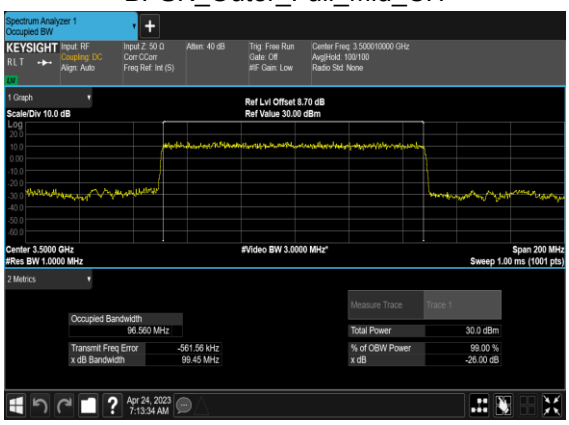
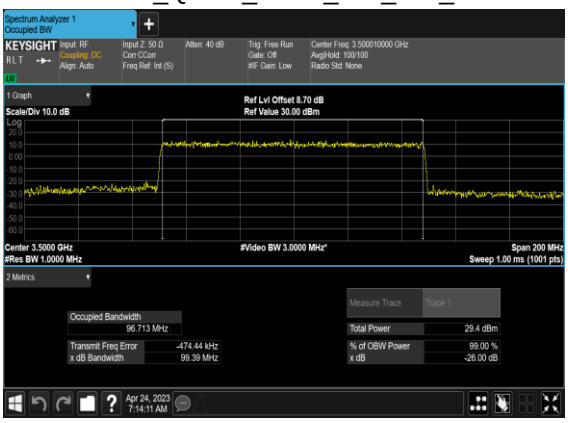
N77(100M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

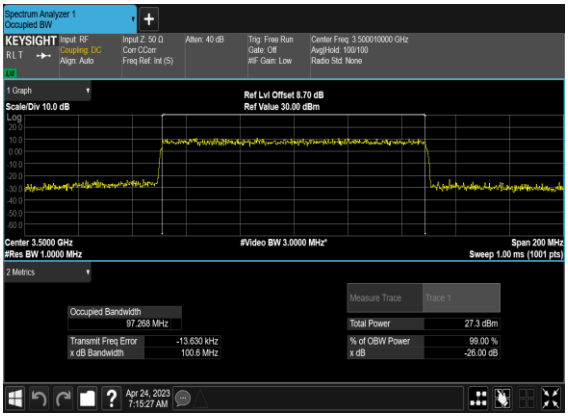



N77(100M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

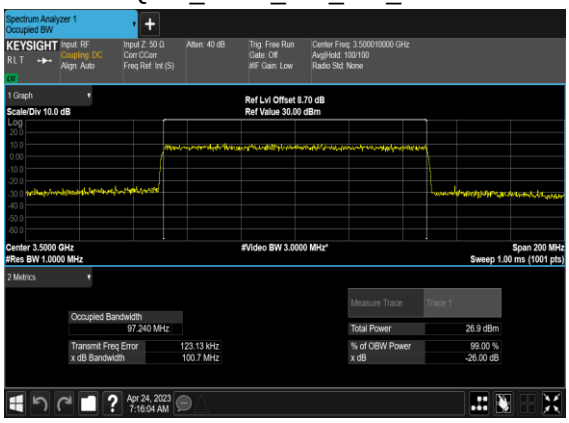



N77(100M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

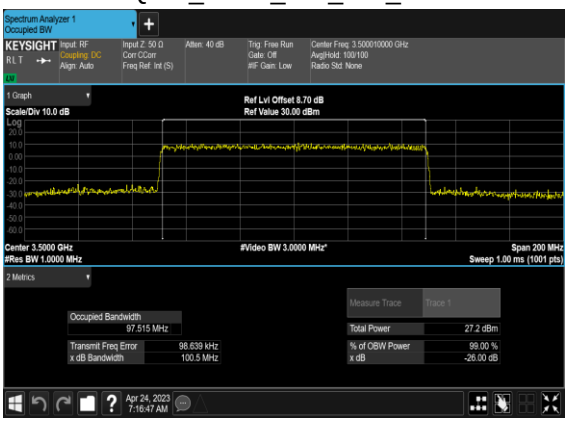
N77(100M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH




N77(100M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH




N77(100M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



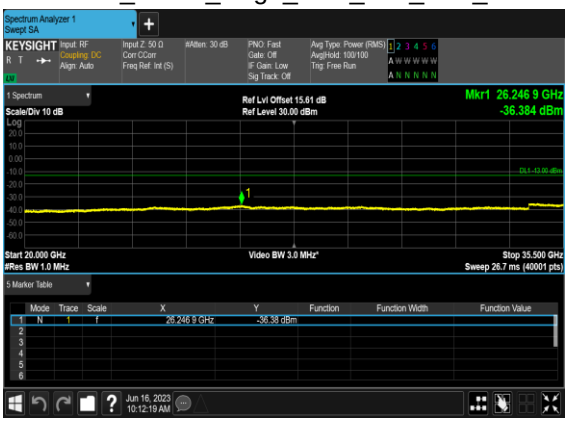
## Conducted Spurious Emissions

| NR Band | SCS (kHz) | Bandwidth (MHz) | Arfcn | Freq (MHz) | Modulation | RB | Result | Verdict |
|---|---|---|---|---|---|---|---|---|
| **77** | 30 | 10 | 630334 | 3455.01 | DFT-s-OFDM BPSK | 1@0 | see graph | **---** |
| **77** | 30 | 10 | 630334 | 3455.01 | DFT-s-OFDM BPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 10 | 630334 | 3455.01 | DFT-s-OFDM BPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 10 | 630334 | 3455.01 | DFT-s-OFDM QPSK | 1@0 | see graph | **---** |
| **77** | 30 | 10 | 630334 | 3455.01 | DFT-s-OFDM QPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 10 | 630334 | 3455.01 | DFT-s-OFDM QPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 10 | 633334 | 3500.01 | DFT-s-OFDM BPSK | 1@0 | see graph | **---** |
| **77** | 30 | 10 | 633334 | 3500.01 | DFT-s-OFDM BPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 10 | 633334 | 3500.01 | DFT-s-OFDM BPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 10 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@0 | see graph | **---** |
| **77** | 30 | 10 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 10 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 10 | 636332 | 3544.98 | DFT-s-OFDM BPSK | 1@0 | see graph | **---** |
| **77** | 30 | 10 | 636332 | 3544.98 | DFT-s-OFDM BPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 10 | 636332 | 3544.98 | DFT-s-OFDM BPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 10 | 636332 | 3544.98 | DFT-s-OFDM QPSK | 1@0 | see graph | **---** |
| **77** | 30 | 10 | 636332 | 3544.98 | DFT-s-OFDM QPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 10 | 636332 | 3544.98 | DFT-s-OFDM QPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 50 | 631668 | 3475.02 | DFT-s-OFDM BPSK | 1@0 | see graph | **---** |
| **77** | 30 | 50 | 631668 | 3475.02 | DFT-s-OFDM BPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 50 | 631668 | 3475.02 | DFT-s-OFDM BPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 50 | 631668 | 3475.02 | DFT-s-OFDM QPSK | 1@0 | see graph | **---** |

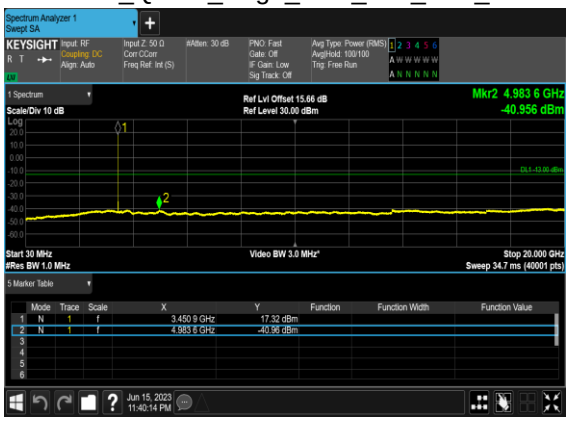
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **77** | 30 | 50 | 631668 | 3475.02 | DFT-s-OFDM QPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 50 | 631668 | 3475.02 | DFT-s-OFDM QPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 50 | 633334 | 3500.01 | DFT-s-OFDM BPSK | 1@0 | see graph | **---** |
| **77** | 30 | 50 | 633334 | 3500.01 | DFT-s-OFDM BPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 50 | 633334 | 3500.01 | DFT-s-OFDM BPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 50 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@0 | see graph | **---** |
| **77** | 30 | 50 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 50 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 50 | 635000 | 3525.0 | DFT-s-OFDM BPSK | 1@0 | see graph | **---** |
| **77** | 30 | 50 | 635000 | 3525.0 | DFT-s-OFDM BPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 50 | 635000 | 3525.0 | DFT-s-OFDM BPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 50 | 635000 | 3525.0 | DFT-s-OFDM QPSK | 1@0 | see graph | **---** |
| **77** | 30 | 50 | 635000 | 3525.0 | DFT-s-OFDM QPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 50 | 635000 | 3525.0 | DFT-s-OFDM QPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 100 | 633334 | 3500.01 | DFT-s-OFDM BPSK | 1@0 | see graph | **---** |
| **77** | 30 | 100 | 633334 | 3500.01 | DFT-s-OFDM BPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 100 | 633334 | 3500.01 | DFT-s-OFDM BPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 100 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@0 | see graph | **---** |
| **77** | 30 | 100 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 100 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@0 | see graph | **PASS** |

N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH

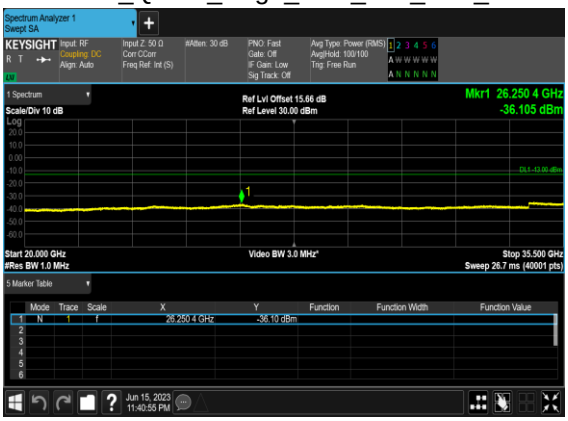
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



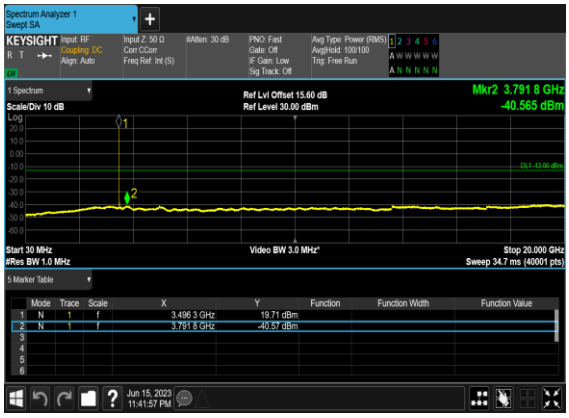

N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



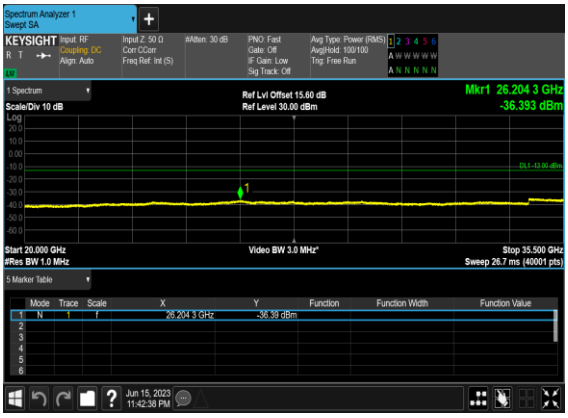

N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH




N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH

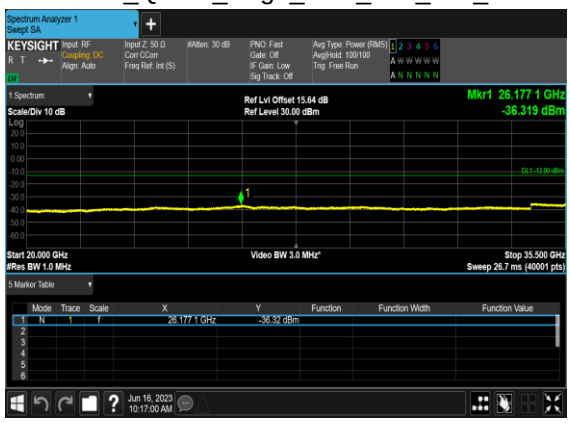



N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH

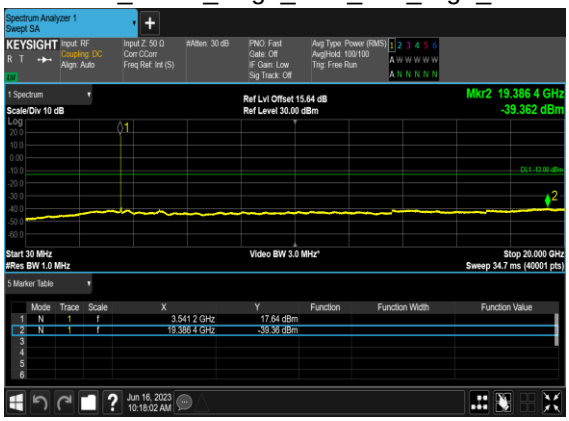


N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

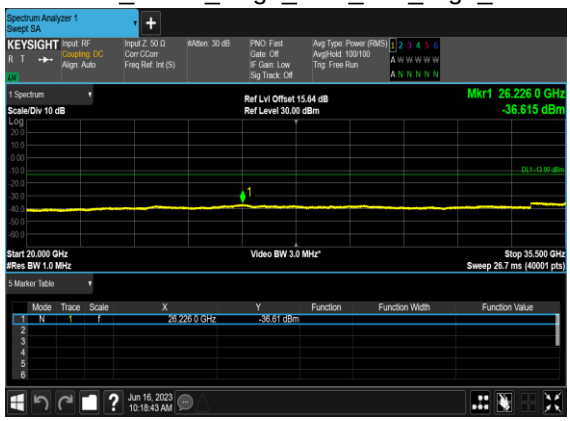
N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



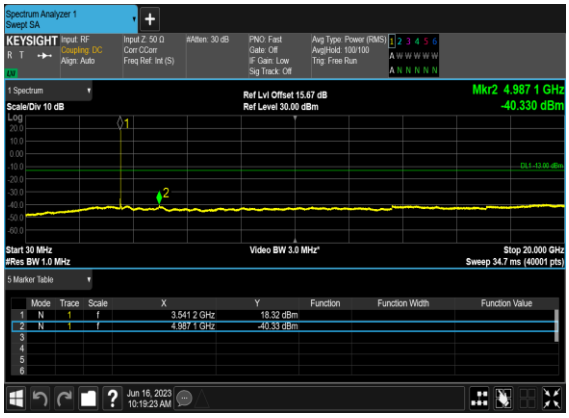

N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



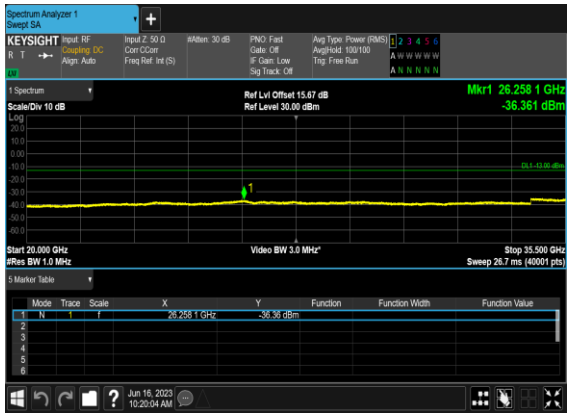

N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH




N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

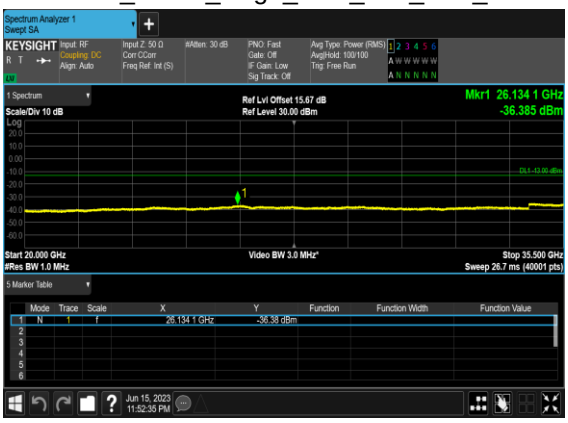



N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

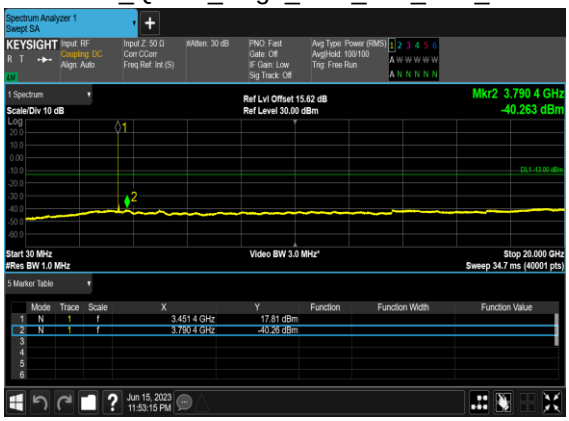


N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH

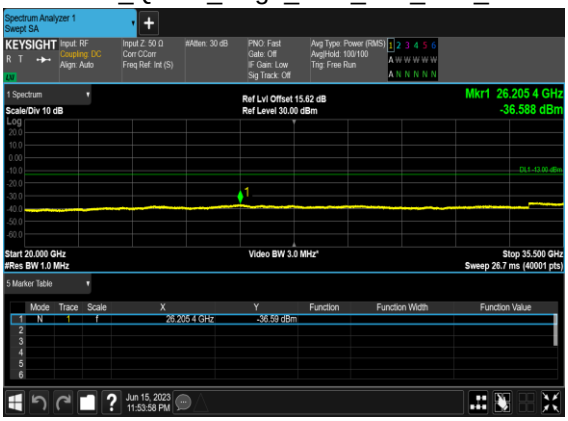
N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



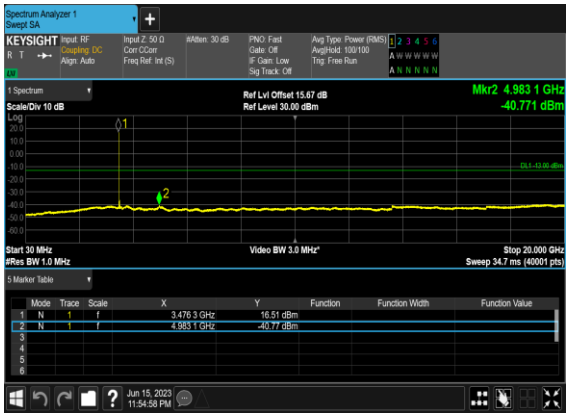

N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



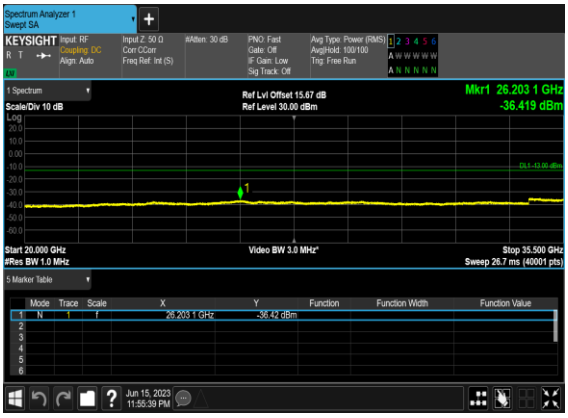

N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH




N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH

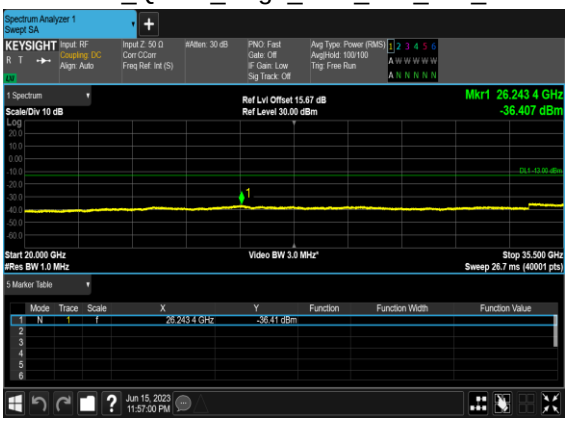



N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



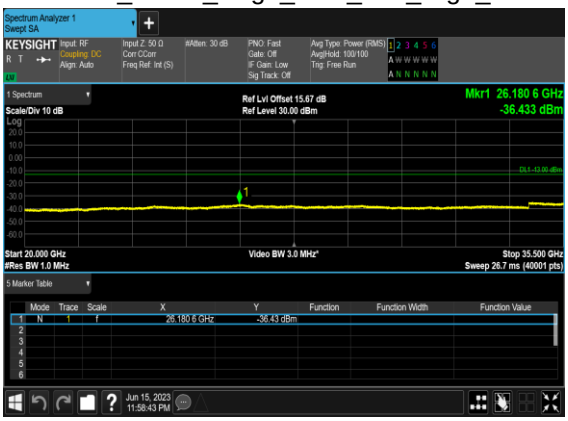
N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

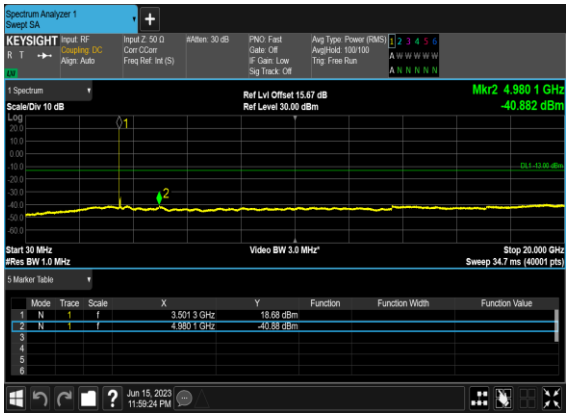



N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH

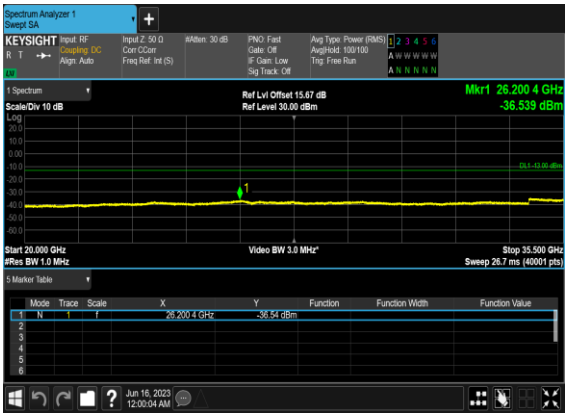
N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH




N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

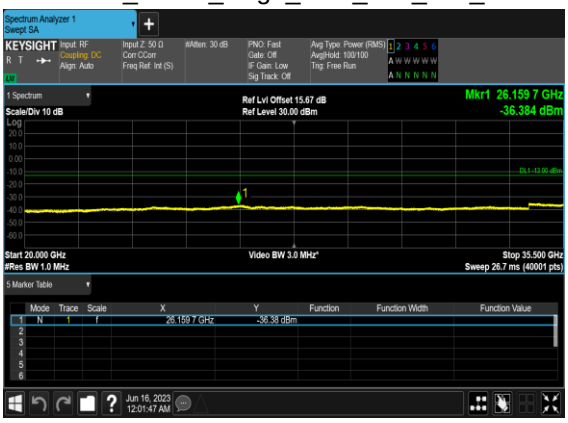



N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



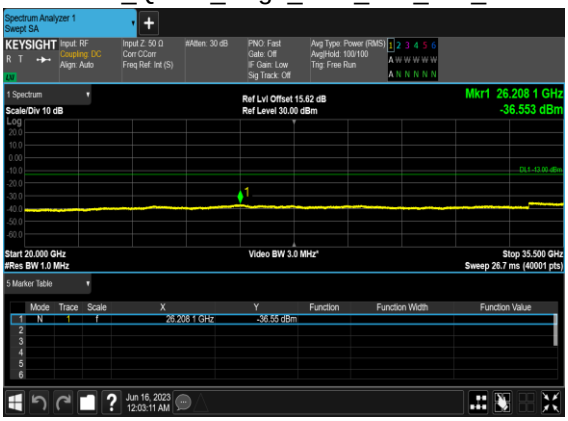
N77(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH

N77(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH




N77(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

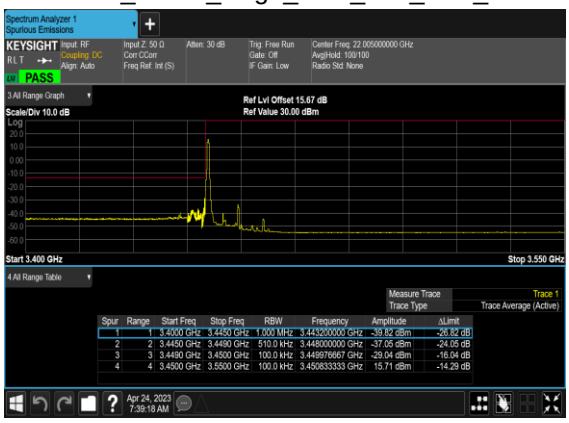
N77(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



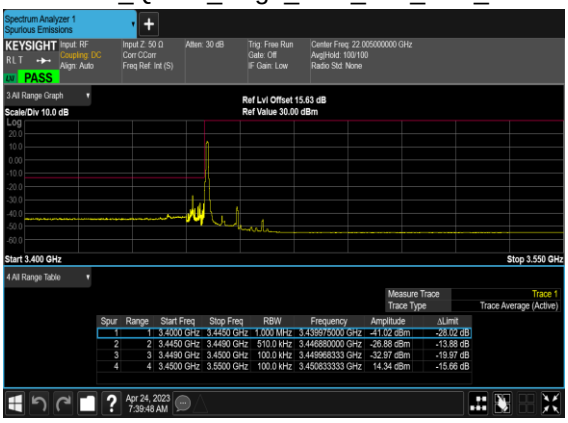
## Conducted Band Edge

| NR Band | SCS (kHz) | Bandwidth (MHz) | Arfcn | Freq (MHz) | Modulation | RB | Result | Verdict |
|---|---|---|---|---|---|---|---|---|
| **77** | 30 | 10 | 630334 | 3455.01 | DFT-s-OFDM BPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 10 | 630334 | 3455.01 | DFT-s-OFDM QPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 10 | 630334 | 3455.01 | DFT-s-OFDM BPSK | 24@0 | see graph | **PASS** |
| **77** | 30 | 10 | 630334 | 3455.01 | DFT-s-OFDM QPSK | 24@0 | see graph | **PASS** |
| **77** | 30 | 10 | 636332 | 3544.98 | DFT-s-OFDM BPSK | 1@23 | see graph | **PASS** |
| **77** | 30 | 10 | 636332 | 3544.98 | DFT-s-OFDM QPSK | 1@23 | see graph | **PASS** |
| **77** | 30 | 10 | 636332 | 3544.98 | DFT-s-OFDM BPSK | 24@0 | see graph | **PASS** |
| **77** | 30 | 10 | 636332 | 3544.98 | DFT-s-OFDM QPSK | 24@0 | see graph | **PASS** |
| **77** | 30 | 50 | 631668 | 3475.02 | DFT-s-OFDM BPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 50 | 631668 | 3475.02 | DFT-s-OFDM QPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 50 | 631668 | 3475.02 | DFT-s-OFDM BPSK | 128@0 | see graph | **PASS** |
| **77** | 30 | 50 | 631668 | 3475.02 | DFT-s-OFDM QPSK | 128@0 | see graph | **PASS** |
| **77** | 30 | 50 | 635000 | 3525.0 | DFT-s-OFDM BPSK | 1@132 | see graph | **PASS** |
| **77** | 30 | 50 | 635000 | 3525.0 | DFT-s-OFDM QPSK | 1@132 | see graph | **PASS** |
| **77** | 30 | 50 | 635000 | 3525.0 | DFT-s-OFDM BPSK | 128@0 | see graph | **PASS** |
| **77** | 30 | 50 | 635000 | 3525.0 | DFT-s-OFDM QPSK | 128@0 | see graph | **PASS** |
| **77** | 30 | 100 | 633334 | 3500.01 | DFT-s-OFDM BPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 100 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@0 | see graph | **PASS** |
| **77** | 30 | 100 | 633334 | 3500.01 | DFT-s-OFDM BPSK | 1@272 | see graph | **PASS** |
| **77** | 30 | 100 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@272 | see graph | **PASS** |
| **77** | 30 | 100 | 633334 | 3500.01 | DFT-s-OFDM BPSK | 270@0 | see graph | **PASS** |
| **77** | 30 | 100 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 270@0 | see graph | **PASS** |

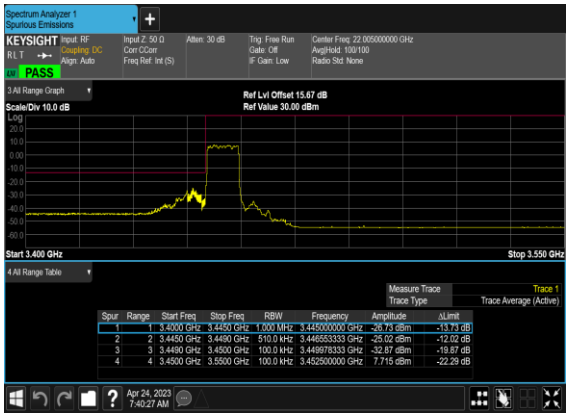
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



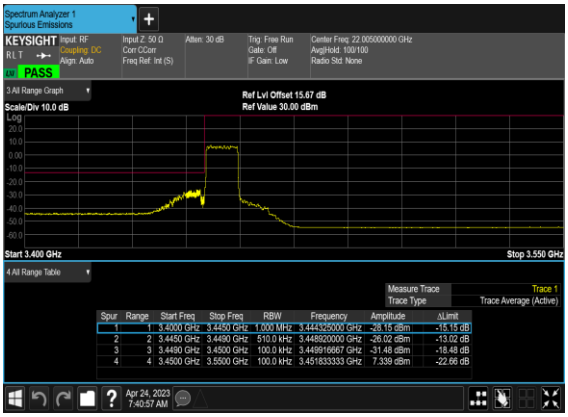

N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



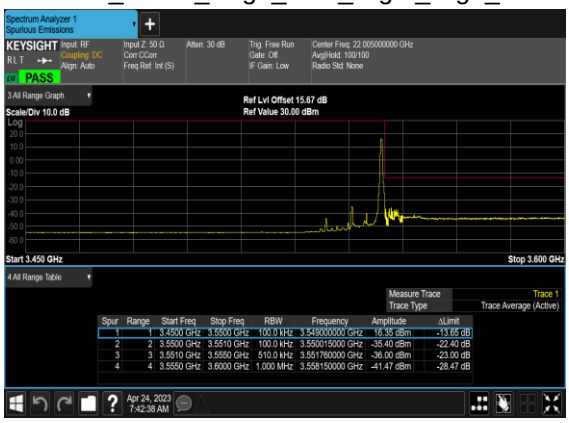

N77(10M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



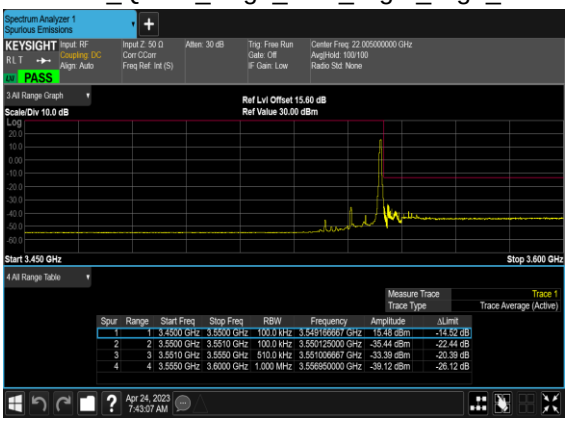

N77(10M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



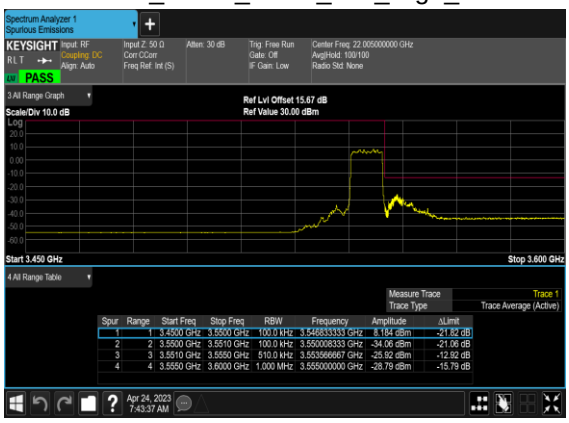

N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH




N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH

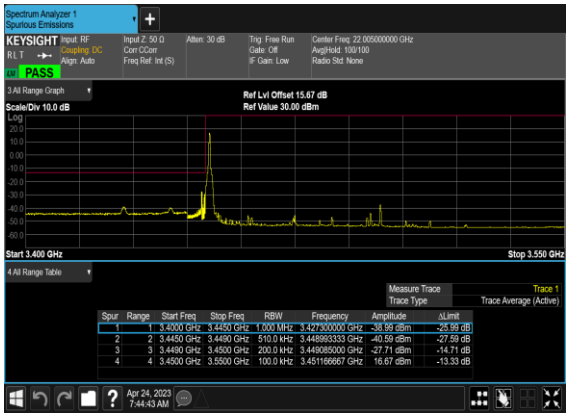


N77(10M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH

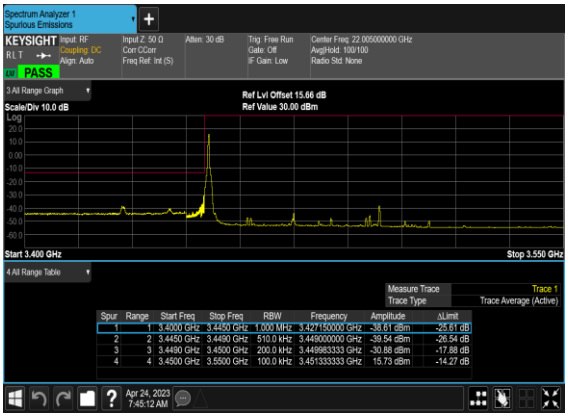



N77(10M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH

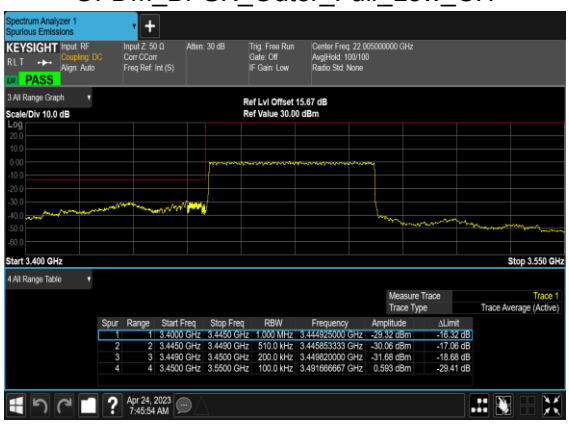
N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



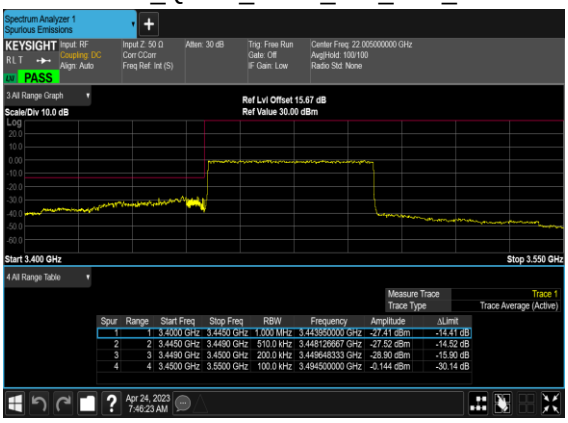

N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



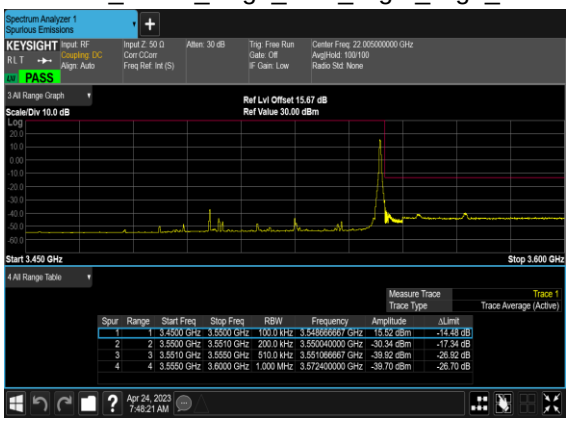

N77(50M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



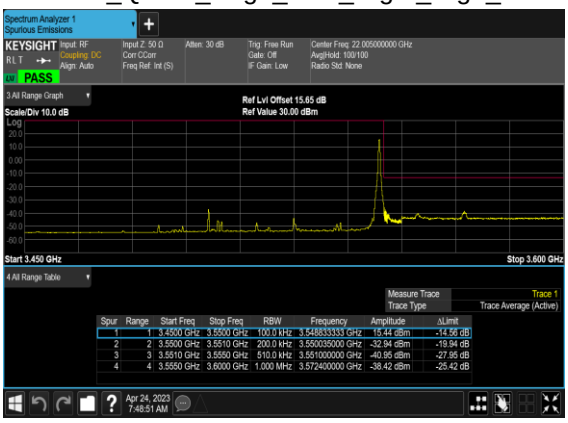

N77(50M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



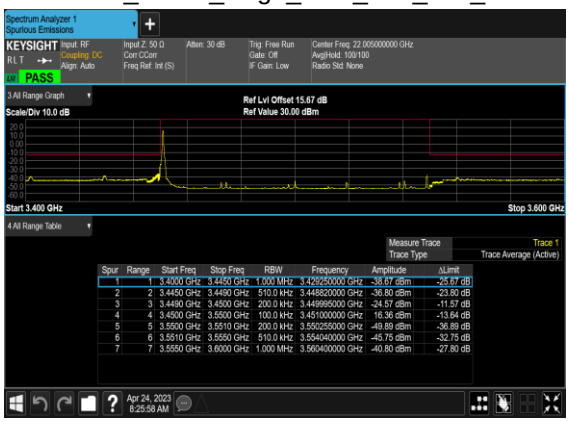

N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



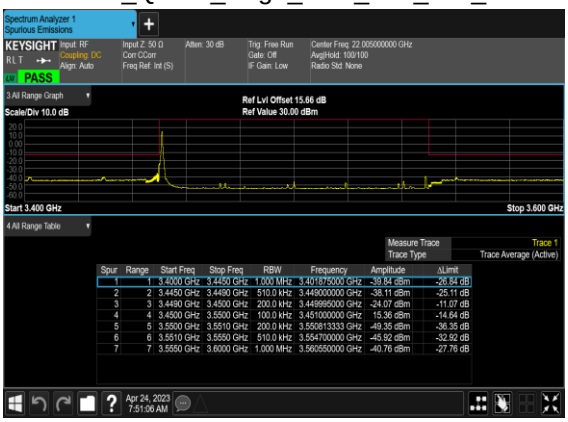

N77(50M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH

N77(50M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH

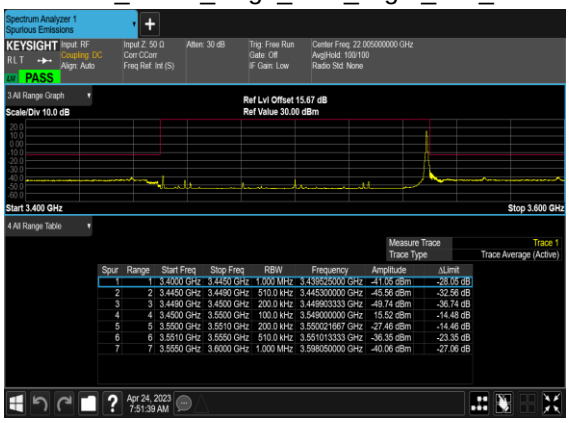
N77(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH




N77(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

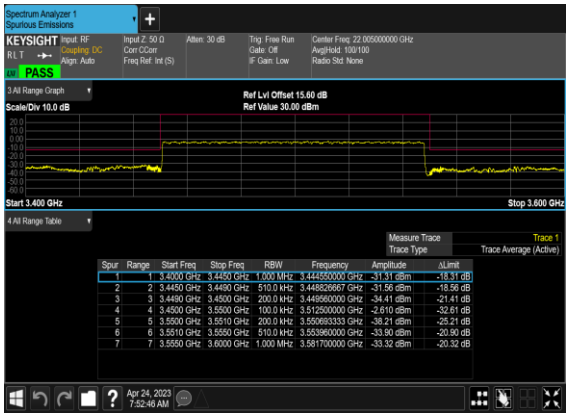


N77(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_Mid_CH

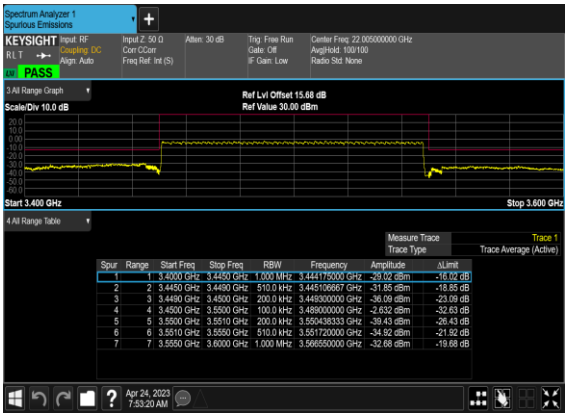



N77(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Mid_CH

N77(100M)_DFT-s-OFDM_BPSK_Outer_Full_Mid_CH




N77(100M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



Software Version: 23.04.2801

# FR1 N77 (MIMO-ANT0+1) – SCS 15kHz

## Transmitter Conducted Output Power And EIRP, ($G_T$ - $L_C$)=18.01dB

| NR Band | SCS (kHz) | Bandwidth (MHz) | Arfcn | Freq (MHz) | Modulation | RB | ANT0 Power(dBm) | ANT1 Power(dBm) | Conducted Power(dBm) | EIRP (dBm) | EIRP (W) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **77** | 15 | 10 | 630334 | 3455.01 | DFT-s-OFDM QPSK | 1@1 | 25.32 | 26.29 | 28.84 | 46.85 | 48.4172 |
| **77** | 15 | 10 | 630334 | 3455.01 | DFT-s-OFDM 16 QAM | 1@1 | 24.33 | 24.97 | 27.67 | 45.68 | 36.9828 |
| **77** | 15 | 10 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@1 | 25.55 | 26.15 | 28.87 | 46.88 | 48.7528 |
| **77** | 15 | 10 | 633334 | 3500.01 | DFT-s-OFDM 16 QAM | 1@1 | 24.51 | 25.1 | 27.83 | 45.84 | 38.3707 |
| **77** | 15 | 10 | 636333 | 3544.995 | DFT-s-OFDM QPSK | 1@1 | 25.66 | 26.06 | 28.87 | 46.88 | 48.7528 |
| **77** | 15 | 10 | 636333 | 3544.995 | DFT-s-OFDM 16 QAM | 1@1 | 24.56 | 25.07 | 27.83 | 45.84 | 38.3707 |
| **77** | 15 | 15 | 630500 | 3457.5 | DFT-s-OFDM QPSK | 1@1 | 25.46 | 26.24 | 28.88 | 46.89 | 48.8652 |
| **77** | 15 | 15 | 630500 | 3457.5 | DFT-s-OFDM 16 QAM | 1@1 | 24.54 | 25.07 | 27.82 | 45.83 | 38.2825 |
| **77** | 15 | 15 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@1 | 25.62 | 26.24 | 28.95 | 46.96 | 49.6592 |
| **77** | 15 | 15 | 633334 | 3500.01 | DFT-s-OFDM 16 QAM | 1@1 | 24.53 | 25.08 | 27.82 | 45.83 | 38.2825 |
| **77** | 15 | 15 | 636166 | 3542.49 | DFT-s-OFDM QPSK | 1@1 | 25.68 | 26.04 | 28.87 | 46.88 | 48.7528 |
| **77** | 15 | 15 | 636166 | 3542.49 | DFT-s-OFDM 16 QAM | 1@1 | 24.65 | 25.09 | 27.89 | 45.9 | 38.9045 |
| **77** | 15 | 20 | 630667 | 3460.005 | DFT-s-OFDM QPSK | 1@1 | 25.58 | 26.3 | 28.97 | 46.98 | 49.8884 |
| **77** | 15 | 20 | 630667 | 3460.005 | DFT-s-OFDM 16 QAM | 1@1 | 24.45 | 25.06 | 27.78 | 45.79 | 37.9315 |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@1 | 25.66 | 26.27 | 28.99 | 47 | 50.1187 |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM 16 QAM | 1@1 | 24.64 | 25.12 | 27.90 | 45.91 | 38.9942 |
| **77** | 15 | 20 | 636000 | 3540 | DFT-s-OFDM QPSK | 1@1 | 25.72 | 26.15 | 28.95 | 46.96 | 49.6592 |
| **77** | 15 | 20 | 636000 | 3540 | DFT-s-OFDM 16 QAM | 1@1 | 24.64 | 25.06 | 27.87 | 45.88 | 38.7258 |
| **77** | 15 | 25 | 630834 | 3462.51 | DFT-s-OFDM QPSK | 1@1 | 25.61 | 26.23 | 28.94 | 46.95 | 49.5450 |
| **77** | 15 | 25 | 630834 | 3462.51 | DFT-s-OFDM 16 QAM | 1@1 | 24.55 | 25.16 | 27.88 | 45.89 | 38.8150 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **77** | 15 | 25 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@1 | 25.69 | 26.19 | 28.96 | 46.97 | 49.7737 |
| **77** | 15 | 25 | 633334 | 3500.01 | DFT-s-OFDM 16 QAM | 1@1 | 24.63 | 25.08 | 27.87 | 45.88 | 38.7258 |
| **77** | 15 | 25 | 635833 | 3537.495 | DFT-s-OFDM QPSK | 1@1 | 25.64 | 23.07 | 27.55 | 45.56 | 35.9749 |
| **77** | 15 | 25 | 635833 | 3537.495 | DFT-s-OFDM 16 QAM | 1@1 | 24.57 | 25.07 | 27.84 | 45.85 | 38.4592 |
| **77** | 15 | 30 | 631000 | 3465 | DFT-s-OFDM QPSK | 1@1 | 25.61 | 26.22 | 28.94 | 46.95 | 49.5450 |
| **77** | 15 | 30 | 631000 | 3465 | DFT-s-OFDM 16 QAM | 1@1 | 24.6 | 25.13 | 27.88 | 45.89 | 38.8150 |
| **77** | 15 | 30 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@1 | 25.66 | 26.23 | 28.96 | 46.97 | 49.7737 |
| **77** | 15 | 30 | 633334 | 3500.01 | DFT-s-OFDM 16 QAM | 1@1 | 24.57 | 25.11 | 27.86 | 45.87 | 38.6367 |
| **77** | 15 | 30 | 635666 | 3534.99 | DFT-s-OFDM QPSK | 1@1 | 25.69 | 26.21 | 28.97 | 46.98 | 49.8884 |
| **77** | 15 | 30 | 635666 | 3534.99 | DFT-s-OFDM 16 QAM | 1@1 | 24.57 | 25.2 | 27.91 | 45.92 | 39.0841 |
| **77** | 15 | 40 | 631334 | 3470.01 | DFT-s-OFDM QPSK | 1@1 | 25.57 | 26.2 | 28.91 | 46.92 | 49.2040 |
| **77** | 15 | 40 | 631334 | 3470.01 | DFT-s-OFDM 16 QAM | 1@1 | 24.59 | 25.19 | 27.91 | 45.92 | 39.0841 |
| **77** | 15 | 40 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@1 | 25.69 | 26.23 | 28.98 | 46.99 | 50.0035 |
| **77** | 15 | 40 | 633334 | 3500.01 | DFT-s-OFDM 16 QAM | 1@1 | 24.68 | 25.13 | 27.92 | 45.93 | 39.1742 |
| **77** | 15 | 40 | 635333 | 3529.995 | DFT-s-OFDM QPSK | 1@1 | 25.64 | 26.24 | 28.96 | 46.97 | 49.7737 |
| **77** | 15 | 40 | 635333 | 3529.995 | DFT-s-OFDM 16 QAM | 1@1 | 24.57 | 25.18 | 27.90 | 45.91 | 38.9942 |
| **77** | 15 | 50 | 631667 | 3475.005 | DFT-s-OFDM PI/2 BPSK | 135@67 | 25.64 | 26.1 | 28.89 | 46.9 | 48.9779 |
| **77** | 15 | 50 | 631667 | 3475.005 | DFT-s-OFDM PI/2 BPSK | 1@1 | 25.58 | 26.29 | 28.96 | 46.97 | 49.7737 |
| **77** | 15 | 50 | 631667 | 3475.005 | DFT-s-OFDM PI/2 BPSK | 1@268 | 25.46 | 25.9 | 28.70 | 46.71 | 46.8813 |
| **77** | 15 | 50 | 631667 | 3475.005 | DFT-s-OFDM QPSK | 135@67 | 25.65 | 26.08 | 28.88 | 46.89 | 48.8652 |
| **77** | 15 | 50 | 631667 | 3475.005 | DFT-s-OFDM QPSK | 1@1 | 25.61 | 26.27 | 28.96 | 46.97 | 49.7737 |
| **77** | 15 | 50 | 631667 | 3475.005 | DFT-s-OFDM QPSK | 1@268 | 25.41 | 25.85 | 28.65 | 46.66 | 46.3447 |
| **77** | 15 | 50 | 631667 | 3475.005 | DFT-s-OFDM 16 QAM | 135@67 | 24.59 | 25.11 | 27.87 | 45.88 | 38.7258 |
| **77** | 15 | 50 | 631667 | 3475.005 | DFT-s-OFDM 16 QAM | 1@1 | 24.52 | 25.18 | 27.87 | 45.88 | 38.7258 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **77** | 15 | 50 | 631667 | 3475.005 | DFT-s-OFDM 16 QAM | 1@268 | 24.34 | 24.76 | 27.57 | 45.58 | 36.1410 |
| **77** | 15 | 50 | 631667 | 3475.005 | DFT-s-OFDM 64 QAM | 135@67 | 22.73 | 23.19 | 25.98 | 43.99 | 25.0611 |
| **77** | 15 | 50 | 631667 | 3475.005 | DFT-s-OFDM 64 QAM | 1@1 | 22.83 | 23.28 | 26.07 | 44.08 | 25.5859 |
| **77** | 15 | 50 | 631667 | 3475.005 | DFT-s-OFDM 64 QAM | 1@268 | 22.88 | 22.89 | 25.90 | 43.91 | 24.6037 |
| **77** | 15 | 50 | 631667 | 3475.005 | DFT-s-OFDM 256 QAM | 135@67 | 20.28 | 20.93 | 23.63 | 41.64 | 14.5881 |
| **77** | 15 | 50 | 631667 | 3475.005 | DFT-s-OFDM 256 QAM | 1@1 | 20.32 | 20.8 | 23.58 | 41.59 | 14.4212 |
| **77** | 15 | 50 | 631667 | 3475.005 | DFT-s-OFDM 256 QAM | 1@268 | 20 | 20.51 | 23.27 | 41.28 | 13.4276 |
| **77** | 15 | 50 | 631667 | 3475.005 | CP-OFDM QPSK | 135@67 | 24.12 | 24.22 | 27.18 | 45.19 | 33.0370 |
| **77** | 15 | 50 | 631667 | 3475.005 | CP-OFDM QPSK | 1@1 | 24.15 | 24.82 | 27.51 | 45.52 | 35.6451 |
| **77** | 15 | 50 | 631667 | 3475.005 | CP-OFDM QPSK | 1@268 | 24.02 | 24.46 | 27.26 | 45.27 | 33.6512 |
| **77** | 15 | 50 | 633334 | 3500.01 | DFT-s-OFDM PI/2 BPSK | 135@67 | 25.61 | 26.04 | 28.84 | 46.85 | 48.4172 |
| **77** | 15 | 50 | 633334 | 3500.01 | DFT-s-OFDM PI/2 BPSK | 1@1 | 25.75 | 26.21 | 29.00 | 47.01 | 50.2343 |
| **77** | 15 | 50 | 633334 | 3500.01 | DFT-s-OFDM PI/2 BPSK | 1@268 | 25.52 | 25.9 | 28.72 | 46.73 | 47.0977 |
| **77** | 15 | 50 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 135@67 | 25.6 | 26.08 | 28.86 | 46.87 | 48.6407 |
| **77** | 15 | 50 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@1 | 25.7 | 26.2 | 28.97 | 46.98 | 49.8884 |
| **77** | 15 | 50 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@268 | 25.47 | 25.97 | 28.74 | 46.75 | 47.3151 |
| **77** | 15 | 50 | 633334 | 3500.01 | DFT-s-OFDM 16 QAM | 135@67 | 24.61 | 25.06 | 27.85 | 45.86 | 38.5478 |
| **77** | 15 | 50 | 633334 | 3500.01 | DFT-s-OFDM 16 QAM | 1@1 | 24.66 | 25.24 | 27.97 | 45.98 | 39.6278 |
| **77** | 15 | 50 | 633334 | 3500.01 | DFT-s-OFDM 16 QAM | 1@268 | 24.5 | 24.93 | 27.73 | 45.74 | 37.4973 |
| **77** | 15 | 50 | 633334 | 3500.01 | DFT-s-OFDM 64 QAM | 135@67 | 22.62 | 23.18 | 25.92 | 43.93 | 24.7172 |
| **77** | 15 | 50 | 633334 | 3500.01 | DFT-s-OFDM 64 QAM | 1@1 | 22.96 | 23.46 | 26.23 | 44.24 | 26.5461 |
| **77** | 15 | 50 | 633334 | 3500.01 | DFT-s-OFDM 64 QAM | 1@268 | 23.04 | 23.4 | 26.23 | 44.24 | 26.5461 |
| **77** | 15 | 50 | 633334 | 3500.01 | DFT-s-OFDM 256 QAM | 135@67 | 20.21 | 20.75 | 23.50 | 41.51 | 14.1579 |
| **77** | 15 | 50 | 633334 | 3500.01 | DFT-s-OFDM 256 QAM | 1@1 | 20.25 | 20.72 | 23.50 | 41.51 | 14.1579 |
| **77** | 15 | 50 | 633334 | 3500.01 | DFT-s-OFDM 256 QAM | 1@268 | 20.12 | 20.5 | 23.32 | 41.33 | 13.5831 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **77** | 15 | 50 | 633334 | 3500.01 | CP-OFDM QPSK | 135@67 | 24.11 | 24.29 | 27.21 | 45.22 | 33.2660 |
| **77** | 15 | 50 | 633334 | 3500.01 | CP-OFDM QPSK | 1@1 | 24.26 | 24.76 | 27.53 | 45.54 | 35.8096 |
| **77** | 15 | 50 | 633334 | 3500.01 | CP-OFDM QPSK | 1@268 | 24.04 | 24.48 | 27.28 | 45.29 | 33.8065 |
| **77** | 15 | 50 | 635000 | 3525 | DFT-s-OFDM PI/2 BPSK | 135@67 | 25.62 | 26.05 | 28.85 | 46.86 | 48.5289 |
| **77** | 15 | 50 | 635000 | 3525 | DFT-s-OFDM PI/2 BPSK | 1@1 | 25.58 | 26.29 | 28.96 | 46.97 | 49.7737 |
| **77** | 15 | 50 | 635000 | 3525 | DFT-s-OFDM PI/2 BPSK | 1@268 | 25.53 | 25.81 | 28.68 | 46.69 | 46.6659 |
| **77** | 15 | 50 | 635000 | 3525 | DFT-s-OFDM QPSK | 135@67 | 25.64 | 26.1 | 28.89 | 46.9 | 48.9779 |
| **77** | 15 | 50 | 635000 | 3525 | DFT-s-OFDM QPSK | 1@1 | 25.89 | 26.49 | 29.21 | 47.22 | 52.7230 |
| **77** | 15 | 50 | 635000 | 3525 | DFT-s-OFDM QPSK | 1@268 | 25.54 | 25.77 | 28.67 | 46.68 | 46.5586 |
| **77** | 15 | 50 | 635000 | 3525 | DFT-s-OFDM 16 QAM | 135@67 | 24.63 | 25.21 | 27.94 | 45.95 | 39.3550 |
| **77** | 15 | 50 | 635000 | 3525 | DFT-s-OFDM 16 QAM | 1@1 | 24.7 | 25.36 | 28.05 | 46.06 | 40.3645 |
| **77** | 15 | 50 | 635000 | 3525 | DFT-s-OFDM 16 QAM | 1@268 | 24.49 | 24.66 | 27.59 | 45.6 | 36.3078 |
| **77** | 15 | 50 | 635000 | 3525 | DFT-s-OFDM 64 QAM | 135@67 | 22.59 | 23.21 | 25.92 | 43.93 | 24.7172 |
| **77** | 15 | 50 | 635000 | 3525 | DFT-s-OFDM 64 QAM | 1@1 | 23.21 | 23.71 | 26.48 | 44.49 | 28.1190 |
| **77** | 15 | 50 | 635000 | 3525 | DFT-s-OFDM 64 QAM | 1@268 | 23 | 22.86 | 25.94 | 43.95 | 24.8313 |
| **77** | 15 | 50 | 635000 | 3525 | DFT-s-OFDM 256 QAM | 135@67 | 20.19 | 20.63 | 23.43 | 41.44 | 13.9316 |
| **77** | 15 | 50 | 635000 | 3525 | DFT-s-OFDM 256 QAM | 1@1 | 20.17 | 20.66 | 23.43 | 41.44 | 13.9316 |
| **77** | 15 | 50 | 635000 | 3525 | DFT-s-OFDM 256 QAM | 1@268 | 20.26 | 20.35 | 23.32 | 41.33 | 13.5831 |
| **77** | 15 | 50 | 635000 | 3525 | CP-OFDM QPSK | 135@67 | 24.18 | 24.46 | 27.33 | 45.34 | 34.1979 |
| **77** | 15 | 50 | 635000 | 3525 | CP-OFDM QPSK | 1@1 | 24.26 | 24.77 | 27.53 | 45.54 | 35.8096 |
| **77** | 15 | 50 | 635000 | 3525 | CP-OFDM QPSK | 1@268 | 24.02 | 24.47 | 27.26 | 45.27 | 33.6512 |

# FR1 N77 (MIMO-ANT0) – SCS 15kHz

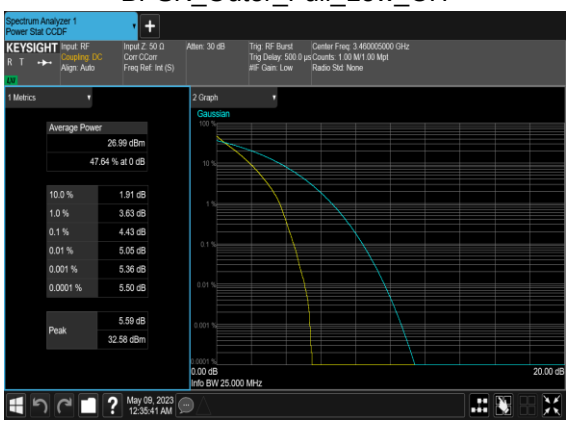
## Frequency Stability

| NR Band | SCS (kHz) | Bandwidth (MHz) | Arfcn | Freq (MHz) | Modulation | RB | Deviation (ppm) | Verdict | Environment |
|---|---|---|---|---|---|---|---|---|---|
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 100@0 | 0.0036 | **PASS** | NV |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 100@0 | 0.0061 | **PASS** | LV |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 100@0 | 0.0067 | **PASS** | HV |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 100@0 | 0.0041 | **PASS** | -30℃ |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 100@0 | 0.0047 | **PASS** | -20℃ |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 100@0 | 0.0045 | **PASS** | -10℃ |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 100@0 | 0.0055 | **PASS** | 0℃ |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 100@0 | 0.0058 | **PASS** | 10℃ |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 100@0 | 0.0036 | **PASS** | 20℃ |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 100@0 | 0.0059 | **PASS** | 30℃ |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 100@0 | 0.0024 | **PASS** | 40℃ |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 100@0 | 0.0046 | **PASS** | 50℃ |

## Peak to Average Ratio

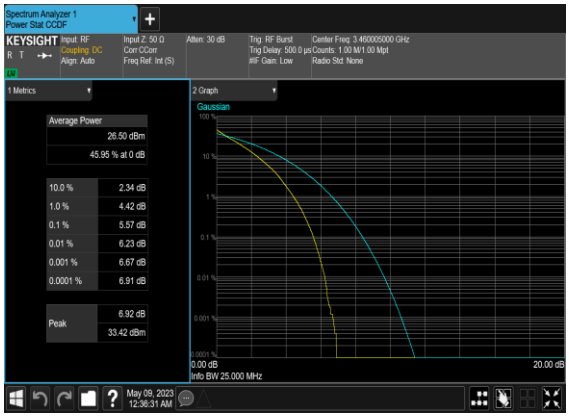
| NR Band | SCS (kHz) | Bandwidth (MHz) | Arfcn | Freq (MHz) | Modulation | RB | Result (dB) | Limit (dB) | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| **77** | 15 | 20 | 630667 | 3460.005 | DFT-s-OFDM PI/2 BPSK | 100@0 | 4.43 | 13 | **PASS** |
| **77** | 15 | 20 | 630667 | 3460.005 | DFT-s-OFDM PI/2 BPSK | 1@0 | 4.8 | 13 | **PASS** |
| **77** | 15 | 20 | 630667 | 3460.005 | DFT-s-OFDM QPSK | 100@0 | 5.57 | 13 | **PASS** |
| **77** | 15 | 20 | 630667 | 3460.005 | DFT-s-OFDM QPSK | 1@0 | 5.71 | 13 | **PASS** |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM PI/2 BPSK | 100@0 | 4.45 | 13 | **PASS** |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM PI/2 BPSK | 1@0 | 4.79 | 13 | **PASS** |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 100@0 | 5.59 | 13 | **PASS** |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 1@0 | 5.63 | 13 | **PASS** |
| **77** | 15 | 20 | 636000 | 3540.0 | DFT-s-OFDM PI/2 BPSK | 100@0 | 4.48 | 13 | **PASS** |
| **77** | 15 | 20 | 636000 | 3540.0 | DFT-s-OFDM PI/2 BPSK | 1@0 | 4.78 | 13 | **PASS** |
| **77** | 15 | 20 | 636000 | 3540.0 | DFT-s-OFDM QPSK | 100@0 | 5.65 | 13 | **PASS** |
| **77** | 15 | 20 | 636000 | 3540.0 | DFT-s-OFDM QPSK | 1@0 | 5.44 | 13 | **PASS** |

N77(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH

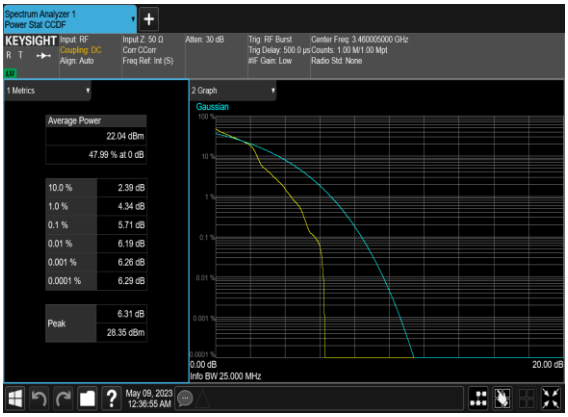



N77(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH

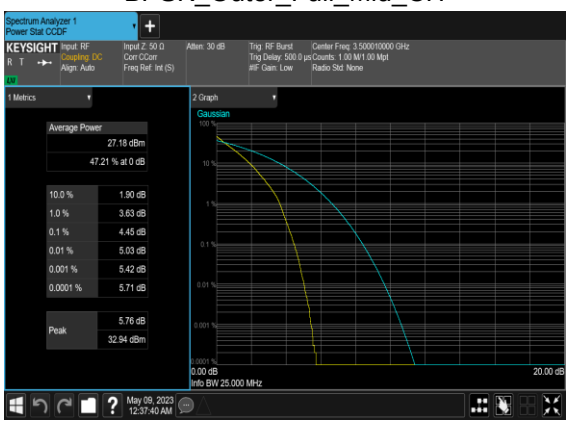
N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH




N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH




N77(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

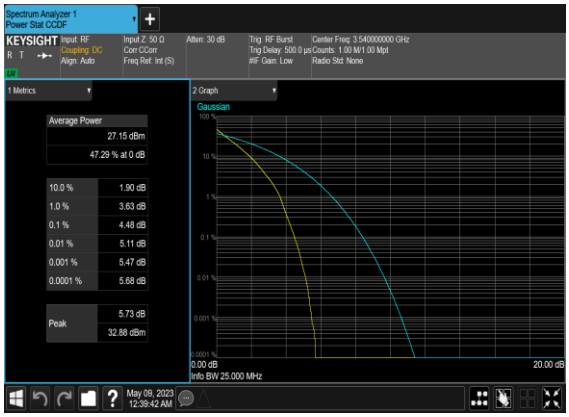



N77(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH

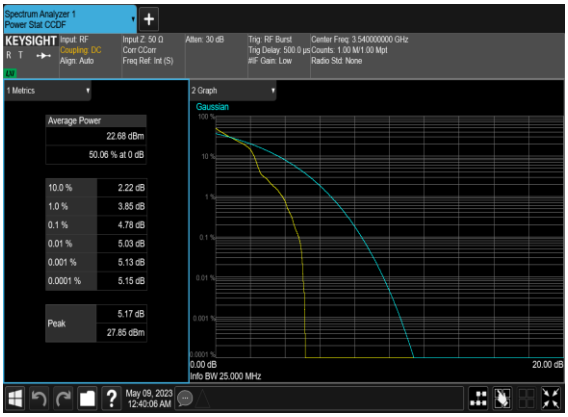
N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

N77(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH




N77(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH




N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH

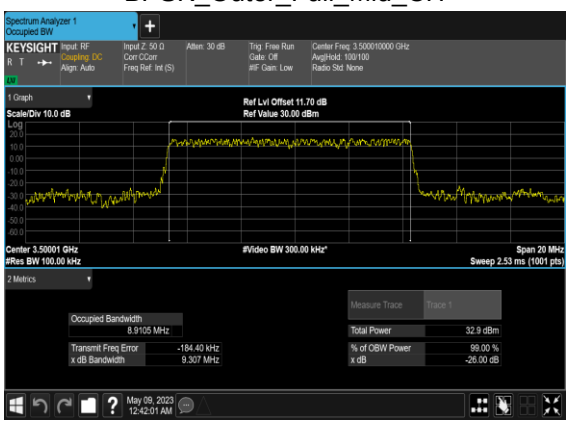
N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

## Occupied Bandwidth

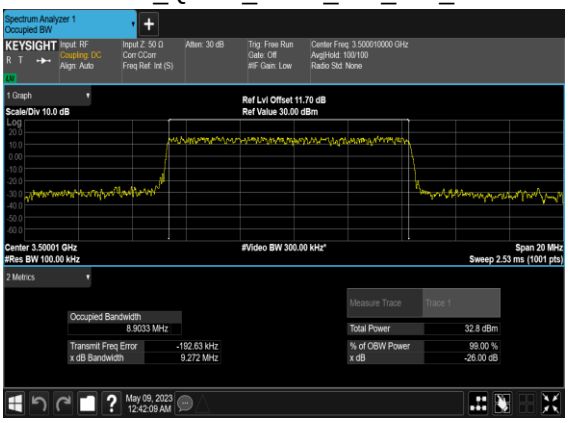
| NR Band | SCS (kHz) | Bandwidth (MHz) | Arfcn | Freq (MHz) | Modulation | RB | OBW (MHz) | 26dB BW (MHz) |
|---|---|---|---|---|---|---|---|---|
| **77** | 15 | 10 | 633334 | 3500.01 | DFT-s-OFDM PI/2 BPSK | 50@0 | 8.9105 | 9.307 |
| **77** | 15 | 10 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 50@0 | 8.9033 | 9.272 |
| **77** | 15 | 10 | 633334 | 3500.01 | CP-OFDM QPSK | 52@0 | 9.2774 | 9.648 |
| **77** | 15 | 10 | 633334 | 3500.01 | CP-OFDM 16 QAM | 52@0 | 9.2813 | 9.719 |
| **77** | 15 | 10 | 633334 | 3500.01 | CP-OFDM 64 QAM | 52@0 | 9.2461 | 9.655 |
| **77** | 15 | 10 | 633334 | 3500.01 | CP-OFDM 256 QAM | 52@0 | 9.2953 | 9.656 |
| **77** | 15 | 15 | 633334 | 3500.01 | DFT-s-OFDM PI/2 BPSK | 75@0 | 13.325 | 13.94 |
| **77** | 15 | 15 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 75@0 | 13.377 | 13.89 |
| **77** | 15 | 15 | 633334 | 3500.01 | CP-OFDM QPSK | 79@0 | 14.076 | 14.61 |
| **77** | 15 | 15 | 633334 | 3500.01 | CP-OFDM 16 QAM | 79@0 | 14.1 | 14.66 |
| **77** | 15 | 15 | 633334 | 3500.01 | CP-OFDM 64 QAM | 79@0 | 14.064 | 14.65 |
| **77** | 15 | 15 | 633334 | 3500.01 | CP-OFDM 256 QAM | 79@0 | 14.09 | 14.69 |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM PI/2 BPSK | 100@0 | 17.833 | 18.53 |
| **77** | 15 | 20 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 100@0 | 17.867 | 18.5 |
| **77** | 15 | 20 | 633334 | 3500.01 | CP-OFDM QPSK | 106@0 | 18.927 | 19.52 |
| **77** | 15 | 20 | 633334 | 3500.01 | CP-OFDM 16 QAM | 106@0 | 18.905 | 19.57 |
| **77** | 15 | 20 | 633334 | 3500.01 | CP-OFDM 64 QAM | 106@0 | 18.875 | 19.56 |
| **77** | 15 | 20 | 633334 | 3500.01 | CP-OFDM 256 QAM | 106@0 | 18.9 | 19.62 |
| **77** | 15 | 25 | 633334 | 3500.01 | DFT-s-OFDM PI/2 BPSK | 128@0 | 22.829 | 23.61 |
| **77** | 15 | 25 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 128@0 | 22.885 | 23.6 |
| **77** | 15 | 25 | 633334 | 3500.01 | CP-OFDM QPSK | 133@0 | 23.767 | 24.51 |
| **77** | 15 | 25 | 633334 | 3500.01 | CP-OFDM 16 QAM | 133@0 | 23.729 | 24.5 |
| **77** | 15 | 25 | 633334 | 3500.01 | CP-OFDM 64 QAM | 133@0 | 23.823 | 29.3 |
| **77** | 15 | 25 | 633334 | 3500.01 | CP-OFDM 256 QAM | 133@0 | 23.759 | 24.55 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **77** | 15 | 30 | 633334 | 3500.01 | DFT-s-OFDM PI/2 BPSK | 160@0 | 28.562 | 29.51 |
| **77** | 15 | 30 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 160@0 | 28.481 | 29.48 |
| **77** | 15 | 30 | 633334 | 3500.01 | CP-OFDM QPSK | 160@0 | 28.486 | 29.52 |
| **77** | 15 | 30 | 633334 | 3500.01 | CP-OFDM 16 QAM | 160@0 | 28.534 | 29.48 |
| **77** | 15 | 30 | 633334 | 3500.01 | CP-OFDM 64 QAM | 160@0 | 28.508 | 29.5 |
| **77** | 15 | 30 | 633334 | 3500.01 | CP-OFDM 256 QAM | 160@0 | 28.554 | 29.57 |
| **77** | 15 | 40 | 633334 | 3500.01 | DFT-s-OFDM PI/2 BPSK | 216@0 | 38.614 | 39.93 |
| **77** | 15 | 40 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 216@0 | 38.5 | 39.84 |
| **77** | 15 | 40 | 633334 | 3500.01 | CP-OFDM QPSK | 216@0 | 38.41 | 39.8 |
| **77** | 15 | 40 | 633334 | 3500.01 | CP-OFDM 16 QAM | 216@0 | 38.48 | 39.82 |
| **77** | 15 | 40 | 633334 | 3500.01 | CP-OFDM 64 QAM | 216@0 | 38.571 | 39.78 |
| **77** | 15 | 40 | 633334 | 3500.01 | CP-OFDM 256 QAM | 216@0 | 38.528 | 39.82 |
| **77** | 15 | 50 | 633334 | 3500.01 | DFT-s-OFDM PI/2 BPSK | 270@0 | 48.174 | 49.73 |
| **77** | 15 | 50 | 633334 | 3500.01 | DFT-s-OFDM QPSK | 270@0 | 48.099 | 49.76 |
| **77** | 15 | 50 | 633334 | 3500.01 | CP-OFDM QPSK | 270@0 | 48.121 | 49.7 |
| **77** | 15 | 50 | 633334 | 3500.01 | CP-OFDM 16 QAM | 270@0 | 48.23 | 49.84 |
| **77** | 15 | 50 | 633334 | 3500.01 | CP-OFDM 64 QAM | 270@0 | 48.2 | 49.71 |
| **77** | 15 | 50 | 633334 | 3500.01 | CP-OFDM 256 QAM | 270@0 | 48.237 | 49.76 |

N77(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

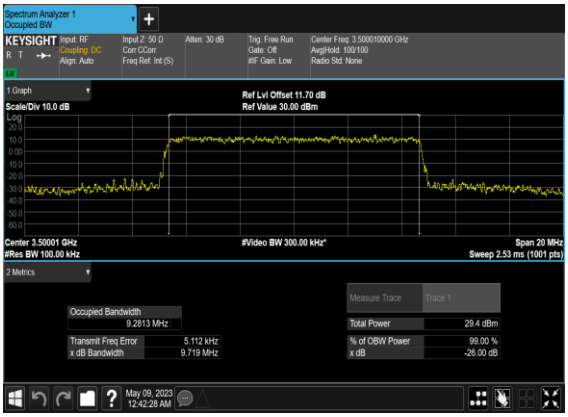



N77(10M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

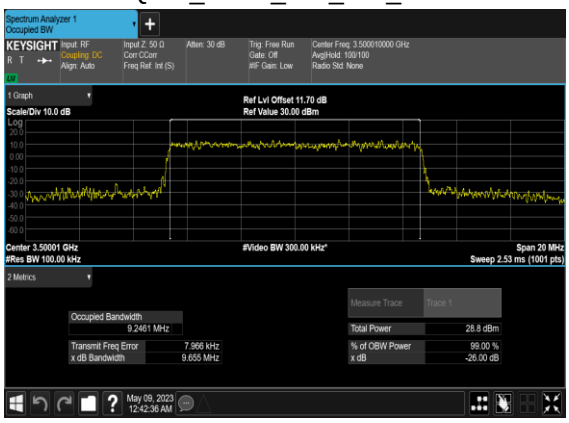



N77(10M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

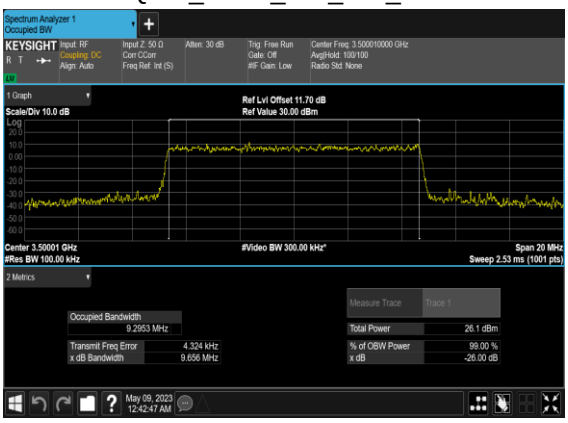
N77(10M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



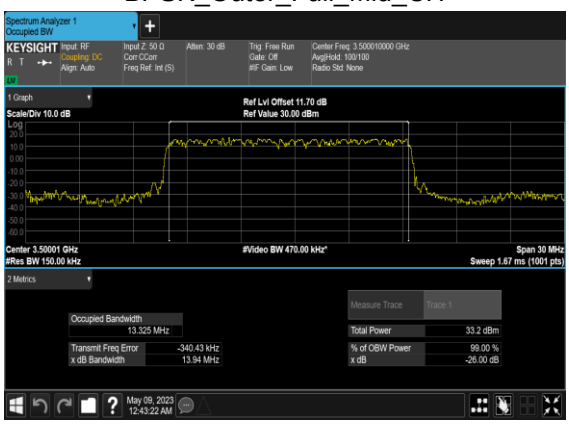

N77(10M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



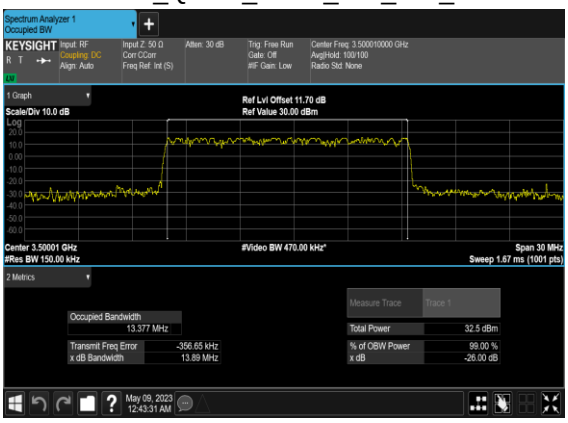

N77(10M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



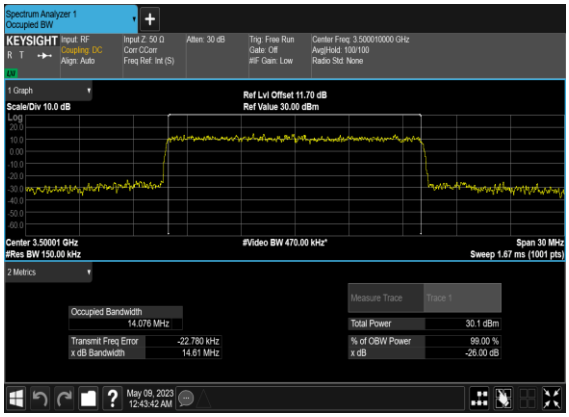
N77(15M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



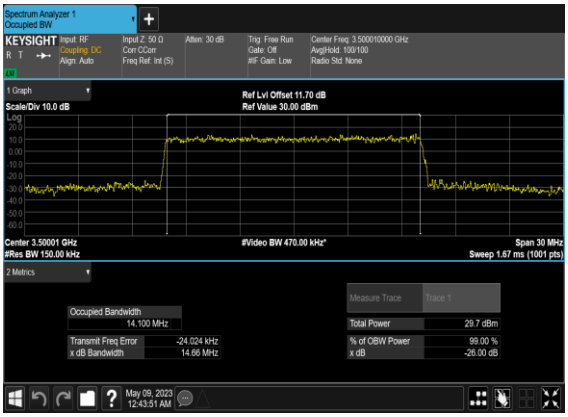

N77(15M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



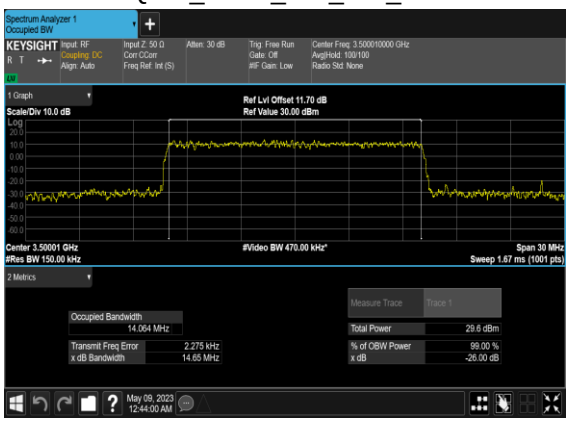

N77(15M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



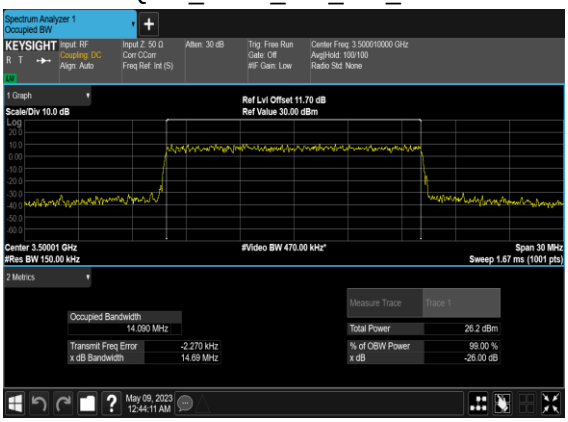

N77(15M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



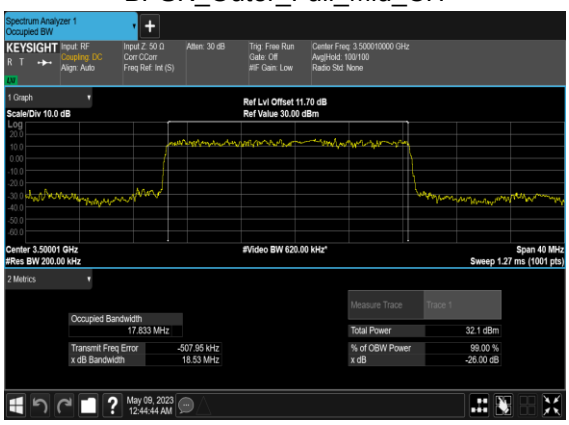

N77(15M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



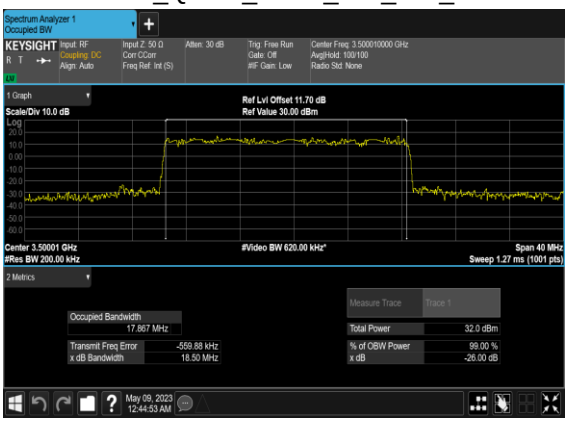

N77(15M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



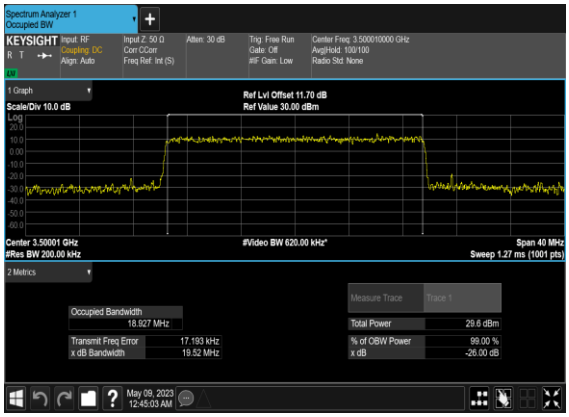
N77(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



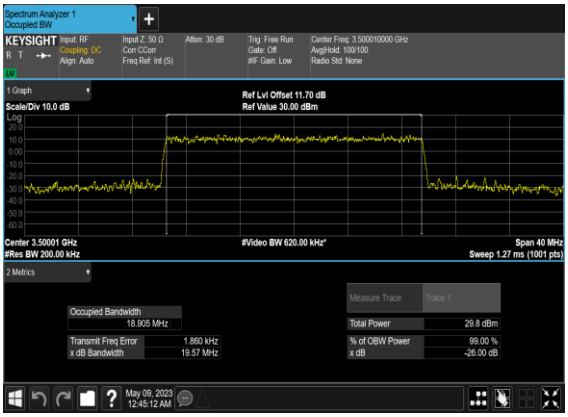

N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



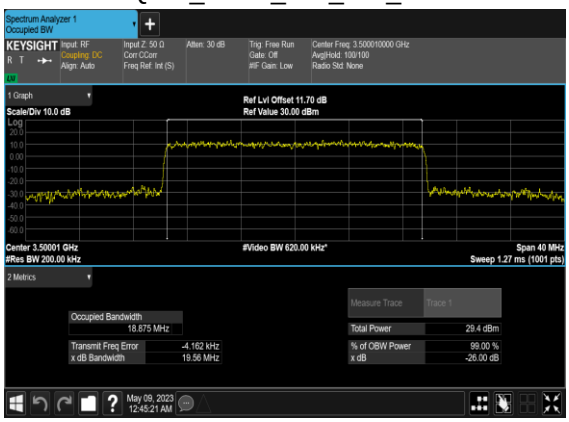

N77(20M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



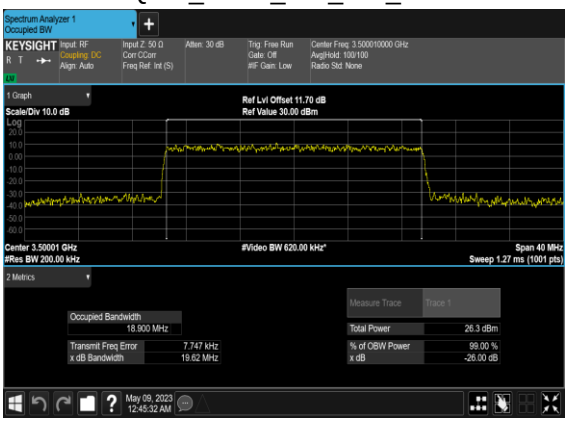

N77(20M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



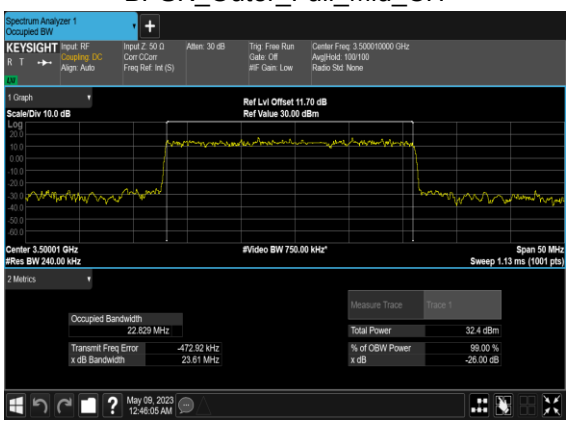

N77(20M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



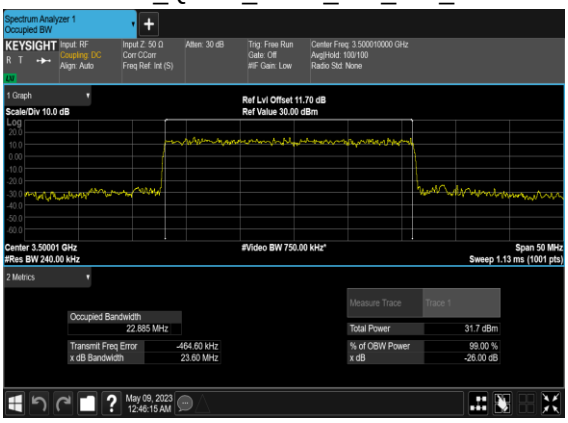

N77(20M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



N77(25M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

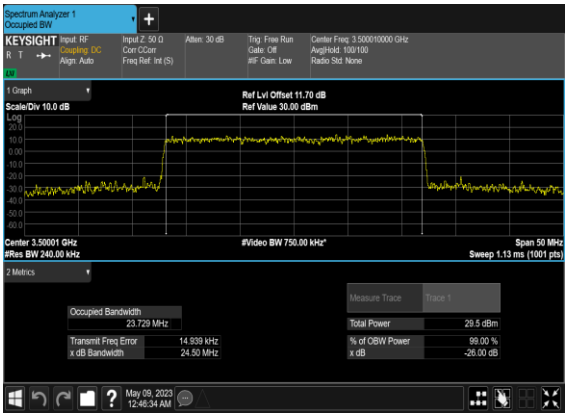



N77(25M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

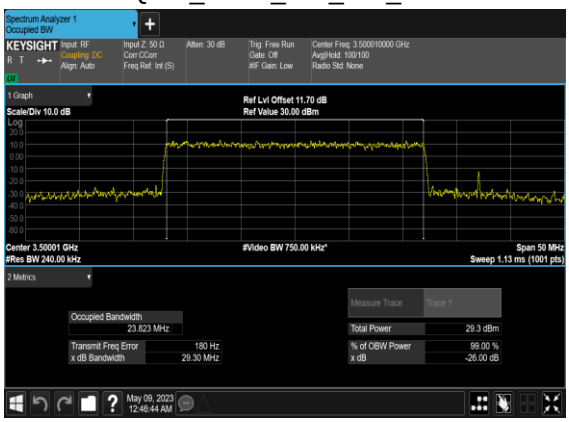



N77(25M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

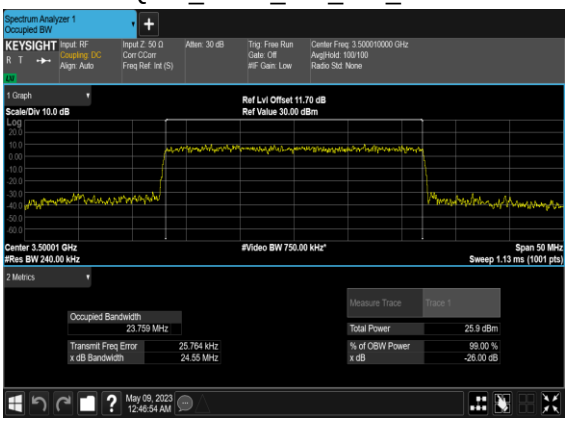
N77(25M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



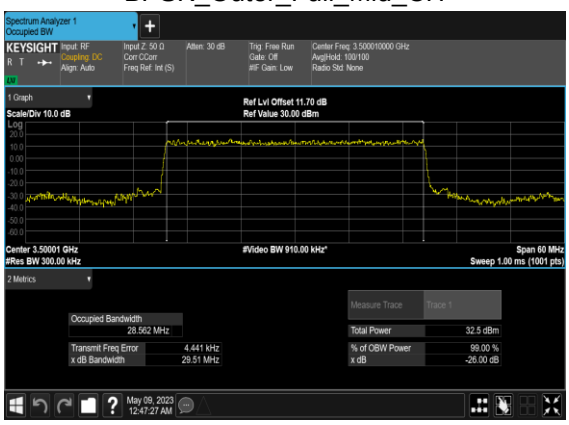

N77(25M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



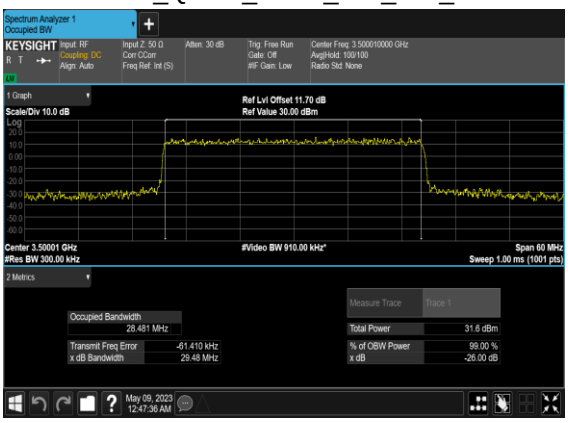

N77(25M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



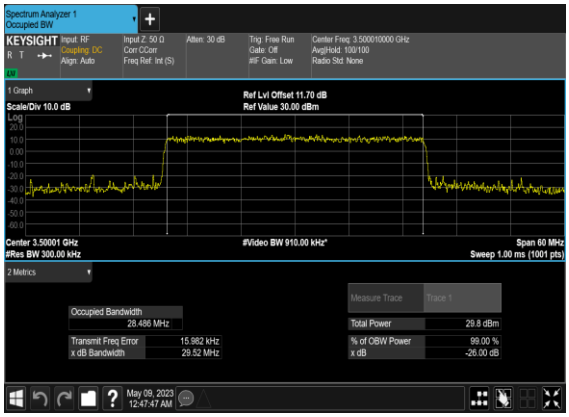
N77(30M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



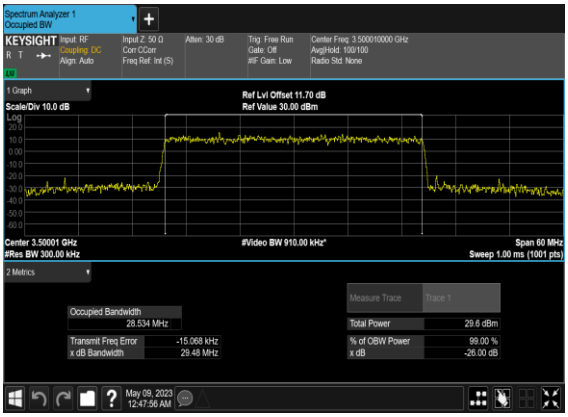

N77(30M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



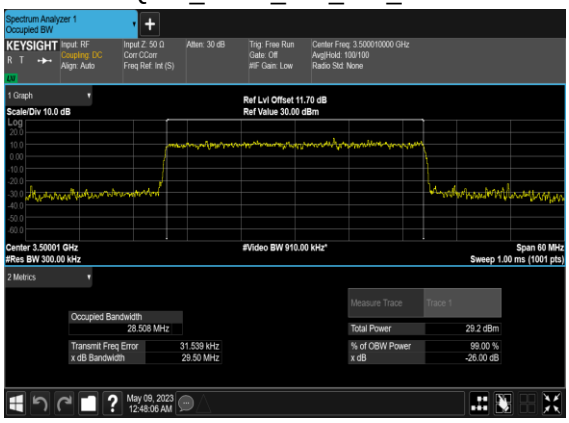

N77(30M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



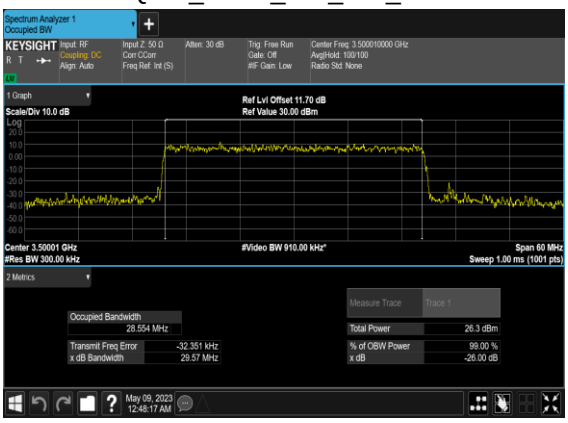

N77(30M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



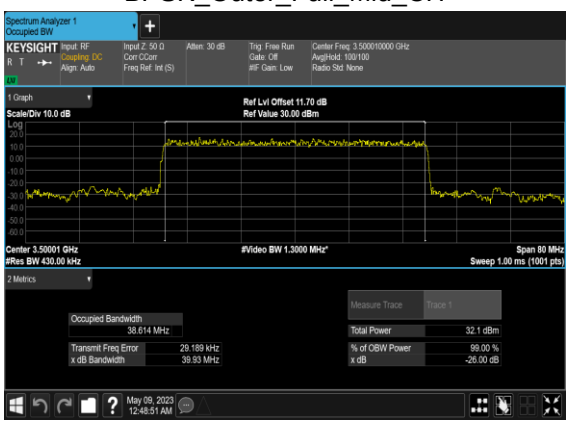

N77(30M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



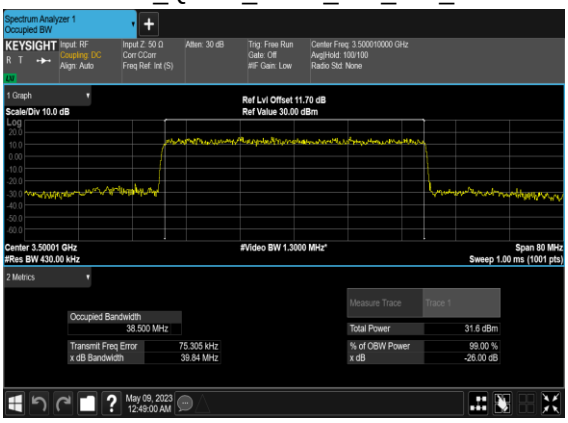

N77(30M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



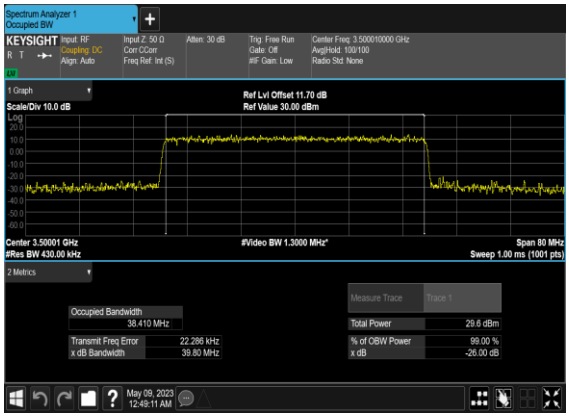
N77(40M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



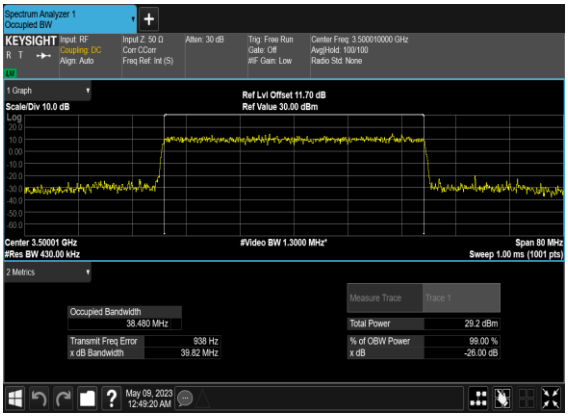

N77(40M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



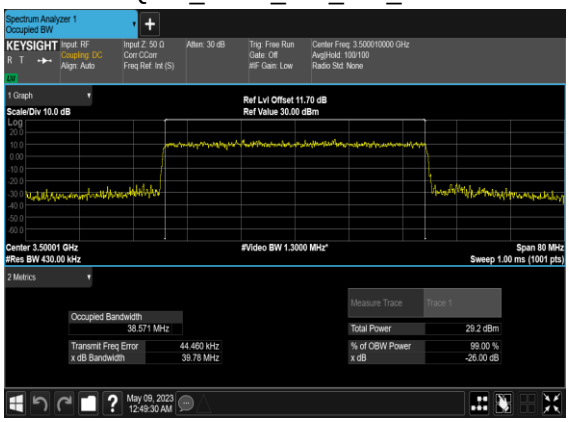

N77(40M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

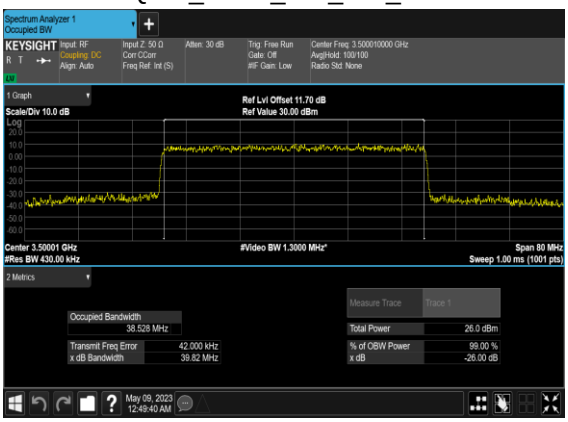



N77(40M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH




N77(40M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH




N77(40M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH