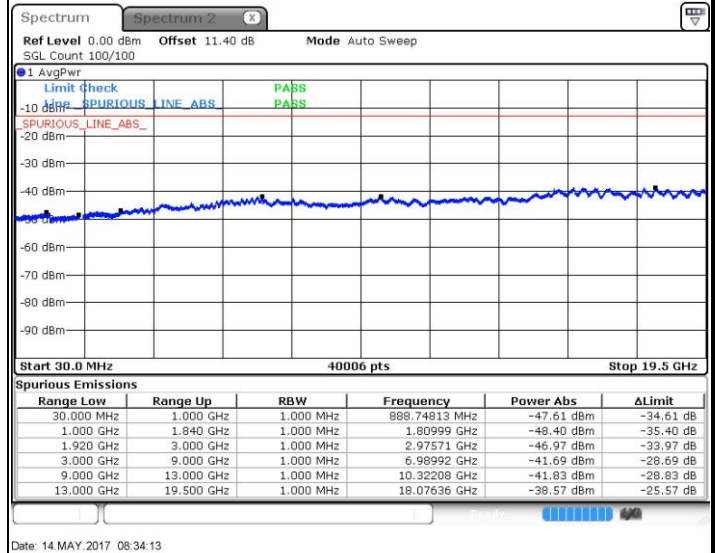


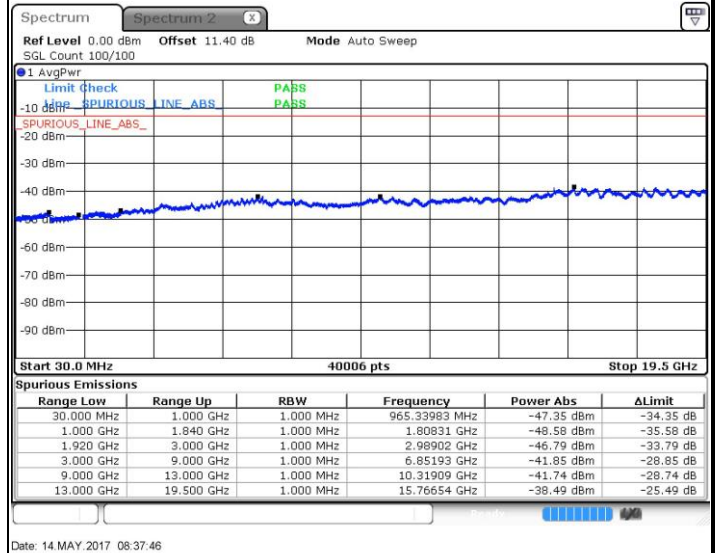


## LTE Band 2 / 10MHz

## Middle Channel / 64QAM



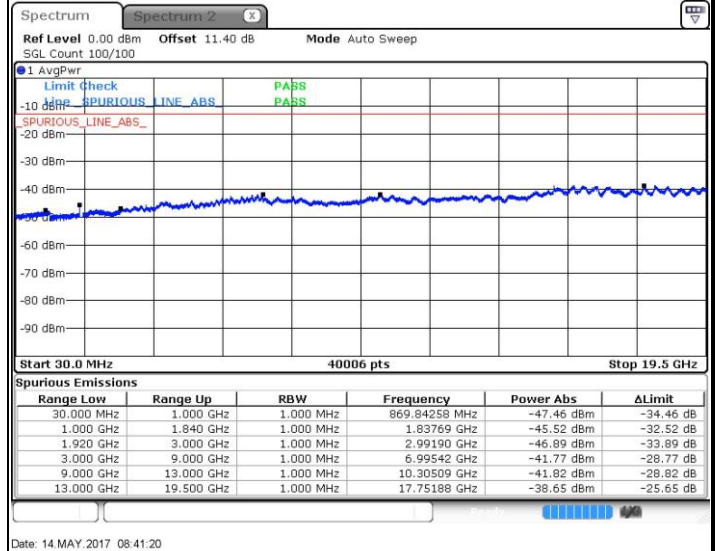
## Highest Channel / 64QAM



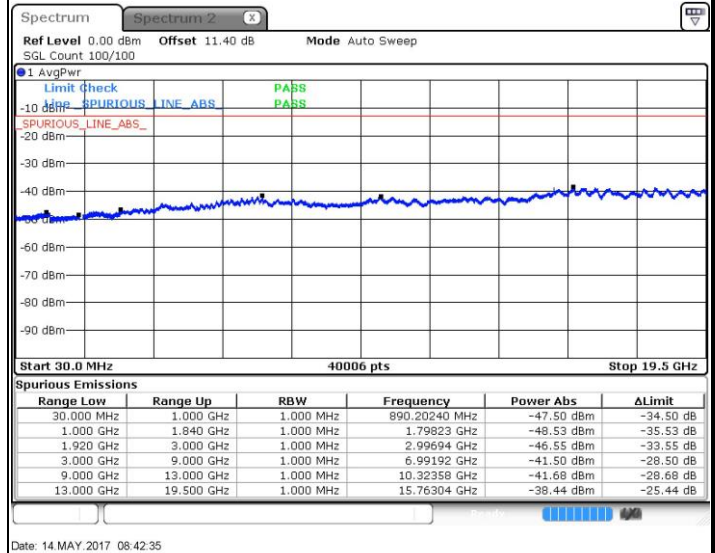


## LTE Band 2 / 15MHz

## Lowest Channel / 64QAM



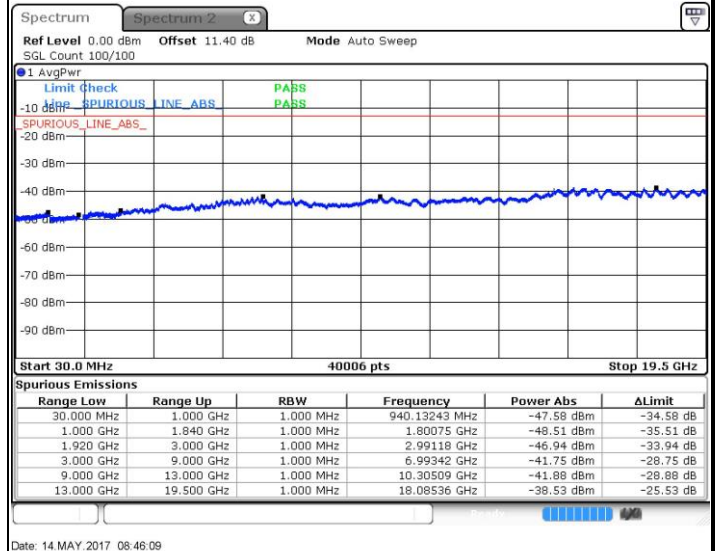
## Middle Channel / 64QAM





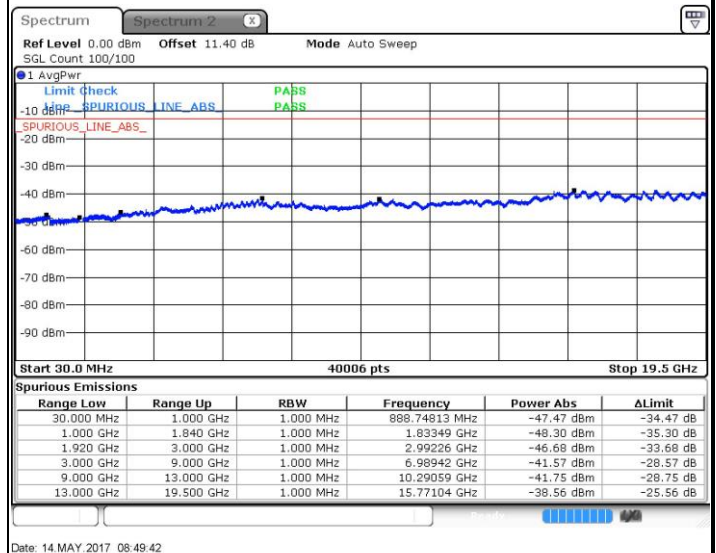
## LTE Band 2 / 15MHz

## Highest Channel / 64QAM



## LTE Band 2 / 20MHz

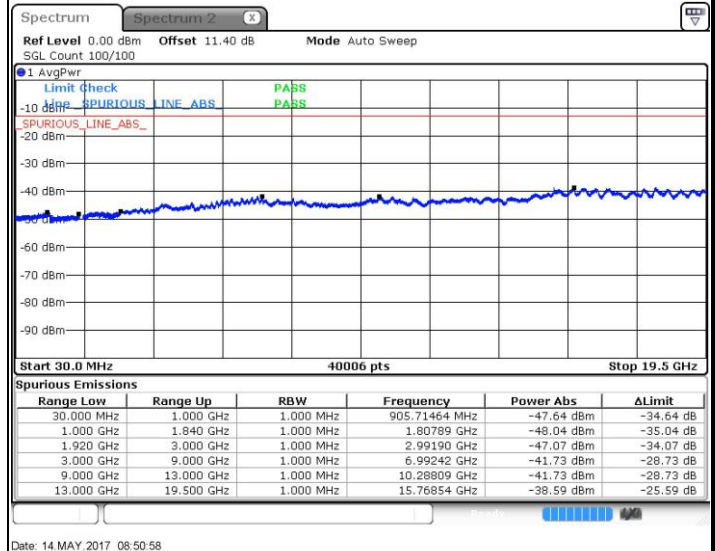
## Lowest Channel / 64QAM



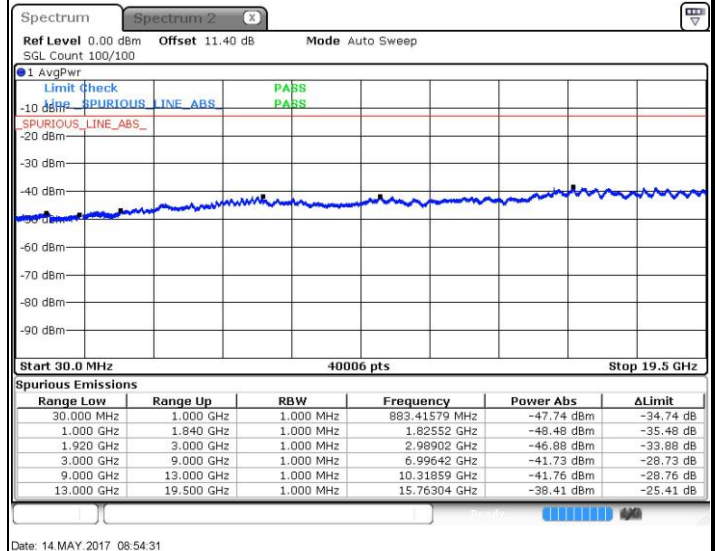


## LTE Band 2 / 20MHz

## Middle Channel / 64QAM



## Highest Channel / 64QAM



## Frequency Stability

| Test Conditions  |                   | LTE Band 2 (QPSK) / Middle Channel | Limit   |
|------------------|-------------------|------------------------------------|---------|
| Temperature (°C) | Voltage (Volt)    | BW 10MHz                           | Note 2. |
|                  |                   | Deviation (ppm)                    | Result  |
| 50               | Normal Voltage    | 0.0083                             | PASS    |
| 40               | Normal Voltage    | 0.0009                             |         |
| 30               | Normal Voltage    | 0.0006                             |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                             |         |
| 10               | Normal Voltage    | 0.0003                             |         |
| 0                | Normal Voltage    | 0.0006                             |         |
| -10              | Normal Voltage    | 0.0081                             |         |
| -20              | Normal Voltage    | 0.0004                             |         |
| -30              | Normal Voltage    | 0.0086                             |         |
| 20               | Maximum Voltage   | 0.0089                             |         |
| 20               | Normal Voltage    | 0.0000                             |         |
| 20               | Battery End Point | 0.0003                             |         |

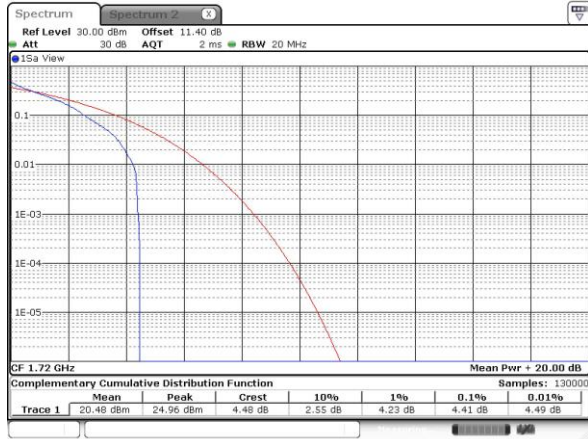
**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.35 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

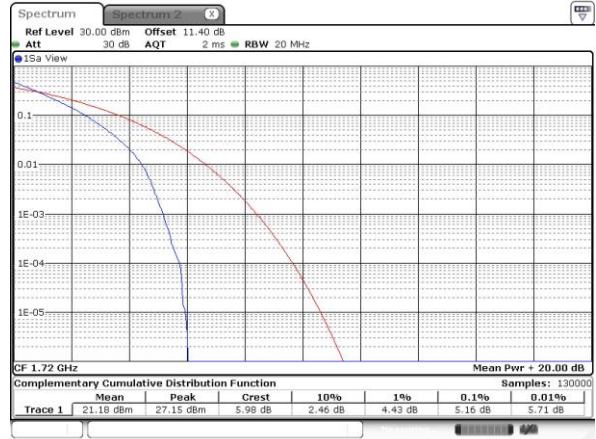
## LTE Band 4

### Peak-to-Average Ratio

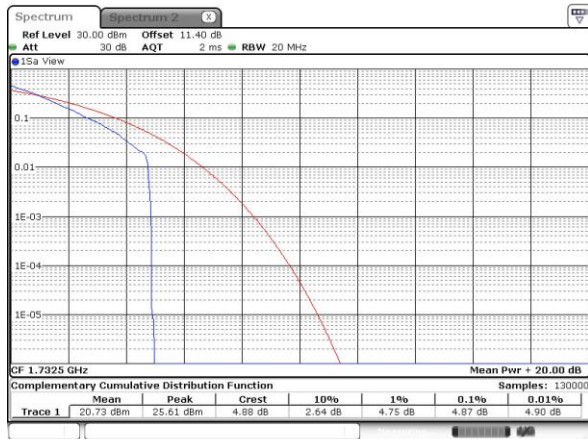
| Mode       | LTE Band 4 / 20MHz |         |       |         |             |
|------------|--------------------|---------|-------|---------|-------------|
| Mod.       | QPSK               |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | 4.41               | 5.16    | 5.22  | 6.29    | PASS        |
| Middle CH  | 4.87               | 4.81    | 5.54  | 5.97    |             |
| Highest CH | 4                  | 4.67    | 4.72  | 5.57    |             |
| Mod.       | -                  |         | 64QAM |         | Limit: 13dB |
| RB Size    | 1RB                | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | -                  | -       | 5.33  | 6.14    | PASS        |
| Middle CH  | -                  | -       | 5.8   | 6.09    |             |
| Highest CH | -                  | -       | 4.67  | 5.68    |             |

**LTE Band 4 / 20MHz / QPSK**
**Lowest Channel / 1RB**


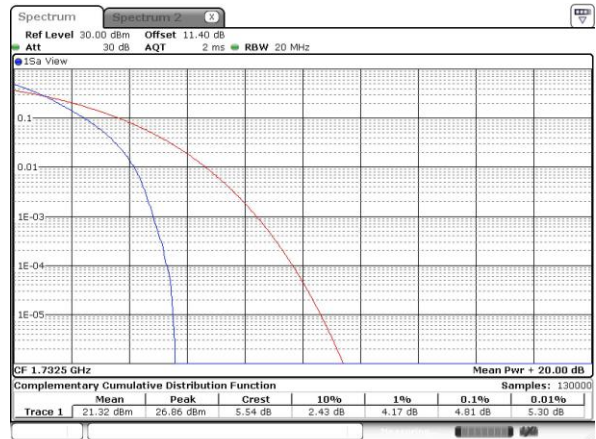
Date: 9 MAY 2017 01:40:25

**Lowest Channel / Full RB**


Date: 9 MAY 2017 01:40:35

**Middle Channel / 1RB**


Date: 9 MAY 2017 01:40:44

**Middle Channel / Full RB**


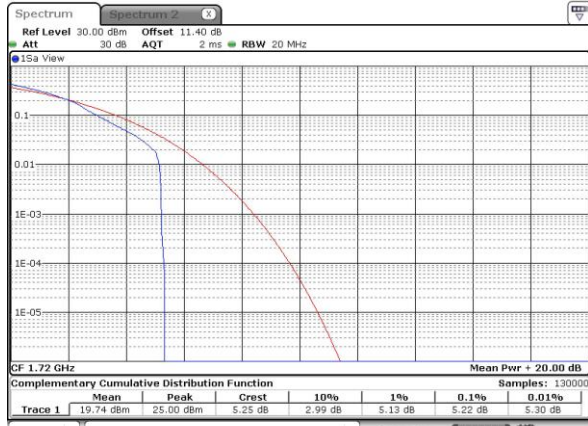
Date: 9 MAY 2017 01:40:55

**Highest Channel / 1RB**

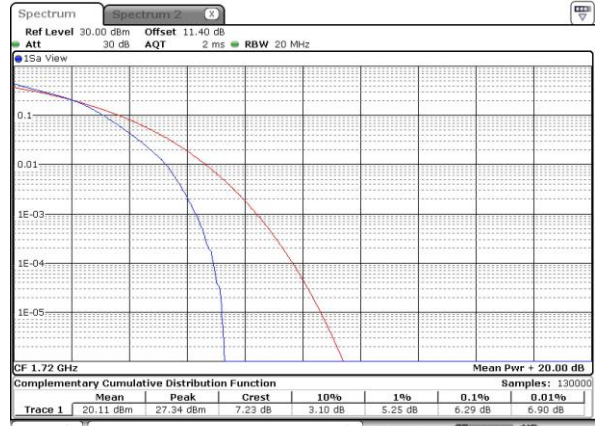

Date: 9 MAY 2017 01:41:06

**Highest Channel / Full RB**

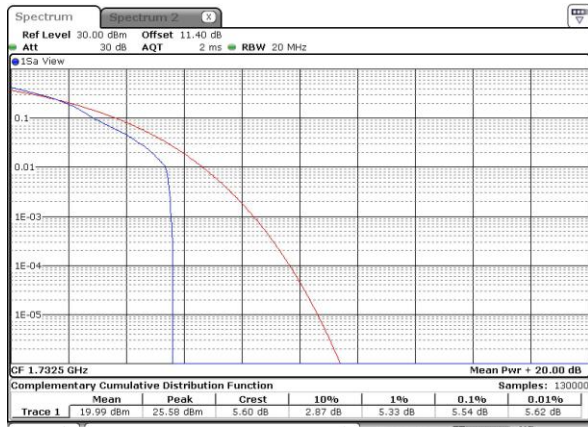

Date: 9 MAY 2017 01:41:18

**LTE Band 4 / 20MHz / 16QAM**
**Lowest Channel / 1RB**


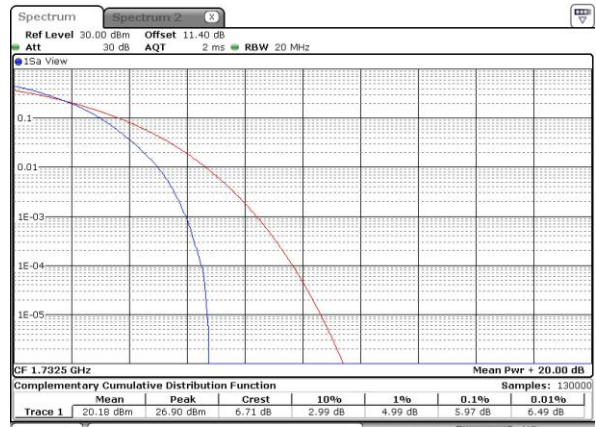
Date: 9 MAY 2017 01:39:15

**Lowest Channel / Full RB**


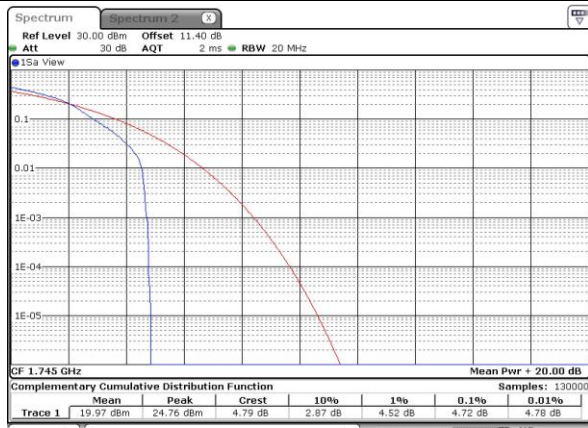
Date: 9 MAY 2017 01:39:26

**Middle Channel / 1RB**


Date: 9 MAY 2017 01:39:44

**Middle Channel / Full RB**


Date: 9 MAY 2017 01:39:54

**Highest Channel / 1RB**


Date: 9 MAY 2017 01:40:05

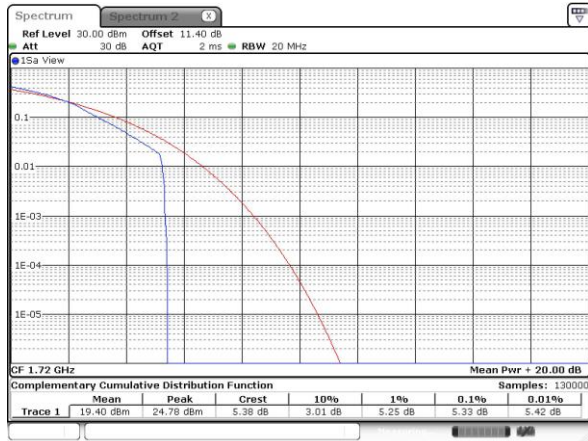
**Highest Channel / Full RB**


Date: 9 MAY 2017 01:40:15

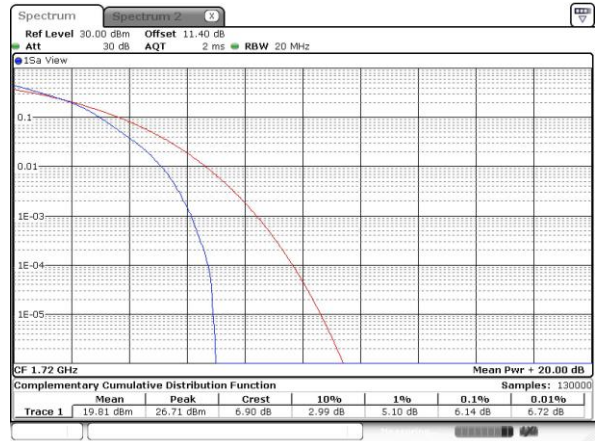


## LTE Band 4 / 20MHz / 64QAM

## Lowest Channel / 1RB



## Lowest Channel / Full RB



## Middle Channel / 1RB



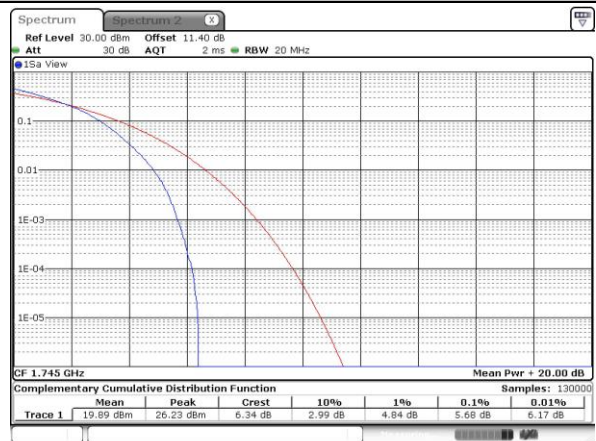
## Middle Channel / Full RB



## Highest Channel / 1RB



## Highest Channel / Full RB



**26dB Bandwidth**

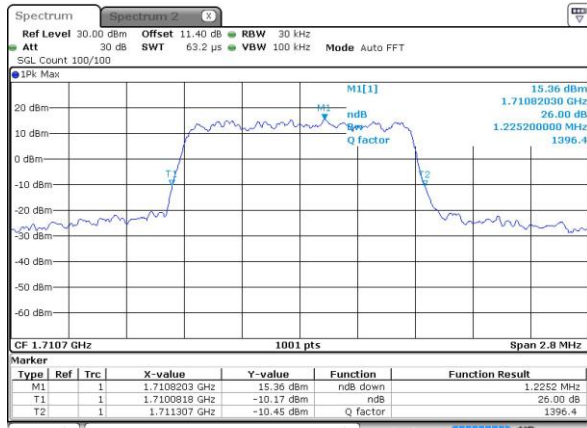
| Mode       | LTE Band 4 : 26dB BW(MHz) |       |      |       |      |       |       |       |       |       |       |       |
|------------|---------------------------|-------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| BW         | 1.4MHz                    |       | 3MHz |       | 5MHz |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | QPSK                      | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM |
| Lowest CH  | 1.23                      | 1.21  | 3.03 | 3.02  | 4.93 | 4.89  | 9.75  | 9.73  | 14.45 | 14.33 | 20.22 | 20.10 |
| Middle CH  | 1.22                      | 1.22  | 2.99 | 2.97  | 4.82 | 4.87  | 9.77  | 9.73  | 14.24 | 14.48 | 20.14 | 20.10 |
| Highest CH | 1.23                      | 1.23  | 3.01 | 3.03  | 4.93 | 4.85  | 9.69  | 9.91  | 14.36 | 14.51 | 20.10 | 20.02 |

| BW         | 1.4MHz |       | 3MHz |       | 5MHz |       | 10MHz |       | 15MHz |       | 20MHz |       |
|------------|--------|-------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Mod.       | -      | 64QAM | -    | 64QAM | -    | 64QAM | -     | 64QAM | -     | 64QAM | -     | 64QAM |
| Lowest CH  | -      | 1.22  | -    | 3.03  | -    | 4.82  | -     | 9.79  | -     | 14.21 | -     | 20.26 |
| Middle CH  | -      | 1.22  | -    | 3.06  | -    | 4.88  | -     | 9.79  | -     | 14.57 | -     | 20.10 |
| Highest CH | -      | 1.23  | -    | 2.99  | -    | 4.89  | -     | 9.83  | -     | 14.36 | -     | 20.18 |



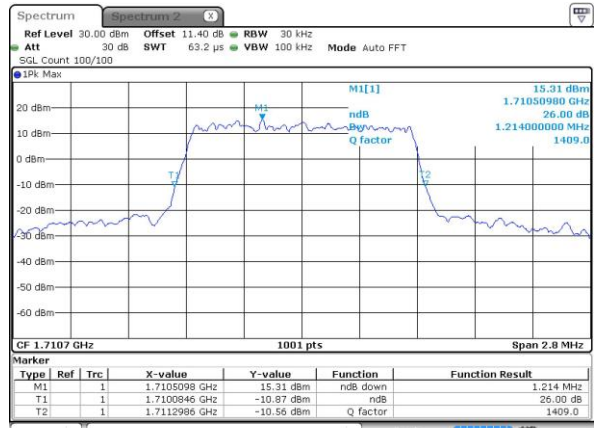
## LTE Band 4

## Lowest Channel / 1.4MHz / QPSK



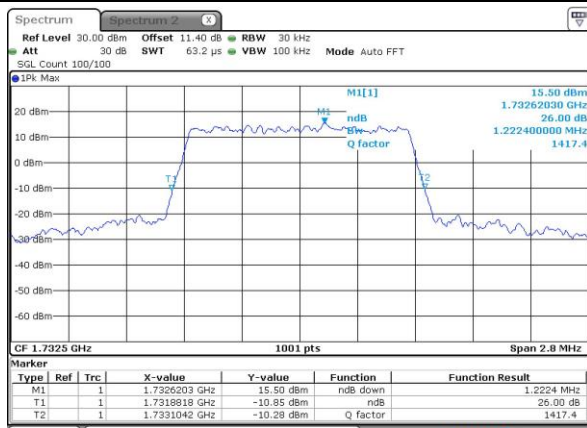
Date: 9 MAY 2017 01:22:12

## Lowest Channel / 1.4MHz / 16QAM



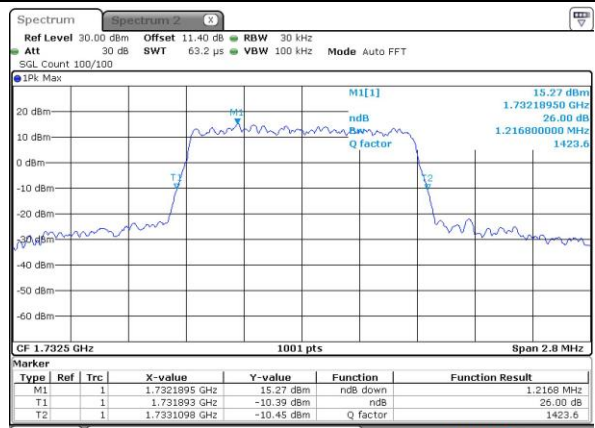
Date: 9 MAY 2017 01:22:23

## Middle Channel / 1.4MHz / QPSK



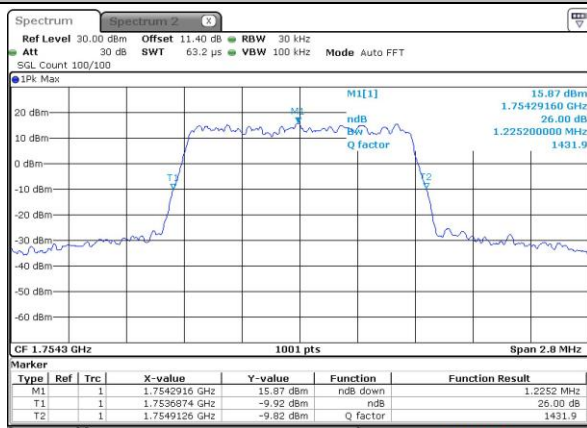
Date: 9 MAY 2017 01:29:19

## Middle Channel / 1.4MHz / 16QAM



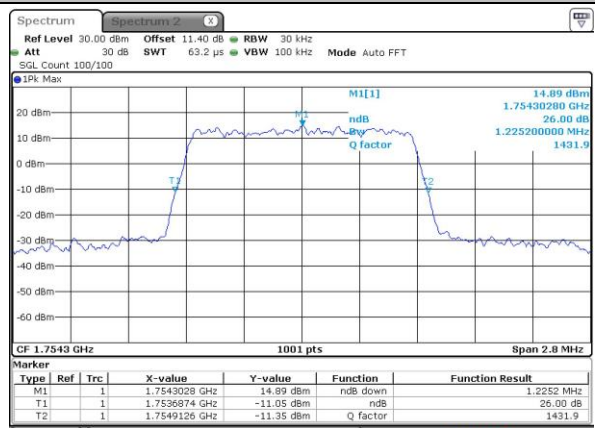
Date: 9 MAY 2017 01:29:30

## Highest Channel / 1.4MHz / QPSK



Date: 9 MAY 2017 01:31:50

## Highest Channel / 1.4MHz / 16QAM

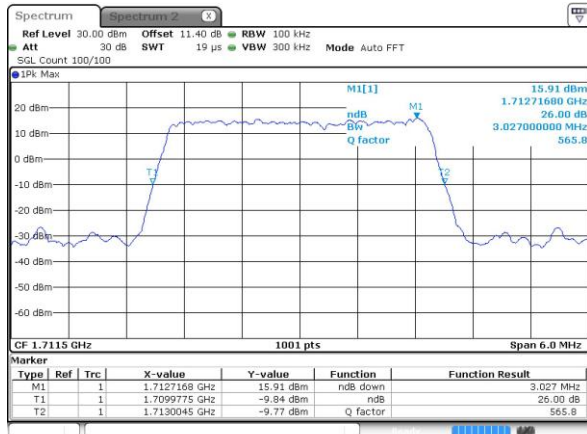


Date: 9 MAY 2017 01:32:00

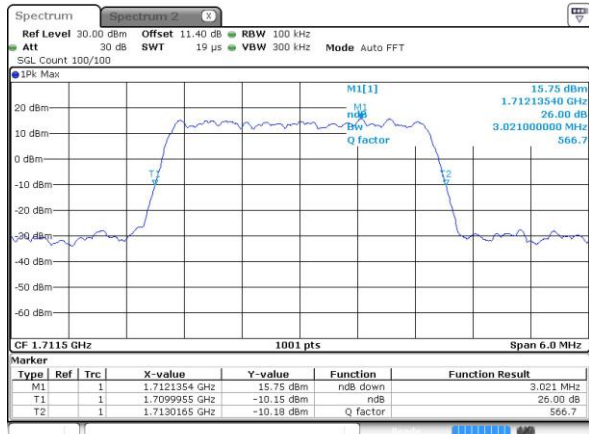


## LTE Band 4

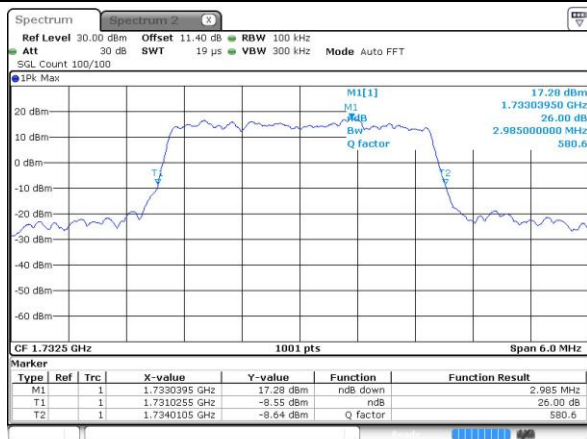
## Lowest Channel / 3MHz / QPSK



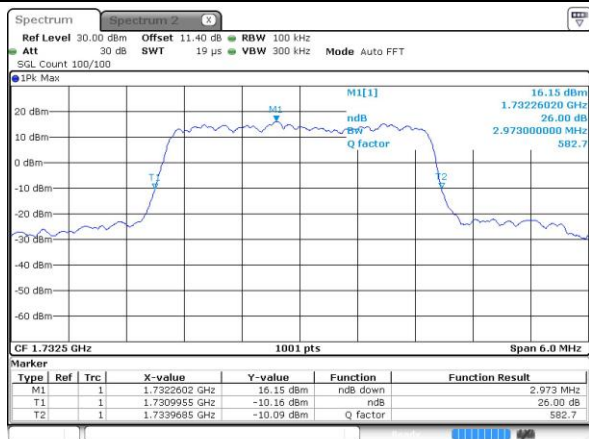
## Lowest Channel / 3MHz / 16QAM



## Middle Channel / 3MHz / QPSK



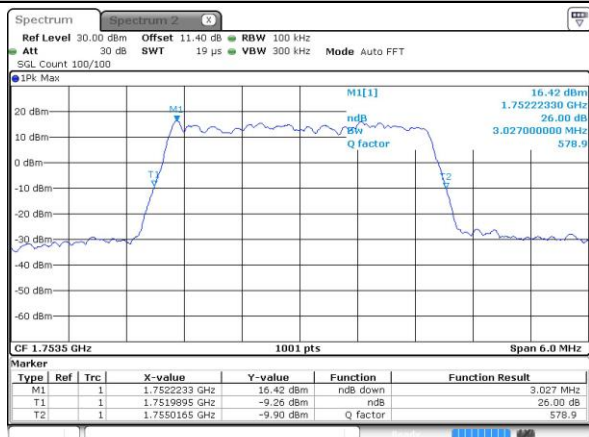
## Middle Channel / 3MHz / 16QAM



## Highest Channel / 3MHz / QPSK



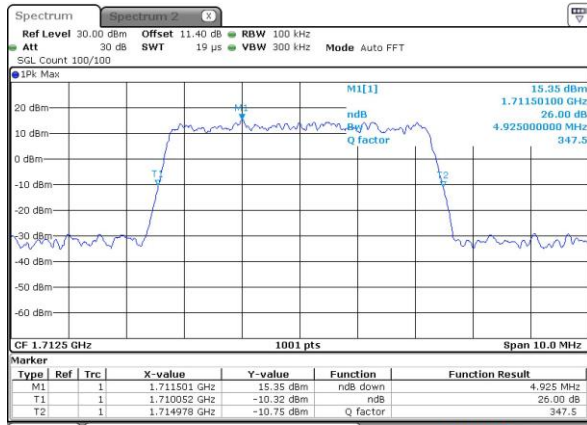
## Highest Channel / 3MHz / 16QAM



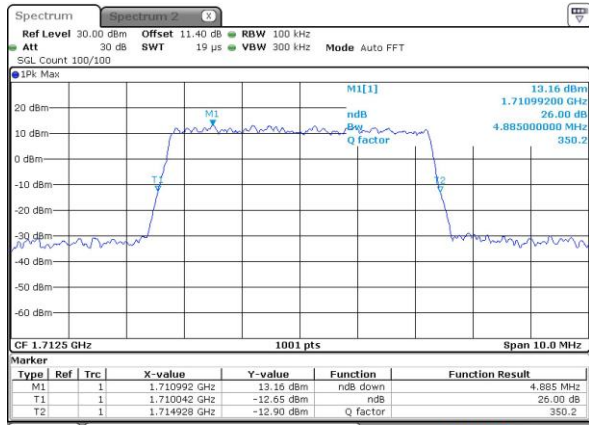


## LTE Band 4

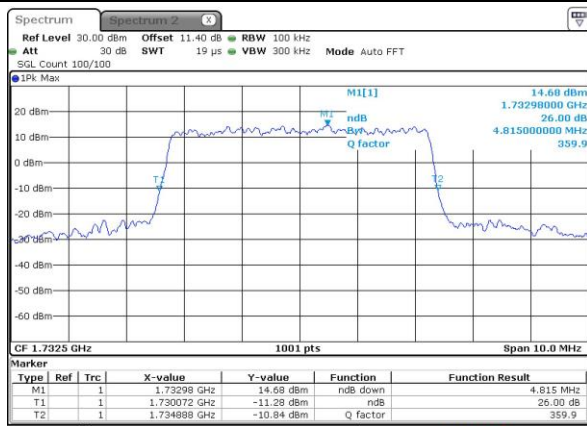
## Lowest Channel / 5MHz / QPSK



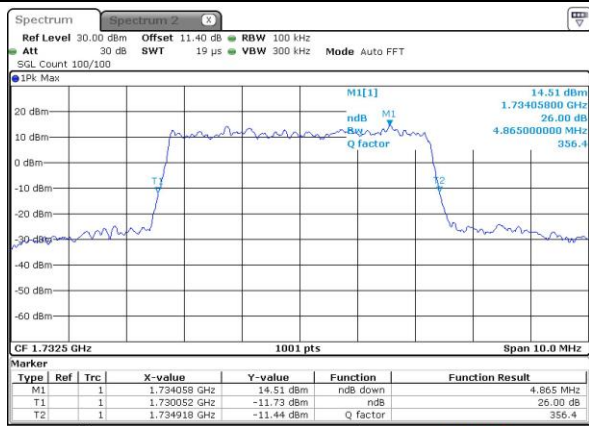
## Lowest Channel / 5MHz / 16QAM



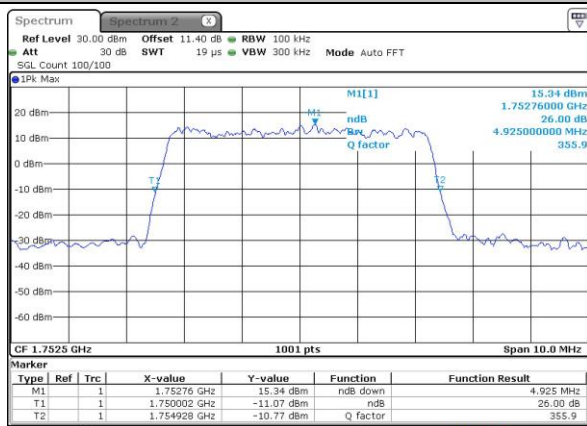
## Middle Channel / 5MHz / QPSK



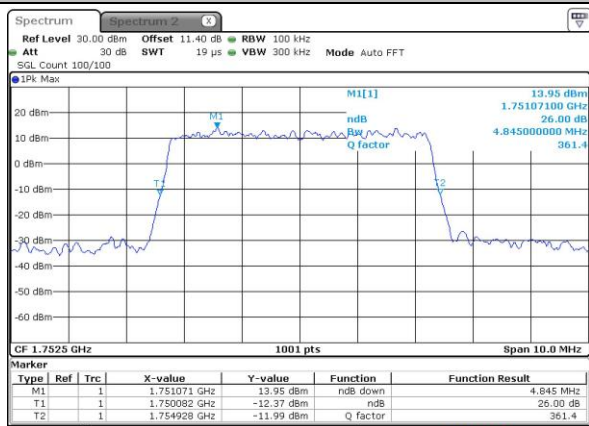
## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



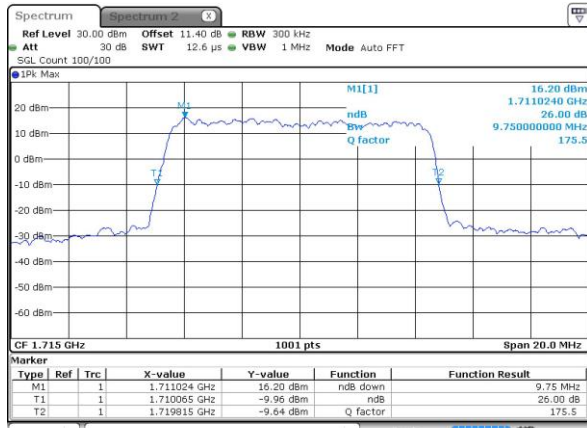
## Highest Channel / 5MHz / 16QAM





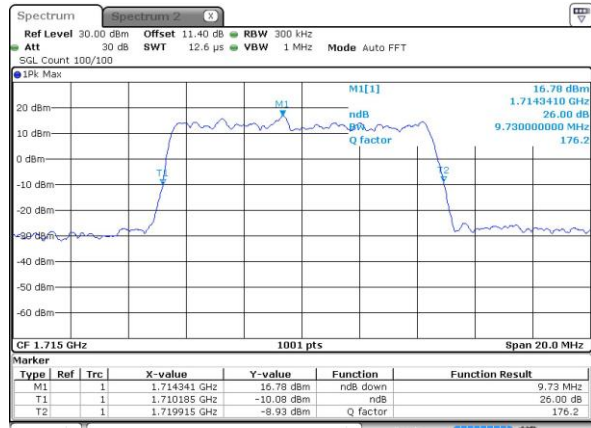
## LTE Band 4

## Lowest Channel / 10MHz / QPSK



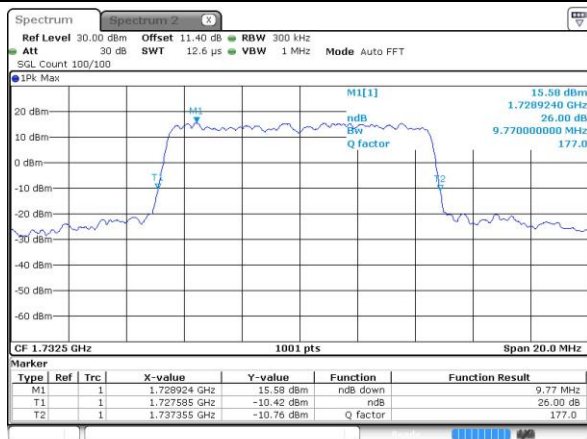
Date: 9 MAY 2017 00:27:13

## Lowest Channel / 10MHz / 16QAM



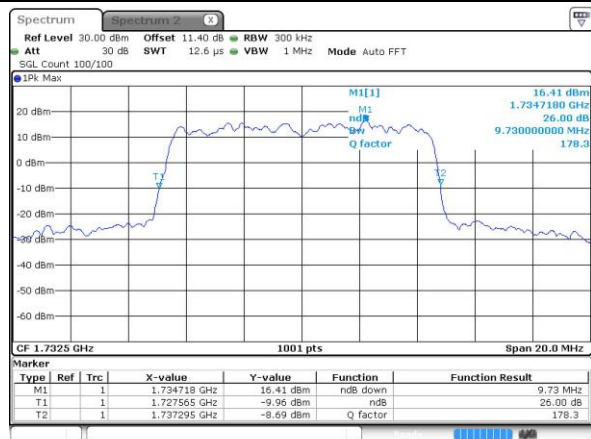
Date: 9 MAY 2017 00:27:23

## Middle Channel / 10MHz / QPSK



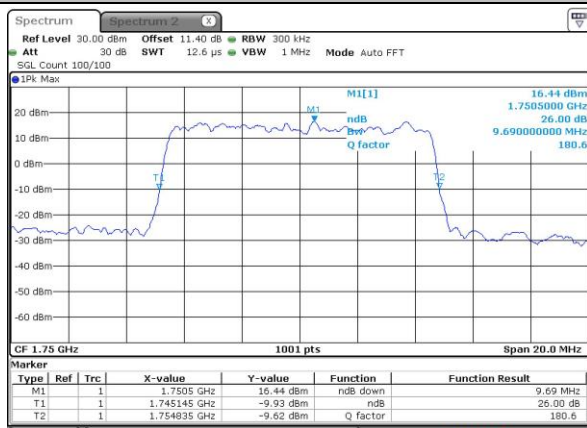
Date: 9 MAY 2017 00:34:20

## Middle Channel / 10MHz / 16QAM



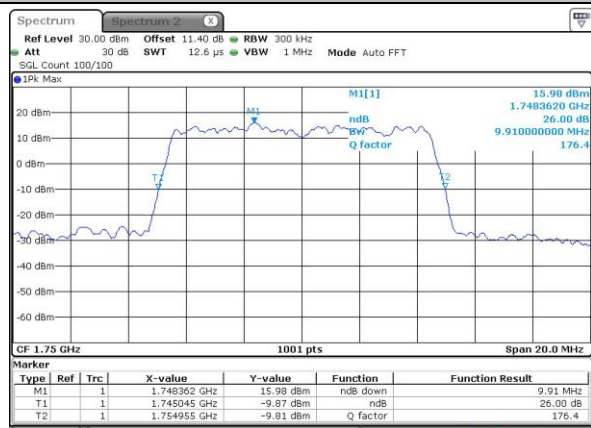
Date: 9 MAY 2017 00:34:31

## Highest Channel / 10MHz / QPSK



Date: 9 MAY 2017 00:36:51

## Highest Channel / 10MHz / 16QAM

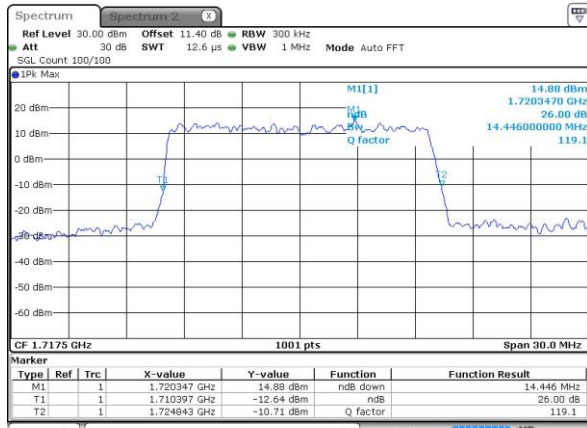


Date: 9 MAY 2017 00:37:01

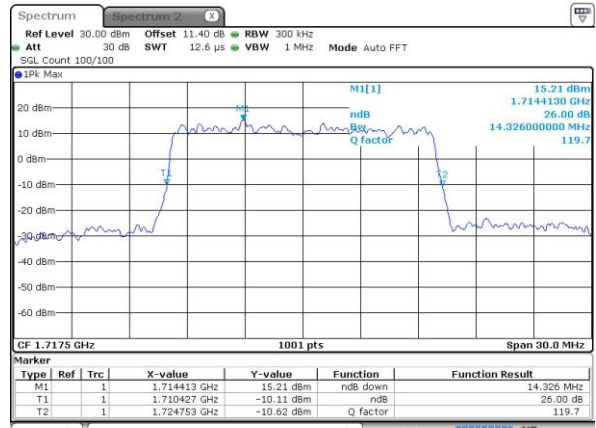


## LTE Band 4

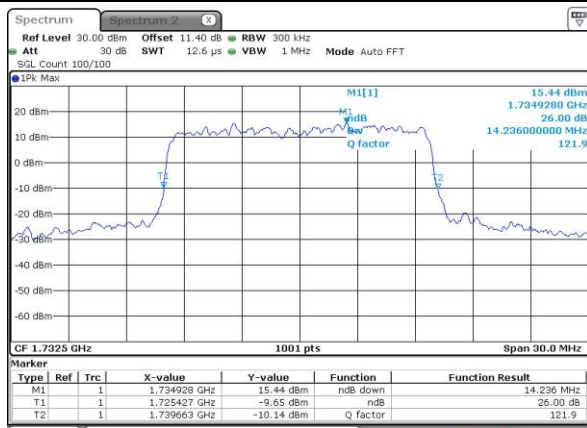
## Lowest Channel / 15MHz / QPSK



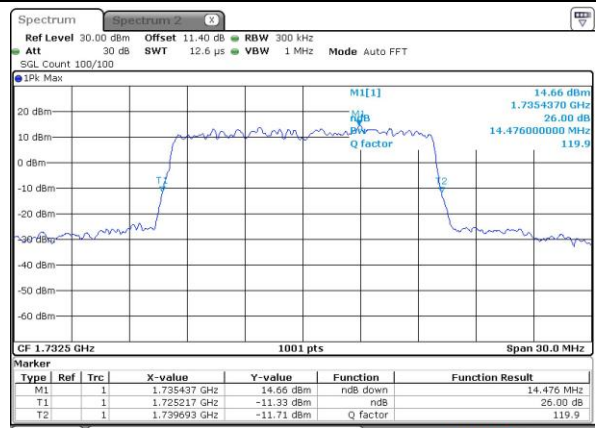
## Lowest Channel / 15MHz / 16QAM



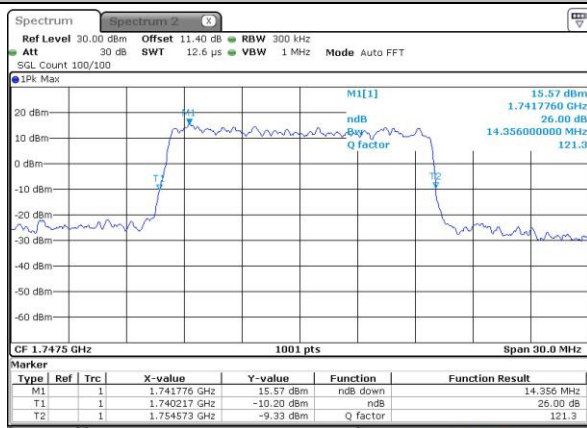
## Middle Channel / 15MHz / QPSK



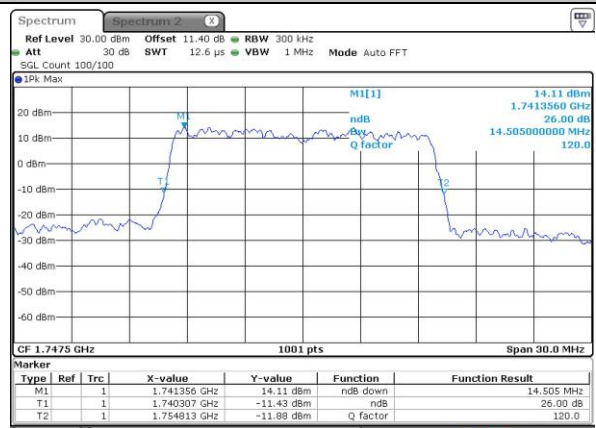
## Middle Channel / 15MHz / 16QAM



## Highest Channel / 15MHz / QPSK



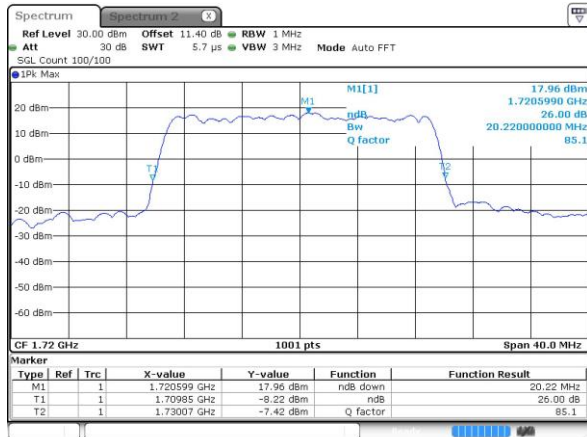
## Highest Channel / 15MHz / 16QAM



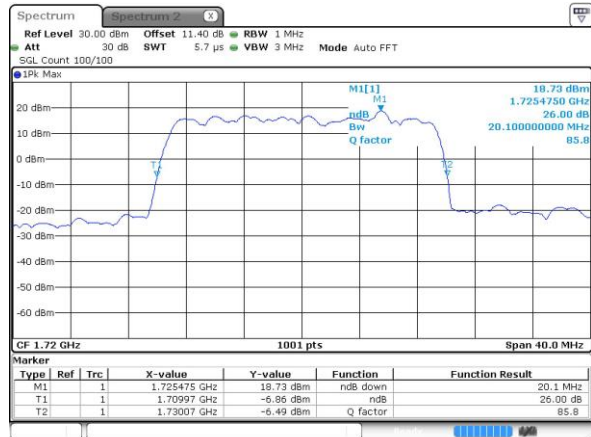


## LTE Band 4

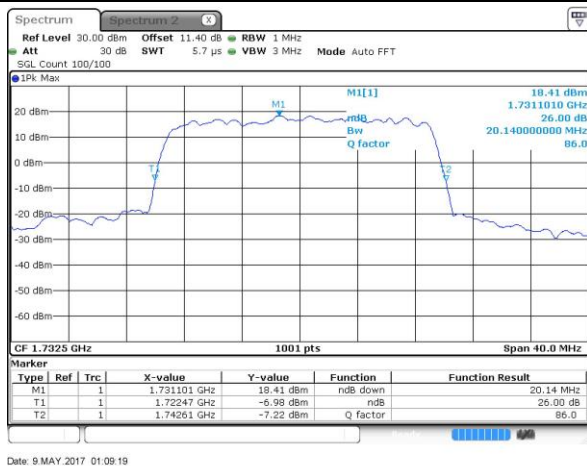
## Lowest Channel / 20MHz / QPSK



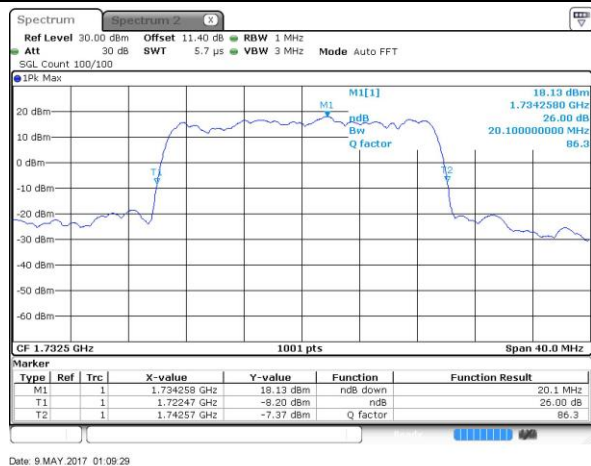
## Lowest Channel / 20MHz / 16QAM



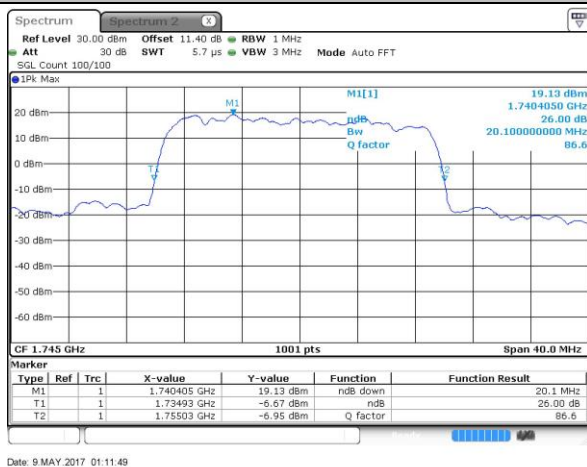
## Middle Channel / 20MHz / QPSK



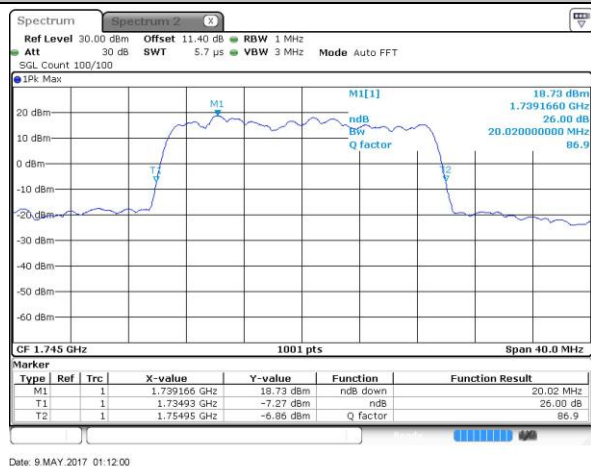
## Middle Channel / 20MHz / 16QAM



## Highest Channel / 20MHz / QPSK



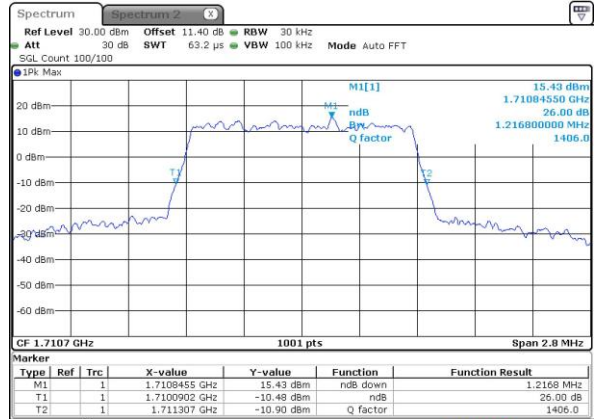
## Highest Channel / 20MHz / 16QAM





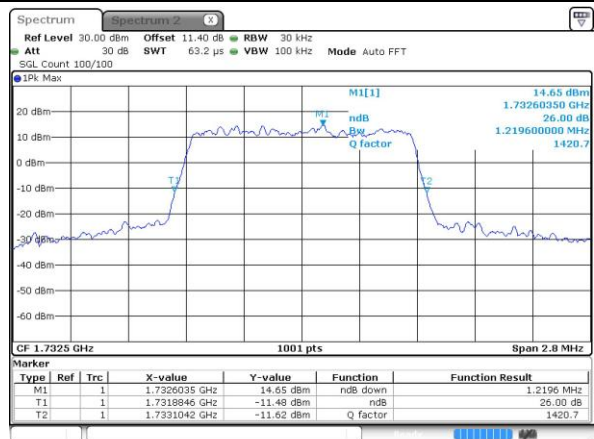
## LTE Band 4

## Lowest Channel / 1.4MHz / 64QAM



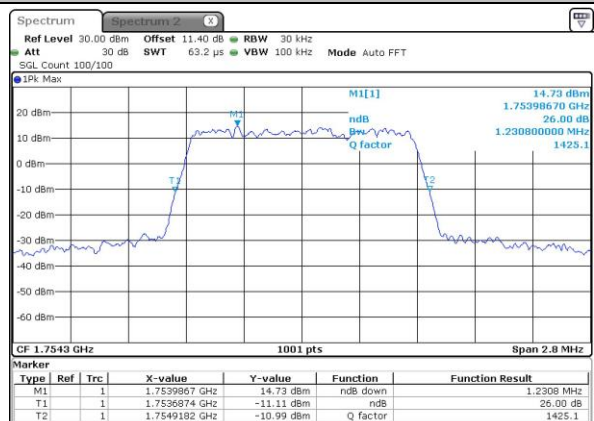
Date: 14.MAY.2017 09:55:47

## Middle Channel / 1.4MHz / 64QAM



Date: 14.MAY.2017 09:59:21

## Highest Channel / 1.4MHz / 64QAM

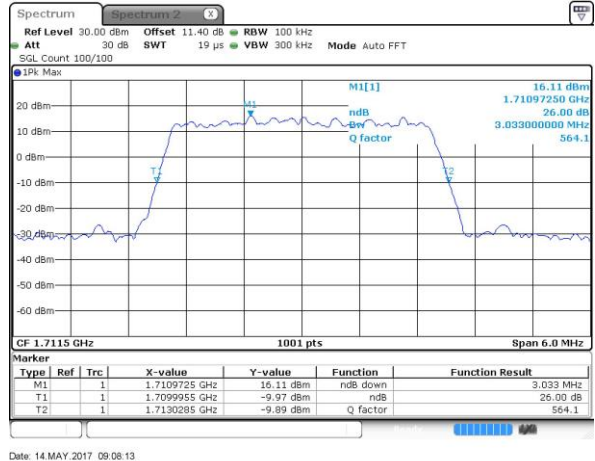


Date: 14.MAY.2017 10:00:36

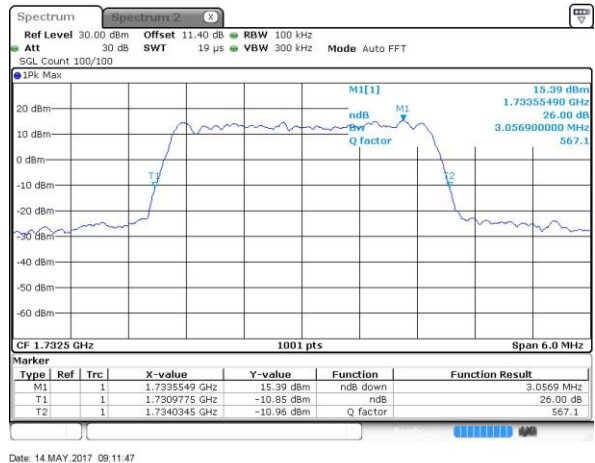


## LTE Band 4

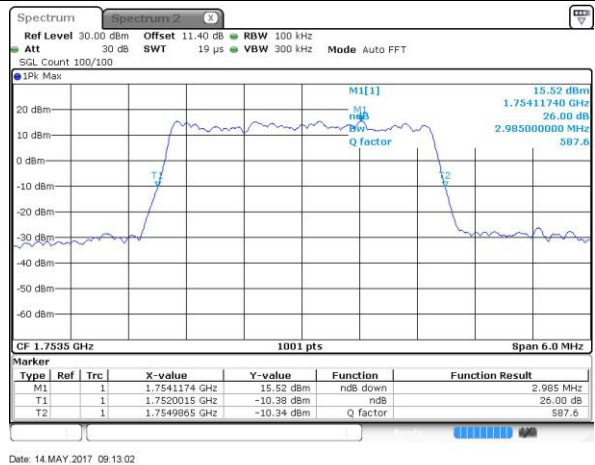
## Lowest Channel / 3MHz / 64QAM



## Middle Channel / 3MHz / 64QAM



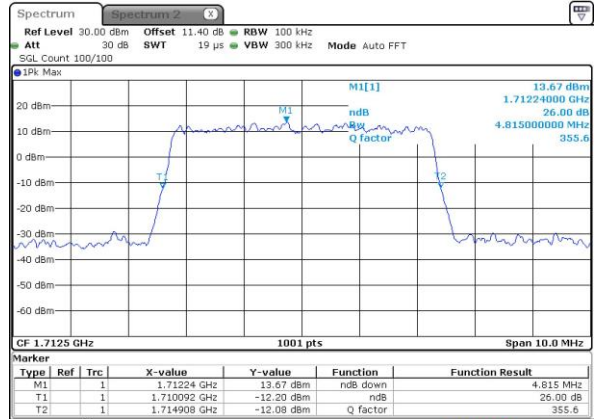
## Highest Channel / 3MHz / 64QAM





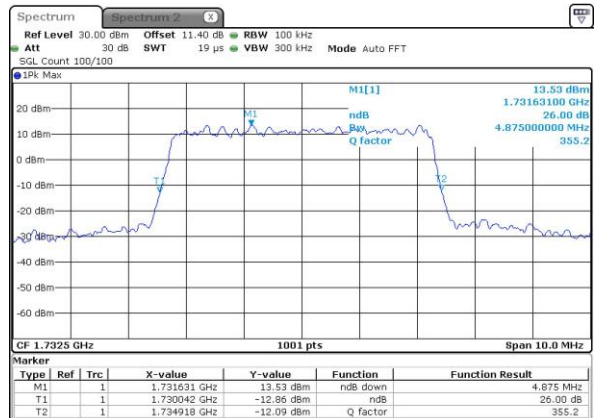
## LTE Band 4

## Lowest Channel / 5MHz / 64QAM



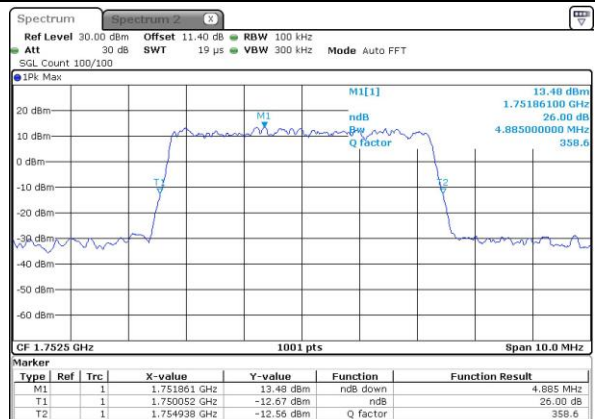
Date: 14.MAY.2017 09:16:36

## Middle Channel / 5MHz / 64QAM



Date: 14.MAY.2017 09:20:09

## Highest Channel / 5MHz / 64QAM

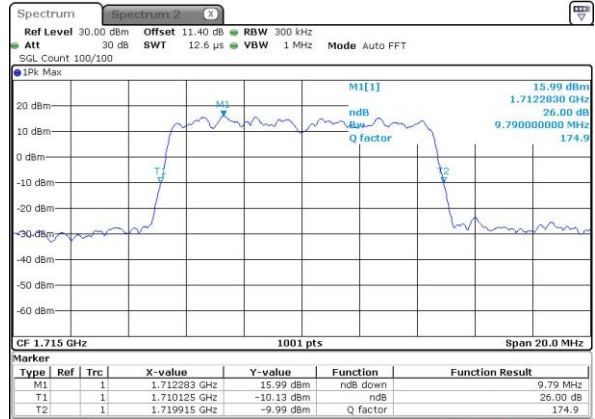


Date: 14.MAY.2017 09:21:24



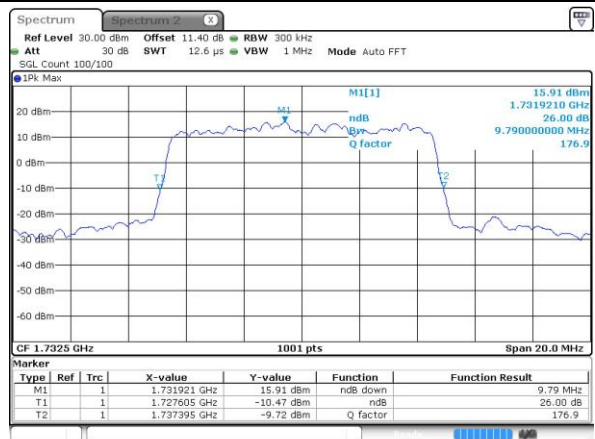
## LTE Band 4

## Lowest Channel / 10MHz / 64QAM



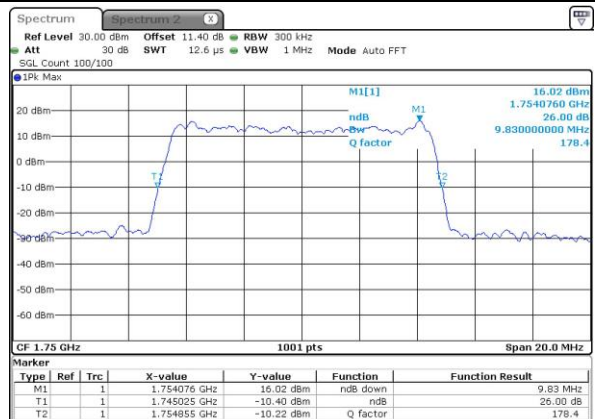
Date: 14.MAY.2017 09:24:58

## Middle Channel / 10MHz / 64QAM



Date: 14.MAY.2017 09:28:31

## Highest Channel / 10MHz / 64QAM

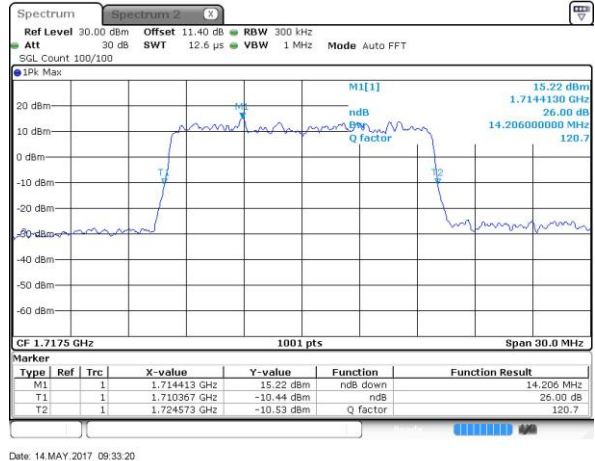


Date: 14.MAY.2017 09:29:47

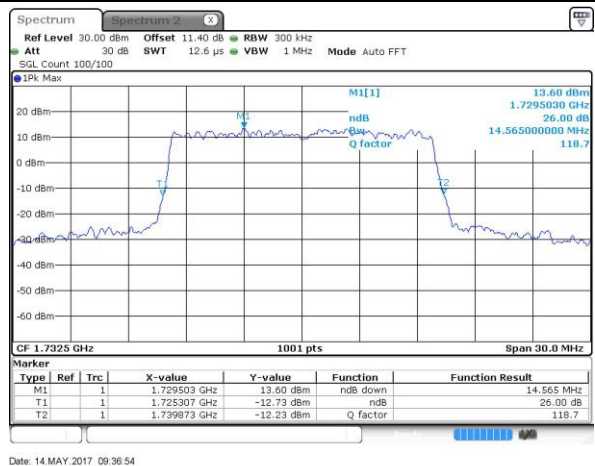


## LTE Band 4

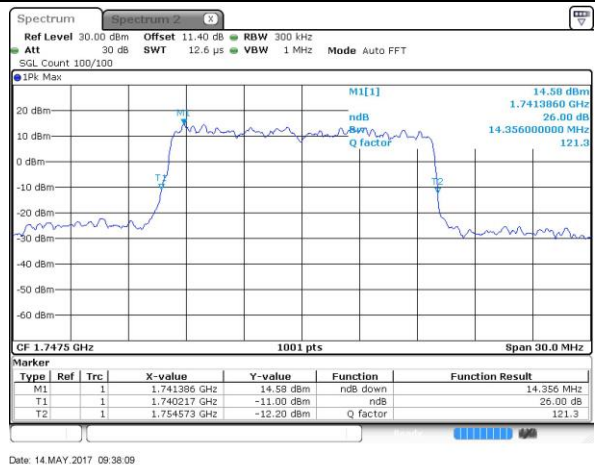
## Lowest Channel / 15MHz / 64QAM



## Middle Channel / 15MHz / 64QAM



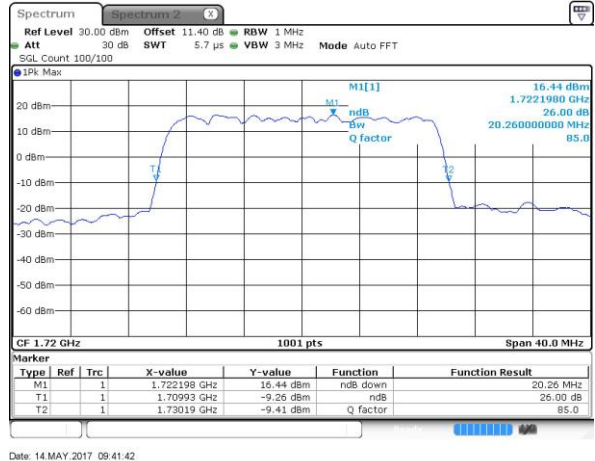
## Highest Channel / 15MHz / 64QAM



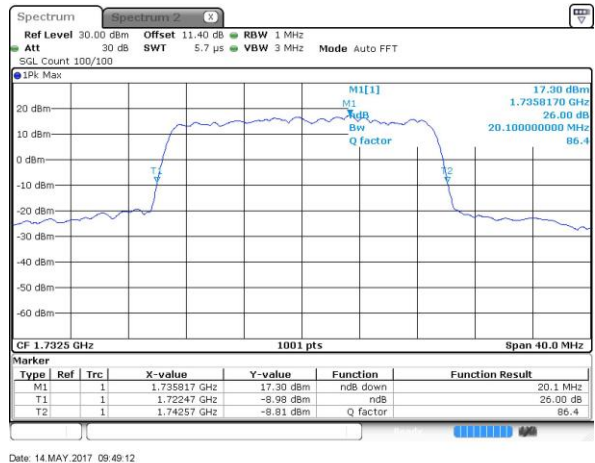


## LTE Band 4

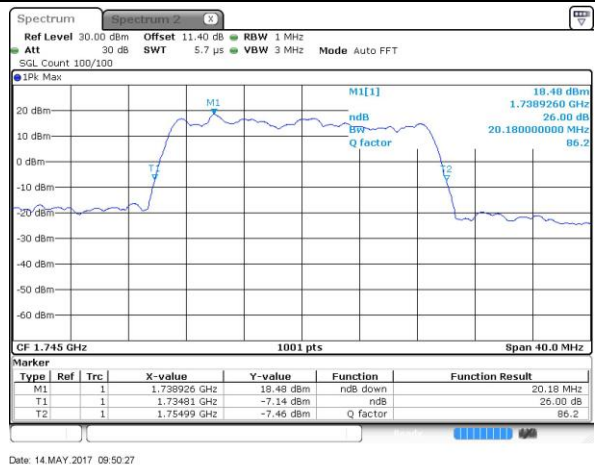
## Lowest Channel / 20MHz / 64QAM



## Middle Channel / 20MHz / 64QAM



## Highest Channel / 20MHz / 64QAM



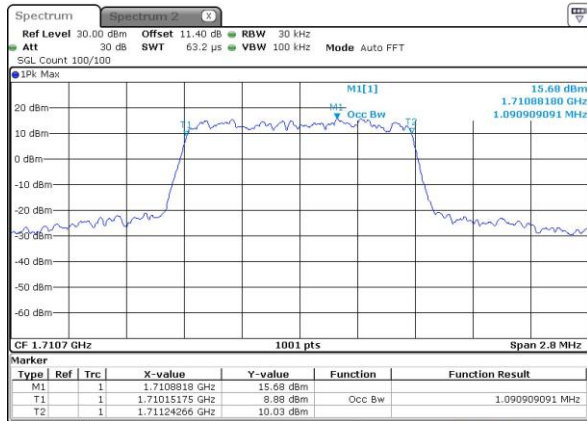
**Occupied Bandwidth**

| Mode       | LTE Band 4 : 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 | 2.71  | 4.49 | 4.49  | 8.99  | 8.99  | 13.46 | 13.4  | 18.42 | 18.42 |
| Middle CH  | 1.09                     | 1.09  | 2.72 | 2.72  | 4.47 | 4.49  | 8.99  | 9.01  | 13.34 | 13.43 | 18.3  | 18.22 |
| Highest CH | 1.08                     | 1.09  | 2.72 | 2.73  | 4.5  | 4.48  | 9.05  | 9.03  | 13.49 | 13.49 | 18.34 | 18.3  |
| BW         | 1.4MHz                   |       | 3MHz |       | 5MHz |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | -                        | 64QAM | -    | 64QAM | -    | 64QAM | -     | 64QAM | -     | 64QAM | -     | 64QAM |
| Lowest CH  | -                        | 1.09  | -    | 2.7   | -    | 4.51  | -     | 8.97  | -     | 13.52 | -     | 18.22 |
| Middle CH  | -                        | 1.09  | -    | 2.72  | -    | 4.49  | -     | 8.99  | -     | 13.4  | -     | 18.18 |
| Highest CH | -                        | 1.09  | -    | 2.73  | -    | 4.49  | -     | 9.05  | -     | 13.49 | -     | 18.46 |



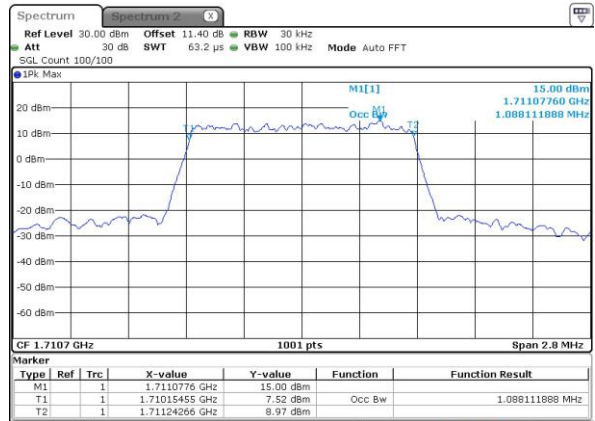
## LTE Band 4

## Lowest Channel / 1.4MHz / QPSK



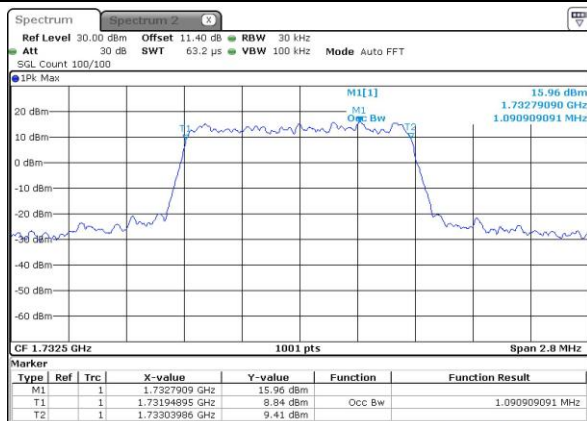
Date: 9 MAY 2017 01:21:52

## Lowest Channel / 1.4MHz / 16QAM



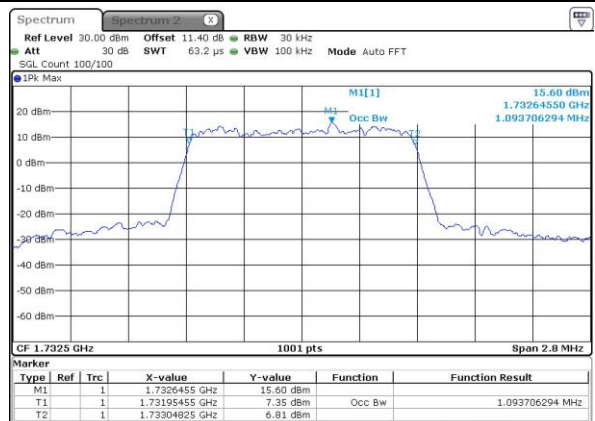
Date: 9 MAY 2017 01:22:02

## Middle Channel / 1.4MHz / QPSK



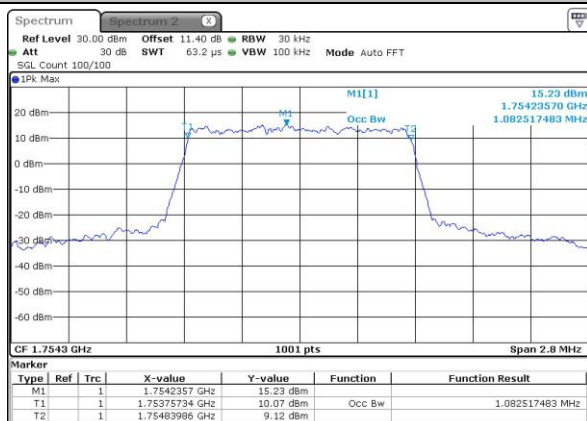
Date: 9 MAY 2017 01:28:59

## Middle Channel / 1.4MHz / 16QAM



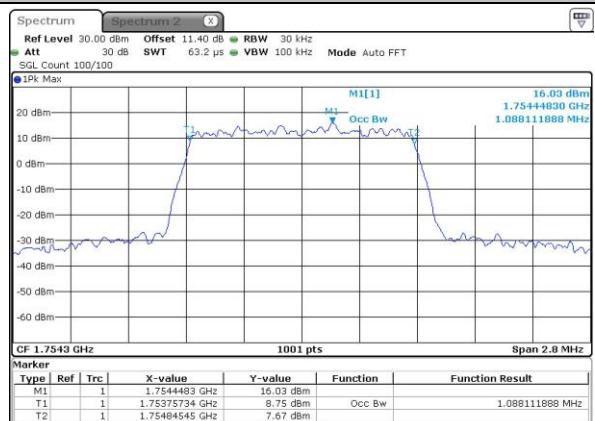
Date: 9 MAY 2017 01:29:06

## Highest Channel / 1.4MHz / QPSK



Date: 9 MAY 2017 01:31:29

## Highest Channel / 1.4MHz / 16QAM

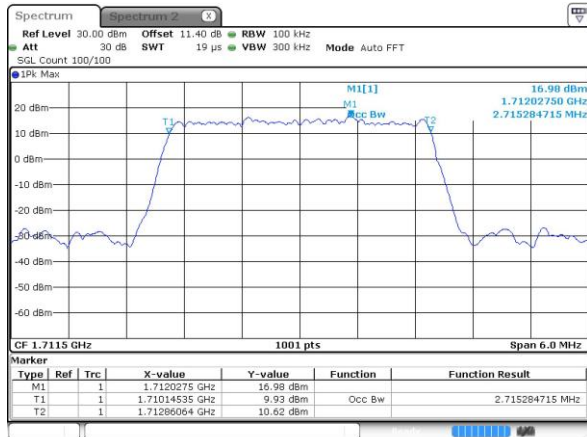


Date: 9 MAY 2017 01:31:40



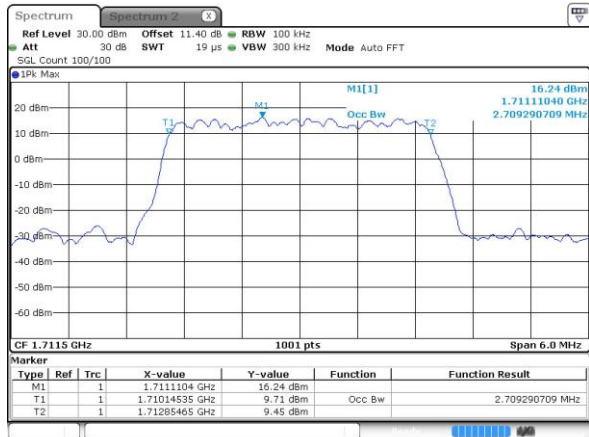
## LTE Band 4

## Lowest Channel / 3MHz / QPSK



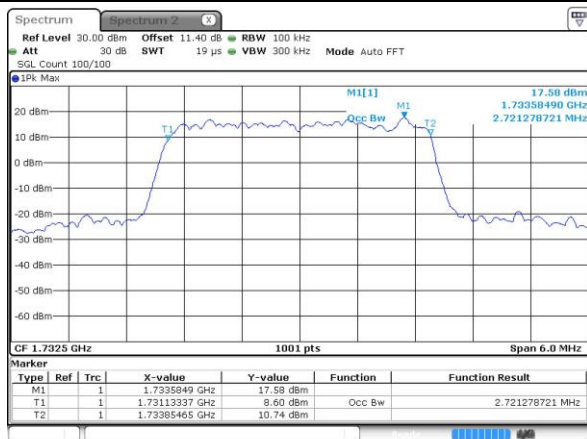
Date: 8 MAY 2017 23:53:22

## Lowest Channel / 3MHz / 16QAM



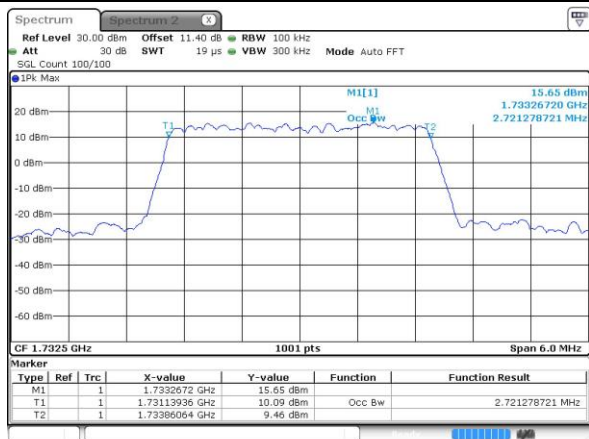
Date: 8 MAY 2017 23:53:33

## Middle Channel / 3MHz / QPSK



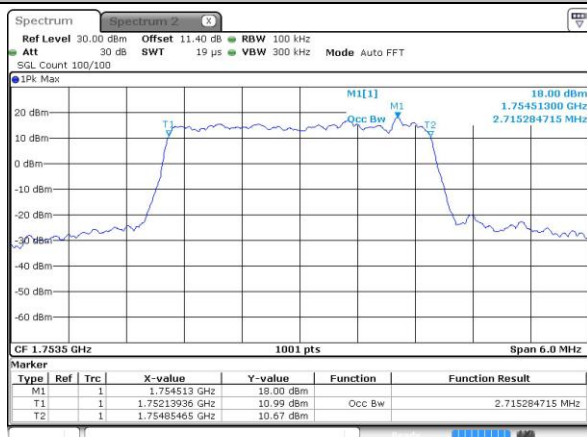
Date: 9 MAY 2017 00:00:30

## Middle Channel / 3MHz / 16QAM



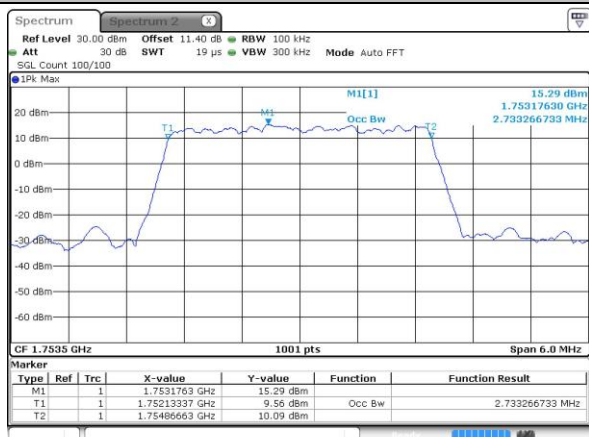
Date: 9 MAY 2017 00:00:40

## Highest Channel / 3MHz / QPSK



Date: 9 MAY 2017 00:03:00

## Highest Channel / 3MHz / 16QAM



Date: 9 MAY 2017 00:03:11