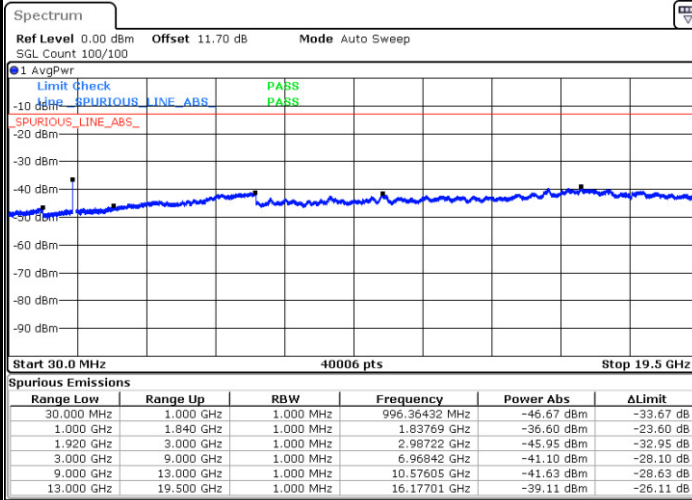




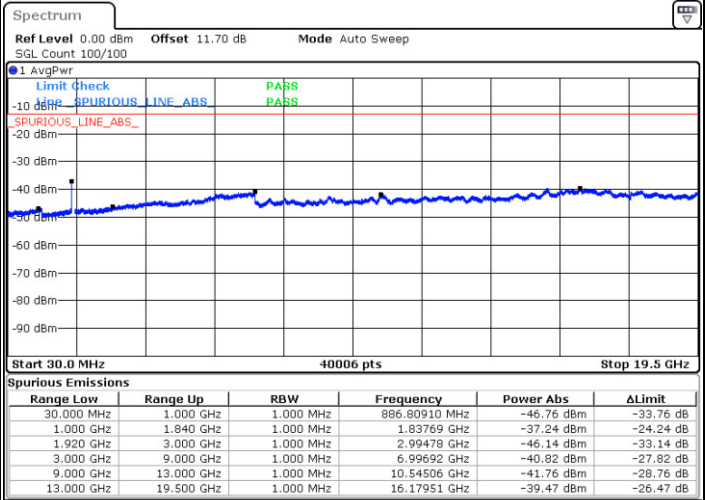
## LTE Band 2 / 15MHz

## Lowest Channel / QPSK



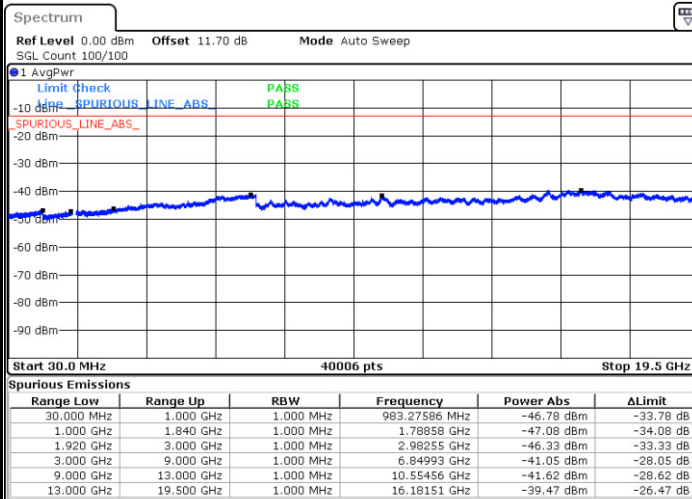
Date: 17.FEB.2018 01:11:45

## Lowest Channel / 16QAM



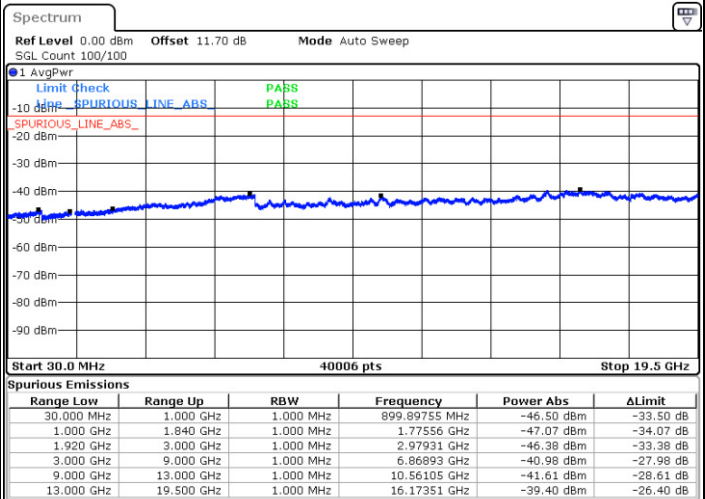
Date: 17.FEB.2018 01:12:39

## Middle Channel / QPSK



Date: 17.FEB.2018 01:14:12

## Middle Channel / 16QAM

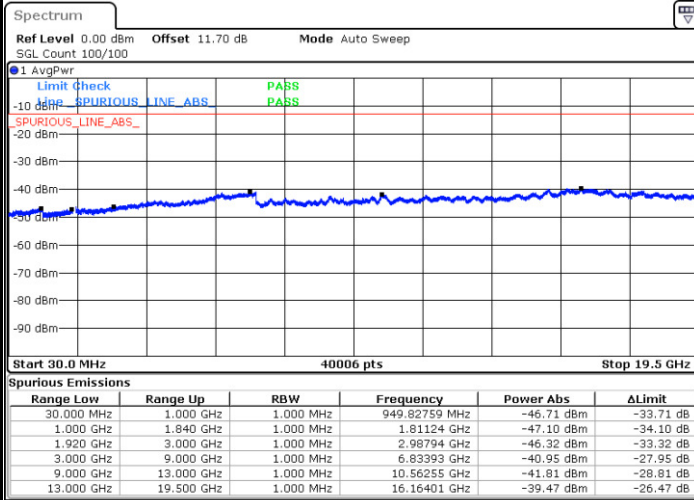


Date: 17.FEB.2018 01:15:06



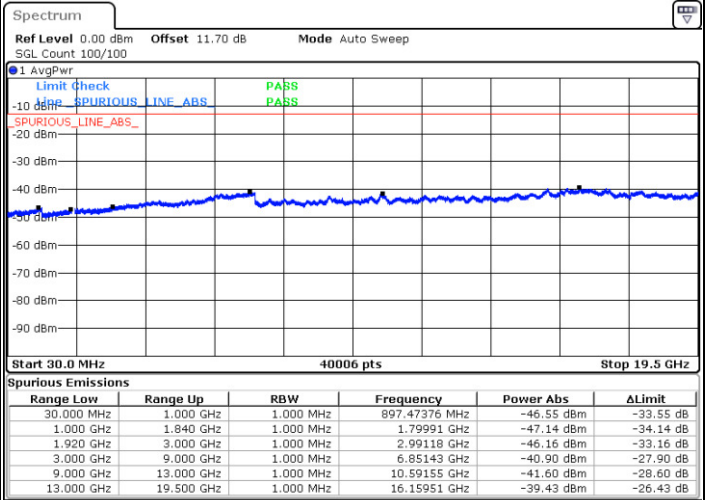
## LTE Band 2 / 15MHz

## Highest Channel / QPSK



Date: 17.FEB.2018 01:21:08

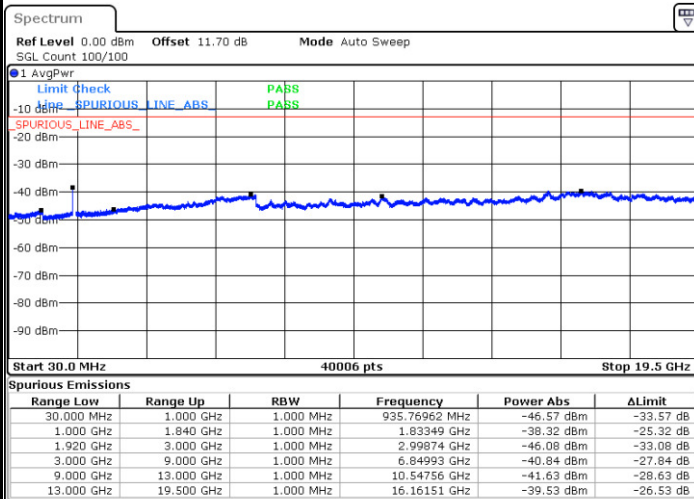
## Highest Channel / 16QAM



Date: 17.FEB.2018 01:22:02

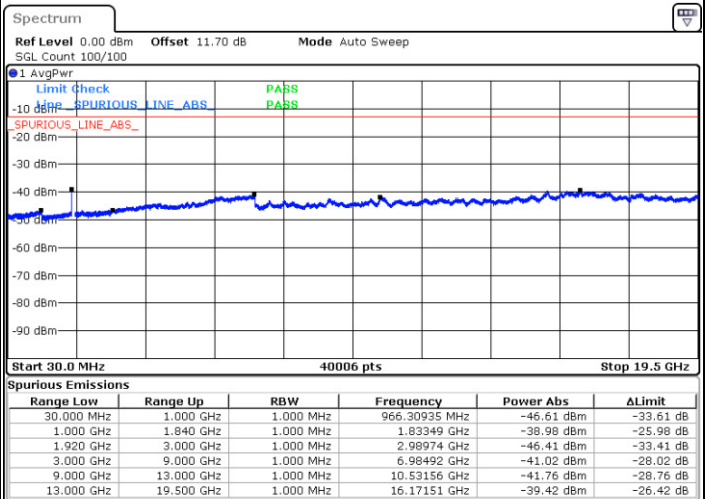
## LTE Band 2 / 20MHz

## Lowest Channel / QPSK



Date: 17.FEB.2018 01:28:04

## Lowest Channel / 16QAM

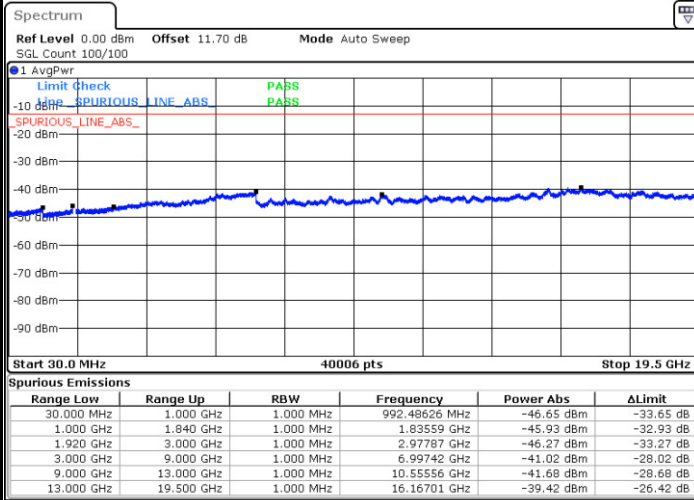


Date: 17.FEB.2018 01:28:58



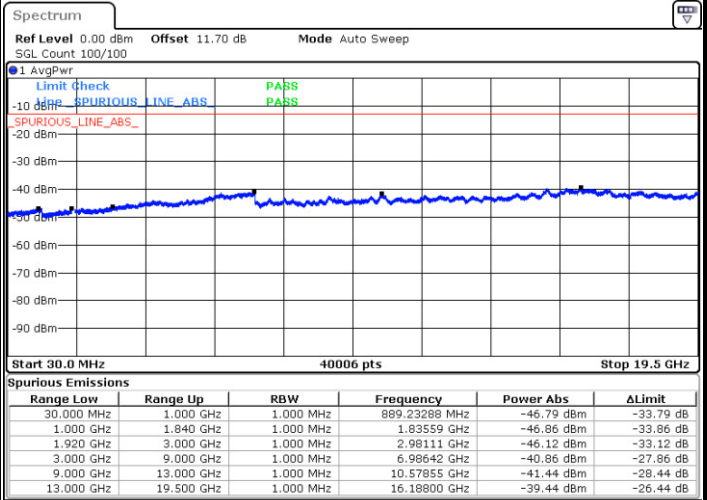
## LTE Band 2 / 20MHz

## Middle Channel / QPSK



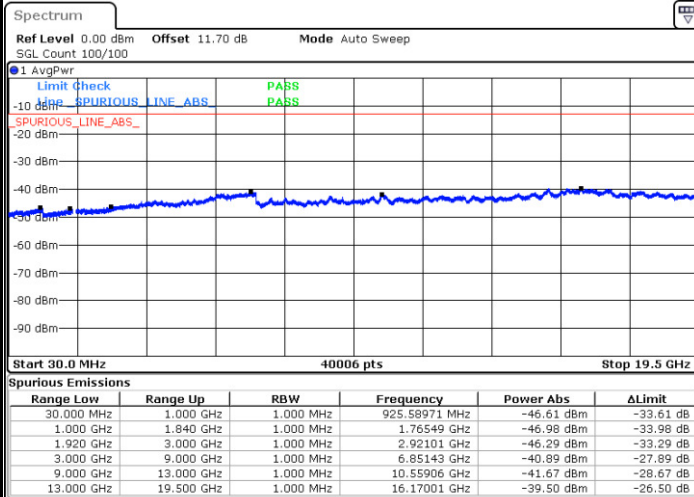
Date: 17.FEB 2018 01:30:31

## Middle Channel / 16QAM



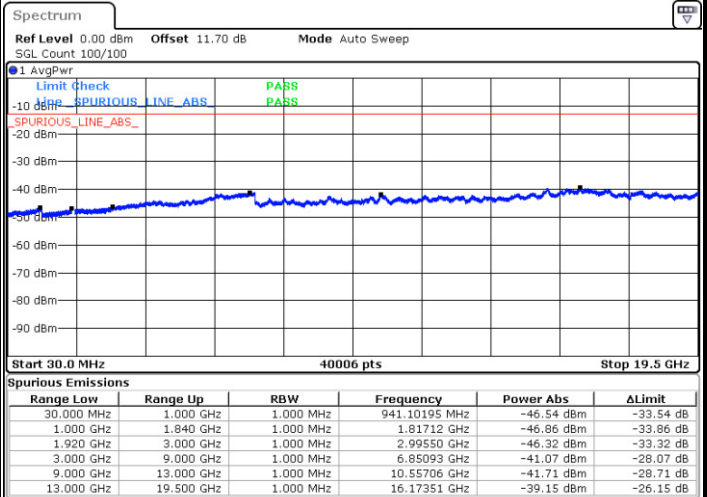
Date: 17.FEB 2018 01:31:25

## Highest Channel / QPSK



Date: 17.FEB 2018 01:37:27

## Highest Channel / 16QAM

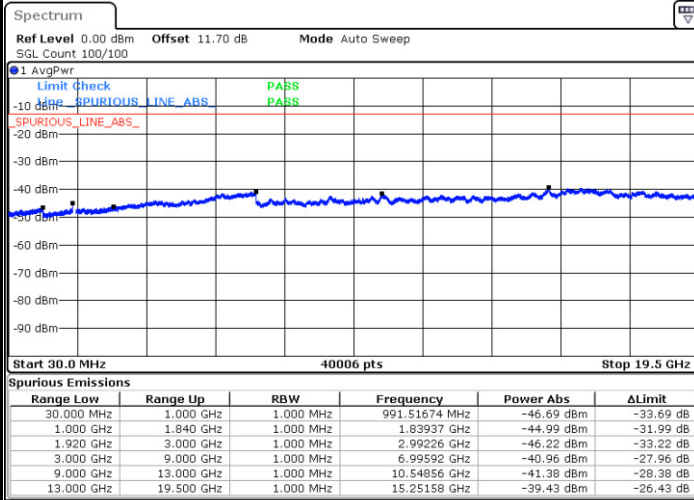


Date: 17.FEB 2018 01:38:21



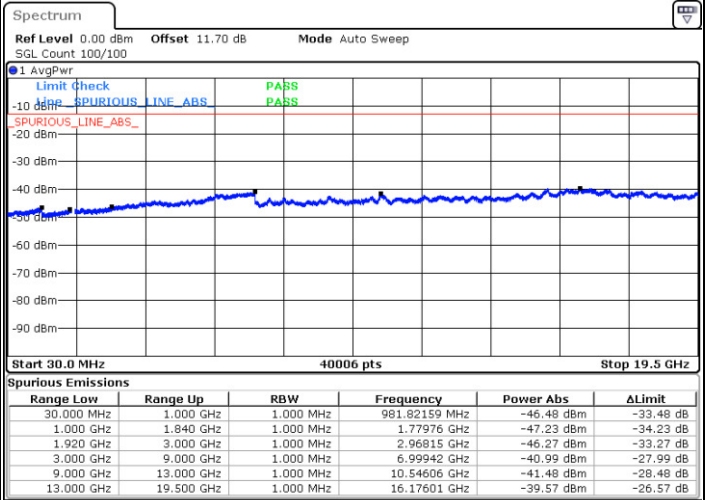
## LTE Band 2 / 1.4MHz

## Lowest Channel / 64QAM



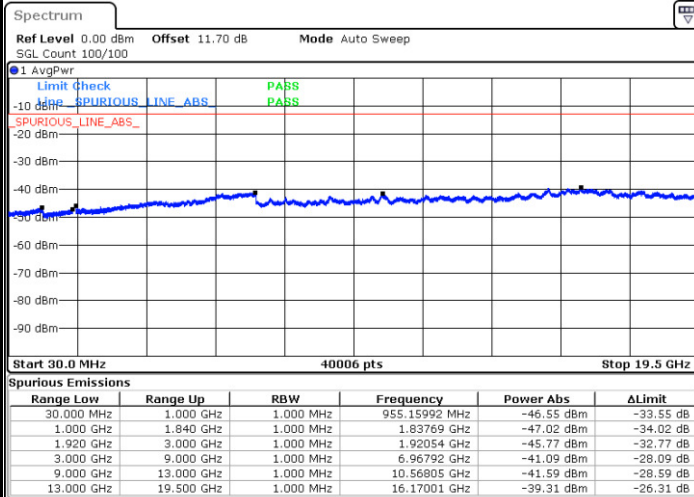
Date: 17.FEB 2018 02:22:37

## Middle Channel / 64QAM



Date: 17.FEB 2018 02:23:50

## Highest Channel / 64QAM

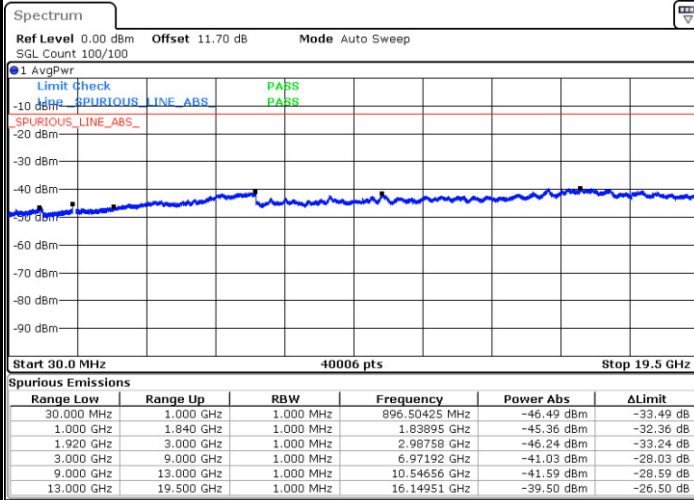


Date: 17.FEB 2018 02:27:18



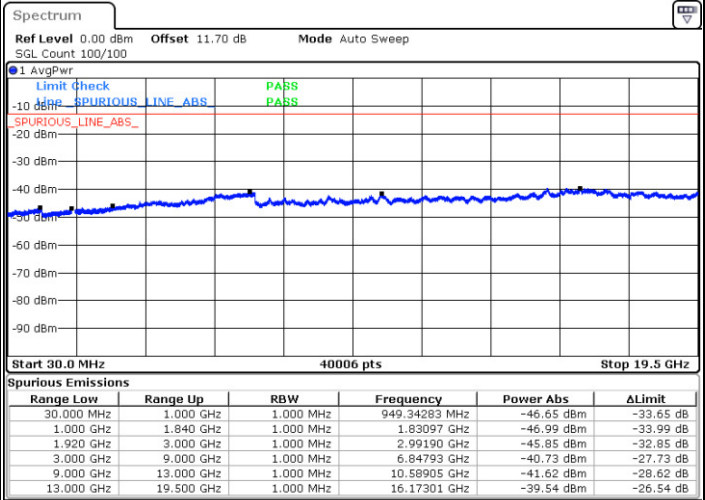
## LTE Band 2 / 3MHz

## Lowest Channel / 64QAM



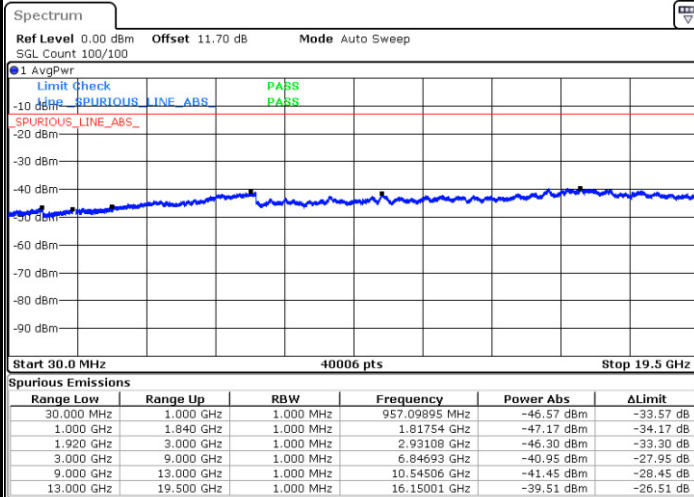
Date: 17.FEB 2018 01:41:49

## Middle Channel / 64QAM



Date: 17.FEB 2018 01:43:03

## Highest Channel / 64QAM

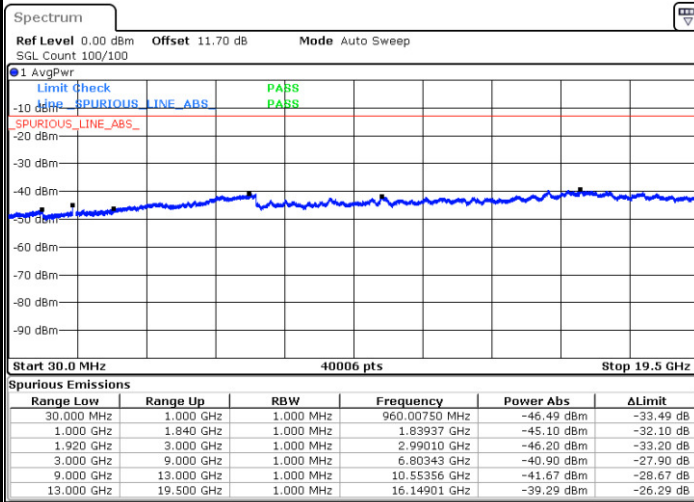


Date: 17.FEB 2018 01:46:31



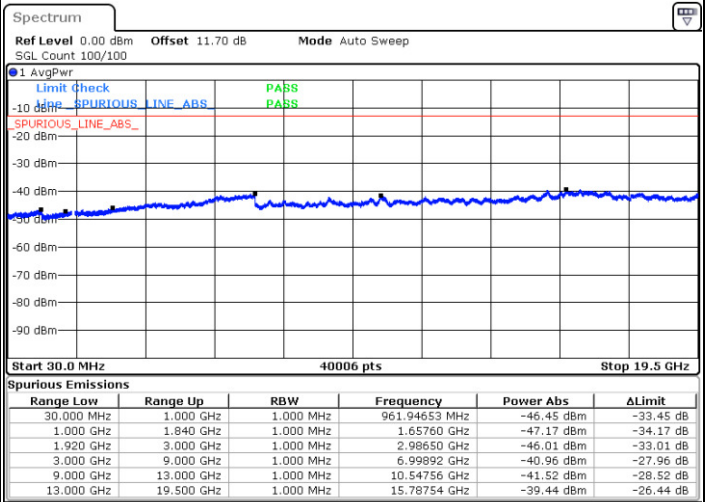
## LTE Band 2 / 5MHz

## Lowest Channel / 64QAM



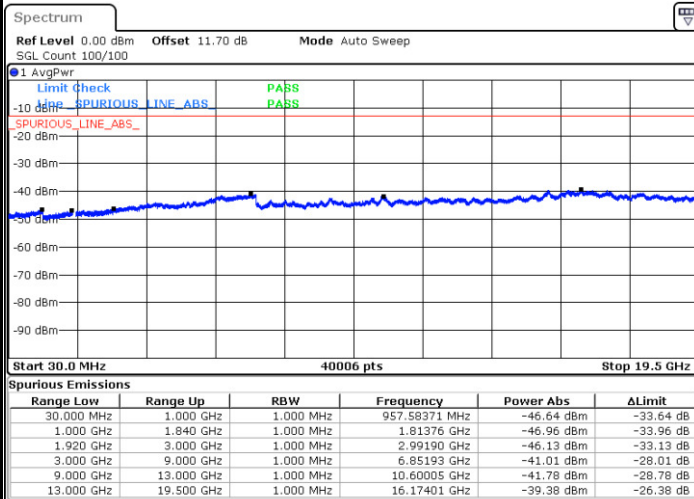
Date: 17.FEB 2018 01:49:59

## Middle Channel / 64QAM



Date: 17.FEB 2018 01:51:12

## Highest Channel / 64QAM

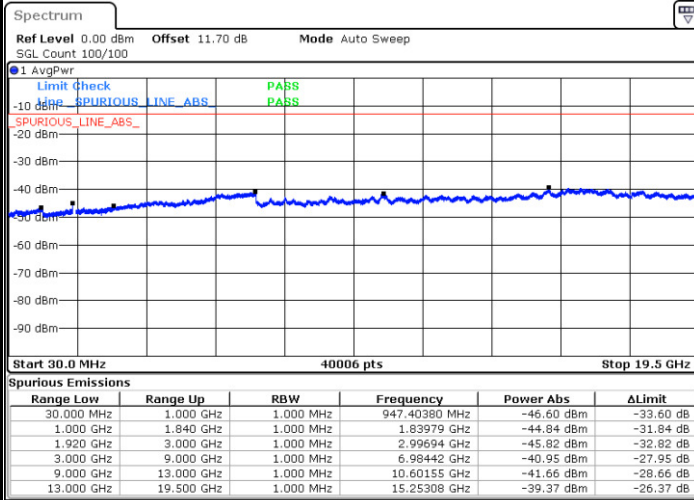


Date: 17.FEB 2018 01:54:40



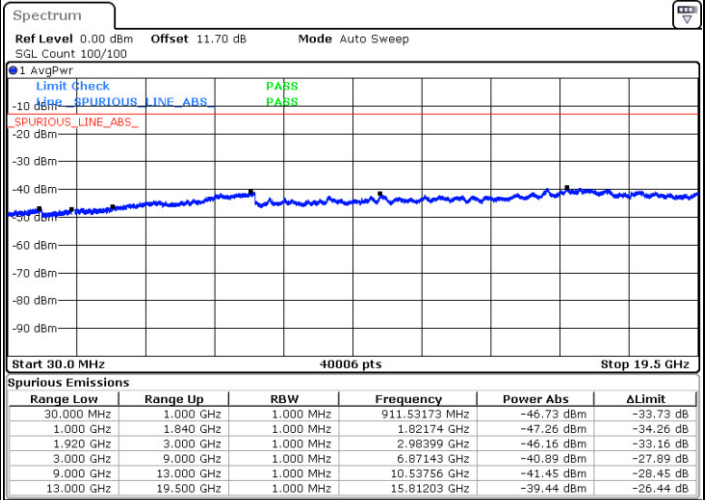
## LTE Band 2 / 10MHz

## Lowest Channel / 64QAM



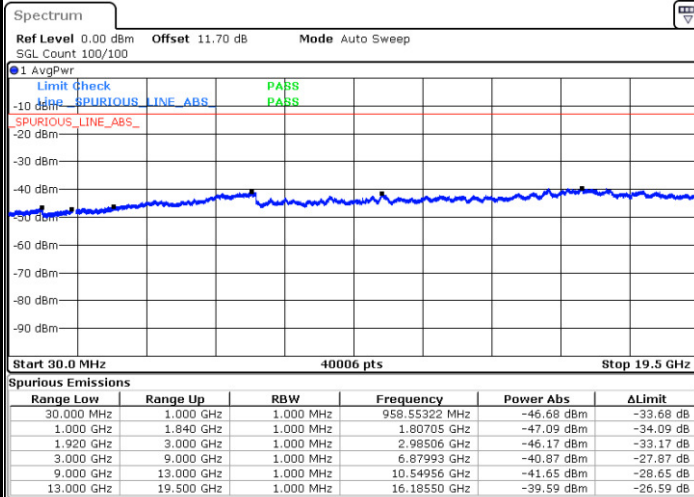
Date: 17.FEB 2018 01:58:08

## Middle Channel / 64QAM



Date: 17.FEB 2018 01:59:22

## Highest Channel / 64QAM

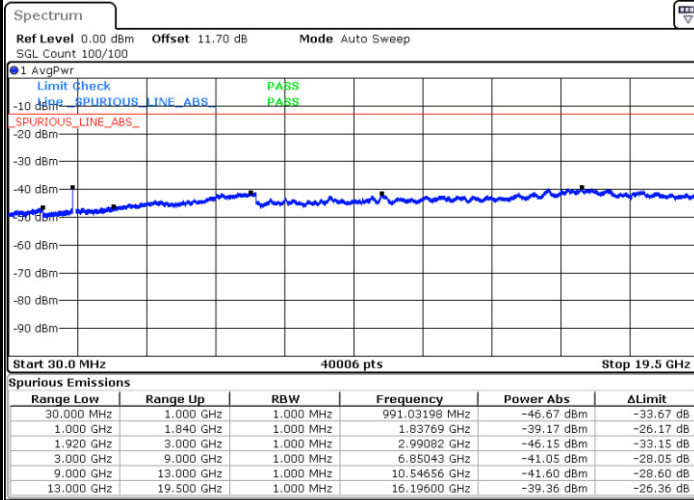


Date: 17.FEB 2018 02:02:50



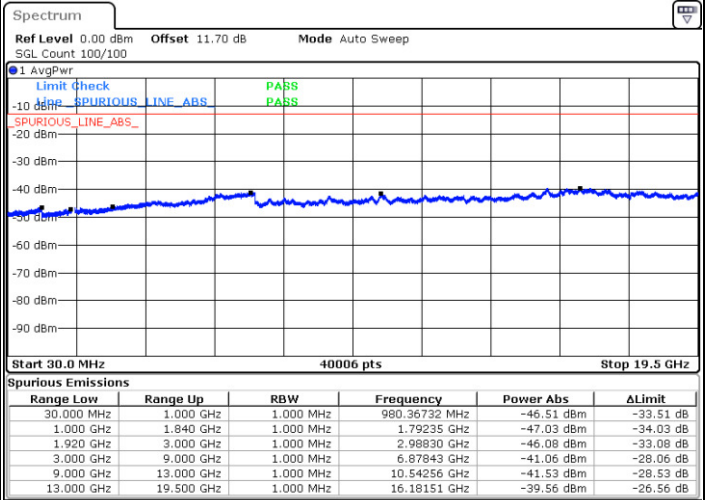
## LTE Band 2 / 15MHz

## Lowest Channel / 64QAM



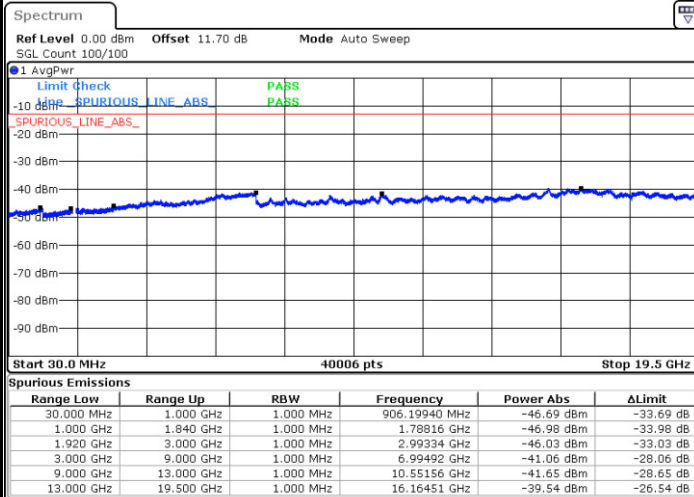
Date: 17.FEB 2018 02:06:18

## Middle Channel / 64QAM



Date: 17.FEB 2018 02:07:31

## Highest Channel / 64QAM

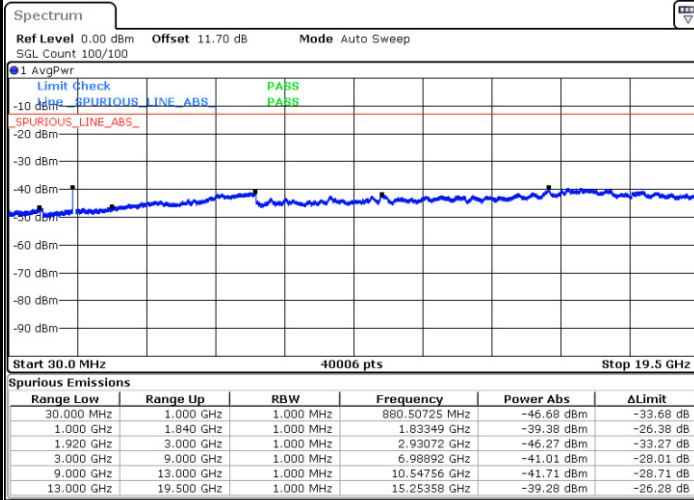


Date: 17.FEB 2018 02:10:59



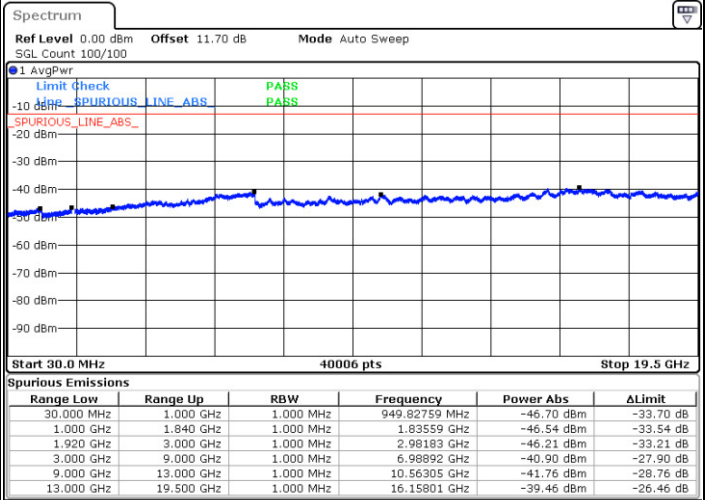
## LTE Band 2 / 20MHz

## Lowest Channel / 64QAM



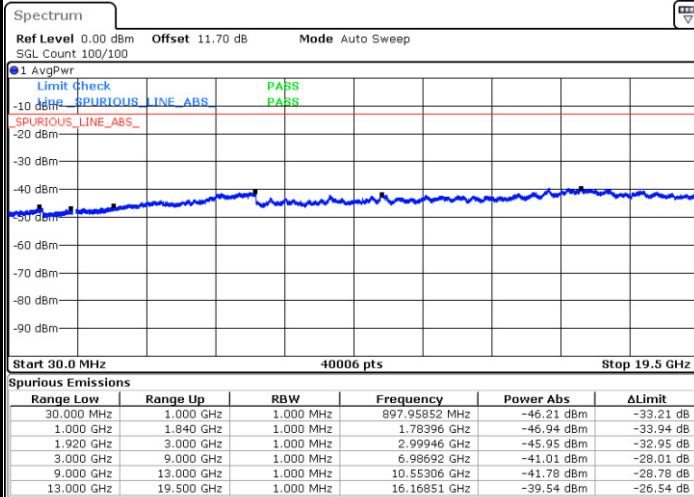
Date: 17.FEB 2018 02:14:27

## Middle Channel / 64QAM



Date: 17.FEB 2018 02:15:41

## Highest Channel / 64QAM



Date: 17.FEB 2018 02:19:09

## 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    | 0.0004                             | PASS    |
| 40               | Normal Voltage    | 0.0042                             |         |
| 30               | Normal Voltage    | 0.0005                             |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                             |         |
| 10               | Normal Voltage    | 0.0038                             |         |
| 0                | Normal Voltage    | 0.0034                             |         |
| -10              | Normal Voltage    | 0.0012                             |         |
| -20              | Normal Voltage    | 0.0006                             |         |
| -30              | Normal Voltage    | 0.0056                             |         |
| 20               | Maximum Voltage   | 0.0015                             |         |
| 20               | Normal Voltage    | 0.0000                             |         |
| 20               | Battery End Point | 0.0024                             |         |

**Note:**

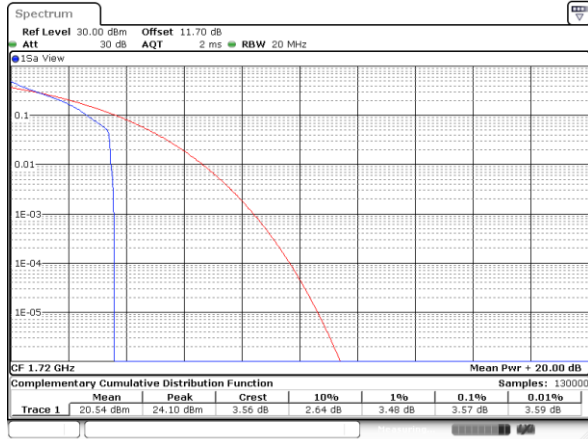
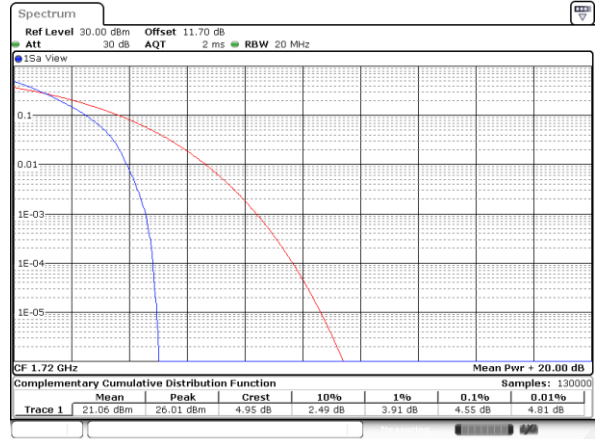
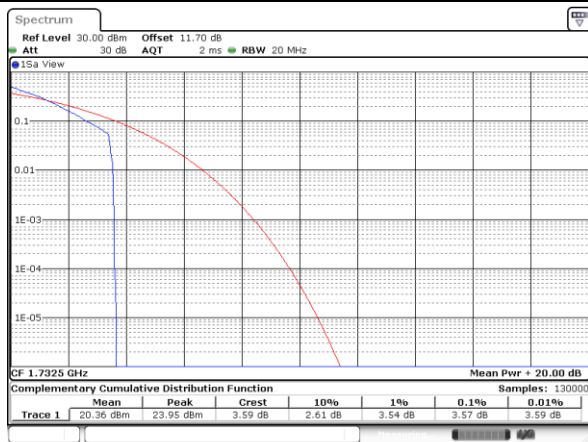
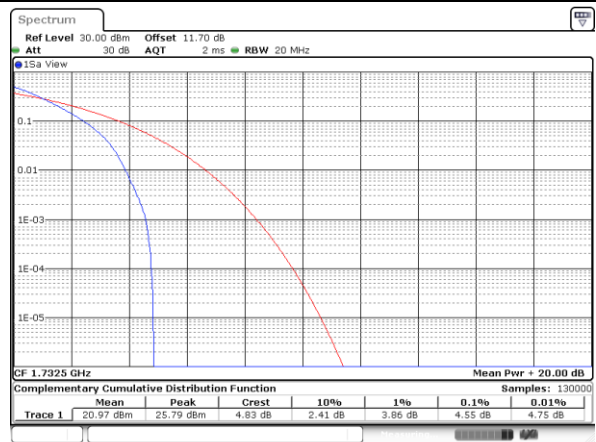
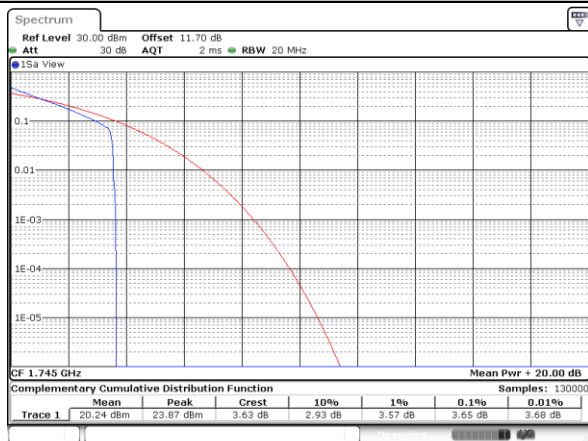
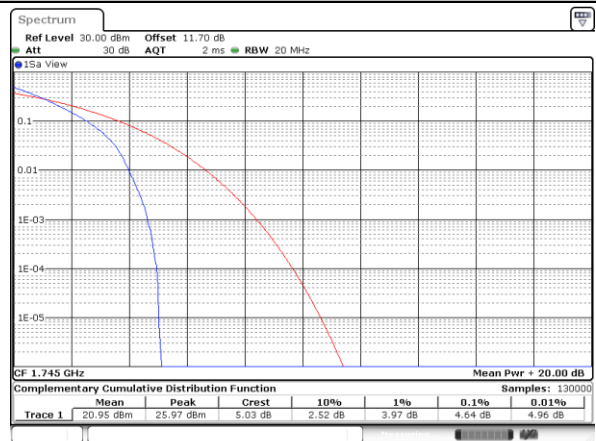
1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 4

**Peak-to-Average Ratio**

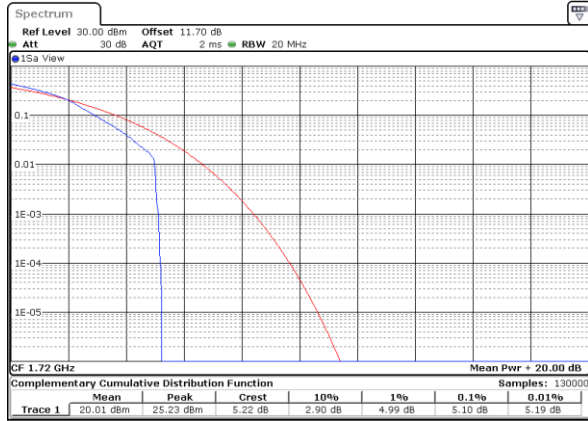
| Mode       | LTE Band 4 / 20MHz |         |       |         |             |
|------------|--------------------|---------|-------|---------|-------------|
| Mod.       | QPSK               |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | 3.57               | 4.55    | 5.1   | 5.86    | PASS        |
| Middle CH  | 3.57               | 4.55    | 5.19  | 5.8     |             |
| Highest CH | 3.65               | 4.64    | 4.99  | 5.86    |             |
| Mode       | LTE Band 4 / 20MHz |         |       |         |             |
| Mod.       | 64QAM              |         |       |         | Limit: 13dB |
| RB Size    | 1RB                | Full RB |       |         | Result      |
| Lowest CH  | 5.42               | 6.52    | -     | -       | PASS        |
| Middle CH  | 6.17               | 6.41    | -     | -       |             |
| Highest CH | 6.03               | 6.46    | -     | -       |             |

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

**Lowest Channel / Full RB**

**Middle Channel / 1RB**

**Middle Channel / Full RB**

**Highest Channel / 1RB**

**Highest Channel / Full RB**


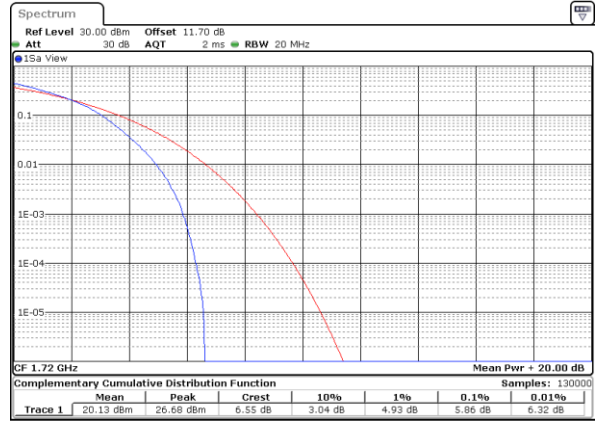


## LTE Band 4 / 20MHz / 16QAM

## Lowest Channel / 1RB



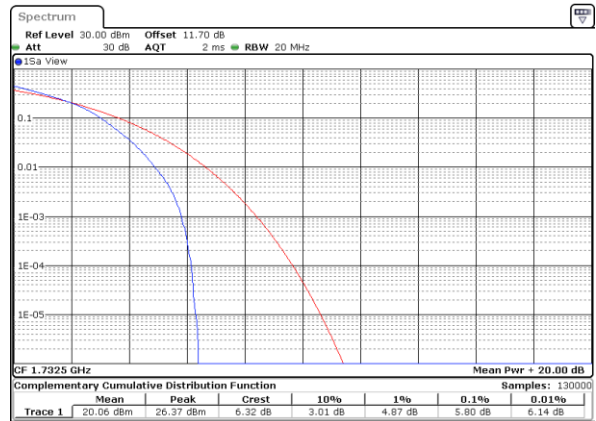
## Lowest Channel / Full RB



## Middle Channel / 1RB



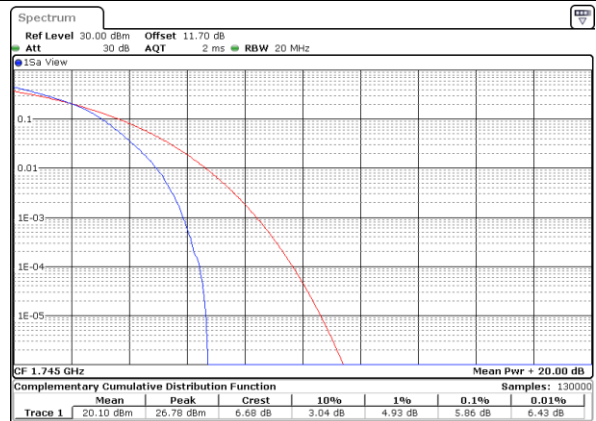
## Middle Channel / Full RB



## Highest Channel / 1RB



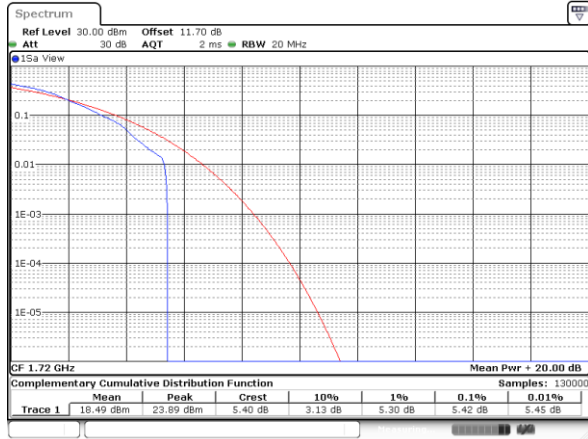
## Highest Channel / Full RB



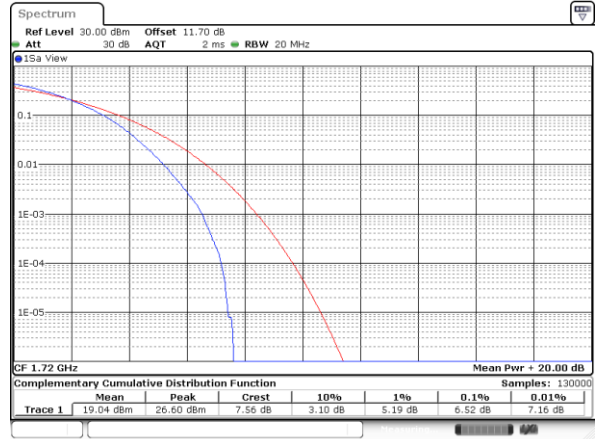


## LTE Band 4 / 20MHz / 64QAM

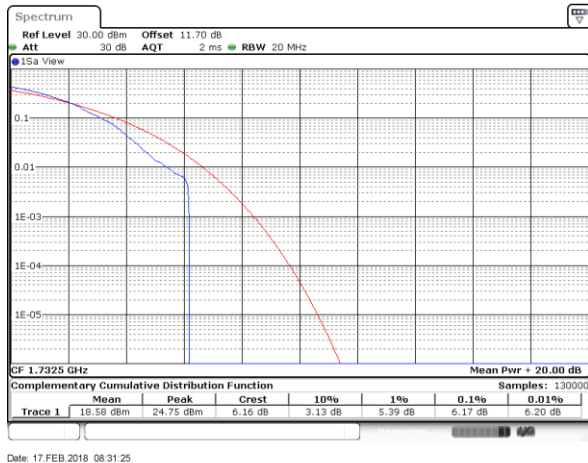
## Lowest Channel / 1RB



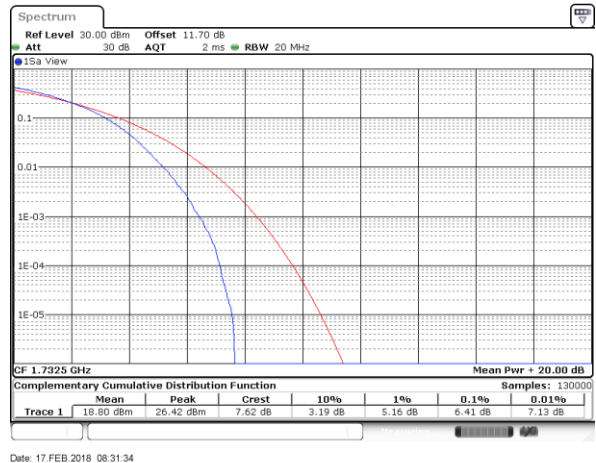
## Lowest Channel / Full RB



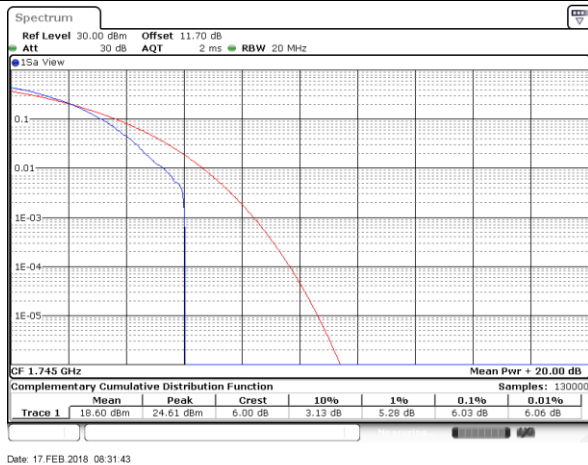
## Middle Channel / 1RB



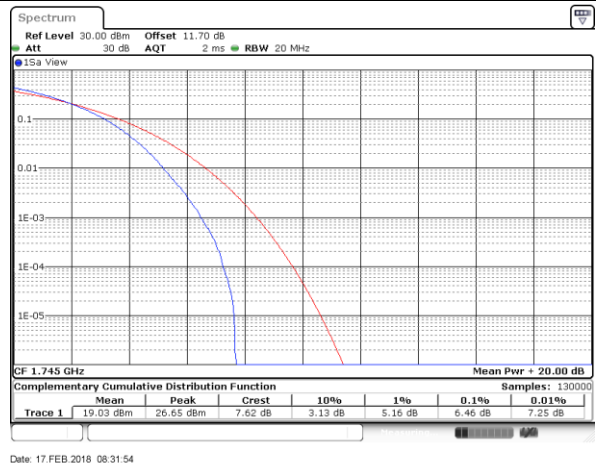
## Middle Channel / Full RB



## Highest Channel / 1RB



## Highest Channel / Full RB



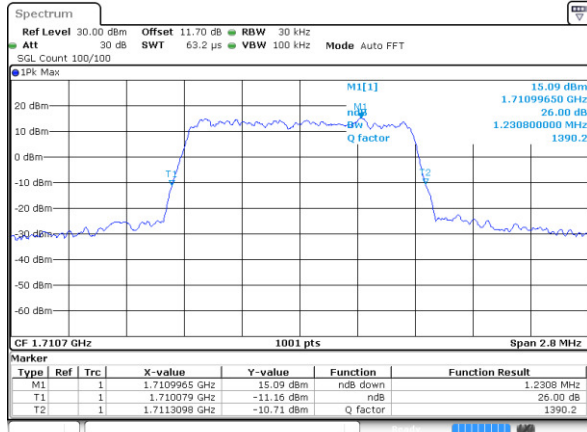
**26dB Bandwidth**

| 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                      | 1.23  | 2.99  | 3.03  | 4.91  | 4.91  | 9.91  | 9.69  | 14.39 | 14.54 | 20.18 | 20.30 |
| Middle CH  | 1.23                      | 1.23  | 3.04  | 3.05  | 4.90  | 4.90  | 9.93  | 9.77  | 14.42 | 14.54 | 20.22 | 20.26 |
| Highest CH | 1.24                      | 1.23  | 3.02  | 3.07  | 4.88  | 4.90  | 9.77  | 9.77  | 14.27 | 14.36 | 20.18 | 20.22 |
| Mode       | LTE Band 4 : 26dB BW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
| BW         | 1.4MHz                    |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                     |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | 1.23                      | -     | 3.00  | -     | 4.89  | -     | 9.65  | -     | 14.39 | -     | 20.18 | -     |
| Middle CH  | 1.23                      | -     | 3.03  | -     | 4.94  | -     | 9.85  | -     | 14.69 | -     | 20.10 | -     |
| Highest CH | 1.23                      | -     | 3.02  | -     | 4.88  | -     | 9.95  | -     | 14.60 | -     | 20.06 | -     |



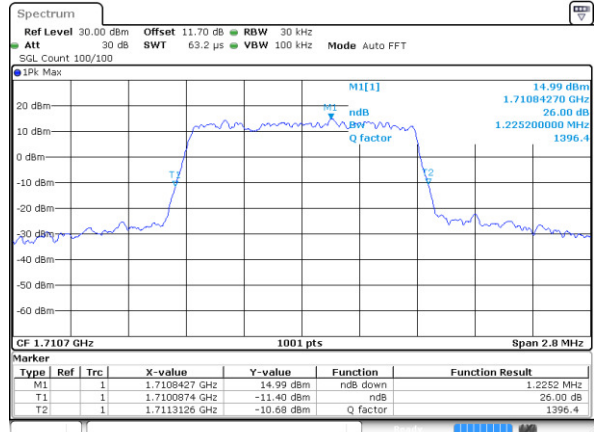
## LTE Band 4

## Lowest Channel / 1.4MHz / QPSK



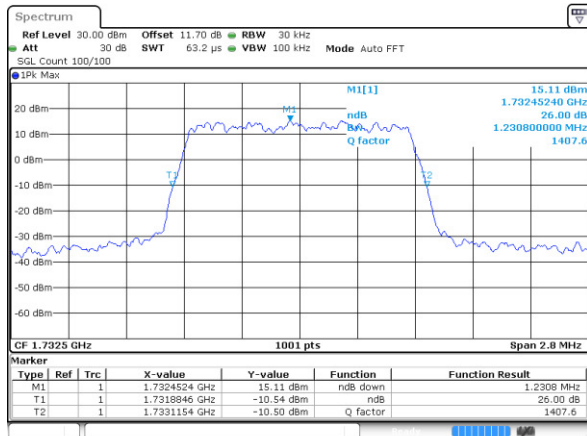
Date: 17 FEB 2018 07:13:45

## Lowest Channel / 1.4MHz / 16QAM



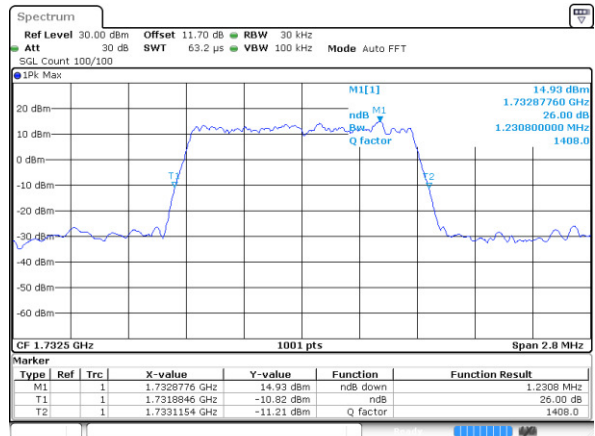
Date: 17 FEB 2018 07:13:54

## Middle Channel / 1.4MHz / QPSK



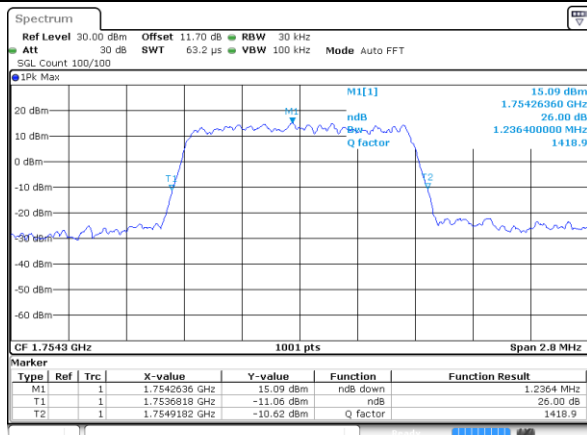
Date: 17 FEB 2018 07:20:41

## Middle Channel / 1.4MHz / 16QAM



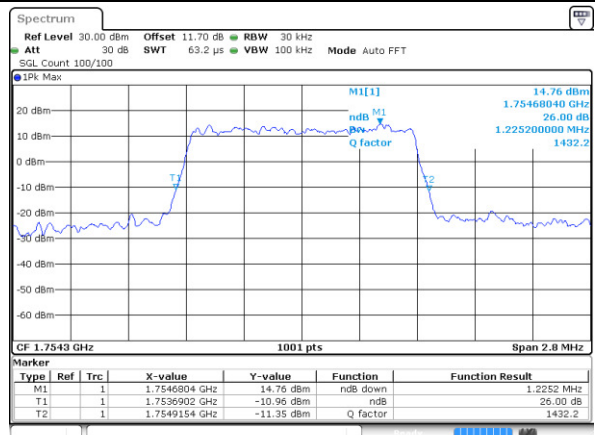
Date: 17 FEB 2018 07:20:50

## Highest Channel / 1.4MHz / QPSK



Date: 17 FEB 2018 07:23:08

## Highest Channel / 1.4MHz / 16QAM

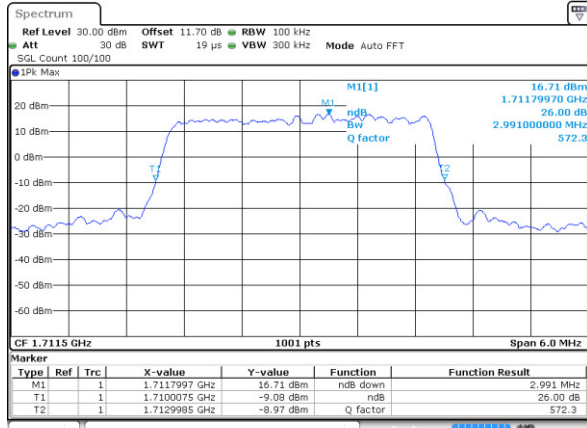


Date: 17 FEB 2018 07:23:18



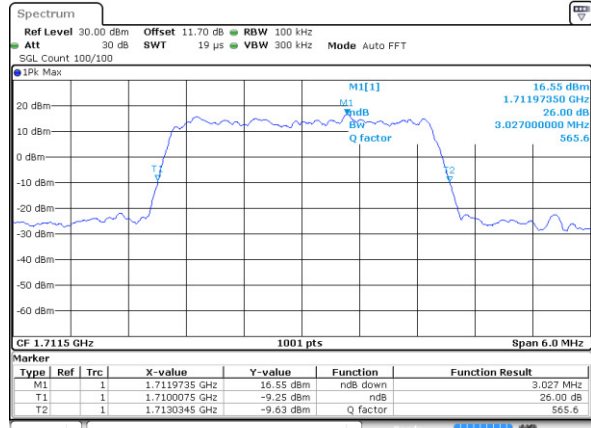
## LTE Band 4

## Lowest Channel / 3MHz / QPSK



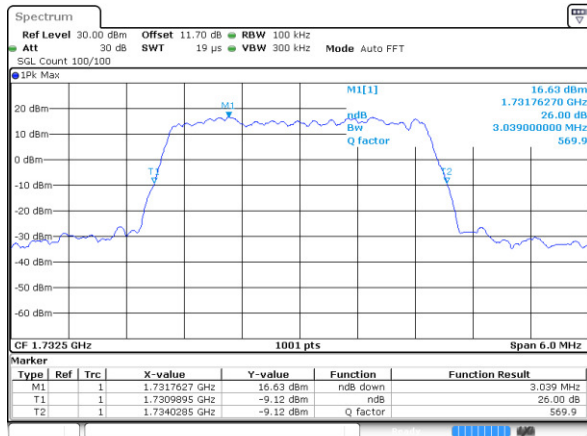
Date: 17 FEB 2018 05:52:11

## Lowest Channel / 3MHz / 16QAM



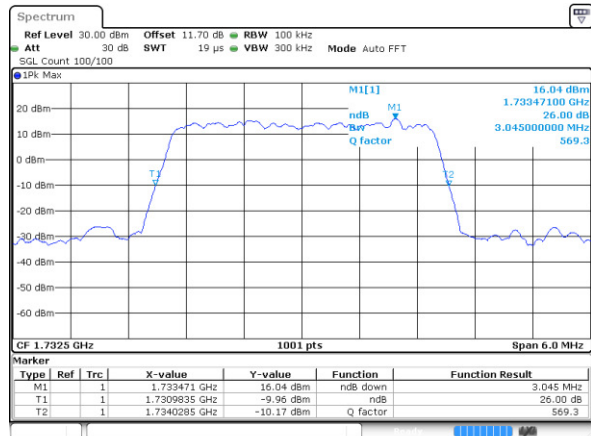
Date: 17 FEB 2018 05:52:21

## Middle Channel / 3MHz / QPSK



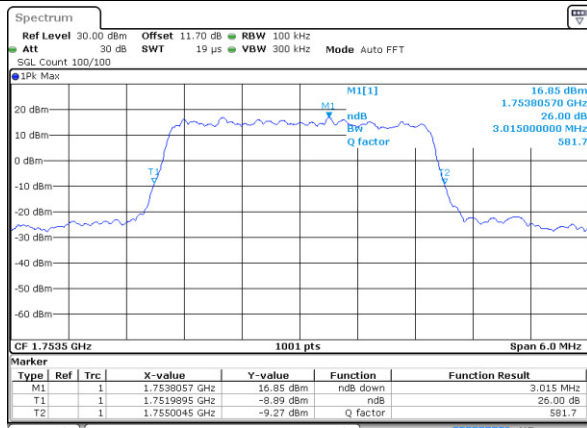
Date: 17 FEB 2018 05:59:07

## Middle Channel / 3MHz / 16QAM



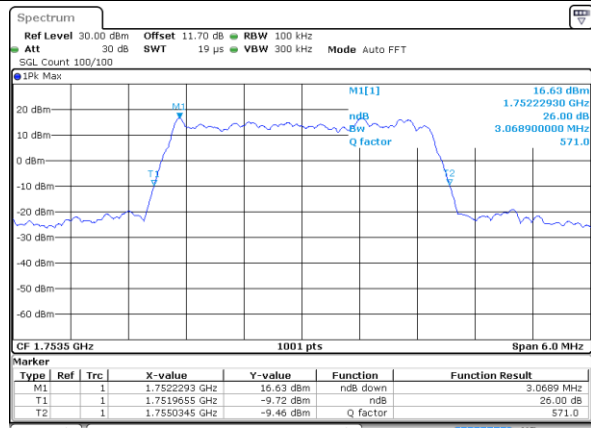
Date: 17 FEB 2018 05:59:16

## Highest Channel / 3MHz / QPSK



Date: 17 FEB 2018 06:01:34

## Highest Channel / 3MHz / 16QAM

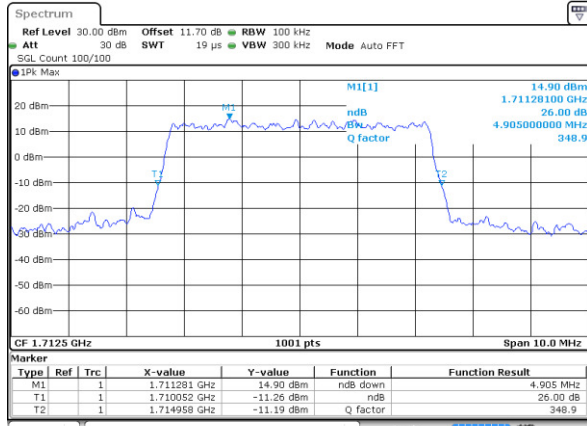


Date: 17 FEB 2018 06:01:43



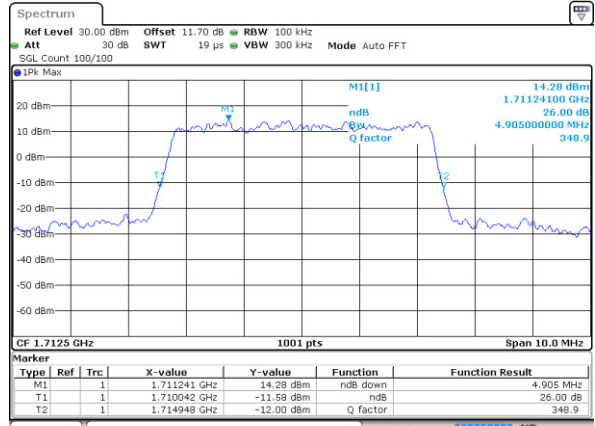
## LTE Band 4

## Lowest Channel / 5MHz / QPSK



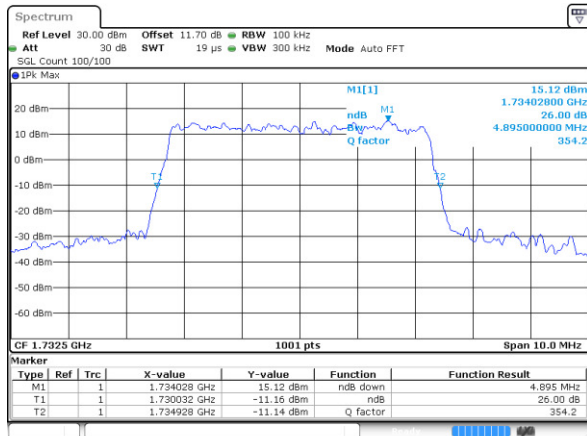
Date: 17 FEB 2018 06:08:30

## Lowest Channel / 5MHz / 16QAM



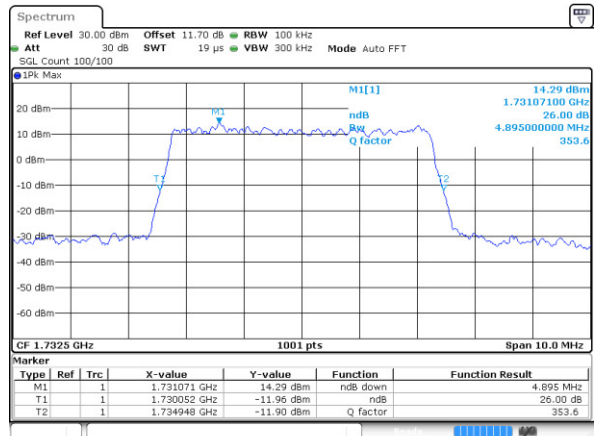
Date: 17 FEB 2018 06:08:39

## Middle Channel / 5MHz / QPSK



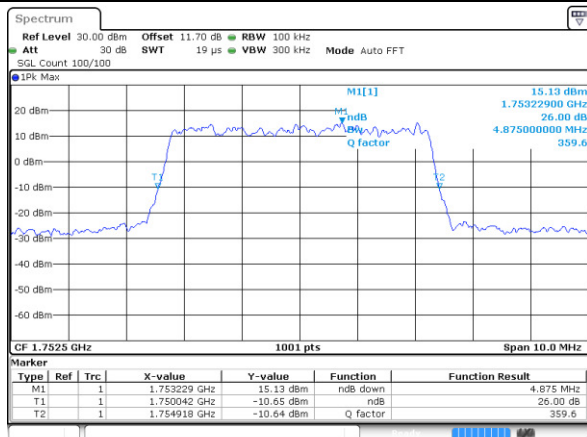
Date: 17 FEB 2018 06:15:25

## Middle Channel / 5MHz / 16QAM



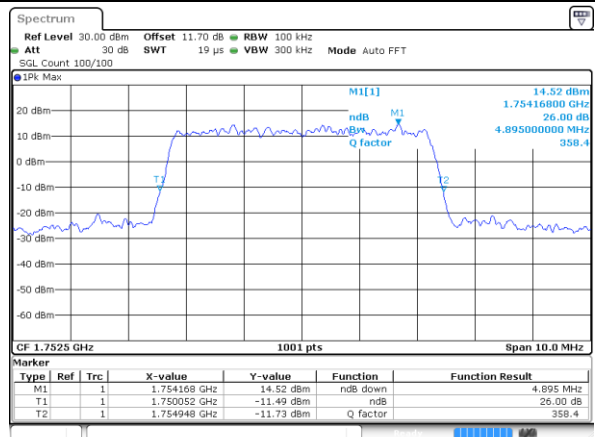
Date: 17 FEB 2018 06:15:35

## Highest Channel / 5MHz / QPSK



Date: 17 FEB 2018 06:17:52

## Highest Channel / 5MHz / 16QAM

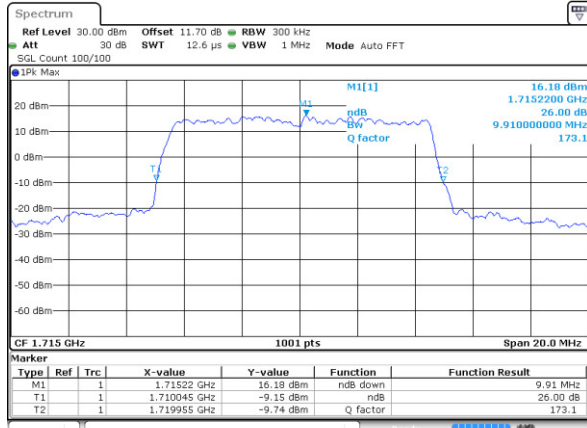


Date: 17 FEB 2018 06:18:02



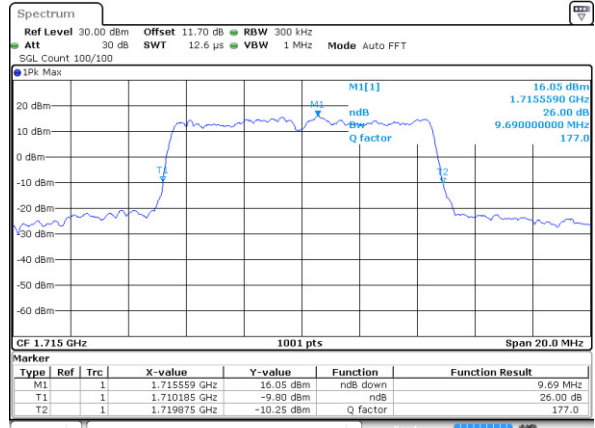
## LTE Band 4

## Lowest Channel / 10MHz / QPSK



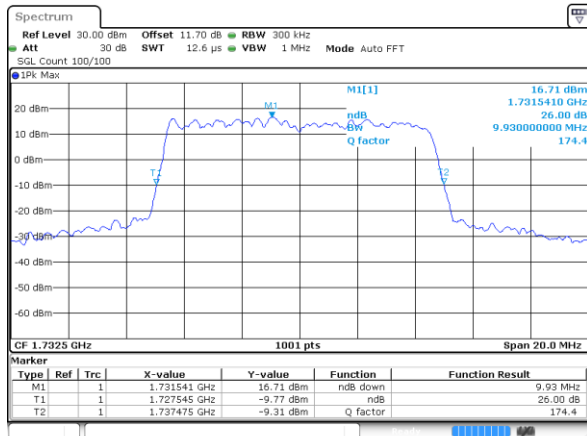
Date: 17 FEB 2018 06:24:48

## Lowest Channel / 10MHz / 16QAM



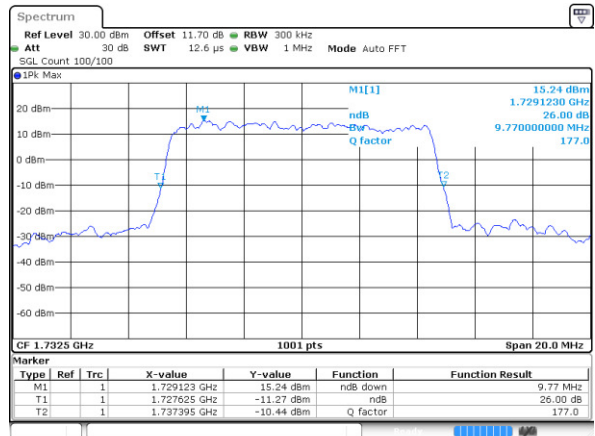
Date: 17 FEB 2018 06:24:58

## Middle Channel / 10MHz / QPSK



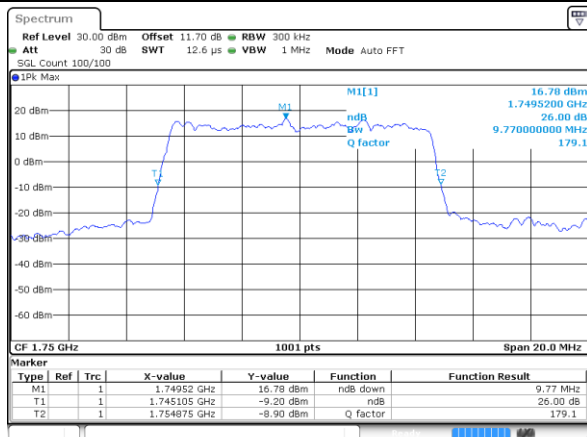
Date: 17 FEB 2018 06:31:44

## Middle Channel / 10MHz / 16QAM



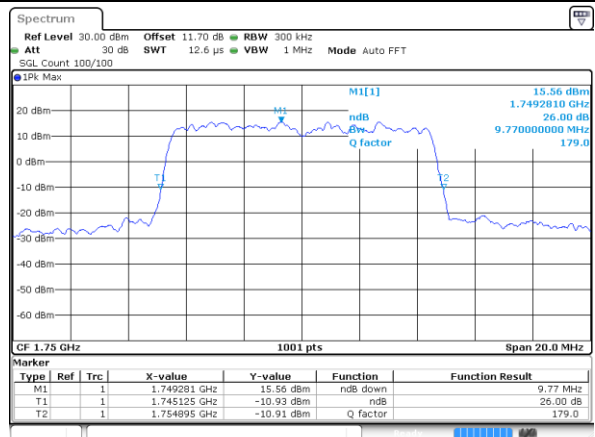
Date: 17 FEB 2018 06:31:54

## Highest Channel / 10MHz / QPSK



Date: 17 FEB 2018 06:34:11

## Highest Channel / 10MHz / 16QAM

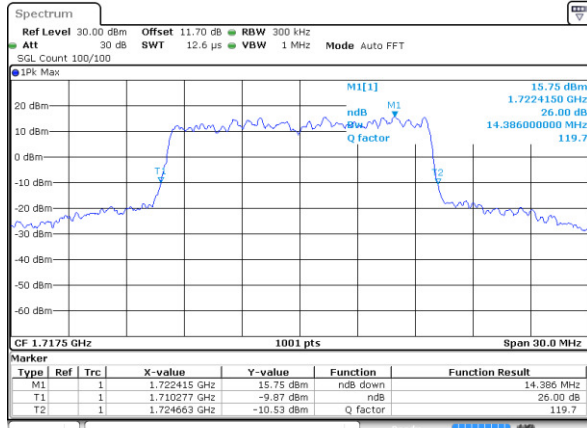


Date: 17 FEB 2018 06:34:21



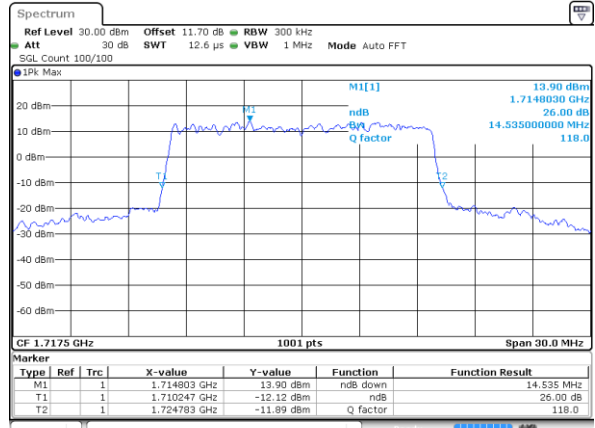
## LTE Band 4

## Lowest Channel / 15MHz / QPSK



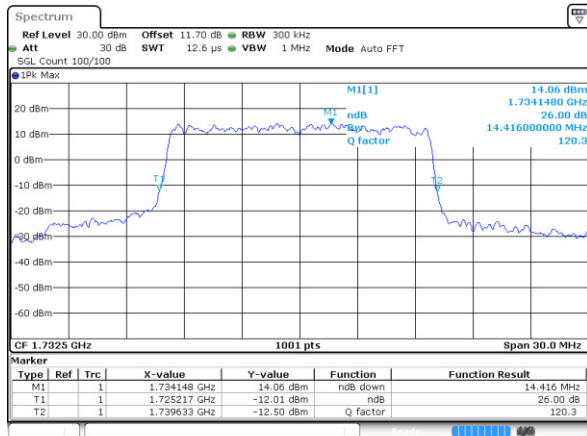
Date: 17 FEB 2018 06:41:07

## Lowest Channel / 15MHz / 16QAM



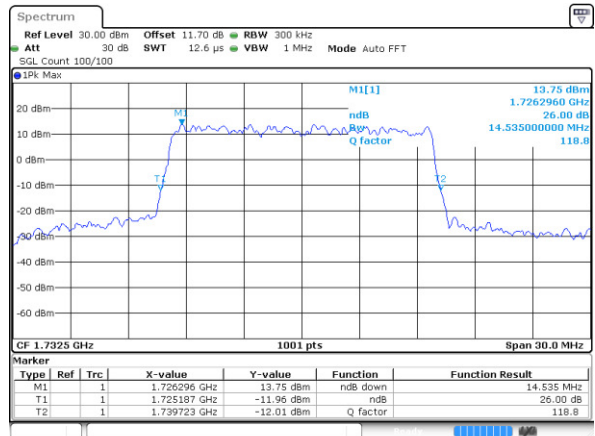
Date: 17 FEB 2018 06:41:17

## Middle Channel / 15MHz / QPSK



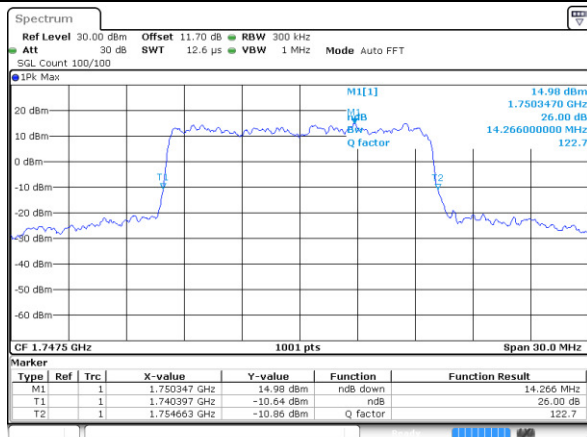
Date: 17 FEB 2018 06:48:03

## Middle Channel / 15MHz / 16QAM



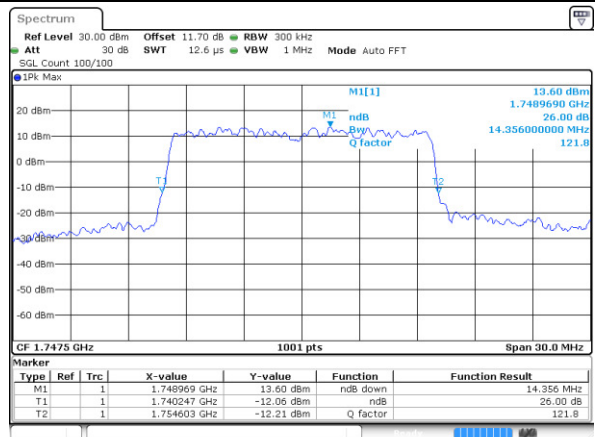
Date: 17 FEB 2018 06:48:13

## Highest Channel / 15MHz / QPSK



Date: 17 FEB 2018 06:50:30

## Highest Channel / 15MHz / 16QAM

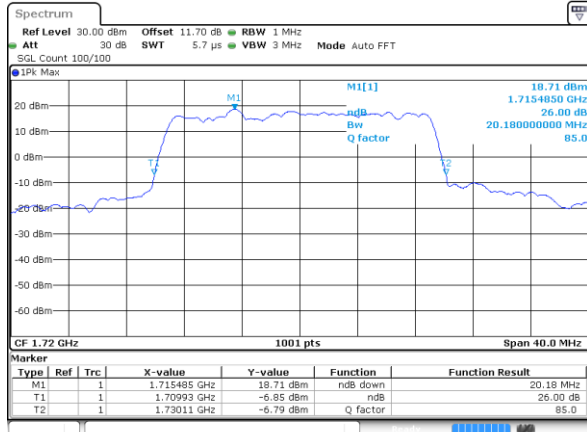


Date: 17 FEB 2018 06:50:40

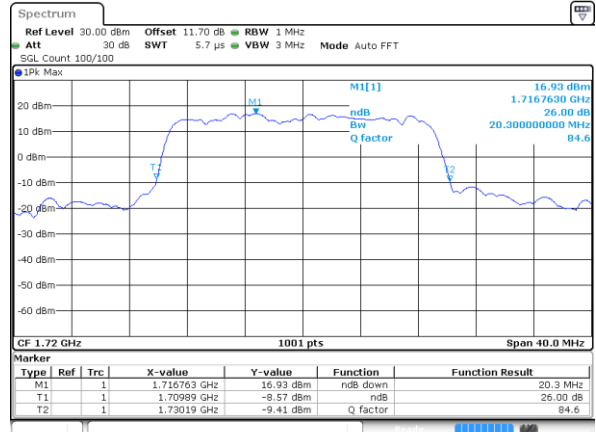


## LTE Band 4

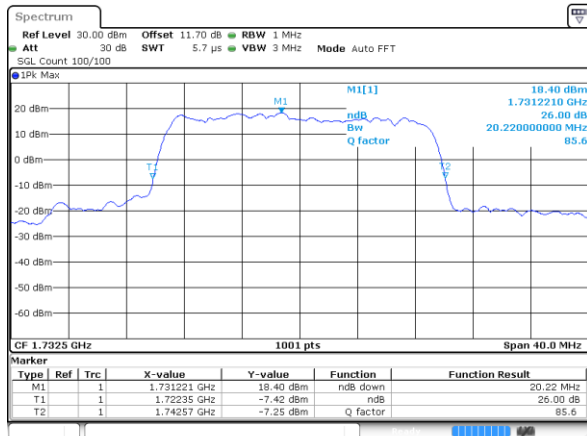
## Lowest Channel / 20MHz / QPSK



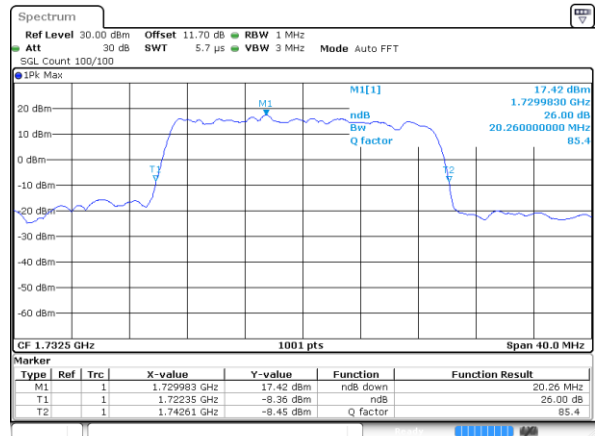
## Lowest Channel / 20MHz / 16QAM



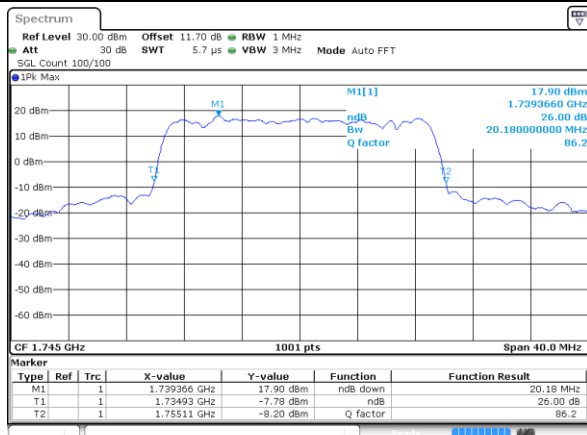
## Middle Channel / 20MHz / QPSK



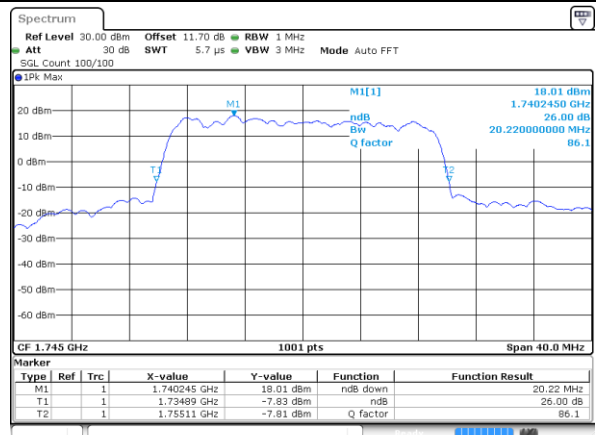
## Middle Channel / 20MHz / 16QAM



## Highest Channel / 20MHz / QPSK



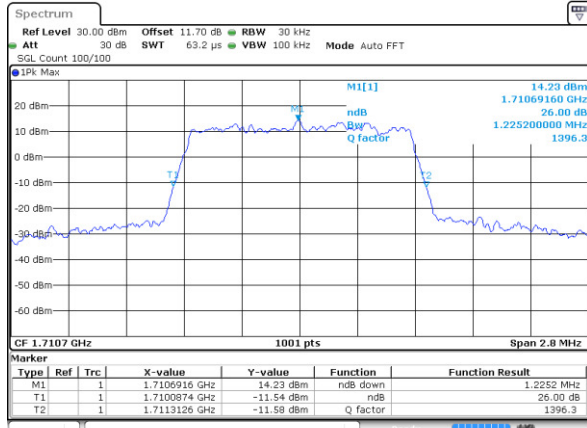
## Highest Channel / 20MHz / 16QAM





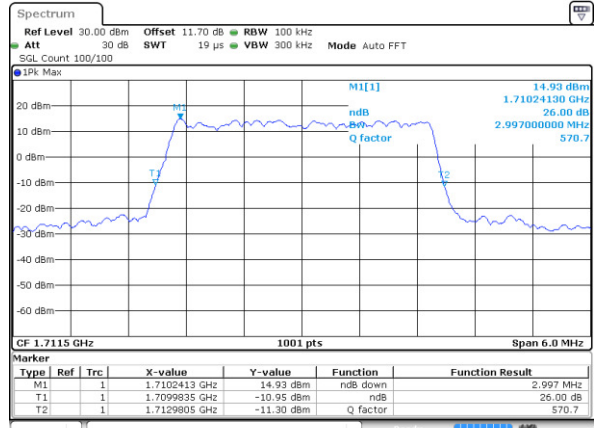
## LTE Band 4

## Lowest Channel / 1.4MHz / 64QAM



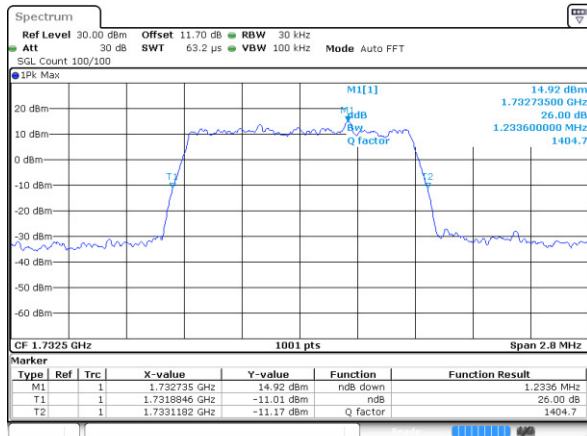
Date: 17 FEB 2018 08:22:58

## Lowest Channel / 3MHz / 64QAM



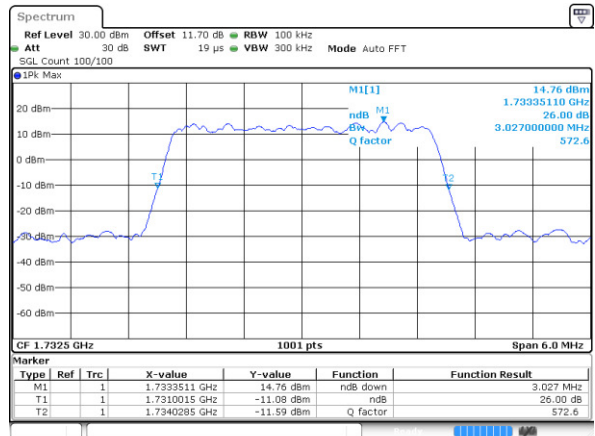
Date: 17 FEB 2018 07:35:48

## Middle Channel / 1.4MHz / 64QAM



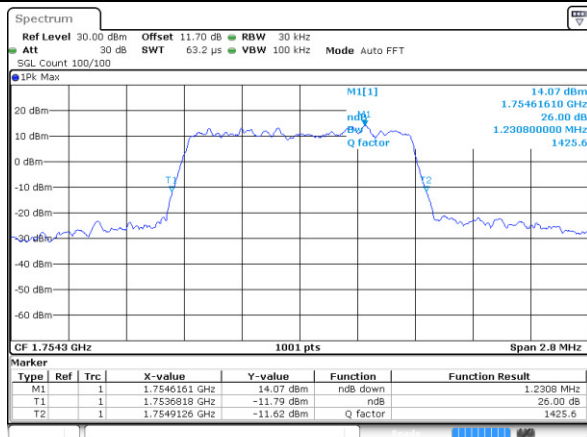
Date: 17 FEB 2018 08:26:26

## Middle Channel / 3MHz / 64QAM



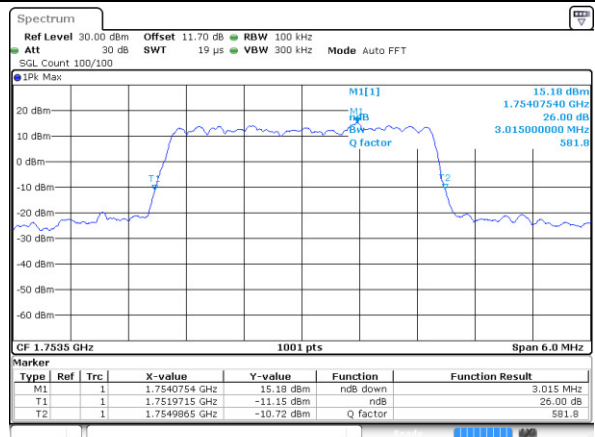
Date: 17 FEB 2018 07:39:16

## Highest Channel / 1.4MHz / 64QAM



Date: 17 FEB 2018 08:27:39

## Highest Channel / 3MHz / 64QAM

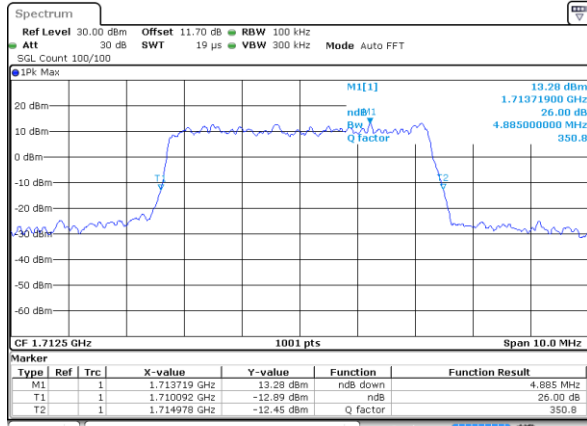


Date: 17 FEB 2018 07:40:30

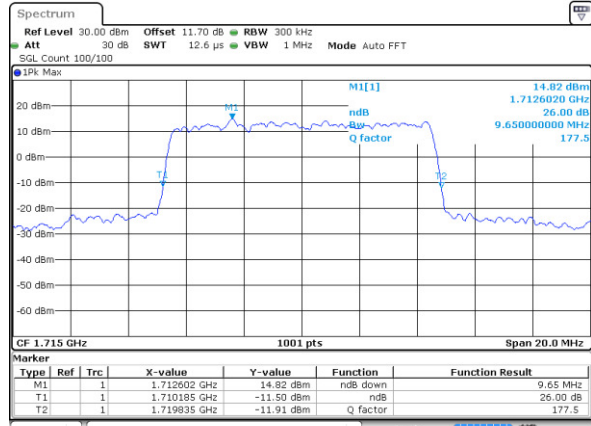


## LTE Band 4

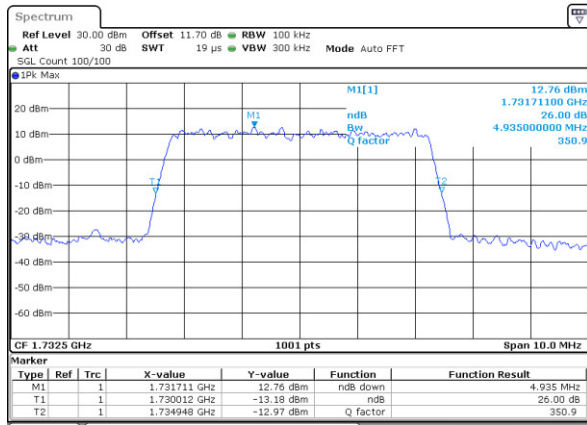
## Lowest Channel / 5MHz / 64QAM



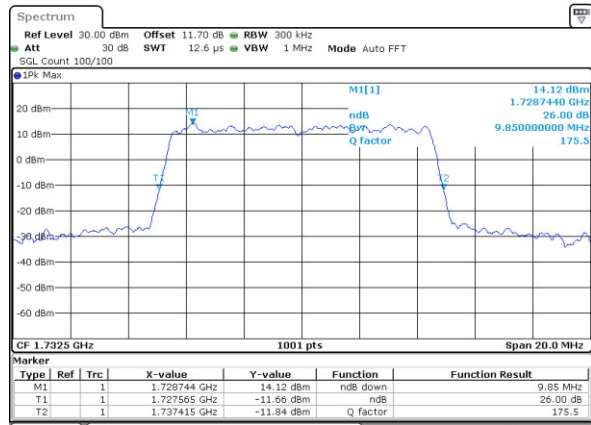
## Lowest Channel / 10MHz / 64QAM



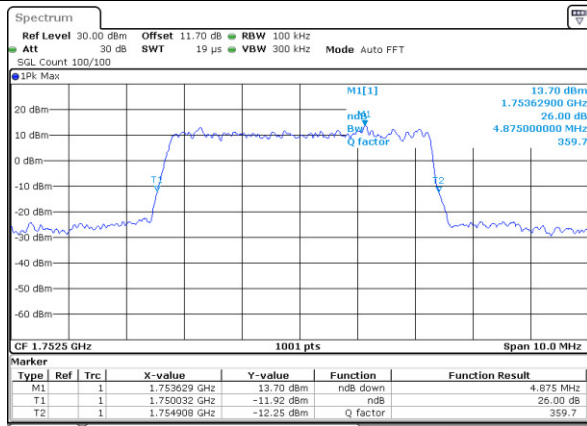
## Middle Channel / 5MHz / 64QAM



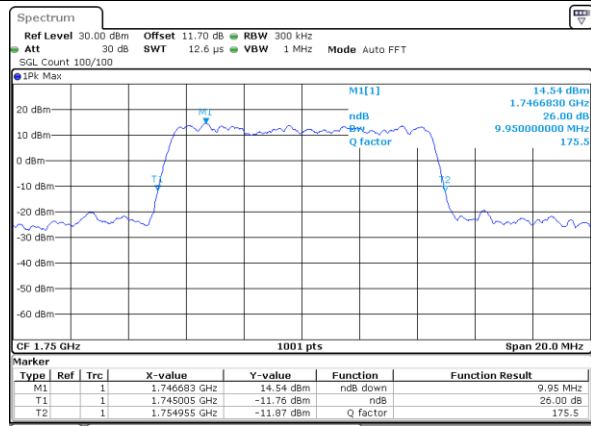
## Middle Channel / 10MHz / 64QAM



## Highest Channel / 5MHz / 64QAM



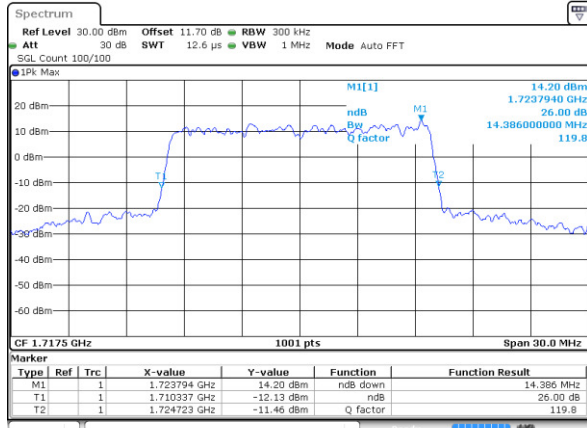
## Highest Channel / 10MHz / 64QAM





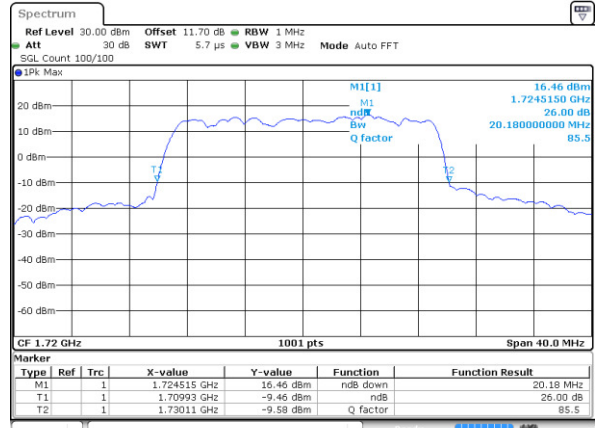
## LTE Band 4

## Lowest Channel / 15MHz / 64QAM



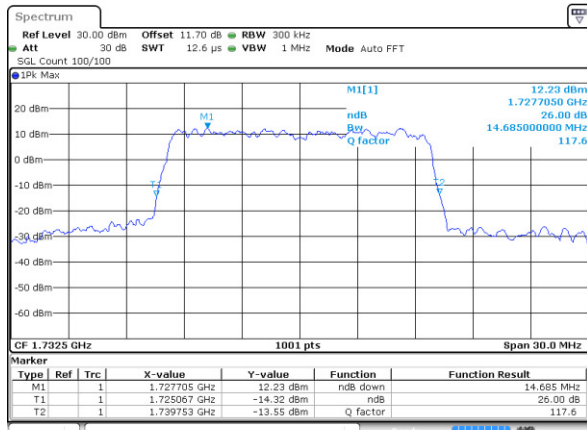
Date: 17 FEB 2018 08:00:16

## Lowest Channel / 20MHz / 64QAM



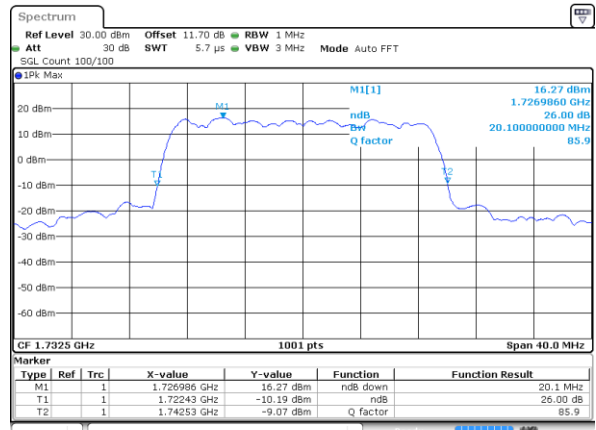
Date: 17 FEB 2018 08:14:48

## Middle Channel / 15MHz / 64QAM



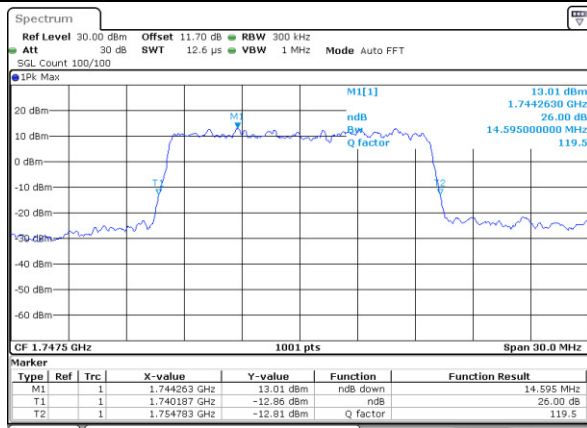
Date: 17 FEB 2018 08:03:44

## Middle Channel / 20MHz / 64QAM



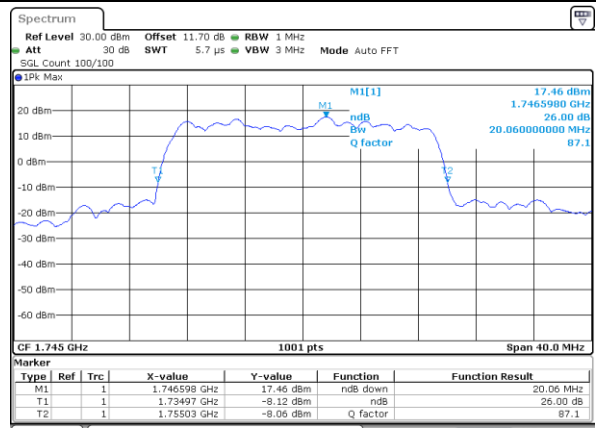
Date: 17 FEB 2018 08:18:16

## Highest Channel / 15MHz / 64QAM



Date: 17 FEB 2018 08:04:58

## Highest Channel / 20MHz / 64QAM



Date: 17 FEB 2018 08:19:30

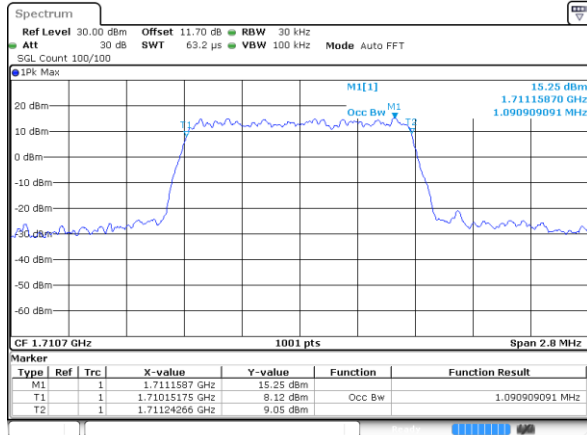
**Occupied Bandwidth**

| 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  | 2.72  | 4.5   | 4.5   | 8.99  | 9.05  | 13.4  | 13.43 | 18.42 | 18.58 |
| Middle CH  | 1.09                     | 1.1   | 2.73  | 2.74  | 4.46  | 4.5   | 9.01  | 8.97  | 13.49 | 13.4  | 18.34 | 18.26 |
| Highest CH | 1.08                     | 1.09  | 2.73  | 2.72  | 4.48  | 4.48  | 8.99  | 9.05  | 13.49 | 13.46 | 18.38 | 18.46 |
| Mode       | LTE Band 4 : 99%OBW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
| BW         | 1.4MHz                   |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                    |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | 1.09                     | -     | 2.73  | -     | 4.49  | -     | 9.07  | -     | 13.46 | -     | 18.50 | -     |
| Middle CH  | 1.09                     | -     | 2.72  | -     | 4.51  | -     | 9.01  | -     | 13.40 | -     | 18.18 | -     |
| Highest CH | 1.08                     | -     | 2.72  | -     | 4.49  | -     | 9.07  | -     | 13.43 | -     | 18.46 | -     |

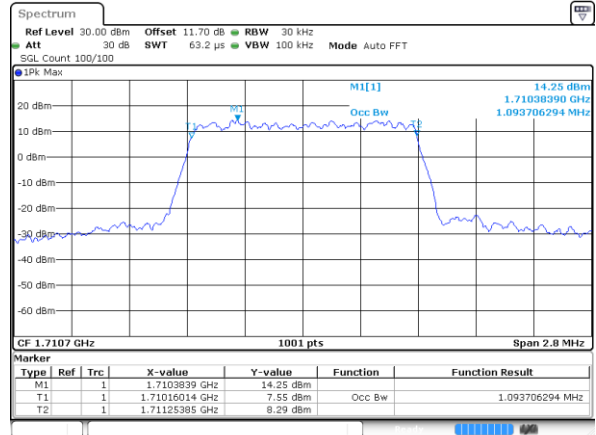


## LTE Band 4

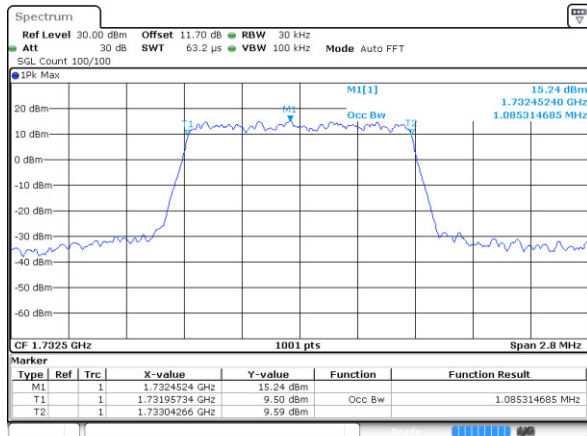
## Lowest Channel / 1.4MHz / QPSK



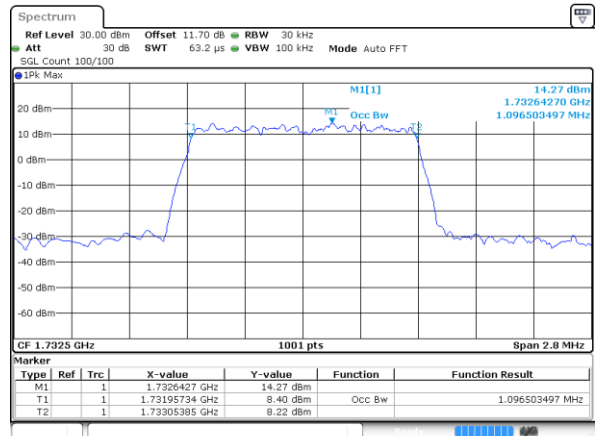
## Lowest Channel / 1.4MHz / 16QAM



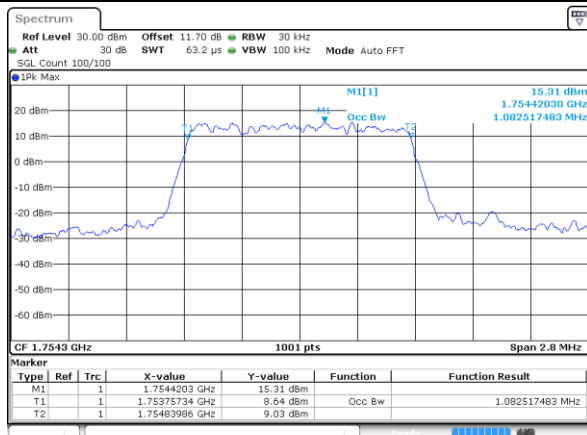
## Middle Channel / 1.4MHz / QPSK



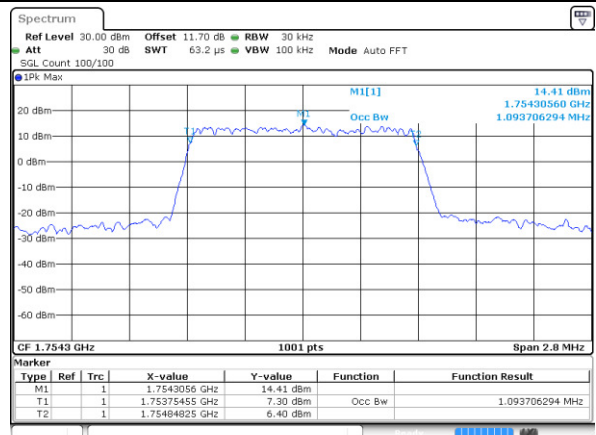
## Middle Channel / 1.4MHz / 16QAM



## Highest Channel / 1.4MHz / QPSK



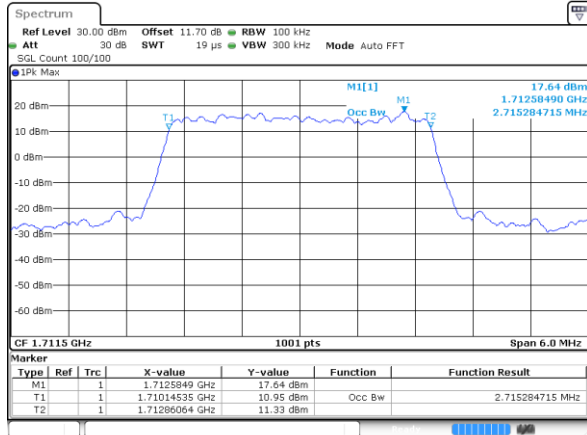
## Highest Channel / 1.4MHz / 16QAM





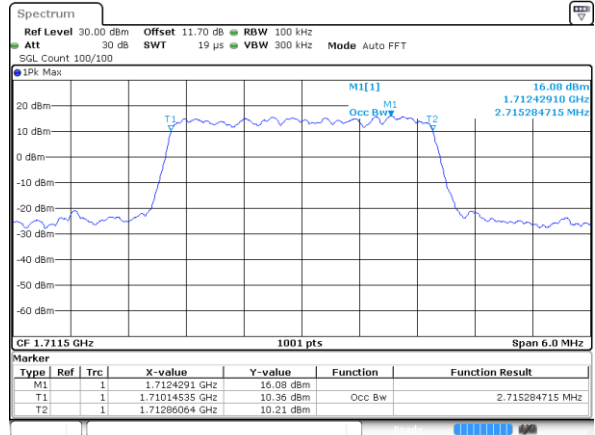
## LTE Band 4

## Lowest Channel / 3MHz / QPSK



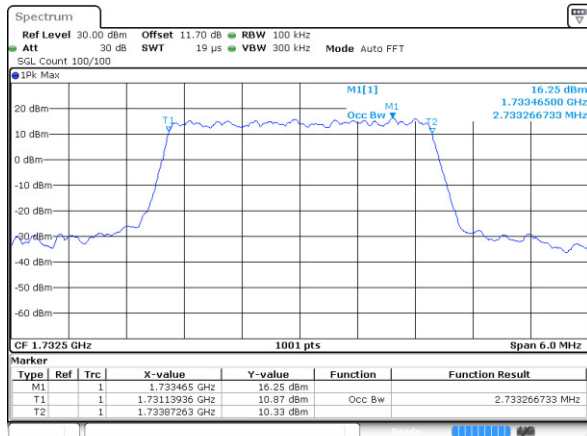
Date: 17 FEB 2018 05:51:51

## Lowest Channel / 3MHz / 16QAM



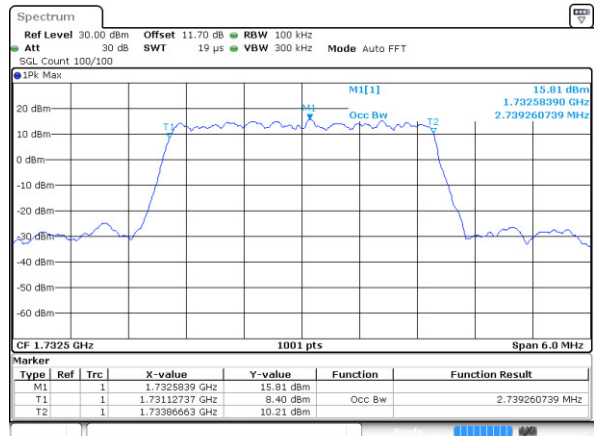
Date: 17 FEB 2018 05:52:01

## Middle Channel / 3MHz / QPSK



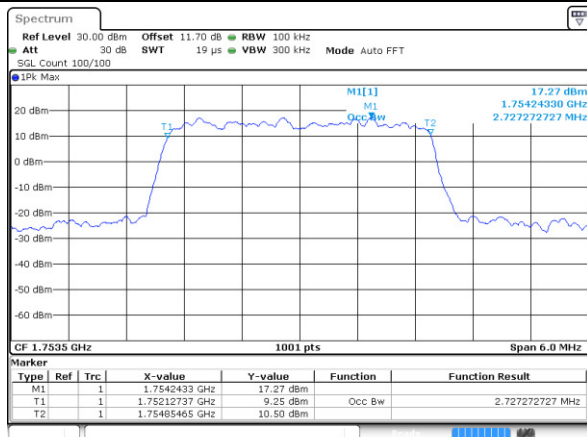
Date: 17 FEB 2018 05:58:47

## Middle Channel / 3MHz / 16QAM



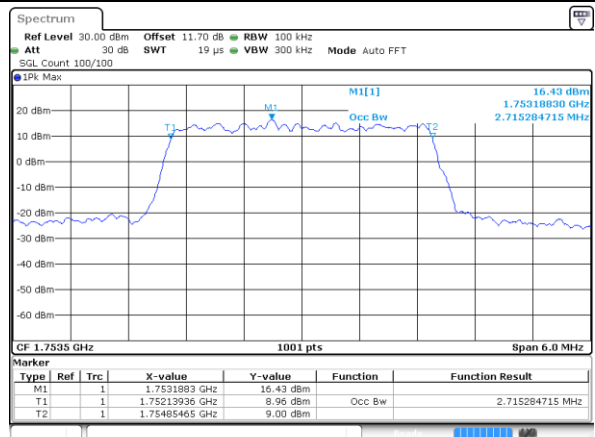
Date: 17 FEB 2018 05:58:57

## Highest Channel / 3MHz / QPSK



Date: 17 FEB 2018 06:01:14

## Highest Channel / 3MHz / 16QAM



Date: 17 FEB 2018 06:01:24