



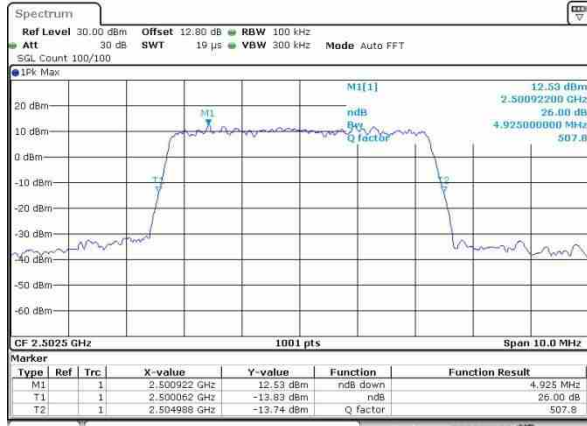
26dB Bandwidth

| Mode       | LTE Band 7 : 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  | -                         | -     | -    | -     | 4.93 | 4.83  | 9.79  | 9.79  | 14.27 | 14.51 | 20.06 | 20.18 |
| Middle CH  | -                         | -     | -    | -     | 4.8  | 4.89  | 9.71  | 9.77  | 14.33 | 14.6  | 20.14 | 20.14 |
| Highest CH | -                         | -     | -    | -     | 4.82 | 4.89  | 9.77  | 9.69  | 14.48 | 14.36 | 20.3  | 20.42 |

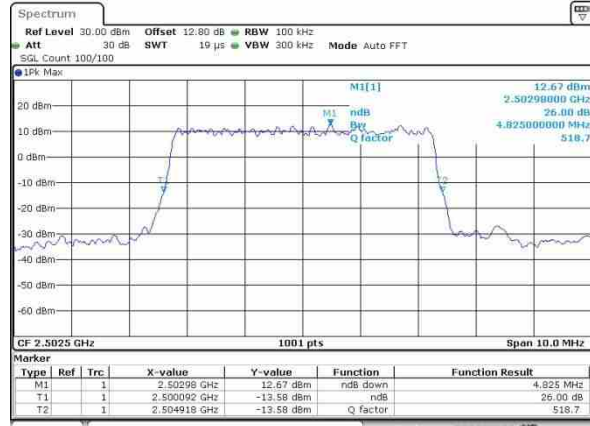


## LTE Band 7

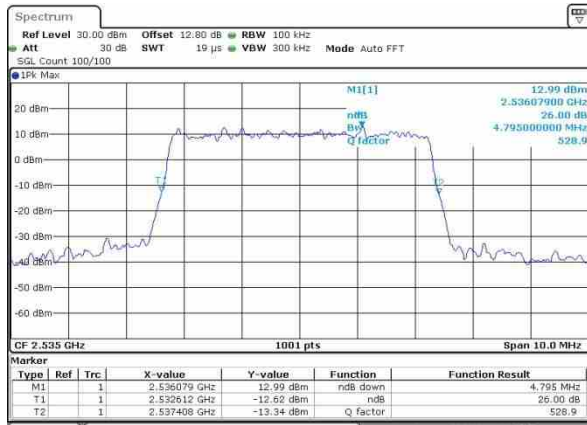
## Lowest Channel / 5MHz / QPSK



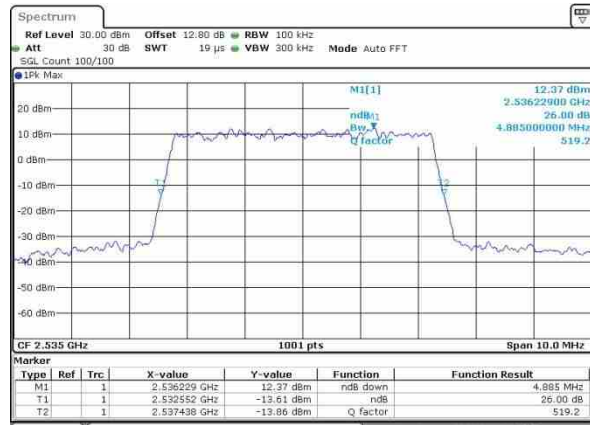
## Lowest Channel / 5MHz / 16QAM



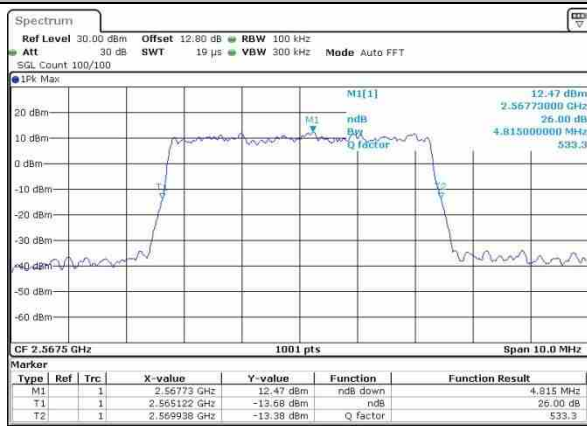
## Middle Channel / 5MHz / QPSK



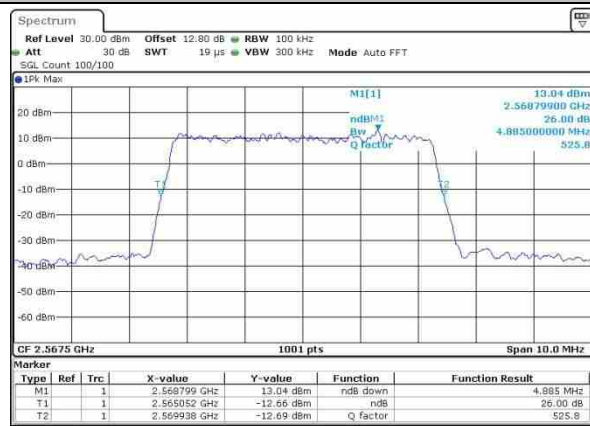
## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



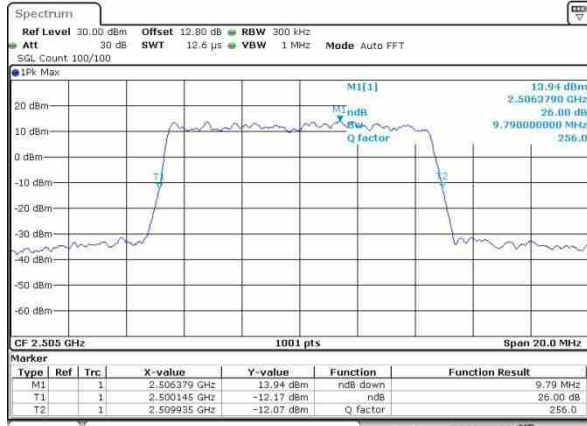
## Highest Channel / 5MHz / 16QAM



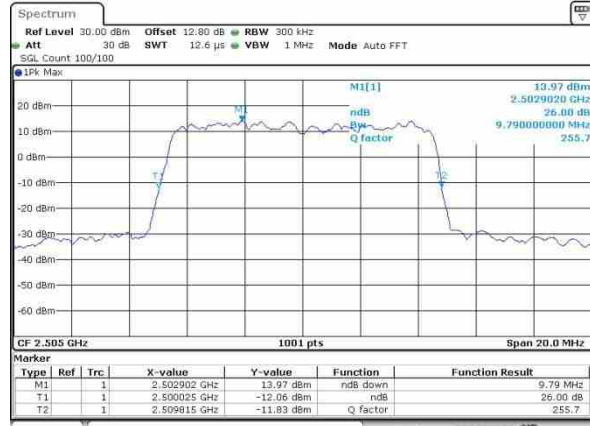


## LTE Band 7

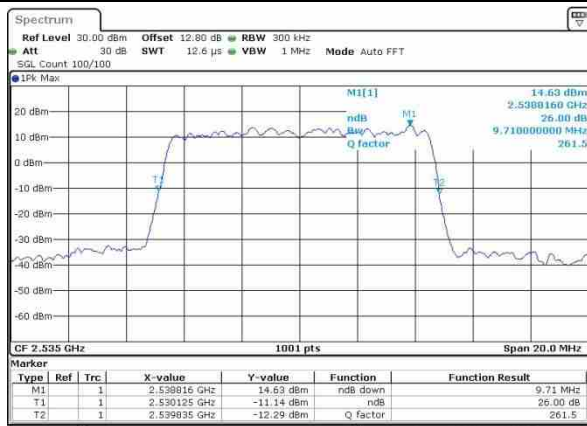
## Lowest Channel / 10MHz / QPSK



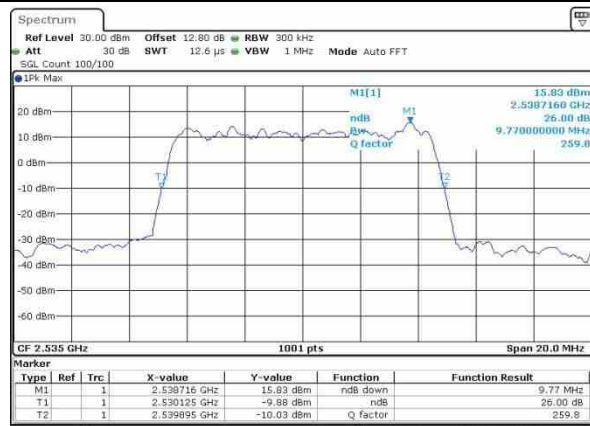
## Lowest Channel / 10MHz / 16QAM



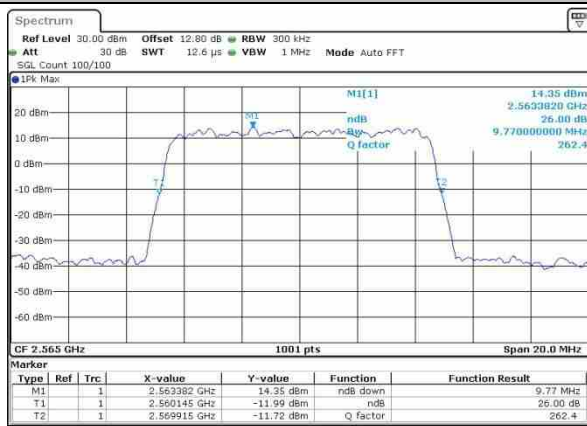
## Middle Channel / 10MHz / QPSK



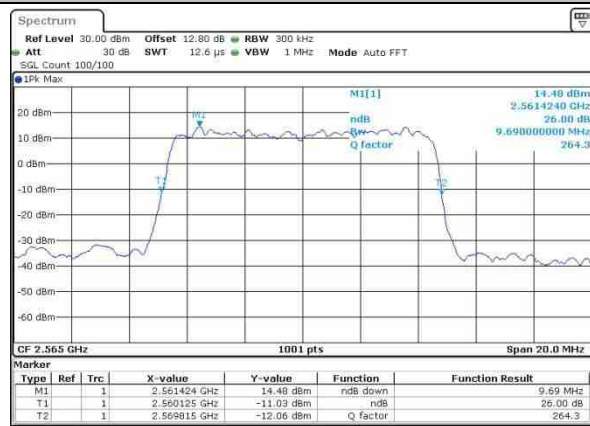
## Middle Channel / 10MHz / 16QAM



## Highest Channel / 10MHz / QPSK



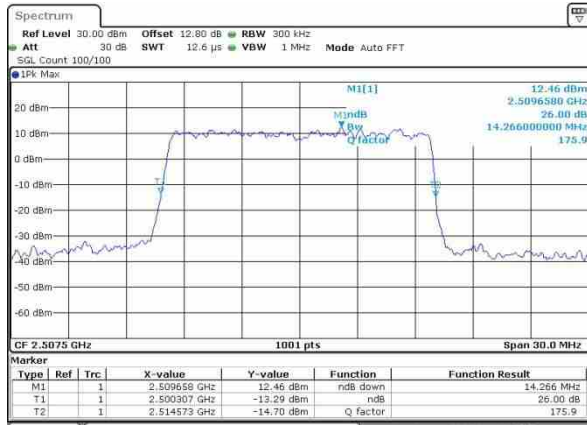
## Highest Channel / 10MHz / 16QAM



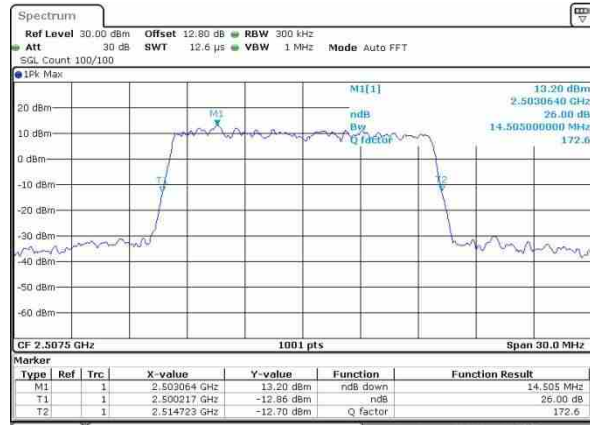


## LTE Band 7

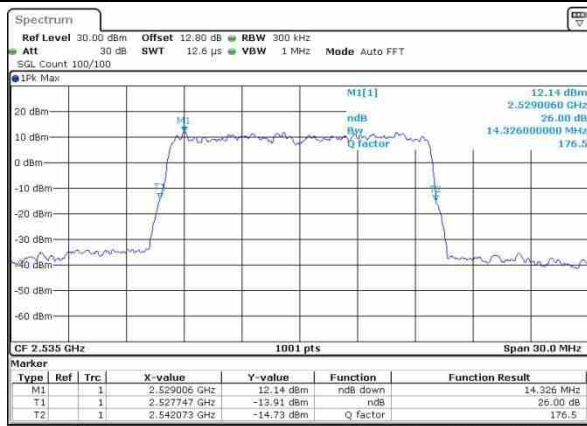
## Lowest Channel / 15MHz / QPSK



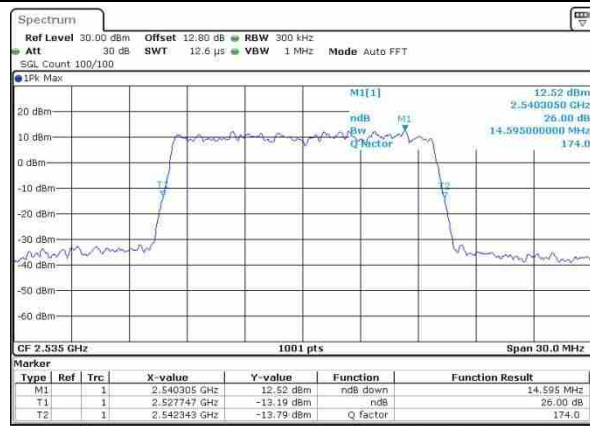
## Lowest Channel / 15MHz / 16QAM



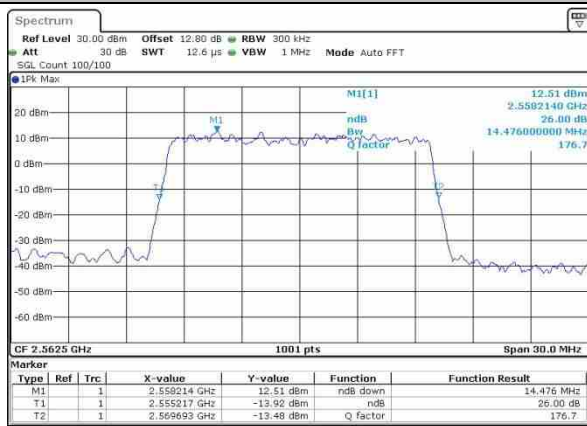
## Middle Channel / 15MHz / QPSK



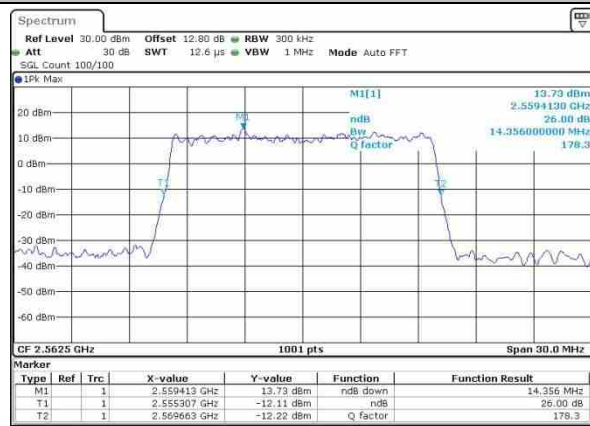
## Middle Channel / 15MHz / 16QAM



## Highest Channel / 15MHz / QPSK



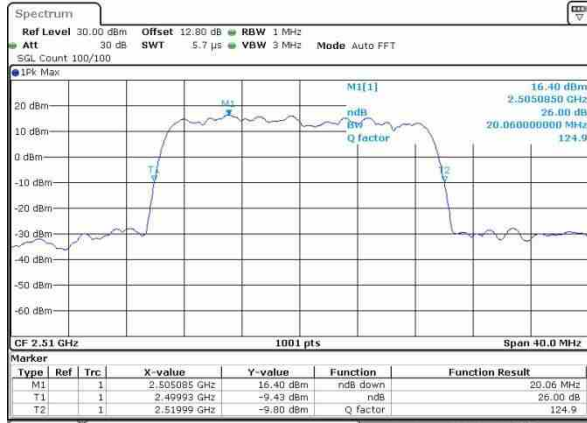
## Highest Channel / 15MHz / 16QAM





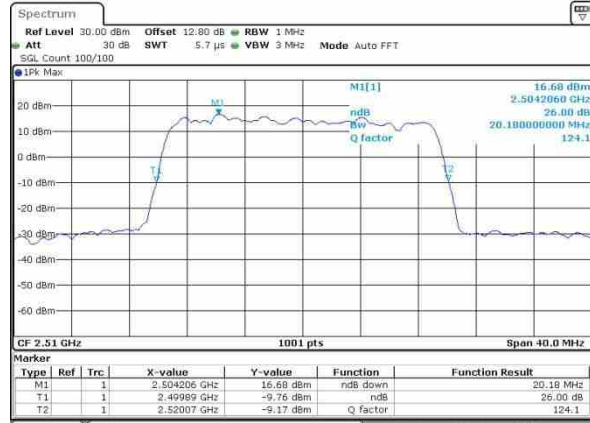
## LTE Band 7

## Lowest Channel / 20MHz / QPSK



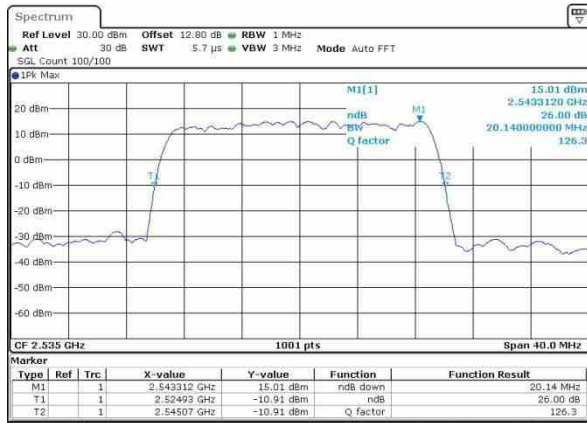
Date: 14.SEP.2015 20:56:09

## Lowest Channel / 20MHz / 16QAM



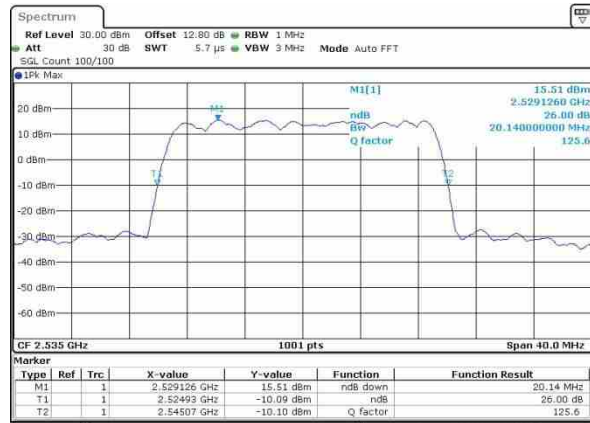
Date: 14.SEP.2015 20:56:21

## Middle Channel / 20MHz / QPSK



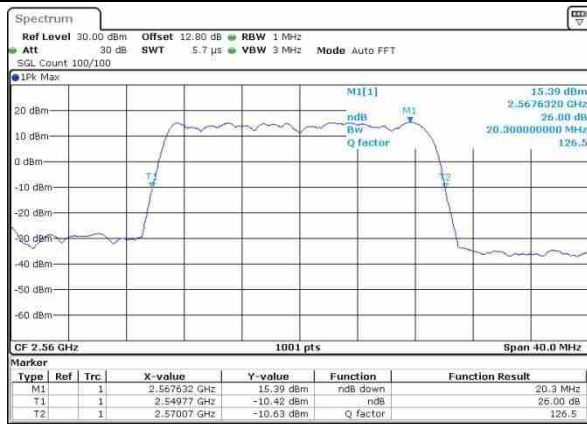
Date: 14.SEP.2015 21:03:27

## Middle Channel / 20MHz / 16QAM



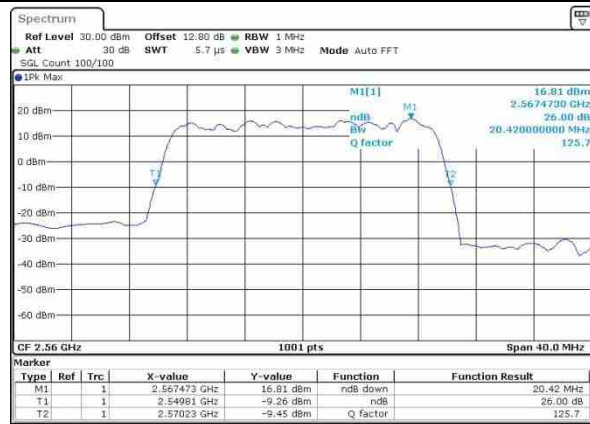
Date: 14.SEP.2015 21:03:38

## Highest Channel / 20MHz / QPSK



Date: 14.SEP.2015 21:06:04

## Highest Channel / 20MHz / 16QAM



Date: 14.SEP.2015 21:06:16



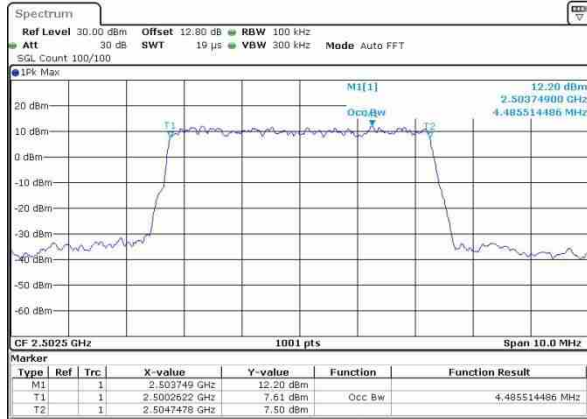
## Occupied Bandwidth

| Mode       | LTE Band 7 : 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  | -                        | -     | -    | -     | 4.49 | 4.49  | 9.03  | 9.03  | 13.55 | 13.49 | 18.38 | 18.34 |
| Middle CH  | -                        | -     | -    | -     | 4.48 | 4.47  | 9.03  | 9.01  | 13.49 | 13.43 | 18.38 | 18.3  |
| Highest CH | -                        | -     | -    | -     | 4.49 | 4.5   | 9.01  | 8.97  | 13.43 | 13.49 | 18.42 | 18.58 |

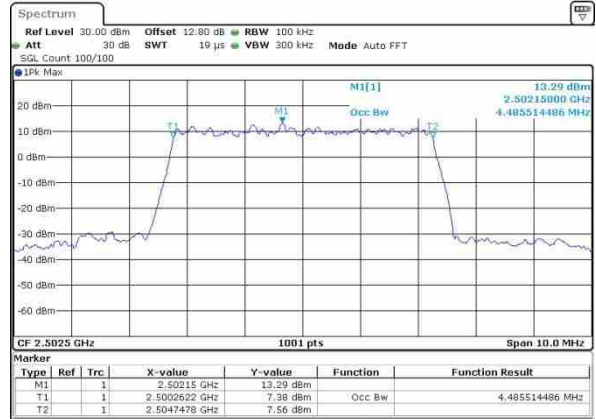


## LTE Band 7

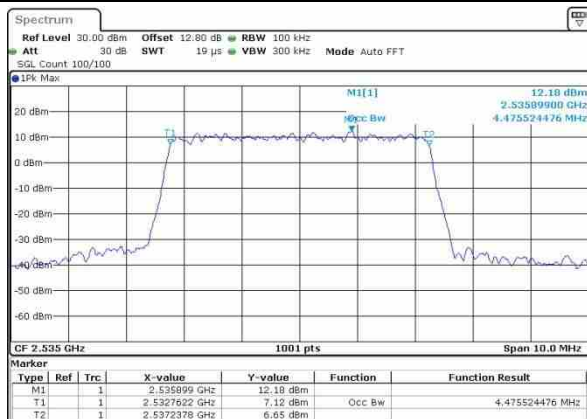
## Lowest Channel / 5MHz / QPSK



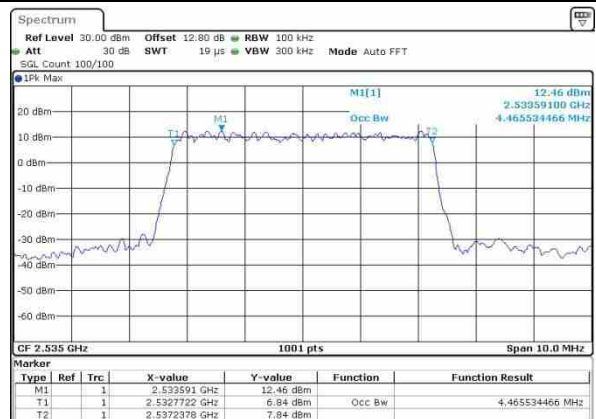
## Lowest Channel / 5MHz / 16QAM



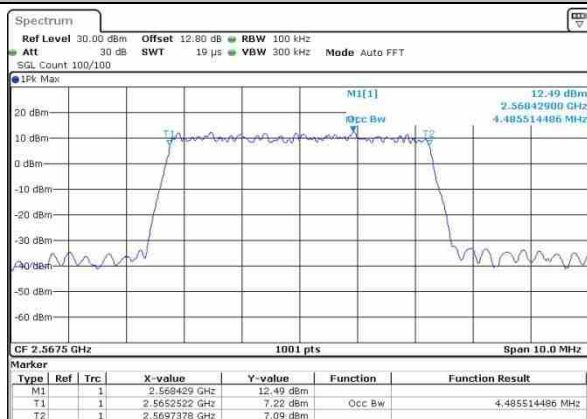
## Middle Channel / 5MHz / QPSK



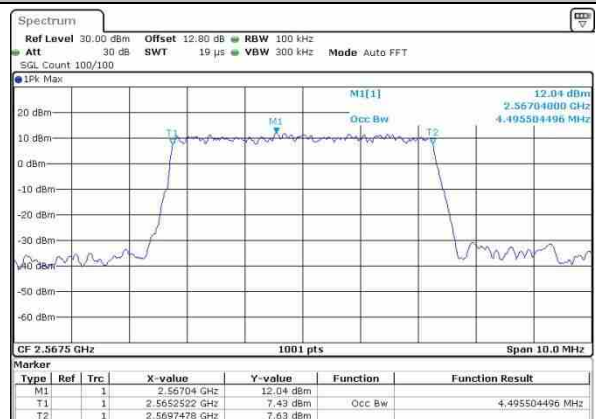
## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



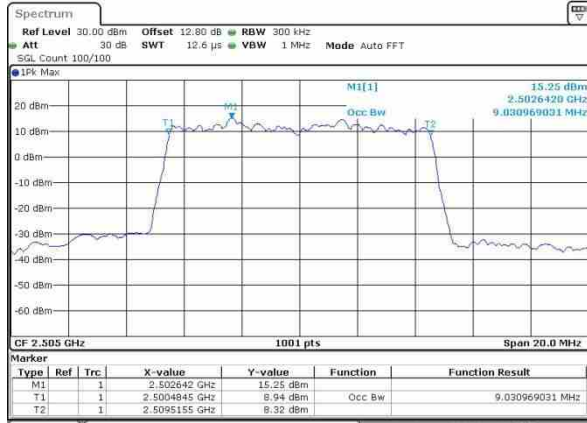
## Highest Channel / 5MHz / 16QAM



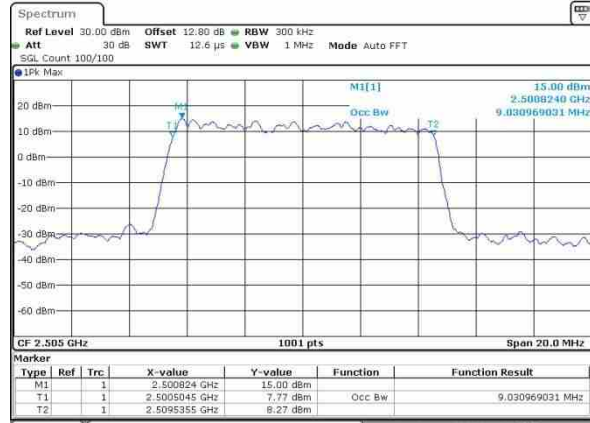


## LTE Band 7

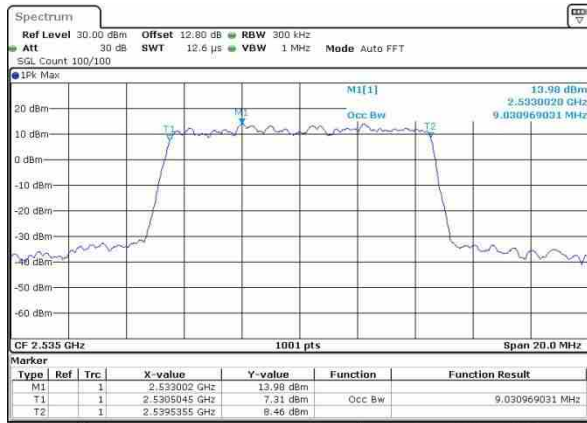
## Lowest Channel / 10MHz / QPSK



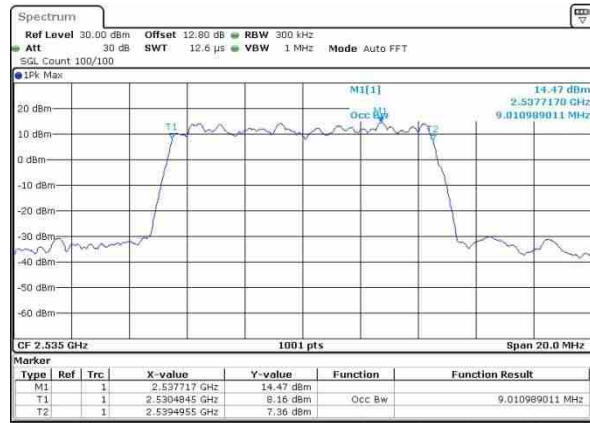
## Lowest Channel / 10MHz / 16QAM



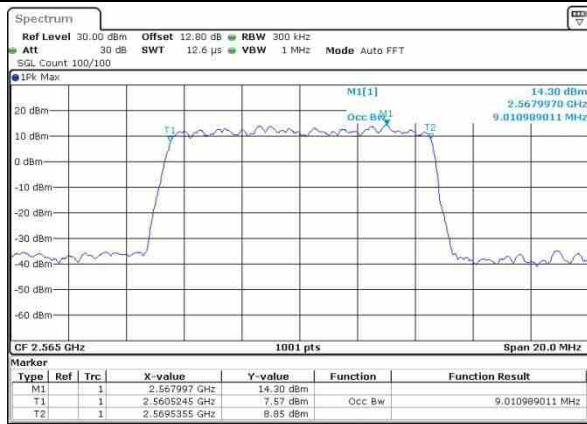
## Middle Channel / 10MHz / QPSK



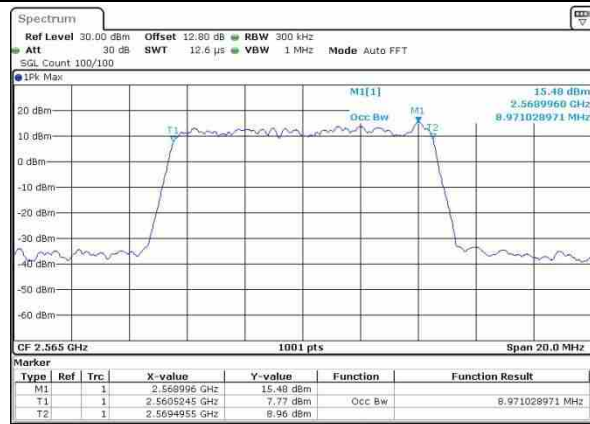
## Middle Channel / 10MHz / 16QAM



## Highest Channel / 10MHz / QPSK



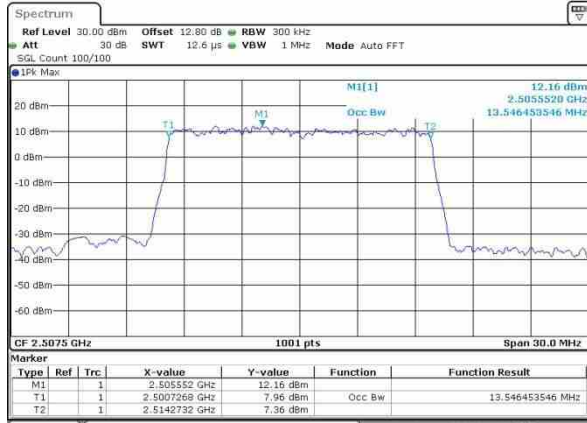
## Highest Channel / 10MHz / 16QAM





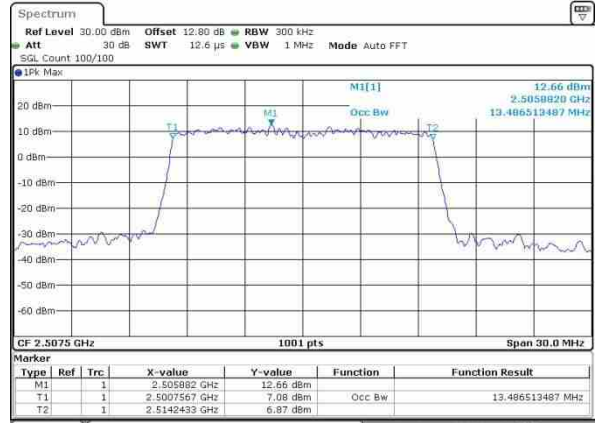
## LTE Band 7

## Lowest Channel / 15MHz / QPSK



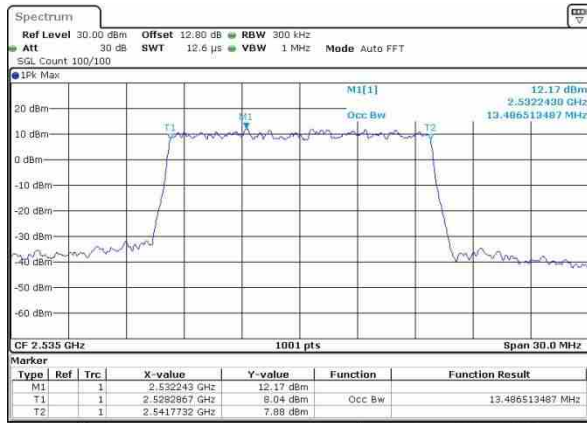
Date: 14.SEP.2015 20:38:14

## Lowest Channel / 15MHz / 16QAM



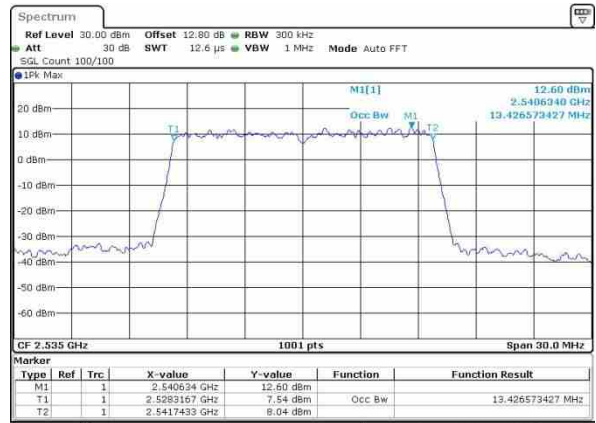
Date: 14.SEP.2015 20:38:14

## Middle Channel / 15MHz / QPSK



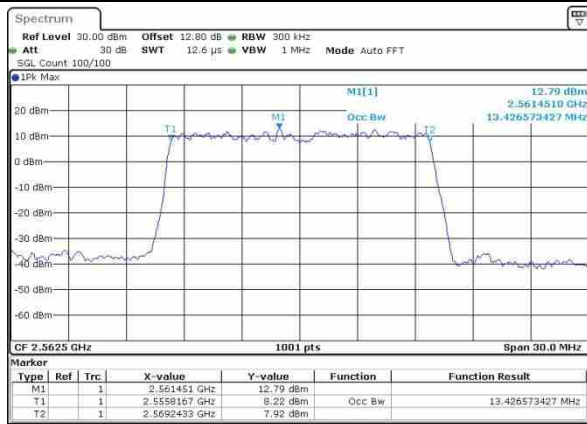
Date: 14.SEP.2015 20:45:51

## Middle Channel / 15MHz / 16QAM



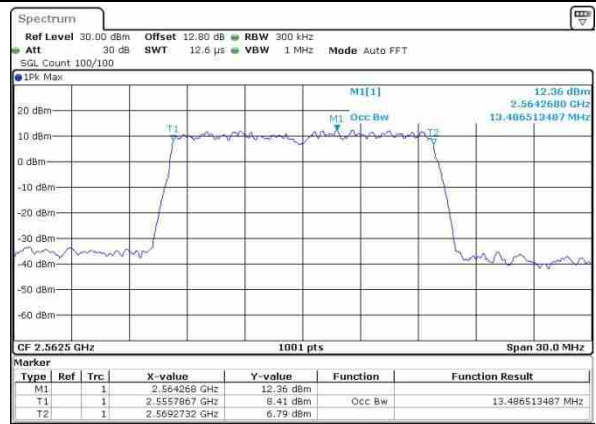
Date: 14.SEP.2015 20:46:03

## Highest Channel / 15MHz / QPSK



Date: 14.SEP.2015 20:48:28

## Highest Channel / 15MHz / 16QAM

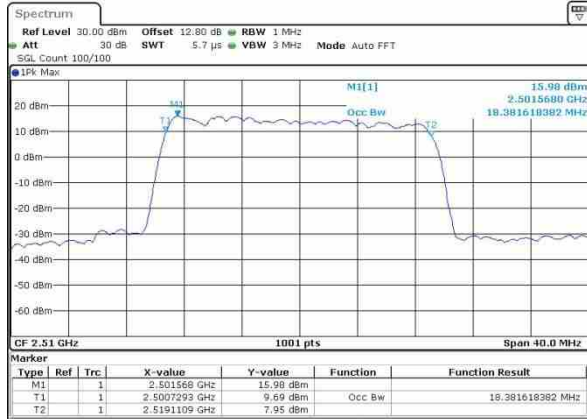


Date: 14.SEP.2015 20:48:40

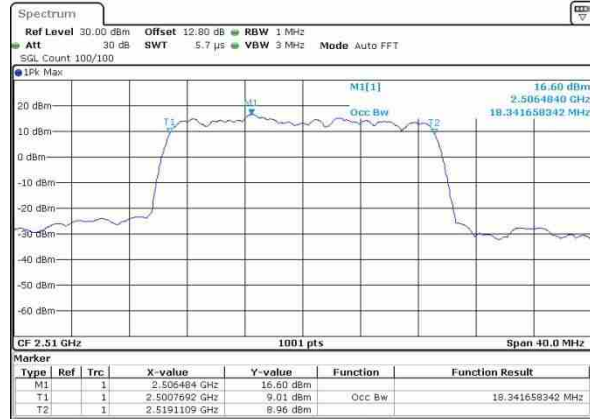


## LTE Band 7

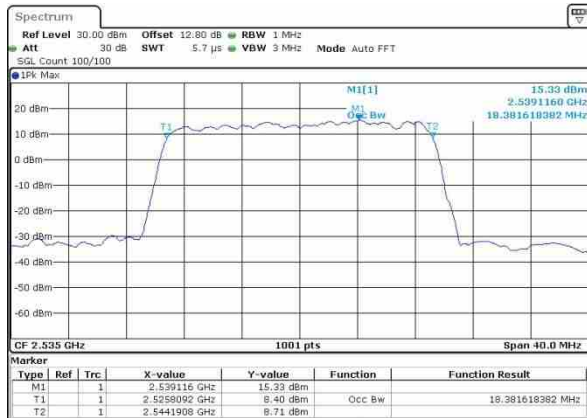
## Lowest Channel / 20MHz / QPSK



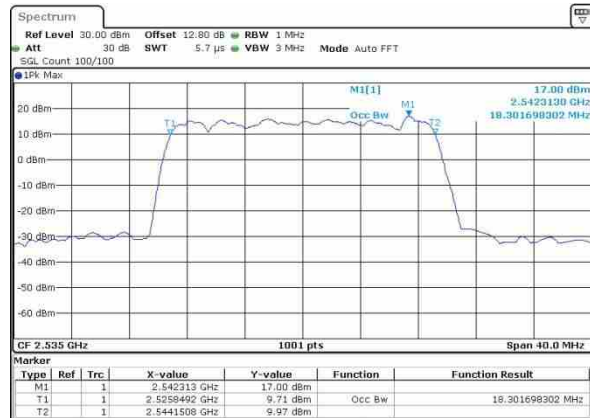
## Lowest Channel / 20MHz / 16QAM



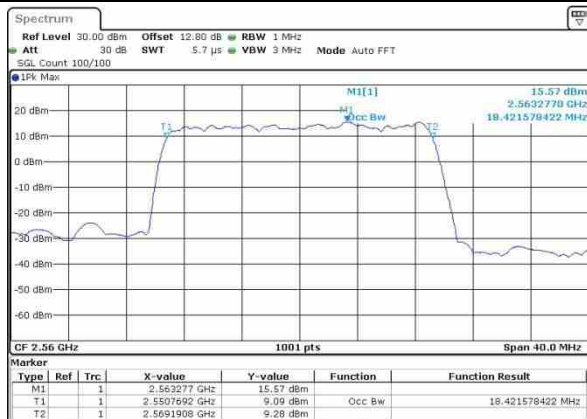
## Middle Channel / 20MHz / QPSK



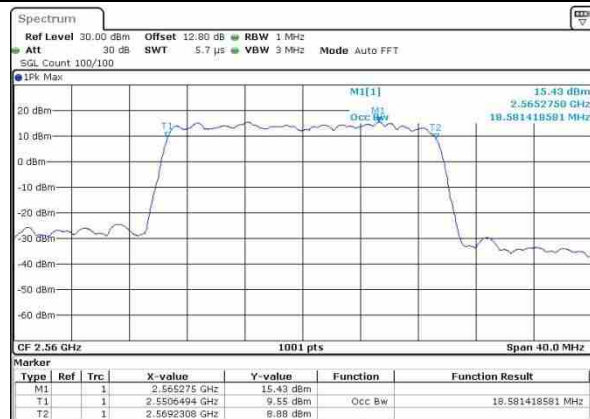
## Middle Channel / 20MHz / 16QAM



## Highest Channel / 20MHz / QPSK



## Highest Channel / 20MHz / 16QAM



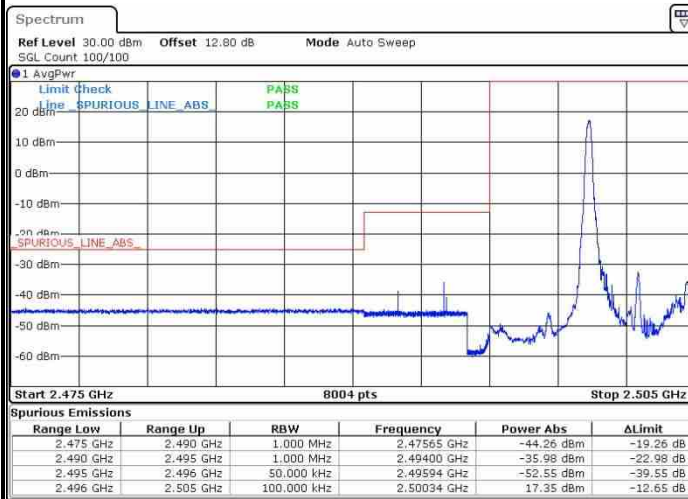


## **Conducted Band Edge**

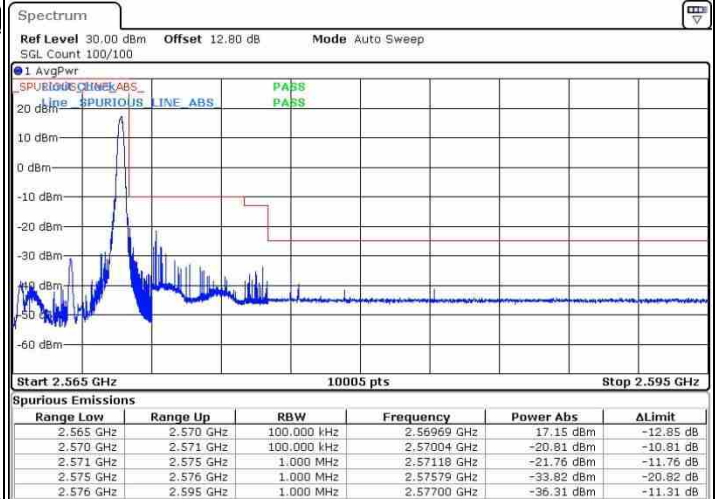


## LTE Band 7 / 5MHz / QPSK

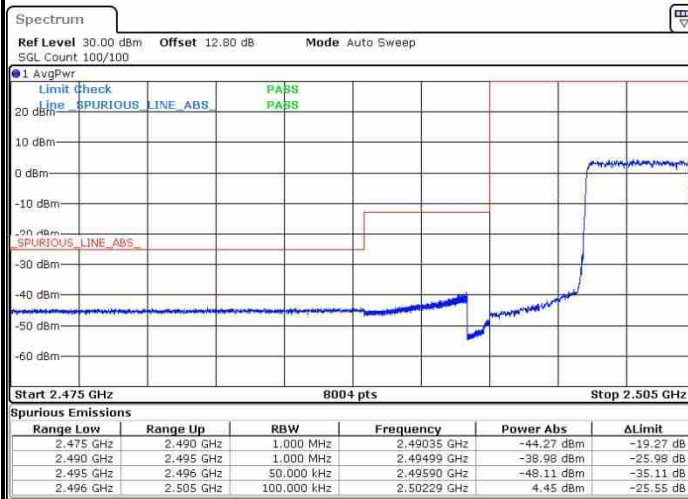
## Lowest Band Edge / 1 RB



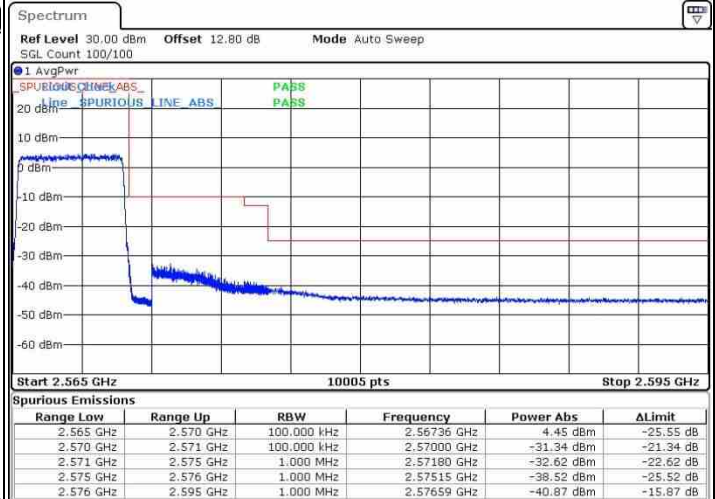
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



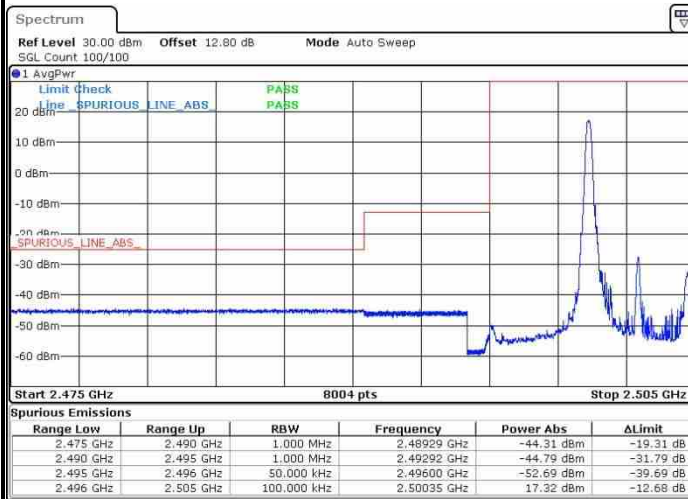
## Highest Band Edge / Full RB



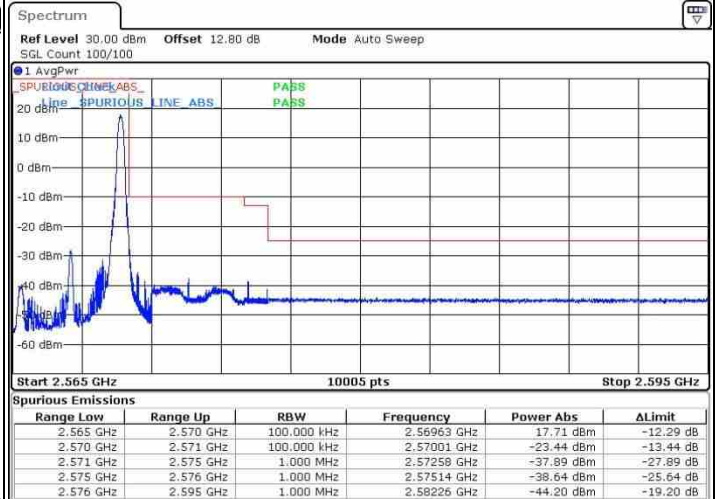


## LTE Band 7 / 5MHz / 16QAM

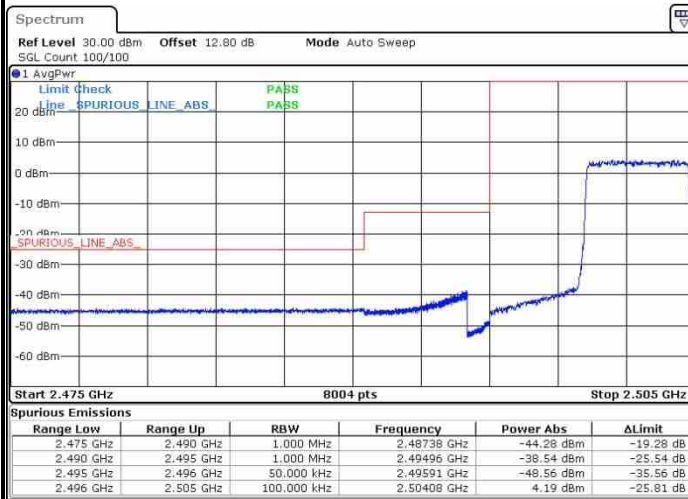
## Lowest Band Edge / 1 RB



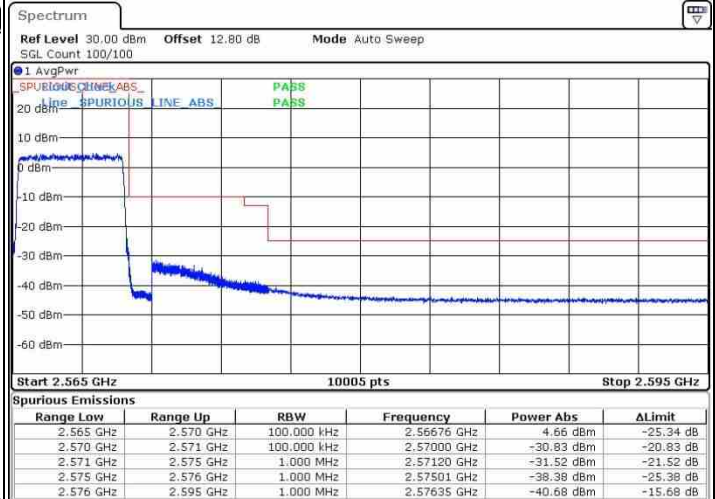
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



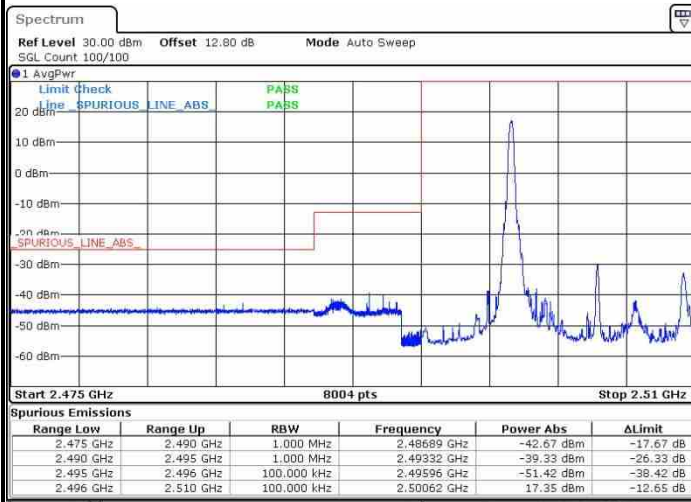
## Highest Band Edge / Full RB



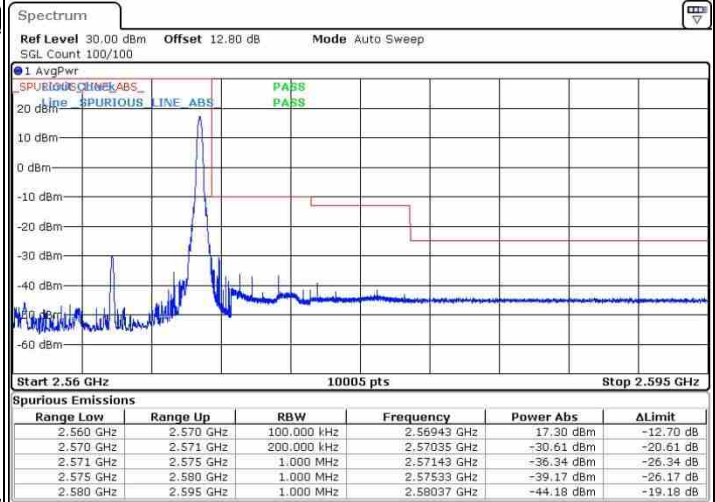


## LTE Band 7 / 10MHz / QPSK

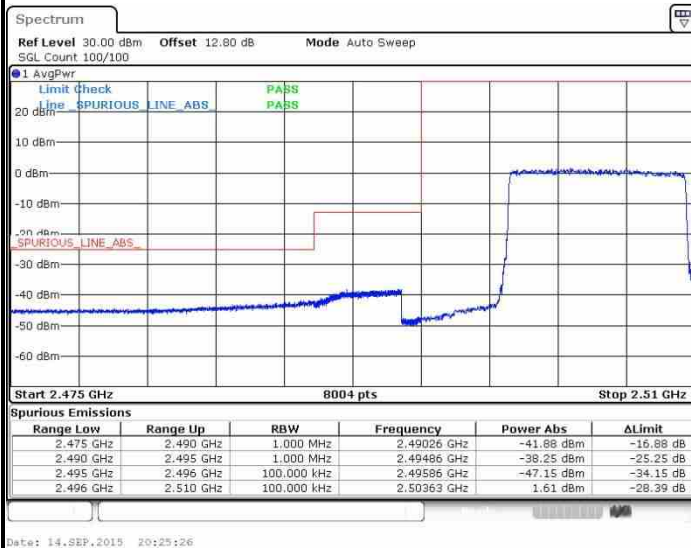
## Lowest Band Edge / 1 RB



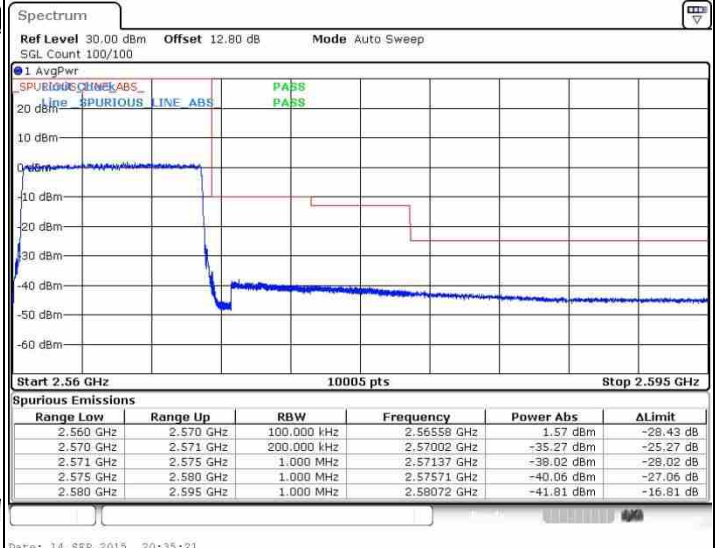
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



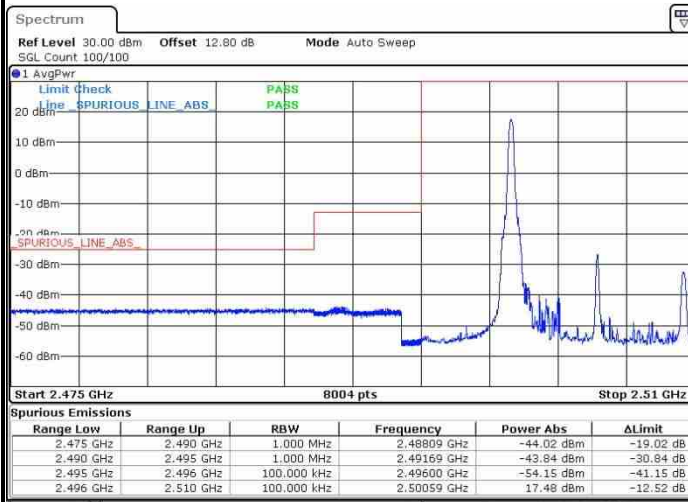
## Highest Band Edge / Full RB



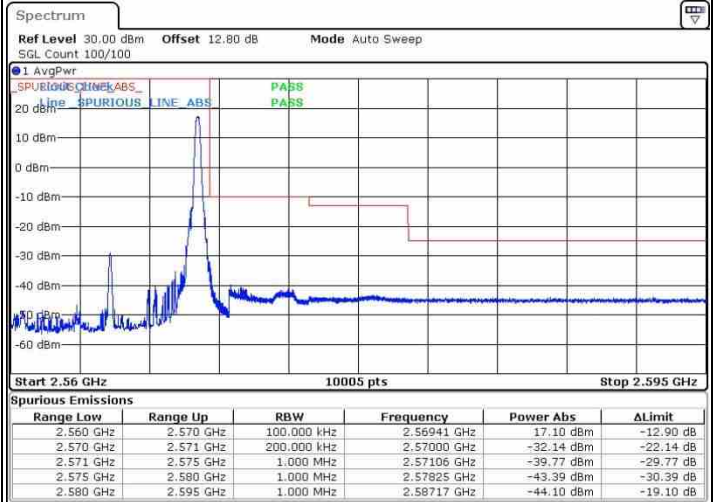


## LTE Band 7 / 10MHz / 16QAM

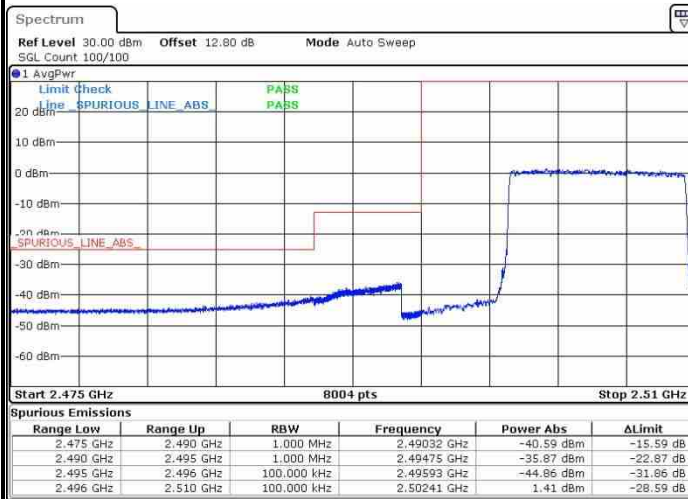
## Lowest Band Edge / 1 RB



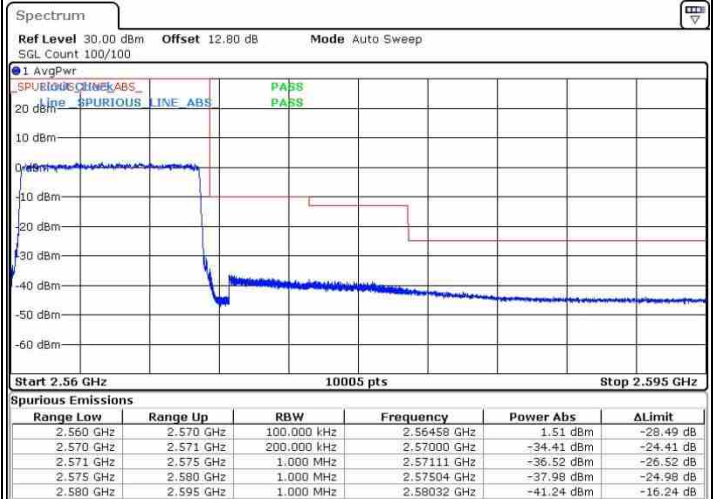
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



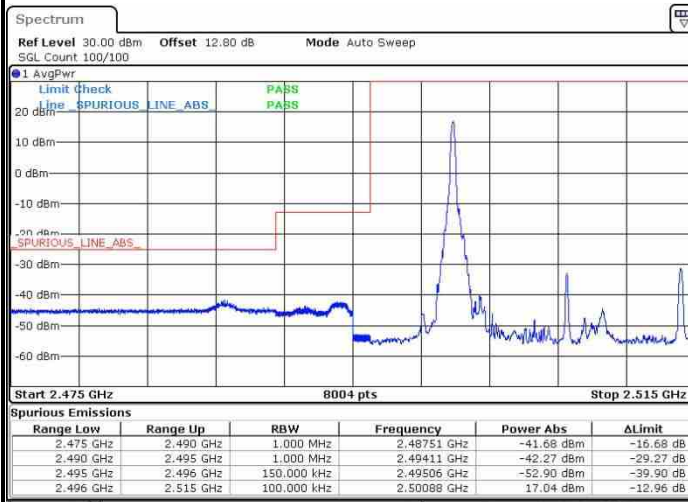
## Highest Band Edge / Full RB



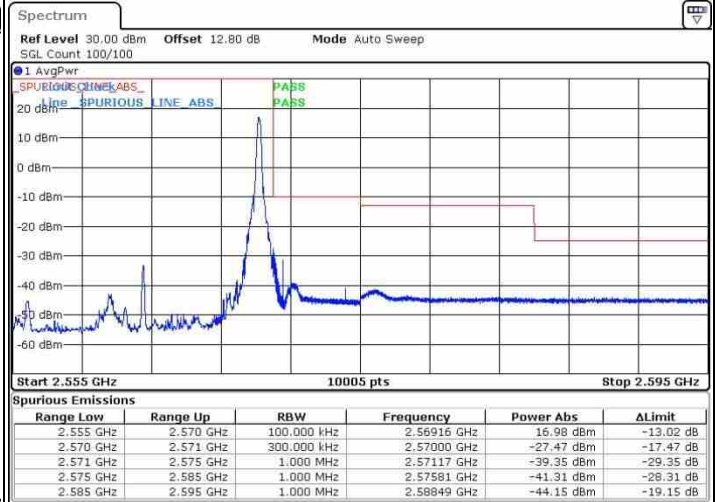


## LTE Band 7 / 15MHz / QPSK

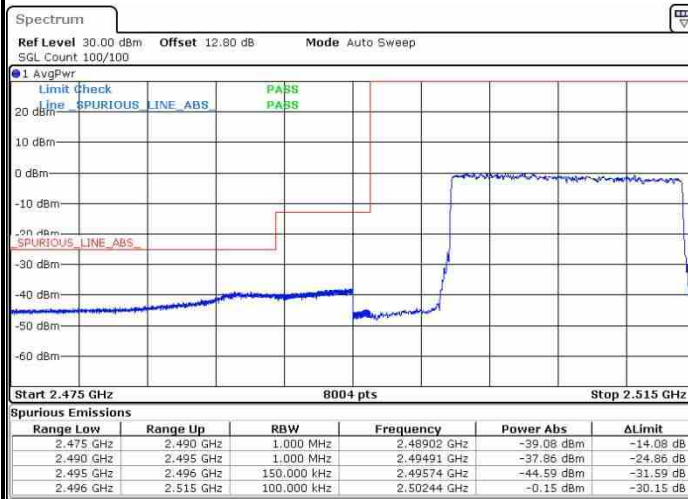
## Lowest Band Edge / 1 RB



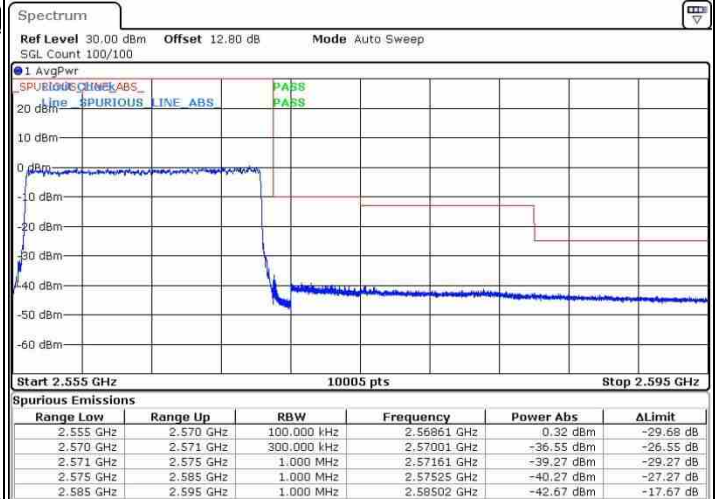
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



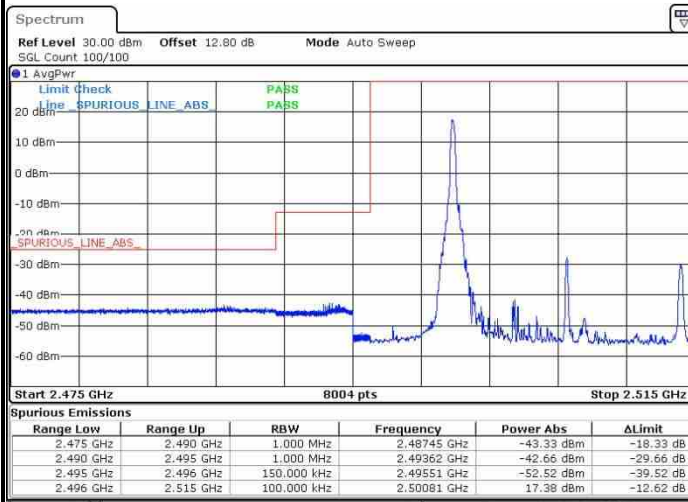
## Highest Band Edge / Full RB



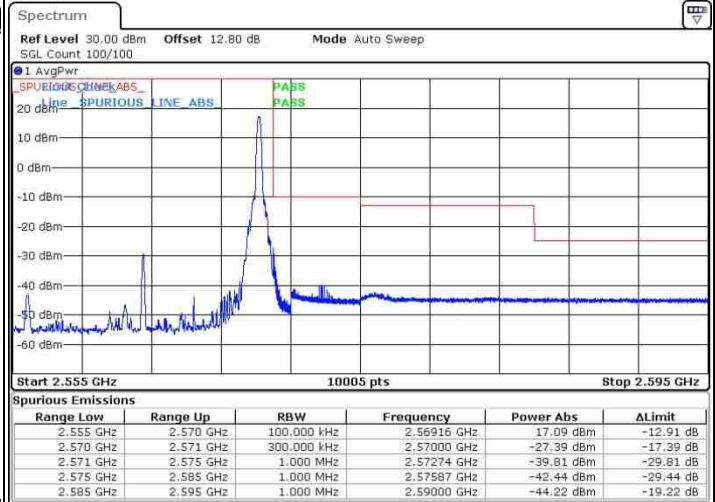


## LTE Band 7 / 15MHz / 16QAM

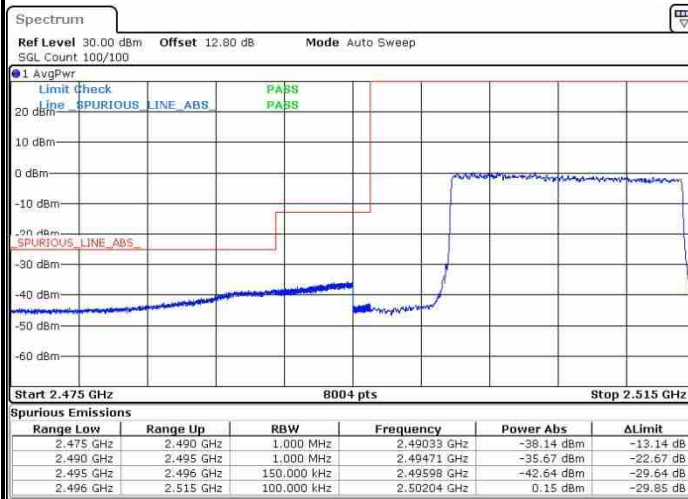
## Lowest Band Edge / 1 RB



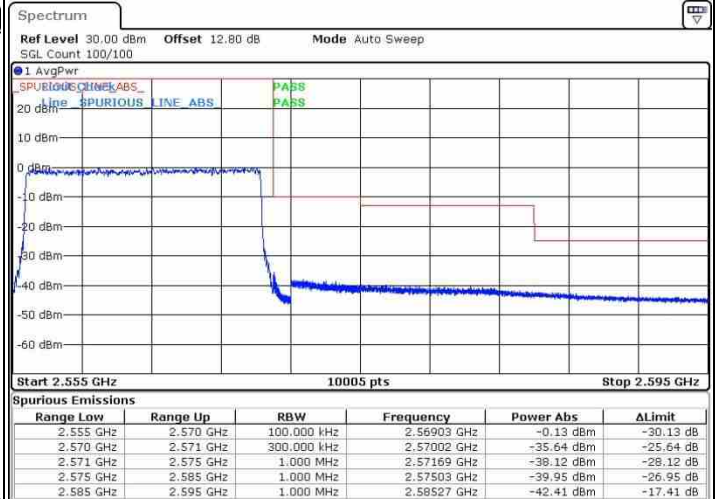
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



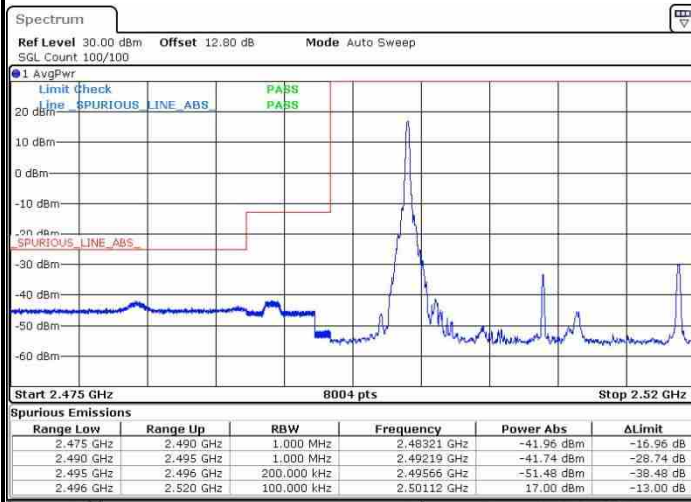
## Highest Band Edge / Full RB



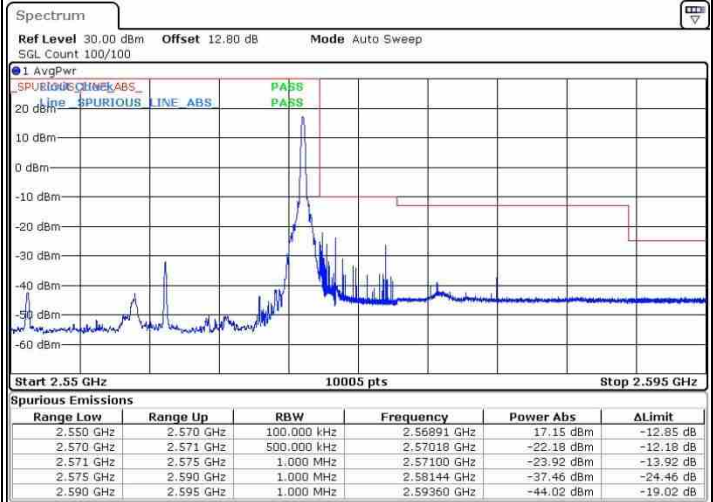


## LTE Band 7 / 20MHz / QPSK

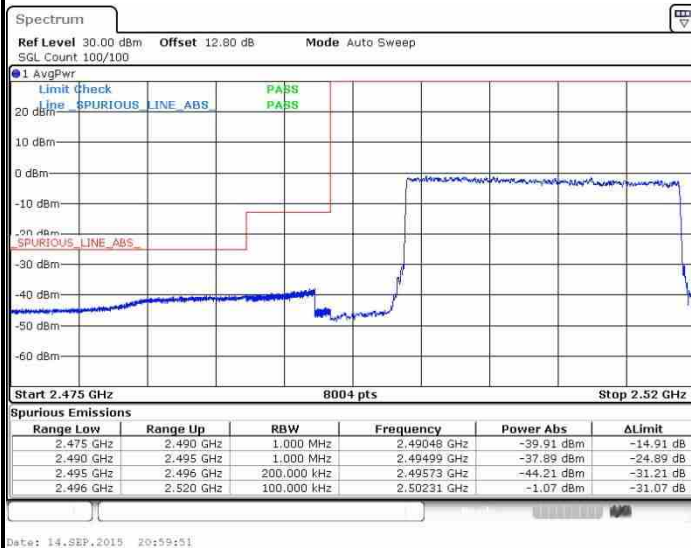
## Lowest Band Edge / 1 RB



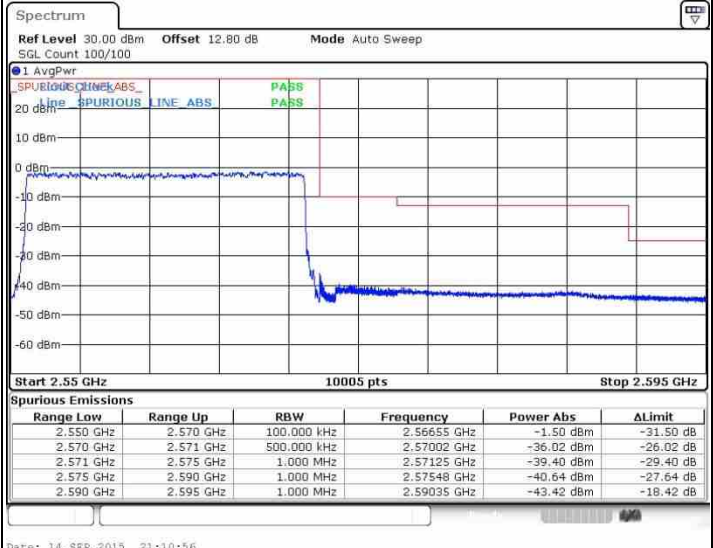
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



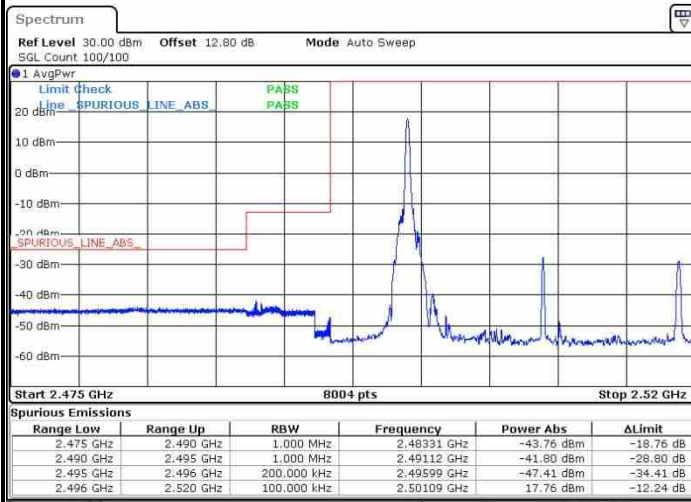
## Highest Band Edge / Full RB



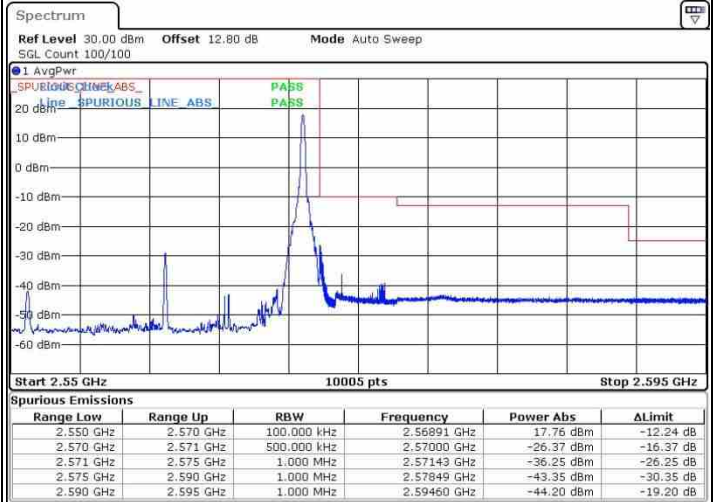


## LTE Band 7 / 20MHz / 16QAM

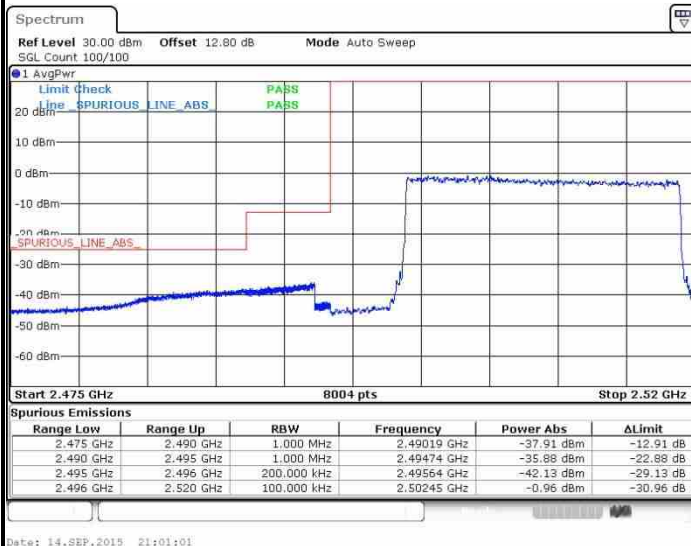
## Lowest Band Edge / 1 RB



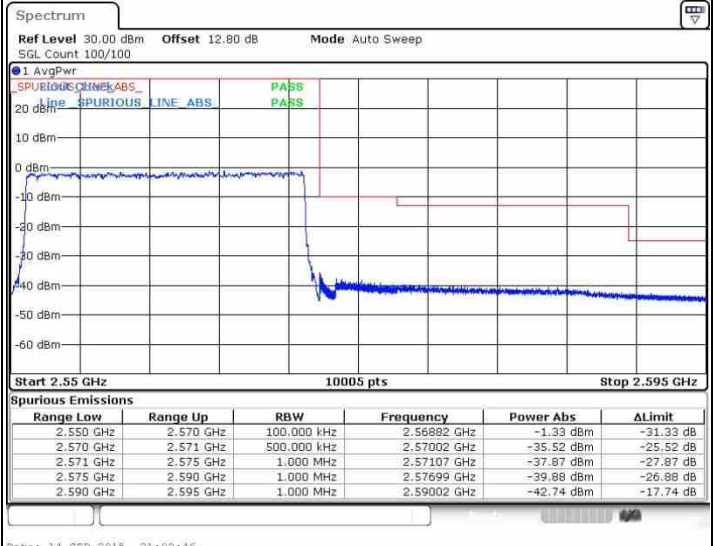
## Highest Band Edge / 1RB



## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB



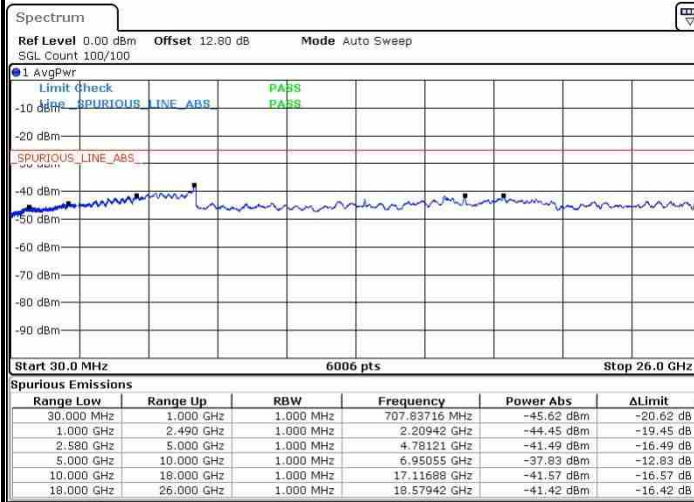


## **Conducted Spurious Emission**



## LTE Band 7 / 5MHz

## Lowest Channel / QPSK



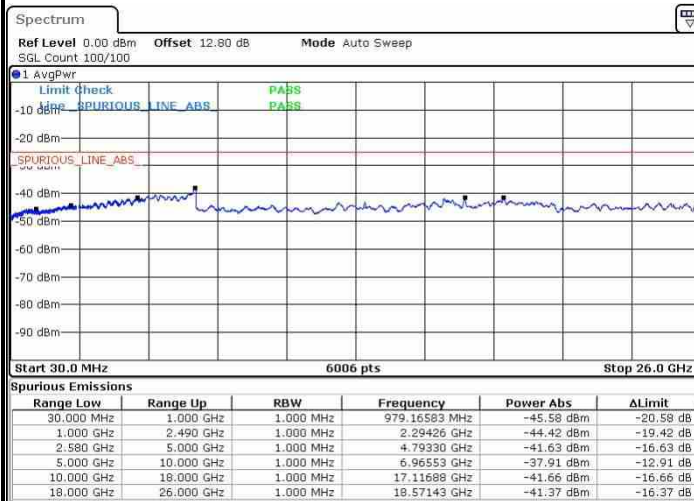
Date: 14.SEP.2015 20:10:20

## Lowest Channel / 16QAM



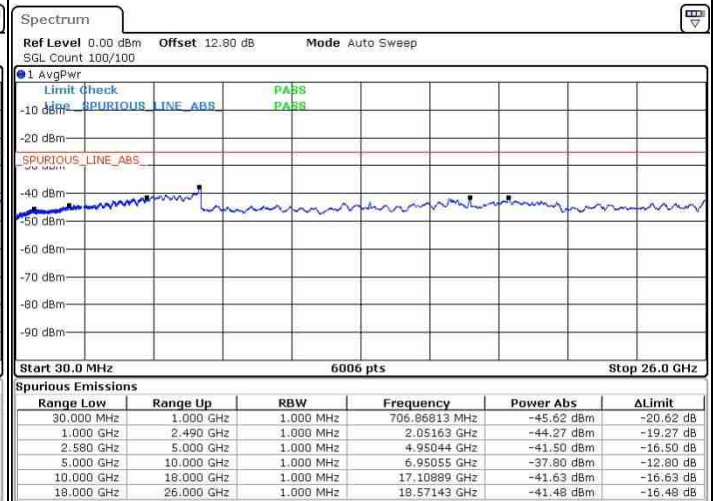
Date: 14.SEP.2015 20:11:15

## Middle Channel / QPSK



Date: 14.SEP.2015 20:12:57

## Middle Channel / 16QAM

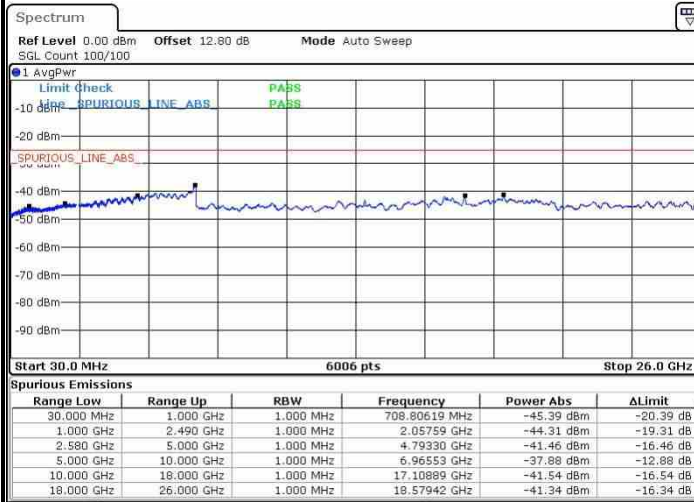


Date: 14.SEP.2015 20:13:53



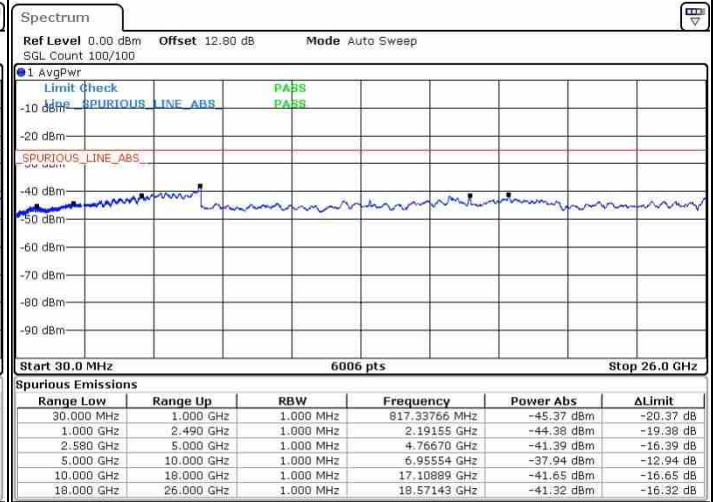
## LTE Band 7 / 5MHz

## Highest Channel / QPSK



Date: 14.SEP.2015 20:20:15

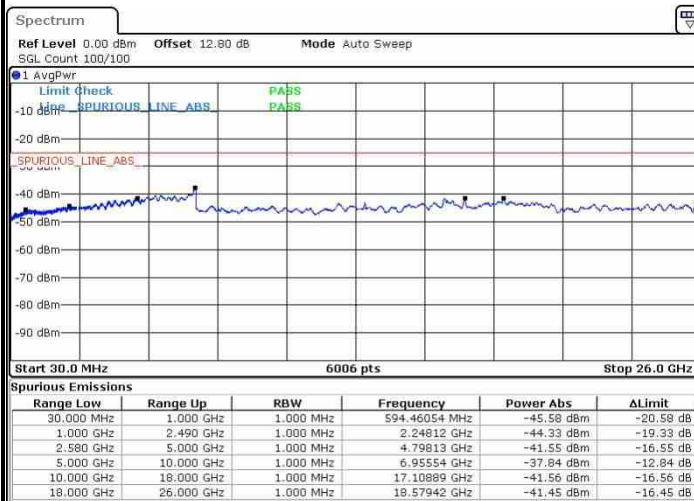
## Highest Channel / 16QAM



Date: 14.SEP.2015 20:21:10

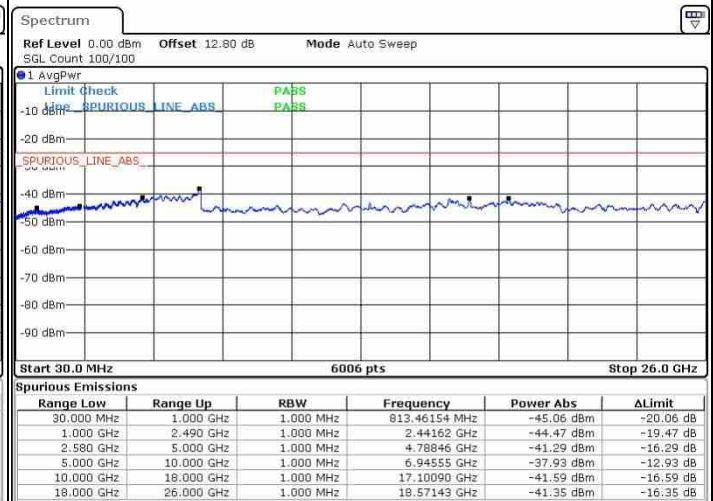
## LTE Band 7 / 10MHz

## Lowest Channel / QPSK



Date: 14.SEP.2015 20:27:32

## Lowest Channel / 16QAM

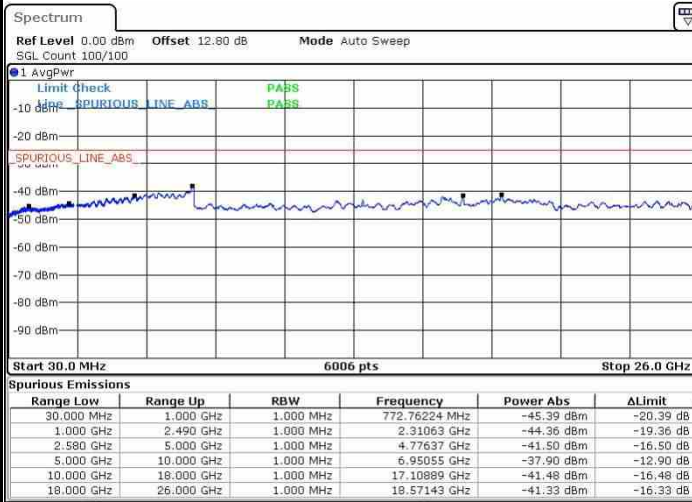


Date: 14.SEP.2015 20:28:27



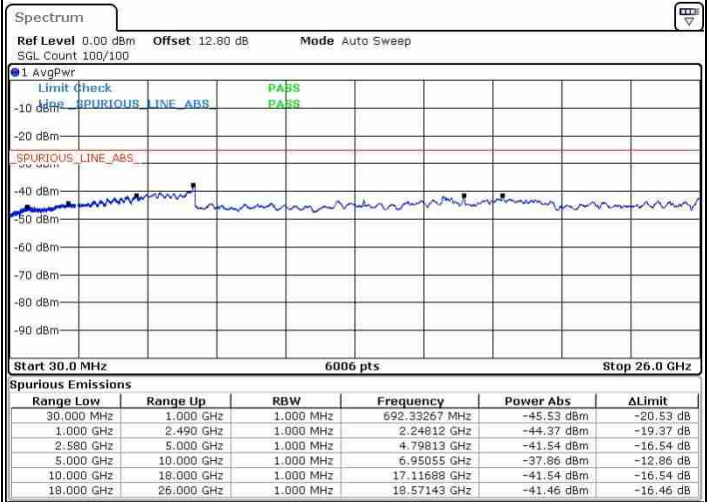
## LTE Band 7 / 10MHz

## Middle Channel / QPSK



Date: 14.SEP.2015 20:30:09

## Middle Channel / 16QAM



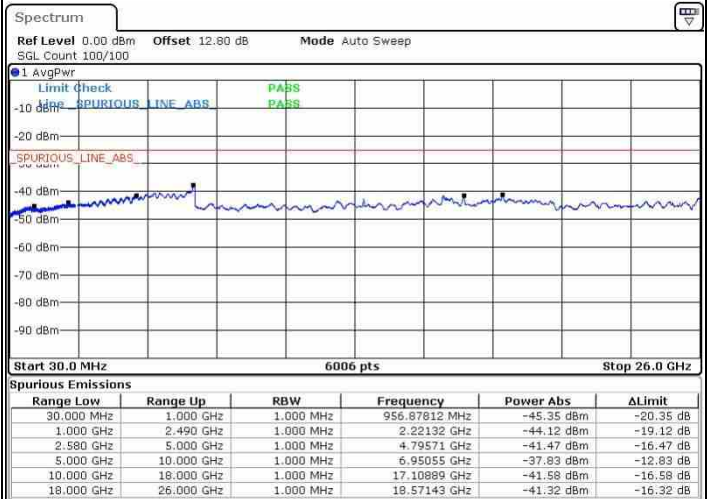
Date: 14.SEP.2015 20:31:09

## Highest Channel / QPSK



Date: 14.SEP.2015 20:37:27

## Highest Channel / 16QAM

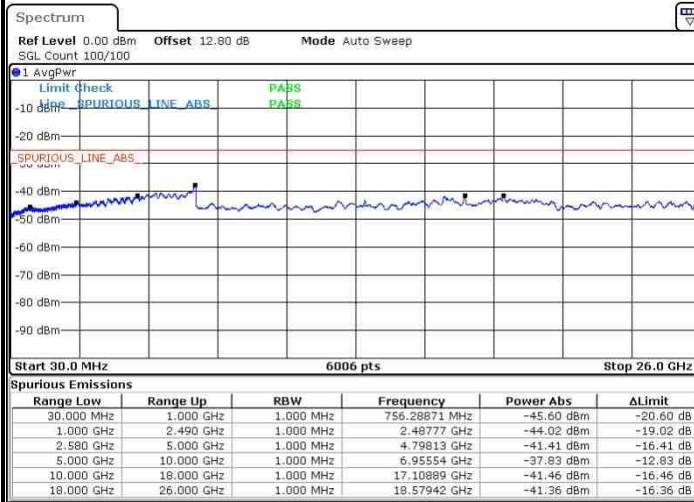


Date: 14.SEP.2015 20:38:22



## LTE Band 7 / 15MHz

## Lowest Channel / QPSK



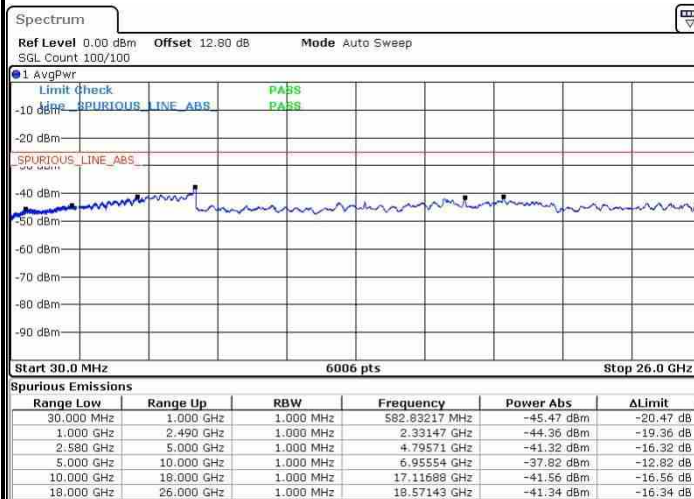
Date: 14.SEP.2015 20:44:44

## Lowest Channel / 16QAM



Date: 14.SEP.2015 20:45:39

## Middle Channel / QPSK



Date: 14.SEP.2015 20:47:21

## Middle Channel / 16QAM

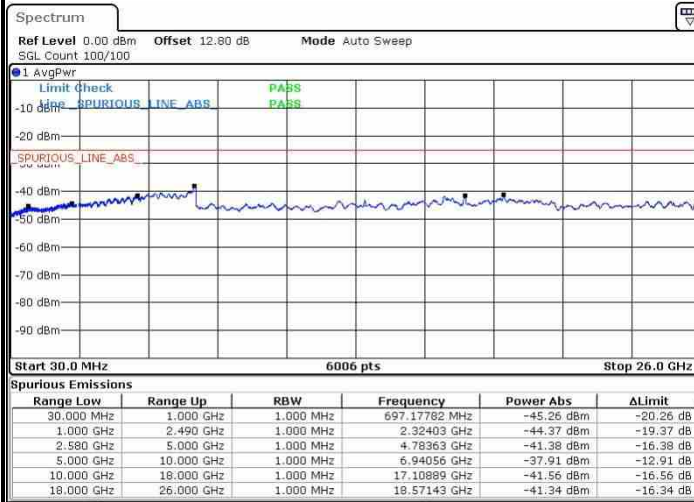


Date: 14.SEP.2015 20:48:17



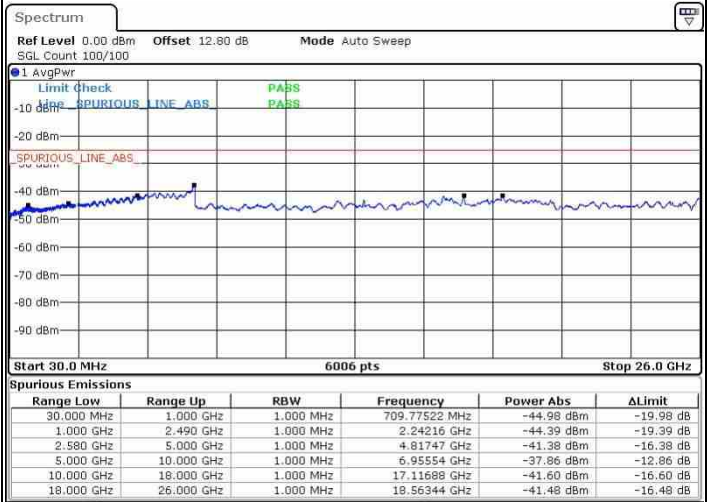
## LTE Band 7 / 15MHz

## Highest Channel / QPSK



Date: 14.SEP.2015 20:54:39

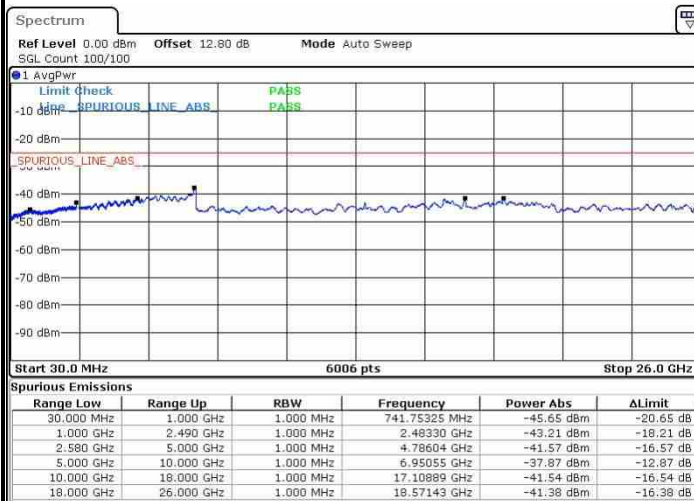
## Highest Channel / 16QAM



Date: 14.SEP.2015 20:55:34

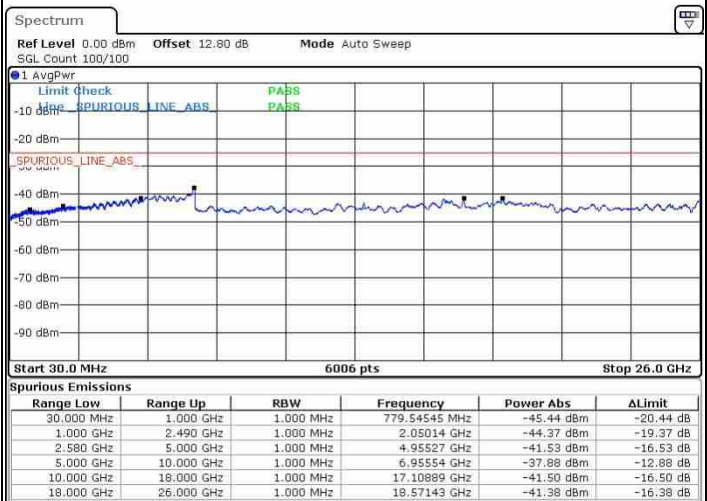
## LTE Band 7 / 20MHz

## Lowest Channel / QPSK



Date: 14.SEP.2015 21:01:56

## Lowest Channel / 16QAM

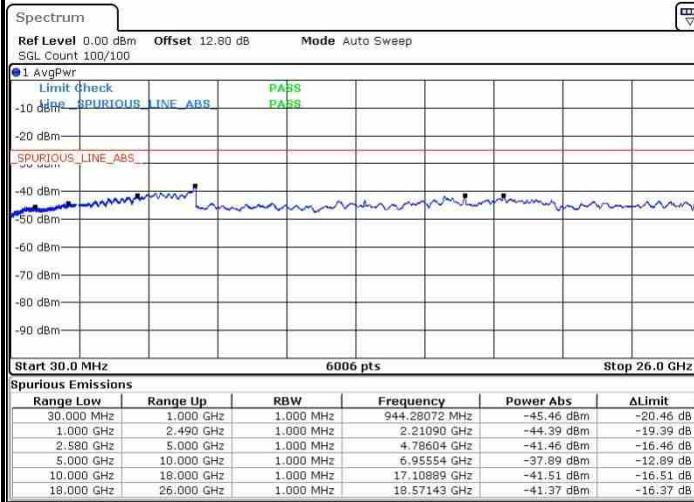


Date: 14.SEP.2015 21:02:51



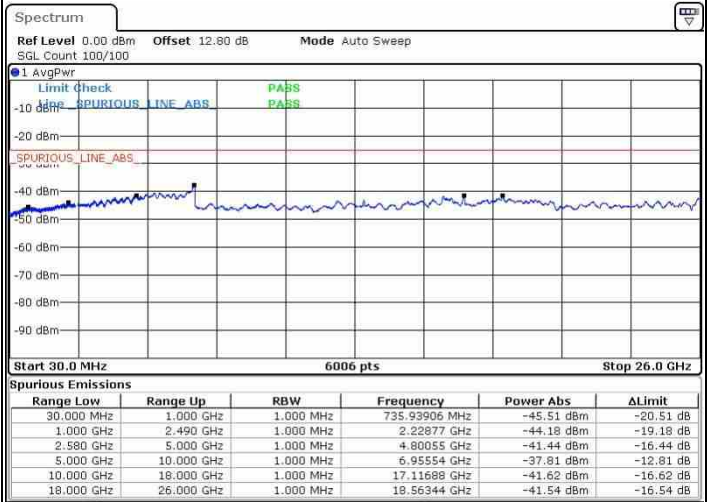
## LTE Band 7 / 20MHz

## Middle Channel / QPSK



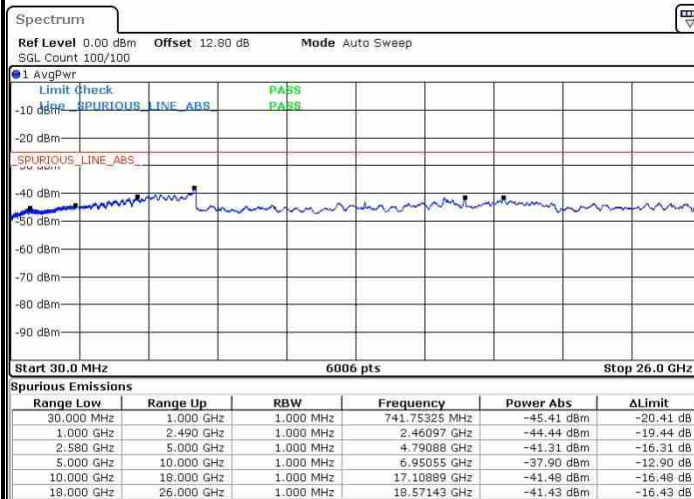
Date: 14.SEP.2015 21:04:34

## Middle Channel / 16QAM



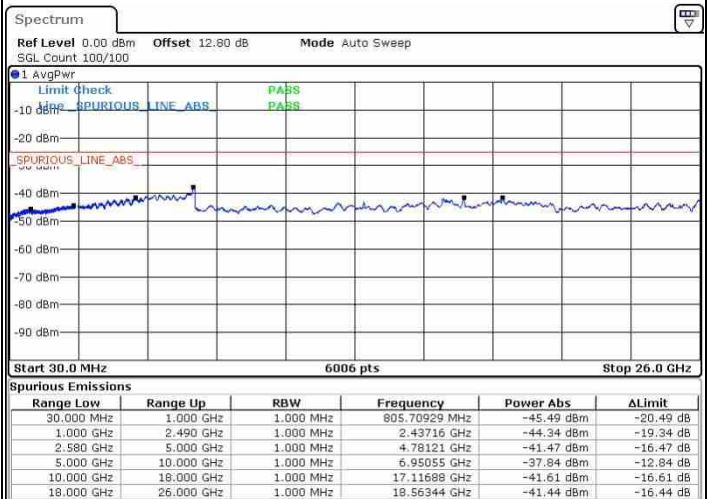
Date: 14.SEP.2015 21:05:29

## Highest Channel / QPSK



Date: 14.SEP.2015 21:11:51

## Highest Channel / 16QAM



Date: 14.SEP.2015 21:12:47

## Frequency Stability

| Test Conditions  |                   | LTE Band 7 (QPSK) / Middle Channel | Limit   |
|------------------|-------------------|------------------------------------|---------|
| Temperature (°C) | Voltage (Volt)    | BW 10MHz                           | Note 2. |
|                  |                   | Deviation (ppm)                    | Result  |
| 50               | Normal Voltage    | 0.0093                             | PASS    |
| 40               | Normal Voltage    | 0.0001                             |         |
| 30               | Normal Voltage    | 0.0005                             |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                             |         |
| 10               | Normal Voltage    | 0.0076                             |         |
| 0                | Normal Voltage    | 0.0085                             |         |
| -10              | Normal Voltage    | 0.0002                             |         |
| -20              | Normal Voltage    | 0.0000                             |         |
| -30              | Normal Voltage    | 0.0072                             |         |
| 20               | Maximum Voltage   | 0.0081                             |         |
| 20               | Normal Voltage    | 0.0000                             |         |
| 20               | Battery End Point | 0.0007                             |         |

**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.

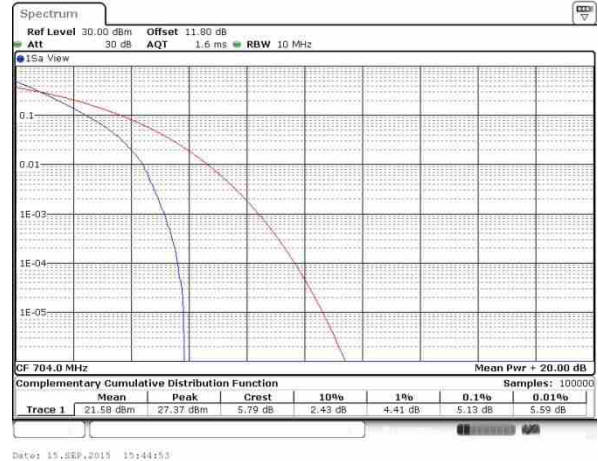
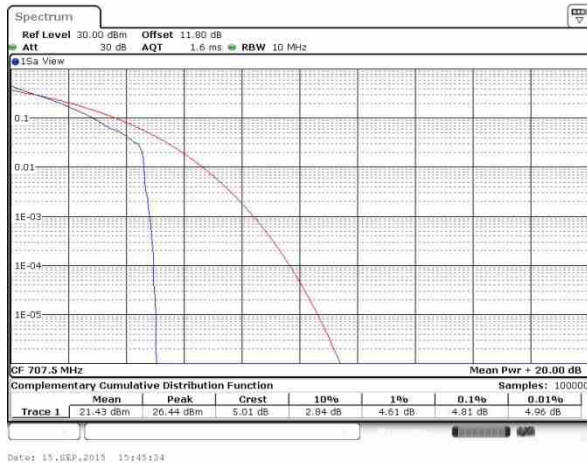


## LTE Band 12

### Peak-to-Average Ratio

| Mode       | LTE Band 12 / 10MHz |         |       |         |             |
|------------|---------------------|---------|-------|---------|-------------|
| Mod.       | QPSK                |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | 4.64                | 5.13    | 5.16  | 6.03    | PASS        |
| Middle CH  | 4.81                | 4.99    | 5.42  | 6       |             |
| Highest CH | 4.96                | 5.04    | 5.54  | 5.91    |             |

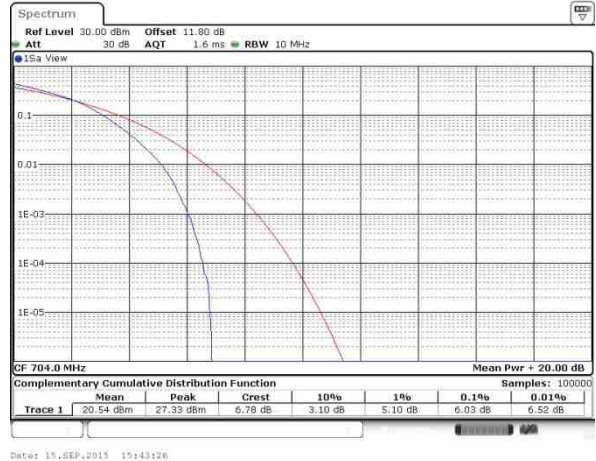
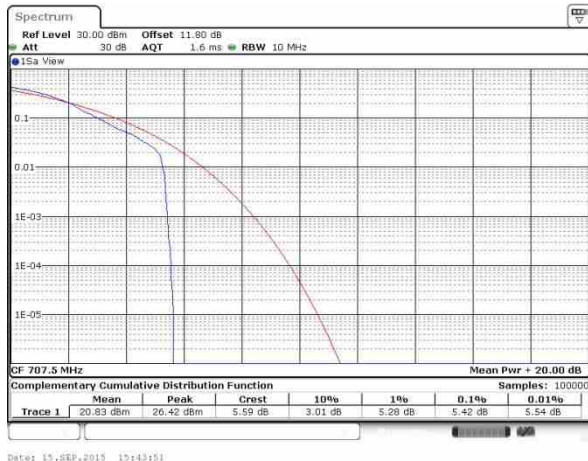
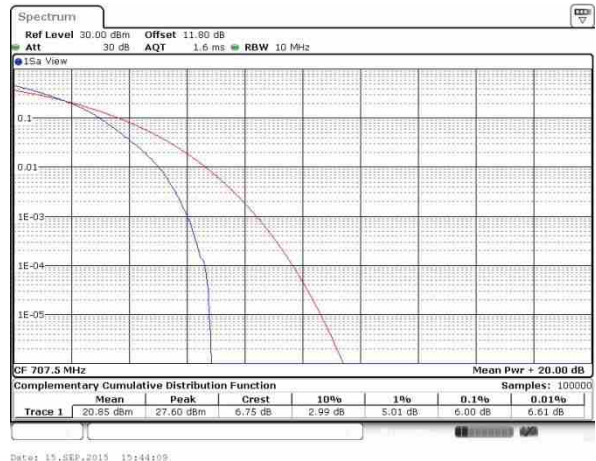
**LTE Band 12 / 10MHz / QPSK**
**Lowest Channel / 1RB**

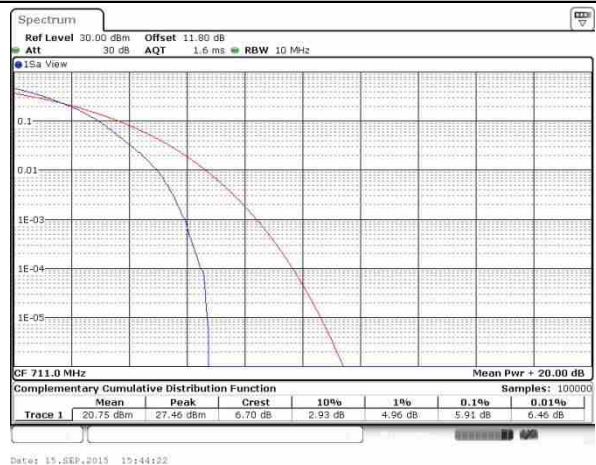
**Lowest Channel / Full RB**

**Middle Channel / 1RB**

**Middle Channel / Full RB**

**Highest Channel / 1RB**

**Highest Channel / Full RB**


**LTE Band 12 / 10MHz / 16QAM**
**Lowest Channel / 1RB**

**Lowest Channel / Full RB**

**Middle Channel / 1RB**

**Middle Channel / Full RB**

**Highest Channel / 1RB**

**Highest Channel / Full RB**




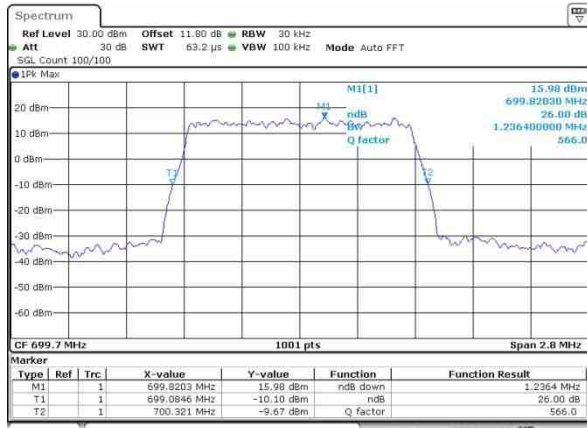
**26dB Bandwidth**

| Mode       | LTE Band 12 : 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  | 1.24                       | 1.23  | 3.02 | 3     | 4.87 | 4.93  | 9.91  | 9.77  | -     | -     | -     | -     |
| Middle CH  | 1.21                       | 1.23  | 3.02 | 2.95  | 4.9  | 4.99  | 9.91  | 9.73  | -     | -     | -     | -     |
| Highest CH | 1.21                       | 1.22  | 3.01 | 3.02  | 4.9  | 4.86  | 9.73  | 9.73  | -     | -     | -     | -     |



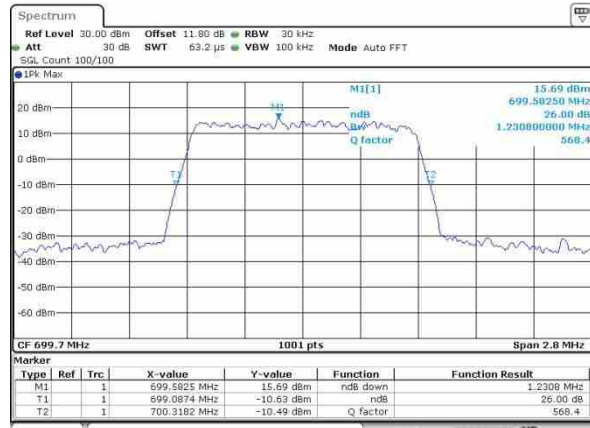
## LTE Band 12

## Lowest Channel / 1.4MHz / QPSK



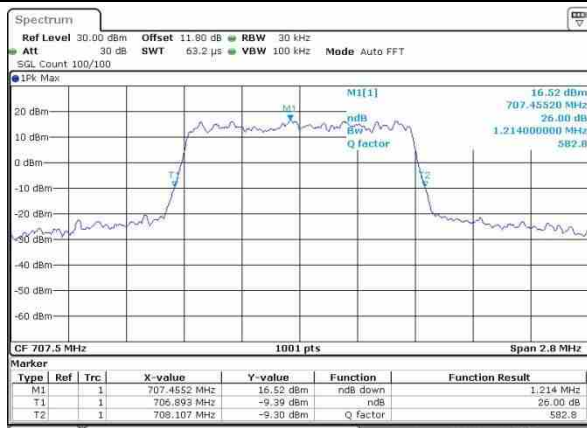
Date: 15.SEP.2015 14:24:13

## Lowest Channel / 1.4MHz / 16QAM



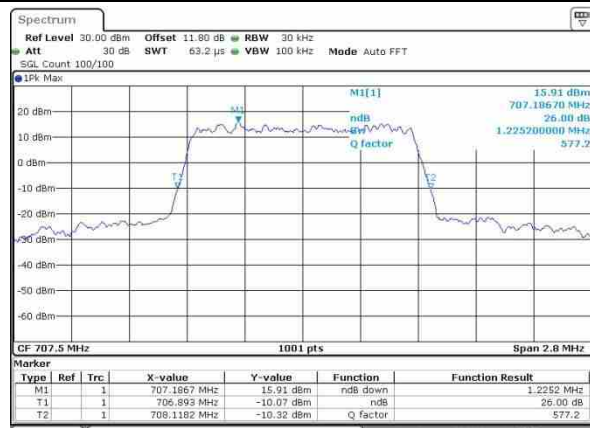
Date: 15.SEP.2015 14:24:01

## Middle Channel / 1.4MHz / QPSK



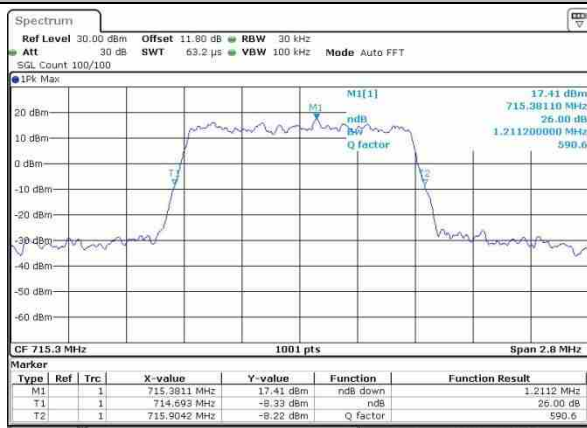
Date: 15.SEP.2015 14:19:18

## Middle Channel / 1.4MHz / 16QAM



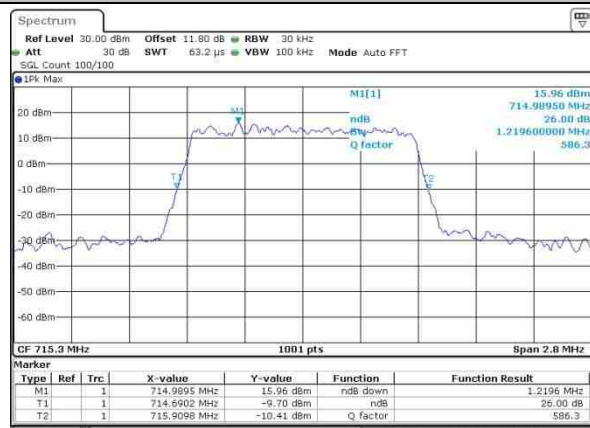
Date: 15.SEP.2015 14:19:10

## Highest Channel / 1.4MHz / QPSK



Date: 15.SEP.2015 14:19:13

## Highest Channel / 1.4MHz / 16QAM

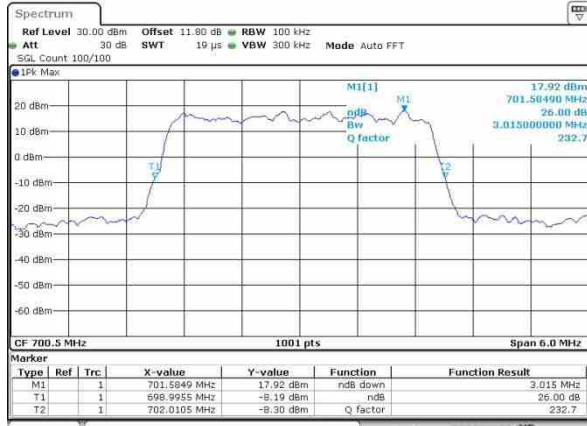


Date: 15.SEP.2015 14:19:02

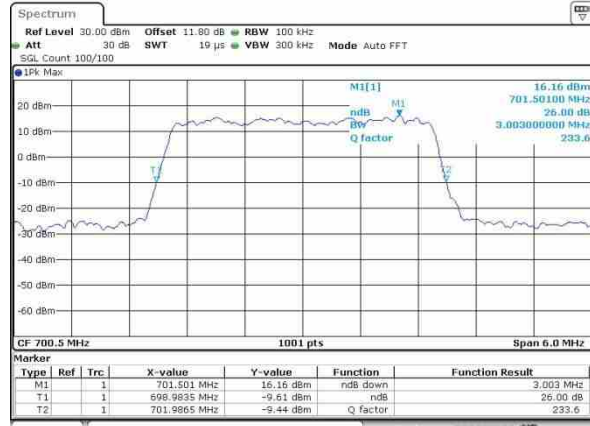


## LTE Band 12

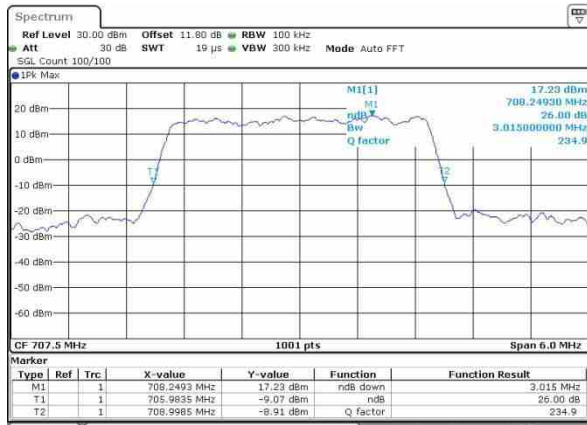
## Lowest Channel / 3MHz / QPSK



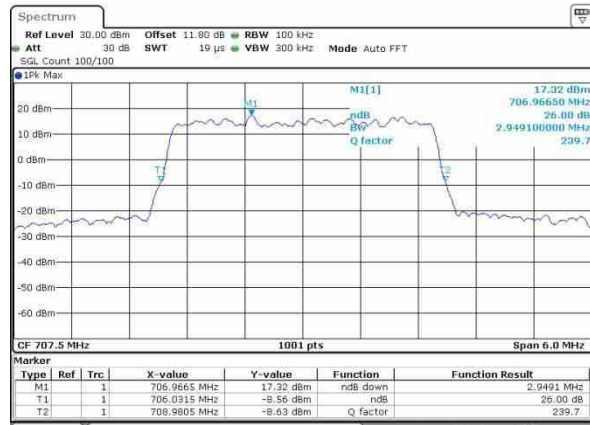
## Lowest Channel / 3MHz / 16QAM



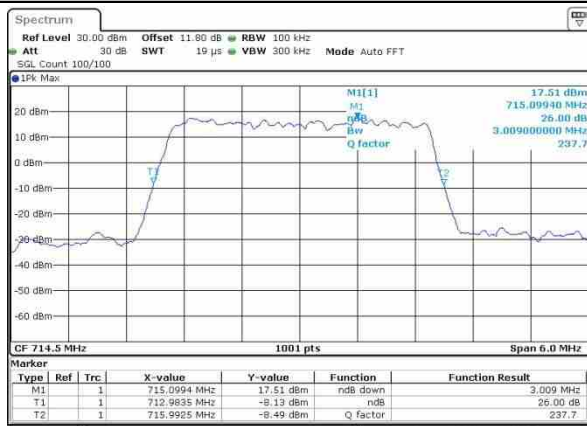
## Middle Channel / 3MHz / QPSK



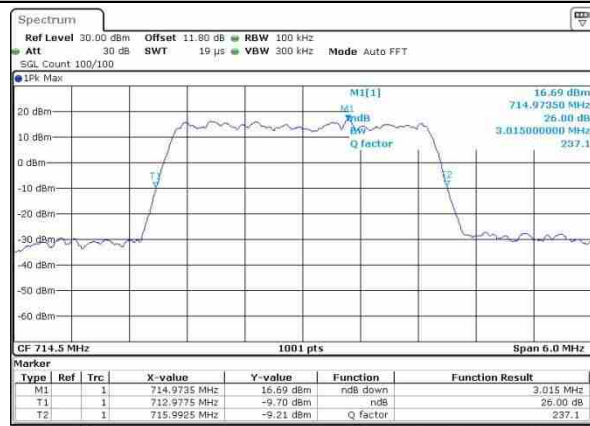
## Middle Channel / 3MHz / 16QAM



## Highest Channel / 3MHz / QPSK



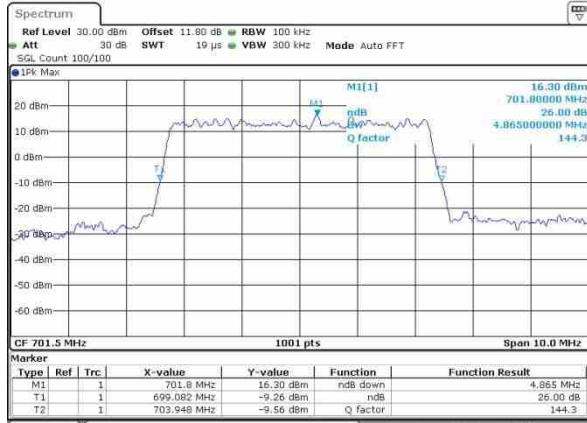
## Highest Channel / 3MHz / 16QAM





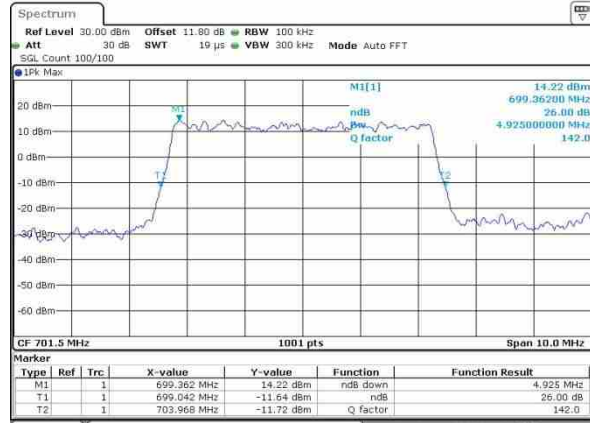
## LTE Band 12

## Lowest Channel / 5MHz / QPSK



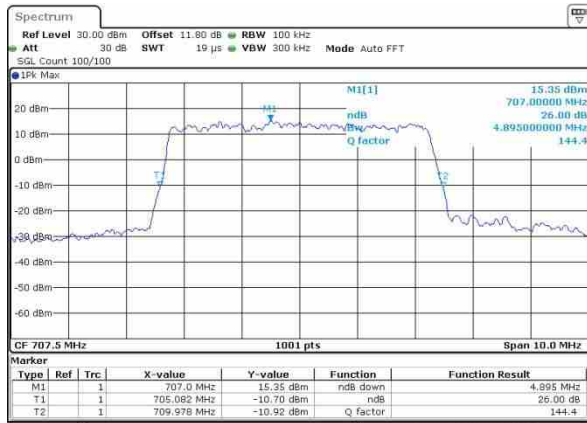
Date: 15.SEP.2015 11:38:14

## Lowest Channel / 5MHz / 16QAM



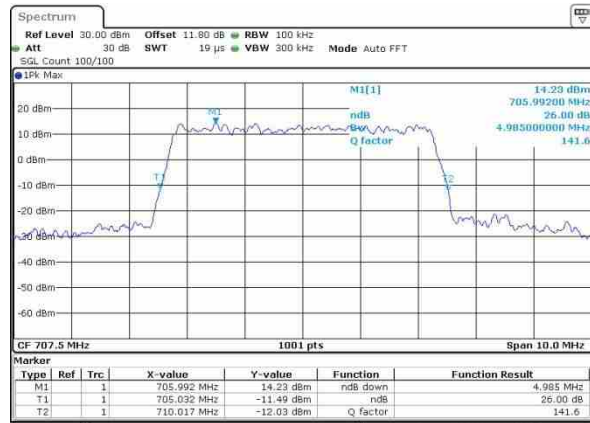
Date: 15.SEP.2015 11:38:14

## Middle Channel / 5MHz / QPSK



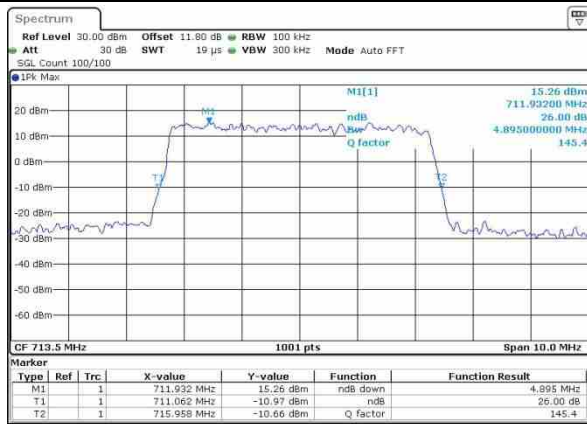
Date: 15.SEP.2015 11:49:04

## Middle Channel / 5MHz / 16QAM



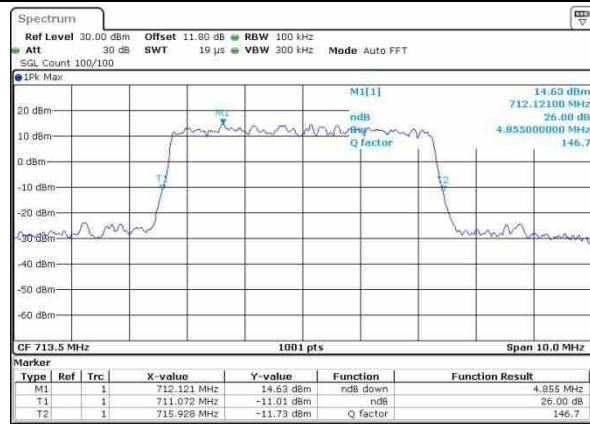
Date: 15.SEP.2015 11:49:15

## Highest Channel / 5MHz / QPSK



Date: 15.SEP.2015 11:51:59

## Highest Channel / 5MHz / 16QAM



Date: 15.SEP.2015 11:51:48