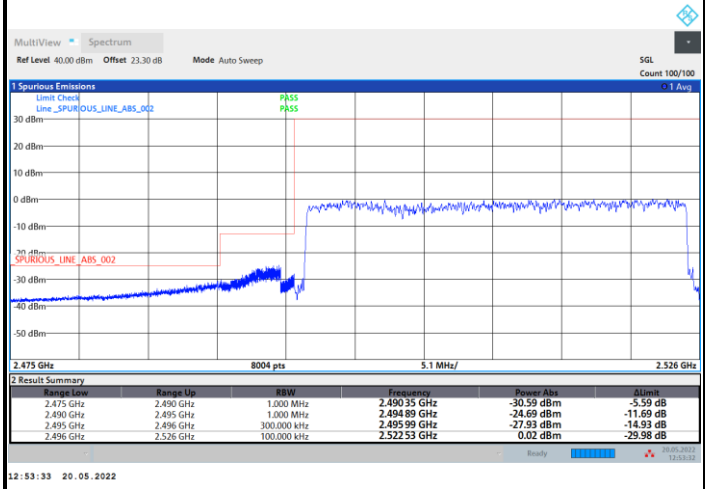
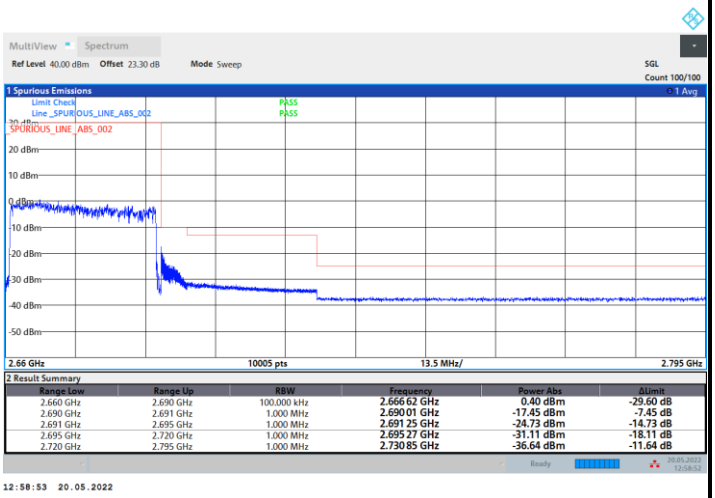
## FR1 n41 / 30MHz / CP OFDM / QPSK

### Lowest Band Edge / Full RB

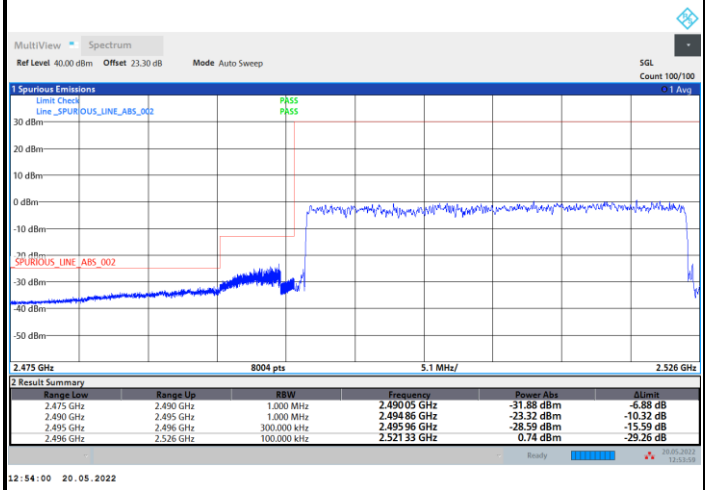



### Highest Band Edge / Full RB

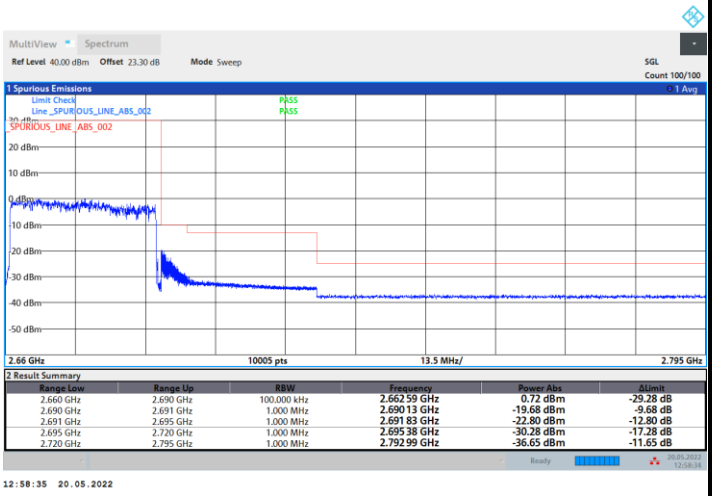



## FR1 n41 / 30MHz / CP OFDM / 16QAM

### Lowest Band Edge / Full RB

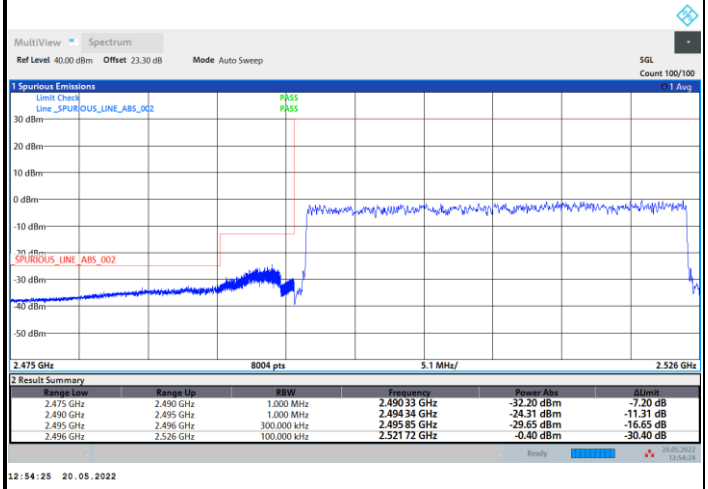



### Highest Band Edge / Full RB

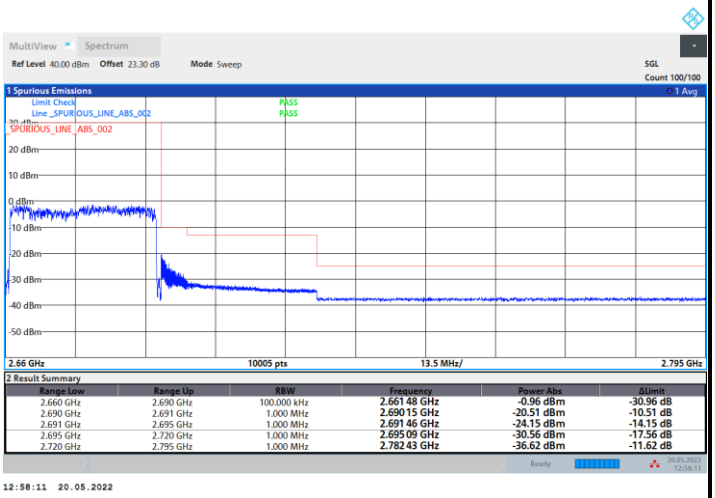


## FR1 n41 / 30MHz / CP OFDM / 64QAM

### Lowest Band Edge / Full RB

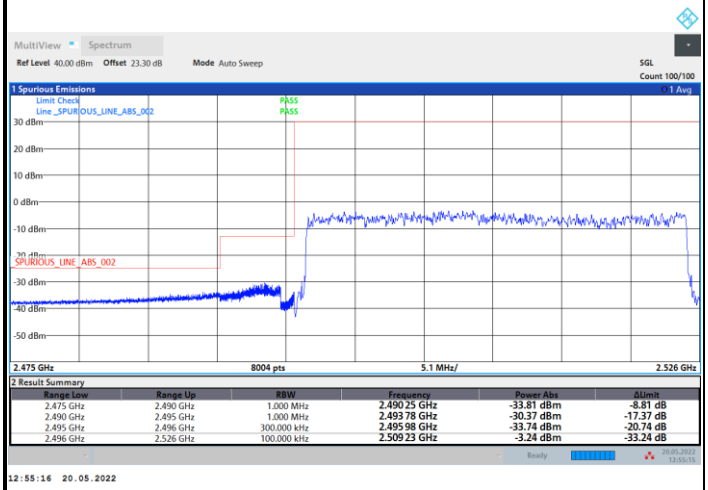



### Highest Band Edge / Full RB

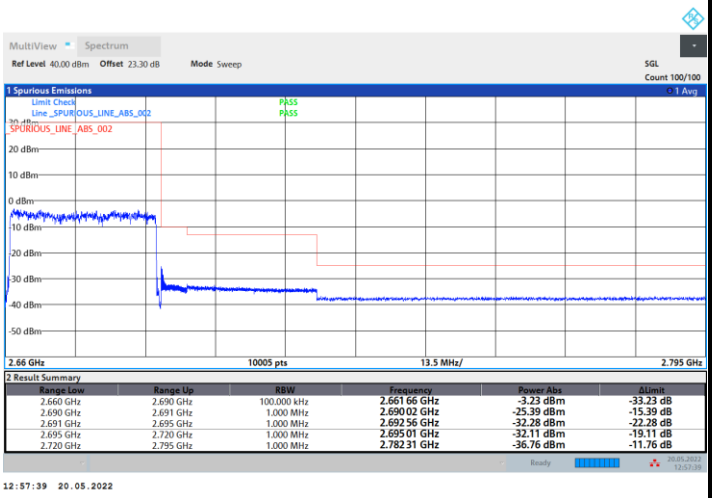



## FR1 n41 / 30MHz / CP OFDM / 256QAM

### Lowest Band Edge / Full RB

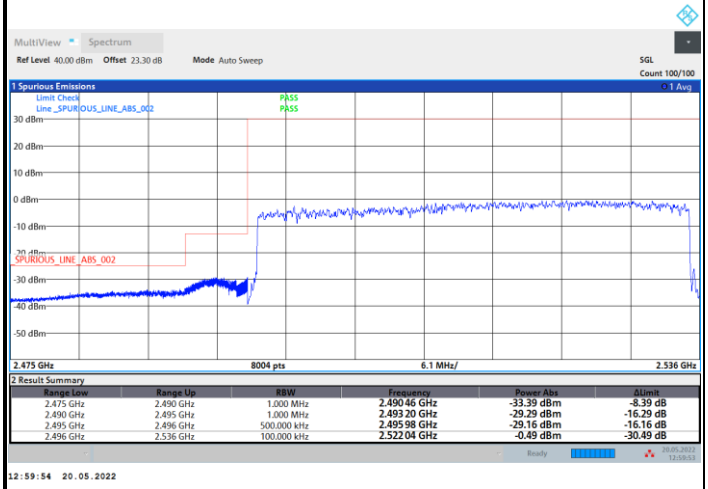



### Highest Band Edge / Full RB

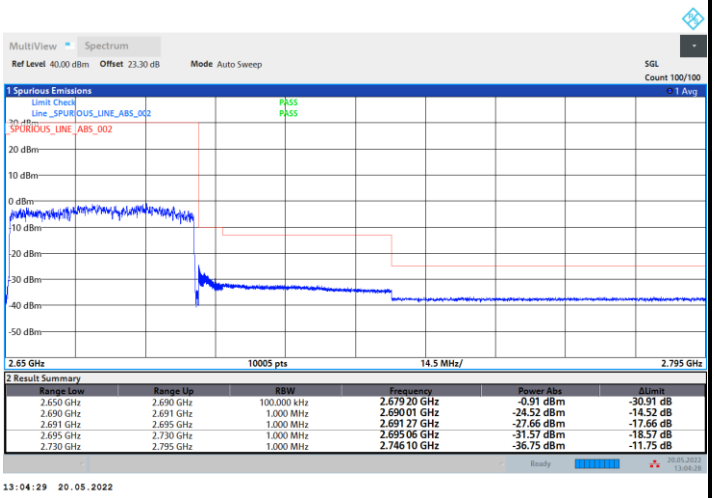


## FR1 n41 / 40MHz / CP OFDM / QPSK

### Lowest Band Edge / Full RB

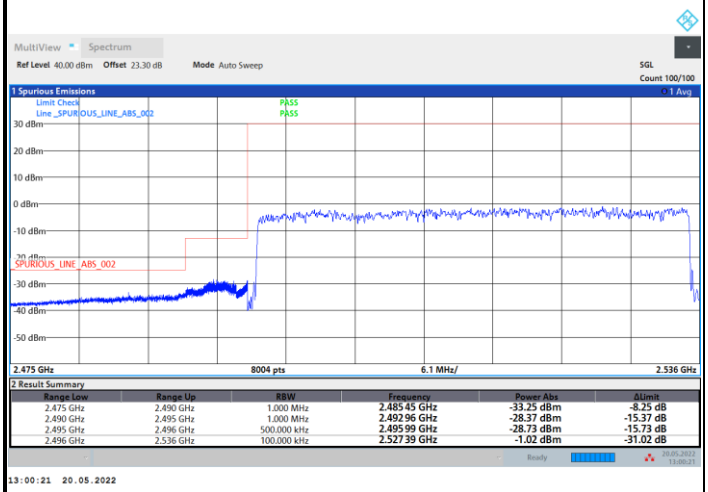



### Highest Band Edge / Full RB

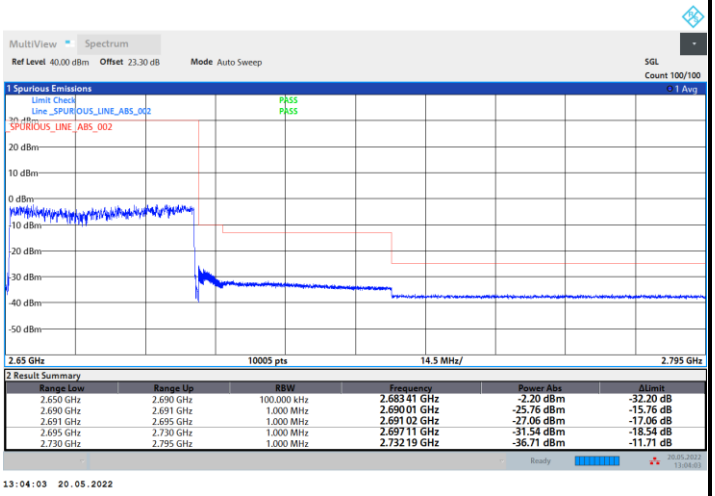



## FR1 n41 / 40MHz / CP OFDM / 16QAM

### Lowest Band Edge / Full RB

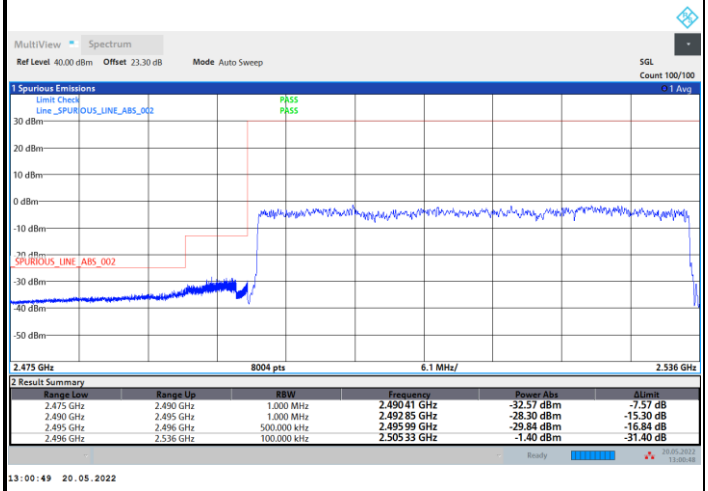



### Highest Band Edge / Full RB

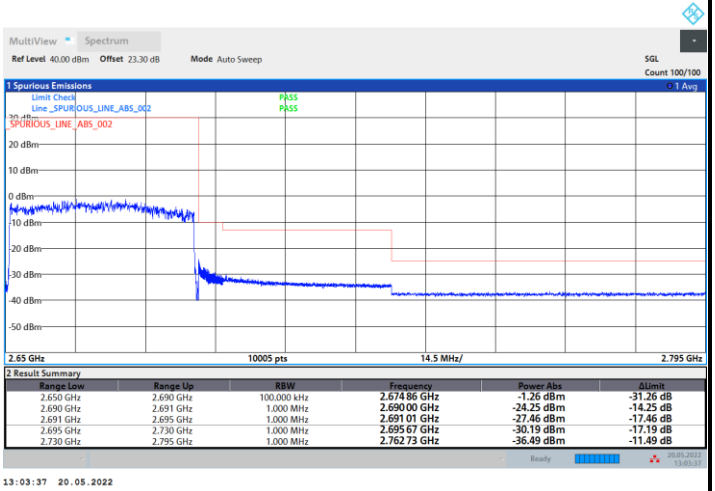


## FR1 n41 / 40MHz / CP OFDM / 64QAM

### Lowest Band Edge / Full RB

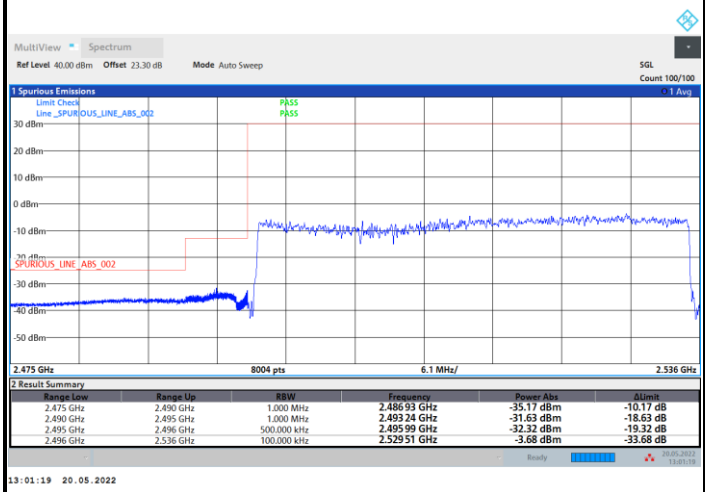



### Highest Band Edge / Full RB

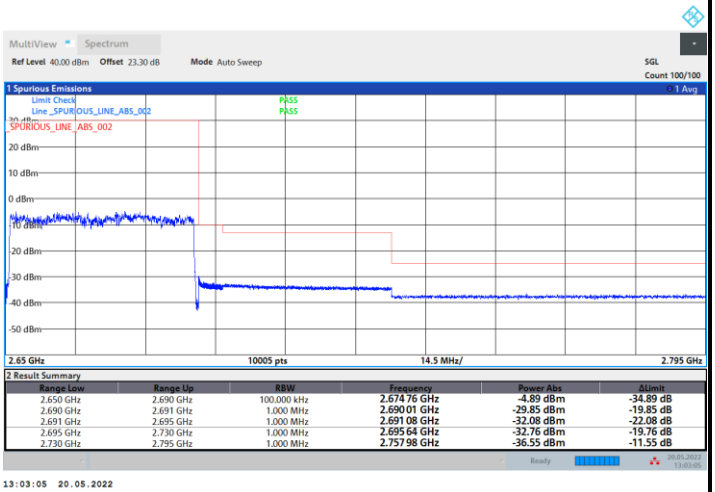



## FR1 n41 / 40MHz / CP OFDM / 256QAM

### Lowest Band Edge / Full RB

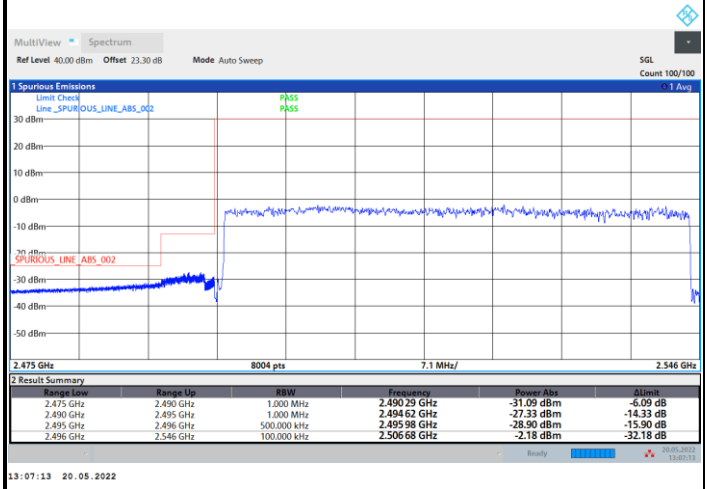



### Highest Band Edge / Full RB

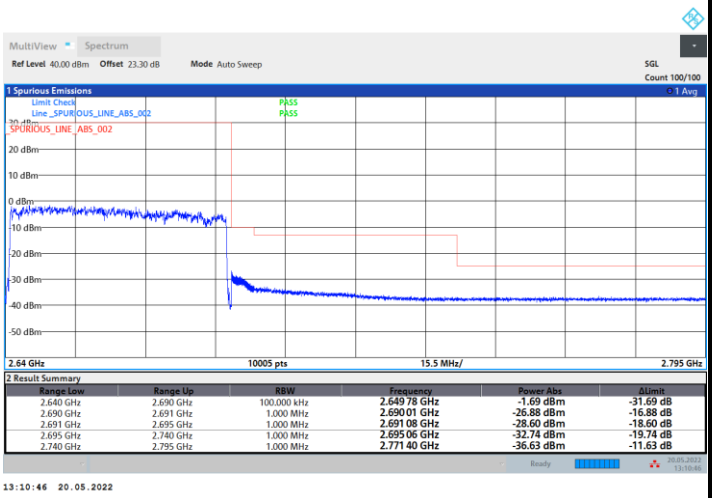


## FR1 n41 / 50MHz / CP OFDM / QPSK

### Lowest Band Edge / Full RB

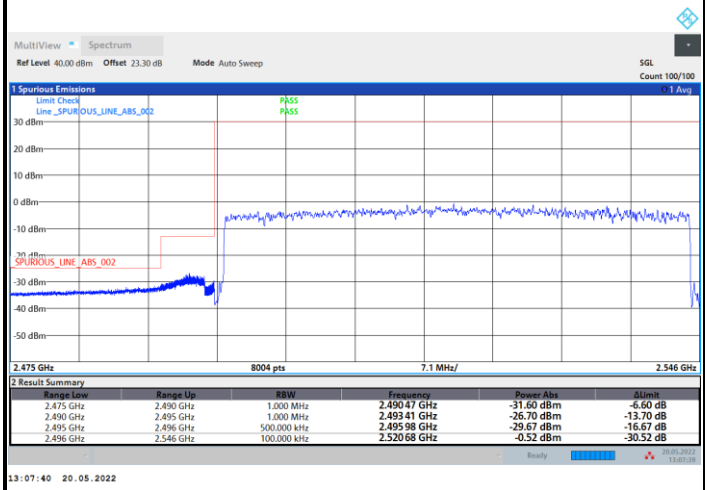



### Highest Band Edge / Full RB

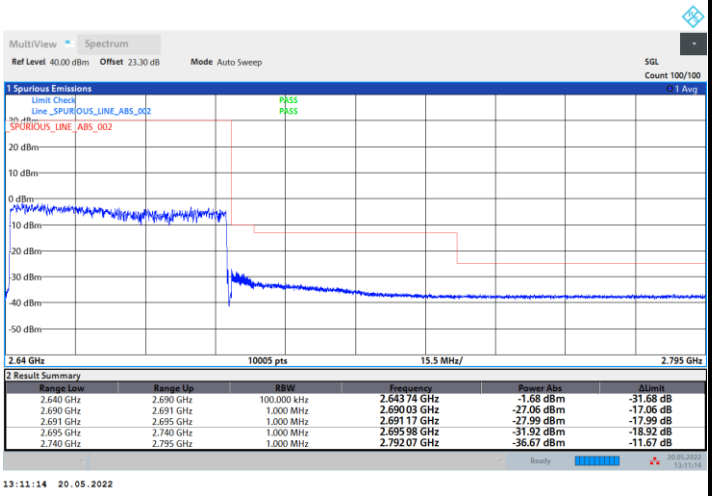



## FR1 n41 / 50MHz / CP OFDM / 16QAM

### Lowest Band Edge / Full RB

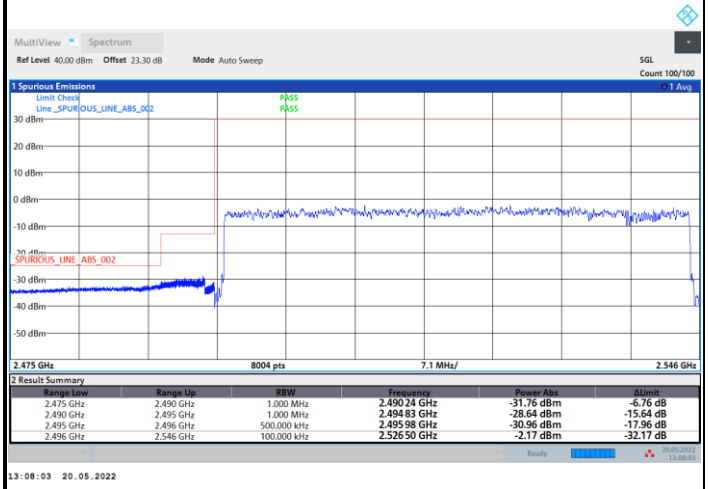



### Highest Band Edge / Full RB

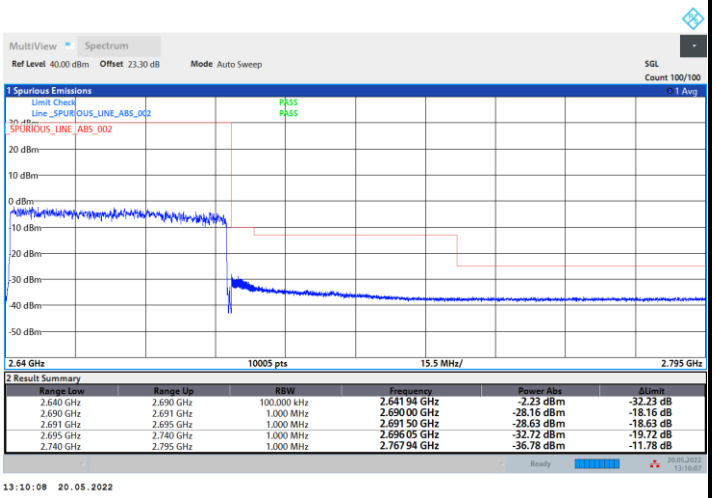


## FR1 n41 / 50MHz / CP OFDM / 64QAM

### Lowest Band Edge / Full RB

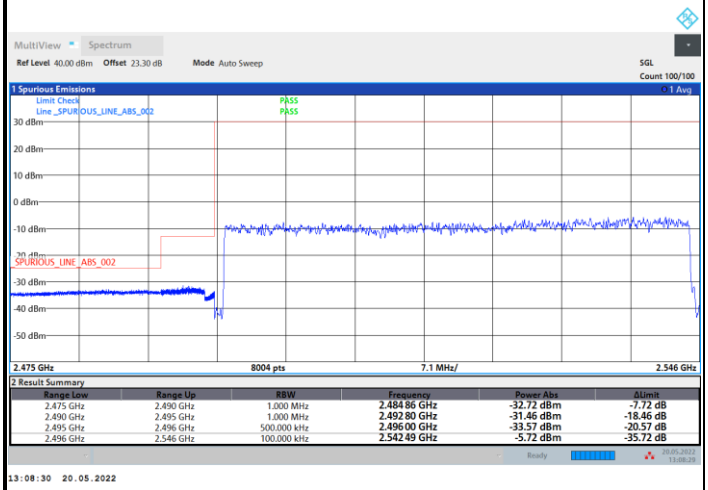



### Highest Band Edge / Full RB

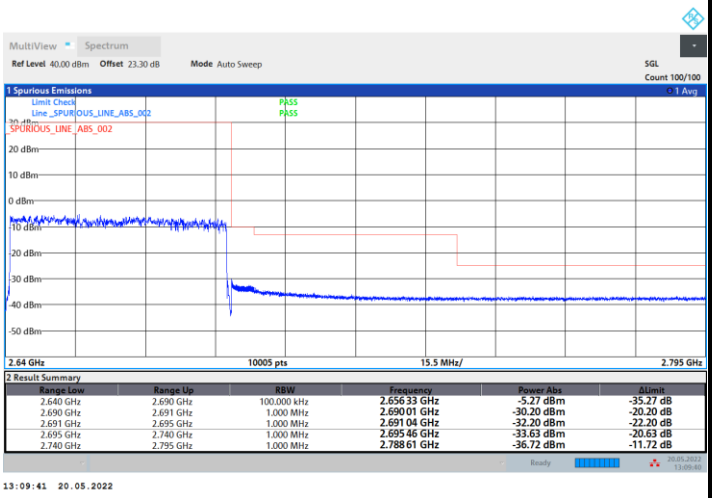



## FR1 n41 / 50MHz / CP OFDM / 256QAM

### Lowest Band Edge / Full RB

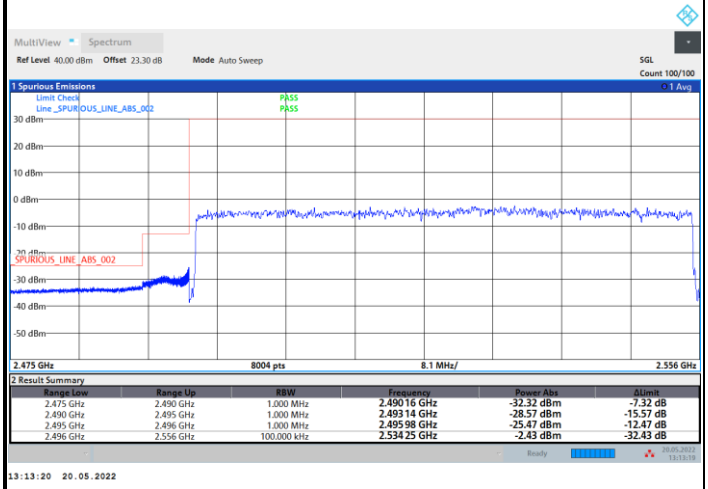



### Highest Band Edge / Full RB

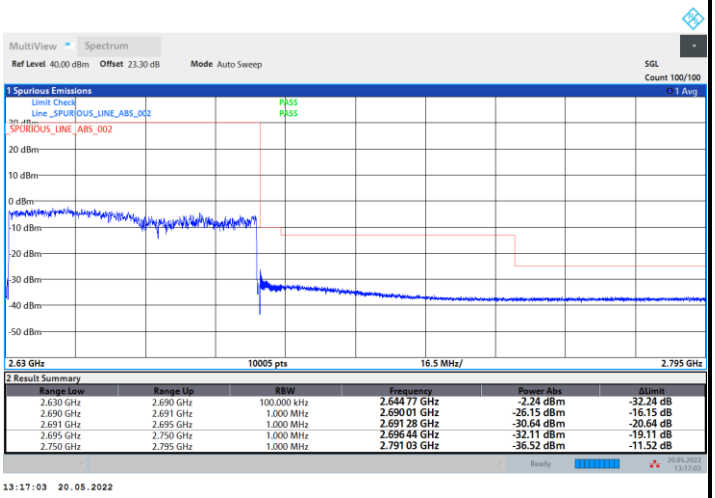


## FR1 n41 / 60MHz / CP OFDM / QPSK

### Lowest Band Edge / Full RB

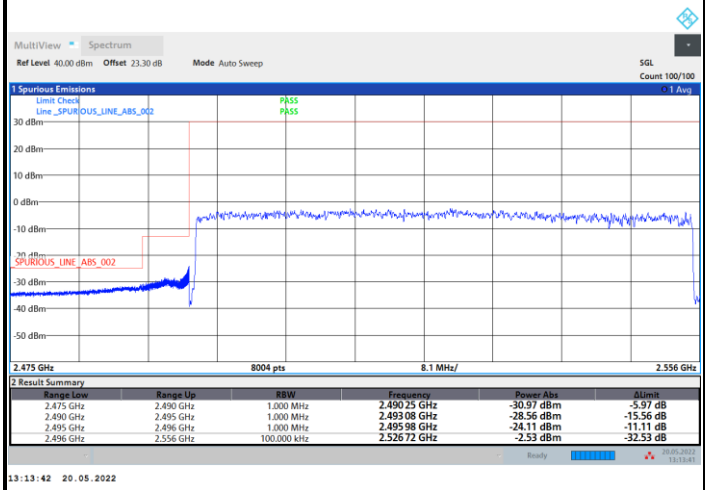



### Highest Band Edge / Full RB

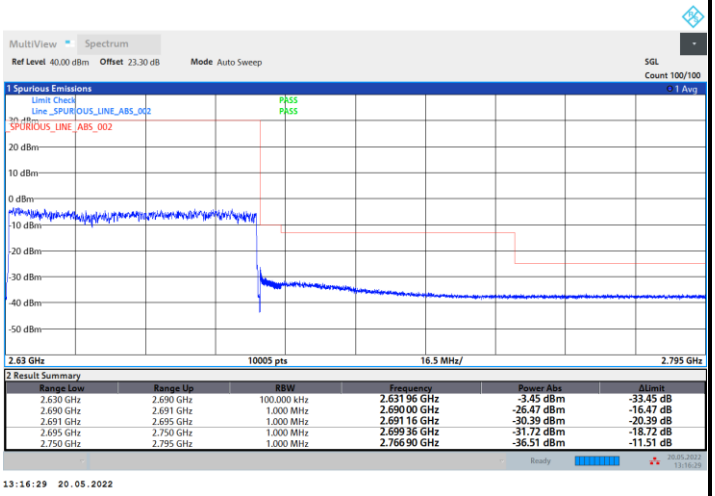



## FR1 n41 / 60MHz / CP OFDM / 16QAM

### Lowest Band Edge / Full RB

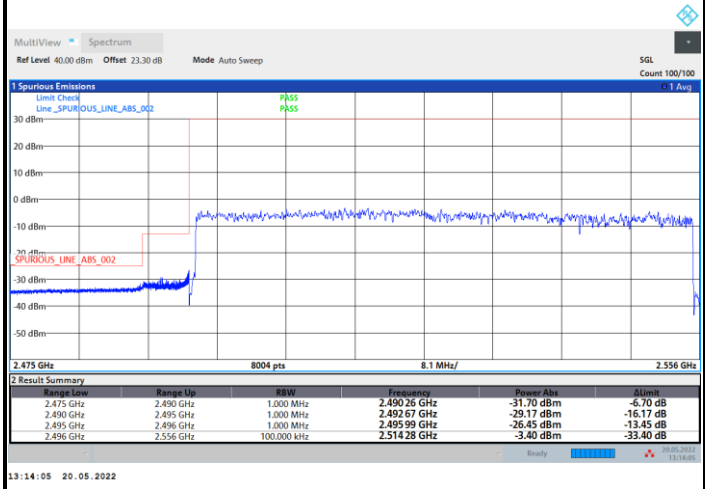



### Highest Band Edge / Full RB

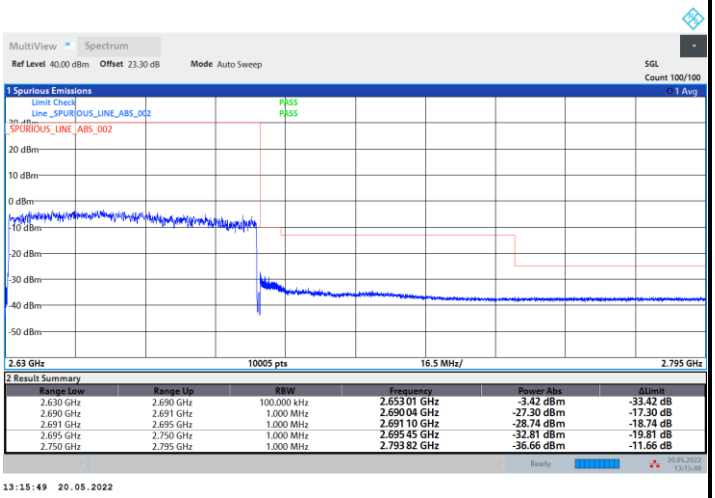


## FR1 n41 / 60MHz / CP OFDM / 64QAM

### Lowest Band Edge / Full RB

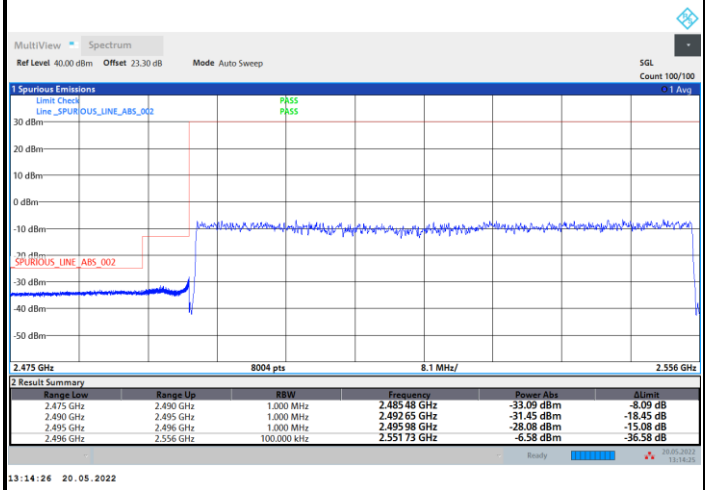



### Highest Band Edge / Full RB

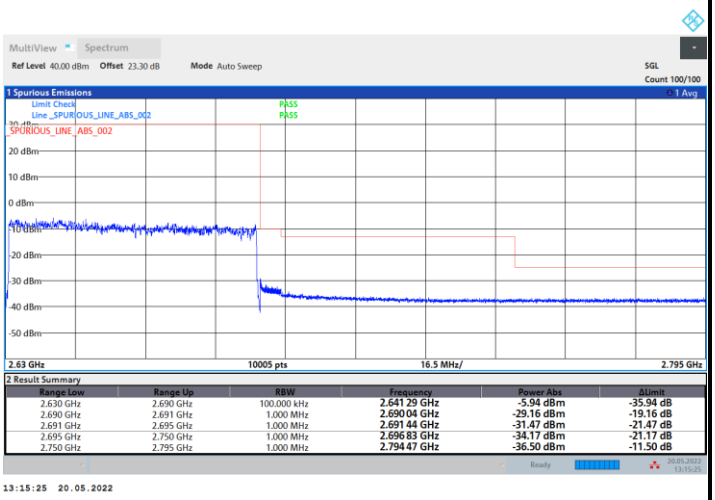



## FR1 n41 / 60MHz / CP OFDM / 256QAM

### Lowest Band Edge / Full RB

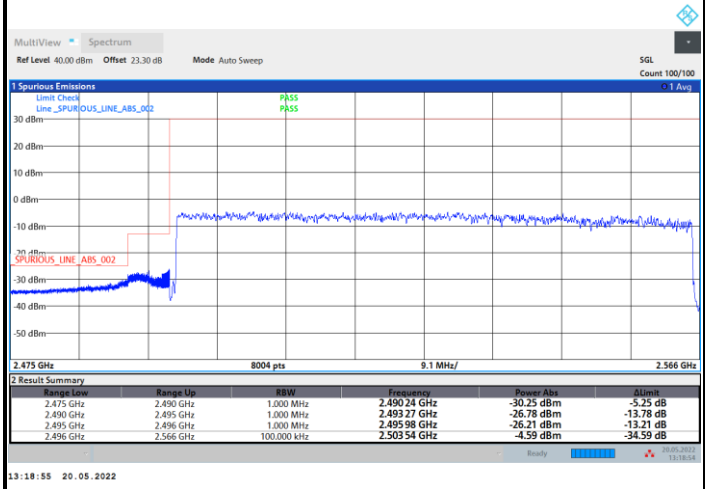



### Highest Band Edge / Full RB

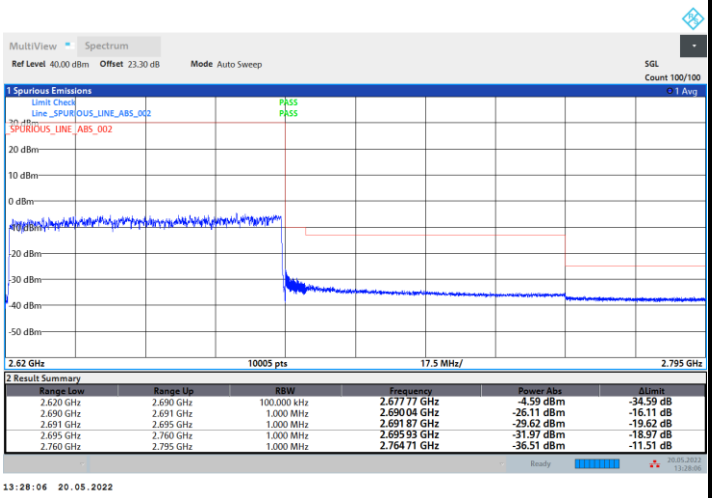


## FR1 n41 / 70MHz / CP OFDM / QPSK

### Lowest Band Edge / Full RB

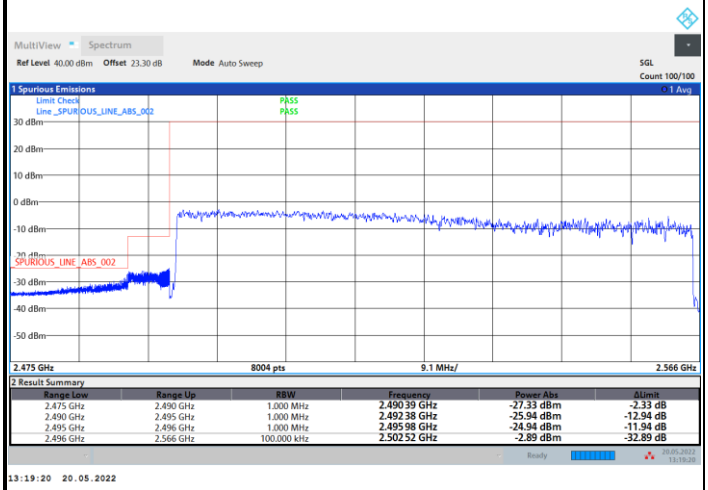



### Highest Band Edge / Full RB

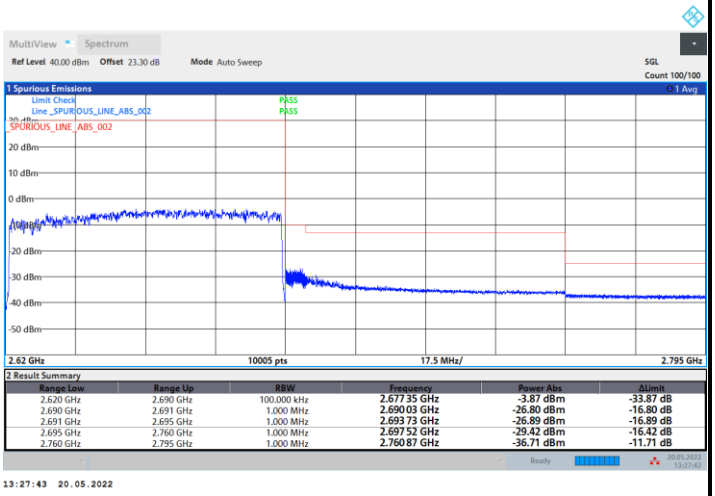



## FR1 n41 / 70MHz / CP OFDM / 16QAM

### Lowest Band Edge / Full RB

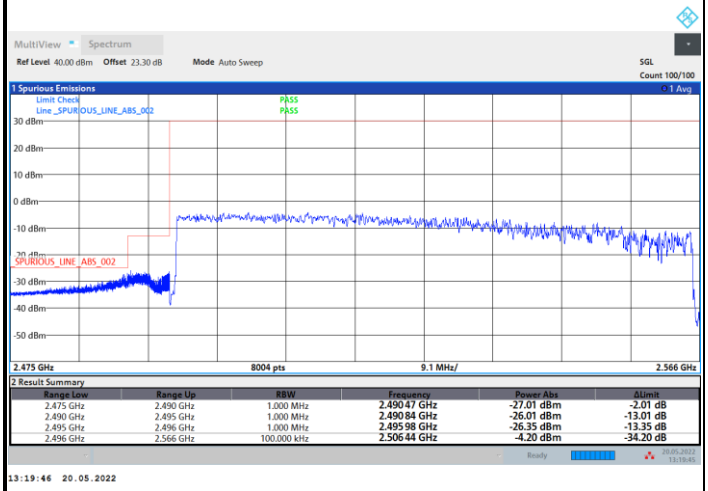



### Highest Band Edge / Full RB

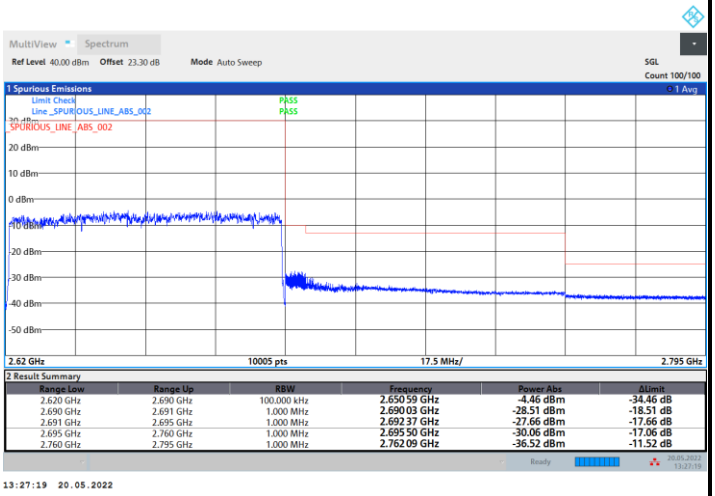


## FR1 n41 / 70MHz / CP OFDM / 64QAM

### Lowest Band Edge / Full RB

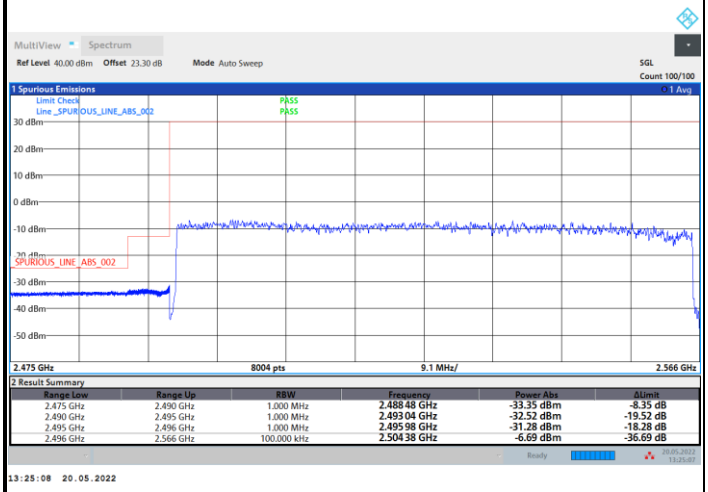



### Highest Band Edge / Full RB

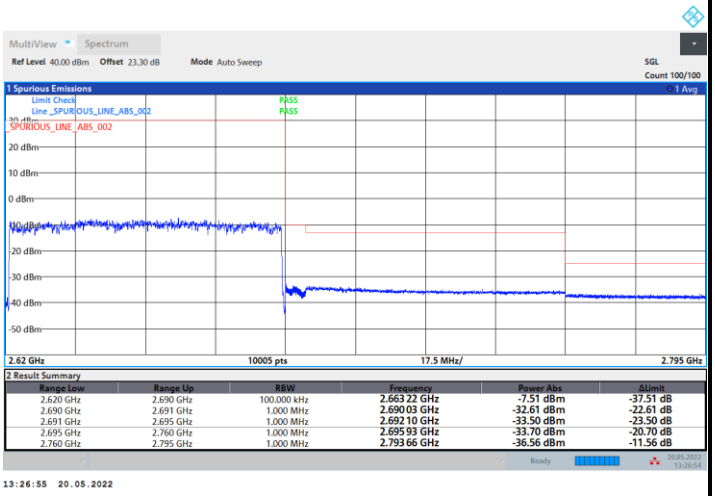



## FR1 n41 / 70MHz / CP OFDM / 256QAM

### Lowest Band Edge / Full RB

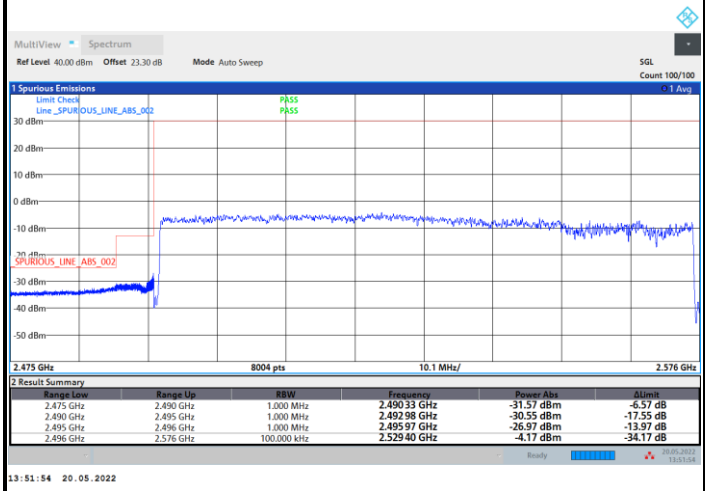



### Highest Band Edge / Full RB

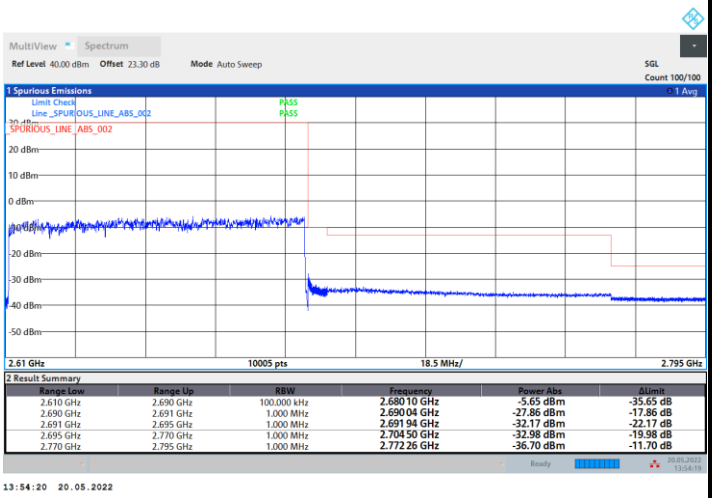


## FR1 n41 / 80MHz / CP OFDM / QPSK

### Lowest Band Edge / Full RB

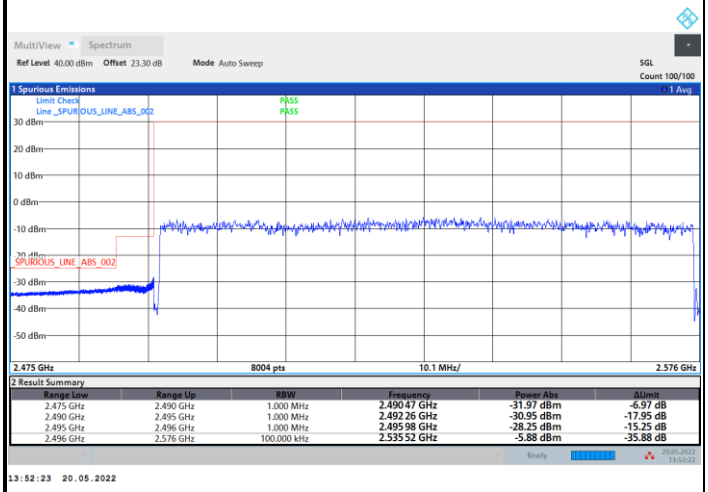



### Highest Band Edge / Full RB

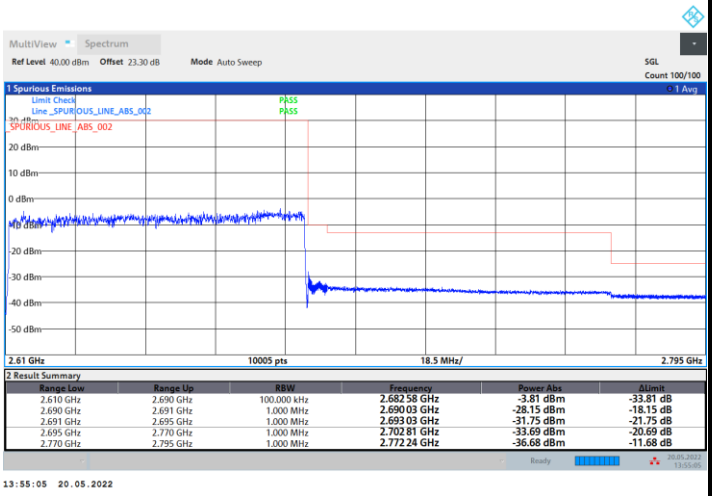



## FR1 n41 / 80MHz / CP OFDM / 16QAM

### Lowest Band Edge / Full RB

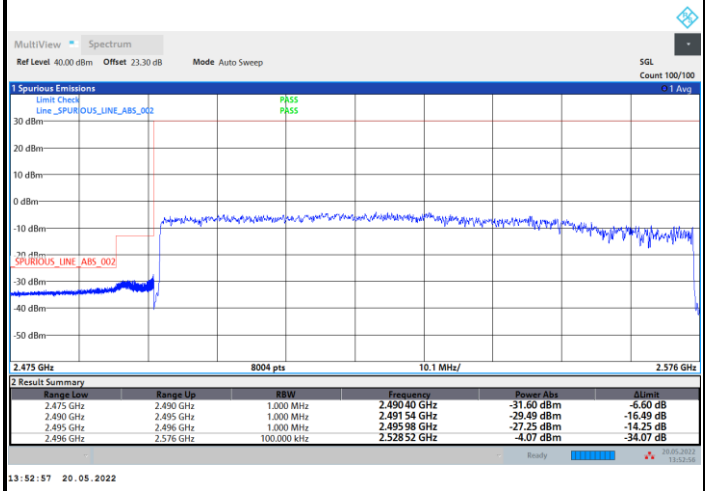



### Highest Band Edge / Full RB

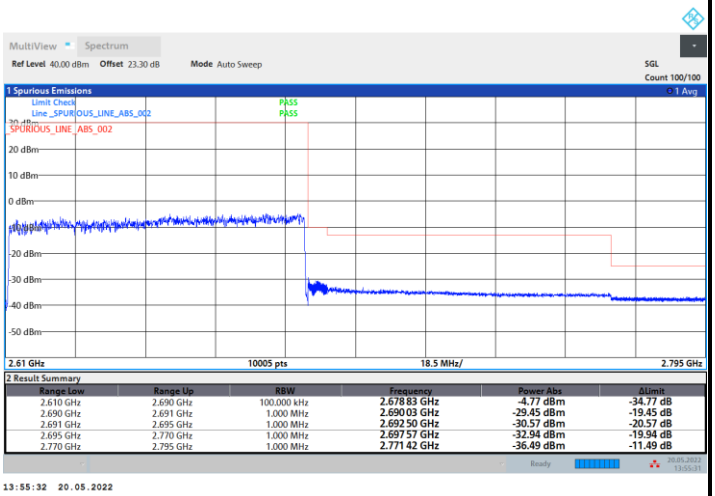


## FR1 n41 / 80MHz / CP OFDM / 64QAM

### Lowest Band Edge / Full RB

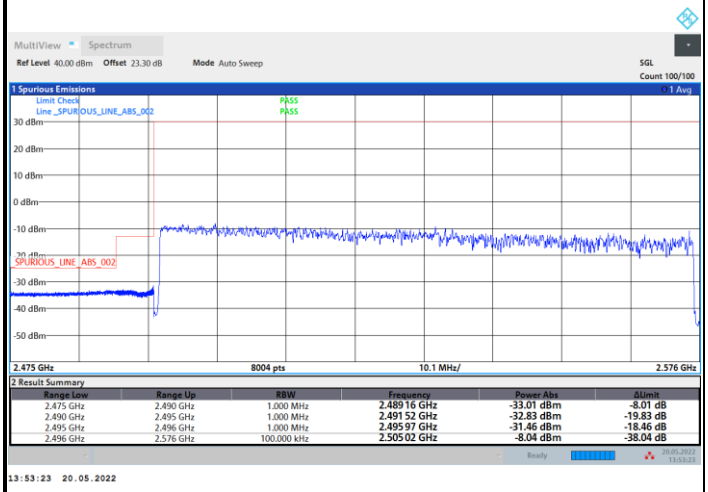



### Highest Band Edge / Full RB

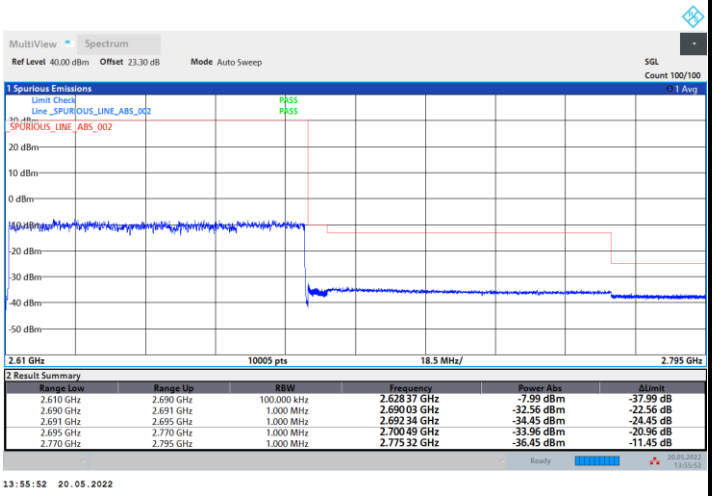



## FR1 n41 / 80MHz / CP OFDM / 256QAM

### Lowest Band Edge / Full RB

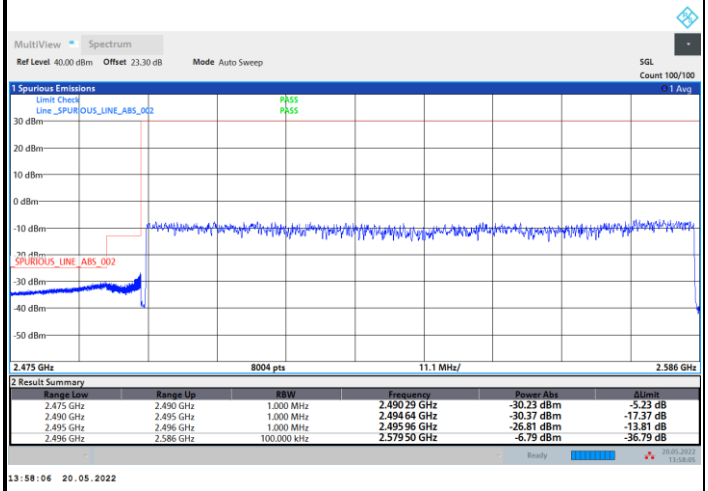



### Highest Band Edge / Full RB

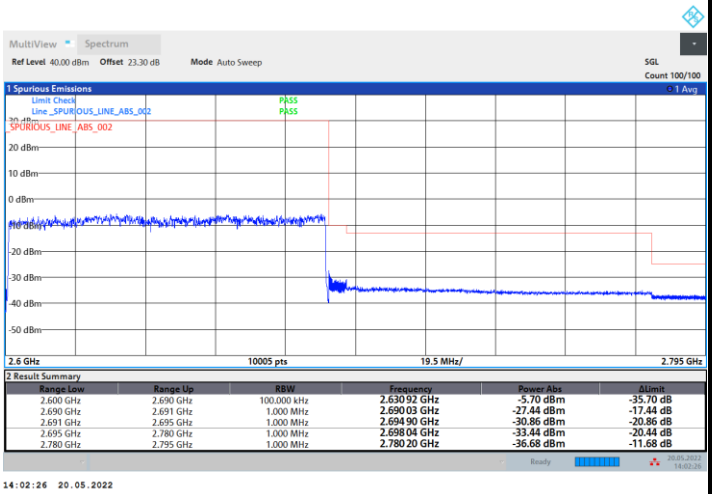


## FR1 n41 / 90MHz / CP OFDM / QPSK

### Lowest Band Edge / Full RB

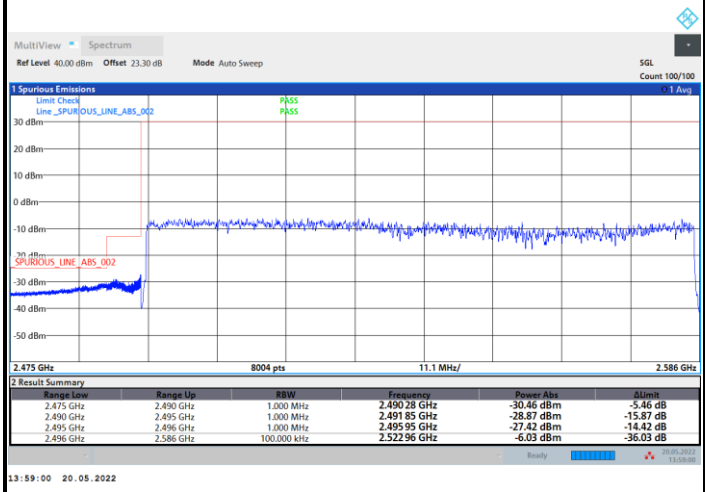



### Highest Band Edge / Full RB

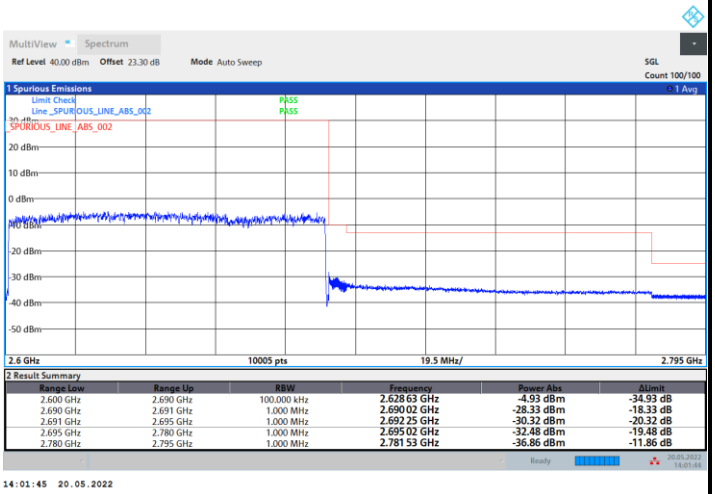



## FR1 n41 / 90MHz / CP OFDM / 16QAM

### Lowest Band Edge / Full RB

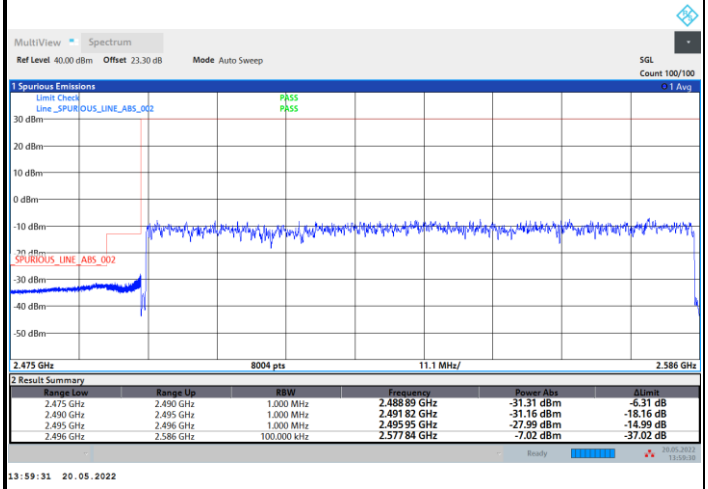



### Highest Band Edge / Full RB

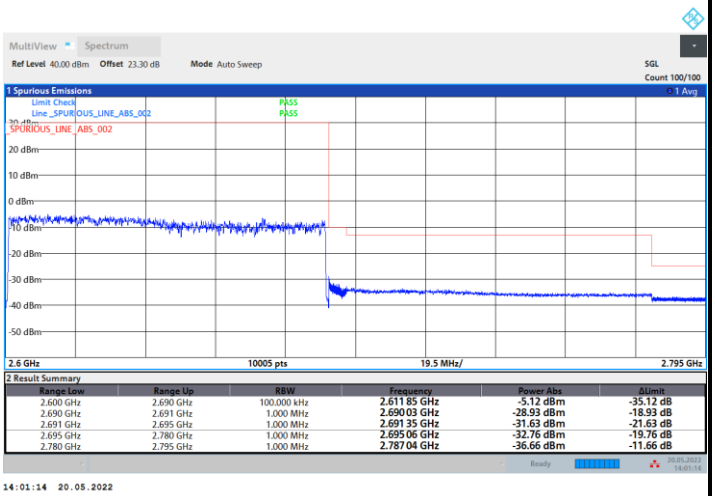


## FR1 n41 / 90MHz / CP OFDM / 64QAM

### Lowest Band Edge / Full RB

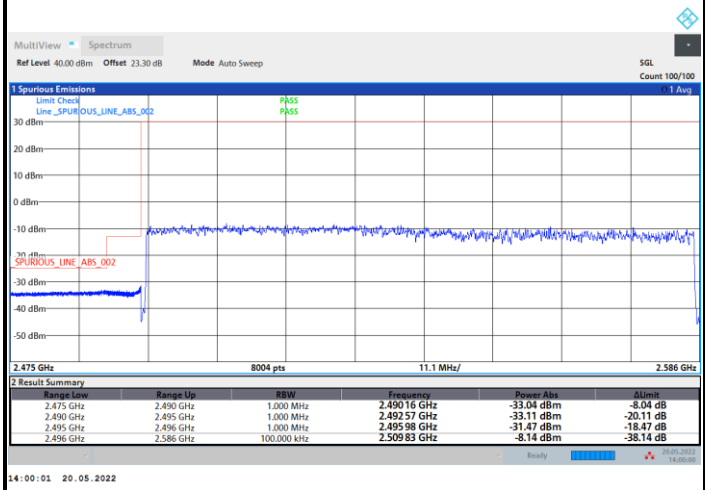



### Highest Band Edge / Full RB

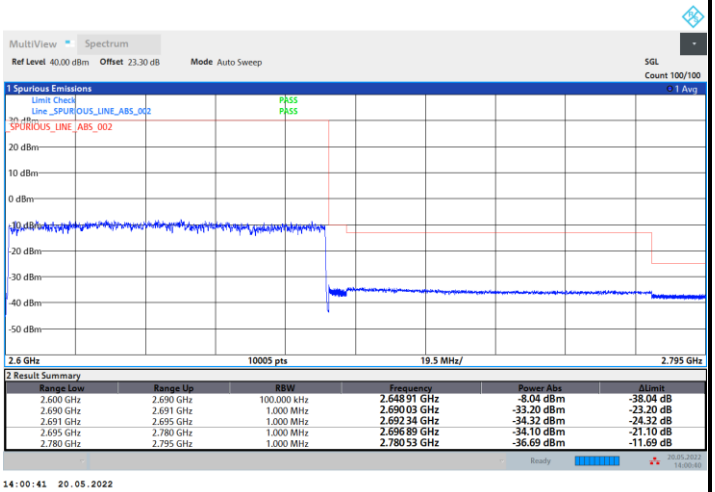



## FR1 n41 / 90MHz / CP OFDM / 256QAM

### Lowest Band Edge / Full RB

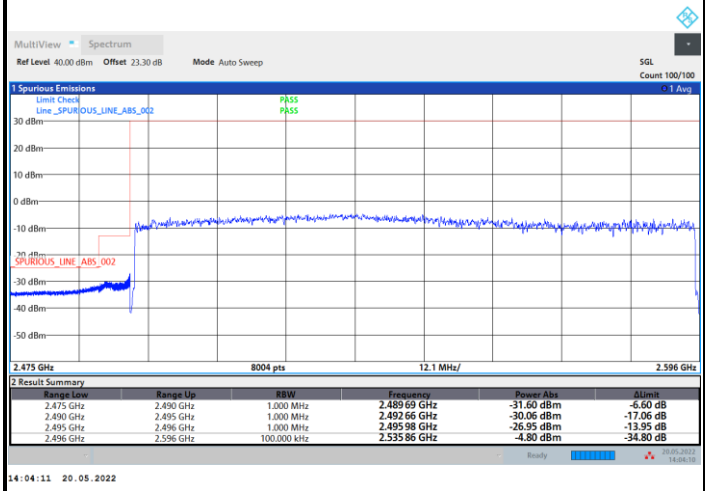



### Highest Band Edge / Full RB

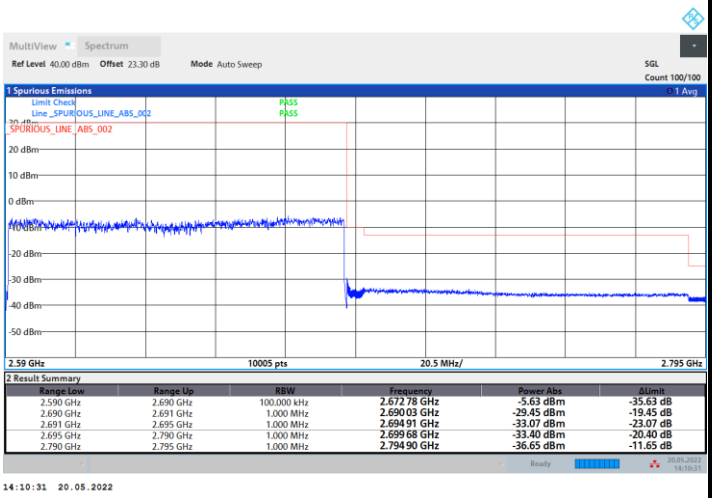


## FR1 n41 / 100MHz / CP OFDM / QPSK

### Lowest Band Edge / Full RB

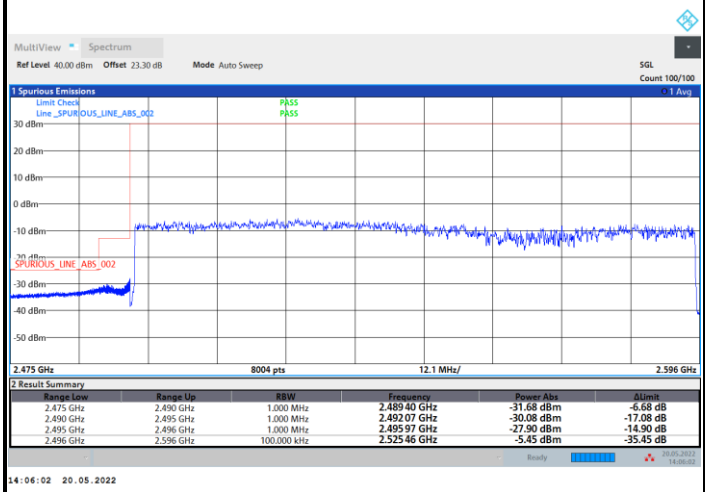



### Highest Band Edge / Full RB

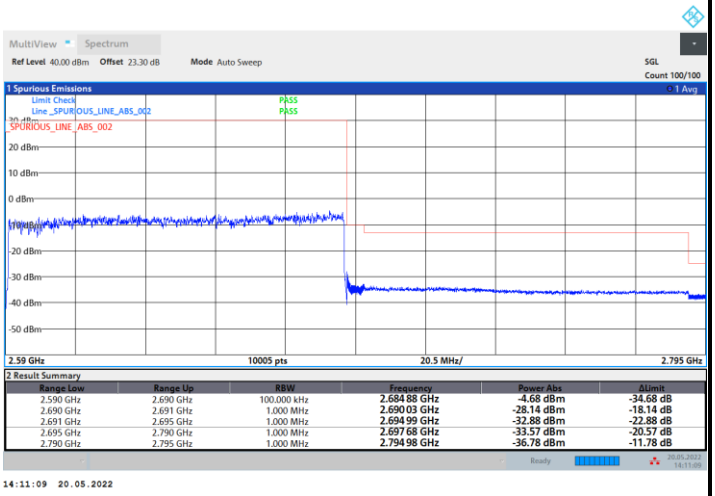



## FR1 n41 / 100MHz / CP OFDM / 16QAM

### Lowest Band Edge / Full RB

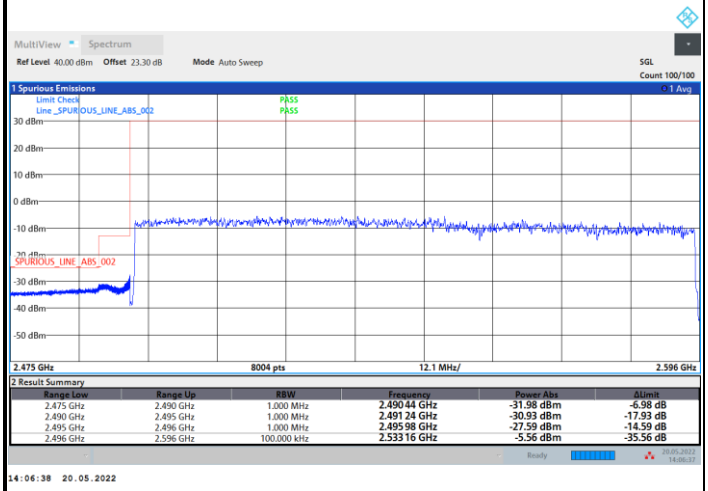



### Highest Band Edge / Full RB

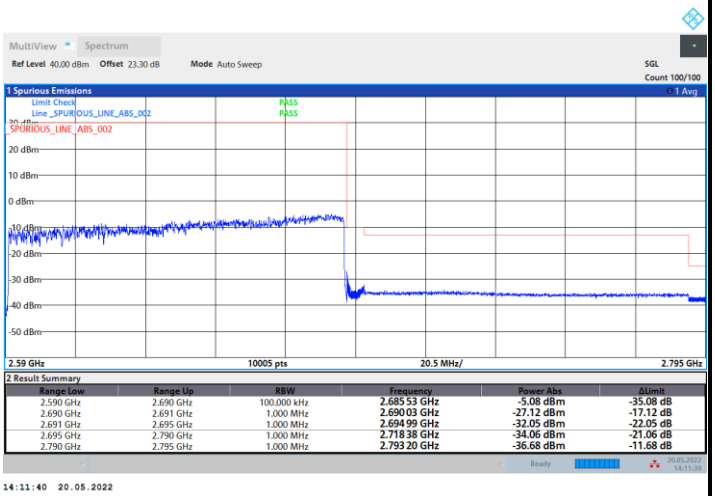


## FR1 n41 / 100MHz / CP OFDM / 64QAM

### Lowest Band Edge / Full RB

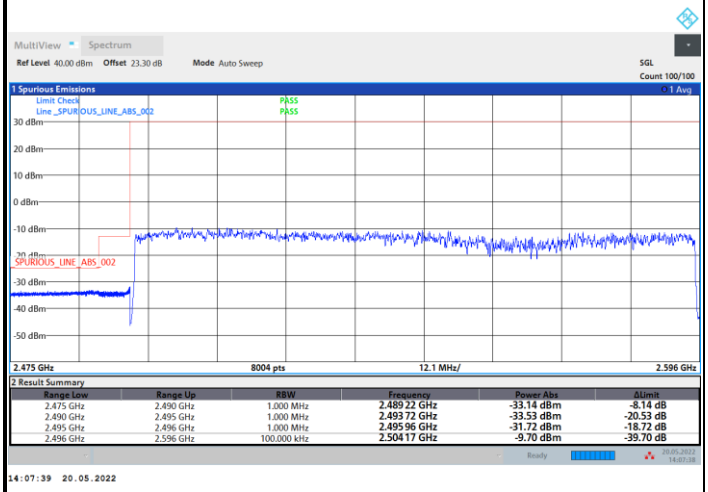



### Highest Band Edge / Full RB

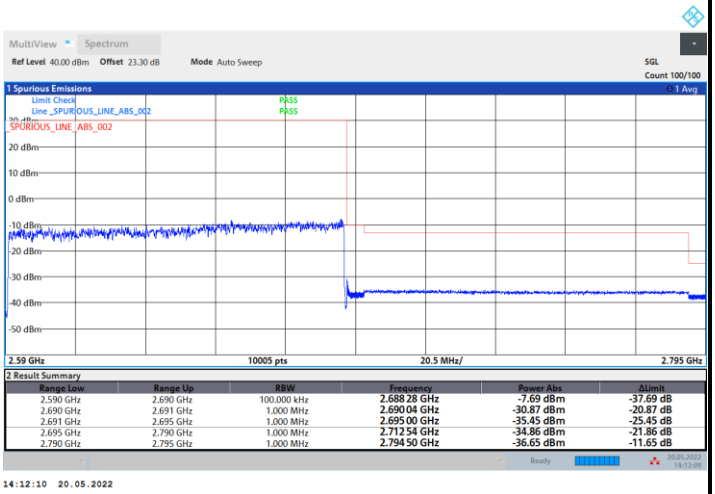



## FR1 n41 / 100MHz / CP OFDM / 256QAM

### Lowest Band Edge / Full RB



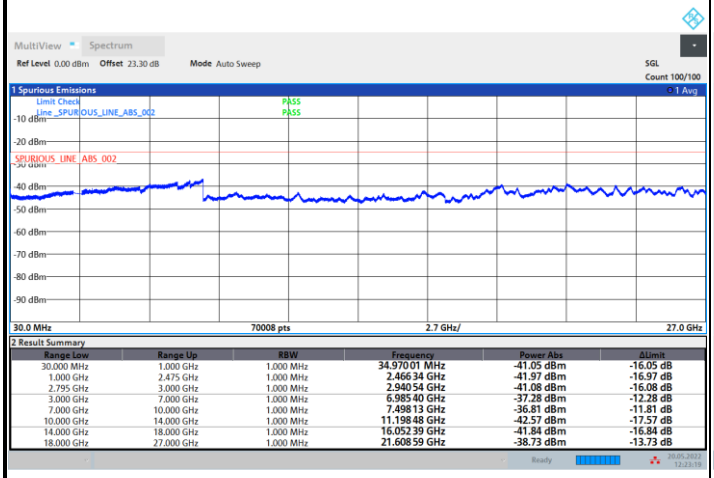

### Highest Band Edge / Full RB



# Conducted Spurious Emission

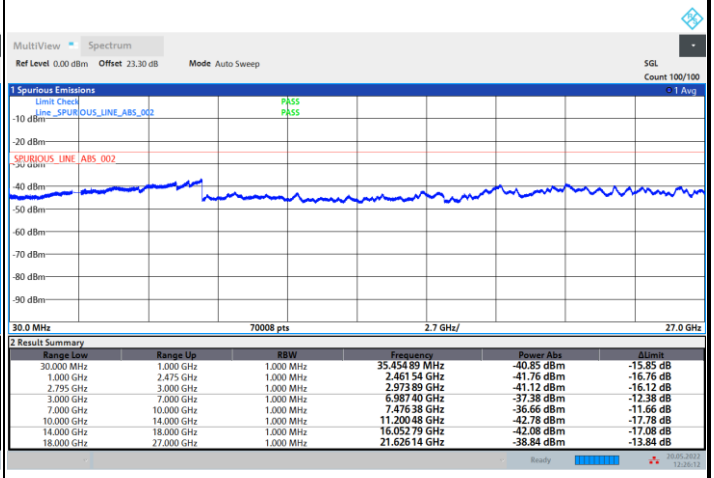
## FR1 n41 / 20MHz / CP OFDM / QPSK / 1RB1

### Lowest Channel



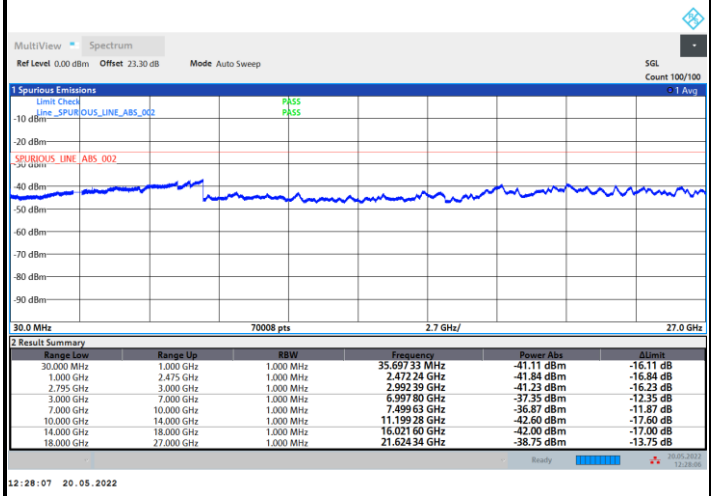

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 34.970 01 MHz | -41.05 dBm | -16.05 dB |
| 1.000 GHz | 2.475 GHz | 1.000 MHz | 2.466 34 GHz | -41.97 dBm | -16.97 dB |
| 2.795 GHz | 3.000 GHz | 1.000 MHz | 2.940 54 GHz | -41.08 dBm | -16.08 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.985 40 GHz | -37.28 dBm | -12.28 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 7.498 13 GHz | -36.81 dBm | -11.81 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 11.198 48 GHz | -42.57 dBm | -17.57 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 16.052 39 GHz | -41.84 dBm | -16.84 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 21.608 59 GHz | -38.73 dBm | -13.73 dB |

### Middle Channel




| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 35.454 89 MHz | -40.85 dBm | -15.85 dB |
| 1.000 GHz | 2.475 GHz | 1.000 MHz | 2.461 54 GHz | -41.76 dBm | -16.76 dB |
| 2.795 GHz | 3.000 GHz | 1.000 MHz | 2.973 89 GHz | -41.12 dBm | -16.12 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.987 40 GHz | -37.38 dBm | -12.38 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 7.476 38 GHz | -36.66 dBm | -11.66 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 11.200 48 GHz | -42.78 dBm | -17.78 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 16.052 79 GHz | -42.08 dBm | -17.08 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 21.626 14 GHz | -38.84 dBm | -13.84 dB |

### Highest Channel




| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 35.697 33 MHz | -41.11 dBm | -16.11 dB |
| 1.000 GHz | 2.475 GHz | 1.000 MHz | 2.472 24 GHz | -41.84 dBm | -16.84 dB |
| 2.795 GHz | 3.000 GHz | 1.000 MHz | 2.992 39 GHz | -41.23 dBm | -16.23 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.997 80 GHz | -37.35 dBm | -12.35 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 7.499 63 GHz | -36.87 dBm | -11.87 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 11.199 28 GHz | -42.60 dBm | -17.60 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 16.021 60 GHz | -42.00 dBm | -17.00 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 21.624 34 GHz | -38.75 dBm | -13.75 dB |

# Frequency Stability

| Test Conditions | | FR1 n41 (QPSK) / Middle Channel | Limit |
|---|---|---|---|
| Temperature (°C) | Voltage (Volt) | BW 20MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0032 | PASS |
| 40 | Normal Voltage | 0.0023 | |
| 30 | Normal Voltage | 0.0024 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0006 | |
| 0 | Normal Voltage | 0.0004 | |
| -10 | Normal Voltage | 0.0023 | |
| -20 | Normal Voltage | 0.0025 | |
| -30 | Normal Voltage | 0.0038 | |
| 20 | Maximum Voltage | 0.0007 | |
| 20 | Normal Voltage | 0.0003 | |
| 20 | Battery End Point | 0.0004 | |

**Note:**

1. Normal Voltage = 3.85 V.；Battery End Point (BEP) = 3.30 V.；Maximum Voltage = 4.25 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

# MIMO <Ant. 0>

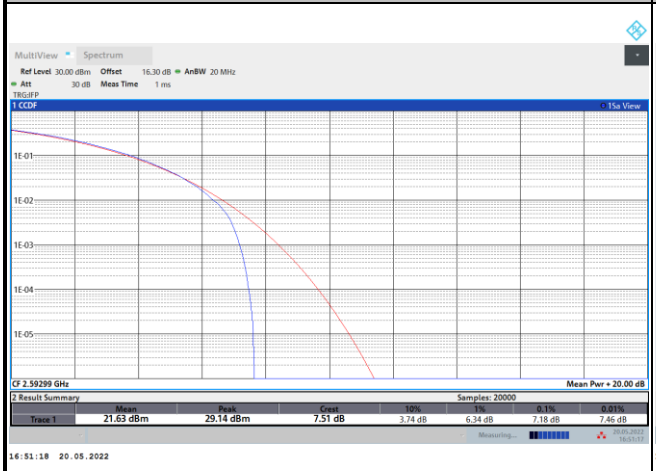
# FR1 n41

## Peak-to-Average Ratio

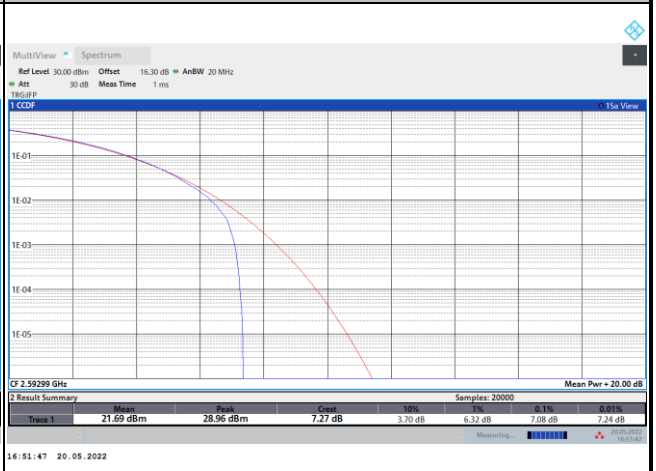
| Mode | FR1 n41 / 20MHz / CP OFDM | | | | |
|---|---|---|---|---|---|
| Mod. | QPSK | 16QAM | 64QAM | 256QAM | Limit: 13dB |
| RB Size | Full RB | Full RB | Full RB | Full RB | Result |
| Middle CH | 7.18 | 7.08 | 7.58 | 8.34 | PASS |

**FR1 n41 / 20MHz / CP OFDM / Middle Channel / Full RB**

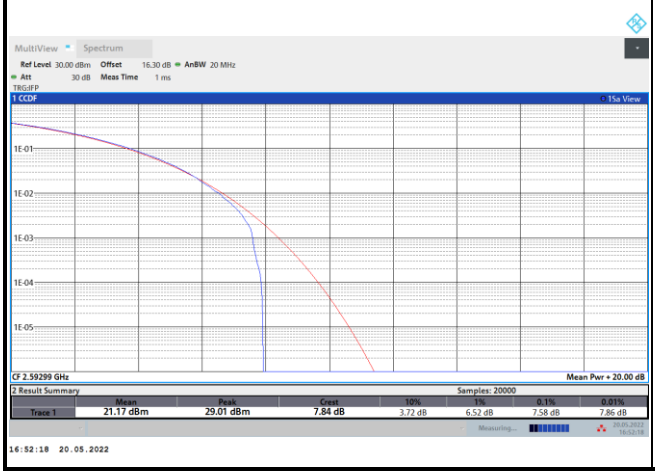
**QPSK**



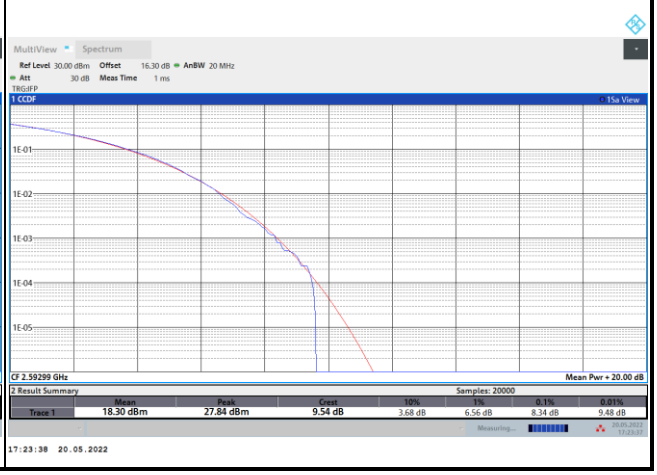

**16QAM**




**64QAM**




**256QAM**

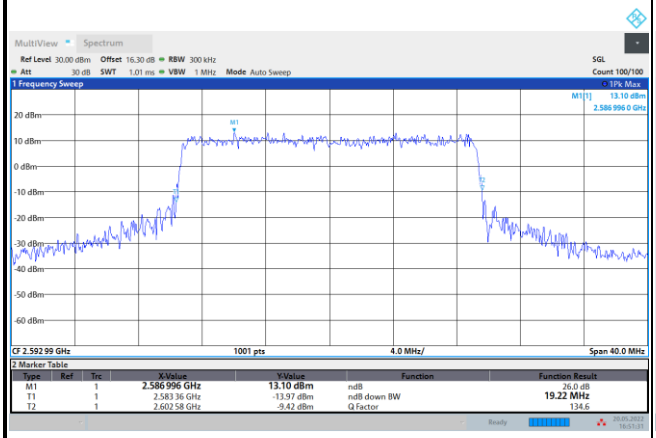


# 26dB Bandwidth

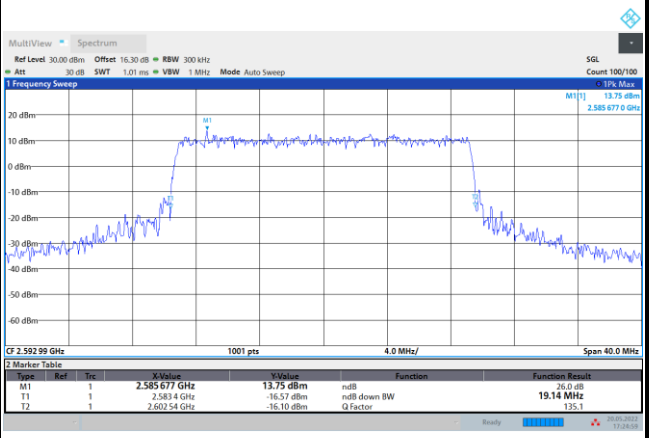
| Mode | FR1 n41 : 26dB BW(MHz) / CP OFDM | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW | 20MHz | | 30MHz | | 40MHz | | 50MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Middle CH | 19.22 | 19.14 | 29.19 | 28.83 | 40.44 | 40.52 | 50.15 | 49.95 |
| Mod. | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | 19.26 | 19.26 | 29.07 | 28.95 | 40.52 | 40.36 | 50.05 | 50.25 |
| BW | 60MHz | | 70MHz | | 80MHz | | 90MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Middle CH | 60.78 | 60.66 | 70.49 | 70.63 | 80.56 | 80.24 | 90.45 | 90.63 |
| Mod. | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | 60.66 | 60.66 | 70.21 | 70.35 | 80.56 | 80.40 | 90.45 | 90.45 |
| BW | 100MHz | | | | | | | |
| Mod. | QPSK | 16QAM | | | | | | |
| Middle CH | 100.70 | 100.50 | | | | | | |
| Mod. | 64QAM | 256QAM | | | | | | |
| Middle CH | 100.70 | 100.70 | | | | | | |

## FR1 n41 / 20MHz / CP OFDM / Middle Channel / Full RB

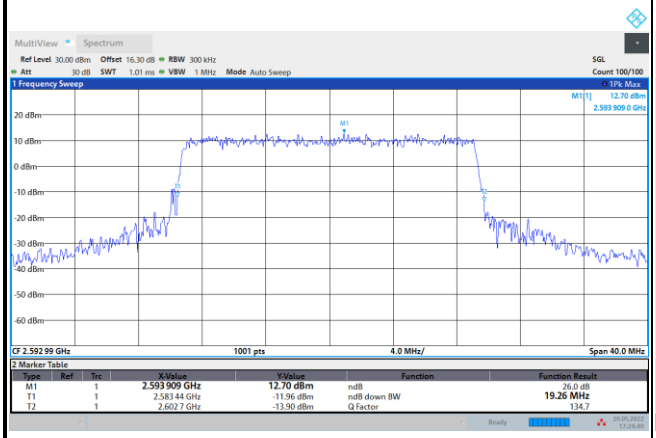
### QPSK



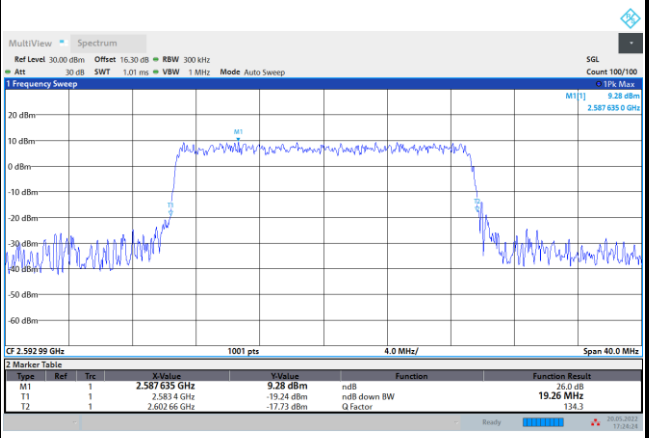

### 16QAM




### 64QAM

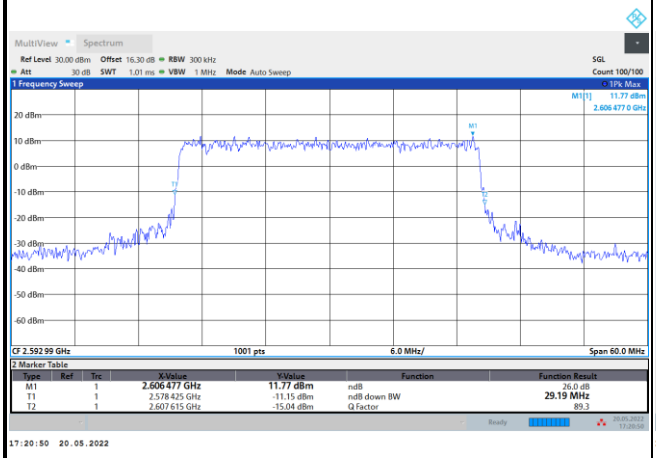



### 256QAM

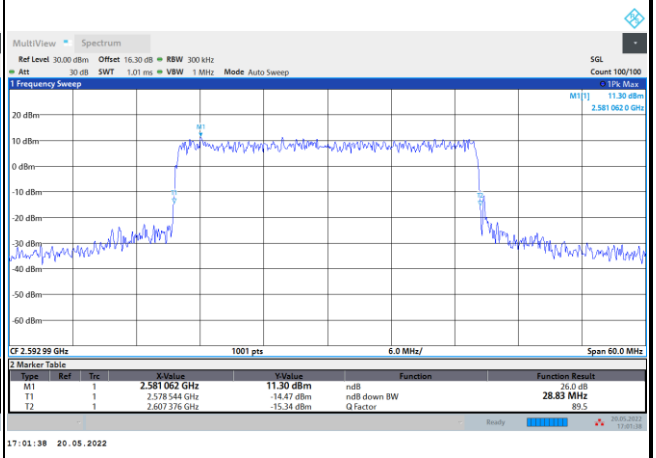


## FR1 n41 / 30MHz / CP OFDM / Middle Channel / Full RB

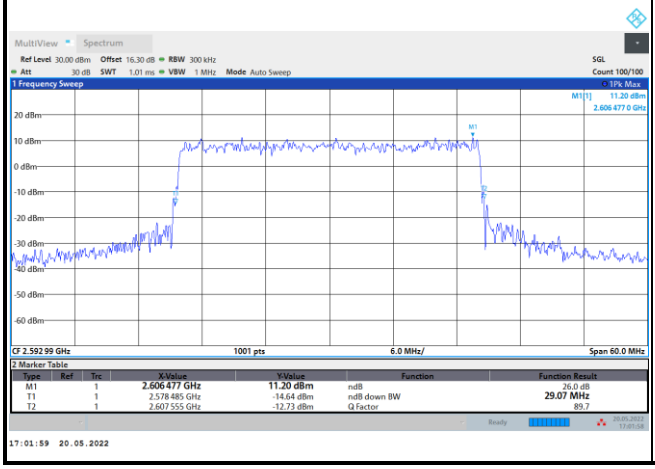
### QPSK

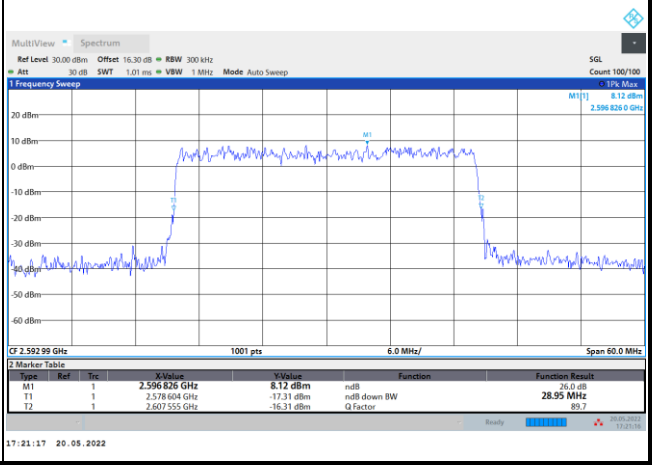



### 16QAM




### 64QAM




### 256QAM