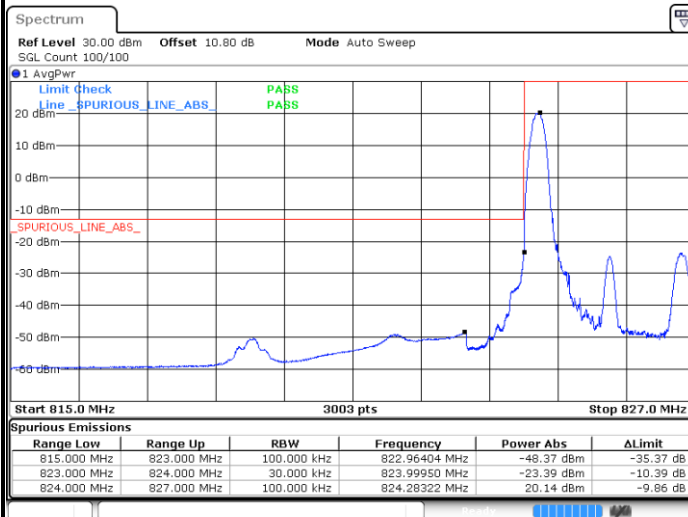


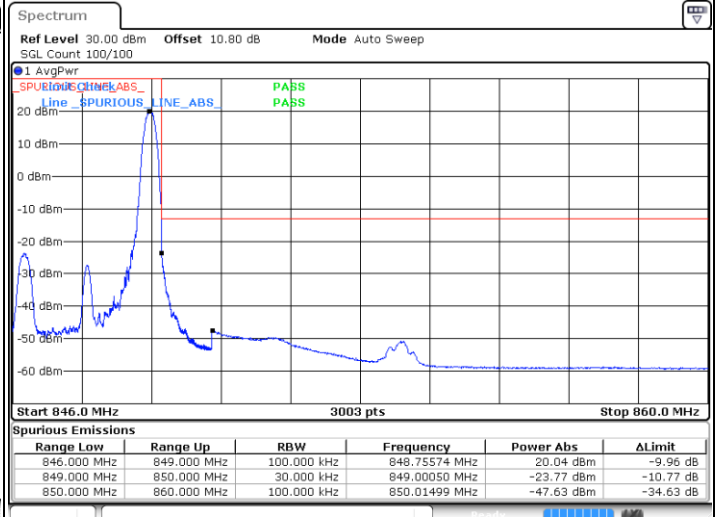


## LTE Band 5 / 3MHz / QPSK

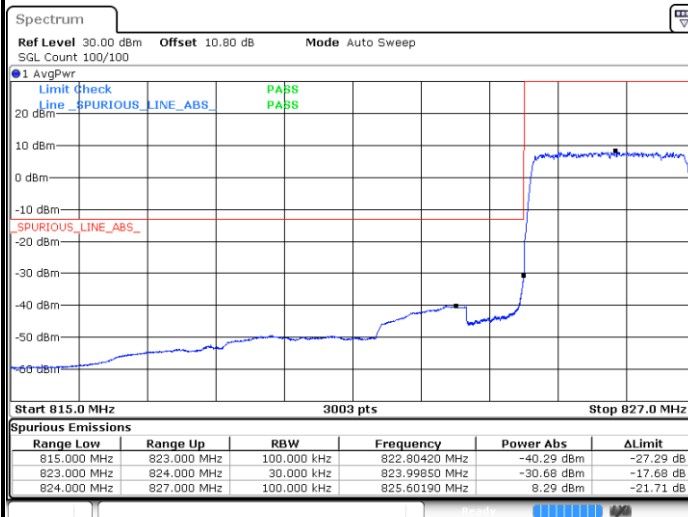
## Lowest Band Edge / 1RB



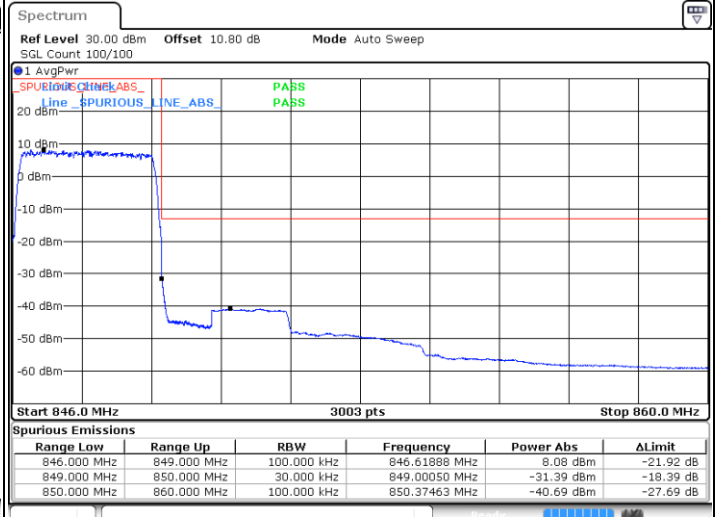
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



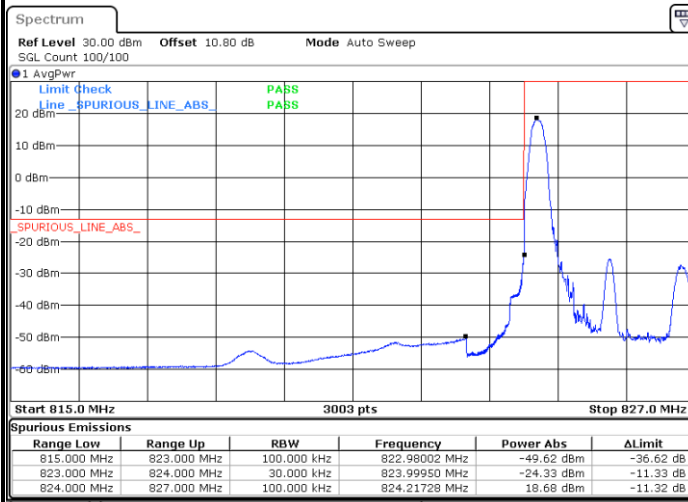
## Highest Band Edge / Full RB





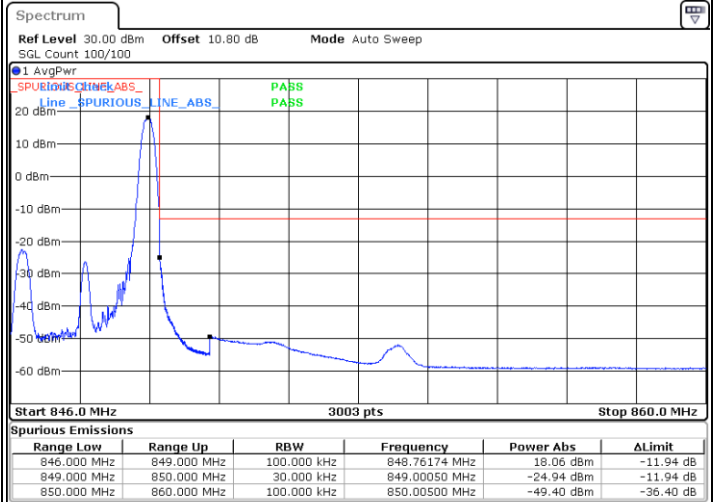
## LTE Band 5 / 3MHz / 16QAM

## Lowest Band Edge / 1 RB



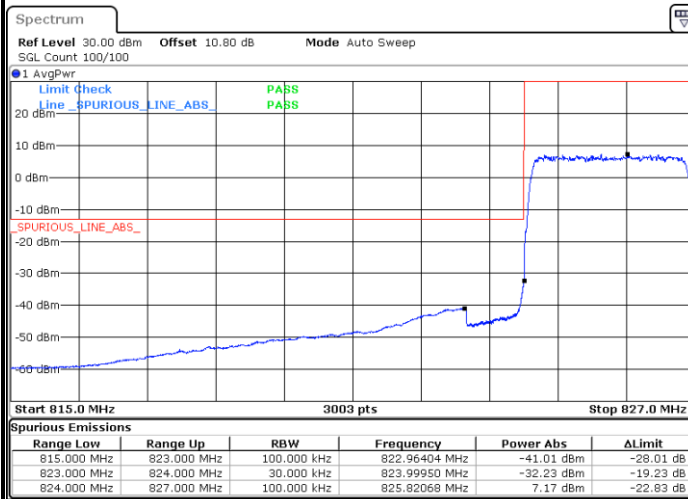
Date: 10 JUL 2017 01:42:33

## Highest Band Edge / 1 RB



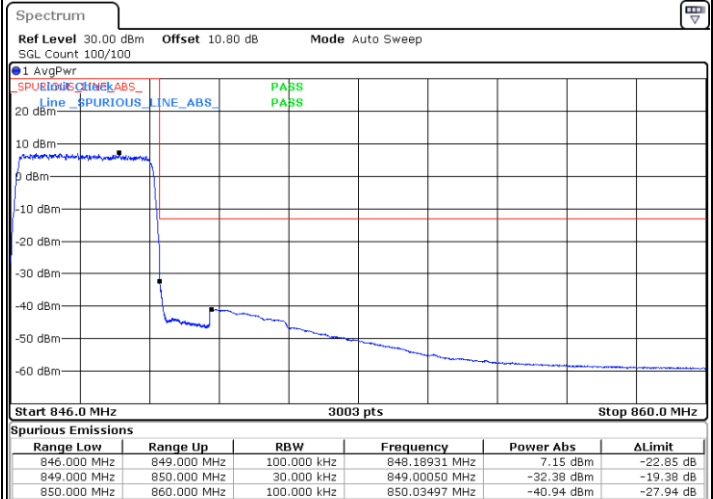
Date: 10 JUL 2017 01:54:03

## Lowest Band Edge / Full RB



Date: 10 JUL 2017 01:45:51

## Highest Band Edge / Full RB

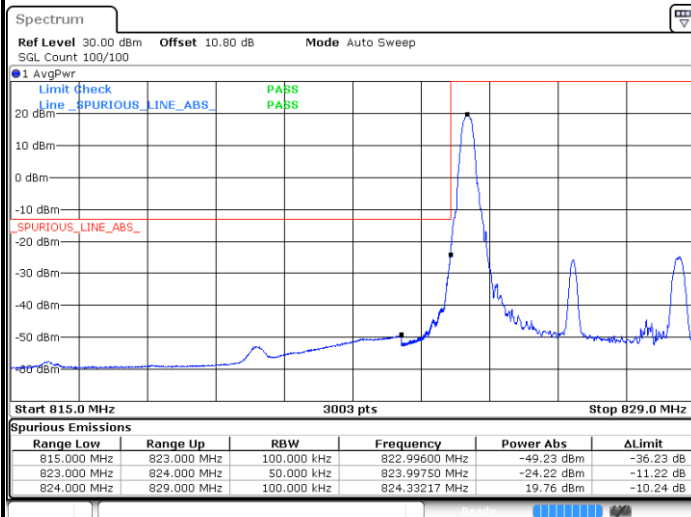


Date: 10 JUL 2017 01:57:21

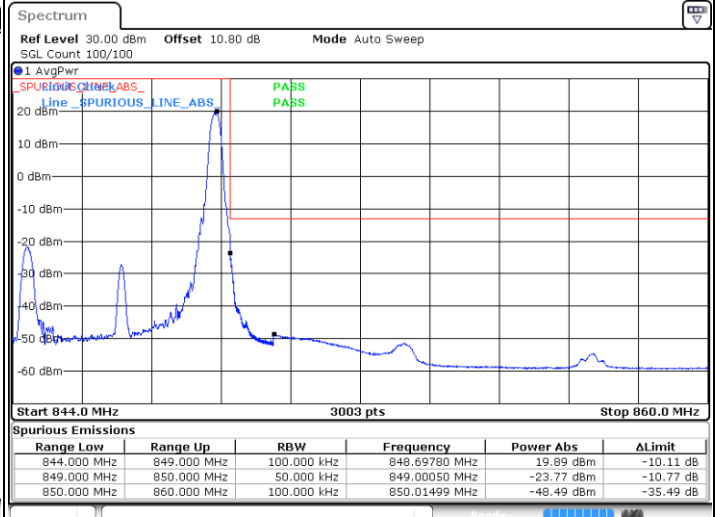


## LTE Band 5 / 5MHz / QPSK

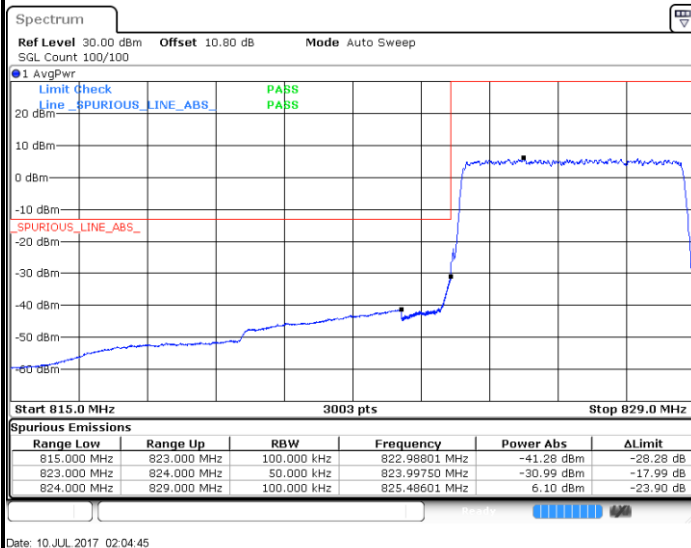
## Lowest Band Edge / 1 RB



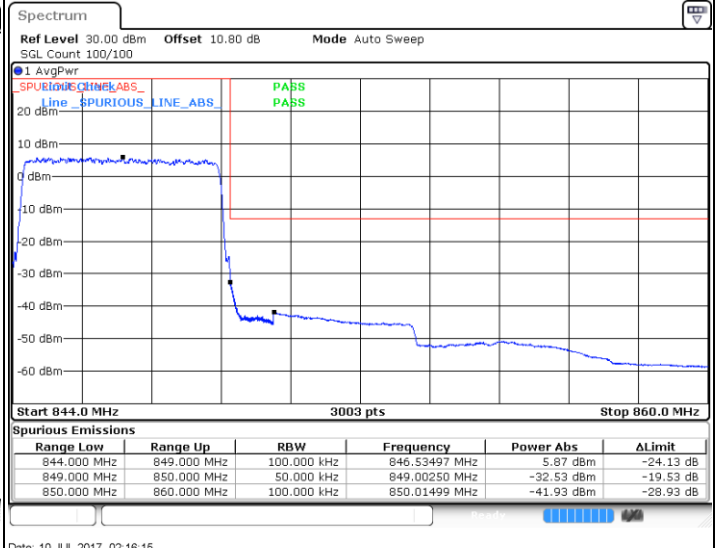
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



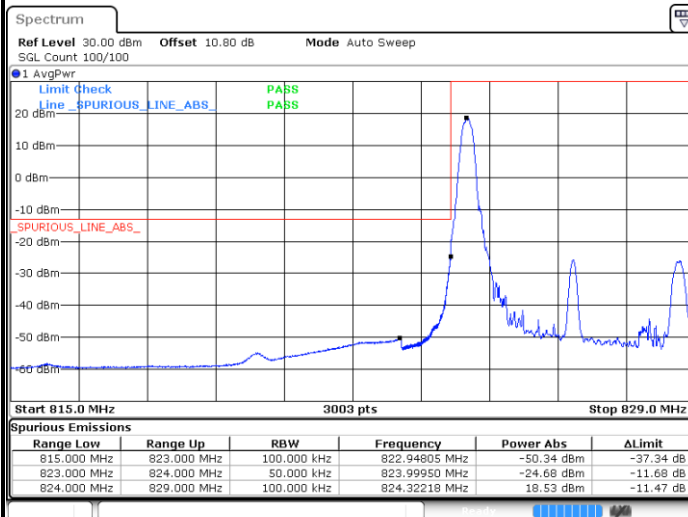
## Highest Band Edge / Full RB



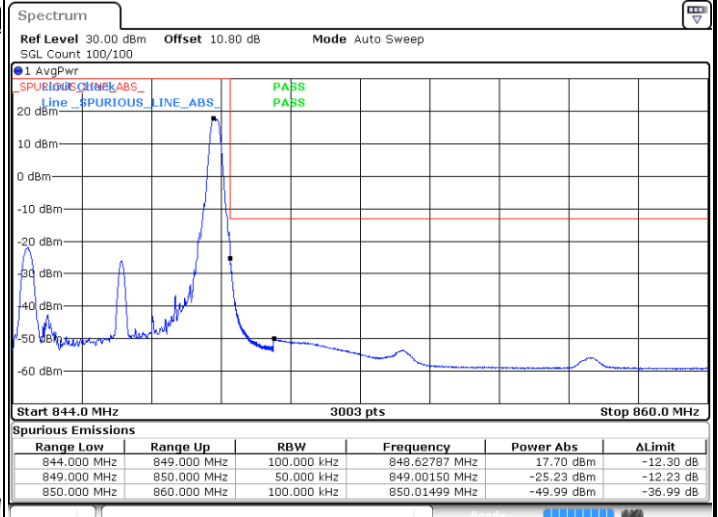


## LTE Band 5 / 5MHz / 16QAM

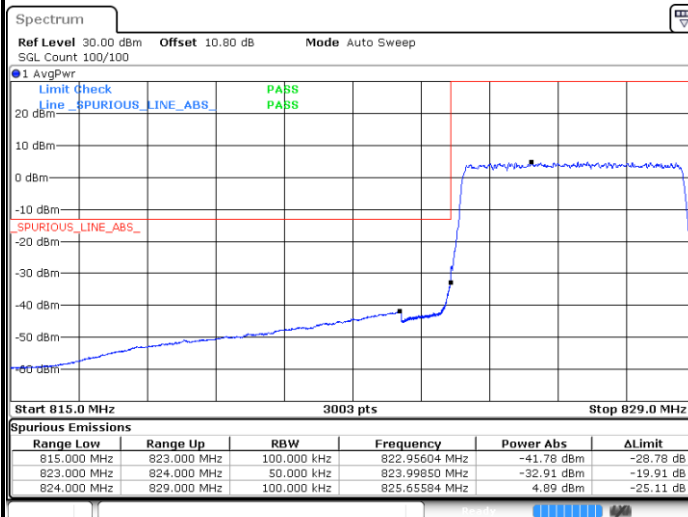
## Lowest Band Edge / 1RB



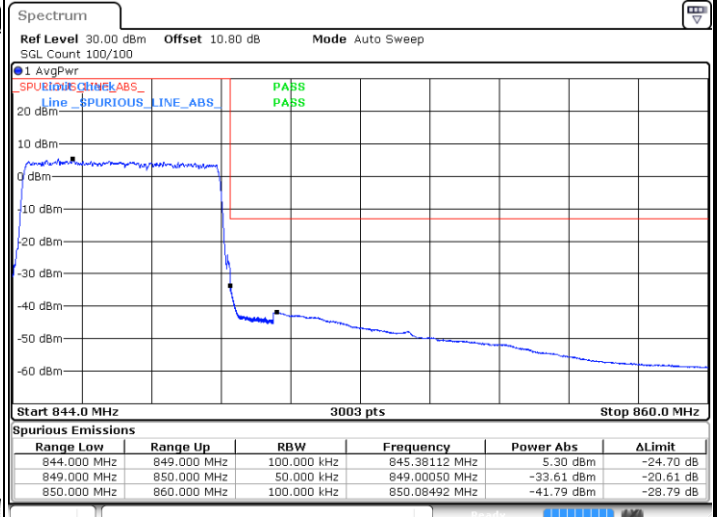
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



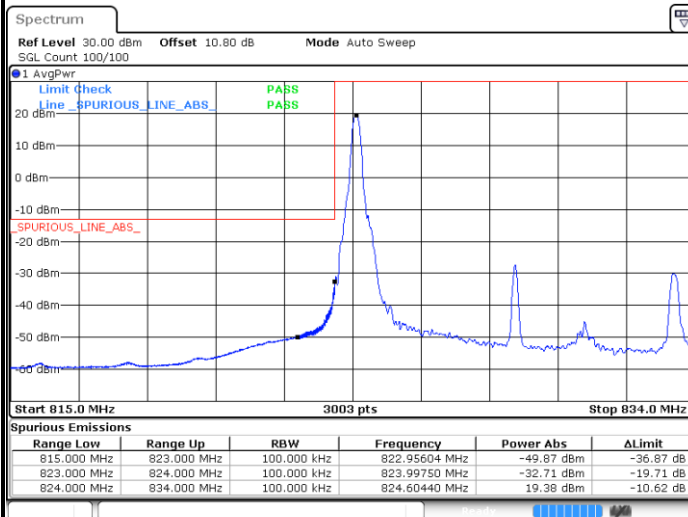
## Highest Band Edge / Full RB



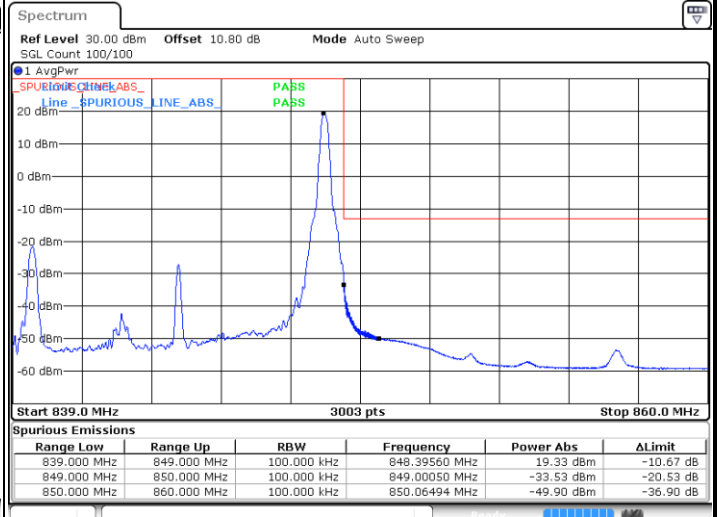


## LTE Band 5 / 10MHz / QPSK

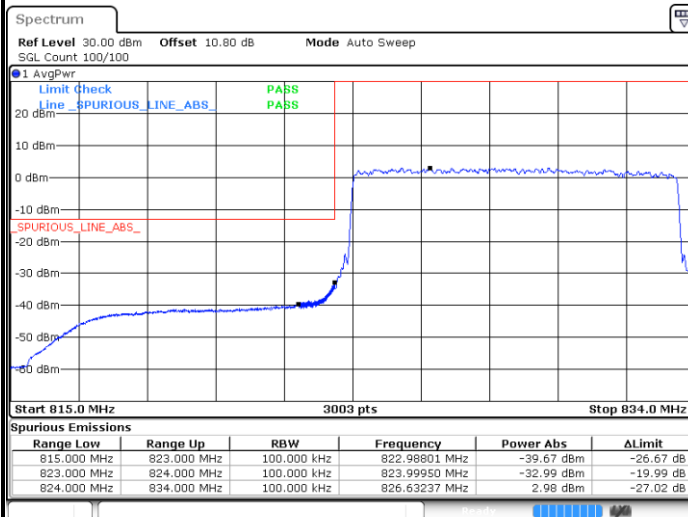
## Lowest Band Edge / 1 RB



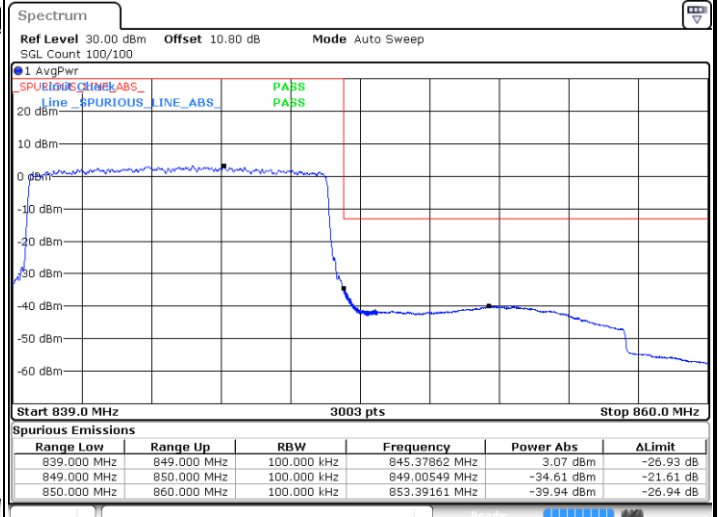
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



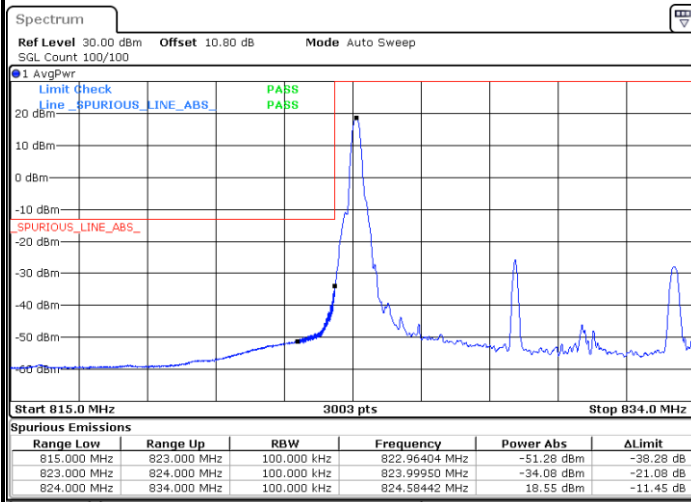
## Highest Band Edge / Full RB



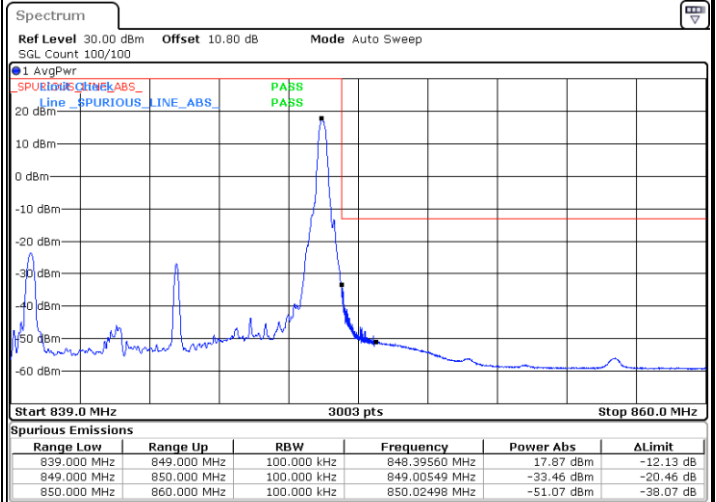


## LTE Band 5 / 10MHz / 16QAM

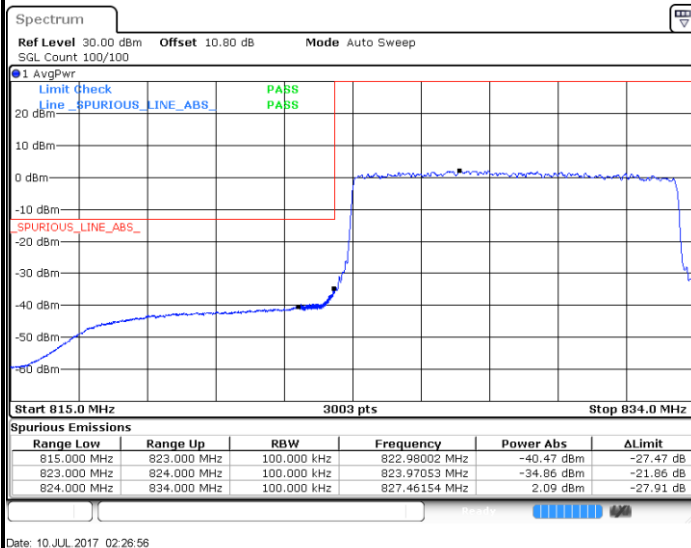
## Lowest Band Edge / 1 RB



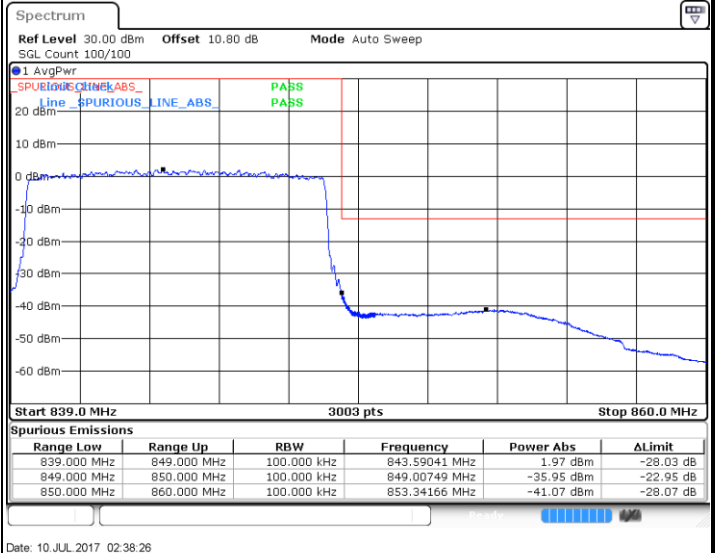
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB



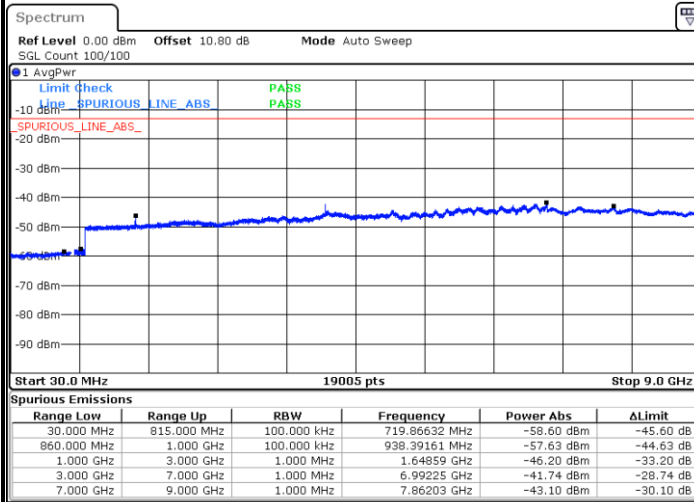


## **Conducted Spurious Emission**



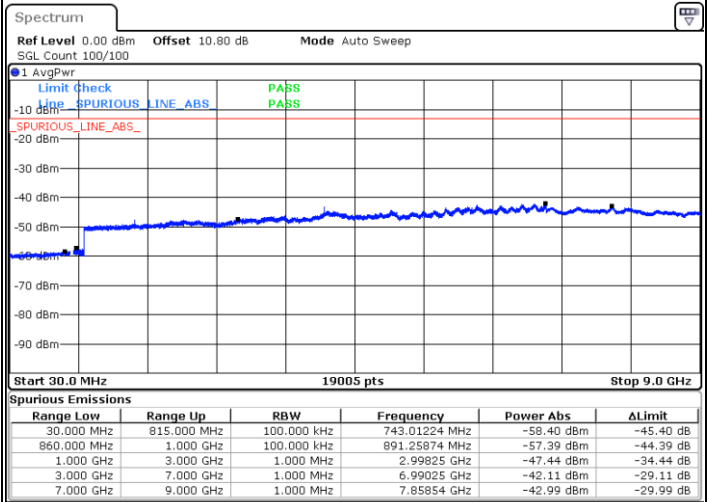
## LTE Band 5 / 1.4MHz

## Lowest Channel / QPSK



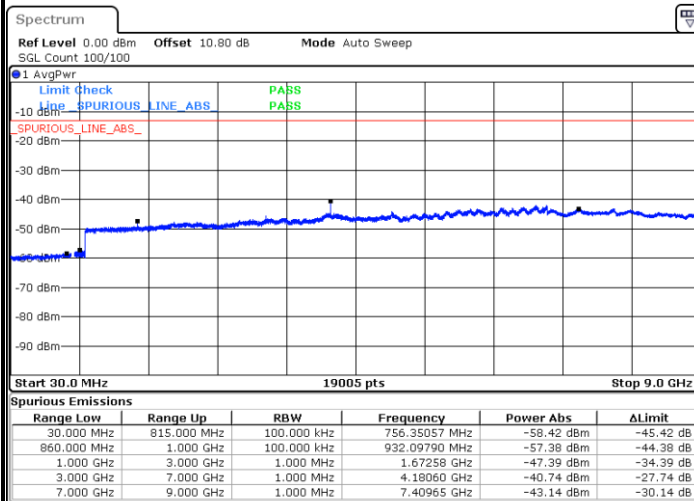
Date: 10 JUL 2017 02:53:54

## Lowest Channel / 16QAM



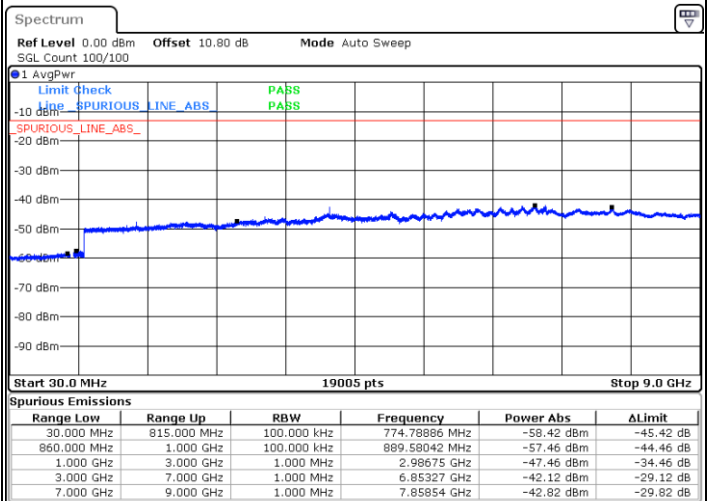
Date: 10 JUL 2017 02:54:48

## Middle Channel / QPSK



Date: 10 JUL 2017 02:56:22

## Middle Channel / 16QAM

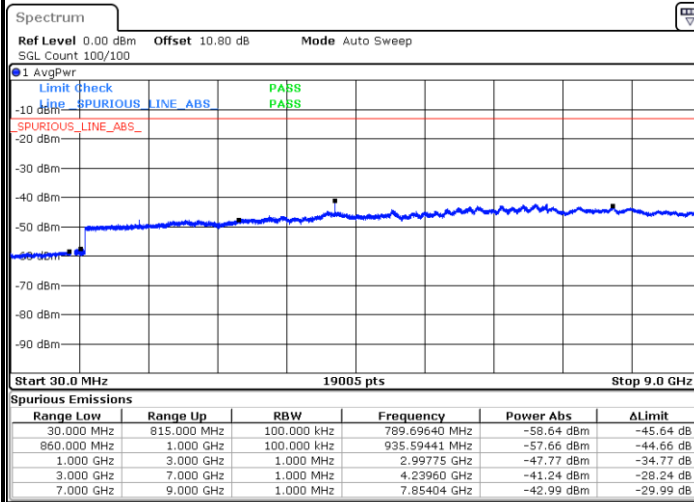


Date: 10 JUL 2017 02:57:15



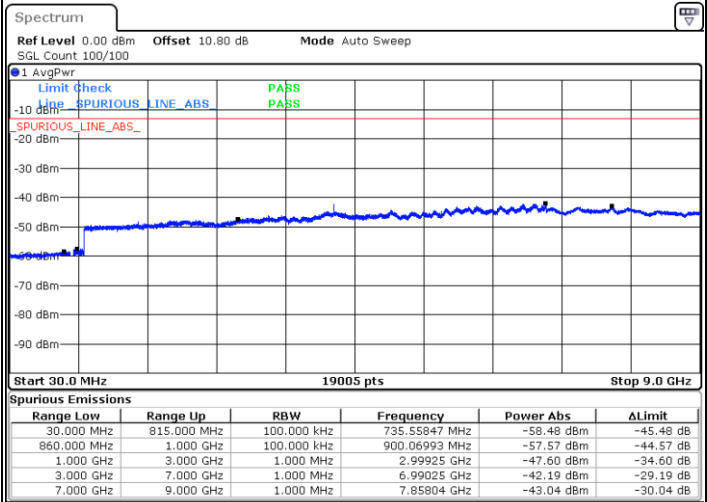
## LTE Band 5 / 1.4MHz

## Highest Channel / QPSK



Date: 10 JUL 2017 03:05:24

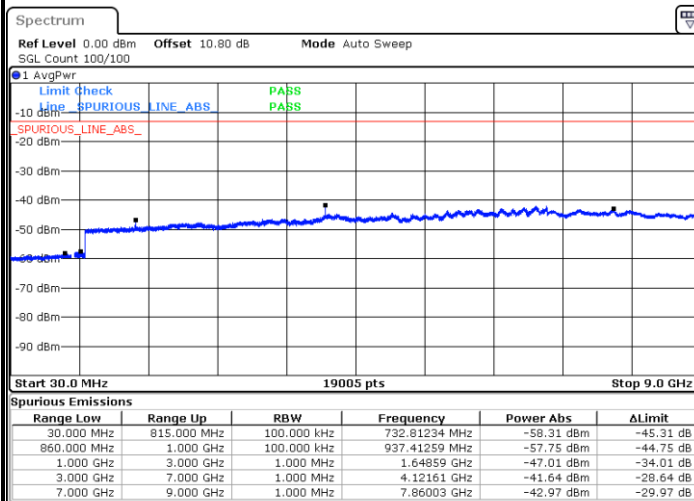
## Highest Channel / 16QAM



Date: 10 JUL 2017 03:06:18

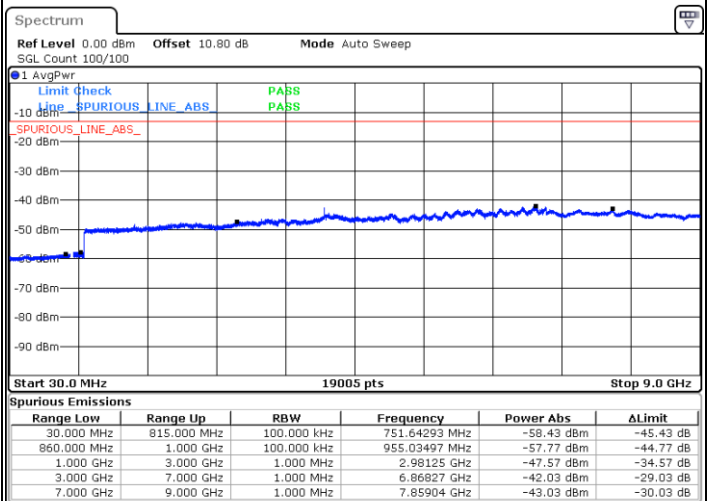
## LTE Band 5 / 3MHz

## Lowest Channel / QPSK



Date: 10 JUL 2017 01:46:45

## Lowest Channel / 16QAM

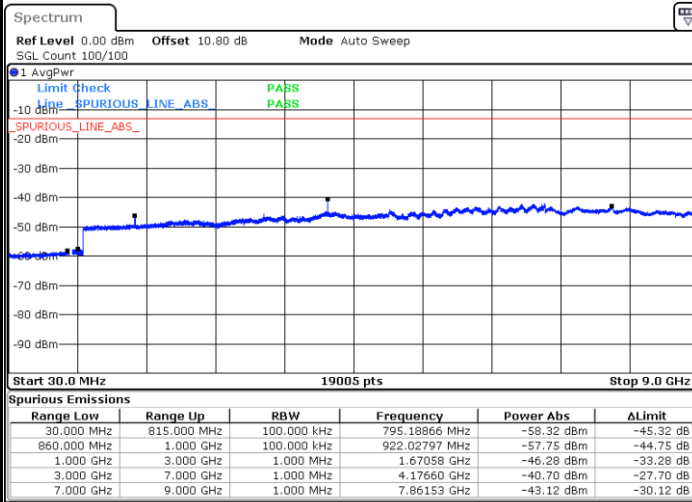


Date: 10 JUL 2017 01:47:39



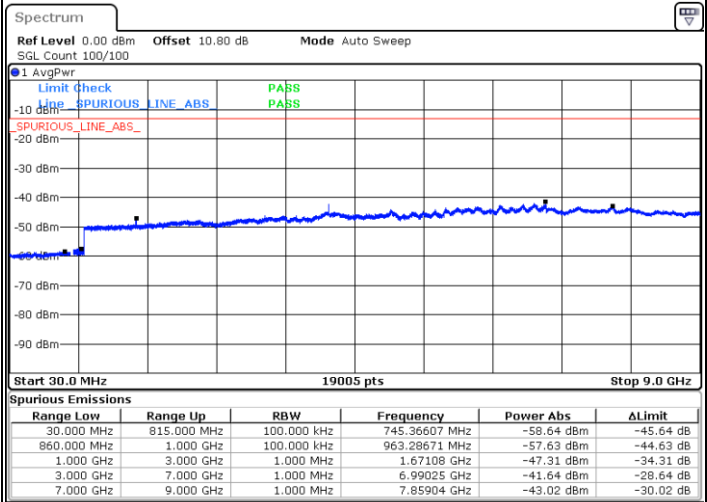
## LTE Band 5 / 3MHz

## Middle Channel / QPSK



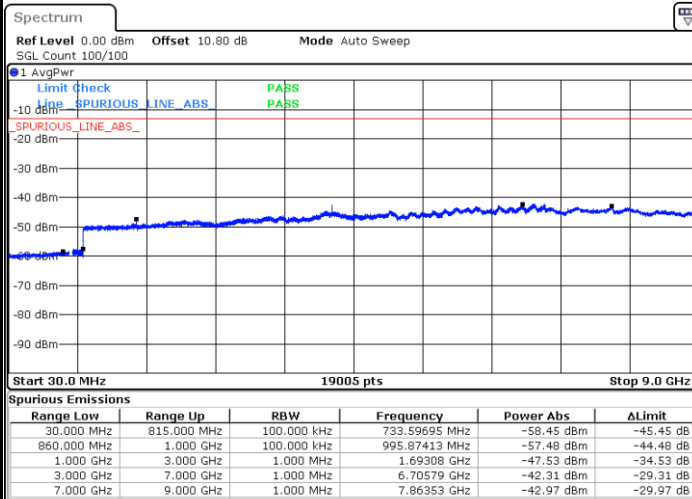
Date: 10 JUL 2017 01:49:13

## Middle Channel / 16QAM



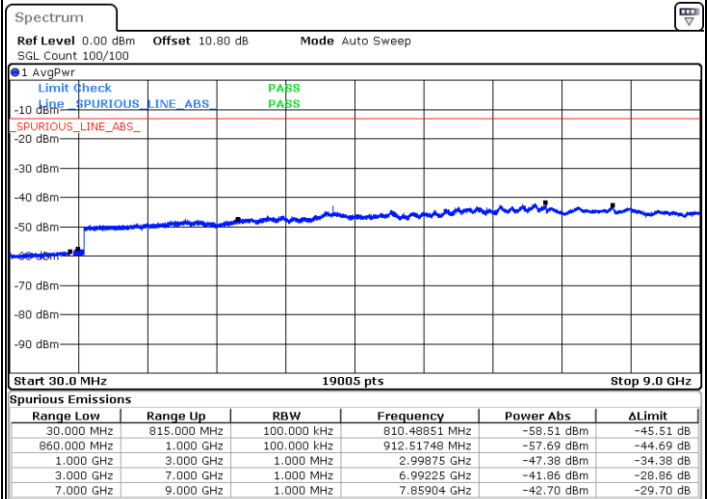
Date: 10 JUL 2017 01:50:06

## Highest Channel / QPSK



Date: 10 JUL 2017 01:58:15

## Highest Channel / 16QAM

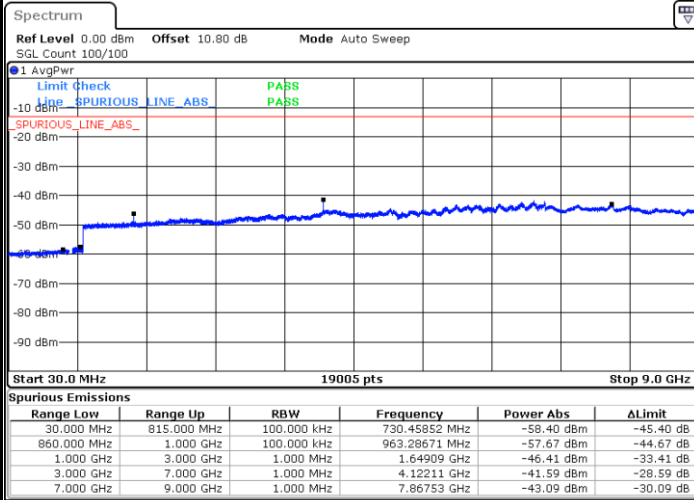


Date: 10 JUL 2017 01:59:09



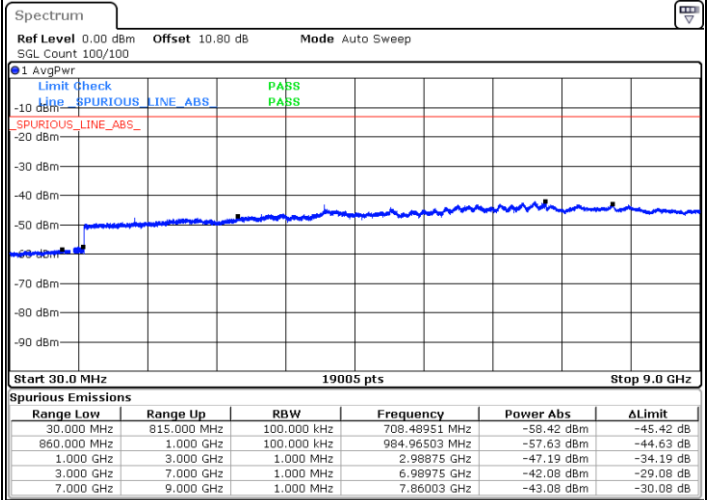
## LTE Band 5 / 5MHz

## Lowest Channel / QPSK



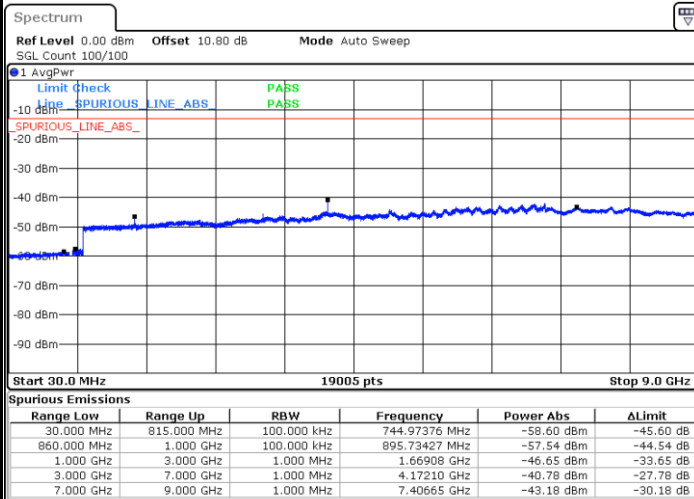
Date: 10 JUL 2017 02:07:18

## Lowest Channel / 16QAM



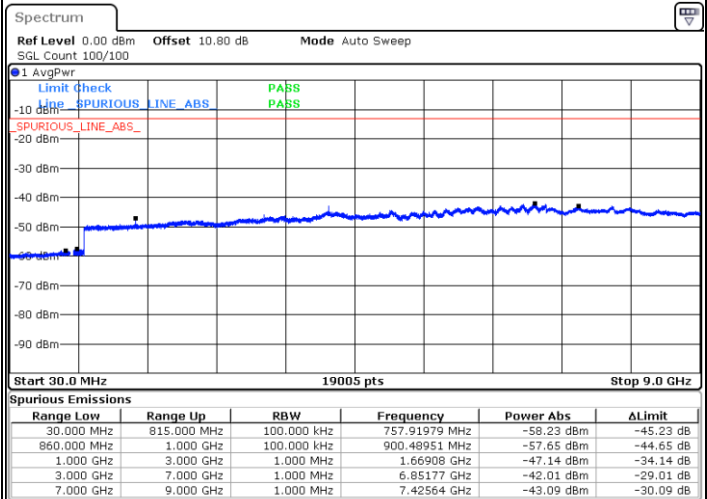
Date: 10 JUL 2017 02:08:12

## Middle Channel / QPSK



Date: 10 JUL 2017 02:09:45

## Middle Channel / 16QAM

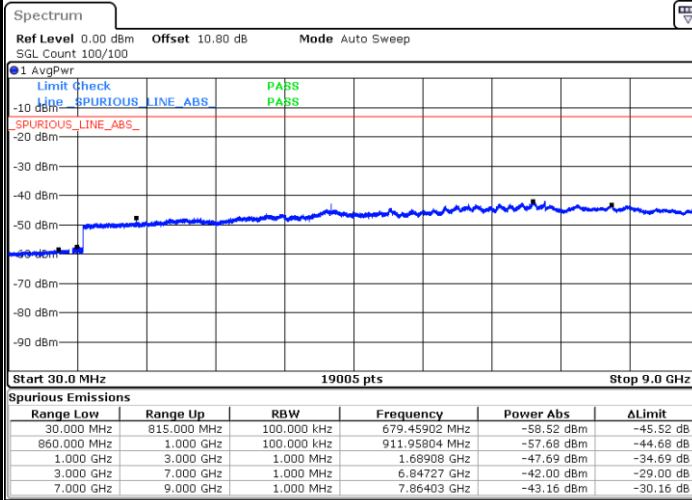


Date: 10 JUL 2017 02:10:39



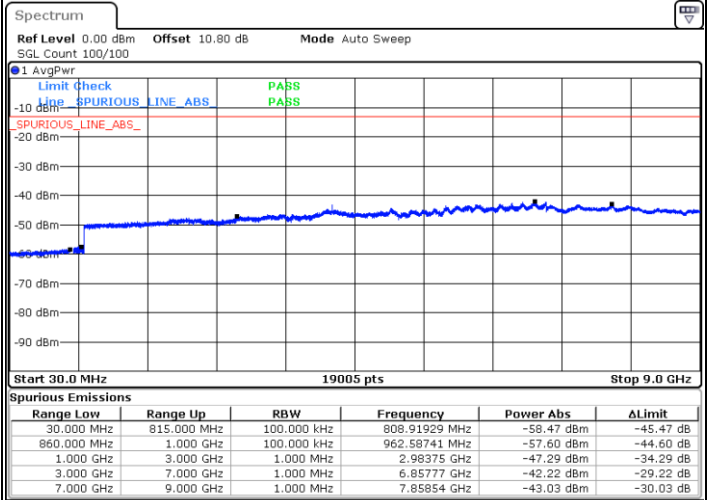
## LTE Band 5 / 5MHz

## Highest Channel / QPSK



Date: 10 JUL 2017 02:18:48

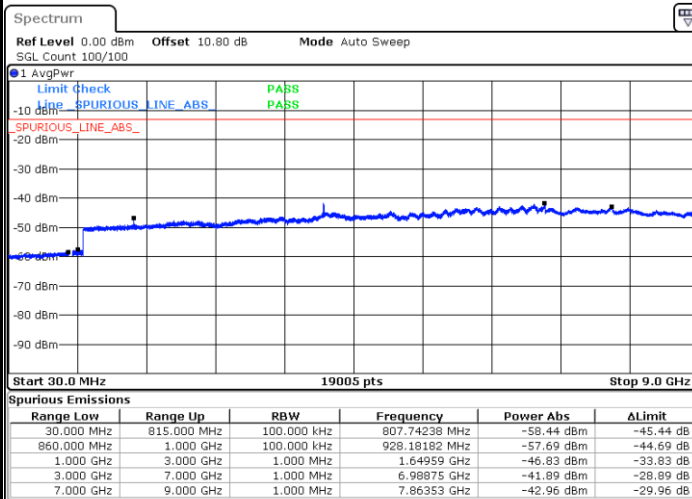
## Highest Channel / 16QAM



Date: 10 JUL 2017 02:19:42

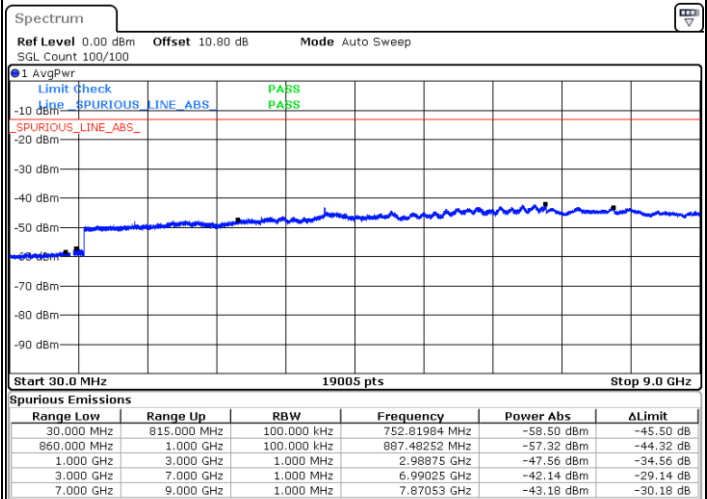
## LTE Band 5 / 10MHz

## Lowest Channel / QPSK



Date: 10 JUL 2017 02:27:51

## Lowest Channel / 16QAM

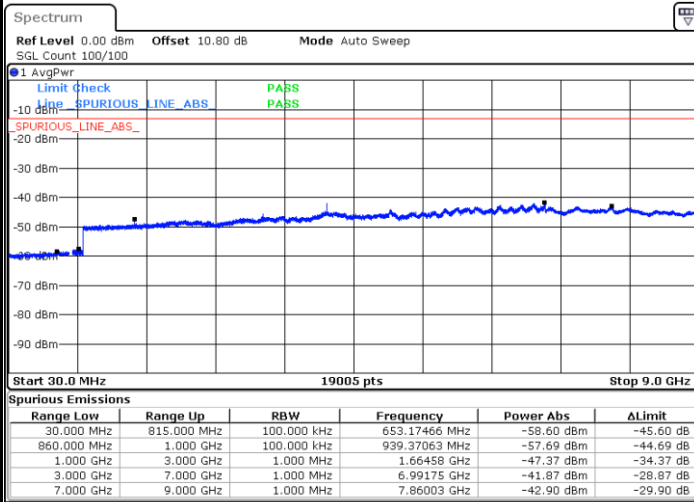


Date: 10 JUL 2017 02:28:44



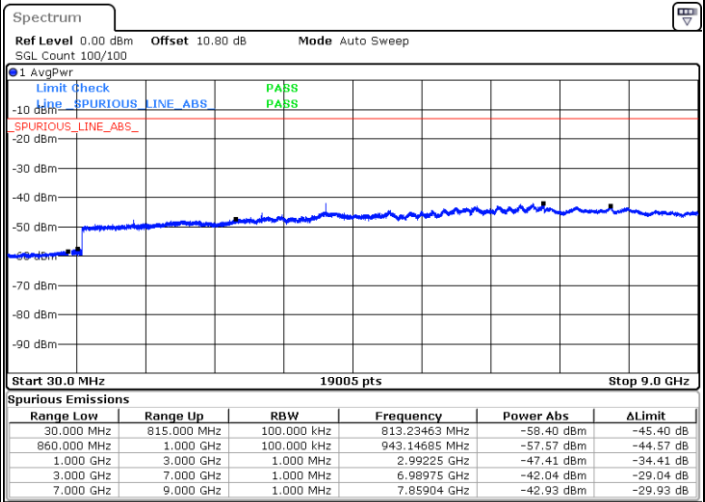
## LTE Band 5 / 10MHz

## Middle Channel / QPSK



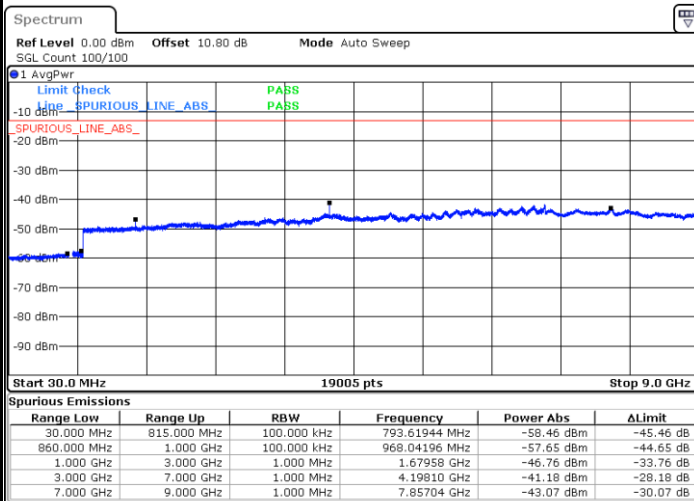
Date: 10 JUL 2017 02:30:18

## Middle Channel / 16QAM



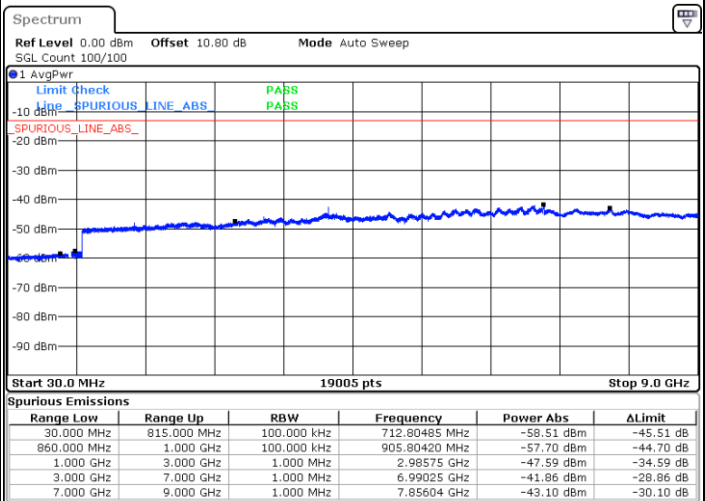
Date: 10 JUL 2017 02:31:12

## Highest Channel / QPSK



Date: 10 JUL 2017 02:39:21

## Highest Channel / 16QAM



Date: 10 JUL 2017 02:40:14

## 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    | 0.0004                             | PASS   |
| 40               | Normal Voltage    | 0.0001                             |        |
| 30               | Normal Voltage    | 0.0023                             |        |
| 20(Ref.)         | Normal Voltage    | 0.0000                             |        |
| 10               | Normal Voltage    | 0.0010                             |        |
| 0                | Normal Voltage    | 0.0020                             |        |
| -10              | Normal Voltage    | 0.0033                             |        |
| -20              | Normal Voltage    | 0.0050                             |        |
| -30              | Normal Voltage    | 0.0041                             |        |
| 20               | Maximum Voltage   | 0.0000                             |        |
| 20               | Normal Voltage    | 0.0000                             |        |
| 20               | Battery End Point | 0.0000                             |        |

**Note:**

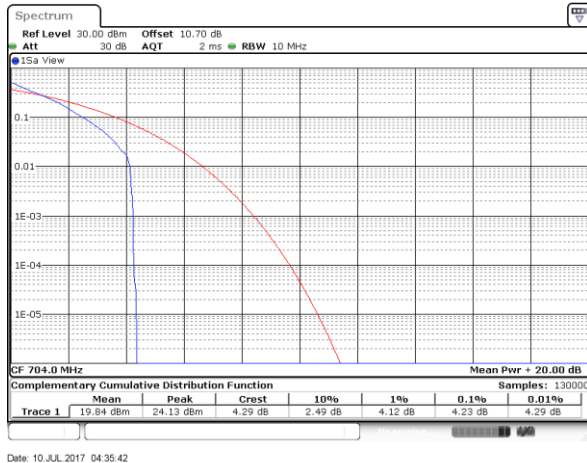
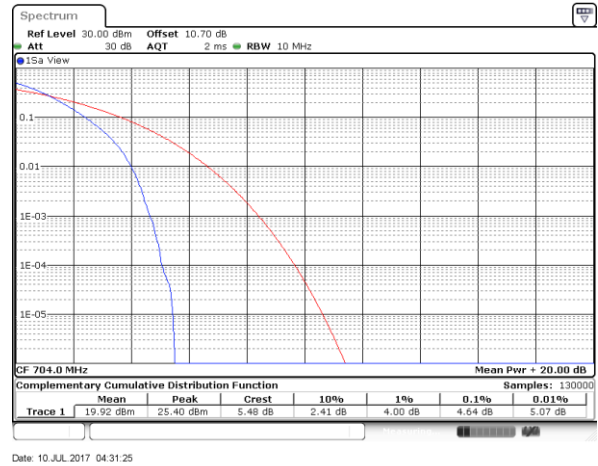
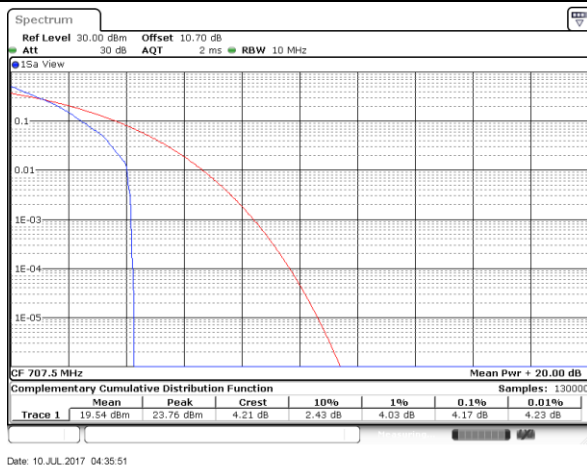
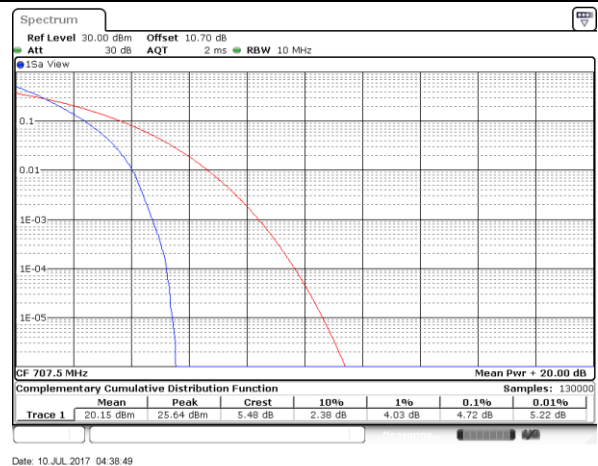
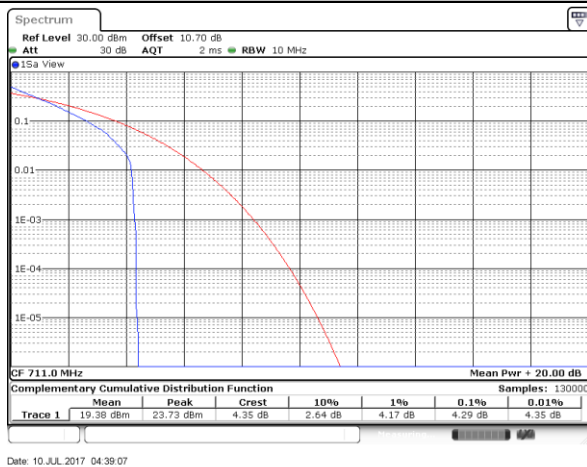
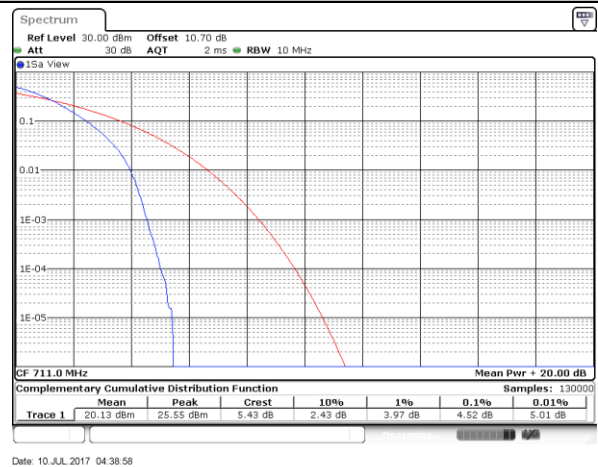
1. Normal Voltage =3.3 V. ; Battery End Point (BEP) =3.3 V. ; Maximum Voltage =3.3 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

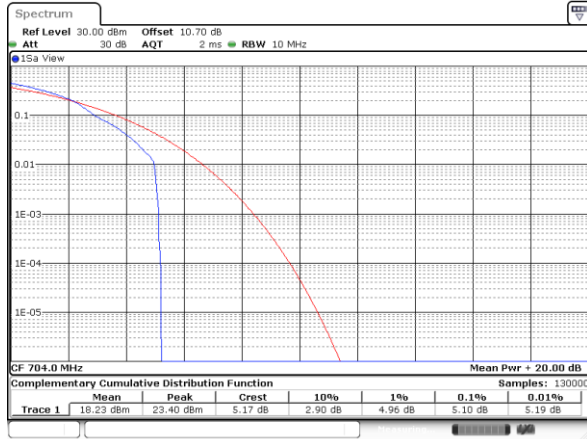


## LTE Band 12

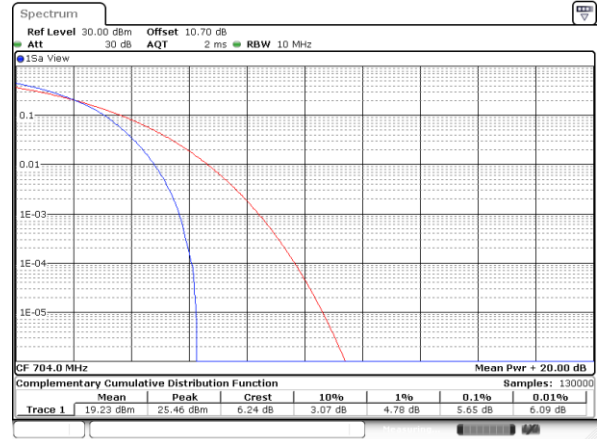
## Peak-to-Average Ratio

| Mode       | LTE Band 12 / 10MHz |         |       |         |             |
|------------|---------------------|---------|-------|---------|-------------|
| Mod.       | QPSK                |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | 4.23                | 4.64    | 5.1   | 5.65    | PASS        |
| Middle CH  | 4.17                | 4.72    | 5.25  | 5.62    |             |
| Highest CH | 4.29                | 4.52    | 4.93  | 5.65    |             |

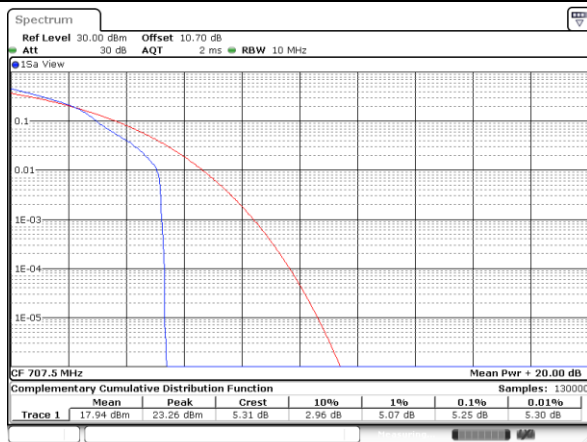
**LTE Band 12 / 10MHz / QPSK**
**Lowest Channel / 1RB**

**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**


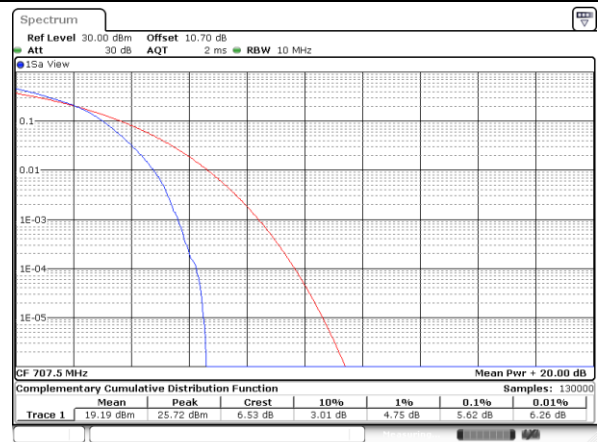
Date: 10 JUL 2017 04:29:10

**Lowest Channel / Full RB**


Date: 10 JUL 2017 04:19:18

**Middle Channel / 1RB**


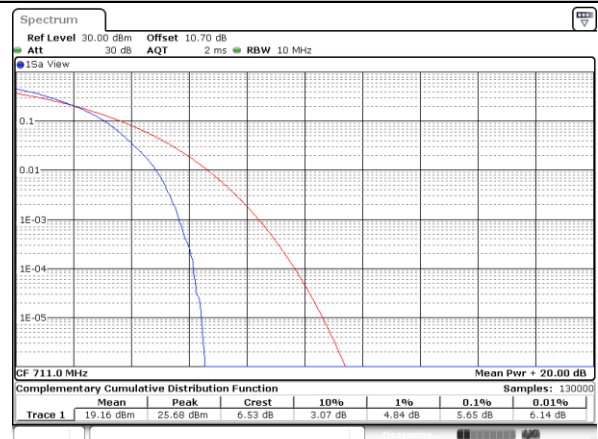
Date: 10 JUL 2017 04:29:21

**Middle Channel / Full RB**


Date: 10 JUL 2017 04:29:29

**Highest Channel / 1RB**


Date: 10 JUL 2017 04:31:15

**Highest Channel / Full RB**


Date: 10 JUL 2017 04:31:06



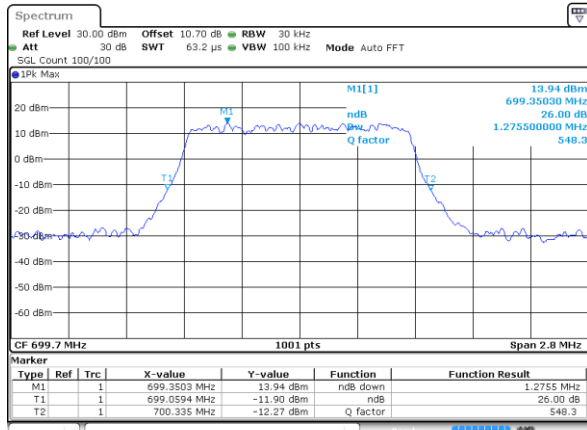
26dB Bandwidth

| 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  | 1.28                       | 1.28  | 3.06 | 3.01  | 4.92 | 4.94  | 9.77  | 9.95  | -     | -     | -     | -     |
| Middle CH  | 1.28                       | 1.29  | 2.99 | 3.00  | 4.86 | 4.89  | 10.13 | 9.83  | -     | -     | -     | -     |
| Highest CH | 1.29                       | 1.30  | 3.00 | 3.00  | 4.85 | 4.92  | 9.85  | 9.61  | -     | -     | -     | -     |



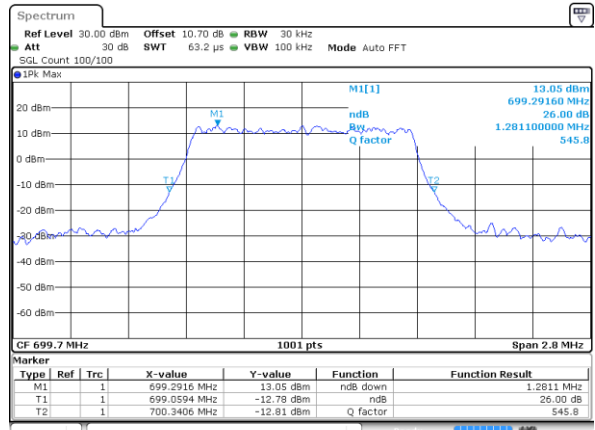
## LTE Band 12

## Lowest Channel / 1.4MHz / QPSK



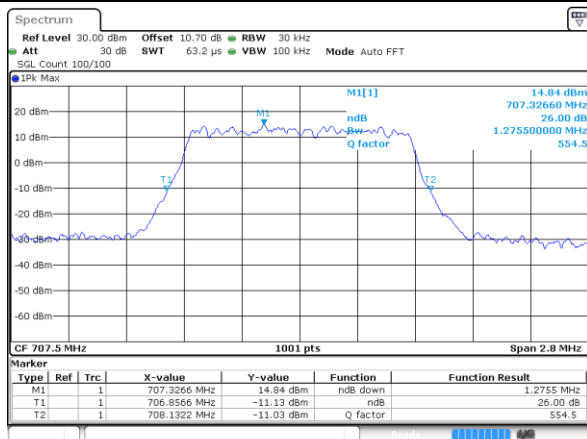
Date: 10 JUL 2017 04:00:49

## Lowest Channel / 1.4MHz / 16QAM



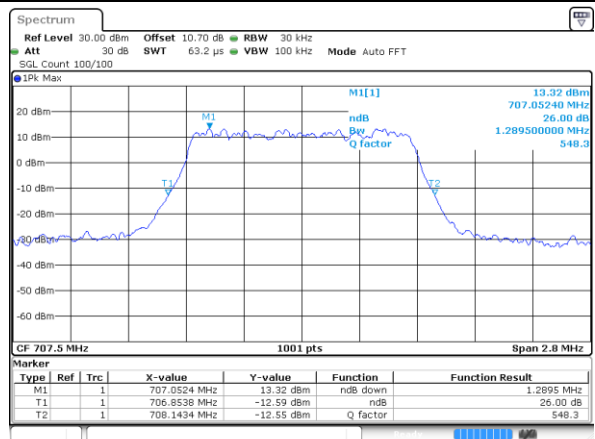
Date: 10 JUL 2017 04:00:39

## Middle Channel / 1.4MHz / QPSK



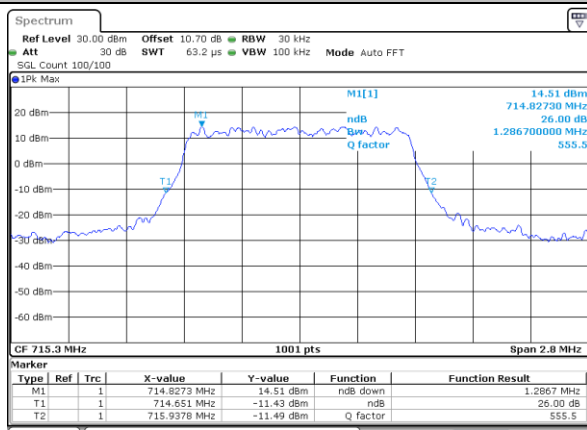
Date: 10 JUL 2017 04:07:41

## Middle Channel / 1.4MHz / 16QAM



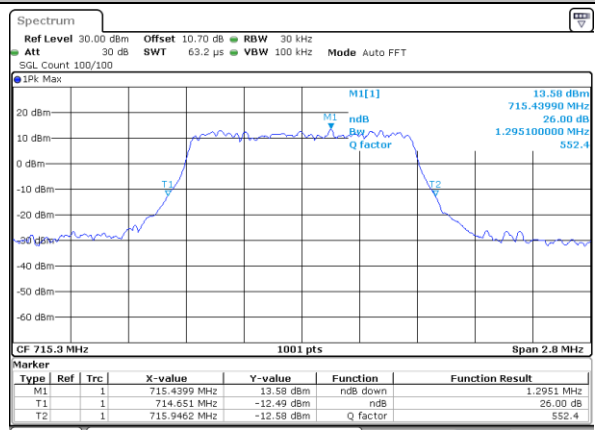
Date: 10 JUL 2017 04:07:51

## Highest Channel / 1.4MHz / QPSK



Date: 10 JUL 2017 04:10:19

## Highest Channel / 1.4MHz / 16QAM

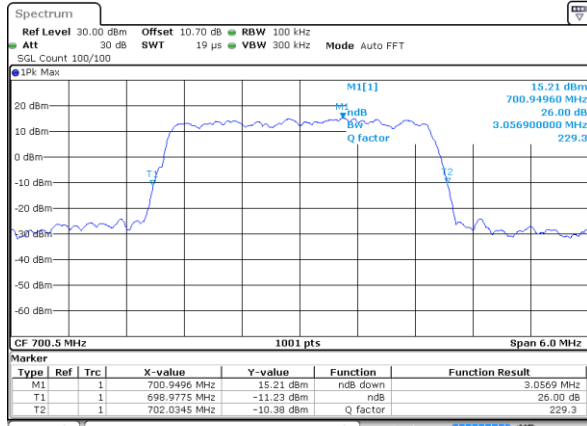


Date: 10 JUL 2017 04:10:09



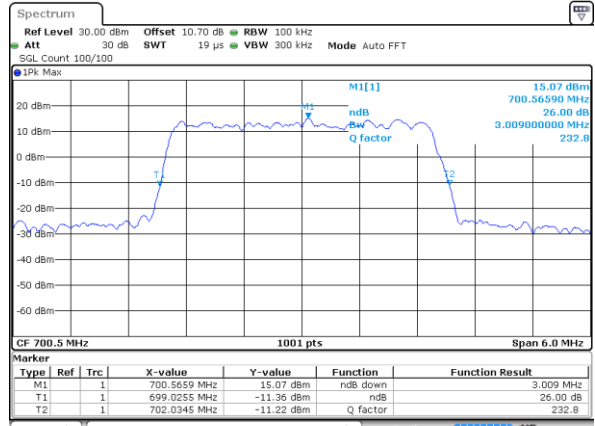
## LTE Band 12

## Lowest Channel / 3MHz / QPSK



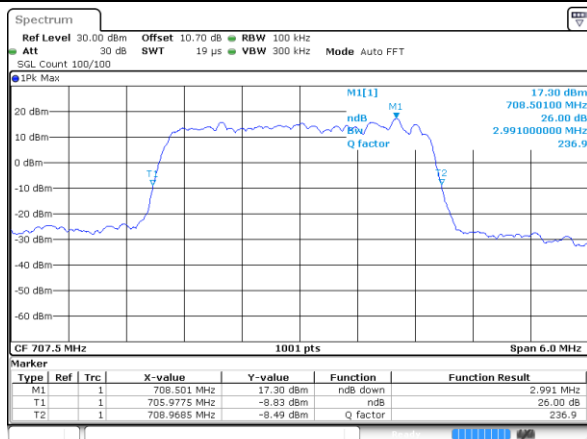
Date: 10 JUL 2017 03:09:46

## Lowest Channel / 3MHz / 16QAM



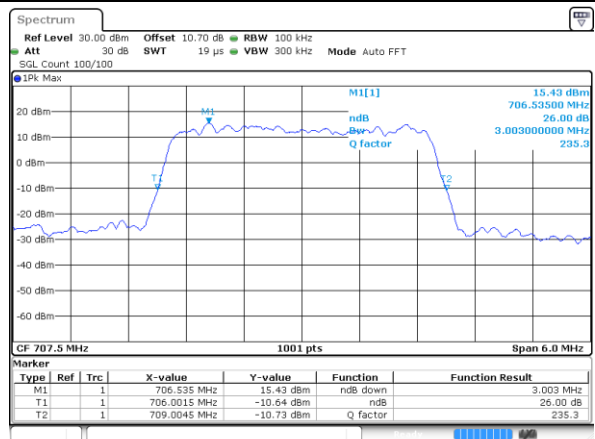
Date: 10 JUL 2017 03:09:36

## Middle Channel / 3MHz / QPSK



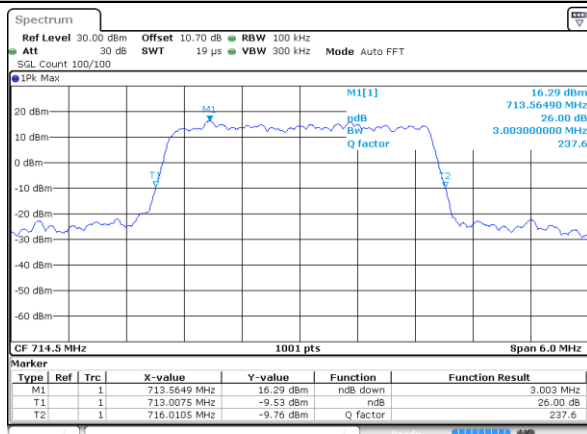
Date: 10 JUL 2017 03:16:38

## Middle Channel / 3MHz / 16QAM



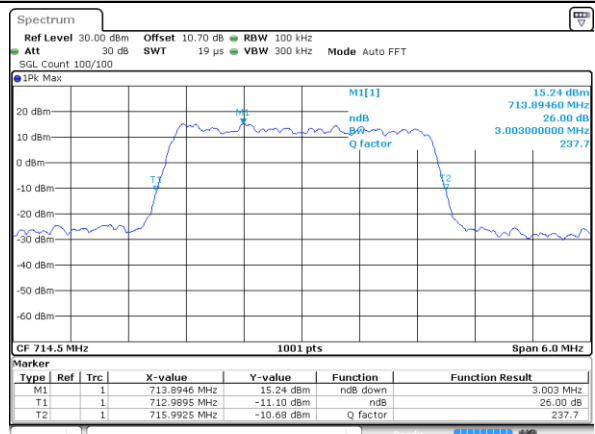
Date: 10 JUL 2017 03:16:48

## Highest Channel / 3MHz / QPSK



Date: 10 JUL 2017 03:19:16

## Highest Channel / 3MHz / 16QAM

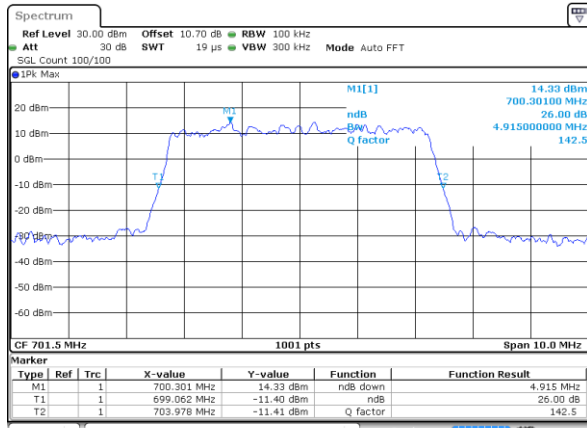


Date: 10 JUL 2017 03:19:06

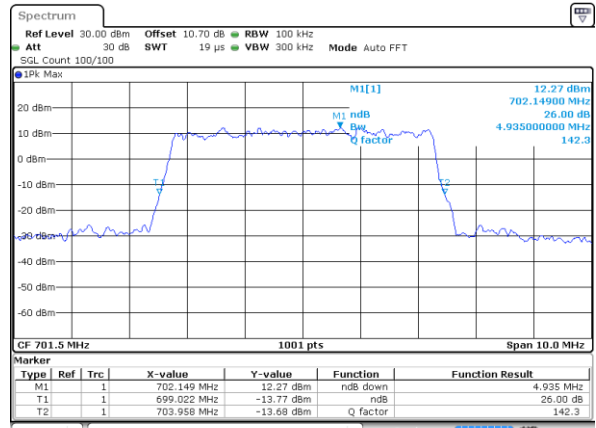


## LTE Band 12

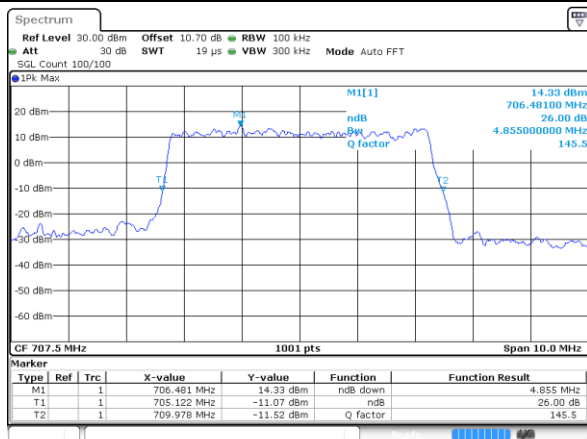
## Lowest Channel / 5MHz / QPSK



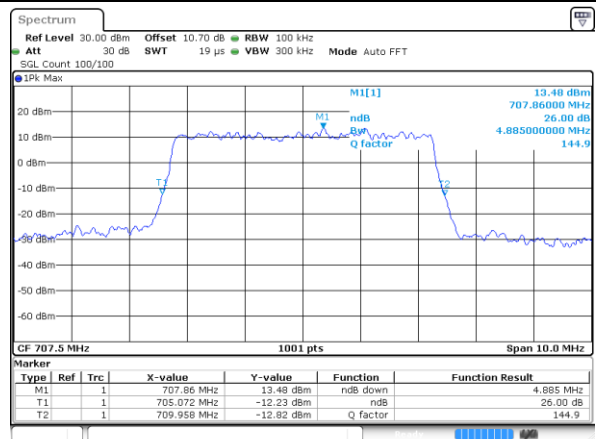
## Lowest Channel / 5MHz / 16QAM



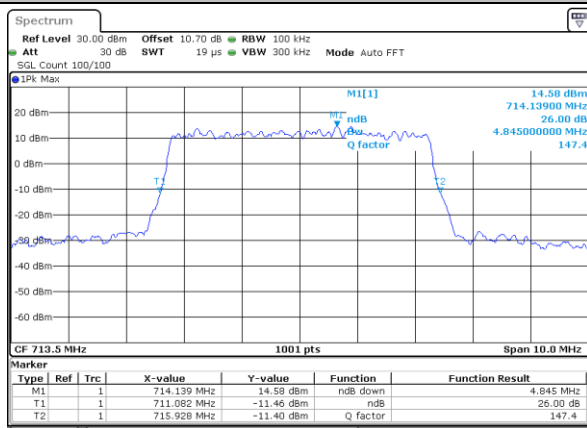
## Middle Channel / 5MHz / QPSK



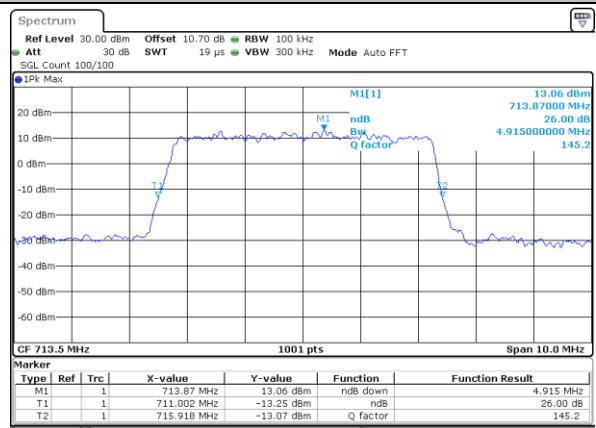
## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



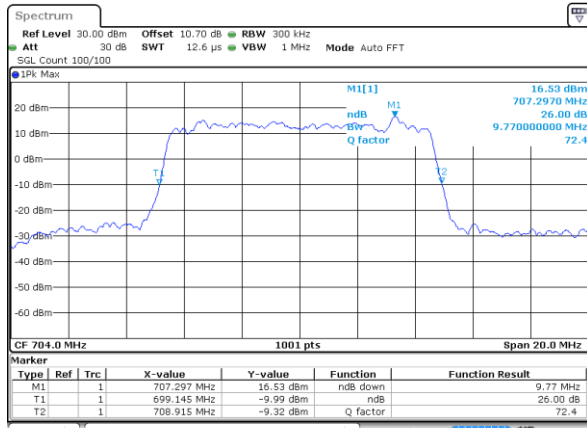
## Highest Channel / 5MHz / 16QAM



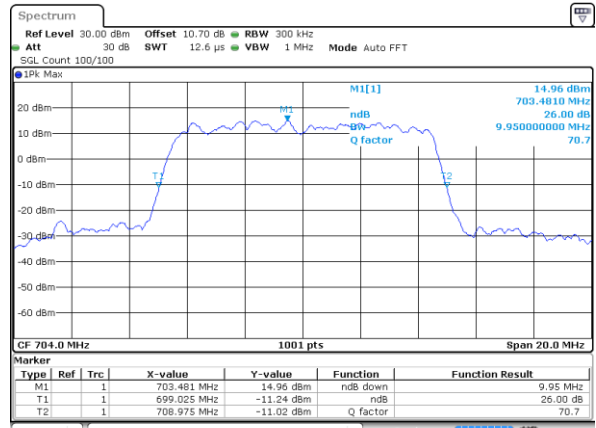


## LTE Band 12

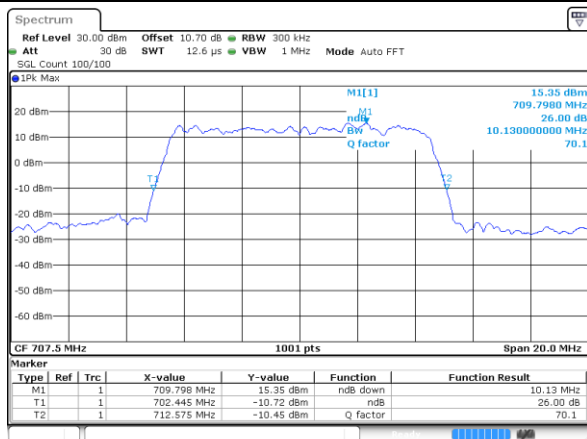
## Lowest Channel / 10MHz / QPSK



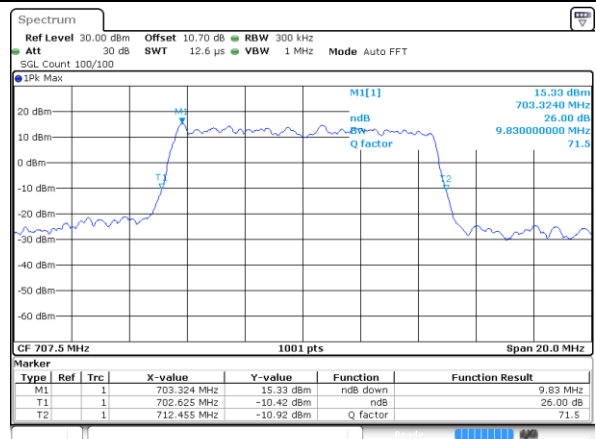
## Lowest Channel / 10MHz / 16QAM



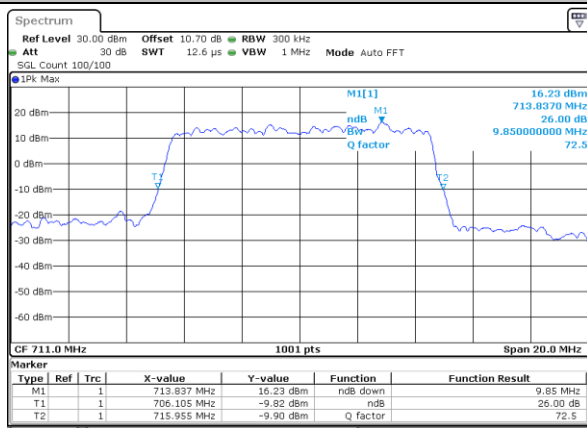
## Middle Channel / 10MHz / QPSK



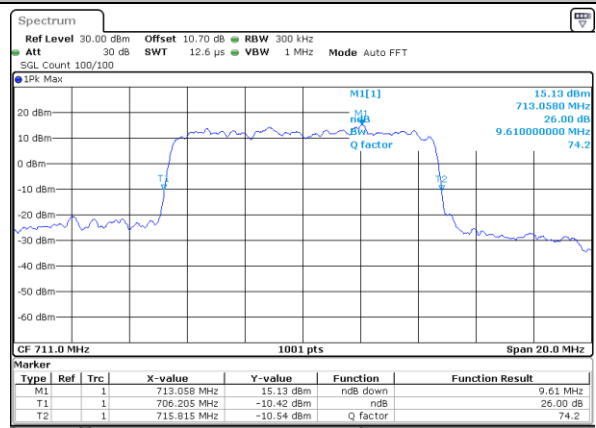
## Middle Channel / 10MHz / 16QAM



## Highest Channel / 10MHz / QPSK



## Highest Channel / 10MHz / 16QAM





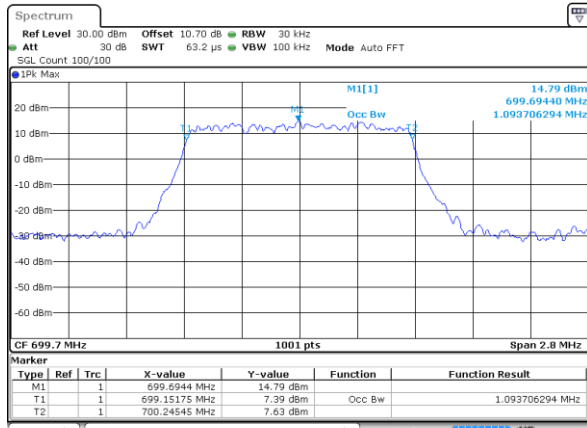
## Occupied Bandwidth

| Mode       | LTE Band 12 : 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                      | 1.1   | 2.71 | 2.7   | 4.51 | 4.49  | 8.99  | 8.97  | -     | -     | -     | -     |
| Middle CH  | 1.09                      | 1.1   | 2.71 | 2.72  | 4.49 | 4.5   | 9.03  | 9.03  | -     | -     | -     | -     |
| Highest CH | 1.09                      | 1.1   | 2.71 | 2.73  | 4.52 | 4.51  | 8.97  | 8.97  | -     | -     | -     | -     |

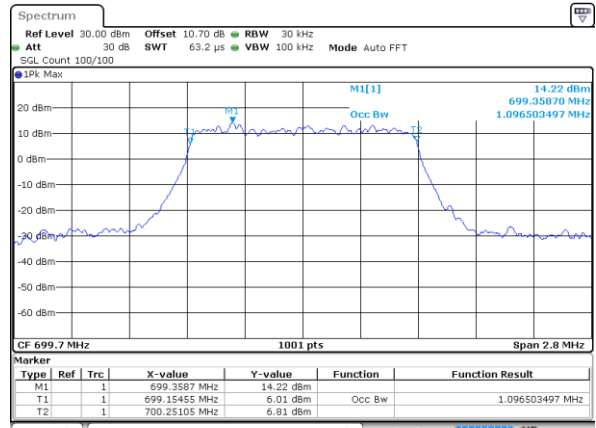


## LTE Band 12

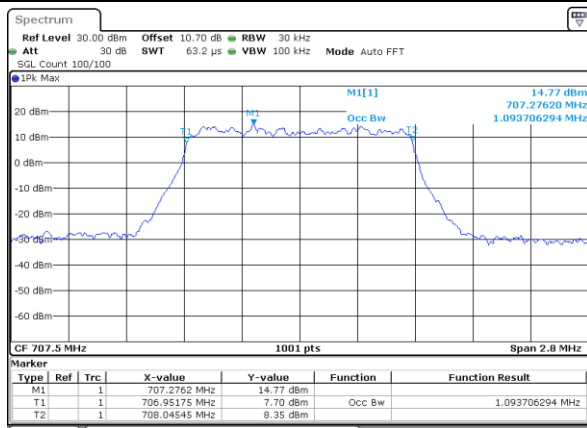
## Lowest Channel / 1.4MHz / QPSK



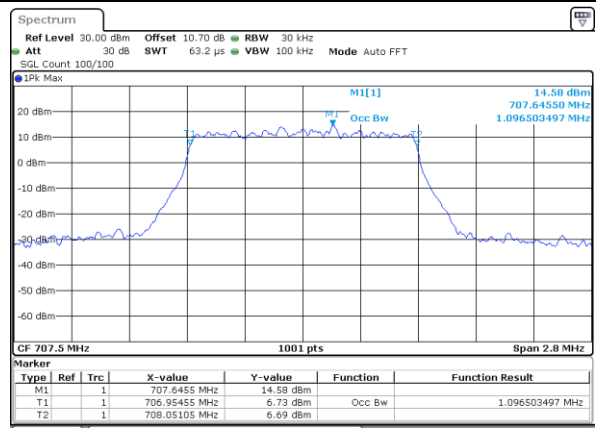
## Lowest Channel / 1.4MHz / 16QAM



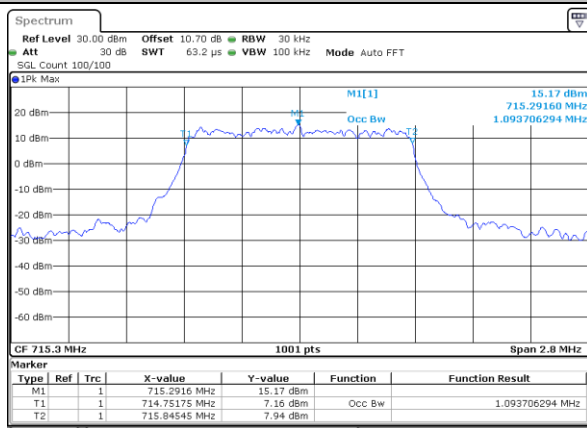
## Middle Channel / 1.4MHz / QPSK



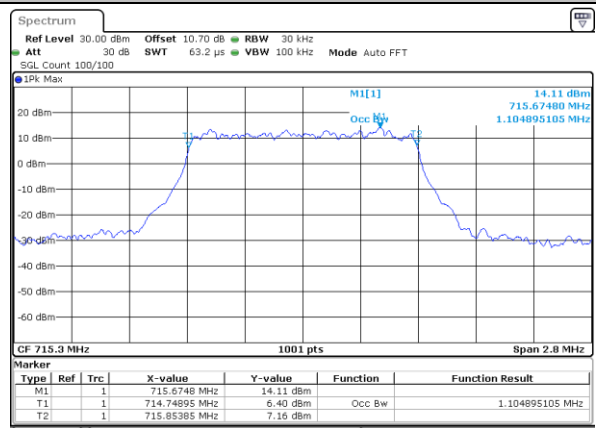
## Middle Channel / 1.4MHz / 16QAM



## Highest Channel / 1.4MHz / QPSK



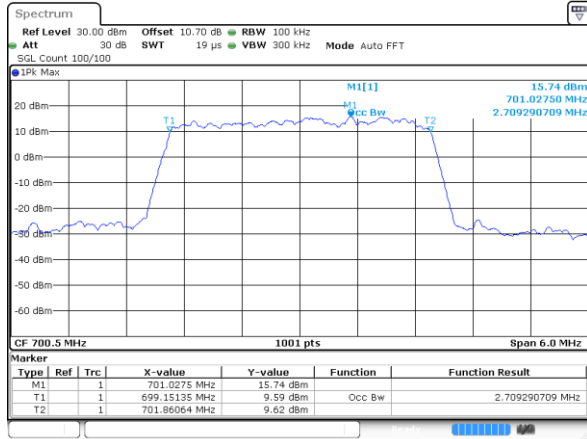
## Highest Channel / 1.4MHz / 16QAM



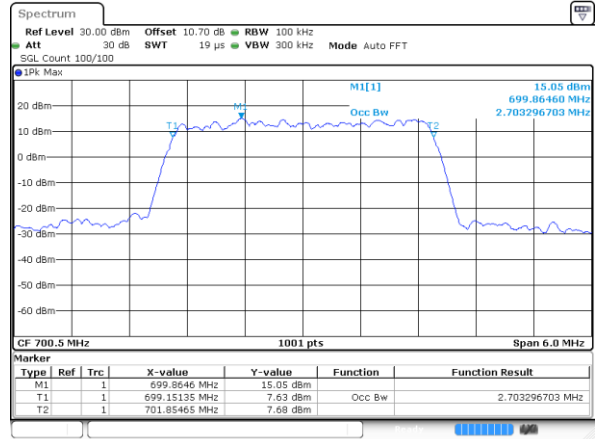


## LTE Band 12

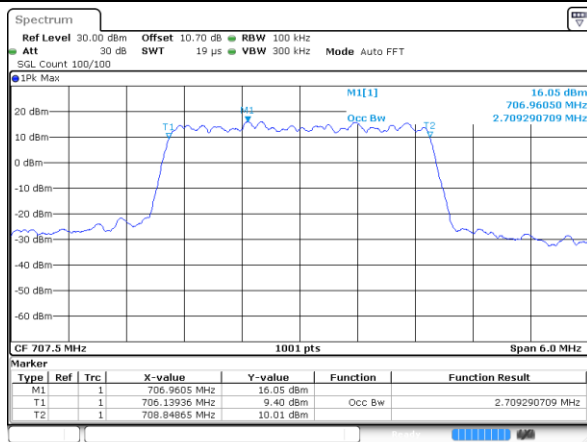
## Lowest Channel / 3MHz / QPSK



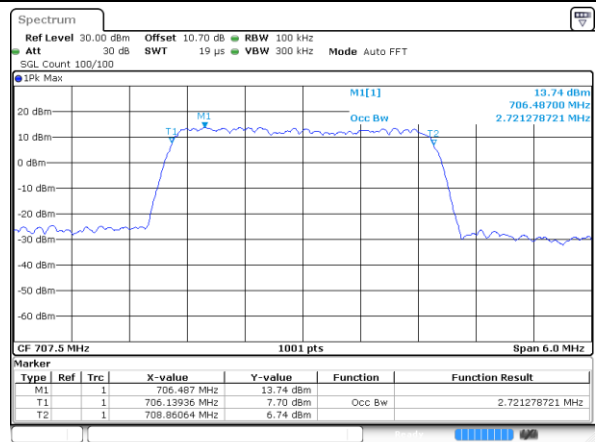
## Lowest Channel / 3MHz / 16QAM



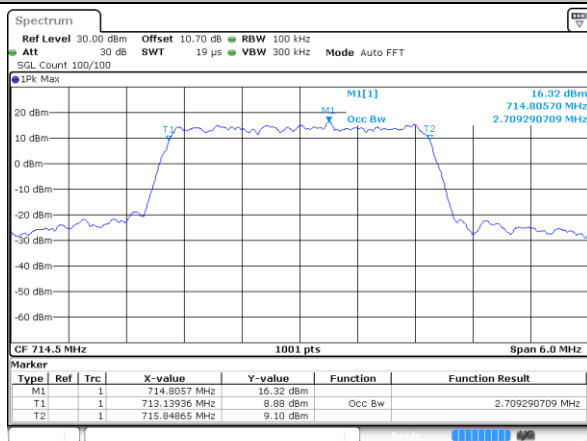
## Middle Channel / 3MHz / QPSK



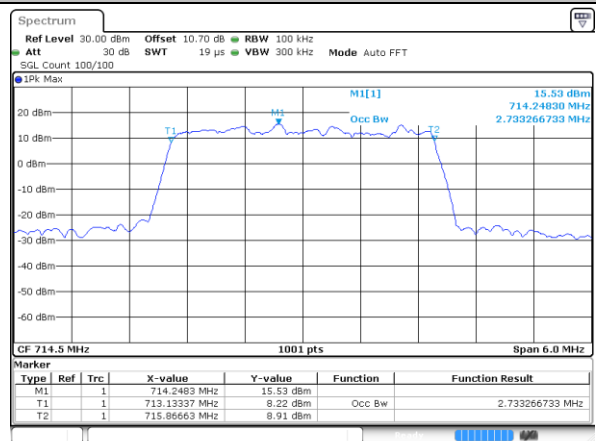
## Middle Channel / 3MHz / 16QAM



## Highest Channel / 3MHz / QPSK



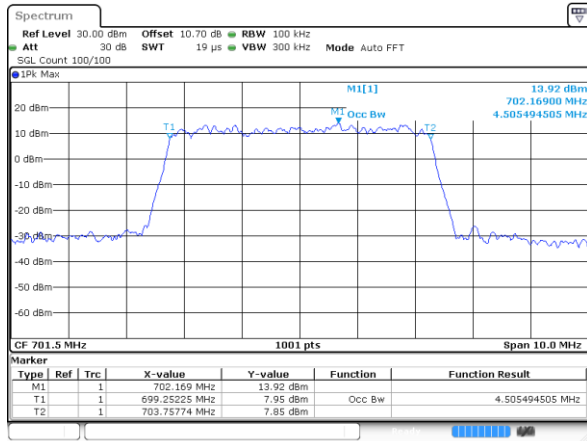
## Highest Channel / 3MHz / 16QAM



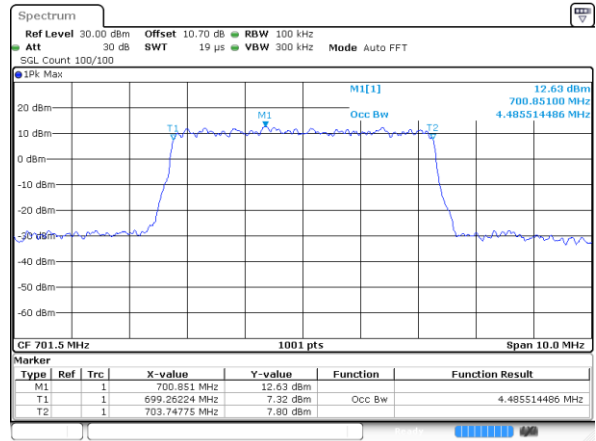


## LTE Band 12

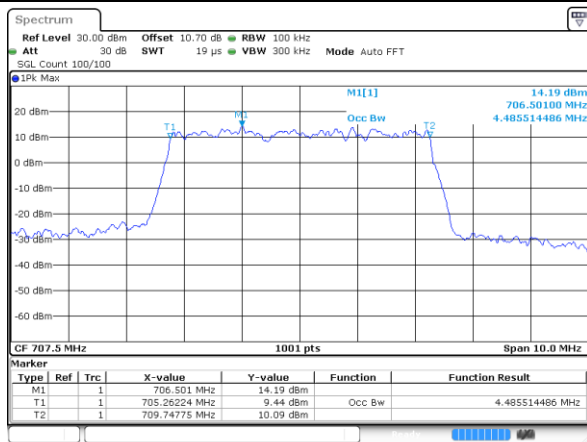
## Lowest Channel / 5MHz / QPSK



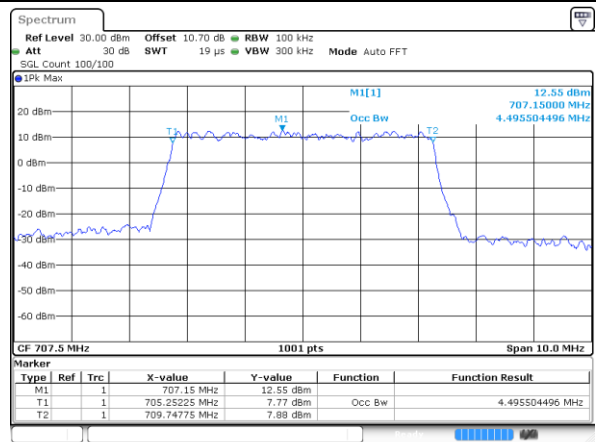
## Lowest Channel / 5MHz / 16QAM



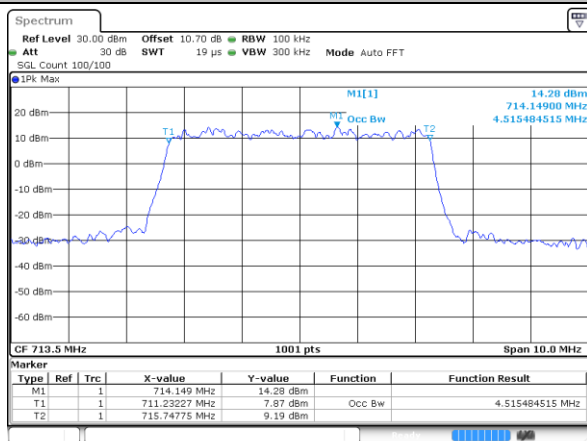
## Middle Channel / 5MHz / QPSK



## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



## Highest Channel / 5MHz / 16QAM

