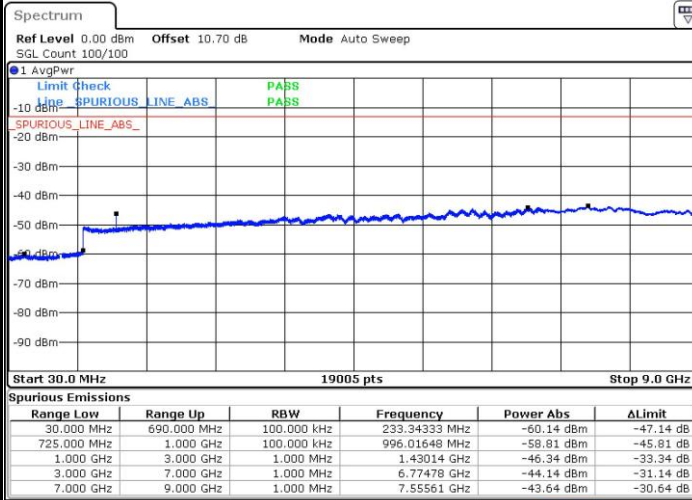




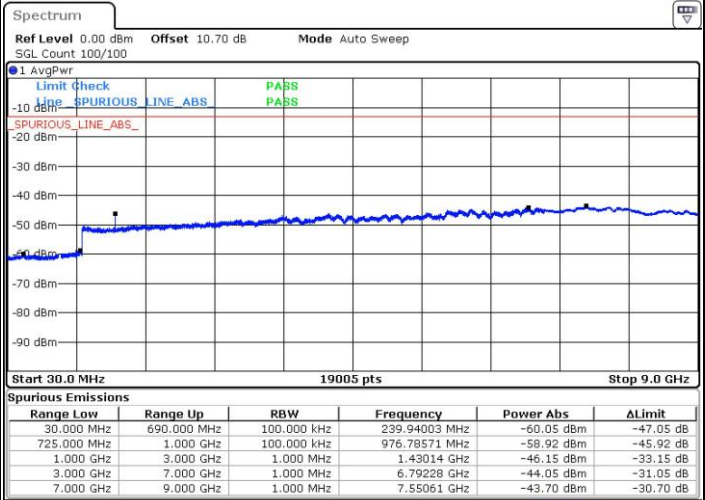
## LTE Band 12 / 1.4MHz

## Highest Channel / QPSK



Date: 13 JUN 2018 09:26:07

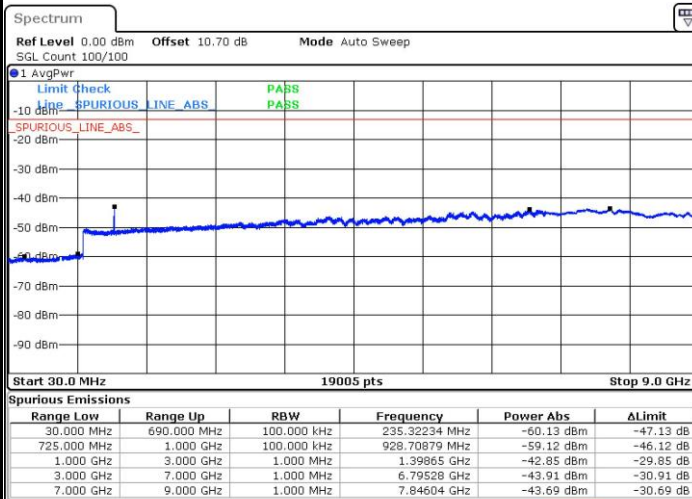
## Highest Channel / 16QAM



Date: 13 JUN 2018 09:27:01

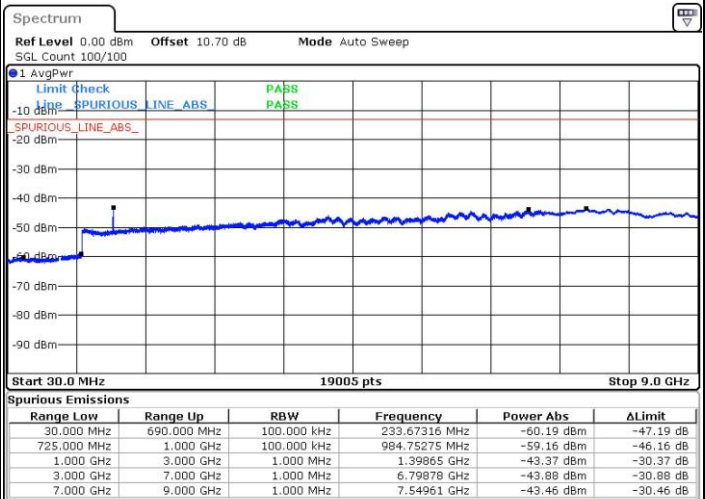
## LTE Band 12 / 3MHz

## Lowest Channel / QPSK



Date: 13 JUN 2018 00:54:32

## Lowest Channel / 16QAM

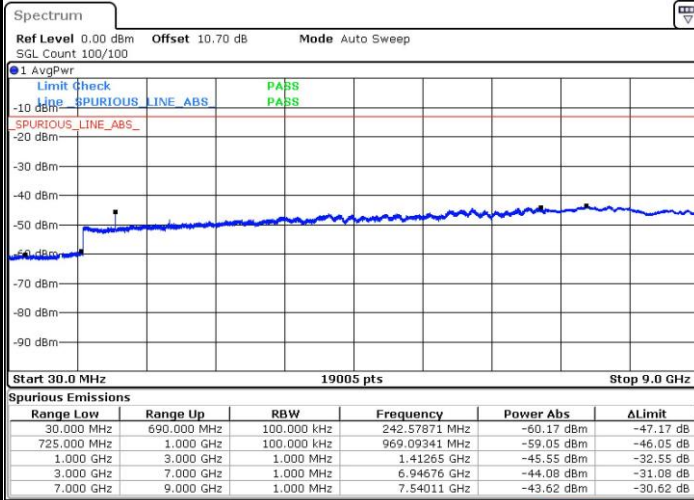


Date: 13 JUN 2018 00:55:26



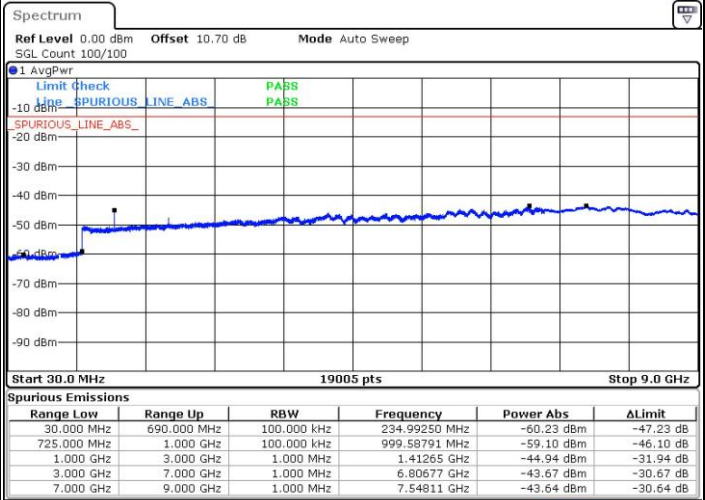
## LTE Band 12 / 3MHz

## Middle Channel / QPSK



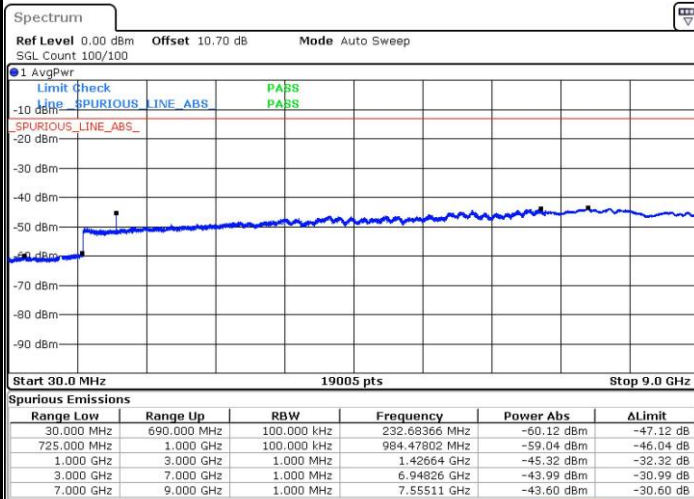
Date: 13 JUN 2018 00:57:56

## Middle Channel / 16QAM



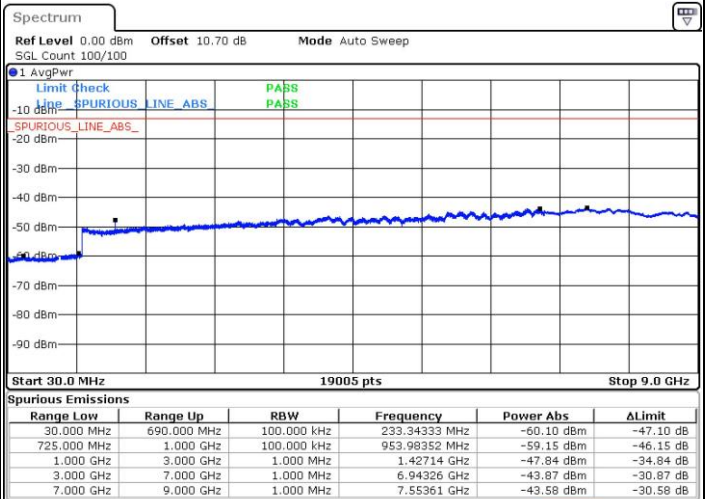
Date: 13 JUN 2018 00:57:02

## Highest Channel / QPSK



Date: 13 JUN 2018 01:04:09

## Highest Channel / 16QAM

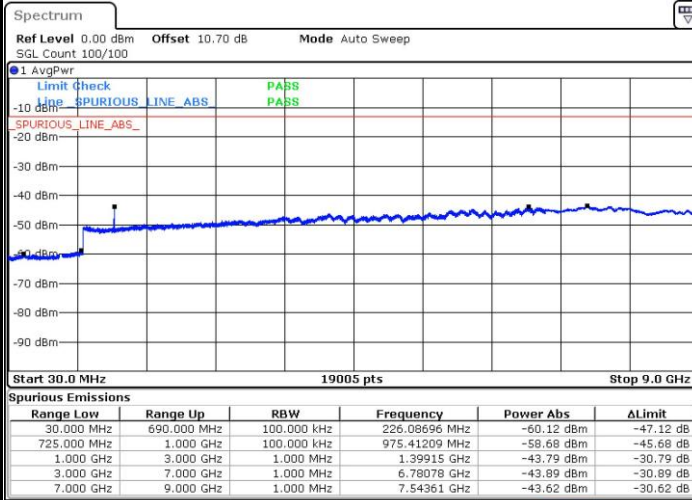


Date: 13 JUN 2018 01:05:03



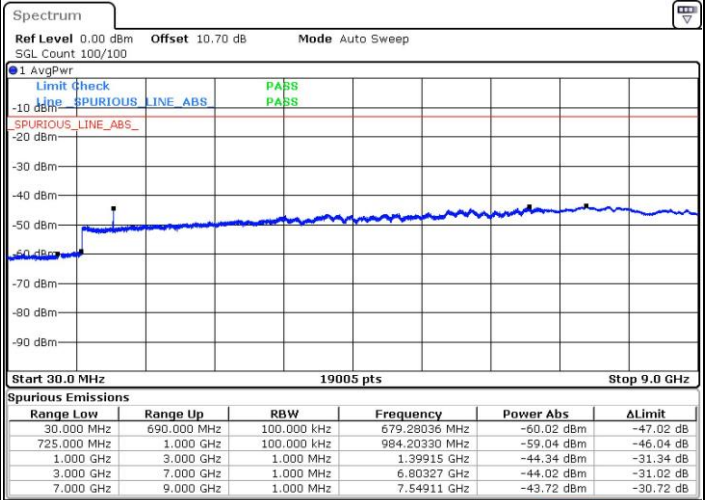
## LTE Band 12 / 5MHz

## Lowest Channel / QPSK



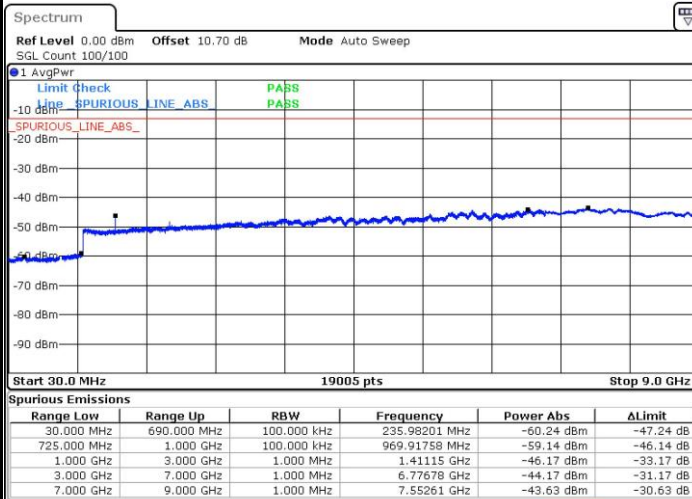
Date: 13 JUN 2018 01:11:16

## Lowest Channel / 16QAM



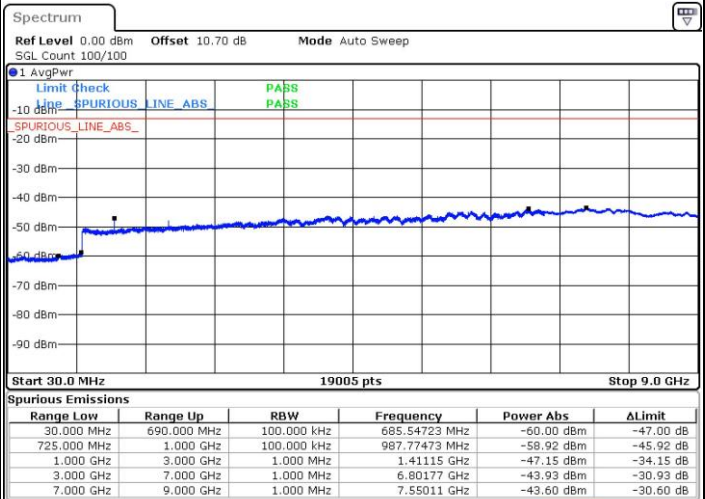
Date: 13 JUN 2018 01:12:11

## Middle Channel / QPSK



Date: 13 JUN 2018 01:16:16

## Middle Channel / 16QAM

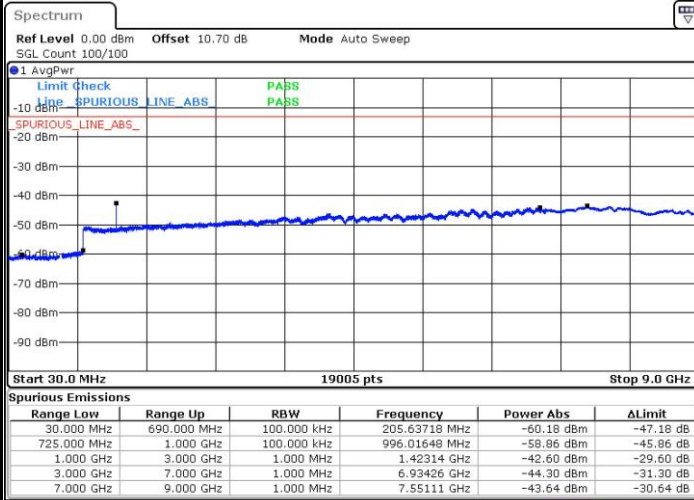


Date: 13 JUN 2018 01:15:22



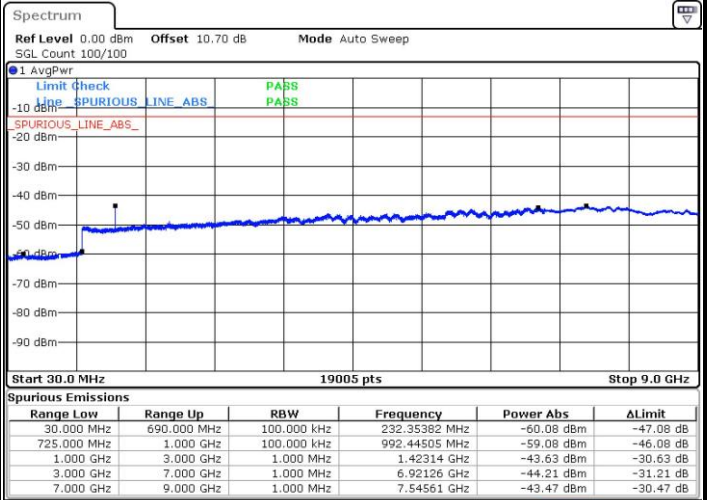
## LTE Band 12 / 5MHz

## Highest Channel / QPSK



Date: 13 JUN 2018 01:23:23

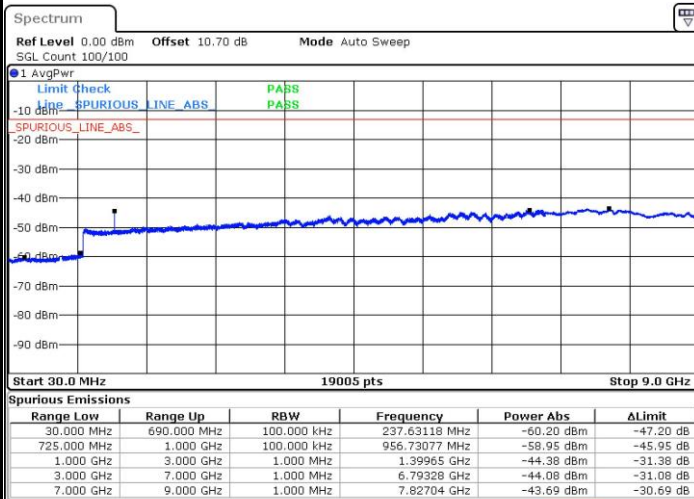
## Highest Channel / 16QAM



Date: 13 JUN 2018 01:22:29

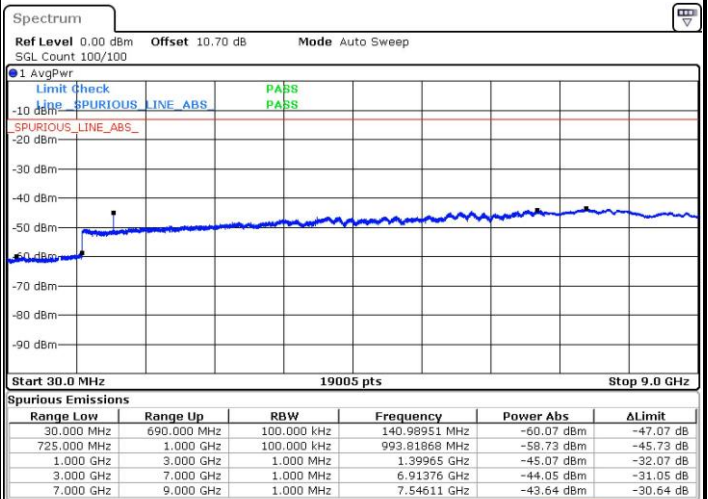
## LTE Band 12 / 10MHz

## Lowest Channel / QPSK



Date: 13 JUN 2018 01:29:36

## Lowest Channel / 16QAM

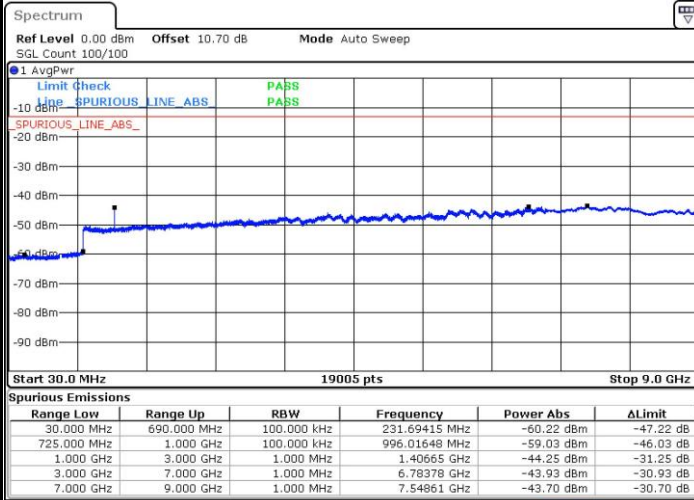


Date: 13 JUN 2018 01:30:31



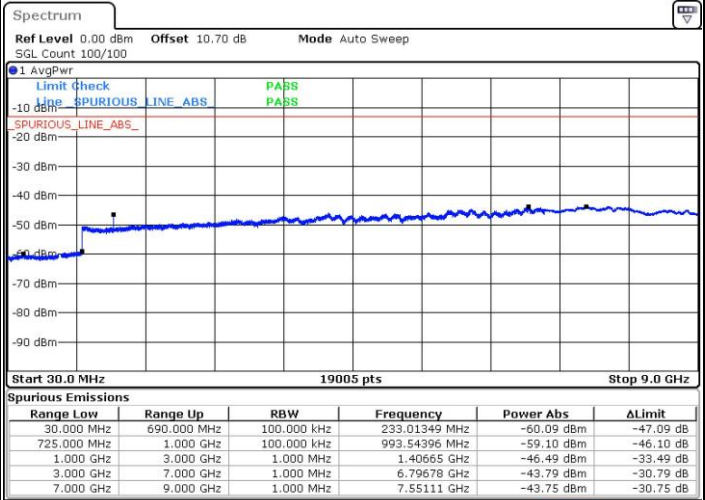
## LTE Band 12 / 10MHz

## Middle Channel / QPSK



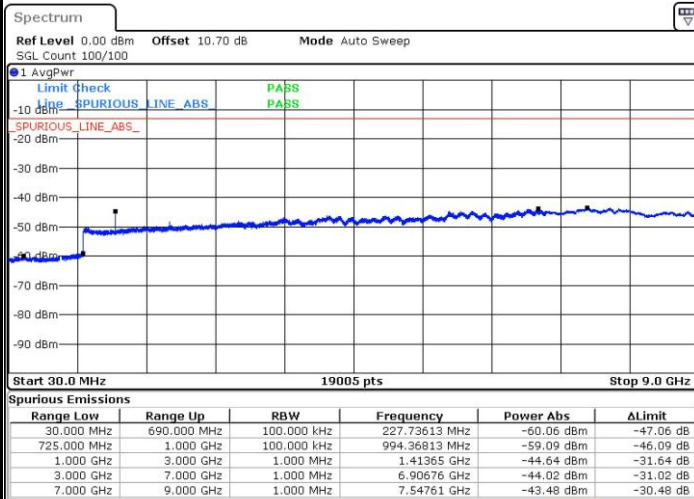
Date: 13 JUN 2018 01:33:01

## Middle Channel / 16QAM



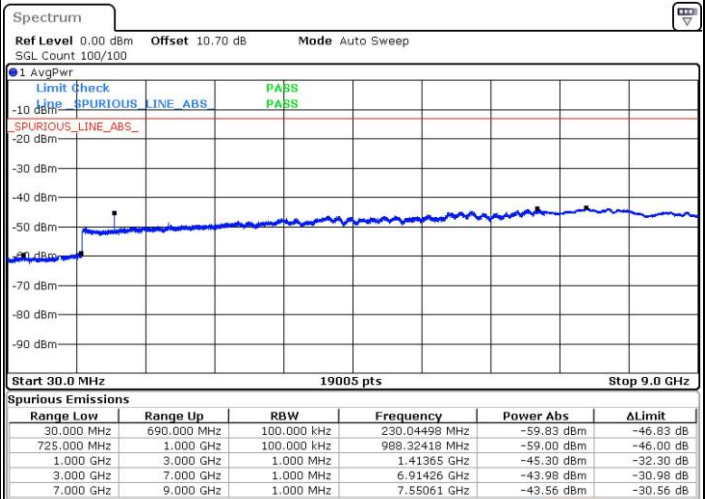
Date: 13 JUN 2018 01:32:07

## Highest Channel / QPSK



Date: 13 JUN 2018 01:39:14

## Highest Channel / 16QAM

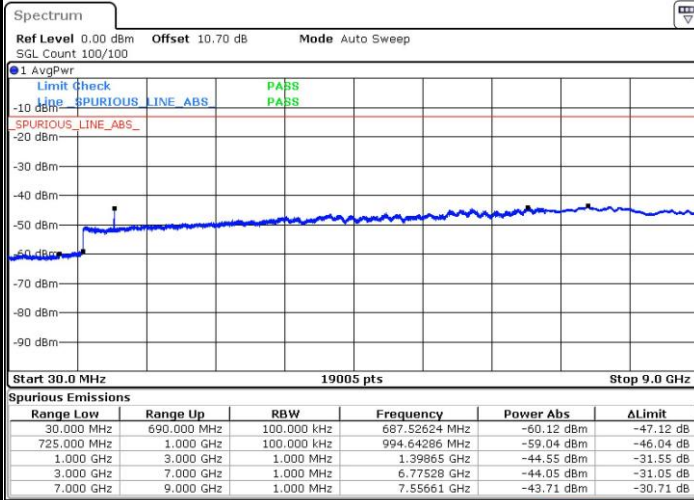


Date: 13 JUN 2018 01:40:09



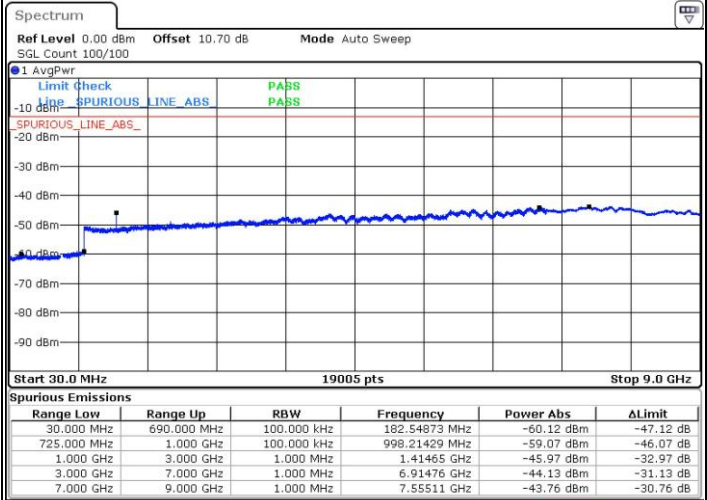
## LTE Band 12 / 1.4MHz

## Lowest Channel / 64QAM



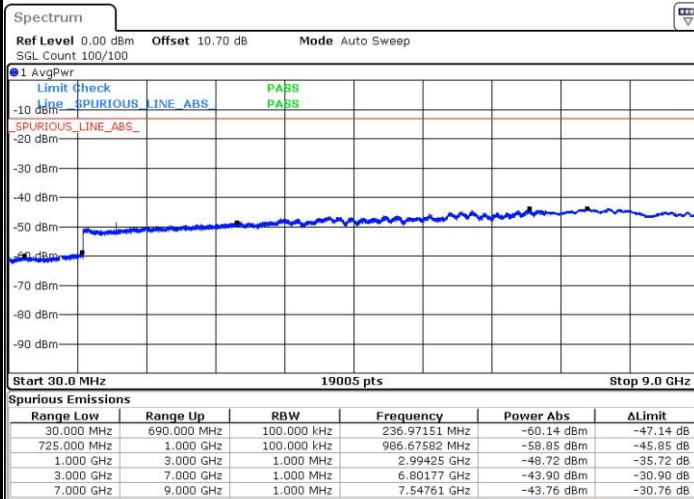
Date: 13 JUN 2018 09:55:43

## Middle Channel / 64QAM



Date: 13 JUN 2018 09:56:59

## Highest Channel / 64QAM

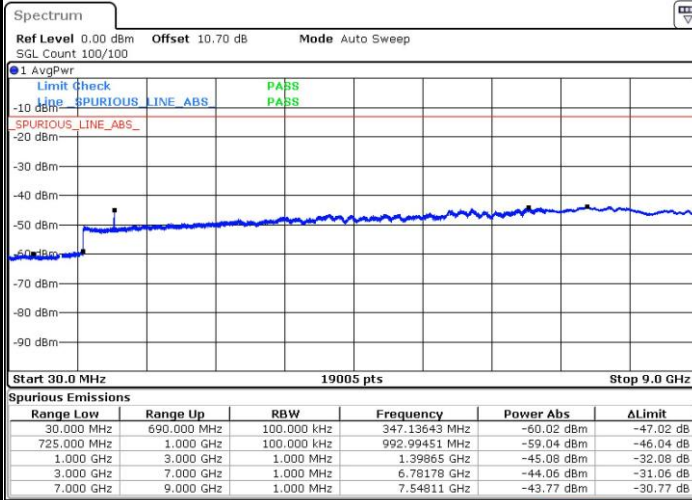


Date: 13 JUN 2018 10:00:32



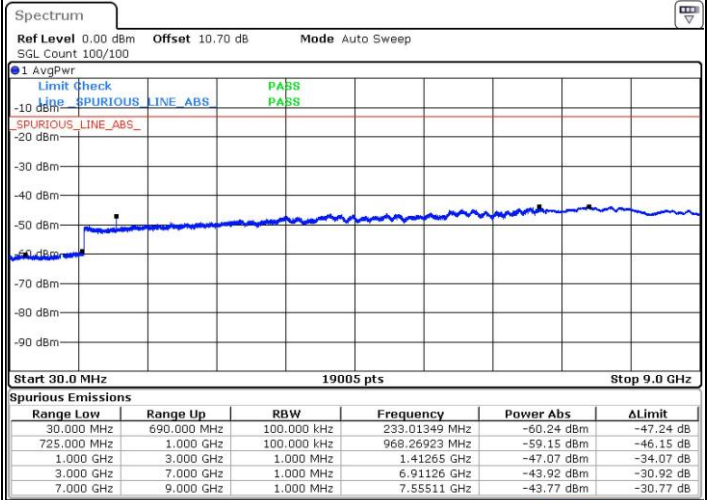
## LTE Band 12 / 3MHz

## Lowest Channel / 64QAM



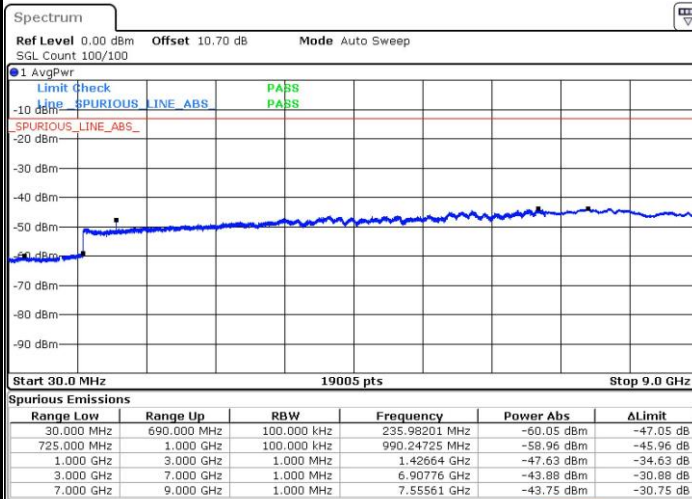
Date: 13 JUN 2018 09:30:35

## Middle Channel / 64QAM



Date: 13 JUN 2018 09:31:50

## Highest Channel / 64QAM

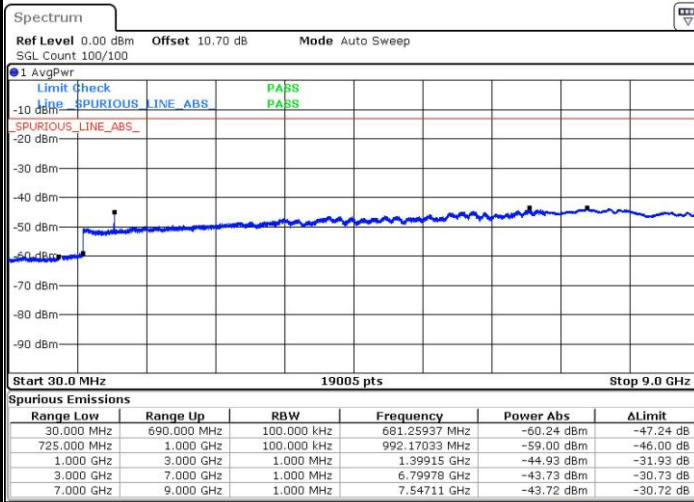


Date: 13 JUN 2018 09:35:24



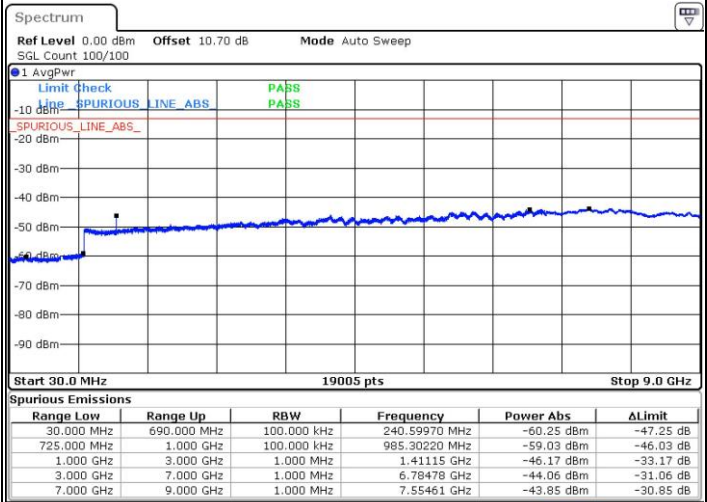
## LTE Band 12 / 5MHz

## Lowest Channel / 64QAM



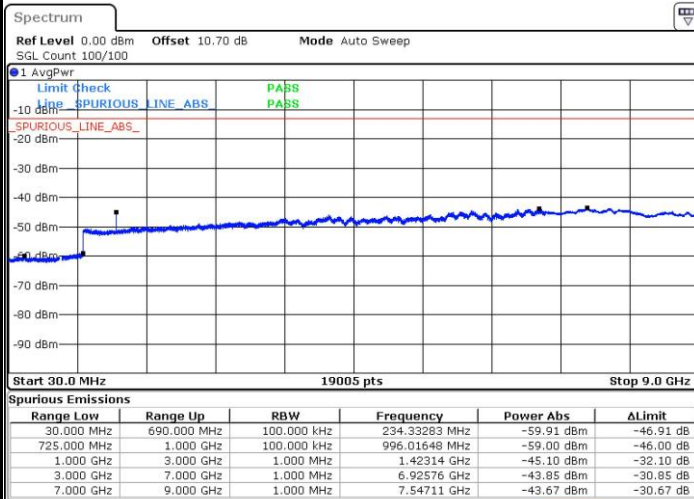
Date: 13 JUN 2018 09:38:58

## Middle Channel / 64QAM



Date: 13 JUN 2018 09:40:13

## Highest Channel / 64QAM

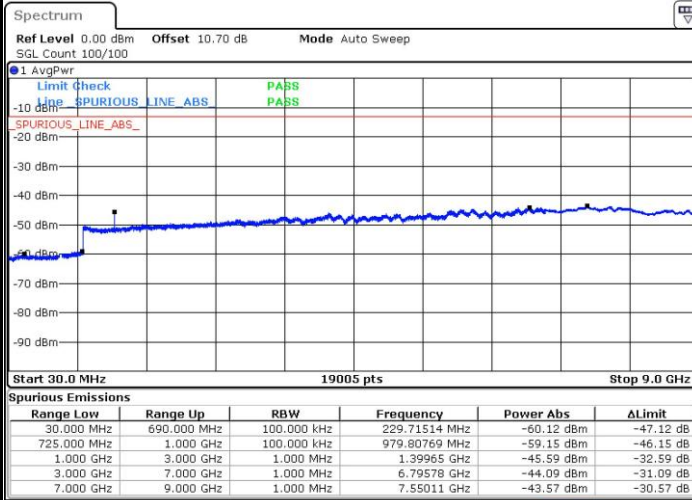


Date: 13 JUN 2018 09:43:47



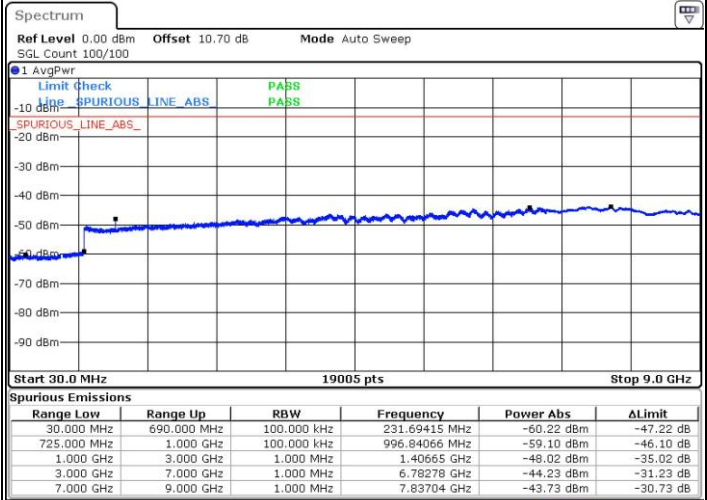
## LTE Band 12 / 10MHz

## Lowest Channel / 64QAM



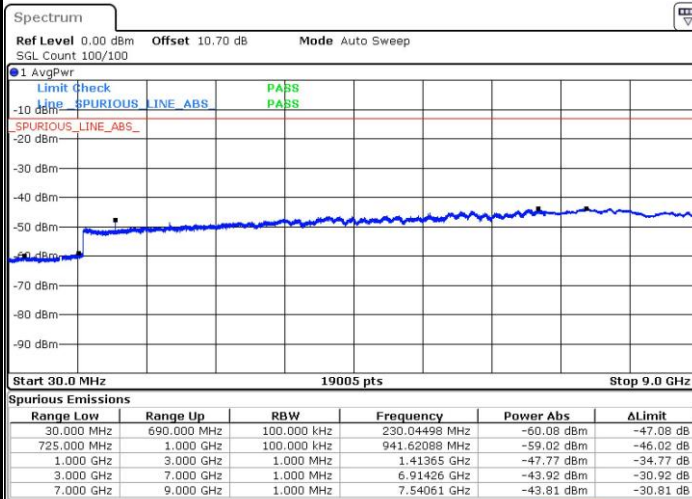
Date: 13 JUN 2018 09:47:21

## Middle Channel / 64QAM



Date: 13 JUN 2018 09:48:36

## Highest Channel / 64QAM



Date: 13 JUN 2018 09:52:10

## Frequency Stability

| Test Conditions     |                   | LTE Band 12 (QPSK) / Middle Channel | Limit   |
|---------------------|-------------------|-------------------------------------|---------|
| Temperature<br>(°C) | Voltage<br>(Volt) | BW 10MHz                            | Note 2. |
|                     |                   | Deviation (ppm)                     | Result  |
| 50                  | Normal Voltage    | 0.0028                              | PASS    |
| 40                  | Normal Voltage    | 0.0025                              |         |
| 30                  | Normal Voltage    | 0.0035                              |         |
| 20(Ref.)            | Normal Voltage    | 0.0000                              |         |
| 10                  | Normal Voltage    | 0.0006                              |         |
| 0                   | Normal Voltage    | 0.0001                              |         |
| -10                 | Normal Voltage    | 0.0030                              |         |
| -20                 | Normal Voltage    | 0.0054                              |         |
| -30                 | Normal Voltage    | 0.0047                              |         |
| 20                  | Maximum Voltage   | 0.0072                              |         |
| 20                  | Normal Voltage    | 0.0000                              |         |
| 20                  | Battery End Point | 0.0007                              |         |

**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.2 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 13

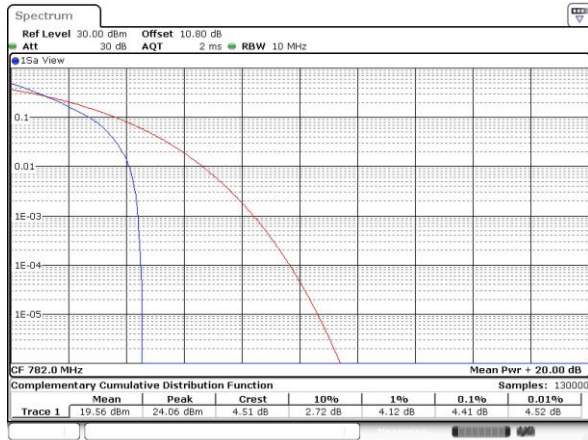
### Peak-to-Average Ratio

| Mode       | LTE Band 13 / 10MHz |         |       |         |             |
|------------|---------------------|---------|-------|---------|-------------|
| Mod.       | QPSK                |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | -                   | -       | -     | -       | PASS        |
| Middle CH  | 4.41                | 5.57    | 5.07  | 6.41    |             |
| Highest CH | -                   | -       | -     | -       |             |
| Mode       | LTE Band 13 / 10MHz |         |       |         |             |
| Mod.       | 64QAM               |         |       |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB |       |         | Result      |
| Lowest CH  | -                   | -       | -     | -       | PASS        |
| Middle CH  | 5.94                | 6.78    | -     | -       |             |
| Highest CH | -                   | -       | -     | -       |             |

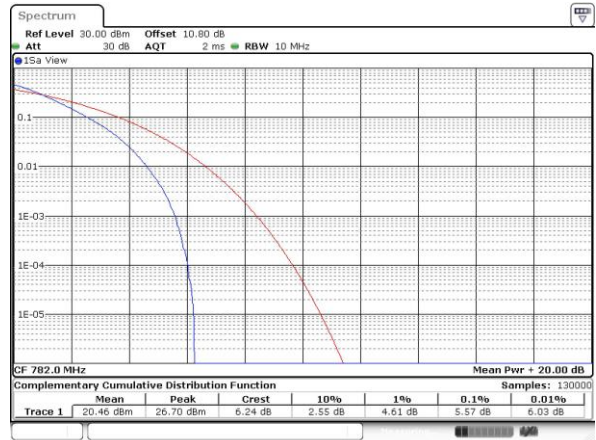


## LTE Band 13 / 10MHz / QPSK

## Middle Channel / 1RB

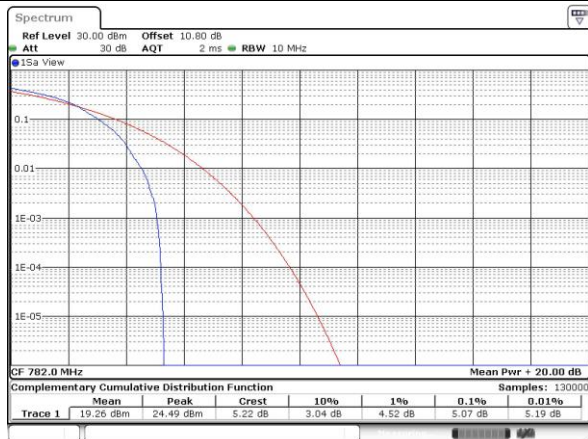


## Middle Channel / Full RB



## LTE Band 13 / 10MHz / 16QAM

## Middle Channel / 1RB

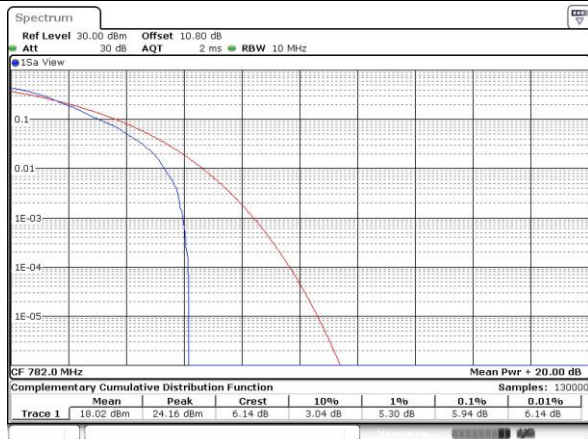


## Middle Channel / Full RB



## LTE Band 13 / 10MHz / 64QAM

## Middle Channel / 1RB



## Middle Channel / Full RB



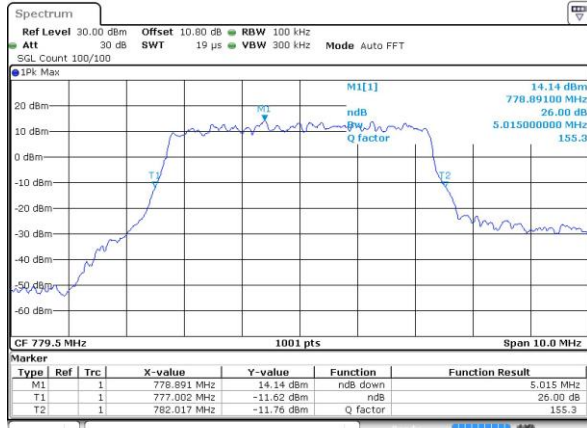
**26dB Bandwidth**

| 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  | -                          | -     | -     | -     | 5.02  | 4.91  | -     | -     | -     | -     | -     | -     |
| Middle CH  | -                          | -     | -     | -     | 5.14  | 5.11  | 9.93  | 9.87  | -     | -     | -     | -     |
| Highest CH | -                          | -     | -     | -     | 5.04  | 5.15  | -     | -     | -     | -     | -     | -     |
| Mode       | LTE Band 13 : 26dB BW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
| BW         | 1.4MHz                     |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                      |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | -                          | -     | -     | -     | 5.17  | -     | -     | -     | -     | -     | -     | -     |
| Middle CH  | -                          | -     | -     | -     | 5.00  | -     | 9.93  | -     | -     | -     | -     | -     |
| Highest CH | -                          | -     | -     | -     | 4.97  | -     | -     | -     | -     | -     | -     | -     |



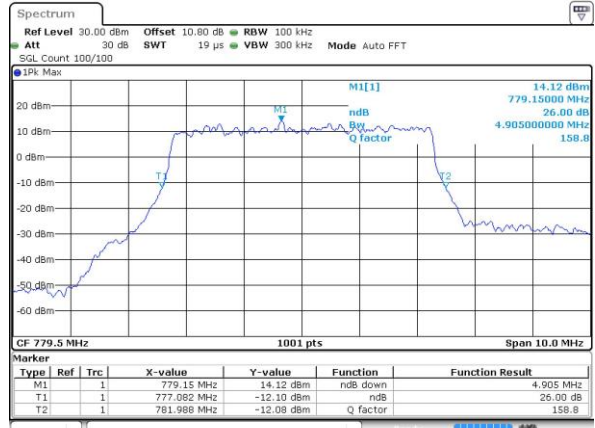
## LTE Band 13

## Lowest Channel / 5MHz / QPSK



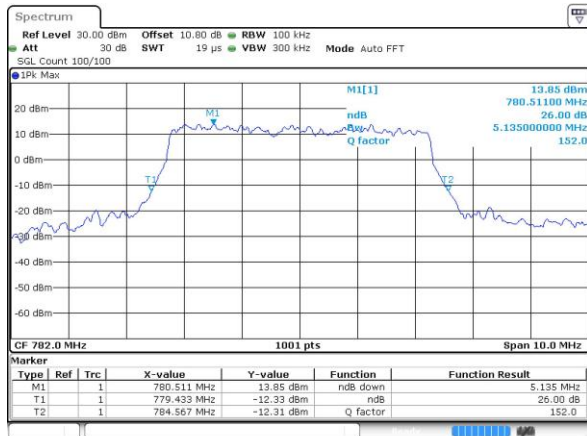
Date: 13 JUN 2018 11:08:13

## Lowest Channel / 5MHz / 16QAM



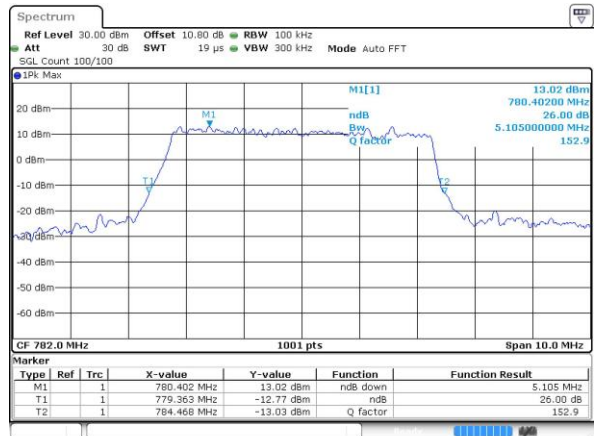
Date: 13 JUN 2018 11:08:03

## Middle Channel / 5MHz / QPSK



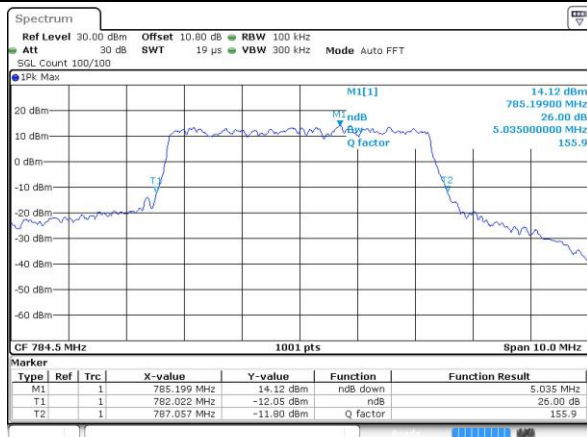
Date: 13 JUN 2018 11:18:38

## Middle Channel / 5MHz / 16QAM



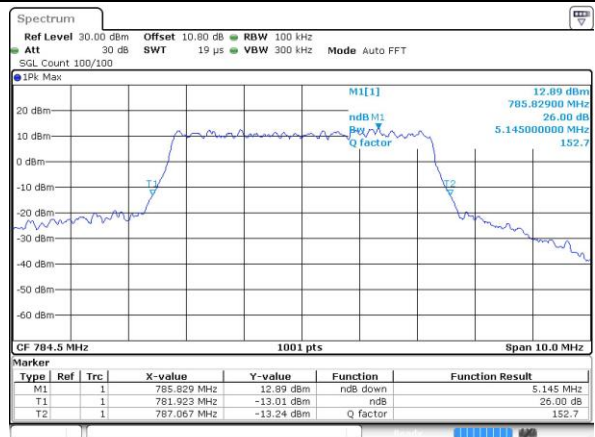
Date: 13 JUN 2018 11:18:48

## Highest Channel / 5MHz / QPSK



Date: 13 JUN 2018 11:19:52

## Highest Channel / 5MHz / 16QAM

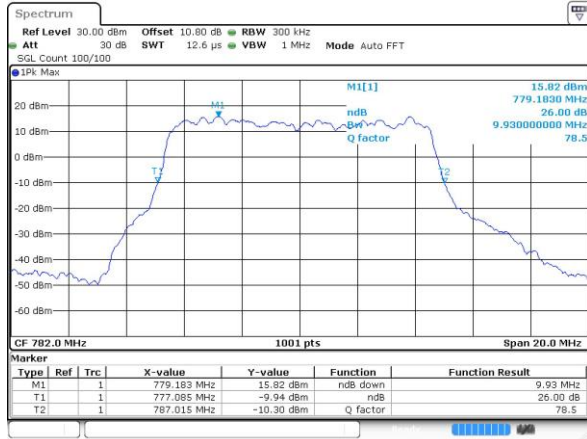


Date: 13 JUN 2018 11:19:41



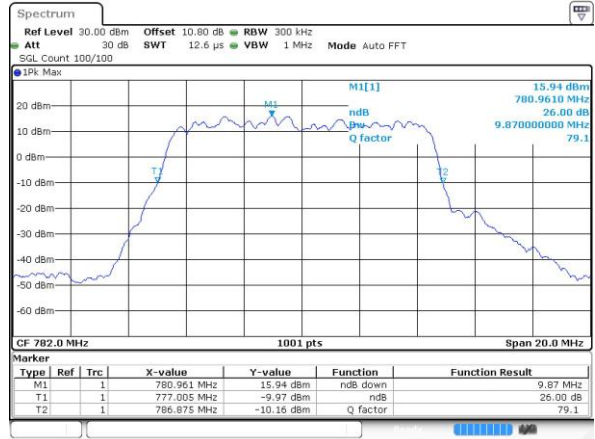
## LTE Band 13

## Middle Channel / 10MHz / QPSK



Date: 13 JUN 2018 11:39:22

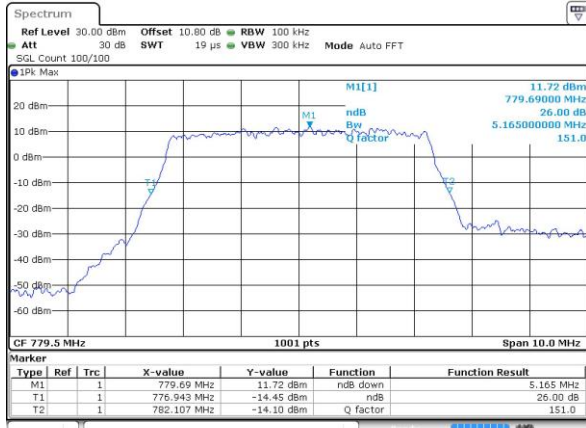
## Middle Channel / 10MHz / 16QAM



Date: 13 JUN 2018 11:39:12

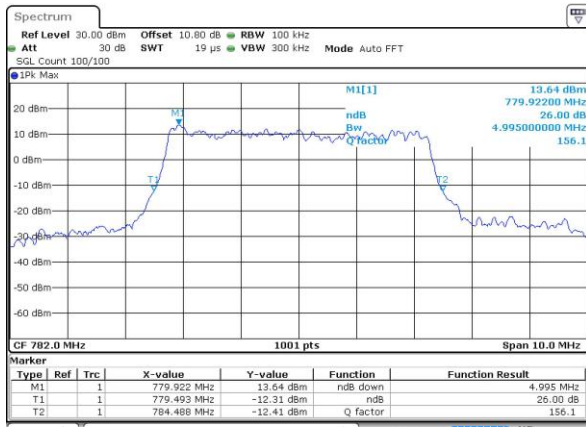
## LTE Band 13

### Lowest Channel / 5MHz / 64QAM



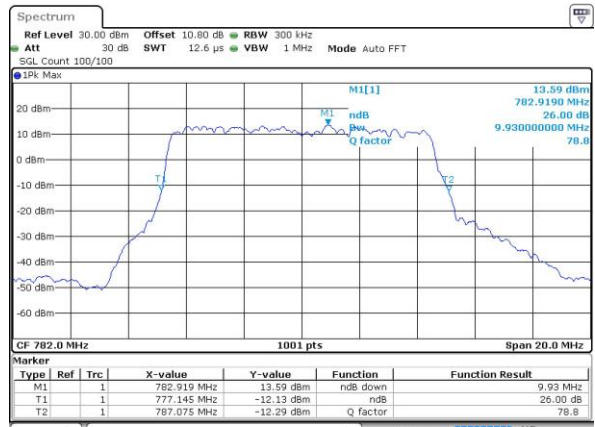
Date: 13 JUN 2018 11:28:39

### Middle Channel / 5MHz / 64QAM



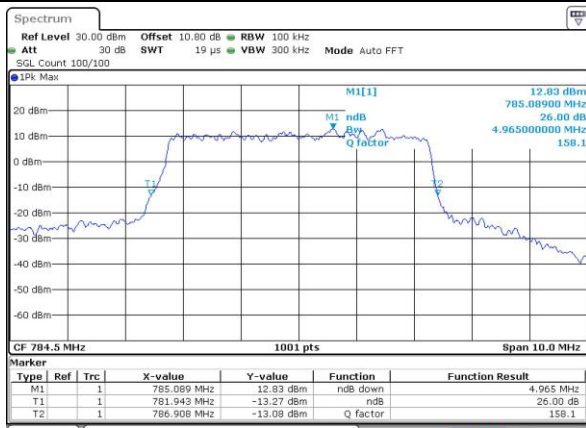
Date: 13 JUN 2018 11:33:56

### Middle Channel / 10MHz / 64QAM



Date: 13 JUN 2018 11:51:28

### Highest Channel / 5MHz / 64QAM



Date: 13 JUN 2018 11:34:28

**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  | -                         | -     | -     | -     | 4.49  | 4.47  | -     | -     | -     | -     | -     | -     |
| Middle CH  | -                         | -     | -     | -     | 4.52  | 4.5   | 9.05  | 9.05  | -     | -     | -     | -     |
| Highest CH | -                         | -     | -     | -     | 4.5   | 4.51  | -     | -     | -     | -     | -     | -     |
| Mode       | LTE Band 13 : 99%OBW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
| BW         | 1.4MHz                    |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                     |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | -                         | -     | -     | -     | 4.51  | -     | -     | -     | -     | -     | -     | -     |
| Middle CH  | -                         | -     | -     | -     | 4.51  | -     | 8.99  | -     | -     | -     | -     | -     |
| Highest CH | -                         | -     | -     | -     | 4.52  | -     | -     | -     | -     | -     | -     | -     |



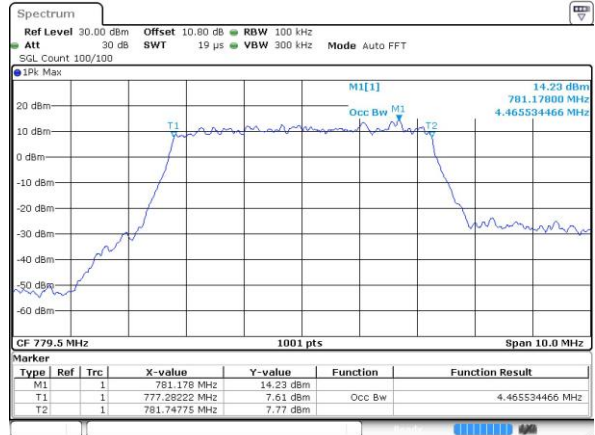
## LTE Band 13

## Lowest Channel / 5MHz / QPSK



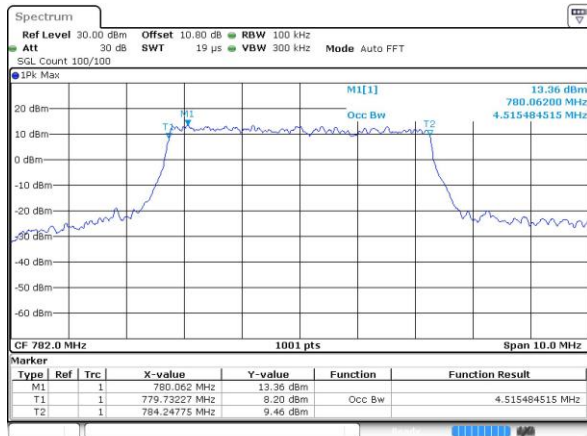
Date: 13 JUN 2018 11:07:42

## Lowest Channel / 5MHz / 16QAM



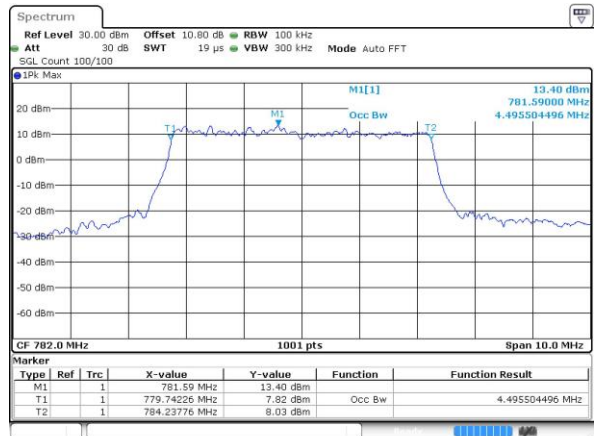
Date: 13 JUN 2018 11:07:52

## Middle Channel / 5MHz / QPSK



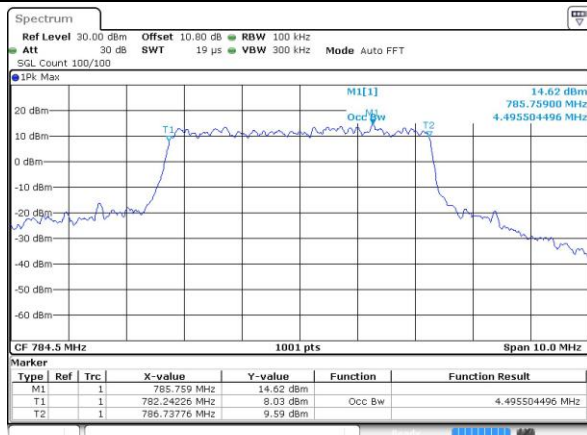
Date: 13 JUN 2018 11:19:09

## Middle Channel / 5MHz / 16QAM



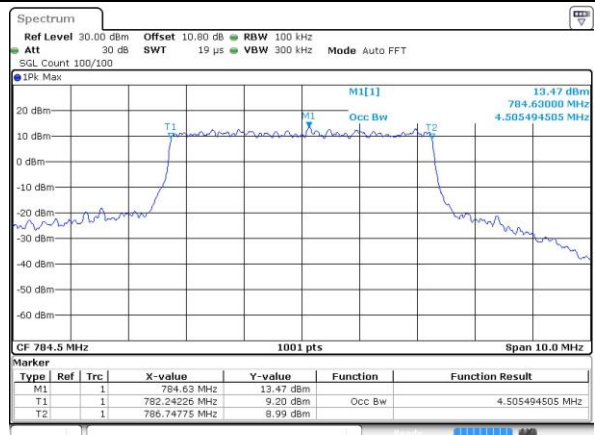
Date: 13 JUN 2018 11:18:59

## Highest Channel / 5MHz / QPSK



Date: 13 JUN 2018 11:19:20

## Highest Channel / 5MHz / 16QAM



Date: 13 JUN 2018 11:19:30



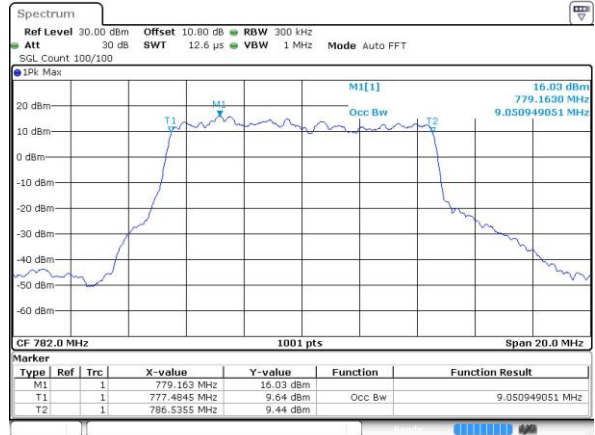
## LTE Band 13

## Middle Channel / 10MHz / QPSK



Date: 13 JUN 2018 11:38:51

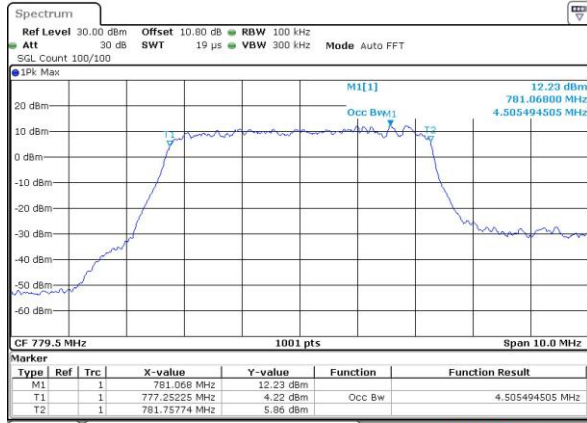
## Middle Channel / 10MHz / 16QAM



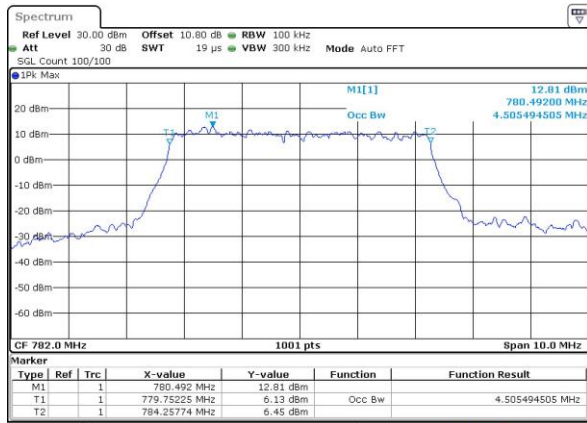
Date: 13 JUN 2018 11:39:02

## LTE Band 13

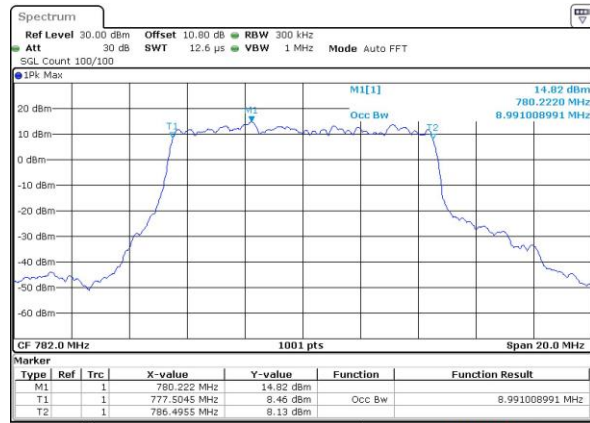
### Lowest Channel / 5MHz / 64QAM



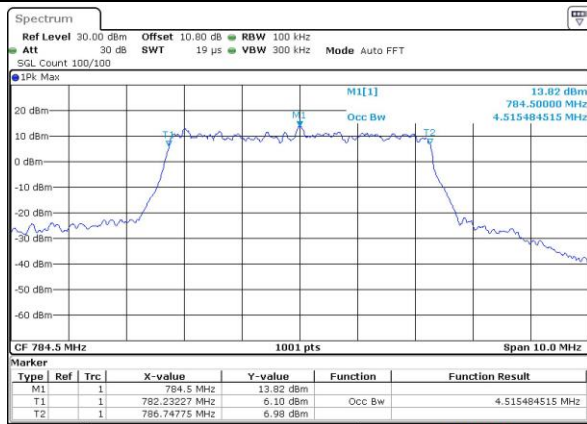
### Middle Channel / 5MHz / 64QAM



### Middle Channel / 10MHz / 64QAM



### Highest Channel / 5MHz / 64QAM

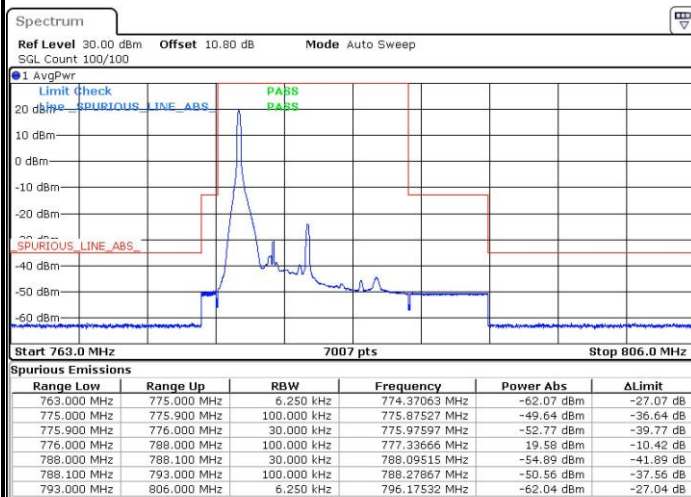




# Conducted Band Edge

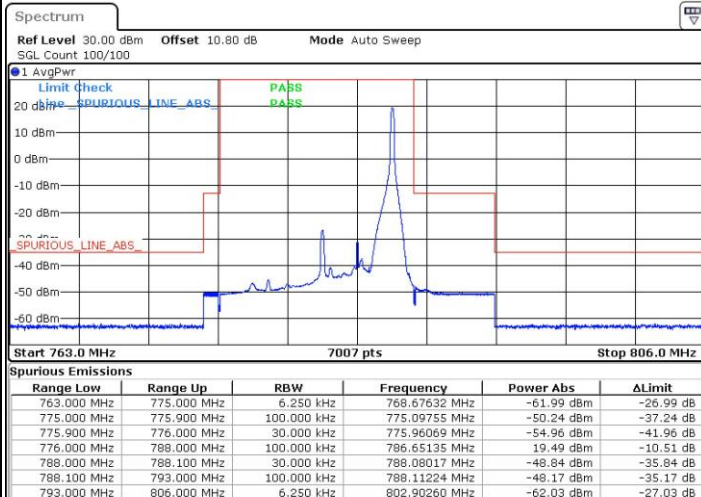
## LTE Band 13 / 5MHz / QPSK

### Lowest Band Edge / 1 RB



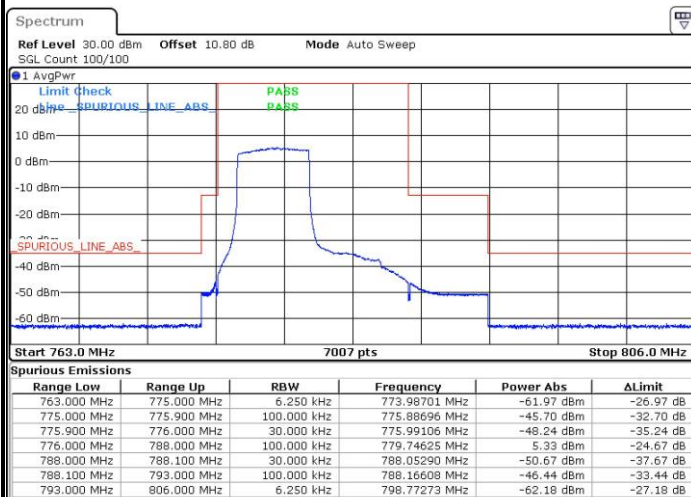
Date: 13 JUN 2018 11:14:51

### Highest Band Edge / 1 RB



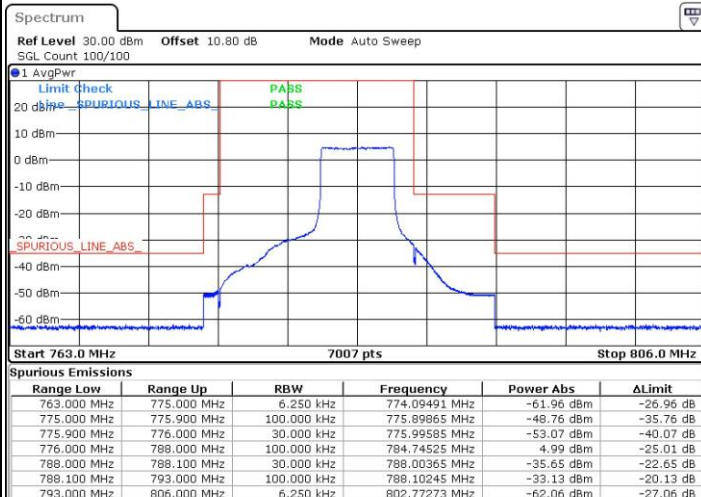
Date: 13 JUN 2018 11:26:29

### Lowest Band Edge / Full RB



Date: 13 JUN 2018 11:09:52

### Highest Band Edge / Full RB

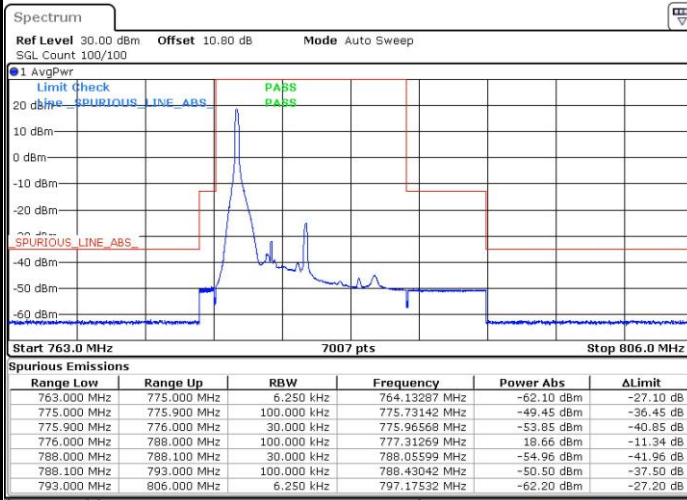


Date: 13 JUN 2018 11:21:31



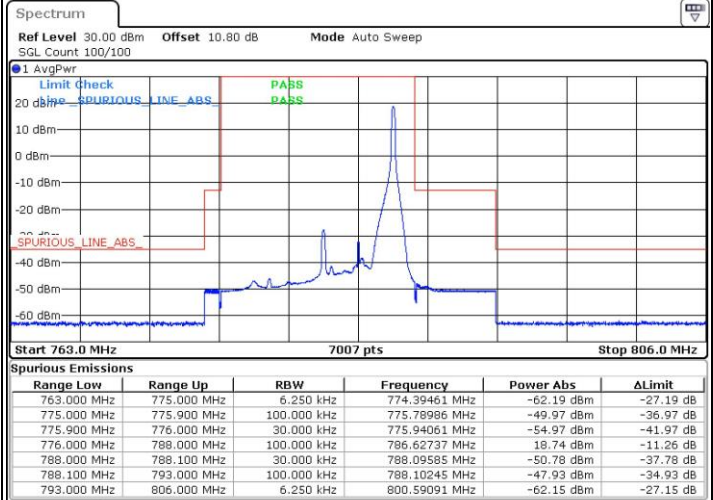
## LTE Band 13 / 5MHz / 16QAM

## Lowest Band Edge / 1 RB



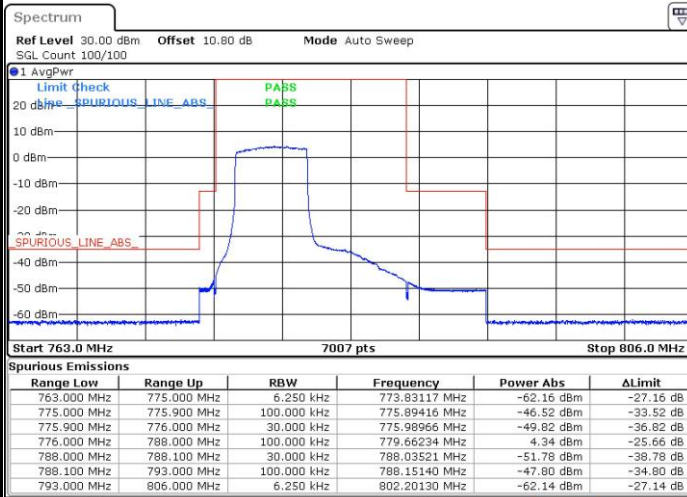
Date: 13 JUN 2018 11:13:11

## Highest Band Edge / 1 RB



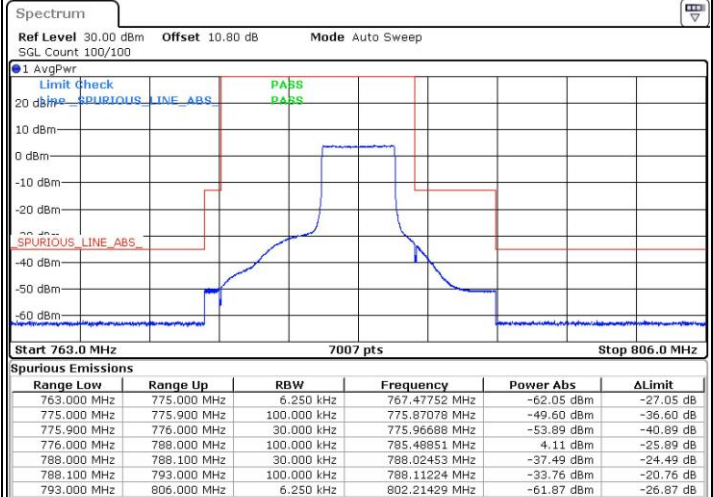
Date: 13 JUN 2018 11:24:50

## Lowest Band Edge / Full RB



Date: 13 JUN 2018 11:11:32

## Highest Band Edge / Full RB

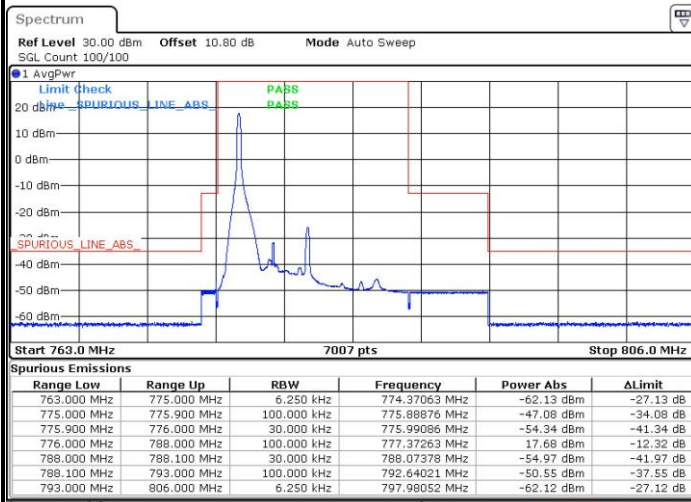


Date: 13 JUN 2018 11:23:10



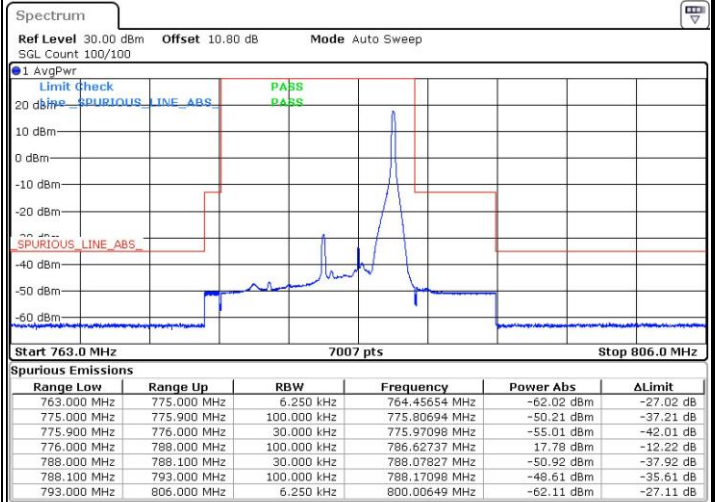
## LTE Band 13 / 5MHz / 64QAM

## Lowest Band Edge / 1 RB



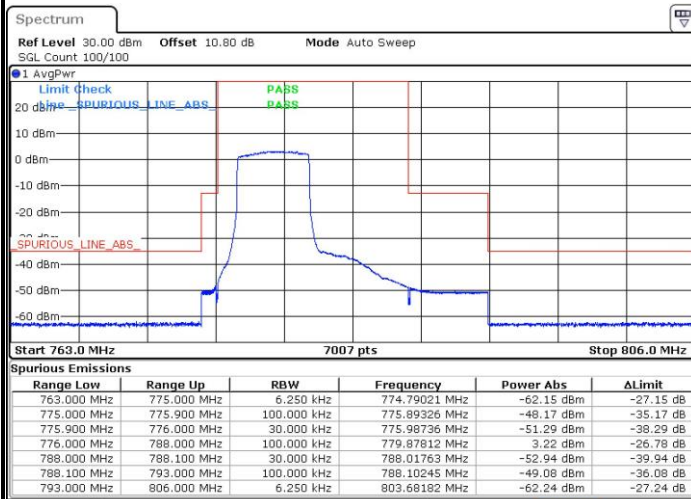
Date: 13 JUN 2018 11:31:57

## Highest Band Edge / 1 RB



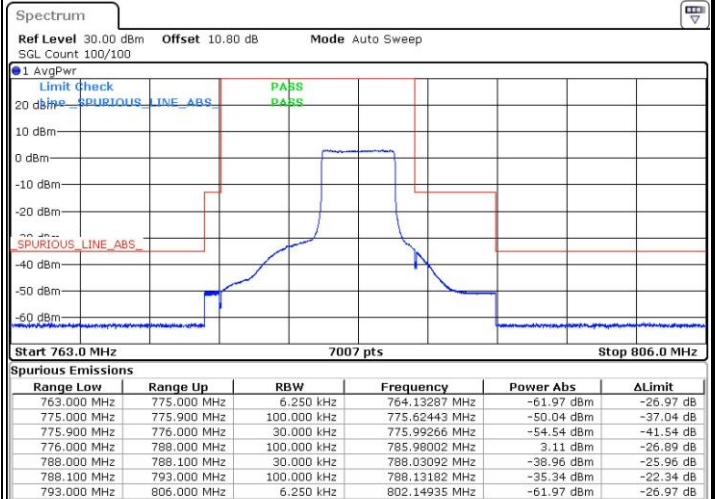
Date: 13 JUN 2018 11:37:46

## Lowest Band Edge / Full RB



Date: 13 JUN 2018 11:30:18

## Highest Band Edge / Full RB

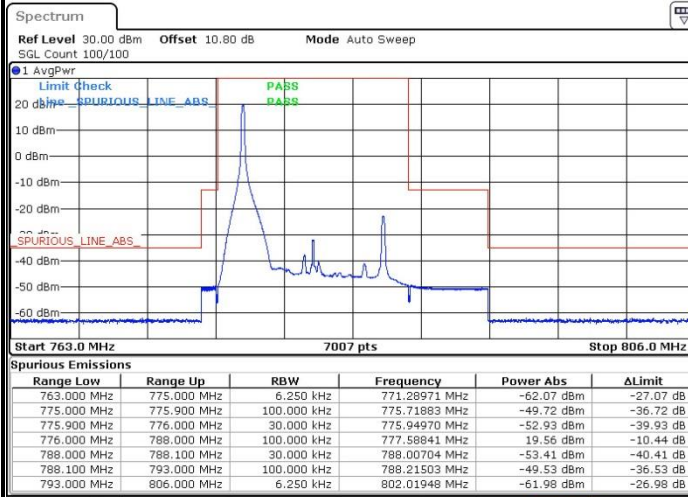


Date: 13 JUN 2018 11:36:06



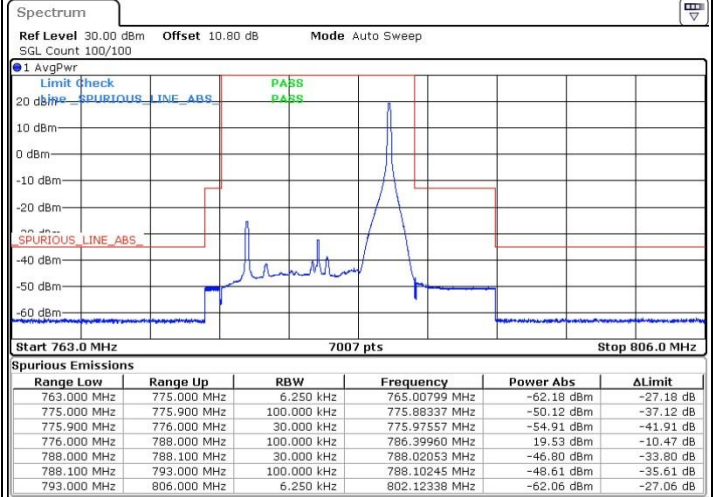
## LTE Band 13 / 10MHz / QPSK

## Lowest Band Edge / 1 RB



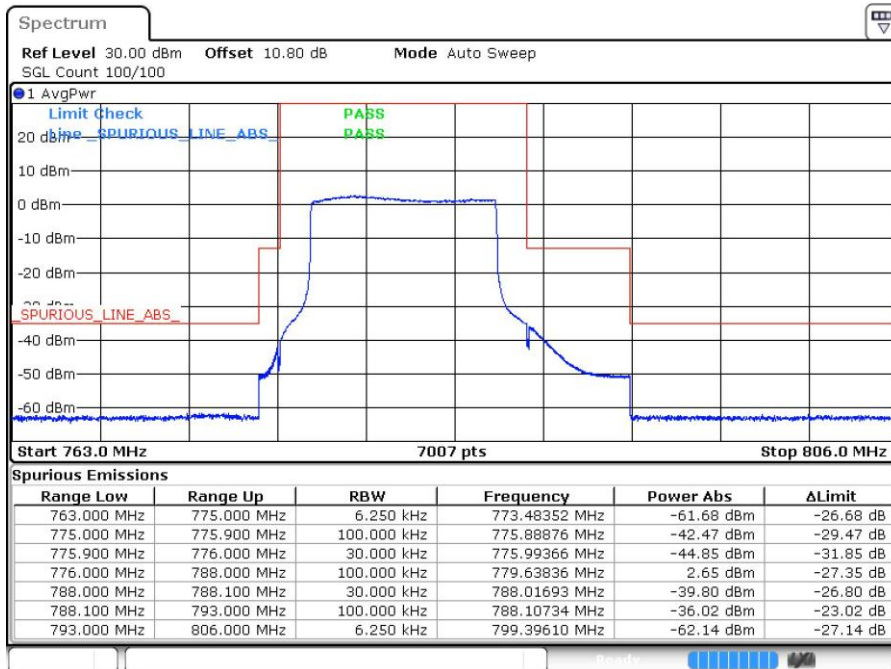
Date: 13 JUN 2018 11:45:59

## Highest Band Edge / 1 RB



Date: 13 JUN 2018 11:47:39

## Band Edge / Full RB



Date: 13 JUN 2018 11:41:01