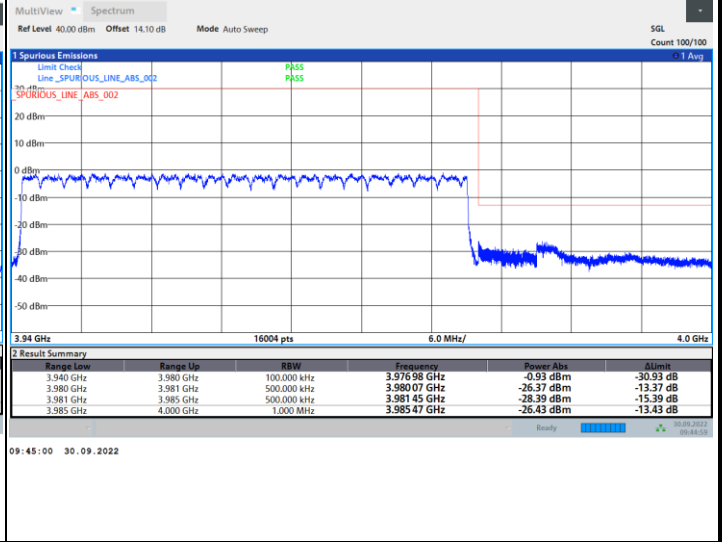
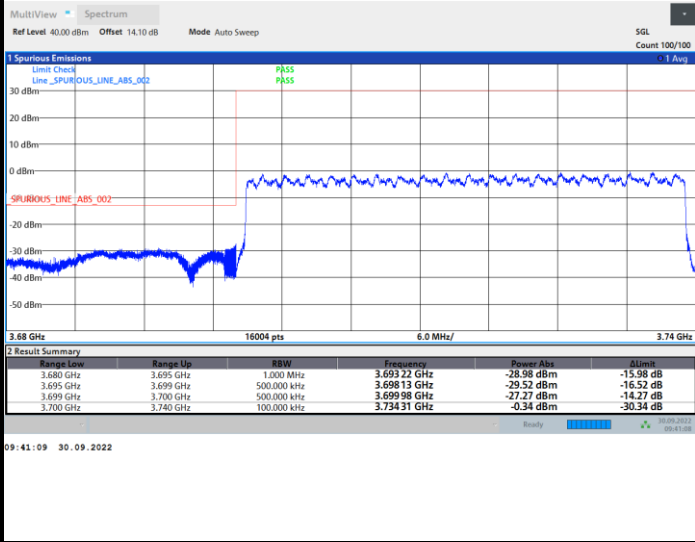




FR1 n77 / 40MHz / CP OFDM / 64QAM

Lowest Band Edge / Full RB

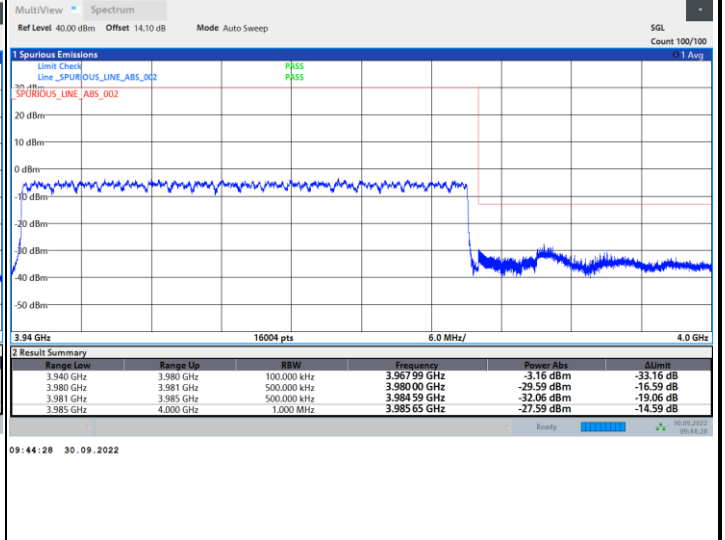
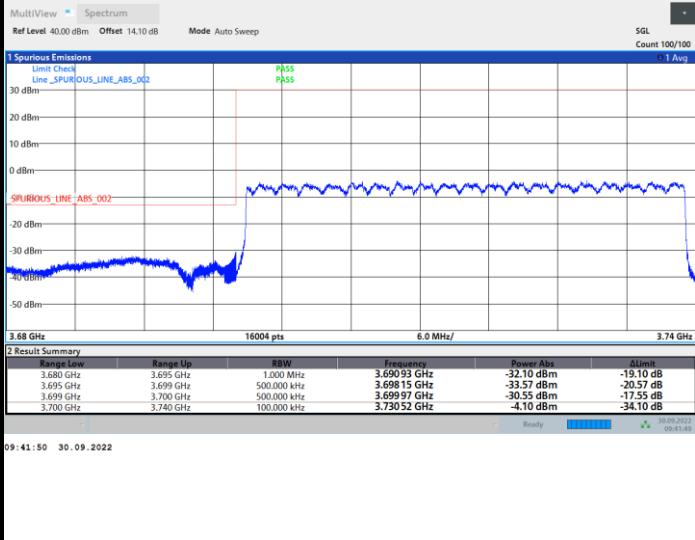
Highest Band Edge / Full RB



FR1 n77 / 40MHz / CP OFDM / 256QAM

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

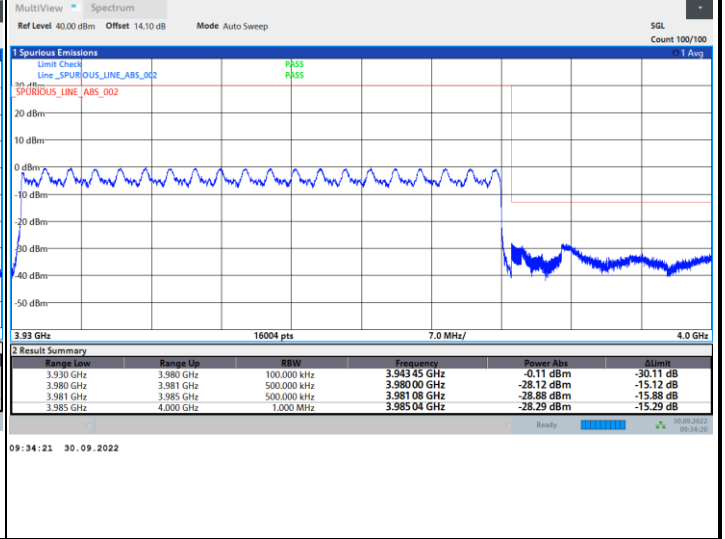
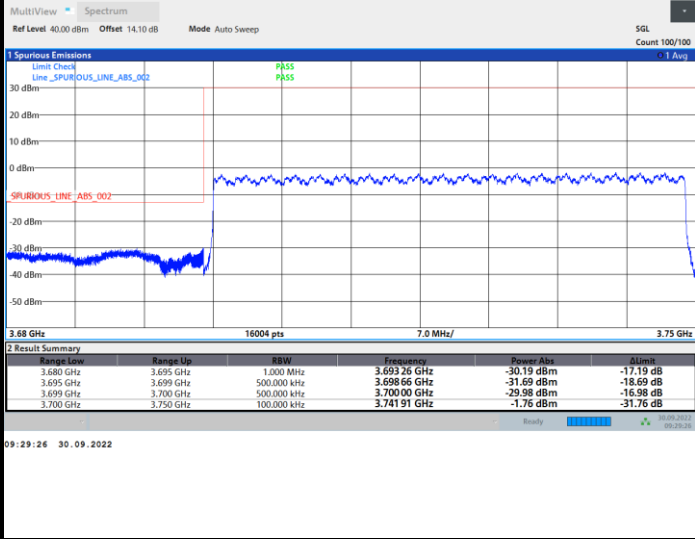




FR1 n77 / 50MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB

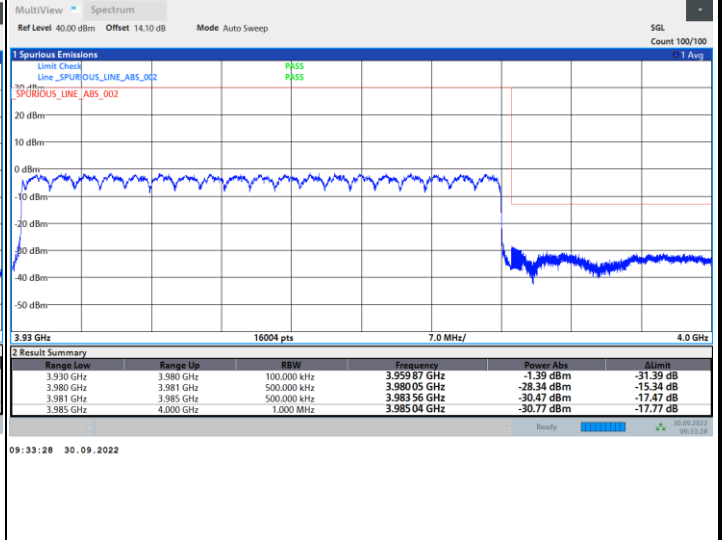
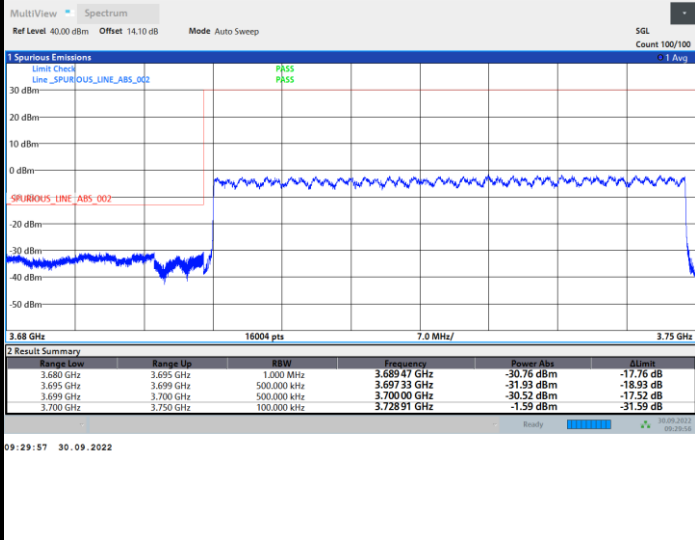
Highest Band Edge / Full RB



FR1 n77 / 50MHz / CP OFDM / 16QAM

Lowest Band Edge / Full RB

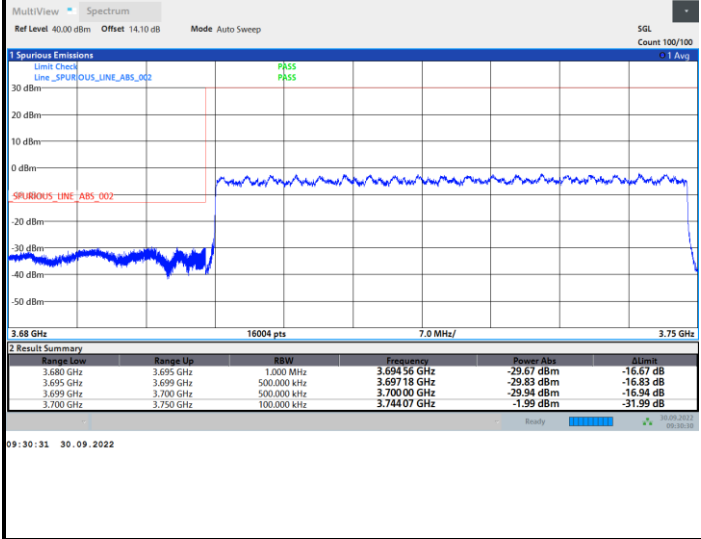
Highest Band Edge / Full RB



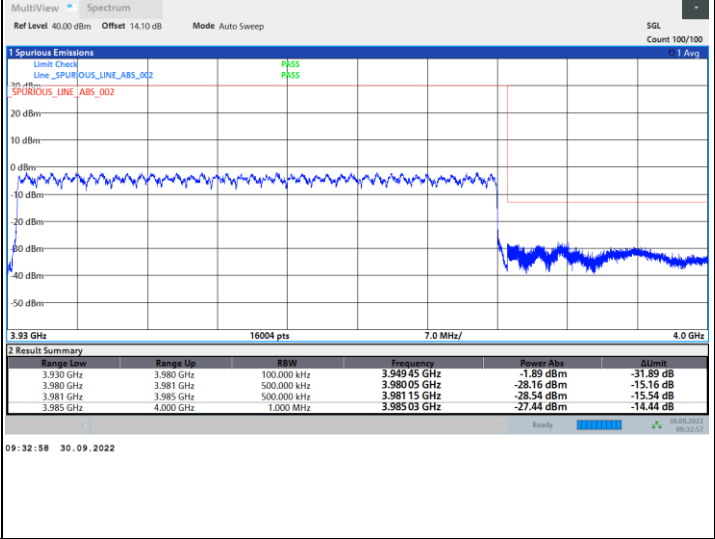


FR1 n77 / 50MHz / CP OFDM / 64QAM

Lowest Band Edge / Full RB

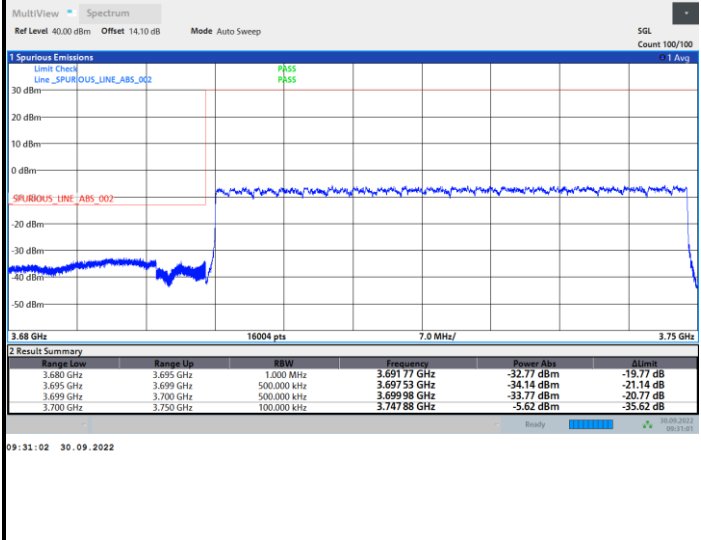


Highest Band Edge / Full RB

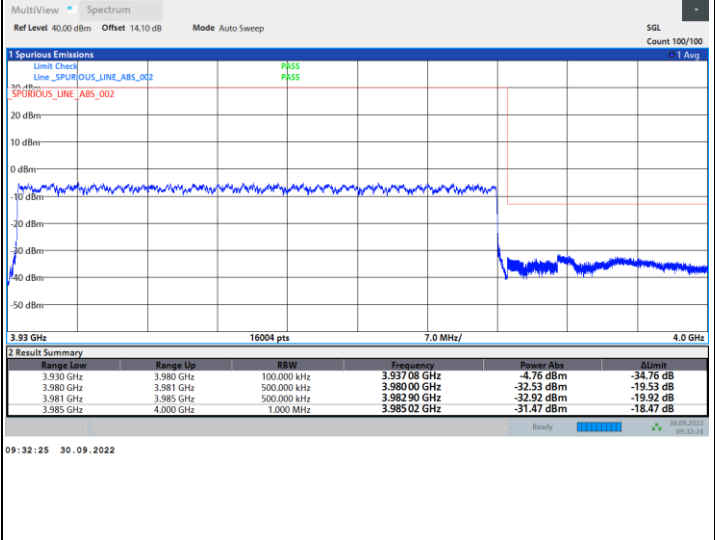


FR1 n77 / 50MHz / CP OFDM / 256QAM

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

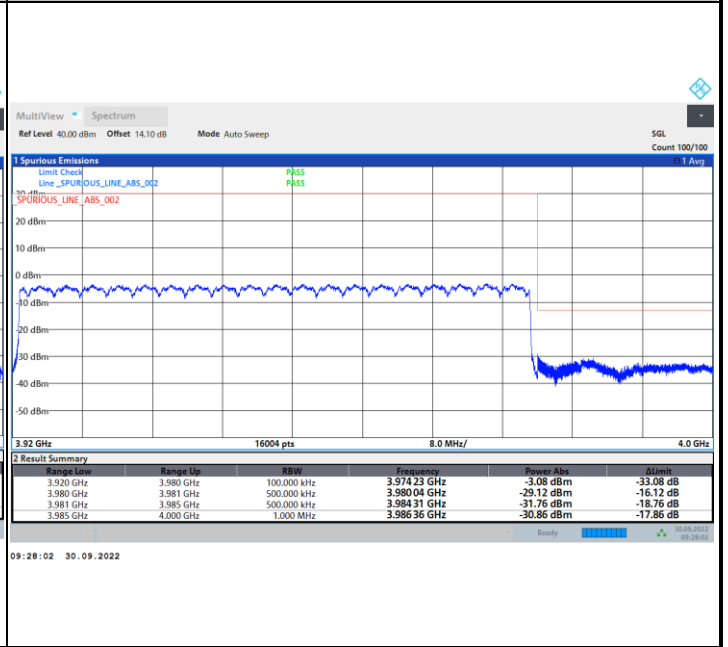
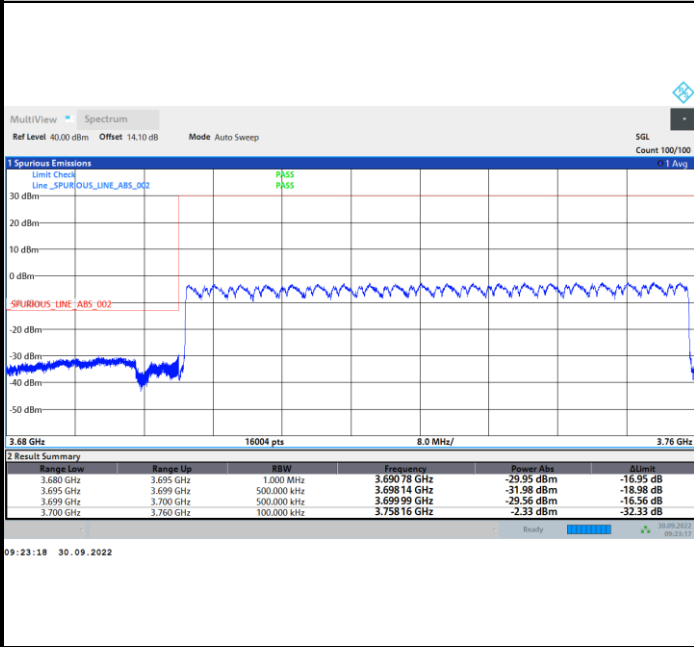




FR1 n77 / 60MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB

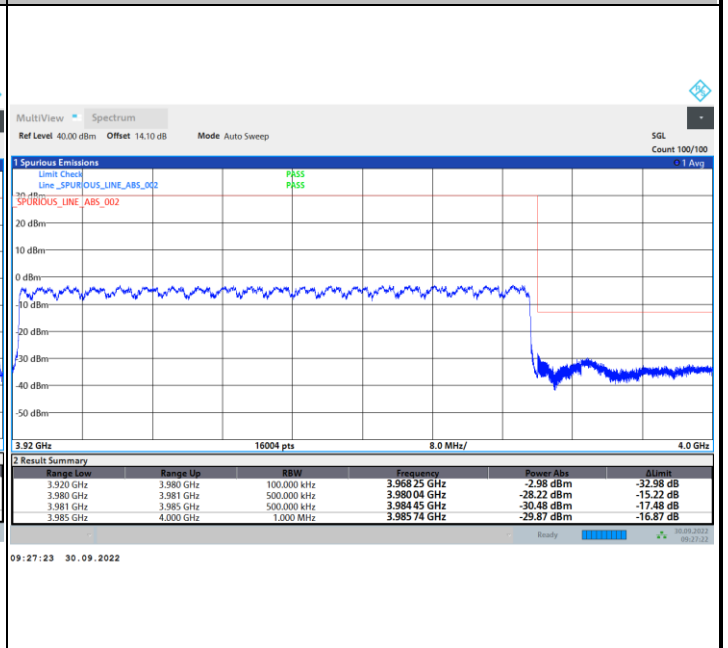
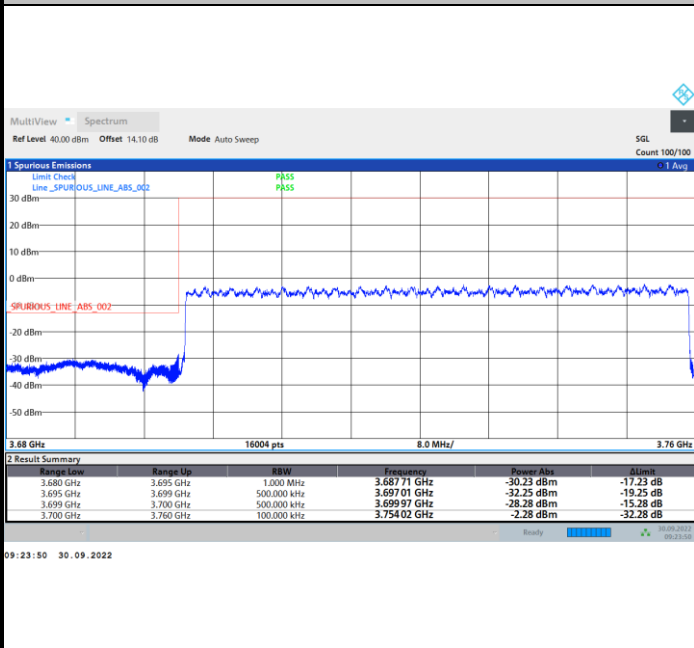
Highest Band Edge / Full RB



FR1 n77 / 60MHz / CP OFDM / 16QAM

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

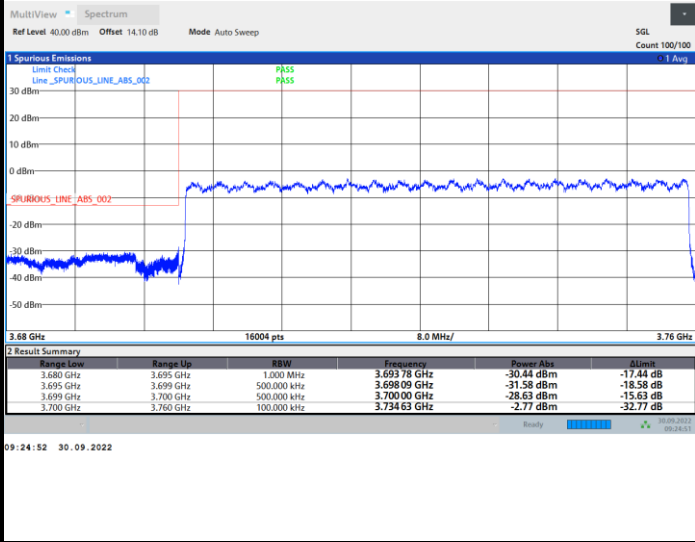




FR1 n77 / 60MHz / CP OFDM / 64QAM

Lowest Band Edge / Full RB

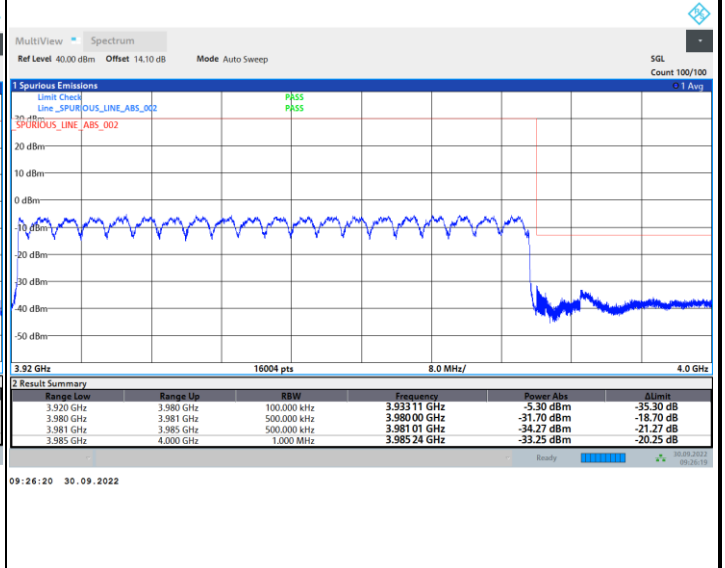
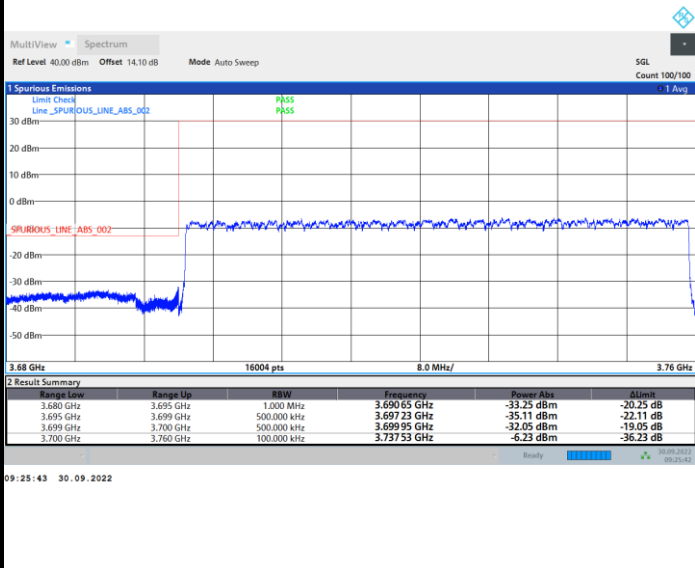
Highest Band Edge / Full RB



FR1 n77 / 60MHz / CP OFDM / 256QAM

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

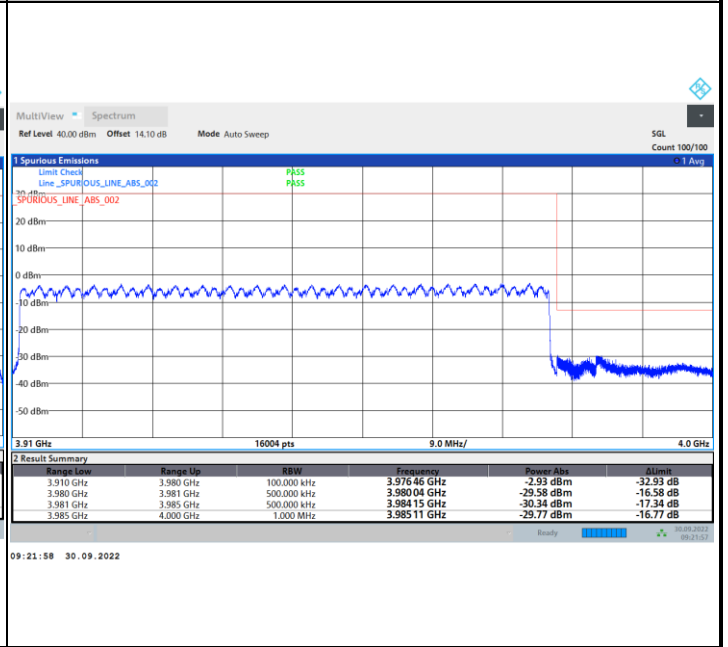
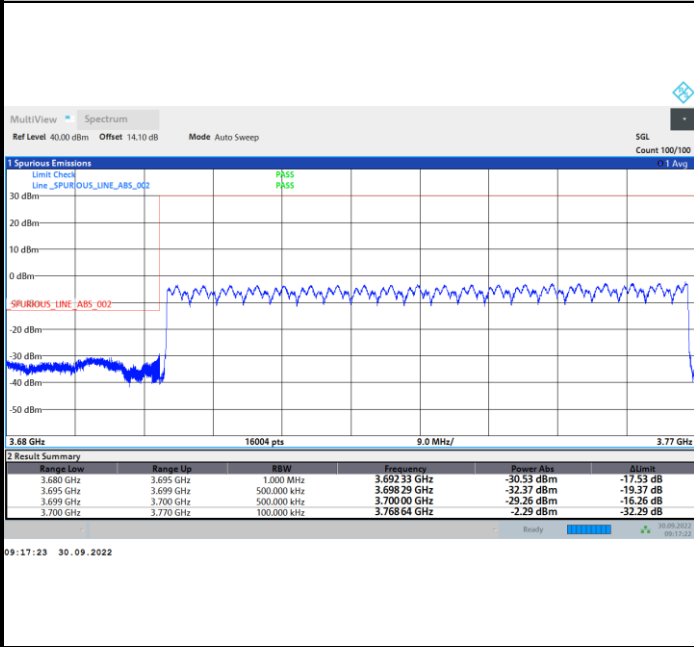




FR1 n77 / 70MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB

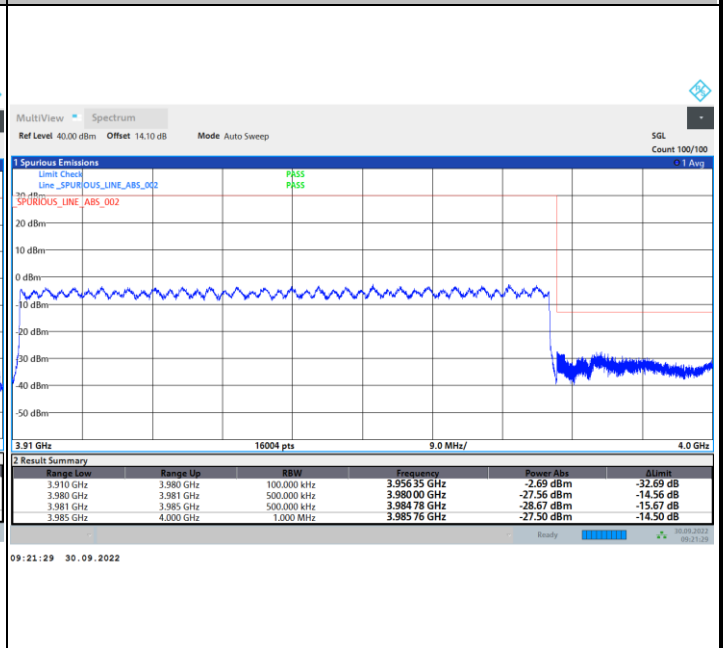
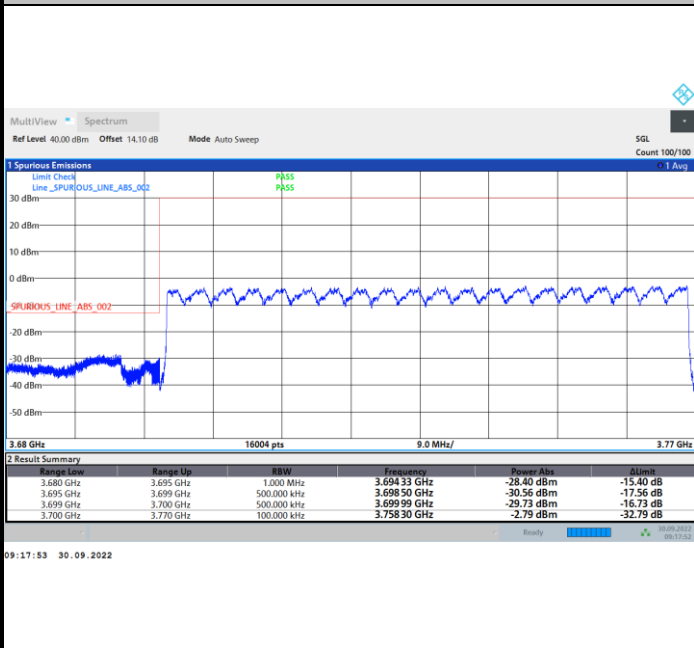
Highest Band Edge / Full RB



FR1 n77 / 70MHz / CP OFDM / 16QAM

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

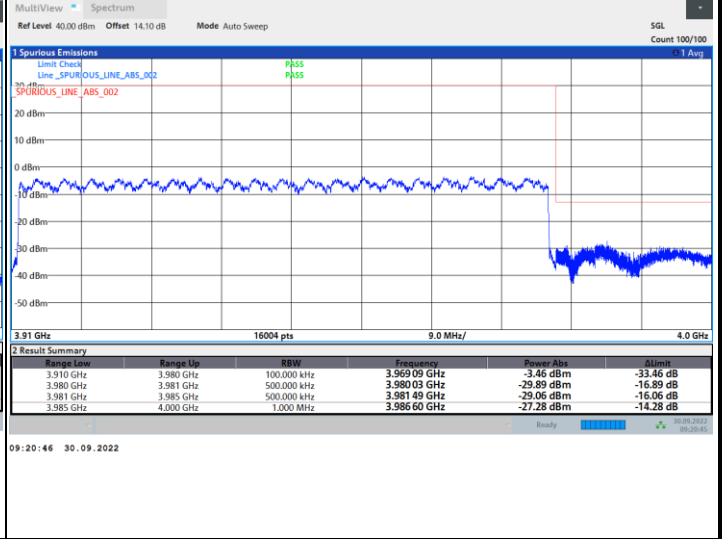
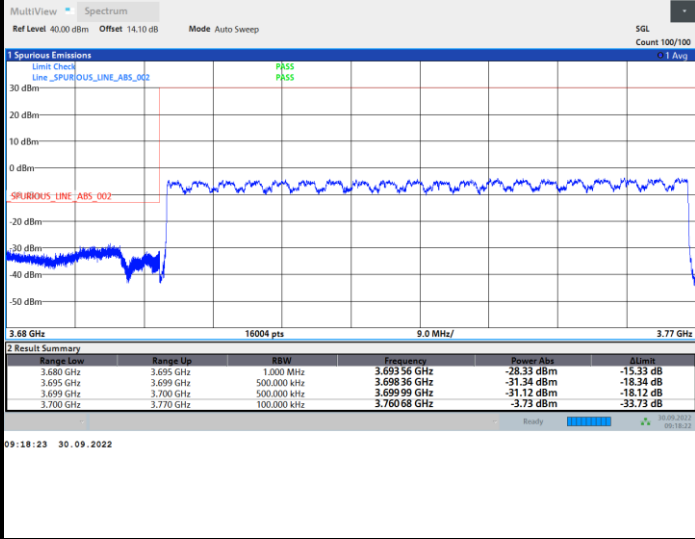




FR1 n77 / 70MHz / CP OFDM / 64QAM

Lowest Band Edge / Full RB

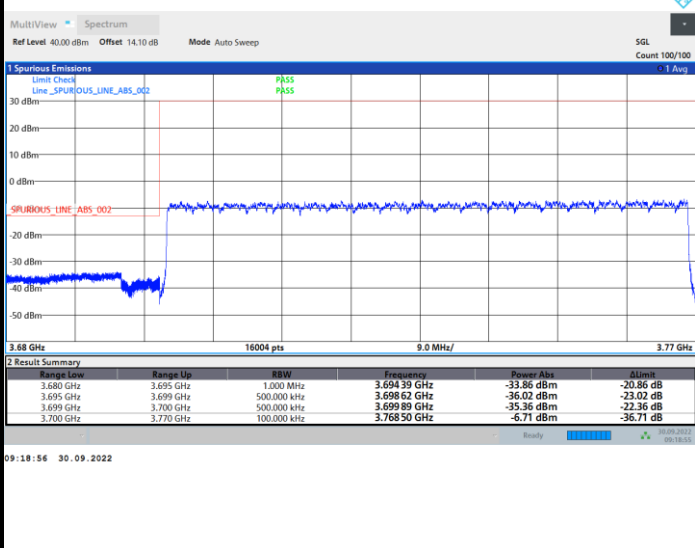
Highest Band Edge / Full RB



FR1 n77 / 70MHz / CP OFDM / 256QAM

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

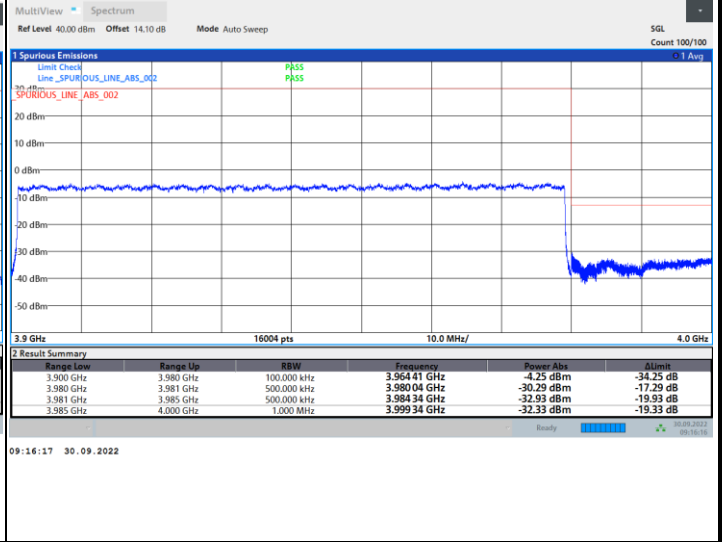
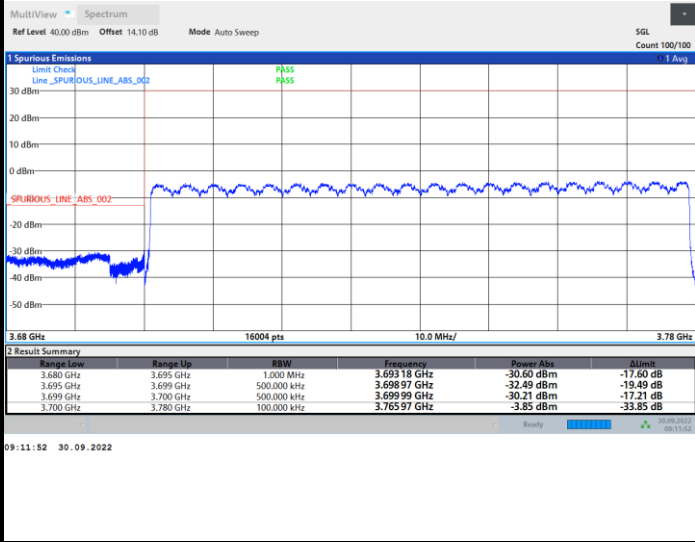




FR1 n77 / 80MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB

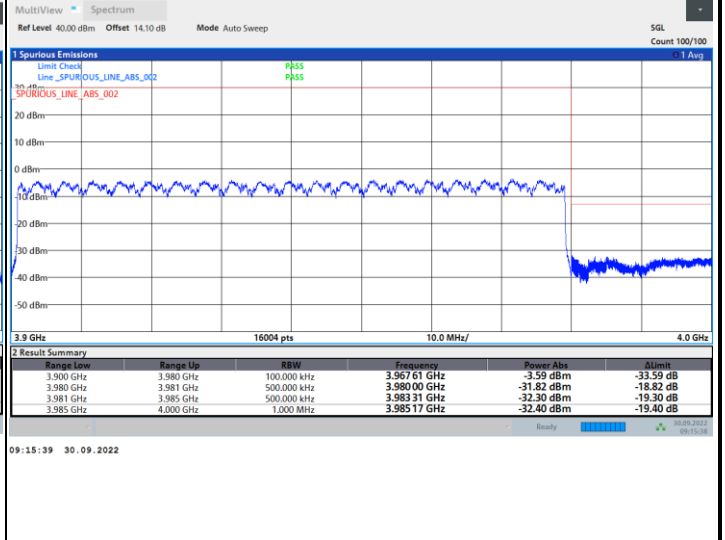
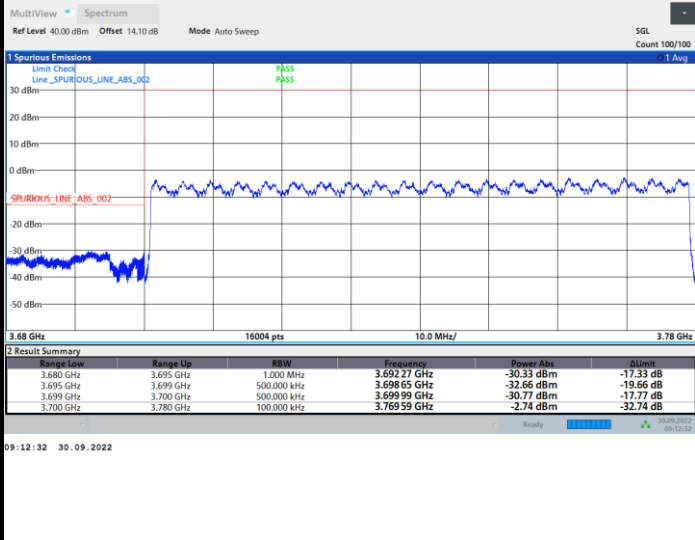
Highest Band Edge / Full RB



FR1 n77 / 80MHz / CP OFDM / 16QAM

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

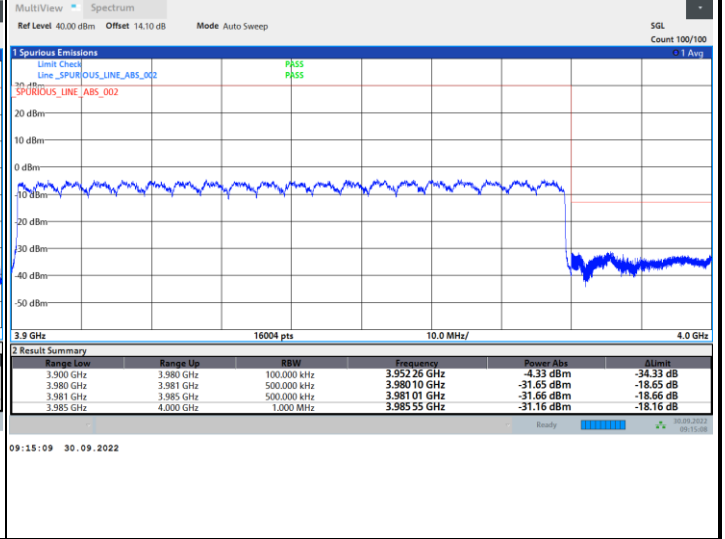
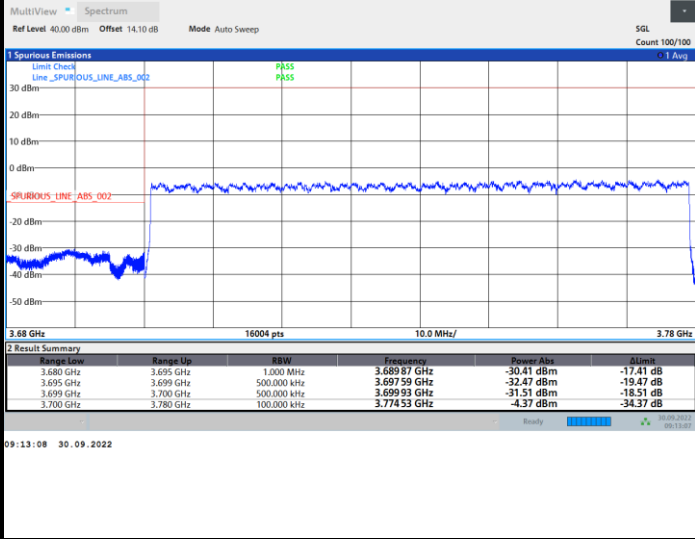




FR1 n77 / 80MHz / CP OFDM / 64QAM

Lowest Band Edge / Full RB

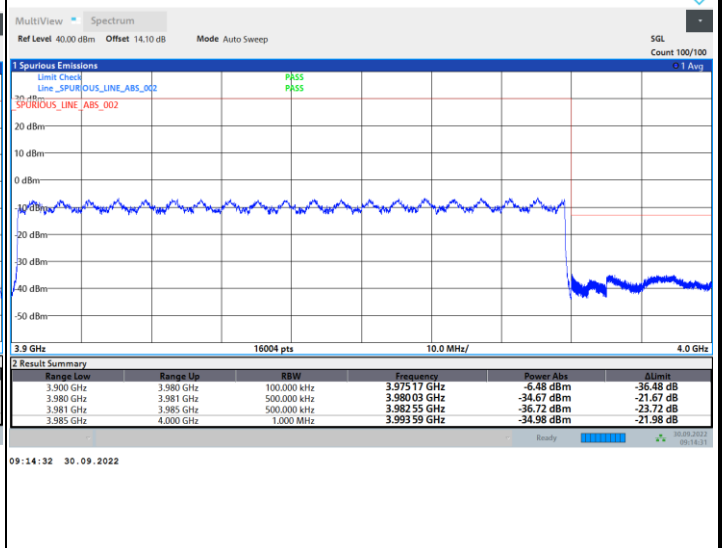
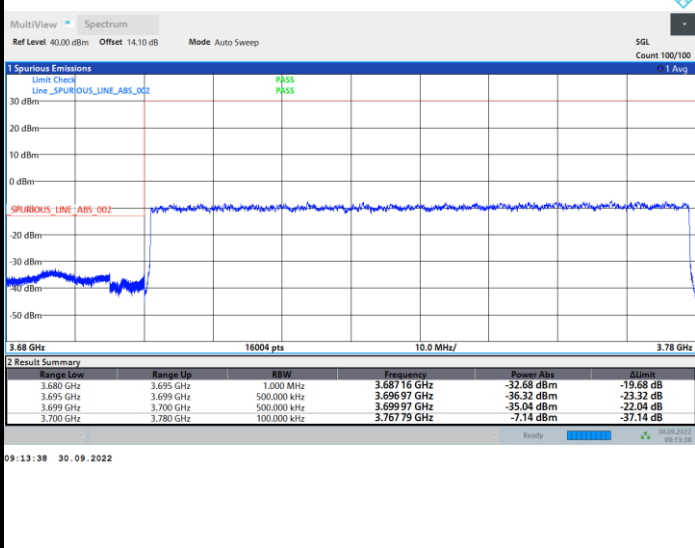
Highest Band Edge / Full RB



FR1 n77 / 80MHz / CP OFDM / 256QAM

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

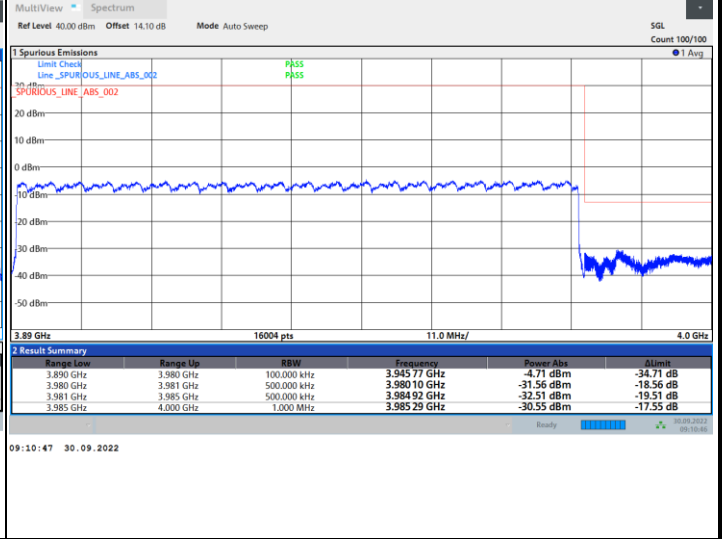
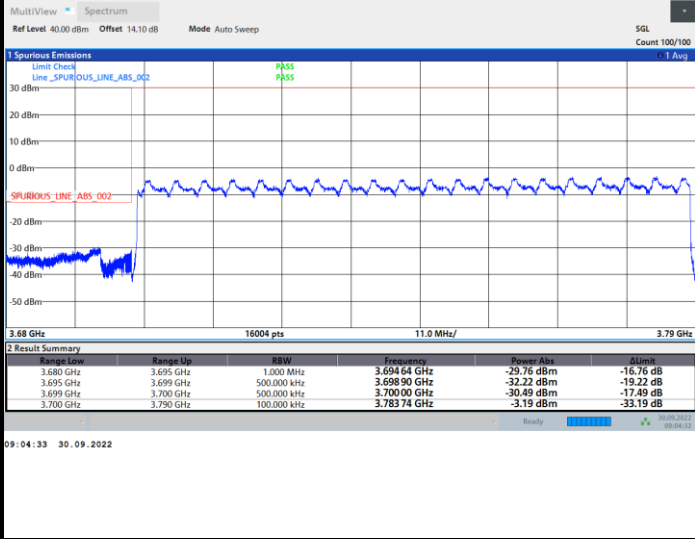




FR1 n77 / 90MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB

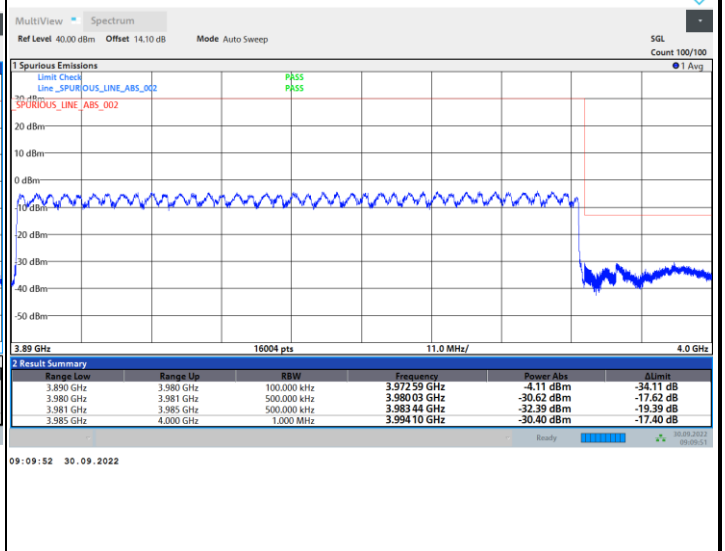
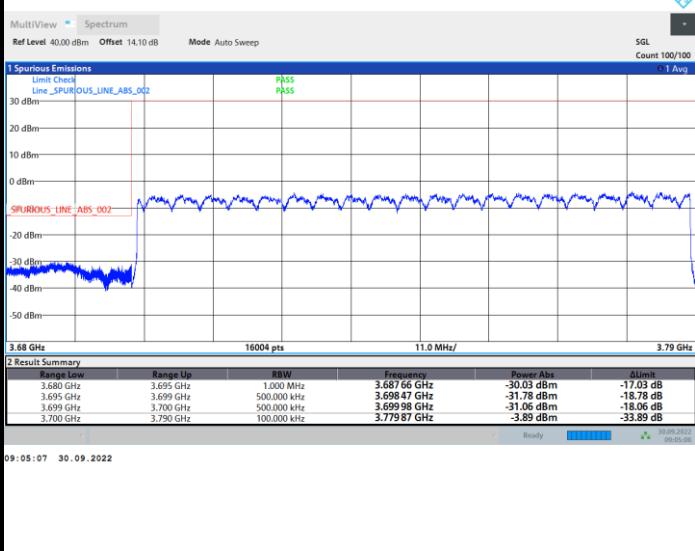
Highest Band Edge / Full RB



FR1 n77 / 90MHz / CP OFDM / 16QAM

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

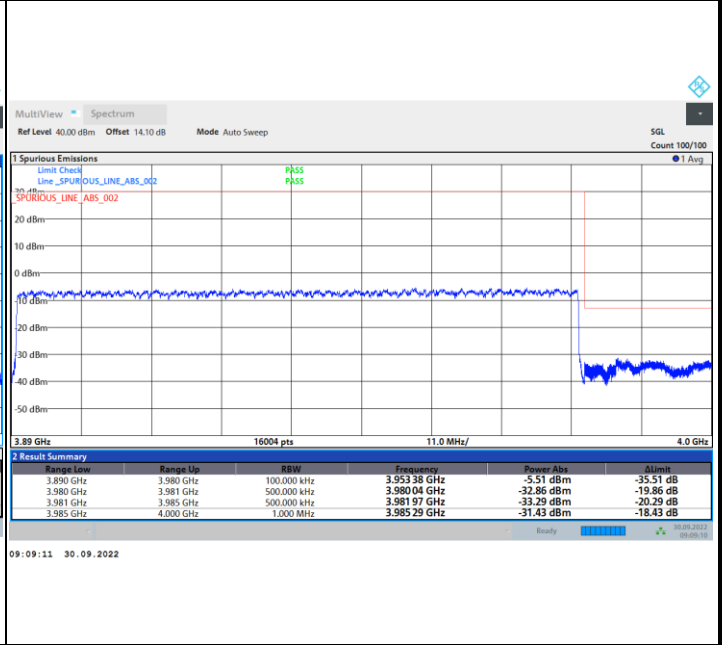
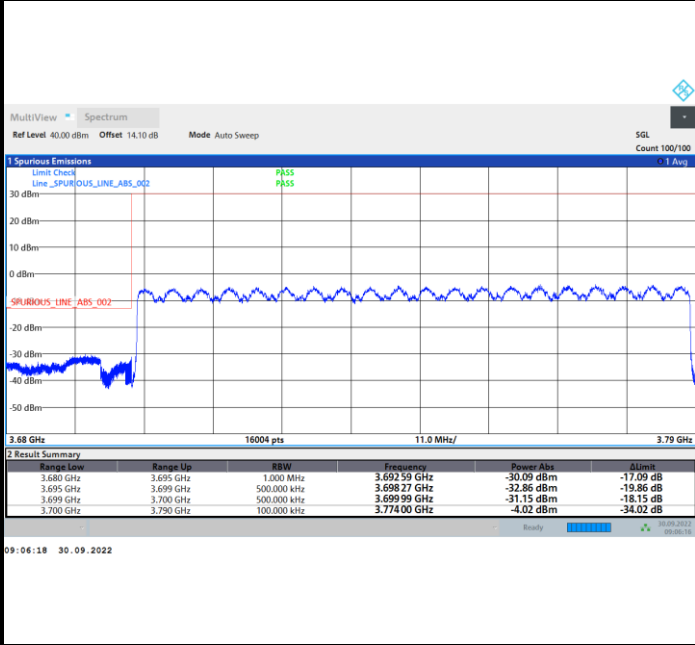




FR1 n77 / 90MHz / CP OFDM / 64QAM

Lowest Band Edge / Full RB

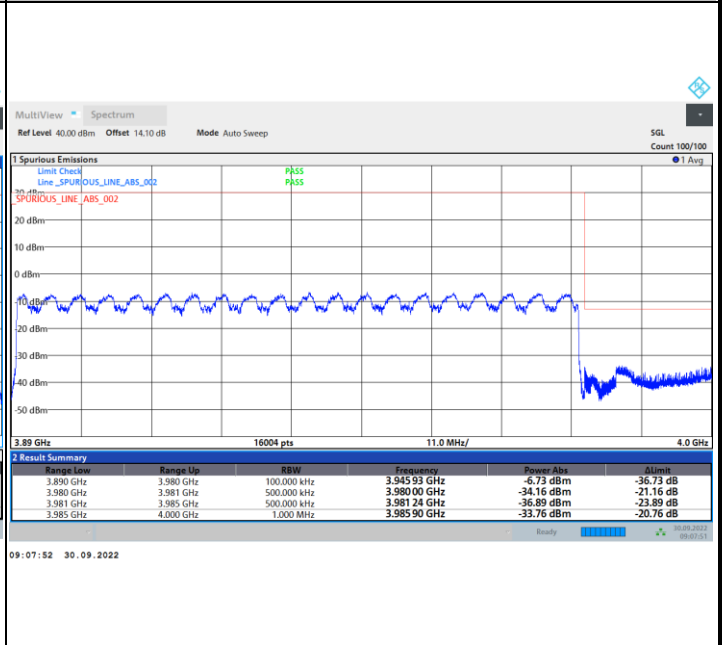
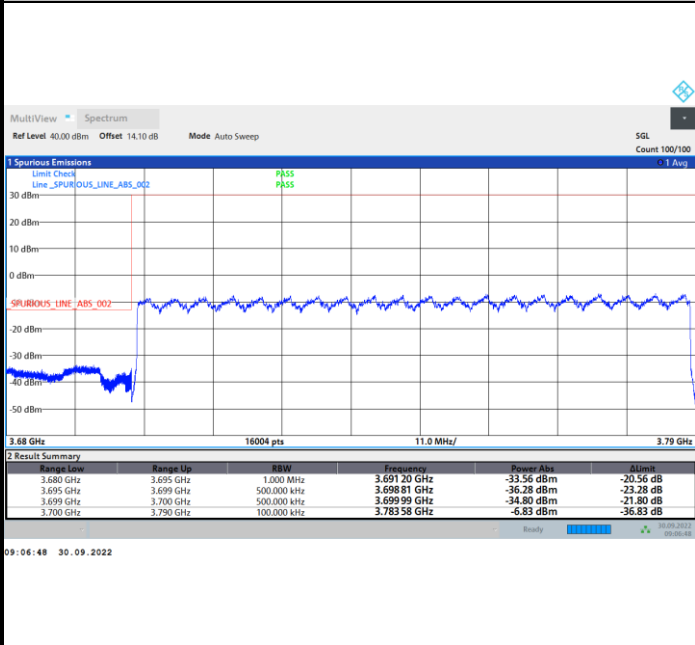
Highest Band Edge / Full RB

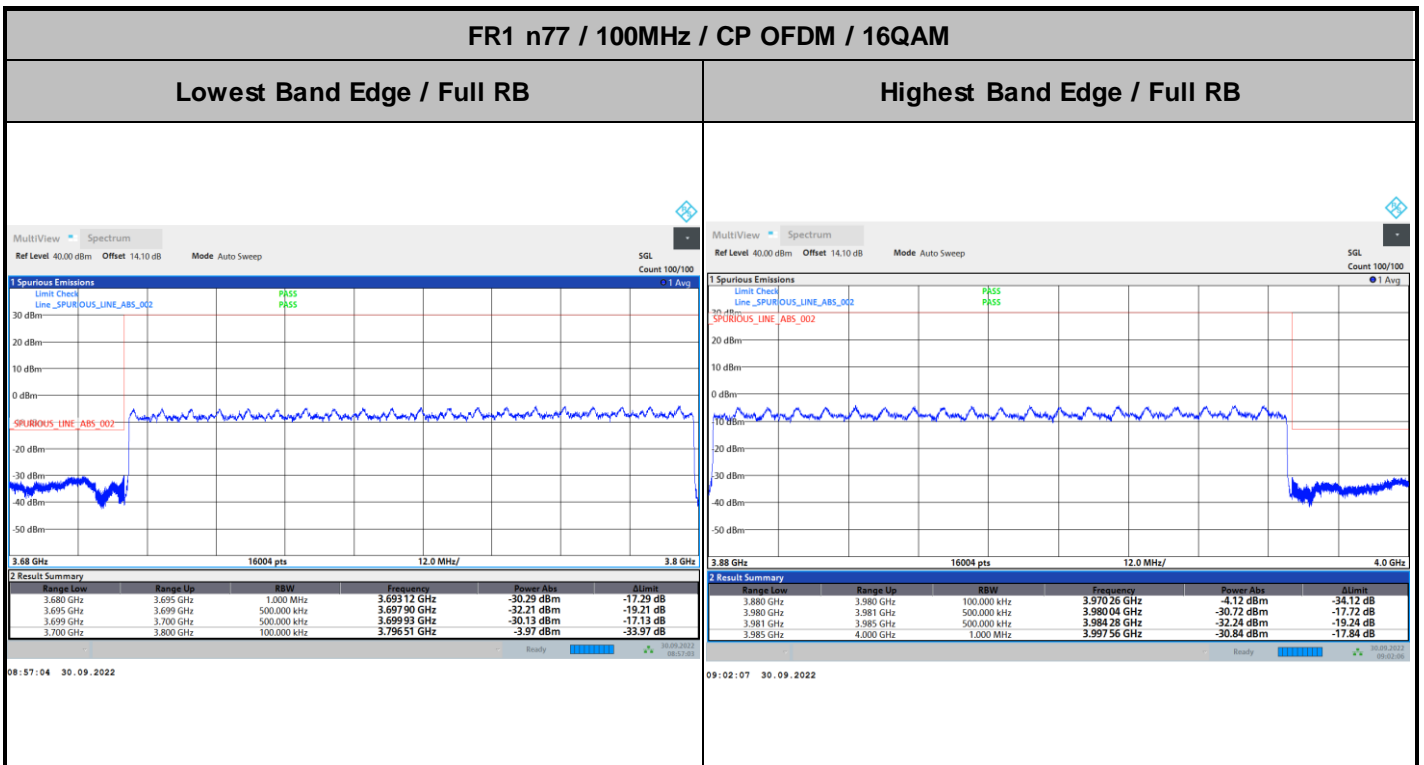
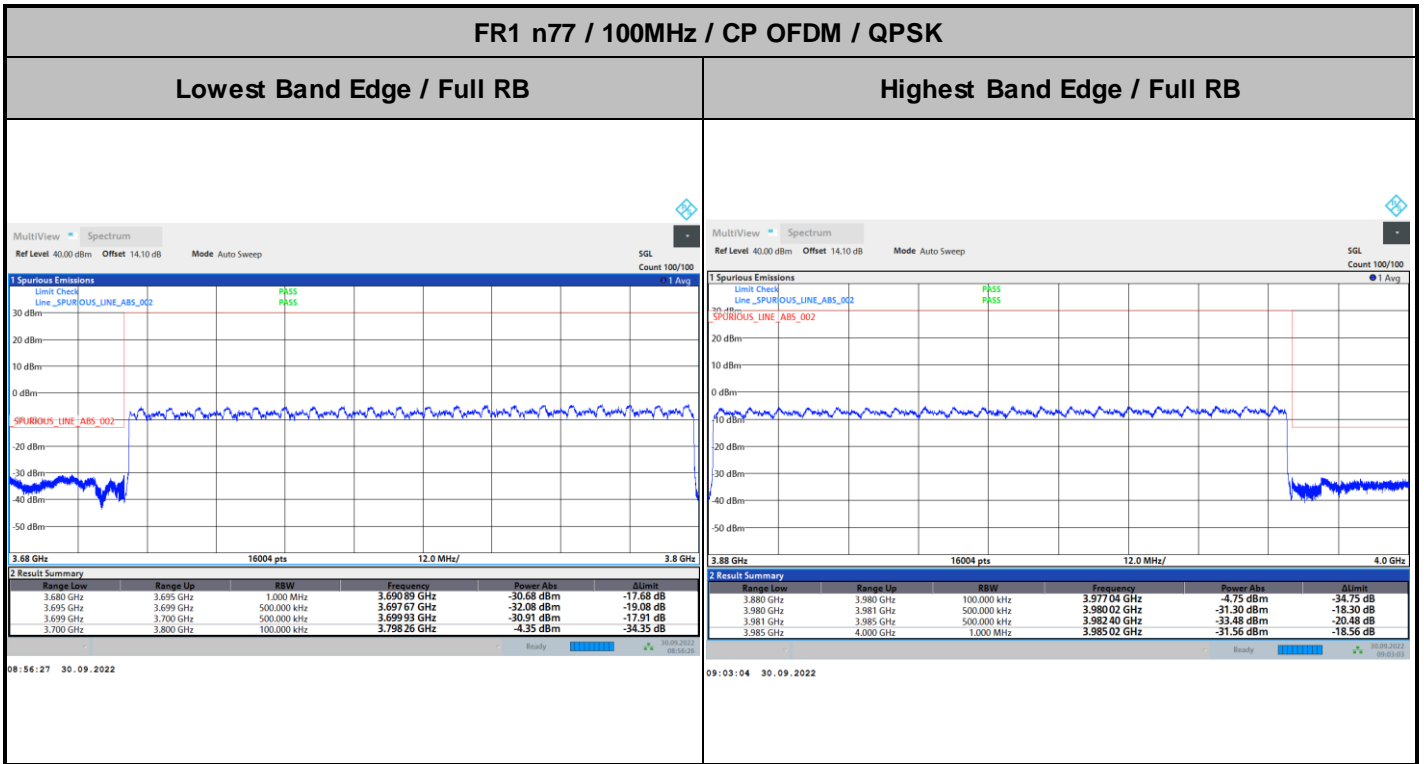


FR1 n77 / 90MHz / CP OFDM / 256QAM

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

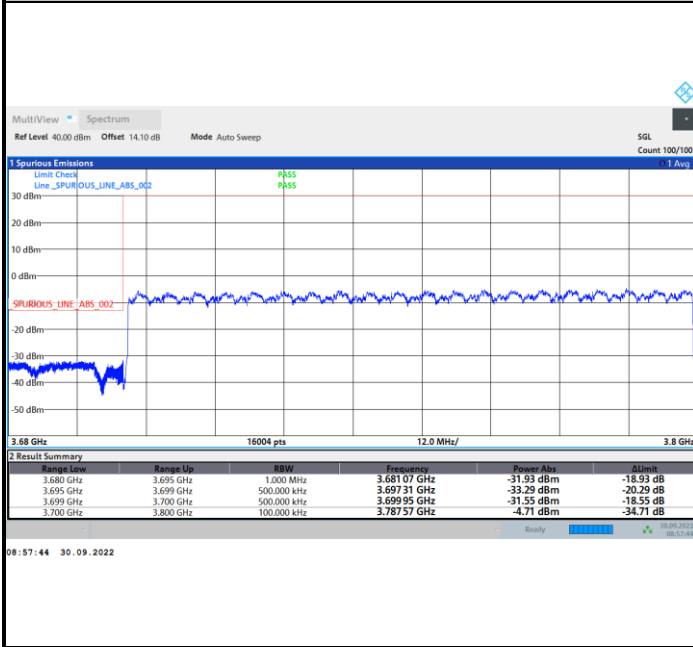




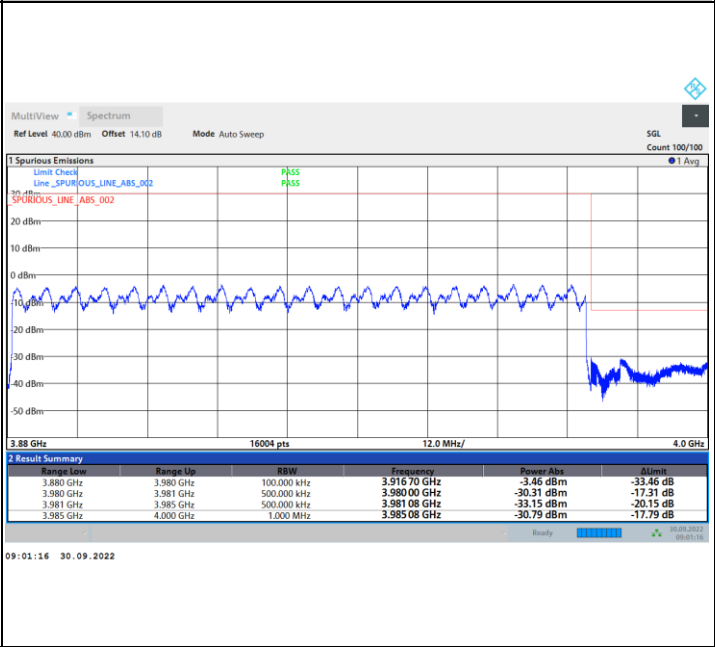


FR1 n77 / 100MHz / CP OFDM / 64QAM

Lowest Band Edge / Full RB

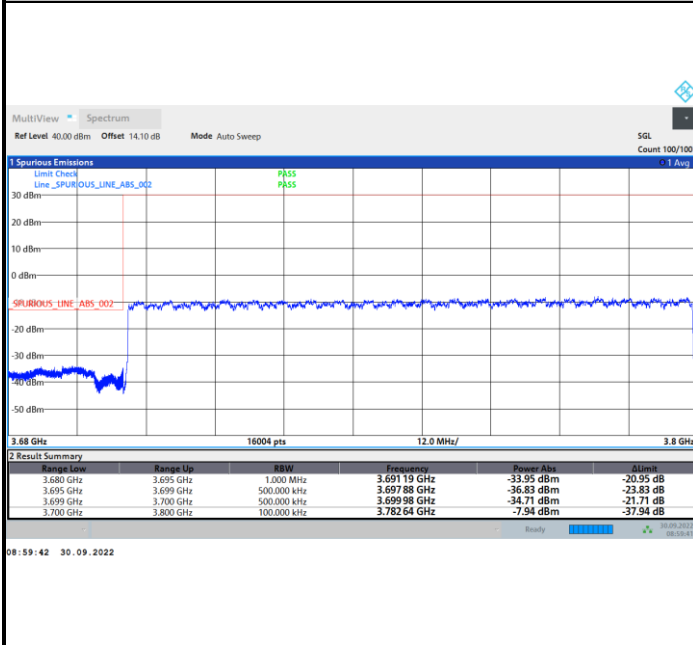


Highest Band Edge / Full RB

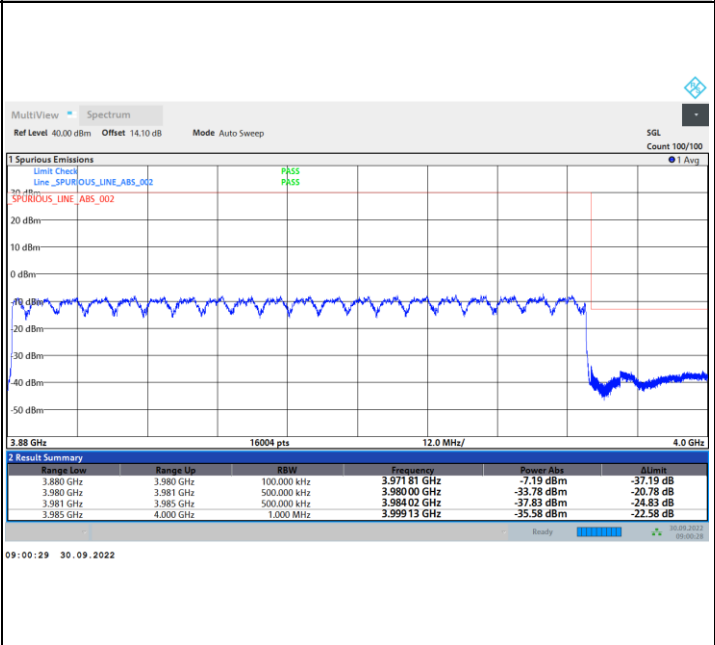


FR1 n77 / 100MHz / CP OFDM / 256QAM

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

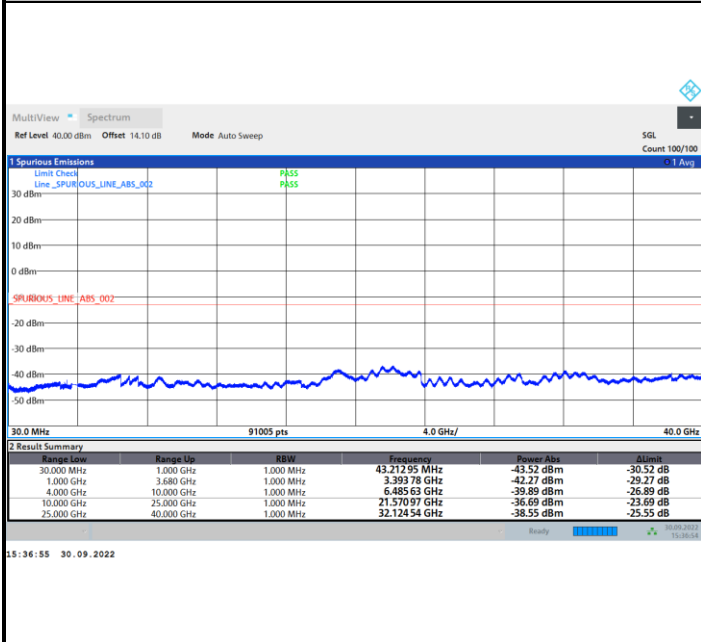




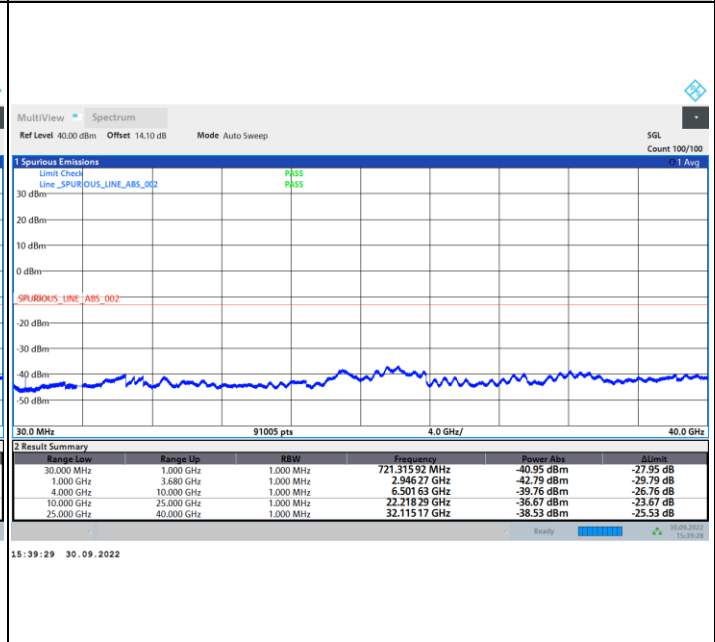
Conducted Spurious Emission

FR1 n77 / 10MHz / CP OFDM / QPSK / 1RB1

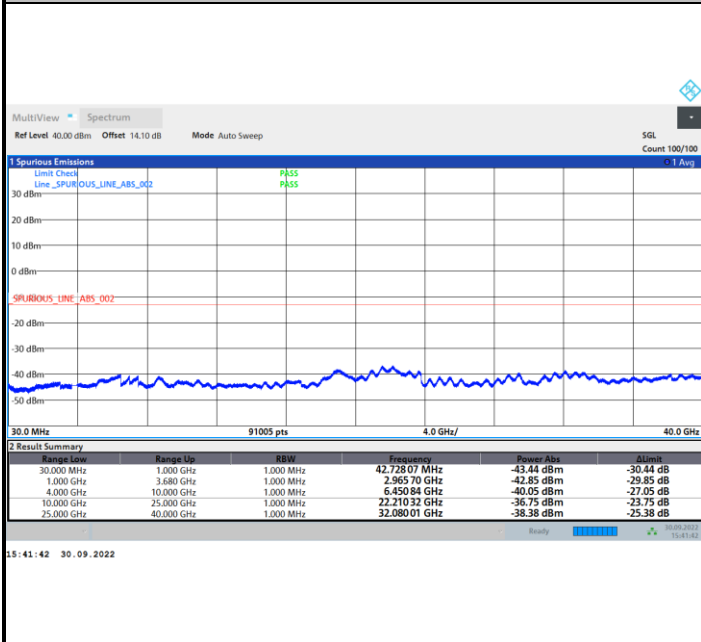
Lowest Channel



Middle Channel



Highest Channel





Frequency Stability

| Test Conditions | | FR1 n77 (QPSK) / Middle Channel | Limit |
|------------------|-------------------|---------------------------------|---------|
| Temperature (°C) | Voltage (Volt) | BW 20MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0002 | PASS |
| 40 | Normal Voltage | 0.0027 | |
| 30 | Normal Voltage | 0.0013 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0030 | |
| 0 | Normal Voltage | 0.0036 | |
| -10 | Normal Voltage | 0.0039 | |
| -20 | Normal Voltage | 0.0036 | |
| -30 | Normal Voltage | 0.0014 | |
| 20 | Maximum Voltage | 0.0004 | |
| 20 | Normal Voltage | 0.0000 | |
| 20 | Battery End Point | 0.0002 | |

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.



Appendix B. Test Results of Radiated Test

<Ant. 4>

5G NR n77 HPUE

| 5G NR n77_HPUE / 10MHz / PI/2 BPSK | | | | | | | | | |
|------------------------------------|-------------------|--------------|---------------|---------------|-------------------|--------------------|----------------------|-----------------------|--------------------|
| Channel | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Lowest | 7402 | -40.61 | -13 | -27.61 | -71.52 | -47.92 | 1.94 | 11.40 | H |
| | 11102 | -34.66 | -13 | -21.66 | -71.78 | -40.89 | 2.24 | 10.62 | H |
| | 14803 | -28.40 | -13 | -15.40 | -71.31 | -36.43 | 2.58 | 12.77 | H |
| | 18510 | -55.96 | -13 | -42.96 | -67.84 | -68.16 | 3.24 | 17.59 | H |
| | 22206 | -52.05 | -13 | -39.05 | -67.78 | -65.24 | 3.52 | 18.86 | H |
| | 25903 | -40.93 | -13 | -27.93 | -59.74 | -53.94 | 3.92 | 19.08 | H |
| | 7402 | -39.52 | -13 | -26.52 | -70.52 | -46.83 | 1.94 | 11.40 | V |
| | 11102 | -32.41 | -13 | -19.41 | -69.49 | -38.64 | 2.24 | 10.62 | V |
| | 14803 | -27.44 | -13 | -14.44 | -71.46 | -35.47 | 2.58 | 12.77 | V |
| | 18510 | -56.36 | -13 | -43.36 | -68.01 | -68.56 | 3.24 | 17.59 | V |
| | 22206 | -54.88 | -13 | -41.88 | -70.21 | -68.07 | 3.52 | 18.86 | V |
| | 25903 | -39.76 | -13 | -26.76 | -58.27 | -52.77 | 3.92 | 19.08 | V |
| Middle | 7672 | -40.92 | -13 | -27.92 | -71.55 | -48.52 | 1.89 | 11.64 | H |
| | 11507 | -34.35 | -13 | -21.35 | -71.94 | -40.92 | 2.40 | 11.13 | H |
| | 15343 | -29.32 | -13 | -16.32 | -70.97 | -39.23 | 2.65 | 14.71 | H |
| | 19177 | -61.17 | -13 | -48.17 | -73.05 | -73.02 | 3.25 | 17.24 | H |
| | 23013 | -57.23 | -13 | -44.23 | -74.2 | -70.11 | 3.57 | 18.60 | H |
| | 26849 | -27.08 | -13 | -14.08 | -47.39 | -40.10 | 3.92 | 19.09 | H |
| | 7672 | -36.21 | -13 | -23.21 | -67.05 | -43.81 | 1.89 | 11.64 | V |
| | 11507 | -29.93 | -13 | -16.93 | -67.63 | -36.50 | 2.40 | 11.13 | V |
| | 15343 | -28.22 | -13 | -15.22 | -70.53 | -38.13 | 2.65 | 14.71 | V |
| | 19177 | -58.68 | -13 | -45.68 | -70.31 | -70.53 | 3.25 | 17.24 | V |
| | 23013 | -48.34 | -13 | -35.34 | -64.98 | -61.22 | 3.57 | 18.60 | V |
| | 26849 | -27.80 | -13 | -14.80 | -47.72 | -40.82 | 3.92 | 19.09 | V |



| | | | | | | | | | |
|---------|-------|--------|-----|--------|--------|--------|------|-------|---|
| Highest | 7942 | -39.39 | -13 | -26.39 | -70.69 | -46.63 | 1.96 | 11.35 | H |
| | 11912 | -24.15 | -13 | -11.15 | -63.39 | -32.01 | 2.57 | 12.58 | H |
| | 15883 | -30.77 | -13 | -17.77 | -71.04 | -42.30 | 2.79 | 16.47 | H |
| | 19853 | -55.97 | -13 | -42.97 | -68.45 | -68.05 | 3.20 | 17.43 | H |
| | 23827 | -53.95 | -13 | -40.95 | -71.27 | -66.55 | 3.76 | 18.50 | H |
| | 27801 | -38.05 | -13 | -25.05 | -58.54 | -51.56 | 3.96 | 19.62 | H |
| | 7942 | -36.27 | -13 | -23.27 | -67.94 | -43.51 | 1.96 | 11.35 | V |
| | 11912 | -23.70 | -13 | -10.70 | -62.48 | -31.56 | 2.57 | 12.58 | V |
| | 15883 | -30.55 | -13 | -17.55 | -71.04 | -42.08 | 2.79 | 16.47 | V |
| | 19853 | -58.46 | -13 | -45.46 | -70.64 | -70.54 | 3.20 | 17.43 | V |
| | 23827 | -49.91 | -13 | -36.91 | -66.87 | -62.51 | 3.76 | 18.50 | V |
| | 27801 | -39.40 | -13 | -26.40 | -59.53 | -52.91 | 3.96 | 19.62 | V |

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



MIMO <Ant. 4+6>

5G NR n77 HPUE

| 5G NR n77_HPUE / 10MHz / QPSK | | | | | | | | | |
|-------------------------------|-------------------|--------------|---------------|---------------|-------------------|--------------------|----------------------|-----------------------|--------------------|
| Channel | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Lowest | 7402 | -40.36 | -13 | -27.36 | -71.27 | -47.67 | 1.94 | 11.40 | H |
| | 11102 | -35.88 | -13 | -22.88 | -73 | -42.11 | 2.24 | 10.62 | H |
| | 14803 | -28.54 | -13 | -15.54 | -71.45 | -36.57 | 2.58 | 12.77 | H |
| | 18510 | -48.94 | -13 | -35.94 | -60.82 | -61.14 | 3.24 | 17.59 | H |
| | 22206 | -56.28 | -13 | -43.28 | -72.01 | -69.47 | 3.52 | 18.86 | H |
| | 25903 | -48.97 | -13 | -35.97 | -67.78 | -61.98 | 3.92 | 19.08 | H |
| | 7402 | -40.86 | -13 | -27.86 | -71.86 | -48.17 | 1.94 | 11.40 | V |
| | 11102 | -35.37 | -13 | -22.37 | -72.45 | -41.60 | 2.24 | 10.62 | V |
| | 14803 | -27.62 | -13 | -14.62 | -71.64 | -35.65 | 2.58 | 12.77 | V |
| | 18510 | -52.57 | -13 | -39.57 | -64.22 | -64.77 | 3.24 | 17.59 | V |
| | 22206 | -57.29 | -13 | -44.29 | -72.62 | -70.48 | 3.52 | 18.86 | V |
| | 25903 | -46.24 | -13 | -33.24 | -64.75 | -59.25 | 3.92 | 19.08 | V |
| Middle | 7672 | -38.64 | -13 | -25.64 | -69.27 | -46.24 | 1.89 | 11.64 | H |
| | 11507 | -34.87 | -13 | -21.87 | -72.46 | -41.44 | 2.40 | 11.13 | H |
| | 15343 | -29.45 | -13 | -16.45 | -71.1 | -39.36 | 2.65 | 14.71 | H |
| | 19176 | -60.23 | -13 | -47.23 | -72.11 | -72.07 | 3.25 | 17.24 | H |
| | 23017 | -50.68 | -13 | -37.68 | -67.65 | -63.56 | 3.57 | 18.60 | H |
| | 26857 | -39.74 | -13 | -26.74 | -60.05 | -52.77 | 3.92 | 19.10 | H |
| | 7672 | -39.48 | -13 | -26.48 | -70.32 | -47.08 | 1.89 | 11.64 | V |
| | 11507 | -33.60 | -13 | -20.60 | -71.3 | -40.17 | 2.40 | 11.13 | V |
| | 15343 | -29.18 | -13 | -16.18 | -71.49 | -39.09 | 2.65 | 14.71 | V |
| | 19176 | -55.18 | -13 | -42.18 | -66.81 | -67.02 | 3.25 | 17.24 | V |
| | 23017 | -51.01 | -13 | -38.01 | -67.65 | -63.89 | 3.57 | 18.60 | V |
| | 26857 | -40.44 | -13 | -27.44 | -60.36 | -53.47 | 3.92 | 19.10 | V |



| | | | | | | | | | |
|---------|-------|--------|-----|--------|--------|--------|------|-------|---|
| Highest | 7942 | -40.46 | -13 | -27.46 | -71.76 | -47.70 | 1.96 | 11.35 | H |
| | 11912 | -33.22 | -13 | -20.22 | -72.46 | -41.08 | 2.57 | 12.58 | H |
| | 15883 | -30.59 | -13 | -17.59 | -70.86 | -42.12 | 2.79 | 16.47 | H |
| | 19853 | -56.37 | -13 | -43.37 | -68.85 | -68.45 | 3.20 | 17.43 | H |
| | 23827 | -47.15 | -13 | -34.15 | -64.47 | -59.75 | 3.76 | 18.50 | H |
| | 27801 | -41.04 | -13 | -28.04 | -61.53 | -54.55 | 3.96 | 19.62 | H |
| | 7942 | -40.45 | -13 | -27.45 | -72.12 | -47.69 | 1.96 | 11.35 | V |
| | 11912 | -33.37 | -13 | -20.37 | -72.15 | -41.23 | 2.57 | 12.58 | V |
| | 15883 | -31.03 | -13 | -18.03 | -71.52 | -42.56 | 2.79 | 16.47 | V |
| | 19853 | -56.22 | -13 | -43.22 | -68.4 | -68.30 | 3.20 | 17.43 | V |
| | 23827 | -47.67 | -13 | -34.67 | -64.63 | -60.27 | 3.76 | 18.50 | V |
| | 27801 | -41.30 | -13 | -28.30 | -61.43 | -54.81 | 3.96 | 19.62 | V |

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

Appendix C. Setup Photographs

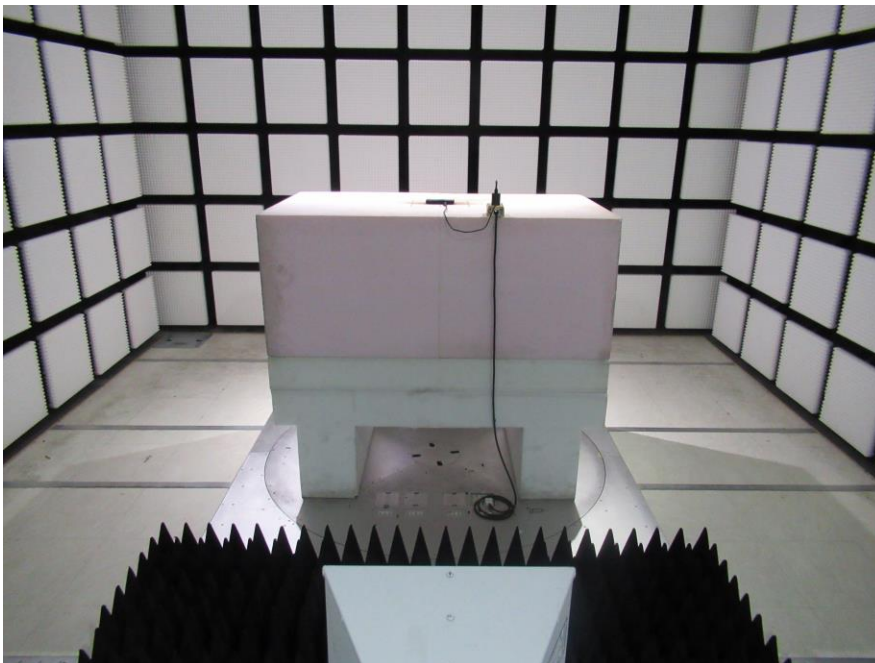
<Radiated Emission>

X Plane for Ant. 4

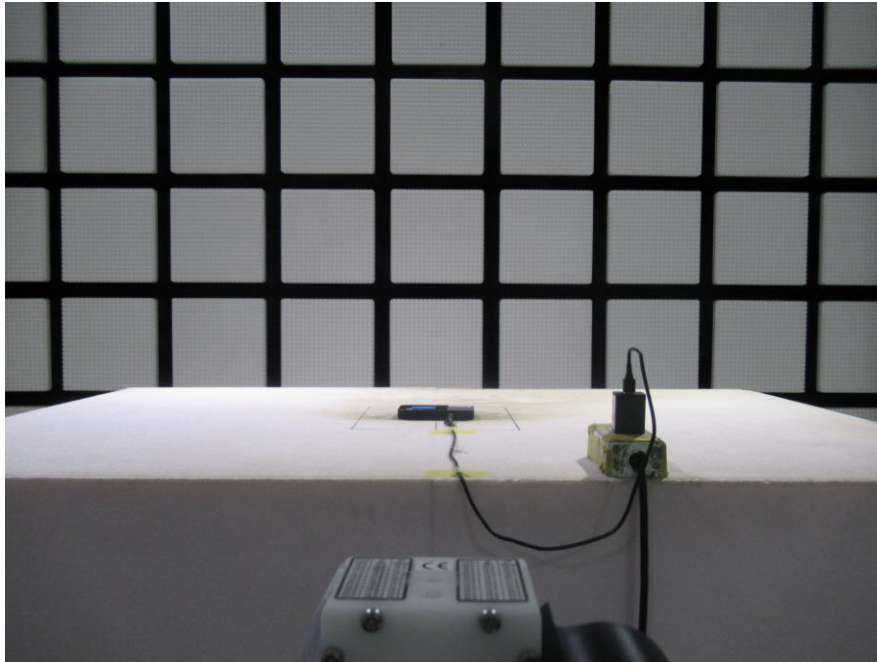
LF



HF



SHF

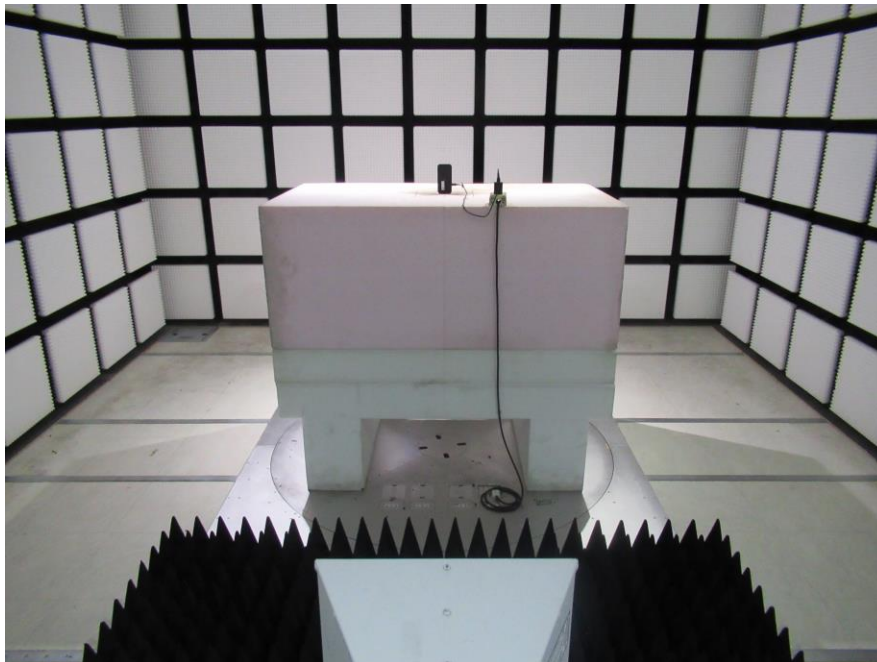


Z Plane for MIMO <Ant. 4+6>

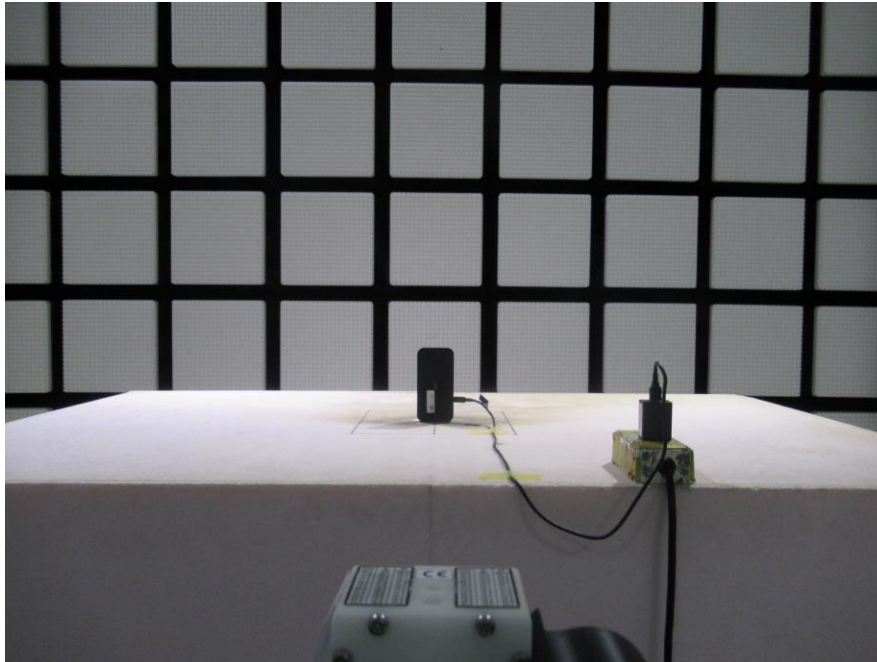
LF



HF



SHF



————THE END————