

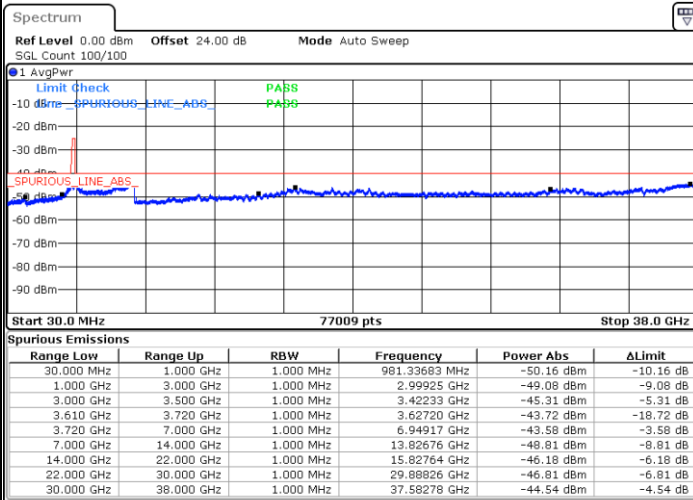


## LTE Band 48 / 5MHz

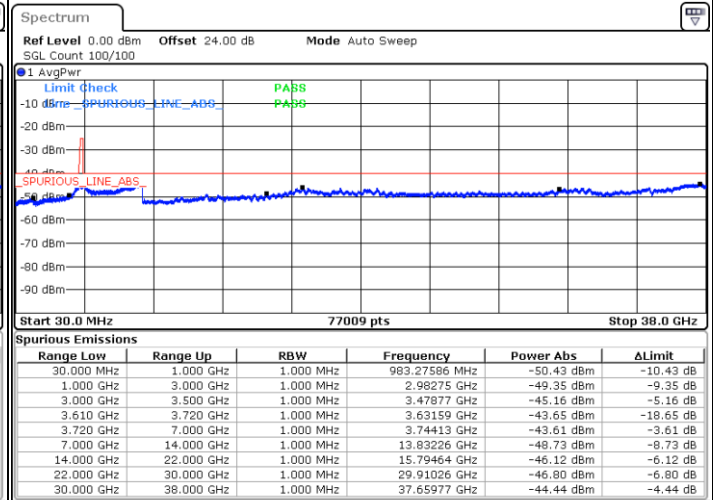
## 64QAM

## Lowest Channel / 1RB0

## Lowest Channel / 1RBmax



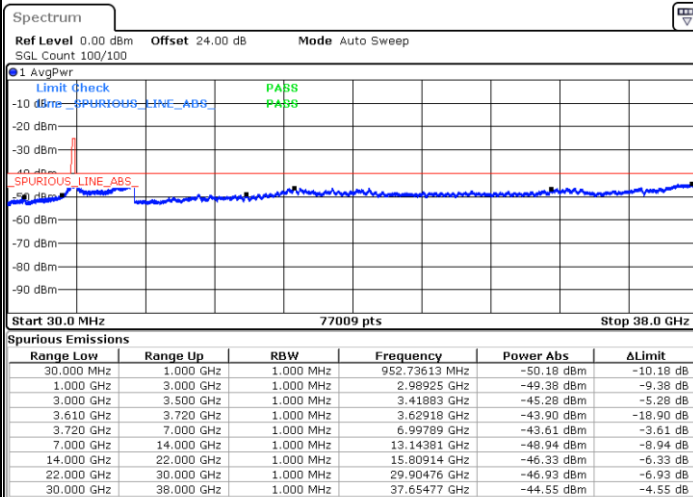
Date: 2 AUG 2020 17:49:36



Date: 2 AUG 2020 18:09:36

## Lowest Channel / FullIRB

## N/A



Date: 2 AUG 2020 17:59:36

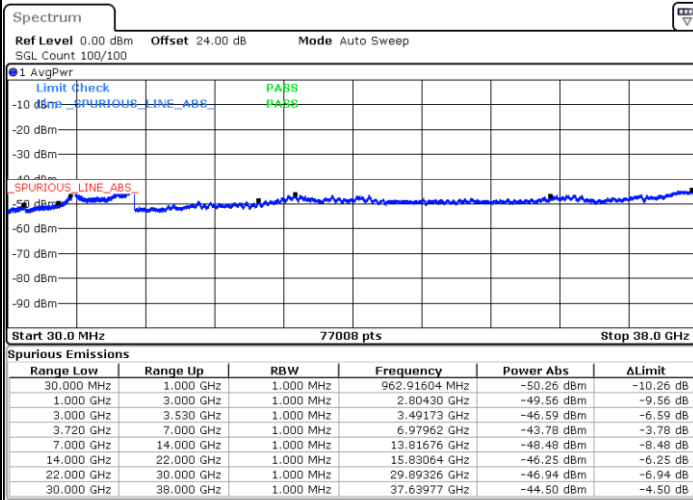


## LTE Band 48 / 5MHz

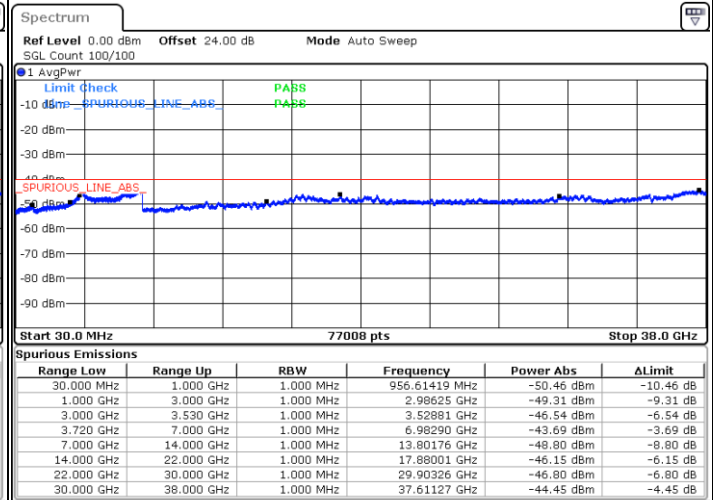
## 64QAM

## Middle Channel / 1RB0

## Middle Channel / 1RBmax



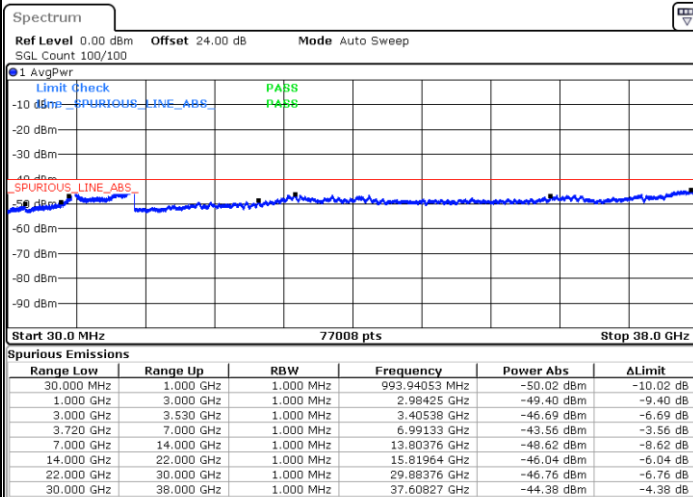
Date: 2 AUG 2020 17:50:43



Date: 2 AUG 2020 18:10:42

## Middle Channel / FullIRB

## N/A



Date: 2 AUG 2020 18:00:42

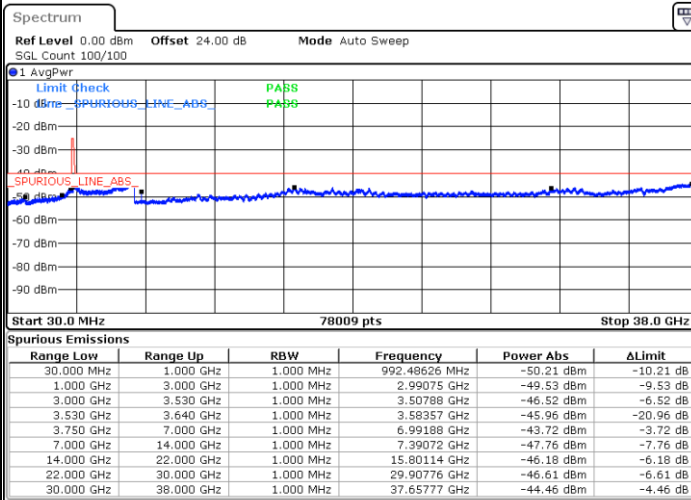


## LTE Band 48 / 5MHz

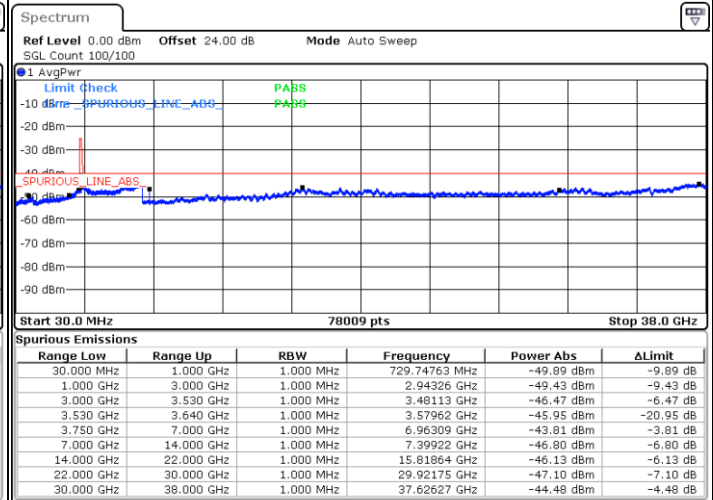
## 64QAM

## Highest Channel / 1RB0

## Highest Channel / 1RBmax



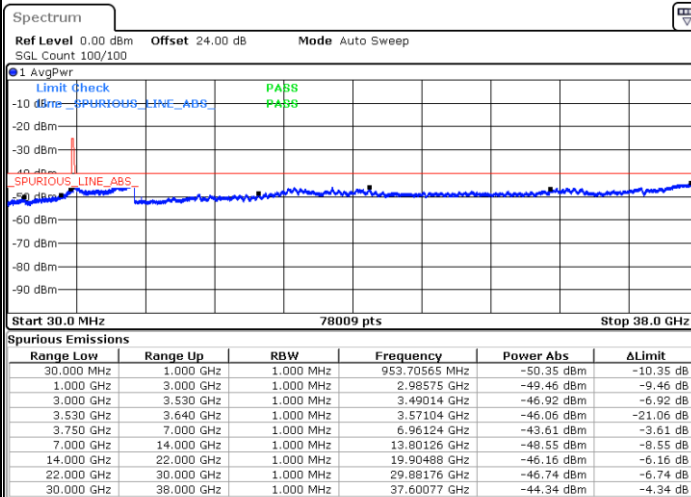
Date: 2 AUG 2020 17:56:16



Date: 2 AUG 2020 18:16:16

## Highest Channel / FullRB

## N/A



Date: 2 AUG 2020 18:06:15

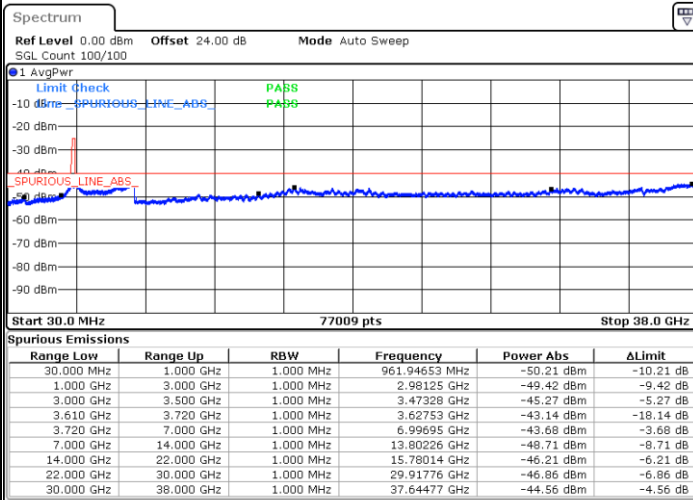


## LTE Band 48 / 10MHz

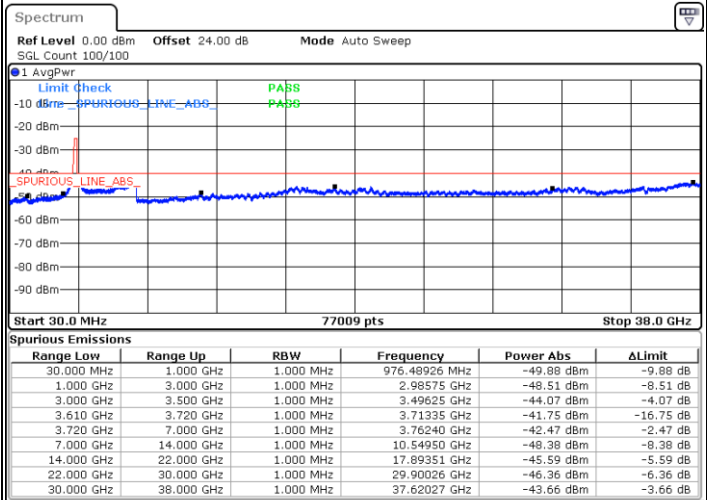
## 64QAM

## Lowest Channel / 1RB0

## Lowest Channel / 1RBmax



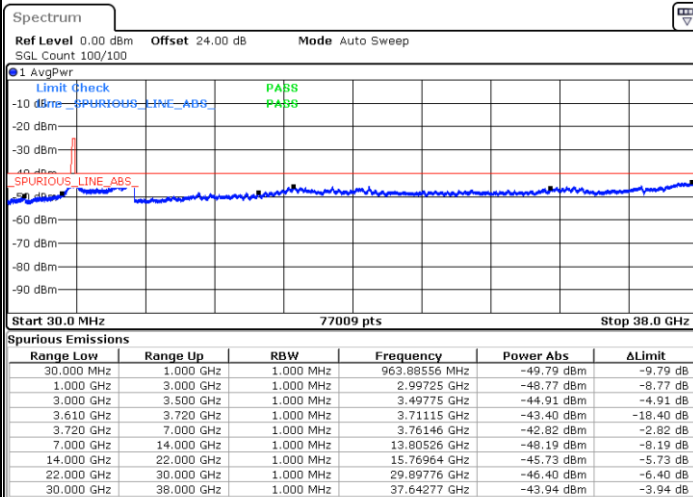
Date: 2 AUG 2020 18:17:24



Date: 3 AUG 2020 09:27:29

## Lowest Channel / FullIRB

## N/A



Date: 3 AUG 2020 09:17:29

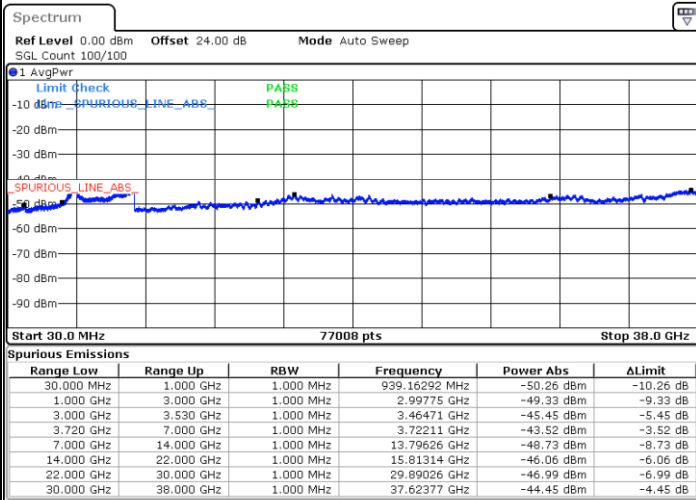


## LTE Band 48 / 10MHz

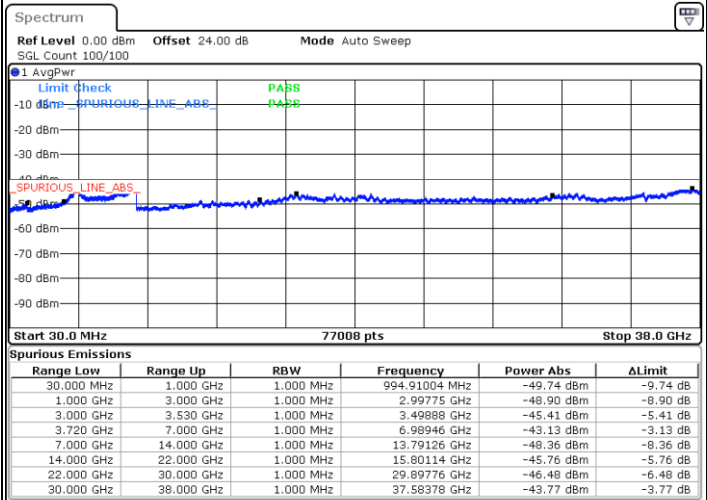
## 64QAM

## MiddleChannel / 1RB0

## Middle Channel / 1RBmax



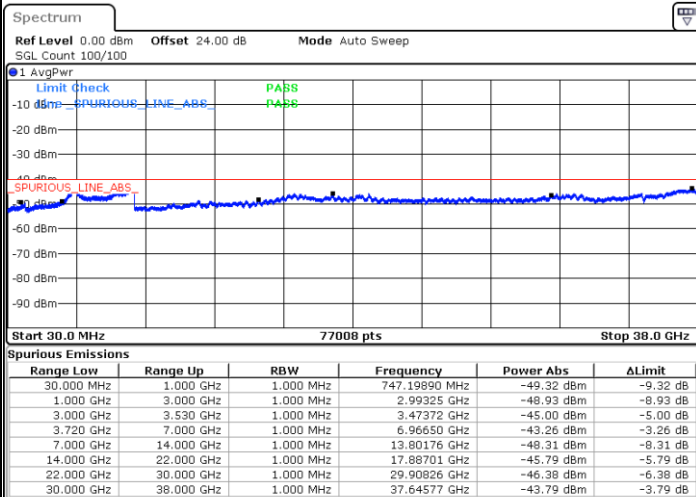
Date: 2 AUG 2020 18:22:56



Date: 3 AUG 2020 09:33:02

## Middle Channel / FullIRB

## N/A



Date: 3 AUG 2020 09:23:01

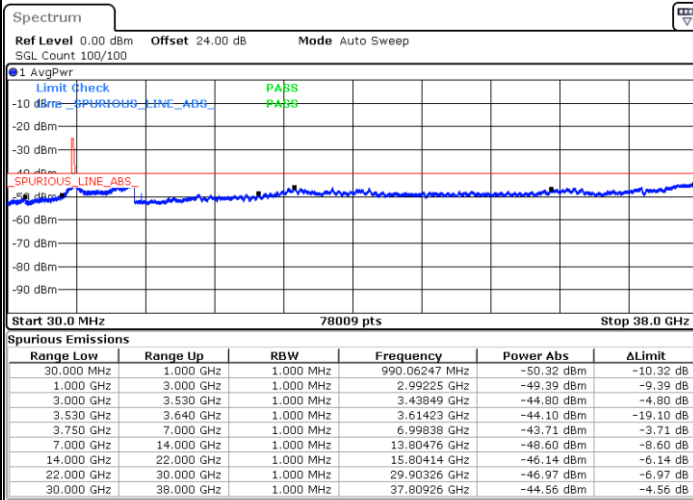


## LTE Band 48 / 10MHz

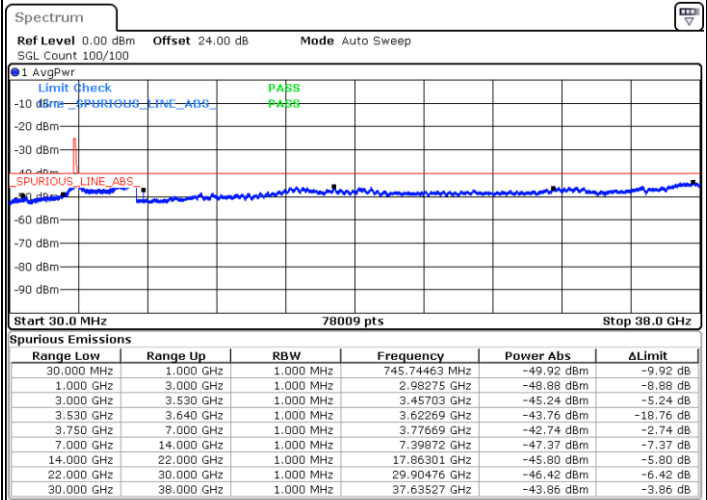
## 64QAM

## Highest Channel / 1RB0

## Highest Channel / 1RBmax



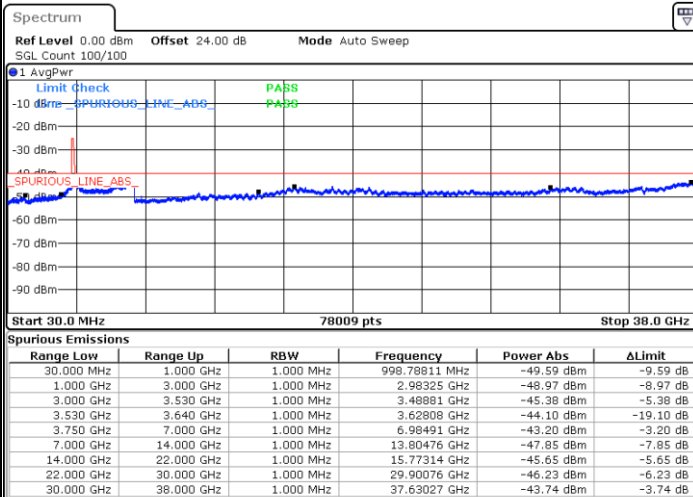
Date: 2 AUG 2020 18:24:03



Date: 3 AUG 2020 09:34:08

## Highest Channel / FullRB

## N/A



Date: 3 AUG 2020 09:24:08

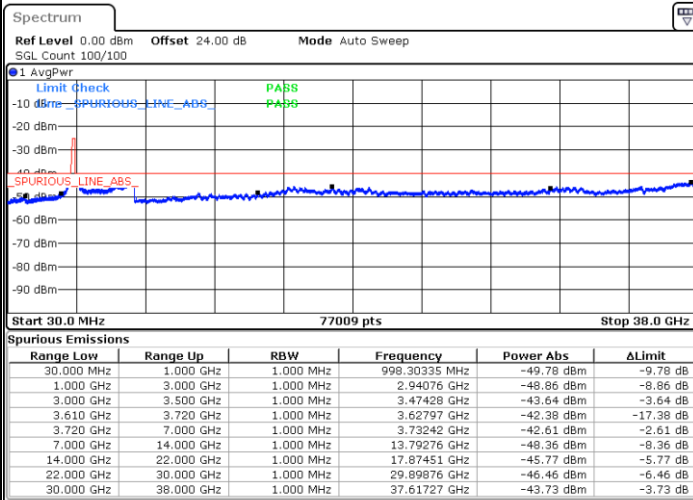


## LTE Band 48 / 15MHz

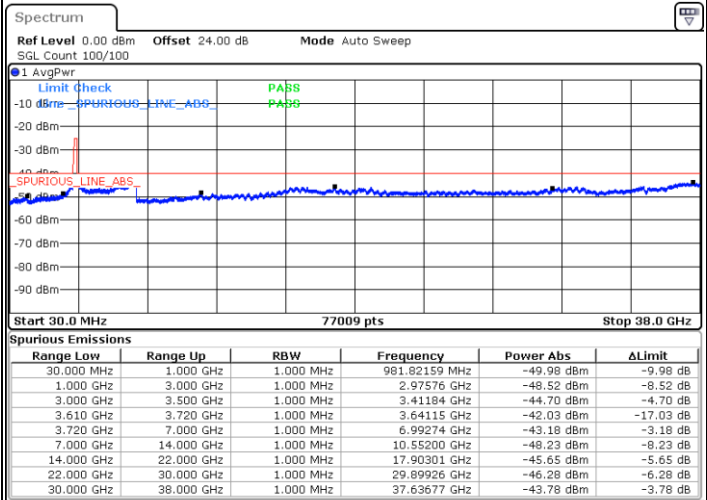
## 64QAM

## Lowest Channel / 1RB0

## Lowest Channel / 1RBmax



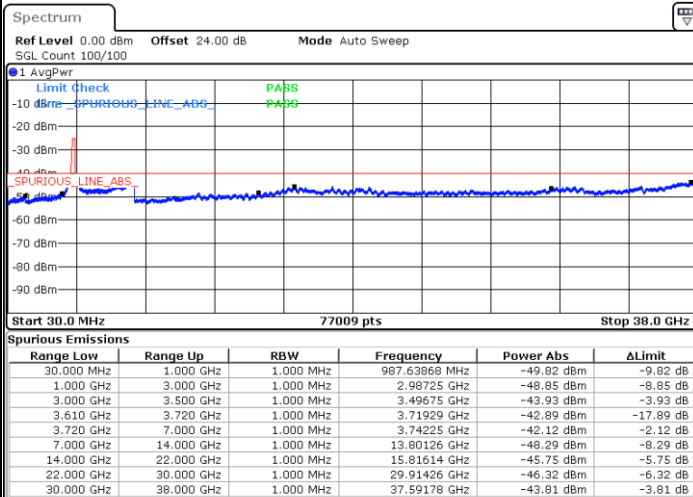
Date: 3 AUG 2020 09:55:07



Date: 3 AUG 2020 10:36:47

## Lowest Channel / FullIRB

## N/A



Date: 3 AUG 2020 10:21:58

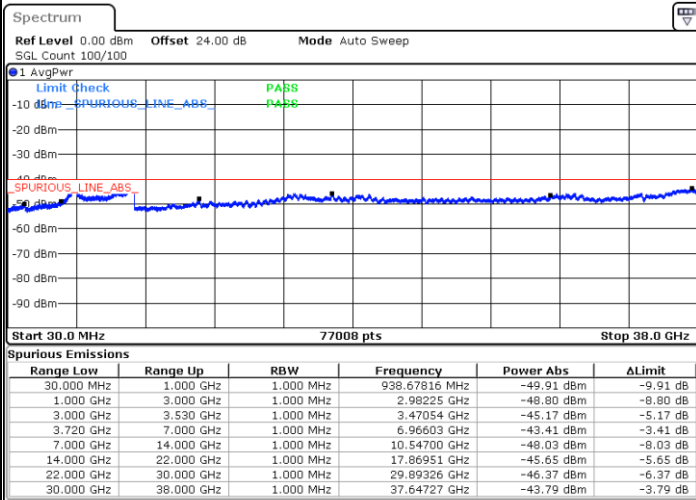


## LTE Band 48 / 15MHz

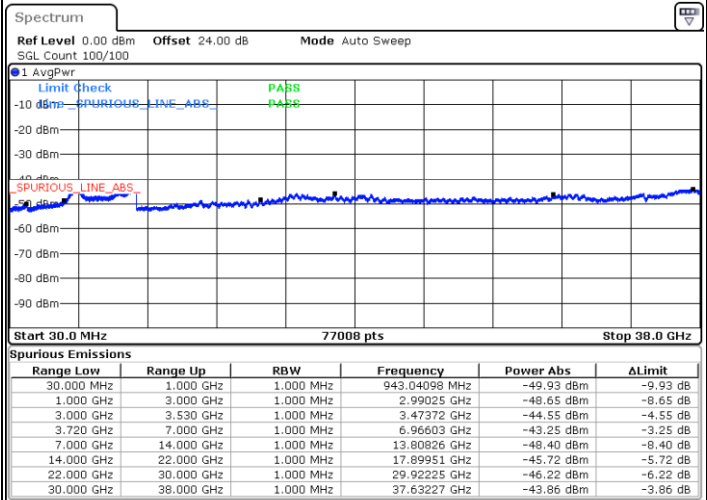
## 64QAM

## Middle Channel / 1RB0

## Middle Channel / 1RBmax



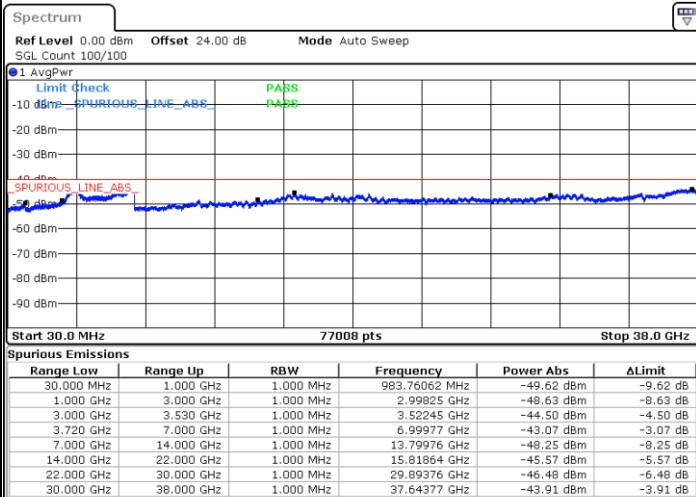
Date: 3 AUG 2020 09:56:13



Date: 3 AUG 2020 10:37:53

## Middle Channel / FullIRB

## N/A



Date: 3 AUG 2020 10:23:05

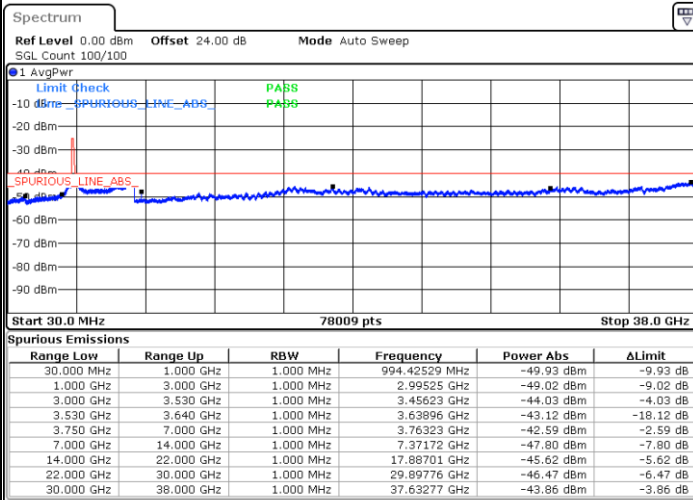


## LTE Band 48 / 15MHz

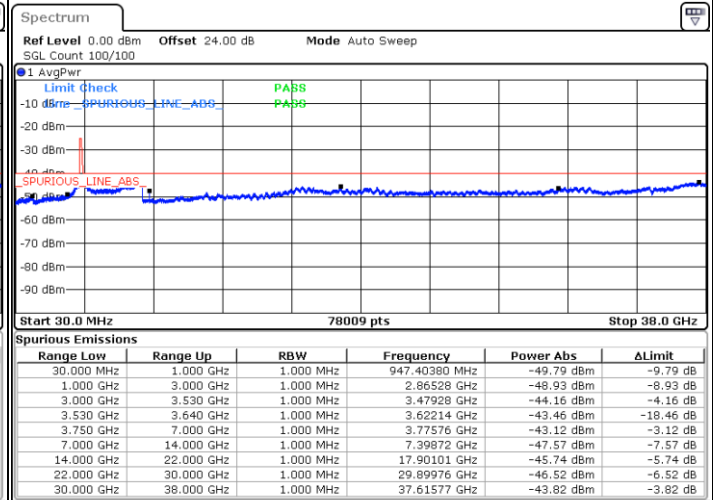
## 64QAM

## Highest Channel / 1RB0

## Highest Channel / 1RBmax



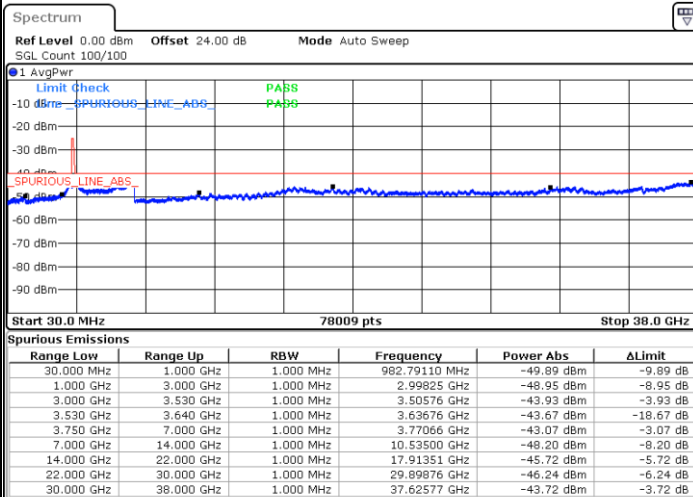
Date: 3 AUG 2020 10:04:55



Date: 3 AUG 2020 10:45:25

## Highest Channel / FullIRB

## N/A



Date: 3 AUG 2020 10:29:20

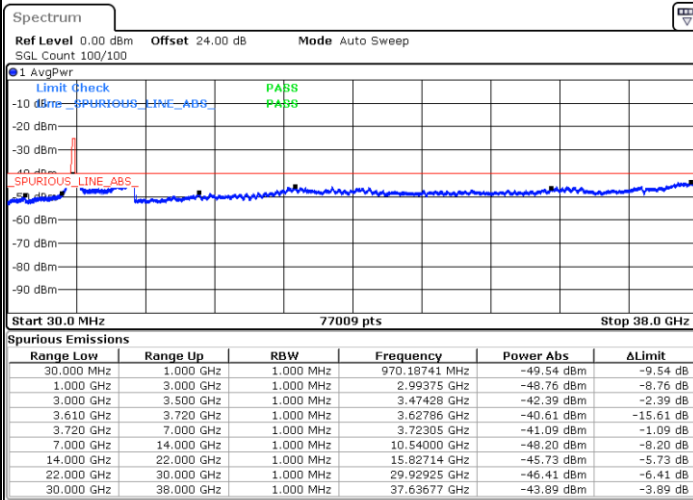


## LTE Band 48 / 20MHz

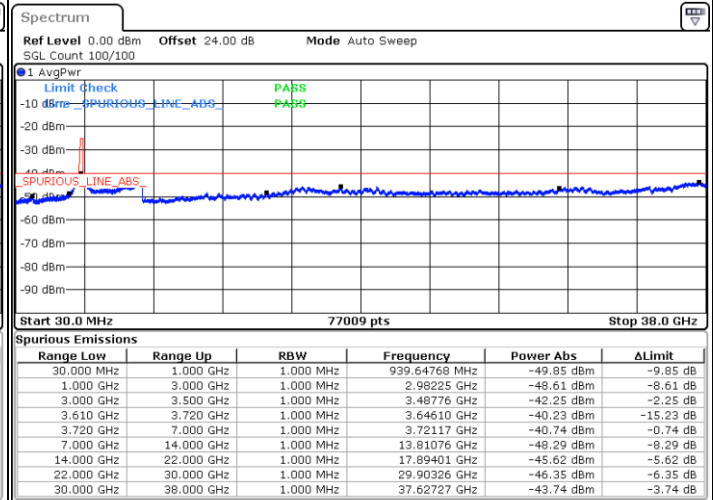
## 64QAM

## Lowest Channel / 1RB0

## Lowest Channel / 1RBmax



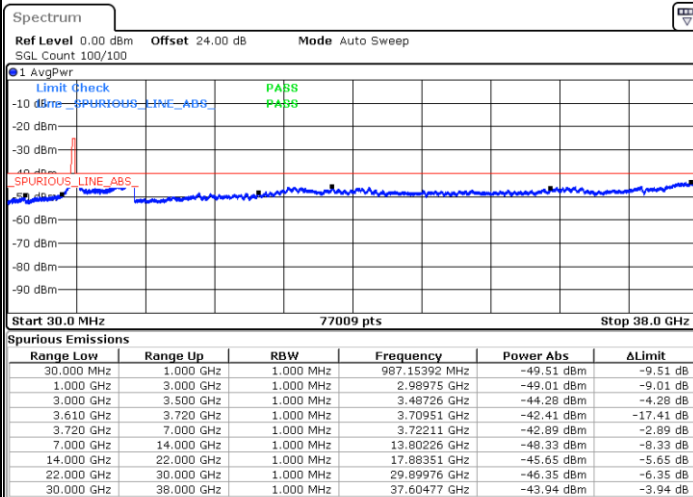
Date: 3 AUG 2020 10:57:03



Date: 3 AUG 2020 11:07:03

## Lowest Channel / FullIRB

## N/A



Date: 3 AUG 2020 10:47:03

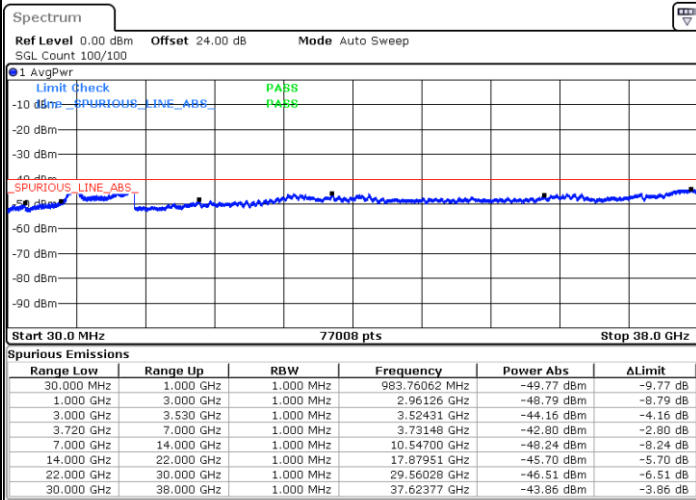


## LTE Band 48 / 20MHz

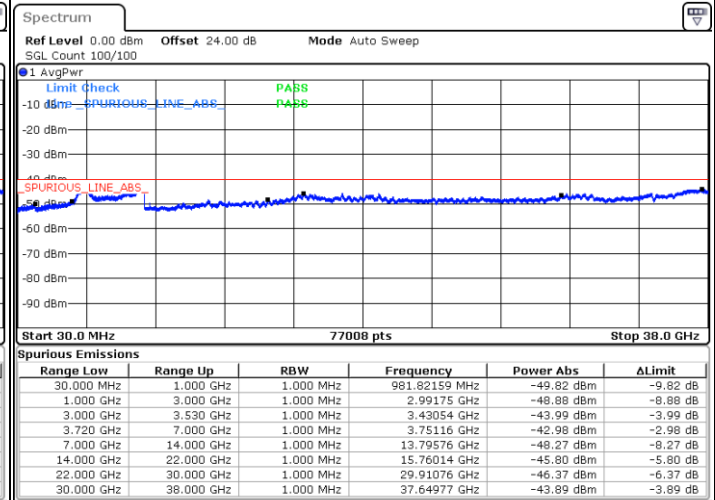
## 64QAM

## Middle Channel / 1RB0

## Middle Channel / 1RBmax



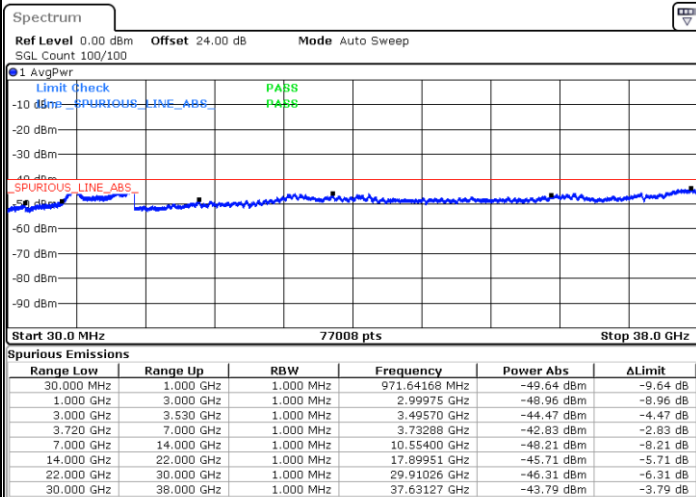
Date: 3 AUG 2020 11:02:36



Date: 3 AUG 2020 11:12:35

## Middle Channel / FullIRB

## N/A



Date: 3 AUG 2020 10:52:35

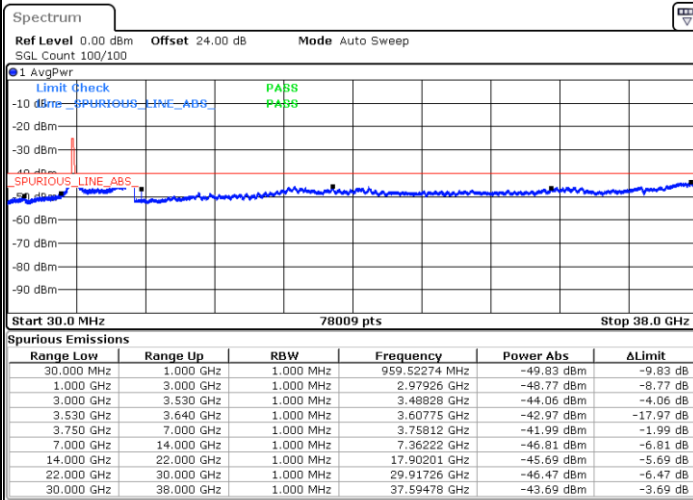


## LTE Band 48 / 20MHz

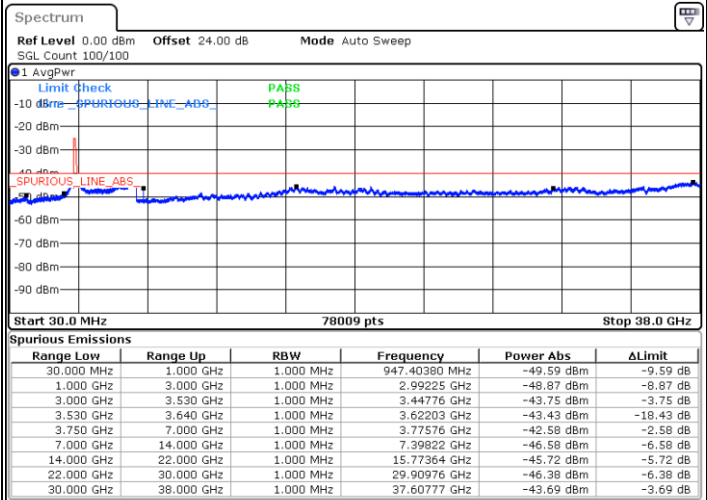
## 64QAM

## Highest Channel / 1RB0

## Highest Channel / 1RBmax



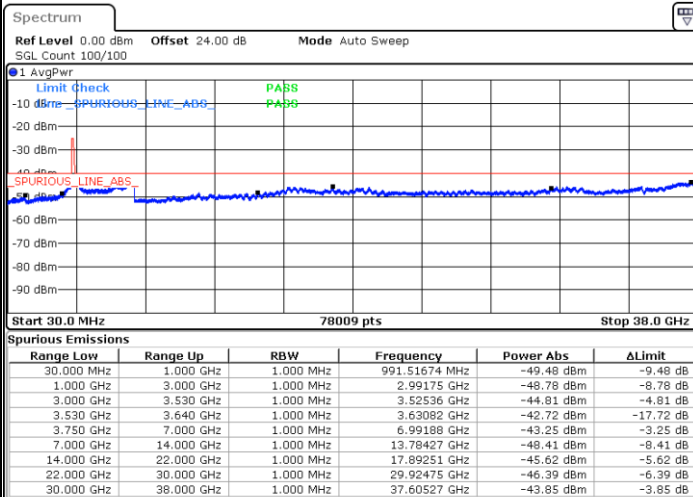
Date: 3 AUG 2020 11:03:42



Date: 3 AUG 2020 11:13:41

## Highest Channel / FullIRB

## N/A



Date: 3 AUG 2020 10:53:42

## Frequency Stability

| Test Conditions     |                   | LTE Band 48 (QPSK) / Middle Channel | Limit   |
|---------------------|-------------------|-------------------------------------|---------|
| Temperature<br>(°C) | Voltage<br>(Volt) | BW 10MHz                            | Note 2. |
|                     |                   | Deviation (ppm)                     | Result  |
| 50                  | Normal Voltage    | 0.0036                              | PASS    |
| 40                  | Normal Voltage    | 0.0013                              |         |
| 30                  | Normal Voltage    | 0.0039                              |         |
| 20(Ref.)            | Normal Voltage    | 0.0000                              |         |
| 10                  | Normal Voltage    | 0.0026                              |         |
| 0                   | Normal Voltage    | 0.0006                              |         |
| -10                 | Normal Voltage    | 0.0030                              |         |
| -20                 | Normal Voltage    | 0.0009                              |         |
| -30                 | Normal Voltage    | 0.0033                              |         |
| 20                  | Maximum Voltage   | 0.0007                              |         |
| 20                  | Normal Voltage    | 0.0000                              |         |
| 20                  | Battery End Point | 0.0007                              |         |

**Note:**

1. Normal Voltage = DC 48 V. ; Battery End Point (BEP) = DC 36 V. ; Maximum Voltage = DC 55 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



&lt;MIMO Mode for Sample 2&gt;

&lt;Ant. 1&gt;

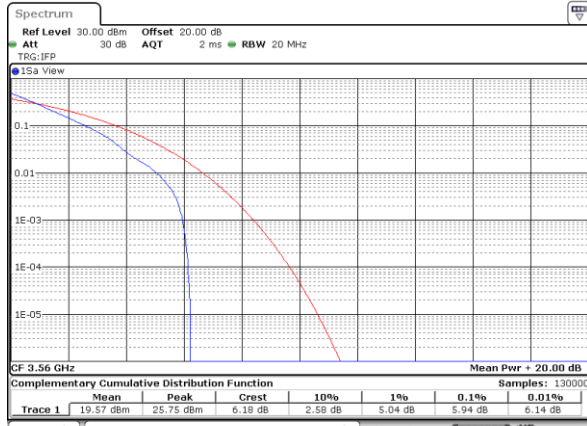
**Peak-to-Average Ratio**

| Mode       | LTE Band 48 / 20MHz |         |       |         |             |
|------------|---------------------|---------|-------|---------|-------------|
| Mod.       | QPSK                |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | 5.94                | 5.30    | 7.13  | 6.14    | PASS        |
| Middle CH  | 5.91                | 5.33    | 7.04  | 6.14    |             |
| Highest CH | 5.94                | 5.39    | 6.78  | 6.23    |             |
| Mode       | LTE Band 48 / 20MHz |         |       |         |             |
| Mod.       | 64QAM               |         |       |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB |       |         | Result      |
| Lowest CH  | 6.41                | 6.32    | -     | -       | PASS        |
| Middle CH  | 6.32                | 6.29    | -     | -       |             |
| Highest CH | 6.32                | 6.35    | -     | -       |             |

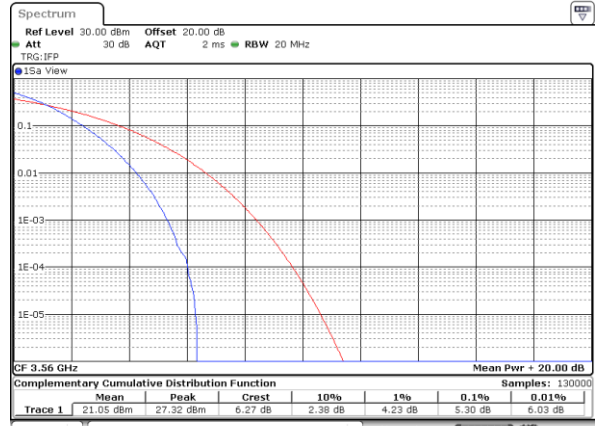


## LTE Band 48 / 20MHz / QPSK

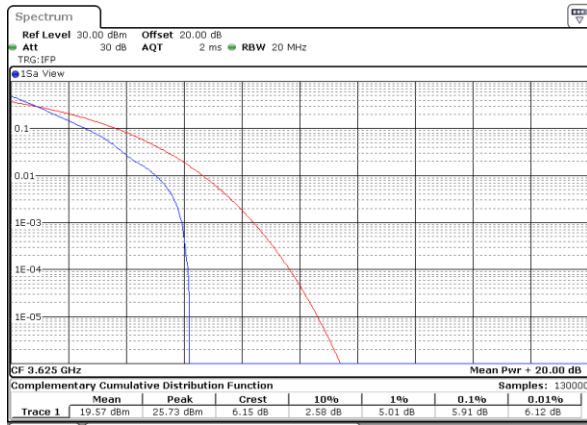
## Lowest Channel / 1RB



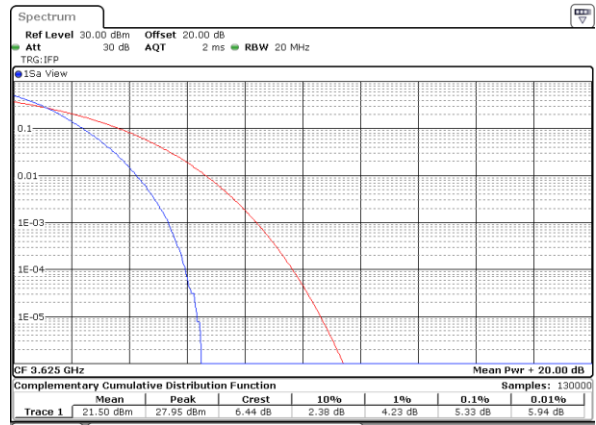
## Lowest Channel / Full RB



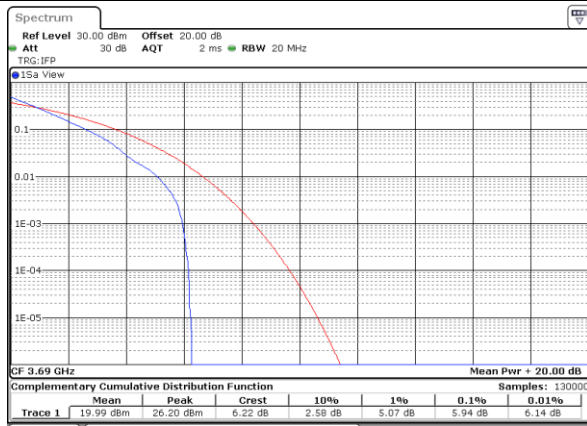
## Middle Channel / 1RB



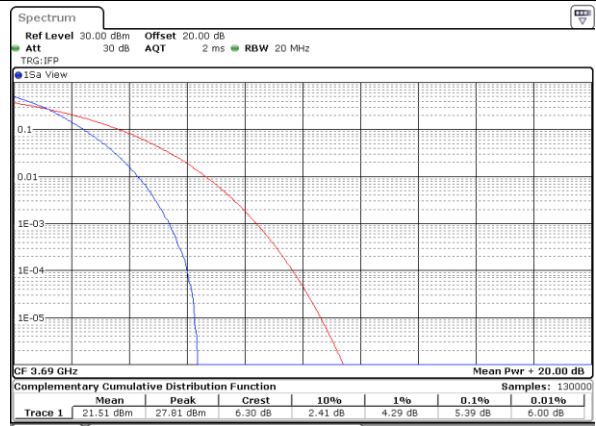
## Middle Channel / Full RB



## Highest Channel / 1RB



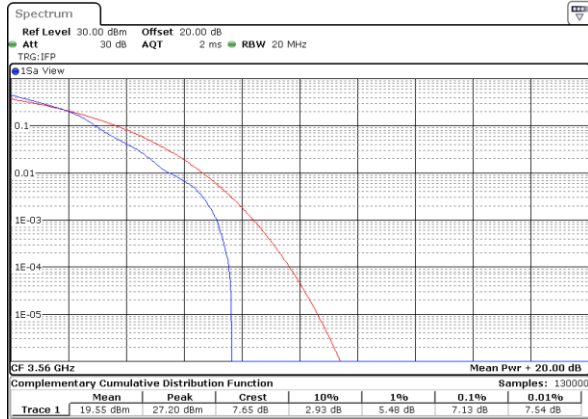
## Highest Channel / Full RB



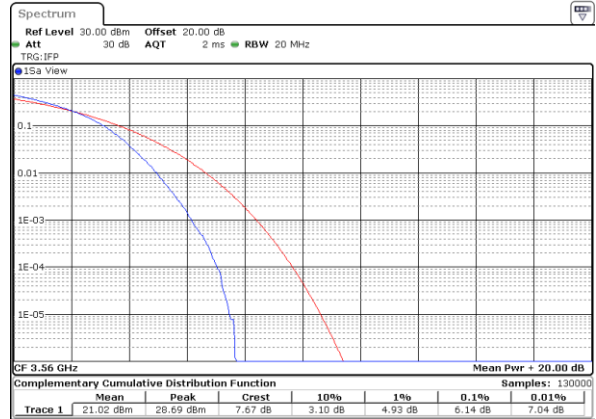


## LTE Band 48 / 20MHz / 16QAM

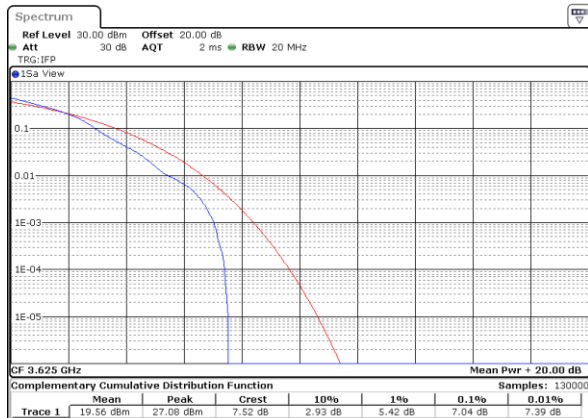
## Lowest Channel / 1RB



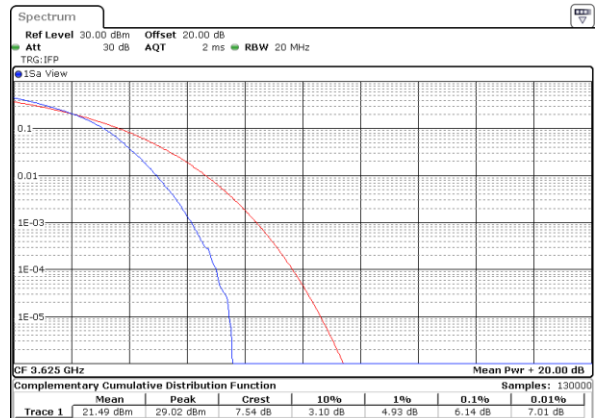
## Lowest Channel / Full RB



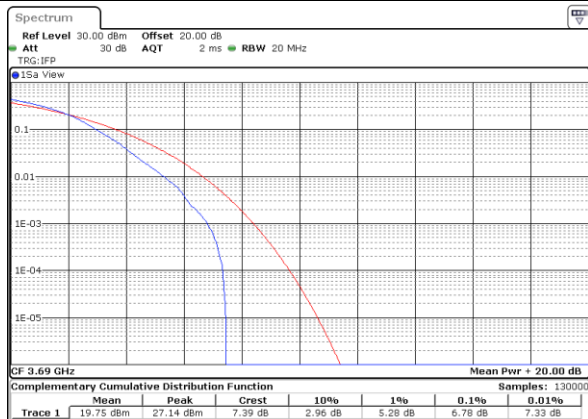
## Middle Channel / 1RB



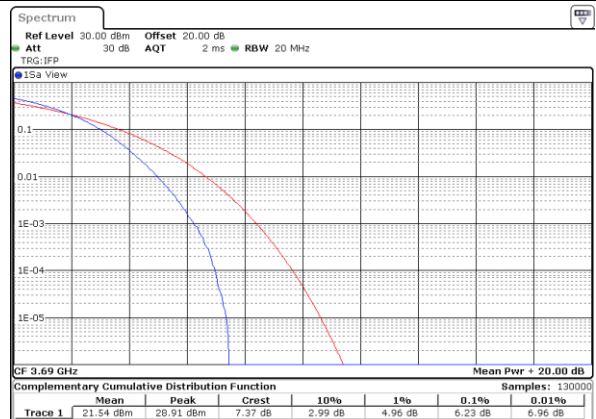
## Middle Channel / Full RB



## Highest Channel / 1RB



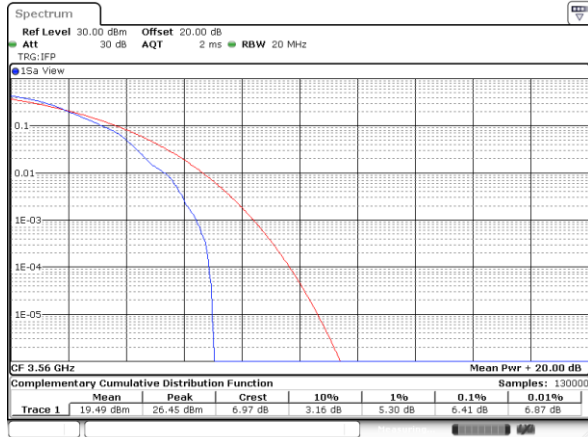
## Highest Channel / Full RB



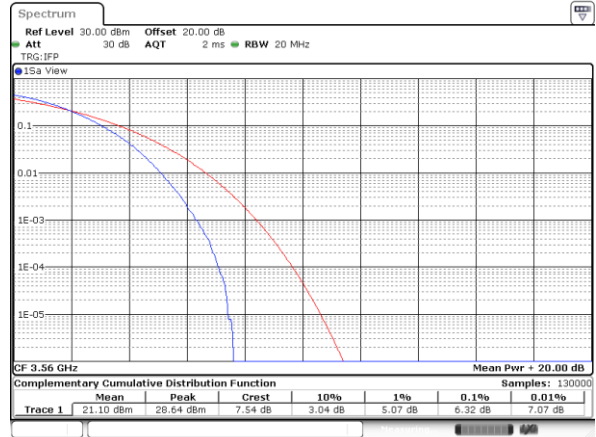


## LTE Band 48 / 20MHz / 64QAM

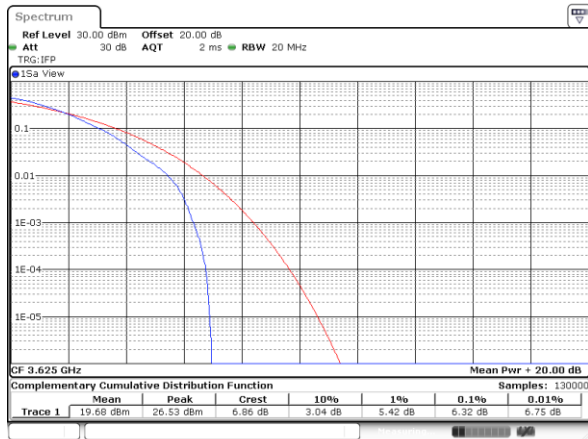
## Lowest Channel / 1RB



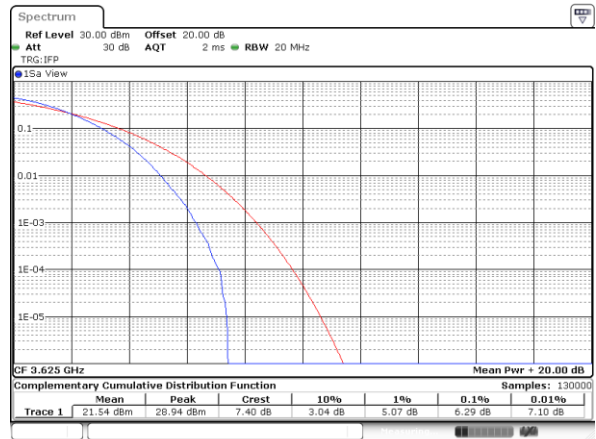
## Lowest Channel / Full RB



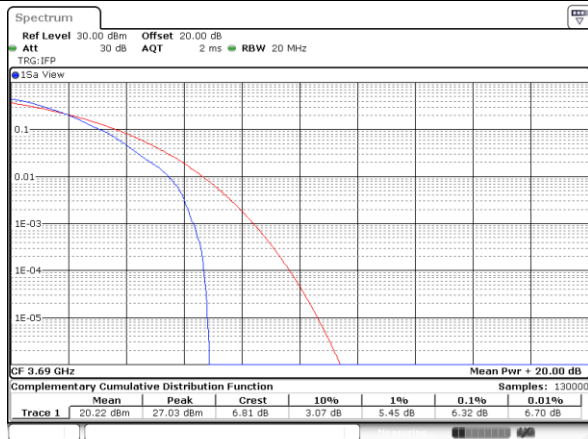
## Middle Channel / 1RB



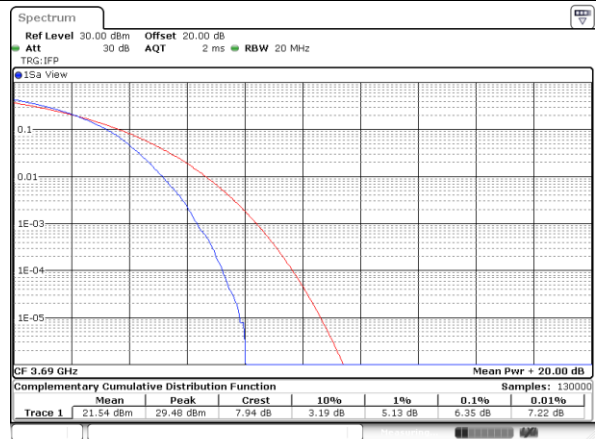
## Middle Channel / Full RB



## Highest Channel / 1RB



## Highest Channel / Full RB



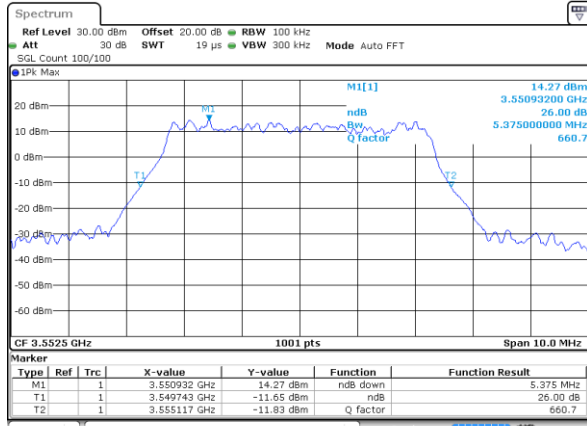
**26dB Bandwidth**

| Mode       | LTE Band 48 : 26dB BW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
|------------|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| BW         | 1.4MHz                     |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | QPSK                       | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM |
| Lowest CH  | -                          | -     | -     | -     | 5.38  | 5.18  | 9.65  | 9.83  | 14.18 | 14.39 | 18.98 | 18.70 |
| Middle CH  | -                          | -     | -     | -     | 5.44  | 5.06  | 9.63  | 9.63  | 14.30 | 14.15 | 18.66 | 18.66 |
| Highest CH | -                          | -     | -     | -     | 5.43  | 5.05  | 9.93  | 9.59  | 14.12 | 14.21 | 18.90 | 18.62 |
| Mode       | LTE Band 48 : 26dB BW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
| BW         | 1.4MHz                     |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                      |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | -                          | -     | -     | -     | 4.82  | -     | 9.73  | -     | 14.21 | -     | 18.74 | -     |
| Middle CH  | -                          | -     | -     | -     | 4.91  | -     | 9.99  | -     | 14.45 | -     | 18.98 | -     |
| Highest CH | -                          | -     | -     | -     | 4.85  | -     | 9.85  | -     | 14.18 | -     | 18.62 | -     |



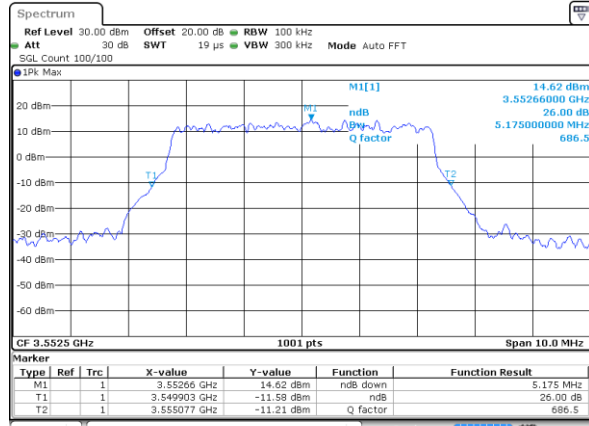
## LTE Band 48

## Lowest Channel / 5MHz / QPSK



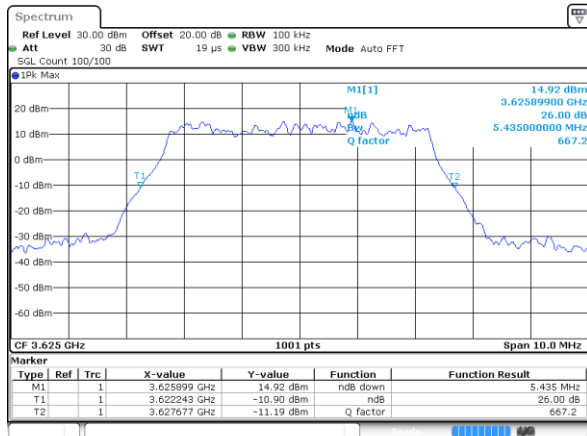
Date: 4 AUG 2020 04:05:20

## Lowest Channel / 5MHz / 16QAM



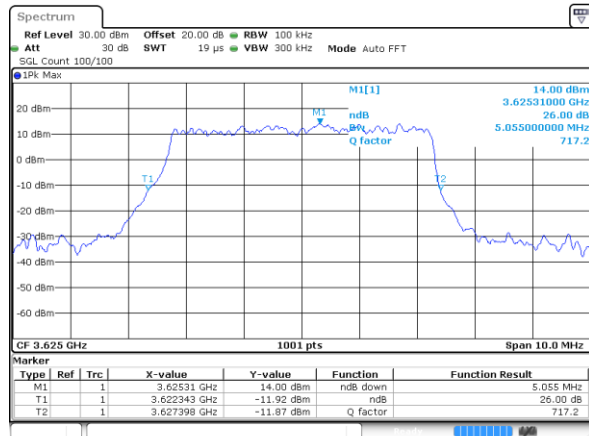
Date: 4 AUG 2020 04:05:32

## Middle Channel / 5MHz / QPSK



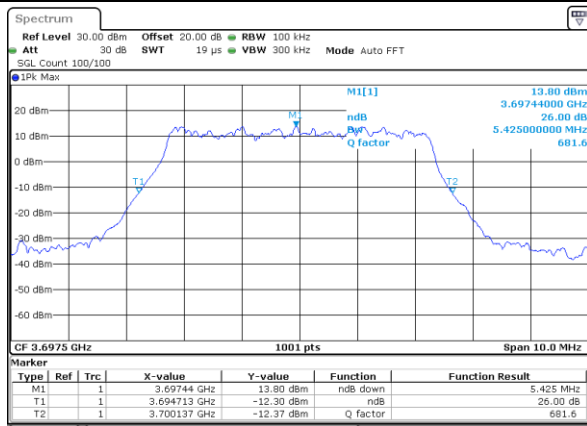
Date: 4 AUG 2020 04:06:06

## Middle Channel / 5MHz / 16QAM



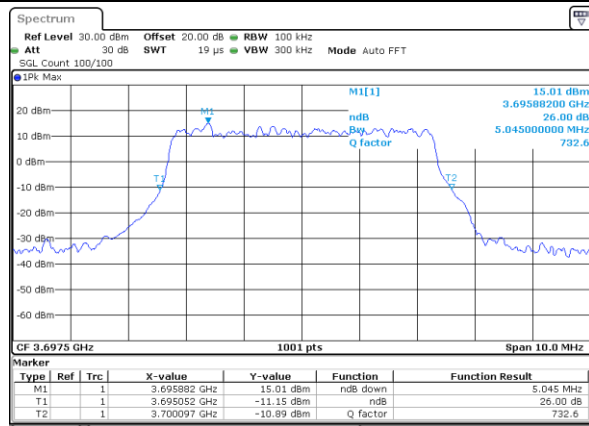
Date: 4 AUG 2020 04:06:17

## Highest Channel / 5MHz / QPSK



Date: 4 AUG 2020 04:06:54

## Highest Channel / 5MHz / 16QAM

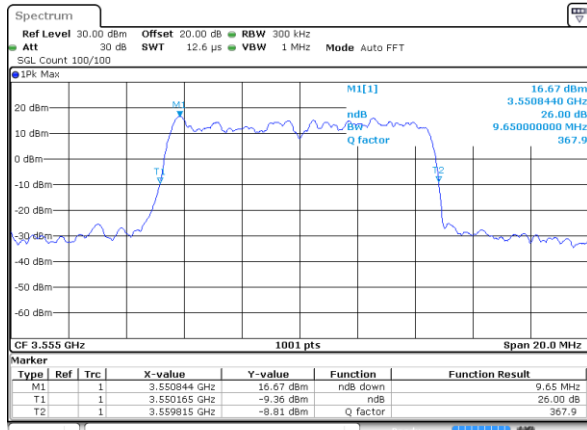


Date: 4 AUG 2020 04:07:06

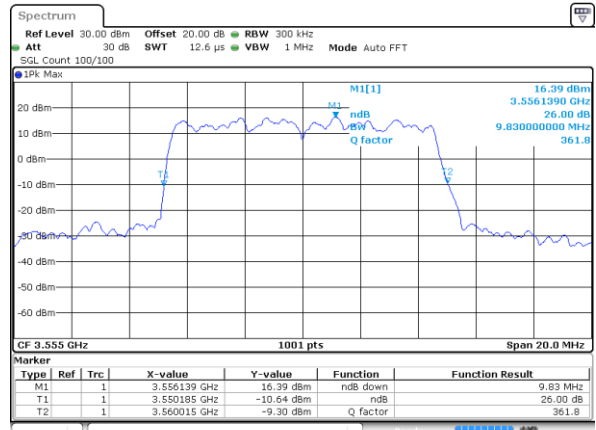


## LTE Band 48

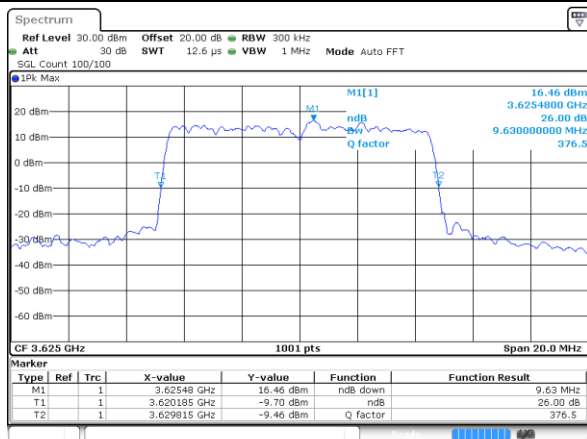
## Lowest Channel / 10MHz / QPSK



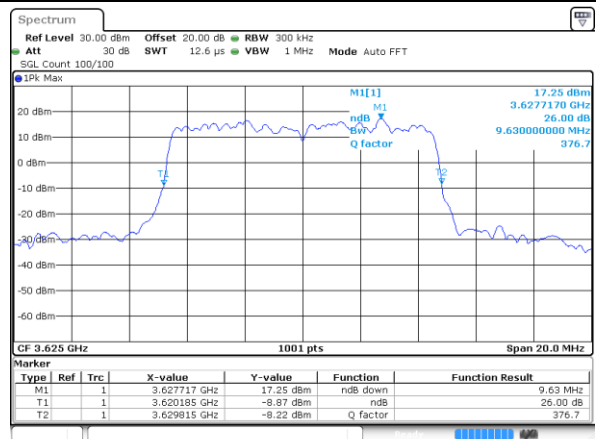
## Lowest Channel / 10MHz / 16QAM



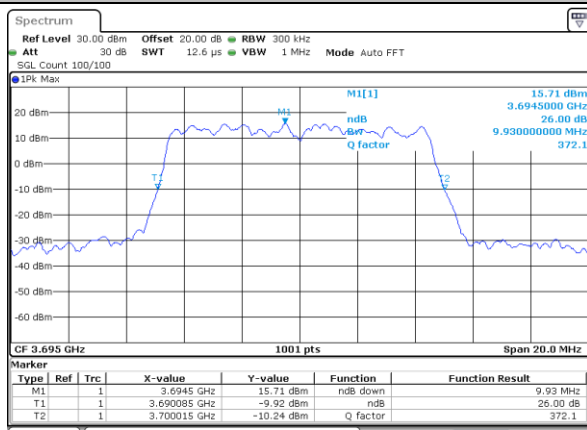
## Middle Channel / 10MHz / QPSK



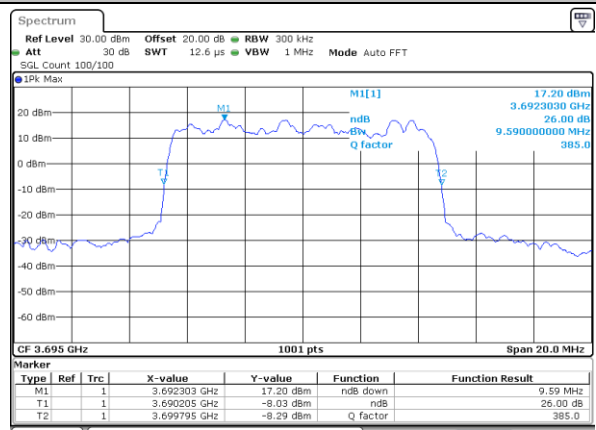
## Middle Channel / 10MHz / 16QAM



## Highest Channel / 10MHz / QPSK



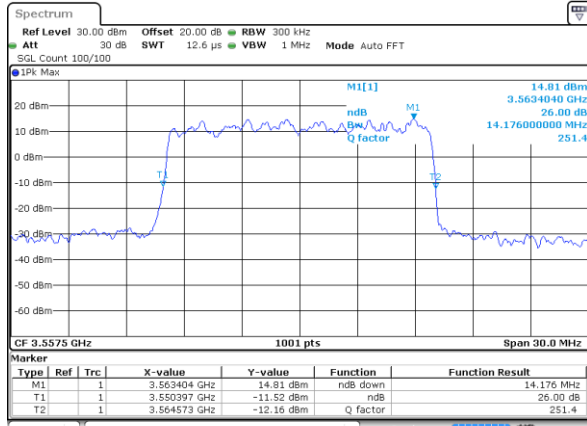
## Highest Channel / 10MHz / 16QAM





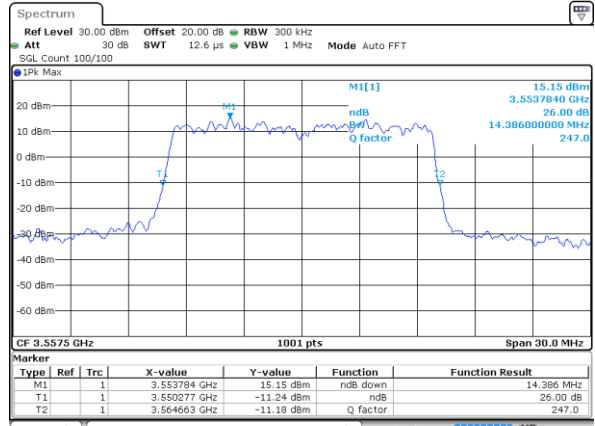
## LTE Band 48

## Lowest Channel / 15MHz / QPSK



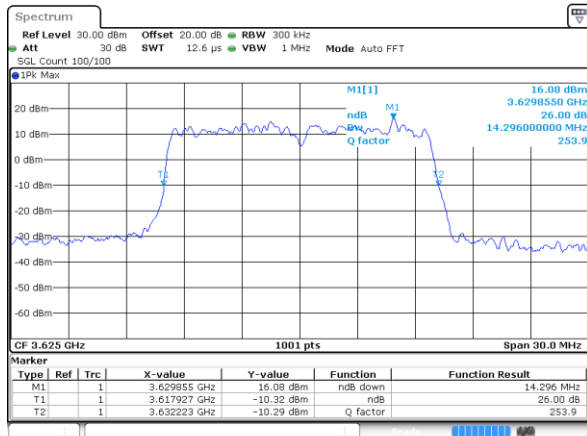
Date: 4 AUG 2020 04:10:06

## Lowest Channel / 15MHz / 16QAM



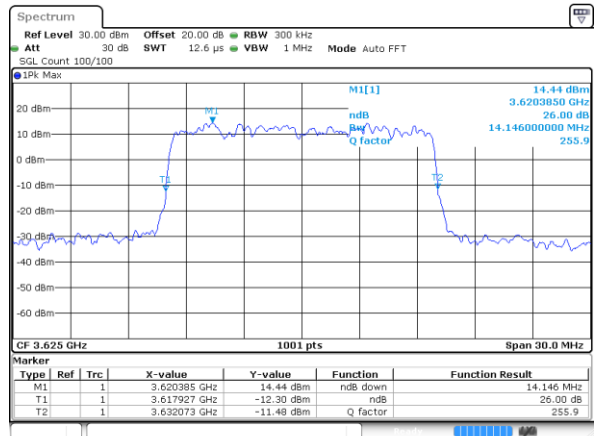
Date: 4 AUG 2020 04:10:18

## Middle Channel / 15MHz / QPSK



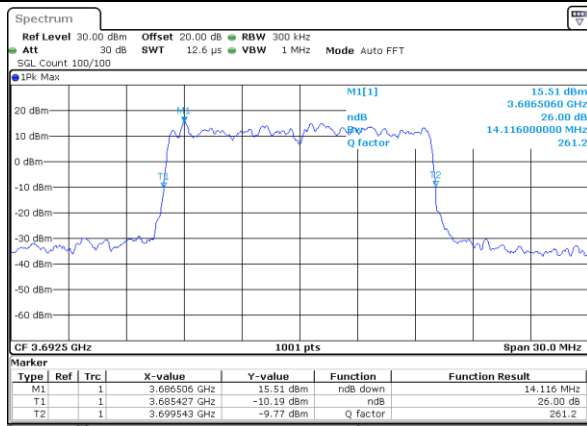
Date: 4 AUG 2020 04:10:53

## Middle Channel / 15MHz / 16QAM



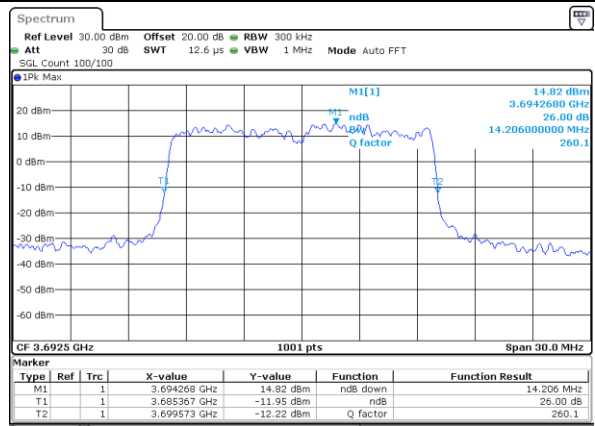
Date: 4 AUG 2020 04:11:05

## Highest Channel / 15MHz / QPSK



Date: 4 AUG 2020 04:11:41

## Highest Channel / 15MHz / 16QAM

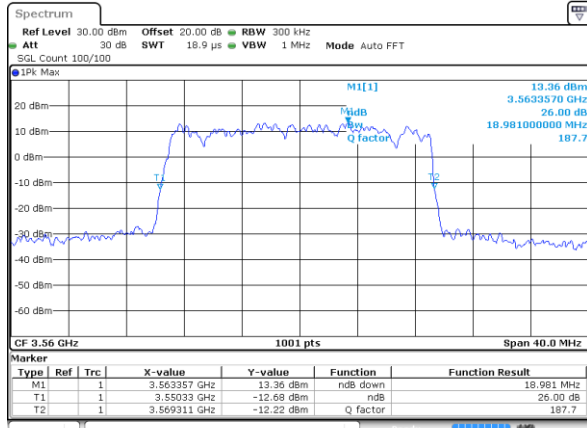


Date: 4 AUG 2020 04:11:53



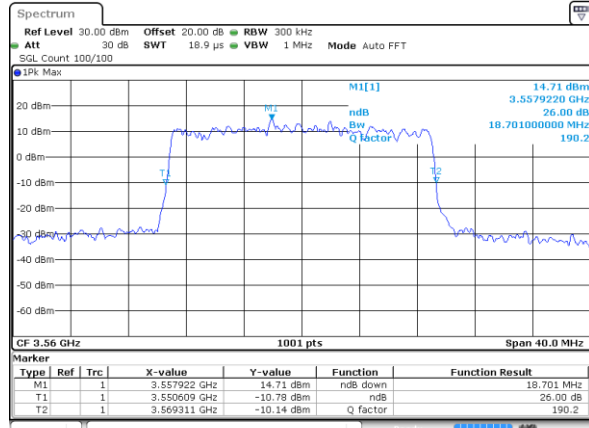
## LTE Band 48

## Lowest Channel / 20MHz / QPSK



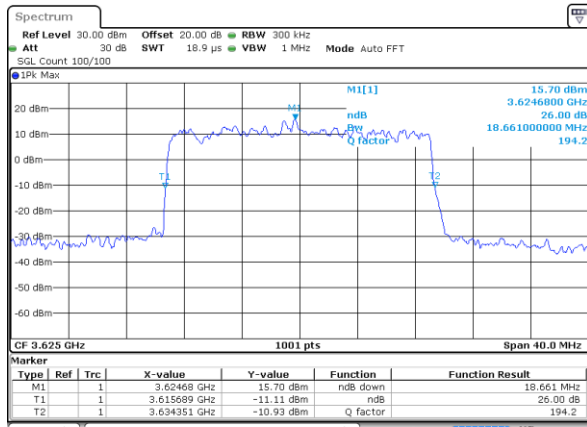
Date: 4 AUG 2020 04:12:30

## Lowest Channel / 20MHz / 16QAM



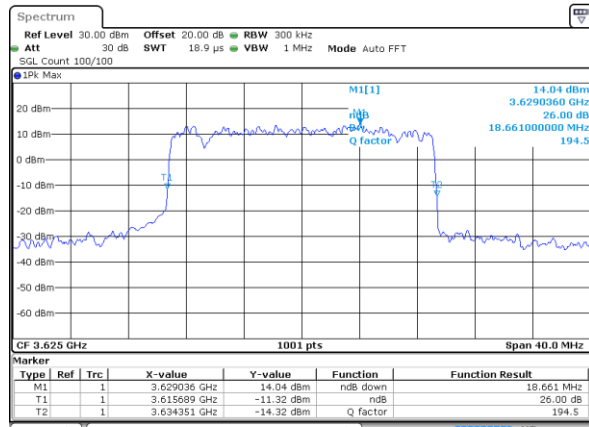
Date: 4 AUG 2020 04:12:42

## Middle Channel / 20MHz / QPSK



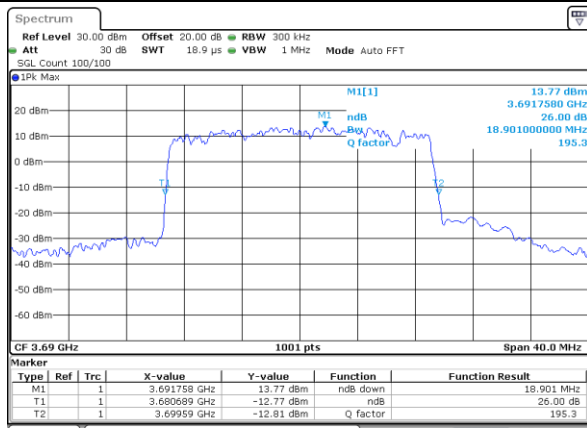
Date: 4 AUG 2020 04:13:17

## Middle Channel / 20MHz / 16QAM



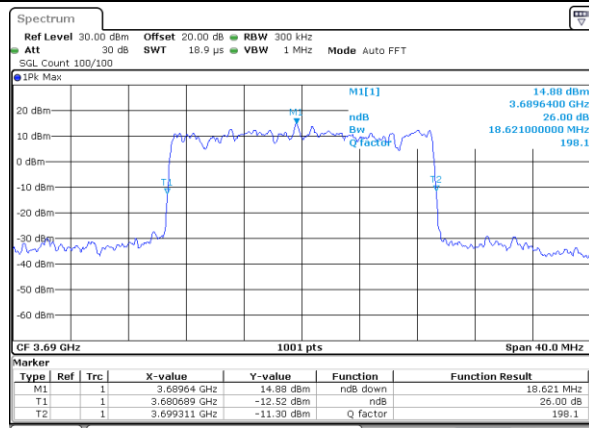
Date: 4 AUG 2020 04:13:29

## Highest Channel / 20MHz / QPSK



Date: 4 AUG 2020 04:14:05

## Highest Channel / 20MHz / 16QAM

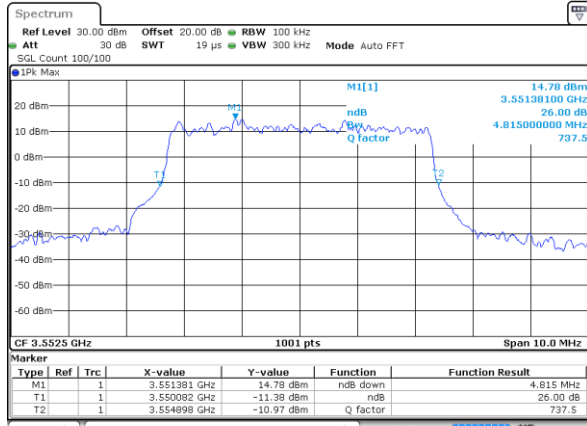


Date: 4 AUG 2020 04:14:17



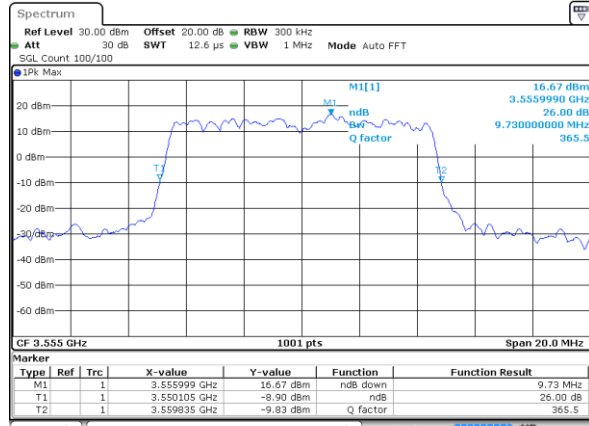
## LTE Band 48

## Lowest Channel / 5MHz / 64QAM



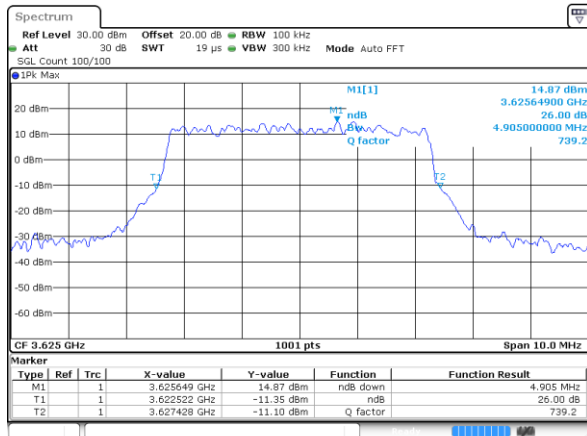
Date: 4 AUG 2020 04:14:43

## Lowest Channel / 10MHz / 64QAM



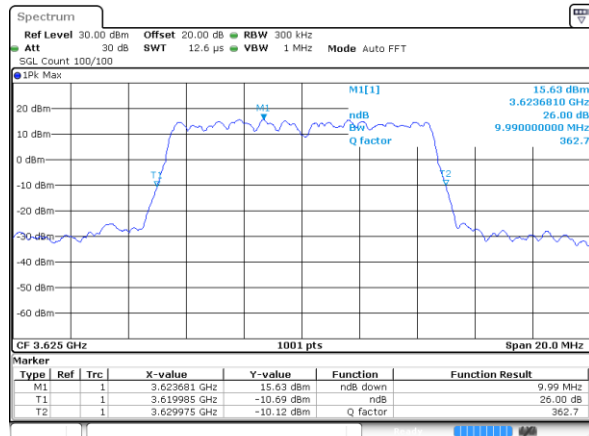
Date: 4 AUG 2020 04:15:55

## Middle Channel / 5MHz / 64QAM



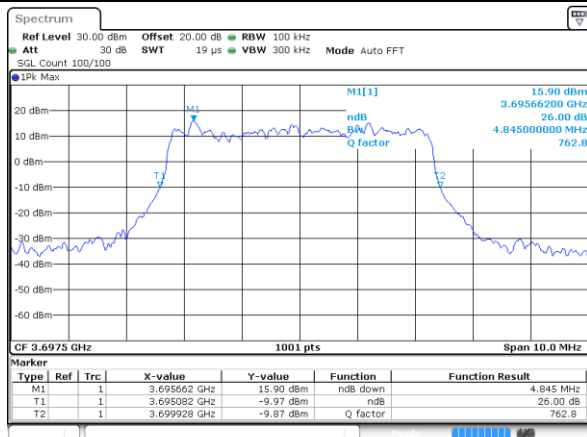
Date: 4 AUG 2020 04:15:06

## Middle Channel / 10MHz / 64QAM



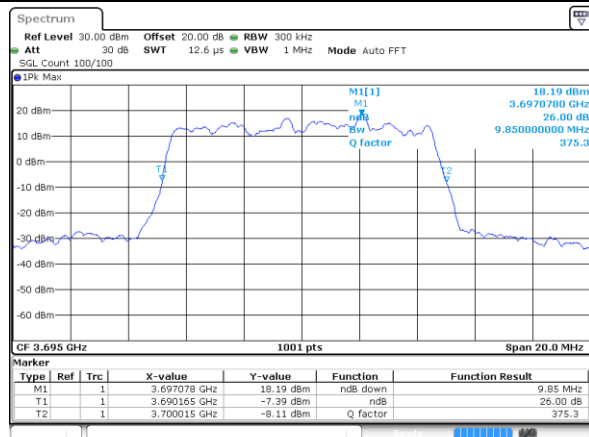
Date: 4 AUG 2020 04:16:18

## Highest Channel / 5MHz / 64QAM



Date: 4 AUG 2020 04:15:29

## Highest Channel / 10MHz / 64QAM

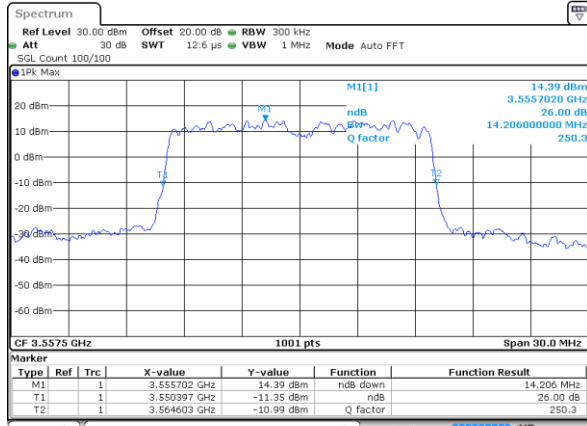


Date: 4 AUG 2020 04:16:41



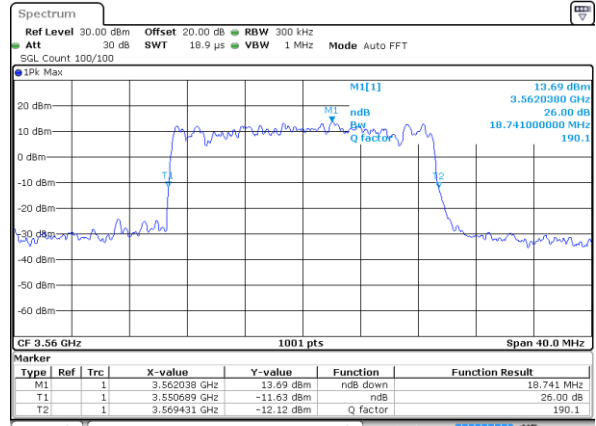
## LTE Band 48

## Lowest Channel / 15MHz / 64QAM



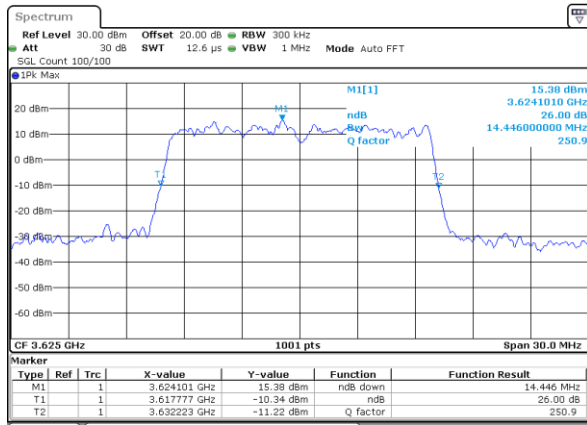
Date: 4 AUG 2020 04:17:07

## Lowest Channel / 20MHz / 64QAM



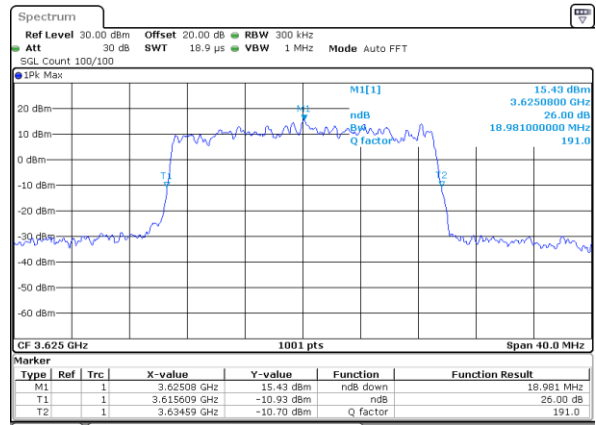
Date: 4 AUG 2020 04:18:19

## Middle Channel / 15MHz / 64QAM



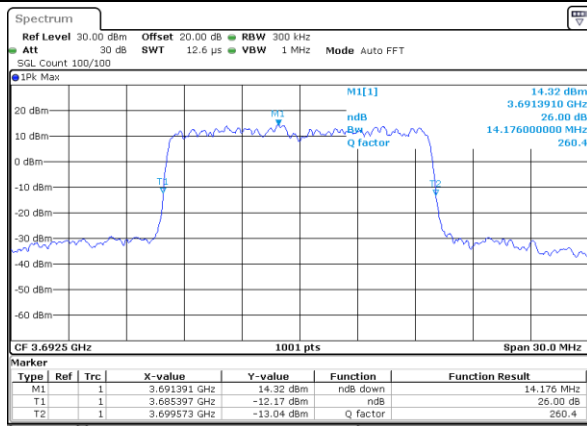
Date: 4 AUG 2020 04:17:30

## Middle Channel / 20MHz / 64QAM



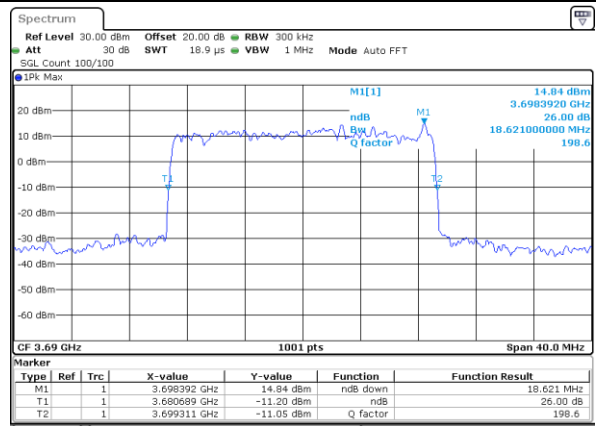
Date: 4 AUG 2020 04:18:42

## Highest Channel / 15MHz / 64QAM



Date: 4 AUG 2020 04:17:53

## Highest Channel / 20MHz / 64QAM



Date: 4 AUG 2020 04:19:05

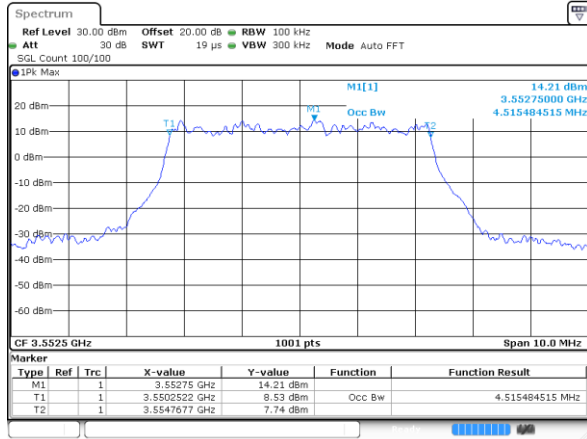
**Occupied Bandwidth**

| Mode       | LTE Band 48 : 99%OBW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
|------------|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| BW         | 1.4MHz                    |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | QPSK                      | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM |
| Lowest CH  | -                         | -     | -     | -     | 4.52  | 4.51  | 9.03  | 9.05  | 13.46 | 13.43 | 17.82 | 17.86 |
| Middle CH  | -                         | -     | -     | -     | 4.51  | 4.55  | 9.05  | 9.01  | 13.49 | 13.43 | 17.86 | 17.86 |
| Highest CH | -                         | -     | -     | -     | 4.52  | 4.51  | 9.03  | 9.05  | 13.43 | 13.49 | 17.82 | 17.86 |
| Mode       | LTE Band 48 : 99%OBW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
| BW         | 1.4MHz                    |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                     |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | -                         | -     | -     | -     | 4.52  | -     | 9.03  | -     | 13.46 | -     | 17.90 | -     |
| Middle CH  | -                         | -     | -     | -     | 4.51  | -     | 9.03  | -     | 13.37 | -     | 17.94 | -     |
| Highest CH | -                         | -     | -     | -     | 4.49  | -     | 9.03  | -     | 13.52 | -     | 17.98 | -     |



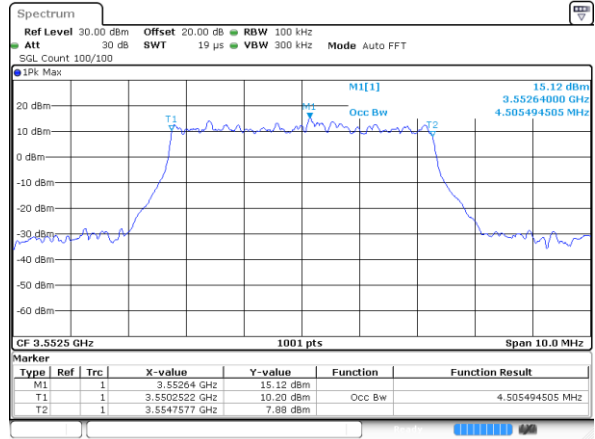
## LTE Band 48

## Lowest Channel / 5MHz / QPSK



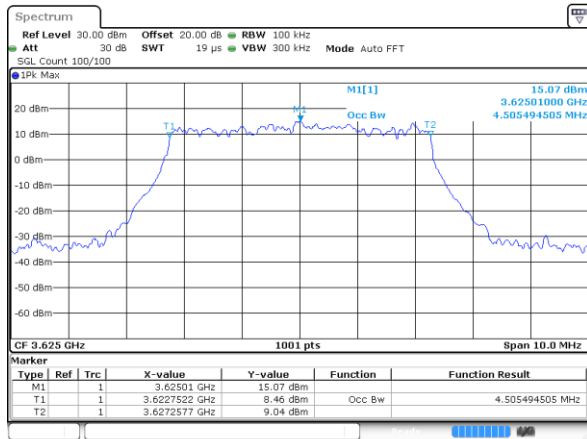
Date: 4 AUG 2020 04:04:56

## Lowest Channel / 5MHz / 16QAM



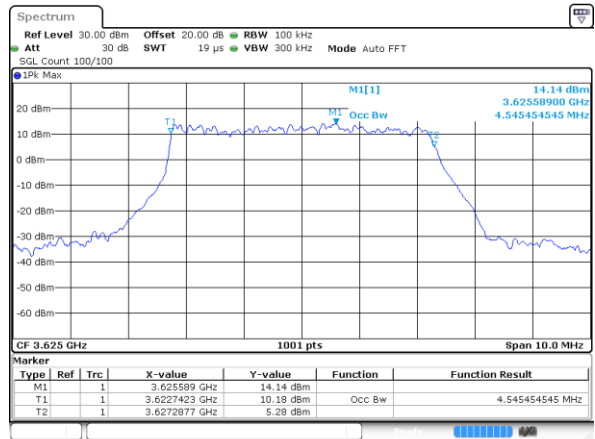
Date: 4 AUG 2020 04:05:08

## Middle Channel / 5MHz / QPSK



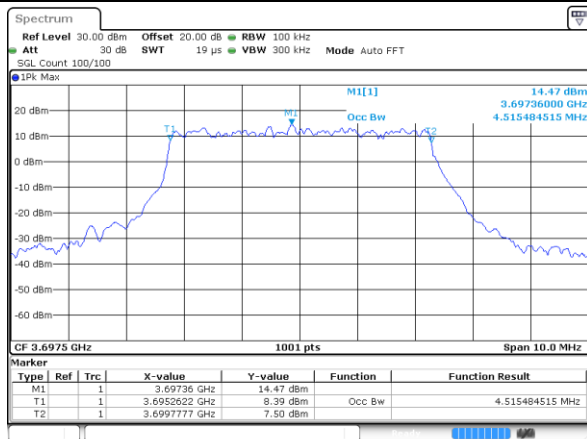
Date: 4 AUG 2020 04:05:43

## Middle Channel / 5MHz / 16QAM



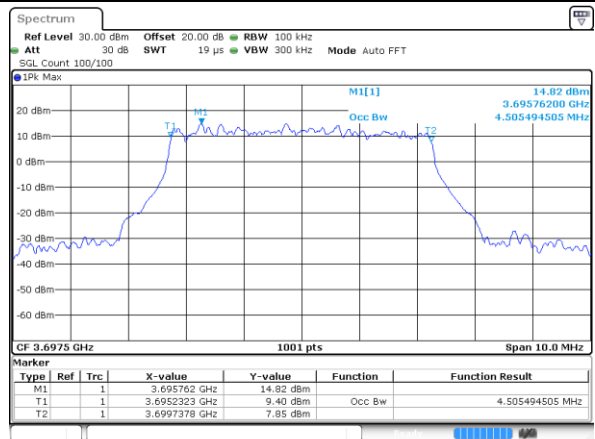
Date: 4 AUG 2020 04:05:55

## Highest Channel / 5MHz / QPSK



Date: 4 AUG 2020 04:06:29

## Highest Channel / 5MHz / 16QAM

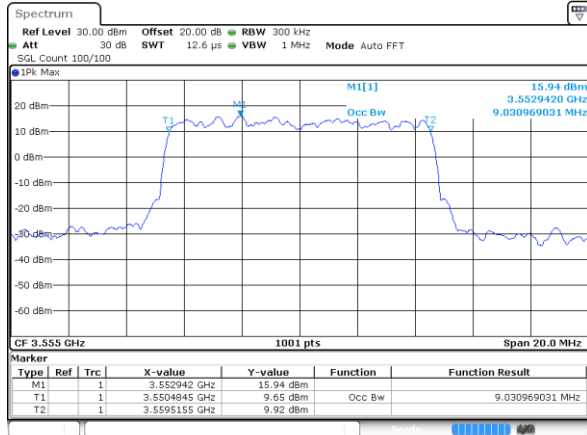


Date: 4 AUG 2020 04:06:42

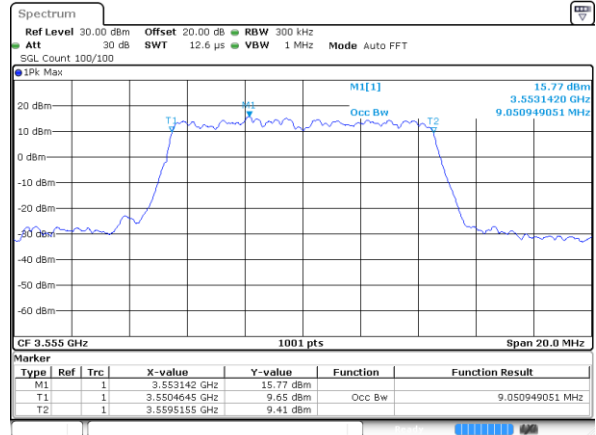


## LTE Band 48

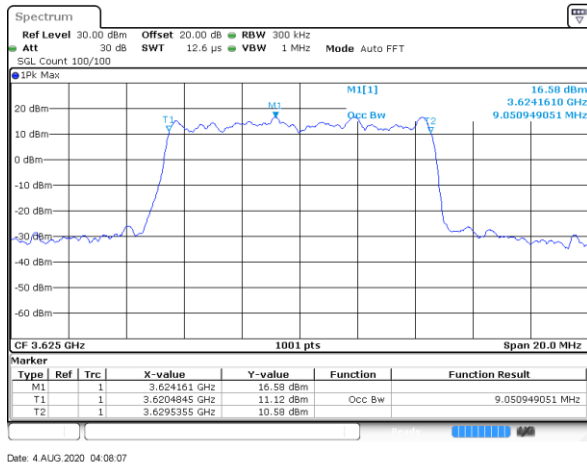
## Lowest Channel / 10MHz / QPSK



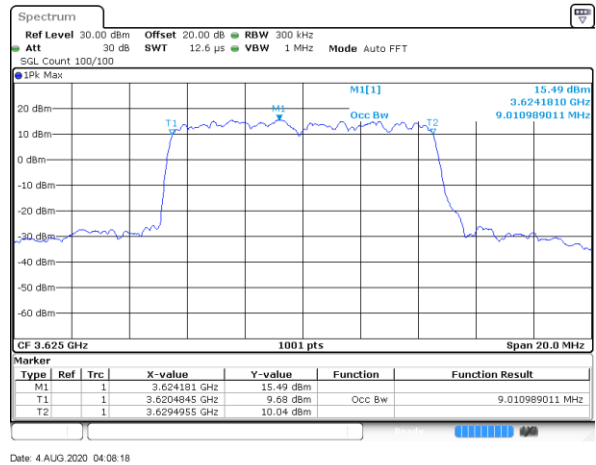
## Lowest Channel / 10MHz / 16QAM



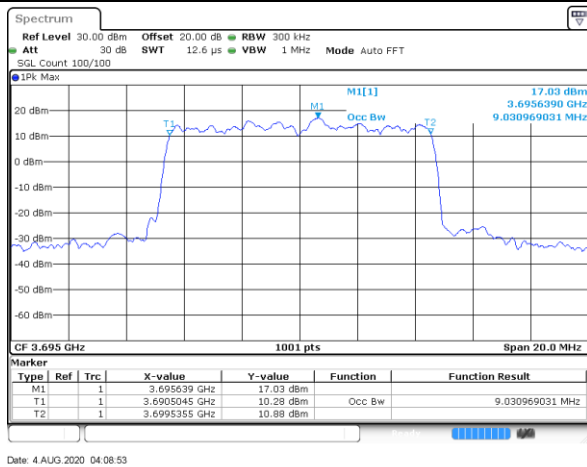
## Middle Channel / 10MHz / QPSK



## Middle Channel / 10MHz / 16QAM



## Highest Channel / 10MHz / QPSK



## Highest Channel / 10MHz / 16QAM

