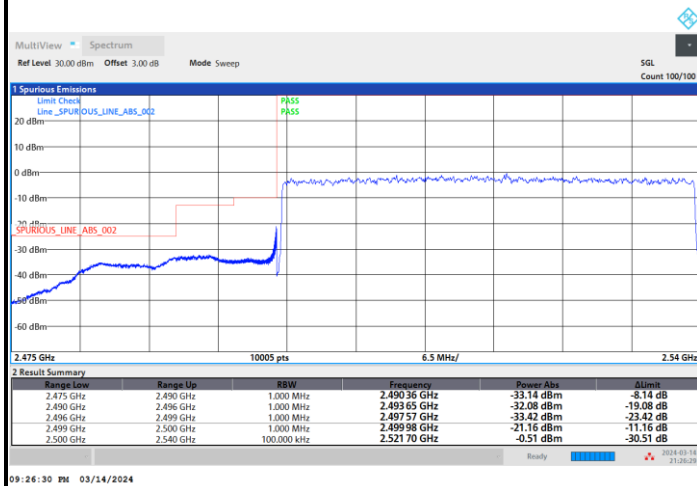


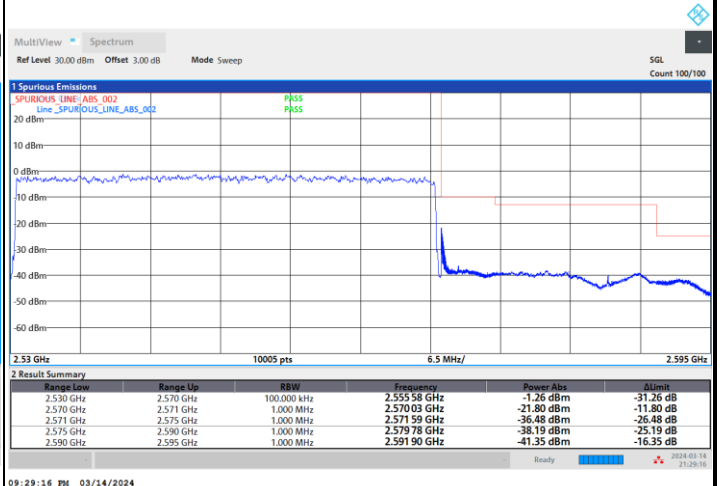


## FR1 n7 / 40MHz / DFT-s-OFDM / PI/2 BPSK

## Lowest Band Edge / Full RB

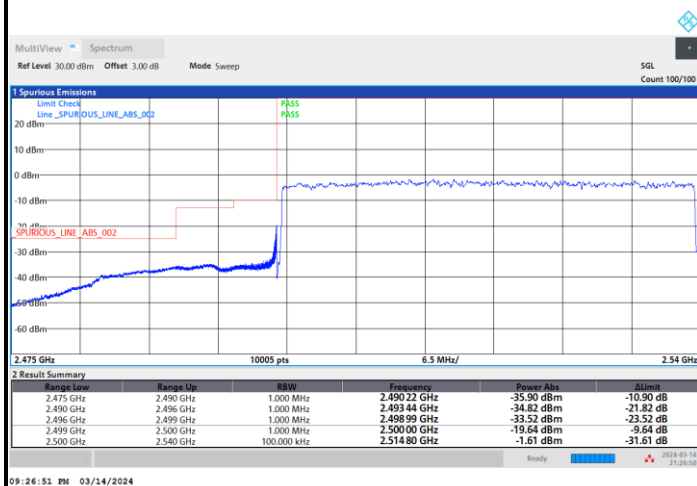


## Highest Band Edge / Full RB

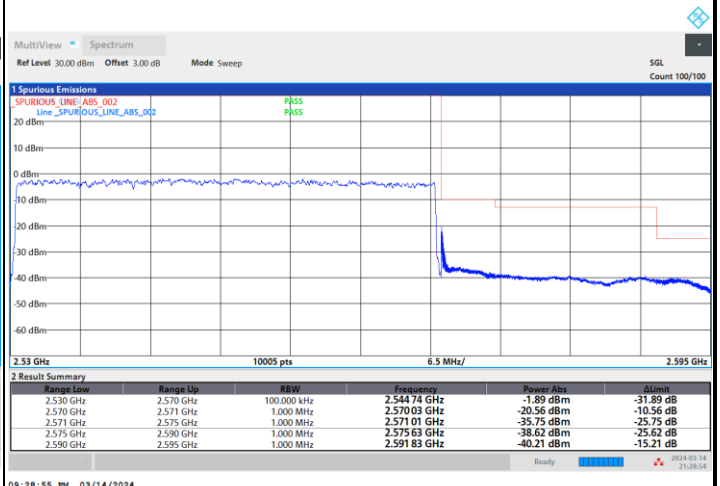


## FR1 n7 / 40MHz / DFT-s-OFDM / QPSK

## Lowest Band Edge / Full RB



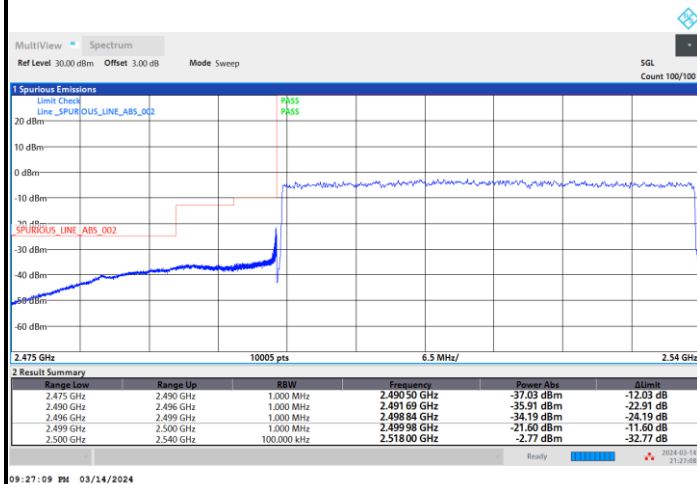
## Highest Band Edge / Full RB



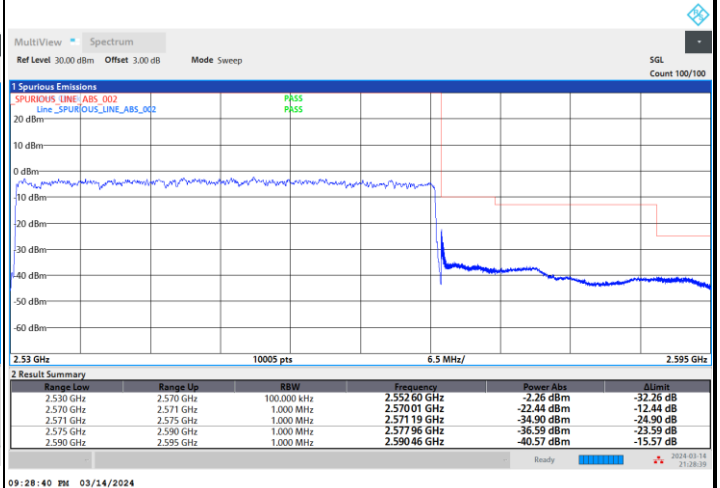


## FR1 n7 / 40MHz / DFT-s-OFDM / 16QAM

## Lowest Band Edge / Full RB

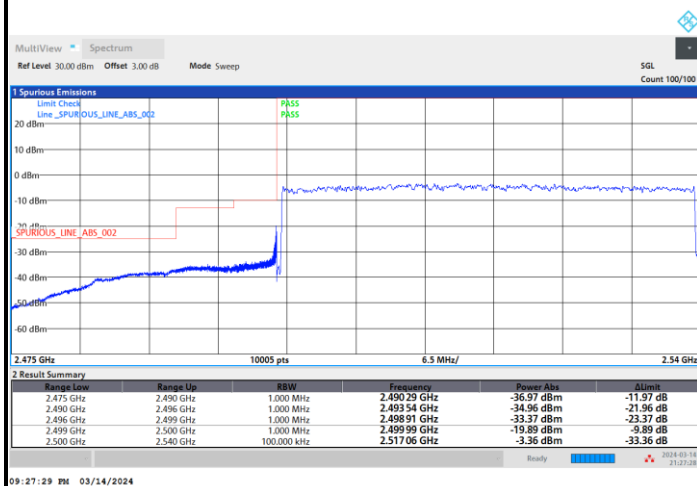


## Highest Band Edge / Full RB

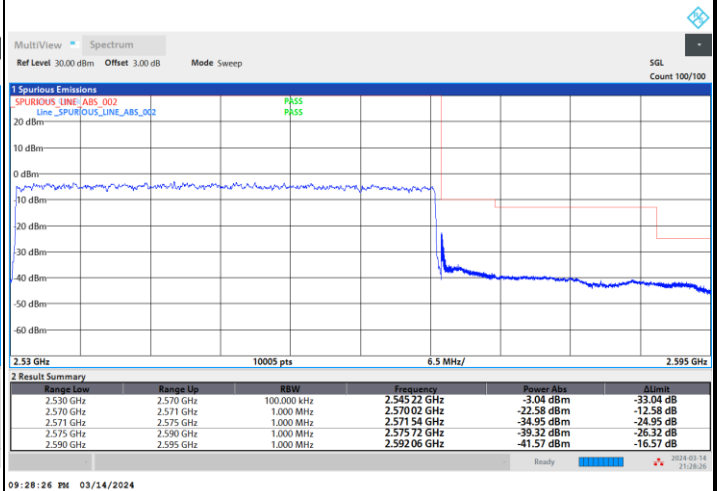


## FR1 n7 / 40MHz / DFT-s-OFDM / 64QAM

## Lowest Band Edge / Full RB



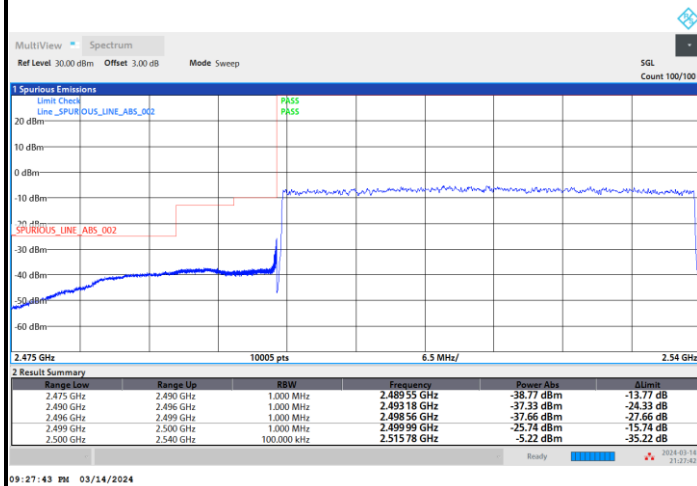
## Highest Band Edge / Full RB



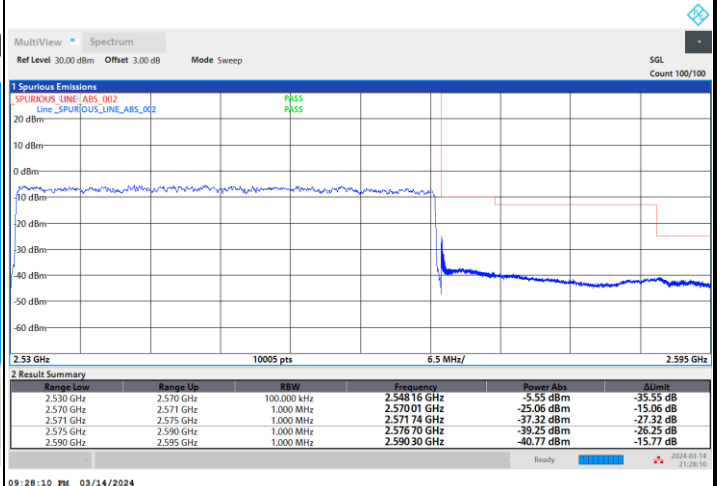


## FR1 n7 / 40MHz / DFT-s-OFDM / 256QAM

## Lowest Band Edge / Full RB

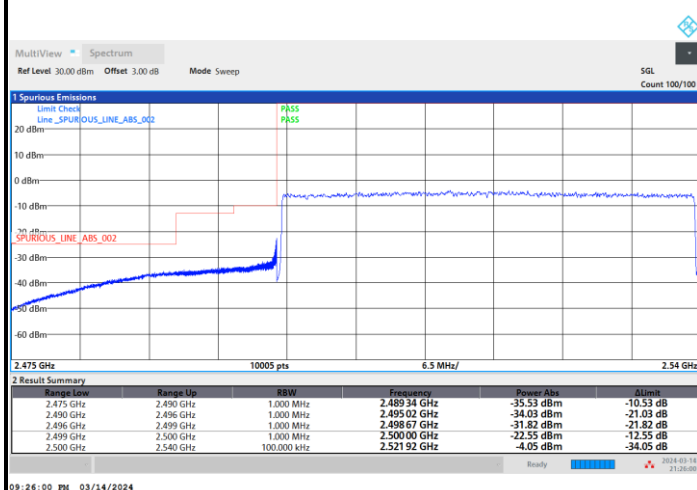


## Highest Band Edge / Full RB

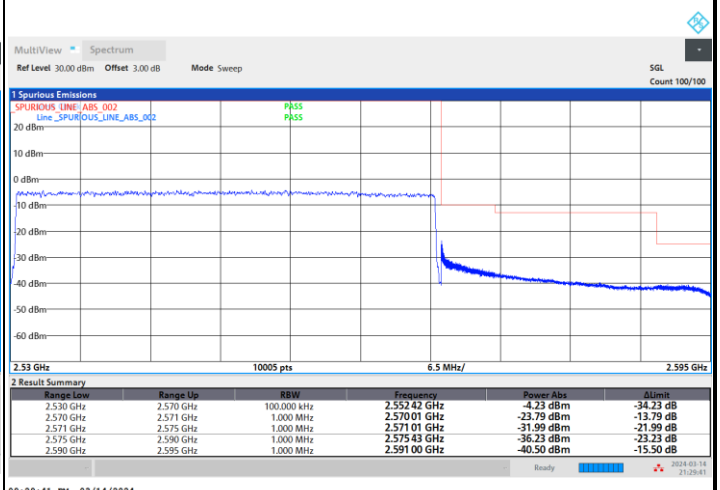


## FR1 n7 / 40MHz / CP OFDM / QPSK / Full RB

## Lowest Band Edge



## Highest Band Edge

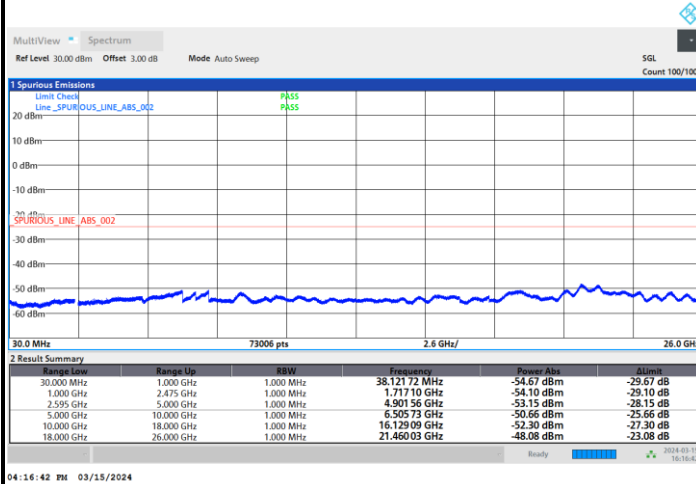




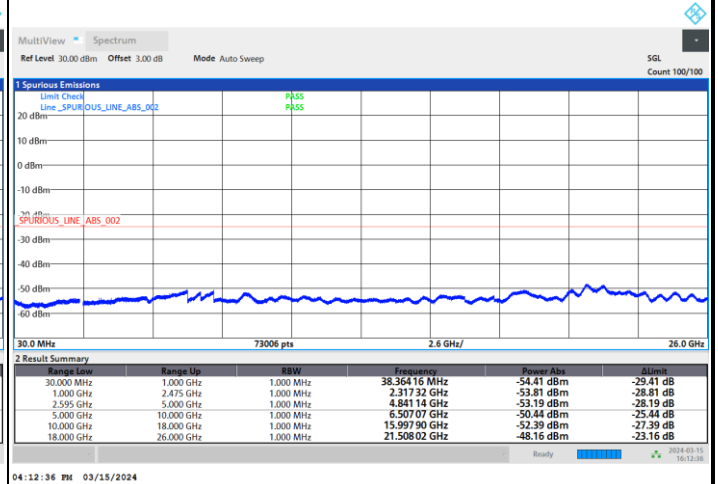
# Conducted Spurious Emission

FR1 n7 / 25MHz / DFT-S OFDM / QPSK / 1RB1

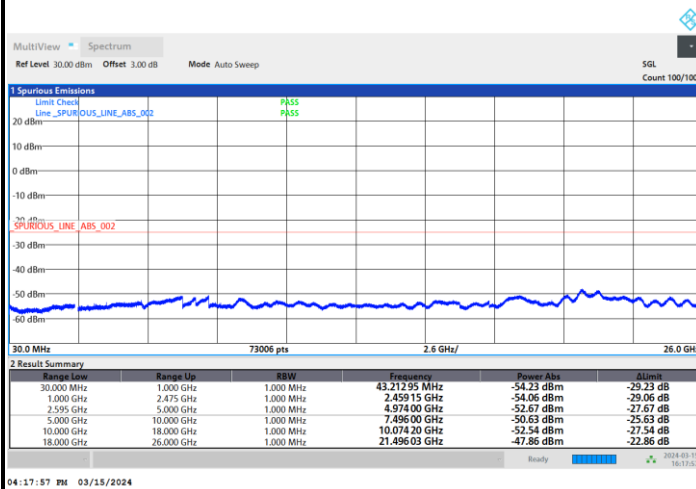
## Lowest Channel



## Middle Channel



## Highest Channel



## Frequency Stability

| Test Conditions     |                   | FR1 n7 (PI/2 BPSK) / Middle Channel | Limit   |
|---------------------|-------------------|-------------------------------------|---------|
| Temperature<br>(°C) | Voltage<br>(Volt) | BW 25MHz                            | Note 2. |
|                     |                   | Deviation (ppm)                     | Result  |
| 50                  | Normal Voltage    | 0.0072                              | PASS    |
| 40                  | Normal Voltage    | 0.0040                              |         |
| 30                  | Normal Voltage    | 0.0184                              |         |
| 20(Ref.)            | Normal Voltage    | 0.0000                              |         |
| 10                  | Normal Voltage    | 0.0180                              |         |
| 0                   | Normal Voltage    | 0.0198                              |         |
| -10                 | Normal Voltage    | 0.0051                              |         |
| -20                 | Normal Voltage    | 0.0075                              |         |
| -30                 | Normal Voltage    | 0.0001                              |         |
| 20                  | Maximum Voltage   | 0.0023                              |         |
| 20                  | Normal Voltage    | 0.0000                              |         |
| 20                  | Battery End Point | 0.0072                              |         |

**Note:**

1. Normal Voltage = 3.3 V. ; Battery End Point (BEP) = 3.135 V. ; Maximum Voltage = 4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

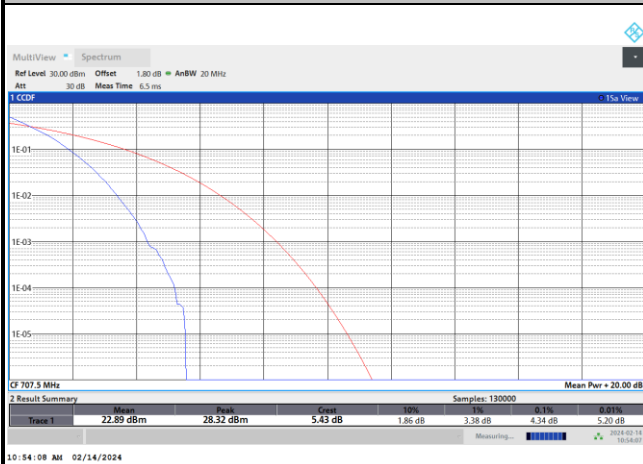
**FR1 n12****Peak-to-Average Ratio**

| Mode      | FR1 n12 / 15MHz / 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                         | 5.54    | 6.36    | 6.52    | <b>PASS</b> |
| Mode      | FR1 n12 / 15MHz / DFT-S OFDM |         |         |         |             |
| Mod.      | 256QAM                       |         |         |         | Limit: 13dB |
| RB Size   | Full RB                      |         |         |         | Result      |
| Middle CH | 6.60                         |         |         |         | <b>PASS</b> |

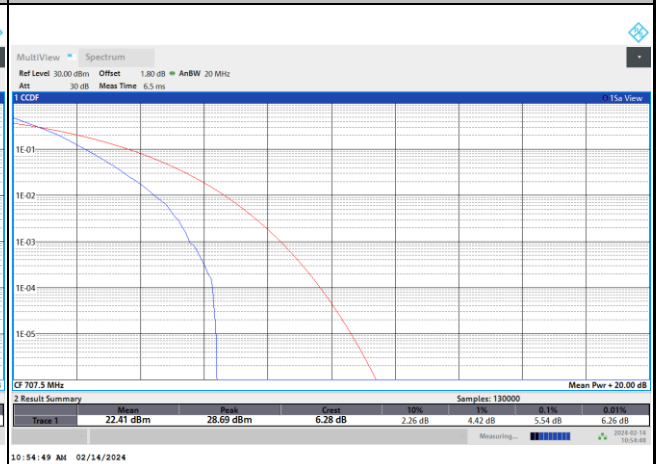


## FR1 n12 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

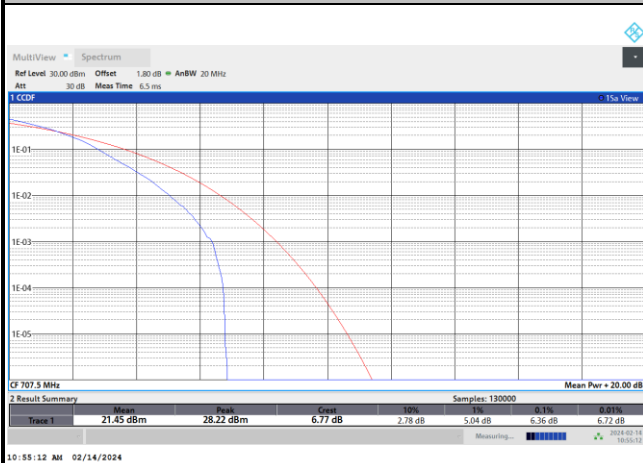
## PI/2 BPSK



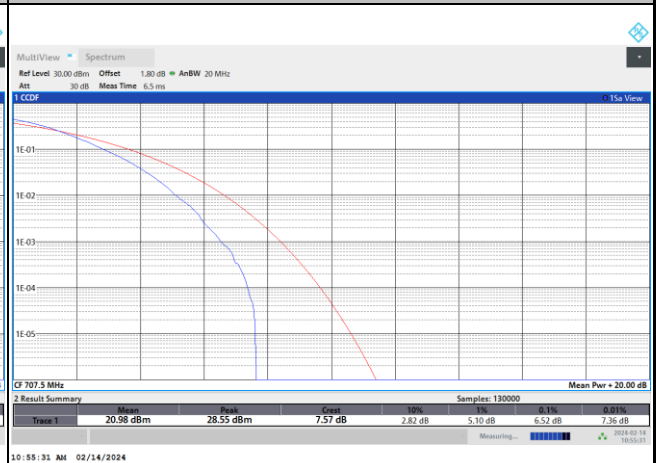
## QPSK



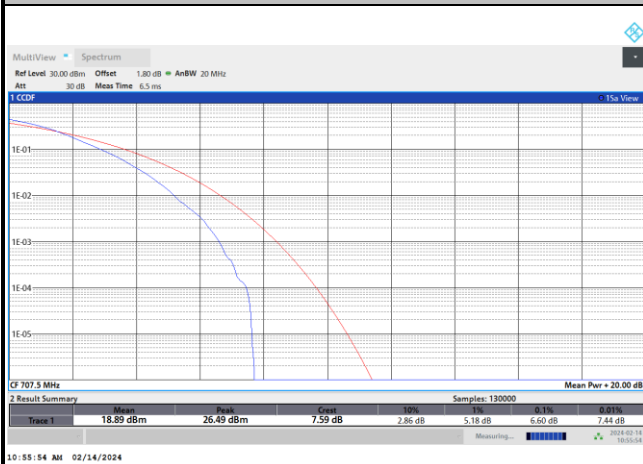
## 16QAM



## 64QAM



## 256QAM



**26dB Bandwidth**

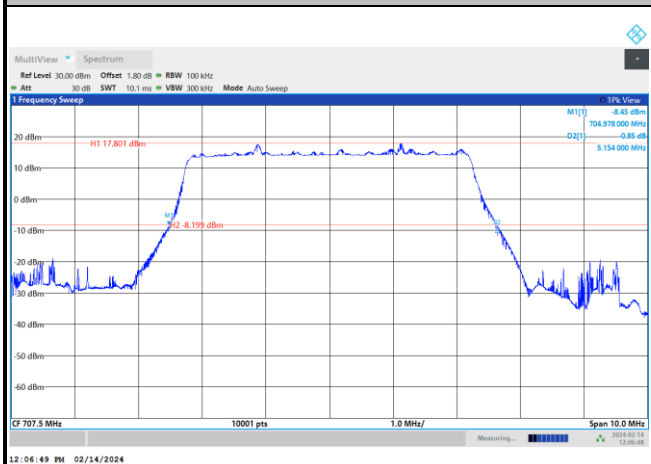
| Mode      | FR1 n12 : 26dB BW(MHz) / DFT-S OFDM |  |           |  |           |  |  |  |
|-----------|-------------------------------------|--|-----------|--|-----------|--|--|--|
| BW        | 5MHz                                |  | 10MHz     |  | 15MHz     |  |  |  |
| Mod.      | PI/2 BPSK                           |  | PI/2 BPSK |  | PI/2 BPSK |  |  |  |
| Middle CH | 5.15                                |  | 9.80      |  | 14.53     |  |  |  |

| Mode      | FR1 n12 : 26dB BW(MHz) / CP OFDM |        |       |        |       |        |  |  |
|-----------|----------------------------------|--------|-------|--------|-------|--------|--|--|
| BW        | 5MHz                             |        | 10MHz |        | 15MHz |        |  |  |
| Mod.      | QPSK                             | 16QAM  | QPSK  | 16QAM  | QPSK  | 16QAM  |  |  |
| Middle CH | 5.27                             | 5.24   | 10.36 | 10.31  | 15.28 | 15.29  |  |  |
| Mod.      | 64QAM                            | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |  |  |
| Middle CH | 5.29                             | 5.28   | 10.26 | 10.28  | 15.36 | 15.39  |  |  |



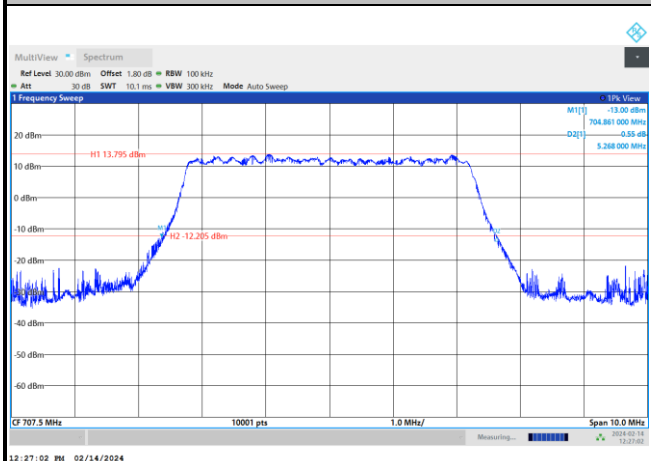
## FR1 n12 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

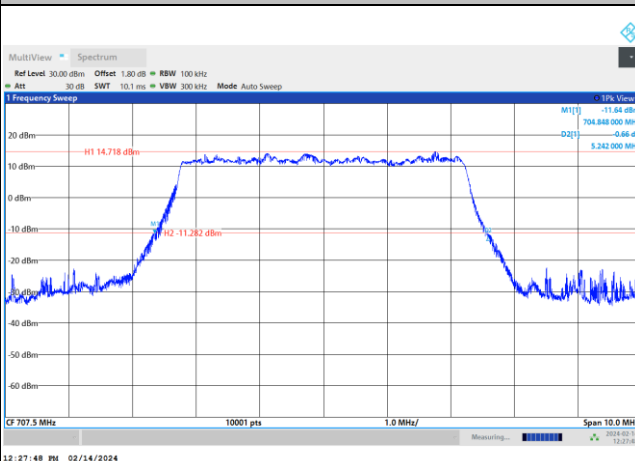


## FR1 n12 / 5MHz / CP OFDM / Middle Channel / Full RB

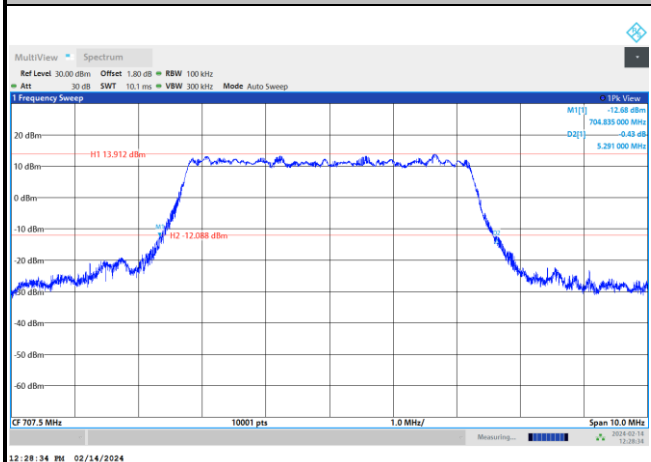
**QPSK**



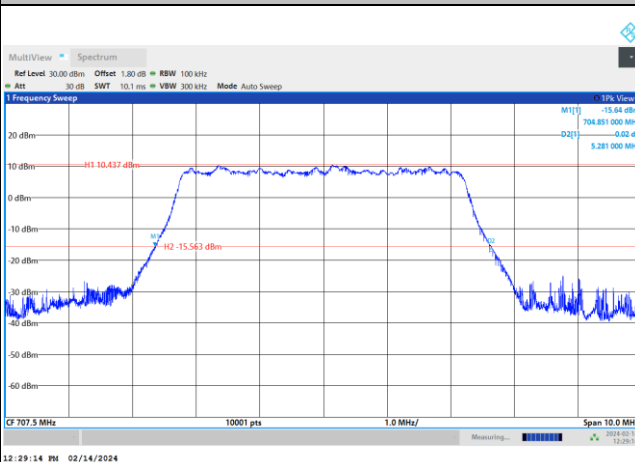
## 16QAM



## 64QAM



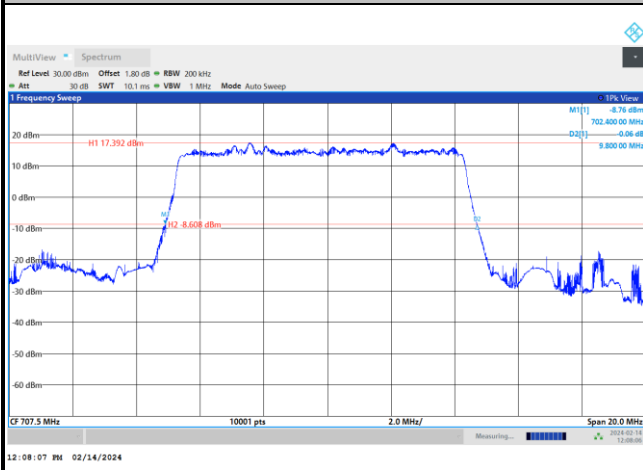
## 256QAM





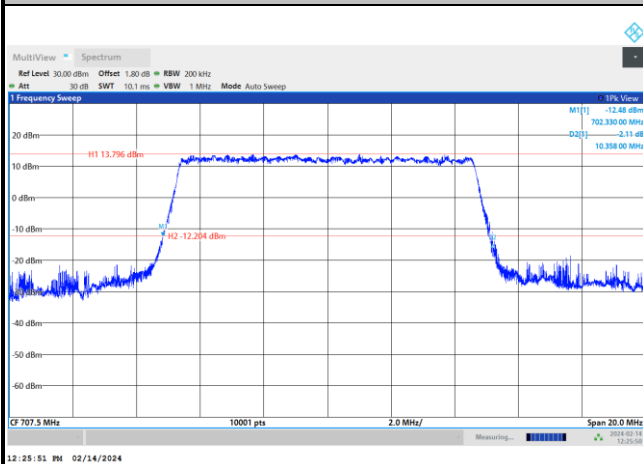
## FR1 n12 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

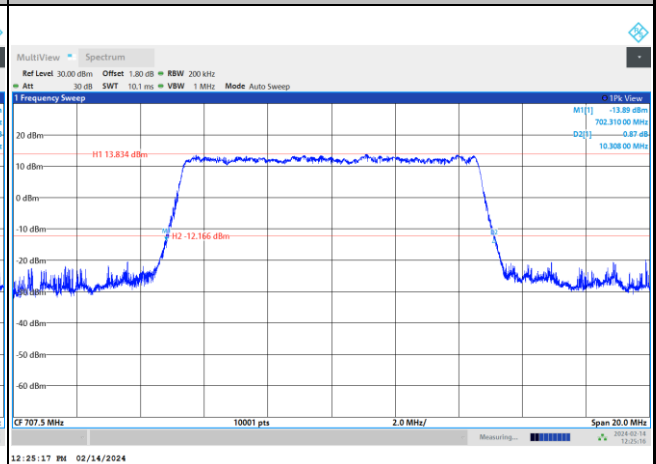


## FR1 n12 / 10MHz / CP OFDM / Middle Channel / Full RB

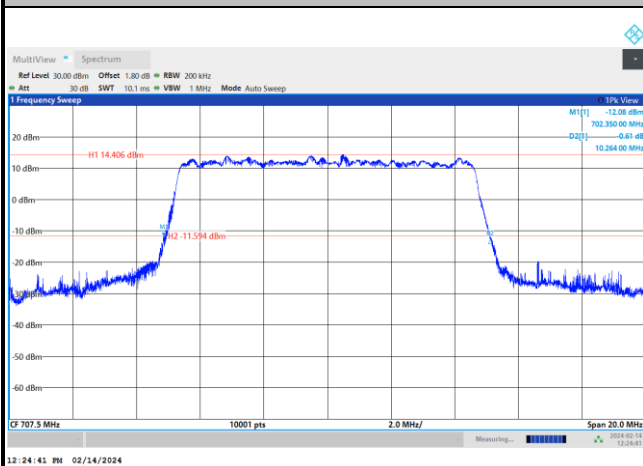
## QPSK



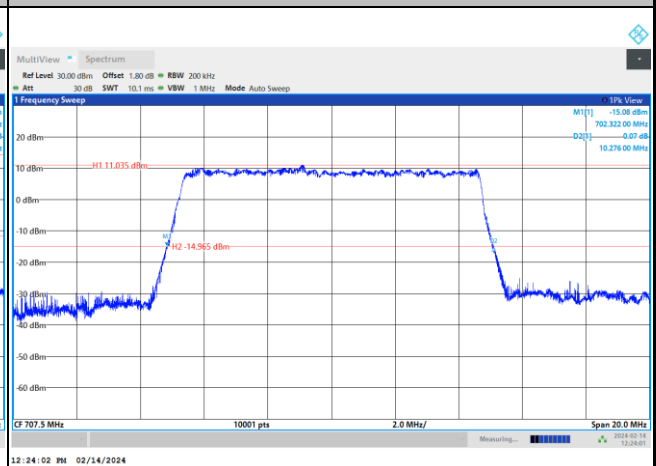
## 16QAM



## 64QAM



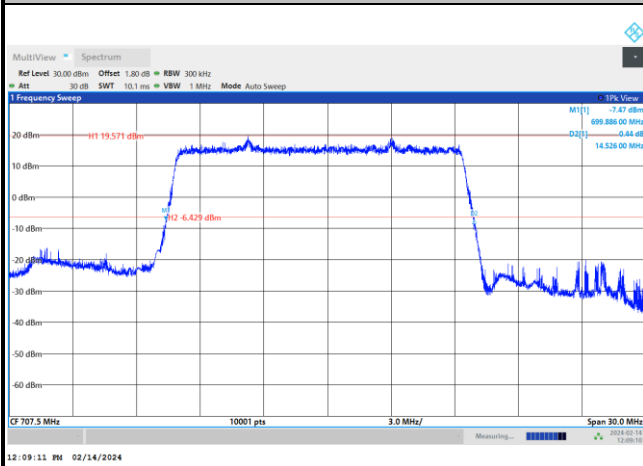
## 256QAM





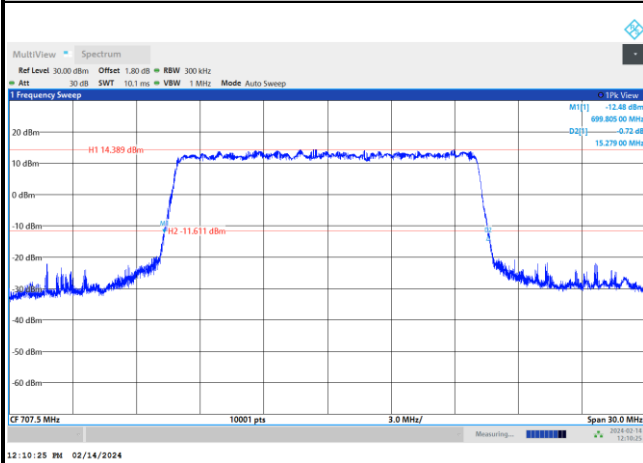
## FR1 n12 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

## PI/2 BPSK

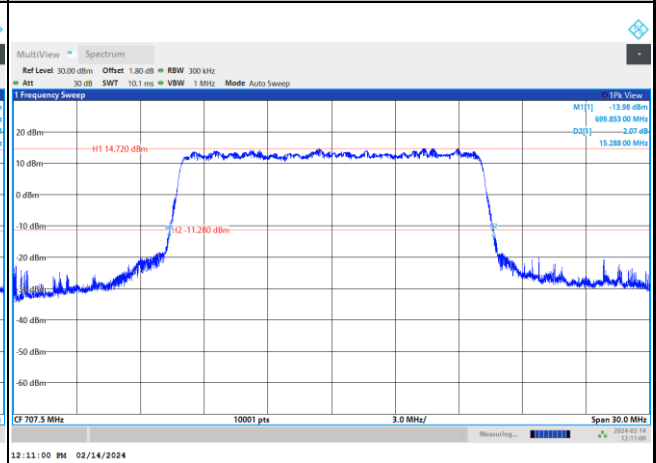


## FR1 n12 / 15MHz / CP OFDM / Middle Channel / Full RB

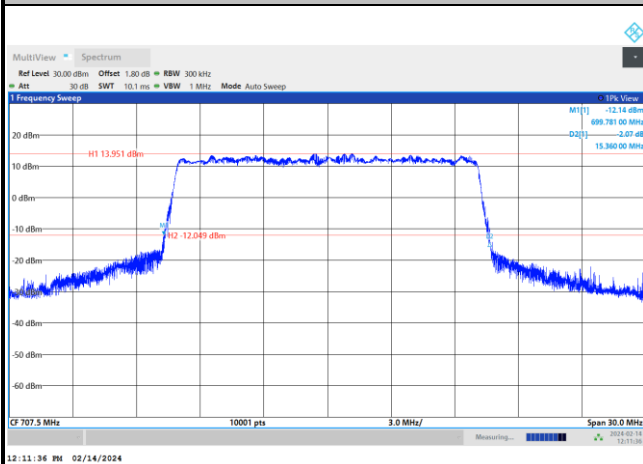
## QPSK



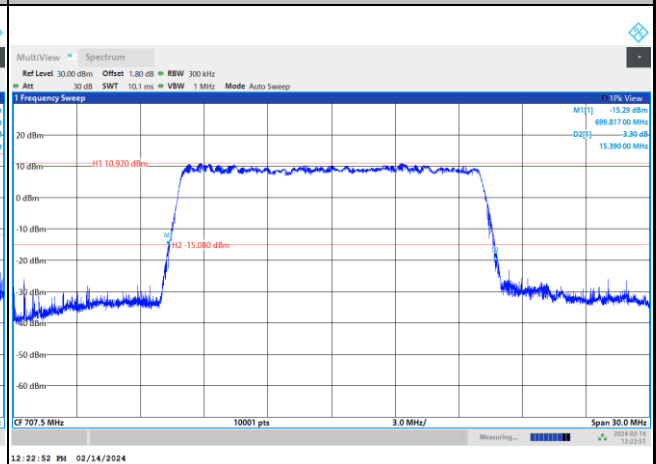
## 16QAM



## 64QAM



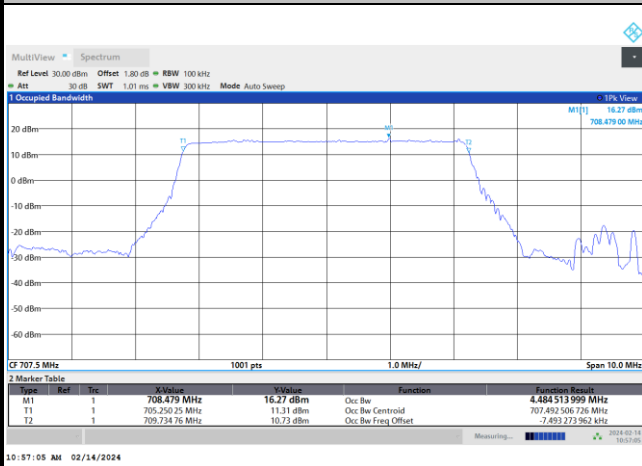
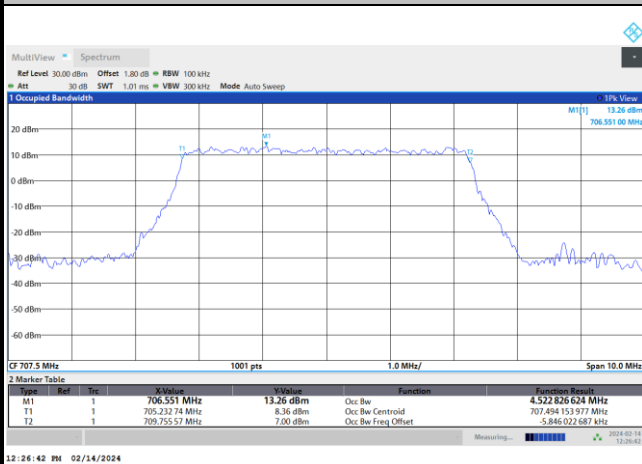
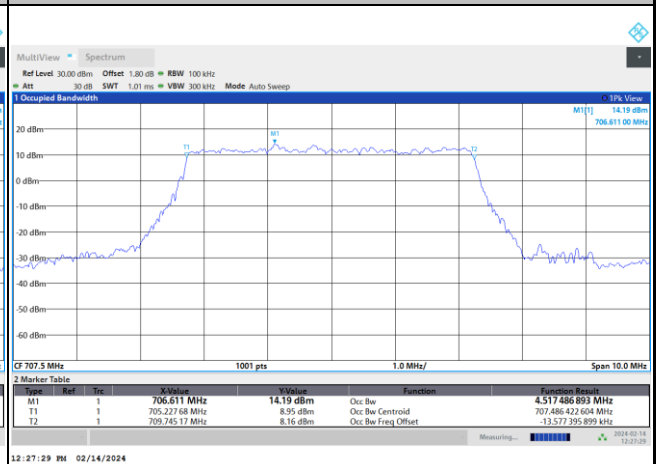
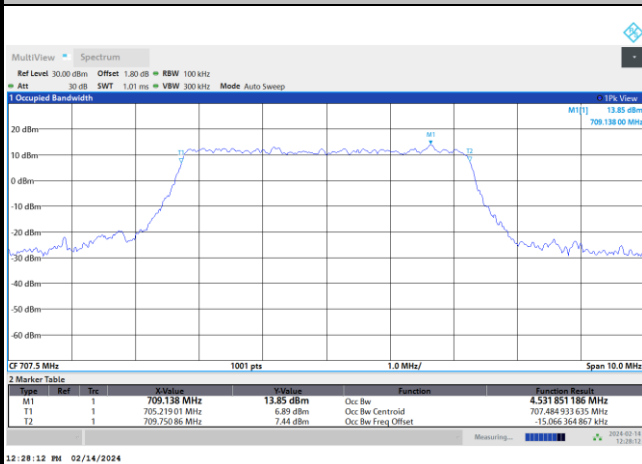
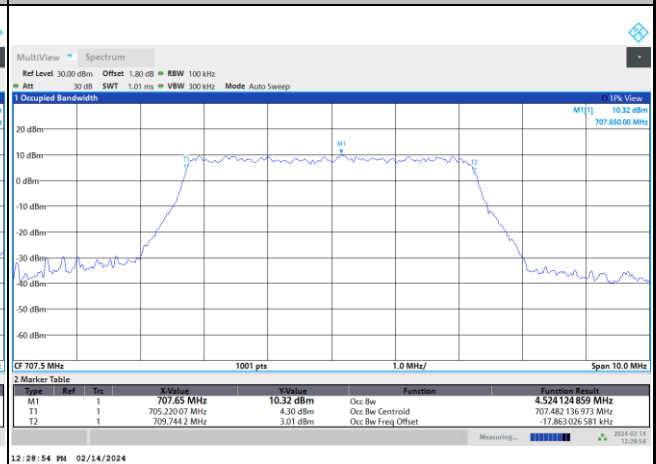
## 256QAM



**Occupied Bandwidth**

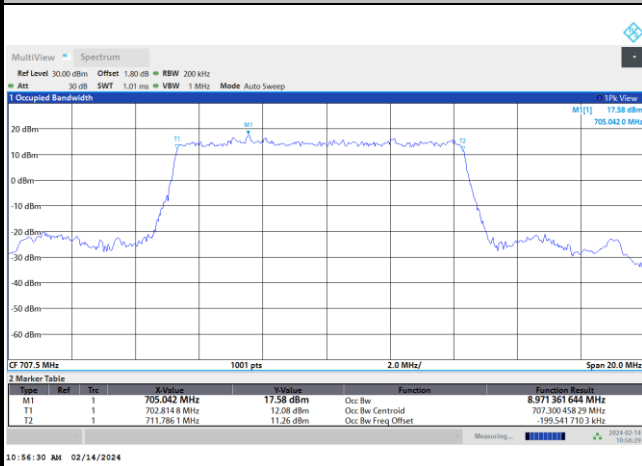
| Mode      | FR1 n12 : 99%OBW(MHz) / DFT-S OFDM |  |           |  |           |  |  |  |
|-----------|------------------------------------|--|-----------|--|-----------|--|--|--|
| BW        | 5MHz                               |  | 10MHz     |  | 15MHz     |  |  |  |
| Mod.      | PI/2 BPSK                          |  | PI/2 BPSK |  | PI/2 BPSK |  |  |  |
| Middle CH | 4.48                               |  | 8.97      |  | 13.44     |  |  |  |

| Mode      | FR1 n12 : 99%OBW (MHz) / CP OFDM |        |       |        |       |        |  |  |
|-----------|----------------------------------|--------|-------|--------|-------|--------|--|--|
| BW        | 5MHz                             |        | 10MHz |        | 15MHz |        |  |  |
| Mod.      | QPSK                             | 16QAM  | QPSK  | 16QAM  | QPSK  | 16QAM  |  |  |
| Middle CH | 4.52                             | 4.51   | 9.31  | 9.30   | 14.11 | 14.14  |  |  |
| Mod.      | 64QAM                            | 256QAM | 64QAM | 256QAM | 64QAM | 256QAM |  |  |
| Middle CH | 4.53                             | 4.52   | 9.30  | 9.33   | 14.17 | 14.16  |  |  |

**FR1 n12 / 5MHz / DFT-S OFDM / Middle Channel / Full RB**
**PI/2 BPSK**

**FR1 n12 / 5MHz / CP OFDM / Middle Channel / Full RB**
**QPSK**

**16QAM**

**64QAM**

**256QAM**


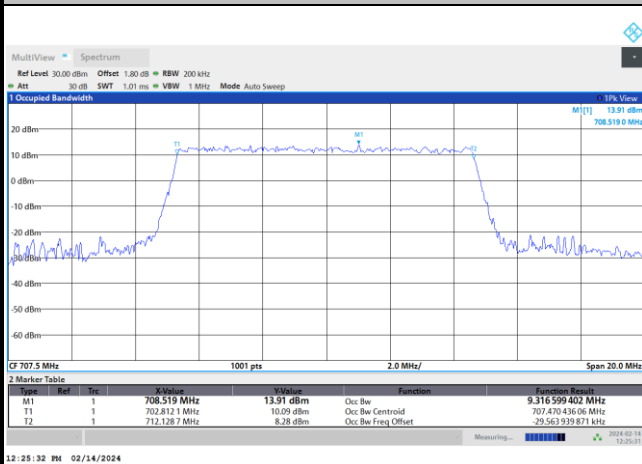
### FR1 n12 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

#### PI/2 BPSK

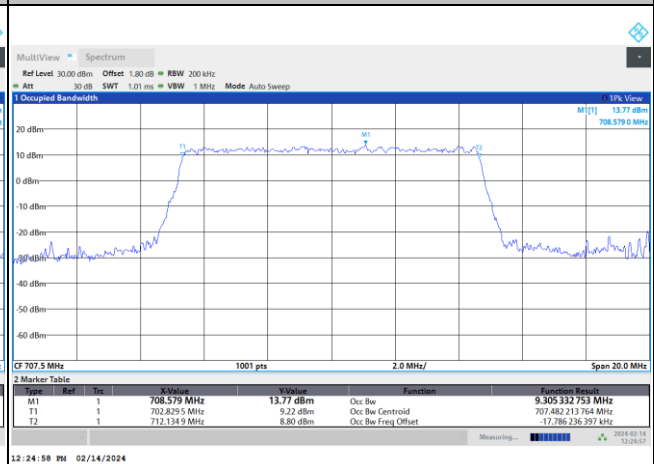


### FR1 n12 / 10MHz / CP OFDM / Middle Channel / Full RB

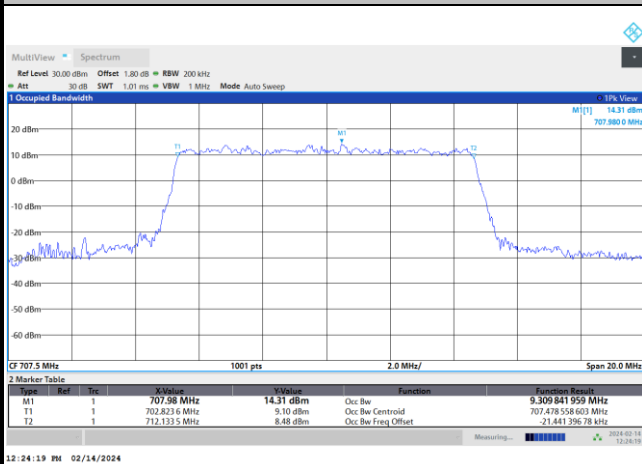
#### QPSK



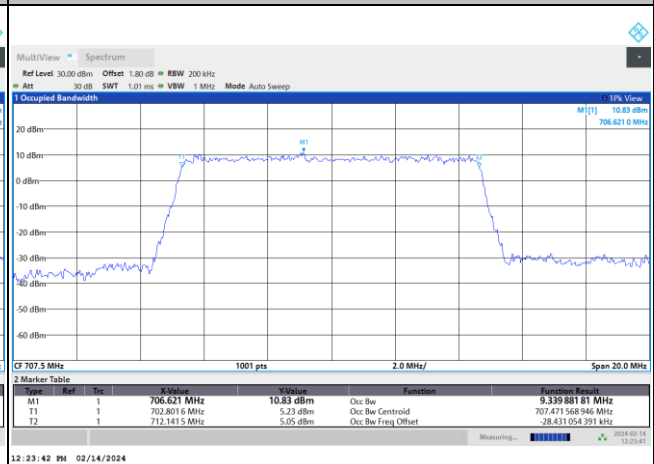
#### 16QAM

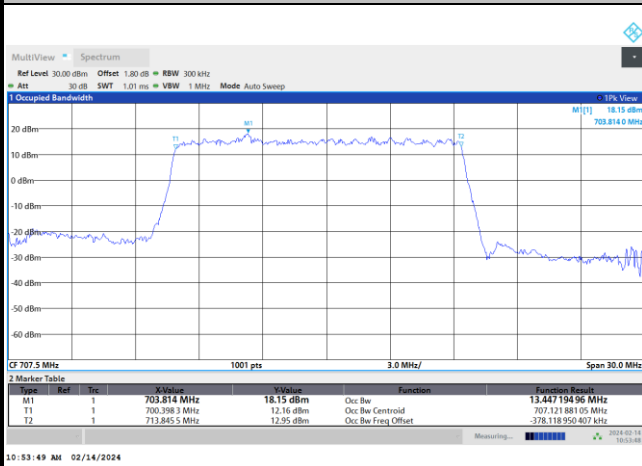
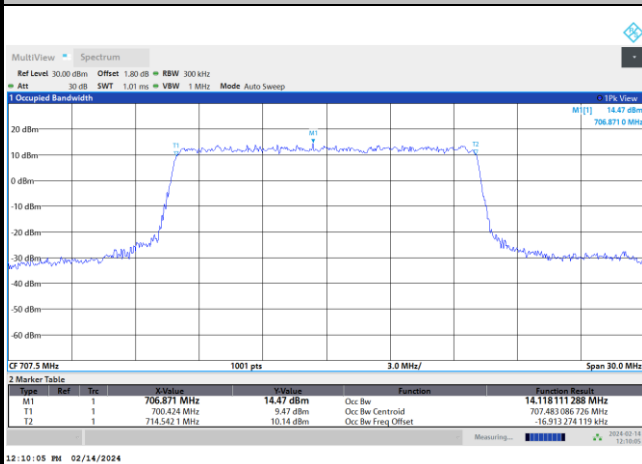
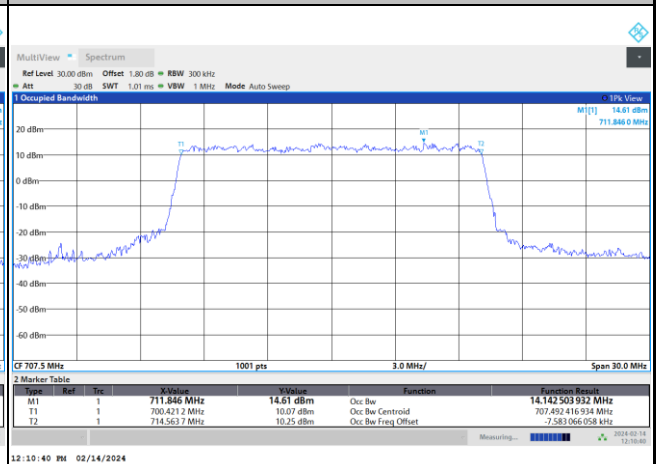
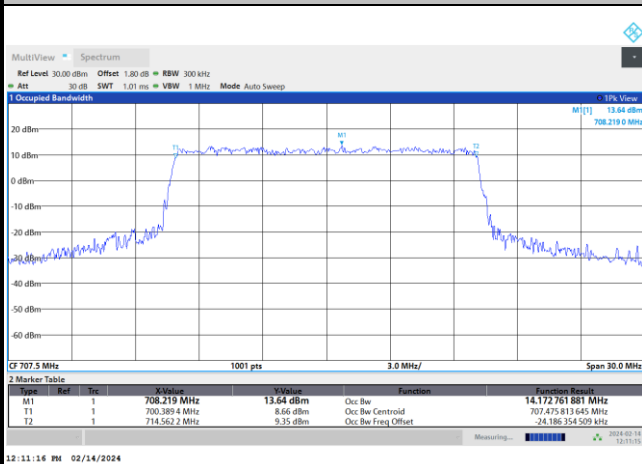
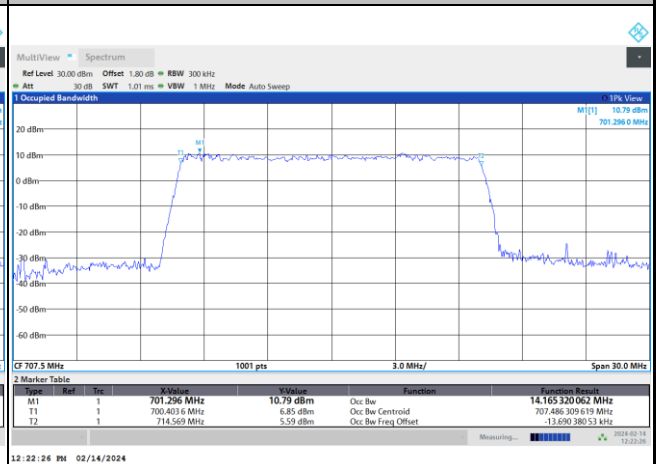


#### 64QAM



#### 256QAM



**FR1 n12 / 15MHz / DFT-S OFDM / Middle Channel / Full RB**
**PI/2 BPSK**

**FR1 n12 / 15MHz / CP OFDM / Middle Channel / Full RB**
**QPSK**

**16QAM**

**64QAM**

**256QAM**


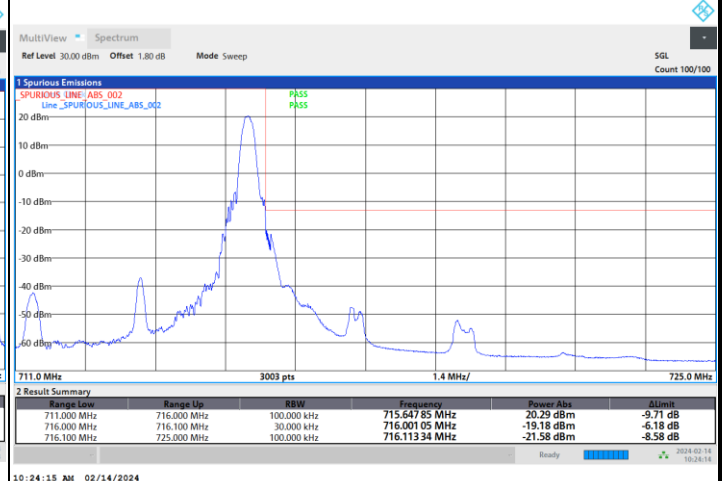
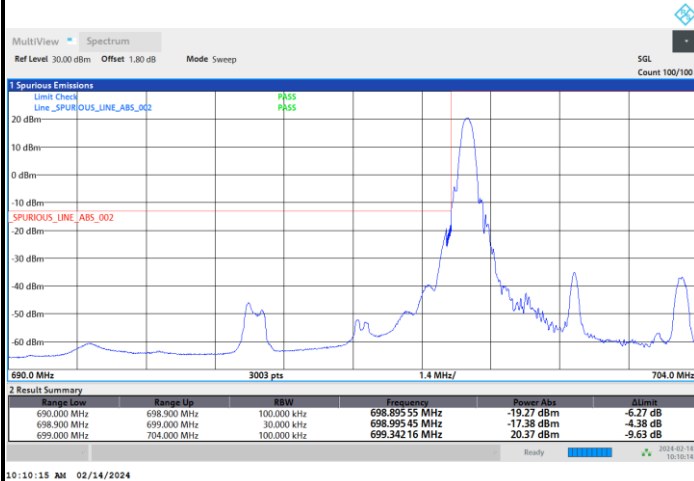


## Conducted Band Edge

FR1 n12 / 5MHz / DFT-S OFDM / PI/2 BPSK

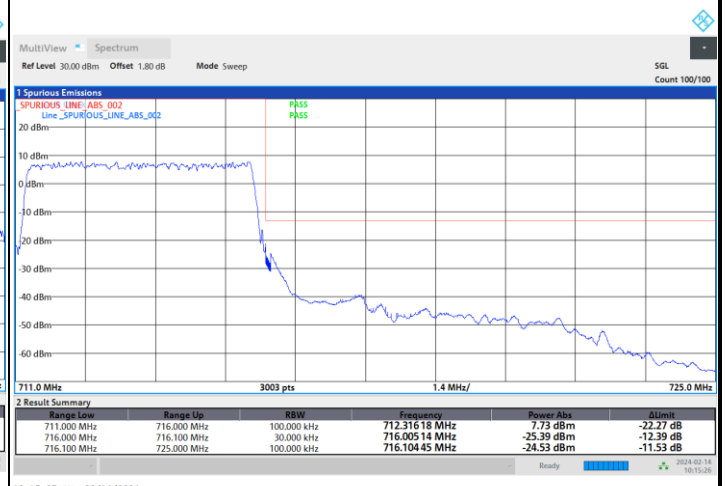
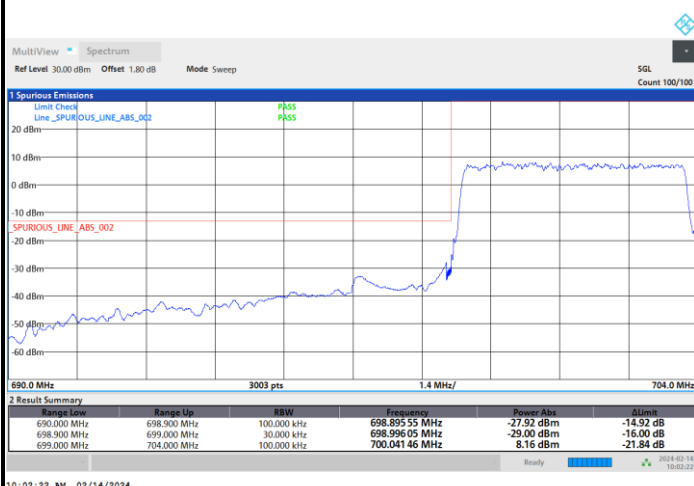
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



Lowest Band Edge / Full RB

Highest Band Edge / Full RB

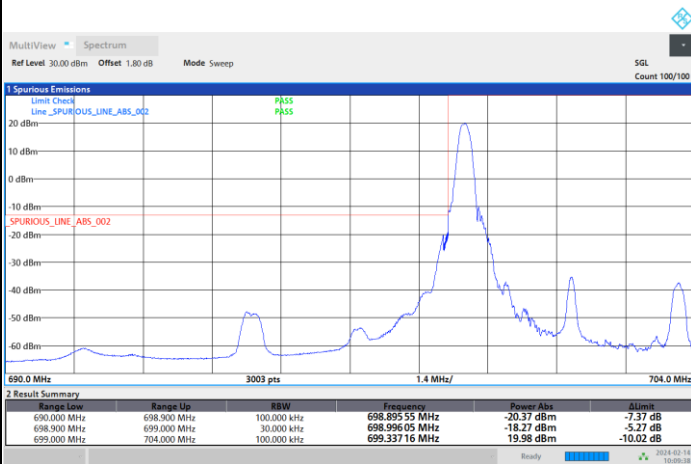




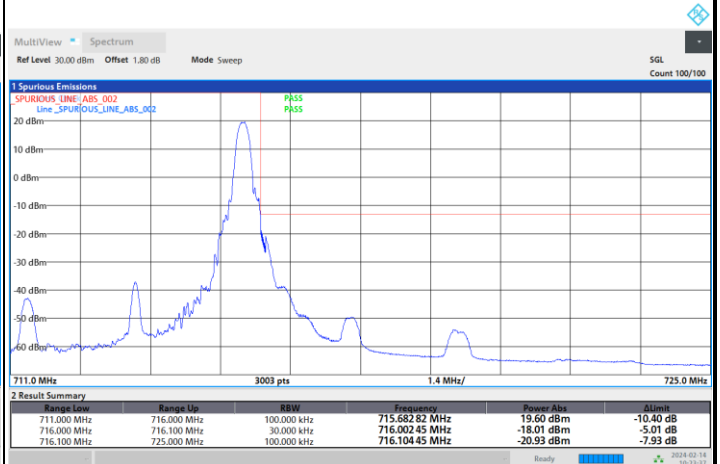
## FR1 n12 / 5MHz / DFT-S OFDM / QPSK

## Lowest Band Edge / 1RB0

## Highest Band Edge / 1RBmax



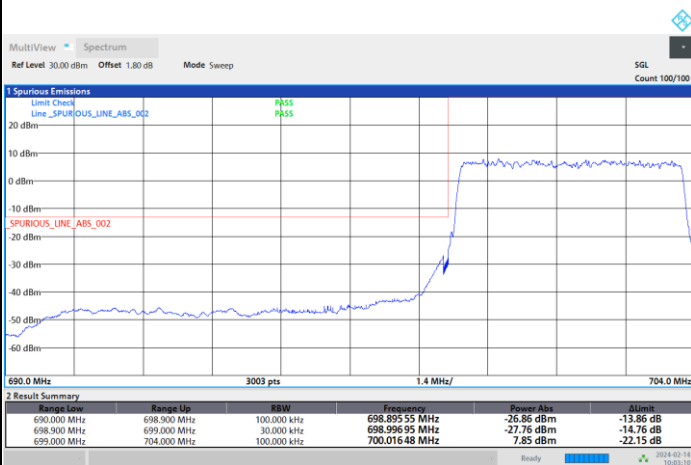
10:09:38 AM 02/14/2024



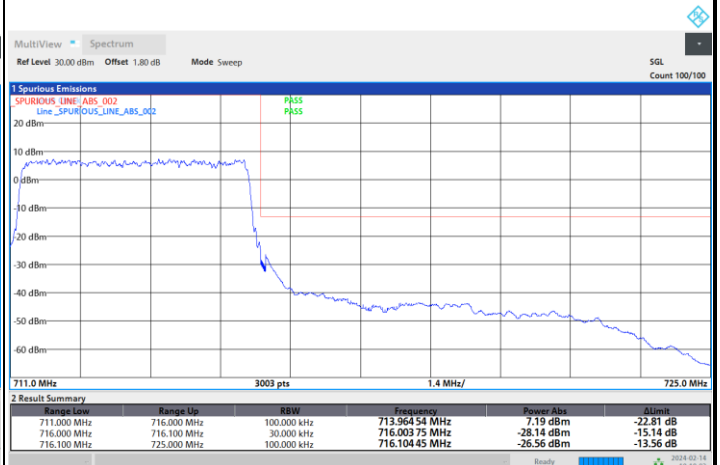
10:23:38 AM 02/14/2024

## Lowest Band Edge / Full RB

## Highest Band Edge / Full RB



10:03:10 AM 02/14/2024



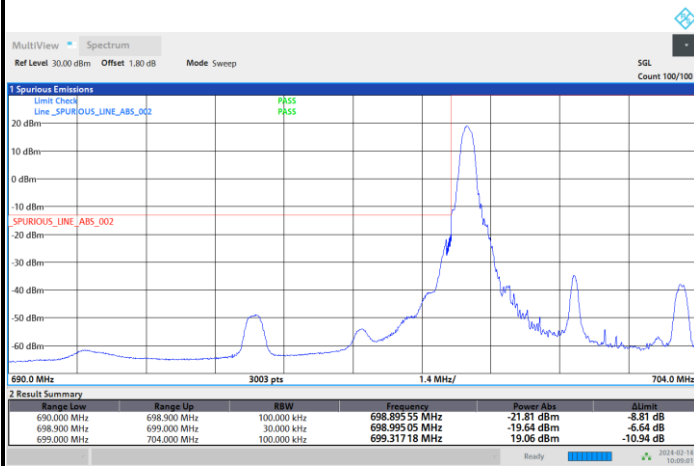
10:18:03 AM 02/14/2024



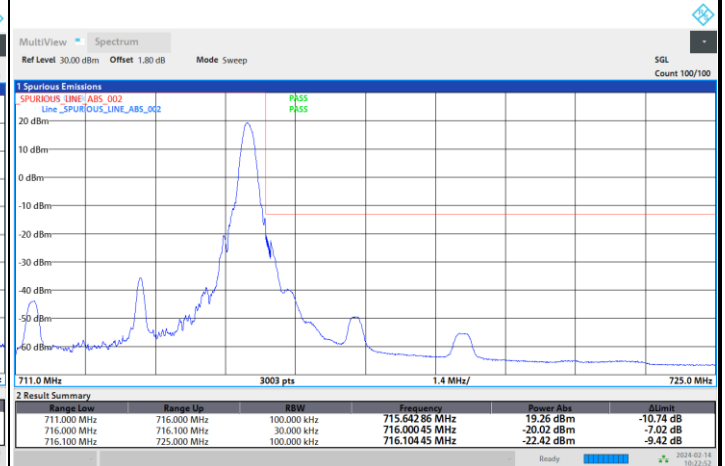
## FR1 n12 / 5MHz / DFT-S OFDM / 16QAM

## Lowest Band Edge / 1RB0

## Highest Band Edge / 1RBmax



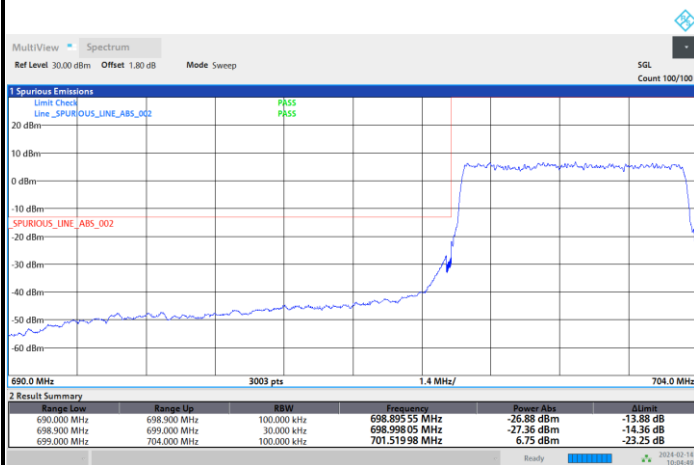
10:09:02 AM 02/14/2024



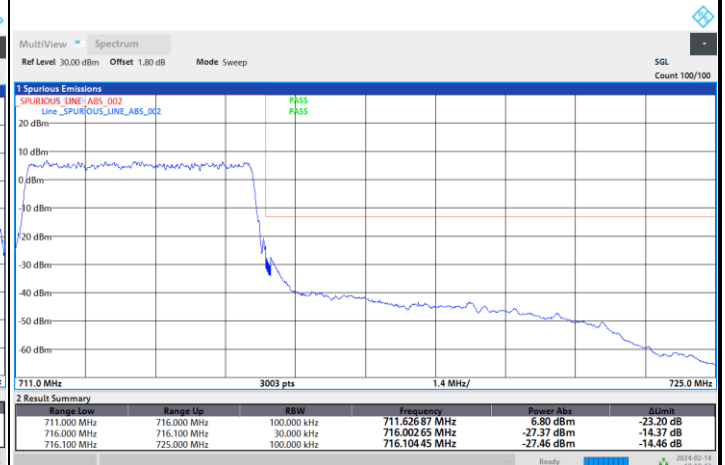
10:22:53 AM 02/14/2024

## Lowest Band Edge / Full RB

## Highest Band Edge / Full RB



10:04:49 AM 02/14/2024



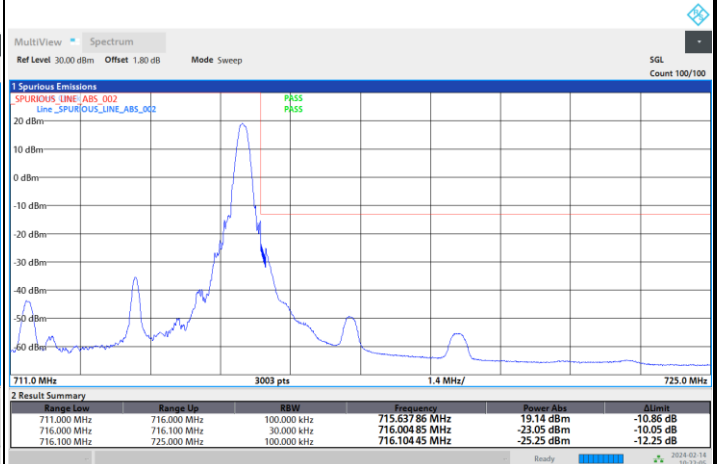
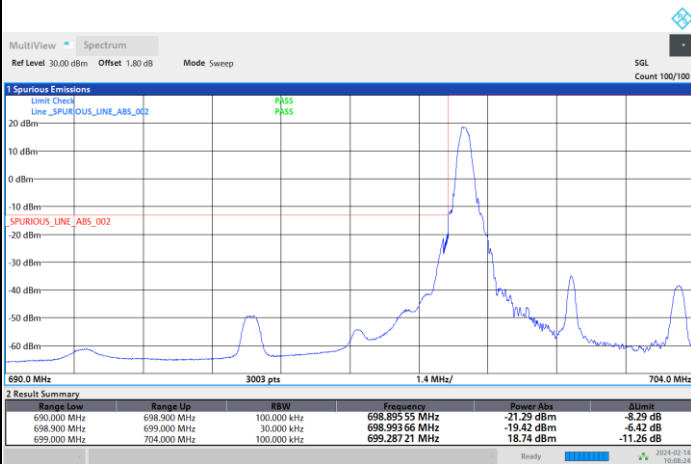
10:18:43 AM 02/14/2024



## FR1 n12 / 5MHz / DFT-S OFDM / 64QAM

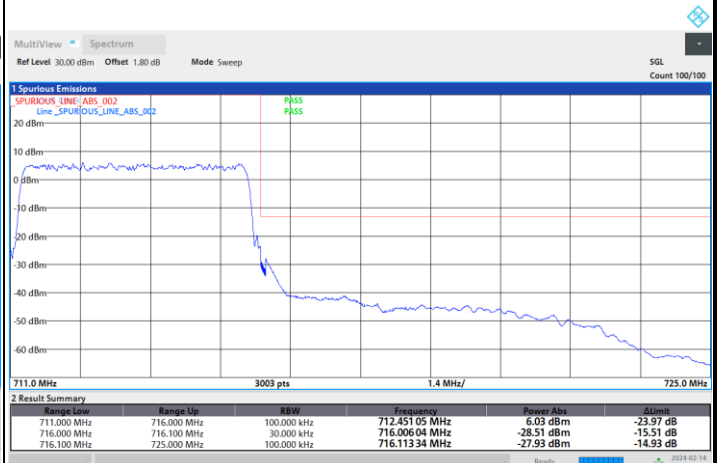
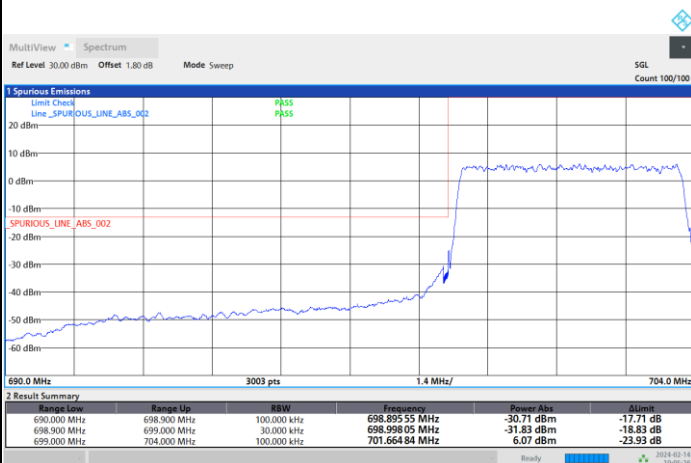
## Lowest Band Edge / 1RB0

## Highest Band Edge / 1RBmax



## Lowest Band Edge / Full RB

## Highest Band Edge / Full RB

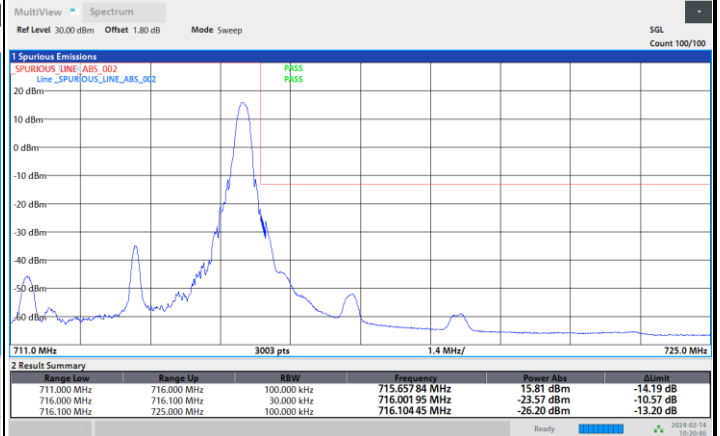
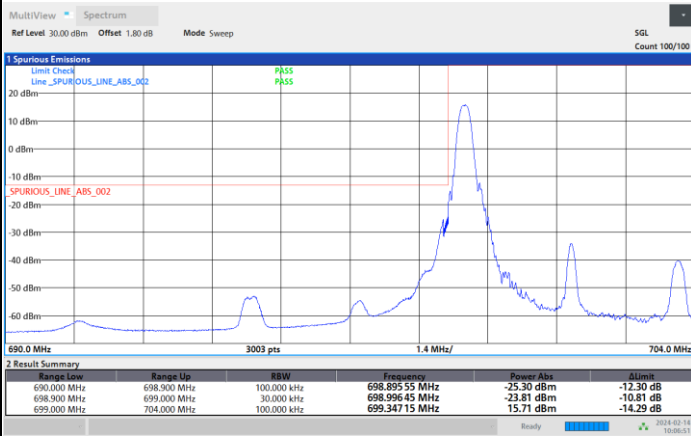




## FR1 n12 / 5MHz / DFT-S OFDM / 256QAM

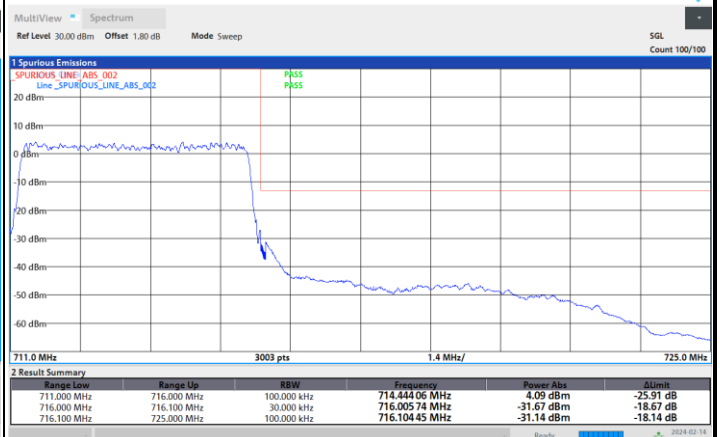
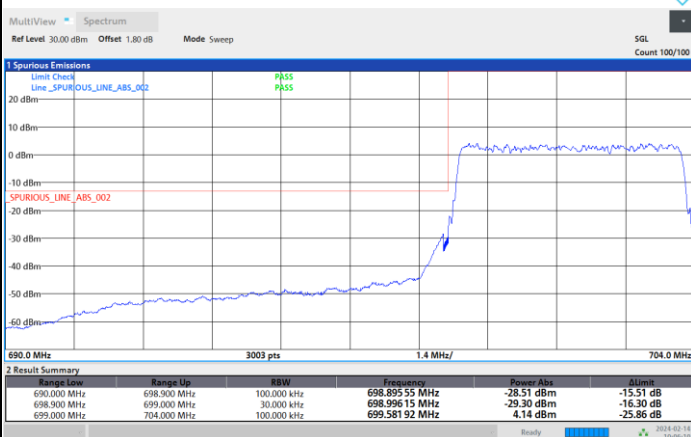
## Lowest Band Edge / 1RB0

## Highest Band Edge / 1RBmax



## Lowest Band Edge / Full RB

## Highest Band Edge / Full RB

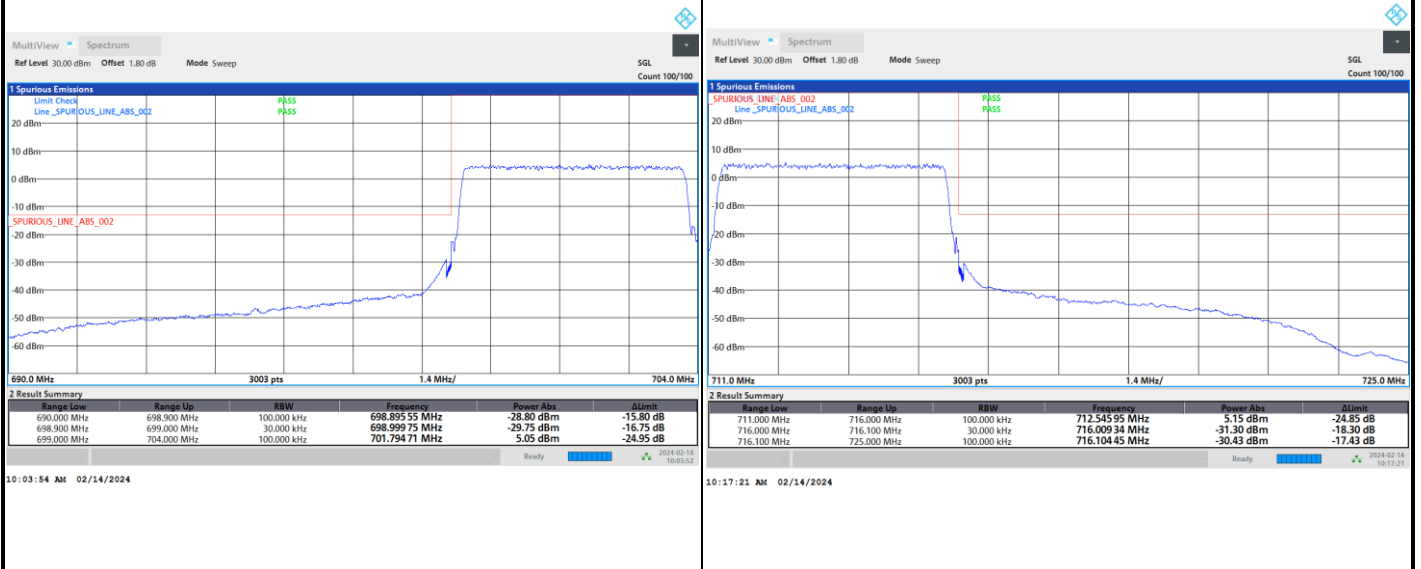




## FR1 n12 / 5MHz / CP OFDM / QPSK / Full RB

## Lowest Band Edge

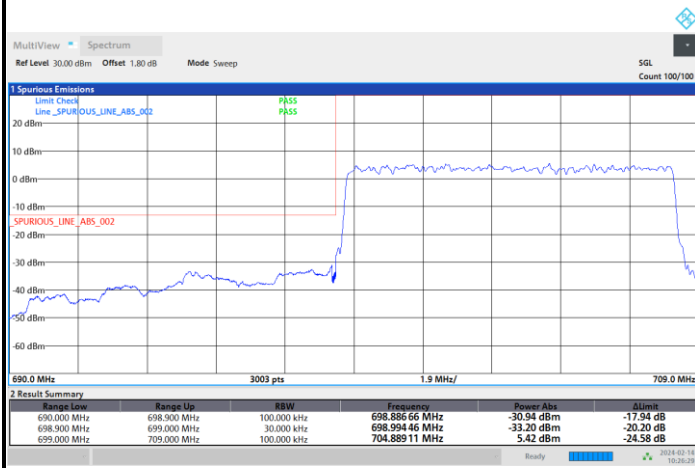
## Highest Band Edge



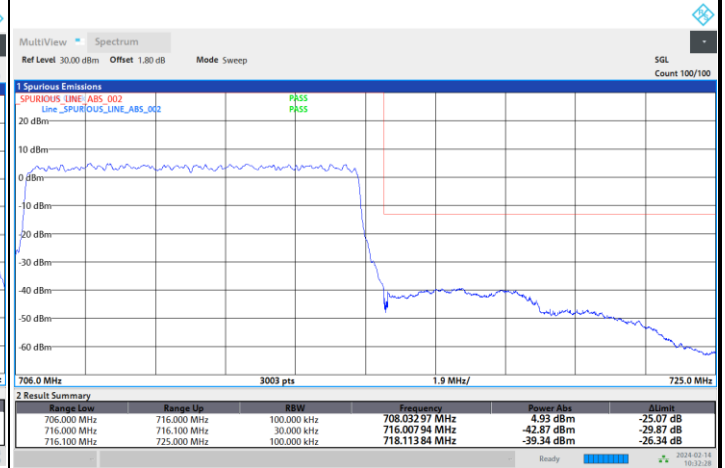


## FR1 n12 / 10MHz / DFT-s-OFDM / PI/2 BPSK / Full RB

## Lowest Band Edge

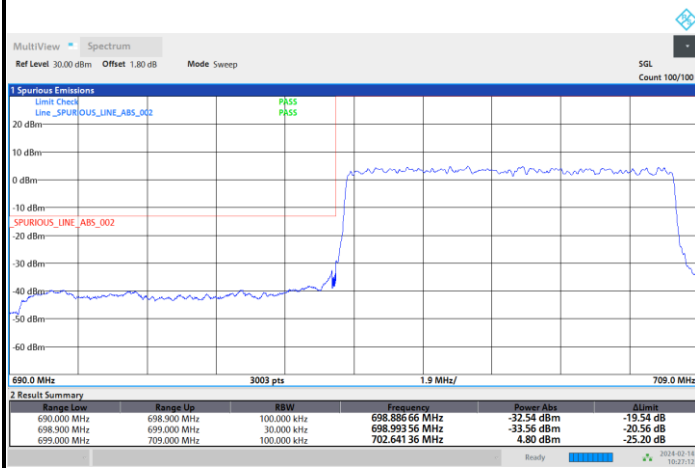


## Highest Band Edge

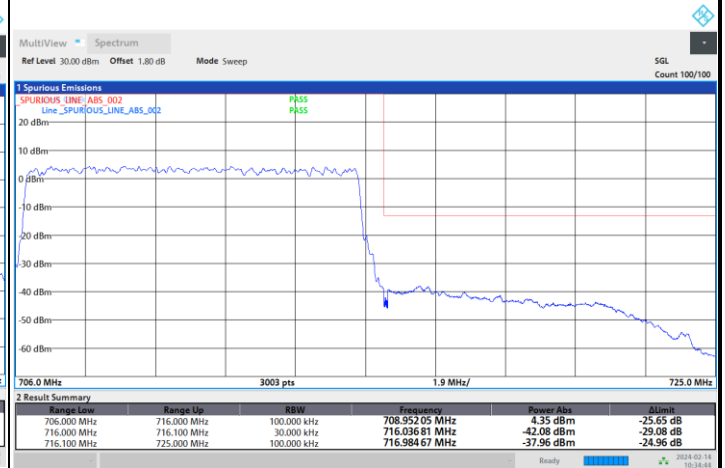


## FR1 n12 / 10MHz / DFT-s-OFDM / QPSK / Full RB

## Lowest Band Edge



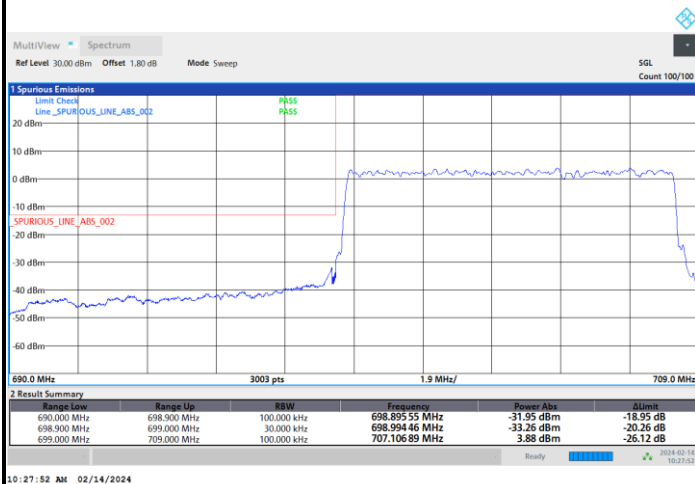
## Highest Band Edge



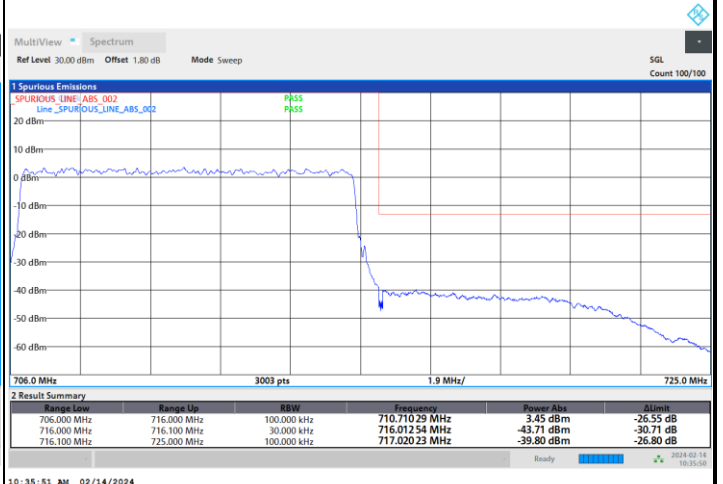


## FR1 n12 / 10MHz / DFT-s-OFDM / 16QAM / Full RB

## Lowest Band Edge

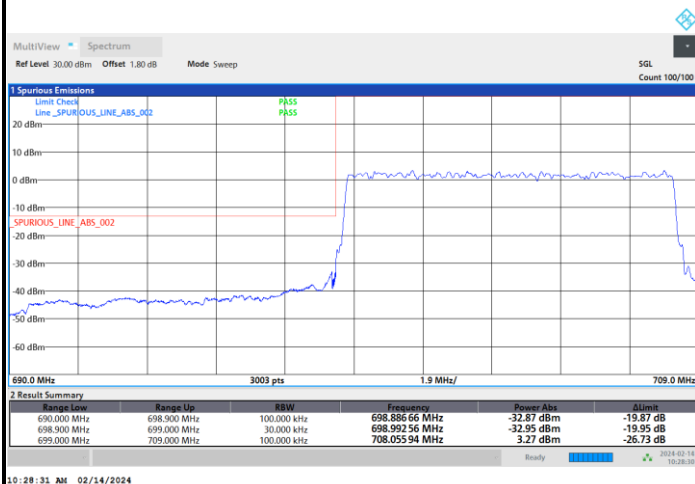


## Highest Band Edge

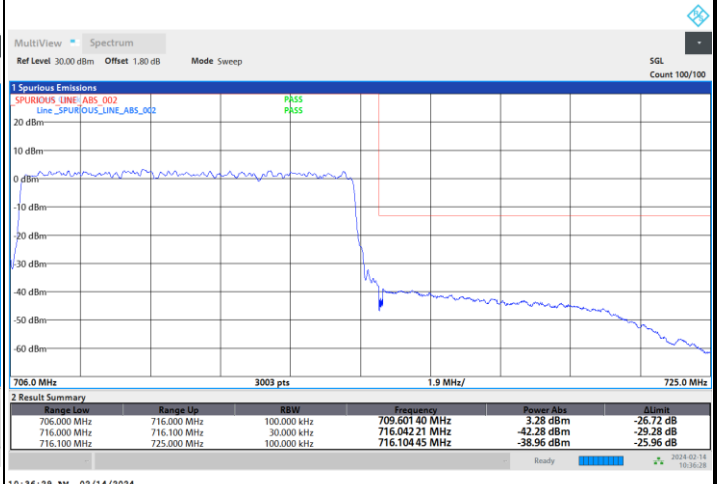


## FR1 n12 / 10MHz / DFT-s-OFDM / 64QAM / Full RB

## Lowest Band Edge



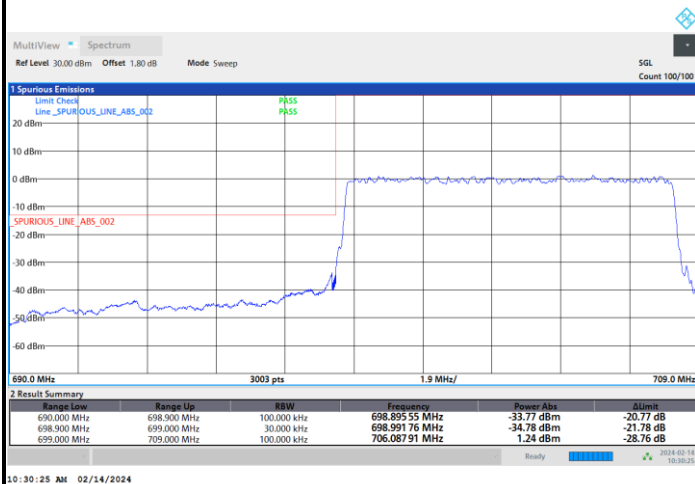
## Highest Band Edge



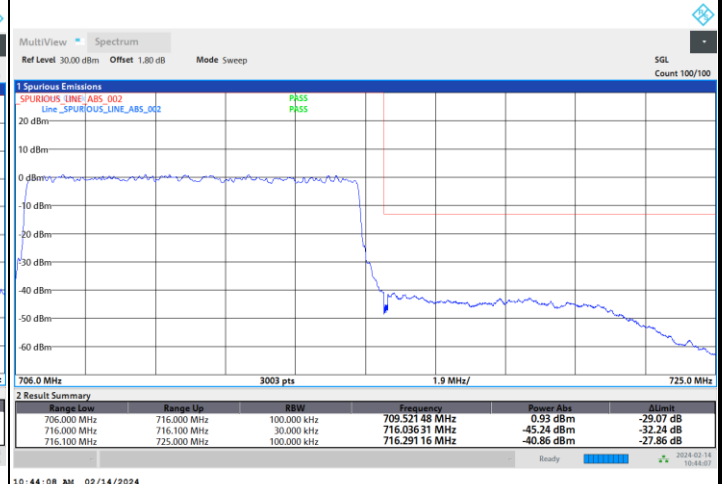


## FR1 n12 / 10MHz / DFT-s-OFDM / 256QAM / Full RB

## Lowest Band Edge

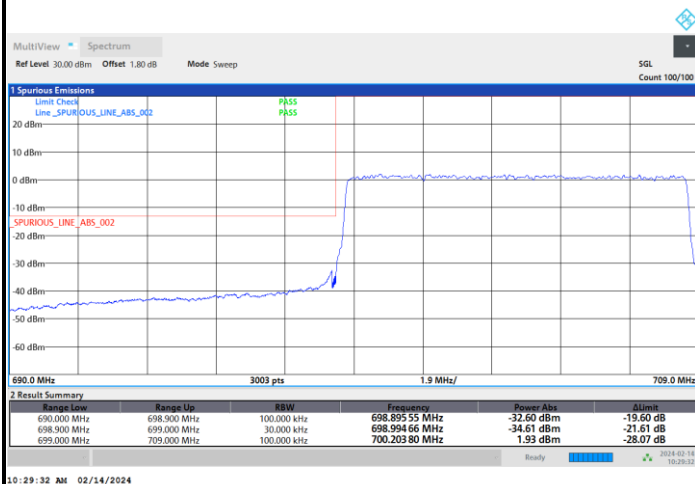


## Highest Band Edge

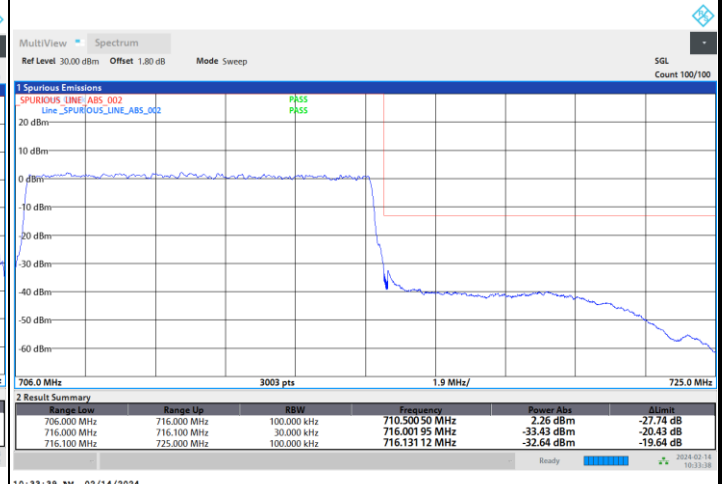


## FR1 n12 / 10MHz / CP OFDM / QPSK / Full RB

## Lowest Band Edge



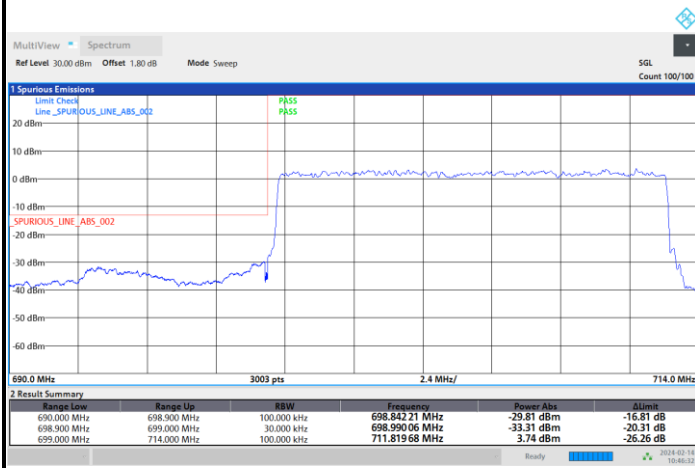
## Highest Band Edge



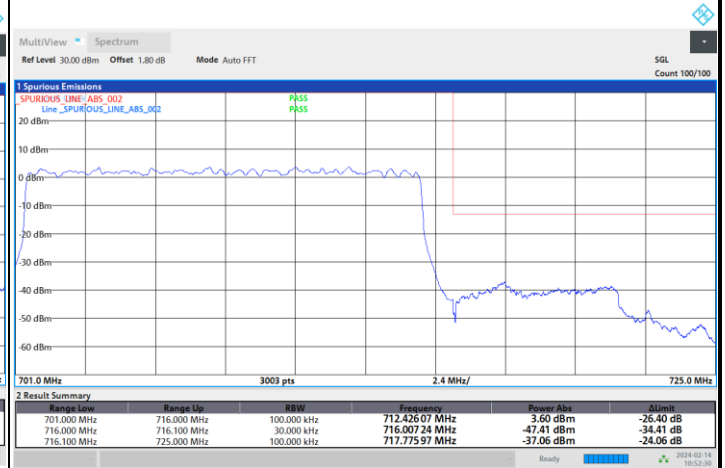


## FR1 n12 / 15MHz / DFT-s-OFDM / PI/2 BPSK / Full RB

## Lowest Band Edge

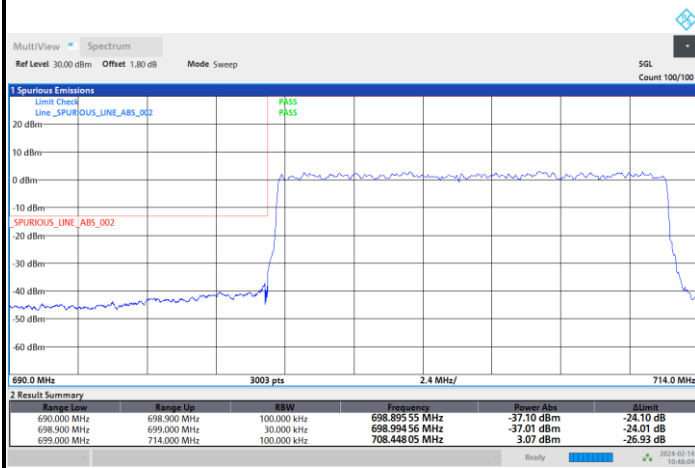


## Highest Band Edge

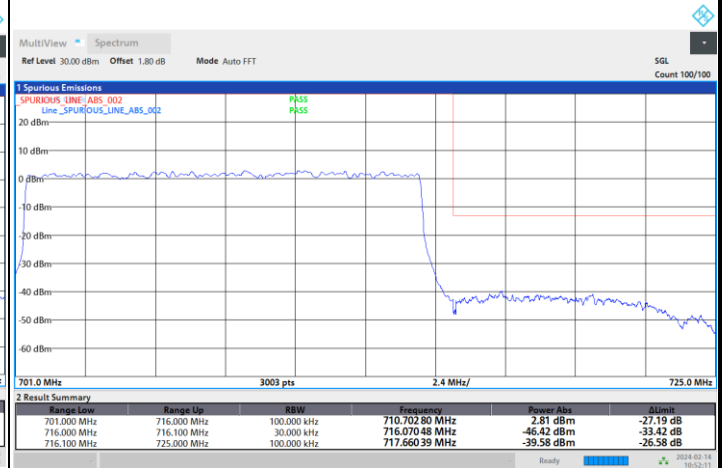


## FR1 n12 / 15MHz / DFT-s-OFDM / QPSK / Full RB

## Lowest Band Edge



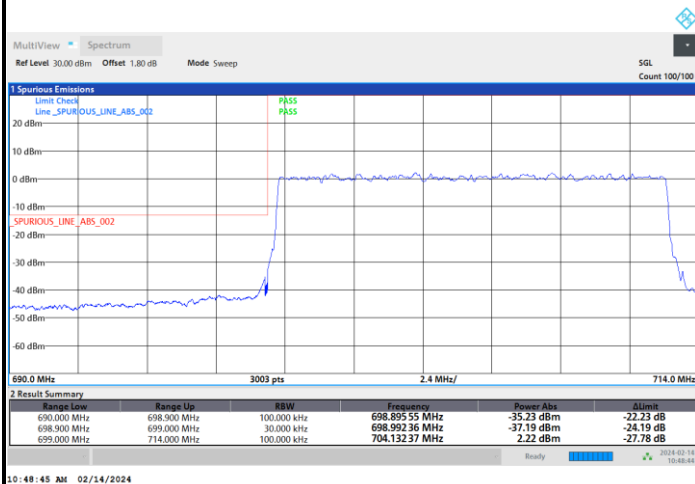
## Highest Band Edge



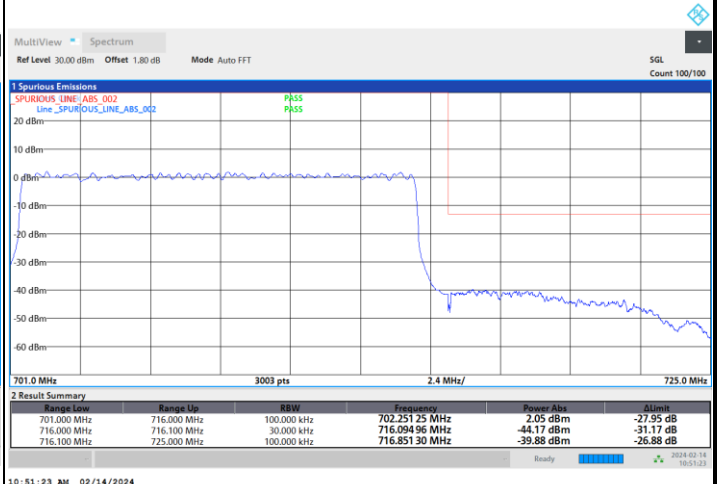


## FR1 n12 / 15MHz / DFT-s-OFDM / 16QAM / Full RB

## Lowest Band Edge

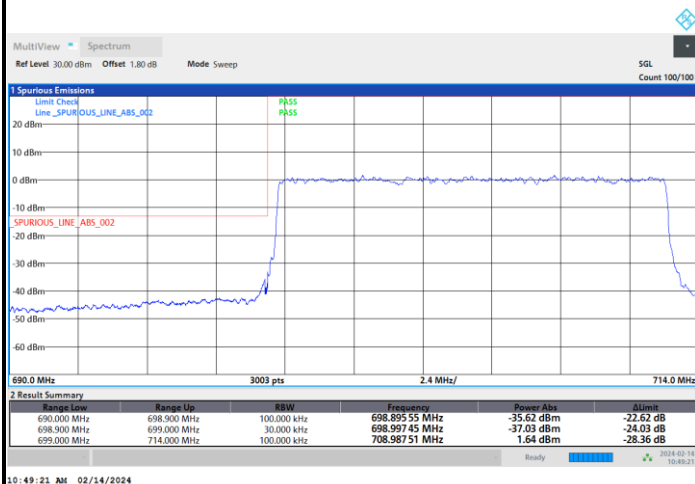


## Highest Band Edge



## FR1 n12 / 15MHz / DFT-s-OFDM / 64QAM / Full RB

## Lowest Band Edge



## Highest Band Edge

