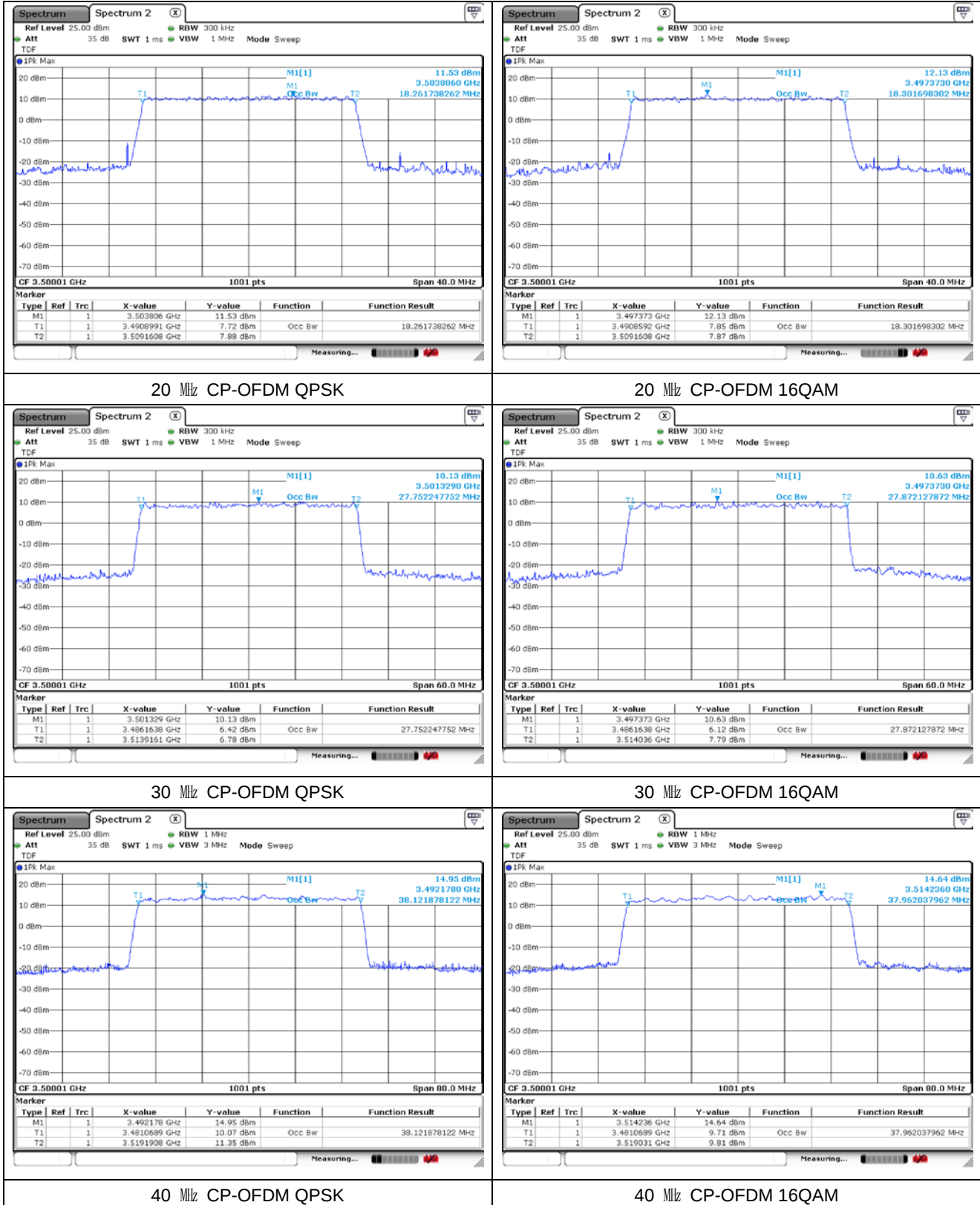
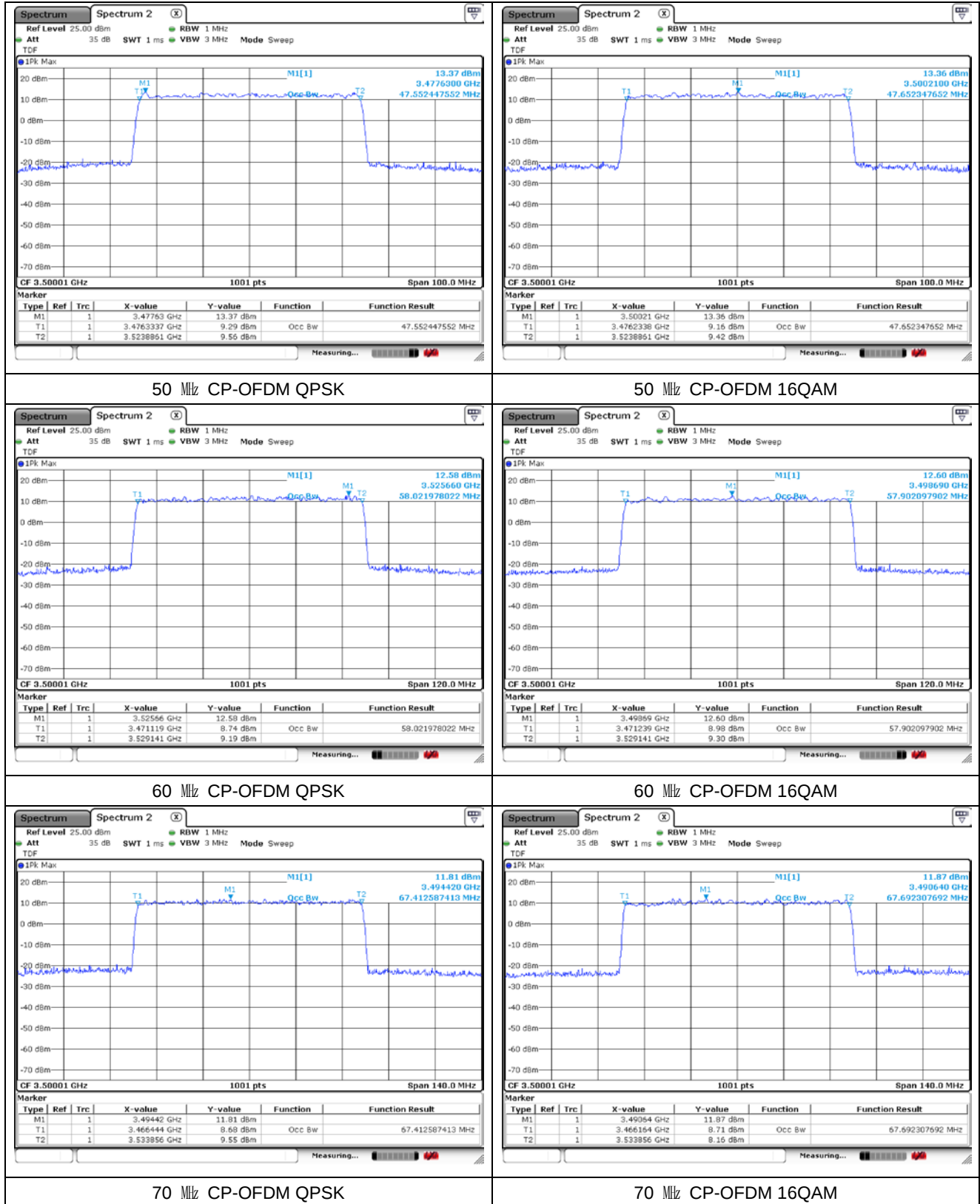
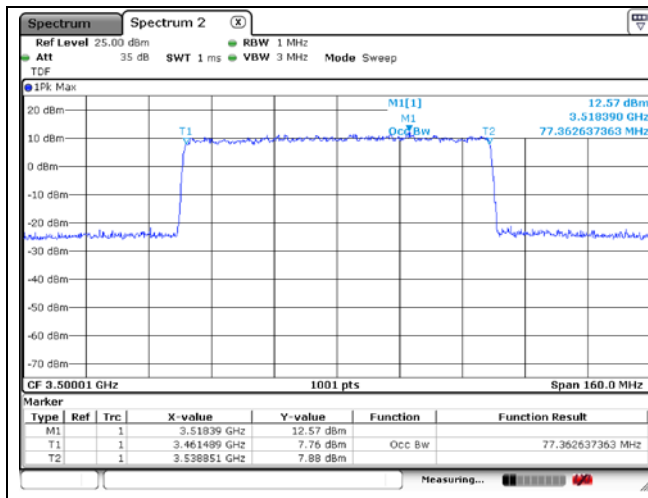


## MIMO\_Port 2

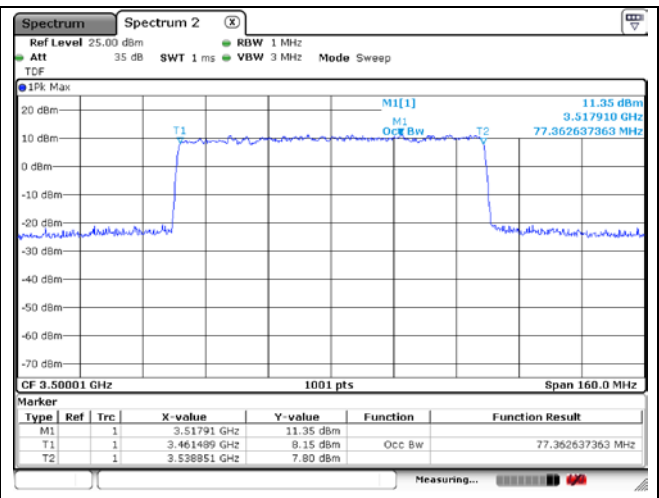
### NR band 77/78\_Low Band



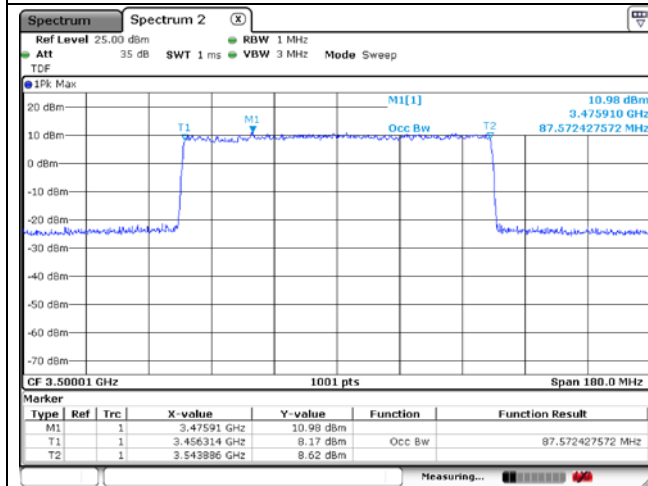




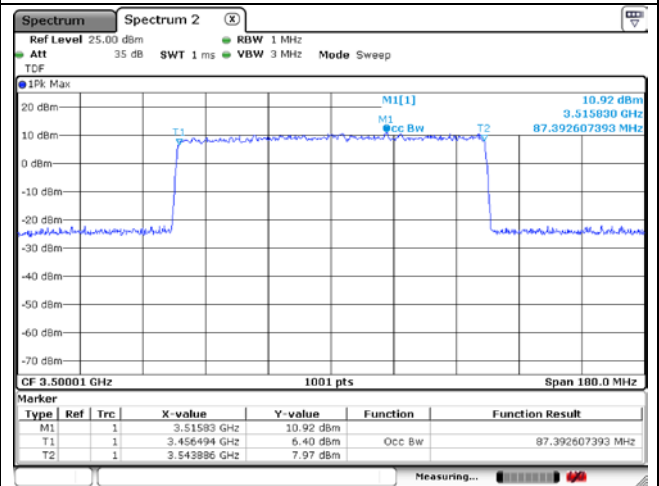
80 MHz CP-OFDM QPSK



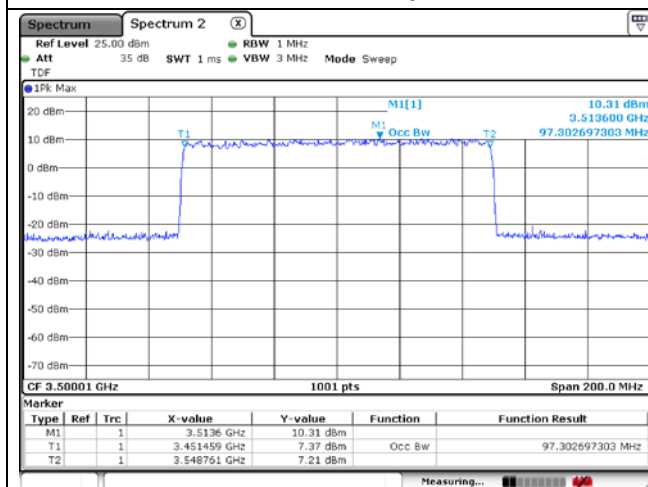
80 MHz CP-OFDM 16QAM



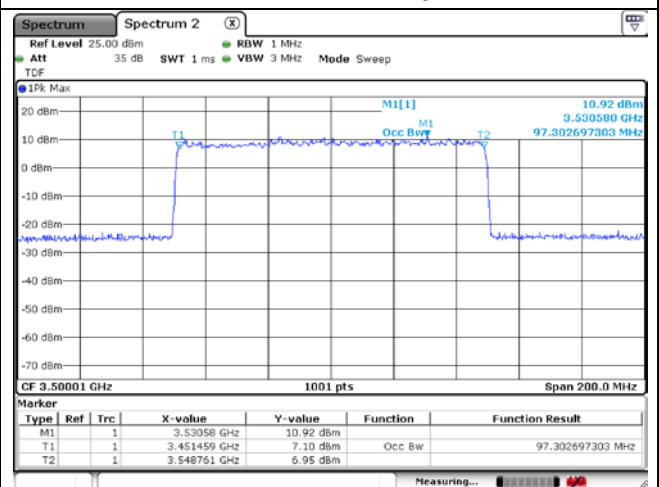
90 MHz CP-OFDM QPSK



90 MHz CP-OFDM 16QAM



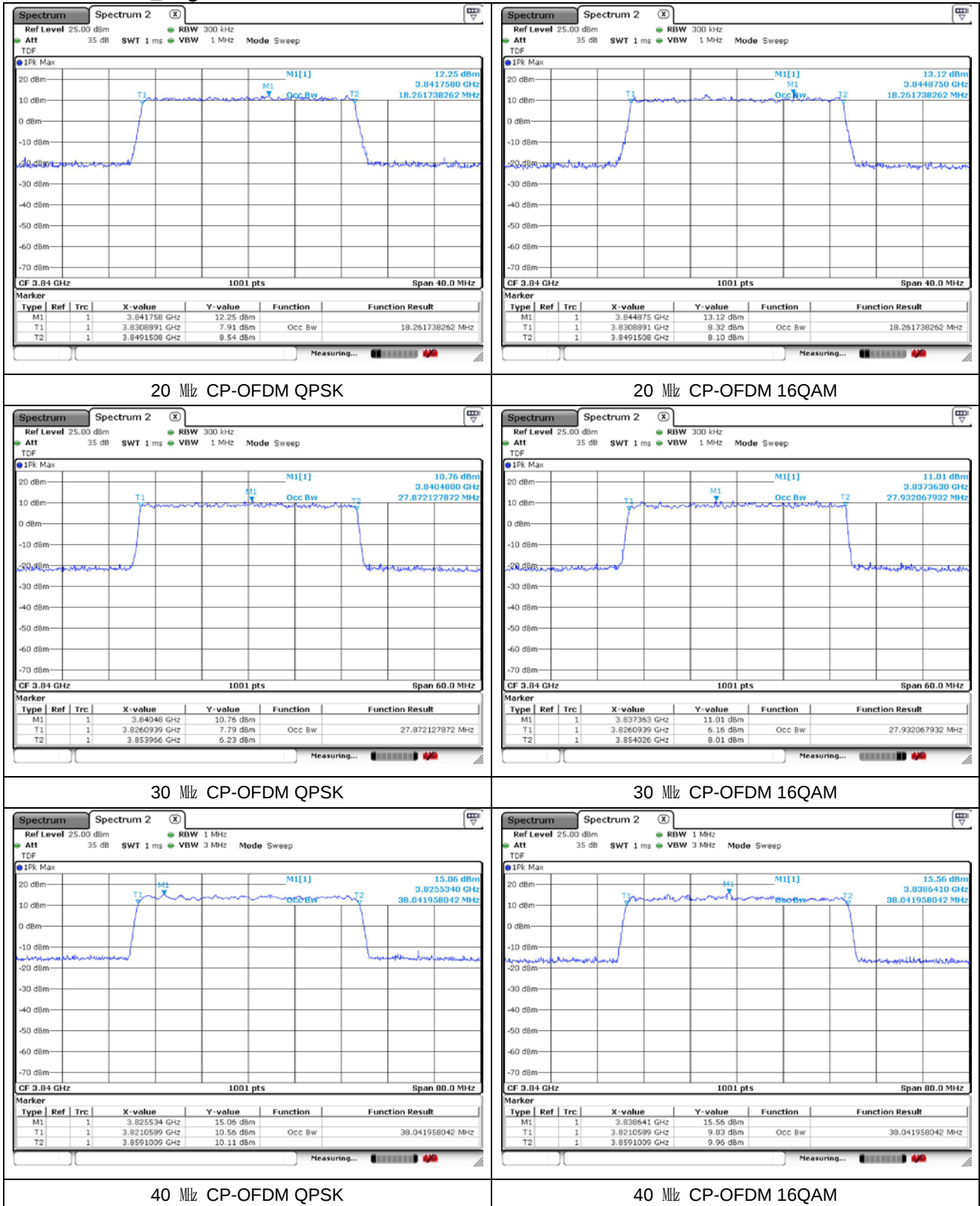
100 MHz CP-OFDM QPSK

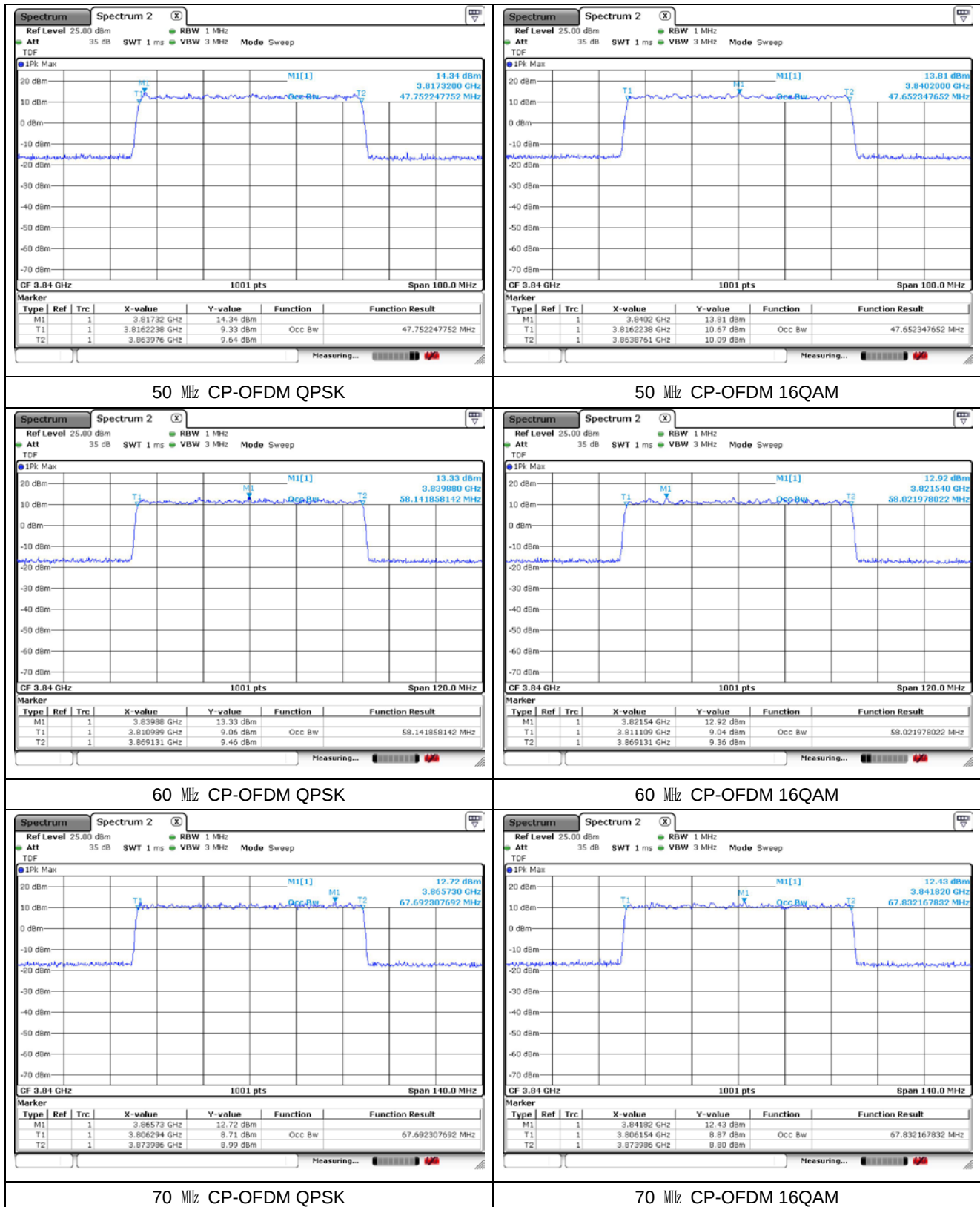


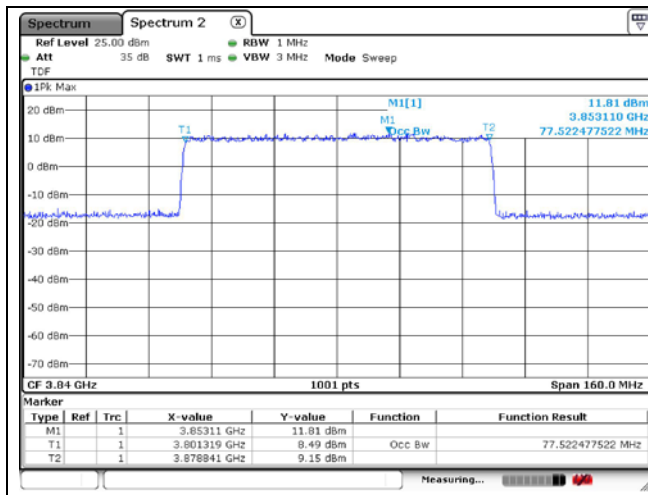
100 MHz CP-OFDM 16QAM

**MIMO\_Port 1**

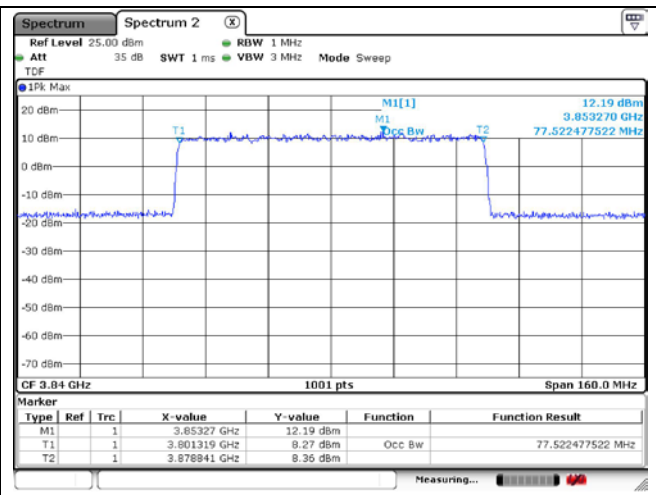
**NR band 77/78\_High Band**



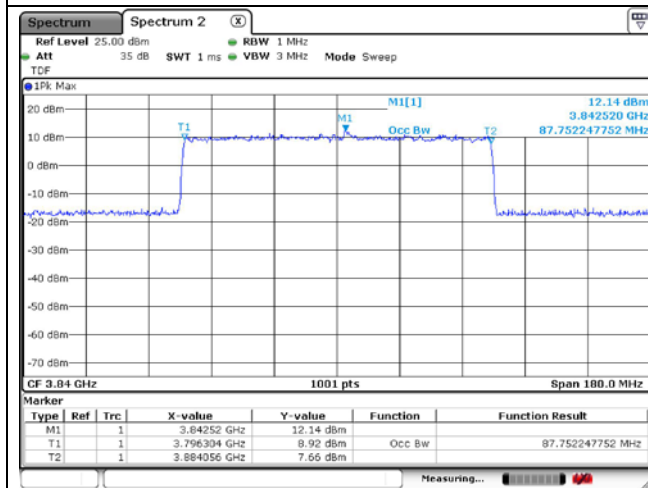




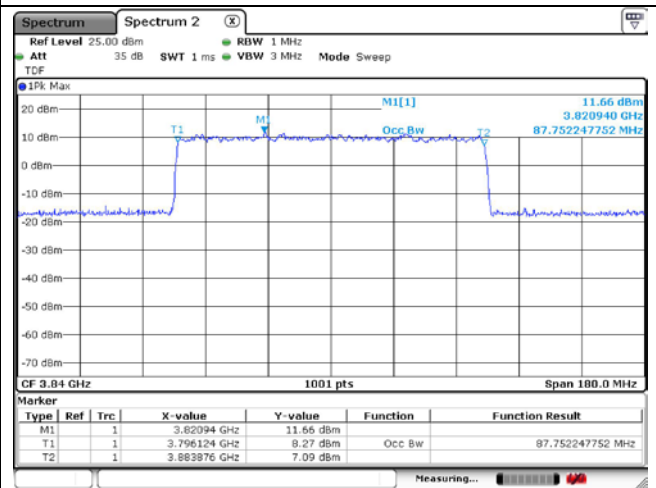
80 MHz CP-OFDM QPSK



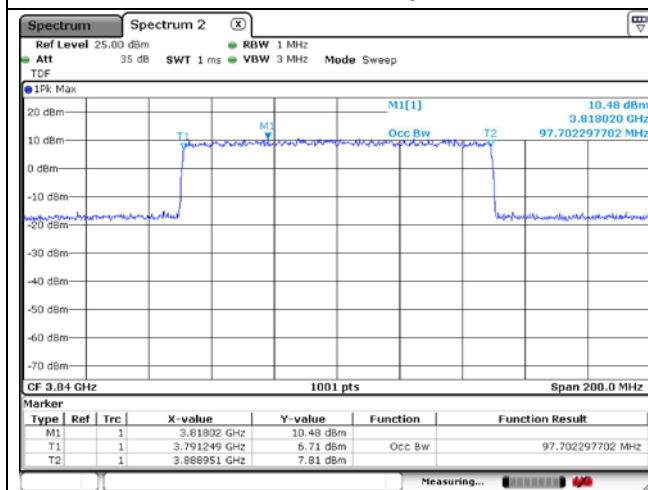
80 MHz CP-OFDM 16QAM



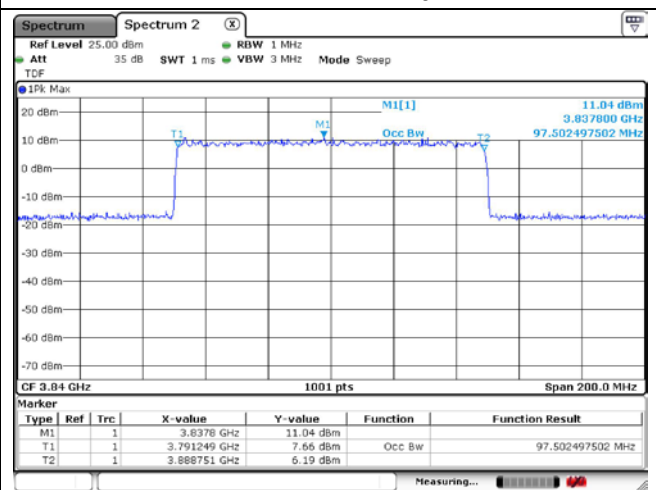
90 MHz CP-OFDM QPSK



90 MHz CP-OFDM 16QAM



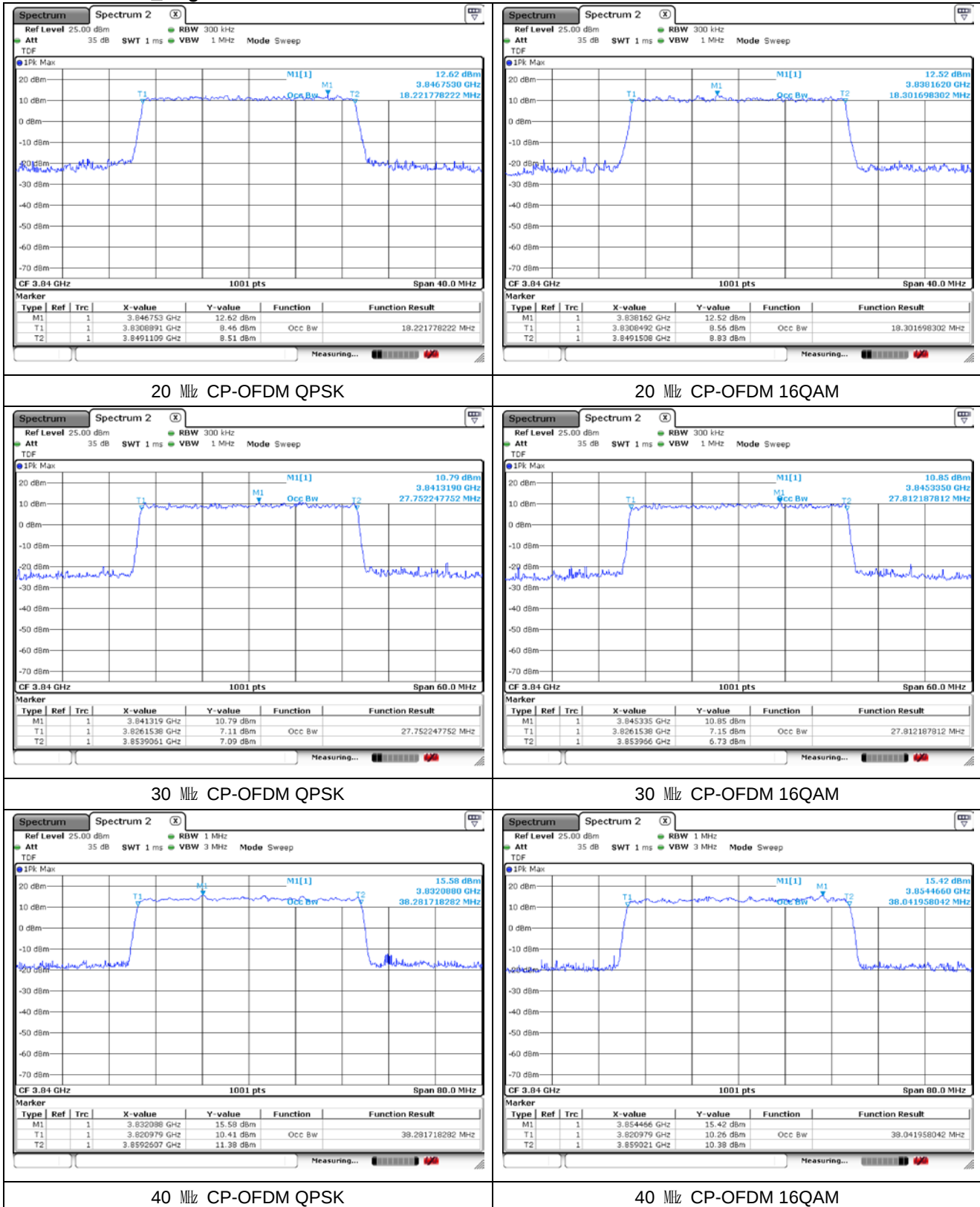
100 MHz CP-OFDM QPSK

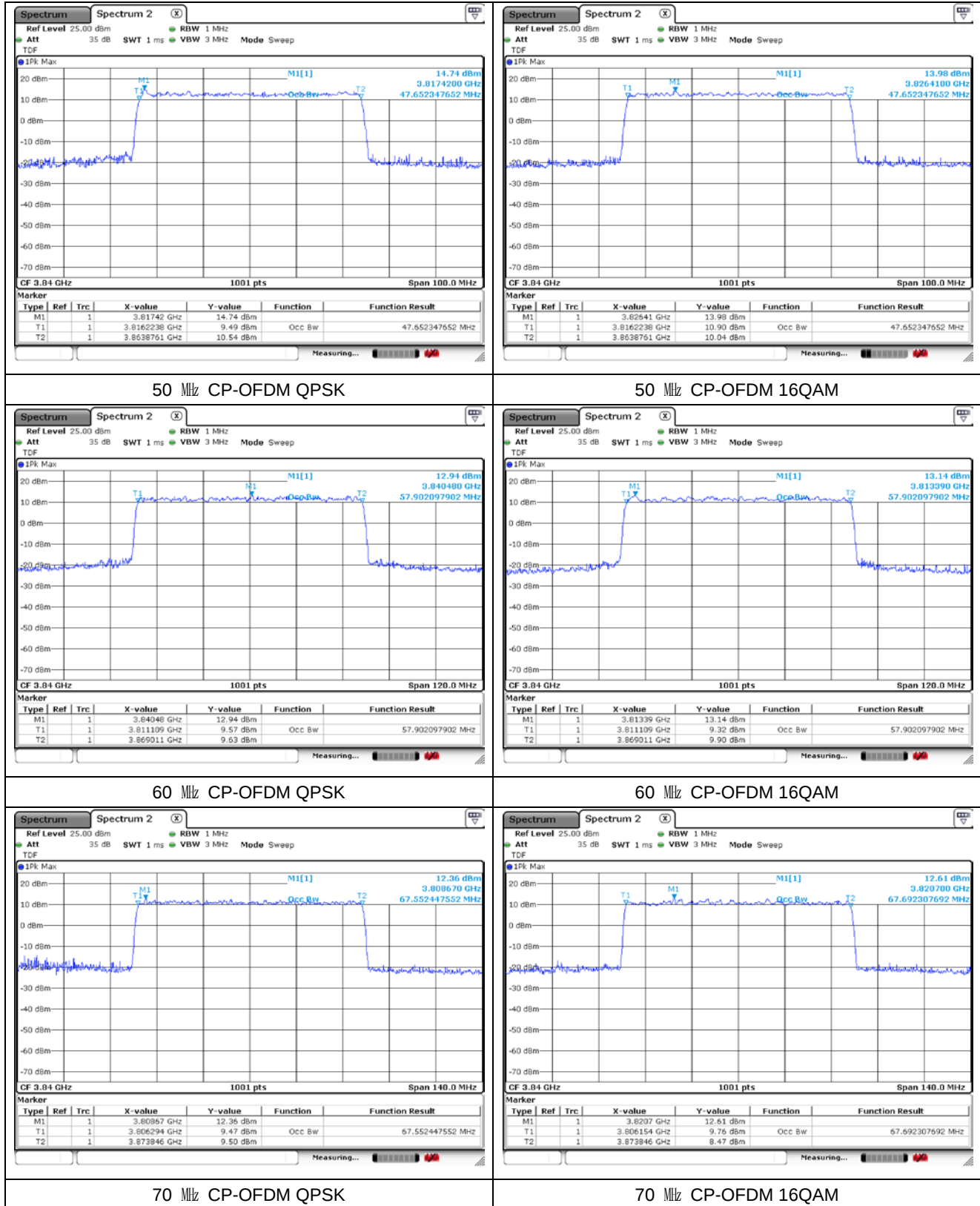


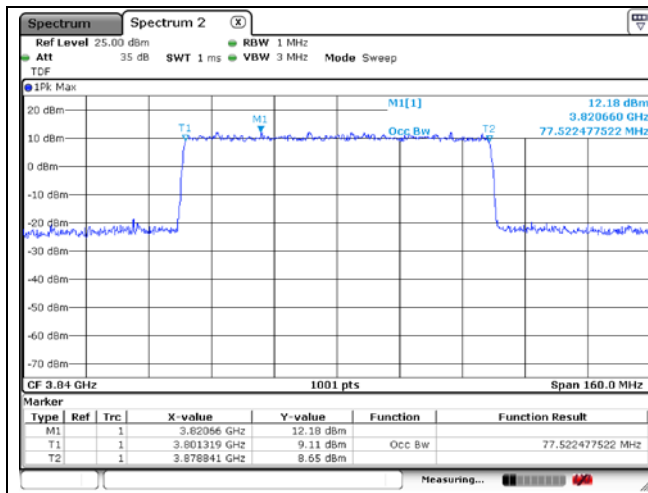
100 MHz CP-OFDM 16QAM

**MIMO\_Port 2**

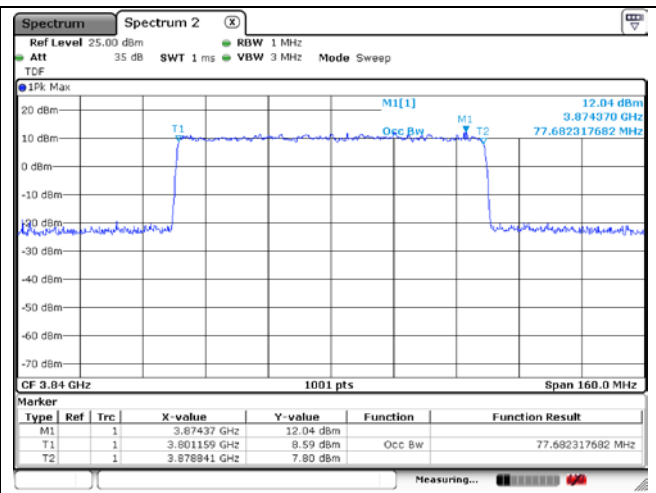
**NR band 77/78\_High Band**



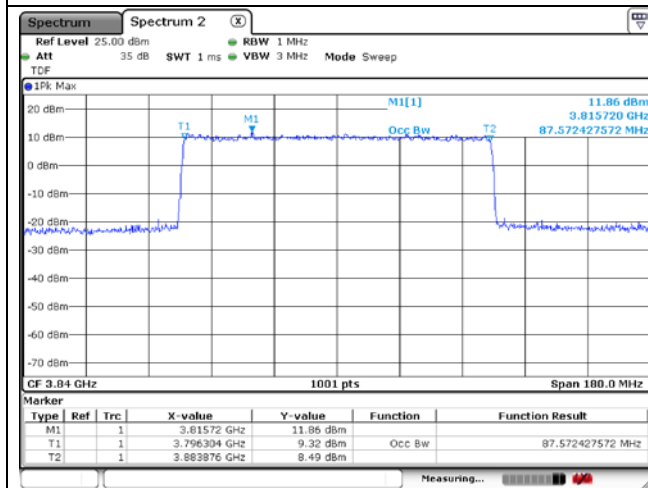




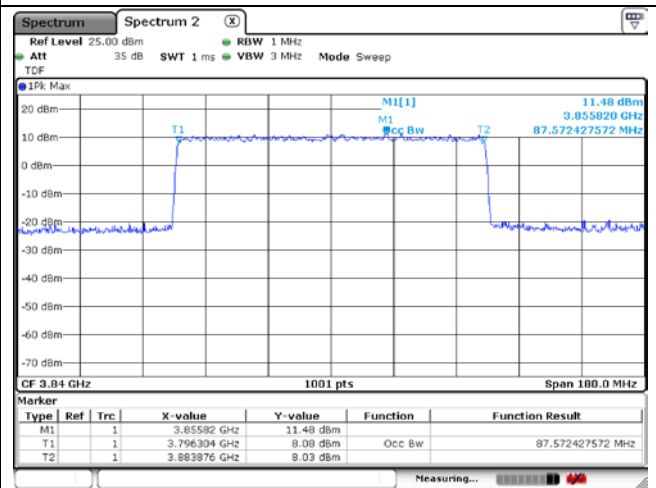
80 MHz CP-OFDM QPSK



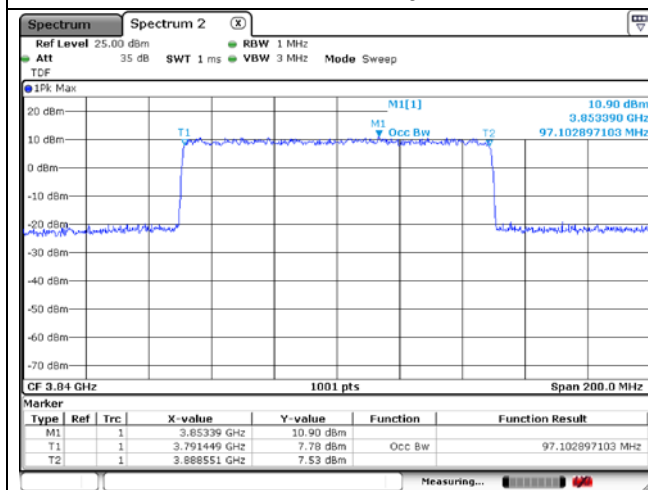
80 MHz CP-OFDM 16QAM



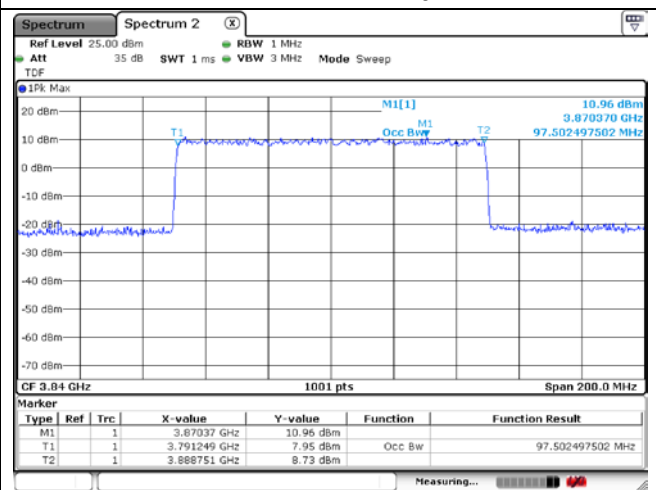
90 MHz CP-OFDM QPSK



90 MHz CP-OFDM 16QAM



100 MHz CP-OFDM QPSK



100 MHz CP-OFDM 16QAM

## 5. Peak-Average Ratio

### 5.1. Limit

- §27.50(j)(4), Equipment employed must be authorized in accordance with the provisions of § 27.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (j)(5) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

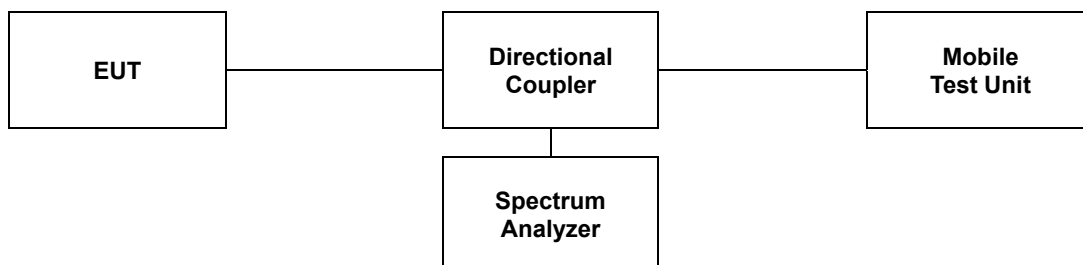
- §27.50(k)(4), Equipment employed must be authorized in accordance with the provisions of § 27.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (k)(5) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

### 5.2. Test Procedure

The test follows section 5.2.3.4 of ANSI C63.26-2015.

See instrumentation-specific application literature for further guidance regarding use of the CCDF capability. The following guidelines are offered for performing a CCDF measurement.

- a. Set resolution/measurement bandwidth  $\geq$  OBW or specified reference bandwidth.
- b. Set the number of counts to a value that stabilizes the measured CCDF curve.
- c. Set the measurement interval as follows:
  - 1) For continuous transmissions, set to greater of  $[10 \times (\text{number of points in sweep}) \times (\text{transmission symbol period})]$  or 1 ms.
  - 2) For burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize. Set the measurement interval to a time that is less than or equal to the burst duration.
  - 3) If there are several carriers in a single antenna port, the peak power shall be determined for each individual carrier (by disabling the other carriers while measuring the required carrier) and the total peak power calculated from the sum of the individual carrier peak powers.
- d. Record the maximum PAPR level associated with a probability of 0.1 %.
- e. The peak power level is calculated from the sum of the PAPR value from step d) to the measured average power.



### 5.3 Test Results

Ambient temperature : (23 ± 1) °C  
 Relative humidity : 47 % R.H.

#### SISO

| Band               | SCS (kHz) | BW (MHz) | Mode  | Frequency (MHz) | PAR (dB)   |         |
|--------------------|-----------|----------|-------|-----------------|------------|---------|
|                    |           |          |       |                 | DFT-S-OFDM | CP-OFDM |
| n77/78<br>Low Band | 30        | 20       | 64QAM | 3 460.02        | 6.52       | 7.68    |
|                    |           |          |       | 3 500.01        | 6.61       | 8.03    |
|                    |           |          |       | 3 540           | 6.78       | 7.97    |
|                    |           | 30       | 64QAM | 3 465           | 6.49       | 8.17    |
|                    |           |          |       | 3 500.01        | 6.55       | 8.29    |
|                    |           |          |       | 3 534.99        | 6.52       | 8.23    |
|                    |           | 40       | 64QAM | 3 470.01        | 6.38       | 8.20    |
|                    |           |          |       | 3 500.01        | 6.38       | 8.23    |
|                    |           |          |       | 3 529.98        | 6.29       | 8.26    |
|                    |           | 50       | 64QAM | 3 475.02        | 6.46       | 8.43    |
|                    |           |          |       | 3 500.01        | 6.38       | 8.38    |
|                    |           |          |       | 3 525           | 6.41       | 8.43    |
|                    |           | 60       | 64QAM | 3 480           | 6.87       | 8.64    |
|                    |           |          |       | 3 500.01        | 6.93       | 8.49    |
|                    |           |          |       | 3 519.99        | 6.84       | 8.46    |
|                    |           | 70       | 64QAM | 3 485.01        | 7.04       | 8.55    |
|                    |           |          |       | 3 500.01        | 7.07       | 8.52    |
|                    |           |          |       | 3 514.98        | 7.01       | 8.67    |
|                    |           | 80       | 64QAM | 3 490.02        | 7.10       | 8.43    |
|                    |           |          |       | 3 500.01        | 7.07       | 8.46    |
|                    |           |          |       | 3 510           | 7.22       | 8.43    |
|                    |           | 90       | 64QAM | 3 495           | 7.51       | 8.61    |
|                    |           |          |       | 3 500.01        | 7.48       | 8.61    |
|                    |           |          |       | 3 504.99        | 7.57       | 8.61    |
|                    |           | 100      | 64QAM | 3 500.01        | 7.39       | 8.67    |

| Band                | SCS (kHz) | BW (MHz) | Mode  | Frequency (MHz) | PAR (dB)   |         |
|---------------------|-----------|----------|-------|-----------------|------------|---------|
|                     |           |          |       |                 | DFT-S-OFDM | CP-OFDM |
| n77/78<br>High Band | 30        | 20       | 64QAM | 3 710.01        | 6.38       | 7.48    |
|                     |           |          |       | 3 840           | 6.35       | 7.42    |
|                     |           |          |       | 3 969.99        | 6.29       | 7.33    |
|                     |           | 30       | 64QAM | 3 715.02        | 6.29       | 7.65    |
|                     |           |          |       | 3 840           | 6.26       | 7.62    |
|                     |           |          |       | 3 964.98        | 6.20       | 7.65    |
|                     |           | 40       | 64QAM | 3 720           | 6.17       | 7.71    |
|                     |           |          |       | 3 840           | 6.12       | 7.68    |
|                     |           |          |       | 3 960           | 6.06       | 7.62    |
|                     |           | 50       | 64QAM | 3 725.01        | 6.35       | 8.12    |
|                     |           |          |       | 3 840           | 6.35       | 7.97    |
|                     |           |          |       | 3 954.99        | 6.32       | 8.09    |
|                     |           | 60       | 64QAM | 3 730.02        | 6.84       | 8.23    |
|                     |           |          |       | 3 840           | 6.84       | 8.26    |
|                     |           |          |       | 3 949.98        | 6.84       | 8.29    |
|                     |           | 70       | 64QAM | 3 735           | 6.99       | 8.29    |
|                     |           |          |       | 3 840           | 6.99       | 8.29    |
|                     |           |          |       | 3 945           | 6.99       | 8.29    |
|                     |           | 80       | 64QAM | 3 740.01        | 7.13       | 8.26    |
|                     |           |          |       | 3 840           | 7.13       | 8.26    |
|                     |           |          |       | 3 939.99        | 7.07       | 8.17    |
|                     |           | 90       | 64QAM | 3 745.02        | 7.42       | 8.49    |
|                     |           |          |       | 3 840           | 7.51       | 8.41    |
|                     |           |          |       | 3 934.98        | 7.45       | 8.41    |
|                     |           | 100      | 64QAM | 3 750           | 7.30       | 8.46    |
|                     |           |          |       | 3 840           | 7.33       | 8.46    |
|                     |           |          |       | 3 930           | 7.25       | 8.49    |

**MIMO**

| Band               | SCS<br>(kHz) | BW<br>(MHz) | Mode  | Frequency<br>(MHz) | PAR (dB) |        |
|--------------------|--------------|-------------|-------|--------------------|----------|--------|
|                    |              |             |       |                    | CP-OFDM  |        |
|                    |              |             |       |                    | Port 1   | Port 2 |
| 77/78<br>Low Band  | 30           | 20          | 64QAM | 3 460.02           | 8.67     | 8.72   |
|                    |              |             |       | 3 500.01           | 8.67     | 8.81   |
|                    |              |             |       | 3 540              | 8.72     | 8.67   |
|                    |              | 30          | 64QAM | 3 465              | 8.87     | 8.93   |
|                    |              |             |       | 3 500.01           | 9.01     | 9.04   |
|                    |              |             |       | 3 534.99           | 8.99     | 8.93   |
|                    |              | 40          | 64QAM | 3 470.01           | 8.96     | 8.78   |
|                    |              |             |       | 3 500.01           | 8.87     | 8.84   |
|                    |              |             |       | 3 529.98           | 8.93     | 8.72   |
|                    |              | 50          | 64QAM | 3 475.02           | 8.93     | 8.90   |
|                    |              |             |       | 3 500.01           | 8.93     | 8.70   |
|                    |              |             |       | 3 525              | 8.81     | 8.81   |
|                    |              | 60          | 64QAM | 3 480              | 8.72     | 8.93   |
|                    |              |             |       | 3 500.01           | 8.81     | 9.01   |
|                    |              |             |       | 3 519.99           | 8.72     | 8.87   |
|                    |              | 70          | 64QAM | 3 485.01           | 8.72     | 8.84   |
|                    |              |             |       | 3 500.01           | 8.78     | 8.90   |
|                    |              |             |       | 3 514.98           | 8.75     | 8.81   |
|                    |              | 80          | 64QAM | 3 490.02           | 8.49     | 8.43   |
|                    |              |             |       | 3 500.01           | 8.55     | 8.32   |
|                    |              |             |       | 3 510              | 8.58     | 8.35   |
|                    |              | 90          | 64QAM | 3 495              | 8.87     | 8.52   |
|                    |              |             |       | 3 500.01           | 8.93     | 8.64   |
|                    |              |             |       | 3 504.99           | 8.72     | 8.90   |
|                    |              | 100         | 64QAM | 3 500.01           | 8.55     | 8.52   |
| Band               | SCS<br>(kHz) | BW<br>(MHz) | Mode  | Frequency<br>(MHz) | PAR (dB) |        |
|                    |              |             |       |                    | CP-OFDM  |        |
|                    |              |             |       |                    | Port 1   | Port 2 |
| 77/78<br>High Band | 30           | 20          | 64QAM | 3 710.01           | 8.64     | 8.26   |
|                    |              |             |       | 3 840              | 8.55     | 8.26   |
|                    |              |             |       | 3 969.99           | 8.26     | 8.29   |
|                    |              | 30          | 64QAM | 3 715.02           | 8.84     | 8.35   |
|                    |              |             |       | 3 840              | 8.70     | 8.72   |
|                    |              |             |       | 3 964.98           | 8.58     | 8.35   |
|                    |              | 40          | 64QAM | 3 720              | 8.70     | 8.67   |
|                    |              |             |       | 3 840              | 8.49     | 8.41   |
|                    |              |             |       | 3 960              | 8.23     | 8.26   |
|                    |              | 50          | 64QAM | 3 725.01           | 8.78     | 8.72   |
|                    |              |             |       | 3 840              | 8.70     | 8.43   |
|                    |              |             |       | 3 954.99           | 8.55     | 8.46   |
|                    |              | 60          | 64QAM | 3 730.02           | 8.75     | 8.81   |
|                    |              |             |       | 3 840              | 8.67     | 8.70   |
|                    |              |             |       | 3 949.98           | 8.58     | 8.72   |
|                    |              | 70          | 64QAM | 3 735              | 8.64     | 8.70   |
|                    |              |             |       | 3 840              | 8.64     | 8.81   |
|                    |              |             |       | 3 945              | 8.72     | 8.70   |
|                    |              | 80          | 64QAM | 3 740.01           | 8.43     | 8.29   |
|                    |              |             |       | 3 840              | 8.26     | 8.49   |
|                    |              |             |       | 3 939.99           | 8.41     | 8.23   |
|                    |              | 90          | 64QAM | 3 745.02           | 8.87     | 8.52   |
|                    |              |             |       | 3 840              | 8.72     | 8.87   |
|                    |              |             |       | 3 934.98           | 8.78     | 8.55   |
|                    |              | 100         | 64QAM | 3 750              | 8.52     | 8.84   |
|                    |              |             |       | 3 840              | 8.75     | 8.43   |
|                    |              |             |       | 3 930              | 8.67     | 8.41   |

## - Test plots

### SISO

#### NR band 77/78 Low Band

