

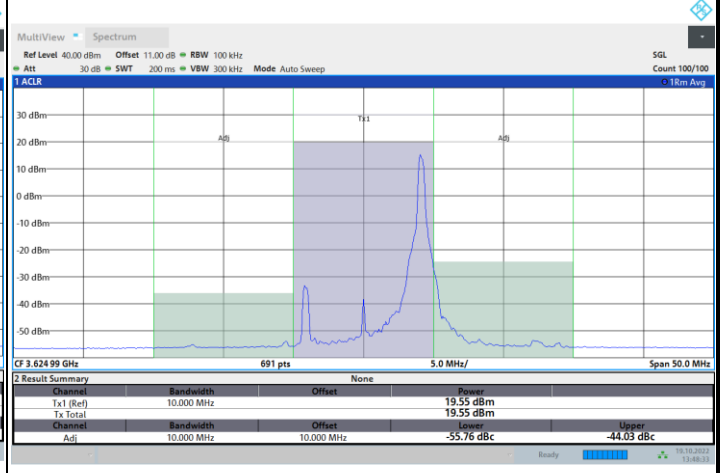
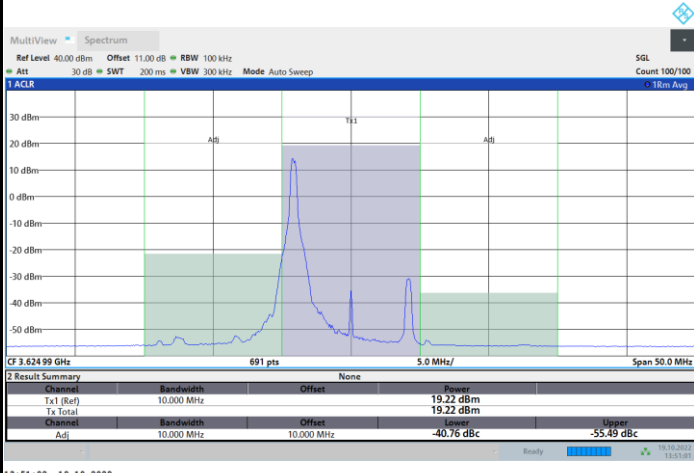


FR1 n48 / 10MHz / DFT-S OFDM / QPSK

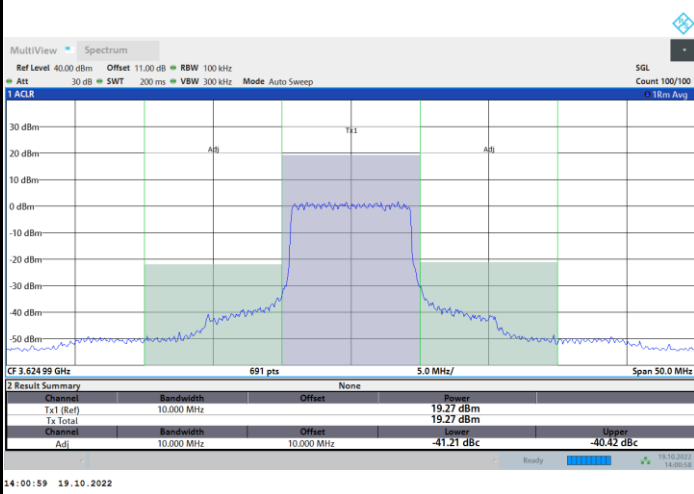
Middle Channel

1RB0

1RBmax



Full RB



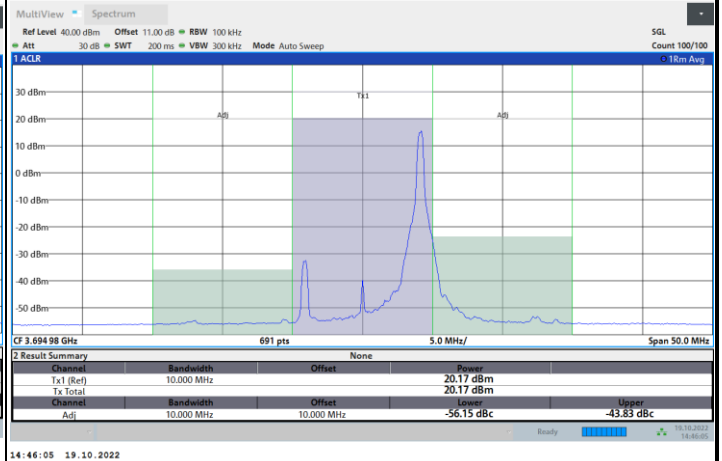
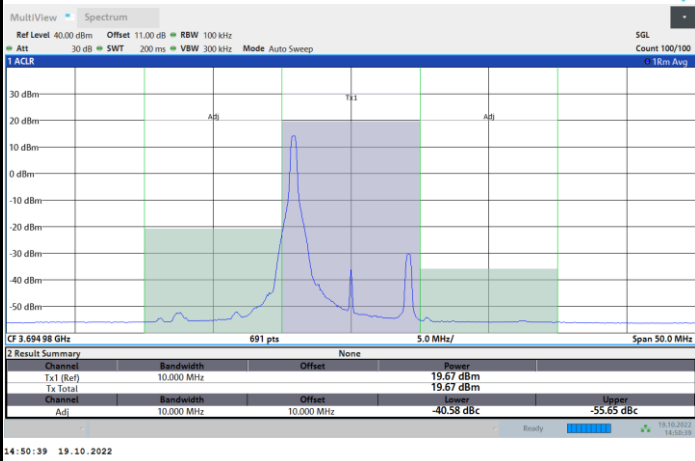


FR1 n48 / 10MHz / DFT-S OFDM / QPSK

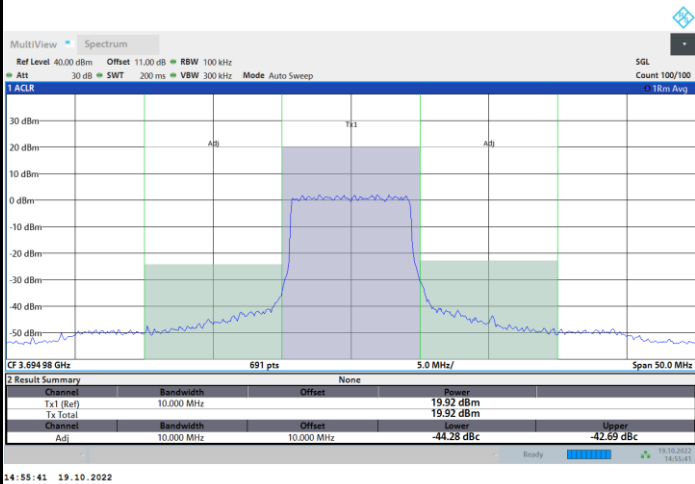
Highest Channel

1RB0

1RBmax



Full RB



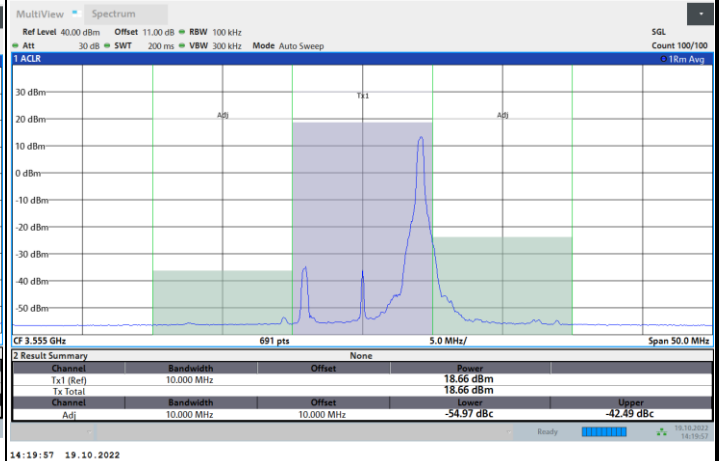
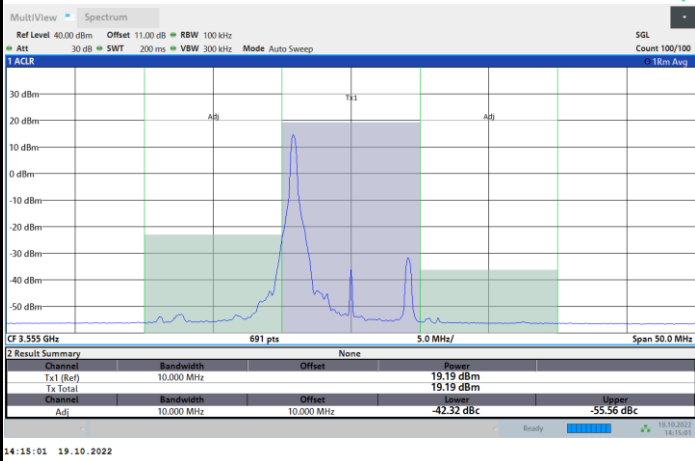


FR1 n48 / 10MHz / DFT-S OFDM / 16QAM

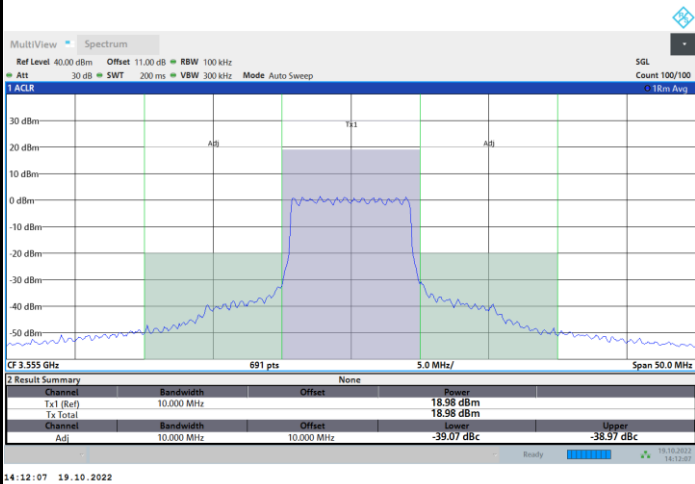
Lowest Channel

1RB0

1RBmax



Full RB



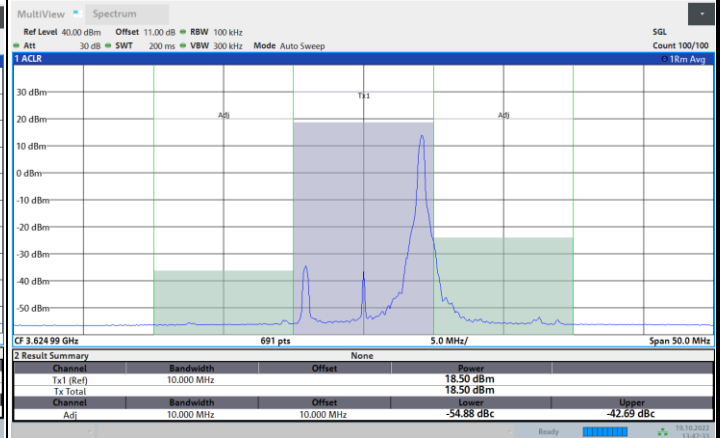
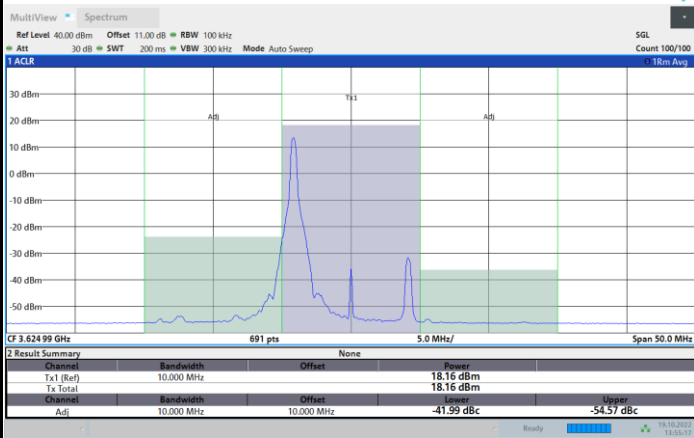


FR1 n48 / 10MHz / DFT-S OFDM / 16QAM

Middle Channel

1RB0

1RBmax



Full RB



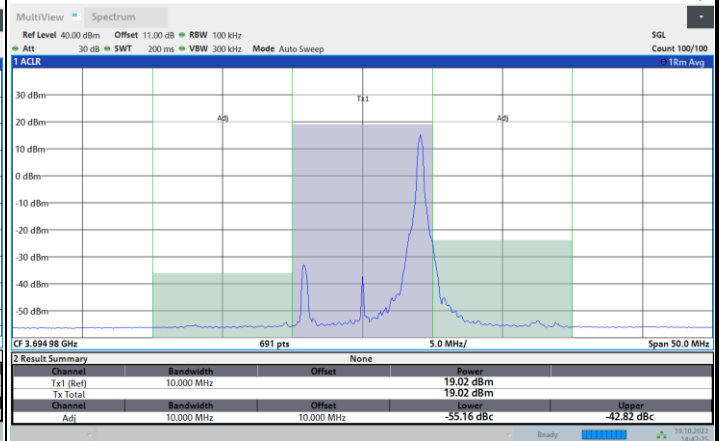
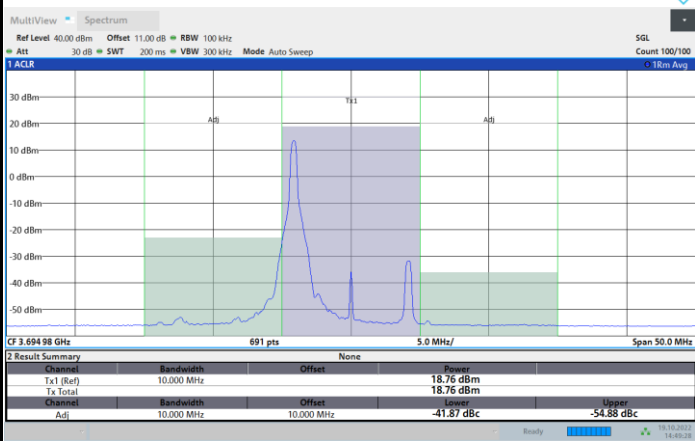


FR1 n48 / 10MHz / DFT-S OFDM / 16QAM

Highest Channel

1RB0

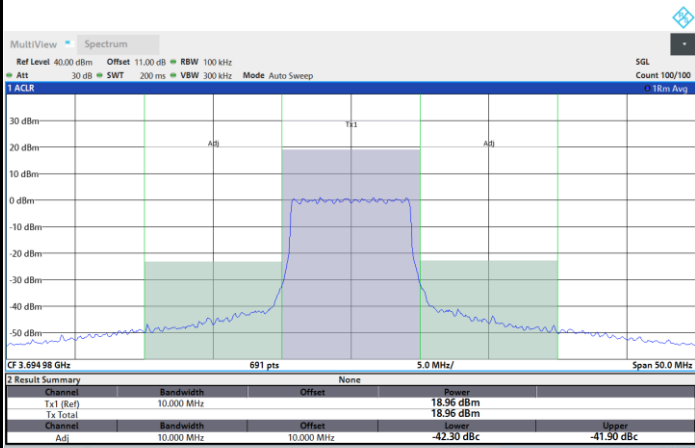
1RBmax



14:49:28 19.10.2022

14:47:25 19.10.2022

Full RB



14:56:54 19.10.2022

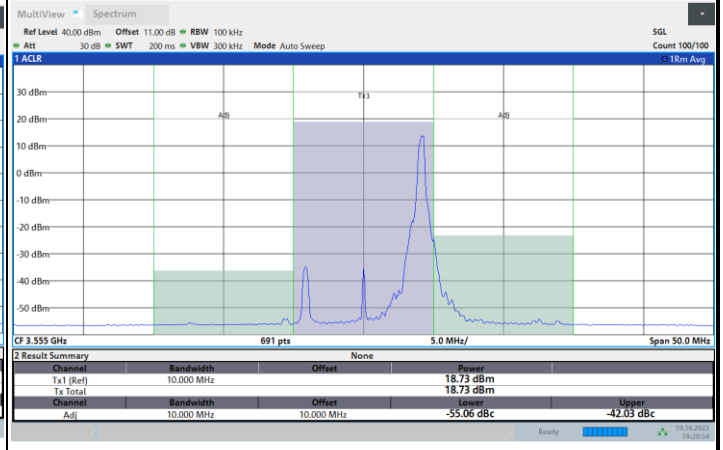
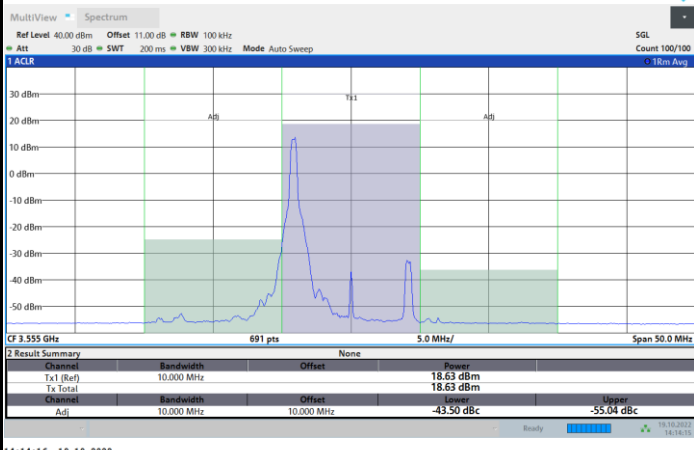


FR1 n48 / 10MHz / DFT-S OFDM / 64QAM

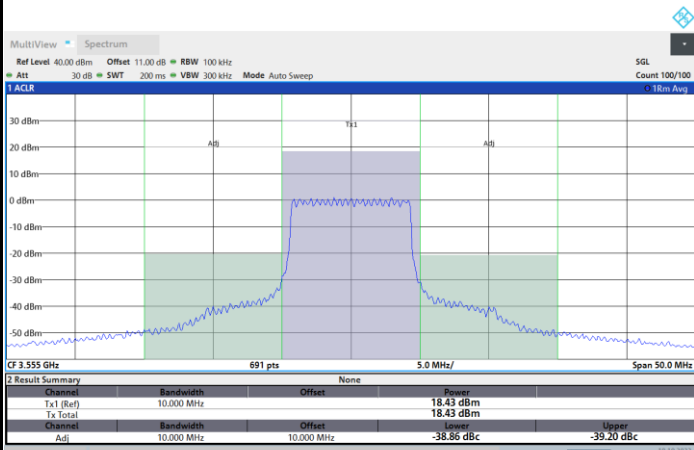
Lowest Channel

1RB0

1RBmax



Full RB



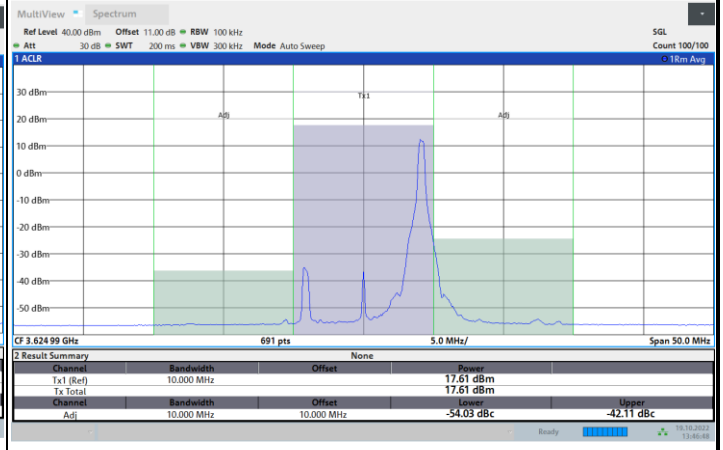
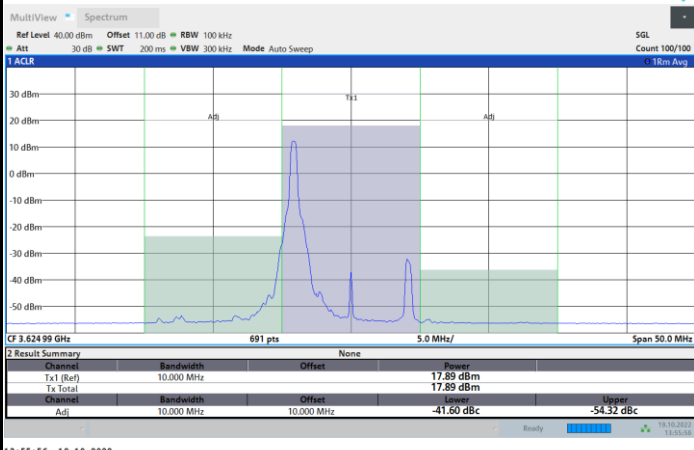


FR1 n48 / 10MHz / DFT-S OFDM / 64QAM

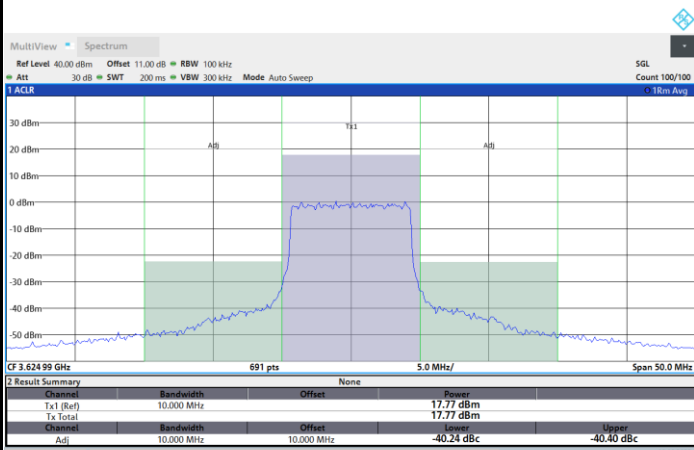
Middle Channel

1RB0

1RBmax



Full RB



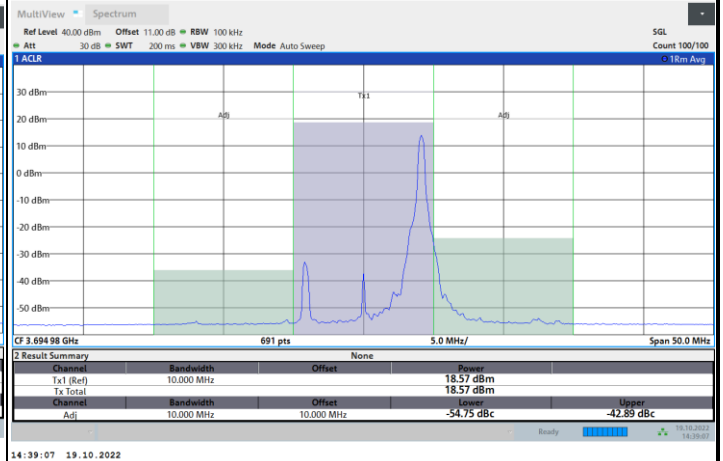
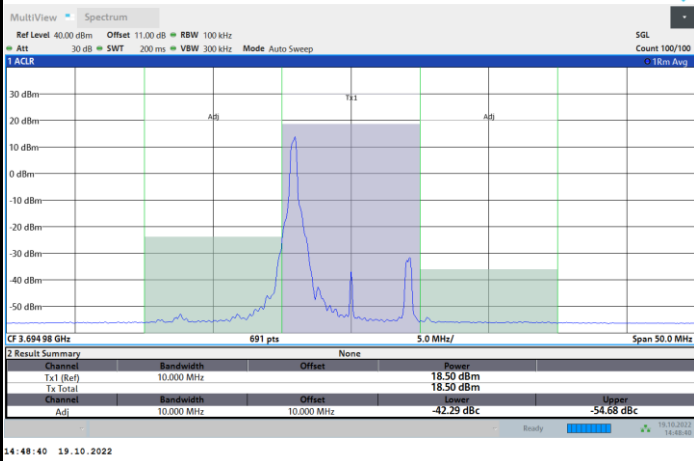


FR1 n48 / 10MHz / DFT-S OFDM / 64QAM

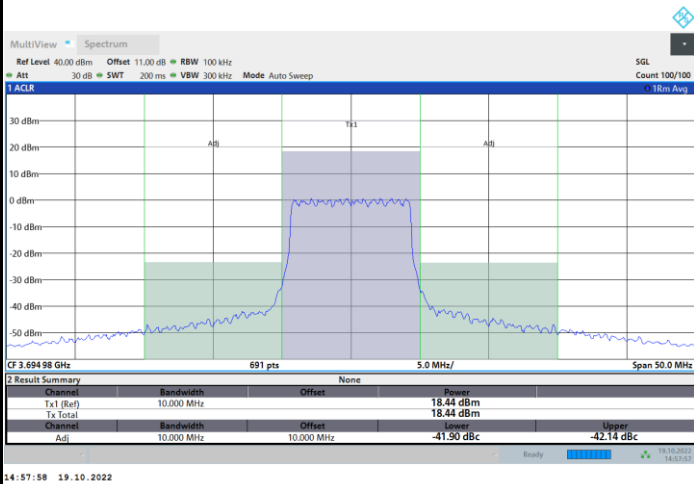
Highest Channel

1RB0

1RBmax



Full RB





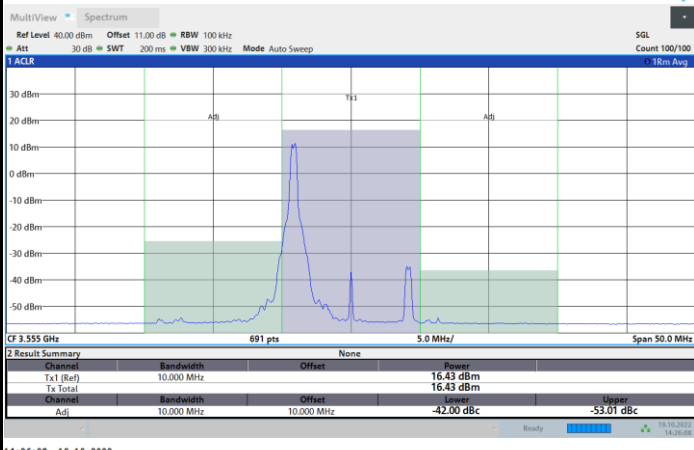


FR1 n48 / 10MHz / DFT-S OFDM / 256QAM

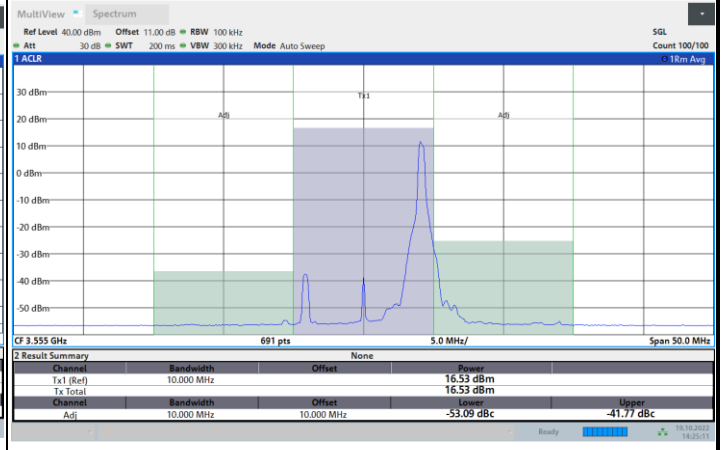
Lowest Channel

1RB0

1RBmax

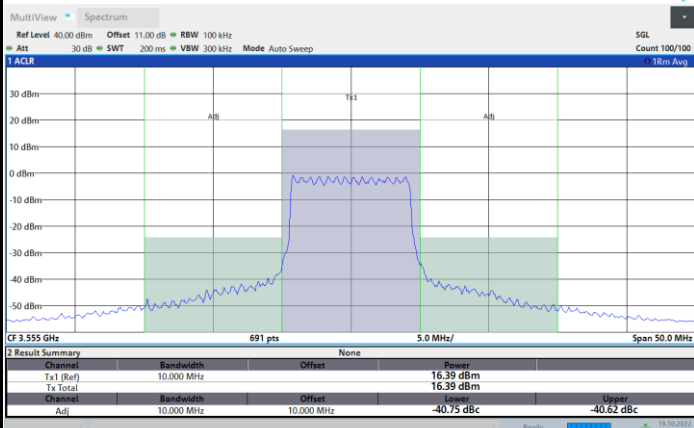


14:26:08 19.10.2022



14:25:12 19.10.2022

Full RB



14:27:06 19.10.2022

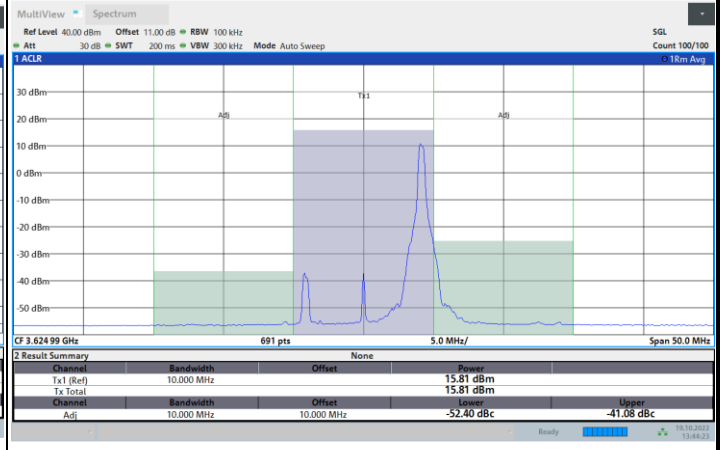
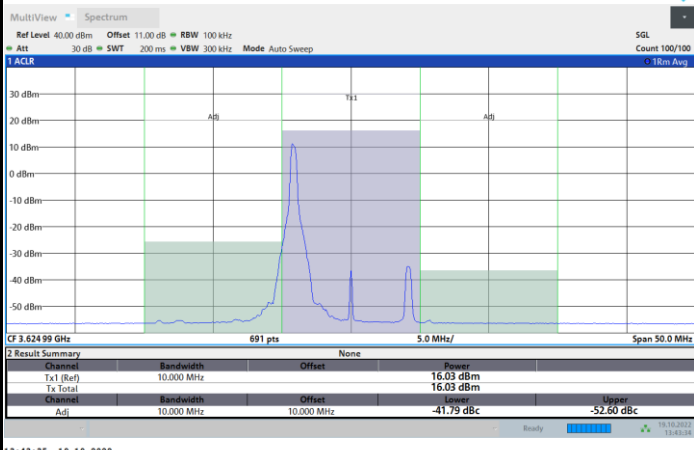


FR1 n48 / 10MHz / DFT-S OFDM / 256QAM

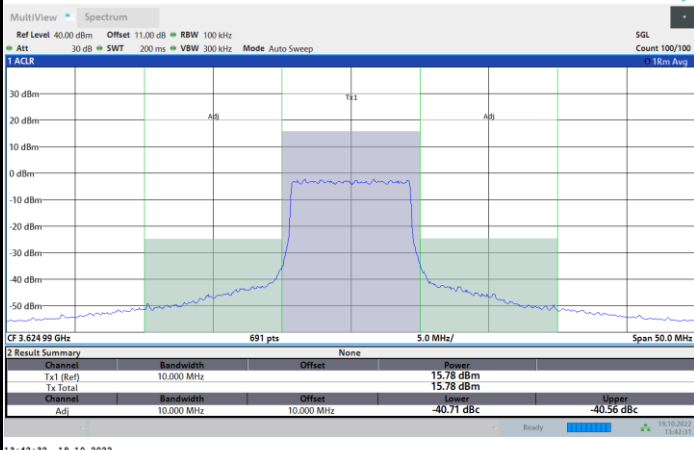
Middle Channel

1RB0

1RBmax



Full RB



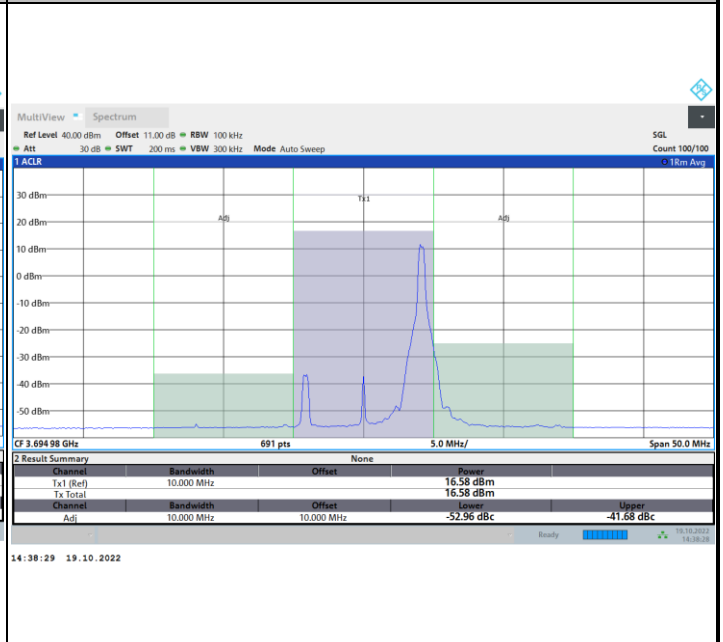
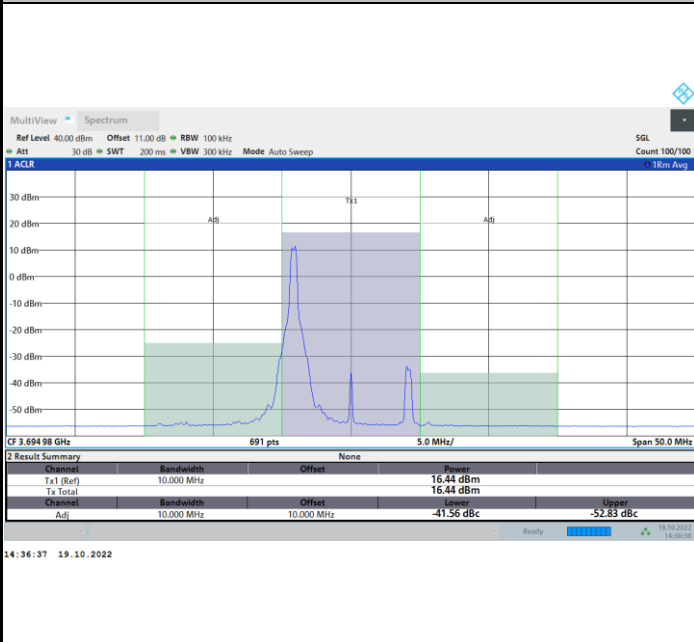


FR1 n48 / 10MHz / DFT-S OFDM / 256QAM

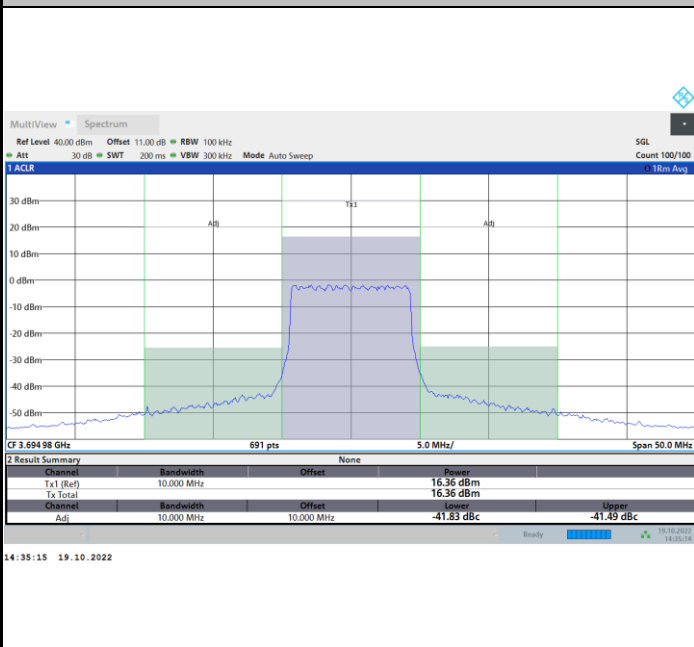
Highest Channel

1RB0

1RBmax



Full RB



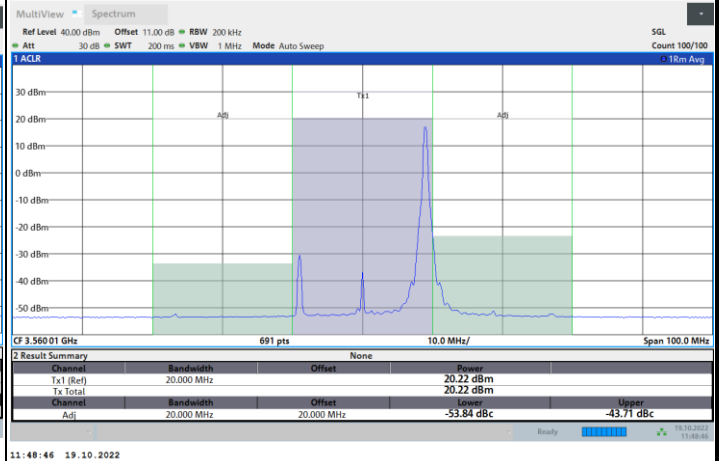
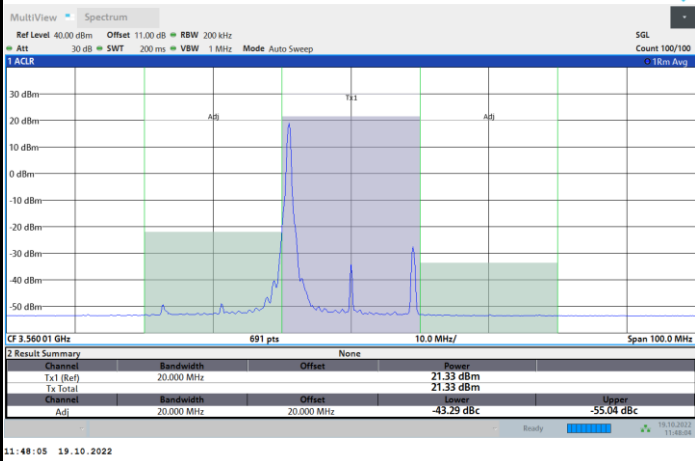


FR1 n48 / 20MHz / DFT-S OFDM / PI/2 BPSK

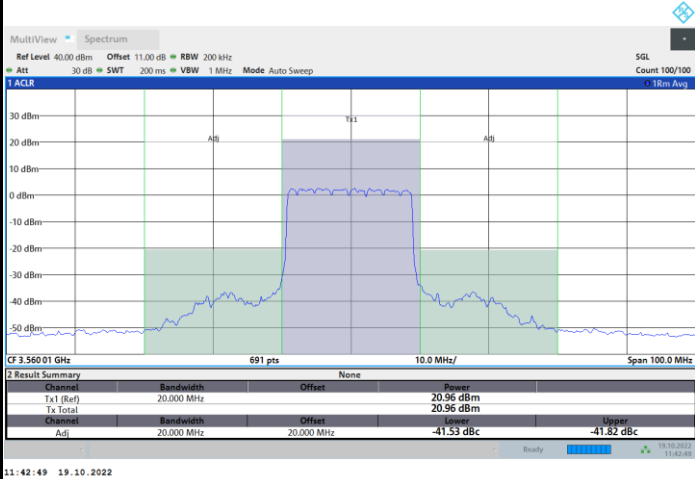
Lowest Channel

1RB0

1RBmax



Full RB



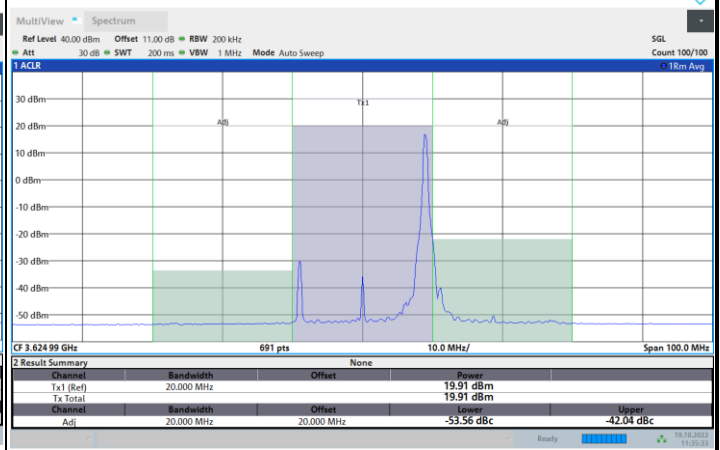
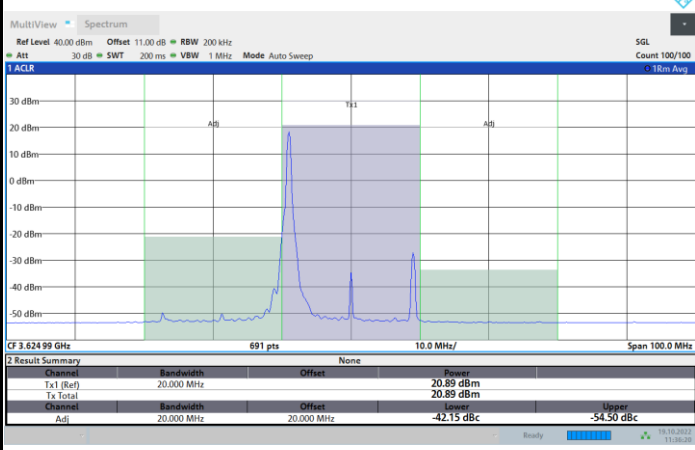


FR1 n48 / 20MHz / DFT-S OFDM / PI/2 BPSK

Middle Channel

1RB0

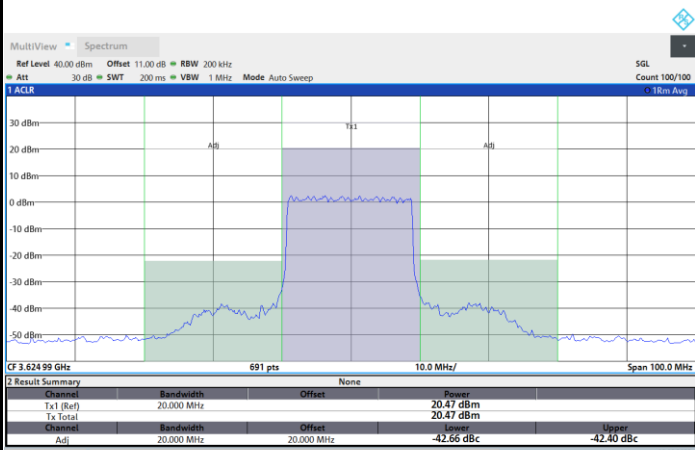
1RBmax



11:36:20 19.10.2022

11:35:34 19.10.2022

Full RB



11:41:52 19.10.2022

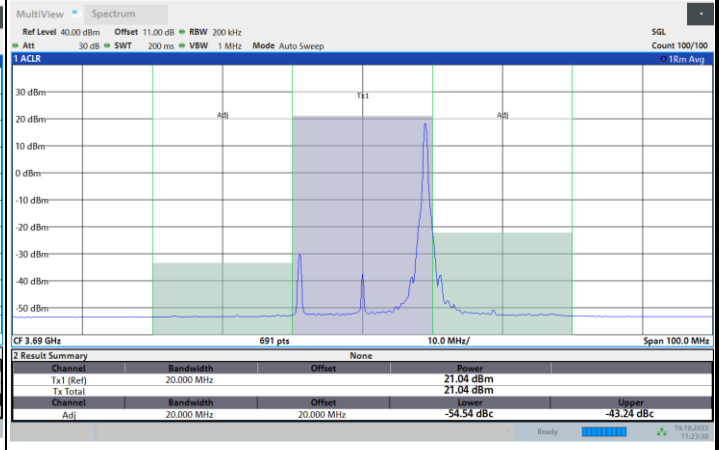
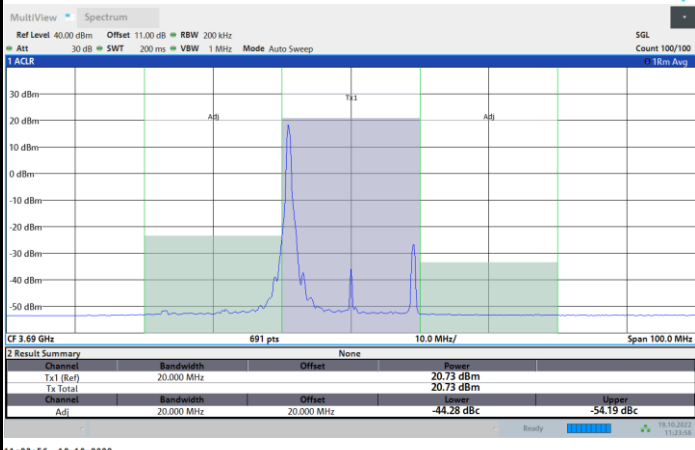


FR1 n48 / 20MHz / DFT-S OFDM / PI/2 BPSK

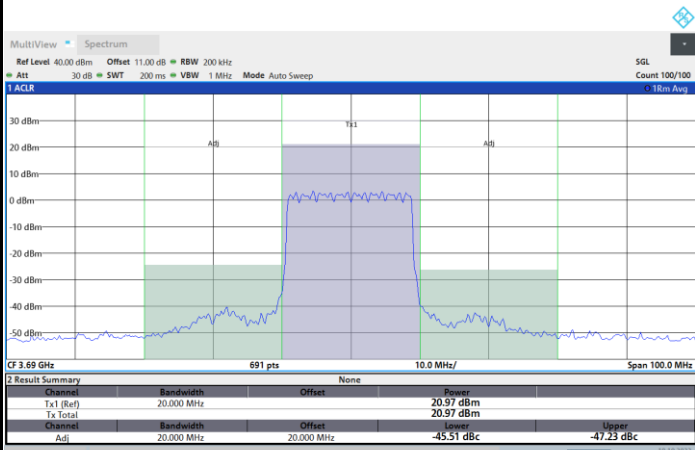
Highest Channel

1RB0

1RBmax



Full RB



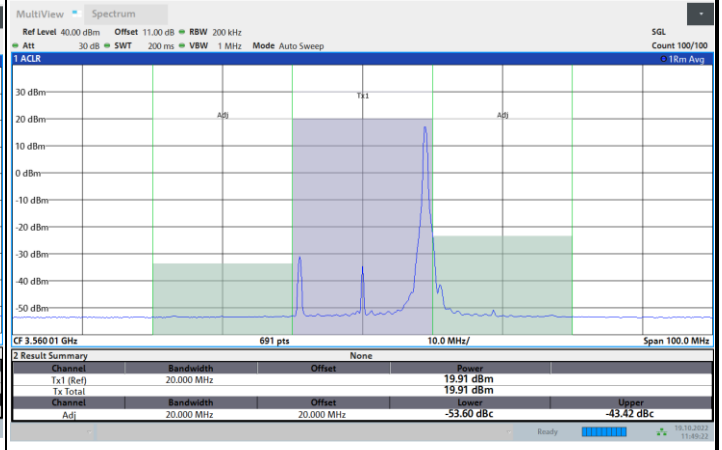
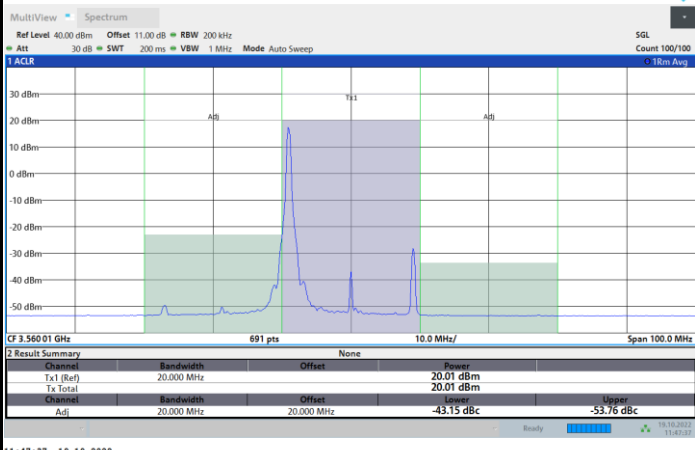


FR1 n48 / 20MHz / DFT-S OFDM / QPSK

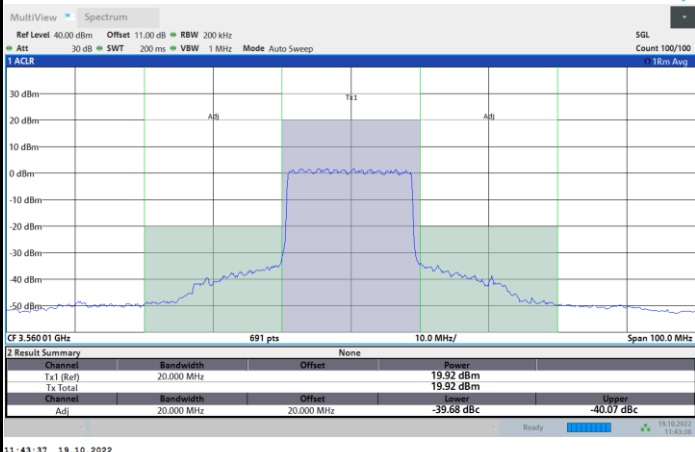
Lowest Channel

1RB0

1RBmax



Full RB



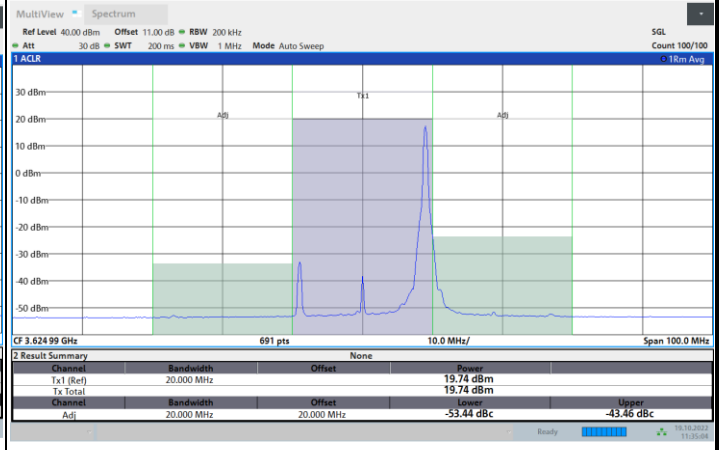
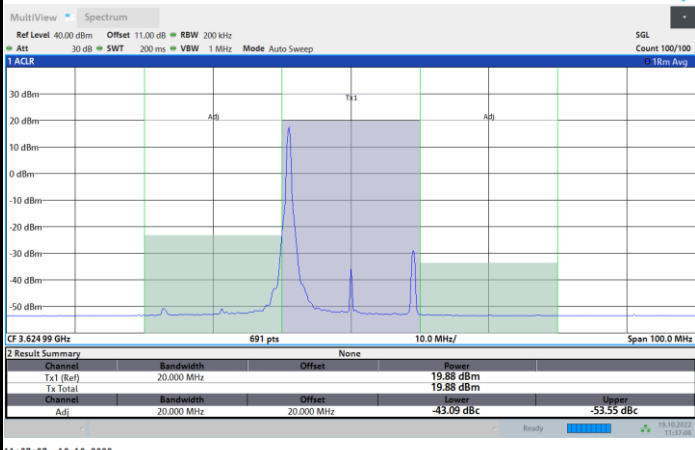


FR1 n48 / 20MHz / DFT-S OFDM / QPSK

Middle Channel

1RB0

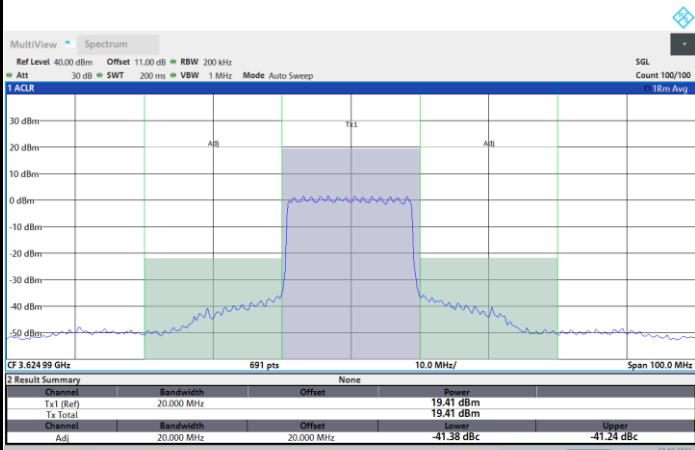
1RBmax



11:37:07 19.10.2022

11:35:05 19.10.2022

Full RB



11:41:19 19.10.2022



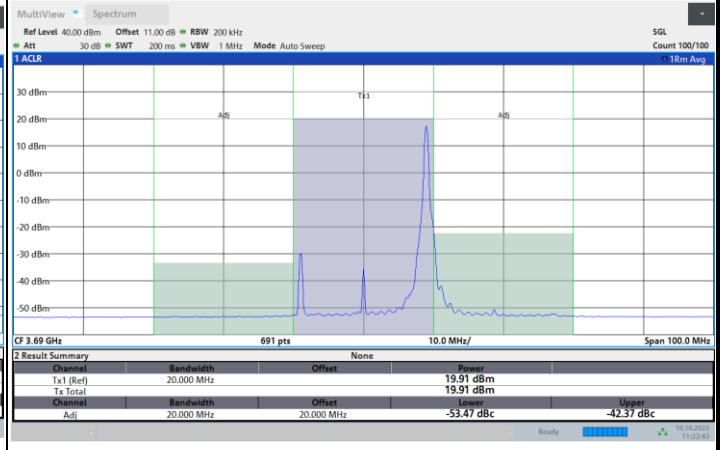
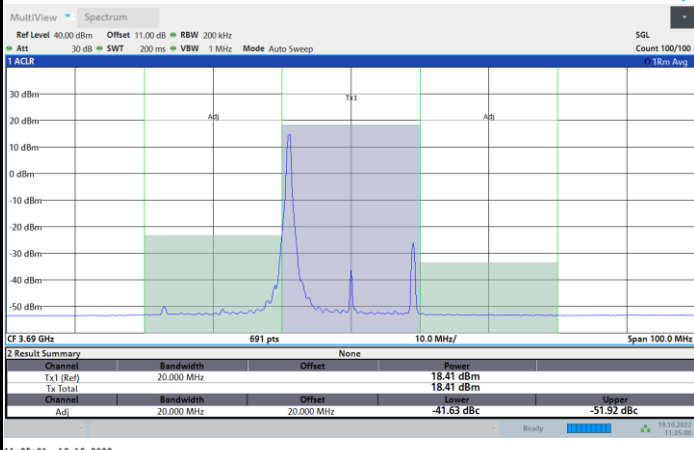


FR1 n48 / 20MHz / DFT-S OFDM / QPSK

Highest Channel

1RB0

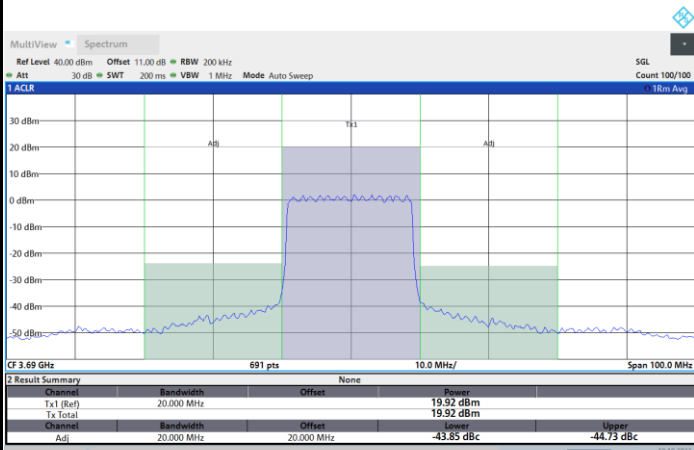
1RBmax



11:25:01 19.10.2022

11:22:44 19.10.2022

Full RB



11:29:45 19.10.2022

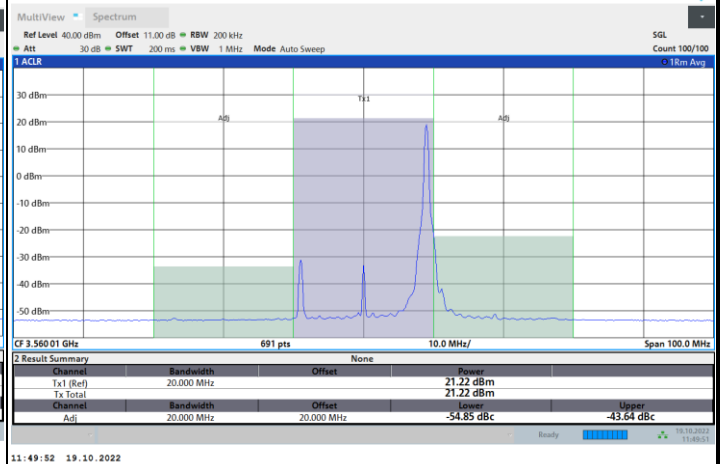
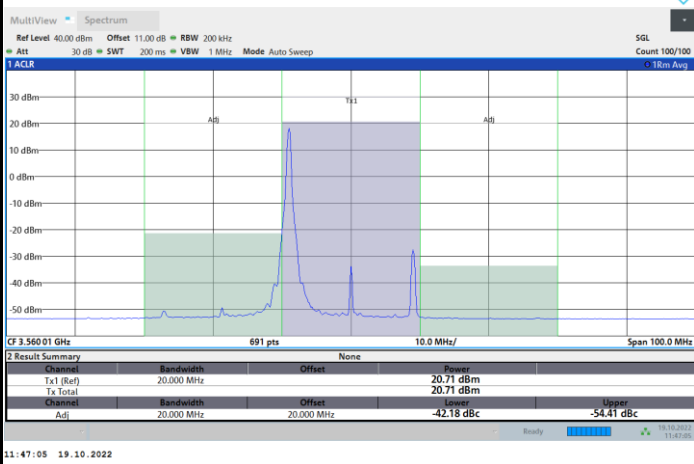


FR1 n48 / 20MHz / DFT-S OFDM / 16QAM

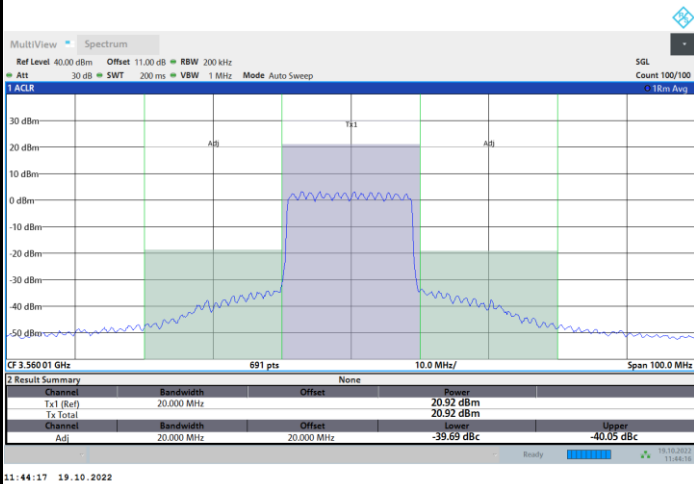
Lowest Channel

1RB0

1RBmax



Full RB



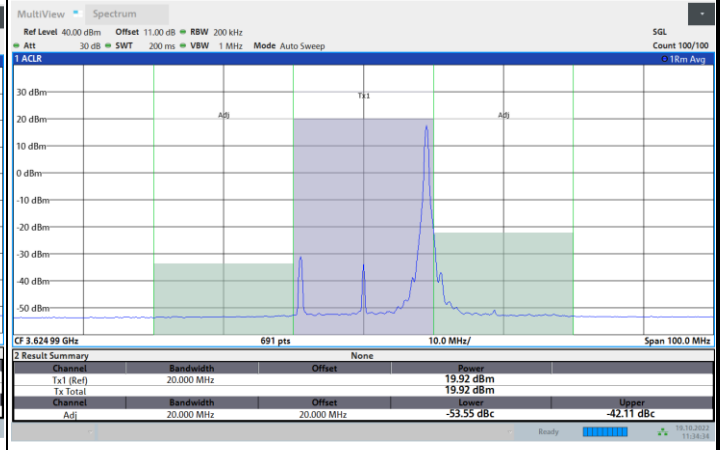
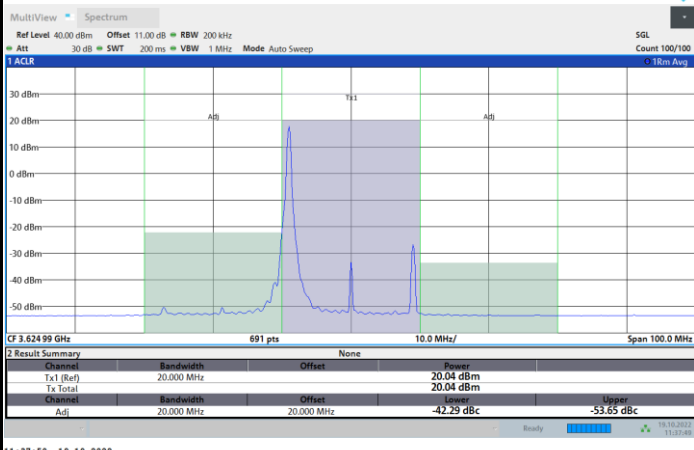


FR1 n48 / 20MHz / DFT-S OFDM / 16QAM

Middle Channel

1RB0

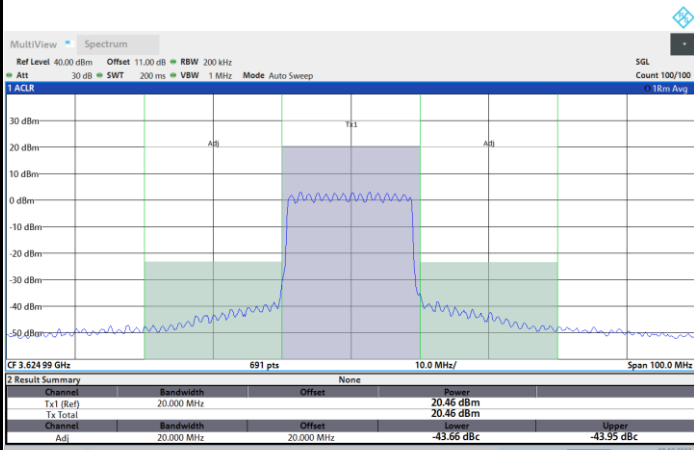
1RBmax



11:37:50 19.10.2022

11:34:35 19.10.2022

Full RB



11:40:47 19.10.2022

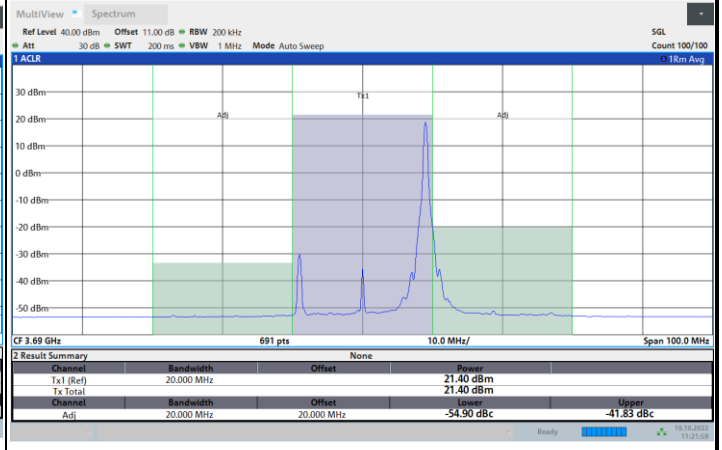
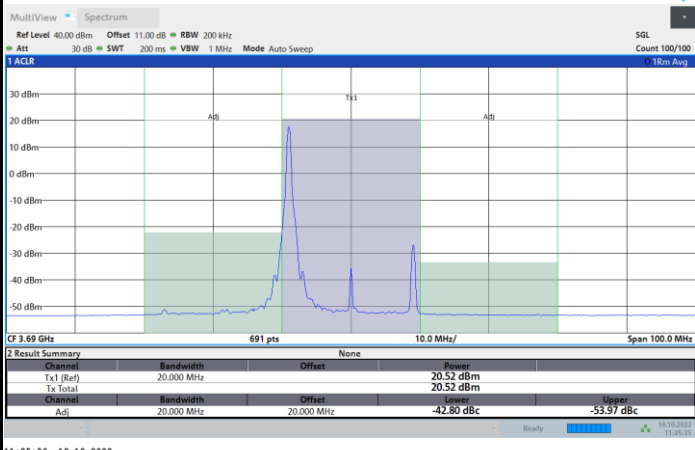


FR1 n48 / 20MHz / DFT-S OFDM / 16QAM

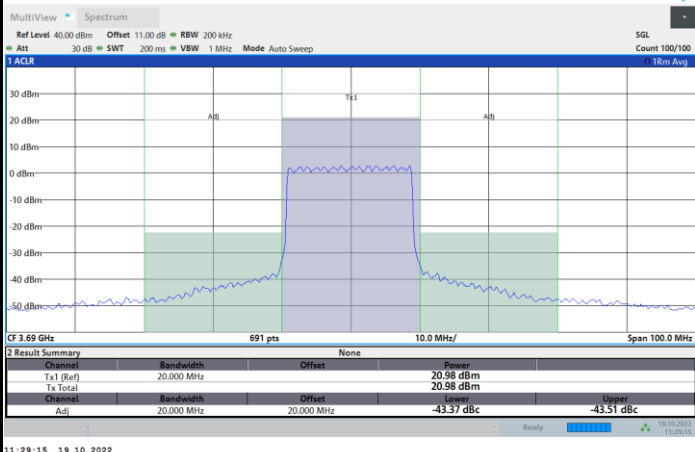
Highest Channel

1RB0

1RBmax



Full RB



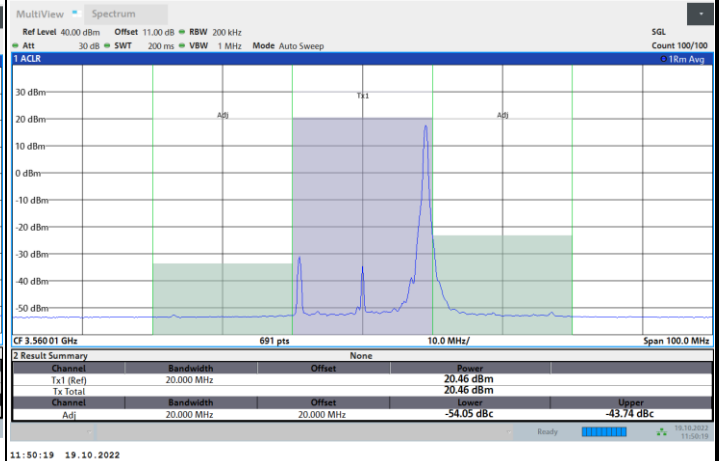
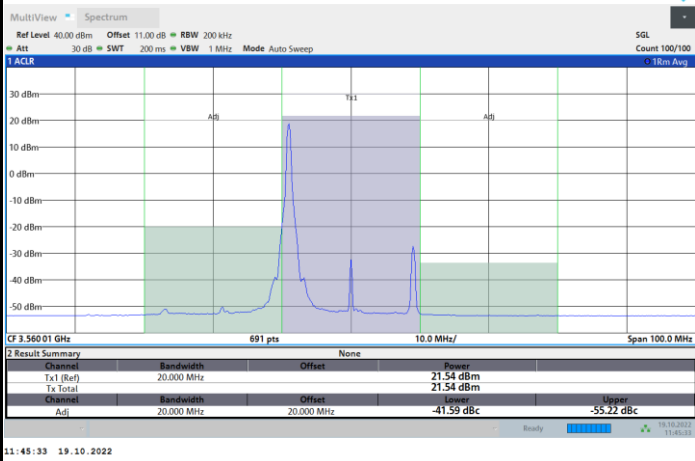


FR1 n48 / 20MHz / DFT-S OFDM / 64QAM

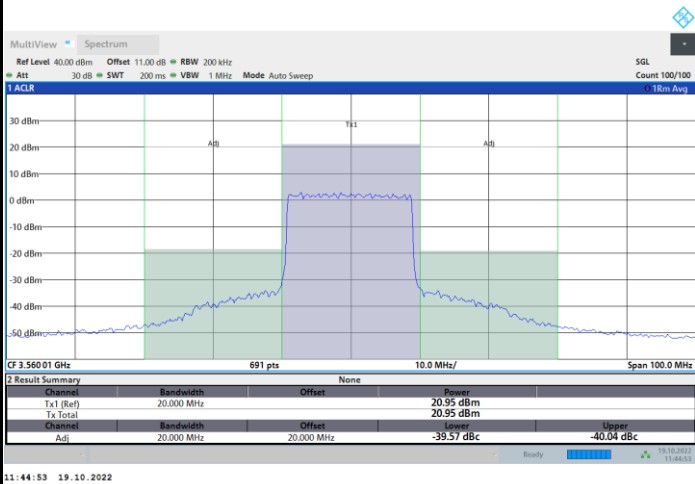
Lowest Channel

1RB0

1RBmax



Full RB



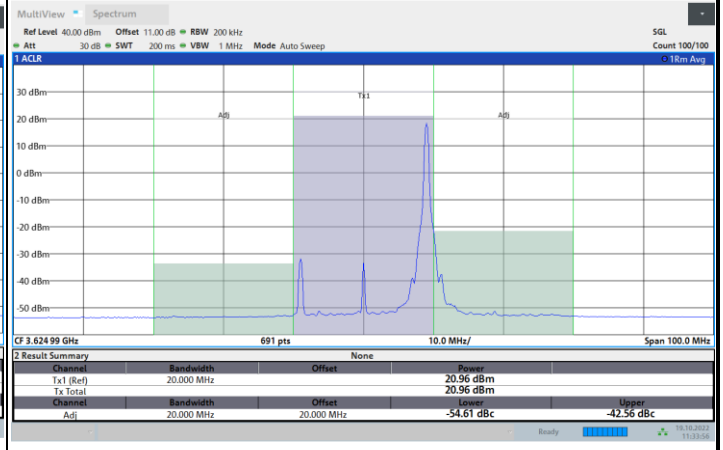
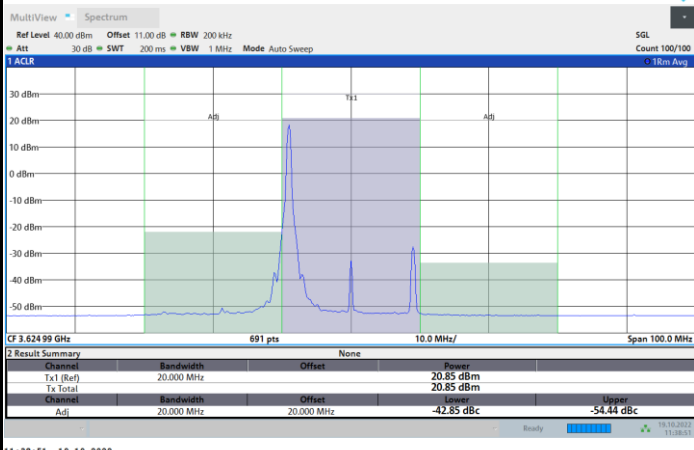


FR1 n48 / 20MHz / DFT-S OFDM / 64QAM

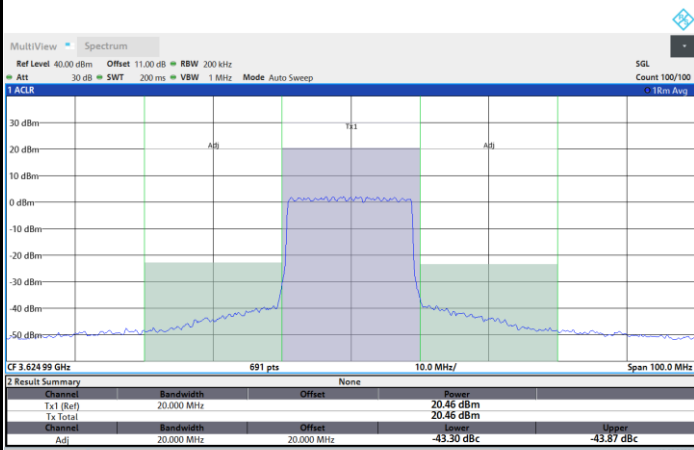
Middle Channel

1RB0

1RBmax



Full RB



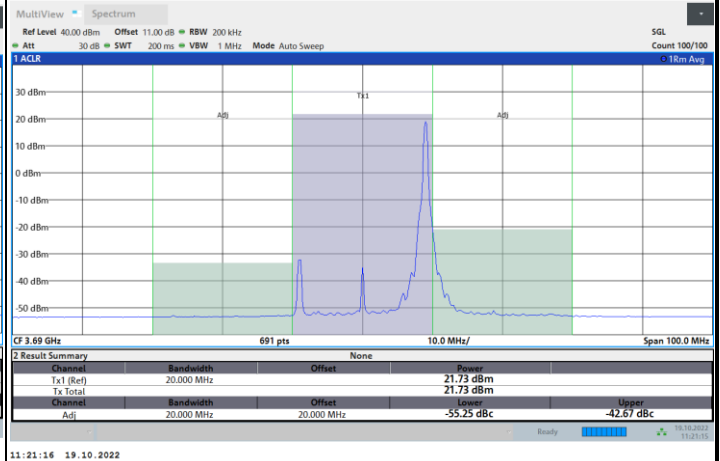
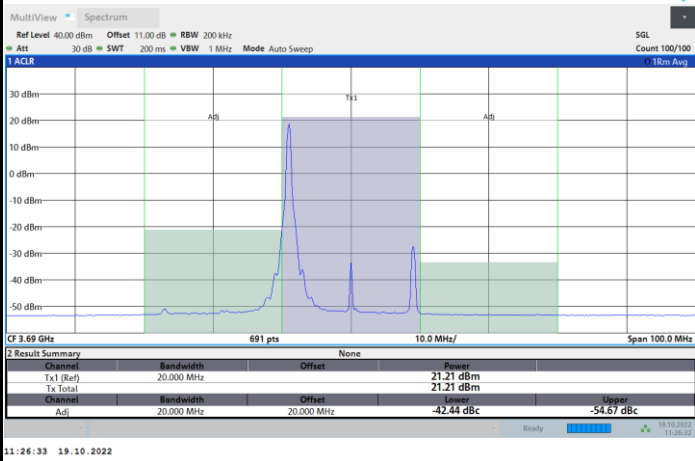


FR1 n48 / 20MHz / DFT-S OFDM / 64QAM

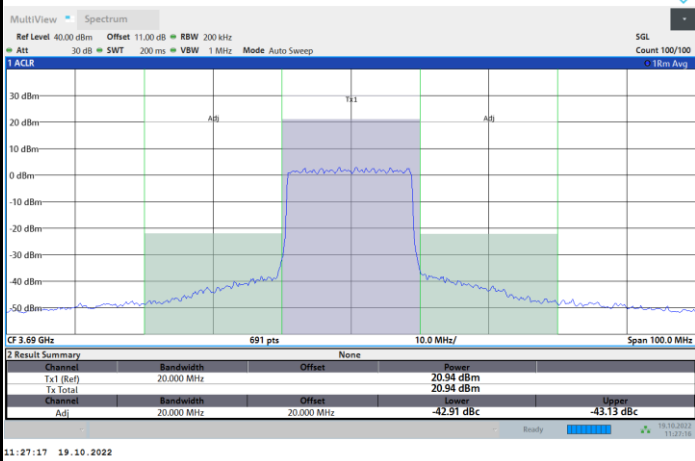
Highest Channel

1RB0

1RBmax



Full RB



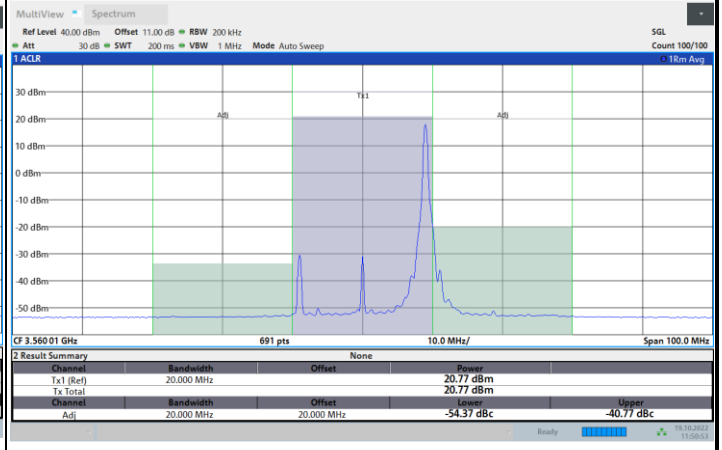
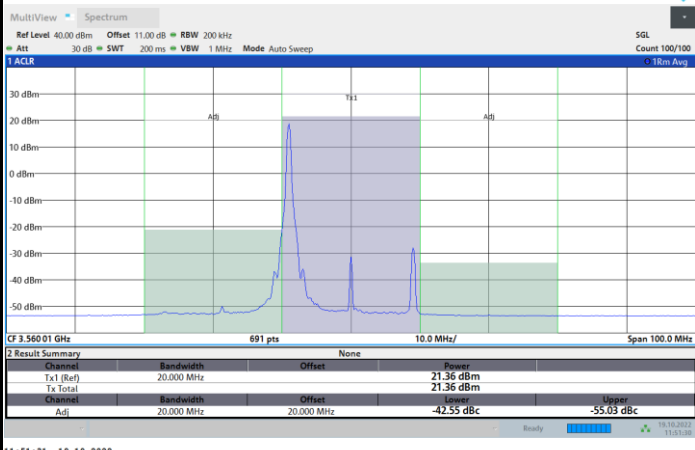


FR1 n48 / 20MHz / DFT-S OFDM / 256QAM

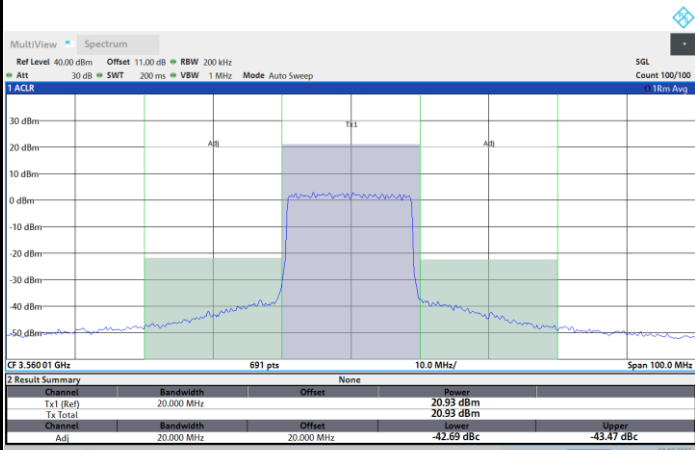
Lowest Channel

1RB0

1RBmax



Full RB





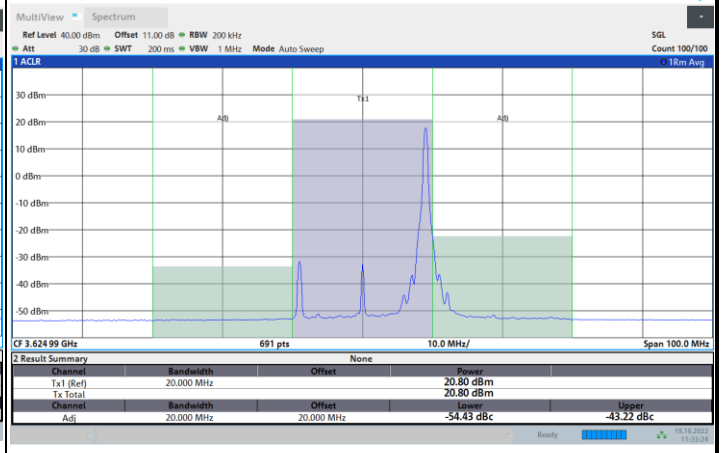
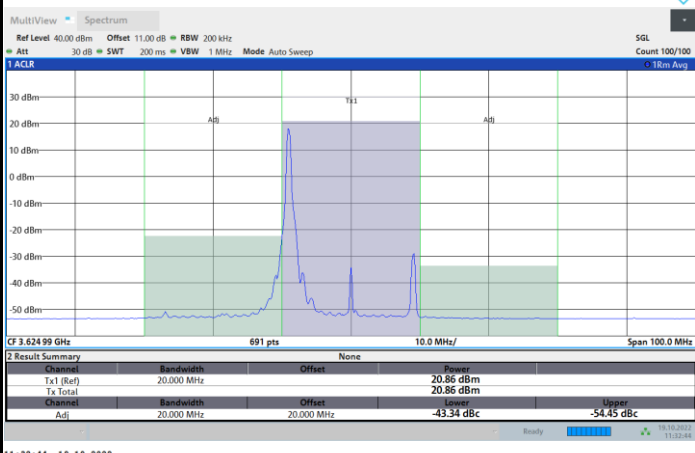


FR1 n48 / 20MHz / DFT-S OFDM / 256QAM

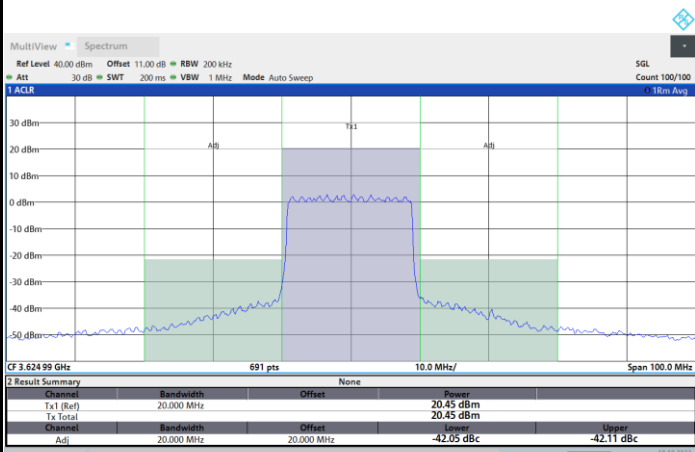
Middle Channel

1RB0

1RBmax



Full RB



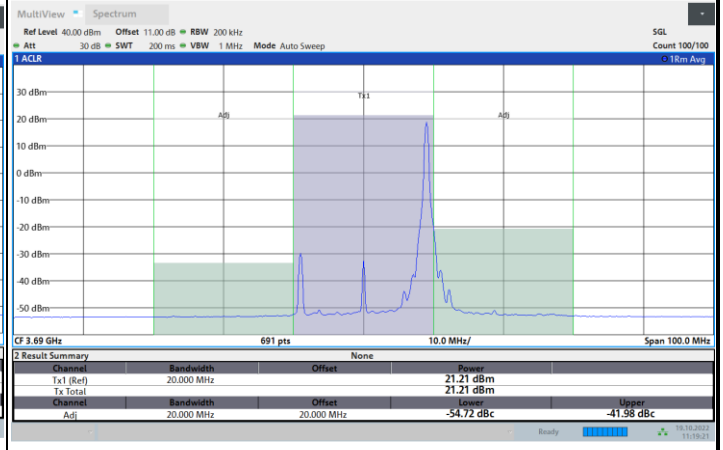
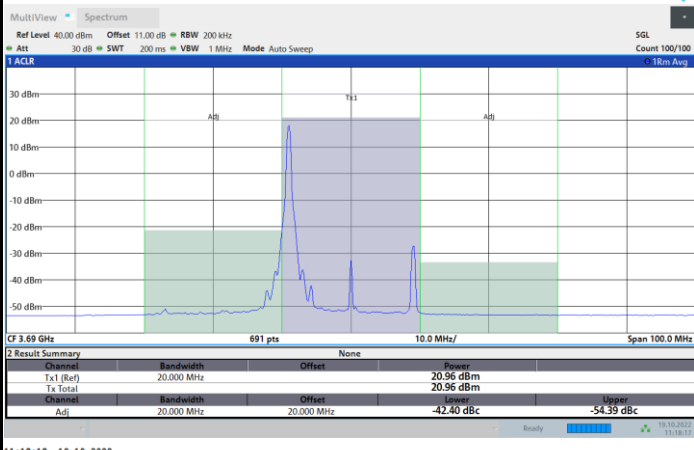


FR1 n48 / 20MHz / DFT-S OFDM / 256QAM

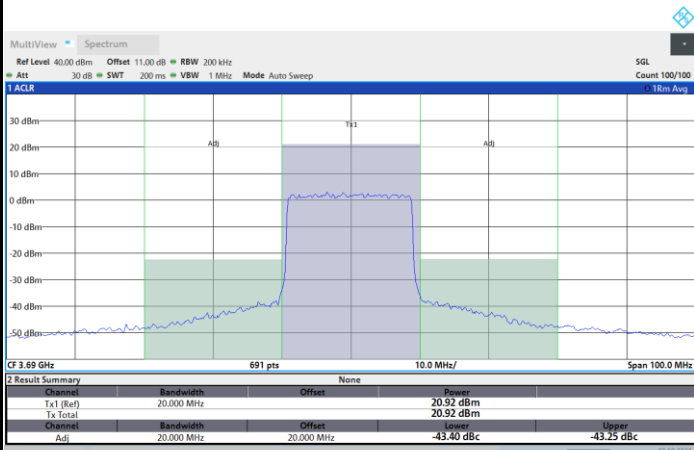
Highest Channel

1RB0

1RBmax



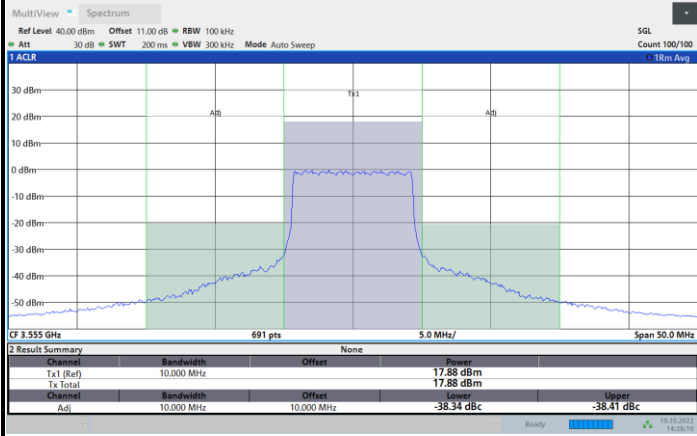
Full RB





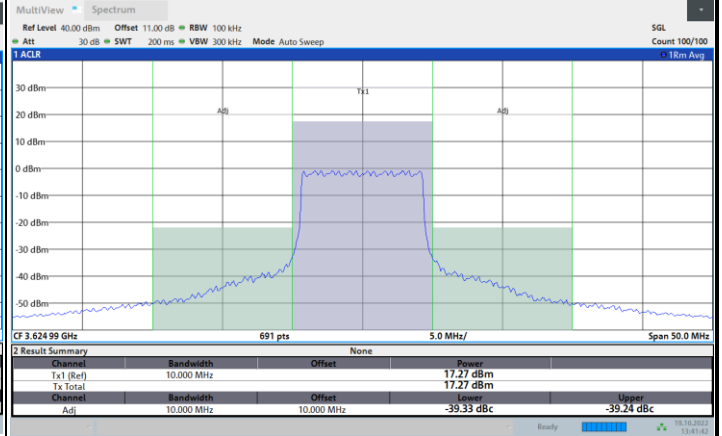
FR1 n48 / 10MHz / CP OFDM / QPSK / Full RB

Lowest Channel



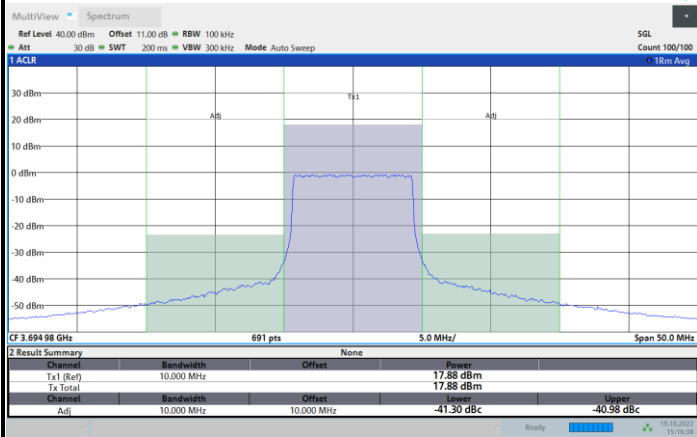
14:28:19 19.10.2022

Middle Channel



13:41:43 19.10.2022

Highest Channel

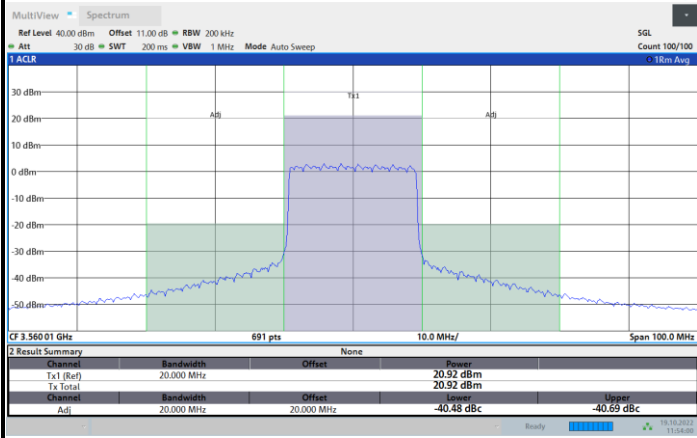


15:16:38 19.10.2022



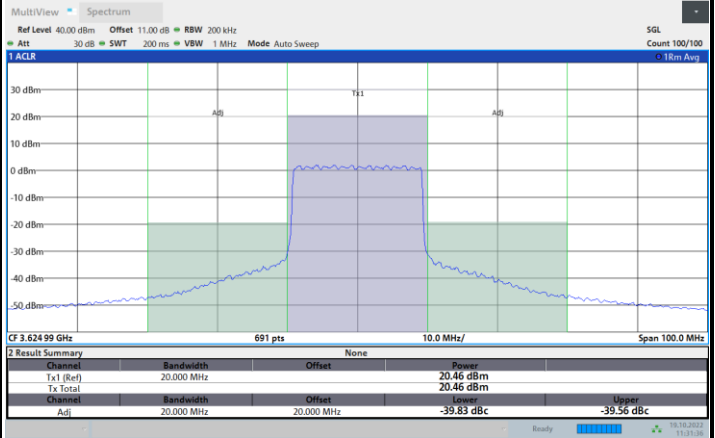
FR1 n48 / 20MHz / CP OFDM / QPSK / Full RB

Lowest Channel



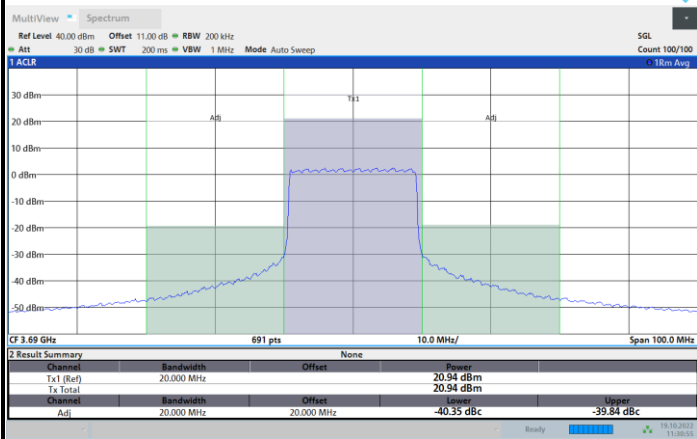
11:54:01 19.10.2022

Middle Channel



11:31:37 19.10.2022

Highest Channel



11:30:56 19.10.2022

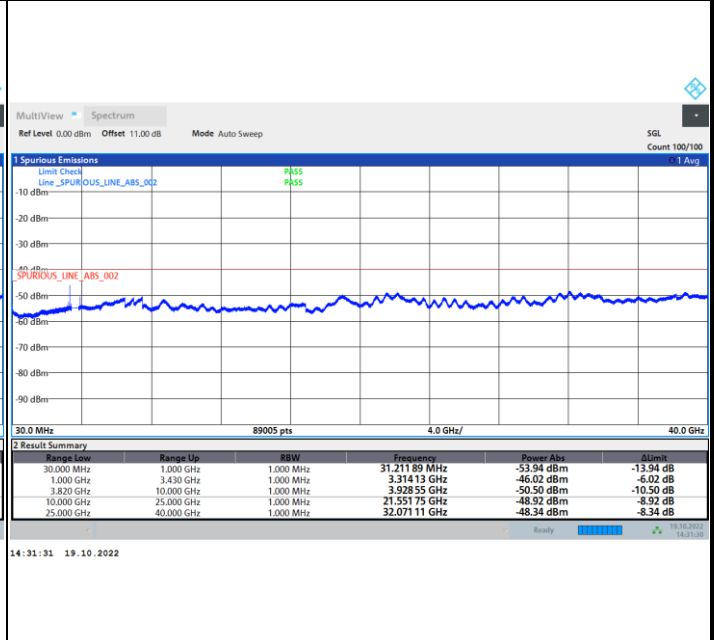
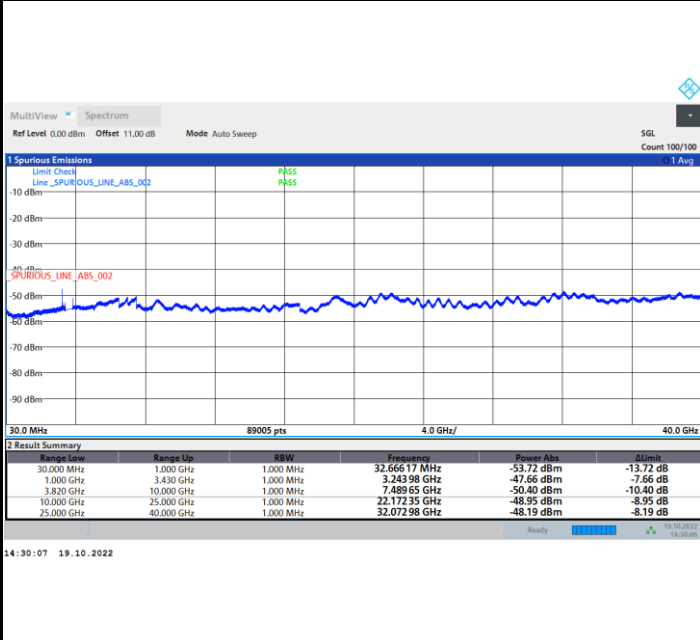


# Conducted Spurious Emission

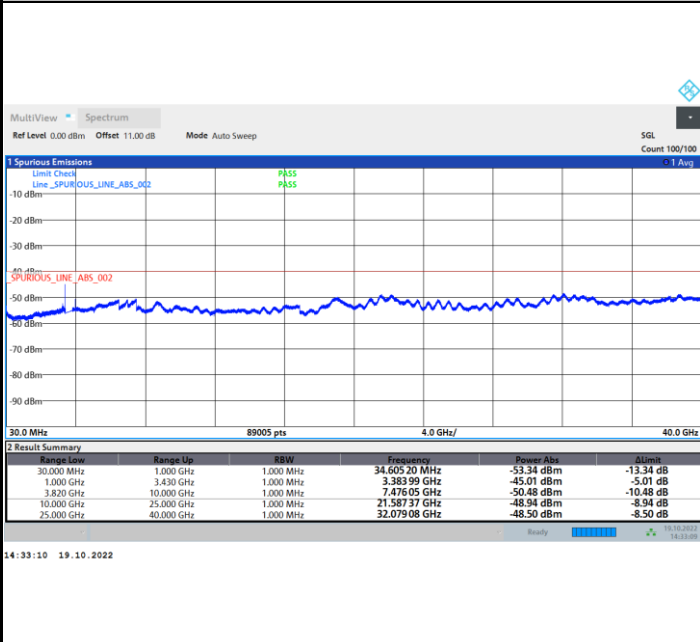
FR1 n48 / 10MHz / DFT-S OFDM / QPSK / 1RB1

## Lowest Channel

## Middle Channel



## Highest Channel

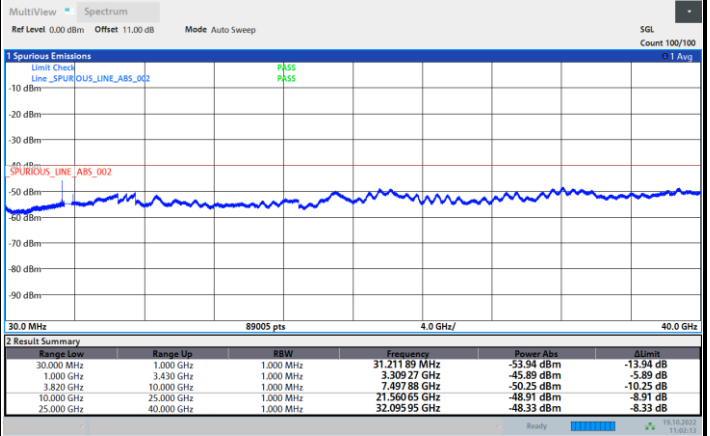
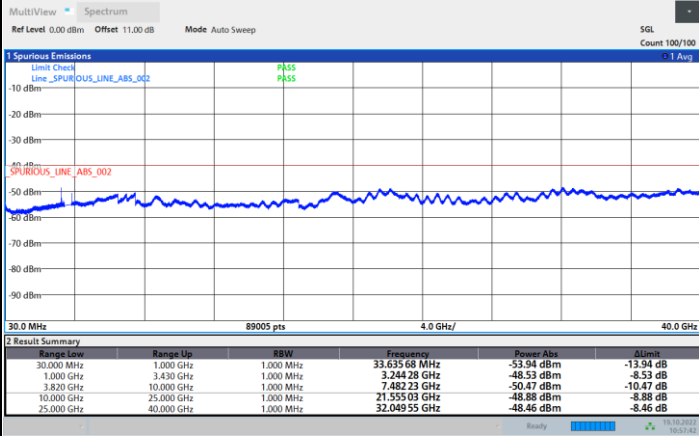




FR1 n48 / 20MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel

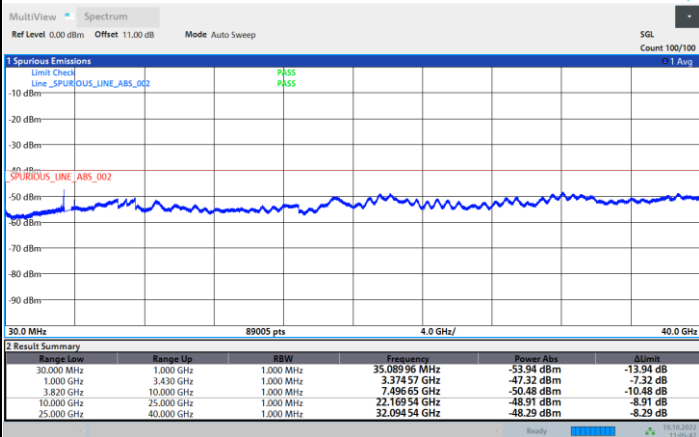
Middle Channel



10:57:43 19.10.2022

11:02:14 19.10.2022

Highest Channel



11:05:47 19.10.2022



### Frequency Stability

| Test Conditions  |                   | FR1 n48 (BPSK) / Middle Channel | Limit   |
|------------------|-------------------|---------------------------------|---------|
| Temperature (°C) | Voltage (Volt)    | BW 20MHz                        | Note 2. |
|                  |                   | Deviation (ppm)                 | Result  |
| 50               | Normal Voltage    | 0.0004                          | PASS    |
| 40               | Normal Voltage    | 0.0018                          |         |
| 30               | Normal Voltage    | 0.0020                          |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                          |         |
| 10               | Normal Voltage    | 0.0049                          |         |
| 0                | Normal Voltage    | 0.0032                          |         |
| -10              | Normal Voltage    | 0.0050                          |         |
| -20              | Normal Voltage    | 0.0010                          |         |
| -30              | Normal Voltage    | 0.0033                          |         |
| 20               | Maximum Voltage   | 0.0034                          |         |
| 20               | Normal Voltage    | 0.0000                          |         |
| 20               | Battery End Point | 0.0031                          |         |

**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.

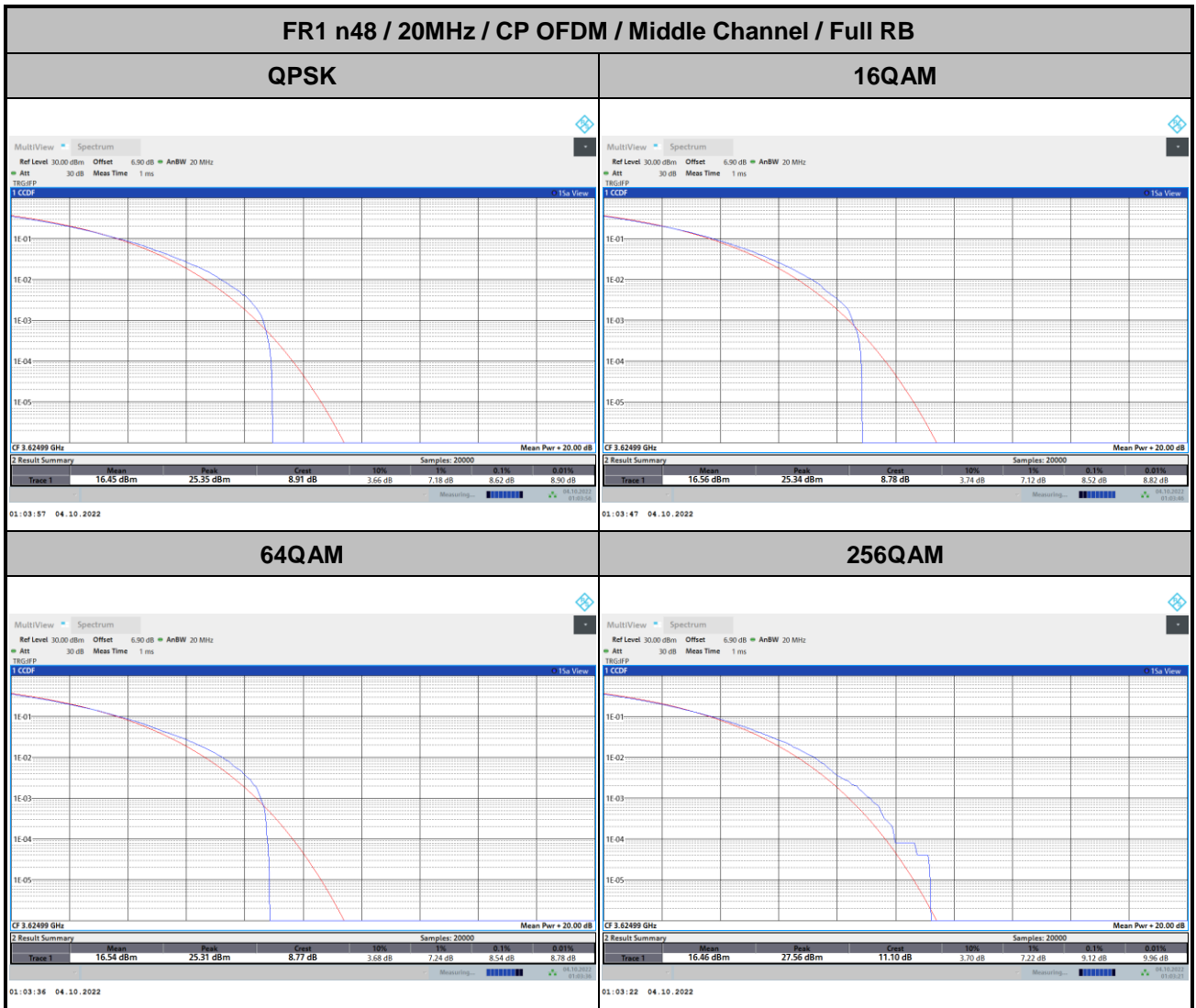


<MIMO Mode>

MIMO <Ant. 4>

**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 | 8.62                      | 8.52    | 8.54    | 9.12    | <b>PASS</b> |







**26dB Bandwidth**

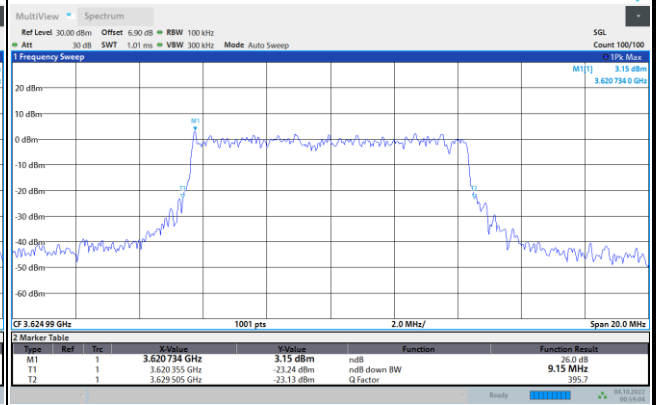
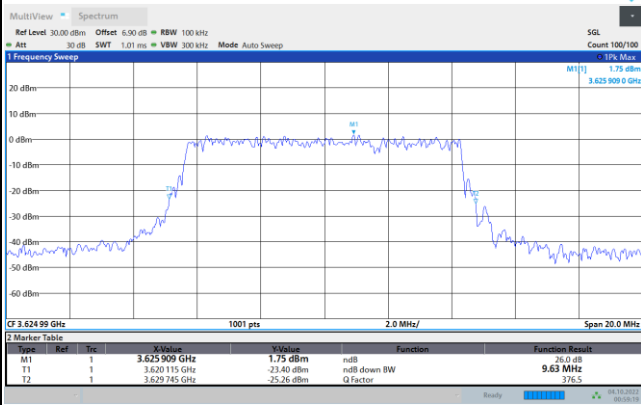
| Mode      | FR1 n48 : 26dB BW(MHz) / CP OFDM |        |       |        |       |        |        |        |
|-----------|----------------------------------|--------|-------|--------|-------|--------|--------|--------|
| BW        | 10MHz                            |        | 15MHz |        | 20MHz |        | 25MHz  |        |
| Mod.      | QPSK                             | 16QAM  | QPSK  | 16QAM  | QPSK  | 16QAM  | QPSK   | 16QAM  |
| Middle CH | 9.63                             | 9.15   | -     | -      | 19.10 | 19.02  | -      | -      |
| Mod.      | 64QAM                            | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM  | 256QAM |
| Middle CH | 9.49                             | 9.05   | -     | -      | 19.14 | 19.38  | -      | -      |
| BW        | 30MHz                            |        | 40MHz |        | 50MHz |        | 60MHz  |        |
| Mod.      | QPSK                             | 16QAM  | QPSK  | 16QAM  | QPSK  | 16QAM  | QPSK   | 16QAM  |
| Middle CH | -                                | -      | -     | -      | -     | -      | -      | -      |
| Mod.      | 64QAM                            | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM  | 256QAM |
| Middle CH | -                                | -      | -     | -      | -     | -      | -      | -      |
| 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 / 10MHz / CP OFDM / Middle Channel / Full RB

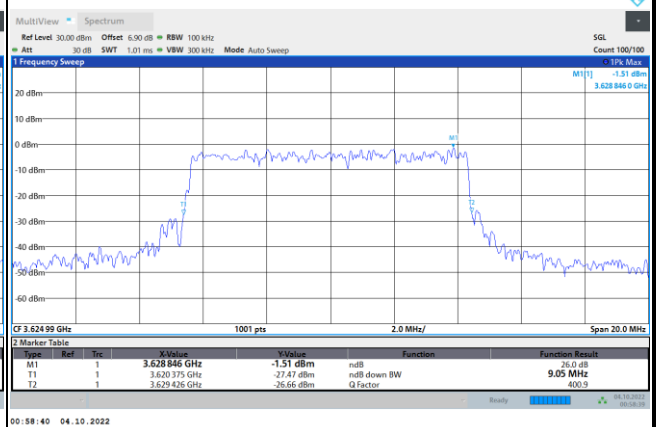
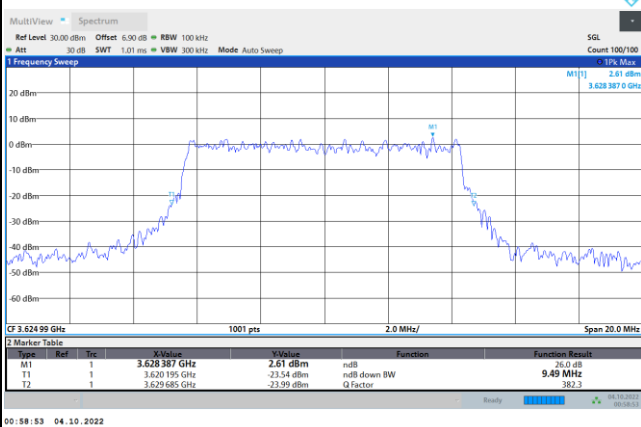
QPSK

16QAM



64QAM

256QAM

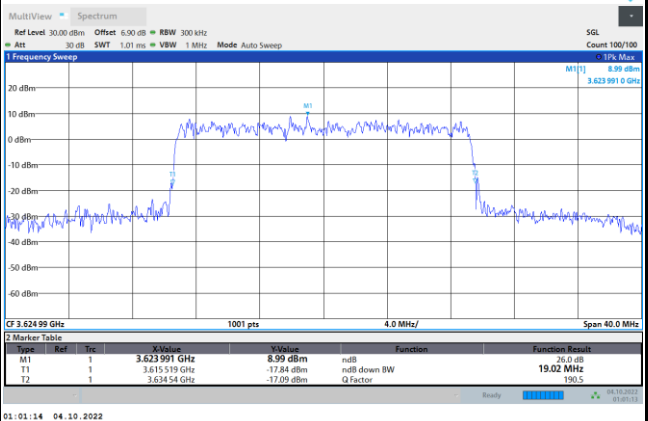
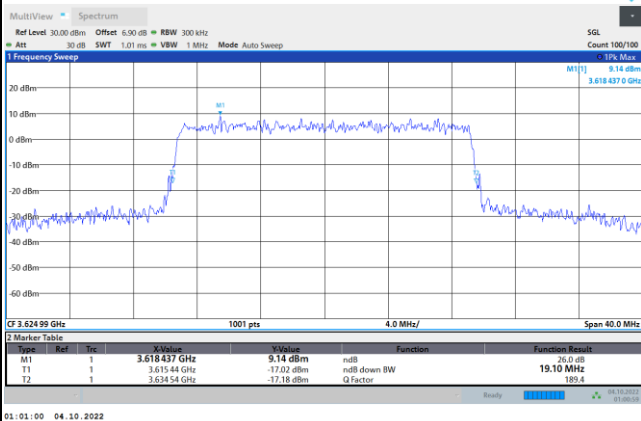




FR1 n48 / 20MHz / CP OFDM / Middle Channel / Full RB

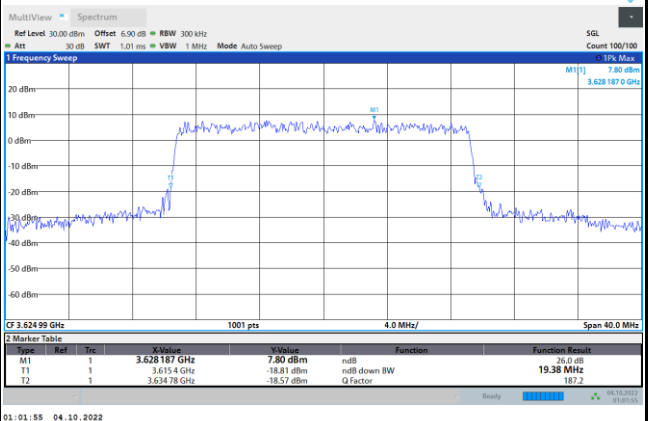
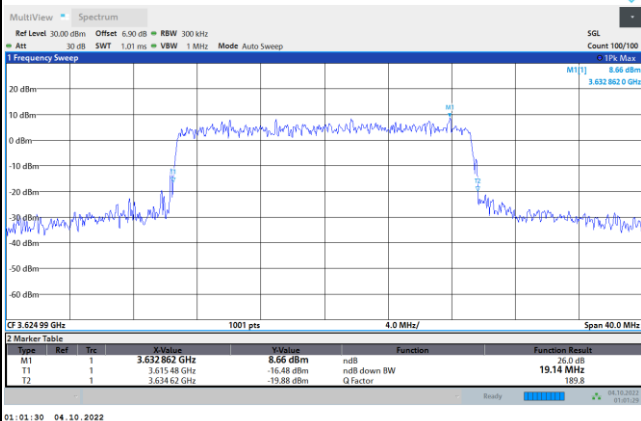
QPSK

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 | 8.58                           | 8.56   | -     | -      | 18.18 | 18.25  | -      | -      |
| Mod.      | 64QAM                          | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM  | 256QAM |
| Middle CH | 8.55                           | 8.60   | -     | -      | 18.26 | 18.20  | -      | -      |
| BW        | 30MHz                          |        | 40MHz |        | 50MHz |        | 60MHz  |        |
| Mod.      | QPSK                           | 16QAM  | QPSK  | 16QAM  | QPSK  | 16QAM  | QPSK   | 16QAM  |
| Middle CH | -                              | -      | -     | -      | -     | -      | -      | -      |
| Mod.      | 64QAM                          | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM  | 256QAM |
| Middle CH | -                              | -      | -     | -      | -     | -      | -      | -      |
| 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 | -                              | -      | -     | -      | -     | -      | -      | -      |