# 99% & 26dB Bandwidth

## Test Result

| 5G NR N48 SCS=30kHz 10MHz | | | | | | |
|---|---|---|---|---|---|---|
| Modulation | CH | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK | Low | Outer_Full | 8.5838 | 9.724 | / | Pass |
| CP-OFDM QPSK | | Outer_Full | 8.6166 | 9.73 | / | Pass |
| DFT-s-OFDM PI/2 BPSK | Middle | Outer_Full | 8.5931 | 9.645 | / | Pass |
| CP-OFDM QPSK | | Outer_Full | 8.6304 | 9.94 | / | Pass |
| DFT-s-OFDM PI/2 BPSK | High | Outer_Full | 8.6139 | 9.957 | / | Pass |
| CP-OFDM QPSK | | Outer_Full | 8.6239 | 9.88 | / | Pass |

| 5G NR N48 SCS=30kHz 15MHz | | | | | | |
|---|---|---|---|---|---|---|
| Modulation | CH | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK | Low | Outer_Full | 12.918 | 14.2 | / | Pass |
| CP-OFDM QPSK | | Outer_Full | 13.688 | 15.2 | / | Pass |
| DFT-s-OFDM PI/2 BPSK | Middle | Outer_Full | 12.898 | 14.4 | / | Pass |
| CP-OFDM QPSK | | Outer_Full | 13.666 | 15.12 | / | Pass |
| DFT-s-OFDM PI/2 BPSK | High | Outer_Full | 12.948 | 14.26 | / | Pass |
| CP-OFDM QPSK | | Outer_Full | 13.66 | 15.06 | / | Pass |

| 5G NR N48 SCS=30kHz 20MHz | | | | | | |
|---|---|---|---|---|---|---|
| Modulation | CH | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK | Low | Outer_Full | 17.87 | 19.19 | / | Pass |
| CP-OFDM QPSK | | Outer_Full | 18.199 | 19.59 | / | Pass |
| DFT-s-OFDM PI/2 BPSK | Middle | Outer_Full | 17.856 | 19.04 | / | Pass |
| CP-OFDM QPSK | | Outer_Full | 18.257 | 19.8 | / | Pass |
| DFT-s-OFDM PI/2 BPSK | High | Outer_Full | 17.857 | 18.97 | / | Pass |
| CP-OFDM QPSK | | Outer_Full | 18.248 | 19.74 | / | Pass |

# Peak-Average Ratio

## Test Result

| 5G NR N48 SCS=30kHz 10MHz | | | | | |
|---|---|---|---|---|---|
| Modulation | CH | RB Allocation | Peak-Average Ratio (dB) | Limit | Verdict |
| DFT-s-OFDM PI/2 BPSK | Low | Outer_Full | 4.27 | <=13 | Pass |
| CP-OFDM QPSK | | Outer_Full | 4.29 | <=13 | Pass |
| DFT-s-OFDM PI/2 BPSK | Middle | Outer_Full | 4.3 | <=13 | Pass |
| CP-OFDM QPSK | | Outer_Full | 7.07 | <=13 | Pass |
| DFT-s-OFDM PI/2 BPSK | High | Outer_Full | 4.47 | <=13 | Pass |
| CP-OFDM QPSK | | Outer_Full | 6.73 | <=13 | Pass |

| 5G NR N48 SCS=30kHz 15MHz | | | | | |
|---|---|---|---|---|---|
| Modulation | CH | RB Allocation | Peak-Average Ratio (dB) | Limit | Verdict |
| DFT-s-OFDM PI/2 BPSK | Low | Outer_Full | 4.11 | <=13 | Pass |
| CP-OFDM QPSK | | Outer_Full | 7.07 | <=13 | Pass |
| DFT-s-OFDM PI/2 BPSK | Middle | Outer_Full | 4.23 | <=13 | Pass |
| CP-OFDM QPSK | | Outer_Full | 6.94 | <=13 | Pass |
| DFT-s-OFDM PI/2 BPSK | High | Outer_Full | 4.52 | <=13 | Pass |
| CP-OFDM QPSK | | Outer_Full | 7.14 | <=13 | Pass |

| 5G NR N48 SCS=30kHz 20MHz | | | | | |
|---|---|---|---|---|---|
| Modulation | CH | RB Allocation | Peak-Average Ratio (dB) | Limit | Verdict |
| DFT-s-OFDM PI/2 BPSK | Low | Outer_Full | 4.19 | <=13 | Pass |
| CP-OFDM QPSK | | Outer_Full | 6.69 | <=13 | Pass |
| DFT-s-OFDM PI/2 BPSK | Middle | Outer_Full | 4.19 | <=13 | Pass |
| CP-OFDM QPSK | | Outer_Full | 7.51 | <=13 | Pass |
| DFT-s-OFDM PI/2 BPSK | High | Outer_Full | 4.39 | <=13 | Pass |
| CP-OFDM QPSK | | Outer_Full | 7.28 | <=13 | Pass |

# Adjacent Channel Power

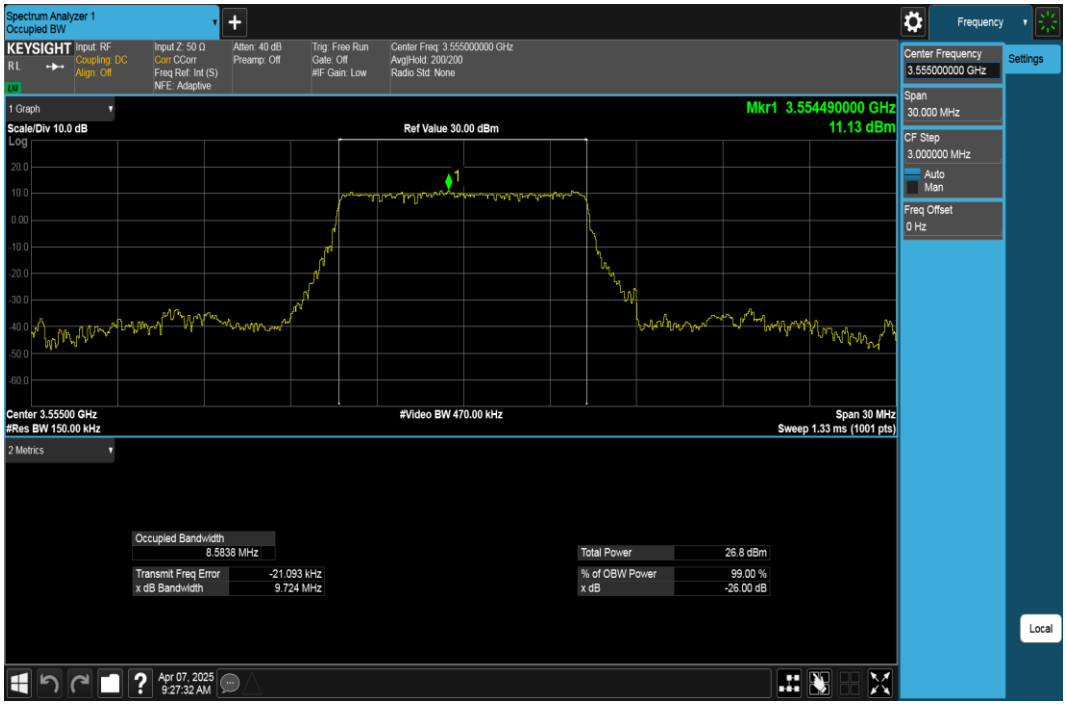
| 5G NR N48 SCS=30kHz 10MHz | | | | | | |
|---|---|---|---|---|---|---|
| Modulation | CH | RB Allocation | Channel Spacing (MHz) | | Limit (dBc) | Verdict |
| | | | -10 | +10 | | |
| DFT-s-OFDM PI/2 BPSK | Low | Outer_Full | 45.39 | 45.17 | ⩾30 | Pass |
| | | 1RB0 | 41.99 | 64.07 | ⩾30 | Pass |
| | | 1RB_Max | 64.39 | 41.34 | ⩾30 | Pass |
| | Middle | Outer_Full | 42.09 | 42.44 | ⩾30 | Pass |
| | | 1RB0 | 39.97 | 61.24 | ⩾30 | Pass |
| | | 1RB_Max | 61.58 | 40.98 | ⩾30 | Pass |
| | Middle | Outer_Full | 44.74 | 44.7 | ⩾30 | Pass |
| | | 1RB0 | 42.75 | 54.97 | ⩾30 | Pass |
| | | 1RB_Max | 54.79 | 42.18 | ⩾30 | Pass |
| CP-OFDM QPSK | Low | Outer_Full | 41.27 | 42.05 | ⩾30 | Pass |
| | | 1RB0 | 40.14 | 53.37 | ⩾30 | Pass |
| | | 1RB_Max | 52.39 | 41.21 | ⩾30 | Pass |
| | Middle | Outer_Full | 45.59 | 44.83 | ⩾30 | Pass |
| | | 1RB0 | 41.49 | 55.19 | ⩾30 | Pass |
| | | 1RB_Max | 55.39 | 41.3 | ⩾30 | Pass |
| | Middle | Outer_Full | 41.12 | 41.08 | ⩾30 | Pass |
| | | 1RB0 | 40.71 | 53.03 | ⩾30 | Pass |
| | | 1RB_Max | 52.97 | 40.94 | ⩾30 | Pass |

| 5G NR N48 SCS=30kHz 15MHz | | | | | | |
|---|---|---|---|---|---|---|
| Modulation | CH | RB Allocation | Channel Spacing (MHz) | | Limit (dBc) | Verdict |
| | | | -15 | +15 | | |
| DFT-s-OFDM PI/2 BPSK | Low | Outer_Full | 45.07 | 47.71 | ⩾30 | Pass |
| | | 1RB0 | 37.08 | 62.78 | ⩾30 | Pass |
| | | 1RB_Max | 62.92 | 38.42 | ⩾30 | Pass |
| | Middle | Outer_Full | 41.73 | 42.54 | ⩾30 | Pass |
| | | 1RB0 | 37.65 | 60.91 | ⩾30 | Pass |
| | | 1RB_Max | 60.58 | 39.08 | ⩾30 | Pass |
| | Middle | Outer_Full | 44.13 | 47.88 | ⩾30 | Pass |
| | | 1RB0 | 38.66 | 54.19 | ⩾30 | Pass |
| | | 1RB_Max | 53.3 | 38.57 | ⩾30 | Pass |
| CP-OFDM QPSK | Low | Outer_Full | 41.07 | 41.9 | ⩾30 | Pass |
| | | 1RB0 | 36.62 | 51.33 | ⩾30 | Pass |
| | | 1RB_Max | 50.97 | 37.65 | ⩾30 | Pass |
| | Middle | Outer_Full | 45.98 | 47.96 | ⩾30 | Pass |
| | | 1RB0 | 37.26 | 53.76 | ⩾30 | Pass |
| | | 1RB_Max | 53.91 | 39 | ⩾30 | Pass |
| | Middle | Outer_Full | 41.82 | 41.87 | ⩾30 | Pass |
| | | 1RB0 | 37.83 | 51.46 | ⩾30 | Pass |
| | | 1RB_Max | 51.76 | 38.01 | ⩾30 | Pass |

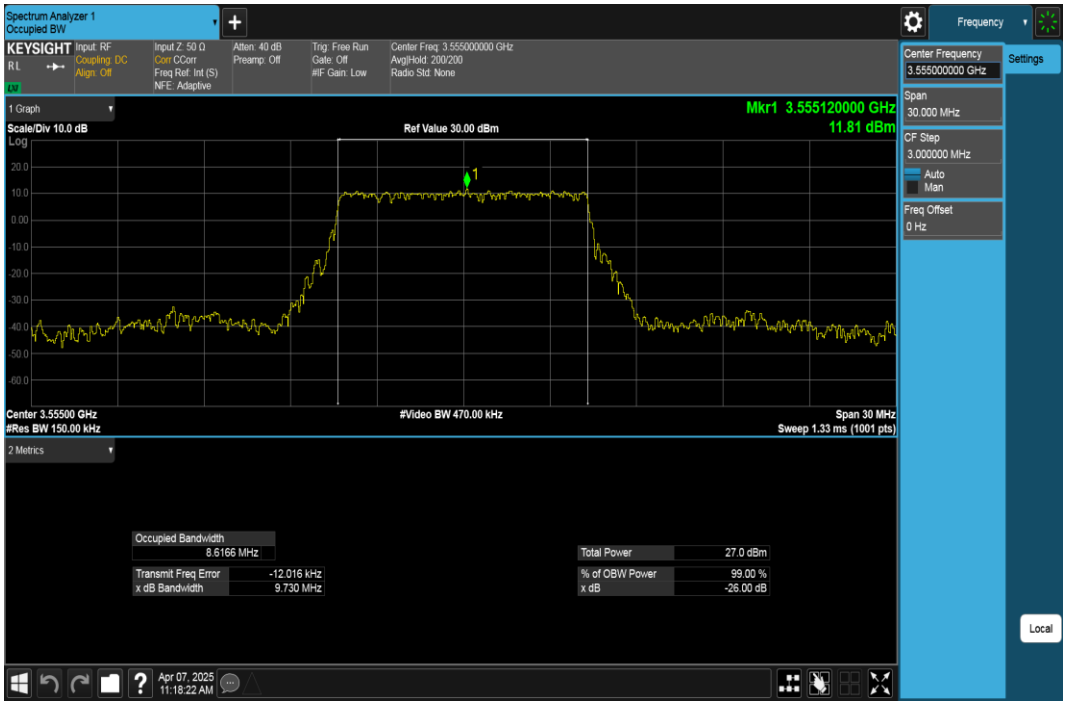
| 5G NR N48 SCS=30kHz 20MHz | | | | | | |
|---|---|---|---|---|---|---|
| Modulation | CH | RB Allocation | Channel Spacing (MHz) | | Limit (dBc) | Verdict |
| | | | -20 | +20 | | |
| DFT-s-OFDM PI/2 BPSK | Low | Outer_Full | 46.17 | 49.93 | ⩾30 | Pass |
| | | 1RB0 | 41.54 | 61.84 | ⩾30 | Pass |
| | | 1RB_Max | 62.06 | 42.95 | ⩾30 | Pass |
| | Middle | Outer_Full | 41.97 | 43 | ⩾30 | Pass |
| | | 1RB0 | 42.11 | 58.79 | ⩾30 | Pass |
| | | 1RB_Max | 59.21 | 42.97 | ⩾30 | Pass |
| | Middle | Outer_Full | 44.45 | 45.97 | ⩾30 | Pass |
| | | 1RB0 | 41.33 | 52.97 | ⩾30 | Pass |
| | | 1RB_Max | 52.08 | 42.18 | ⩾30 | Pass |
| CP-OFDM QPSK | Low | Outer_Full | 40.92 | 41.86 | ⩾30 | Pass |
| | | 1RB0 | 40.9 | 50.49 | ⩾30 | Pass |
| | | 1RB_Max | 50.34 | 42.06 | ⩾30 | Pass |
| | Middle | Outer_Full | 46.93 | 47.58 | ⩾30 | Pass |
| | | 1RB0 | 42.37 | 52.67 | ⩾30 | Pass |
| | | 1RB_Max | 52.62 | 42.47 | ⩾30 | Pass |
| | Middle | Outer_Full | 41.67 | 41.48 | ⩾30 | Pass |
| | | 1RB0 | 40.65 | 50.36 | ⩾30 | Pass |
| | | 1RB_Max | 50.35 | 41.21 | ⩾30 | Pass |

OBW Test graph

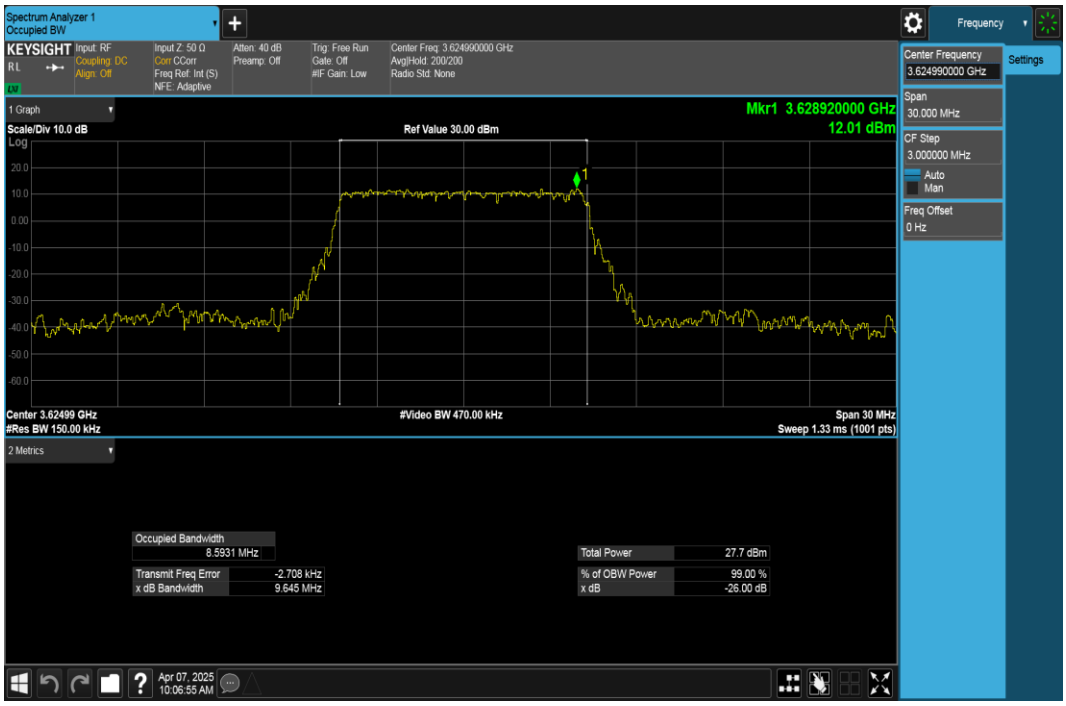
N48-10M-OBW-LCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



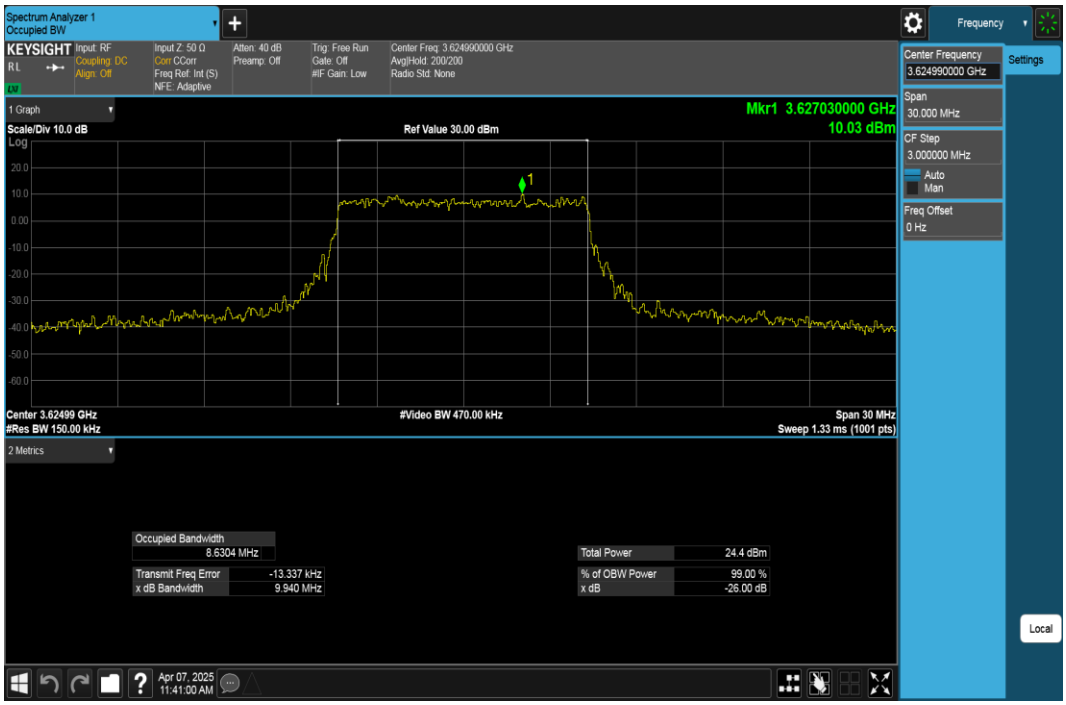

N48-10M-OBW-LCH-CP-OFDM-QPSK-Outer_Full



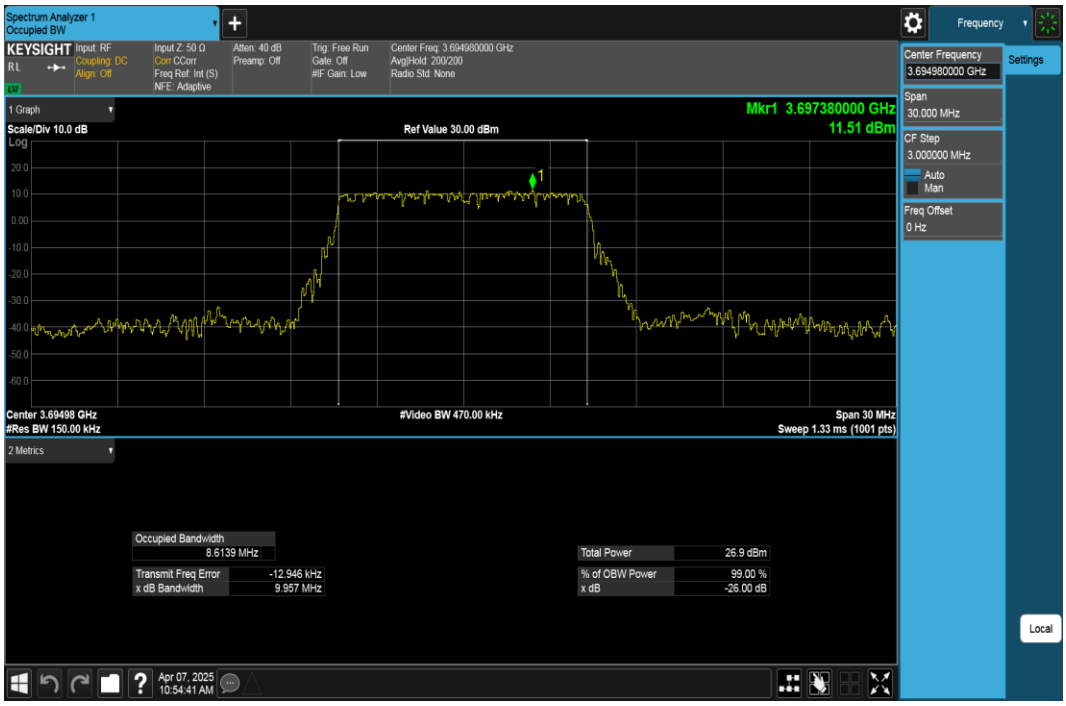
N48-10M-OBW-MCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



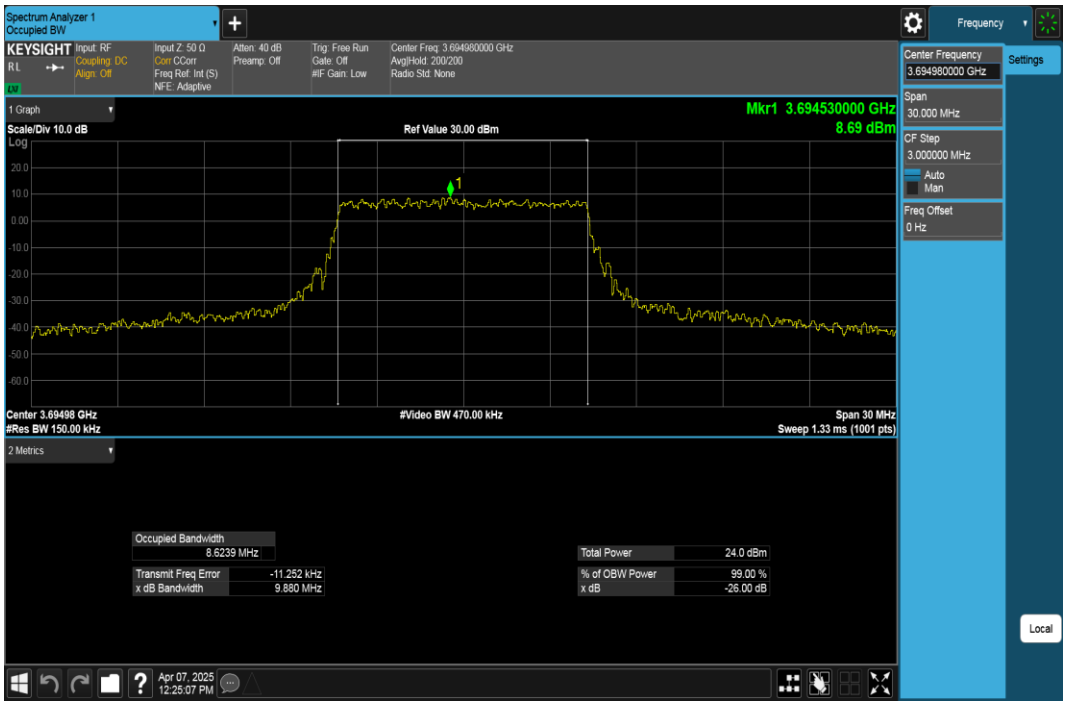

N48-10M-OBW-MCH-CP-OFDM-QPSK-Outer_Full



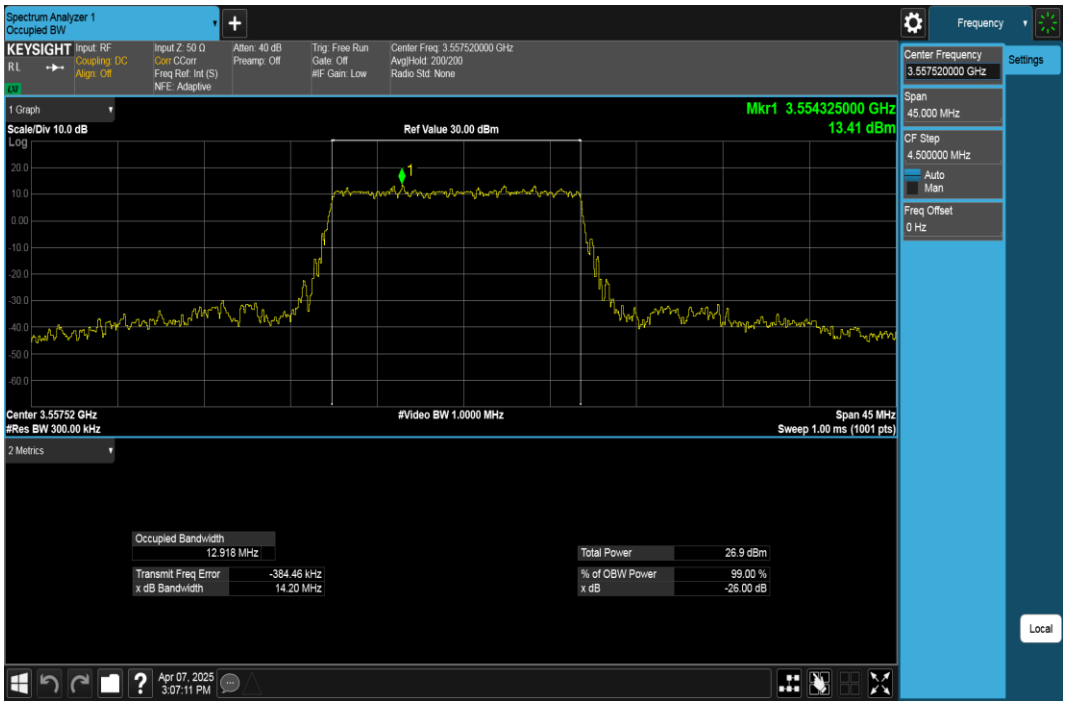
N48-10M-OBW-HCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



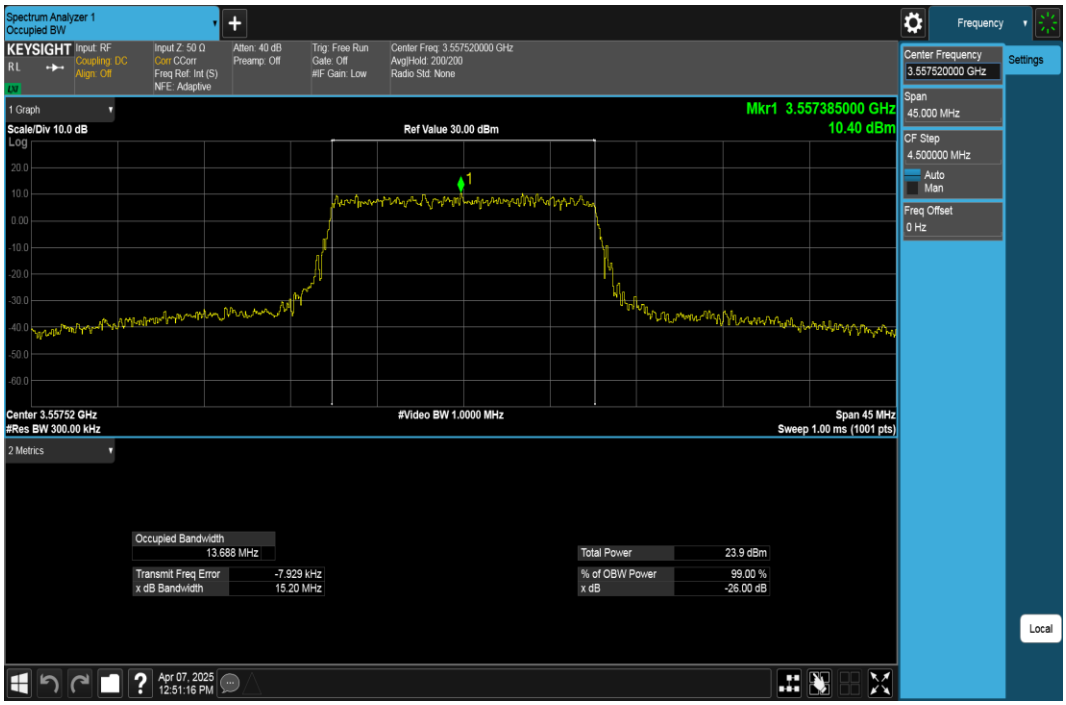

N48-10M-OBW-HCH-CP-OFDM-QPSK-Outer_Full



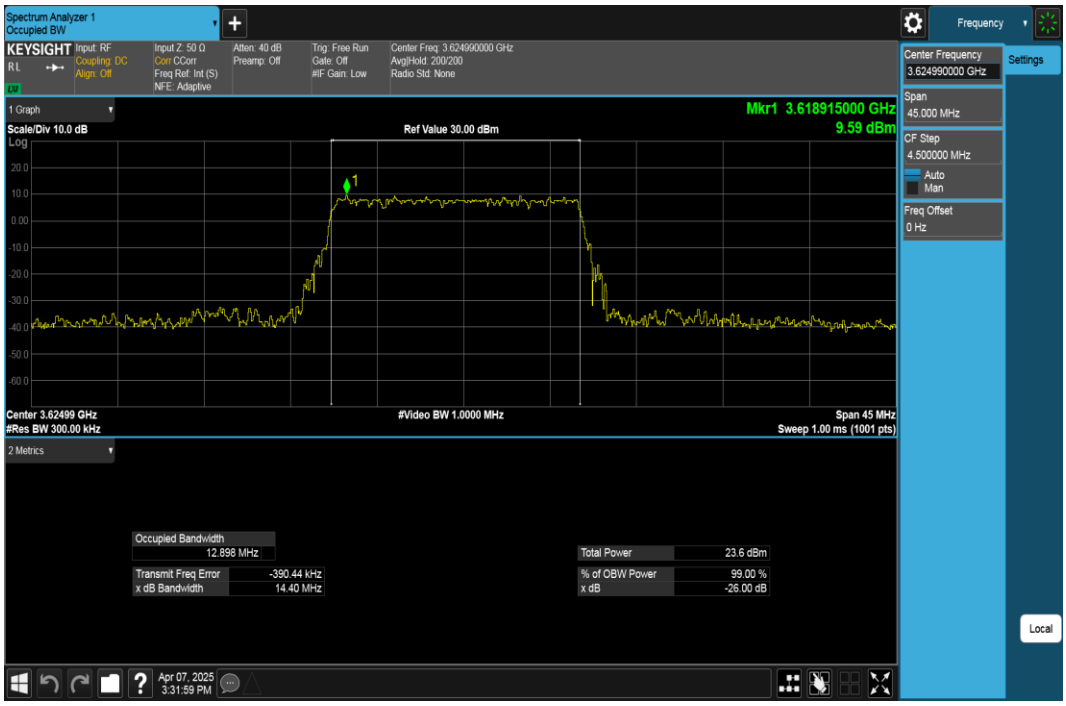
N48-15M-OBW-LCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



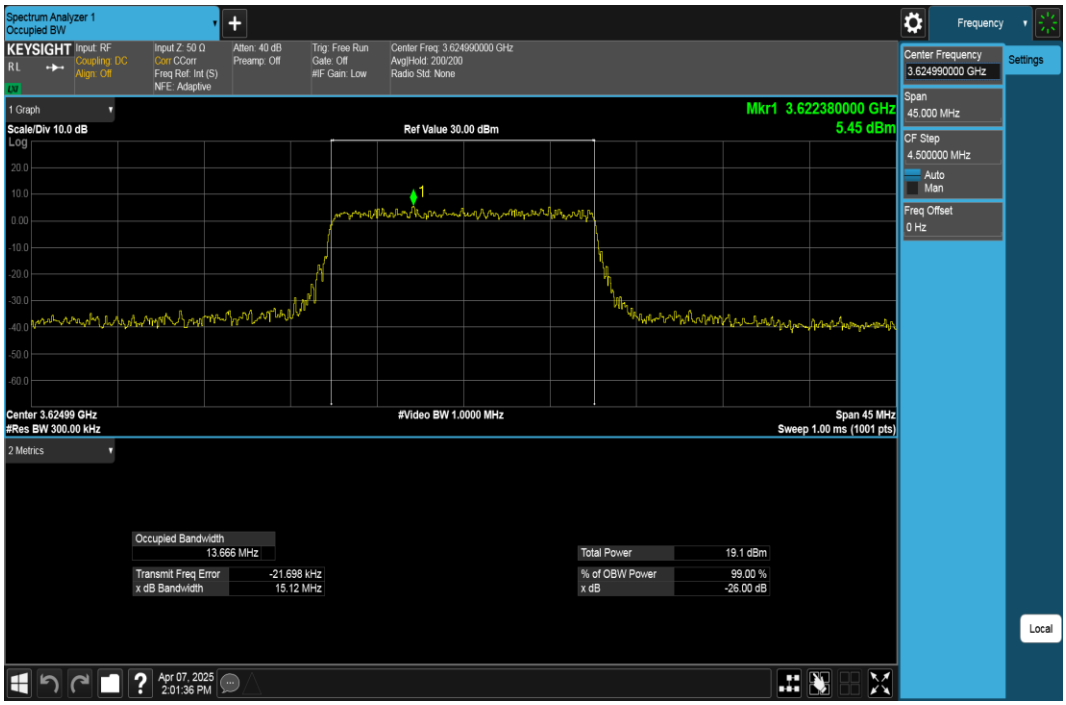

N48-15M-OBW-LCH-CP-OFDM-QPSK-Outer_Full



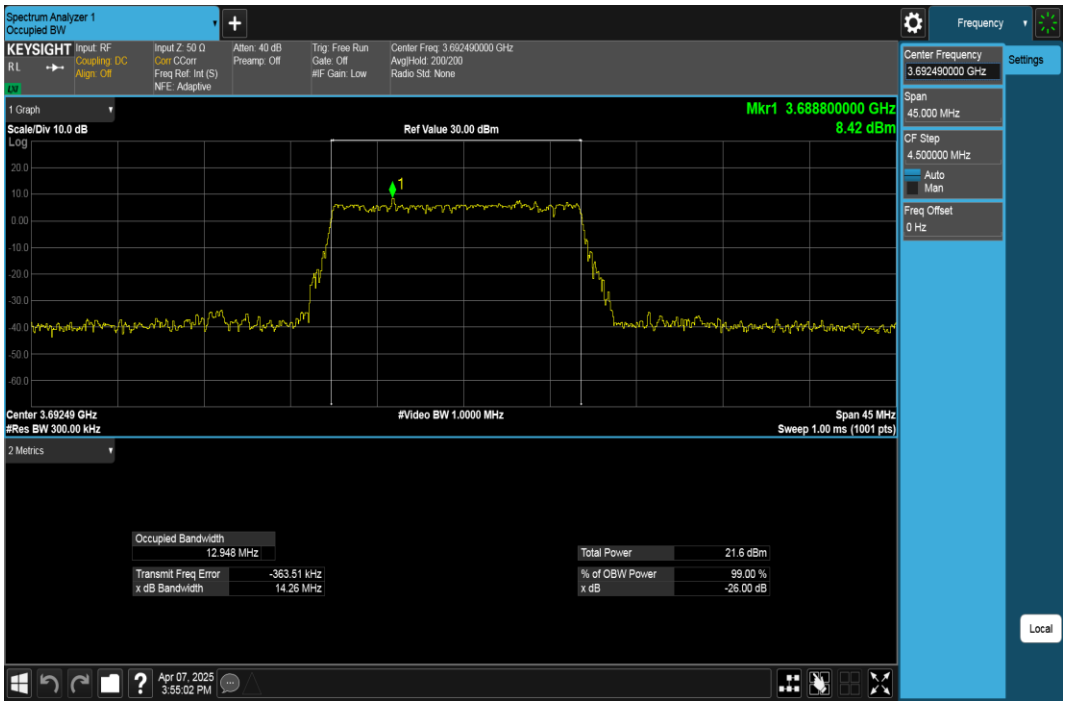
N48-15M-OBW-MCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



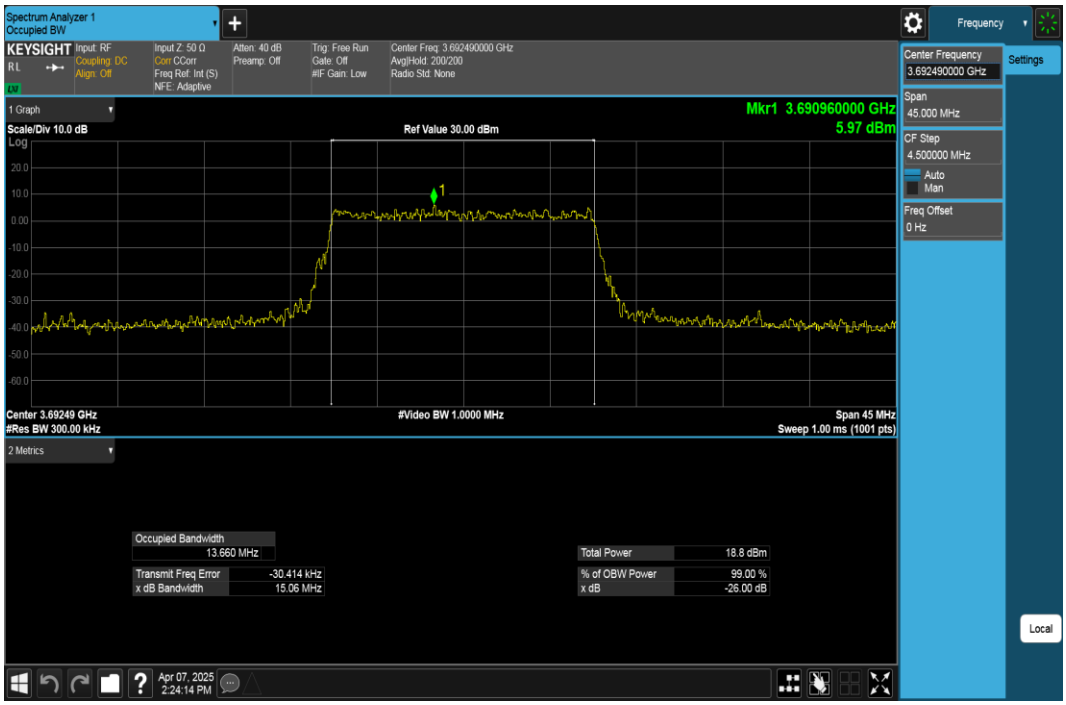

N48-15M-OBW-MCH-CP-OFDM-QPSK-Outer_Full



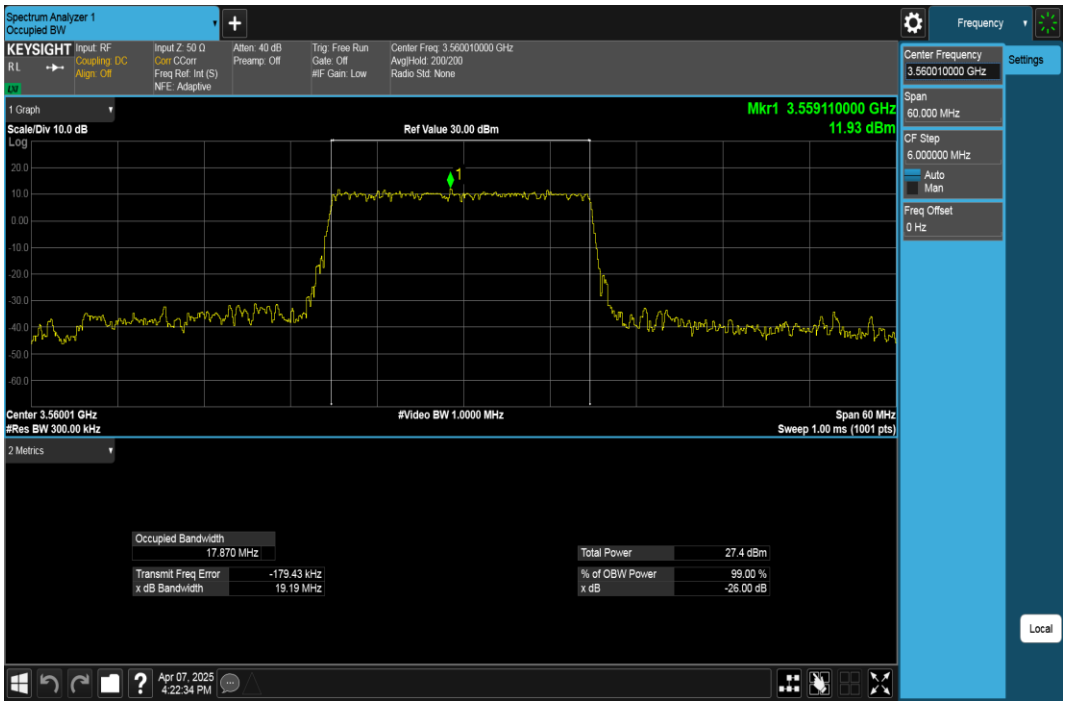
N48-15M-OBW-HCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



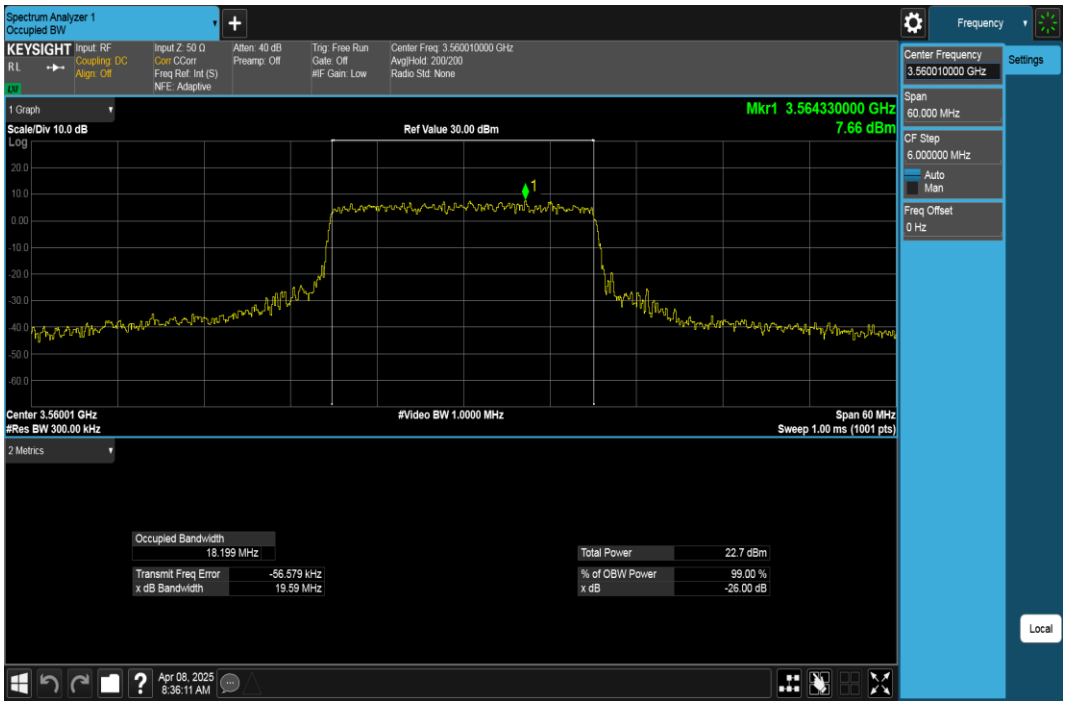

N48-15M-OBW-HCH-CP-OFDM-QPSK-Outer_Full



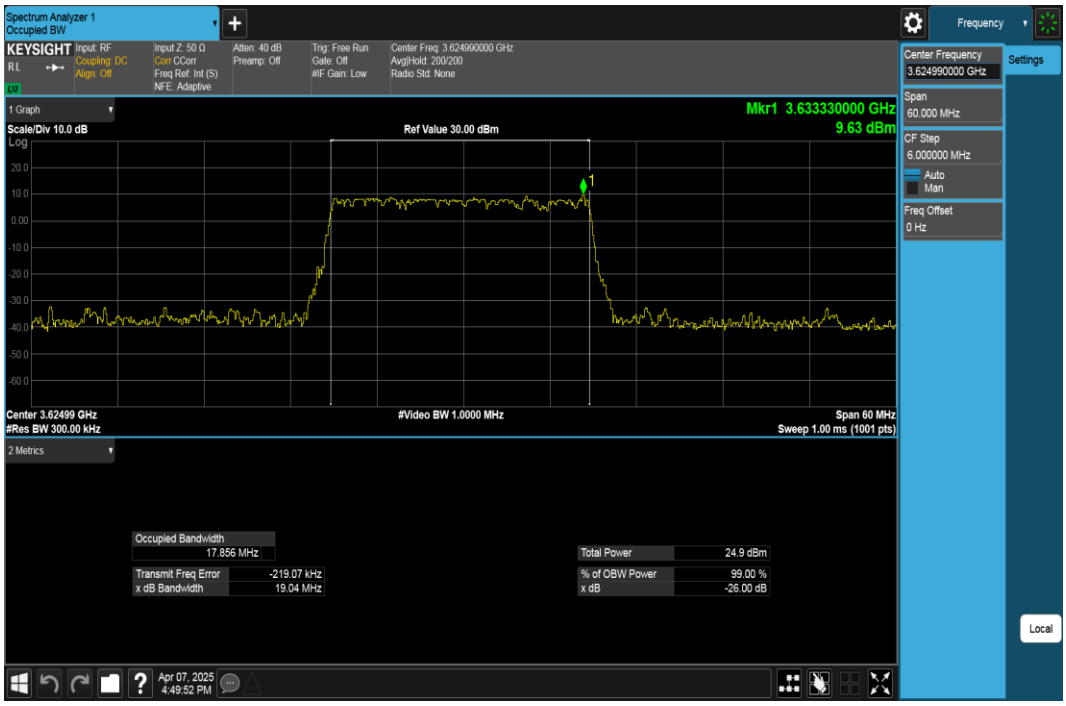
N48-20M-OBW-LCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



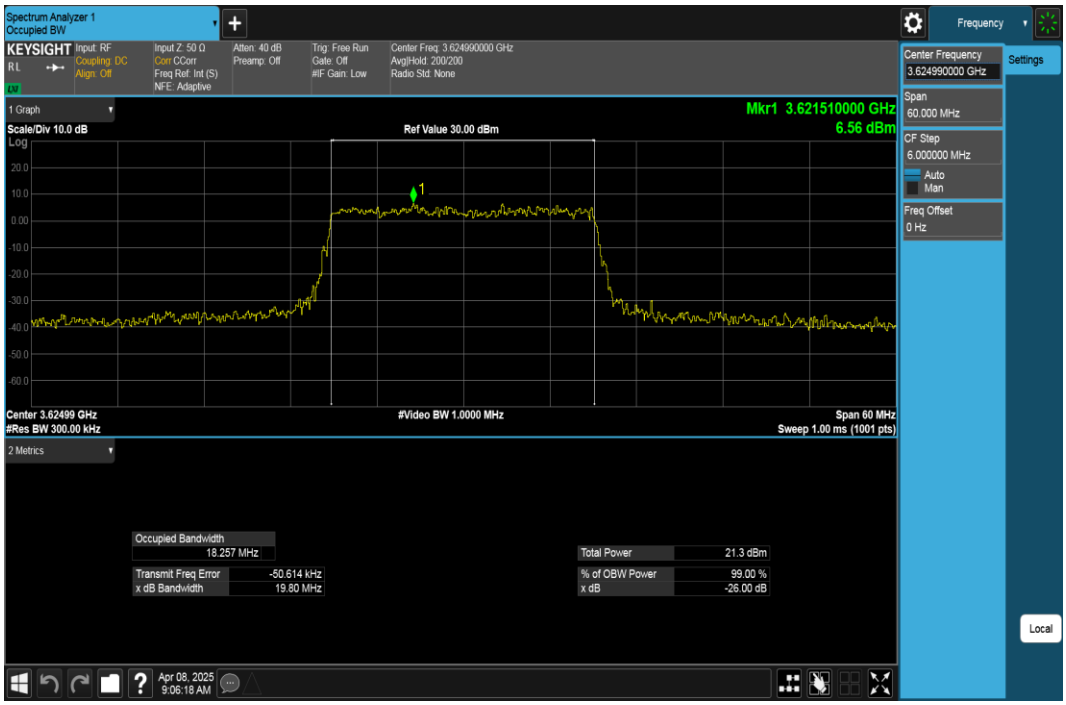

N48-20M-OBW-LCH-CP-OFDM-QPSK-Outer_Full



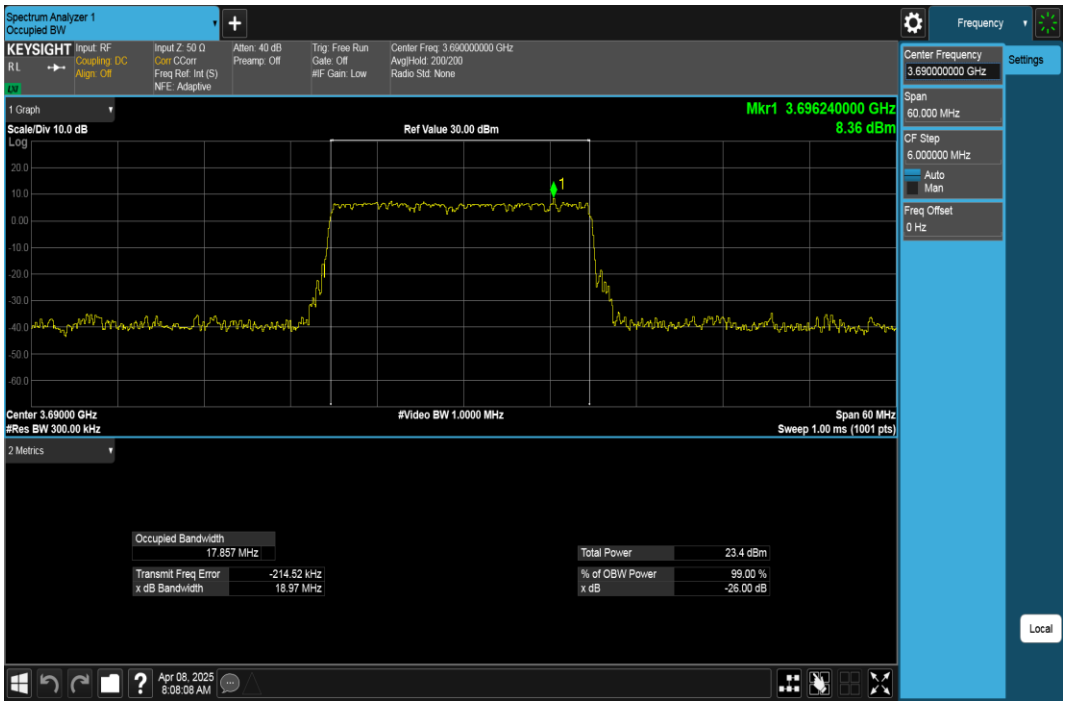
N48-20M-OBW-MCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



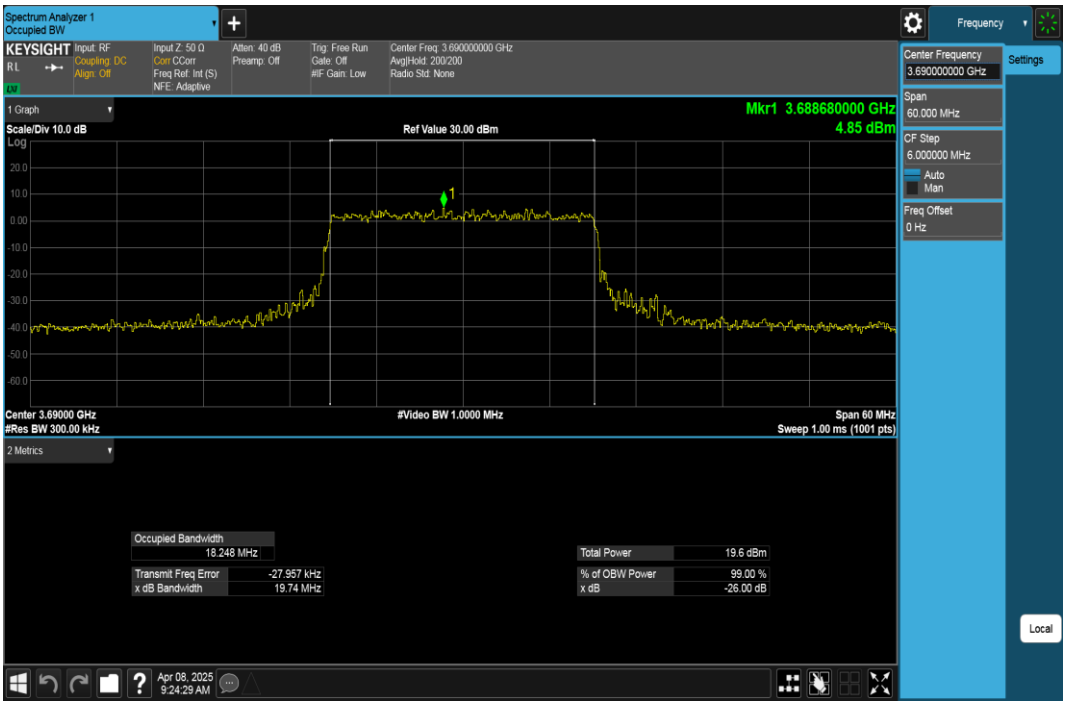

N48-20M-OBW-MCH-CP-OFDM-QPSK-Outer_Full



N48-20M-OBW-HCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full

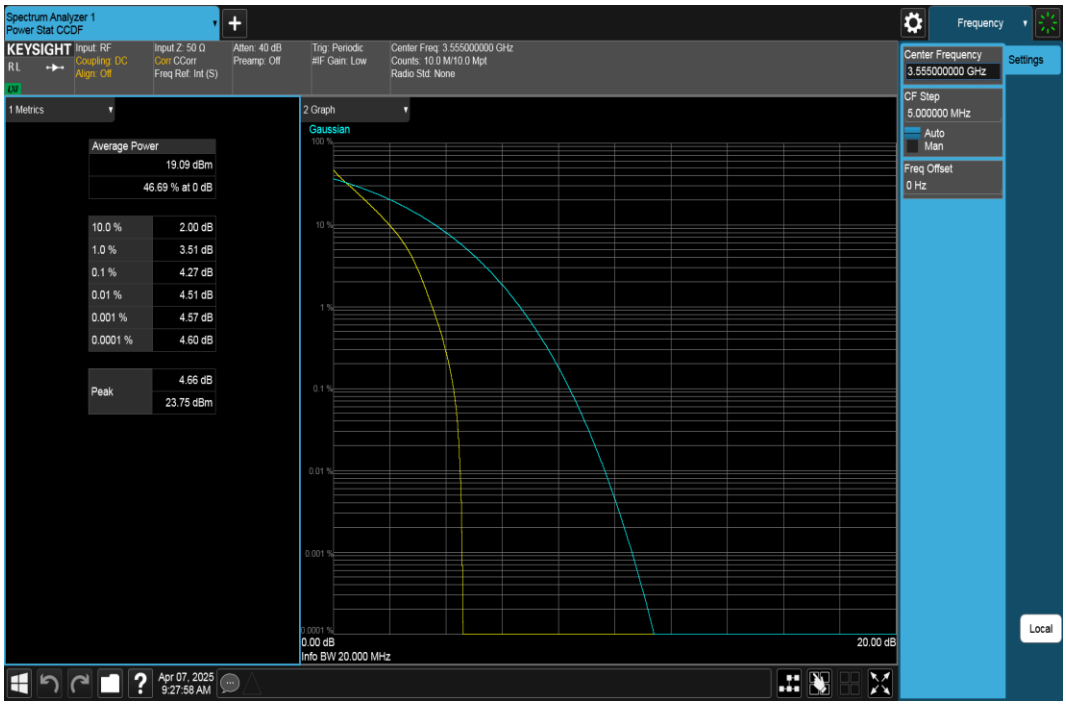



N48-20M-OBW-HCH-CP-OFDM-QPSK-Outer_Full

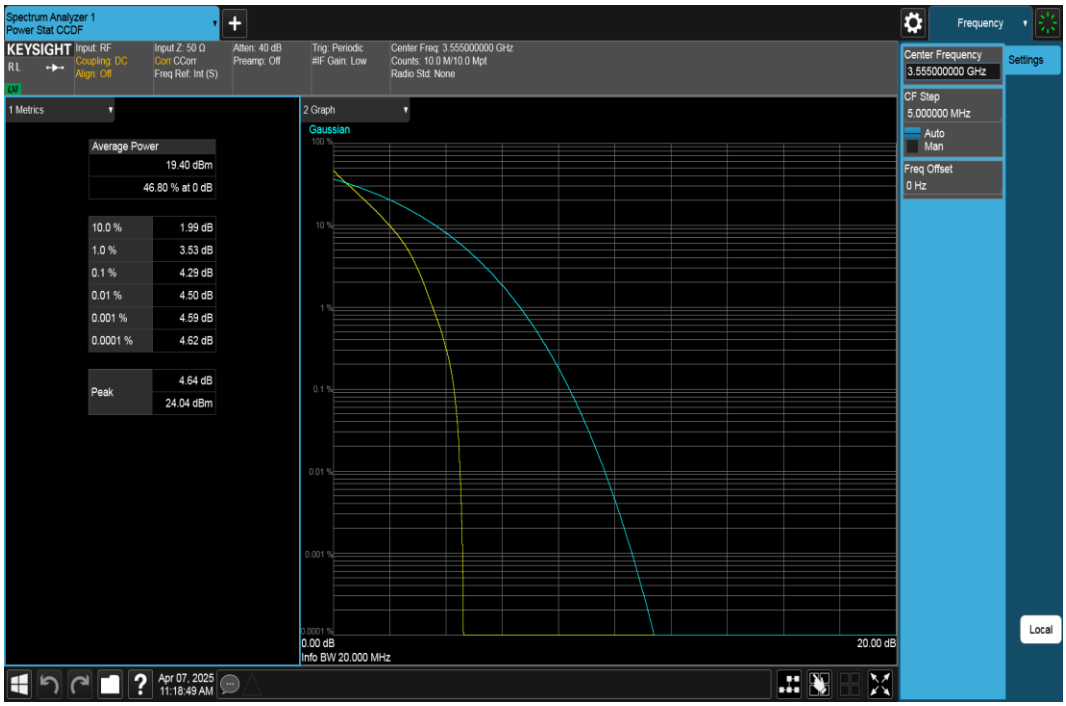


PAPR Test graph

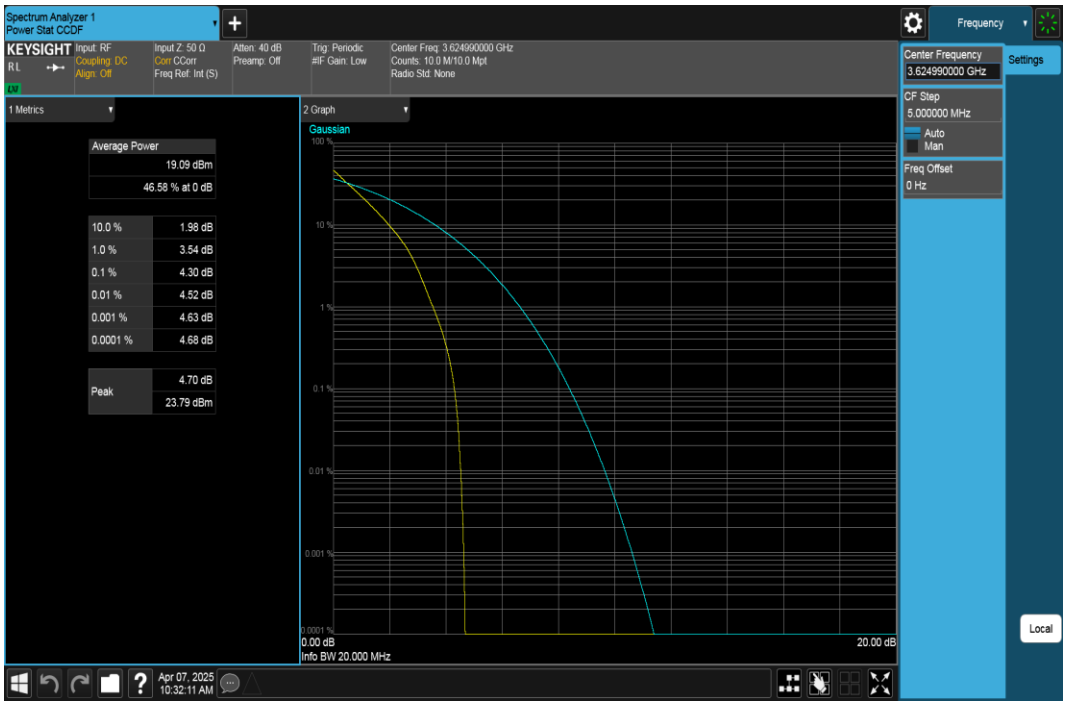
N48-10M-PAPR-LCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



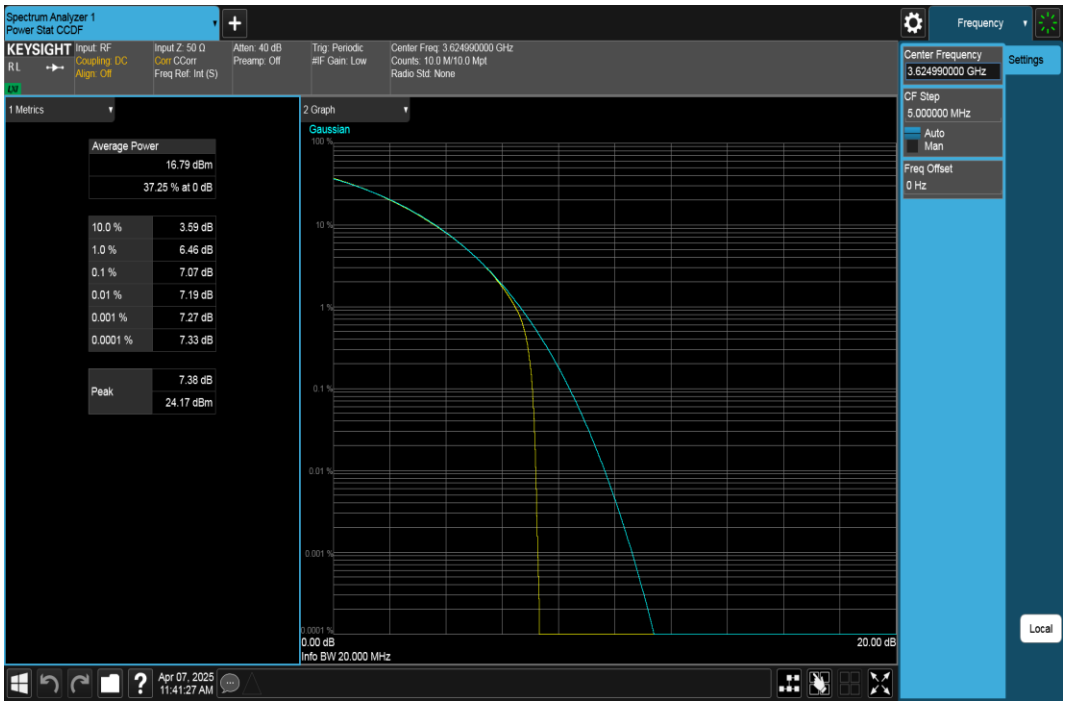

N48-10M-PAPR-LCH-CP-OFDM-QPSK-Outer_Full



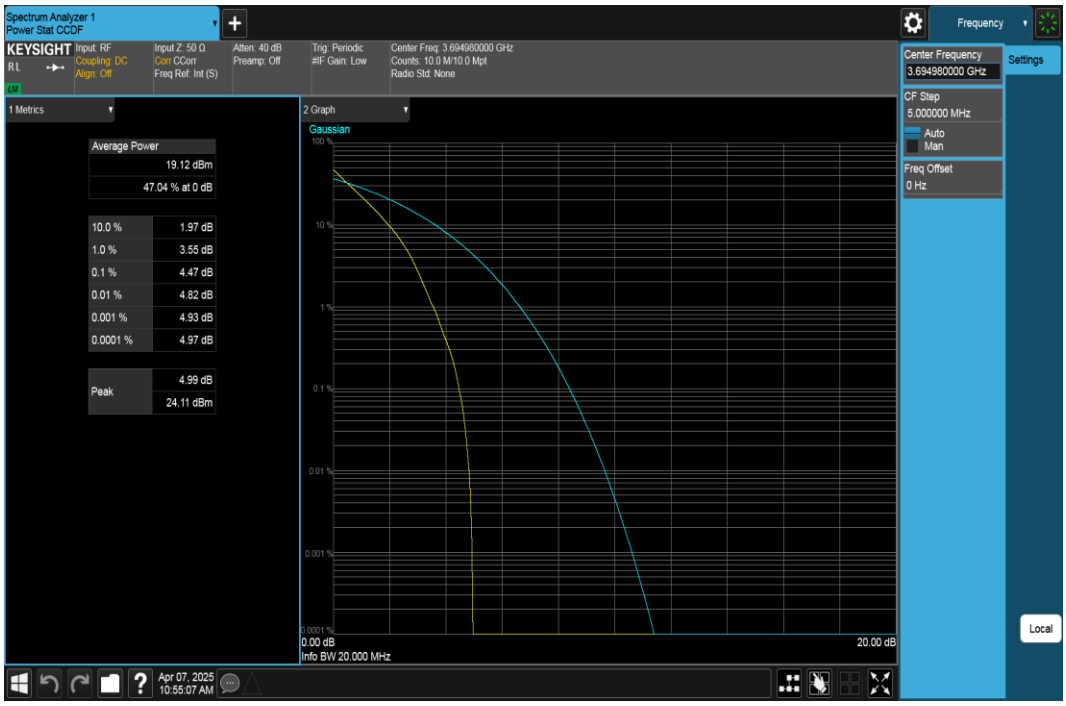
N48-10M-PAPR-MCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



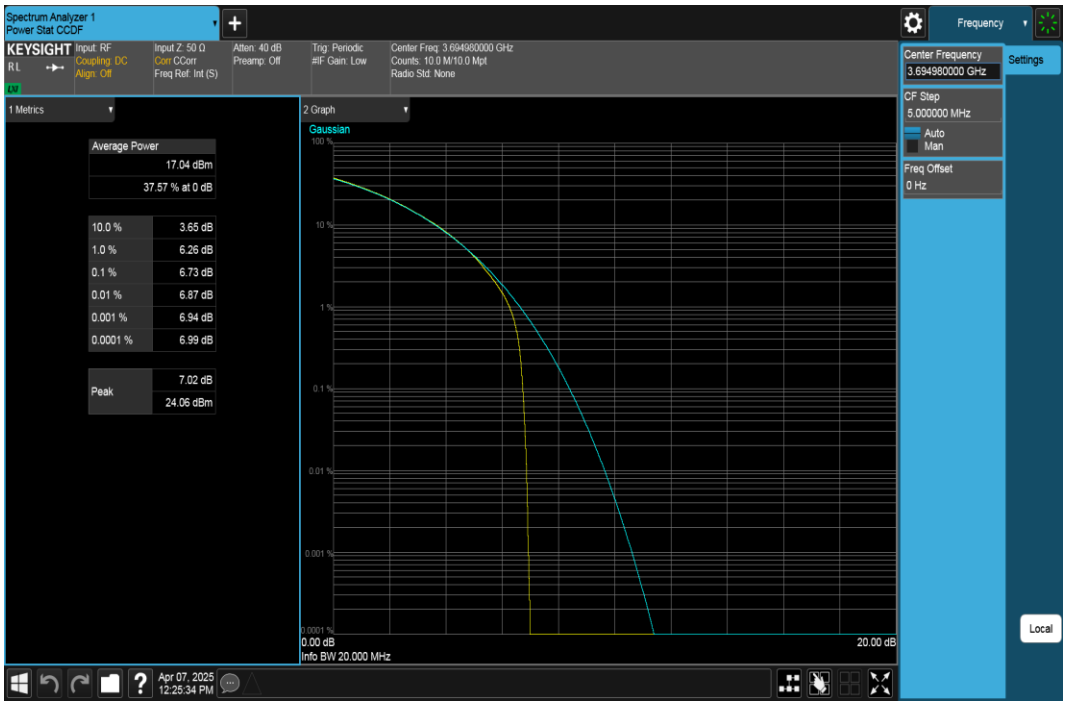

N48-10M-PAPR-MCH-CP-OFDM-QPSK-Outer_Full



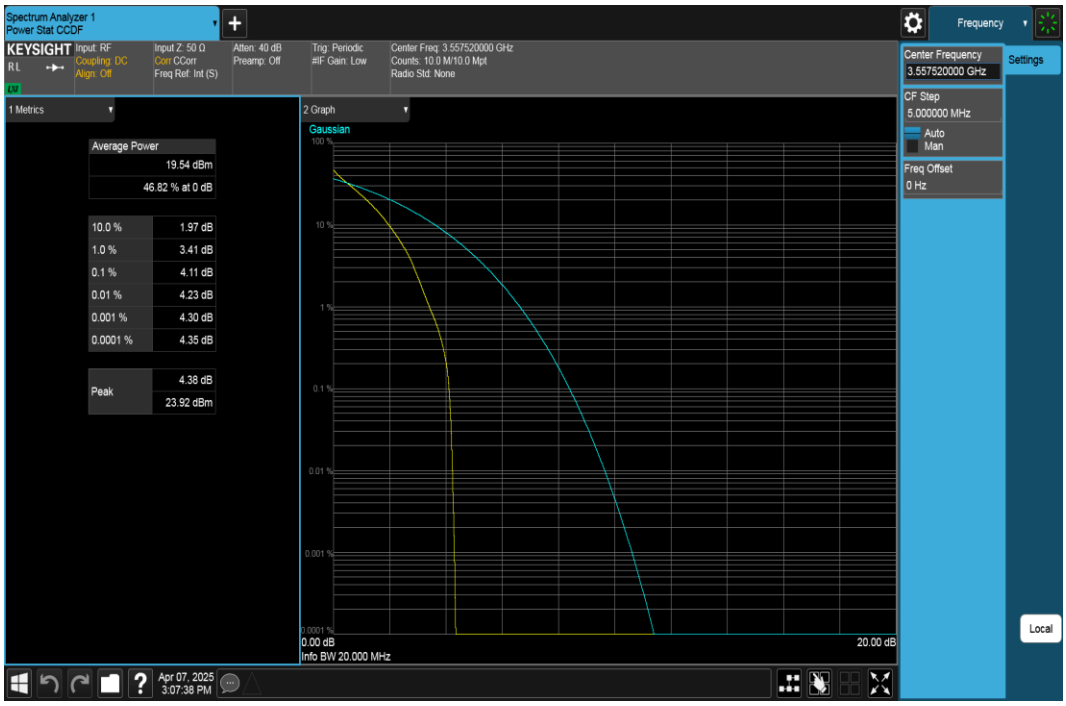
N48-10M-PAPR-HCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



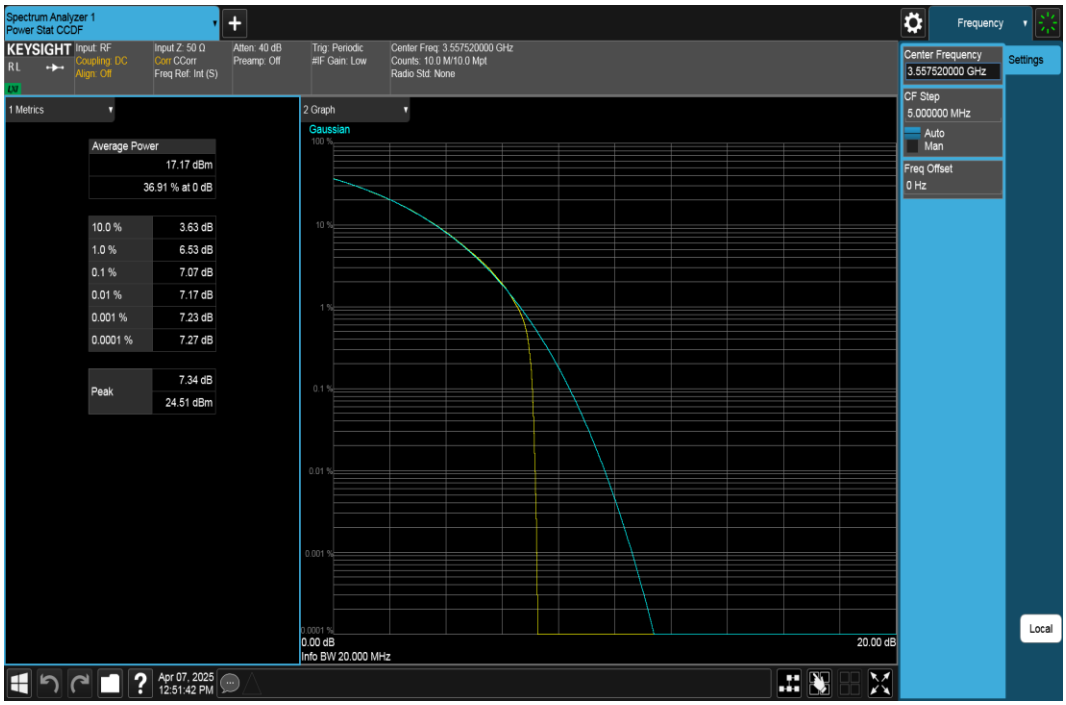

N48-10M-PAPR-HCH-CP-OFDM-QPSK-Outer_Full



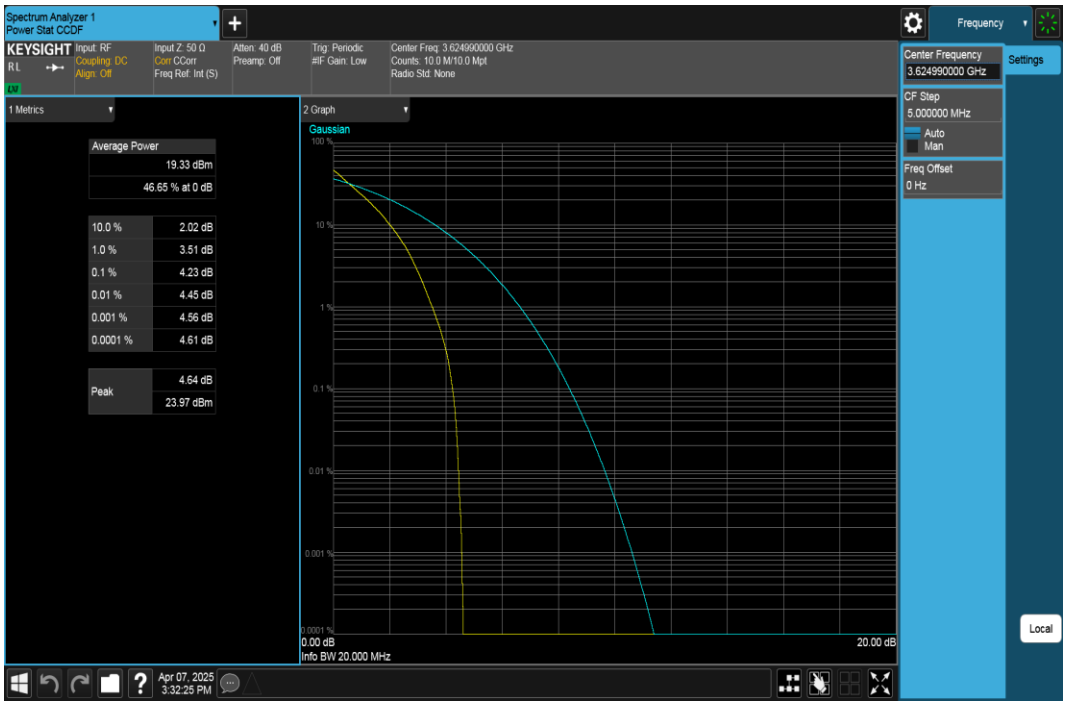
N48-15M-PAPR-LCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



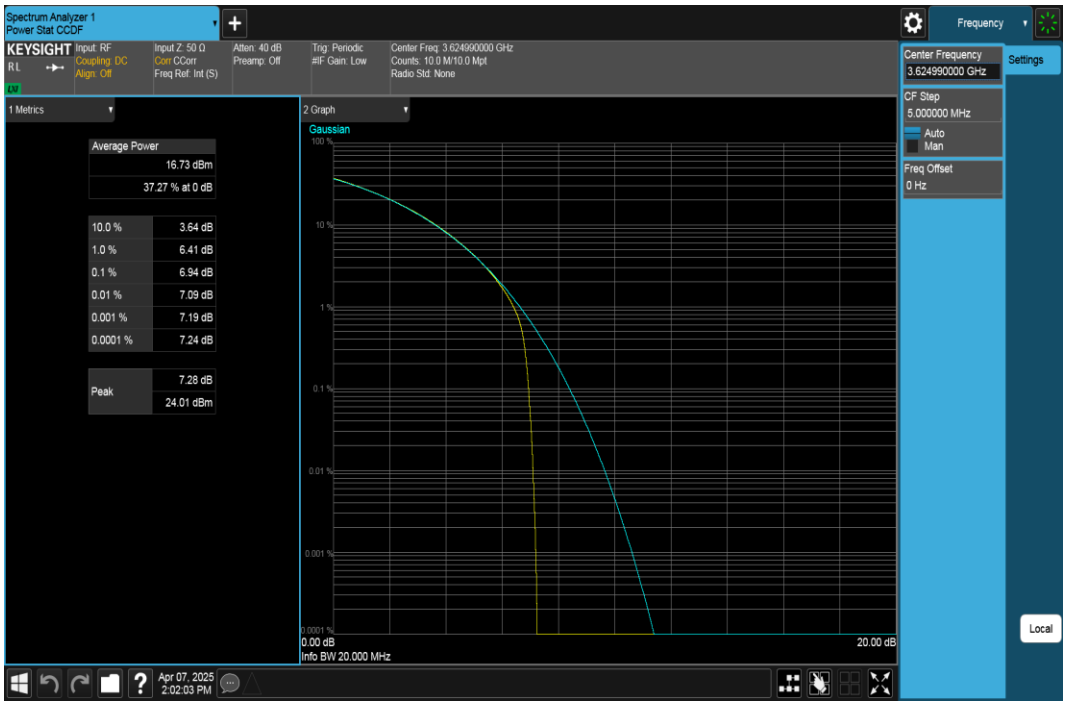

N48-15M-PAPR-LCH-CP-OFDM-QPSK-Outer_Full



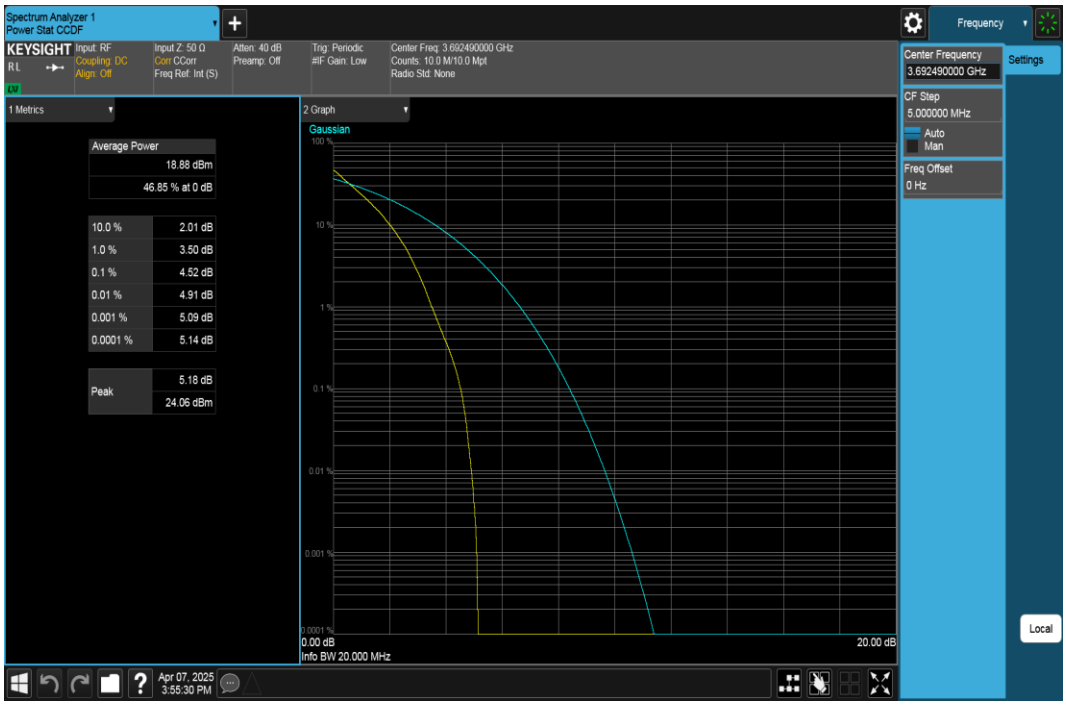
N48-15M-PAPR-MCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



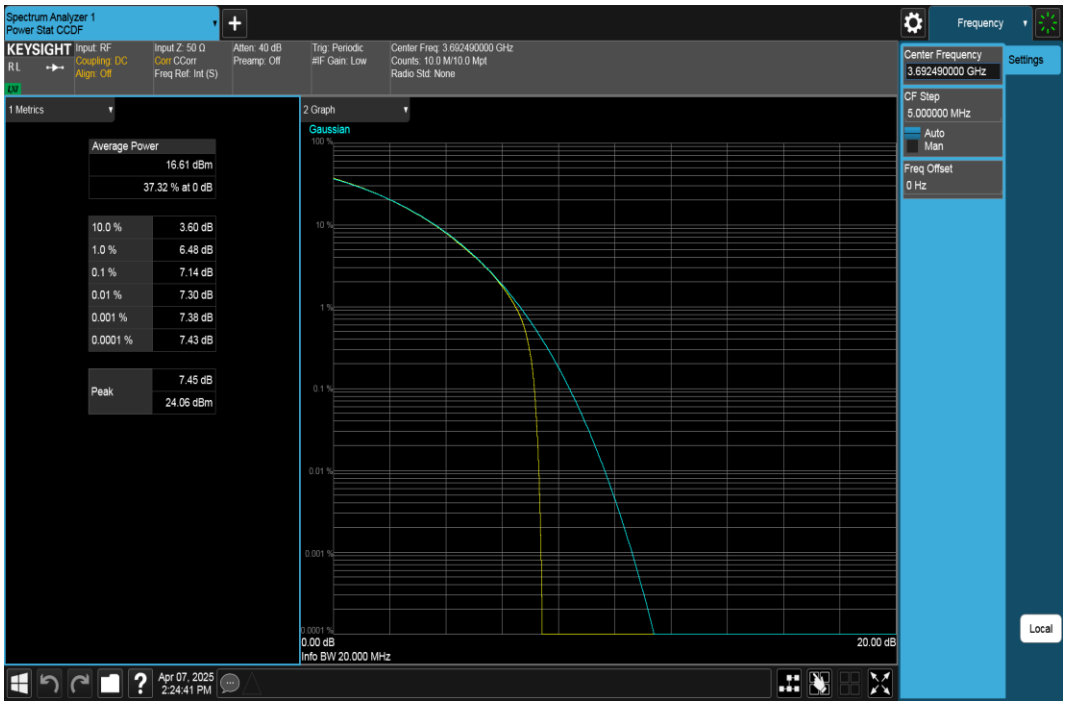

N48-15M-PAPR-MCH-CP-OFDM-QPSK-Outer_Full



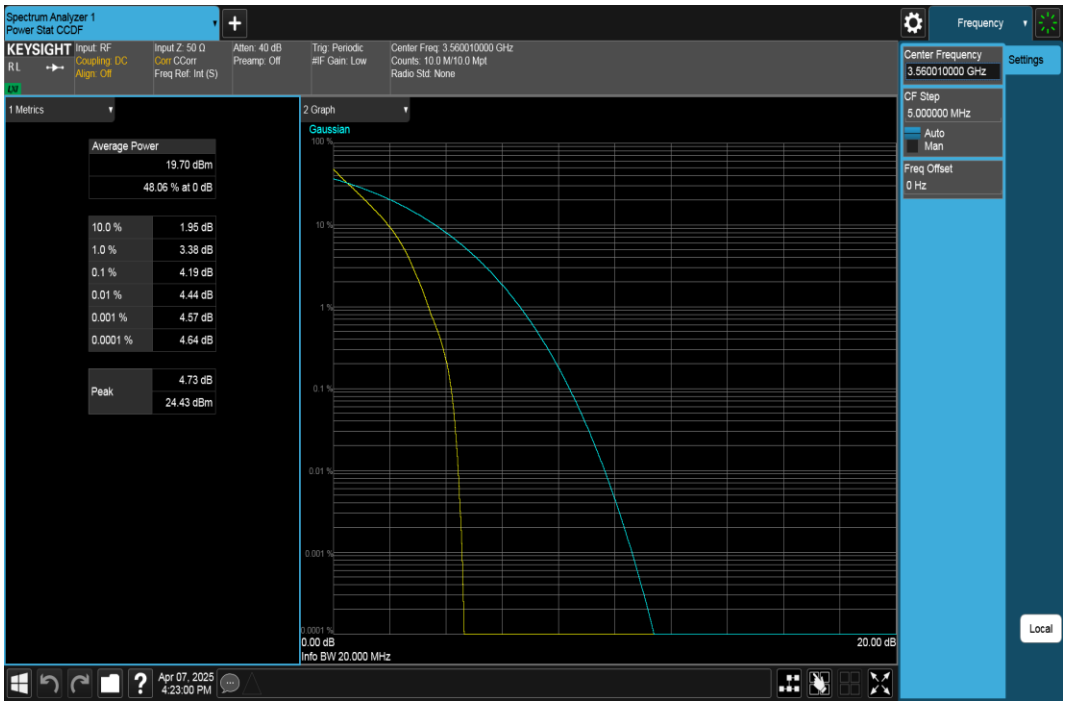
N48-15M-PAPR-HCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



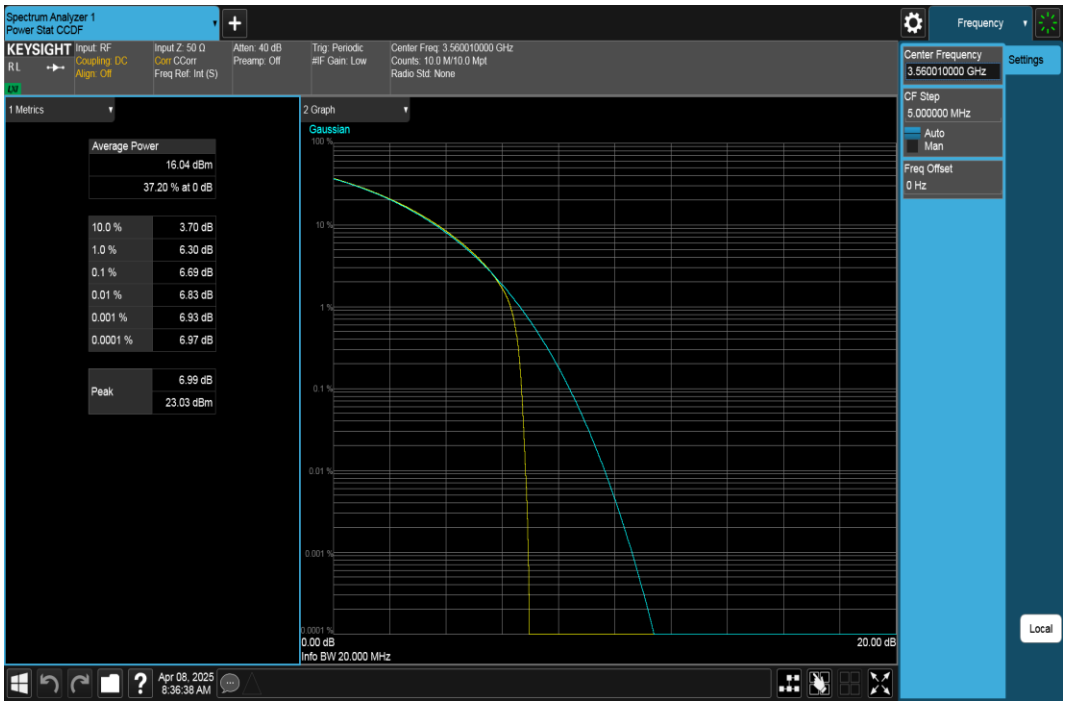

N48-15M-PAPR-HCH-CP-OFDM-QPSK-Outer_Full



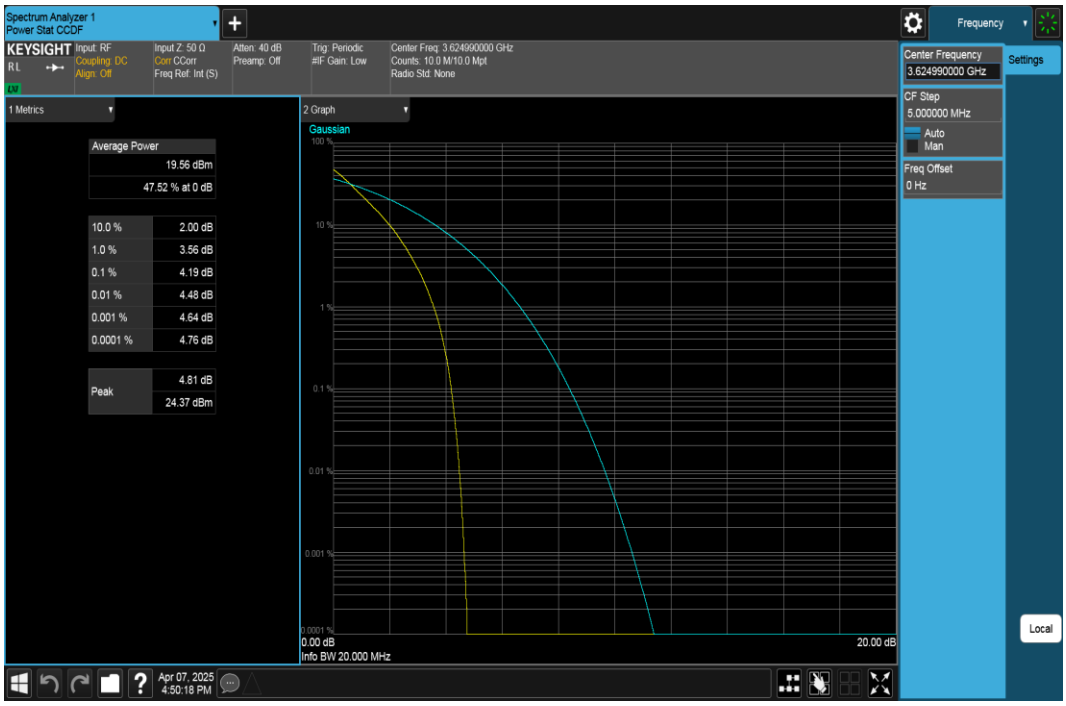
N48-20M-PAPR-LCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



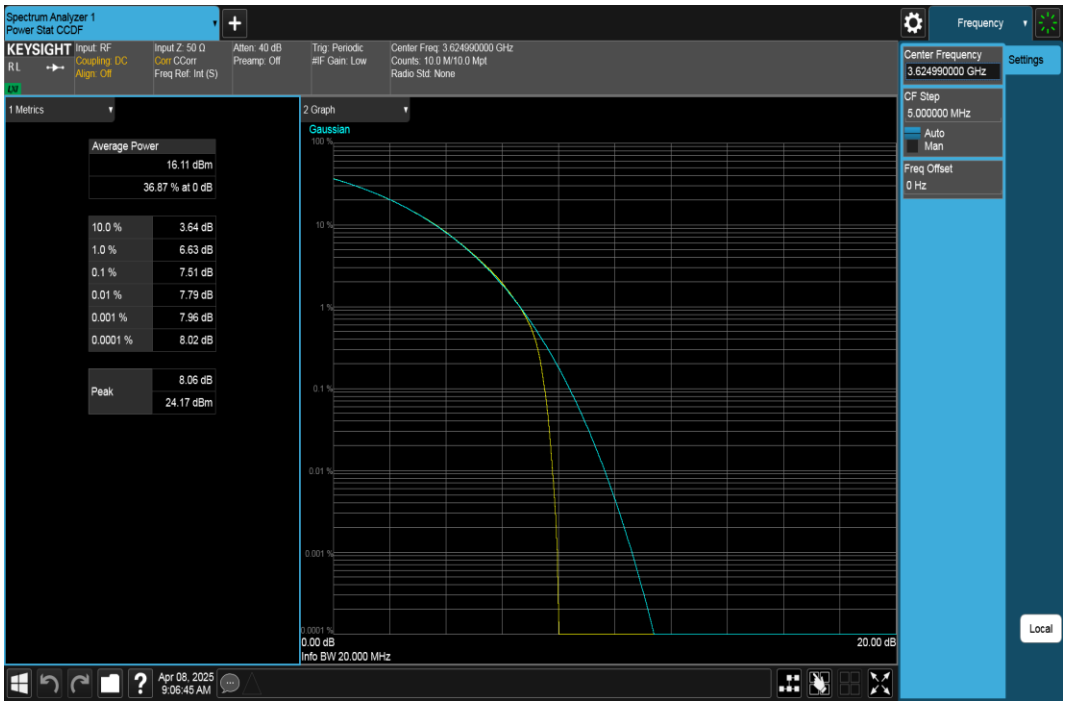

N48-20M-PAPR-LCH-CP-OFDM-QPSK-Outer_Full



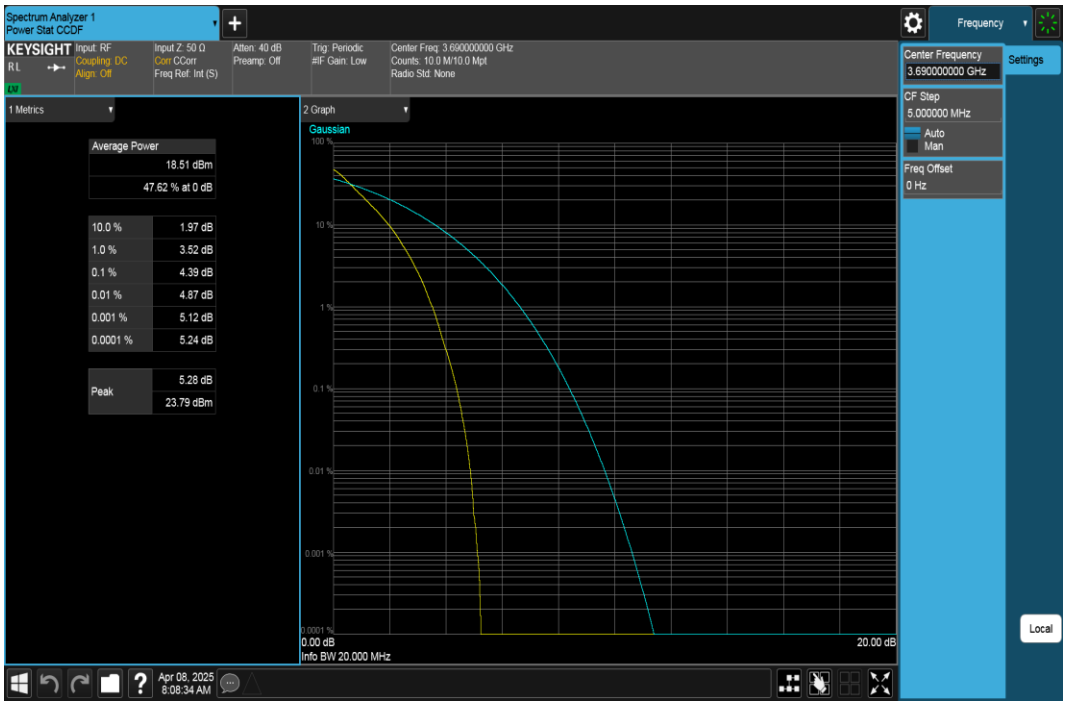
N48-20M-PAPR-MCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



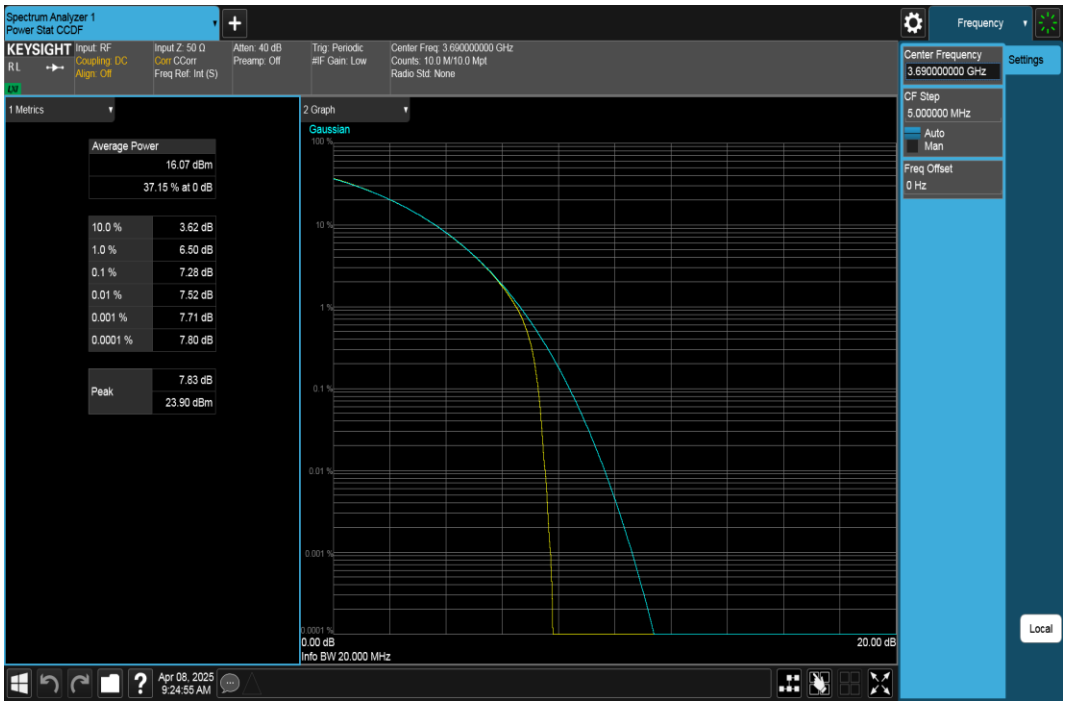

N48-20M-PAPR-MCH-CP-OFDM-QPSK-Outer_Full



N48-20M-PAPR-HCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



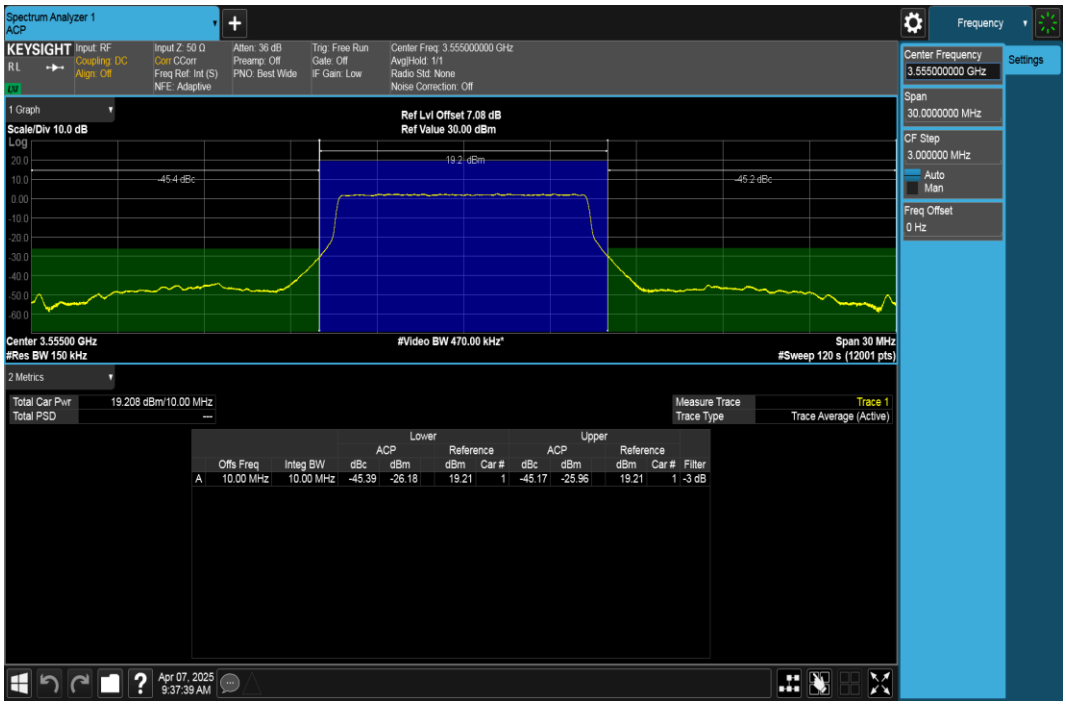

N48-20M-PAPR-HCH-CP-OFDM-QPSK-Outer_Full



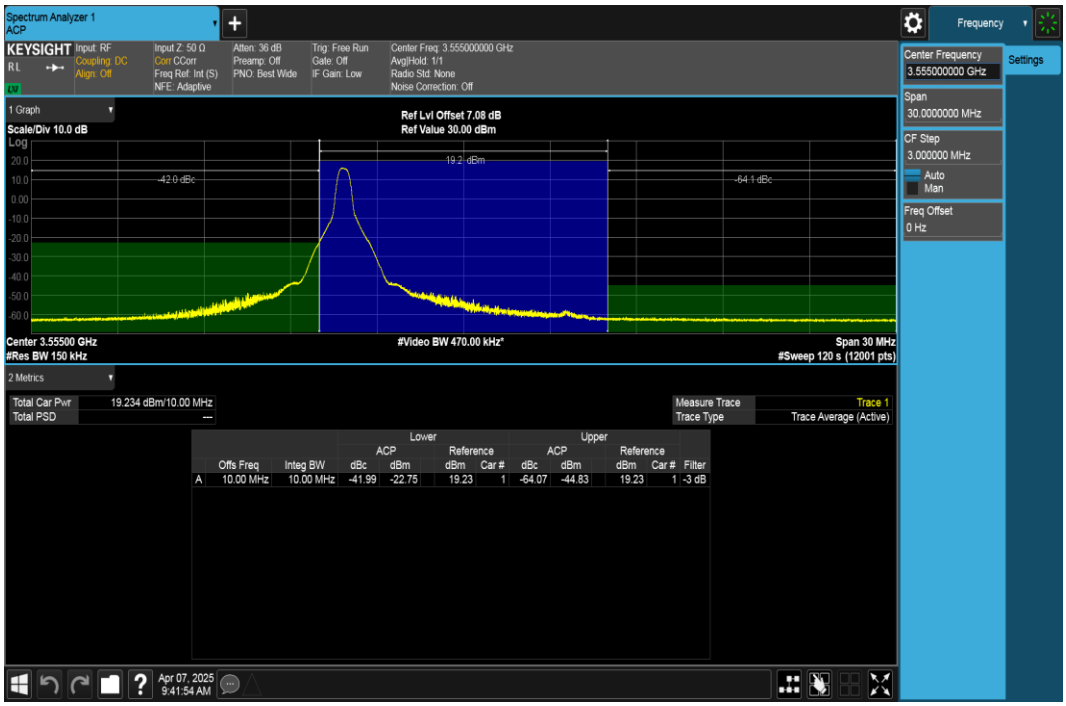
# ACLR

Test graph

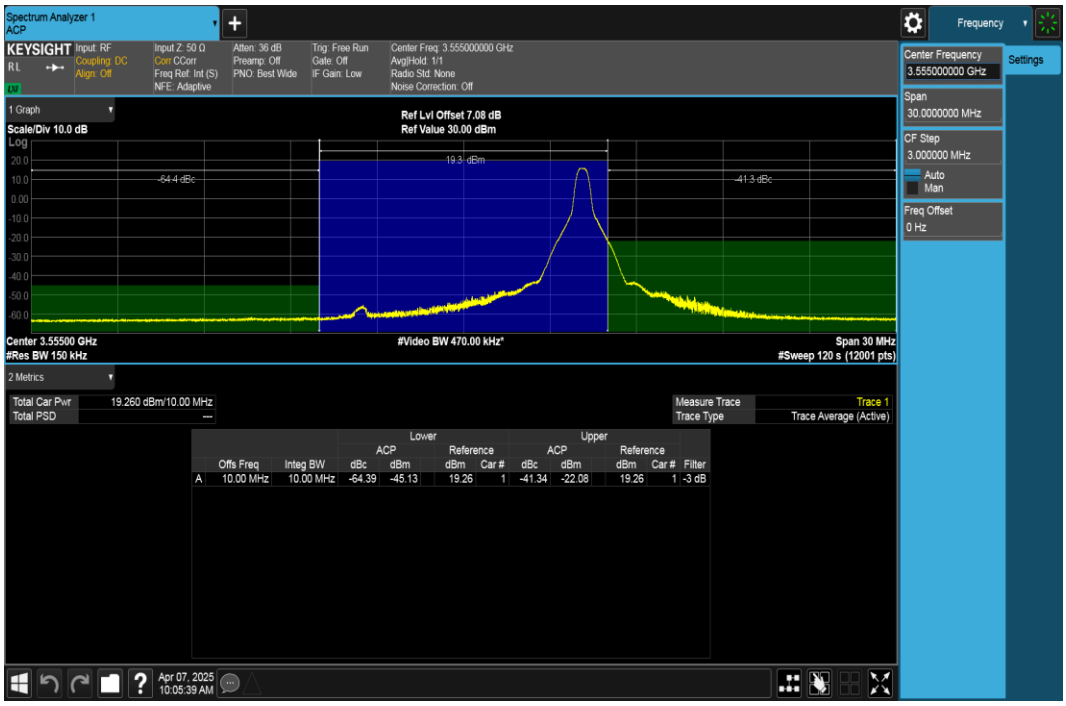
N48-10M-ACLR-LCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



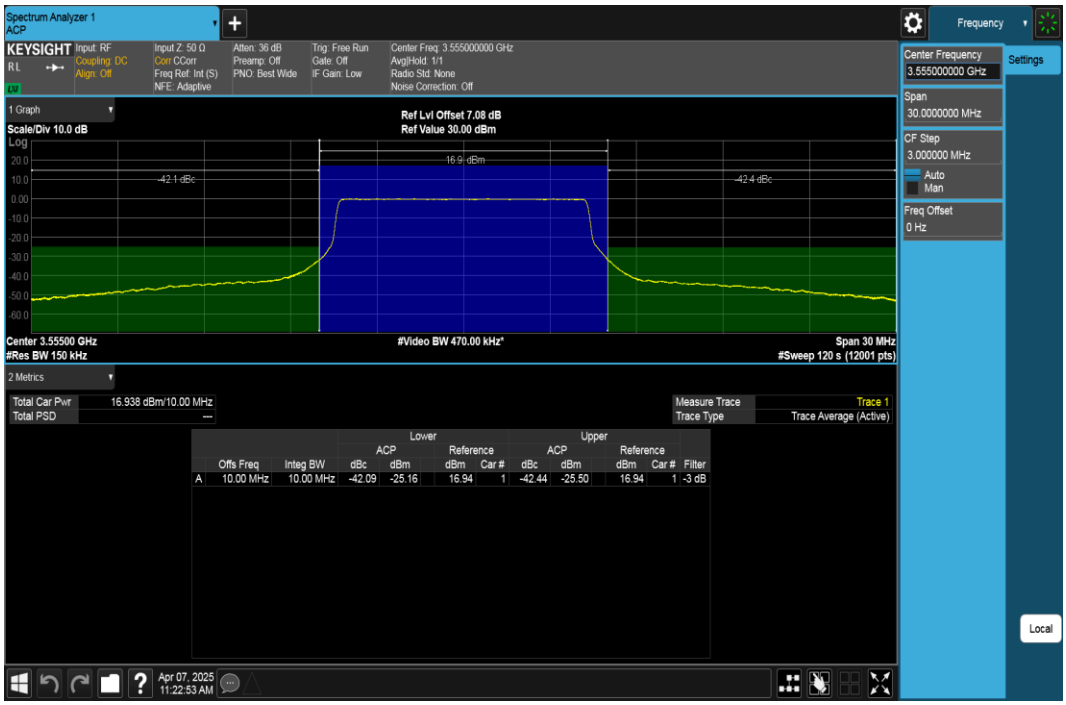

N48-10M-ACLR-LCH-DFT-s-OFDM-Pi2 BPSK-1RB0



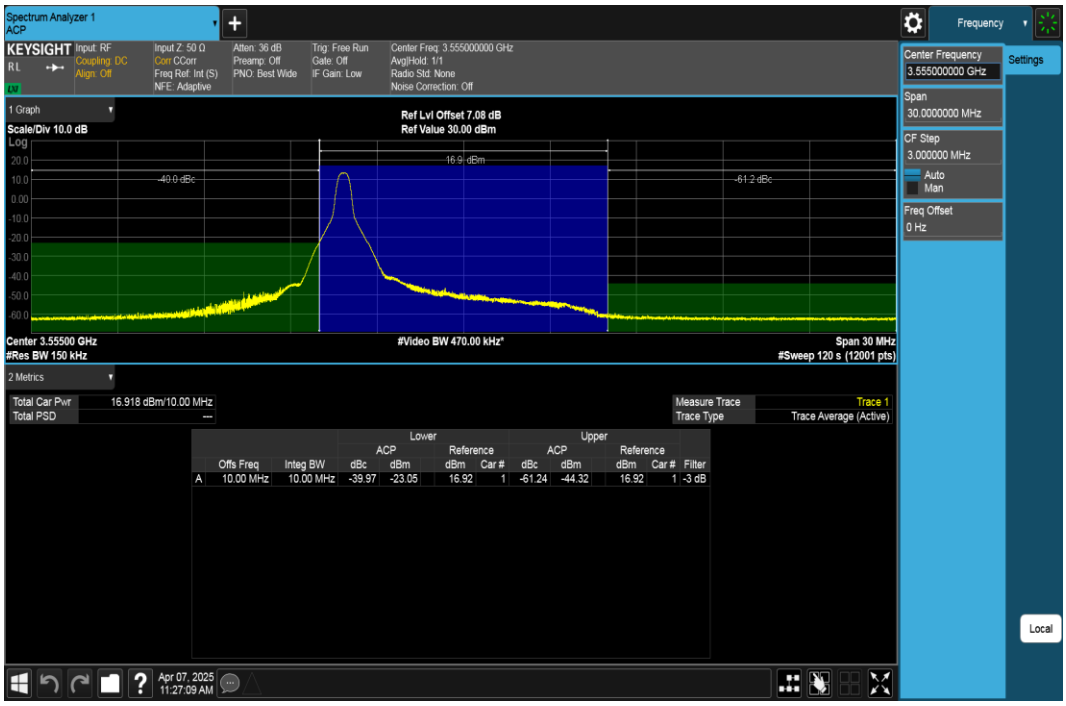
N48-10M-ACLR-LCH-DFT-s-OFDM-Pi2 BPSK-1RB_Max



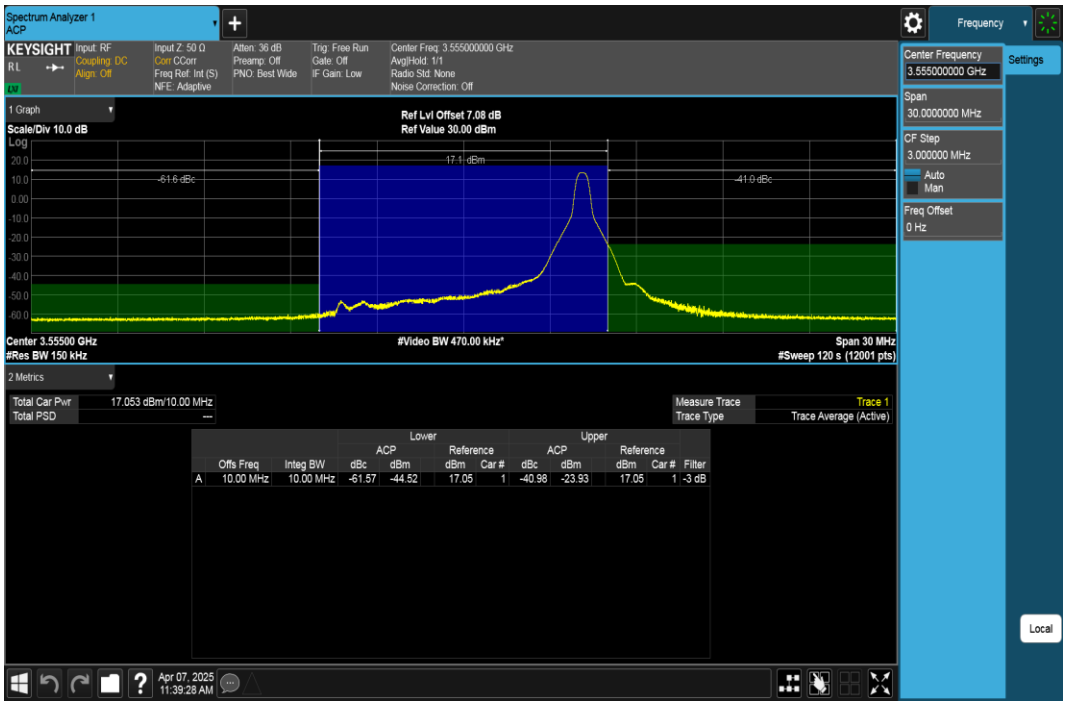

N48-10M-ACLR-LCH-CP-OFDM-QPSK-Outer_Full



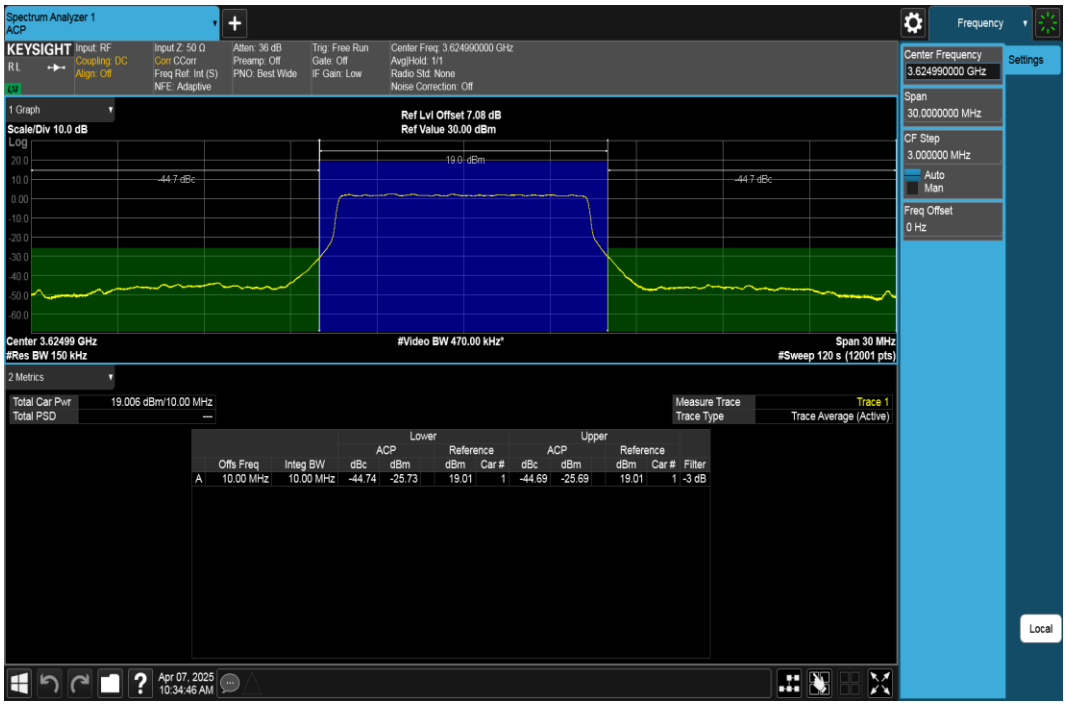
N48-10M-ACLR-LCH-CP-OFDM-QPSK-1RB0



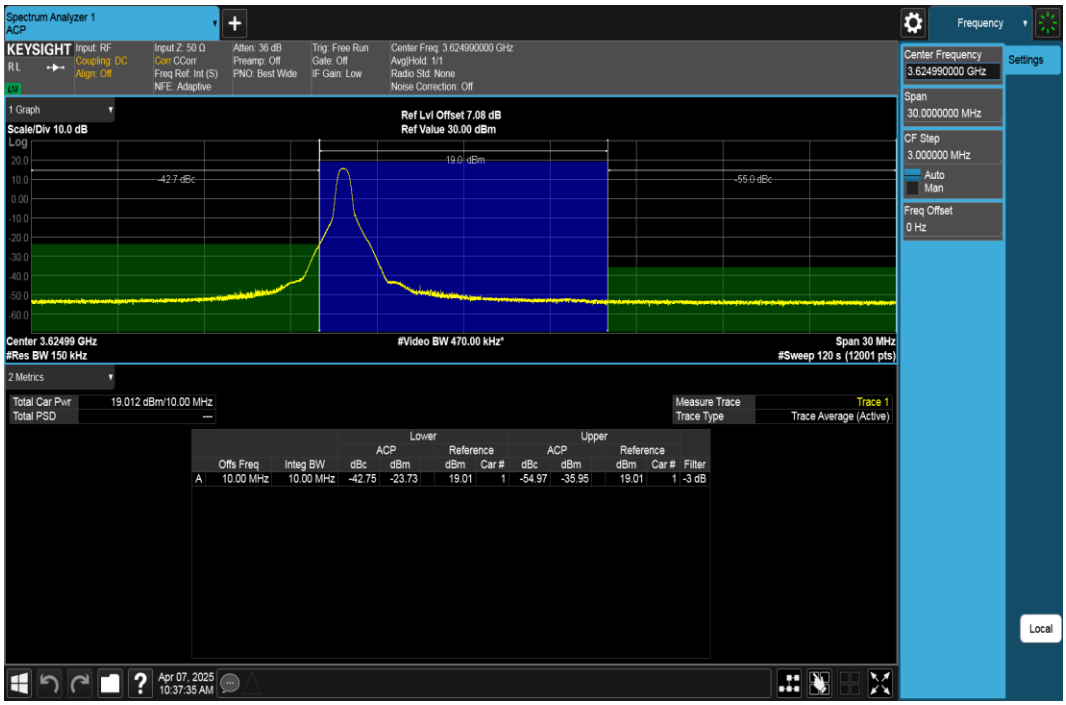

N48-10M-ACLR-LCH-CP-OFDM-QPSK-1RB_Max



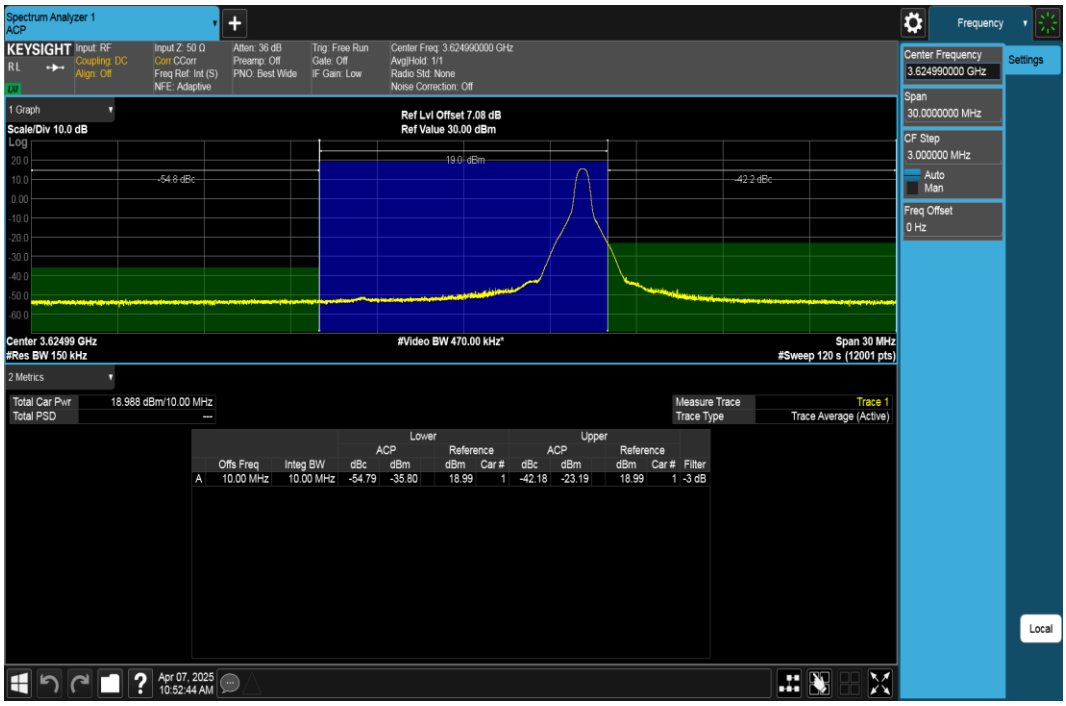
N48-10M-ACLR-MCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full



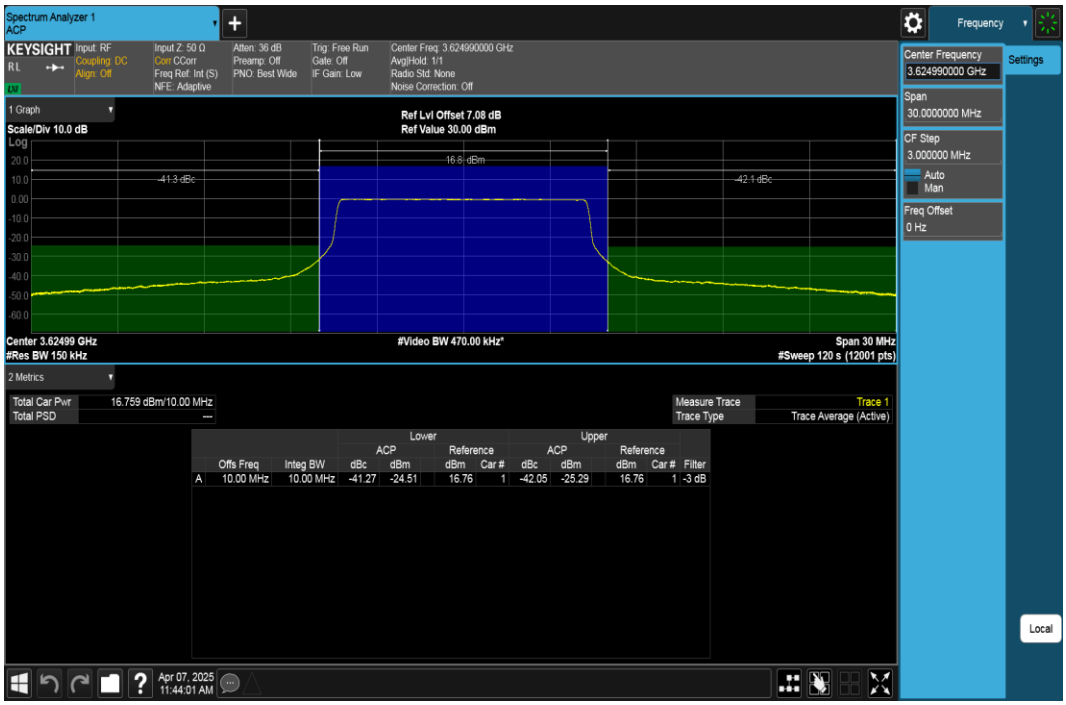

N48-10M-ACLR-MCH-DFT-s-OFDM-Pi2 BPSK-1RB0



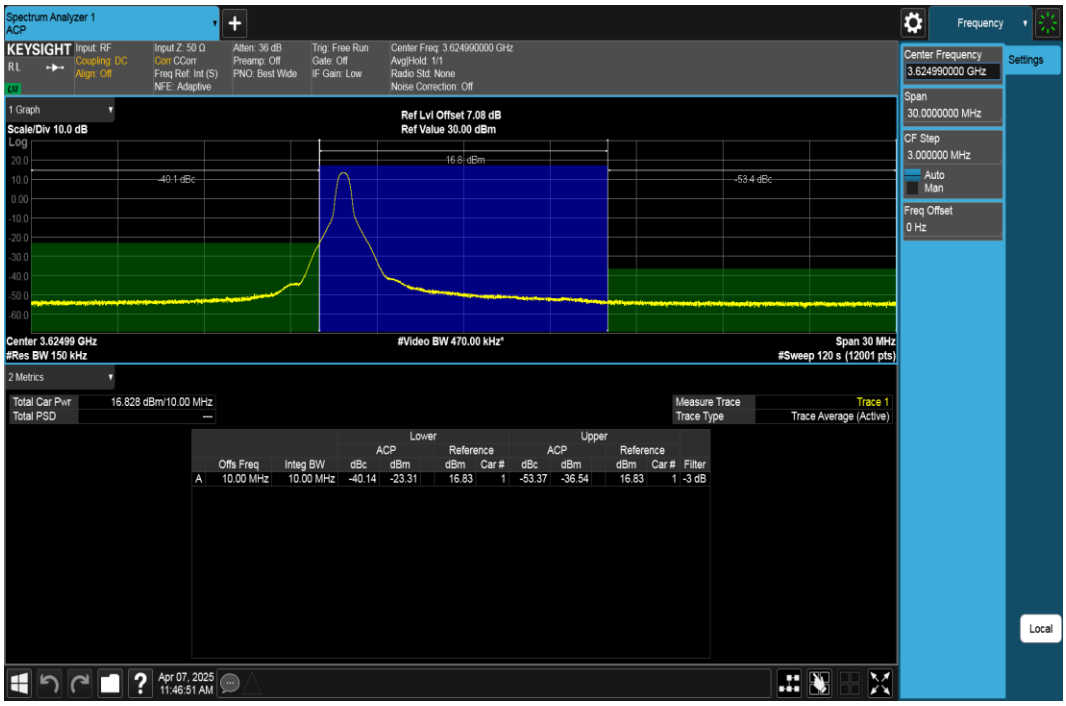
N48-10M-ACLR-MCH-DFT-s-OFDM-Pi2 BPSK-1RB_Max



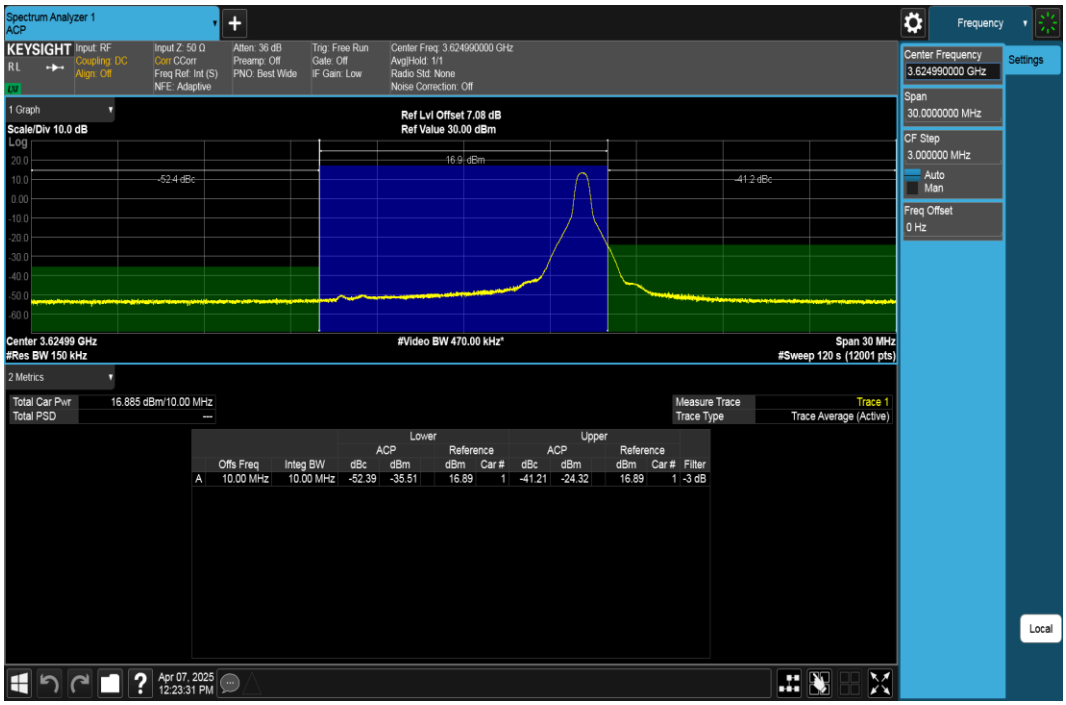

N48-10M-ACLR-MCH-CP-OFDM-QPSK-Outer_Full



N48-10M-ACLR-MCH-CP-OFDM-QPSK-1RB0

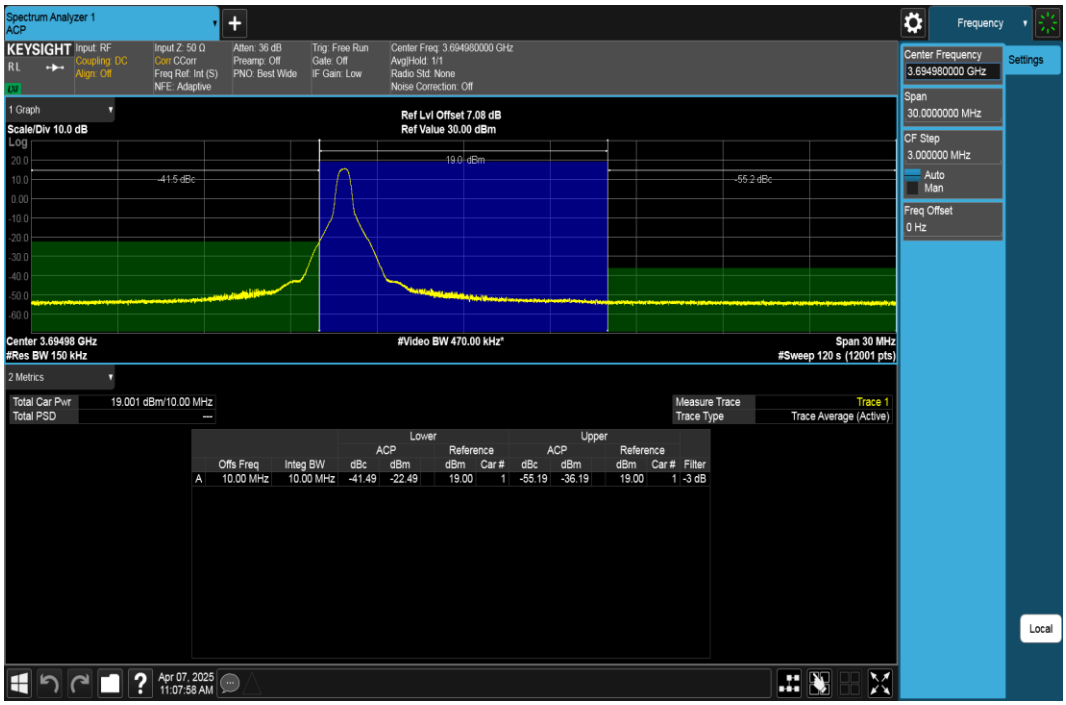



N48-10M-ACLR-MCH-CP-OFDM-QPSK-1RB_Max

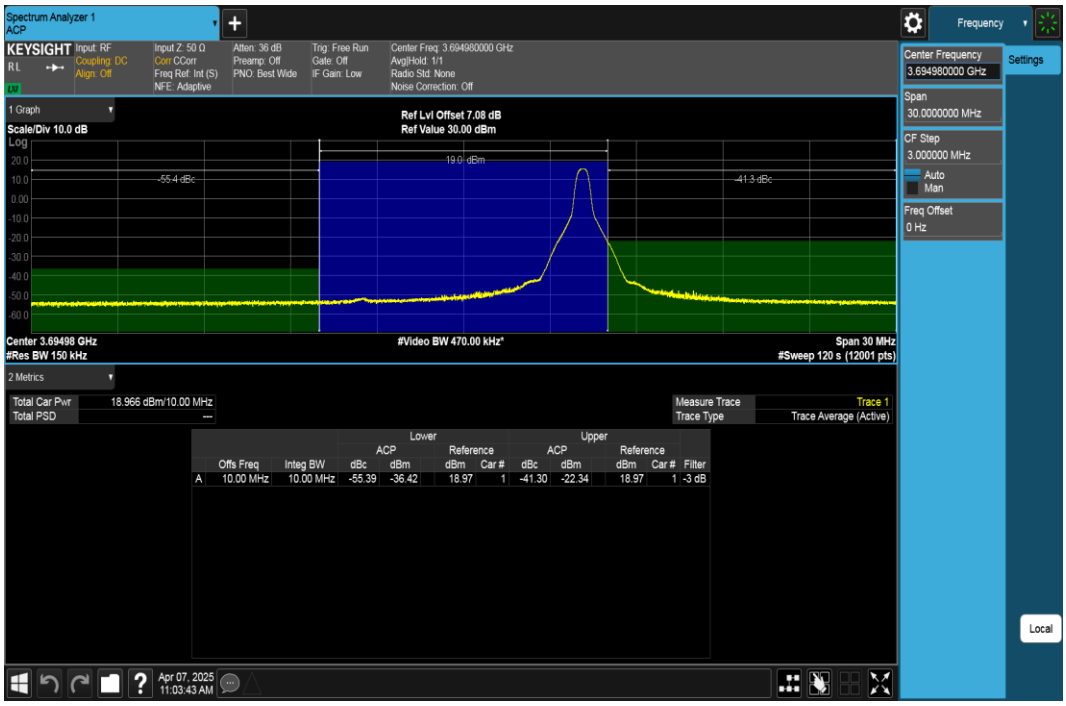


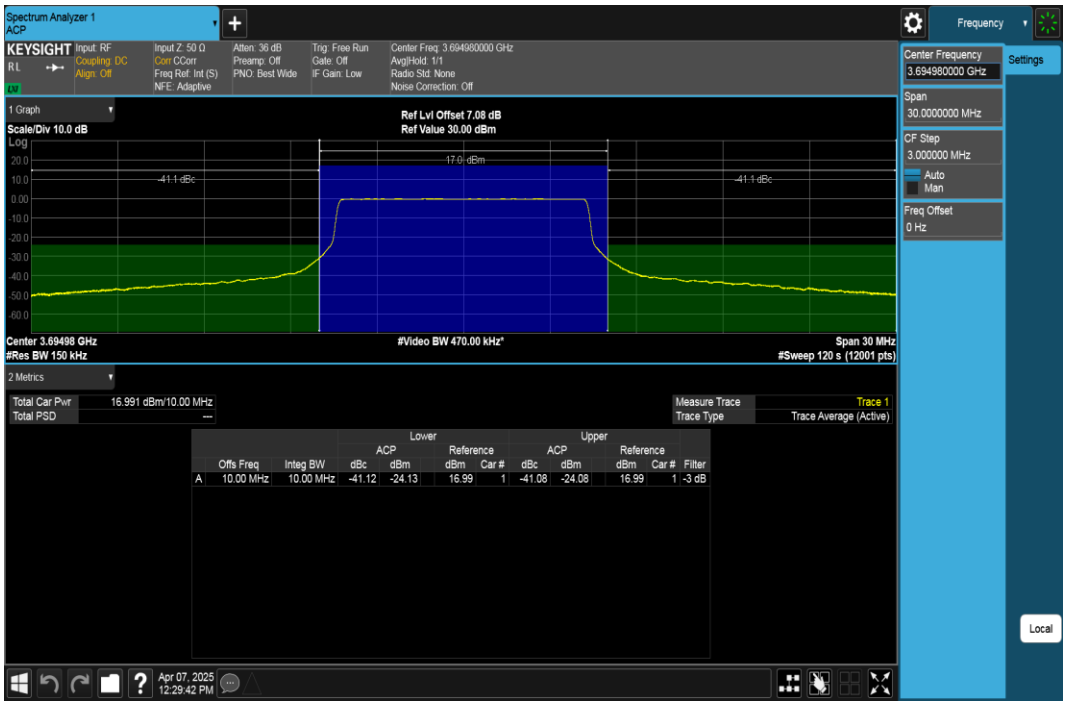
N48-10M-ACLR-HCH-DFT-s-OFDM-Pi2 BPSK-Outer_Full

N48-10M-ACLR-HCH-DFT-s-OFDM-Pi2 BPSK-1RB0



N48-10M-ACLR-HCH-DFT-s-OFDM-Pi2 BPSK-1RB_Max




N48-10M-ACLR-HCH-CP-OFDM-QPSK-Outer_Full