

| | | | | | | | | | | |
|-------------------|-----------------|-----------------|----------------|-------|-------|-------|-------|------|------|------|
| | 3839.985 | Inner Full | 17.79 | / | / | 18.14 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 17.24 | / | / | 17.59 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 18.65 | / | / | 19.00 | / | / | <=30 | Pass |
| | 3934.995 | Edge 1RB Left | 18.51 | / | / | 18.86 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 18.09 | / | / | 18.44 | / | / | <=30 | Pass |
| | | Outer Full | 19.00 | / | / | 19.35 | / | / | <=30 | Pass |
| | | Inner Full | 18.75 | / | / | 19.10 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 18.43 | / | / | 18.78 | / | / | <=30 | Pass |
| | 3934.995 | Inner 1RB Right | 18.27 | / | / | 18.62 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 18.35 | / | / | 18.70 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 16.34 | / | / | 16.69 | / | / | <=30 | Pass |
| | | Outer Full | 17.46 | / | / | 17.81 | / | / | <=30 | Pass |
| | | Inner Full | 16.90 | / | / | 17.25 | / | / | <=30 | Pass |
| | DFT-s-OFDM QPSK | 3745.005 | Inner 1RB Left | 18.25 | / | / | 18.60 | / | / | <=30 |
| Inner 1RB Right | | | 16.38 | / | / | 16.73 | / | / | <=30 | Pass |
| Edge 1RB Left | | | 17.35 | / | / | 17.70 | / | / | <=30 | Pass |
| Edge 1RB Right | | | 18.51 | / | / | 18.86 | / | / | <=30 | Pass |
| Outer Full | | | 18.16 | / | / | 18.51 | / | / | <=30 | Pass |
| 3839.985 | | Inner Full | 17.76 | / | / | 18.11 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 17.26 | / | / | 17.61 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 18.59 | / | / | 18.94 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 18.61 | / | / | 18.96 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 18.11 | / | / | 18.46 | / | / | <=30 | Pass |
| 3934.995 | | Outer Full | 18.99 | / | / | 19.34 | / | / | <=30 | Pass |
| | | Inner Full | 18.80 | / | / | 19.15 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 18.53 | / | / | 18.88 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 18.19 | / | / | 18.54 | / | / | <=30 | Pass |
| | Edge 1RB Left | 18.34 | / | / | 18.69 | / | / | <=30 | Pass | |
| DFT-s-OFDM 16 QAM | 3745.005 | Edge 1RB Right | 16.32 | / | / | 16.67 | / | / | <=30 | Pass |
| | | Outer Full | 17.41 | / | / | 17.76 | / | / | <=30 | Pass |
| | | Inner Full | 16.88 | / | / | 17.23 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 18.25 | / | / | 18.60 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 16.37 | / | / | 16.72 | / | / | <=30 | Pass |
| | 3839.985 | Edge 1RB Left | 17.38 | / | / | 17.73 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 18.50 | / | / | 18.85 | / | / | <=30 | Pass |
| | | Outer Full | 18.06 | / | / | 18.41 | / | / | <=30 | Pass |
| | | Inner Full | 17.69 | / | / | 18.04 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 17.34 | / | / | 17.69 | / | / | <=30 | Pass |
| | 3934.995 | Inner 1RB Right | 18.56 | / | / | 18.91 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 18.57 | / | / | 18.92 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 18.09 | / | / | 18.44 | / | / | <=30 | Pass |
| | | Outer Full | 18.83 | / | / | 19.18 | / | / | <=30 | Pass |
| Inner Full | | 18.79 | / | / | 19.14 | / | / | <=30 | Pass | |
| DFT-s-OFDM 64 QAM | 3745.005 | Inner 1RB Left | 18.52 | / | / | 18.87 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 18.18 | / | / | 18.53 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 18.25 | / | / | 18.60 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 16.26 | / | / | 16.61 | / | / | <=30 | Pass |
| | | Outer Full | 17.23 | / | / | 17.58 | / | / | <=30 | Pass |
| | 3839.985 | Inner Full | 16.90 | / | / | 17.25 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 18.20 | / | / | 18.55 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 16.34 | / | / | 16.69 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 17.48 | / | / | 17.83 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 18.51 | / | / | 18.86 | / | / | <=30 | Pass |
| | 3745.005 | Outer Full | 18.03 | / | / | 18.38 | / | / | <=30 | Pass |
| | | Inner Full | 17.65 | / | / | 18.00 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 17.44 | / | / | 17.79 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 18.58 | / | / | 18.93 | / | / | <=30 | Pass |
| Edge 1RB Left | | 18.80 | / | / | 19.15 | / | / | <=30 | Pass | |
| 3839.985 | Edge 1RB Right | 18.21 | / | / | 18.56 | / | / | <=30 | Pass | |

| | | | | | | | | | | |
|--------------------|----------|-----------------|-------|---|-------|-------|---|------|------|------|
| | 3934.995 | Outer Full | 18.84 | / | / | 19.19 | / | / | <=30 | Pass |
| | | Inner Full | 18.77 | / | / | 19.12 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 18.76 | / | / | 19.11 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 18.22 | / | / | 18.57 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 18.45 | / | / | 18.80 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 16.51 | / | / | 16.86 | / | / | <=30 | Pass |
| | | Outer Full | 17.23 | / | / | 17.58 | / | / | <=30 | Pass |
| | | Inner Full | 16.88 | / | / | 17.23 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 18.38 | / | / | 18.73 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 16.37 | / | / | 16.72 | / | / | <=30 | Pass |
| DFT-s-OFDM 256 QAM | 3745.005 | Edge 1RB Left | 16.29 | / | / | 16.64 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 17.55 | / | / | 17.90 | / | / | <=30 | Pass |
| | | Outer Full | 16.51 | / | / | 16.86 | / | / | <=30 | Pass |
| | | Inner Full | 16.70 | / | / | 17.05 | / | / | <=30 | Pass |
| | 3839.985 | Inner 1RB Left | 16.23 | / | / | 16.58 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 17.60 | / | / | 17.95 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 17.49 | / | / | 17.84 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 17.12 | / | / | 17.47 | / | / | <=30 | Pass |
| | 3934.995 | Outer Full | 17.20 | / | / | 17.55 | / | / | <=30 | Pass |
| | | Inner Full | 17.66 | / | / | 18.01 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 17.46 | / | / | 17.81 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 17.19 | / | / | 17.54 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 17.32 | / | / | 17.67 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 15.33 | / | / | 15.68 | / | / | <=30 | Pass |
| | | Outer Full | 15.74 | / | / | 16.09 | / | / | <=30 | Pass |
| | | Inner Full | 15.91 | / | / | 16.26 | / | / | <=30 | Pass |
| CP-OFDM QPSK | 3745.005 | Inner 1RB Left | 17.25 | / | / | 17.60 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 15.40 | / | / | 15.75 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 17.26 | / | / | 17.61 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 18.48 | / | / | 18.83 | / | / | <=30 | Pass |
| | 3839.985 | Outer Full | 18.01 | / | / | 18.36 | / | / | <=30 | Pass |
| | | Inner Full | 17.76 | / | / | 18.11 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 17.19 | / | / | 17.54 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 18.57 | / | / | 18.92 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 18.56 | / | / | 18.91 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 18.06 | / | / | 18.41 | / | / | <=30 | Pass |
| | | Outer Full | 18.77 | / | / | 19.12 | / | / | <=30 | Pass |
| | | Inner Full | 18.77 | / | / | 19.12 | / | / | <=30 | Pass |
| | 3934.995 | Inner 1RB Left | 18.49 | / | / | 18.84 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 18.16 | / | / | 18.51 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 18.09 | / | / | 18.44 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 16.25 | / | / | 16.60 | / | / | <=30 | Pass |
| Outer Full | | 17.14 | / | / | 17.49 | / | / | <=30 | Pass | |
| Inner Full | | 16.82 | / | / | 17.17 | / | / | <=30 | Pass | |
| CP-OFDM 16 QAM | 3745.005 | Inner 1RB Left | 18.06 | / | / | 18.41 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 16.33 | / | / | 16.68 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 17.41 | / | / | 17.76 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 18.48 | / | / | 18.83 | / | / | <=30 | Pass |
| | | Outer Full | 18.03 | / | / | 18.38 | / | / | <=30 | Pass |
| | | Inner Full | 17.71 | / | / | 18.06 | / | / | <=30 | Pass |
| | 3839.985 | Inner 1RB Left | 17.31 | / | / | 17.66 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 18.57 | / | / | 18.92 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 18.52 | / | / | 18.87 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 18.06 | / | / | 18.41 | / | / | <=30 | Pass |
| | | Outer Full | 18.76 | / | / | 19.11 | / | / | <=30 | Pass |
| | | Inner Full | 18.72 | / | / | 19.07 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 18.50 | / | / | 18.85 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 18.15 | / | / | 18.50 | / | / | <=30 | Pass |
| | 3934.995 | Edge 1RB Left | 18.07 | / | / | 18.42 | / | / | <=30 | Pass |

| | | | | | | | | | | |
|-----------------|-----------------|-----------------|-------|---|-------|-------|---|------|------|------|
| CP-OFDM 64 QAM | 3745.005 | Edge 1RB Right | 16.23 | / | / | 16.58 | / | / | <=30 | Pass |
| | | Outer Full | 17.13 | / | / | 17.48 | / | / | <=30 | Pass |
| | | Inner Full | 16.82 | / | / | 17.17 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 18.02 | / | / | 18.37 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 16.32 | / | / | 16.67 | / | / | <=30 | Pass |
| | 3839.985 | Edge 1RB Left | 17.41 | / | / | 17.76 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 18.78 | / | / | 19.13 | / | / | <=30 | Pass |
| | | Outer Full | 17.55 | / | / | 17.90 | / | / | <=30 | Pass |
| | | Inner Full | 17.72 | / | / | 18.07 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 17.41 | / | / | 17.76 | / | / | <=30 | Pass |
| | 3934.995 | Inner 1RB Right | 18.81 | / | / | 19.16 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 18.89 | / | / | 19.24 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 18.17 | / | / | 18.52 | / | / | <=30 | Pass |
| | | Outer Full | 18.29 | / | / | 18.64 | / | / | <=30 | Pass |
| | | Inner Full | 18.71 | / | / | 19.06 | / | / | <=30 | Pass |
| CP-OFDM 256 QAM | 3745.005 | Inner 1RB Left | 18.84 | / | / | 19.19 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 18.28 | / | / | 18.63 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 18.48 | / | / | 18.83 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 16.63 | / | / | 16.98 | / | / | <=30 | Pass |
| | | Outer Full | 16.67 | / | / | 17.02 | / | / | <=30 | Pass |
| | 3839.985 | Inner Full | 16.83 | / | / | 17.18 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 18.42 | / | / | 18.77 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 16.71 | / | / | 17.06 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 14.46 | / | / | 14.81 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 15.75 | / | / | 16.10 | / | / | <=30 | Pass |
| | 3934.995 | Outer Full | 14.56 | / | / | 14.91 | / | / | <=30 | Pass |
| | | Inner Full | 14.78 | / | / | 15.13 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 14.45 | / | / | 14.80 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 15.80 | / | / | 16.15 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 15.74 | / | / | 16.09 | / | / | <=30 | Pass |
| 3839.985 | Edge 1RB Right | 15.23 | / | / | 15.58 | / | / | <=30 | Pass | |
| | Outer Full | 15.27 | / | / | 15.62 | / | / | <=30 | Pass | |
| | Inner Full | 15.78 | / | / | 16.13 | / | / | <=30 | Pass | |
| | Inner 1RB Left | 15.69 | / | / | 16.04 | / | / | <=30 | Pass | |
| | Inner 1RB Right | 15.34 | / | / | 15.69 | / | / | <=30 | Pass | |
| 3934.995 | Edge 1RB Left | 15.64 | / | / | 15.99 | / | / | <=30 | Pass | |
| | Edge 1RB Right | 13.60 | / | / | 13.95 | / | / | <=30 | Pass | |
| | Outer Full | 13.84 | / | / | 14.19 | / | / | <=30 | Pass | |
| | Inner Full | 14.06 | / | / | 14.41 | / | / | <=30 | Pass | |
| | Inner 1RB Left | 15.58 | / | / | 15.93 | / | / | <=30 | Pass | |
| | | Inner 1RB Right | 13.70 | / | / | 14.05 | / | / | <=30 | Pass |

Note1: Antenna Gain: Ant1: 0.35dBi;

Note2: EIRP=Conducted Power+Antenna Gain

1.1.14 30k_SISO_100MHz_NTNV_EIRP

| 5G NR n77a SCS=30kHz SISO 100MHz NTN | | | | | | | | | | |
|--------------------------------------|-----------------|-----------------|----------------------|------|-----|-----------|------|-----|-------|---------|
| Modulation | Frequency (MHz) | RB Allocation | Conducted Power(dBm) | | | EIRP(dBm) | | | | Verdict |
| | | | Ant1 | Ant2 | Sum | Ant1 | Ant2 | Sum | Limit | |
| DFT-s-OFDM PI/2 BPSK | 3750.015 | Edge 1RB Left | 15.45 | / | / | 15.80 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 16.80 | / | / | 17.15 | / | / | <=30 | Pass |
| | | Outer Full | 17.19 | / | / | 17.54 | / | / | <=30 | Pass |
| | | Inner Full | 16.89 | / | / | 17.24 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 15.43 | / | / | 15.78 | / | / | <=30 | Pass |
| | 3839.985 | Inner 1RB Right | 16.89 | / | / | 17.24 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 17.75 | / | / | 18.10 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 17.17 | / | / | 17.52 | / | / | <=30 | Pass |
| | | Outer Full | 18.93 | / | / | 19.28 | / | / | <=30 | Pass |
| | | | | | | | | | | |

| | | | | | | | | | | |
|-------------------|-----------------|-----------------|-------|---|-------|-------|---|------|------|------|
| | 3929.985 | Inner Full | 18.90 | / | / | 19.25 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 17.70 | / | / | 18.05 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 17.33 | / | / | 17.68 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 17.89 | / | / | 18.24 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 15.64 | / | / | 15.99 | / | / | <=30 | Pass |
| | | Outer Full | 17.54 | / | / | 17.89 | / | / | <=30 | Pass |
| | | Inner Full | 17.25 | / | / | 17.60 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 17.90 | / | / | 18.25 | / | / | <=30 | Pass |
| DFT-s-OFDM QPSK | 3750.015 | Edge 1RB Left | 15.34 | / | / | 15.69 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 16.80 | / | / | 17.15 | / | / | <=30 | Pass |
| | | Outer Full | 17.28 | / | / | 17.63 | / | / | <=30 | Pass |
| | | Inner Full | 16.94 | / | / | 17.29 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 15.49 | / | / | 15.84 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 16.95 | / | / | 17.30 | / | / | <=30 | Pass |
| | 3839.985 | Edge 1RB Left | 17.72 | / | / | 18.07 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 17.17 | / | / | 17.52 | / | / | <=30 | Pass |
| | | Outer Full | 18.86 | / | / | 19.21 | / | / | <=30 | Pass |
| | | Inner Full | 18.89 | / | / | 19.24 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 17.68 | / | / | 18.03 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 17.34 | / | / | 17.69 | / | / | <=30 | Pass |
| 3929.985 | Edge 1RB Left | 18.03 | / | / | 18.38 | / | / | <=30 | Pass | |
| | Edge 1RB Right | 15.76 | / | / | 16.11 | / | / | <=30 | Pass | |
| | Outer Full | 17.73 | / | / | 18.08 | / | / | <=30 | Pass | |
| | Inner Full | 17.29 | / | / | 17.64 | / | / | <=30 | Pass | |
| | Inner 1RB Left | 17.97 | / | / | 18.32 | / | / | <=30 | Pass | |
| | Inner 1RB Right | 15.87 | / | / | 16.22 | / | / | <=30 | Pass | |
| DFT-s-OFDM 16 QAM | 3750.015 | Edge 1RB Left | 15.62 | / | / | 15.97 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 16.88 | / | / | 17.23 | / | / | <=30 | Pass |
| | | Outer Full | 17.15 | / | / | 17.50 | / | / | <=30 | Pass |
| | | Inner Full | 16.89 | / | / | 17.24 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 15.64 | / | / | 15.99 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 16.91 | / | / | 17.26 | / | / | <=30 | Pass |
| | 3839.985 | Edge 1RB Left | 17.67 | / | / | 18.02 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 17.15 | / | / | 17.50 | / | / | <=30 | Pass |
| | | Outer Full | 18.80 | / | / | 19.15 | / | / | <=30 | Pass |
| | | Inner Full | 18.85 | / | / | 19.20 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 17.71 | / | / | 18.06 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 17.33 | / | / | 17.68 | / | / | <=30 | Pass |
| | 3929.985 | Edge 1RB Left | 18.00 | / | / | 18.35 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 15.78 | / | / | 16.13 | / | / | <=30 | Pass |
| | | Outer Full | 17.54 | / | / | 17.89 | / | / | <=30 | Pass |
| | | Inner Full | 17.25 | / | / | 17.60 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 18.05 | / | / | 18.40 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 15.95 | / | / | 16.30 | / | / | <=30 | Pass |
| DFT-s-OFDM 64 QAM | 3750.015 | Edge 1RB Left | 15.61 | / | / | 15.96 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 16.83 | / | / | 17.18 | / | / | <=30 | Pass |
| | | Outer Full | 17.14 | / | / | 17.49 | / | / | <=30 | Pass |
| | | Inner Full | 16.89 | / | / | 17.24 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 15.71 | / | / | 16.06 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 16.97 | / | / | 17.32 | / | / | <=30 | Pass |
| | 3839.985 | Edge 1RB Left | 17.70 | / | / | 18.05 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 17.40 | / | / | 17.75 | / | / | <=30 | Pass |
| | | Outer Full | 18.80 | / | / | 19.15 | / | / | <=30 | Pass |
| | | Inner Full | 18.86 | / | / | 19.21 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 17.86 | / | / | 18.21 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 17.57 | / | / | 17.92 | / | / | <=30 | Pass |
| | 3929.985 | Edge 1RB Left | 17.98 | / | / | 18.33 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 15.75 | / | / | 16.10 | / | / | <=30 | Pass |

| | | | | | | | | | | |
|--------------------|----------------|-----------------|-------|---|-------|-------|---|------|------|------|
| | | Outer Full | 17.53 | / | / | 17.88 | / | / | <=30 | Pass |
| | | Inner Full | 17.22 | / | / | 17.57 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 17.99 | / | / | 18.34 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 15.91 | / | / | 16.26 | / | / | <=30 | Pass |
| DFT-s-OFDM 256 QAM | 3750.015 | Edge 1RB Left | 14.39 | / | / | 14.74 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 15.79 | / | / | 16.14 | / | / | <=30 | Pass |
| | | Outer Full | 15.54 | / | / | 15.89 | / | / | <=30 | Pass |
| | | Inner Full | 15.82 | / | / | 16.17 | / | / | <=30 | Pass |
| | 3839.985 | Inner 1RB Left | 14.50 | / | / | 14.85 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 15.87 | / | / | 16.22 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 16.68 | / | / | 17.03 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 16.08 | / | / | 16.43 | / | / | <=30 | Pass |
| | 3929.985 | Outer Full | 17.14 | / | / | 17.49 | / | / | <=30 | Pass |
| | | Inner Full | 17.74 | / | / | 18.09 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 16.61 | / | / | 16.96 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 16.25 | / | / | 16.60 | / | / | <=30 | Pass |
| CP-OFDM QPSK | 3750.015 | Edge 1RB Left | 16.88 | / | / | 17.23 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 14.65 | / | / | 15.00 | / | / | <=30 | Pass |
| | | Outer Full | 15.99 | / | / | 16.34 | / | / | <=30 | Pass |
| | | Inner Full | 16.24 | / | / | 16.59 | / | / | <=30 | Pass |
| | 3839.985 | Inner 1RB Left | 16.90 | / | / | 17.25 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 14.79 | / | / | 15.14 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 15.40 | / | / | 15.75 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 16.82 | / | / | 17.17 | / | / | <=30 | Pass |
| | 3929.985 | Outer Full | 17.13 | / | / | 17.48 | / | / | <=30 | Pass |
| | | Inner Full | 16.89 | / | / | 17.24 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 15.42 | / | / | 15.77 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 17.00 | / | / | 17.35 | / | / | <=30 | Pass |
| CP-OFDM 16 QAM | 3750.015 | Edge 1RB Left | 17.74 | / | / | 18.09 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 17.13 | / | / | 17.48 | / | / | <=30 | Pass |
| | | Outer Full | 18.73 | / | / | 19.08 | / | / | <=30 | Pass |
| | | Inner Full | 18.80 | / | / | 19.15 | / | / | <=30 | Pass |
| | 3839.985 | Inner 1RB Left | 17.69 | / | / | 18.04 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 17.36 | / | / | 17.71 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 17.79 | / | / | 18.14 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 15.67 | / | / | 16.02 | / | / | <=30 | Pass |
| | 3929.985 | Outer Full | 17.39 | / | / | 17.74 | / | / | <=30 | Pass |
| | | Inner Full | 17.08 | / | / | 17.43 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 17.80 | / | / | 18.15 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 15.86 | / | / | 16.21 | / | / | <=30 | Pass |
| CP-OFDM 64 QAM | 3750.015 | Edge 1RB Left | 15.51 | / | / | 15.86 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 16.77 | / | / | 17.12 | / | / | <=30 | Pass |
| | | Outer Full | 17.08 | / | / | 17.43 | / | / | <=30 | Pass |
| | | Inner Full | 16.85 | / | / | 17.20 | / | / | <=30 | Pass |
| | 3839.985 | Inner 1RB Left | 15.54 | / | / | 15.89 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 16.96 | / | / | 17.31 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 17.88 | / | / | 18.23 | / | / | <=30 | Pass |
| | | Edge 1RB Right | 17.12 | / | / | 17.47 | / | / | <=30 | Pass |
| | 3929.985 | Outer Full | 18.71 | / | / | 19.06 | / | / | <=30 | Pass |
| | | Inner Full | 18.78 | / | / | 19.13 | / | / | <=30 | Pass |
| | | Inner 1RB Left | 17.74 | / | / | 18.09 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 17.32 | / | / | 17.67 | / | / | <=30 | Pass |
| 3929.985 | Edge 1RB Left | 17.91 | / | / | 18.26 | / | / | <=30 | Pass | |
| | Edge 1RB Right | 15.74 | / | / | 16.09 | / | / | <=30 | Pass | |
| | Outer Full | 17.34 | / | / | 17.69 | / | / | <=30 | Pass | |
| | Inner Full | 17.05 | / | / | 17.40 | / | / | <=30 | Pass | |
| CP-OFDM 64 QAM | 3750.015 | Inner 1RB Left | 17.91 | / | / | 18.26 | / | / | <=30 | Pass |
| | | Inner 1RB Right | 15.95 | / | / | 16.30 | / | / | <=30 | Pass |
| | | Edge 1RB Left | 15.54 | / | / | 15.89 | / | / | <=30 | Pass |

| | | | | | | | | | | | |
|---|-----------------|-----------------|-----------------|-------|-------|-------|-------|------|------|------|------|
| CP-OFDM 256 QAM | 3839.985 | Edge 1RB Right | 16.89 | / | / | 17.24 | / | / | <=30 | Pass | |
| | | Outer_Full | 16.59 | / | / | 16.94 | / | / | <=30 | Pass | |
| | | Inner_Full | 16.83 | / | / | 17.18 | / | / | <=30 | Pass | |
| | | Inner_1RB Left | 15.81 | / | / | 16.16 | / | / | <=30 | Pass | |
| | | Inner_1RB Right | 17.08 | / | / | 17.43 | / | / | <=30 | Pass | |
| | | Edge 1RB Left | 17.82 | / | / | 18.17 | / | / | <=30 | Pass | |
| | 3929.985 | Edge 1RB Right | 17.50 | / | / | 17.85 | / | / | <=30 | Pass | |
| | | Outer_Full | 18.23 | / | / | 18.58 | / | / | <=30 | Pass | |
| | | Inner_Full | 18.78 | / | / | 19.13 | / | / | <=30 | Pass | |
| | | Inner_1RB Left | 17.87 | / | / | 18.22 | / | / | <=30 | Pass | |
| | | Inner_1RB Right | 17.70 | / | / | 18.05 | / | / | <=30 | Pass | |
| | | Edge 1RB Left | 17.95 | / | / | 18.30 | / | / | <=30 | Pass | |
| | 3750.015 | 3839.985 | Edge 1RB Right | 15.93 | / | / | 16.28 | / | / | <=30 | Pass |
| | | | Outer_Full | 16.85 | / | / | 17.20 | / | / | <=30 | Pass |
| | | | Inner_Full | 17.05 | / | / | 17.40 | / | / | <=30 | Pass |
| | | 3929.985 | Inner_1RB Left | 17.97 | / | / | 18.32 | / | / | <=30 | Pass |
| | | | Inner_1RB Right | 16.11 | / | / | 16.46 | / | / | <=30 | Pass |
| | | | Edge 1RB Left | 12.70 | / | / | 13.05 | / | / | <=30 | Pass |
| Edge 1RB Right | | | 14.05 | / | / | 14.40 | / | / | <=30 | Pass | |
| Outer_Full | | | 13.68 | / | / | 14.03 | / | / | <=30 | Pass | |
| Inner_Full | | | 13.96 | / | / | 14.31 | / | / | <=30 | Pass | |
| Inner_1RB Left | | | 12.70 | / | / | 13.05 | / | / | <=30 | Pass | |
| Inner_1RB Right | | | 14.18 | / | / | 14.53 | / | / | <=30 | Pass | |
| Edge 1RB Left | | | 14.87 | / | / | 15.22 | / | / | <=30 | Pass | |
| 3839.985 | Edge 1RB Right | 14.34 | / | / | 14.69 | / | / | <=30 | Pass | | |
| | Outer_Full | 15.23 | / | / | 15.58 | / | / | <=30 | Pass | | |
| | Inner_Full | 15.87 | / | / | 16.22 | / | / | <=30 | Pass | | |
| | Inner_1RB Left | 14.88 | / | / | 15.23 | / | / | <=30 | Pass | | |
| | Inner_1RB Right | 14.55 | / | / | 14.90 | / | / | <=30 | Pass | | |
| | Edge 1RB Left | 15.13 | / | / | 15.48 | / | / | <=30 | Pass | | |
| 3929.985 | Edge 1RB Right | 12.81 | / | / | 13.16 | / | / | <=30 | Pass | | |
| | Outer_Full | 14.02 | / | / | 14.37 | / | / | <=30 | Pass | | |
| | Inner_Full | 14.28 | / | / | 14.63 | / | / | <=30 | Pass | | |
| | Inner_1RB Left | 15.15 | / | / | 15.50 | / | / | <=30 | Pass | | |
| | Inner_1RB Right | 13.06 | / | / | 13.41 | / | / | <=30 | Pass | | |
| Note1: Antenna Gain: Ant1: 0.35dBi; Note2: EIRP=Conducted Power+Antenna Gain | | | | | | | | | | | |

2. Frequency Stability

2.1 Test Result

2.1.1 15k_SISO_10MHz

| 5G NR n77a SCS=15kHz SISO 10MHz | | | | | | | | |
|---------------------------------|-----------------|---------------|------------|----------------|------------------|-----------------------|----------------|----------------|
| Modulation | Frequency (MHz) | RB Allocation | Temp. (°C) | Volt. | Freq. Error (Hz) | Freq. vs. rated (ppm) | | Verdict |
| | | | | | | Result | Limit | |
| DFT-s-OFDM PI/2 BPSK | 3840 | Outer_Full | 20 | LV | -17.10 | -0.0045 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 12.90 | 0.0034 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -5.60 | -0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | | NV | -5.20 | -0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -1.50 | -0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | | 0 | NV | -3.80 | -0.0010 | >=-2.5 & <=2.5 |
| | | | 10 | NV | -5.30 | -0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 4.10 | 0.0011 | >=-2.5 & <=2.5 | Pass |
| 30 | NV | 3.90 | 0.0010 | >=-2.5 & <=2.5 | Pass | | | |

| | | | | | | | | | | | |
|--------------------|------|------------|-------------------|------|------------|---------|----------------|-------|---------|----------------|------|
| DFT-s-OFDM QPSK | 3840 | Outer_Full | 40 | NV | 7.70 | 0.0020 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 50 | NV | 1.10 | 0.0003 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 20 | LV | -4.40 | -0.0011 | >=-2.5 & <=2.5 | Pass | | | |
| | | | | HV | -5.10 | -0.0013 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -30 | NV | -2.40 | -0.0006 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -20 | NV | 3.20 | 0.0008 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -10 | NV | 7.80 | 0.0020 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 0 | NV | 1.30 | 0.0003 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 10 | NV | 1.60 | 0.0004 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 20 | NV | 5.40 | 0.0014 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 30 | NV | -2.90 | -0.0008 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 40 | NV | -1.40 | -0.0004 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 50 | NV | 2.00 | 0.0005 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 16 QAM | 3840 | Outer_Full | 20 | LV | -6.40 | -0.0017 | >=-2.5 & <=2.5 | Pass | | | |
| | | | | HV | -4.90 | -0.0013 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -30 | NV | -2.20 | -0.0006 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -20 | NV | -5.50 | -0.0014 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -10 | NV | 2.80 | 0.0007 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 0 | NV | -5.10 | -0.0013 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 10 | NV | -3.00 | -0.0008 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 20 | NV | -2.00 | -0.0005 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 30 | NV | -2.10 | -0.0005 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 40 | NV | -5.10 | -0.0013 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 50 | NV | -5.20 | -0.0014 | >=-2.5 & <=2.5 | Pass | | | |
| | | | DFT-s-OFDM 64 QAM | 3840 | Outer_Full | 20 | LV | 4.10 | 0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | | | | | HV | -4.10 | -0.0011 | >=-2.5 & <=2.5 | Pass |
| -30 | NV | 5.40 | | | | 0.0014 | >=-2.5 & <=2.5 | Pass | | | |
| -20 | NV | 3.60 | | | | 0.0009 | >=-2.5 & <=2.5 | Pass | | | |
| -10 | NV | -1.30 | | | | -0.0003 | >=-2.5 & <=2.5 | Pass | | | |
| 0 | NV | 4.60 | | | | 0.0012 | >=-2.5 & <=2.5 | Pass | | | |
| 10 | NV | 3.50 | | | | 0.0009 | >=-2.5 & <=2.5 | Pass | | | |
| 20 | NV | 4.00 | | | | 0.0010 | >=-2.5 & <=2.5 | Pass | | | |
| 30 | NV | 3.70 | | | | 0.0010 | >=-2.5 & <=2.5 | Pass | | | |
| 40 | NV | -6.00 | | | | -0.0016 | >=-2.5 & <=2.5 | Pass | | | |
| 50 | NV | 1.80 | | | | 0.0005 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 256 QAM | 3840 | Outer_Full | | | | 20 | LV | -5.10 | -0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | | | | | HV | 1.00 | 0.0003 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -4.70 | -0.0012 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -20 | NV | -3.50 | -0.0009 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -10 | NV | -6.00 | -0.0016 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 0 | NV | -6.00 | -0.0016 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 10 | NV | -12.00 | -0.0031 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 20 | NV | -4.00 | -0.0010 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 30 | NV | -4.20 | -0.0011 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 40 | NV | 4.70 | 0.0012 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 50 | NV | 3.10 | 0.0008 | >=-2.5 & <=2.5 | Pass | | | |
| | | | CP-OFDM QPSK | 3840 | Outer_Full | 20 | LV | -3.30 | -0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | | | | | HV | -6.00 | -0.0016 | >=-2.5 & <=2.5 | Pass |
| -30 | NV | 4.30 | | | | 0.0011 | >=-2.5 & <=2.5 | Pass | | | |
| -20 | NV | 4.80 | | | | 0.0013 | >=-2.5 & <=2.5 | Pass | | | |
| -10 | NV | 2.40 | | | | 0.0006 | >=-2.5 & <=2.5 | Pass | | | |
| 0 | NV | 0.80 | | | | 0.0002 | >=-2.5 & <=2.5 | Pass | | | |
| 10 | NV | 5.30 | | | | 0.0014 | >=-2.5 & <=2.5 | Pass | | | |
| 20 | NV | 3.10 | | | | 0.0008 | >=-2.5 & <=2.5 | Pass | | | |
| 30 | NV | 9.90 | | | | 0.0026 | >=-2.5 & <=2.5 | Pass | | | |
| 40 | NV | 6.80 | | | | 0.0018 | >=-2.5 & <=2.5 | Pass | | | |
| 50 | NV | 3.80 | | | | 0.0010 | >=-2.5 & <=2.5 | Pass | | | |
| CP-OFDM 16 QAM | 3840 | Outer_Full | | | | 20 | LV | -2.40 | -0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | | | | | HV | -1.60 | -0.0004 | >=-2.5 & <=2.5 | Pass |

| | | | | | | | | |
|-----------------|------|------------|-----|----|-------|---------|----------------|------|
| | | | -30 | NV | -2.70 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 3.70 | 0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -3.90 | -0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -3.00 | -0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -4.60 | -0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 1.90 | 0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 2.30 | 0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -0.10 | 0.0000 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 64 QAM | 3840 | Outer_Full | 20 | LV | -0.90 | -0.0002 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -4.10 | -0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -3.10 | -0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 2.90 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -1.10 | -0.0003 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 2.00 | 0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -3.90 | -0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | -3.90 | -0.0010 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 256 QAM | 3840 | Outer_Full | 20 | LV | -4.20 | -0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -2.00 | -0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -9.50 | -0.0025 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -2.70 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -5.30 | -0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -8.90 | -0.0023 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -8.70 | -0.0023 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | -5.60 | -0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -8.40 | -0.0022 | >=-2.5 & <=2.5 | Pass |
| | | | | NV | -2.40 | -0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -2.40 | -0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | -3.50 | -0.0009 | >=-2.5 & <=2.5 | Pass |

2.1.2 15k_SISO_15MHz

| 5G NR n77a SCS=15kHz SISO 15MHz | | | | | | | | |
|---------------------------------|-----------------|---------------|------------|----------------|------------------|-----------------------|----------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | Temp. (°C) | Volt. | Freq. Error (Hz) | Freq. vs. rated (ppm) | | Verdict |
| | | | | | | Result | Limit | |
| DFT-s-OFDM PI/2 BPSK | 3840 | Outer_Full | 20 | LV | -2.20 | -0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -0.70 | -0.0002 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 7.30 | 0.0019 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 8.90 | 0.0023 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 11.10 | 0.0029 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 6.90 | 0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 5.60 | 0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 7.30 | 0.0019 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 1.80 | 0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 4.50 | 0.0012 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM QPSK | 3840 | Outer_Full | 20 | LV | -5.90 | -0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 2.80 | 0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 3.00 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 6.00 | 0.0016 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 4.40 | 0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 3.90 | 0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 4.70 | 0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 8.10 | 0.0021 | >=-2.5 & <=2.5 | Pass |
| 30 | NV | 6.60 | 0.0017 | >=-2.5 & <=2.5 | Pass | | | |

| | | | | | | | | | | | |
|-------------------|------|------------|--------------------|------|------------|---------|----------------|-------|---------|----------------|------|
| DFT-s-OFDM 16 QAM | 3840 | Outer_Full | 40 | NV | 5.80 | 0.0015 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 50 | NV | 4.80 | 0.0013 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 20 | LV | 6.90 | 0.0018 | >=-2.5 & <=2.5 | Pass | | | |
| | | | | HV | 6.70 | 0.0017 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -30 | NV | 8.30 | 0.0022 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -20 | NV | 8.40 | 0.0022 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -10 | NV | 8.00 | 0.0021 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 0 | NV | 4.10 | 0.0011 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 10 | NV | 1.70 | 0.0004 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 20 | NV | -3.90 | -0.0010 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 30 | NV | 1.20 | 0.0003 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 40 | NV | -4.10 | -0.0011 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 50 | NV | 1.90 | 0.0005 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 64 QAM | 3840 | Outer_Full | 20 | LV | -2.30 | -0.0006 | >=-2.5 & <=2.5 | Pass | | | |
| | | | | HV | -2.20 | -0.0006 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -30 | NV | -1.60 | -0.0004 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -20 | NV | -3.90 | -0.0010 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -10 | NV | -4.60 | -0.0012 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 0 | NV | -1.00 | -0.0003 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 10 | NV | -14.30 | -0.0037 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 20 | NV | -2.20 | -0.0006 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 30 | NV | -4.00 | -0.0010 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 40 | NV | -3.30 | -0.0009 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 50 | NV | 0.90 | 0.0002 | >=-2.5 & <=2.5 | Pass | | | |
| | | | DFT-s-OFDM 256 QAM | 3840 | Outer_Full | 20 | LV | -4.10 | -0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | | | | | HV | -2.70 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| -30 | NV | -3.20 | | | | -0.0008 | >=-2.5 & <=2.5 | Pass | | | |
| -20 | NV | -3.10 | | | | -0.0008 | >=-2.5 & <=2.5 | Pass | | | |
| -10 | NV | 1.00 | | | | 0.0003 | >=-2.5 & <=2.5 | Pass | | | |
| 0 | NV | 13.10 | | | | 0.0034 | >=-2.5 & <=2.5 | Pass | | | |
| 10 | NV | 3.60 | | | | 0.0009 | >=-2.5 & <=2.5 | Pass | | | |
| 20 | NV | 4.60 | | | | 0.0012 | >=-2.5 & <=2.5 | Pass | | | |
| 30 | NV | 6.60 | | | | 0.0017 | >=-2.5 & <=2.5 | Pass | | | |
| 40 | NV | 6.80 | | | | 0.0018 | >=-2.5 & <=2.5 | Pass | | | |
| 50 | NV | 6.10 | | | | 0.0016 | >=-2.5 & <=2.5 | Pass | | | |
| CP-OFDM QPSK | 3840 | Outer_Full | | | | 20 | LV | 1.50 | 0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | | | | | HV | 7.20 | 0.0019 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 4.70 | 0.0012 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -20 | NV | 4.30 | 0.0011 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -10 | NV | 9.60 | 0.0025 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 0 | NV | 6.70 | 0.0017 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 10 | NV | 6.50 | 0.0017 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 20 | NV | 5.30 | 0.0014 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 30 | NV | 5.80 | 0.0015 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 40 | NV | 5.20 | 0.0014 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 50 | NV | 7.80 | 0.0020 | >=-2.5 & <=2.5 | Pass | | | |
| | | | CP-OFDM 16 QAM | 3840 | Outer_Full | 20 | LV | -1.20 | -0.0003 | >=-2.5 & <=2.5 | Pass |
| | | | | | | | HV | 2.60 | 0.0007 | >=-2.5 & <=2.5 | Pass |
| -30 | NV | 4.70 | | | | 0.0012 | >=-2.5 & <=2.5 | Pass | | | |
| -20 | NV | 6.60 | | | | 0.0017 | >=-2.5 & <=2.5 | Pass | | | |
| -10 | NV | 10.20 | | | | 0.0027 | >=-2.5 & <=2.5 | Pass | | | |
| 0 | NV | -2.00 | | | | -0.0005 | >=-2.5 & <=2.5 | Pass | | | |
| 10 | NV | 3.70 | | | | 0.0010 | >=-2.5 & <=2.5 | Pass | | | |
| 20 | NV | -1.80 | | | | -0.0005 | >=-2.5 & <=2.5 | Pass | | | |
| 30 | NV | -2.10 | | | | -0.0005 | >=-2.5 & <=2.5 | Pass | | | |
| 40 | NV | -1.00 | | | | -0.0003 | >=-2.5 & <=2.5 | Pass | | | |
| 50 | NV | -2.30 | | | | -0.0006 | >=-2.5 & <=2.5 | Pass | | | |
| CP-OFDM 64 QAM | 3840 | Outer_Full | | | | 20 | LV | 6.20 | 0.0016 | >=-2.5 & <=2.5 | Pass |
| | | | | | | | HV | 4.70 | 0.0012 | >=-2.5 & <=2.5 | Pass |

| | | | | | | | | |
|-----------------|------|------------|-----|----|-------|---------|----------------|------|
| | | | -30 | NV | 7.80 | 0.0020 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 5.10 | 0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 2.40 | 0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 2.00 | 0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 3.80 | 0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 2.70 | 0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 3.20 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -1.70 | -0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | -2.30 | -0.0006 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 256 QAM | 3840 | Outer_Full | 20 | LV | 4.90 | 0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 3.40 | 0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 2.40 | 0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -6.50 | -0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 5.40 | 0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 1.30 | 0.0003 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 0.40 | 0.0001 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | -3.90 | -0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -1.20 | -0.0003 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -0.40 | -0.0001 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 0.30 | 0.0001 | >=-2.5 & <=2.5 | Pass |

2.1.3 15k_SISO_20MHz

| 5G NR n77a SCS=15kHz SISO 20MHz | | | | | | | | |
|---------------------------------|-----------------|---------------|------------|----------------|------------------|-----------------------|----------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | Temp. (°C) | Volt. | Freq. Error (Hz) | Freq. vs. rated (ppm) | | Verdict |
| | | | | | | Result | Limit | |
| DFT-s-OFDM PI/2 BPSK | 3840 | Outer_Full | 20 | LV | 6.40 | 0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 8.60 | 0.0022 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 6.30 | 0.0016 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -2.90 | -0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 4.30 | 0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 6.60 | 0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 7.40 | 0.0019 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 2.70 | 0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 5.40 | 0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 6.60 | 0.0017 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 4.00 | 0.0010 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM QPSK | 3840 | Outer_Full | 20 | LV | -2.10 | -0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -1.70 | -0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 3.00 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 4.00 | 0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 2.90 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 6.00 | 0.0016 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 5.20 | 0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 6.70 | 0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 7.30 | 0.0019 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 8.50 | 0.0022 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 1.40 | 0.0004 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 16 QAM | 3840 | Outer_Full | 20 | LV | -2.60 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -7.00 | -0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 2.60 | 0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -1.30 | -0.0003 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -3.20 | -0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -5.20 | -0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -4.10 | -0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 0.80 | 0.0002 | >=-2.5 & <=2.5 | Pass |
| 30 | NV | -2.60 | -0.0007 | >=-2.5 & <=2.5 | Pass | | | |

| | | | | | | | | |
|--------------------|------|------------|----------------|----------------|------------|---------|----------------|-------|
| DFT-s-OFDM 64 QAM | 3840 | Outer_Full | 40 | NV | -5.00 | -0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 5.90 | 0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | LV | 2.60 | 0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 2.90 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 3.30 | 0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 2.30 | 0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 2.70 | 0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 4.30 | 0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 4.80 | 0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 6.80 | 0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 5.20 | 0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 6.00 | 0.0016 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 5.90 | 0.0015 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 256 QAM | 3840 | Outer_Full | 20 | LV | 5.90 | 0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 5.80 | 0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 2.30 | 0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 2.90 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 4.50 | 0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 3.80 | 0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 2.10 | 0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 1.80 | 0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 6.20 | 0.0016 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 4.30 | 0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 3.90 | 0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | CP-OFDM QPSK | 3840 | Outer_Full | 20 | LV | -3.00 |
| HV | 1.50 | 0.0004 | | | | | >=-2.5 & <=2.5 | Pass |
| -30 | NV | 7.20 | | | | 0.0019 | >=-2.5 & <=2.5 | Pass |
| -20 | NV | 3.80 | | | | 0.0010 | >=-2.5 & <=2.5 | Pass |
| -10 | NV | 6.70 | | | | 0.0017 | >=-2.5 & <=2.5 | Pass |
| 0 | NV | 6.60 | | | | 0.0017 | >=-2.5 & <=2.5 | Pass |
| 10 | NV | 5.90 | | | | 0.0015 | >=-2.5 & <=2.5 | Pass |
| 20 | NV | 5.20 | | | | 0.0014 | >=-2.5 & <=2.5 | Pass |
| 30 | NV | 5.30 | | | | 0.0014 | >=-2.5 & <=2.5 | Pass |
| 40 | NV | 4.80 | | | | 0.0013 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 3.30 | | | | 0.0009 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 16 QAM | 3840 | Outer_Full | | | | 20 | LV | -4.70 |
| | | | HV | -0.30 | -0.0001 | | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -2.80 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -1.40 | -0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 7.50 | 0.0020 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 6.50 | 0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 2.20 | 0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 2.30 | 0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 1.30 | 0.0003 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 3.30 | 0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 4.40 | 0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | CP-OFDM 64 QAM | 3840 | Outer_Full | 20 | LV | 3.40 |
| HV | 2.40 | 0.0006 | | | | | >=-2.5 & <=2.5 | Pass |
| -30 | NV | -3.20 | | | | -0.0008 | >=-2.5 & <=2.5 | Pass |
| -20 | NV | 6.90 | | | | 0.0018 | >=-2.5 & <=2.5 | Pass |
| -10 | NV | 3.20 | | | | 0.0008 | >=-2.5 & <=2.5 | Pass |
| 0 | NV | 3.40 | | | | 0.0009 | >=-2.5 & <=2.5 | Pass |
| 10 | NV | 2.00 | | | | 0.0005 | >=-2.5 & <=2.5 | Pass |
| 20 | NV | -0.80 | | | | -0.0002 | >=-2.5 & <=2.5 | Pass |
| 30 | NV | 4.60 | | | | 0.0012 | >=-2.5 & <=2.5 | Pass |
| 40 | NV | 4.10 | | | | 0.0011 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | -1.20 | | | | -0.0003 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 256 QAM | 3840 | Outer_Full | | | | 20 | LV | -1.80 |
| | | | HV | -5.90 | -0.0015 | | >=-2.5 & <=2.5 | Pass |

| | | | | | | | | |
|--|--|--|-----|----|-------|---------|----------------|------|
| | | | -30 | NV | -2.50 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 2.00 | 0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -2.60 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 1.40 | 0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -0.80 | -0.0002 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 2.40 | 0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 6.60 | 0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 2.20 | 0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | -3.80 | -0.0010 | >=-2.5 & <=2.5 | Pass |

2.1.4 15k_SISO_40MHz

| 5G NR n77a SCS=15kHz SISO 40MHz | | | | | | | | |
|---------------------------------|-----------------|---------------|------------|----------------|------------------|-----------------------|----------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | Temp. (°C) | Volt. | Freq. Error (Hz) | Freq. vs. rated (ppm) | | Verdict |
| | | | | | | Result | Limit | |
| DFT-s-OFDM PI/2 BPSK | 3840 | Outer_Full | 20 | LV | -0.80 | -0.0002 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 11.10 | 0.0029 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 4.50 | 0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 2.30 | 0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 3.20 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 5.80 | 0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 3.40 | 0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 1.90 | 0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 2.50 | 0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -3.90 | -0.0010 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 3.40 | 0.0009 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM QPSK | 3840 | Outer_Full | 20 | LV | -8.20 | -0.0021 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -7.40 | -0.0019 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 6.50 | 0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -6.70 | -0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -1.40 | -0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -2.70 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 2.80 | 0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 4.80 | 0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 2.00 | 0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 1.20 | 0.0003 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 1.30 | 0.0003 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 16 QAM | 3840 | Outer_Full | 20 | LV | 3.20 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -4.40 | -0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 2.70 | 0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 1.50 | 0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -4.30 | -0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 4.30 | 0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -1.90 | -0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 2.60 | 0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -3.90 | -0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 1.80 | 0.0005 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | -3.10 | -0.0008 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 64 QAM | 3840 | Outer_Full | 20 | LV | -4.00 | -0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -3.80 | -0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -5.10 | -0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 2.30 | 0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 2.90 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 2.90 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -3.30 | -0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | -2.40 | -0.0006 | >=-2.5 & <=2.5 | Pass |
| 30 | NV | -2.20 | -0.0006 | >=-2.5 & <=2.5 | Pass | | | |

| | | | | | | | | | | | |
|--------------------|------|------------|-----------------|------|------------|---------|----------------|--------|---------|----------------|------|
| DFT-s-OFDM 256 QAM | 3840 | Outer_Full | 40 | NV | -3.40 | -0.0009 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 50 | NV | -7.30 | -0.0019 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 20 | LV | -3.90 | -0.0010 | >=-2.5 & <=2.5 | Pass | | | |
| | | | | HV | -4.60 | -0.0012 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -30 | NV | -6.20 | -0.0016 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -20 | NV | -5.00 | -0.0013 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -10 | NV | -7.30 | -0.0019 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 0 | NV | -3.90 | -0.0010 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 10 | NV | -3.50 | -0.0009 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 20 | NV | -4.60 | -0.0012 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 30 | NV | -4.60 | -0.0012 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 40 | NV | -7.60 | -0.0020 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 50 | NV | 2.80 | 0.0007 | >=-2.5 & <=2.5 | Pass | | | |
| CP-OFDM QPSK | 3840 | Outer_Full | 20 | LV | 1.80 | 0.0005 | >=-2.5 & <=2.5 | Pass | | | |
| | | | | HV | 2.40 | 0.0006 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -30 | NV | -2.90 | -0.0008 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -20 | NV | 1.70 | 0.0004 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -10 | NV | 1.80 | 0.0005 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 0 | NV | 2.70 | 0.0007 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 10 | NV | 2.20 | 0.0006 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 20 | NV | 3.40 | 0.0009 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 30 | NV | 4.30 | 0.0011 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 40 | NV | 3.60 | 0.0009 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 50 | NV | -1.40 | -0.0004 | >=-2.5 & <=2.5 | Pass | | | |
| | | | CP-OFDM 16 QAM | 3840 | Outer_Full | 20 | LV | 1.70 | 0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | | | | | HV | 1.60 | 0.0004 | >=-2.5 & <=2.5 | Pass |
| -30 | NV | 3.90 | | | | 0.0010 | >=-2.5 & <=2.5 | Pass | | | |
| -20 | NV | -1.20 | | | | -0.0003 | >=-2.5 & <=2.5 | Pass | | | |
| -10 | NV | -4.70 | | | | -0.0012 | >=-2.5 & <=2.5 | Pass | | | |
| 0 | NV | -1.10 | | | | -0.0003 | >=-2.5 & <=2.5 | Pass | | | |
| 10 | NV | -1.80 | | | | -0.0005 | >=-2.5 & <=2.5 | Pass | | | |
| 20 | NV | 1.90 | | | | 0.0005 | >=-2.5 & <=2.5 | Pass | | | |
| 30 | NV | 6.00 | | | | 0.0016 | >=-2.5 & <=2.5 | Pass | | | |
| 40 | NV | 1.60 | | | | 0.0004 | >=-2.5 & <=2.5 | Pass | | | |
| 50 | NV | 1.30 | | | | 0.0003 | >=-2.5 & <=2.5 | Pass | | | |
| CP-OFDM 64 QAM | 3840 | Outer_Full | | | | 20 | LV | -2.90 | -0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | | | | | HV | 3.10 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 4.10 | 0.0011 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -20 | NV | 2.40 | 0.0006 | >=-2.5 & <=2.5 | Pass | | | |
| | | | -10 | NV | -3.30 | -0.0009 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 0 | NV | -0.60 | -0.0002 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 10 | NV | -0.90 | -0.0002 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 20 | NV | -1.60 | -0.0004 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 30 | NV | 2.40 | 0.0006 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 40 | NV | -3.60 | -0.0009 | >=-2.5 & <=2.5 | Pass | | | |
| | | | 50 | NV | 2.50 | 0.0007 | >=-2.5 & <=2.5 | Pass | | | |
| | | | CP-OFDM 256 QAM | 3840 | Outer_Full | 20 | LV | -4.80 | -0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | | | | | HV | -11.40 | -0.0030 | >=-2.5 & <=2.5 | Pass |
| -30 | NV | -4.80 | | | | -0.0013 | >=-2.5 & <=2.5 | Pass | | | |
| -20 | NV | 12.20 | | | | 0.0032 | >=-2.5 & <=2.5 | Pass | | | |
| -10 | NV | -3.40 | | | | -0.0009 | >=-2.5 & <=2.5 | Pass | | | |
| 0 | NV | -4.00 | | | | -0.0010 | >=-2.5 & <=2.5 | Pass | | | |
| 10 | NV | -2.50 | | | | -0.0007 | >=-2.5 & <=2.5 | Pass | | | |
| 20 | NV | -5.60 | | | | -0.0015 | >=-2.5 & <=2.5 | Pass | | | |
| 30 | NV | -1.40 | | | | -0.0004 | >=-2.5 & <=2.5 | Pass | | | |
| 40 | NV | -1.40 | | | | -0.0004 | >=-2.5 & <=2.5 | Pass | | | |
| 50 | NV | -7.70 | | | | -0.0020 | >=-2.5 & <=2.5 | Pass | | | |

2.1.5 15k_SISO_50MHz

| 5G NR n77a SCS=15kHz SISO 50MHz | | | | | | | | |
|---------------------------------|-----------------|---------------|------------|----------------|------------------|-----------------------|----------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | Temp. (°C) | Volt. | Freq. Error (Hz) | Freq. vs. rated (ppm) | | Verdict |
| | | | | | | Result | Limit | |
| DFT-s-OFDM PI/2 BPSK | 3840 | Outer_Full | 20 | LV | 1.70 | 0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 3.60 | 0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 13.50 | 0.0035 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 11.70 | 0.0030 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 8.20 | 0.0021 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 6.70 | 0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 5.30 | 0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 4.30 | 0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 1.70 | 0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 1.60 | 0.0004 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 3.10 | 0.0008 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM QPSK | 3840 | Outer_Full | 20 | LV | -7.00 | -0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -5.00 | -0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -1.80 | -0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -1.20 | -0.0003 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -5.80 | -0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 1.90 | 0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 6.90 | 0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 7.50 | 0.0020 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -2.60 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -2.00 | -0.0005 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 1.40 | 0.0004 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 16 QAM | 3840 | Outer_Full | 20 | LV | 1.20 | 0.0003 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 5.70 | 0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 6.70 | 0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 2.30 | 0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 4.60 | 0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 3.30 | 0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 5.70 | 0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 2.70 | 0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -2.90 | -0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -4.00 | -0.0010 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | -3.40 | -0.0009 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 64 QAM | 3840 | Outer_Full | 20 | LV | -5.40 | -0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -2.50 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -9.00 | -0.0023 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 4.50 | 0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 3.70 | 0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 5.70 | 0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 3.00 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | -1.70 | -0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 3.60 | 0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 3.90 | 0.0010 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 3.10 | 0.0008 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 256 QAM | 3840 | Outer_Full | 20 | LV | 3.20 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -3.40 | -0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 2.30 | 0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -4.40 | -0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -1.70 | -0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -1.20 | -0.0003 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -7.70 | -0.0020 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | -3.60 | -0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -4.20 | -0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -3.90 | -0.0010 | >=-2.5 & <=2.5 | Pass |

| | | | | | | | | |
|-----------------|-------|------------|----------------|-------|------------|---------|----------------|-------|
| CP-OFDM QPSK | 3840 | Outer_Full | 50 | NV | -2.00 | -0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | LV | -3.10 | -0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -1.20 | -0.0003 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -3.30 | -0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -2.60 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -2.60 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 1.20 | 0.0003 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 2.10 | 0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 3.20 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 4.60 | 0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 2.20 | 0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | -1.60 | -0.0004 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 16 QAM | 3840 | Outer_Full | 20 | LV | 4.10 | 0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 4.20 | 0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 1.00 | 0.0003 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 2.50 | 0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -1.50 | -0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -2.30 | -0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -3.00 | -0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | -3.10 | -0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -4.30 | -0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -6.00 | -0.0016 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 1.70 | 0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | CP-OFDM 64 QAM | 3840 | Outer_Full | 20 | LV | 1.00 |
| HV | -1.50 | -0.0004 | | | | | >=-2.5 & <=2.5 | Pass |
| -30 | NV | -2.00 | | | | -0.0005 | >=-2.5 & <=2.5 | Pass |
| -20 | NV | -4.40 | | | | -0.0011 | >=-2.5 & <=2.5 | Pass |
| -10 | NV | -5.00 | | | | -0.0013 | >=-2.5 & <=2.5 | Pass |
| 0 | NV | -3.40 | | | | -0.0009 | >=-2.5 & <=2.5 | Pass |
| 10 | NV | -4.00 | | | | -0.0010 | >=-2.5 & <=2.5 | Pass |
| 20 | NV | 2.30 | | | | 0.0006 | >=-2.5 & <=2.5 | Pass |
| 30 | NV | -10.80 | | | | -0.0028 | >=-2.5 & <=2.5 | Pass |
| 40 | NV | 1.50 | | | | 0.0004 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 1.20 | | | | 0.0003 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 256 QAM | 3840 | Outer_Full | | | | 20 | LV | -8.00 |
| | | | HV | -0.90 | -0.0002 | | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 5.40 | 0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -2.30 | -0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -1.90 | -0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -6.30 | -0.0016 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -7.70 | -0.0020 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | -4.50 | -0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -2.10 | -0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -4.70 | -0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | -1.90 | -0.0005 | >=-2.5 & <=2.5 | Pass |

2.1.6 30k_SISO_10MHz

| 5G NR n77a SCS=30kHz SISO 10MHz | | | | | | | | |
|---------------------------------|-----------------|---------------|------------|-------|------------------|-----------------------|----------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | Temp. (°C) | Volt. | Freq. Error (Hz) | Freq. vs. rated (ppm) | | Verdict |
| | | | | | | Result | Limit | |
| DFT-s-OFDM PI/2 BPSK | 3839.985 | Outer_Full | 20 | LV | 3.90 | 0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -5.00 | -0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 6.00 | 0.0016 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 17.10 | 0.0045 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 30.30 | 0.0079 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 29.50 | 0.0077 | >=-2.5 & <=2.5 | Pass |

| | | | | | | | | |
|--------------------|----------|------------|--------|----------------|--------|---------|----------------|------|
| | | | 10 | NV | 6.90 | 0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | -8.20 | -0.0021 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 13.50 | 0.0035 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 23.40 | 0.0061 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 28.80 | 0.0075 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM QPSK | 3839.985 | Outer_Full | 20 | LV | 15.70 | 0.0041 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 39.10 | 0.0102 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 27.10 | 0.0071 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 20.40 | 0.0053 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 13.50 | 0.0035 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 22.80 | 0.0059 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 20.40 | 0.0053 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 14.20 | 0.0037 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 47.50 | 0.0124 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 13.30 | 0.0035 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM 16 QAM | 3839.985 | Outer_Full | 20 | LV | -21.50 | -0.0056 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -4.20 | -0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 38.10 | 0.0099 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -10.90 | -0.0028 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -4.70 | -0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 16.40 | 0.0043 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -6.50 | -0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 29.30 | 0.0076 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -2.80 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 19.50 | 0.0051 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM 64 QAM | 3839.985 | Outer_Full | 20 | LV | -4.10 | -0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -9.40 | -0.0024 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 31.90 | 0.0083 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 5.80 | 0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 11.00 | 0.0029 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 42.60 | 0.0111 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 10.70 | 0.0028 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 13.70 | 0.0036 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 17.60 | 0.0046 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 15.40 | 0.0040 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM 256 QAM | 3839.985 | Outer_Full | 20 | LV | 31.00 | 0.0081 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 16.80 | 0.0044 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 8.90 | 0.0023 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 27.70 | 0.0072 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 14.20 | 0.0037 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 7.30 | 0.0019 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 52.50 | 0.0137 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 23.20 | 0.0060 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 20.80 | 0.0054 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 40.60 | 0.0106 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM QPSK | 3839.985 | Outer_Full | 20 | LV | 28.50 | 0.0074 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 3.20 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 21.40 | 0.0056 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 22.70 | 0.0059 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 17.70 | 0.0046 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 42.10 | 0.0110 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 16.00 | 0.0042 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 25.30 | 0.0066 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 15.10 | 0.0039 | >=-2.5 & <=2.5 | Pass |
| 40 | NV | 9.40 | 0.0024 | >=-2.5 & <=2.5 | Pass | | | |

| | | | | | | | | |
|-----------------|----------|------------|--------|----------------|--------|---------|----------------|------|
| CP-OFDM 16 QAM | 3839.985 | Outer_Full | 50 | NV | 10.40 | 0.0027 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | LV | 31.10 | 0.0081 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 15.80 | 0.0041 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 9.30 | 0.0024 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 15.60 | 0.0041 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 4.40 | 0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -13.40 | -0.0035 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 19.30 | 0.0050 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 12.10 | 0.0032 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 29.80 | 0.0078 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 10.10 | 0.0026 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 11.90 | 0.0031 | >=-2.5 & <=2.5 | Pass | | | |
| CP-OFDM 64 QAM | 3839.985 | Outer_Full | 20 | LV | 14.60 | 0.0038 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 25.40 | 0.0066 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 3.90 | 0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 10.30 | 0.0027 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 28.80 | 0.0075 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 27.80 | 0.0072 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -6.70 | -0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 5.70 | 0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 54.70 | 0.0142 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 33.20 | 0.0086 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 23.30 | 0.0061 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 256 QAM | 3839.985 | Outer_Full | 20 | LV | 20.80 | 0.0054 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 47.00 | 0.0122 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 18.90 | 0.0049 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 21.90 | 0.0057 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 16.50 | 0.0043 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 11.10 | 0.0029 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 11.70 | 0.0030 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 18.90 | 0.0049 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 12.40 | 0.0032 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -2.30 | -0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 14.20 | 0.0037 | >=-2.5 & <=2.5 | Pass |

2.1.7 30k_SISO_15MHz

| 5G NR n77a SCS=30kHz SISO 15MHz | | | | | | | | |
|---------------------------------|-----------------|---------------|------------|-------|------------------|-----------------------|----------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | Temp. (°C) | Volt. | Freq. Error (Hz) | Freq. vs. rated (ppm) | | Verdict |
| | | | | | | Result | Limit | |
| DFT-s-OFDM PI/2 BPSK | 3839.985 | Outer_Full | 20 | LV | 11.00 | 0.0029 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 16.40 | 0.0043 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -11.30 | -0.0029 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 7.00 | 0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 5.10 | 0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 8.60 | 0.0022 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -6.70 | -0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 19.90 | 0.0052 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 14.50 | 0.0038 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 27.60 | 0.0072 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 34.70 | 0.0090 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM QPSK | 3839.985 | Outer_Full | 20 | LV | -14.80 | -0.0039 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 2.90 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 33.50 | 0.0087 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -18.20 | -0.0047 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 9.20 | 0.0024 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 18.60 | 0.0048 | >=-2.5 & <=2.5 | Pass |

| | | | | | | | | |
|--------------------|----------|------------|--------|----------------|-------|---------|----------------|------|
| | | | 10 | NV | 7.00 | 0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 9.60 | 0.0025 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 6.90 | 0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 13.20 | 0.0034 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 23.30 | 0.0061 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM 16 QAM | 3839.985 | Outer_Full | 20 | LV | -7.10 | -0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 16.90 | 0.0044 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -5.80 | -0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 17.50 | 0.0046 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 9.90 | 0.0026 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 43.60 | 0.0114 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 8.80 | 0.0023 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 47.80 | 0.0124 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 8.30 | 0.0022 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -6.60 | -0.0017 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM 64 QAM | 3839.985 | Outer_Full | 20 | LV | 15.90 | 0.0041 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 32.20 | 0.0084 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 17.10 | 0.0045 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 31.80 | 0.0083 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 24.70 | 0.0064 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 20.60 | 0.0054 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 35.70 | 0.0093 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 1.50 | 0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 3.80 | 0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 25.80 | 0.0067 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM 256 QAM | 3839.985 | Outer_Full | 20 | LV | -9.50 | -0.0025 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 3.00 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 14.80 | 0.0039 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 20.80 | 0.0054 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 6.10 | 0.0016 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 17.90 | 0.0047 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 10.10 | 0.0026 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 45.00 | 0.0117 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 36.60 | 0.0095 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 5.80 | 0.0015 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM QPSK | 3839.985 | Outer_Full | 20 | LV | 8.60 | 0.0022 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 1.70 | 0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 25.50 | 0.0066 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 13.60 | 0.0035 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 14.30 | 0.0037 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 17.10 | 0.0045 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 35.20 | 0.0092 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | -6.60 | -0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 4.40 | 0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 14.40 | 0.0038 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 16 QAM | 3839.985 | Outer_Full | 20 | LV | 11.70 | 0.0030 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 20.00 | 0.0052 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -8.00 | -0.0021 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -7.70 | -0.0020 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 15.40 | 0.0040 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 21.90 | 0.0057 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 17.80 | 0.0046 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 16.90 | 0.0044 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -2.10 | -0.0005 | >=-2.5 & <=2.5 | Pass |
| 40 | NV | 25.70 | 0.0067 | >=-2.5 & <=2.5 | Pass | | | |

| | | | | | | | | |
|-----------------|----------|------------|--------|----------------|--------|---------|----------------|------|
| CP-OFDM 64 QAM | 3839.985 | Outer_Full | 50 | NV | 14.20 | 0.0037 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | LV | 15.70 | 0.0041 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 15.50 | 0.0040 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 17.20 | 0.0045 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 27.40 | 0.0071 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 3.20 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 32.60 | 0.0085 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -11.50 | -0.0030 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 4.70 | 0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -4.30 | -0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 30.20 | 0.0079 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 25.10 | 0.0065 | >=-2.5 & <=2.5 | Pass | | | |
| CP-OFDM 256 QAM | 3839.985 | Outer_Full | 20 | LV | 19.40 | 0.0051 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 4.60 | 0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 25.90 | 0.0067 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 4.60 | 0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 24.00 | 0.0063 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 29.80 | 0.0078 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 15.00 | 0.0039 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 7.70 | 0.0020 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 26.00 | 0.0068 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 19.80 | 0.0052 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 17.50 | 0.0046 | >=-2.5 & <=2.5 | Pass |

2.1.8 30k_SISO_20MHz

| 5G NR n77a SCS=30kHz SISO 20MHz | | | | | | | | |
|---------------------------------|-----------------|---------------|------------|----------------|------------------|-----------------------|----------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | Temp. (°C) | Volt. | Freq. Error (Hz) | Freq. vs. rated (ppm) | | Verdict |
| | | | | | | Result | Limit | |
| DFT-s-OFDM PI/2 BPSK | 3839.985 | Outer_Full | 20 | LV | 25.30 | 0.0066 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 45.30 | 0.0118 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 64.80 | 0.0169 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 22.00 | 0.0057 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 25.70 | 0.0067 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 10.20 | 0.0027 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 12.10 | 0.0032 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 18.70 | 0.0049 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 6.20 | 0.0016 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 11.30 | 0.0029 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 25.30 | 0.0066 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM QPSK | 3839.985 | Outer_Full | 20 | LV | 10.90 | 0.0028 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 50.60 | 0.0132 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 23.40 | 0.0061 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 21.00 | 0.0055 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 31.90 | 0.0083 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 17.70 | 0.0046 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 5.50 | 0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 40.50 | 0.0105 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 19.10 | 0.0050 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 12.20 | 0.0032 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 44.40 | 0.0116 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 16 QAM | 3839.985 | Outer_Full | 20 | LV | -7.60 | -0.0020 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 16.50 | 0.0043 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 10.90 | 0.0028 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 30.40 | 0.0079 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 23.50 | 0.0061 | >=-2.5 & <=2.5 | Pass |
| 0 | NV | 13.70 | 0.0036 | >=-2.5 & <=2.5 | Pass | | | |

| | | | | | | | | |
|--------------------|----------|------------|-----|----|-------|---------|----------------|------|
| | | | 10 | NV | 37.60 | 0.0098 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 28.00 | 0.0073 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 3.60 | 0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 7.90 | 0.0021 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 22.60 | 0.0059 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM 64 QAM | 3839.985 | Outer_Full | 20 | LV | 23.80 | 0.0062 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 27.50 | 0.0072 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 6.90 | 0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 7.50 | 0.0020 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 26.80 | 0.0070 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 10.40 | 0.0027 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 22.00 | 0.0057 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 29.40 | 0.0077 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -7.30 | -0.0019 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 7.90 | 0.0021 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM 256 QAM | 3839.985 | Outer_Full | 20 | LV | 18.60 | 0.0048 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -7.00 | -0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 14.10 | 0.0037 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -6.30 | -0.0016 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 45.90 | 0.0120 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 6.90 | 0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 8.70 | 0.0023 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 12.90 | 0.0034 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 9.40 | 0.0024 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -2.70 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM QPSK | 3839.985 | Outer_Full | 20 | LV | 31.70 | 0.0083 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 30.70 | 0.0080 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 30.10 | 0.0078 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 31.40 | 0.0082 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 37.80 | 0.0098 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -4.60 | -0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 11.60 | 0.0030 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 7.00 | 0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 13.30 | 0.0035 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 17.60 | 0.0046 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 16 QAM | 3839.985 | Outer_Full | 20 | LV | 21.50 | 0.0056 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 30.70 | 0.0080 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 36.50 | 0.0095 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -5.10 | -0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 20.90 | 0.0054 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 6.30 | 0.0016 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -2.70 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 20.30 | 0.0053 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 17.10 | 0.0045 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -7.00 | -0.0018 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 64 QAM | 3839.985 | Outer_Full | 20 | LV | 17.00 | 0.0044 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 16.30 | 0.0042 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 15.50 | 0.0040 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 26.10 | 0.0068 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 12.70 | 0.0033 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 13.10 | 0.0034 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 2.40 | 0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 13.70 | 0.0036 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 12.30 | 0.0032 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -4.60 | -0.0012 | >=-2.5 & <=2.5 | Pass |

| Modulation | Frequency (MHz) | RB Allocation | Temp. (°C) | Volt. | Freq. Error (Hz) | Freq. vs. rated (ppm) | | Verdict |
|-----------------|-----------------|---------------|------------|-------|------------------|-----------------------|----------------|---------|
| | | | | | | Result | Limit | |
| CP-OFDM 256 QAM | 3839.985 | Outer_Full | 50 | NV | 8.10 | 0.0021 | >=-2.5 & <=2.5 | Pass |
| | | | | LV | 10.90 | 0.0028 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | HV | 41.80 | 0.0109 | >=-2.5 & <=2.5 | Pass |
| | | | | NV | 9.00 | 0.0023 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 9.10 | 0.0024 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 22.20 | 0.0058 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 20.90 | 0.0054 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 24.10 | 0.0063 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 54.50 | 0.0142 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 34.00 | 0.0089 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 13.30 | 0.0035 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 19.10 | 0.0050 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | | | | | | | |

2.1.9 30k_SISO_40MHz

| 5G NR n77a SCS=30kHz SISO 40MHz | | | | | | | | |
|---------------------------------|-----------------|---------------|------------|-------|------------------|-----------------------|----------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | Temp. (°C) | Volt. | Freq. Error (Hz) | Freq. vs. rated (ppm) | | Verdict |
| | | | | | | Result | Limit | |
| DFT-s-OFDM PI/2 BPSK | 3839.985 | Outer_Full | 20 | LV | 6.60 | 0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 16.90 | 0.0044 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 6.70 | 0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | | NV | 10.10 | 0.0026 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 23.30 | 0.0061 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 41.60 | 0.0108 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 14.30 | 0.0037 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 8.70 | 0.0023 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 11.90 | 0.0031 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -3.60 | -0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 17.20 | 0.0045 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | | | | |
| DFT-s-OFDM QPSK | 3839.985 | Outer_Full | 20 | LV | 23.60 | 0.0061 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -3.00 | -0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 20.30 | 0.0053 | >=-2.5 & <=2.5 | Pass |
| | | | | NV | 25.40 | 0.0066 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 25.70 | 0.0067 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 2.70 | 0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 3.10 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 15.90 | 0.0041 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 3.10 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 46.10 | 0.0120 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -3.50 | -0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | | | | |
| DFT-s-OFDM 16 QAM | 3839.985 | Outer_Full | 20 | LV | 16.60 | 0.0043 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 8.40 | 0.0022 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 14.40 | 0.0038 | >=-2.5 & <=2.5 | Pass |
| | | | | NV | -7.10 | -0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -4.20 | -0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -1.60 | -0.0004 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 52.60 | 0.0137 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -4.40 | -0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 19.70 | 0.0051 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 27.80 | 0.0072 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 11.90 | 0.0031 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | | | | |
| DFT-s-OFDM 64 QAM | 3839.985 | Outer_Full | 20 | LV | -5.30 | -0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 7.80 | 0.0020 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 4.20 | 0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | | NV | 37.90 | 0.0099 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 5.80 | 0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -4.10 | -0.0011 | >=-2.5 & <=2.5 | Pass |
| 0 | NV | | | | | | | |

| | | | | | | | | |
|--------------------|----------|------------|---------|----------------|--------|---------|----------------|------|
| | | | 10 | NV | 53.90 | 0.0140 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 21.00 | 0.0055 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -9.90 | -0.0026 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 15.40 | 0.0040 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | -4.40 | -0.0011 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM 256 QAM | 3839.985 | Outer_Full | 20 | LV | 22.20 | 0.0058 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 3.30 | 0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 23.50 | 0.0061 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 21.60 | 0.0056 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 20.10 | 0.0052 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 11.20 | 0.0029 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 10.80 | 0.0028 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 22.00 | 0.0057 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 3.30 | 0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 26.00 | 0.0068 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM QPSK | 3839.985 | Outer_Full | 20 | LV | 28.50 | 0.0074 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 16.70 | 0.0043 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 18.80 | 0.0049 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 14.80 | 0.0039 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 4.60 | 0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 11.10 | 0.0029 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 58.40 | 0.0152 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | -1.80 | -0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 7.60 | 0.0020 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 7.60 | 0.0020 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 16 QAM | 3839.985 | Outer_Full | 20 | LV | 17.90 | 0.0047 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 5.00 | 0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 12.80 | 0.0033 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 6.60 | 0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 8.50 | 0.0022 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -16.70 | -0.0043 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 16.80 | 0.0044 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 19.80 | 0.0052 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 22.90 | 0.0060 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 8.20 | 0.0021 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 64 QAM | 3839.985 | Outer_Full | 20 | LV | -3.80 | -0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 27.00 | 0.0070 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -7.00 | -0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 12.10 | 0.0032 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 39.00 | 0.0102 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -10.80 | -0.0028 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 4.30 | 0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 35.40 | 0.0092 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -2.40 | -0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 21.90 | 0.0057 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 256 QAM | 3839.985 | Outer_Full | 20 | LV | 41.50 | 0.0108 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -7.20 | -0.0019 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 8.50 | 0.0022 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 55.90 | 0.0146 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -3.40 | -0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -6.80 | -0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 16.90 | 0.0044 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 13.20 | 0.0034 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 6.60 | 0.0017 | >=-2.5 & <=2.5 | Pass |
| 40 | NV | -5.40 | -0.0014 | >=-2.5 & <=2.5 | Pass | | | |

| | | | | | | | | |
|--|--|--|----|----|------|--------|----------------|------|
| | | | 50 | NV | 3.70 | 0.0010 | >=-2.5 & <=2.5 | Pass |
|--|--|--|----|----|------|--------|----------------|------|

2.1.10 30k_SISO_50MHz

| 5G NR n77a SCS=30kHz SISO 50MHz | | | | | | | | |
|---------------------------------|-----------------|---------------|------------|----------------|------------------|-----------------------|----------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | Temp. (°C) | Volt. | Freq. Error (Hz) | Freq. vs. rated (ppm) | | Verdict |
| | | | | | | Result | Limit | |
| DFT-s-OFDM PI/2 BPSK | 3839.985 | Outer_Full | 20 | LV | 10.10 | 0.0026 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 28.50 | 0.0074 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 35.30 | 0.0092 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 11.30 | 0.0029 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -5.10 | -0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -22.50 | -0.0059 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 22.80 | 0.0059 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 5.00 | 0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 12.80 | 0.0033 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 13.30 | 0.0035 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 12.10 | 0.0032 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM QPSK | 3839.985 | Outer_Full | 20 | LV | 37.40 | 0.0097 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 14.50 | 0.0038 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 23.40 | 0.0061 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 11.40 | 0.0030 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 13.00 | 0.0034 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 11.50 | 0.0030 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 16.70 | 0.0043 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 4.60 | 0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 18.00 | 0.0047 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 16.20 | 0.0042 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | -8.40 | -0.0022 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 16 QAM | 3839.985 | Outer_Full | 20 | LV | 23.80 | 0.0062 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -9.70 | -0.0025 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 18.20 | 0.0047 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -14.70 | -0.0038 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 8.70 | 0.0023 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 28.90 | 0.0075 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 20.30 | 0.0053 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 28.40 | 0.0074 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 6.50 | 0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 24.00 | 0.0063 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 22.50 | 0.0059 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 64 QAM | 3839.985 | Outer_Full | 20 | LV | -19.60 | -0.0051 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 16.20 | 0.0042 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 24.60 | 0.0064 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 20.20 | 0.0053 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 14.50 | 0.0038 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 14.30 | 0.0037 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 14.70 | 0.0038 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 12.50 | 0.0033 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 35.30 | 0.0092 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 8.00 | 0.0021 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 12.30 | 0.0032 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 256 QAM | 3839.985 | Outer_Full | 20 | LV | 4.50 | 0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 14.90 | 0.0039 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -20.60 | -0.0054 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 25.20 | 0.0066 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 19.10 | 0.0050 | >=-2.5 & <=2.5 | Pass |
| 0 | NV | 26.70 | 0.0070 | >=-2.5 & <=2.5 | Pass | | | |

| | | | | | | | | |
|-----------------|----------|------------|-----|----|--------|---------|----------------|------|
| | | | 10 | NV | 19.00 | 0.0049 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | -2.50 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 29.20 | 0.0076 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 12.30 | 0.0032 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 5.90 | 0.0015 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM QPSK | 3839.985 | Outer_Full | 20 | LV | 31.00 | 0.0081 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 22.40 | 0.0058 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 15.50 | 0.0040 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 15.90 | 0.0041 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 21.00 | 0.0055 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 17.30 | 0.0045 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -7.60 | -0.0020 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 21.80 | 0.0057 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 16.70 | 0.0043 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 7.30 | 0.0019 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 16 QAM | 3839.985 | Outer_Full | 20 | LV | 6.90 | 0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -25.80 | -0.0067 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 15.90 | 0.0041 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 17.80 | 0.0046 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -14.00 | -0.0036 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 10.50 | 0.0027 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 16.80 | 0.0044 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | -12.80 | -0.0033 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 8.40 | 0.0022 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 19.30 | 0.0050 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 64 QAM | 3839.985 | Outer_Full | 20 | LV | 25.00 | 0.0065 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 22.20 | 0.0058 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -1.20 | -0.0003 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 20.00 | 0.0052 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 15.50 | 0.0040 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 23.10 | 0.0060 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -6.90 | -0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 18.30 | 0.0048 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 28.40 | 0.0074 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 27.50 | 0.0072 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 256 QAM | 3839.985 | Outer_Full | 20 | LV | 16.40 | 0.0043 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 16.10 | 0.0042 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 7.30 | 0.0019 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 5.10 | 0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 11.50 | 0.0030 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 15.80 | 0.0041 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 19.30 | 0.0050 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 18.40 | 0.0048 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 14.20 | 0.0037 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 34.60 | 0.0090 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 32.40 | 0.0084 | >=-2.5 & <=2.5 | Pass |

2.1.11 30k_SISO_60MHz

| 5G NR n77a SCS=30kHz SISO 60MHz | | | | | | | | |
|---------------------------------|-----------------|---------------|------------|-------|------------------|-----------------------|----------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | Temp. (°C) | Volt. | Freq. Error (Hz) | Freq. vs. rated (ppm) | | Verdict |
| | | | | | | Result | Limit | |
| DFT-s-OFDM PI/2 BPSK | 3839.985 | Outer_Full | 20 | LV | 21.90 | 0.0057 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -9.40 | -0.0024 | >=-2.5 & <=2.5 | Pass |

| | | | | | | | | |
|--------------------|----------|------------|--------|----------------|--------|---------|----------------|------|
| | | | -30 | NV | 5.80 | 0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 14.50 | 0.0038 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 25.90 | 0.0067 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -12.70 | -0.0033 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -10.30 | -0.0027 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 13.10 | 0.0034 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 27.70 | 0.0072 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -9.20 | -0.0024 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM QPSK | 3839.985 | Outer_Full | 50 | NV | 1.00 | 0.0003 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | LV | 37.00 | 0.0096 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 12.10 | 0.0032 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 11.80 | 0.0031 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 18.80 | 0.0049 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 12.60 | 0.0033 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -6.60 | -0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 26.80 | 0.0070 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 30.40 | 0.0079 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 14.00 | 0.0036 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM 16 QAM | 3839.985 | Outer_Full | 40 | NV | 11.40 | 0.0030 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 8.10 | 0.0021 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | LV | 5.60 | 0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -4.70 | -0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 2.70 | 0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 19.50 | 0.0051 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 10.20 | 0.0027 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -3.20 | -0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 10.20 | 0.0027 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 18.80 | 0.0049 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM 64 QAM | 3839.985 | Outer_Full | 30 | NV | 11.90 | 0.0031 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 11.60 | 0.0030 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 8.40 | 0.0022 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | LV | 17.10 | 0.0045 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 5.40 | 0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 11.70 | 0.0030 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 58.20 | 0.0152 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 14.40 | 0.0038 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 15.00 | 0.0039 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 8.10 | 0.0021 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM 256 QAM | 3839.985 | Outer_Full | 20 | NV | 21.30 | 0.0055 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 18.90 | 0.0049 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 11.70 | 0.0030 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 18.50 | 0.0048 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | -6.50 | -0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | LV | 14.20 | 0.0037 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 12.00 | 0.0031 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 15.90 | 0.0041 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 32.60 | 0.0085 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 18.50 | 0.0048 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM QPSK | 3839.985 | Outer_Full | 0 | NV | 21.00 | 0.0055 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 30.80 | 0.0080 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 18.90 | 0.0049 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 11.70 | 0.0030 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 18.50 | 0.0048 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 29.50 | 0.0077 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | LV | 24.10 | 0.0063 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 12.10 | 0.0032 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 16.70 | 0.0043 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 21.30 | 0.0055 | >=-2.5 & <=2.5 | Pass |
| | NV | 9.50 | 0.0025 | >=-2.5 & <=2.5 | Pass | | | |
| | NV | 29.50 | 0.0077 | >=-2.5 & <=2.5 | Pass | | | |

| | | | | | | | | |
|-----------------|----------|------------|-----|----|-------|---------|----------------|------|
| | | | 10 | NV | 13.90 | 0.0036 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 28.30 | 0.0074 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 28.10 | 0.0073 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 6.20 | 0.0016 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 20.80 | 0.0054 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 16 QAM | 3839.985 | Outer_Full | 20 | LV | -3.20 | -0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -2.90 | -0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 52.30 | 0.0136 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -5.20 | -0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 14.20 | 0.0037 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 39.80 | 0.0104 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 8.30 | 0.0022 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 3.20 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -5.50 | -0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 16.20 | 0.0042 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 64 QAM | 3839.985 | Outer_Full | 20 | LV | 21.90 | 0.0057 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 6.00 | 0.0016 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 28.10 | 0.0073 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 11.90 | 0.0031 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 12.20 | 0.0032 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 23.50 | 0.0061 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 15.30 | 0.0040 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 9.10 | 0.0024 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 18.80 | 0.0049 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 16.60 | 0.0043 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 256 QAM | 3839.985 | Outer_Full | 20 | LV | 11.80 | 0.0031 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 18.90 | 0.0049 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 23.20 | 0.0060 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 17.10 | 0.0045 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 17.40 | 0.0045 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 15.90 | 0.0041 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -6.00 | -0.0016 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 24.00 | 0.0063 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 18.60 | 0.0048 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 10.20 | 0.0027 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 26.10 | 0.0068 | >=-2.5 & <=2.5 | Pass |

2.1.12 30k_SISO_80MHz

| 5G NR n77a SCS=30kHz SISO 80MHz | | | | | | | | |
|---------------------------------|-----------------|---------------|------------|----------------|------------------|-----------------------|----------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | Temp. (°C) | Volt. | Freq. Error (Hz) | Freq. vs. rated (ppm) | | Verdict |
| | | | | | | Result | Limit | |
| DFT-s-OFDM PI/2 BPSK | 3839.985 | Outer_Full | 20 | LV | -9.70 | -0.0025 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 16.10 | 0.0042 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 10.00 | 0.0026 | >=-2.5 & <=2.5 | Pass |
| | | | | NV | 26.70 | 0.0070 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 8.20 | 0.0021 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 17.00 | 0.0044 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 23.20 | 0.0060 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 11.60 | 0.0030 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 13.70 | 0.0036 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -6.30 | -0.0016 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 25.50 | 0.0066 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM QPSK | 3839.985 | Outer_Full | 20 | LV | -2.00 | -0.0005 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 20.00 | 0.0052 | >=-2.5 & <=2.5 | Pass |

| | | | | | | | | |
|--------------------|----------|------------|---------|----------------|--------|---------|----------------|------|
| | | | -30 | NV | 27.00 | 0.0070 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 27.40 | 0.0071 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 10.50 | 0.0027 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 13.60 | 0.0035 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -3.60 | -0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 23.30 | 0.0061 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 7.90 | 0.0021 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | -16.90 | -0.0044 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | -5.70 | -0.0015 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM 16 QAM | 3839.985 | Outer_Full | 20 | LV | 22.60 | 0.0059 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -14.90 | -0.0039 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -13.00 | -0.0034 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 21.50 | 0.0056 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -78.50 | -0.0204 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -6.60 | -0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -14.70 | -0.0038 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 14.90 | 0.0039 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 15.60 | 0.0041 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM 64 QAM | 3839.985 | Outer_Full | 20 | LV | 28.00 | 0.0073 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 8.20 | 0.0021 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 7.30 | 0.0019 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -2.40 | -0.0006 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 29.60 | 0.0077 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 14.30 | 0.0037 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 12.40 | 0.0032 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 23.90 | 0.0062 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 39.00 | 0.0102 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM 256 QAM | 3839.985 | Outer_Full | 20 | LV | 32.10 | 0.0084 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 80.00 | 0.0208 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 4.20 | 0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 23.20 | 0.0060 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 10.70 | 0.0028 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 3.70 | 0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -11.60 | -0.0030 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 10.30 | 0.0027 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 14.70 | 0.0038 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM QPSK | 3839.985 | Outer_Full | 20 | LV | 29.10 | 0.0076 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 37.80 | 0.0098 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 16.40 | 0.0043 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 30.80 | 0.0080 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -12.70 | -0.0033 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 2.70 | 0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -6.90 | -0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 11.80 | 0.0031 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 24.90 | 0.0065 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 16 QAM | 3839.985 | Outer_Full | 20 | LV | 17.30 | 0.0045 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 10.30 | 0.0027 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 18.90 | 0.0049 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -11.70 | -0.0030 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -7.60 | -0.0020 | >=-2.5 & <=2.5 | Pass |
| 0 | NV | -7.90 | -0.0021 | >=-2.5 & <=2.5 | Pass | | | |

| | | | | | | | | |
|-----------------|----------|------------|-----|----|-------|---------|----------------|------|
| | | | 10 | NV | 8.50 | 0.0022 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 6.10 | 0.0016 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 7.70 | 0.0020 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 16.10 | 0.0042 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 17.10 | 0.0045 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 64 QAM | 3839.985 | Outer_Full | 20 | LV | 12.60 | 0.0033 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 16.10 | 0.0042 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -2.80 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -4.00 | -0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -8.10 | -0.0021 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 11.30 | 0.0029 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 18.00 | 0.0047 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 17.60 | 0.0046 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 14.10 | 0.0037 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 18.70 | 0.0049 | >=-2.5 & <=2.5 | Pass |
| CP-OFDM 256 QAM | 3839.985 | Outer_Full | 20 | LV | 16.70 | 0.0043 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 16.20 | 0.0042 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -2.70 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 20.30 | 0.0053 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -7.00 | -0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 5.20 | 0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 25.90 | 0.0067 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 21.30 | 0.0055 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 14.20 | 0.0037 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 15.80 | 0.0041 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 27.60 | 0.0072 | >=-2.5 & <=2.5 | Pass |

2.1.13 30k_SISO_90MHz

| 5G NR n77a SCS=30kHz SISO 90MHz | | | | | | | | |
|---------------------------------|-----------------|---------------|------------|-------|------------------|-----------------------|----------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | Temp. (°C) | Volt. | Freq. Error (Hz) | Freq. vs. rated (ppm) | | Verdict |
| | | | | | | Result | Limit | |
| DFT-s-OFDM PI/2 BPSK | 3839.985 | Outer_Full | 20 | LV | 18.80 | 0.0049 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 3.00 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 15.30 | 0.0040 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 4.70 | 0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 21.30 | 0.0055 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 22.50 | 0.0059 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -7.30 | -0.0019 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 12.90 | 0.0034 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -6.60 | -0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 14.30 | 0.0037 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM QPSK | 3839.985 | Outer_Full | 20 | LV | 44.00 | 0.0115 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 3.40 | 0.0009 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 16.00 | 0.0042 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 11.30 | 0.0029 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 13.50 | 0.0035 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 5.00 | 0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 5.90 | 0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 18.10 | 0.0047 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -15.60 | -0.0041 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM 16 QAM | 3839.985 | Outer_Full | 20 | LV | 21.20 | 0.0055 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 16.10 | 0.0042 | >=-2.5 & <=2.5 | Pass |
| | | | | | | | | |

| | | | | | | | | |
|--------------------|----------|------------|---------|----------------|--------|---------|----------------|------|
| | | | -30 | NV | 10.60 | 0.0028 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 25.00 | 0.0065 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 30.60 | 0.0080 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -24.70 | -0.0064 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 32.20 | 0.0084 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 25.10 | 0.0065 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 13.80 | 0.0036 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 13.70 | 0.0036 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 29.20 | 0.0076 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 64 QAM | 3839.985 | Outer_Full | 20 | LV | 12.10 | 0.0032 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 15.90 | 0.0041 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -11.90 | -0.0031 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 16.70 | 0.0043 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 19.90 | 0.0052 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 14.80 | 0.0039 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 27.50 | 0.0072 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 31.60 | 0.0082 | >=-2.5 & <=2.5 | Pass |
| 30 | NV | 33.10 | 0.0086 | >=-2.5 & <=2.5 | Pass | | | |
| 40 | NV | 11.70 | 0.0030 | >=-2.5 & <=2.5 | Pass | | | |
| 50 | NV | -5.40 | -0.0014 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 256 QAM | 3839.985 | Outer_Full | 20 | LV | 5.20 | 0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 11.60 | 0.0030 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 16.20 | 0.0042 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 20.20 | 0.0053 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 22.90 | 0.0060 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 14.00 | 0.0036 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 28.70 | 0.0075 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 18.50 | 0.0048 | >=-2.5 & <=2.5 | Pass |
| 30 | NV | 16.80 | 0.0044 | >=-2.5 & <=2.5 | Pass | | | |
| 40 | NV | -7.40 | -0.0019 | >=-2.5 & <=2.5 | Pass | | | |
| 50 | NV | 31.10 | 0.0081 | >=-2.5 & <=2.5 | Pass | | | |
| CP-OFDM QPSK | 3839.985 | Outer_Full | 20 | LV | 12.20 | 0.0032 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 20.90 | 0.0054 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 6.00 | 0.0016 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -7.10 | -0.0018 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 13.60 | 0.0035 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 17.80 | 0.0046 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 10.60 | 0.0028 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 20.50 | 0.0053 | >=-2.5 & <=2.5 | Pass |
| 30 | NV | 29.50 | 0.0077 | >=-2.5 & <=2.5 | Pass | | | |
| 40 | NV | 7.70 | 0.0020 | >=-2.5 & <=2.5 | Pass | | | |
| 50 | NV | 14.80 | 0.0039 | >=-2.5 & <=2.5 | Pass | | | |
| CP-OFDM 16 QAM | 3839.985 | Outer_Full | 20 | LV | 13.20 | 0.0034 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 22.90 | 0.0060 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 2.90 | 0.0008 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 22.30 | 0.0058 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 20.50 | 0.0053 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 19.50 | 0.0051 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 21.40 | 0.0056 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 11.80 | 0.0031 | >=-2.5 & <=2.5 | Pass |
| 30 | NV | 6.00 | 0.0016 | >=-2.5 & <=2.5 | Pass | | | |
| 40 | NV | 32.70 | 0.0085 | >=-2.5 & <=2.5 | Pass | | | |
| 50 | NV | 24.70 | 0.0064 | >=-2.5 & <=2.5 | Pass | | | |
| CP-OFDM 64 QAM | 3839.985 | Outer_Full | 20 | LV | 17.80 | 0.0046 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 8.00 | 0.0021 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 17.10 | 0.0045 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 27.50 | 0.0072 | >=-2.5 & <=2.5 | Pass |
| -10 | NV | -6.00 | -0.0016 | >=-2.5 & <=2.5 | Pass | | | |
| 0 | NV | 16.00 | 0.0042 | >=-2.5 & <=2.5 | Pass | | | |

| | | | | | | | | |
|-----------------|----------|------------|---------|----------------|--------|---------|----------------|------|
| CP-OFDM 256 QAM | 3839.985 | Outer_Full | 10 | NV | -8.50 | -0.0022 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 17.90 | 0.0047 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 14.30 | 0.0037 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 14.70 | 0.0038 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 4.10 | 0.0011 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | LV | 13.60 | 0.0035 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 25.40 | 0.0066 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 18.50 | 0.0048 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 28.00 | 0.0073 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 30.80 | 0.0080 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 14.00 | 0.0036 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | -11.80 | -0.0031 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 20.70 | 0.0054 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 32.10 | 0.0084 | >=-2.5 & <=2.5 | Pass |
| 40 | NV | 15.90 | 0.0041 | >=-2.5 & <=2.5 | Pass | | | |
| 50 | NV | -10.40 | -0.0027 | >=-2.5 & <=2.5 | Pass | | | |

2.1.14 30k_SISO_100MHz

| 5G NR n77a SCS=30kHz SISO 100MHz | | | | | | | | |
|----------------------------------|-----------------|---------------|------------|----------------|------------------|-----------------------|----------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | Temp. (°C) | Volt. | Freq. Error (Hz) | Freq. vs. rated (ppm) | | Verdict |
| | | | | | | Result | Limit | |
| DFT-s-OFDM PI/2 BPSK | 3839.985 | Outer_Full | 20 | LV | 29.70 | 0.0077 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | -13.00 | -0.0034 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 38.20 | 0.0099 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | -4.00 | -0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -2.50 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 26.70 | 0.0070 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 14.80 | 0.0039 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | -2.70 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 18.30 | 0.0048 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 12.20 | 0.0032 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 49.10 | 0.0128 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM QPSK | 3839.985 | Outer_Full | 20 | LV | 12.50 | 0.0033 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 21.60 | 0.0056 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 3.70 | 0.0010 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 19.50 | 0.0051 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 36.80 | 0.0096 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 5.80 | 0.0015 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 26.90 | 0.0070 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 21.90 | 0.0057 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 27.20 | 0.0071 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 13.70 | 0.0036 | >=-2.5 & <=2.5 | Pass |
| 50 | NV | 16.70 | 0.0043 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 16 QAM | 3839.985 | Outer_Full | 20 | LV | 21.50 | 0.0056 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 19.40 | 0.0051 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -12.80 | -0.0033 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 22.90 | 0.0060 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 11.80 | 0.0031 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 23.30 | 0.0061 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 13.10 | 0.0034 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 11.10 | 0.0029 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 11.10 | 0.0029 | >=-2.5 & <=2.5 | Pass |
| 40 | NV | 17.30 | 0.0045 | >=-2.5 & <=2.5 | Pass | | | |
| 50 | NV | 14.20 | 0.0037 | >=-2.5 & <=2.5 | Pass | | | |
| DFT-s-OFDM 64 QAM | 3839.985 | Outer_Full | 20 | LV | 12.70 | 0.0033 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 15.20 | 0.0040 | >=-2.5 & <=2.5 | Pass |

| | | | | | | | | |
|--------------------|----------|------------|---------|----------------|--------|---------|----------------|------|
| | | | -30 | NV | 6.40 | 0.0017 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 11.10 | 0.0029 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 16.30 | 0.0042 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 26.70 | 0.0070 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 24.60 | 0.0064 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 14.60 | 0.0038 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 19.10 | 0.0050 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 20.00 | 0.0052 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | -7.50 | -0.0020 | >=-2.5 & <=2.5 | Pass |
| DFT-s-OFDM 256 QAM | 3839.985 | Outer_Full | 20 | LV | -5.50 | -0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 8.30 | 0.0022 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 21.80 | 0.0057 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 8.10 | 0.0021 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -4.70 | -0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 4.70 | 0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 22.20 | 0.0058 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 24.50 | 0.0064 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 30.00 | 0.0078 | >=-2.5 & <=2.5 | Pass |
| 40 | NV | 21.50 | 0.0056 | >=-2.5 & <=2.5 | Pass | | | |
| 50 | NV | 8.30 | 0.0022 | >=-2.5 & <=2.5 | Pass | | | |
| CP-OFDM QPSK | 3839.985 | Outer_Full | 20 | LV | 9.60 | 0.0025 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 42.70 | 0.0111 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -9.00 | -0.0023 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 7.40 | 0.0019 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 20.40 | 0.0053 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -5.00 | -0.0013 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 0.60 | 0.0002 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 51.50 | 0.0134 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | -12.70 | -0.0033 | >=-2.5 & <=2.5 | Pass |
| 40 | NV | 5.50 | 0.0014 | >=-2.5 & <=2.5 | Pass | | | |
| 50 | NV | 34.10 | 0.0089 | >=-2.5 & <=2.5 | Pass | | | |
| CP-OFDM 16 QAM | 3839.985 | Outer_Full | 20 | LV | 26.30 | 0.0068 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 18.60 | 0.0048 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | -5.50 | -0.0014 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 10.90 | 0.0028 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | -2.70 | -0.0007 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | -4.70 | -0.0012 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 25.70 | 0.0067 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 28.60 | 0.0074 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 16.60 | 0.0043 | >=-2.5 & <=2.5 | Pass |
| 40 | NV | -6.90 | -0.0018 | >=-2.5 & <=2.5 | Pass | | | |
| 50 | NV | 9.60 | 0.0025 | >=-2.5 & <=2.5 | Pass | | | |
| CP-OFDM 64 QAM | 3839.985 | Outer_Full | 20 | LV | 20.80 | 0.0054 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 32.20 | 0.0084 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 22.70 | 0.0059 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 21.10 | 0.0055 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 31.10 | 0.0081 | >=-2.5 & <=2.5 | Pass |
| | | | 0 | NV | 30.70 | 0.0080 | >=-2.5 & <=2.5 | Pass |
| | | | 10 | NV | 19.90 | 0.0052 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 30.70 | 0.0080 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 21.90 | 0.0057 | >=-2.5 & <=2.5 | Pass |
| 40 | NV | 29.00 | 0.0076 | >=-2.5 & <=2.5 | Pass | | | |
| 50 | NV | 15.00 | 0.0039 | >=-2.5 & <=2.5 | Pass | | | |
| CP-OFDM 256 QAM | 3839.985 | Outer_Full | 20 | LV | 43.80 | 0.0114 | >=-2.5 & <=2.5 | Pass |
| | | | | HV | 10.90 | 0.0028 | >=-2.5 & <=2.5 | Pass |
| | | | -30 | NV | 17.70 | 0.0046 | >=-2.5 & <=2.5 | Pass |
| | | | -20 | NV | 33.40 | 0.0087 | >=-2.5 & <=2.5 | Pass |
| | | | -10 | NV | 39.20 | 0.0102 | >=-2.5 & <=2.5 | Pass |
| 0 | NV | -2.80 | -0.0007 | >=-2.5 & <=2.5 | Pass | | | |

| | | | | | | | | |
|--|--|--|----|----|-------|--------|----------------|------|
| | | | 10 | NV | 23.30 | 0.0061 | >=-2.5 & <=2.5 | Pass |
| | | | 20 | NV | 29.90 | 0.0078 | >=-2.5 & <=2.5 | Pass |
| | | | 30 | NV | 35.60 | 0.0093 | >=-2.5 & <=2.5 | Pass |
| | | | 40 | NV | 31.10 | 0.0081 | >=-2.5 & <=2.5 | Pass |
| | | | 50 | NV | 18.40 | 0.0048 | >=-2.5 & <=2.5 | Pass |

3. Modulation Characteristics

3.1 Test Result

3.1.1 15k_SISO_50MHz_NTNV

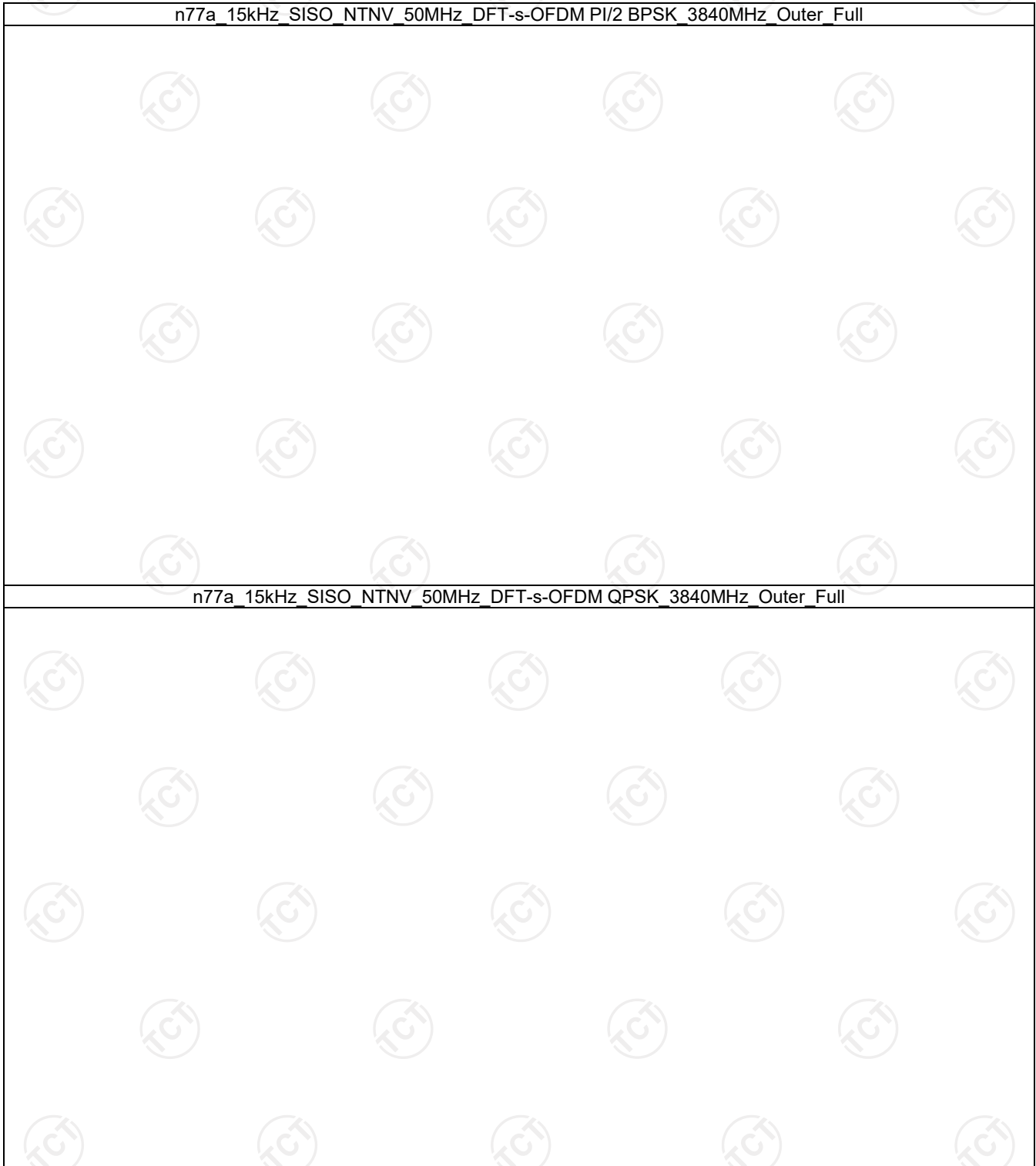
| 5G NR n77a SCS=15kHz SISO 50MHz NTN | | | | | | | |
|-------------------------------------|-----------------|---------------|----------------------------|------|-----|-------|---------|
| Modulation | Frequency (MHz) | RB Allocation | Modulation Characteristics | | | | Verdict |
| | | | Ant1 | Ant2 | Sum | Limit | |
| DFT-s-OFDM PI/2 BPSK | 3840 | Outer_Full | Refer To Test Graph | | | | Pass |
| DFT-s-OFDM QPSK | 3840 | Outer_Full | Refer To Test Graph | | | | Pass |
| DFT-s-OFDM 16 QAM | 3840 | Outer_Full | Refer To Test Graph | | | | Pass |
| DFT-s-OFDM 64 QAM | 3840 | Outer_Full | Refer To Test Graph | | | | Pass |
| DFT-s-OFDM 256 QAM | 3840 | Outer_Full | Refer To Test Graph | | | | Pass |
| CP-OFDM QPSK | 3840 | Outer_Full | Refer To Test Graph | | | | Pass |
| CP-OFDM 16 QAM | 3840 | Outer_Full | Refer To Test Graph | | | | Pass |
| CP-OFDM 64 QAM | 3840 | Outer_Full | Refer To Test Graph | | | | Pass |
| CP-OFDM 256 QAM | 3840 | Outer_Full | Refer To Test Graph | | | | Pass |

3.1.2 30k_SISO_100MHz_NTNV

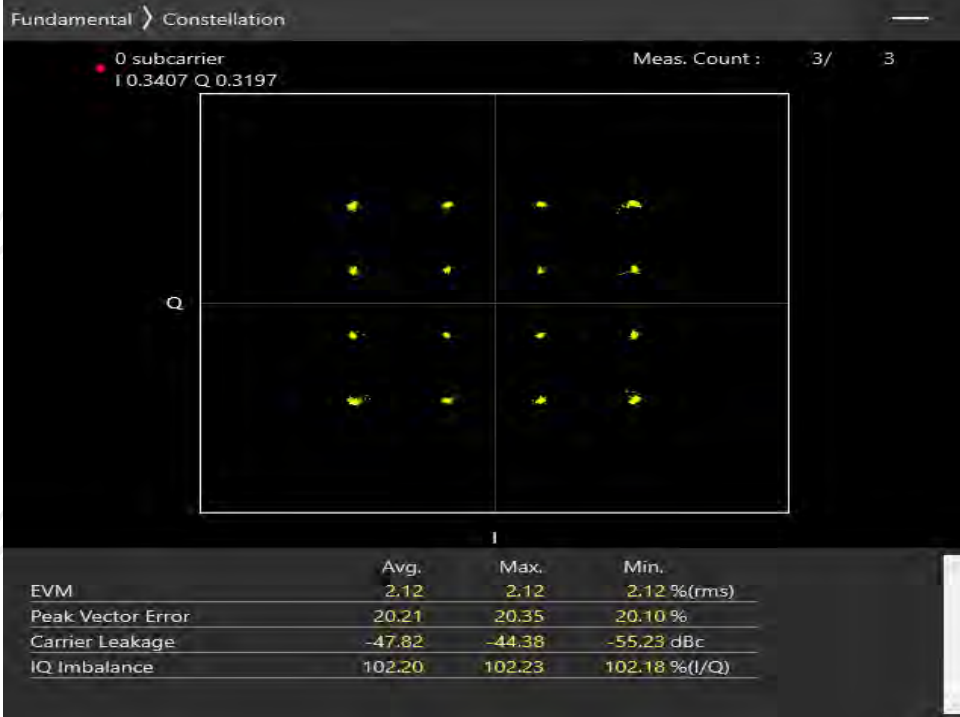
| 5G NR n77a SCS=30kHz SISO 100MHz NTN | | | | | | | |
|--------------------------------------|-----------------|---------------|----------------------------|------|-----|-------|---------|
| Modulation | Frequency (MHz) | RB Allocation | Modulation Characteristics | | | | Verdict |
| | | | Ant1 | Ant2 | Sum | Limit | |
| DFT-s-OFDM PI/2 BPSK | 3839.985 | Outer_Full | Refer To Test Graph | | | | Pass |
| DFT-s-OFDM QPSK | 3839.985 | Outer_Full | Refer To Test Graph | | | | Pass |
| DFT-s-OFDM 16 QAM | 3839.985 | Outer_Full | Refer To Test Graph | | | | Pass |
| DFT-s-OFDM 64 QAM | 3839.985 | Outer_Full | Refer To Test Graph | | | | Pass |
| DFT-s-OFDM 256 QAM | 3839.985 | Outer_Full | Refer To Test Graph | | | | Pass |
| CP-OFDM QPSK | 3839.985 | Outer_Full | Refer To Test Graph | | | | Pass |
| CP-OFDM 16 QAM | 3839.985 | Outer_Full | Refer To Test Graph | | | | Pass |
| CP-OFDM 64 QAM | 3839.985 | Outer_Full | Refer To Test Graph | | | | Pass |
| CP-OFDM 256 QAM | 3839.985 | Outer_Full | Refer To Test Graph | | | | Pass |

3.2 Test Graph

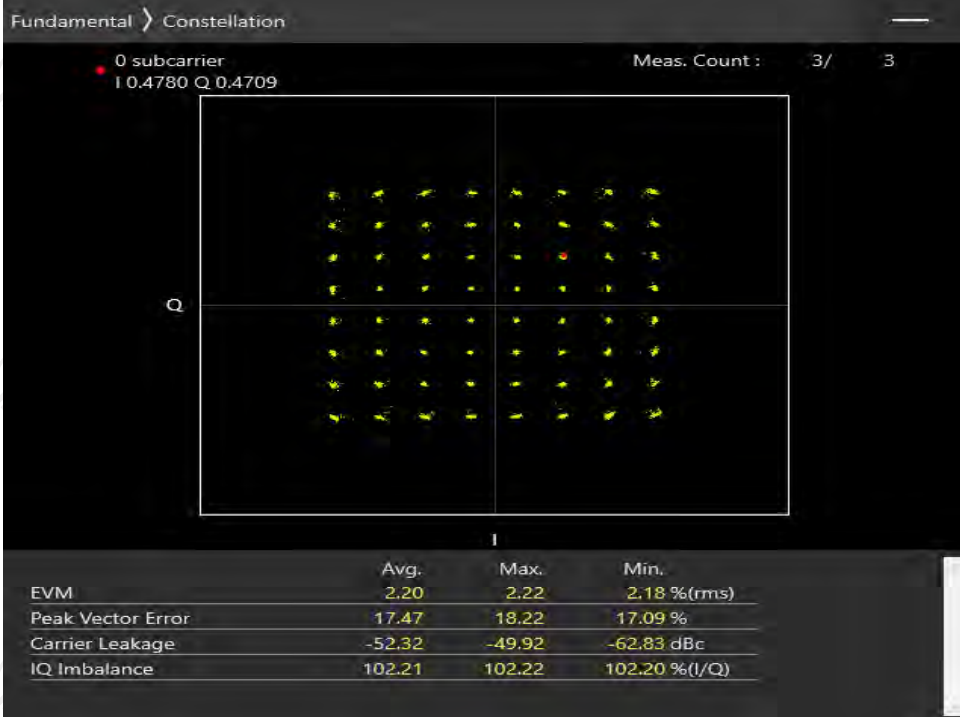
3.2.1 15k_SISO_50MHz_NTNV



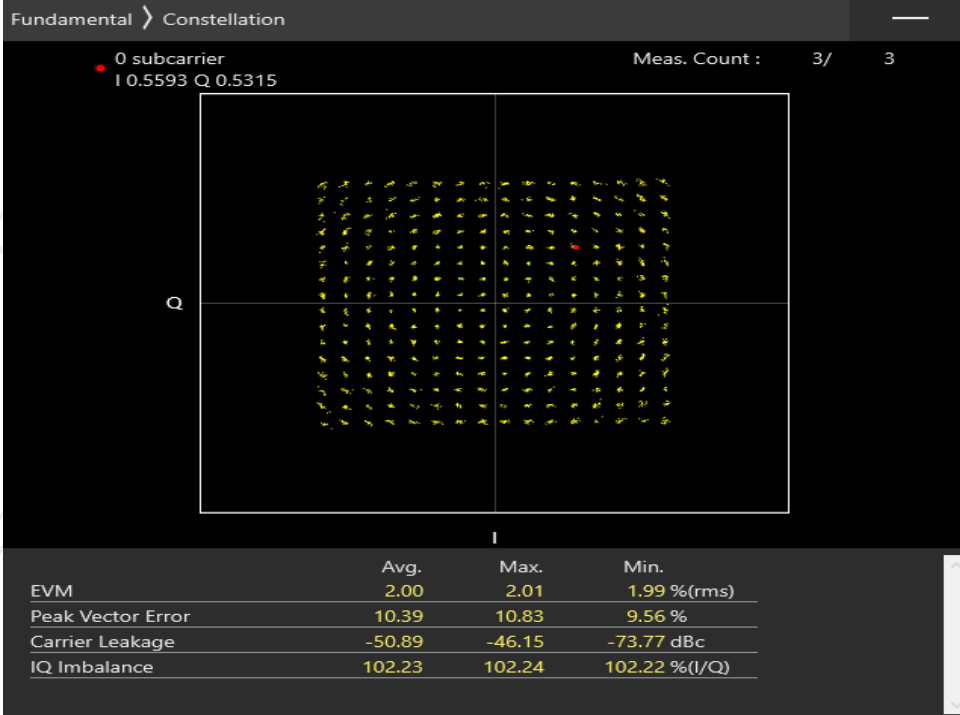
n77a 15kHz SISO NTV 50MHz DFT-s-OFDM 16 QAM 3840MHz Outer Full



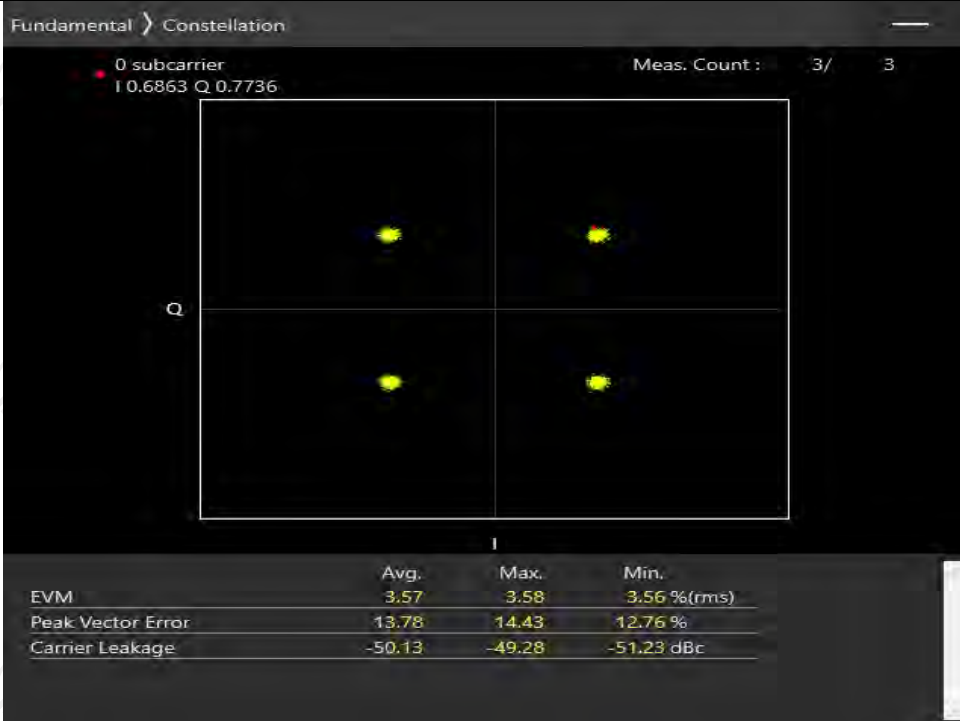
n77a 15kHz SISO NTV 50MHz DFT-s-OFDM 64 QAM 3840MHz Outer Full



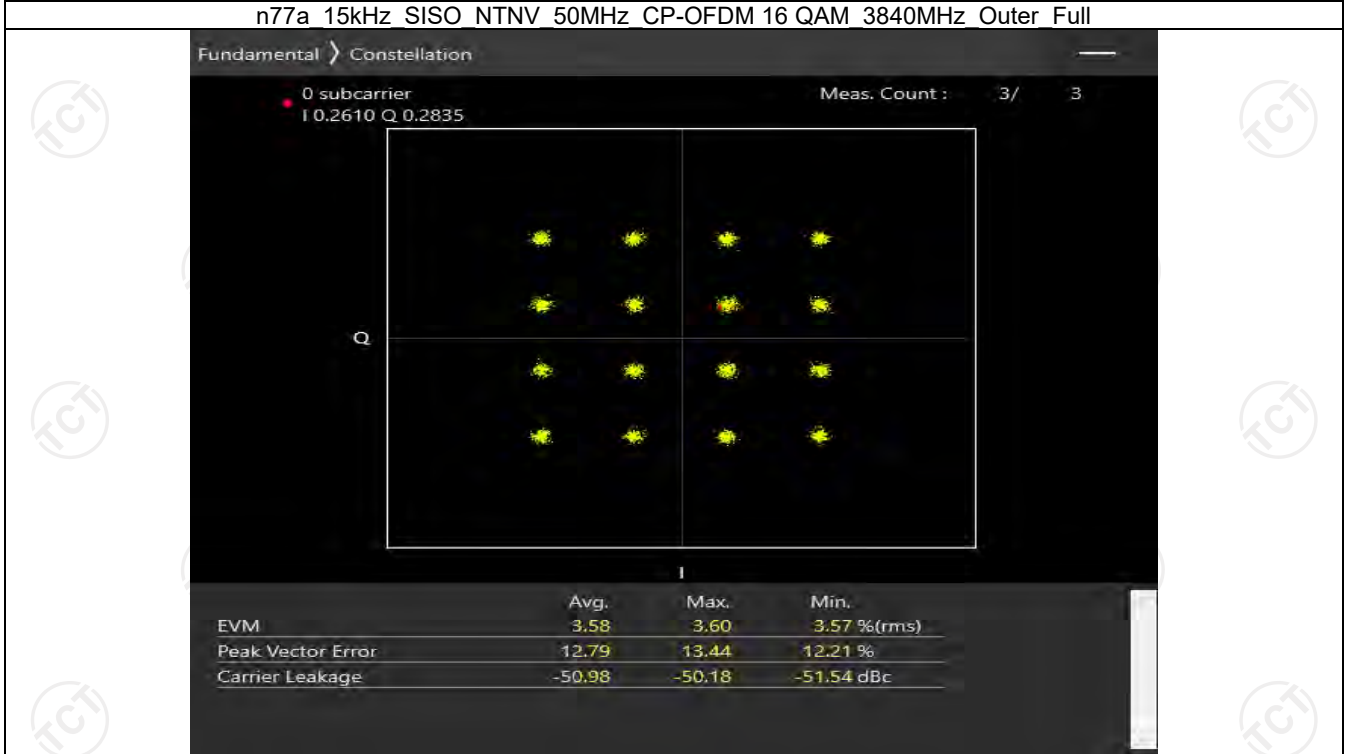
n77a 15kHz SISO NTN 50MHz DFT-s-OFDM 256 QAM 3840MHz Outer Full



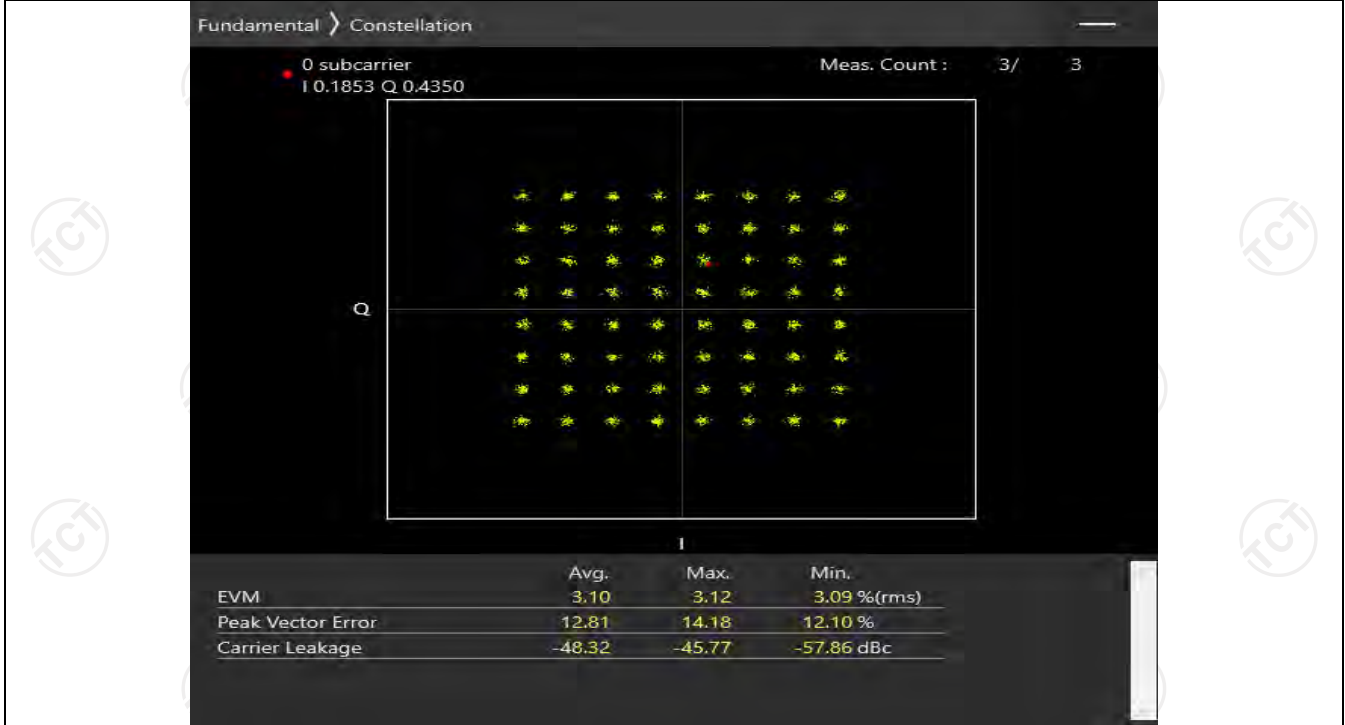
n77a 15kHz SISO NTN 50MHz CP-OFDM QPSK 3840MHz Outer Full



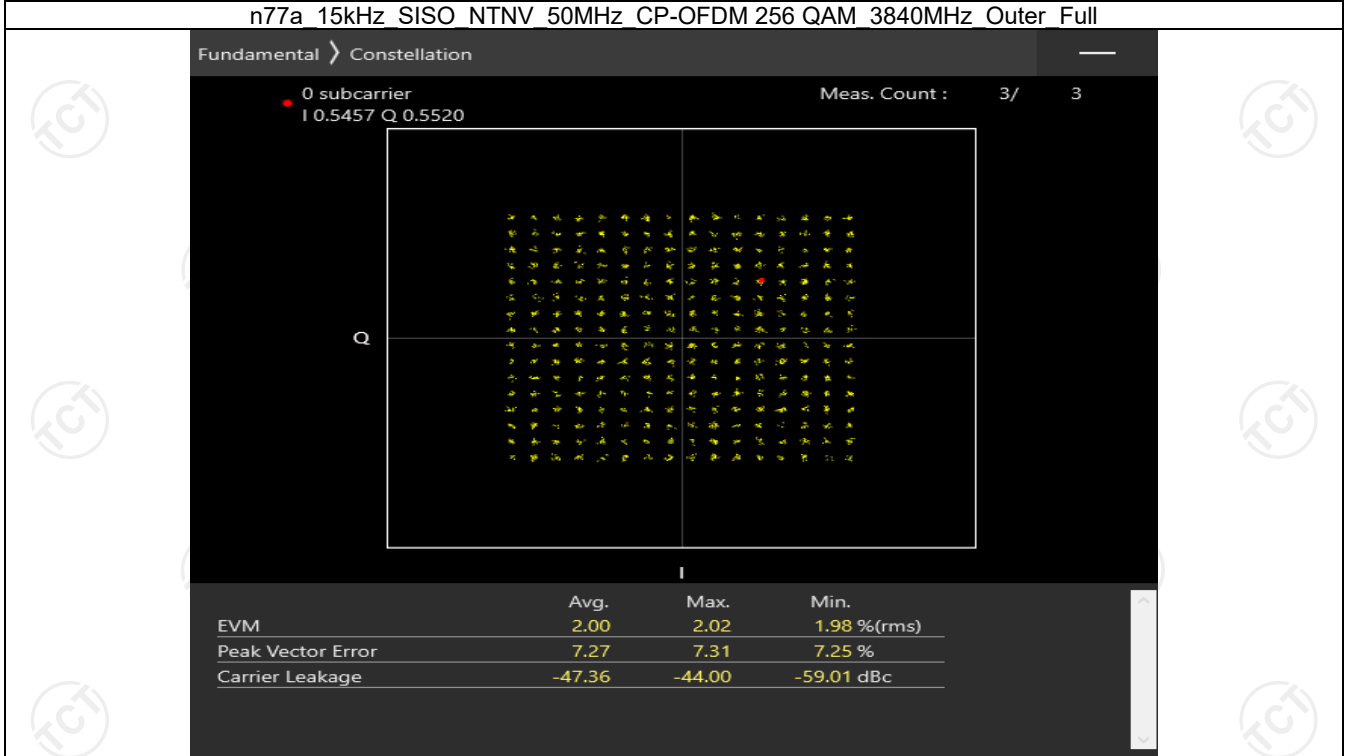
n77a 15kHz SISO NTN 50MHz CP-OFDM 16 QAM 3840MHz Outer Full



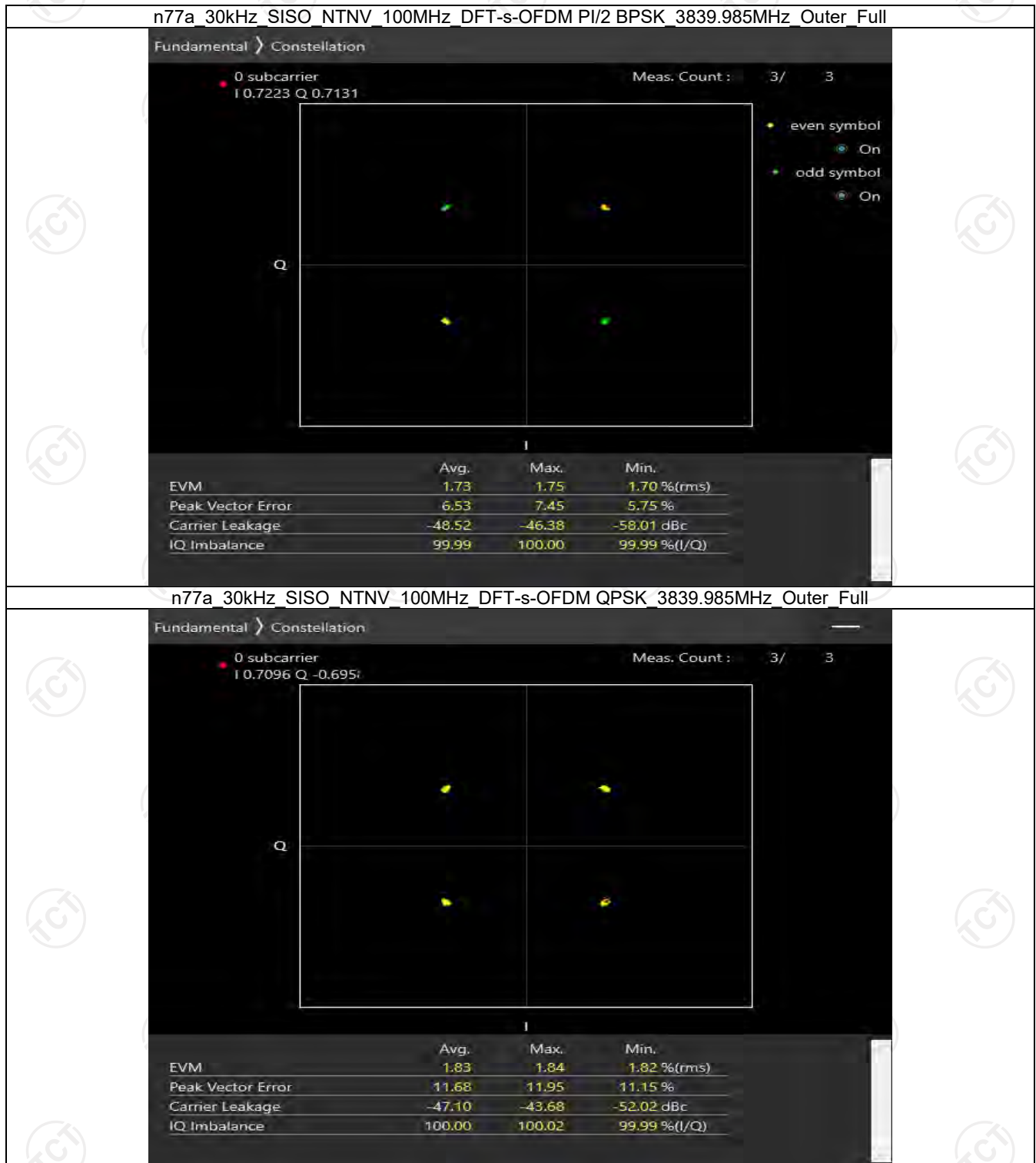
n77a 15kHz SISO NTN 50MHz CP-OFDM 64 QAM 3840MHz Outer Full



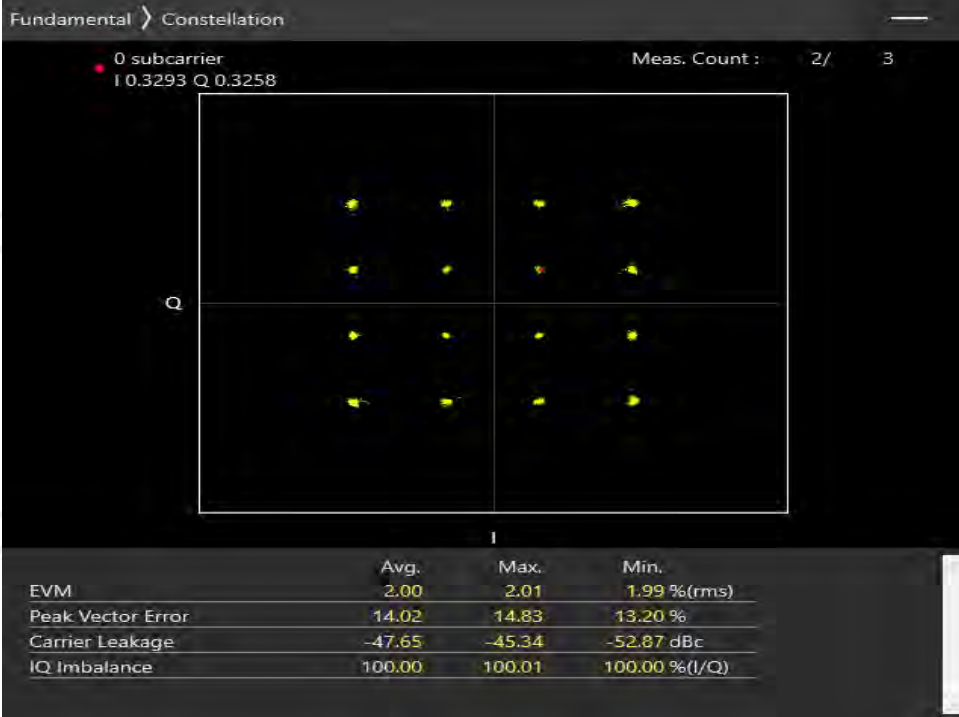
n77a 15kHz SISO NTV 50MHz CP-OFDM 256 QAM 3840MHz Outer Full



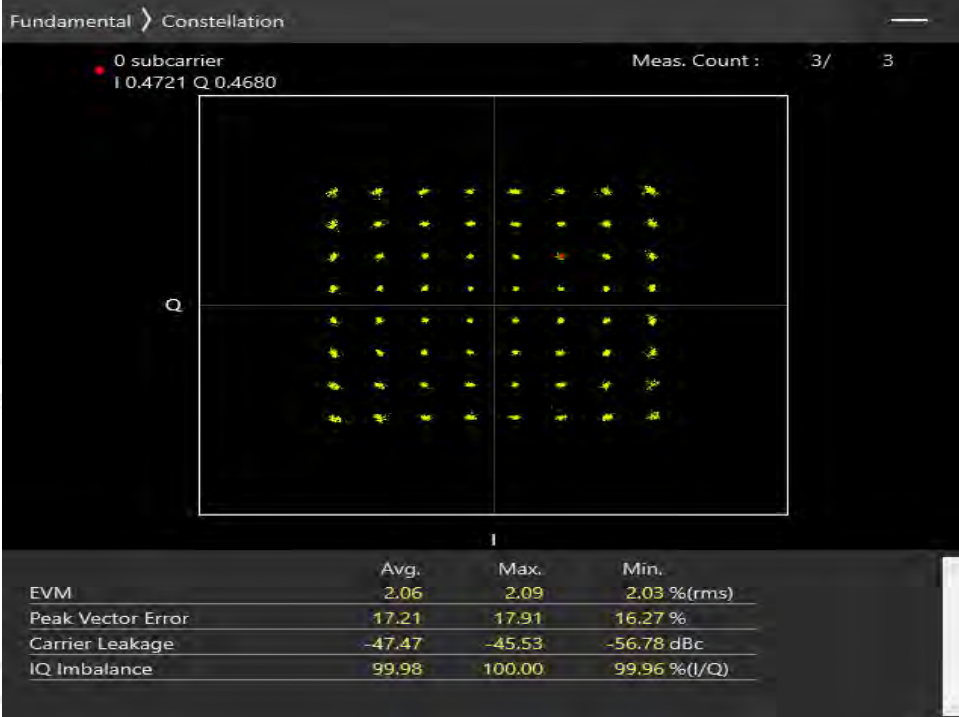
3.2.2 30k_SISO_100MHz_NTNV



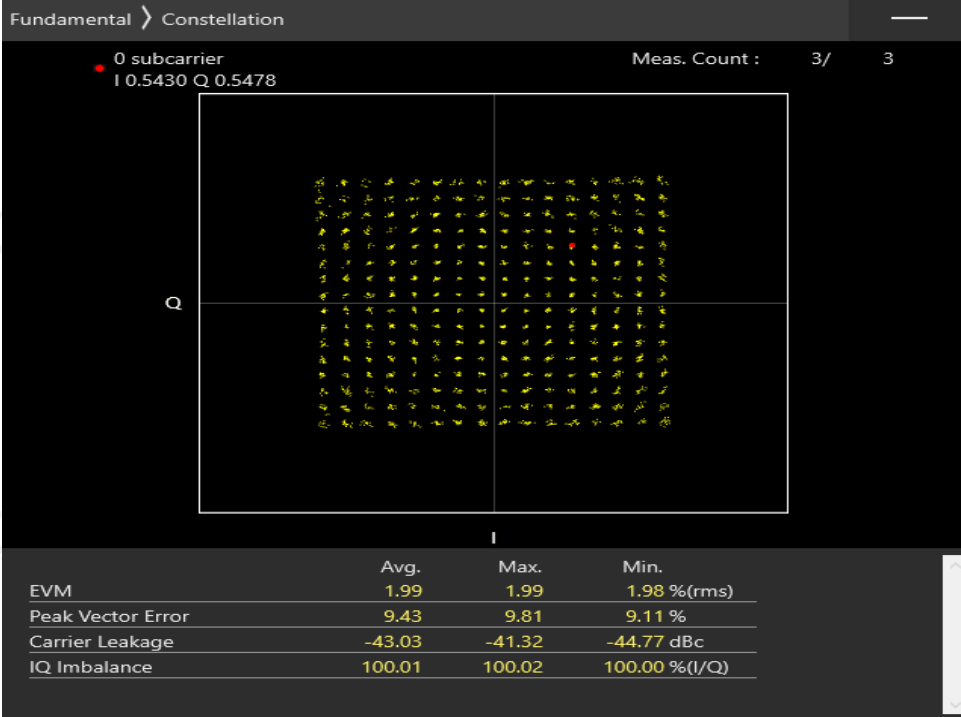
n77a 30kHz SISO NTV 100MHz DFT-s-OFDM 16 QAM 3839.985MHz Outer Full



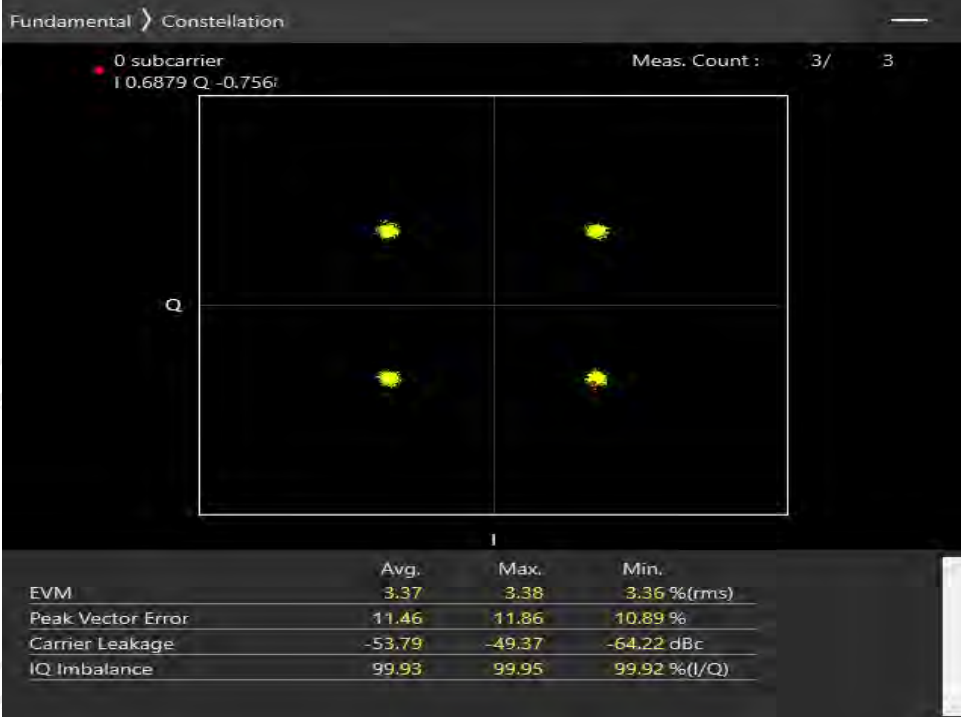
n77a 30kHz SISO NTV 100MHz DFT-s-OFDM 64 QAM 3839.985MHz Outer Full



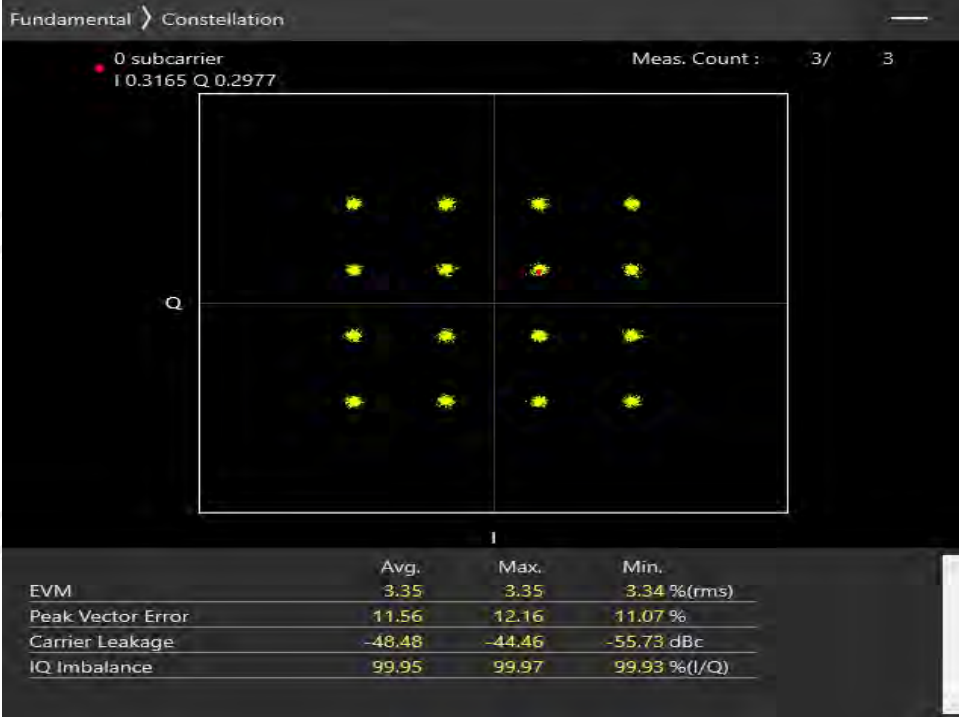
n77a 30kHz SISO NTN 100MHz DFT-s-OFDM 256 QAM 3839.985MHz Outer Full



n77a 30kHz SISO NTN 100MHz CP-OFDM QPSK 3839.985MHz Outer Full

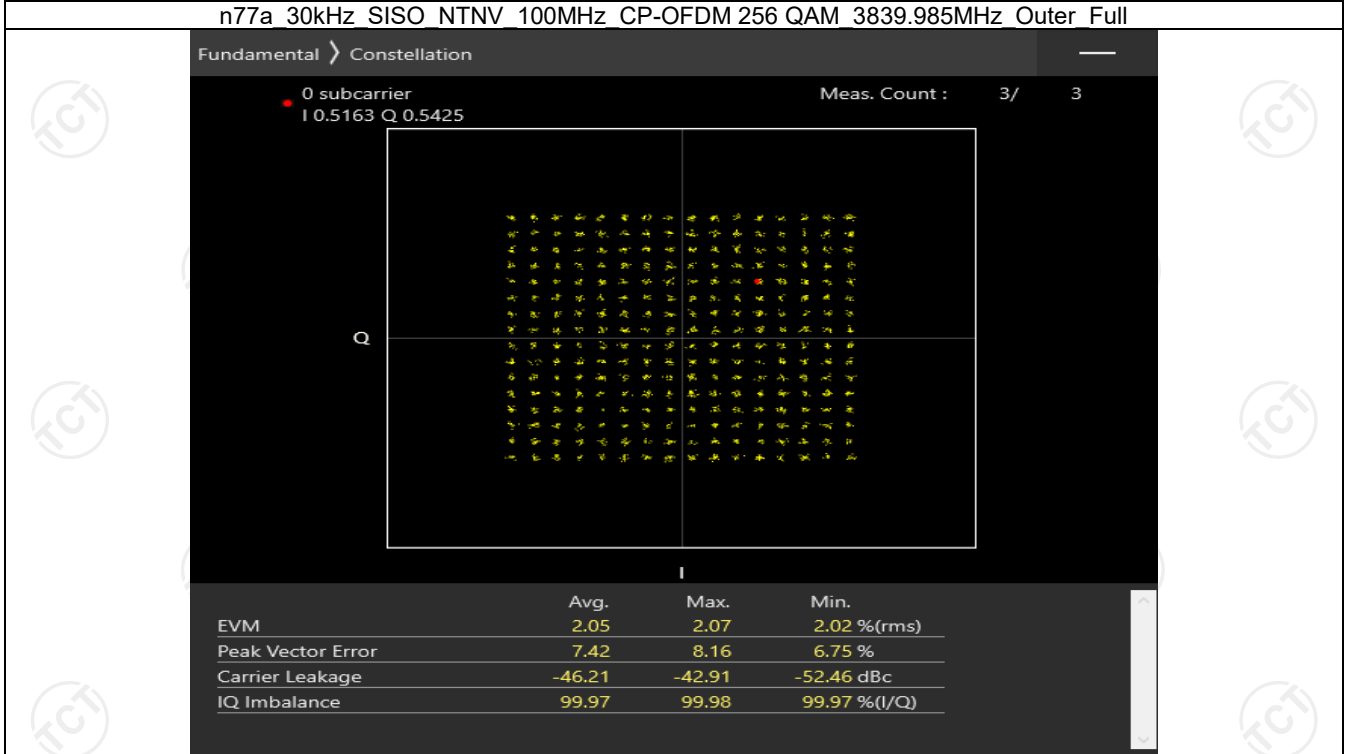


n77a 30kHz SISO NTN 100MHz CP-OFDM 16 QAM 3839.985MHz Outer Full



n77a 30kHz SISO NTN 100MHz CP-OFDM 64 QAM 3839.985MHz Outer Full

n77a 30kHz SISO NTN 100MHz CP-OFDM 256 QAM 3839.985MHz Outer Full



4. 99% & 26dB Bandwidth

4.1 Test Result

4.1.1 15k_SISO_10MHz_NTNV

| 5G NR n77a SCS=15kHz SISO 10MHz NTN | | | | | | |
|-------------------------------------|-----------------|---------------|---------------------|----------------------|-------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK | 3705 | Outer_Full | 9.04 | 9.71 | / | Pass |
| | 3840 | Outer_Full | 9.10 | 9.90 | / | Pass |
| | 3975 | Outer_Full | 9.12 | 9.86 | / | Pass |
| DFT-s-OFDM QPSK | 3705 | Outer_Full | 9.04 | 9.77 | / | Pass |
| | 3840 | Outer_Full | 9.08 | 9.71 | / | Pass |
| | 3975 | Outer_Full | 9.07 | 9.67 | / | Pass |
| DFT-s-OFDM 16 QAM | 3705 | Outer_Full | 9.05 | 9.68 | / | Pass |
| | 3840 | Outer_Full | 9.06 | 9.94 | / | Pass |
| | 3975 | Outer_Full | 9.07 | 9.84 | / | Pass |
| DFT-s-OFDM 64 QAM | 3705 | Outer_Full | 9.09 | 9.98 | / | Pass |
| | 3840 | Outer_Full | 9.09 | 9.74 | / | Pass |
| | 3975 | Outer_Full | 9.11 | 9.88 | / | Pass |
| DFT-s-OFDM 256 QAM | 3705 | Outer_Full | 9.06 | 9.81 | / | Pass |
| | 3840 | Outer_Full | 9.09 | 9.80 | / | Pass |
| | 3975 | Outer_Full | 9.04 | 9.79 | / | Pass |
| CP-OFDM QPSK | 3705 | Outer_Full | 9.38 | 10.04 | / | Pass |
| | 3840 | Outer_Full | 9.41 | 10.24 | / | Pass |
| | 3975 | Outer_Full | 9.38 | 10.02 | / | Pass |
| CP-OFDM 16 QAM | 3705 | Outer_Full | 9.38 | 10.10 | / | Pass |
| | 3840 | Outer_Full | 9.41 | 10.10 | / | Pass |
| | 3975 | Outer_Full | 9.41 | 10.01 | / | Pass |
| CP-OFDM 64 QAM | 3705 | Outer_Full | 9.39 | 10.10 | / | Pass |
| | 3840 | Outer_Full | 9.39 | 10.02 | / | Pass |
| | 3975 | Outer_Full | 9.41 | 10.10 | / | Pass |
| CP-OFDM 256 QAM | 3705 | Outer_Full | 9.39 | 10.37 | / | Pass |
| | 3840 | Outer_Full | 9.44 | 10.16 | / | Pass |
| | 3975 | Outer_Full | 9.39 | 10.43 | / | Pass |

4.1.2 15k_SISO_15MHz_NTNV

| 5G NR n77a SCS=15kHz SISO 15MHz NTN | | | | | | |
|-------------------------------------|-----------------|---------------|---------------------|----------------------|-------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK | 3707.505 | Outer_Full | 13.61 | 14.51 | / | Pass |
| | 3840 | Outer_Full | 13.68 | 14.74 | / | Pass |
| | 3972.495 | Outer_Full | 13.64 | 14.72 | / | Pass |
| DFT-s-OFDM QPSK | 3707.505 | Outer_Full | 13.61 | 14.70 | / | Pass |
| | 3840 | Outer_Full | 13.64 | 14.68 | / | Pass |
| | 3972.495 | Outer_Full | 13.65 | 14.78 | / | Pass |
| DFT-s-OFDM 16 QAM | 3707.505 | Outer_Full | 13.62 | 14.65 | / | Pass |
| | 3840 | Outer_Full | 13.66 | 14.57 | / | Pass |
| | 3972.495 | Outer_Full | 13.66 | 14.83 | / | Pass |
| DFT-s-OFDM 64 QAM | 3707.505 | Outer_Full | 13.64 | 14.60 | / | Pass |
| | 3840 | Outer_Full | 13.65 | 14.78 | / | Pass |
| | 3972.495 | Outer_Full | 13.63 | 14.67 | / | Pass |

| | | | | | | |
|--------------------|----------|------------|-------|-------|---|------|
| DFT-s-OFDM 256 QAM | 3707.505 | Outer Full | 13.65 | 14.80 | / | Pass |
| | 3840 | Outer Full | 13.66 | 14.67 | / | Pass |
| | 3972.495 | Outer Full | 13.66 | 14.82 | / | Pass |
| CP-OFDM QPSK | 3707.505 | Outer Full | 14.28 | 15.37 | / | Pass |
| | 3840 | Outer Full | 14.27 | 17.89 | / | Pass |
| | 3972.495 | Outer Full | 14.34 | 15.31 | / | Pass |
| CP-OFDM 16 QAM | 3707.505 | Outer Full | 14.30 | 15.23 | / | Pass |
| | 3840 | Outer Full | 14.30 | 17.46 | / | Pass |
| | 3972.495 | Outer Full | 14.34 | 15.31 | / | Pass |
| CP-OFDM 64 QAM | 3707.505 | Outer Full | 14.34 | 15.64 | / | Pass |
| | 3840 | Outer Full | 14.29 | 15.23 | / | Pass |
| | 3972.495 | Outer Full | 14.29 | 15.29 | / | Pass |
| CP-OFDM 256 QAM | 3707.505 | Outer Full | 14.31 | 15.60 | / | Pass |
| | 3840 | Outer Full | 14.24 | 15.32 | / | Pass |
| | 3972.495 | Outer Full | 14.28 | 15.35 | / | Pass |

4.1.3 15k_SISO_20MHz_NTNV

| 5G NR n77a SCS=15kHz SISO 20MHz NTN | | | | | | |
|-------------------------------------|-----------------|---------------|---------------------|----------------------|-------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK | 3710.01 | Outer Full | 18.12 | 19.70 | / | Pass |
| | 3840 | Outer Full | 18.12 | 19.40 | / | Pass |
| | 3969.99 | Outer Full | 18.08 | 19.49 | / | Pass |
| DFT-s-OFDM QPSK | 3710.01 | Outer Full | 18.09 | 19.41 | / | Pass |
| | 3840 | Outer Full | 18.13 | 19.47 | / | Pass |
| | 3969.99 | Outer Full | 18.09 | 19.42 | / | Pass |
| DFT-s-OFDM 16 QAM | 3710.01 | Outer Full | 18.05 | 19.48 | / | Pass |
| | 3840 | Outer Full | 18.19 | 19.45 | / | Pass |
| | 3969.99 | Outer Full | 18.16 | 19.57 | / | Pass |
| DFT-s-OFDM 64 QAM | 3710.01 | Outer Full | 18.17 | 19.56 | / | Pass |
| | 3840 | Outer Full | 18.18 | 19.95 | / | Pass |
| | 3969.99 | Outer Full | 18.16 | 19.39 | / | Pass |
| DFT-s-OFDM 256 QAM | 3710.01 | Outer Full | 18.11 | 20.00 | / | Pass |
| | 3840 | Outer Full | 18.14 | 19.37 | / | Pass |
| | 3969.99 | Outer Full | 18.12 | 20.01 | / | Pass |
| CP-OFDM QPSK | 3710.01 | Outer Full | 19.14 | 20.44 | / | Pass |
| | 3840 | Outer Full | 19.23 | 27.44 | / | Pass |
| | 3969.99 | Outer Full | 19.20 | 21.12 | / | Pass |
| CP-OFDM 16 QAM | 3710.01 | Outer Full | 19.14 | 20.48 | / | Pass |
| | 3840 | Outer Full | 19.22 | 26.91 | / | Pass |
| | 3969.99 | Outer Full | 19.14 | 20.46 | / | Pass |
| CP-OFDM 64 QAM | 3710.01 | Outer Full | 19.17 | 20.52 | / | Pass |
| | 3840 | Outer Full | 19.24 | 22.28 | / | Pass |
| | 3969.99 | Outer Full | 19.18 | 20.47 | / | Pass |
| CP-OFDM 256 QAM | 3710.01 | Outer Full | 19.08 | 20.45 | / | Pass |
| | 3840 | Outer Full | 19.12 | 20.47 | / | Pass |
| | 3969.99 | Outer Full | 19.13 | 20.38 | / | Pass |

4.1.4 15k_SISO_40MHz_NTNV

| 5G NR n77a SCS=15kHz SISO 40MHz NTN | | | | | | |
|-------------------------------------|-----------------|---------------|---------------------|----------------------|-------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK | 3720 | Outer Full | 38.97 | 41.47 | / | Pass |
| | 3840 | Outer Full | 38.95 | 41.45 | / | Pass |

| | | | | | | |
|--------------------|------|------------|-------|-------|---|------|
| DFT-s-OFDM QPSK | 3960 | Outer Full | 39.02 | 41.44 | / | Pass |
| | 3720 | Outer Full | 39.04 | 41.48 | / | Pass |
| | 3840 | Outer Full | 39.14 | 41.40 | / | Pass |
| | 3960 | Outer Full | 39.14 | 41.58 | / | Pass |
| DFT-s-OFDM 16 QAM | 3720 | Outer Full | 38.94 | 41.38 | / | Pass |
| | 3840 | Outer Full | 39.00 | 41.44 | / | Pass |
| | 3960 | Outer Full | 39.12 | 41.34 | / | Pass |
| DFT-s-OFDM 64 QAM | 3720 | Outer Full | 38.90 | 41.54 | / | Pass |
| | 3840 | Outer Full | 39.12 | 41.56 | / | Pass |
| | 3960 | Outer Full | 39.13 | 41.41 | / | Pass |
| DFT-s-OFDM 256 QAM | 3720 | Outer Full | 38.86 | 41.36 | / | Pass |
| | 3840 | Outer Full | 38.91 | 41.51 | / | Pass |
| | 3960 | Outer Full | 39.10 | 41.47 | / | Pass |
| CP-OFDM QPSK | 3720 | Outer Full | 38.98 | 41.45 | / | Pass |
| | 3840 | Outer Full | 39.17 | 50.66 | / | Pass |
| | 3960 | Outer Full | 39.13 | 51.55 | / | Pass |
| CP-OFDM 16 QAM | 3720 | Outer Full | 38.88 | 41.45 | / | Pass |
| | 3840 | Outer Full | 39.04 | 50.76 | / | Pass |
| | 3960 | Outer Full | 39.12 | 45.80 | / | Pass |
| CP-OFDM 64 QAM | 3720 | Outer Full | 39.10 | 41.47 | / | Pass |
| | 3840 | Outer Full | 38.99 | 41.70 | / | Pass |
| | 3960 | Outer Full | 39.07 | 41.28 | / | Pass |
| CP-OFDM 256 QAM | 3720 | Outer Full | 39.01 | 41.38 | / | Pass |
| | 3840 | Outer Full | 39.01 | 41.48 | / | Pass |
| | 3960 | Outer Full | 39.10 | 41.49 | / | Pass |

4.1.5 15k_SISO_50MHz_NTNV

| 5G NR n77a SCS=15kHz SISO 50MHz NTN | | | | | | |
|-------------------------------------|-----------------|---------------|---------------------|----------------------|-------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK | 3725.01 | Outer Full | 48.43 | 51.63 | / | Pass |
| | 3840 | Outer Full | 48.58 | 51.59 | / | Pass |
| | 3954.99 | Outer Full | 48.60 | 51.72 | / | Pass |
| DFT-s-OFDM QPSK | 3725.01 | Outer Full | 48.49 | 51.80 | / | Pass |
| | 3840 | Outer Full | 48.48 | 51.68 | / | Pass |
| | 3954.99 | Outer Full | 48.64 | 51.67 | / | Pass |
| DFT-s-OFDM 16 QAM | 3725.01 | Outer Full | 48.55 | 51.74 | / | Pass |
| | 3840 | Outer Full | 48.55 | 51.63 | / | Pass |
| | 3954.99 | Outer Full | 48.41 | 51.48 | / | Pass |
| DFT-s-OFDM 64 QAM | 3725.01 | Outer Full | 48.39 | 51.78 | / | Pass |
| | 3840 | Outer Full | 48.57 | 51.81 | / | Pass |
| | 3954.99 | Outer Full | 48.50 | 51.86 | / | Pass |
| DFT-s-OFDM 256 QAM | 3725.01 | Outer Full | 48.49 | 51.58 | / | Pass |
| | 3840 | Outer Full | 48.51 | 51.61 | / | Pass |
| | 3954.99 | Outer Full | 48.48 | 51.68 | / | Pass |
| CP-OFDM QPSK | 3725.01 | Outer Full | 43.77 | 46.67 | / | Pass |
| | 3840 | Outer Full | 43.74 | 51.96 | / | Pass |
| | 3954.99 | Outer Full | 43.96 | 53.36 | / | Pass |
| CP-OFDM 16 QAM | 3725.01 | Outer Full | 43.60 | 46.69 | / | Pass |
| | 3840 | Outer Full | 43.81 | 53.38 | / | Pass |
| | 3954.99 | Outer Full | 43.81 | 58.17 | / | Pass |
| CP-OFDM 64 QAM | 3725.01 | Outer Full | 43.69 | 46.84 | / | Pass |
| | 3840 | Outer Full | 43.72 | 47.08 | / | Pass |
| | 3954.99 | Outer Full | 43.72 | 50.71 | / | Pass |
| CP-OFDM 256 QAM | 3725.01 | Outer Full | 43.81 | 46.76 | / | Pass |
| | 3840 | Outer Full | 43.68 | 46.80 | / | Pass |
| | 3954.99 | Outer Full | 43.78 | 46.84 | / | Pass |

4.1.6 30k_SISO_10MHz_NTNV

| 5G NR n77a SCS=30kHz SISO 10MHz NTN | | | | | | |
|-------------------------------------|-----------------|---------------|---------------------|----------------------|-------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK | 3705.015 | Outer Full | 8.84 | 9.97 | / | Pass |
| | 3839.985 | Outer Full | 8.82 | 9.63 | / | Pass |
| | 3974.985 | Outer Full | 8.74 | 9.44 | / | Pass |
| DFT-s-OFDM QPSK | 3705.015 | Outer Full | 8.75 | 9.52 | / | Pass |
| | 3839.985 | Outer Full | 8.77 | 9.17 | / | Pass |
| | 3974.985 | Outer Full | 8.70 | 10.42 | / | Pass |
| DFT-s-OFDM 16 QAM | 3705.015 | Outer Full | 8.73 | 10.05 | / | Pass |
| | 3839.985 | Outer Full | 8.70 | 10.17 | / | Pass |
| | 3974.985 | Outer Full | 8.83 | 9.47 | / | Pass |
| DFT-s-OFDM 64 QAM | 3705.015 | Outer Full | 8.76 | 9.42 | / | Pass |
| | 3839.985 | Outer Full | 8.82 | 10.41 | / | Pass |
| | 3974.985 | Outer Full | 8.73 | 9.69 | / | Pass |
| DFT-s-OFDM 256 QAM | 3705.015 | Outer Full | 8.79 | 9.93 | / | Pass |
| | 3839.985 | Outer Full | 8.84 | 9.67 | / | Pass |
| | 3974.985 | Outer Full | 8.79 | 9.50 | / | Pass |
| CP-OFDM QPSK | 3705.015 | Outer Full | 8.84 | 10.05 | / | Pass |
| | 3839.985 | Outer Full | 8.69 | 9.72 | / | Pass |
| | 3974.985 | Outer Full | 8.74 | 10.22 | / | Pass |
| CP-OFDM 16 QAM | 3705.015 | Outer Full | 8.73 | 10.70 | / | Pass |
| | 3839.985 | Outer Full | 8.87 | 9.65 | / | Pass |
| | 3974.985 | Outer Full | 8.71 | 9.81 | / | Pass |
| CP-OFDM 64 QAM | 3705.015 | Outer Full | 8.92 | 9.93 | / | Pass |
| | 3839.985 | Outer Full | 8.69 | 9.65 | / | Pass |
| | 3974.985 | Outer Full | 8.85 | 9.32 | / | Pass |
| CP-OFDM 256 QAM | 3705.015 | Outer Full | 8.69 | 11.35 | / | Pass |
| | 3839.985 | Outer Full | 8.77 | 11.40 | / | Pass |
| | 3974.985 | Outer Full | 8.72 | 9.59 | / | Pass |

4.1.7 30k_SISO_15MHz_NTNV

| 5G NR n77a SCS=30kHz SISO 15MHz NTN | | | | | | |
|-------------------------------------|-----------------|---------------|---------------------|----------------------|-------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK | 3707.505 | Outer Full | 12.99 | 16.12 | / | Pass |
| | 3839.985 | Outer Full | 13.18 | 15.15 | / | Pass |
| | 3972.495 | Outer Full | 13.09 | 14.71 | / | Pass |
| DFT-s-OFDM QPSK | 3707.505 | Outer Full | 13.14 | 15.05 | / | Pass |
| | 3839.985 | Outer Full | 13.27 | 14.65 | / | Pass |
| | 3972.495 | Outer Full | 13.32 | 14.34 | / | Pass |
| DFT-s-OFDM 16 QAM | 3707.505 | Outer Full | 13.08 | 15.00 | / | Pass |
| | 3839.985 | Outer Full | 13.25 | 14.03 | / | Pass |
| | 3972.495 | Outer Full | 13.27 | 13.92 | / | Pass |
| DFT-s-OFDM 64 QAM | 3707.505 | Outer Full | 13.34 | 14.29 | / | Pass |
| | 3839.985 | Outer Full | 13.10 | 14.56 | / | Pass |
| | 3972.495 | Outer Full | 13.18 | 14.61 | / | Pass |
| DFT-s-OFDM 256 QAM | 3707.505 | Outer Full | 13.10 | 14.53 | / | Pass |
| | 3839.985 | Outer Full | 13.08 | 14.28 | / | Pass |
| | 3972.495 | Outer Full | 13.11 | 15.15 | / | Pass |
| CP-OFDM QPSK | 3707.505 | Outer Full | 13.98 | 14.98 | / | Pass |
| | 3839.985 | Outer Full | 14.03 | 14.50 | / | Pass |

| | | | | | | |
|-----------------|----------|------------|-------|-------|---|------|
| CP-OFDM 16 QAM | 3972.495 | Outer Full | 13.79 | 15.26 | / | Pass |
| | 3707.505 | Outer Full | 13.97 | 14.99 | / | Pass |
| | 3839.985 | Outer Full | 14.08 | 16.39 | / | Pass |
| | 3972.495 | Outer Full | 13.82 | 15.70 | / | Pass |
| CP-OFDM 64 QAM | 3707.505 | Outer Full | 14.02 | 15.02 | / | Pass |
| | 3839.985 | Outer Full | 14.02 | 14.68 | / | Pass |
| | 3972.495 | Outer Full | 13.80 | 15.95 | / | Pass |
| CP-OFDM 256 QAM | 3707.505 | Outer Full | 14.09 | 14.71 | / | Pass |
| | 3839.985 | Outer Full | 13.71 | 15.07 | / | Pass |
| | 3972.495 | Outer Full | 13.76 | 16.55 | / | Pass |

4.1.8 30k_SISO_20MHz_NTNV

| 5G NR n77a SCS=30kHz SISO 20MHz NTN | | | | | | |
|-------------------------------------|-----------------|---------------|---------------------|----------------------|-------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK | 3710.025 | Outer Full | 18.27 | 22.70 | / | Pass |
| | 3839.985 | Outer Full | 18.21 | 19.70 | / | Pass |
| | 3969.975 | Outer Full | 18.16 | 19.69 | / | Pass |
| DFT-s-OFDM QPSK | 3710.025 | Outer Full | 18.23 | 20.22 | / | Pass |
| | 3839.985 | Outer Full | 18.45 | 19.19 | / | Pass |
| | 3969.975 | Outer Full | 18.61 | 20.08 | / | Pass |
| DFT-s-OFDM 16 QAM | 3710.025 | Outer Full | 18.41 | 19.29 | / | Pass |
| | 3839.985 | Outer Full | 18.50 | 19.75 | / | Pass |
| | 3969.975 | Outer Full | 18.19 | 19.37 | / | Pass |
| DFT-s-OFDM 64 QAM | 3710.025 | Outer Full | 18.37 | 19.86 | / | Pass |
| | 3839.985 | Outer Full | 18.48 | 19.14 | / | Pass |
| | 3969.975 | Outer Full | 18.25 | 19.76 | / | Pass |
| DFT-s-OFDM 256 QAM | 3710.025 | Outer Full | 18.40 | 19.10 | / | Pass |
| | 3839.985 | Outer Full | 18.43 | 19.11 | / | Pass |
| | 3969.975 | Outer Full | 18.44 | 19.29 | / | Pass |
| CP-OFDM QPSK | 3710.025 | Outer Full | 18.74 | 20.17 | / | Pass |
| | 3839.985 | Outer Full | 18.81 | 19.74 | / | Pass |
| | 3969.975 | Outer Full | 18.83 | 21.43 | / | Pass |
| CP-OFDM 16 QAM | 3710.025 | Outer Full | 18.57 | 19.86 | / | Pass |
| | 3839.985 | Outer Full | 18.90 | 20.03 | / | Pass |
| | 3969.975 | Outer Full | 18.88 | 19.82 | / | Pass |
| CP-OFDM 64 QAM | 3710.025 | Outer Full | 18.49 | 20.86 | / | Pass |
| | 3839.985 | Outer Full | 18.87 | 19.59 | / | Pass |
| | 3969.975 | Outer Full | 18.71 | 19.58 | / | Pass |
| CP-OFDM 256 QAM | 3710.025 | Outer Full | 18.77 | 19.44 | / | Pass |
| | 3839.985 | Outer Full | 18.45 | 19.55 | / | Pass |
| | 3969.975 | Outer Full | 18.59 | 20.25 | / | Pass |

4.1.9 30k_SISO_40MHz_NTNV

| 5G NR n77a SCS=30kHz SISO 40MHz NTN | | | | | | |
|-------------------------------------|-----------------|---------------|---------------------|----------------------|-------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK | 3720.015 | Outer Full | 36.87 | 38.62 | / | Pass |
| | 3839.985 | Outer Full | 36.82 | 38.05 | / | Pass |
| | 3959.985 | Outer Full | 36.89 | 38.55 | / | Pass |
| DFT-s-OFDM QPSK | 3720.015 | Outer Full | 36.86 | 38.40 | / | Pass |
| | 3839.985 | Outer Full | 36.85 | 38.46 | / | Pass |
| | 3959.985 | Outer Full | 36.28 | 38.54 | / | Pass |
| DFT-s-OFDM 16 QAM | 3720.015 | Outer Full | 36.29 | 38.42 | / | Pass |

| | | | | | | |
|--------------------|----------|------------|-------|-------|---|------|
| DFT-s-OFDM 64 QAM | 3839.985 | Outer Full | 36.97 | 38.72 | / | Pass |
| | 3959.985 | Outer Full | 36.35 | 39.25 | / | Pass |
| | 3720.015 | Outer Full | 36.85 | 38.71 | / | Pass |
| DFT-s-OFDM 256 QAM | 3839.985 | Outer Full | 36.98 | 38.69 | / | Pass |
| | 3959.985 | Outer Full | 36.25 | 38.67 | / | Pass |
| | 3720.015 | Outer Full | 36.97 | 38.52 | / | Pass |
| CP-OFDM QPSK | 3839.985 | Outer Full | 36.20 | 38.36 | / | Pass |
| | 3959.985 | Outer Full | 36.13 | 37.68 | / | Pass |
| | 3720.015 | Outer Full | 38.42 | 46.58 | / | Pass |
| CP-OFDM 16 QAM | 3839.985 | Outer Full | 39.24 | 64.95 | / | Pass |
| | 3959.985 | Outer Full | 38.75 | 65.28 | / | Pass |
| | 3720.015 | Outer Full | 38.37 | 40.72 | / | Pass |
| CP-OFDM 64 QAM | 3839.985 | Outer Full | 38.45 | 47.03 | / | Pass |
| | 3959.985 | Outer Full | 39.10 | 40.55 | / | Pass |
| | 3720.015 | Outer Full | 38.34 | 40.69 | / | Pass |
| CP-OFDM 256 QAM | 3839.985 | Outer Full | 39.16 | 40.64 | / | Pass |
| | 3959.985 | Outer Full | 38.45 | 40.75 | / | Pass |
| | 3720.015 | Outer Full | 39.13 | 40.50 | / | Pass |
| CP-OFDM 256 QAM | 3839.985 | Outer Full | 38.64 | 40.56 | / | Pass |
| | 3959.985 | Outer Full | 38.38 | 40.58 | / | Pass |
| | 3720.015 | Outer Full | 39.13 | 40.50 | / | Pass |

4.1.10 30k_SISO_50MHz_NTNV

| 5G NR n77a SCS=30kHz SISO 50MHz NTN | | | | | | |
|-------------------------------------|-----------------|---------------|---------------------|----------------------|-------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK | 3725.025 | Outer Full | 46.13 | 49.22 | / | Pass |
| | 3839.985 | Outer Full | 47.15 | 49.37 | / | Pass |
| | 3954.975 | Outer Full | 46.89 | 49.15 | / | Pass |
| DFT-s-OFDM QPSK | 3725.025 | Outer Full | 46.17 | 49.33 | / | Pass |
| | 3839.985 | Outer Full | 46.22 | 49.22 | / | Pass |
| | 3954.975 | Outer Full | 46.06 | 49.34 | / | Pass |
| DFT-s-OFDM 16 QAM | 3725.025 | Outer Full | 46.19 | 49.79 | / | Pass |
| | 3839.985 | Outer Full | 46.97 | 49.42 | / | Pass |
| | 3954.975 | Outer Full | 47.24 | 49.89 | / | Pass |
| DFT-s-OFDM 64 QAM | 3725.025 | Outer Full | 46.53 | 48.70 | / | Pass |
| | 3839.985 | Outer Full | 47.10 | 49.11 | / | Pass |
| | 3954.975 | Outer Full | 47.05 | 49.23 | / | Pass |
| DFT-s-OFDM 256 QAM | 3725.025 | Outer Full | 46.62 | 48.34 | / | Pass |
| | 3839.985 | Outer Full | 46.24 | 49.84 | / | Pass |
| | 3954.975 | Outer Full | 47.22 | 49.05 | / | Pass |
| CP-OFDM QPSK | 3725.025 | Outer Full | 48.80 | 51.10 | / | Pass |
| | 3839.985 | Outer Full | 48.89 | 51.14 | / | Pass |
| | 3954.975 | Outer Full | 48.06 | 66.99 | / | Pass |
| CP-OFDM 16 QAM | 3725.025 | Outer Full | 48.10 | 50.50 | / | Pass |
| | 3839.985 | Outer Full | 48.01 | 62.03 | / | Pass |
| | 3954.975 | Outer Full | 48.83 | 50.99 | / | Pass |
| CP-OFDM 64 QAM | 3725.025 | Outer Full | 48.90 | 51.20 | / | Pass |
| | 3839.985 | Outer Full | 49.01 | 51.09 | / | Pass |
| | 3954.975 | Outer Full | 47.95 | 51.32 | / | Pass |
| CP-OFDM 256 QAM | 3725.025 | Outer Full | 47.65 | 50.03 | / | Pass |
| | 3839.985 | Outer Full | 47.69 | 50.70 | / | Pass |
| | 3954.975 | Outer Full | 48.16 | 51.46 | / | Pass |

4.1.11 30k_SISO_60MHz_NTNV

| 5G NR n77a SCS=30kHz SISO 60MHz NTN | | | | | | |
|-------------------------------------|-----------------|---------------|---------------------|----------------------|-------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK | 3730.005 | Outer Full | 58.29 | 62.28 | / | Pass |
| | 3839.985 | Outer Full | 59.71 | 62.36 | / | Pass |
| | 3949.995 | Outer Full | 58.18 | 61.53 | / | Pass |
| DFT-s-OFDM QPSK | 3730.005 | Outer Full | 58.22 | 62.20 | / | Pass |
| | 3839.985 | Outer Full | 58.20 | 62.35 | / | Pass |
| | 3949.995 | Outer Full | 58.32 | 62.72 | / | Pass |
| DFT-s-OFDM 16 QAM | 3730.005 | Outer Full | 58.61 | 62.78 | / | Pass |
| | 3839.985 | Outer Full | 58.30 | 62.40 | / | Pass |
| | 3949.995 | Outer Full | 58.37 | 62.15 | / | Pass |
| DFT-s-OFDM 64 QAM | 3730.005 | Outer Full | 59.47 | 62.36 | / | Pass |
| | 3839.985 | Outer Full | 59.60 | 61.67 | / | Pass |
| | 3949.995 | Outer Full | 59.24 | 62.00 | / | Pass |
| DFT-s-OFDM 256 QAM | 3730.005 | Outer Full | 59.52 | 62.22 | / | Pass |
| | 3839.985 | Outer Full | 58.35 | 62.14 | / | Pass |
| | 3949.995 | Outer Full | 58.41 | 62.22 | / | Pass |
| CP-OFDM QPSK | 3730.005 | Outer Full | 59.56 | 62.26 | / | Pass |
| | 3839.985 | Outer Full | 59.60 | 62.14 | / | Pass |
| | 3949.995 | Outer Full | 59.53 | 61.91 | / | Pass |
| CP-OFDM 16 QAM | 3730.005 | Outer Full | 59.58 | 61.92 | / | Pass |
| | 3839.985 | Outer Full | 59.61 | 62.14 | / | Pass |
| | 3949.995 | Outer Full | 59.33 | 61.83 | / | Pass |
| CP-OFDM 64 QAM | 3730.005 | Outer Full | 58.33 | 62.08 | / | Pass |
| | 3839.985 | Outer Full | 58.45 | 62.22 | / | Pass |
| | 3949.995 | Outer Full | 58.40 | 62.88 | / | Pass |
| CP-OFDM 256 QAM | 3730.005 | Outer Full | 59.67 | 62.12 | / | Pass |
| | 3839.985 | Outer Full | 59.63 | 62.02 | / | Pass |
| | 3949.995 | Outer Full | 59.36 | 61.79 | / | Pass |

4.1.12 30k_SISO_80MHz_NTNV

| 5G NR n77a SCS=30kHz SISO 80MHz NTN | | | | | | |
|-------------------------------------|-----------------|---------------|---------------------|----------------------|-------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK | 3740.025 | Outer Full | 79.45 | 83.08 | / | Pass |
| | 3839.985 | Outer Full | 79.45 | 83.20 | / | Pass |
| | 3939.975 | Outer Full | 78.73 | 81.55 | / | Pass |
| DFT-s-OFDM QPSK | 3740.025 | Outer Full | 77.71 | 82.96 | / | Pass |
| | 3839.985 | Outer Full | 77.62 | 82.99 | / | Pass |
| | 3939.975 | Outer Full | 79.04 | 82.27 | / | Pass |
| DFT-s-OFDM 16 QAM | 3740.025 | Outer Full | 79.43 | 83.26 | / | Pass |
| | 3839.985 | Outer Full | 77.71 | 82.65 | / | Pass |
| | 3939.975 | Outer Full | 79.19 | 83.53 | / | Pass |
| DFT-s-OFDM 64 QAM | 3740.025 | Outer Full | 79.47 | 83.32 | / | Pass |
| | 3839.985 | Outer Full | 79.53 | 83.29 | / | Pass |
| | 3939.975 | Outer Full | 77.70 | 81.77 | / | Pass |
| DFT-s-OFDM 256 QAM | 3740.025 | Outer Full | 79.89 | 83.98 | / | Pass |
| | 3839.985 | Outer Full | 77.65 | 82.65 | / | Pass |
| | 3939.975 | Outer Full | 77.58 | 82.79 | / | Pass |
| CP-OFDM QPSK | 3740.025 | Outer Full | 78.20 | 82.04 | / | Pass |
| | 3839.985 | Outer Full | 78.01 | 81.94 | / | Pass |
| | 3939.975 | Outer Full | 79.61 | 82.95 | / | Pass |
| CP-OFDM 16 QAM | 3740.025 | Outer Full | 78.09 | 83.36 | / | Pass |
| | 3839.985 | Outer Full | 79.80 | 83.57 | / | Pass |
| | 3939.975 | Outer Full | 79.34 | 96.82 | / | Pass |
| CP-OFDM 64 QAM | 3740.025 | Outer Full | 79.81 | 83.31 | / | Pass |

| | | | | | | |
|-----------------|----------|------------|-------|-------|---|------|
| CP-OFDM 256 QAM | 3839.985 | Outer Full | 78.20 | 83.25 | / | Pass |
| | 3939.975 | Outer Full | 78.35 | 82.25 | / | Pass |
| | 3740.025 | Outer Full | 78.44 | 81.34 | / | Pass |
| | 3839.985 | Outer Full | 77.62 | 83.24 | / | Pass |
| | 3939.975 | Outer Full | 79.44 | 82.47 | / | Pass |

4.1.13 30k_SISO_90MHz_NTNV

| 5G NR n77a SCS=30kHz SISO 90MHz NTN | | | | | | |
|-------------------------------------|-----------------|---------------|---------------------|----------------------|-------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK | 3745.005 | Outer Full | 87.27 | 93.32 | / | Pass |
| | 3839.985 | Outer Full | 89.00 | 93.09 | / | Pass |
| | 3934.995 | Outer Full | 86.99 | 91.71 | / | Pass |
| DFT-s-OFDM QPSK | 3745.005 | Outer Full | 87.42 | 93.18 | / | Pass |
| | 3839.985 | Outer Full | 87.25 | 92.80 | / | Pass |
| | 3934.995 | Outer Full | 87.43 | 93.10 | / | Pass |
| DFT-s-OFDM 16 QAM | 3745.005 | Outer Full | 89.46 | 93.52 | / | Pass |
| | 3839.985 | Outer Full | 88.99 | 93.23 | / | Pass |
| | 3934.995 | Outer Full | 87.33 | 92.94 | / | Pass |
| DFT-s-OFDM 64 QAM | 3745.005 | Outer Full | 89.47 | 93.50 | / | Pass |
| | 3839.985 | Outer Full | 87.08 | 93.18 | / | Pass |
| | 3934.995 | Outer Full | 87.25 | 92.97 | / | Pass |
| DFT-s-OFDM 256 QAM | 3745.005 | Outer Full | 86.85 | 91.67 | / | Pass |
| | 3839.985 | Outer Full | 89.23 | 93.28 | / | Pass |
| | 3934.995 | Outer Full | 87.72 | 91.11 | / | Pass |
| CP-OFDM QPSK | 3745.005 | Outer Full | 90.02 | 94.07 | / | Pass |
| | 3839.985 | Outer Full | 88.09 | 117.52 | / | Pass |
| | 3934.995 | Outer Full | 90.24 | 93.26 | / | Pass |
| CP-OFDM 16 QAM | 3745.005 | Outer Full | 89.80 | 92.72 | / | Pass |
| | 3839.985 | Outer Full | 90.01 | 93.76 | / | Pass |
| | 3934.995 | Outer Full | 89.48 | 95.41 | / | Pass |
| CP-OFDM 64 QAM | 3745.005 | Outer Full | 89.49 | 93.32 | / | Pass |
| | 3839.985 | Outer Full | 88.21 | 101.86 | / | Pass |
| | 3934.995 | Outer Full | 89.88 | 93.61 | / | Pass |
| CP-OFDM 256 QAM | 3745.005 | Outer Full | 89.99 | 93.37 | / | Pass |
| | 3839.985 | Outer Full | 90.33 | 94.12 | / | Pass |
| | 3934.995 | Outer Full | 87.93 | 93.33 | / | Pass |

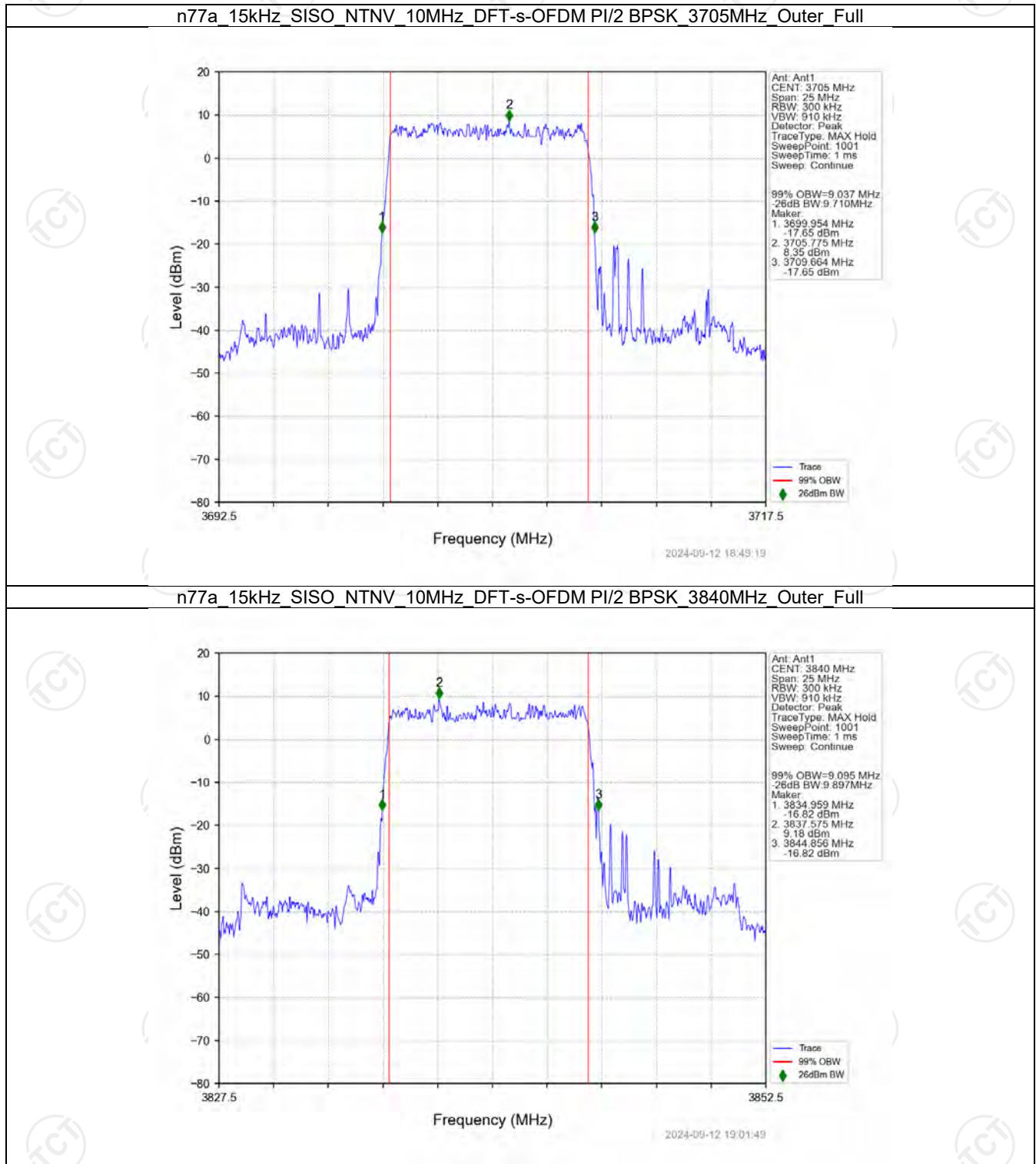
4.1.14 30k_SISO_100MHz_NTNV

| 5G NR n77a SCS=30kHz SISO 100MHz NTN | | | | | | |
|--------------------------------------|-----------------|---------------|---------------------|----------------------|-------------|---------|
| Modulation | Frequency (MHz) | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK | 3750.015 | Outer Full | 96.85 | 103.27 | / | Pass |
| | 3839.985 | Outer Full | 98.87 | 103.95 | / | Pass |
| | 3929.985 | Outer Full | 96.78 | 103.35 | / | Pass |
| DFT-s-OFDM QPSK | 3750.015 | Outer Full | 96.98 | 103.51 | / | Pass |
| | 3839.985 | Outer Full | 96.56 | 103.06 | / | Pass |
| | 3929.985 | Outer Full | 98.76 | 103.47 | / | Pass |
| DFT-s-OFDM 16 QAM | 3750.015 | Outer Full | 97.25 | 104.51 | / | Pass |
| | 3839.985 | Outer Full | 98.32 | 102.38 | / | Pass |
| | 3929.985 | Outer Full | 96.50 | 103.25 | / | Pass |
| DFT-s-OFDM 64 QAM | 3750.015 | Outer Full | 96.33 | 103.44 | / | Pass |
| | 3839.985 | Outer Full | 96.67 | 103.02 | / | Pass |
| | 3929.985 | Outer Full | 98.22 | 103.97 | / | Pass |

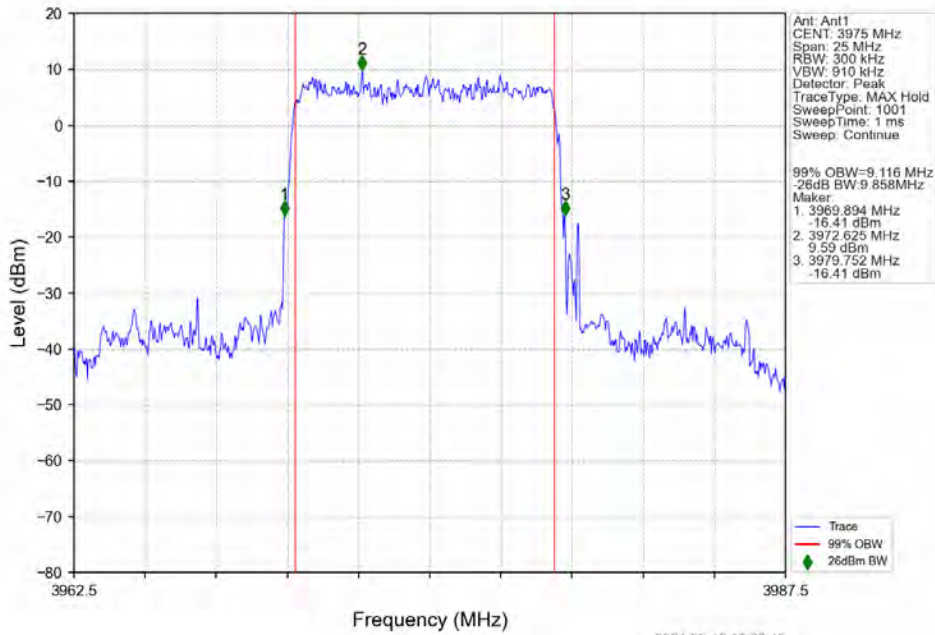
| | | | | | | |
|--------------------|----------|------------|--------|--------|---|------|
| DFT-s-OFDM 256 QAM | 3750.015 | Outer Full | 98.85 | 104.22 | / | Pass |
| | 3839.985 | Outer Full | 99.26 | 103.62 | / | Pass |
| | 3929.985 | Outer Full | 96.81 | 103.47 | / | Pass |
| CP-OFDM QPSK | 3750.015 | Outer Full | 99.84 | 104.13 | / | Pass |
| | 3839.985 | Outer Full | 97.85 | 104.34 | / | Pass |
| | 3929.985 | Outer Full | 98.10 | 116.03 | / | Pass |
| CP-OFDM 16 QAM | 3750.015 | Outer Full | 97.73 | 106.00 | / | Pass |
| | 3839.985 | Outer Full | 98.15 | 106.79 | / | Pass |
| | 3929.985 | Outer Full | 98.16 | 115.62 | / | Pass |
| CP-OFDM 64 QAM | 3750.015 | Outer Full | 97.77 | 104.07 | / | Pass |
| | 3839.985 | Outer Full | 100.34 | 105.17 | / | Pass |
| | 3929.985 | Outer Full | 99.72 | 104.11 | / | Pass |
| CP-OFDM 256 QAM | 3750.015 | Outer Full | 97.64 | 103.75 | / | Pass |
| | 3839.985 | Outer Full | 100.14 | 104.57 | / | Pass |
| | 3929.985 | Outer Full | 97.96 | 104.15 | / | Pass |

4.2 Test Graph

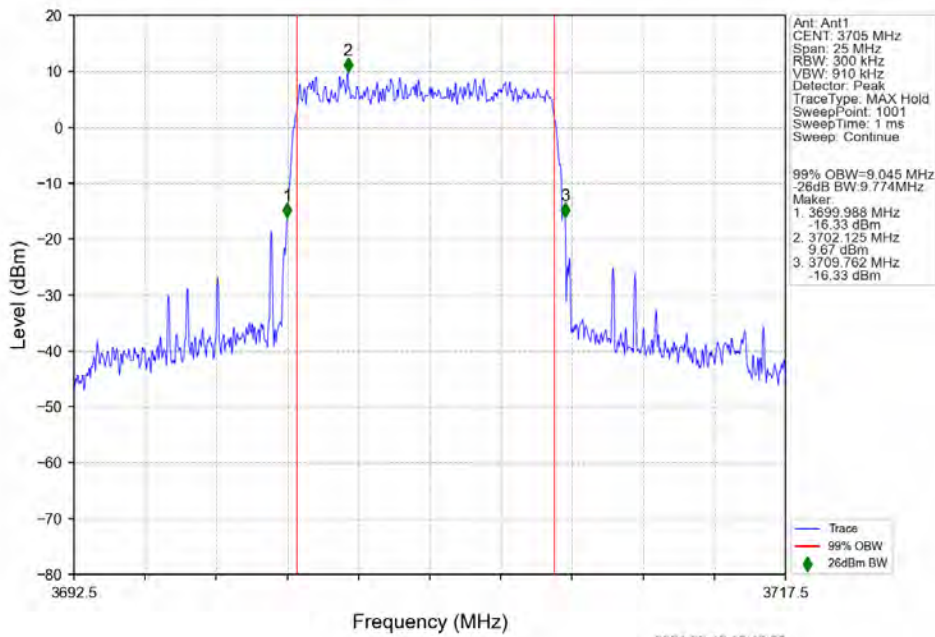
4.2.1 15k_SISO_10MHz_NTNV



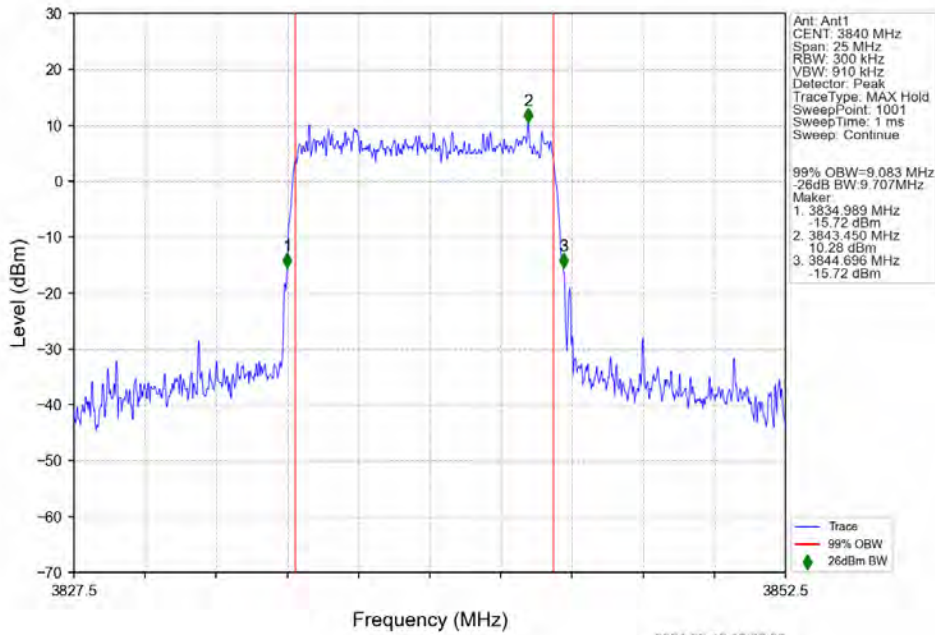
n77a 15kHz SISO NTN 10MHz DFT-s-OFDM PI/2 BPSK 3975MHz Outer Full



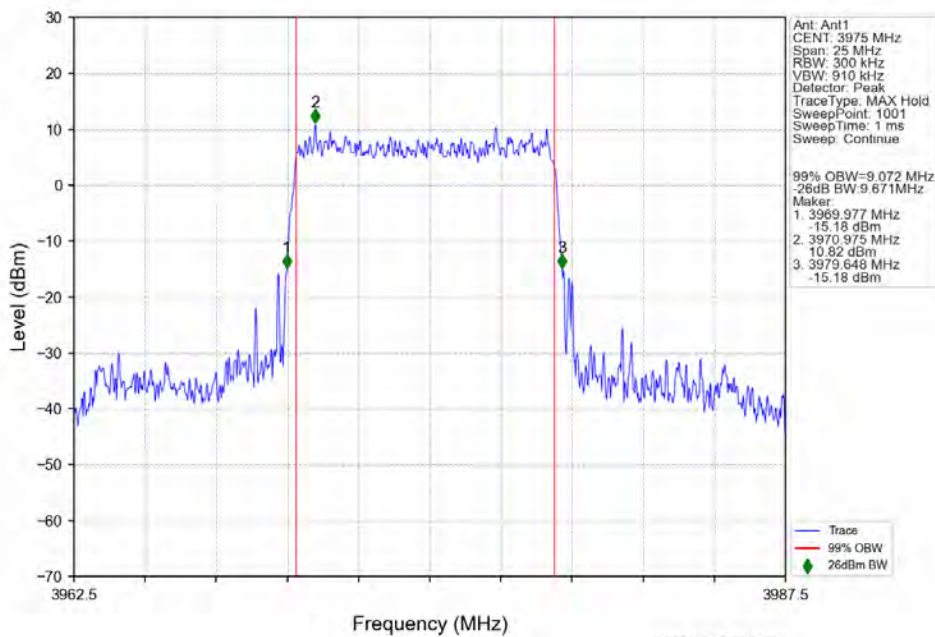
n77a 15kHz SISO NTN 10MHz DFT-s-OFDM QPSK 3705MHz Outer Full



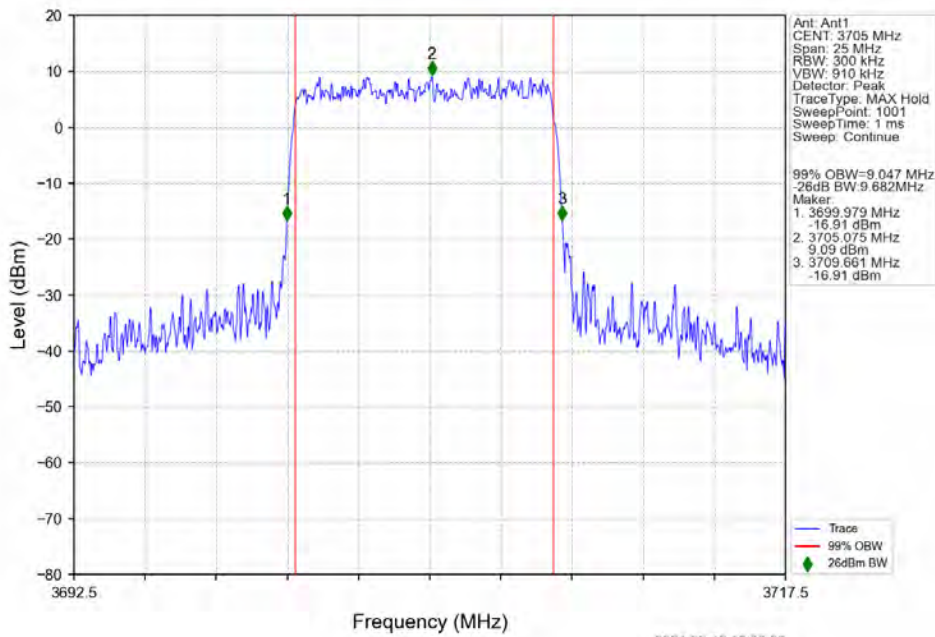
n77a 15kHz SISO NTN 10MHz DFT-s-OFDM QPSK 3840MHz Outer Full



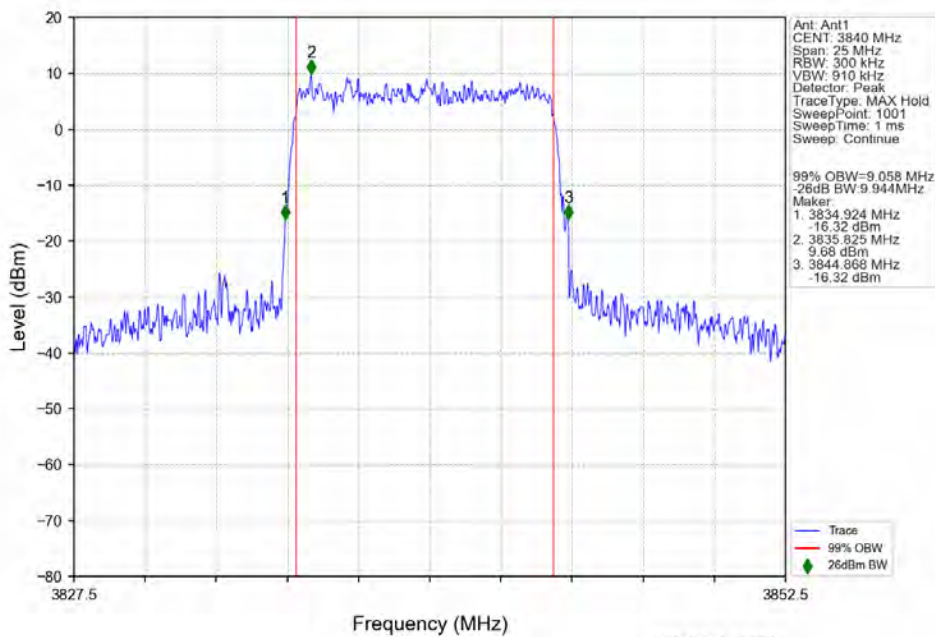
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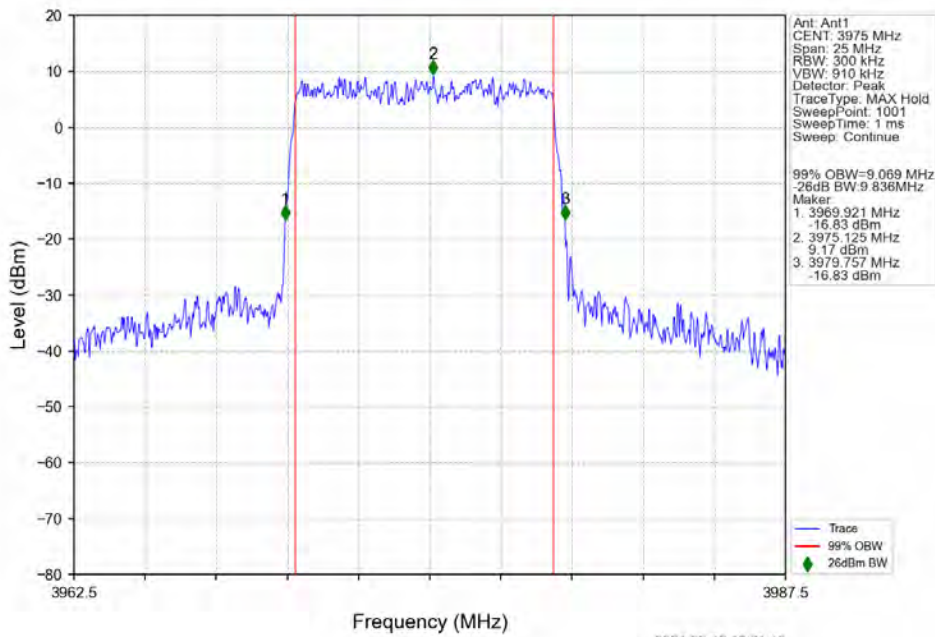
n77a 15kHz SISO NTV 10MHz DFT-s-OFDM 16 QAM 3705MHz Outer Full



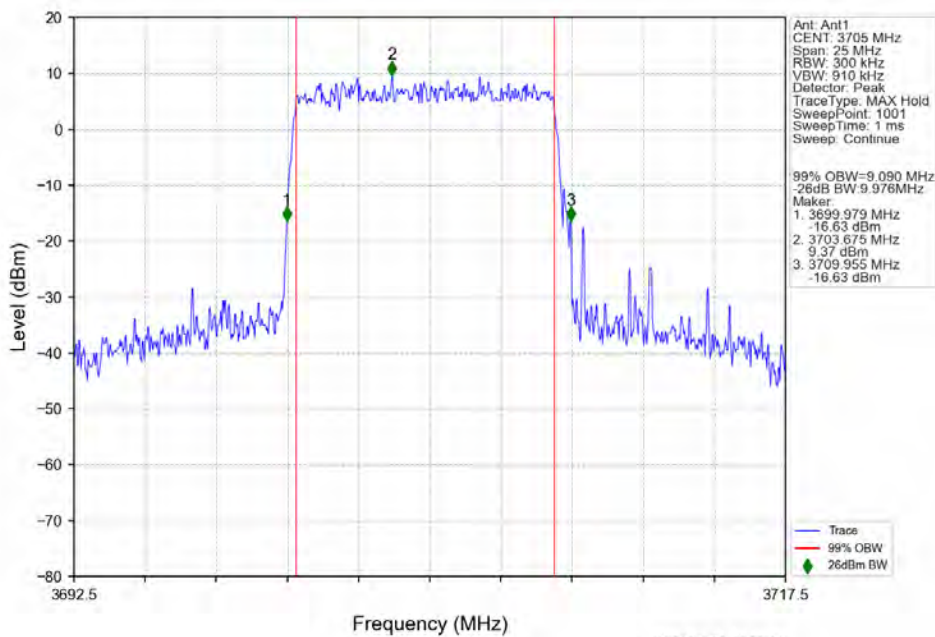
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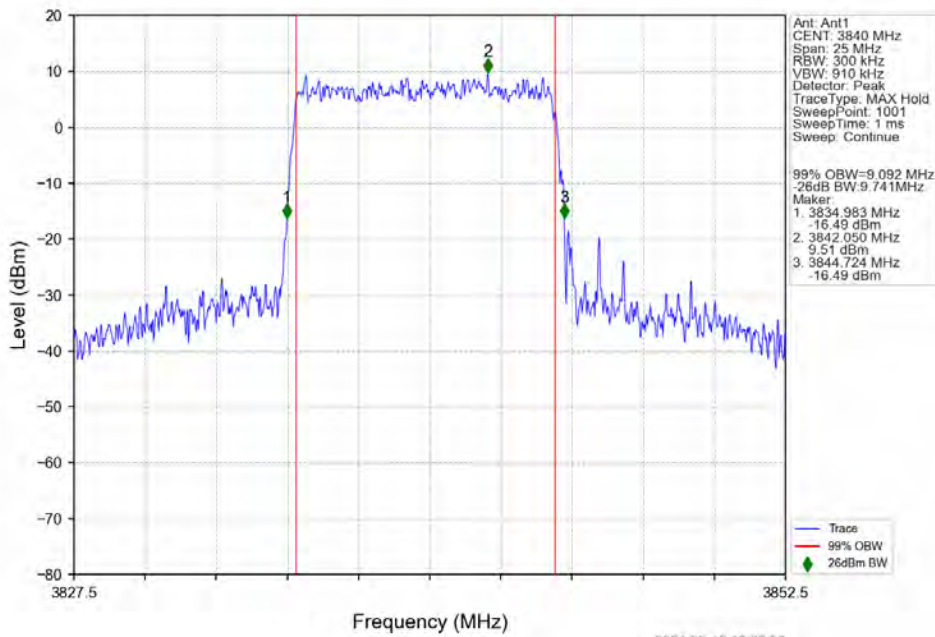
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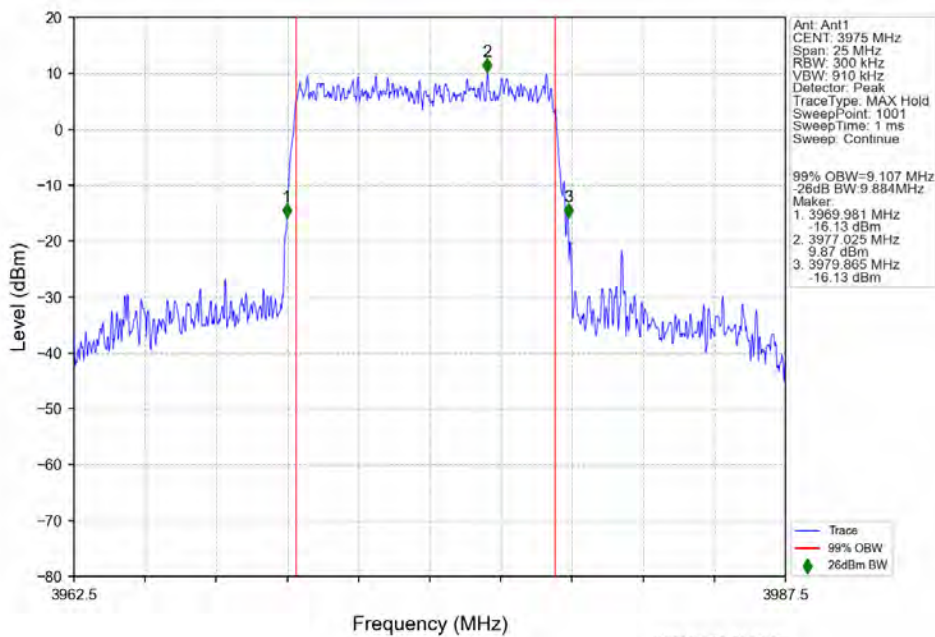
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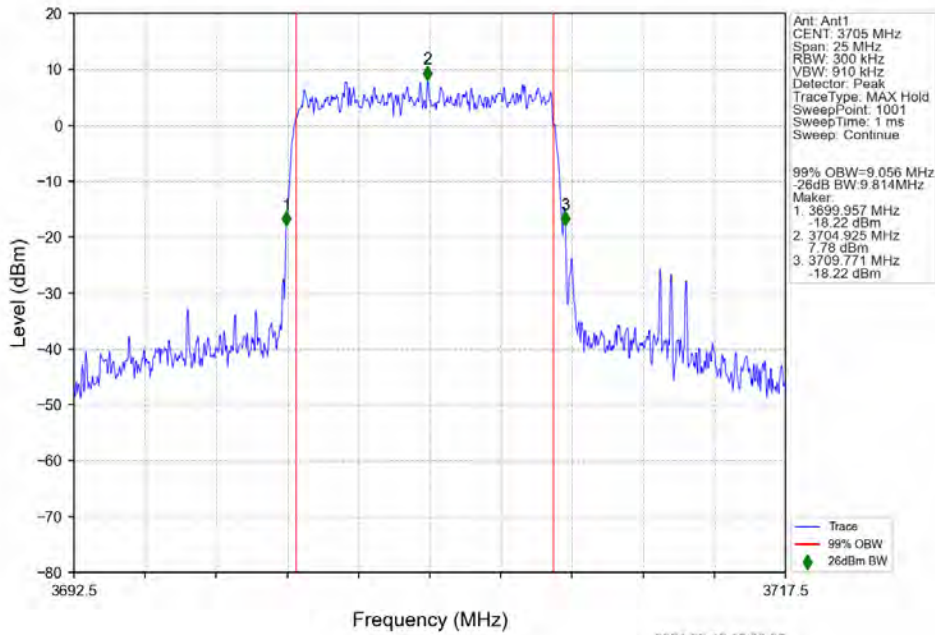
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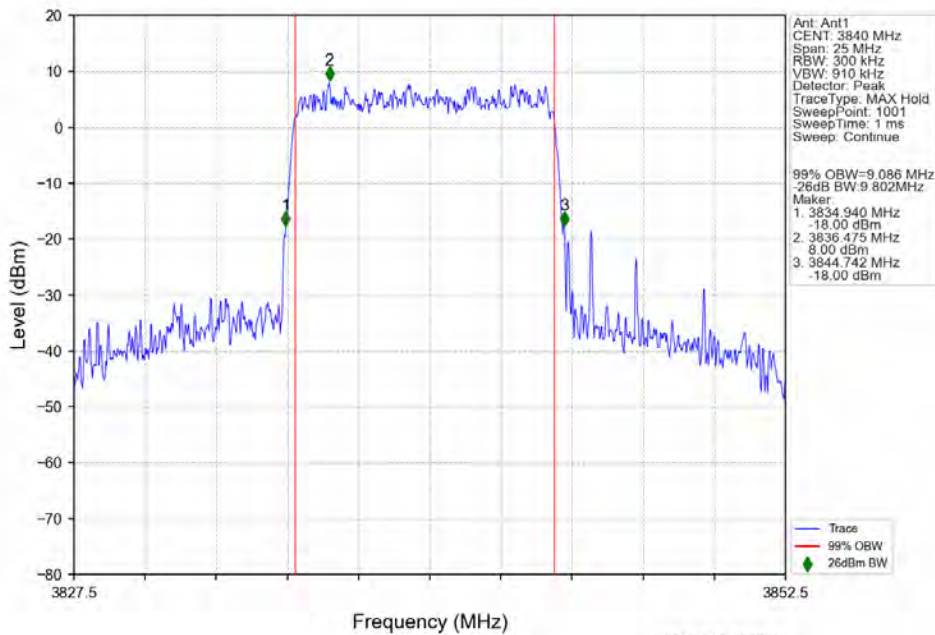
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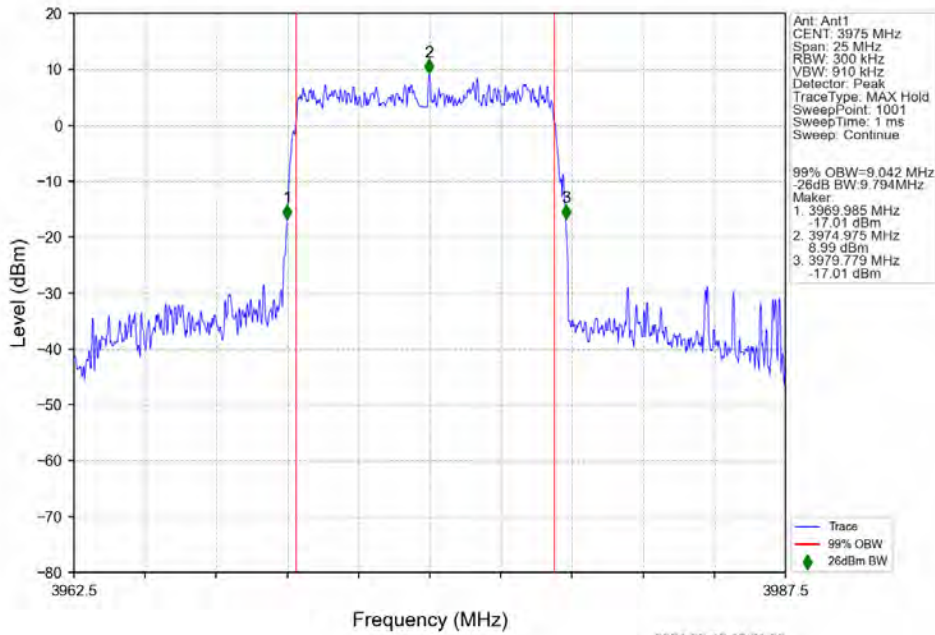
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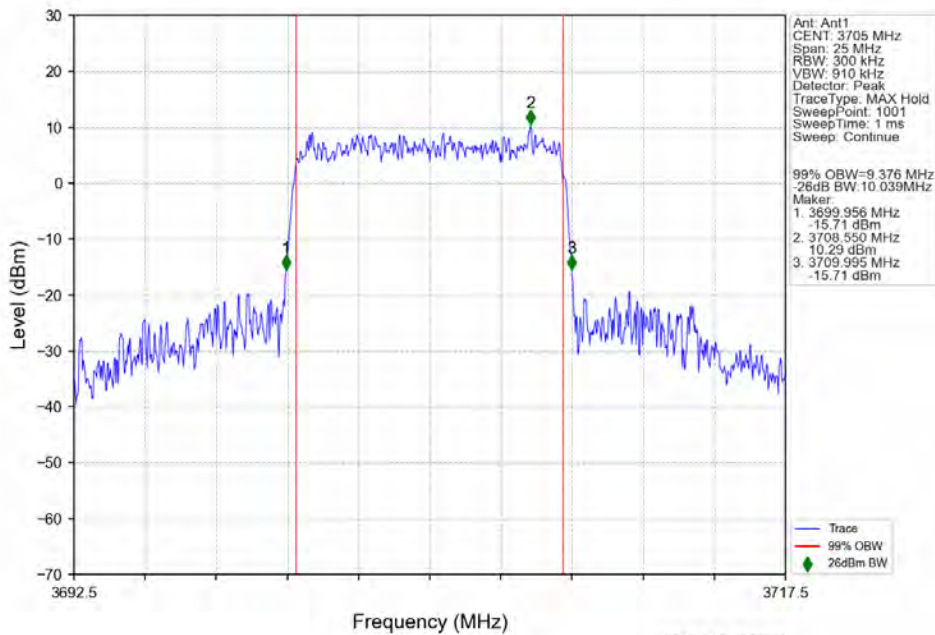
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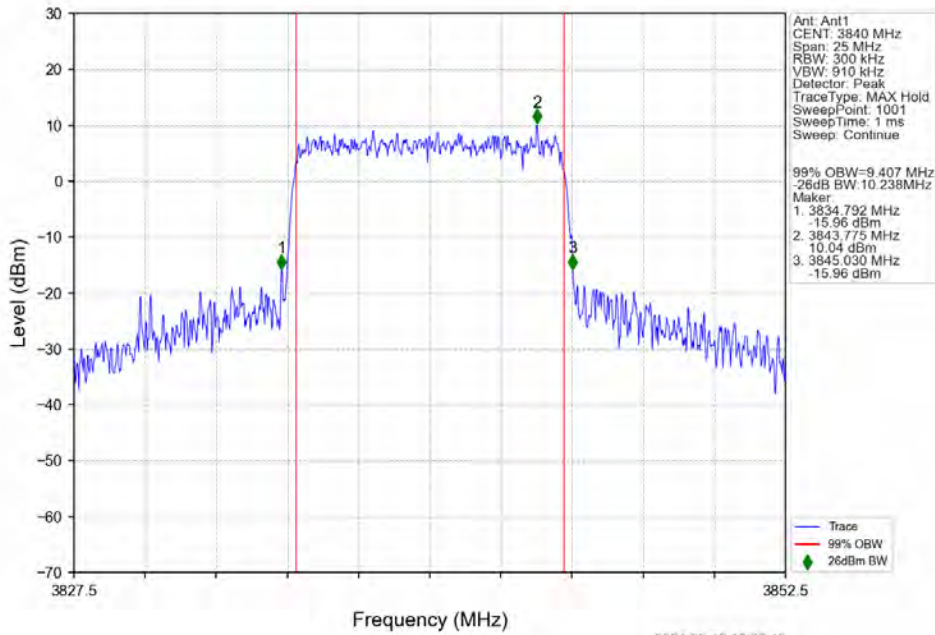
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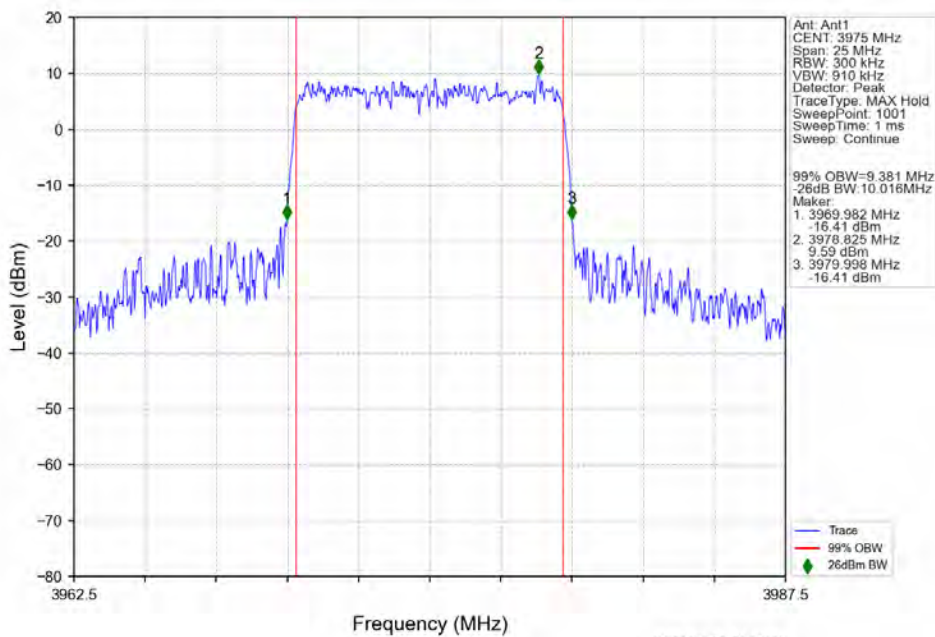
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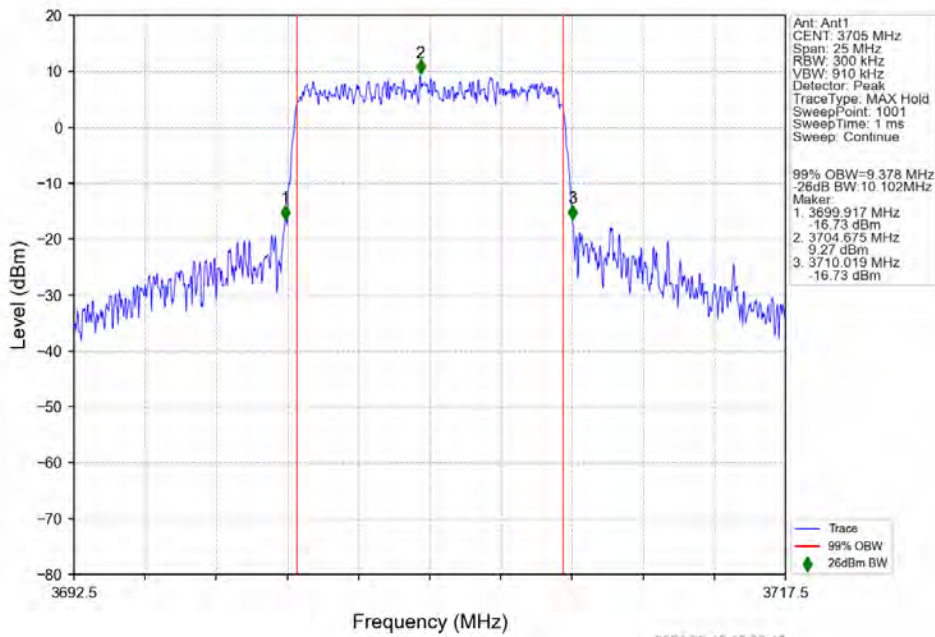
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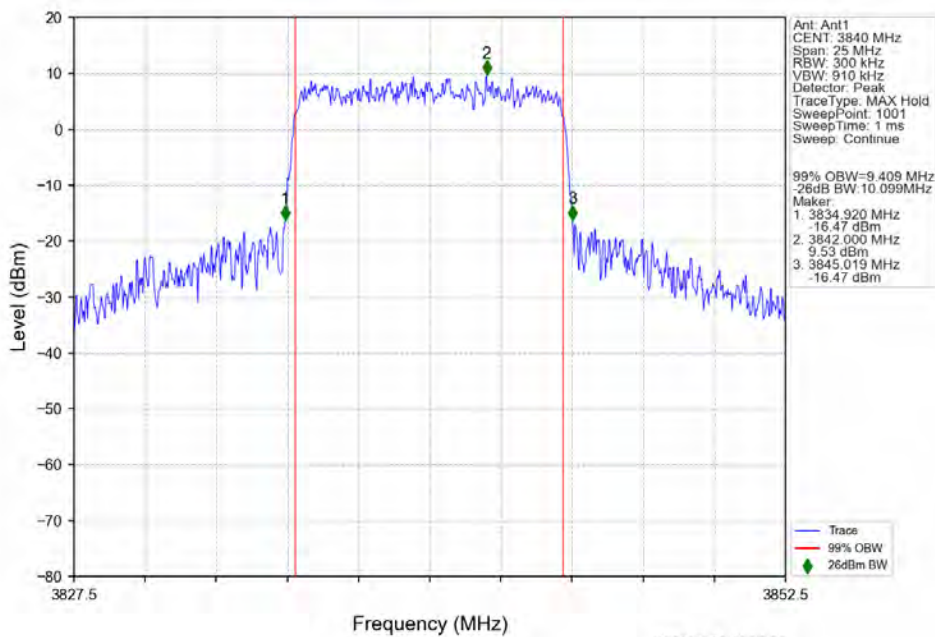
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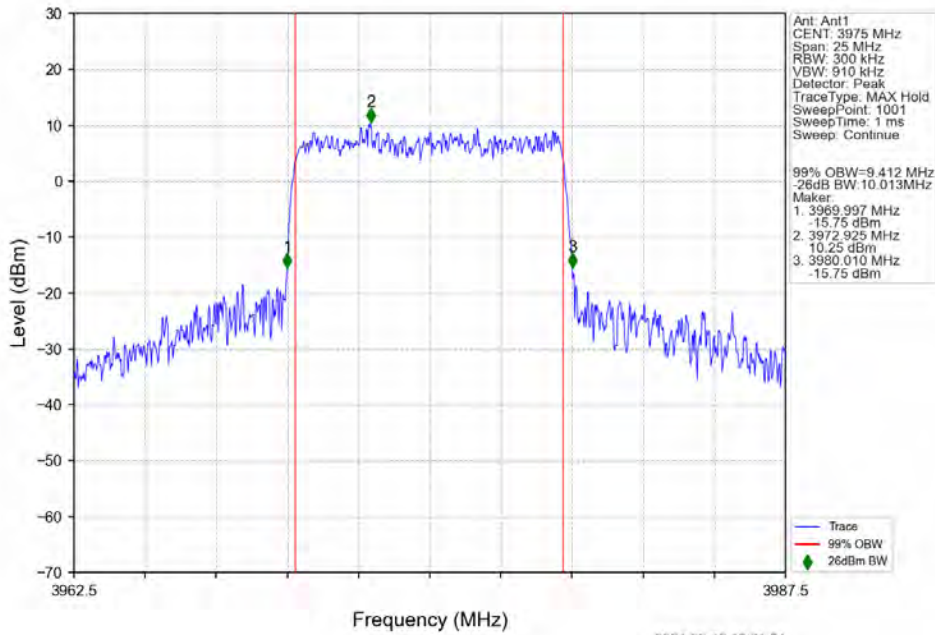
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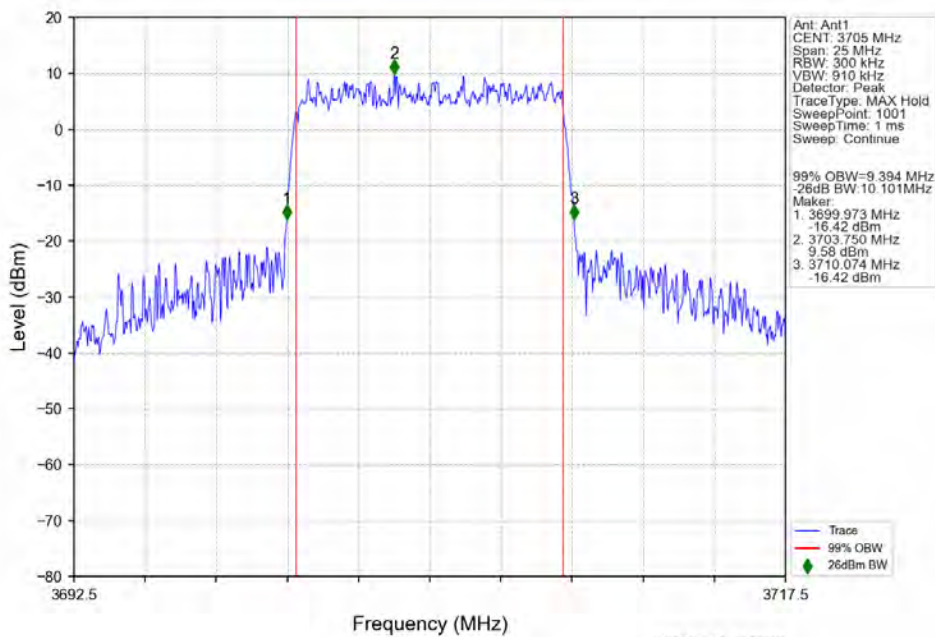
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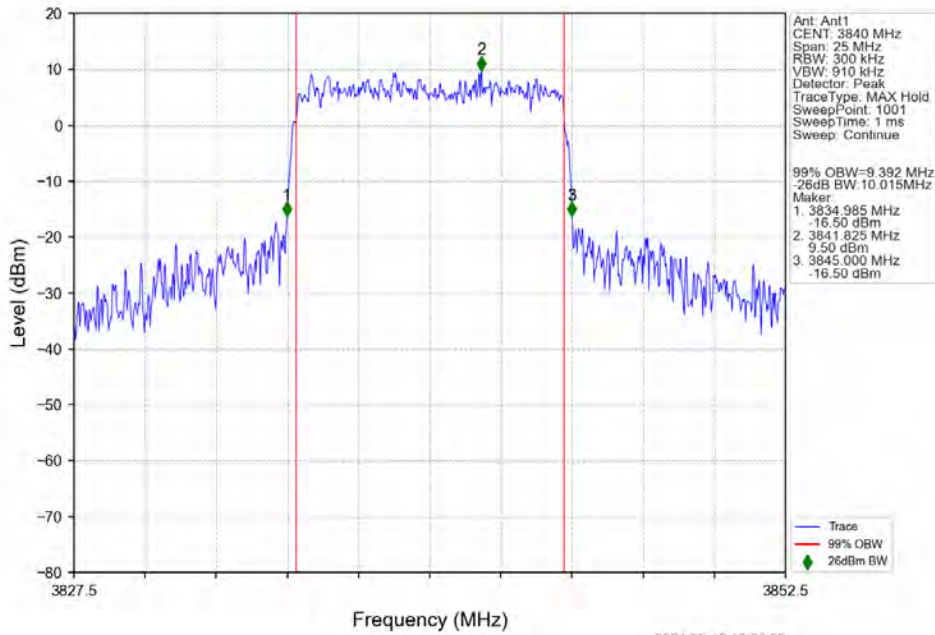
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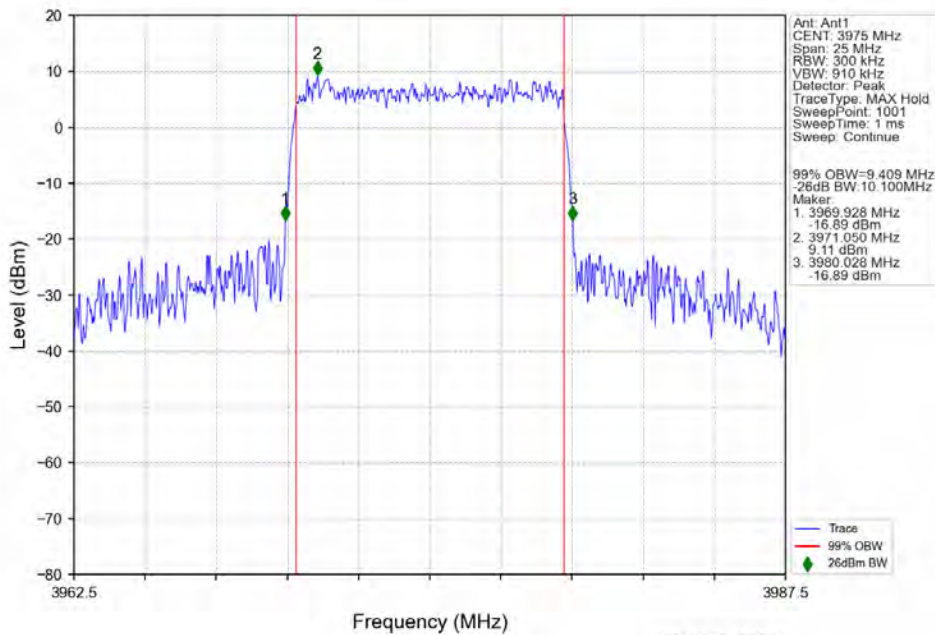
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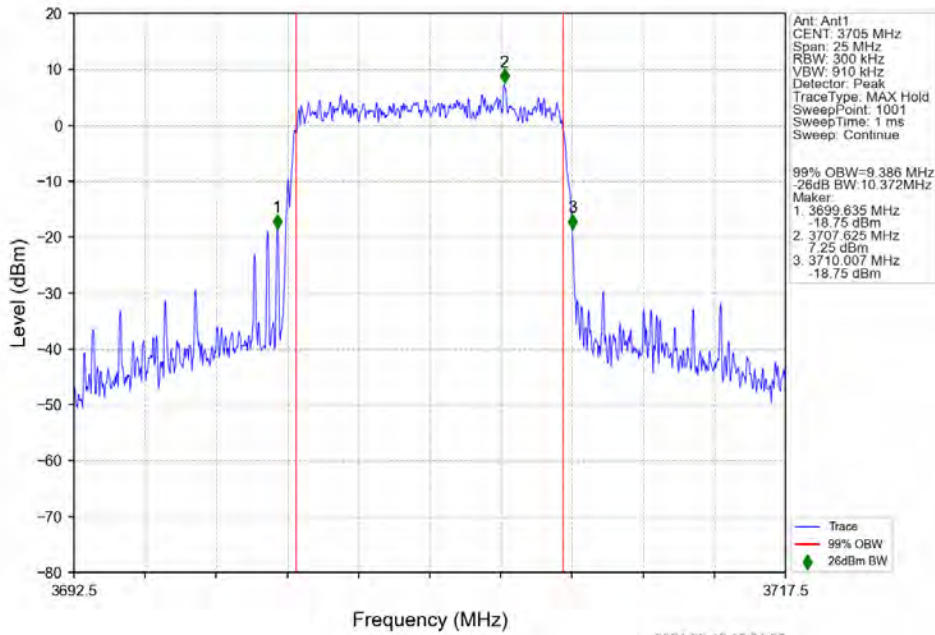
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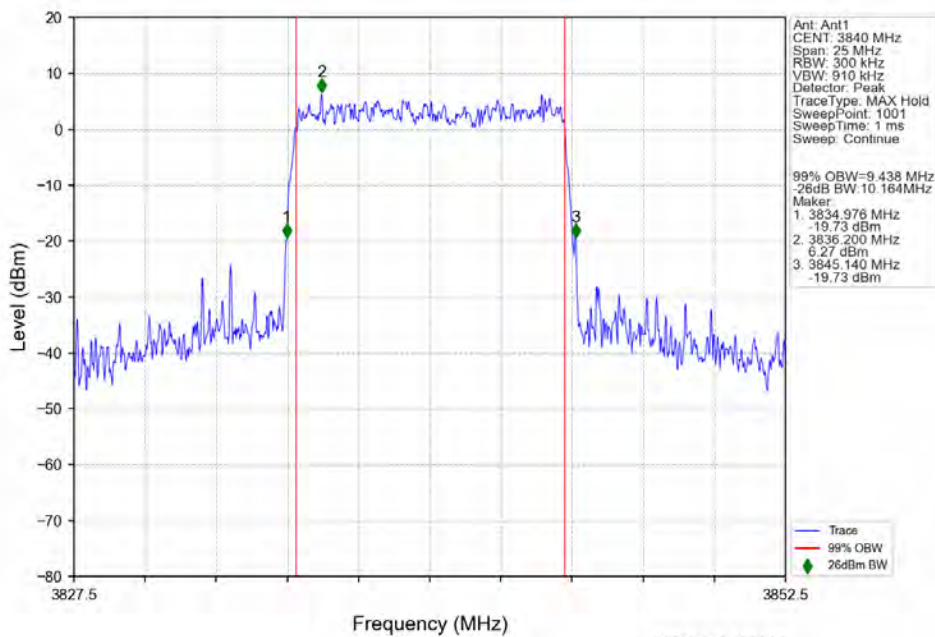
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n77a 15kHz SISO NTVN 10MHz CP-OFDM 256 QAM 3705MHz Outer Full



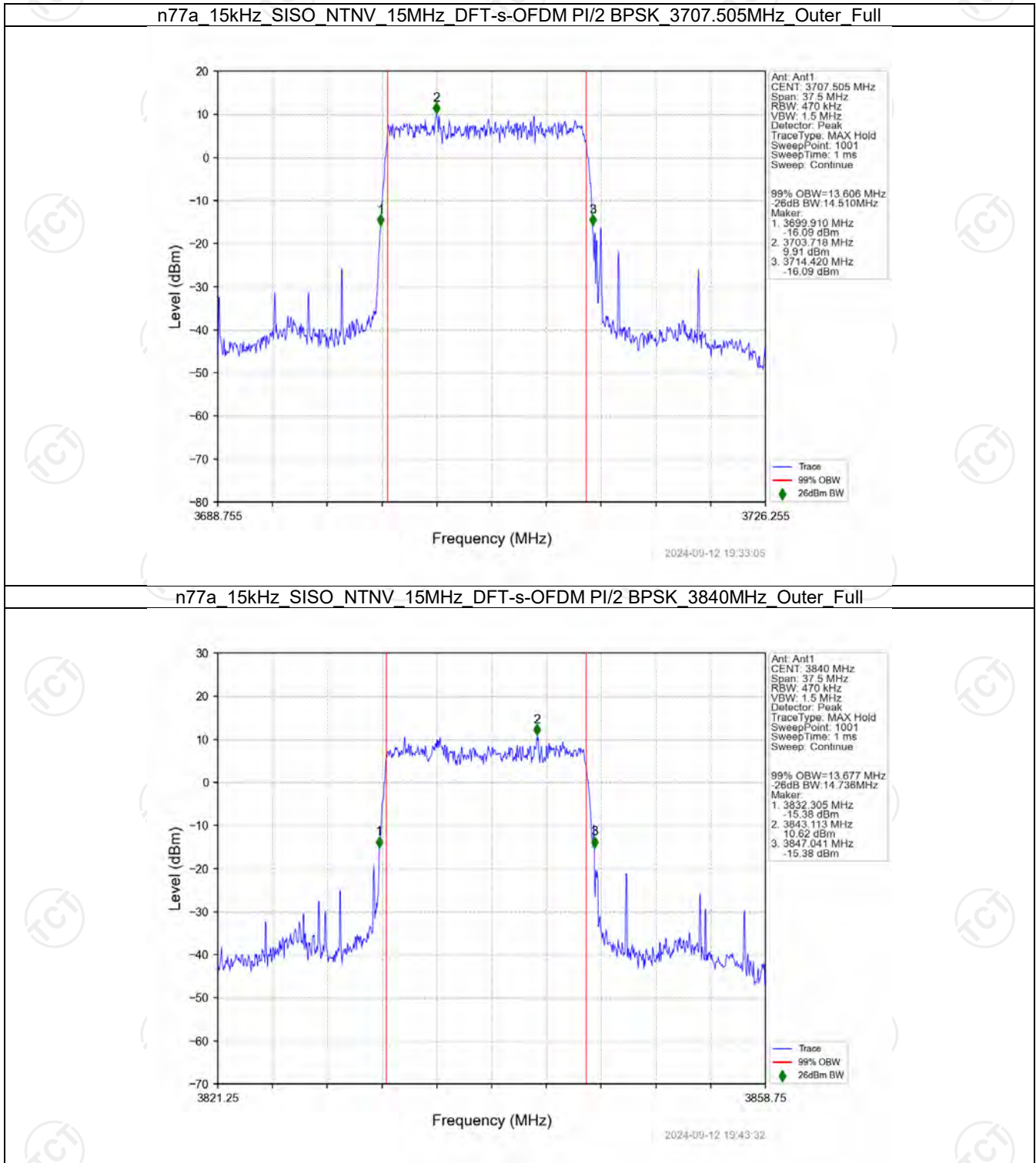
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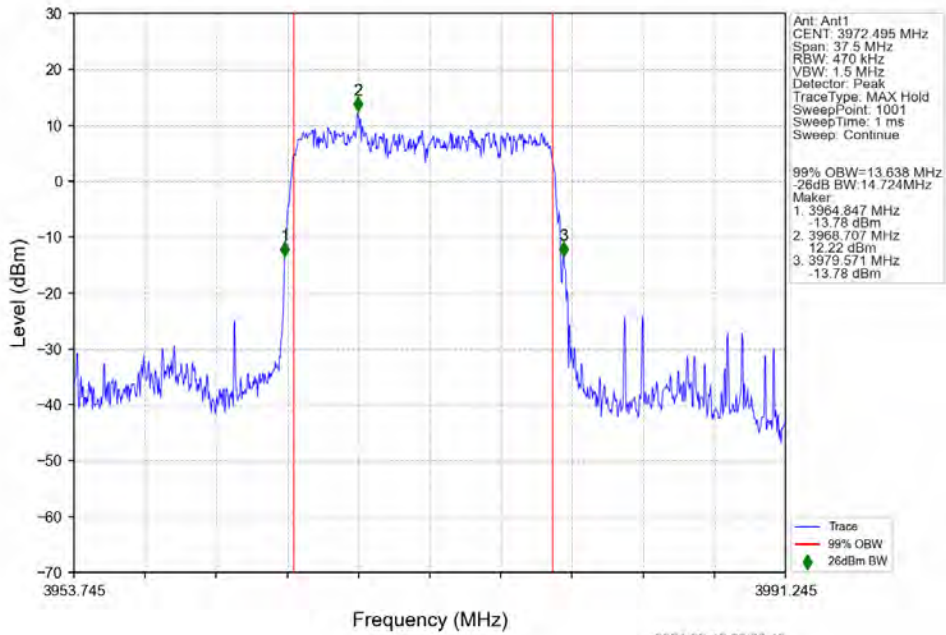
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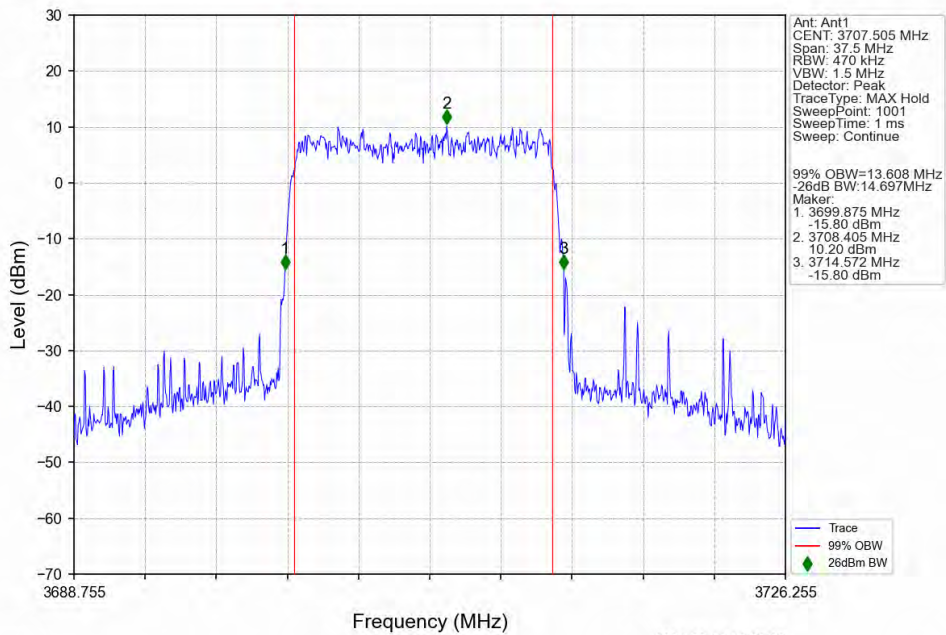
4.2.2 15k_SISO_15MHz_NTNV



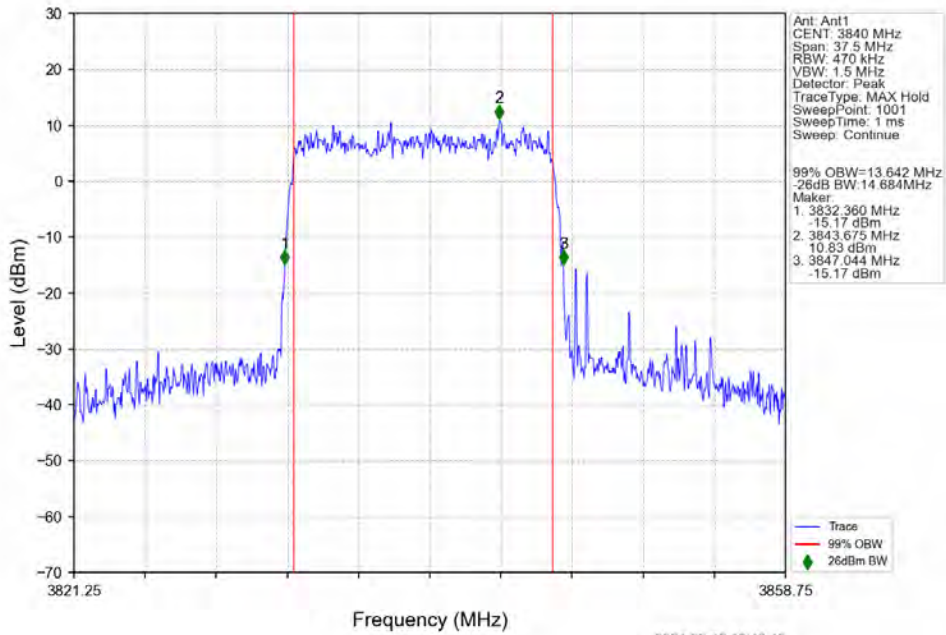
n77a 15kHz SISO NTN 15MHz DFT-s-OFDM PI/2 BPSK 3972.495MHz Outer Full



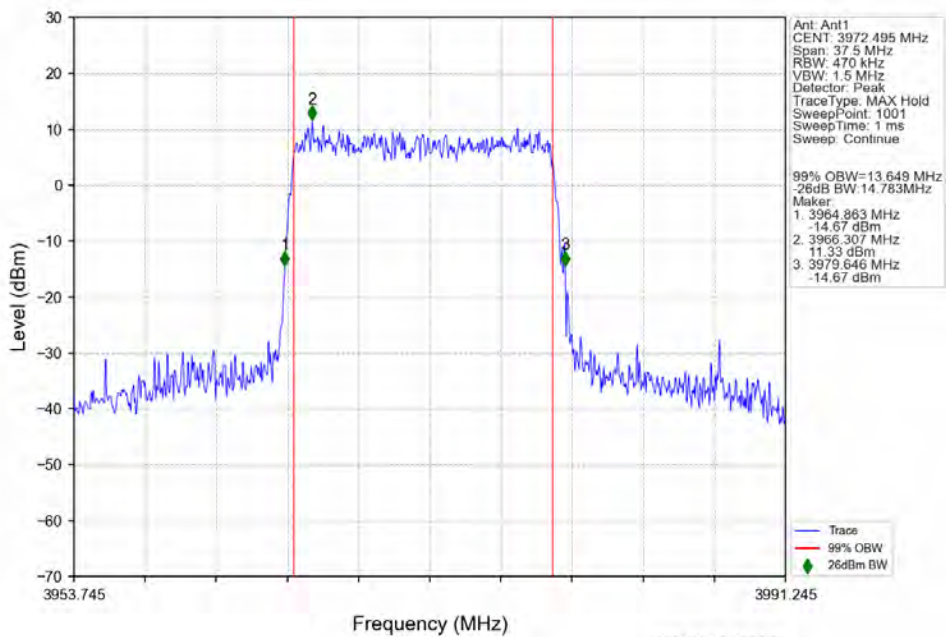
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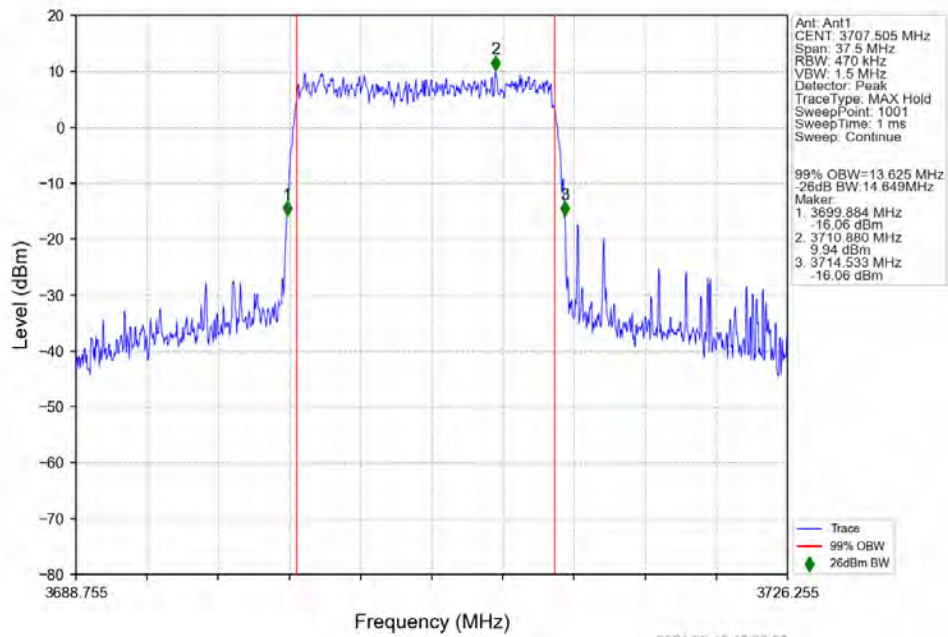
n77a 15kHz SISO NTNv 15MHz DFT-s-OFDM QPSK 3840MHz Outer Full



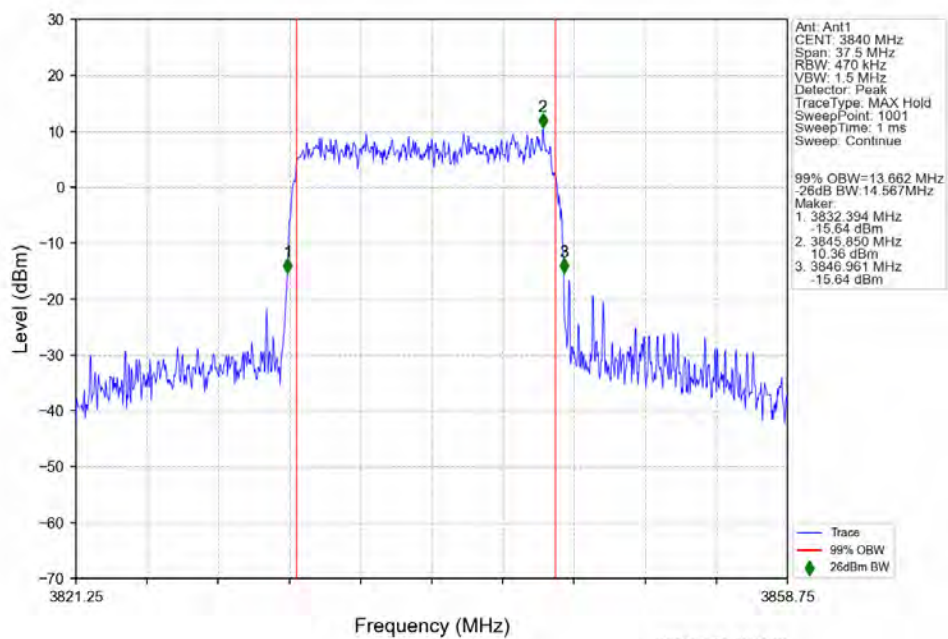
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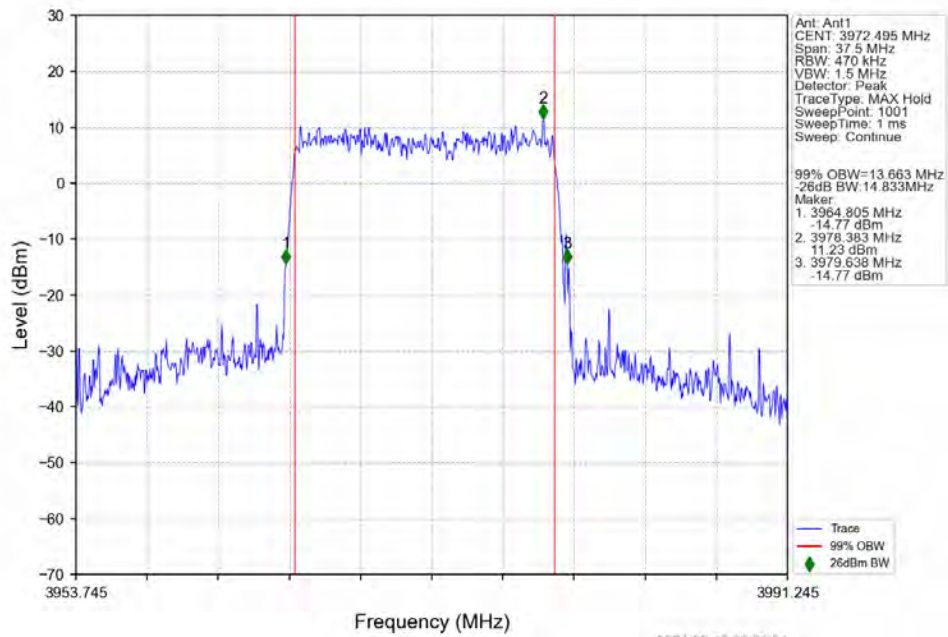
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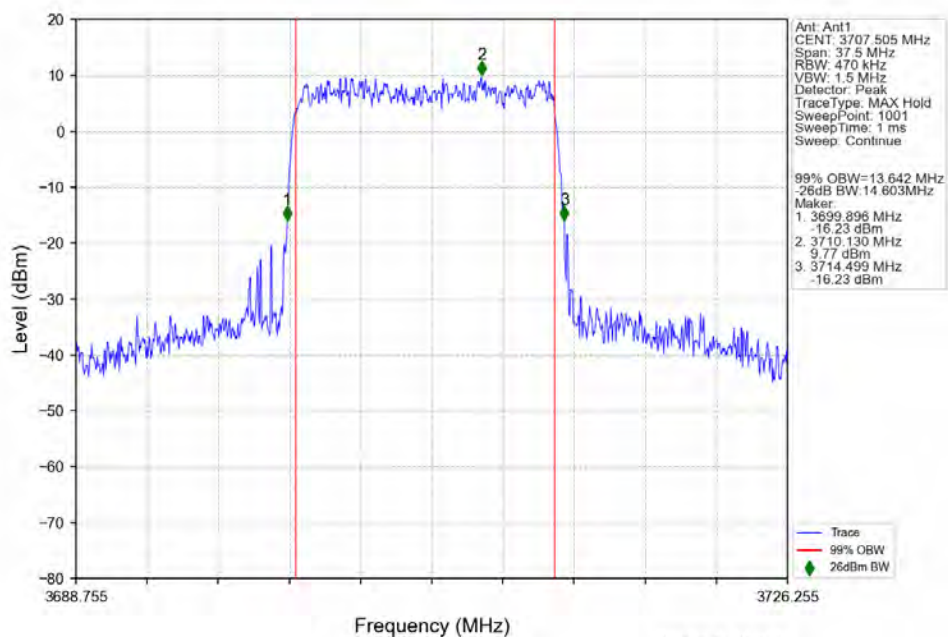
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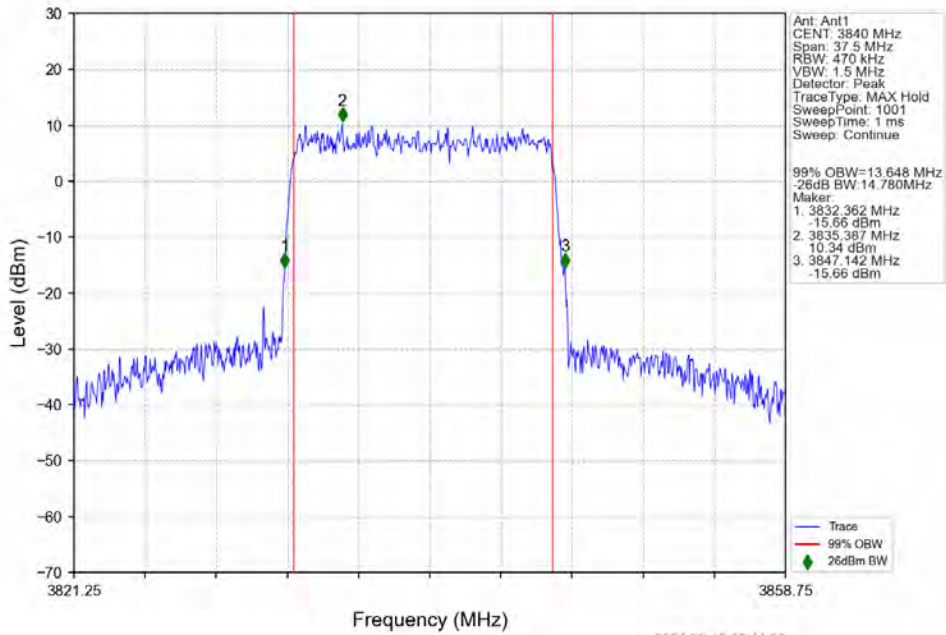
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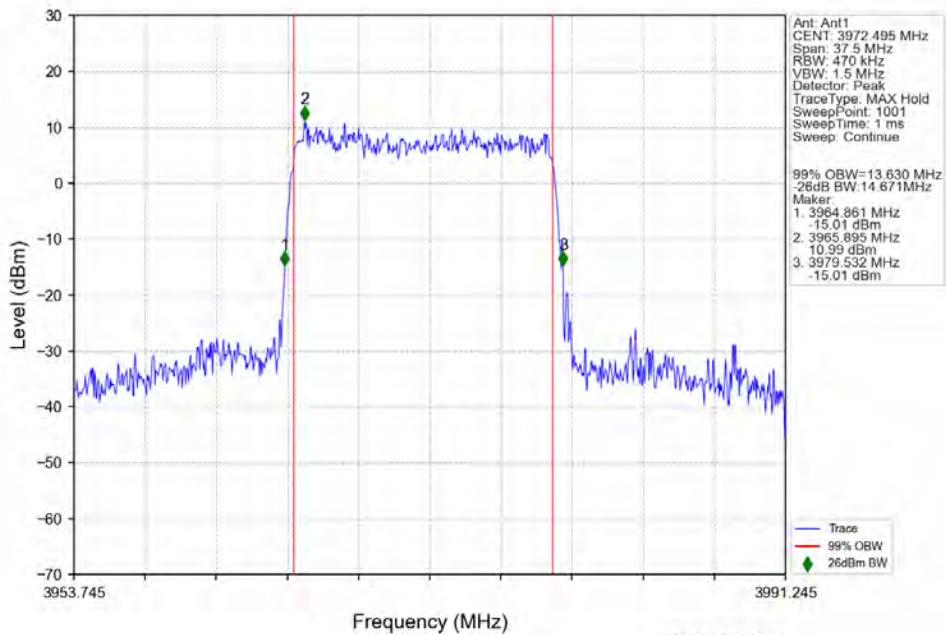
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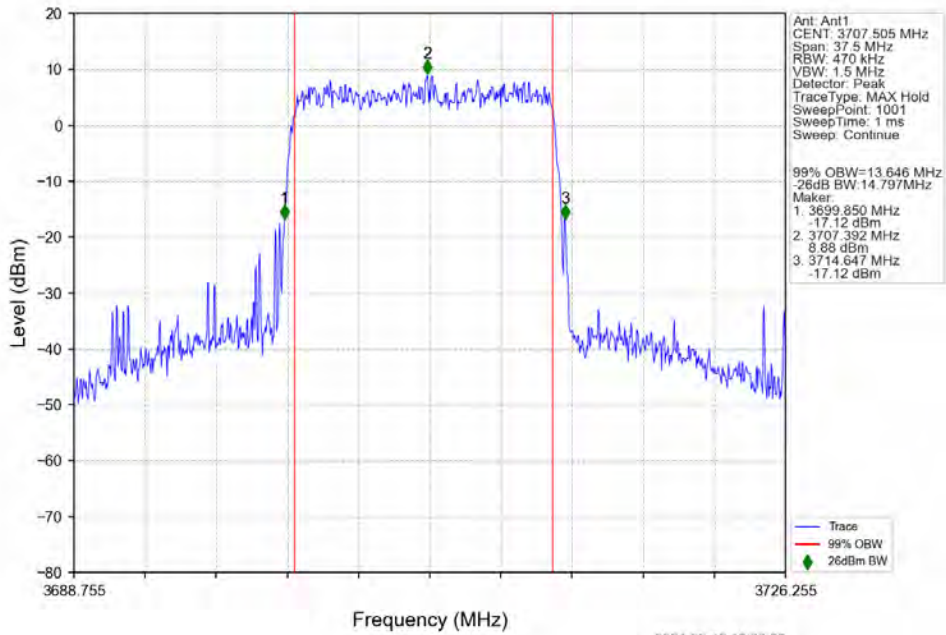
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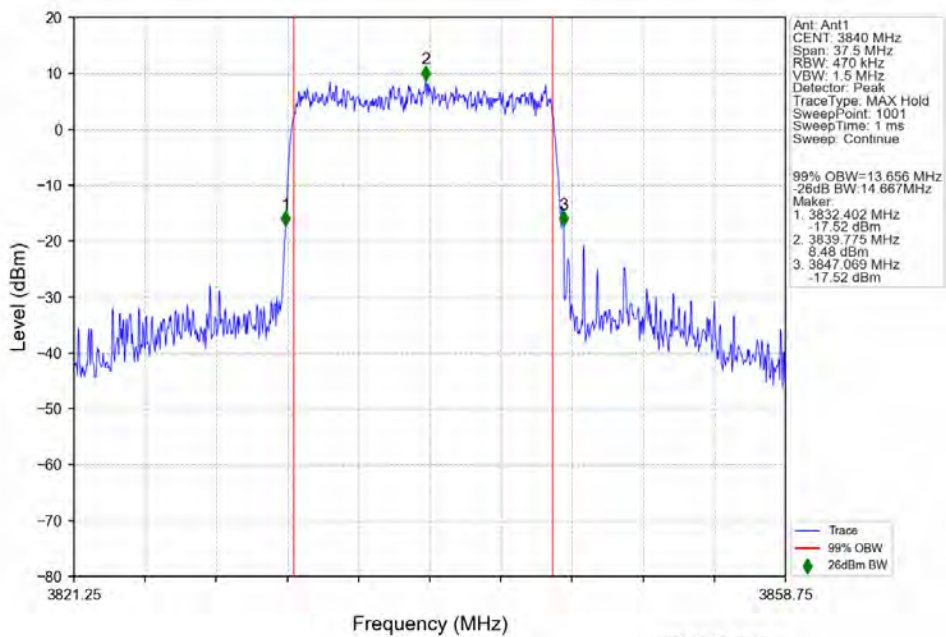
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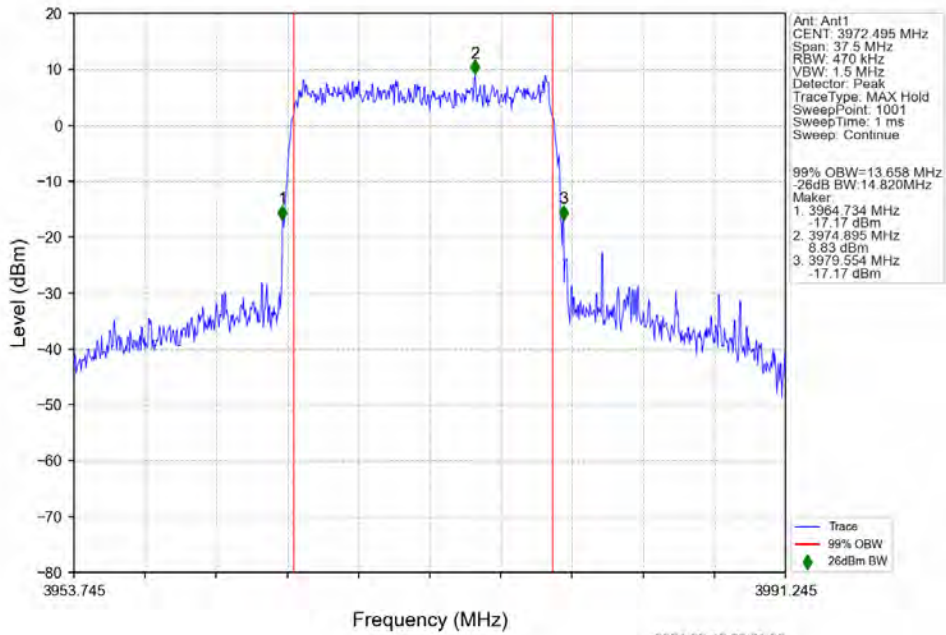
n77a 15kHz SISO NTN 15MHz DFT-s-OFDM 256 QAM 3707.505MHz Outer Full



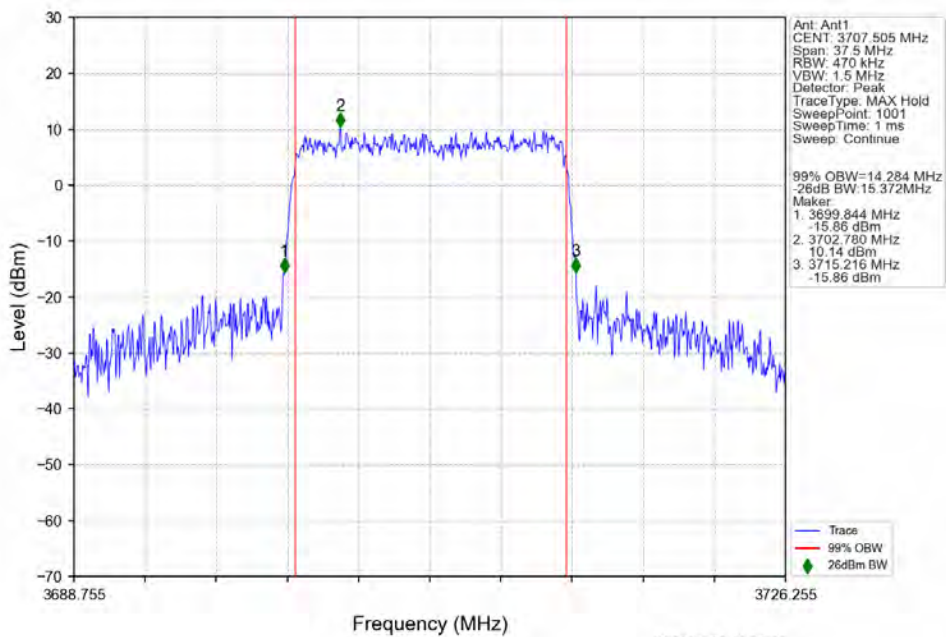
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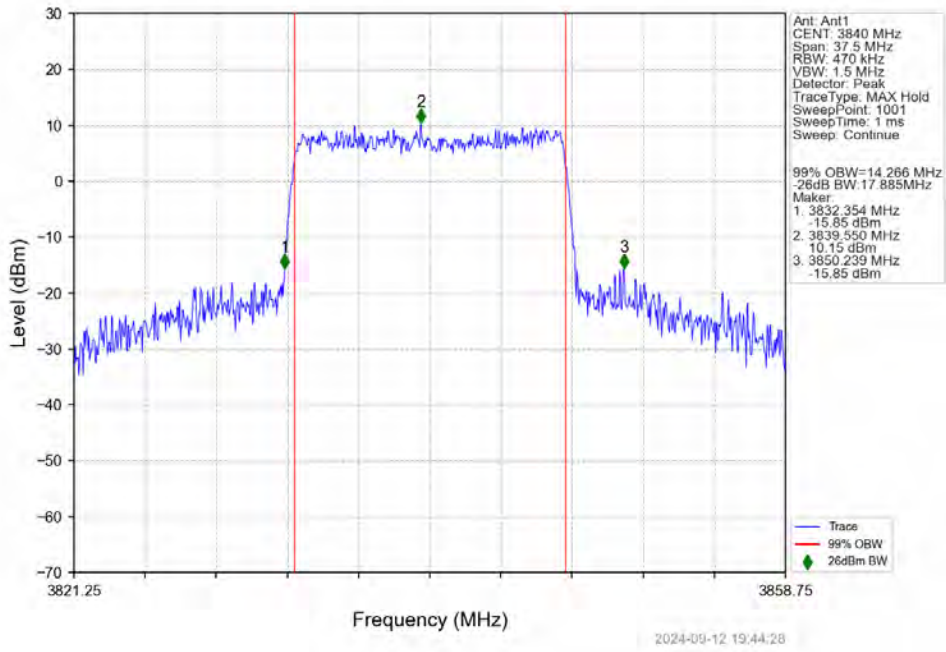
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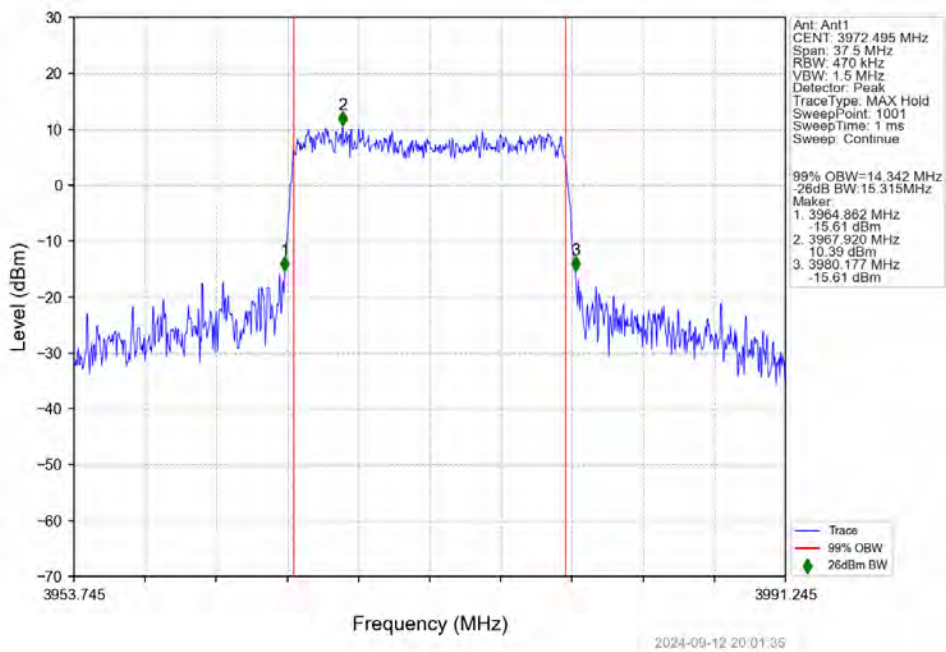
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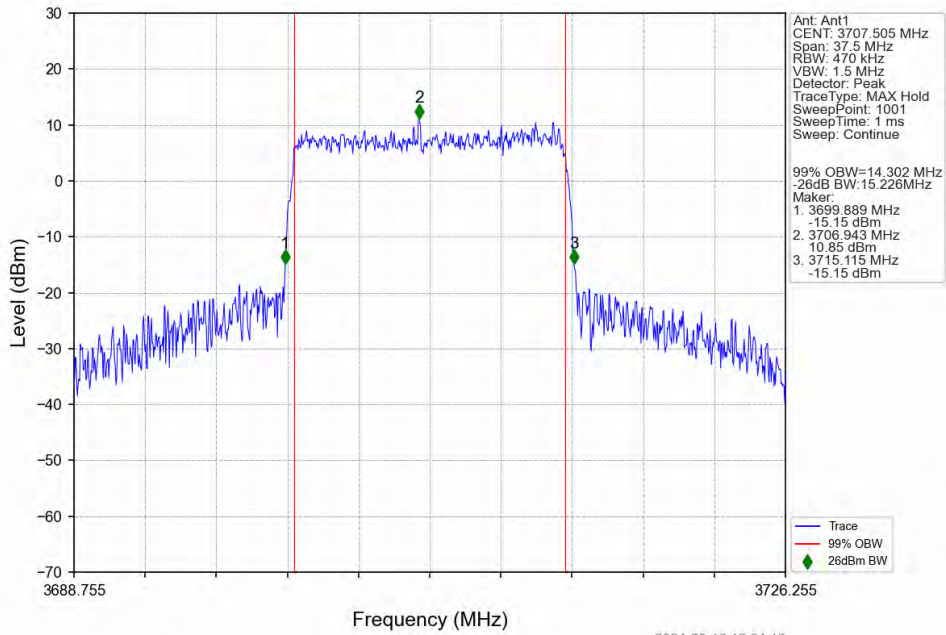
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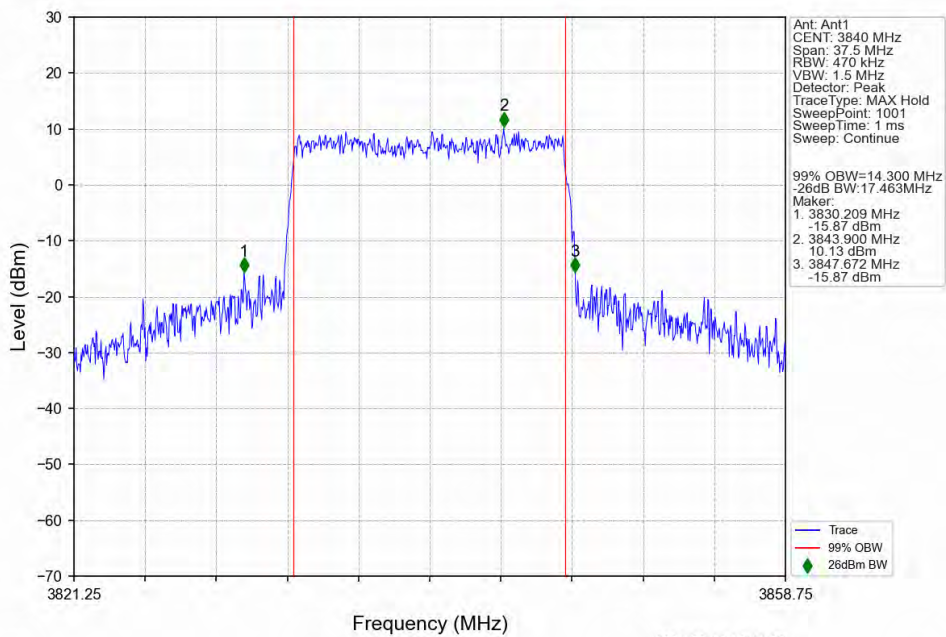
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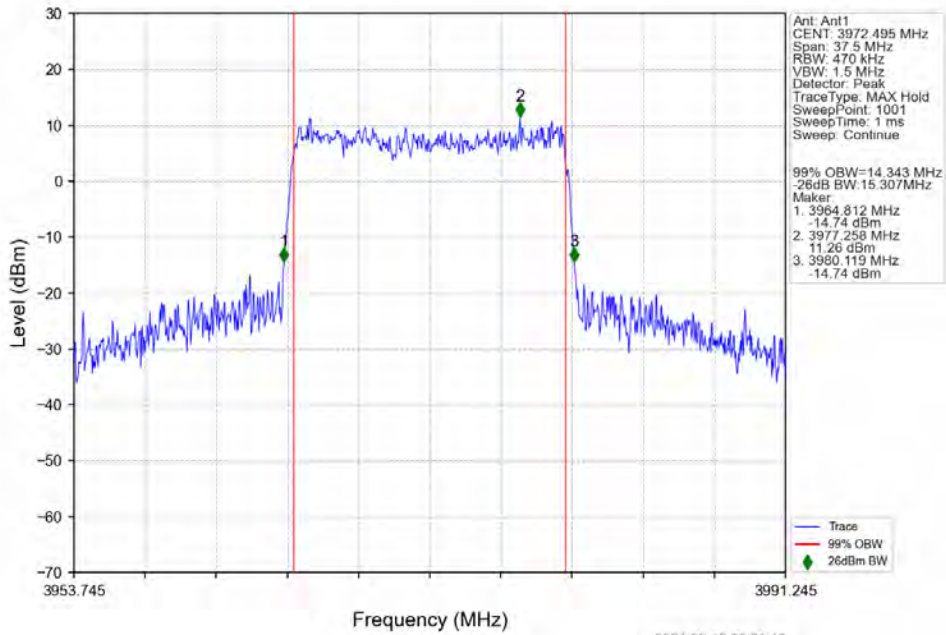
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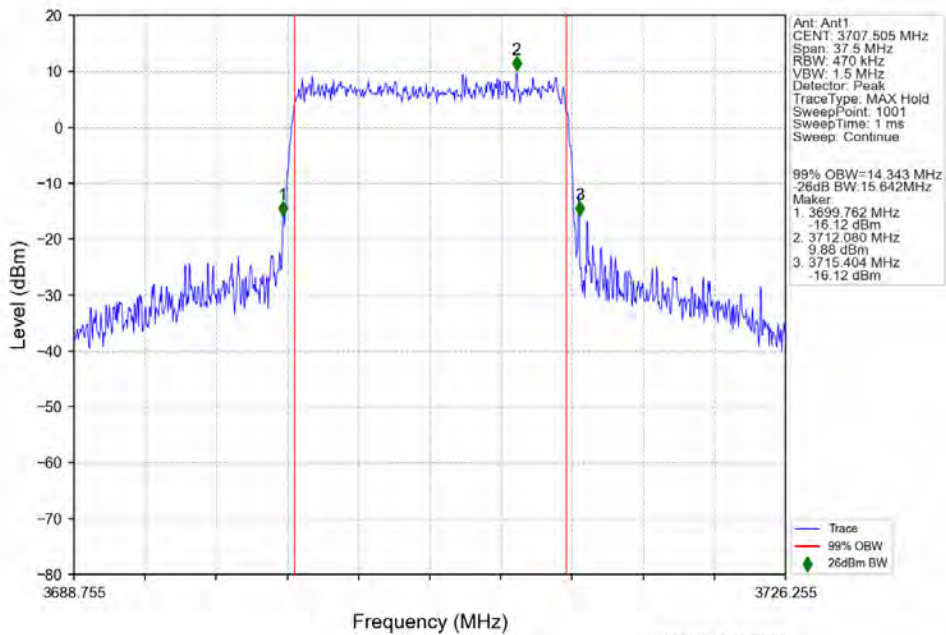
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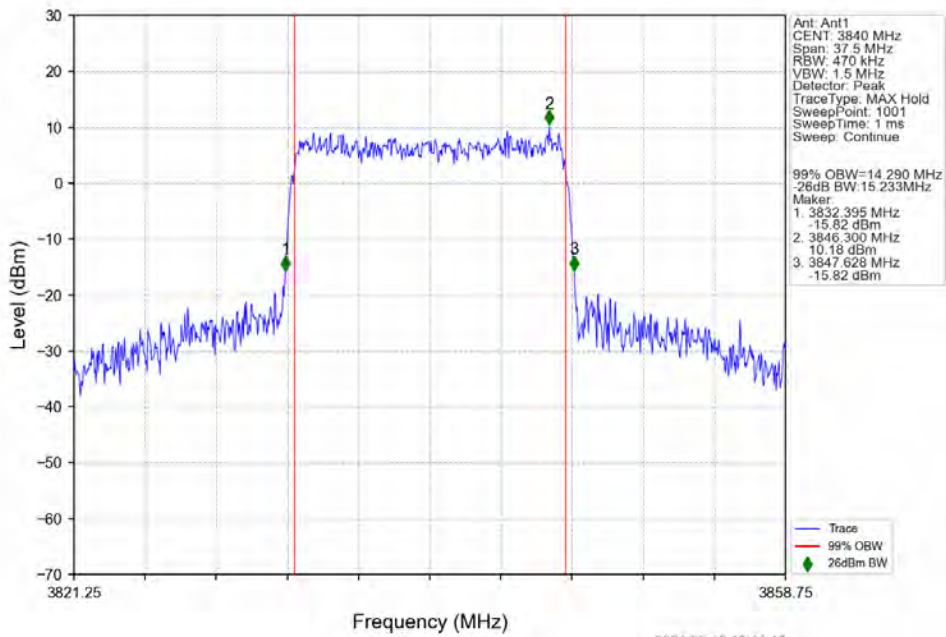
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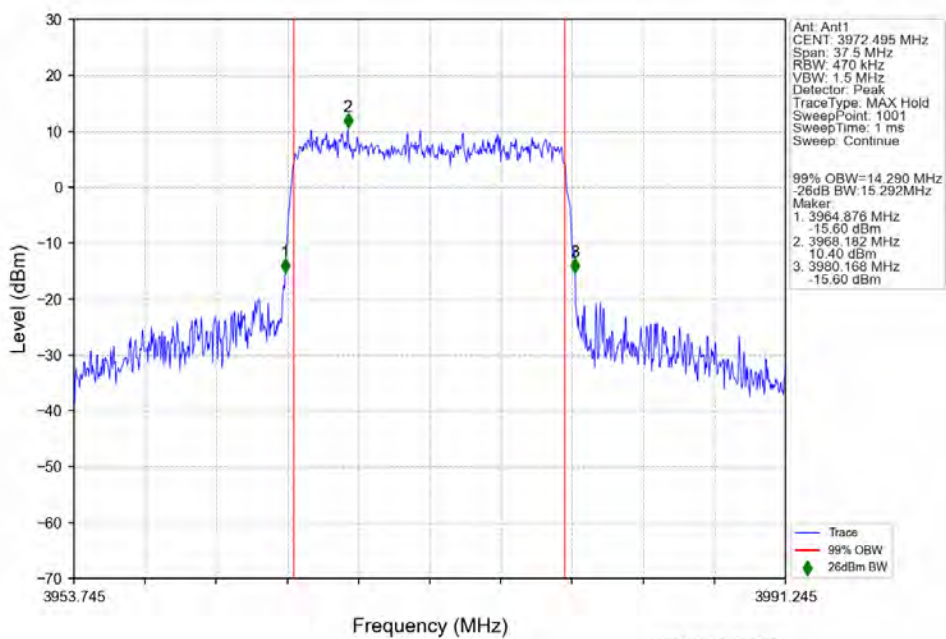
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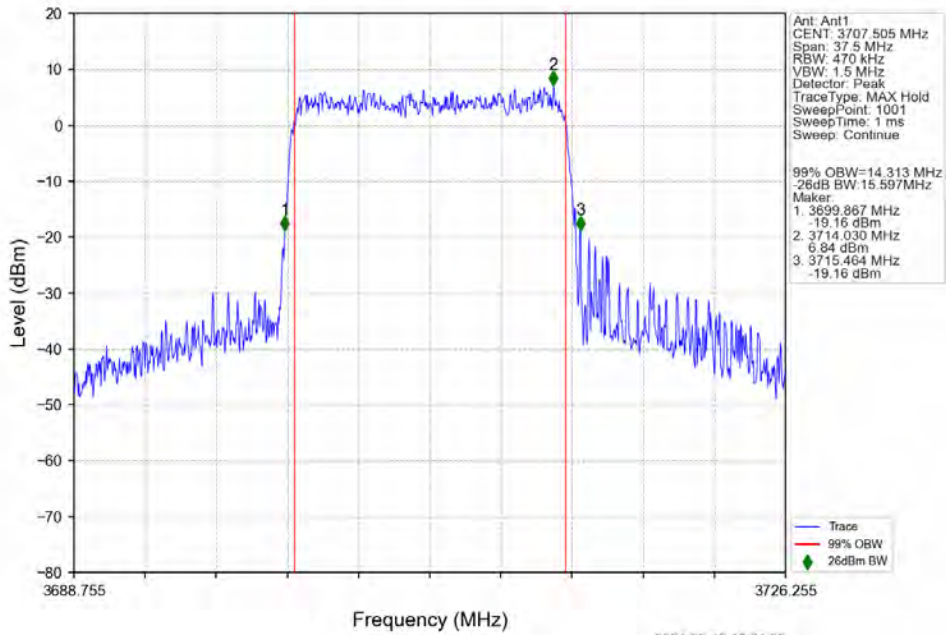
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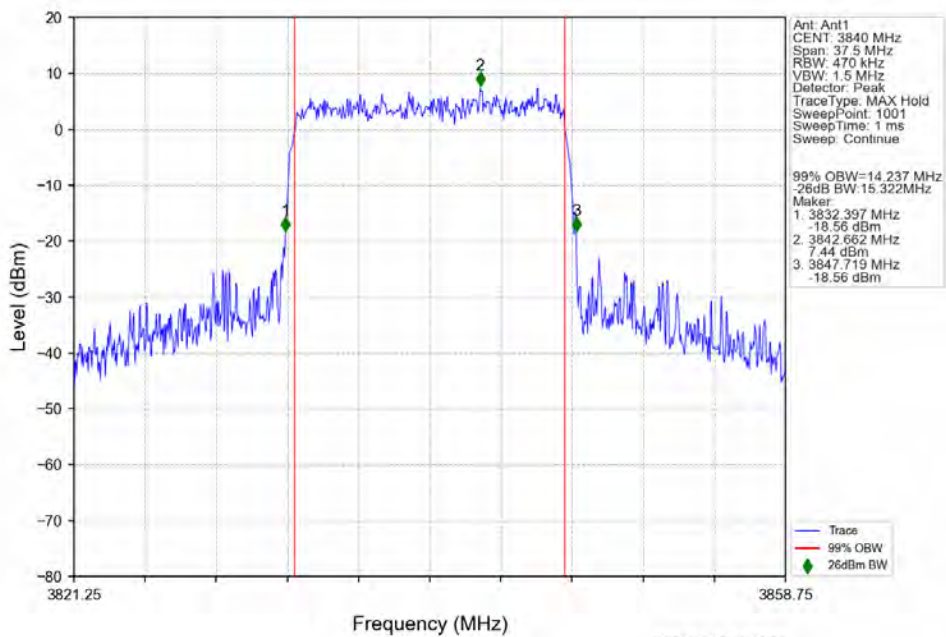
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n77a 15kHz SISO NTV 15MHz CP-OFDM 256 QAM 3707.505MHz Outer Full



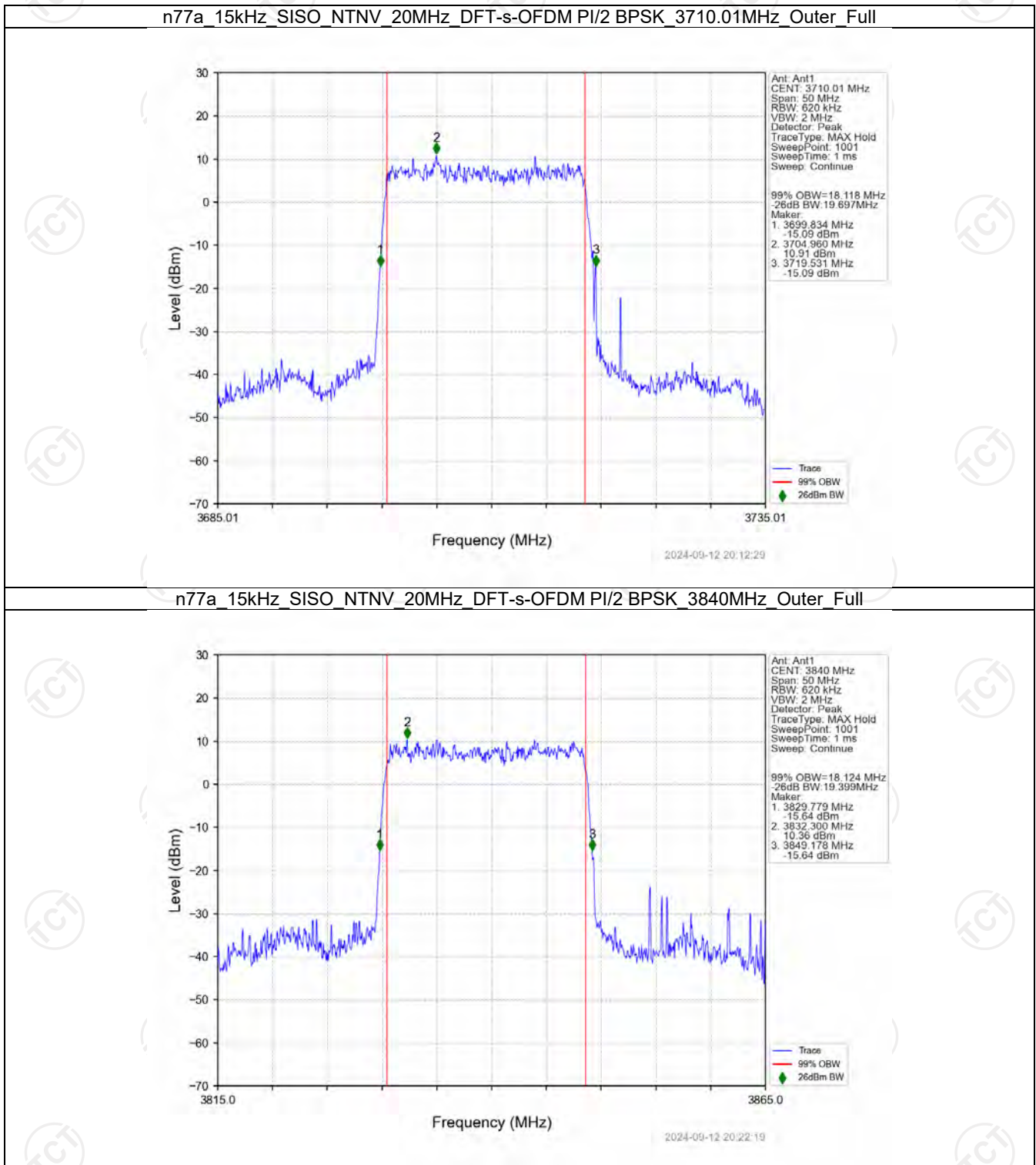
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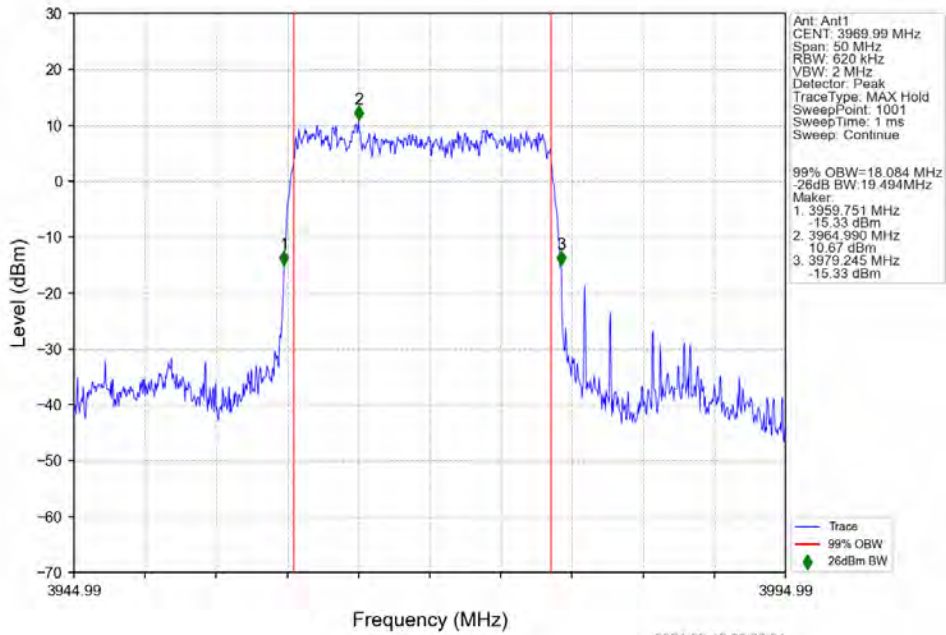
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4.2.3 15k_SISO_20MHz_NTNV



n77a 15kHz SISO NTN 20MHz DFT-s-OFDM PI/2 BPSK 3969.99MHz Outer Full



n77a 15kHz SISO NTN 20MHz DFT-s-OFDM QPSK 3710.01MHz Outer Full

