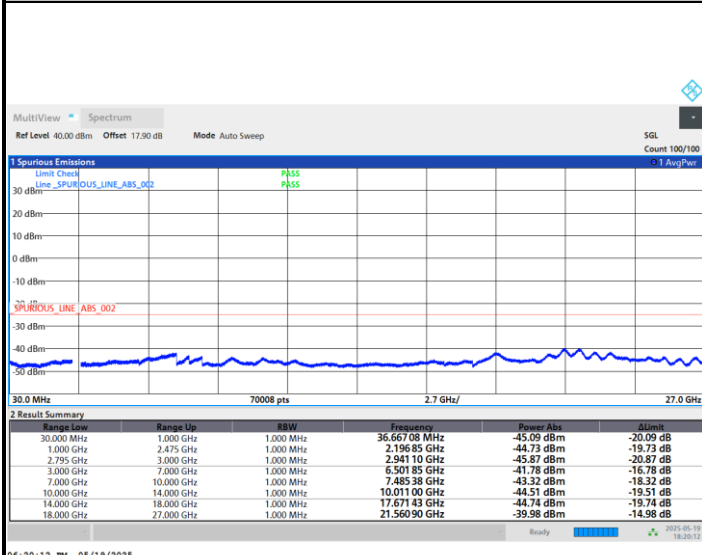




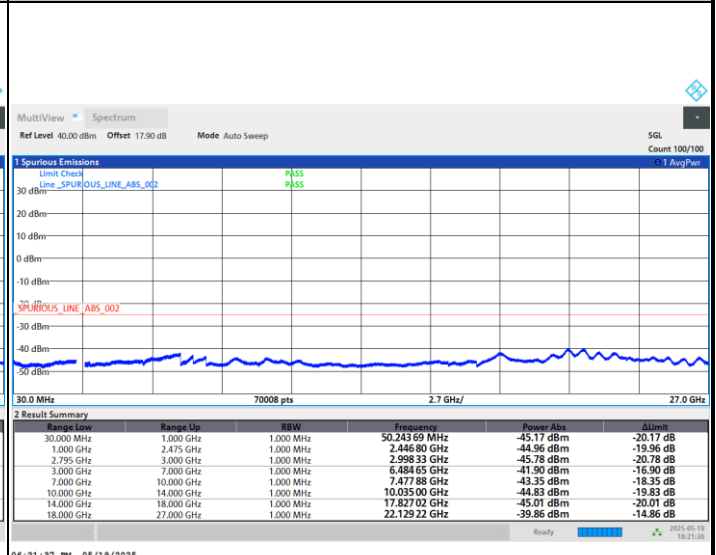
# Conducted Spurious Emission

FR1 n41 / 10MHz / DFT-S OFDM / QPSK / 1RB1

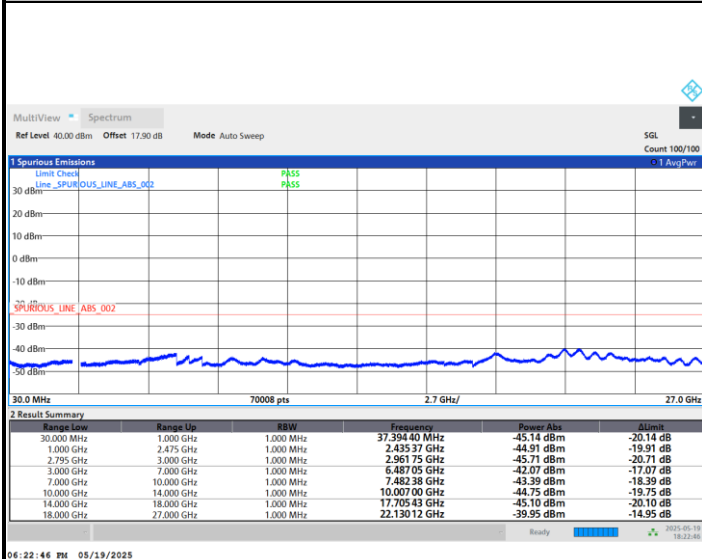
## Lowest Channel



## Middle Channel



## Highest Channel



## Frequency Stability

| Test Conditions     |                   | FR1 n41 ((PI/2 BPSK)) / Middle Channel | Limit   |
|---------------------|-------------------|----------------------------------------|---------|
| Temperature<br>(°C) | Voltage<br>(Volt) | BW 20MHz                               | Note 2. |
|                     |                   | Deviation (ppm)                        | Result  |
| 50                  | Normal Voltage    | 0.0027                                 | PASS    |
| 40                  | Normal Voltage    | 0.0024                                 |         |
| 30                  | Normal Voltage    | 0.0010                                 |         |
| 20(Ref.)            | Normal Voltage    | 0.0000                                 |         |
| 10                  | Normal Voltage    | 0.0008                                 |         |
| 0                   | Normal Voltage    | 0.0028                                 |         |
| -10                 | Normal Voltage    | 0.0000                                 |         |
| -20                 | Normal Voltage    | 0.0009                                 |         |
| -30                 | Normal Voltage    | 0.0017                                 |         |
| 20                  | Maximum Voltage   | 0.0016                                 |         |
| 20                  | Normal Voltage    | 0.0000                                 |         |
| 20                  | Minimum Voltage   | 0.0022                                 |         |

**Note:**

1. Normal Voltage = 3.3 V. ; Minimum Voltage = 3.135 V. ; Maximum Voltage = 4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.
3. The frequency variation is sufficient to ensure that the occupied bandwidth of all operation channels stay within the operating frequency block or frequency block group.

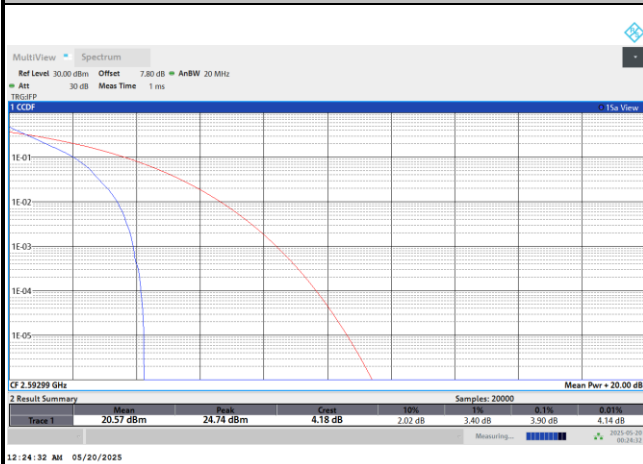
**FR1 n41****MIMO <Ant. 0+2> (Ant. 2)****Peak-to-Average Ratio**

| Mode      | FR1 n41 / 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 | 3.90                         | 4.48    | 5.42    | 5.84    | <b>PASS</b> |
| Mode      | FR1 n41 / 20MHz / DFT-S OFDM |         |         |         |             |
| Mod.      | 256QAM                       |         |         |         | Limit: 13dB |
| RB Size   | Full RB                      |         |         |         | Result      |
| Middle CH | 6.48                         |         |         |         | <b>PASS</b> |

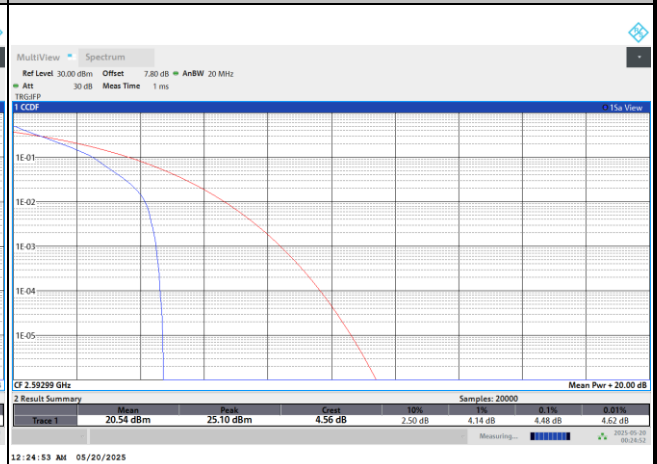


## FR1 n41 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

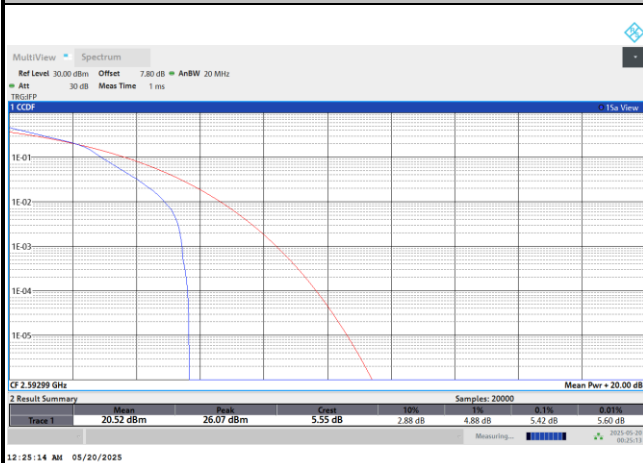
## PI/2 BPSK



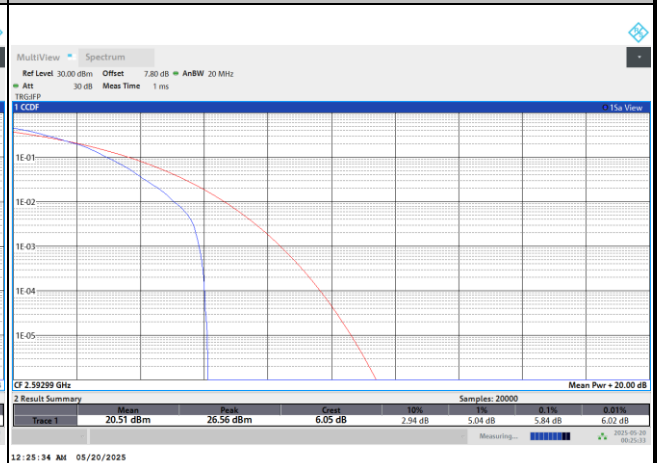
## QPSK



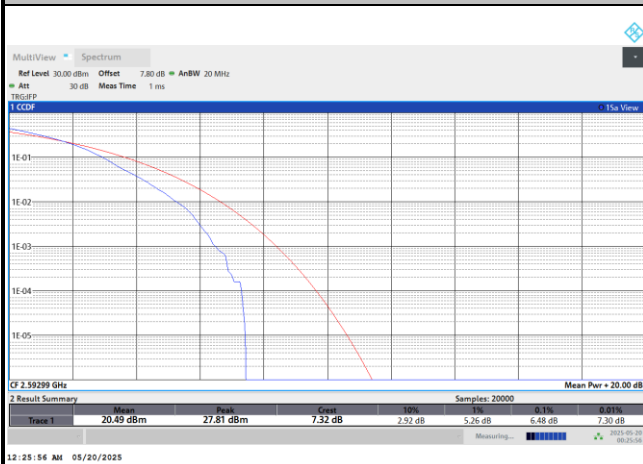
## 16QAM



## 64QAM



## 256QAM



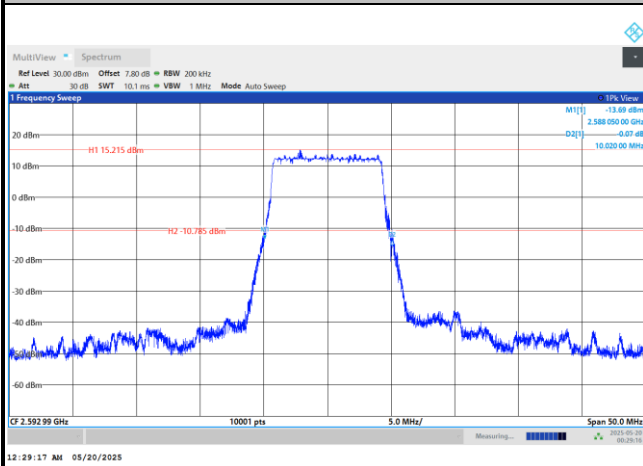
**26dB Bandwidth**

| Mode      | FR1 n41 : 26dB BW(MHz) / DFT-S OFDM |           |           |           |           |           |           |           |
|-----------|-------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| BW        | 10MHz                               | 15MHz     | 20MHz     | 25MHz     | 30MHz     | 40MHz     | 50MHz     | 60MHz     |
| 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 | 10.02                               | 14.44     | 19.46     | 24.96     | 29.79     | 38.47     | 48.69     | 62.76     |
| BW        | 70MHz                               | 80MHz     | 90MHz     | 100MHz    |           |           |           |           |
| Mod.      | PI/2 BPSK                           | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK |           |           |           |           |
| Middle CH | 69.13                               | 81.94     | 91.81     | 101.52    |           |           |           |           |

| Mode      | FR1 n41 : 26dB BW(MHz) / CP OFDM |        |       |        |       |        |        |        |
|-----------|----------------------------------|--------|-------|--------|-------|--------|--------|--------|
| BW        | 10MHz                            |        | 15MHz |        | 20MHz |        | 25MHz  |        |
| Mod.      | QPSK                             | 16QAM  | QPSK  | 16QAM  | QPSK  | 16QAM  | QPSK   | 16QAM  |
| Middle CH | 10.11                            | 10.23  | 15.57 | 15.27  | 19.90 | 19.74  | 25.22  | 25.41  |
| Mod.      | 64QAM                            | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM  | 256QAM |
| Middle CH | 10.30                            | 10.10  | 15.34 | 15.12  | 20.02 | 19.95  | 25.32  | 25.29  |
| BW        | 30MHz                            |        | 40MHz |        | 50MHz |        | 60MHz  |        |
| Mod.      | QPSK                             | 16QAM  | QPSK  | 16QAM  | QPSK  | 16QAM  | QPSK   | 16QAM  |
| Middle CH | 30.85                            | 30.79  | 40.86 | 40.76  | 50.57 | 50.63  | 62.67  | 62.89  |
| Mod.      | 64QAM                            | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM  | 256QAM |
| Middle CH | 30.71                            | 30.69  | 41.20 | 40.98  | 50.24 | 50.46  | 64.45  | 62.55  |
| BW        | 70MHz                            |        | 80MHz |        | 90MHz |        | 100MHz |        |
| Mod.      | QPSK                             | 16QAM  | QPSK  | 16QAM  | QPSK  | 16QAM  | QPSK   | 16QAM  |
| Middle CH | 72.36                            | 72.42  | 82.42 | 82.46  | 92.56 | 92.86  | 102.71 | 102.78 |
| Mod.      | 64QAM                            | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM  | 256QAM |
| Middle CH | 72.55                            | 72.42  | 82.70 | 82.61  | 92.90 | 92.54  | 102.83 | 102.69 |

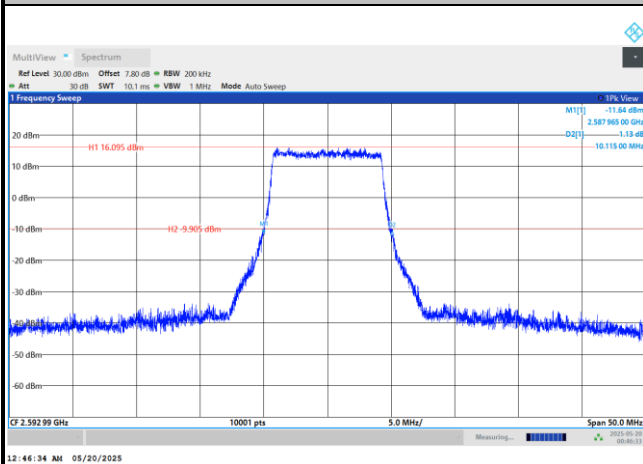
## FR1 n41 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

### PI/2 BPSK

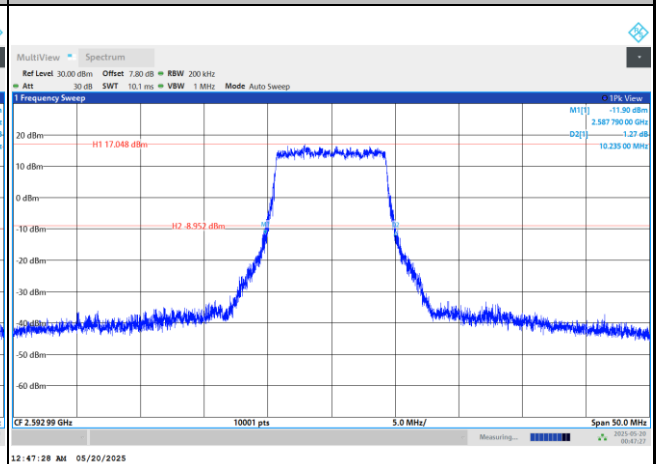


## FR1 n41 / 10MHz / CP OFDM / Middle Channel / Full RB

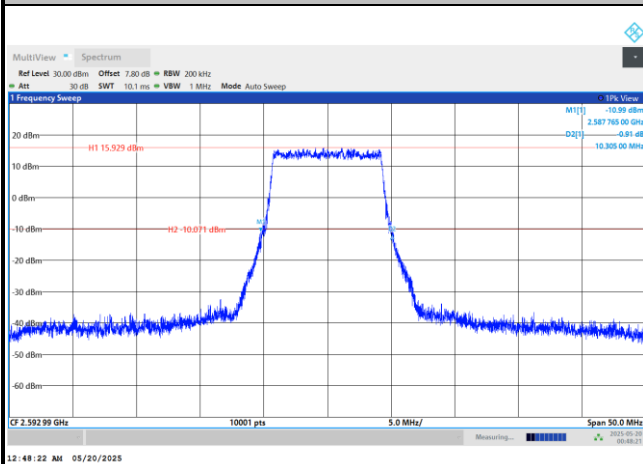
### QPSK



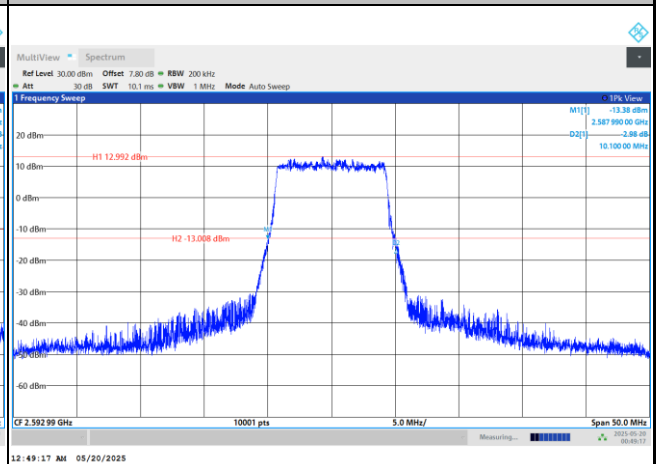
### 16QAM



### 64QAM



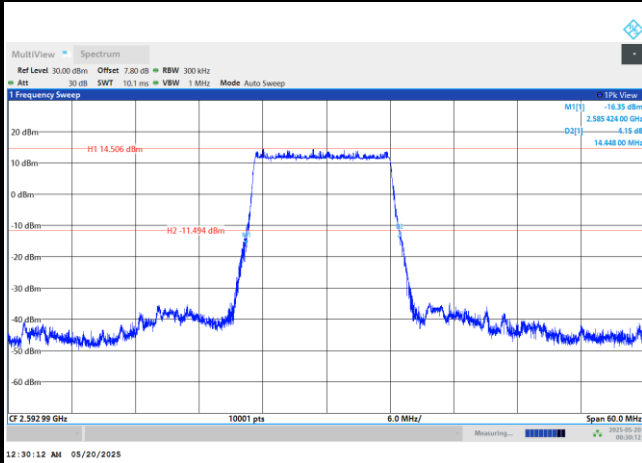
### 256QAM





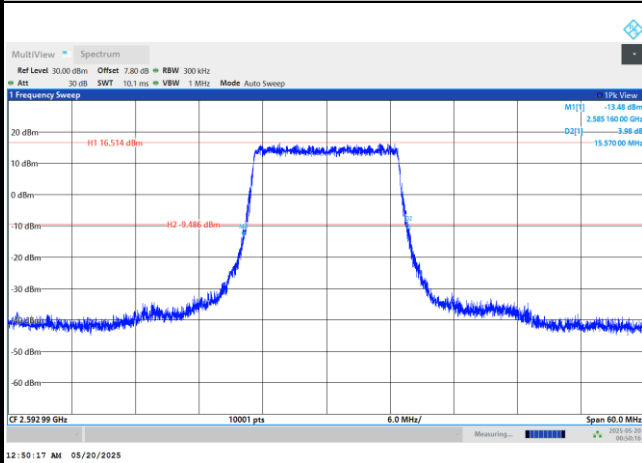
## FR1 n41 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

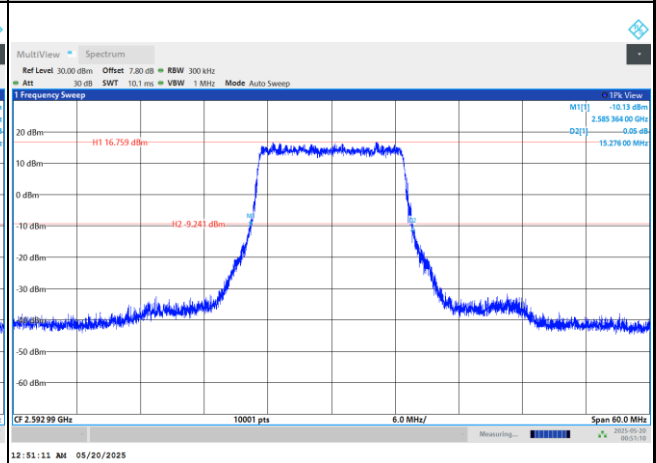


## FR1 n41 / 15MHz / CP OFDM / Middle Channel / Full RB

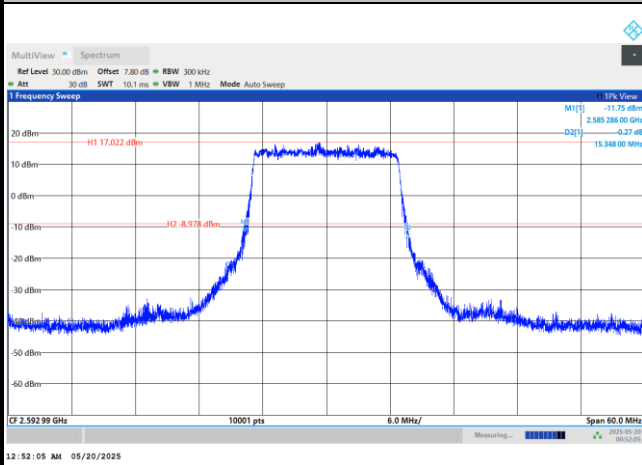
## QPSK



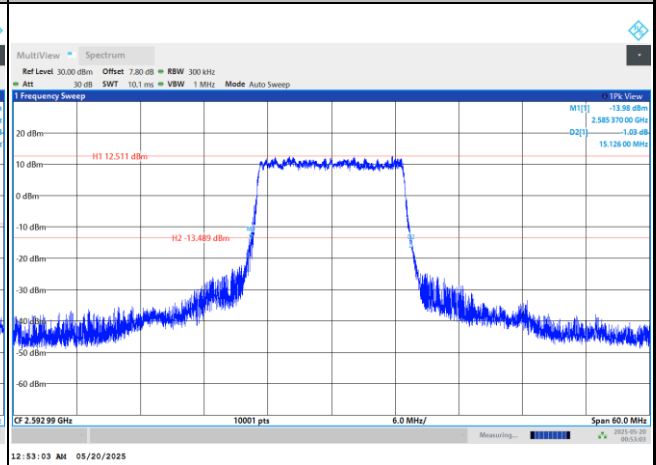
## 16QAM



## 64QAM



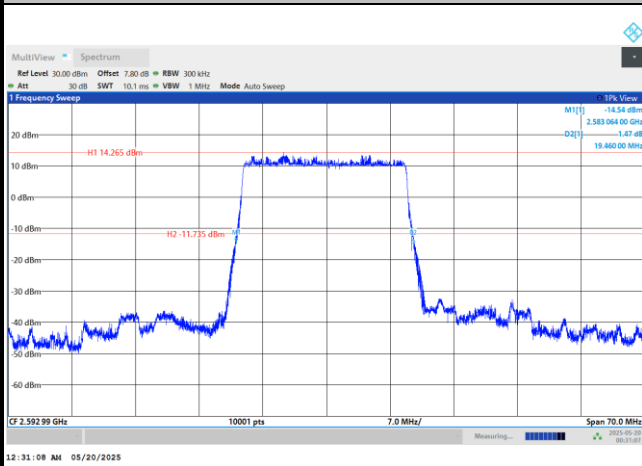
## 256QAM





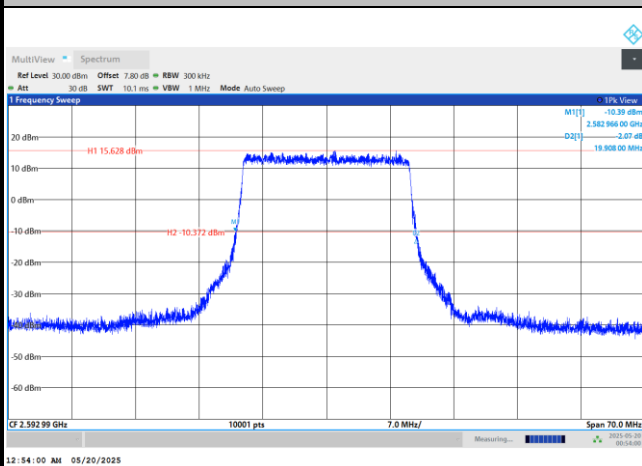
## FR1 n41 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

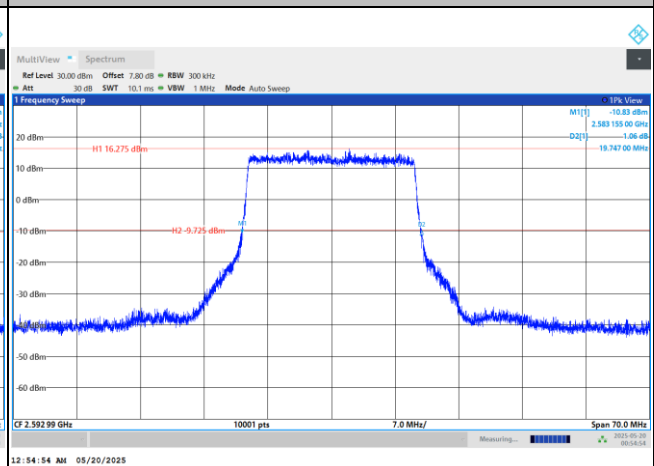


## FR1 n41 / 20MHz / CP OFDM / Middle Channel / Full RB

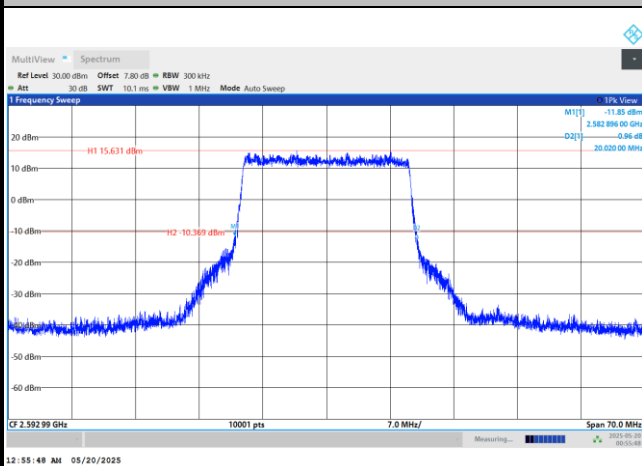
## QPSK



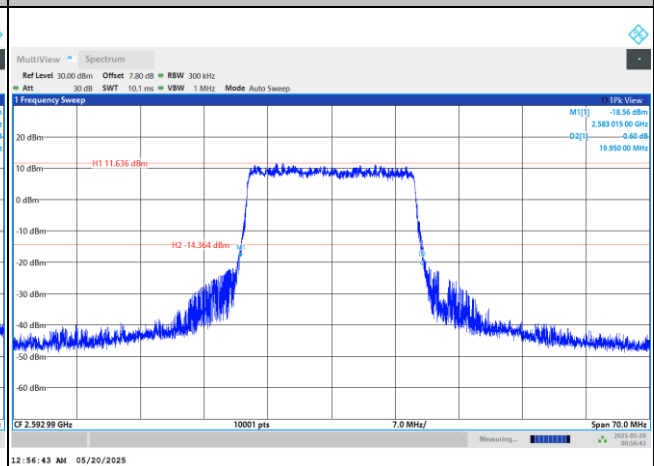
## 16QAM



## 64QAM



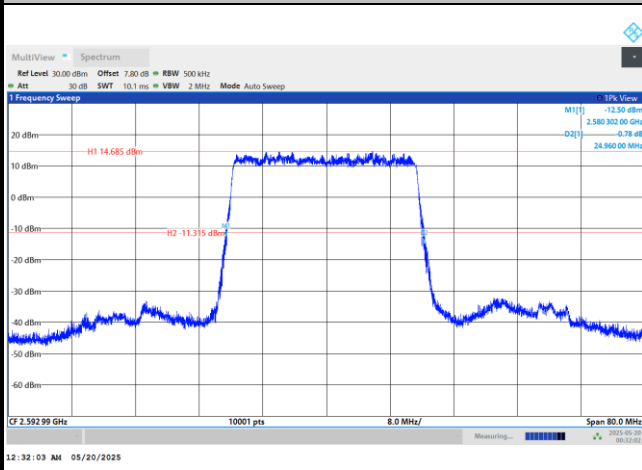
## 256QAM





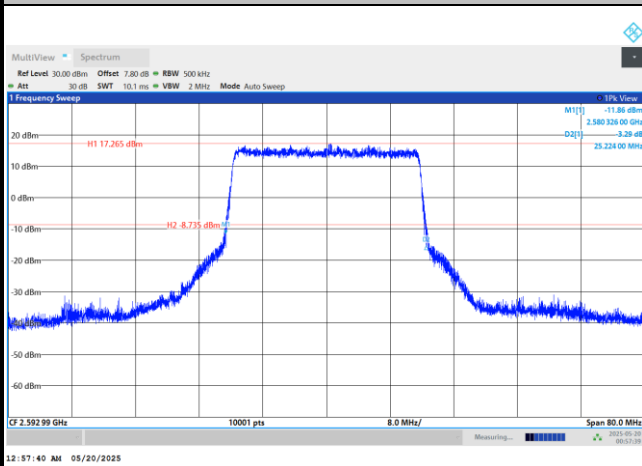
## FR1 n41 / 25MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

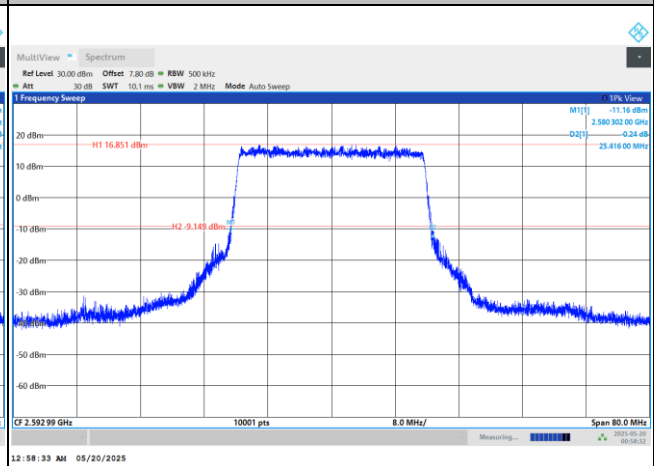


## FR1 n41 / 25MHz / CP OFDM / Middle Channel / Full RB

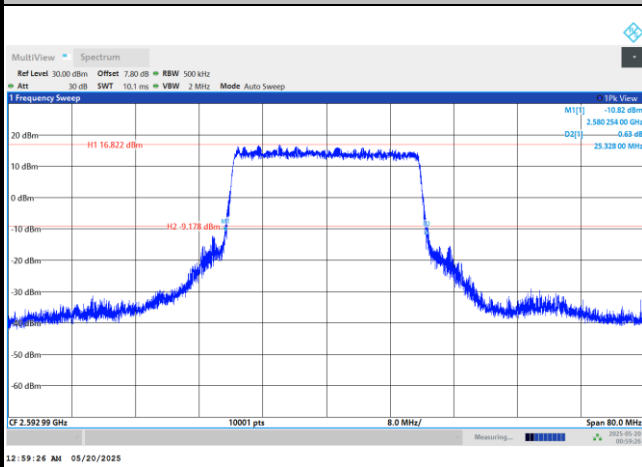
## QPSK



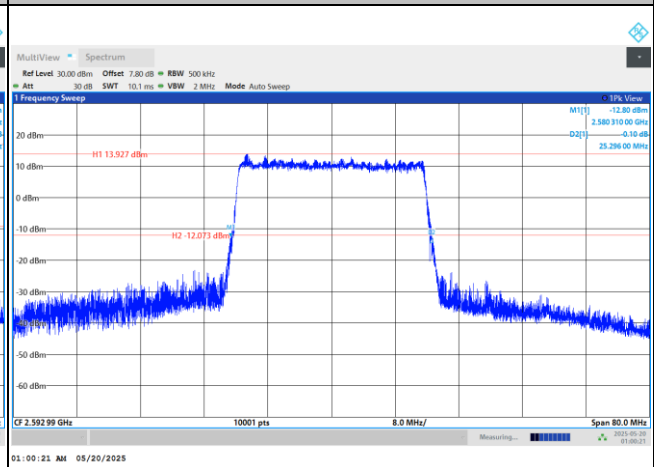
## 16QAM



## 64QAM



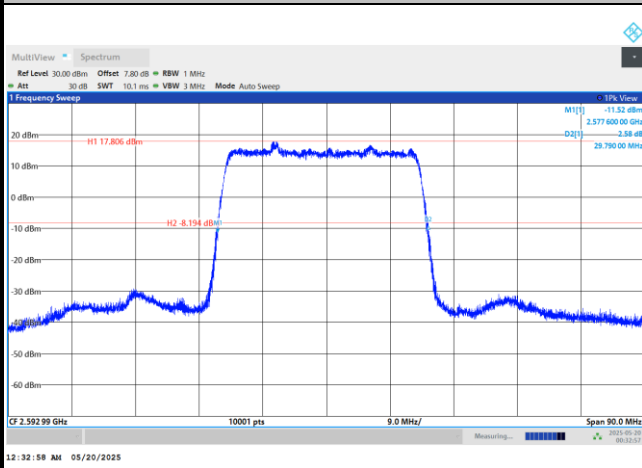
## 256QAM





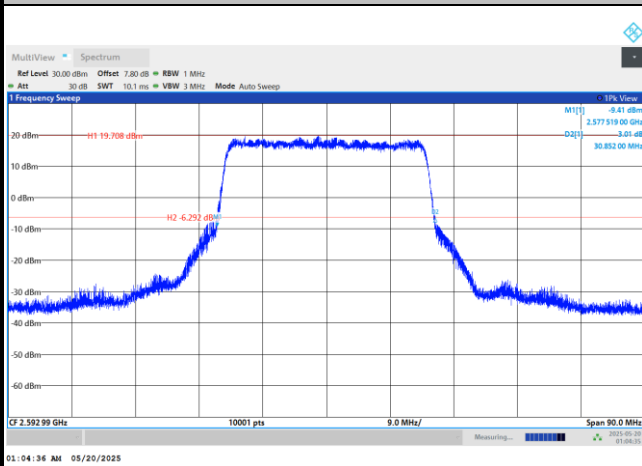
FR1 n41 / 30MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

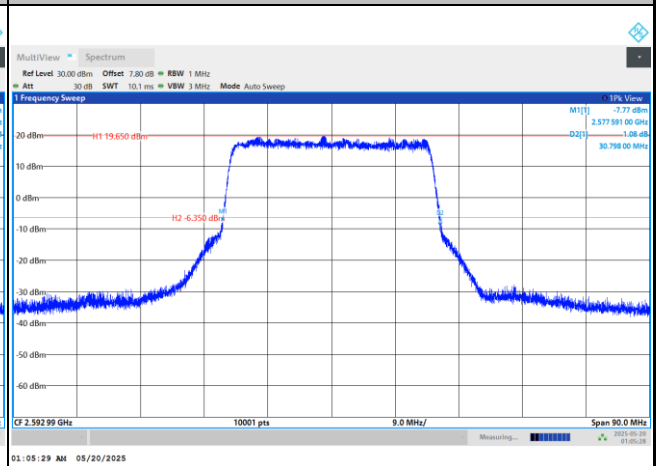


FR1 n41 / 30MHz / CP OFDM / Middle Channel / Full RB

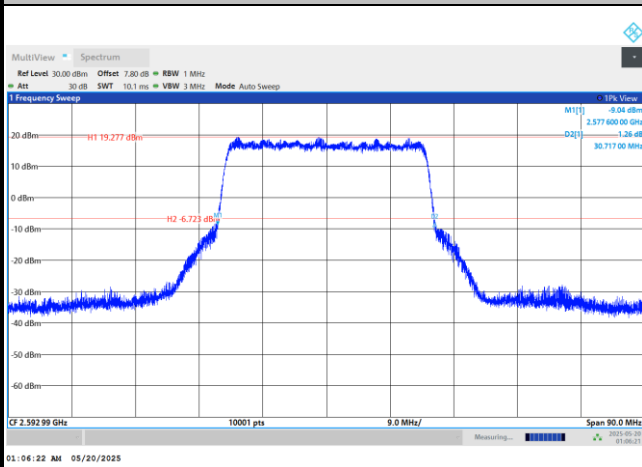
QPSK



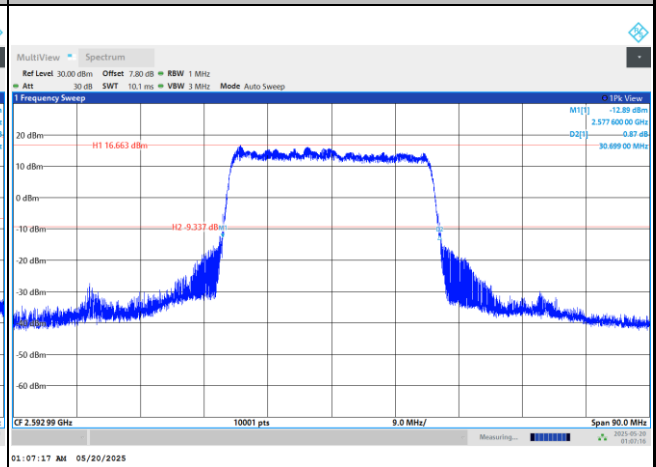
16QAM



64QAM



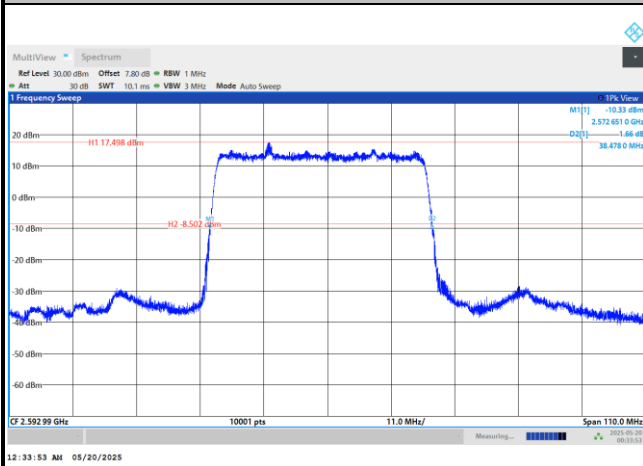
256QAM





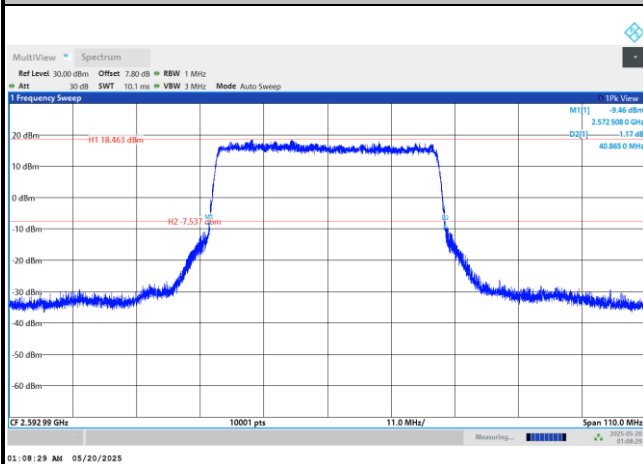
## FR1 n41 / 40MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

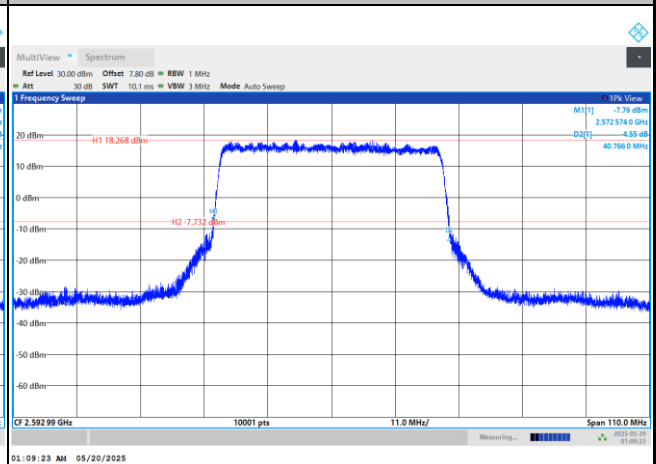


## FR1 n41 / 40MHz / CP OFDM / Middle Channel / Full RB

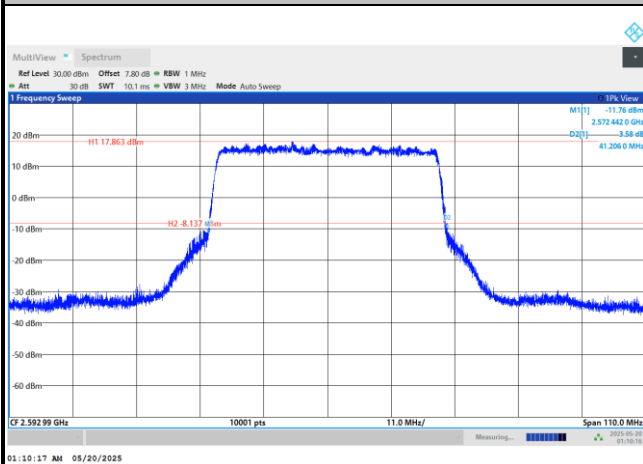
## QPSK



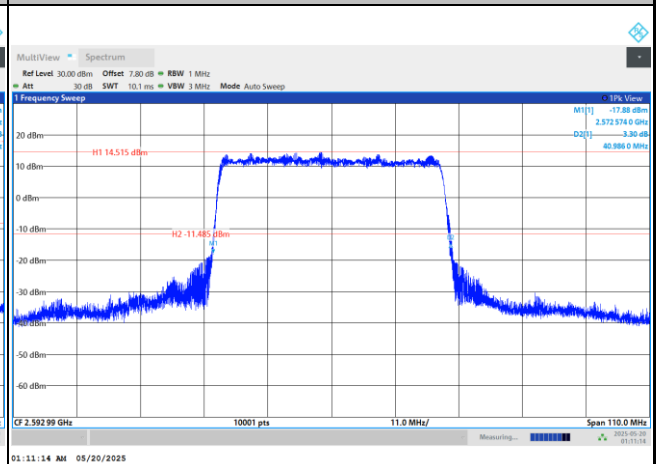
## 16QAM

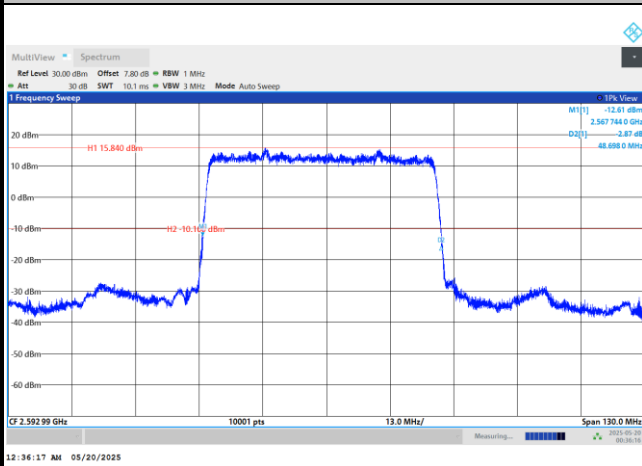
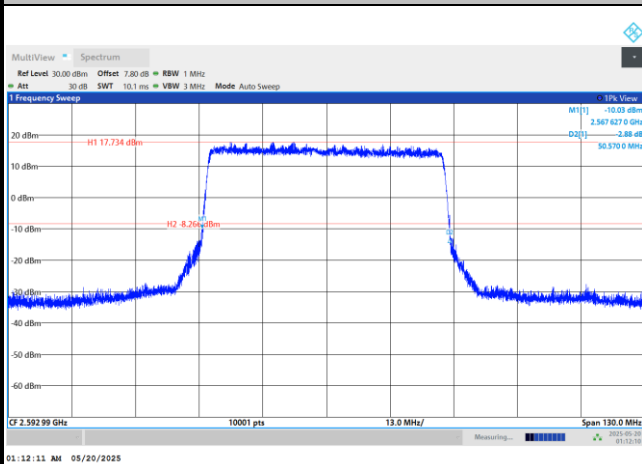
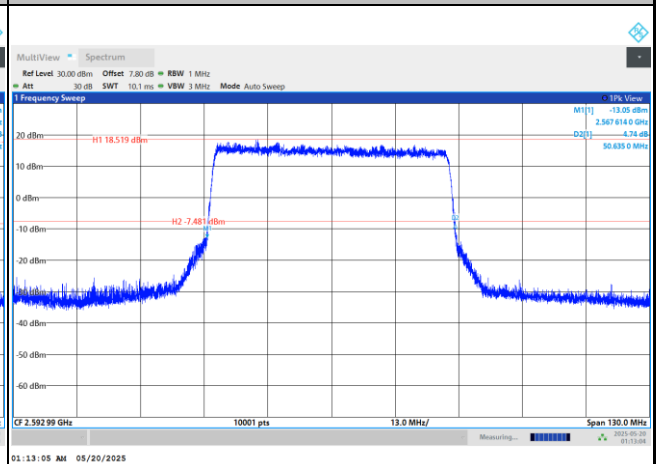
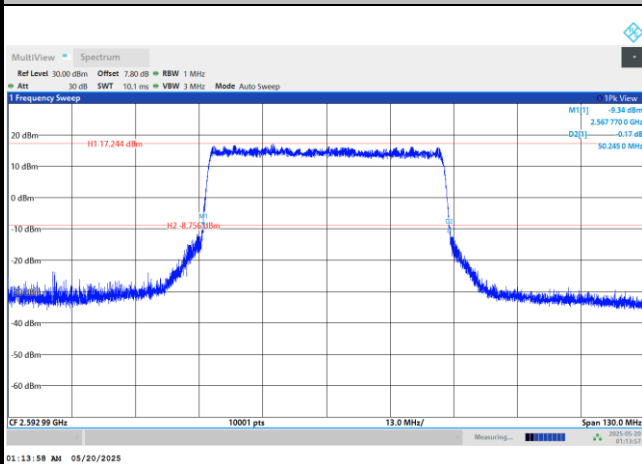
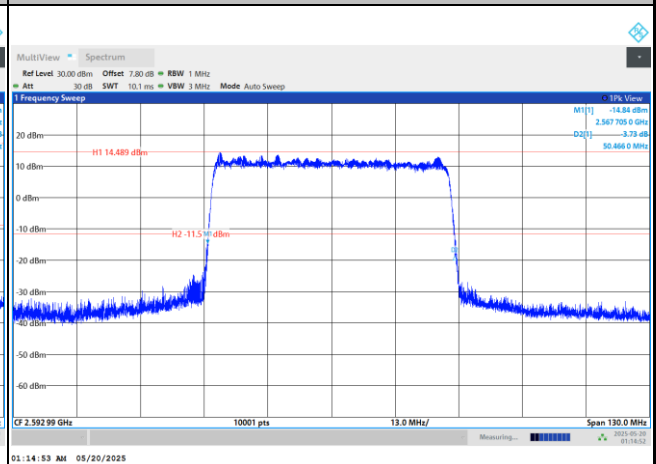


## 64QAM



## 256QAM

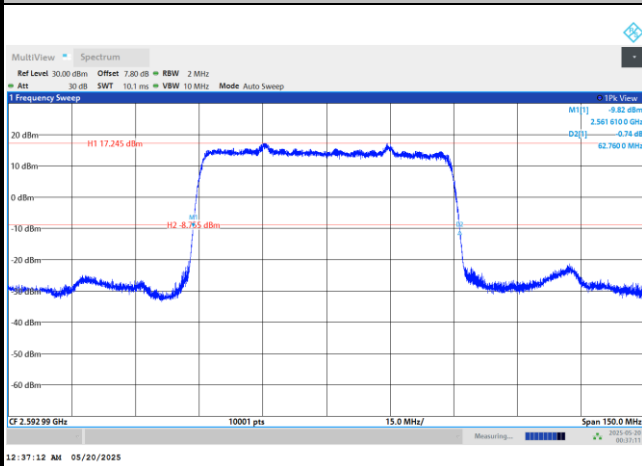


**FR1 n41 / 50MHz / DFT-S OFDM / Middle Channel / Full RB**
**PI/2 BPSK**

**FR1 n41 / 50MHz / CP OFDM / Middle Channel / Full RB**
**QPSK**

**16QAM**

**64QAM**

**256QAM**




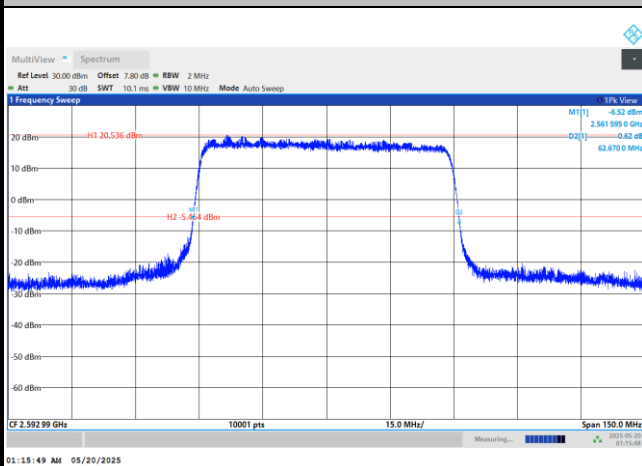
## FR1 n41 / 60MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

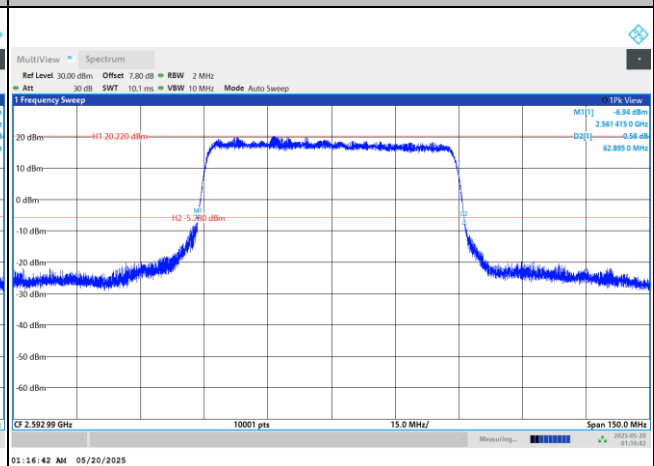


## FR1 n41 / 60MHz / CP OFDM / Middle Channel / Full RB

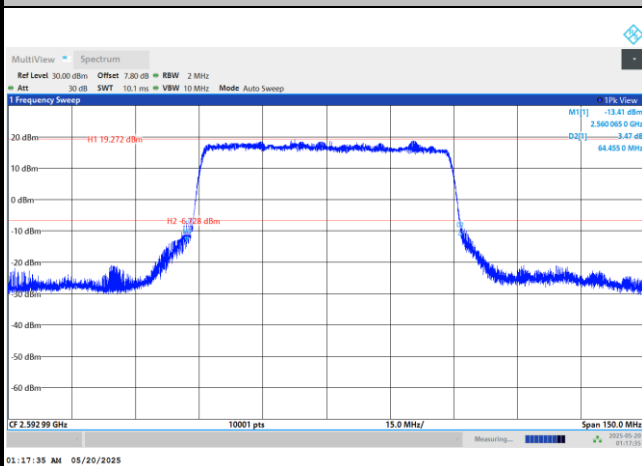
## QPSK



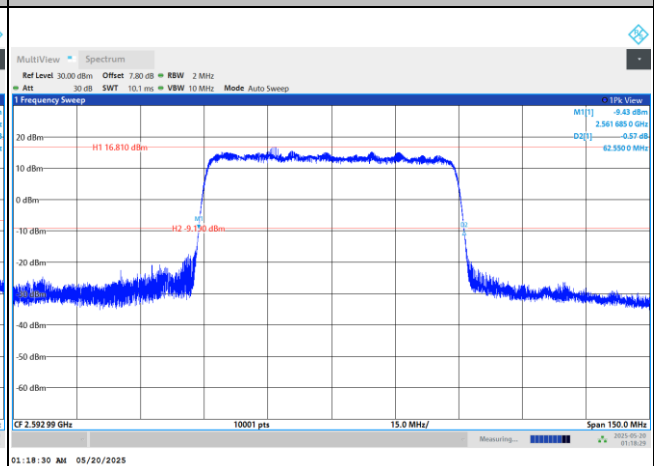
## 16QAM



## 64QAM



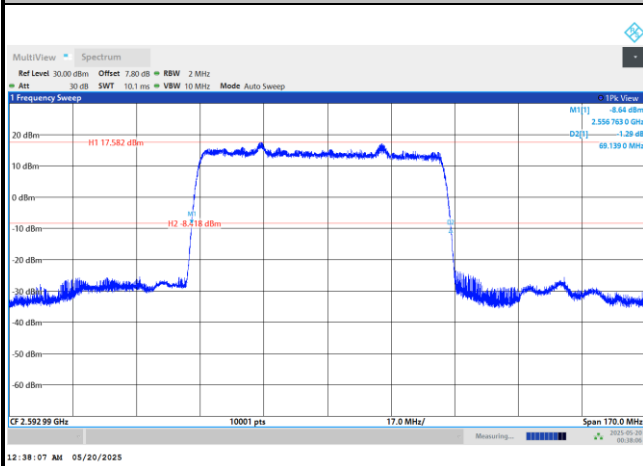
## 256QAM





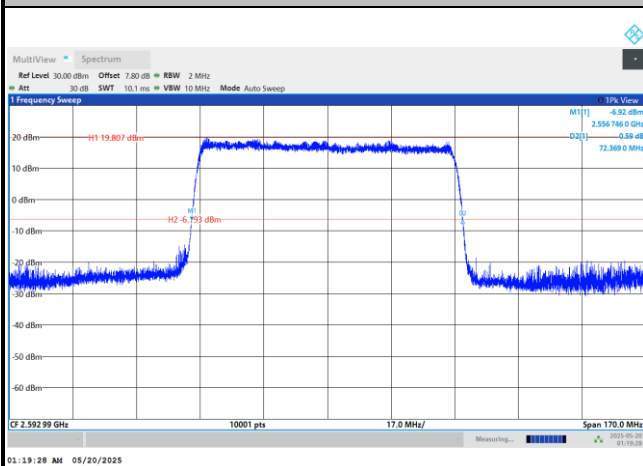
## FR1 n41 / 70MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

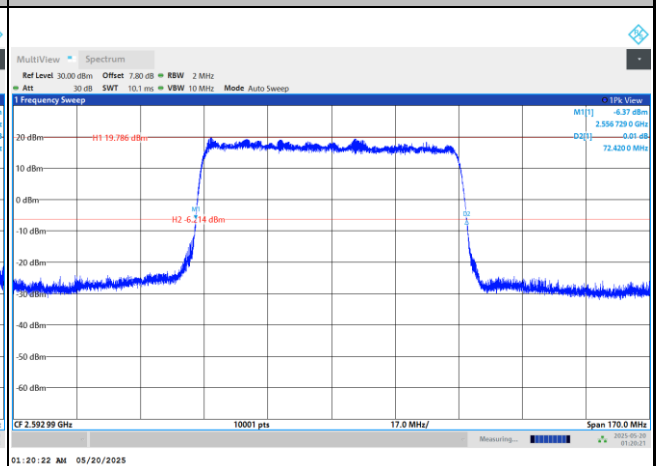


## FR1 n41 / 70MHz / CP OFDM / Middle Channel / Full RB

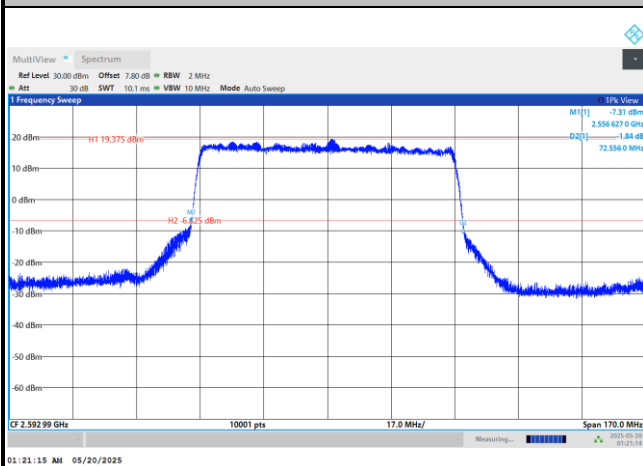
## QPSK



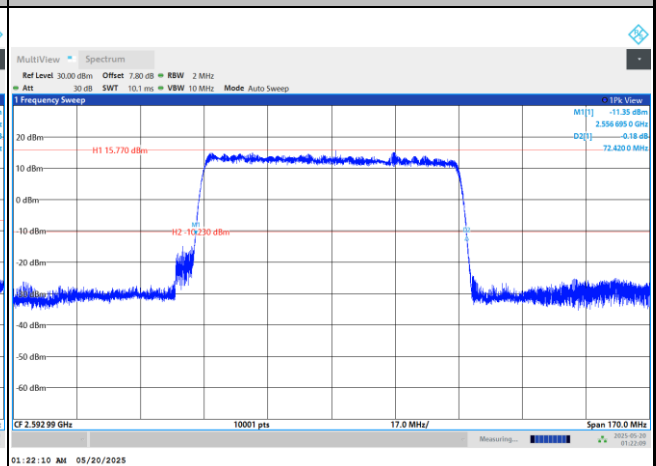
## 16QAM



## 64QAM



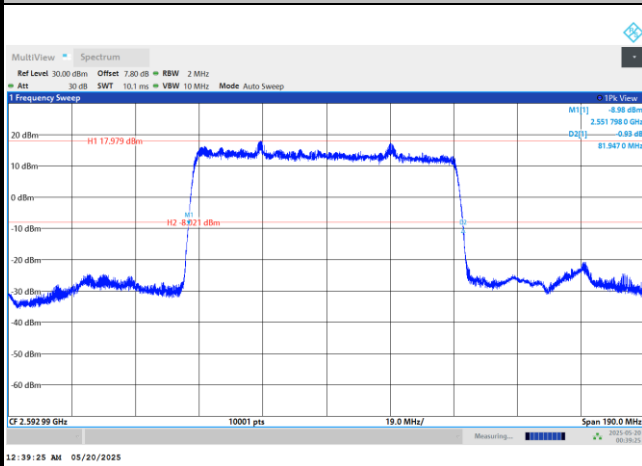
## 256QAM





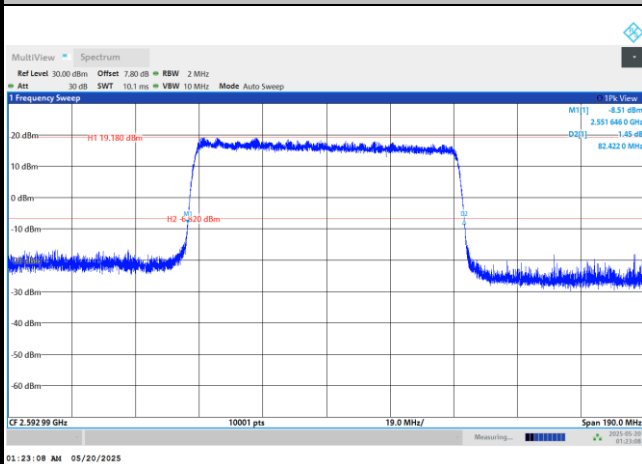
## FR1 n41 / 80MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

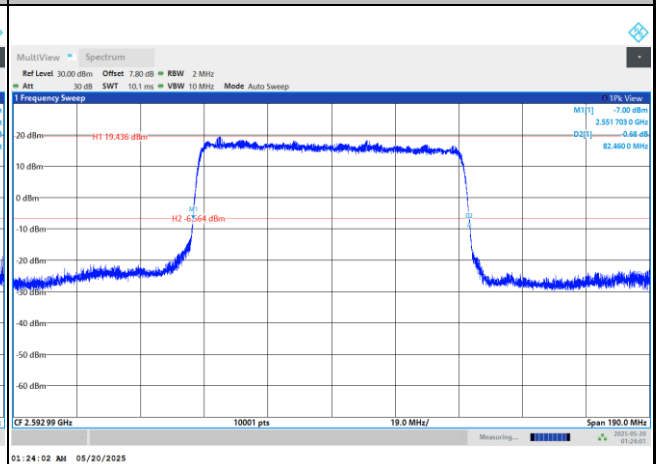


## FR1 n41 / 80MHz / CP OFDM / Middle Channel / Full RB

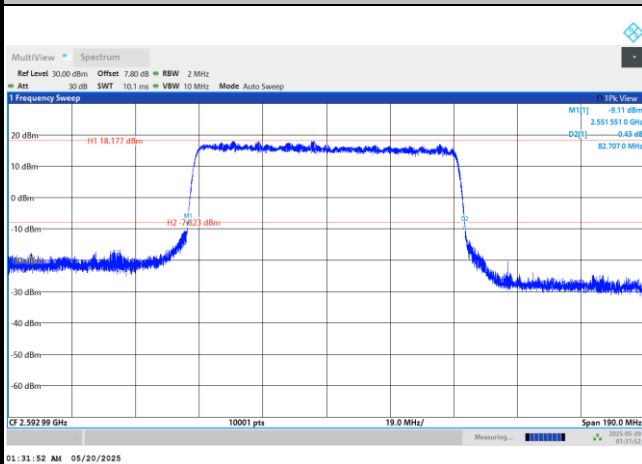
## QPSK



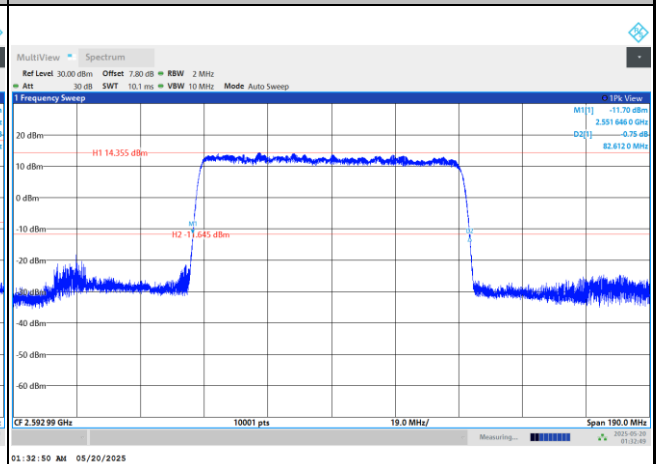
## 16QAM



## 64QAM



## 256QAM





MultiView ☐ Spectrum

Ref Level 30.00 dBm Offset 7.80 dB RBW 2 MHz

Att 30 dB SWT 10.1 ms VBW 10 MHz Mode Auto Sweep

1 Frequency Sweep

10% View

Max 1 -10.74 dBm  
2.546 SMO 0 GHz  
D201 -0.28 dB  
91.812 0 MHz

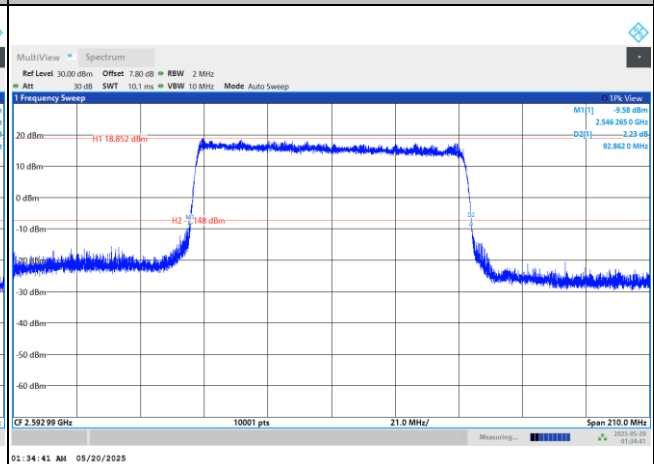
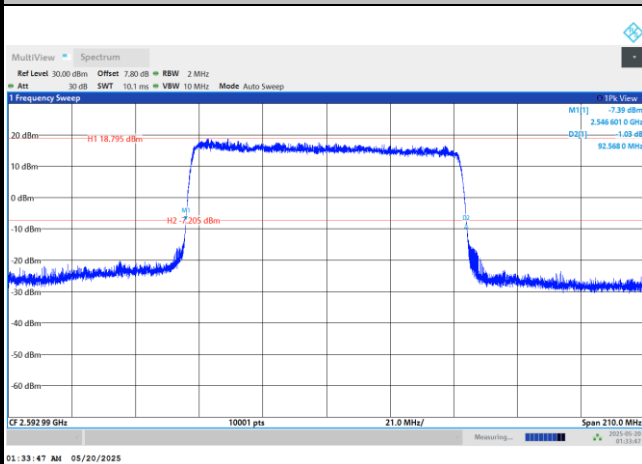
H1 16.534 dBm  
H2 -9.466 dBm

CF 2.59299 GHz 10001 pts 21.0 MHz/ Span 210.0 MHz

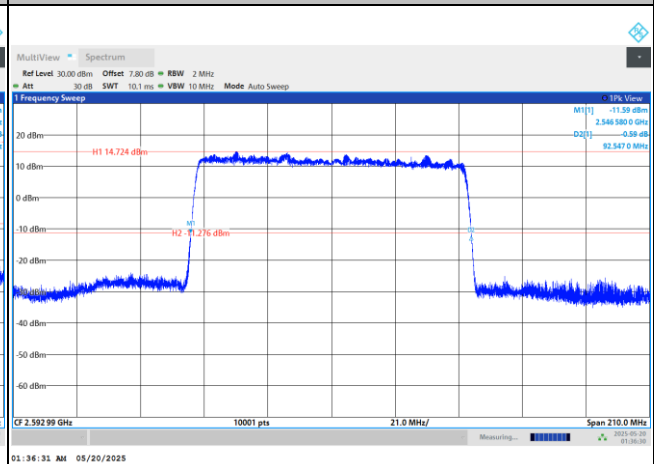
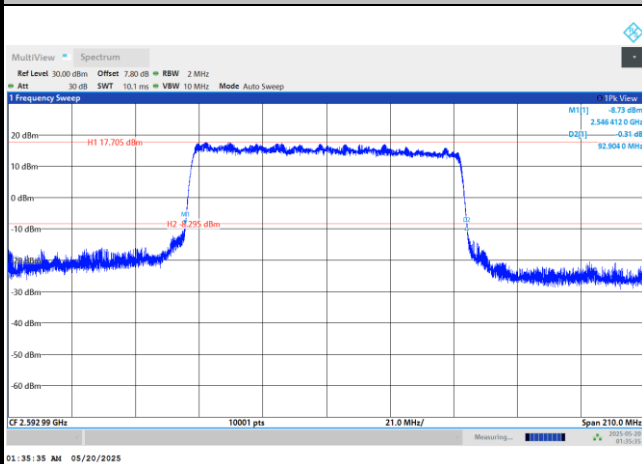
Measuring...

12:40:54 AM 05/20/2025

## 16QAM



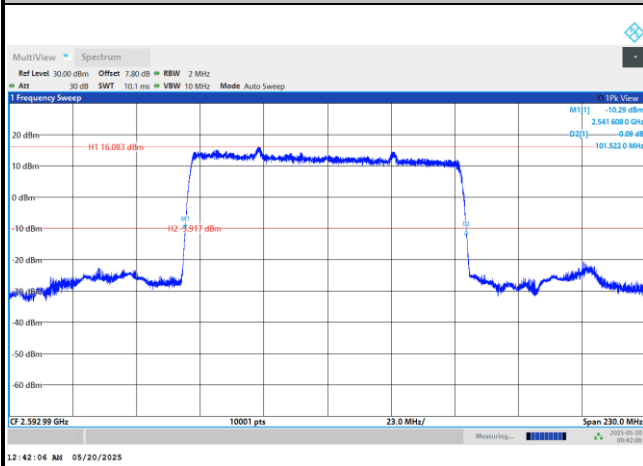
## 256QAM





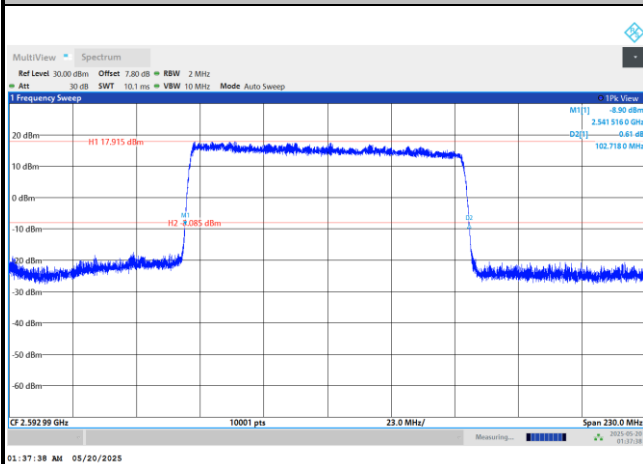
## FR1 n41 / 100MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

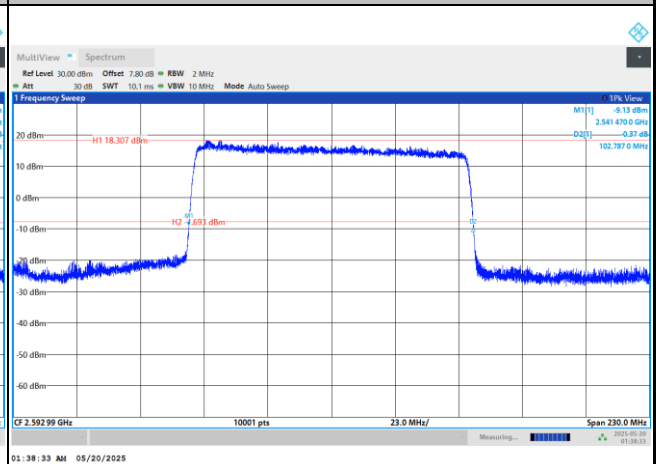


## FR1 n41 / 100MHz / CP OFDM / Middle Channel / Full RB

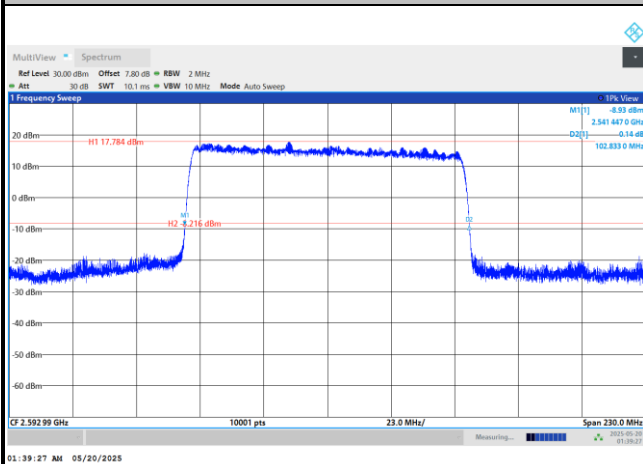
## QPSK



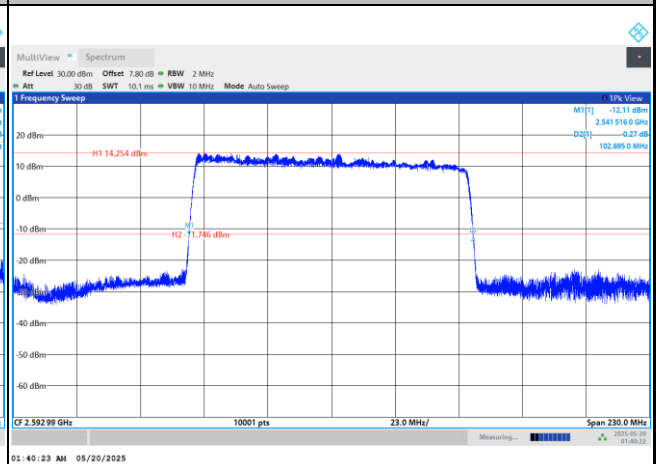
## 16QAM



## 64QAM



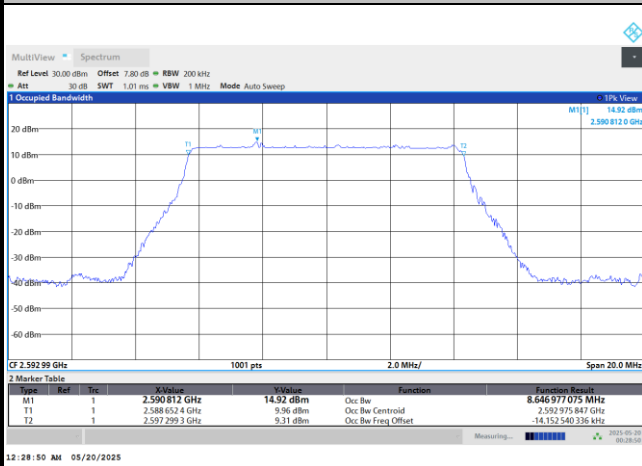
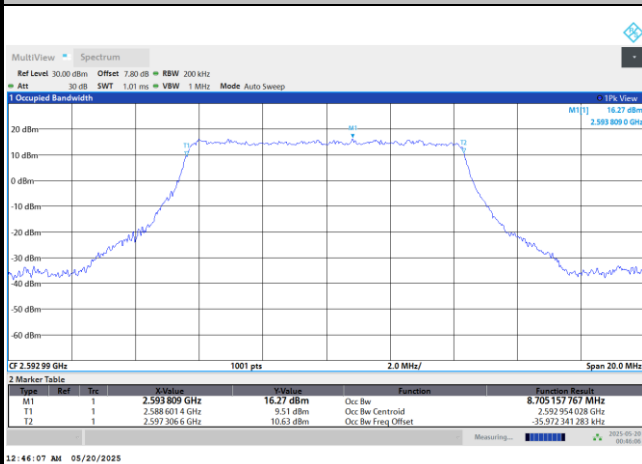
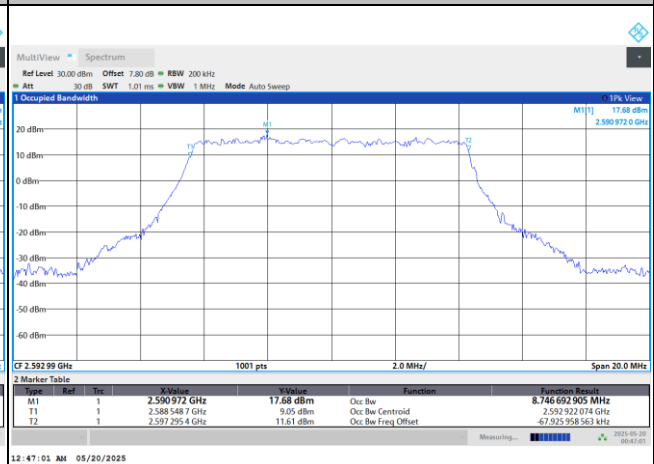
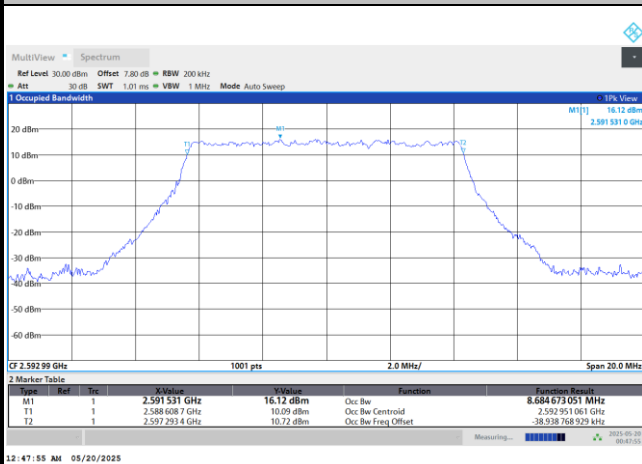
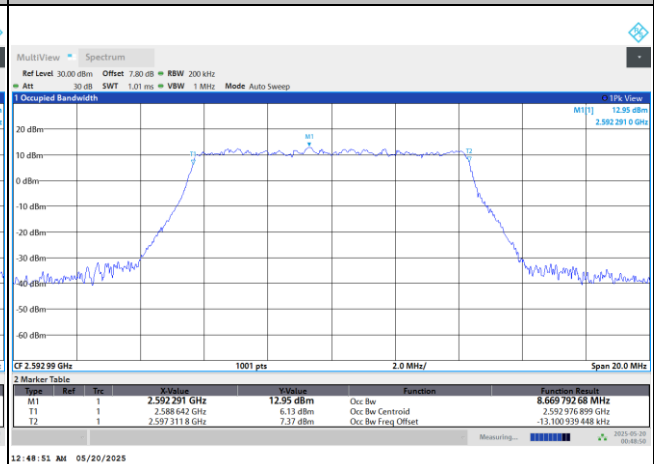
## 256QAM



**Occupied Bandwidth**

| Mode      | FR1 n41 : OB BW(MHz) / DFT-S OFDM |           |           |           |           |           |           |           |
|-----------|-----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| BW        | 10MHz                             | 15MHz     | 20MHz     | 25MHz     | 30MHz     | 40MHz     | 50MHz     | 60MHz     |
| 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 | 8.64                              | 12.95     | 17.85     | 22.99     | 27.18     | 35.87     | 45.87     | 58.56     |
| BW        | 70MHz                             | 80MHz     | 90MHz     | 100MHz    |           |           |           |           |
| Mod.      | PI/2 BPSK                         | PI/2 BPSK | PI/2 BPSK | PI/2 BPSK |           |           |           |           |
| Middle CH | 64.91                             | 77.69     | 87.12     | 96.80     |           |           |           |           |

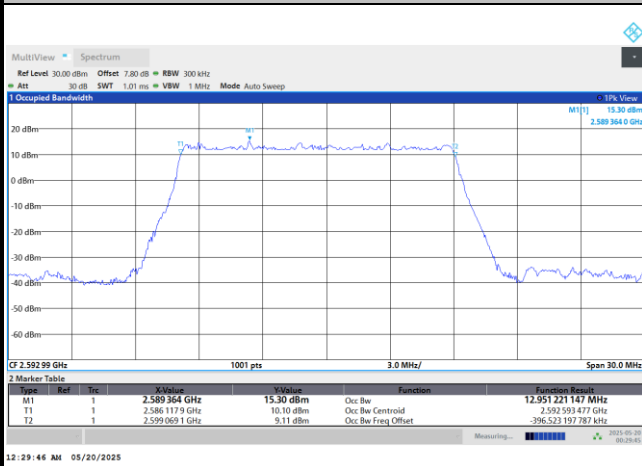
| Mode      | FR1 n41 : OB BW(MHz) / CP OFDM |        |       |        |       |        |        |        |
|-----------|--------------------------------|--------|-------|--------|-------|--------|--------|--------|
| BW        | 10MHz                          |        | 15MHz |        | 20MHz |        | 25MHz  |        |
| Mod.      | QPSK                           | 16QAM  | QPSK  | 16QAM  | QPSK  | 16QAM  | QPSK   | 16QAM  |
| Middle CH | 8.70                           | 8.74   | 13.67 | 13.70  | 18.25 | 18.26  | 23.32  | 23.26  |
| Mod.      | 64QAM                          | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM  | 256QAM |
| Middle CH | 8.68                           | 8.66   | 13.64 | 13.67  | 18.25 | 18.22  | 23.37  | 23.33  |
| BW        | 30MHz                          |        | 40MHz |        | 50MHz |        | 60MHz  |        |
| Mod.      | QPSK                           | 16QAM  | QPSK  | 16QAM  | QPSK  | 16QAM  | QPSK   | 16QAM  |
| Middle CH | 28.19                          | 28.20  | 38.05 | 38.03  | 47.54 | 47.58  | 58.37  | 58.17  |
| Mod.      | 64QAM                          | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM  | 256QAM |
| Middle CH | 28.19                          | 28.18  | 38.11 | 38.21  | 47.52 | 47.61  | 58.50  | 58.33  |
| BW        | 70MHz                          |        | 80MHz |        | 90MHz |        | 100MHz |        |
| Mod.      | QPSK                           | 16QAM  | QPSK  | 16QAM  | QPSK  | 16QAM  | QPSK   | 16QAM  |
| Middle CH | 67.91                          | 67.96  | 77.65 | 77.94  | 87.72 | 87.58  | 97.63  | 97.74  |
| Mod.      | 64QAM                          | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM | 64QAM  | 256QAM |
| Middle CH | 67.93                          | 67.90  | 77.90 | 77.70  | 87.87 | 87.92  | 97.55  | 97.75  |

**FR1 n41 / 10MHz / DFT-S OFDM / Middle Channel / Full RB**
**PI/2 BPSK**

**FR1 n41 / 10MHz / CP OFDM / Middle Channel / Full RB**
**QPSK**

**16QAM**

**64QAM**

**256QAM**




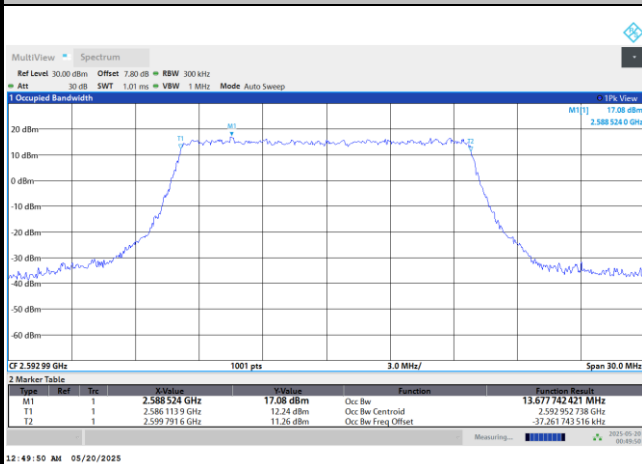
## FR1 n41 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

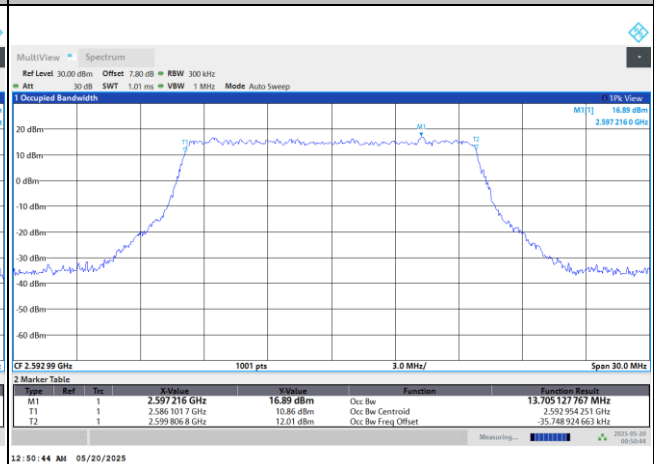


## FR1 n41 / 15MHz / CP OFDM / Middle Channel / Full RB

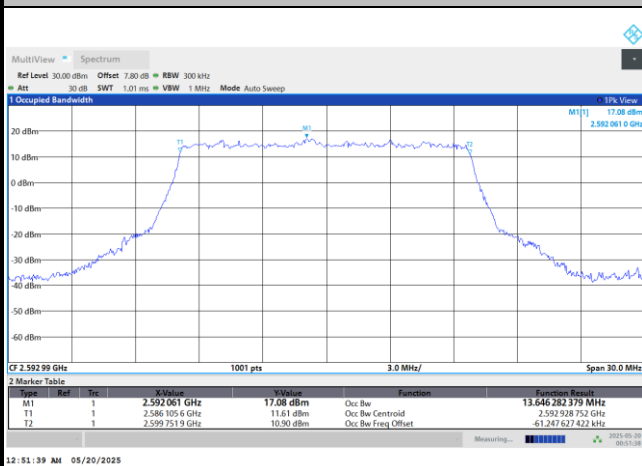
## QPSK



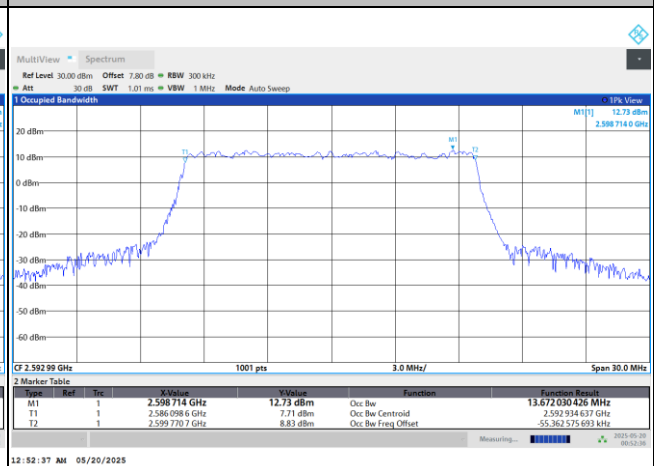
## 16QAM



## 64QAM



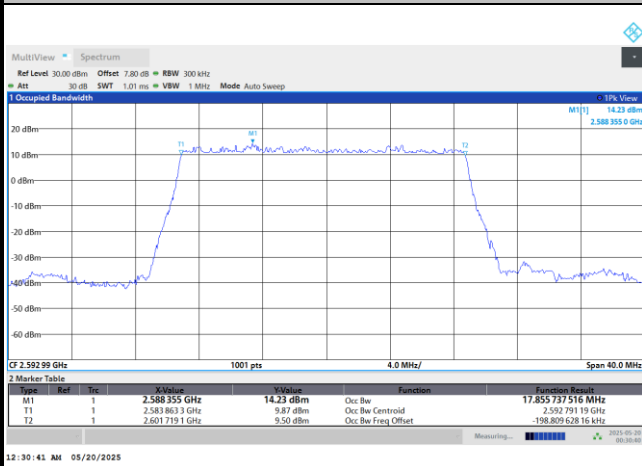
## 256QAM





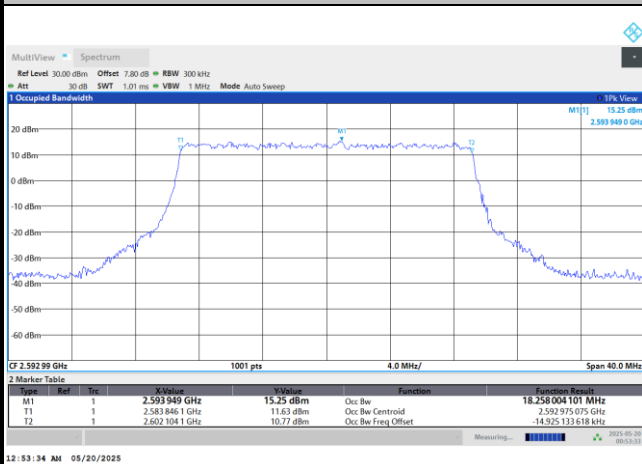
## FR1 n41 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

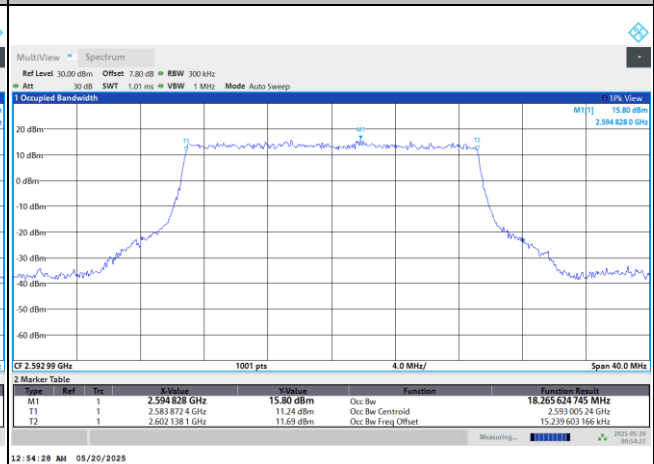


## FR1 n41 / 20MHz / CP OFDM / Middle Channel / Full RB

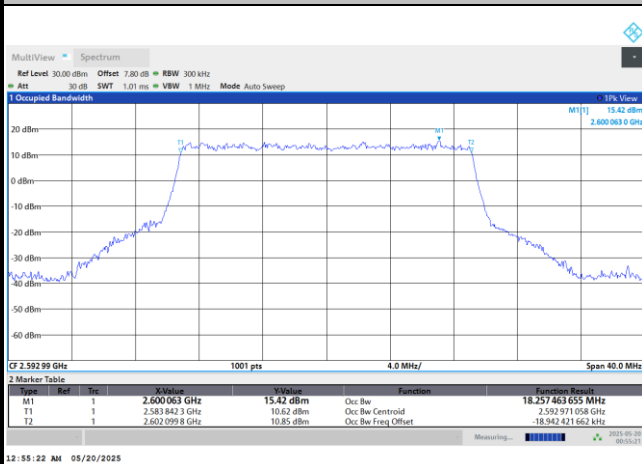
## QPSK



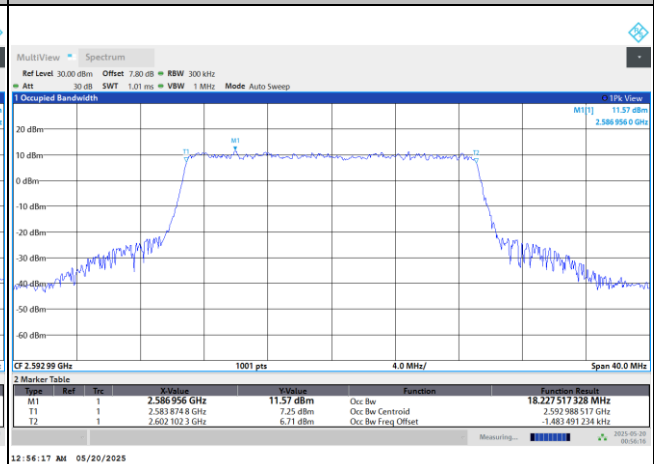
## 16QAM



## 64QAM

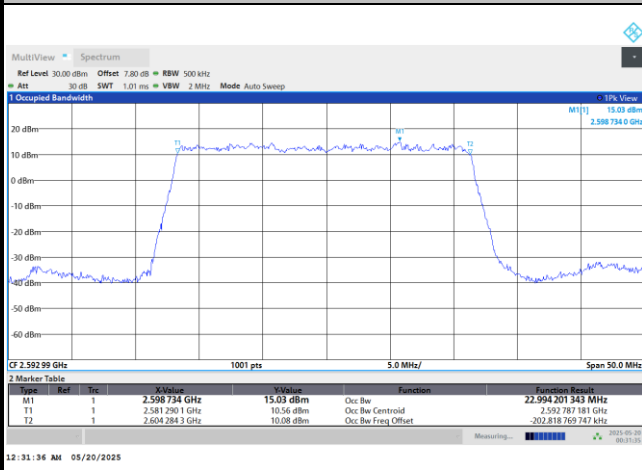


## 256QAM



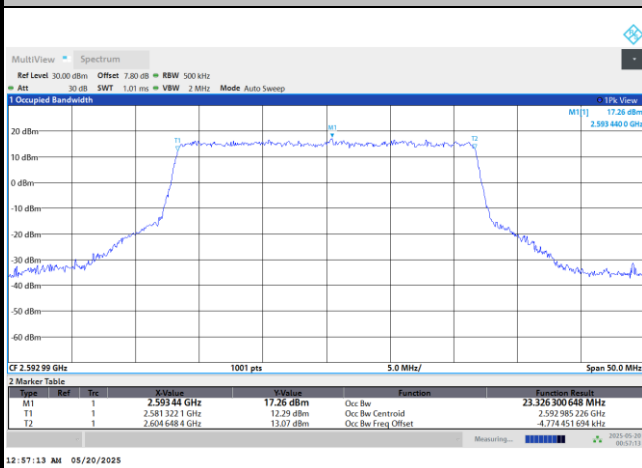
## FR1 n41 / 25MHz / DFT-S OFDM / Middle Channel / Full RB

### PI/2 BPSK

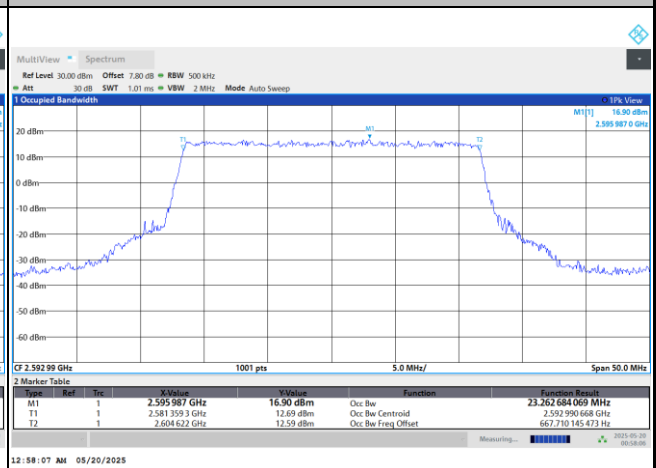


## FR1 n41 / 25MHz / CP OFDM / Middle Channel / Full RB

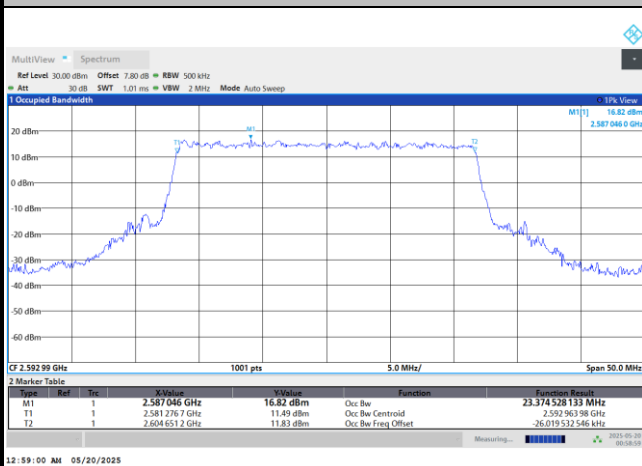
### QPSK



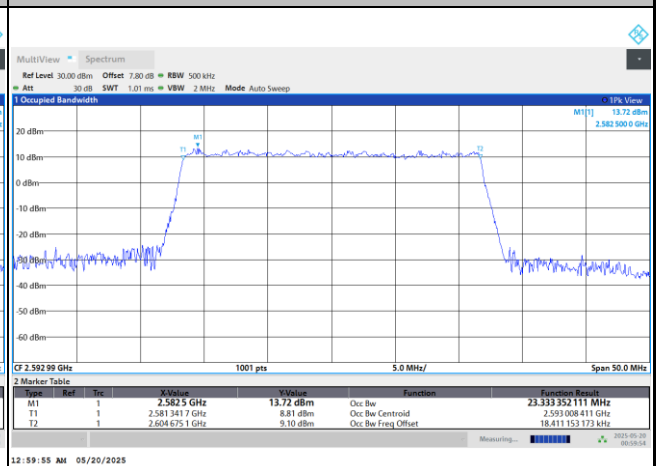
### 16QAM



### 64QAM



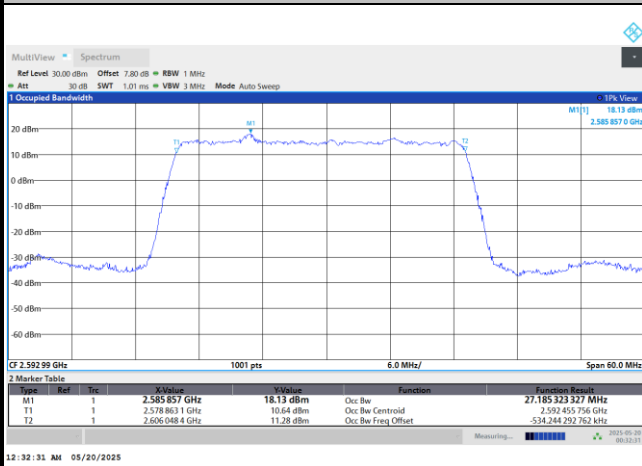
### 256QAM





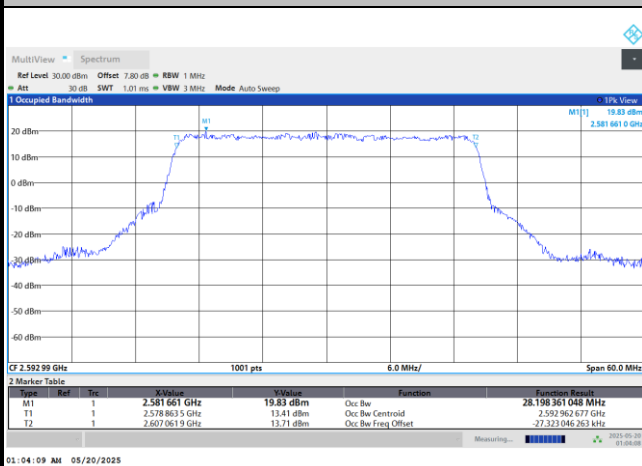
## FR1 n41 / 30MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

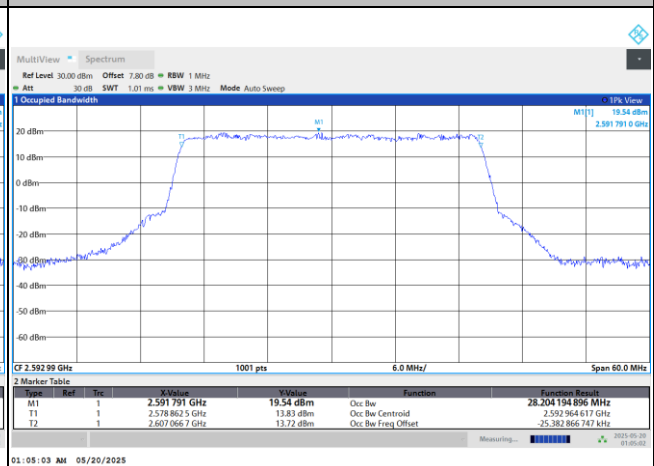


## FR1 n41 / 30MHz / CP OFDM / Middle Channel / Full RB

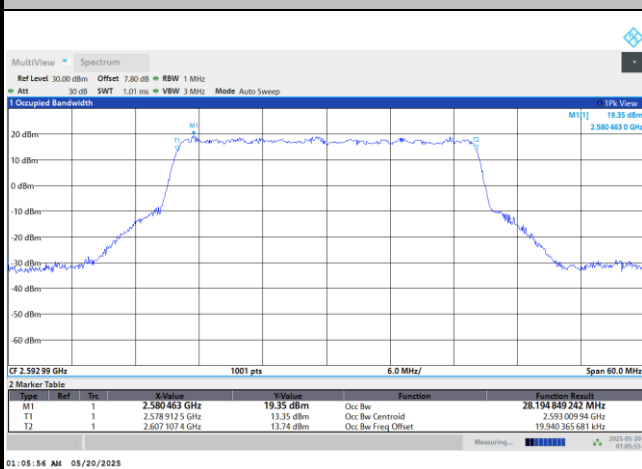
## QPSK



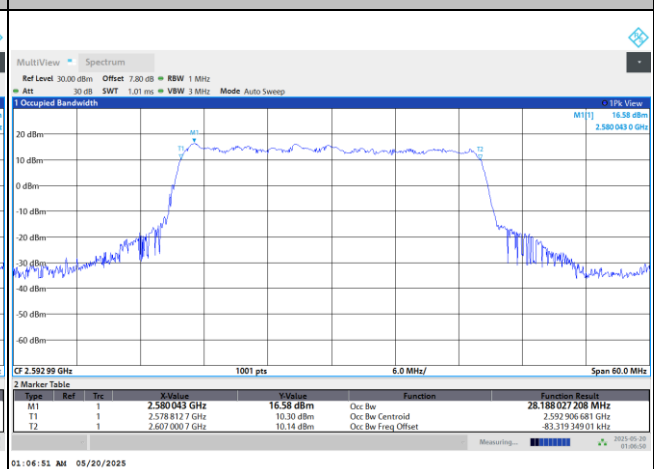
## 16QAM



## 64QAM

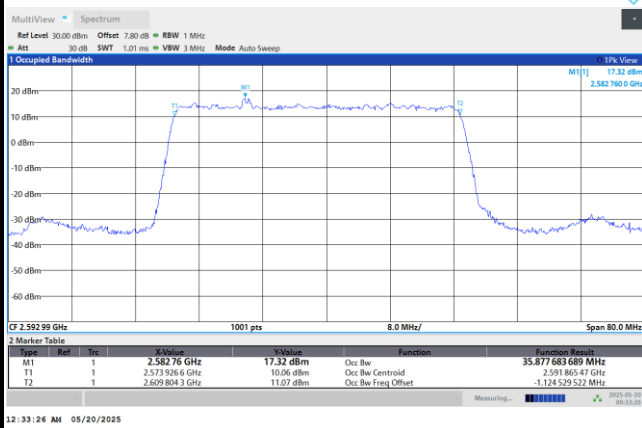


## 256QAM



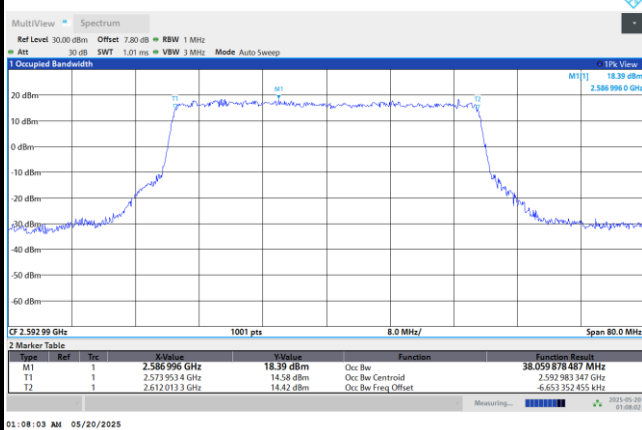
## FR1 n41 / 40MHz / DFT-S OFDM / Middle Channel / Full RB

### PI/2 BPSK

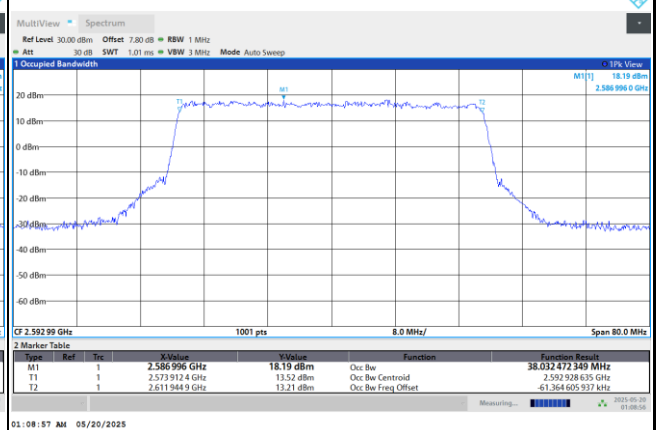


## FR1 n41 / 40MHz / CP OFDM / Middle Channel / Full RB

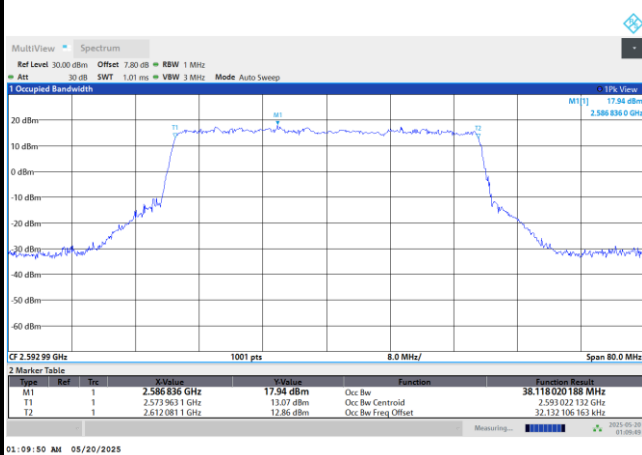
### QPSK



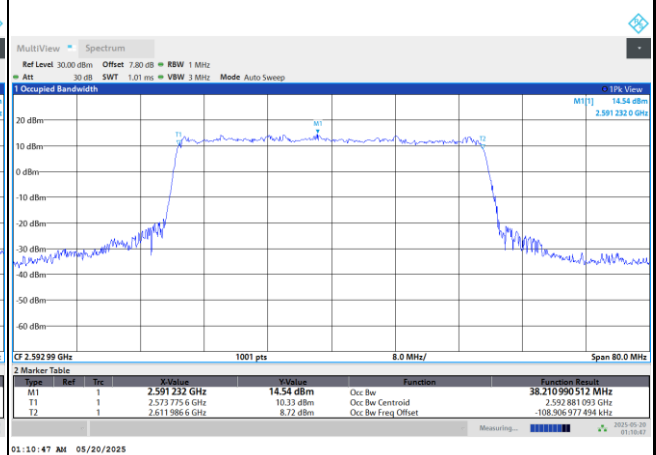
### 16QAM



### 64QAM



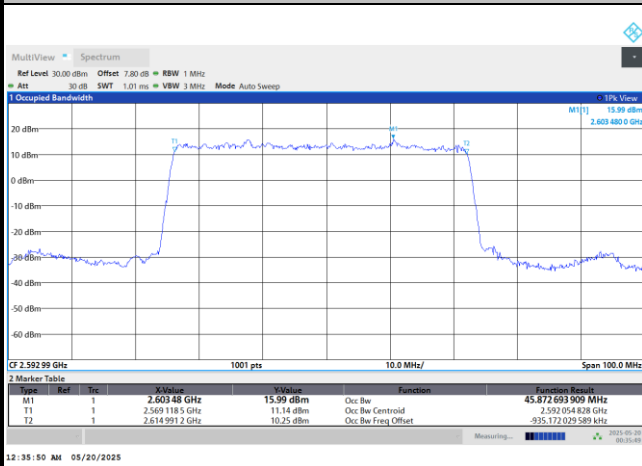
### 256QAM





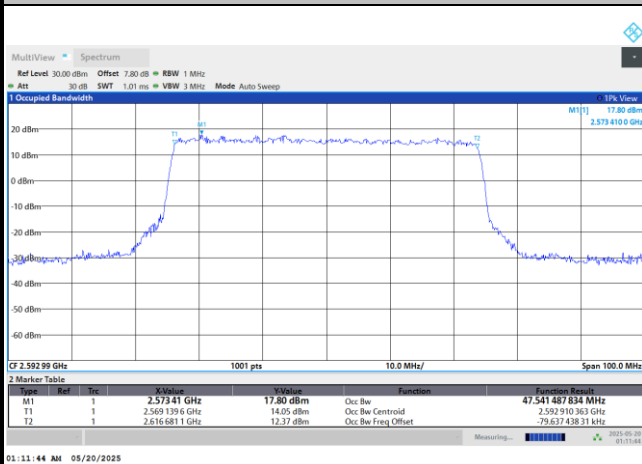
## FR1 n41 / 50MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

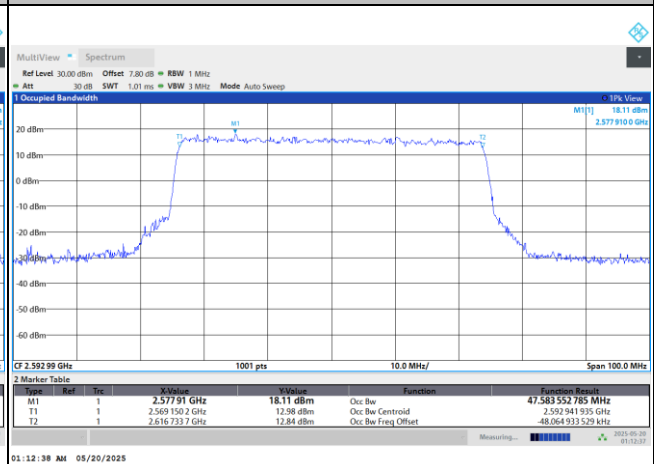


## FR1 n41 / 50MHz / CP OFDM / Middle Channel / Full RB

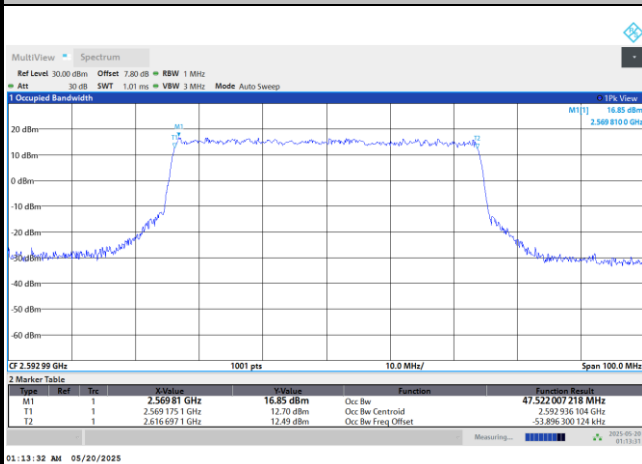
## QPSK



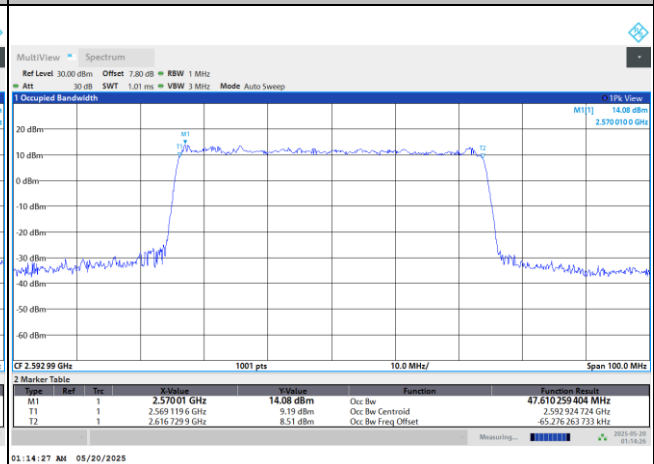
## 16QAM



## 64QAM



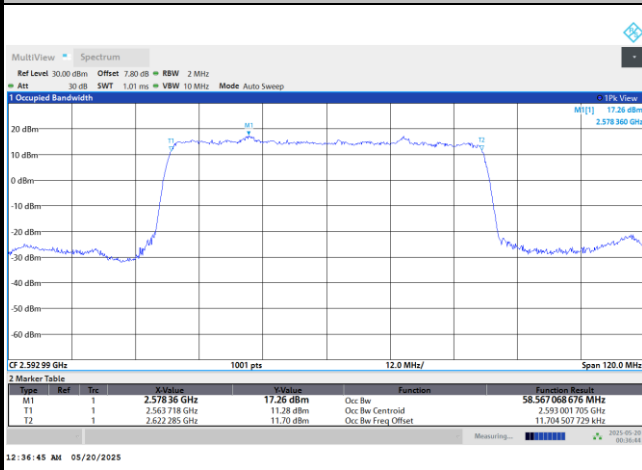
## 256QAM





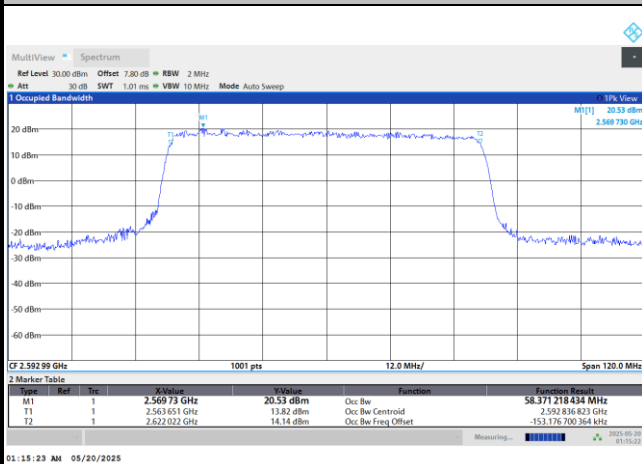
## FR1 n41 / 60MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

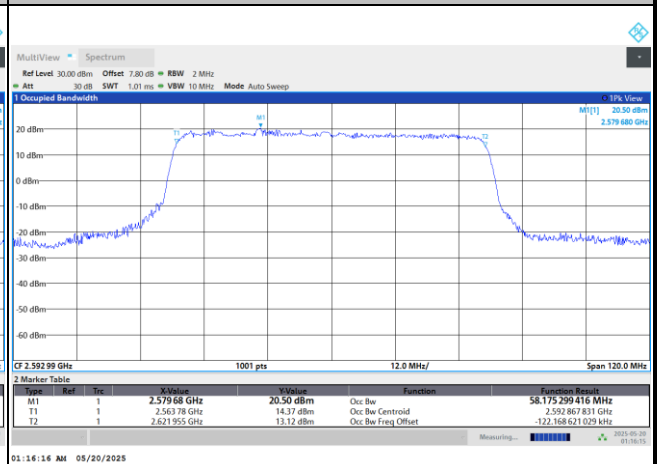


## FR1 n41 / 60MHz / CP OFDM / Middle Channel / Full RB

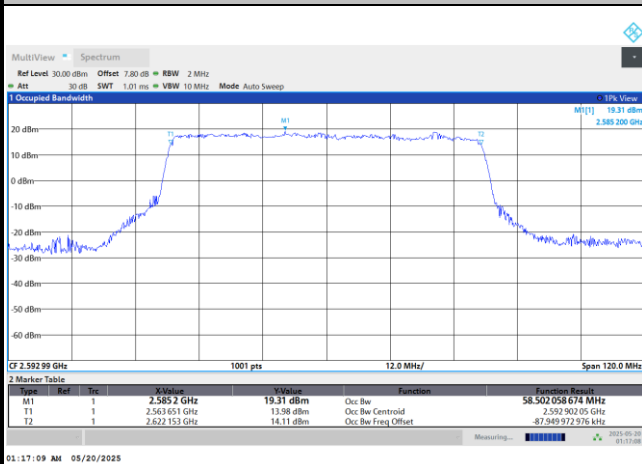
## QPSK



## 16QAM



## 64QAM



## 256QAM

