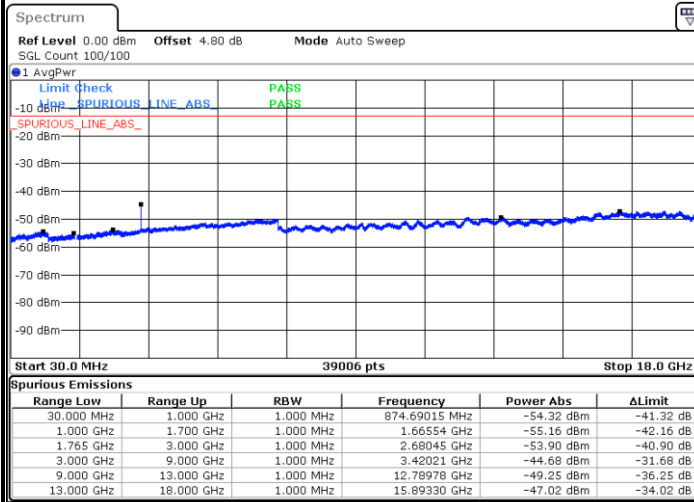




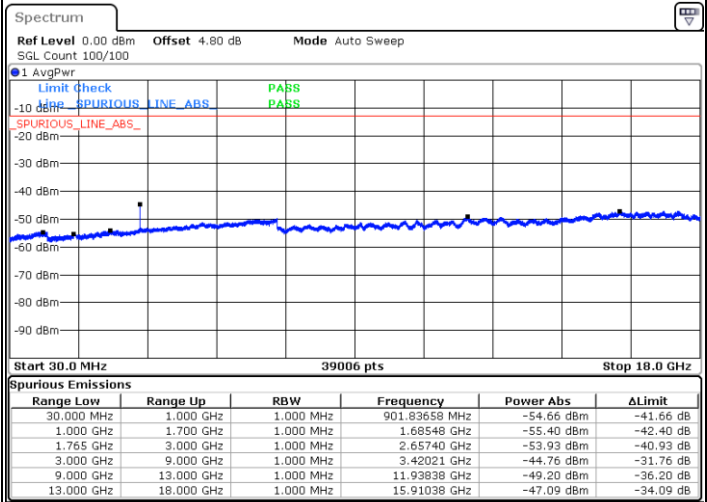
## LTE Band 4 / 1.4MHz

## Lowest Channel / QPSK



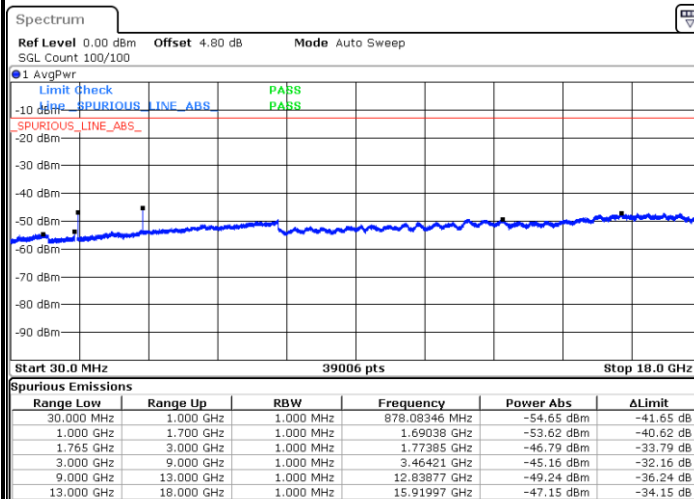
Date: 21 MAR 2020 10:45:11

## Lowest Channel / 16QAM



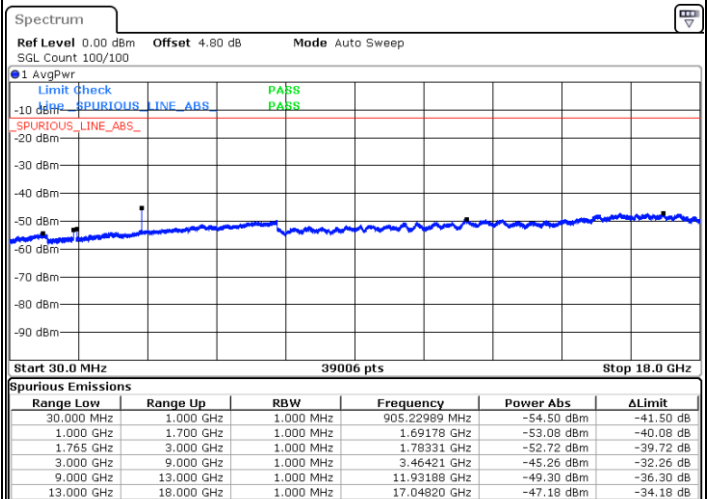
Date: 21 MAR 2020 10:46:05

## Middle Channel / QPSK



Date: 21 MAR 2020 10:47:40

## Middle Channel / 16QAM

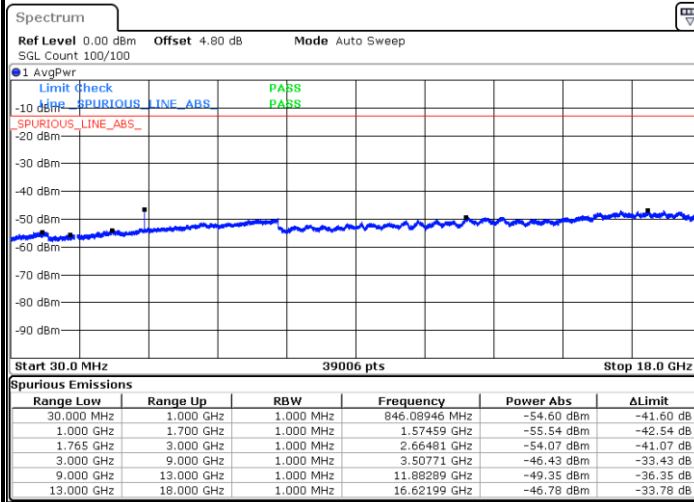


Date: 21 MAR 2020 10:48:35



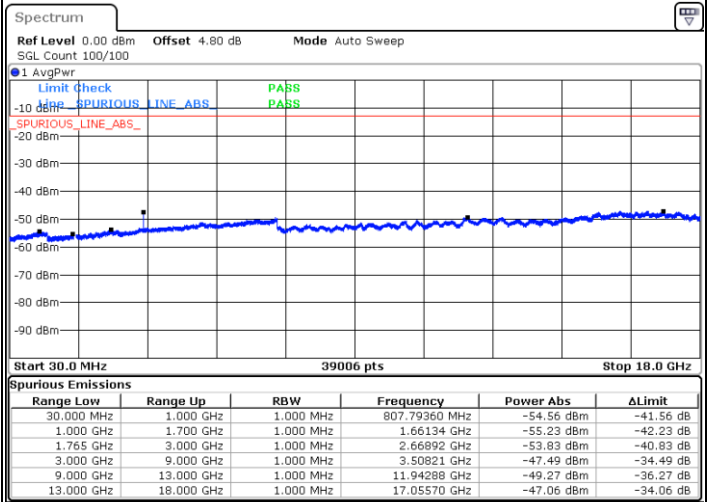
## LTE Band 4 / 1.4MHz

## Highest Channel / QPSK



Date: 21 MAR 2020 10:54:39

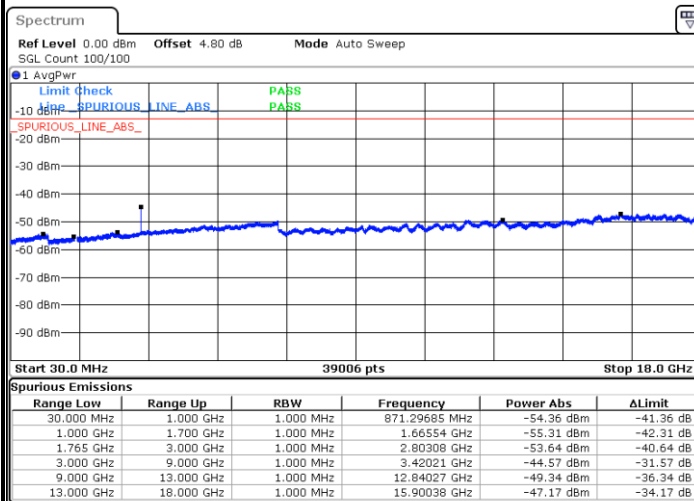
## Highest Channel / 16QAM



Date: 21 MAR 2020 10:55:33

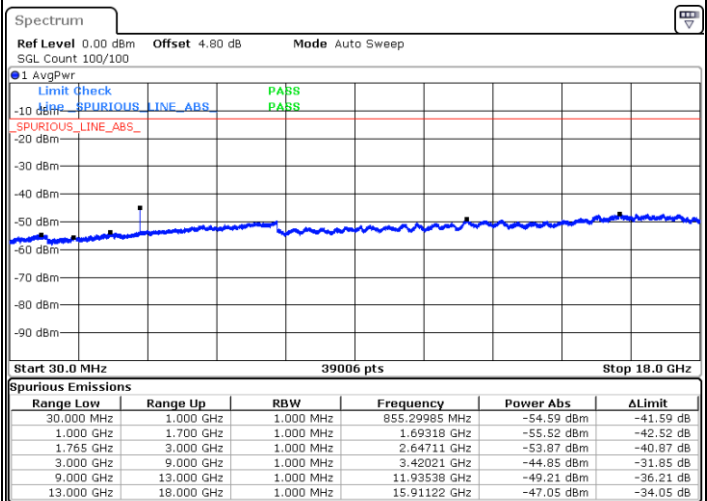
## LTE Band 4 / 3MHz

## Lowest Channel / QPSK



Date: 21 MAR 2020 11:01:38

## Lowest Channel / 16QAM

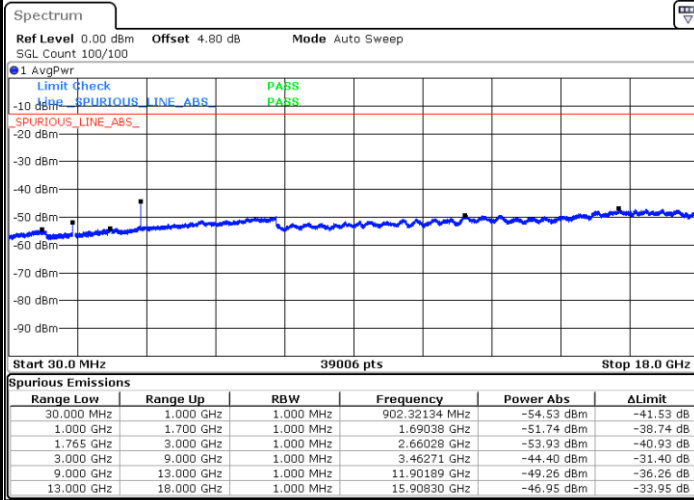


Date: 21 MAR 2020 11:02:32



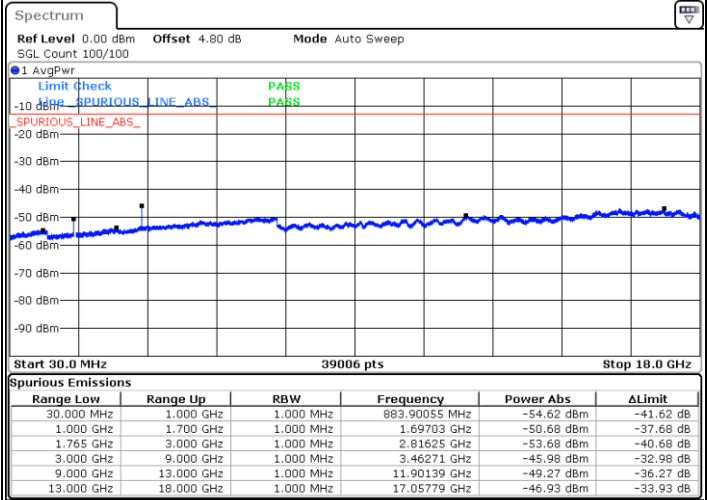
## LTE Band 4 / 3MHz

## Middle Channel / QPSK



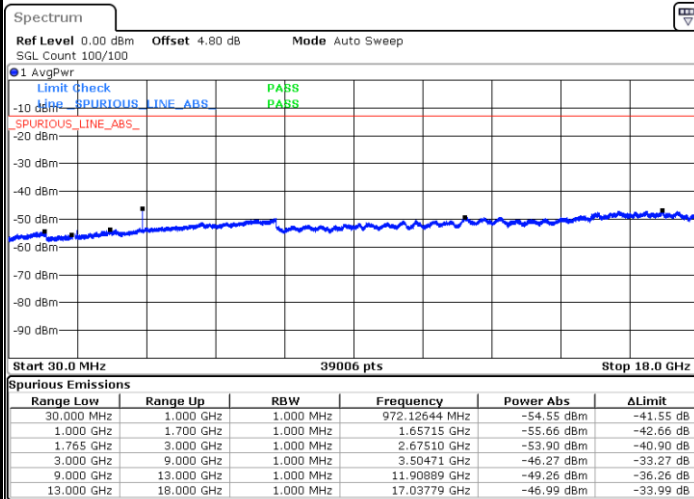
Date: 21 MAR 2020 11:04:07

## Middle Channel / 16QAM



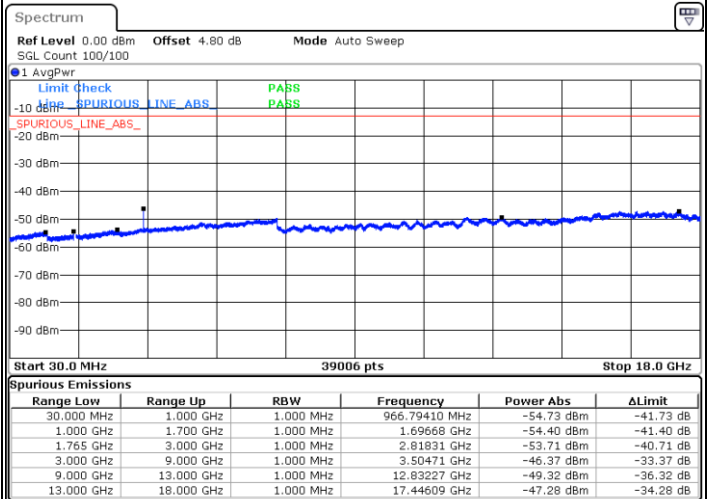
Date: 21 MAR 2020 11:05:01

## Highest Channel / QPSK



Date: 21 MAR 2020 11:11:06

## Highest Channel / 16QAM

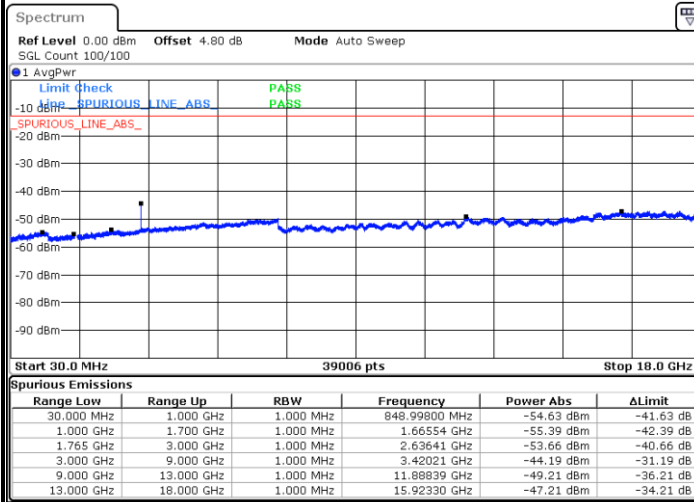


Date: 21 MAR 2020 11:12:00



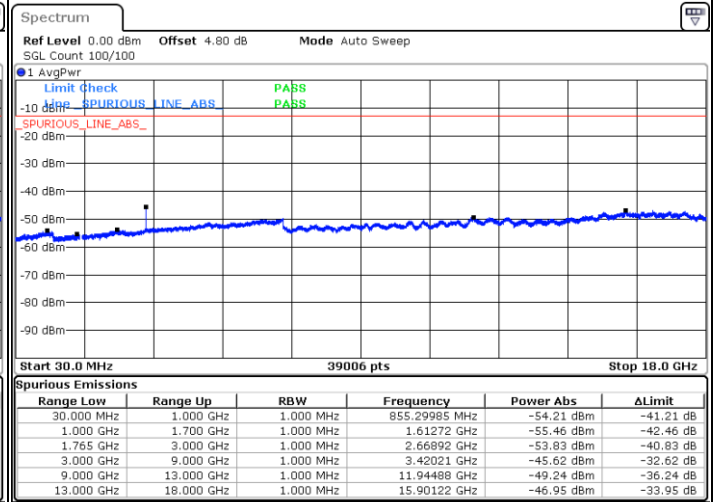
## LTE Band 4 / 5MHz

## Lowest Channel / QPSK



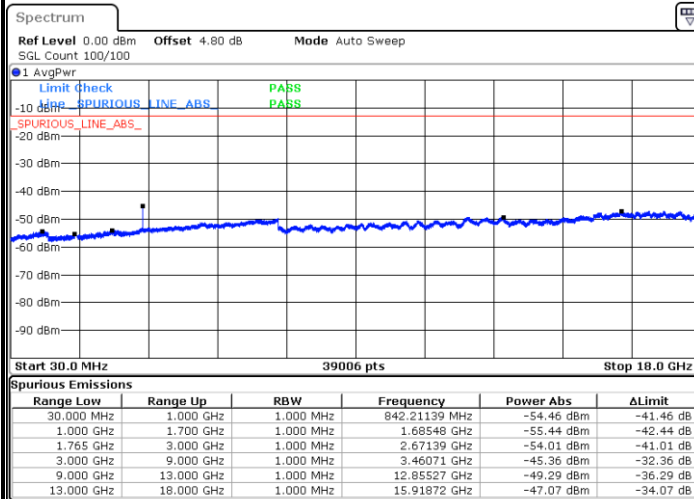
Date: 21 MAR 2020 11:18:05

## Lowest Channel / 16QAM



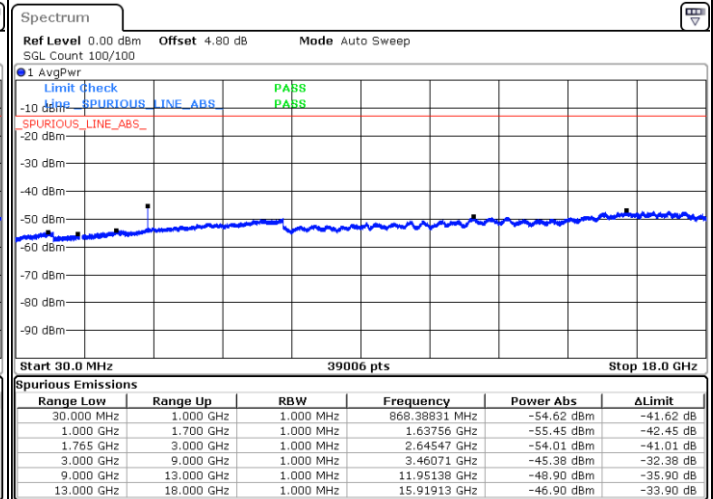
Date: 21 MAR 2020 11:18:59

## Middle Channel / QPSK



Date: 21 MAR 2020 11:20:34

## Middle Channel / 16QAM

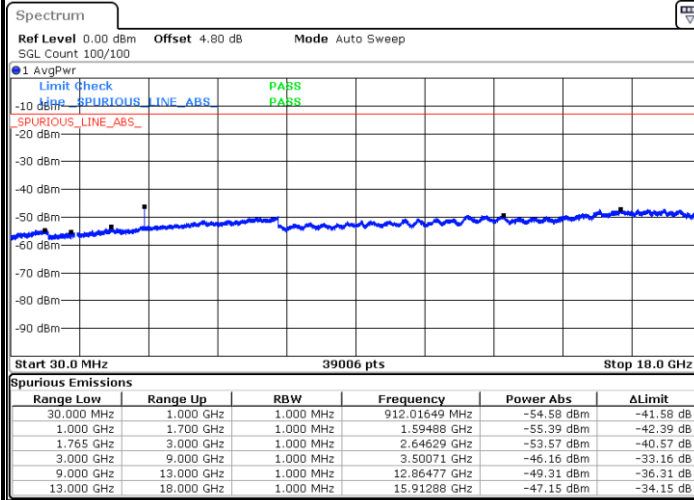


Date: 21 MAR 2020 11:21:28



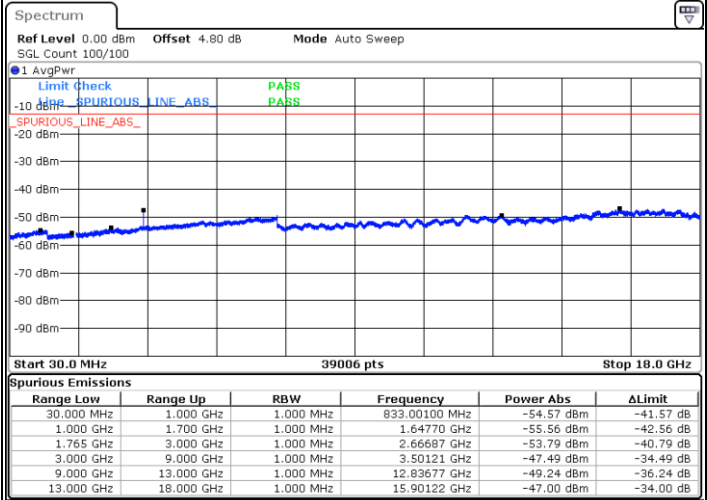
## LTE Band 4 / 5MHz

## Highest Channel / QPSK



Date: 21 MAR 2020 11:27:33

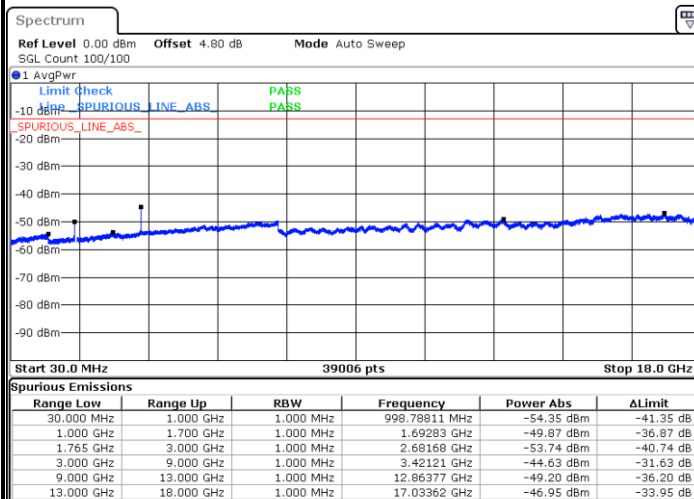
## Highest Channel / 16QAM



Date: 21 MAR 2020 11:28:28

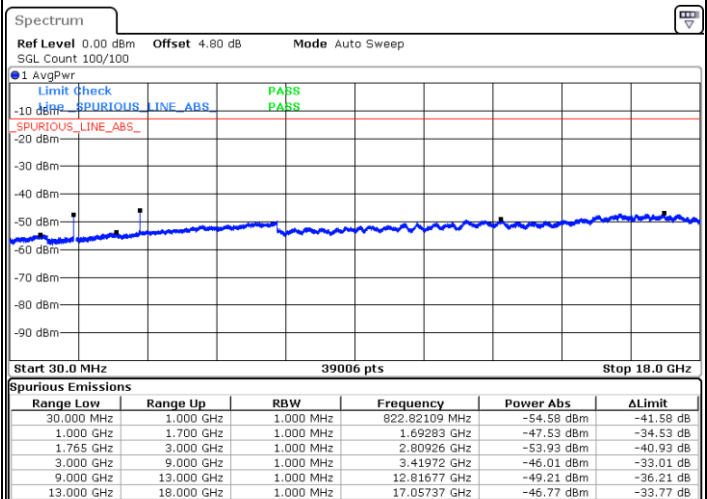
## LTE Band 4 / 10MHz

## Lowest Channel / QPSK



Date: 21 MAR 2020 11:34:32

## Lowest Channel / 16QAM

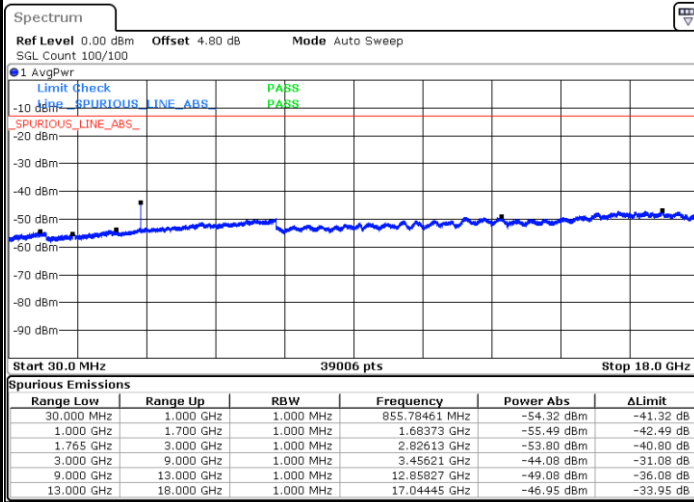


Date: 21 MAR 2020 11:35:27



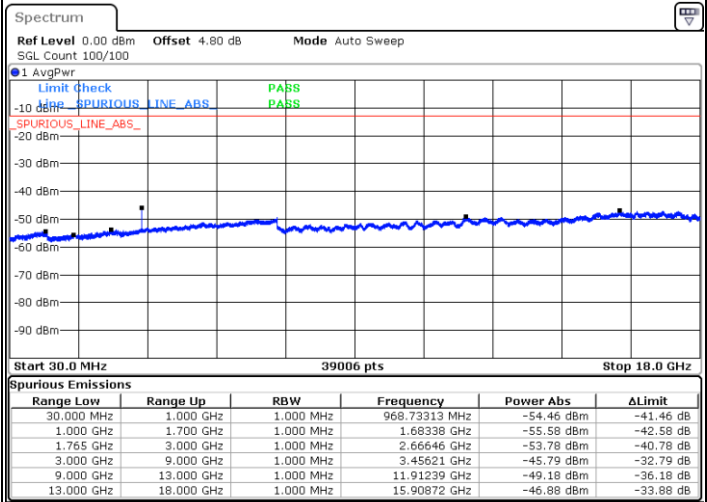
## LTE Band 4 / 10MHz

## Middle Channel / QPSK



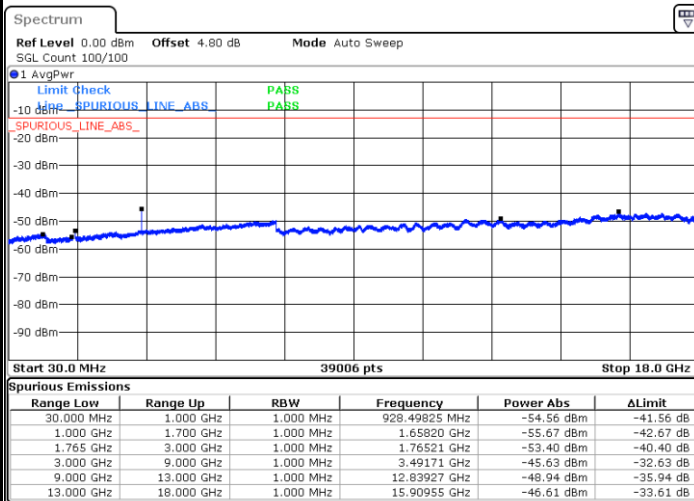
Date: 21 MAR 2020 11:37:01

## Middle Channel / 16QAM



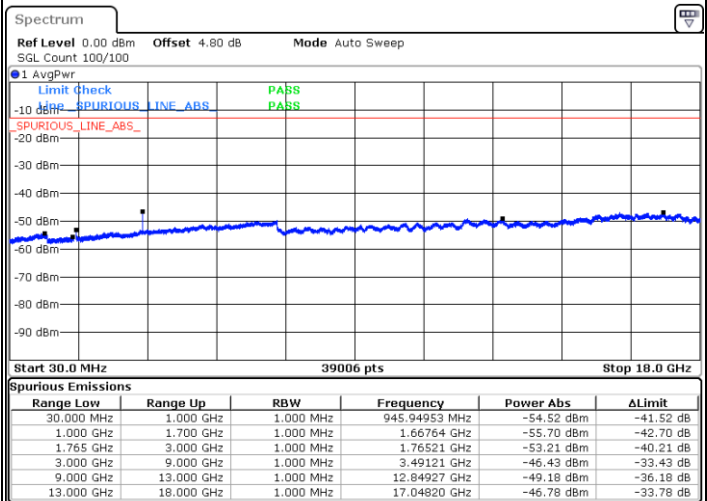
Date: 21 MAR 2020 11:37:56

## Highest Channel / QPSK



Date: 21 MAR 2020 11:44:00

## Highest Channel / 16QAM

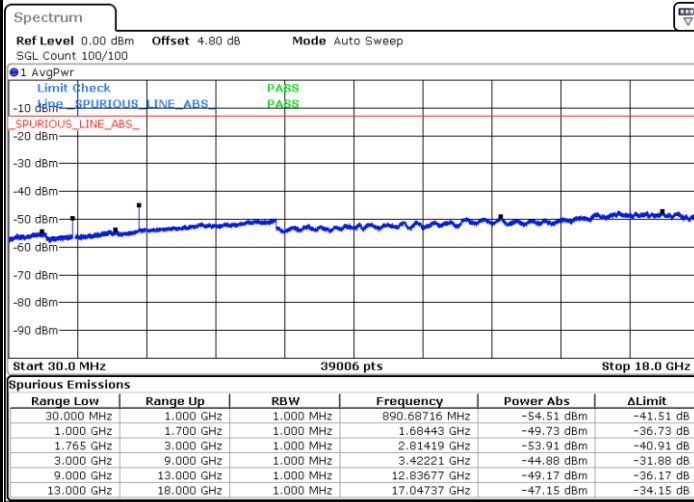


Date: 21 MAR 2020 11:44:55



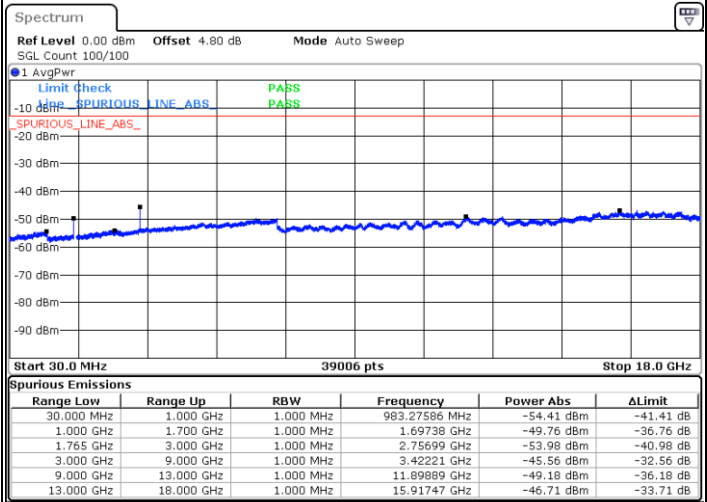
## LTE Band 4 / 15MHz

## Lowest Channel / QPSK



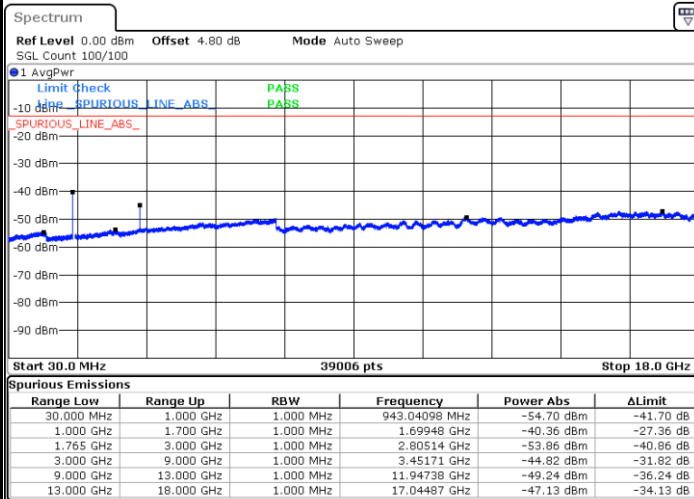
Date: 21 MAR 2020 11:50:59

## Lowest Channel / 16QAM



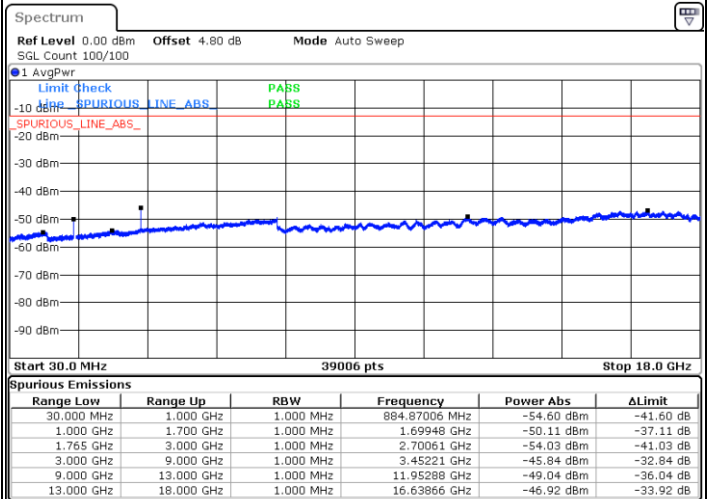
Date: 21 MAR 2020 11:51:53

## Middle Channel / QPSK



Date: 21 MAR 2020 11:53:28

## Middle Channel / 16QAM

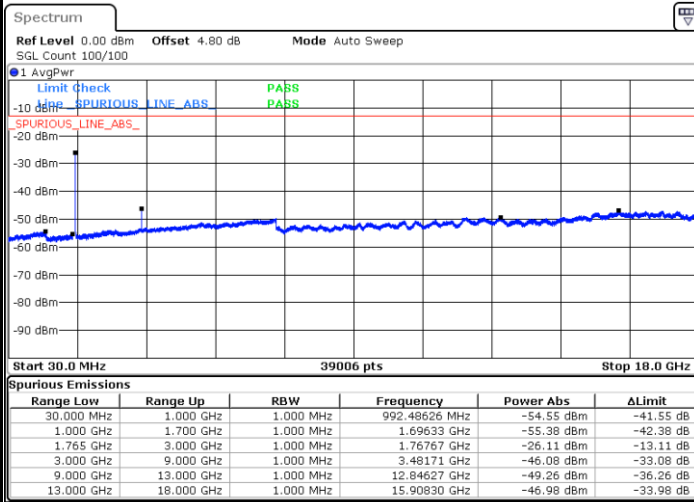


Date: 21 MAR 2020 11:54:22



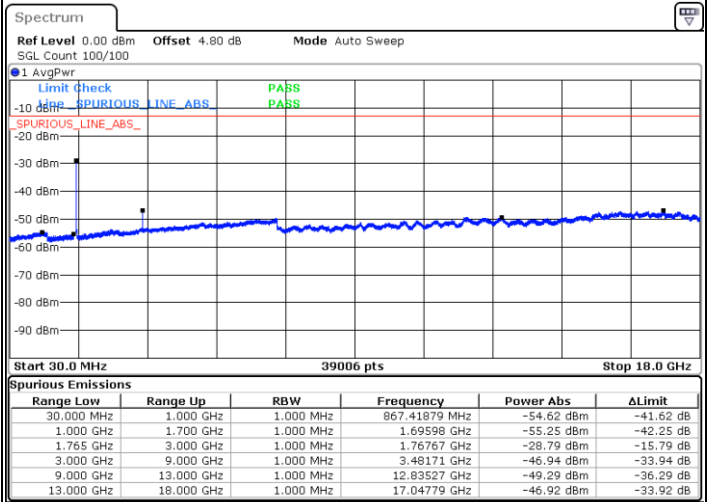
## LTE Band 4 / 15MHz

## Highest Channel / QPSK



Date: 21.MAR.2020 12:00:27

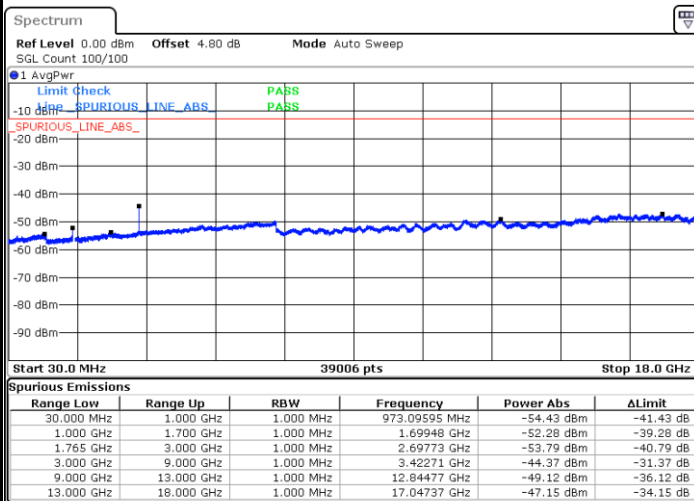
## Highest Channel / 16QAM



Date: 21.MAR.2020 12:01:21

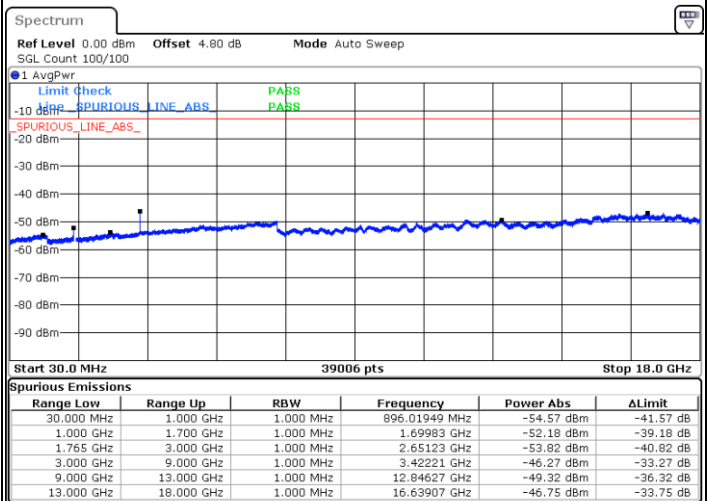
## LTE Band 4 / 20MHz

## Lowest Channel / QPSK



Date: 21.MAR.2020 12:07:26

## Lowest Channel / 16QAM

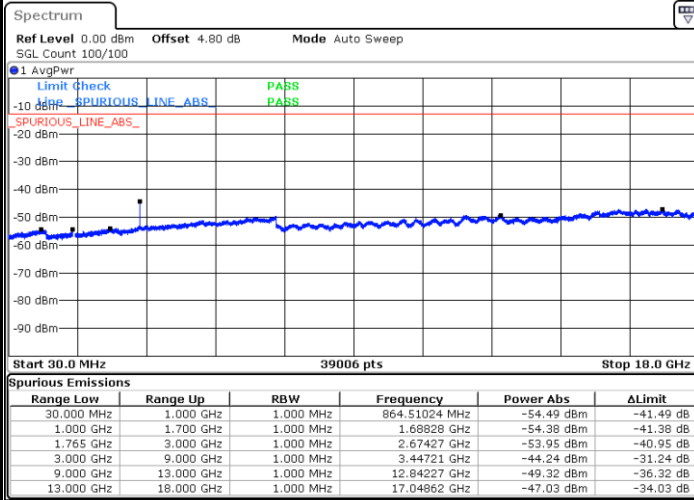


Date: 21.MAR.2020 12:08:20



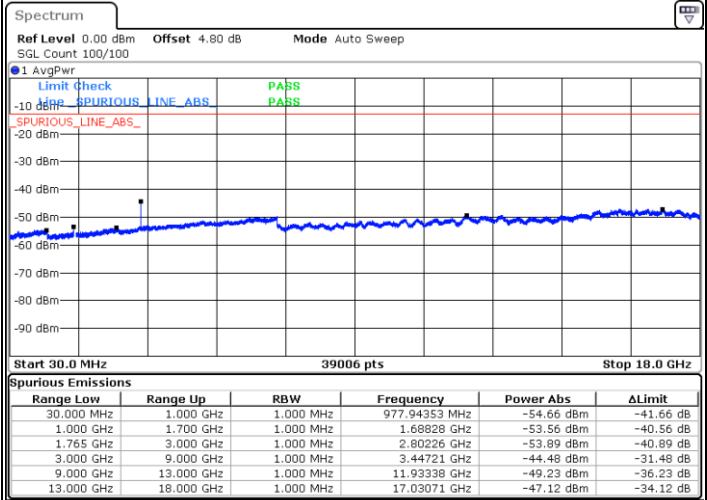
## LTE Band 4 / 20MHz

## Middle Channel / QPSK



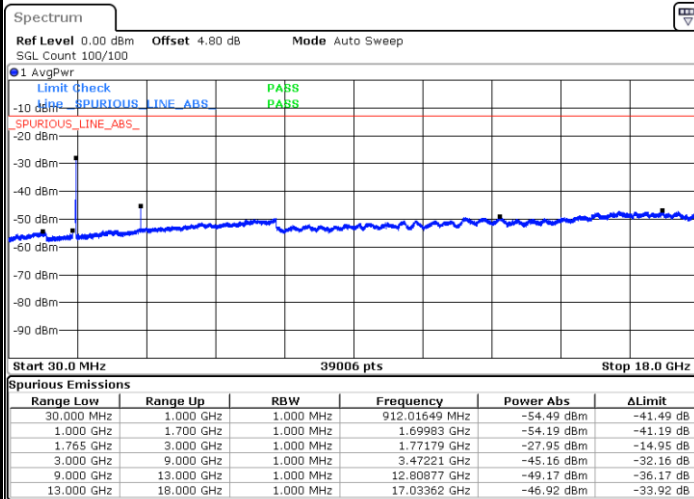
Date: 21 MAR 2020 12:09:55

## Middle Channel / 16QAM



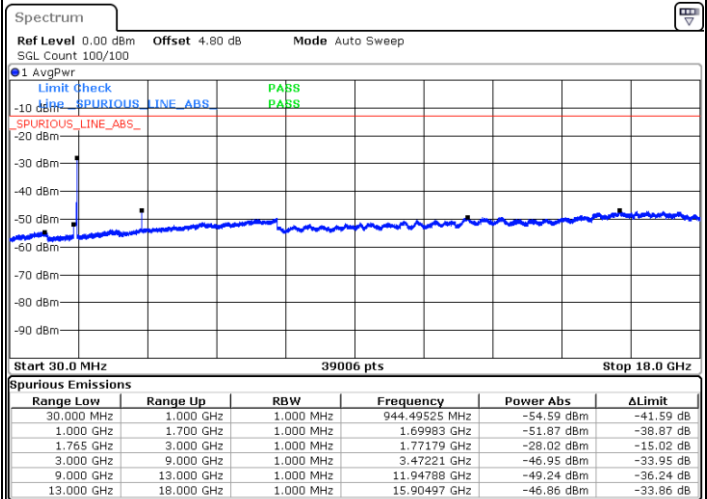
Date: 21 MAR 2020 12:10:49

## Highest Channel / QPSK



Date: 21 MAR 2020 12:16:54

## Highest Channel / 16QAM

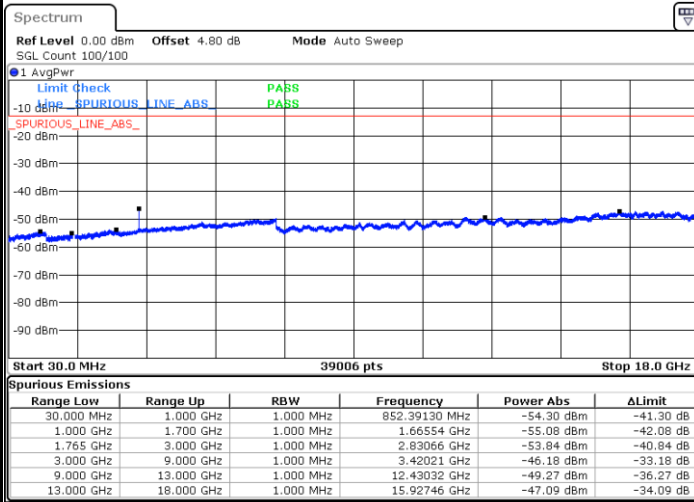


Date: 21 MAR 2020 12:17:48



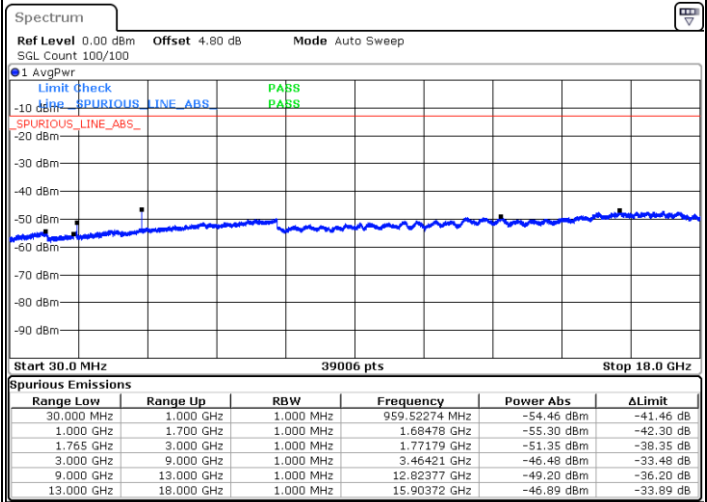
## LTE Band 4 / 1.4MHz

## Lowest Channel / 64QAM



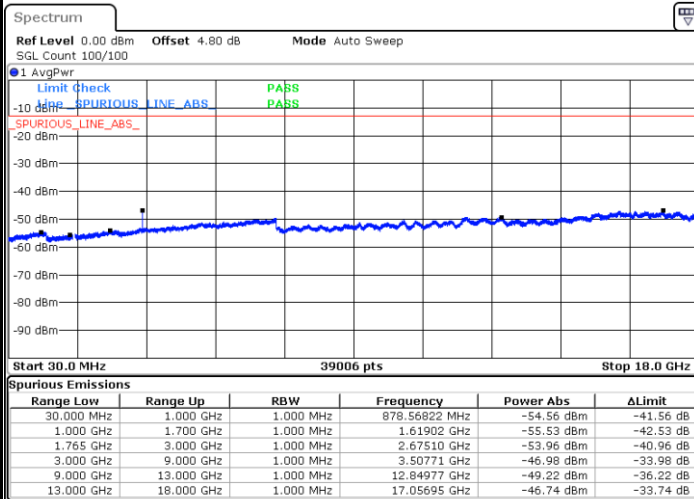
Date: 21 MAR 2020 12:56:13

## Middle Channel / 64QAM



Date: 21 MAR 2020 12:57:28

## Highest Channel / 64QAM

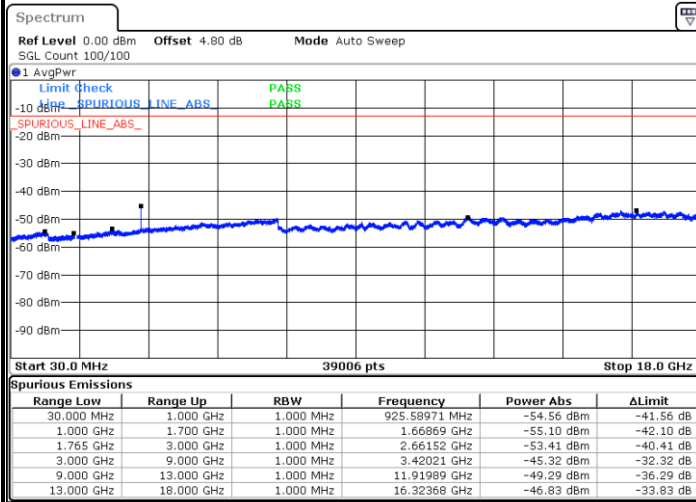


Date: 21 MAR 2020 13:00:57



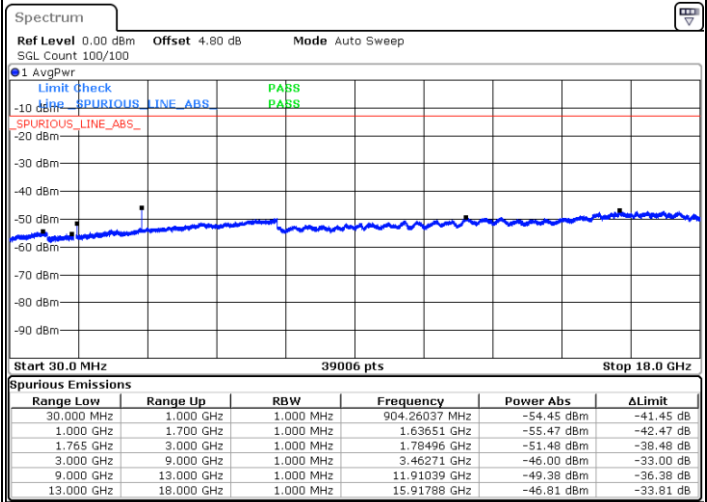
## LTE Band 4 / 3MHz

## Lowest Channel / 64QAM



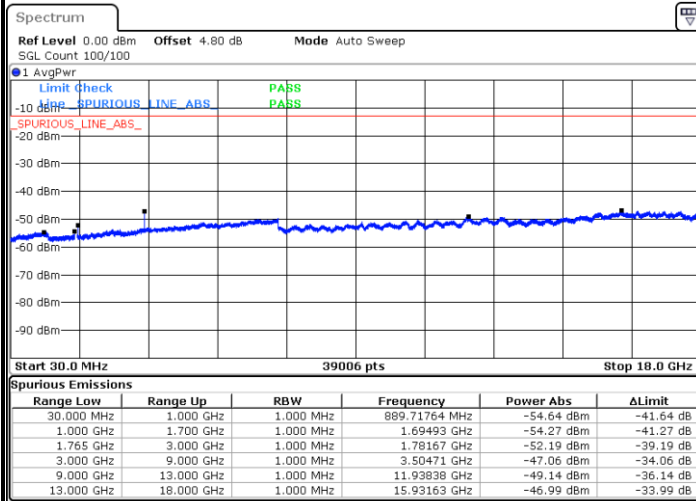
Date: 21 MAR 2020 13:04:27

## Middle Channel / 64QAM



Date: 21 MAR 2020 13:05:41

## Highest Channel / 64QAM

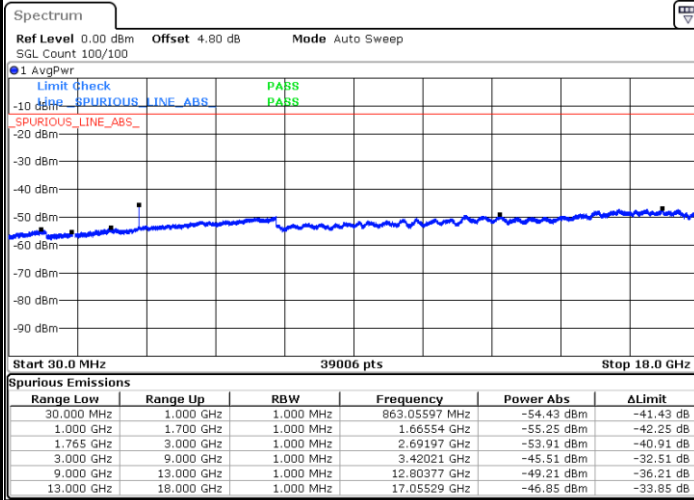


Date: 21 MAR 2020 13:09:10



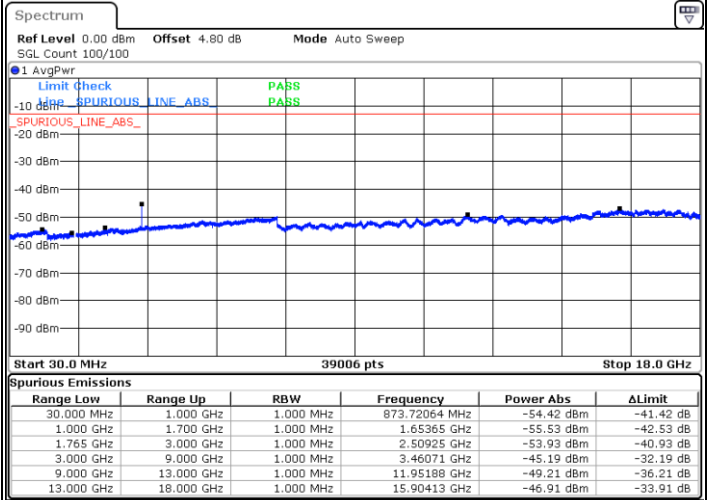
## LTE Band 4 / 5MHz

## Lowest Channel / 64QAM



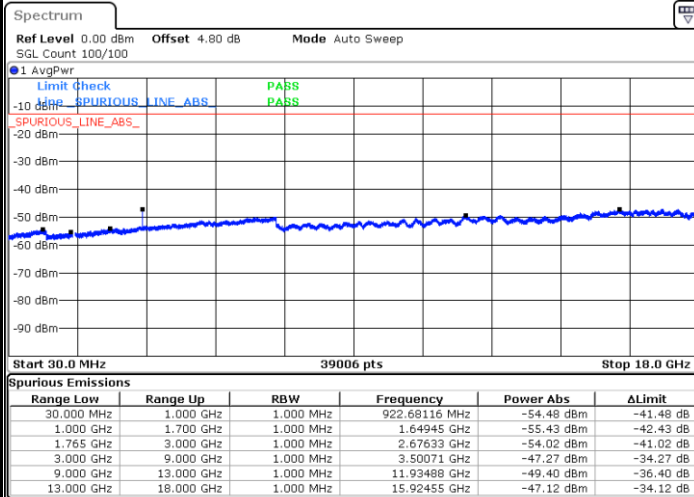
Date: 21 MAR 2020 13:12:40

## Middle Channel / 64QAM



Date: 21 MAR 2020 13:13:54

## Highest Channel / 64QAM

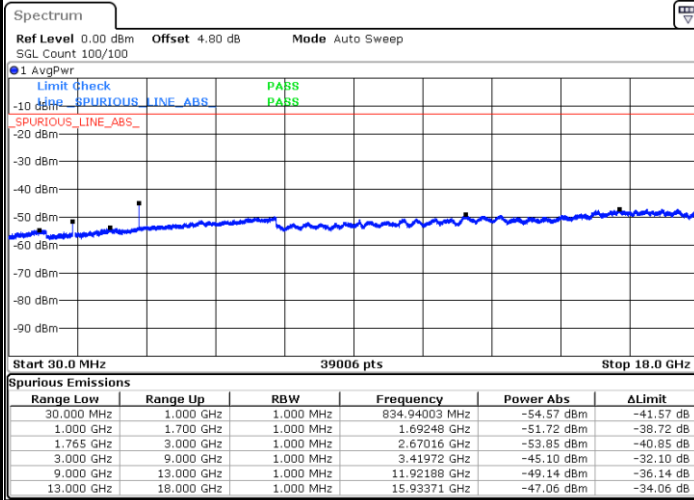


Date: 21 MAR 2020 13:17:24



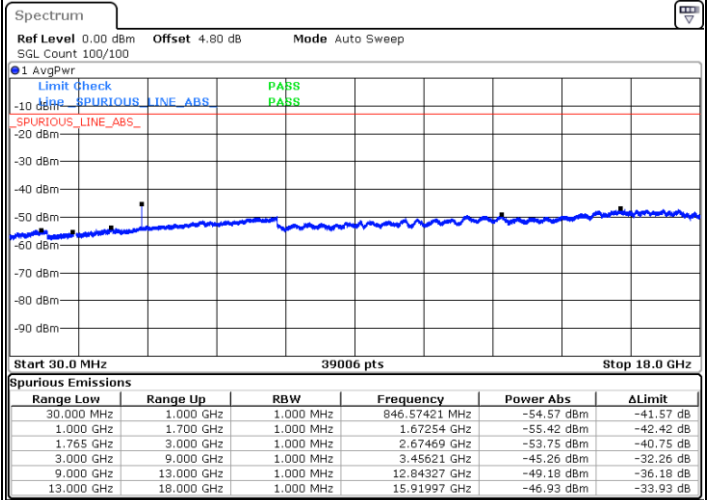
## LTE Band 4 / 10MHz

## Lowest Channel / 64QAM



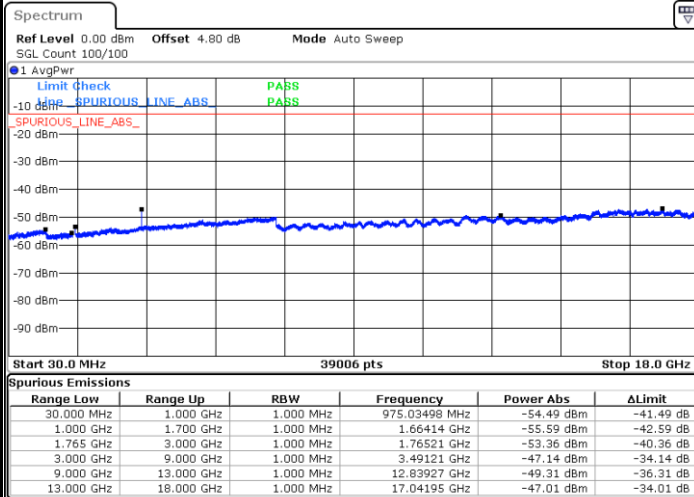
Date: 21 MAR 2020 13:20:53

## Middle Channel / 64QAM



Date: 21 MAR 2020 13:22:08

## Highest Channel / 64QAM

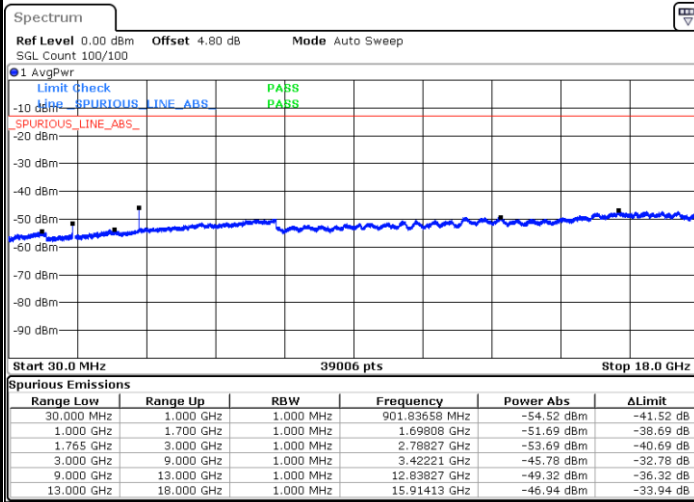


Date: 21 MAR 2020 13:25:37



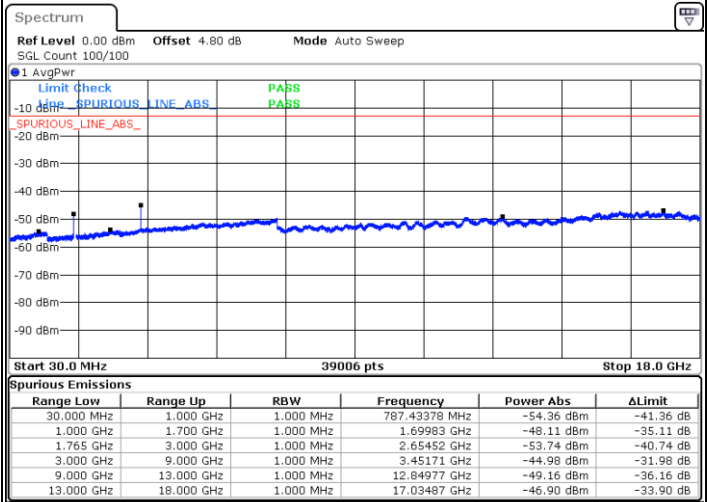
## LTE Band 4 / 15MHz

## Lowest Channel / 64QAM



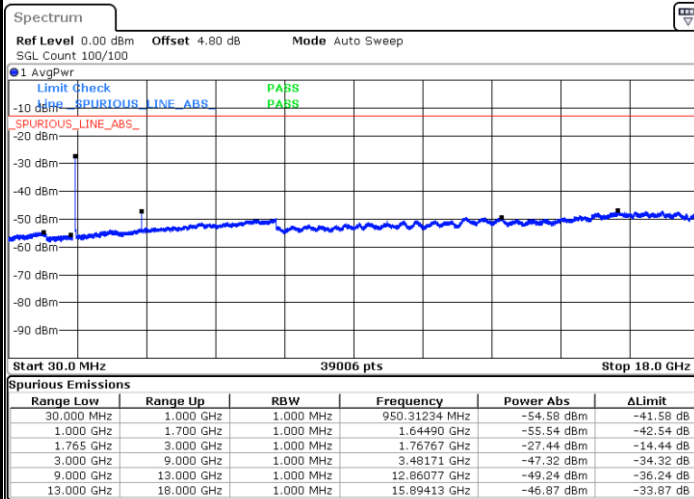
Date: 21 MAR 2020 13:29:07

## Middle Channel / 64QAM



Date: 21 MAR 2020 13:30:22

## Highest Channel / 64QAM

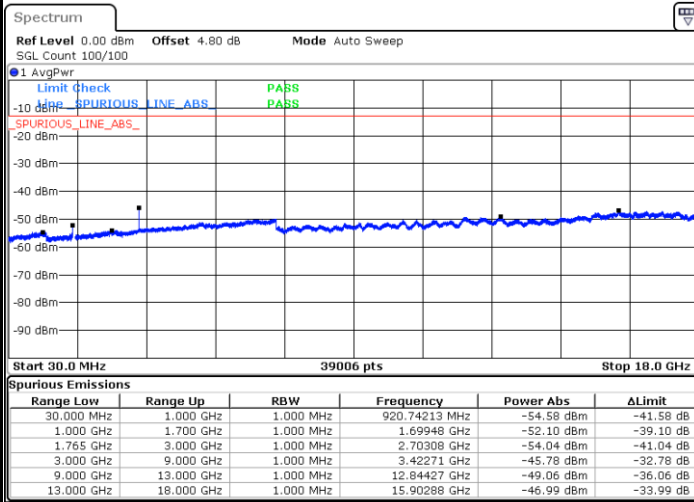


Date: 21 MAR 2020 13:33:51



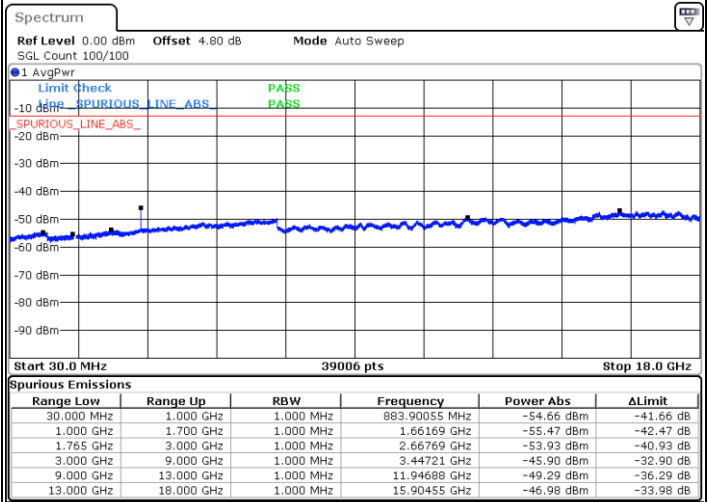
## LTE Band 4 / 20MHz

## Lowest Channel / 64QAM



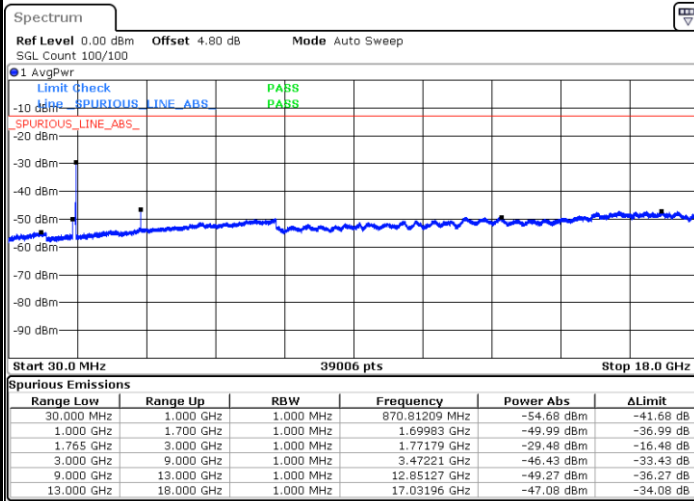
Date: 21 MAR 2020 13:37:21

## Middle Channel / 64QAM



Date: 21 MAR 2020 13:38:35

## Highest Channel / 64QAM



Date: 21 MAR 2020 13:42:05

**Frequency Stability**

| Test Conditions  |                   | LTE Band 4 (QPSK) / Middle Channel | Limit   |
|------------------|-------------------|------------------------------------|---------|
| Temperature (°C) | Voltage (Volt)    | BW 10MHz                           | Note 2. |
|                  |                   | Deviation (ppm)                    | Result  |
| 50               | Normal Voltage    | 0.0014                             | PASS    |
| 40               | Normal Voltage    | 0.0007                             |         |
| 30               | Normal Voltage    | 0.0029                             |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                             |         |
| 10               | Normal Voltage    | 0.0001                             |         |
| 0                | Normal Voltage    | 0.0032                             |         |
| -10              | Normal Voltage    | 0.0002                             |         |
| -20              | Normal Voltage    | 0.0023                             |         |
| -30              | Normal Voltage    | 0.0003                             |         |
| 20               | Maximum Voltage   | 0.0013                             |         |
| 20               | Normal Voltage    | 0.0034                             |         |
| 20               | Battery End Point | 0.0028                             |         |

**Note:**

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.45 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 5

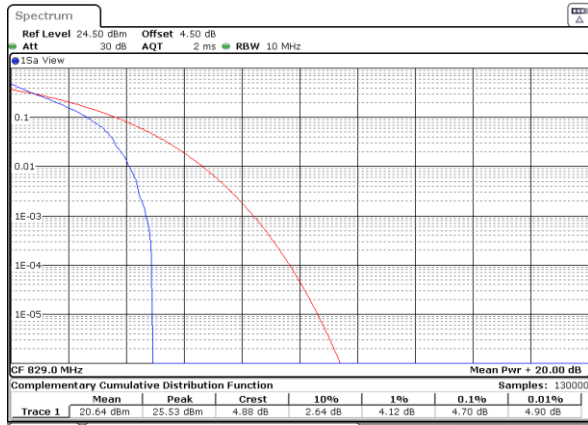
## Peak-to-Average Ratio

| Mode       | LTE Band 5 / 10MHz |         |       |         |             |
|------------|--------------------|---------|-------|---------|-------------|
| Mod.       | QPSK               |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | 4.70               | 4.96    | 5.54  | 5.77    | PASS        |
| Middle CH  | 4.23               | 5.30    | 5.19  | 6.14    |             |
| Highest CH | 4.87               | 5.22    | 5.94  | 6.17    |             |
| Mode       | LTE Band 5 / 10MHz |         |       |         |             |
| Mod.       | 64QAM              |         |       |         | Limit: 13dB |
| RB Size    | 1RB                | Full RB |       |         | Result      |
| Lowest CH  | 6.29               | 6.09    | -     | -       | PASS        |
| Middle CH  | 5.74               | 6.41    | -     | -       |             |
| Highest CH | 6.43               | 6.29    | -     | -       |             |

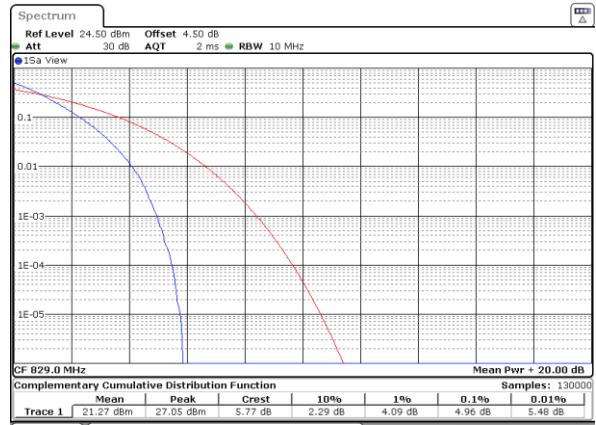


## LTE Band 5 / 10MHz / QPSK

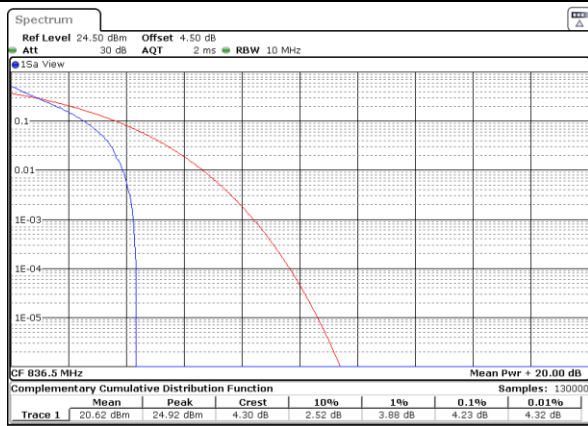
## Lowest Channel / 1RB



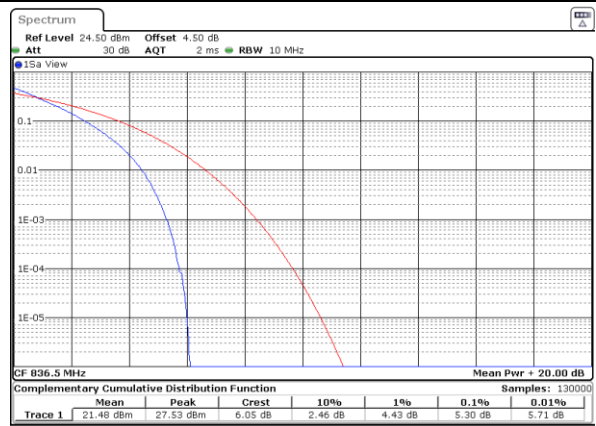
## Lowest Channel / Full RB



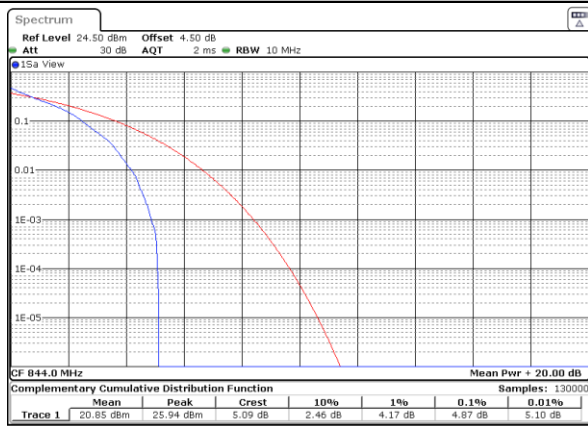
## Middle Channel / 1RB



## Middle Channel / Full RB



## Highest Channel / 1RB

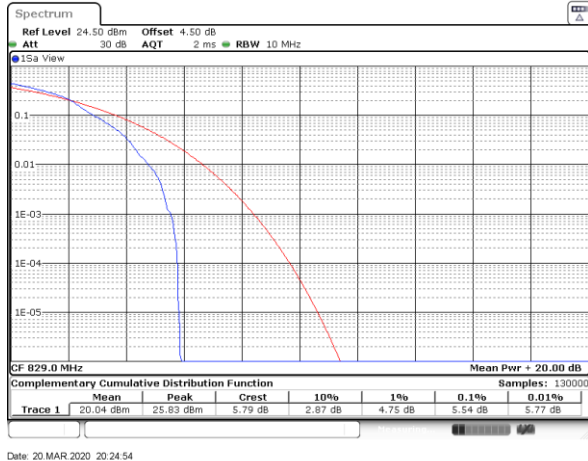


## Highest Channel / Full RB

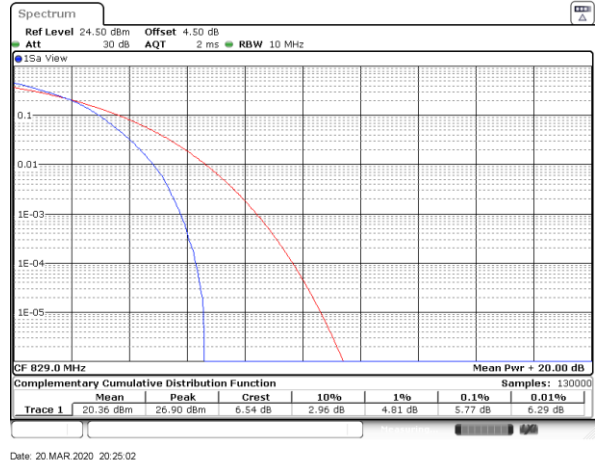


LTE Band 5 / 10MHz / 16QAM

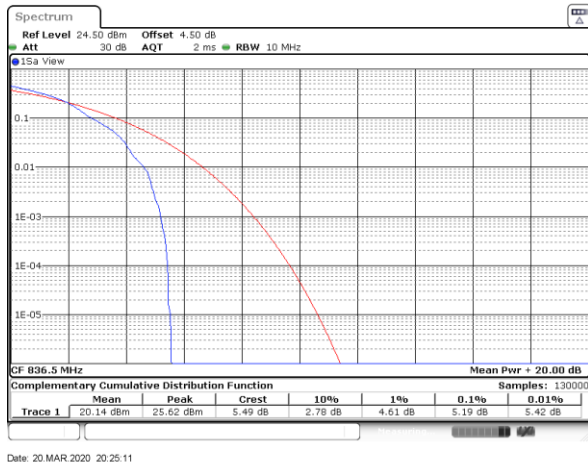
Lowest Channel / 1RB



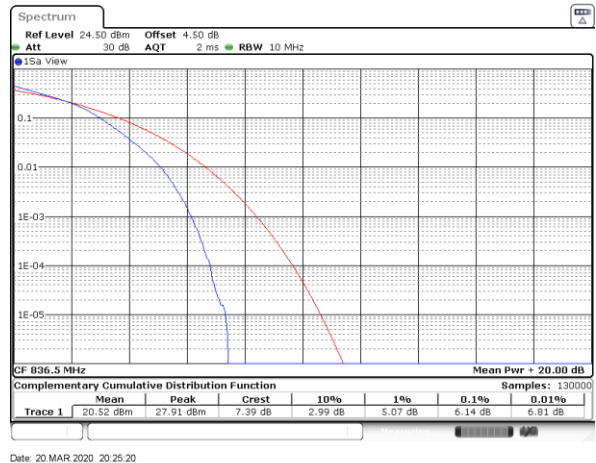
Lowest Channel / Full RB



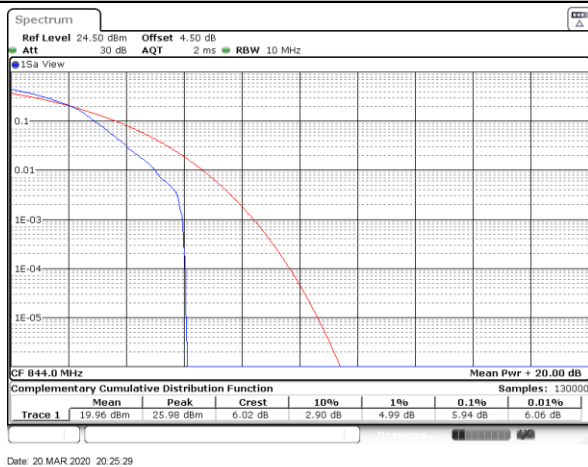
Middle Channel / 1RB



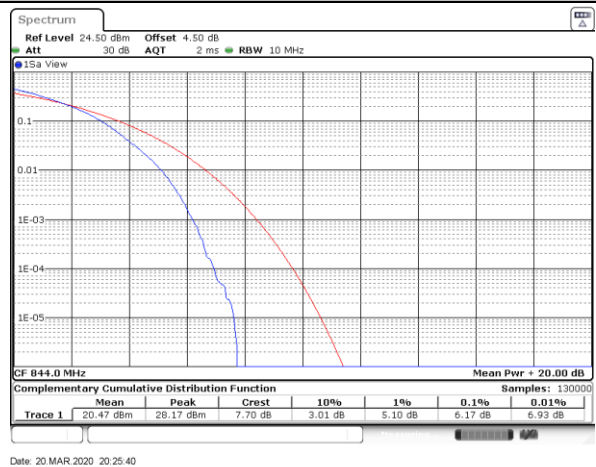
Middle Channel / Full RB



Highest Channel / 1RB



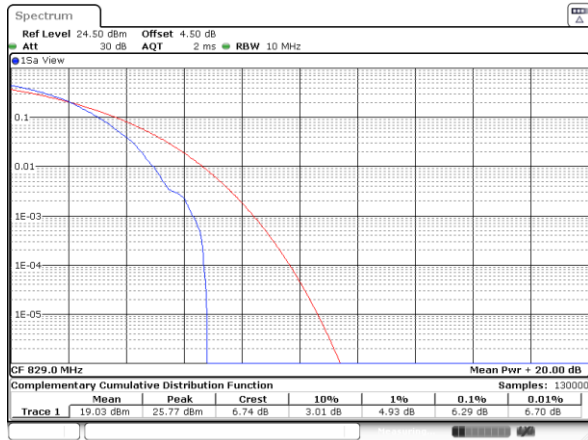
Highest Channel / Full RB



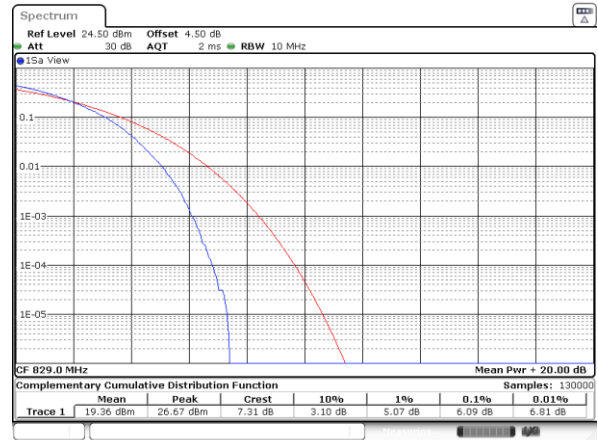


## LTE Band 5 / 10MHz / 64QAM

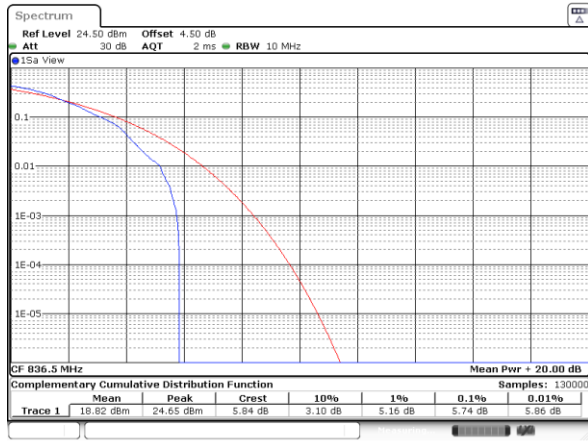
## Lowest Channel / 1RB



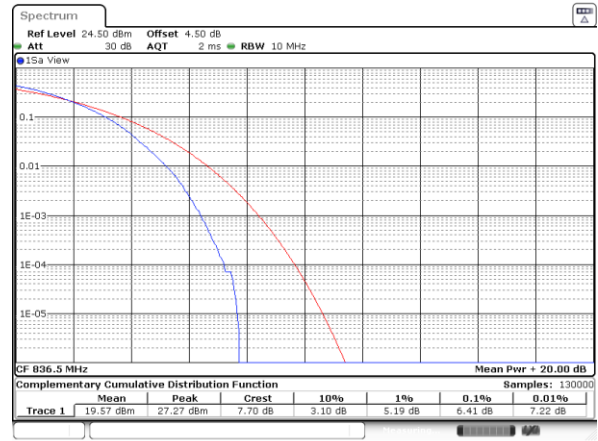
## Lowest Channel / Full RB



## Middle Channel / 1RB



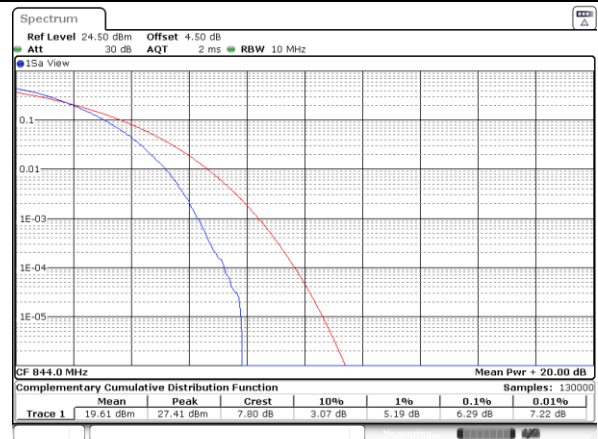
## Middle Channel / Full RB



## Highest Channel / 1RB



## Highest Channel / Full RB



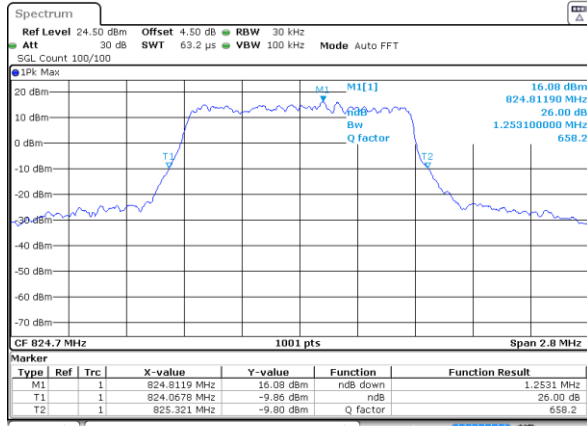
**26dB Bandwidth**

| Mode       | LTE Band 5 : 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  | 1.25                      | 1.29  | 2.96  | 2.99  | 4.81  | 4.81  | 9.67  | 9.71  | -     | -     | -     | -     |
| Middle CH  | 1.26                      | 1.28  | 2.96  | 2.96  | 4.86  | 4.85  | 9.69  | 9.61  | -     | -     | -     | -     |
| Highest CH | 1.27                      | 1.24  | 2.93  | 2.95  | 4.83  | 4.83  | 9.75  | 9.61  | -     | -     | -     | -     |
| Mode       | LTE Band 5 : 26dB BW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
| BW         | 1.4MHz                    |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                     |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | 1.31                      | -     | 2.93  | -     | 4.82  | -     | 9.67  | -     | -     | -     | -     | -     |
| Middle CH  | 1.28                      | -     | 2.96  | -     | 4.82  | -     | 9.79  | -     | -     | -     | -     | -     |
| Highest CH | 1.26                      | -     | 2.94  | -     | 4.85  | -     | 9.65  | -     | -     | -     | -     | -     |



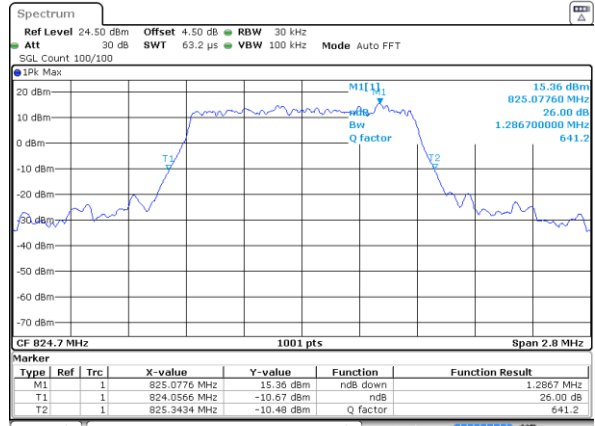
## LTE Band 5

## Lowest Channel / 1.4MHz / QPSK



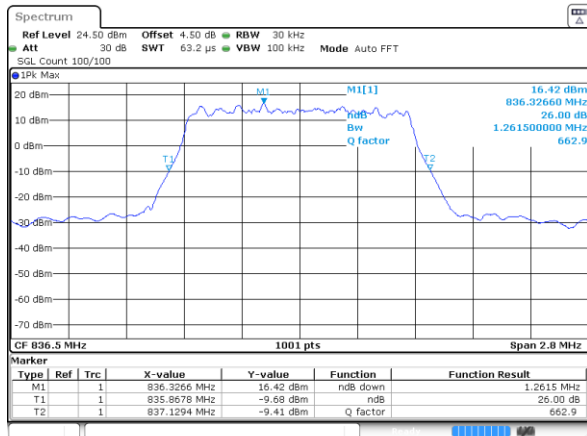
Date: 20 MAR 2020 19:02:48

## Lowest Channel / 1.4MHz / 16QAM



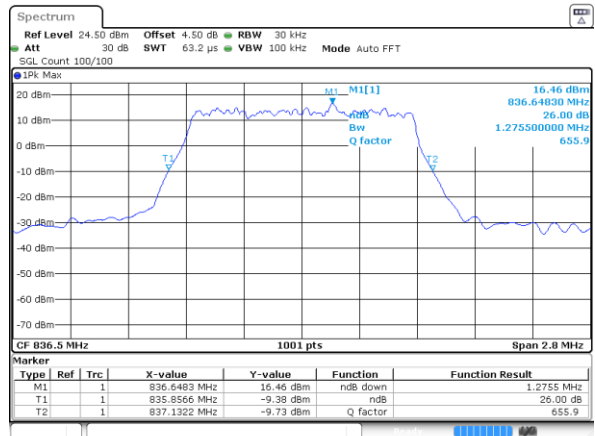
Date: 20 MAR 2020 19:02:38

## Middle Channel / 1.4MHz / QPSK



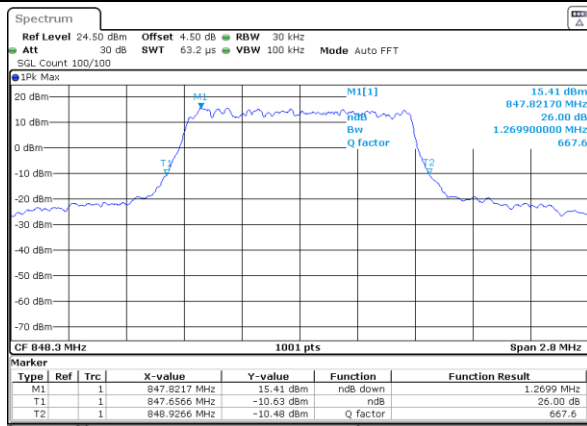
Date: 20 MAR 2020 19:12:14

## Middle Channel / 1.4MHz / 16QAM



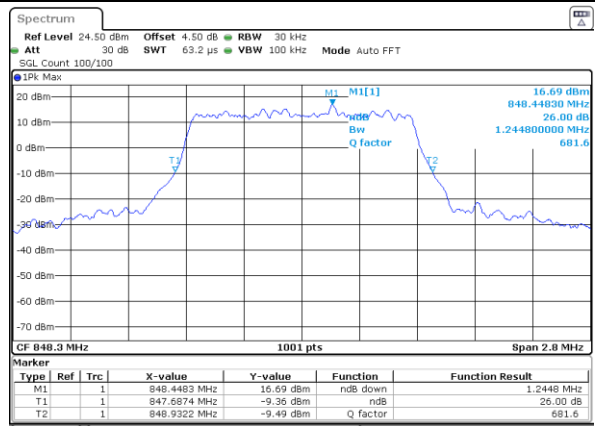
Date: 20 MAR 2020 19:12:24

## Highest Channel / 1.4MHz / QPSK



Date: 20 MAR 2020 19:14:43

## Highest Channel / 1.4MHz / 16QAM

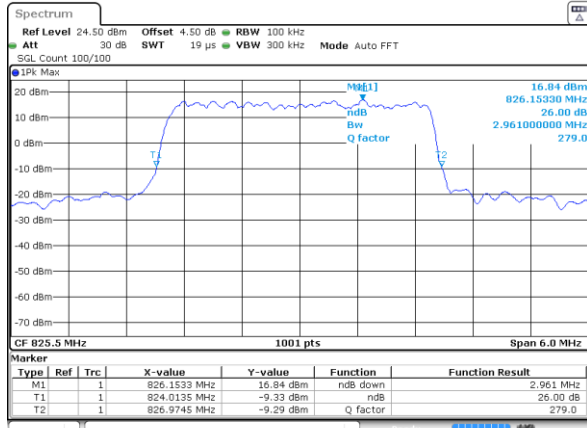


Date: 20 MAR 2020 19:14:53



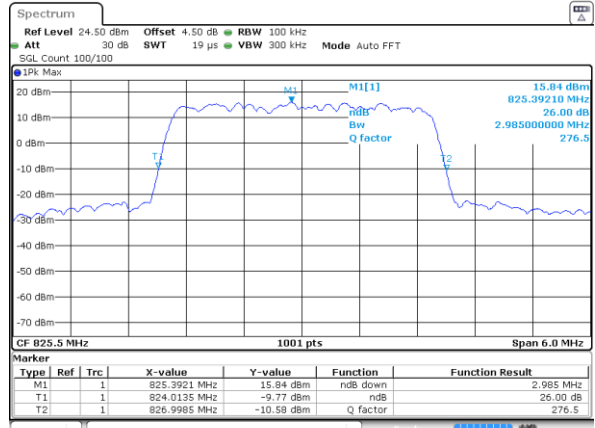
## LTE Band 5

## Lowest Channel / 3MHz / QPSK



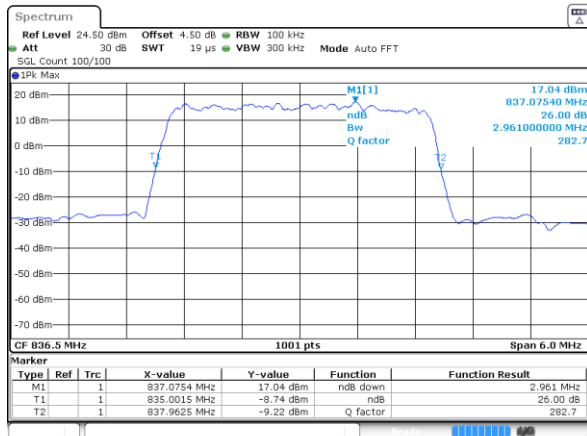
Date: 20 MAR 2020 19:23:41

## Lowest Channel / 3MHz / 16QAM



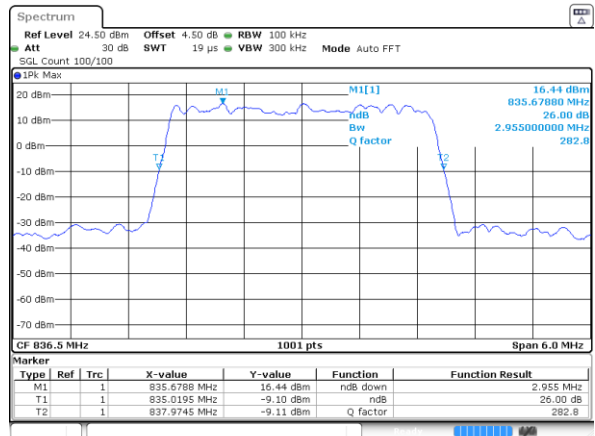
Date: 20 MAR 2020 19:23:51

## Middle Channel / 3MHz / QPSK



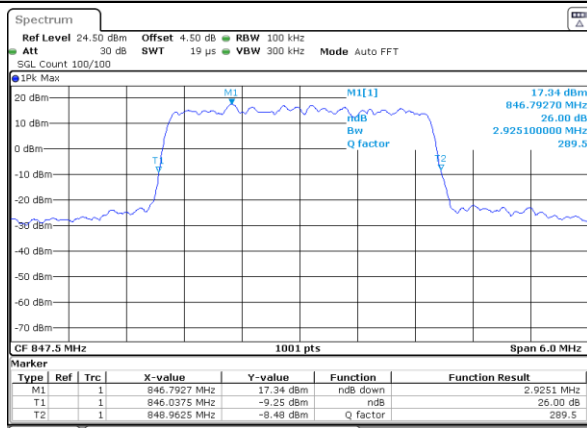
Date: 20 MAR 2020 19:32:39

## Middle Channel / 3MHz / 16QAM



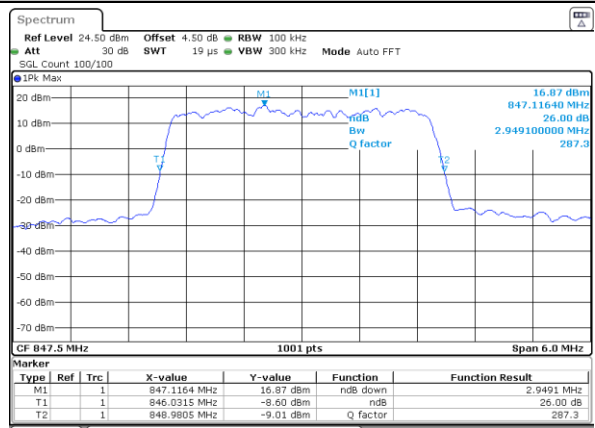
Date: 20 MAR 2020 19:32:49

## Highest Channel / 3MHz / QPSK



Date: 20 MAR 2020 19:35:08

## Highest Channel / 3MHz / 16QAM

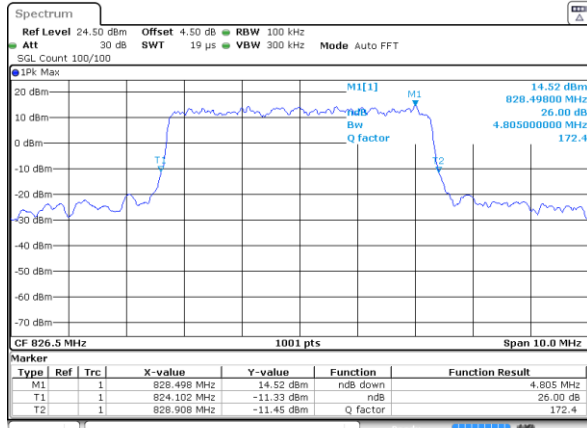


Date: 20 MAR 2020 19:35:18

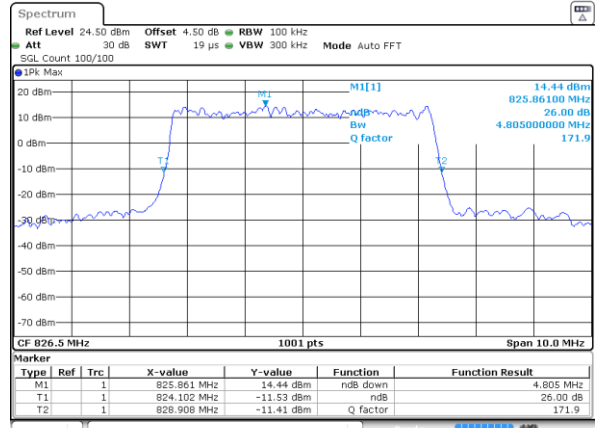


## LTE Band 5

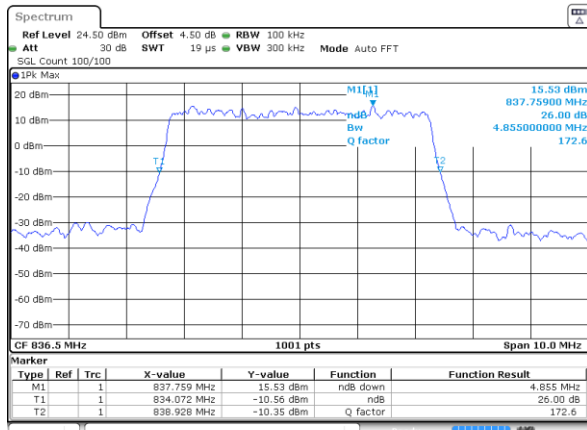
## Lowest Channel / 5MHz / QPSK



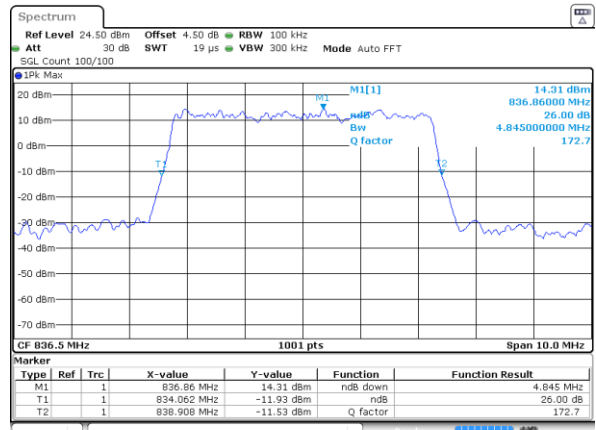
## Lowest Channel / 5MHz / 16QAM



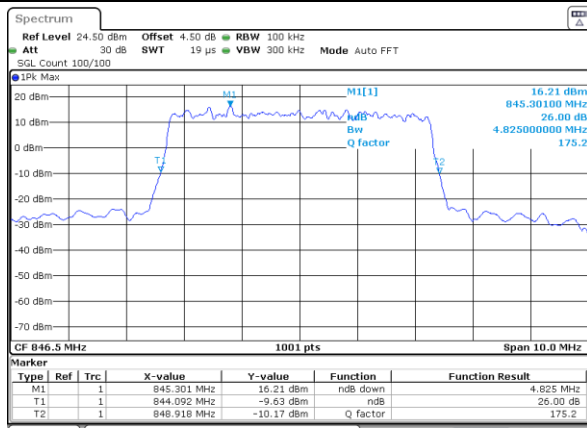
## Middle Channel / 5MHz / QPSK



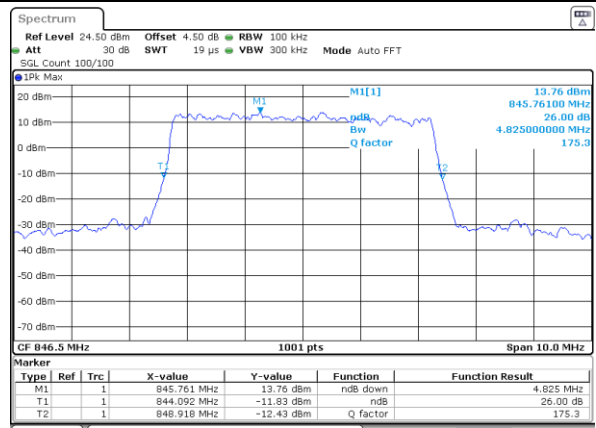
## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



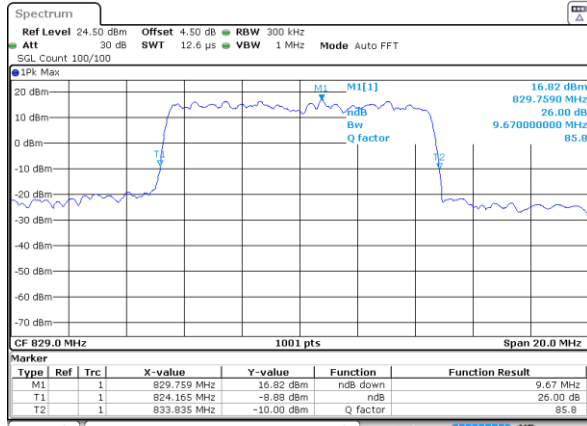
## Highest Channel / 5MHz / 16QAM



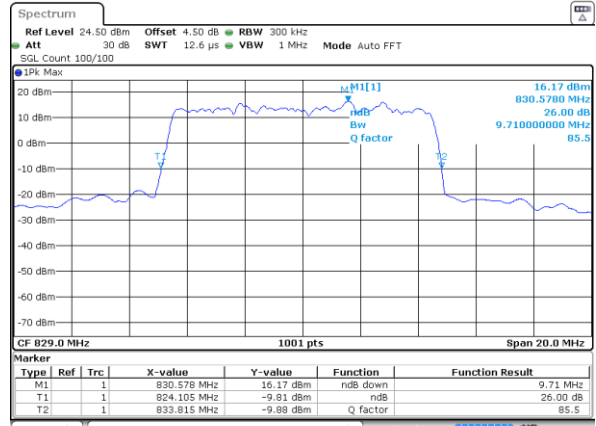


## LTE Band 5

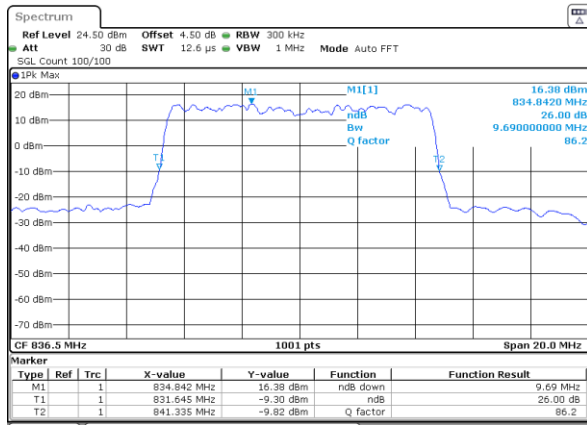
## Lowest Channel / 10MHz / QPSK



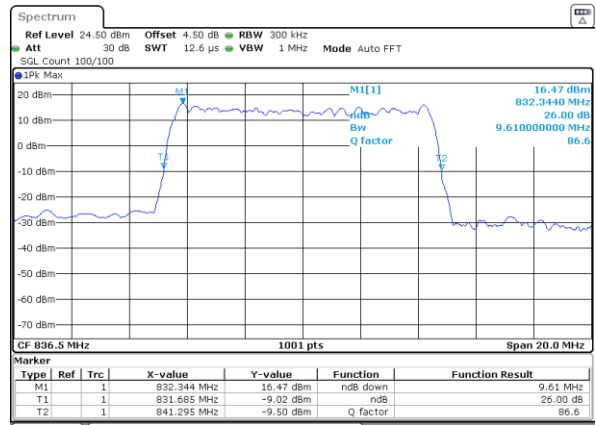
## Lowest Channel / 10MHz / 16QAM



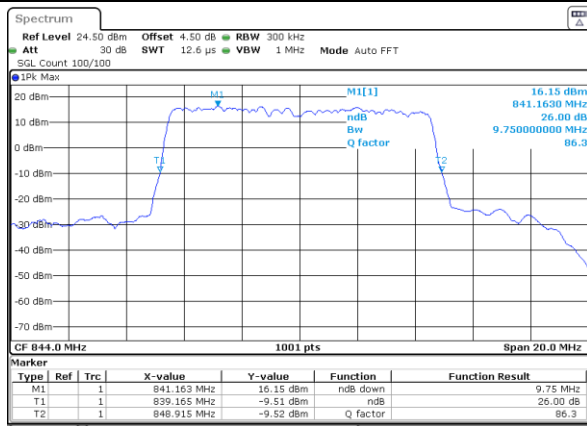
## Middle Channel / 10MHz / QPSK



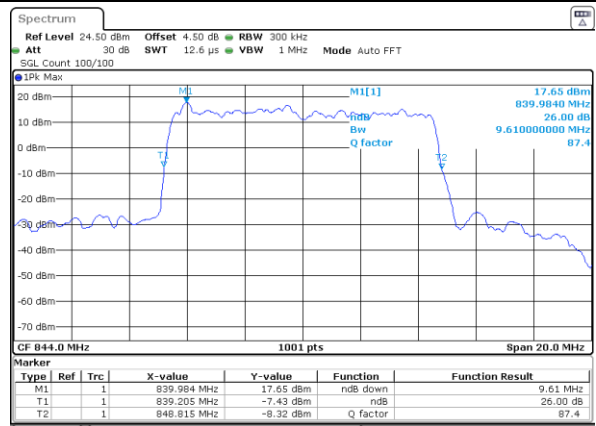
## Middle Channel / 10MHz / 16QAM



## Highest Channel / 10MHz / QPSK



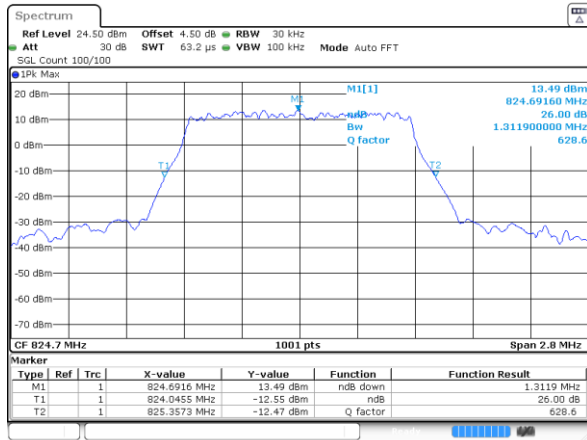
## Highest Channel / 10MHz / 16QAM



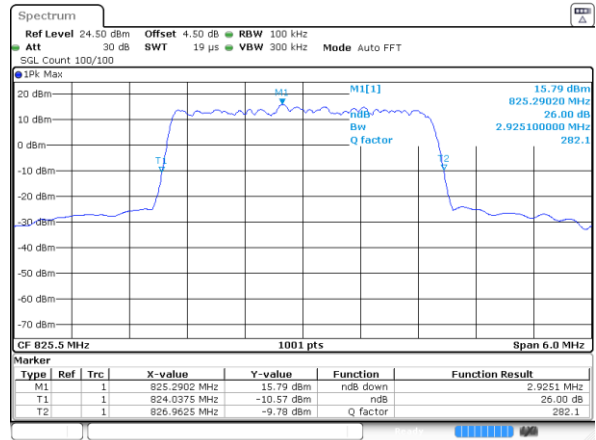


## LTE Band 5

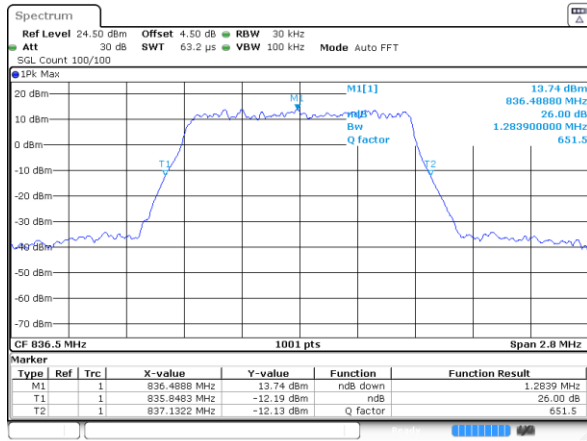
## Lowest Channel / 1.4MHz / 64QAM



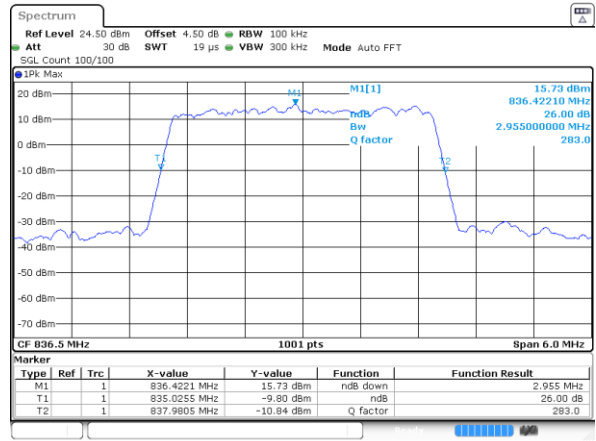
## Lowest Channel / 3MHz / 64QAM



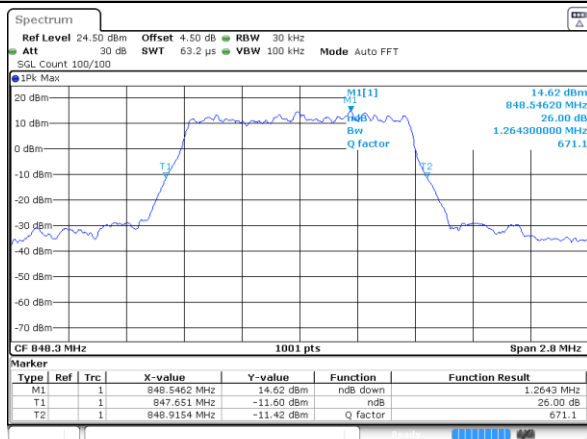
## Middle Channel / 1.4MHz / 64QAM



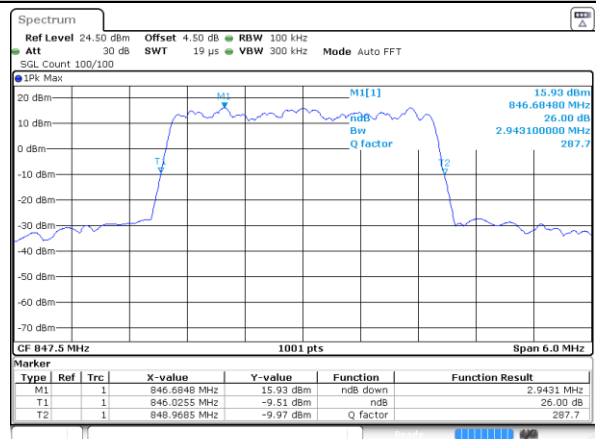
## Middle Channel / 3MHz / 64QAM



## Highest Channel / 1.4MHz / 64QAM



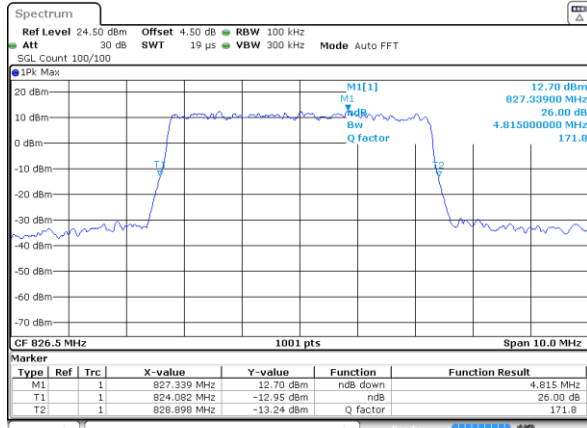
## Highest Channel / 3MHz / 64QAM





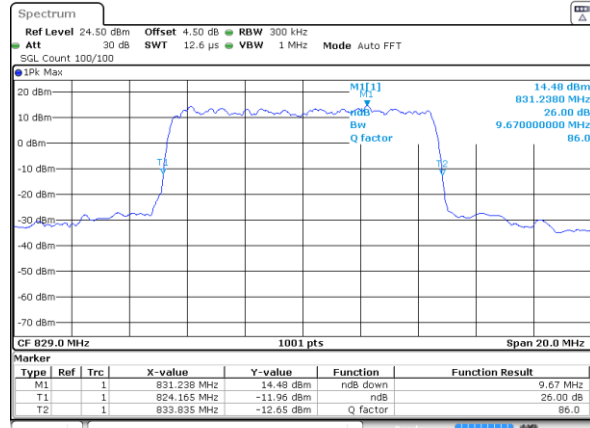
## LTE Band 5

## Lowest Channel / 5MHz / 64QAM



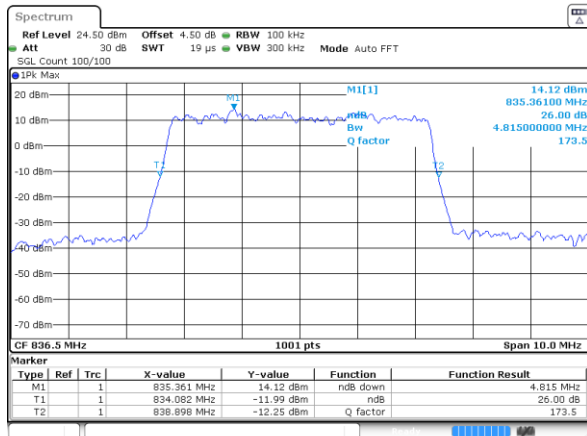
Date: 20 MAR 2020 20:45:26

## Lowest Channel / 10MHz / 64QAM



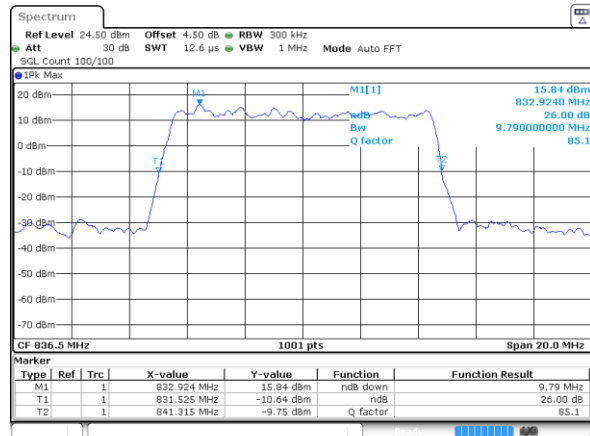
Date: 20 MAR 2020 20:55:39

## Middle Channel / 5MHz / 64QAM



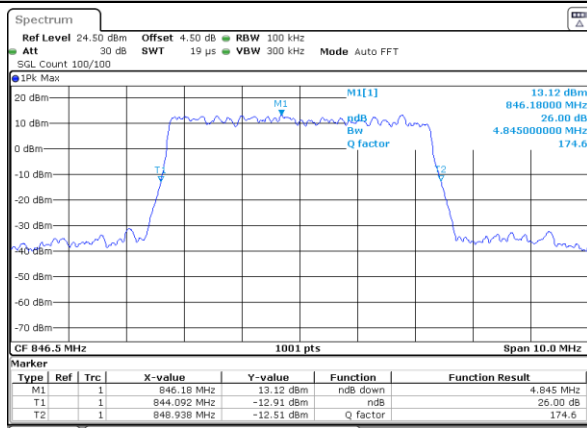
Date: 20 MAR 2020 20:50:49

## Middle Channel / 10MHz / 64QAM



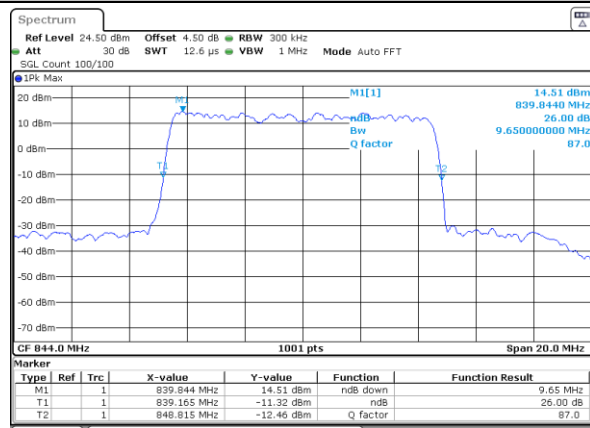
Date: 20 MAR 2020 21:01:02

## Highest Channel / 5MHz / 64QAM



Date: 20 MAR 2020 20:51:09

## Highest Channel / 10MHz / 64QAM



Date: 20 MAR 2020 21:01:22

**Occupied Bandwidth**

| Mode       | LTE Band 5 : 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  | 1.10                     | 1.08  | 2.72  | 2.70  | 4.49  | 4.48  | 9.03  | 9.05  | -     | -     | -     | -     |
| Middle CH  | 1.09                     | 1.09  | 2.72  | 2.73  | 4.48  | 4.48  | 9.01  | 8.99  | -     | -     | -     | -     |
| Highest CH | 1.09                     | 1.10  | 2.70  | 2.72  | 4.50  | 4.48  | 9.05  | 8.99  | -     | -     | -     | -     |
| Mode       | LTE Band 5 : 99%OBW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
| BW         | 1.4MHz                   |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                    |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | 1.09                     | -     | 2.72  | -     | 4.50  | -     | 9.01  | -     | -     | -     | -     | -     |
| Middle CH  | 1.09                     | -     | 2.72  | -     | 4.49  | -     | 9.03  | -     | -     | -     | -     | -     |
| Highest CH | 1.09                     | -     | 2.72  | -     | 4.49  | -     | 8.99  | -     | -     | -     | -     | -     |