



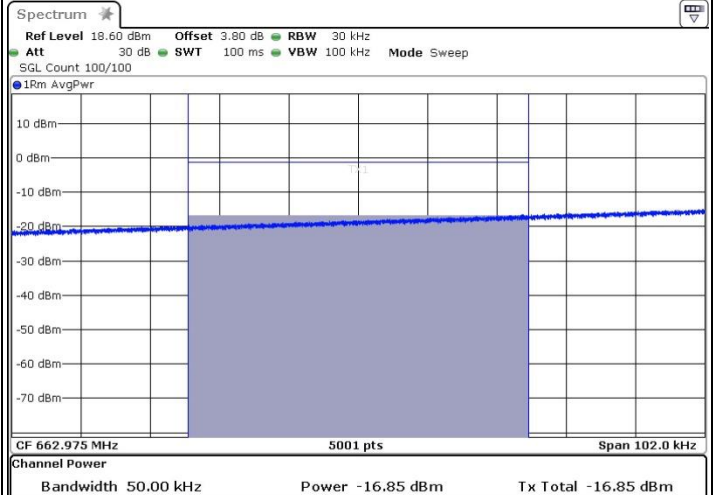
## Conducted Band Edge

### FR1 n71 / 5MHz / DFT-S OFDM BPSK

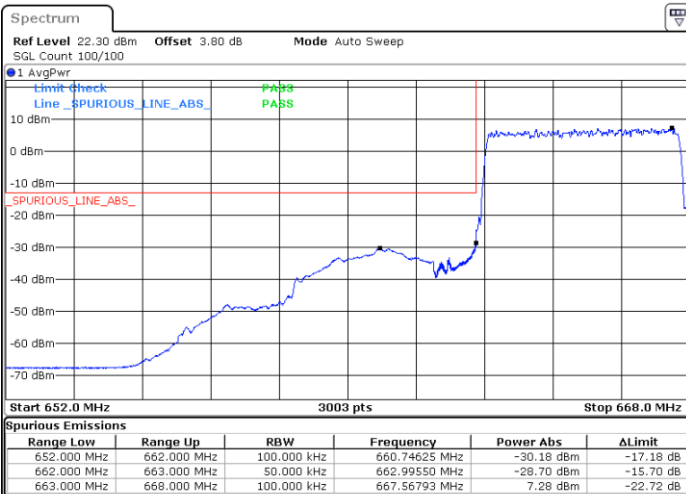
#### Lowest Band Edge / 1 RB



#### Channel Power < -13dBm Pass



#### Lowest Band Edge / Full RB



#### Channel Power < -13dBm Pass

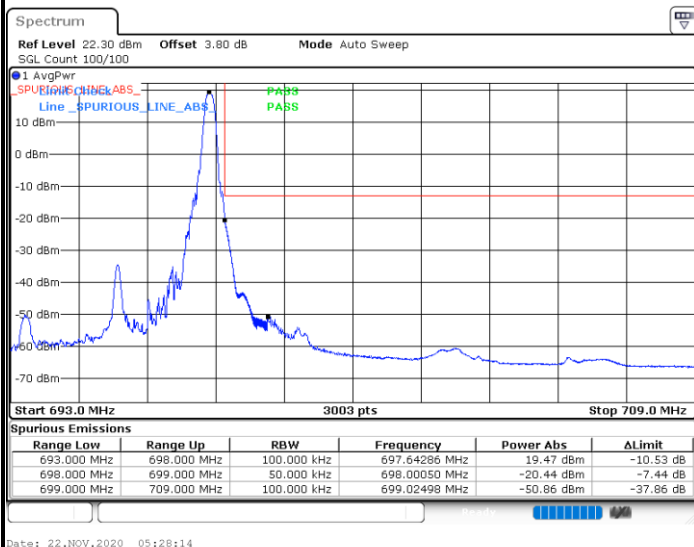
/



## FR1 n71 / 5MHz / DFT-S OFDM BPSK

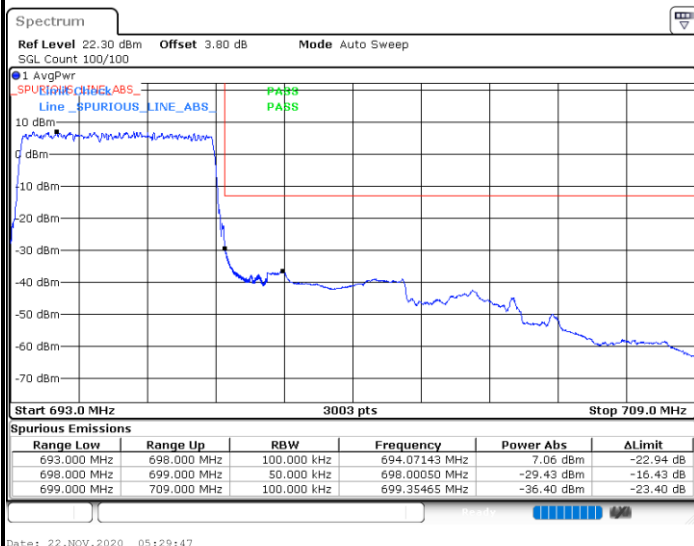
## Highest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

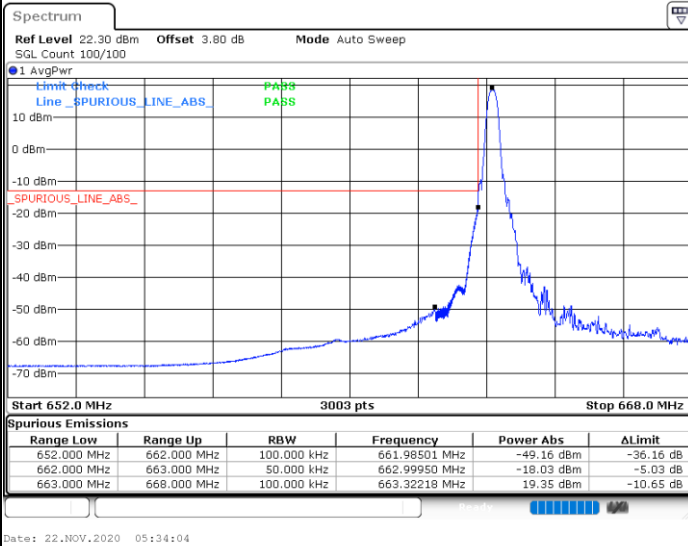




## FR1 n71 / 5MHz / DFT-S OFDM QPSK

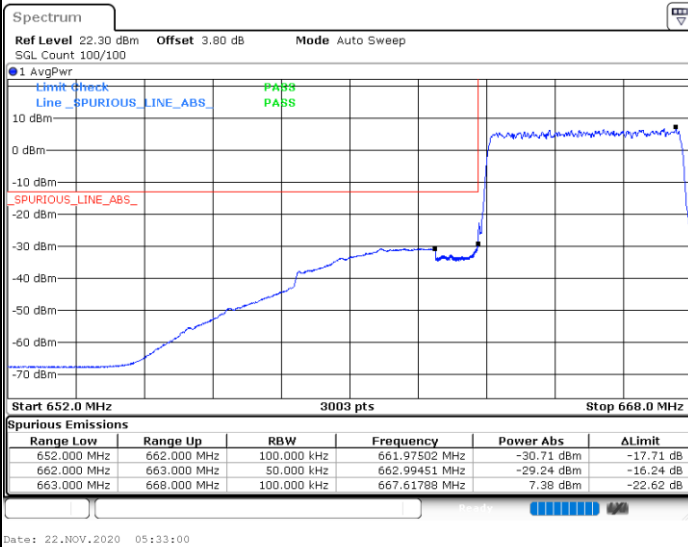
## Lowest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Lowest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

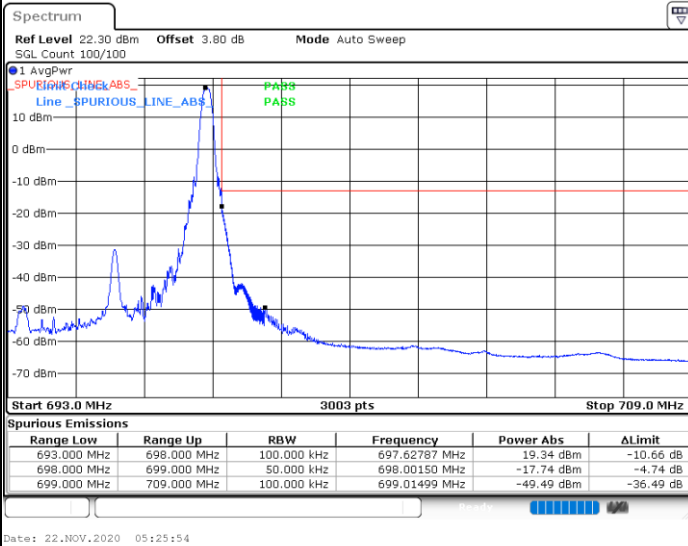




## FR1 n71 / 5MHz / DFT-S OFDM QPSK

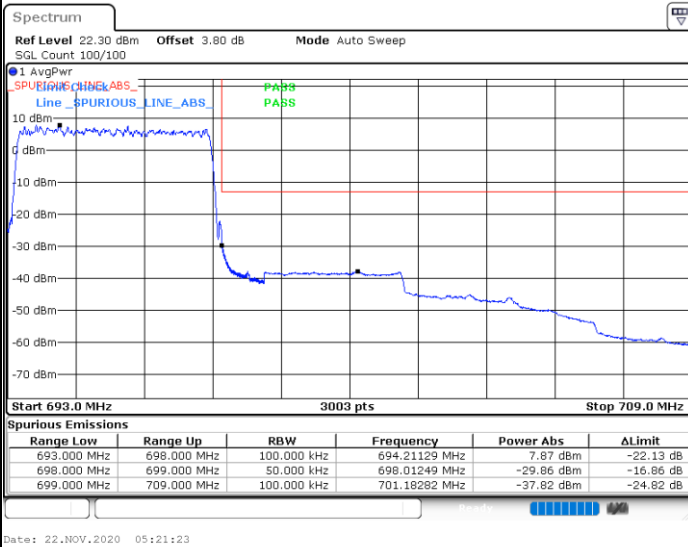
## Highest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB

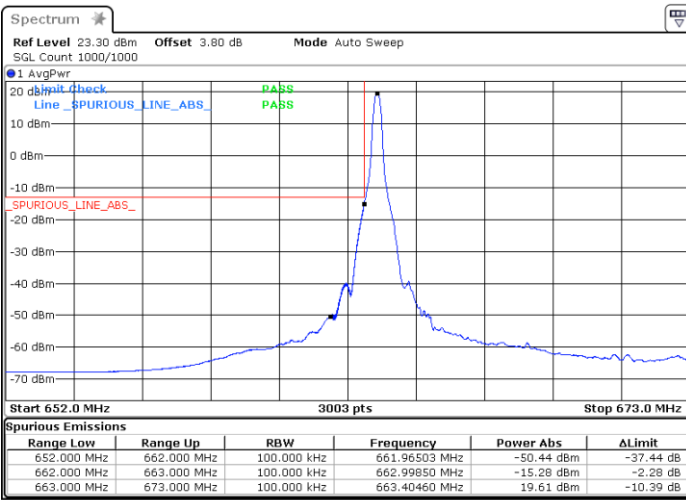
## Channel Power &lt; -13dBm Pass



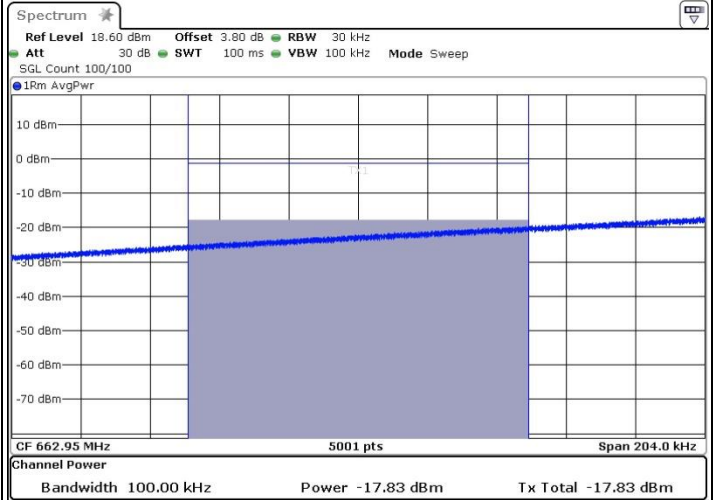


## FR1 n71 / 10MHz / DFT-S OFDM BPSK

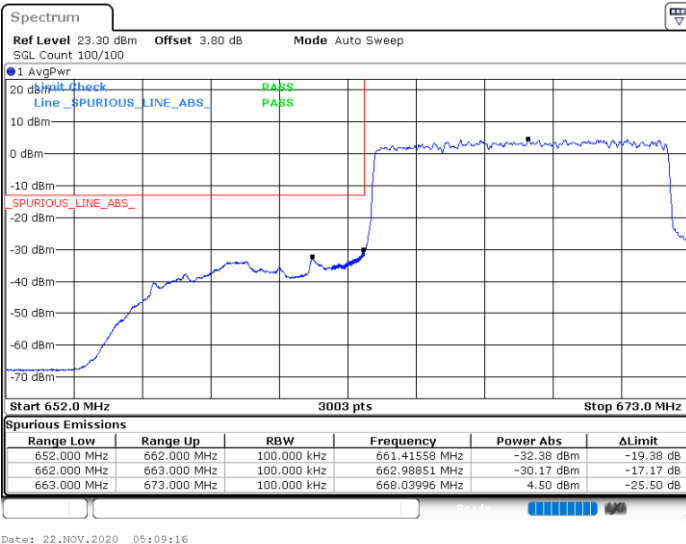
## Lowest Band Edge / 1 RB



## Channel Power &lt; -13dBm Pass

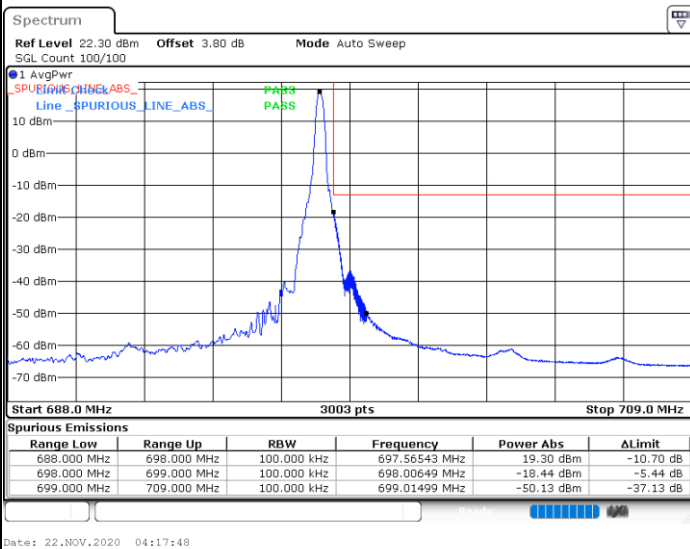
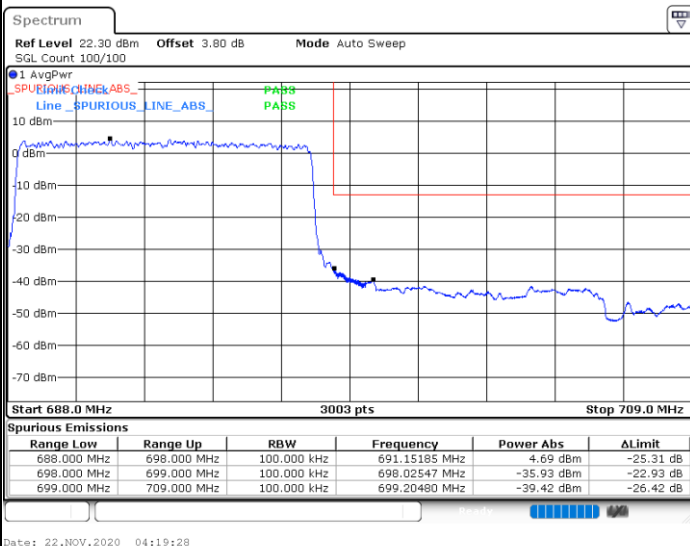


## Lowest Band Edge / Full RB



## Channel Power &lt; -13dBm Pass

/

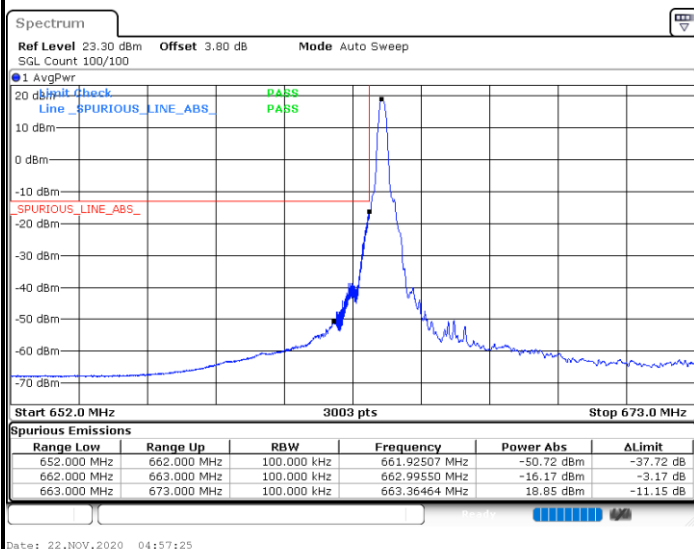
**FR1 n71 / 10MHz / DFT-S OFDM BPSK****Highest Band Edge / 1 RB****Channel Power < -13dBm Pass****Highest Band Edge / Full RB****Channel Power < -13dBm Pass**



## FR1 n71 / 10MHz / DFT-S OFDM QPSK

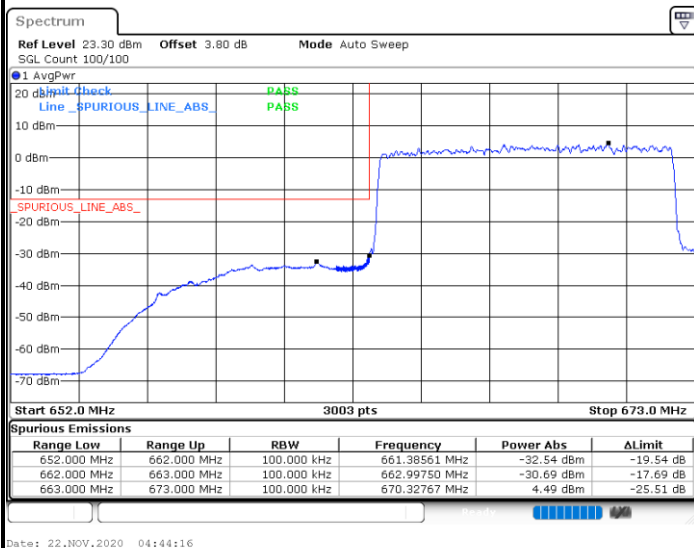
## Lowest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Lowest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

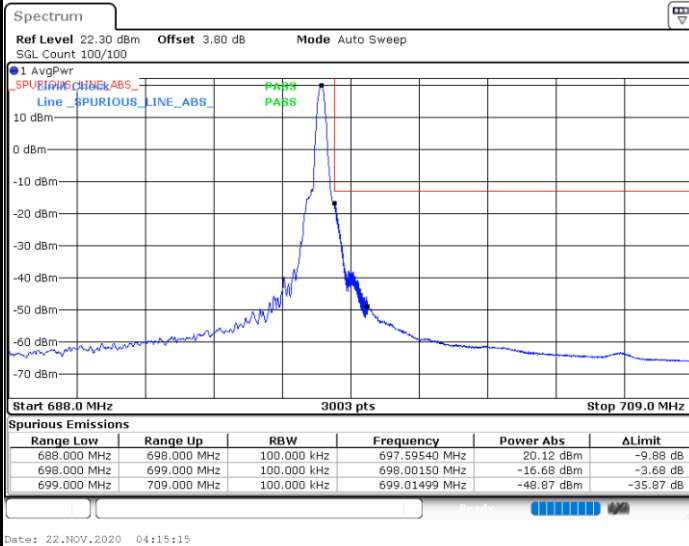




## FR1 n71 / 10MHz / DFT-S OFDM QPSK

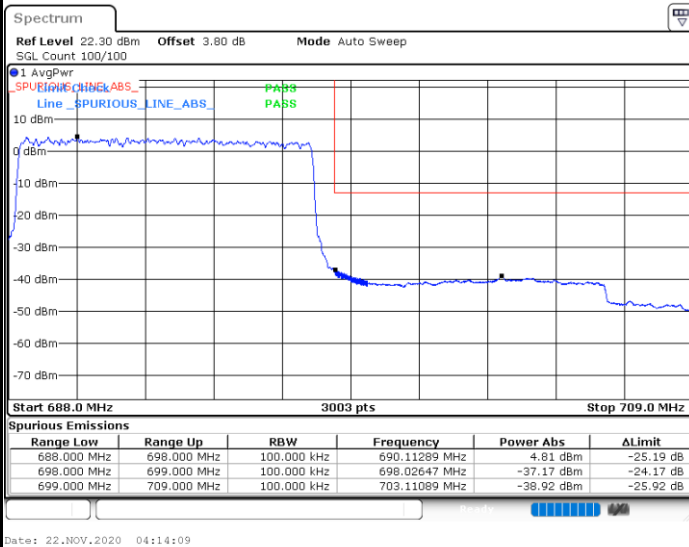
## Highest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

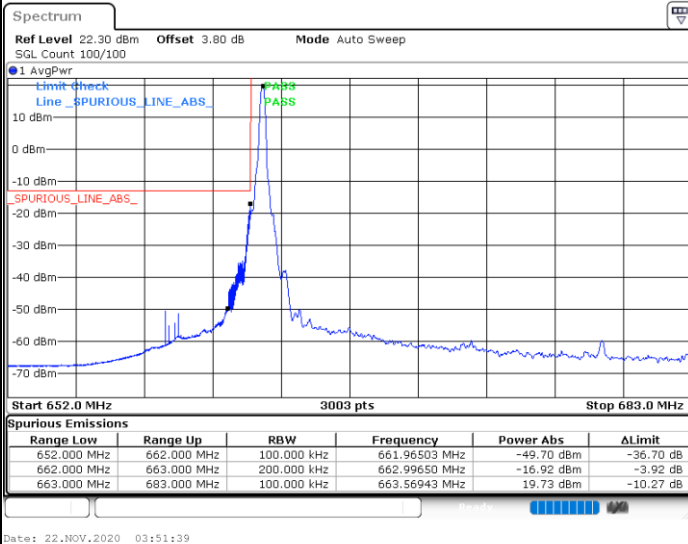




## FR1 n71 / 20MHz / DFT-S OFDM BPSK

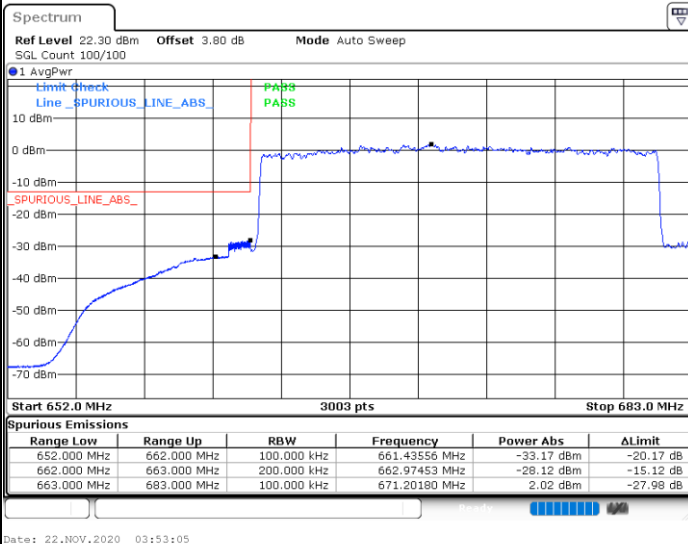
## Lowest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Lowest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

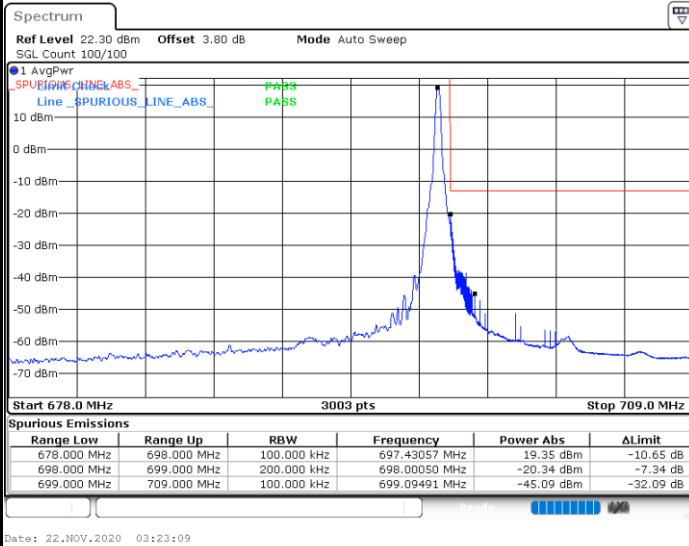




## FR1 n71 / 20MHz / DFT-S OFDM BPSK

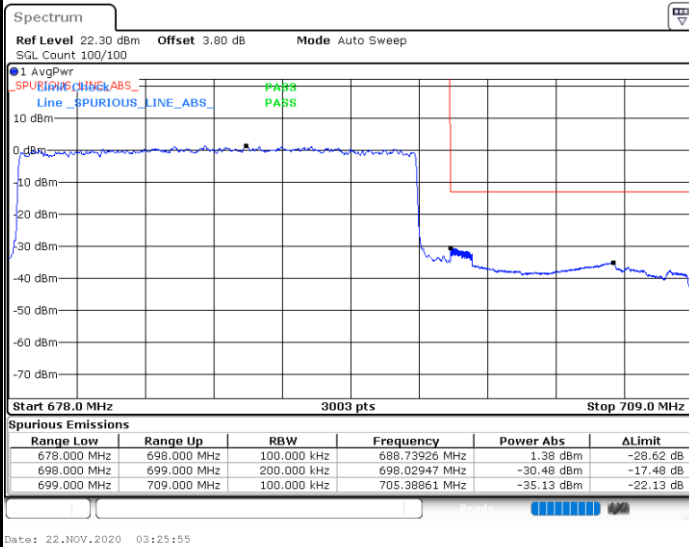
## Highest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

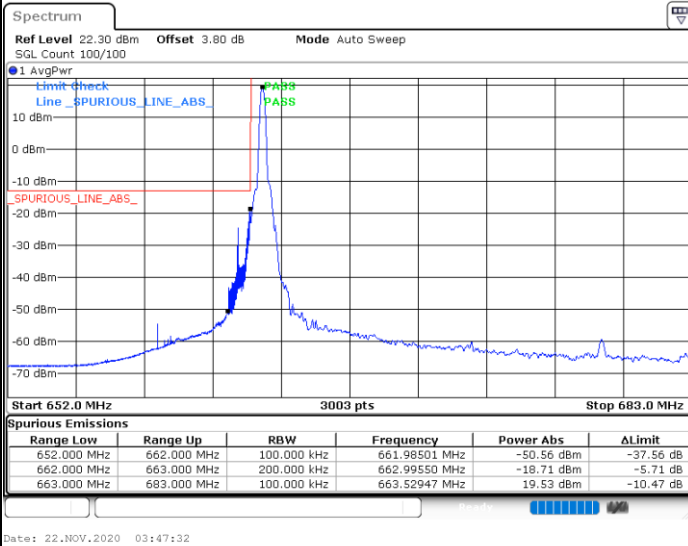




## FR1 n71 / 20MHz / DFT-S OFDM QPSK

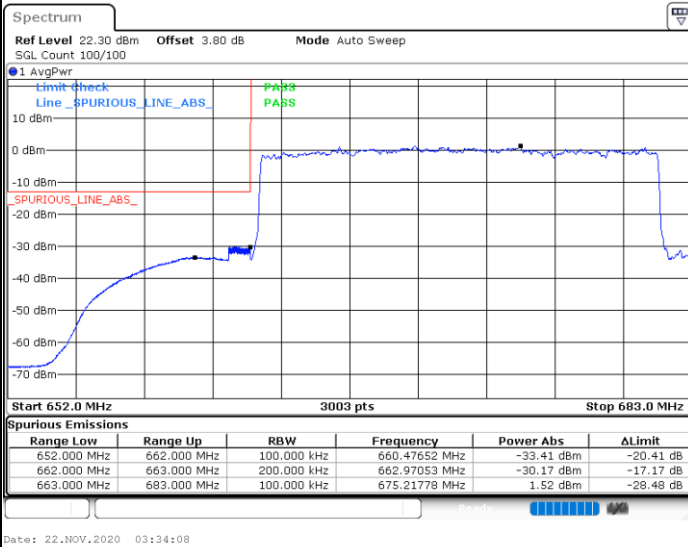
## Lowest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Lowest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

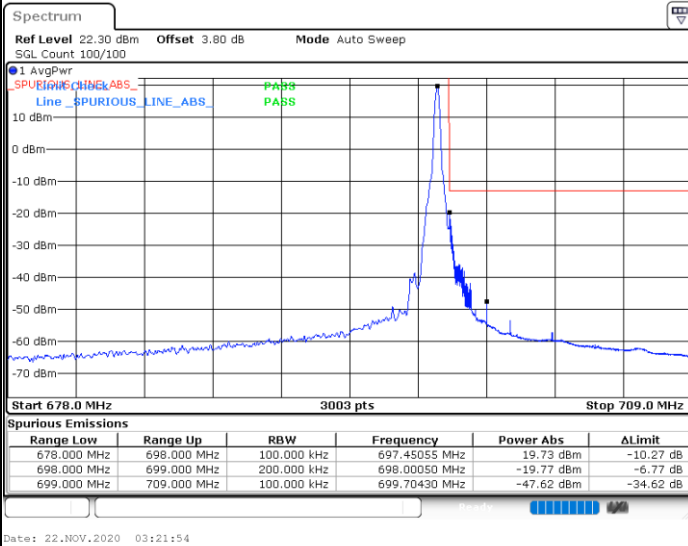




## FR1 n71 / 20MHz / DFT-S OFDM QPSK

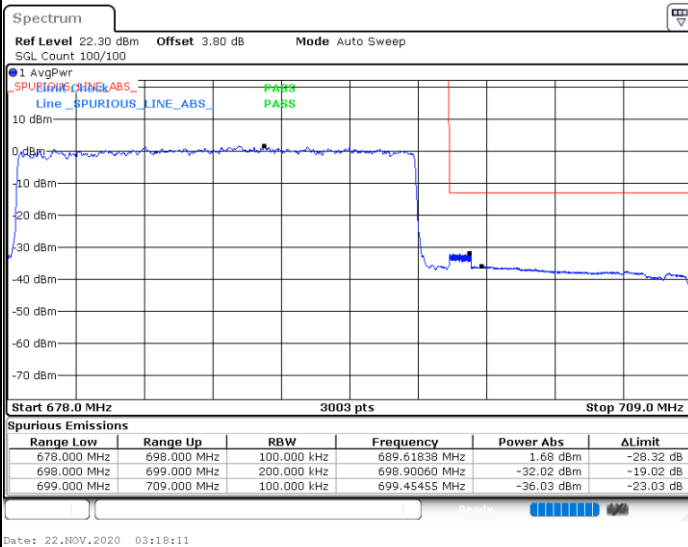
## Highest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

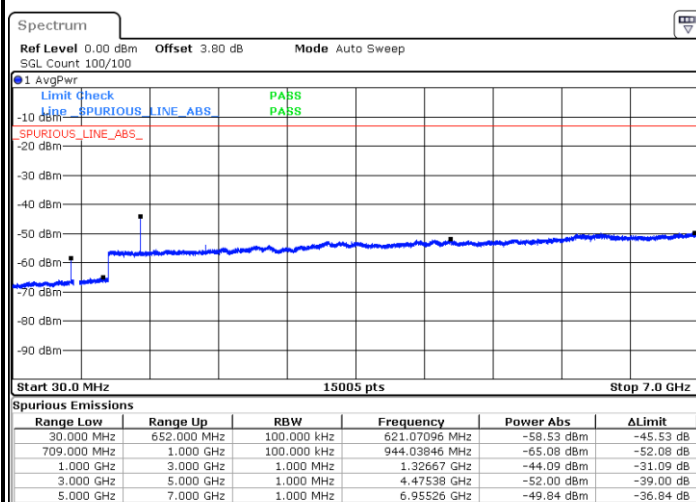




# Conducted Spurious Emission

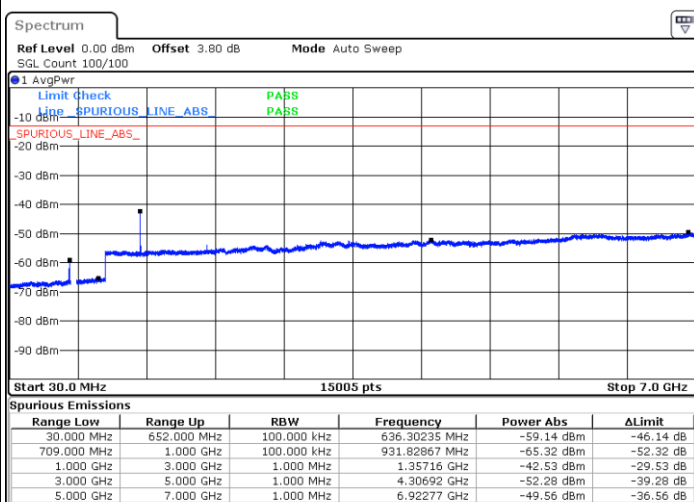
FR1 n71 / 5MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB



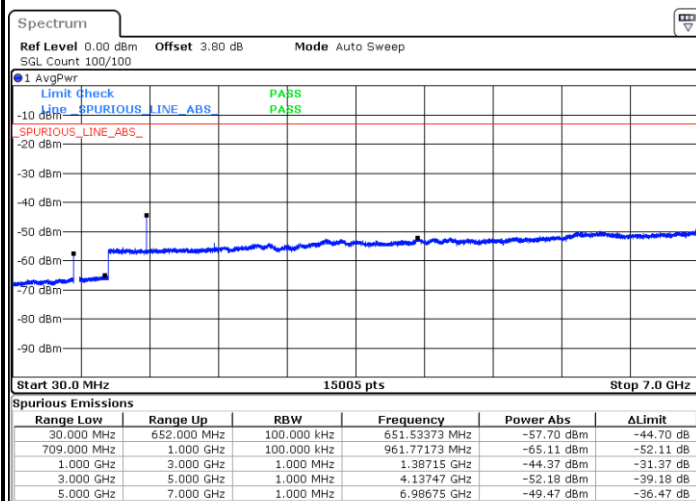
Date: 22.NOV.2020 05:48:20

Middle Channel / 1RB



Date: 22.NOV.2020 05:54:32

Highest Channel / 1RB



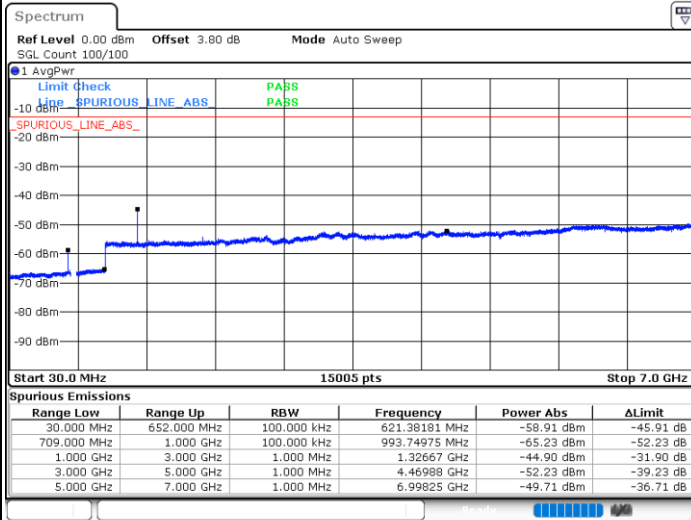
Date: 22.NOV.2020 05:56:44



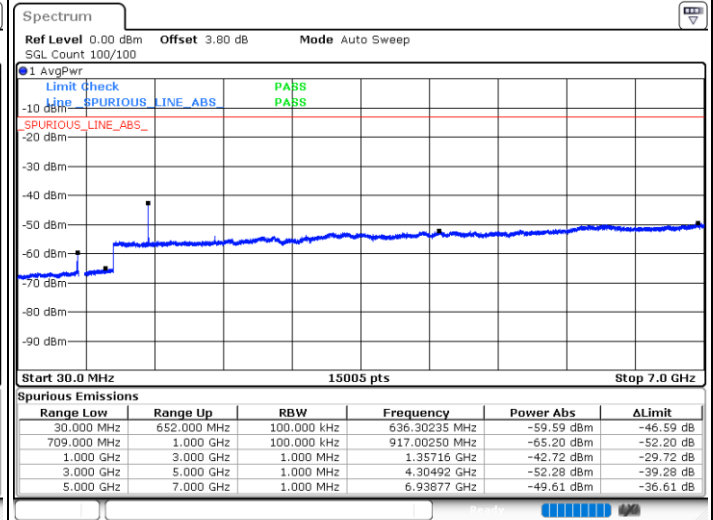
## FR1 n71 / 5MHz / DFT-S OFDM / QPSK

## Lowest Channel / 1RB

## Middle Channel / 1RB

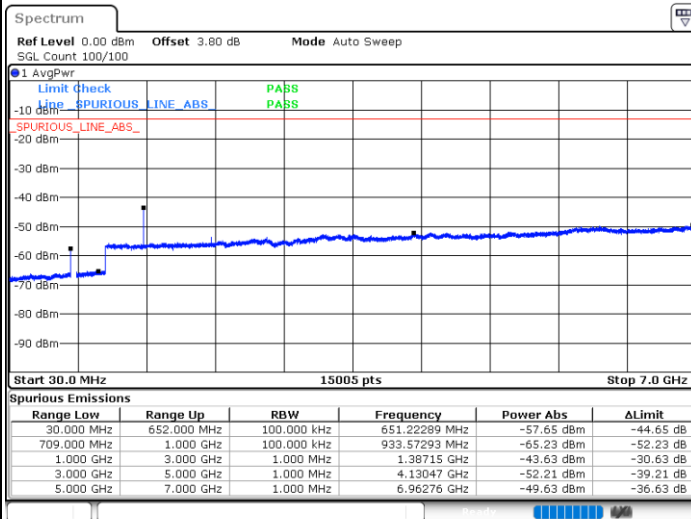


Date: 22.NOV.2020 05:52:04



Date: 22.NOV.2020 05:53:40

## Highest Channel / 1RB



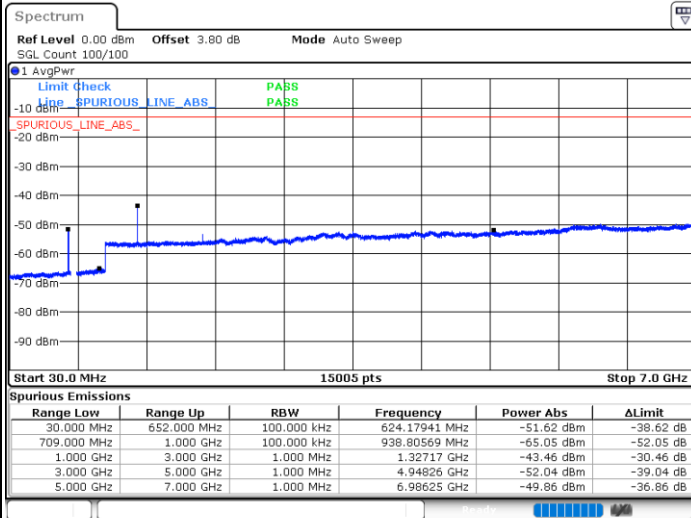
Date: 22.NOV.2020 05:58:22



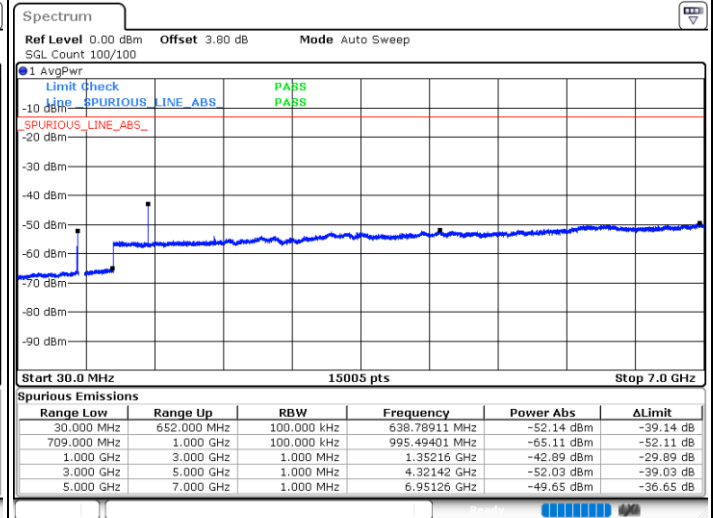
## FR1 n71 / 10MHz / DFT-S OFDM / BPSK

## Lowest Channel / 1RB

## Middle Channel / 1RB

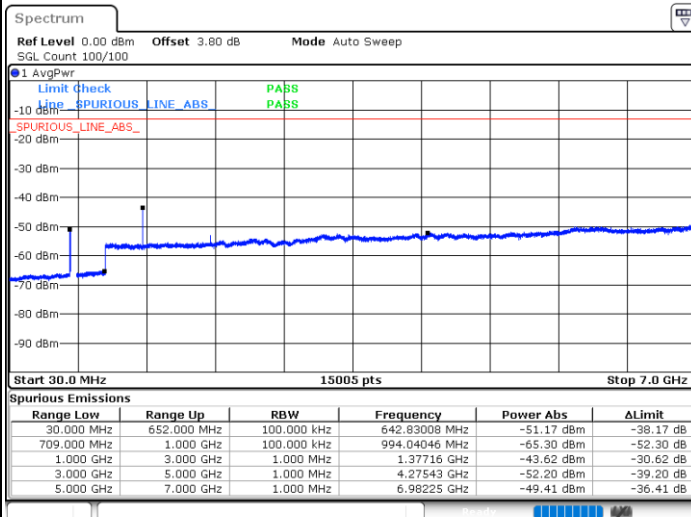


Date: 22.NOV.2020 05:10:26



Date: 22.NOV.2020 05:16:13

## Highest Channel / 1RB



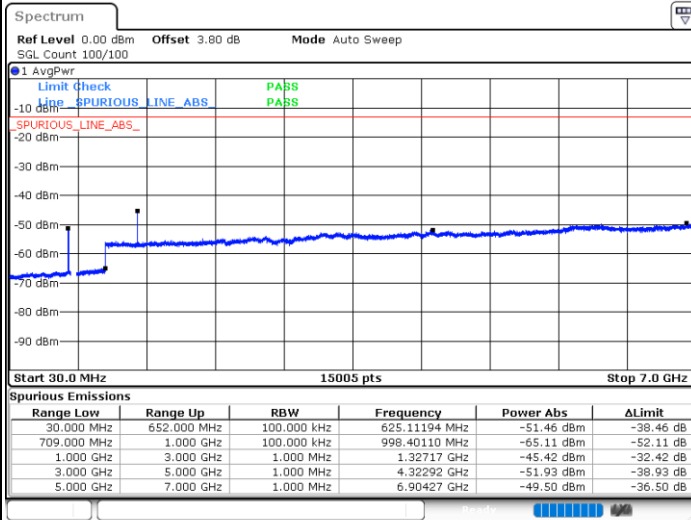
Date: 22.NOV.2020 05:17:25



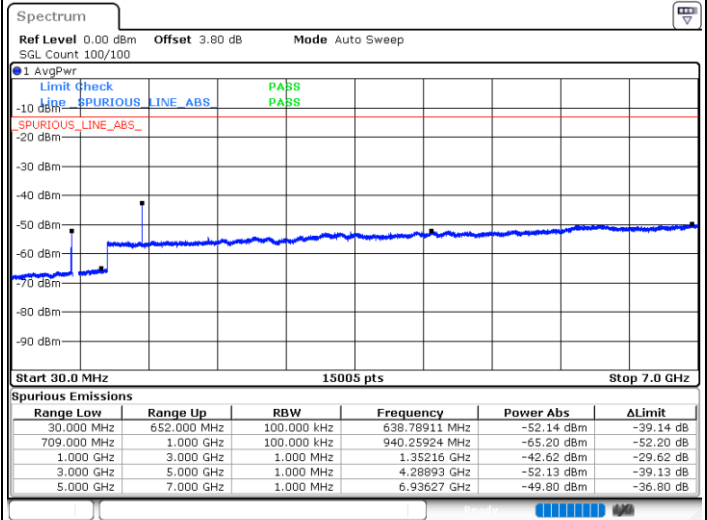
## FR1 n71 / 10MHz / DFT-S OFDM / QPSK

## Lowest Channel / 1RB

## Middle Channel / 1RB

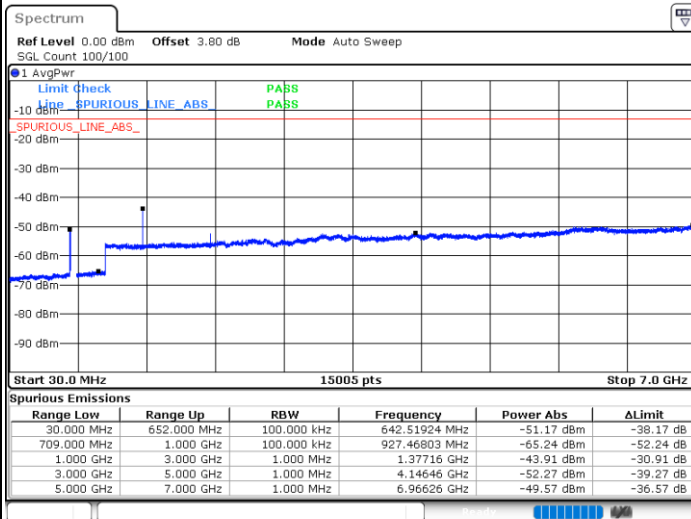


Date: 22.NOV.2020 05:13:38



Date: 22.NOV.2020 05:15:27

## Highest Channel / 1RB

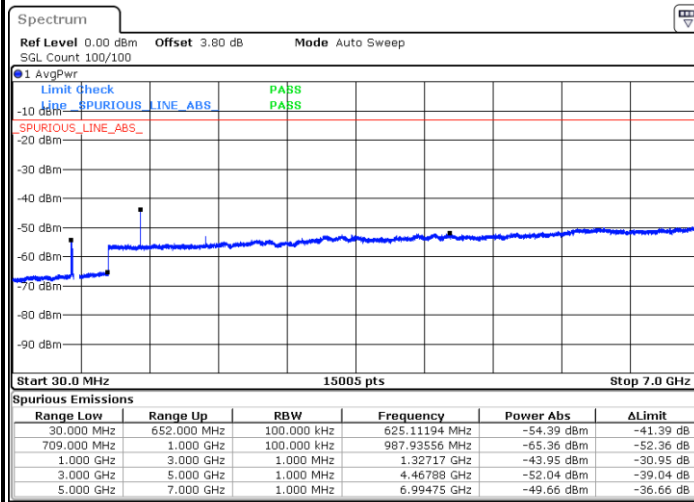


Date: 22.NOV.2020 05:18:46



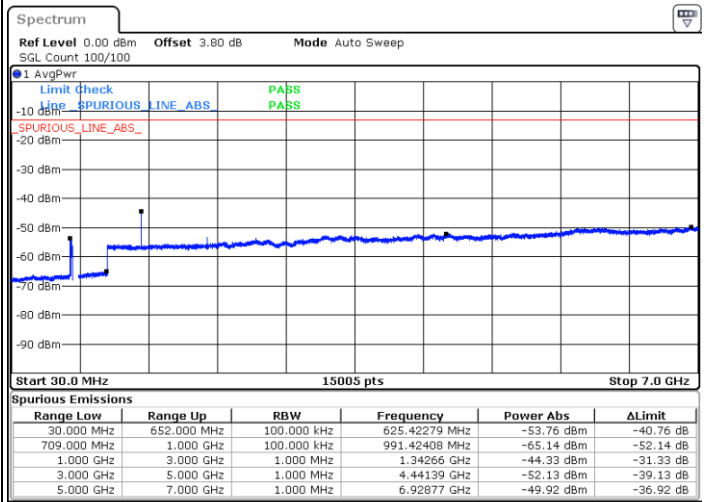
## FR1 n71 / 20MHz / DFT-S OFDM / BPSK

## Lowest Channel / 1RB



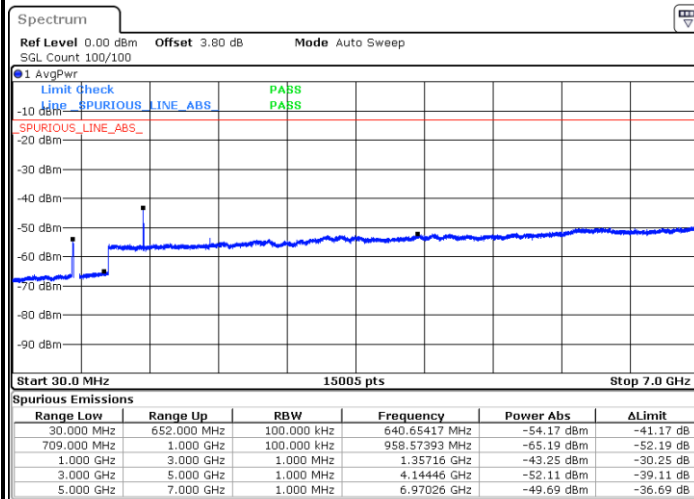
Date: 22.NOV.2020 03:55:49

## Middle Channel / 1RB



Date: 22.NOV.2020 04:01:39

## Highest Channel / 1RB

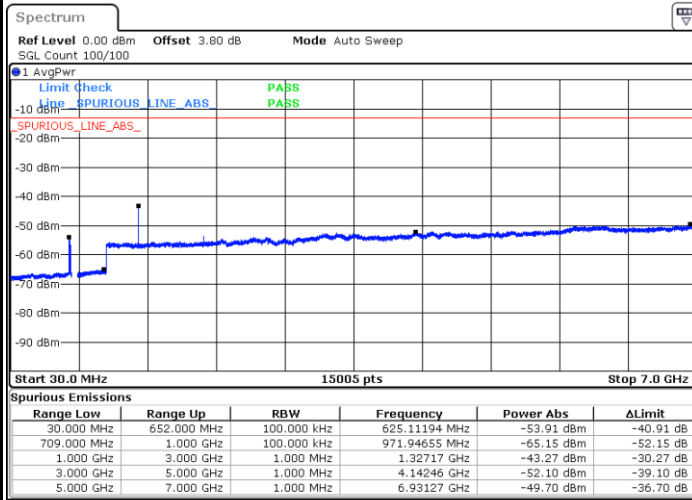


Date: 22.NOV.2020 04:07:15



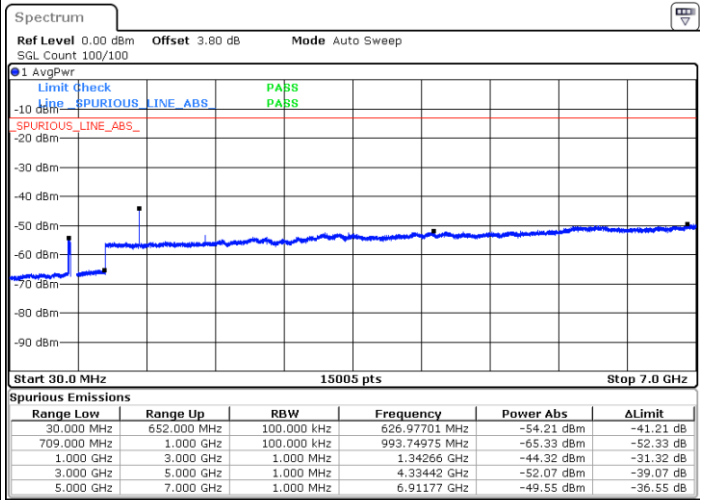
## FR1 n71 / 20MHz / DFT-S OFDM / QPSK

## Lowest Channel / 1RB



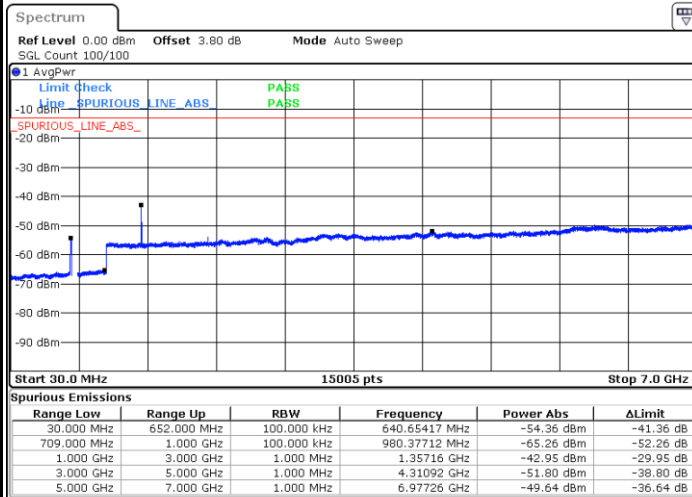
Date: 22.NOV.2020 03:57:46

## Middle Channel / 1RB



Date: 22.NOV.2020 03:59:52

## Highest Channel / 1RB



Date: 22.NOV.2020 04:08:21

**Frequency Stability**

| Test Conditions  |                   | NR n71 (BPSK) / Middle Channel | Limit       |
|------------------|-------------------|--------------------------------|-------------|
| Temperature (°C) | Voltage (Volt)    | BW 20MHz                       | Within Band |
|                  |                   | Deviation (ppm)                | Result      |
| 50               | Normal Voltage    | 0.0021                         | PASS        |
| 40               | Normal Voltage    | 0.0017                         |             |
| 30               | Normal Voltage    | 0.0013                         |             |
| 20(Ref.)         | Normal Voltage    | 0.0015                         |             |
| 10               | Normal Voltage    | 0.0021                         |             |
| 0                | Normal Voltage    | 0.0017                         |             |
| -10              | Normal Voltage    | 0.0021                         |             |
| -20              | Normal Voltage    | 0.0011                         |             |
| -30              | Normal Voltage    | 0.0017                         |             |
| 20               | Maximum Voltage   | 0.0012                         |             |
| 20               | Normal Voltage    | 0.0016                         |             |
| 20               | Battery End Point | 0.0014                         |             |

**Note:**

1. Normal Voltage =7.74 V. ; Battery End Point (BEP) =7.2 V. ; Maximum Voltage =8.9 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## 5G NR n77 SA

**Peak-to-Average Ratio**

| Mode       | FR1 n77 / 20MHz / DFT-S OFDM |           |      |         |             |
|------------|------------------------------|-----------|------|---------|-------------|
| Mod.       | PI/2 BPSK                    | PI/2 BPSK | QPSK | QPSK    | Limit: 13dB |
| RB Size    | 1RB                          | Full RB   | 1RB  | Full RB | Result      |
| Lowest CH  | 6.75                         | 6.46      | 7.59 | 7.48    | PASS        |
| Middle CH  | 6.58                         | 6.26      | 7.33 | 7.25    |             |
| Highest CH | 6.35                         | 6.17      | 6.38 | 7.17    |             |



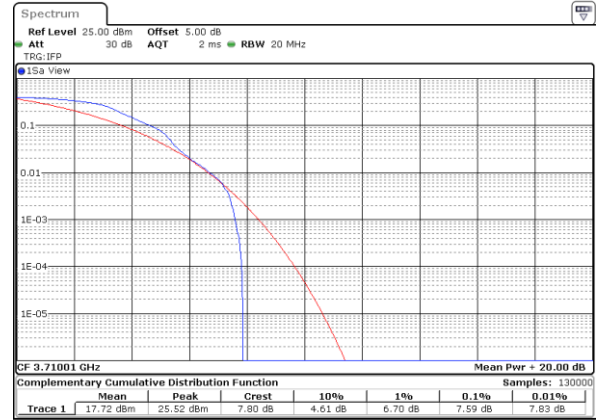
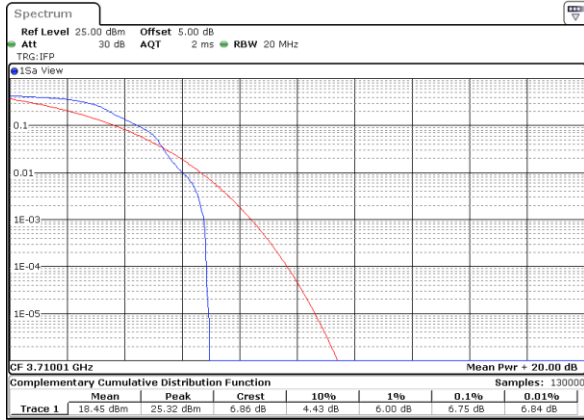
## FR1 n77 / 20MHz / DFT-S OFDM

## PI/2 BPSK

## QPSK

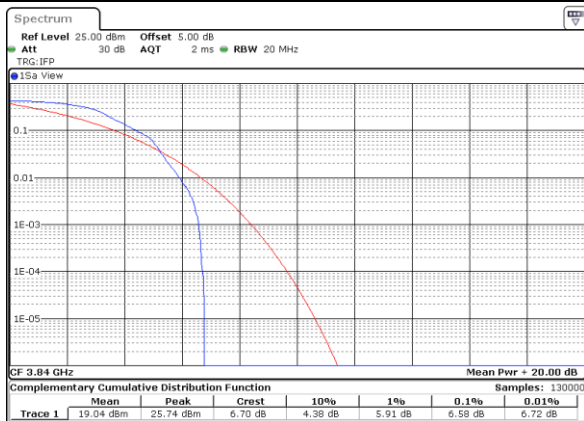
## Lowest Channel / 1RB

## Lowest Channel / 1RB



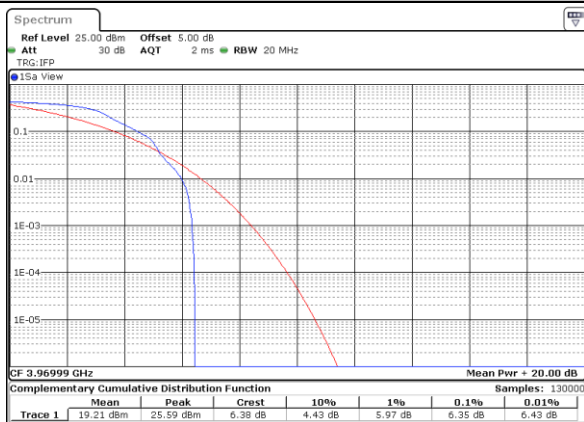
## Middle Channel / 1 RB

## Middle Channel / 1 RB



## Highest Channel / 1 RB

## Highest Channel / 1 RB





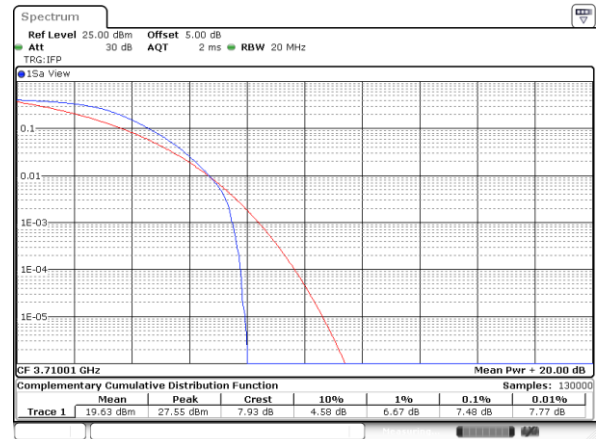
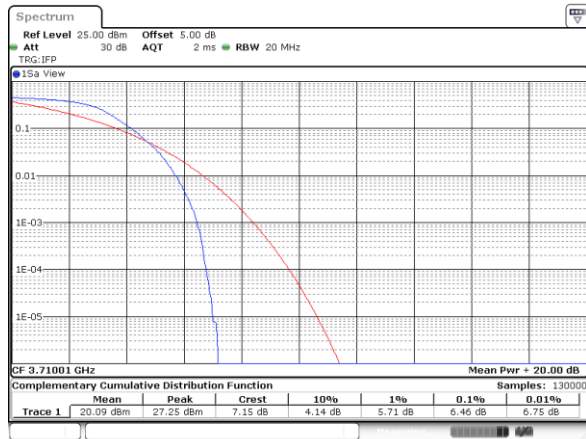
## FR1 n77 / 20MHz / DFT-S OFDM

## PI/2 BPSK

## QPSK

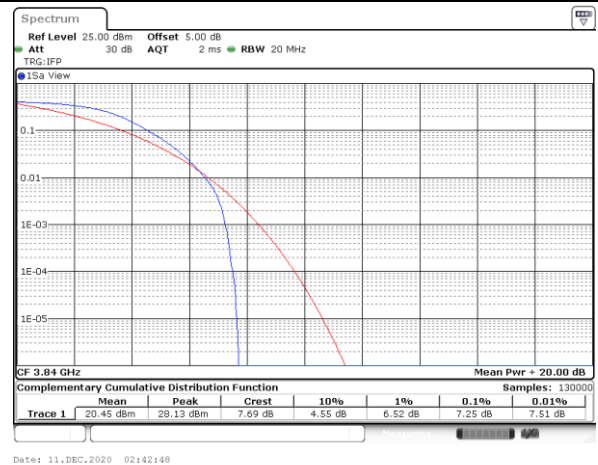
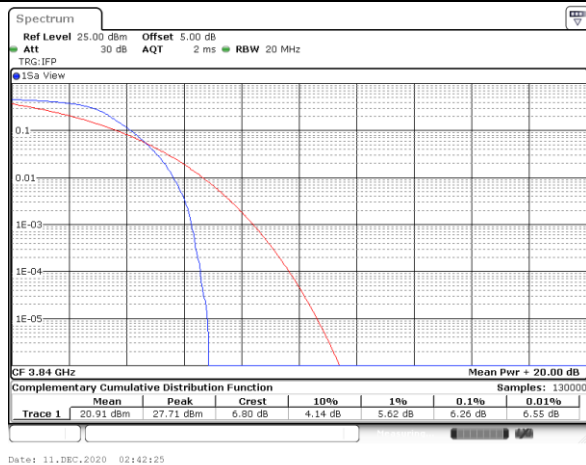
## Lowest Channel / Full RB

## Lowest Channel / Full RB



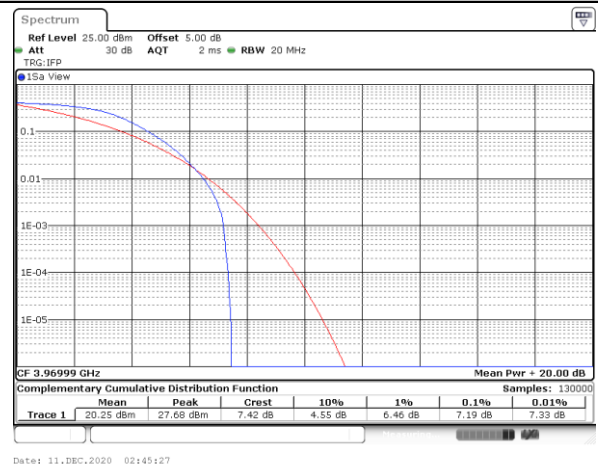
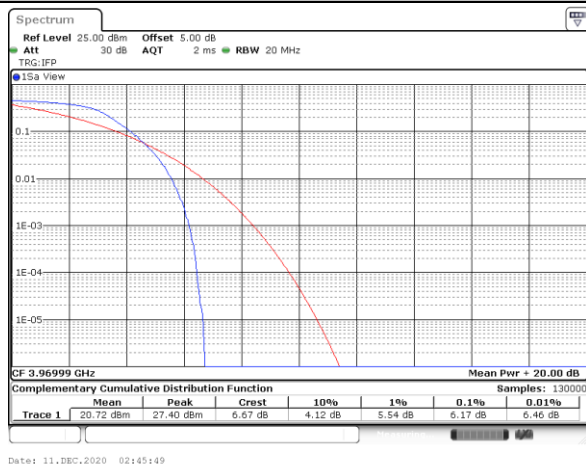
## Middle Channel / Full RB

## Middle Channel / Full RB



## Highest Channel / Full RB

## Highest Channel / Full RB



## 26dB Bandwidth

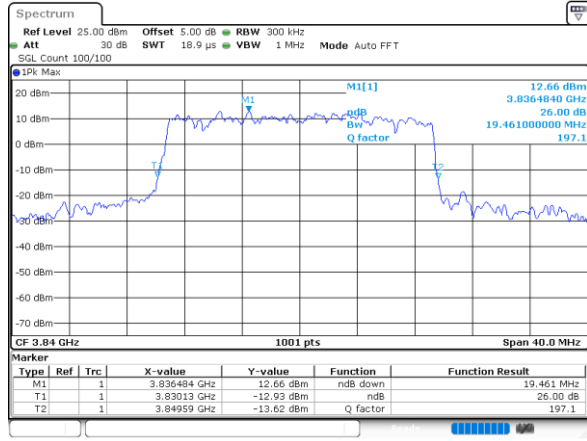
| Mode      | FR1 n77 : 26dB BW(MHz) / CP-OFDM |        |        |        |
|-----------|----------------------------------|--------|--------|--------|
| BW        | 20MHz                            | 20MHz  | 20MHz  | 20MHz  |
| Mod.      | QPSK                             | 16QAM  | 64QAM  | 256QAM |
| Middle CH | 19.46                            | 19.22  | 19.06  | 19.58  |
| BW        | 30MHz                            | 30MHz  | 30MHz  | 30MHz  |
| Mod.      | QPSK                             | 16QAM  | 64QAM  | 256QAM |
| Middle CH | 30.39                            | 30.15  | 30.15  | 30.27  |
| BW        | 40MHz                            | 40MHz  | 40MHz  | 40MHz  |
| Mod.      | QPSK                             | 16QAM  | 64QAM  | 256QAM |
| Middle CH | 40.28                            | 40.2   | 40.28  | 40.36  |
| BW        | 50MHz                            | 50MHz  | 50MHz  | 50MHz  |
| Mod.      | QPSK                             | 16QAM  | 64QAM  | 256QAM |
| Middle CH | 49.75                            | 49.65  | 49.65  | 49.55  |
| BW        | 80MHz                            | 80MHz  | 80MHz  | 80MHz  |
| Mod.      | QPSK                             | 16QAM  | 64QAM  | 256QAM |
| Middle CH | 80.08                            | 80.08  | 79.92  | 79.92  |
| BW        | 90MHz                            | 90MHz  | 90MHz  | 90MHz  |
| Mod.      | QPSK                             | 16QAM  | 64QAM  | 256QAM |
| Middle CH | 90.27                            | 90.27  | 90.27  | 90.45  |
| BW        | 100MHz                           | 100MHz | 100MHz | 100MHz |
| Mod.      | QPSK                             | 16QAM  | 64QAM  | 256QAM |
| Middle CH | 100.5                            | 100.3  | 100.7  | 100.1  |



## FR1 n77 / 20MHz / CP-OFDM

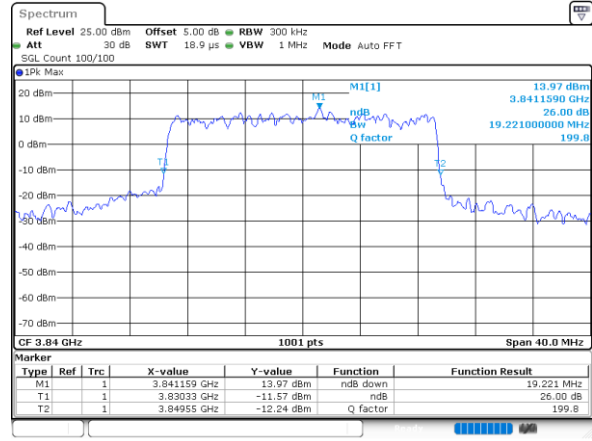
## QPSK

## Middle Channel



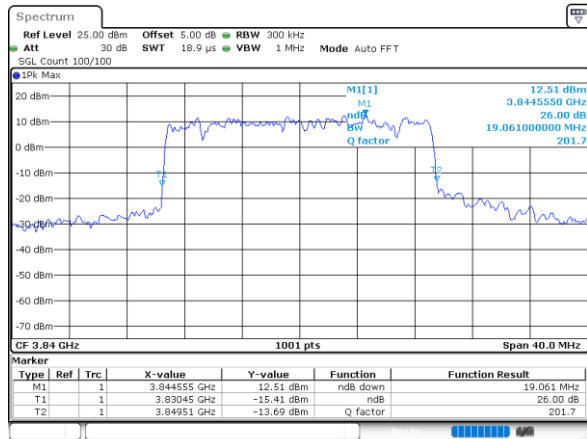
## 16QAM

## Middle Channel



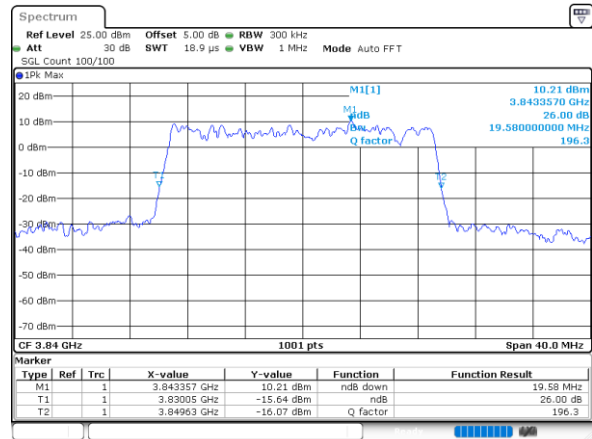
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel





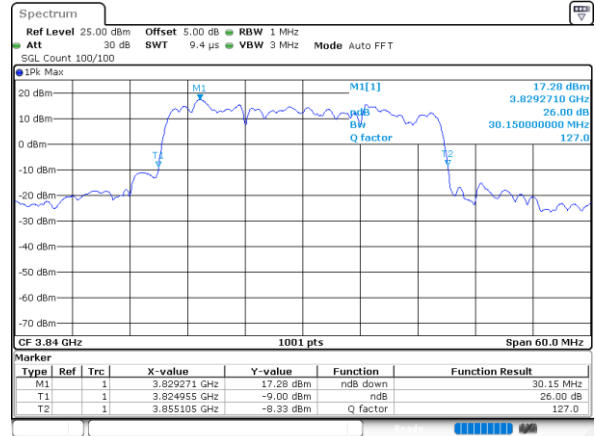
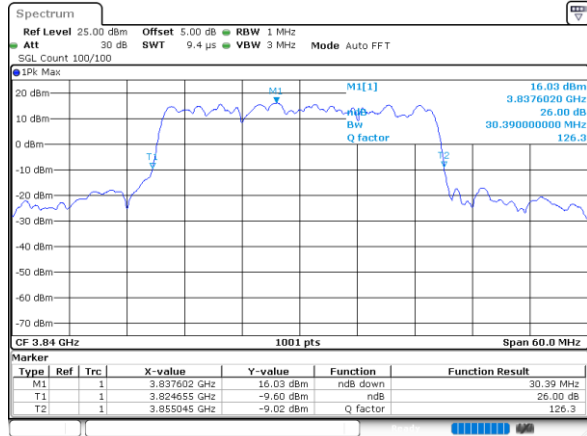
## FR1 n77 / 30MHz / CP-OFDM

## QPSK

## 16QAM

## Middle Channel

## Middle Channel

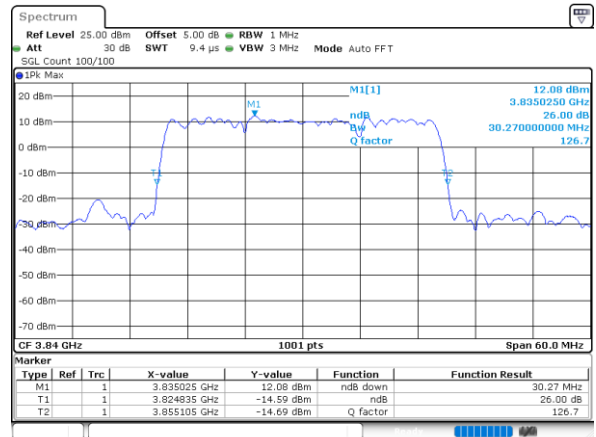
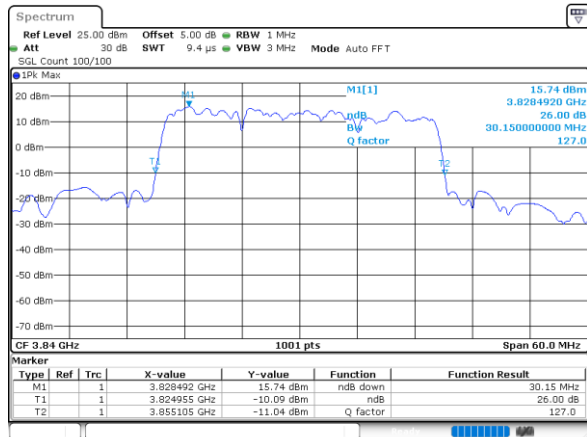


## 64QAM

## 256QAM

## Middle Channel

## Middle Channel

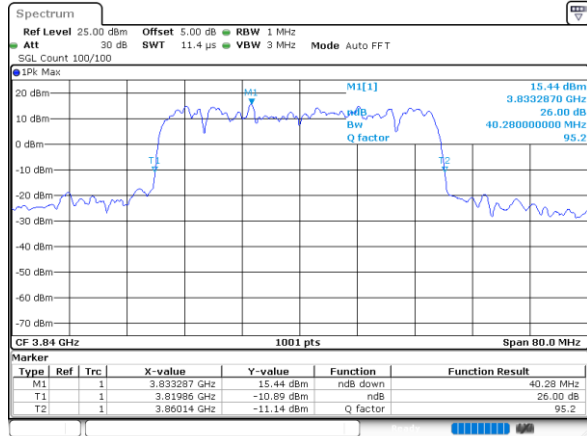




## FR1 n77 / 40MHz / CP-OFDM

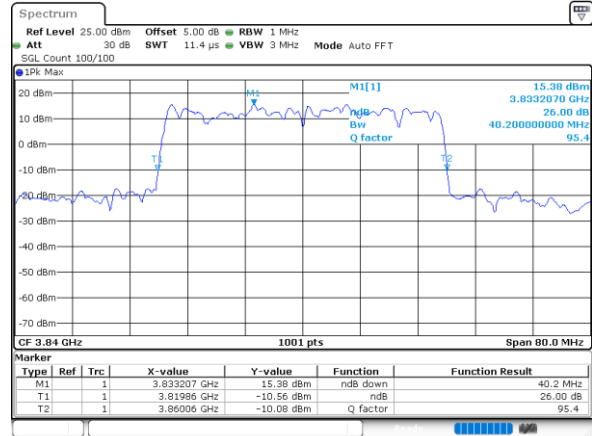
## QPSK

## Middle Channel



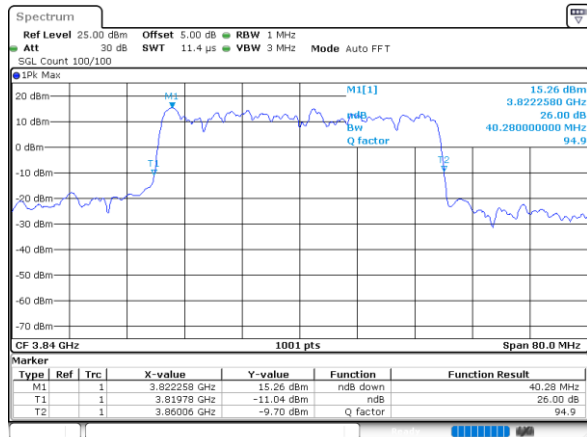
## 16QAM

## Middle Channel



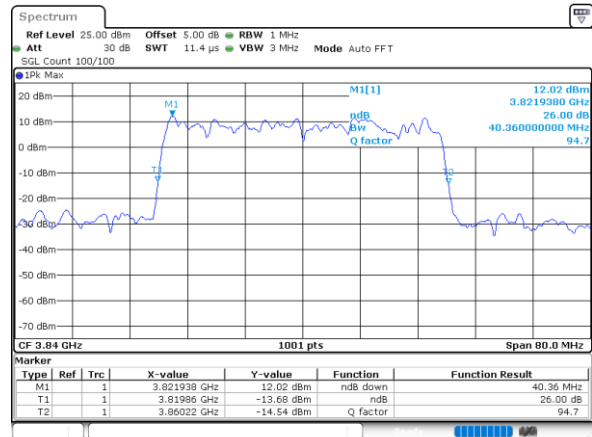
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel

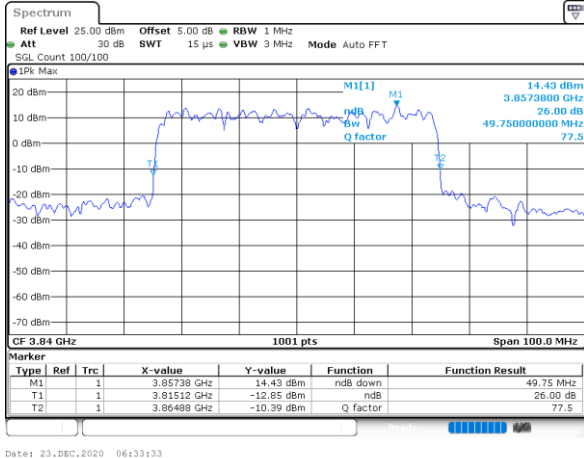




## FR1 n77 / 50MHz / CP-OFDM

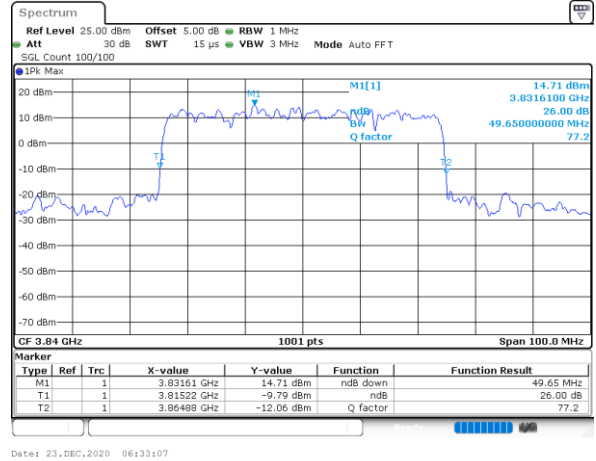
## QPSK

## Middle Channel



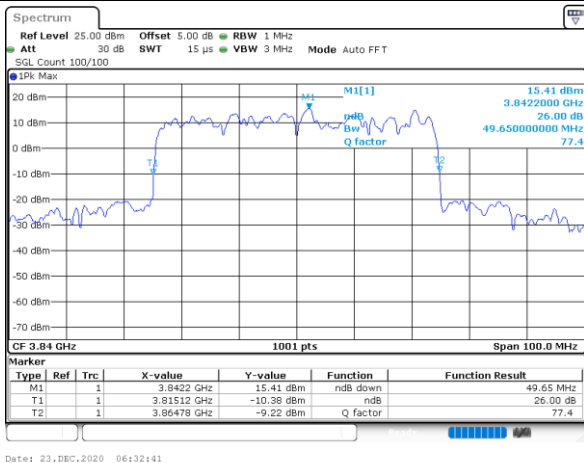
## 16QAM

## Middle Channel



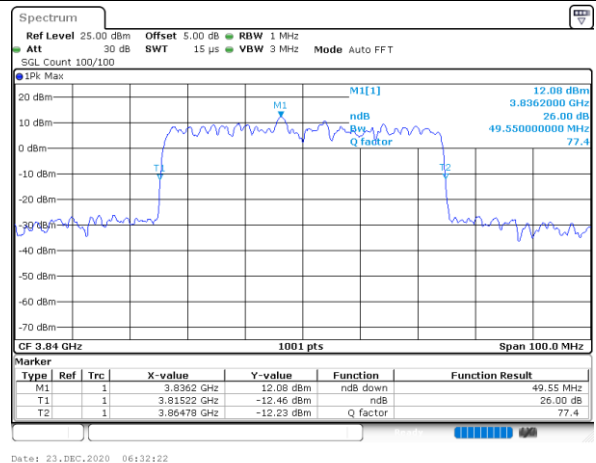
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel

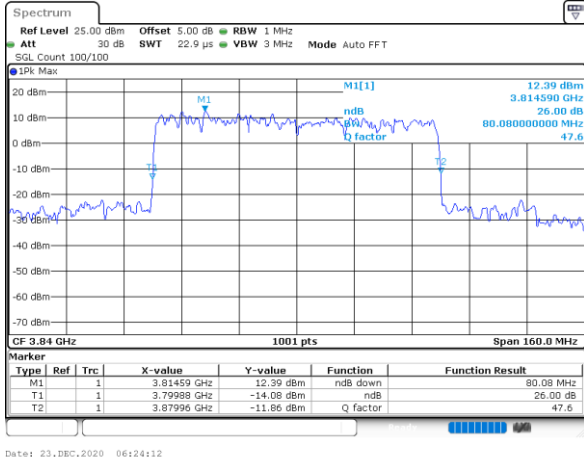




## FR1 n77 / 80MHz / CP-OFDM

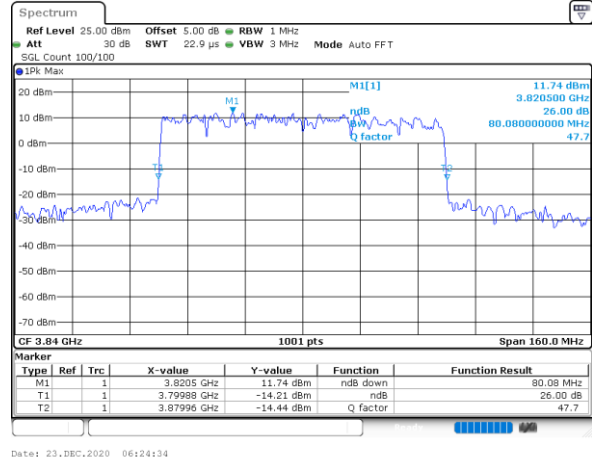
## QPSK

## Middle Channel



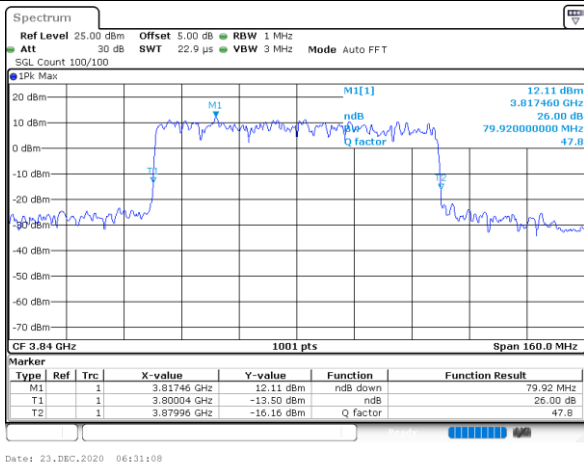
## 16QAM

## Middle Channel



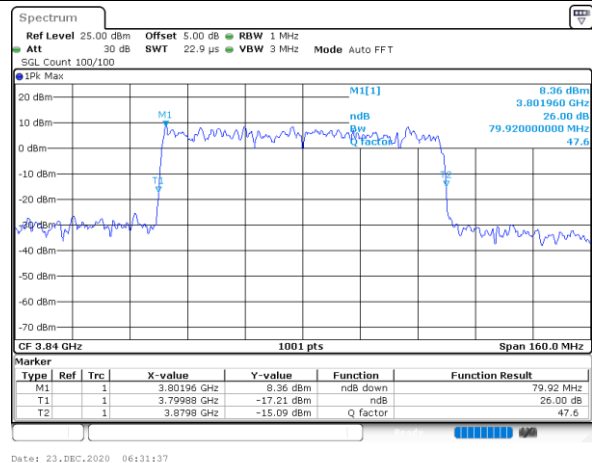
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel

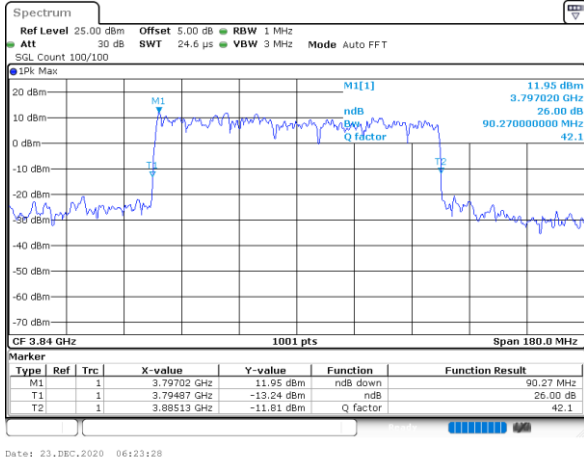




## FR1 n77 / 90MHz / CP-OFDM

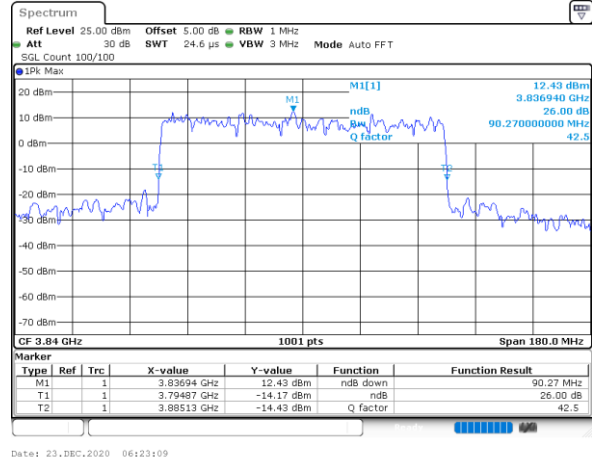
## QPSK

## Middle Channel



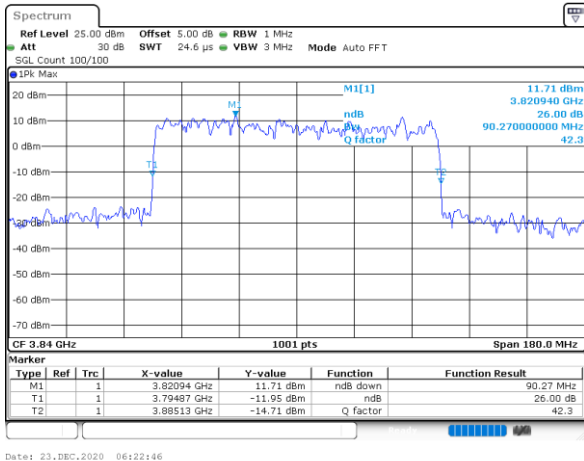
## 16QAM

## Middle Channel



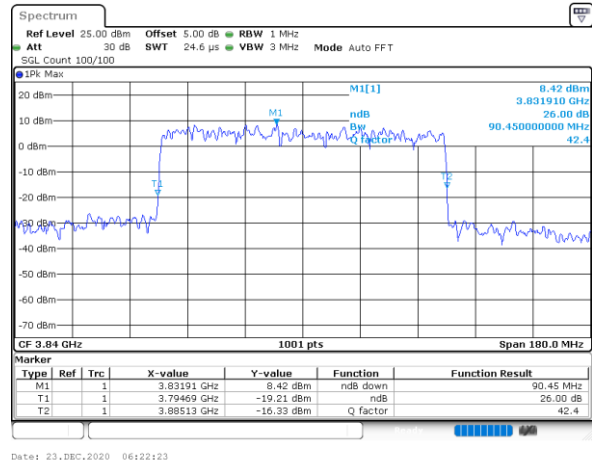
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel

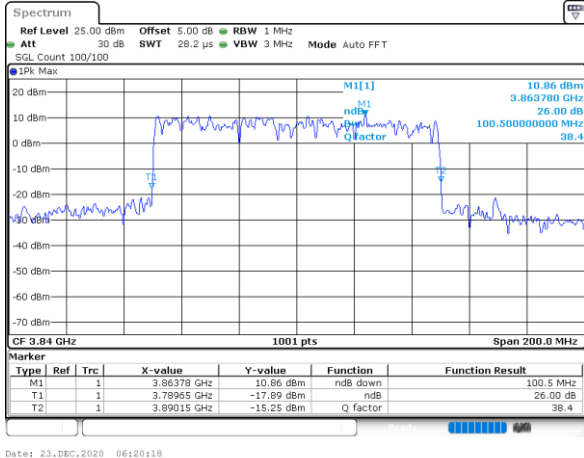




## FR1 n77 / 100MHz / CP-OFDM

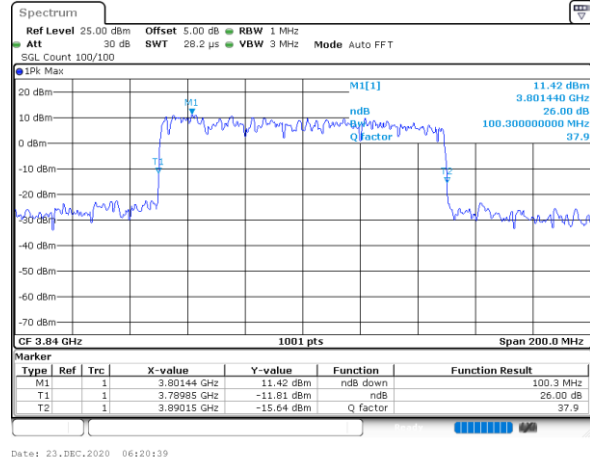
## QPSK

## Middle Channel



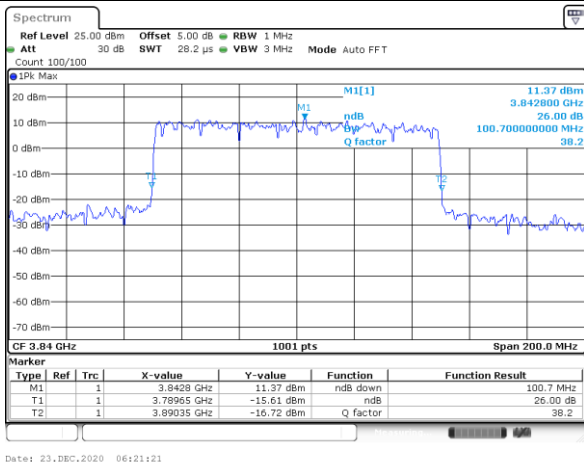
## 16QAM

## Middle Channel



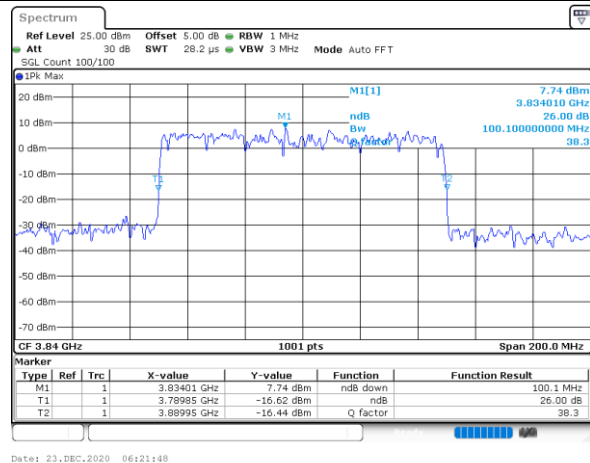
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel



**Occupied Bandwidth**

| Mode      | FR1 n77 : OBW(MHz) / CP-OFDM |        |        |        |
|-----------|------------------------------|--------|--------|--------|
| BW        | 20MHz                        | 20MHz  | 20MHz  | 20MHz  |
| Mod.      | QPSK                         | 16QAM  | 64QAM  | 256QAM |
| Middle CH | 18.22                        | 18.34  | 18.34  | 18.18  |
| BW        | 30MHz                        | 30MHz  | 30MHz  | 30MHz  |
| Mod.      | QPSK                         | 16QAM  | 64QAM  | 256QAM |
| Middle CH | 27.93                        | 28.17  | 28.05  | 28.05  |
| BW        | 40MHz                        | 40MHz  | 40MHz  | 40MHz  |
| Mod.      | QPSK                         | 16QAM  | 64QAM  | 256QAM |
| Middle CH | 38.28                        | 37.8   | 38.28  | 37.96  |
| BW        | 50MHz                        | 50MHz  | 50MHz  | 50MHz  |
| Mod.      | QPSK                         | 16QAM  | 64QAM  | 256QAM |
| Middle CH | 47.85                        | 47.85  | 47.65  | 47.45  |
| BW        | 80MHz                        | 80MHz  | 80MHz  | 80MHz  |
| Mod.      | QPSK                         | 16QAM  | 64QAM  | 256QAM |
| Middle CH | 77.52                        | 77.36  | 77.36  | 77.04  |
| BW        | 90MHz                        | 90MHz  | 90MHz  | 90MHz  |
| Mod.      | QPSK                         | 16QAM  | 64QAM  | 256QAM |
| Middle CH | 87.57                        | 87.57  | 87.39  | 87.21  |
| BW        | 100MHz                       | 100MHz | 100MHz | 100MHz |
| Mod.      | QPSK                         | 16QAM  | 64QAM  | 256QAM |
| Middle CH | 97.5                         | 97.5   | 97.5   | 97.1   |



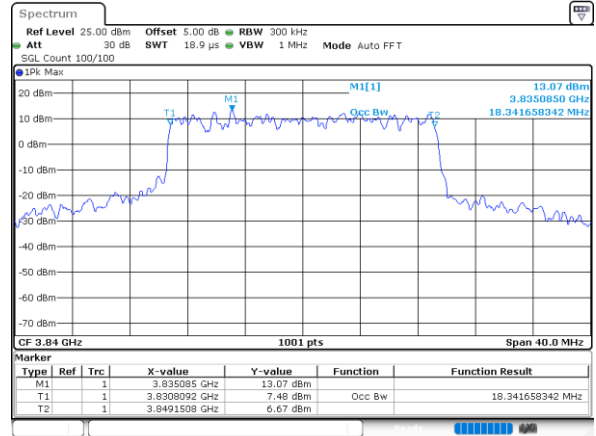
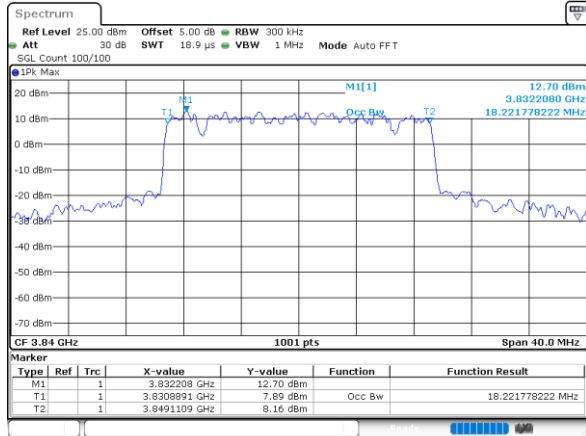
## FR1 n77 / 20MHz / CP-OFDM

## QPSK

## 16QAM

## Middle Channel

## Middle Channel

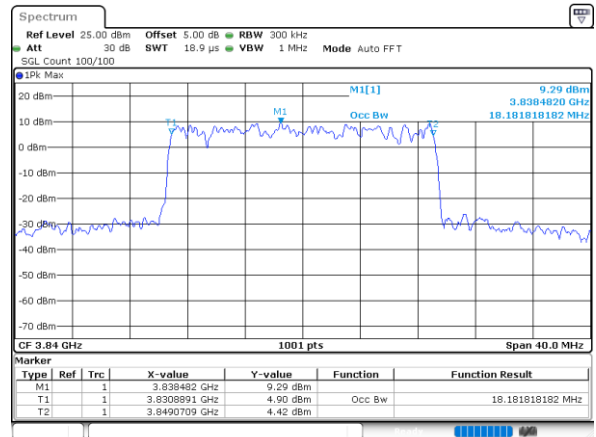
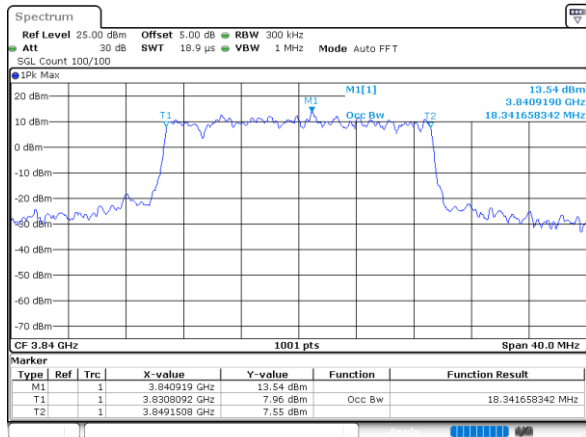


## 64QAM

## 256QAM

## Middle Channel

## Middle Channel

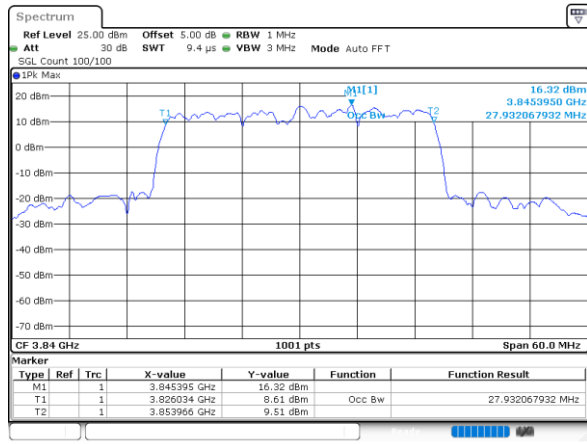




## FR1 n77 / 30MHz / CP-OFDM

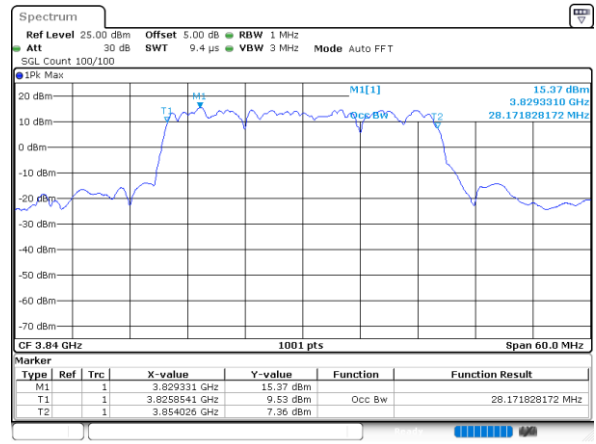
## QPSK

## Middle Channel



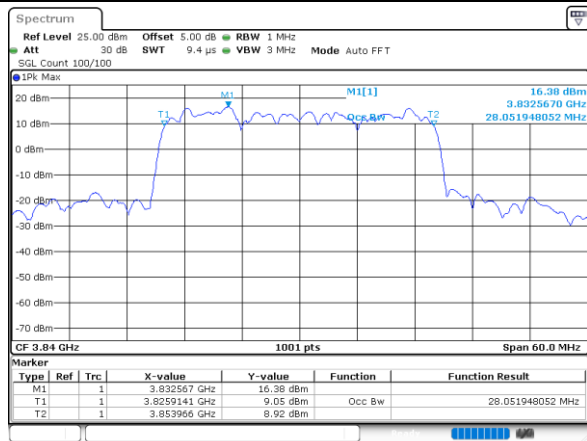
## 16QAM

## Middle Channel



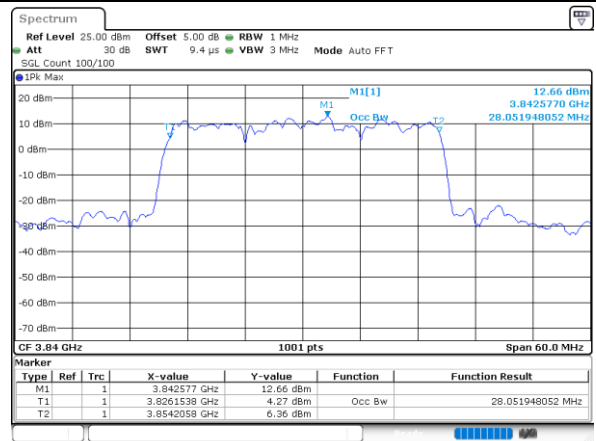
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel

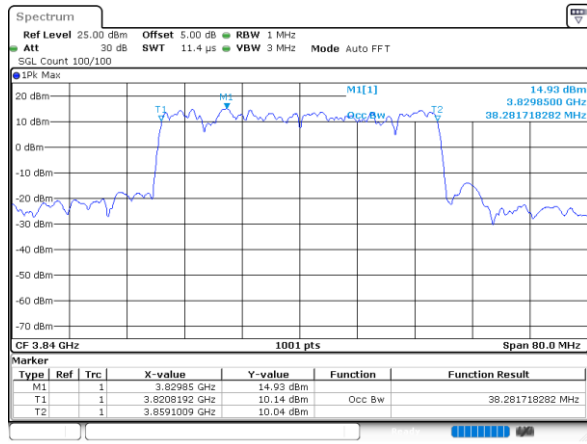




## FR1 n77 / 40MHz / CP-OFDM

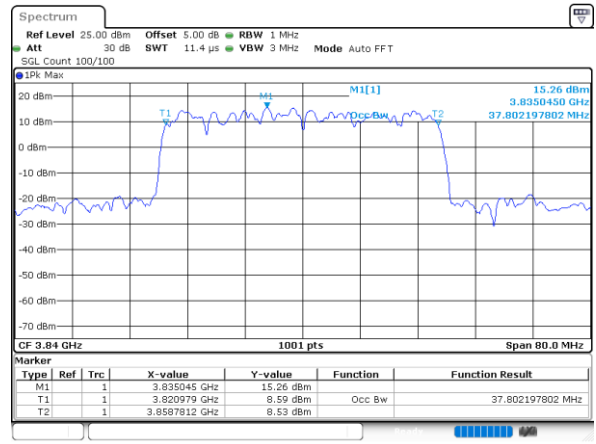
## QPSK

## Middle Channel



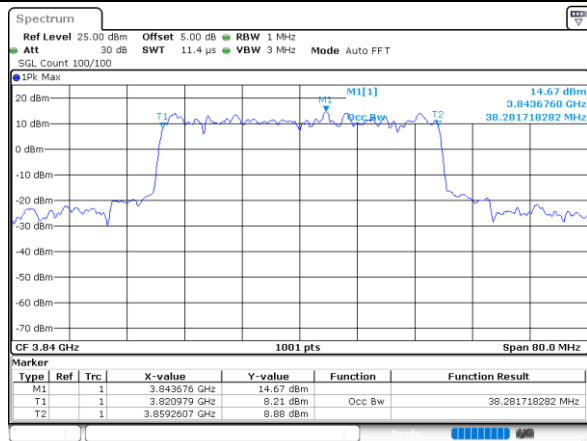
## 16QAM

## Middle Channel



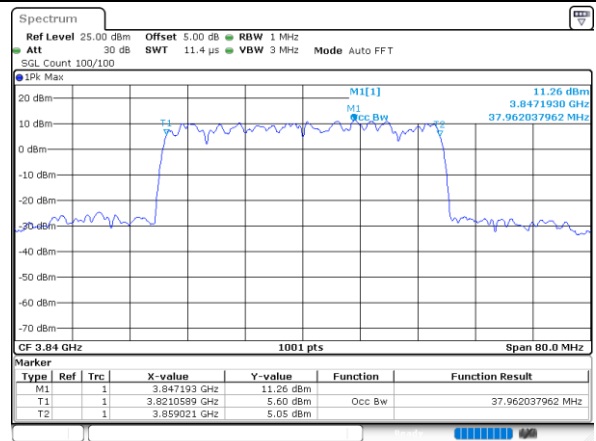
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel

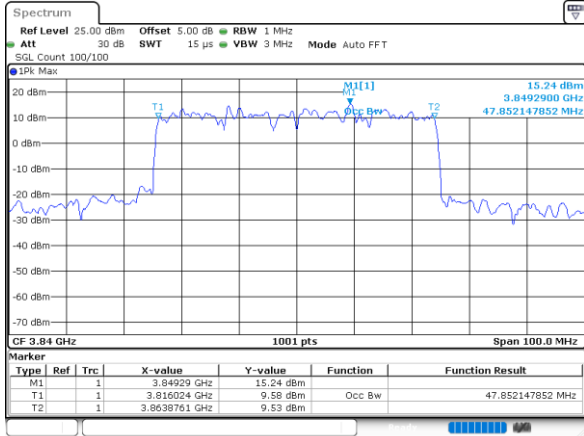




## FR1 n77 / 50MHz / CP-OFDM

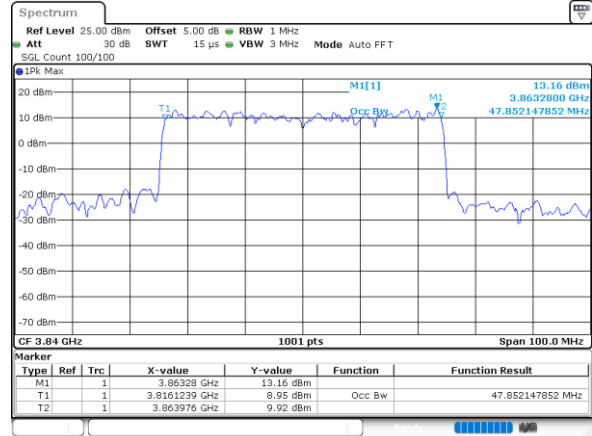
## QPSK

## Middle Channel



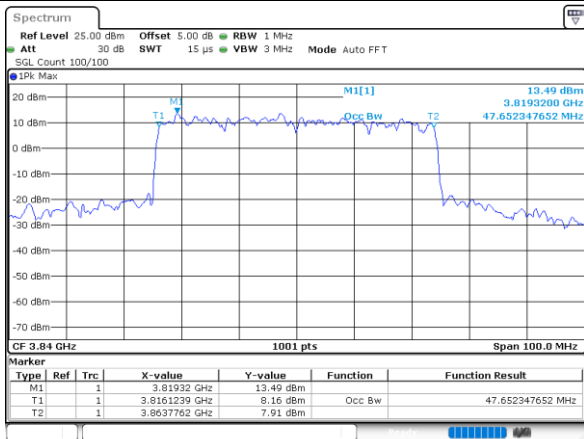
## 16QAM

## Middle Channel



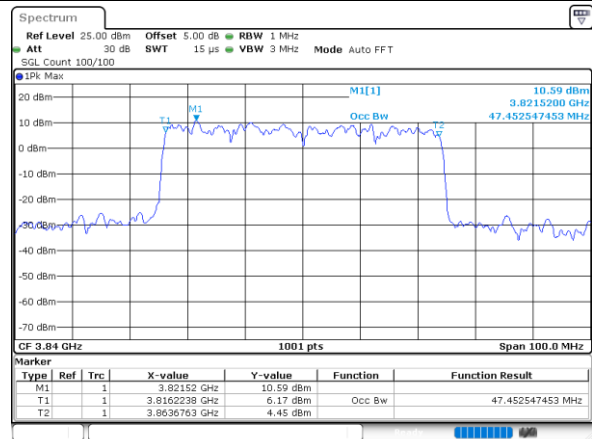
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel

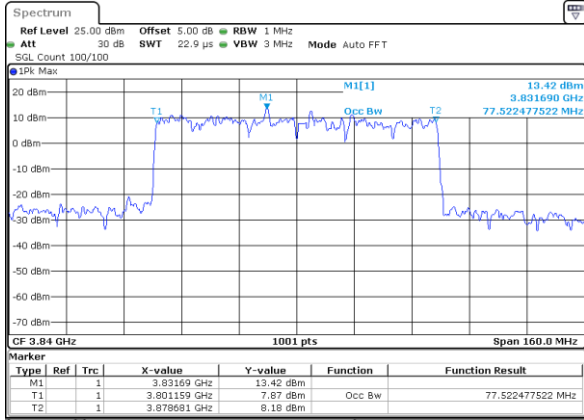




## FR1 n77 / 80MHz / CP-OFDM

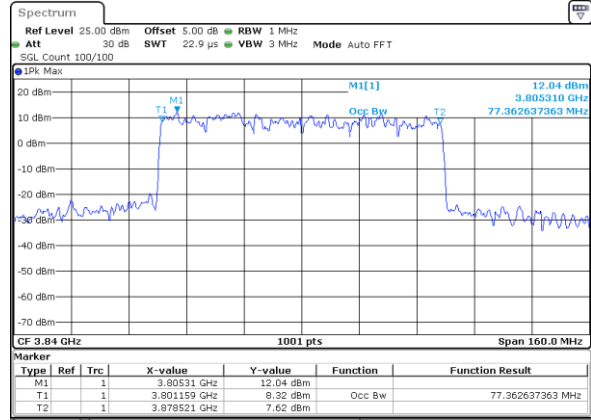
## QPSK

## Middle Channel



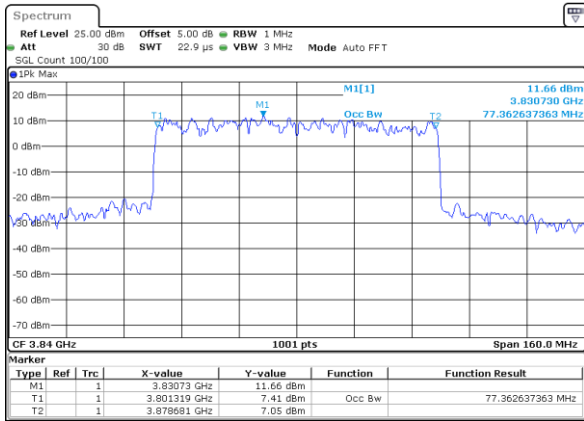
## 16QAM

## Middle Channel



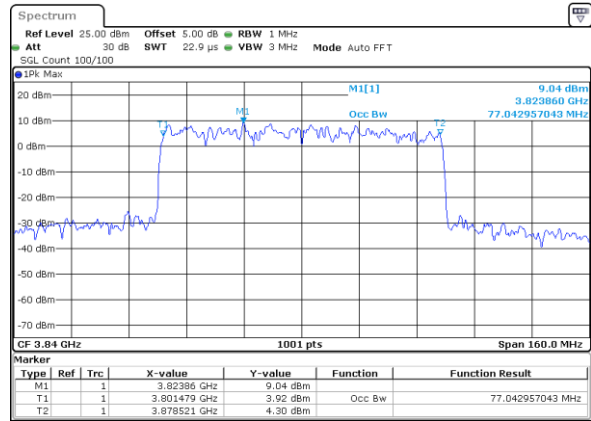
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel

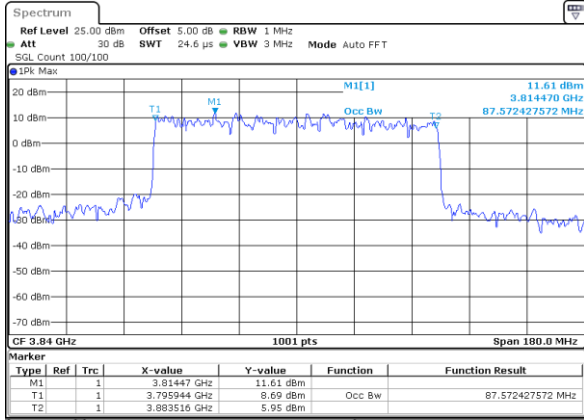




## FR1 n77 / 90MHz / CP-OFDM

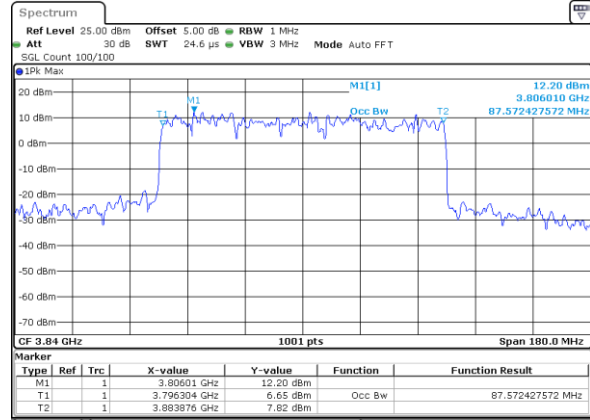
## QPSK

## Middle Channel



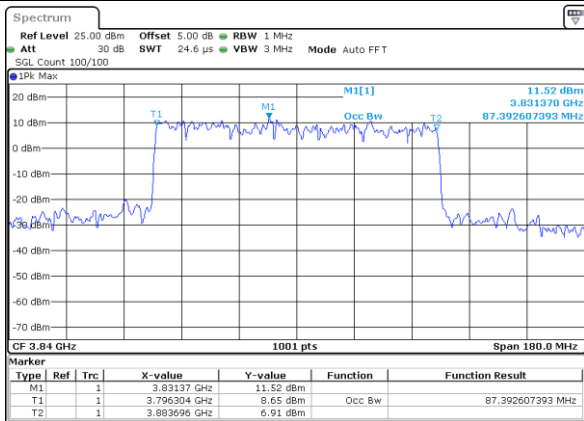
## 16QAM

## Middle Channel



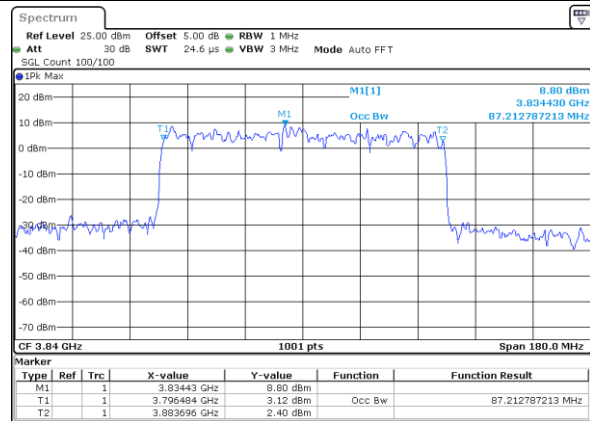
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel

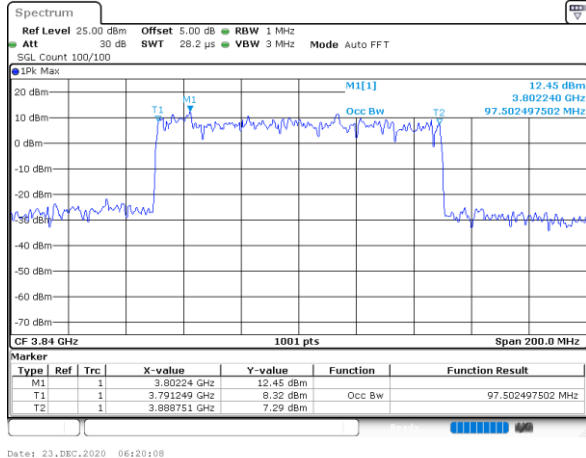




## FR1 n77 / 100MHz / CP-OFDM

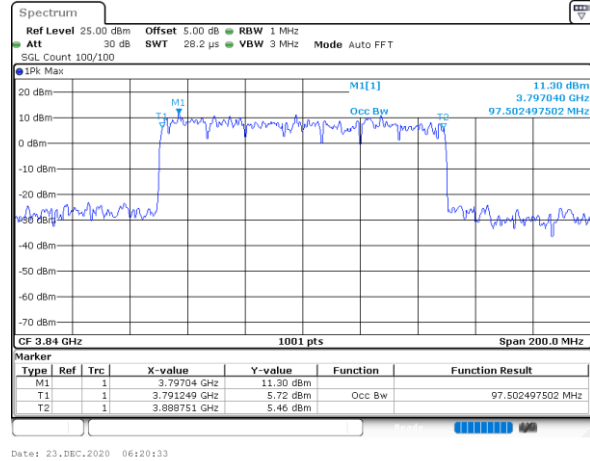
## QPSK

## Middle Channel



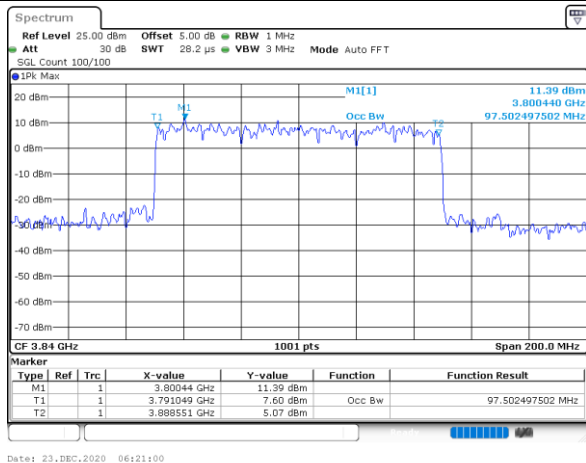
## 16QAM

## Middle Channel



## 64QAM

## Middle Channel



## 256QAM

## Middle Channel

