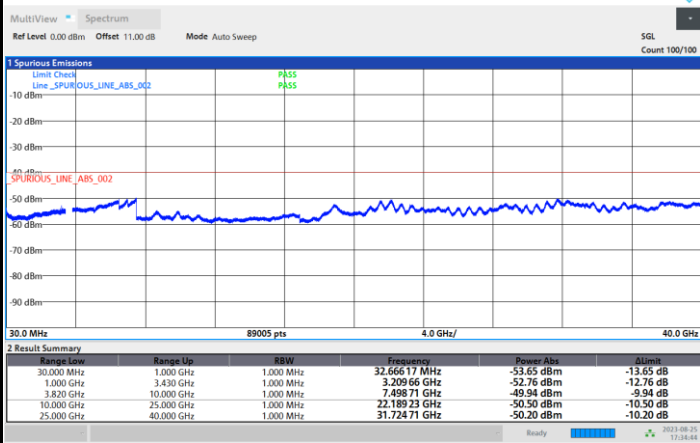
FR1 n48 / 40MHz / DFT-S OFDM / QPSK / 1RB1

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	0.0006	PASS
40	Normal Voltage	0.0194	
30	Normal Voltage	0.0130	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0221	
0	Normal Voltage	0.0004	
-10	Normal Voltage	0.0238	
-20	Normal Voltage	0.0084	
-30	Normal Voltage	0.0213	
20	Maximum Voltage	0.0076	
20	Normal Voltage	0.0122	
20	Battery End Point	0.0178	

Note:

1. Normal Voltage = 4.05 V. ; Battery End Point (BEP) = 3.85 V. ; Maximum Voltage = 4.35 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of Radiated Test

<Ant. 3>

5G NR n48

5G NR n48 / 20MHz / 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	-56.81	-40	-16.81	-50.4	-66.21	1.30	10.69	H
	10653	-59.98	-40	-19.98	-57.47	-70.34	1.56	11.92	H
	14205	-58.63	-40	-18.63	-58.78	-69.54	1.87	12.78	H
	21308	-69.83	-40	-29.83	-76.04	-86.43	2.26	18.86	H
	24859	-66.70	-40	-26.70	-77.64	-83.54	2.23	19.07	H
	28410	-65.92	-40	-25.92	-78.12	-82.19	2.87	19.14	H
									H
	7102	-53.07	-40	-13.07	-48.11	-62.47	1.30	10.69	V
	10653	-61.38	-40	-21.38	-57.65	-71.74	1.56	11.92	V
	14205	-58.85	-40	-18.85	-59.19	-69.76	1.87	12.78	V
	21308	-70.17	-40	-30.17	-75.93	-86.77	2.26	18.86	V
	24859	-66.78	-40	-26.78	-77.28	-83.62	2.23	19.07	V
	28410	-66.38	-40	-26.38	-78.16	-82.65	2.87	19.14	V
									V



Middle	7232	-59.32	-40	-19.32	-52.83	-68.41	1.31	10.40	H
	10848	-58.74	-40	-18.74	-56.55	-69.22	1.60	12.08	H
	14465	-59.71	-40	-19.71	-60.01	-70.66	1.94	12.89	H
	18081	-68.96	-40	-28.96	-72.44	-85.13	2.03	18.20	H
	21698	-69.09	-40	-29.09	-75.64	-85.82	2.14	18.86	H
	25314	-66.83	-40	-26.83	-77.77	-83.67	2.31	19.15	H
									H
	7232	-56.98	-40	-16.98	-51.86	-66.07	1.31	10.40	V
	10848	-59.56	-40	-19.56	-56.33	-70.04	1.60	12.08	V
	14465	-59.38	-40	-19.38	-60.04	-70.33	1.94	12.89	V
	18081	-68.76	-40	-28.76	-72.2	-84.93	2.03	18.20	V
	21698	-69.41	-40	-29.41	-75.47	-86.14	2.14	18.86	V
	25314	-67.38	-40	-27.38	-77.84	-84.22	2.31	19.15	V
									V
Highest	7362	-56.73	-40	-16.73	-50.59	-66.18	1.33	10.79	H
	11043	-59.13	-40	-19.13	-57.3	-69.72	1.62	12.22	H
	14725	-59.96	-40	-19.96	-61.01	-71.28	1.94	13.26	H
	18406	-70.48	-40	-30.48	-74.07	-86.40	2.28	18.20	H
	22088	-70.31	-40	-30.31	-76.35	-86.92	2.24	18.85	H
	25769	-67.81	-40	-27.81	-78.62	-84.79	2.42	19.41	H
									H
	7362	-55.83	-40	-15.83	-50.66	-65.28	1.33	10.79	V
	11043	-60.33	-40	-20.33	-57.61	-70.92	1.62	12.22	V
	14725	-59.10	-40	-19.10	-60.37	-70.42	1.94	13.26	V
	18406	-71.14	-40	-31.14	-74.84	-87.06	2.28	18.20	V
	22088	-69.90	-40	-29.90	-76.44	-86.51	2.24	18.85	V
	25769	-67.32	-40	-27.32	-78.57	-84.30	2.42	19.41	V
									V

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



<Ant. 1+Ant. 3>

EN-DC 5A-n48A

EN-DC 5A-n48A / 10+20MHz / 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	-56.32	-40	-16.32	-49.91	-65.72	1.30	10.69	H
	10653	-59.87	-40	-19.87	-57.36	-70.23	1.56	11.92	H
	14205	-58.81	-40	-18.81	-58.96	-69.72	1.87	12.78	H
	21308	-70.29	-40	-30.29	-76.05	-86.89	2.26	18.86	H
	24859	-67.27	-40	-27.27	-77.77	-84.11	2.23	19.07	H
	28410	-66.16	-40	-26.16	-77.94	-82.43	2.87	19.14	H
									H
	7102	-50.30	-40	-10.30	-45.34	-59.70	1.30	10.69	V
	10653	-61.39	-40	-21.39	-57.66	-71.75	1.56	11.92	V
	14205	-58.48	-40	-18.48	-58.82	-69.39	1.87	12.78	V
	21308	-69.95	-40	-29.95	-76.16	-86.55	2.26	18.86	V
	24859	-66.87	-40	-26.87	-77.81	-83.71	2.23	19.07	V
	28410	-65.79	-40	-25.79	-77.99	-82.06	2.87	19.14	V
									V



Middle	7232	-59.08	-40	-19.08	-52.59	-68.17	1.31	10.40	H
	10848	-58.44	-40	-18.44	-56.25	-68.92	1.60	12.08	H
	14465	-59.14	-40	-19.14	-59.44	-70.09	1.94	12.89	H
	18081	-68.98	-40	-28.98	-72.42	-85.15	2.03	18.20	H
	21698	-69.71	-40	-29.71	-75.77	-86.44	2.14	18.86	H
	25314	-66.97	-40	-26.97	-77.43	-83.81	2.31	19.15	H
									H
	7232	-53.99	-40	-13.99	-48.87	-63.08	1.31	10.40	V
	10848	-59.55	-40	-19.55	-56.33	-70.03	1.60	12.08	V
	14465	-58.68	-40	-18.68	-59.34	-69.63	1.94	12.89	V
	18081	-68.55	-40	-28.55	-72.03	-84.72	2.03	18.20	V
	21698	-69.24	-40	-29.24	-75.79	-85.97	2.14	18.86	V
	25314	-66.91	-40	-26.91	-77.85	-83.75	2.31	19.15	V
									V
Highest	7362	-55.68	-40	-15.68	-49.53	-65.13	1.33	10.79	H
	11043	-59.73	-40	-19.73	-57.91	-70.32	1.62	12.22	H
	14725	-59.56	-40	-19.56	-60.61	-70.88	1.94	13.26	H
	18406	-71.19	-40	-31.19	-74.78	-87.11	2.28	18.20	H
	22088	-71.13	-40	-31.13	-77.17	-87.74	2.24	18.85	H
	25769	-67.46	-40	-27.46	-78.27	-84.44	2.42	19.41	H
									H
	7362	-50.34	-40	-10.34	-45.16	-59.79	1.33	10.79	V
	11043	-60.81	-40	-20.81	-58.1	-71.40	1.62	12.22	V
	14725	-59.02	-40	-19.02	-60.29	-70.34	1.94	13.26	V
	18406	-71.04	-40	-31.04	-74.71	-86.96	2.28	18.20	V
	22088	-70.76	-40	-30.76	-77.3	-87.37	2.24	18.85	V
	25769	-67.09	-40	-27.09	-78.34	-84.07	2.42	19.41	V
									V

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