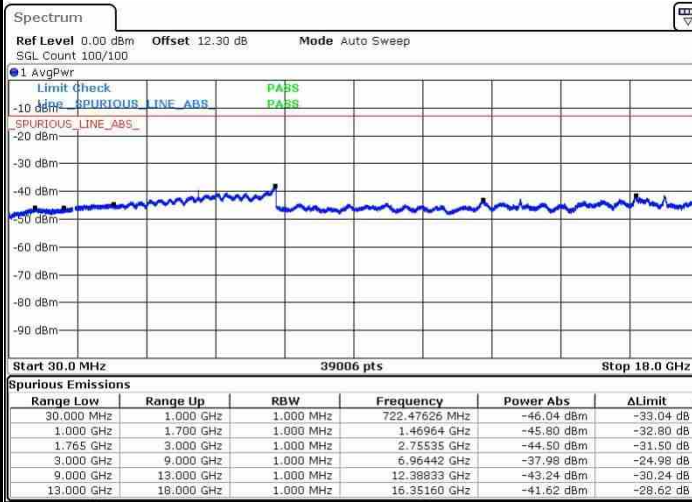




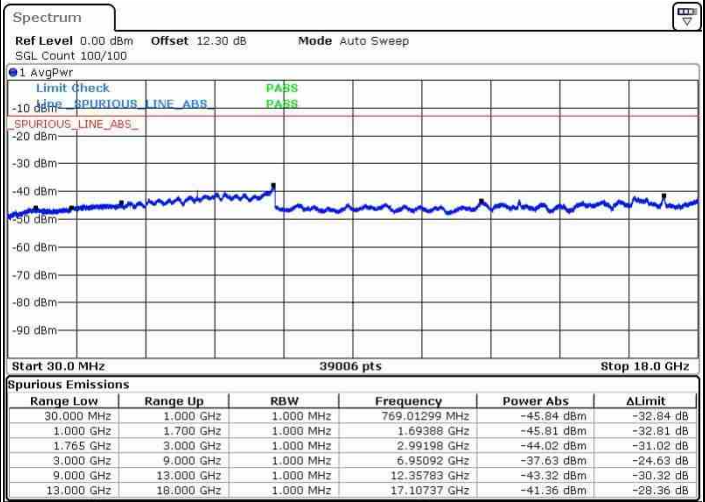
## LTE Band 4 / 20MHz

## Middle Channel / QPSK



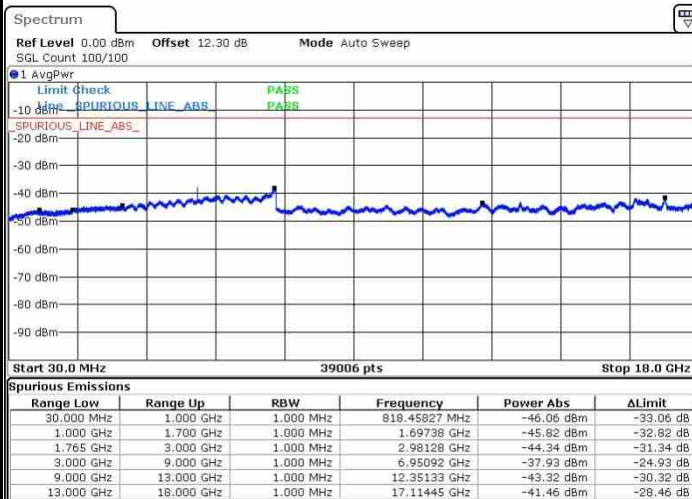
Date: 14.SEP.2015 23:30:32

## Middle Channel / 16QAM



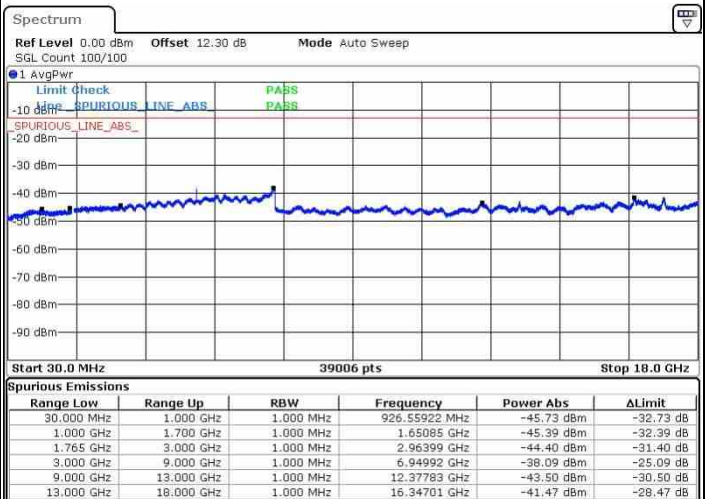
Date: 14.SEP.2015 23:31:30

## Highest Channel / QPSK



Date: 14.SEP.2015 23:37:53

## Highest Channel / 16QAM



Date: 14.SEP.2015 23:38:51

## 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    | 0.0014                             | PASS    |
| 40               | Normal Voltage    | 0.0013                             |         |
| 30               | Normal Voltage    | 0.0002                             |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                             |         |
| 10               | Normal Voltage    | 0.0004                             |         |
| 0                | Normal Voltage    | 0.0001                             |         |
| -10              | Normal Voltage    | 0.0001                             |         |
| -20              | Normal Voltage    | 0.0006                             |         |
| -30              | Normal Voltage    | 0.0002                             |         |
| 20               | Maximum Voltage   | 0.0005                             |         |
| 20               | Normal Voltage    | 0.0000                             |         |
| 20               | Battery End Point | 0.0010                             |         |

**Note:**

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.2 V
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

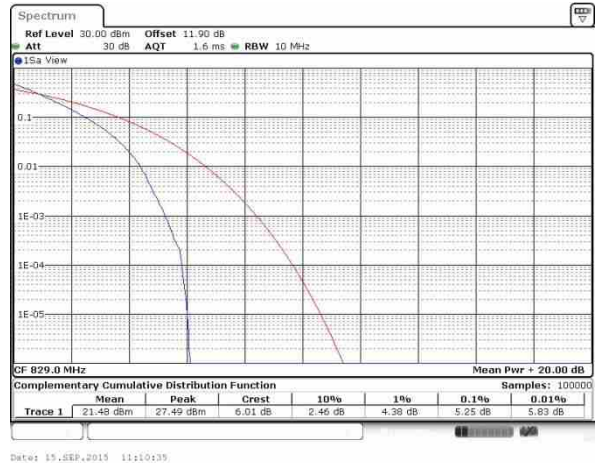


## LTE Band 5

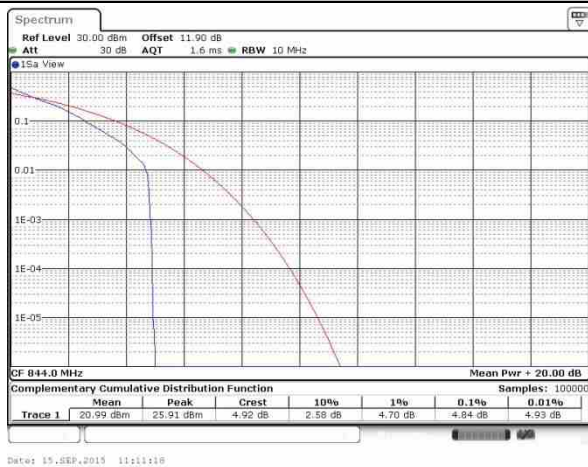
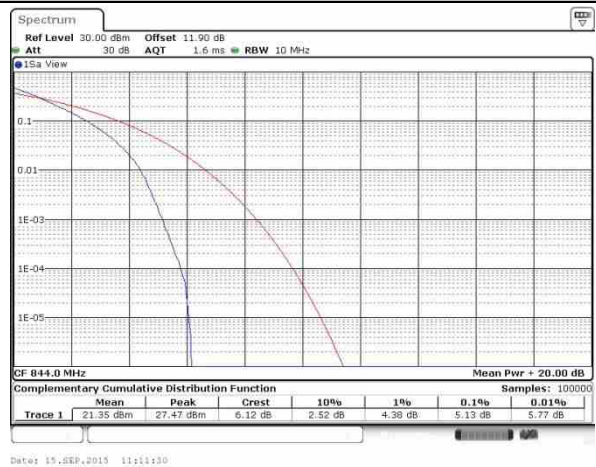
### Peak-to-Average Ratio

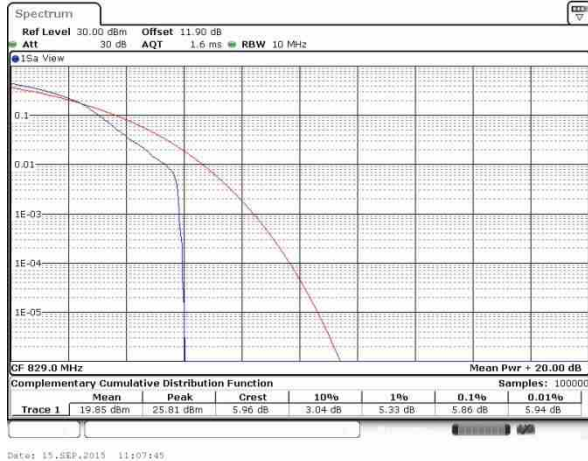
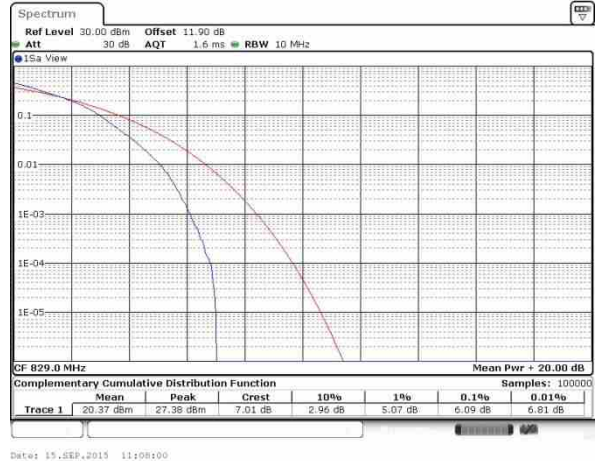
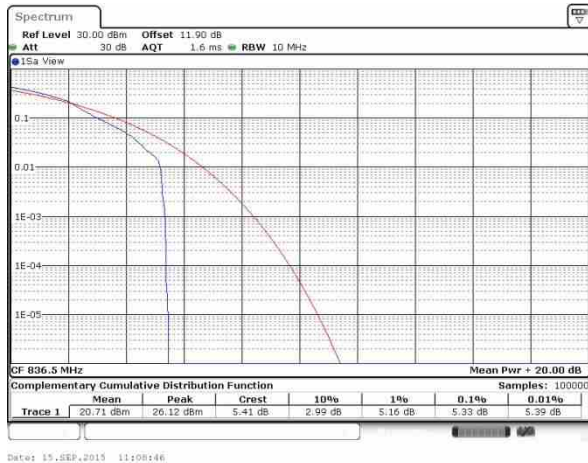
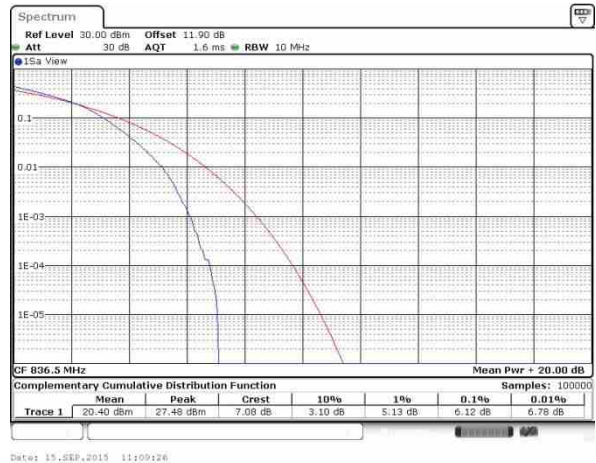
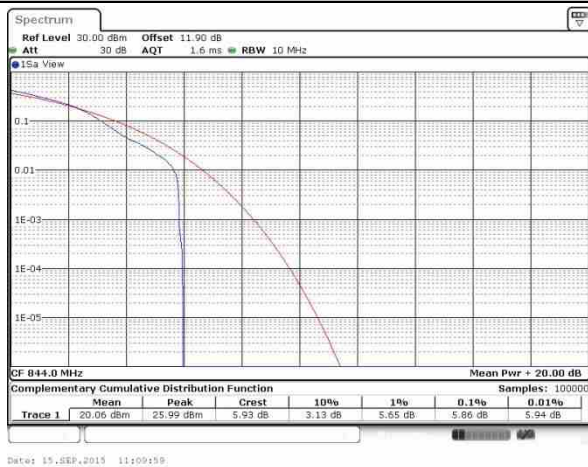
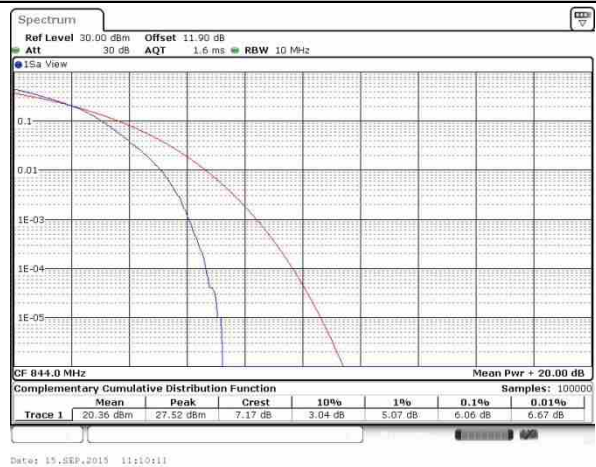
| Mode       | LTE Band 5 / 10MHz |         |       |         |             |
|------------|--------------------|---------|-------|---------|-------------|
| Mod.       | QPSK               |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | 4.84               | 5.25    | 5.86  | 6.09    | PASS        |
| Middle CH  | 4.84               | 5.19    | 5.33  | 6.12    |             |
| Highest CH | 4.84               | 5.13    | 5.86  | 6.06    |             |

**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**




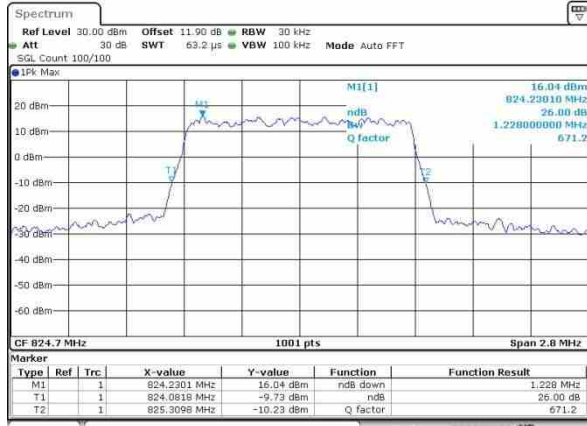
26dB Bandwidth

| Mode       | LTE Band 5 : 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  | 1.23                      | 1.21  | 3.02 | 3.06  | 4.91 | 4.88  | 9.83  | 9.71  | -     | -     | -     | -     |
| Middle CH  | 1.24                      | 1.23  | 3.05 | 2.98  | 4.93 | 4.83  | 9.71  | 10.01 | -     | -     | -     | -     |
| Highest CH | 1.23                      | 1.24  | 2.99 | 2.99  | 4.87 | 4.79  | 9.79  | 9.67  | -     | -     | -     | -     |



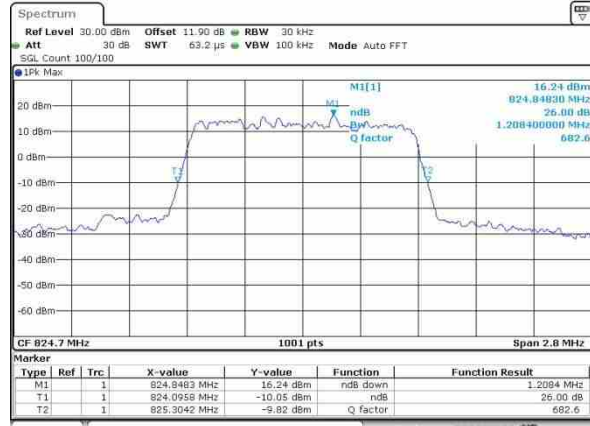
## LTE Band 5

## Lowest Channel / 1.4MHz / QPSK



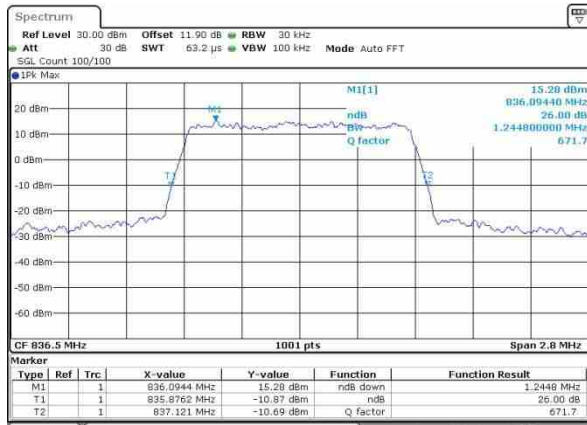
Date: 15.SEP.2015 10:31:53

## Lowest Channel / 1.4MHz / 16QAM



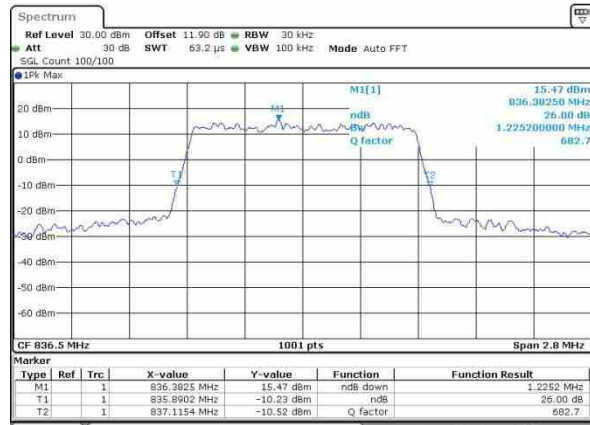
Date: 15.SEP.2015 10:31:42

## Middle Channel / 1.4MHz / QPSK



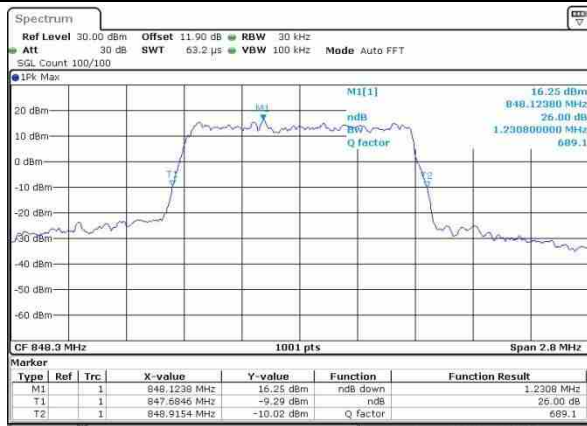
Date: 15.SEP.2015 10:42:03

## Middle Channel / 1.4MHz / 16QAM



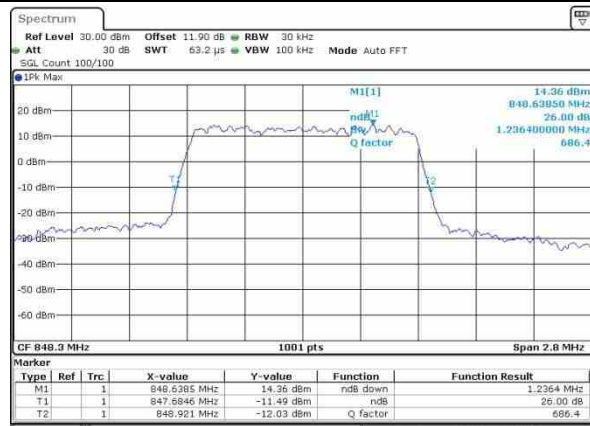
Date: 15.SEP.2015 10:42:15

## Highest Channel / 1.4MHz / QPSK



Date: 15.SEP.2015 10:44:46

## Highest Channel / 1.4MHz / 16QAM

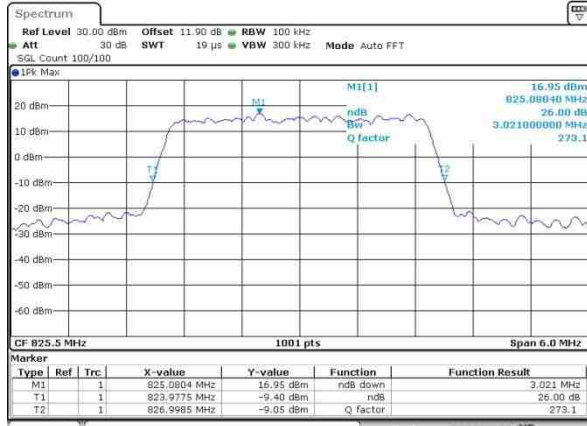


Date: 15.SEP.2015 10:44:58



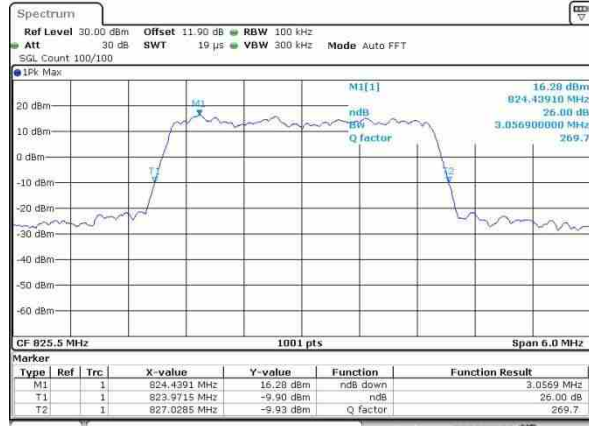
## LTE Band 5

## Lowest Channel / 3MHz / QPSK



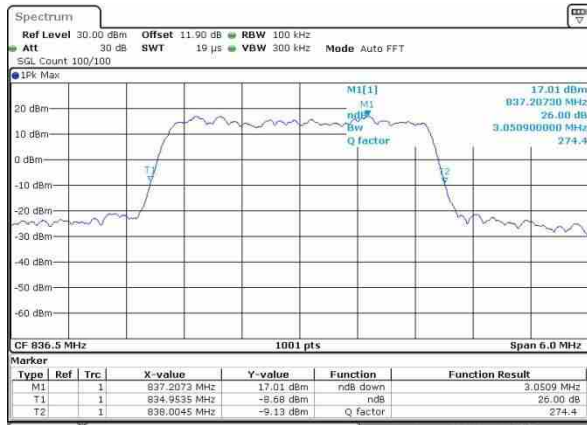
Date: 15.SEP.2015 09:12:108

## Lowest Channel / 3MHz / 16QAM



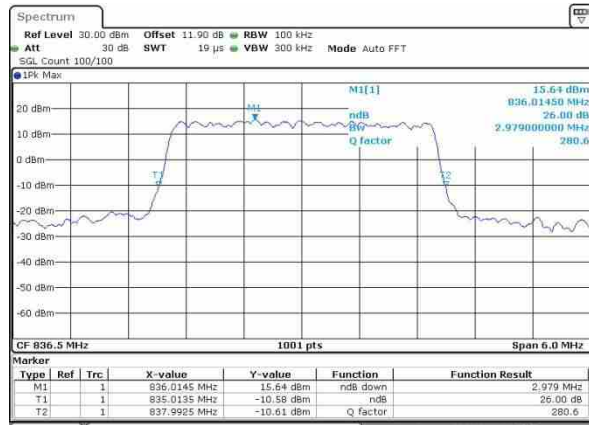
Date: 15.SEP.2015 09:12:120

## Middle Channel / 3MHz / QPSK



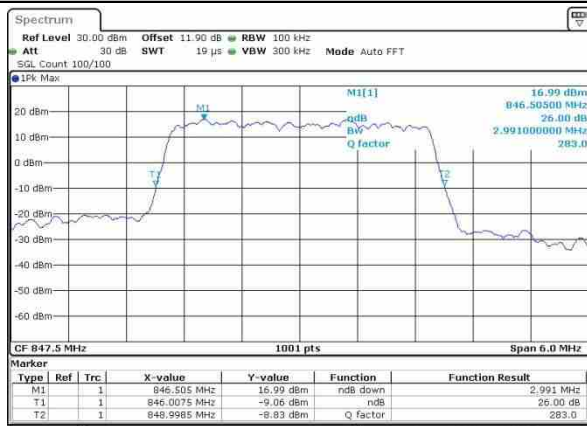
Date: 15.SEP.2015 09:12:131

## Middle Channel / 3MHz / 16QAM



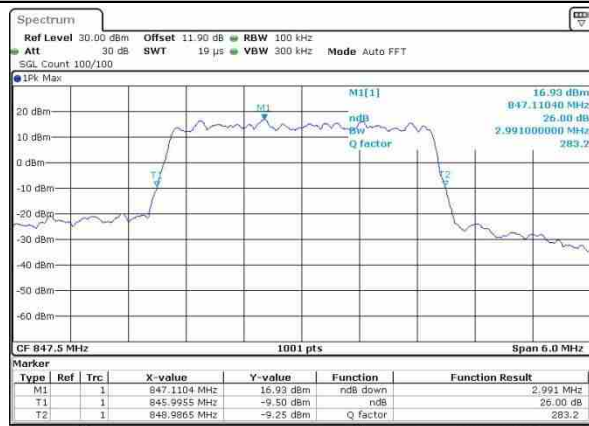
Date: 15.SEP.2015 09:12:143

## Highest Channel / 3MHz / QPSK



Date: 15.SEP.2015 09:12:115

## Highest Channel / 3MHz / 16QAM

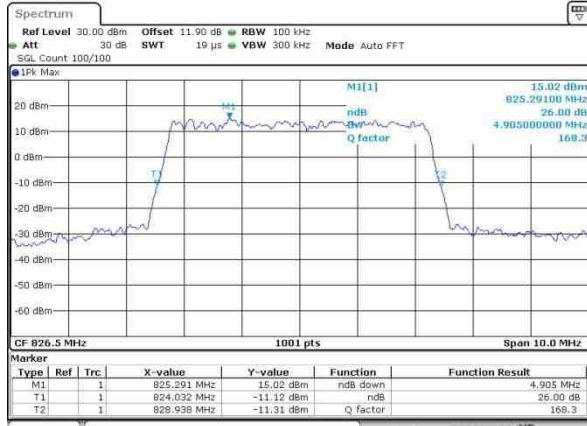


Date: 15.SEP.2015 09:12:126

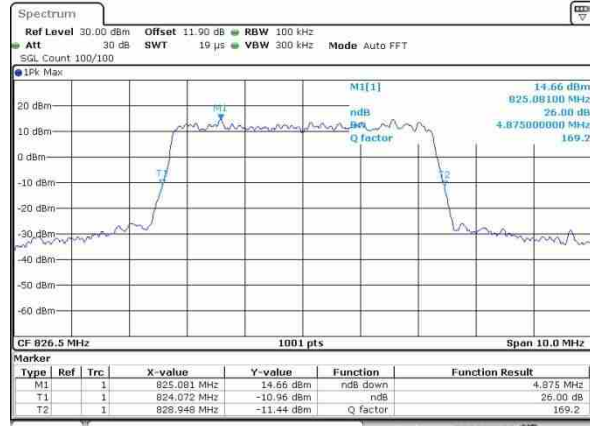


## LTE Band 5

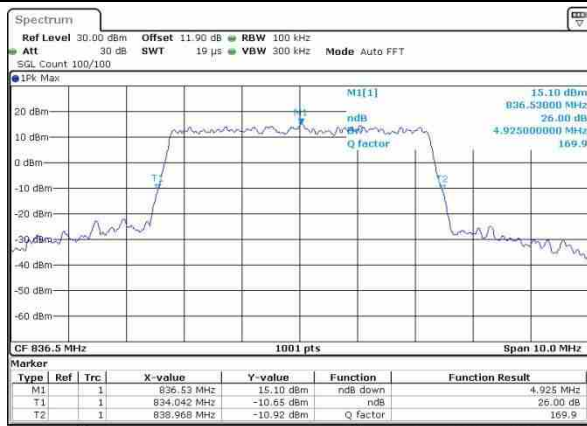
## Lowest Channel / 5MHz / QPSK



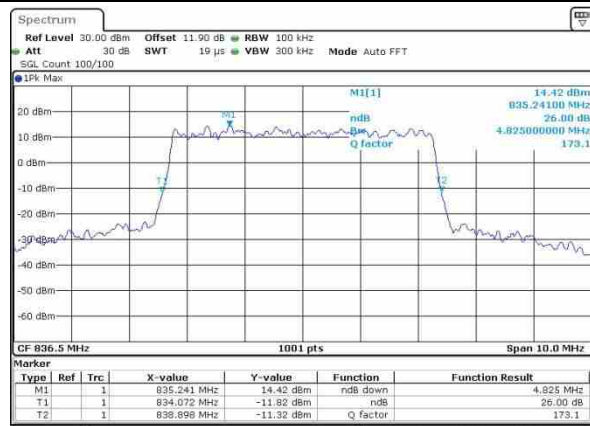
## Lowest Channel / 5MHz / 16QAM



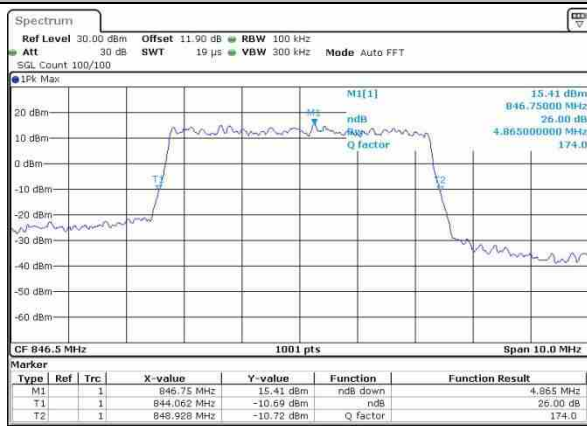
## Middle Channel / 5MHz / QPSK



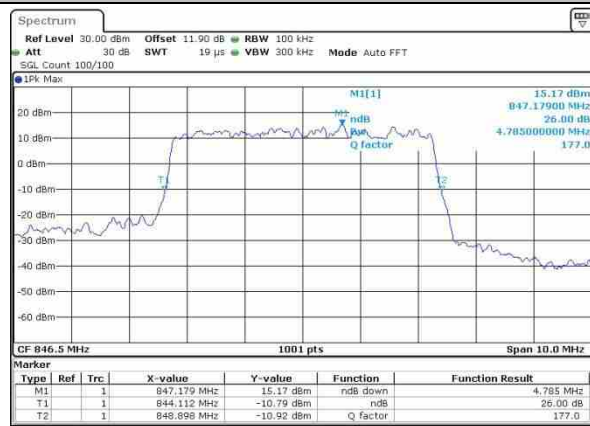
## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



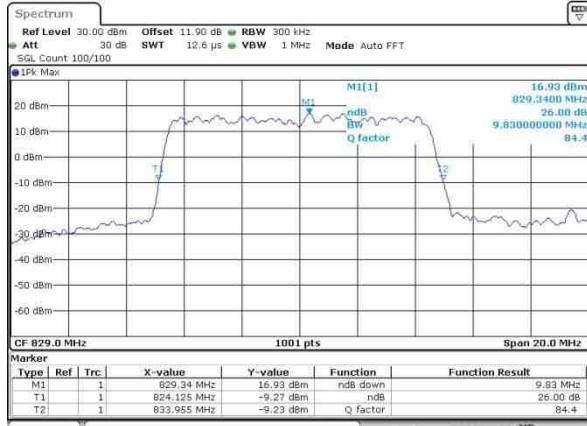
## Highest Channel / 5MHz / 16QAM





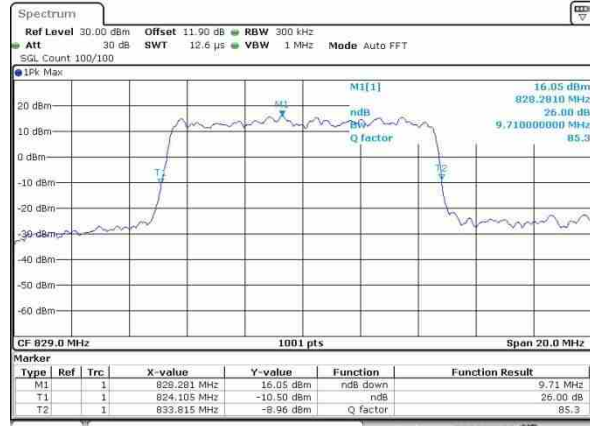
## LTE Band 5

## Lowest Channel / 10MHz / QPSK



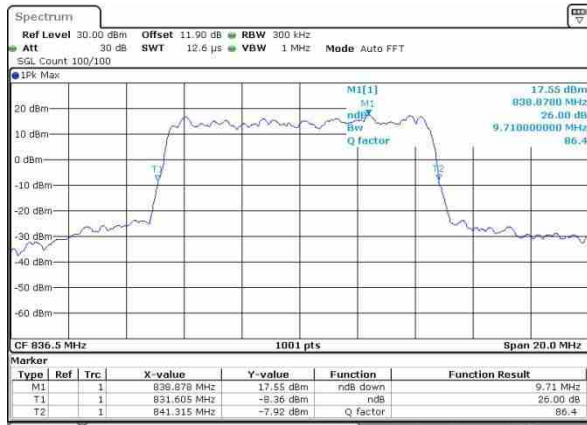
Date: 15.SEP.2015 09:59:00

## Lowest Channel / 10MHz / 16QAM



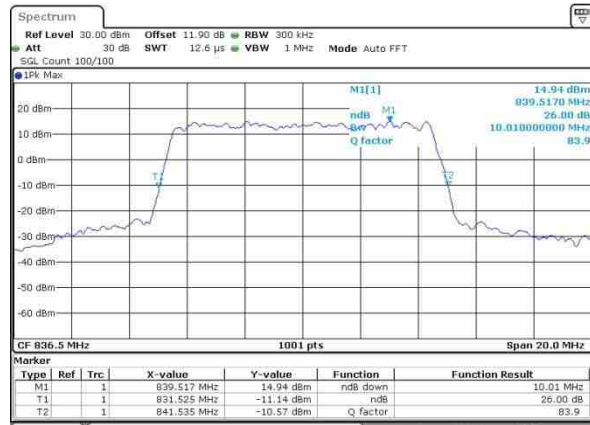
Date: 15.SEP.2015 09:59:12

## Middle Channel / 10MHz / QPSK



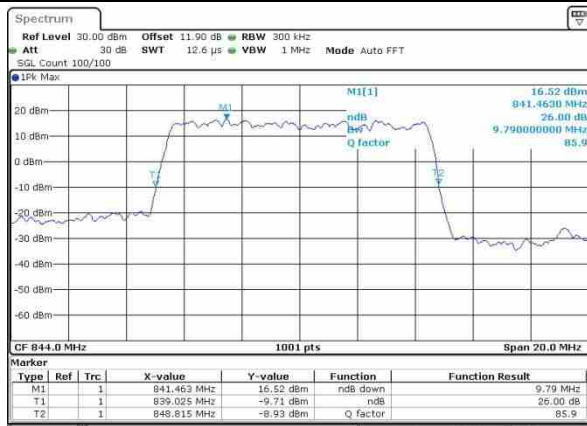
Date: 15.SEP.2015 10:09:21

## Middle Channel / 10MHz / 16QAM



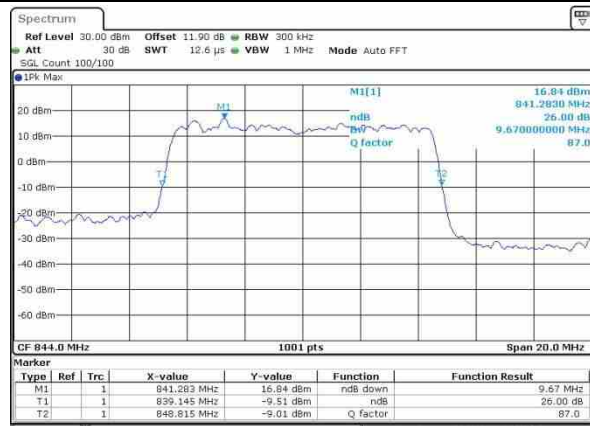
Date: 15.SEP.2015 10:09:22

## Highest Channel / 10MHz / QPSK



Date: 15.SEP.2015 10:12:04

## Highest Channel / 10MHz / 16QAM



Date: 15.SEP.2015 10:12:16



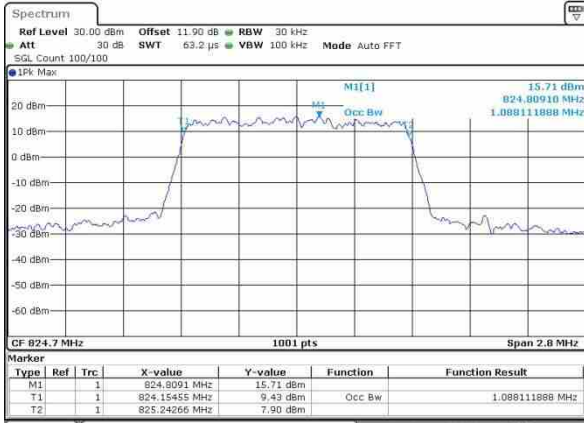
## Occupied Bandwidth

| Mode       | LTE Band 5 : 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  | 1.09                     | 1.09  | 2.72 | 2.73  | 4.48 | 4.5   | 9.03  | 8.99  | -     | -     | -     | -     |
| Middle CH  | 1.09                     | 1.09  | 2.71 | 2.71  | 4.49 | 4.51  | 9.07  | 9.03  | -     | -     | -     | -     |
| Highest CH | 1.09                     | 1.09  | 2.74 | 2.72  | 4.47 | 4.49  | 9.05  | 9.03  | -     | -     | -     | -     |

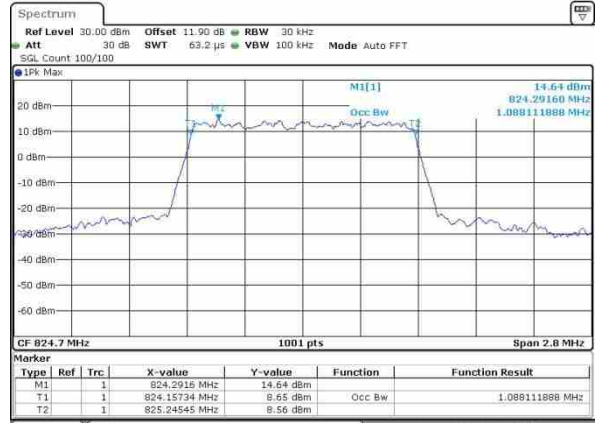


## LTE Band 5

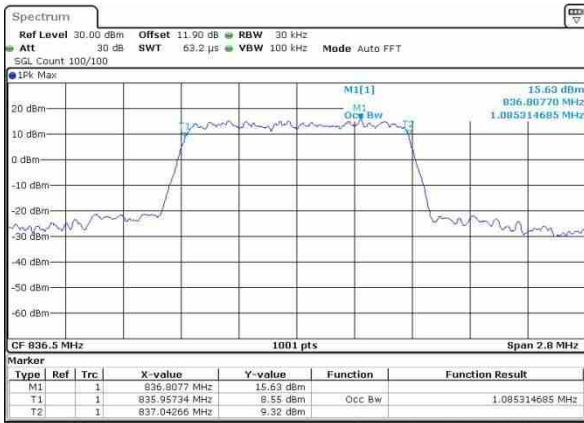
## Lowest Channel / 1.4MHz / QPSK



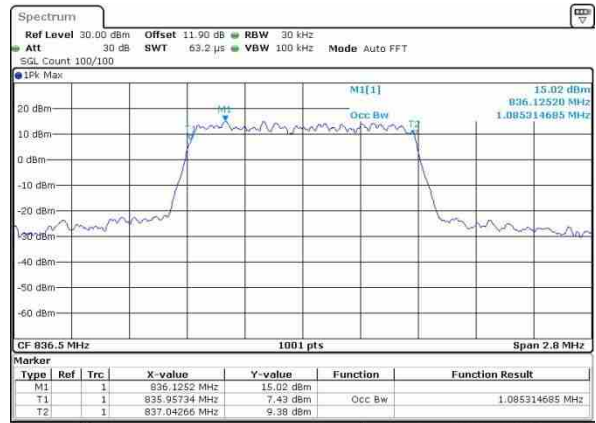
## Lowest Channel / 1.4MHz / 16QAM



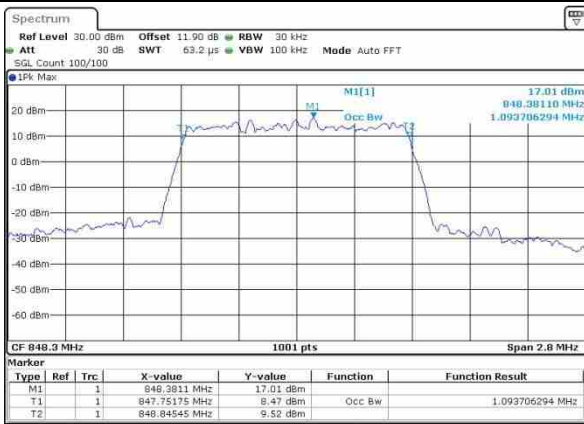
## Middle Channel / 1.4MHz / QPSK



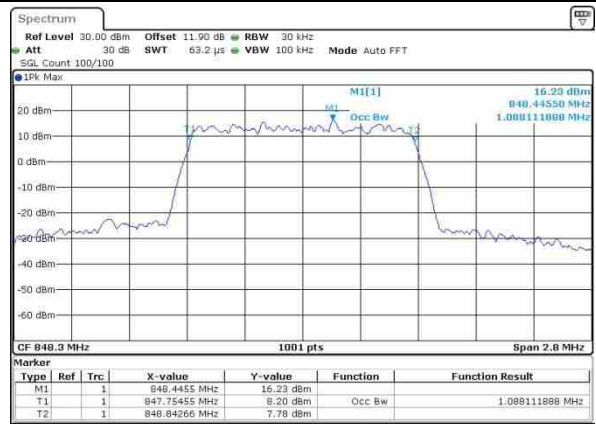
## Middle Channel / 1.4MHz / 16QAM



## Highest Channel / 1.4MHz / QPSK



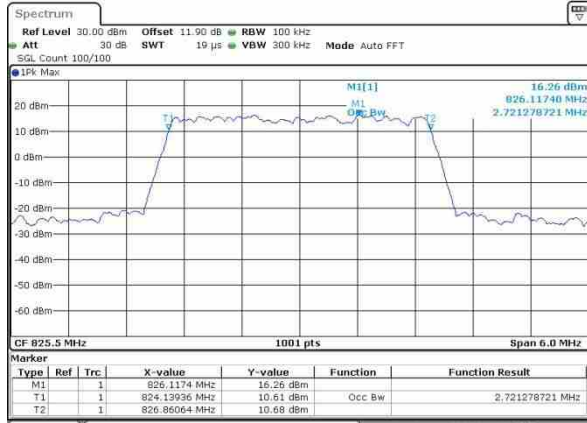
## Highest Channel / 1.4MHz / 16QAM



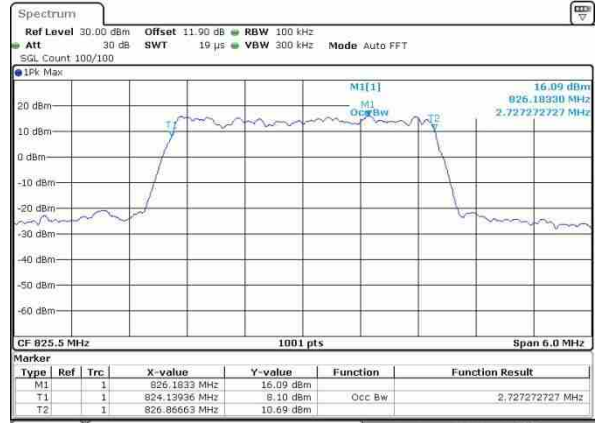


## LTE Band 5

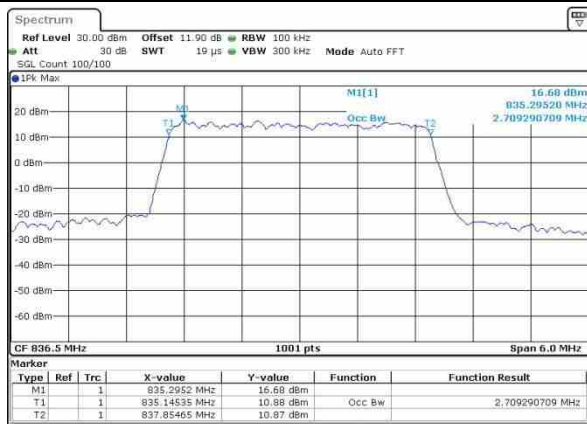
## Lowest Channel / 3MHz / QPSK



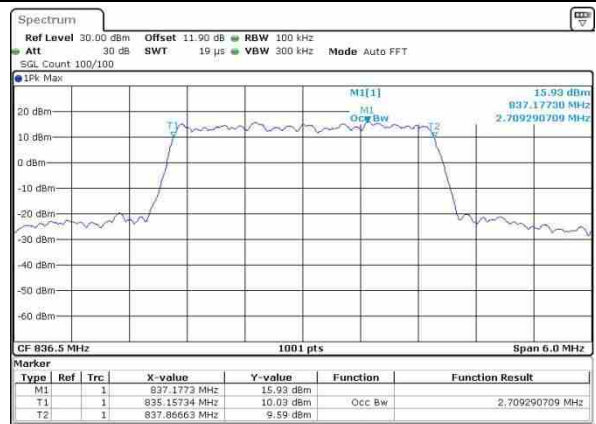
## Lowest Channel / 3MHz / 16QAM



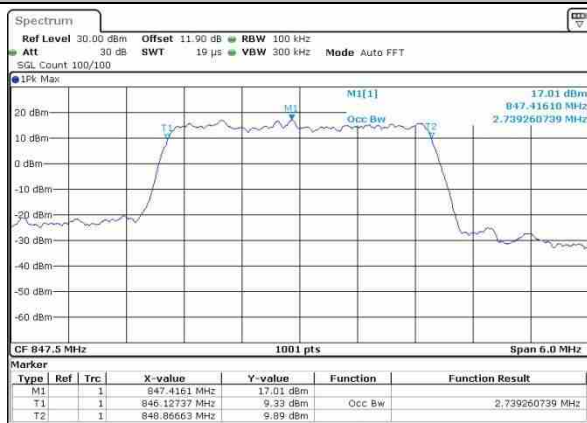
## Middle Channel / 3MHz / QPSK



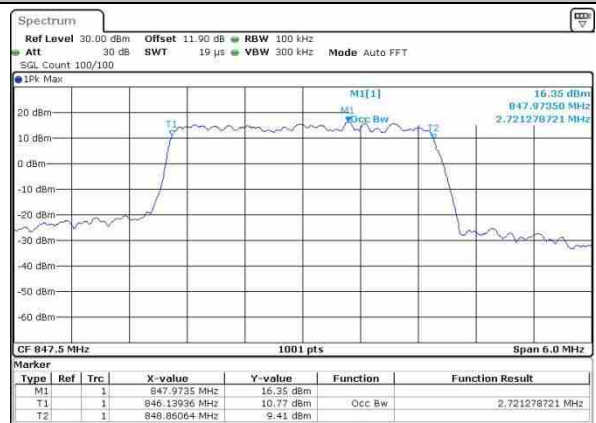
## Middle Channel / 3MHz / 16QAM



## Highest Channel / 3MHz / QPSK



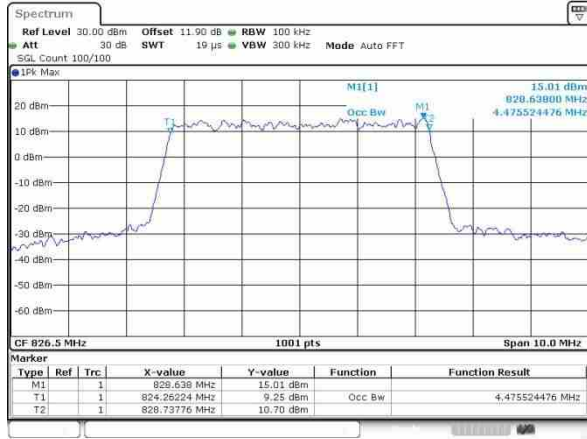
## Highest Channel / 3MHz / 16QAM



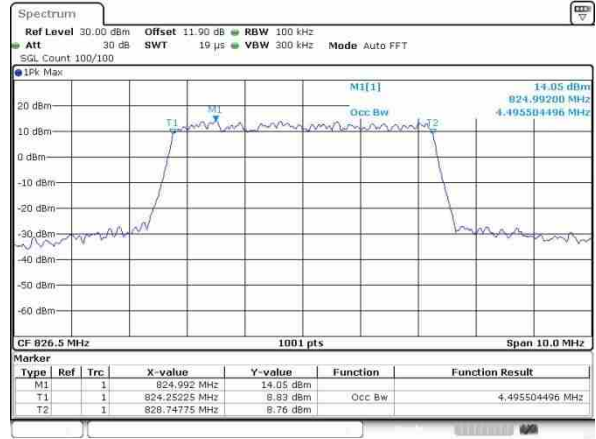


## LTE Band 5

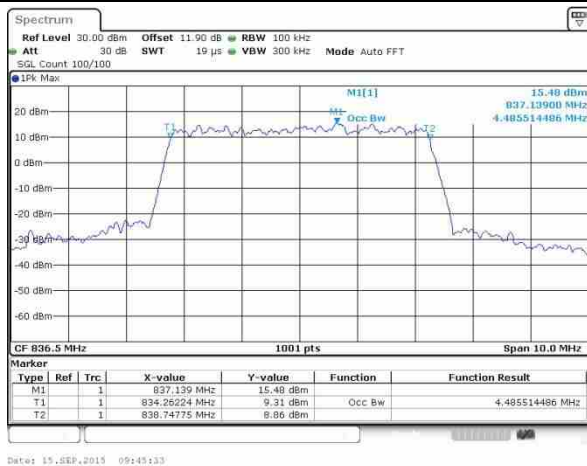
## Lowest Channel / 5MHz / QPSK



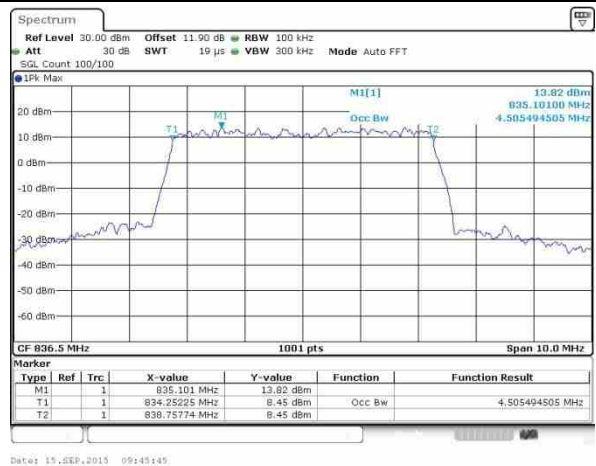
## Lowest Channel / 5MHz / 16QAM



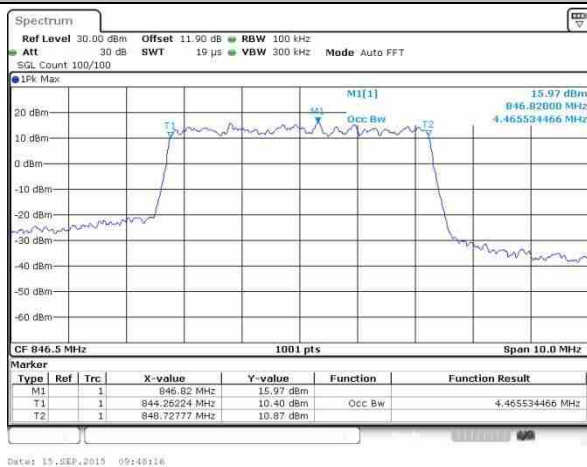
## Middle Channel / 5MHz / QPSK



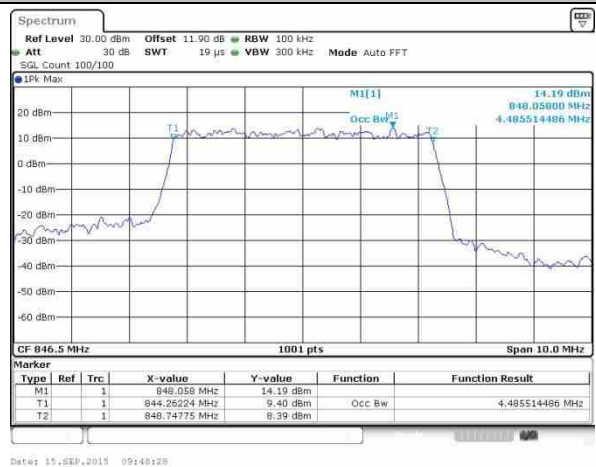
## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



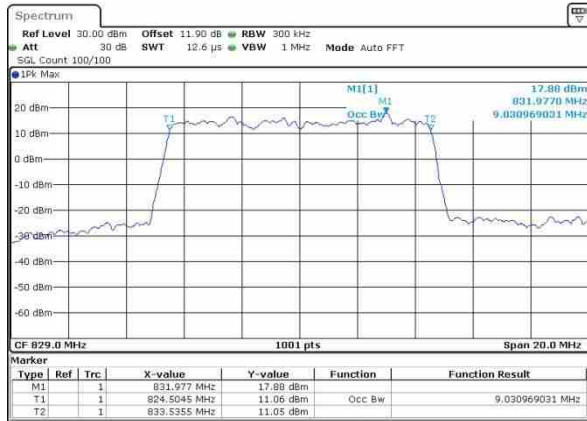
## Highest Channel / 5MHz / 16QAM



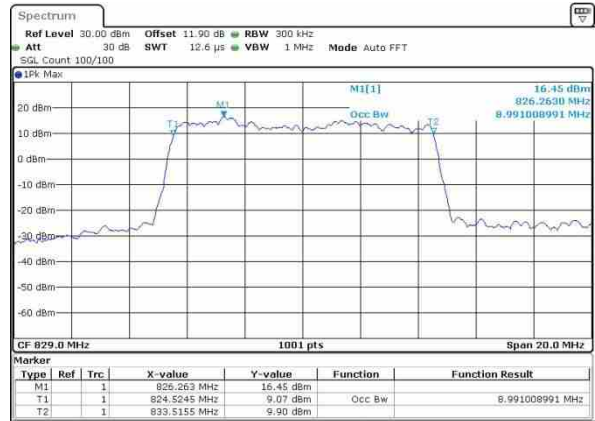


## LTE Band 5

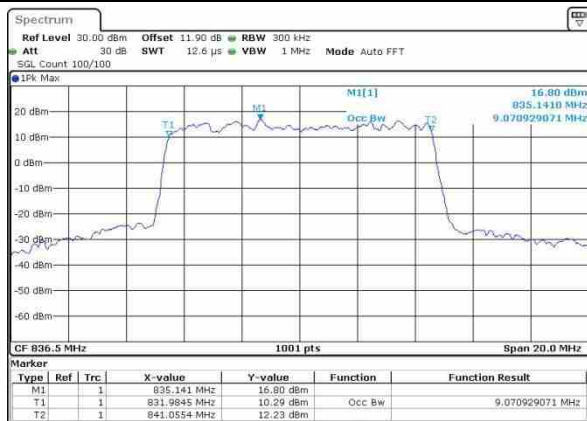
## Lowest Channel / 10MHz / QPSK



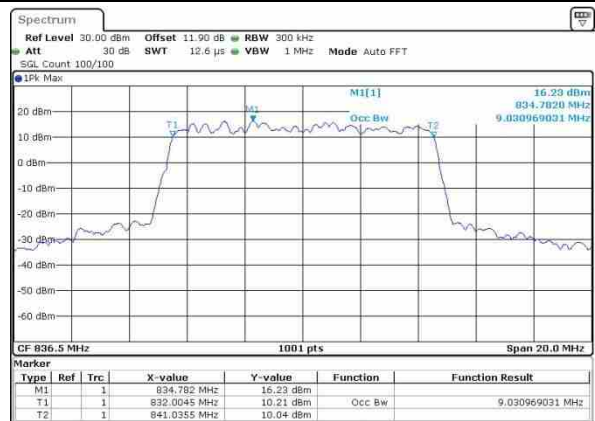
## Lowest Channel / 10MHz / 16QAM



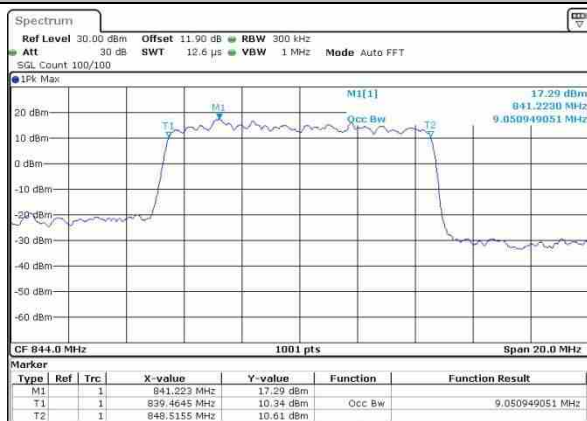
## Middle Channel / 10MHz / QPSK



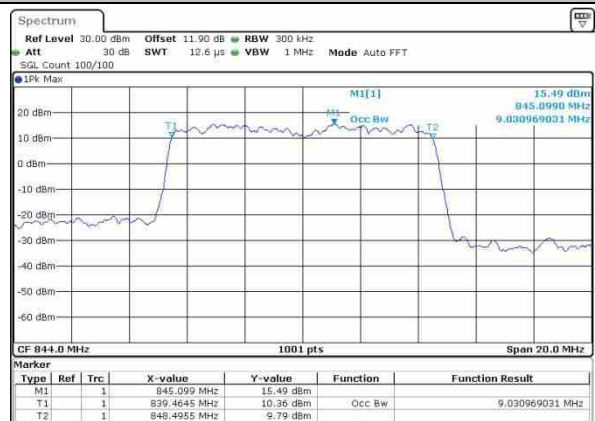
## Middle Channel / 10MHz / 16QAM



## Highest Channel / 10MHz / QPSK



## Highest Channel / 10MHz / 16QAM





## **Conducted Band Edge**



## LTE Band 5 / 1.4MHz / QPSK

## Lowest Band Edge / 1RB



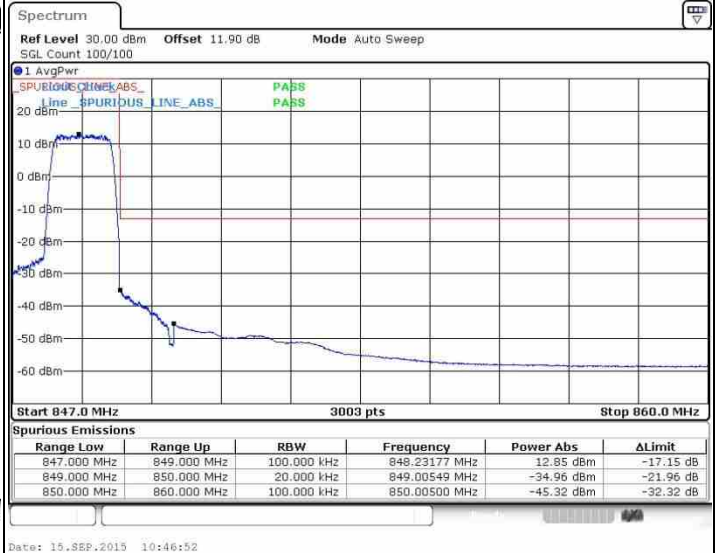
## Highest Band Edge / 1RB



## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB





## LTE Band 5 / 1.4MHz / 16QAM

## Lowest Band Edge / 1 RB



## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



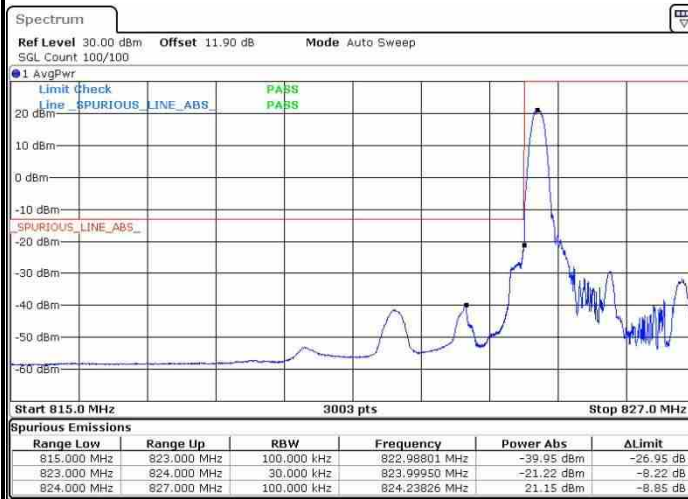
## Highest Band Edge / Full RB





## LTE Band 5 / 3MHz / QPSK

## Lowest Band Edge / 1RB



## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



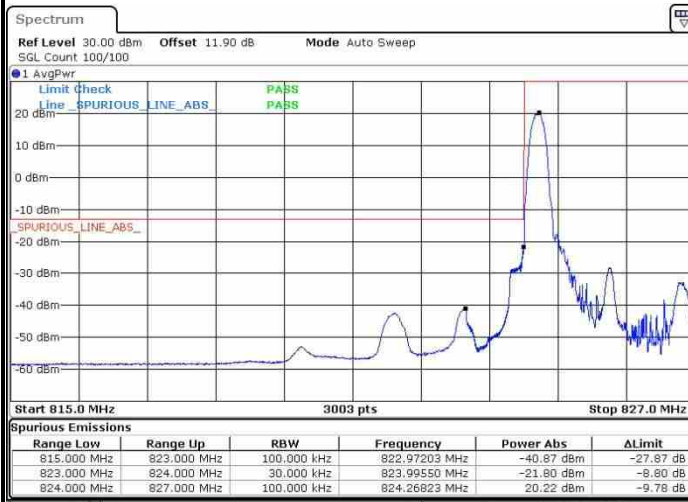
## Highest Band Edge / Full RB





## LTE Band 5 / 3MHz / 16QAM

## Lowest Band Edge / 1 RB



## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



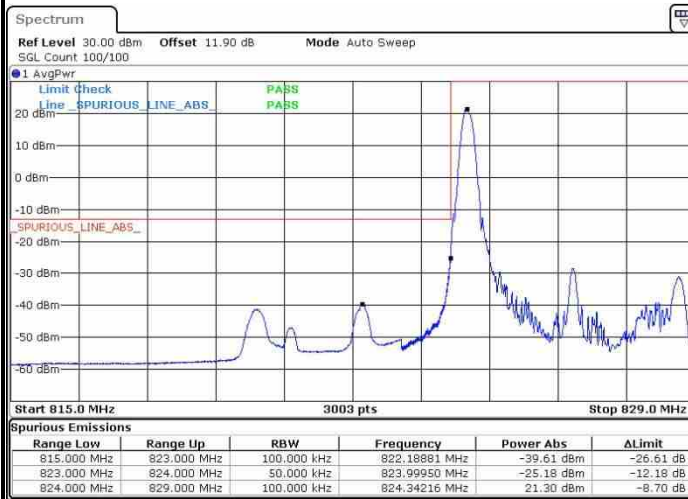
## Highest Band Edge / Full RB





## LTE Band 5 / 5MHz / QPSK

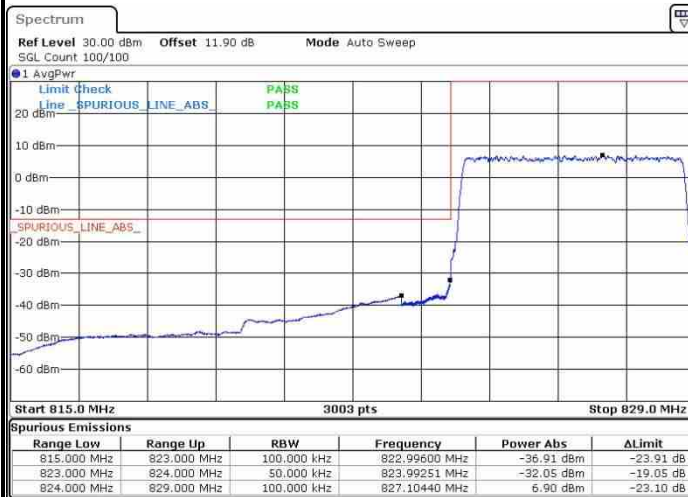
## Lowest Band Edge / 1 RB



## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



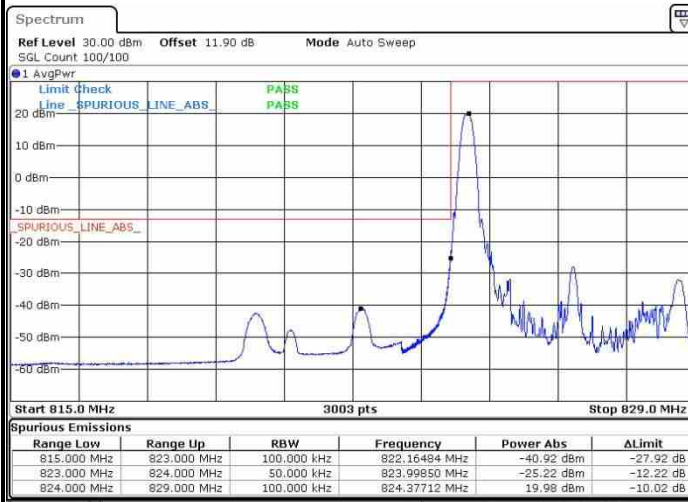
## Highest Band Edge / Full RB





## LTE Band 5 / 5MHz / 16QAM

## Lowest Band Edge / 1RB



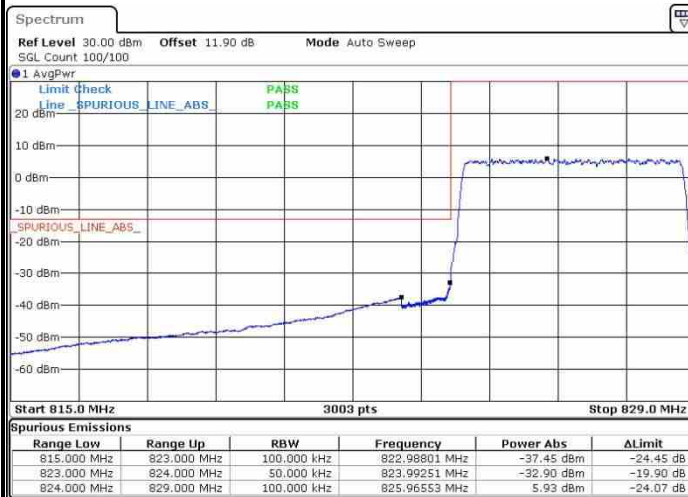
Date: 15.SEP.2015 09:39:36

## Highest Band Edge / 1 RB



Date: 15.SEP.2015 09:52:40

## Lowest Band Edge / Full RB



Date: 15.SEP.2015 09:43:25

## Highest Band Edge / Full RB

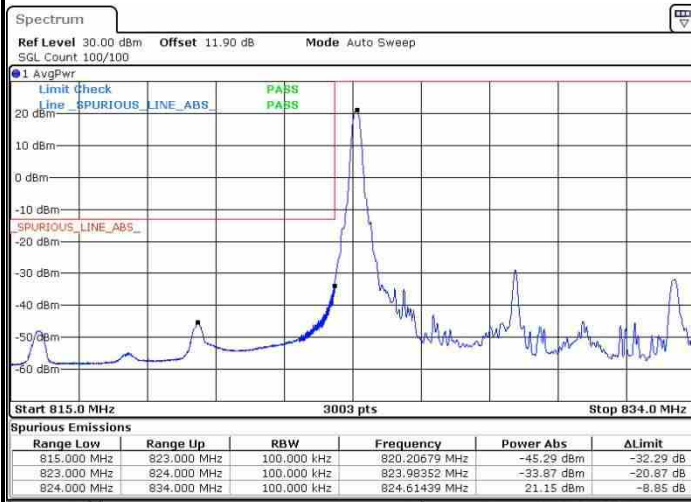


Date: 15.SEP.2015 09:56:29

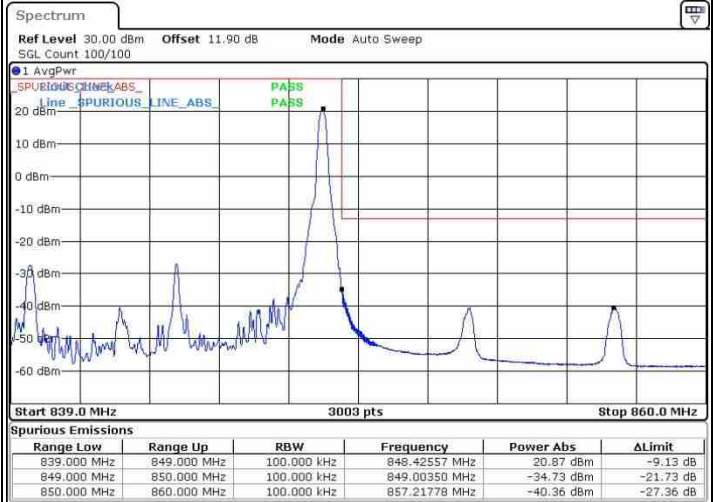


## LTE Band 5 / 10MHz / QPSK

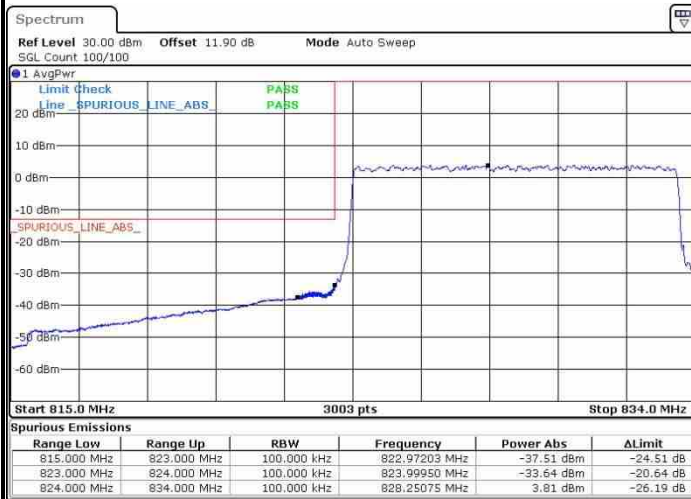
## Lowest Band Edge / 1 RB



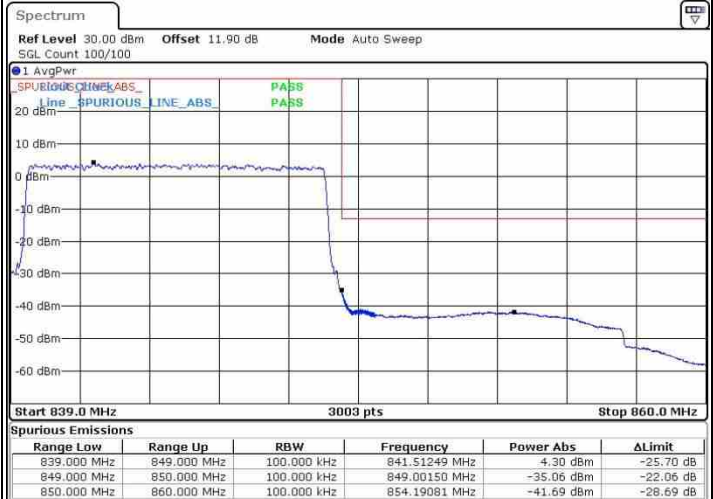
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



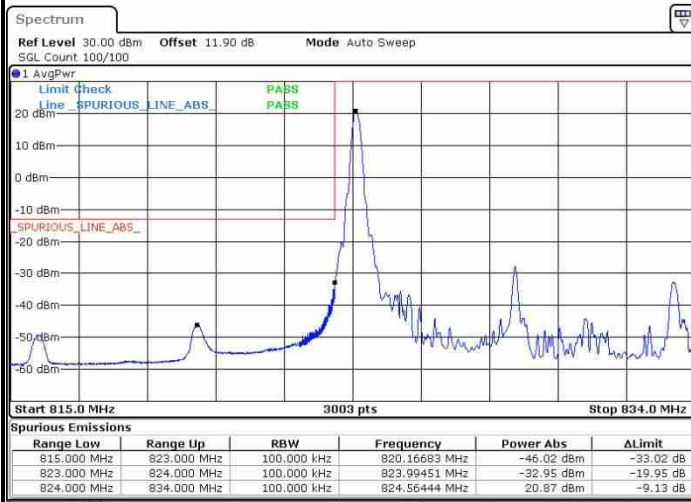
## Highest Band Edge / Full RB



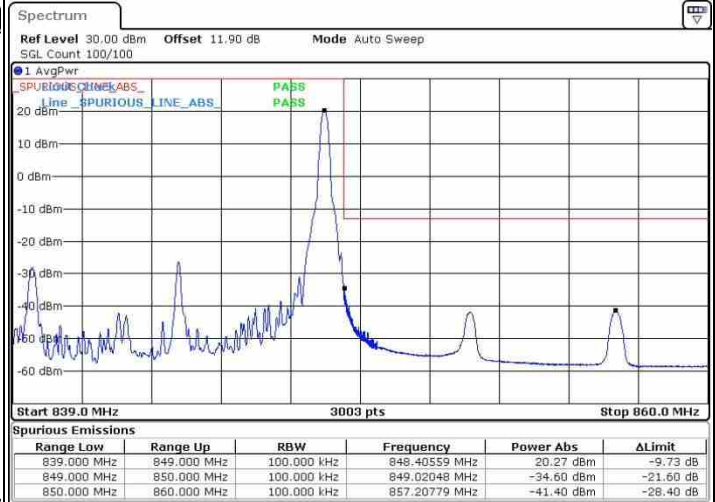


## LTE Band 5 / 10MHz / 16QAM

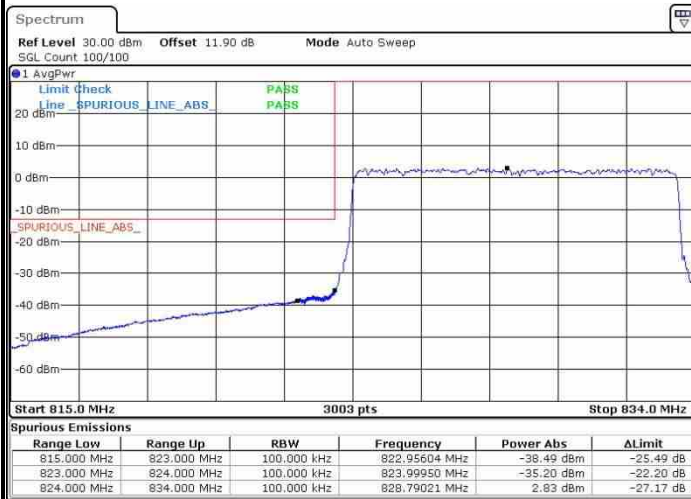
## Lowest Band Edge / 1 RB



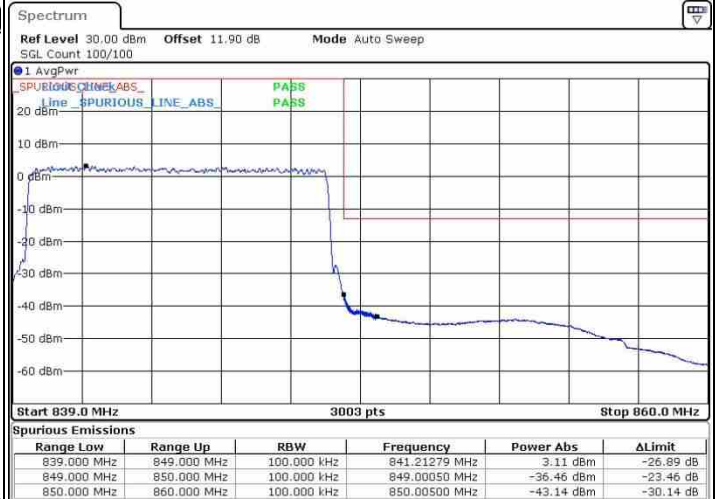
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB



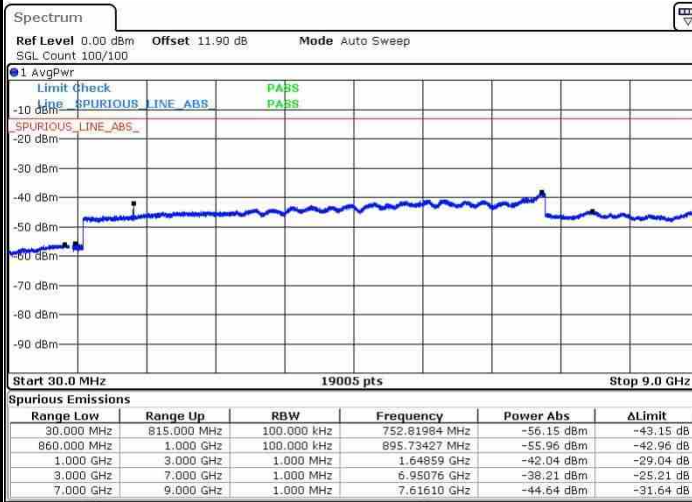


## **Conducted Spurious Emission**



## LTE Band 5 / 1.4MHz

## Lowest Channel / QPSK



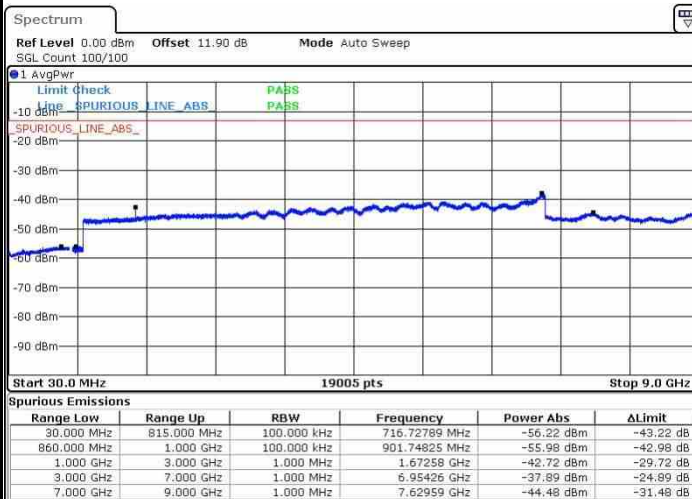
Date: 15.SEP.2015 10:40:29

## Lowest Channel / 16QAM



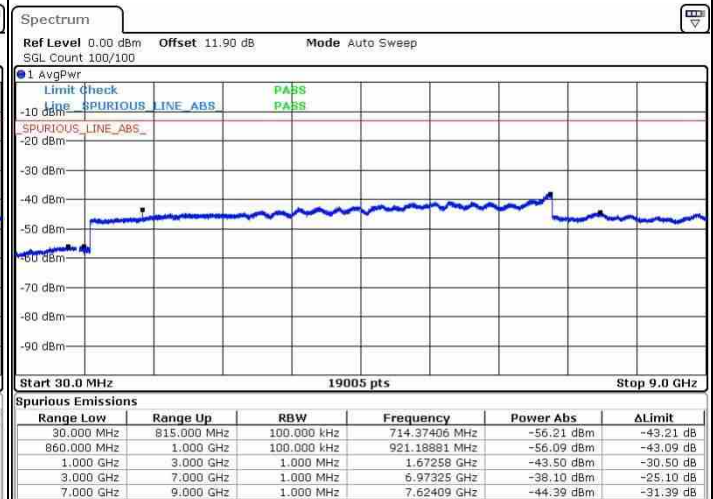
Date: 15.SEP.2015 10:41:27

## Middle Channel / QPSK



Date: 15.SEP.2015 10:43:12

## Middle Channel / 16QAM

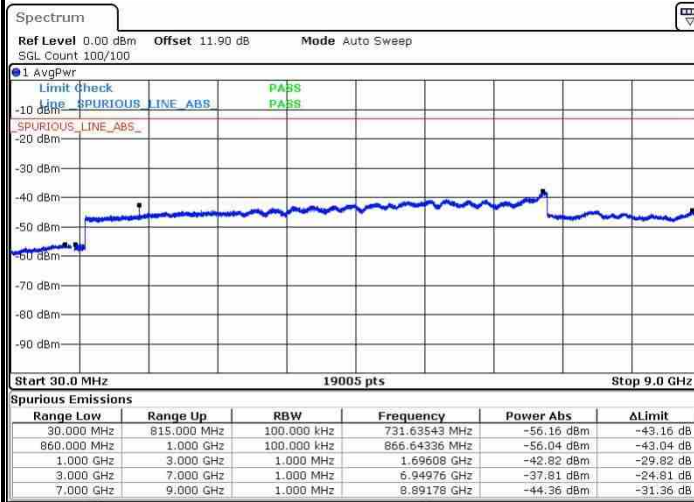


Date: 15.SEP.2015 10:44:10



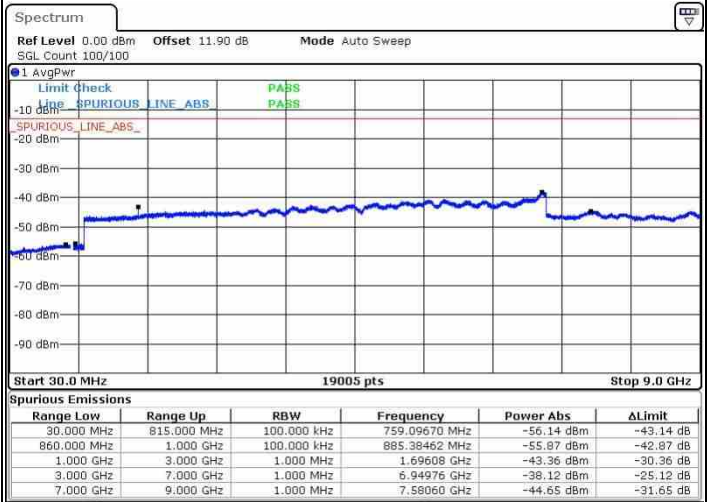
## LTE Band 5 / 1.4MHz

## Highest Channel / QPSK



Date: 15.SEP.2015 10:53:33

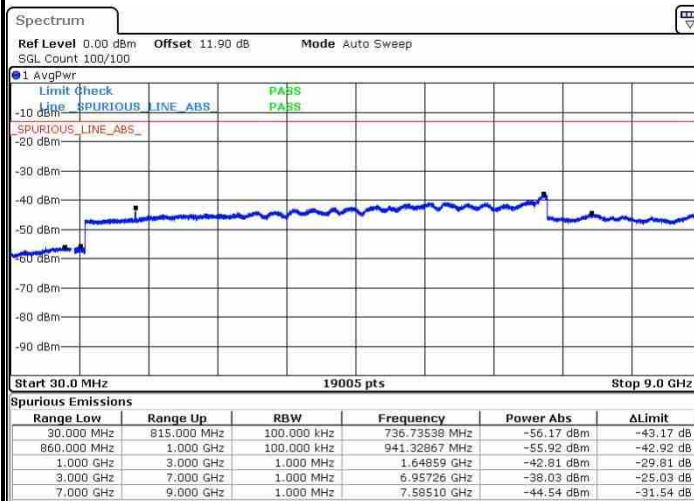
## Highest Channel / 16QAM



Date: 15.SEP.2015 10:54:31

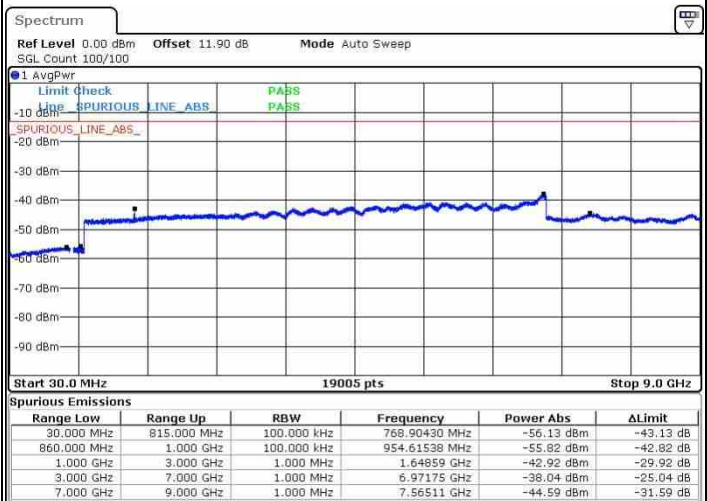
## LTE Band 5 / 3MHz

## Lowest Channel / QPSK



Date: 15.SEP.2015 09:20:57

## Lowest Channel / 16QAM

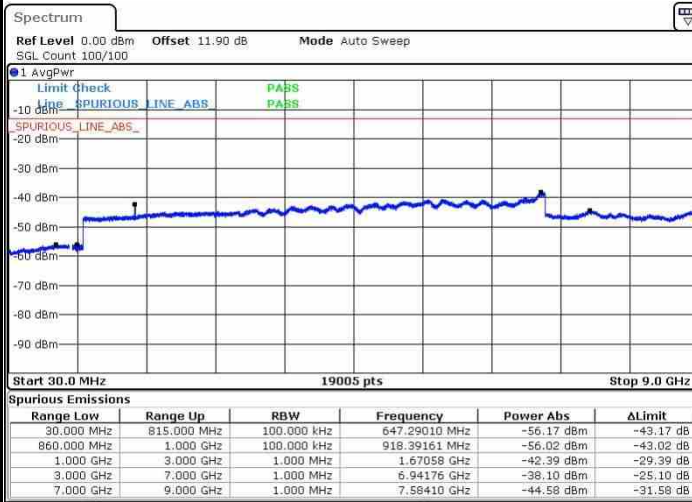


Date: 15.SEP.2015 09:21:55



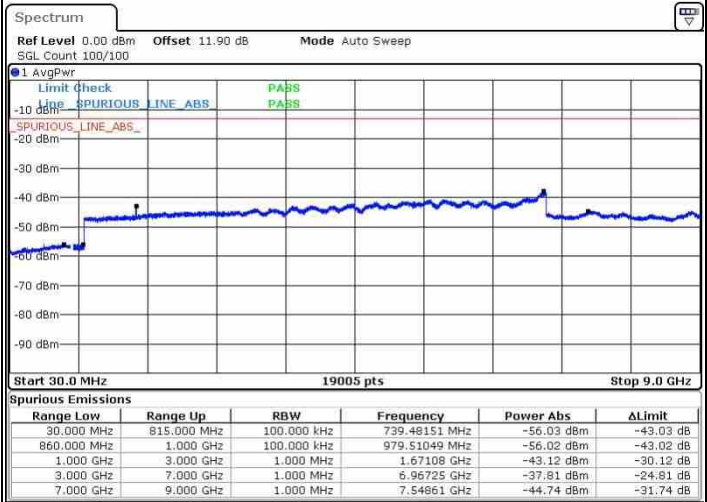
## LTE Band 5 / 3MHz

## Middle Channel / QPSK



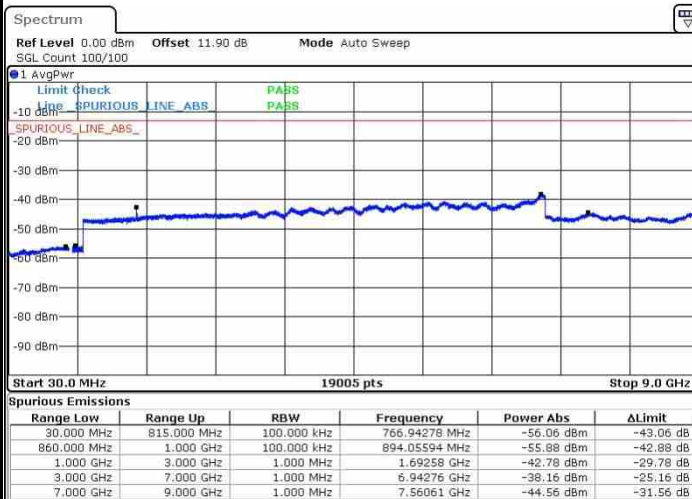
Date: 15.SEP.2015 09:23:40

## Middle Channel / 16QAM



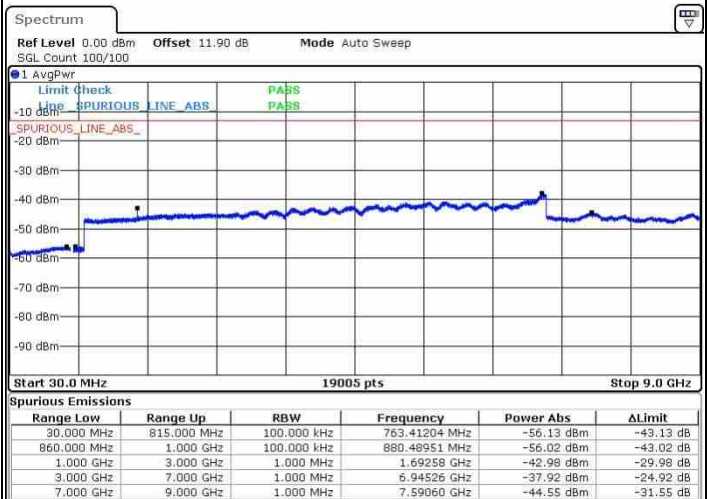
Date: 15.SEP.2015 09:24:39

## Highest Channel / QPSK



Date: 15.SEP.2015 09:34:01

## Highest Channel / 16QAM

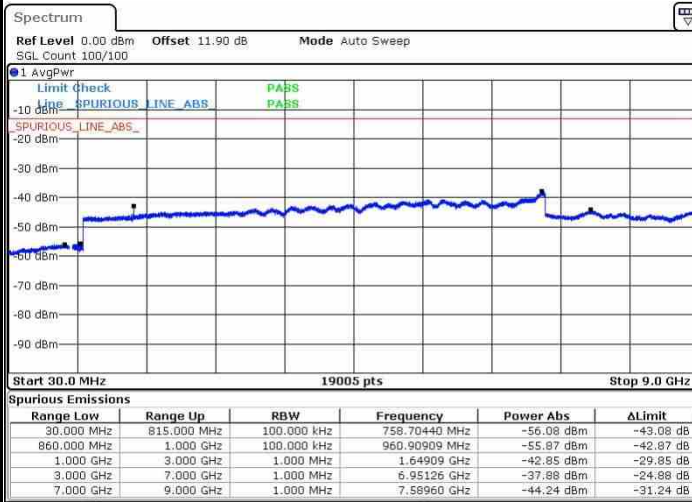


Date: 15.SEP.2015 09:34:59



## LTE Band 5 / 5MHz

## Lowest Channel / QPSK



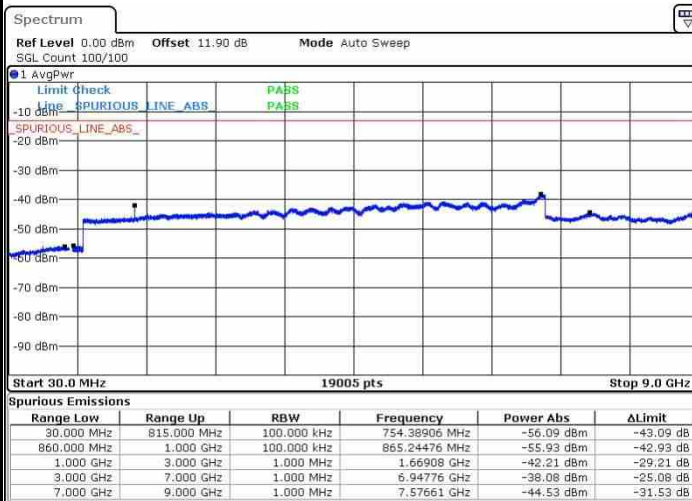
Date: 15.SEP.2015 09:44:22

## Lowest Channel / 16QAM



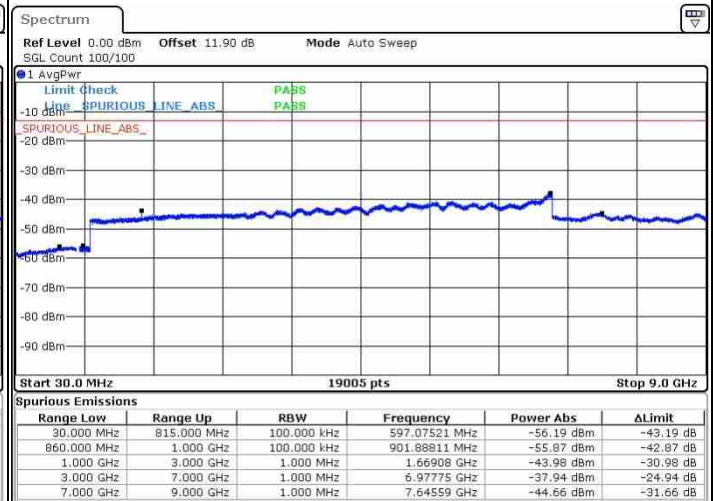
Date: 15.SEP.2015 09:45:21

## Middle Channel / QPSK



Date: 15.SEP.2015 09:47:05

## Middle Channel / 16QAM

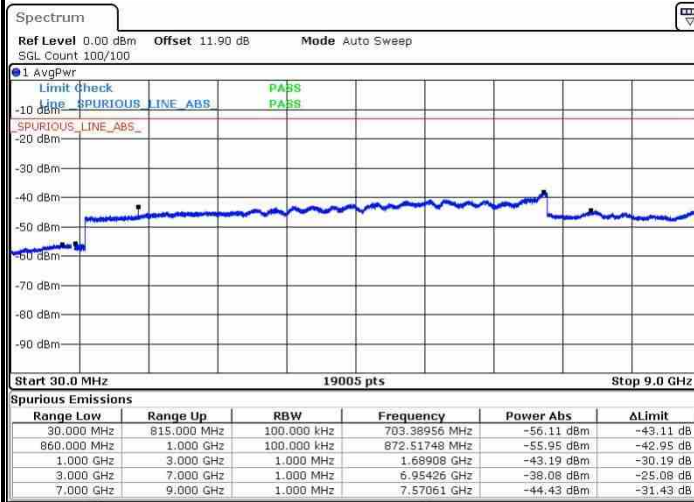


Date: 15.SEP.2015 09:48:04



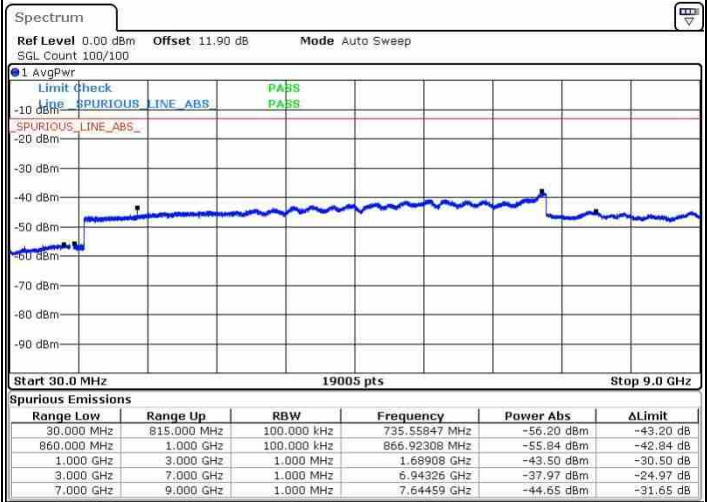
## LTE Band 5 / 5MHz

## Highest Channel / QPSK



Date: 15.SEP.2015 09:57:26

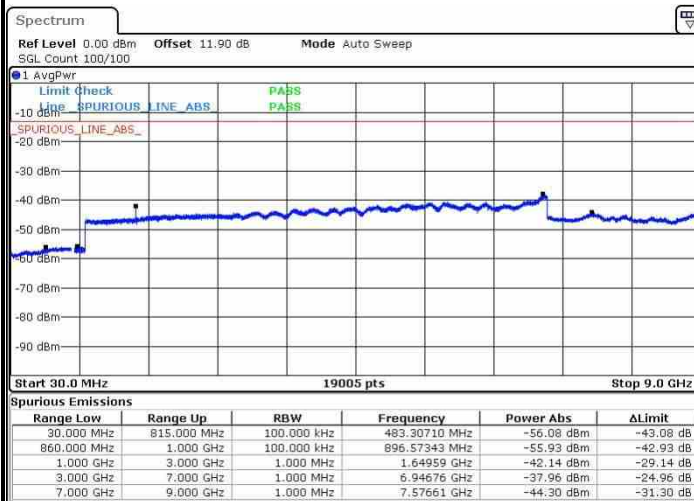
## Highest Channel / 16QAM



Date: 15.SEP.2015 09:58:24

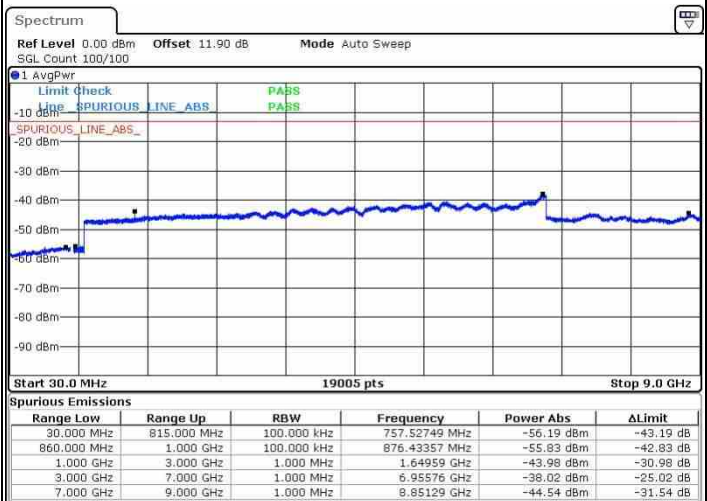
## LTE Band 5 / 10MHz

## Lowest Channel / QPSK



Date: 15.SEP.2015 10:07:46

## Lowest Channel / 16QAM

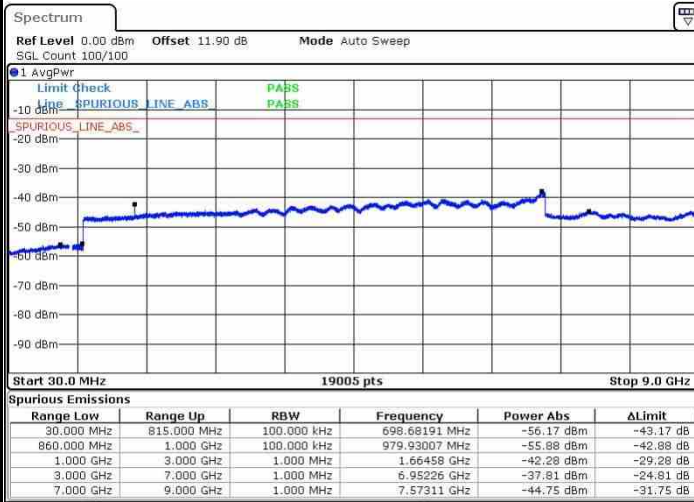


Date: 15.SEP.2015 10:08:45



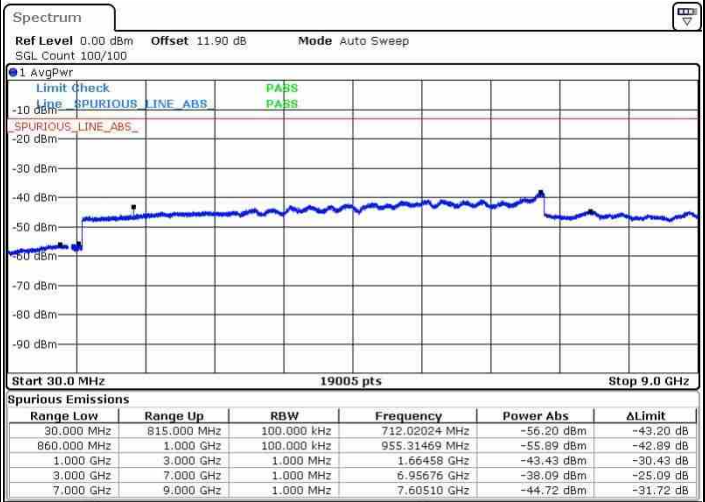
## LTE Band 5 / 10MHz

## Middle Channel / QPSK



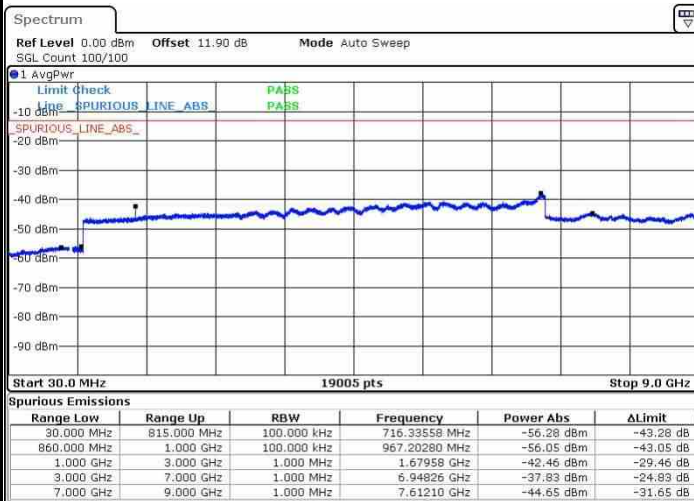
Date: 15.SEP.2015 10:10:30

## Middle Channel / 16QAM



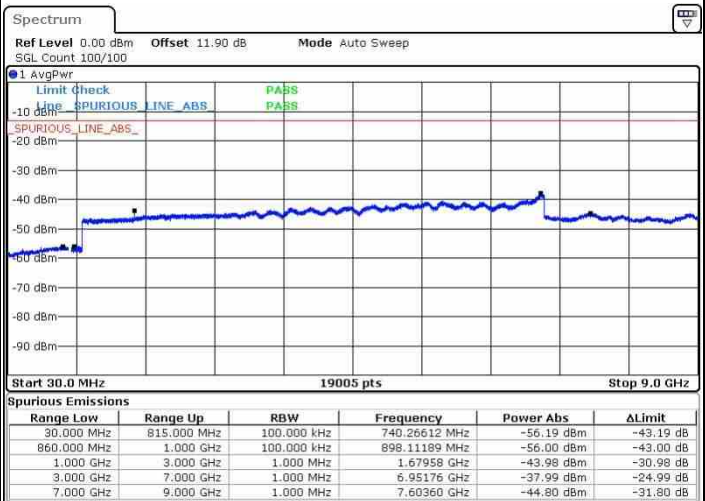
Date: 15.SEP.2015 10:11:28

## Highest Channel / QPSK



Date: 15.SEP.2015 10:20:51

## Highest Channel / 16QAM



Date: 15.SEP.2015 10:21:49

## Frequency Stability

| Test Conditions  |                   | LTE Band 5 (QPSK) / Middle Channel | Limit  |
|------------------|-------------------|------------------------------------|--------|
| Temperature (°C) | Voltage (Volt)    | BW 10MHz                           | 2.5ppm |
|                  |                   | Deviation (ppm)                    | Result |
| 50               | Normal Voltage    | 0.0011                             | PASS   |
| 40               | Normal Voltage    | 0.0010                             |        |
| 30               | Normal Voltage    | 0.0007                             |        |
| 20(Ref.)         | Normal Voltage    | 0.0000                             |        |
| 10               | Normal Voltage    | 0.0099                             |        |
| 0                | Normal Voltage    | 0.0105                             |        |
| -10              | Normal Voltage    | 0.0112                             |        |
| -20              | Normal Voltage    | 0.0118                             |        |
| -30              | Normal Voltage    | 0.0097                             |        |
| 20               | Maximum Voltage   | 0.0005                             |        |
| 20               | Normal Voltage    | 0.0000                             |        |
| 20               | Battery End Point | 0.0102                             |        |

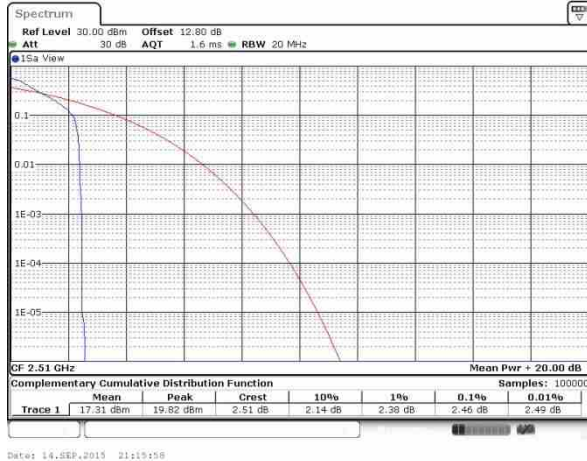
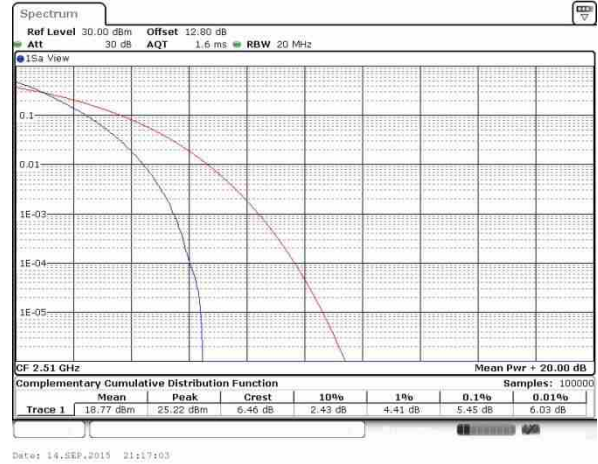
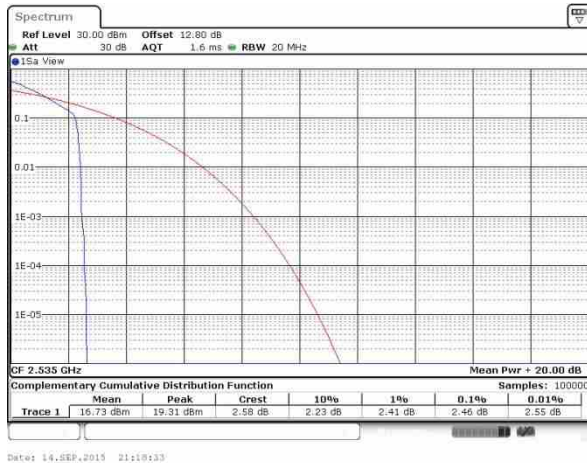
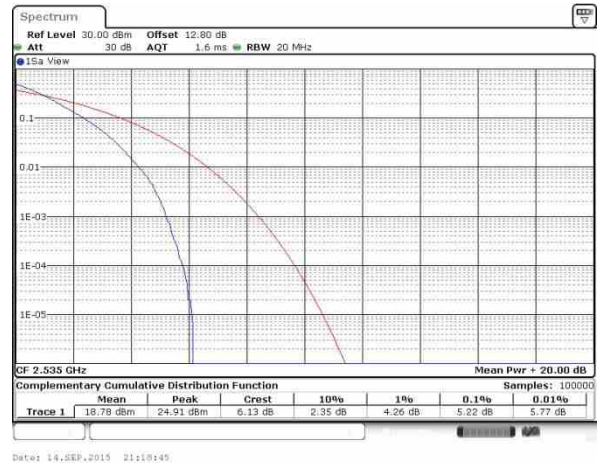
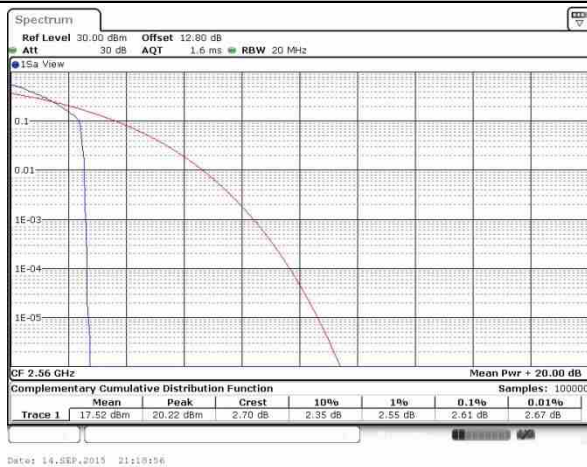
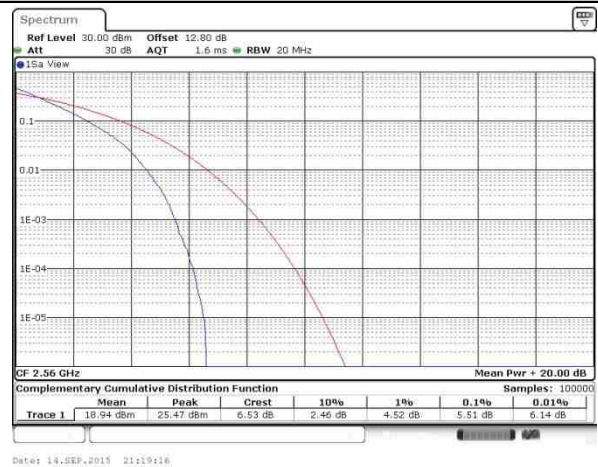
**Note:** Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.2 V

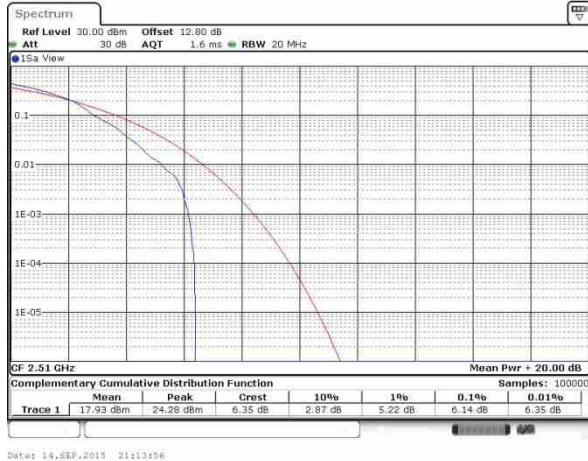


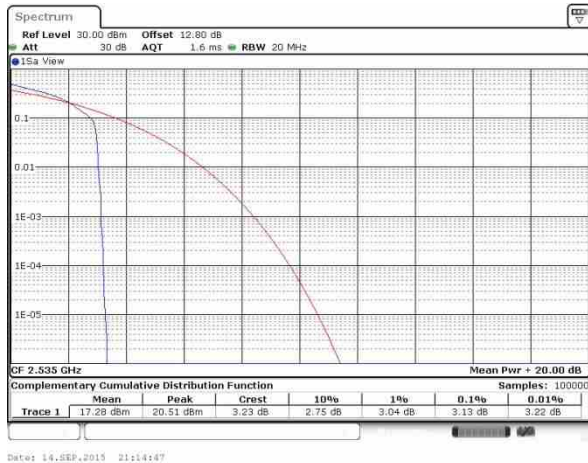
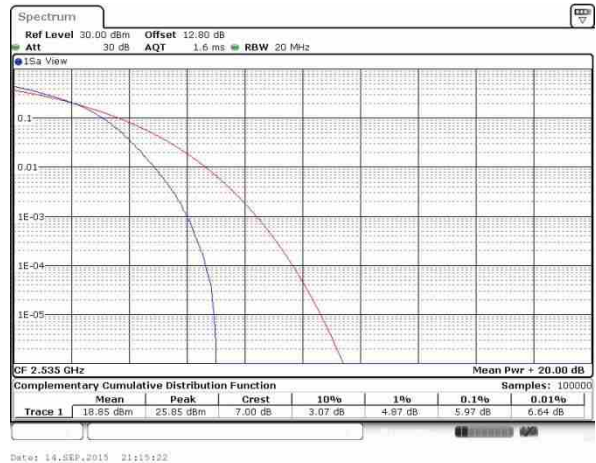
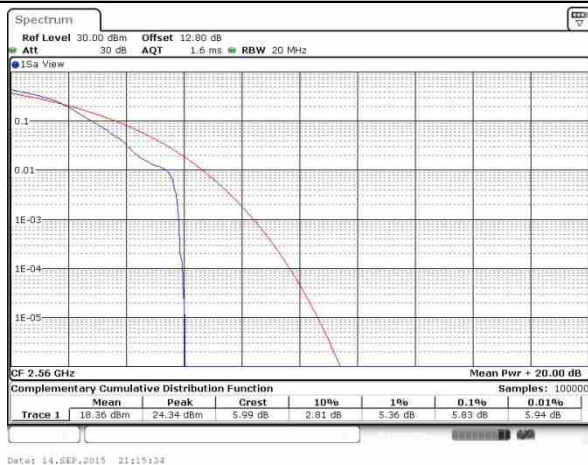
## LTE Band 7

### Peak-to-Average Ratio

| Mode       | LTE Band 7 / 20MHz |         |       |         |             |
|------------|--------------------|---------|-------|---------|-------------|
| Mod.       | QPSK               |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | 2.46               | 5.45    | 6.14  | 6.06    | PASS        |
| Middle CH  | 2.46               | 5.22    | 3.13  | 5.97    |             |
| Highest CH | 2.61               | 5.51    | 5.83  | 6.12    |             |

**LTE Band 7 / 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 7 / 20MHz / 16QAM**
**Lowest Channel / 1RB**

**Lowest Channel / Full RB**

**Middle Channel / 1RB**

**Middle Channel / Full RB**

**Highest Channel / 1RB**

**Highest Channel / Full RB**
