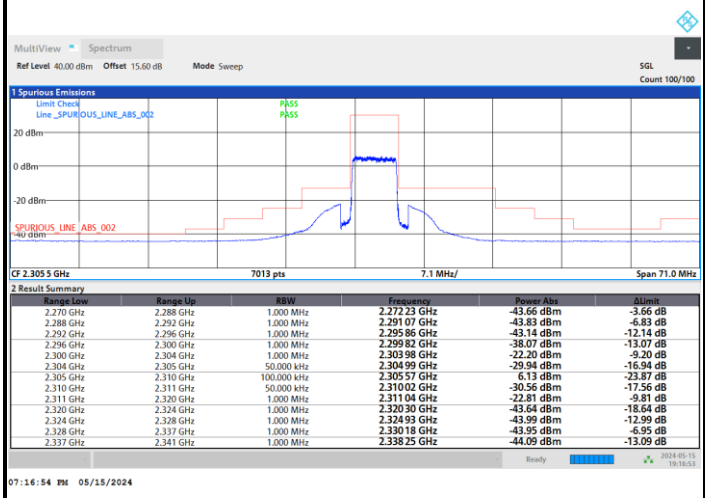
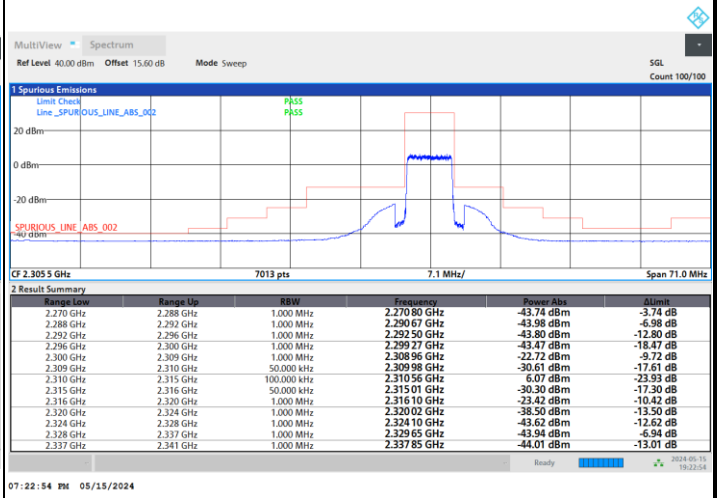
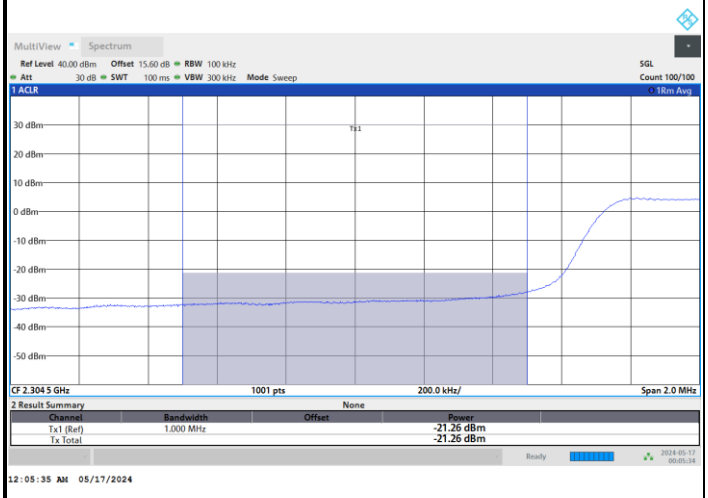
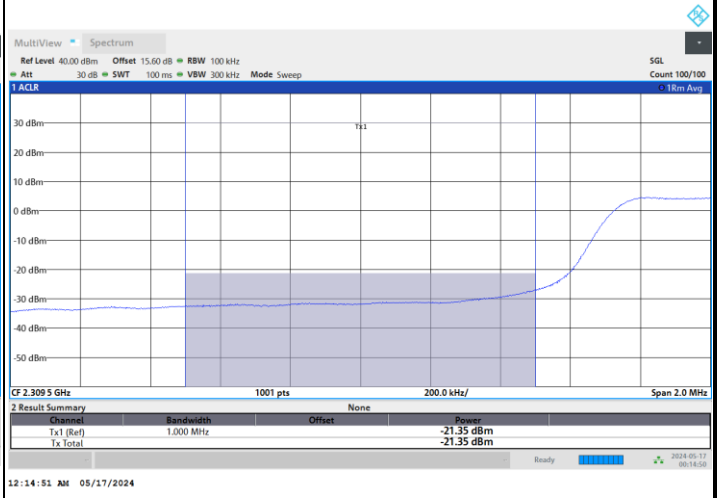
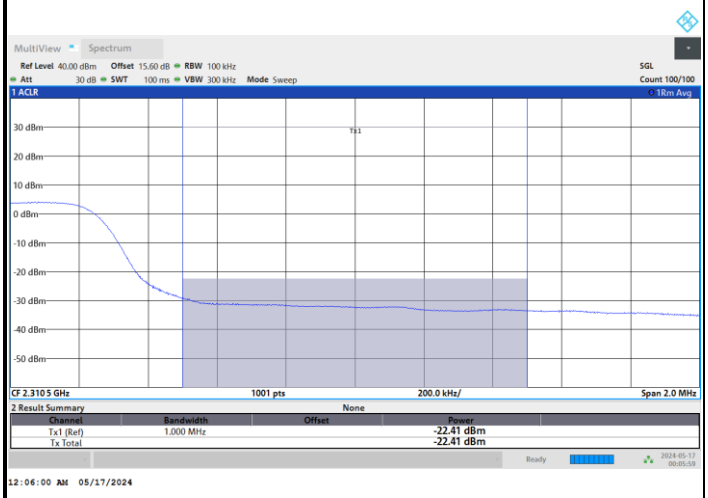
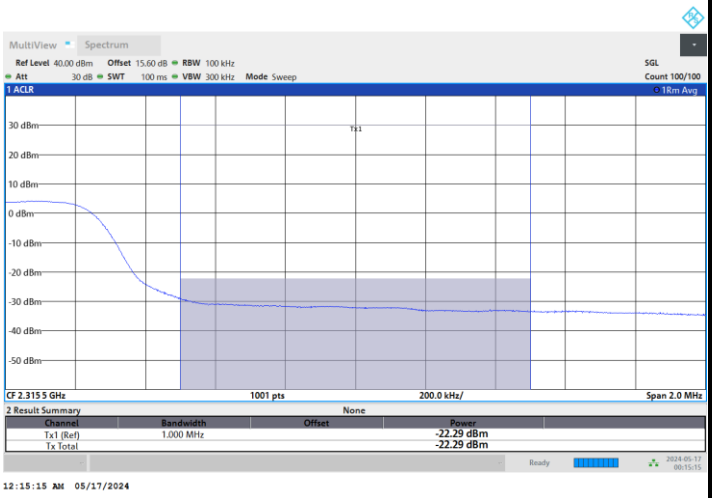
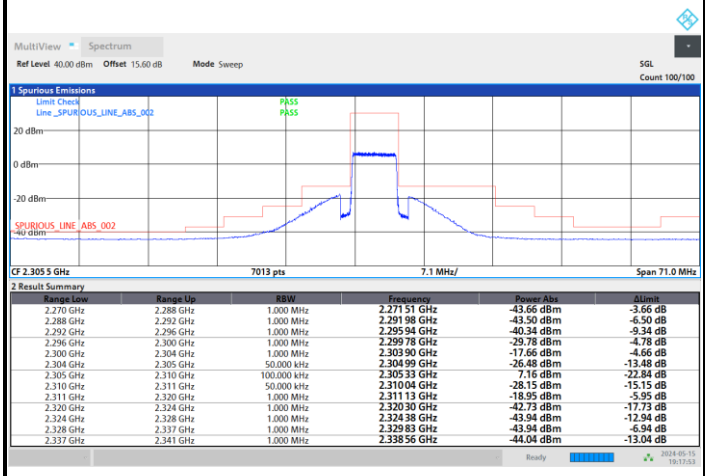
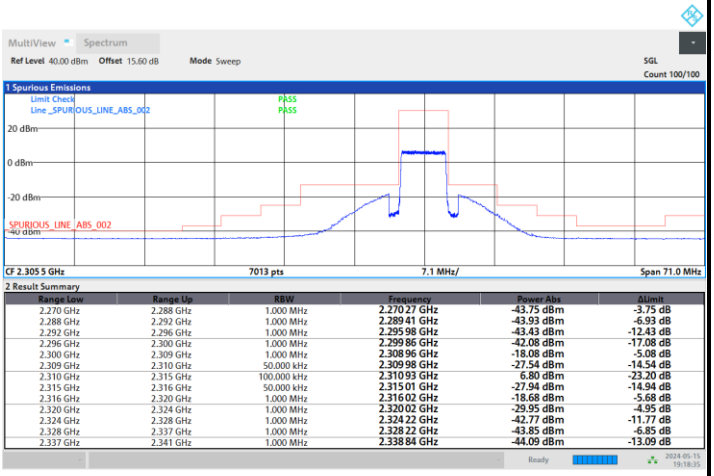
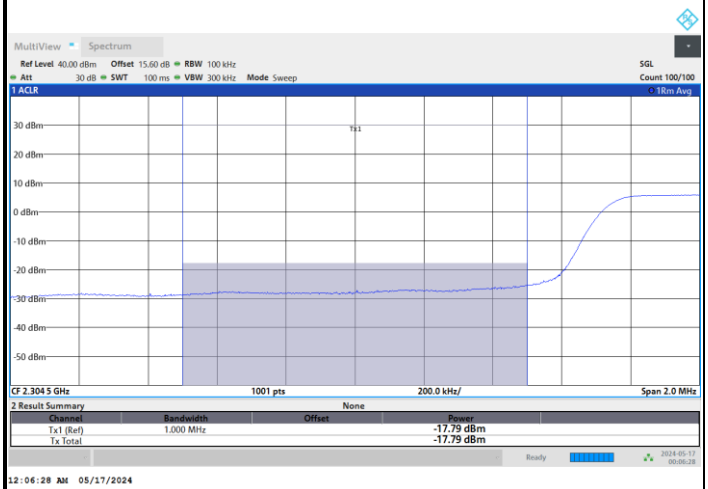
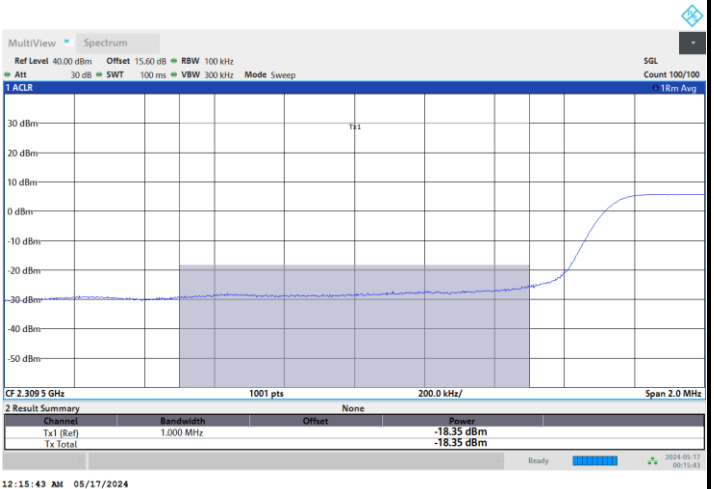
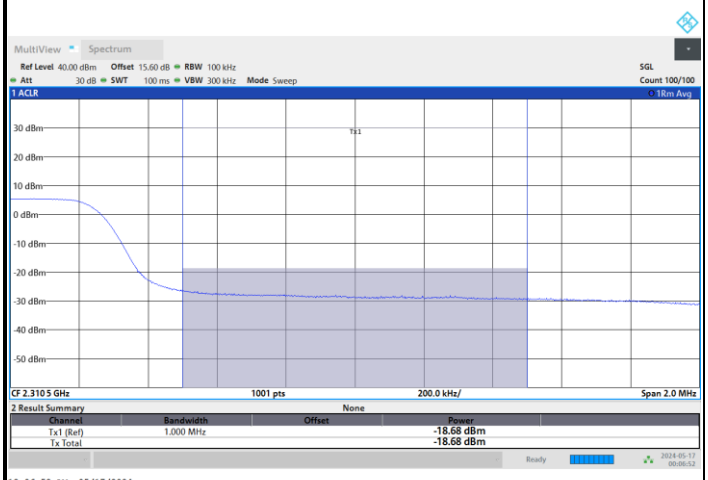
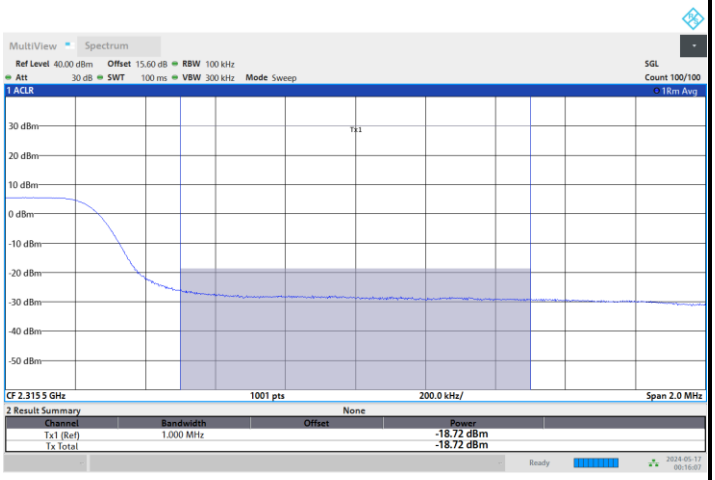
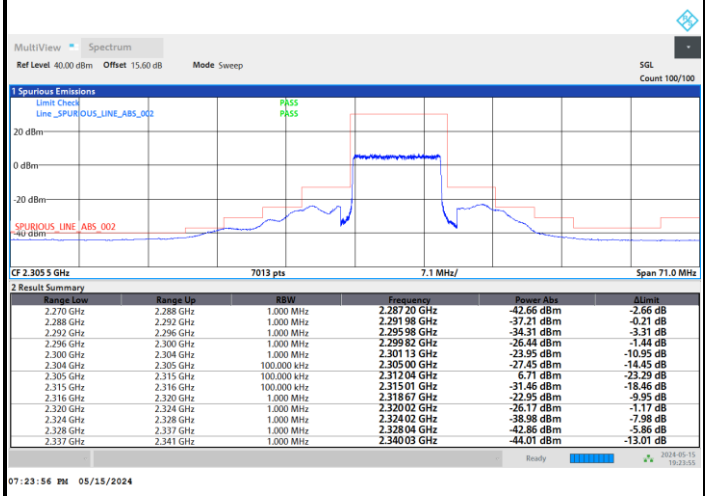
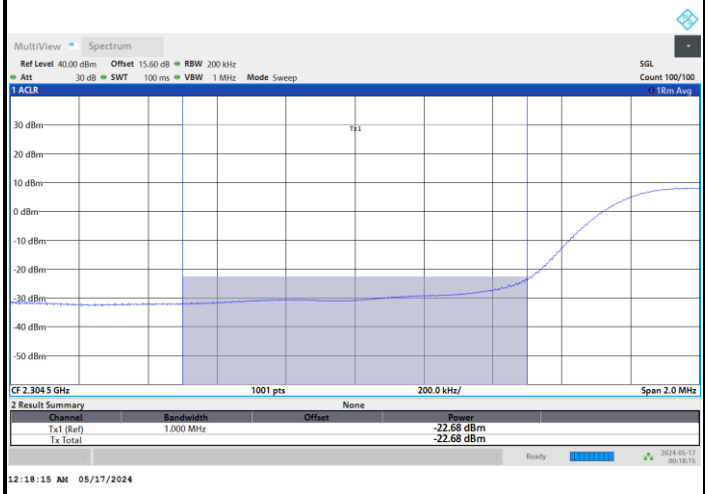
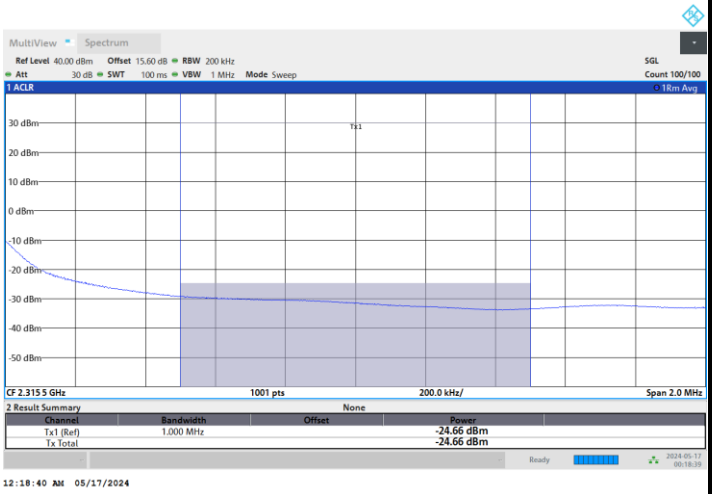
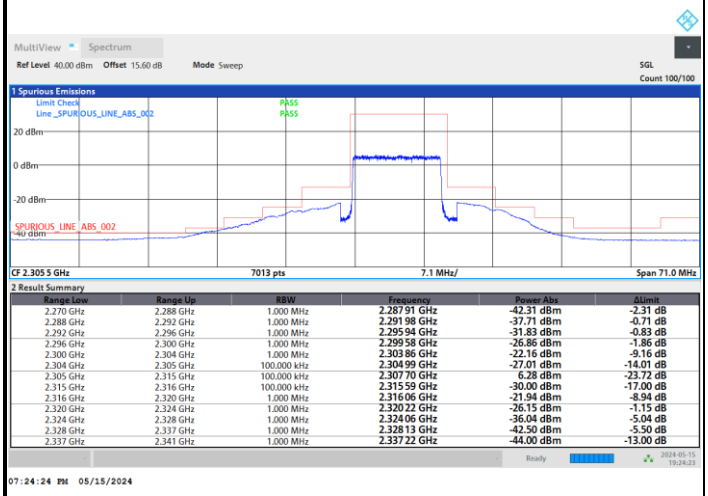
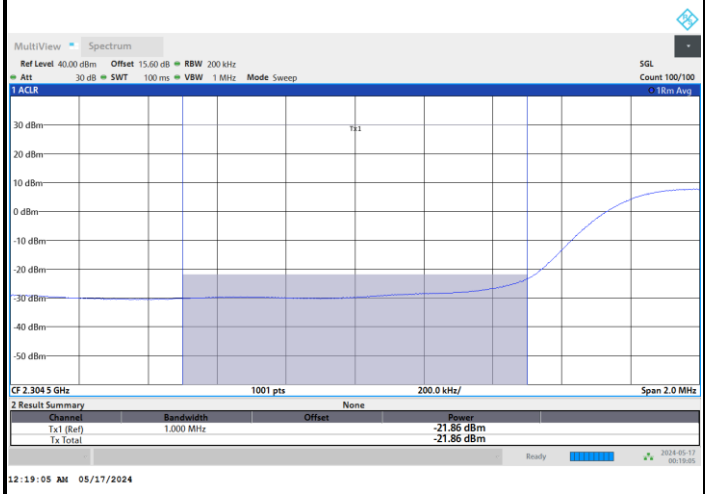
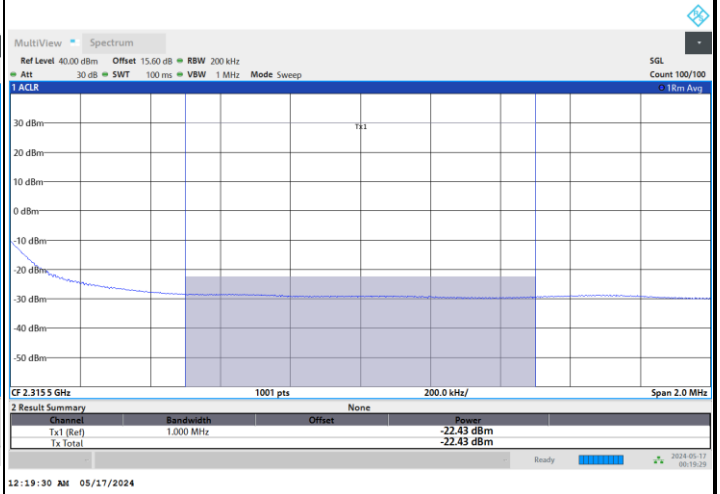
| Lowest Band Edge / Full RB | Highest Band Edge / Full RB |
|---|---|
|  |  |
| **Lowest Band Edge / Full RB / Lower zoom in** | **Highest Band Edge / Full RB / Lower zoom in** |
|  |  |

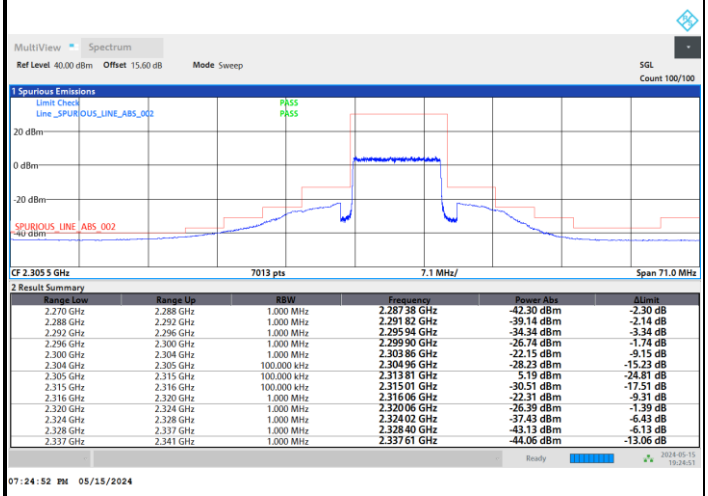
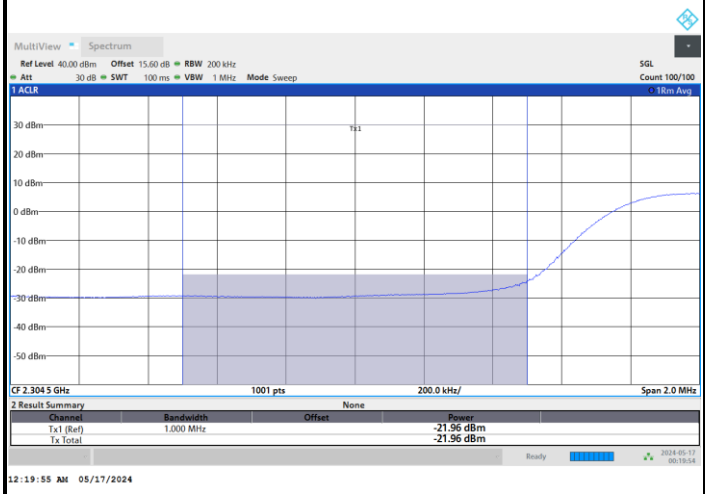
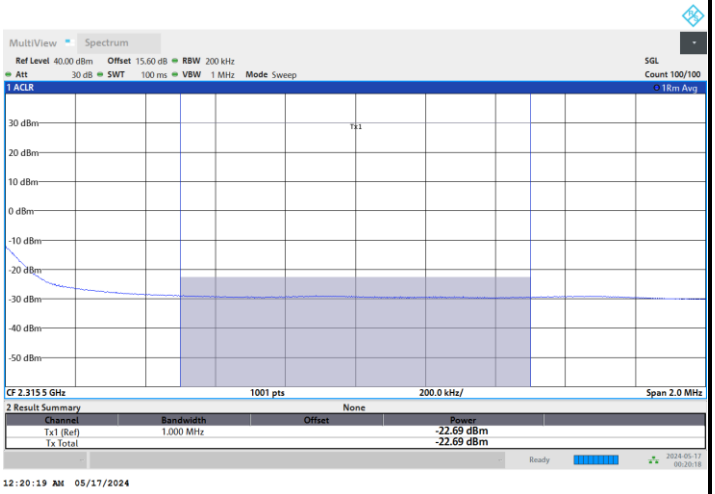
| Lowest Band Edge / Full RB / Upper zoom in | Highest Band Edge / Full RB / Upper zoom in |
|---|---|
|  |  |

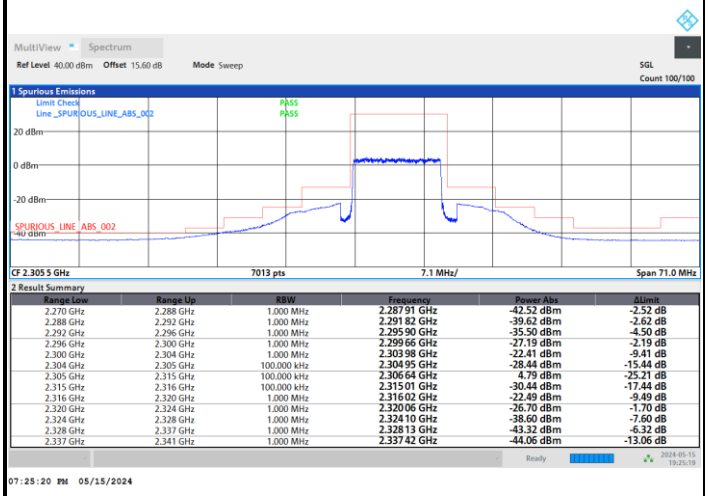
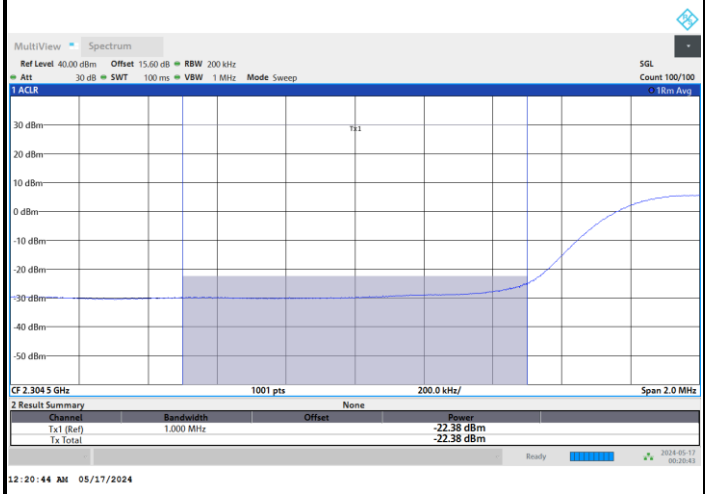
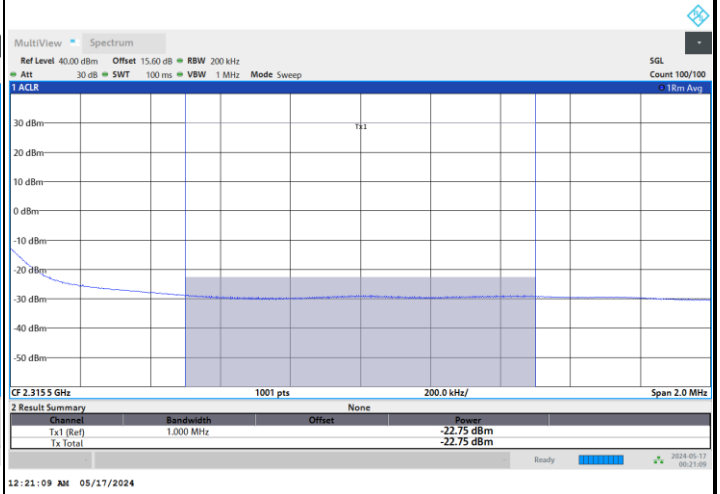
| FR1 n30 / 5MHz / CP OFDM / QPSK / Full RB | |
|---|---|
| **Lowest Band Edge** | **Highest Band Edge** |
|  |  |
| **Lowest Band Edge / Full RB / Lower zoom in** | **Highest Band Edge / Full RB / Lower zoom in** |
|  |  |

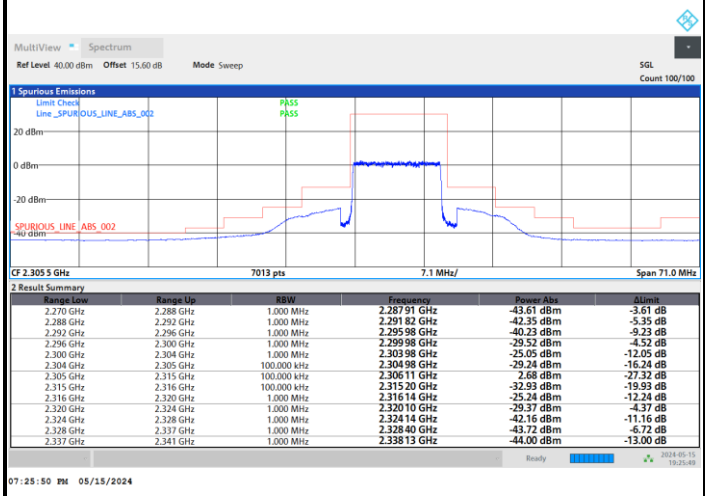
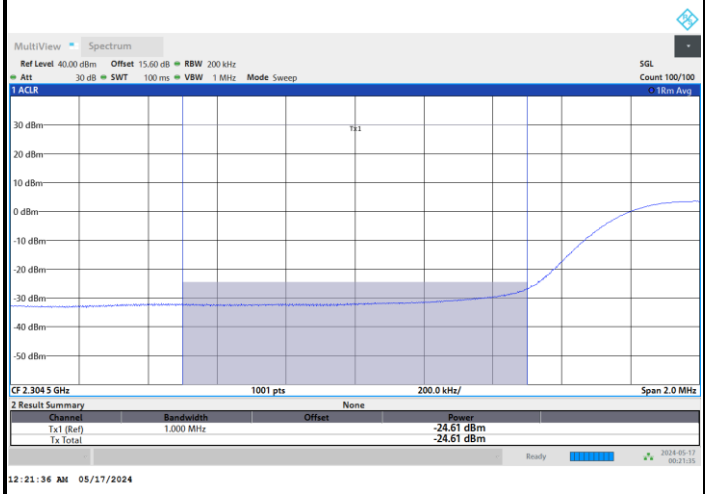
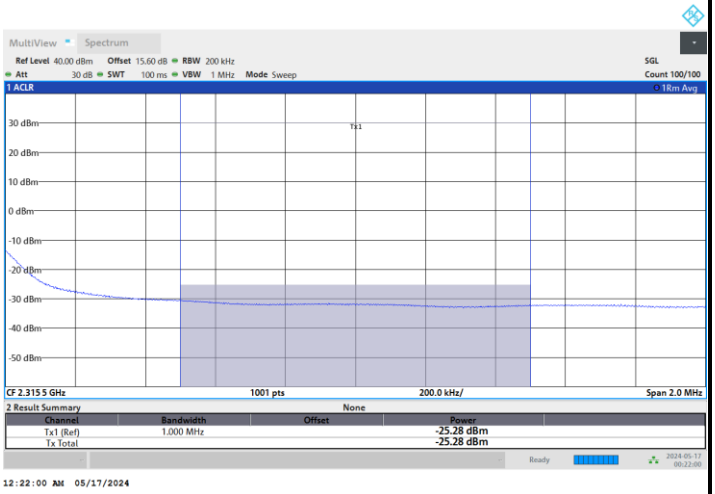
| Lowest Band Edge / Full RB / Upper zoom in | Highest Band Edge / Full RB / Upper zoom in |
|---|---|
|  |  |

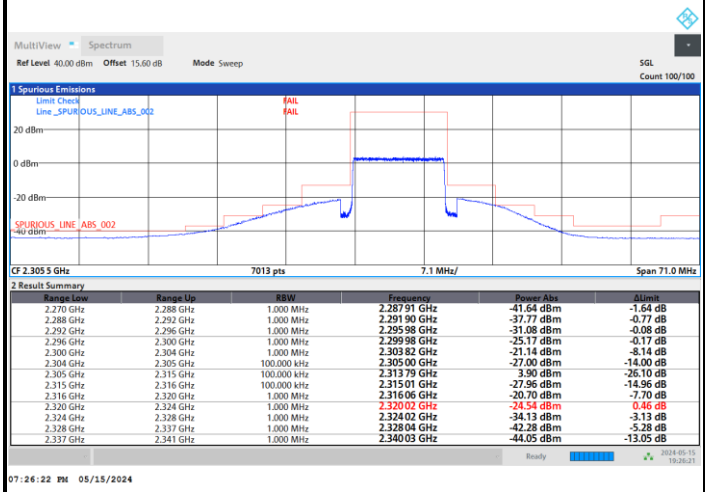
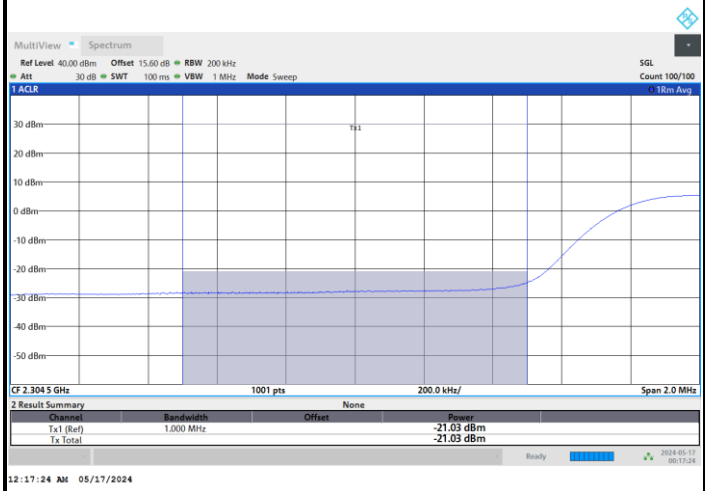
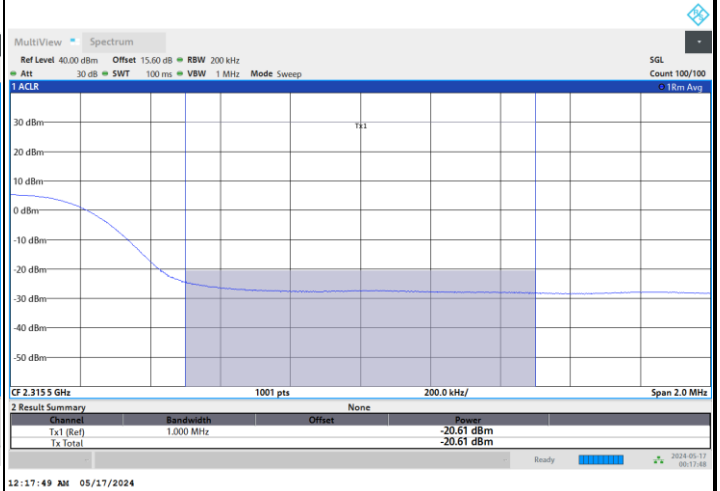
| FR1 n30 / 10MHz / DFT-s-OFDM / PI/2 BPSK | |
|---|---|
| **Middle Band Edge / Full RB** | |
|  | |
| **Middle Band Edge / Full RB / Lower zoom in** | **Middle Band Edge / Full RB / Upper zoom in** |
|  |  |

| FR1 n30 / 10MHz / DFT-s-OFDM / QPSK | |
|---|---|
| **Middle Band Edge / Full RB** | |
|  | |
| **Middle Band Edge / Full RB / Lower zoom in** | **Middle Band Edge / Full RB / Upper zoom in** |
|  |  |

| FR1 n30 / 10MHz / DFT-s-OFDM / 16QAM | |
|---|---|
| **Middle Band Edge / Full RB** | |
|  | |
| **Middle Band Edge / Full RB / Lower zoom in** | **Middle Band Edge / Full RB / Upper zoom in** |
|  |  |

| FR1 n30 / 10MHz / DFT-s-OFDM / 64QAM | |
|---|---|
| **Middle Band Edge / Full RB** | |
|  | |
| **Middle Band Edge / Full RB / Lower zoom in** | **Middle Band Edge / Full RB / Upper zoom in** |
|  |  |

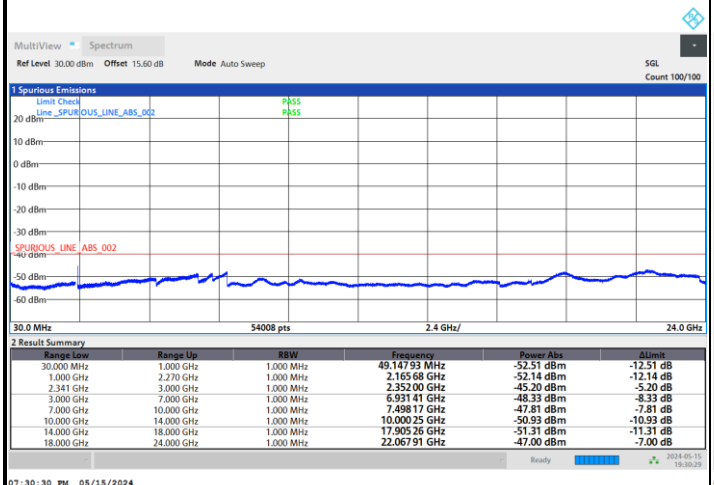
| FR1 n30 / 10MHz / DFT-s-OFDM / 256QAM | |
|---|---|
| **Middle Band Edge / Full RB** | |
|  | |
| **Middle Band Edge / Full RB / Lower zoom in** | **Middle Band Edge / Full RB / Upper zoom in** |
|  |  |

| FR1 n30 / 10MHz / CP OFDM / QPSK / Full RB | |
|---|---|
| **Middle Band Edge / Full RB** | **Middle Band Edge / Full RB**<br>**Channel power -25dBm > -25.96dBm (PASS)** |
|  |  |
| **Middle Band Edge / Full RB / Lower zoom in** | **Middle Band Edge / Full RB / Upper zoom in** |
|  |  |

# Conducted Spurious Emission

## FR1 n30 / 5MHz / DFT-S OFDM / QPSK / 1RB1

### Lowest Channel




2 Result Summary

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 49.147 93 MHz | -52.51 dBm | -12.51 dB |
| 1.000 GHz | 2.270 GHz | 1.000 MHz | 2.165 68 GHz | -52.14 dBm | -12.14 dB |
| 2.341 GHz | 3.000 GHz | 1.000 MHz | 2.352 00 GHz | -45.20 dBm | -5.20 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.931 41 GHz | -48.33 dBm | -8.33 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 7.498 17 GHz | -47.81 dBm | -7.81 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 10.000 25 GHz | -50.93 dBm | -10.93 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 17.905 26 GHz | -51.31 dBm | -11.31 dB |
| 18.000 GHz | 24.000 GHz | 1.000 MHz | 22.067 91 GHz | -47.00 dBm | -7.00 dB |

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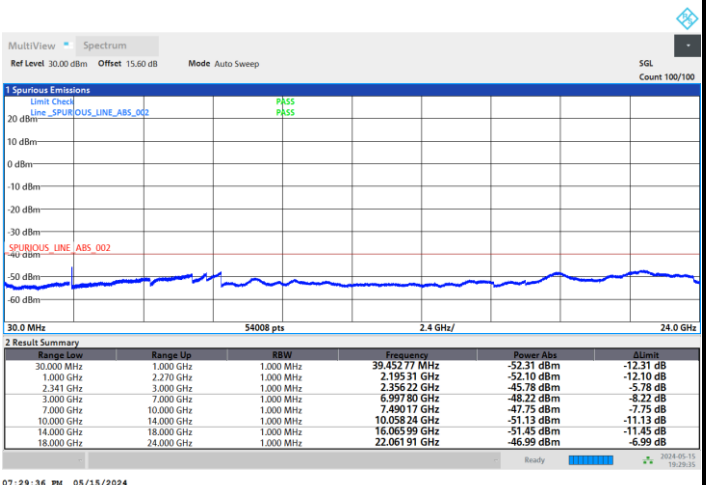
### Middle Channel




2 Result Summary

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 39.452 77 MHz | -52.31 dBm | -12.31 dB |
| 1.000 GHz | 2.270 GHz | 1.000 MHz | 2.195 31 GHz | -52.10 dBm | -12.10 dB |
| 2.341 GHz | 3.000 GHz | 1.000 MHz | 2.356 22 GHz | -45.78 dBm | -5.78 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.997 80 GHz | -48.22 dBm | -8.22 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 7.490 17 GHz | -47.75 dBm | -7.75 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 10.058 24 GHz | -51.13 dBm | -11.13 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 16.065 99 GHz | -51.45 dBm | -11.45 dB |
| 18.000 GHz | 24.000 GHz | 1.000 MHz | 22.061 91 GHz | -46.99 dBm | -6.99 dB |

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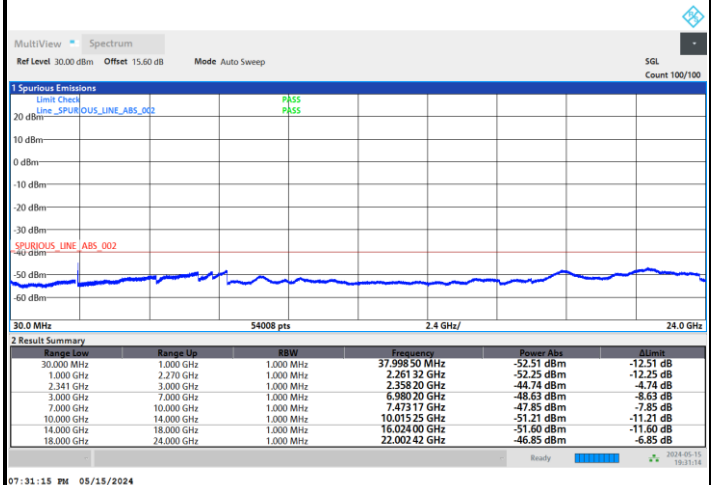
### Highest Channel




2 Result Summary

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 37.998 50 MHz | -52.51 dBm | -12.51 dB |
| 1.000 GHz | 2.270 GHz | 1.000 MHz | 2.261 32 GHz | -52.25 dBm | -12.25 dB |
| 2.341 GHz | 3.000 GHz | 1.000 MHz | 2.358 20 GHz | -44.74 dBm | -4.74 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.980 20 GHz | -48.63 dBm | -8.63 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 7.473 17 GHz | -47.85 dBm | -7.85 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 10.015 25 GHz | -51.21 dBm | -11.21 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 16.024 00 GHz | -51.60 dBm | -11.60 dB |
| 18.000 GHz | 24.000 GHz | 1.000 MHz | 22.002 42 GHz | -46.85 dBm | -6.85 dB |

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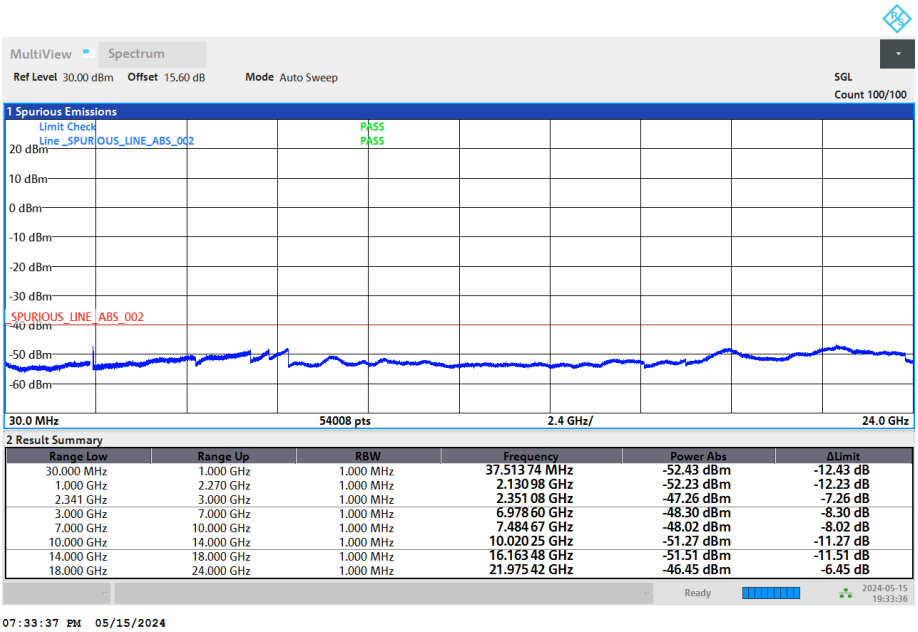
## FR1 n30 / 10MHz / DFT-S OFDM / QPSK / 1RB1

### Middle Channel



# Frequency Stability

| Test Conditions | | FR1 n30 (PI/2 BPSK) / Middle Channel | Limit |
|---|---|---|---|
| Temperature (°C) | Voltage (Volt) | BW 10MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0034 | PASS |
| 40 | Normal Voltage | 0.0010 | |
| 30 | Normal Voltage | 0.0005 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0019 | |
| 0 | Normal Voltage | 0.0027 | |
| -10 | Normal Voltage | 0.0004 | |
| -20 | Normal Voltage | 0.0003 | |
| -30 | Normal Voltage | 0.0045 | |
| 20 | Maximum Voltage | 0.0054 | |
| 20 | Normal Voltage | 0.0000 | |
| 20 | Battery End Point | 0.0035 | |

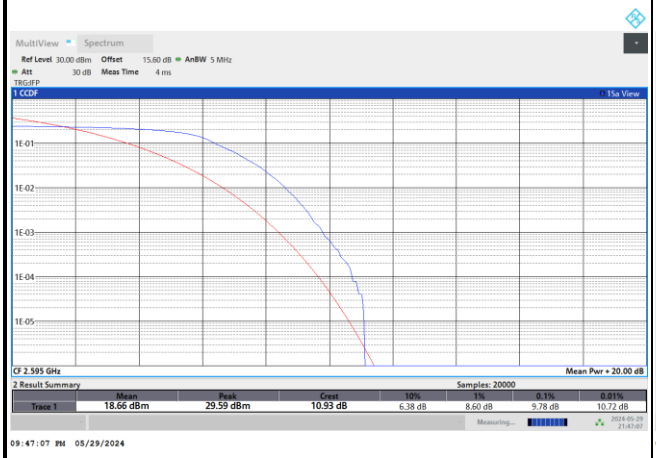
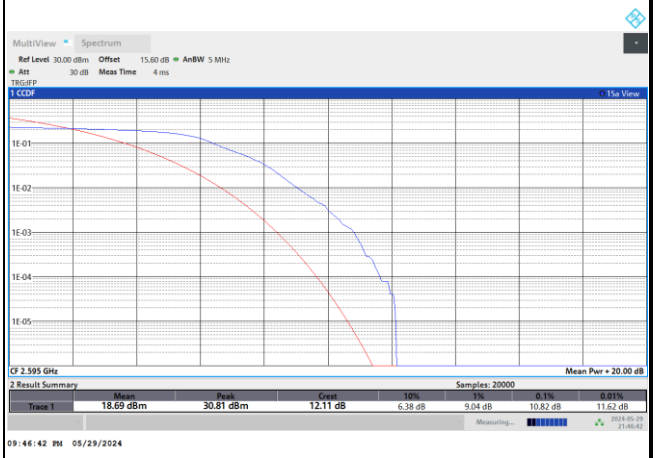
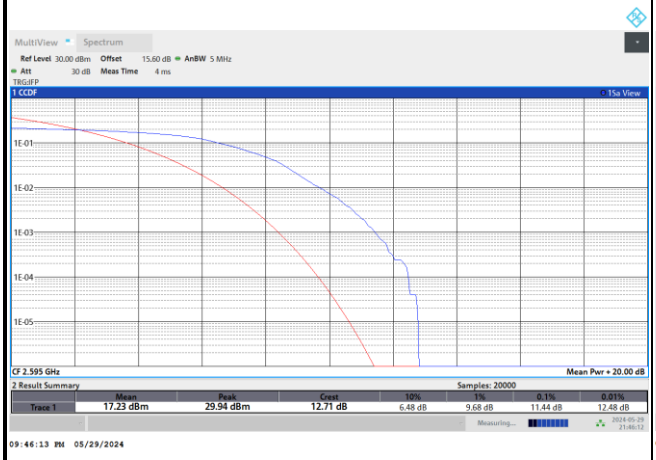
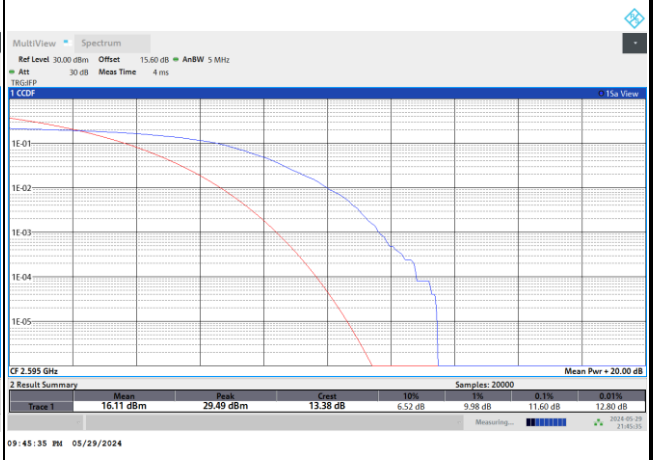
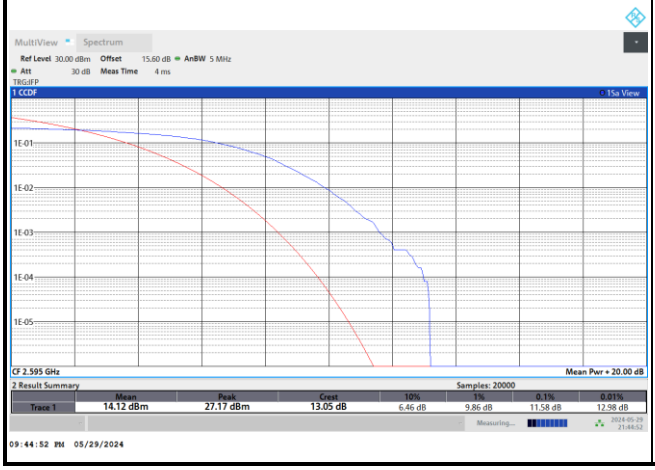
**Note:**

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.

# FR1 n38

## Peak-to-Average Ratio

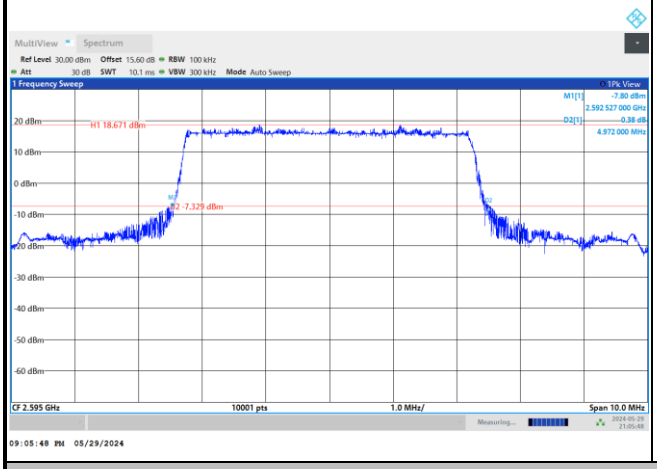
| Mode | FR1 n38 / 5MHz / DFT-S OFDM | | | | |
|---|---|---|---|---|---|
| Mod. | PI/2 BPSK | QPSK | 16QAM | 64QAM | Limit: 13dB |
| RB Size | Full RB | Full RB | Full RB | Full RB | Result |
| Middle CH | 9.78 | 10.82 | 11.44 | 11.60 | PASS |
| Mode | FR1 n38 / 5MHz / DFT-S OFDM | | | | |
| Mod. | 256QAM | | | | Limit: 13dB |
| RB Size | Full RB | | | | Result |
| Middle CH | 11.58 | | | | PASS |

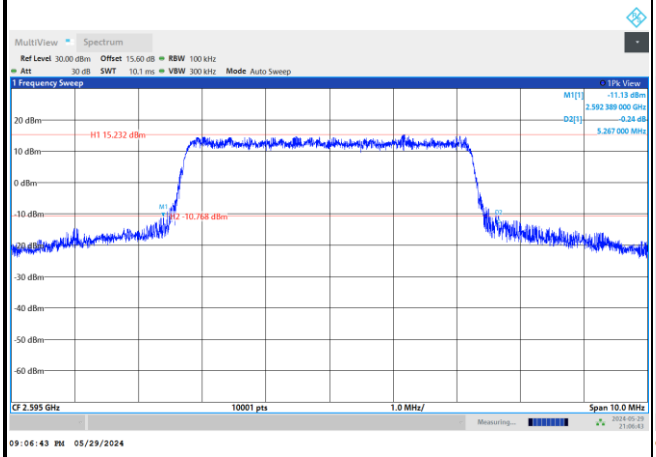
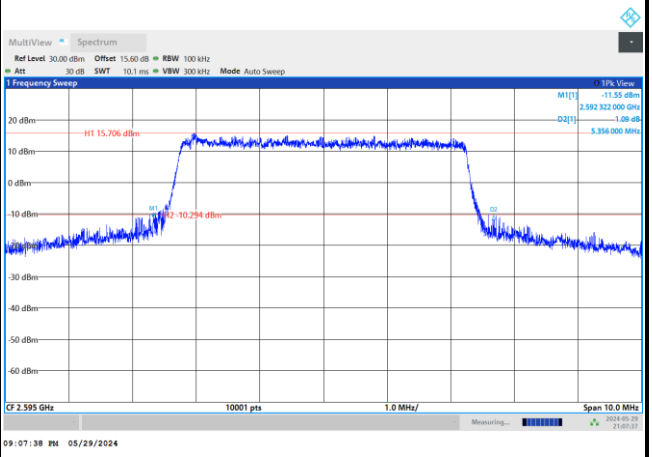
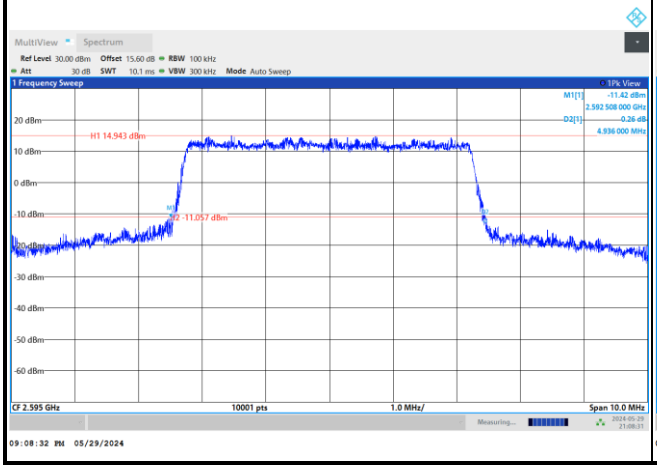
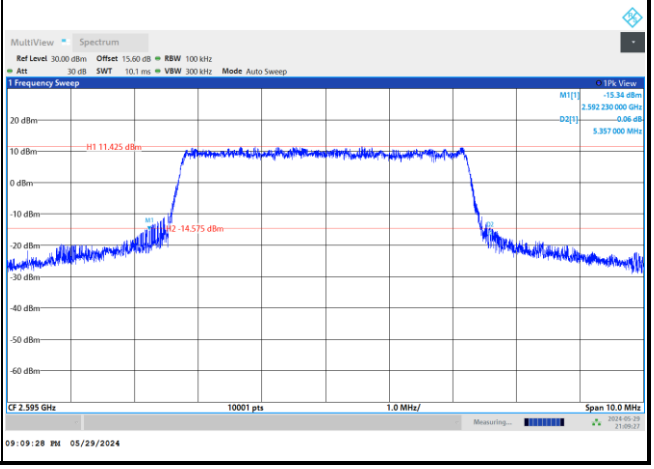
| FR1 n38 / 5MHz / DFT-S OFDM / Middle Channel / Full RB | |
|---|---|
| PI/2 BPSK | QPSK |
|  |  |
| 16QAM | 64QAM |
|  |  |
| 256QAM | |
|  | |

# 26dB Bandwidth

| Mode | FR1 n38 : 26dB BW(MHz) / DFT-S OFDM | | | | |
|---|---|---|---|---|---|
| BW | 5MHz | | | | |
| Mod. | PI/2 BPSK | | | | |
| Middle CH | 4.97 | | | | |

| Mode | FR1 n38 : 26dB BW(MHz) / CP OFDM | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| BW | 5MHz | | | | | | | | | |
| Mod. | QPSK | 16QAM | | | | | | | | |
| Middle CH | 5.27 | 5.36 | | | | | | | | |
| Mod. | 64QAM | 256QAM | | | | | | | | |
| Middle CH | 4.94 | 5.36 | | | | | | | | |

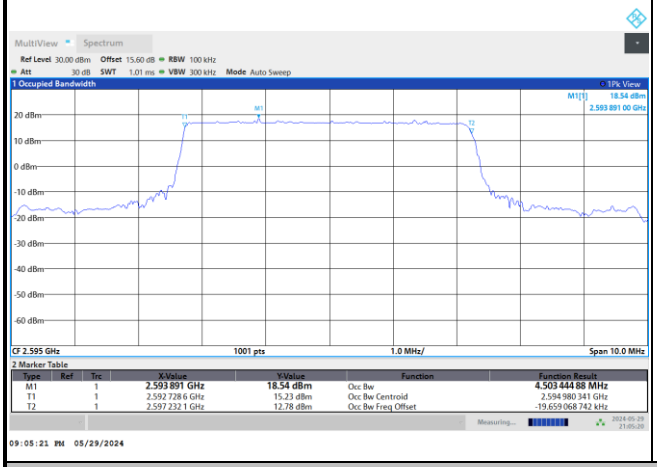
| FR1 n38 / 5MHz / DFT-S OFDM / Middle Channel / Full RB | |
|---|---|
| PI/2 BPSK | |
|  | |

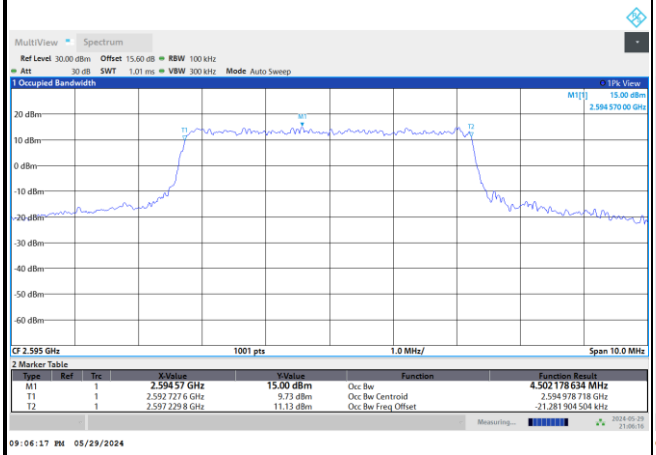
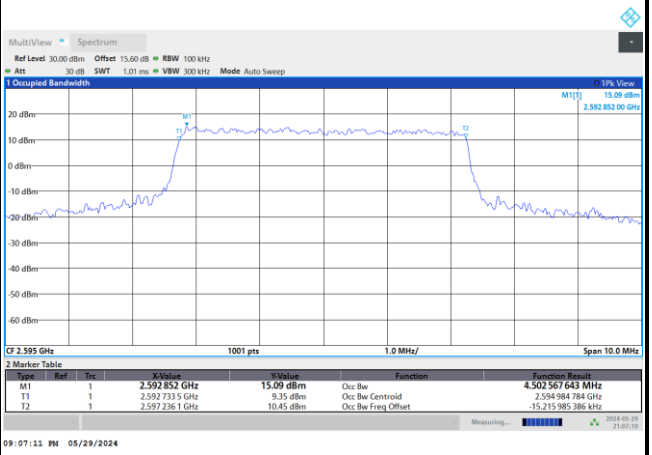
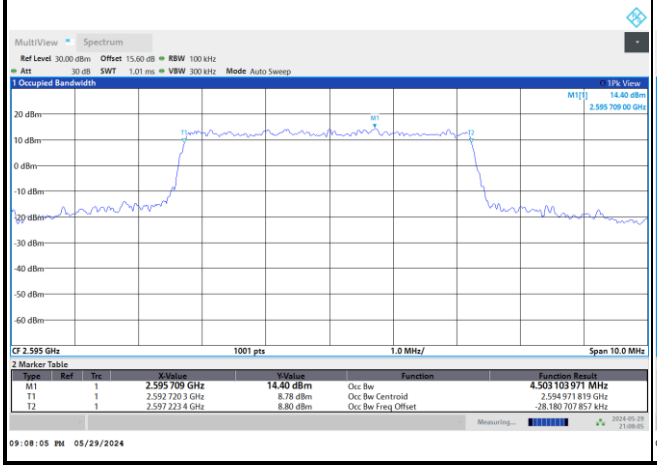
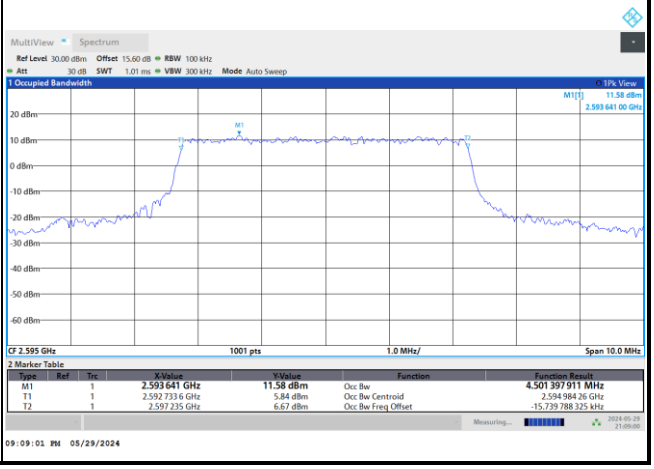
| FR1 n38 / 5MHz / CP OFDM / Middle Channel / Full RB | |
|---|---|
| QPSK | 16QAM |
|  |  |
| 64QAM | 256QAM |
|  |  |

# Occupied Bandwidth

| Mode | FR1 n38 : OB BW(MHz) / DFT-S OFDM | | | | |
|---|---|---|---|---|---|
| BW | 5MHz | | | | |
| Mod. | PI/2 BPSK | | | | |
| Middle CH | 4.50 | | | | |

| Mode | FR1 n38 : OB BW(MHz) / CP OFDM | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| BW | 5MHz | | | | | | | | | |
| Mod. | QPSK | 16QAM | | | | | | | | |
| Middle CH | 4.50 | 4.50 | | | | | | | | |
| Mod. | 64QAM | 256QAM | | | | | | | | |
| Middle CH | 4.50 | 4.50 | | | | | | | | |

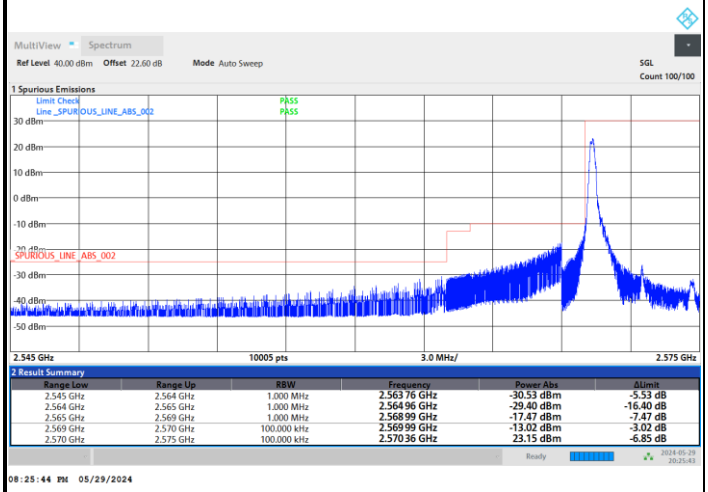
| FR1 n38 / 5MHz / DFT-S OFDM / Middle Channel / Full RB | |
|---|---|
| PI/2 BPSK | |
|  | |

| FR1 n38 / 5MHz / CP OFDM / Middle Channel / Full RB | |
|---|---|
| QPSK | 16QAM |
|  |  |
| 64QAM | 256QAM |
|  |  |

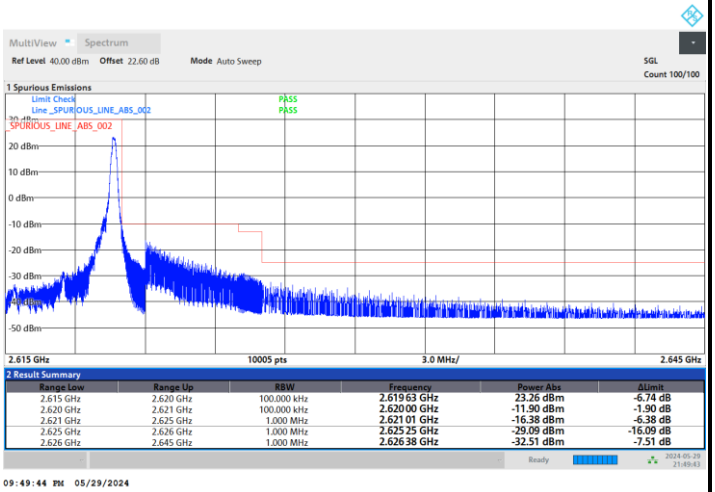
# Conducted Band Edge

## FR1 n38 / 5MHz / DFT-S OFDM / PI/2 BPSK

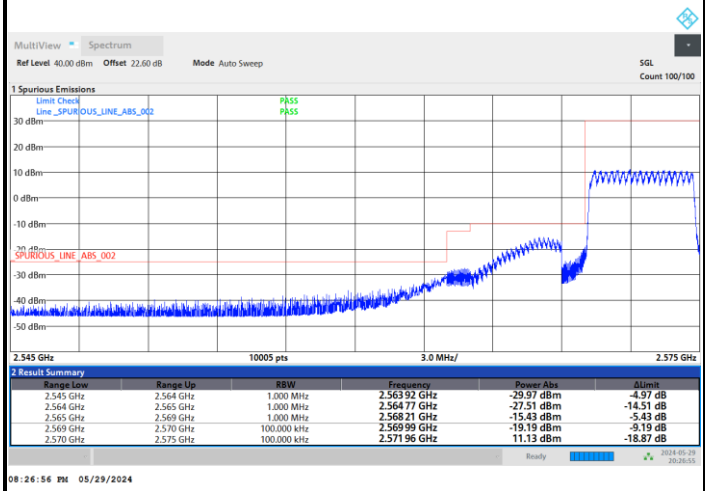
### Lowest Band Edge / 1RB0



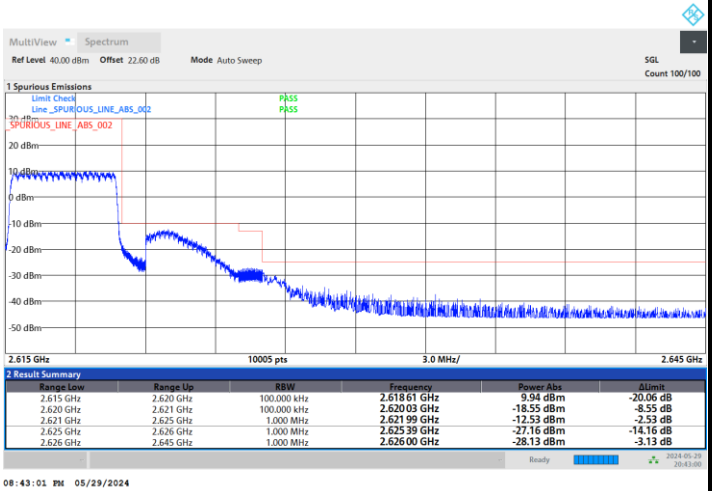

### Highest Band Edge / 1RBmax

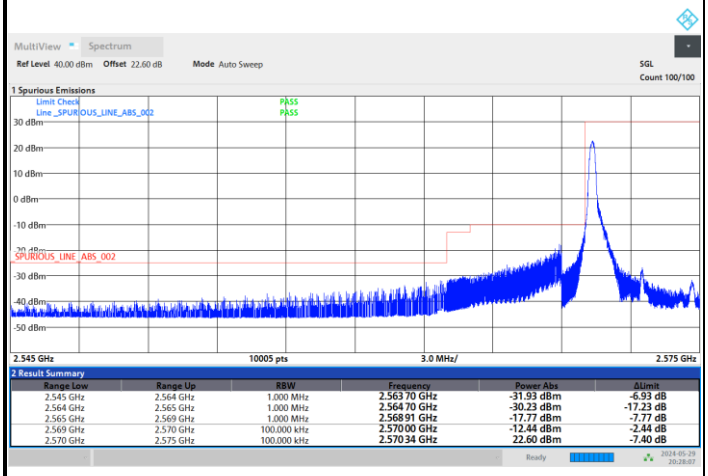
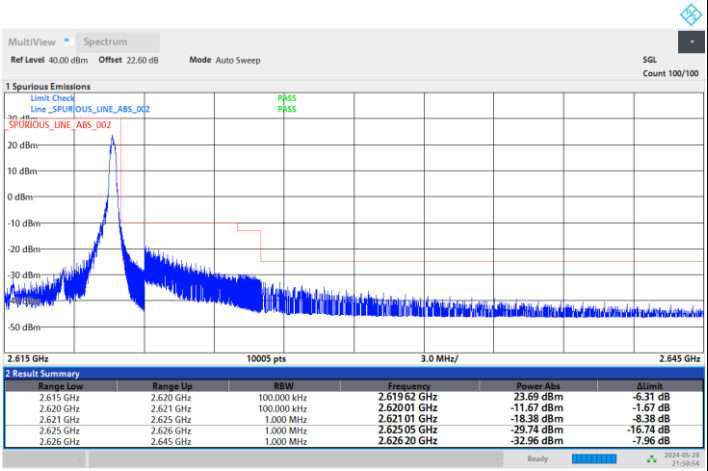
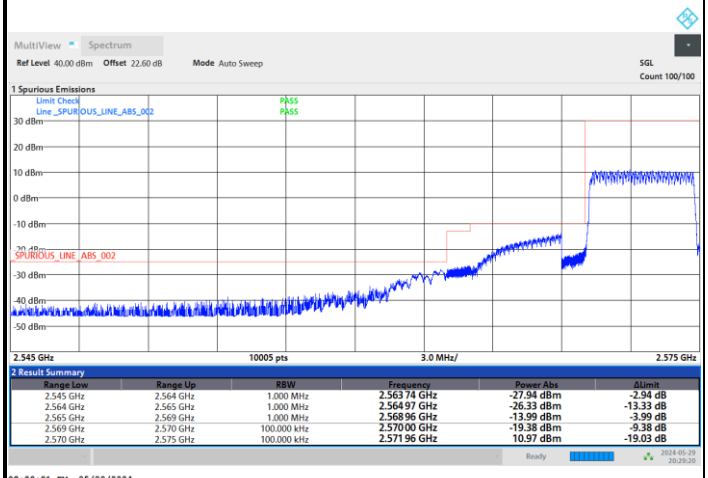
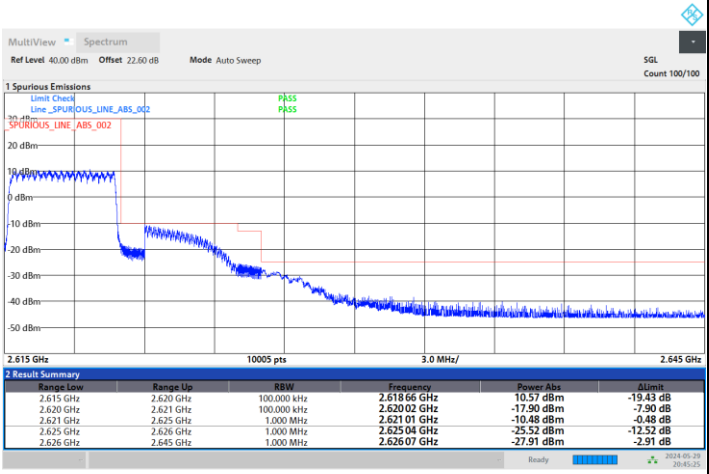


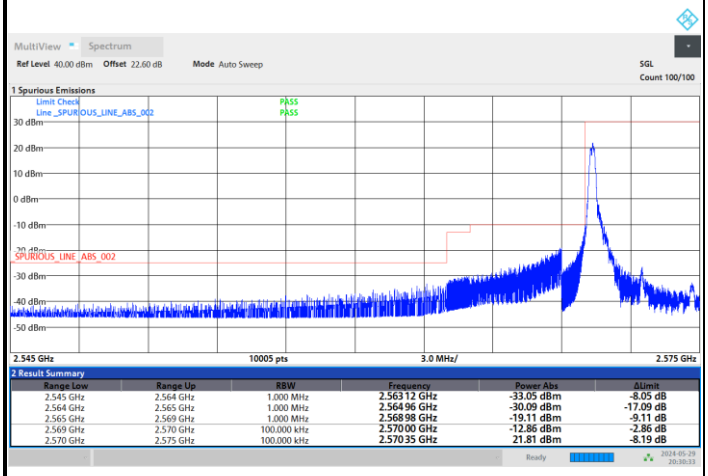
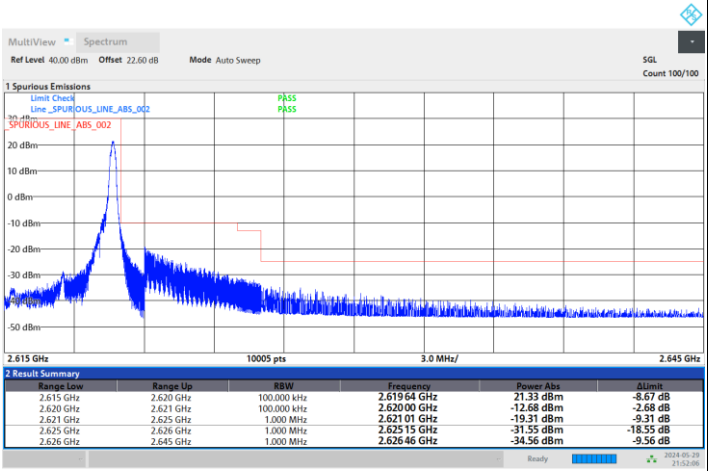
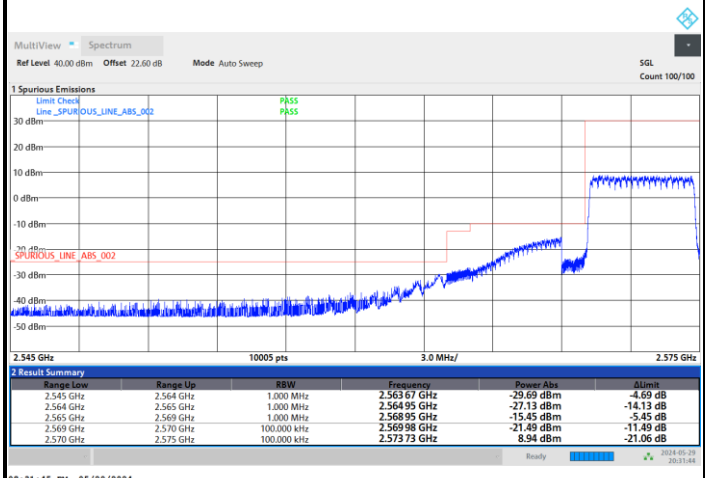
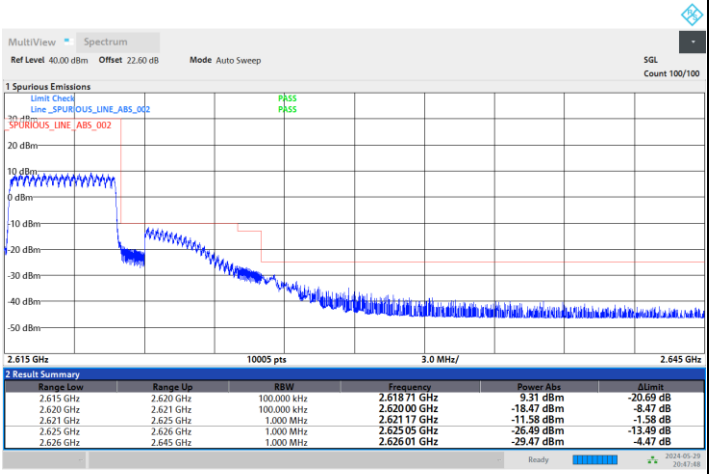

### Lowest Band Edge / Full RB

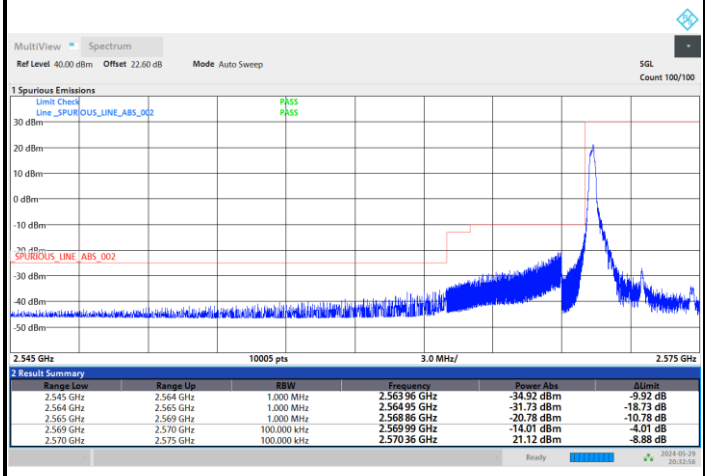
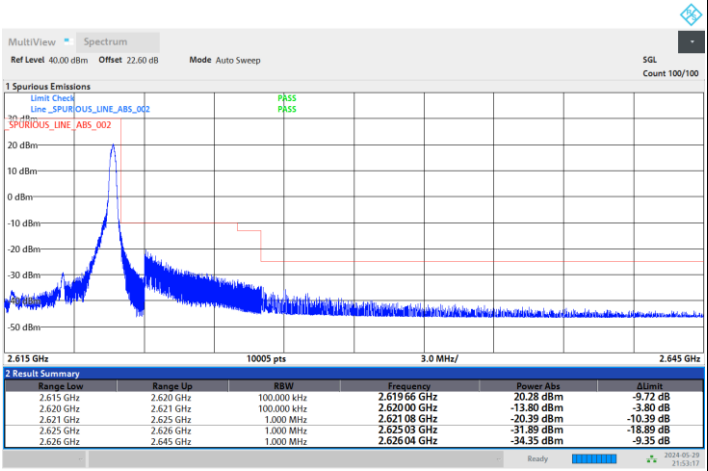
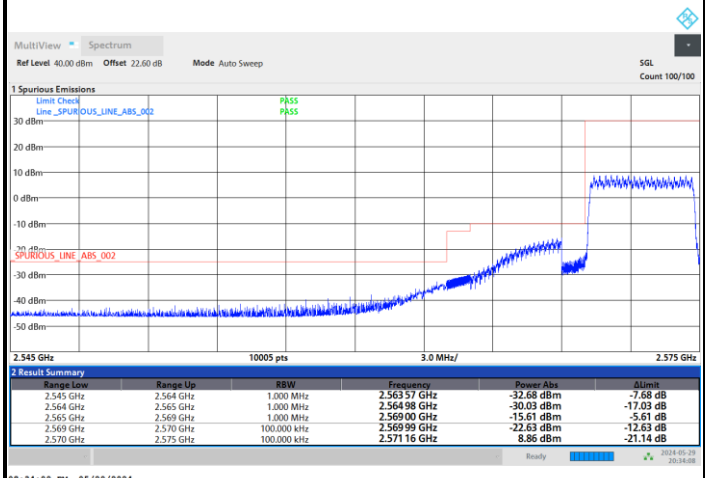
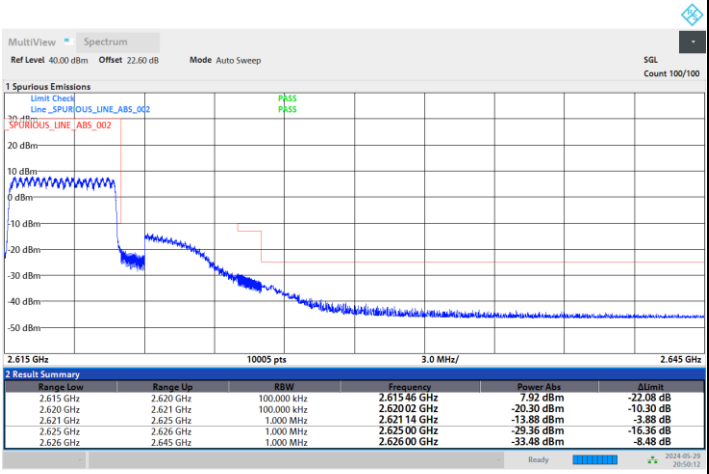


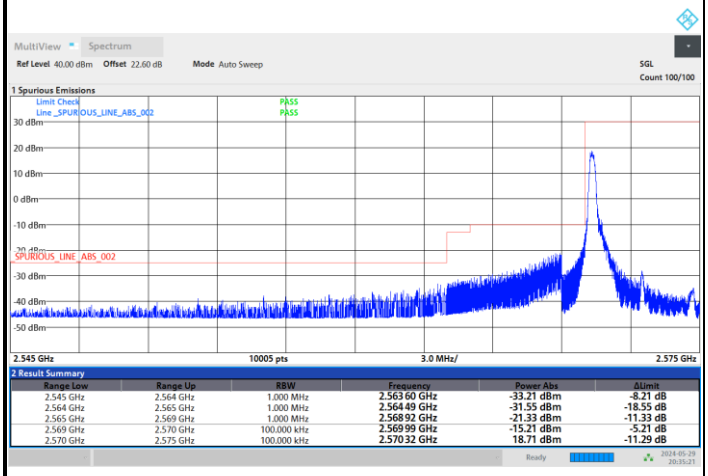
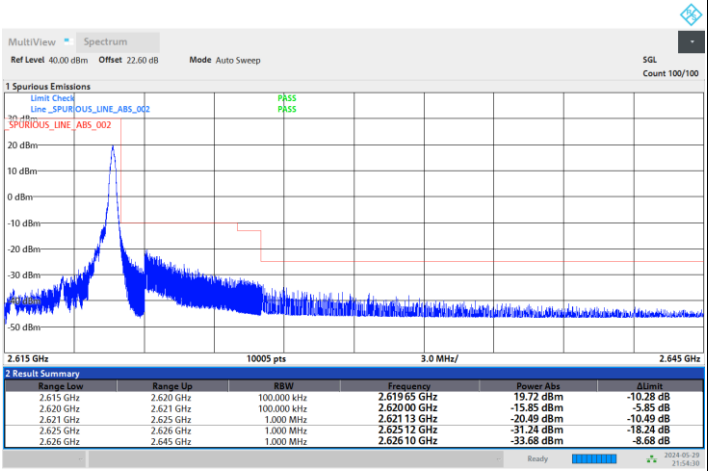
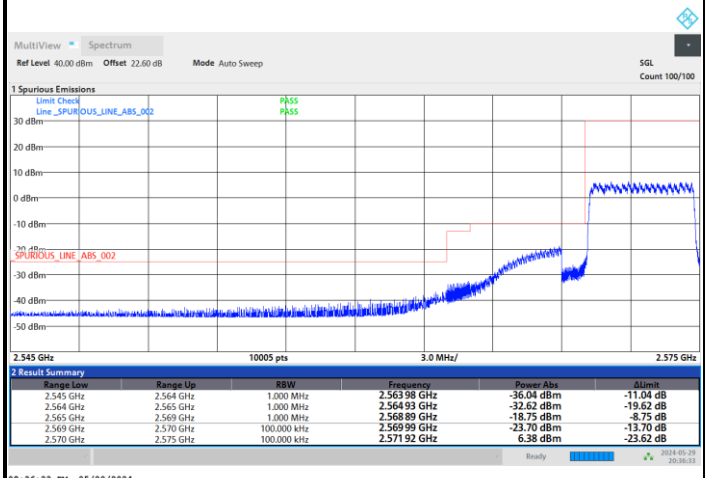
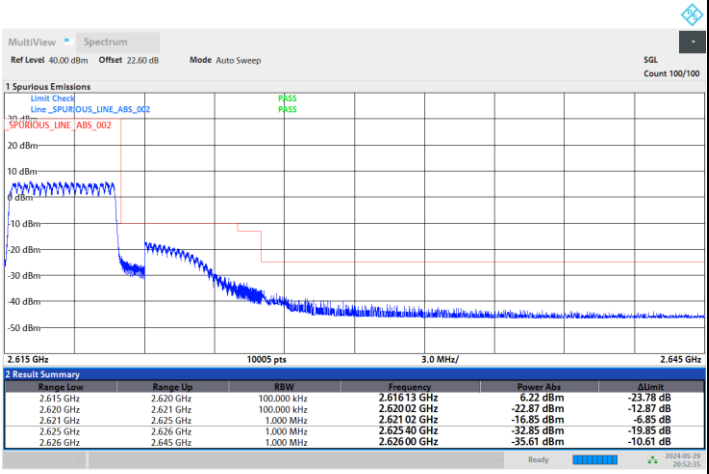

### Highest Band Edge / Full RB

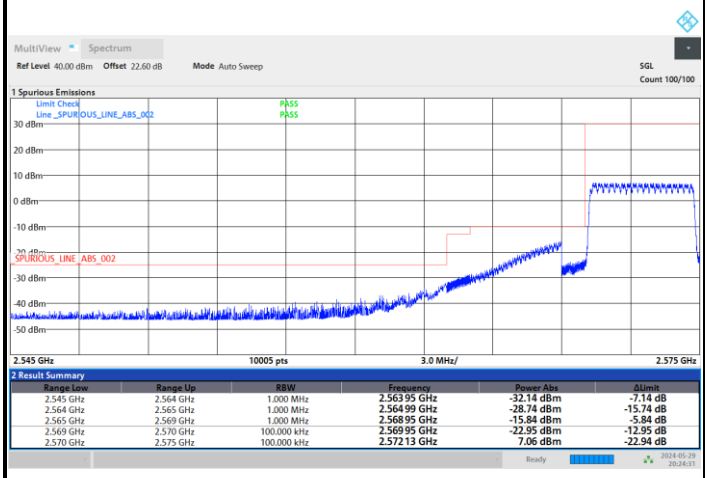
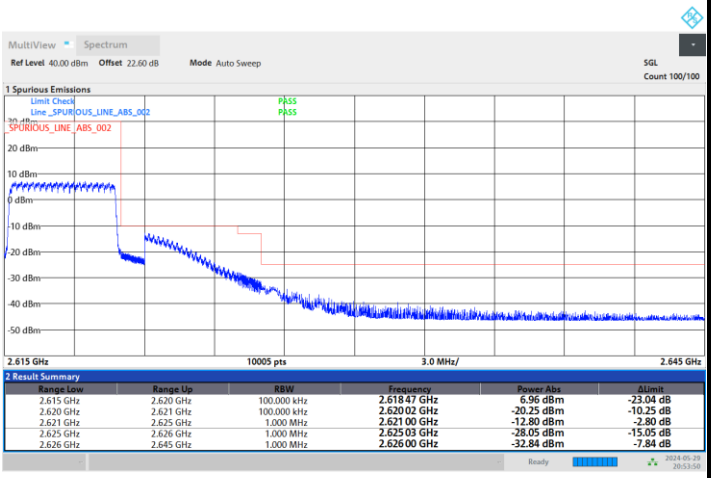


| FR1 n38 / 10MHz / DFT-S OFDM / QPSK | |
|---|---|
| **Lowest Band Edge / 1RB0** | **Highest Band Edge / 1RBmax** |
|  |  |
| **Lowest Band Edge / Full RB** | **Highest Band Edge / Full RB** |
|  |  |

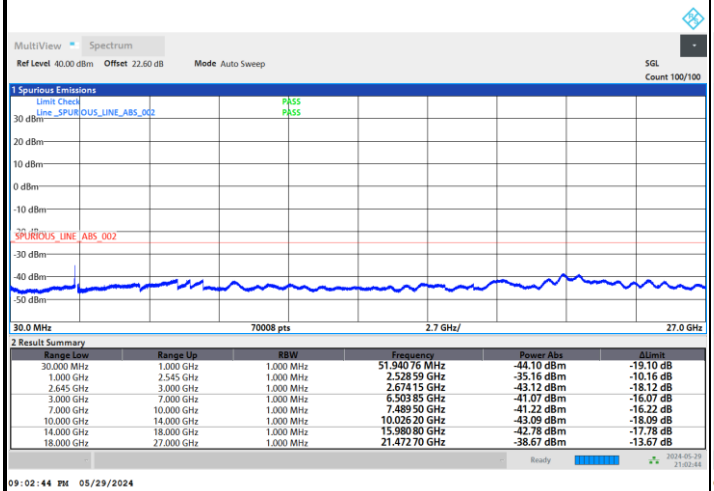
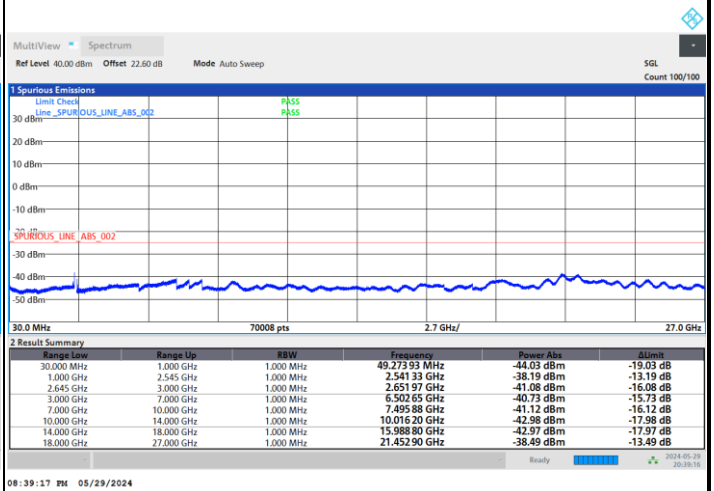
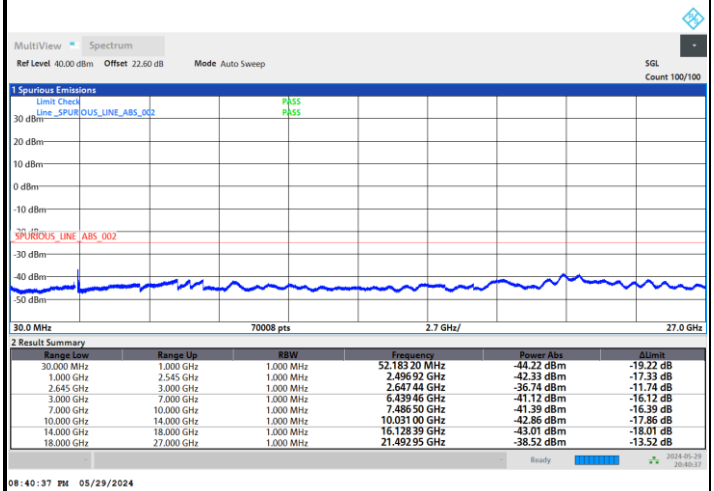
| FR1 n38 / 5MHz / DFT-S OFDM / 16QAM | |
|---|---|
| **Lowest Band Edge / 1RB0** | **Highest Band Edge / 1RBmax** |
|  |  |
| **Lowest Band Edge / Full RB** | **Highest Band Edge / Full RB** |
|  |  |

| FR1 n38 / 5MHz / DFT-S OFDM / 64QAM | |
|---|---|
| **Lowest Band Edge / 1RB0** | **Highest Band Edge / 1RBmax** |
|  |  |
| **Lowest Band Edge / Full RB** | **Highest Band Edge / Full RB** |
|  |  |

| FR1 n38 / 5MHz / DFT-S OFDM / 256QAM | |
|---|---|
| **Lowest Band Edge / 1RB0** | **Highest Band Edge / 1RBmax** |
|  |  |
| **Lowest Band Edge / Full RB** | **Highest Band Edge / Full RB** |
|  |  |

| FR1 n38 / 5MHz / CP OFDM / QPSK / Full RB | |
|---|---|
| Lowest Band Edge | Highest Band Edge |
|  |  |

# Conducted Spurious Emission

| FR1 n38 / 5MHz / DFT-S OFDM / QPSK / 1RB1 | |
|---|---|
| **Lowest Channel** | **Middle Channel** |
|  |  |
| **Highest Channel** | |
|  | |



| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 51.940 76 MHz | -44.10 dBm | -19.10 dB |
| 1.000 GHz | 2.545 GHz | 1.000 MHz | 2.528 59 GHz | -35.16 dBm | -10.16 dB |
| 2.645 GHz | 3.000 GHz | 1.000 MHz | 2.674 15 GHz | -43.12 dBm | -18.12 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.503 85 GHz | -41.07 dBm | -16.07 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 7.489 50 GHz | -41.22 dBm | -16.22 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 10.026 20 GHz | -43.09 dBm | -18.09 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 15.980 80 GHz | -42.78 dBm | -17.78 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 21.472 70 GHz | -38.67 dBm | -13.67 dB |



| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 49.273 93 MHz | -44.03 dBm | -19.03 dB |
| 1.000 GHz | 2.545 GHz | 1.000 MHz | 2.541 33 GHz | -38.19 dBm | -13.19 dB |
| 2.645 GHz | 3.000 GHz | 1.000 MHz | 2.651 97 GHz | -41.08 dBm | -16.08 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.502 65 GHz | -40.73 dBm | -15.73 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 7.495 88 GHz | -41.12 dBm | -16.12 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 10.016 20 GHz | -42.98 dBm | -17.98 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 15.988 80 GHz | -42.97 dBm | -17.97 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 21.452 90 GHz | -38.49 dBm | -13.49 dB |



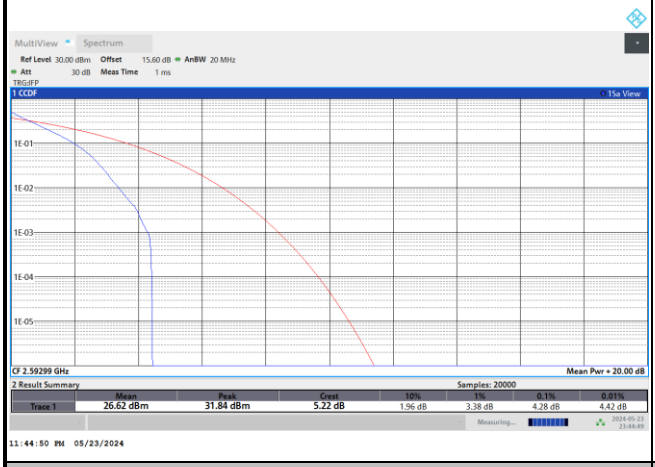
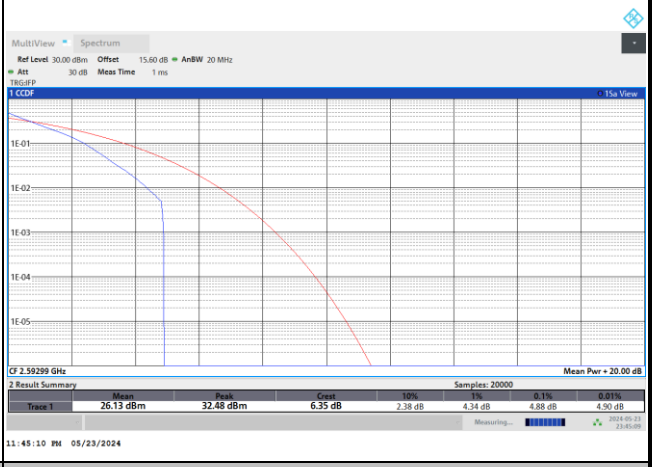
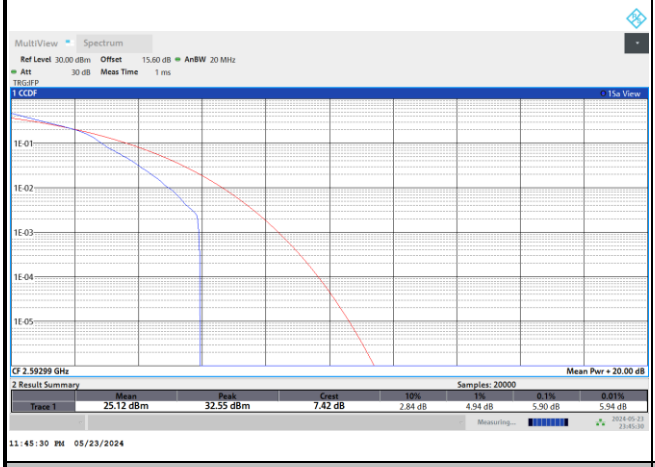
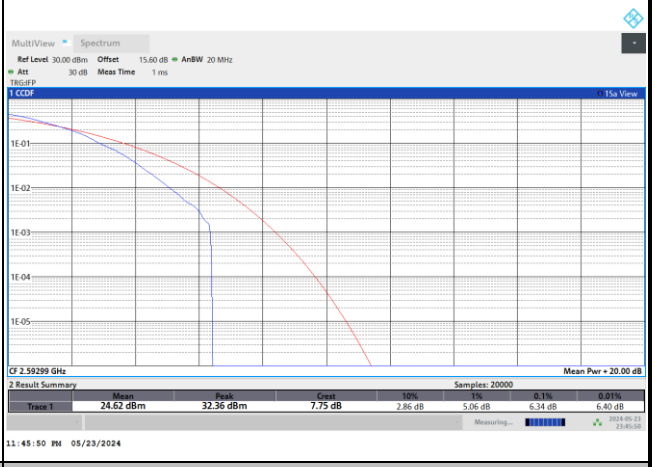
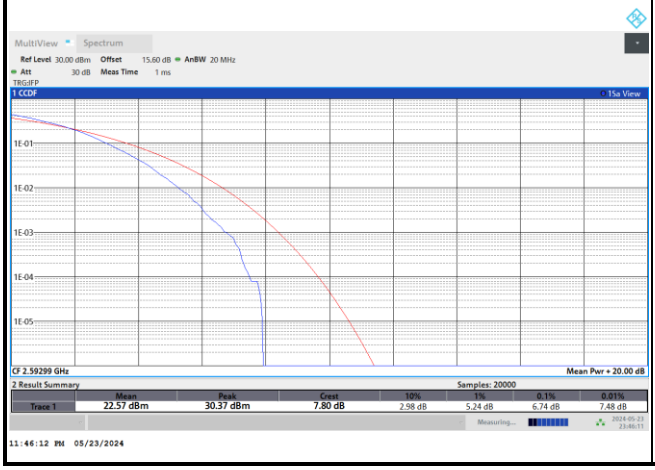
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 1.000 GHz | 1.000 MHz | 52.183 20 MHz | -44.22 dBm | -19.22 dB |
| 1.000 GHz | 2.545 GHz | 1.000 MHz | 2.496 92 GHz | -42.33 dBm | -17.33 dB |
| 2.645 GHz | 3.000 GHz | 1.000 MHz | 2.647 44 GHz | -36.74 dBm | -11.74 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.439 46 GHz | -41.12 dBm | -16.12 dB |
| 7.000 GHz | 10.000 GHz | 1.000 MHz | 7.486 50 GHz | -41.39 dBm | -16.39 dB |
| 10.000 GHz | 14.000 GHz | 1.000 MHz | 10.031 00 GHz | -42.86 dBm | -17.86 dB |
| 14.000 GHz | 18.000 GHz | 1.000 MHz | 16.128 39 GHz | -43.01 dBm | -18.01 dB |
| 18.000 GHz | 27.000 GHz | 1.000 MHz | 21.492 95 GHz | -38.52 dBm | -13.52 dB |

# FR1 n41

## <SISO Mode>

## Peak-to-Average Ratio

| Mode | FR1 n41 / 20MHz / DFT-S OFDM | | | | |
|---|---|---|---|---|---|
| Mod. | PI/2 BPSK | QPSK | 16QAM | 64QAM | Limit: 13dB |
| RB Size | Full RB | Full RB | Full RB | Full RB | Result |
| Middle CH | 4.28 | 4.88 | 5.90 | 6.34 | PASS |
| Mode | FR1 n41 / 20MHz / DFT-S OFDM | | | | |
| Mod. | 256QAM | | | | Limit: 13dB |
| RB Size | Full RB | | | | Result |
| Middle CH | 6.74 | | | | PASS |

| FR1 n41 / 20MHz / DFT-S OFDM / Middle Channel / Full RB | |
|---|---|
| PI/2 BPSK | QPSK |
|  |  |
| 16QAM | 64QAM |
|  |  |
| 256QAM | |
|  | |

# 26dB Bandwidth

| Mode | FR1 n41 : 26dB BW(MHz) / DFT-S OFDM | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW | 10MHz | 15MHz | 20MHz | 25MHz | 30MHz | 40MHz | 50MHz | 60MHz |
| Mod. | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK |
| Middle CH | 9.62 | 14.21 | 19.60 | - | 30.56 | 38.49 | 50.43 | 64.24 |
| BW | 70MHz | 80MHz | 90MHz | 100MHz | | | | |
| Mod. | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK | | | | |
| Middle CH | 72.23 | 81.02 | 92.14 | 101.62 | | | | |

| Mode | FR1 n41 : 26dB BW(MHz) / CP OFDM | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BW | 10MHz | | 15MHz | | 20MHz | | 25MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Middle CH | 9.59 | 9.90 | 15.01 | 15.13 | 20.35 | 20.12 | - | - |
| Mod. | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | 9.80 | 9.84 | 14.92 | 14.89 | 20.03 | 20.05 | - | - |
| BW | 30MHz | | 40MHz | | 50MHz | | 60MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Middle CH | 31.92 | 31.51 | 41.06 | 42.74 | 51.36 | 50.69 | 67.15 | 63.60 |
| Mod. | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | 30.74 | 30.94 | 40.78 | 43.23 | 50.73 | 50.94 | 64.67 | 63.08 |
| BW | 70MHz | | 80MHz | | 90MHz | | 100MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Middle CH | 77.55 | 75.08 | 81.82 | 81.63 | 93.40 | 93.17 | 107.02 | 103.00 |
| Mod. | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | 76.10 | 74.76 | 83.20 | 81.49 | 92.57 | 93.62 | 104.00 | 108.86 |