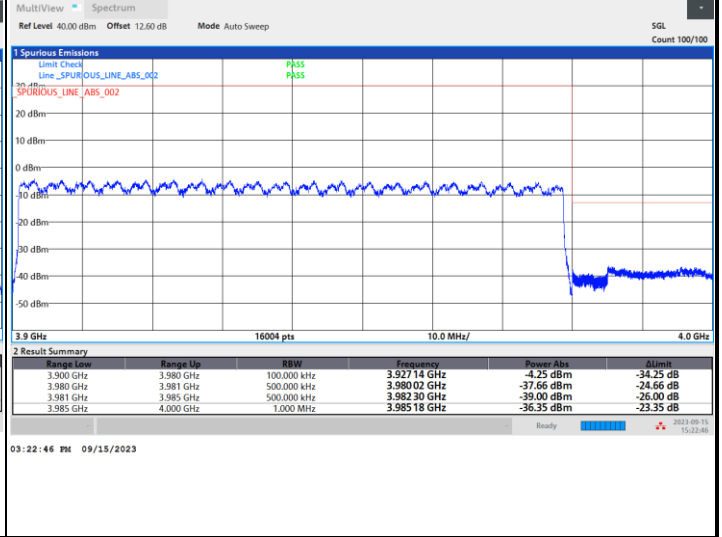
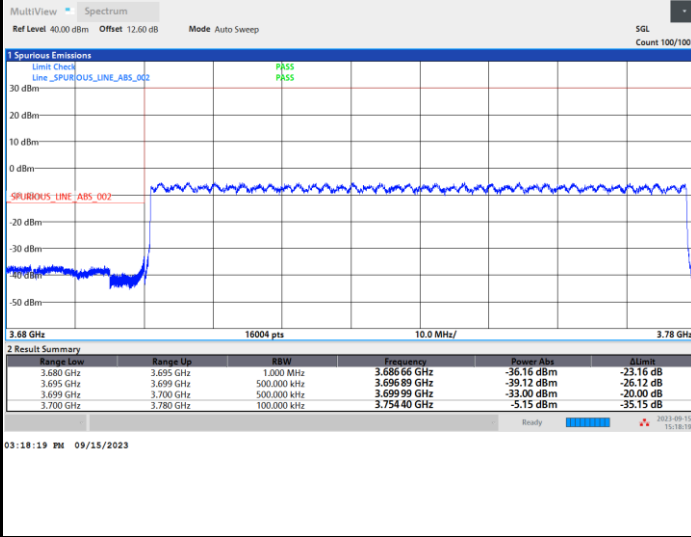




5G-FR1 SA n77 (PC2) / 80MHz / DFT-S OFDM / 256QAM

Lowest Band Edge / Full RB

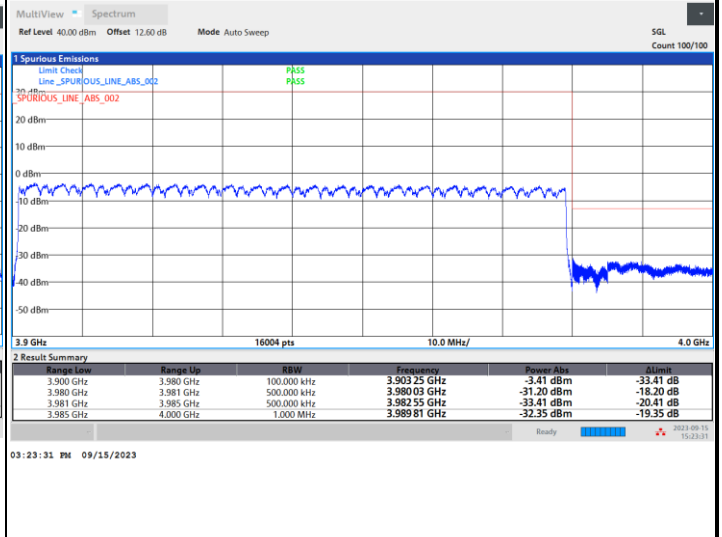
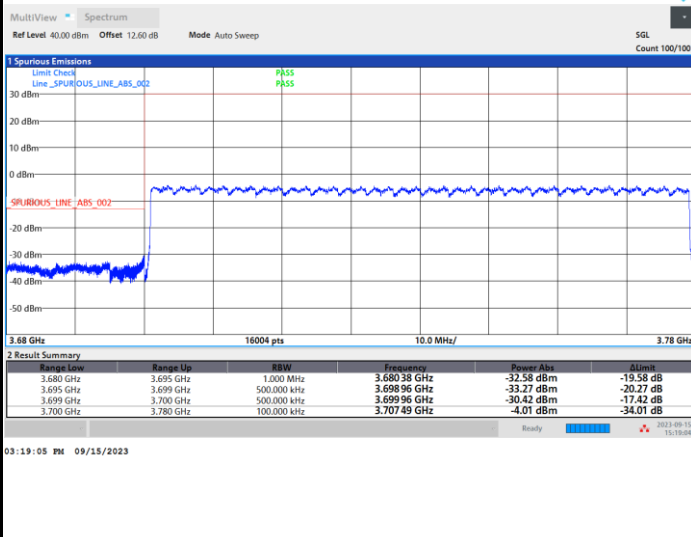
Highest Band Edge / Full RB



5G-FR1 SA n77 (PC2) / 80MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge

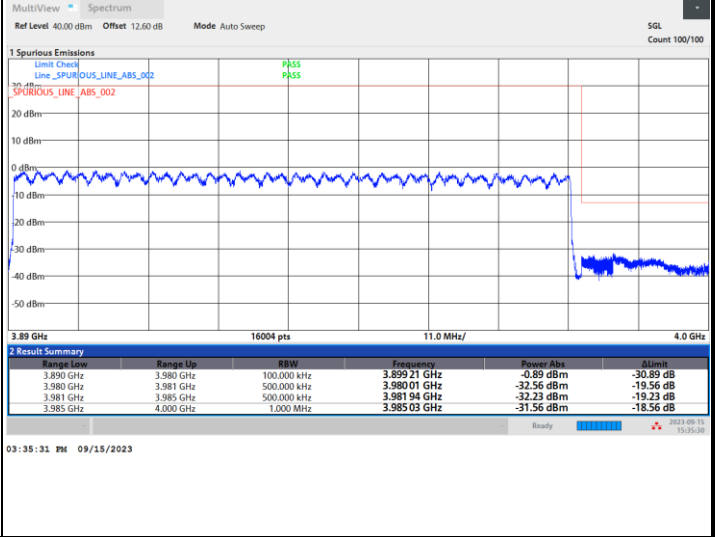
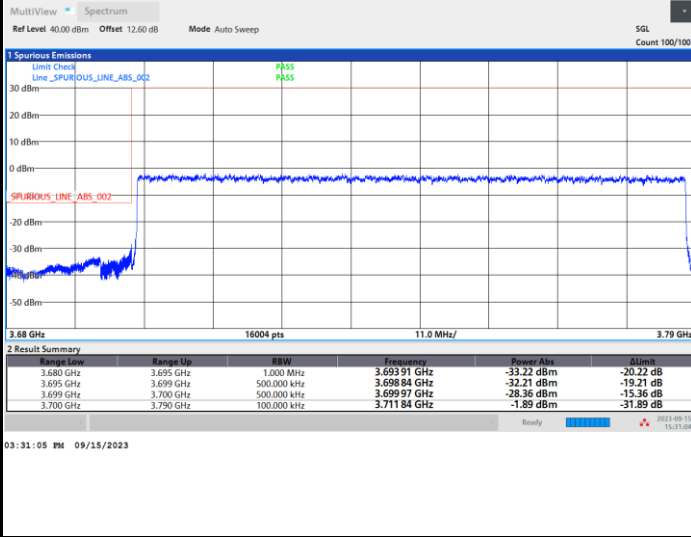




5G-FR1 SA n77 (PC2) / 90MHz / DFT-S OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

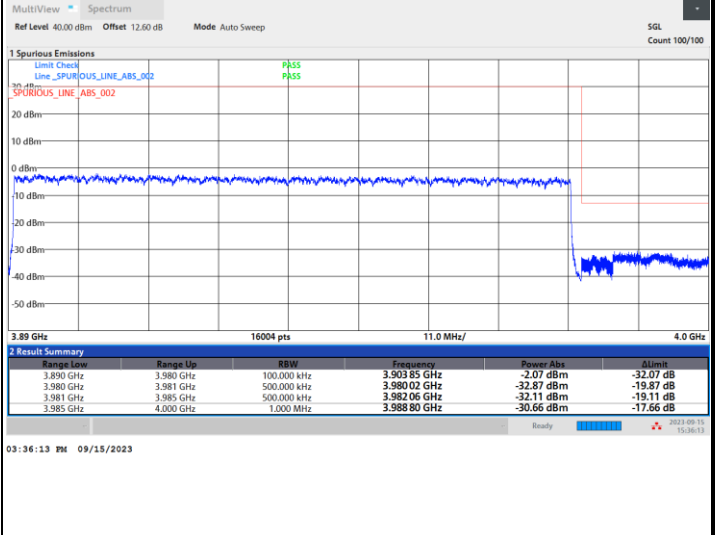
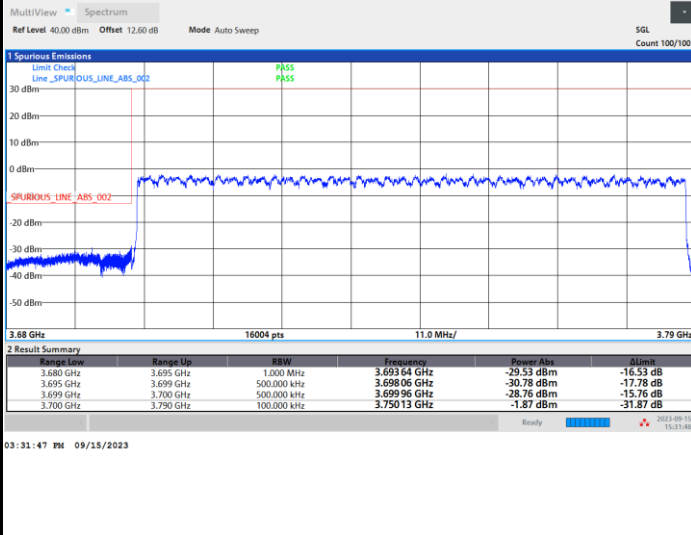
Highest Band Edge / Full RB



5G-FR1 SA n77 (PC2) / 90MHz / DFT-S OFDM / QPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

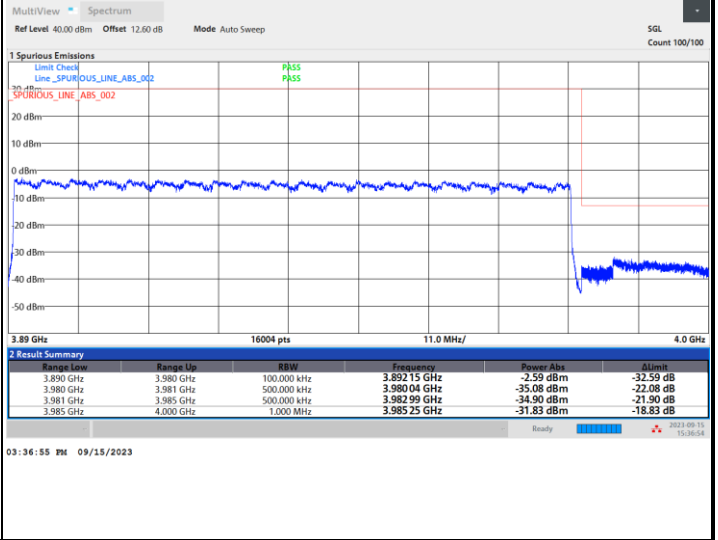
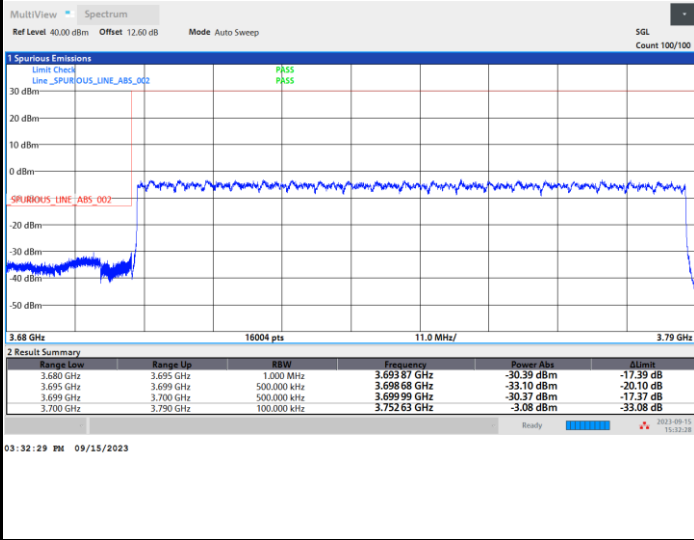




5G-FR1 SA n77 (PC2) / 90MHz / DFT-S OFDM / 16QAM

Lowest Band Edge / Full RB

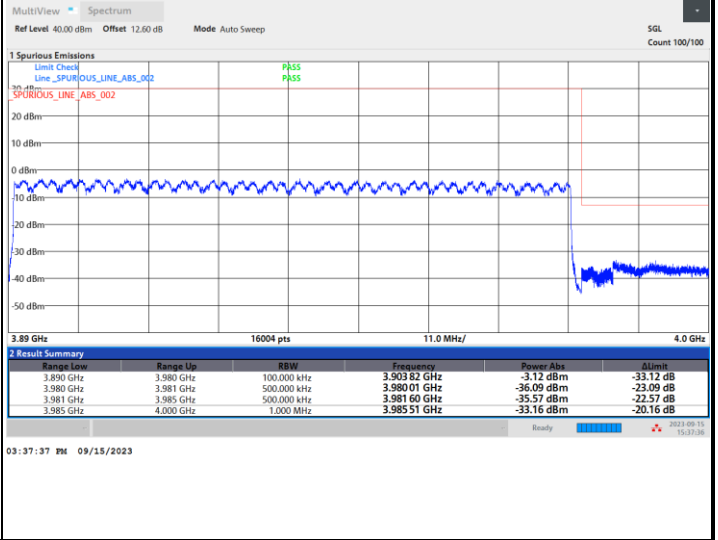
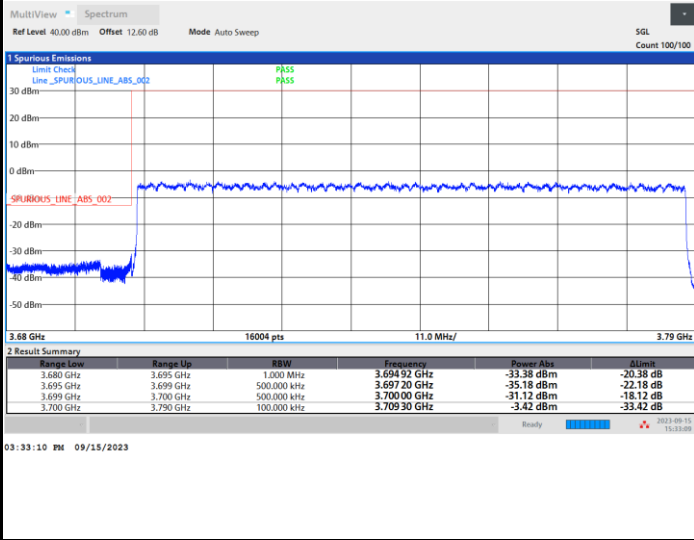
Highest Band Edge / Full RB



5G-FR1 SA n77 (PC2) / 90MHz / DFT-S OFDM / 64QAM

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

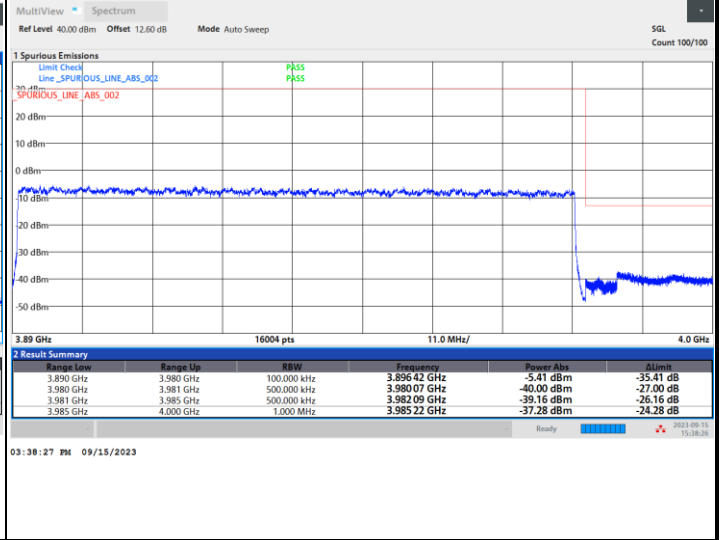
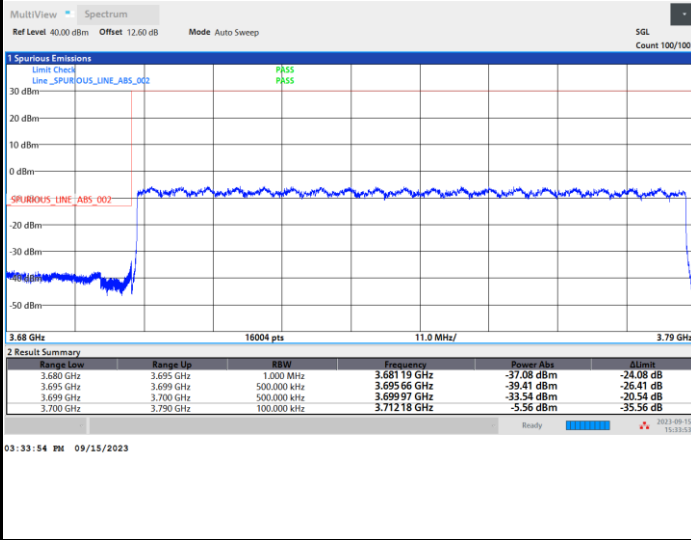




5G-FR1 SA n77 (PC2) / 90MHz / DFT-S OFDM / 256QAM

Lowest Band Edge / Full RB

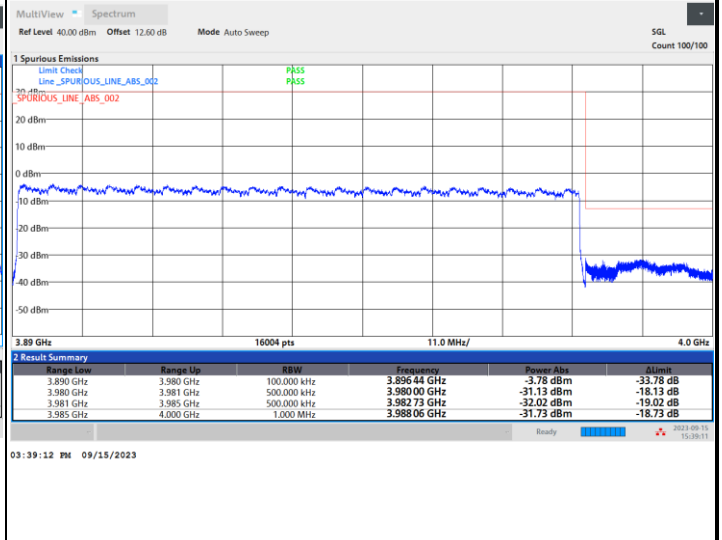
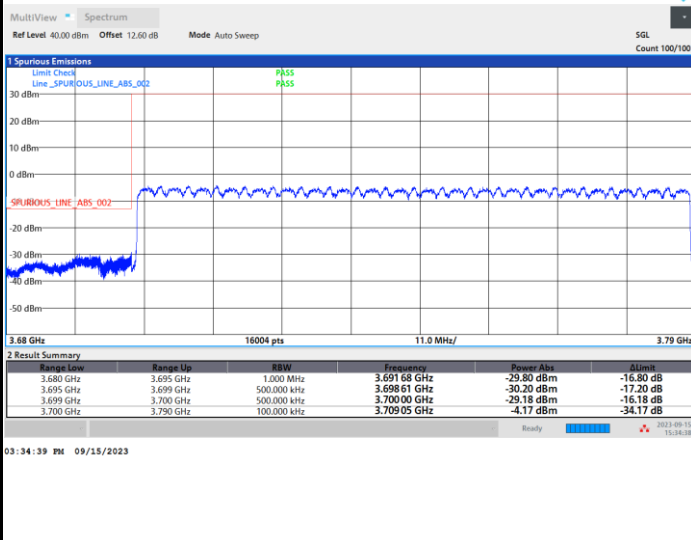
Highest Band Edge / Full RB



5G-FR1 SA n77 (PC2) / 90MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge

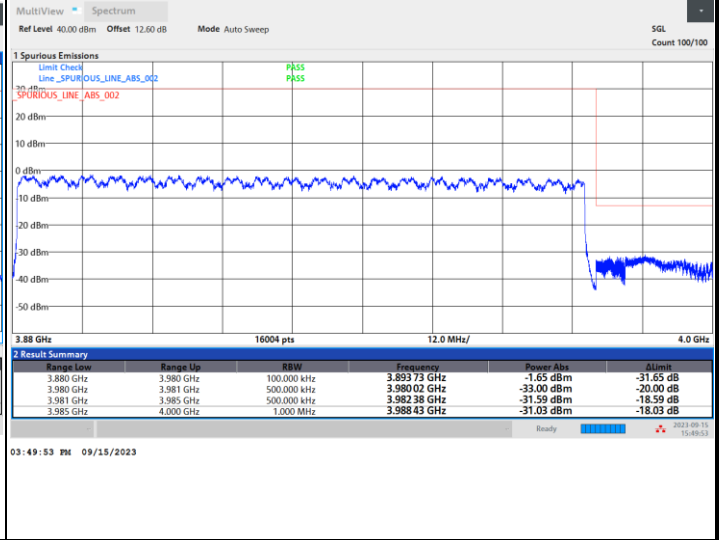
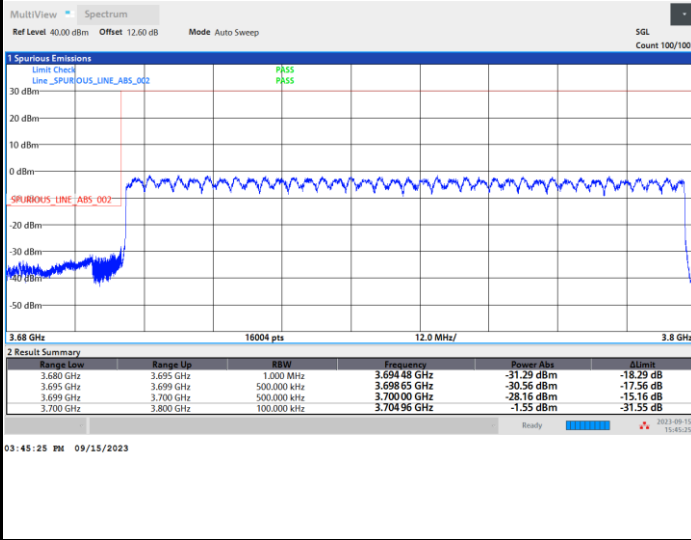




5G-FR1 SA n77 (PC2) / 100MHz / DFT-S OFDM / PI/2 BPSK

Lowest Band Edge / Full RB

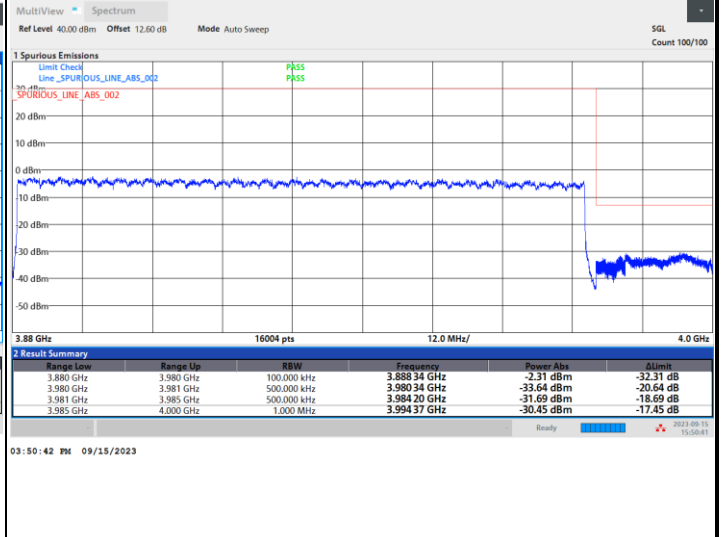
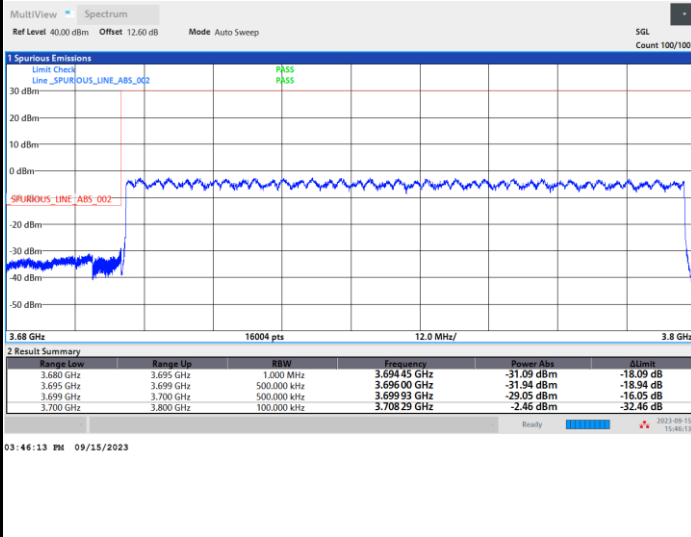
Highest Band Edge / Full RB



5G-FR1 SA n77 (PC2) / 100MHz / DFT-S OFDM / QPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

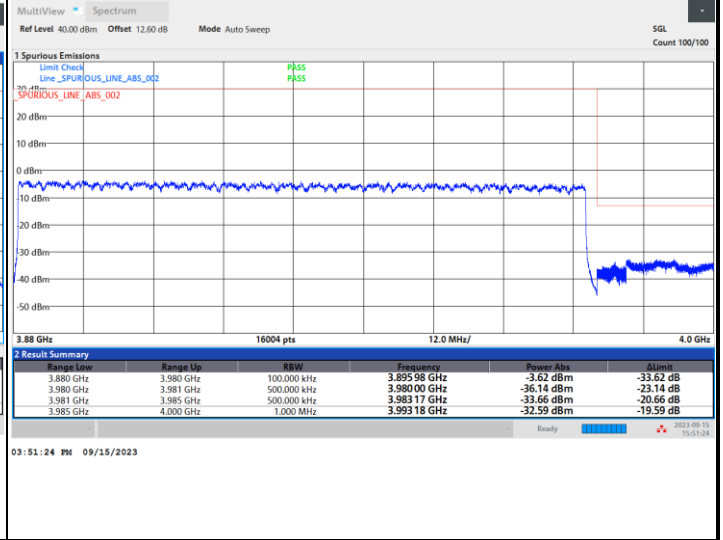
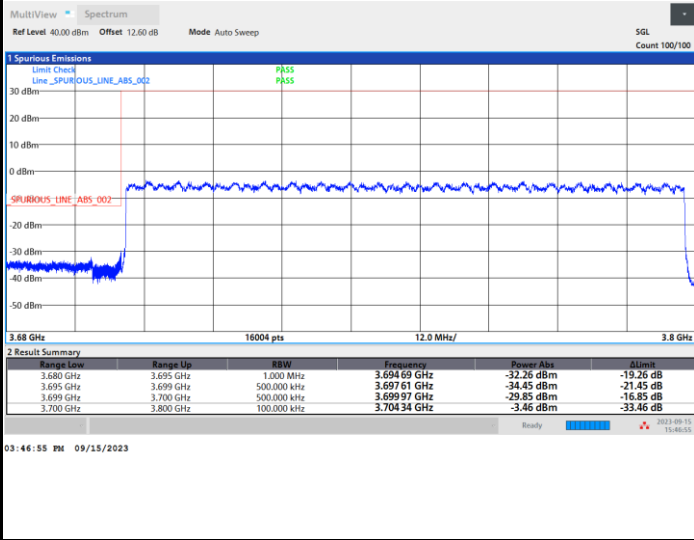




5G-FR1 SA n77 (PC2) / 100MHz / DFT-S OFDM / 16QAM

Lowest Band Edge / Full RB

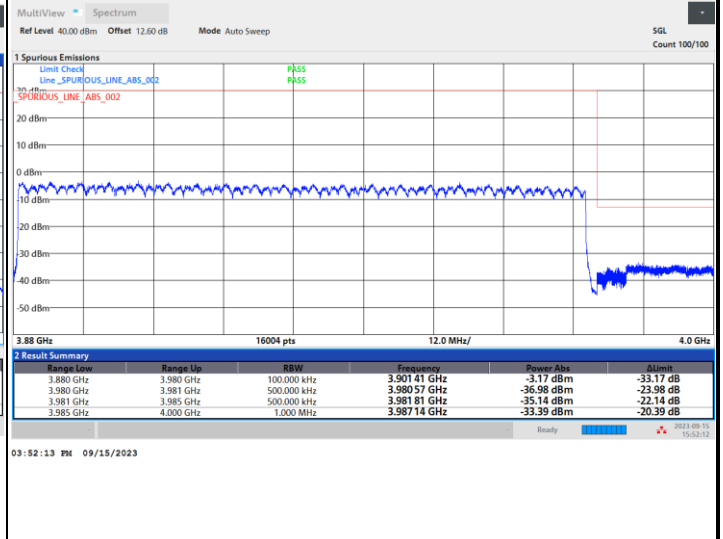
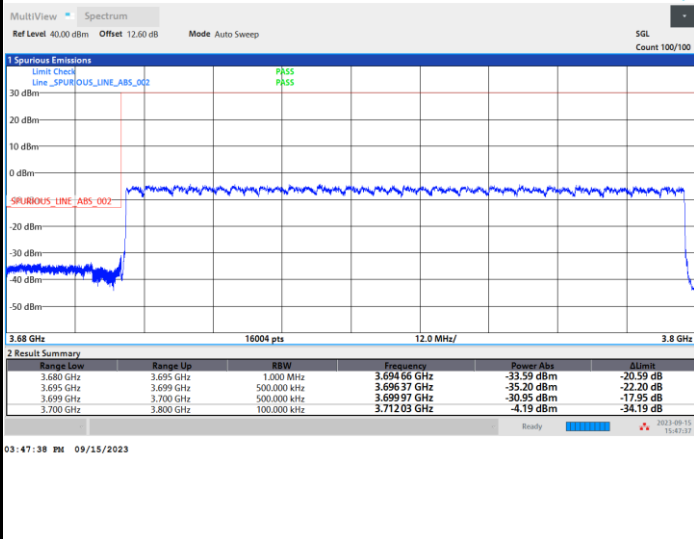
Highest Band Edge / Full RB



5G-FR1 SA n77 (PC2) / 100MHz / DFT-S OFDM / 64QAM

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

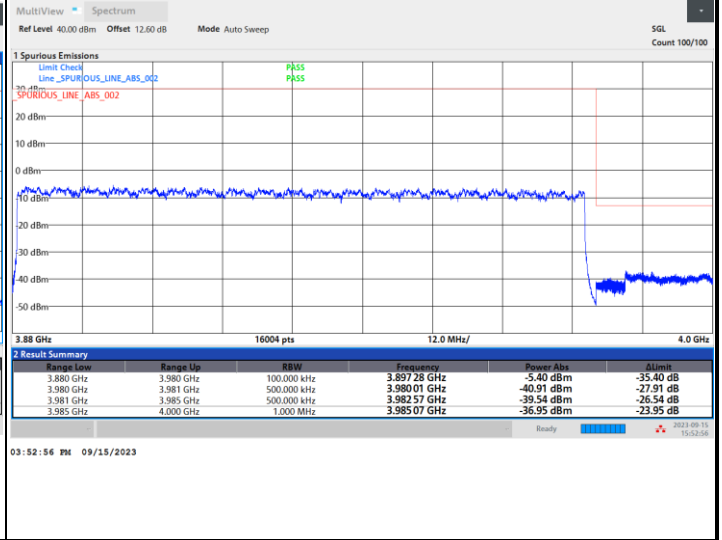
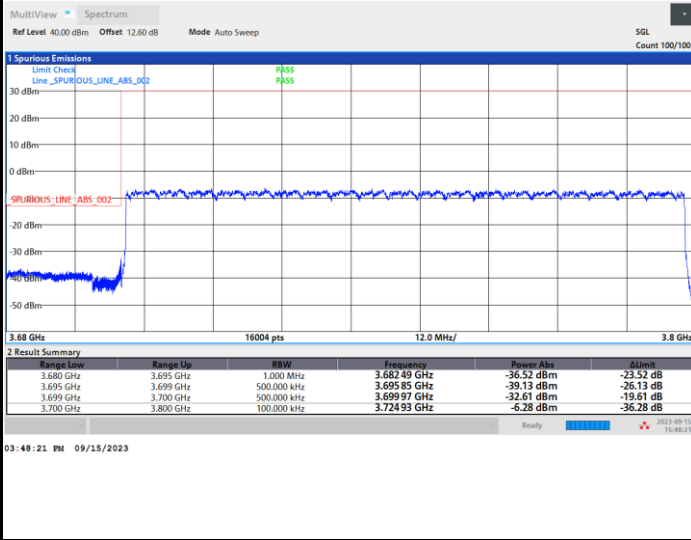




5G-FR1 SA n77 (PC2) / 100MHz / DFT-S OFDM / 256QAM

Lowest Band Edge / Full RB

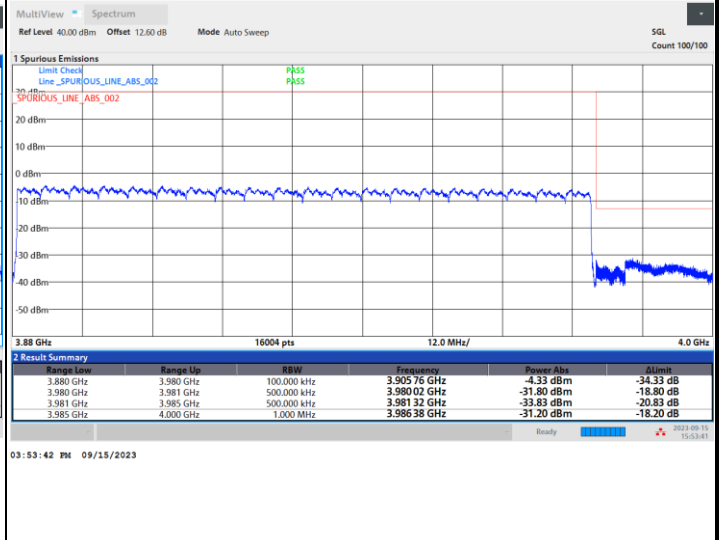
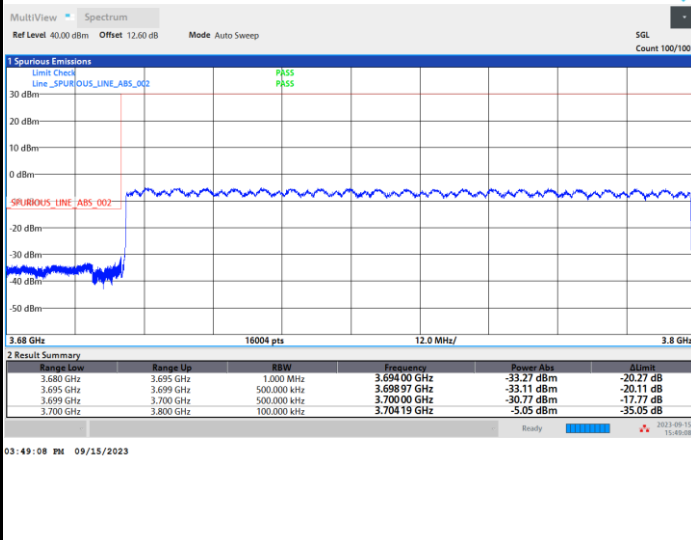
Highest Band Edge / Full RB



5G-FR1 SA n77 (PC2) / 100MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge



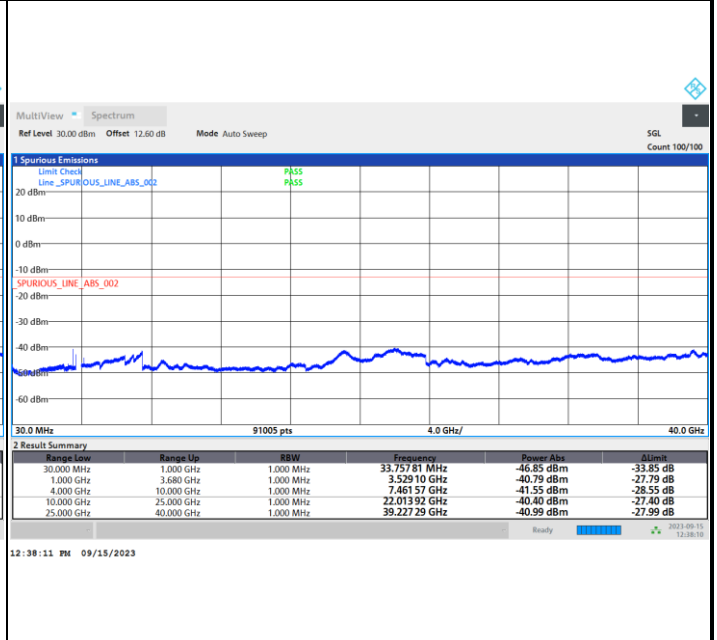
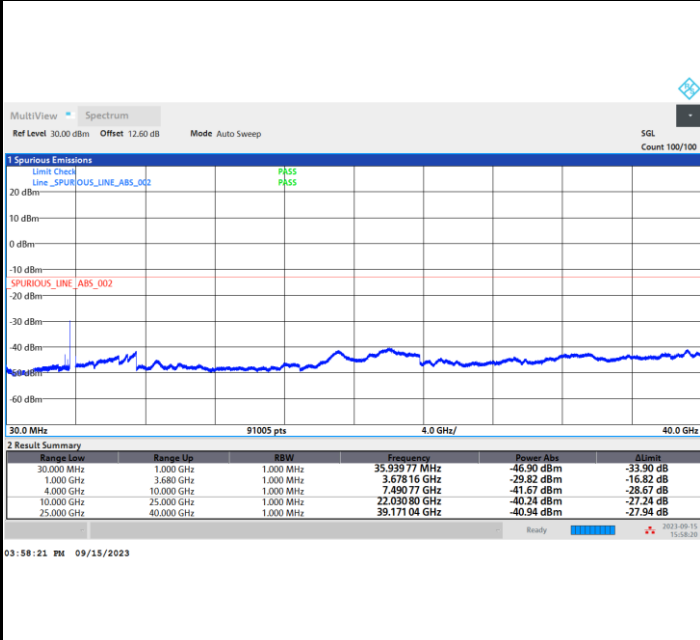


Conducted Spurious Emission

5G-FR1 SA n77 (PC2) / 10MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel

Middle Channel



Highest Channel





Frequency Stability

| Test Conditions | | 5G-FR1 SA n77 (PC2) (PI/2 BPSK) / Middle Channel | Limit |
|---------------------|-------------------|---|---------|
| Temperature (°C) | Voltage (Volt) | BW 20MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0010 | PASS |
| 40 | Normal Voltage | 0.0033 | |
| 30 | Normal Voltage | 0.0025 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0028 | |
| 0 | Normal Voltage | 0.0004 | |
| -10 | Normal Voltage | 0.0011 | |
| -20 | Normal Voltage | 0.0015 | |
| -30 | Normal Voltage | 0.0000 | |
| 20 | Maximum Voltage | 0.0011 | |
| 20 | Normal Voltage | 0.0000 | |
| 20 | Minimum Voltage | 0.0028 | |

Note:

- 1. Normal Voltage = 48 V. ; Minimum Voltage = 42.5 V. ; Maximum Voltage = 57 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.

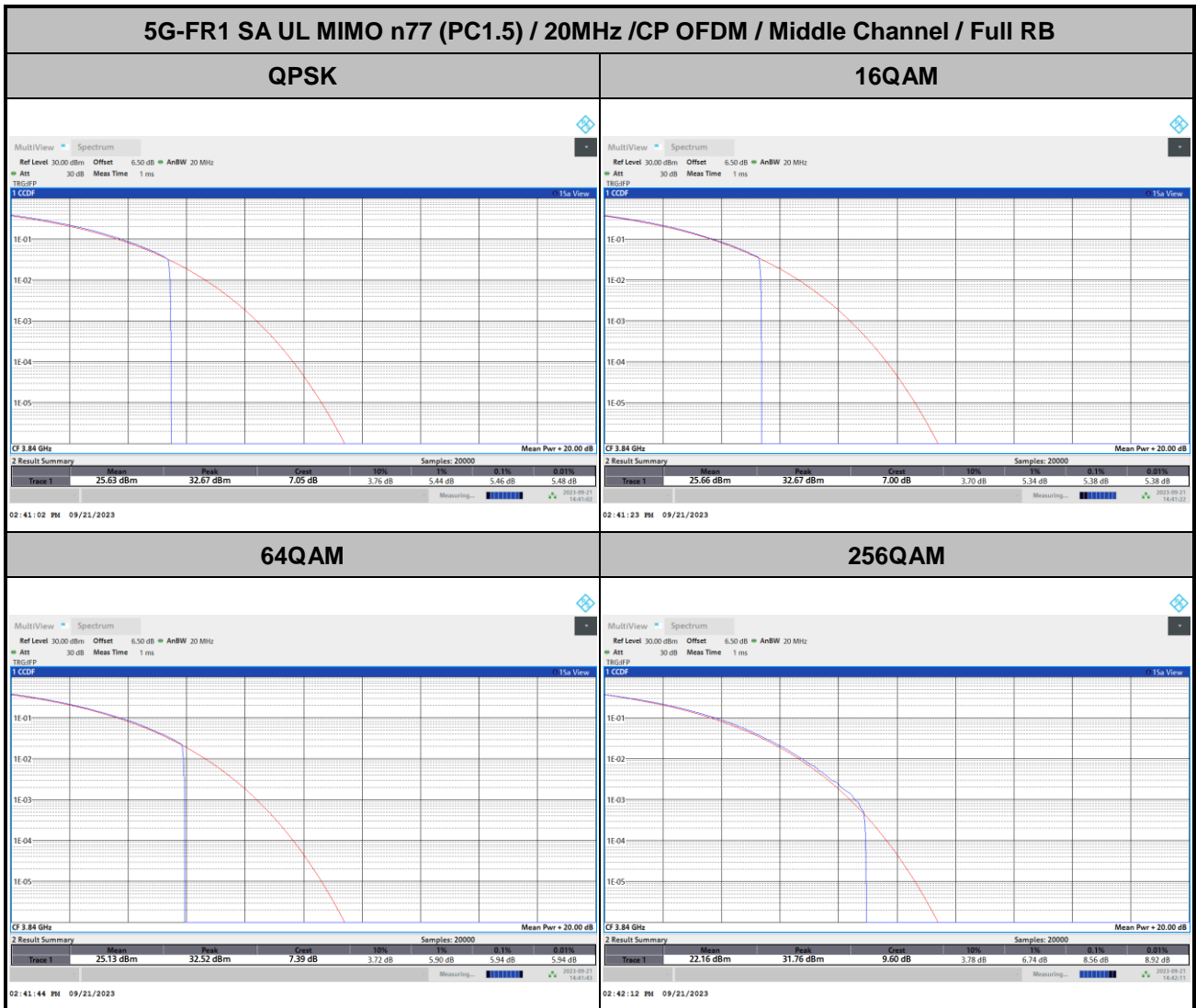


<MIMO Mode>

MIMO <Ant. 4>

Peak-to-Average Ratio

| | | | | | |
|-----------|---|---------|---------|---------|-------------|
| Mode | 5G-FR1 SA UL MIMO n77 (PC1.5) / 20MHz / CP OFDM | | | | |
| Mod. | QPSK | 16QAM | 64QAM | 256QAM | Limit: 13dB |
| RB Size | Full RB | Full RB | Full RB | Full RB | Result |
| Middle CH | 5.46 | 5.38 | 5.94 | 8.56 | PASS |





26dB Bandwidth

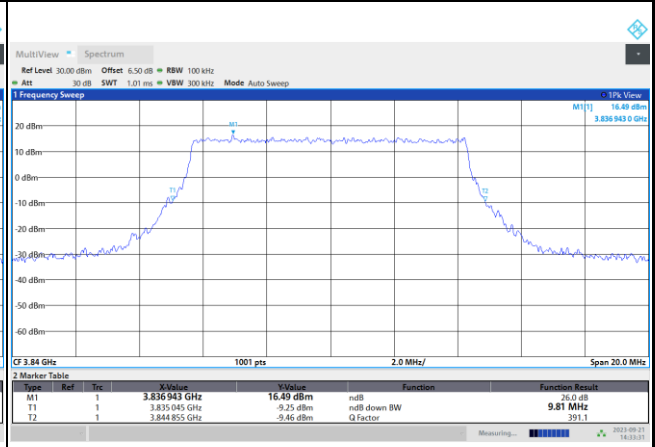
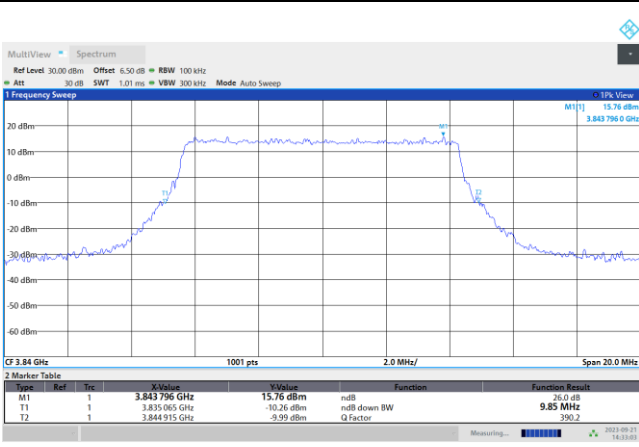
| Mode | 5G-FR1 SA UL MIMO n77 (PC1.5) : 26dB BW(MHz) / CP OFDM | | | | | | | |
|-----------|--|--------|-------|--------|-------|--------|--------|--------|
| BW | 10MHz | | 15MHz | | 20MHz | | 25MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Middle CH | 9.85 | 9.81 | 15.44 | 15.35 | 20.06 | 20.02 | 24.83 | 24.93 |
| Mod. | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | 9.73 | 9.79 | 15.29 | 15.41 | 19.86 | 19.90 | 25.03 | 24.93 |
| BW | 30MHz | | 40MHz | | 50MHz | | 60MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Middle CH | 29.67 | 29.97 | 40.60 | 40.92 | 50.65 | 50.65 | 60.78 | 60.78 |
| Mod. | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | 29.73 | 29.49 | 40.76 | 40.84 | 50.55 | 50.55 | 60.90 | 60.90 |
| BW | 70MHz | | 80MHz | | 90MHz | | 100MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Middle CH | 70.77 | 70.63 | 80.72 | 80.56 | 90.99 | 90.81 | 101.10 | 100.90 |
| Mod. | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | 70.77 | 70.77 | 80.88 | 80.88 | 90.99 | 90.99 | 101.10 | 101.10 |



5G-FR1 SA UL MIMO n77 (PC1.5) / 10MHz / CP OFDM / Middle Channel / Full RB

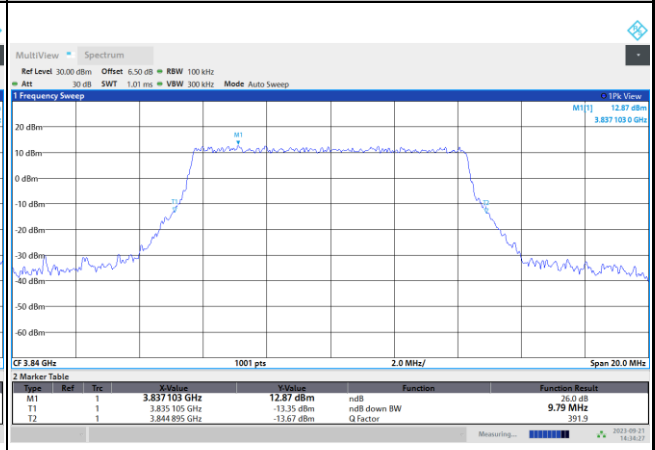
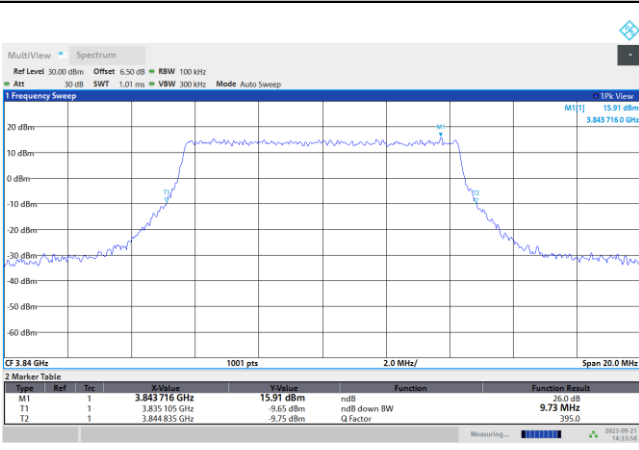
QPSK

16QAM



64QAM

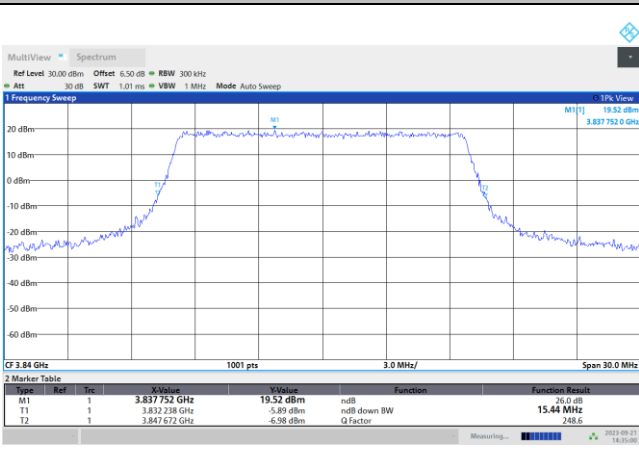
256QAM



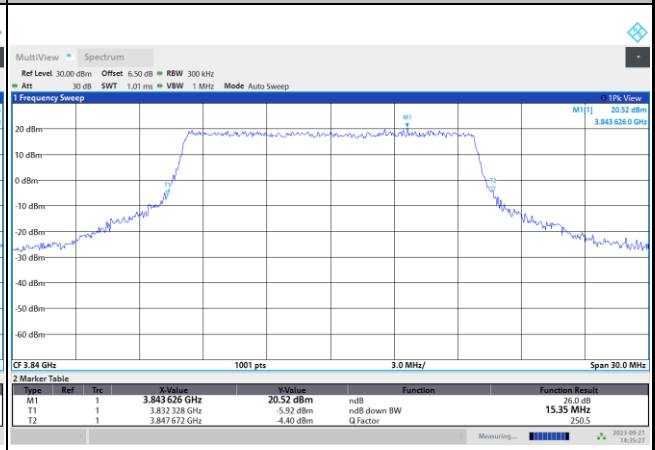


5G-FR1 SA UL MIMO n77 (PC1.5) / 15MHz / CP OFDM / Middle Channel / Full RB

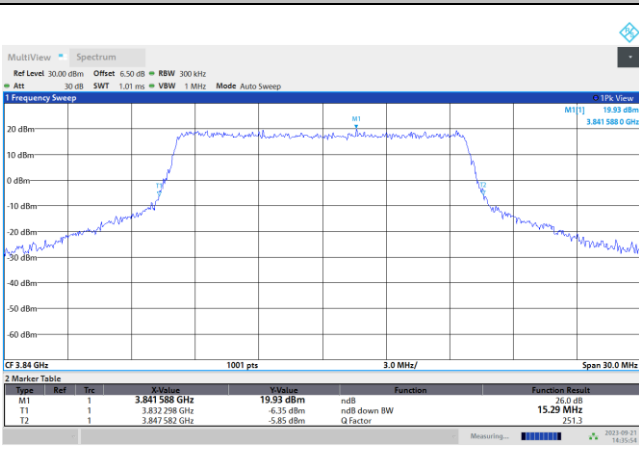
QPSK



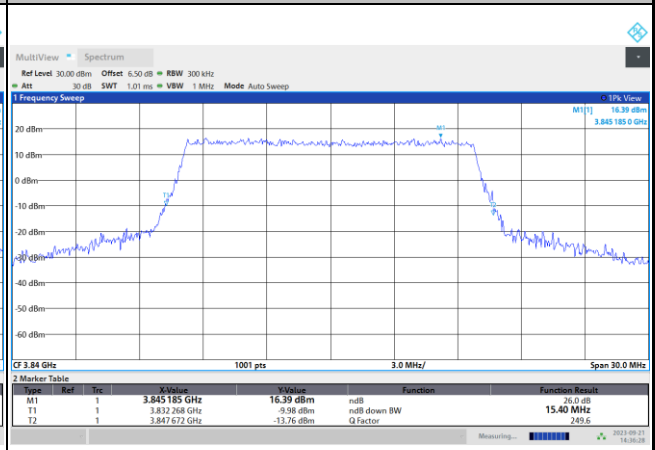
16QAM



64QAM



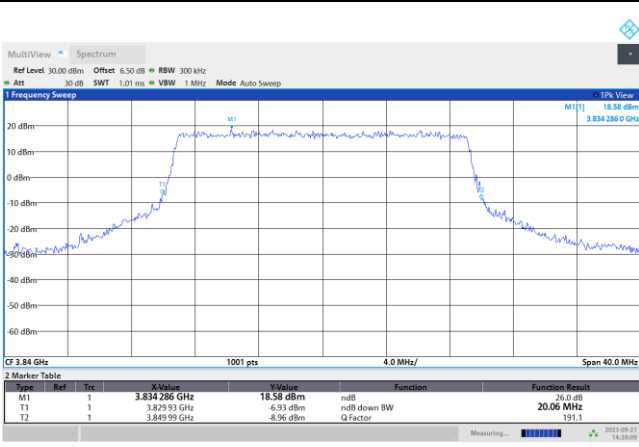
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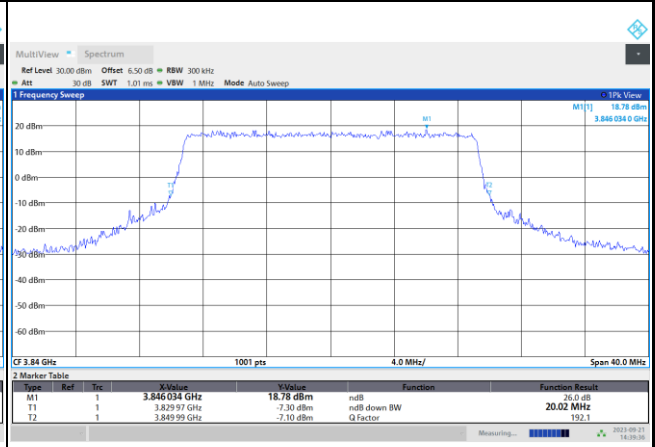


5G-FR1 SA UL MIMO n77 (PC1.5) / 20MHz / CP OFDM / Middle Channel / Full RB

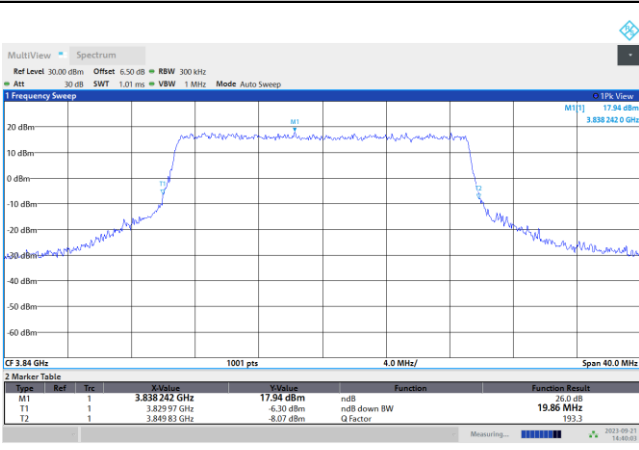
QPSK



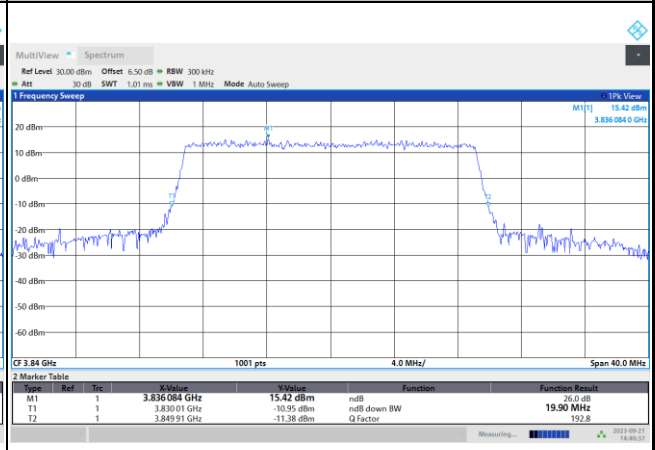
16QAM



64QAM



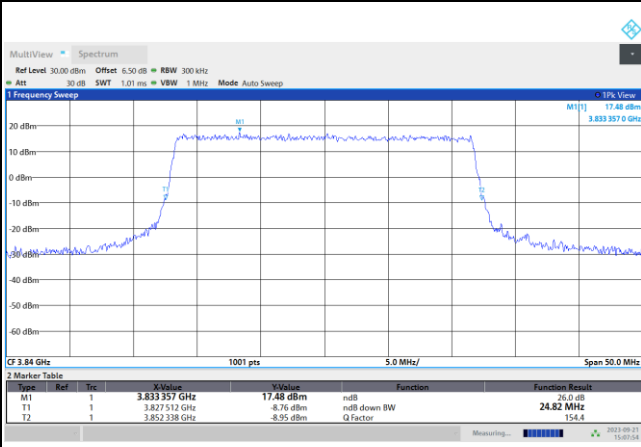
256QAM



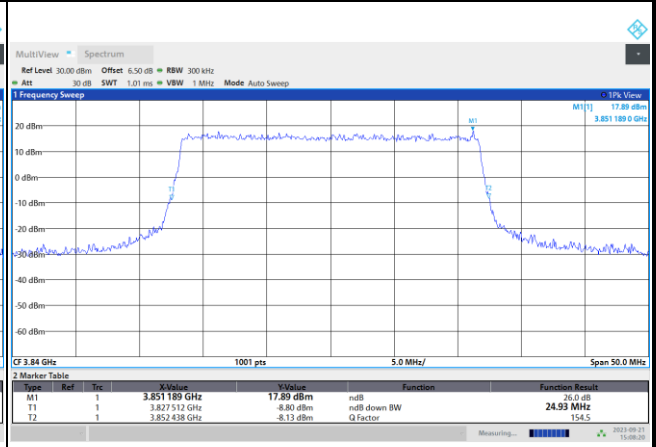


5G-FR1 SA UL MIMO n77 (PC1.5) / 25MHz / CP OFDM / Middle Channel / Full RB

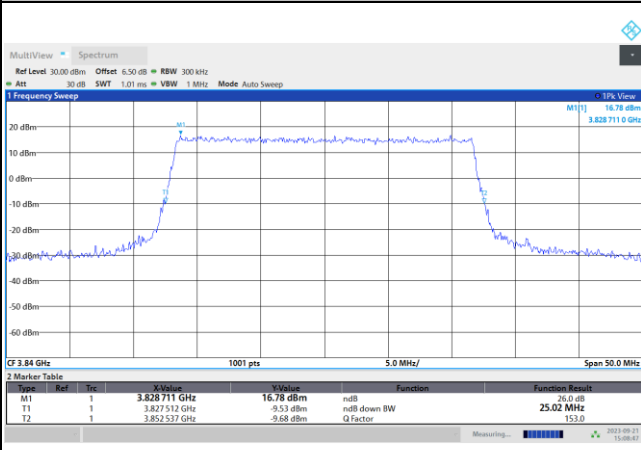
QPSK



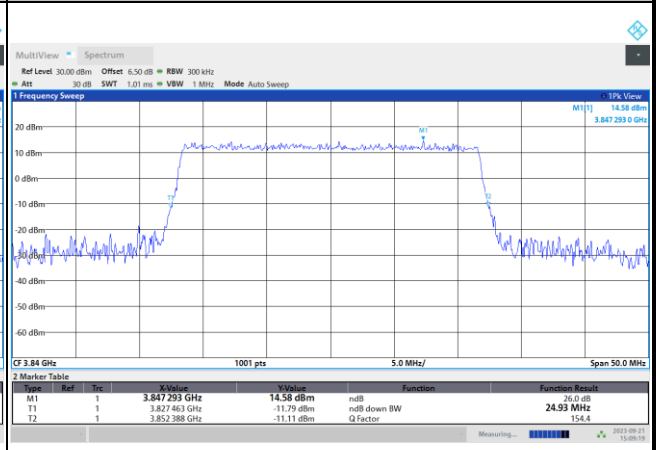
16QAM



64QAM



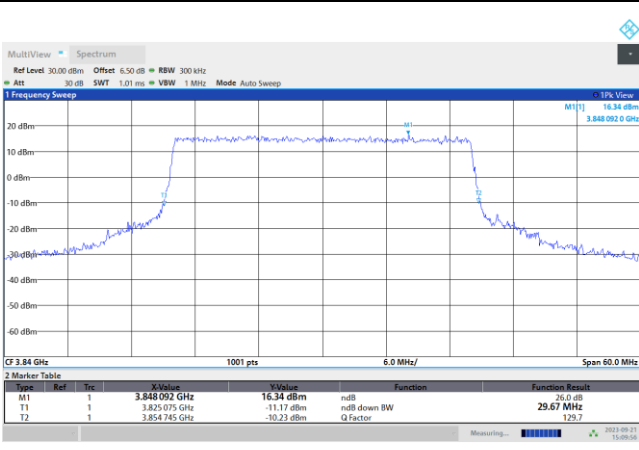
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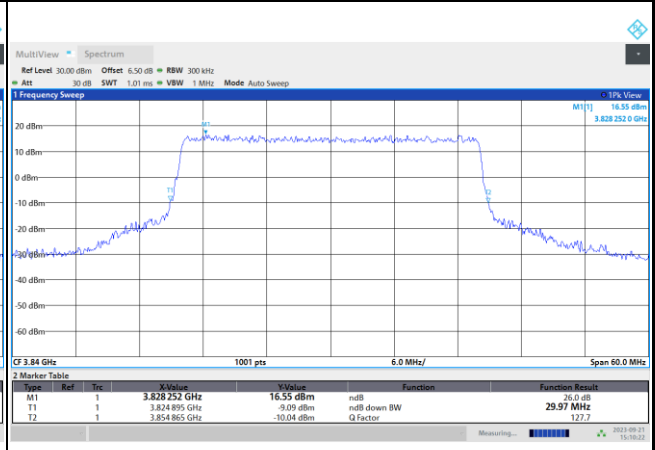


5G-FR1 SA UL MIMO n77 (PC1.5) / 30MHz / CP OFDM / Middle Channel / Full RB

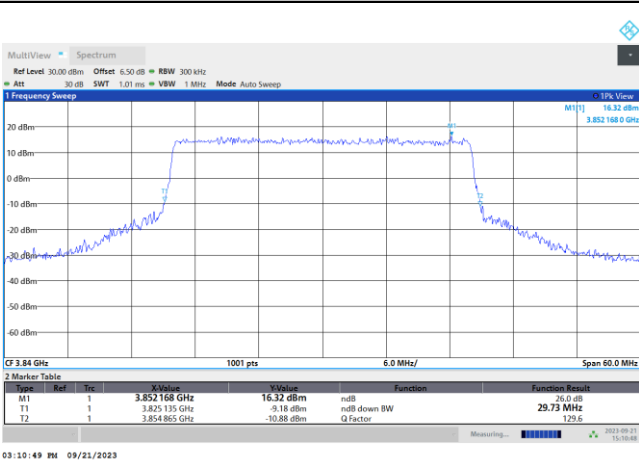
QPSK



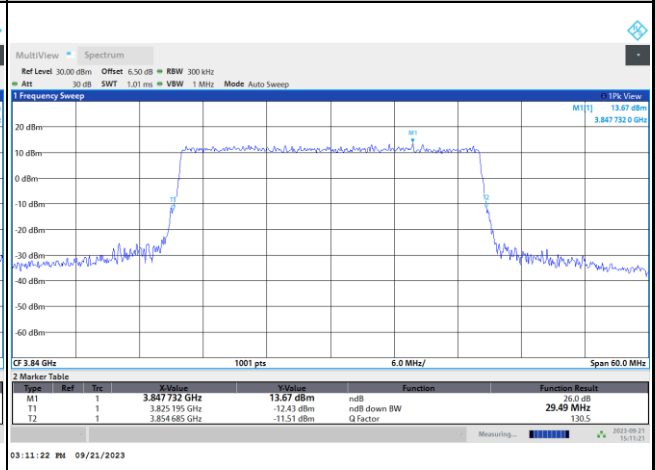
16QAM



64QAM



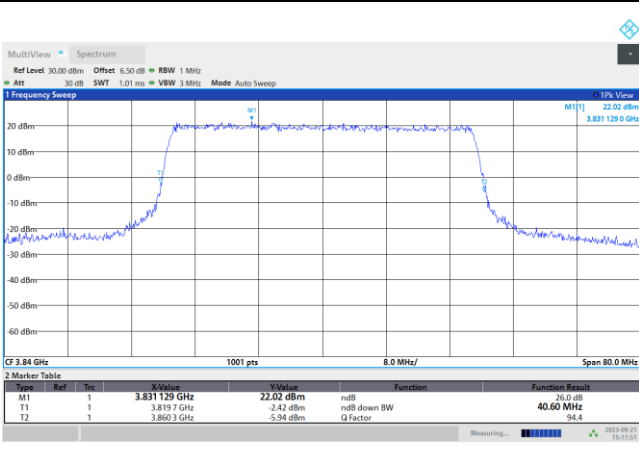
256QAM



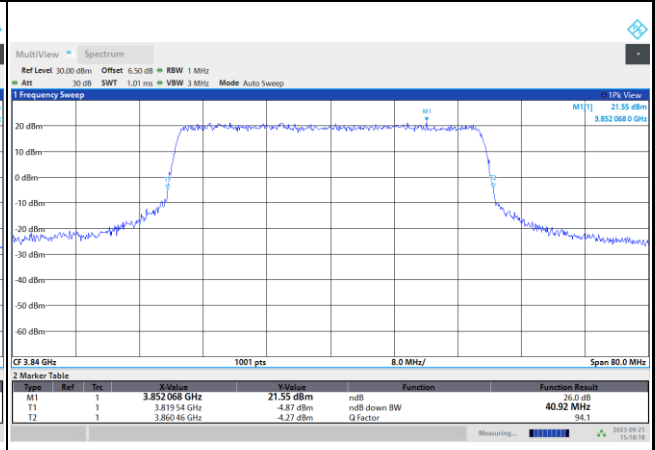


5G-FR1 SA UL MIMO n77 (PC1.5) / 40MHz / CP OFDM / Middle Channel / Full RB

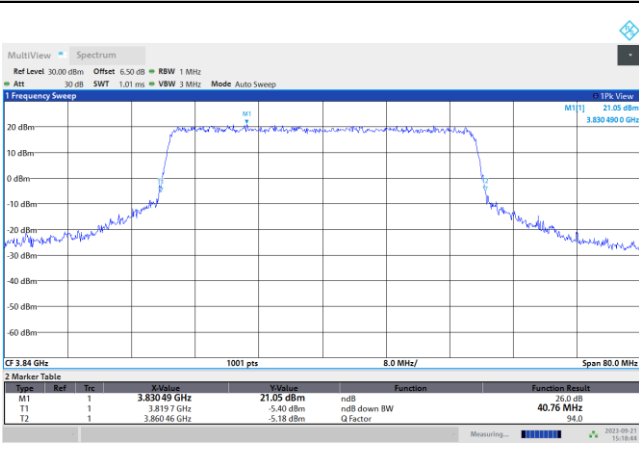
QPSK



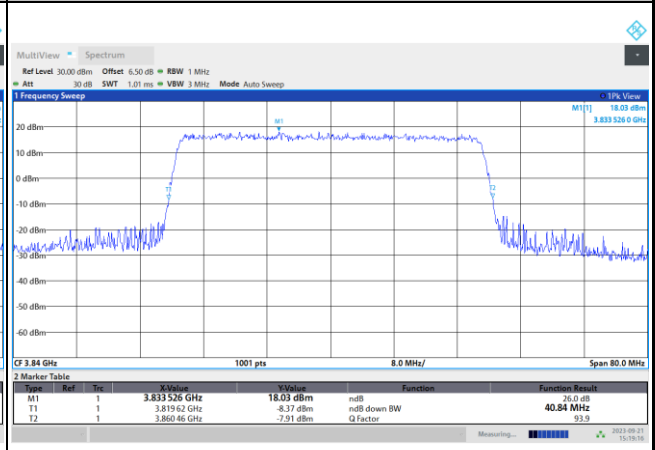
16QAM



64QAM



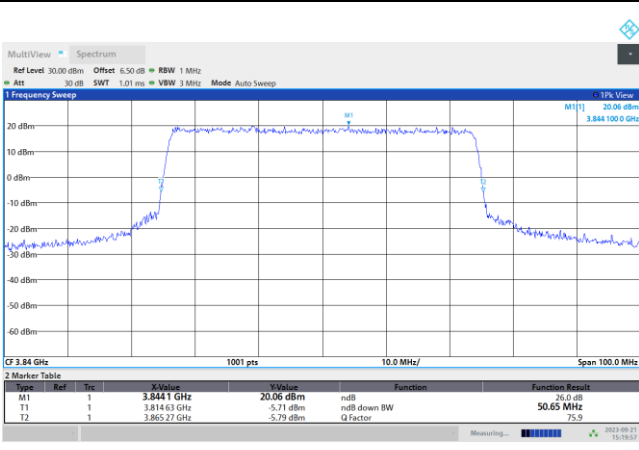
256QAM





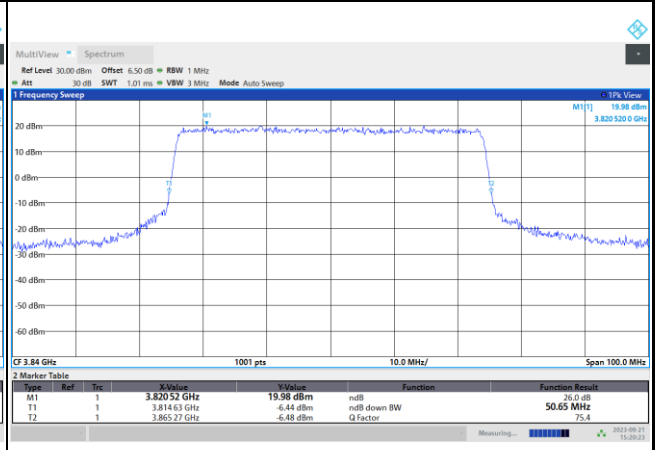
5G-FR1 SA UL MIMO n77 (PC1.5) / 50MHz / CP OFDM / Middle Channel / Full RB

QPSK



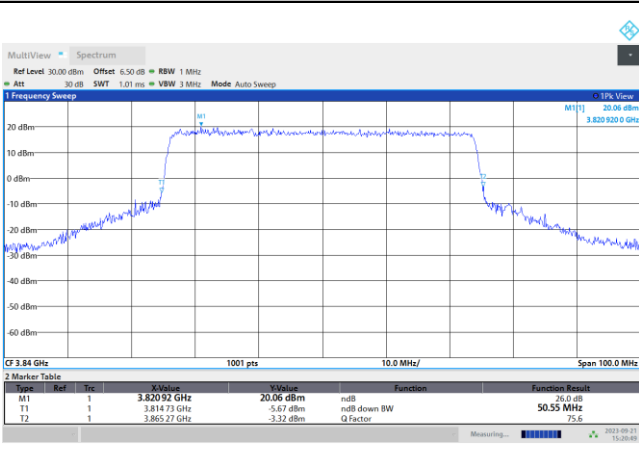
03:19:57 PM 09/21/2023

16QAM



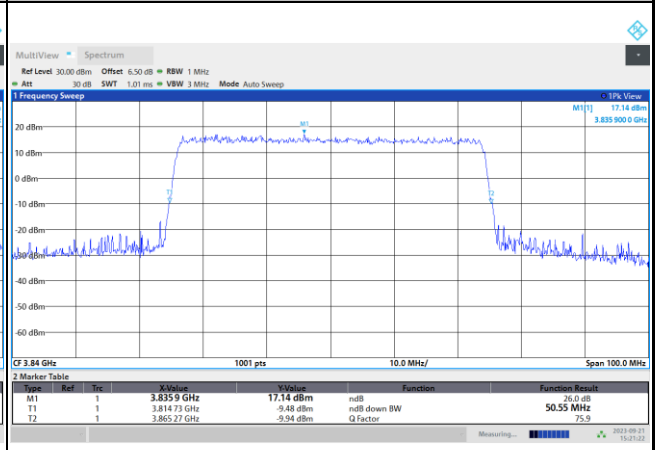
03:20:23 PM 09/21/2023

64QAM



03:20:50 PM 09/21/2023

256QAM

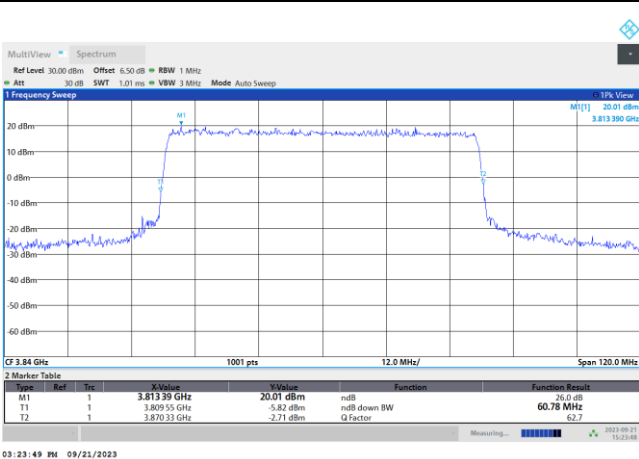


03:21:23 PM 09/21/2023

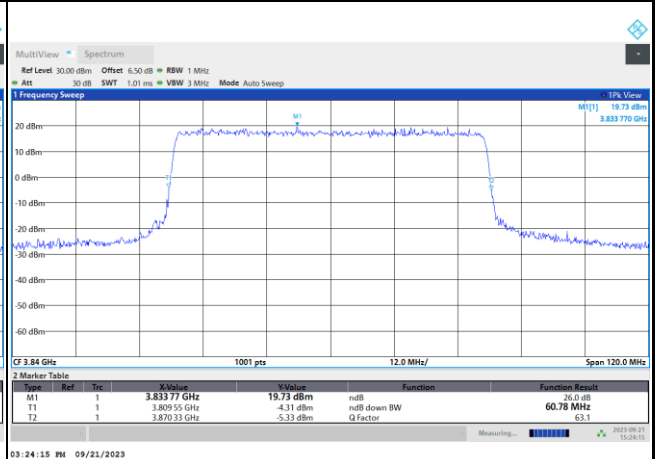


5G-FR1 SA UL MIMO n77 (PC1.5) / 60MHz / CP OFDM / Middle Channel / Full RB

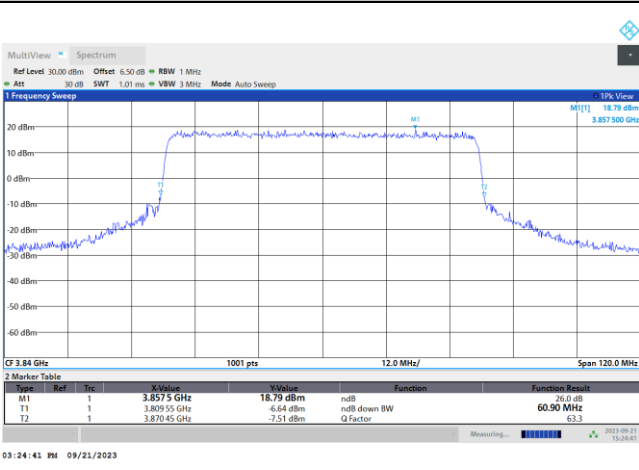
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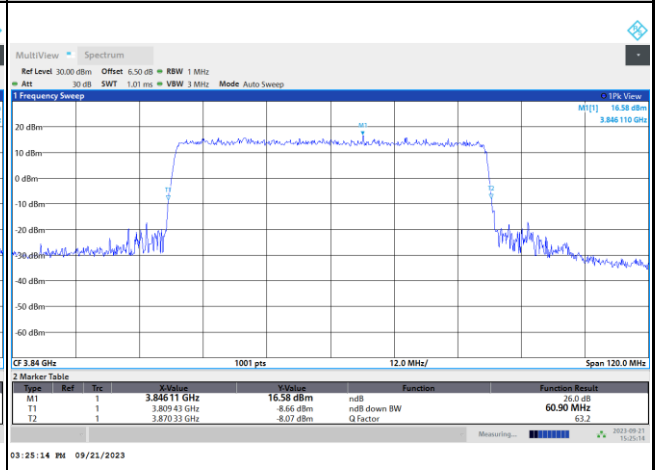
16QAM



64QAM



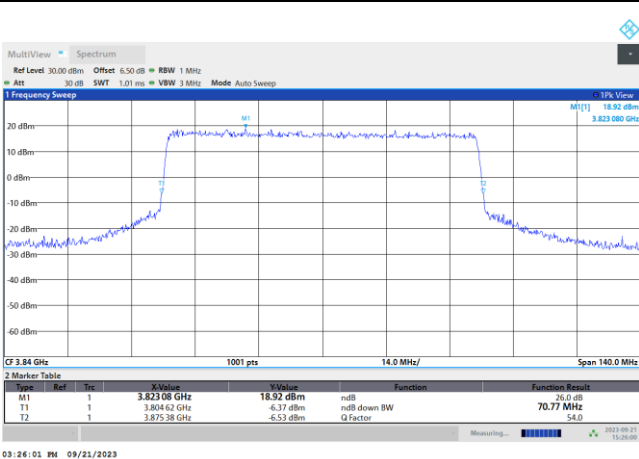
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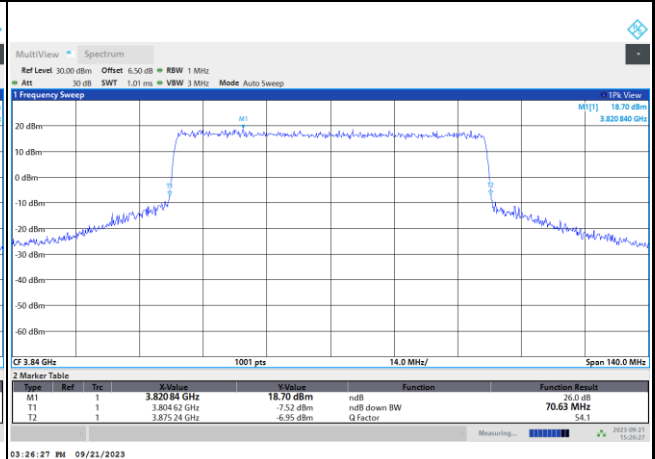


5G-FR1 SA UL MIMO n77 (PC1.5) / 70MHz / CP OFDM / Middle Channel / Full RB

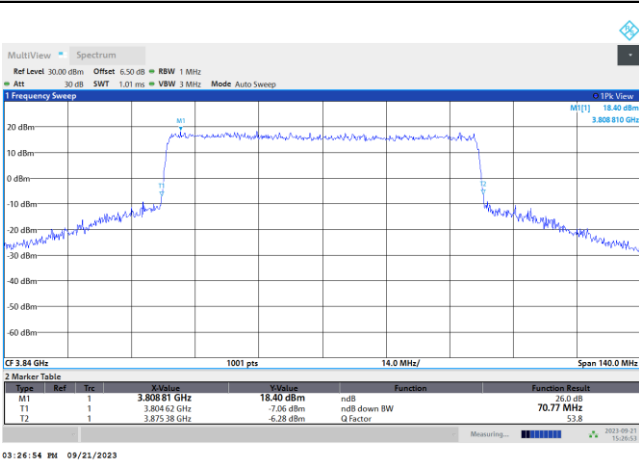
QPSK



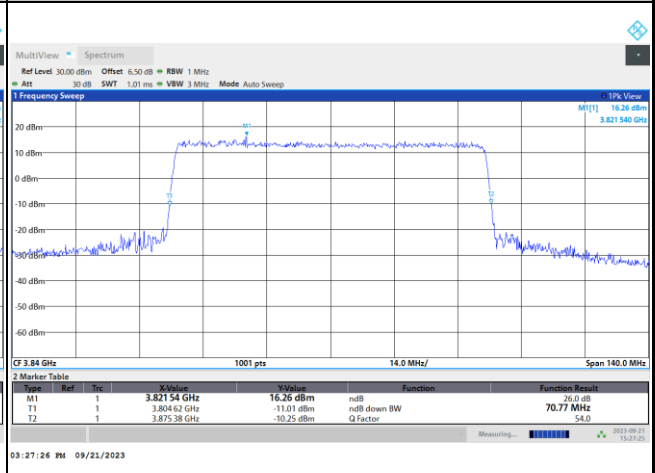
16QAM



64QAM



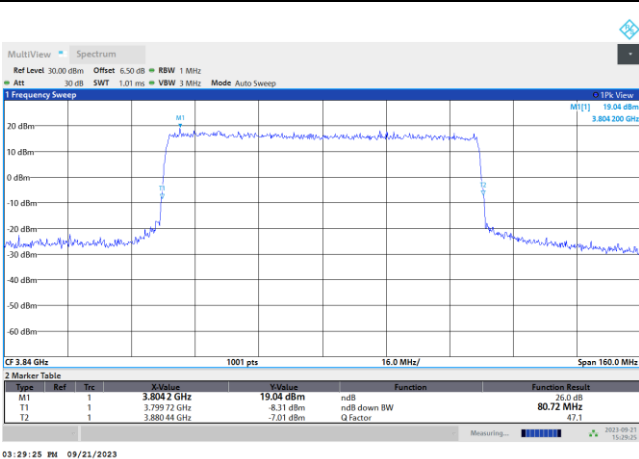
256QAM



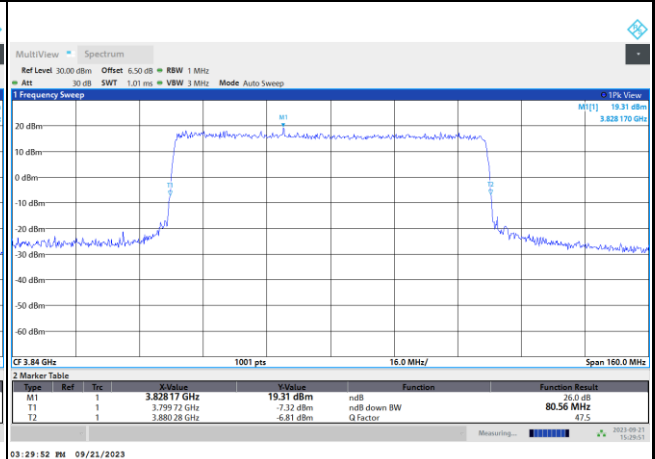


5G-FR1 SA UL MIMO n77 (PC1.5) / 80MHz / CP OFDM / Middle Channel / Full RB

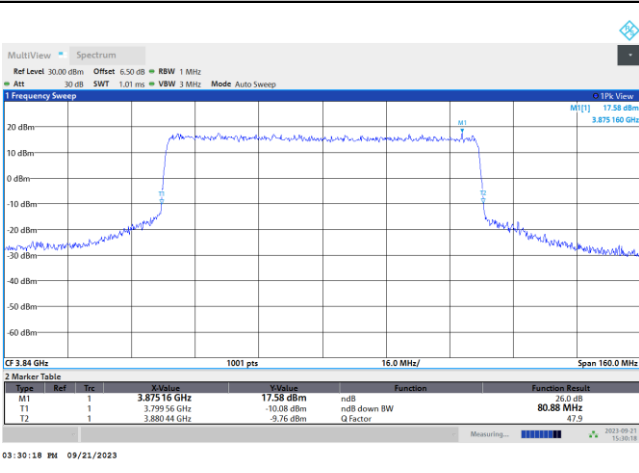
QPSK



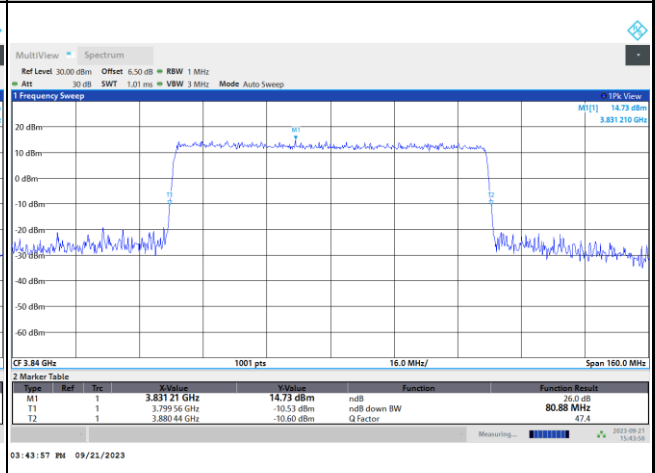
16QAM



64QAM



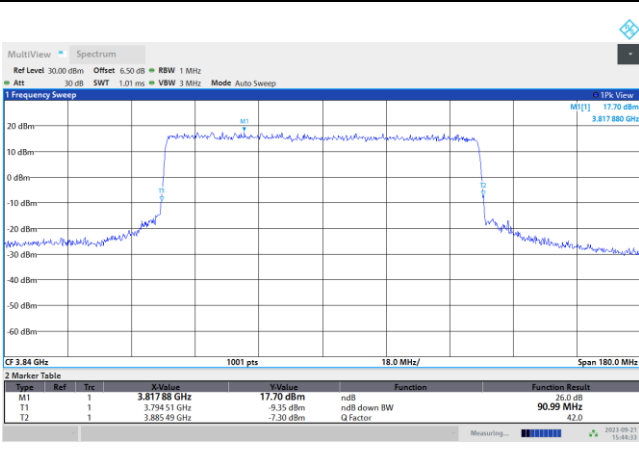
256QAM



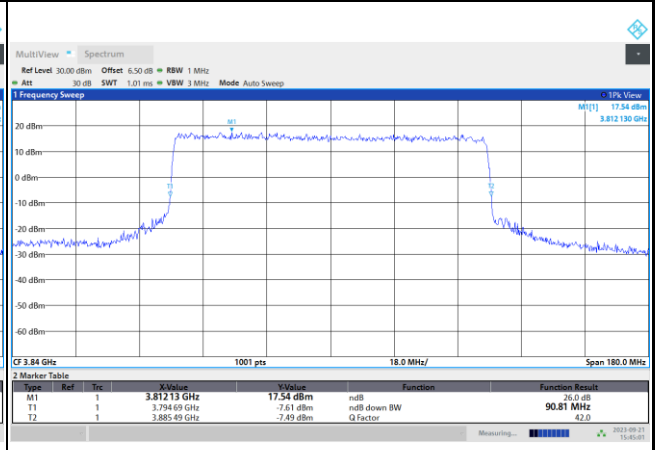


5G-FR1 SA UL MIMO n77 (PC1.5) / 90MHz / CP OFDM / Middle Channel / Full RB

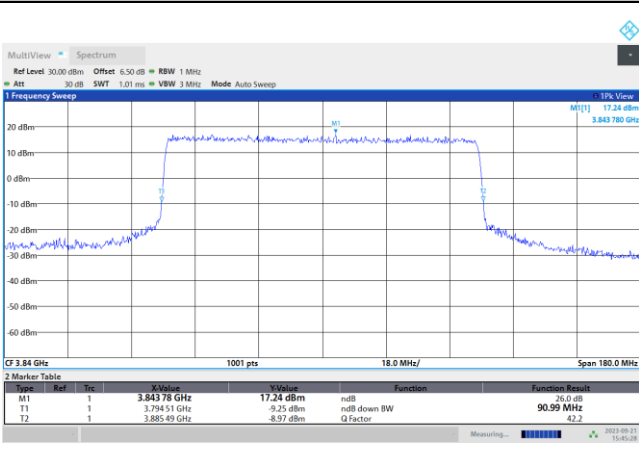
QPSK



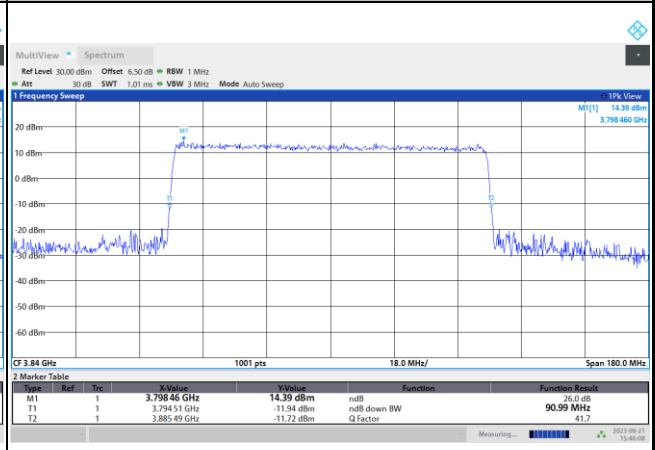
16QAM



64QAM



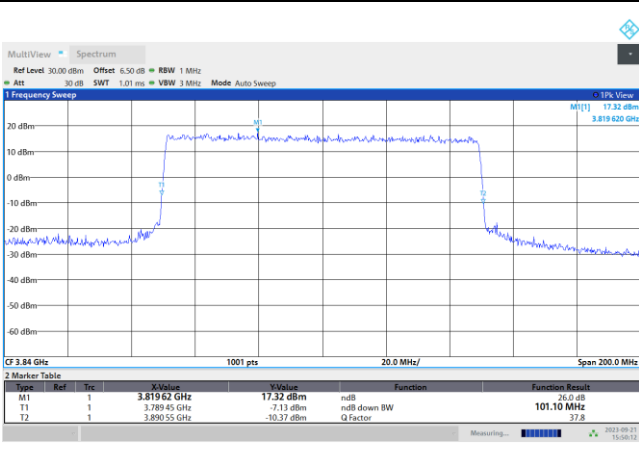
256QAM



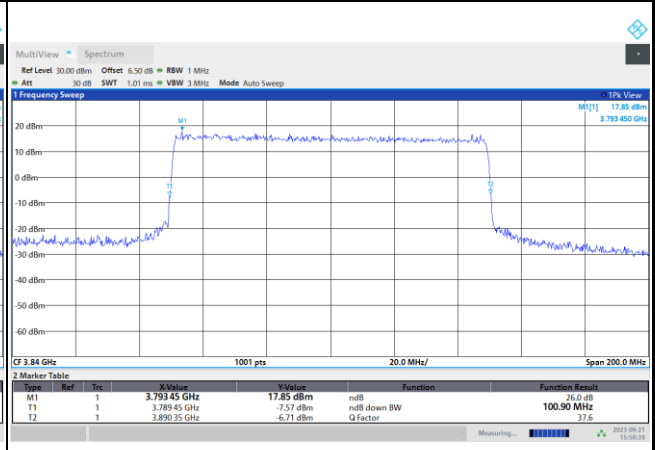


5G-FR1 SA UL MIMO n77 (PC1.5) / 100MHz / CP OFDM / Middle Channel / Full RB

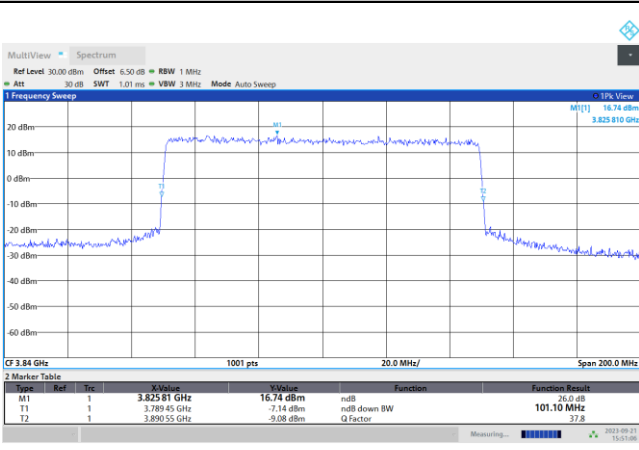
QPSK



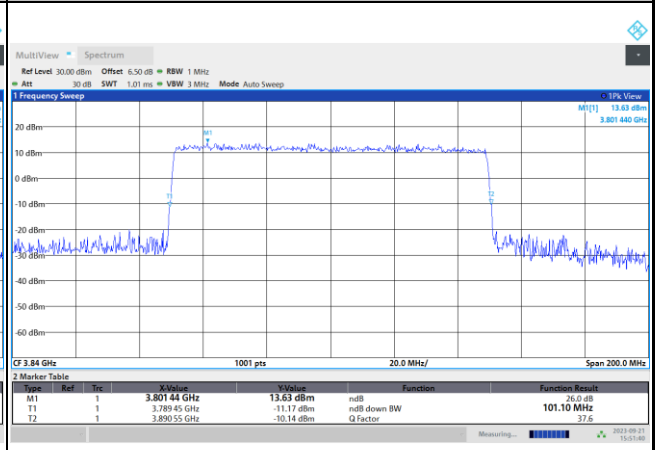
16QAM



64QAM



256QAM





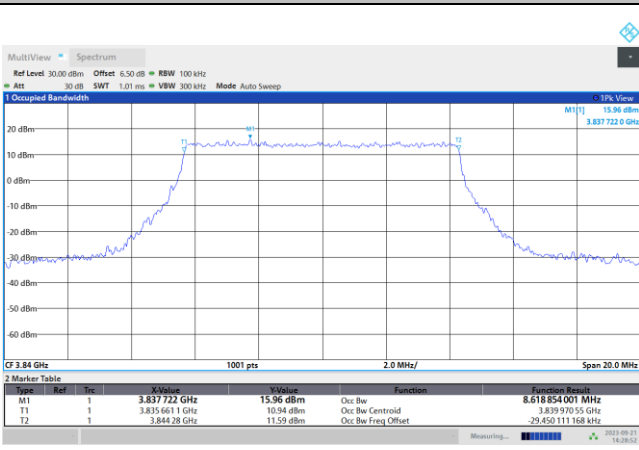
Occupied Bandwidth

| Mode | 5G-FR1 SA UL MIMO n77 (PC1.5) : OB BW(MHz) / CP OFDM | | | | | | | |
|-----------|--|--------|-------|--------|-------|--------|--------|--------|
| BW | 10MHz | | 15MHz | | 20MHz | | 25MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Middle CH | 8.61 | 8.61 | 13.68 | 13.71 | 18.27 | 18.29 | 23.22 | 23.26 |
| Mod. | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | 8.61 | 8.61 | 13.68 | 13.65 | 18.28 | 18.24 | 23.18 | 23.25 |
| BW | 30MHz | | 40MHz | | 50MHz | | 60MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Middle CH | 27.86 | 27.87 | 38.02 | 38.09 | 47.56 | 47.60 | 57.86 | 57.88 |
| Mod. | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | 27.87 | 27.86 | 37.98 | 38.05 | 47.64 | 47.58 | 57.80 | 57.85 |
| BW | 70MHz | | 80MHz | | 90MHz | | 100MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Middle CH | 67.49 | 67.50 | 77.46 | 77.43 | 87.43 | 87.39 | 97.20 | 97.28 |
| Mod. | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | 67.48 | 67.48 | 77.38 | 77.30 | 87.28 | 87.38 | 97.22 | 97.43 |

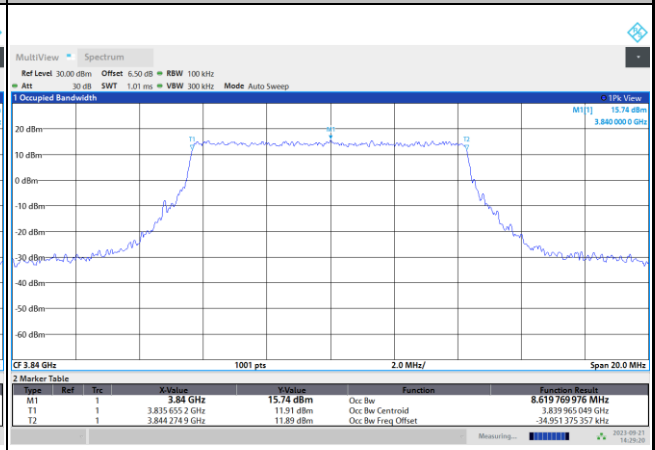


5G-FR1 SA UL MIMO n77 (PC1.5) / 10MHz / CP OFDM / Middle Channel / Full RB

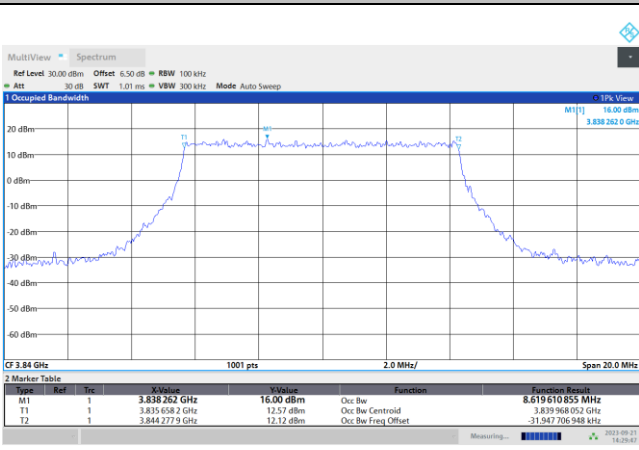
QPSK



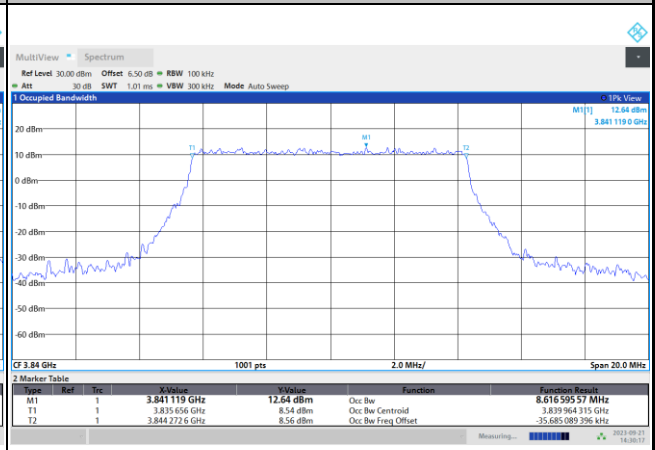
16QAM



64QAM



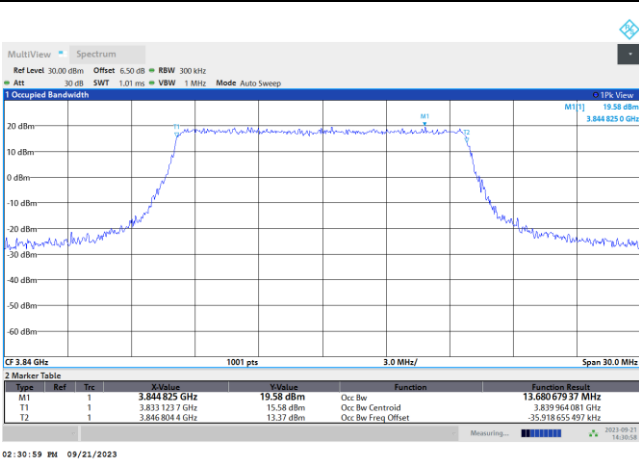
256QAM





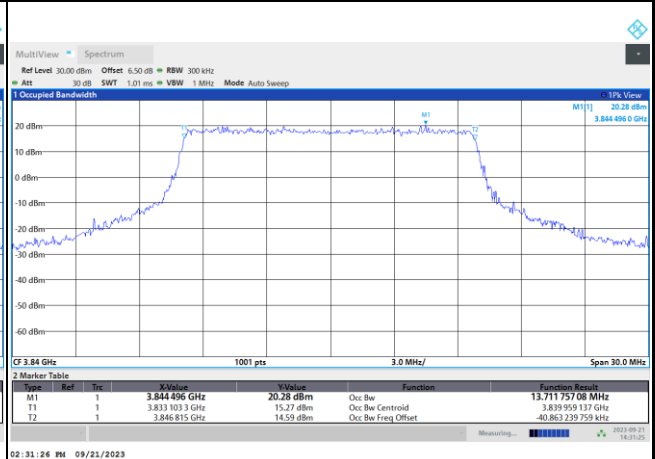
5G-FR1 SA UL MIMO n77 (PC1.5) / 15MHz / CP OFDM / Middle Channel / Full RB

QPSK



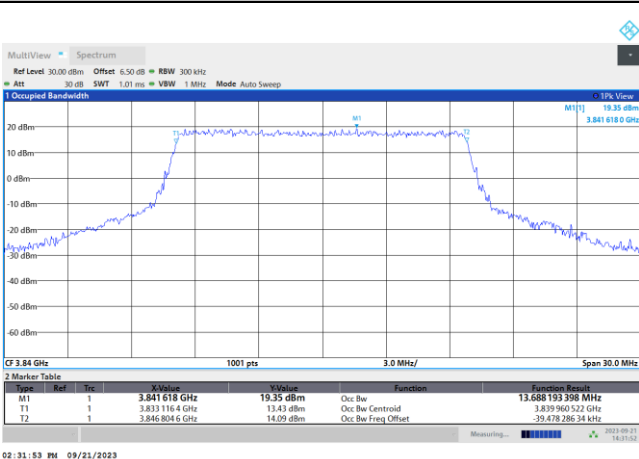
02:30:59 PM 09/21/2023

16QAM



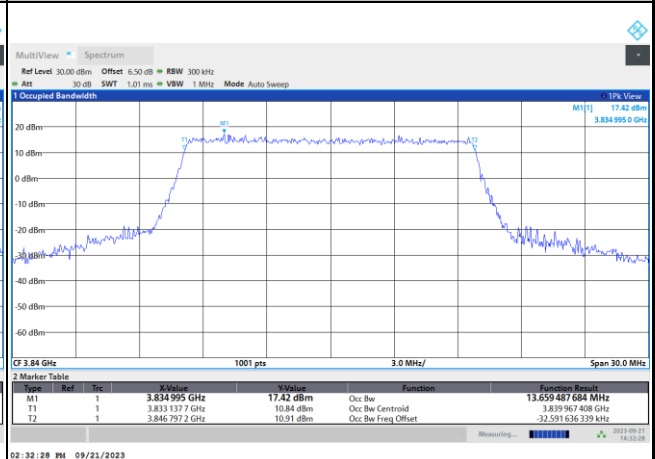
02:31:26 PM 09/21/2023

64QAM



02:31:53 PM 09/21/2023

256QAM



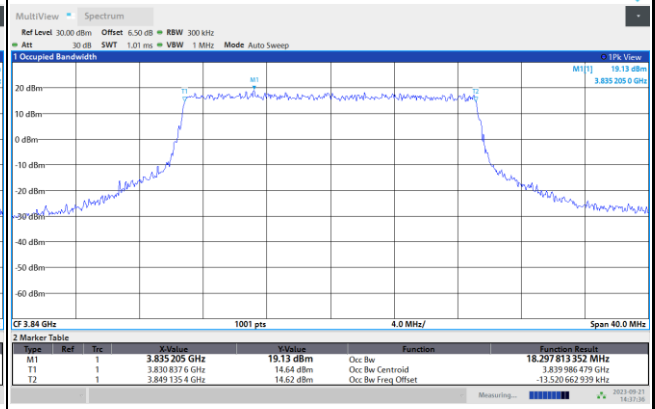
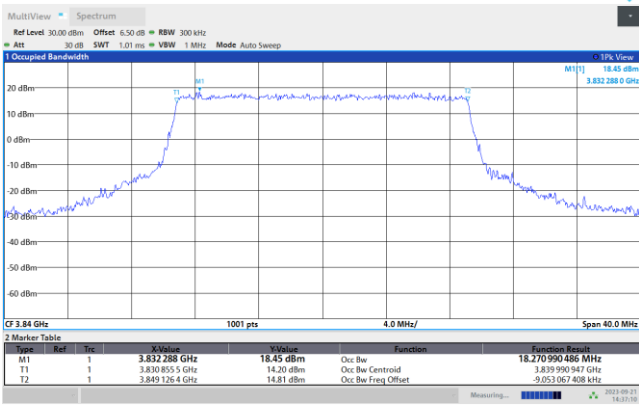
02:32:28 PM 09/21/2023



5G-FR1 SA UL MIMO n77 (PC1.5) / 20MHz / CP OFDM / Middle Channel / Full RB

QPSK

16QAM



64QAM

256QAM

