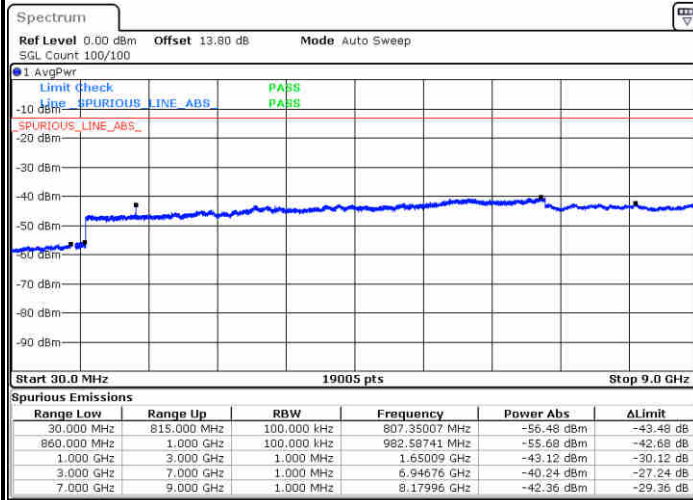


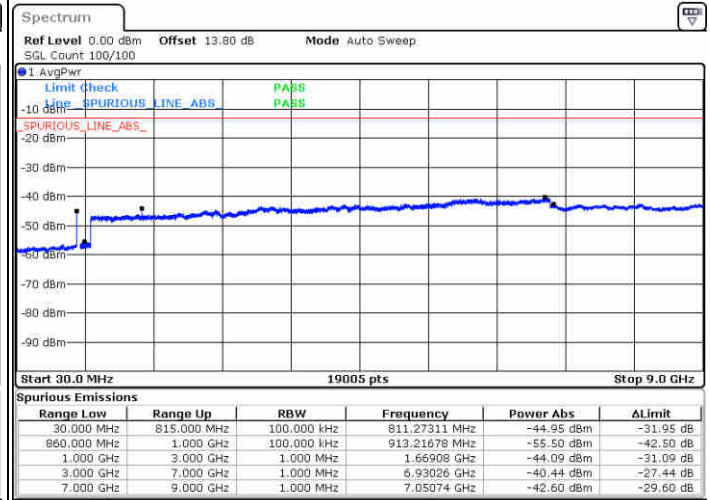


## FR1 n5+66A / 5MHz / DFT-S OFDM / QPSK

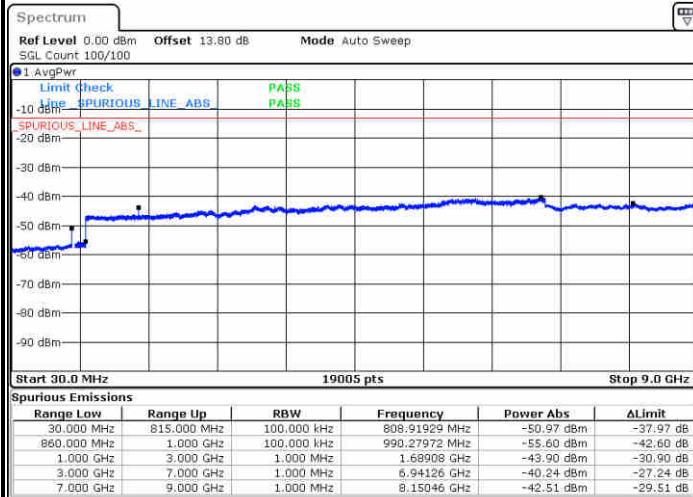
## Lowest Channel / 1RB



## Middle Channel / 1RB



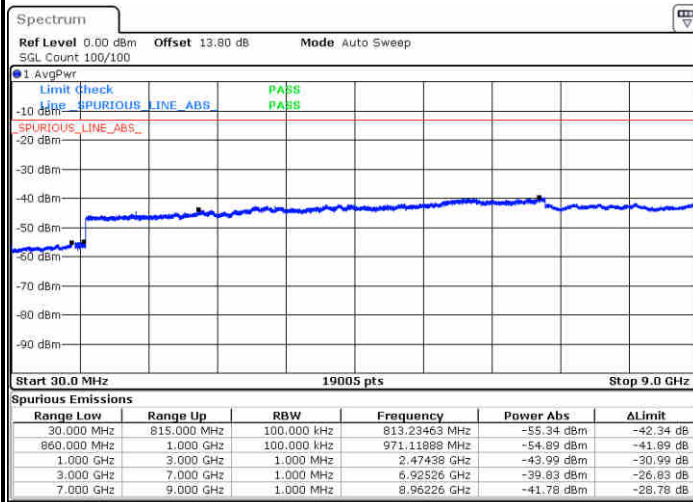
## Highest Channel / 1RB





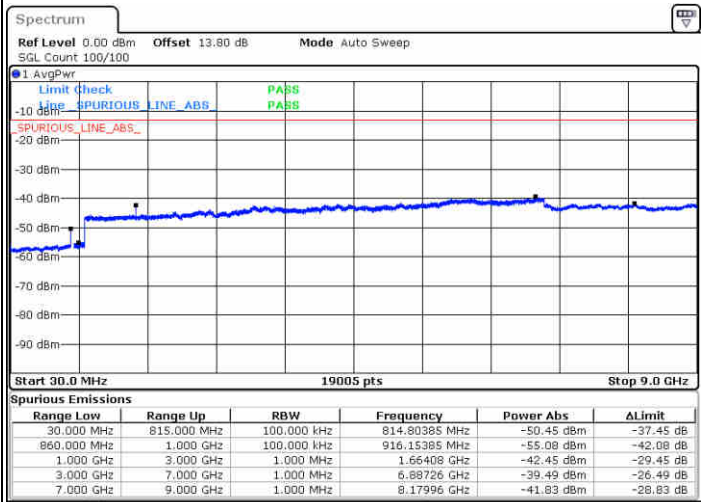
## FR1 n5+66A / 10MHz / DFT-S OFDM / BPSK

## Lowest Channel / 1RB



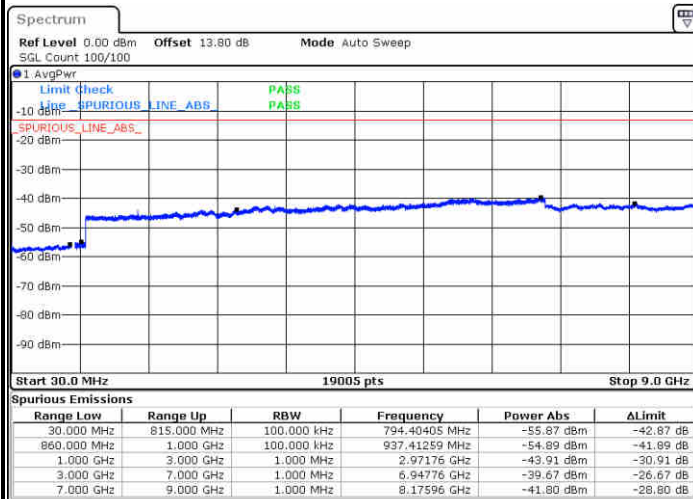
Date: 10.JUL.2020 02:01:46

## Middle Channel / 1RB



Date: 10.JUL.2020 02:14:55

## Highest Channel / 1RB

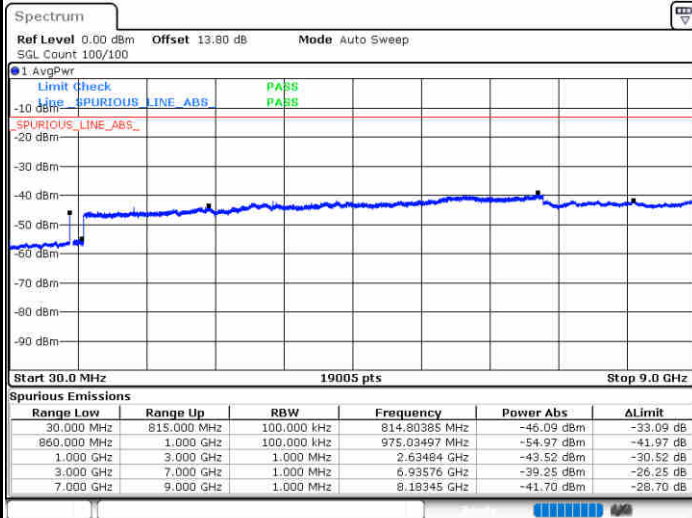


Date: 10.JUL.2020 02:39:27

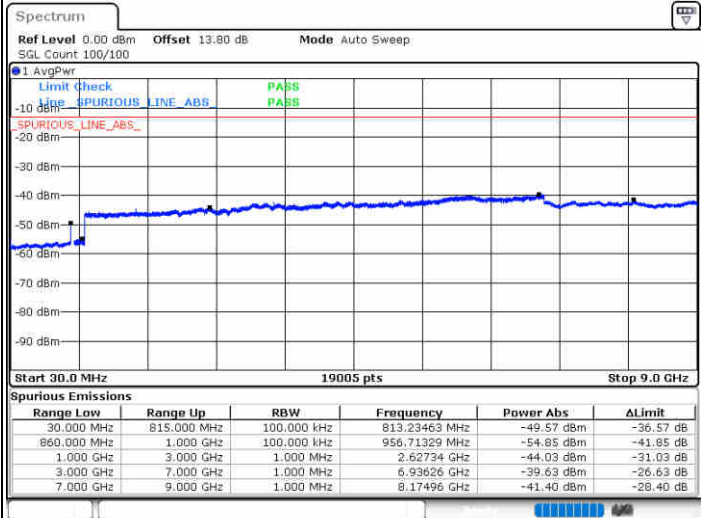


## FR1 n5+66A / 10MHz / DFT-S OFDM / QPSK

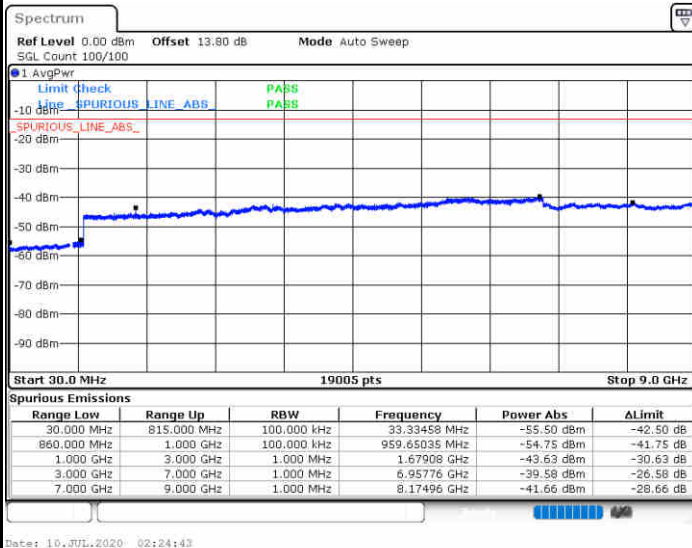
## Lowest Channel / 1RB



## Middle Channel / 1RB



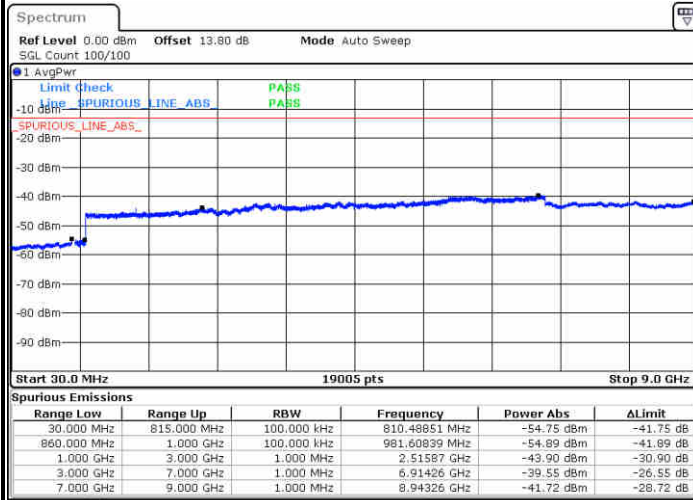
## Highest Channel / 1RB





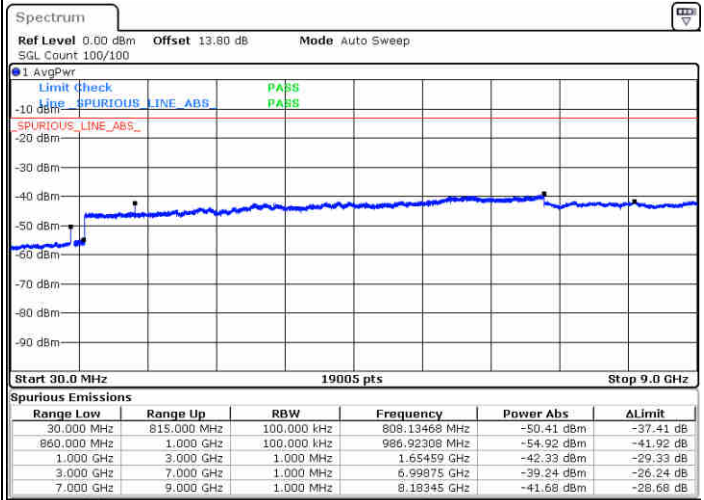
## FR1 n5+66A / 20MHz / DFT-S OFDM / BPSK

## Lowest Channel / 1RB



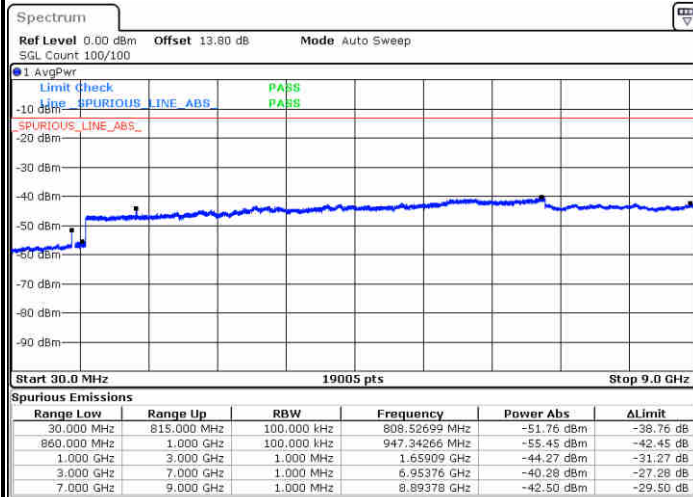
Date: 13.JUL.2020 04:00:20

## Middle Channel / 1RB



Date: 14.JUL.2020 03:38:18

## Highest Channel / 1RB

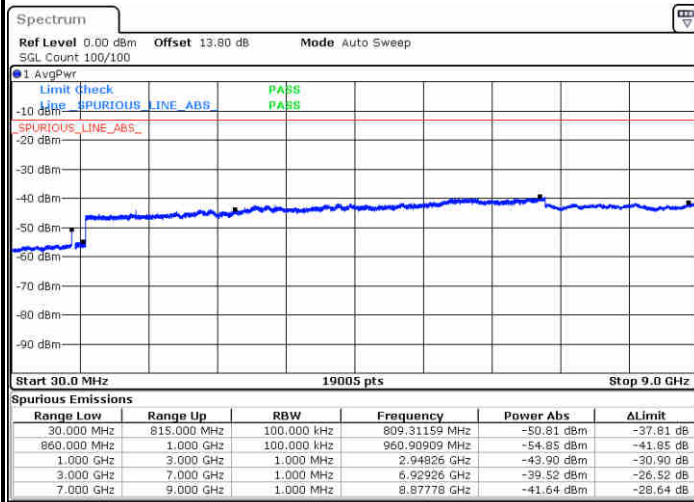


Date: 16.JUL.2020 05:45:45



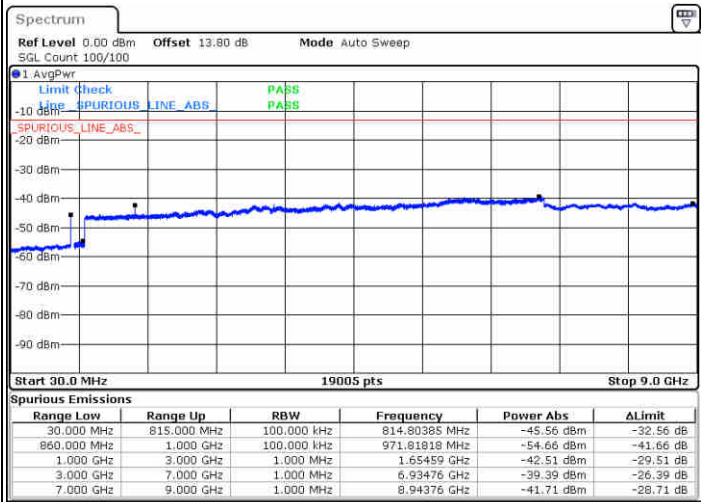
## FR1 n5+66A / 20MHz / DFT-S OFDM / QPSK

## Lowest Channel / 1RB



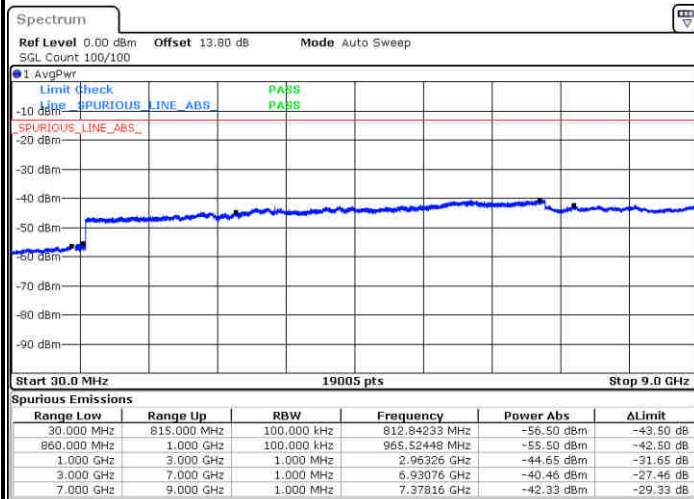
Date: 13.JUL.2020 03:57:13

## Middle Channel / 1RB



Date: 14.JUL.2020 03:40:07

## Highest Channel / 1RB



Date: 16.JUL.2020 05:47:06

**Frequency Stability**

| Test Conditions  |                   | NR n5+66A (BPSK) / Middle Channel | Limit       |
|------------------|-------------------|-----------------------------------|-------------|
| Temperature (°C) | Voltage (Volt)    | BW 20MHz                          | Within Band |
|                  |                   | Deviation (ppm)                   | Result      |
| 50               | Normal Voltage    | 0.0015                            | PASS        |
| 40               | Normal Voltage    | 0.0012                            |             |
| 30               | Normal Voltage    | 0.0010                            |             |
| 20(Ref.)         | Normal Voltage    | 0.0019                            |             |
| 10               | Normal Voltage    | 0.0011                            |             |
| 0                | Normal Voltage    | 0.0013                            |             |
| -10              | Normal Voltage    | 0.0015                            |             |
| -20              | Normal Voltage    | 0.0011                            |             |
| -30              | Normal Voltage    | 0.0018                            |             |
| 20               | Maximum Voltage   | 0.0019                            |             |
| 20               | Normal Voltage    | 0.0013                            |             |
| 20               | Battery End Point | 0.0015                            |             |



## 5G NR n25

## NSA

### Peak-to-Average Ratio

| Mode       | FR1 n25+12A / 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  | 4.23                             | 5.16      | 5.22 | 5.54    | PASS        |
| Middle CH  | 4.2                              | 3.88      | 5.42 | 6.26    |             |
| Highest CH | 4.75                             | 4.46      | 5.59 | 5.1     |             |



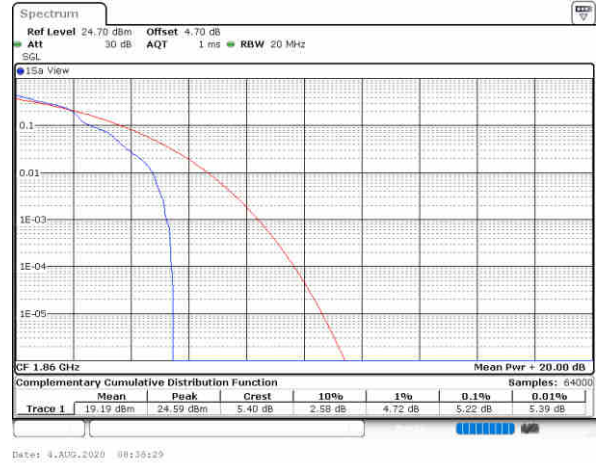
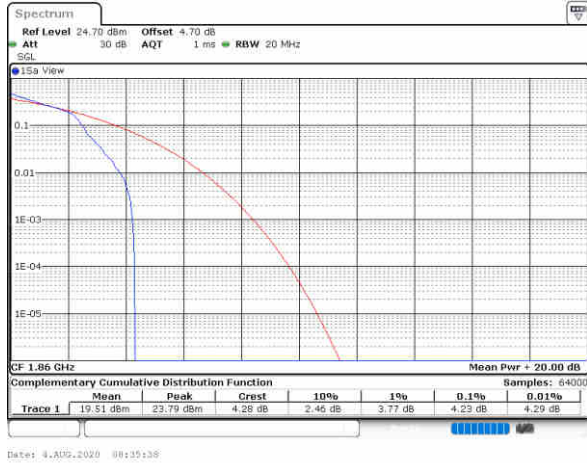
## FR1 n25+12A / 20MHz / DFT-S OFDM

## PI/2 BPSK

## QPSK

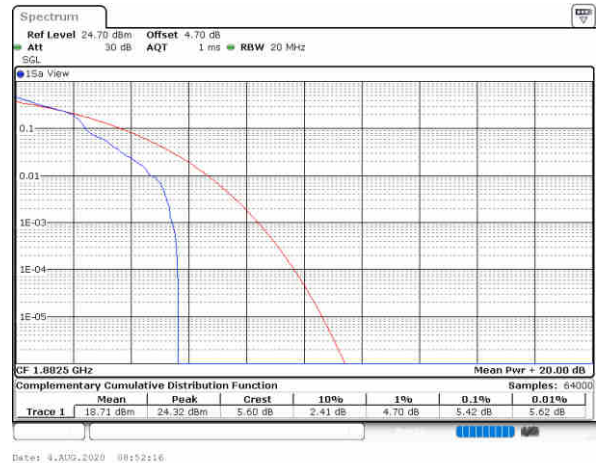
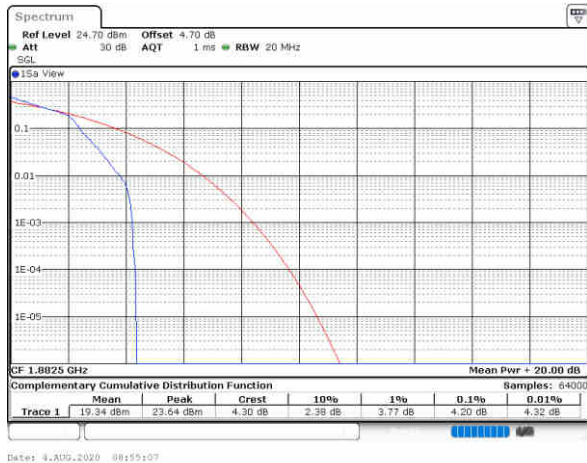
## Lowest Channel / 1RB

## Lowest Channel / 1RB



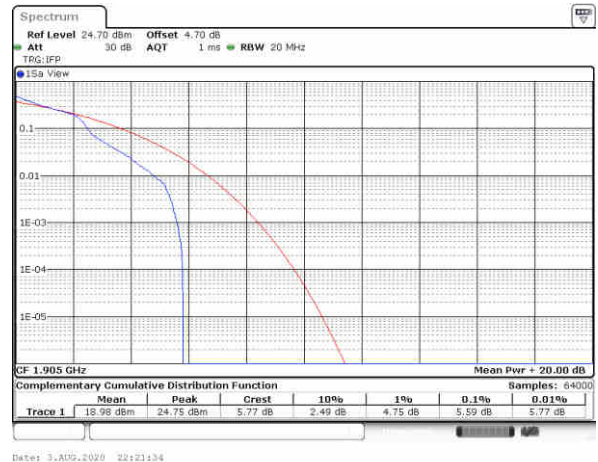
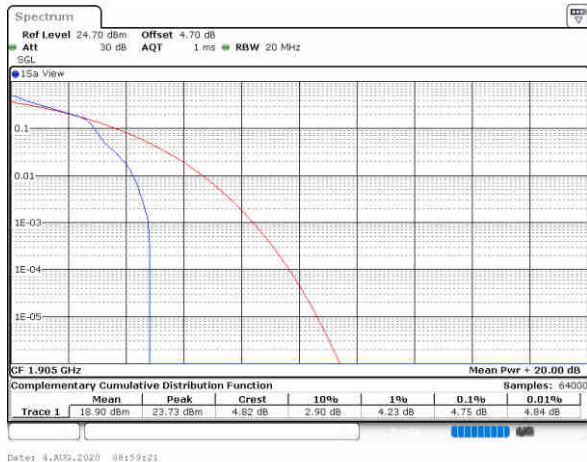
## Middle Channel / 1 RB

## Middle Channel / 1 RB



## Highest Channel / 1 RB

## Highest Channel / 1 RB





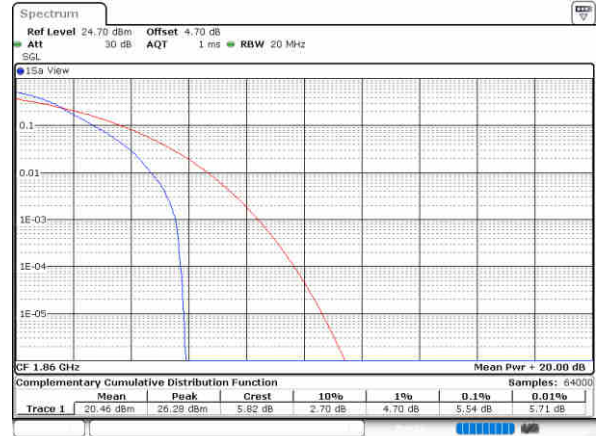
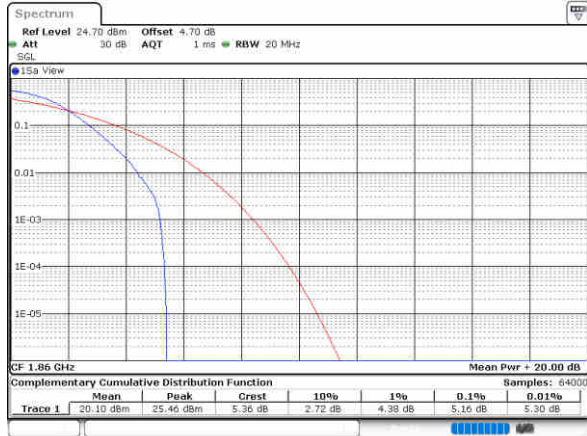
## FR1 n25+12A / 20MHz / DFT-S OFDM

## PI/2 BPSK

## QPSK

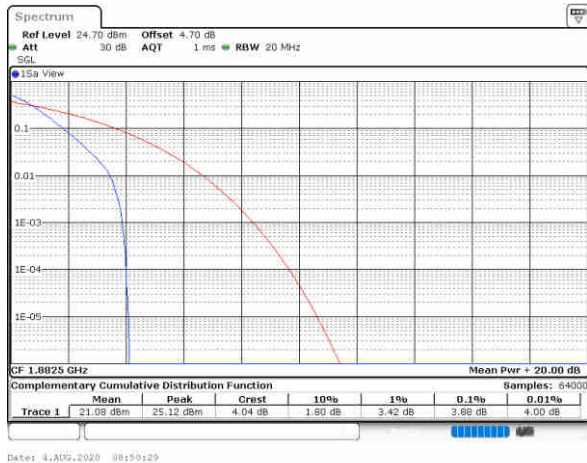
## Lowest Channel / Full RB

## Lowest Channel / Full RB



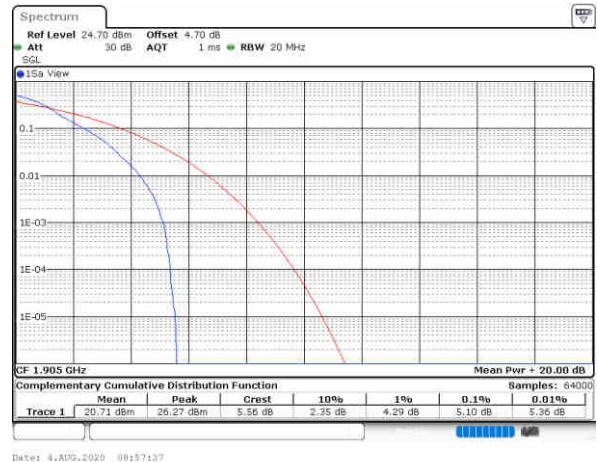
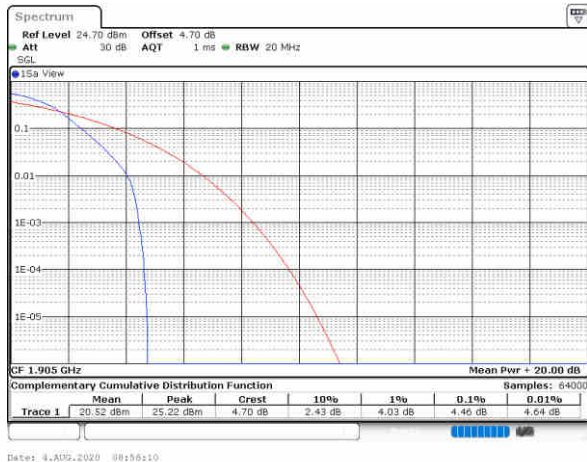
## Middle Channel / Full RB

## Middle Channel / Full RB



## Highest Channel / Full RB

## Highest Channel / Full RB





**26dB Bandwidth**

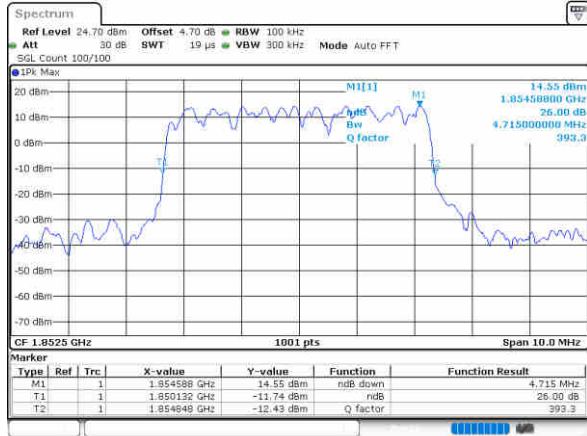
| Mode       | FR1 n25+12A : 26dB BW(MHz) / DFT-S OFDM |      |           |       |           |       |  |  |
|------------|-----------------------------------------|------|-----------|-------|-----------|-------|--|--|
| BW         | 5MHz                                    | 5MHz | 10MHz     | 10MHz | 20MHz     | 20MHz |  |  |
| Mod.       | PI/2 BPSK                               | QPSK | PI/2 BPSK | QPSK  | PI/2 BPSK | QPSK  |  |  |
| Lowest CH  | 4.71                                    | 4.71 | 9.21      | 9.49  | 18.62     | 18.66 |  |  |
| Middle CH  | 4.69                                    | 4.99 | 9.25      | 9.43  | 18.58     | 18.78 |  |  |
| Highest CH | 4.79                                    | 4.69 | 9.47      | 9.25  | 18.82     | 18.78 |  |  |



## FR1 n25+12A / 5MHz / DFT-S OFDM

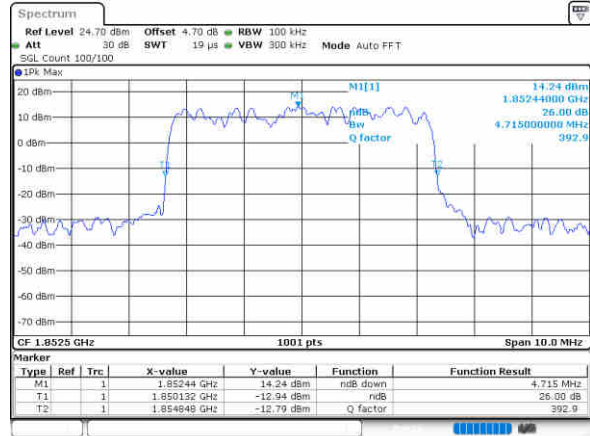
## PI/2 BPSK

## Lowest Channel

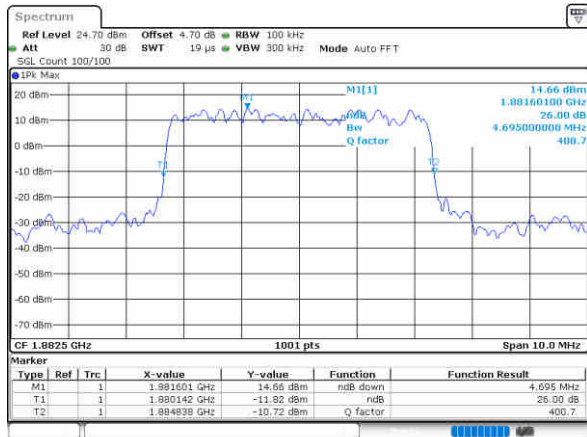


## QPSK

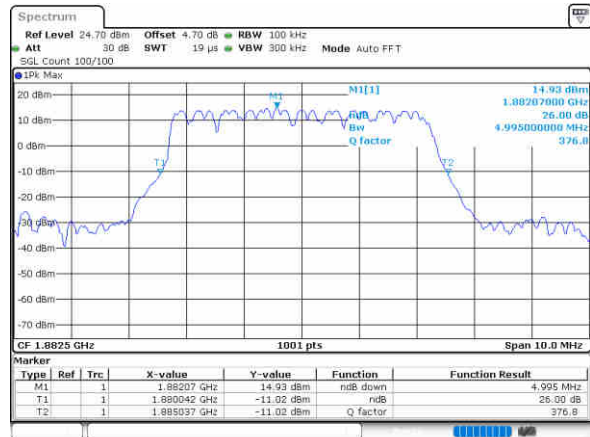
## Lowest Channel



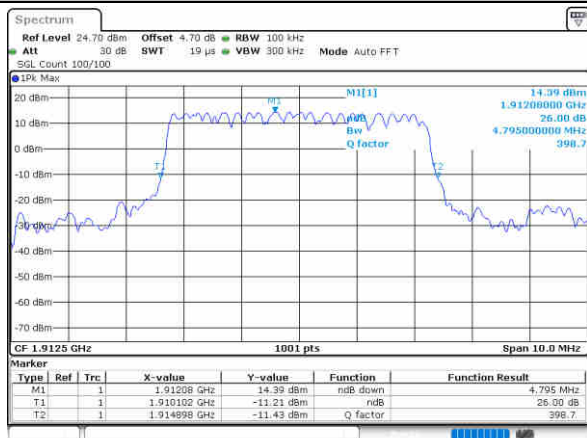
## Middle Channel



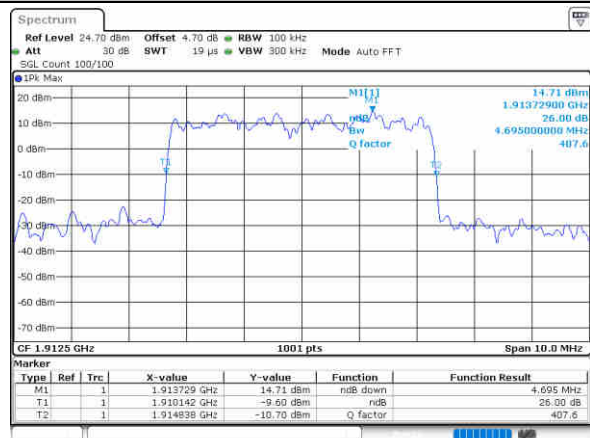
## Middle Channel



## Highest Channel



## Highest Channel

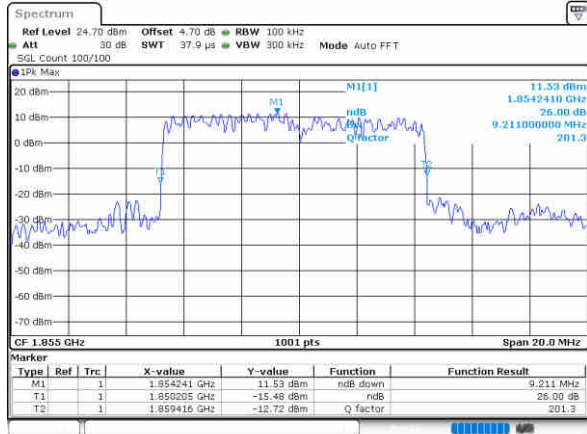




## FR1 n25+12A / 10MHz / DFT-S OFDM

## PI/2 BPSK

## Lowest Channel

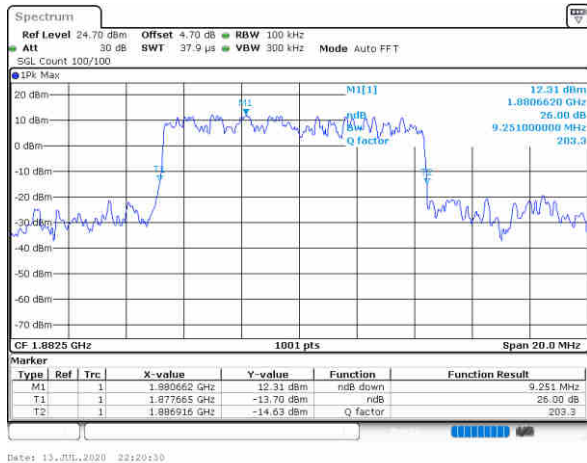


## QPSK

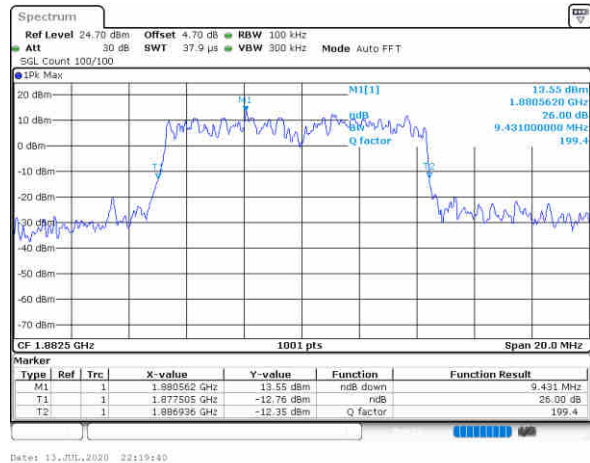
## Lowest Channel



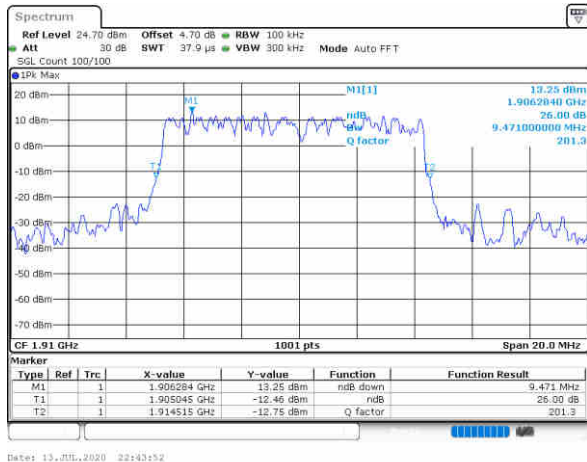
## Middle Channel



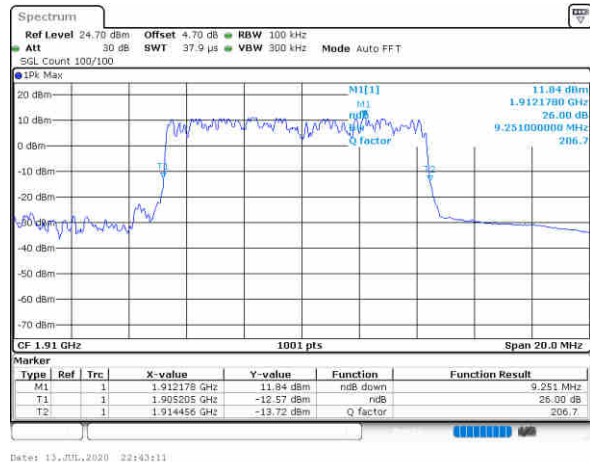
## Middle Channel



## Highest Channel



## Highest Channel

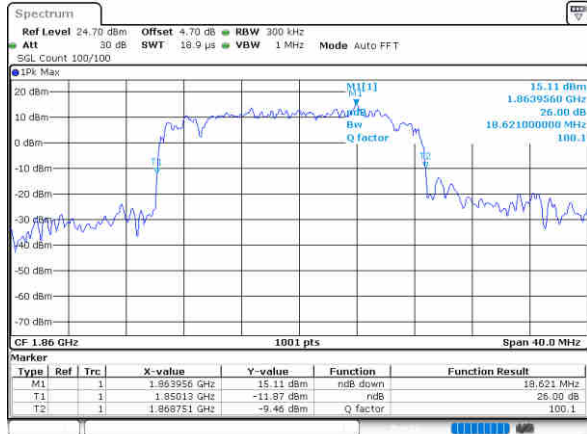




## FR1 n25+12A / 20MHz / DFT-S OFDM

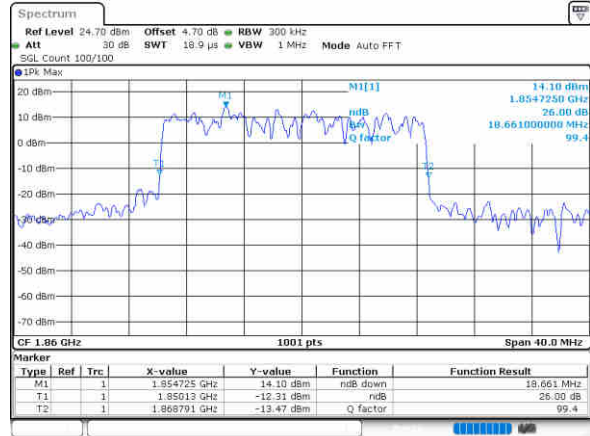
## PI/2 BPSK

## Lowest Channel

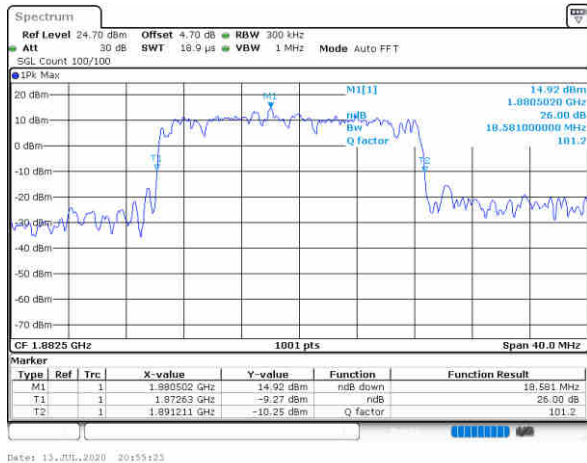


## QPSK

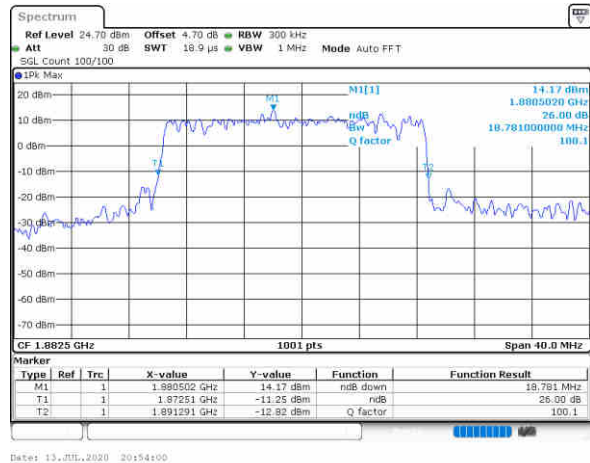
## Lowest Channel



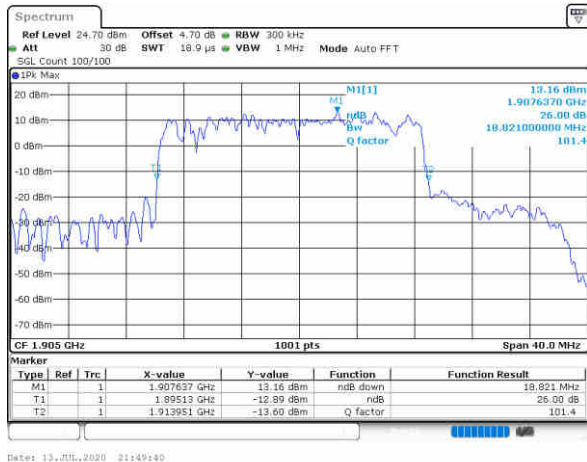
## Middle Channel



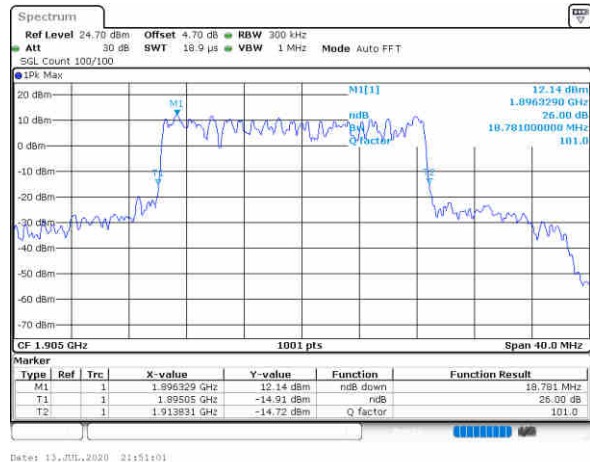
## Middle Channel



## Highest Channel



## Highest Channel





## Occupied Bandwidth

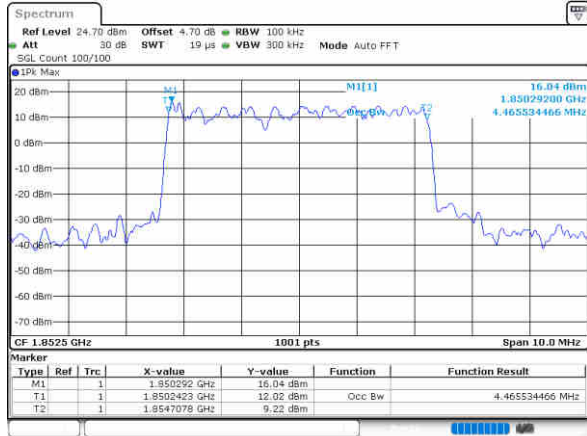
| Mode       | FR1 n25+12A : OB BW(MHz) / DFT-S OFDM |      |           |       |           |       |  |  |
|------------|---------------------------------------|------|-----------|-------|-----------|-------|--|--|
| BW         | 5MHz                                  | 5MHz | 10MHz     | 10MHz | 20MHz     | 20MHz |  |  |
| Mod.       | PI/2 BPSK                             | QPSK | PI/2 BPSK | QPSK  | PI/2 BPSK | QPSK  |  |  |
| Lowest CH  | 4.46                                  | 4.44 | 8.89      | 8.91  | 17.86     | 17.94 |  |  |
| Middle CH  | 4.53                                  | 4.53 | 8.93      | 8.87  | 17.9      | 17.9  |  |  |
| Highest CH | 4.49                                  | 4.46 | 8.91      | 8.77  | 17.86     | 17.9  |  |  |



## FR1 n25+12A / 5MHz / DFT-S OFDM

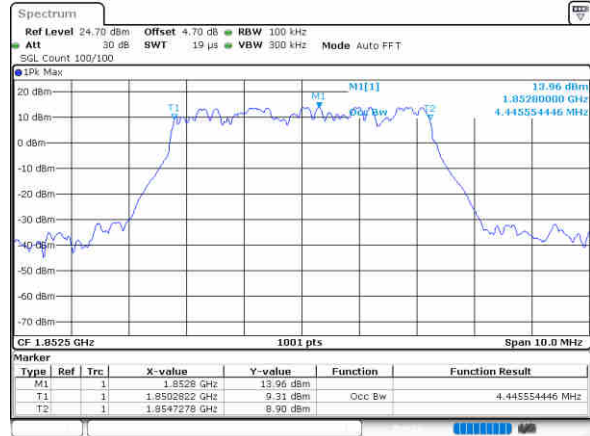
## PI/2 BPSK

## Lowest Channel

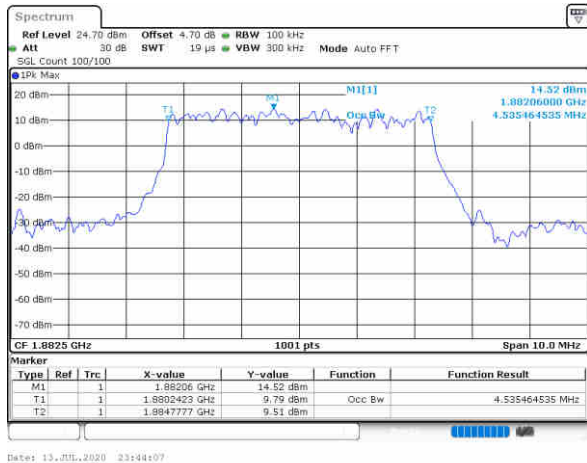


## QPSK

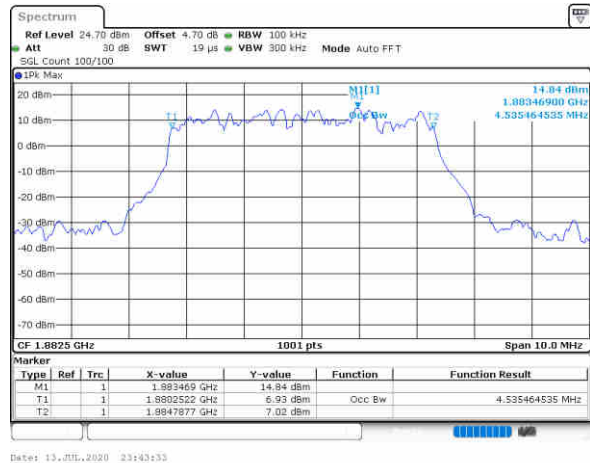
## Lowest Channel



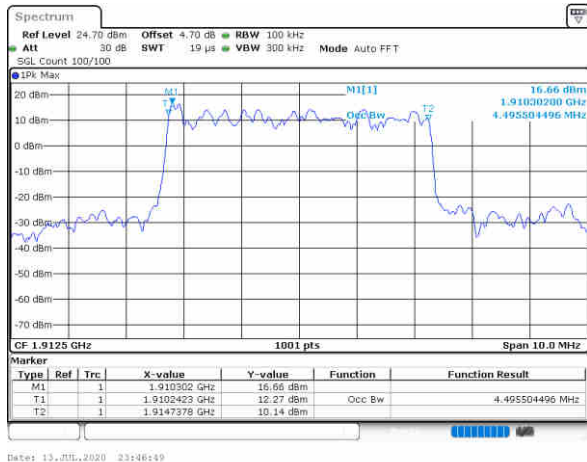
## Middle Channel



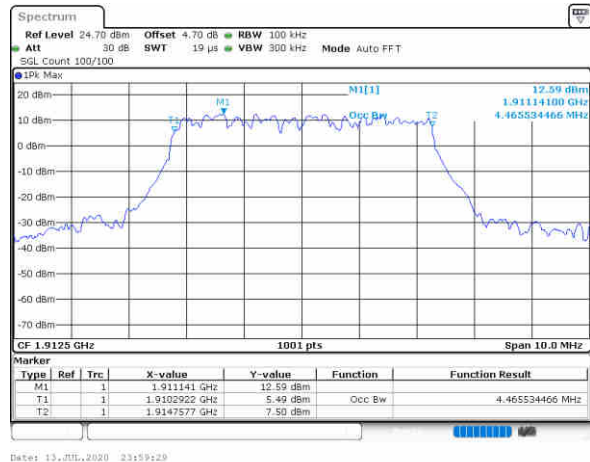
## Middle Channel



## Highest Channel



## Highest Channel





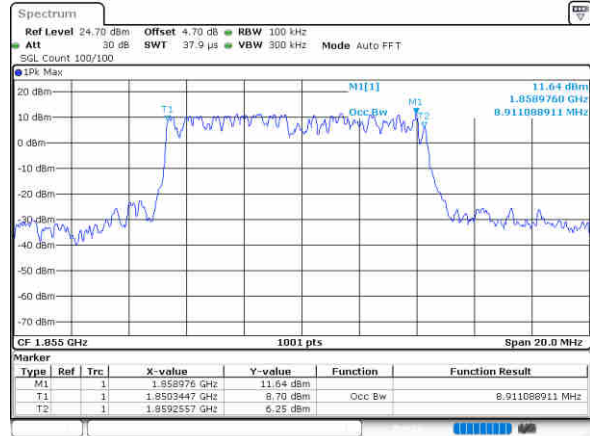
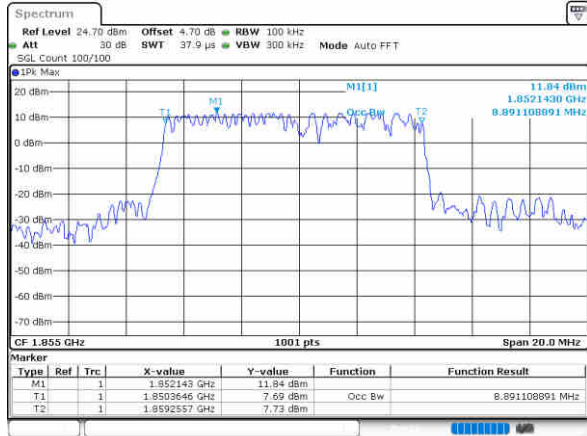
## FR1 n25+12A / 10MHz / DFT-S OFDM

## PI/2 BPSK

## QPSK

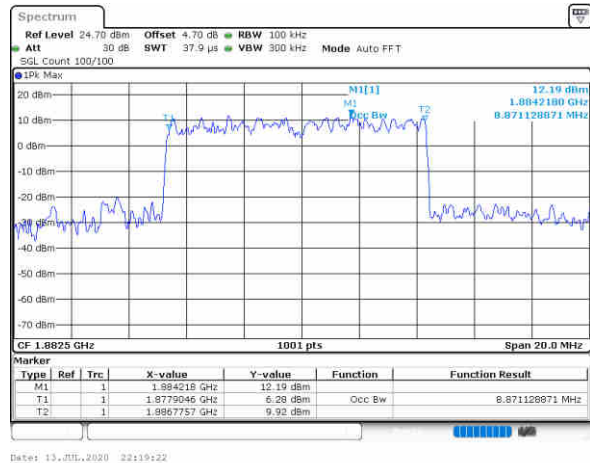
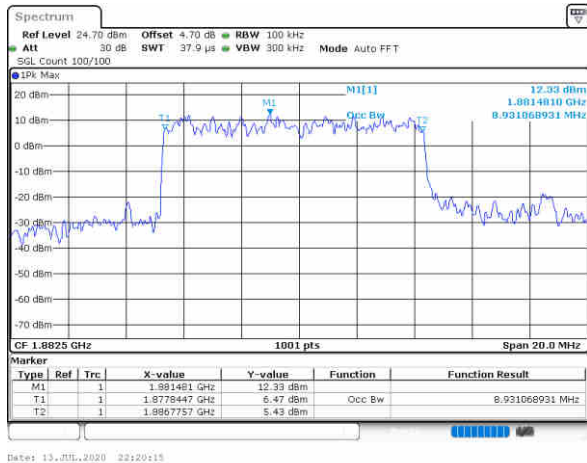
## Lowest Channel

## Lowest Channel



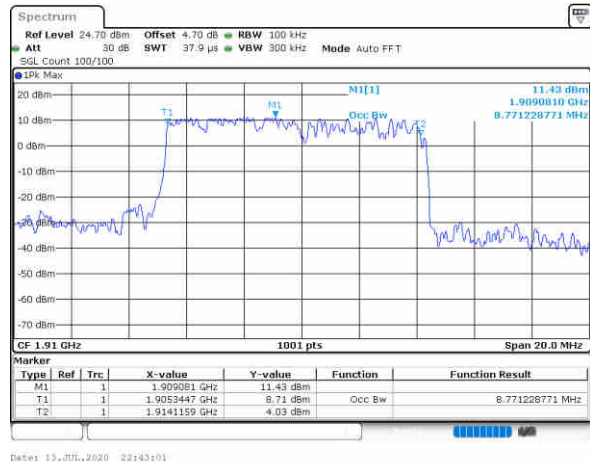
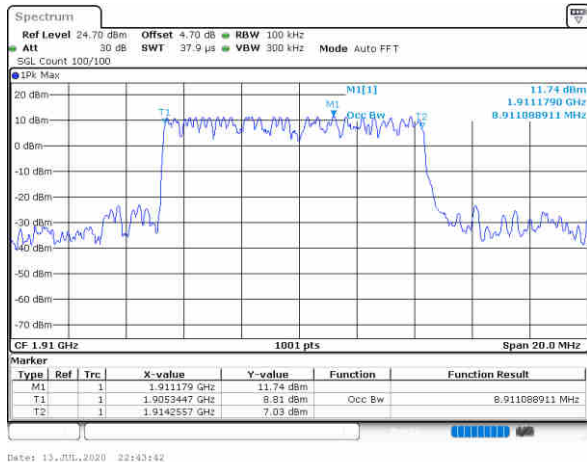
## Middle Channel

## Middle Channel



## Highest Channel

## Highest Channel





## FR1 n25+12A / 20MHz / DFT-S OFDM

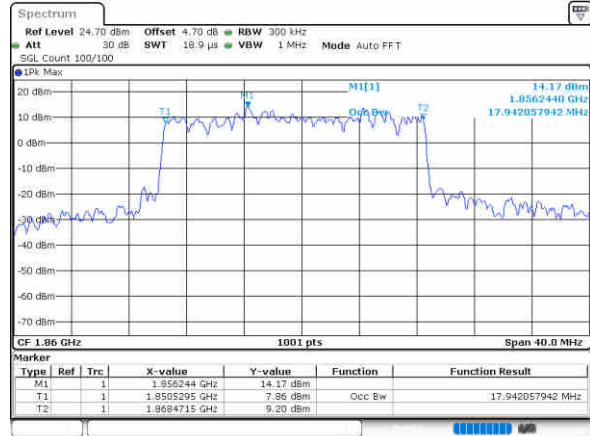
## PI/2 BPSK

## Lowest Channel

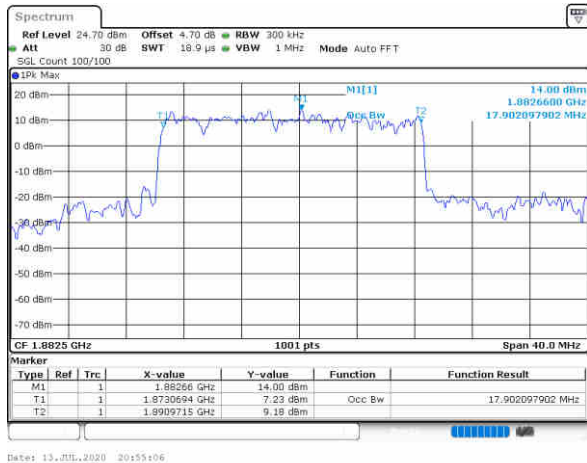


## QPSK

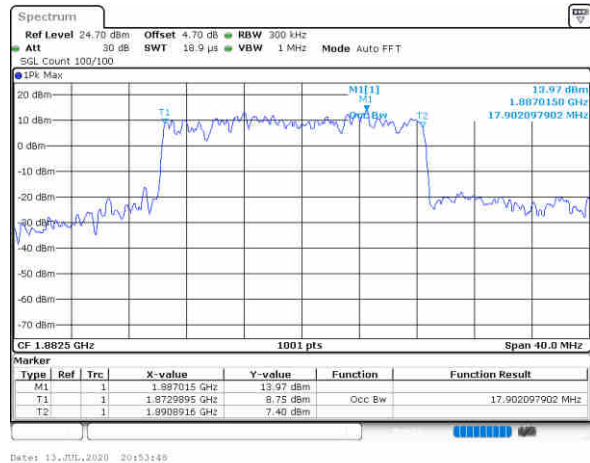
## Lowest Channel



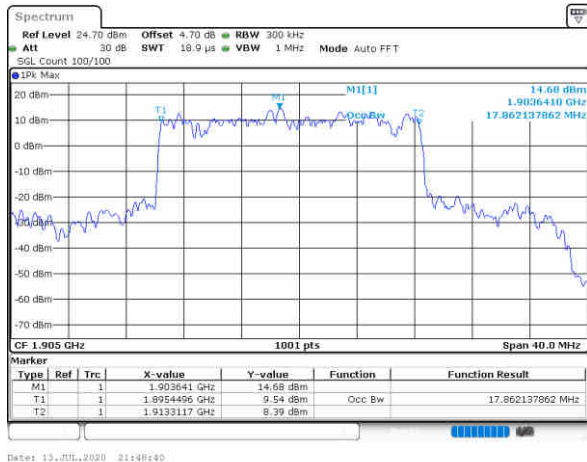
## Middle Channel



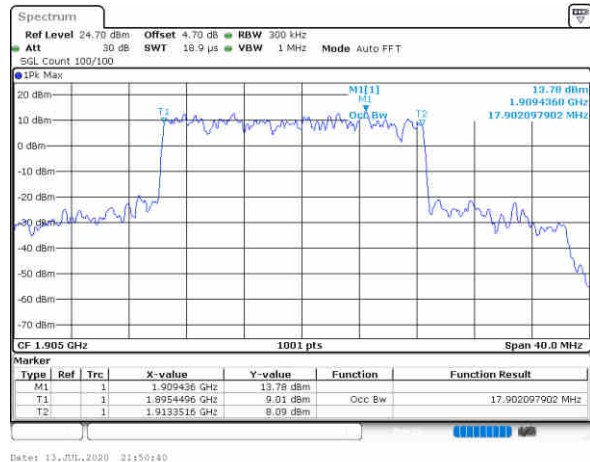
## Middle Channel



## Highest Channel



## Highest Channel



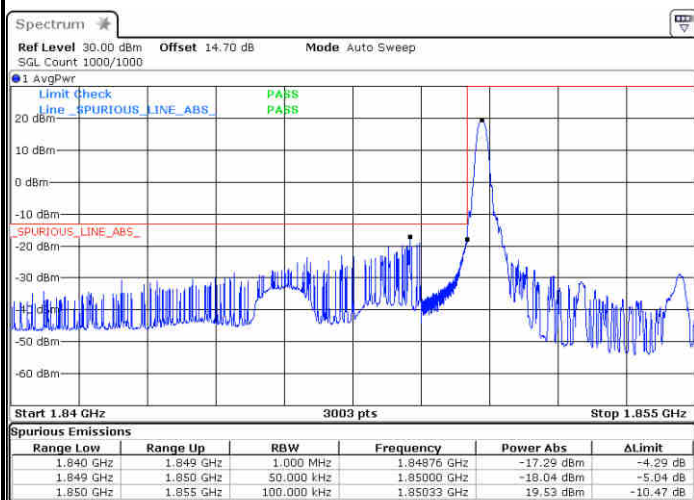


## Conducted Band Edge

### FR1 n25+12A / 5MHz / DFT-S OFDM BPSK

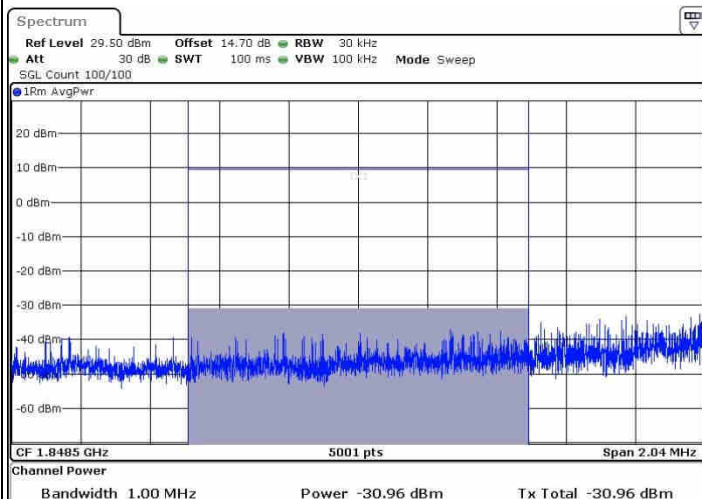
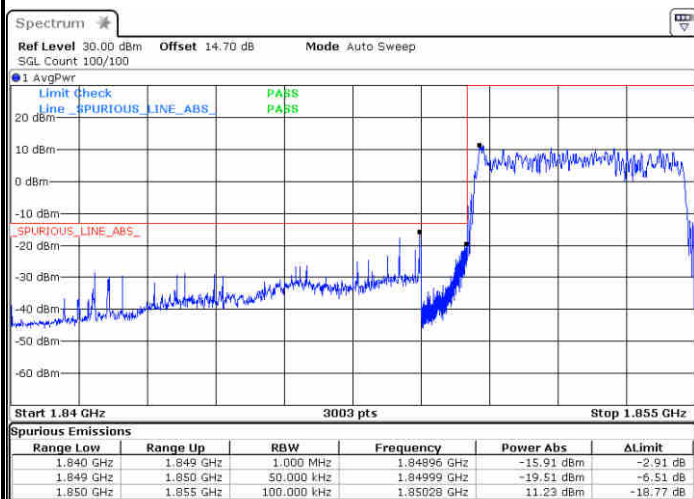
#### Lowest Band Edge / 1 RB

#### Channel Power < -13dBm Pass



#### Lowest Band Edge / Full RB

#### Channel Power < -13dBm Pass

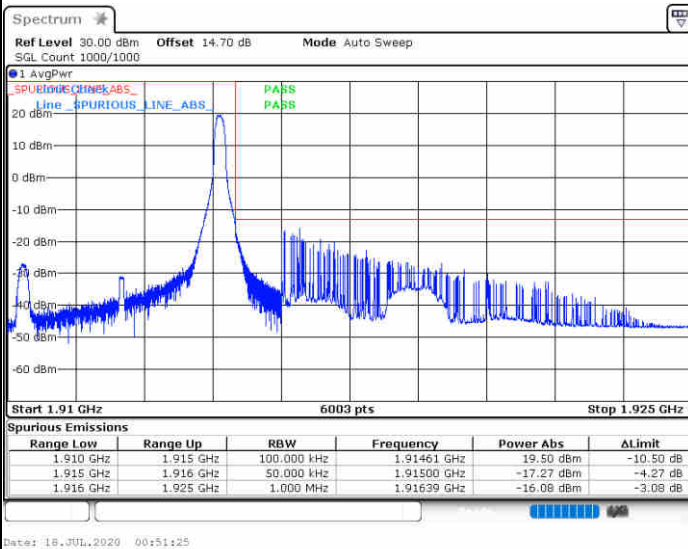




## FR1 n25+12A / 5MHz / DFT-S OFDM BPSK

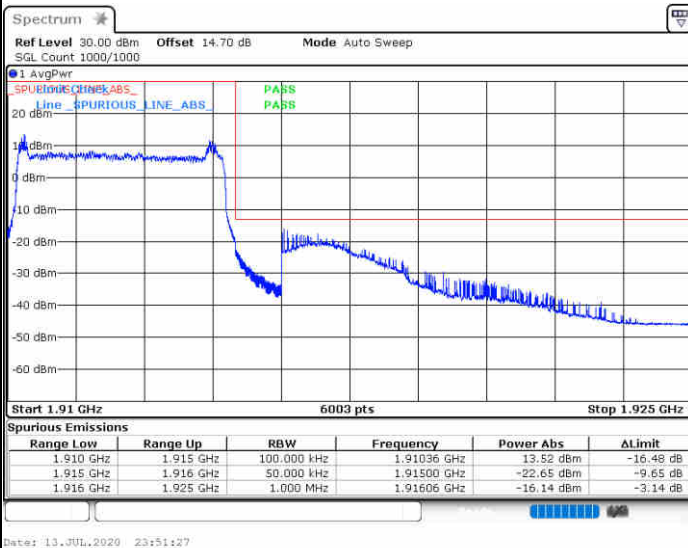
## Highest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB

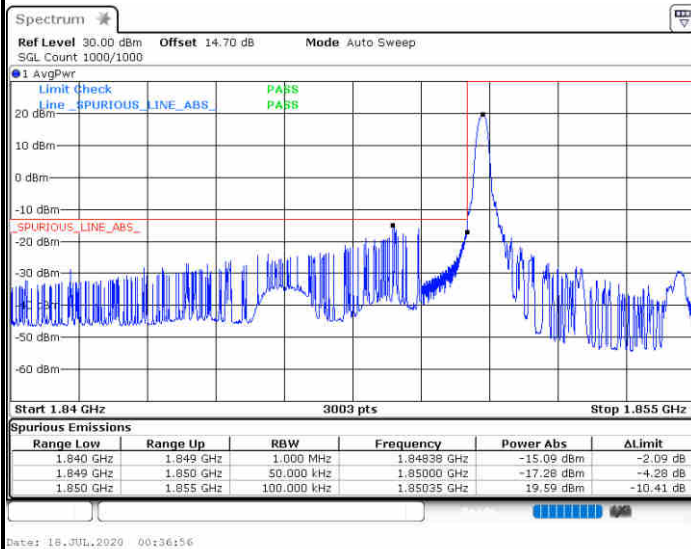
## Channel Power &lt; -13dBm Pass



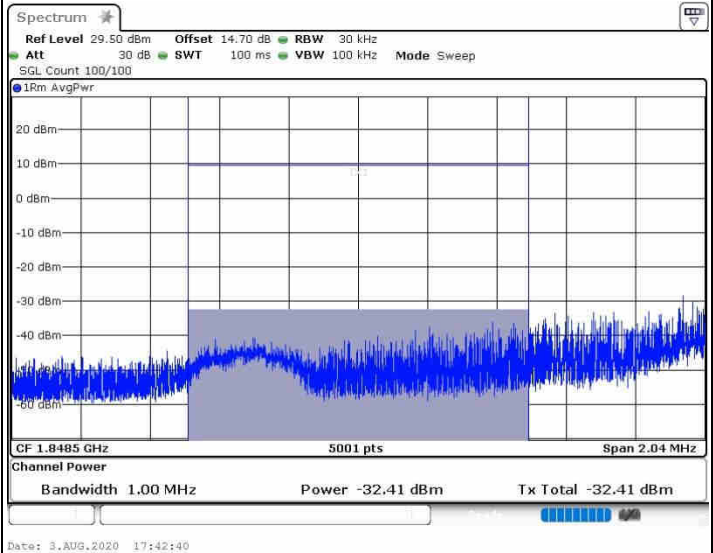


## FR1 n25+12A / 5MHz / DFT-S OFDM QPSK

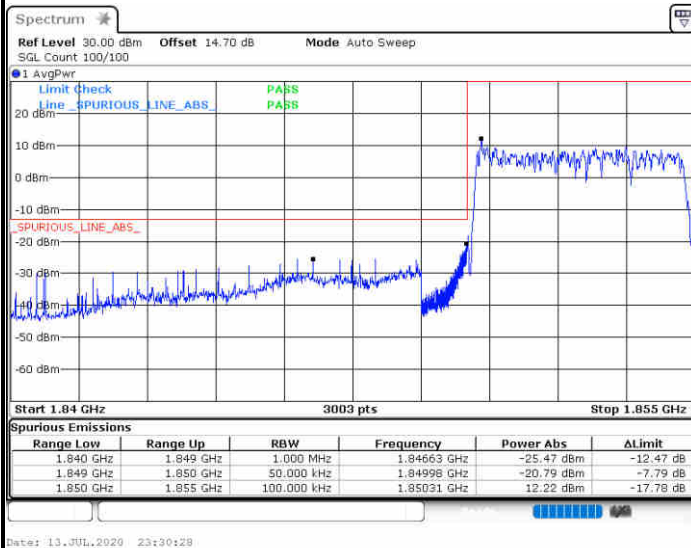
## Lowest Band Edge / 1 RB



## Channel Power &lt; -13dBm Pass



## Lowest Band Edge / Full RB



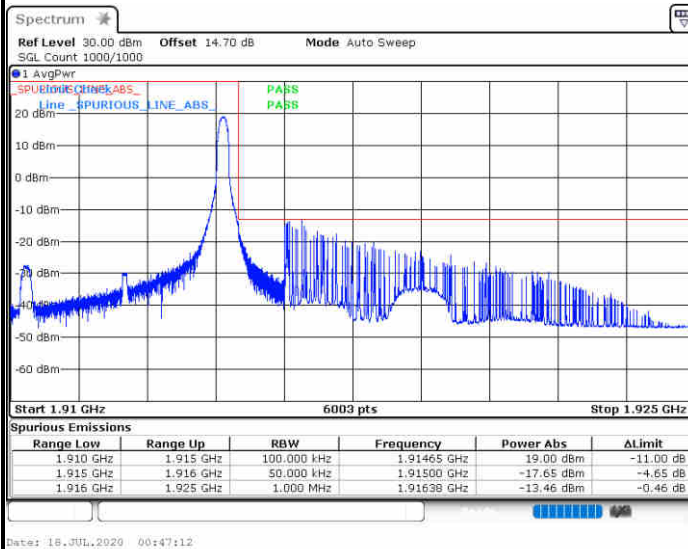
## Channel Power &lt; -13dBm Pass

/

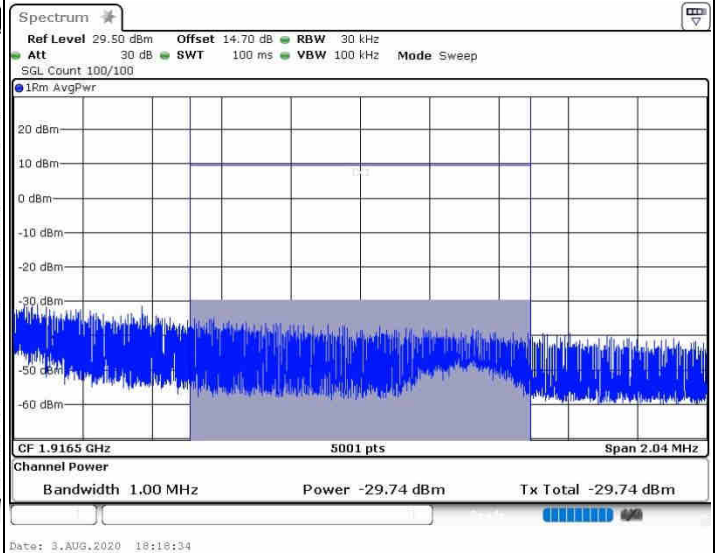


## FR1 n25+12A / 5MHz / DFT-S OFDM QPSK

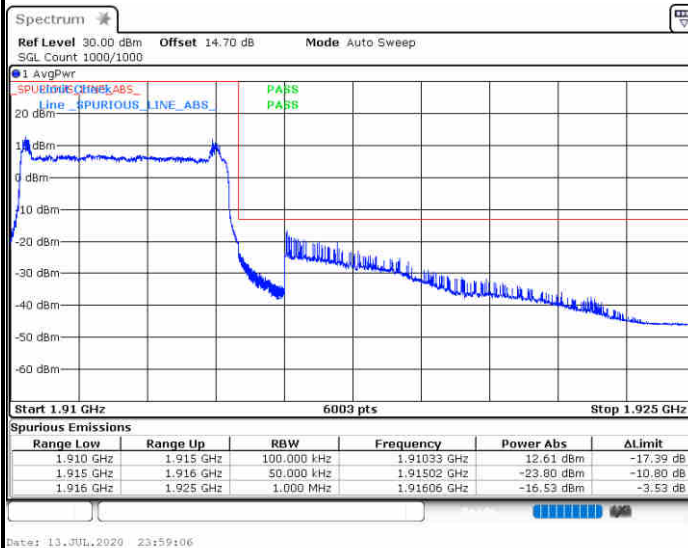
## Highest Band Edge / 1 RB



## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB



## Channel Power &lt; -13dBm Pass

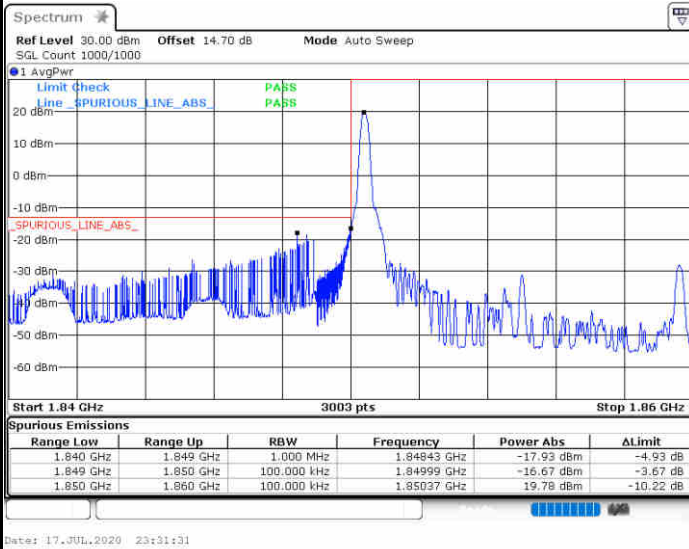
/



## FR1 n25+12A / 10MHz / DFT-S OFDM BPSK

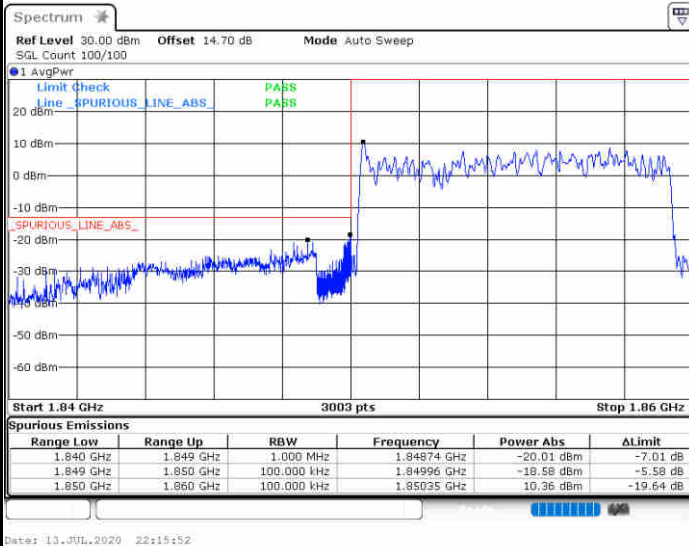
## Lowest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Lowest Band Edge / Full RB

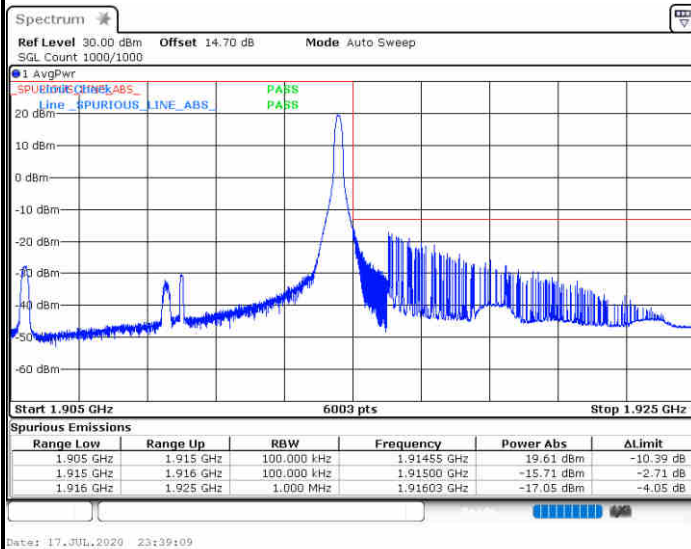
## Channel Power &lt; -13dBm Pass



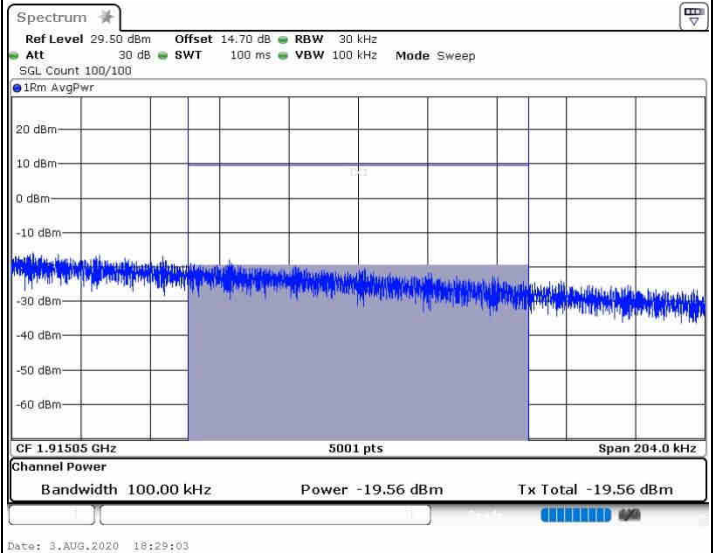


## FR1 n25+12A / 10MHz / DFT-S OFDM BPSK

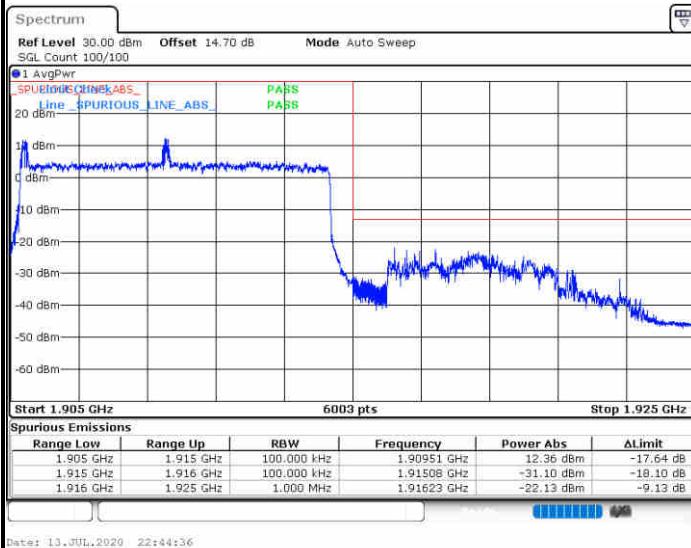
## Highest Band Edge / 1 RB



## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB



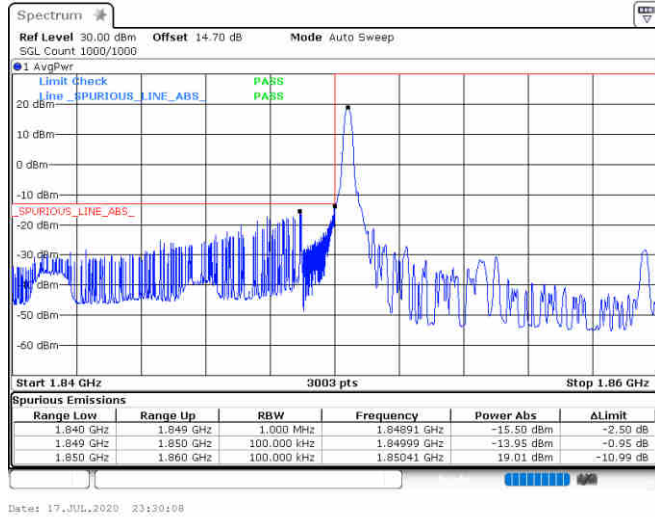
## Channel Power &lt; -13dBm Pass

/

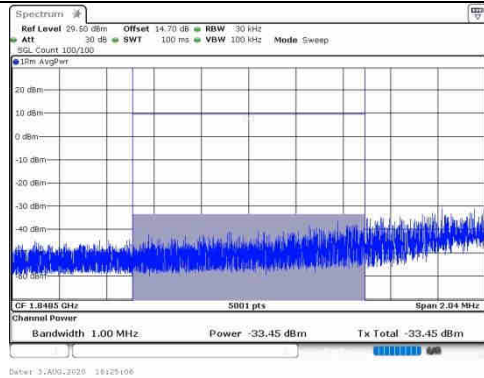
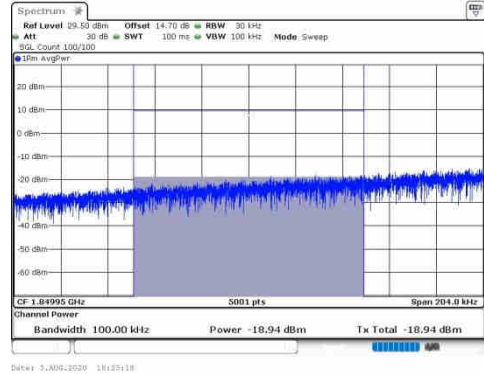


## FR1 n25+12A / 10MHz / DFT-S OFDM QPSK

## Lowest Band Edge / 1 RB

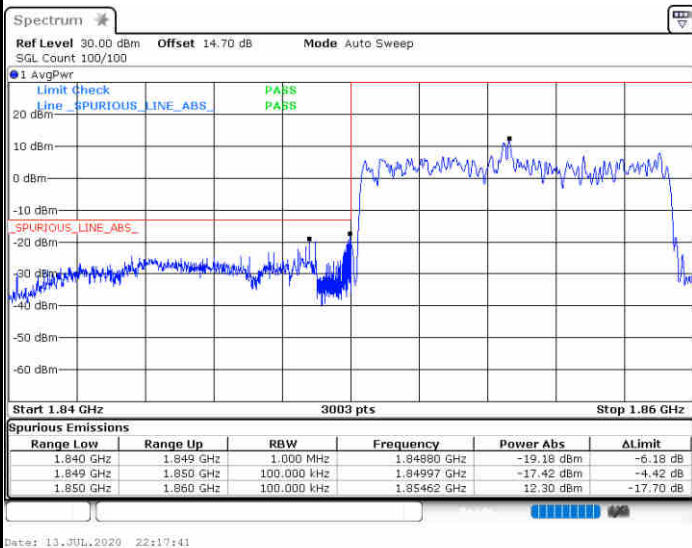


## Channel Power &lt; -13dBm Pass



## Lowest Band Edge / Full RB

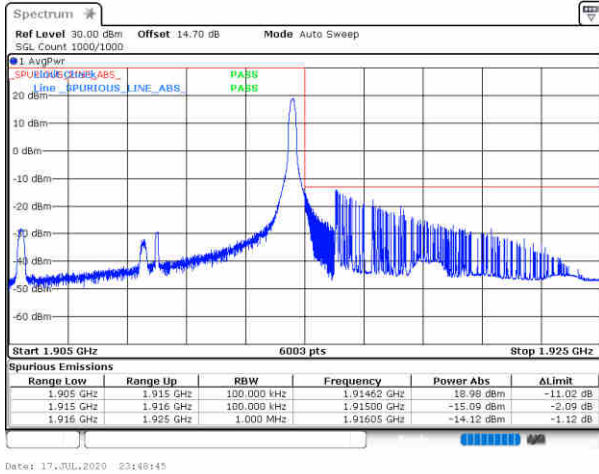
## Channel Power &lt; -13dBm Pass



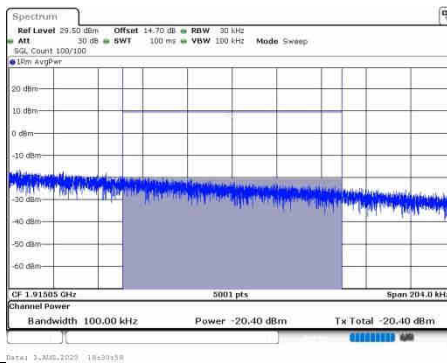
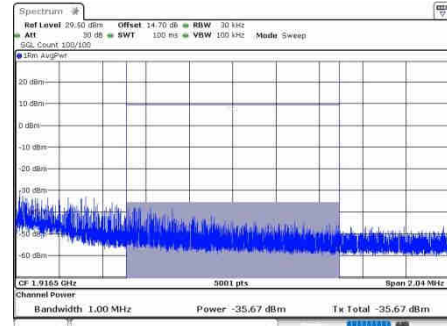


## FR1 n25+12A / 10MHz / DFT-S OFDM QPSK

## Highest Band Edge / 1 RB

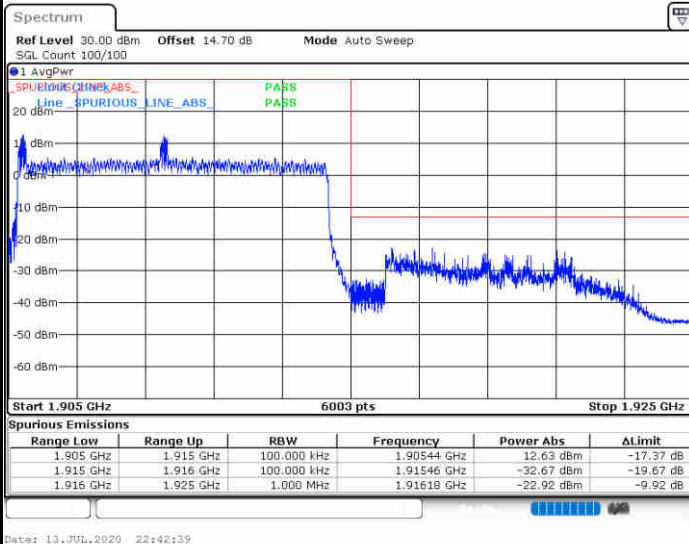


## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

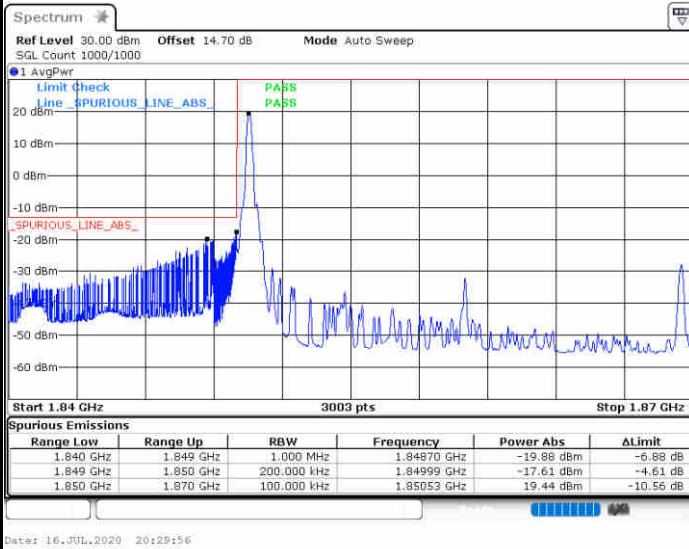




## FR1 n25+12A / 20MHz / DFT-S OFDM BPSK

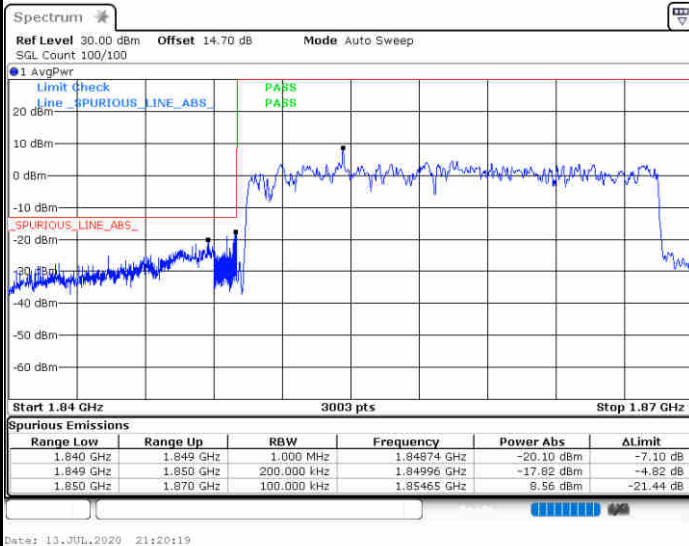
## Lowest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Lowest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

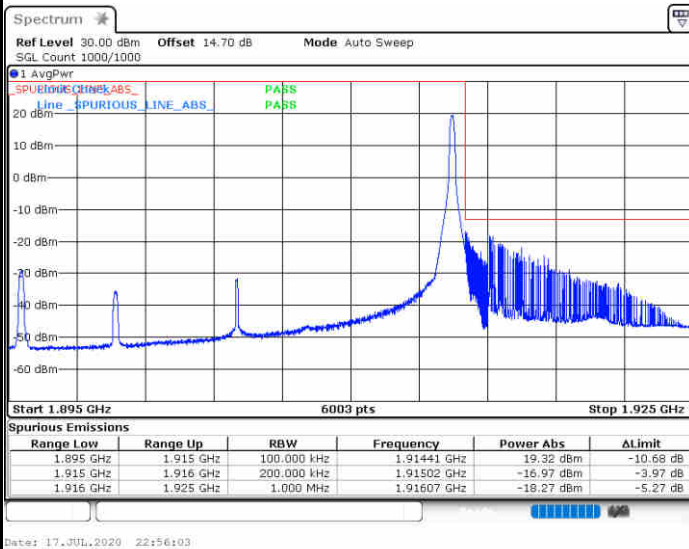




## FR1 n25+12A / 20MHz / DFT-S OFDM BPSK

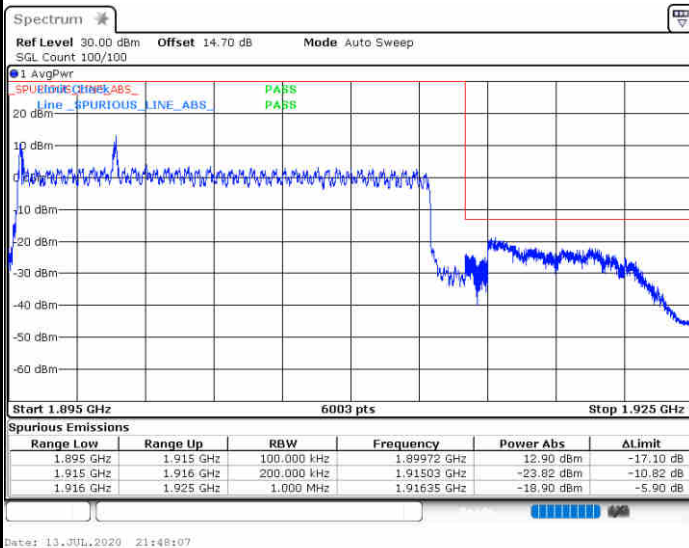
## Highest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB

## Channel Power &lt; -13dBm Pass

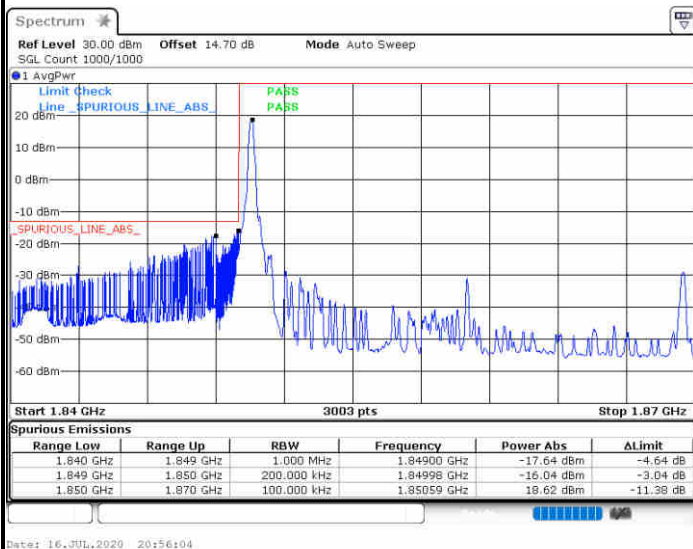




## FR1 n25+12A / 20MHz / DFT-S OFDM QPSK

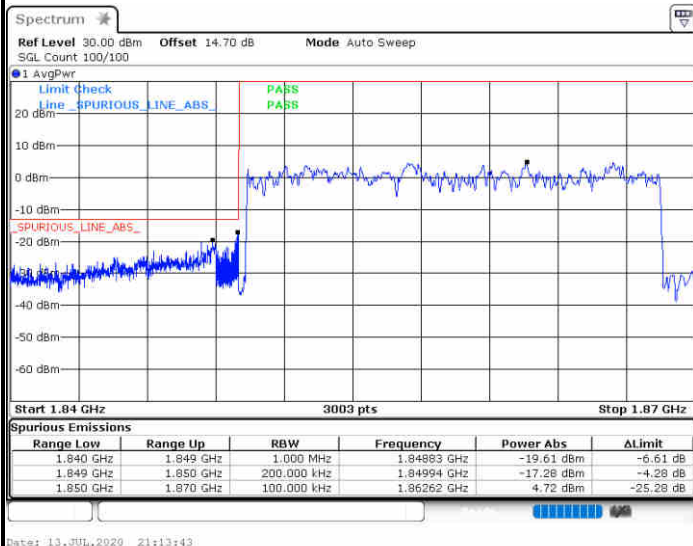
## Lowest Band Edge / 1 RB

## Channel Power &lt; -13dBm Pass



## Lowest Band Edge / Full RB

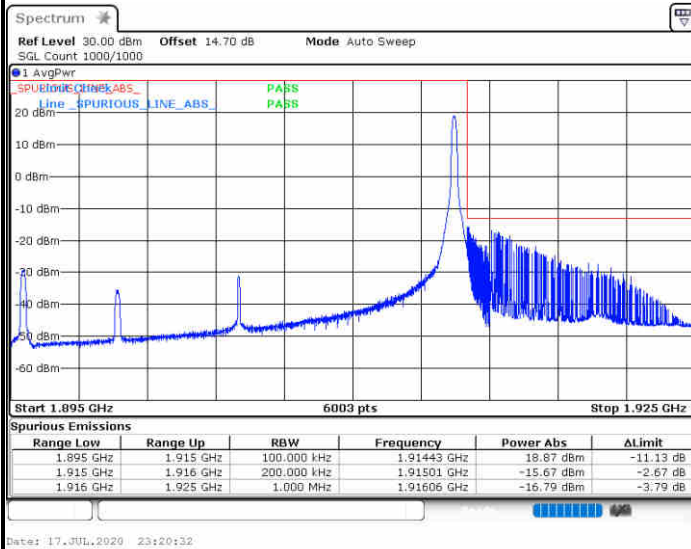
## Channel Power &lt; -13dBm Pass



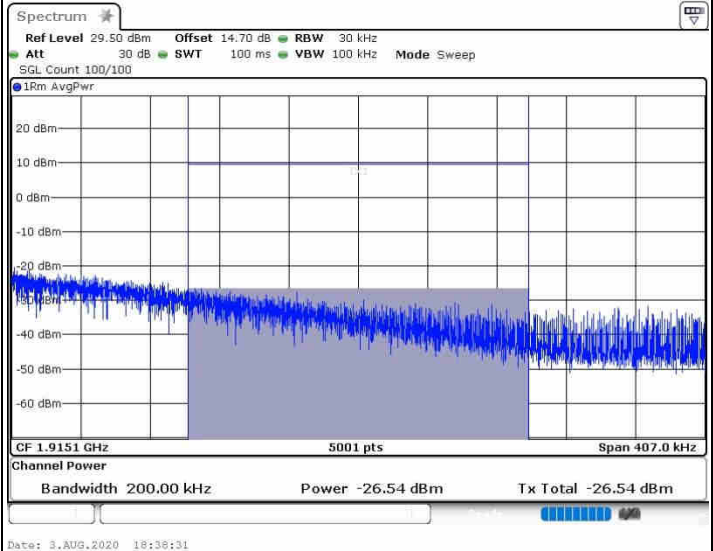


## FR1 n25+12A / 20MHz / DFT-S OFDM QPSK

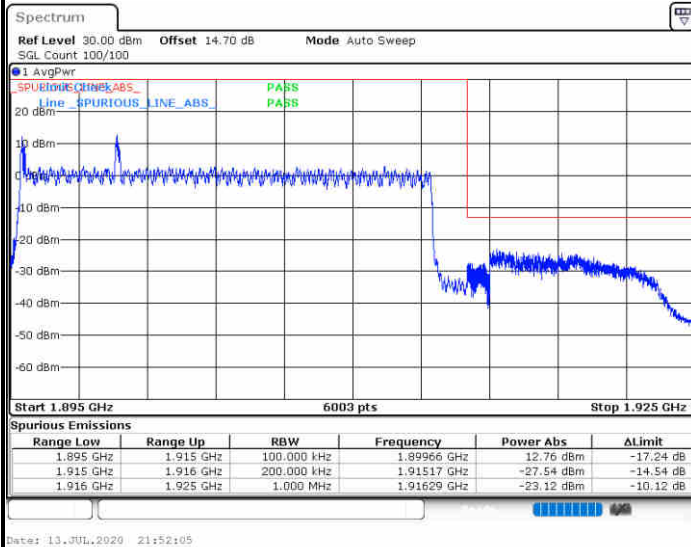
## Highest Band Edge / 1 RB



## Channel Power &lt; -13dBm Pass



## Highest Band Edge / Full RB



## Channel Power &lt; -13dBm Pass

/

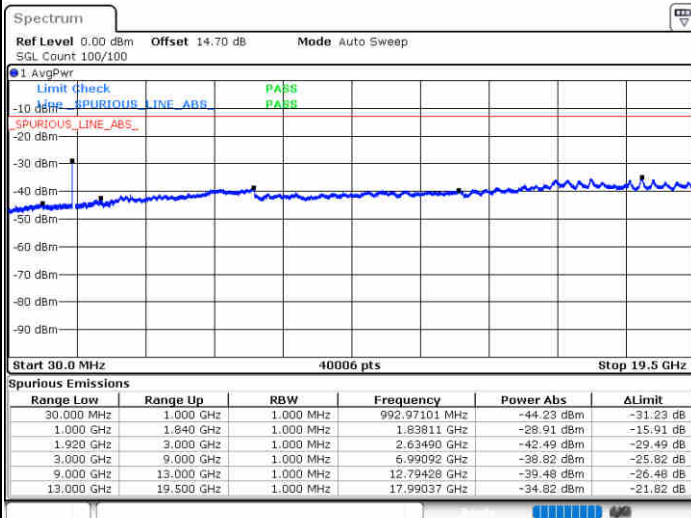


## Conducted Spurious Emission

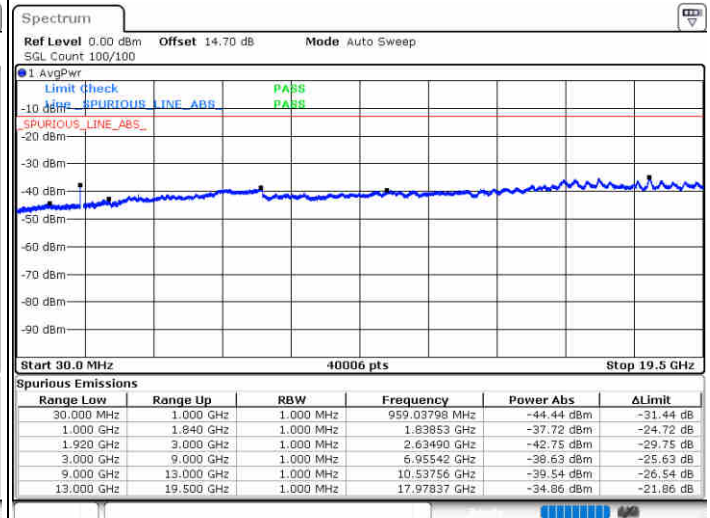
FR1 n25+12A / 5MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB

Middle Channel / 1RB

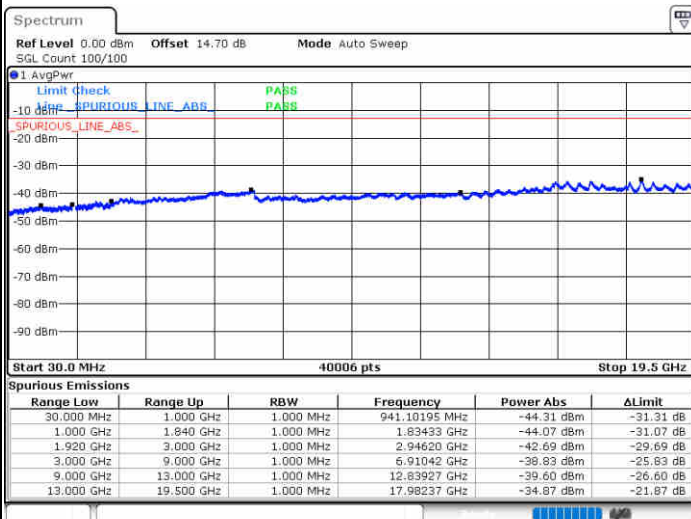


Date: 13.JUL.2020 23:37:40



Date: 13.JUL.2020 23:40:41

Highest Channel / 1RB

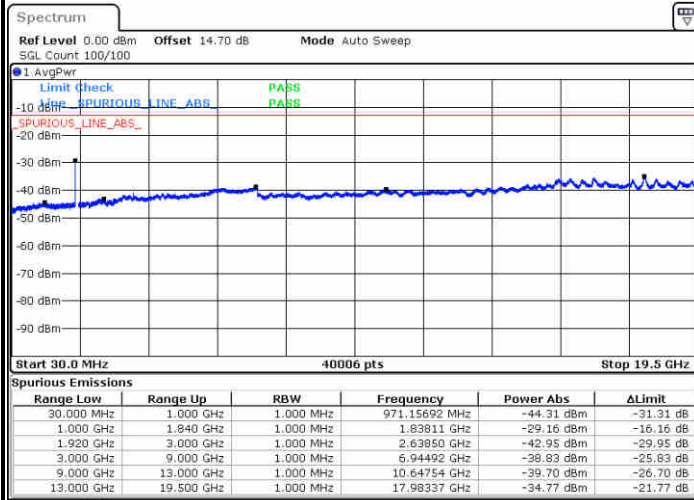


Date: 14.JUL.2020 00:03:41



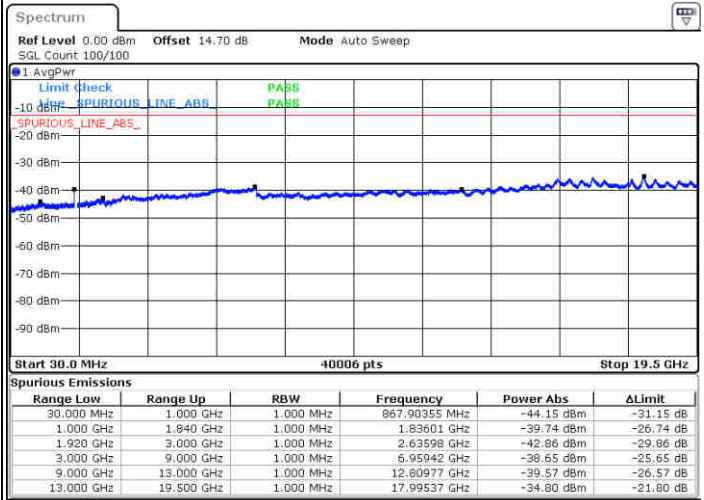
## FR1 n25+12A / 5MHz / DFT-S OFDM / QPSK

## Lowest Channel / 1RB



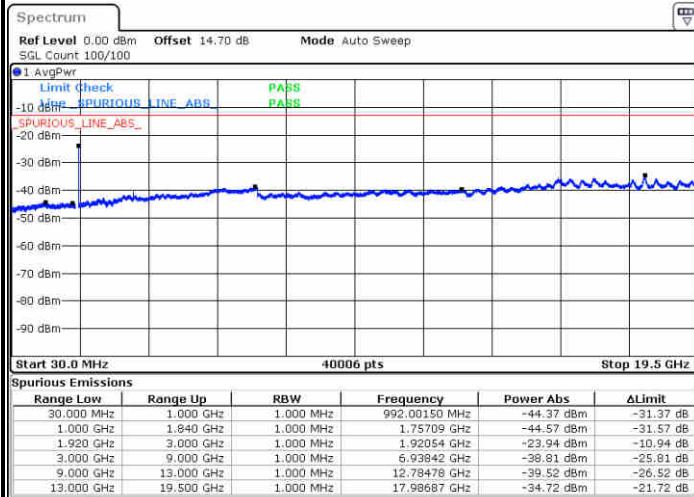
Date: 13.JUL.2020 23:34:21

## Middle Channel / 1RB



Date: 13.JUL.2020 23:42:39

## Highest Channel / 1RB

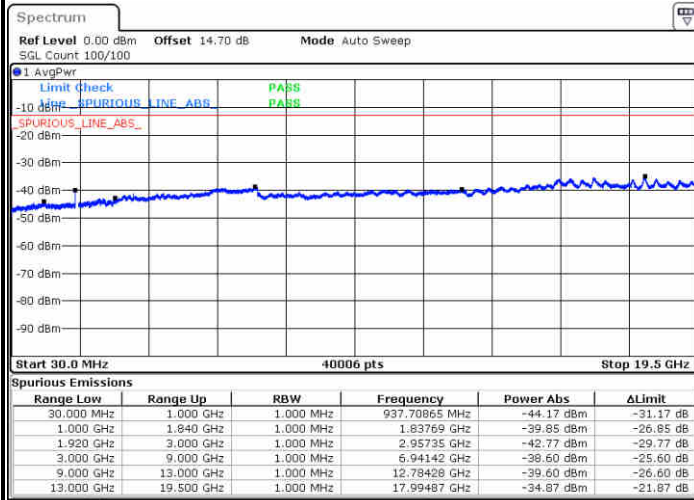


Date: 14.JUL.2020 00:01:39



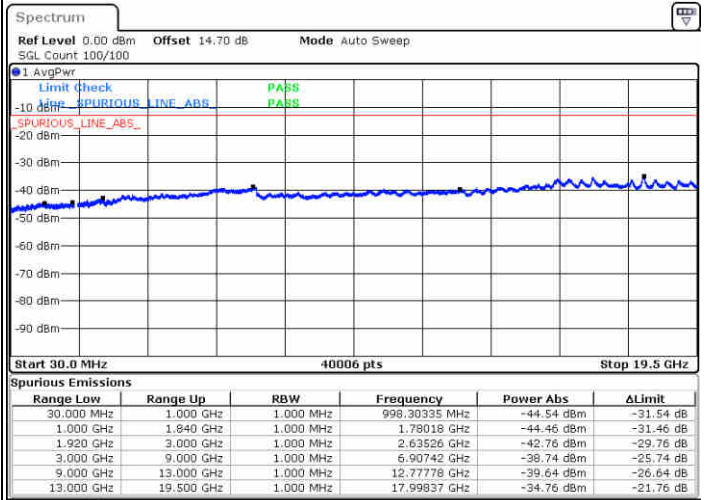
## FR1 n25+12A / 10MHz / DFT-S OFDM / BPSK

## Lowest Channel / 1RB



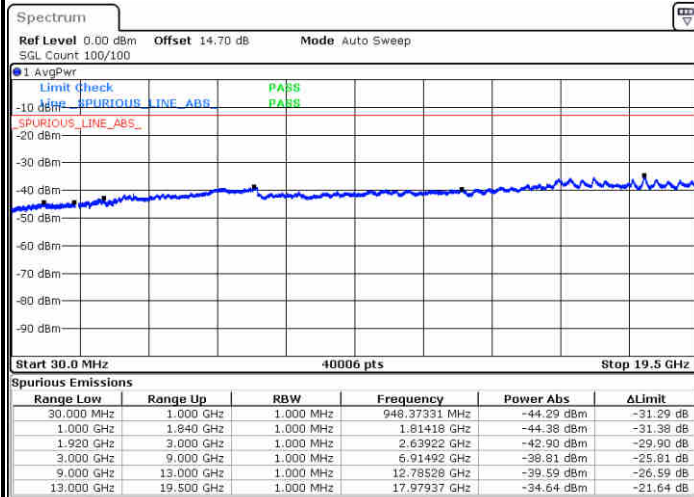
Date: 13.JUL.2020 22:12:32

## Middle Channel / 1RB



Date: 13.JUL.2020 22:22:46

## Highest Channel / 1RB



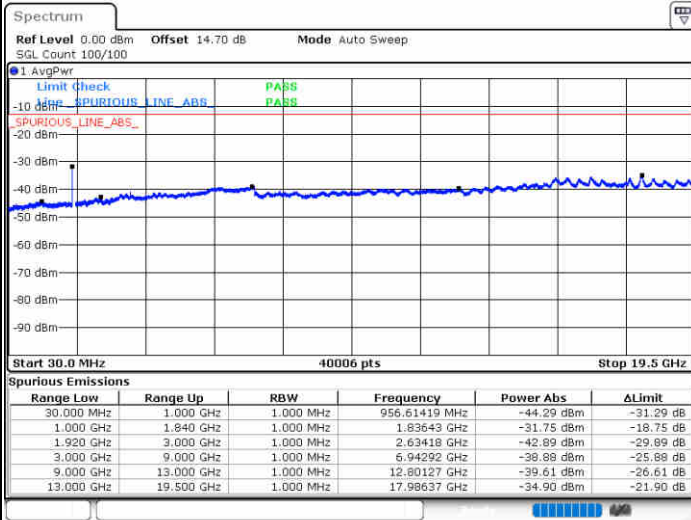
Date: 13.JUL.2020 22:29:48



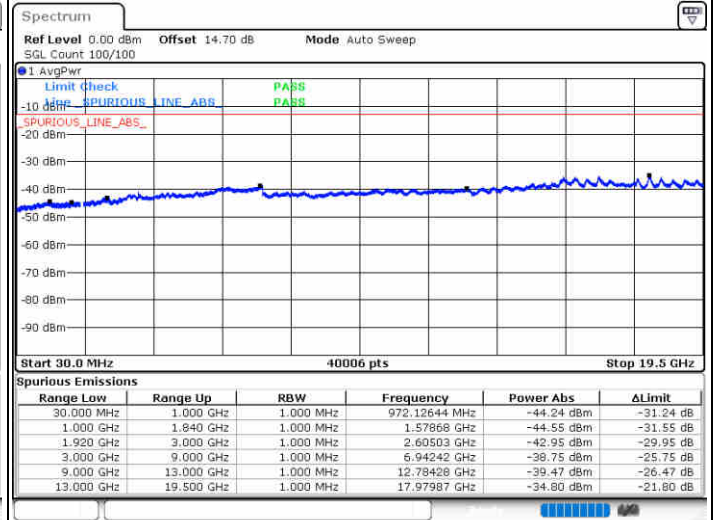
## FR1 n25+12A / 10MHz / DFT-S OFDM / QPSK

## Lowest Channel / 1RB

## Middle Channel / 1RB

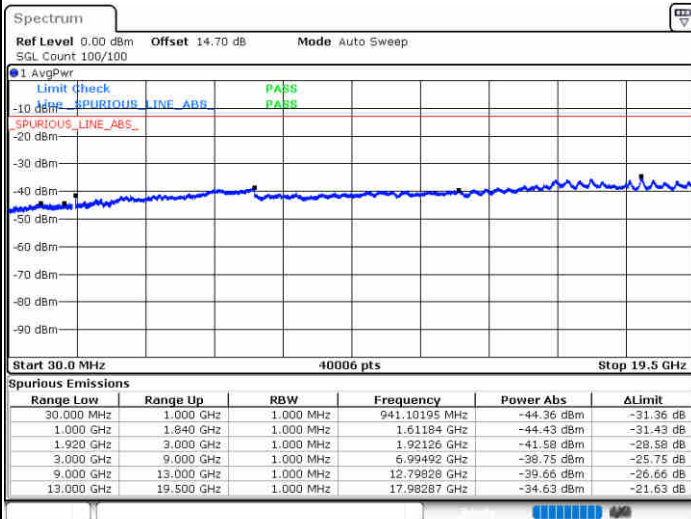


Date: 13.JUL.2020 22:09:03



Date: 13.JUL.2020 22:25:24

## Highest Channel / 1RB

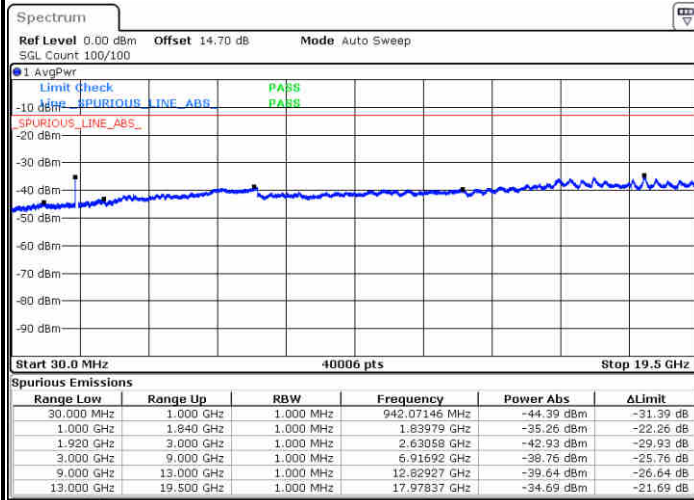


Date: 13.JUL.2020 22:28:22



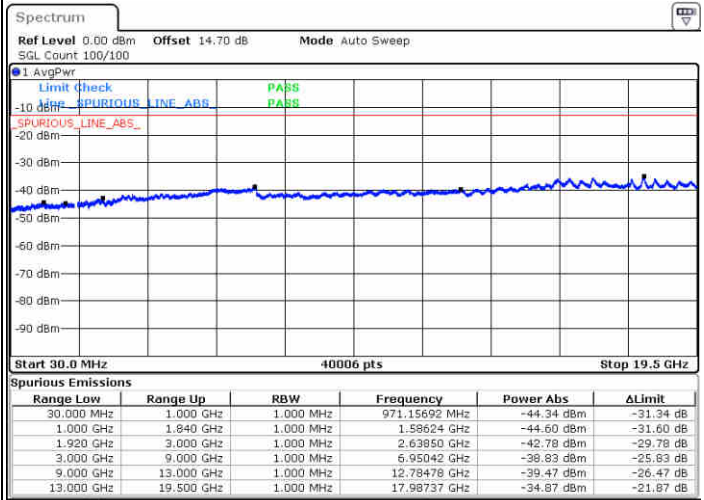
## FR1 n25+12A / 20MHz / DFT-S OFDM / BPSK

## Lowest Channel / 1RB



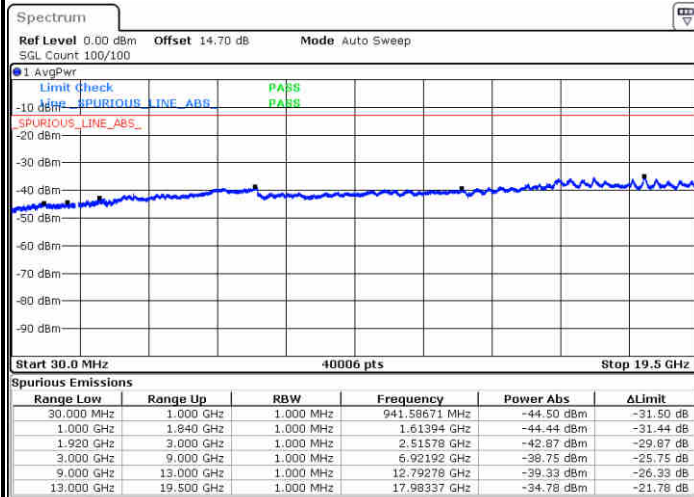
Date: 13.JUL.2020 21:08:34

## Middle Channel / 1RB



Date: 13.JUL.2020 21:03:00

## Highest Channel / 1RB

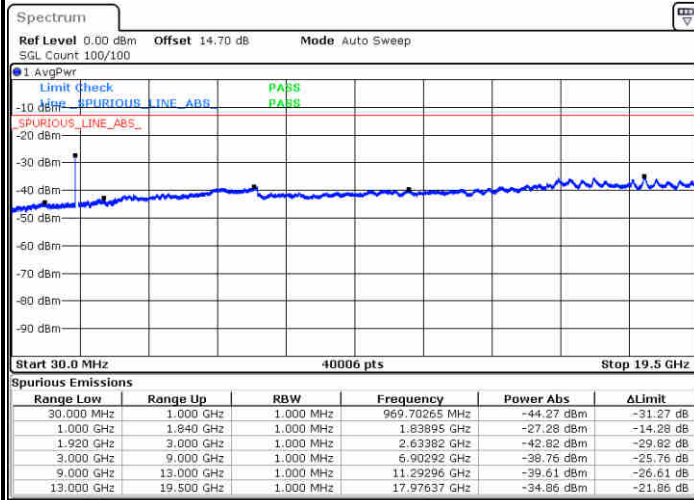


Date: 13.JUL.2020 21:58:15



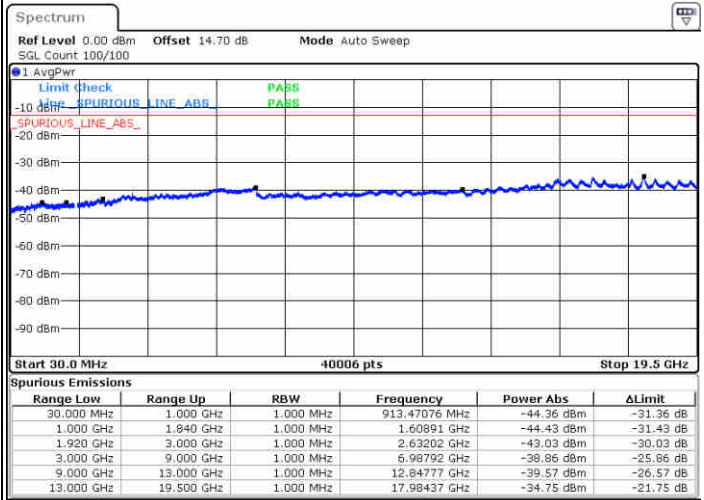
## FR1 n25+12A / 20MHz / DFT-S OFDM / QPSK

## Lowest Channel / 1RB



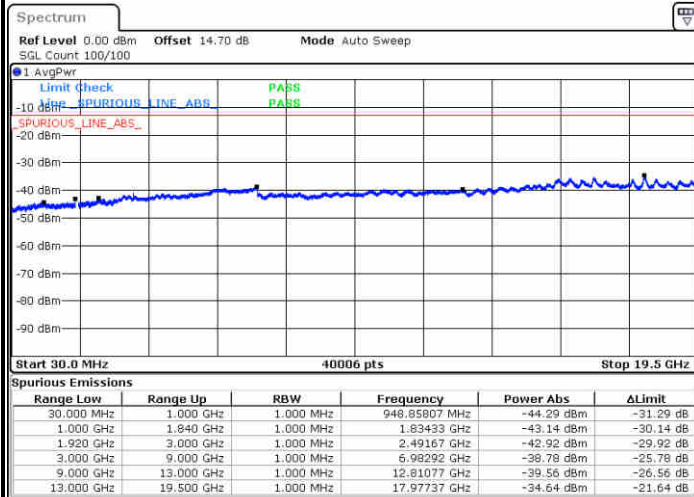
Date: 13.JUL.2020 21:12:41

## Middle Channel / 1RB



Date: 13.JUL.2020 21:09:03

## Highest Channel / 1RB



Date: 13.JUL.2020 21:54:00

**Frequency Stability**

| Test Conditions     |                   | NR n25+12A (BPSK) / Middle Channel | Limit          |
|---------------------|-------------------|------------------------------------|----------------|
| Temperature<br>(°C) | Voltage<br>(Volt) | BW 20MHz                           | Within<br>Band |
|                     |                   | Deviation<br>(ppm)                 | Result         |
| 50                  | Normal Voltage    | 0.0015                             | PASS           |
| 40                  | Normal Voltage    | 0.0012                             |                |
| 30                  | Normal Voltage    | 0.0019                             |                |
| 20(Ref.)            | Normal Voltage    | 0.0015                             |                |
| 10                  | Normal Voltage    | 0.0013                             |                |
| 0                   | Normal Voltage    | 0.0013                             |                |
| -10                 | Normal Voltage    | 0.0013                             |                |
| -20                 | Normal Voltage    | 0.0011                             |                |
| -30                 | Normal Voltage    | 0.0018                             |                |
| 20                  | Maximum Voltage   | 0.0025                             |                |
| 20                  | Normal Voltage    | 0.0011                             |                |
| 20                  | Battery End Point | 0.0015                             |                |



SA

**Peak-to-Average Ratio**

| Mode       | FR1 n25 / 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  | 5.07                         | 4.14      | 5.77 | 6.75    | PASS        |
| Middle CH  | 4.96                         | 4.49      | 5.97 | 6.7     |             |
| Highest CH | 4.87                         | 4.12      | 6.17 | 5.13    |             |



## FR1 n25 / 20MHz / DFT-S OFDM

## PI/2 BPSK

## QPSK

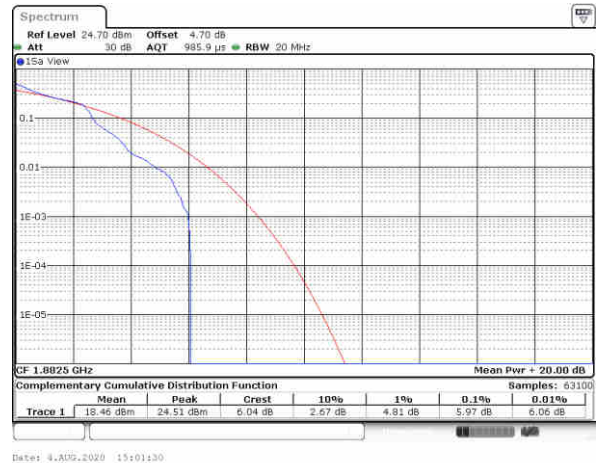
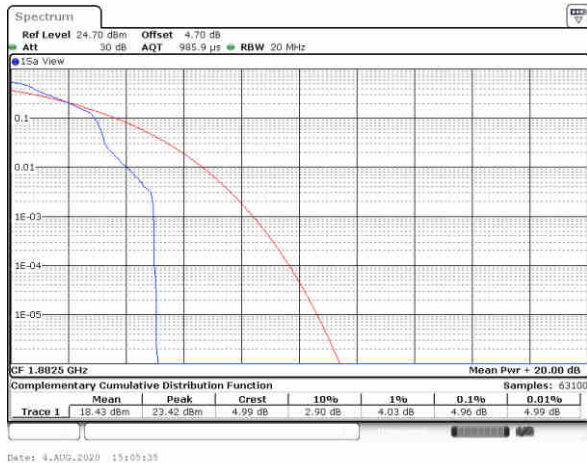
## Lowest Channel / 1RB

## Lowest Channel / 1RB



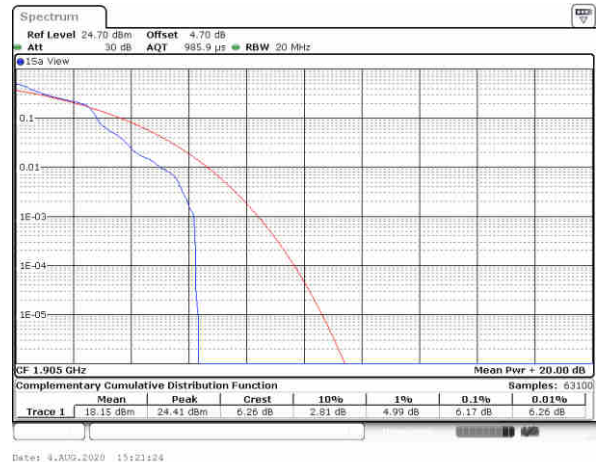
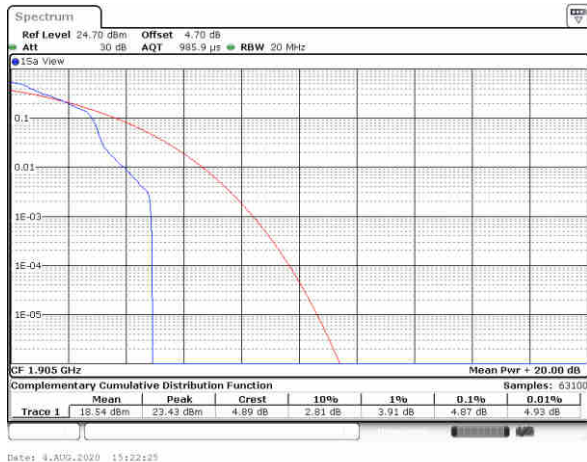
## Middle Channel / 1 RB

## Middle Channel / 1 RB



## Highest Channel / 1 RB

## Highest Channel / 1 RB





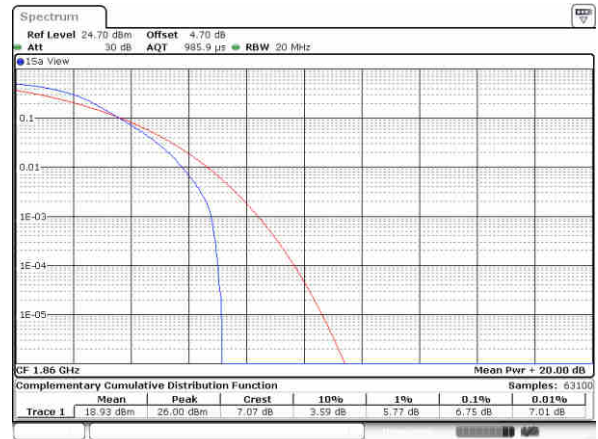
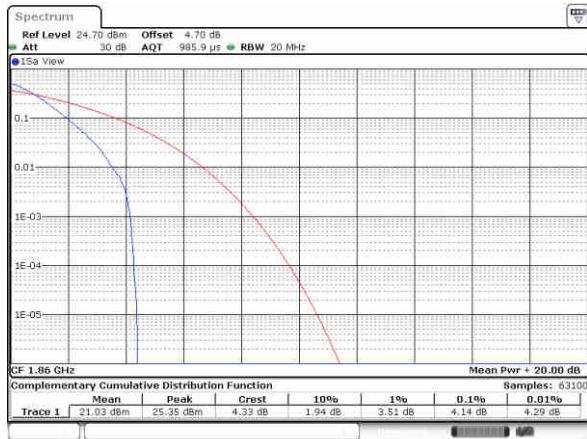
## FR1 n25 / 20MHz / DFT-S OFDM

## PI/2 BPSK

## QPSK

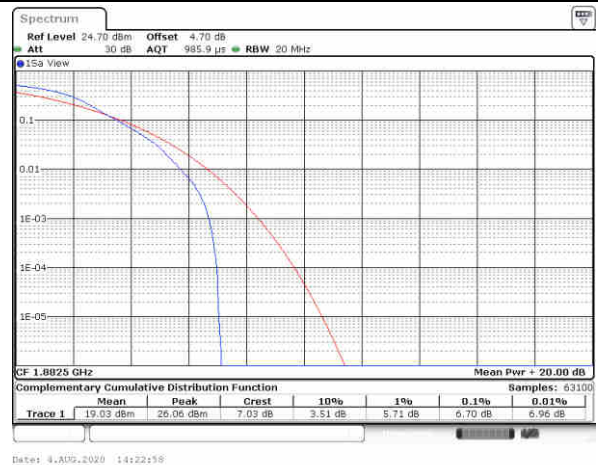
## Lowest Channel / Full RB

## Lowest Channel / Full RB



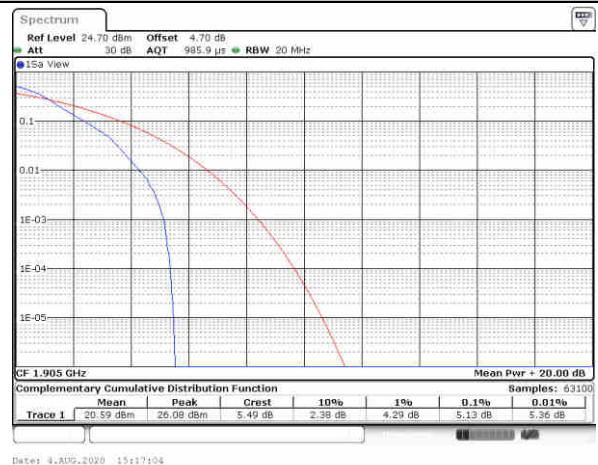
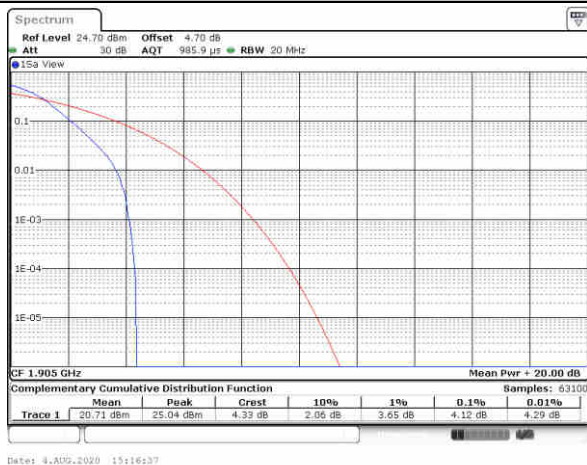
## Middle Channel / Full RB

## Middle Channel / Full RB



## Highest Channel / Full RB

## Highest Channel / Full RB



**26dB Bandwidth**

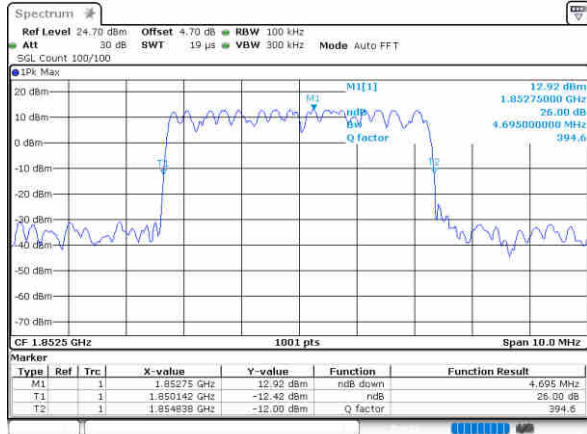
| Mode       | FR1 n25 : 26dB BW(MHz) / DFT-S OFDM |      |           |       |           |       |  |  |
|------------|-------------------------------------|------|-----------|-------|-----------|-------|--|--|
| BW         | 5MHz                                | 5MHz | 10MHz     | 10MHz | 20MHz     | 20MHz |  |  |
| Mod.       | PI/2 BPSK                           | QPSK | PI/2 BPSK | QPSK  | PI/2 BPSK | QPSK  |  |  |
| Lowest CH  | 4.69                                | 4.7  | 9.53      | 9.53  | 18.62     | 18.74 |  |  |
| Middle CH  | 4.88                                | 5    | 9.31      | 9.55  | 18.66     | 18.66 |  |  |
| Highest CH | 4.68                                | 4.68 | 9.27      | 9.23  | 18.86     | 18.58 |  |  |



## FR1 n25 / 5MHz / DFT-S OFDM

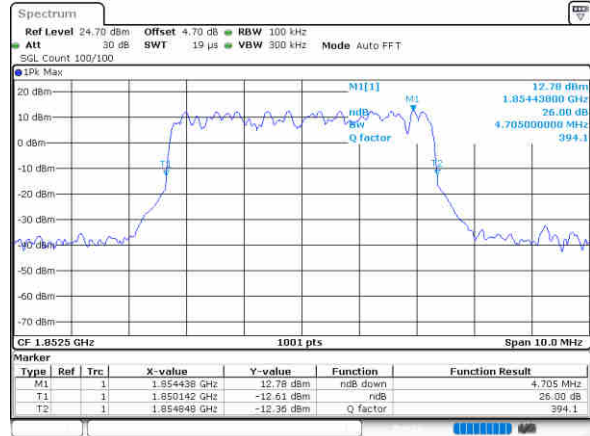
## PI/2 BPSK

## Lowest Channel

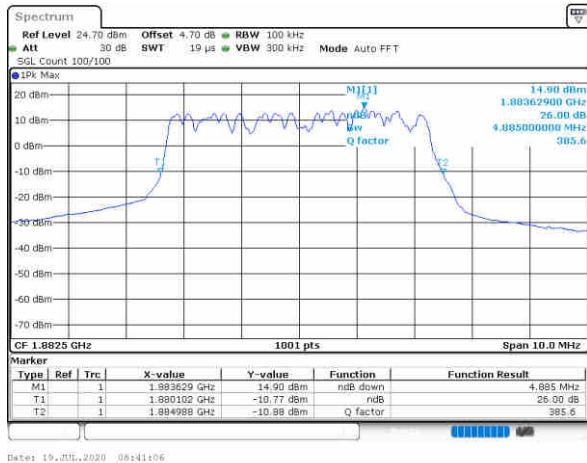


## QPSK

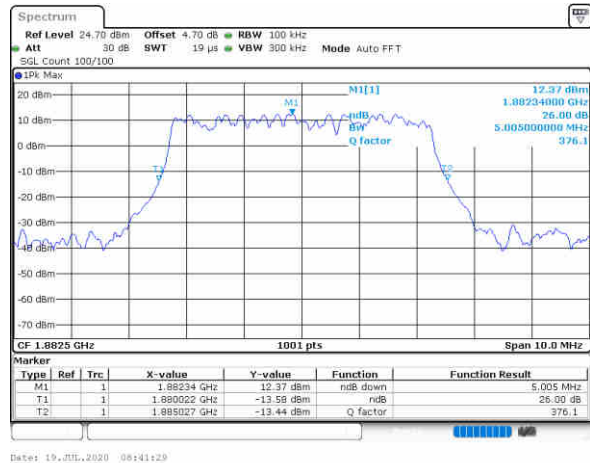
## Lowest Channel



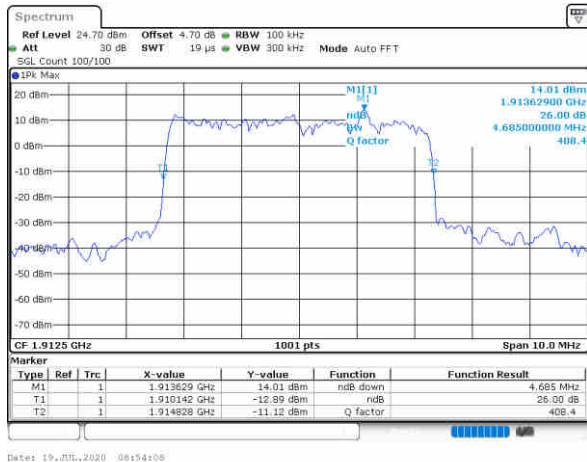
## Middle Channel



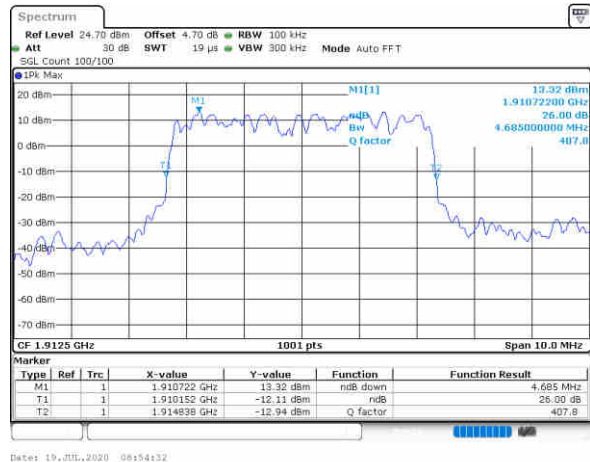
## Middle Channel



## Highest Channel



## Highest Channel





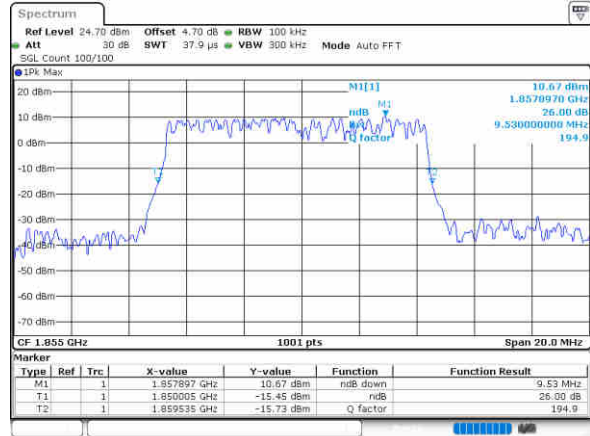
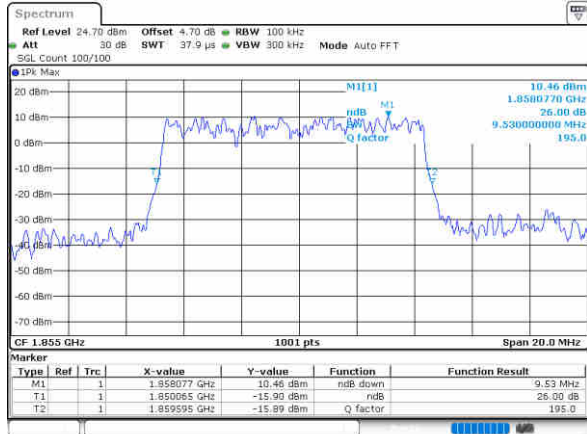
## FR1 n25 / 10MHz / DFT-S OFDM

## PI/2 BPSK

## QPSK

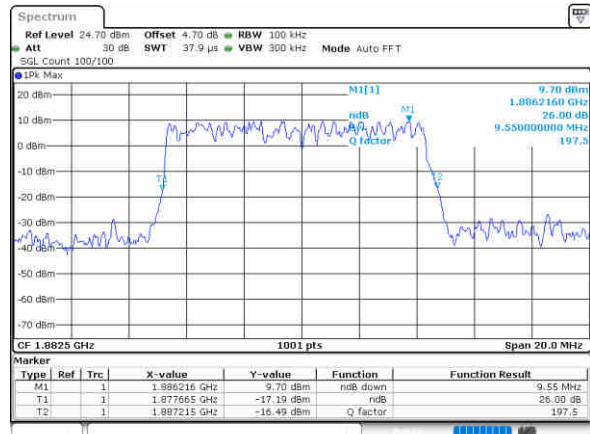
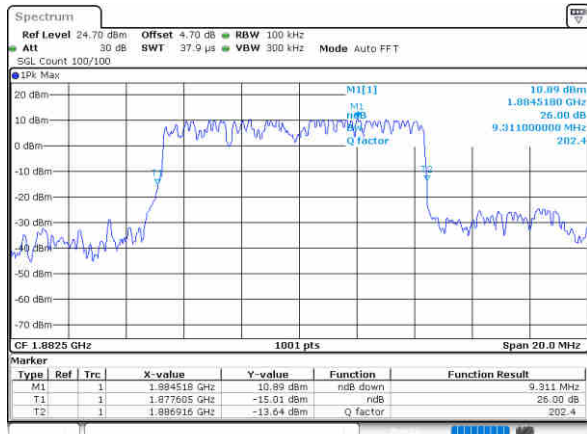
## Lowest Channel

## Lowest Channel



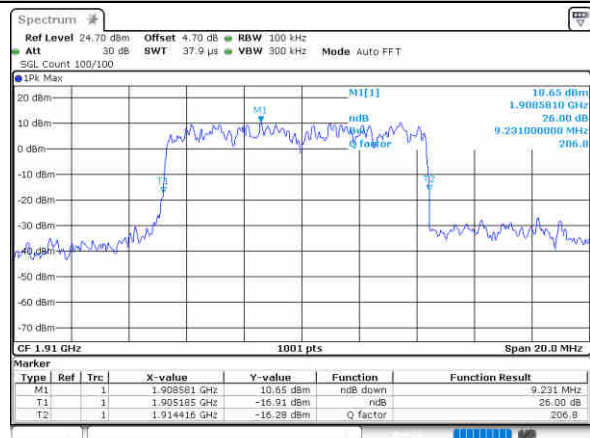
## Middle Channel

## Middle Channel



## Highest Channel

## Highest Channel

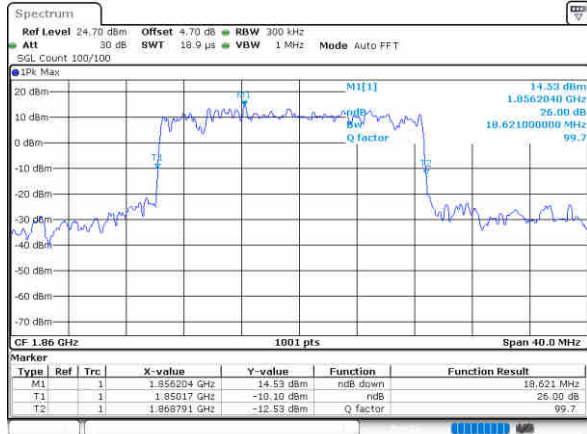




## FR1 n25 / 20MHz / DFT-S OFDM

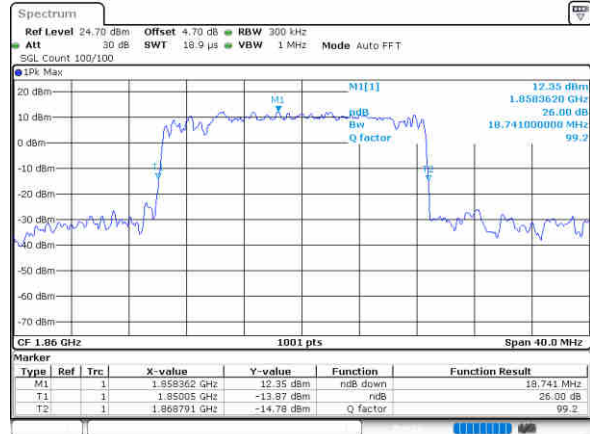
## PI/2 BPSK

## Lowest Channel

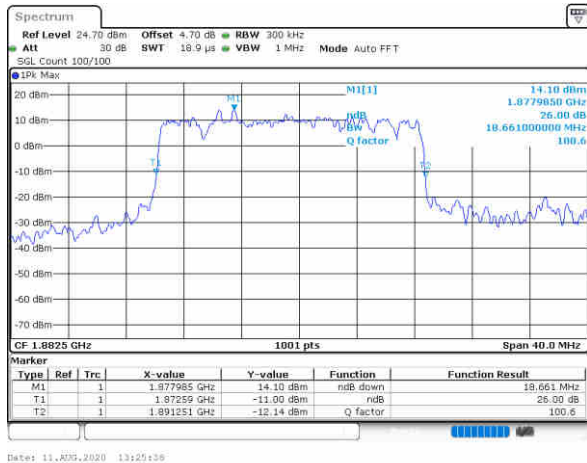


## QPSK

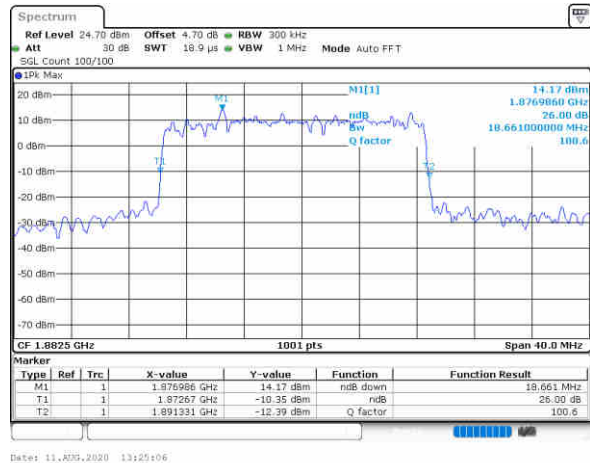
## Lowest Channel



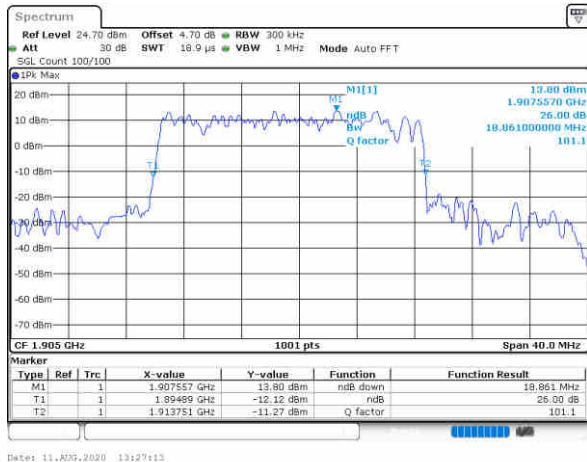
## Middle Channel



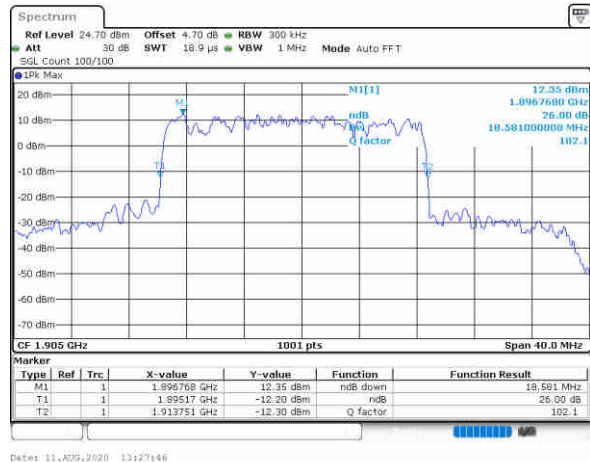
## Middle Channel



## Highest Channel



## Highest Channel





## Occupied Bandwidth

| Mode       | FR1 n25 : OB BW(MHz) / DFT-S OFDM |      |           |       |           |       |  |  |
|------------|-----------------------------------|------|-----------|-------|-----------|-------|--|--|
| BW         | 5MHz                              | 5MHz | 10MHz     | 10MHz | 20MHz     | 20MHz |  |  |
| Mod.       | PI/2 BPSK                         | QPSK | PI/2 BPSK | QPSK  | PI/2 BPSK | QPSK  |  |  |
| Lowest CH  | 4.46                              | 4.47 | 8.93      | 8.85  | 17.98     | 17.94 |  |  |
| Middle CH  | 4.43                              | 4.44 | 8.95      | 8.91  | 17.78     | 17.82 |  |  |
| Highest CH | 4.47                              | 4.51 | 8.91      | 8.89  | 17.86     | 17.74 |  |  |