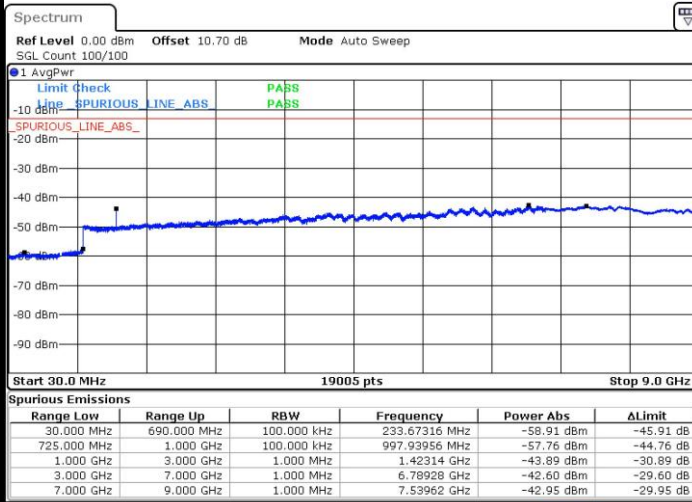




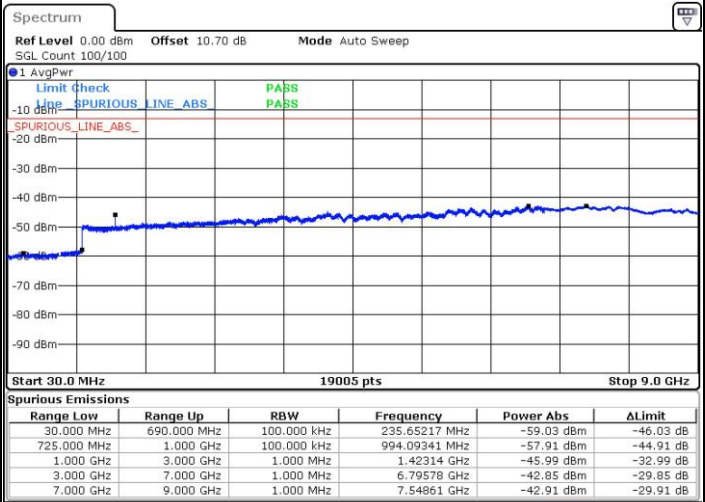
## LTE Band 12 / 5MHz

## Highest Channel / QPSK



Date: 3 JUL 2019 07:53:51

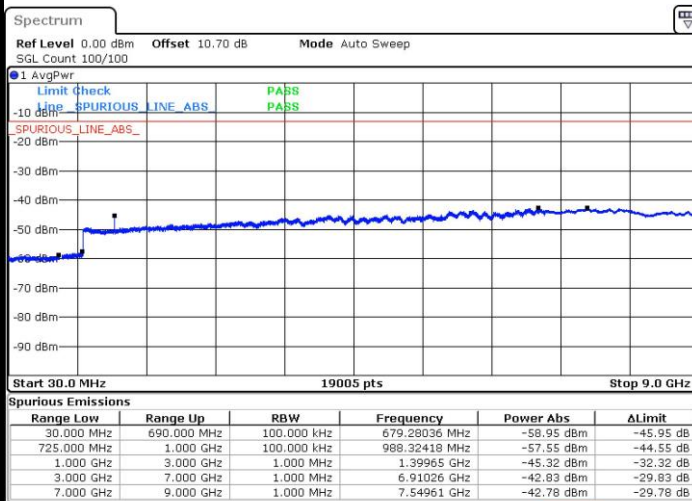
## Highest Channel / 16QAM



Date: 3 JUL 2019 07:53:10

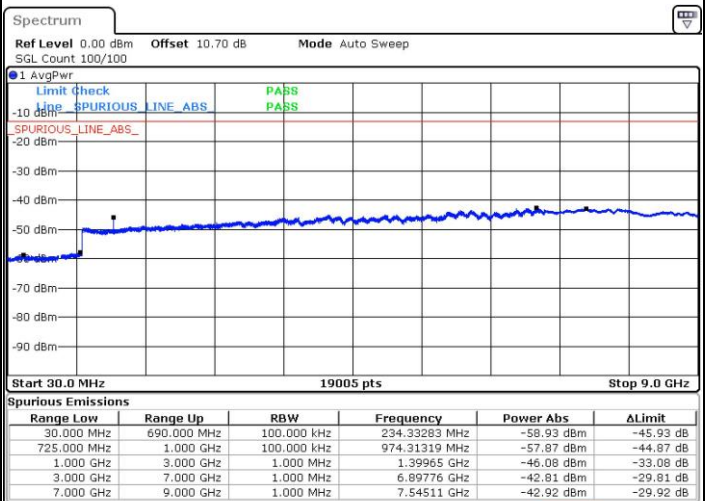
## LTE Band 12 / 10MHz

## Lowest Channel / QPSK



Date: 3 JUL 2019 07:58:06

## Lowest Channel / 16QAM

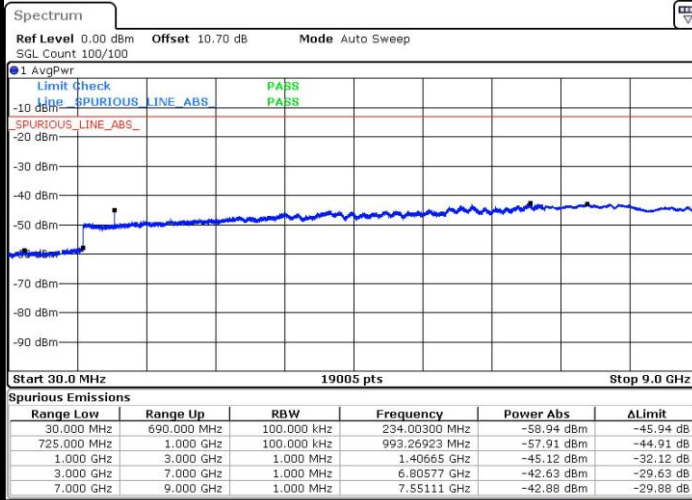


Date: 3 JUL 2019 07:58:47



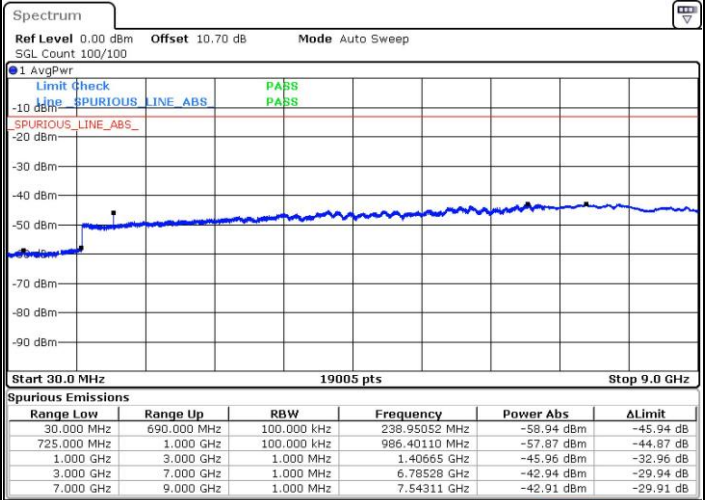
## LTE Band 12 / 10MHz

## Middle Channel / QPSK



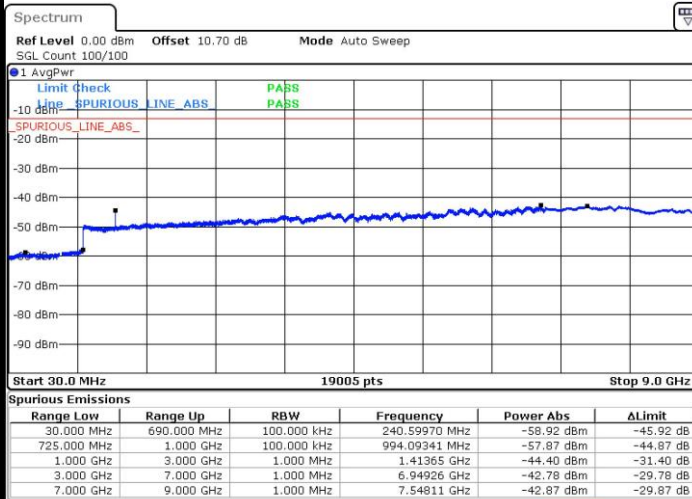
Date: 3 JUL 2019 08:00:58

## Middle Channel / 16QAM



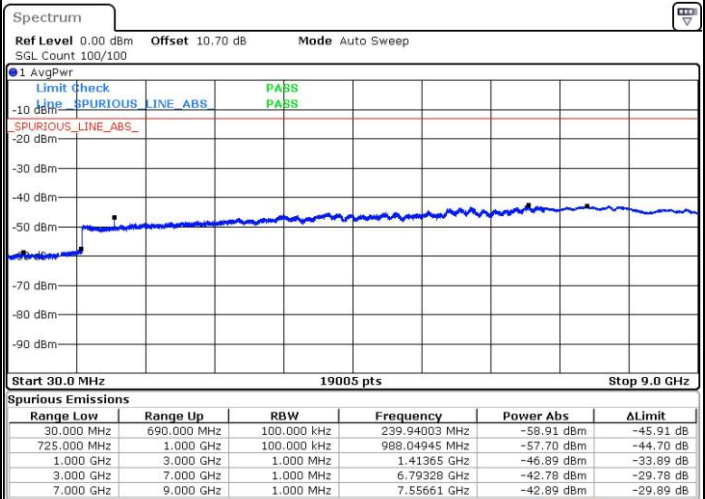
Date: 3 JUL 2019 08:00:17

## Highest Channel / QPSK



Date: 3 JUL 2019 08:05:12

## Highest Channel / 16QAM

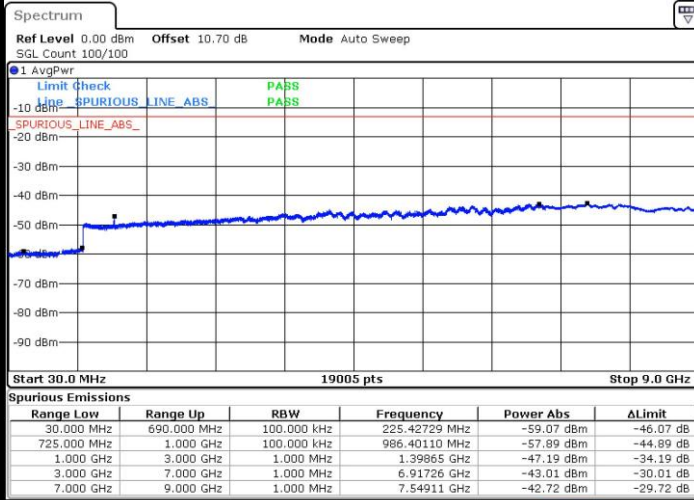


Date: 3 JUL 2019 08:05:53



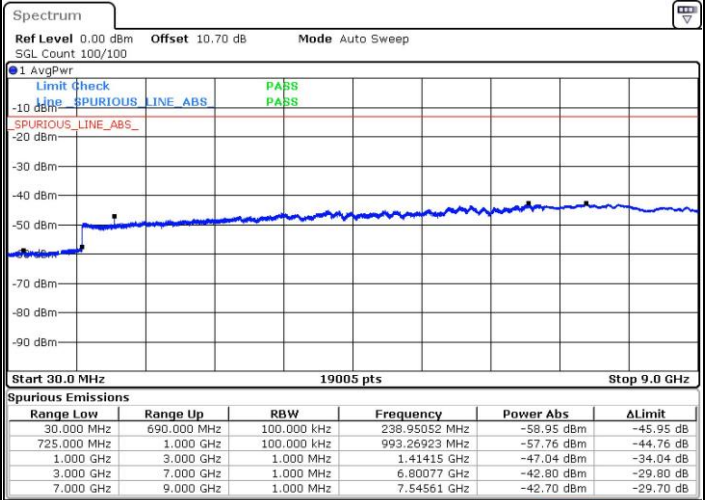
## LTE Band 12 / 1.4MHz

## Lowest Channel / 64QAM



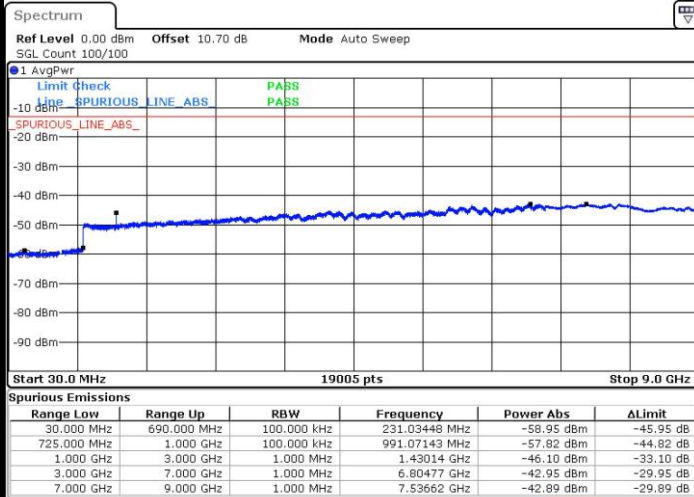
Date: 3 JUL 2019 07:23:24

## Middle Channel / 64QAM



Date: 3 JUL 2019 07:24:28

## Highest Channel / 64QAM

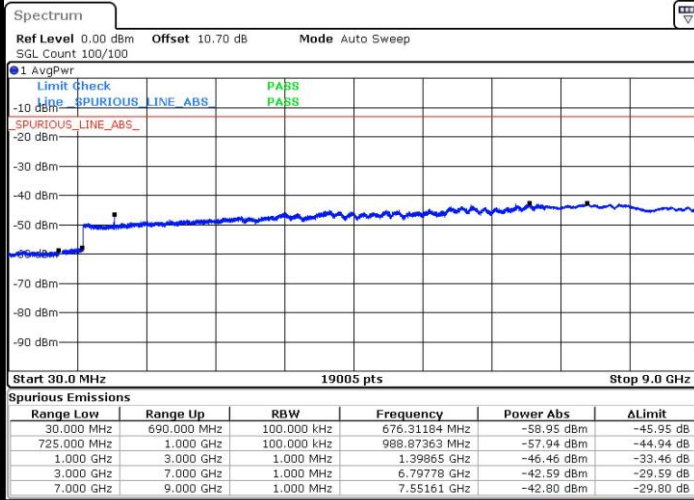


Date: 3 JUL 2019 07:27:46



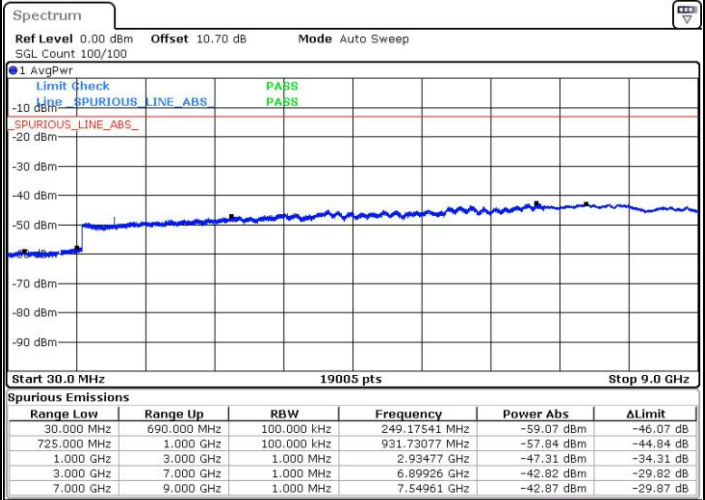
## LTE Band 12 / 3MHz

## Lowest Channel / 64QAM



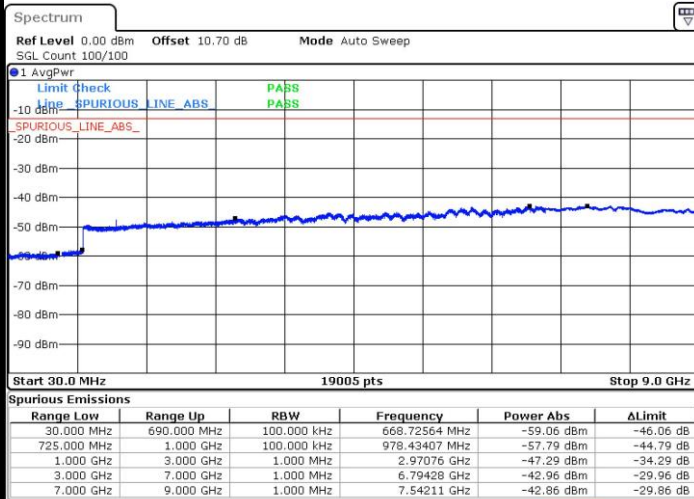
Date: 3 JUL 2019 06:56:04

## Middle Channel / 64QAM



Date: 3 JUL 2019 06:57:08

## Highest Channel / 64QAM

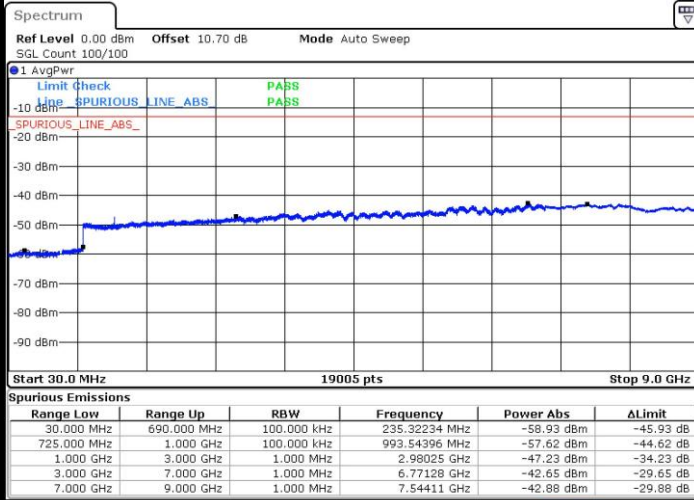


Date: 3 JUL 2019 07:00:25



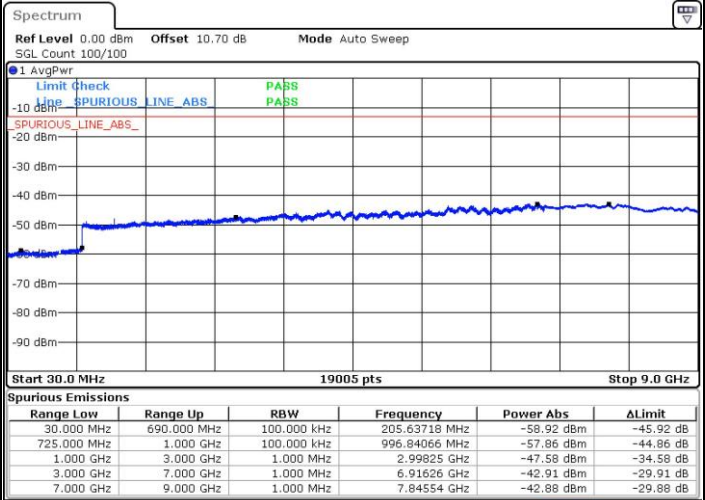
## LTE Band 12 / 5MHz

## Lowest Channel / 64QAM



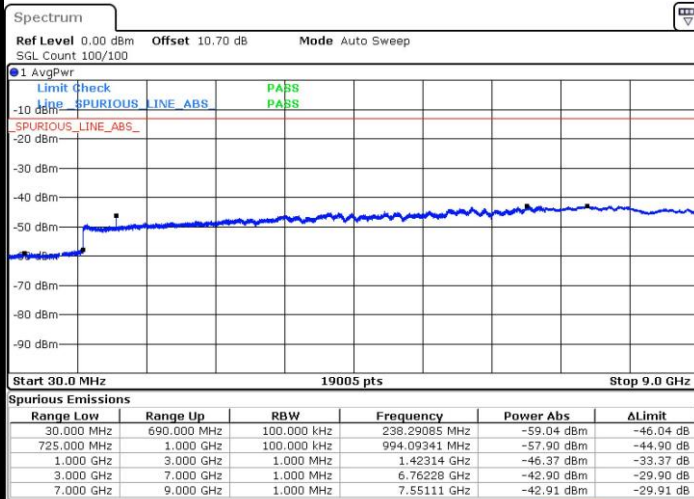
Date: 3 JUL 2019 07:38:19

## Middle Channel / 64QAM



Date: 3 JUL 2019 07:39:24

## Highest Channel / 64QAM

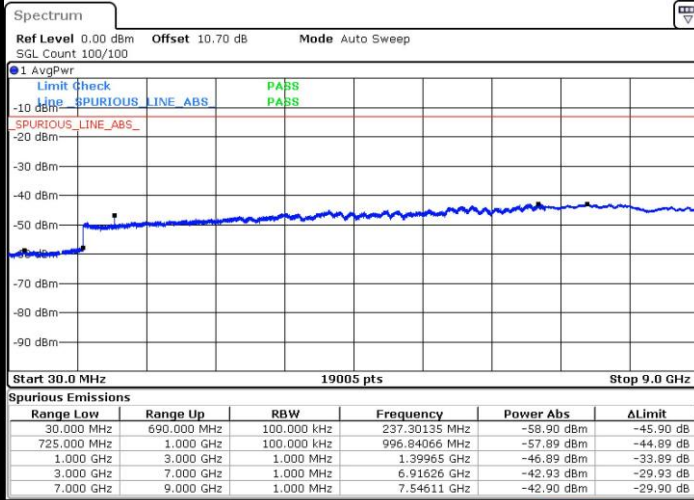


Date: 3 JUL 2019 07:41:51



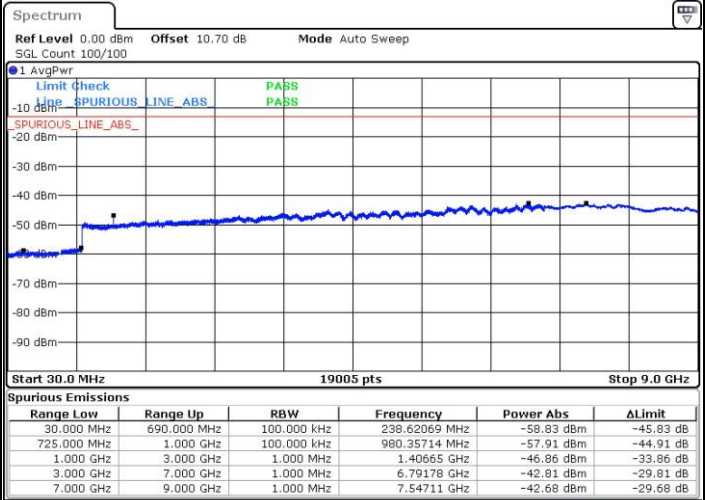
## LTE Band 12 / 10MHz

## Lowest Channel / 64QAM



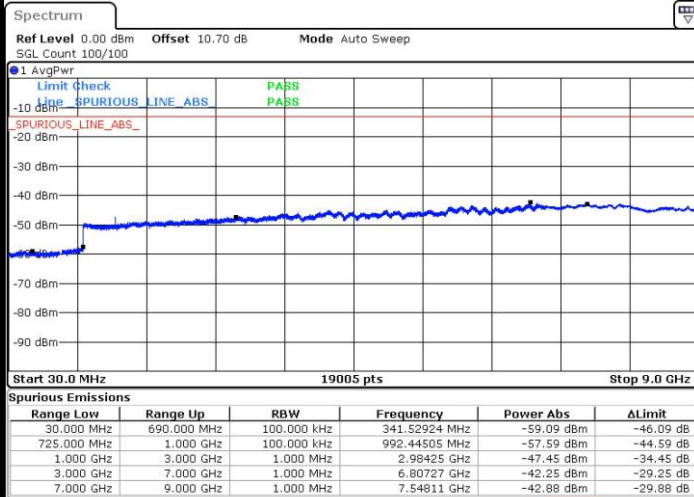
Date: 3 JUL 2019 08:08:21

## Middle Channel / 64QAM



Date: 3 JUL 2019 08:09:25

## Highest Channel / 64QAM



Date: 3 JUL 2019 08:11:52

## Frequency Stability

| Test Conditions  |                   | LTE Band 12 (QPSK) / Middle Channel | Limit   |
|------------------|-------------------|-------------------------------------|---------|
| Temperature (°C) | Voltage (Volt)    | BW 10MHz                            | Note 2. |
|                  |                   | Deviation (ppm)                     | Result  |
| 50               | Normal Voltage    | 0.0086                              | PASS    |
| 40               | Normal Voltage    | 0.0075                              |         |
| 30               | Normal Voltage    | 0.0106                              |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                              |         |
| 10               | Normal Voltage    | 0.0092                              |         |
| 0                | Normal Voltage    | 0.0112                              |         |
| -10              | Normal Voltage    | 0.0001                              |         |
| -20              | Normal Voltage    | 0.0007                              |         |
| -30              | Normal Voltage    | 0.0075                              |         |
| 20               | Maximum Voltage   | 0.0076                              |         |
| 20               | Normal Voltage    | 0.0000                              |         |
| 20               | Battery End Point | 0.0102                              |         |

**Note:**

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.65 V. ; Maximum Voltage =4.25 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

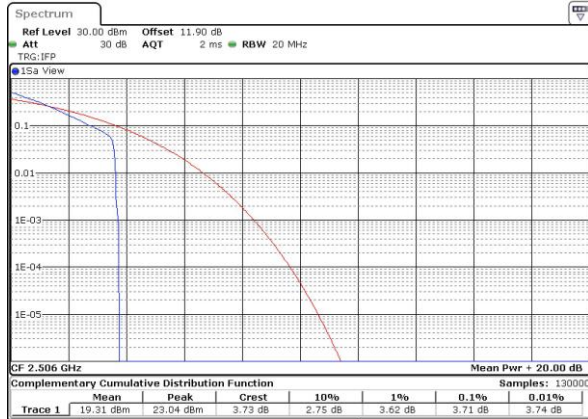


## LTE Band 41

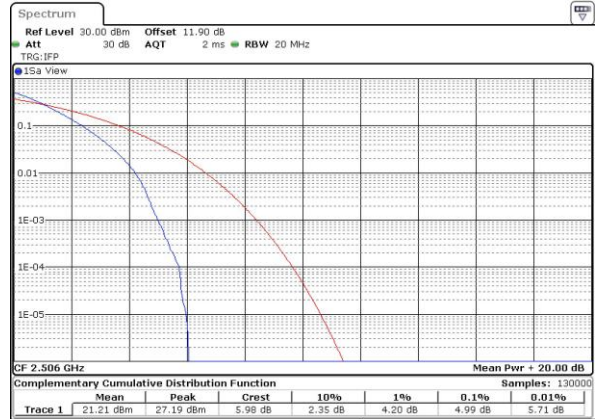
**Peak-to-Average Ratio**

| Mode       | LTE Band 41 / 20MHz |         |       |         |             |
|------------|---------------------|---------|-------|---------|-------------|
| Mod.       | QPSK                |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | 3.71                | 4.99    | 4.52  | 5.94    | PASS        |
| Middle CH  | 3.68                | 5.01    | 4.38  | 5.94    |             |
| Highest CH | 3.74                | 4.96    | 4.64  | 5.97    |             |
| Mode       | LTE Band 41 / 20MHz |         |       |         |             |
| Mod.       | 64QAM               |         |       |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB |       |         | Result      |
| Lowest CH  | 5.59                | 6.64    | -     | -       | PASS        |
| Middle CH  | 5.28                | 6.49    | -     | -       |             |
| Highest CH | 5.59                | 6.46    | -     | -       |             |



**LTE Band 41 / 20MHz / QPSK**
**Lowest Channel / 1RB**


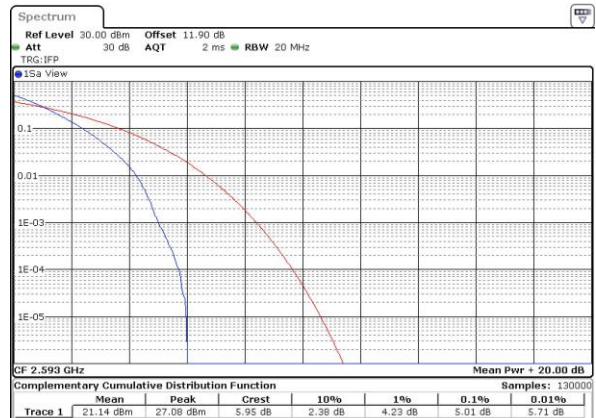
Date: 3 JUL 2019 15:08:53

**Lowest Channel / Full RB**


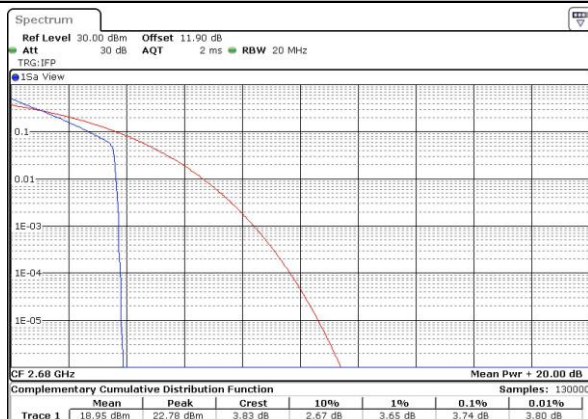
Date: 3 JUL 2019 15:09:10

**Middle Channel / 1RB**

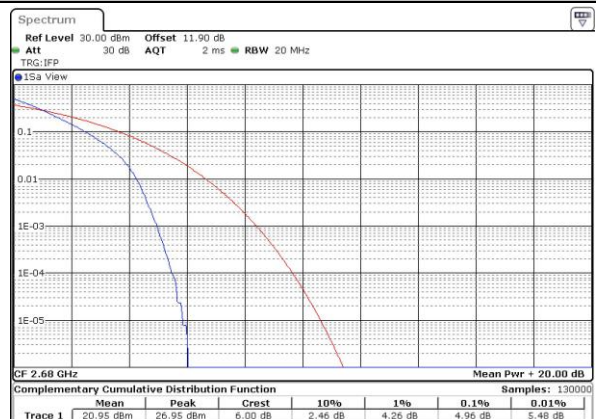

Date: 3 JUL 2019 15:09:24

**Middle Channel / Full RB**


Date: 3 JUL 2019 15:09:40

**Highest Channel / 1RB**


Date: 3 JUL 2019 15:10:01

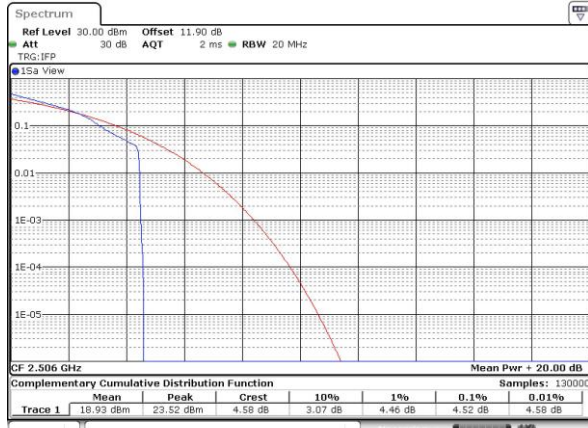
**Highest Channel / Full RB**


Date: 3 JUL 2019 15:10:23

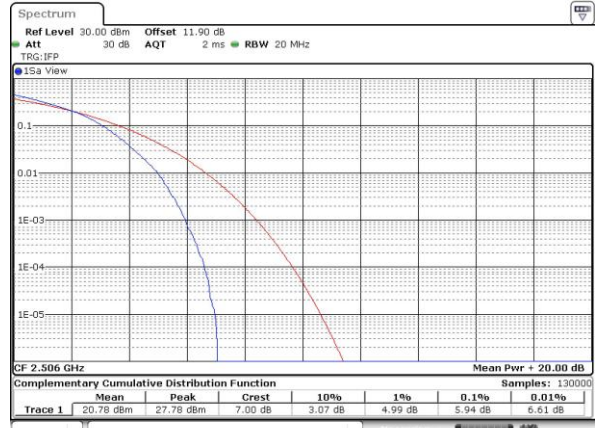


## LTE Band 41 / 20MHz / 16QAM

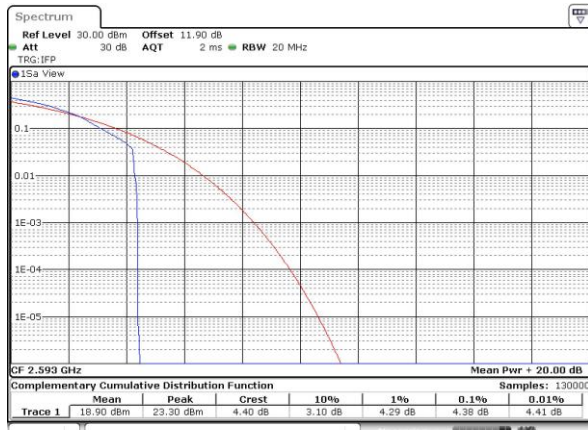
## Lowest Channel / 1RB



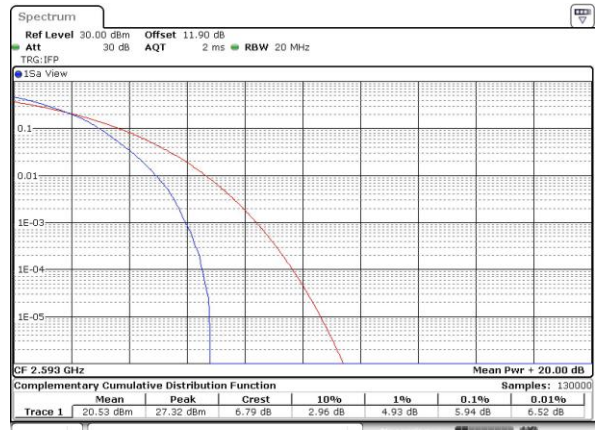
## Lowest Channel / Full RB



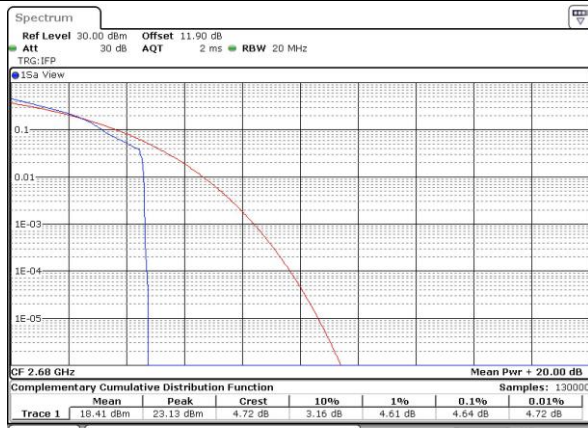
## Middle Channel / 1RB



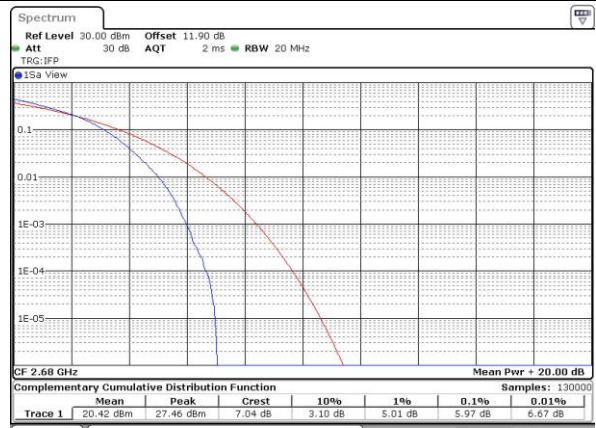
## Middle Channel / Full RB



## Highest Channel / 1RB



## Highest Channel / Full RB

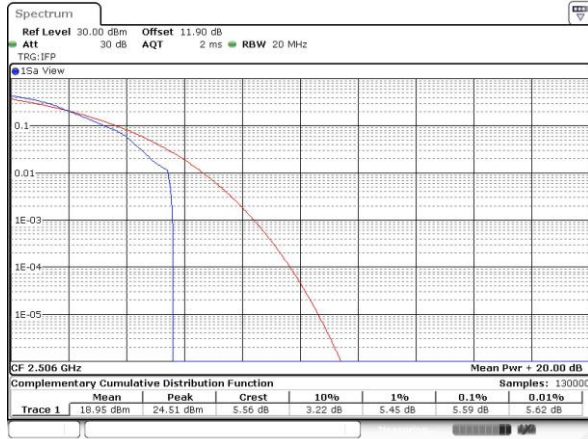




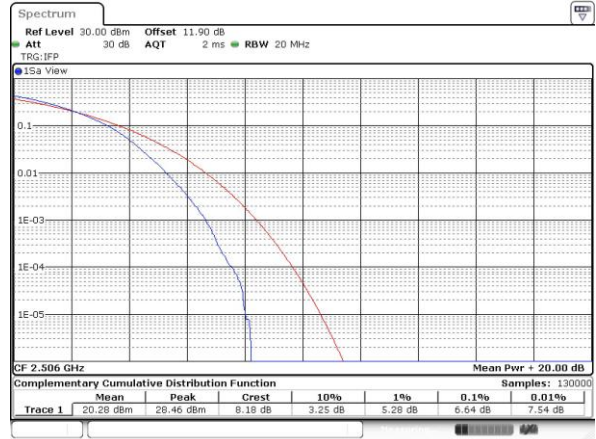


## LTE Band 41 / 20MHz / 64QAM

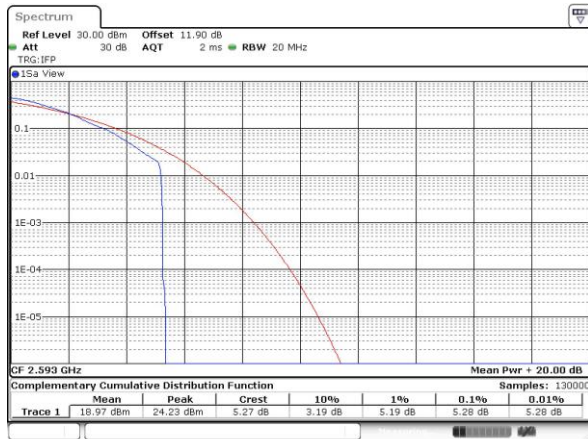
## Lowest Channel / 1RB



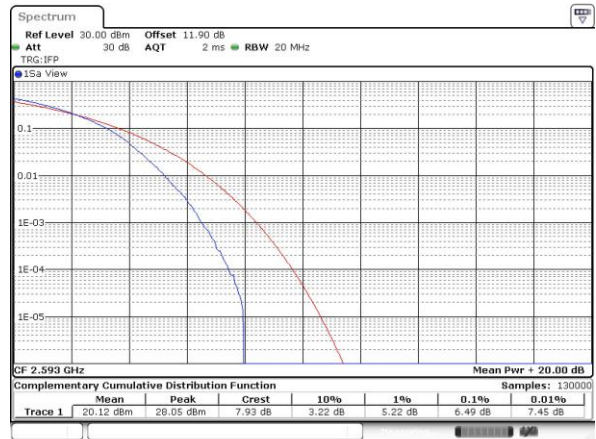
## Lowest Channel / Full RB



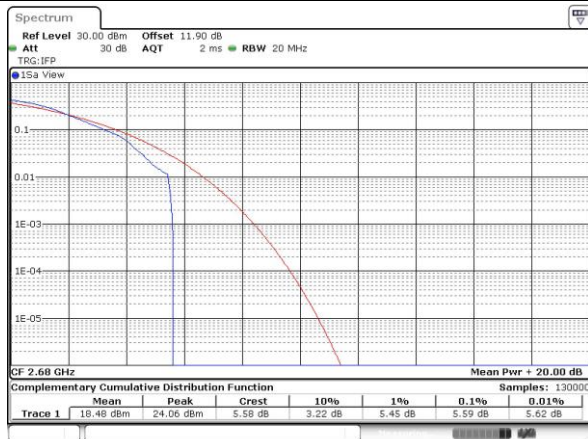
## Middle Channel / 1RB



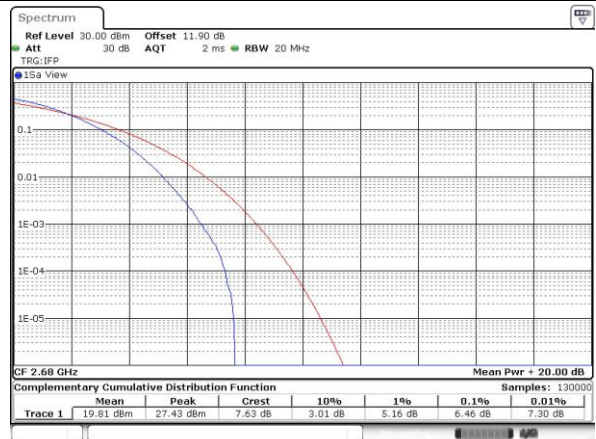
## Middle Channel / Full RB



## Highest Channel / 1RB



## Highest Channel / Full RB



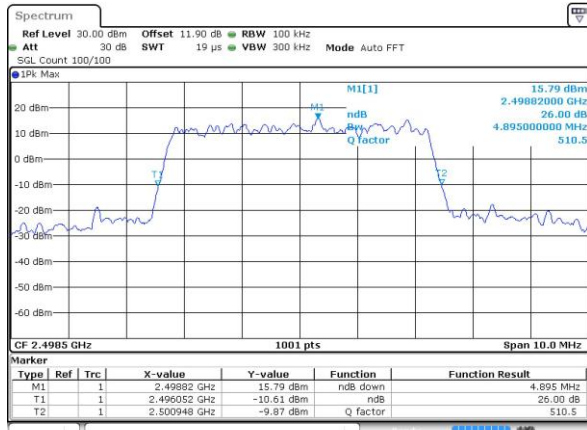
**26dB Bandwidth**

| Mode       | LTE Band 41 : 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  | -                          | -     | -     | -     | 4.90  | 4.73  | 9.63  | 9.73  | 14.18 | 14.24 | 18.74 | 18.78 |
| Middle CH  | -                          | -     | -     | -     | 4.86  | 4.86  | 9.81  | 9.65  | 14.15 | 14.24 | 19.18 | 18.66 |
| Highest CH | -                          | -     | -     | -     | 4.80  | 4.85  | 9.65  | 9.77  | 14.18 | 14.12 | 18.90 | 18.90 |
| Mode       | LTE Band 41 : 26dB BW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
| BW         | 1.4MHz                     |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                      |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | -                          | -     | -     | -     | 4.72  | -     | 9.77  | -     | 14.63 | -     | 18.82 | -     |
| Middle CH  | -                          | -     | -     | -     | 4.90  | -     | 9.67  | -     | 14.15 | -     | 18.70 | -     |
| Highest CH | -                          | -     | -     | -     | 5.00  | -     | 9.75  | -     | 14.12 | -     | 18.86 | -     |



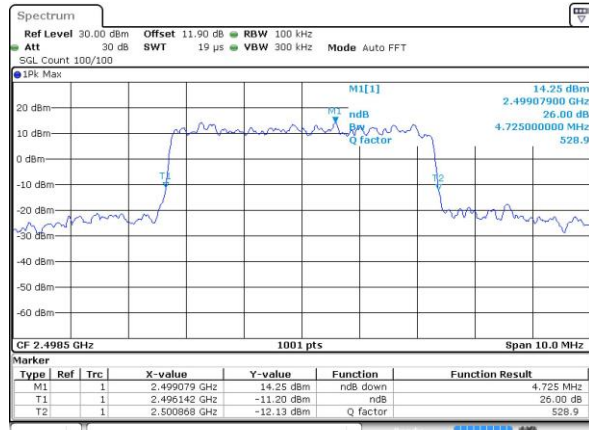
## LTE Band 41

## Lowest Channel / 5MHz / QPSK



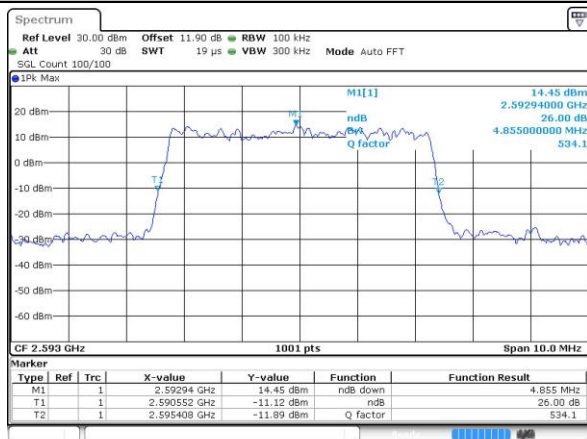
Date: 3 JUL 2019 14:48:26

## Lowest Channel / 5MHz / 16QAM



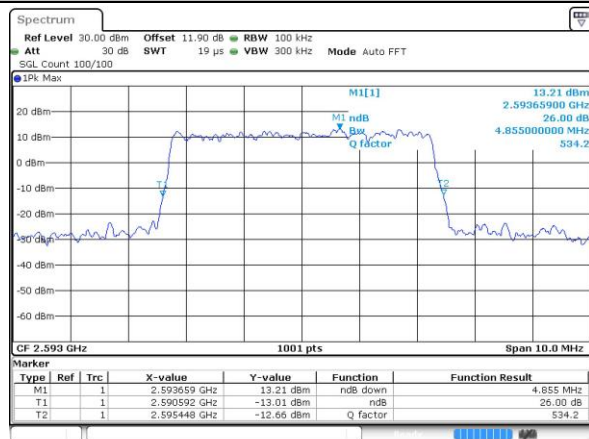
Date: 3 JUL 2019 14:48:38

## Middle Channel / 5MHz / QPSK



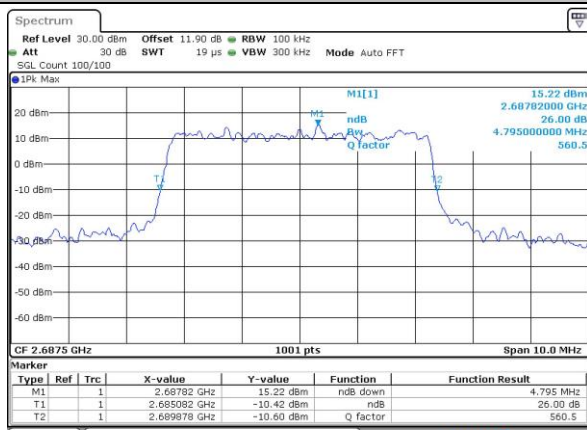
Date: 3 JUL 2019 14:49:14

## Middle Channel / 5MHz / 16QAM



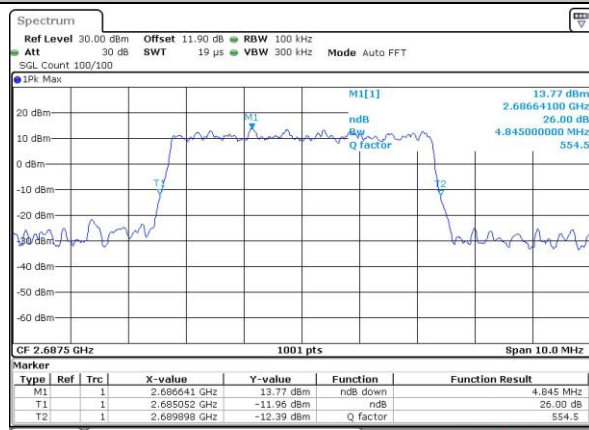
Date: 3 JUL 2019 14:49:25

## Highest Channel / 5MHz / QPSK



Date: 3 JUL 2019 14:50:02

## Highest Channel / 5MHz / 16QAM

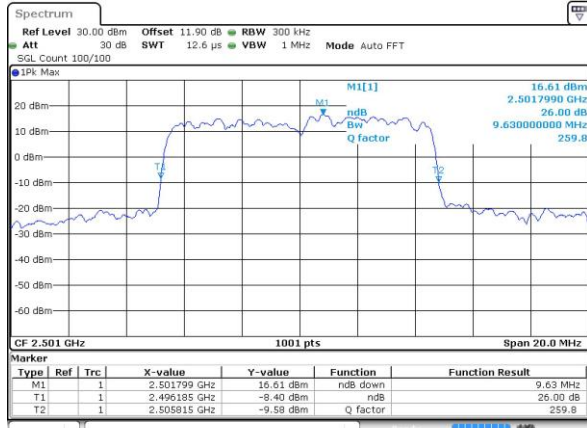


Date: 3 JUL 2019 14:50:14



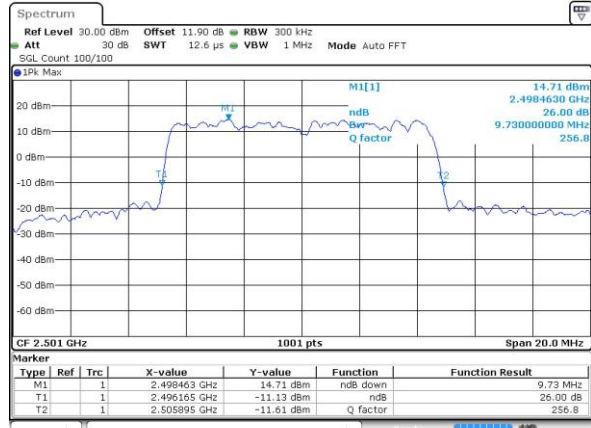
## LTE Band 41

## Lowest Channel / 10MHz / QPSK



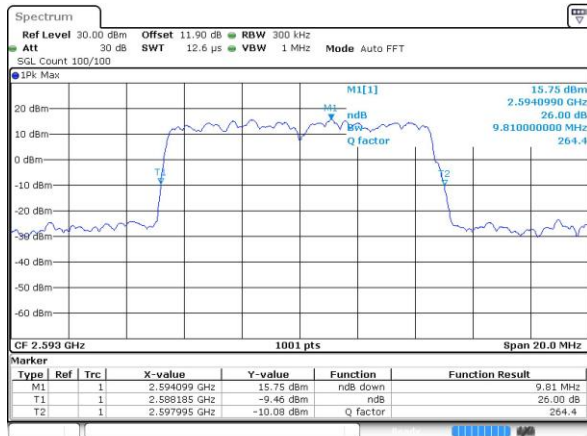
Date: 3.JUL.2019 14:50:53

## Lowest Channel / 10MHz / 16QAM



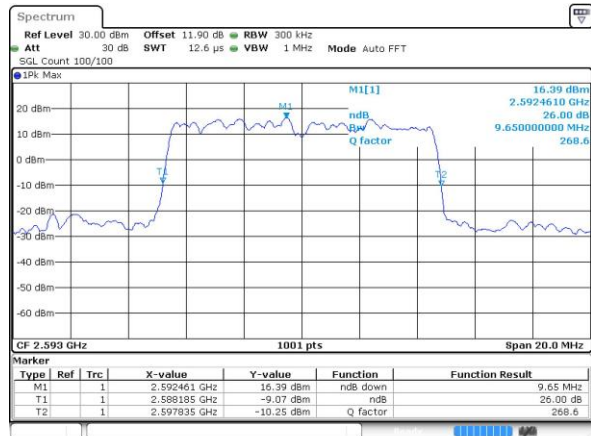
Date: 3.JUL.2019 14:51:05

## Middle Channel / 10MHz / QPSK



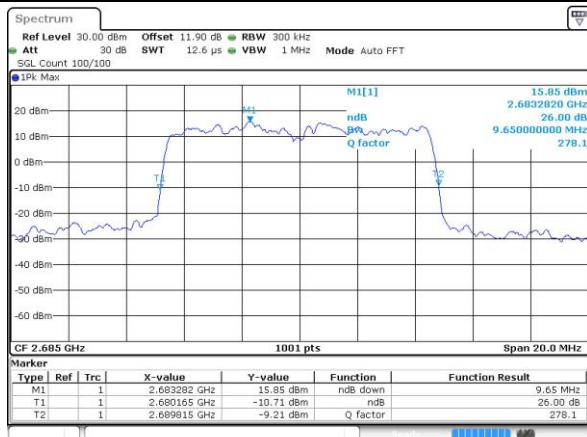
Date: 3.JUL.2019 14:51:40

## Middle Channel / 10MHz / 16QAM



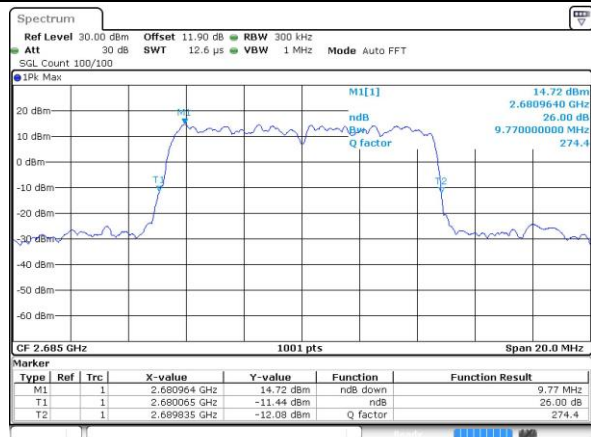
Date: 3.JUL.2019 14:51:52

## Highest Channel / 10MHz / QPSK



Date: 3.JUL.2019 14:52:29

## Highest Channel / 10MHz / 16QAM

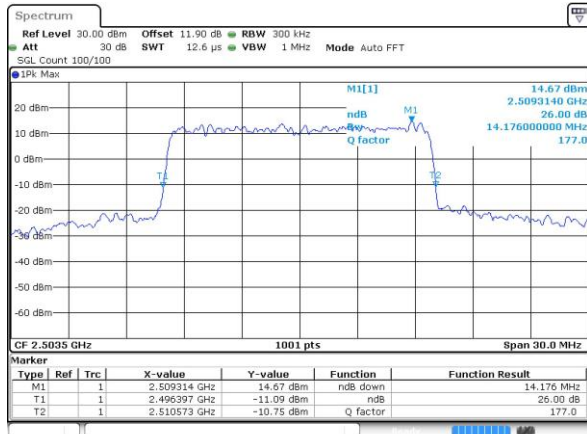


Date: 3.JUL.2019 14:52:41



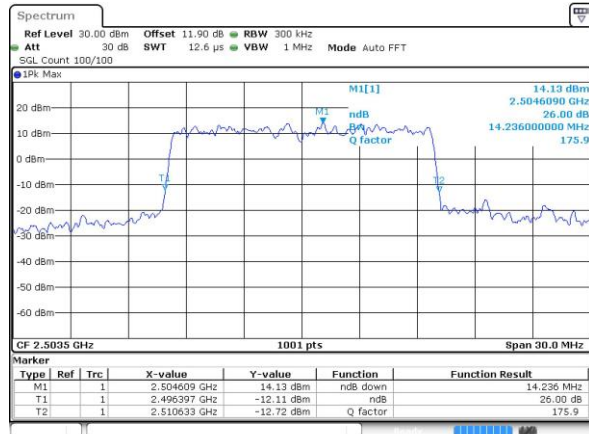
## LTE Band 41

## Lowest Channel / 15MHz / QPSK



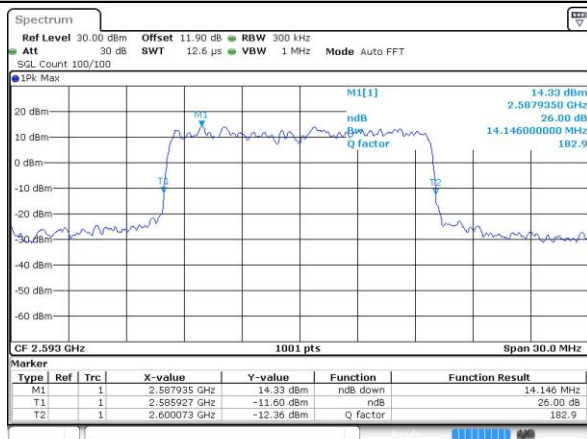
Date: 3 JUL 2019 14:53:20

## Lowest Channel / 15MHz / 16QAM



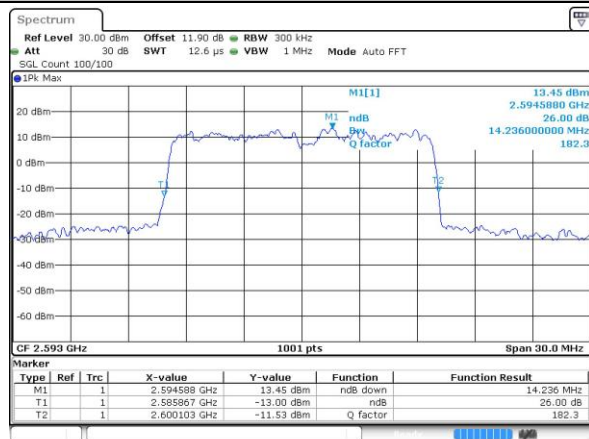
Date: 3 JUL 2019 14:53:32

## Middle Channel / 15MHz / QPSK



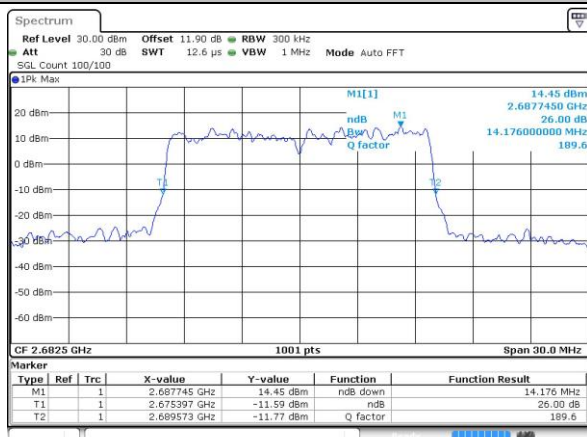
Date: 3 JUL 2019 14:54:08

## Middle Channel / 15MHz / 16QAM



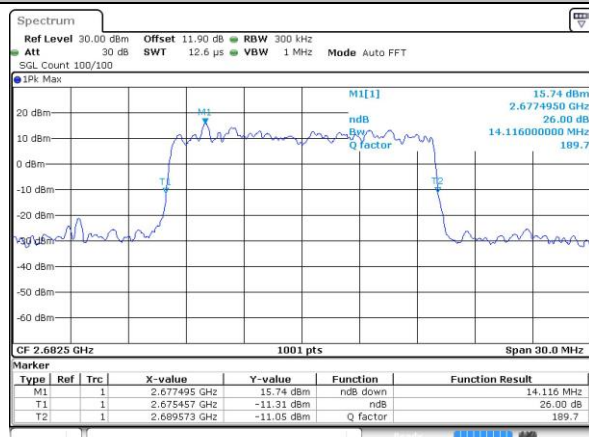
Date: 3 JUL 2019 14:54:19

## Highest Channel / 15MHz / QPSK



Date: 3 JUL 2019 14:54:56

## Highest Channel / 15MHz / 16QAM



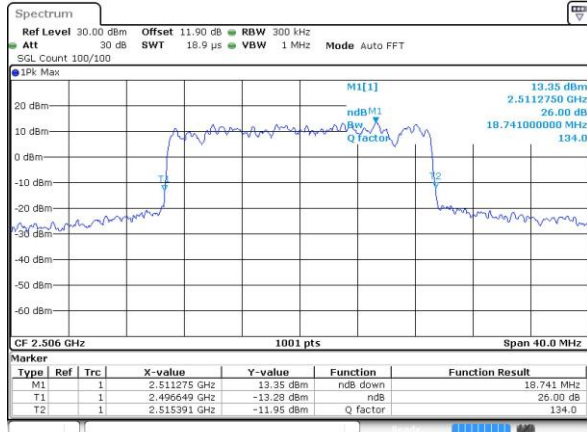
Date: 3 JUL 2019 14:55:08



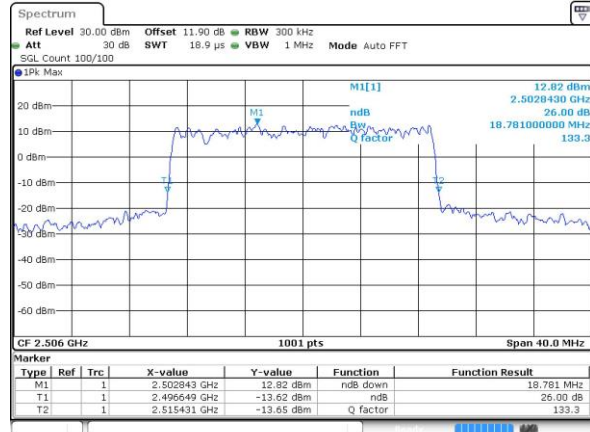


## LTE Band 41

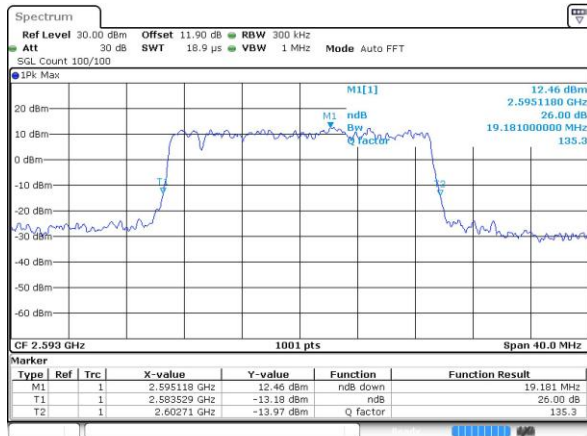
## Lowest Channel / 20MHz / QPSK



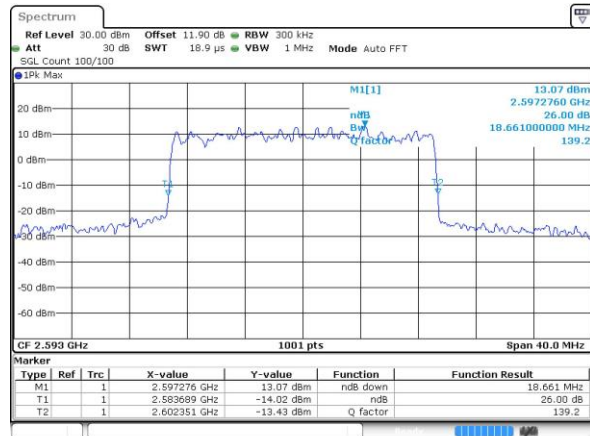
## Lowest Channel / 20MHz / 16QAM



## Middle Channel / 20MHz / QPSK



## Middle Channel / 20MHz / 16QAM



## Highest Channel / 20MHz / QPSK



## Highest Channel / 20MHz / 16QAM

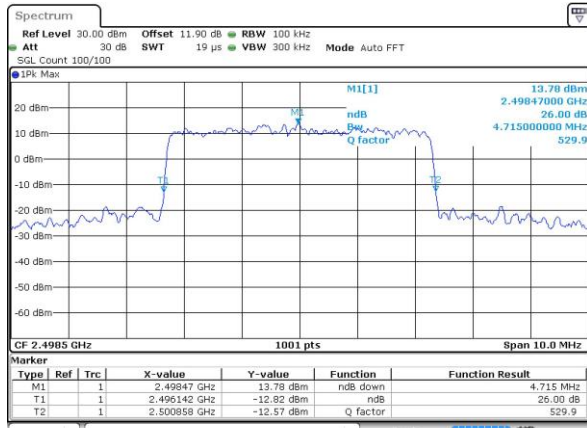






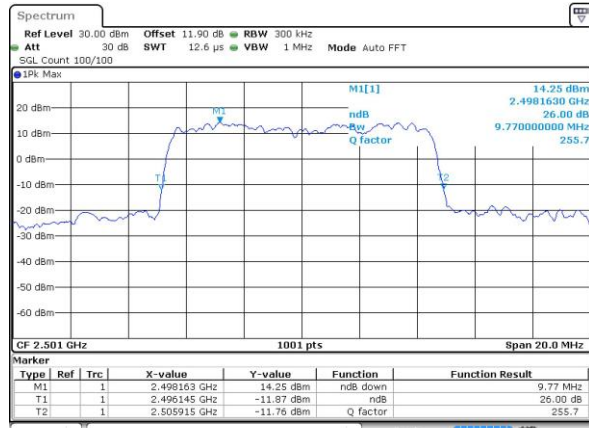
## LTE Band 41

## Lowest Channel / 5MHz / 64QAM



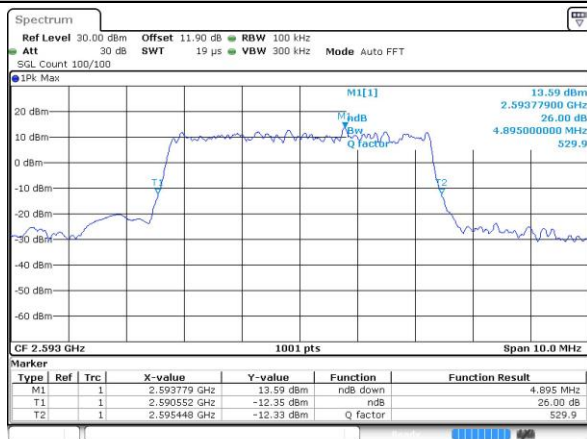
Date: 3 JUL 2019 14:58:01

## Lowest Channel / 10MHz / 64QAM



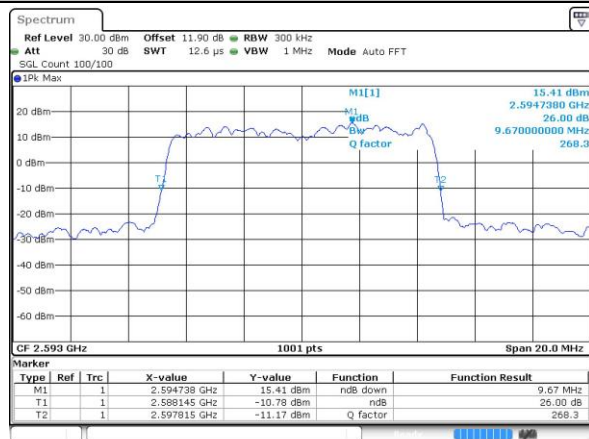
Date: 3 JUL 2019 14:59:15

## Middle Channel / 5MHz / 64QAM



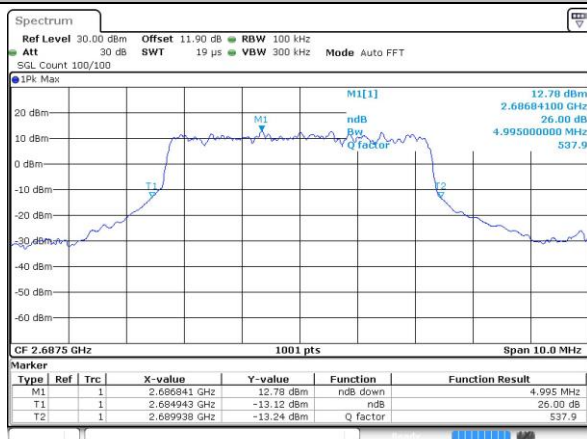
Date: 3 JUL 2019 14:58:25

## Middle Channel / 10MHz / 64QAM



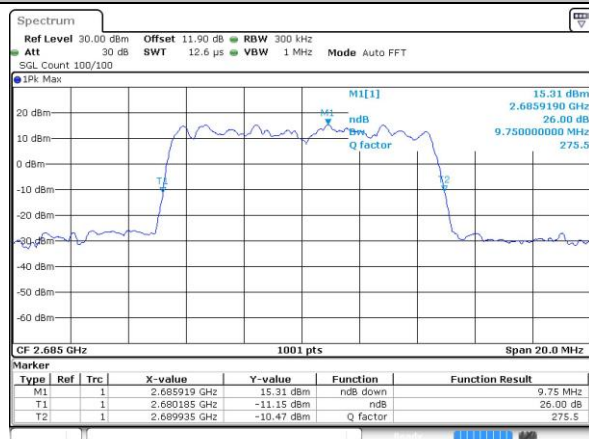
Date: 3 JUL 2019 14:59:39

## Highest Channel / 5MHz / 64QAM



Date: 3 JUL 2019 14:58:49

## Highest Channel / 10MHz / 64QAM

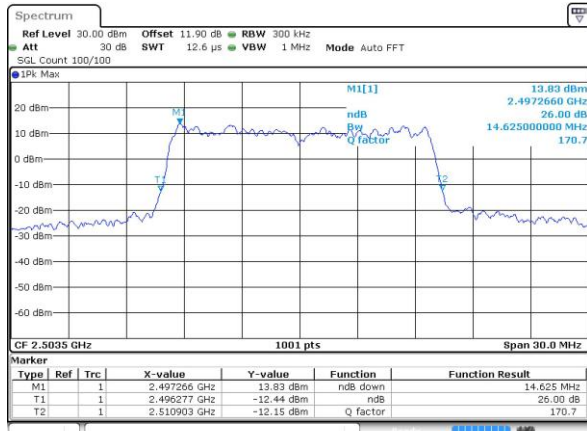


Date: 3 JUL 2019 15:00:03



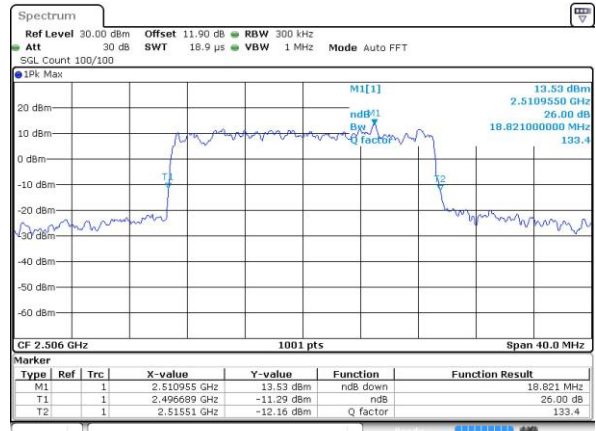
## LTE Band 41

## Lowest Channel / 15MHz / 64QAM



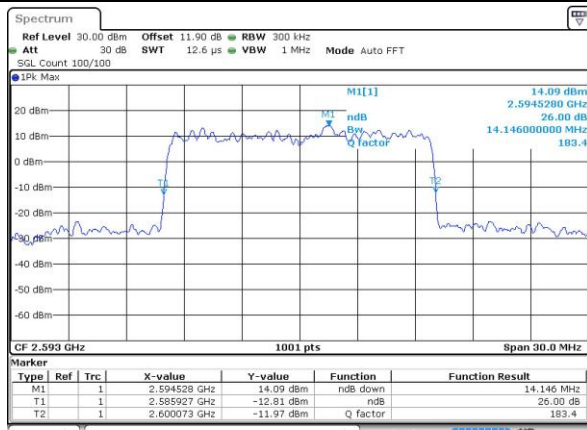
Date: 3 JUL 2019 15:00:29

## Lowest Channel / 20MHz / 64QAM



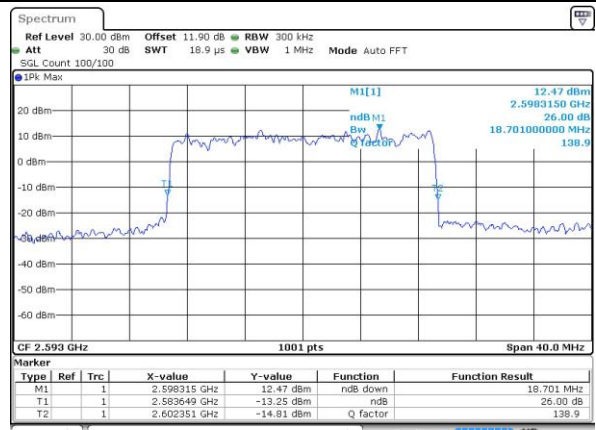
Date: 3 JUL 2019 15:01:43

## Middle Channel / 15MHz / 64QAM



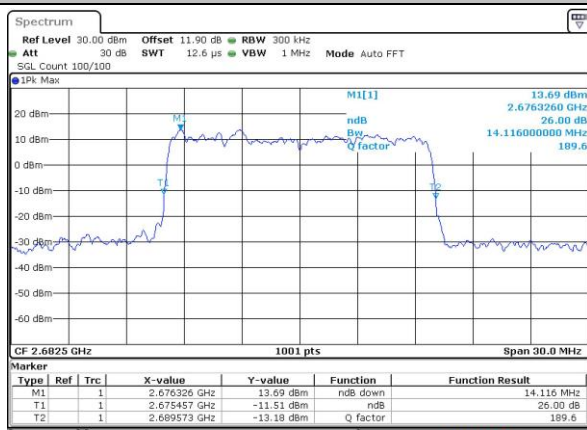
Date: 3 JUL 2019 15:00:53

## Middle Channel / 20MHz / 64QAM



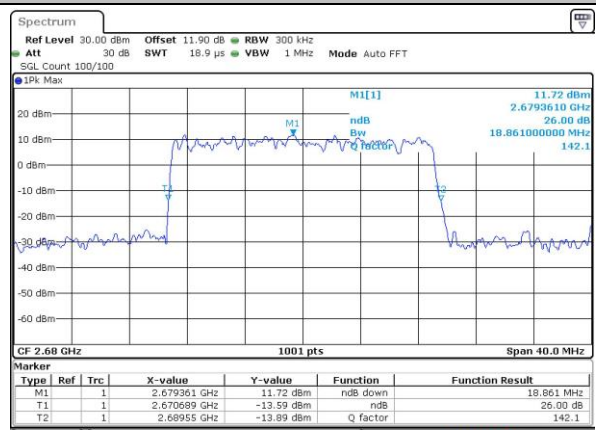
Date: 3 JUL 2019 15:02:06

## Highest Channel / 15MHz / 64QAM



Date: 3 JUL 2019 15:01:17

## Highest Channel / 20MHz / 64QAM



Date: 3 JUL 2019 15:02:31

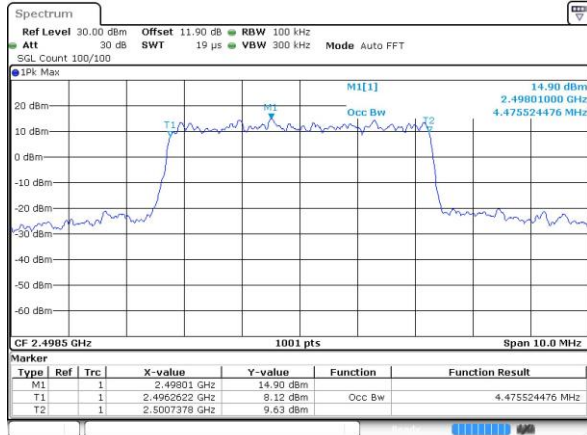
**Occupied Bandwidth**

| Mode       | LTE Band 41 : 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  | -                         | -     | -     | -     | 4.48  | 4.47  | 9.01  | 9.05  | 13.52 | 13.46 | 17.90 | 17.86 |
| Middle CH  | -                         | -     | -     | -     | 4.50  | 4.47  | 9.05  | 8.97  | 13.37 | 13.43 | 17.86 | 17.86 |
| Highest CH | -                         | -     | -     | -     | 4.48  | 4.49  | 9.03  | 9.03  | 13.46 | 13.49 | 17.90 | 17.90 |
| Mode       | LTE Band 41 : 99%OBW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
| BW         | 1.4MHz                    |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                     |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | -                         | -     | -     | -     | 4.48  | -     | 8.99  | -     | 13.43 | -     | 17.86 | -     |
| Middle CH  | -                         | -     | -     | -     | 4.51  | -     | 9.05  | -     | 13.43 | -     | 17.86 | -     |
| Highest CH | -                         | -     | -     | -     | 4.50  | -     | 9.01  | -     | 13.40 | -     | 17.86 | -     |



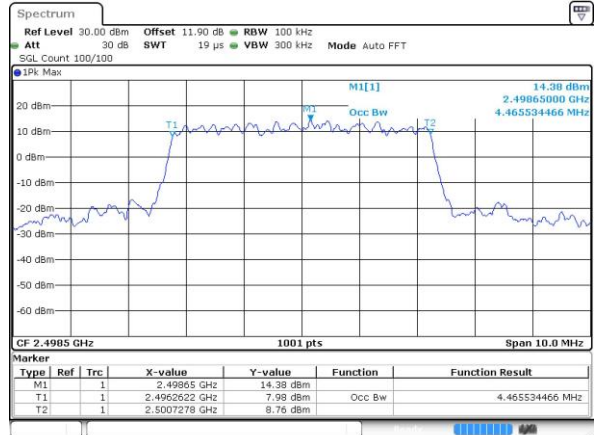
## LTE Band 41

## Lowest Channel / 5MHz / QPSK



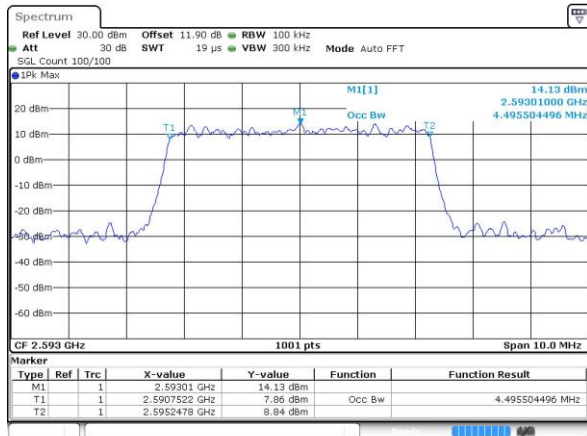
Date: 3 JUL 2019 14:48:01

## Lowest Channel / 5MHz / 16QAM



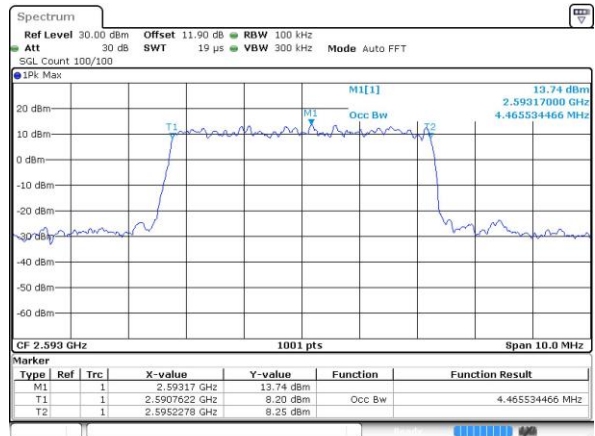
Date: 3 JUL 2019 14:48:14

## Middle Channel / 5MHz / QPSK



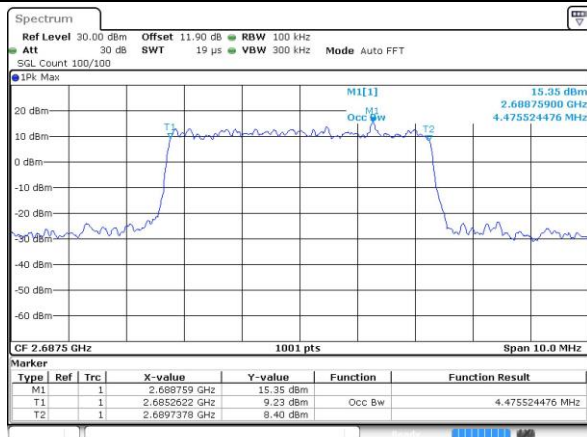
Date: 3 JUL 2019 14:48:50

## Middle Channel / 5MHz / 16QAM



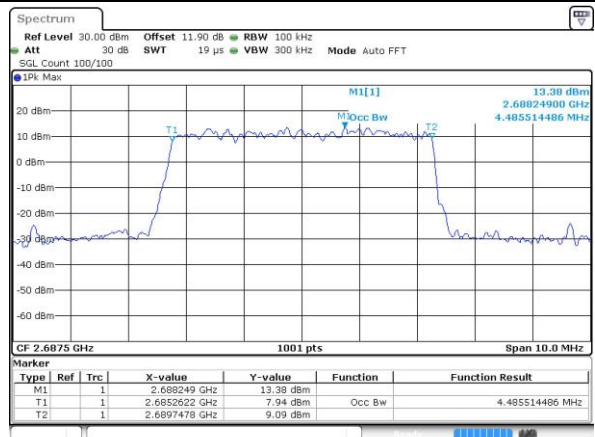
Date: 3 JUL 2019 14:49:02

## Highest Channel / 5MHz / QPSK



Date: 3 JUL 2019 14:49:37

## Highest Channel / 5MHz / 16QAM

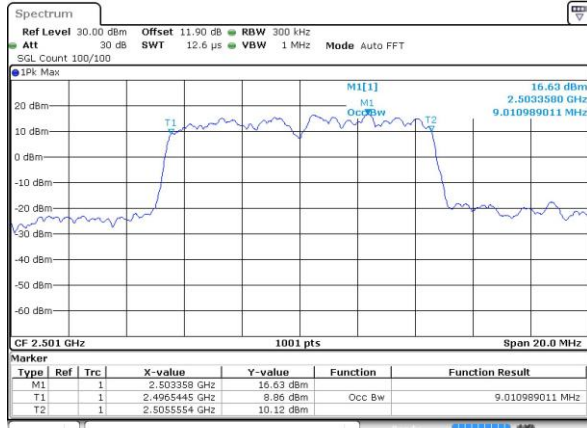


Date: 3 JUL 2019 14:49:50



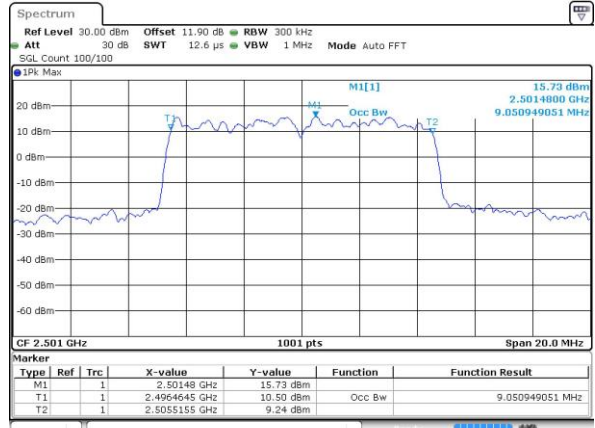
## LTE Band 41

## Lowest Channel / 10MHz / QPSK



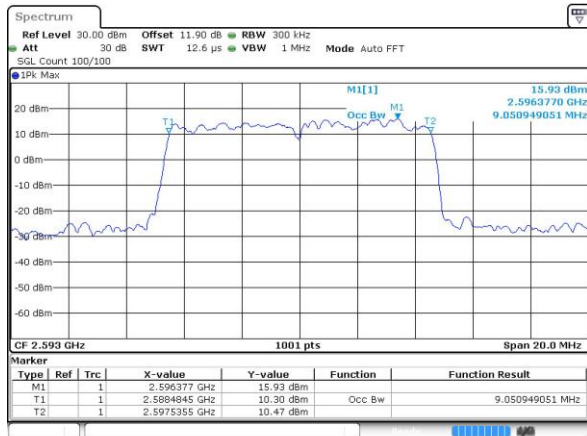
Date: 3 JUL 2019 14:50:28

## Lowest Channel / 10MHz / 16QAM



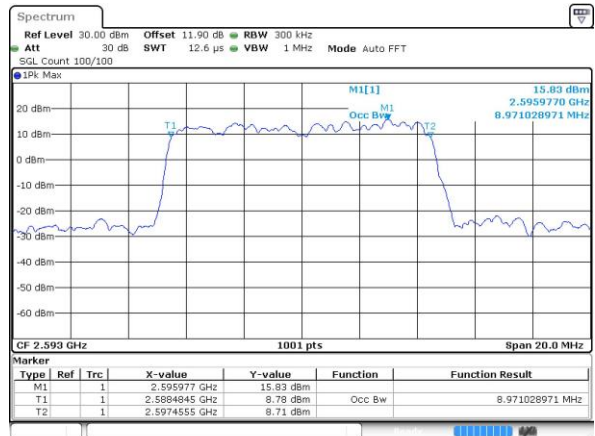
Date: 3 JUL 2019 14:50:40

## Middle Channel / 10MHz / QPSK



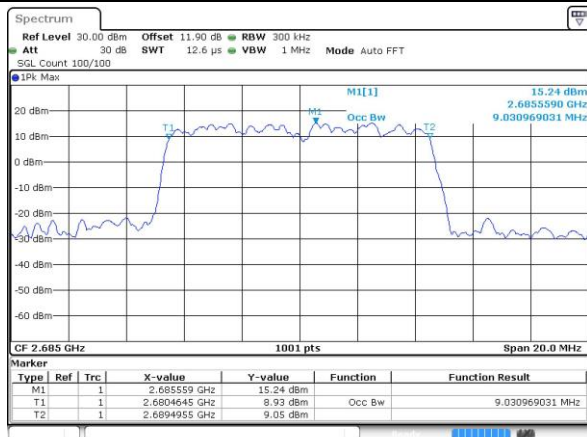
Date: 3 JUL 2019 14:51:17

## Middle Channel / 10MHz / 16QAM



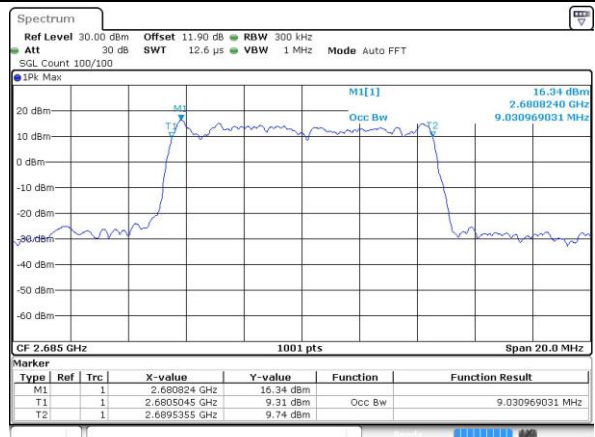
Date: 3 JUL 2019 14:51:29

## Highest Channel / 10MHz / QPSK



Date: 3 JUL 2019 14:52:04

## Highest Channel / 10MHz / 16QAM



Date: 3 JUL 2019 14:52:17