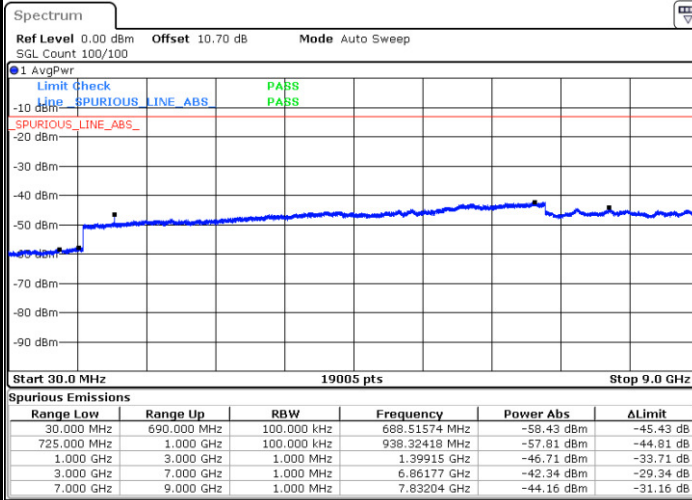




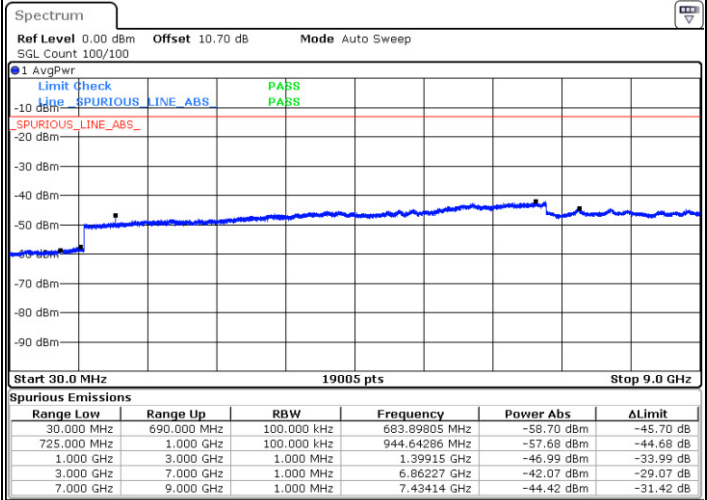
## LTE Band 12 / 5MHz

## Lowest Channel / QPSK



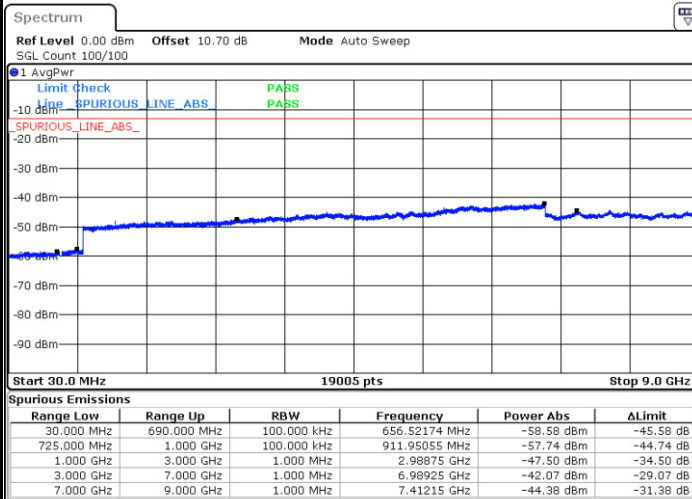
Date: 13 FEB 2018 17:31:56

## Lowest Channel / 16QAM



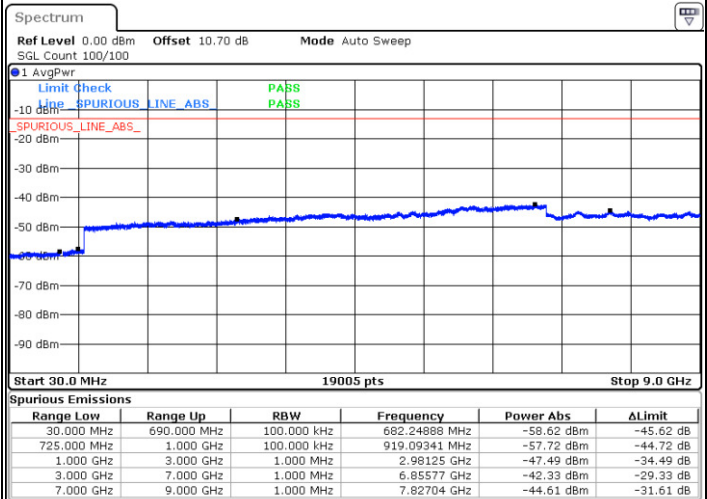
Date: 13 FEB 2018 17:32:50

## Middle Channel / QPSK



Date: 13 FEB 2018 17:35:17

## Middle Channel / 16QAM

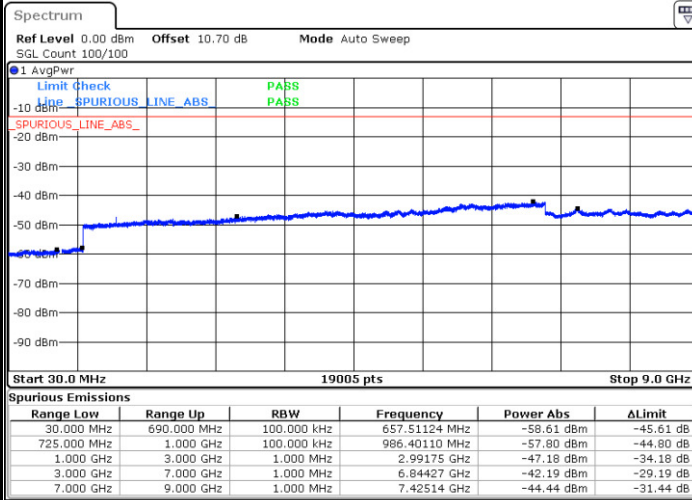


Date: 13 FEB 2018 17:34:23



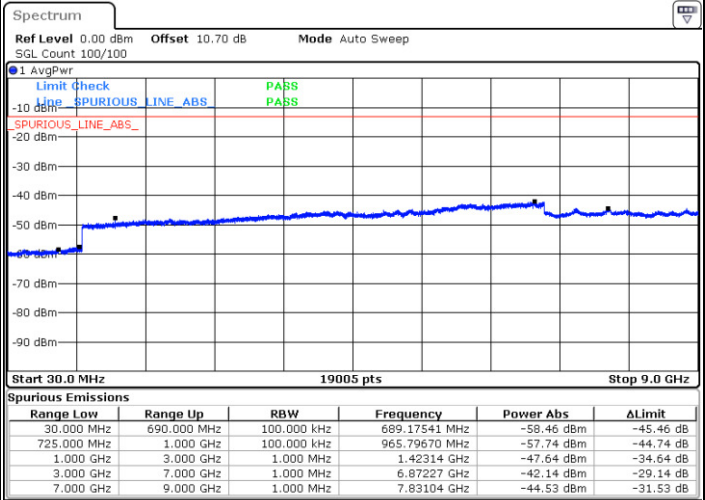
## LTE Band 12 / 5MHz

## Highest Channel / QPSK



Date: 13 FEB 2018 17:42:13

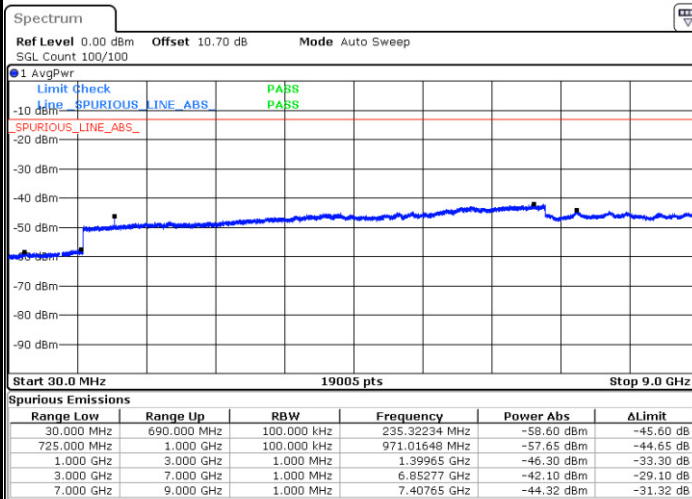
## Highest Channel / 16QAM



Date: 13 FEB 2018 17:41:19

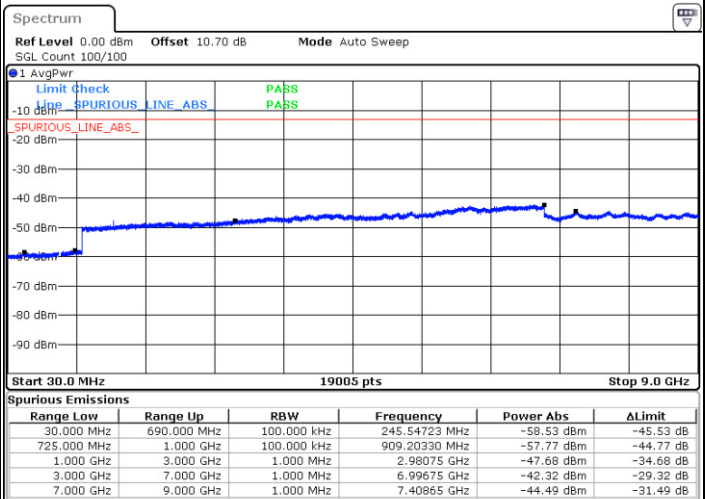
## LTE Band 12 / 10MHz

## Lowest Channel / QPSK



Date: 13 FEB 2018 17:48:15

## Lowest Channel / 16QAM

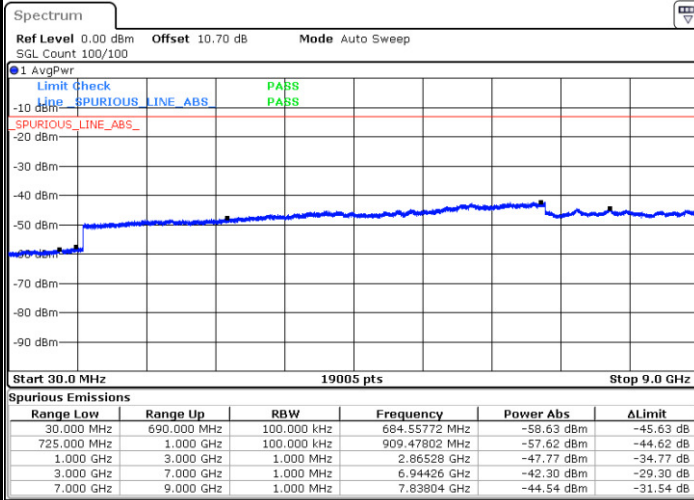


Date: 13 FEB 2018 17:49:08



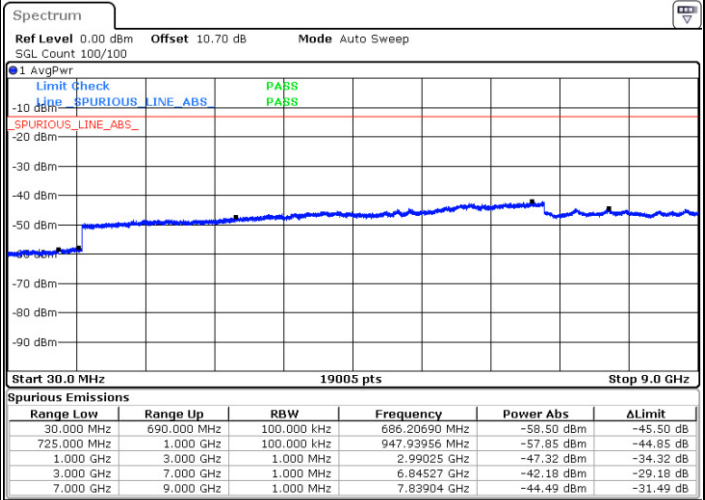
## LTE Band 12 / 10MHz

## Middle Channel / QPSK



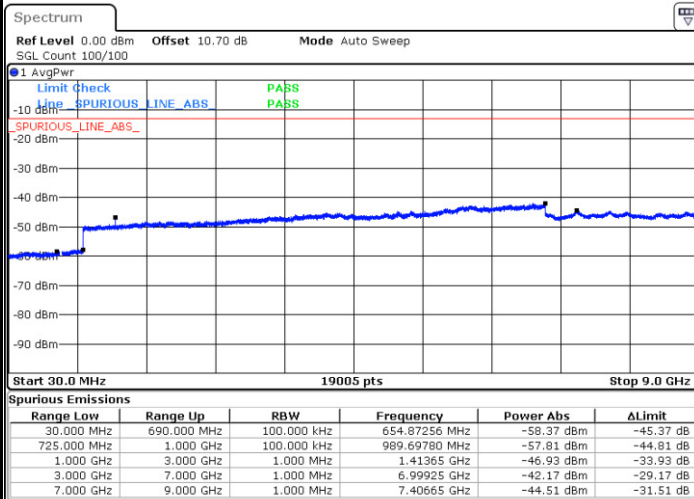
Date: 13 FEB 2018 17:51:35

## Middle Channel / 16QAM



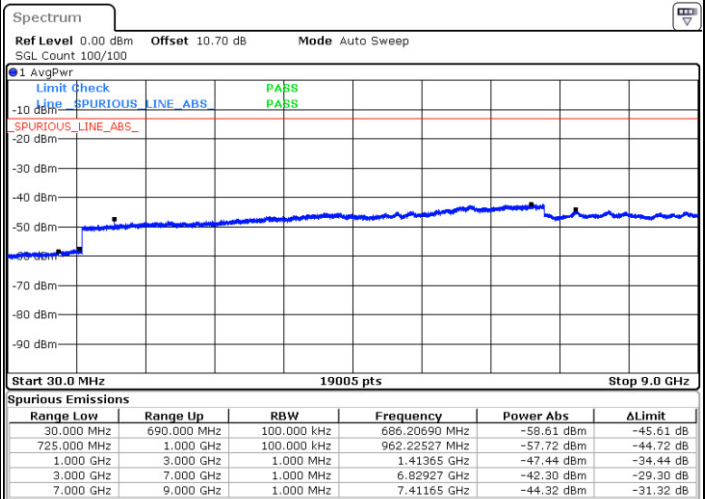
Date: 13 FEB 2018 17:50:41

## Highest Channel / QPSK



Date: 13 FEB 2018 17:57:37

## Highest Channel / 16QAM

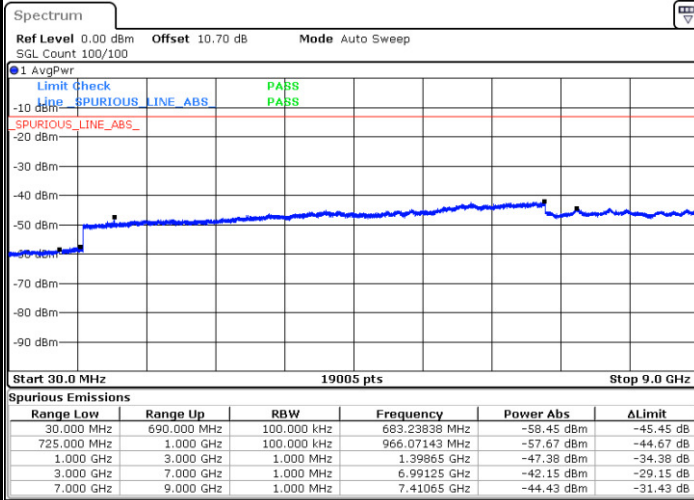


Date: 13 FEB 2018 17:58:31



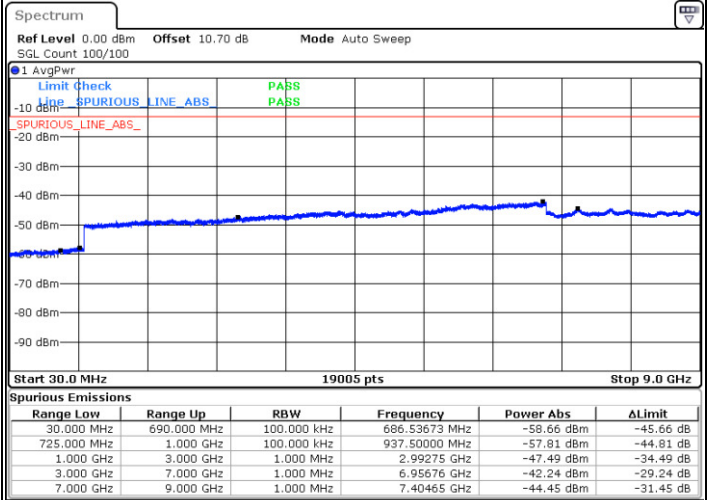
## LTE Band 12 / 1.4MHz

## Lowest Channel / 64QAM



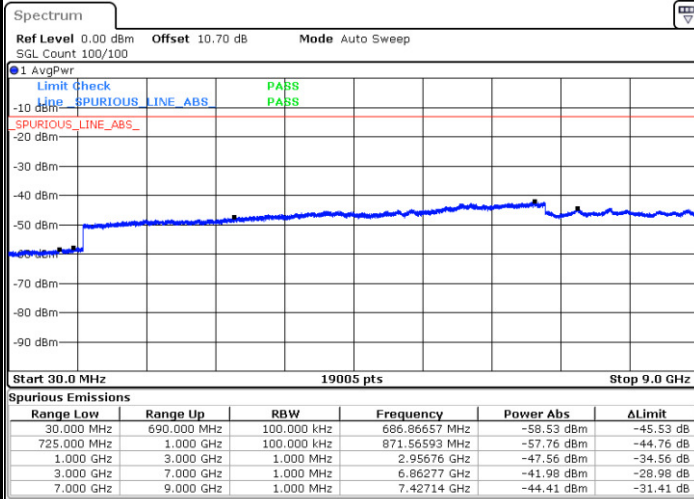
Date: 14 FEB 2018 12:25:00

## Middle Channel / 64QAM



Date: 14 FEB 2018 12:26:14

## Highest Channel / 64QAM

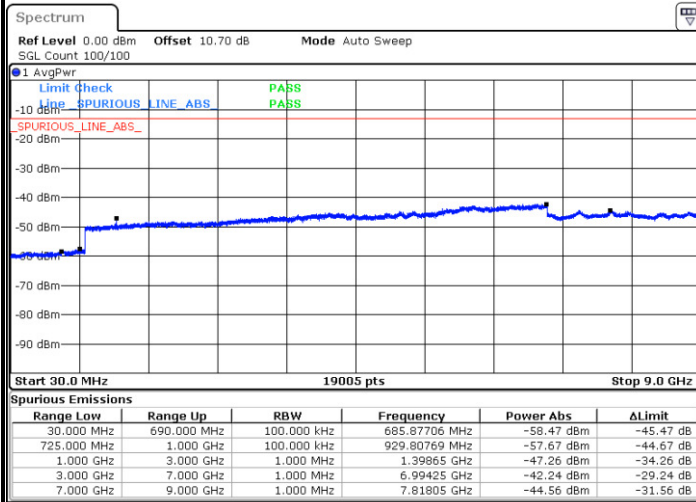


Date: 14 FEB 2018 12:29:42



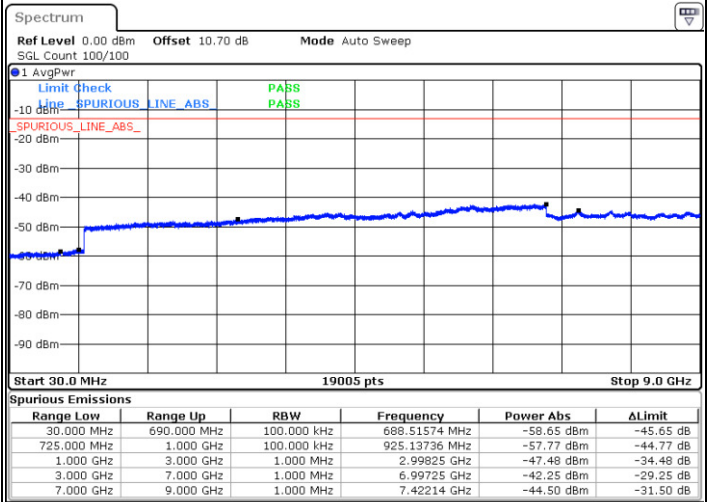
## LTE Band 12 / 3MHz

## Lowest Channel / 64QAM



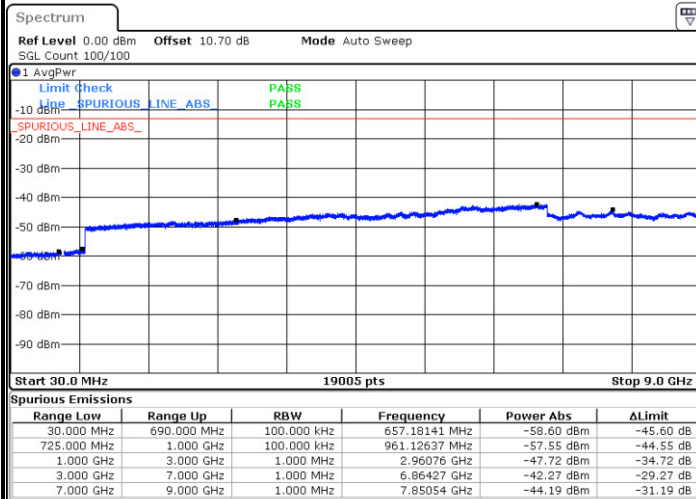
Date: 13 FEB 2018 18:50:55

## Middle Channel / 64QAM



Date: 13 FEB 2018 18:52:09

## Highest Channel / 64QAM

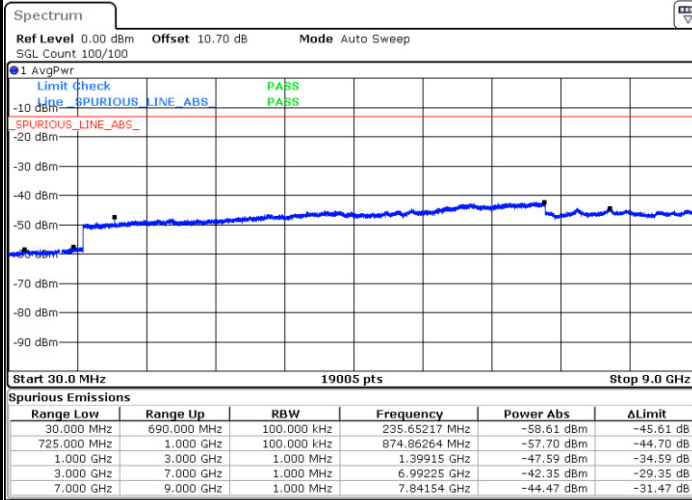


Date: 13 FEB 2018 18:55:37



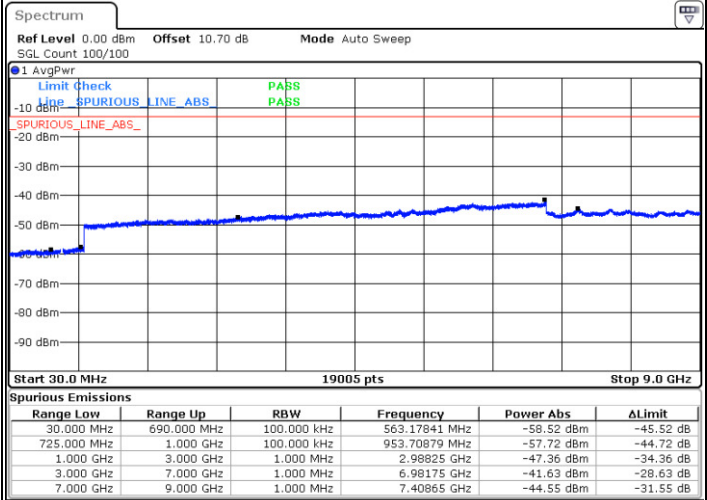
## LTE Band 12 / 5MHz

## Lowest Channel / 64QAM



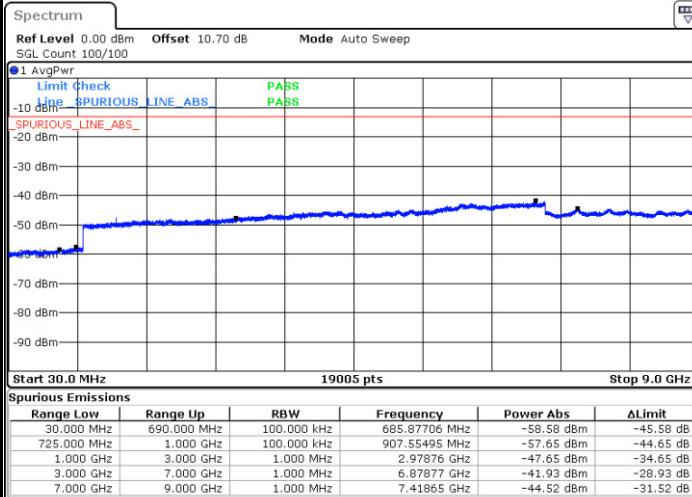
Date: 13 FEB 2018 18:59:05

## Middle Channel / 64QAM



Date: 13 FEB 2018 19:00:19

## Highest Channel / 64QAM

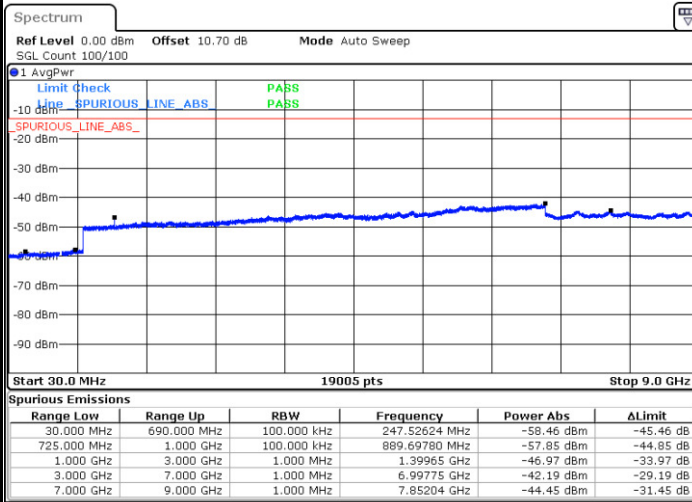


Date: 13 FEB 2018 19:03:47



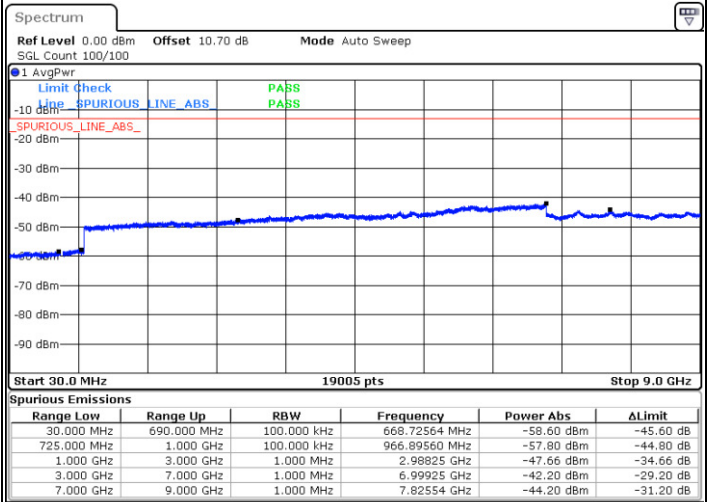
## LTE Band 12 / 10MHz

## Lowest Channel / 64QAM



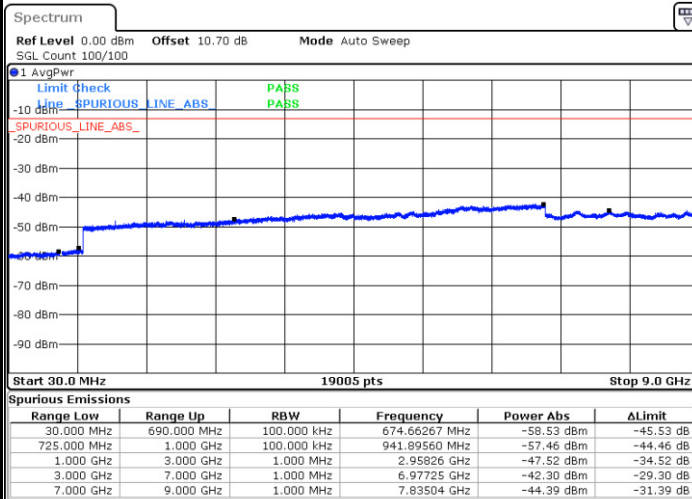
Date: 14 FEB 2018 12:11:56

## Middle Channel / 64QAM



Date: 14 FEB 2018 12:13:09

## Highest Channel / 64QAM



Date: 14 FEB 2018 12:16:37

## Frequency Stability

| Test Conditions  |                   | LTE Band 12 (QPSK) / Middle Channel | Limit   |
|------------------|-------------------|-------------------------------------|---------|
| Temperature (°C) | Voltage (Volt)    | BW 10MHz                            | Note 2. |
|                  |                   | Deviation (ppm)                     | Result  |
| 50               | Normal Voltage    | 0.0037                              | PASS    |
| 40               | Normal Voltage    | 0.0018                              |         |
| 30               | Normal Voltage    | 0.0069                              |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                              |         |
| 10               | Normal Voltage    | 0.0001                              |         |
| 0                | Normal Voltage    | 0.0114                              |         |
| -10              | Normal Voltage    | 0.0003                              |         |
| -20              | Normal Voltage    | 0.0041                              |         |
| -30              | Normal Voltage    | 0.0017                              |         |
| 20               | Maximum Voltage   | 0.0042                              |         |
| 20               | Normal Voltage    | 0.0000                              |         |
| 20               | Battery End Point | 0.0049                              |         |

**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 13

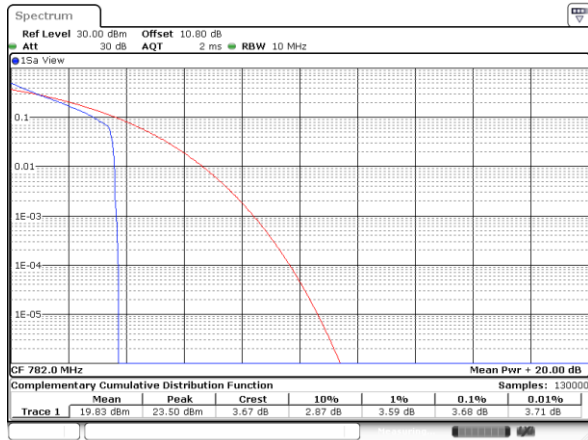
### Peak-to-Average Ratio

| Mode       | LTE Band 13 / 10MHz |         |       |         |             |
|------------|---------------------|---------|-------|---------|-------------|
| Mod.       | QPSK                |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | -                   | -       | -     | -       | PASS        |
| Middle CH  | 3.68                | 4.7     | 5.22  | 6.03    |             |
| Highest CH | -                   | -       | -     | -       |             |
| Mode       | LTE Band 13 / 10MHz |         |       |         |             |
| Mod.       | 64QAM               |         |       |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB |       |         | Result      |
| Lowest CH  | -                   | -       | -     | -       | PASS        |
| Middle CH  | 6.58                | 6.41    | -     | -       |             |
| Highest CH | -                   | -       | -     | -       |             |

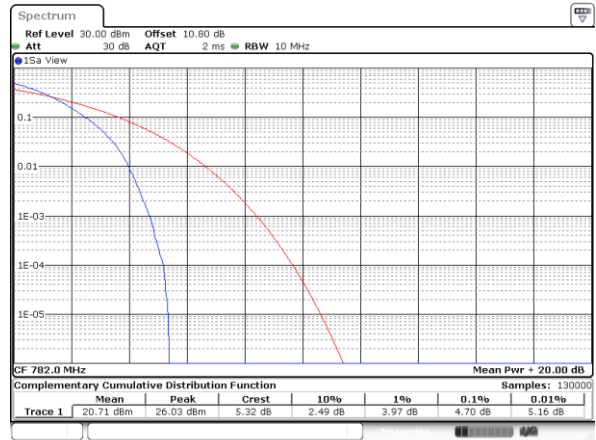


## LTE Band 13 / 10MHz / QPSK

## Middle Channel / 1RB

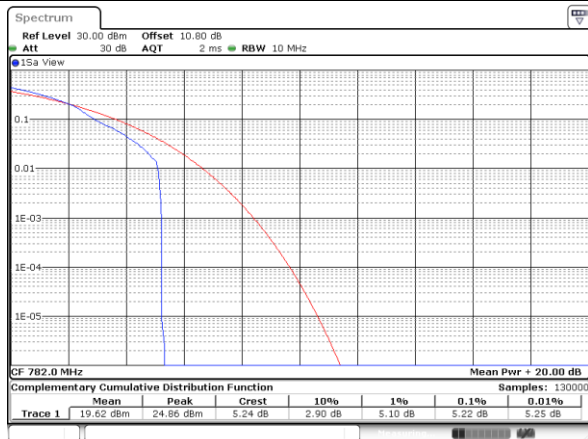


## Middle Channel / Full RB

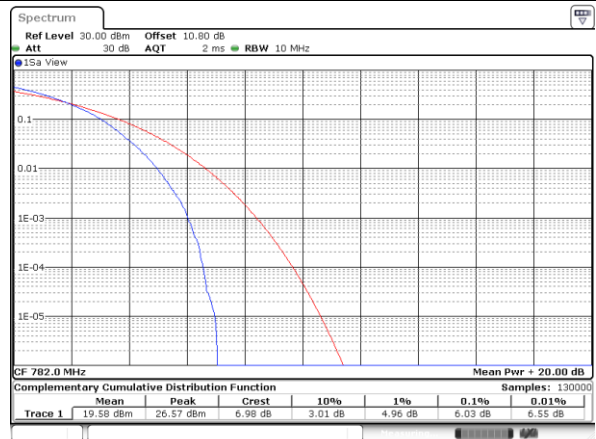


## LTE Band 13 / 10MHz / 16QAM

## Middle Channel / 1RB

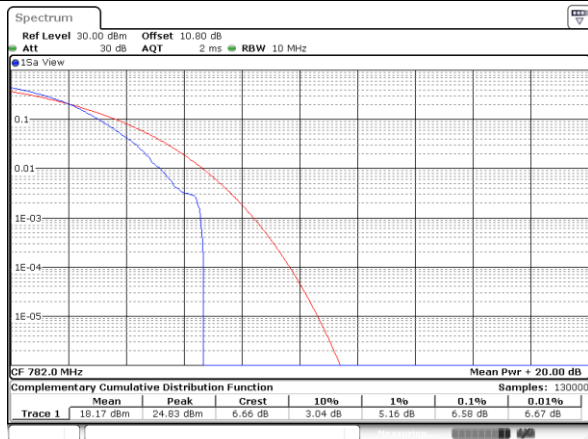


## Middle Channel / Full RB

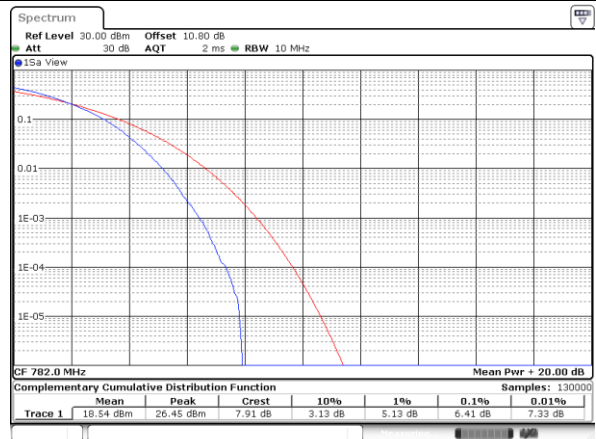


## LTE Band 13 / 10MHz / 64QAM

## Middle Channel / 1RB



## Middle Channel / Full RB



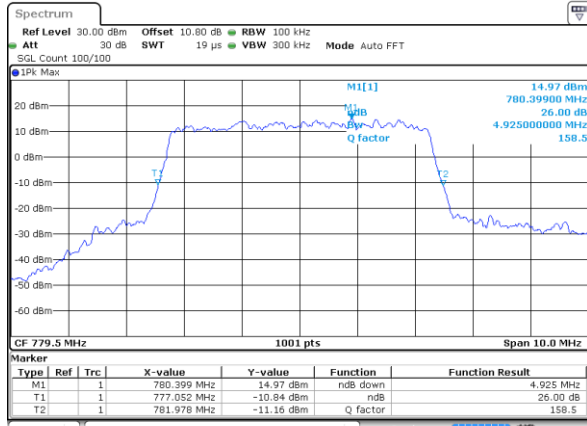
**26dB Bandwidth**

| Mode       | LTE Band 13 : 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  | 4.92  | -     | -     | -     | -     | -     | -     |
| Middle CH  | -                          | -     | -     | -     | 4.84  | 4.92  | 9.87  | 9.69  | -     | -     | -     | -     |
| Highest CH | -                          | -     | -     | -     | 4.95  | 4.89  | -     | -     | -     | -     | -     | -     |
| Mode       | LTE Band 13 : 26dB BW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
| BW         | 1.4MHz                     |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                      |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | -                          | -     | -     | -     | 4.92  | -     | -     | -     | -     | -     | -     | -     |
| Middle CH  | -                          | -     | -     | -     | 4.88  | -     | 9.71  | -     | -     | -     | -     | -     |
| Highest CH | -                          | -     | -     | -     | 4.90  | -     | -     | -     | -     | -     | -     | -     |

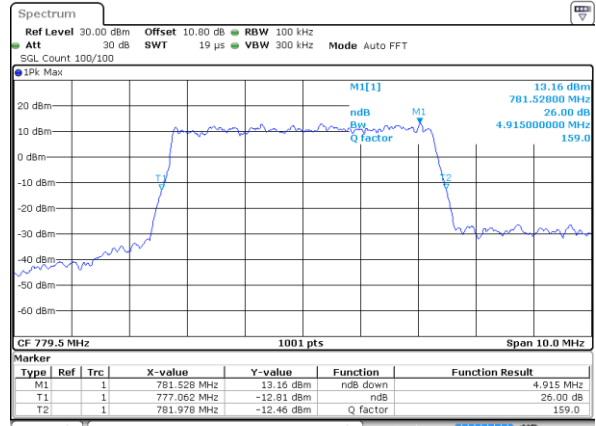


## LTE Band 13

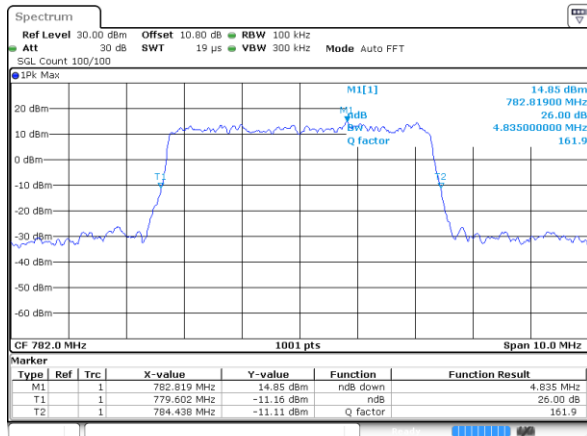
## Lowest Channel / 5MHz / QPSK



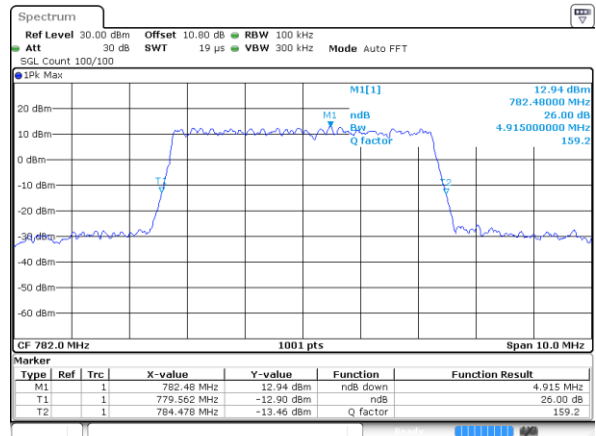
## Lowest Channel / 5MHz / 16QAM



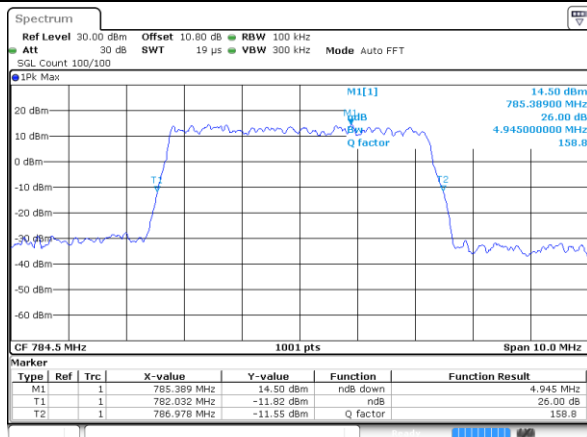
## Middle Channel / 5MHz / QPSK



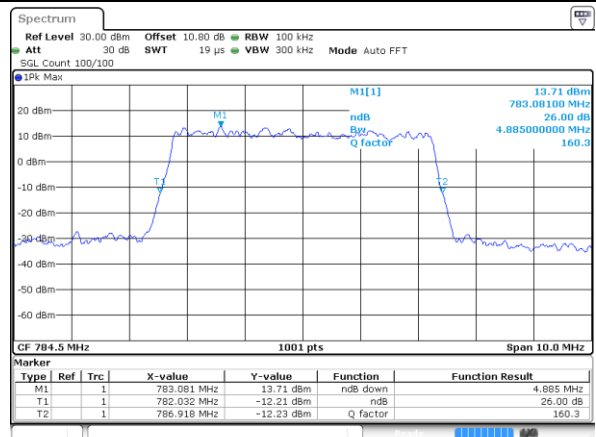
## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



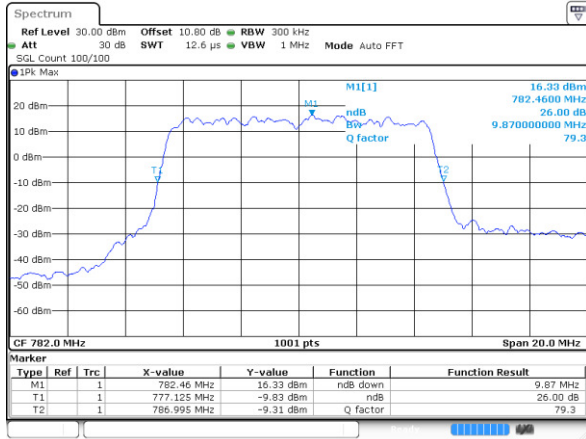
## Highest Channel / 5MHz / 16QAM





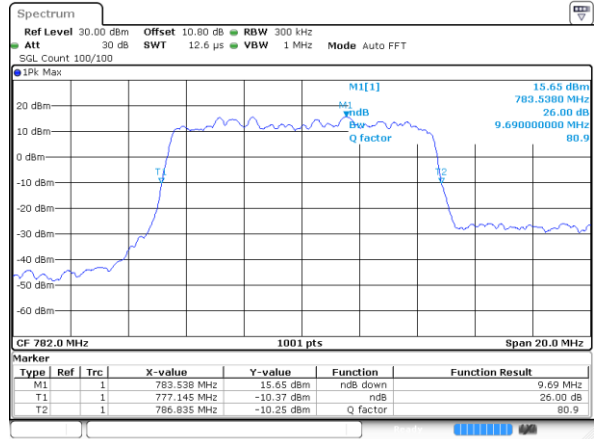
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 16 FEB 2018 13:17:09

Middle Channel / 10MHz / 16QAM

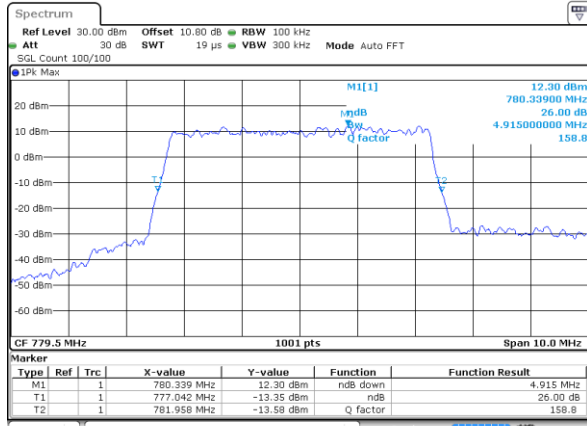


Date: 16 FEB 2018 13:16:59

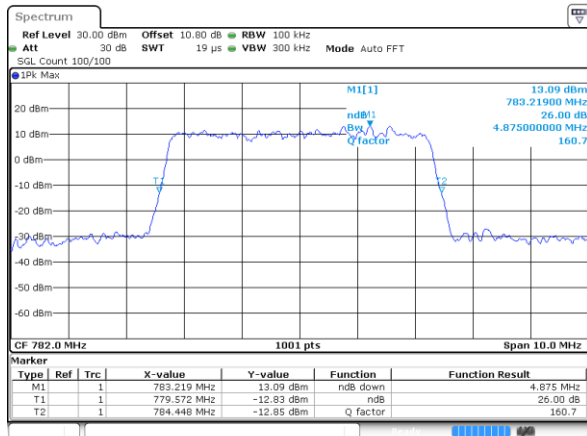


## LTE Band 13

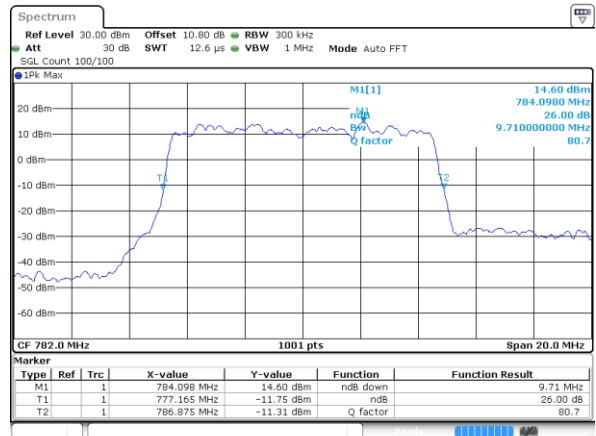
## Lowest Channel / 5MHz / 64QAM



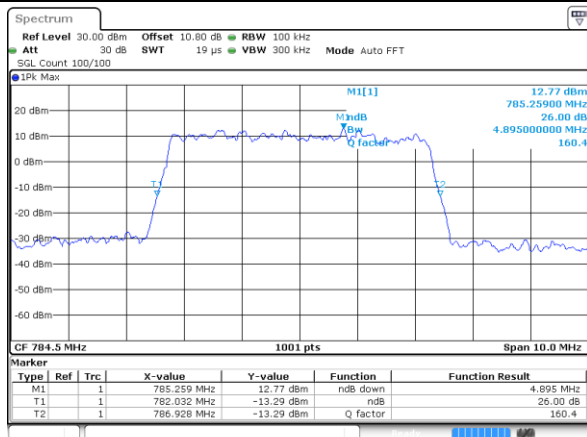
## Middle Channel / 5MHz / 64QAM



## Middle Channel / 10MHz / 64QAM



## Highest Channel / 5MHz / 64QAM



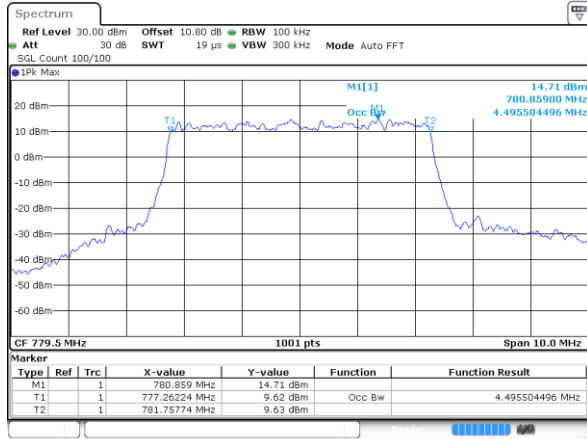
**Occupied Bandwidth**

| Mode       | LTE Band 13 : 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  | -                         | -     | -     | -     | 4.5   | 4.51  | -     | -     | -     | -     | -     | -     |
| Middle CH  | -                         | -     | -     | -     | 4.51  | 4.49  | 8.97  | 8.93  | -     | -     | -     | -     |
| Highest CH | -                         | -     | -     | -     | 4.49  | 4.49  | -     | -     | -     | -     | -     | -     |
| Mode       | LTE Band 13 : 99%OBW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
| BW         | 1.4MHz                    |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                     |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | -                         | -     | -     | -     | 4.46  | -     | -     | -     | -     | -     | -     | -     |
| Middle CH  | -                         | -     | -     | -     | 4.50  | -     | 8.93  | -     | -     | -     | -     | -     |
| Highest CH | -                         | -     | -     | -     | 4.51  | -     | -     | -     | -     | -     | -     | -     |

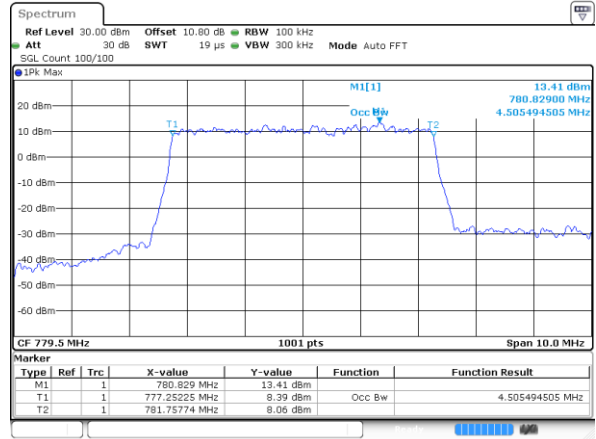


## LTE Band 13

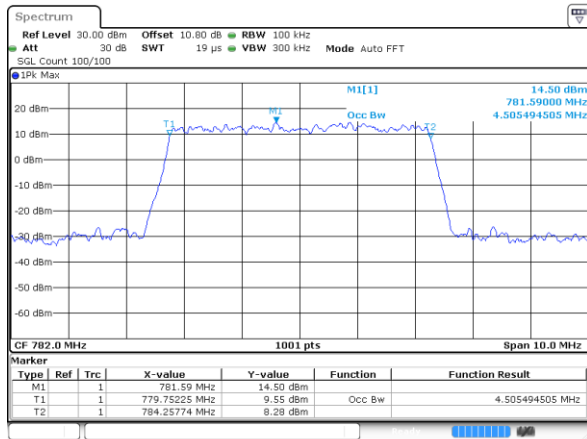
## Lowest Channel / 5MHz / QPSK



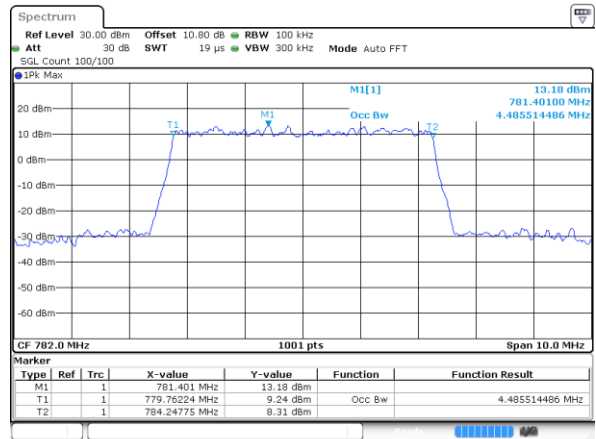
## Lowest Channel / 5MHz / 16QAM



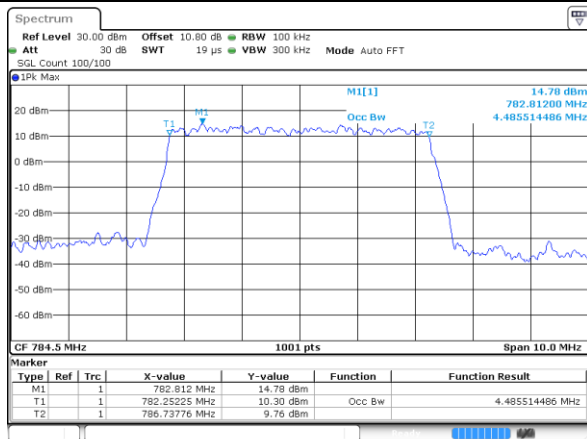
## Middle Channel / 5MHz / QPSK



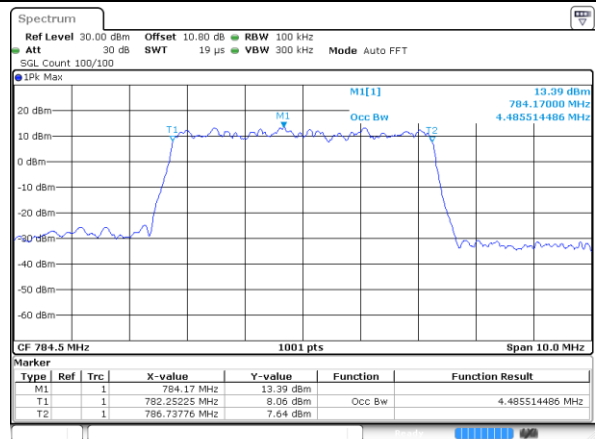
## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



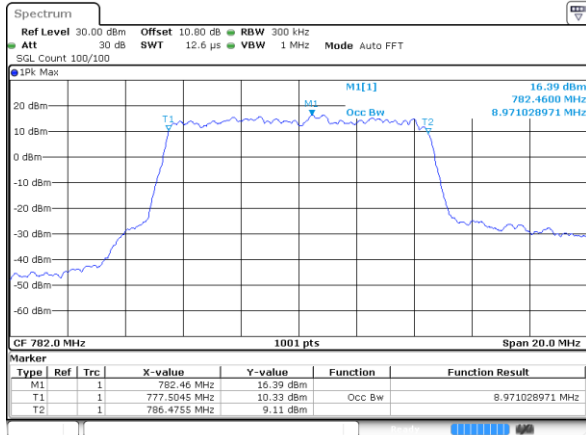
## Highest Channel / 5MHz / 16QAM





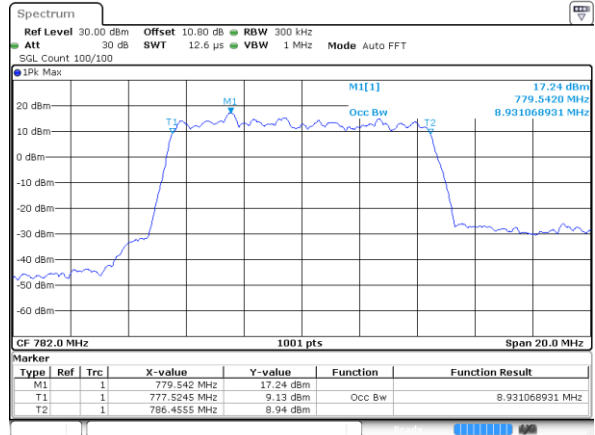
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 16 FEB 2018 13:16:40

Middle Channel / 10MHz / 16QAM

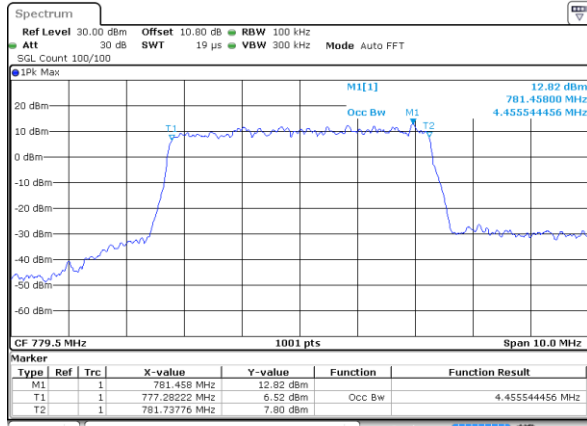


Date: 16 FEB 2018 13:16:50

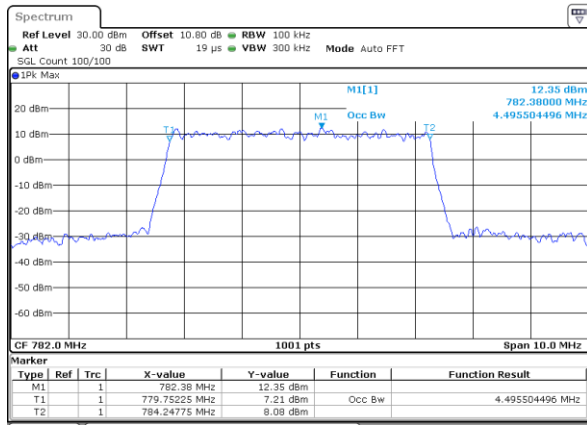


LTE Band 13

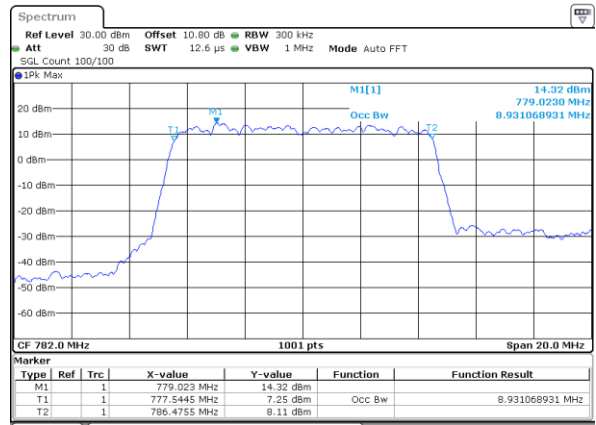
Lowest Channel / 5MHz / 64QAM



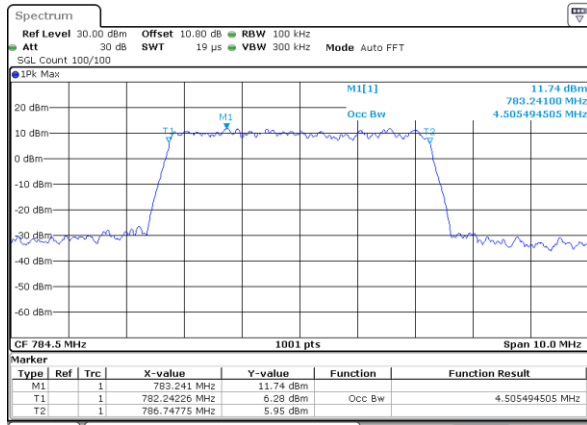
Middle Channel / 5MHz / 64QAM

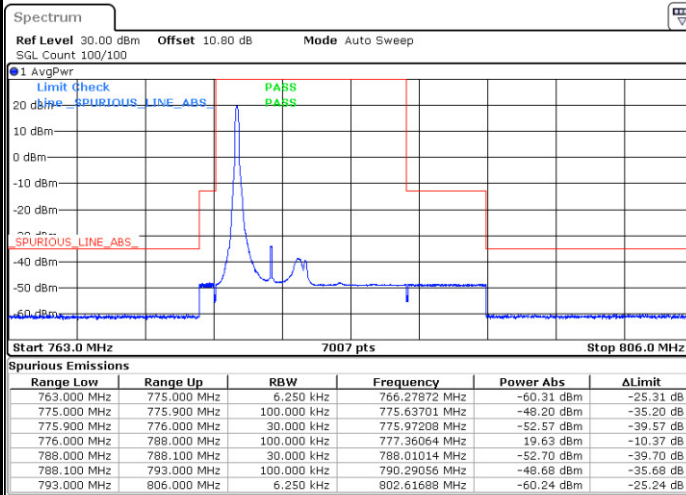


Middle Channel / 10MHz / 64QAM

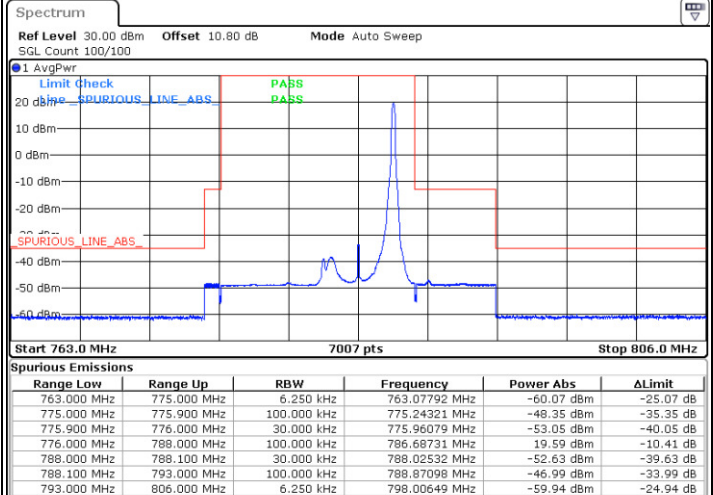


Highest Channel / 5MHz / 64QAM

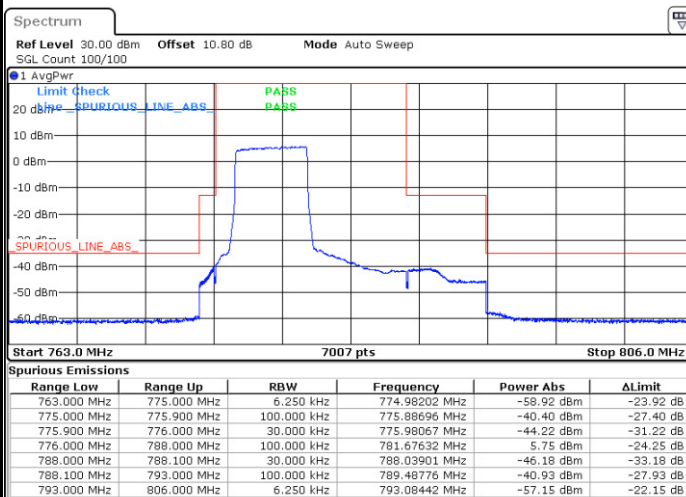


**Conducted Band Edge****LTE Band 13 / 5MHz / QPSK****Lowest Band Edge / 1 RB**

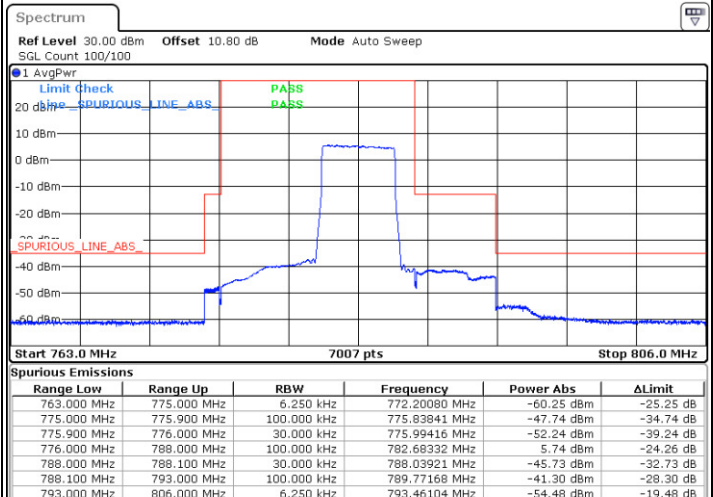
Date: 16 FEB 2018 12:53:12

**Highest Band Edge / 1 RB**

Date: 16 FEB 2018 13:04:34

**Lowest Band Edge / Full RB**

Date: 16 FEB 2018 12:48:20

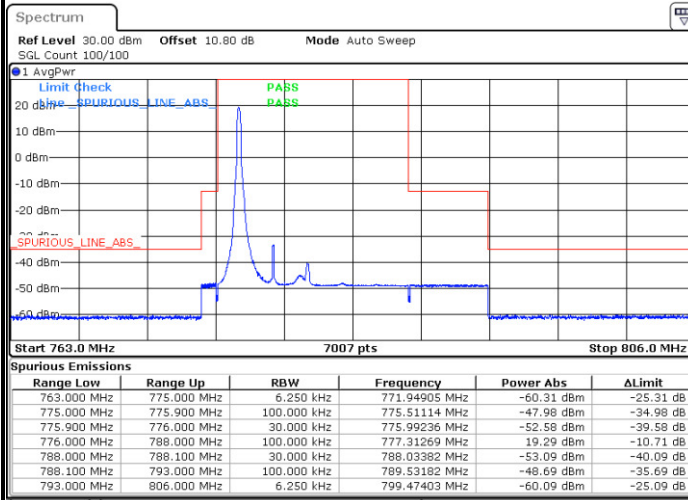
**Highest Band Edge / Full RB**

Date: 16 FEB 2018 12:59:42

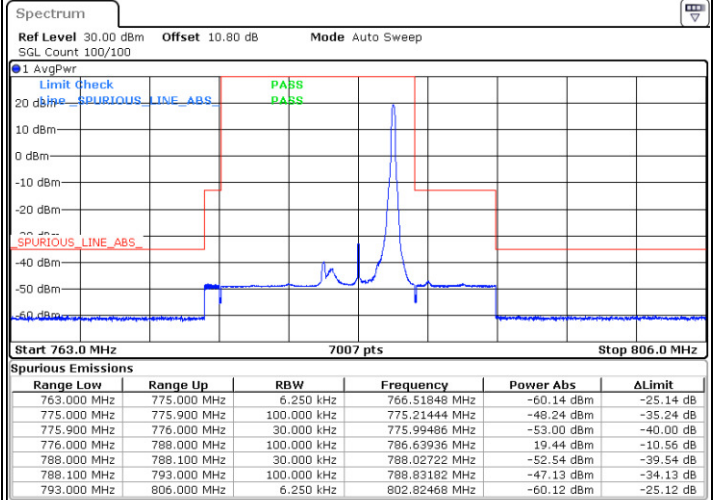


## LTE Band 13 / 5MHz / 16QAM

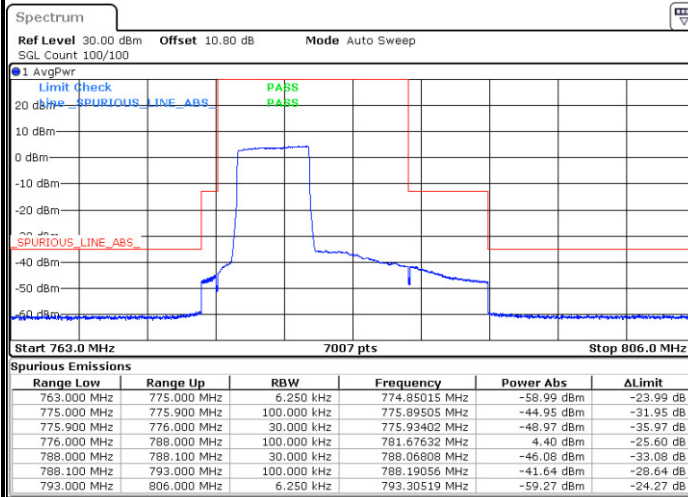
## Lowest Band Edge / 1 RB



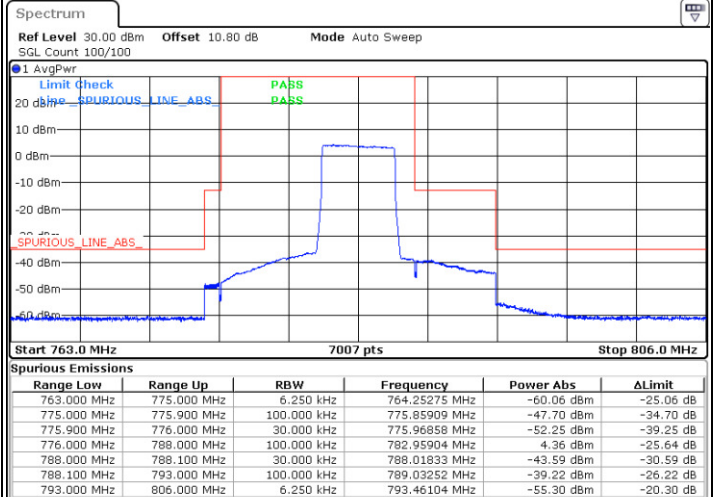
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



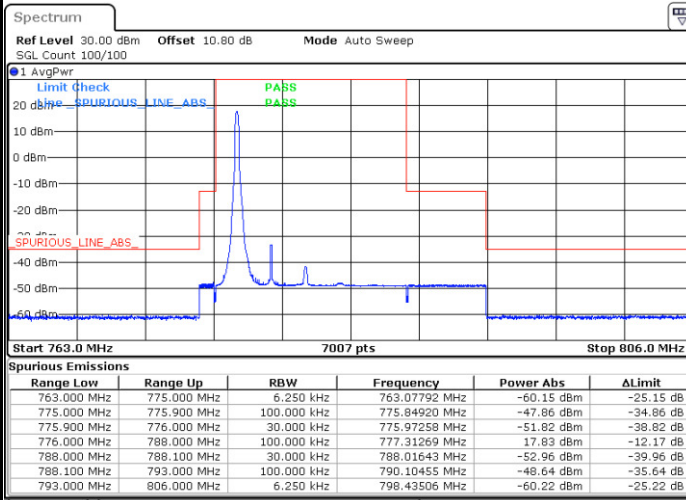
## Highest Band Edge / Full RB



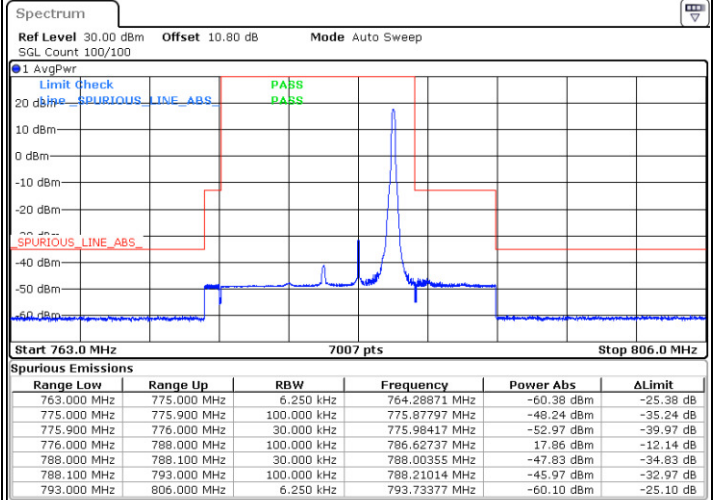


## LTE Band 13 / 5MHz / 64QAM

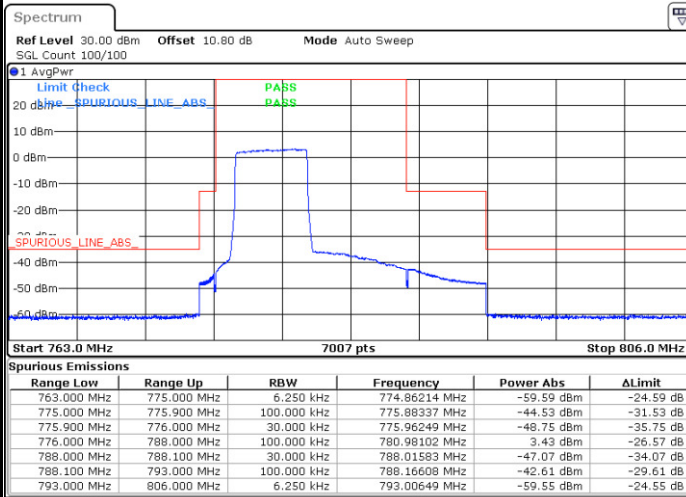
## Lowest Band Edge / 1 RB



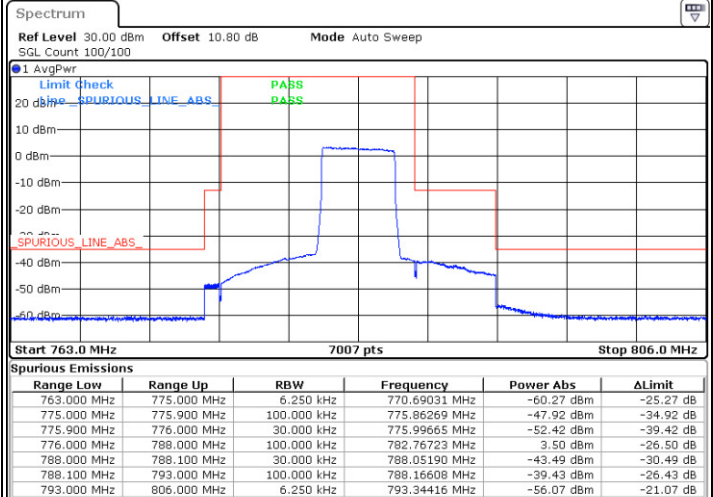
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



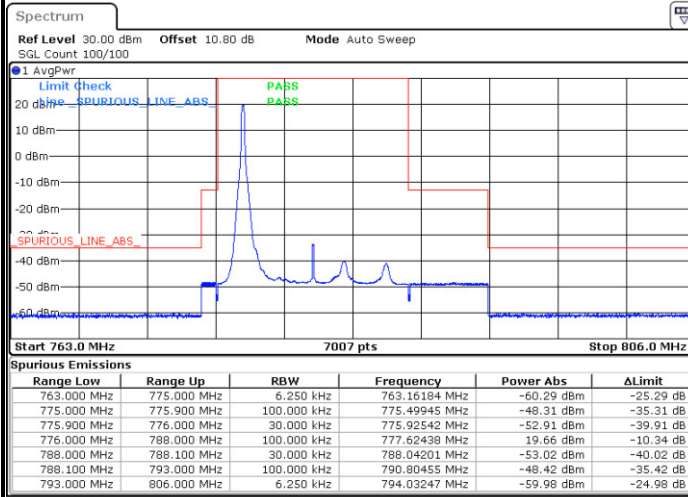
## Highest Band Edge / Full RB





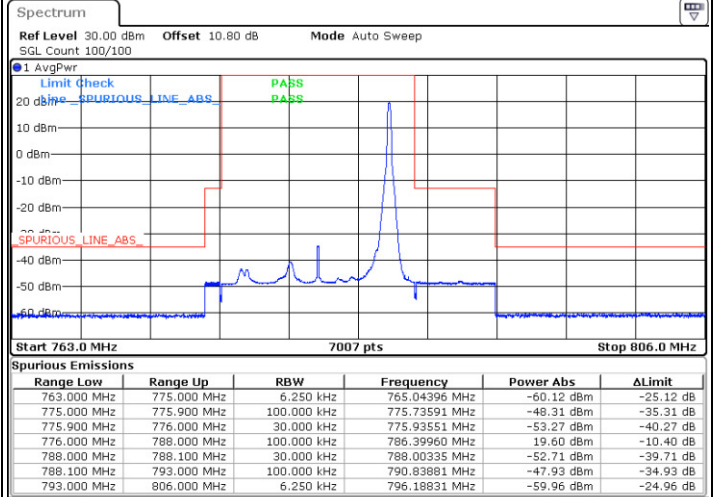
## LTE Band 13 / 10MHz / QPSK

## Lowest Band Edge / 1 RB



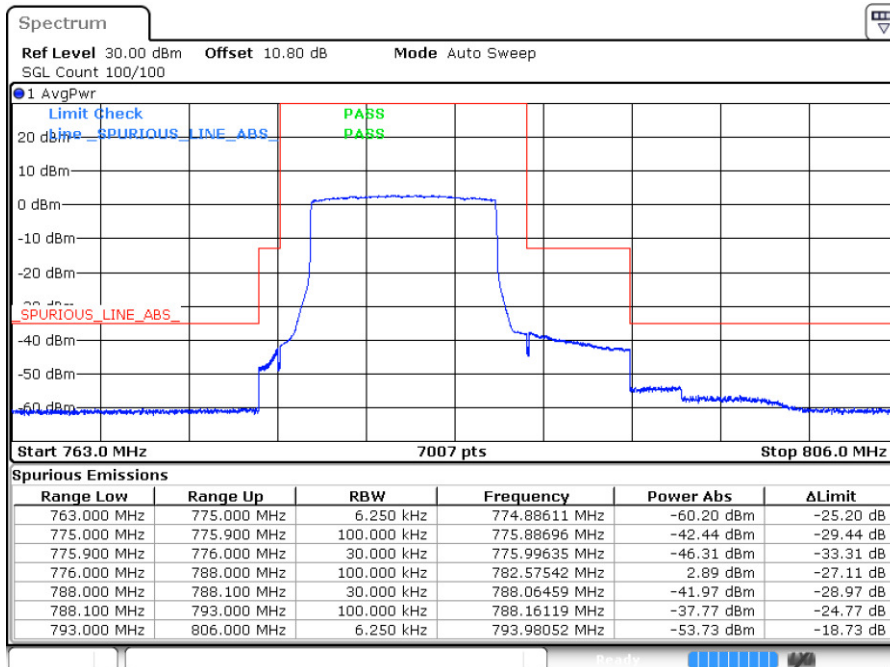
Date: 16.FEB.2018 13:23:39

## Highest Band Edge / 1 RB



Date: 16.FEB.2018 13:25:16

## Band Edge / Full RB

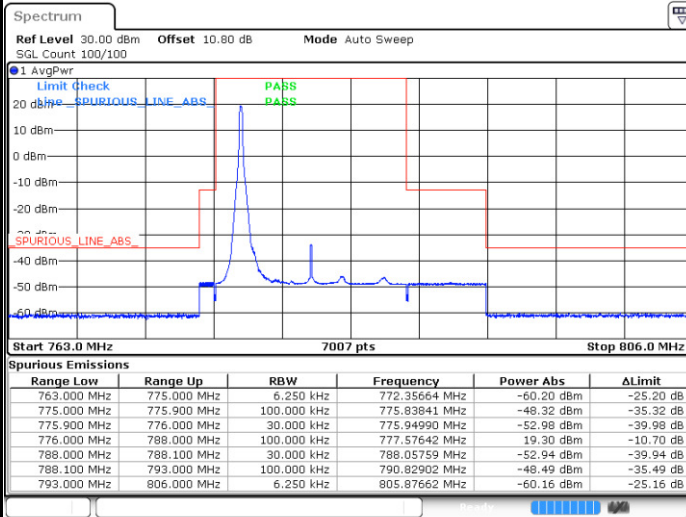


Date: 16.FEB.2018 13:18:47



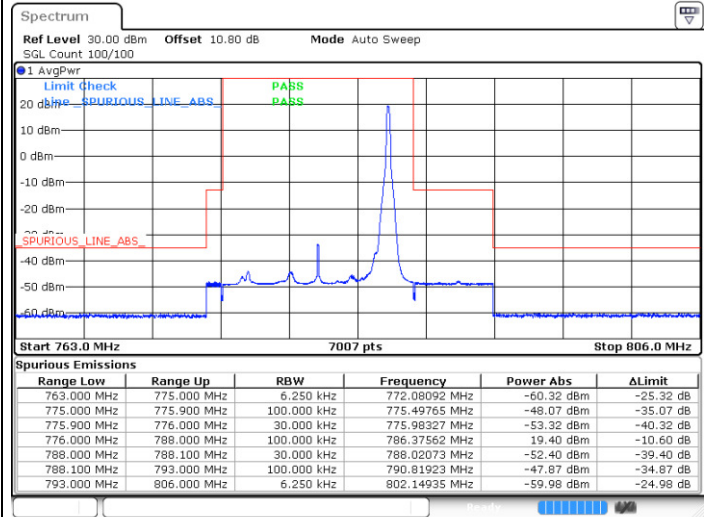
## LTE Band 13 / 10MHz / 16QAM

## Lowest Band Edge / 1 RB



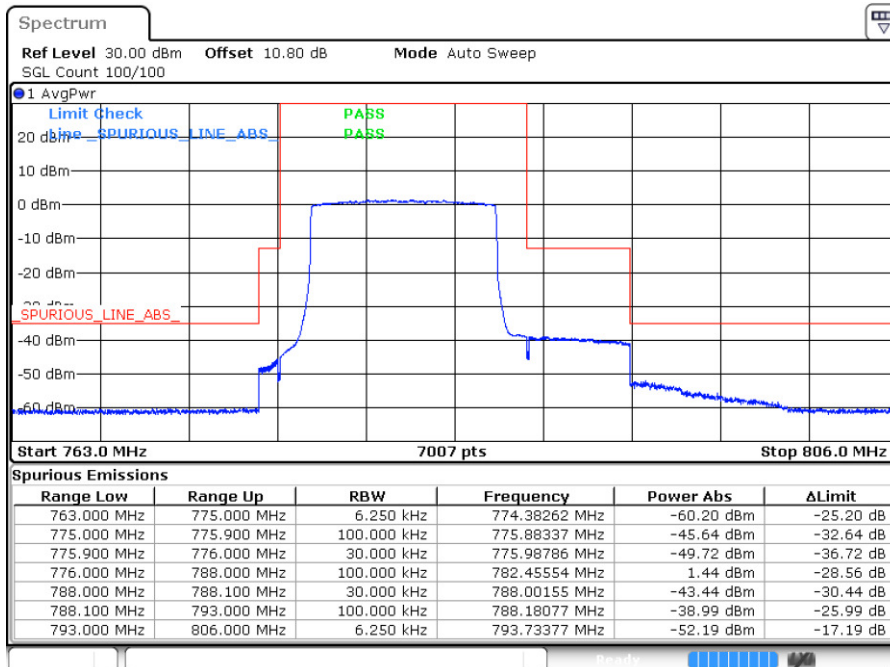
Date: 16.FEB.2018 13:22:02

## Highest Band Edge / 1 RB



Date: 16.FEB.2018 13:26:54

## Band Edge / Full RB

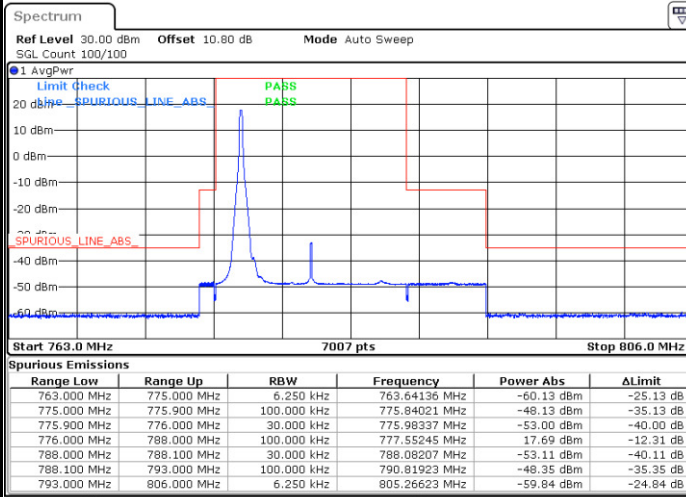


Date: 16.FEB.2018 13:20:24



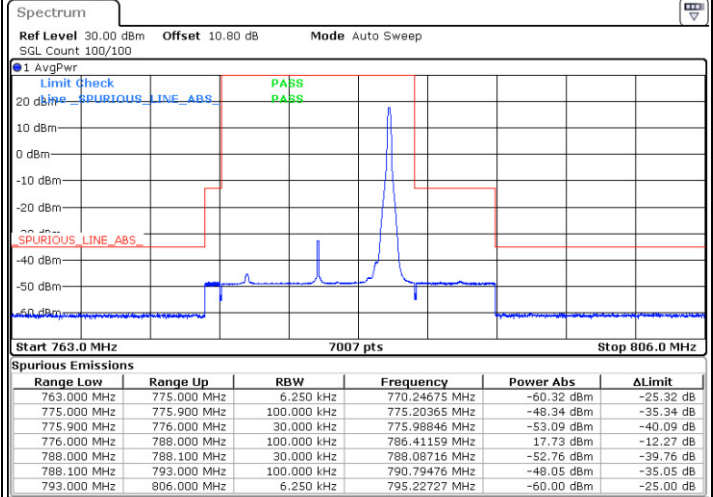
## LTE Band 13 / 10MHz / 64QAM

## Lowest Band Edge / 1 RB



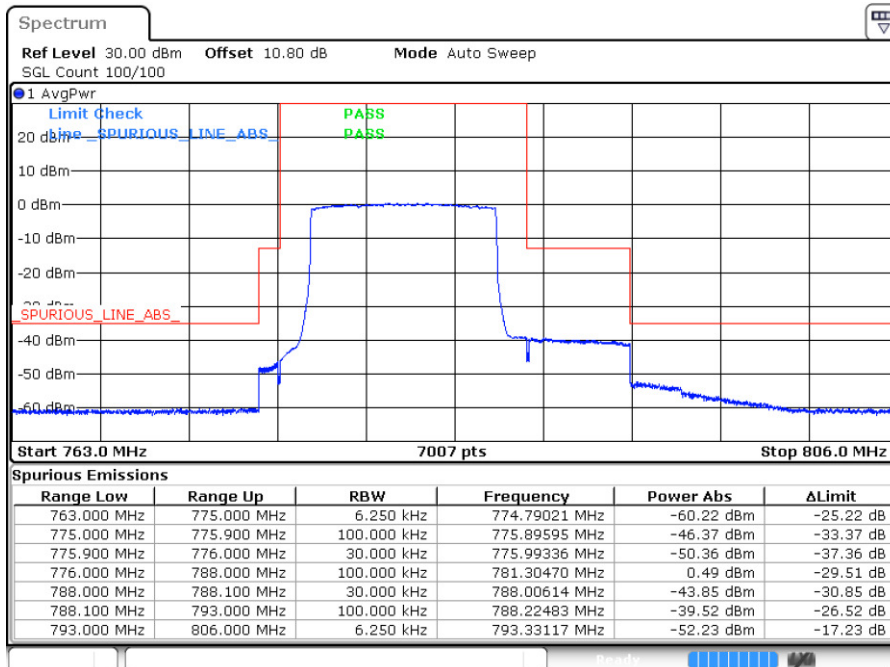
Date: 16.FEB.2018 13:32:15

## Highest Band Edge / 1 RB



Date: 16.FEB.2018 13:33:52

## Band Edge / Full RB

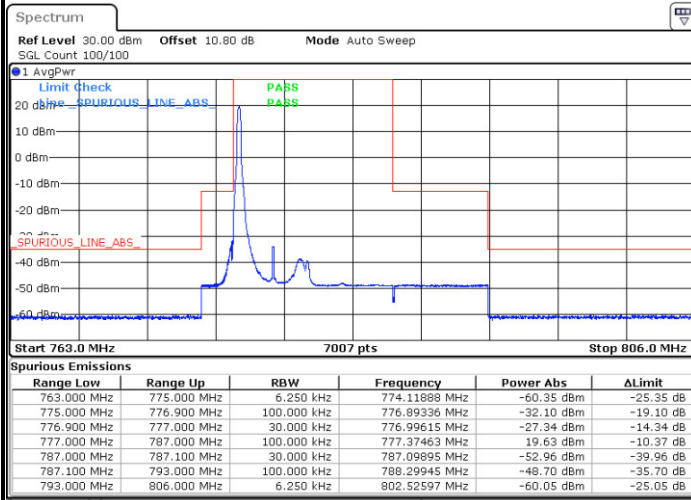


Date: 16.FEB.2018 13:30:38

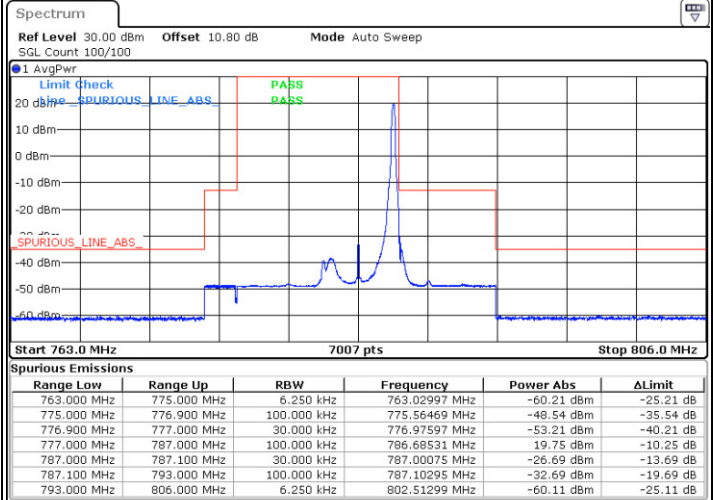


## IC LTE Band 13 / 5MHz / QPSK

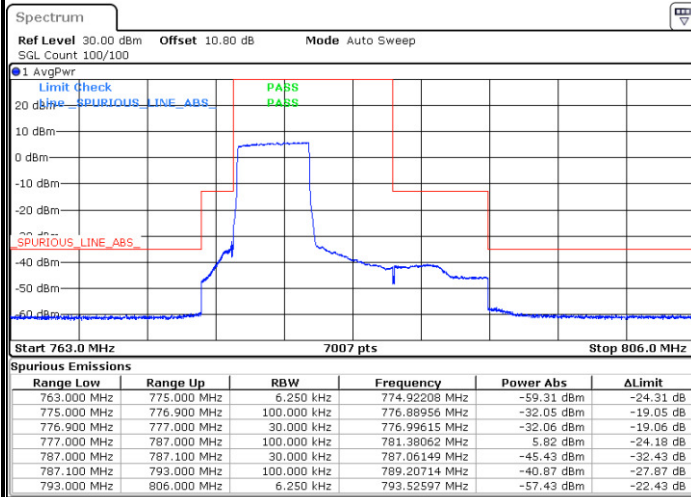
## Lowest Band Edge / 1 RB



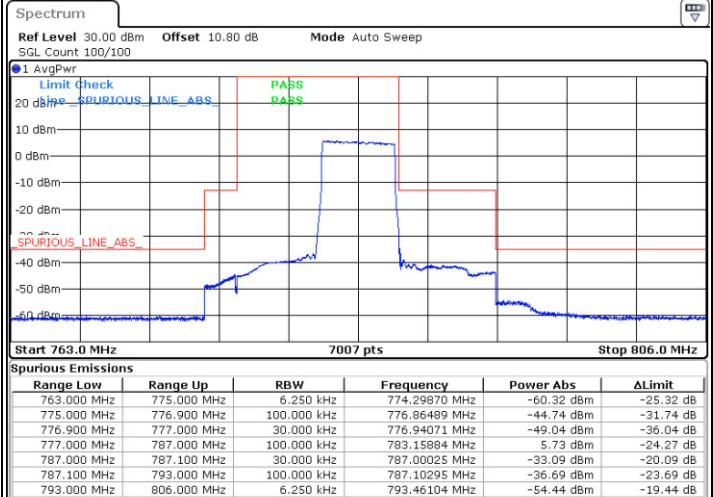
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



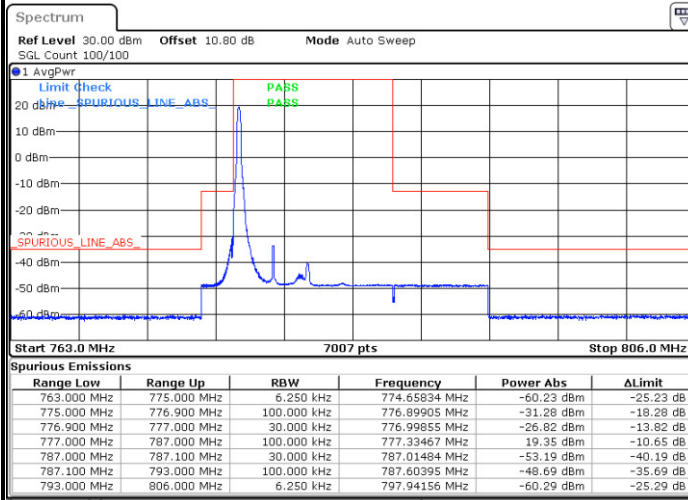
## Highest Band Edge / Full RB





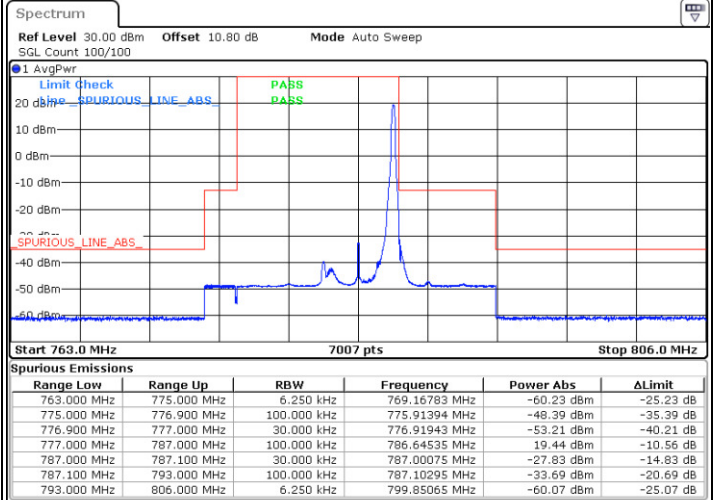
## IC LTE Band 13 / 5MHz / 16QAM

## Lowest Band Edge / 1 RB



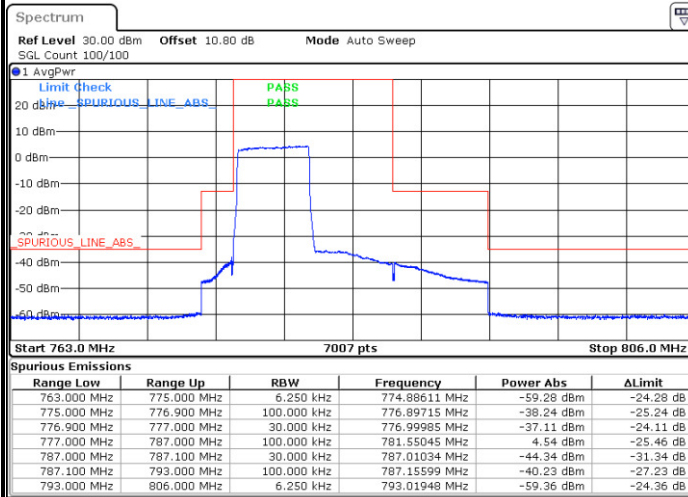
Date: 16 FEB 2018 13:51:58

## Highest Band Edge / 1 RB



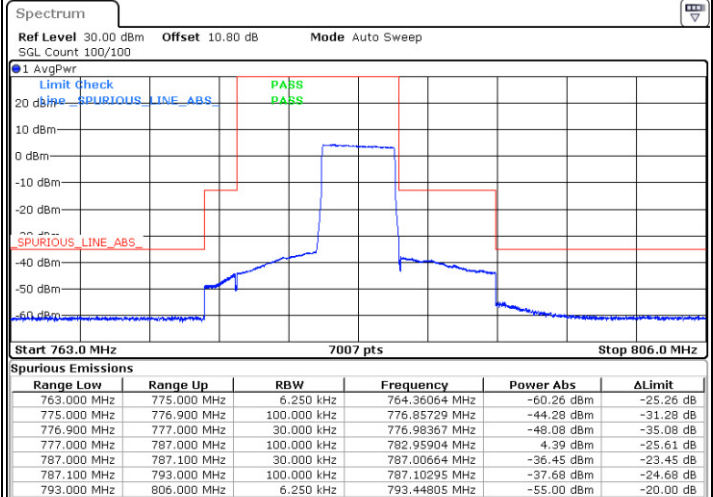
Date: 16 FEB 2018 13:58:27

## Lowest Band Edge / Full RB



Date: 16 FEB 2018 13:50:20

## Highest Band Edge / Full RB

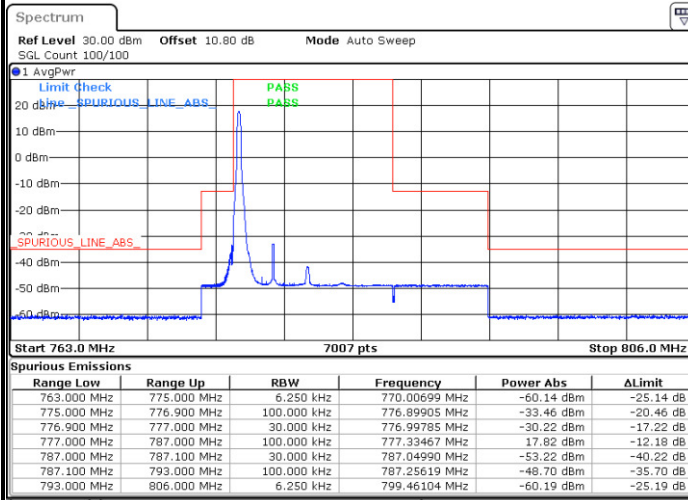


Date: 16 FEB 2018 13:56:50



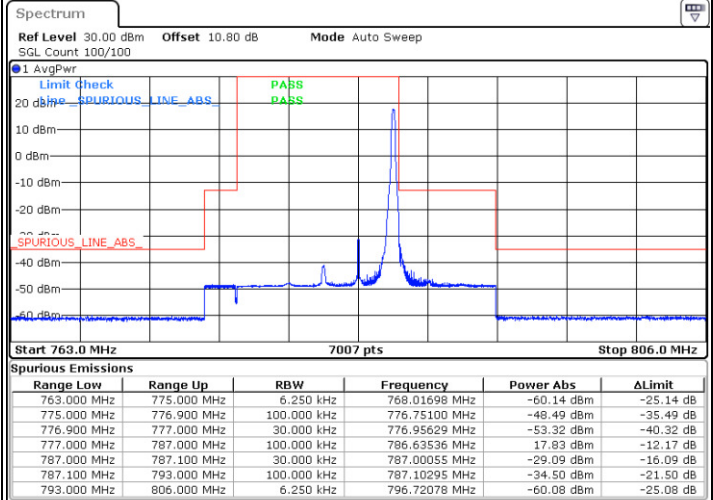
## IC LTE Band 13 / 5MHz / 64QAM

## Lowest Band Edge / 1 RB



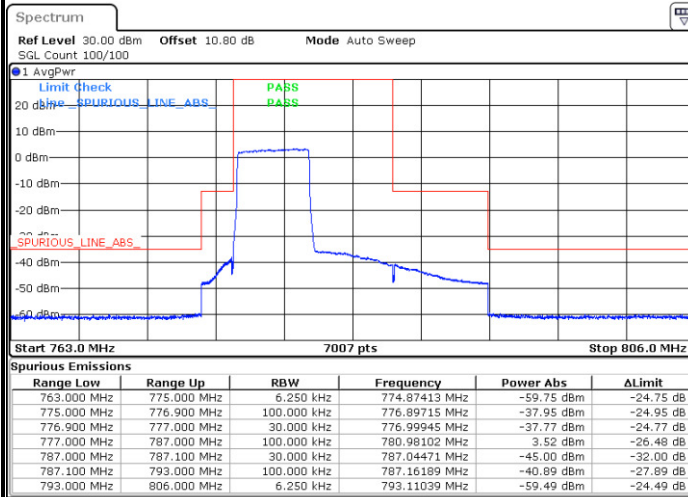
Date: 16.FEB.2018 14:03:19

## Highest Band Edge / 1 RB



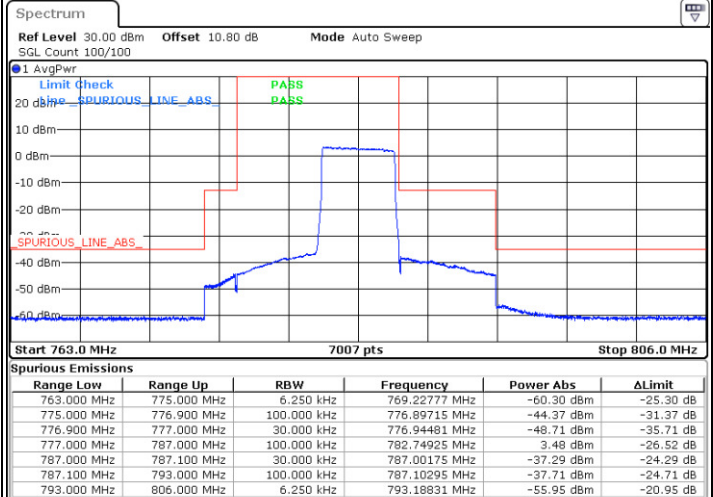
Date: 16.FEB.2018 14:06:34

## Lowest Band Edge / Full RB



Date: 16.FEB.2018 14:01:42

## Highest Band Edge / Full RB

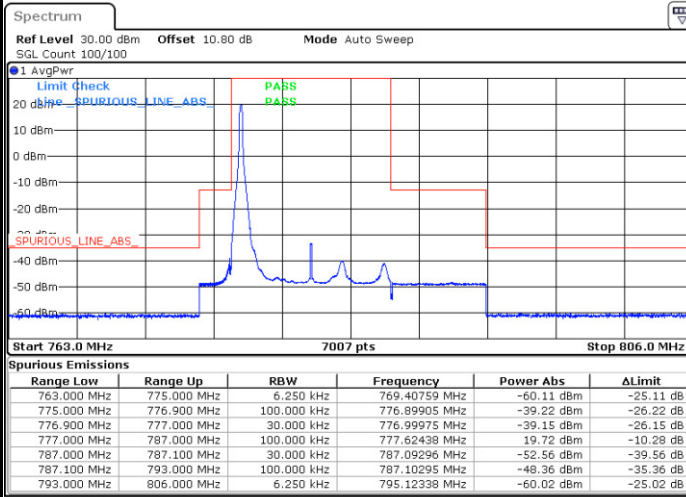


Date: 16.FEB.2018 14:04:56



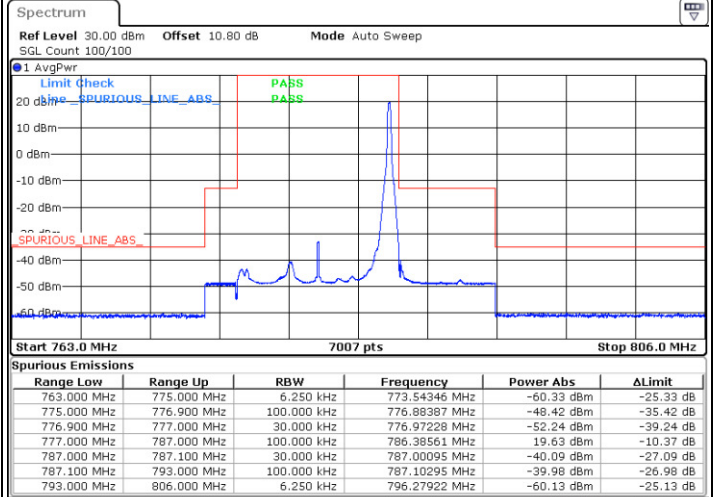
## IC LTE Band 13 / 10MHz / QPSK

## Lowest Band Edge / 1 RB



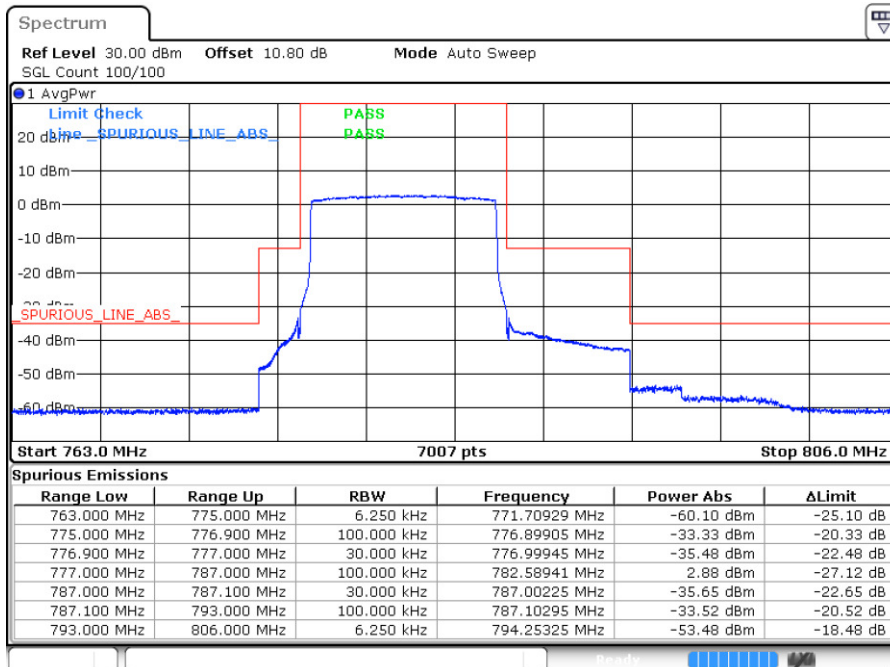
Date: 16.FEB.2018 14:17:55

## Highest Band Edge / 1 RB



Date: 16.FEB.2018 14:19:32

## Band Edge / Full RB

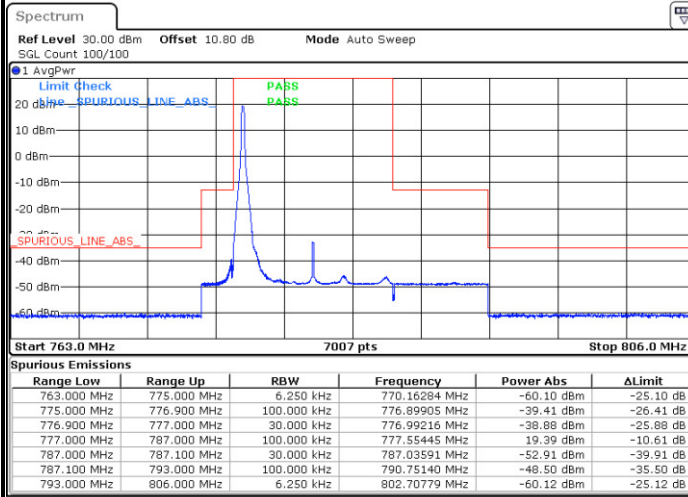


Date: 16.FEB.2018 14:13:03



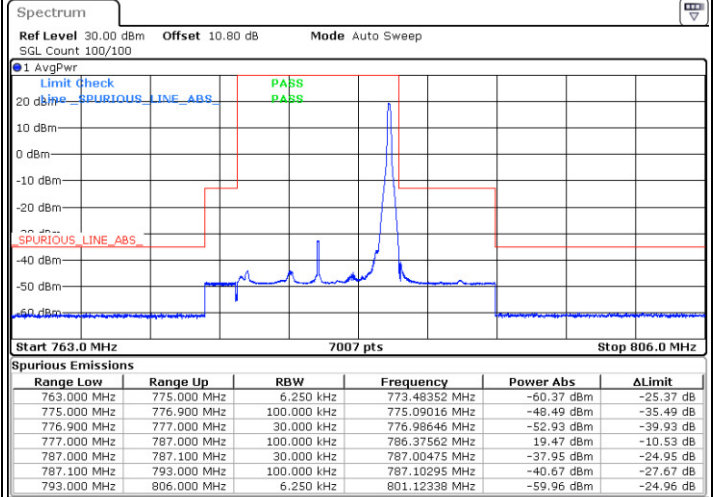
## IC LTE Band 13 / 10MHz / 16QAM

## Lowest Band Edge / 1 RB



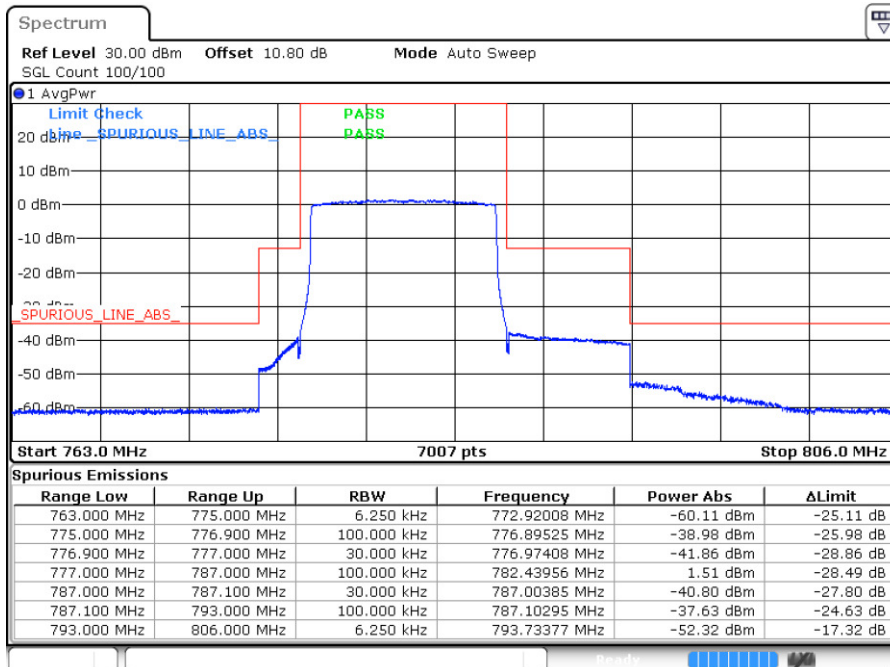
Date: 16.FEB.2018 14:16:18

## Highest Band Edge / 1 RB



Date: 16.FEB.2018 14:21:10

## Band Edge / Full RB

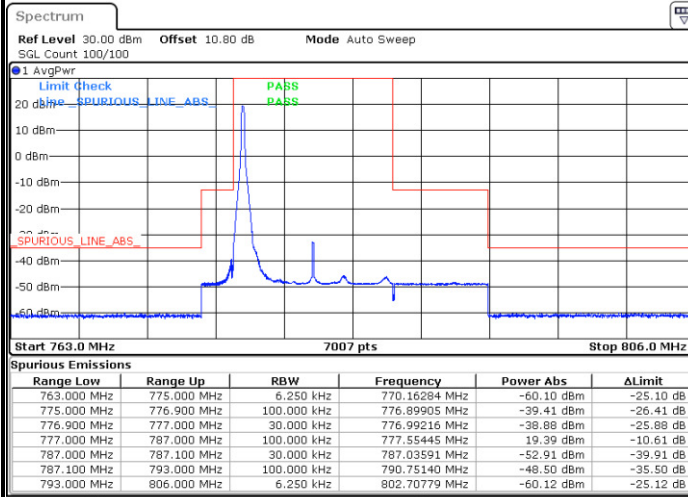


Date: 16.FEB.2018 14:14:40



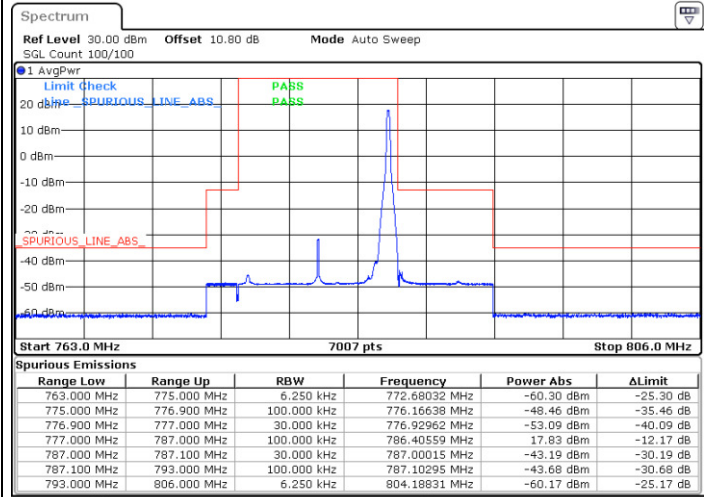
## IC LTE Band 13 / 10MHz / 64QAM

## Lowest Band Edge / 1 RB



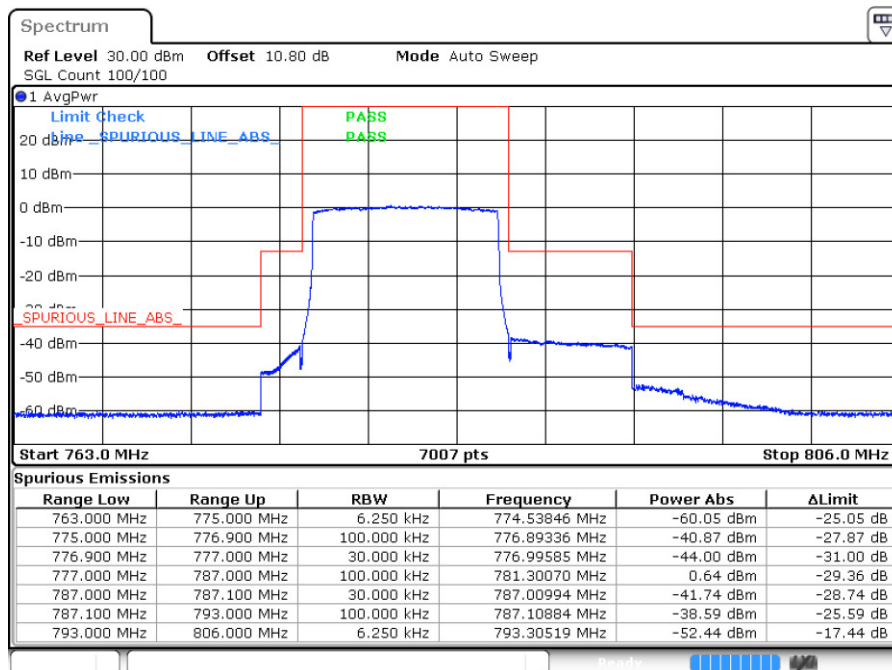
Date: 16.FEB.2018 14:16:18

## Highest Band Edge / 1 RB



Date: 16.FEB.2018 14:11:26

## Band Edge / Full RB



Date: 16.FEB.2018 14:08:11



## Conducted Spurious Emission

