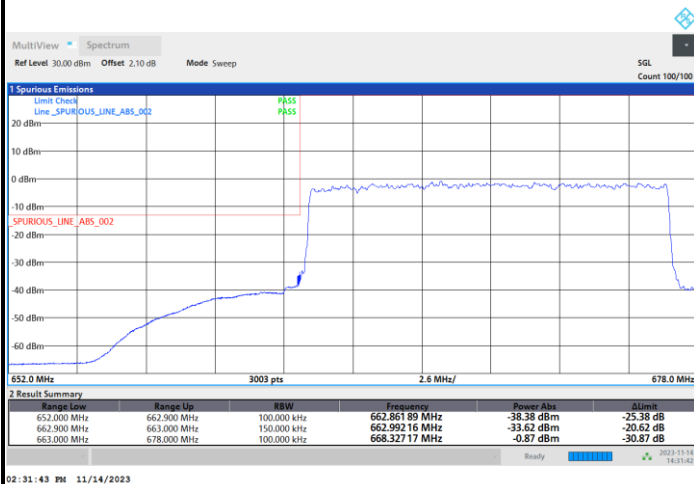


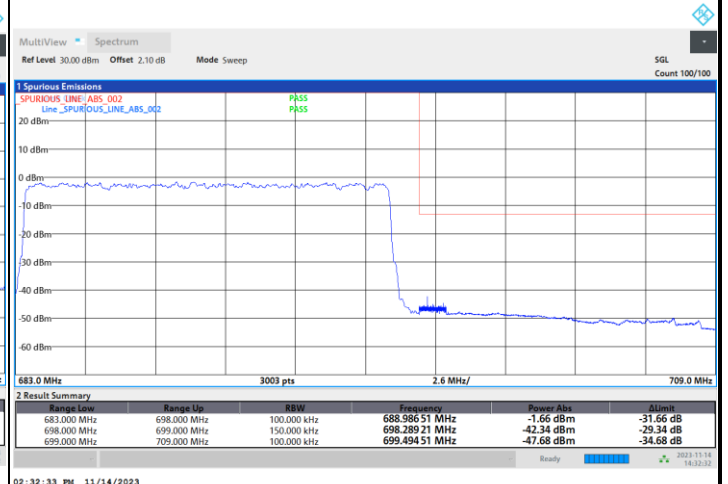


## FR1 n71 / 15MHz / DFT-s-OFDM / 256QAM / Full RB

## Lowest Band Edge

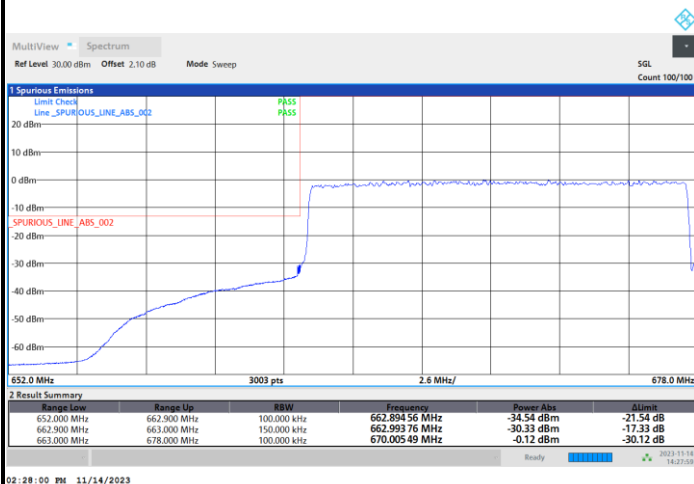


## Highest Band Edge

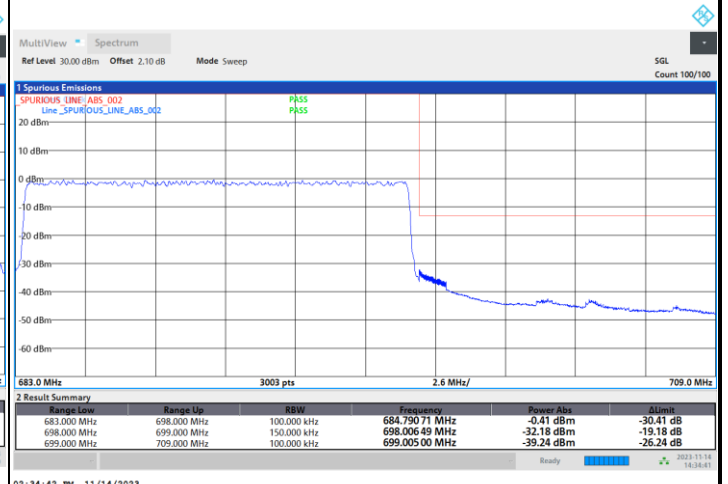


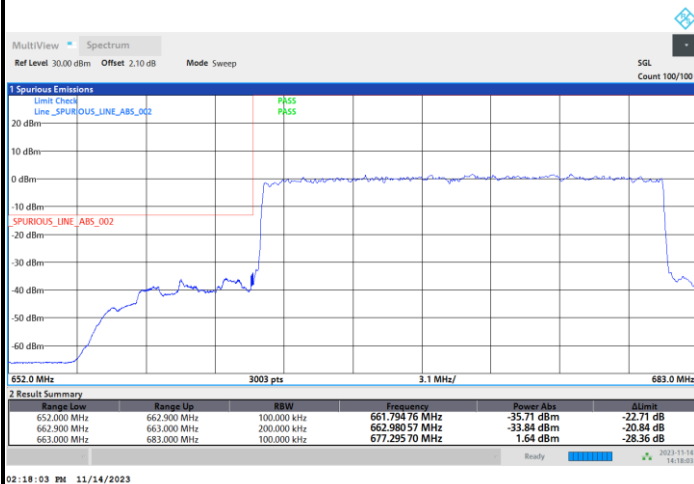
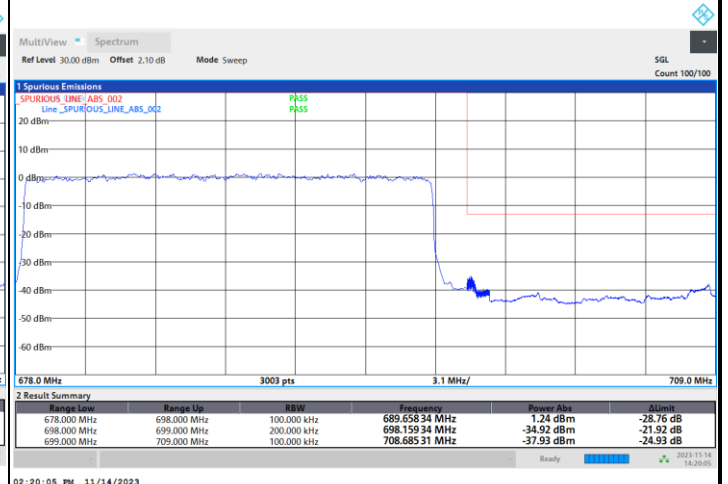
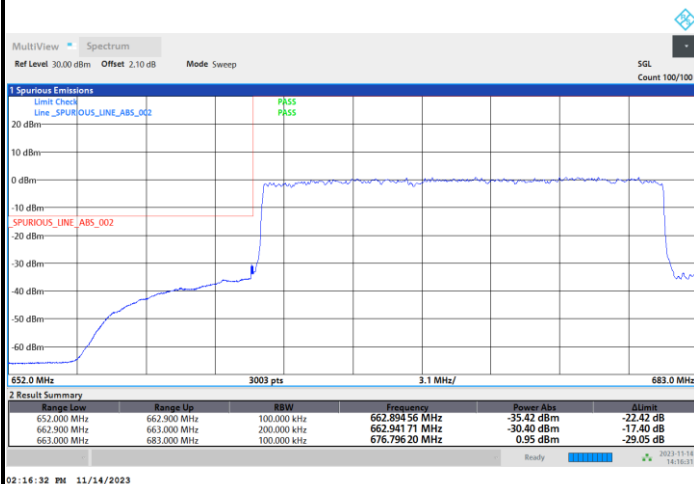
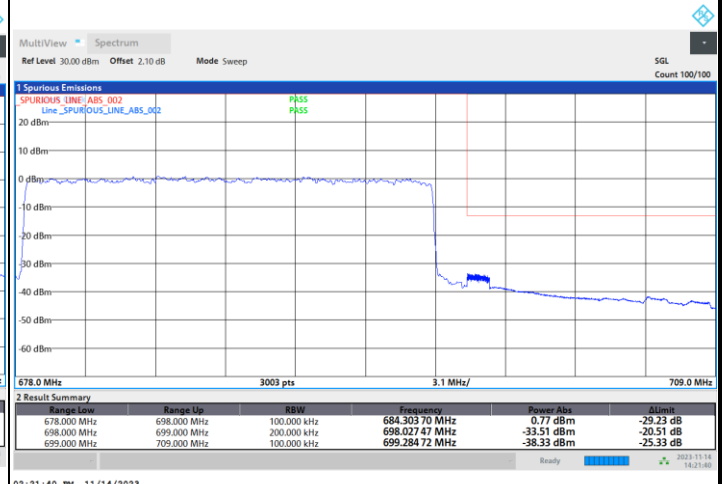
## FR1 n71 / 15MHz / CP OFDM / QPSK / Full RB

## Lowest Band Edge



## Highest Band Edge

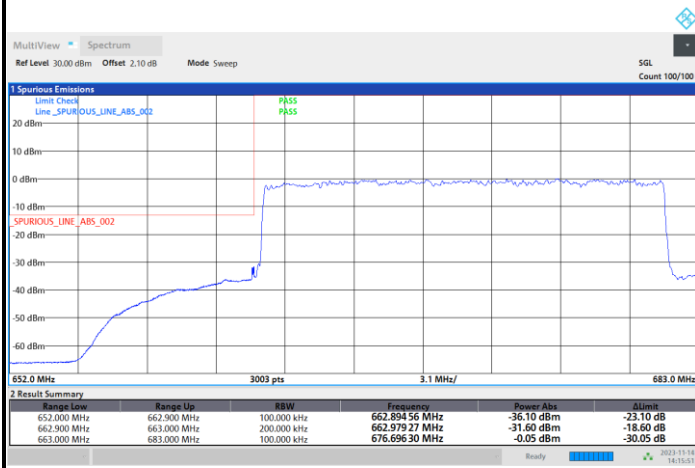


**FR1 n71 / 20MHz / DFT-s-OFDM / PI/2 BPSK / Full RB****Lowest Band Edge****Highest Band Edge****FR1 n71 / 20MHz / DFT-s-OFDM / QPSK / Full RB****Lowest Band Edge****Highest Band Edge**

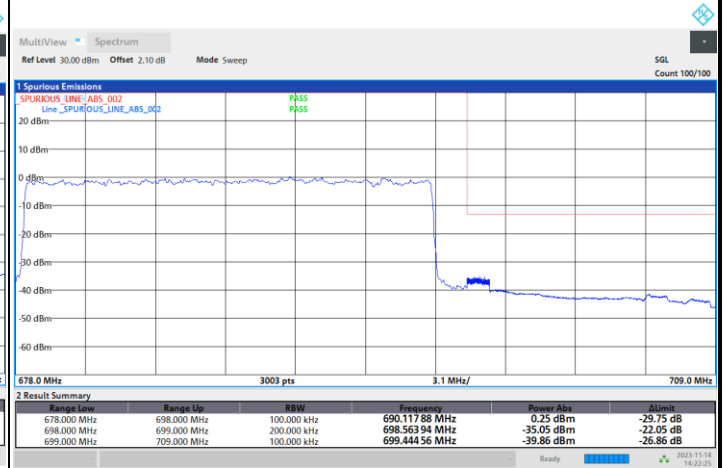


## FR1 n71 / 20MHz / DFT-s-OFDM / 16QAM / Full RB

## Lowest Band Edge

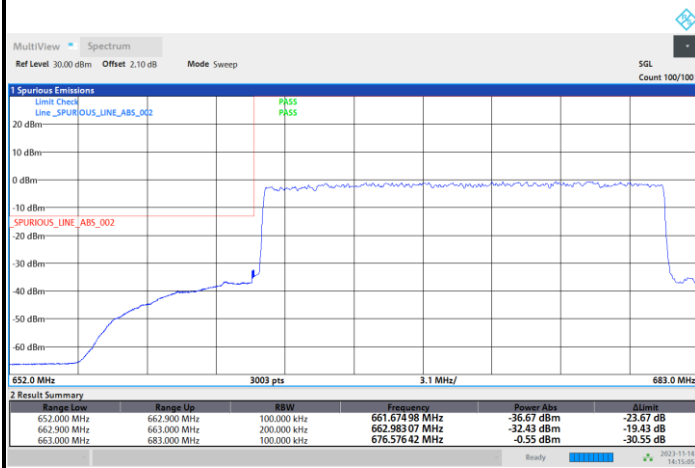


## Highest Band Edge

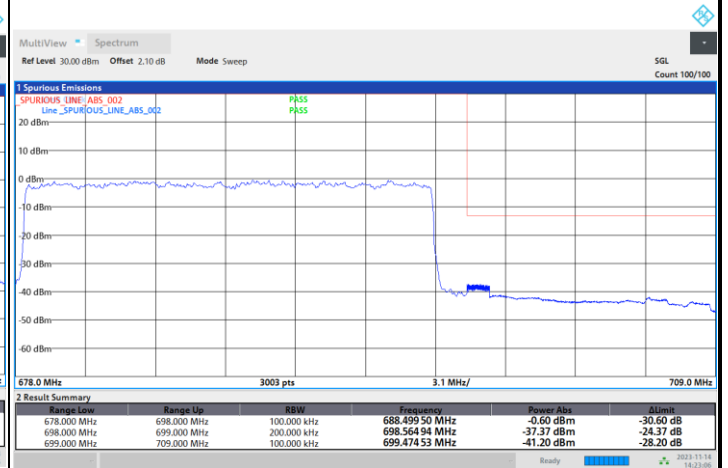


## FR1 n71 / 20MHz / DFT-s-OFDM / 64QAM / Full RB

## Lowest Band Edge



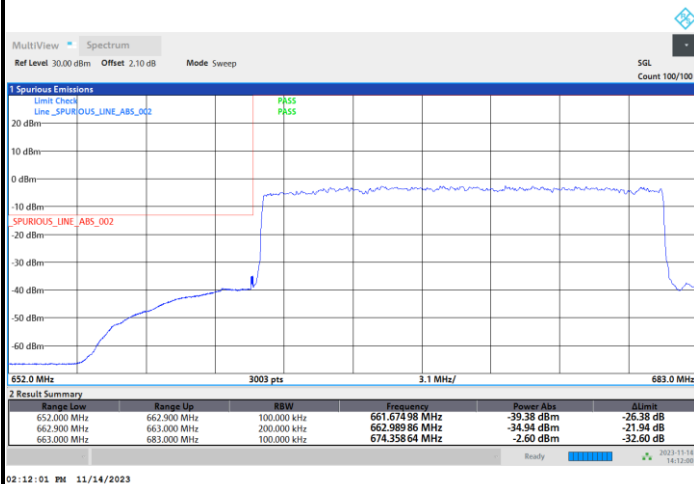
## Highest Band Edge



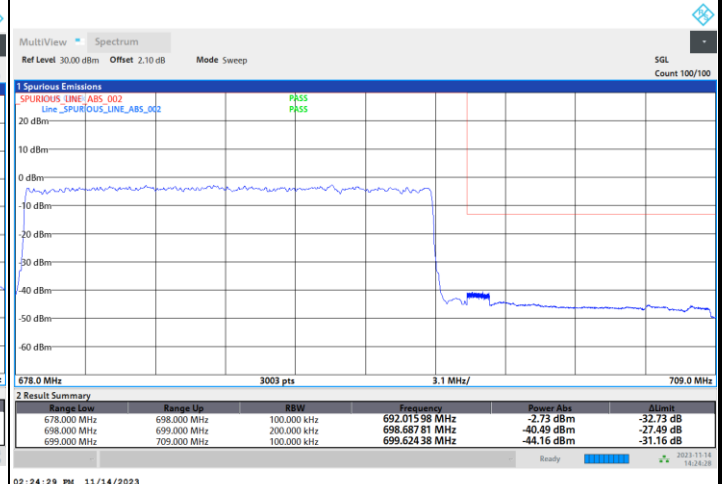


## FR1 n71 / 20MHz / DFT-s-OFDM / 256QAM / Full RB

## Lowest Band Edge

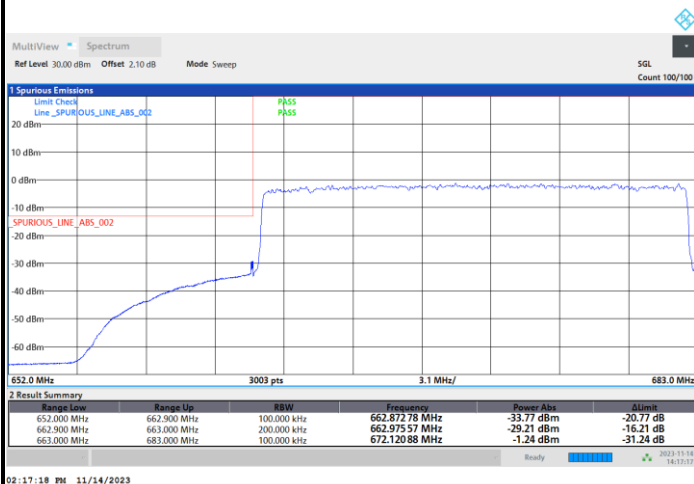


## Highest Band Edge

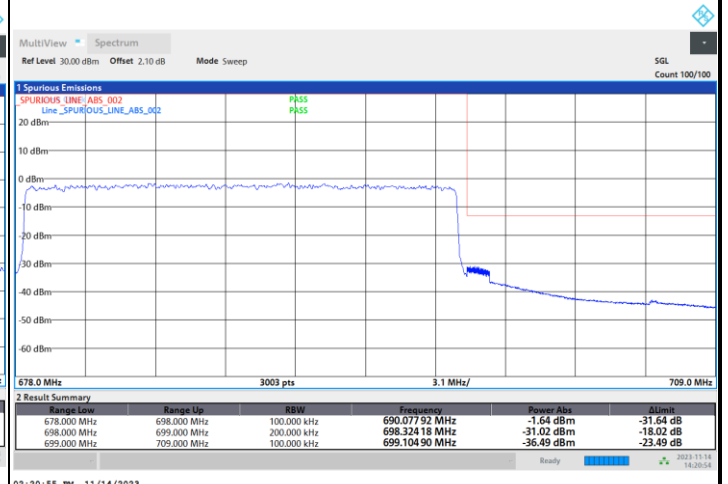


## FR1 n71 / 20MHz / CP OFDM / QPSK / Full RB

## Lowest Band Edge



## Highest Band Edge

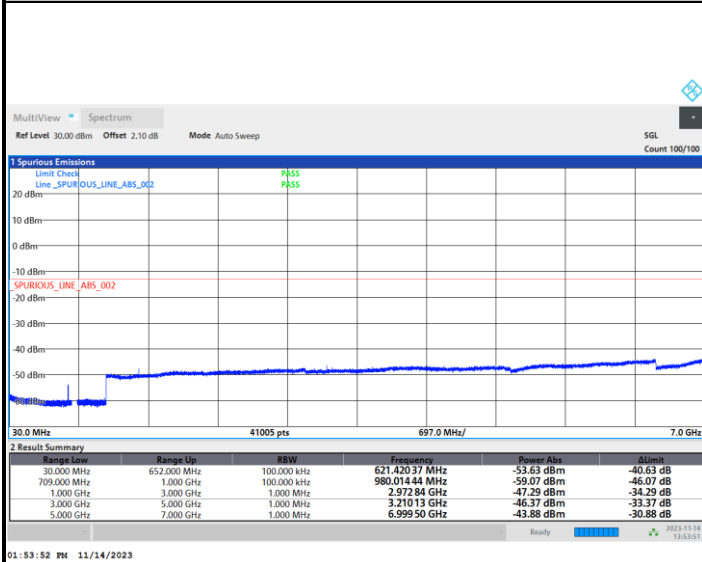




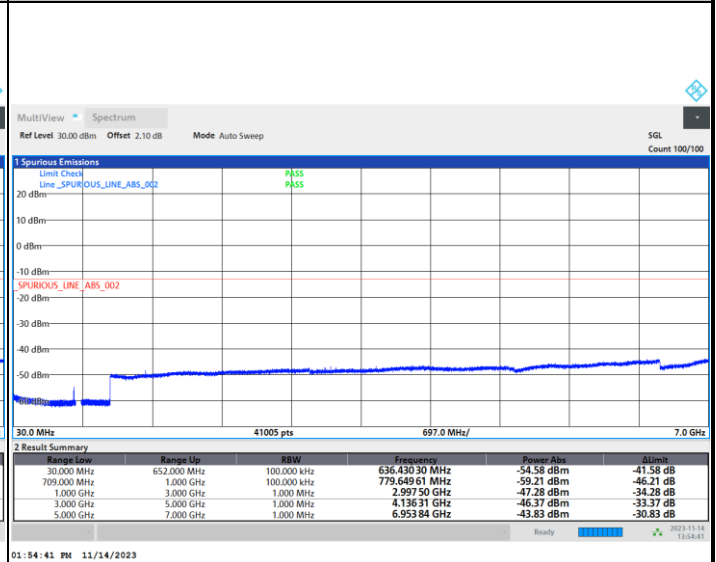
# Conducted Spurious Emission

FR1 n71 / 5MHz / DFT-S OFDM / QPSK / 1RB1

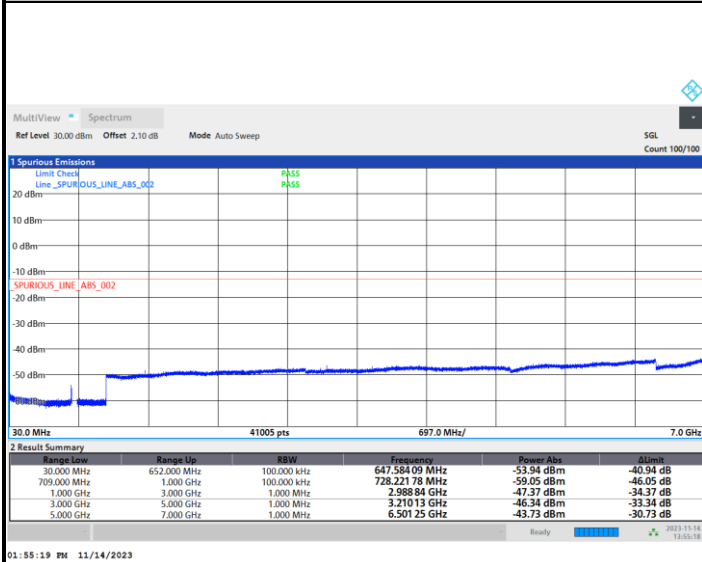
## Lowest Channel



## Middle Channel



## Highest Channel



## Frequency Stability

| Test Conditions     |                   | FR1 n71 (BPSK) / Middle Channel | Limit   |
|---------------------|-------------------|---------------------------------|---------|
| Temperature<br>(°C) | Voltage<br>(Volt) | BW 20MHz                        | Note 2. |
|                     |                   | Deviation (ppm)                 | Result  |
| 50                  | Normal Voltage    | 0.0061                          | PASS    |
| 40                  | Normal Voltage    | 0.0028                          |         |
| 30                  | Normal Voltage    | 0.0054                          |         |
| 20(Ref.)            | Normal Voltage    | 0.0000                          |         |
| 10                  | Normal Voltage    | 0.0083                          |         |
| 0                   | Normal Voltage    | 0.0082                          |         |
| -10                 | Normal Voltage    | 0.0062                          |         |
| -20                 | Normal Voltage    | 0.0126                          |         |
| -30                 | Normal Voltage    | 0.0072                          |         |
| 20                  | Maximum Voltage   | 0.0123                          |         |
| 20                  | Normal Voltage    | 0.0000                          |         |
| 20                  | Battery End Point | 0.0083                          |         |

**Note:**

1. Normal Voltage = 4.0 V. ; Battery End Point (BEP) = 3.8 V. ; Maximum Voltage = 4.2 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

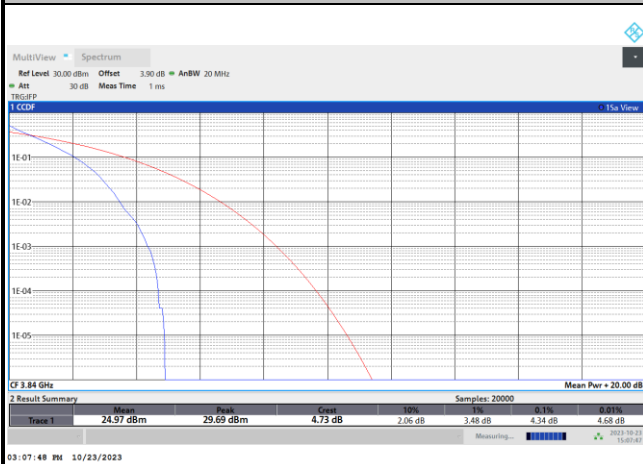
**FR1 n77 HPUE\_Part270****Peak-to-Average Ratio**

| Mode      | FR1 n77 HPUE / 20MHz / DFT-S OFDM |         |         |         |             |
|-----------|-----------------------------------|---------|---------|---------|-------------|
| Mod.      | PI/2 BPSK                         | QPSK    | 16QAM   | 64QAM   | Limit: 13dB |
| RB Size   | Full RB                           | Full RB | Full RB | Full RB | Result      |
| Middle CH | 4.34                              | 5.12    | 6.12    | 6.46    | <b>PASS</b> |
| Mode      | FR1 n77 HPUE / 20MHz / DFT-S OFDM |         |         |         |             |
| Mod.      | 256QAM                            |         |         |         | Limit: 13dB |
| RB Size   | Full RB                           |         |         |         | Result      |
| Middle CH | 6.92                              |         |         |         | <b>PASS</b> |

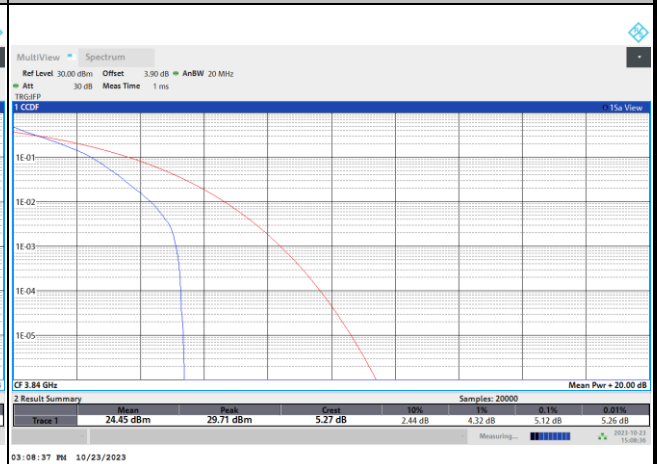


## FR1 n77 HPUE / 20MHz / DFT-S OFDM / Middle Channel / Full RB

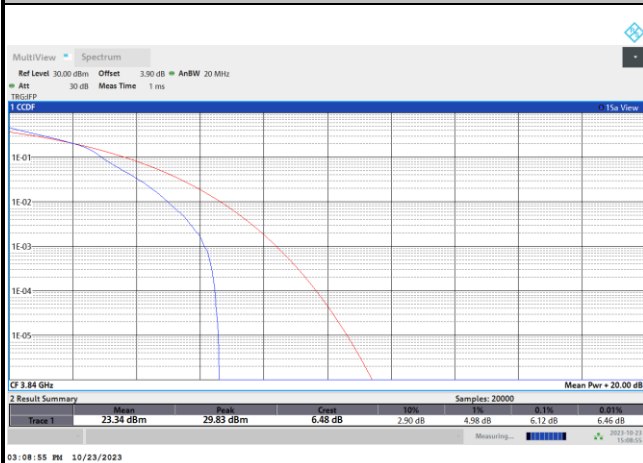
## PI/2 BPSK



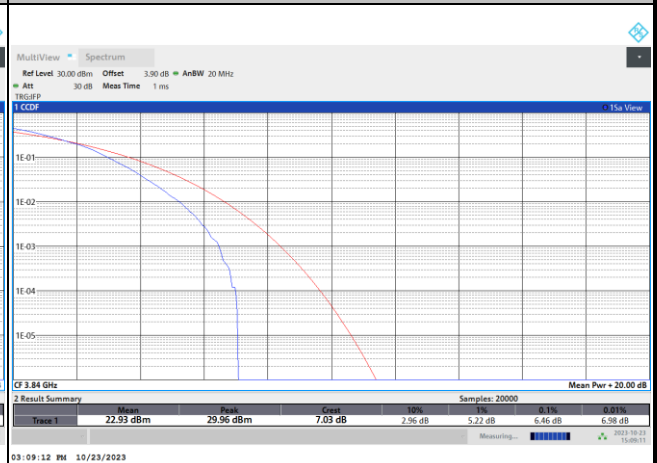
## QPSK



## 16QAM



## 64QAM



## 256QAM



**26dB Bandwidth**

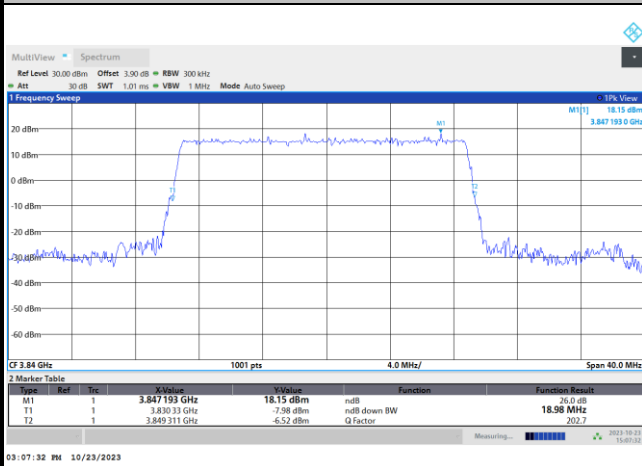
| Mode      | FR1 n77 HPUE : 26dB BW(MHz) / DFT-S OFDM |           |           |           |           |           |           |           |
|-----------|------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| BW        | 20MHz                                    | 25MHz     | 30MHz     | 40MHz     | 50MHz     | 60MHz     | 70MHz     | 80MHz     |
| Mod.      | PI/2 BPSK                                | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK |
| Middle CH | 18.98                                    | -         | -         | 38.28     | 48.45     | 60.66     | -         | 79.92     |
| BW        | 90MHz                                    | 100MHz    |           |           |           |           |           |           |
| Mod.      | PI/2 BPSK                                | PI/2 BPSK |           |           |           |           |           |           |
| Middle CH | 89.91                                    | 99.70     |           |           |           |           |           |           |

| Mode      | FR1 n77 HPUE : 26dB BW(MHz) / CP OFDM |        |        |        |       |        |       |        |
|-----------|---------------------------------------|--------|--------|--------|-------|--------|-------|--------|
| BW        | 20MHz                                 |        | 25MHz  |        | 30MHz |        | 40MHz |        |
| Mod.      | QPSK                                  | 16QAM  | QPSK   | 16QAM  | QPSK  | 16QAM  | QPSK  | 16QAM  |
| Middle CH | 19.50                                 | 19.42  | -      | -      | -     | -      | 40.44 | 40.44  |
| Mod.      | 64QAM                                 | 256QAM | 64QAM  | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | 19.42                                 | 19.46  | -      | -      | -     | -      | 40.36 | 40.36  |
| BW        | 50MHz                                 |        | 60MHz  |        | 70MHz |        | 80MHz |        |
| Mod.      | QPSK                                  | 16QAM  | QPSK   | 16QAM  | QPSK  | 16QAM  | QPSK  | 16QAM  |
| Middle CH | 50.15                                 | 50.05  | 60.54  | 60.66  | -     | -      | 80.24 | 80.40  |
| Mod.      | 64QAM                                 | 256QAM | 64QAM  | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | 50.35                                 | 50.15  | 60.54  | 60.66  | -     | -      | 80.40 | 80.40  |
| BW        | 90MHz                                 |        | 100MHz |        |       |        |       |        |
| Mod.      | QPSK                                  | 16QAM  | QPSK   | 16QAM  |       |        |       |        |
| Middle CH | 90.63                                 | 90.63  | 100.70 | 100.70 |       |        |       |        |
| Mod.      | 64QAM                                 | 256QAM | 64QAM  | 256QAM |       |        |       |        |
| Middle CH | 90.45                                 | 90.63  | 100.50 | 100.30 |       |        |       |        |



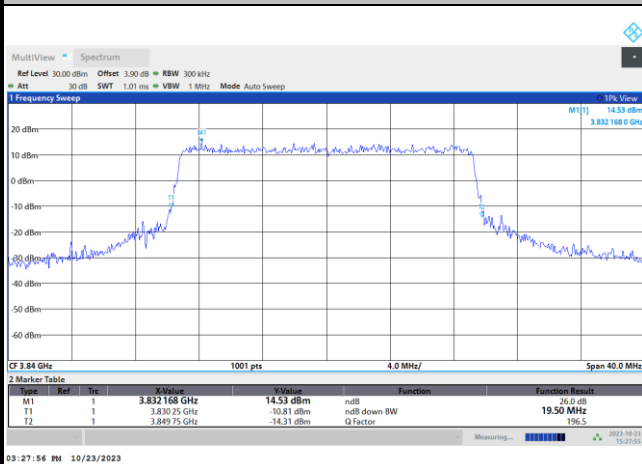
## FR1 n77 HPUE / 20MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

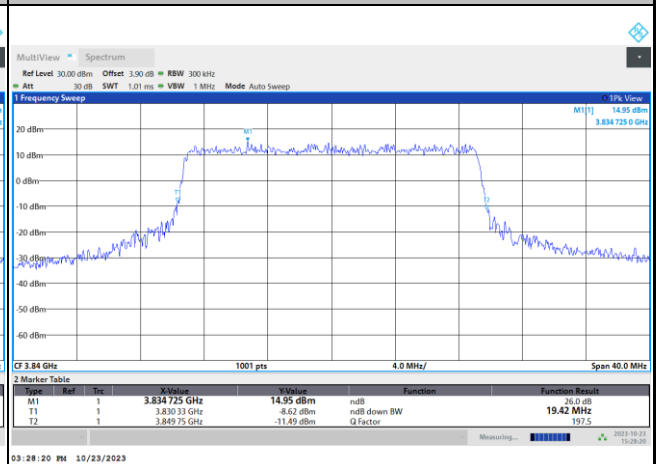


## FR1 n77 HPUE / 20MHz / CP OFDM / Middle Channel / Full RB

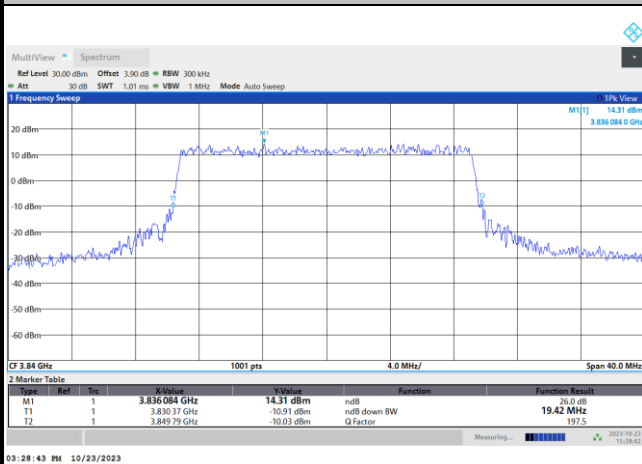
## QPSK



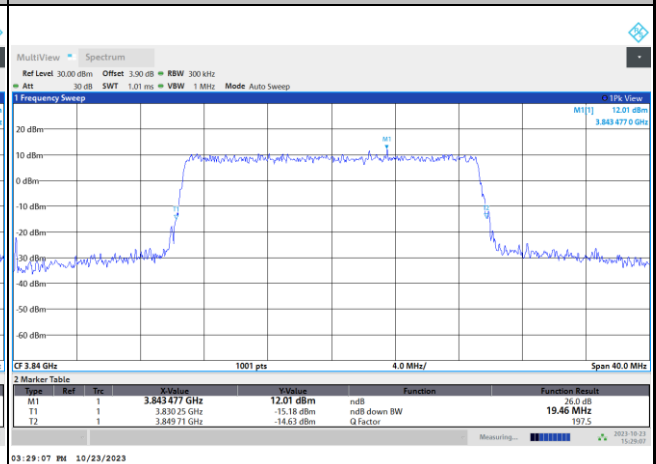
## 16QAM



## 64QAM



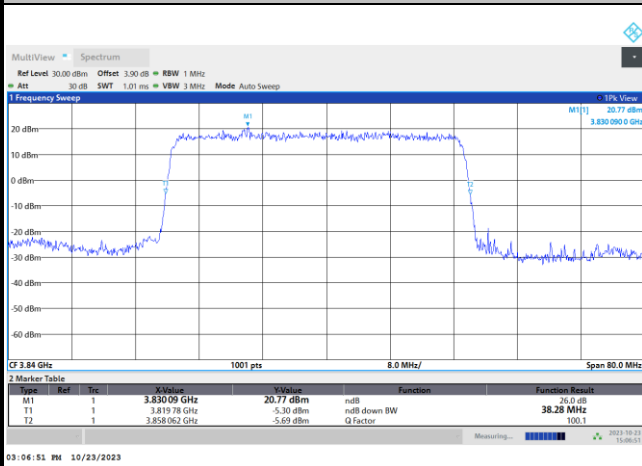
## 256QAM





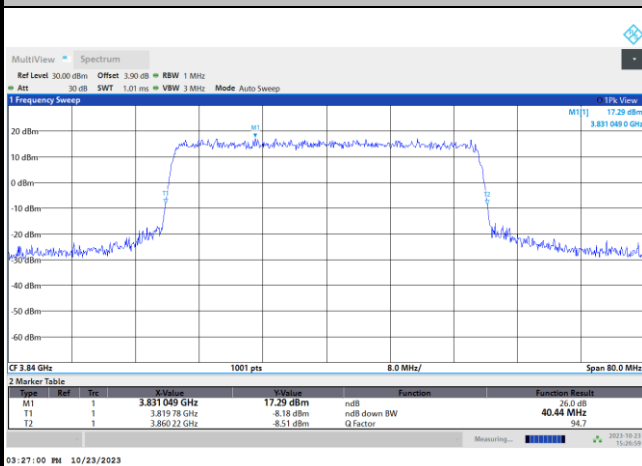
## FR1 n77 HPUE / 40MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

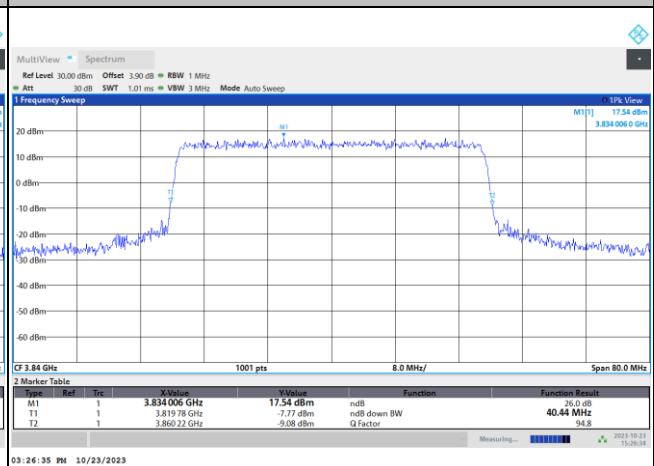


## FR1 n77 HPUE / 40MHz / CP OFDM / Middle Channel / Full RB

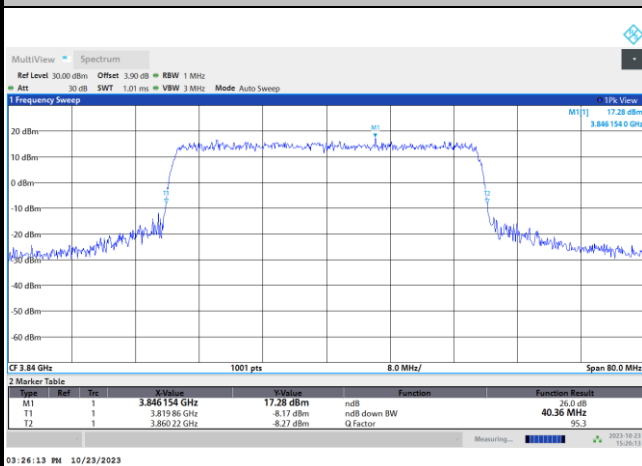
## QPSK



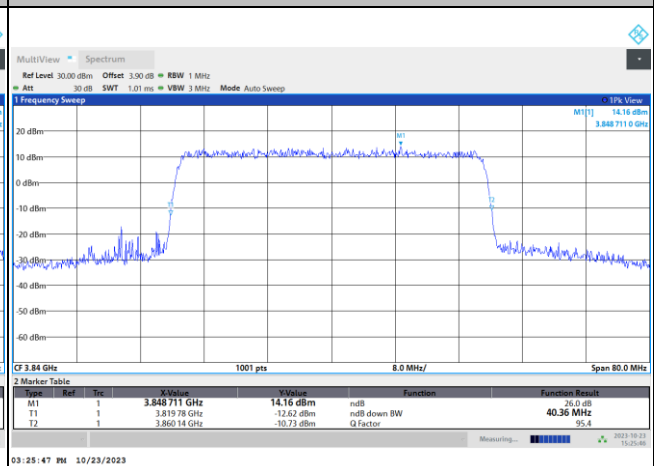
## 16QAM

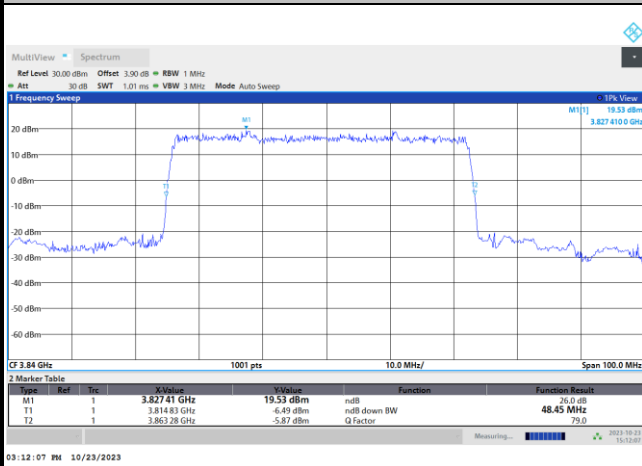
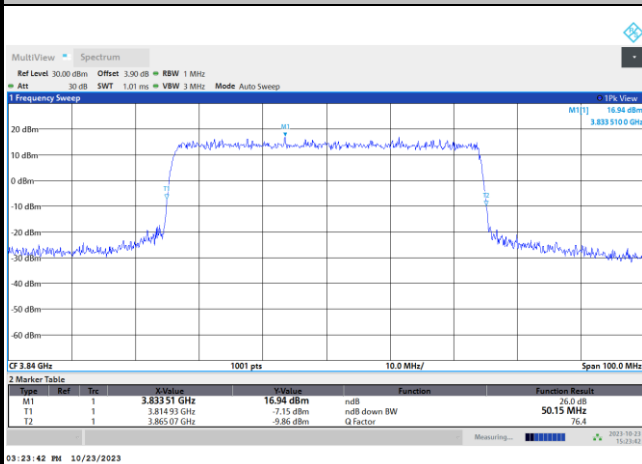
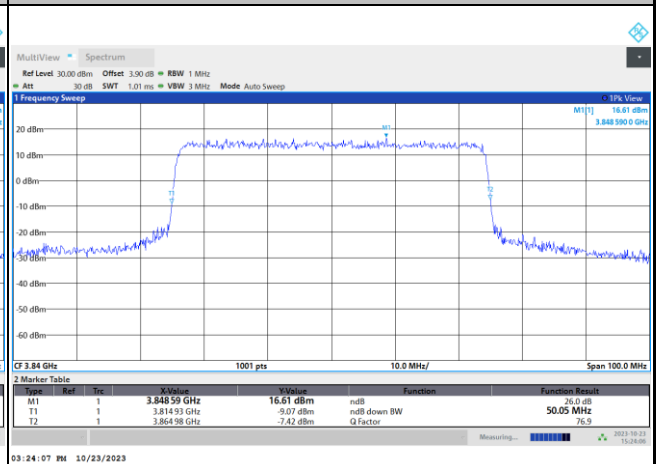
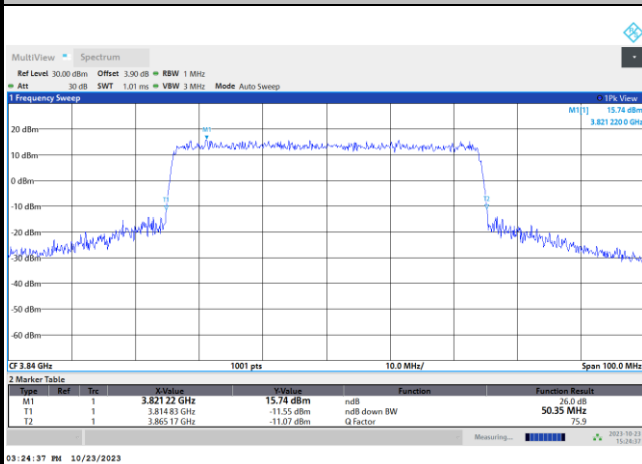
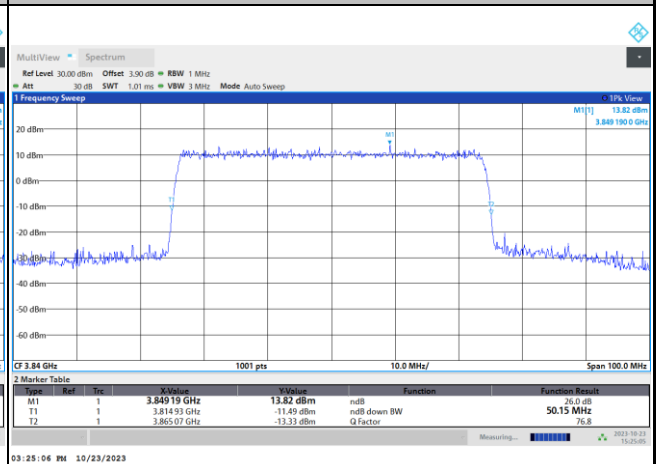


## 64QAM



## 256QAM

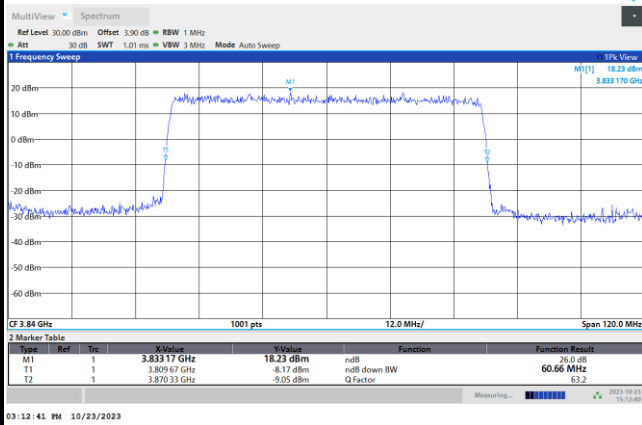


**FR1 n77 HPUE / 50MHz / DFT-S OFDM / Middle Channel / Full RB**
**PI/2 BPSK**

**FR1 n77 HPUE / 50MHz / CP OFDM / Middle Channel / Full RB**
**QPSK**

**16QAM**

**64QAM**

**256QAM**




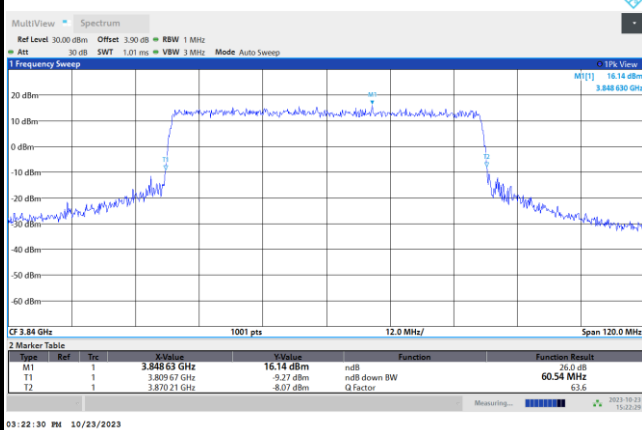
## FR1 n77 HPUE / 60MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

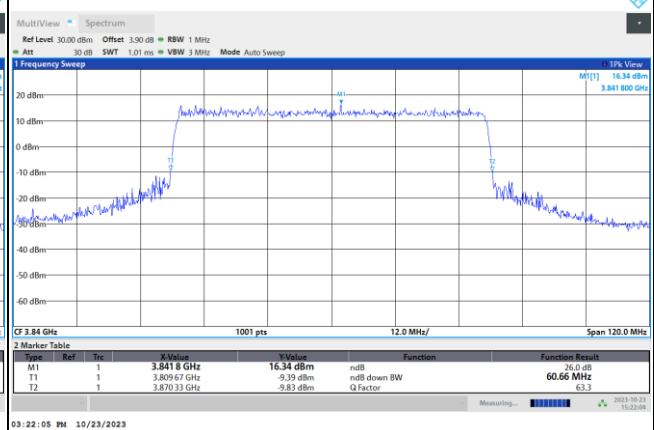


## FR1 n77 HPUE / 60MHz / CP OFDM / Middle Channel / Full RB

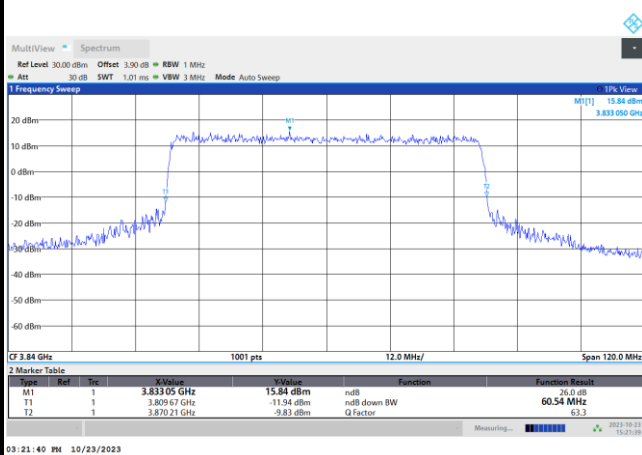
## QPSK



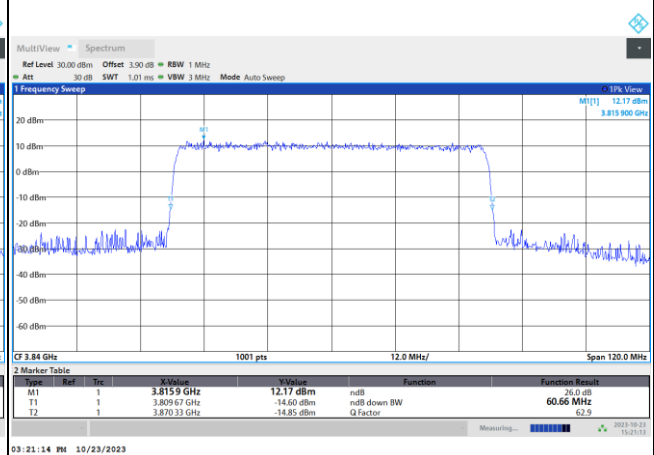
## 16QAM



## 64QAM

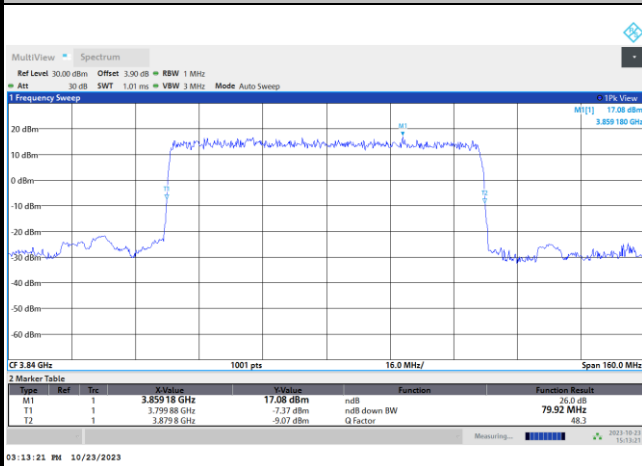


## 256QAM



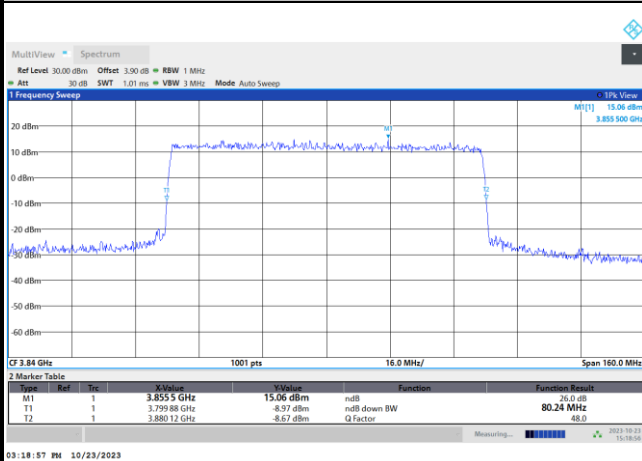
## FR1 n77 HPUE / 80MHz / DFT-S OFDM / Middle Channel / Full RB

### PI/2 BPSK

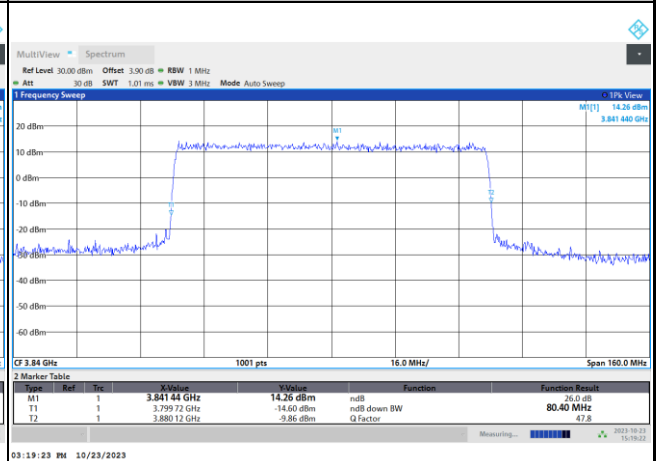


## FR1 n77 HPUE / 80MHz / CP OFDM / Middle Channel / Full RB

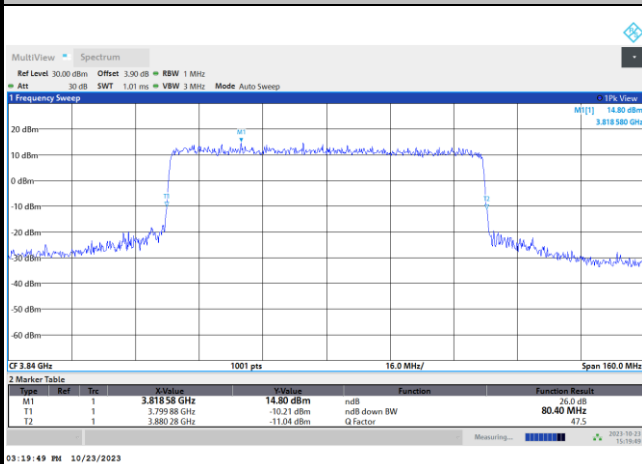
### QPSK



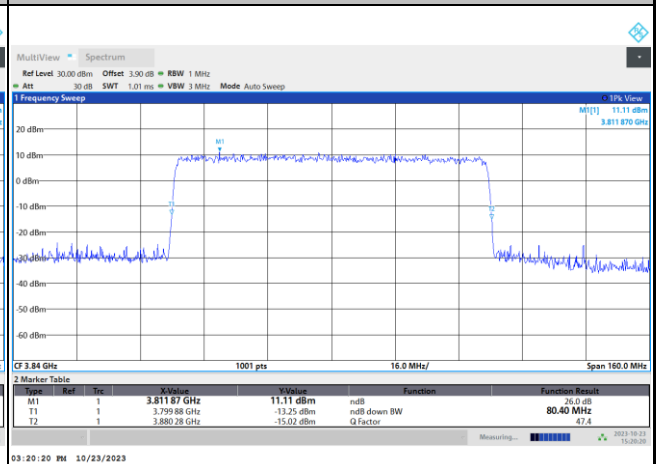
### 16QAM



### 64QAM



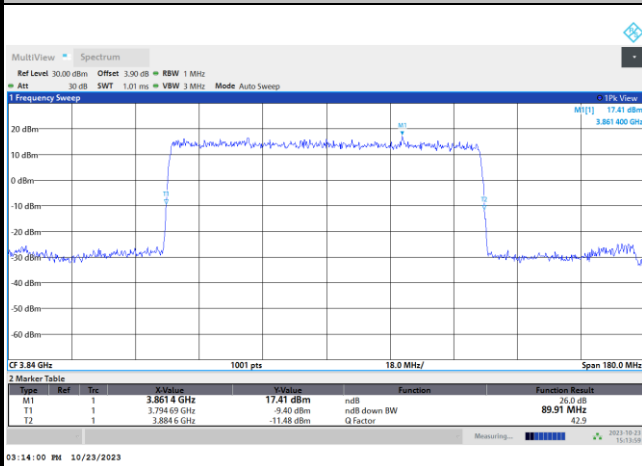
### 256QAM





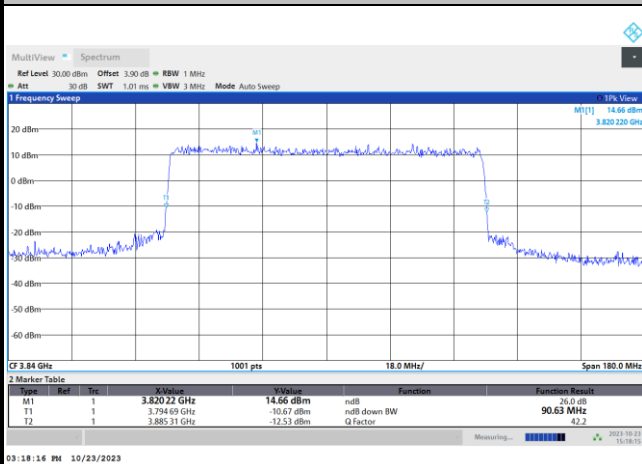
## FR1 n77 HPUE / 90MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

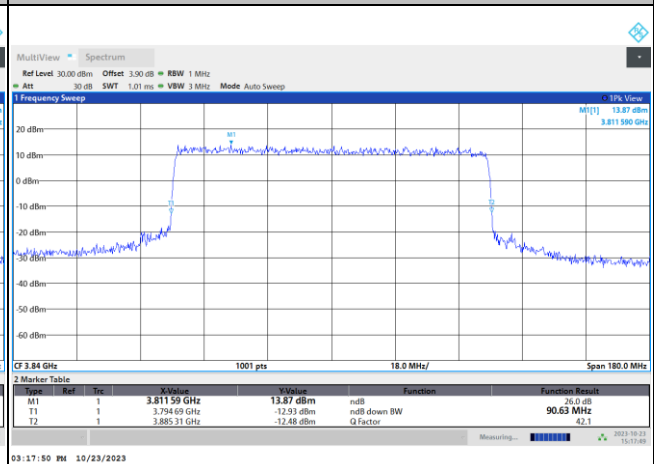


## FR1 n77 HPUE / 90MHz / CP OFDM / Middle Channel / Full RB

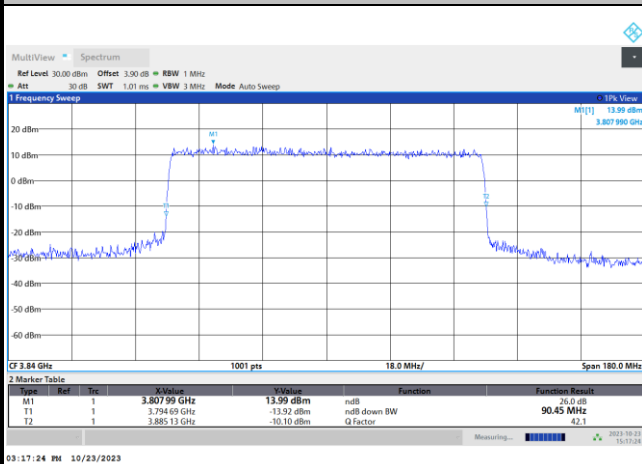
## QPSK



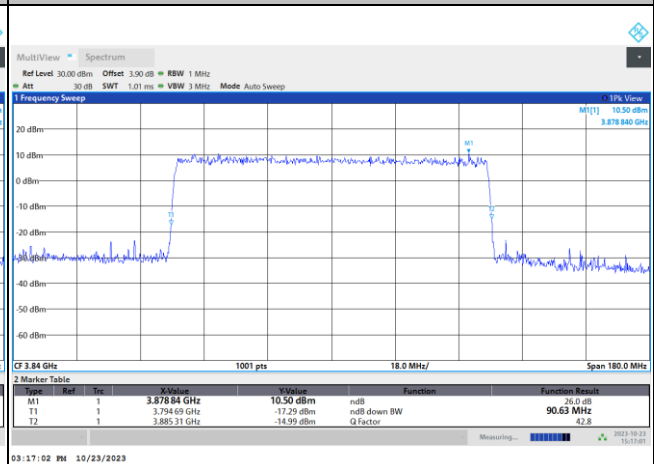
## 16QAM



## 64QAM



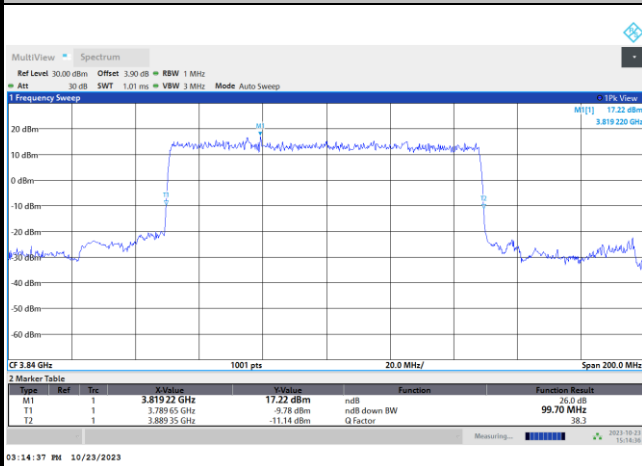
## 256QAM





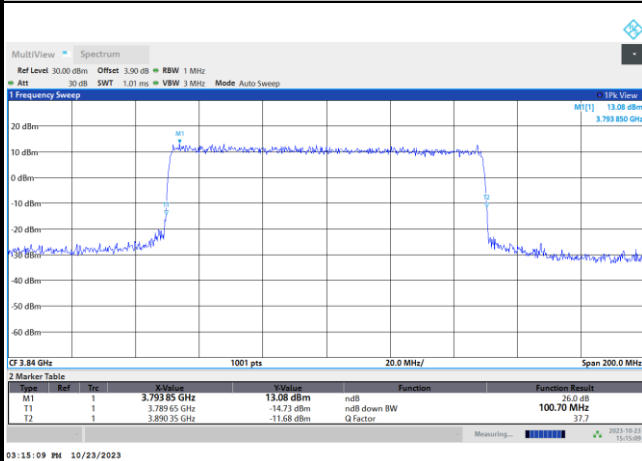
## FR1 n77 HPUE / 100MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

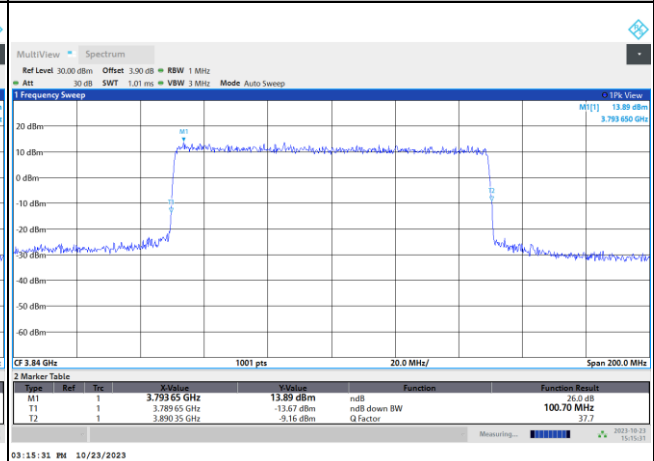


## FR1 n77 HPUE / 100MHz / CP OFDM / Middle Channel / Full RB

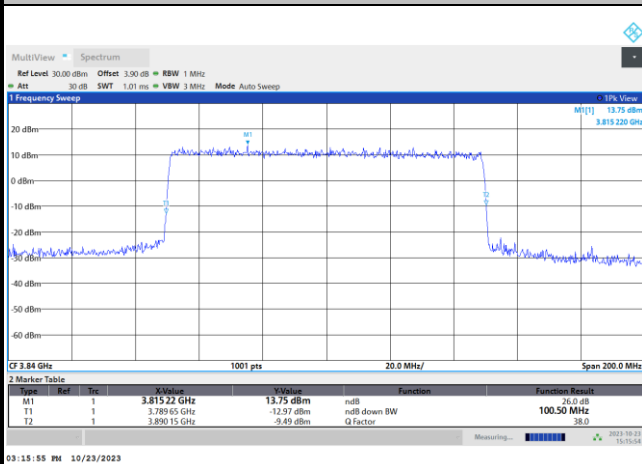
## QPSK



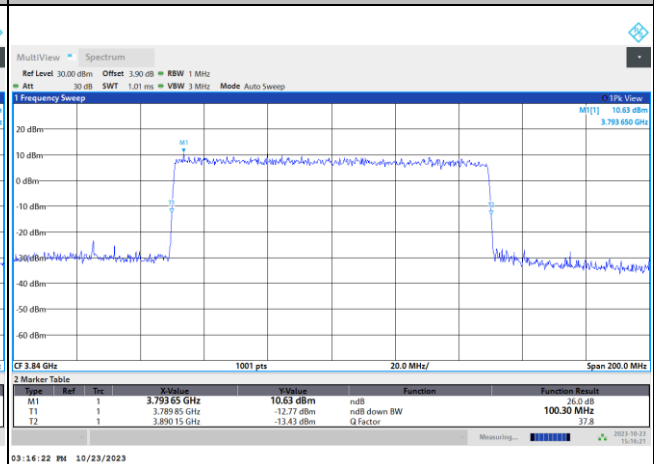
## 16QAM



## 64QAM



## 256QAM



**Occupied Bandwidth**

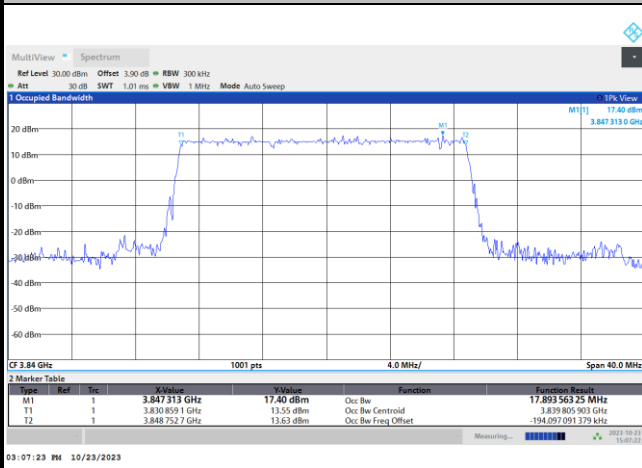
| Mode      | FR1 n77 HPUE : OB BW(MHz) / DFT-S OFDM |           |           |           |           |           |           |           |
|-----------|----------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| BW        | 20MHz                                  | 25MHz     | 30MHz     | 40MHz     | 50MHz     | 60MHz     | 70MHz     | 80MHz     |
| Mod.      | PI/2 BPSK                              | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK |
| Middle CH | 17.89                                  | -         | -         | 35.92     | 45.83     | 57.87     | -         | 77.05     |
| BW        | 90MHz                                  | 100MHz    |           |           |           |           |           |           |
| Mod.      | PI/2 BPSK                              | PI/2 BPSK |           |           |           |           |           |           |
| Middle CH | 86.60                                  | 96.35     |           |           |           |           |           |           |

| Mode      | FR1 n77 HPUE : OB BW(MHz) / CP OFDM |        |        |        |       |        |       |        |
|-----------|-------------------------------------|--------|--------|--------|-------|--------|-------|--------|
| BW        | 20MHz                               |        | 25MHz  |        | 30MHz |        | 40MHz |        |
| Mod.      | QPSK                                | 16QAM  | QPSK   | 16QAM  | QPSK  | 16QAM  | QPSK  | 16QAM  |
| Middle CH | 18.26                               | 18.25  | -      | -      | -     | -      | 37.95 | 38.06  |
| Mod.      | 64QAM                               | 256QAM | 64QAM  | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | 18.25                               | 18.26  | -      | -      | -     | -      | 38.06 | 38.00  |
| BW        | 50MHz                               |        | 60MHz  |        | 70MHz |        | 80MHz |        |
| Mod.      | QPSK                                | 16QAM  | QPSK   | 16QAM  | QPSK  | 16QAM  | QPSK  | 16QAM  |
| Middle CH | 47.65                               | 47.57  | 57.83  | 57.91  | -     | -      | 77.36 | 77.31  |
| Mod.      | 64QAM                               | 256QAM | 64QAM  | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |
| Middle CH | 47.44                               | 47.54  | 57.83  | 57.82  | -     | -      | 77.26 | 77.41  |
| BW        | 90MHz                               |        | 100MHz |        |       |        |       |        |
| Mod.      | QPSK                                | 16QAM  | QPSK   | 16QAM  |       |        |       |        |
| Middle CH | 87.34                               | 87.35  | 97.41  | 97.24  |       |        |       |        |
| Mod.      | 64QAM                               | 256QAM | 64QAM  | 256QAM |       |        |       |        |
| Middle CH | 87.31                               | 87.28  | 97.25  | 97.46  |       |        |       |        |



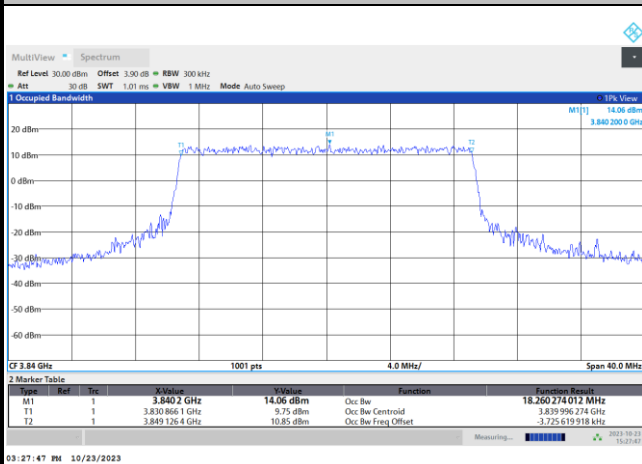
## FR1 n77 HPUE / 20MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

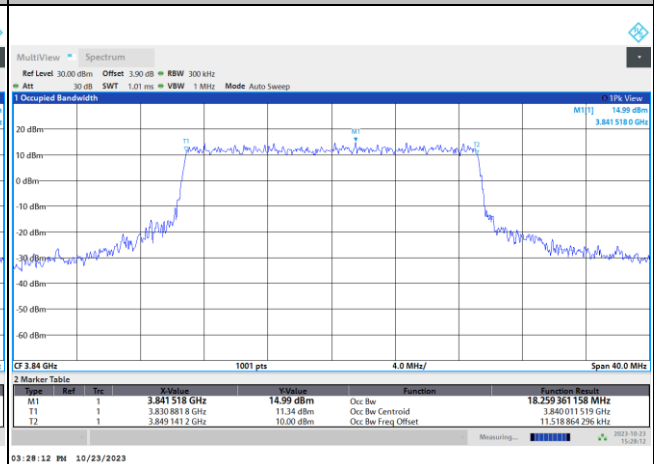


## FR1 n77 HPUE / 20MHz / CP OFDM / Middle Channel / Full RB

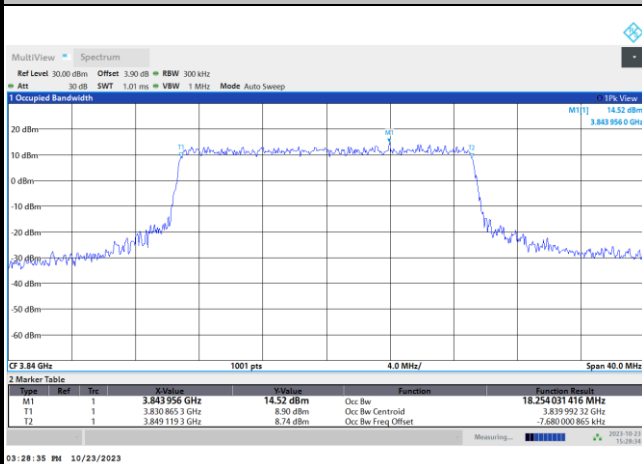
## QPSK



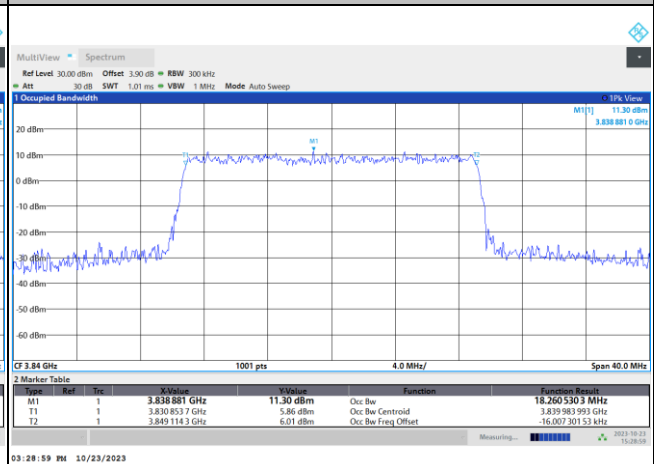
## 16QAM



## 64QAM

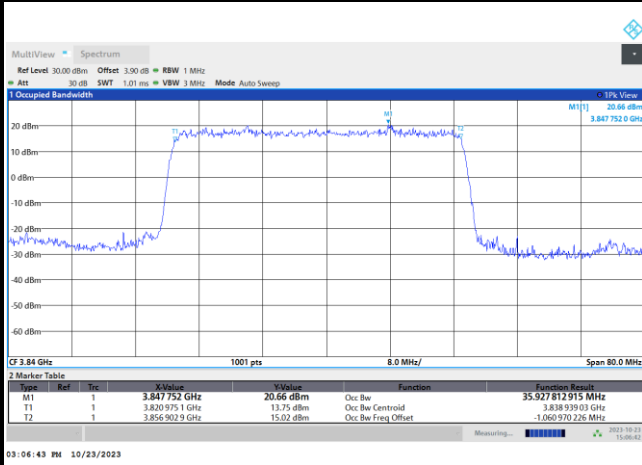


## 256QAM



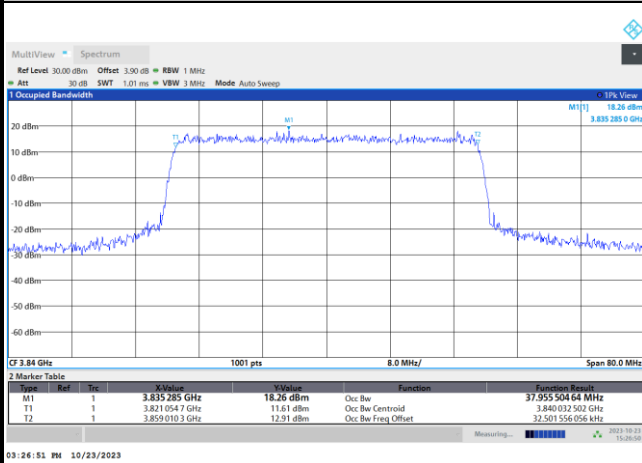
### FR1 n77 HPUE / 40MHz / DFT-S OFDM / Middle Channel / Full RB

#### PI/2 BPSK

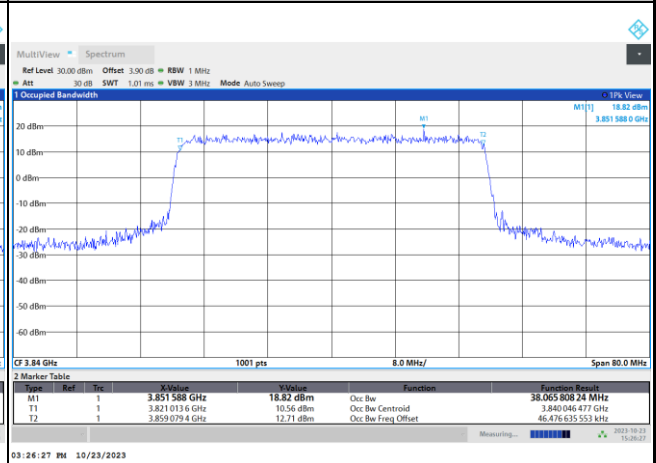


### FR1 n77 HPUE / 40MHz / CP OFDM / Middle Channel / Full RB

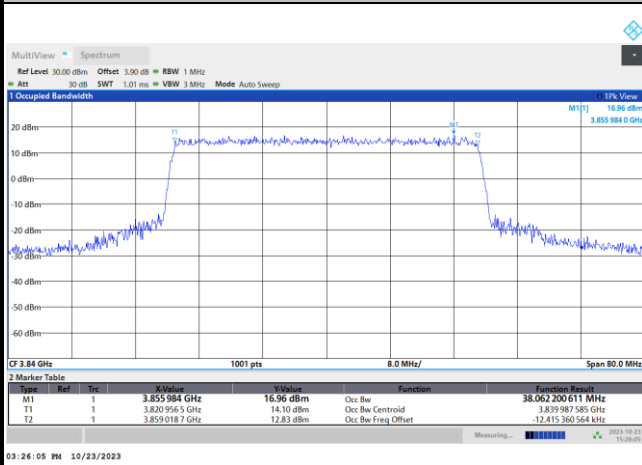
#### QPSK



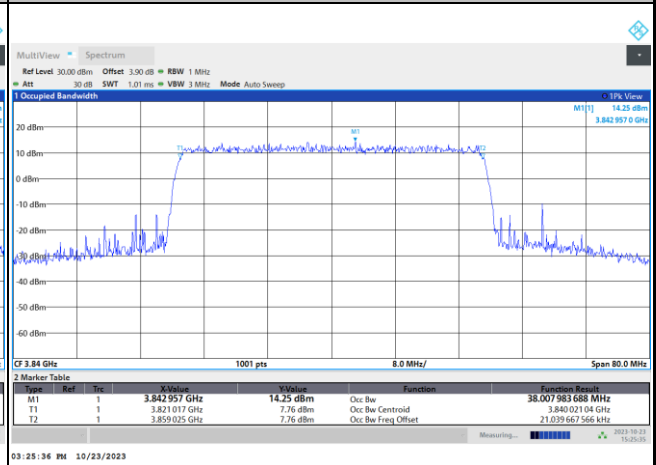
#### 16QAM



#### 64QAM



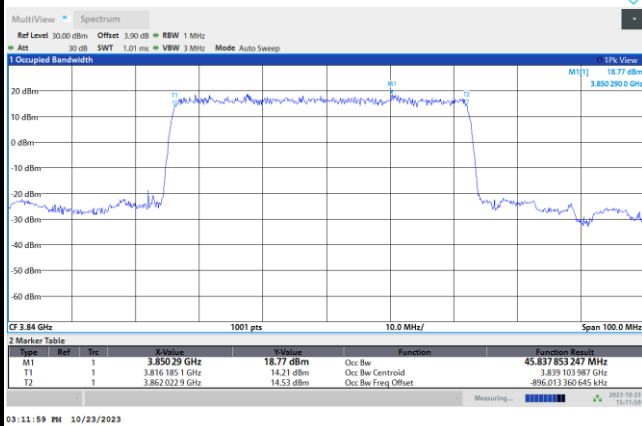
#### 256QAM





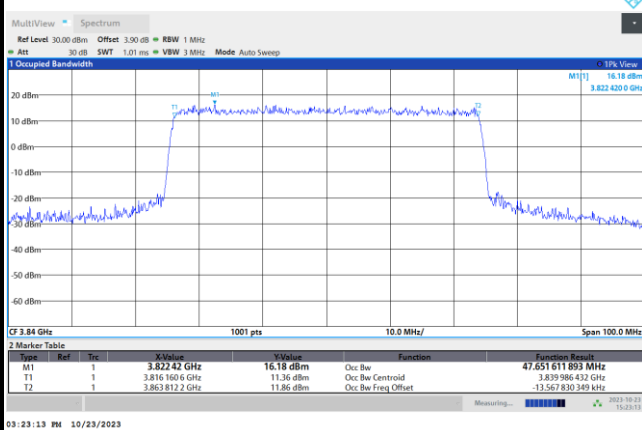
## FR1 n77 HPUE / 50MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

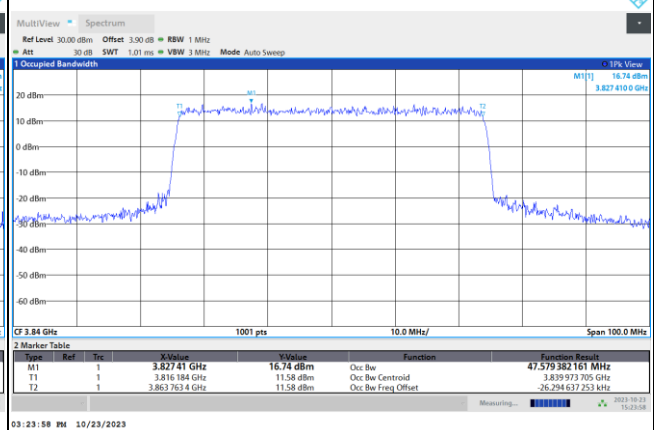


## FR1 n77 HPUE / 50MHz / CP OFDM / Middle Channel / Full RB

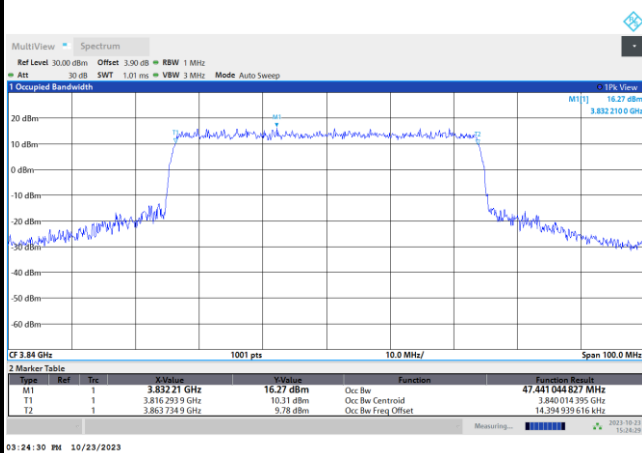
## QPSK



## 16QAM



## 64QAM



## 256QAM

