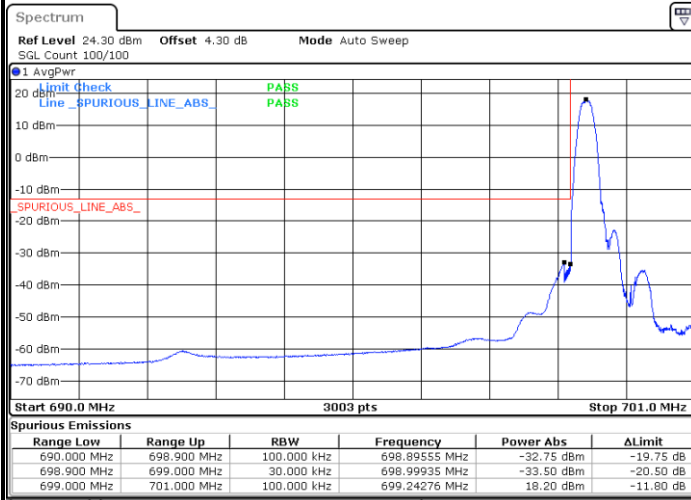




## LTE Band 12 / 1.4MHz / 64QAM

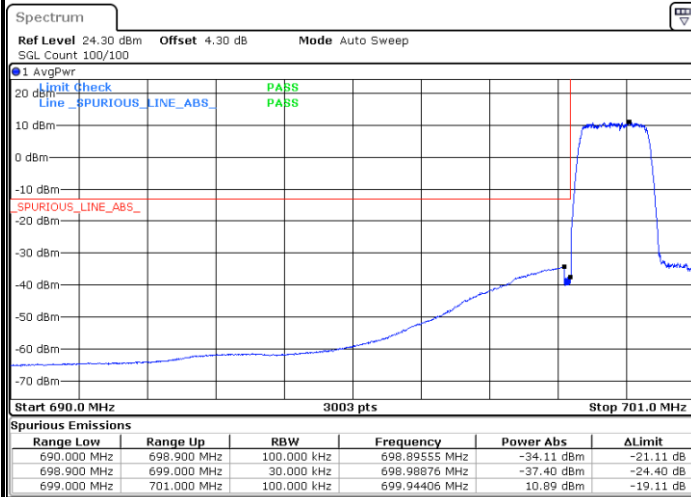
## Lowest Band Edge / 1 RB



## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



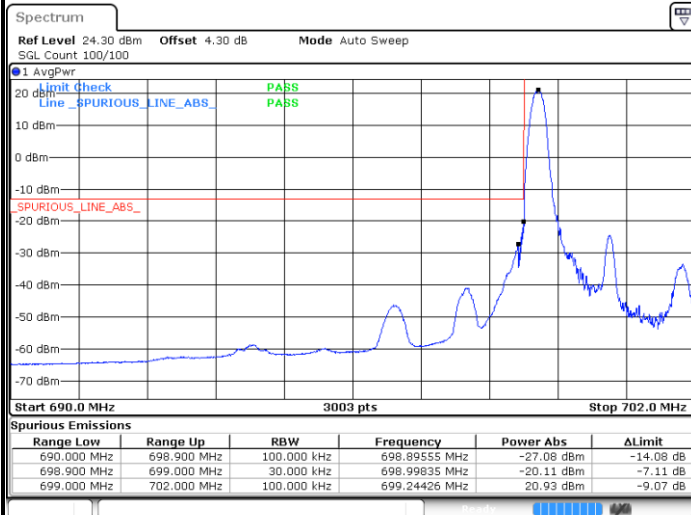
## Highest Band Edge / Full RB



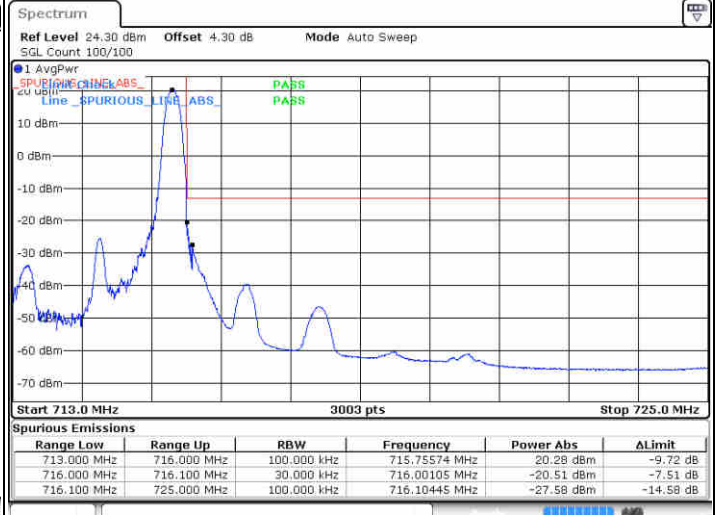


## LTE Band 12 / 3MHz / QPSK

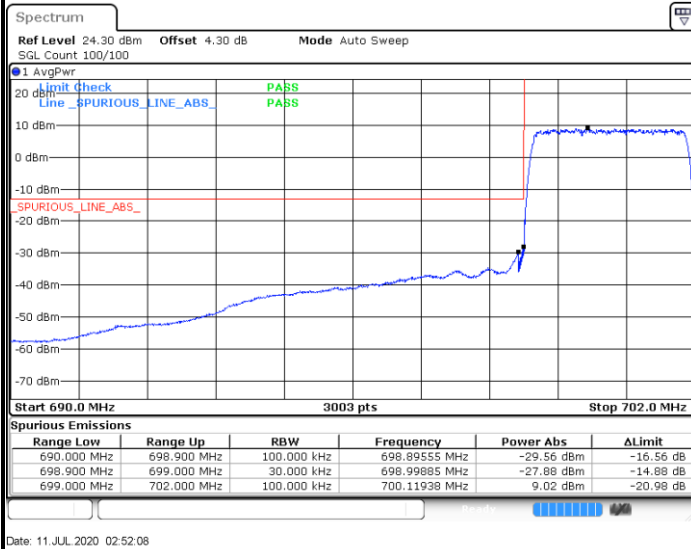
## Lowest Band Edge / 1RB



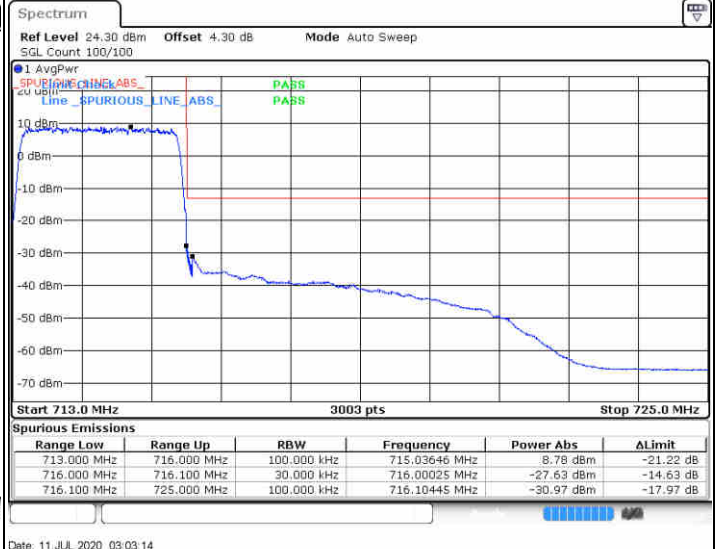
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



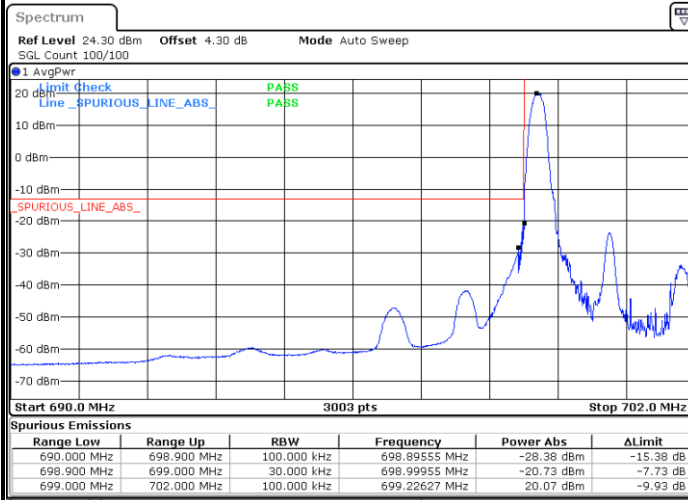
## Highest Band Edge / Full RB





## LTE Band 12 / 3MHz / 16QAM

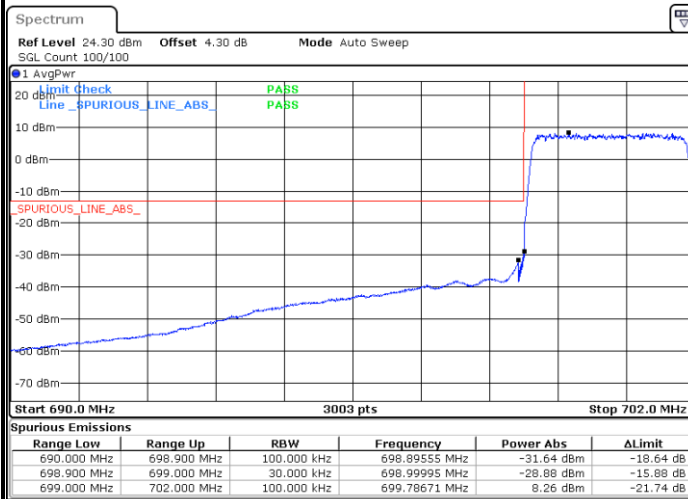
## Lowest Band Edge / 1 RB



## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



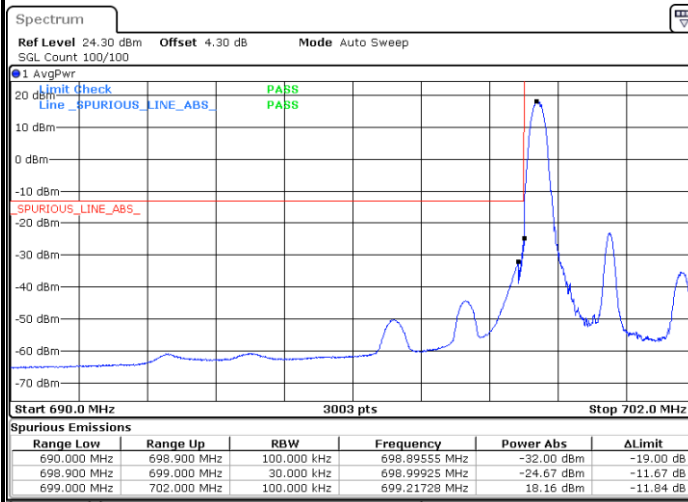
## Highest Band Edge / Full RB



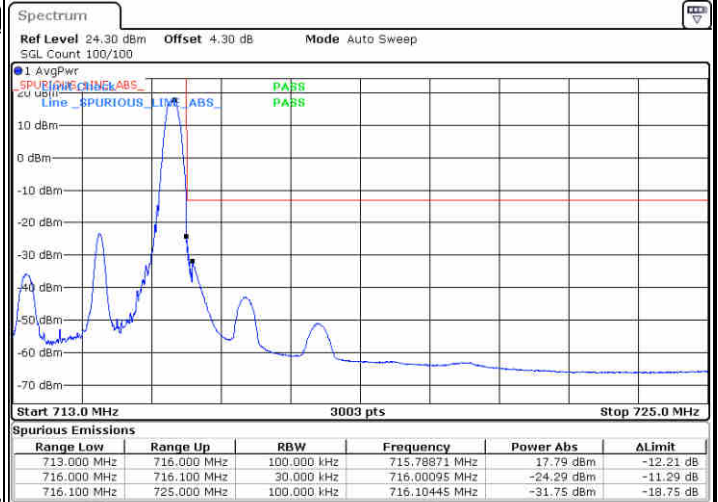


## LTE Band 12 / 3MHz / 64QAM

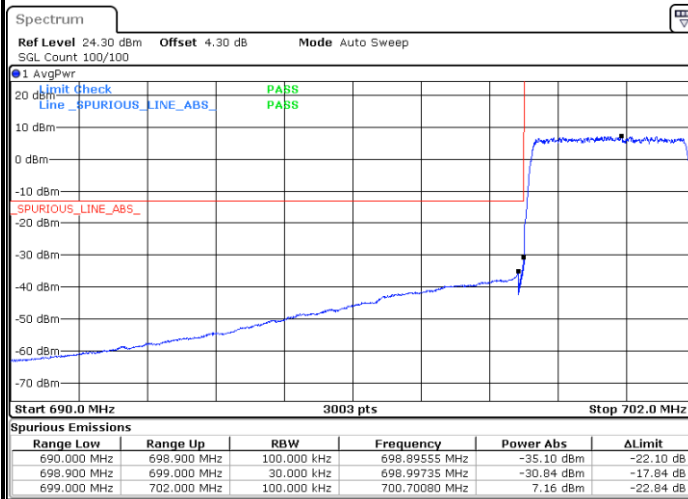
## Lowest Band Edge / 1 RB



## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



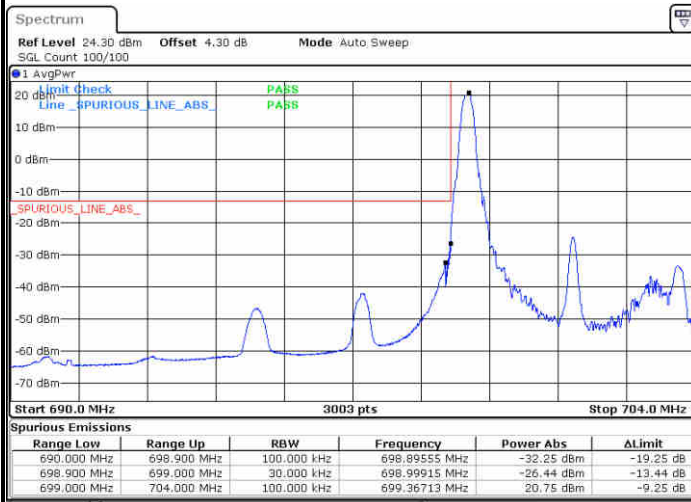
## Highest Band Edge / Full RB



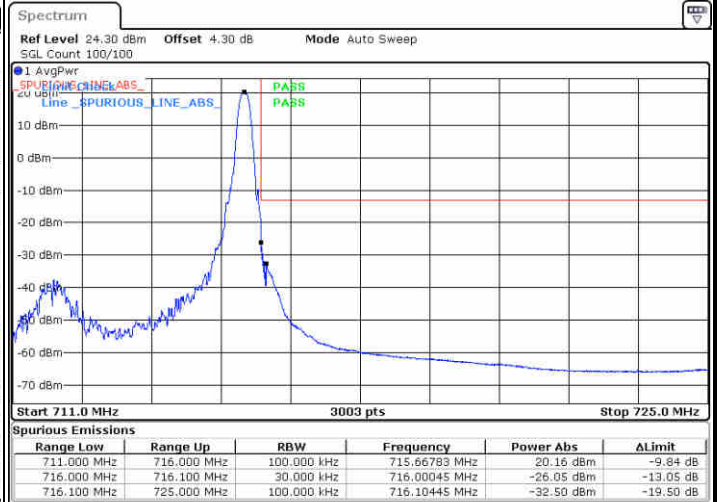


## LTE Band 12 / 5MHz / QPSK

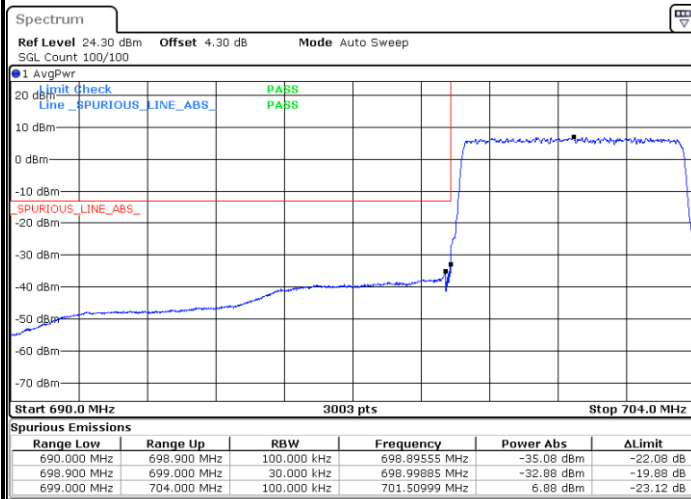
## Lowest Band Edge / 1 RB



## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



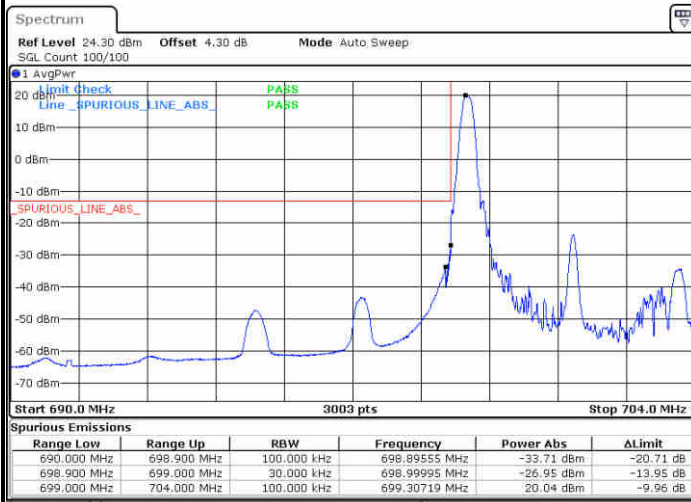
## Highest Band Edge / Full RB



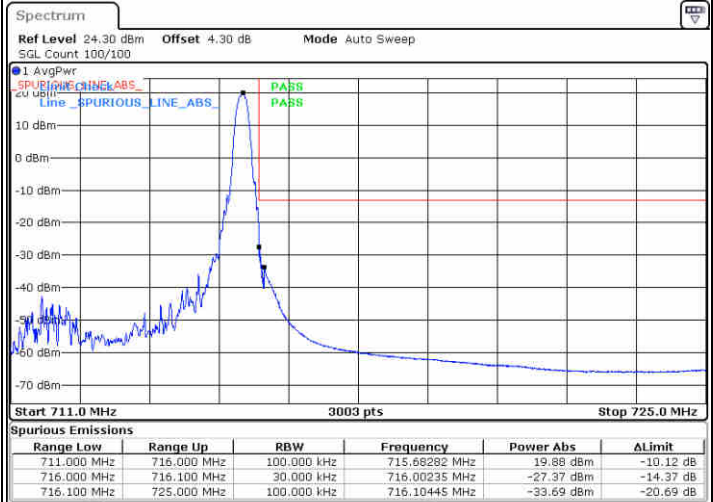


## LTE Band 12 / 5MHz / 16QAM

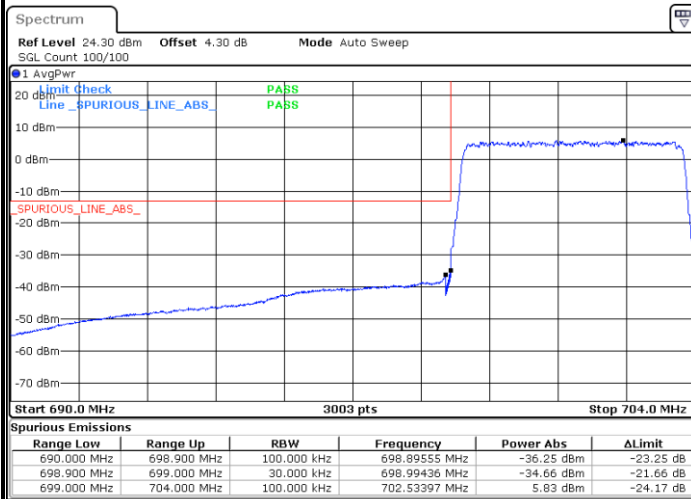
## Lowest Band Edge / 1RB



## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



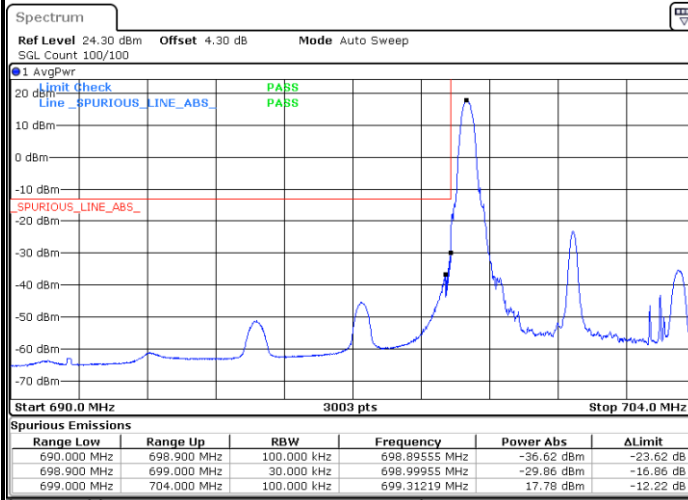
## Highest Band Edge / Full RB



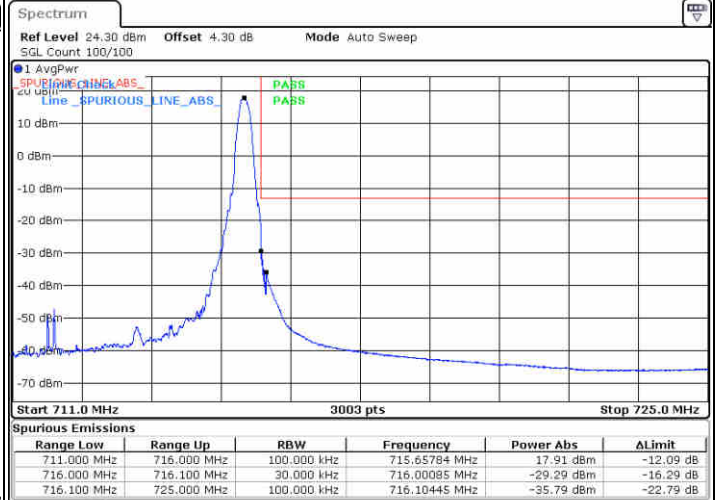


## LTE Band 12 / 5MHz / 64QAM

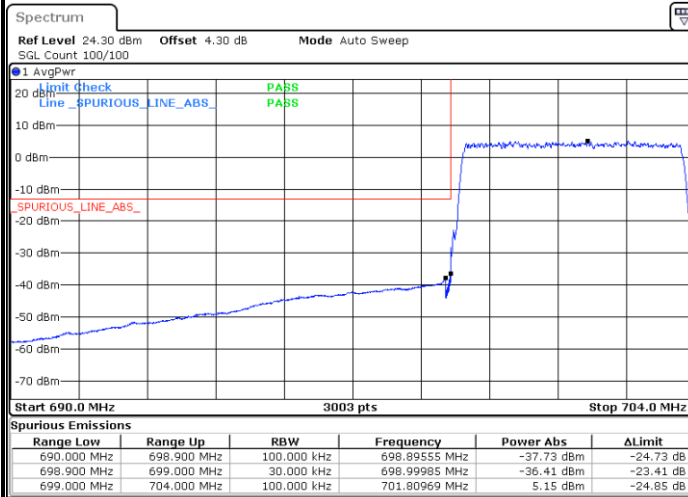
## Lowest Band Edge / 1RB



## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



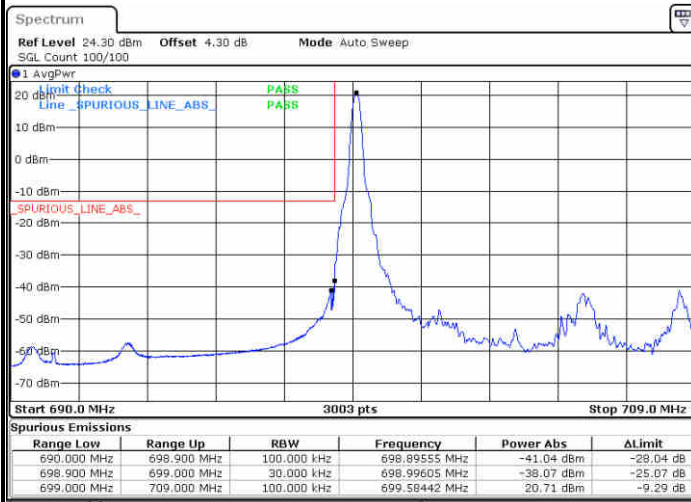
## Highest Band Edge / Full RB



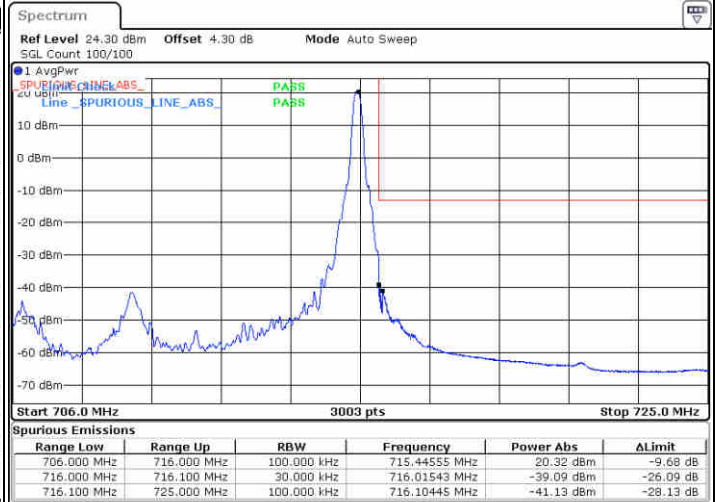


## LTE Band 12 / 10MHz / QPSK

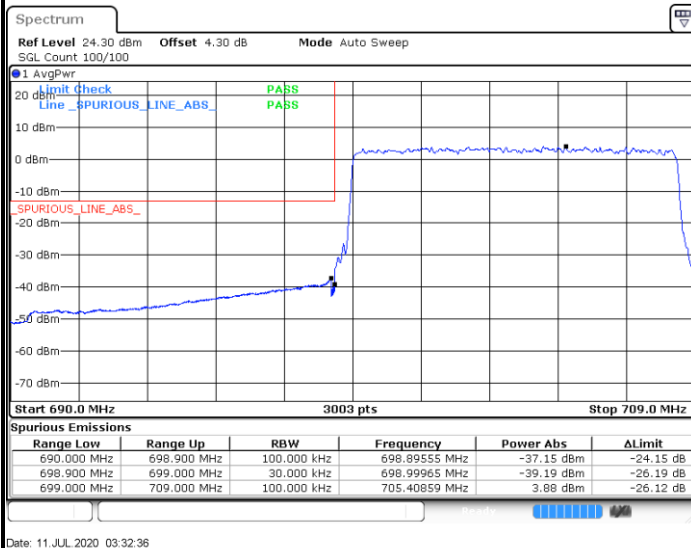
## Lowest Band Edge / 1 RB



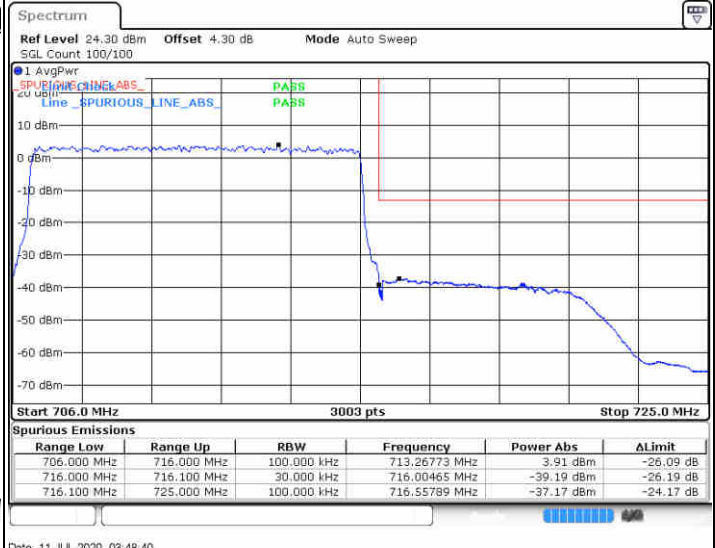
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



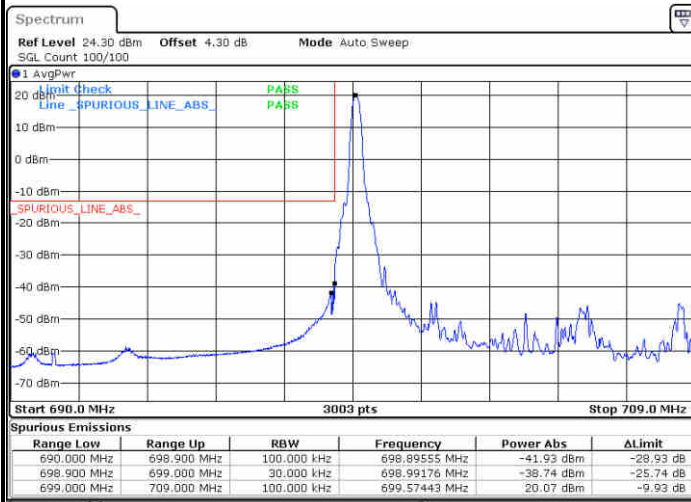
## Highest Band Edge / Full RB



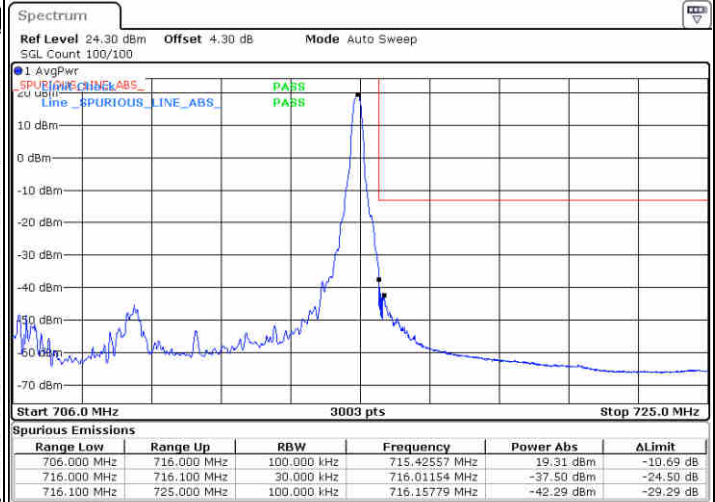


## LTE Band 12 / 10MHz / 16QAM

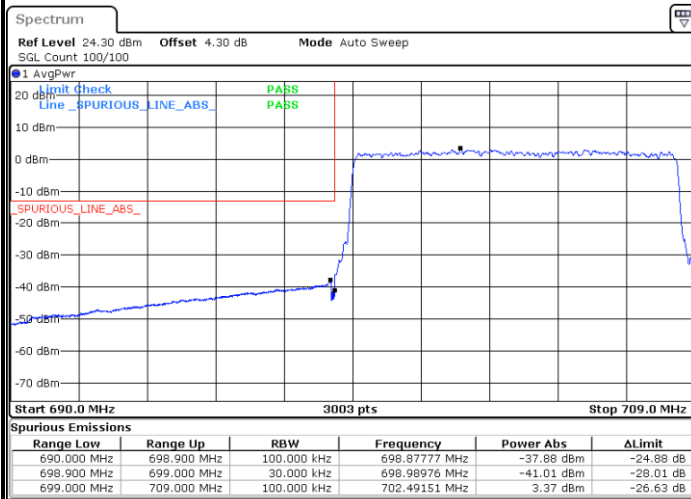
## Lowest Band Edge / 1 RB



## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



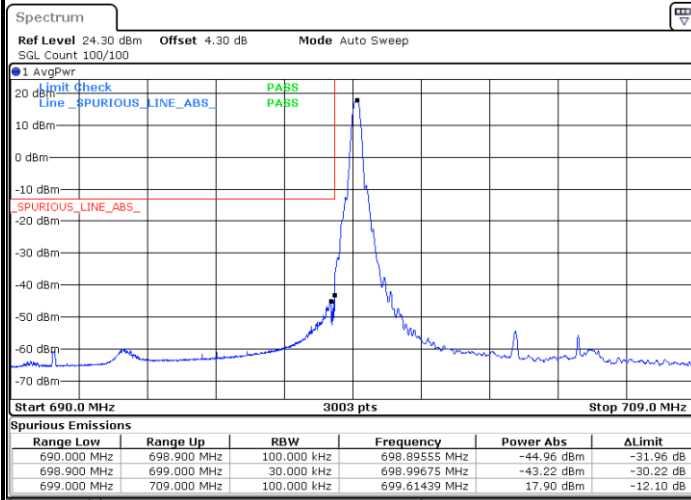
## Highest Band Edge / Full RB



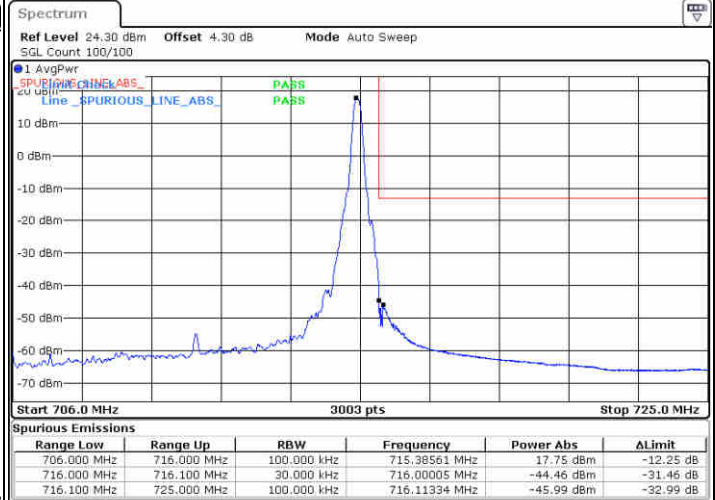


## LTE Band 12 / 10MHz / 64QAM

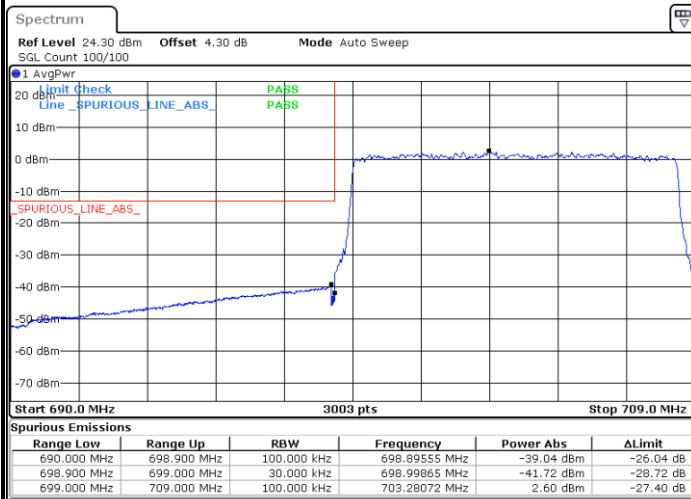
## Lowest Band Edge / 1 RB



## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB

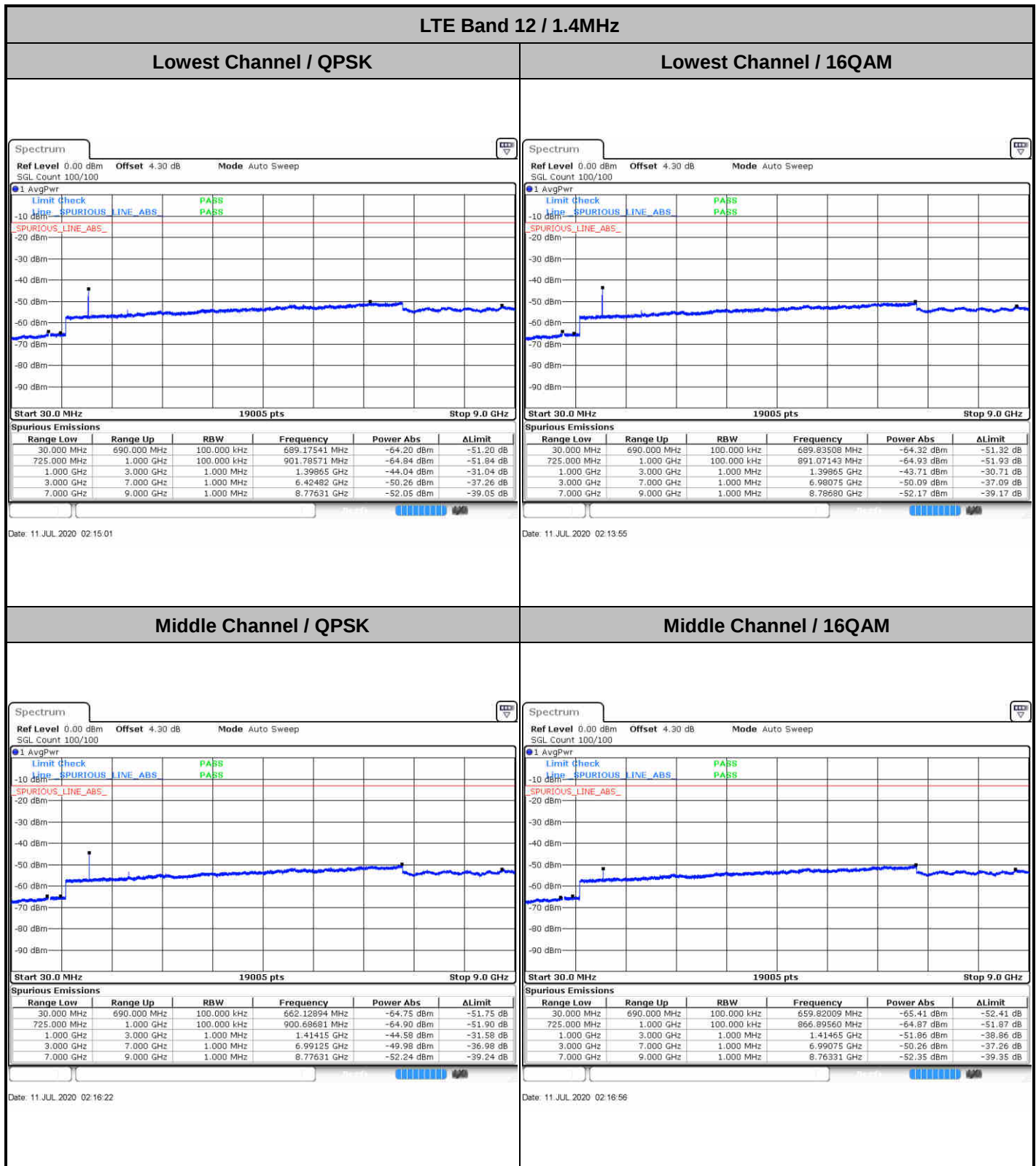


## Highest Band Edge / Full RB





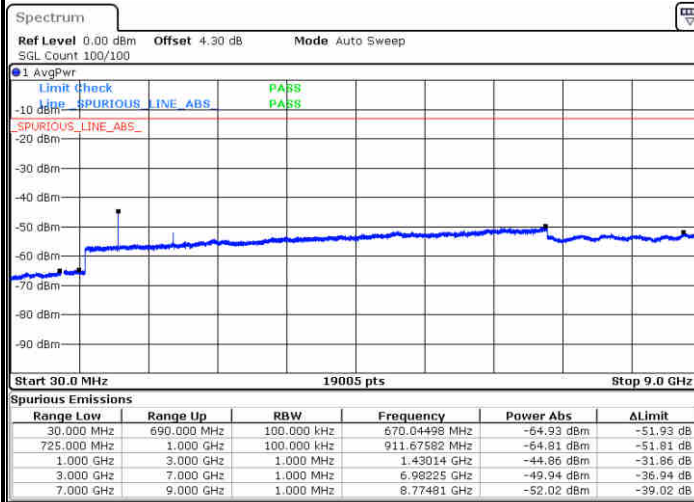
## Conducted Spurious Emission





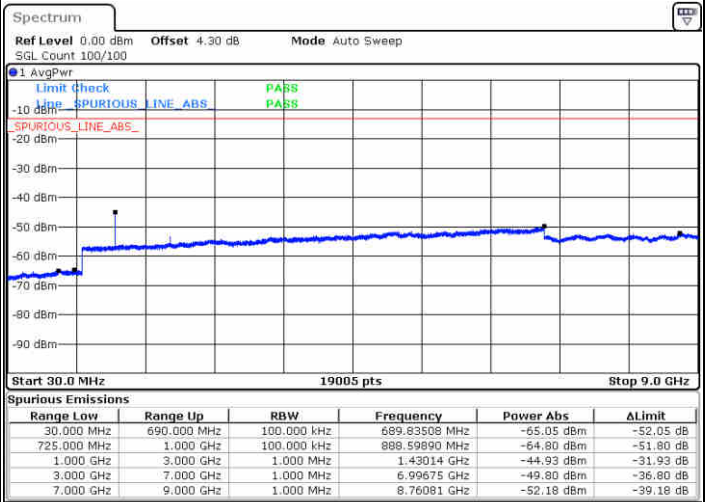
## LTE Band 12 / 1.4MHz

## Highest Channel / QPSK



Date: 11 JUL 2020 02:26:08

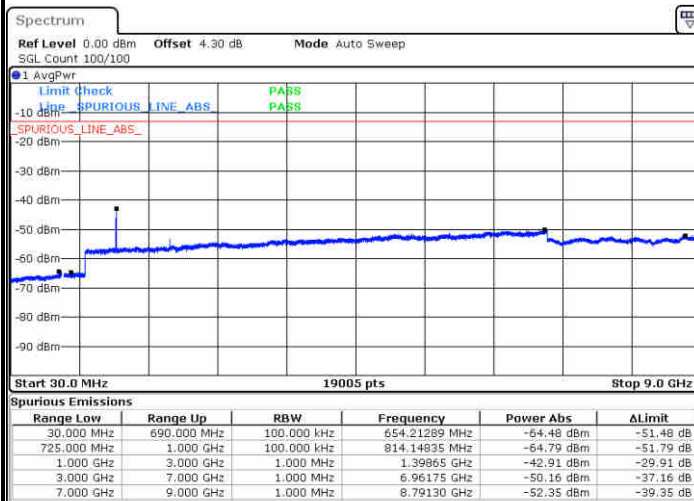
## Highest Channel / 16QAM



Date: 11 JUL 2020 02:26:40

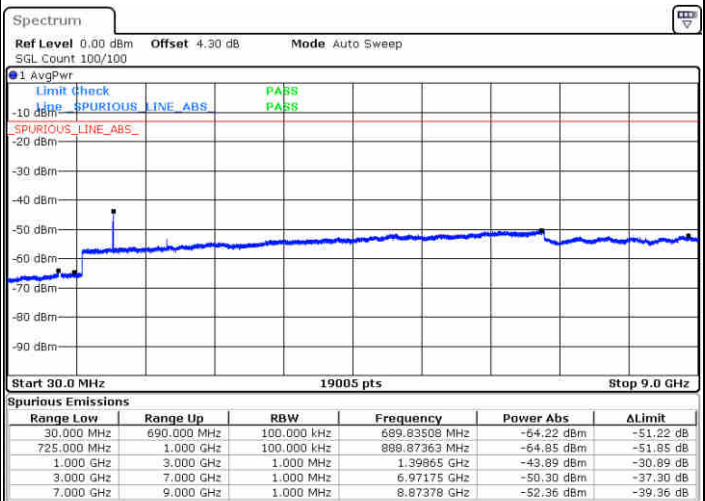
## LTE Band 12 / 3MHz

## Lowest Channel / QPSK



Date: 11 JUL 2020 02:57:49

## Lowest Channel / 16QAM

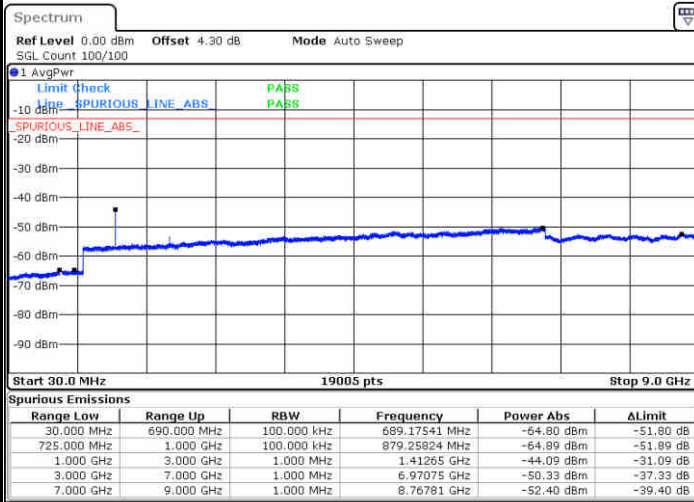


Date: 11 JUL 2020 02:58:25



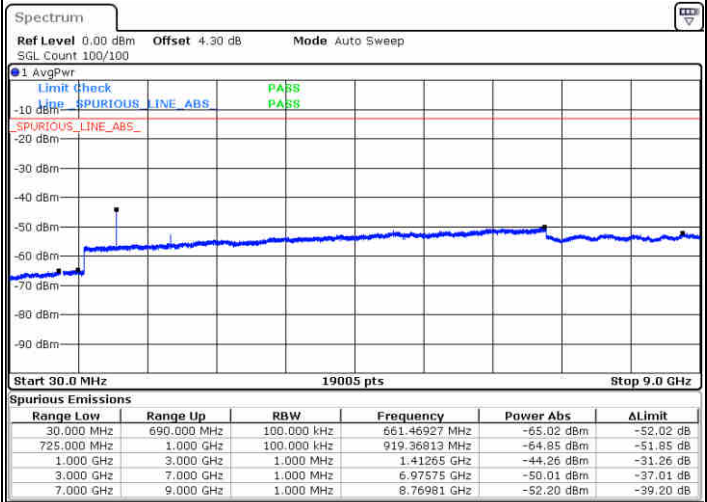
## LTE Band 12 / 3MHz

## Middle Channel / QPSK



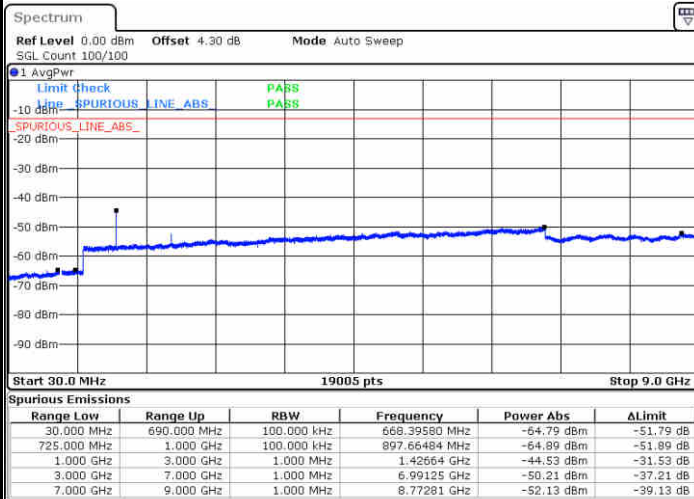
Date: 11 JUL 2020 02:58:57

## Middle Channel / 16QAM



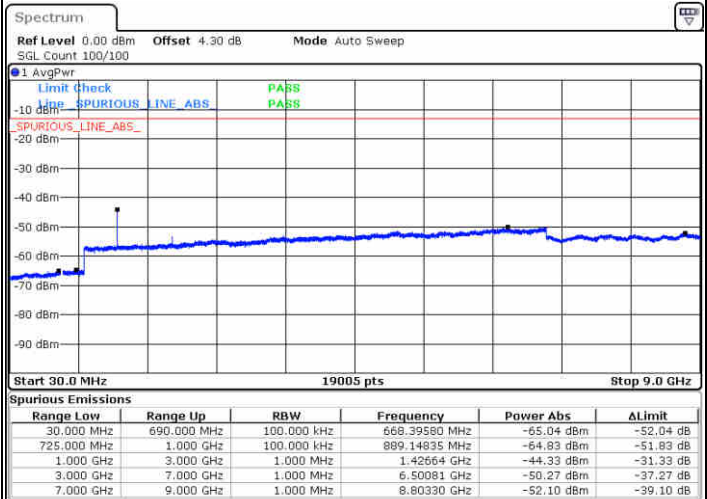
Date: 11 JUL 2020 02:59:31

## Highest Channel / QPSK



Date: 11 JUL 2020 03:07:16

## Highest Channel / 16QAM

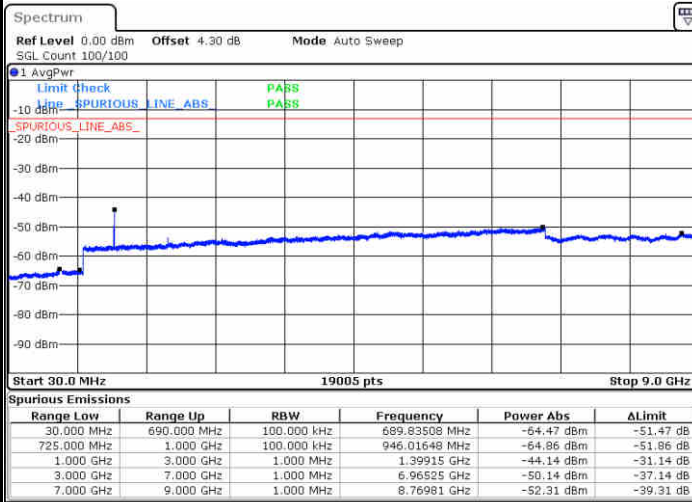


Date: 11 JUL 2020 03:08:43



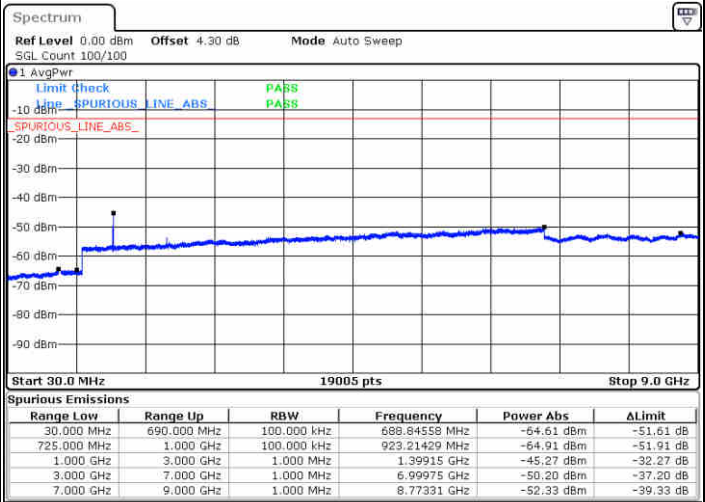
## LTE Band 12 / 5MHz

## Lowest Channel / QPSK



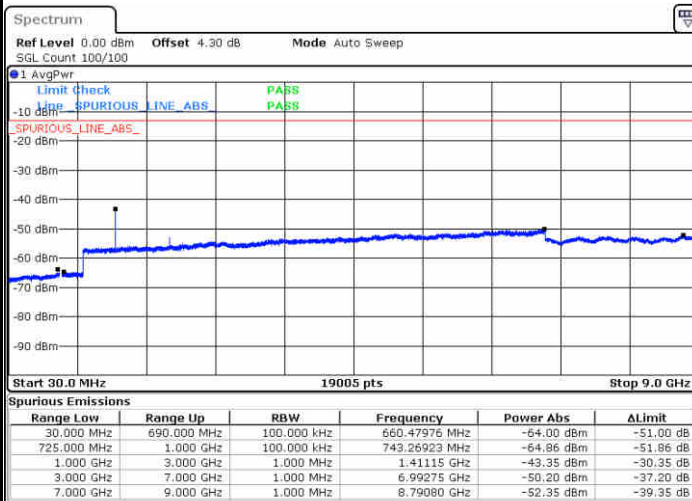
Date: 11 JUL 2020 03:15:10

## Lowest Channel / 16QAM



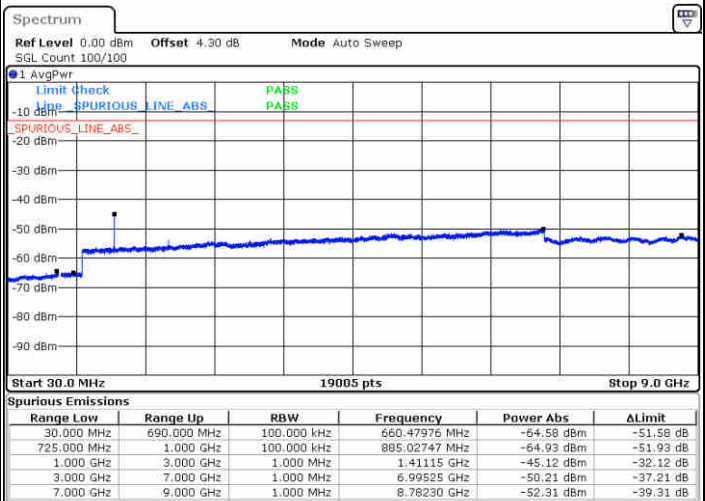
Date: 11 JUL 2020 03:16:15

## Middle Channel / QPSK



Date: 11 JUL 2020 03:20:49

## Middle Channel / 16QAM

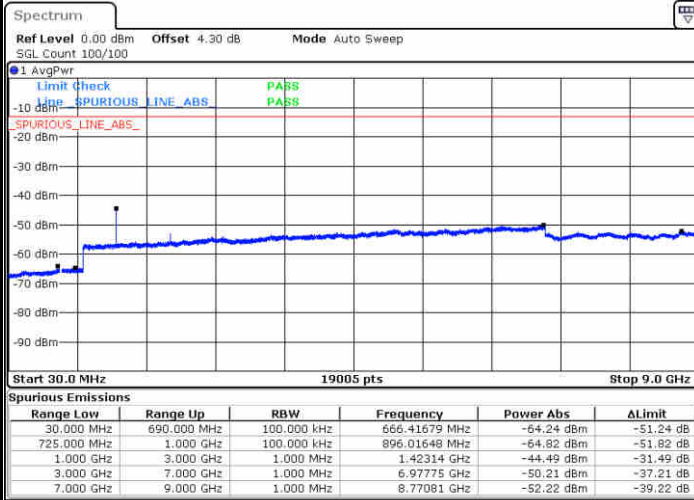


Date: 11 JUL 2020 03:21:40



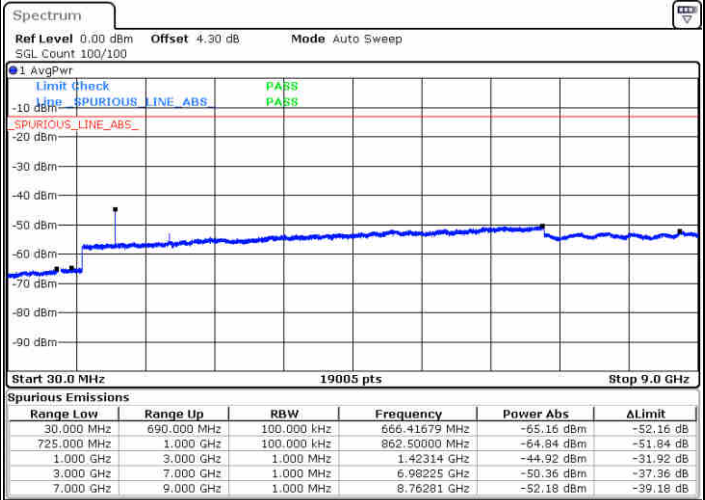
## LTE Band 12 / 5MHz

## Highest Channel / QPSK



Date: 11 JUL 2020 03:26:34

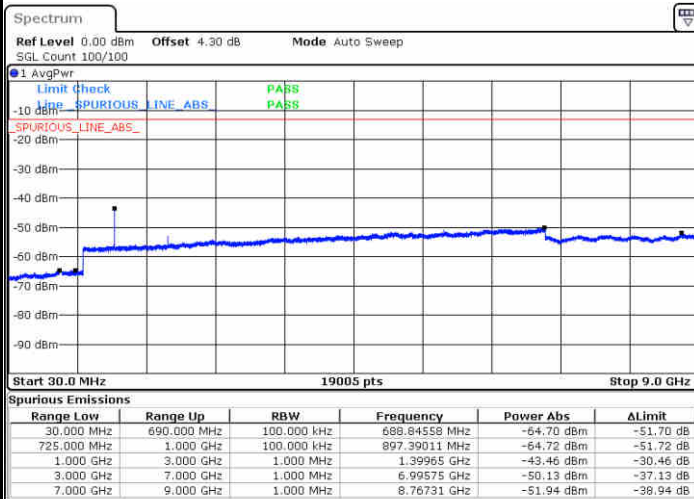
## Highest Channel / 16QAM



Date: 11 JUL 2020 03:27:05

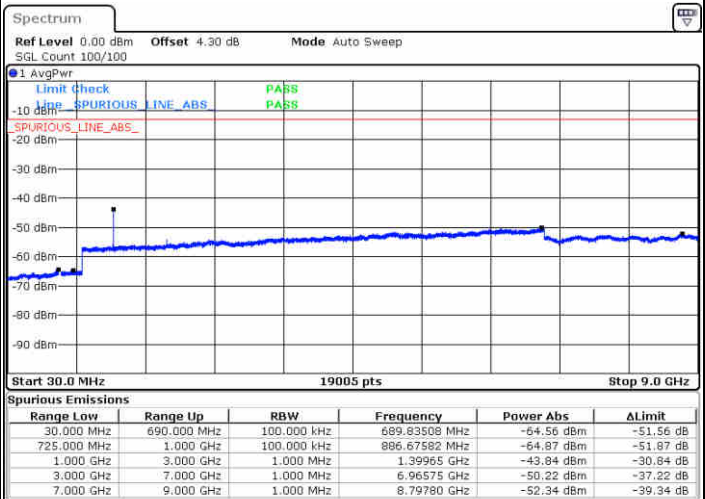
## LTE Band 12 / 10MHz

## Lowest Channel / QPSK



Date: 11 JUL 2020 03:41:58

## Lowest Channel / 16QAM

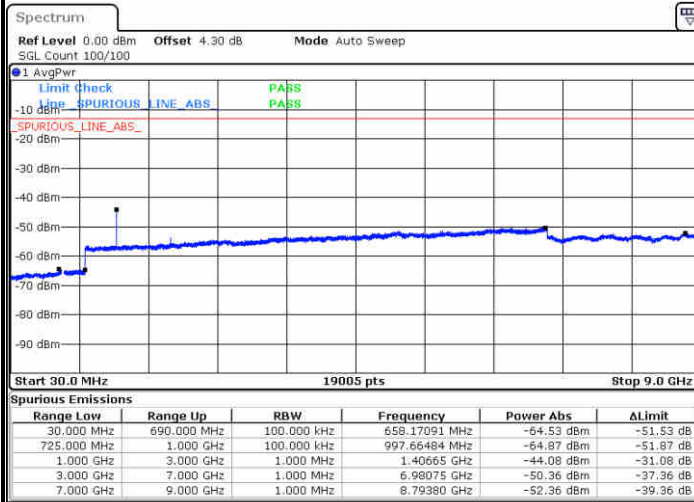


Date: 11 JUL 2020 03:38:36



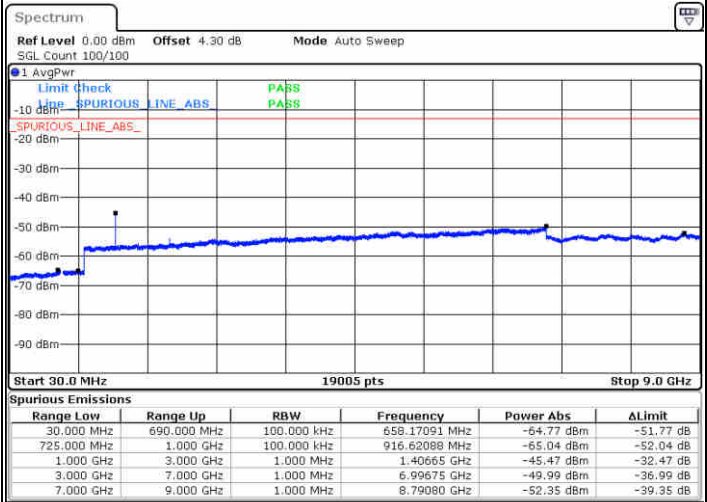
## LTE Band 12 / 10MHz

## Middle Channel / QPSK



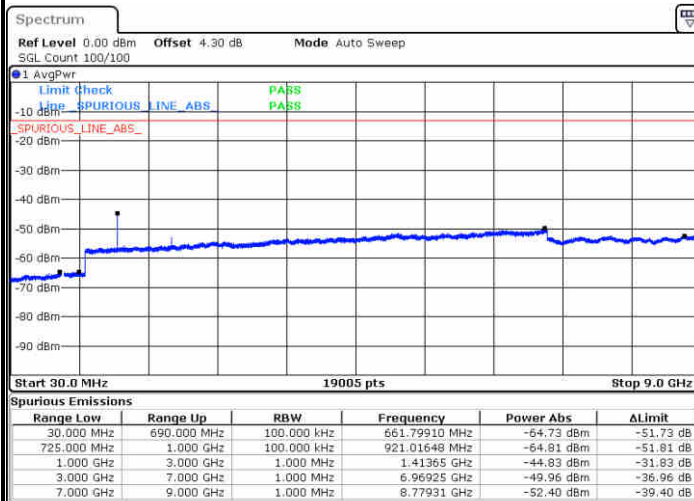
Date: 11 JUL 2020 03:43:15

## Middle Channel / 16QAM



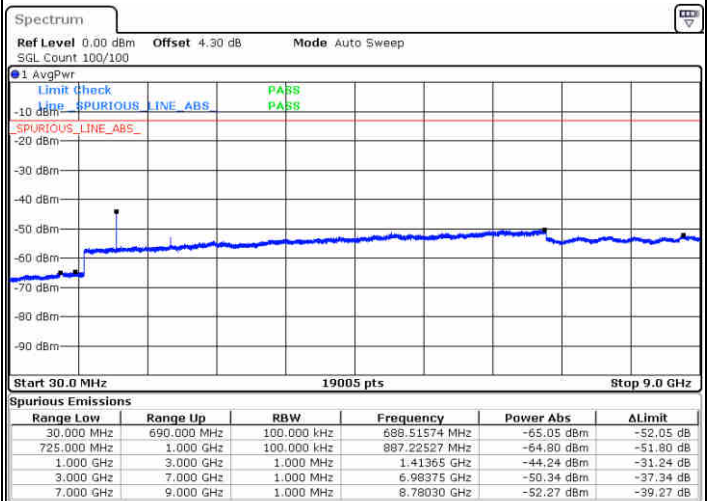
Date: 11 JUL 2020 03:43:54

## Highest Channel / QPSK



Date: 11 JUL 2020 03:52:52

## Highest Channel / 16QAM

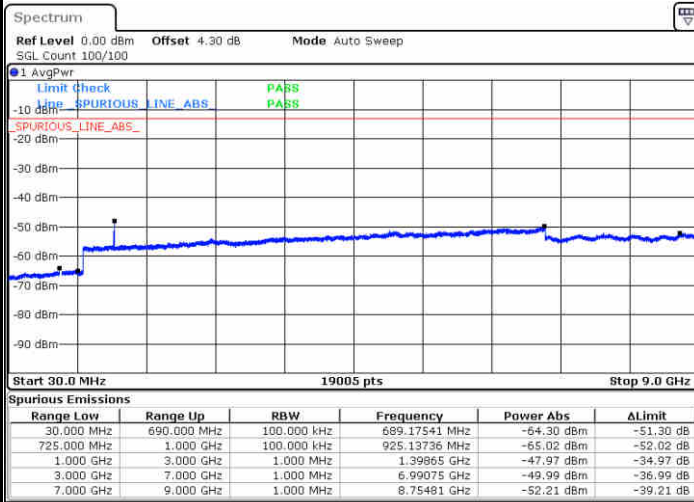


Date: 11 JUL 2020 03:52:20



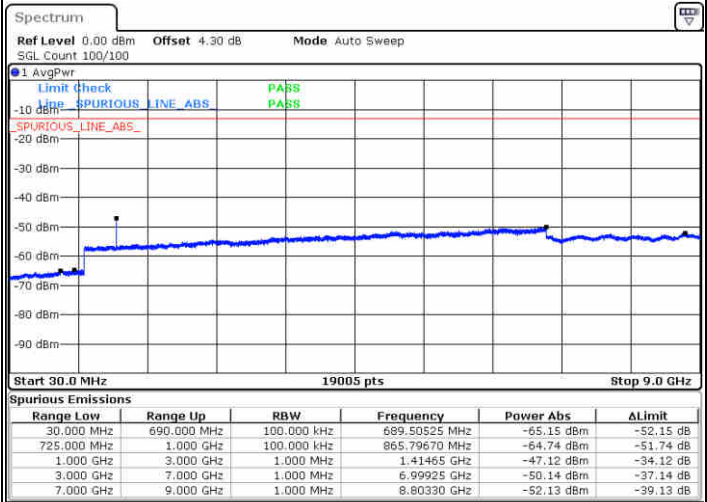
## LTE Band 12 / 1.4MHz

## Lowest Channel / 64QAM



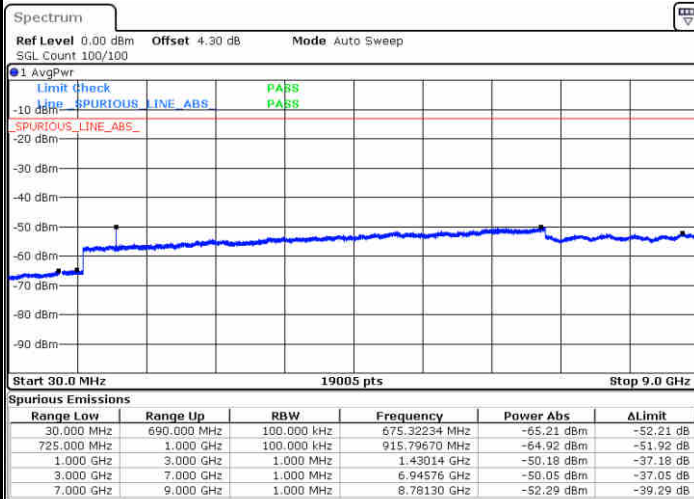
Date: 11 JUL 2020 02:12:44

## Middle Channel / 64QAM



Date: 11 JUL 2020 02:17:50

## Highest Channel / 64QAM

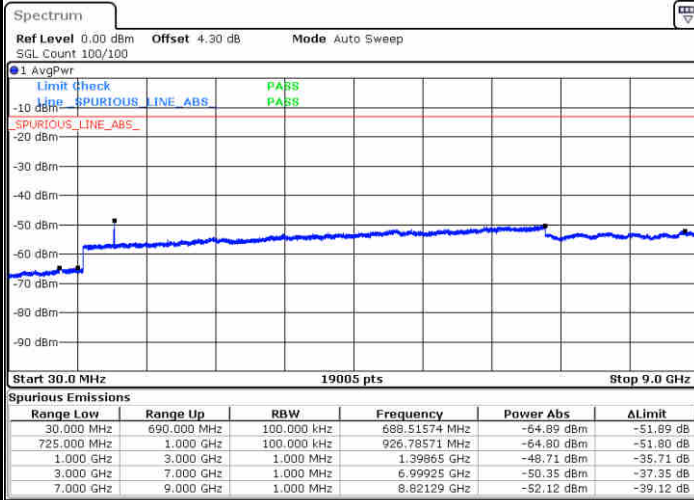


Date: 11 JUL 2020 02:27:28



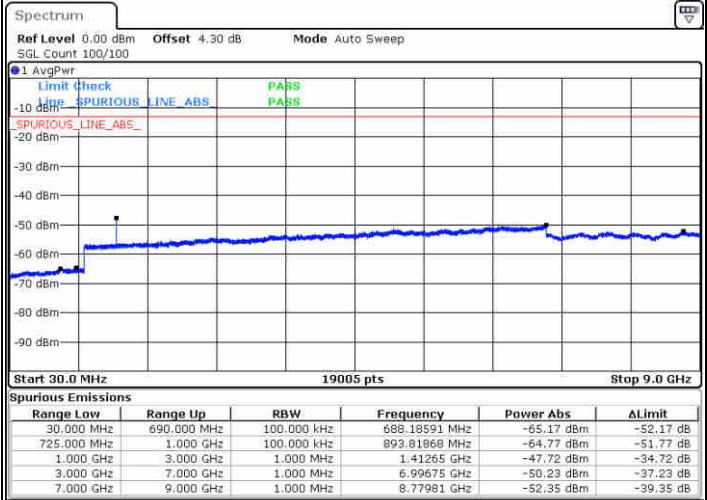
## LTE Band 12 / 3MHz

## Lowest Channel / 64QAM



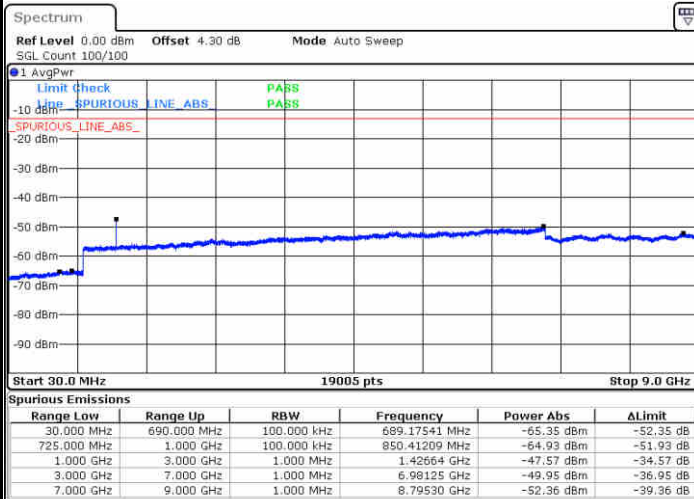
Date: 11 JUL 2020 02:55:24

## Middle Channel / 64QAM



Date: 11 JUL 2020 03:00:18

## Highest Channel / 64QAM

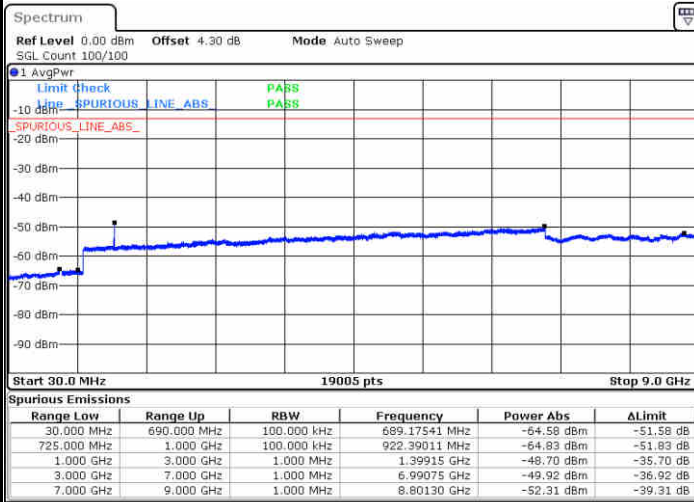


Date: 11 JUL 2020 03:06:00



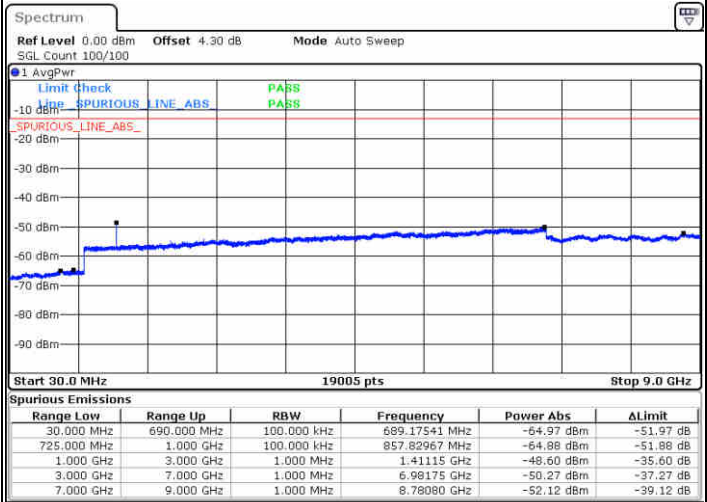
## LTE Band 12 / 5MHz

## Lowest Channel / 64QAM



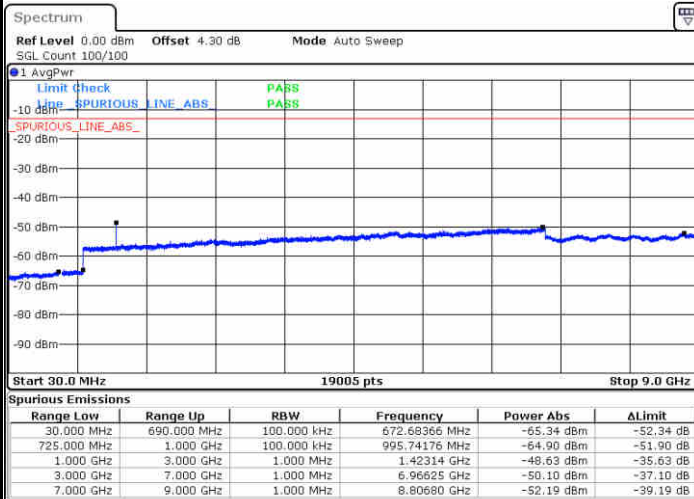
Date: 11 JUL 2020 03:17:41

## Middle Channel / 64QAM



Date: 11 JUL 2020 03:22:28

## Highest Channel / 64QAM

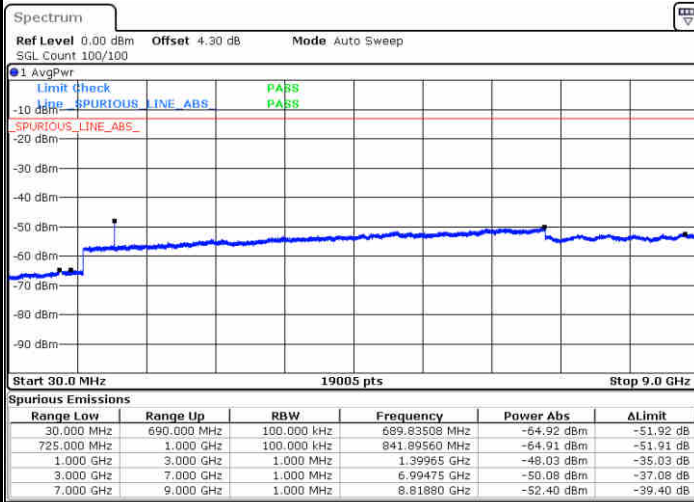


Date: 11 JUL 2020 03:28:06



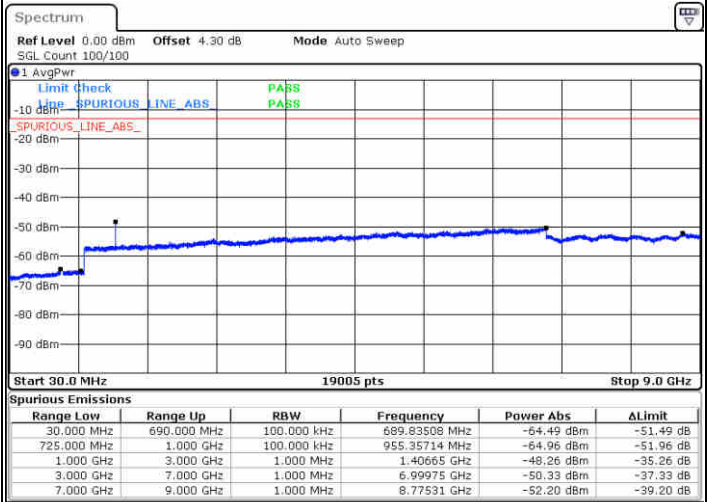
## LTE Band 12 / 10MHz

## Lowest Channel / 64QAM



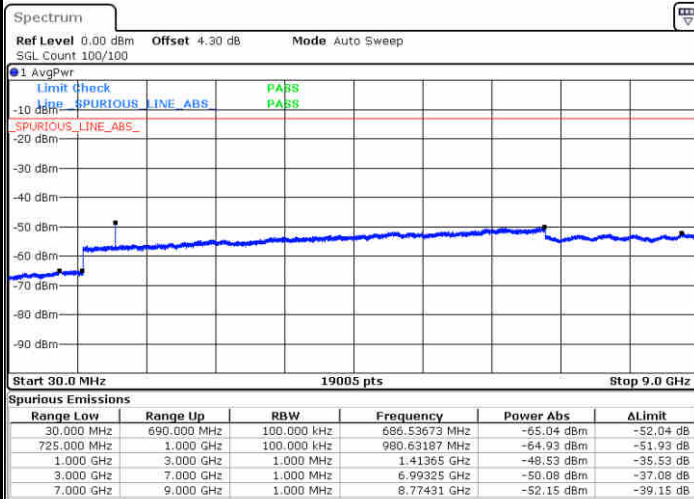
Date: 11 JUL 2020 03:36:20

## Middle Channel / 64QAM



Date: 11 JUL 2020 03:44:27

## Highest Channel / 64QAM



Date: 11 JUL 2020 03:51:38

## 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    | 0.0014                              | PASS    |
| 40               | Normal Voltage    | 0.0026                              |         |
| 30               | Normal Voltage    | 0.0013                              |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                              |         |
| 10               | Normal Voltage    | 0.0019                              |         |
| 0                | Normal Voltage    | 0.0021                              |         |
| -10              | Normal Voltage    | 0.0015                              |         |
| -20              | Normal Voltage    | 0.0027                              |         |
| -30              | Normal Voltage    | 0.0022                              |         |
| 20               | Maximum Voltage   | 0.0016                              |         |
| 20               | Normal Voltage    | 0.0033                              |         |
| 20               | Battery End Point | 0.0028                              |         |

**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.135 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 13

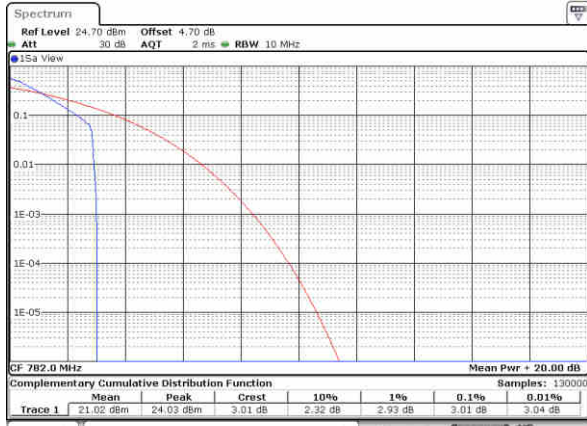
## Peak-to-Average Ratio

| Mode       | LTE Band 13 / 10MHz |         |       |         |             |
|------------|---------------------|---------|-------|---------|-------------|
| Mod.       | QPSK                |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | -                   | -       | -     | -       | PASS        |
| Middle CH  | 3.01                | 4.49    | 4.12  | 5.48    |             |
| Highest CH | -                   | -       | -     | -       |             |
| Mode       | LTE Band 13 / 10MHz |         |       |         |             |
| Mod.       | 64QAM               |         |       |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB |       |         | Result      |
| Lowest CH  | -                   | -       | -     | -       | PASS        |
| Middle CH  | 6.09                | 5.97    | -     | -       |             |
| Highest CH | -                   | -       | -     | -       |             |

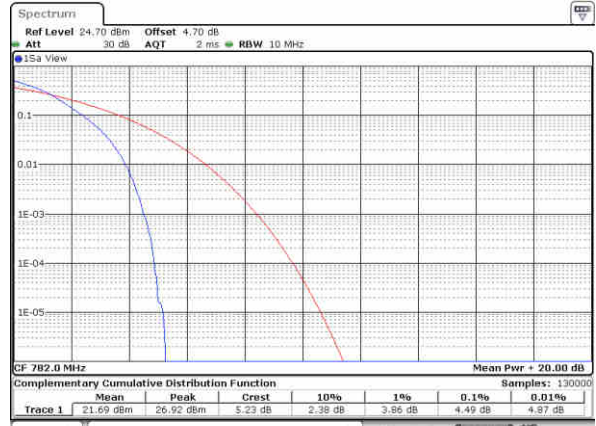


## LTE Band 13 / 10MHz / QPSK

## Middle Channel / 1RB



## Middle Channel / Full RB



## LTE Band 13 / 10MHz / 16QAM

## Middle Channel / 1RB

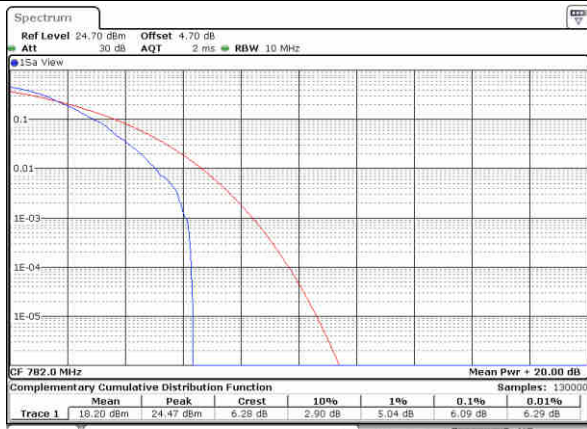


## Middle Channel / Full RB



## LTE Band 13 / 10MHz / 64QAM

## Middle Channel / 1RB



## Middle Channel / Full RB



Date: 27-Jul-2020 03:24:53

Date: 27-Jul-2020 03:24:26

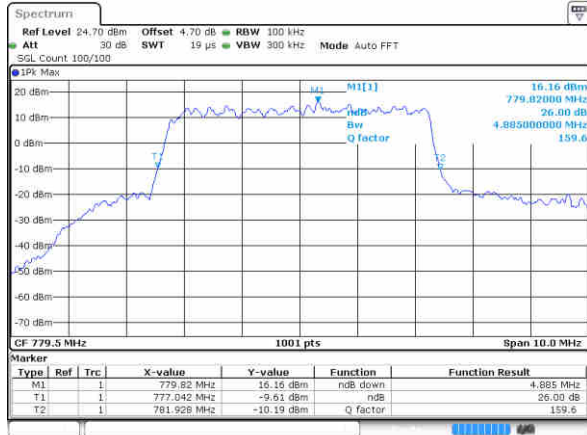
**26dB Bandwidth**

| 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  | -                          | -     | -     | -     | 4.89  | 4.92  | -     | -     | -     | -     | -     | -     |
| Middle CH  | -                          | -     | -     | -     | 4.89  | 4.85  | 9.79  | 9.81  | -     | -     | -     | -     |
| Highest CH | -                          | -     | -     | -     | 4.90  | 4.85  | -     | -     | -     | -     | -     | -     |
| Mode       | LTE Band 13 : 26dB BW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
| BW         | 1.4MHz                     |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                      |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | -                          | -     | -     | -     | 4.86  | -     | -     | -     | -     | -     | -     | -     |
| Middle CH  | -                          | -     | -     | -     | 4.93  | -     | 9.63  | -     | -     | -     | -     | -     |
| Highest CH | -                          | -     | -     | -     | 4.90  | -     | -     | -     | -     | -     | -     | -     |

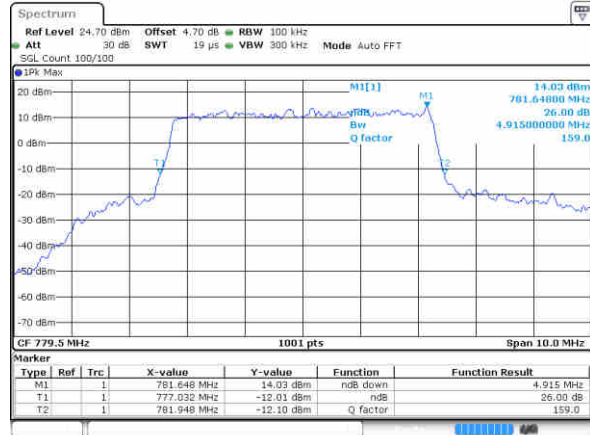


## LTE Band 13

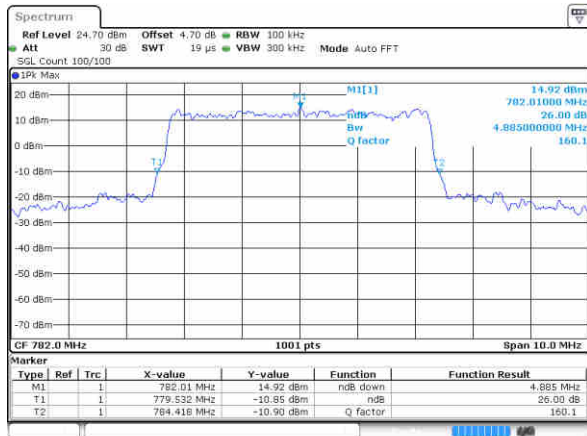
## Lowest Channel / 5MHz / QPSK



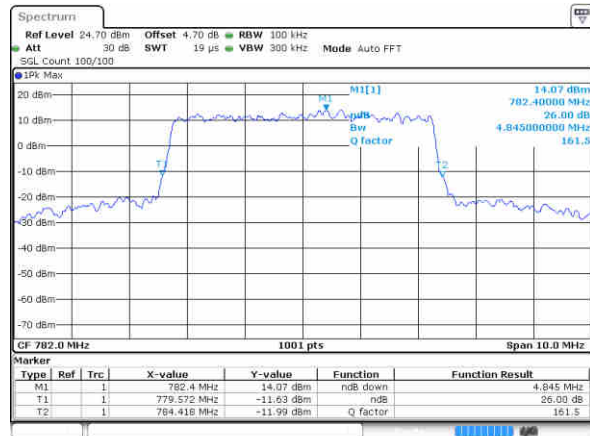
## Lowest Channel / 5MHz / 16QAM



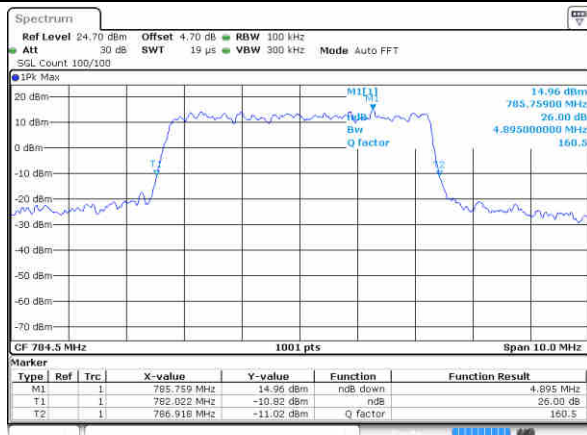
## Middle Channel / 5MHz / QPSK



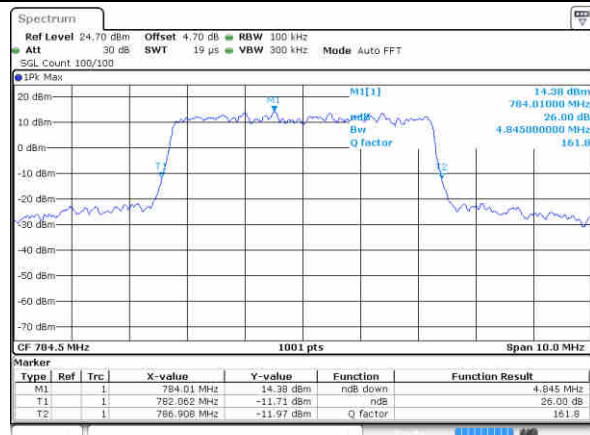
## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



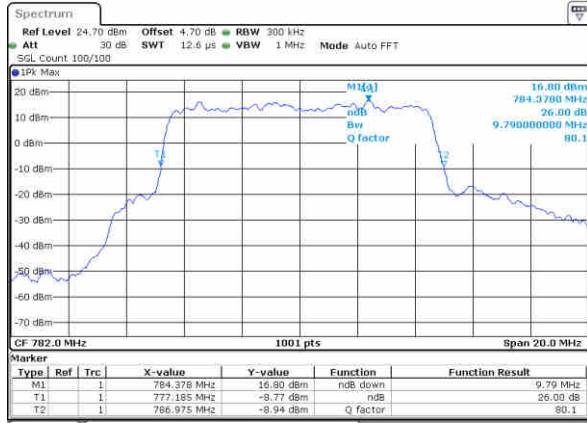
## Highest Channel / 5MHz / 16QAM



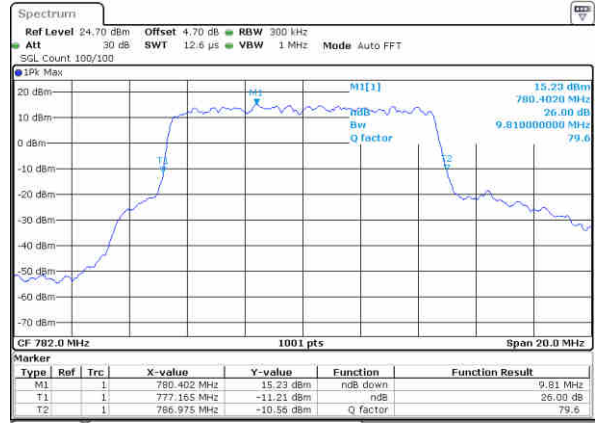


## LTE Band 13

## Middle Channel / 10MHz / QPSK



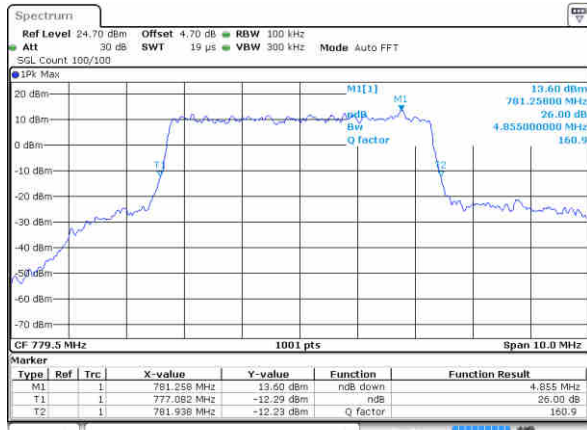
## Middle Channel / 10MHz / 16QAM





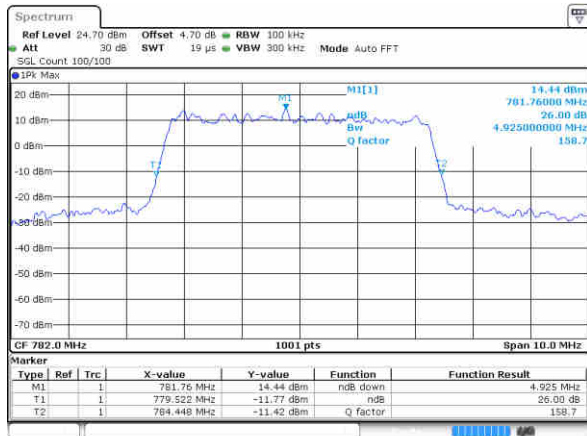
## LTE Band 13

## Lowest Channel / 5MHz / 64QAM



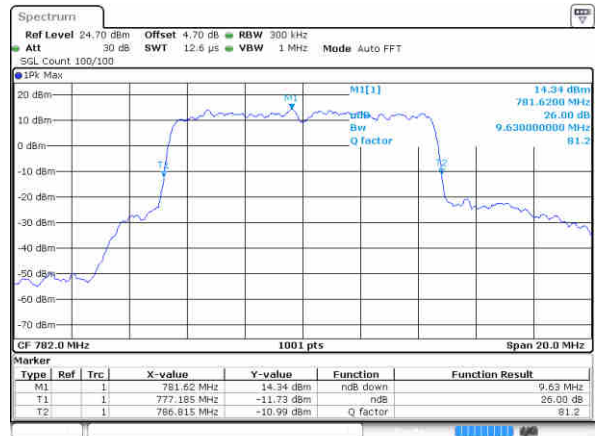
Date: 26 JUL 2020 04:24:23

## Middle Channel / 5MHz / 64QAM



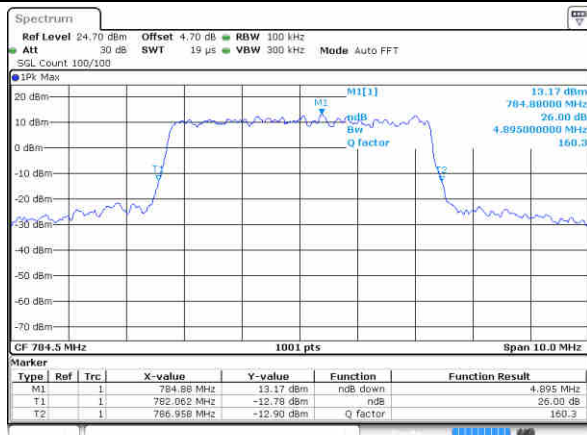
Date: 26 JUL 2020 04:38:06

## Middle Channel / 10MHz / 64QAM



Date: 26 JUL 2020 04:58:55

## Highest Channel / 5MHz / 64QAM



Date: 26 JUL 2020 04:44:55

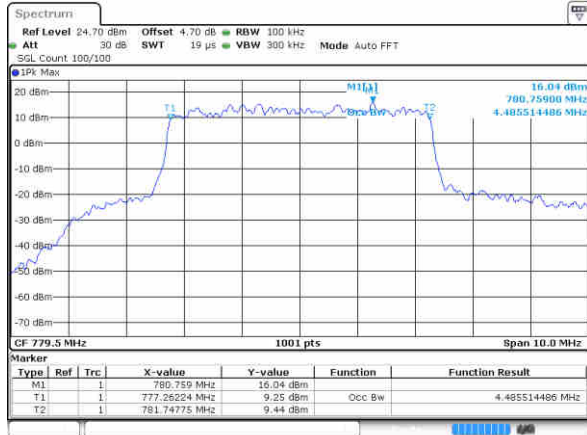
**Occupied Bandwidth**

| 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  | 4.49  | -     | -     | -     | -     | -     | -     |
| Middle CH  | -                         | -     | -     | -     | 4.49  | 4.51  | 8.95  | 8.99  | -     | -     | -     | -     |
| 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  | -                         | -     | -     | -     | 4.49  | -     | -     | -     | -     | -     | -     | -     |
| Middle CH  | -                         | -     | -     | -     | 4.49  | -     | 8.97  | -     | -     | -     | -     | -     |
| Highest CH | -                         | -     | -     | -     | 4.48  | -     | -     | -     | -     | -     | -     | -     |

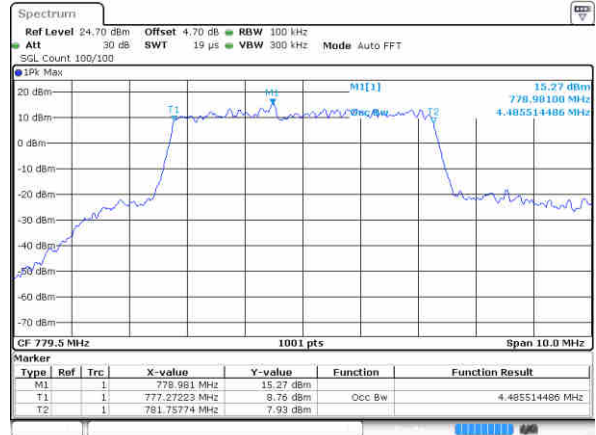


## LTE Band 13

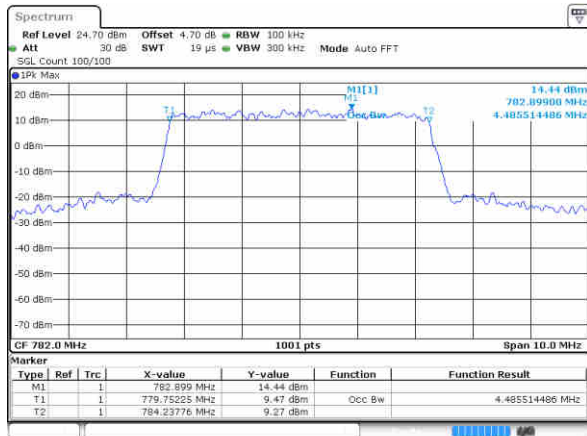
## Lowest Channel / 5MHz / QPSK



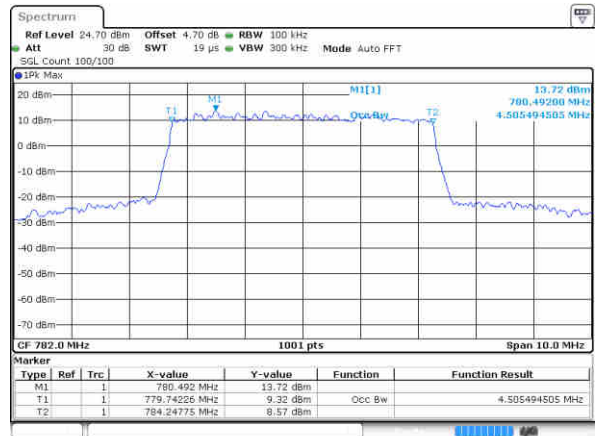
## Lowest Channel / 5MHz / 16QAM



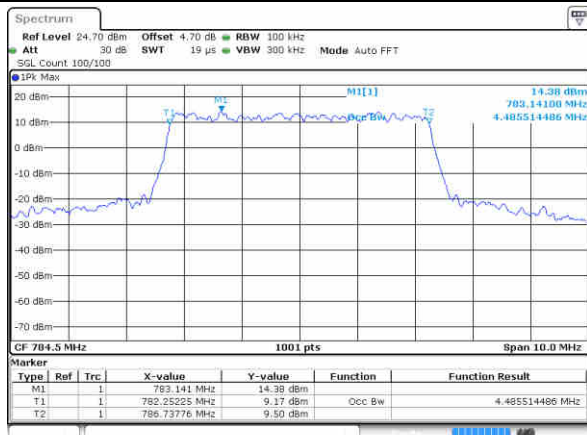
## Middle Channel / 5MHz / QPSK



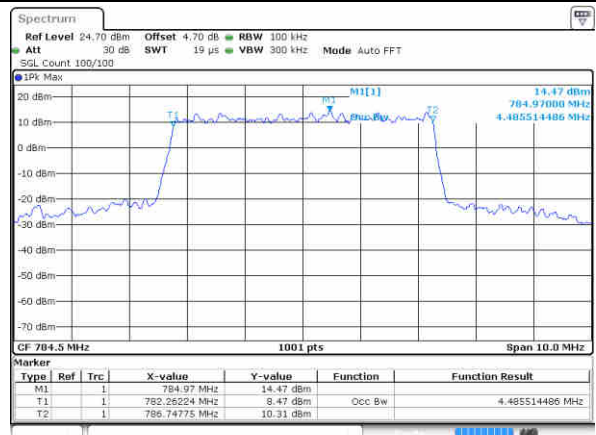
## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



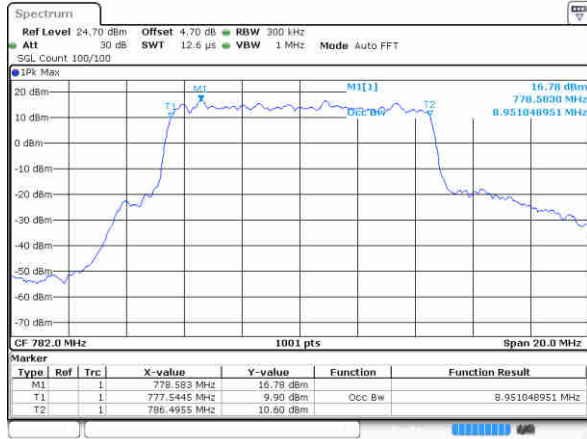
## Highest Channel / 5MHz / 16QAM





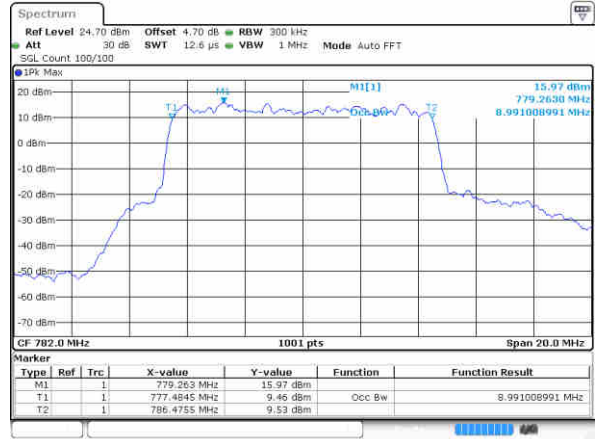
## LTE Band 13

## Middle Channel / 10MHz / QPSK



Date: 26 JUL 2020 04:59:35

## Middle Channel / 10MHz / 16QAM

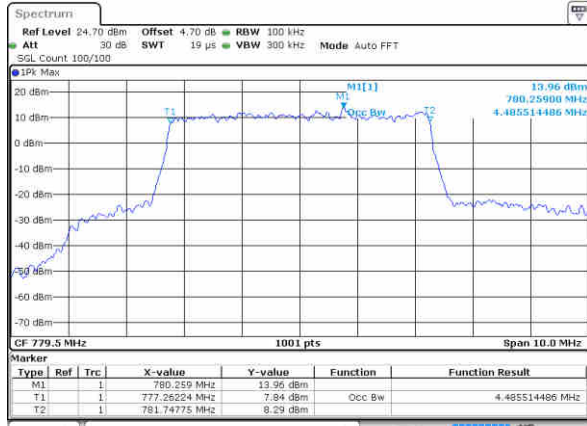


Date: 26 JUL 2020 04:59:14

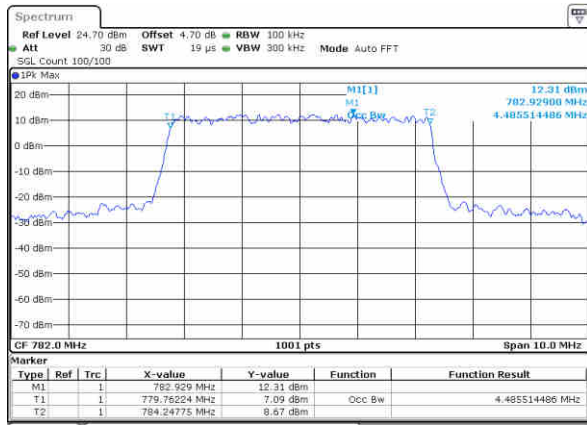


LTE Band 13

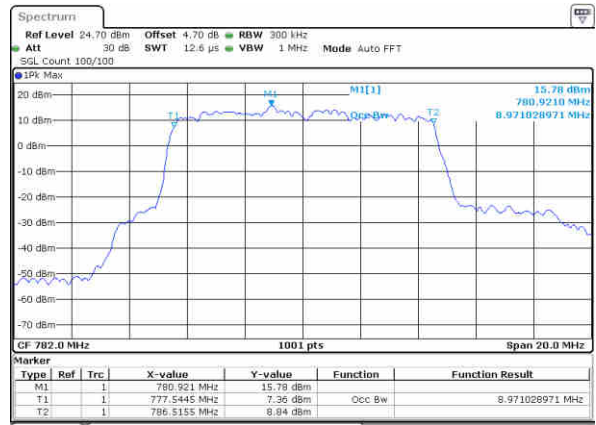
Lowest Channel / 5MHz / 64QAM



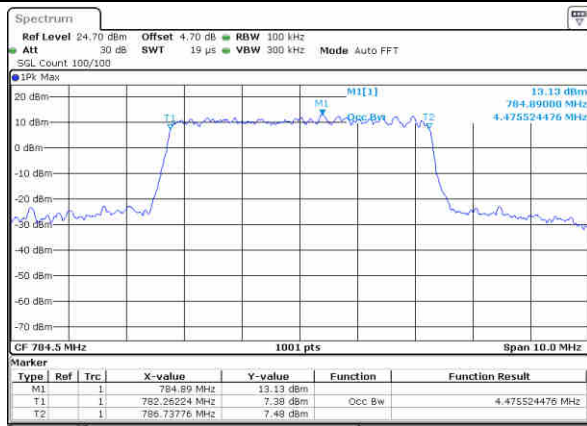
Middle Channel / 5MHz / 64QAM

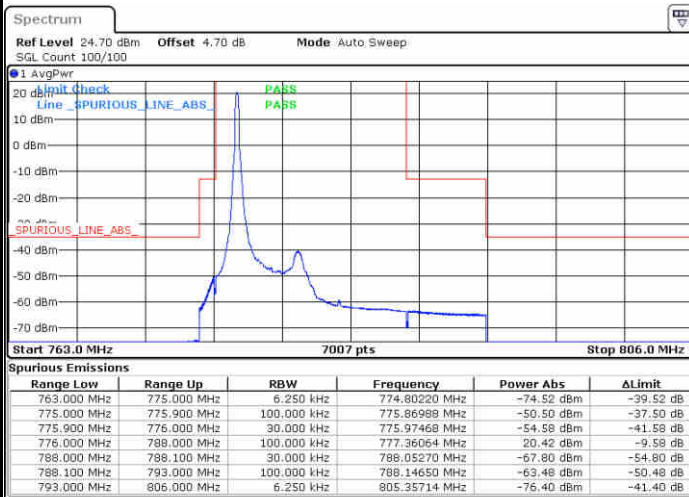
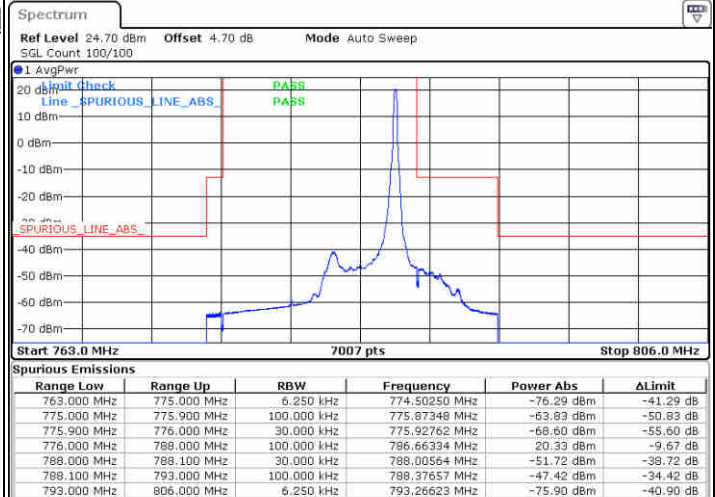
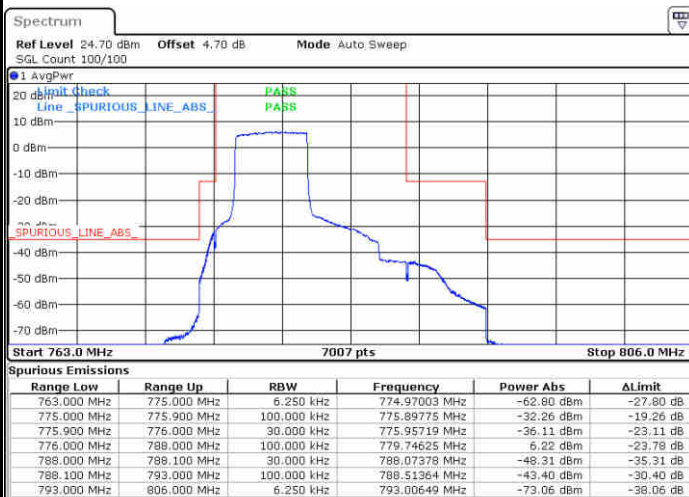
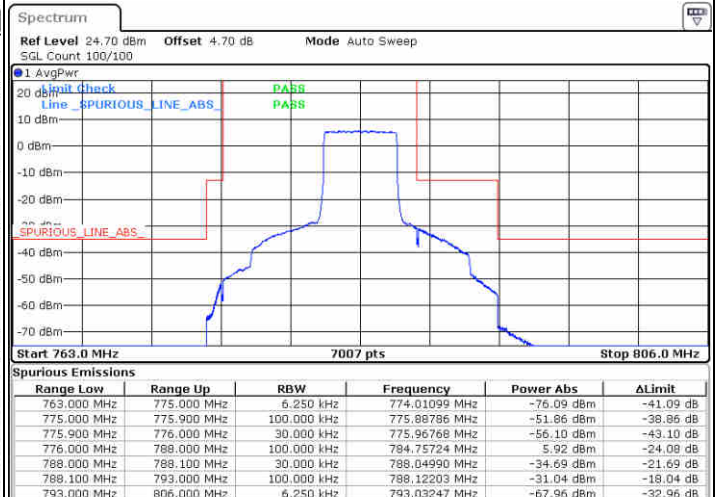


Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM

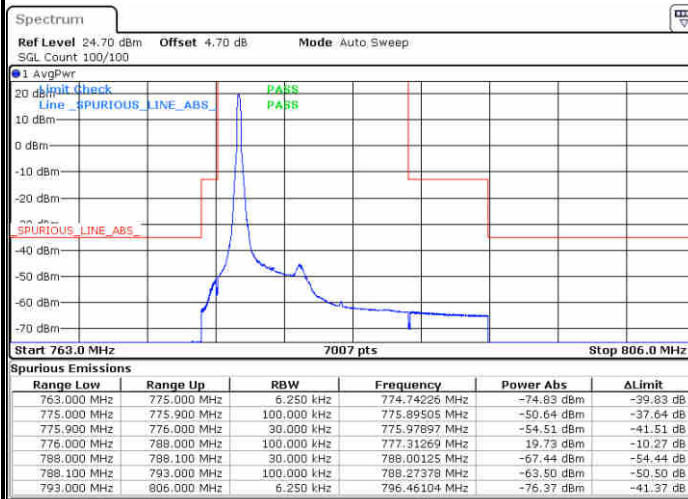


**Conducted Band Edge****LTE Band 13 / 5MHz / QPSK****Lowest Band Edge / 1 RB****Highest Band Edge / 1 RB****Lowest Band Edge / Full RB****Highest Band Edge / Full RB**

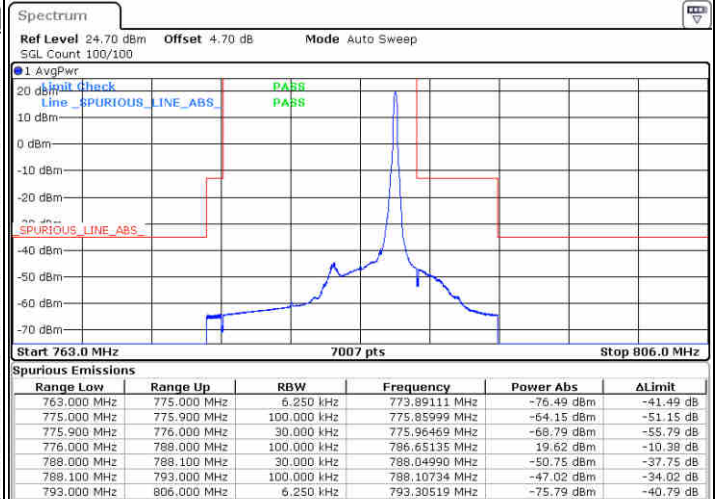


## LTE Band 13 / 5MHz / 16QAM

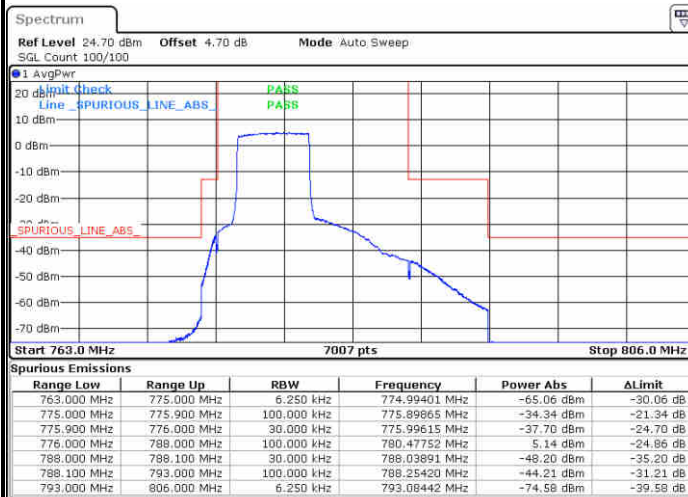
## Lowest Band Edge / 1 RB



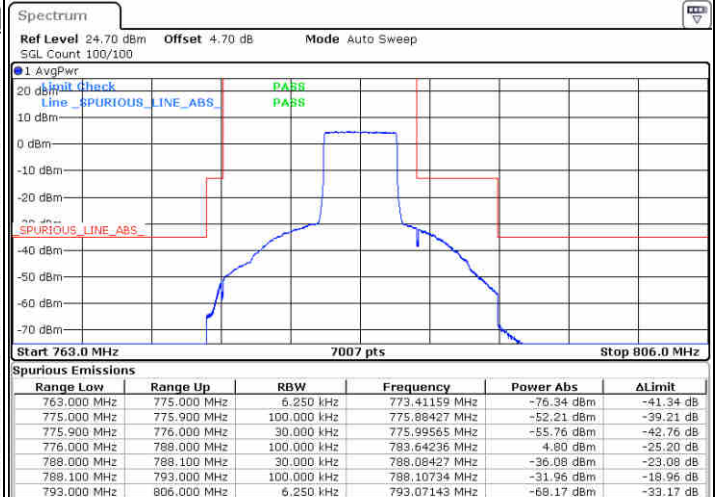
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



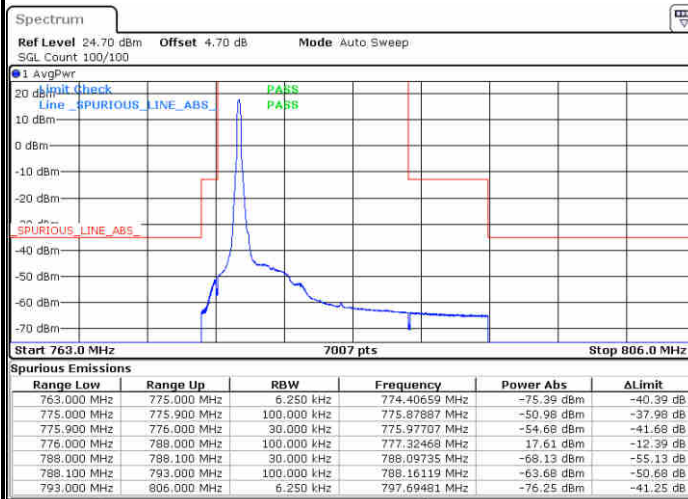
## Highest Band Edge / Full RB



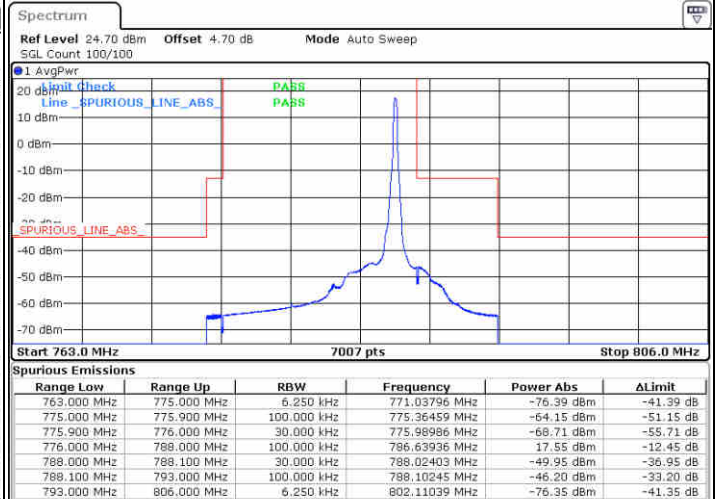


## LTE Band 13 / 5MHz / 64QAM

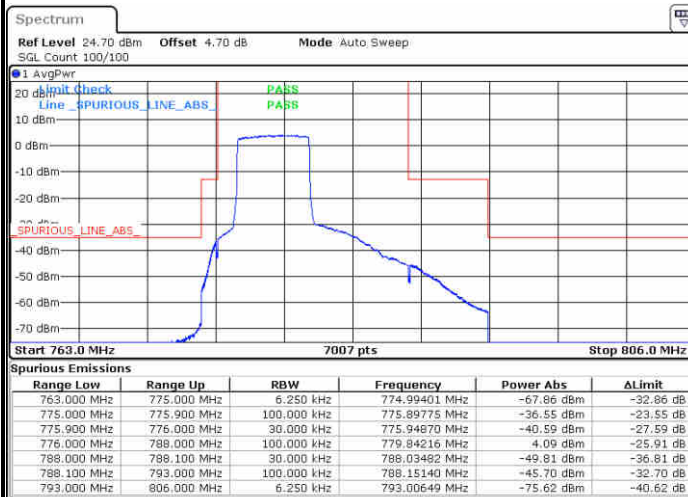
## Lowest Band Edge / 1 RB



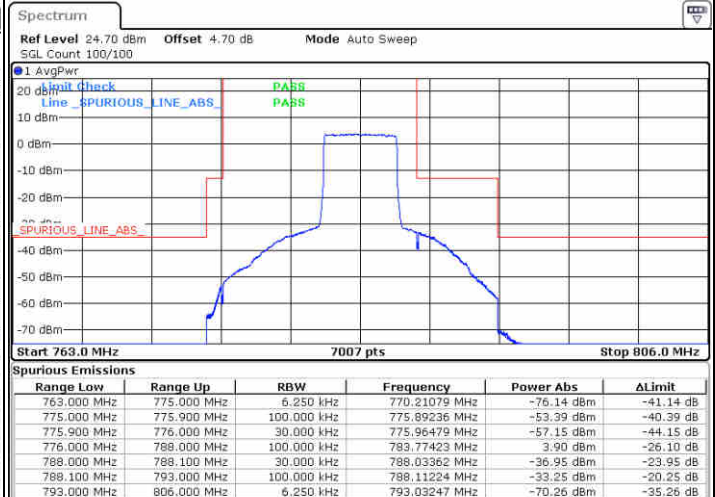
## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB



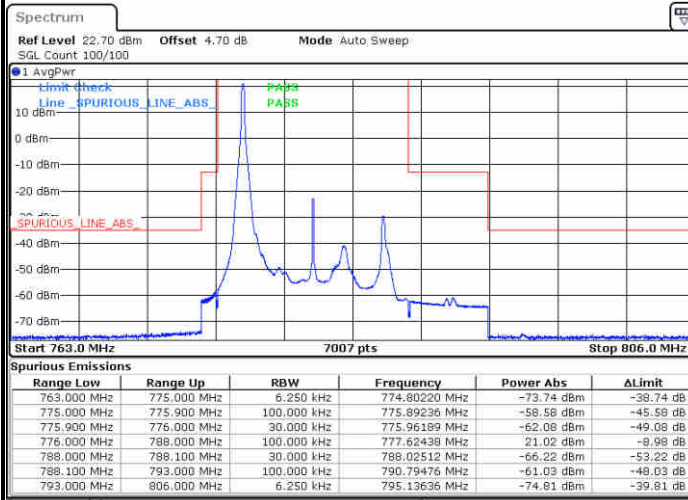
## Highest Band Edge / Full RB





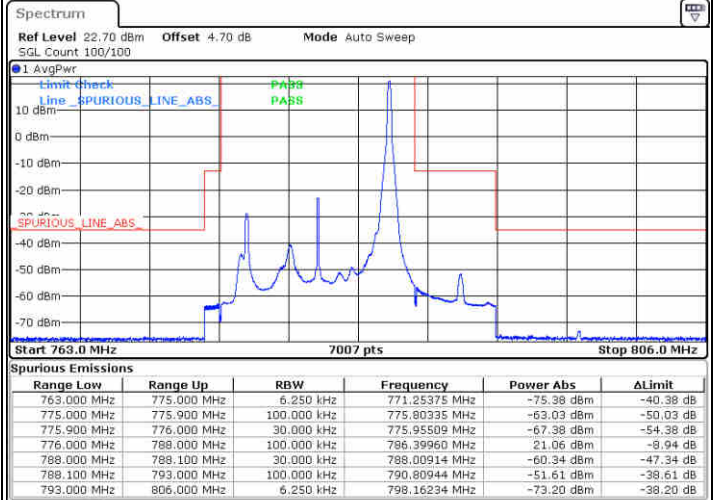
## LTE Band 13 / 10MHz / QPSK

## Lowest Band Edge / 1 RB



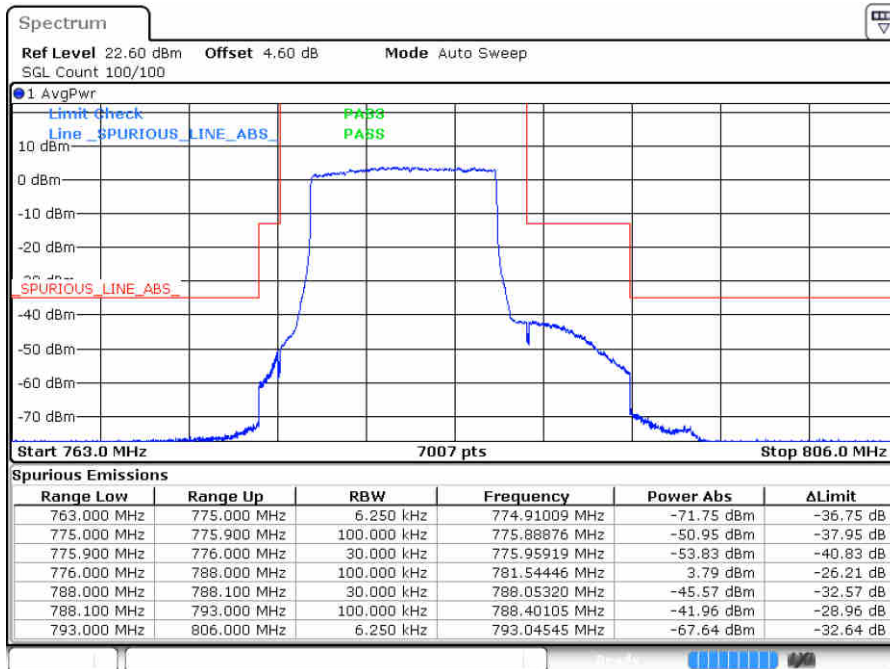
Date: 21.AUG.2020 21:09:22

## Highest Band Edge / 1 RB



Date: 21.AUG.2020 21:11:43

## Band Edge / Full RB

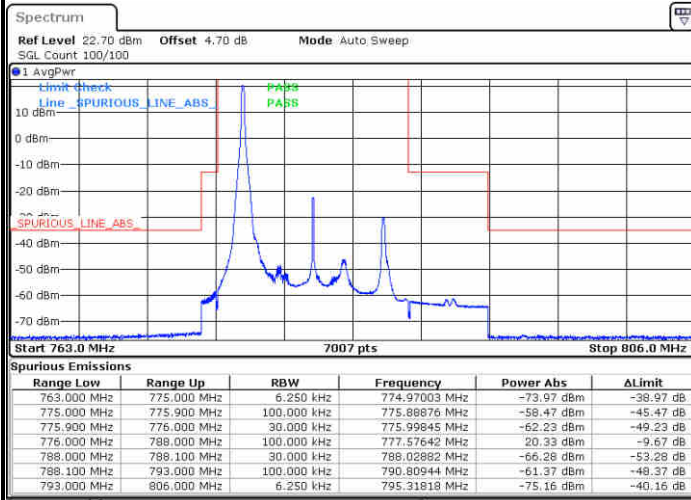


Date: 26.JUN.2020 04:39:04



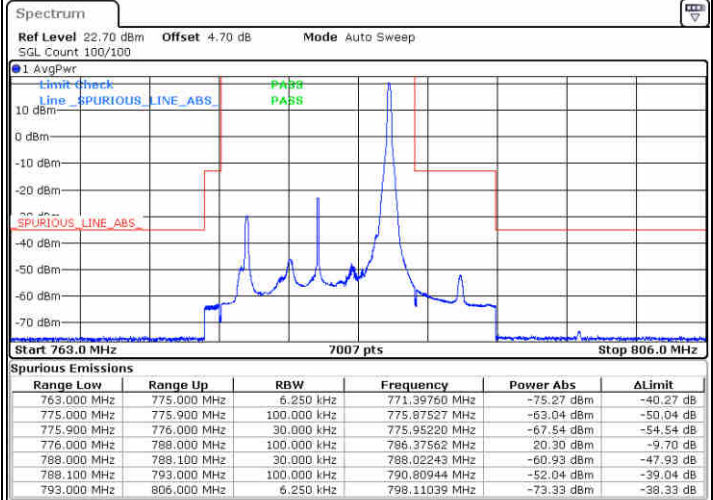
## LTE Band 13 / 10MHz / 16QAM

## Lowest Band Edge / 1 RB



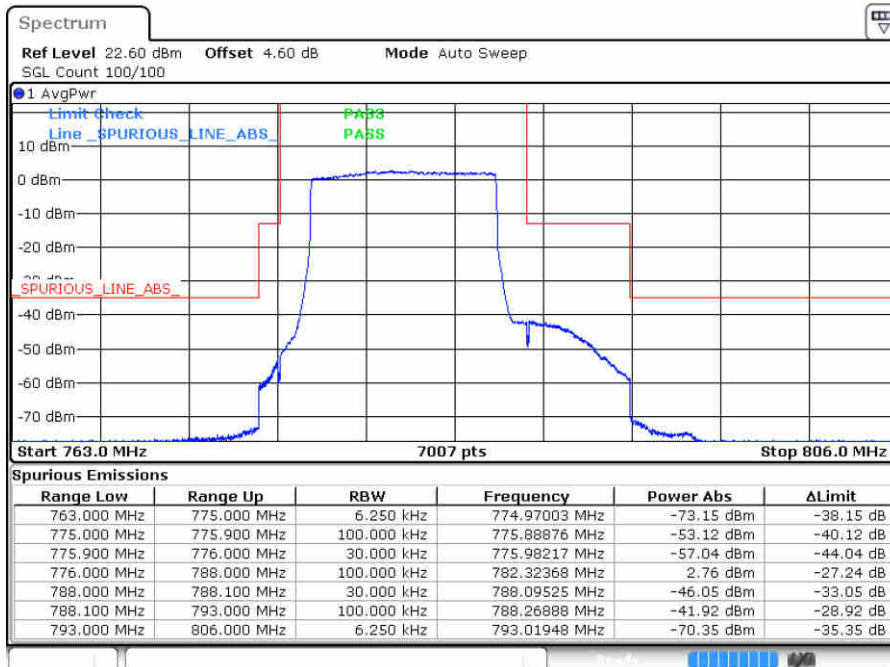
Date: 21.AUG.2020 21:07:43

## Highest Band Edge / 1 RB



Date: 21.AUG.2020 21:13:04

## Band Edge / Full RB

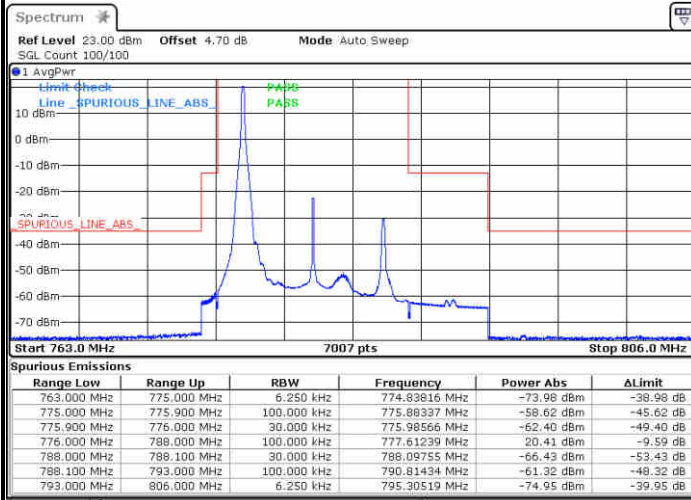


Date: 26 JUN 2020 04:40:42



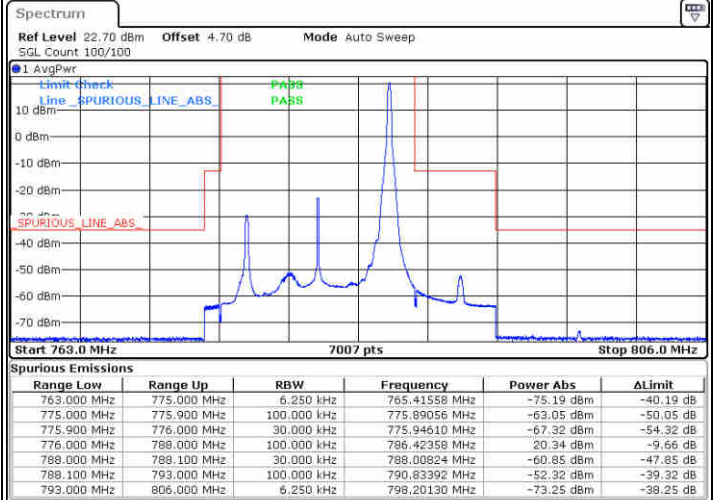
## LTE Band 13 / 10MHz / 64QAM

## Lowest Band Edge / 1 RB



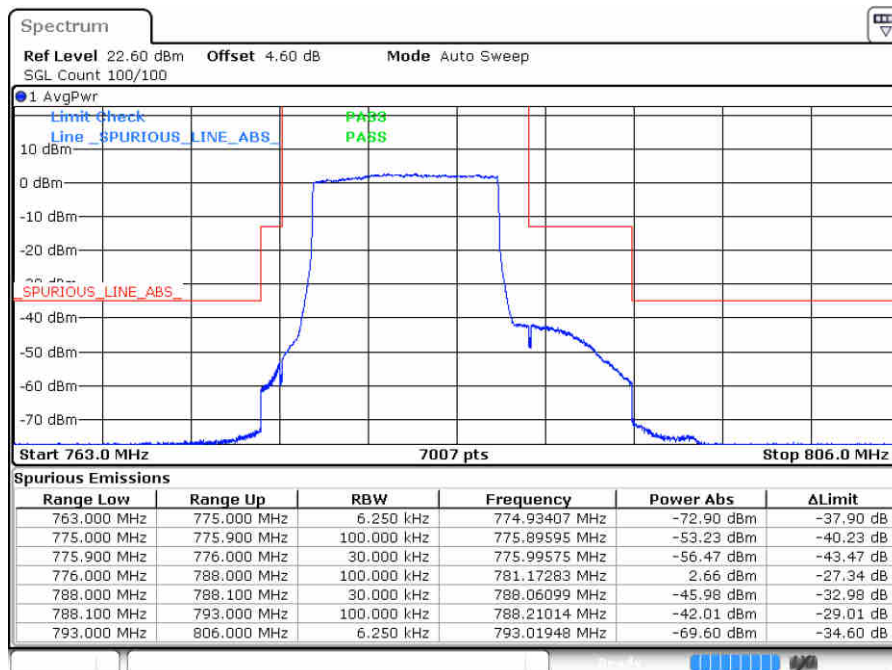
Date: 21.AUG.2020 21:06:22

## Highest Band Edge / 1 RB



Date: 21.AUG.2020 21:14:34

## Band Edge / Full RB



Date: 26.JUN.2020 04:59:59