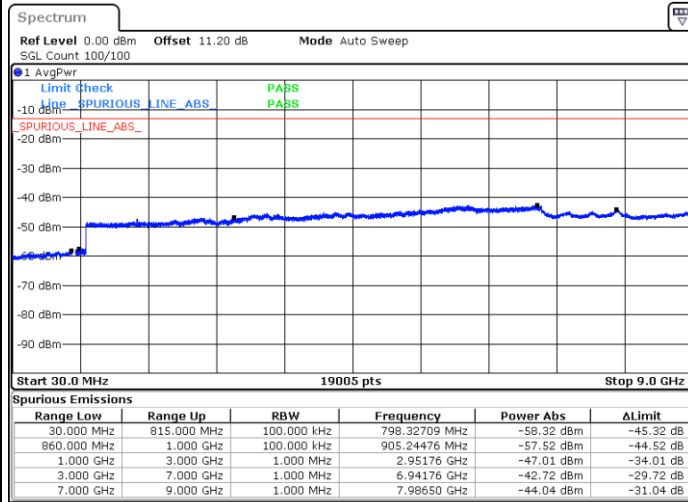




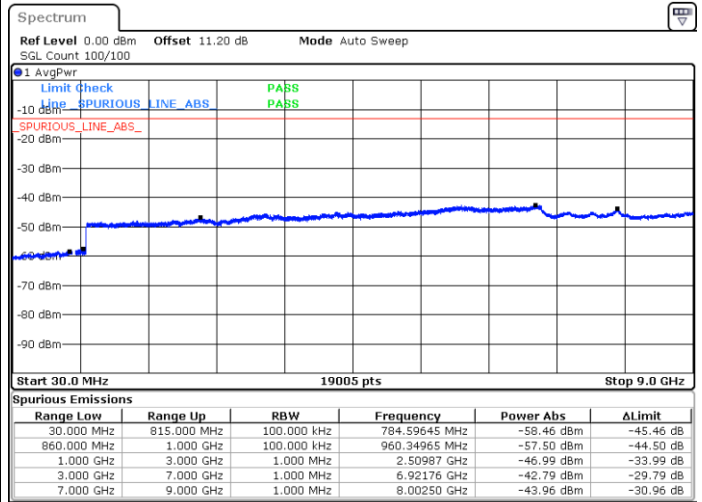
## LTE Band 5 / 3MHz

## Middle Channel / QPSK



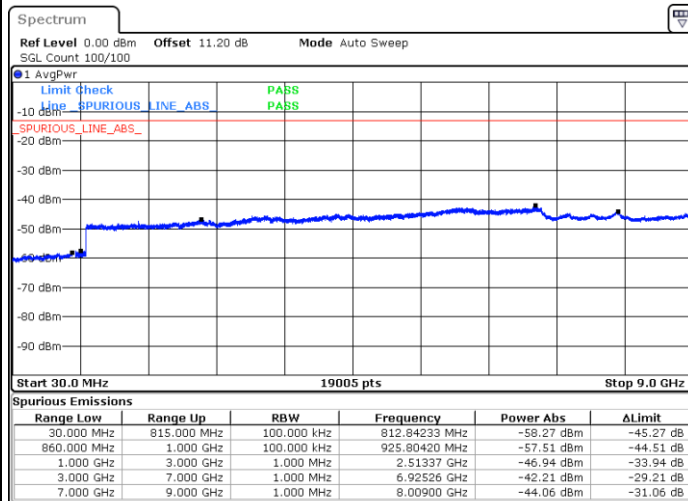
Date: 30.MAY.2020 16:42:44

## Middle Channel / 16QAM



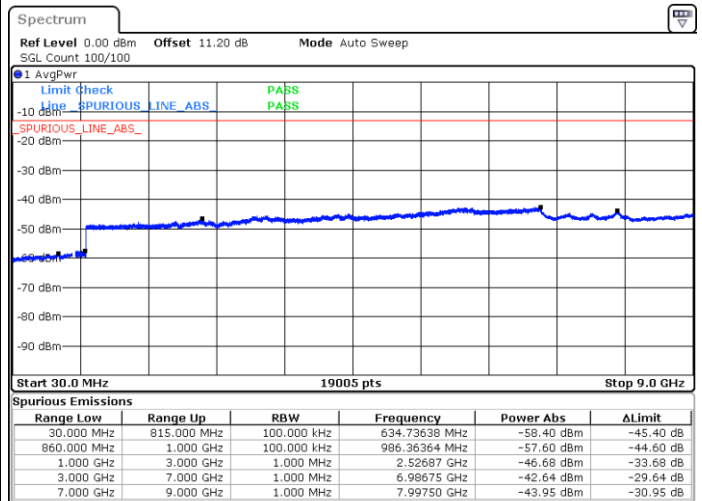
Date: 30.MAY.2020 16:43:24

## Highest Channel / QPSK



Date: 30.MAY.2020 16:51:31

## Highest Channel / 16QAM



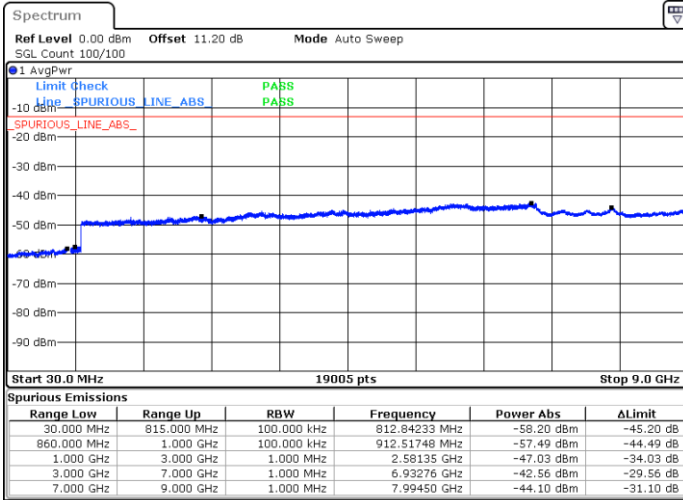
Date: 30.MAY.2020 16:52:11



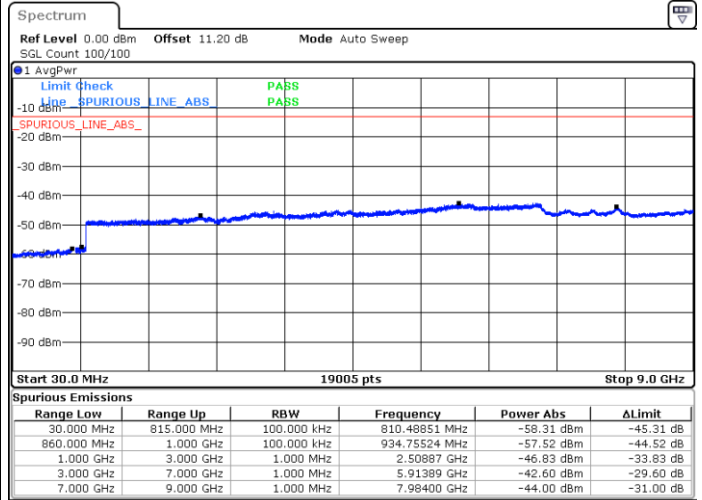
## LTE Band 5 / 5MHz

## Lowest Channel / QPSK

## Lowest Channel / 16QAM



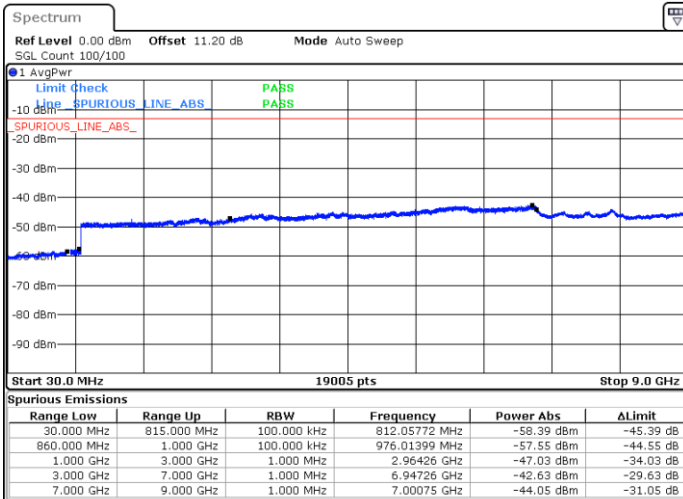
Date: 30.MAY.2020 17:10:09



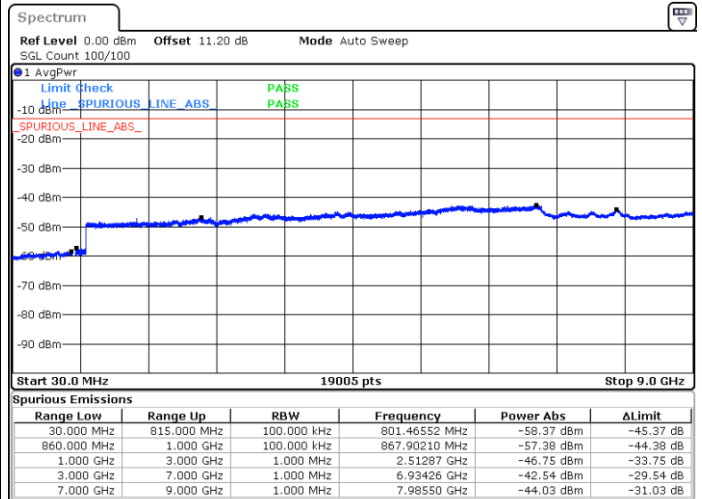
Date: 30.MAY.2020 17:10:49

## Middle Channel / QPSK

## Middle Channel / 16QAM



Date: 30.MAY.2020 17:12:14



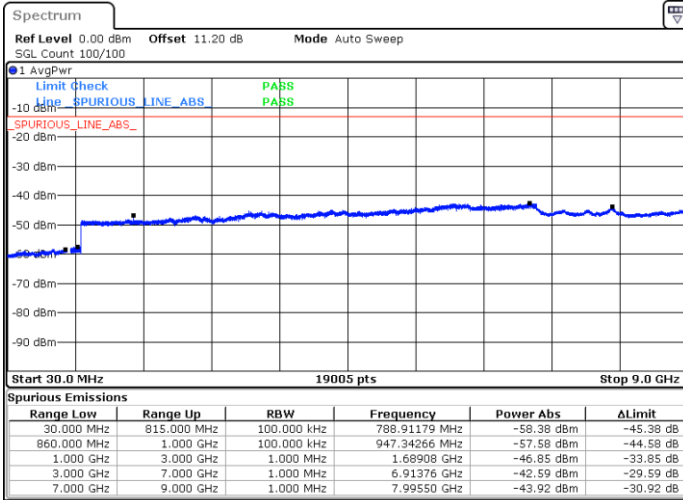
Date: 30.MAY.2020 17:12:54



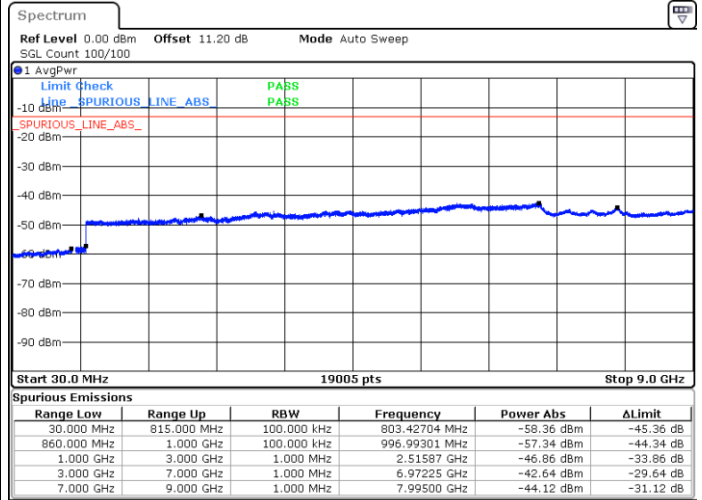
## LTE Band 5 / 5MHz

## Highest Channel / QPSK

## Highest Channel / 16QAM



Date: 30.MAY.2020 17:21:01

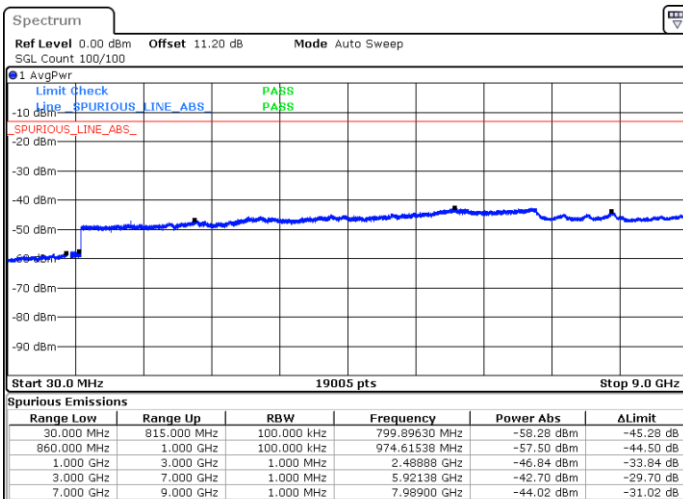


Date: 30.MAY.2020 17:21:41

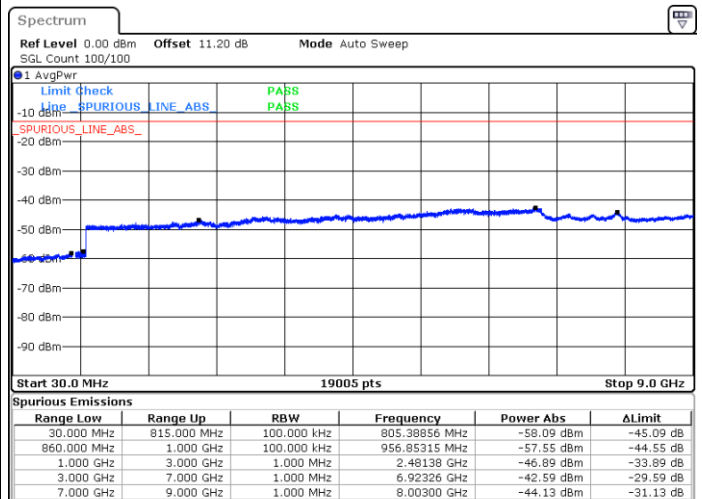
## LTE Band 5 / 10MHz

## Lowest Channel / QPSK

## Lowest Channel / 16QAM



Date: 30.MAY.2020 17:39:00



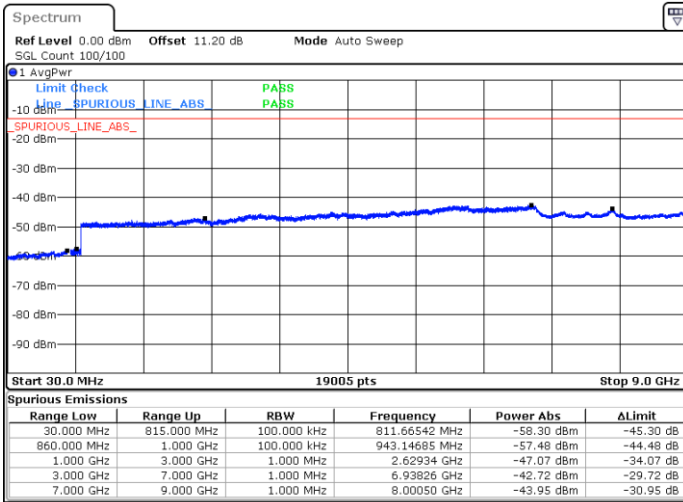
Date: 30.MAY.2020 17:39:39



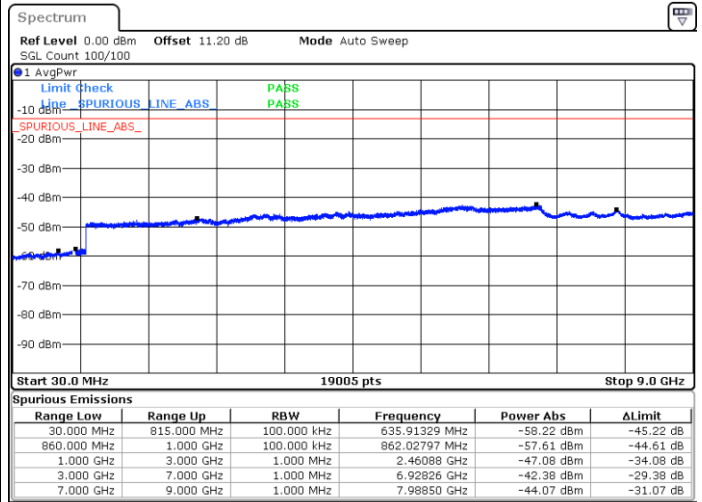
## LTE Band 5 / 10MHz

## Middle Channel / QPSK

## Middle Channel / 16QAM



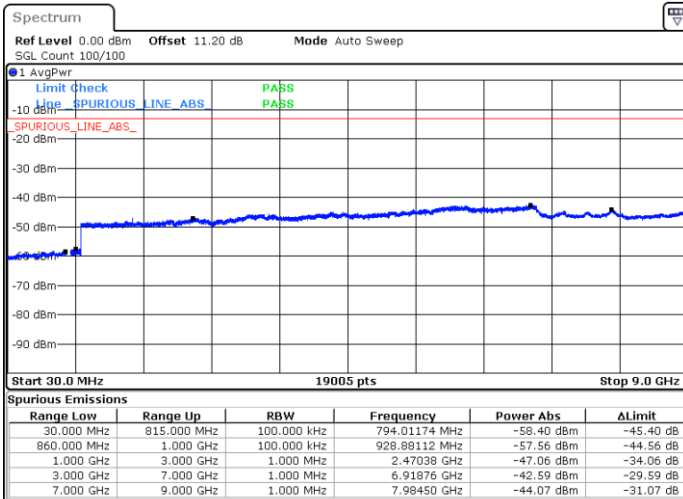
Date: 30.MAY.2020 17:41:05



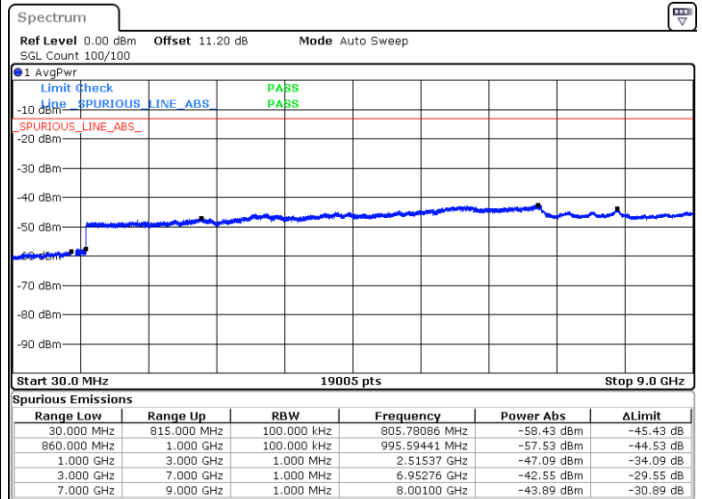
Date: 30.MAY.2020 17:41:44

## Highest Channel / QPSK

## Highest Channel / 16QAM



Date: 30.MAY.2020 17:49:51



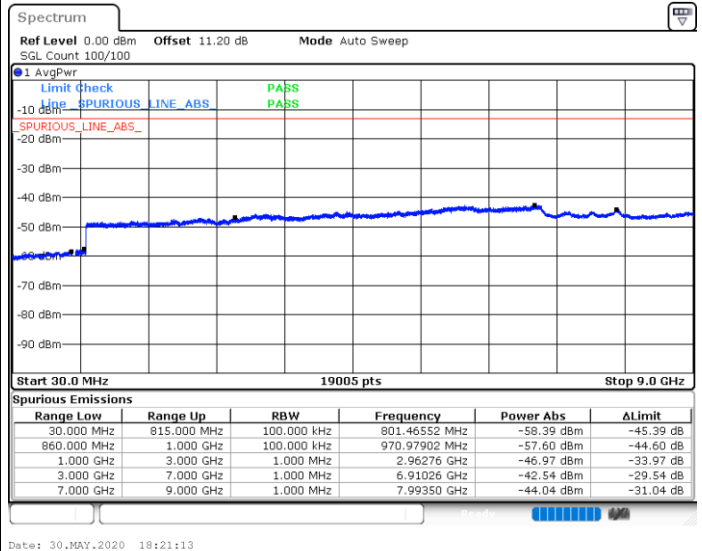
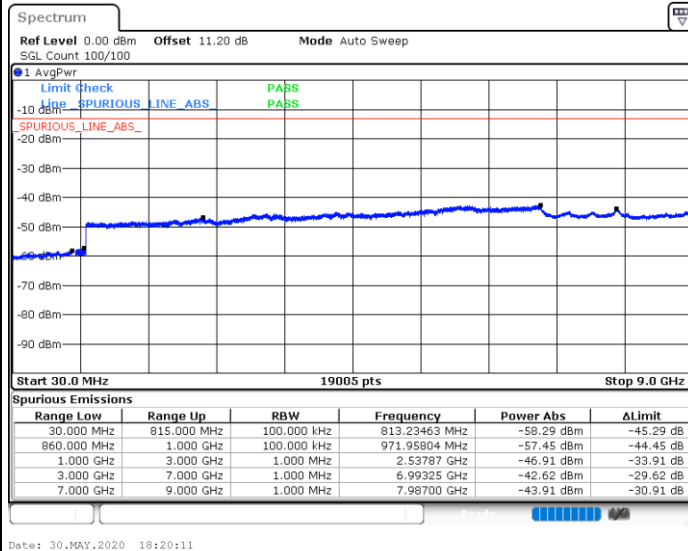
Date: 30.MAY.2020 17:50:31



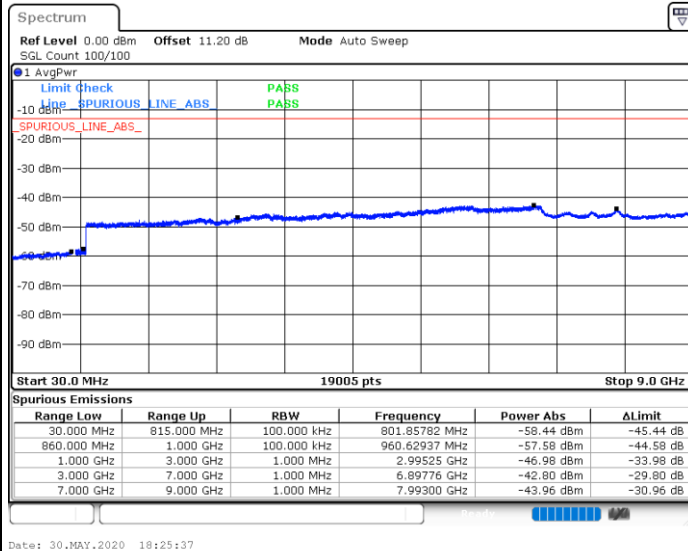
## LTE Band 5 / 1.4MHz

## Lowest Channel / 64QAM

## Middle Channel / 64QAM



## Highest Channel / 64QAM

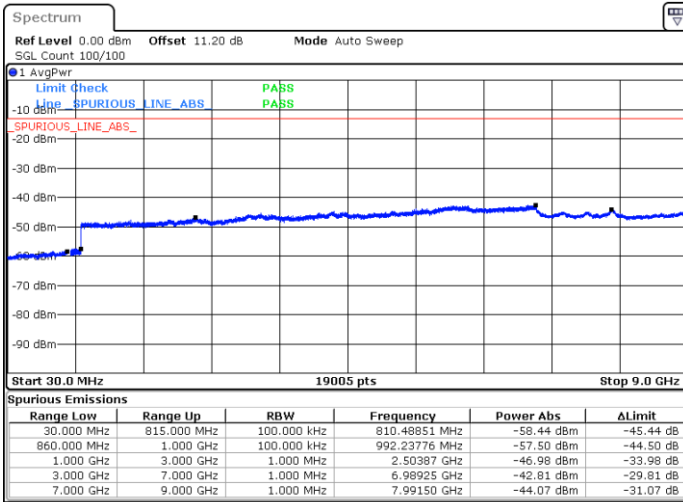




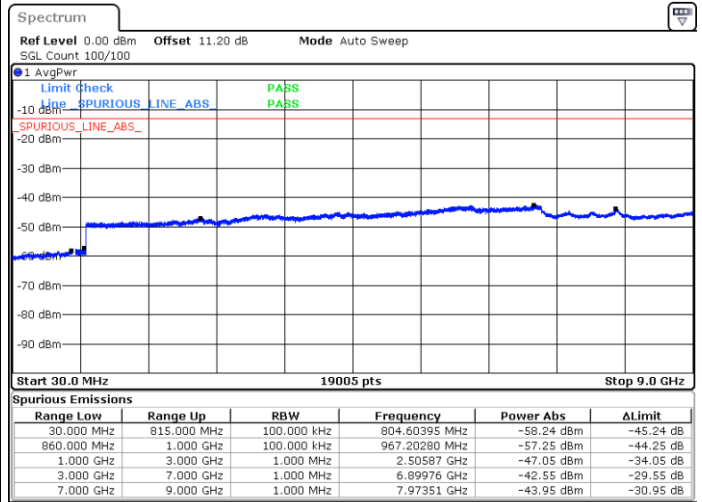
## LTE Band 5 / 3MHz

## Lowest Channel / 64QAM

## Middle Channel / 64QAM

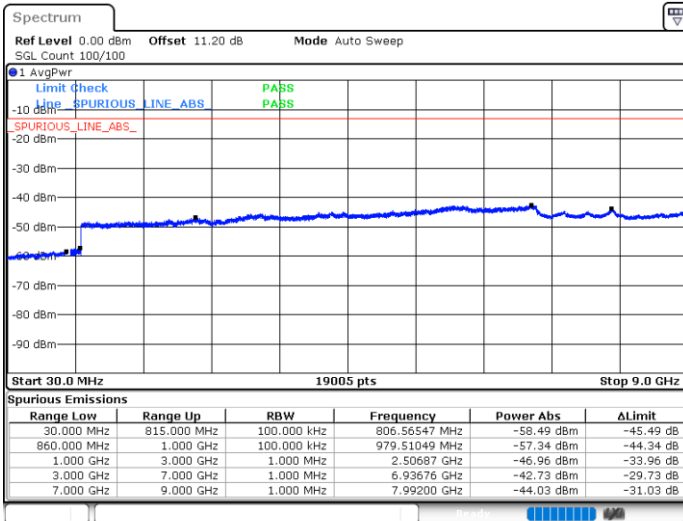


Date: 30.MAY.2020 16:56:35



Date: 30.MAY.2020 16:57:37

## Highest Channel / 64QAM



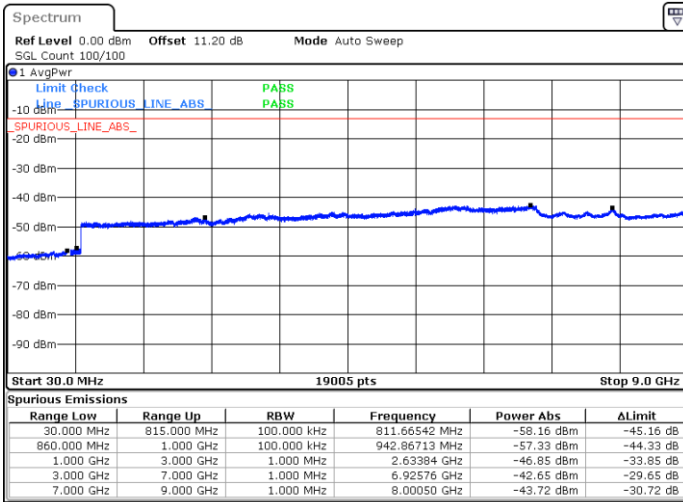
Date: 30.MAY.2020 17:02:01



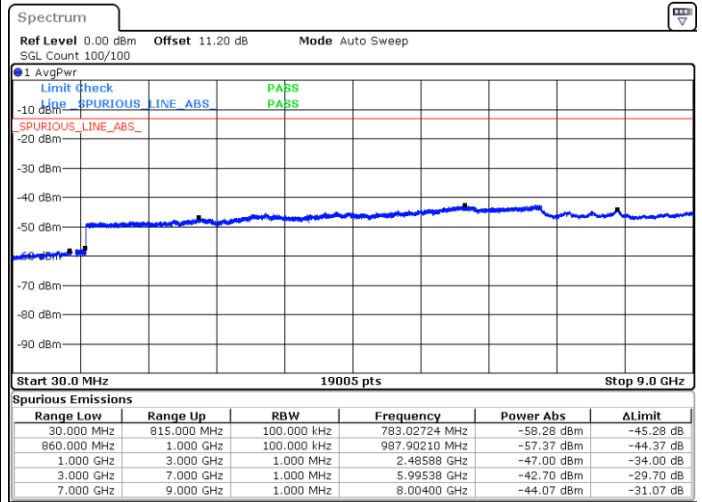
## LTE Band 5 / 5MHz

## Lowest Channel / 64QAM

## Middle Channel / 64QAM

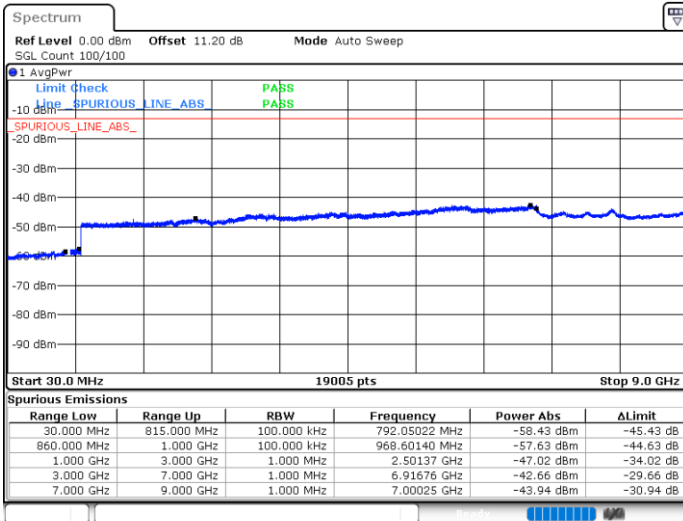


Date: 30.MAY.2020 17:26:05



Date: 30.MAY.2020 17:27:07

## Highest Channel / 64QAM



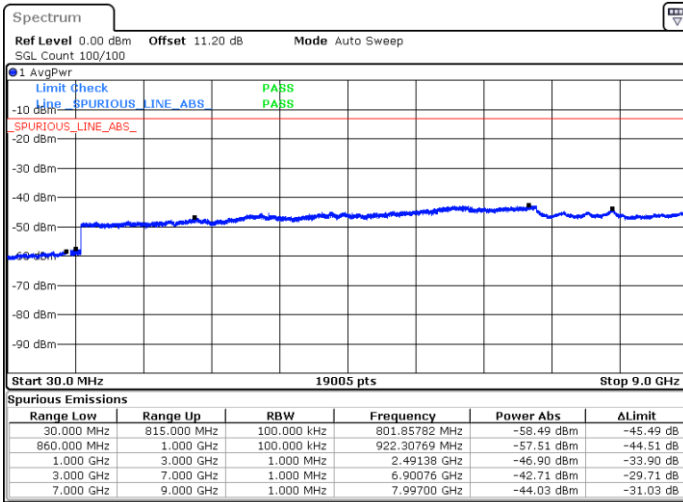
Date: 30.MAY.2020 17:51:13



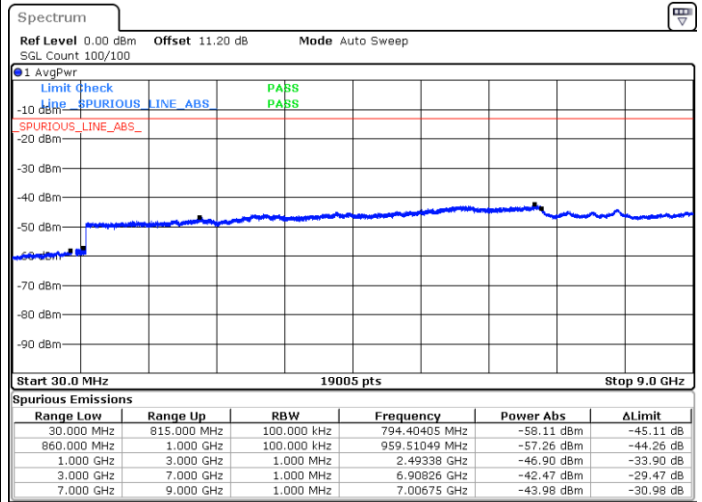
## LTE Band 5 / 10MHz

## Lowest Channel / 64QAM

## Middle Channel / 64QAM

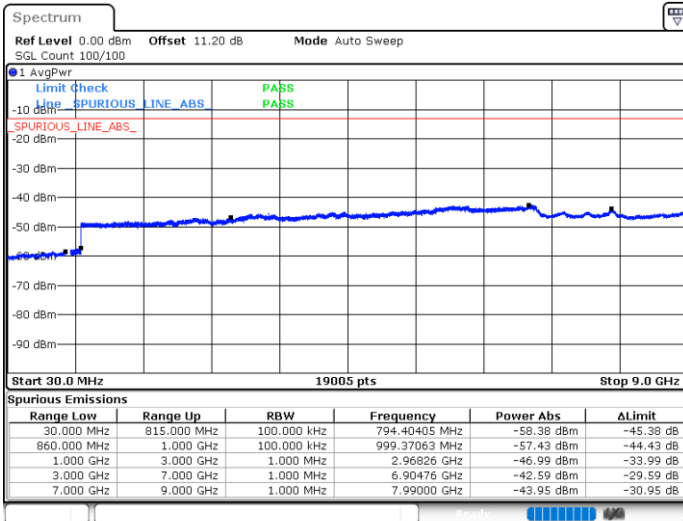


Date: 30.MAY.2020 17:55:38



Date: 30.MAY.2020 17:56:40

## Highest Channel / 64QAM



Date: 30.MAY.2020 18:01:03

## Frequency Stability

| Test Conditions  |                   | LTE Band 5 (QPSK) / Middle Channel | Limit  |
|------------------|-------------------|------------------------------------|--------|
| Temperature (°C) | Voltage (Volt)    | BW 10MHz                           | 2.5ppm |
|                  |                   | Deviation (ppm)                    | Result |
| 50               | Normal Voltage    | 0.0005                             | PASS   |
| 40               | Normal Voltage    | 0.0011                             |        |
| 30               | Normal Voltage    | 0.0016                             |        |
| 20(Ref.)         | Normal Voltage    | 0.0000                             |        |
| 10               | Normal Voltage    | 0.0004                             |        |
| 0                | Normal Voltage    | 0.0013                             |        |
| -10              | Normal Voltage    | 0.0016                             |        |
| -20              | Normal Voltage    | 0.0014                             |        |
| -30              | Normal Voltage    | 0.0002                             |        |
| 20               | Maximum Voltage   | 0.0007                             |        |
| 20               | Normal Voltage    | 0.0000                             |        |
| 20               | Battery End Point | 0.0002                             |        |

**Note:**

1. Normal Voltage =4.0 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.45 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 7

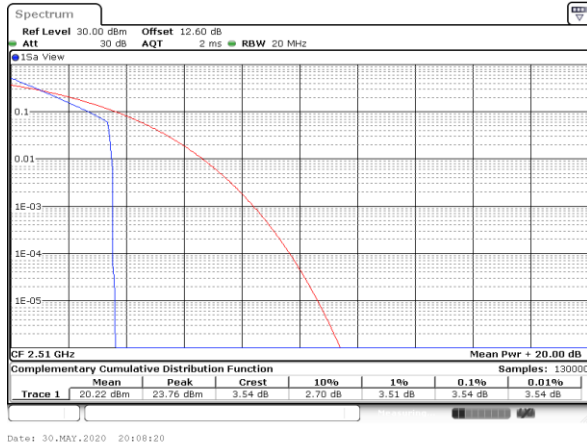
**Peak-to-Average Ratio**

| Mode       | LTE Band 7 / 20MHz |         |       |         |             |
|------------|--------------------|---------|-------|---------|-------------|
| Mod.       | QPSK               |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | 3.54               | 4.90    | 5.16  | 5.83    | PASS        |
| Middle CH  | 3.54               | 4.99    | 5.30  | 5.94    |             |
| Highest CH | 3.62               | 4.75    | 5.30  | 5.88    |             |
| Mode       | LTE Band 7 / 20MHz |         |       |         |             |
| Mod.       | 64QAM              |         |       |         | Limit: 13dB |
| RB Size    | 1RB                | Full RB |       |         | Result      |
| Lowest CH  | 6.67               | 6.43    | -     | -       | PASS        |
| Middle CH  | 6.84               | 6.38    | -     | -       |             |
| Highest CH | 6.43               | 6.38    | -     | -       |             |

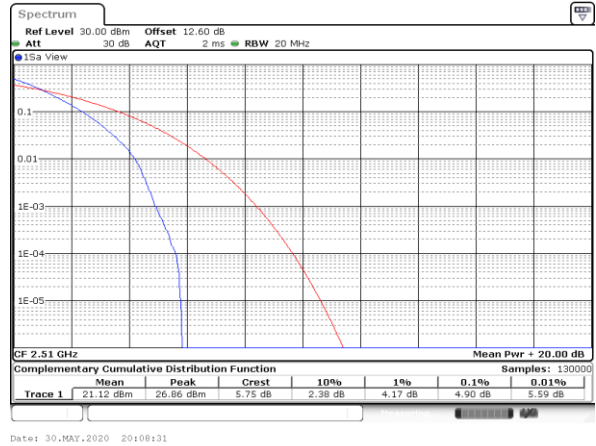


## LTE Band 7 / 20MHz / QPSK

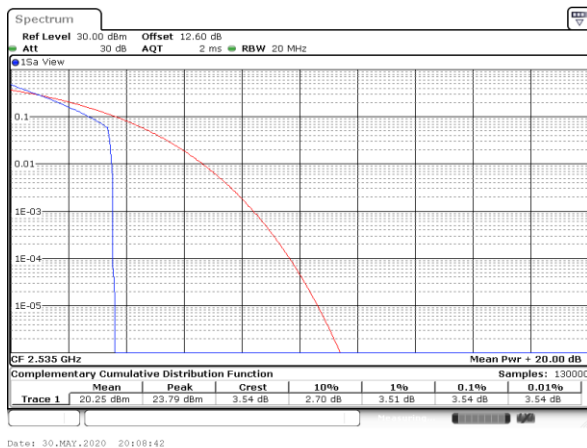
## Lowest Channel / 1RB



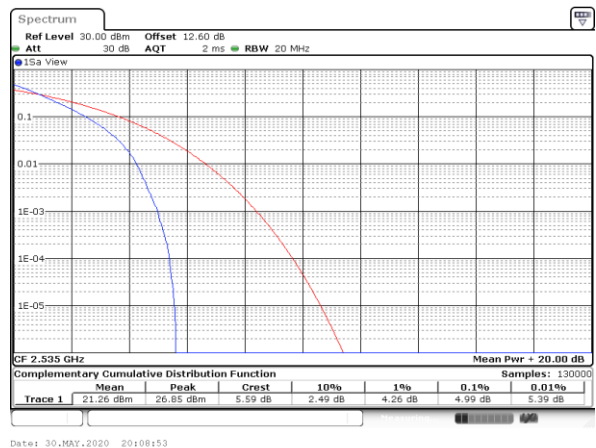
## Lowest Channel / Full RB



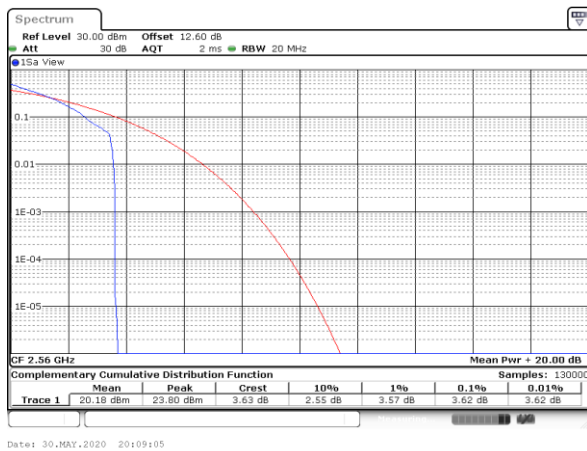
## Middle Channel / 1RB



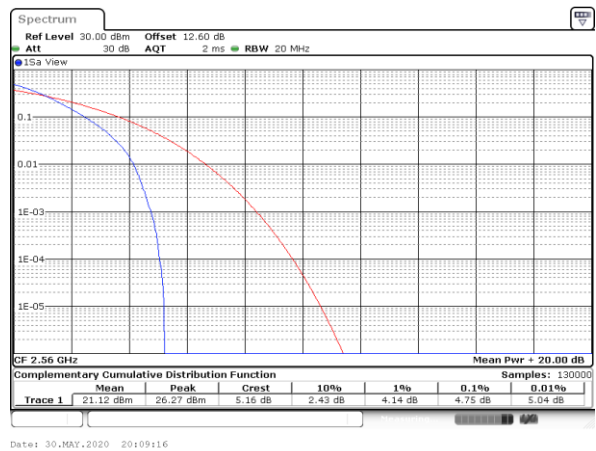
## Middle Channel / Full RB



## Highest Channel / 1RB



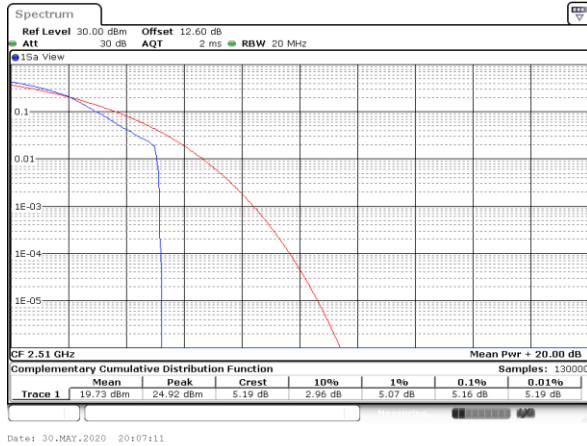
## Highest Channel / Full RB



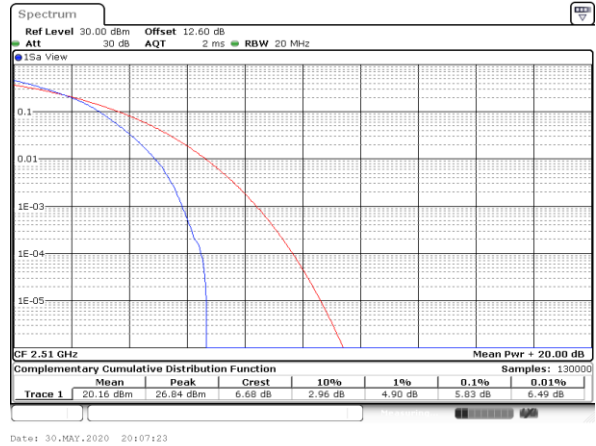


## LTE Band 7 / 20MHz / 16QAM

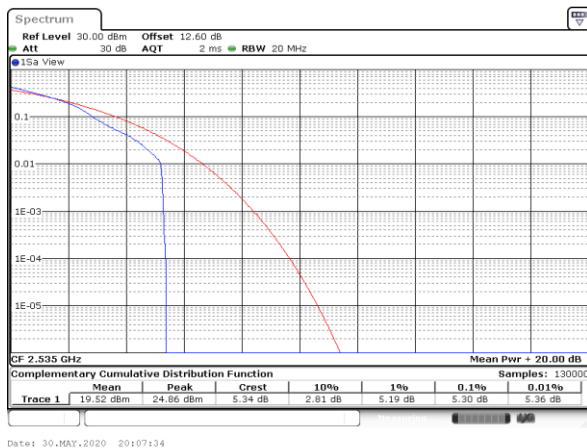
## Lowest Channel / 1RB



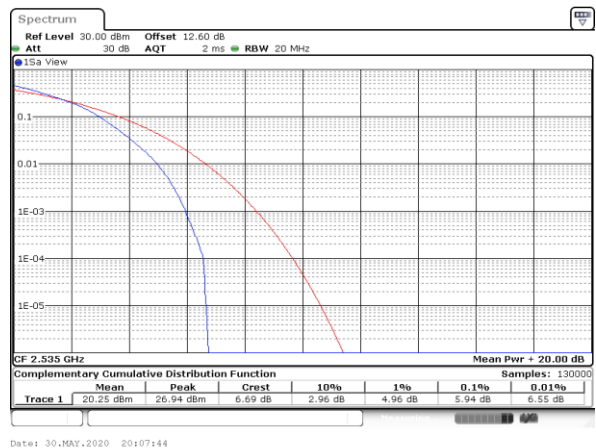
## Lowest Channel / Full RB



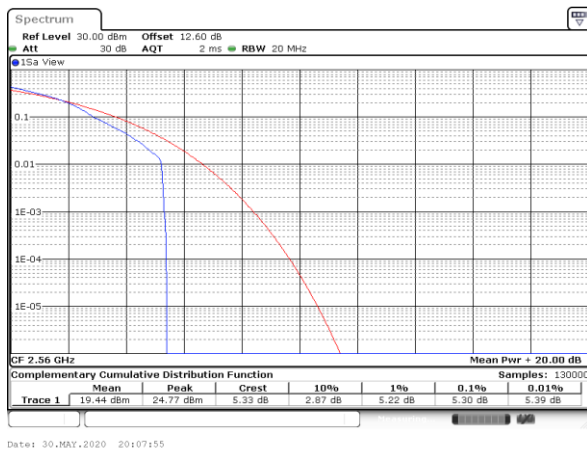
## Middle Channel / 1RB



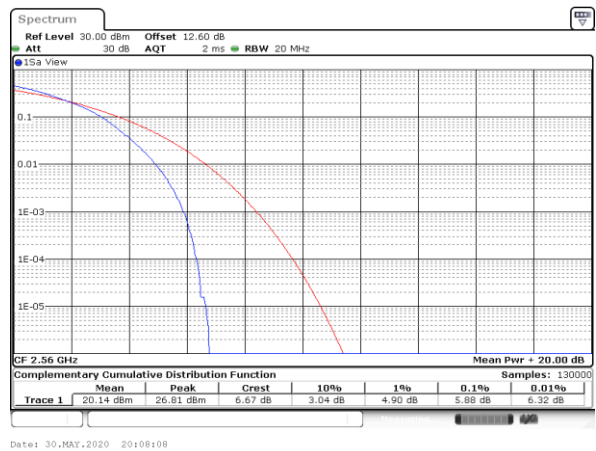
## Middle Channel / Full RB



## Highest Channel / 1RB



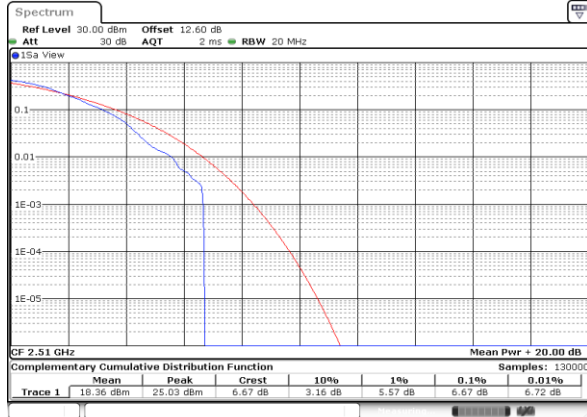
## Highest Channel / Full RB



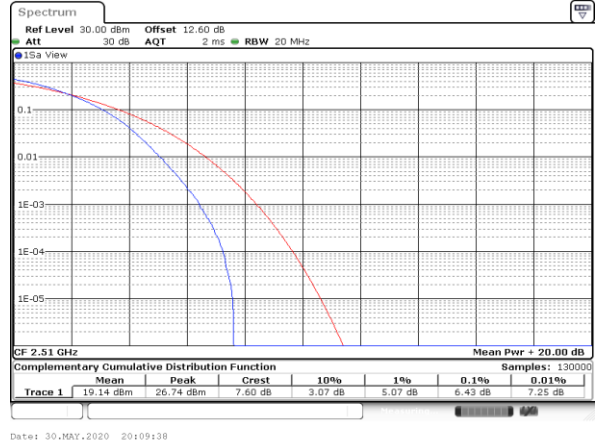


## LTE Band 7 / 20MHz / 64QAM

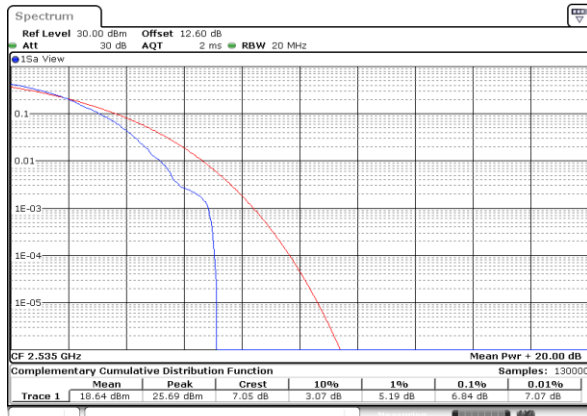
## Lowest Channel / 1RB



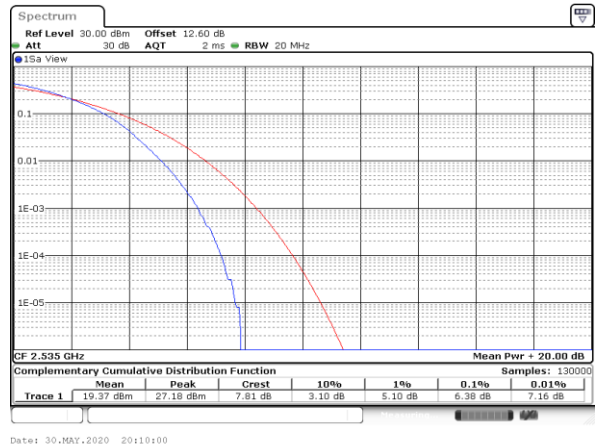
## Lowest Channel / Full RB



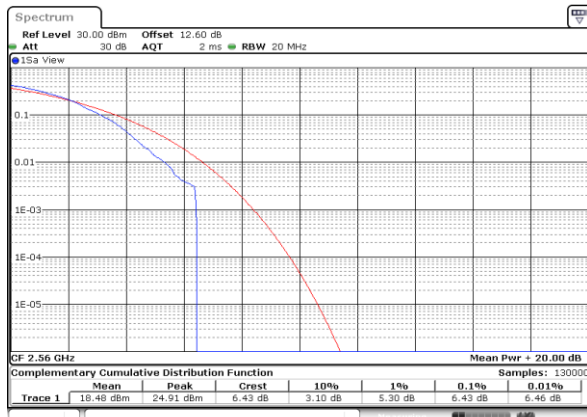
## Middle Channel / 1RB



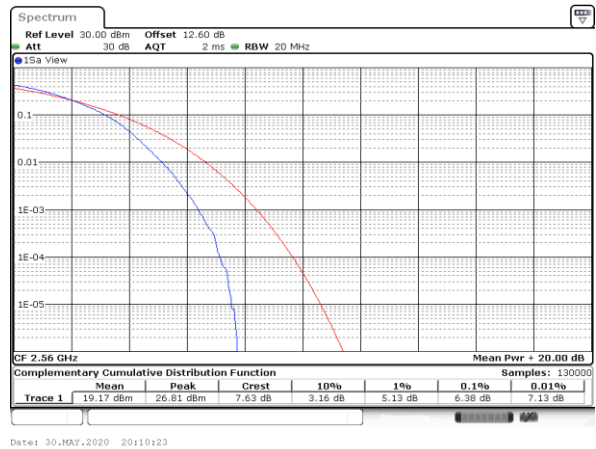
## Middle Channel / Full RB



## Highest Channel / 1RB



## Highest Channel / Full RB



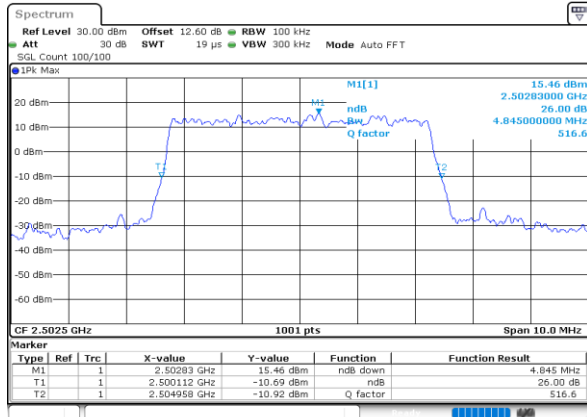
**26dB Bandwidth**

| Mode       | LTE Band 7 : 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  | -                         | -     | -     | -     | 4.85  | 4.93  | 9.89  | 9.73  | 14.24 | 14.39 | 18.62 | 19.26 |
| Middle CH  | -                         | -     | -     | -     | 4.93  | 4.89  | 9.77  | 9.89  | 14.30 | 14.48 | 18.74 | 18.70 |
| Highest CH | -                         | -     | -     | -     | 4.95  | 4.89  | 9.85  | 9.77  | 14.24 | 14.39 | 19.06 | 18.82 |
| Mode       | LTE Band 7 : 26dB BW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
| BW         | 1.4MHz                    |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                     |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | -                         | -     | -     | -     | 4.98  | -     | 9.79  | -     | 14.24 | -     | 19.02 | -     |
| Middle CH  | -                         | -     | -     | -     | 4.92  | -     | 9.75  | -     | 14.36 | -     | 18.86 | -     |
| Highest CH | -                         | -     | -     | -     | 4.95  | -     | 9.73  | -     | 14.27 | -     | 19.10 | -     |

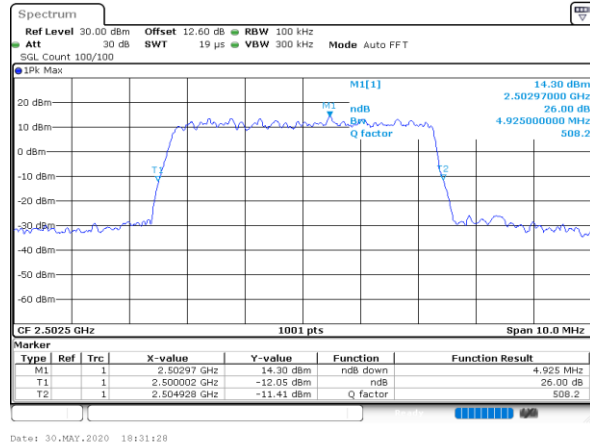


## LTE Band 7

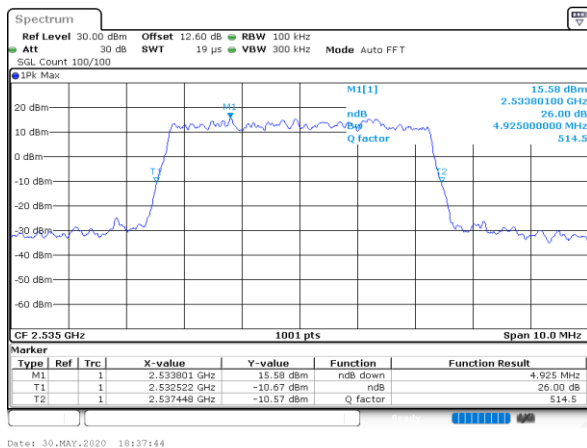
## Lowest Channel / 5MHz / QPSK



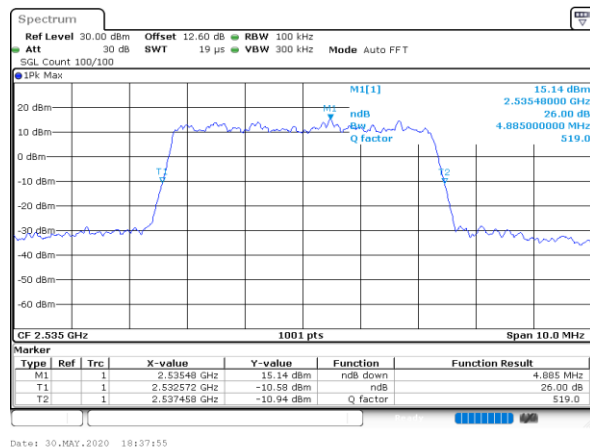
## Lowest Channel / 5MHz / 16QAM



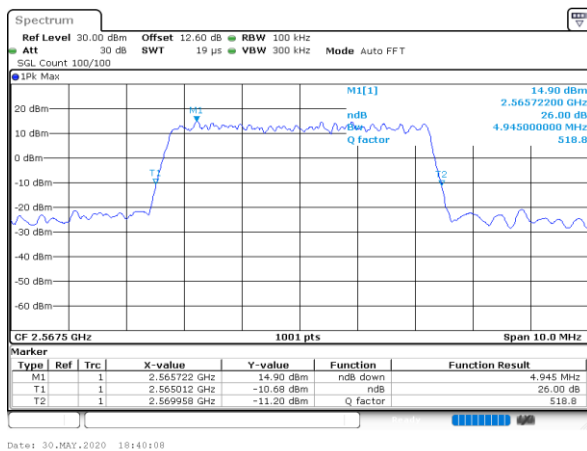
## Middle Channel / 5MHz / QPSK



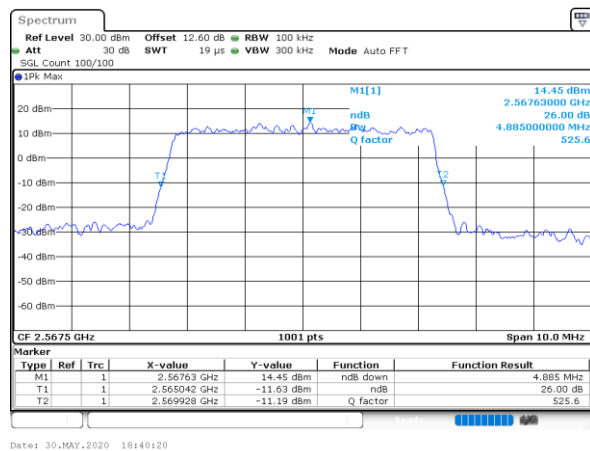
## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



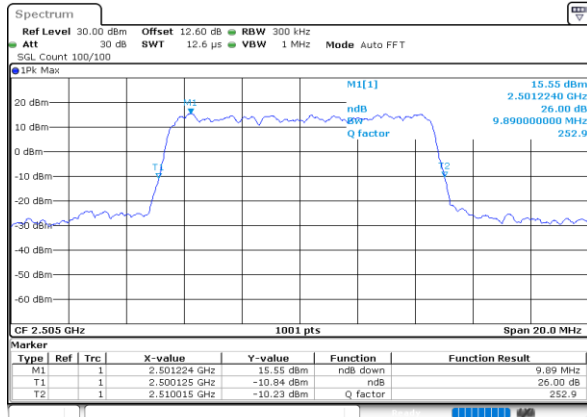
## Highest Channel / 5MHz / 16QAM



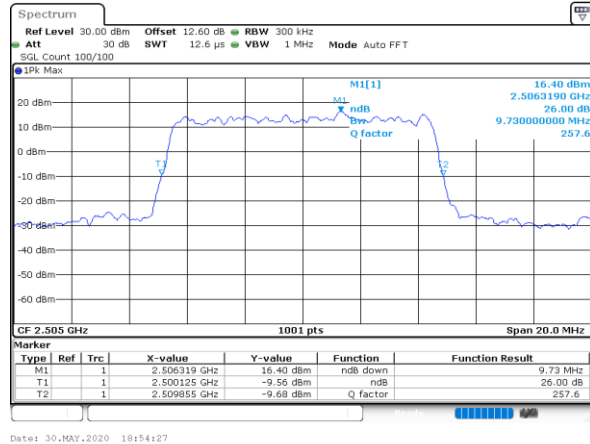


## LTE Band 7

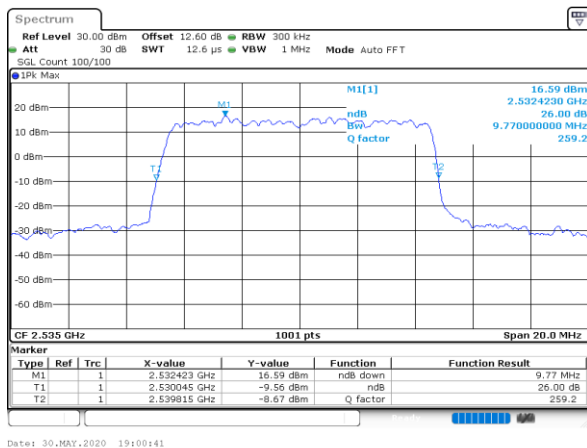
## Lowest Channel / 10MHz / QPSK



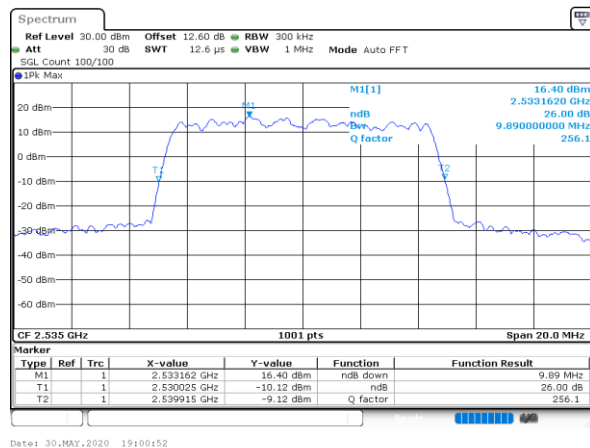
## Lowest Channel / 10MHz / 16QAM



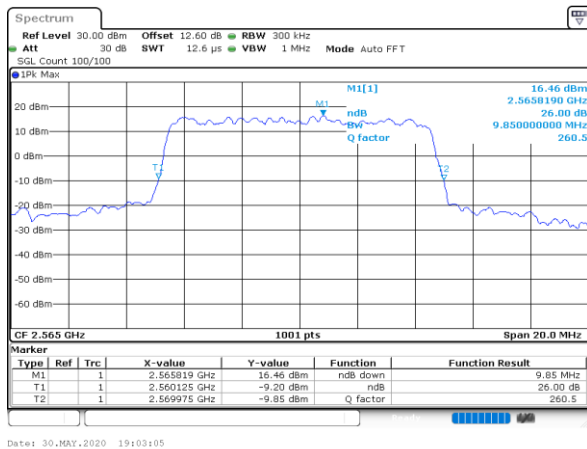
## Middle Channel / 10MHz / QPSK



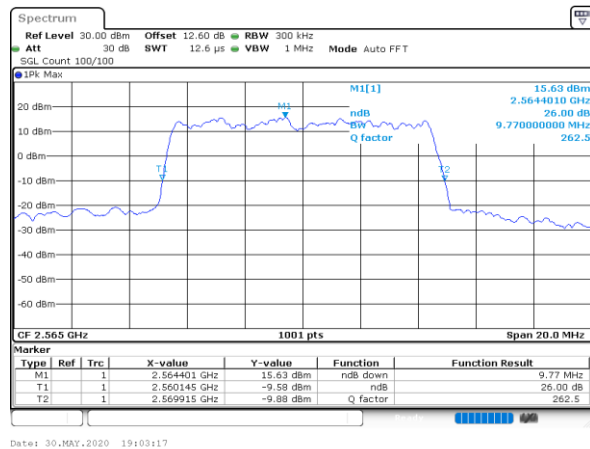
## Middle Channel / 10MHz / 16QAM



## Highest Channel / 10MHz / QPSK



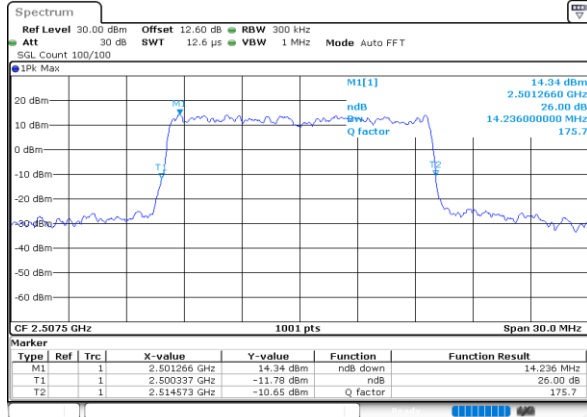
## Highest Channel / 10MHz / 16QAM



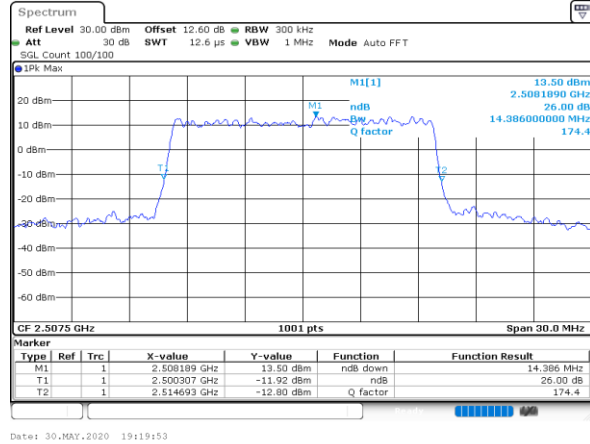


## LTE Band 7

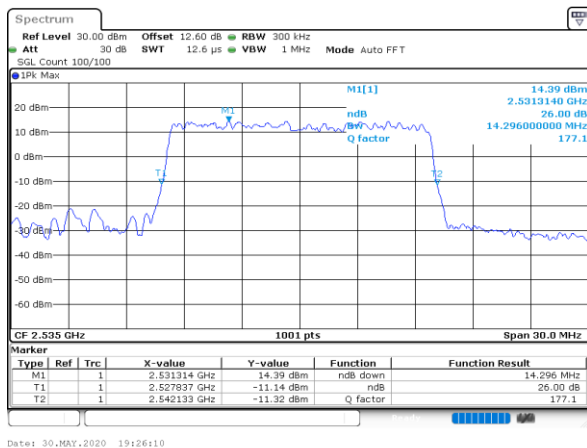
## Lowest Channel / 15MHz / QPSK



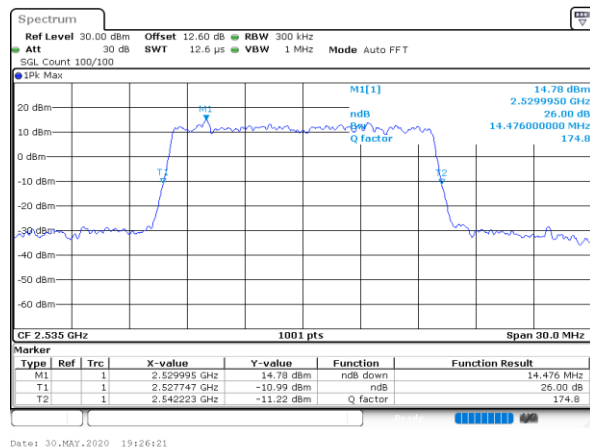
## Lowest Channel / 15MHz / 16QAM



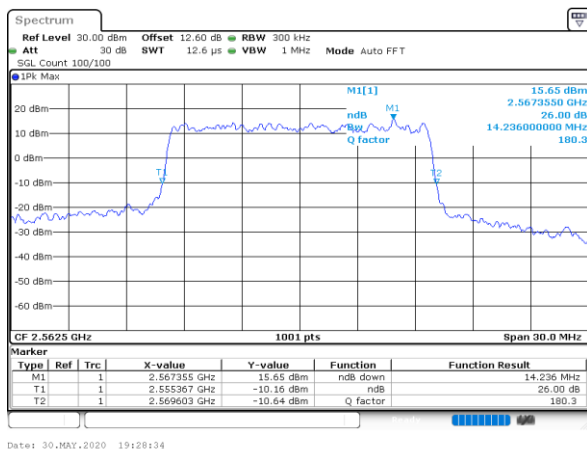
## Middle Channel / 15MHz / QPSK



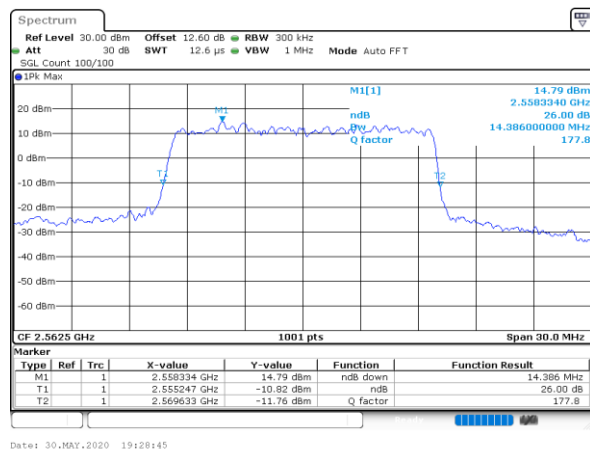
## Middle Channel / 15MHz / 16QAM



## Highest Channel / 15MHz / QPSK



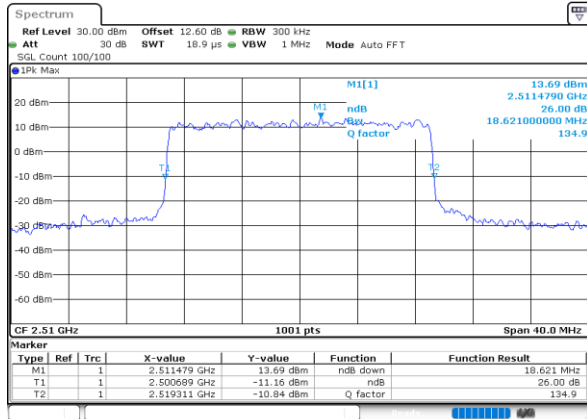
## Highest Channel / 15MHz / 16QAM



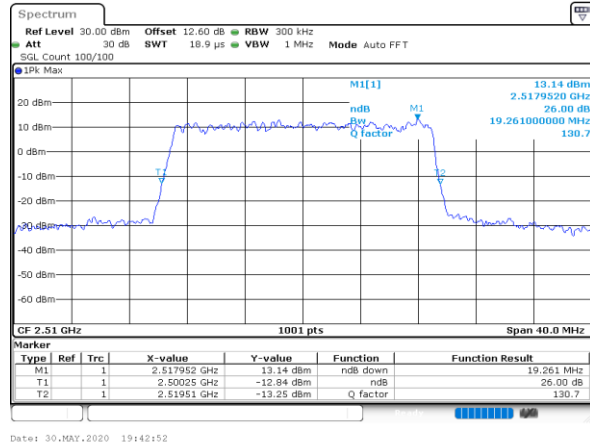


## LTE Band 7

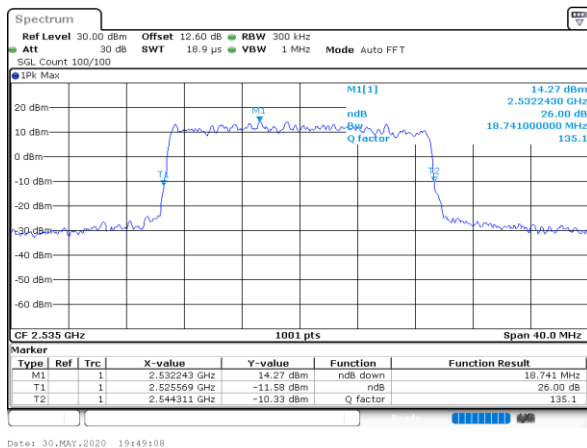
## Lowest Channel / 20MHz / QPSK



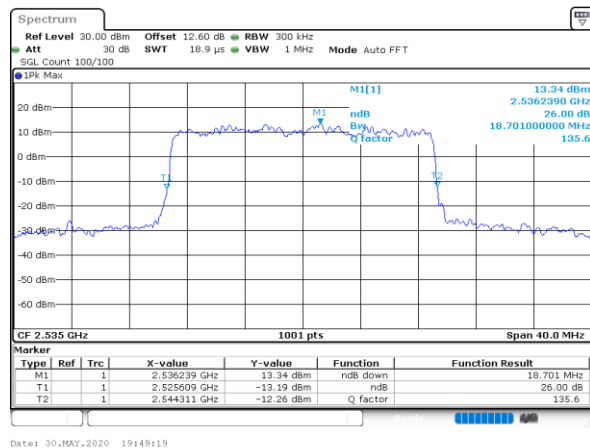
## Lowest Channel / 20MHz / 16QAM



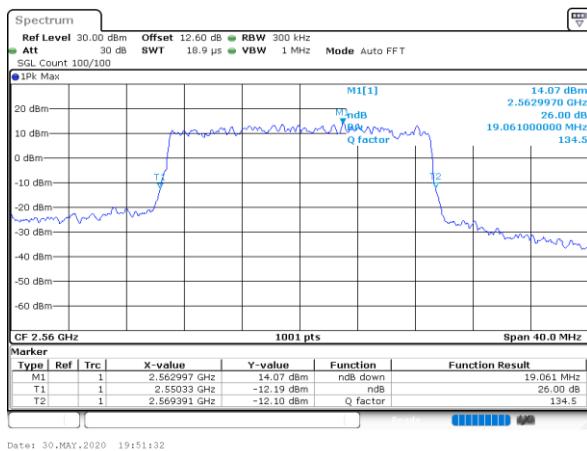
## Middle Channel / 20MHz / QPSK



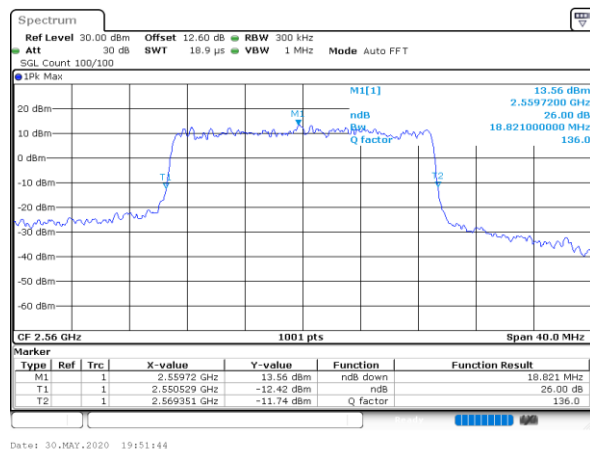
## Middle Channel / 20MHz / 16QAM



## Highest Channel / 20MHz / QPSK



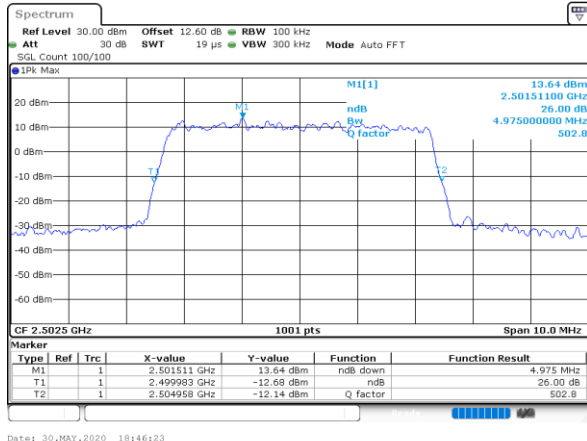
## Highest Channel / 20MHz / 16QAM



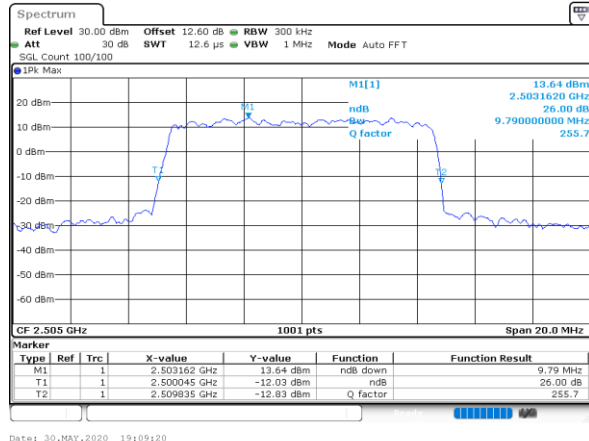


## LTE Band 7

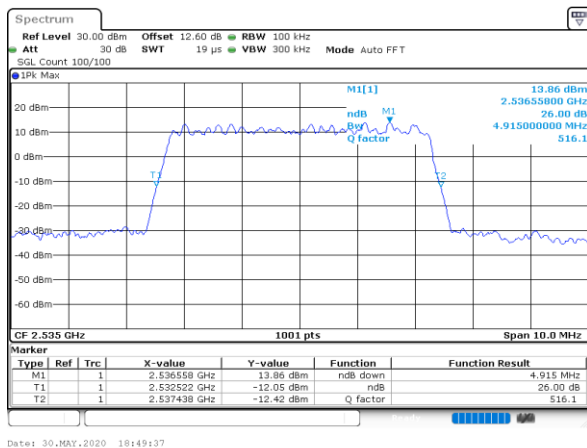
## Lowest Channel / 5MHz / 64QAM



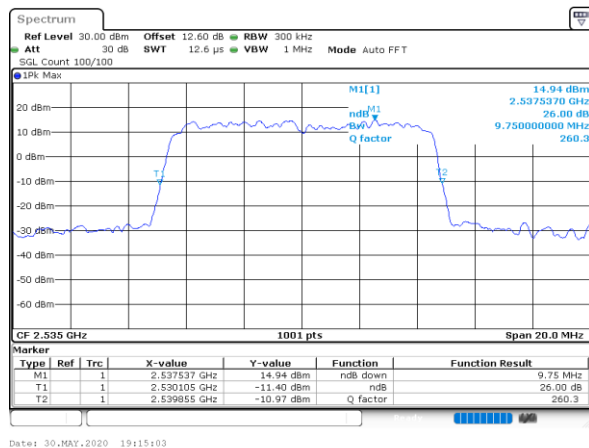
## Lowest Channel / 10MHz / 64QAM



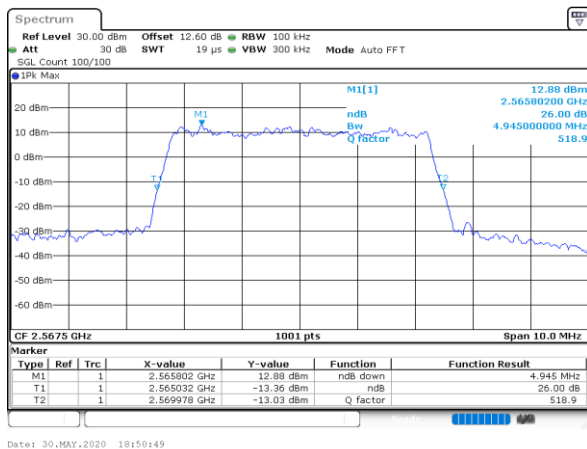
## Middle Channel / 5MHz / 64QAM



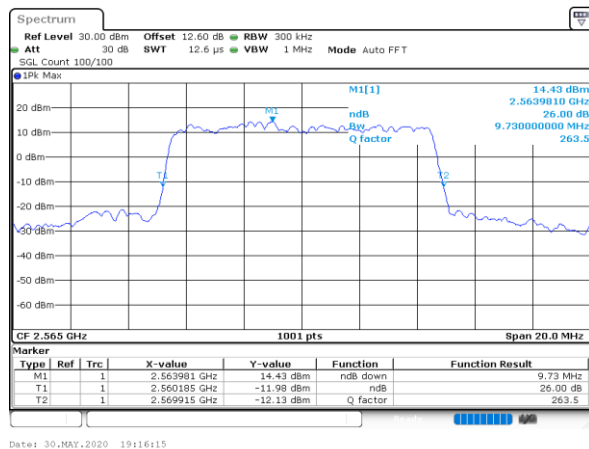
## Middle Channel / 10MHz / 64QAM



## Highest Channel / 5MHz / 64QAM



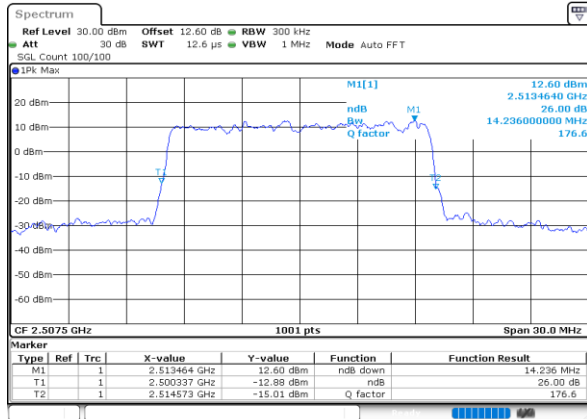
## Highest Channel / 10MHz / 64QAM



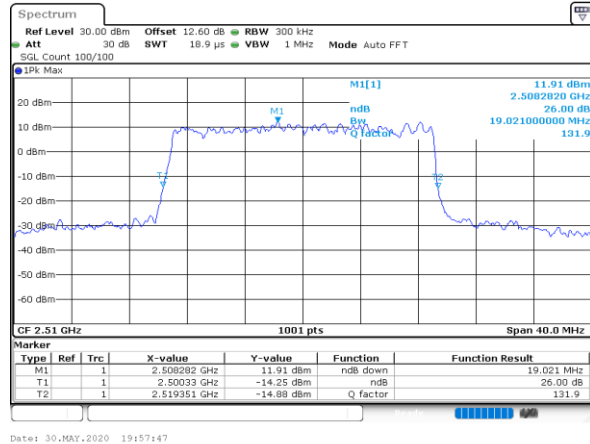


## LTE Band 7

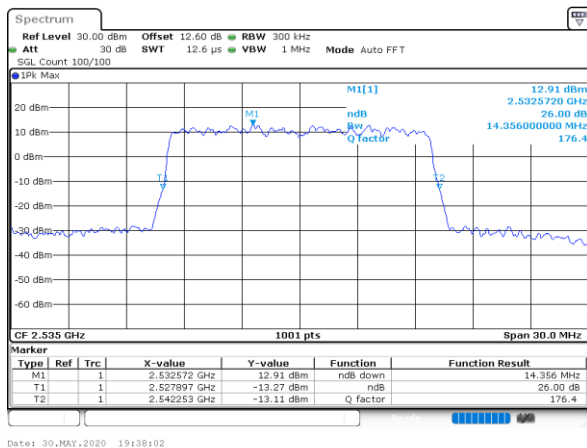
## Lowest Channel / 15MHz / 64QAM



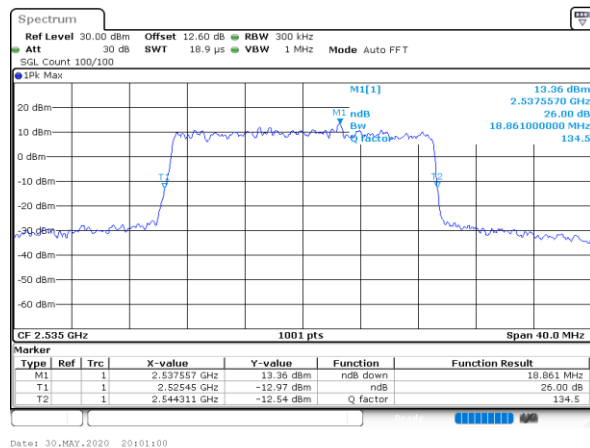
## Lowest Channel / 20MHz / 64QAM



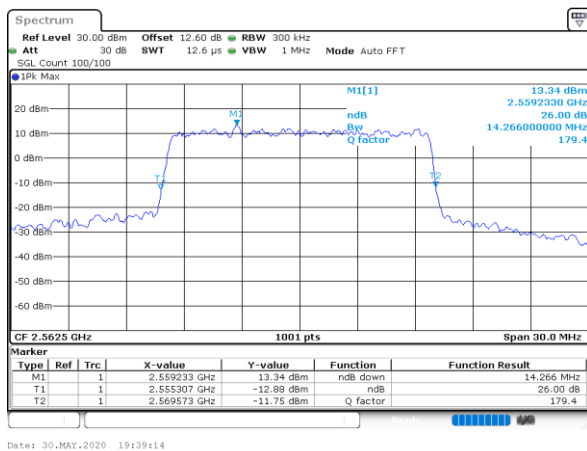
## Middle Channel / 15MHz / 64QAM



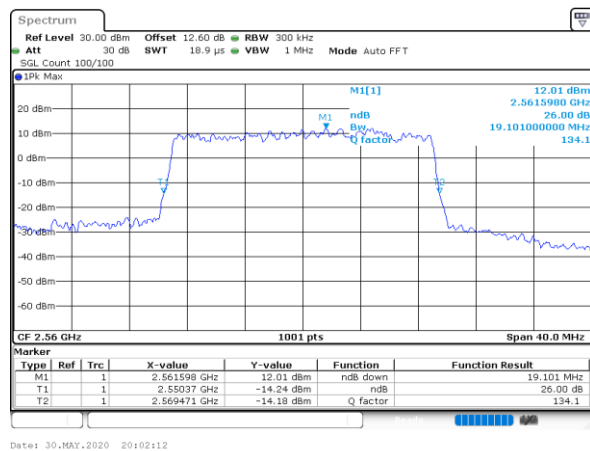
## Middle Channel / 20MHz / 64QAM



## Highest Channel / 15MHz / 64QAM



## Highest Channel / 20MHz / 64QAM



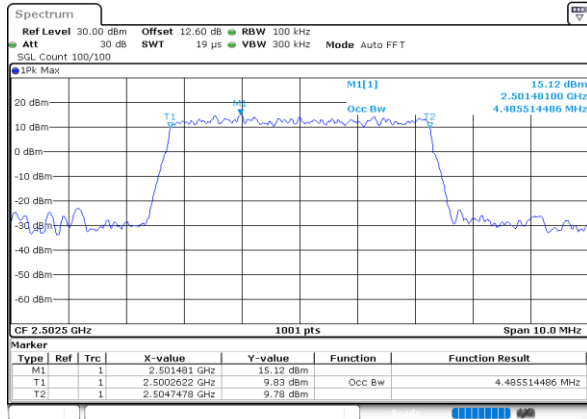
**Occupied Bandwidth**

| 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  | -                        | -     | -     | -     | 4.49  | 4.48  | 9.01  | 9.05  | 13.40 | 13.46 | 17.90 | 17.86 |
| Middle CH  | -                        | -     | -     | -     | 4.49  | 4.50  | 9.01  | 8.99  | 13.43 | 13.43 | 17.90 | 17.90 |
| Highest CH | -                        | -     | -     | -     | 4.48  | 4.50  | 9.03  | 8.95  | 13.49 | 13.40 | 17.82 | 17.90 |
| 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  | -     | 9.01  | -     | 13.46 | -     | 17.86 | -     |
| Middle CH  | -                        | -     | -     | -     | 4.50  | -     | 9.01  | -     | 13.34 | -     | 17.86 | -     |
| Highest CH | -                        | -     | -     | -     | 4.50  | -     | 9.01  | -     | 13.43 | -     | 17.86 | -     |

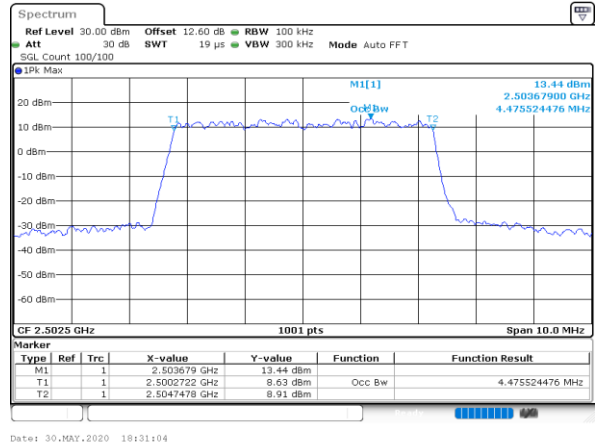


## LTE Band 7

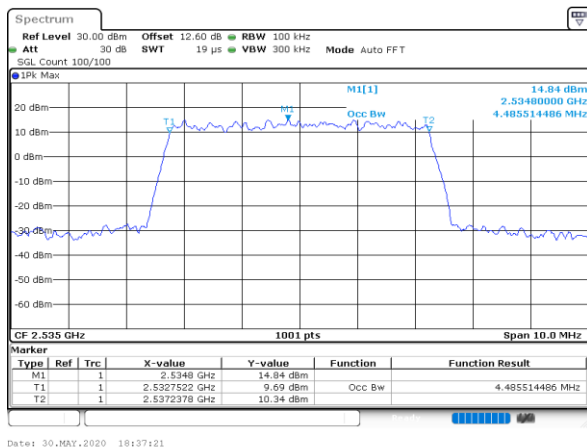
## Lowest Channel / 5MHz / QPSK



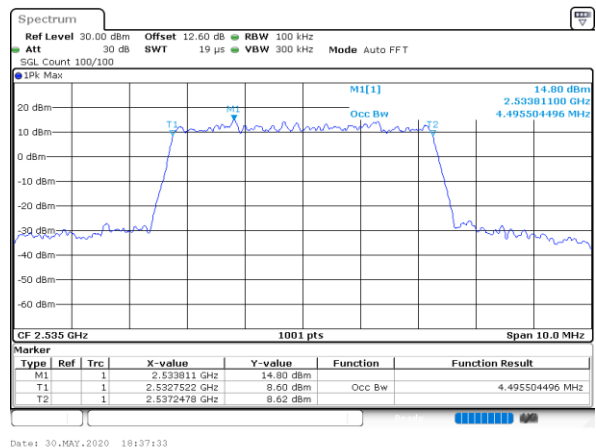
## Lowest Channel / 5MHz / 16QAM



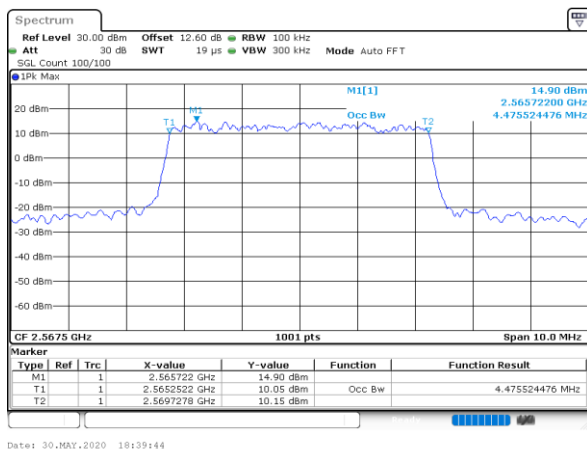
## Middle Channel / 5MHz / QPSK



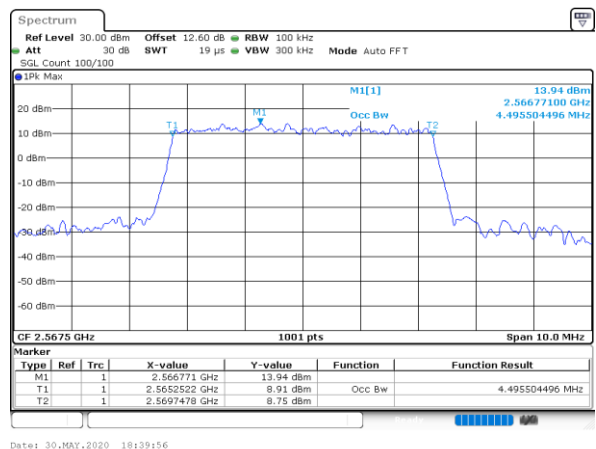
## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



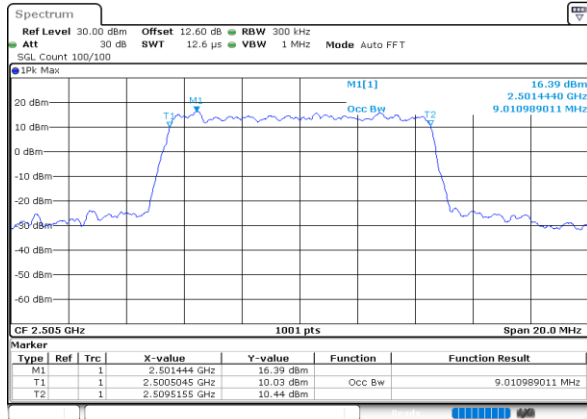
## Highest Channel / 5MHz / 16QAM



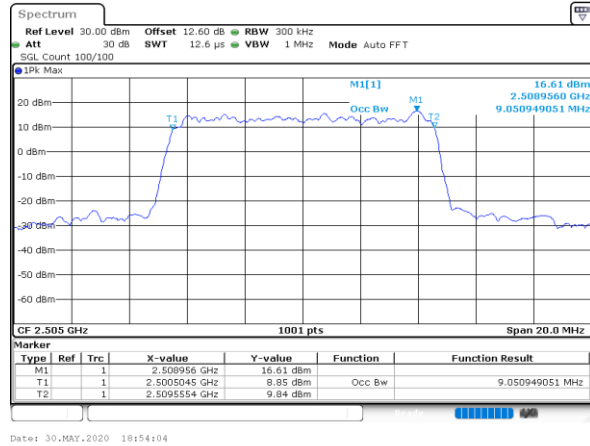


## LTE Band 7

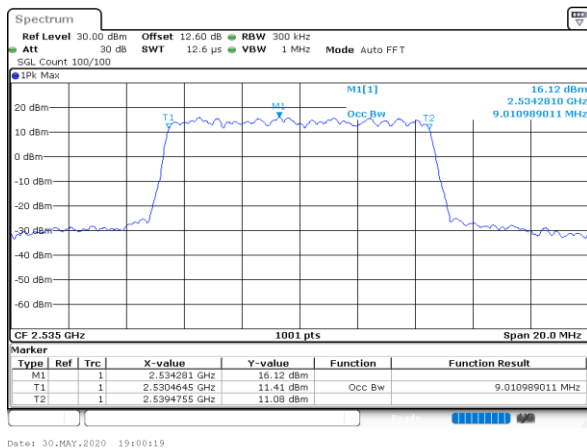
## Lowest Channel / 10MHz / QPSK



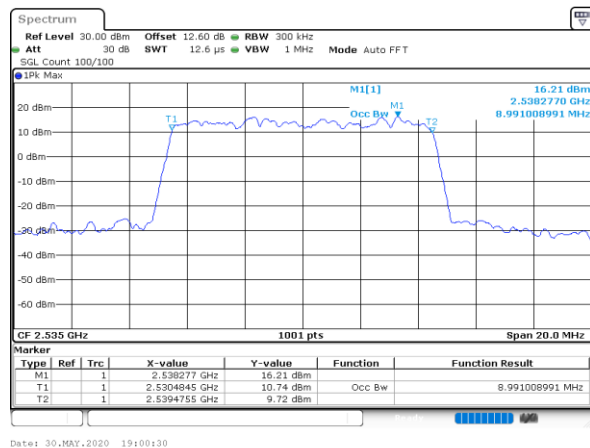
## Lowest Channel / 10MHz / 16QAM



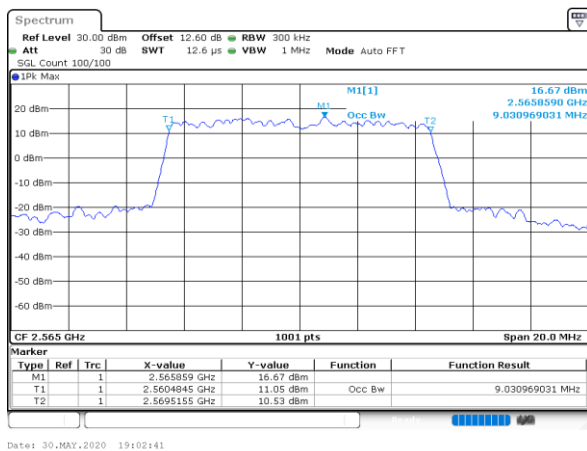
## Middle Channel / 10MHz / QPSK



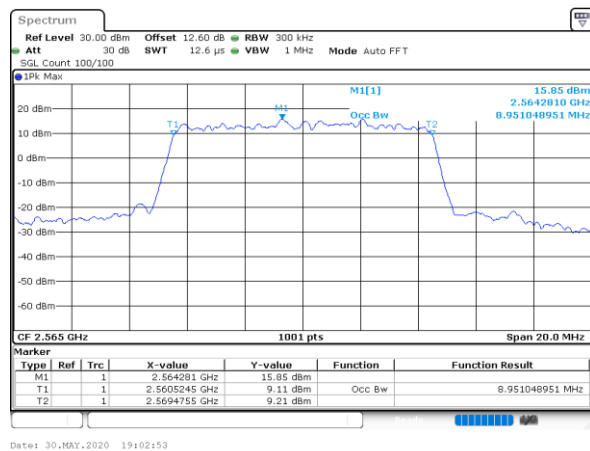
## Middle Channel / 10MHz / 16QAM



## Highest Channel / 10MHz / QPSK



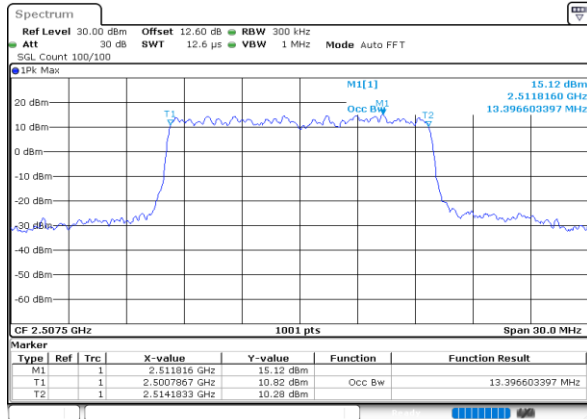
## Highest Channel / 10MHz / 16QAM



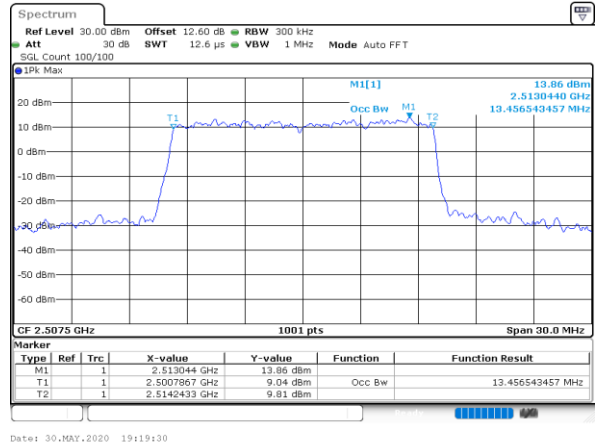


## LTE Band 7

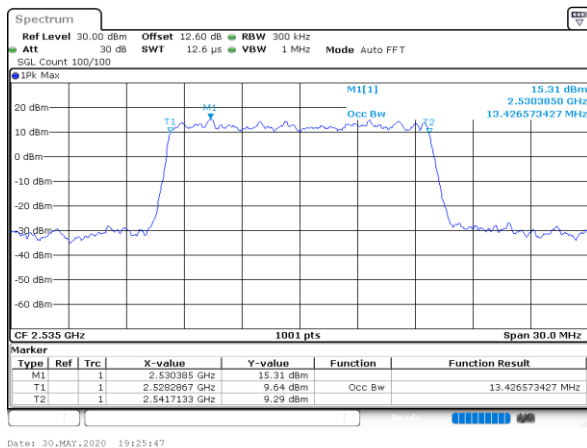
## Lowest Channel / 15MHz / QPSK



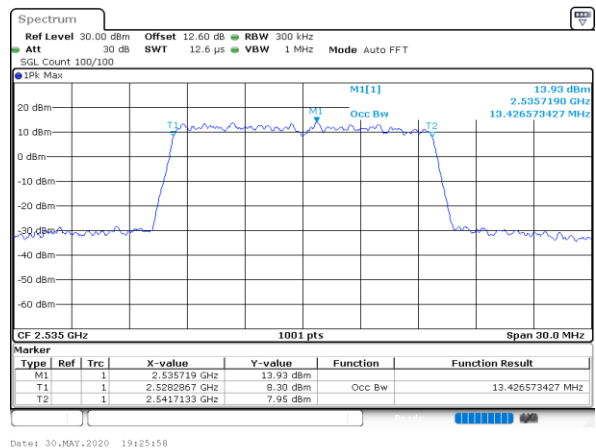
## Lowest Channel / 15MHz / 16QAM



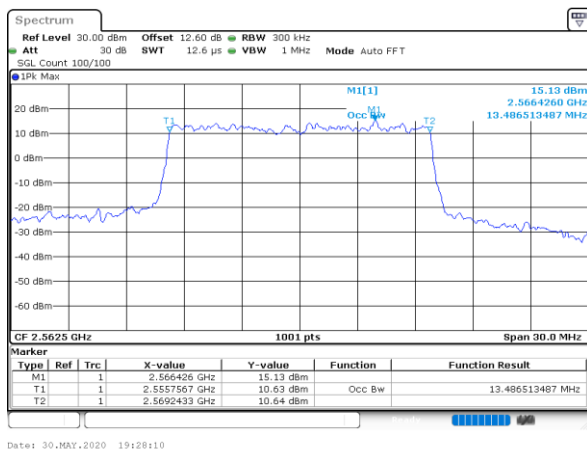
## Middle Channel / 15MHz / QPSK



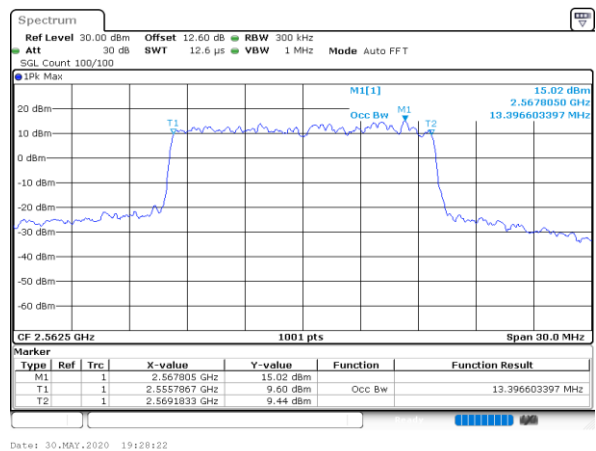
## Middle Channel / 15MHz / 16QAM



## Highest Channel / 15MHz / QPSK



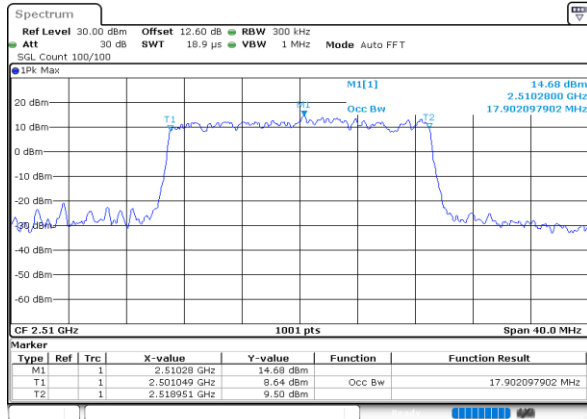
## Highest Channel / 15MHz / 16QAM



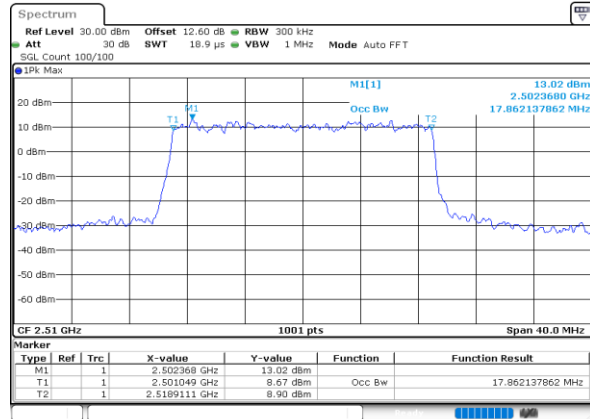


## LTE Band 7

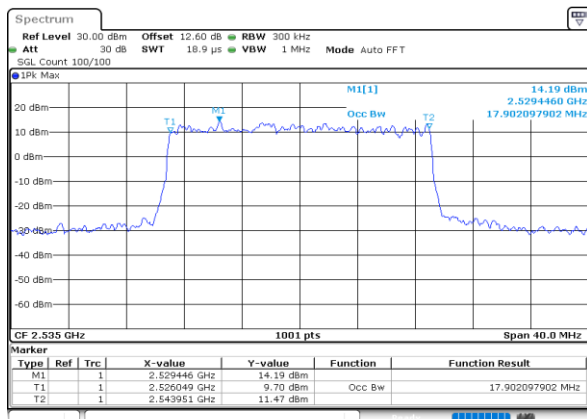
## Lowest Channel / 20MHz / QPSK



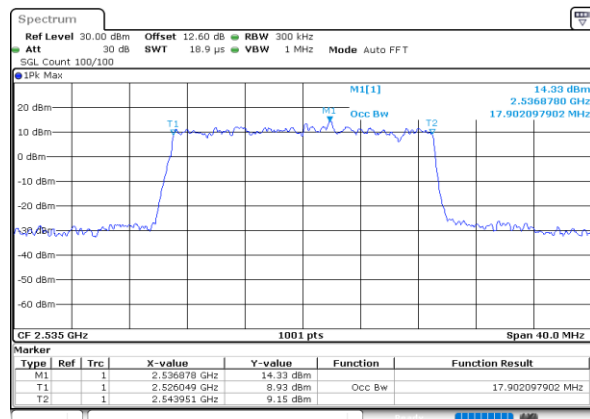
## Lowest Channel / 20MHz / 16QAM



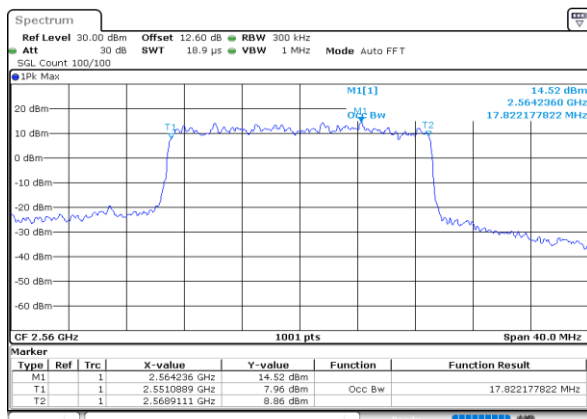
## Middle Channel / 20MHz / QPSK



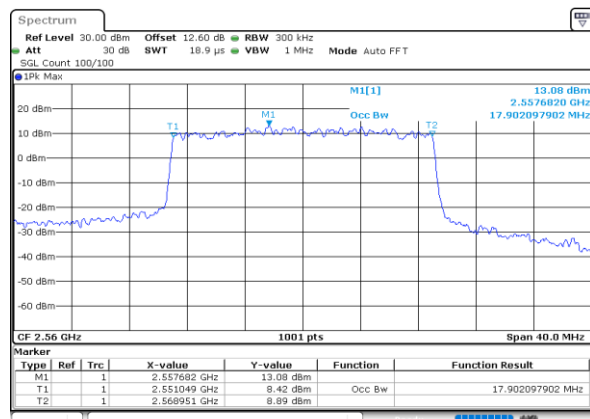
## Middle Channel / 20MHz / 16QAM



## Highest Channel / 20MHz / QPSK



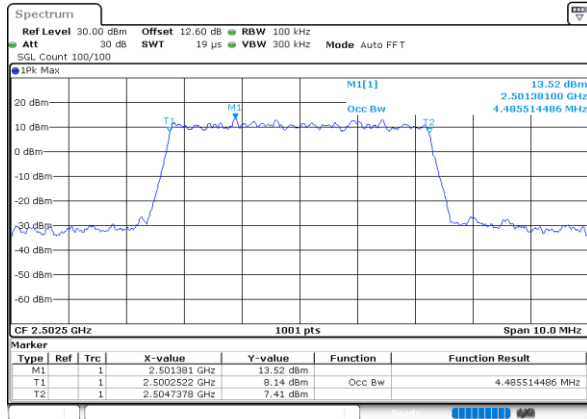
## Highest Channel / 20MHz / 16QAM



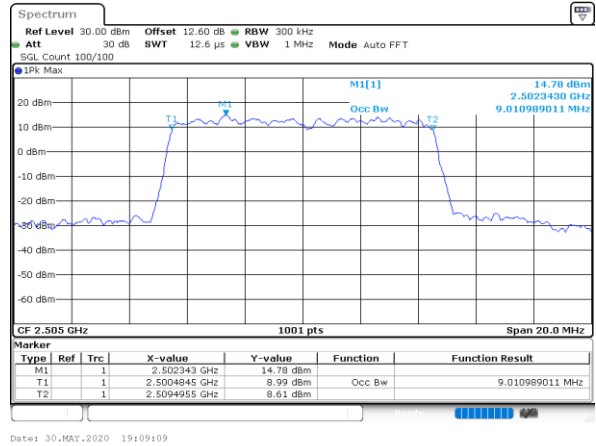


## LTE Band 7

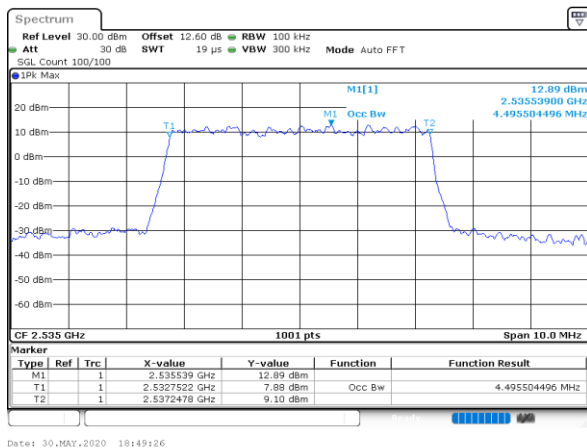
## Lowest Channel / 5MHz / 64QAM



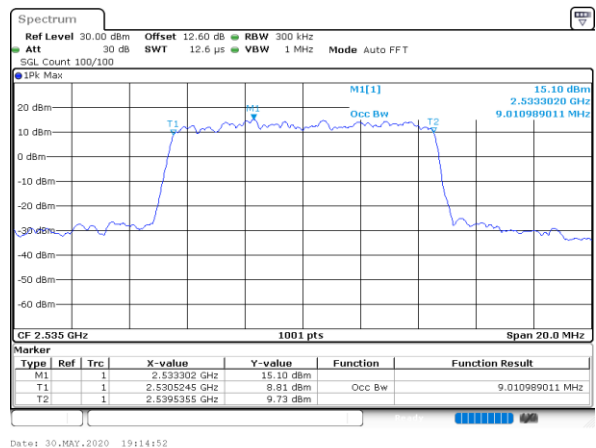
## Lowest Channel / 10MHz / 64QAM



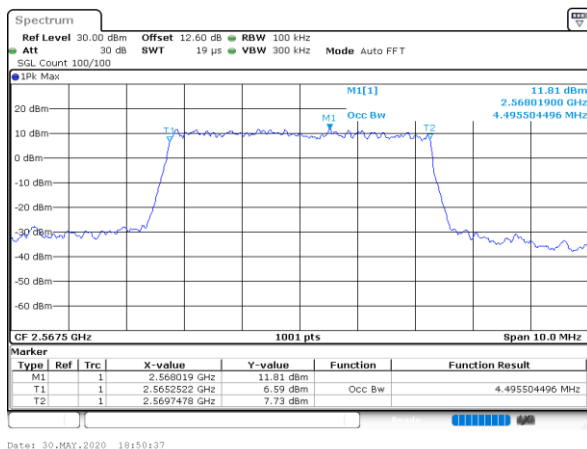
## Middle Channel / 5MHz / 64QAM



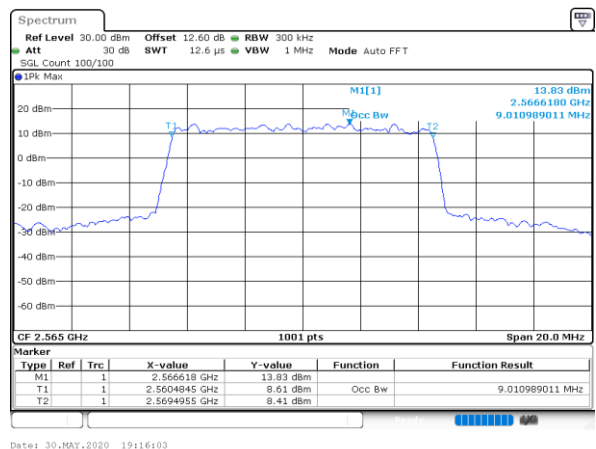
## Middle Channel / 10MHz / 64QAM



## Highest Channel / 5MHz / 64QAM



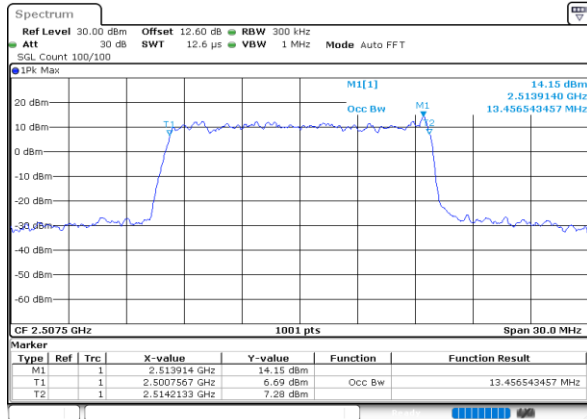
## Highest Channel / 10MHz / 64QAM



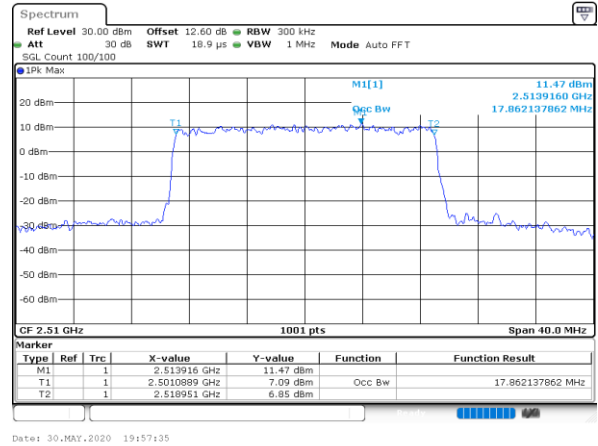


## LTE Band 7

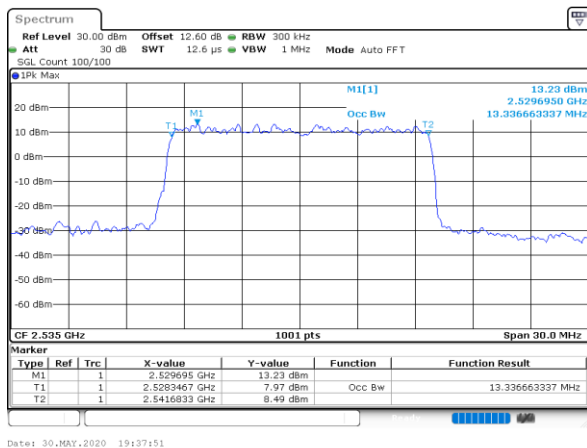
## Lowest Channel / 15MHz / 64QAM



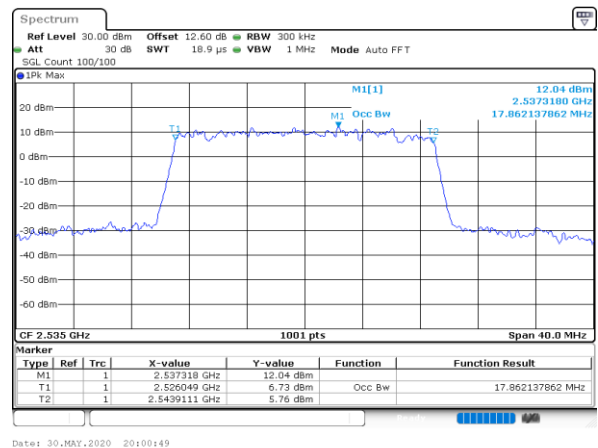
## Lowest Channel / 20MHz / 64QAM



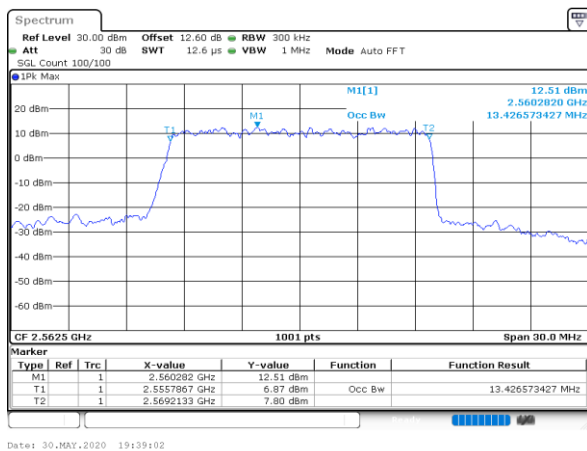
## Middle Channel / 15MHz / 64QAM



## Middle Channel / 20MHz / 64QAM



## Highest Channel / 15MHz / 64QAM



## Highest Channel / 20MHz / 64QAM

