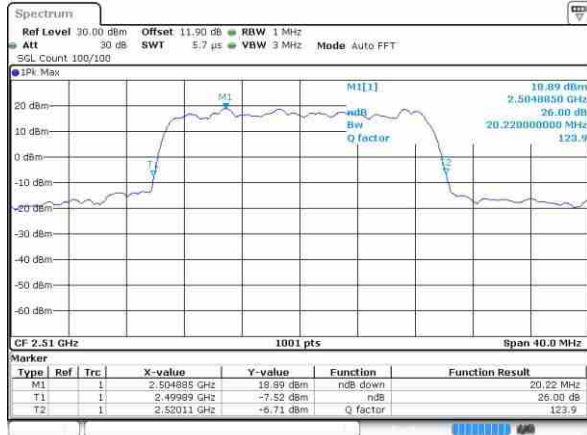


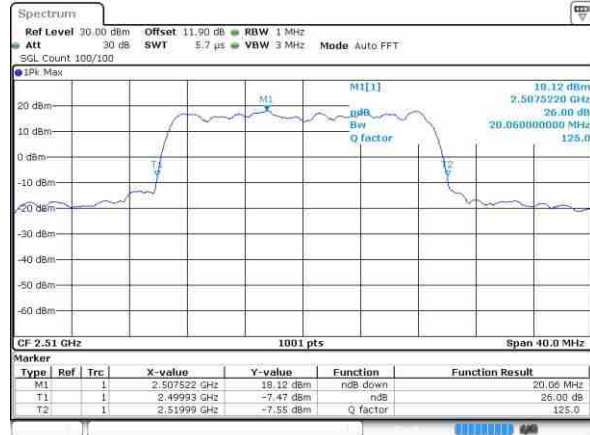


## LTE Band 7

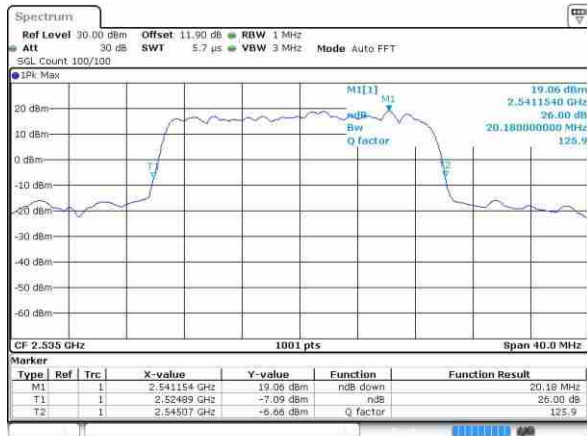
## Lowest Channel / 20MHz / QPSK



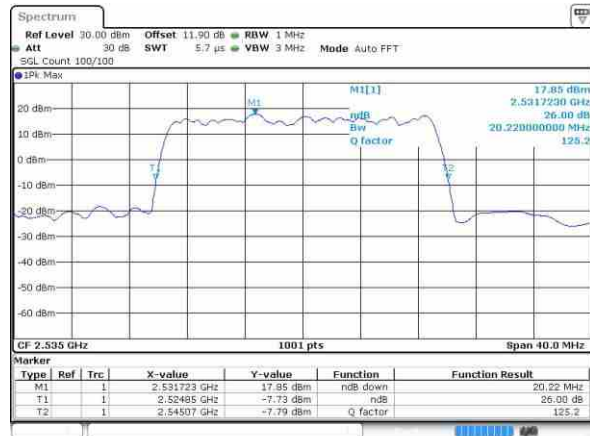
## Lowest Channel / 20MHz / 16QAM



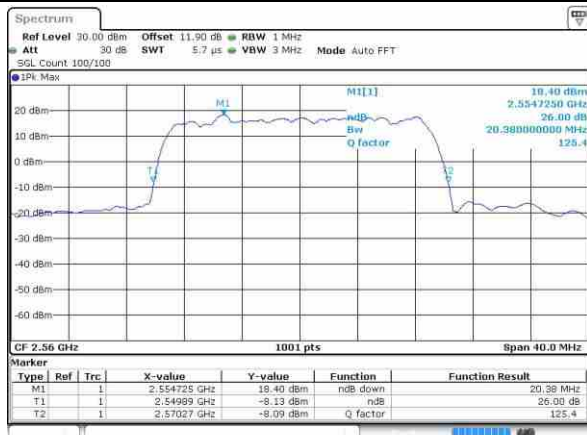
## Middle Channel / 20MHz / QPSK



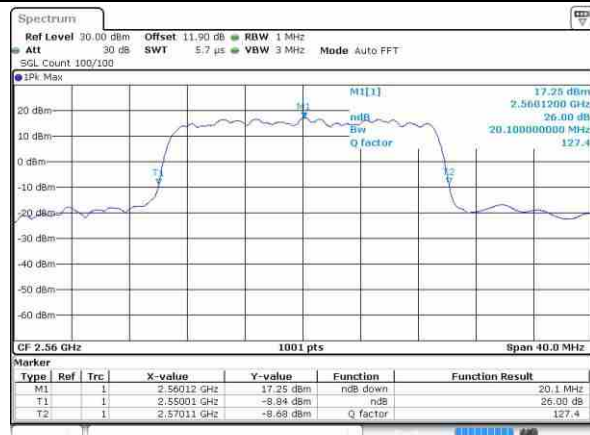
## Middle Channel / 20MHz / 16QAM



## Highest Channel / 20MHz / QPSK



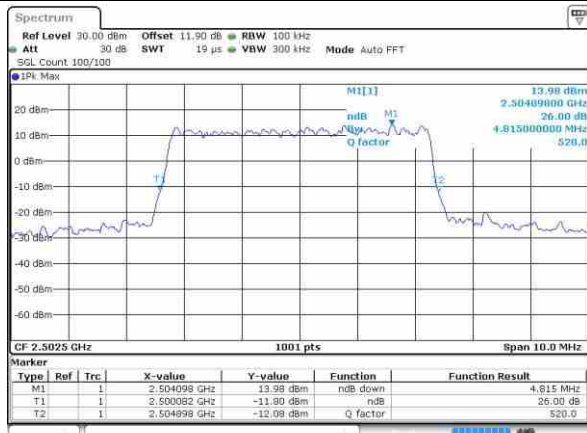
## Highest Channel / 20MHz / 16QAM





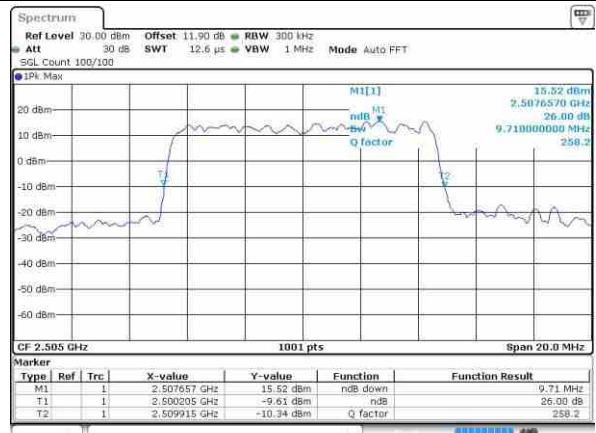
## LTE Band 7

## Lowest Channel / 5MHz / 64QAM



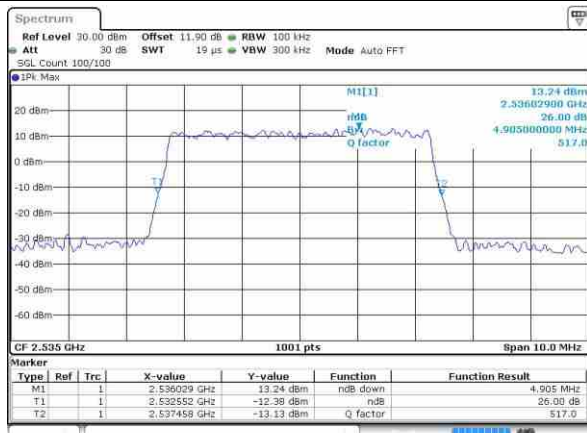
Date: 27 FEB 2019 00:31:29

## Lowest Channel / 10MHz / 64QAM



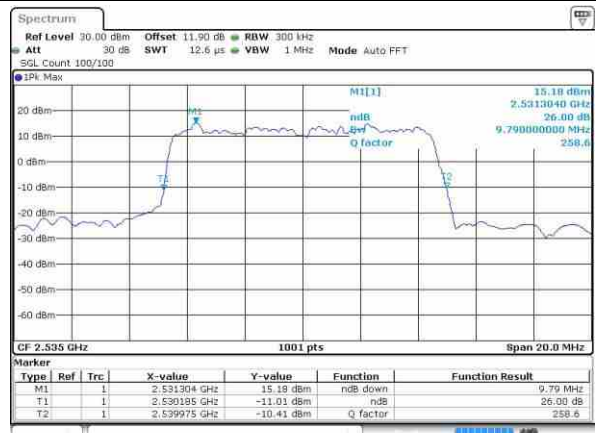
Date: 27 FEB 2019 00:51:15

## Middle Channel / 5MHz / 64QAM



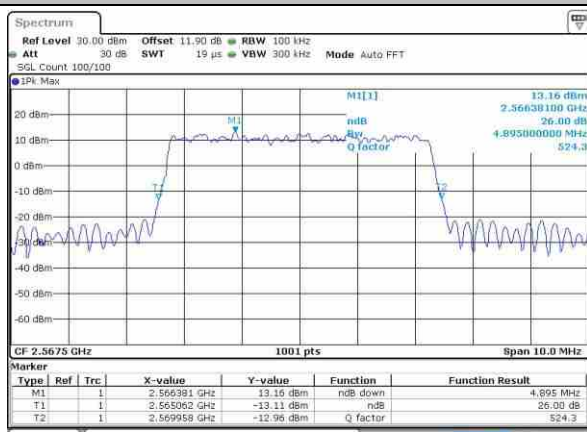
Date: 27 FEB 2019 00:34:07

## Middle Channel / 10MHz / 64QAM



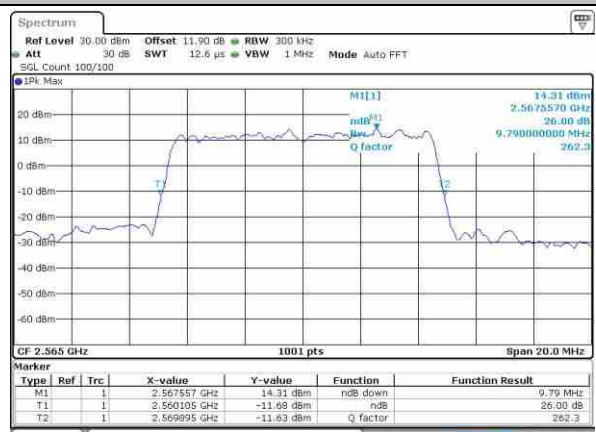
Date: 27 FEB 2019 00:53:54

## Highest Channel / 5MHz / 64QAM



Date: 27 FEB 2019 00:35:25

## Highest Channel / 10MHz / 64QAM

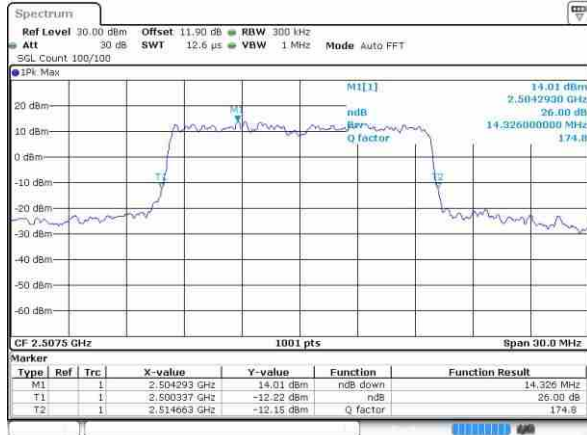


Date: 27 FEB 2019 00:55:11



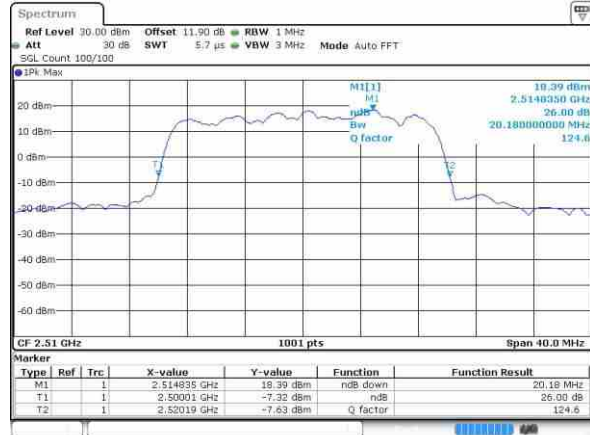
## LTE Band 7

## Lowest Channel / 15MHz / 64QAM



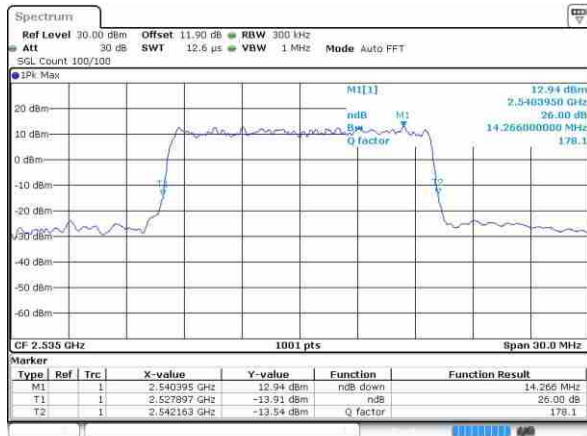
Date: 27 FEB 2019 01:11:01

## Lowest Channel / 20MHz / 64QAM



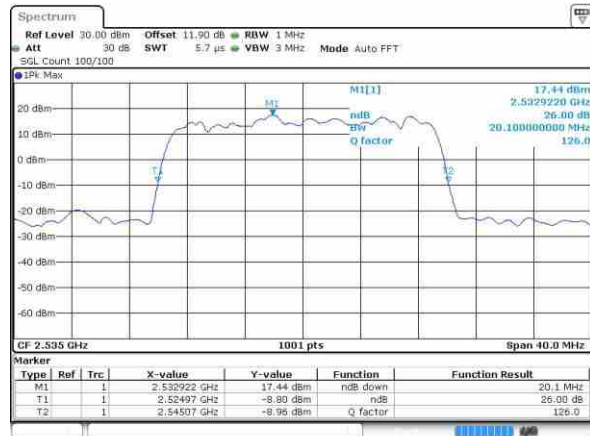
Date: 27 FEB 2019 01:30:49

## Middle Channel / 15MHz / 64QAM



Date: 27 FEB 2019 01:13:42

## Middle Channel / 20MHz / 64QAM



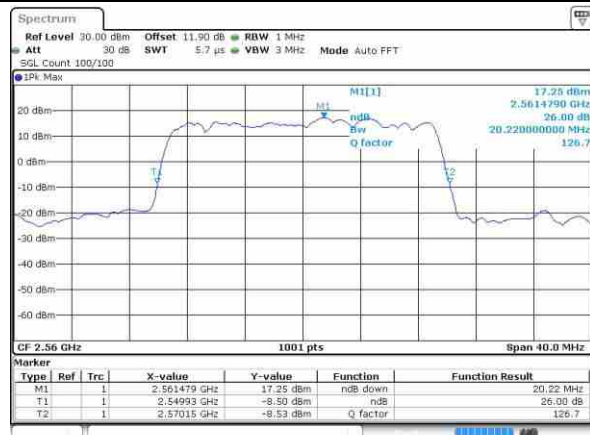
Date: 27 FEB 2019 01:33:28

## Highest Channel / 15MHz / 64QAM



Date: 27 FEB 2019 01:15:00

## Highest Channel / 20MHz / 64QAM



Date: 27 FEB 2019 01:34:46

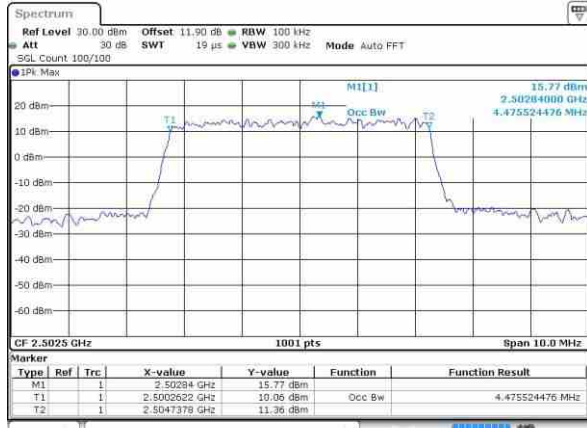
**Occupied Bandwidth**

| Mode       | LTE Band 7 : 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  | 8.97  | 13.43 | 13.43 | 18.26 | 18.38 |
| Middle CH  | -                        | -     | -     | -     | 4.46  | 4.48  | 9.05  | 9.03  | 13.49 | 13.52 | 18.42 | 18.22 |
| Highest CH | -                        | -     | -     | -     | 4.47  | 4.49  | 9.03  | 9.07  | 13.43 | 13.43 | 18.46 | 18.38 |
| Mode       | LTE Band 7 : 99%OBW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
| BW         | 1.4MHz                   |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                    |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | -                        | -     | -     | -     | 4.49  | -     | 9.03  | -     | 13.37 | -     | 18.34 | -     |
| Middle CH  | -                        | -     | -     | -     | 4.50  | -     | 9.01  | -     | 13.43 | -     | 18.34 | -     |
| Highest CH | -                        | -     | -     | -     | 4.49  | -     | 9.03  | -     | 13.40 | -     | 18.26 | -     |



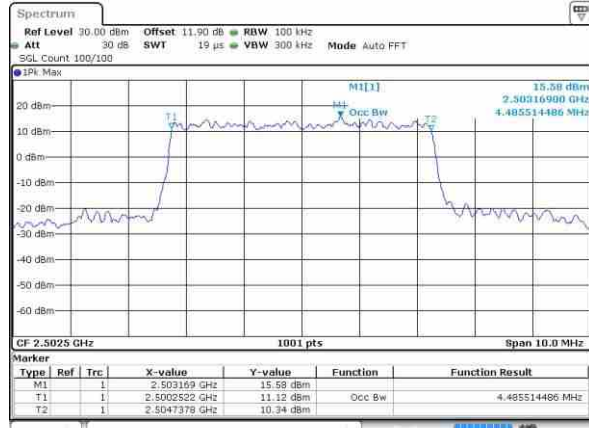
## LTE Band 7

## Lowest Channel / 5MHz / QPSK



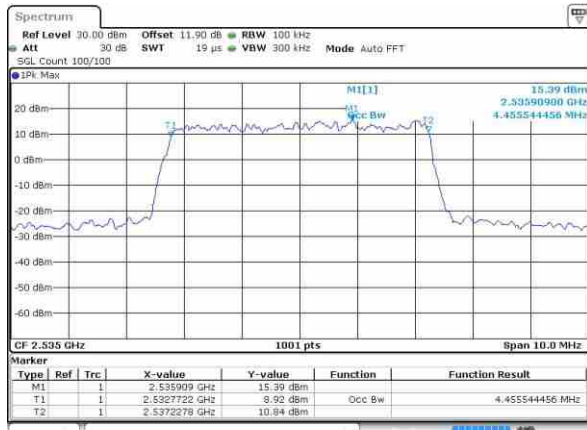
Date: 27 FEB 2019 00:11:35

## Lowest Channel / 5MHz / 16QAM



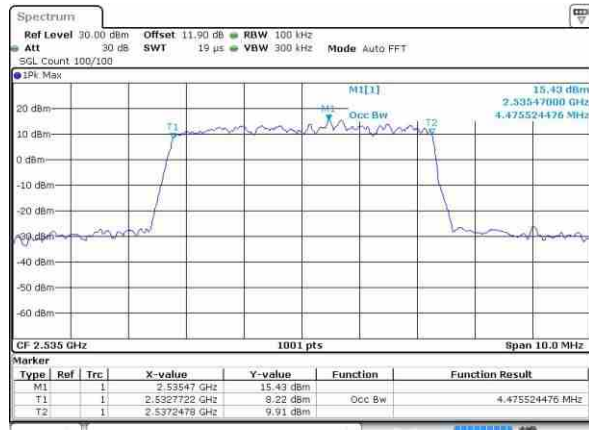
Date: 27 FEB 2019 00:11:47

## Middle Channel / 5MHz / QPSK



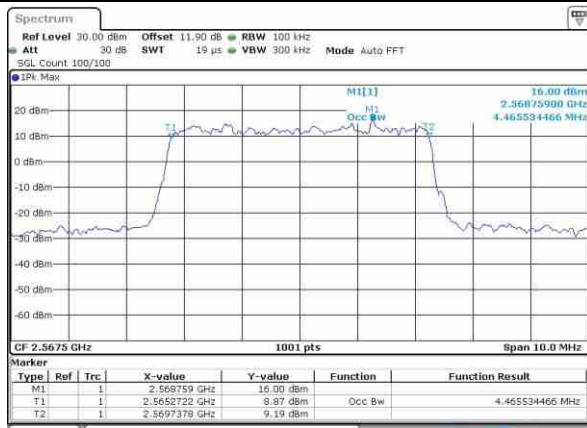
Date: 27 FEB 2019 00:21:03

## Middle Channel / 5MHz / 16QAM



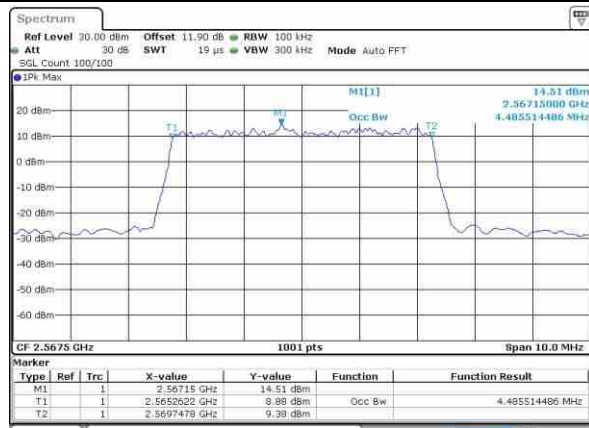
Date: 27 FEB 2019 00:21:15

## Highest Channel / 5MHz / QPSK



Date: 27 FEB 2019 00:23:48

## Highest Channel / 5MHz / 16QAM

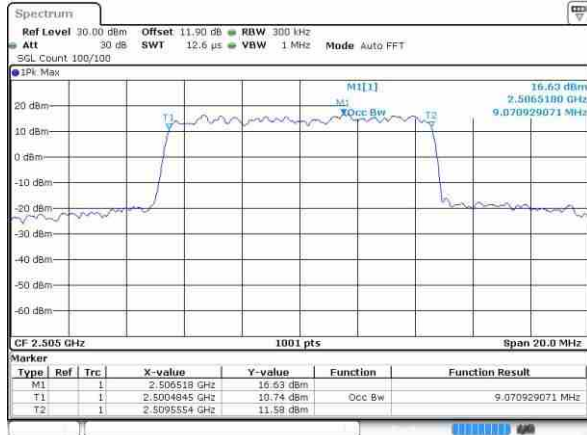


Date: 27 FEB 2019 00:24:00



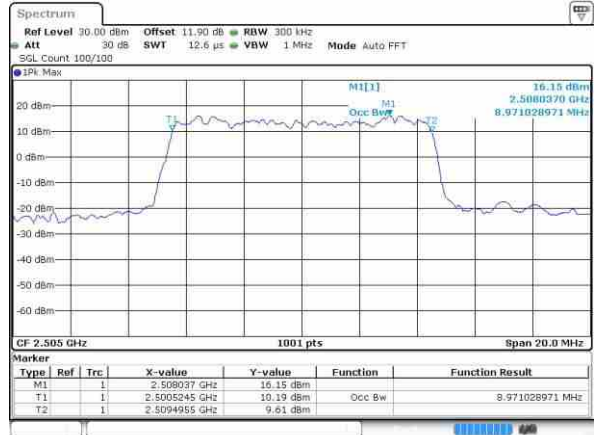
## LTE Band 7

## Lowest Channel / 10MHz / QPSK



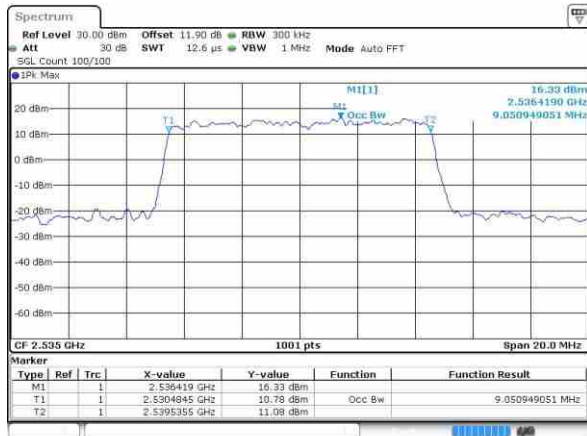
Date: 27 FEB 2019 00:37:53

## Lowest Channel / 10MHz / 16QAM



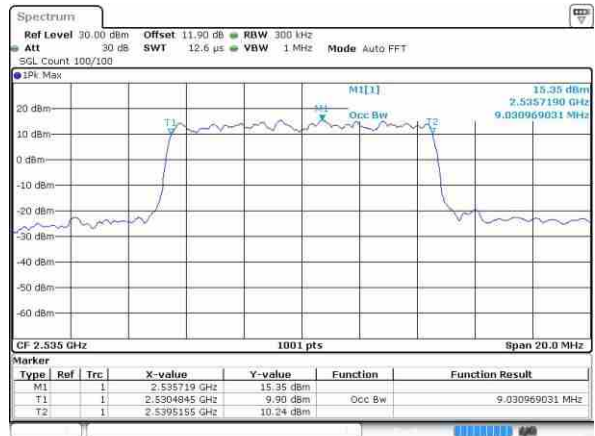
Date: 27 FEB 2019 00:38:04

## Middle Channel / 10MHz / QPSK



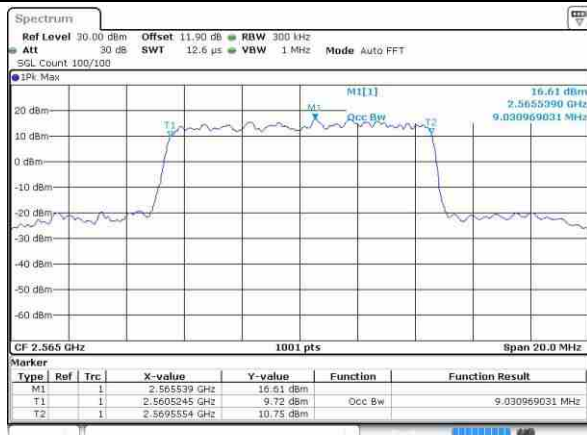
Date: 27 FEB 2019 00:43:11

## Middle Channel / 10MHz / 16QAM



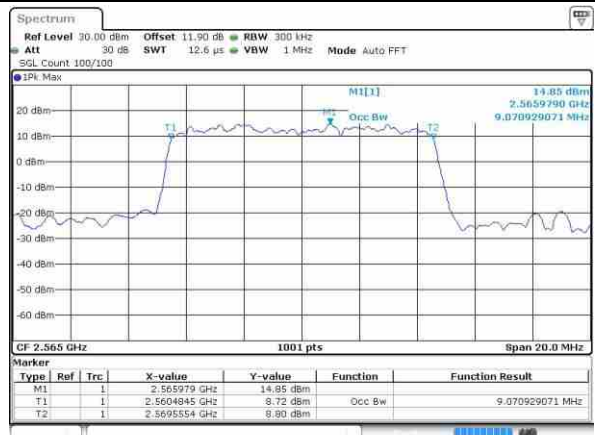
Date: 27 FEB 2019 00:43:22

## Highest Channel / 10MHz / QPSK



Date: 27 FEB 2019 00:45:45

## Highest Channel / 10MHz / 16QAM

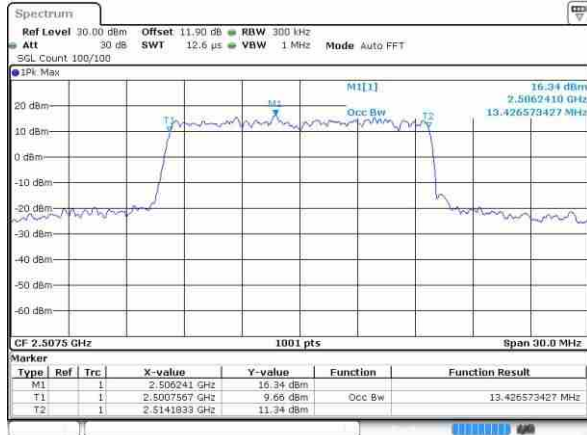


Date: 27 FEB 2019 00:45:57



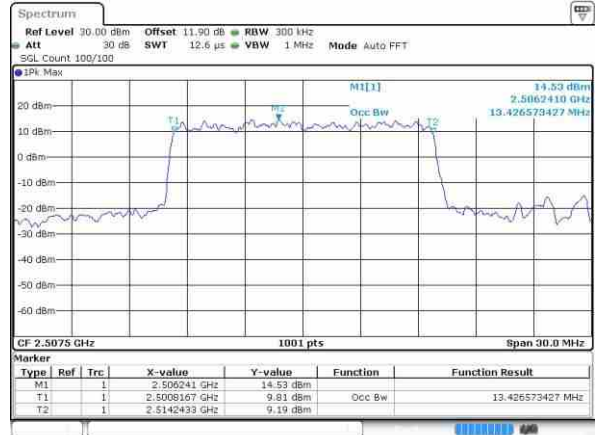
## LTE Band 7

## Lowest Channel / 15MHz / QPSK



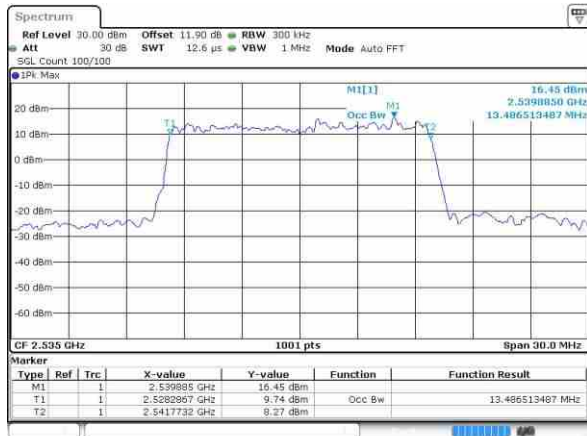
Date: 27 FEB 2019 00:57:39

## Lowest Channel / 15MHz / 16QAM



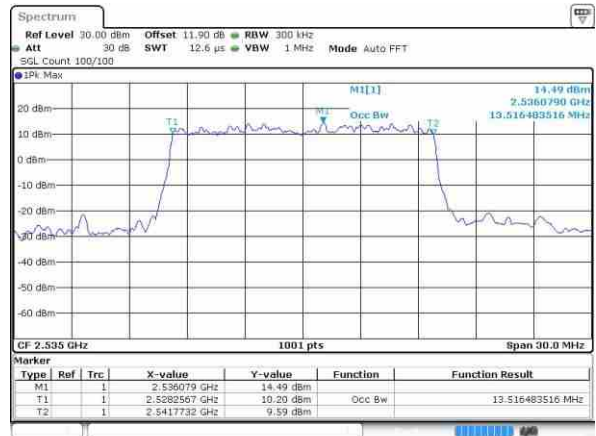
Date: 27 FEB 2019 00:57:50

## Middle Channel / 15MHz / QPSK



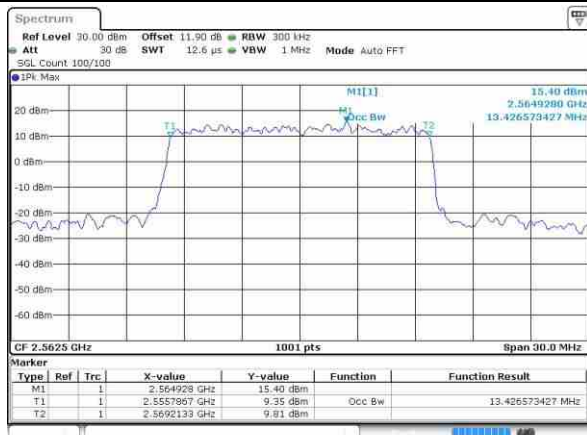
Date: 27 FEB 2019 01:02:57

## Middle Channel / 15MHz / 16QAM



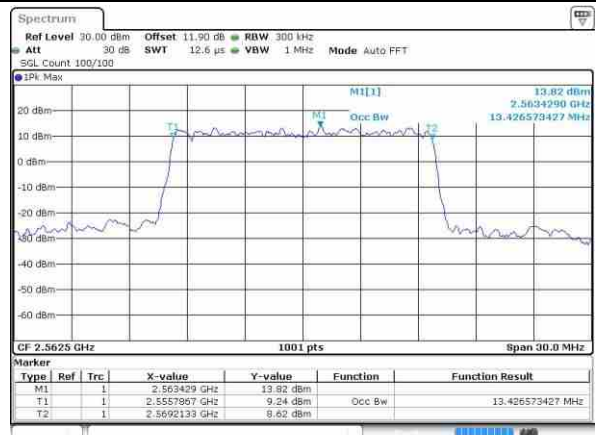
Date: 27 FEB 2019 01:03:08

## Highest Channel / 15MHz / QPSK



Date: 27 FEB 2019 01:05:32

## Highest Channel / 15MHz / 16QAM

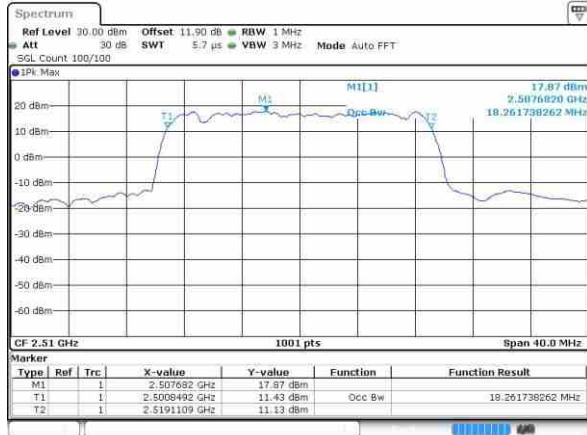


Date: 27 FEB 2019 01:05:43



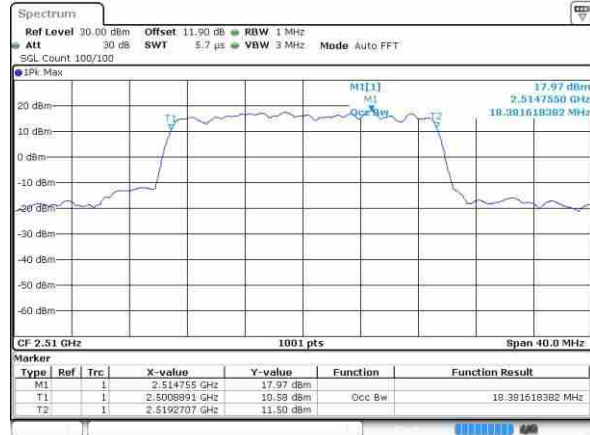
## LTE Band 7

## Lowest Channel / 20MHz / QPSK



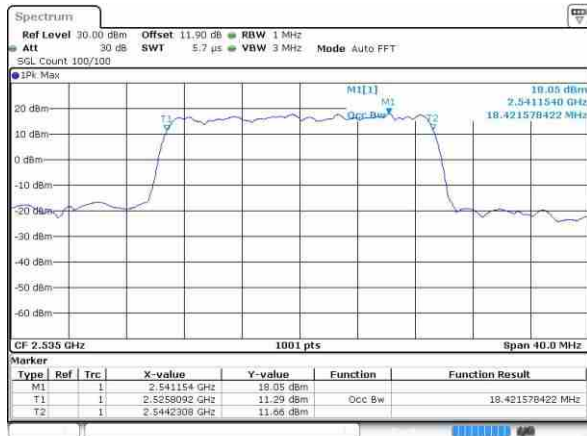
Date: 27 FEB 2019 01:17:27

## Lowest Channel / 20MHz / 16QAM



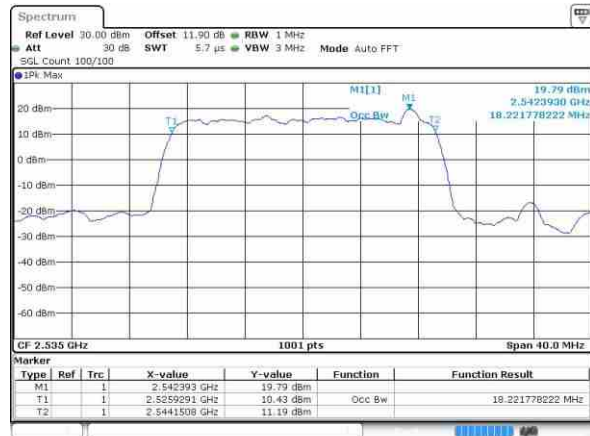
Date: 27 FEB 2019 01:17:39

## Middle Channel / 20MHz / QPSK



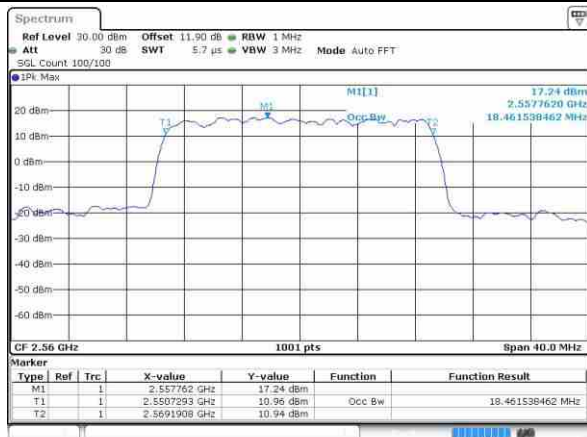
Date: 27 FEB 2019 01:22:45

## Middle Channel / 20MHz / 16QAM



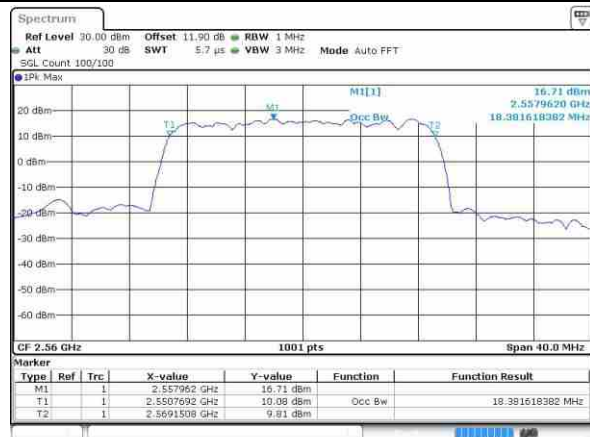
Date: 27 FEB 2019 01:22:56

## Highest Channel / 20MHz / QPSK



Date: 27 FEB 2019 01:25:20

## Highest Channel / 20MHz / 16QAM

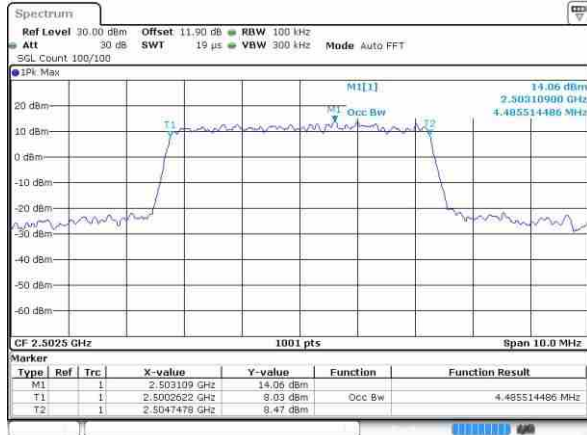


Date: 27 FEB 2019 01:25:31

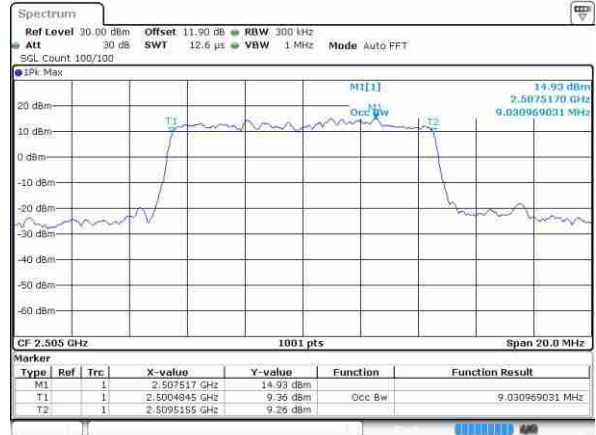


## LTE Band 7

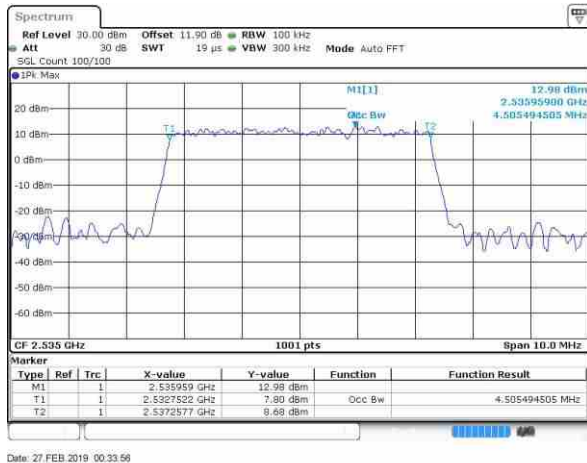
## Lowest Channel / 5MHz / 64QAM



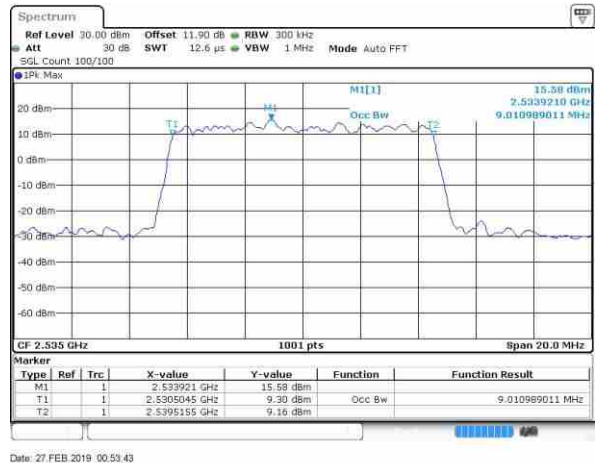
## Lowest Channel / 10MHz / 64QAM



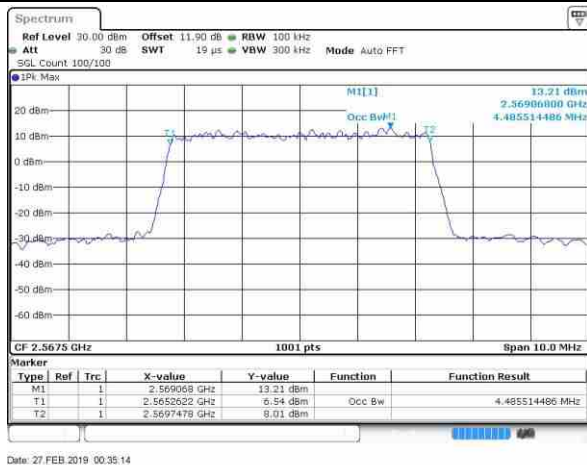
## Middle Channel / 5MHz / 64QAM



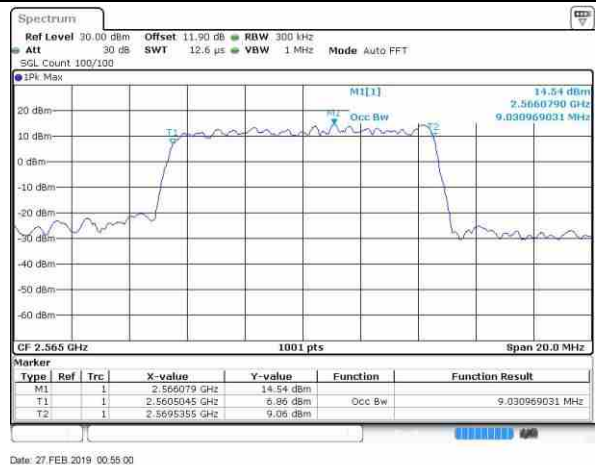
## Middle Channel / 10MHz / 64QAM



## Highest Channel / 5MHz / 64QAM



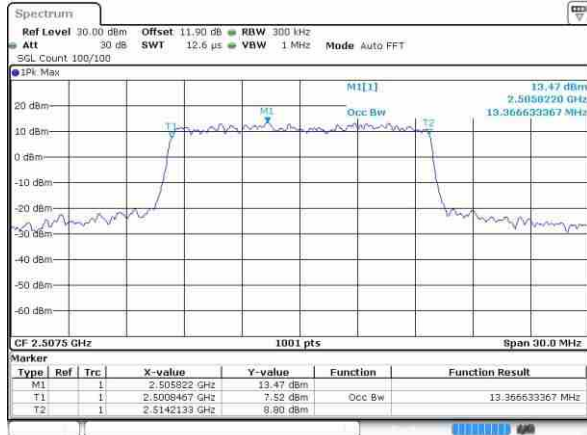
## Highest Channel / 10MHz / 64QAM



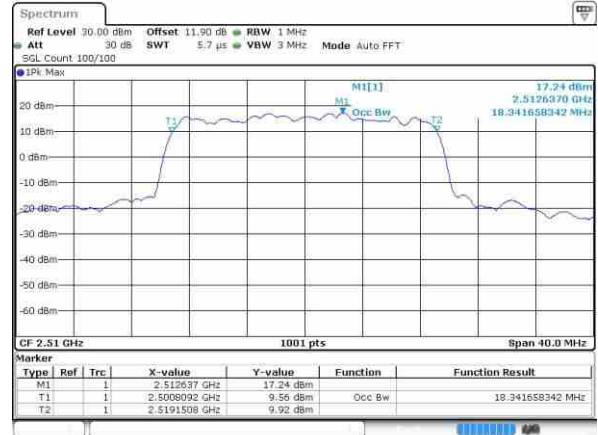


## LTE Band 7

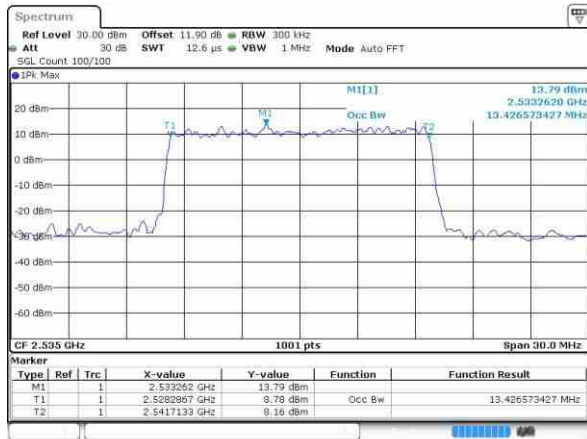
## Lowest Channel / 15MHz / 64QAM



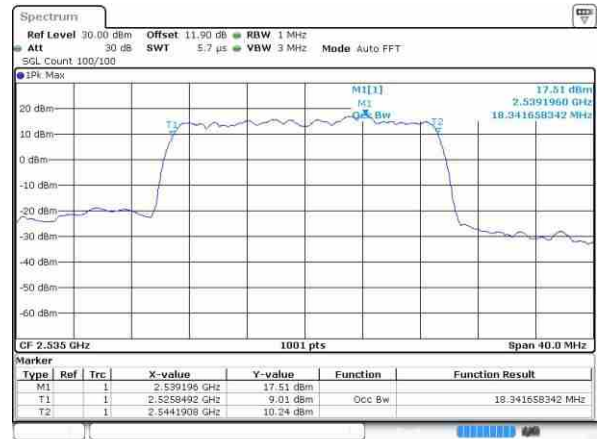
## Lowest Channel / 20MHz / 64QAM



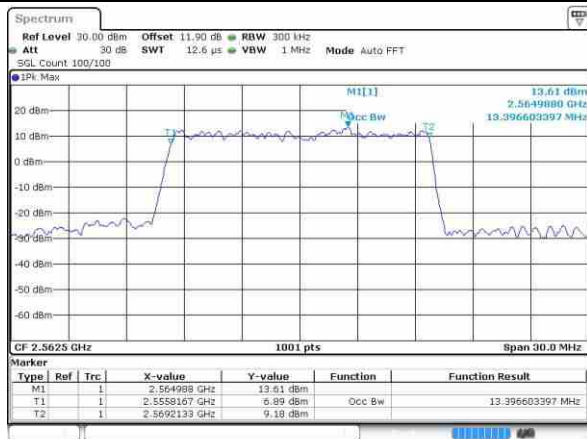
## Middle Channel / 15MHz / 64QAM



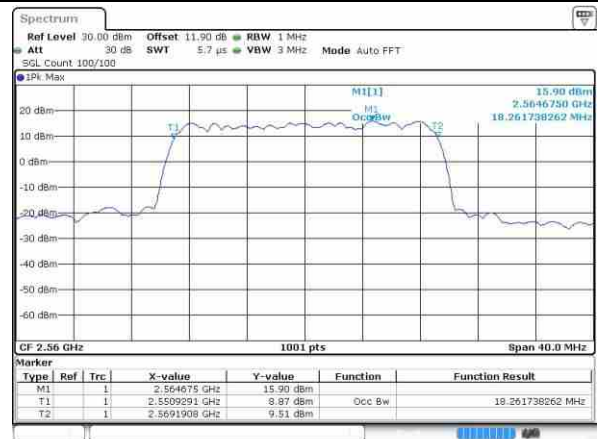
## Middle Channel / 20MHz / 64QAM

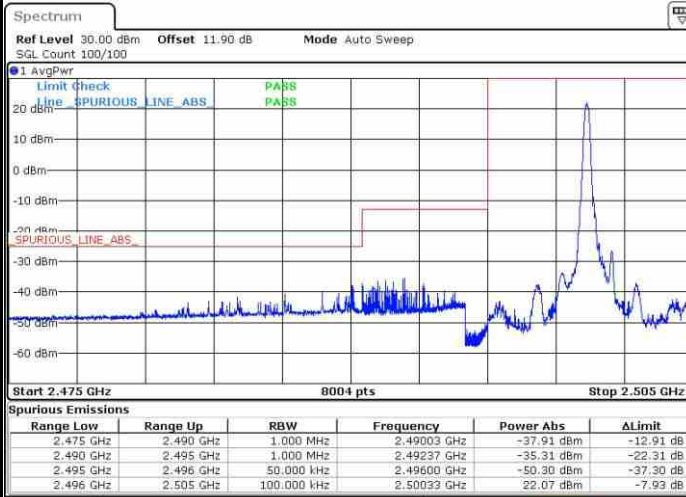
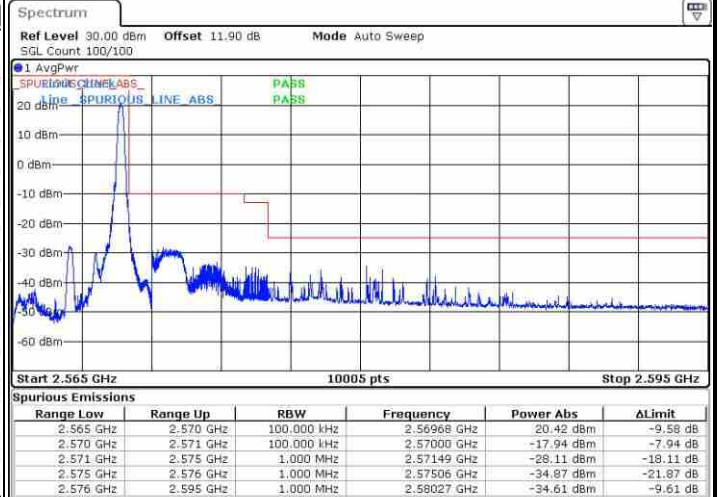
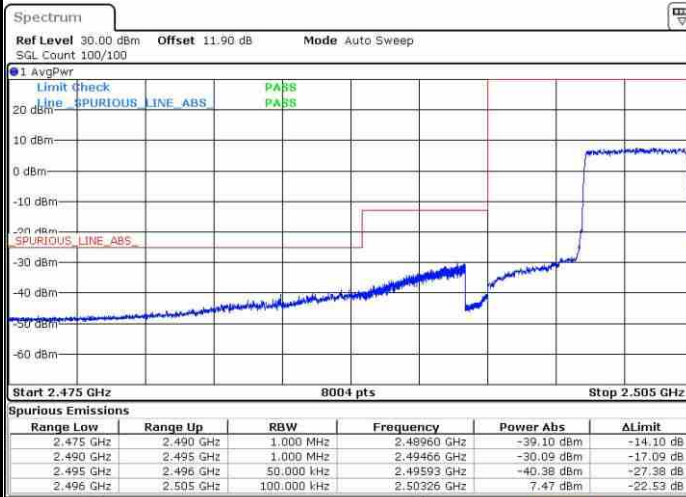
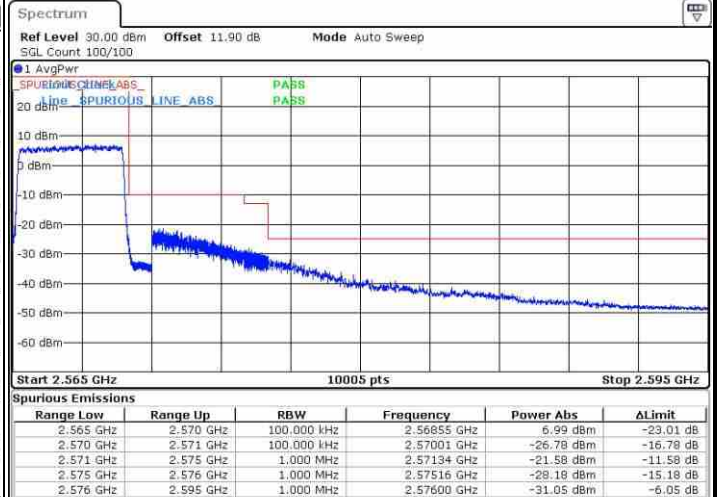


## Highest Channel / 15MHz / 64QAM



## Highest Channel / 20MHz / 64QAM

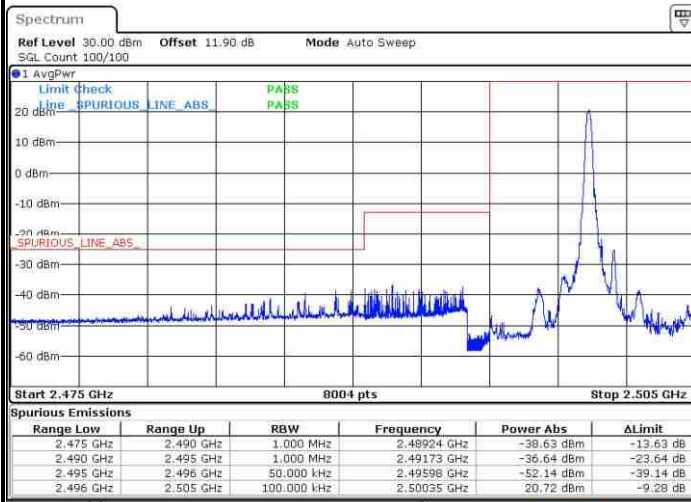


**Conducted Band Edge****LTE Band 7 / 5MHz / QPSK****Lowest Band Edge / 1 RB****Highest Band Edge / 1 RB****Lowest Band Edge / Full RB****Highest Band Edge / Full RB**

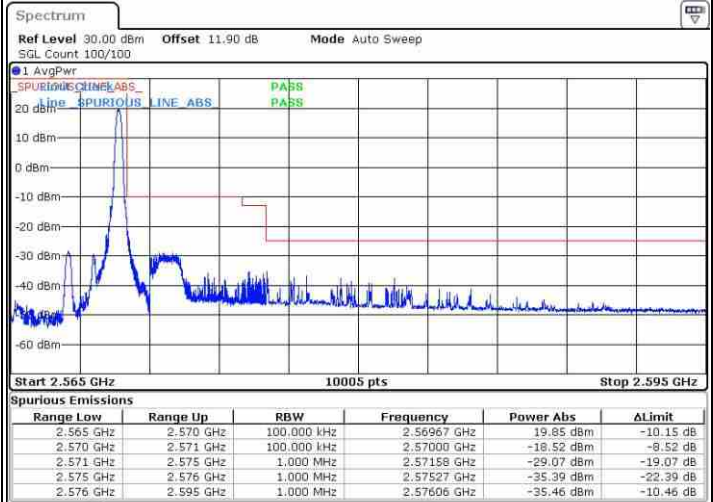


## LTE Band 7 / 5MHz / 16QAM

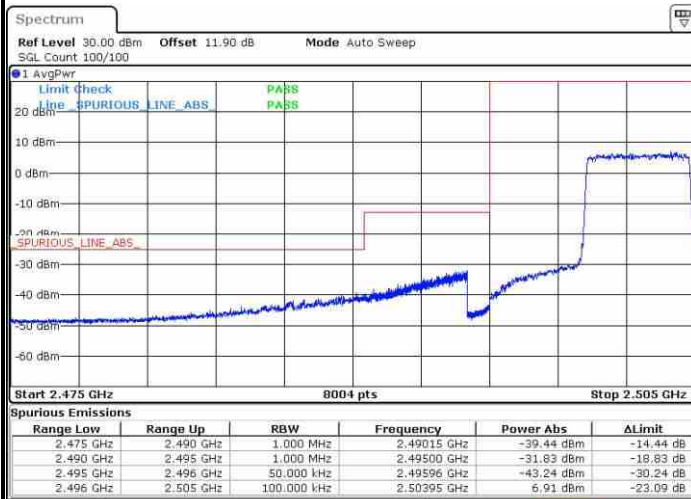
## Lowest Band Edge / 1 RB



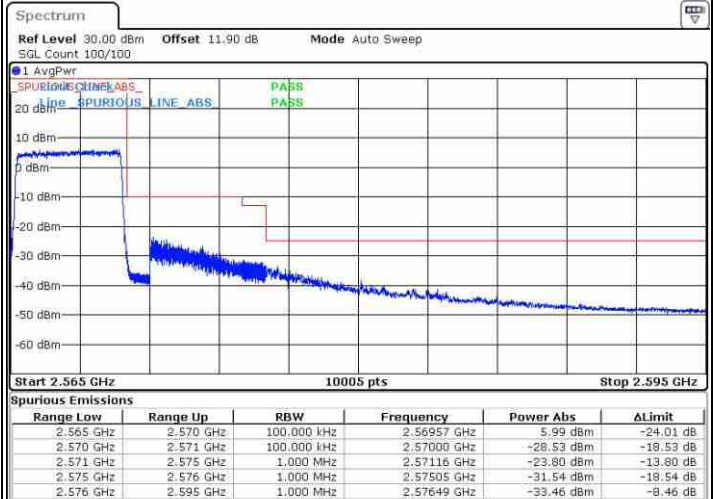
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



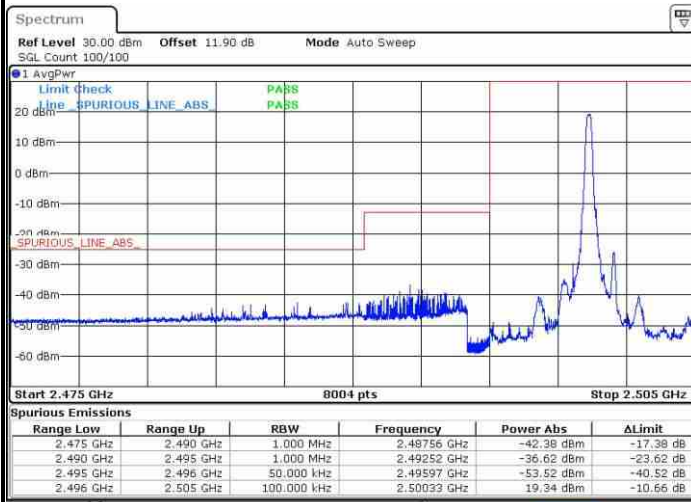
## Highest Band Edge / Full RB



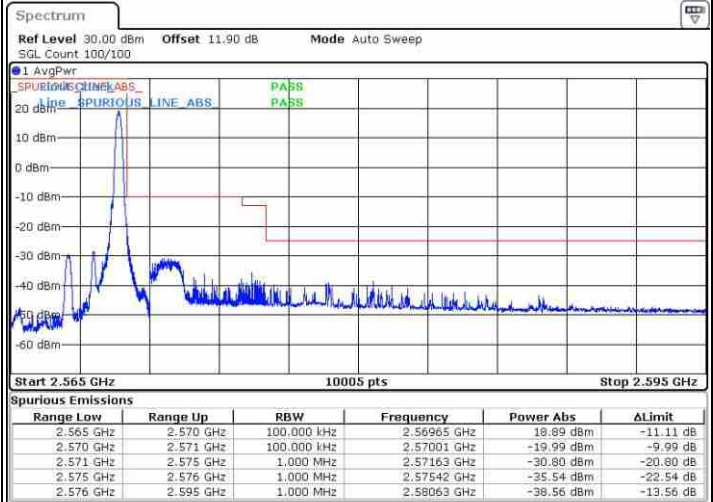


## LTE Band 7 / 5MHz / 64QAM

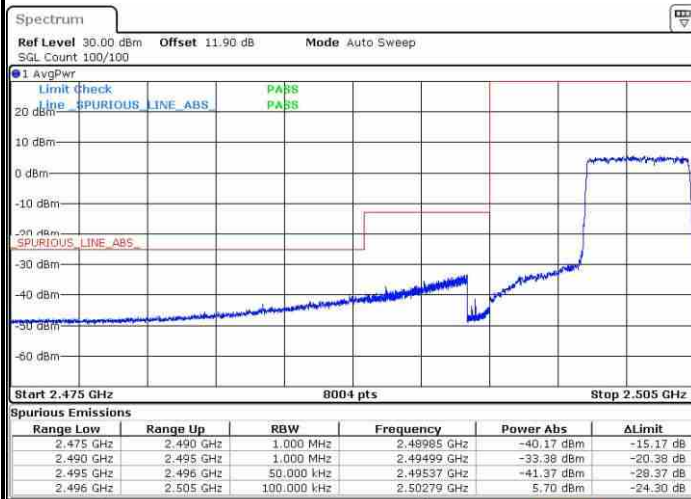
## Lowest Band Edge / 1RB



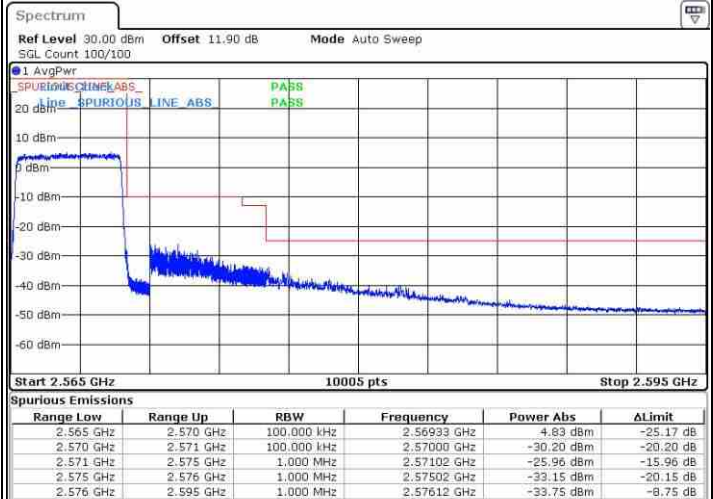
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



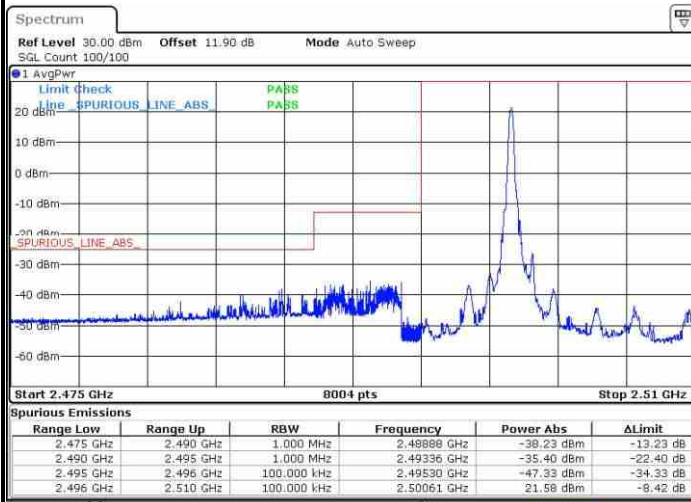
## Highest Band Edge / Full RB



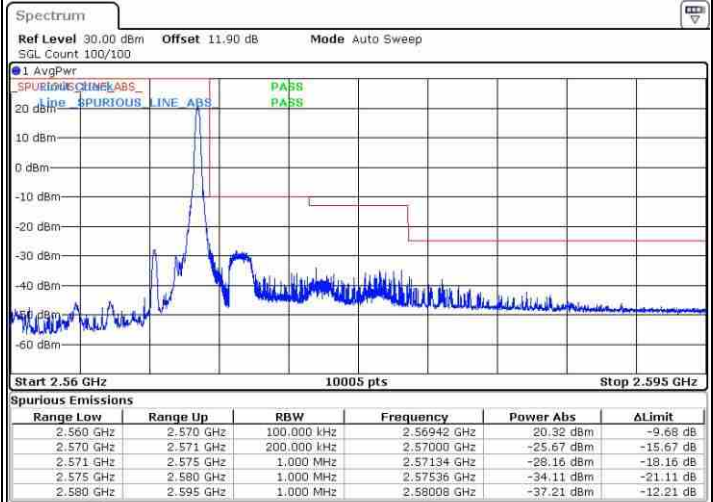


## LTE Band 7 / 10MHz / QPSK

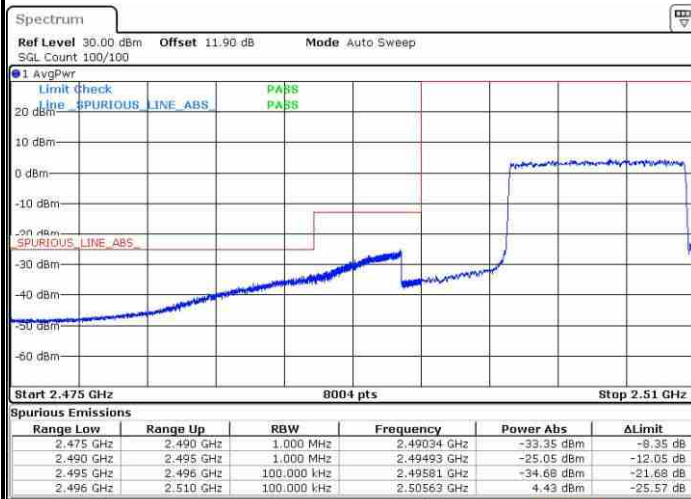
## Lowest Band Edge / 1 RB



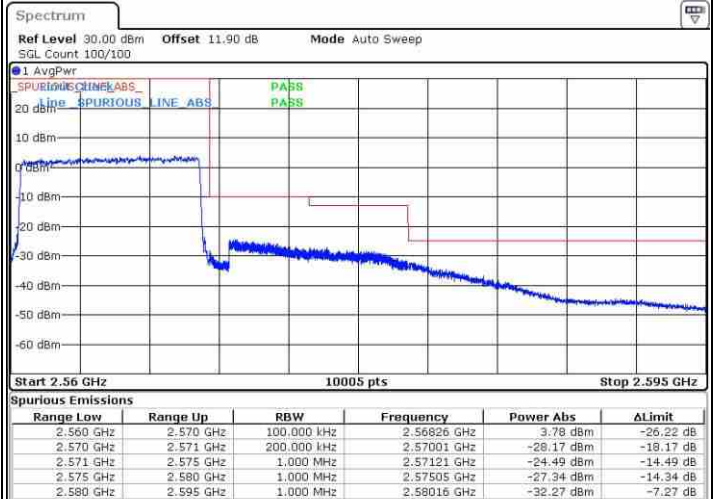
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



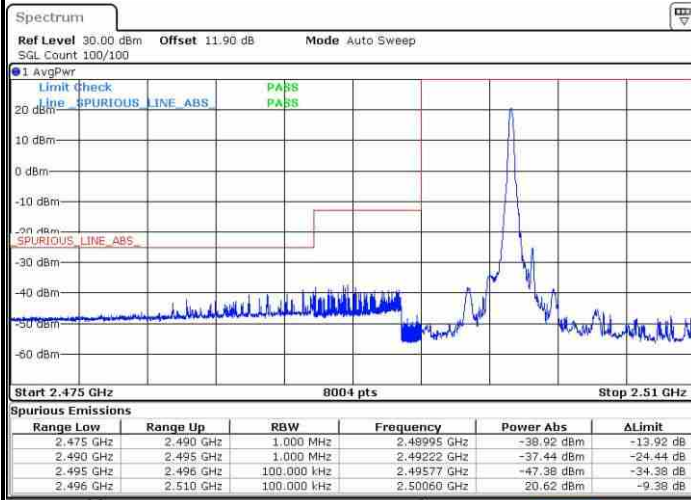
## Highest Band Edge / Full RB



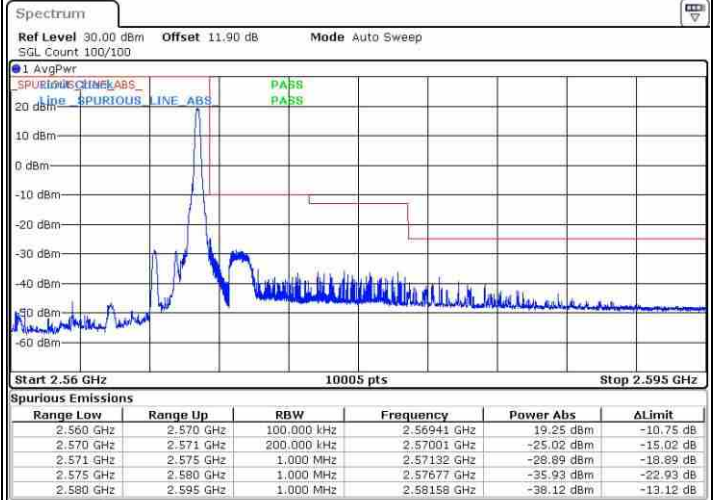


## LTE Band 7 / 10MHz / 16QAM

## Lowest Band Edge / 1 RB



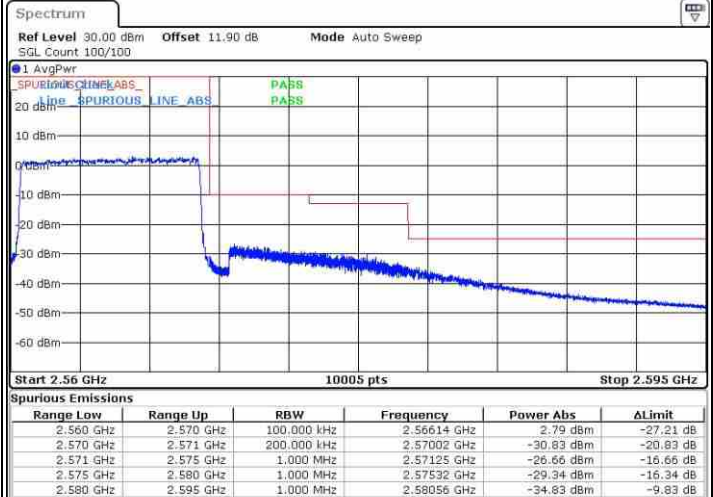
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



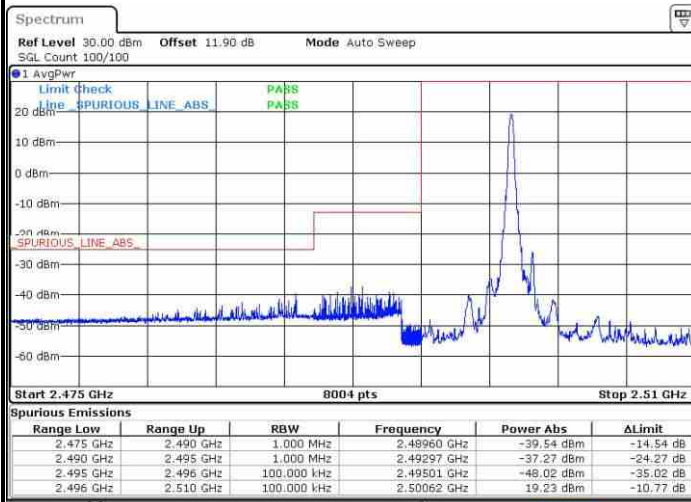
## Highest Band Edge / Full RB



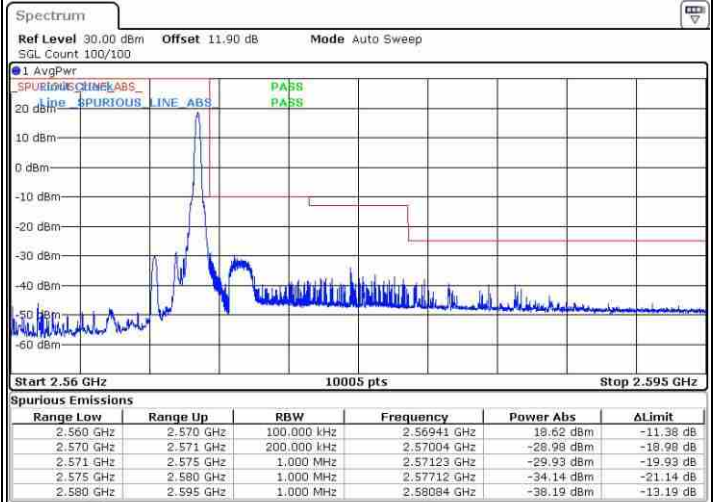


## LTE Band 7 / 10MHz / 64QAM

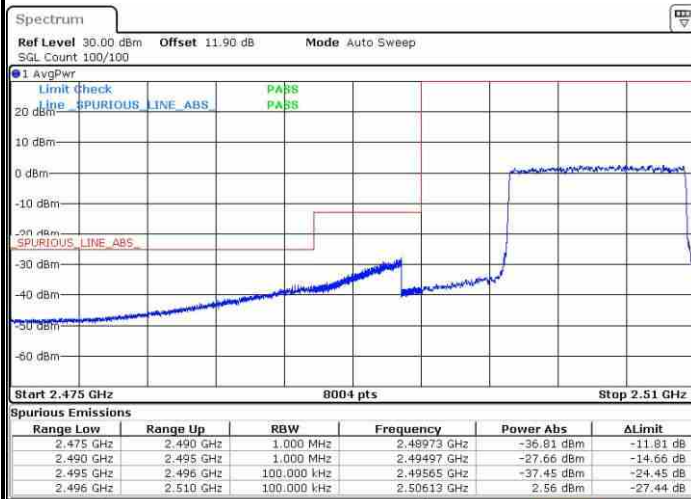
## Lowest Band Edge / 1 RB



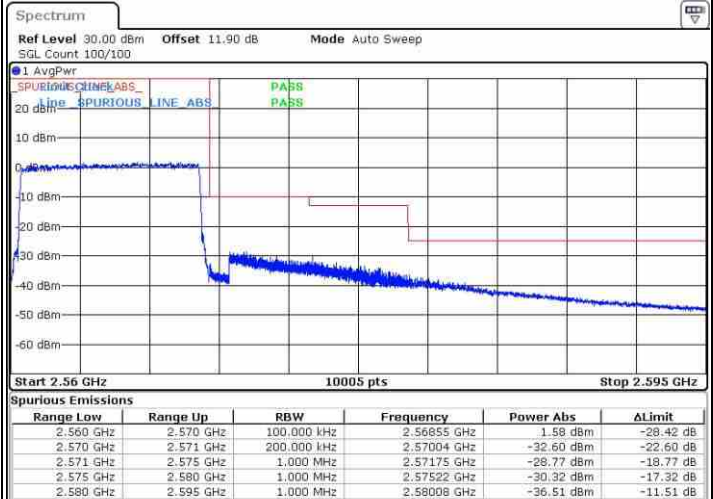
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



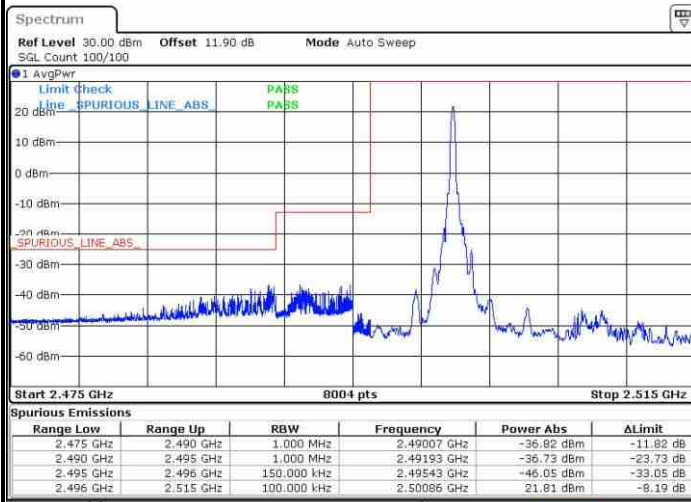
## Highest Band Edge / Full RB



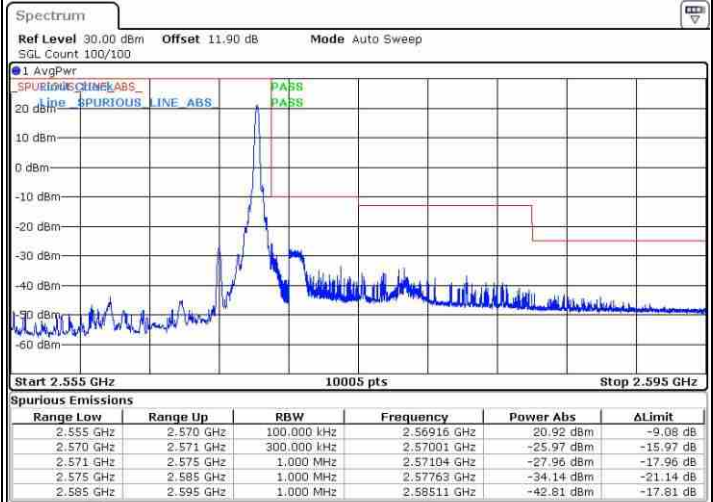


## LTE Band 7 / 15MHz / QPSK

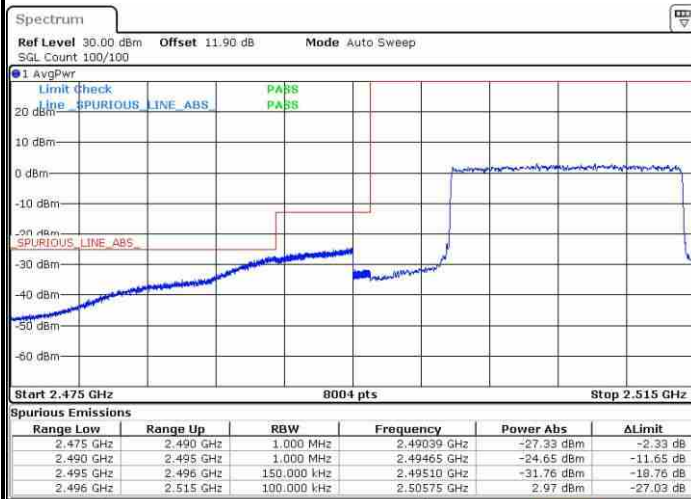
## Lowest Band Edge / 1 RB



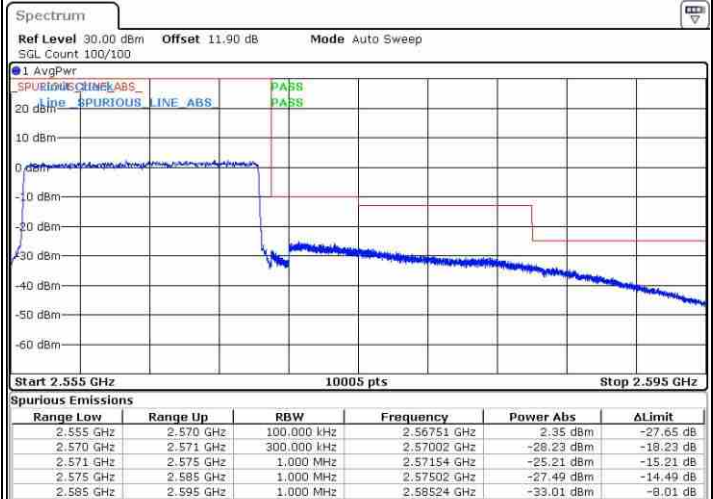
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



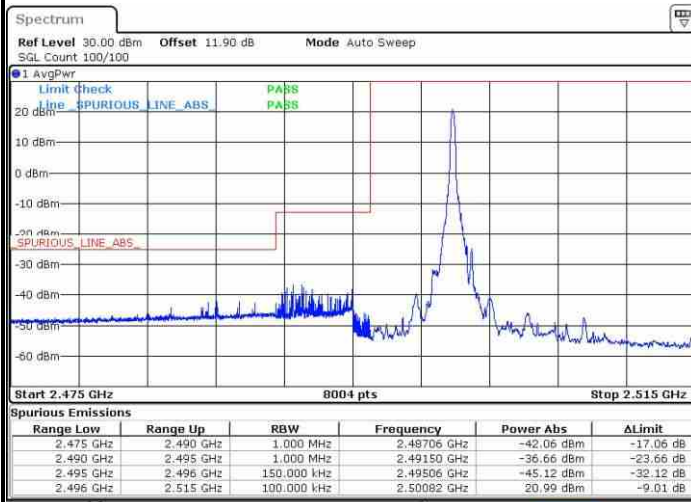
## Highest Band Edge / Full RB



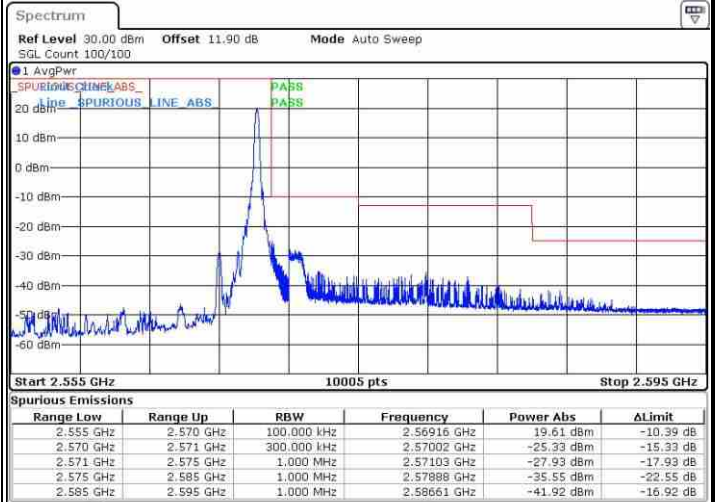


## LTE Band 7 / 15MHz / 16QAM

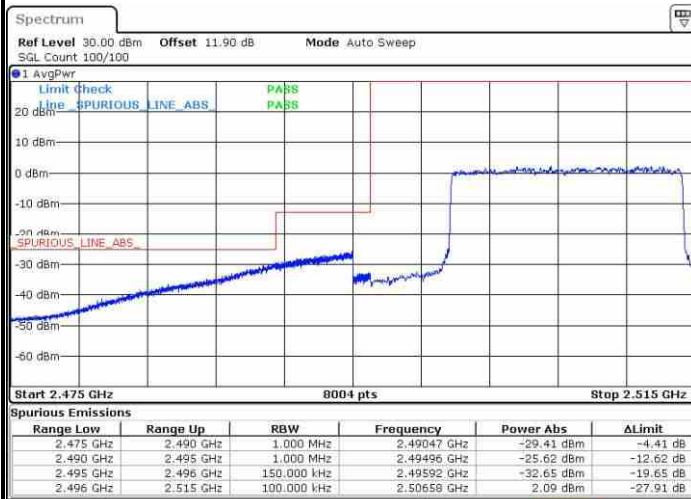
## Lowest Band Edge / 1 RB



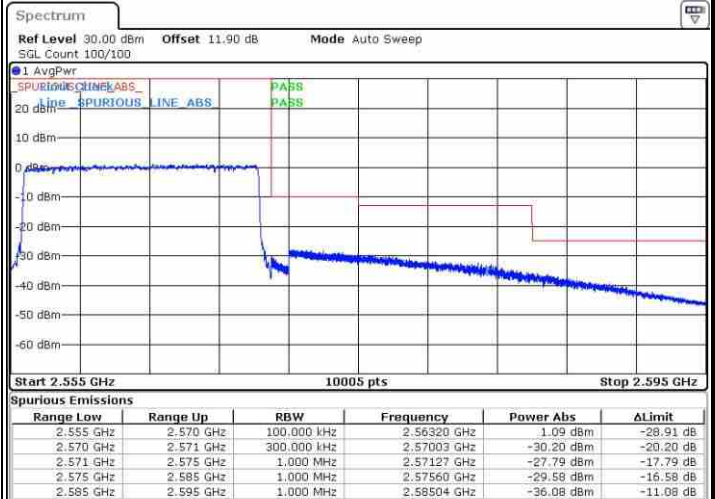
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



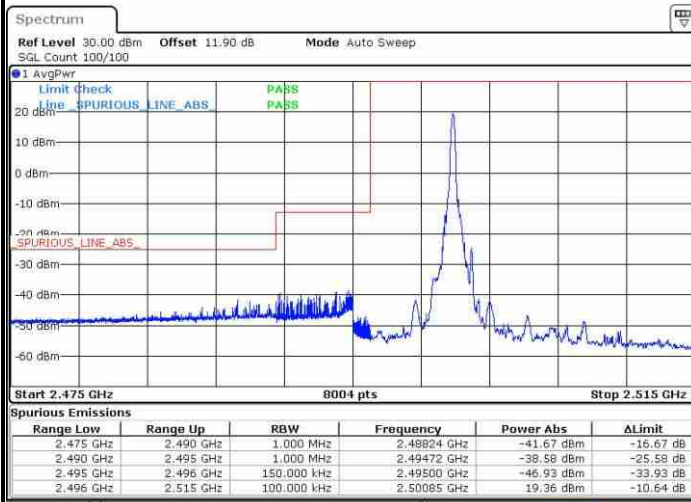
## Highest Band Edge / Full RB





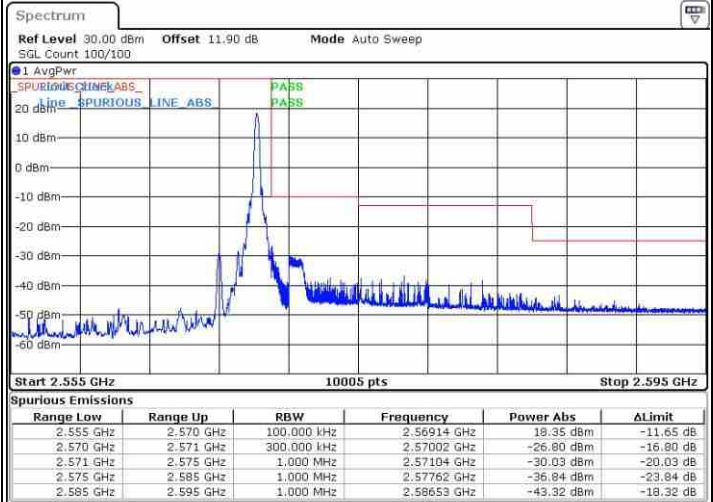
## LTE Band 7 / 15MHz / 64QAM

## Lowest Band Edge / 1 RB



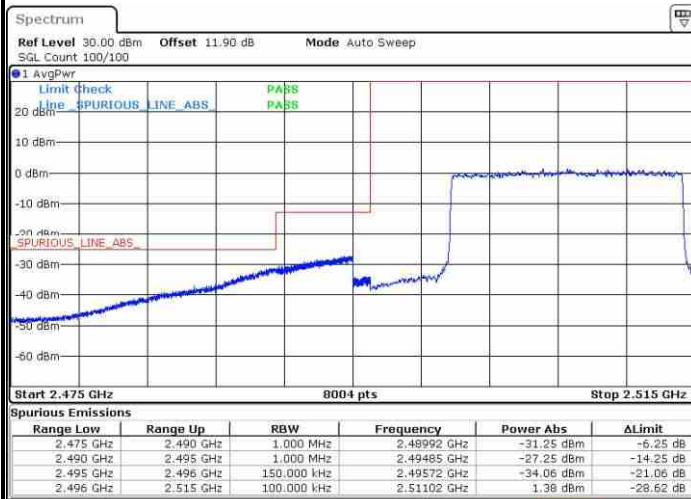
Date: 27.FEB.2019 01:11:43

## Highest Band Edge / 1 RB



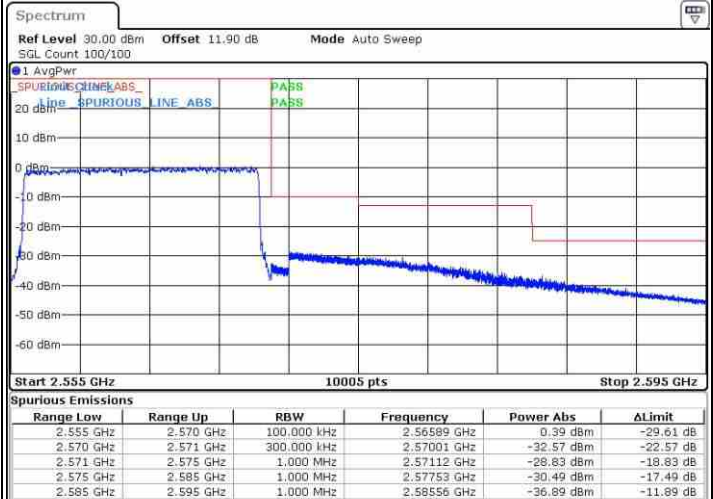
Date: 27.FEB.2019 01:15:40

## Lowest Band Edge / Full RB



Date: 27.FEB.2019 01:12:24

## Highest Band Edge / Full RB

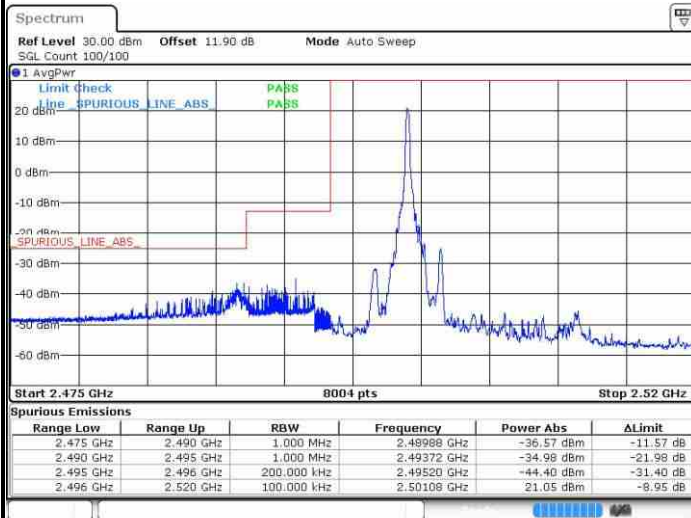


Date: 27.FEB.2019 01:16:21

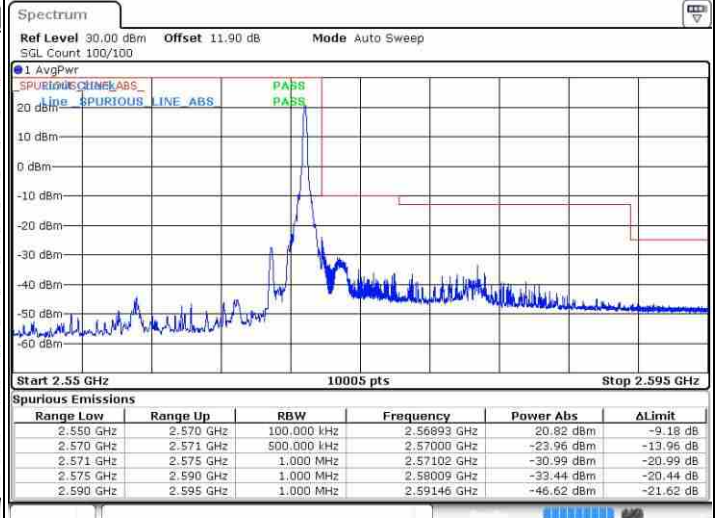


## LTE Band 7 / 20MHz / QPSK

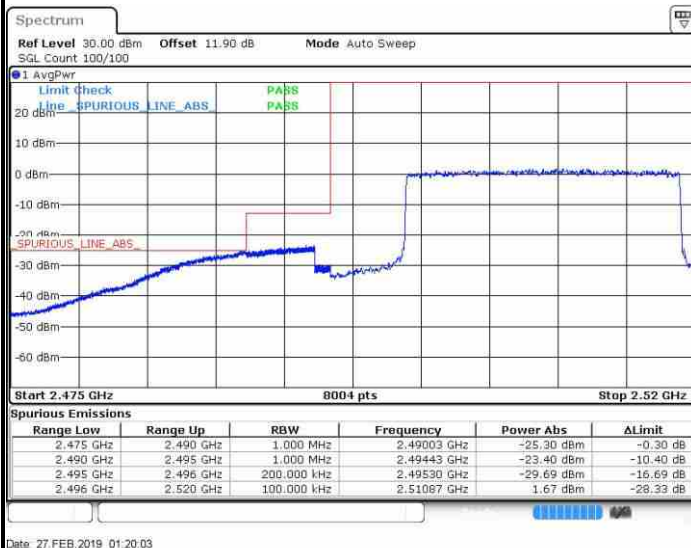
## Lowest Band Edge / 1 RB



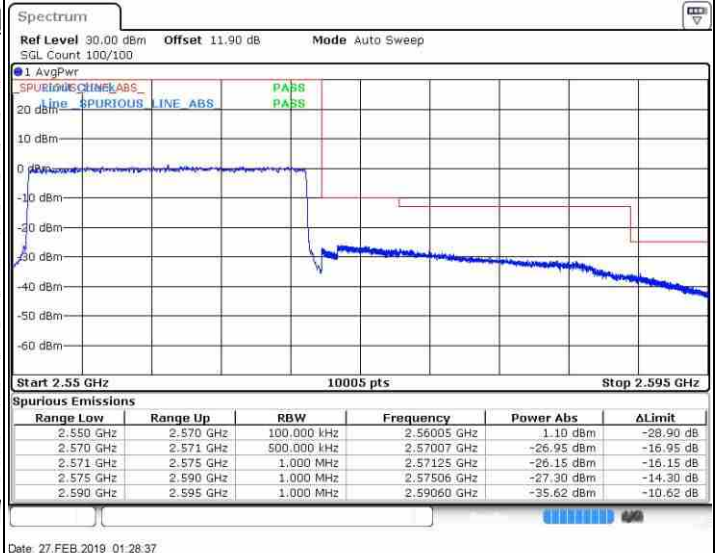
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



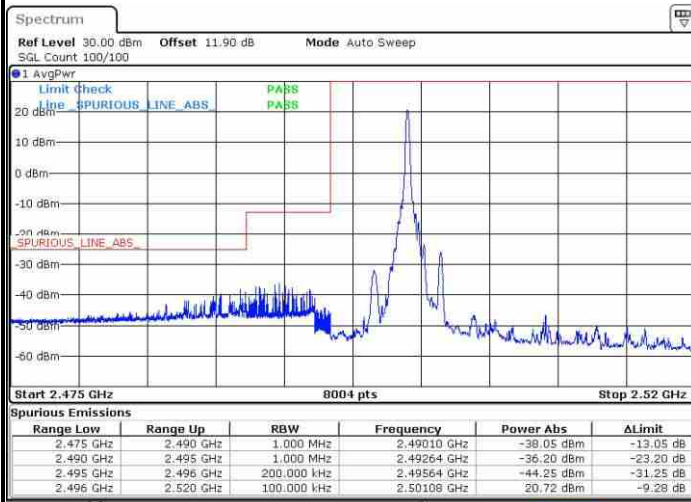
## Highest Band Edge / Full RB



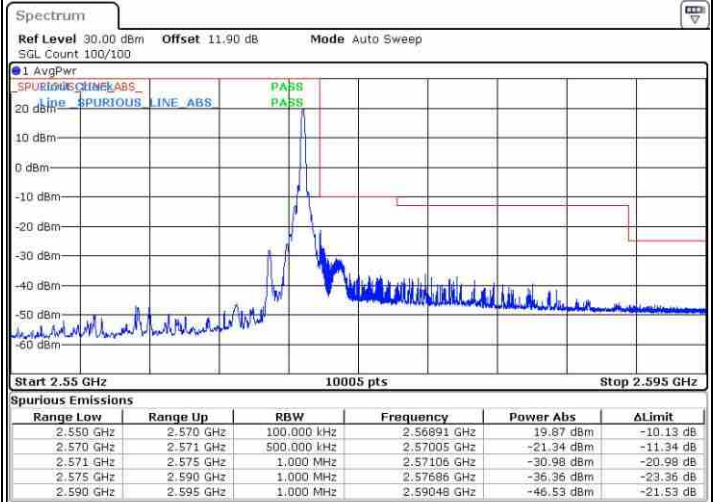


## LTE Band 7 / 20MHz / 16QAM

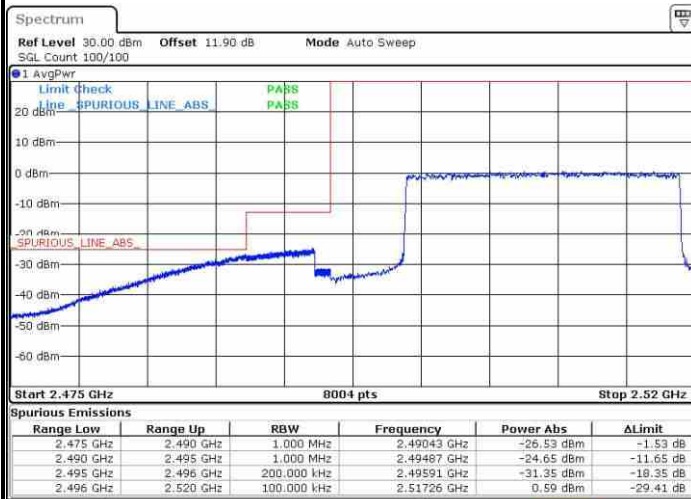
## Lowest Band Edge / 1 RB



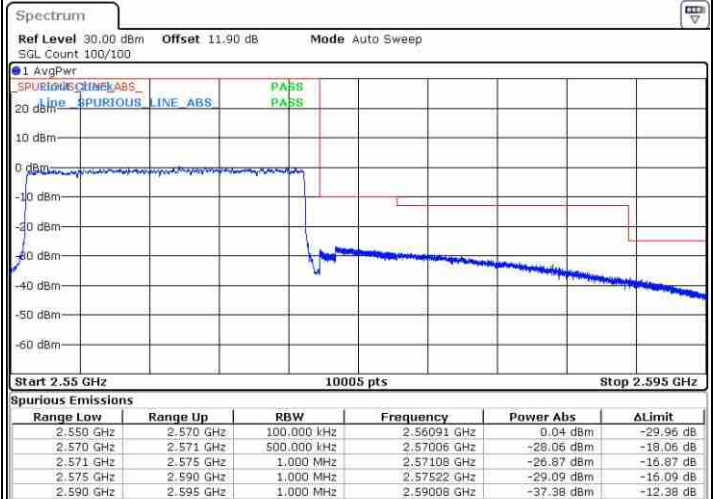
## Highest Band Edge / 1RB



## Lowest Band Edge / Full RB



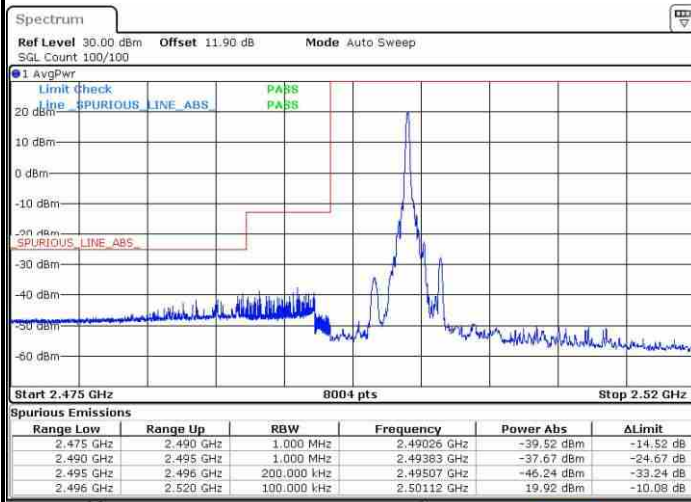
## Highest Band Edge / Full RB



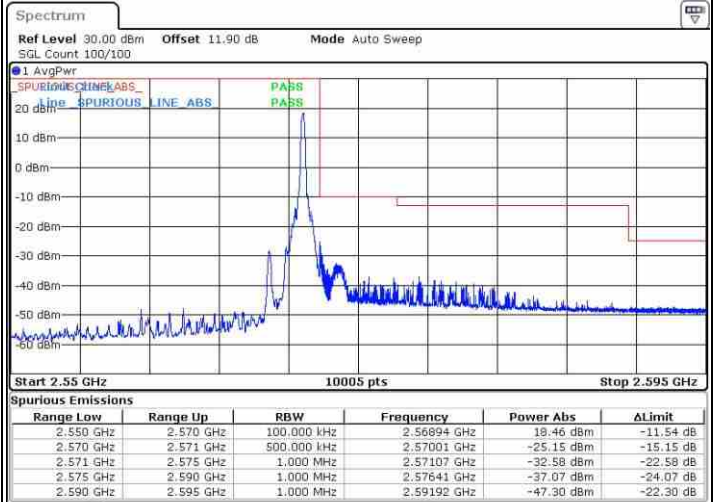


## LTE Band 7 / 20MHz / 64QAM

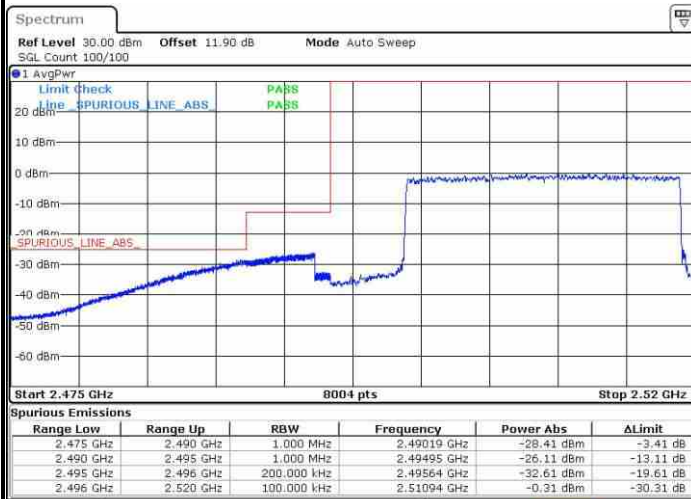
## Lowest Band Edge / 1 RB



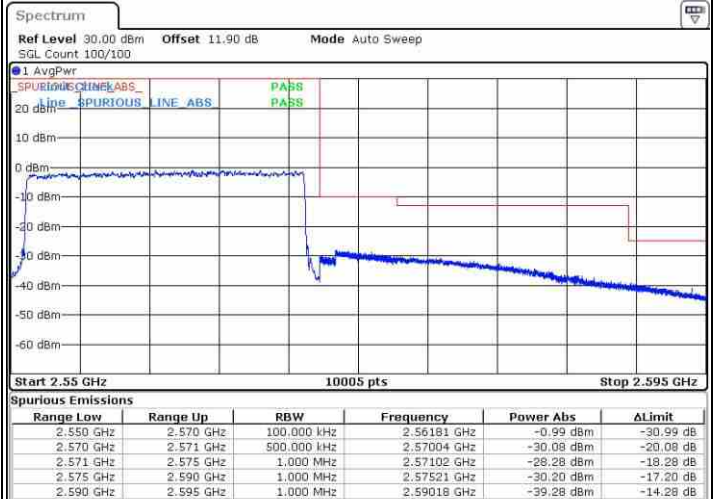
## Highest Band Edge / 1 RB

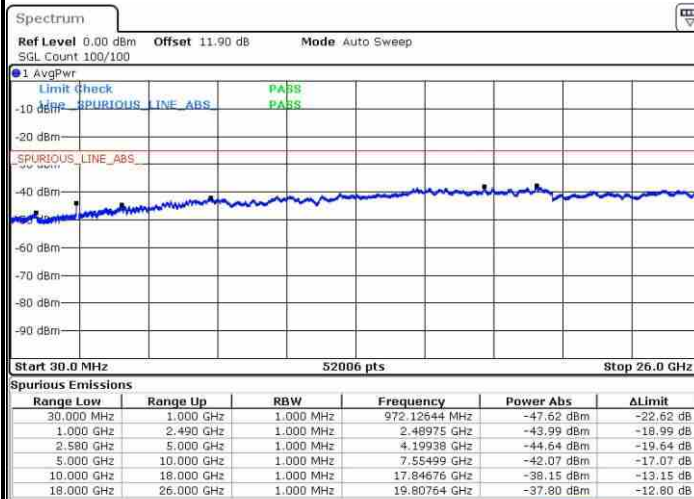


## Lowest Band Edge / Full RB

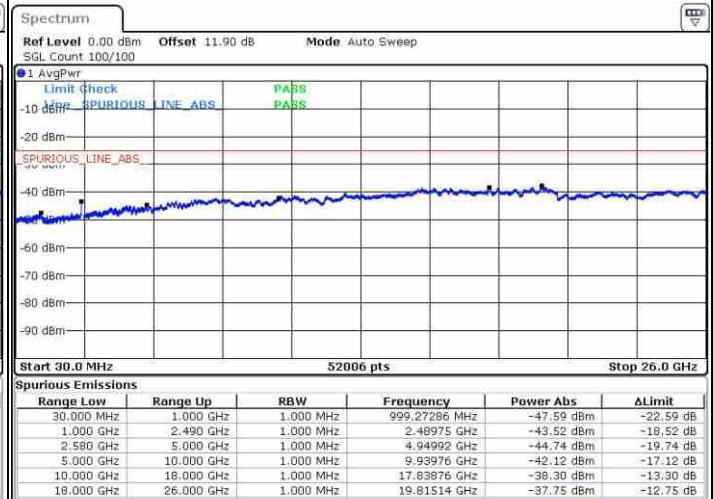


## Highest Band Edge / Full RB



**Conducted Spurious Emission****LTE Band 7 / 5MHz****Lowest Channel / QPSK**

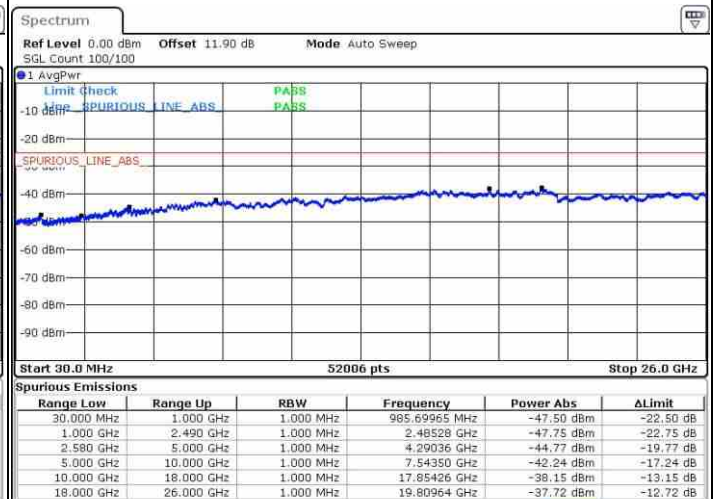
Date: 27.FEB.2019 00:19:52

**Lowest Channel / 16QAM**

Date: 27.FEB.2019 00:20:51

**Middle Channel / QPSK**

Date: 27.FEB.2019 00:23:37

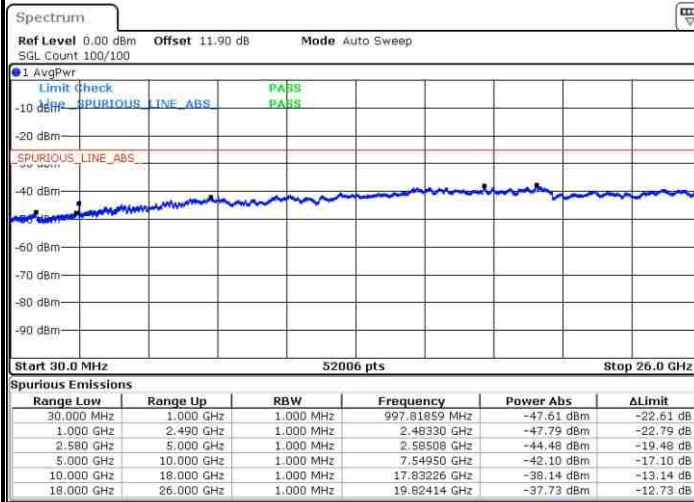
**Middle Channel / 16QAM**

Date: 27.FEB.2019 00:23:37



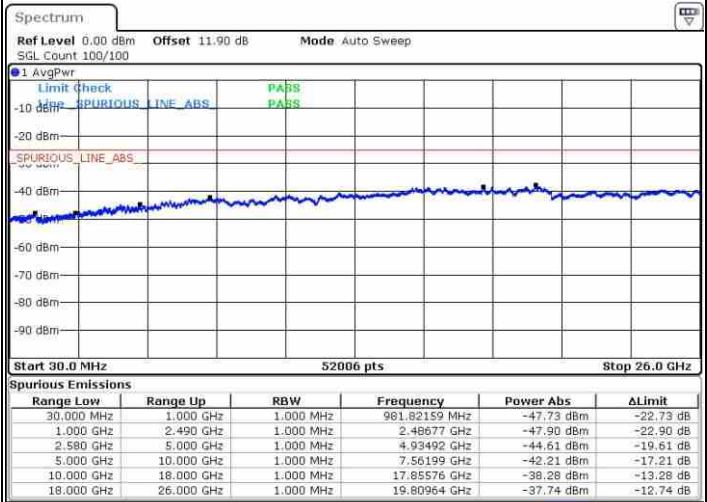
## LTE Band 7 / 5MHz

## Highest Channel / QPSK



Date: 27.FEB 2019 00:30:11

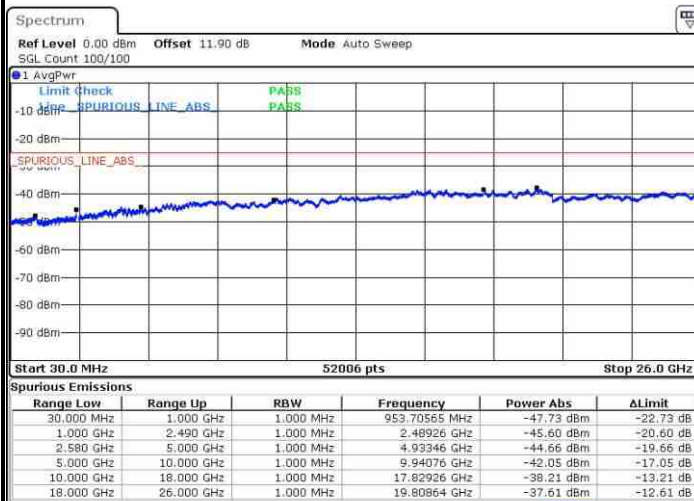
## Highest Channel / 16QAM



Date: 27.FEB 2019 00:31:06

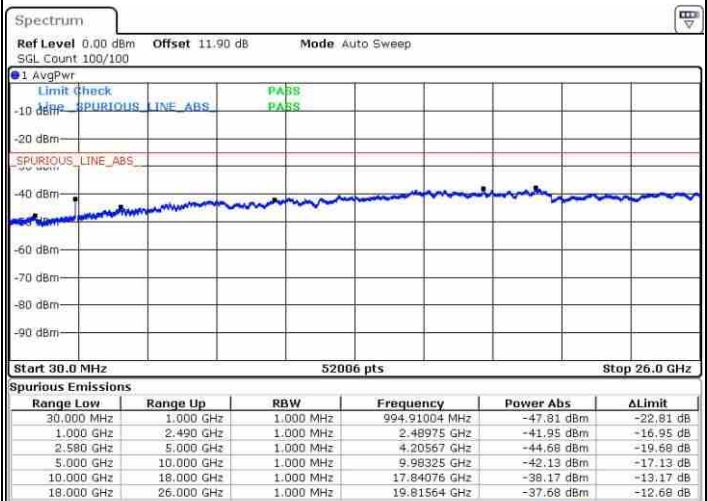
## LTE Band 7 / 10MHz

## Lowest Channel / QPSK



Date: 27.FEB 2019 00:42:04

## Lowest Channel / 16QAM

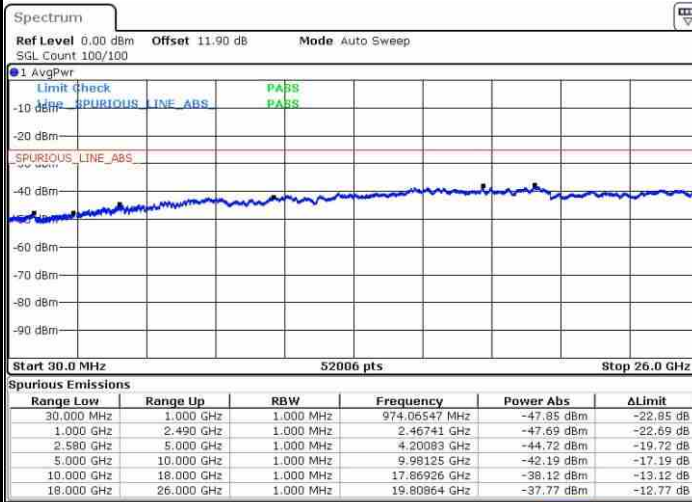


Date: 27.FEB 2019 00:42:59



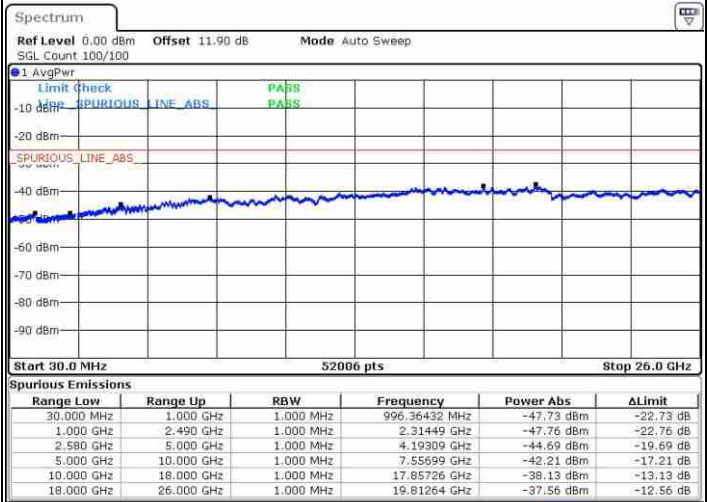
## LTE Band 7 / 10MHz

## Middle Channel / QPSK



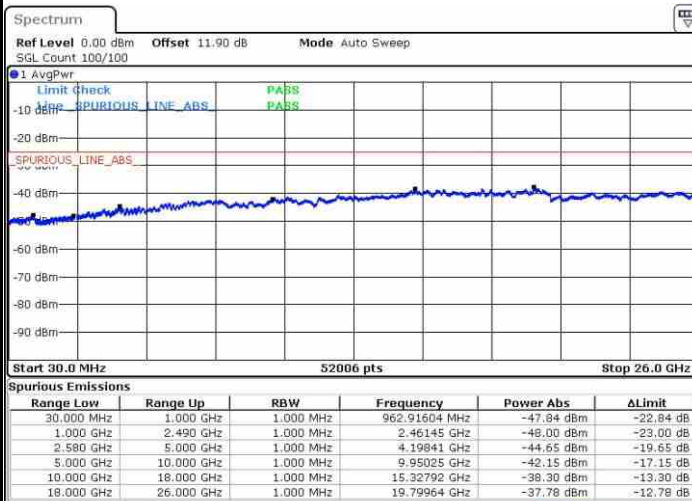
Date: 27.FEB 2019 00:44:39

## Middle Channel / 16QAM



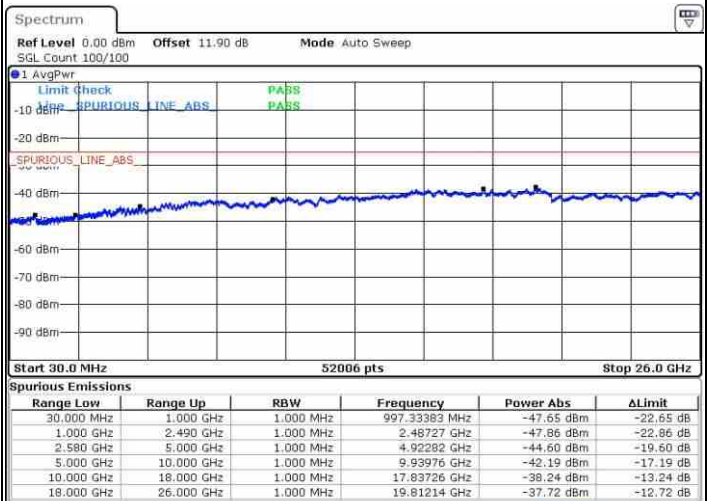
Date: 27.FEB 2019 00:45:34

## Highest Channel / QPSK



Date: 27.FEB 2019 00:49:58

## Highest Channel / 16QAM

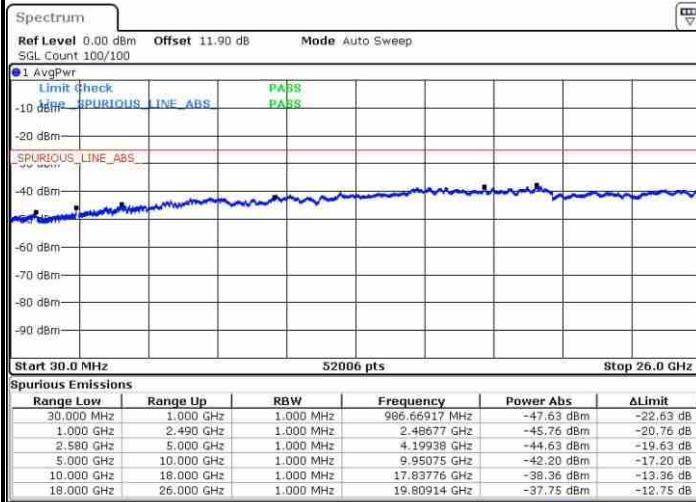


Date: 27.FEB 2019 00:50:52



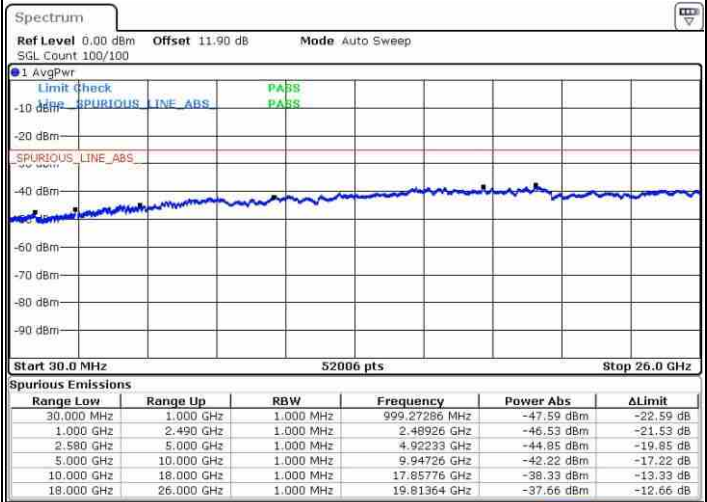
## LTE Band 7 / 15MHz

## Lowest Channel / QPSK



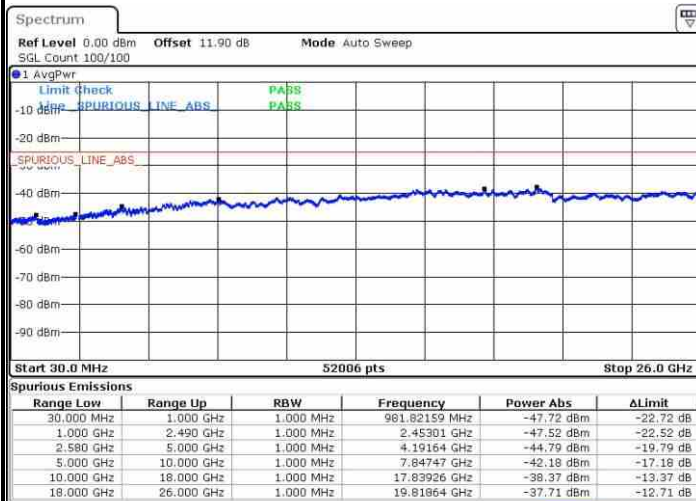
Date: 27.FEB 2019 01:01:51

## Lowest Channel / 16QAM



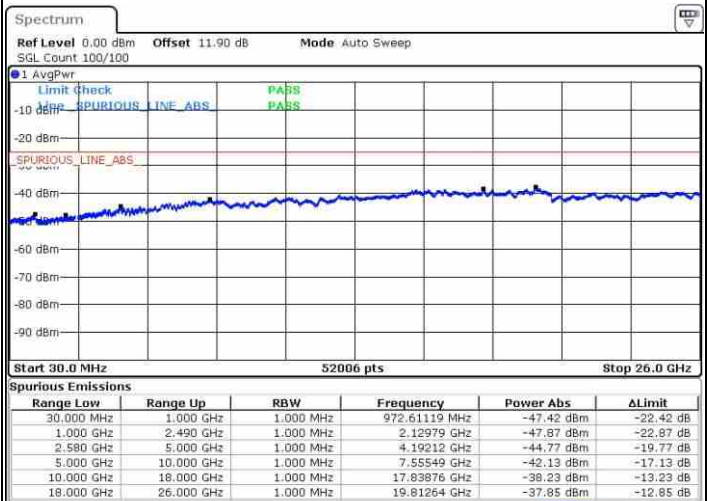
Date: 27.FEB 2019 01:02:45

## Middle Channel / QPSK



Date: 27.FEB 2019 01:04:25

## Middle Channel / 16QAM

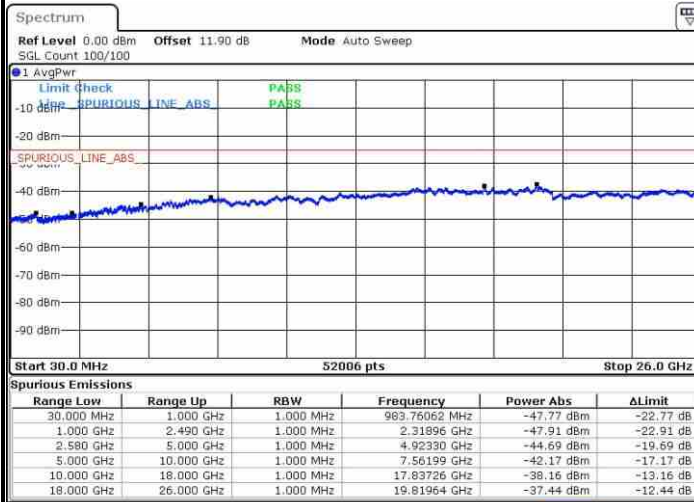


Date: 27.FEB 2019 01:05:20



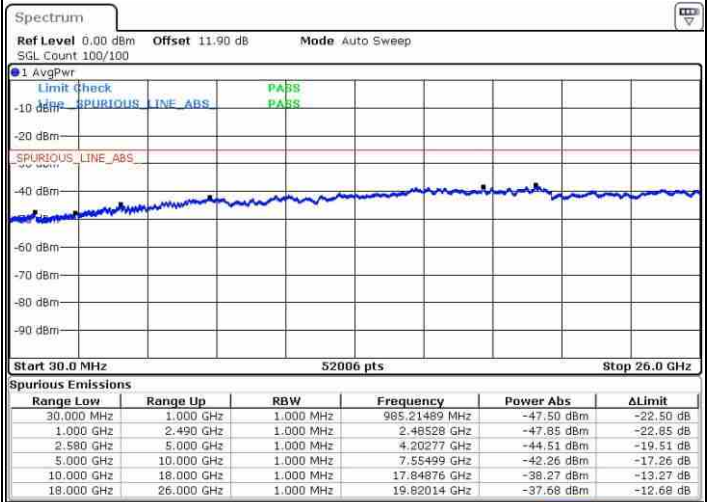
## LTE Band7 / 15MHz

## Highest Channel / QPSK



Date: 27.FEB 2019 01:09:44

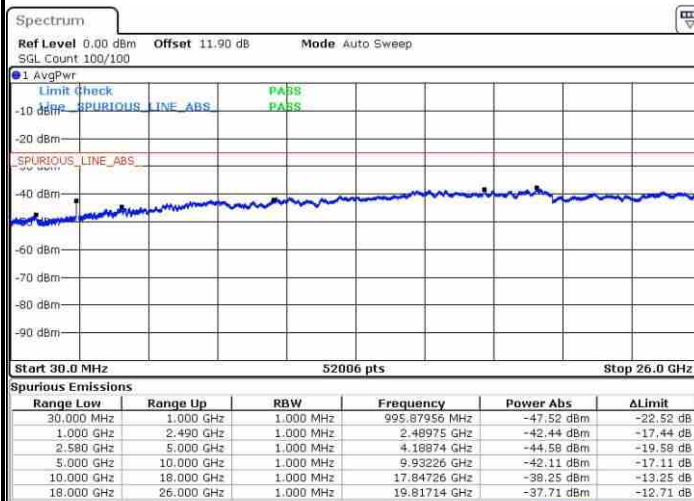
## Highest Channel / 16QAM



Date: 27.FEB 2019 01:10:38

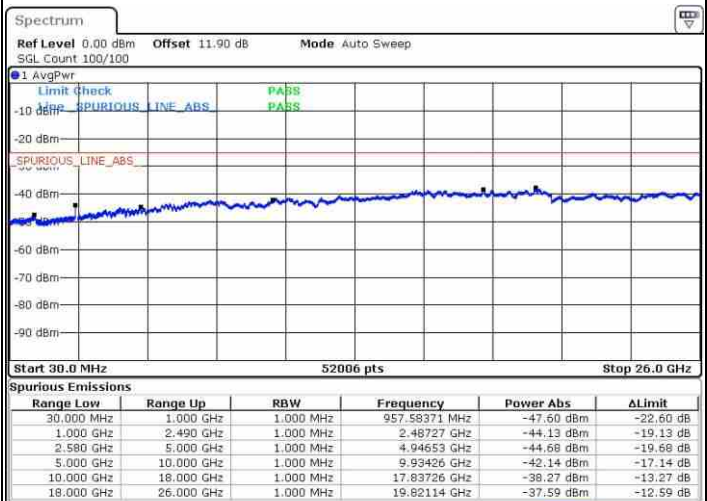
## LTE Band 7 / 20MHz

## Lowest Channel / QPSK



Date: 27.FEB 2019 01:21:39

## Lowest Channel / 16QAM

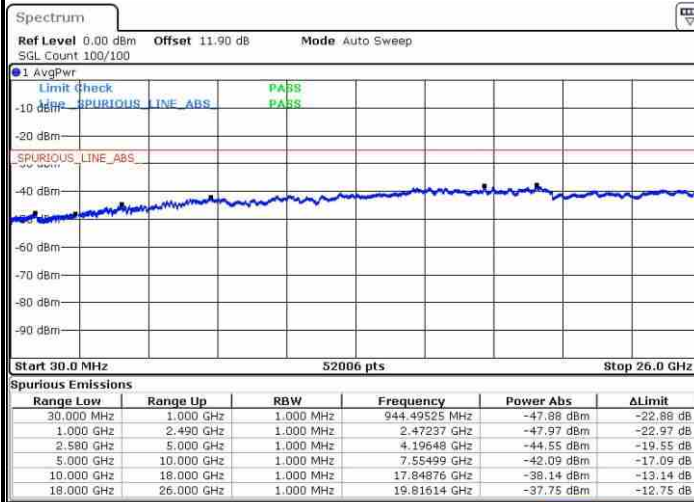


Date: 27.FEB 2019 01:22:33



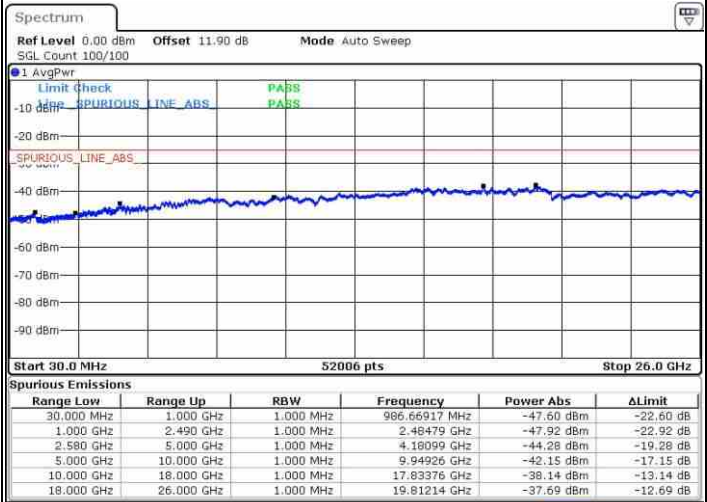
## LTE Band 7 / 20MHz

## Middle Channel / QPSK



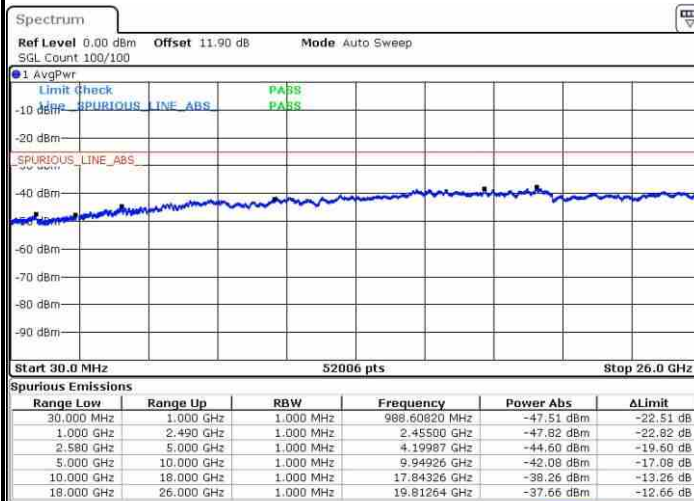
Date: 27.FEB 2019 01:24:14

## Middle Channel / 16QAM



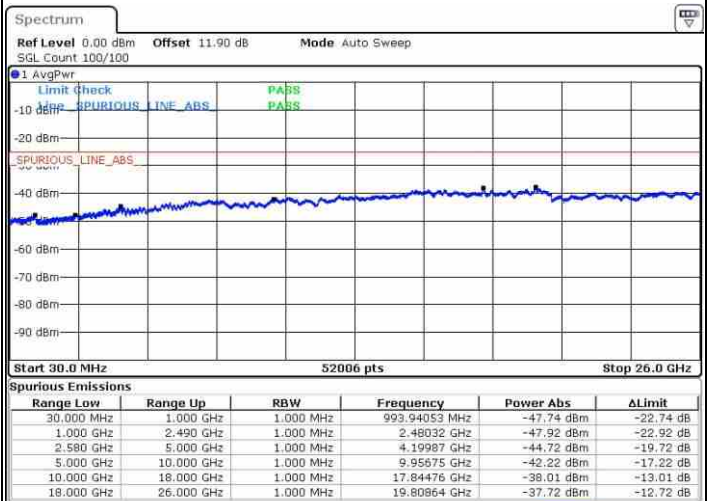
Date: 27.FEB 2019 01:25:08

## Highest Channel / QPSK



Date: 27.FEB 2019 01:29:32

## Highest Channel / 16QAM

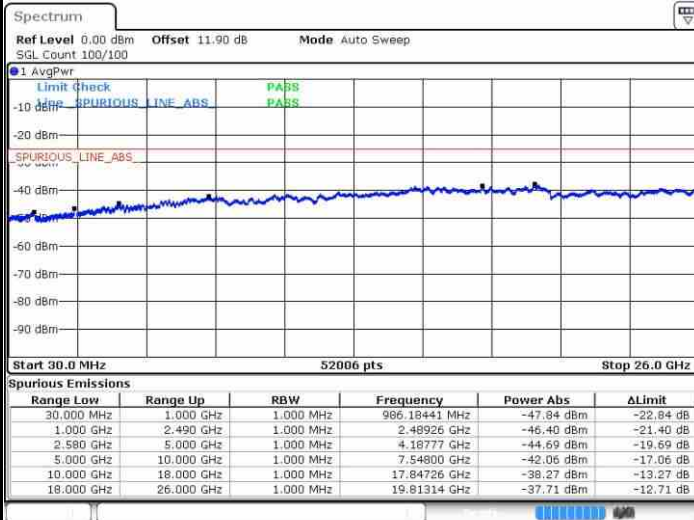


Date: 27.FEB 2019 01:30:26



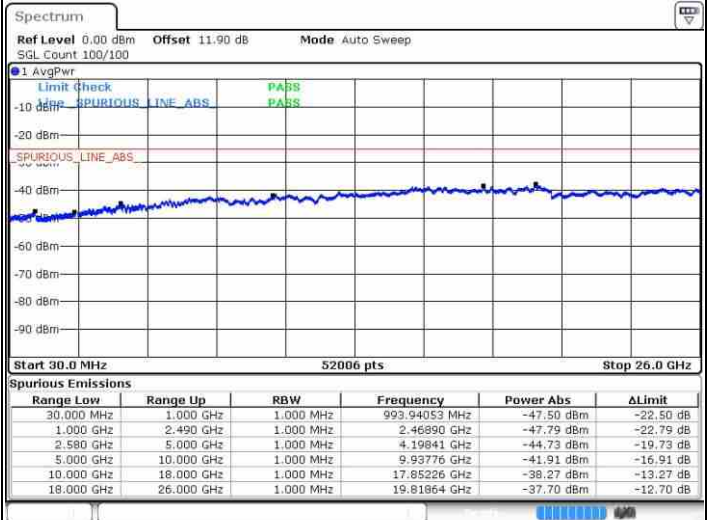
## LTE Band 7 / 5MHz

## Lowest Channel / 64QAM



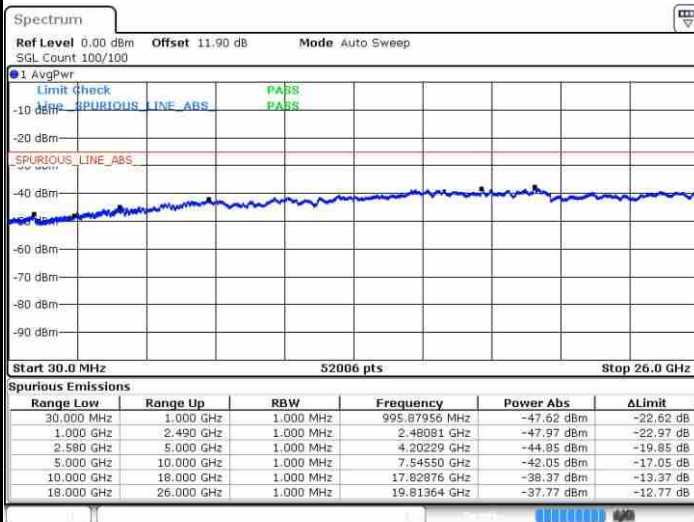
Date: 27.FEB 2019 00:33:45

## Middle Channel / 64QAM



Date: 27.FEB 2019 00:35:02

## Highest Channel / 64QAM

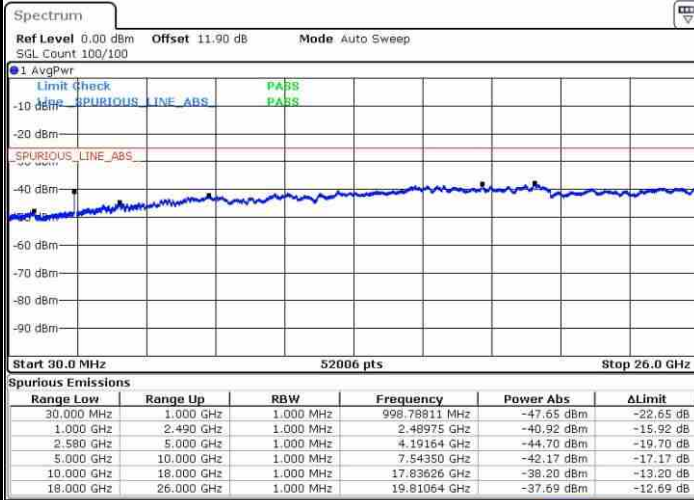


Date: 27.FEB 2019 00:37:41



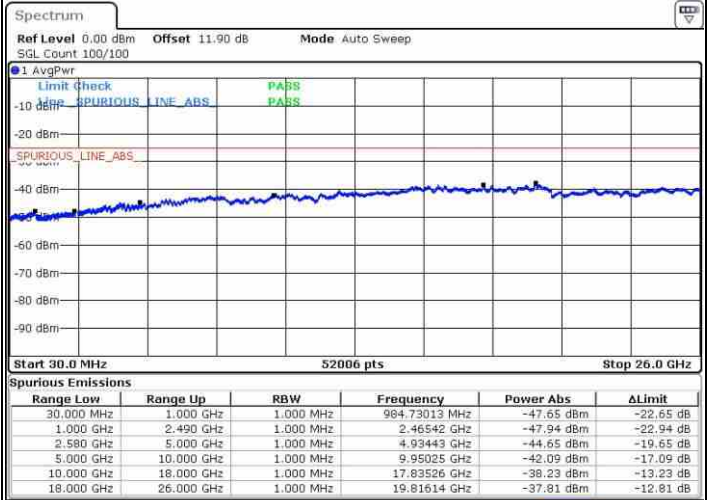
## LTE Band 7 / 10MHz

## Lowest Channel / 64QAM



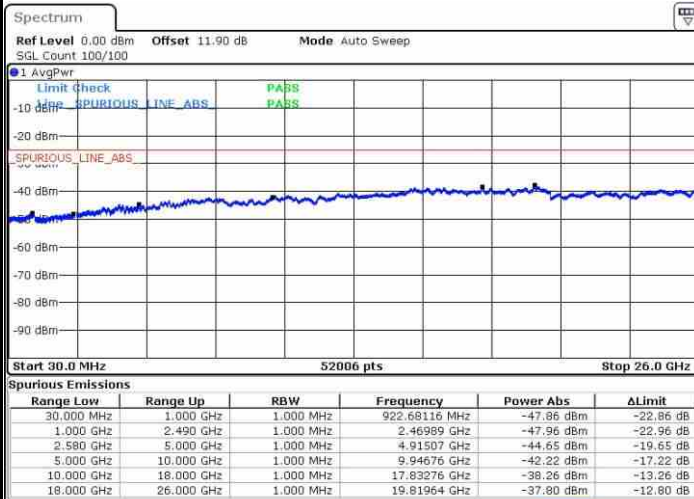
Date: 27.FEB 2019 00:53:31

## Middle Channel / 64QAM



Date: 27.FEB 2019 00:54:48

## Highest Channel / 64QAM

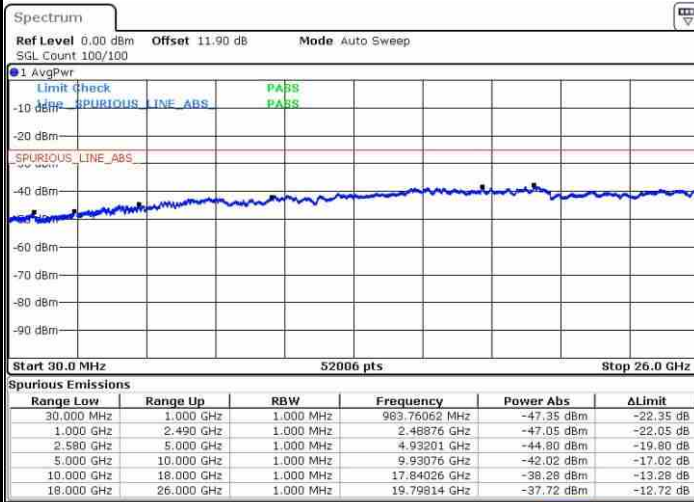


Date: 27.FEB 2019 00:57:27



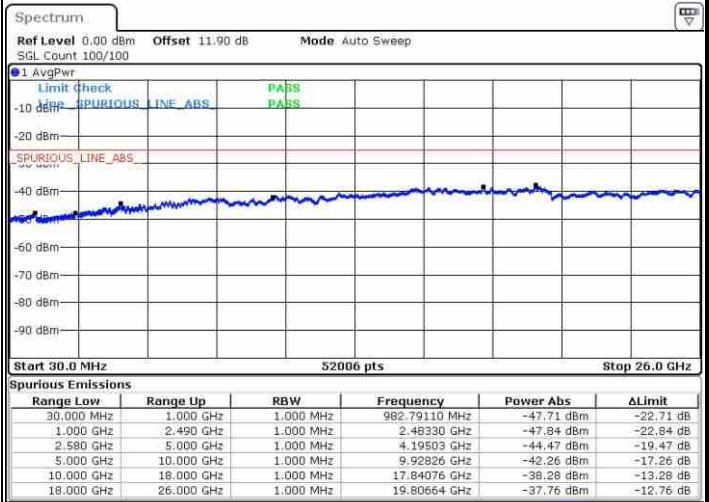
## LTE Band 7 / 15MHz

## Lowest Channel / 64QAM



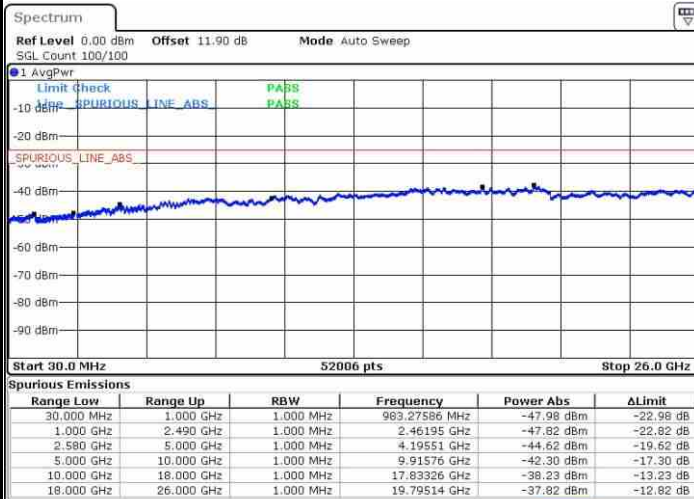
Date: 27.FEB 2019 01:13:19

## Middle Channel / 64QAM



Date: 27.FEB 2019 01:14:37

## Highest Channel / 64QAM

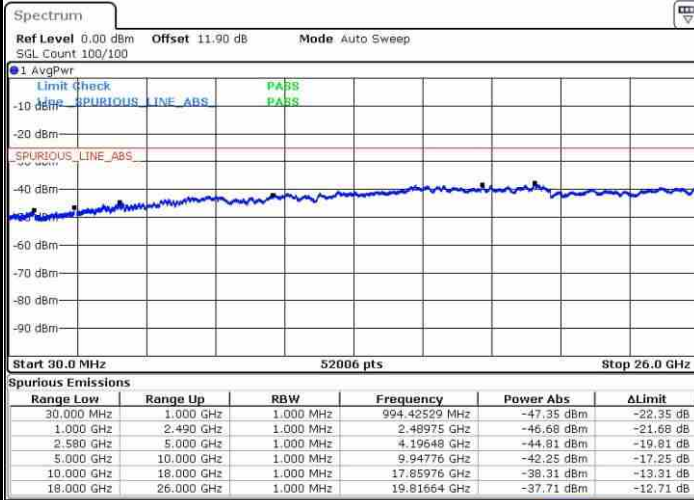


Date: 27.FEB 2019 01:17:16



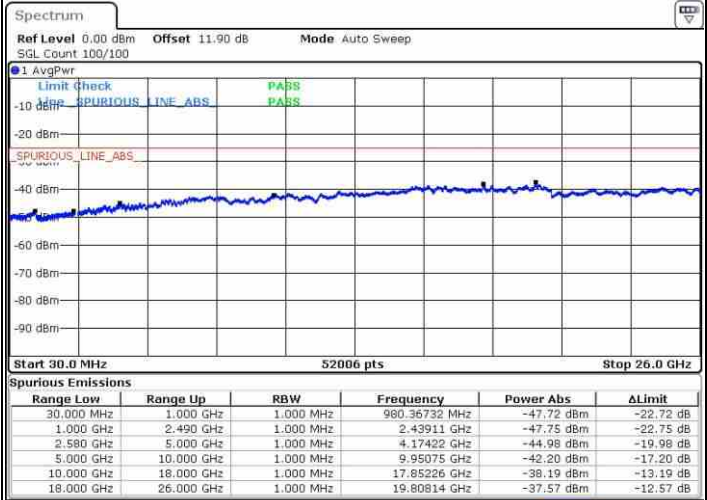
## LTE Band 7 / 20MHz

## Lowest Channel / 64QAM



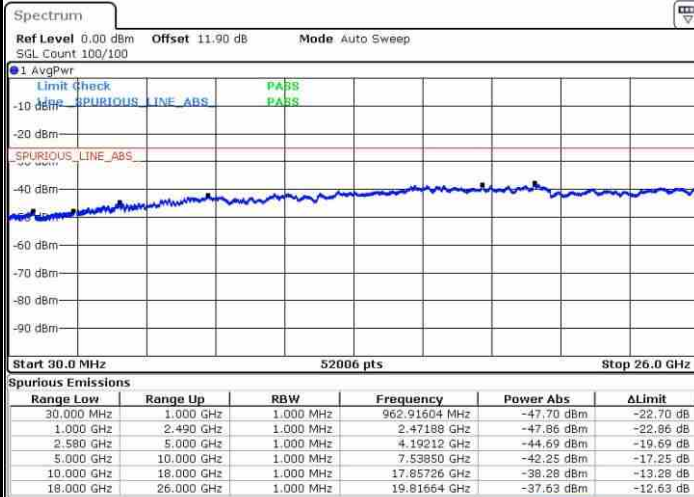
Date: 27.FEB 2019 01:33:05

## Middle Channel / 64QAM



Date: 27.FEB 2019 01:34:23

## Highest Channel / 64QAM



Date: 27.FEB 2019 01:37:02

## Frequency Stability

| Test Conditions  |                   | LTE Band 7 (QPSK) / Middle Channel | Limit   |
|------------------|-------------------|------------------------------------|---------|
| Temperature (°C) | Voltage (Volt)    | BW 10MHz                           | Note 2. |
|                  |                   | Deviation (ppm)                    | Result  |
| 50               | Normal Voltage    | 0.0068                             | PASS    |
| 40               | Normal Voltage    | 0.0062                             |         |
| 30               | Normal Voltage    | 0.0064                             |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                             |         |
| 10               | Normal Voltage    | 0.0011                             |         |
| 0                | Normal Voltage    | 0.0007                             |         |
| -10              | Normal Voltage    | 0.0000                             |         |
| -20              | Normal Voltage    | 0.0001                             |         |
| -30              | Normal Voltage    | 0.0063                             |         |
| 20               | Maximum Voltage   | 0.0010                             |         |
| 20               | Normal Voltage    | 0.0000                             |         |
| 20               | Battery End Point | 0.0000                             |         |

**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.2 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

## LTE Band 7\_CA

### 26dB Bandwidth

| Mode       | LTE Band 7 : 26dB BW(MHz) |             |             |             |
|------------|---------------------------|-------------|-------------|-------------|
| QPSK       |                           |             |             |             |
| BW         | 10MHz+20MHz               | 15MHz+5MHz  | 15MHz+10MHz | 15MHz+15MHz |
| Lowest CH  | 29.79                     | -           | 25.12       | 30.63       |
| Middle CH  | 29.97                     | -           | 25.27       | 30.57       |
| Highest CH | 29.85                     | -           | 25.27       | 30.51       |
| BW         | 15MHz+20MHz               | 20MHz+10MHz | 20MHz+15MHz | 20MHz+20MHz |
| Lowest CH  | 34.83                     | 29.97       | 35.17       | 39.88       |
| Middle CH  | 34.97                     | 30.03       | 34.83       | 39.80       |
| Highest CH | 34.76                     | 29.97       | 35.17       | 39.80       |

| Mode       | LTE Band 7 : 26dB BW(MHz) |             |             |             |
|------------|---------------------------|-------------|-------------|-------------|
| 16QAM      |                           |             |             |             |
| BW         | 10MHz+20MHz               | 15MHz+5MHz  | 15MHz+10MHz | 15MHz+15MHz |
| Lowest CH  | 29.79                     | -           | 25.12       | 30.63       |
| Middle CH  | 29.91                     | -           | 25.12       | 30.51       |
| Highest CH | 29.91                     | -           | 25.07       | 30.51       |
| BW         | 15MHz+20MHz               | 20MHz+10MHz | 20MHz+15MHz | 20MHz+20MHz |
| Lowest CH  | 34.90                     | 30.03       | 34.90       | 39.88       |
| Middle CH  | 34.76                     | 30.27       | 34.83       | 39.96       |
| Highest CH | 34.90                     | 29.97       | 34.90       | 40.04       |

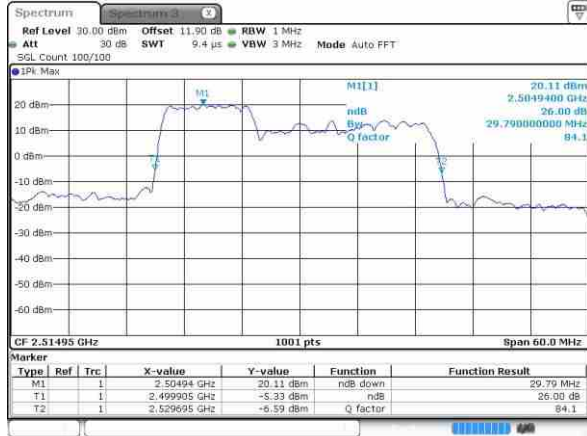
| Mode       | LTE Band 7 : 26dB BW(MHz) |             |             |             |
|------------|---------------------------|-------------|-------------|-------------|
| 64QAM      |                           |             |             |             |
| BW         | 10MHz+20MHz               | 15MHz+5MHz  | 15MHz+10MHz | 15MHz+15MHz |
| Lowest CH  | 29.79                     | -           | 25.18       | 30.33       |
| Middle CH  | 29.79                     | -           | 25.18       | 30.51       |
| Highest CH | 29.85                     | -           | 25.32       | 30.51       |
| BW         | 15MHz+20MHz               | 20MHz+10MHz | 20MHz+15MHz | 20MHz+20MHz |
| Lowest CH  | 34.76                     | 30.15       | 35.03       | 39.80       |
| Middle CH  | 34.83                     | 30.09       | 34.90       | 39.80       |
| Highest CH | 34.76                     | 29.97       | 34.90       | 39.80       |



## LTE Band 7

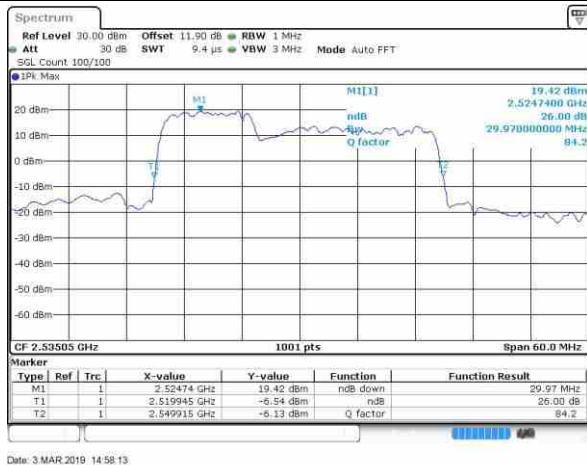
## QPSK

## Lowest Channel / 10MHz+20MHz



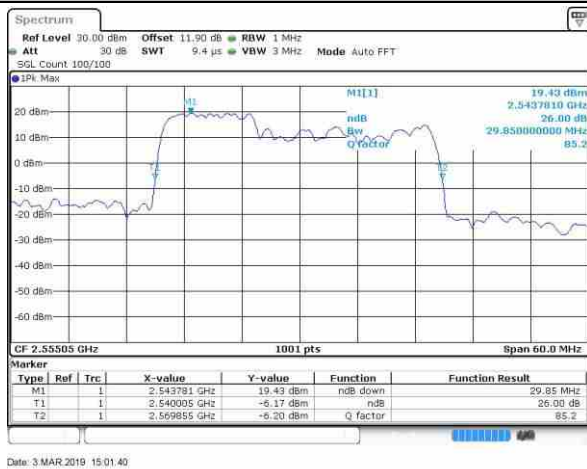
## Lowest Channel / 15MHz+5MHz

## Middle Channel / 10MHz+20MHz



## Middle Channel / 15MHz+5MHz

## Highest Channel / 10MHz+20MHz



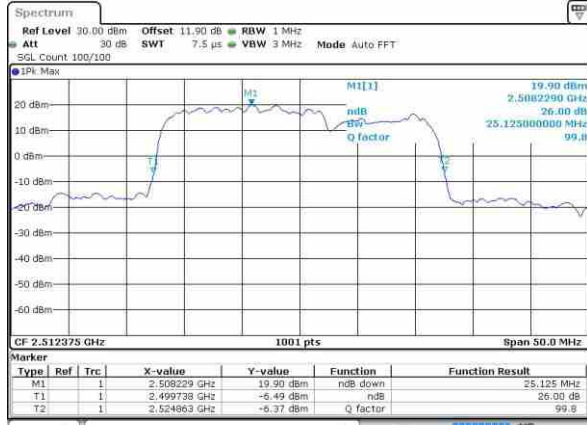
## Highest Channel / 15MHz+5MHz



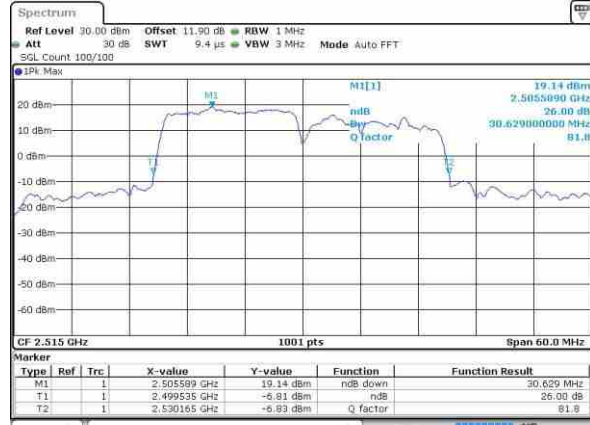
## LTE Band 7

## QPSK

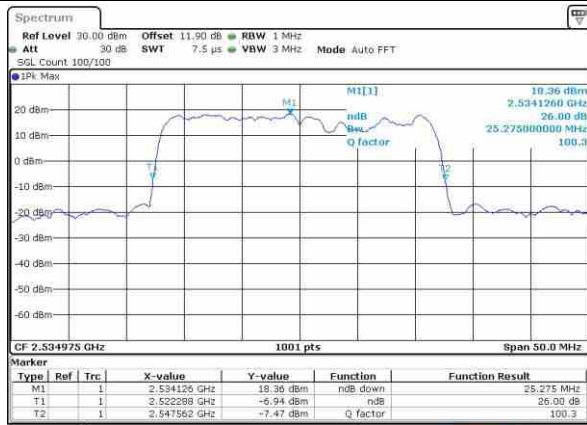
## Lowest Channel / 15MHz+10MHz



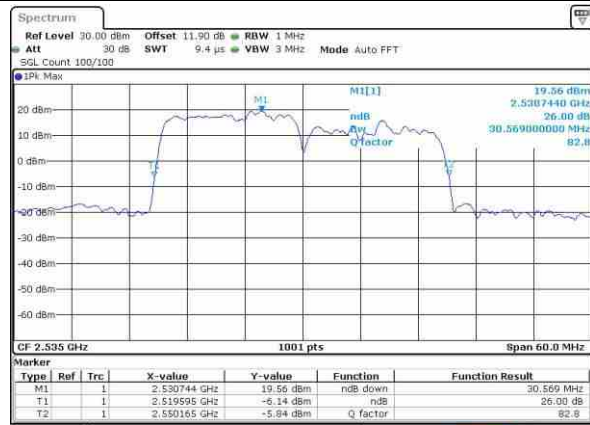
## Lowest Channel / 15MHz+15MHz



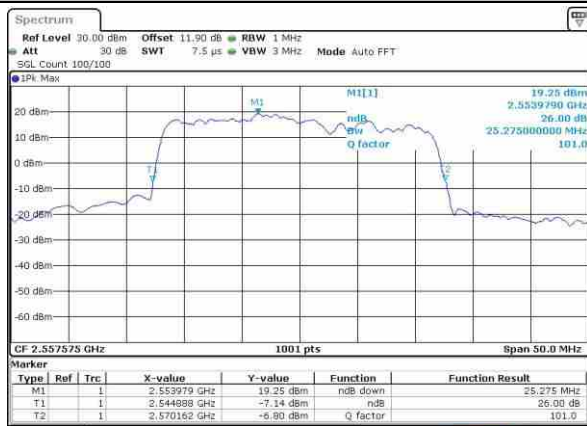
## Middle Channel / 15MHz+10MHz



## Middle Channel / 15MHz+15MHz



## Highest Channel / 15MHz+10MHz



## Highest Channel / 15MHz+15MHz

