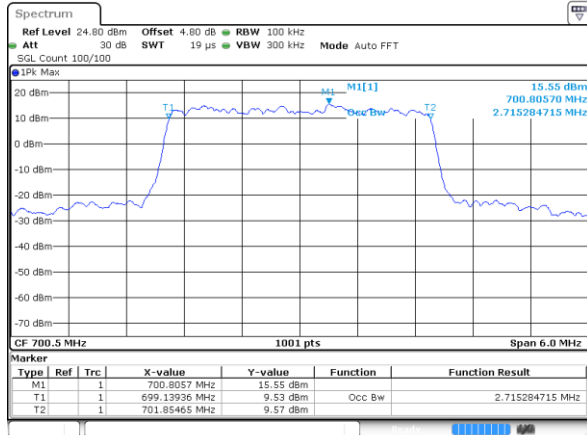




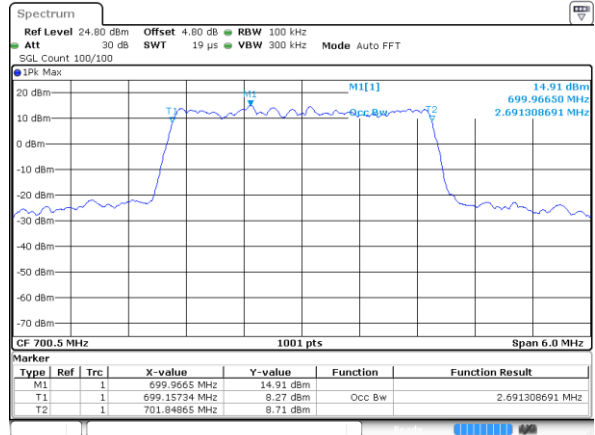
LTE Band 12

Lowest Channel / 3MHz / QPSK



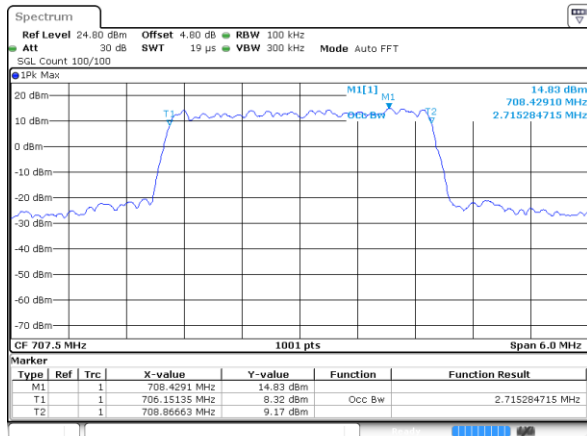
Date: 28 JAN 2020 04:10:45

Lowest Channel / 3MHz / 16QAM



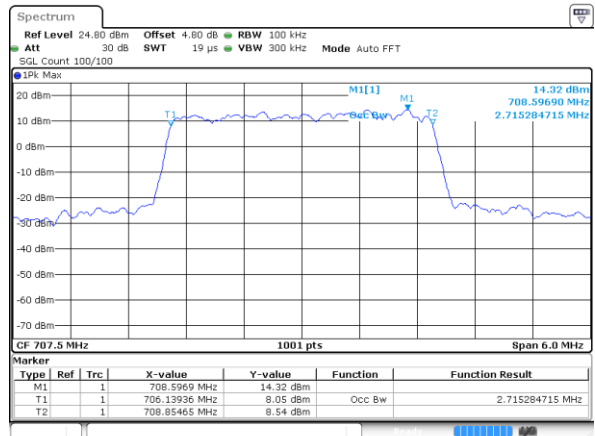
Date: 28 JAN 2020 04:10:55

Middle Channel / 3MHz / QPSK



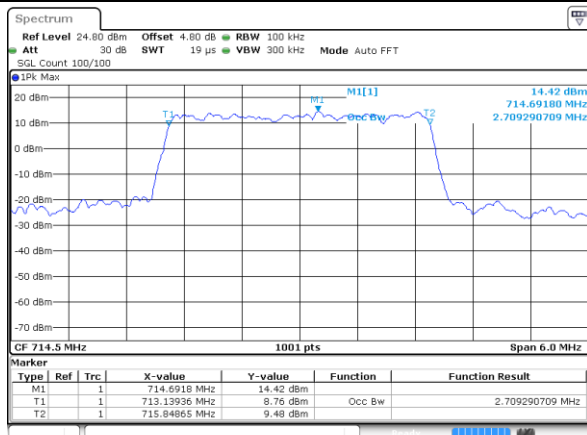
Date: 28 JAN 2020 04:11:15

Middle Channel / 3MHz / 16QAM



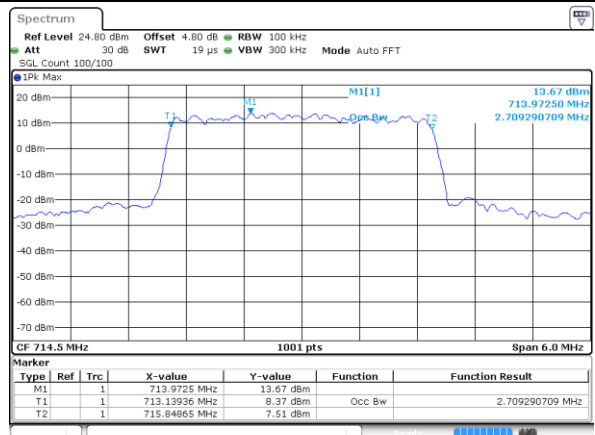
Date: 28 JAN 2020 04:11:05

Highest Channel / 3MHz / QPSK



Date: 28 JAN 2020 04:11:25

Highest Channel / 3MHz / 16QAM

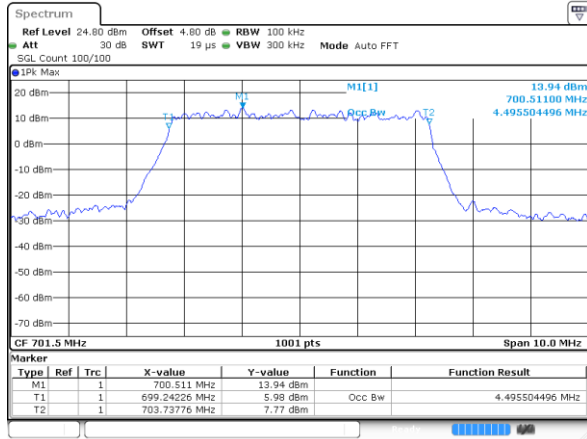


Date: 28 JAN 2020 04:11:35

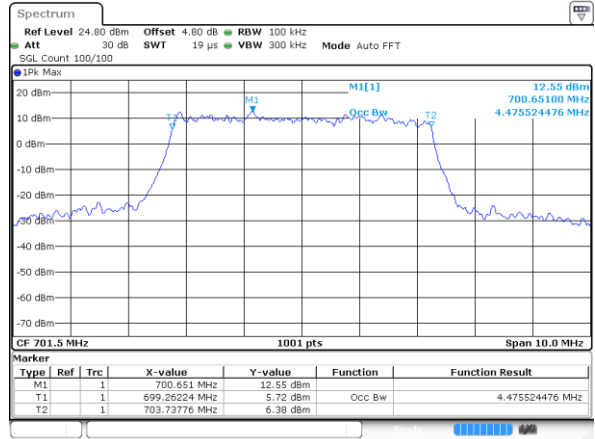


## LTE Band 12

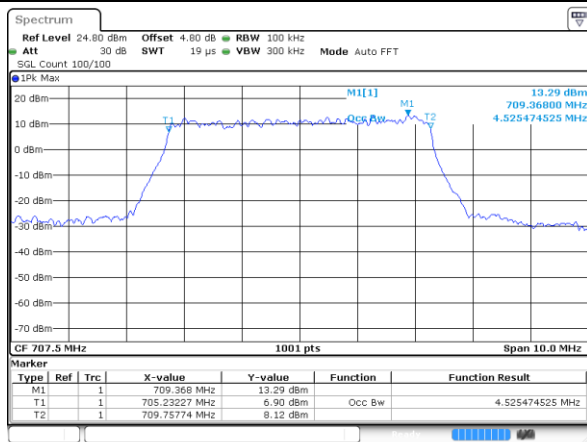
## Lowest Channel / 5MHz / QPSK



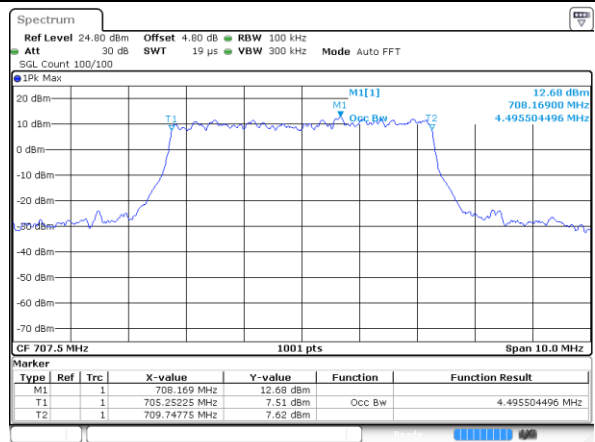
## Lowest Channel / 5MHz / 16QAM



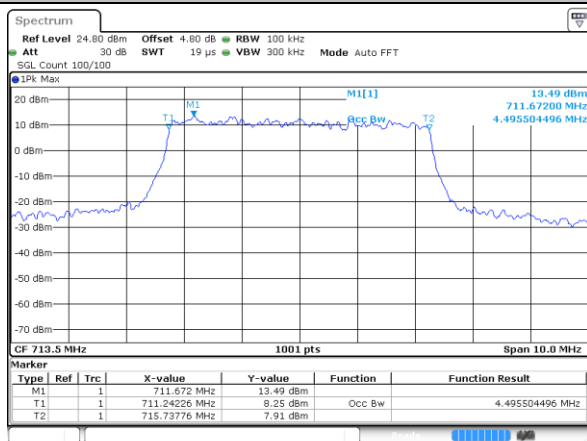
## Middle Channel / 5MHz / QPSK



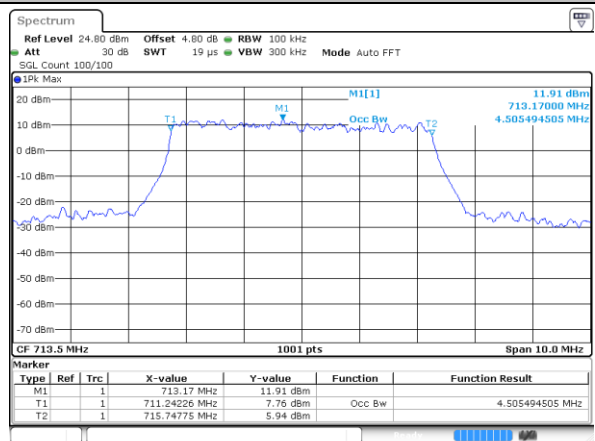
## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



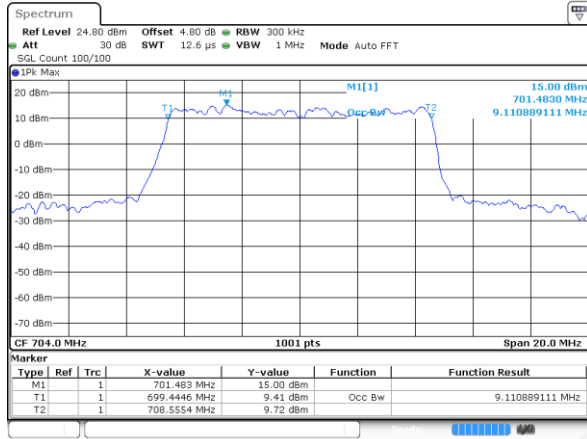
## Highest Channel / 5MHz / 16QAM



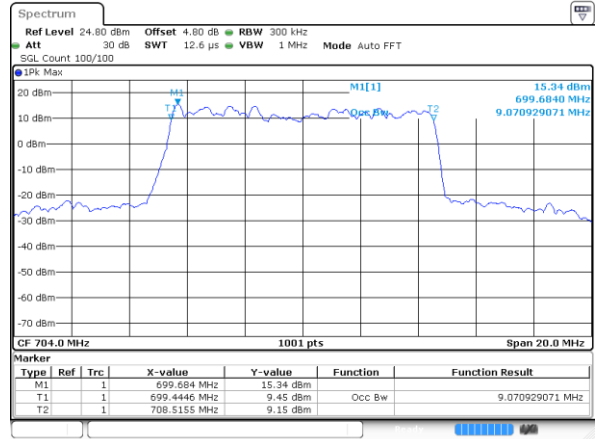


## LTE Band 12

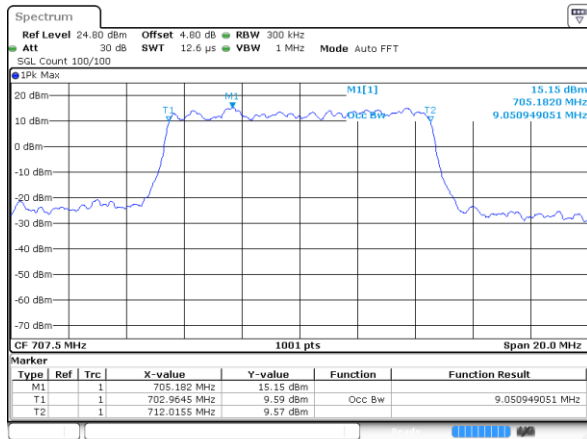
## Lowest Channel / 10MHz / QPSK



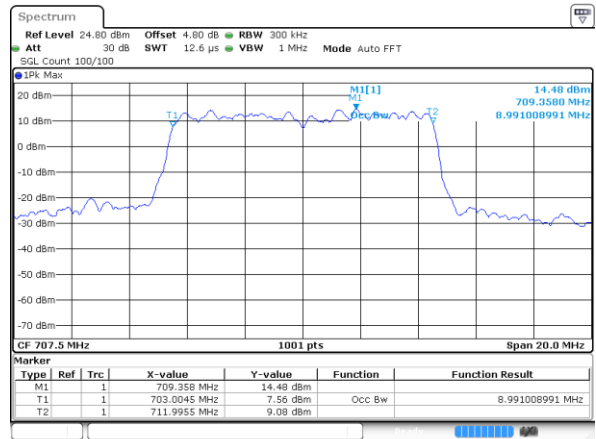
## Lowest Channel / 10MHz / 16QAM



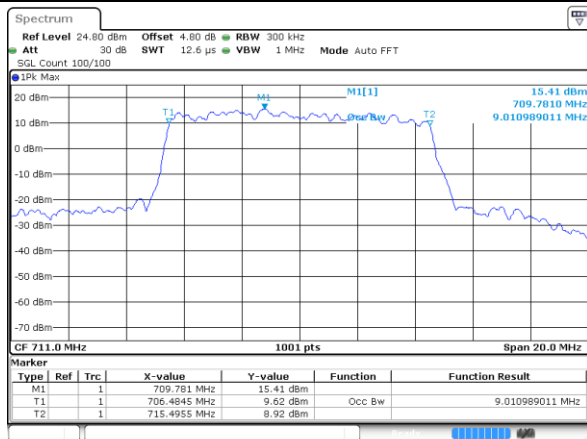
## Middle Channel / 10MHz / QPSK



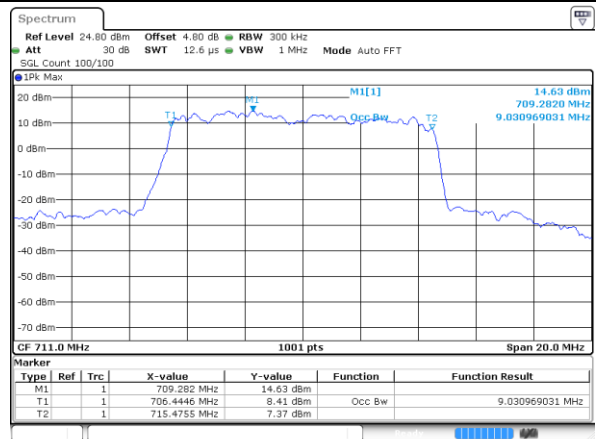
## Middle Channel / 10MHz / 16QAM

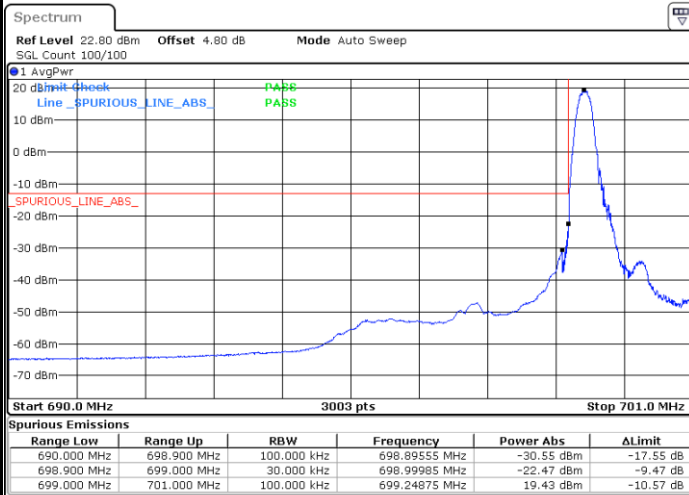
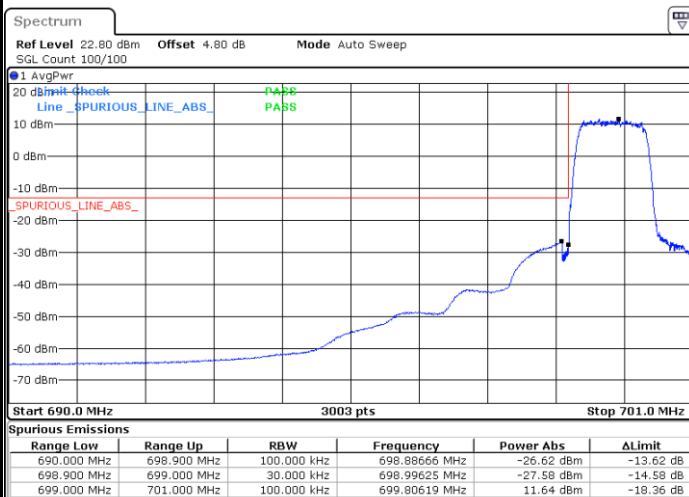
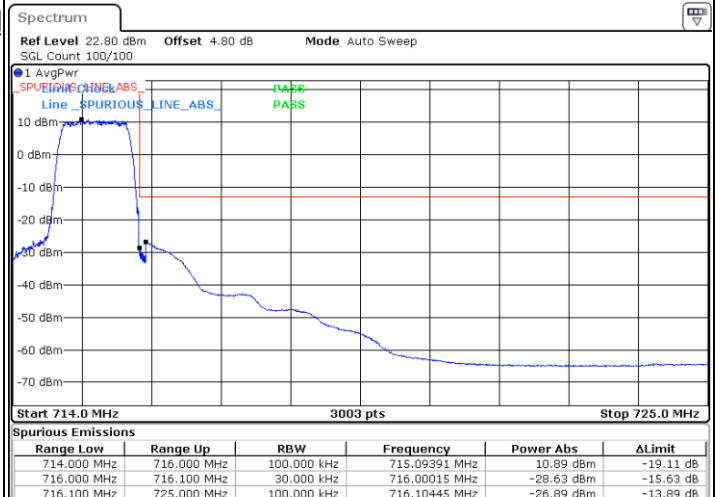


## Highest Channel / 10MHz / QPSK



## Highest Channel / 10MHz / 16QAM

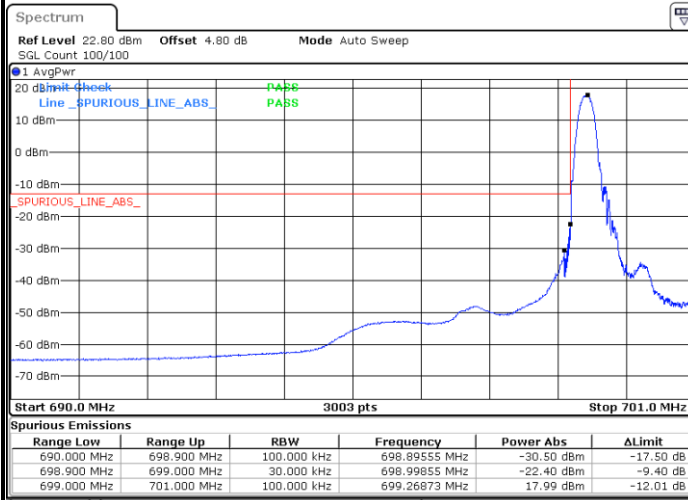


**Conducted Band Edge****LTE Band 12 / 1.4MHz / QPSK****Lowest Band Edge / 1 RB****Highest Band Edge / 1RB****Lowest Band Edge / Full RB****Highest Band Edge / Full RB**



## LTE Band 12 / 1.4MHz / 16QAM

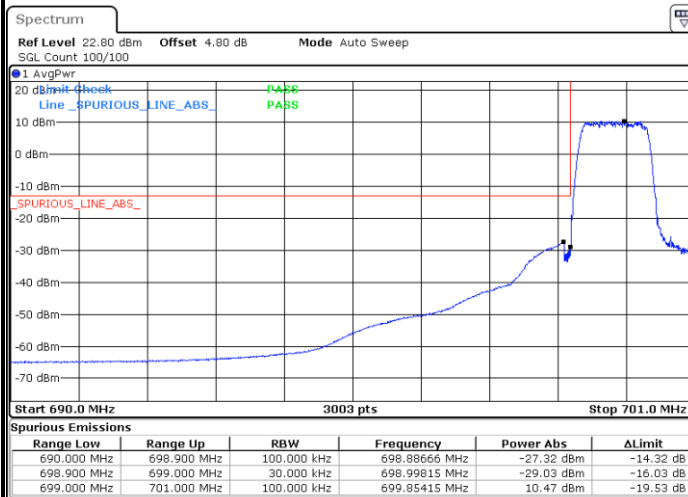
## Lowest Band Edge / 1 RB



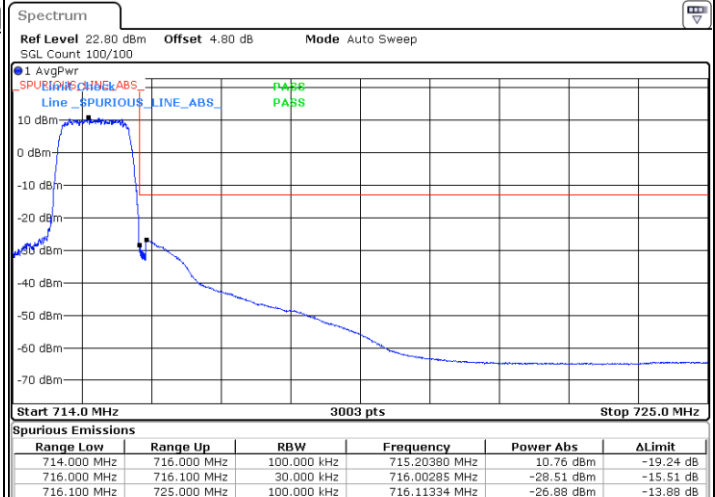
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



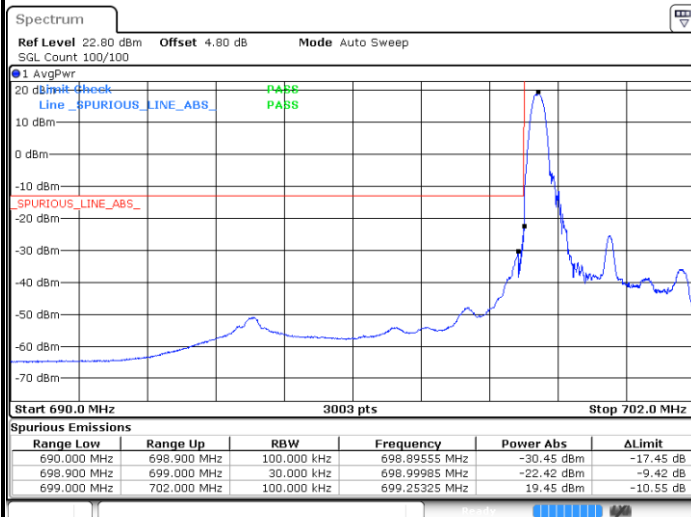
## Highest Band Edge / Full RB





## LTE Band 12 / 3MHz / QPSK

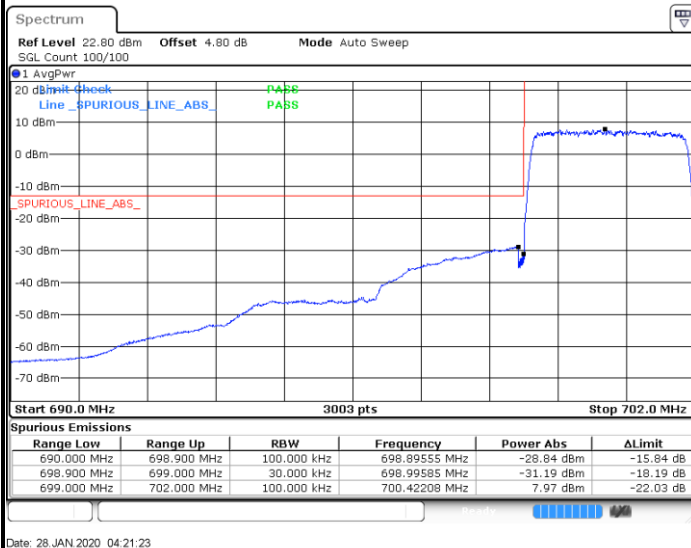
## Lowest Band Edge / 1RB



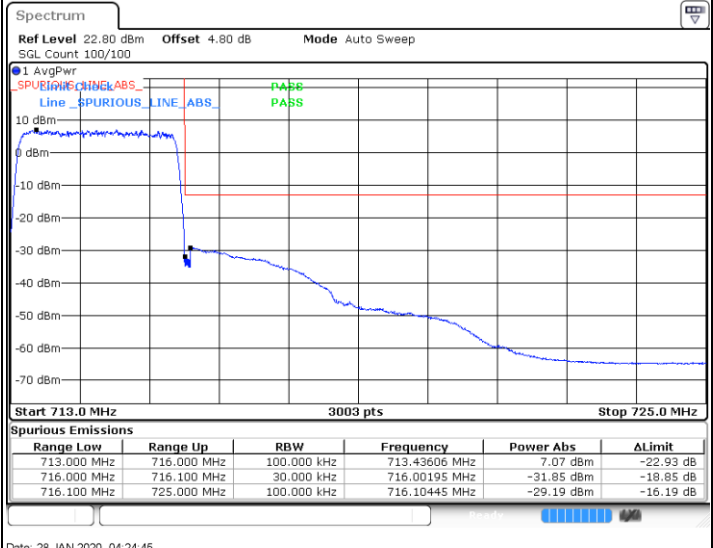
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



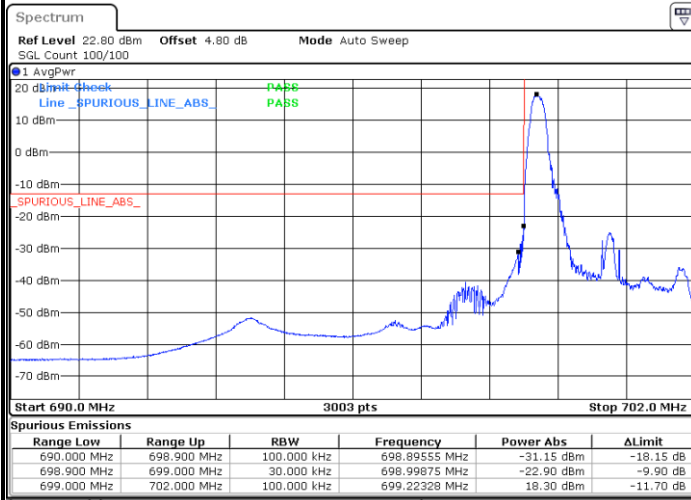
## Highest Band Edge / Full RB





## LTE Band 12 / 3MHz / 16QAM

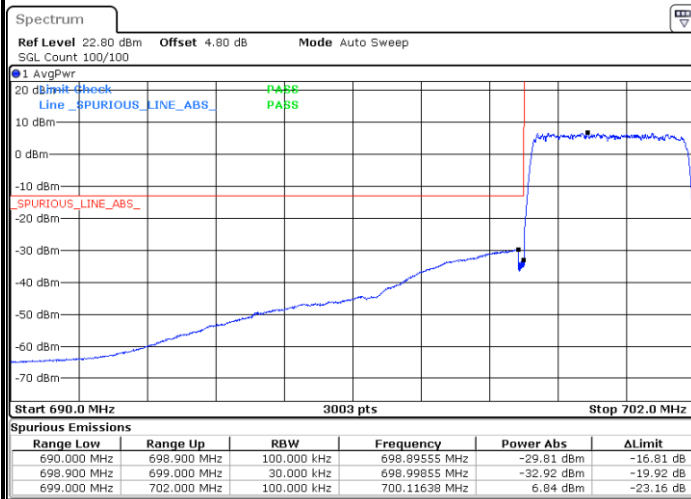
## Lowest Band Edge / 1 RB



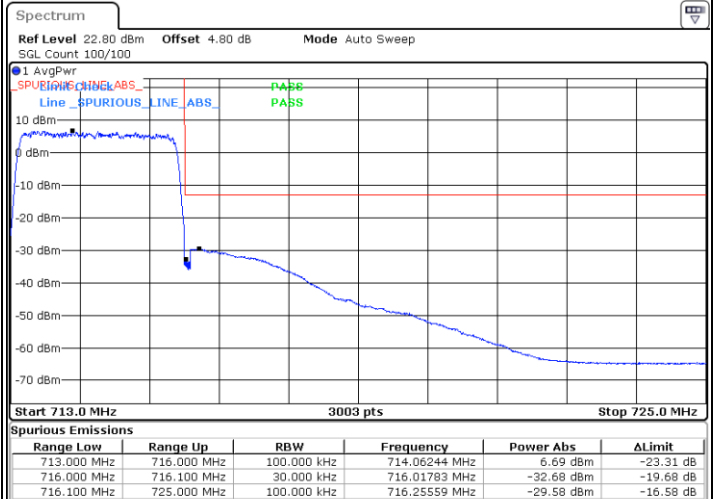
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



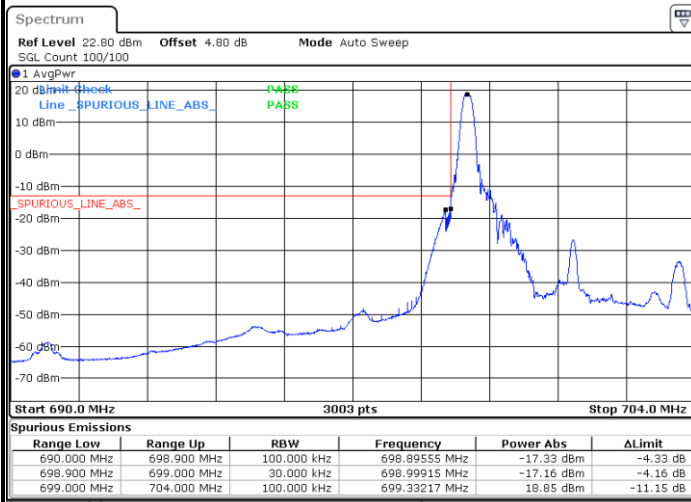
## Highest Band Edge / Full RB



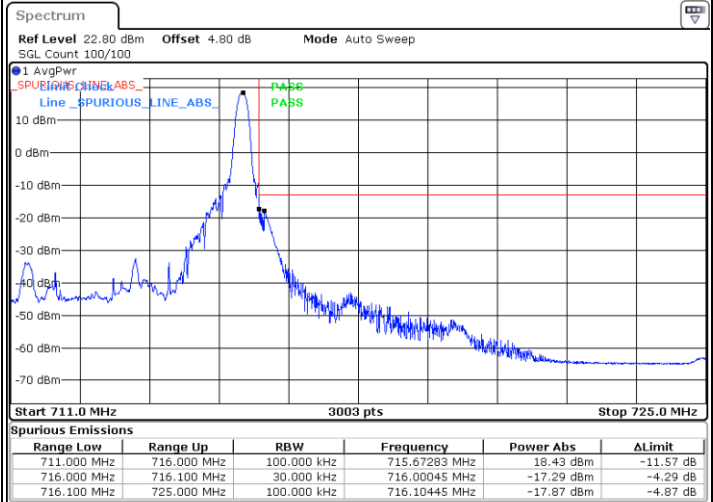


## LTE Band 12 / 5MHz / QPSK

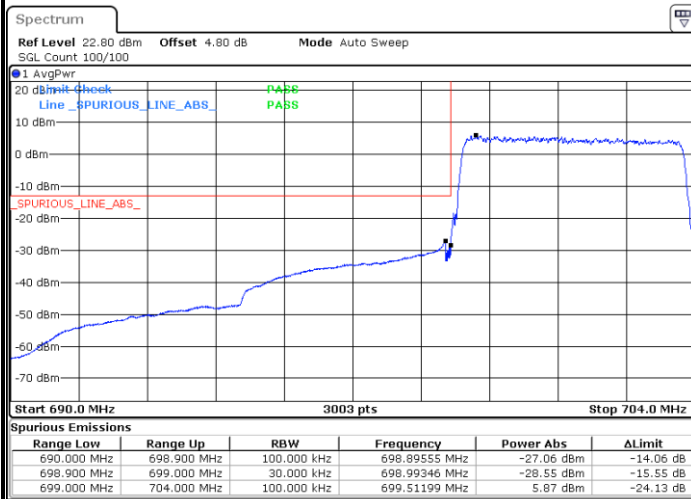
## Lowest Band Edge / 1 RB



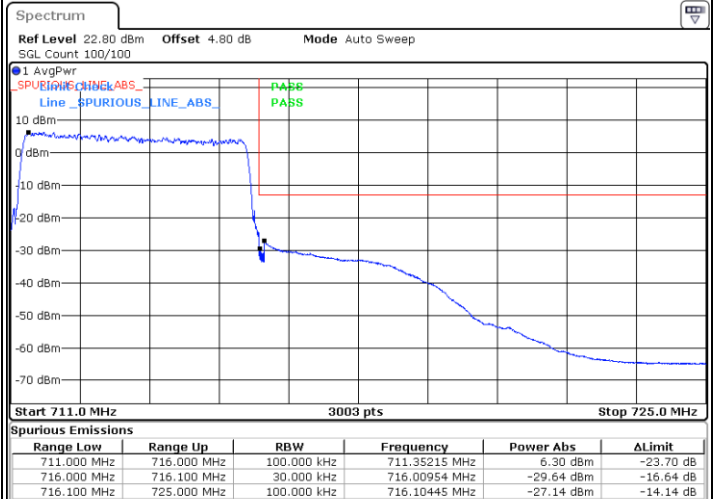
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



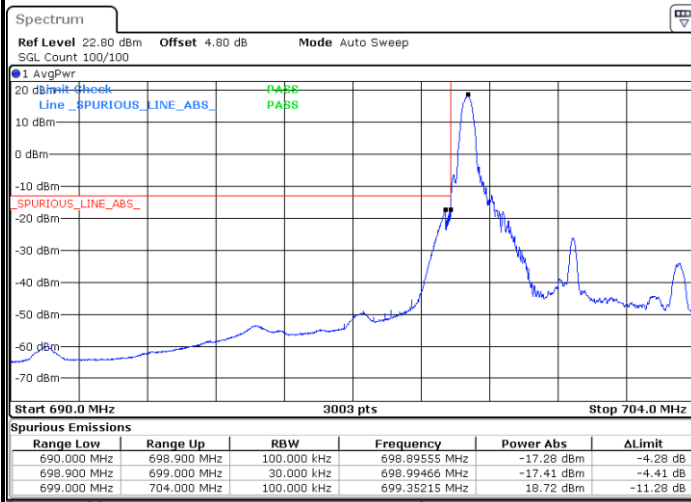
## Highest Band Edge / Full RB



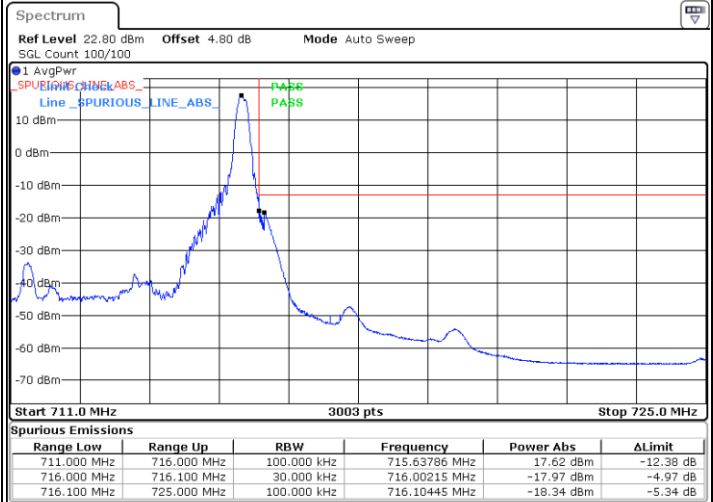


## LTE Band 12 / 5MHz / 16QAM

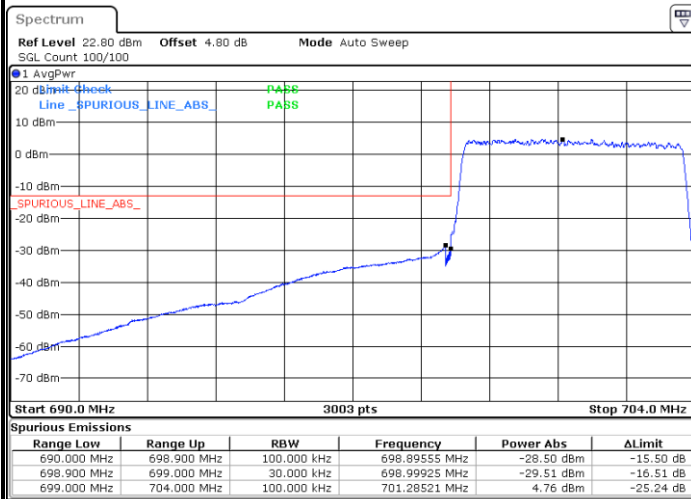
## Lowest Band Edge / 1RB



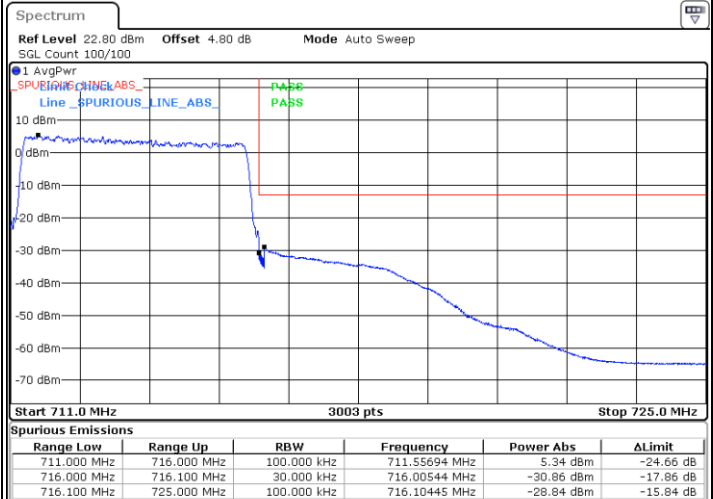
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



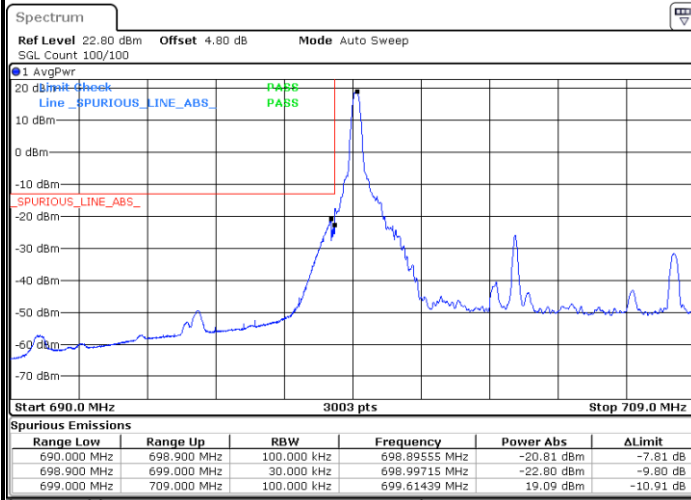
## Highest Band Edge / Full RB



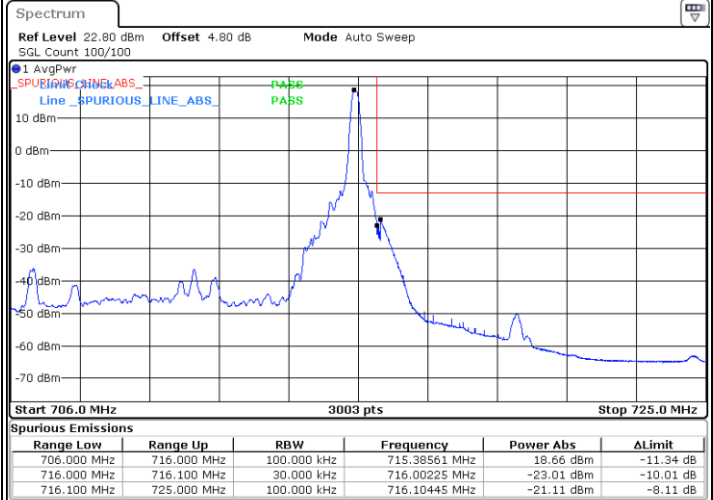


## LTE Band 12 / 10MHz / QPSK

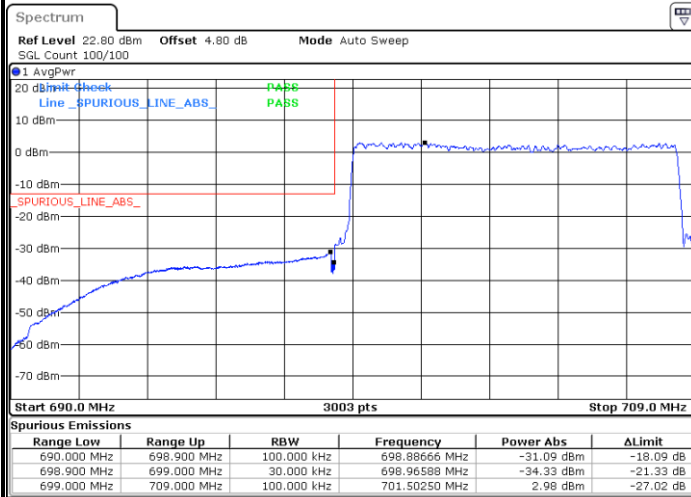
## Lowest Band Edge / 1 RB



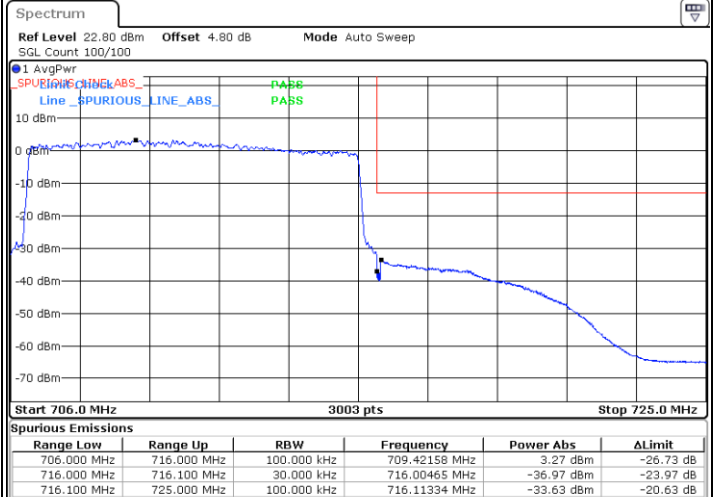
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



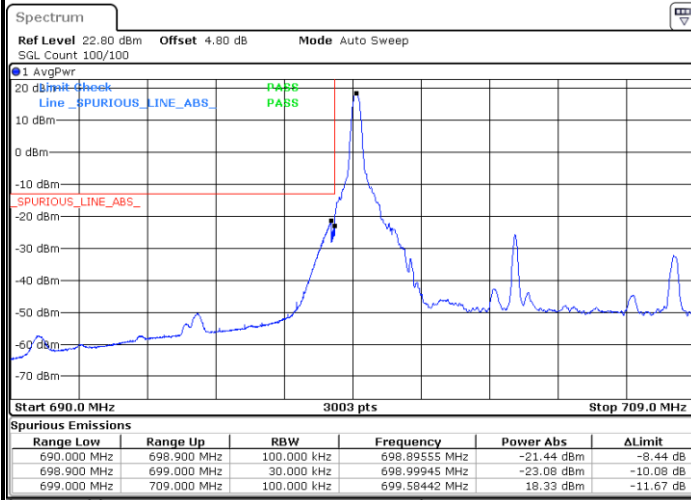
## Highest Band Edge / Full RB



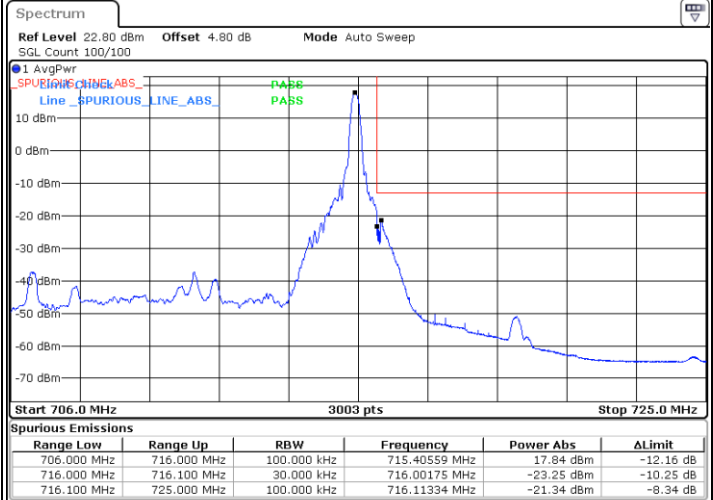


## LTE Band 12 / 10MHz / 16QAM

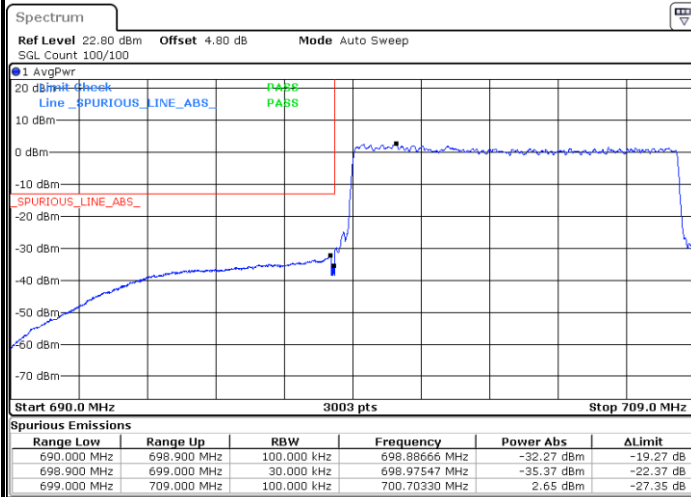
## Lowest Band Edge / 1 RB



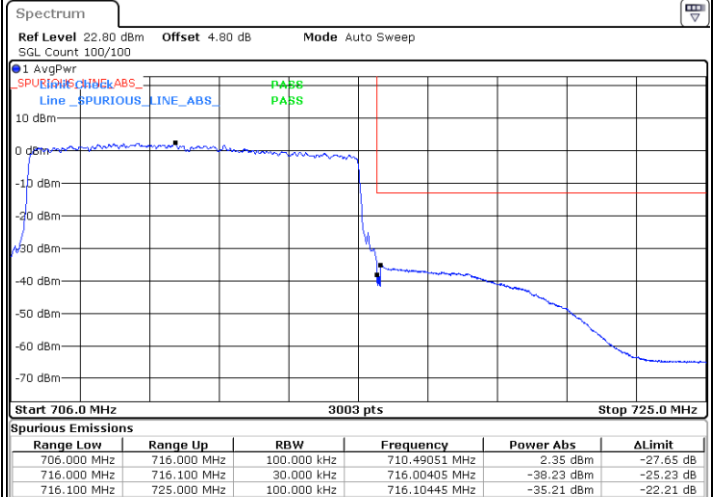
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB

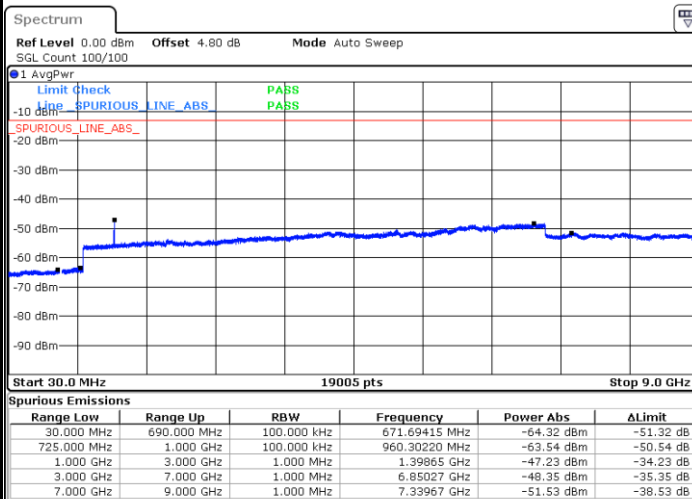




# Conducted Spurious Emission

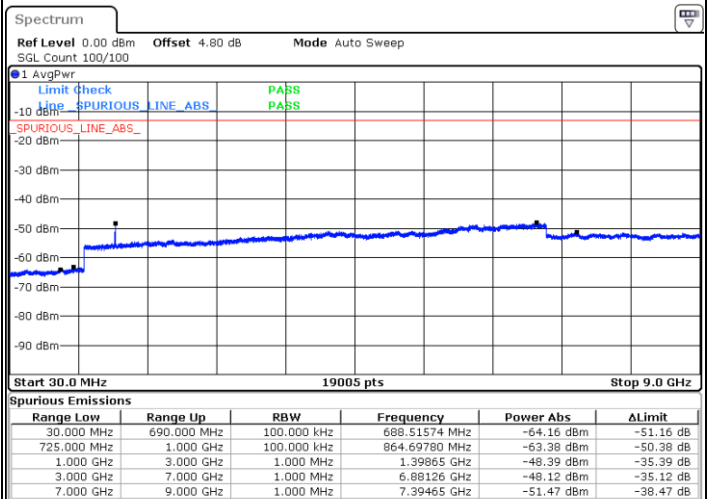
## LTE Band 12 / 1.4MHz

### Lowest Channel / QPSK



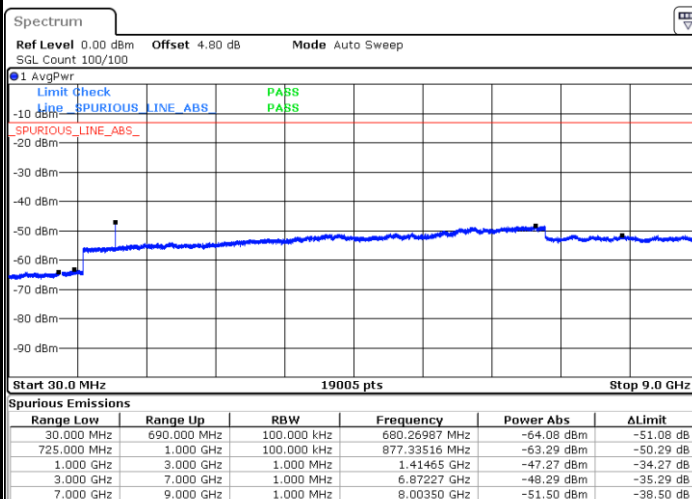
Date: 28 JAN 2020 02:56:49

### Lowest Channel / 16QAM



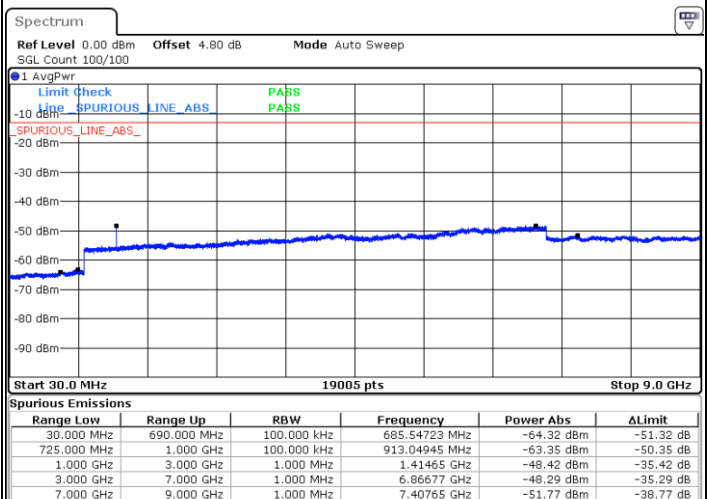
Date: 28 JAN 2020 03:57:57

### Middle Channel / QPSK



Date: 28 JAN 2020 03:59:46

### Middle Channel / 16QAM

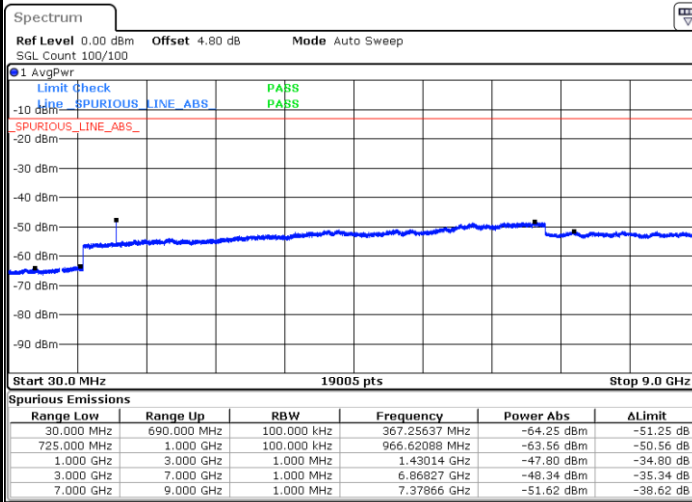


Date: 28 JAN 2020 03:58:52



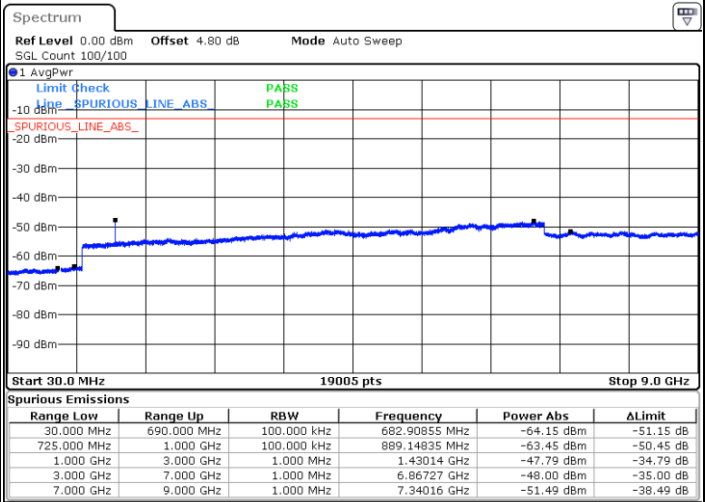
## LTE Band 12 / 1.4MHz

## Highest Channel / QPSK



Date: 28 JAN 2020 04:00:40

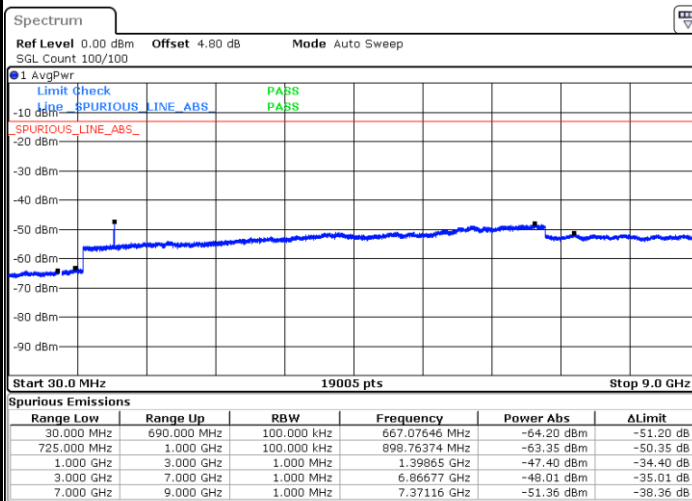
## Highest Channel / 16QAM



Date: 28 JAN 2020 04:01:35

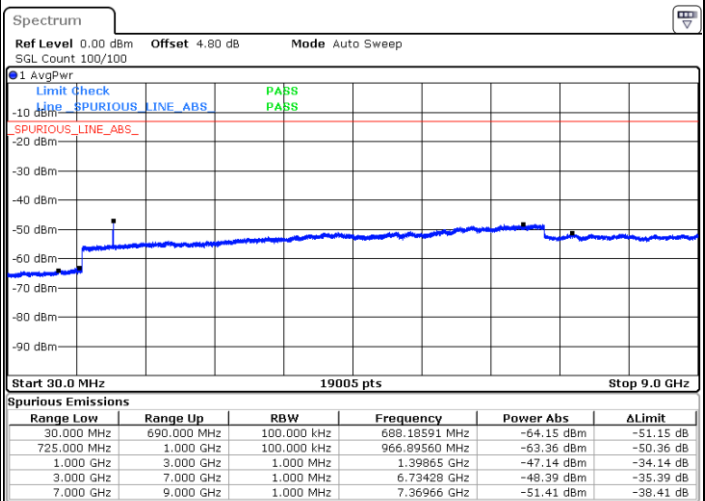
## LTE Band 12 / 3MHz

## Lowest Channel / QPSK



Date: 28 JAN 2020 04:13:28

## Lowest Channel / 16QAM

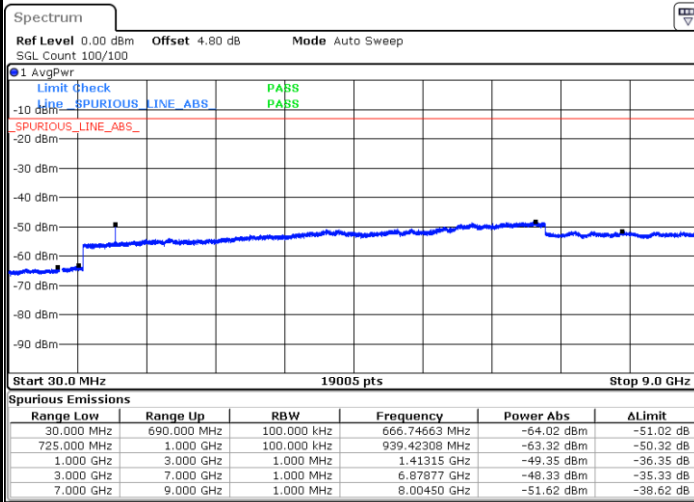


Date: 28 JAN 2020 04:14:22



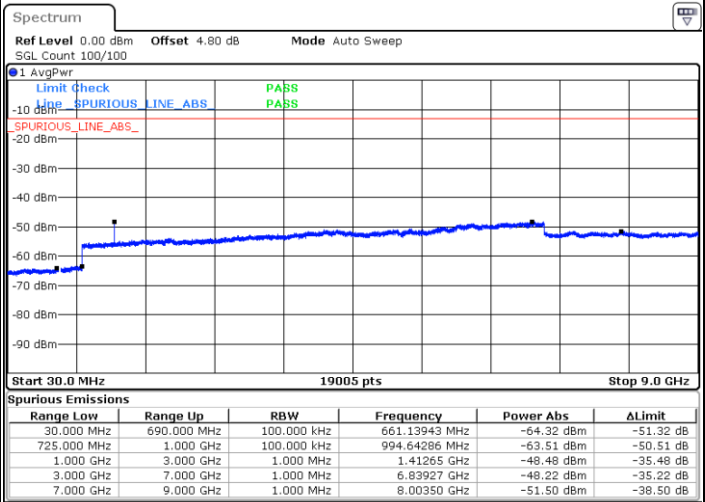
## LTE Band 12 / 3MHz

## Middle Channel / QPSK



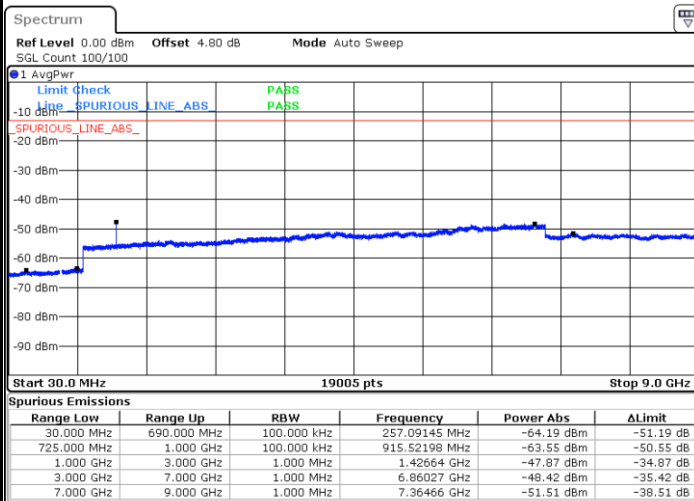
Date: 28 JAN 2020 04:16:11

## Middle Channel / 16QAM



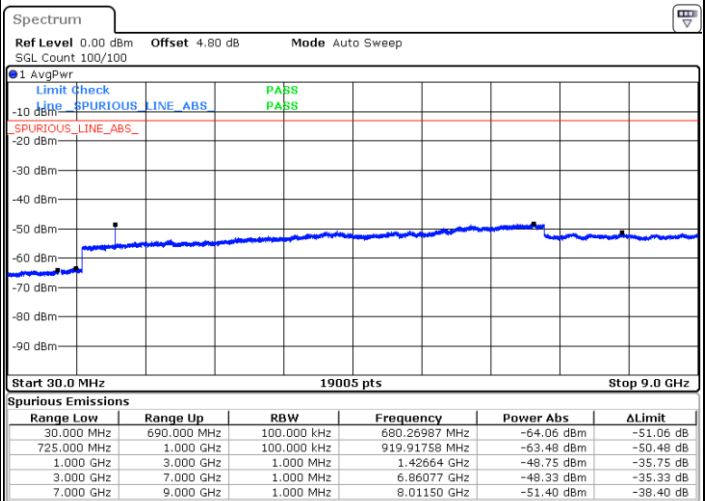
Date: 28 JAN 2020 04:15:17

## Highest Channel / QPSK



Date: 28 JAN 2020 04:17:05

## Highest Channel / 16QAM

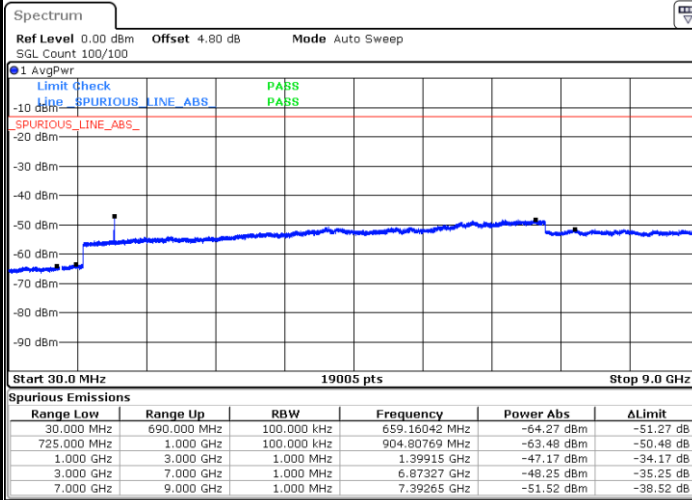


Date: 28 JAN 2020 04:18:00



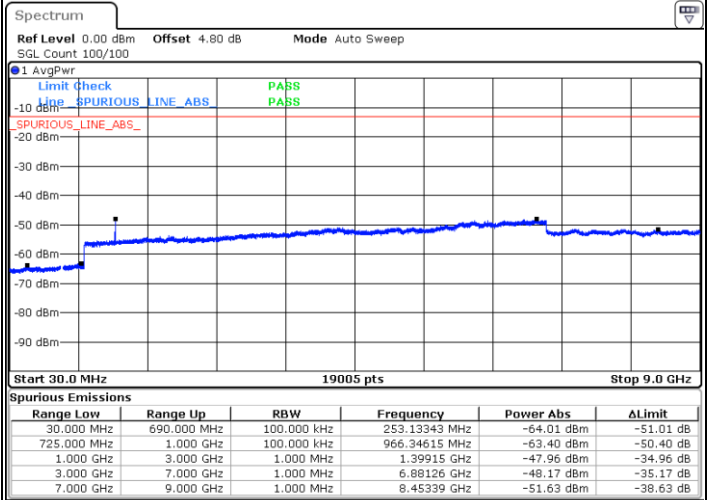
## LTE Band 12 / 5MHz

## Lowest Channel / QPSK



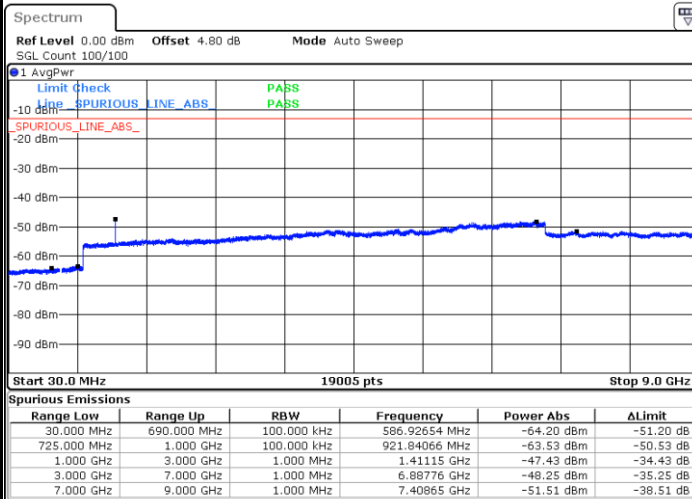
Date: 28 JAN 2020 04:29:53

## Lowest Channel / 16QAM



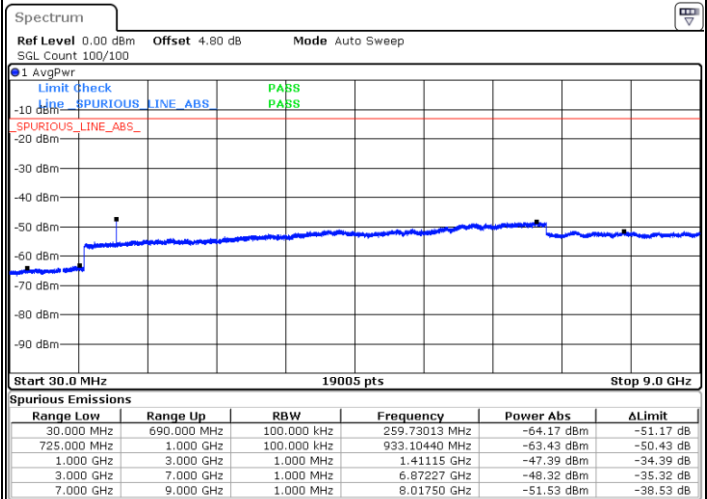
Date: 28 JAN 2020 04:30:48

## Middle Channel / QPSK



Date: 28 JAN 2020 04:32:36

## Middle Channel / 16QAM

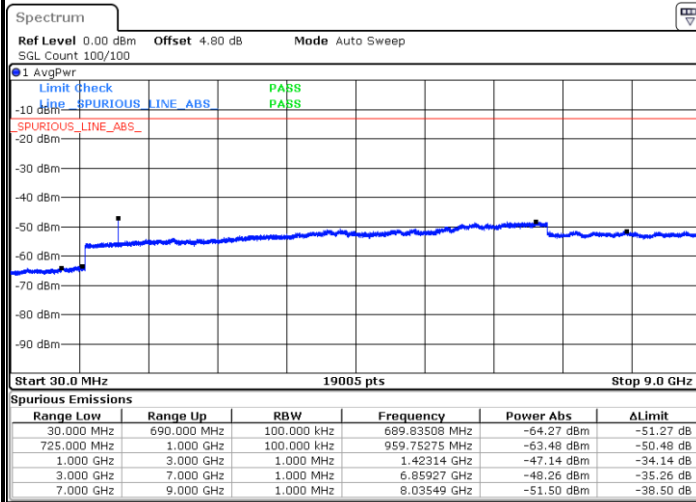


Date: 28 JAN 2020 04:31:42



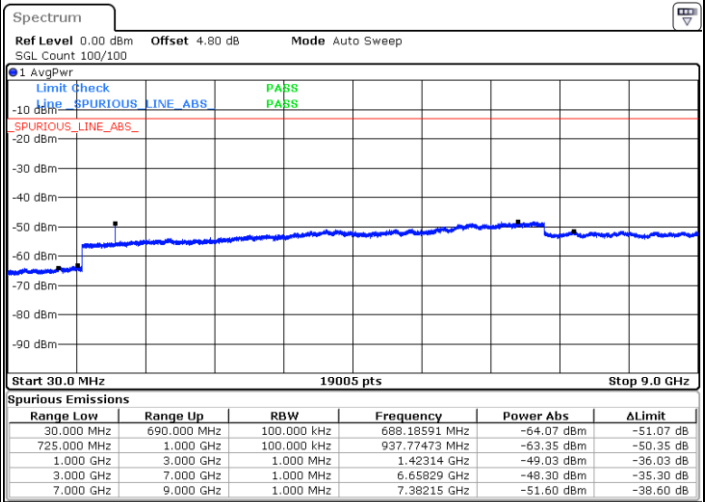
## LTE Band 12 / 5MHz

## Highest Channel / QPSK



Date: 28 JAN 2020 04:33:31

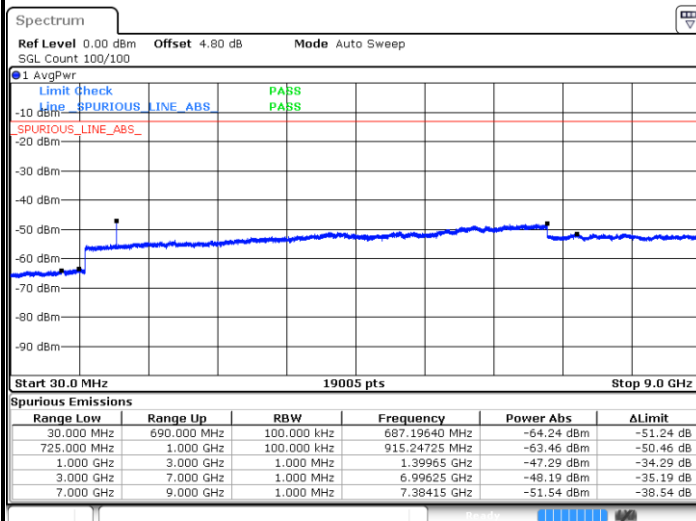
## Highest Channel / 16QAM



Date: 28 JAN 2020 04:34:25

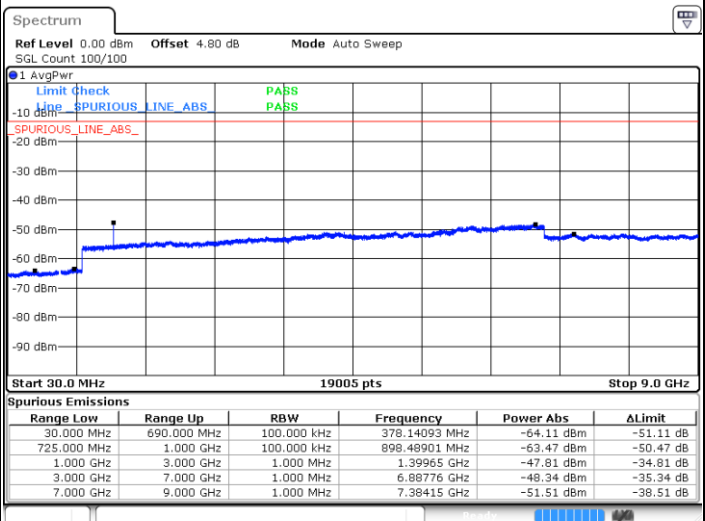
## LTE Band 12 / 10MHz

## Lowest Channel / QPSK



Date: 28 JAN 2020 04:46:19

## Lowest Channel / 16QAM

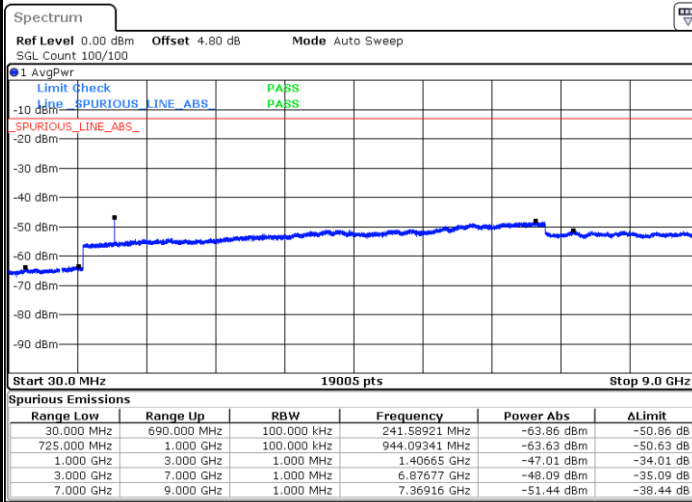


Date: 28 JAN 2020 04:47:13



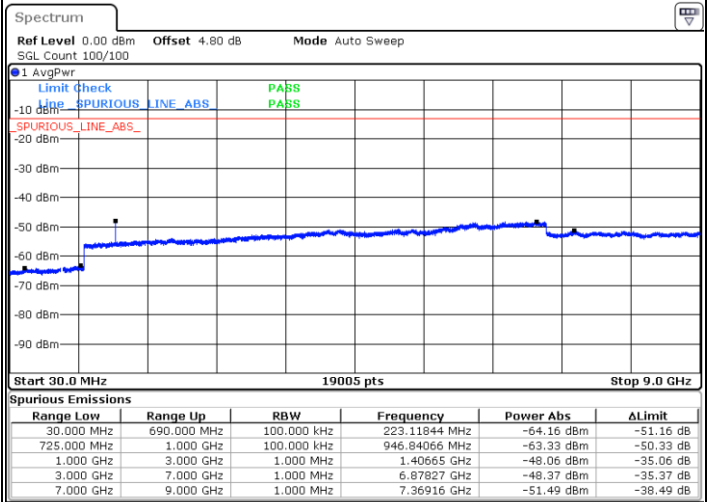
## LTE Band 12 / 10MHz

## Middle Channel / QPSK



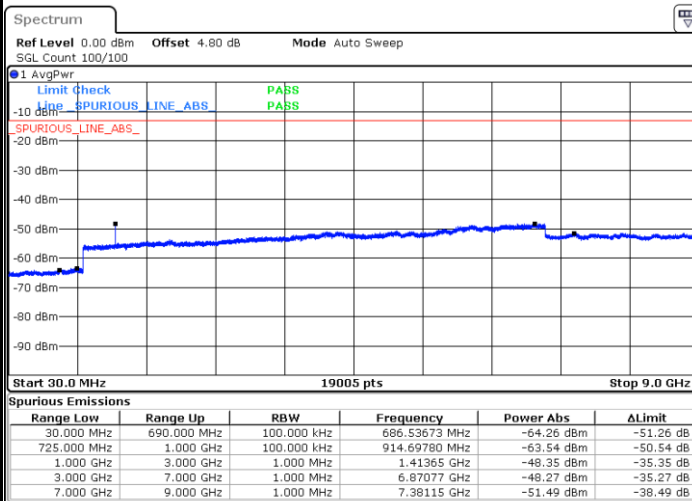
Date: 28 JAN 2020 04:49:01

## Middle Channel / 16QAM



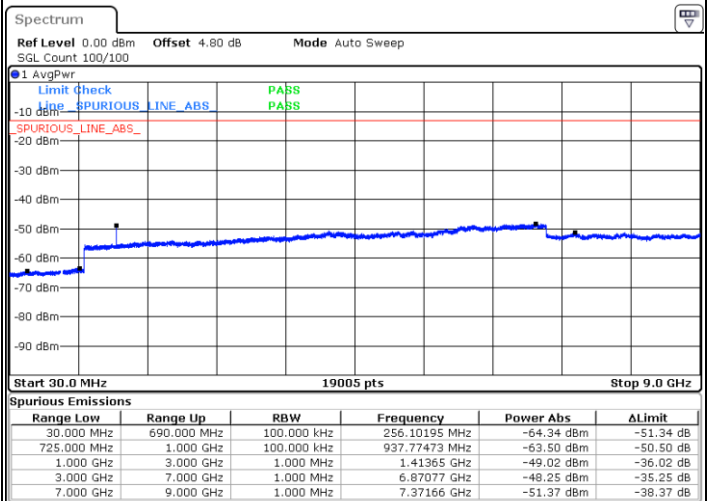
Date: 28 JAN 2020 04:48:07

## Highest Channel / QPSK



Date: 28 JAN 2020 04:49:56

## Highest Channel / 16QAM



Date: 28 JAN 2020 04:50:50

## 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    | 0.0011                              | PASS    |
| 40               | Normal Voltage    | 0.0024                              |         |
| 30               | Normal Voltage    | 0.0090                              |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                              |         |
| 10               | Normal Voltage    | 0.0102                              |         |
| 0                | Normal Voltage    | 0.0006                              |         |
| -10              | Normal Voltage    | 0.0023                              |         |
| -20              | Normal Voltage    | 0.0076                              |         |
| -30              | Normal Voltage    | 0.0068                              |         |
| 20               | Maximum Voltage   | 0.0011                              |         |
| 20               | Normal Voltage    | 0.0000                              |         |
| 20               | Battery End Point | 0.0106                              |         |

**Note:**

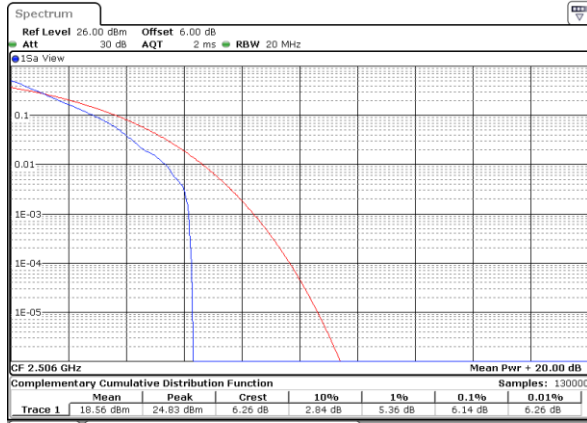
1. Normal Voltage =3.7 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.2 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



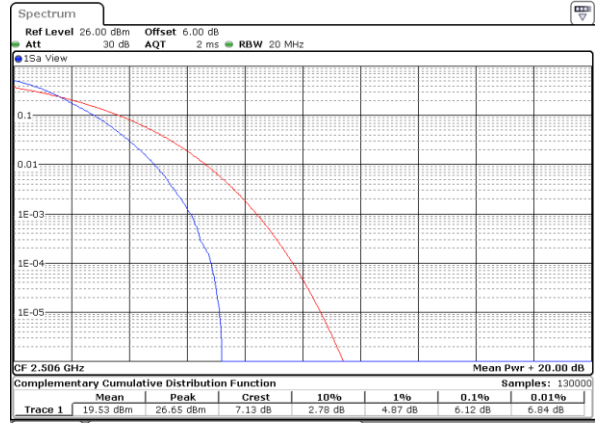
## LTE Band 41

### Peak-to-Average Ratio

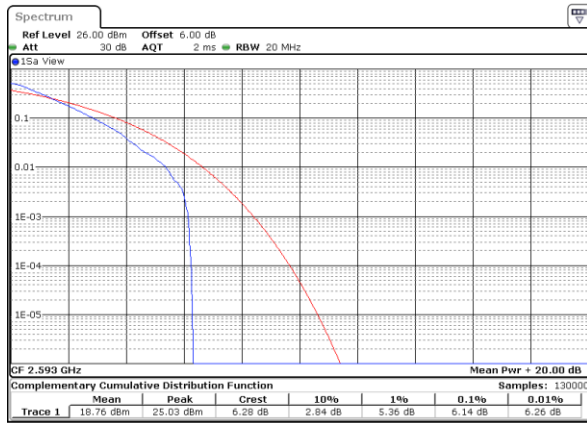
| Mode       | LTE Band 41 / 20MHz |         |       |         |             |
|------------|---------------------|---------|-------|---------|-------------|
| Mod.       | QPSK                |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | 6.14                | 6.12    | 6.78  | 6.81    | PASS        |
| Middle CH  | 6.14                | 5.91    | 6.70  | 6.64    |             |
| Highest CH | 5.91                | 6.70    | 7.88  | 6.78    |             |

**LTE Band 41 / 20MHz / QPSK**
**Lowest Channel / 1RB**


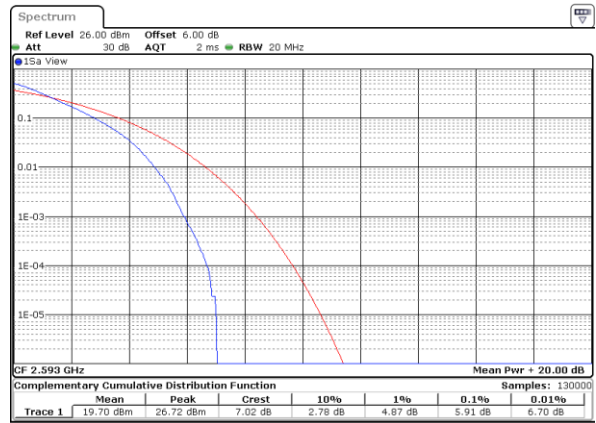
Date: 6 MAR 2020 13:19:08

**Lowest Channel / Full RB**


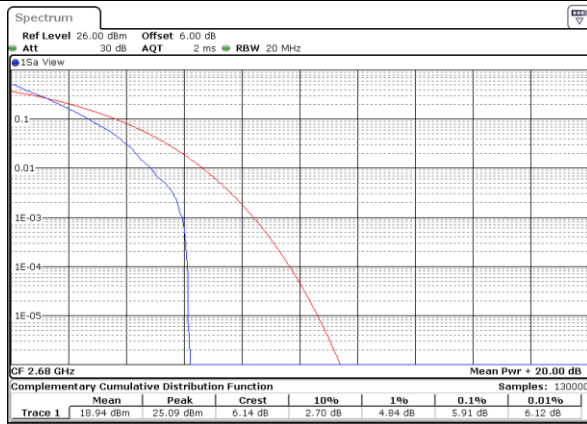
Date: 6 MAR 2020 13:23:11

**Middle Channel / 1RB**


Date: 6 MAR 2020 13:19:57

**Middle Channel / Full RB**


Date: 6 MAR 2020 13:17:57

**Highest Channel / 1RB**


Date: 6 MAR 2020 13:20:29

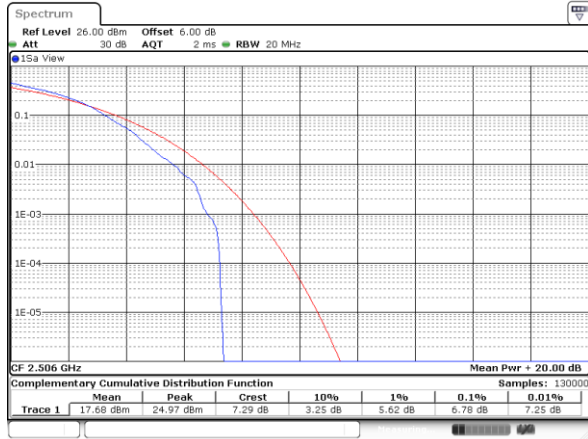
**Highest Channel / Full RB**


Date: 6 MAR 2020 13:18:49

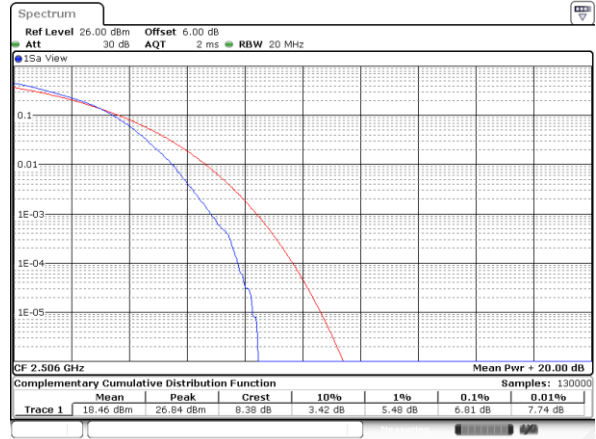


## LTE Band 41 / 20MHz / 16QAM

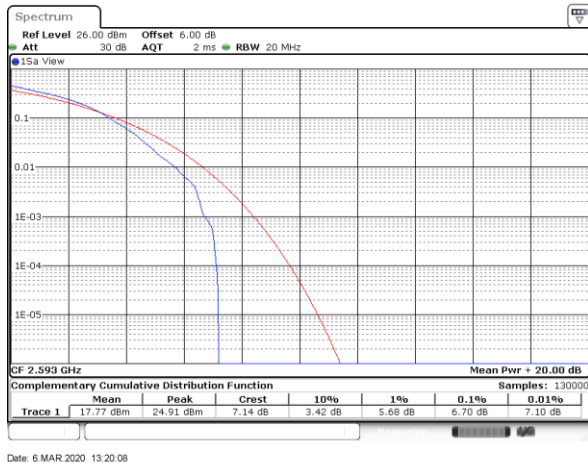
## Lowest Channel / 1RB



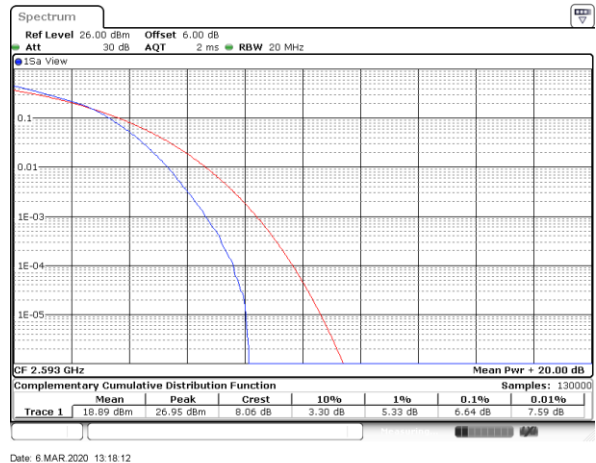
## Lowest Channel / Full RB



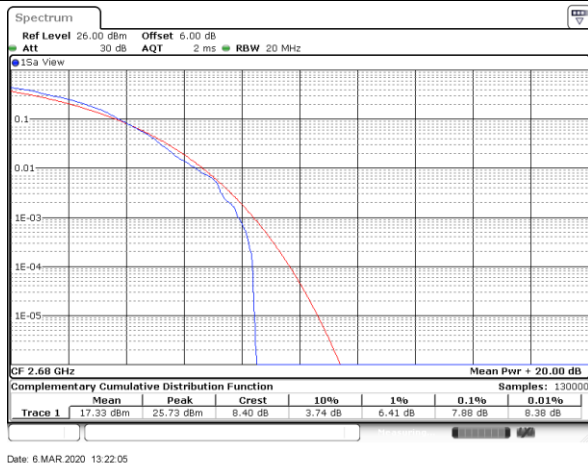
## Middle Channel / 1RB



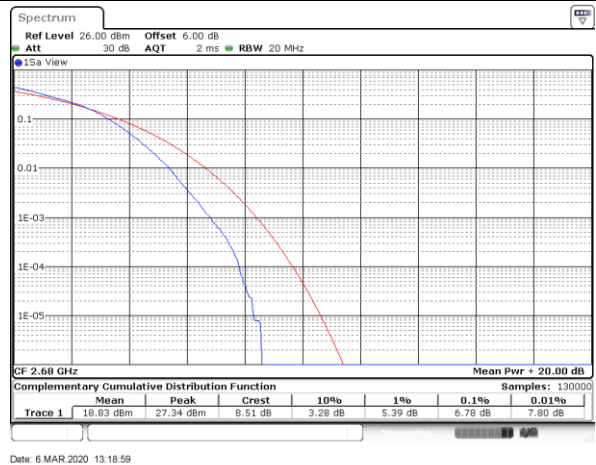
## Middle Channel / Full RB



## Highest Channel / 1RB



## Highest Channel / Full RB





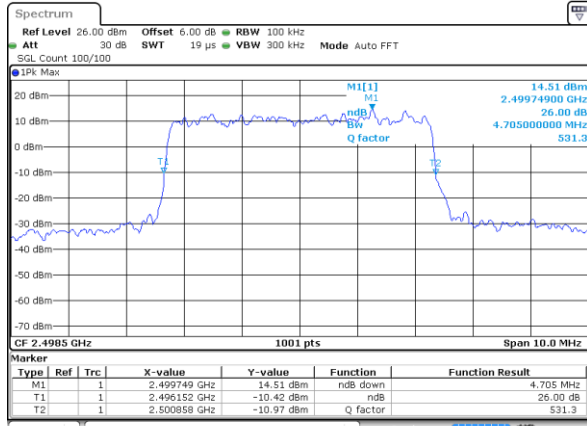
26dB Bandwidth

| Mode       | LTE Band 41 : 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  | -                          | -     | -    | -     | 4.705 | 4.815 | 9.61  | 9.69  | 14.176 | 14.176 | 20.06 | 20.14 |
| Middle CH  | -                          | -     | -    | -     | 4.835 | 4.735 | 9.65  | 9.93  | 14.266 | 14.206 | 20.22 | 20.18 |
| Highest CH | -                          | -     | -    | -     | 4.835 | 4.755 | 9.63  | 9.71  | 14.296 | 14.116 | 20.06 | 20.22 |



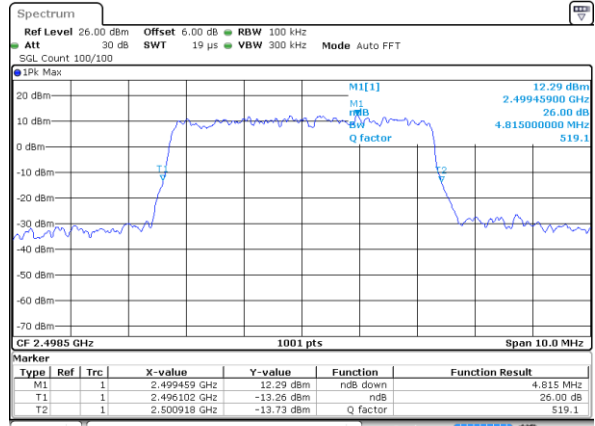
## LTE Band 41

## Lowest Channel / 5MHz / QPSK



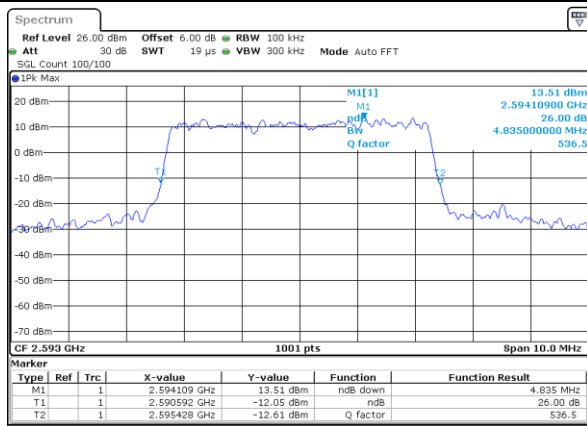
Date: 6 MAR 2020 12:04:26

## Lowest Channel / 5MHz / 16QAM



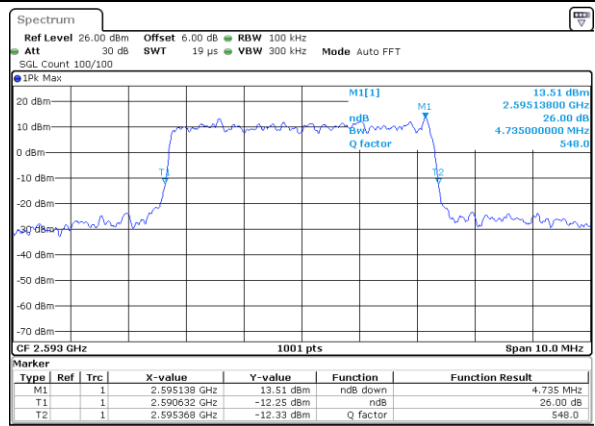
Date: 6 MAR 2020 12:04:46

## Middle Channel / 5MHz / QPSK



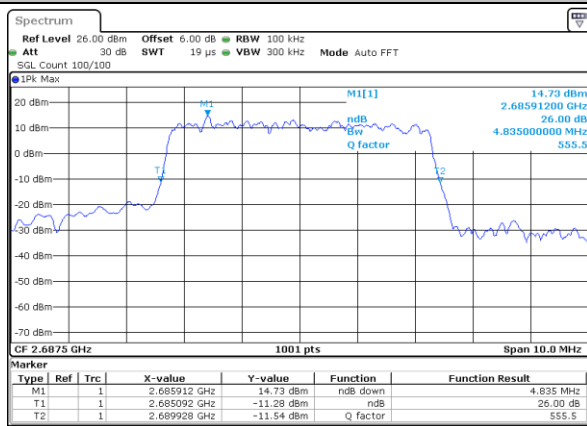
Date: 6 MAR 2020 12:05:06

## Middle Channel / 5MHz / 16QAM



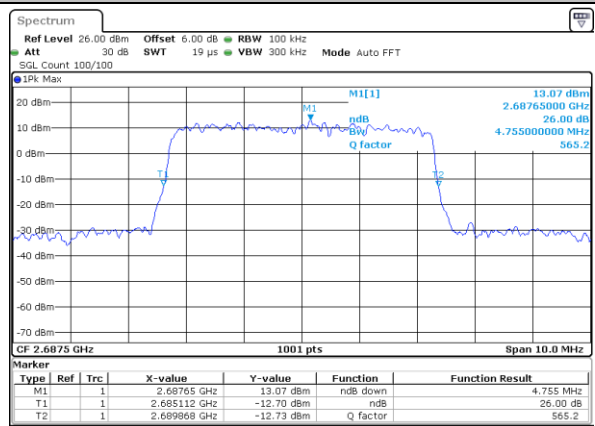
Date: 6 MAR 2020 12:05:26

## Highest Channel / 5MHz / QPSK



Date: 6 MAR 2020 12:05:46

## Highest Channel / 5MHz / 16QAM

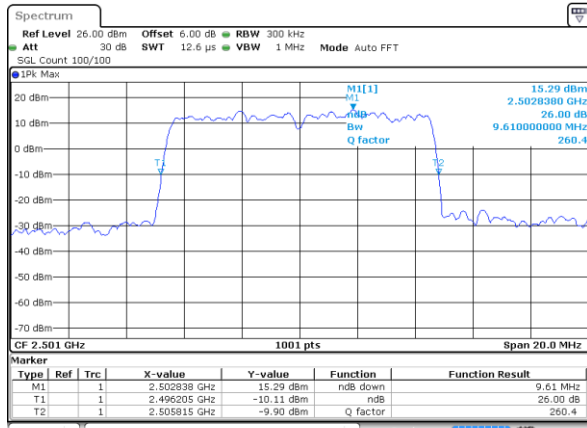


Date: 6 MAR 2020 12:06:06

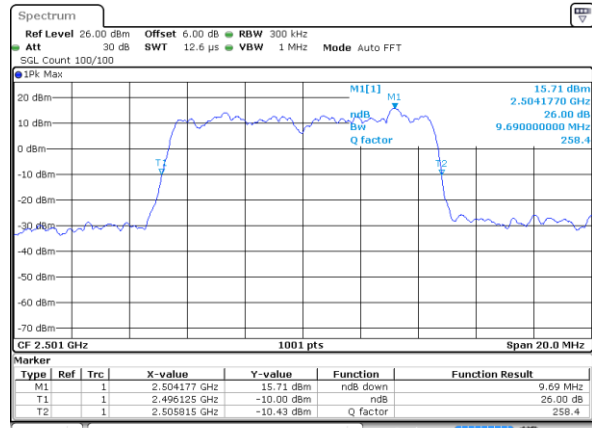


## LTE Band 41

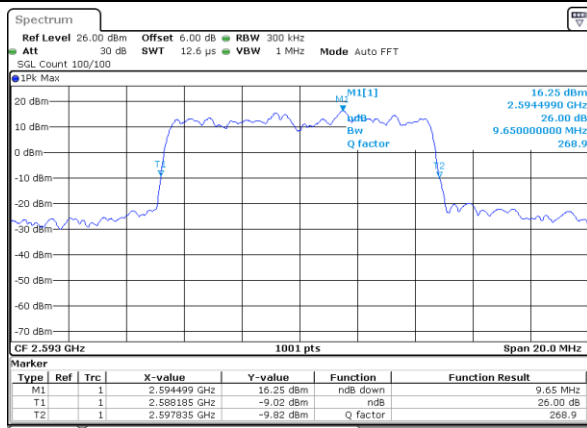
## Lowest Channel / 10MHz / QPSK



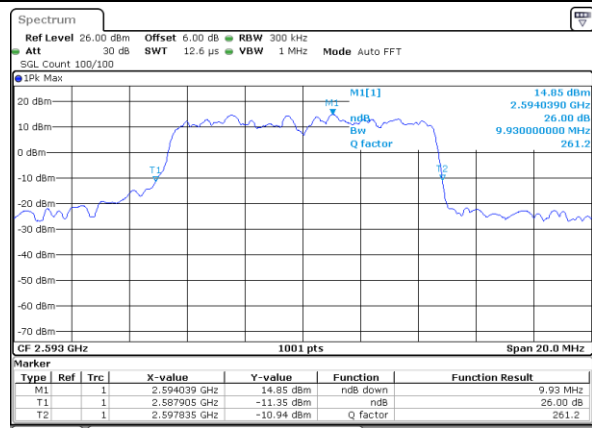
## Lowest Channel / 10MHz / 16QAM



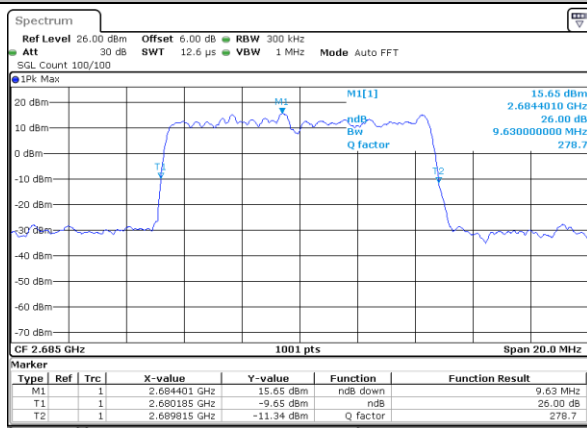
## Middle Channel / 10MHz / QPSK



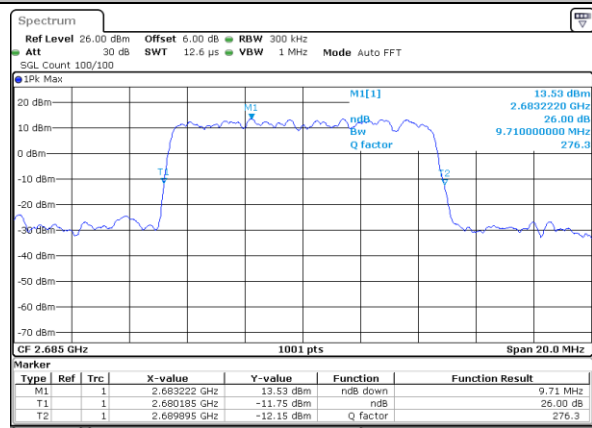
## Middle Channel / 10MHz / 16QAM



## Highest Channel / 10MHz / QPSK



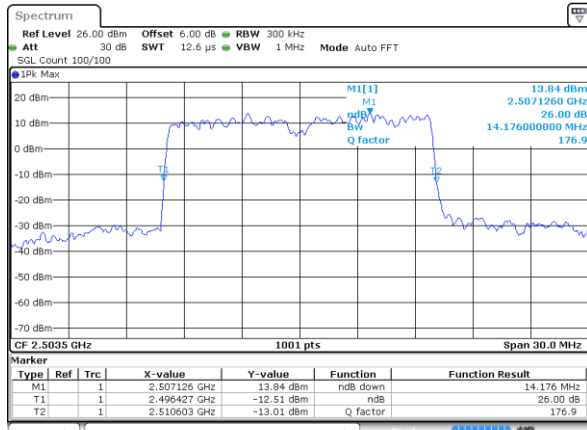
## Highest Channel / 10MHz / 16QAM



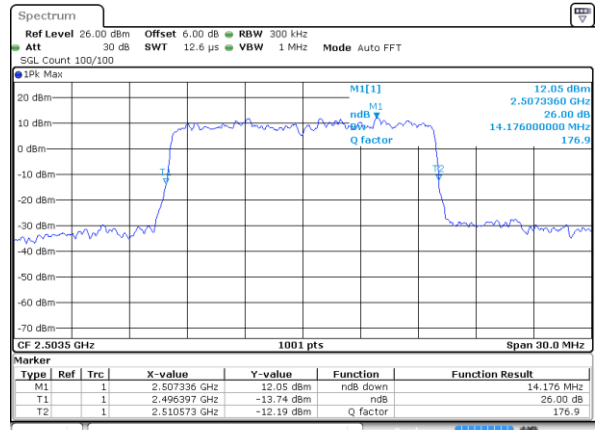


## LTE Band 41

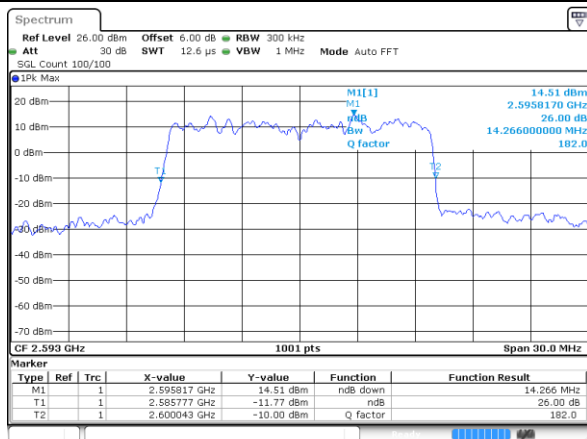
## Lowest Channel / 15MHz / QPSK



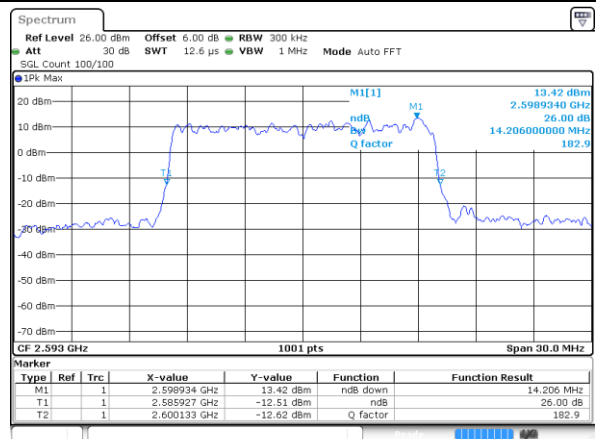
## Lowest Channel / 15MHz / 16QAM



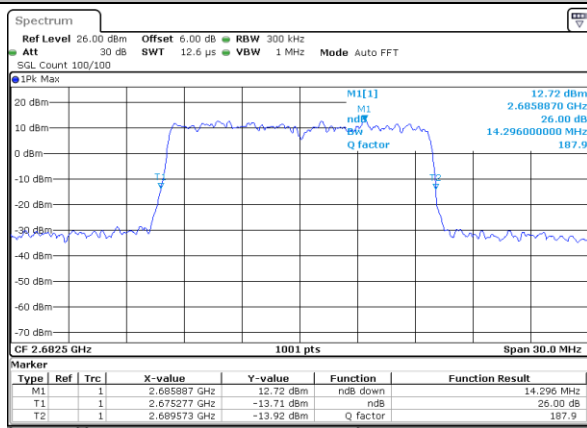
## Middle Channel / 15MHz / QPSK



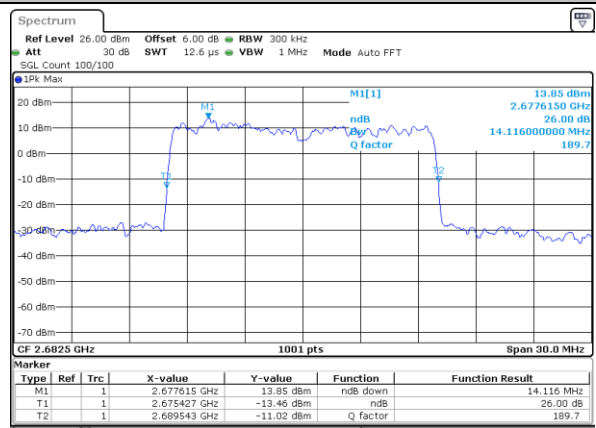
## Middle Channel / 15MHz / 16QAM



## Highest Channel / 15MHz / QPSK



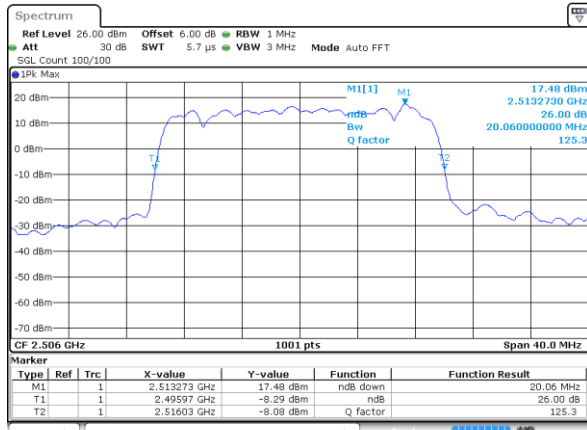
## Highest Channel / 15MHz / 16QAM





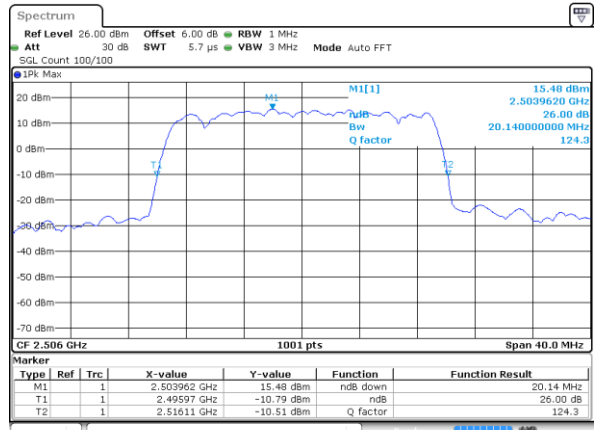
## LTE Band 41

## Lowest Channel / 20MHz / QPSK



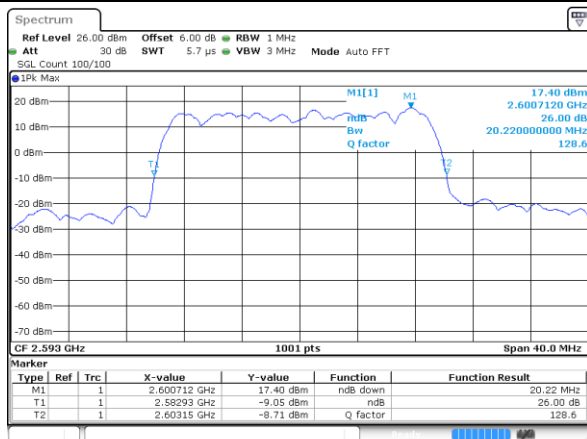
Date: 6 MAR 2020 12:10:25

## Lowest Channel / 20MHz / 16QAM



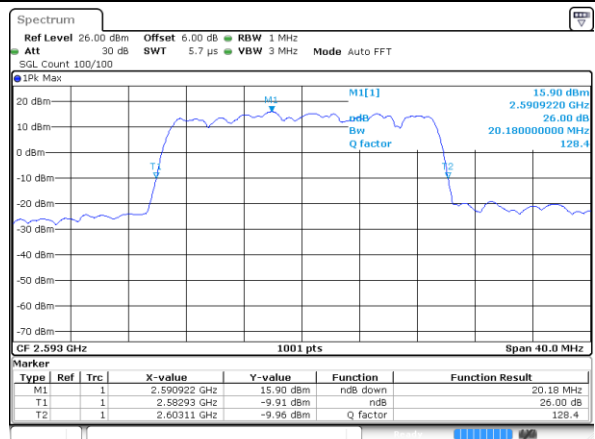
Date: 6 MAR 2020 12:10:45

## Middle Channel / 20MHz / QPSK



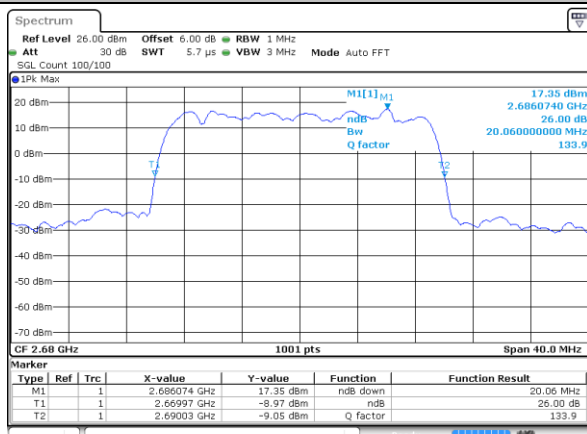
Date: 6 MAR 2020 12:11:05

## Middle Channel / 20MHz / 16QAM



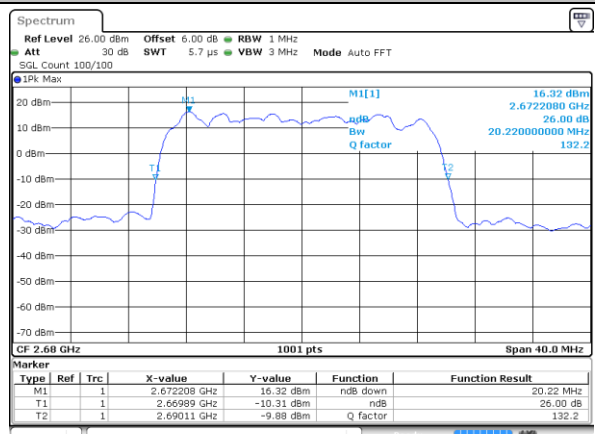
Date: 6 MAR 2020 12:11:25

## Highest Channel / 20MHz / QPSK



Date: 6 MAR 2020 12:11:45

## Highest Channel / 20MHz / 16QAM



Date: 6 MAR 2020 12:12:05



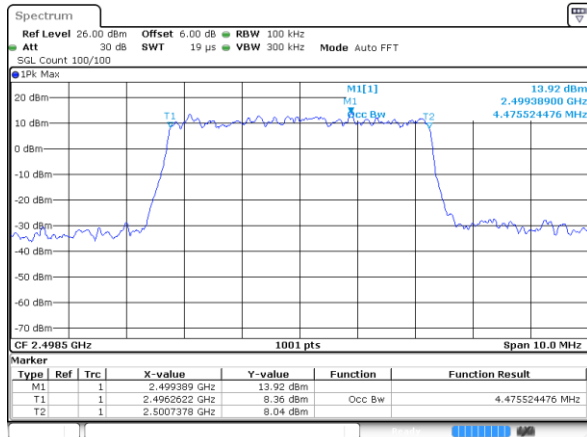
## Occupied Bandwidth

| Mode       | LTE Band 41 : 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  | -                         | -     | -    | -     | 4.48 | 4.49  | 9.07  | 8.99  | 13.49 | 13.43 | 18.30 | 18.22 |
| Middle CH  | -                         | -     | -    | -     | 4.49 | 4.47  | 8.99  | 9.03  | 13.40 | 13.40 | 18.34 | 18.26 |
| Highest CH | -                         | -     | -    | -     | 4.47 | 4.48  | 9.01  | 9.03  | 13.46 | 13.49 | 18.58 | 18.34 |



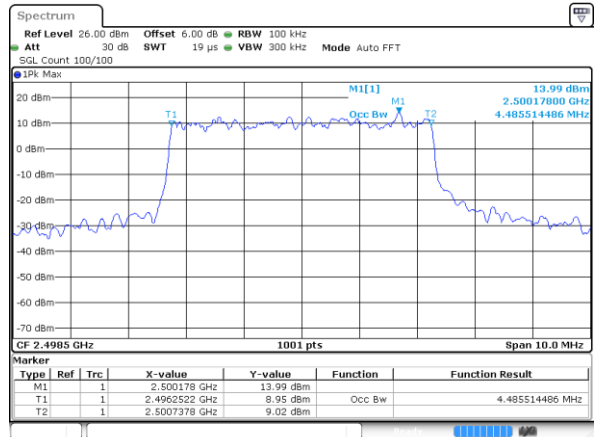
LTE Band 41

Lowest Channel / 5MHz / QPSK



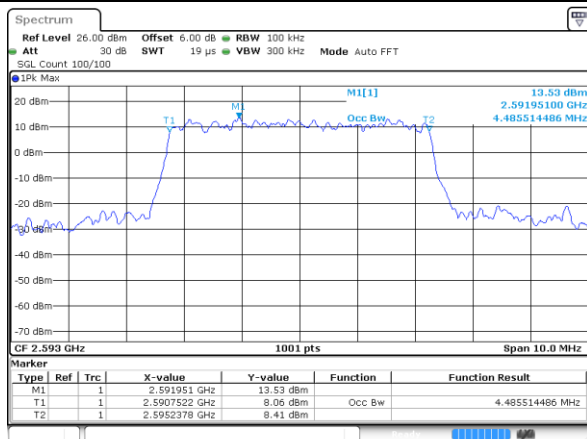
Date: 6 MAR 2020 12:04:16

Lowest Channel / 5MHz / 16QAM



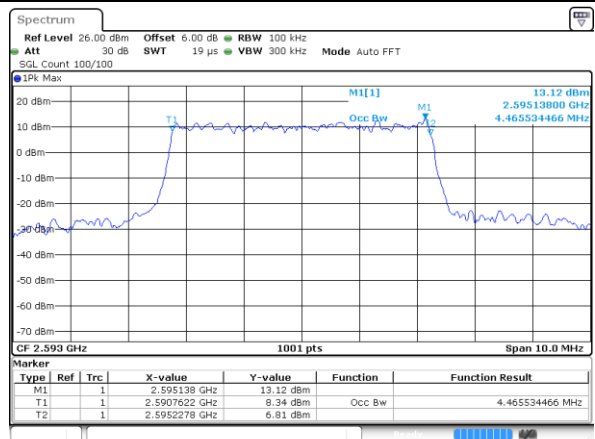
Date: 6 MAR 2020 12:04:36

Middle Channel / 5MHz / QPSK



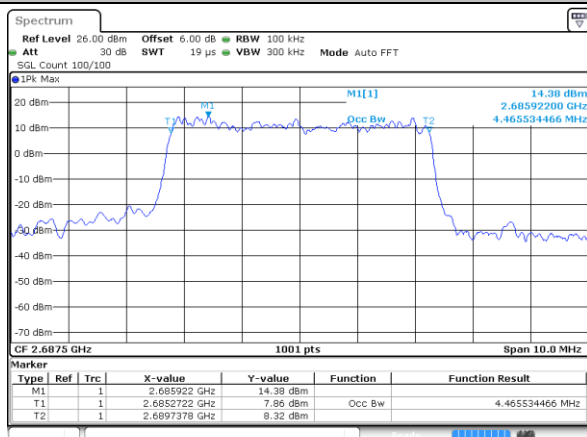
Date: 6 MAR 2020 12:04:56

Middle Channel / 5MHz / 16QAM



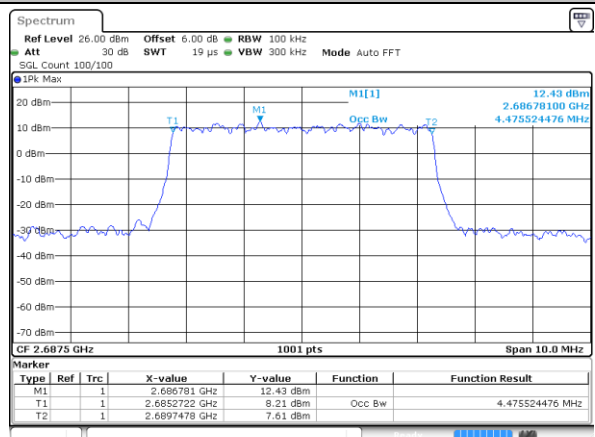
Date: 6 MAR 2020 12:05:16

Highest Channel / 5MHz / QPSK



Date: 6 MAR 2020 12:05:36

Highest Channel / 5MHz / 16QAM



Date: 6 MAR 2020 12:05:56