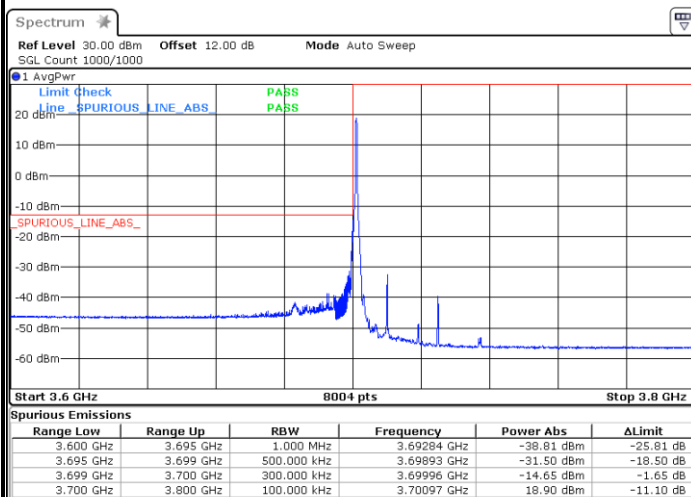




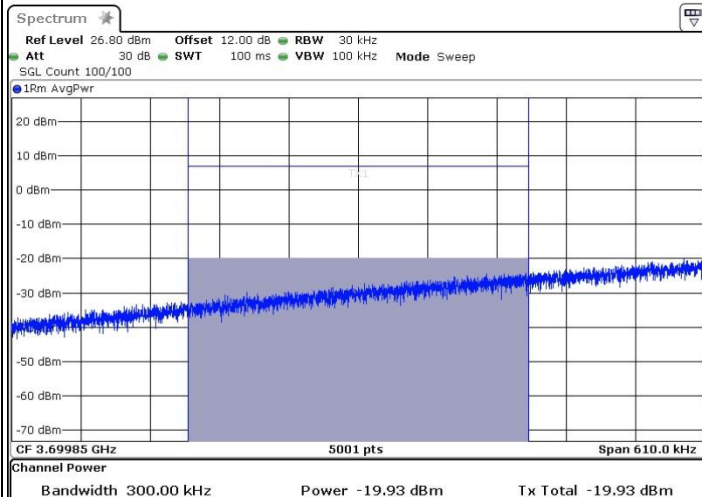
## Conducted Band Edge

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

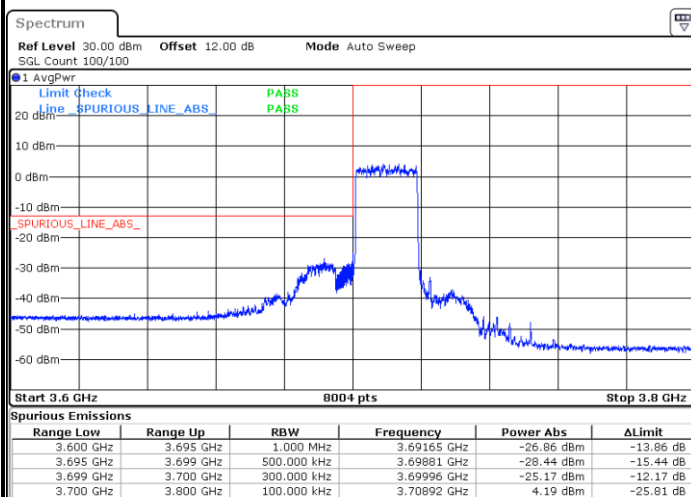
#### Lowest Band Edge / 1 RB



#### Channel Power < -13dBm Pass



#### Lowest Band Edge / Full RB



#### Channel Power < -13dBm Pass

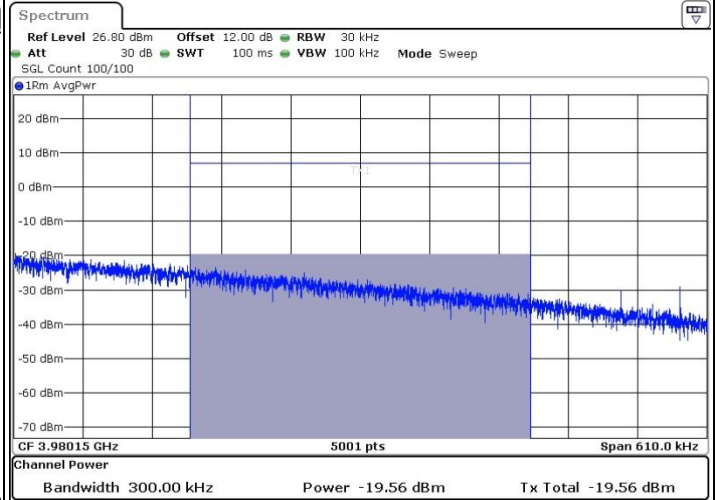
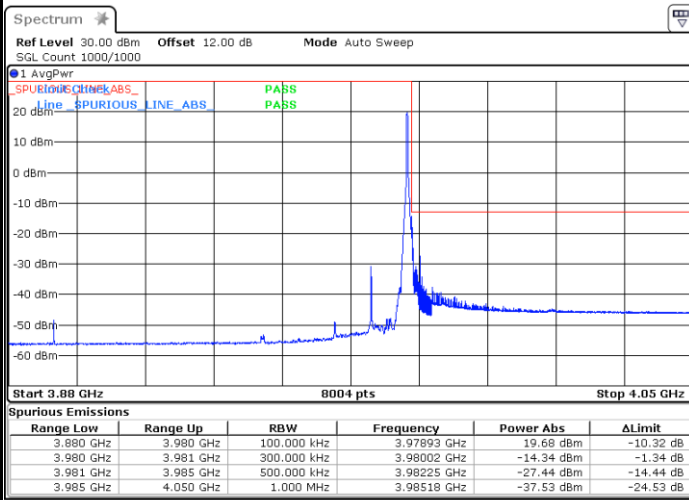
/



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

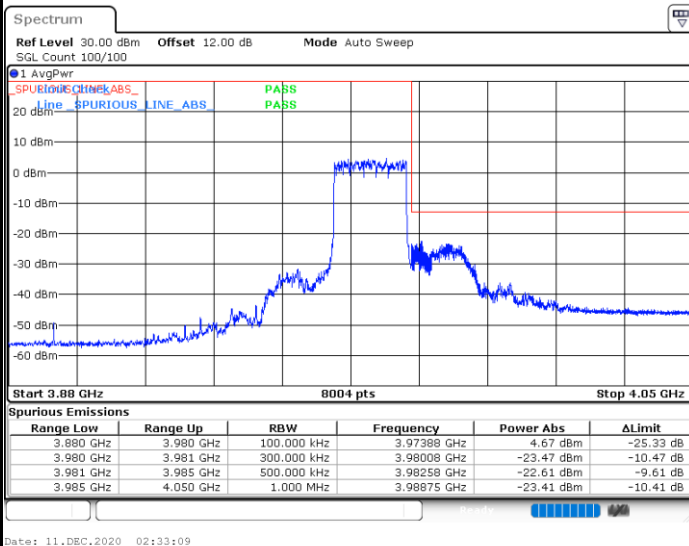
## Highest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

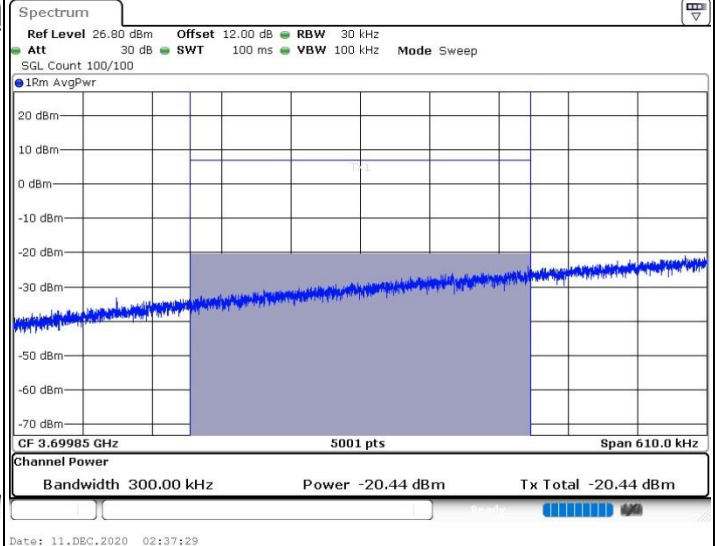
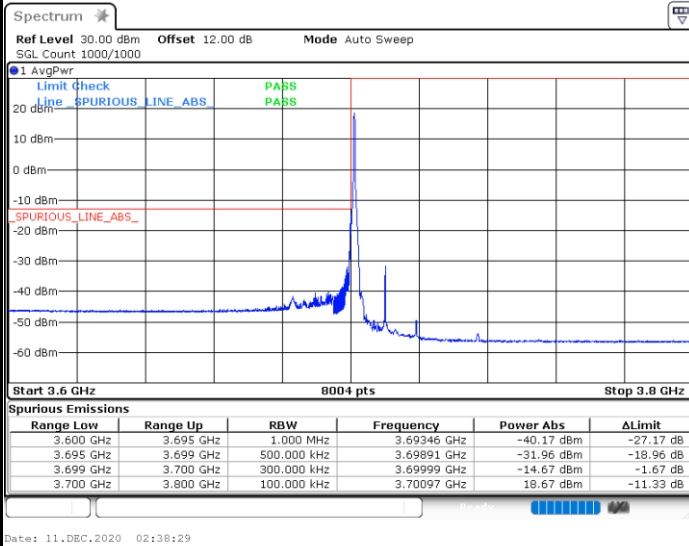




## FR1 n77 / 20MHz / DFT-S OFDM QPSK

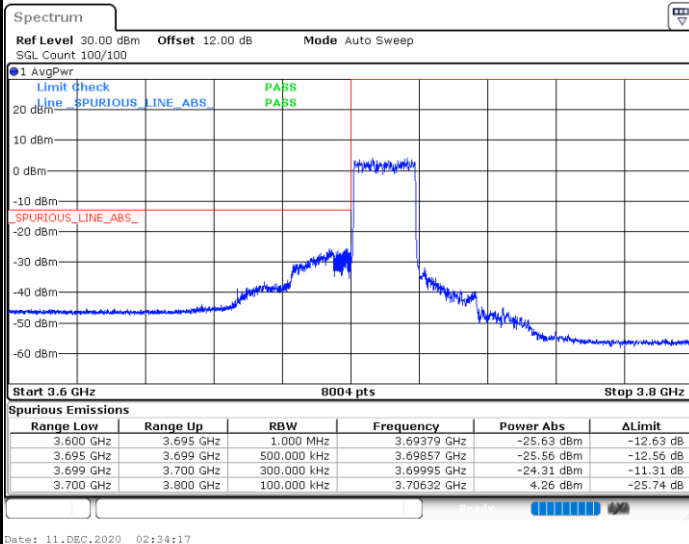
## Lowest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Lowest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

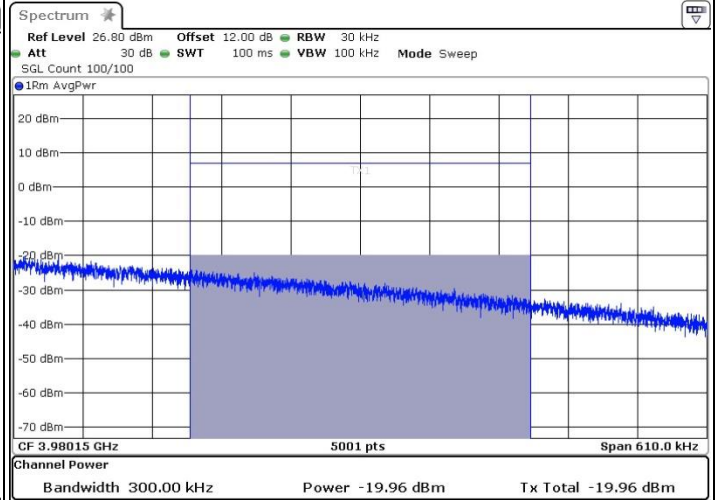
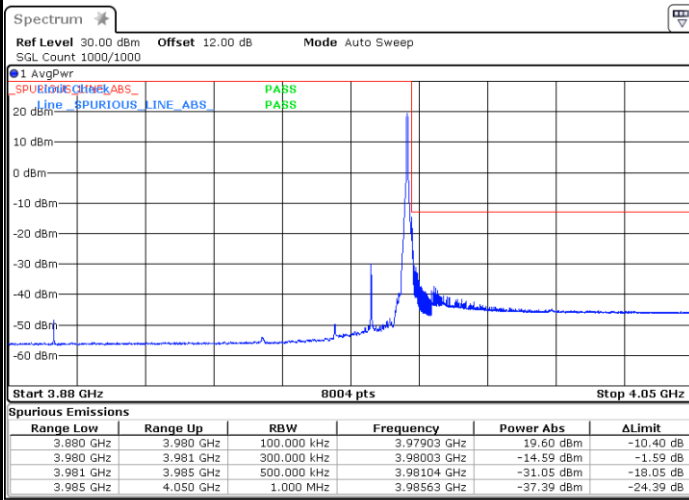




## FR1 n77 / 20MHz / DFT-S OFDM QPSK

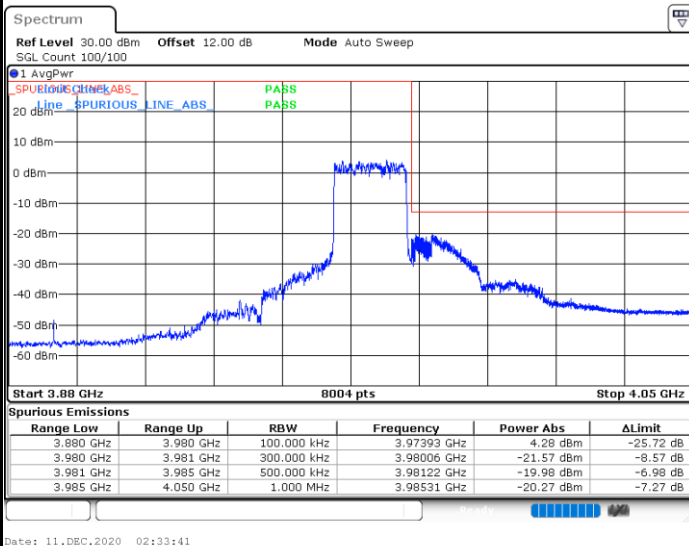
## Highest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

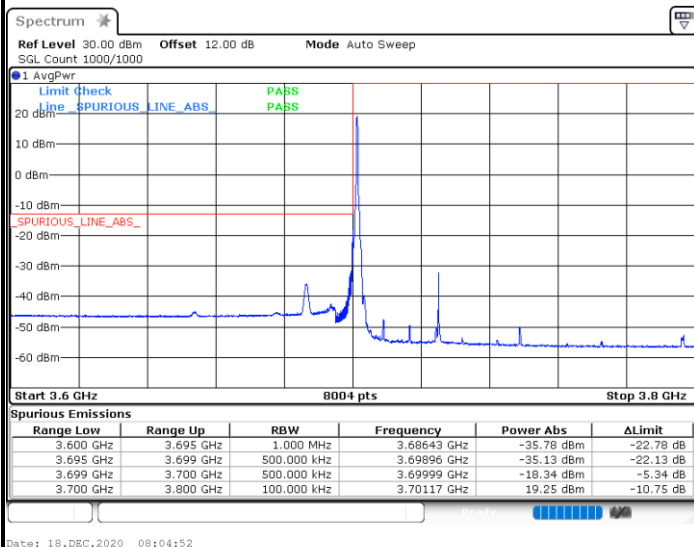




## FR1 n77 / 50MHz / DFT-S OFDM BPSK

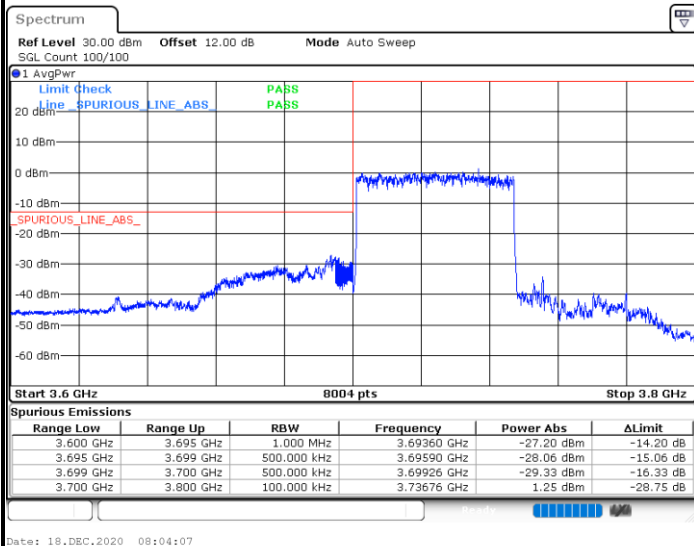
## Lowest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Lowest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

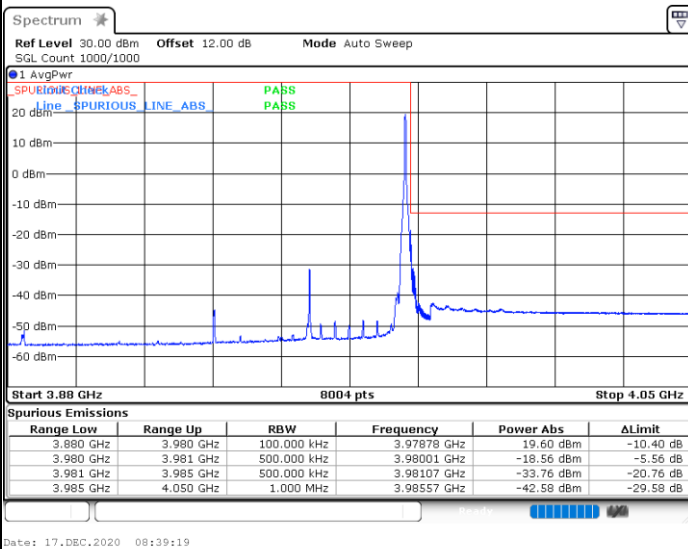




## FR1 n77 / 50MHz / DFT-S OFDM BPSK

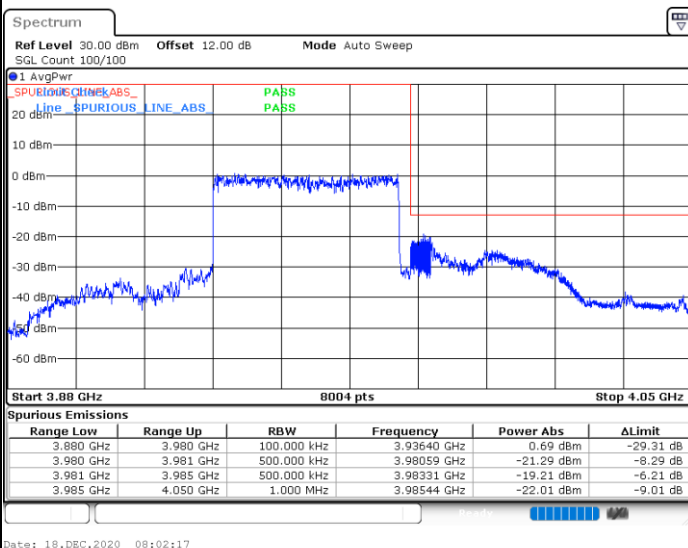
## Highest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

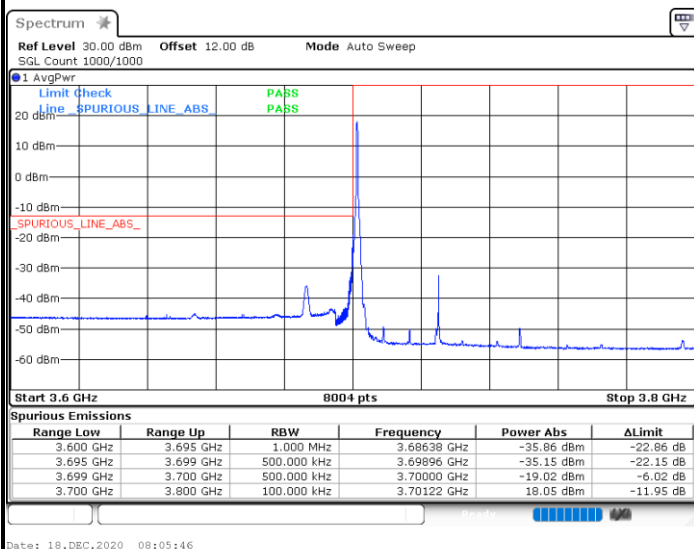




## FR1 n77 / 50MHz / DFT-S OFDM QPSK

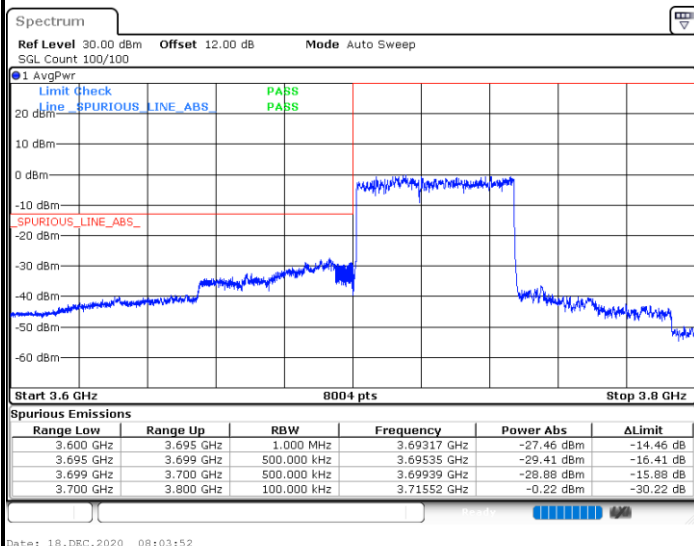
## Lowest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Lowest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

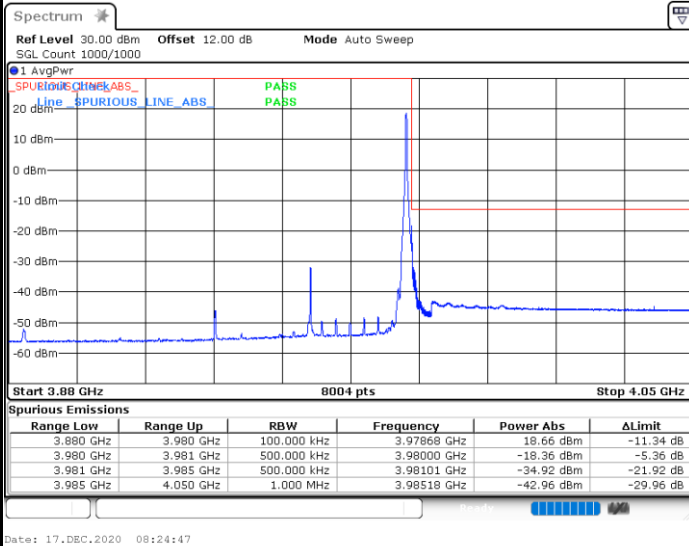




## FR1 n77 / 50MHz / DFT-S OFDM QPSK

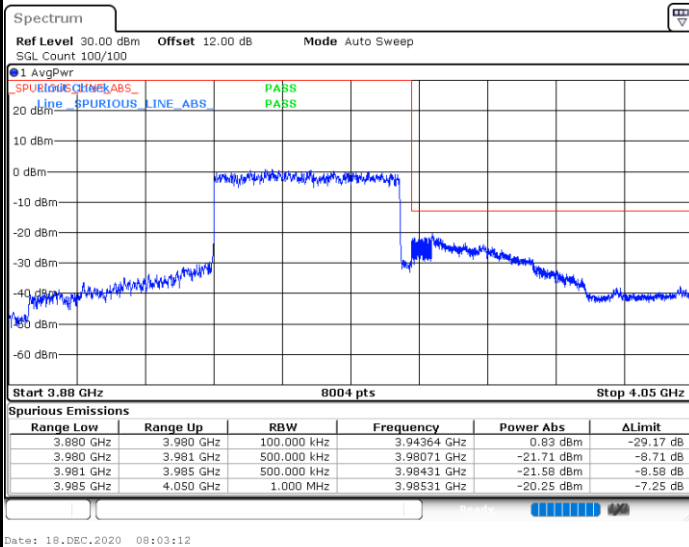
## Highest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass



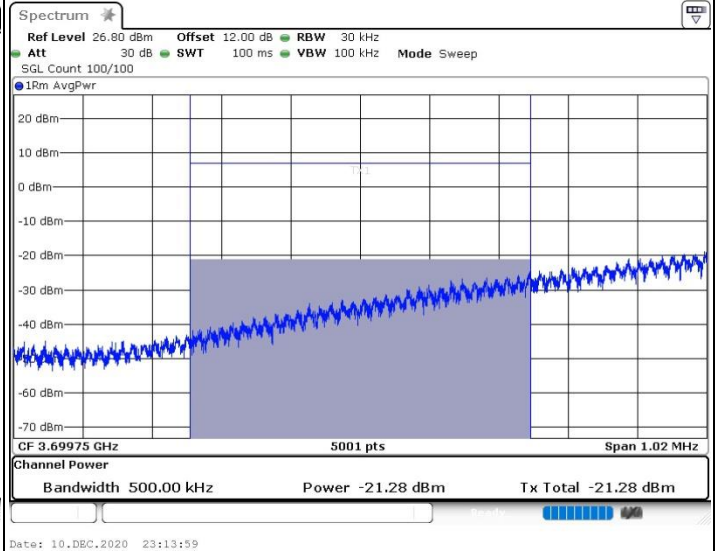
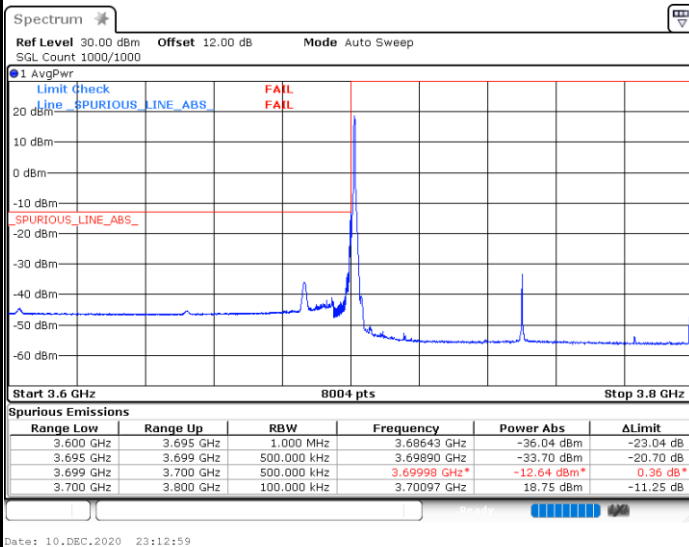




## FR1 n77 / 100MHz / DFT-S OFDM BPSK

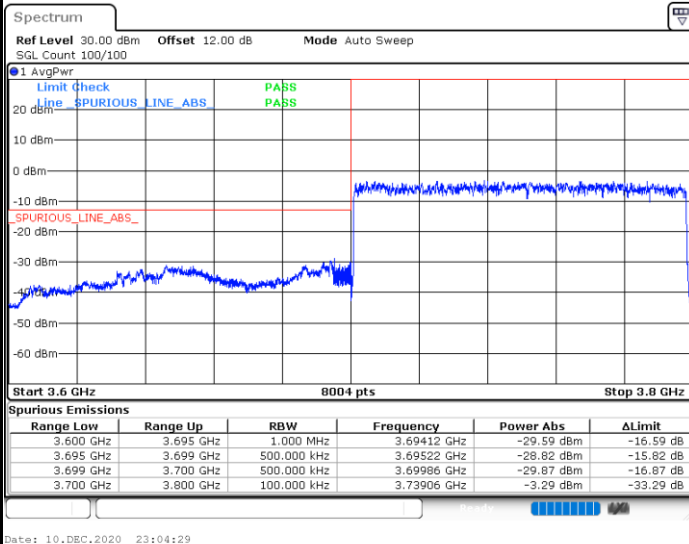
## Lowest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Lowest Band Edge / Full RB

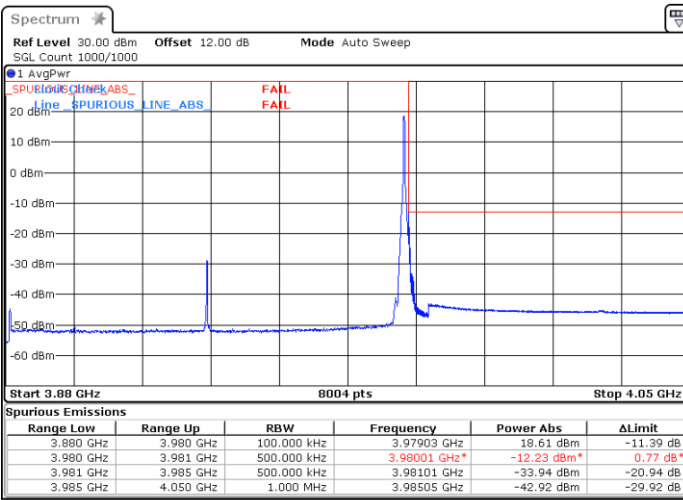
## Channel Power &lt; -13dBm Pass



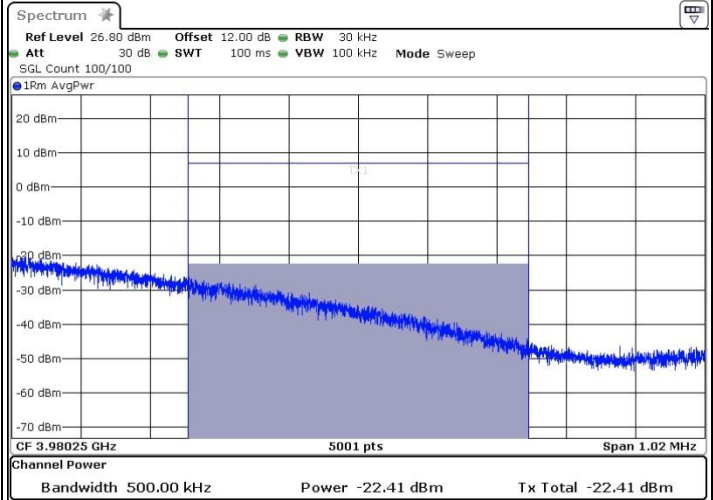


## FR1 n77 / 100MHz / DFT-S OFDM BPSK

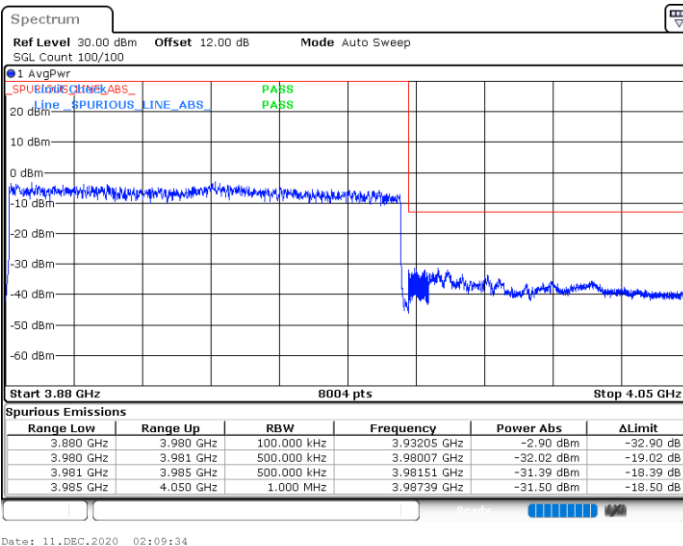
## Highest Band Edge / 1 RB



## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB



## Channel Power &lt; -13dBm Pass

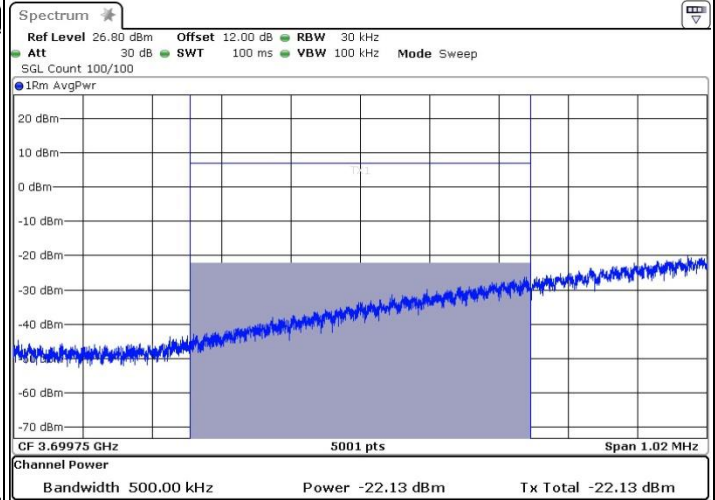
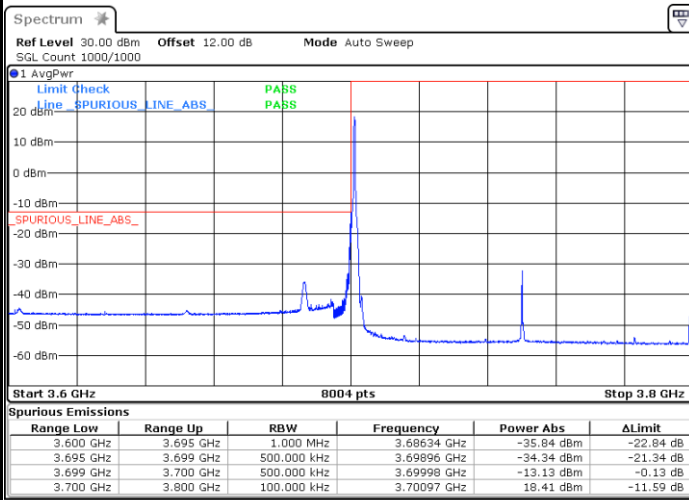
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## FR1 n77 / 100MHz / DFT-S OFDM QPSK

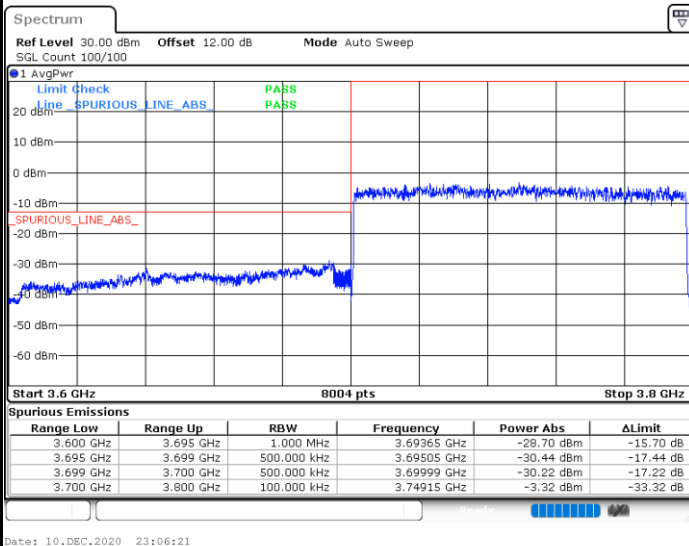
## Lowest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Lowest Band Edge / Full RB

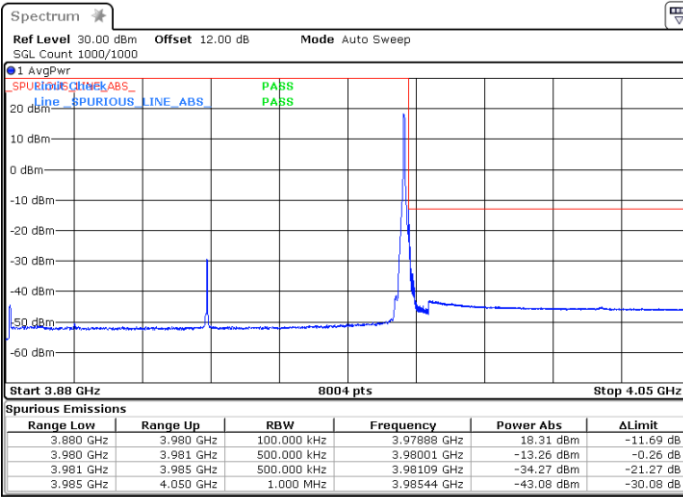
## Channel Power &lt; -13dBm Pass



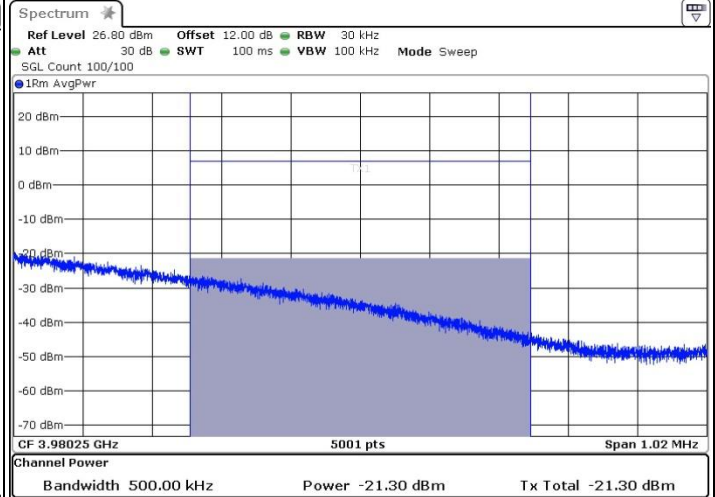


## FR1 n77 / 100MHz / DFT-S OFDM QPSK

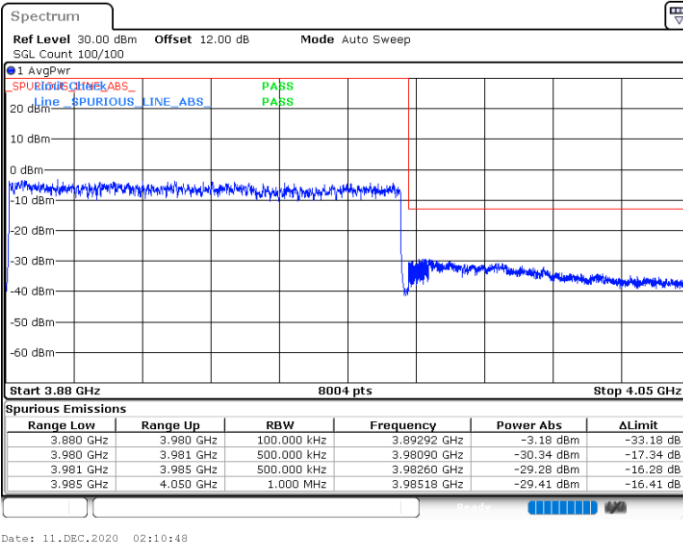
## Highest Band Edge / 1 RB



## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB



## Channel Power &lt; -13dBm Pass

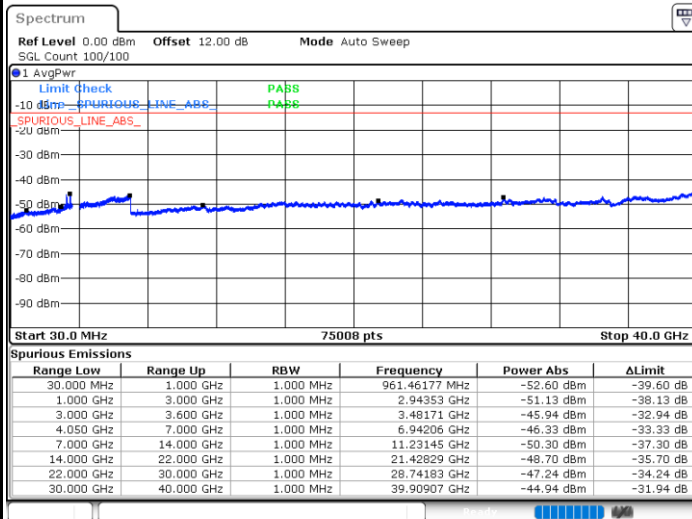
/



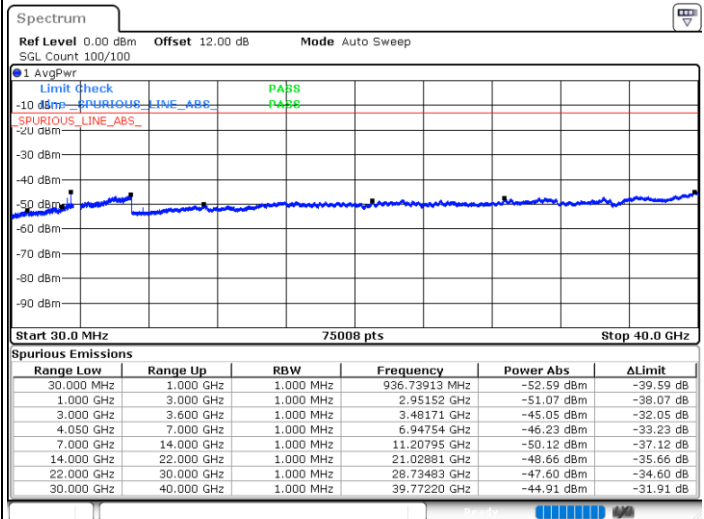
# Conducted Spurious Emission

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

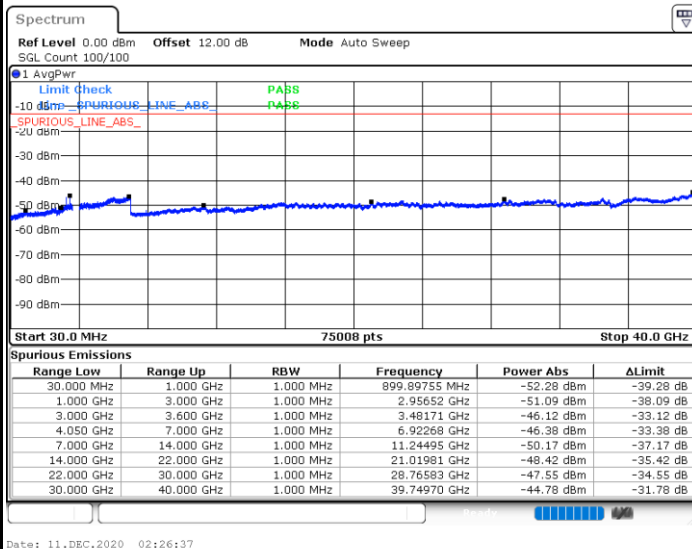
### Lowest Channel / 1RB



### Middle Channel / 1RB



### Highest Channel / 1RB

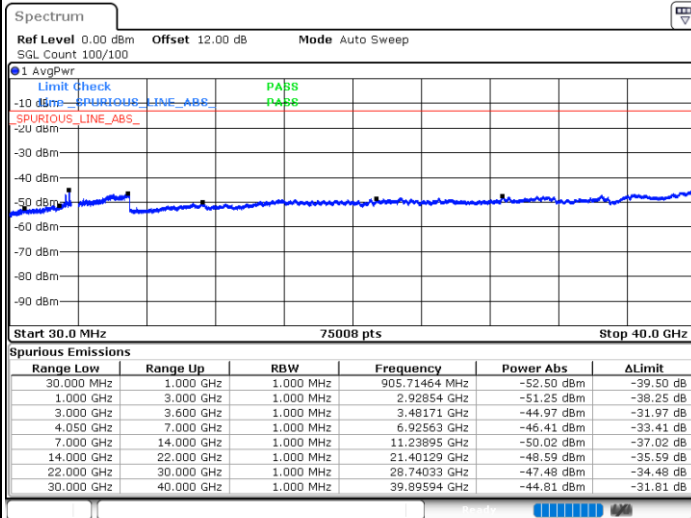




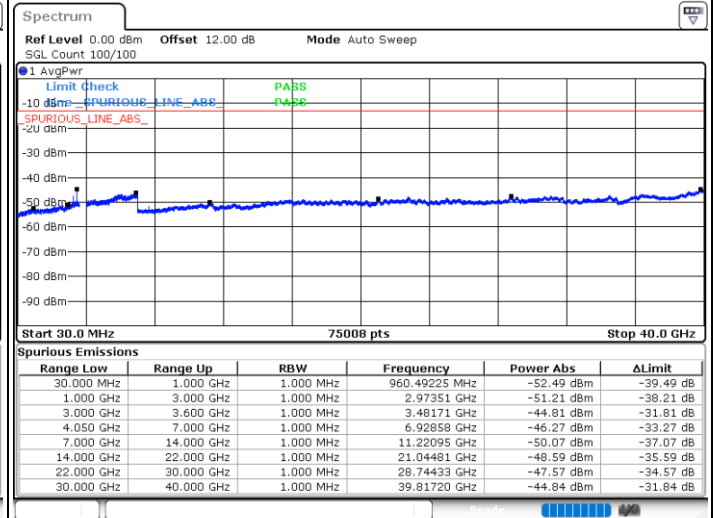
## FR1 n77 / 20MHz / DFT-S OFDM / QPSK

## Lowest Channel / 1RB

## Middle Channel / 1RB

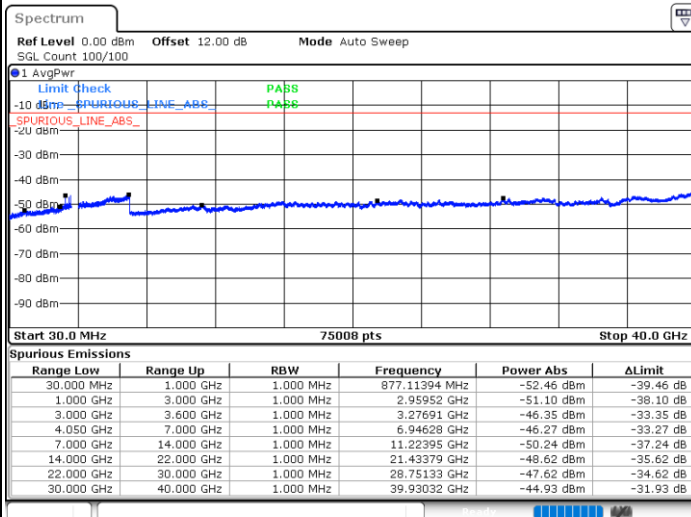


Date: 11.DEC.2020 02:21:09



Date: 11.DEC.2020 02:22:35

## Highest Channel / 1RB



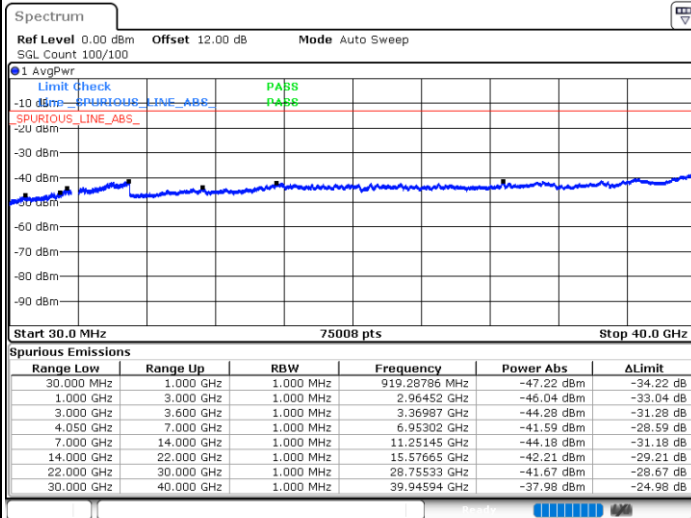
Date: 11.DEC.2020 02:27:54



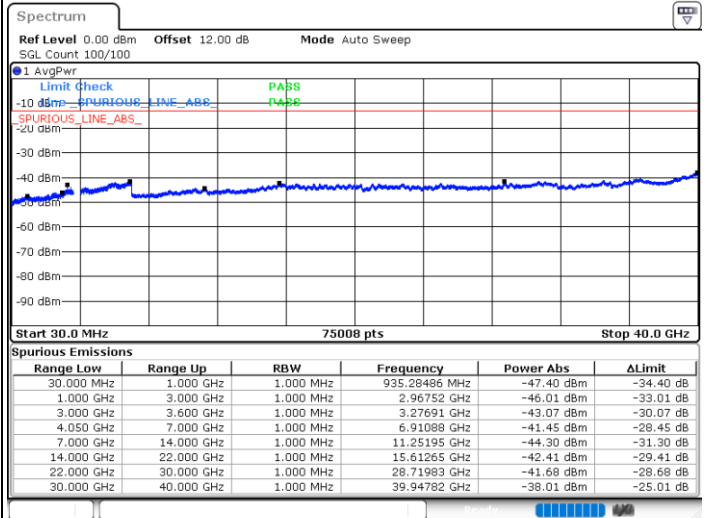
## FR1 n77 / 50MHz / DFT-S OFDM / BPSK

## Lowest Channel / 1RB

## Middle Channel / 1RB

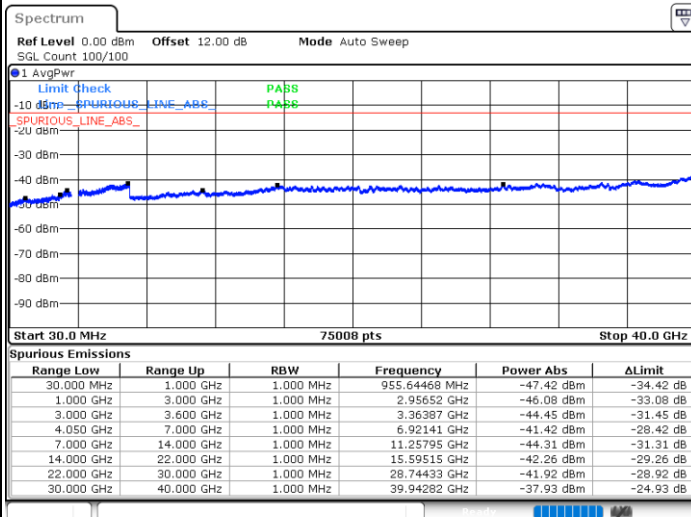


Date: 17.DEC.2020 07:58:32



Date: 17.DEC.2020 08:17:38

## Highest Channel / 1RB



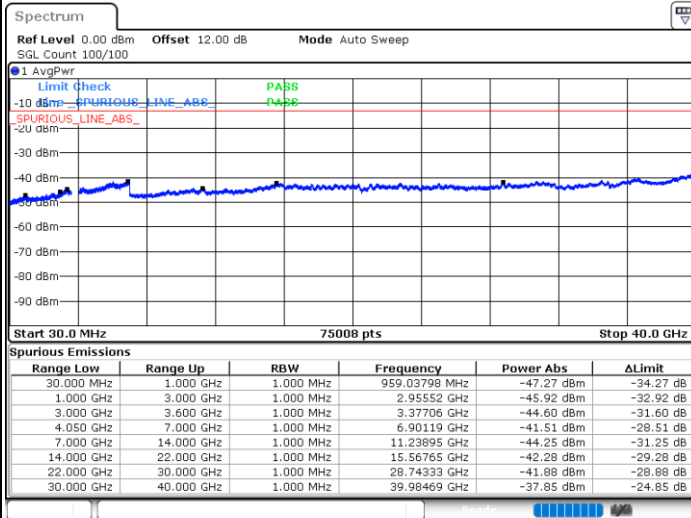
Date: 17.DEC.2020 08:21:47



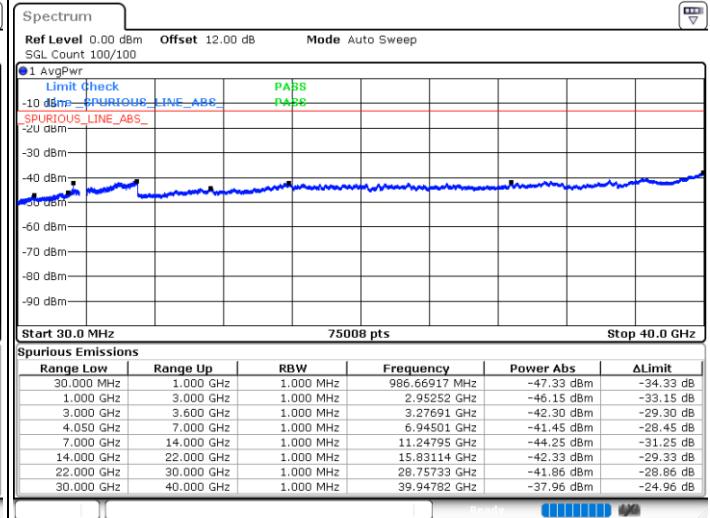
## FR1 n77 / 50MHz / DFT-S OFDM / QPSK

## Lowest Channel / 1RB

## Middle Channel / 1RB

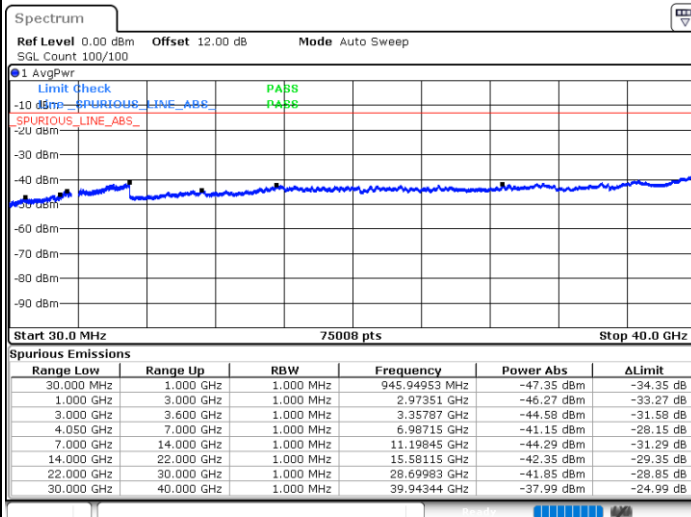


Date: 17.DEC.2020 07:59:46



Date: 17.DEC.2020 08:10:02

## Highest Channel / 1RB



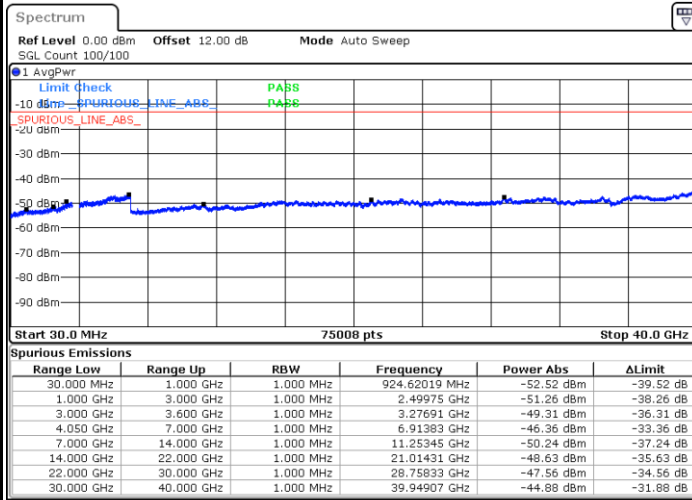
Date: 17.DEC.2020 08:23:17





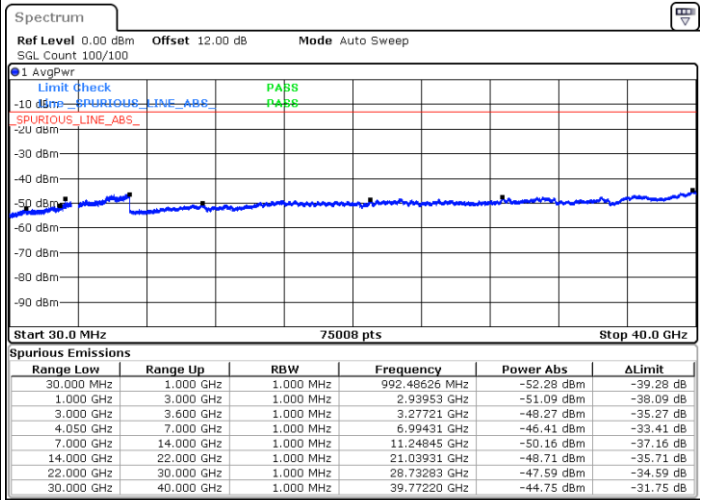
## FR1 n77 / 100MHz / DFT-S OFDM / BPSK

## Lowest Channel / 1RB



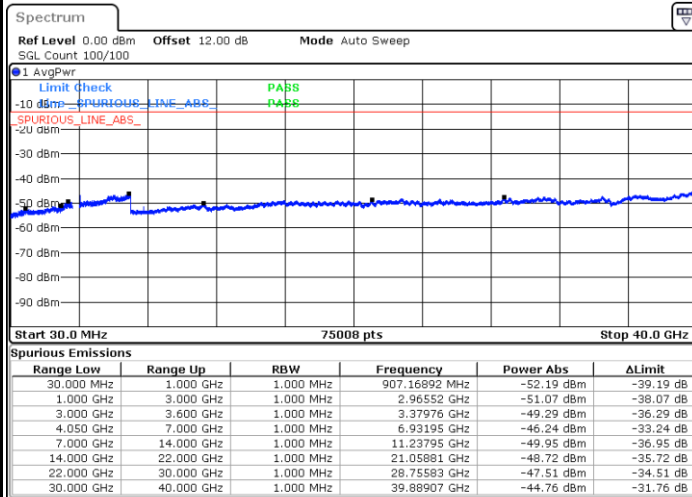
Date: 10.DEC.2020 22:48:18

## Middle Channel / 1RB



Date: 10.DEC.2020 22:46:46

## Highest Channel / 1RB



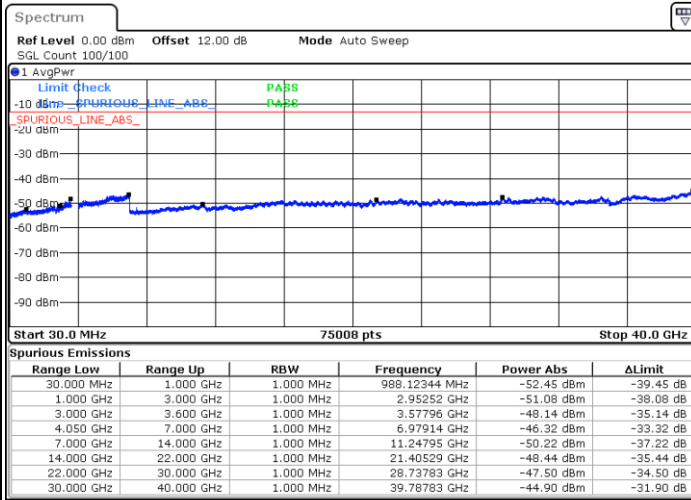
Date: 10.DEC.2020 22:54:34



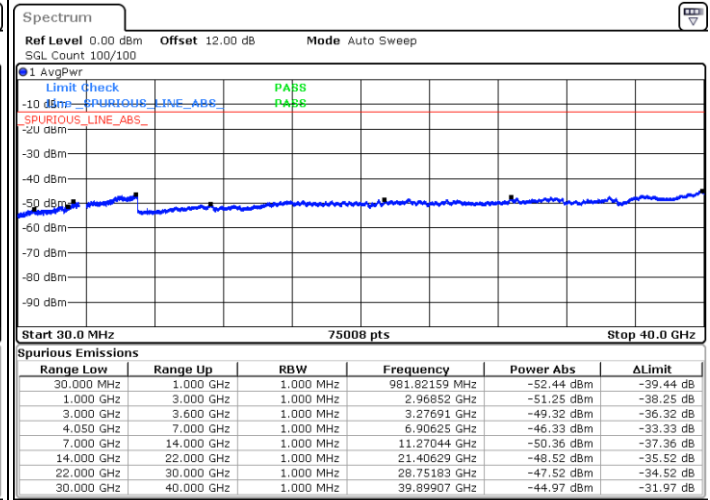
## FR1 n77 / 100MHz / DFT-S OFDM / QPSK

## Lowest Channel / 1RB

## Middle Channel / 1RB

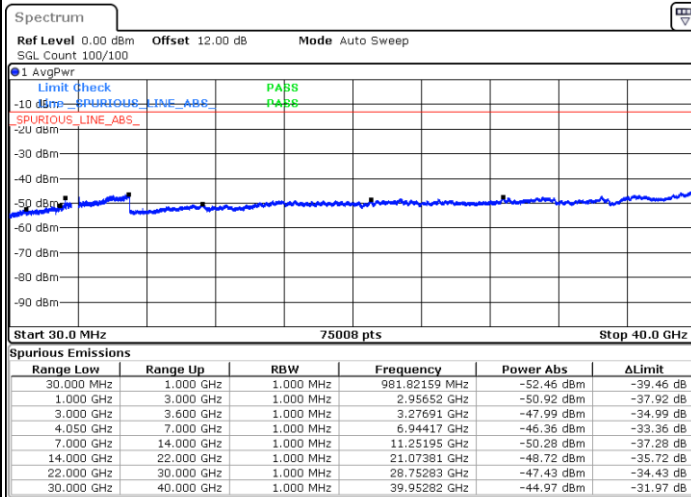


Date: 10.DEC.2020 22:50:16



Date: 10.DEC.2020 22:45:35

## Highest Channel / 1RB



Date: 10.DEC.2020 22:52:23

## Frequency Stability

| Test Conditions  |                   | NR n77 (BPSK) / Middle Channel | Limit       |
|------------------|-------------------|--------------------------------|-------------|
| Temperature (°C) | Voltage (Volt)    | BW 20MHz                       | Within Band |
|                  |                   | Deviation (ppm)                | Result      |
| 50               | Normal Voltage    | 0.0022                         | PASS        |
| 40               | Normal Voltage    | 0.0015                         |             |
| 30               | Normal Voltage    | 0.0013                         |             |
| 20(Ref.)         | Normal Voltage    | 0.0018                         |             |
| 10               | Normal Voltage    | 0.0025                         |             |
| 0                | Normal Voltage    | 0.0013                         |             |
| -10              | Normal Voltage    | 0.0015                         |             |
| -20              | Normal Voltage    | 0.0012                         |             |
| -30              | Normal Voltage    | 0.0017                         |             |
| 20               | Maximum Voltage   | 0.0025                         |             |
| 20               | Normal Voltage    | 0.0018                         |             |
| 20               | Battery End Point | 0.0013                         |             |

**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 n71 NSA

**Peak-to-Average Ratio**

| Mode       | FR1 n71+2A / 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  | 3.77                            | 3.42      | 5.65 | 5.22    | PASS        |
| Middle CH  | 3.57                            | 3.94      | 5.25 | 5.1     |             |
| Highest CH | 3.59                            | 3.83      | 5.39 | 4.64    |             |



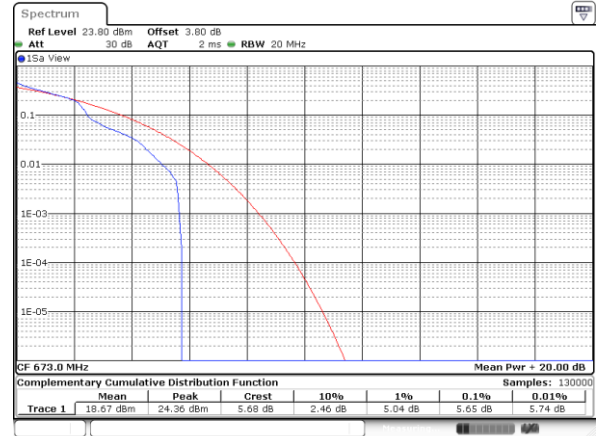
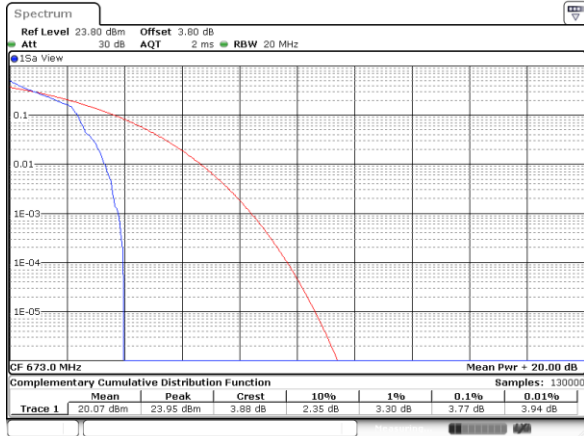
## FR1 n71+2A / 20MHz / DFT-S OFDM

## PI/2 BPSK

## QPSK

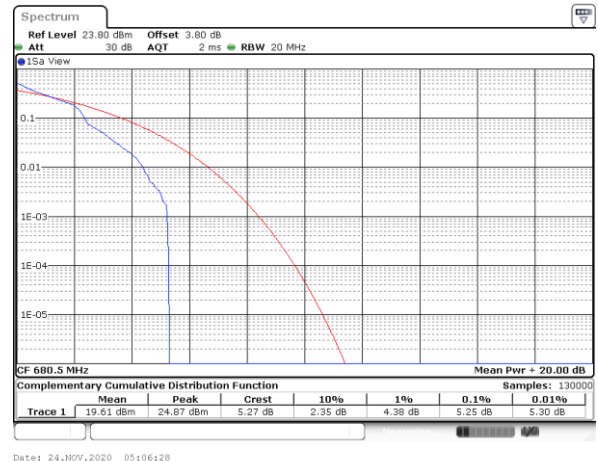
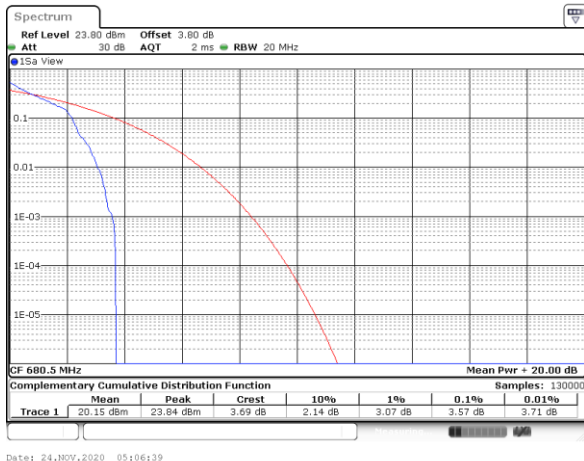
## Lowest Channel / 1RB

## Lowest Channel / 1RB



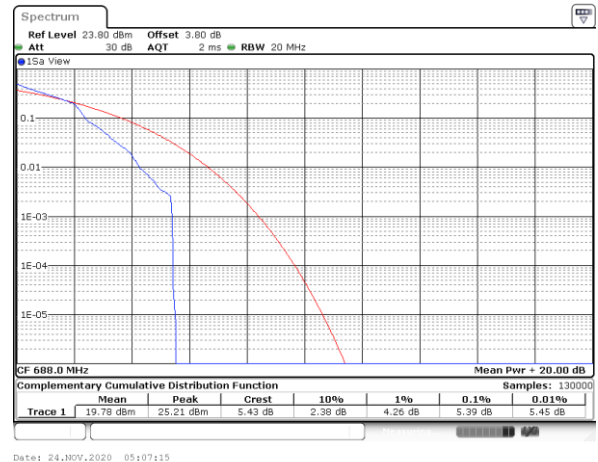
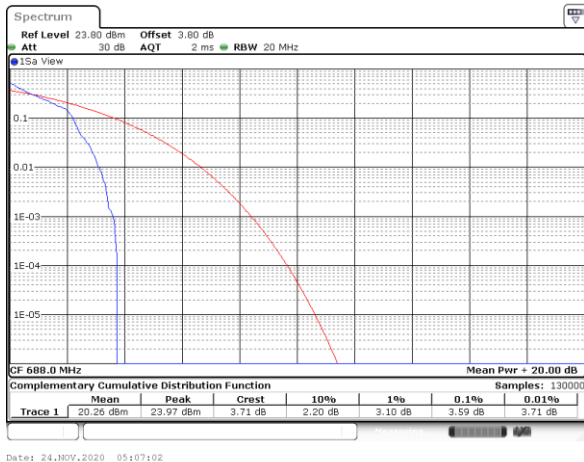
## Middle Channel / 1 RB

## Middle Channel / 1 RB



## Highest Channel / 1 RB

## Highest Channel / 1 RB





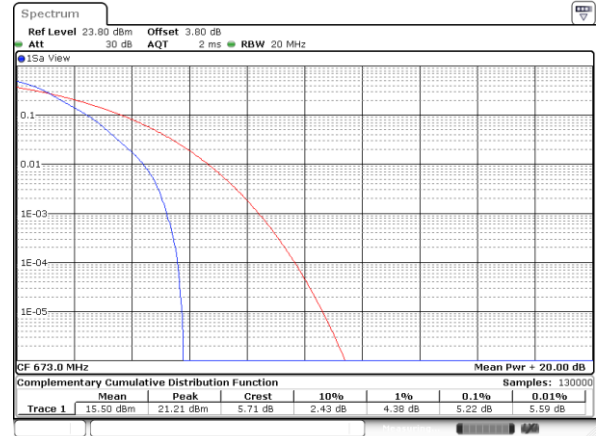
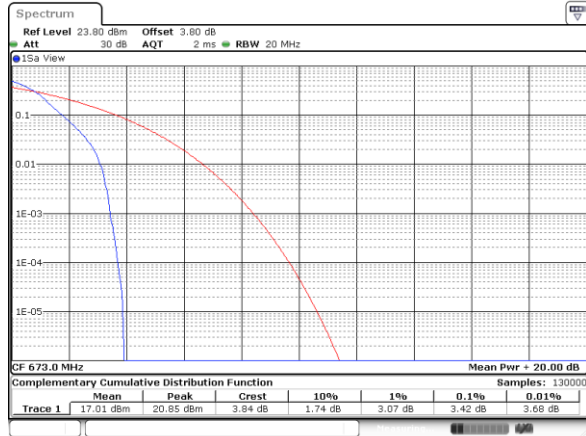
## FR1 n71+2A / 20MHz / DFT-S OFDM

## PI/2 BPSK

## QPSK

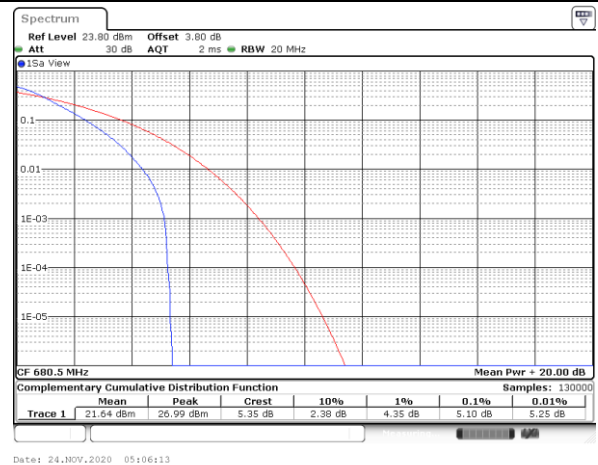
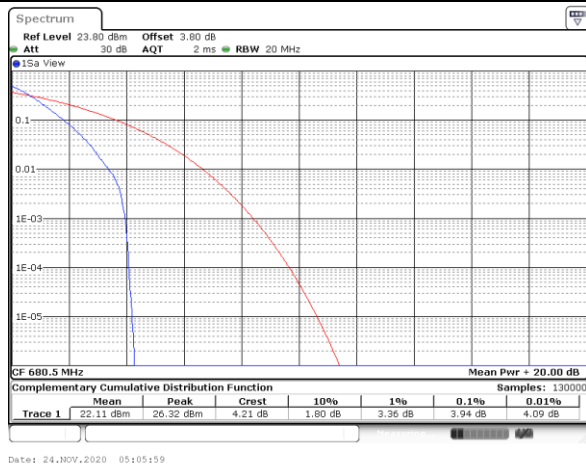
## Lowest Channel / Full RB

## Lowest Channel / Full RB



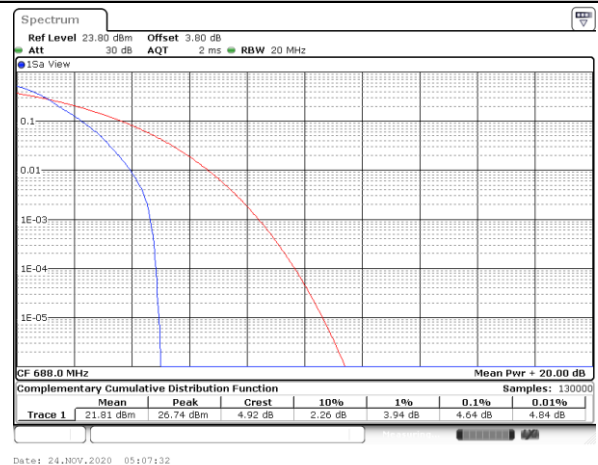
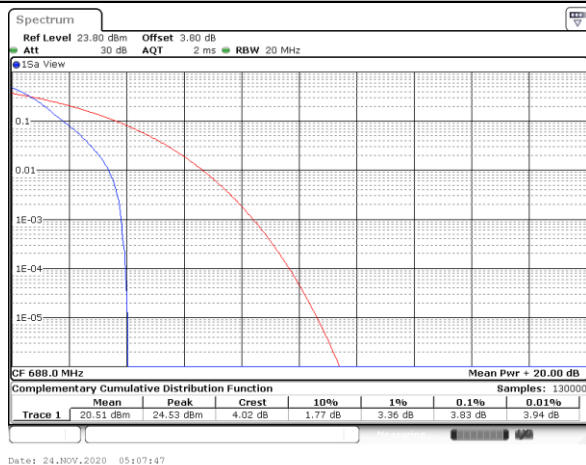
## Middle Channel / Full RB

## Middle Channel / Full RB



## Highest Channel / Full RB

## Highest Channel / Full RB



**26dB Bandwidth**

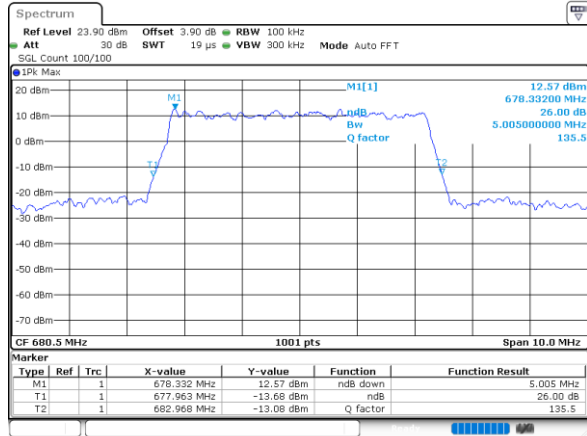
| Mode      | FR1 n71+2A : 26dB BW(MHz) / CP-OFDM |       |       |        |
|-----------|-------------------------------------|-------|-------|--------|
| BW        | 5MHz                                | 5MHz  | 5MHz  | 5MHz   |
| Mod.      | QPSK                                | 16QAM | 64QAM | 256QAM |
| Middle CH | 5                                   | 4.87  | 4.94  | 4.9    |
| BW        | 10MHz                               | 10MHz | 10MHz | 10MHz  |
| Mod.      | QPSK                                | 16QAM | 64QAM | 256QAM |
| Middle CH | 9.77                                | 9.81  | 9.83  | 9.91   |
| BW        | 15MHz                               | 15MHz | 15MHz | 15MHz  |
| Mod.      | QPSK                                | 16QAM | 64QAM | 256QAM |
| Middle CH | 14.89                               | 15.04 | 15.04 | 15.1   |
| BW        | 20MHz                               | 20MHz | 20MHz | 20MHz  |
| Mod.      | QPSK                                | 16QAM | 64QAM | 256QAM |
| Middle CH | 19.94                               | 19.94 | 19.9  | 19.74  |



## FR1 n71+2A / 5MHz / CP-OFDM

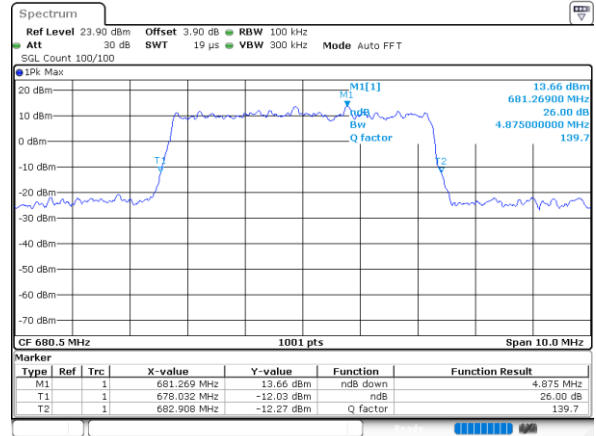
## QPSK

## Middle Channel



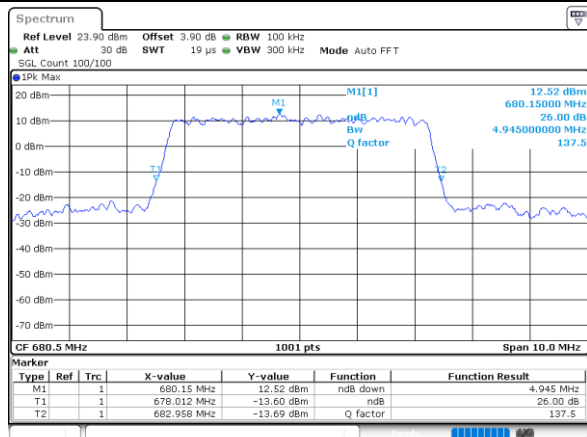
## 16QAM

## Middle Channel



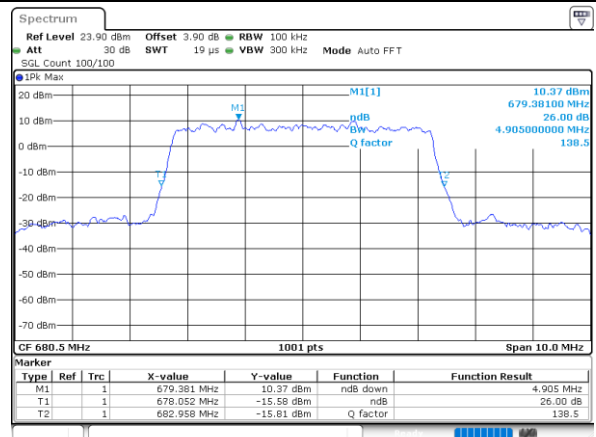
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel



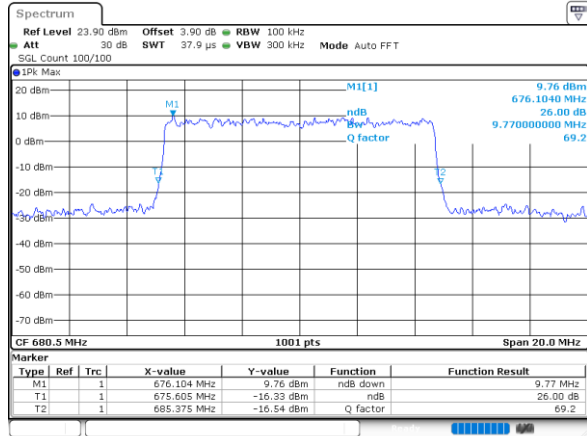




## FR1 n71+2A / 10MHz / CP-OFDM

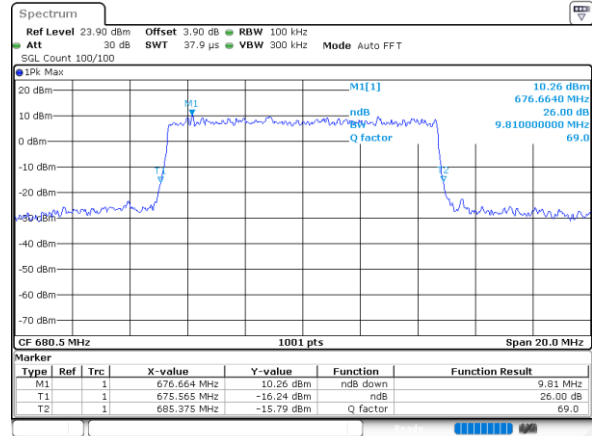
## QPSK

## Middle Channel



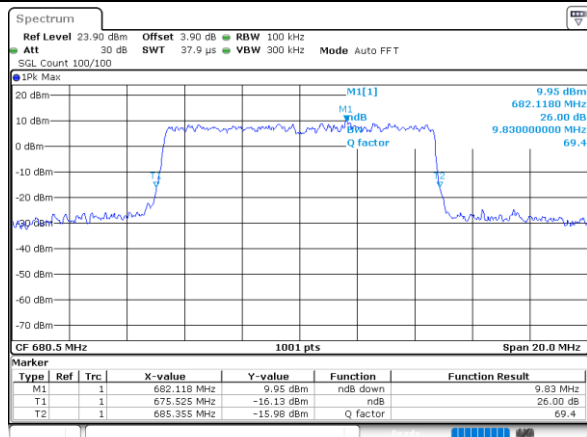
## 16QAM

## Middle Channel



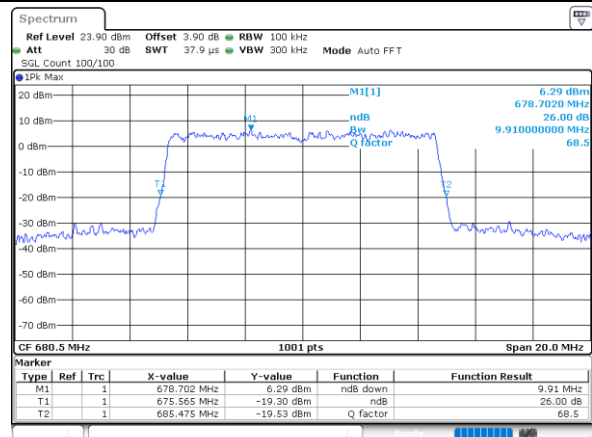
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel

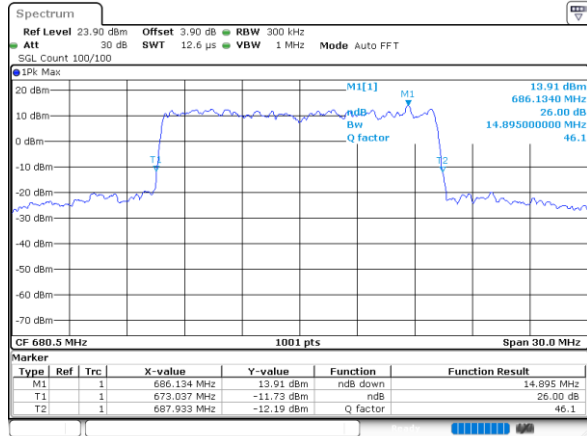




## FR1 n71+2A / 15MHz / CP-OFDM

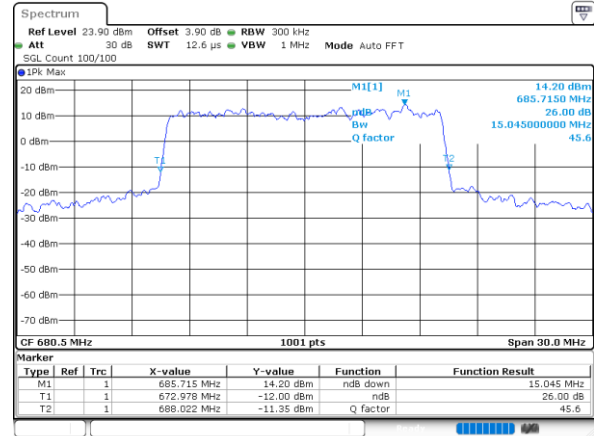
## QPSK

## Middle Channel



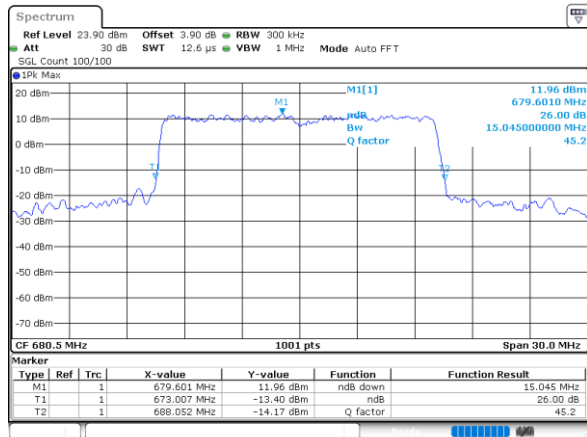
## 16QAM

## Middle Channel



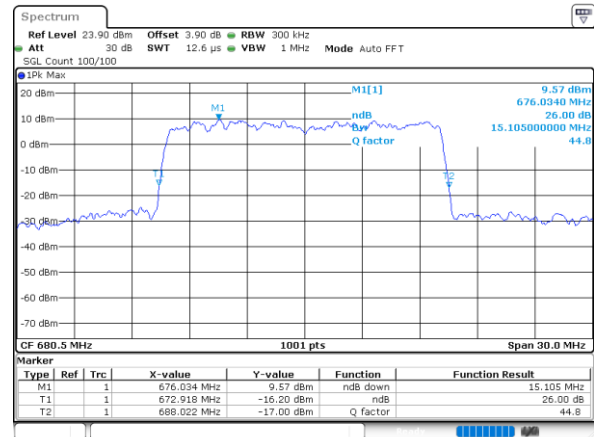
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel

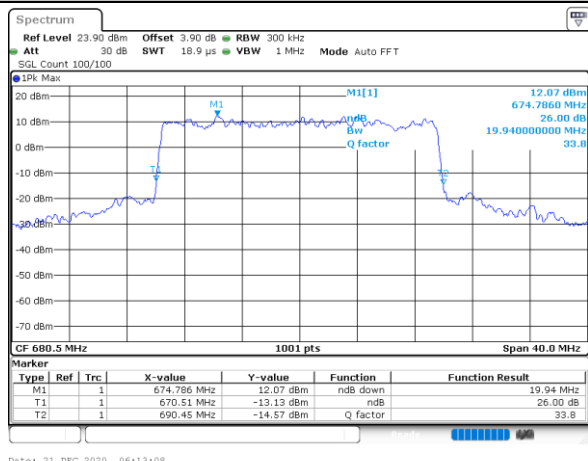




## FR1 n71+2A / 20MHz / CP-OFDM

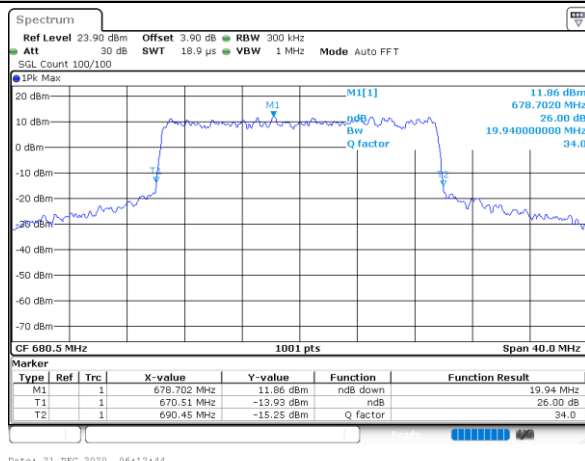
## QPSK

## Middle Channel



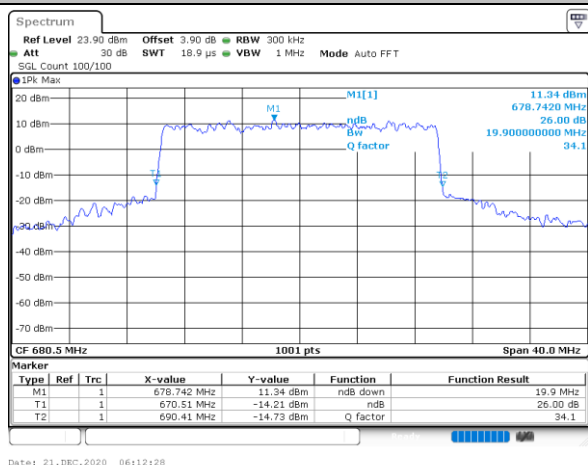
## 16QAM

## Middle Channel



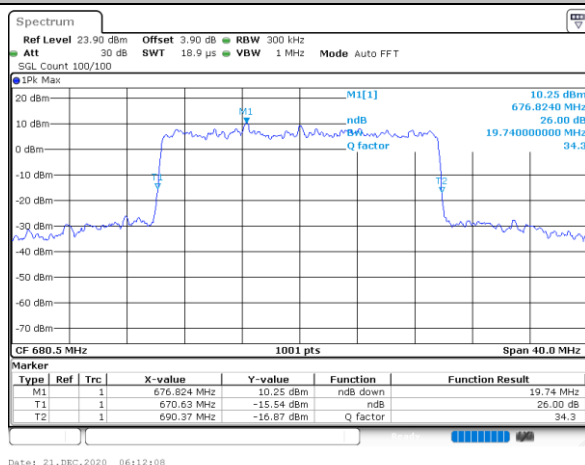
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel



**Occupied Bandwidth**

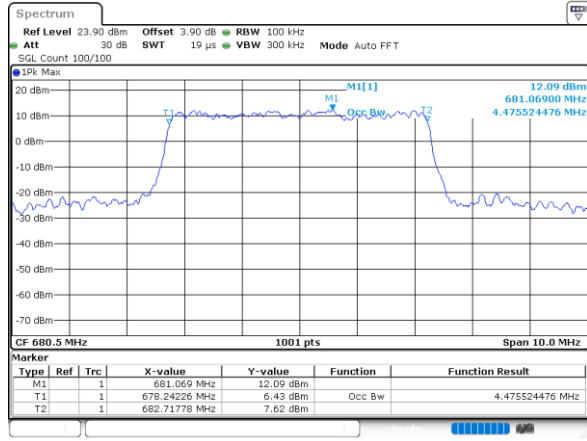
| Mode      | FR1 n71+2A : OBW(MHz) / CP-OFDM |       |       |        |
|-----------|---------------------------------|-------|-------|--------|
| BW        | 5MHz                            | 5MHz  | 5MHz  | 5MHz   |
| Mod.      | QPSK                            | 16QAM | 64QAM | 256QAM |
| Middle CH | 4.47                            | 4.47  | 4.5   | 4.49   |
| BW        | 10MHz                           | 10MHz | 10MHz | 10MHz  |
| Mod.      | QPSK                            | 16QAM | 64QAM | 256QAM |
| Middle CH | 9.31                            | 9.29  | 9.27  | 9.27   |
| BW        | 15MHz                           | 15MHz | 15MHz | 15MHz  |
| Mod.      | QPSK                            | 16QAM | 64QAM | 256QAM |
| Middle CH | 14.11                           | 14.14 | 14.2  | 14.2   |
| BW        | 20MHz                           | 20MHz | 20MHz | 20MHz  |
| Mod.      | QPSK                            | 16QAM | 64QAM | 256QAM |
| Middle CH | 18.9                            | 18.9  | 18.98 | 18.94  |



## FR1 n71+2A / 5MHz / CP-OFDM

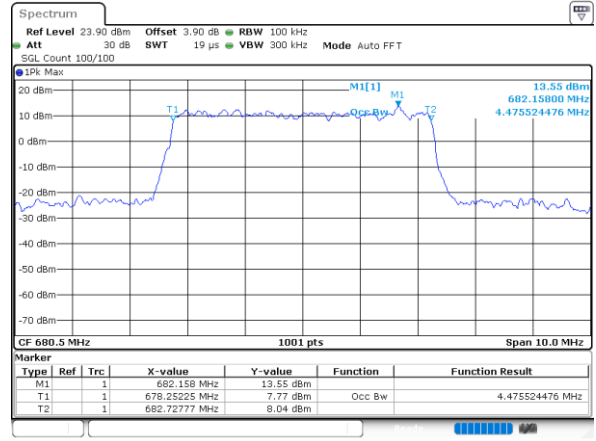
## QPSK

## Middle Channel



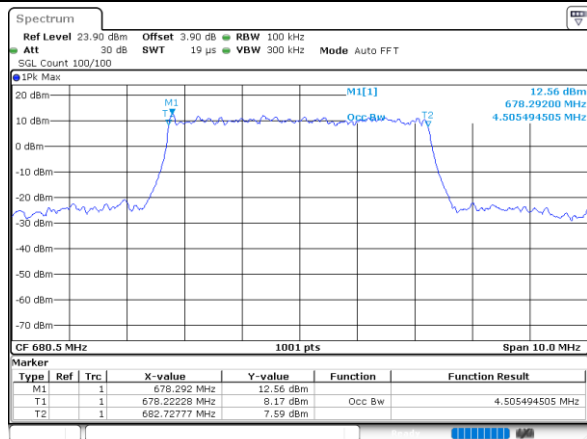
## 16QAM

## Middle Channel



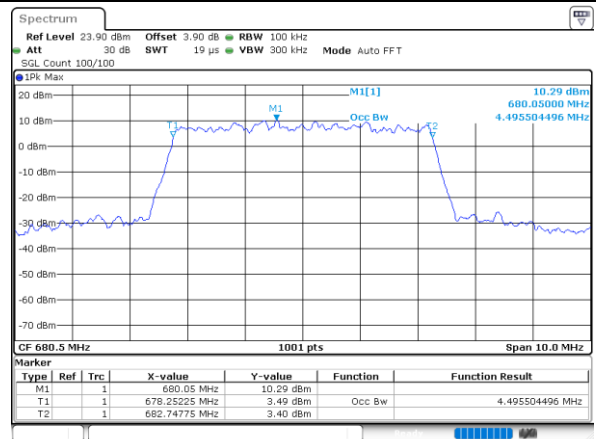
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel

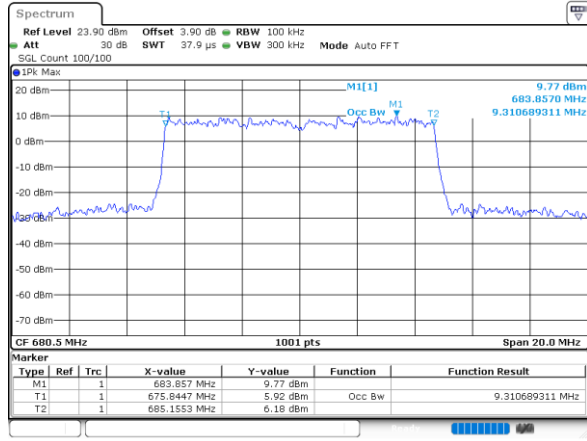




## FR1 n71+2A / 10MHz / CP-OFDM

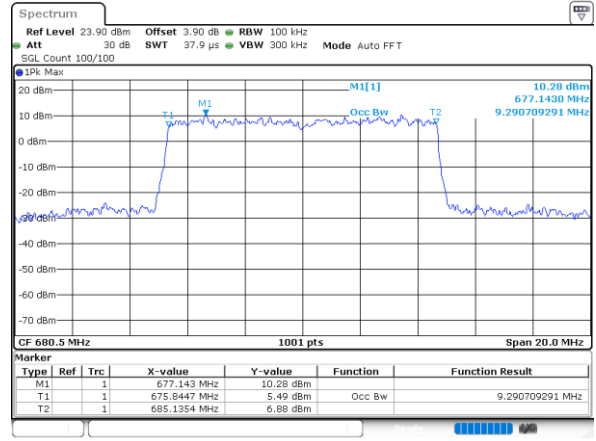
## QPSK

## Middle Channel



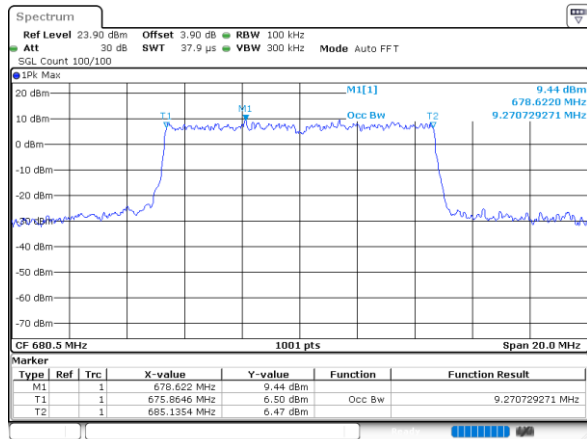
## 16QAM

## Middle Channel



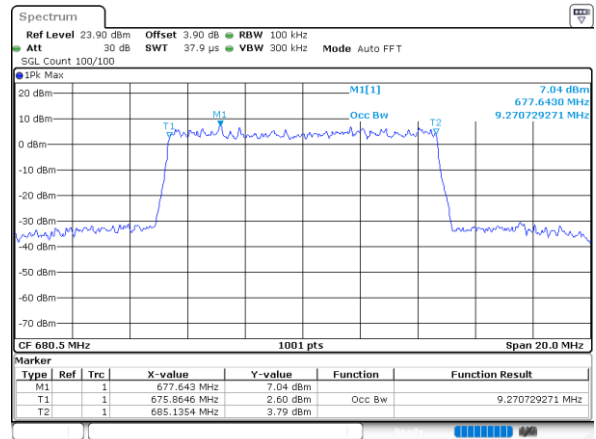
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel

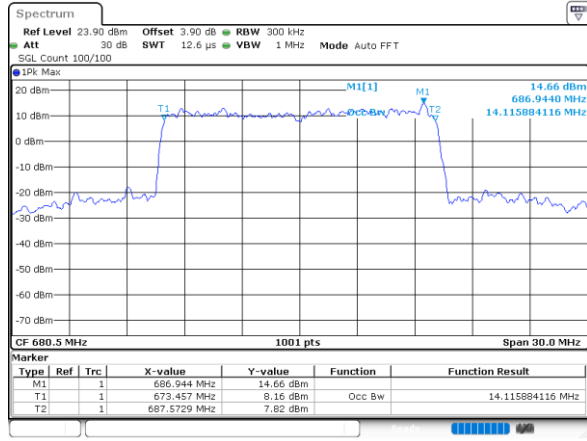




## FR1 n71+2A / 15MHz / CP-OFDM

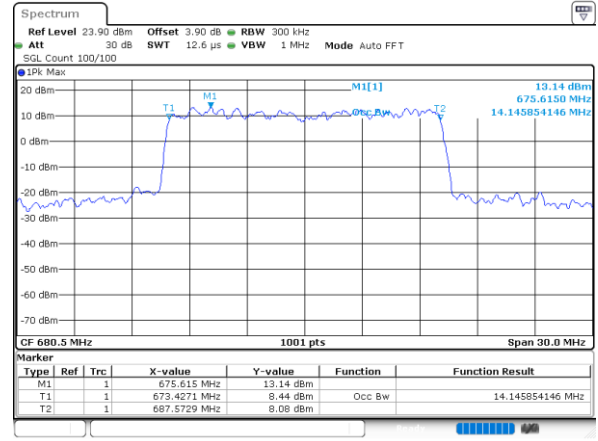
## QPSK

## Middle Channel



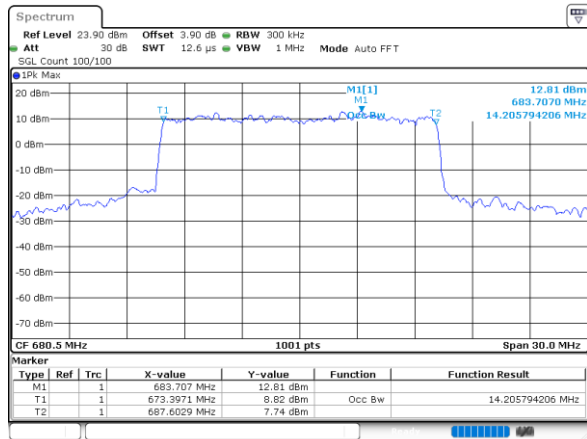
## 16QAM

## Middle Channel



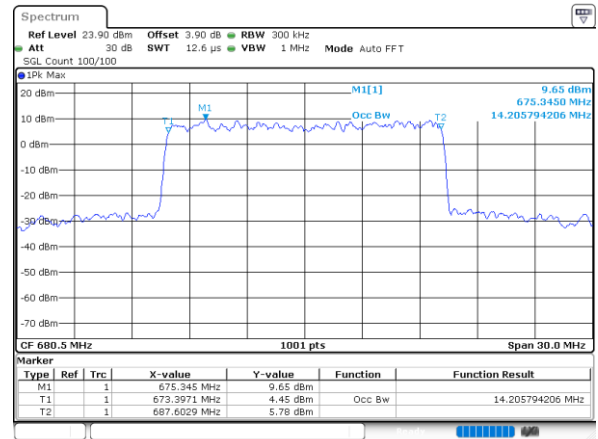
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel

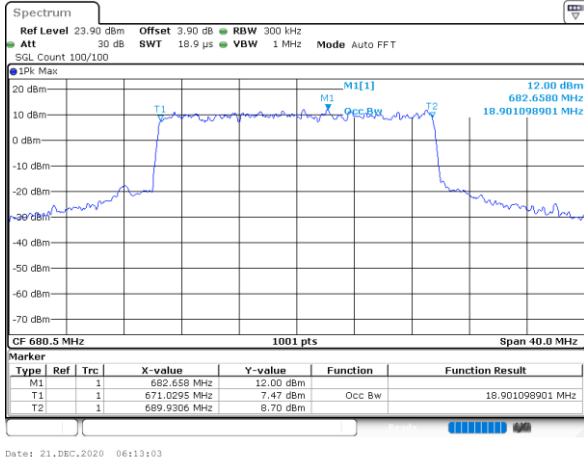




## FR1 n71+2A / 20MHz / CP-OFDM

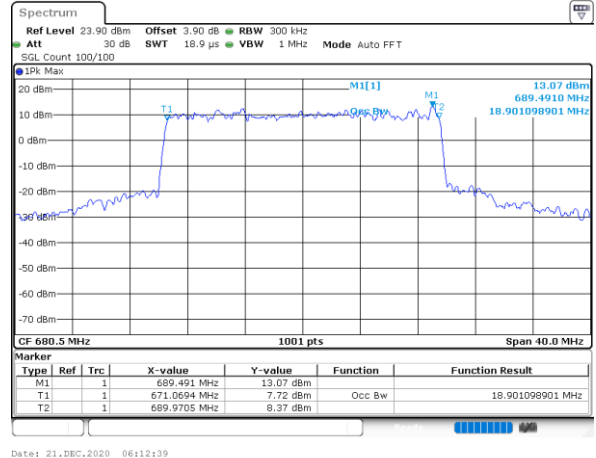
## QPSK

## Middle Channel



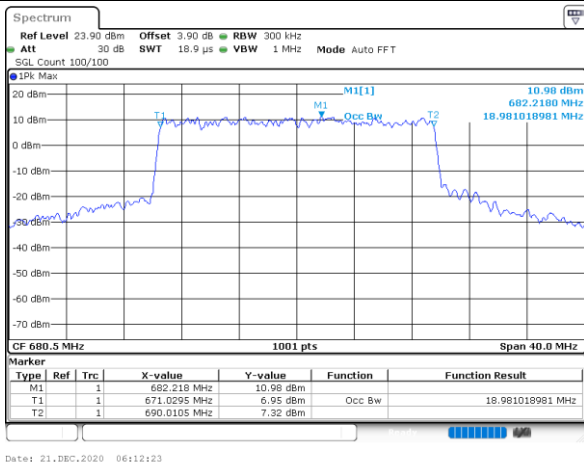
## 16QAM

## Middle Channel



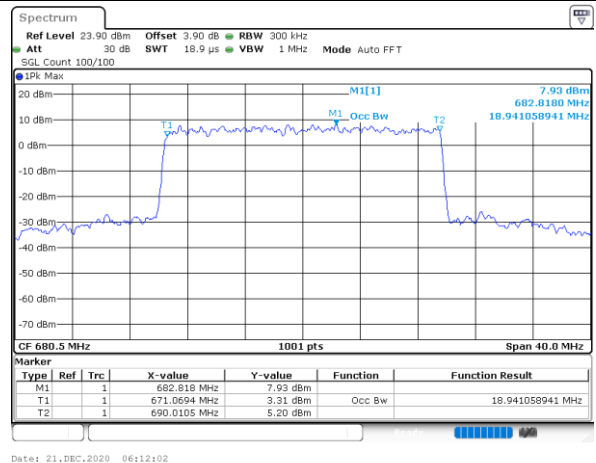
## 64QAM

## Middle Channel



## 256QAM

## Middle Channel



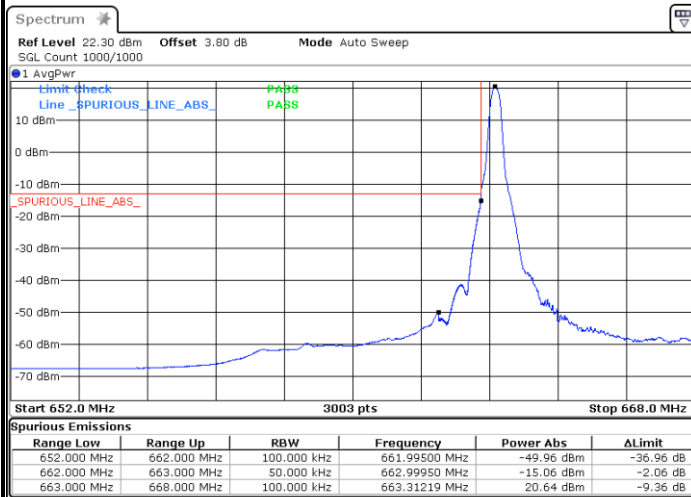




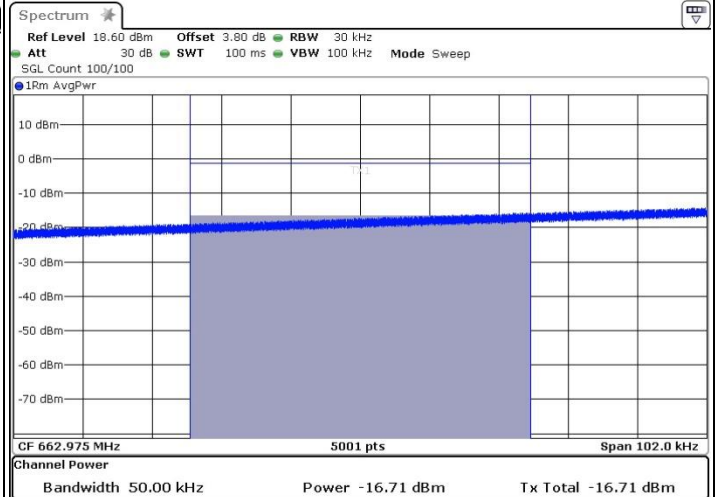
## Conducted Band Edge

### FR1 n71+2A / 5MHz / DFT-S OFDM BPSK

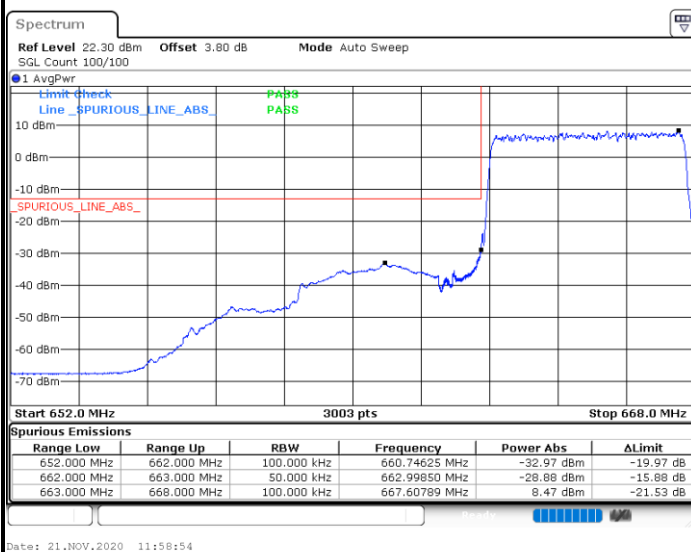
#### Lowest Band Edge / 1 RB



#### Channel Power < -13dBm Pass



#### Lowest Band Edge / Full RB



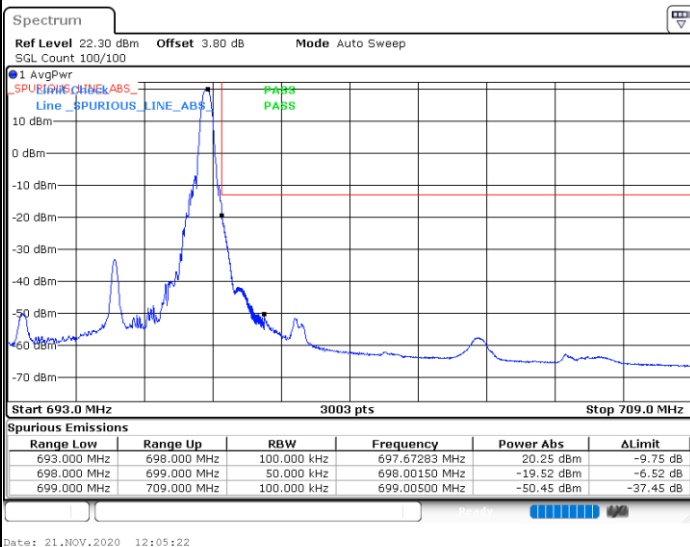
#### Channel Power < -13dBm Pass



## FR1 n71+2A / 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

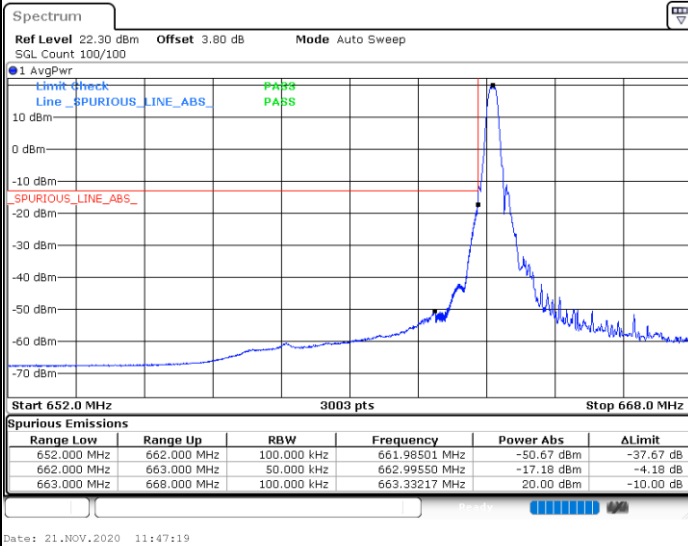




## FR1 n71+2A / 5MHz / DFT-S OFDM QPSK

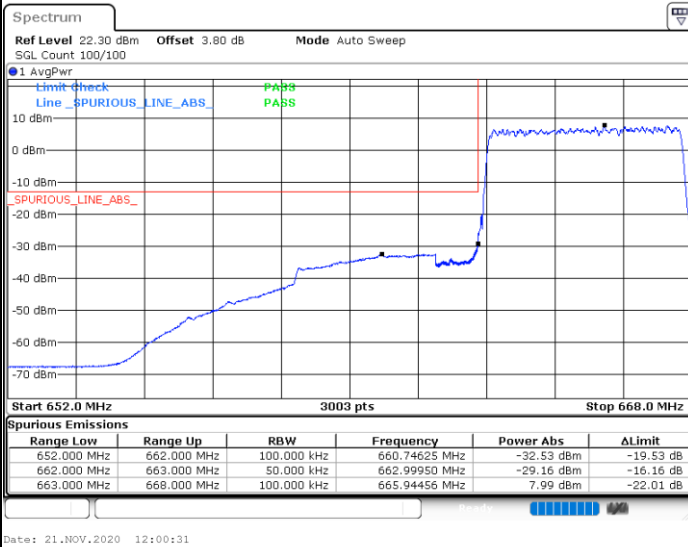
## Lowest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Lowest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

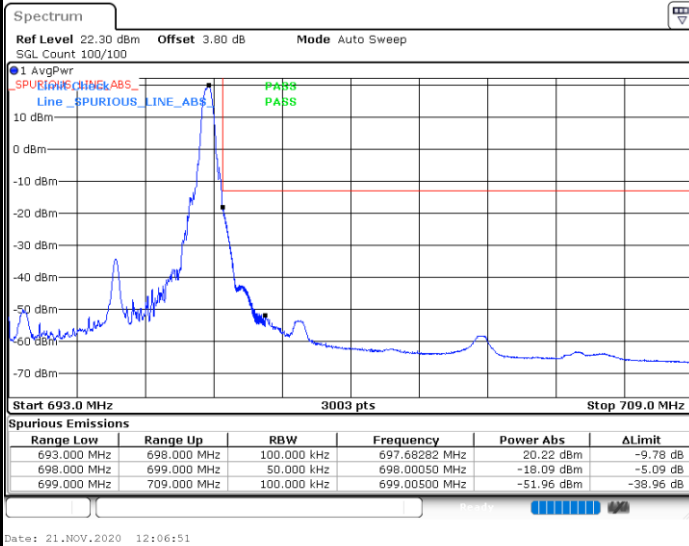




## FR1 n71+2A / 5MHz / DFT-S OFDM QPSK

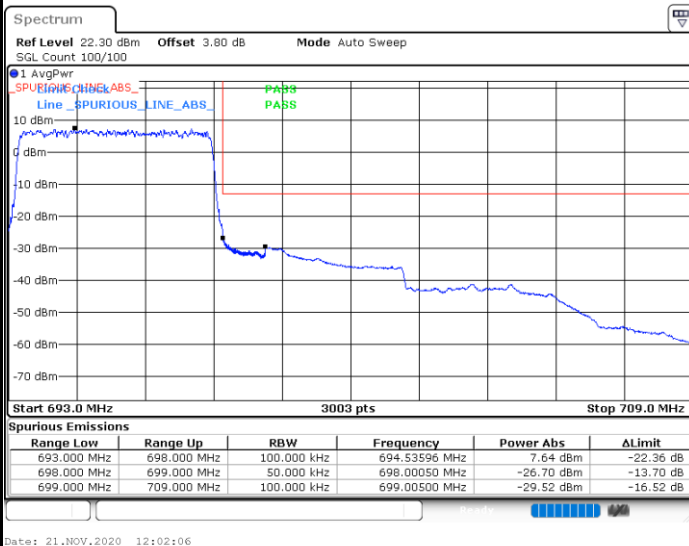
## Highest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB

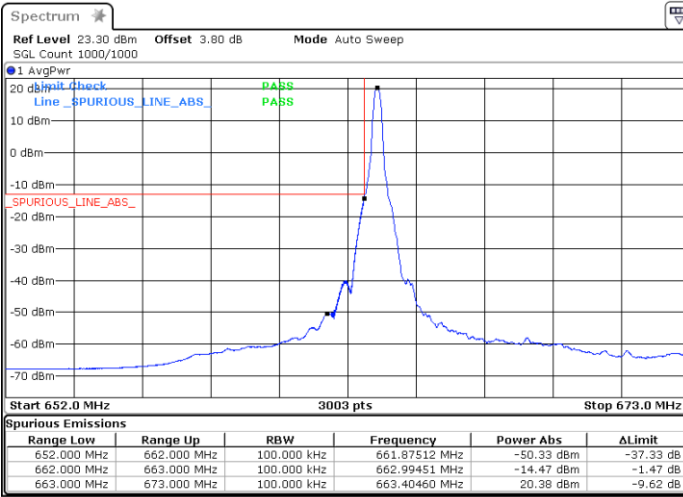
## Channel Power &lt; -13dBm Pass



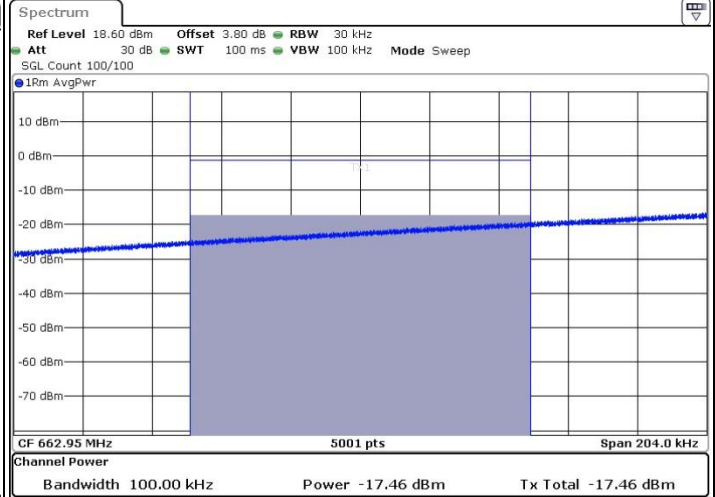


## FR1 n71+2A / 10MHz / DFT-S OFDM BPSK

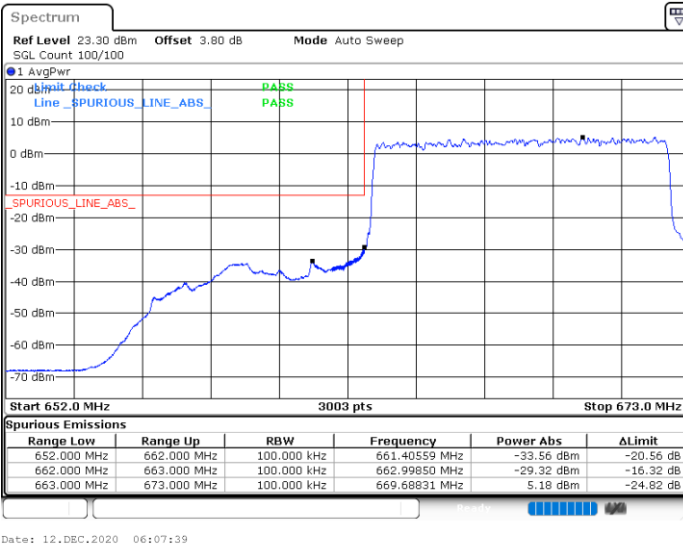
## Lowest Band Edge / 1 RB



## Channel Power &lt; -13dBm Pass



## Lowest Band Edge / Full RB



## Channel Power &lt; -13dBm Pass

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