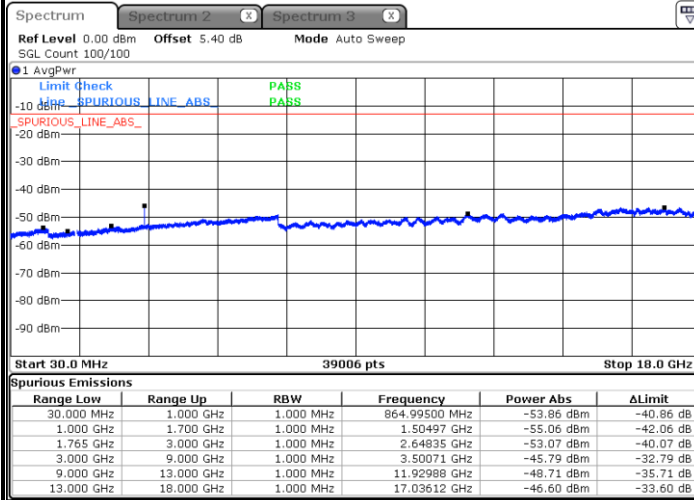




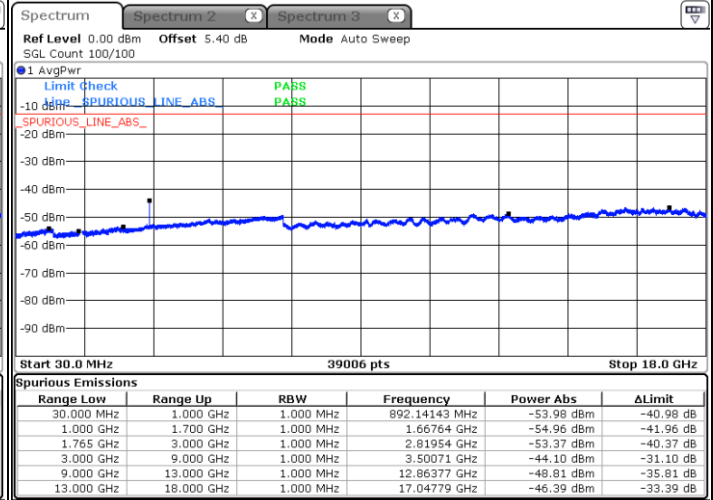
## LTE Band 4 / 5MHz

## Highest Channel / QPSK



Date: 27 NOV 2019 23:08:14

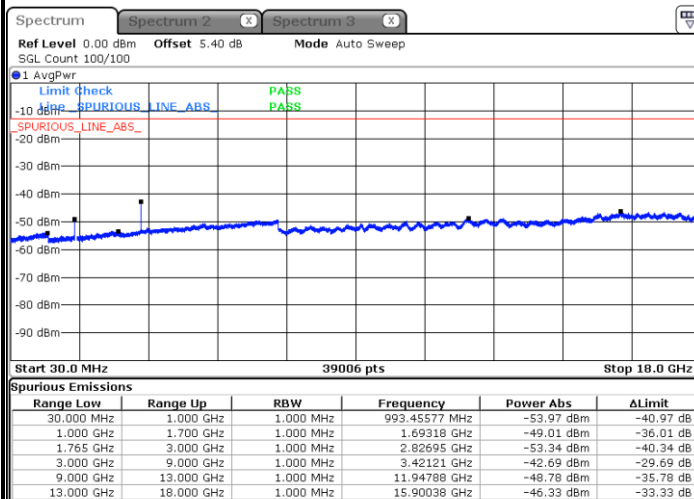
## Highest Channel / 16QAM



Date: 27 NOV 2019 23:09:09

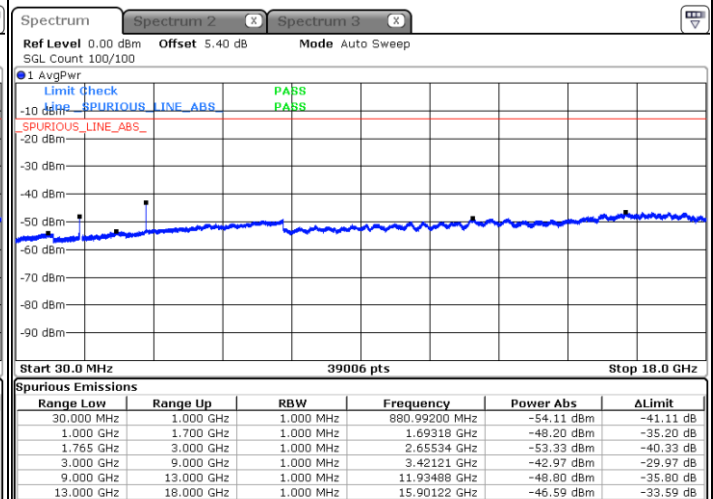
## LTE Band 4 / 10MHz

## Lowest Channel / QPSK



Date: 27 NOV 2019 23:15:14

## Lowest Channel / 16QAM

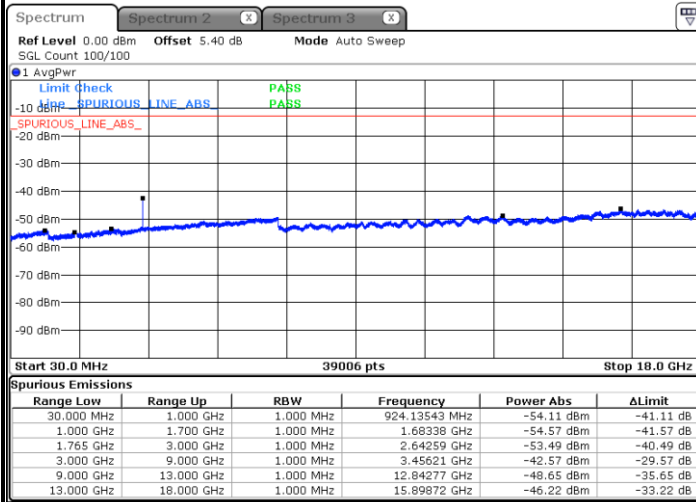


Date: 27 NOV 2019 23:16:09



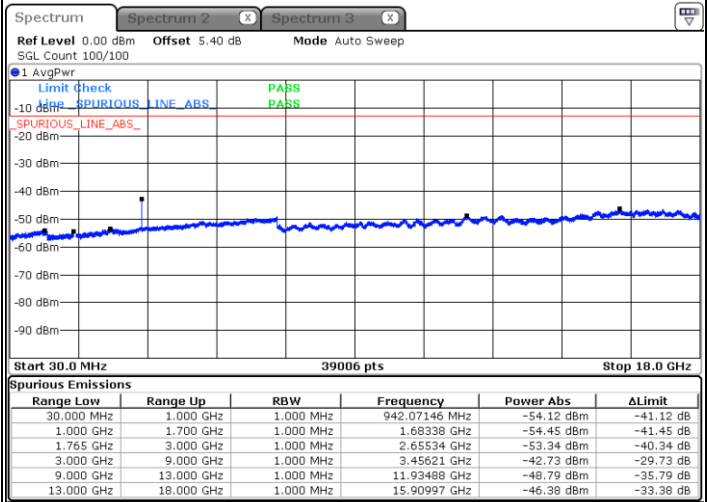
## LTE Band 4 / 10MHz

## Middle Channel / QPSK



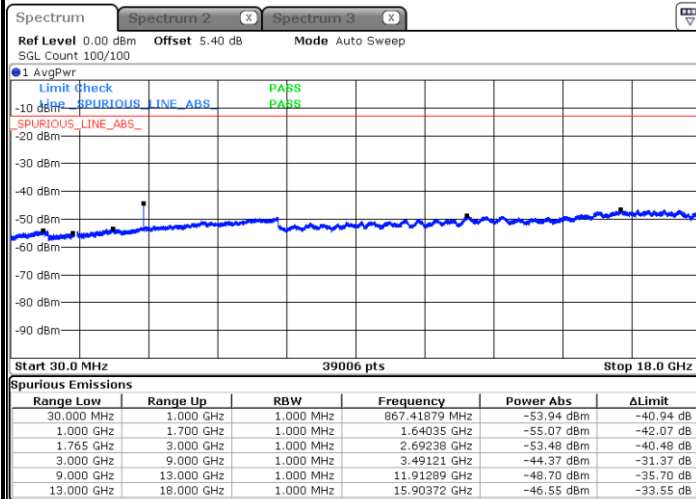
Date: 27 NOV 2019 23:17:44

## Middle Channel / 16QAM



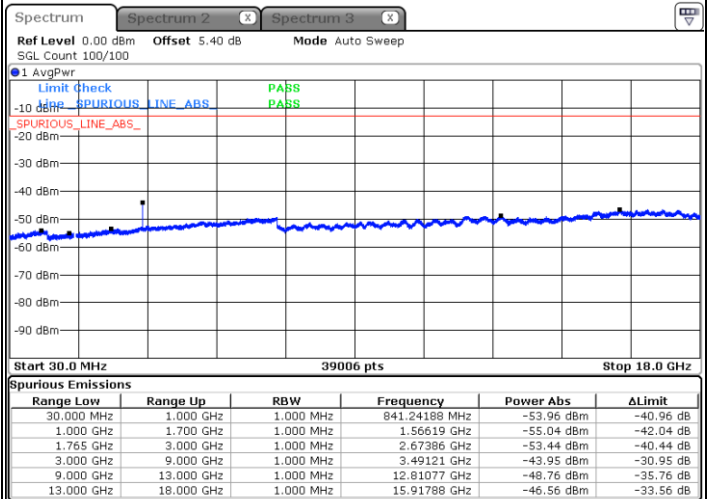
Date: 27 NOV 2019 23:18:39

## Highest Channel / QPSK



Date: 27 NOV 2019 23:24:44

## Highest Channel / 16QAM

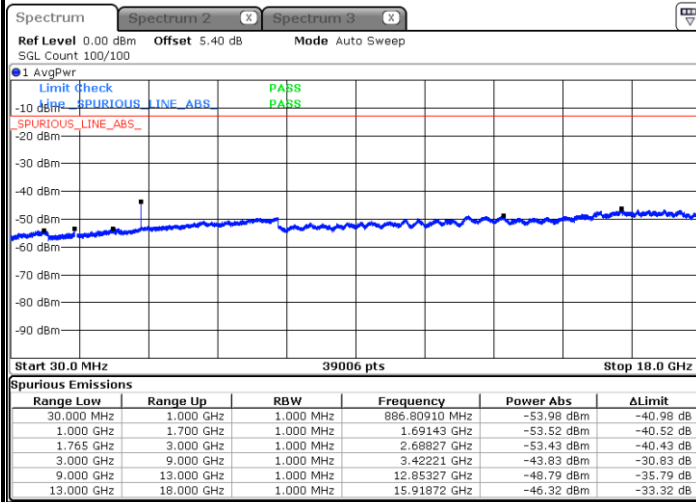


Date: 27 NOV 2019 23:25:39



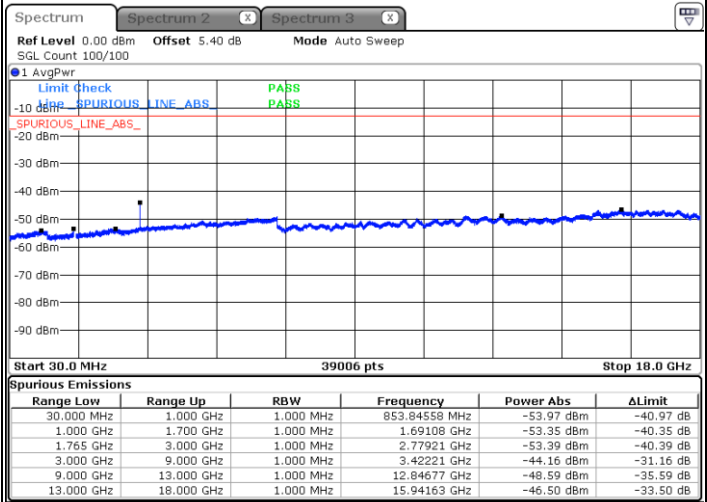
## LTE Band 4 / 15MHz

## Lowest Channel / QPSK



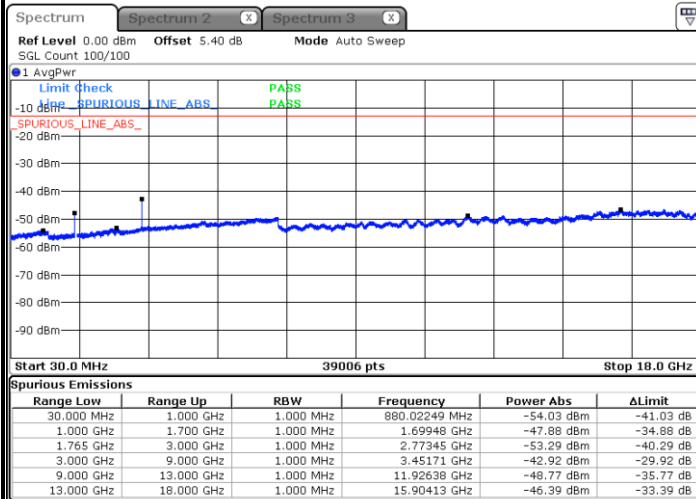
Date: 28 NOV 2019 00:21:16

## Lowest Channel / 16QAM



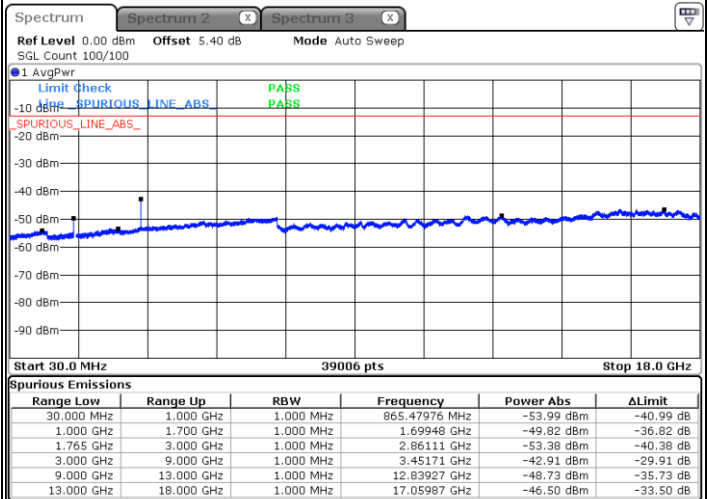
Date: 28 NOV 2019 00:22:11

## Middle Channel / QPSK



Date: 28 NOV 2019 00:23:46

## Middle Channel / 16QAM

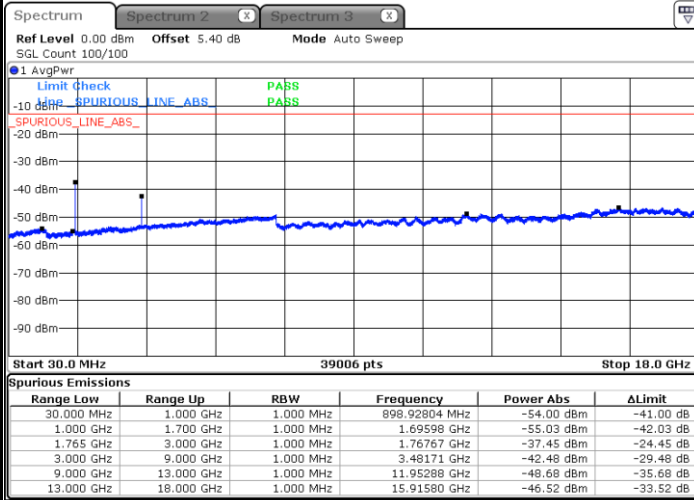


Date: 28 NOV 2019 00:24:41



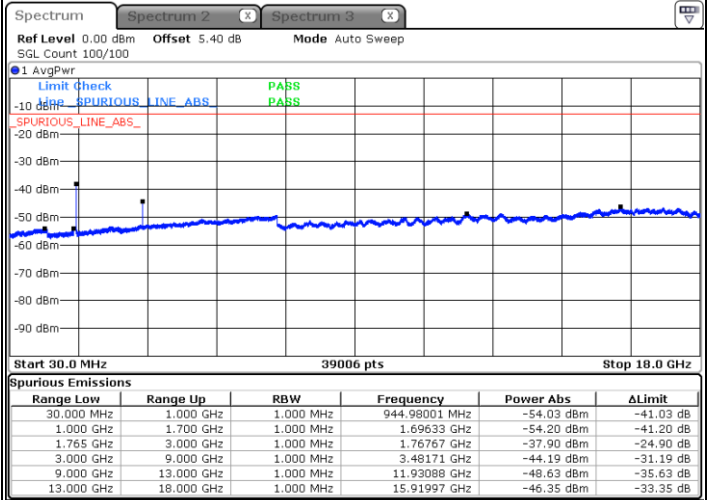
## LTE Band 4 / 15MHz

## Highest Channel / QPSK



Date: 28 NOV 2019 00:30:46

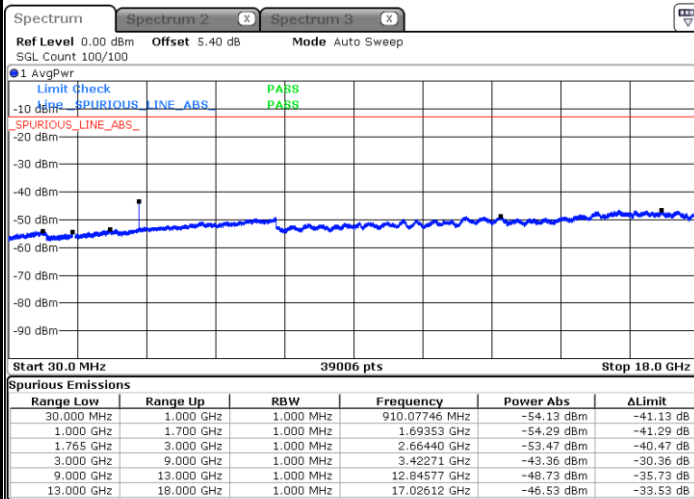
## Highest Channel / 16QAM



Date: 28 NOV 2019 00:31:41

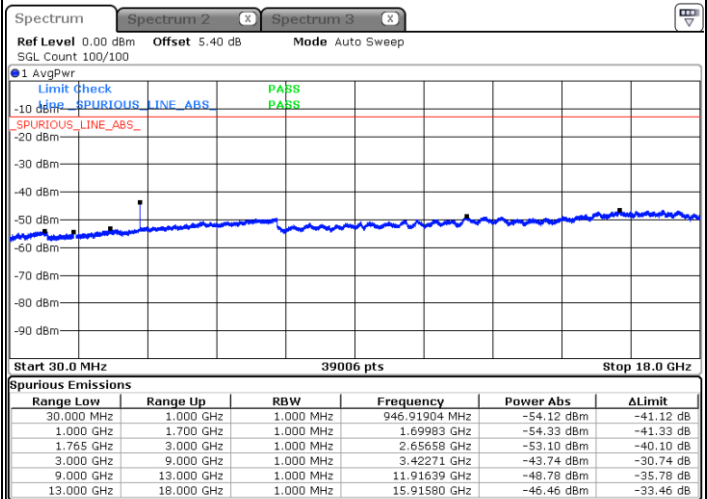
## LTE Band 4 / 20MHz

## Lowest Channel / QPSK



Date: 28 NOV 2019 00:37:46

## Lowest Channel / 16QAM

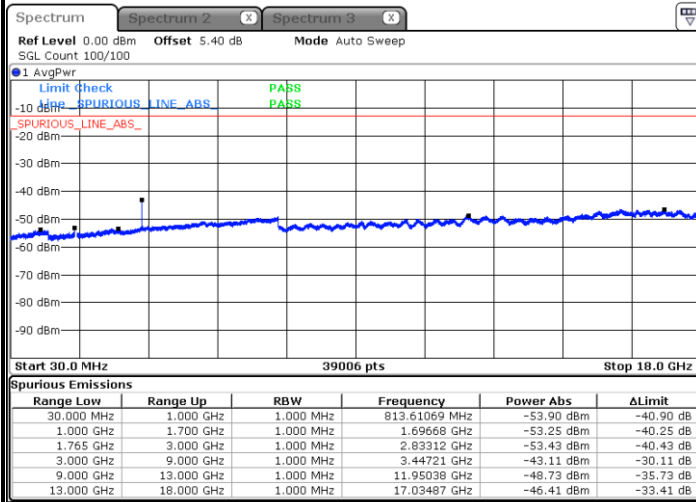


Date: 28 NOV 2019 00:38:41



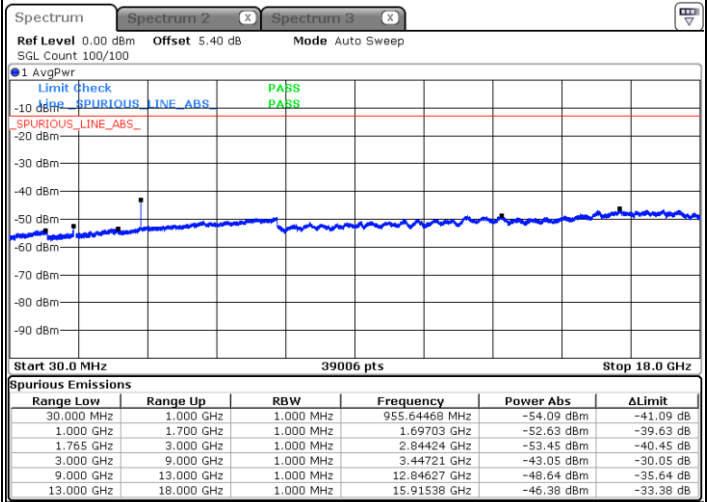
## LTE Band 4 / 20MHz

## Middle Channel / QPSK



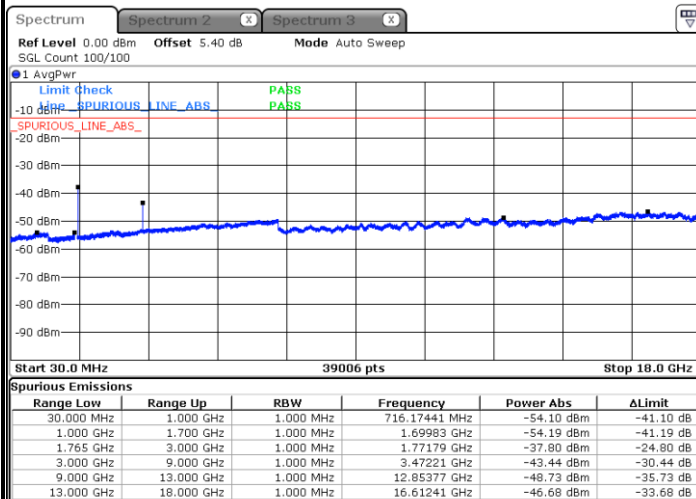
Date: 28 NOV 2019 00:40:16

## Middle Channel / 16QAM



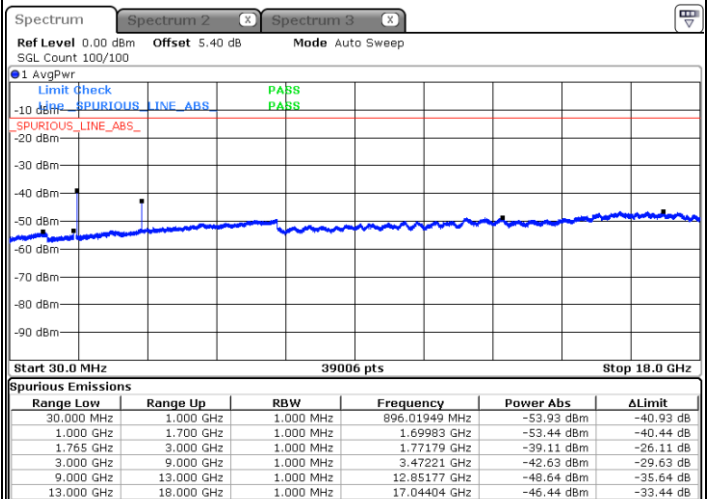
Date: 28 NOV 2019 00:41:11

## Highest Channel / QPSK



Date: 28 NOV 2019 00:47:16

## Highest Channel / 16QAM

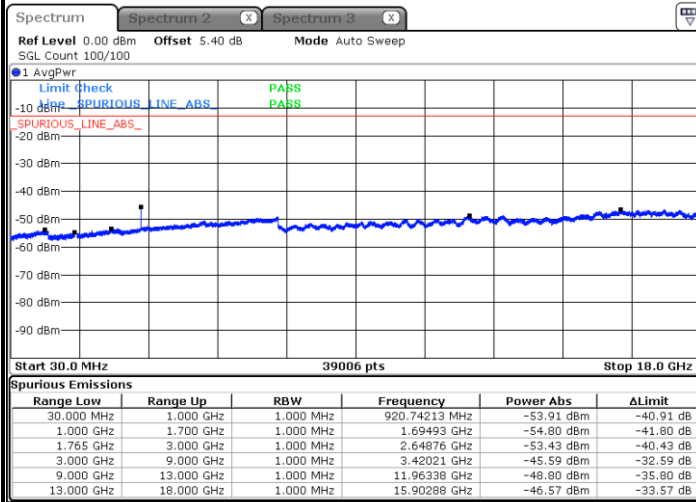


Date: 28 NOV 2019 00:48:11



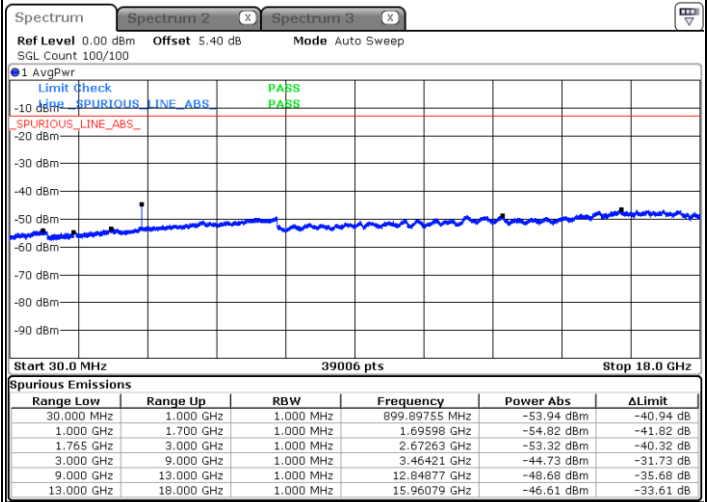
## LTE Band 4 / 1.4MHz

## Lowest Channel / 64QAM



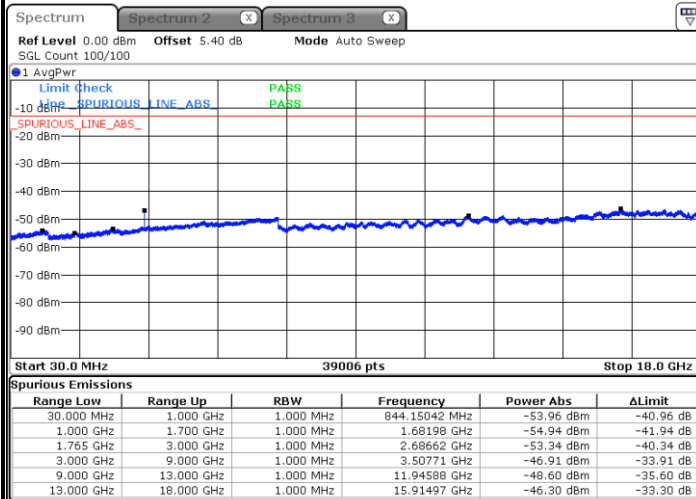
Date: 28 NOV 2019 01:30:08

## Middle Channel / 64QAM



Date: 28 NOV 2019 01:31:24

## Highest Channel / 64QAM

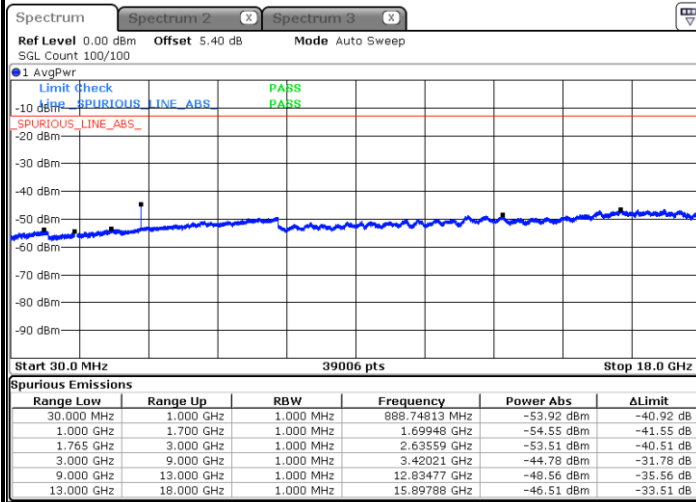


Date: 28 NOV 2019 01:34:54



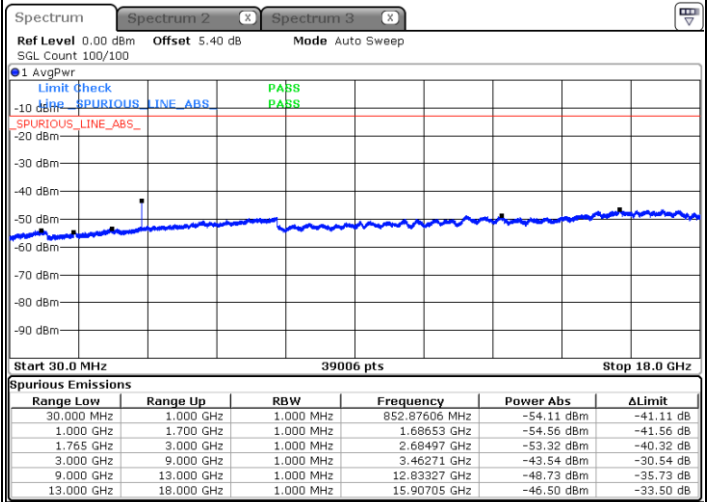
## LTE Band 4 / 3MHz

## Lowest Channel / 64QAM



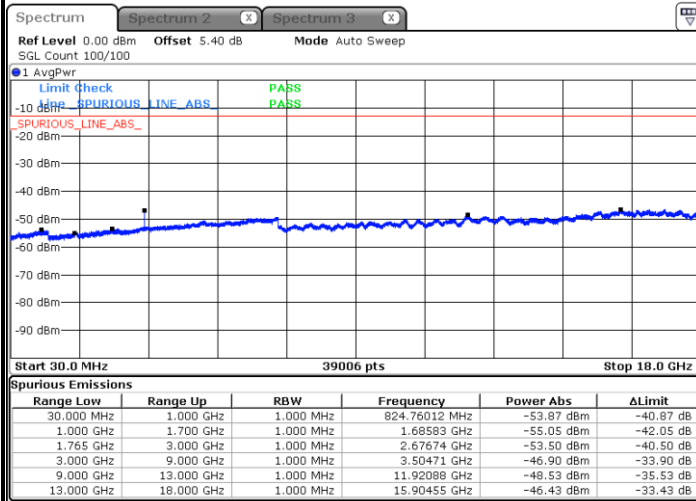
Date: 28 NOV 2019 01:38:24

## Middle Channel / 64QAM



Date: 28 NOV 2019 01:39:39

## Highest Channel / 64QAM

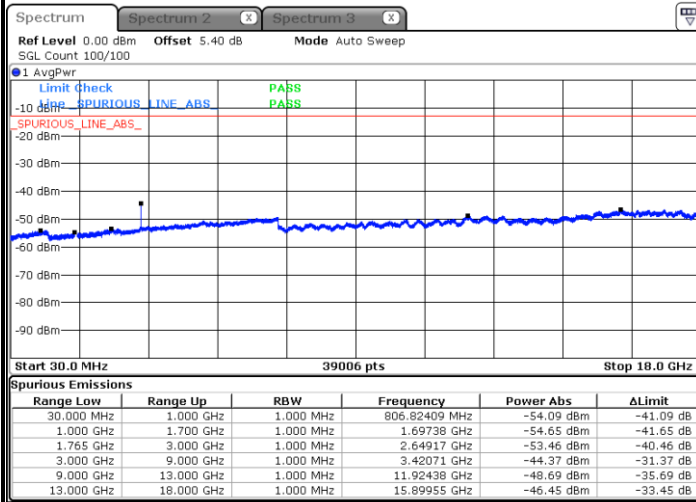


Date: 28 NOV 2019 01:43:09



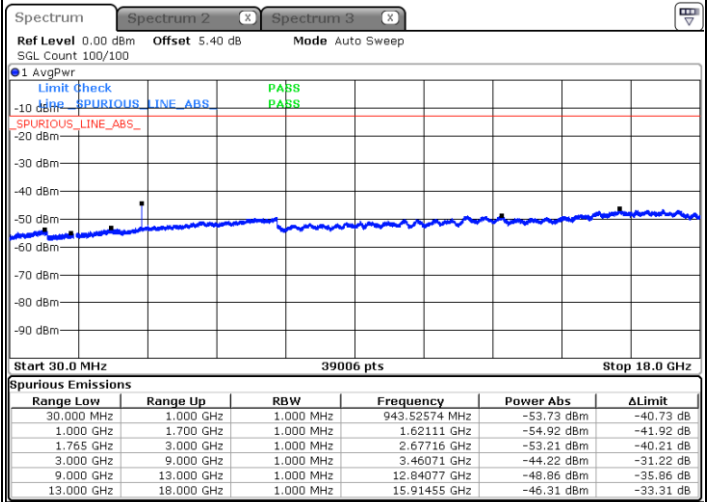
## LTE Band 4 / 5MHz

## Lowest Channel / 64QAM



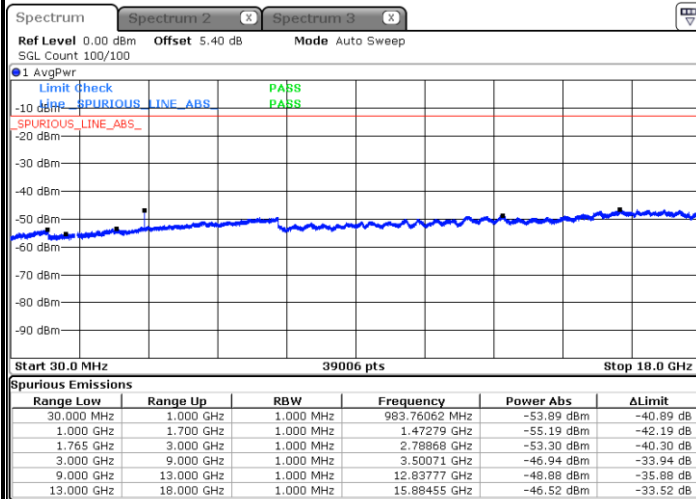
Date: 28 NOV 2019 01:46:39

## Middle Channel / 64QAM



Date: 28 NOV 2019 01:47:54

## Highest Channel / 64QAM

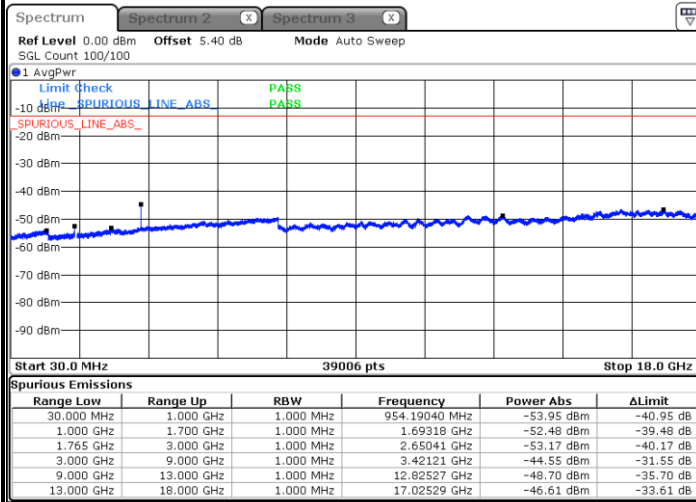


Date: 28 NOV 2019 01:51:24



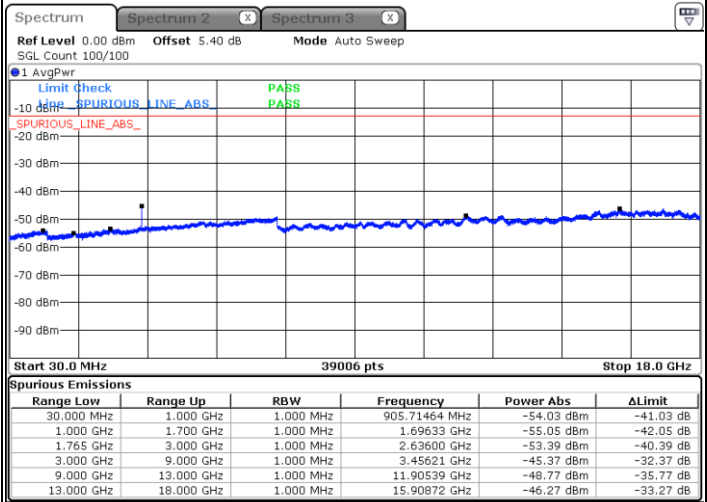
## LTE Band 4 / 10MHz

## Lowest Channel / 64QAM



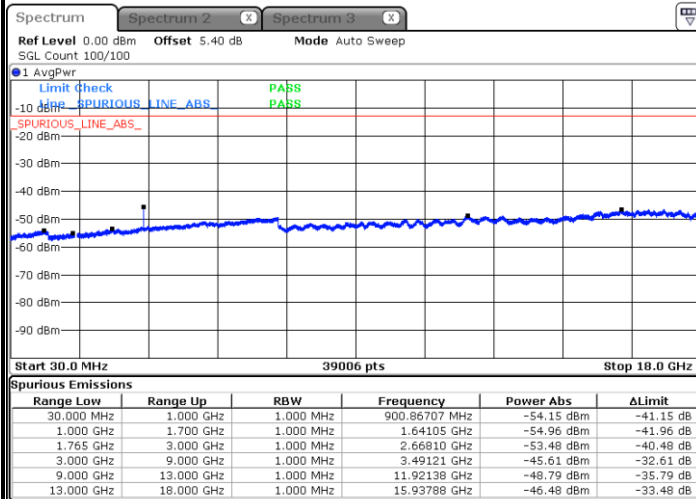
Date: 28 NOV 2019 01:55:21

## Middle Channel / 64QAM



Date: 28 NOV 2019 01:56:36

## Highest Channel / 64QAM

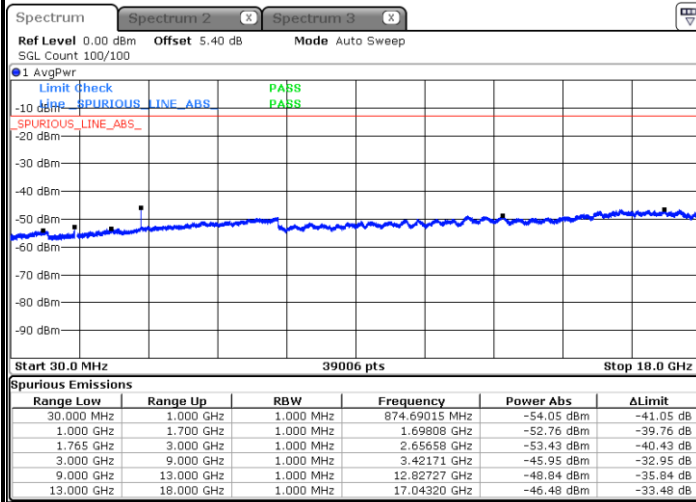


Date: 28 NOV 2019 02:00:06



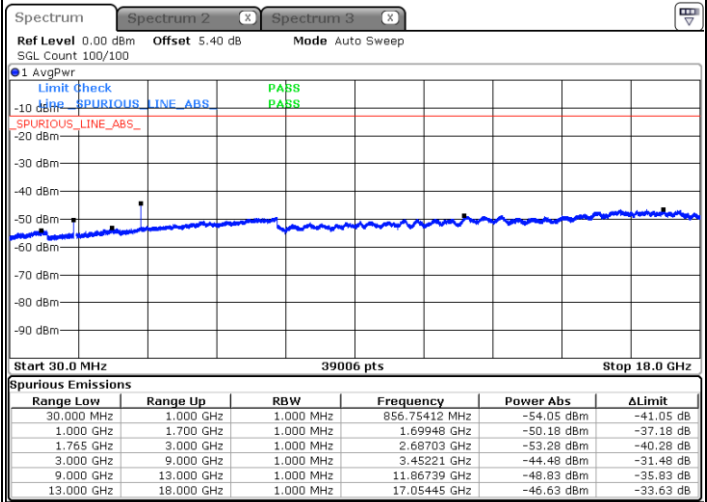
## LTE Band 4 / 15MHz

## Lowest Channel / 64QAM



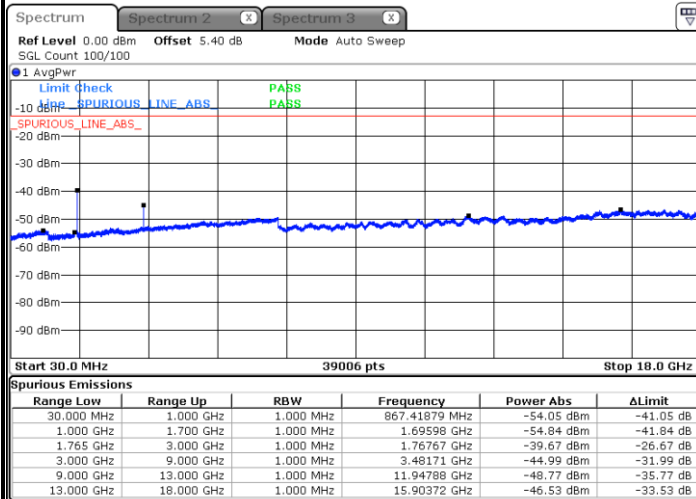
Date: 28 NOV 2019 02:03:36

## Middle Channel / 64QAM



Date: 28 NOV 2019 02:04:50

## Highest Channel / 64QAM

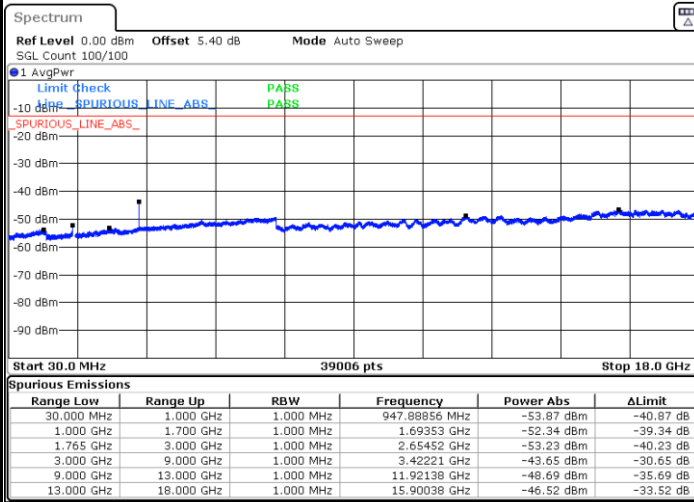


Date: 28 NOV 2019 02:08:20



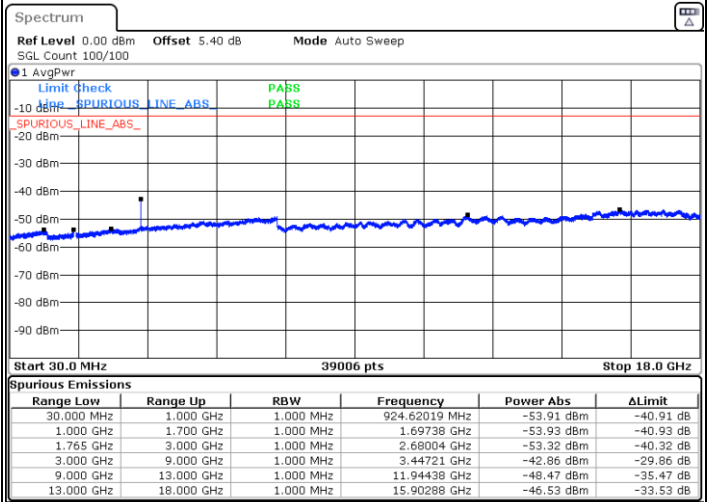
## LTE Band 4 / 20MHz

## Lowest Channel / 64QAM



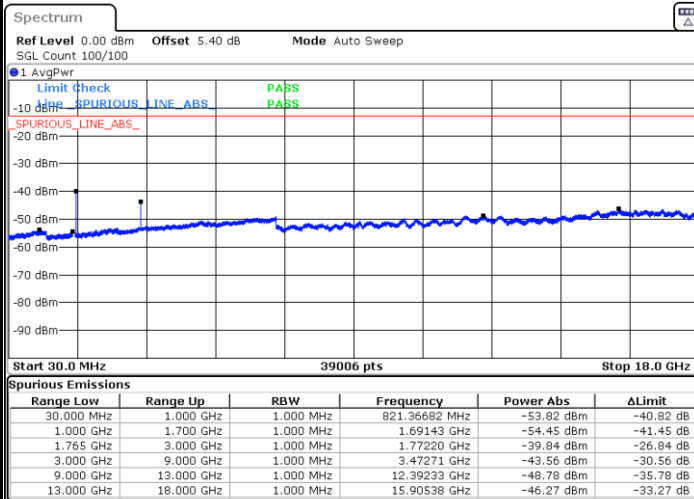
Date: 28 NOV 2019 19:04:04

## Middle Channel / 64QAM



Date: 28 NOV 2019 19:05:19

## Highest Channel / 64QAM



Date: 28 NOV 2019 19:08:49

**Frequency Stability**

| Test Conditions  |                   | LTE Band 4 (QPSK) / Middle Channel | Limit   |
|------------------|-------------------|------------------------------------|---------|
| Temperature (°C) | Voltage (Volt)    | BW 10MHz                           | Note 2. |
|                  |                   | Deviation (ppm)                    | Result  |
| 50               | Normal Voltage    | 0.0021                             | PASS    |
| 40               | Normal Voltage    | 0.0014                             |         |
| 30               | Normal Voltage    | 0.0033                             |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                             |         |
| 10               | Normal Voltage    | 0.0008                             |         |
| 0                | Normal Voltage    | 0.0012                             |         |
| -10              | Normal Voltage    | 0.0026                             |         |
| -20              | Normal Voltage    | 0.0020                             |         |
| -30              | Normal Voltage    | 0.0038                             |         |
| 20               | Maximum Voltage   | 0.0023                             |         |
| 20               | Normal Voltage    | 0.0000                             |         |
| 20               | Battery End Point | 0.0004                             |         |

**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 5

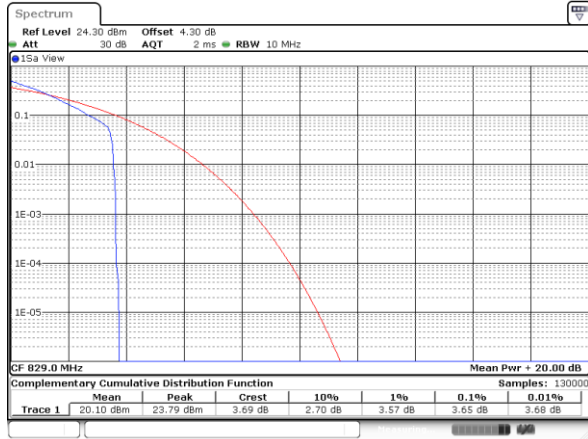
## Peak-to-Average Ratio

| Mode       | LTE Band 5 / 10MHz |         |             |         |             |
|------------|--------------------|---------|-------------|---------|-------------|
| Mod.       | QPSK               |         | 16QAM       |         | Limit: 13dB |
| RB Size    | 1RB                | Full RB | 1RB         | Full RB | Result      |
| Lowest CH  | 3.65               | 4.55    | 5.33        | 5.88    | PASS        |
| Middle CH  | 3.62               | 4.61    | 5.10        | 5.83    |             |
| Highest CH | 3.65               | 4.72    | 5.10        | 5.91    |             |
| Mod.       | 64QAM              |         | Limit: 13dB |         |             |
| RB Size    | 1RB                | Full RB | Result      |         |             |
| Lowest CH  | 6.12               | 6.55    | PASS        |         |             |
| Middle CH  | 6.41               | 6.52    |             |         |             |
| Highest CH | 6.78               | 6.49    |             |         |             |

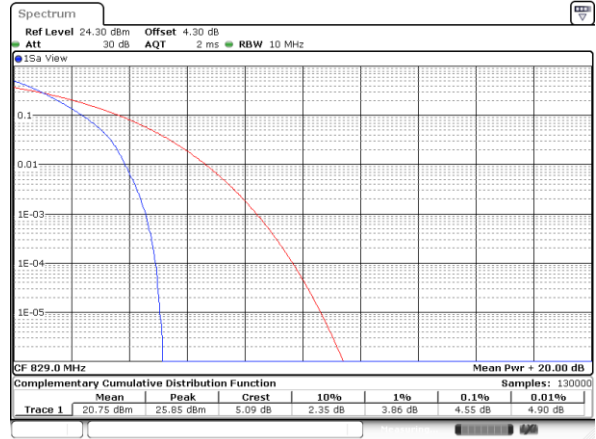


## LTE Band 5 / 10MHz / QPSK

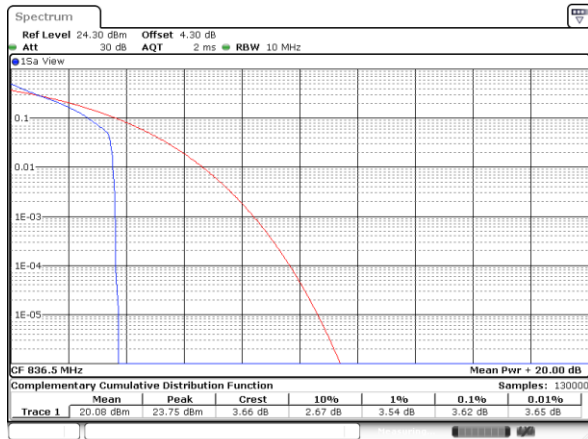
## Lowest Channel / 1RB



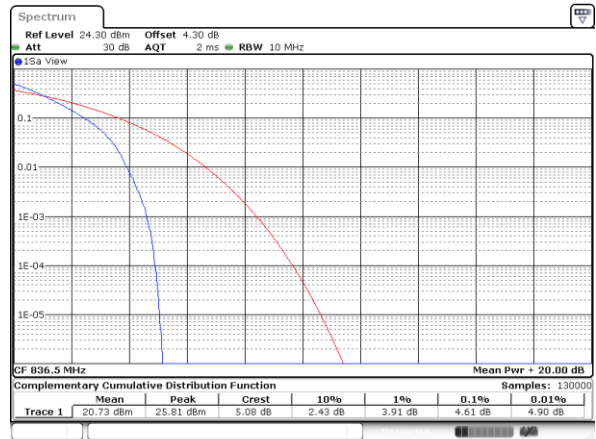
## Lowest Channel / Full RB



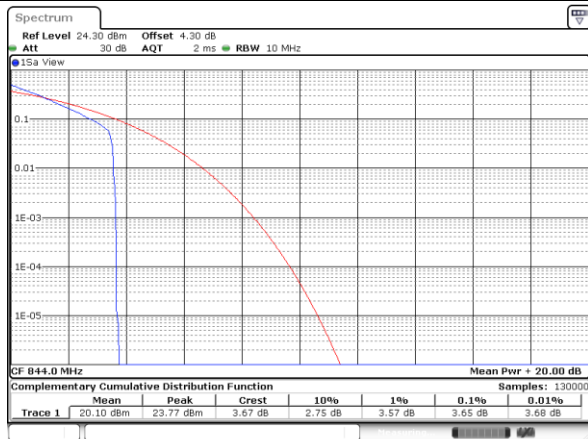
## Middle Channel / 1RB



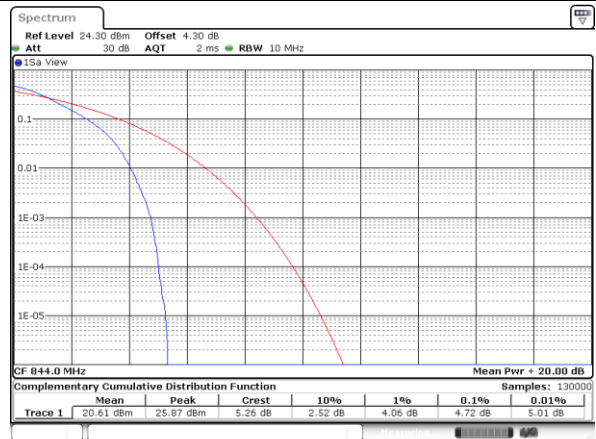
## Middle Channel / Full RB



## Highest Channel / 1RB



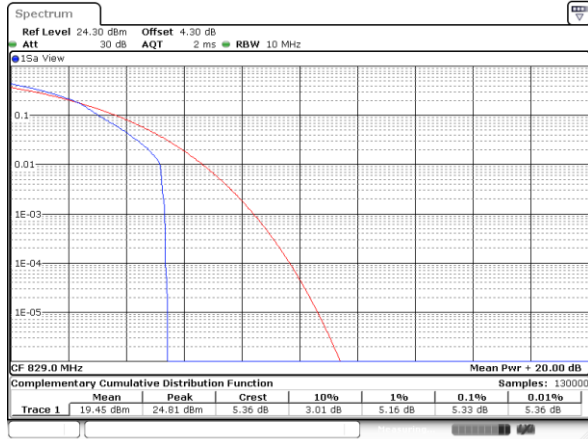
## Highest Channel / Full RB



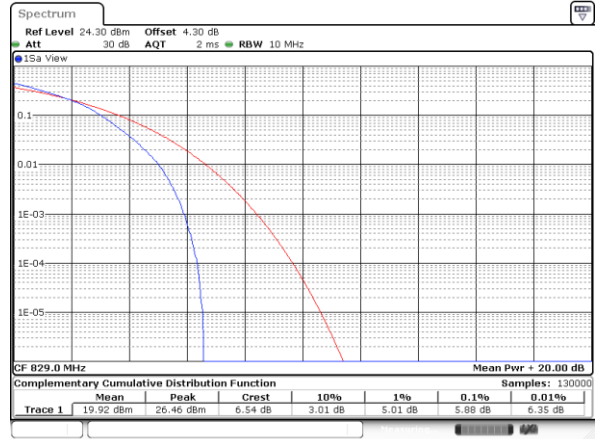


## LTE Band 5 / 10MHz / 16QAM

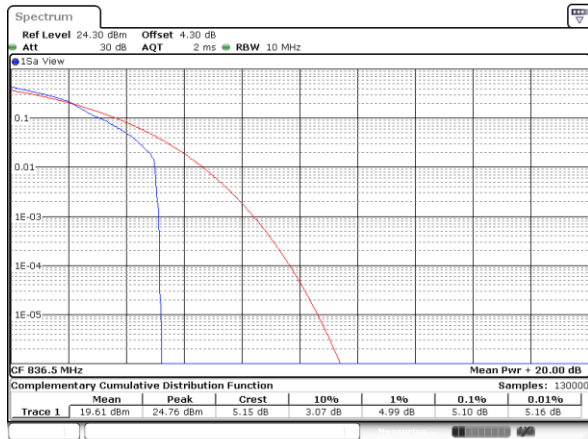
## Lowest Channel / 1RB



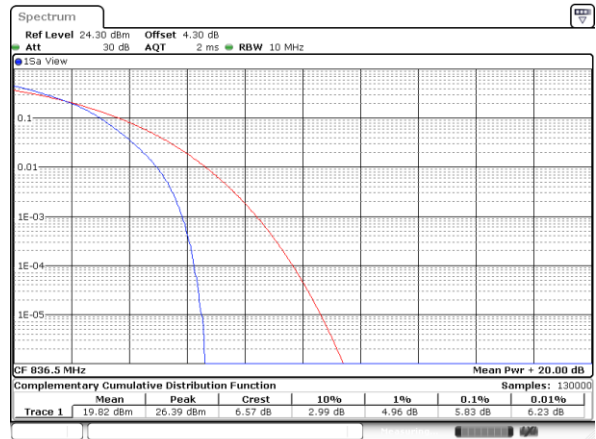
## Lowest Channel / Full RB



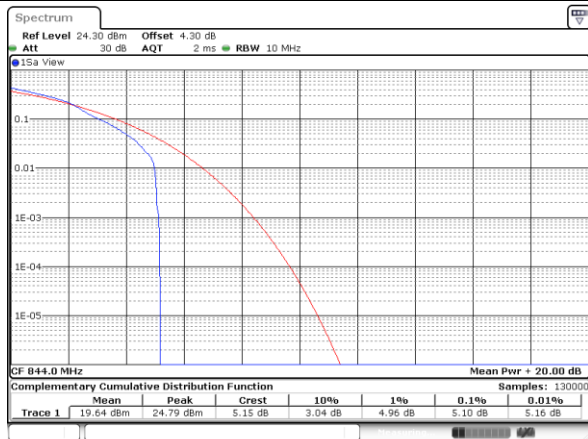
## Middle Channel / 1RB



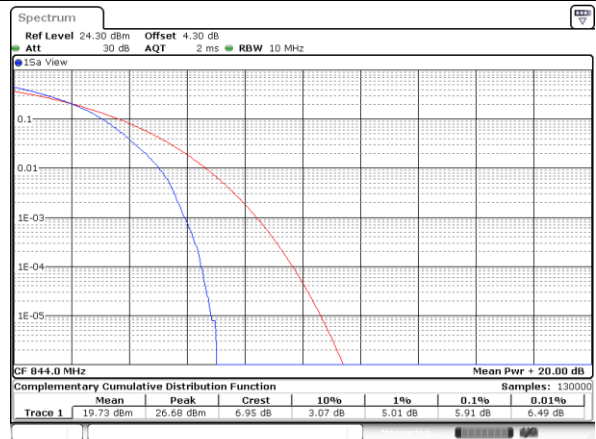
## Middle Channel / Full RB



## Highest Channel / 1RB



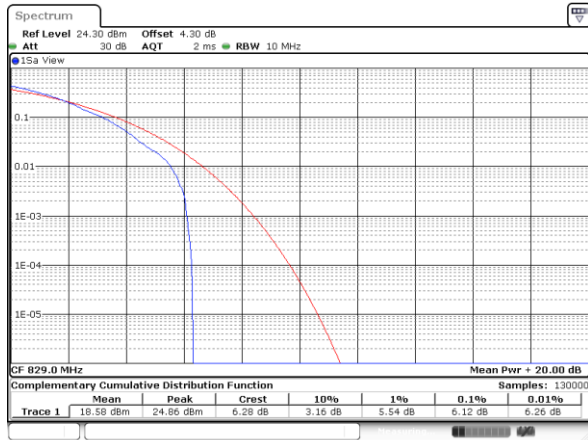
## Highest Channel / Full RB





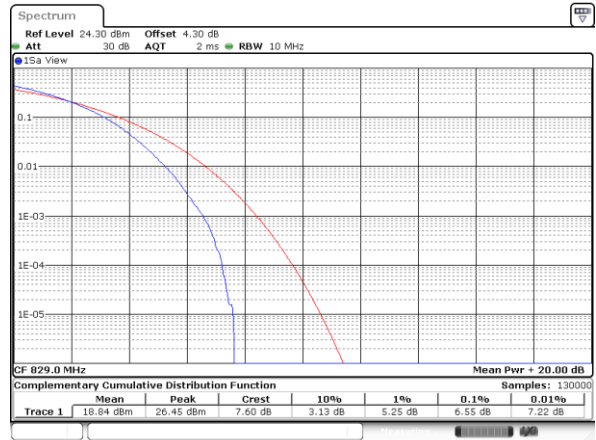
## LTE Band 5 / 10MHz / 64QAM

## Lowest Channel / 1RB



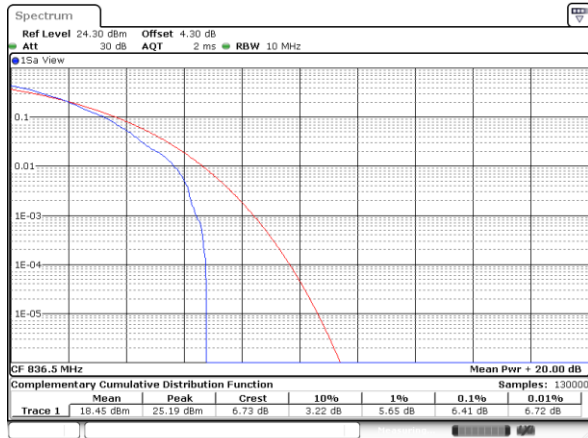
Date: 4 DEC 2019 19:57:18

## Lowest Channel / Full RB



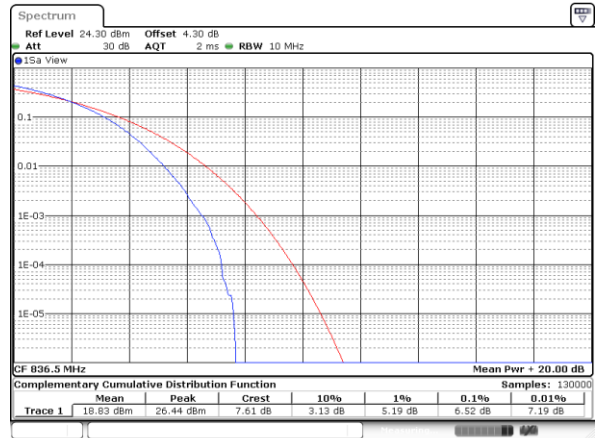
Date: 4 DEC 2019 19:57:26

## Middle Channel / 1RB



Date: 4 DEC 2019 19:57:09

## Middle Channel / Full RB



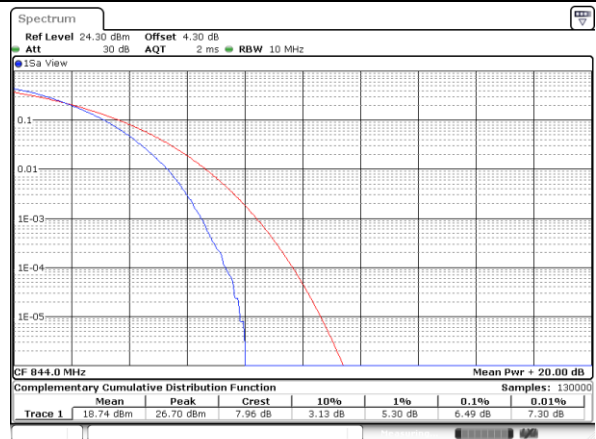
Date: 4 DEC 2019 19:57:00

## Highest Channel / 1RB



Date: 4 DEC 2019 19:56:42

## Highest Channel / Full RB



Date: 4 DEC 2019 19:56:50

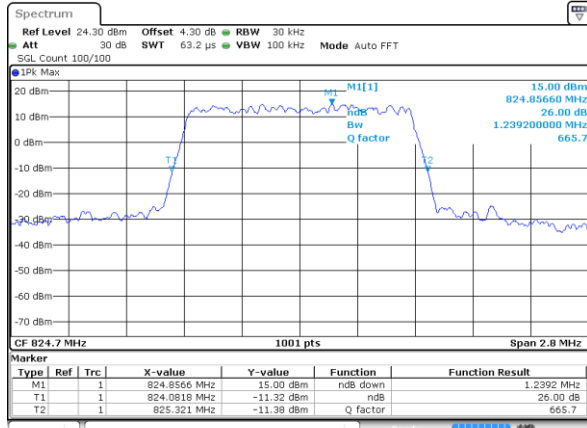
**26dB Bandwidth**

| Mode       | LTE Band 5 : 26dB BW(MHz) |       |       |       |       |       |       |       |   |   |   |   |
|------------|---------------------------|-------|-------|-------|-------|-------|-------|-------|---|---|---|---|
| BW         | 1.4MHz                    |       | 3MHz  |       | 5MHz  |       | 10MHz |       |   |   |   |   |
| Mod.       | QPSK                      | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM |   |   |   |   |
| Lowest CH  | 1.239                     | 1.234 | 2.991 | 3.003 | 4.905 | 4.895 | 9.75  | 9.91  |   |   |   |   |
| Middle CH  | 1.248                     | 1.225 | 3.027 | 2.991 | 4.845 | 4.875 | 9.77  | 9.85  |   |   |   |   |
| Highest CH | 1.239                     | 1.225 | 3.003 | 3.033 | 4.935 | 4.875 | 9.71  | 9.65  |   |   |   |   |
| Mode       | LTE Band 5 : 26dB BW(MHz) |       |       |       |       |       |       |       |   |   |   |   |
| BW         | 1.4MHz                    |       | 3MHz  |       | 5MHz  |       | 10MHz |       |   |   |   |   |
| Mod.       | 64QAM                     |       | 64QAM |       | 64QAM |       | 64QAM |       |   |   |   |   |
| Lowest CH  | 1.239                     |       | 3.027 |       | 4.955 |       | 9.75  |       | - | - | - | - |
| Middle CH  | 1.220                     |       | 2.973 |       | 4.935 |       | 9.69  |       | - | - | - | - |
| Highest CH | 1.222                     |       | 3.051 |       | 4.885 |       | 9.63  |       | - | - | - | - |

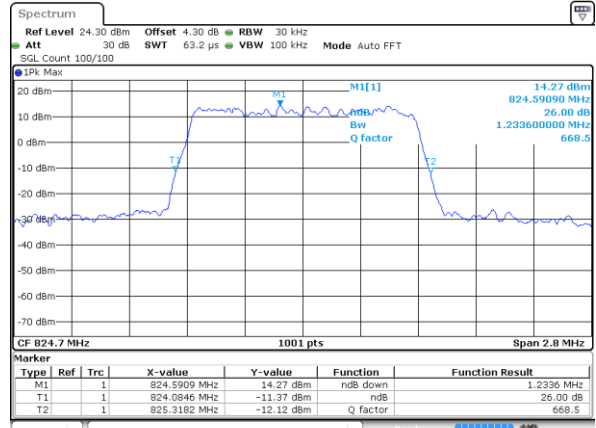


## LTE Band 5

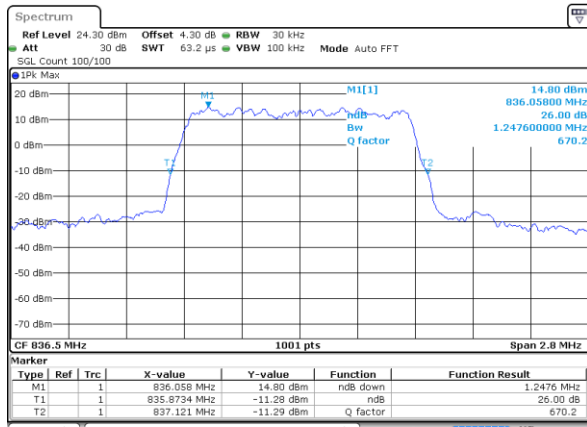
## Lowest Channel / 1.4MHz / QPSK



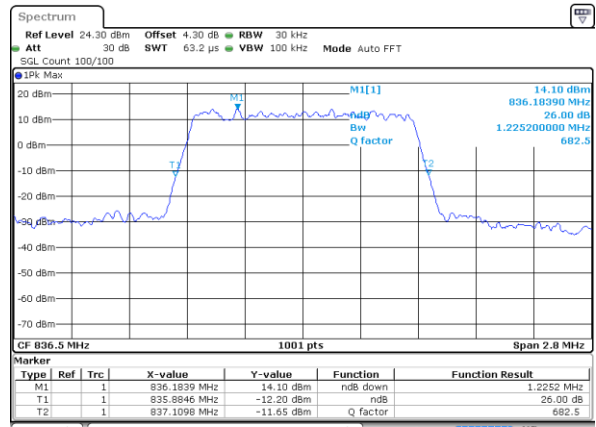
## Lowest Channel / 1.4MHz / 16QAM



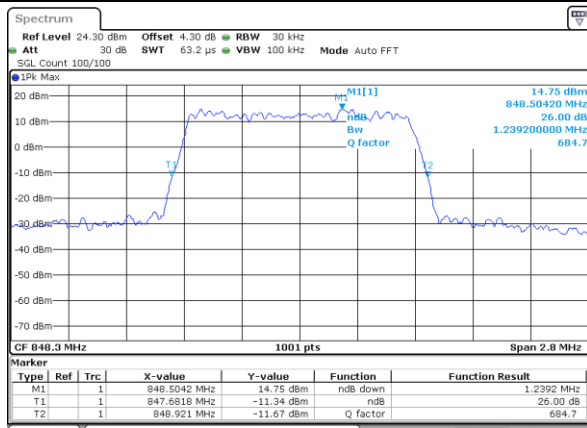
## Middle Channel / 1.4MHz / QPSK



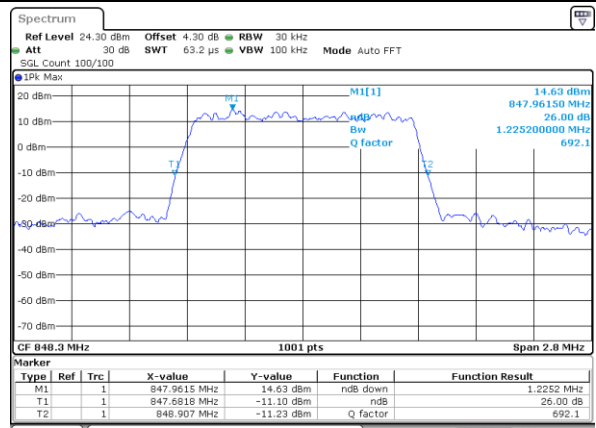
## Middle Channel / 1.4MHz / 16QAM



## Highest Channel / 1.4MHz / QPSK



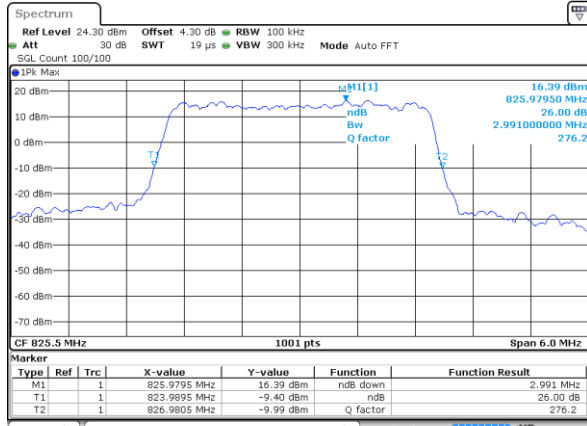
## Highest Channel / 1.4MHz / 16QAM





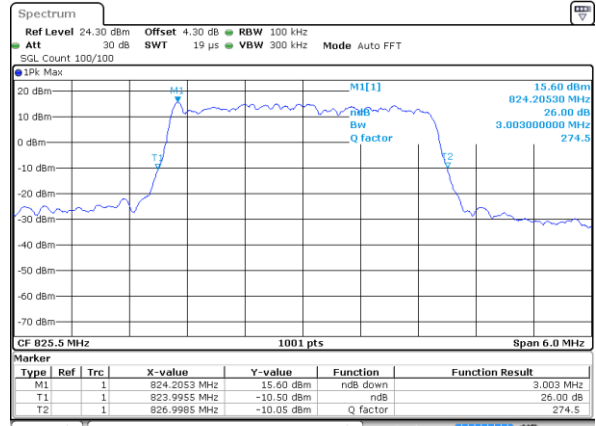
## LTE Band 5

## Lowest Channel / 3MHz / QPSK



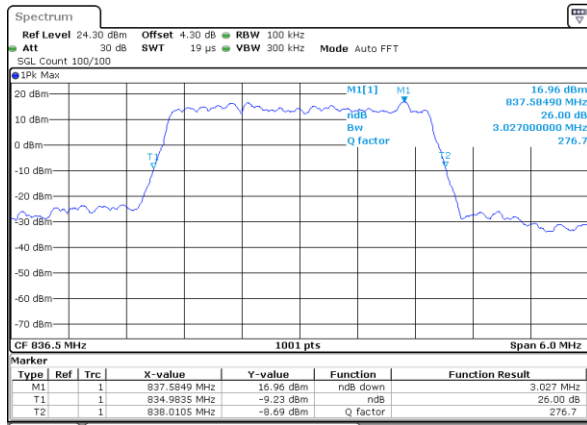
Date: 4 DEC 2019 20:00:40

## Lowest Channel / 3MHz / 16QAM



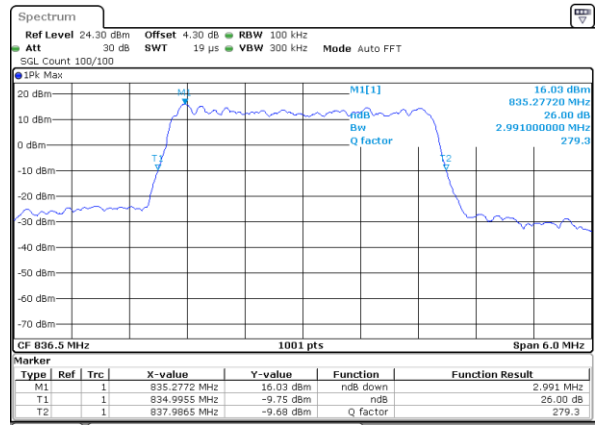
Date: 4 DEC 2019 20:00:50

## Middle Channel / 3MHz / QPSK



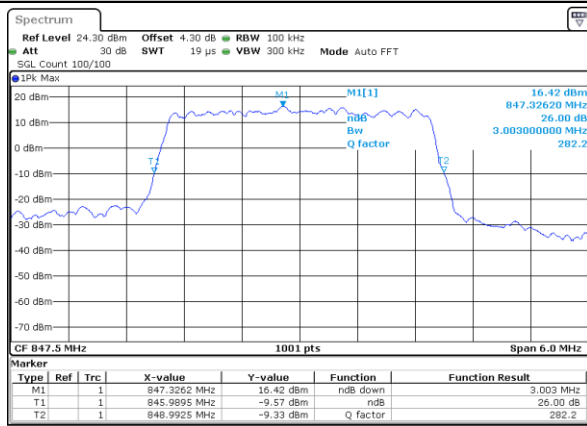
Date: 4 DEC 2019 20:09:41

## Middle Channel / 3MHz / 16QAM



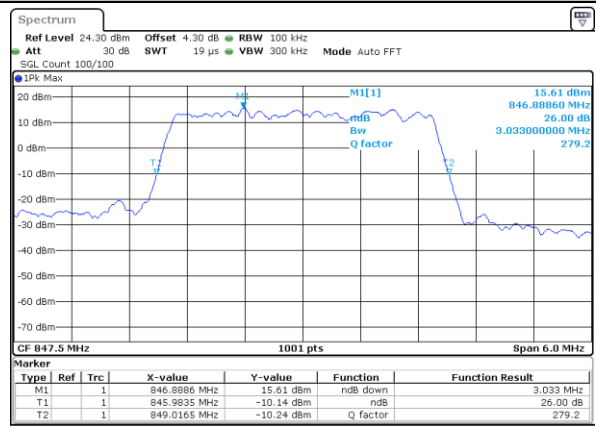
Date: 4 DEC 2019 20:09:51

## Highest Channel / 3MHz / QPSK



Date: 4 DEC 2019 20:12:07

## Highest Channel / 3MHz / 16QAM

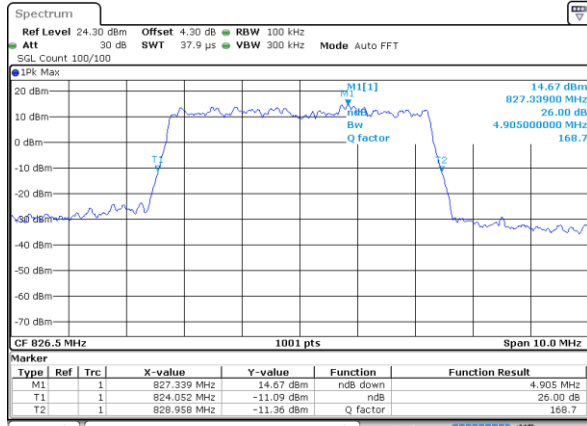


Date: 4 DEC 2019 20:12:17



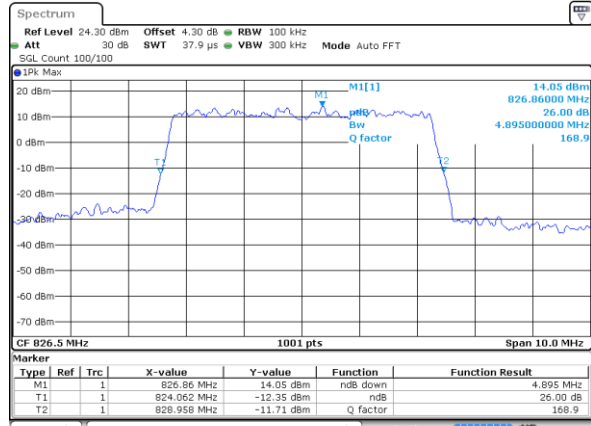
## LTE Band 5

## Lowest Channel / 5MHz / QPSK



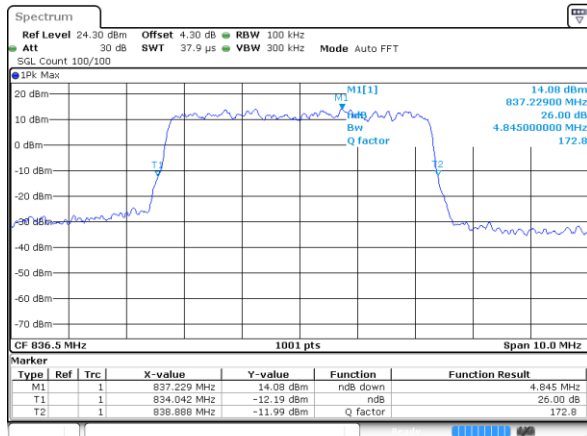
Date: 4 DEC 2019 20:30:04

## Lowest Channel / 5MHz / 16QAM



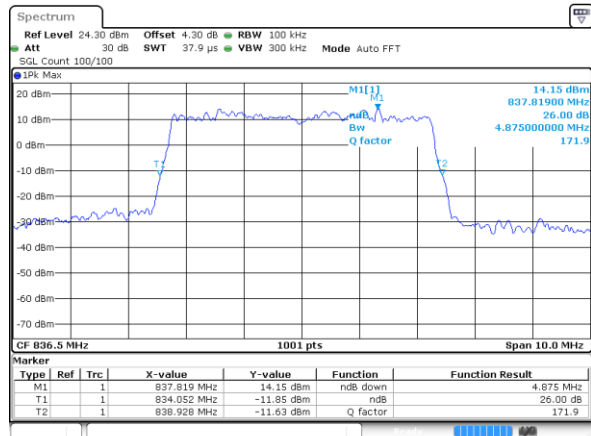
Date: 4 DEC 2019 20:30:14

## Middle Channel / 5MHz / QPSK



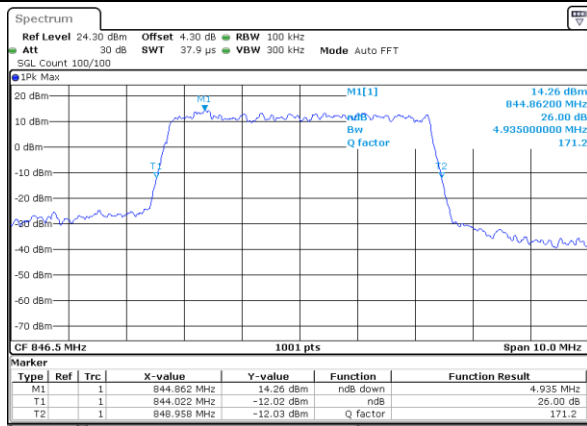
Date: 4 DEC 2019 18:40:03

## Middle Channel / 5MHz / 16QAM



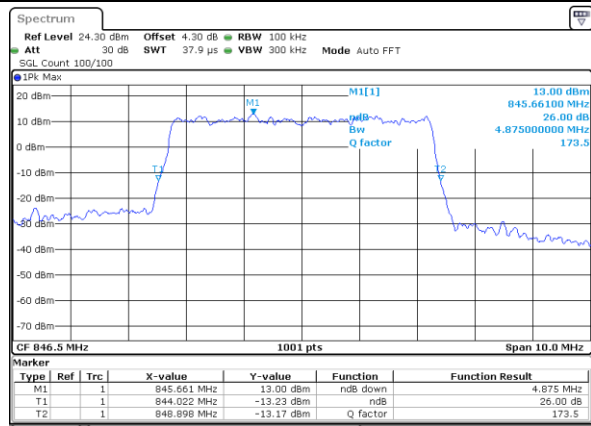
Date: 4 DEC 2019 18:40:12

## Highest Channel / 5MHz / QPSK



Date: 4 DEC 2019 18:42:29

## Highest Channel / 5MHz / 16QAM

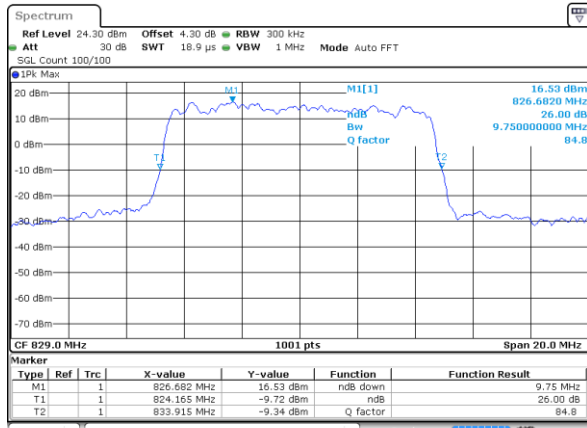


Date: 4 DEC 2019 18:42:39

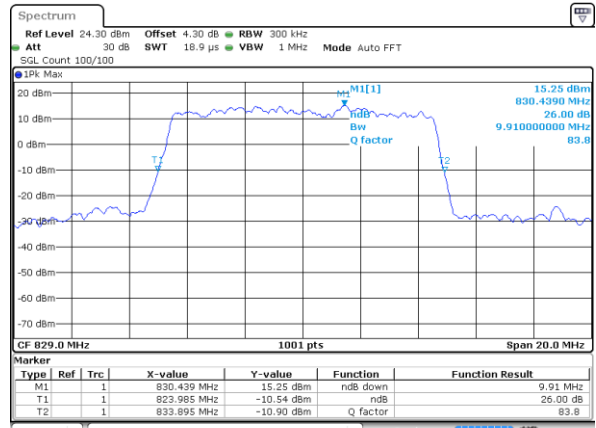


## LTE Band 5

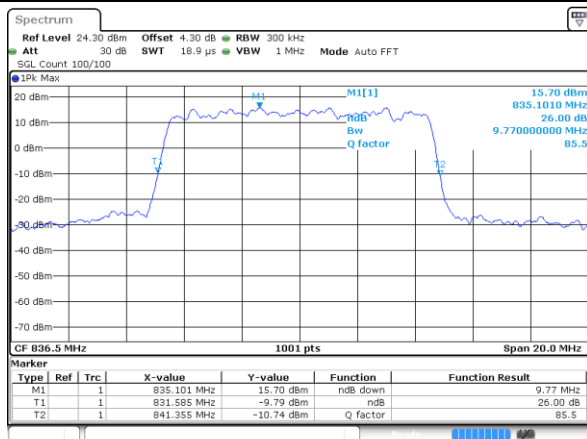
## Lowest Channel / 10MHz / QPSK



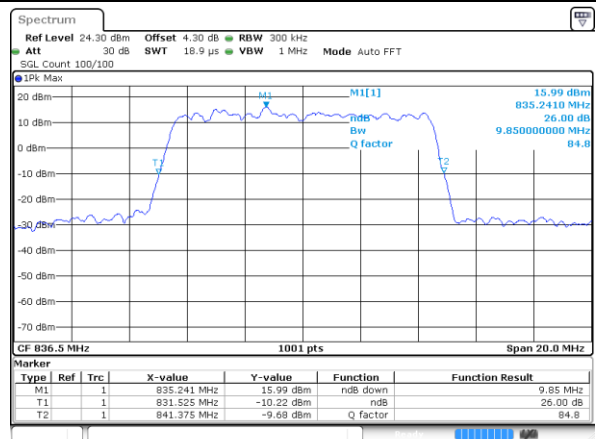
## Lowest Channel / 10MHz / 16QAM



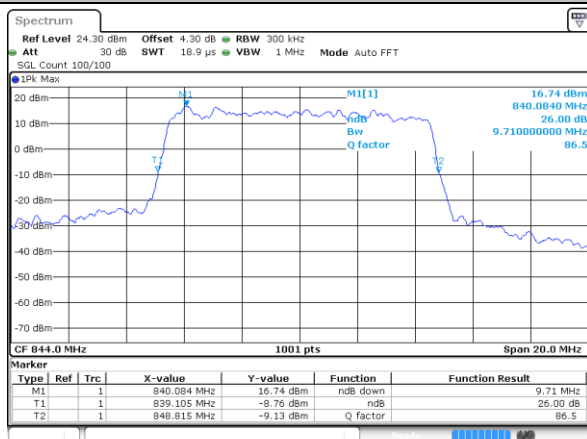
## Middle Channel / 10MHz / QPSK



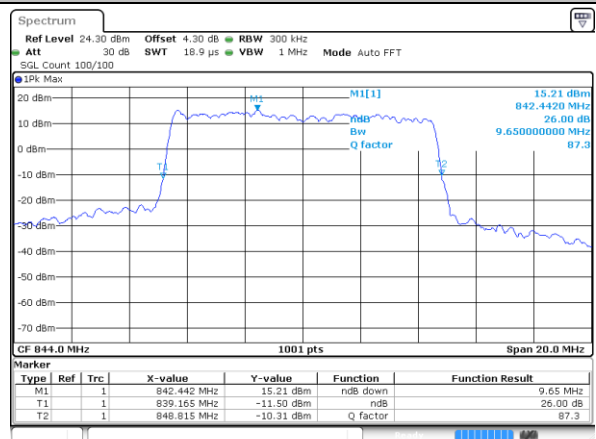
## Middle Channel / 10MHz / 16QAM



## Highest Channel / 10MHz / QPSK



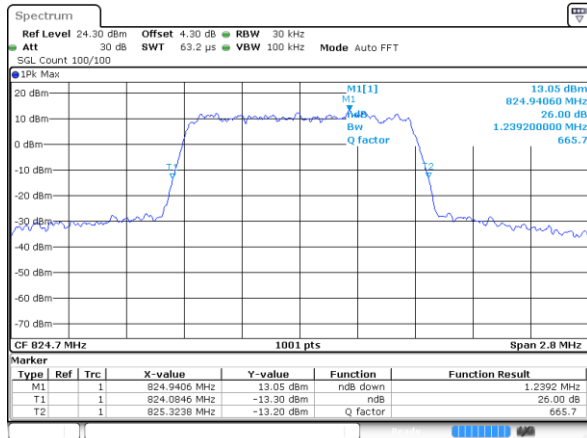
## Highest Channel / 10MHz / 16QAM





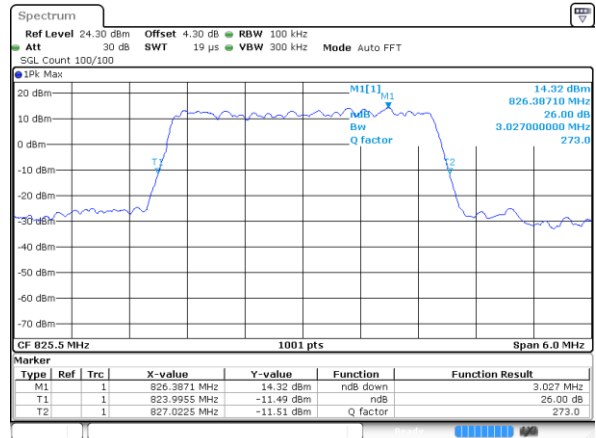
## LTE Band 5

## Lowest Channel / 1.4MHz / 64QAM



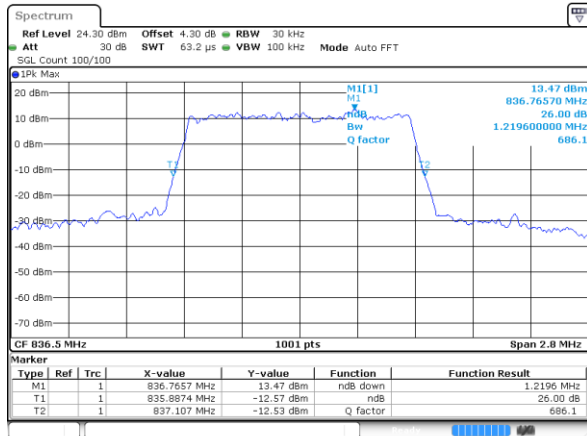
Date: 4 DEC 2019 19:15:55

## Lowest Channel / 3MHz / 64QAM



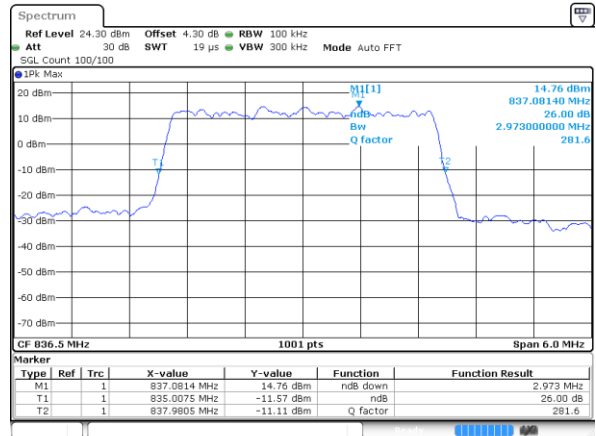
Date: 4 DEC 2019 19:26:08

## Middle Channel / 1.4MHz / 64QAM



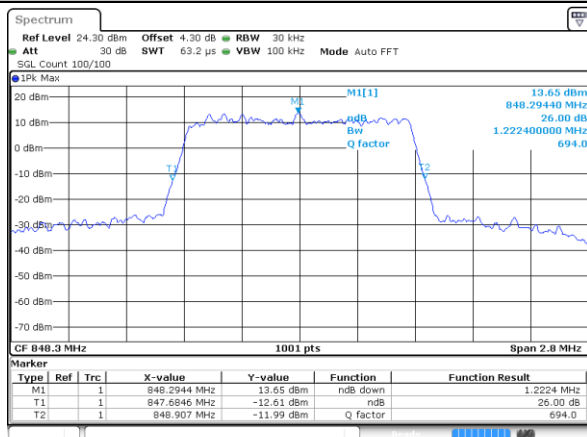
Date: 4 DEC 2019 19:21:18

## Middle Channel / 3MHz / 64QAM



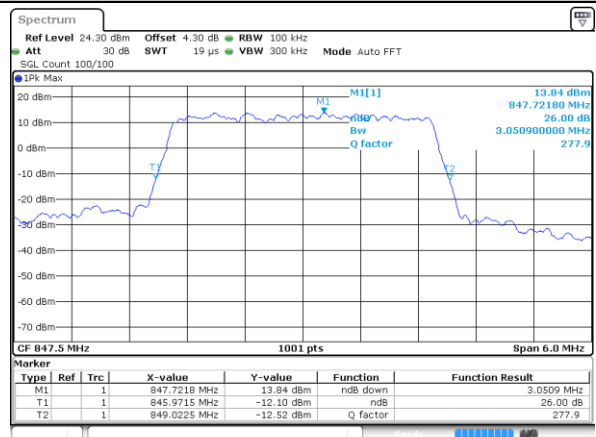
Date: 4 DEC 2019 19:31:32

## Highest Channel / 1.4MHz / 64QAM



Date: 4 DEC 2019 19:21:38

## Highest Channel / 3MHz / 64QAM

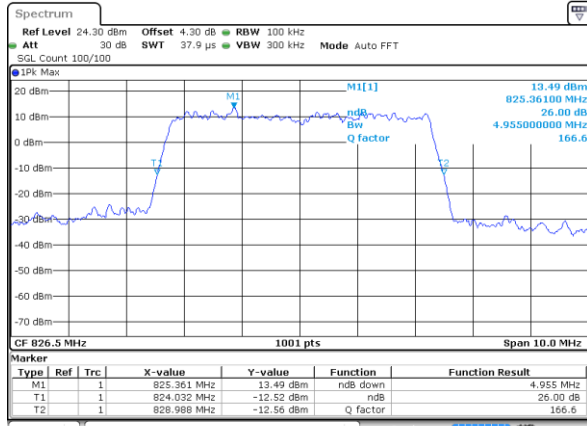


Date: 4 DEC 2019 19:31:52

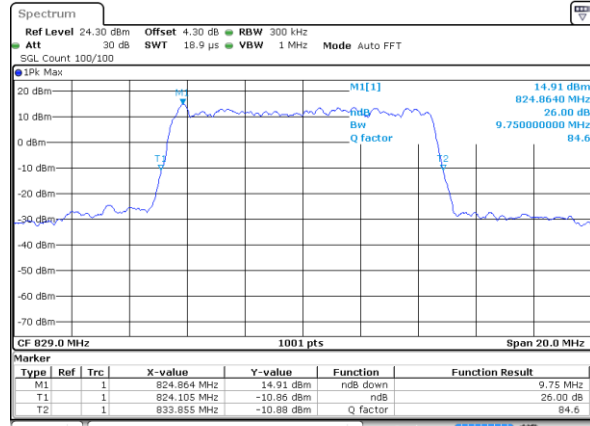


## LTE Band 5

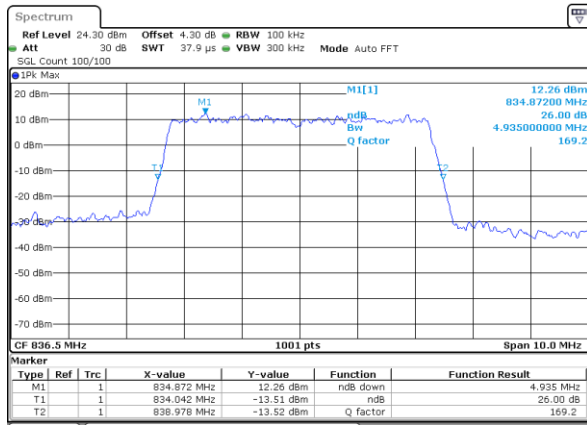
## Lowest Channel / 5MHz / 64QAM



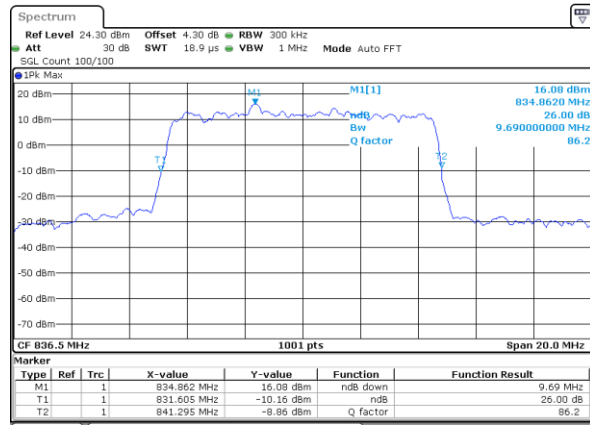
## Lowest Channel / 10MHz / 64QAM



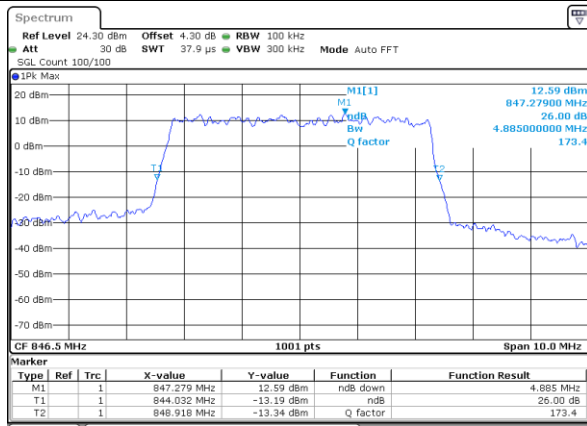
## Middle Channel / 5MHz / 64QAM



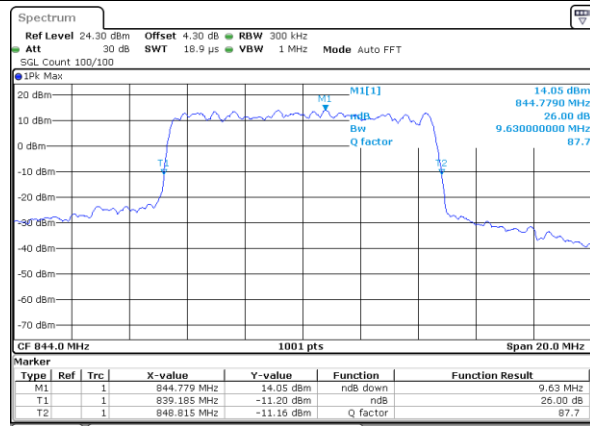
## Middle Channel / 10MHz / 64QAM



## Highest Channel / 5MHz / 64QAM



## Highest Channel / 10MHz / 64QAM



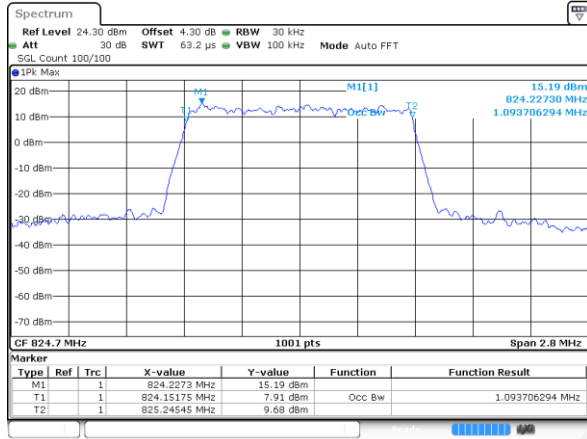
**Occupied Bandwidth**

| Mode       | LTE Band 5 : 99%OBW(MHz) |       |       |       |       |       |       |       |   |   |   |   |
|------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|---|---|---|---|
| BW         | 1.4MHz                   |       | 3MHz  |       | 5MHz  |       | 10MHz |       |   |   |   |   |
| Mod.       | QPSK                     | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM |   |   |   |   |
| Lowest CH  | 1.094                    | 1.099 | 2.709 | 2.709 | 4.496 | 4.505 | 9.071 | 9.031 |   |   |   |   |
| Middle CH  | 1.085                    | 1.088 | 2.715 | 2.721 | 4.486 | 4.476 | 8.991 | 8.951 |   |   |   |   |
| Highest CH | 1.094                    | 1.097 | 2.715 | 2.715 | 4.505 | 4.486 | 9.031 | 9.031 |   |   |   |   |
| Mode       | LTE Band 5 : 99%OBW(MHz) |       |       |       |       |       |       |       |   |   |   |   |
| BW         | 1.4MHz                   |       | 3MHz  |       | 5MHz  |       | 10MHz |       |   |   |   |   |
| Mod.       | 64QAM                    |       | 64QAM |       | 64QAM |       | 64QAM |       |   |   |   |   |
| Lowest CH  | 1.091                    |       | 2.727 |       | 4.505 |       | 9.071 |       | - | - | - | - |
| Middle CH  | 1.094                    |       | 2.721 |       | 4.486 |       | 9.031 |       | - | - | - | - |
| Highest CH | 1.091                    |       | 2.709 |       | 4.496 |       | 9.011 |       | - | - | - | - |

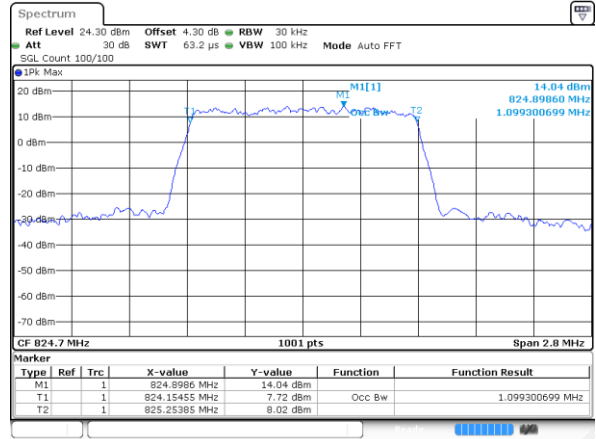


## LTE Band 5

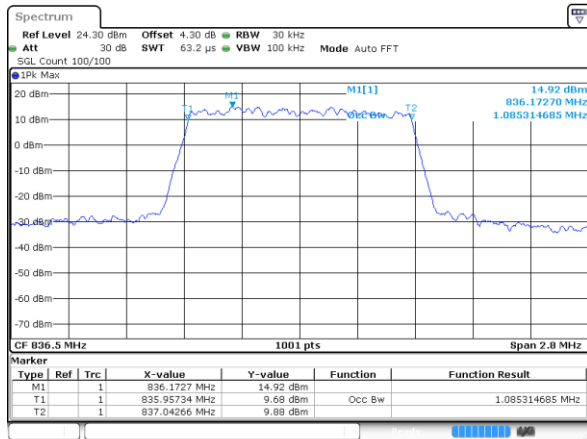
## Lowest Channel / 1.4MHz / QPSK



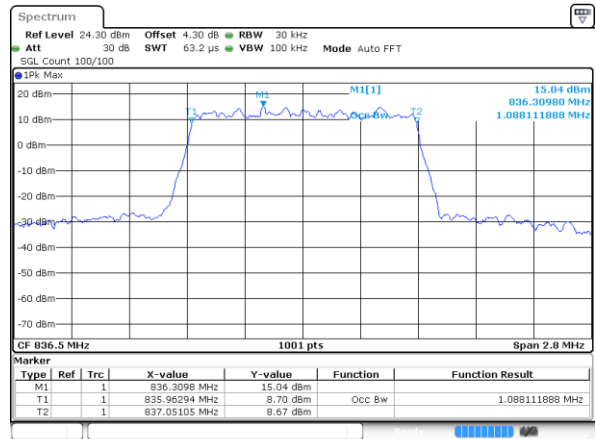
## Lowest Channel / 1.4MHz / 16QAM



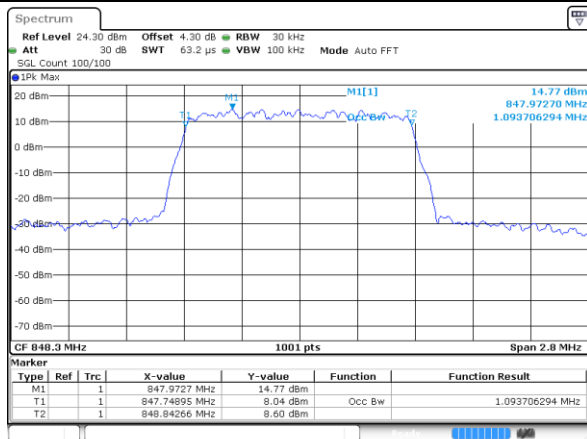
## Middle Channel / 1.4MHz / QPSK



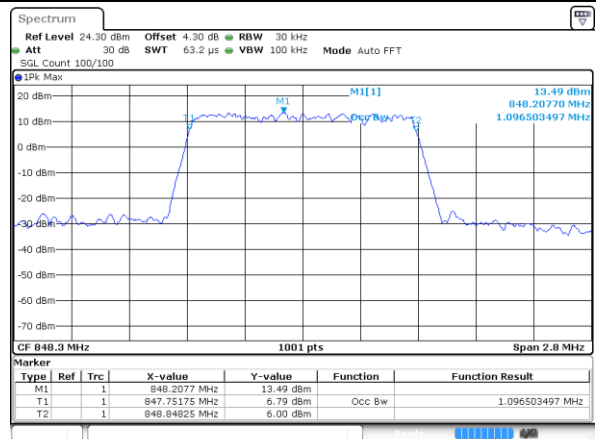
## Middle Channel / 1.4MHz / 16QAM



## Highest Channel / 1.4MHz / QPSK



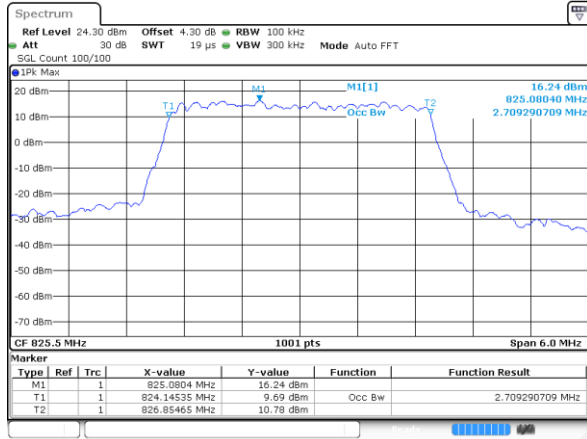
## Highest Channel / 1.4MHz / 16QAM



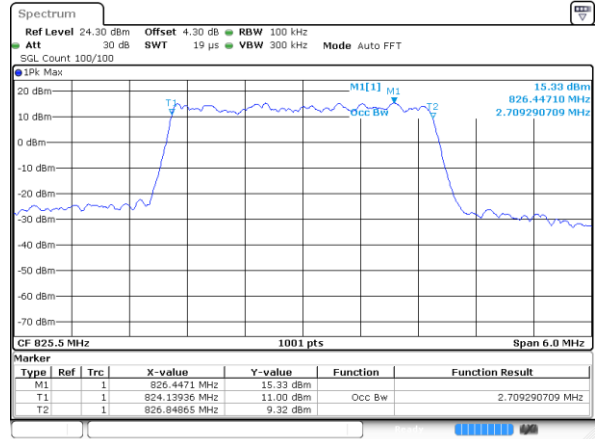


## LTE Band 5

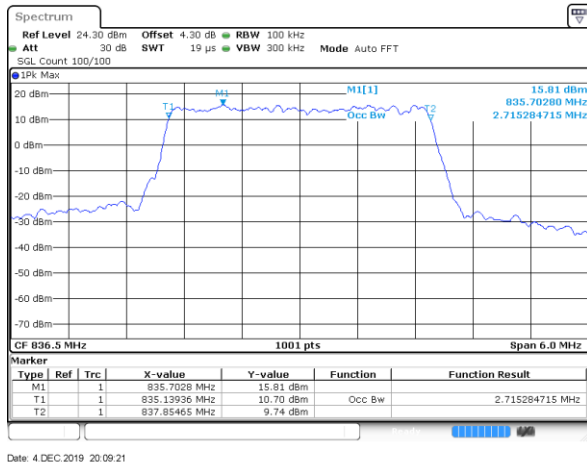
## Lowest Channel / 3MHz / QPSK



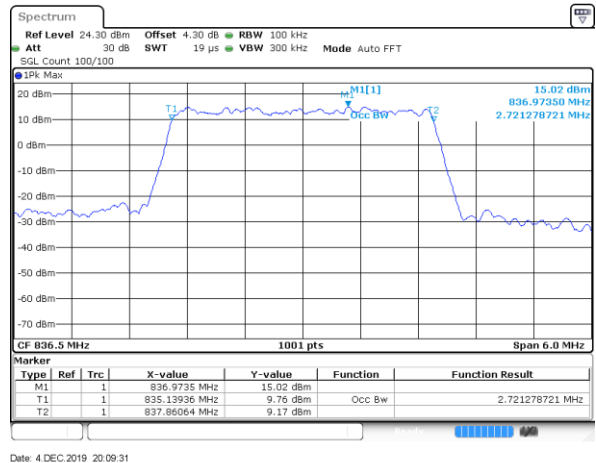
## Lowest Channel / 3MHz / 16QAM



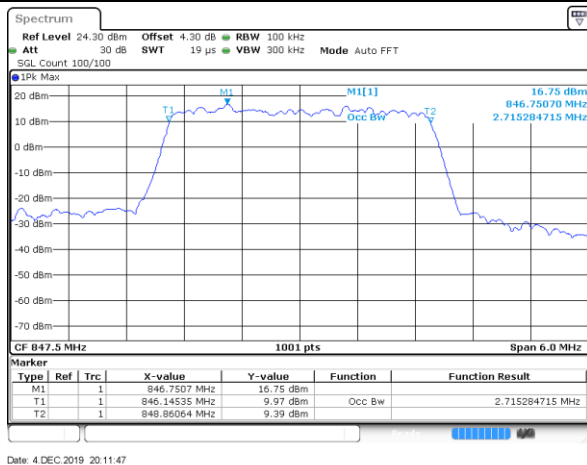
## Middle Channel / 3MHz / QPSK



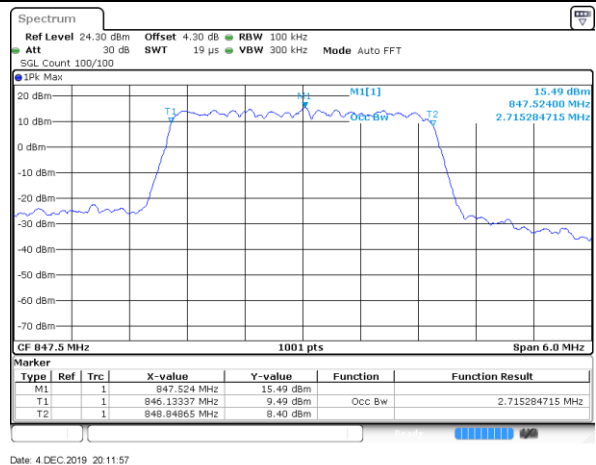
## Middle Channel / 3MHz / 16QAM



## Highest Channel / 3MHz / QPSK



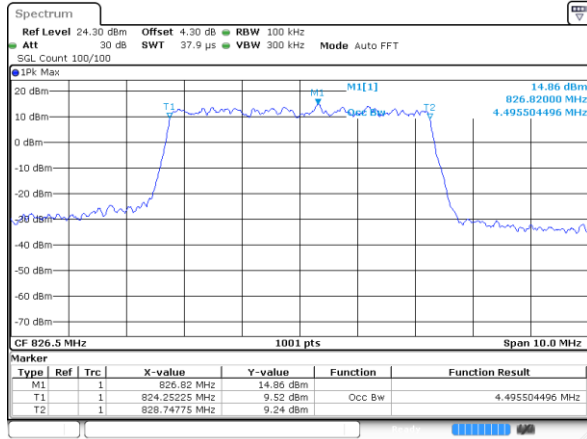
## Highest Channel / 3MHz / 16QAM



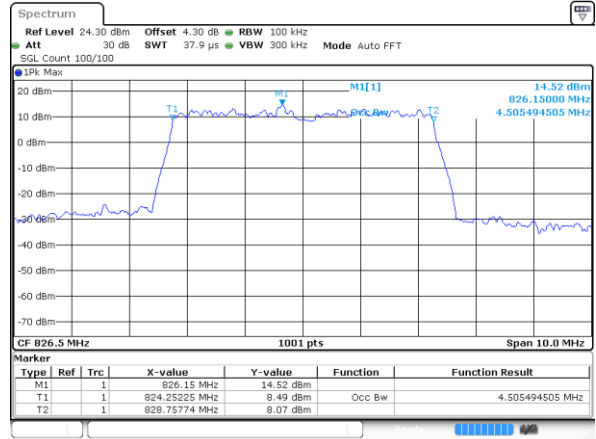


## LTE Band 5

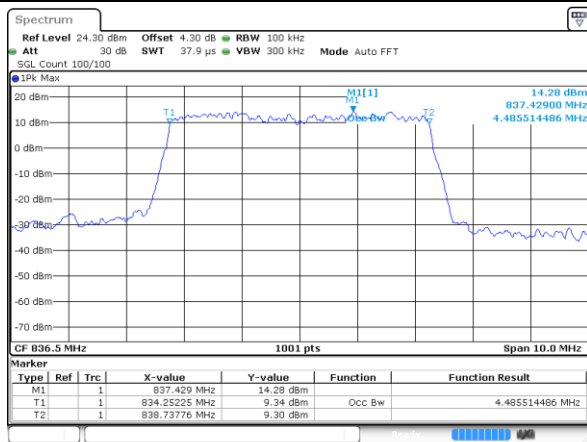
## Lowest Channel / 5MHz / QPSK



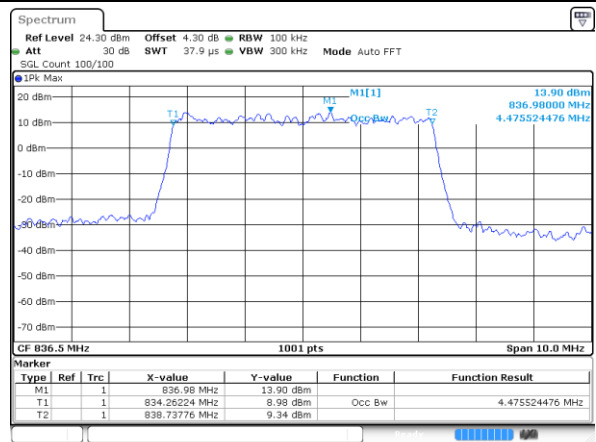
## Lowest Channel / 5MHz / 16QAM



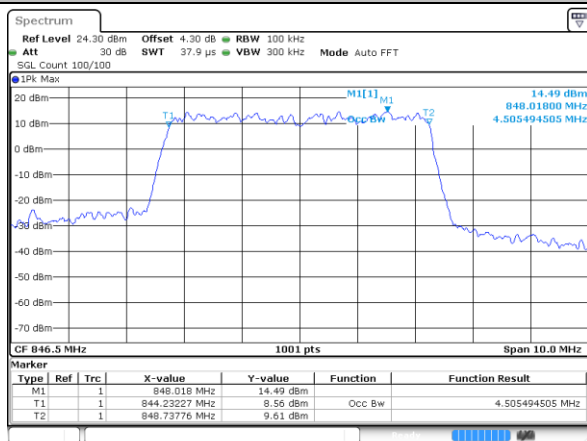
## Middle Channel / 5MHz / QPSK



## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



## Highest Channel / 5MHz / 16QAM

