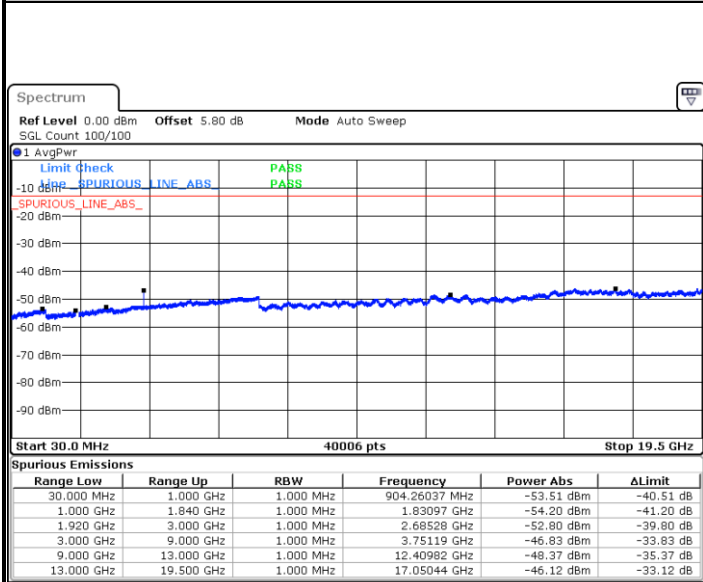




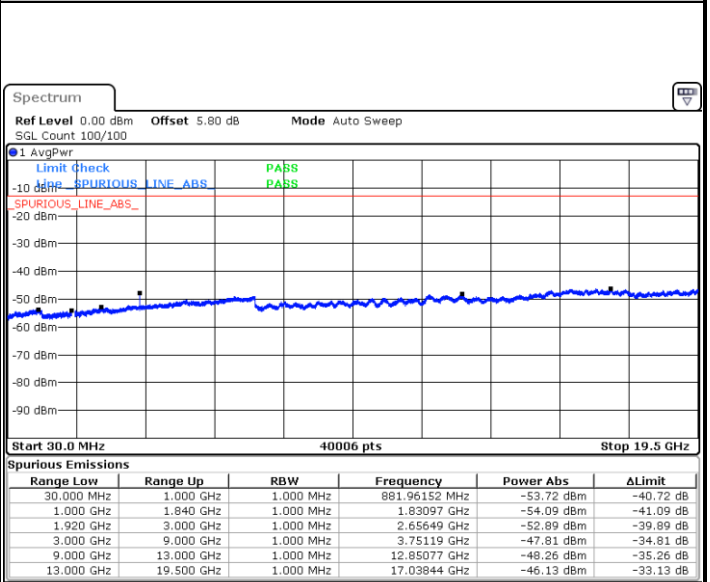
LTE Band 2 / 10MHz

Middle Channel / QPSK



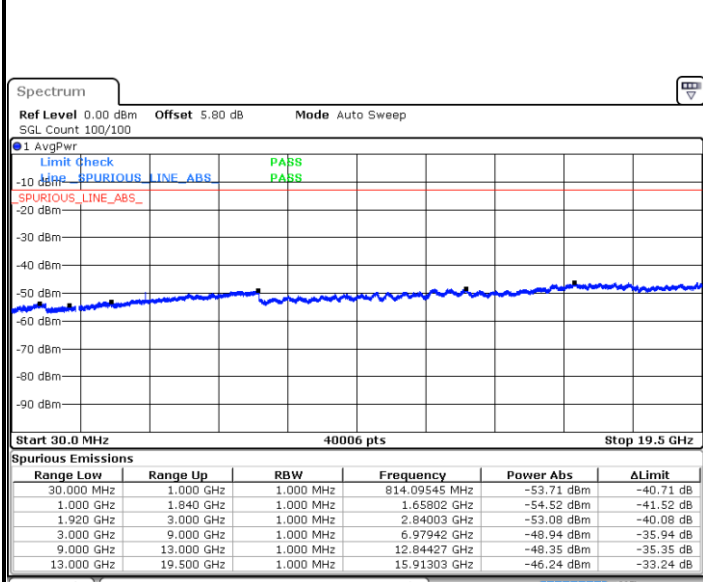
Date: 2 NOV.2019 10:54:31

Middle Channel / 16QAM



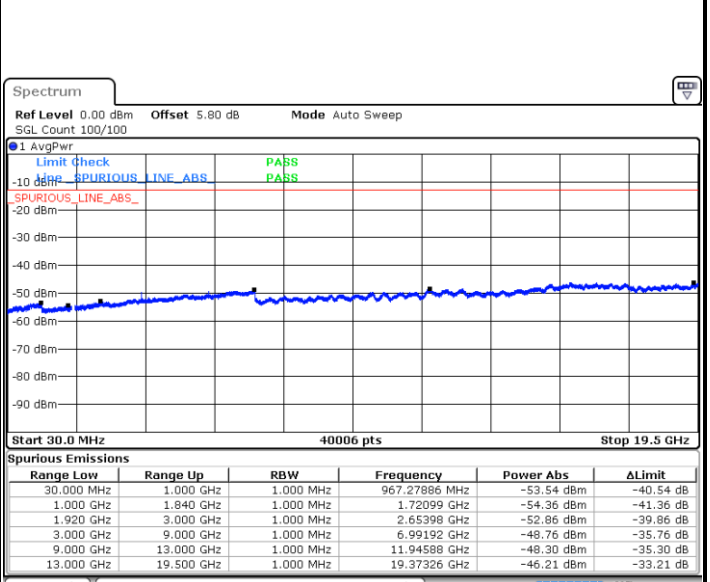
Date: 2 NOV.2019 10:55:25

Highest Channel / QPSK



Date: 2 NOV.2019 11:01:29

Highest Channel / 16QAM



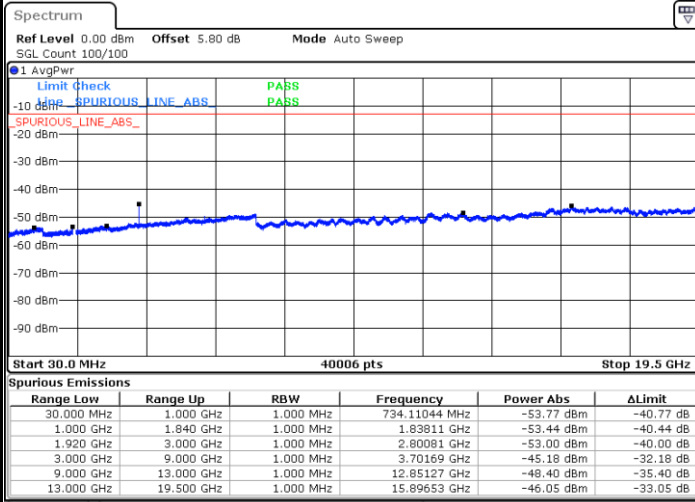
Date: 2 NOV.2019 11:02:24



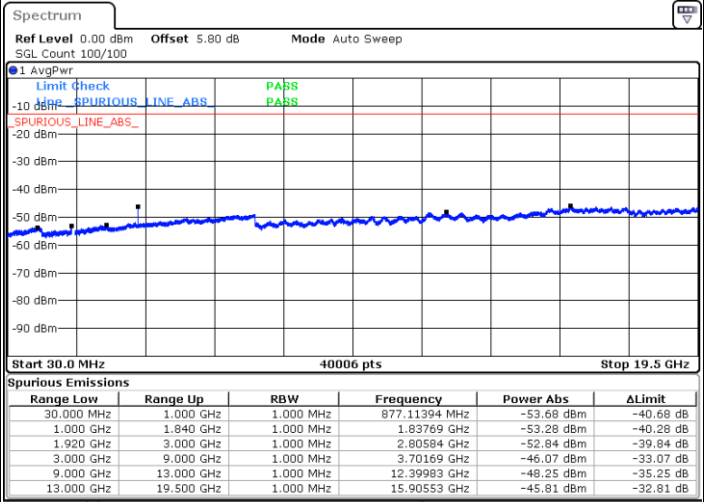
LTE Band 2 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



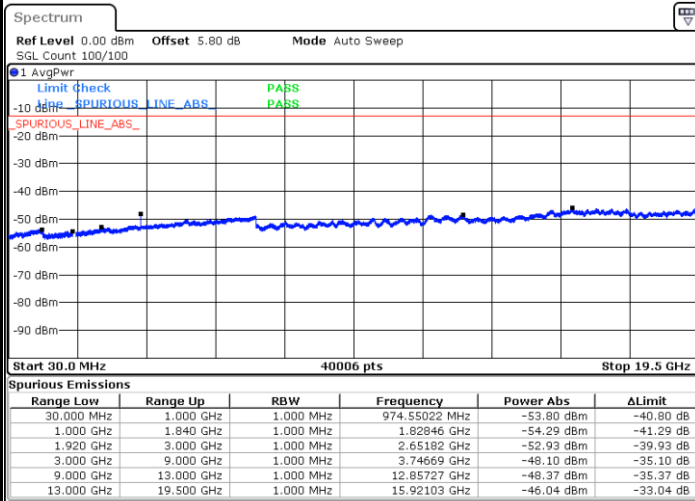
Date: 2 NOV.2019 11:08:28



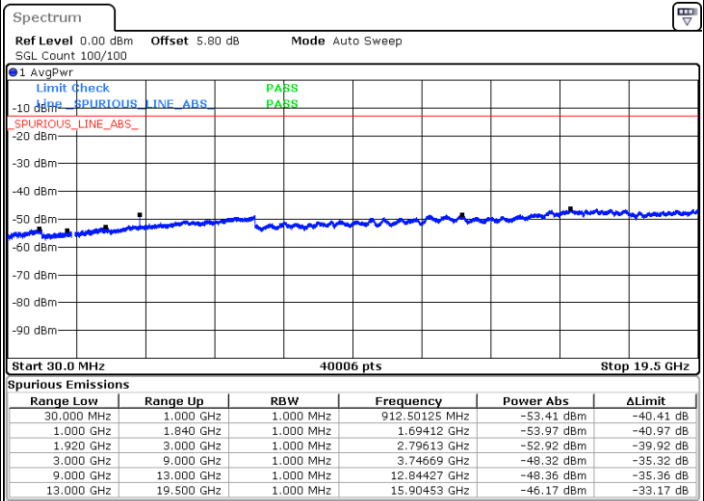
Date: 2 NOV.2019 11:08:22

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 2 NOV.2019 11:10:57

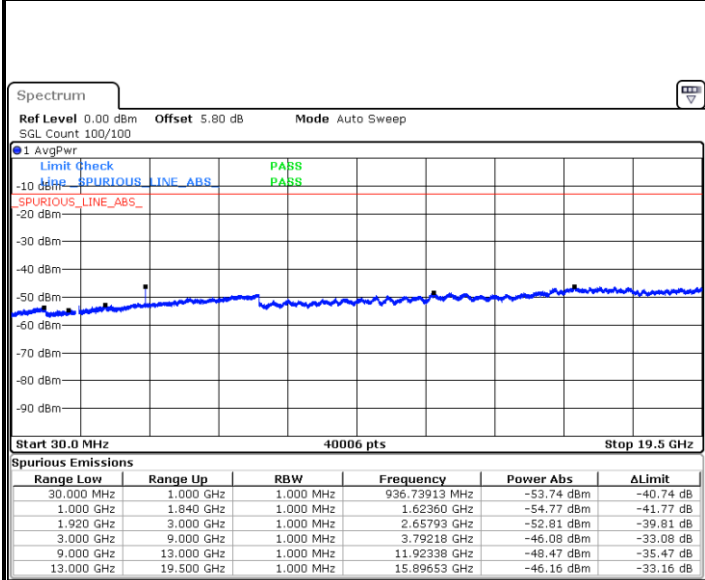


Date: 2 NOV.2019 11:11:51



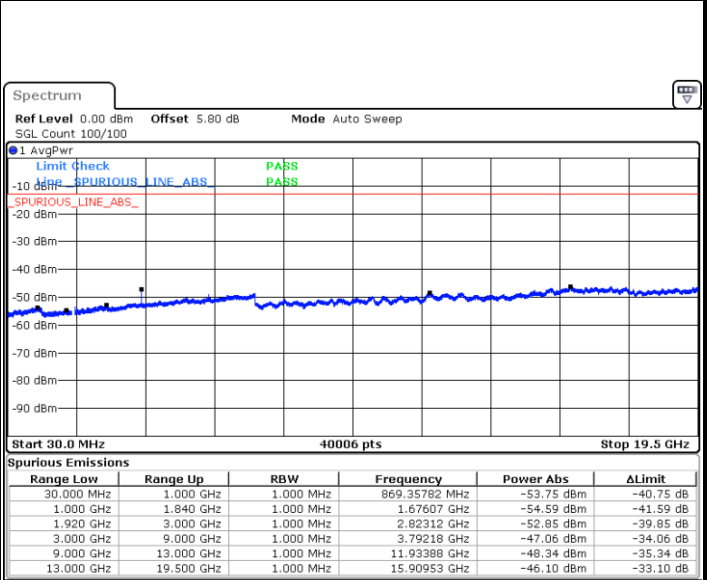
LTE Band 2 / 15MHz

Highest Channel / QPSK



Date: 2.NOV.2019 11:17:55

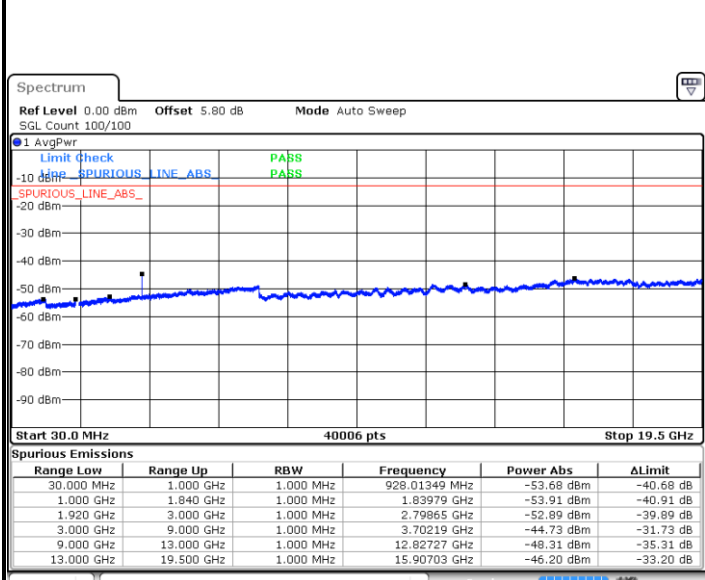
Highest Channel / 16QAM



Date: 2.NOV.2019 11:18:50

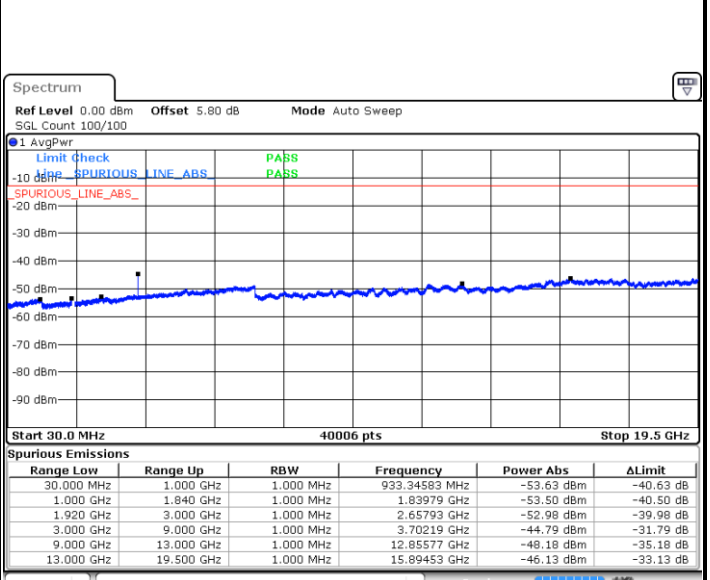
LTE Band 2 / 20MHz

Lowest Channel / QPSK



Date: 2.NOV.2019 11:24:54

Lowest Channel / 16QAM



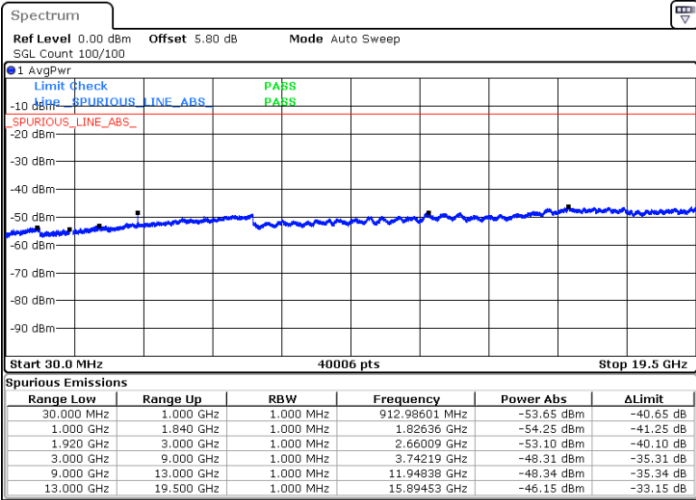
Date: 2.NOV.2019 11:25:49



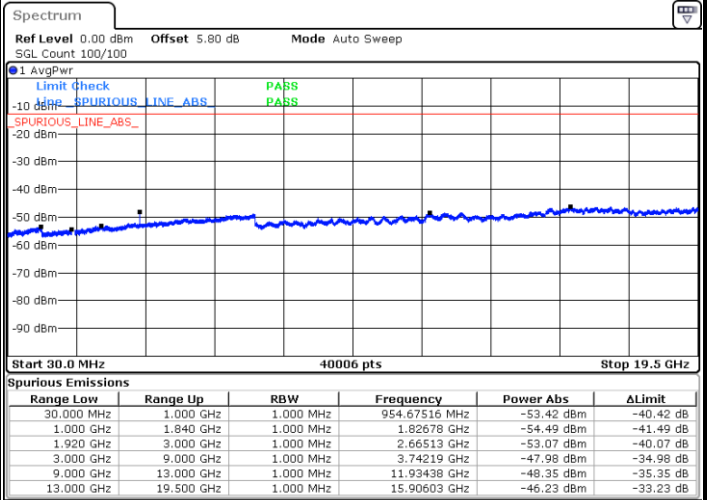
LTE Band 2 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM



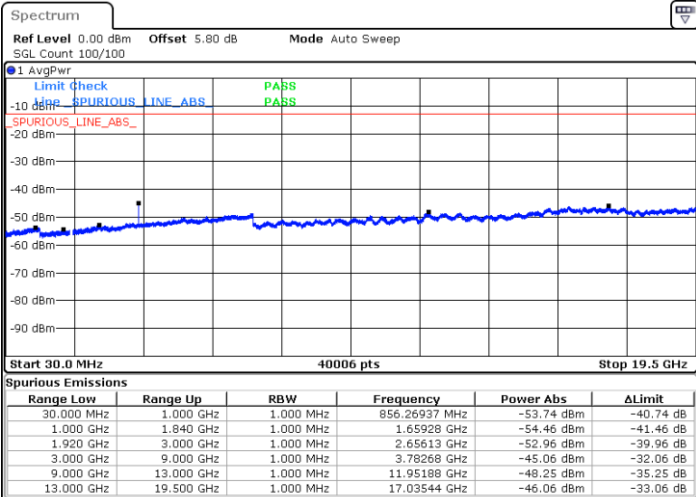
Date: 2 NOV.2019 11:27:23



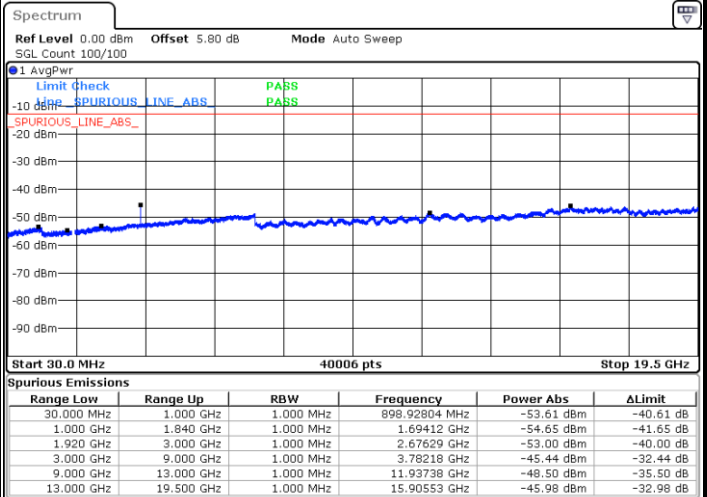
Date: 2 NOV.2019 11:28:18

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 2 NOV.2019 11:34:22



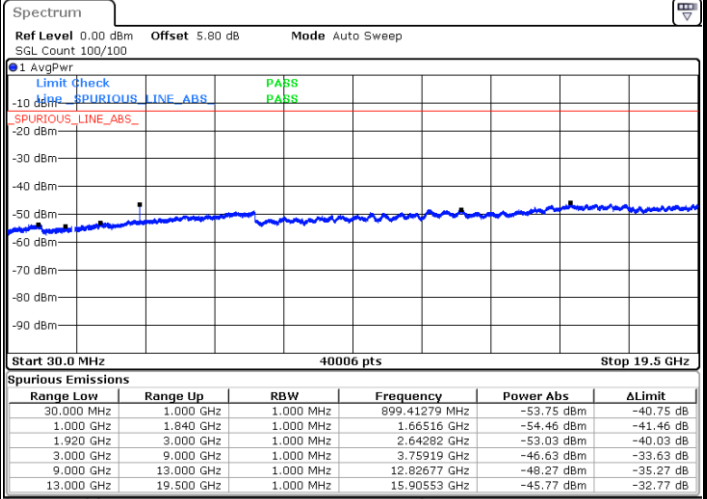
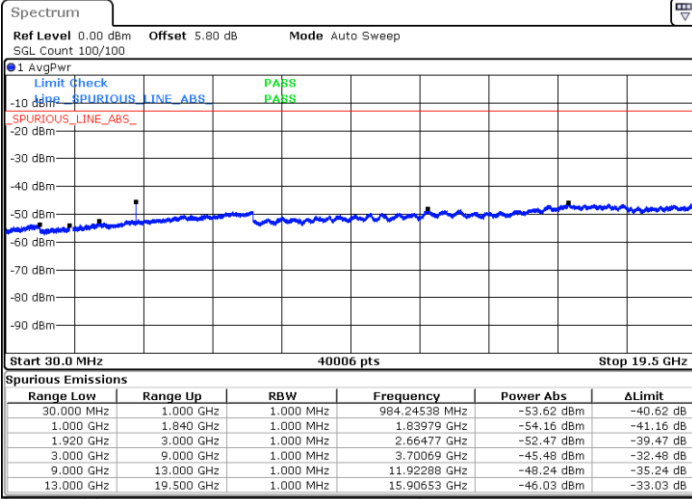
Date: 2 NOV.2019 11:35:16



LTE Band 2 / 1.4MHz

Lowest Channel / 64QAM

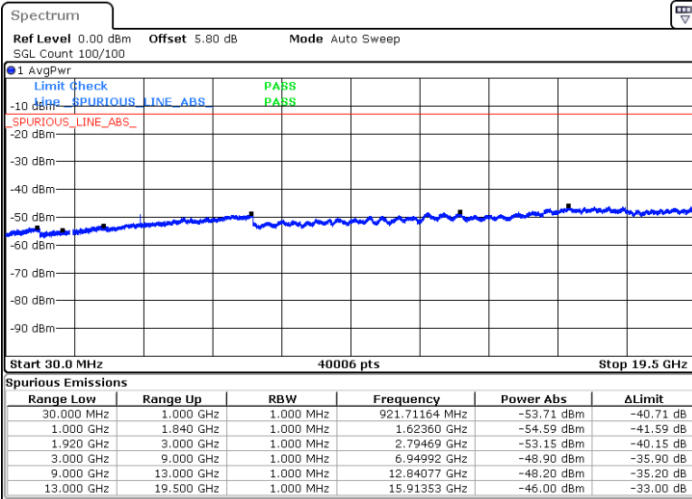
Middle Channel / 64QAM



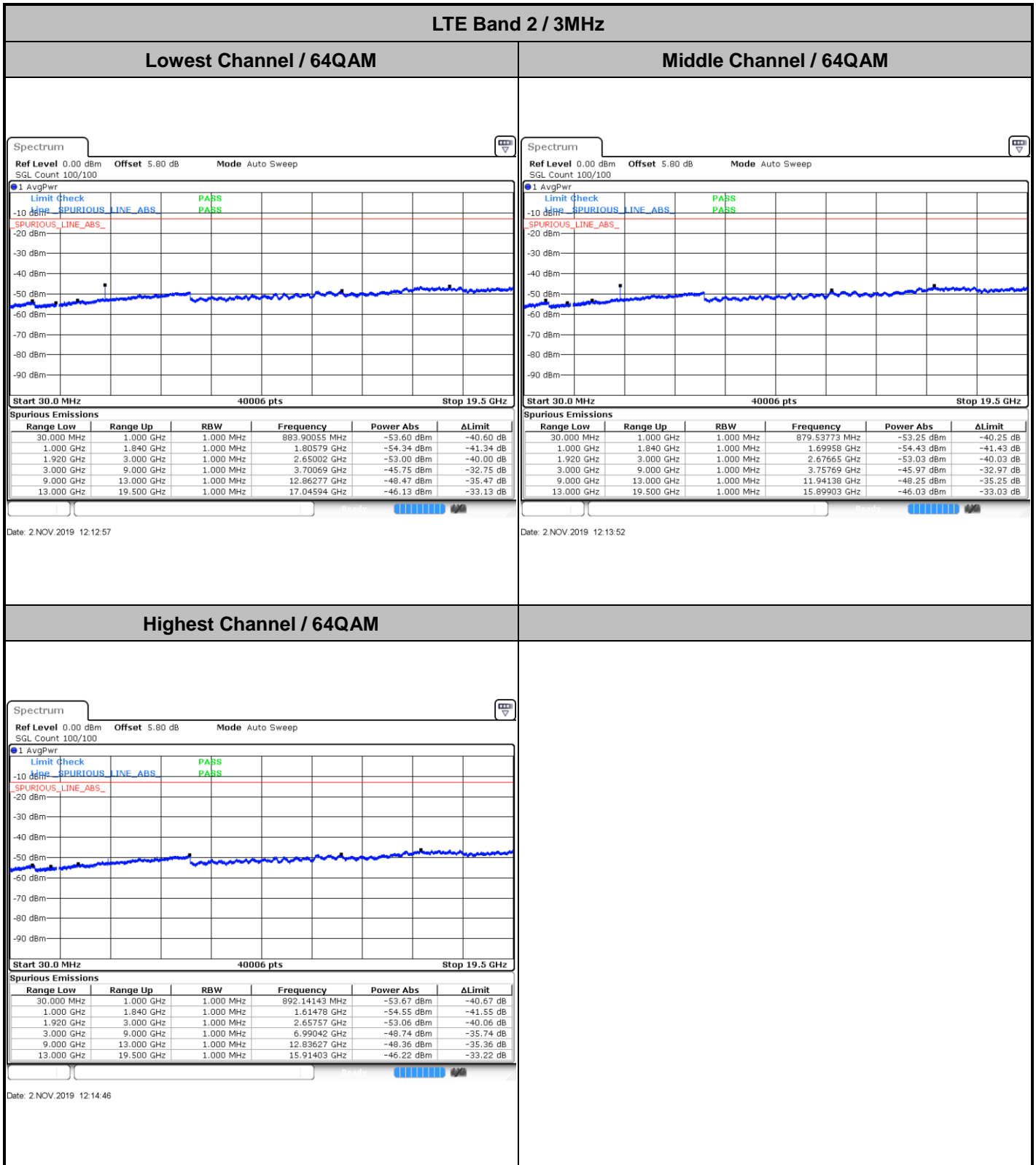
Date: 2.NOV.2019 12:10:14

Date: 2.NOV.2019 12:11:08

Highest Channel / 64QAM



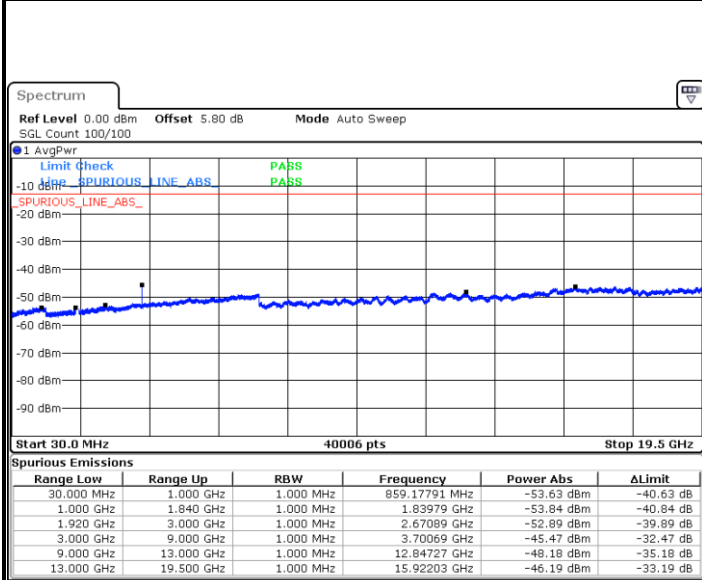
Date: 2.NOV.2019 12:12:03





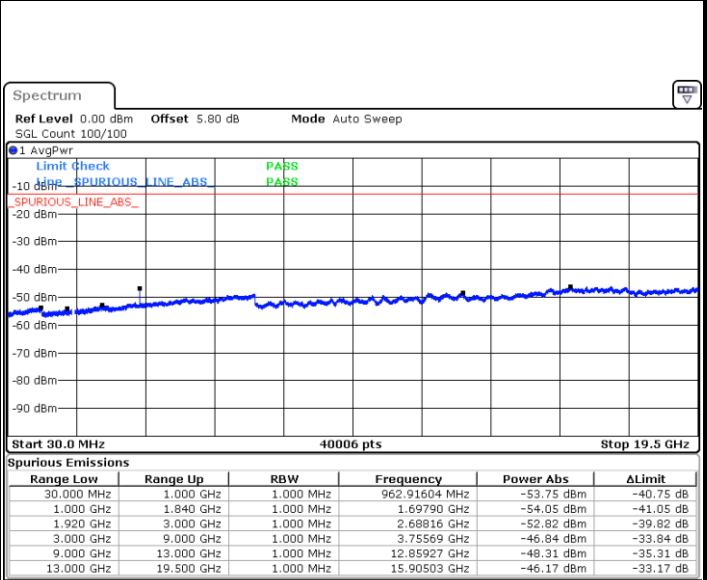
LTE Band 2 / 5MHz

Lowest Channel / 64QAM



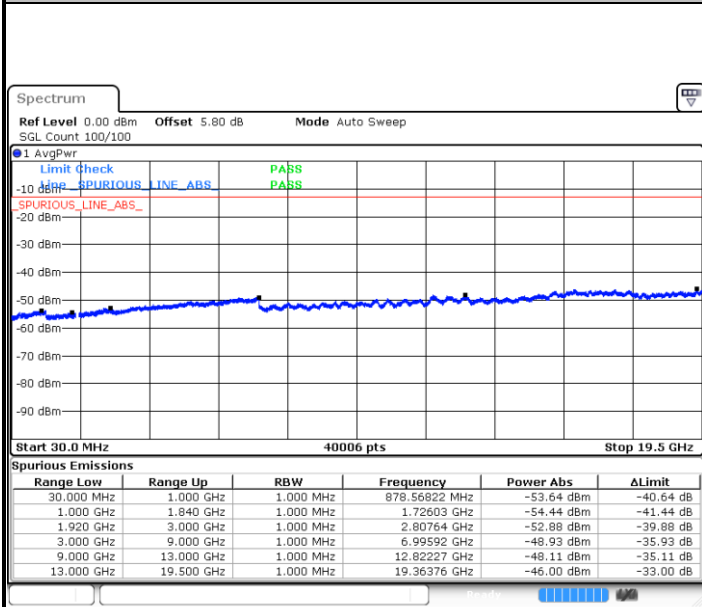
Date: 2.NOV.2019 12:15:41

Middle Channel / 64QAM



Date: 2.NOV.2019 12:16:35

Highest Channel / 64QAM

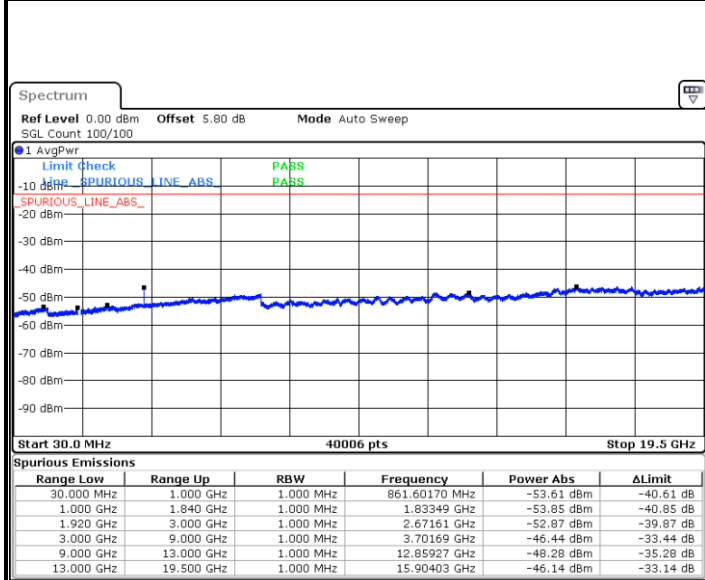


Date: 2.NOV.2019 12:17:29



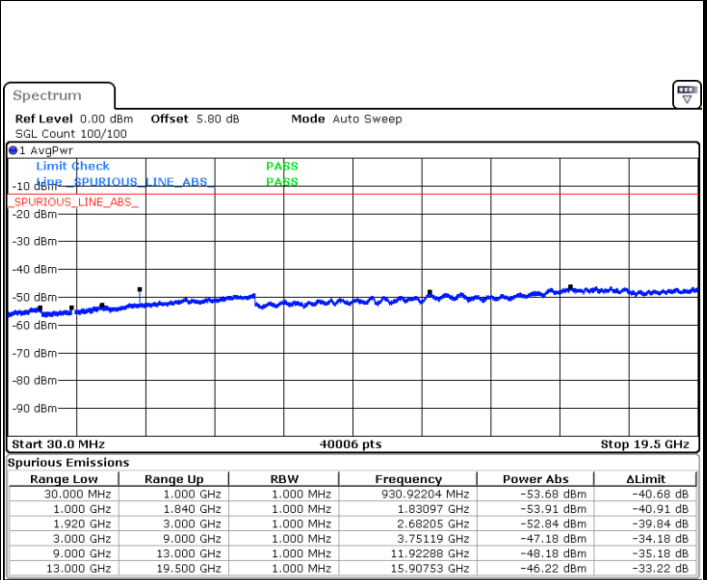
**LTE Band 2 / 10MHz**

**Lowest Channel / 64QAM**



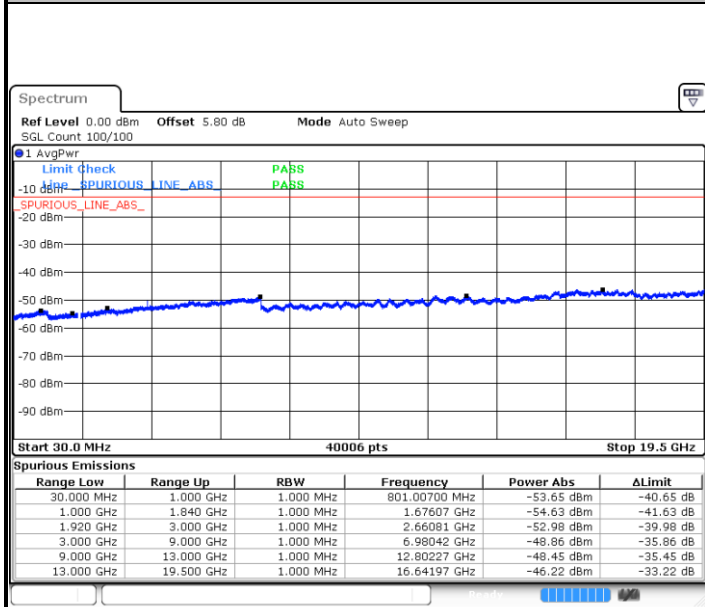
Date: 2.NOV.2019 12:18:24

**Middle Channel / 64QAM**



Date: 2.NOV.2019 12:19:18

**Highest Channel / 64QAM**



Date: 2.NOV.2019 12:20:13

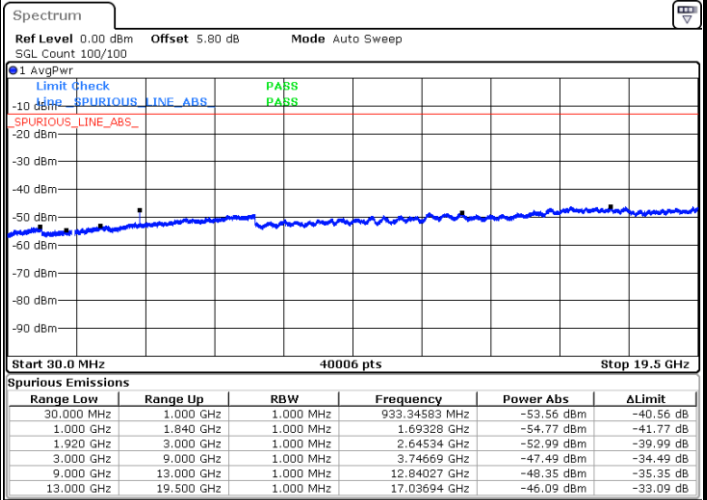
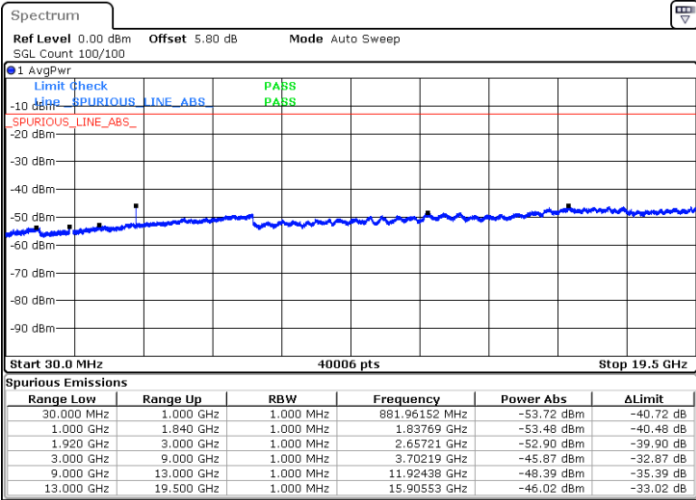




LTE Band 2 / 15MHz

Lowest Channel / 64QAM

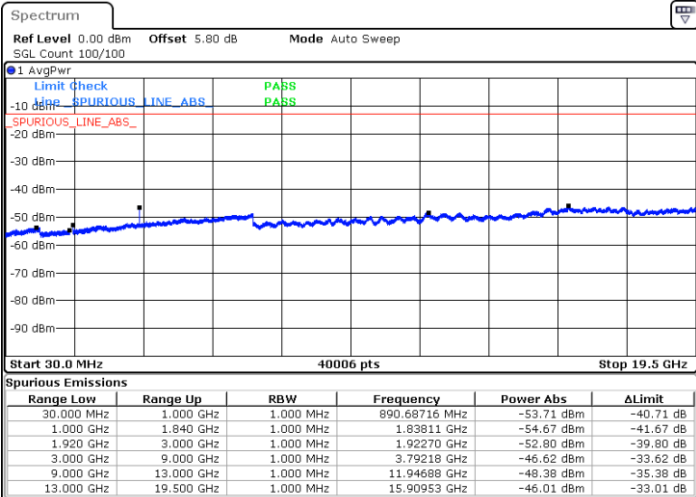
Middle Channel / 64QAM



Date: 2.NOV.2019 12:21:07

Date: 2.NOV.2019 12:22:02

Highest Channel / 64QAM

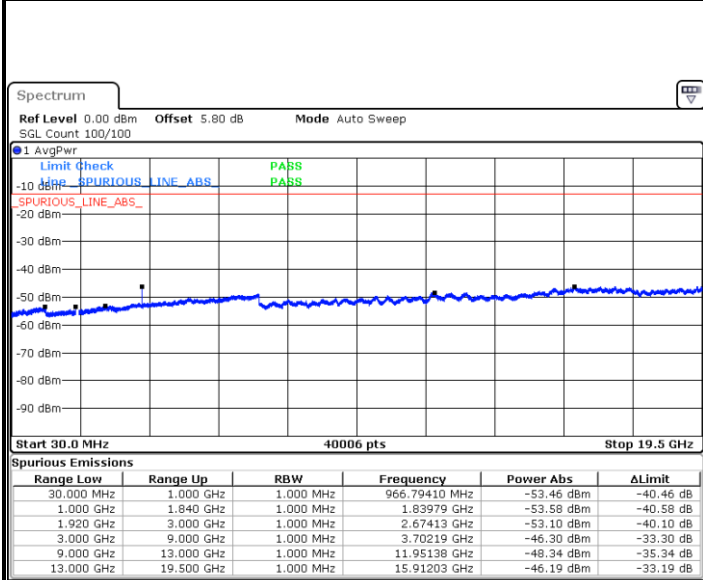


Date: 2.NOV.2019 12:22:56



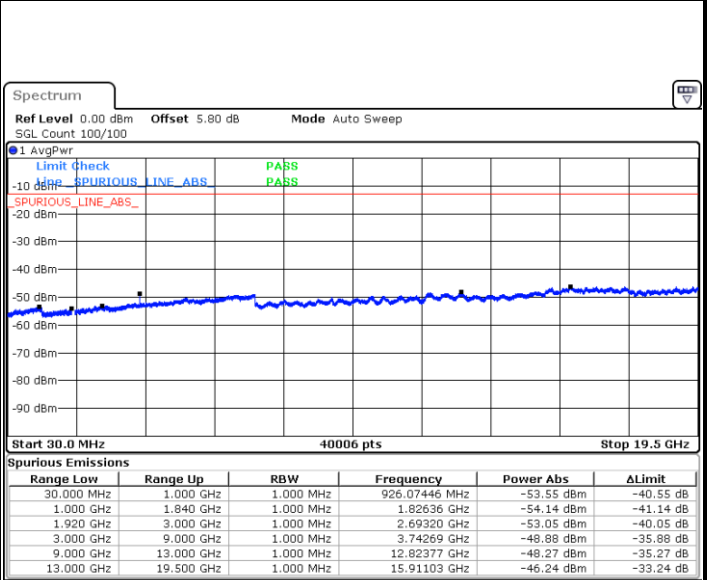
**LTE Band 2 / 20MHz**

**Lowest Channel / 64QAM**



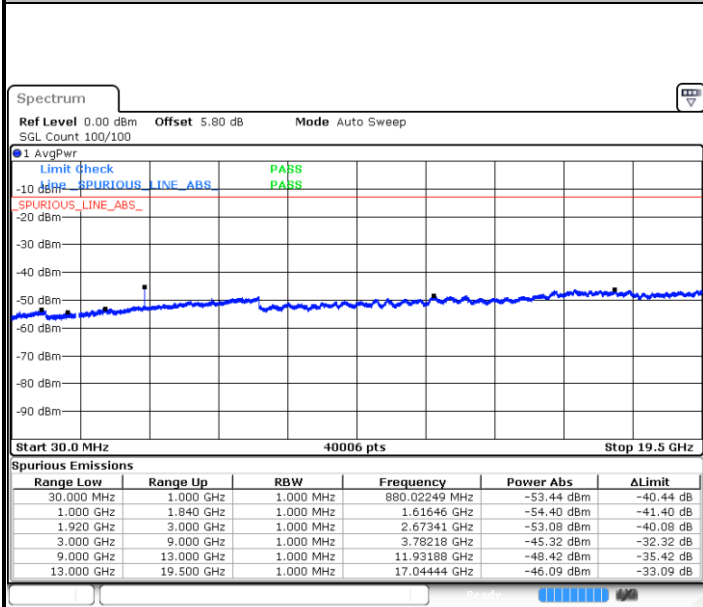
Date: 2.NOV.2019 12:23:51

**Middle Channel / 64QAM**



Date: 2.NOV.2019 12:24:45

**Highest Channel / 64QAM**



Date: 2.NOV.2019 12:25:40



Frequency Stability

| Test Conditions  |                   | LTE Band 2 (QPSK) / Middle Channel | Limit   |
|------------------|-------------------|------------------------------------|---------|
| Temperature (°C) | Voltage (Volt)    | BW 10MHz                           | Note 2. |
|                  |                   | Deviation (ppm)                    | Result  |
| 50               | Normal Voltage    | 0.0023                             | PASS    |
| 40               | Normal Voltage    | 0.0022                             |         |
| 30               | Normal Voltage    | 0.0036                             |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                             |         |
| 10               | Normal Voltage    | 0.0043                             |         |
| 0                | Normal Voltage    | 0.0025                             |         |
| -10              | Normal Voltage    | 0.0036                             |         |
| -20              | Normal Voltage    | 0.0003                             |         |
| -30              | Normal Voltage    | 0.0001                             |         |
| 20               | Maximum Voltage   | 0.0018                             |         |
| 20               | Normal Voltage    | 0.0000                             |         |
| 20               | Battery End Point | 0.0015                             |         |

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 5

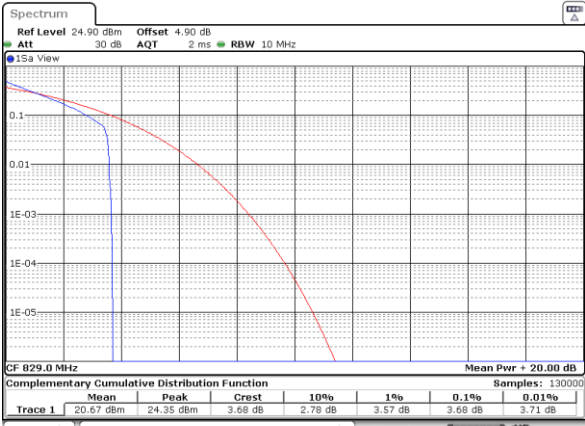
## Peak-to-Average Ratio

| Mode       | LTE Band 5 / 10MHz |         |       |         |             |
|------------|--------------------|---------|-------|---------|-------------|
| Mod.       | QPSK               |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | 3.68               | 4.70    | 5.59  | 6.06    | PASS        |
| Middle CH  | 3.68               | 4.72    | 5.33  | 5.97    |             |
| Highest CH | 3.65               | 4.78    | 5.22  | 6.00    |             |
| Mod.       | 64QAM              |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | 6.72               | 6.58    |       |         | PASS        |
| Middle CH  | 6.49               | 6.58    |       |         |             |
| Highest CH | 6.55               | 6.64    |       |         |             |



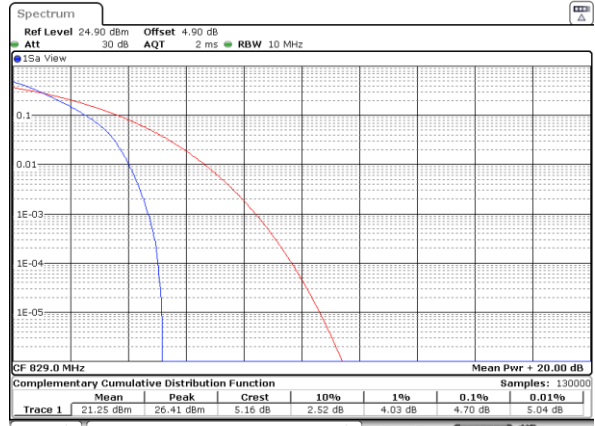
LTE Band 5 / 10MHz / QPSK

Lowest Channel / 1RB



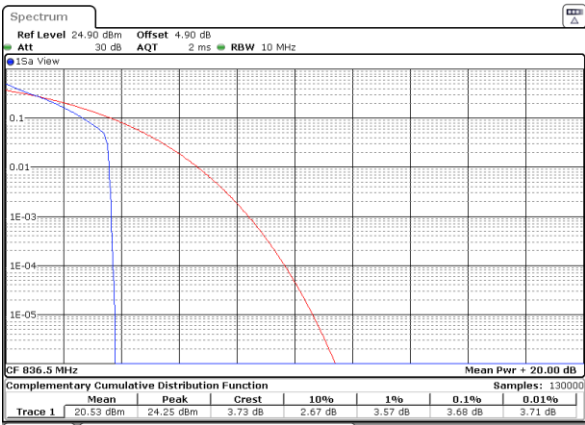
Date: 8 NOV 2019 14:38:13

Lowest Channel / Full RB



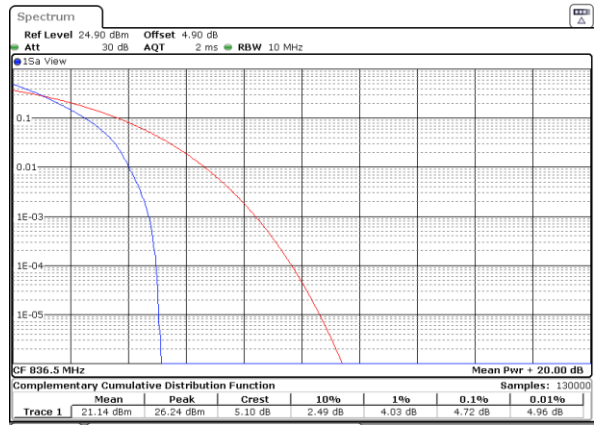
Date: 8 NOV 2019 14:38:29

Middle Channel / 1RB



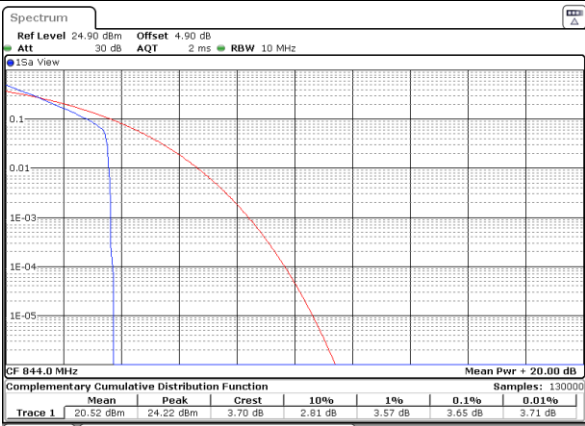
Date: 8 NOV 2019 14:39:03

Middle Channel / Full RB



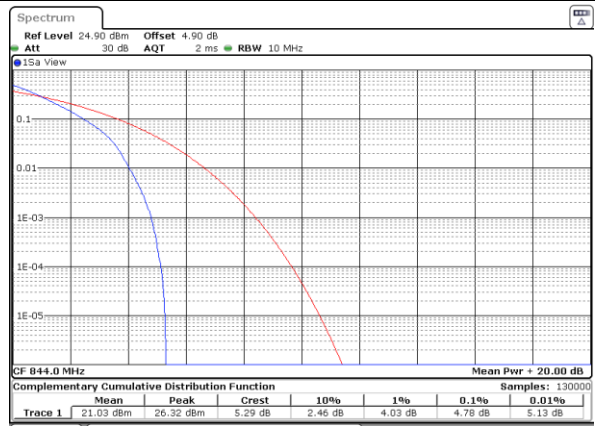
Date: 8 NOV 2019 14:38:50

Highest Channel / 1RB



Date: 8 NOV 2019 14:39:16

Highest Channel / Full RB



Date: 8 NOV 2019 14:39:29



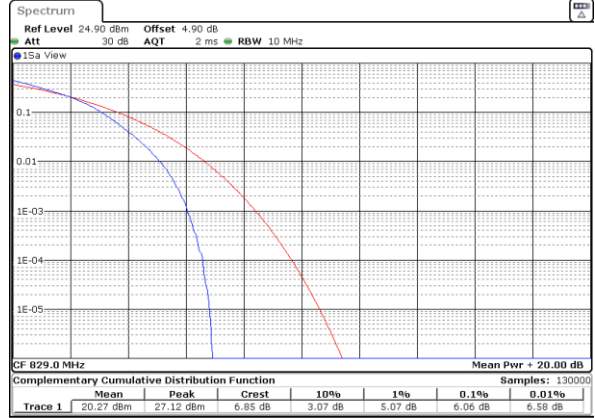
LTE Band 5 / 10MHz / 16QAM

Lowest Channel / 1RB



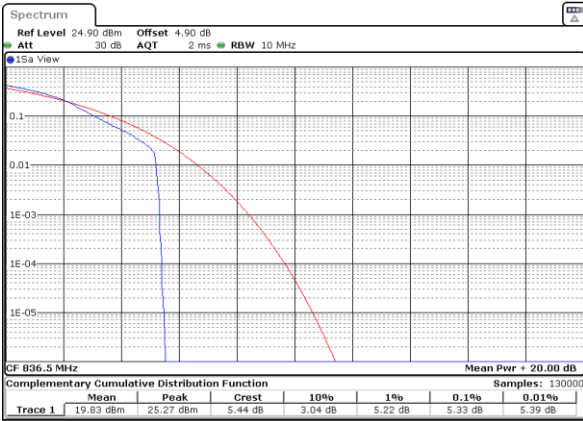
Date: 8 NOV 2019 13:06:18

Lowest Channel / Full RB



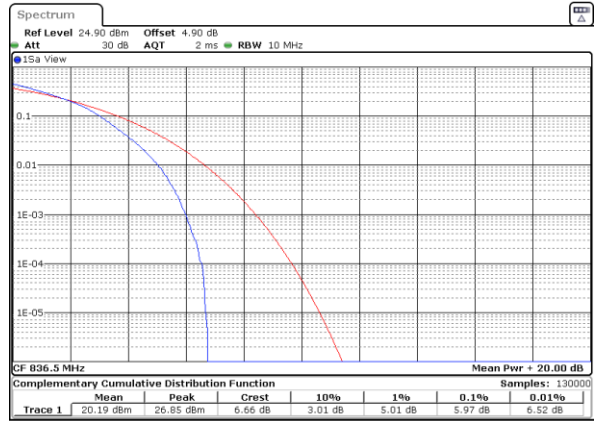
Date: 8 NOV 2019 13:06:27

Middle Channel / 1RB



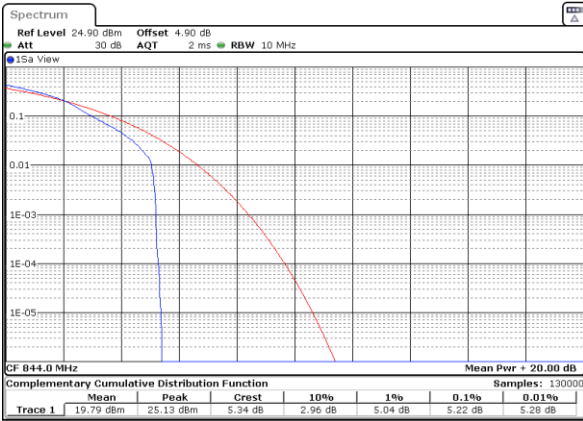
Date: 8 NOV 2019 13:06:36

Middle Channel / Full RB



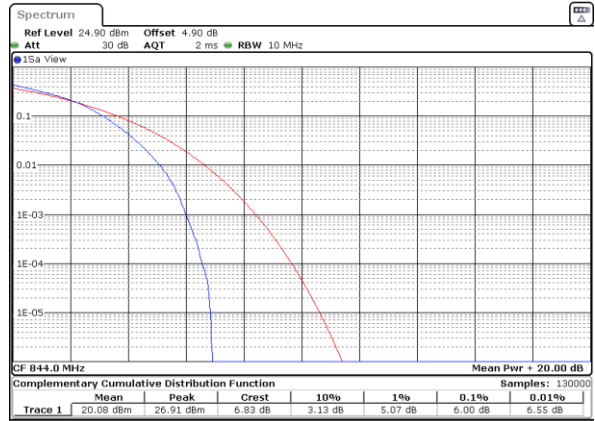
Date: 8 NOV 2019 13:06:45

Highest Channel / 1RB



Date: 8 NOV 2019 13:06:55

Highest Channel / Full RB

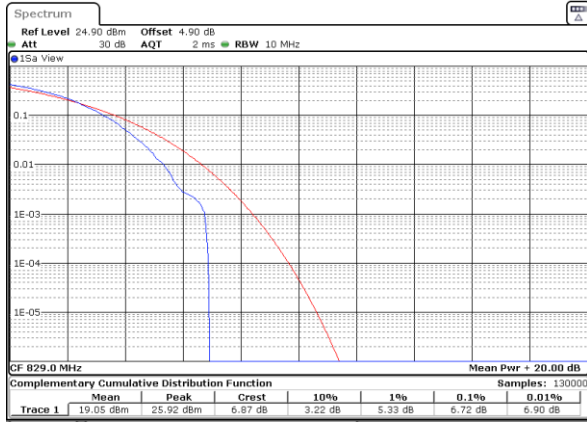


Date: 8 NOV 2019 13:07:04



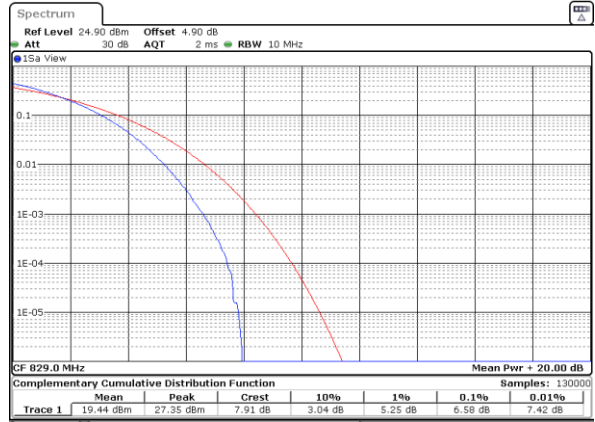
LTE Band 5 / 10MHz / 64QAM

Lowest Channel / 1RB



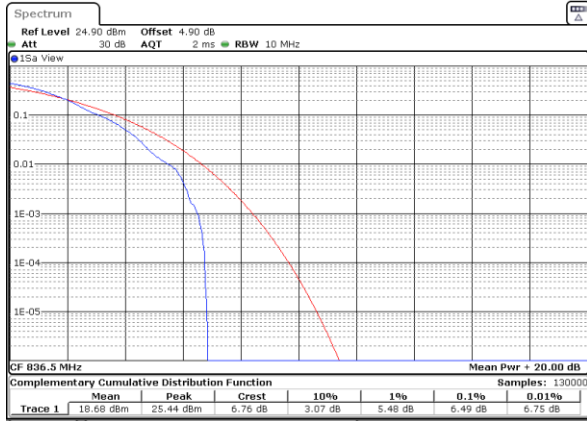
Date: 8 NOV 2019 13:51:03

Lowest Channel / Full RB



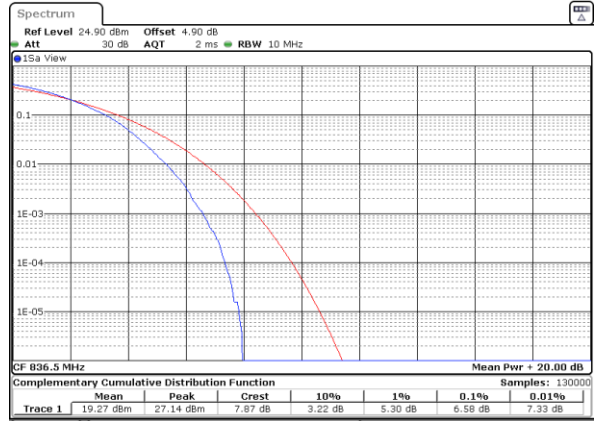
Date: 8 NOV 2019 13:51:13

Middle Channel / 1RB



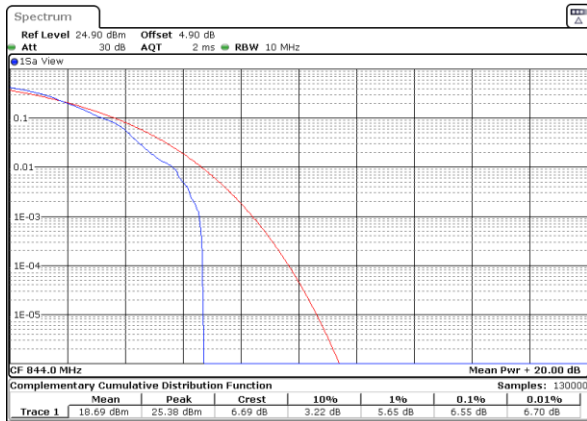
Date: 8 NOV 2019 13:50:54

Middle Channel / Full RB



Date: 8 NOV 2019 13:50:45

Highest Channel / 1RB



Date: 8 NOV 2019 13:50:00

Highest Channel / Full RB



Date: 8 NOV 2019 13:50:36



**26dB Bandwidth**

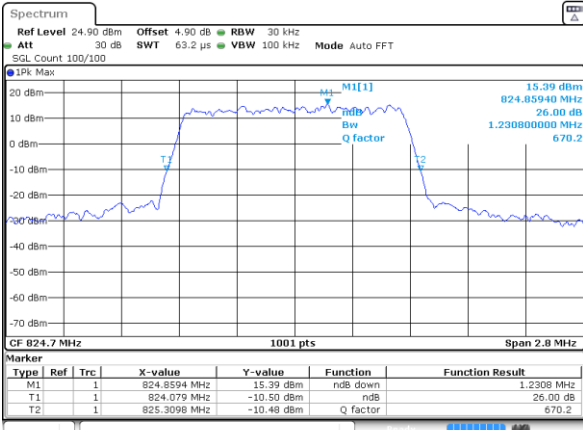
| Mode       | LTE Band 5 : 26dB BW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
|------------|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| BW         | 1.4MHz                    |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | QPSK                      | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM |
| Lowest CH  | 1.231                     | 1.222 | 3.021 | 2.991 | 4.895 | 4.885 | 9.85  | 9.81  |       |       |       |       |
| Middle CH  | 1.234                     | 1.217 | 2.961 | 3.045 | 4.955 | 4.985 | 9.77  | 9.75  |       |       |       |       |
| Highest CH | 1.231                     | 1.222 | 3.051 | 3.009 | 4.875 | 4.885 | 9.87  | 9.69  |       |       |       |       |
| BW         | 1.4MHz                    |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                     |       | 64QAM |       | 64QAM |       | 64QAM |       |       |       |       |       |
| Lowest CH  | 1.214                     |       | 3.003 |       | 4.915 |       | 9.91  |       |       |       |       |       |
| Middle CH  | 1.234                     |       | 3.051 |       | 4.845 |       | 9.83  |       |       |       |       |       |
| Highest CH | 1.225                     |       | 3.033 |       | 4.845 |       | 9.75  |       |       |       |       |       |





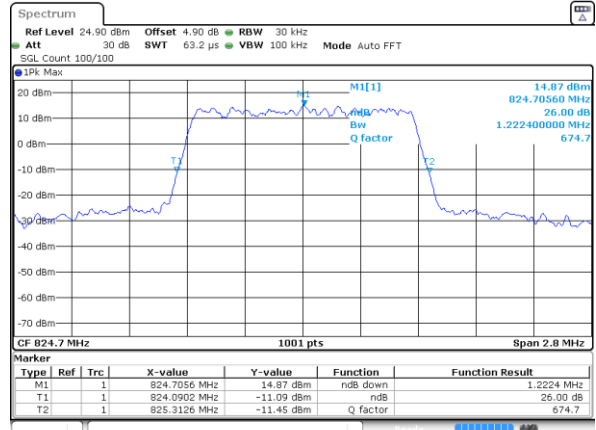
LTE Band 5

Lowest Channel / 1.4MHz / QPSK



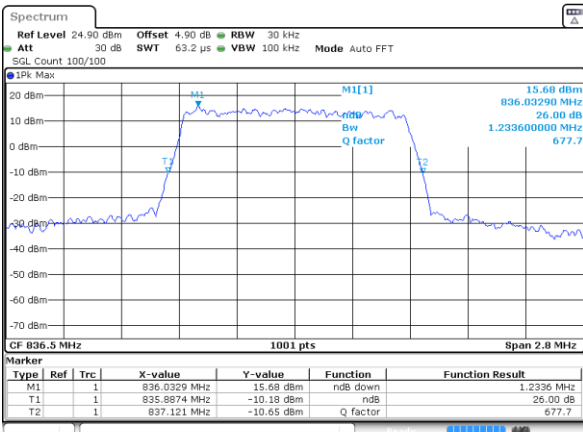
Date: 8 NOV 2019 12:00:02

Lowest Channel / 1.4MHz / 16QAM



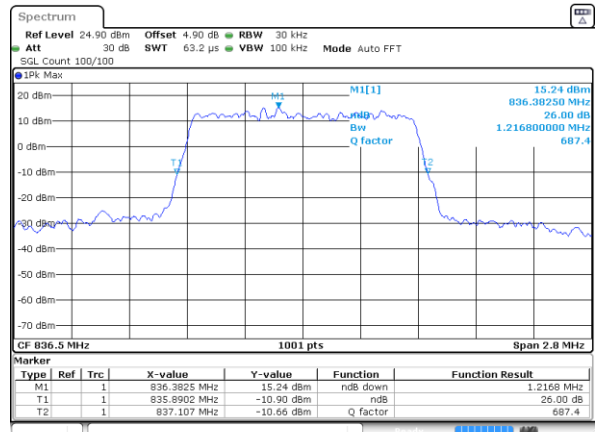
Date: 8 NOV 2019 11:59:52

Middle Channel / 1.4MHz / QPSK



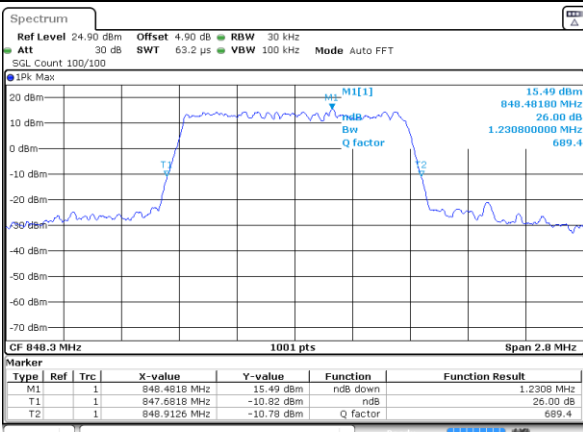
Date: 8 NOV 2019 12:08:50

Middle Channel / 1.4MHz / 16QAM



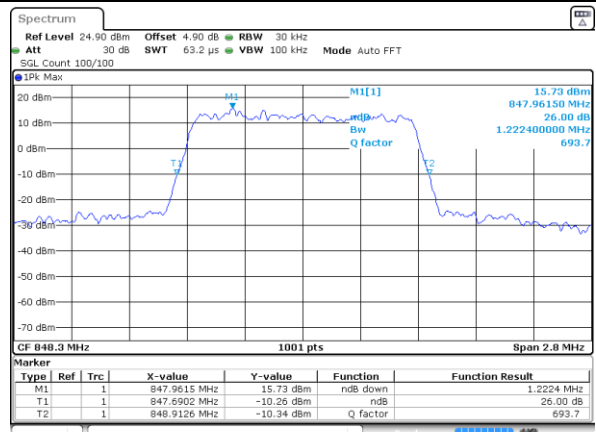
Date: 8 NOV 2019 12:09:00

Highest Channel / 1.4MHz / QPSK



Date: 8 NOV 2019 12:11:19

Highest Channel / 1.4MHz / 16QAM

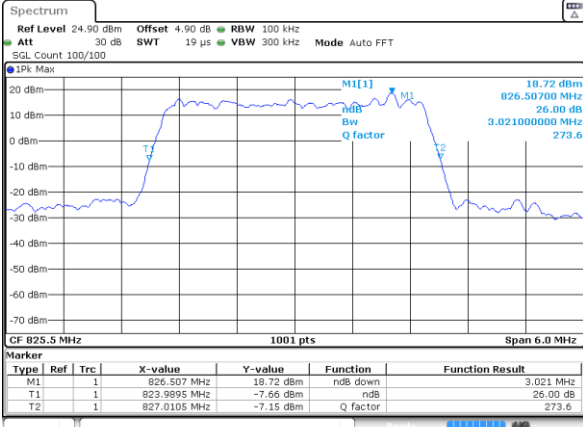


Date: 8 NOV 2019 12:11:29



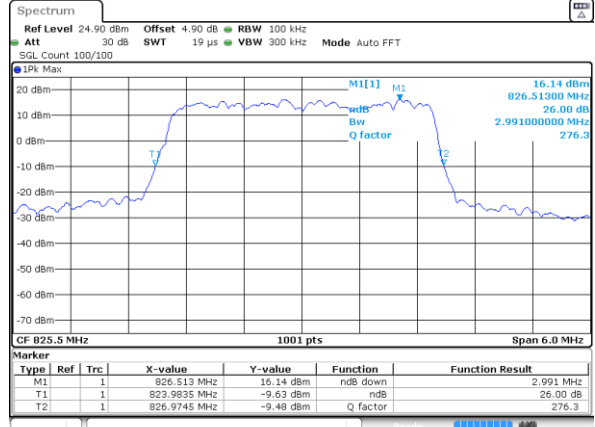
LTE Band 5

Lowest Channel / 3MHz / QPSK



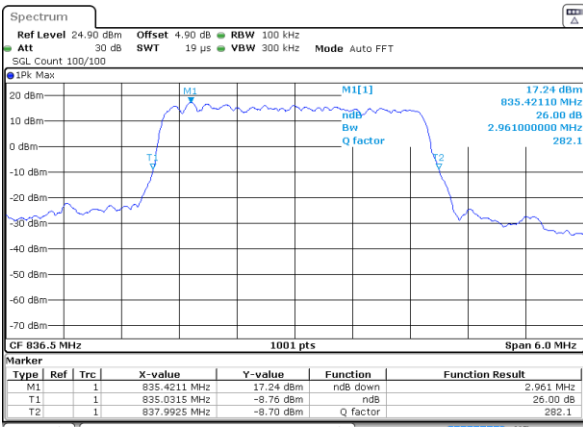
Date: 8 NOV 2019 12:20:17

Lowest Channel / 3MHz / 16QAM



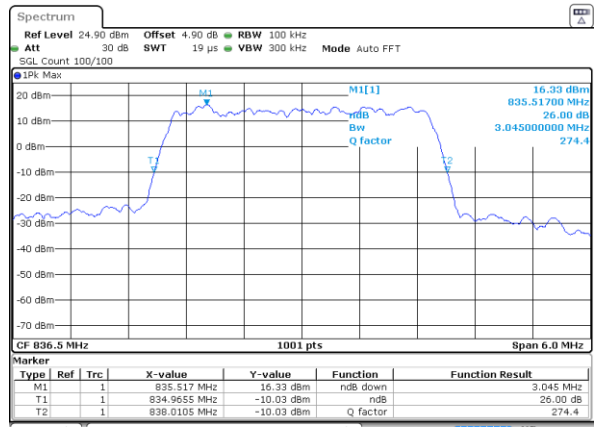
Date: 8 NOV 2019 12:20:27

Middle Channel / 3MHz / QPSK



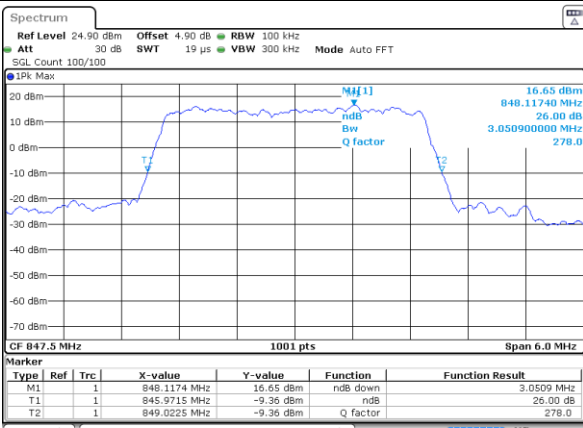
Date: 8 NOV 2019 14:21:14

Middle Channel / 3MHz / 16QAM



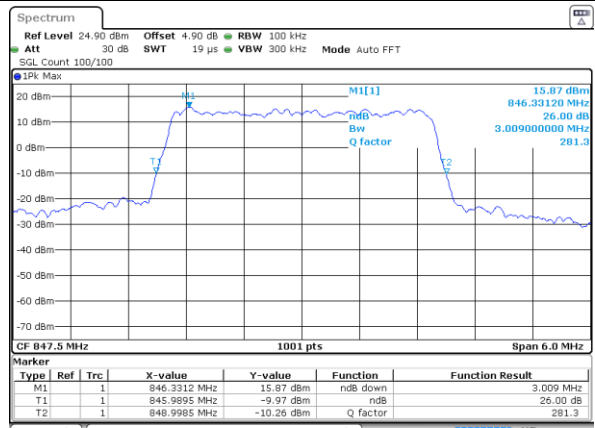
Date: 8 NOV 2019 14:21:34

Highest Channel / 3MHz / QPSK



Date: 8 NOV 2019 14:22:34

Highest Channel / 3MHz / 16QAM

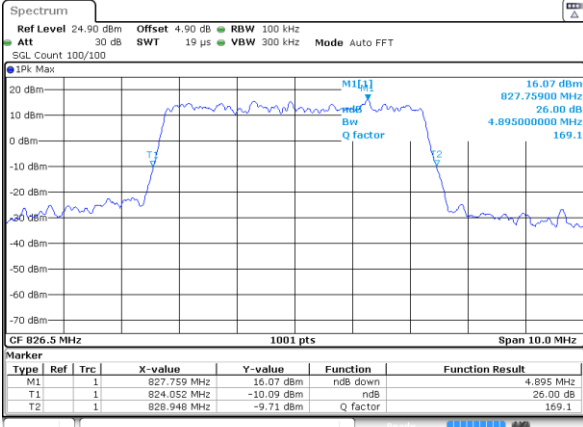


Date: 8 NOV 2019 14:22:14



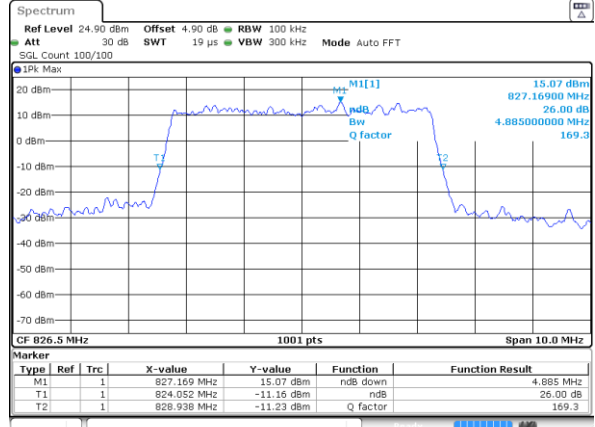
LTE Band 5

Lowest Channel / 5MHz / QPSK



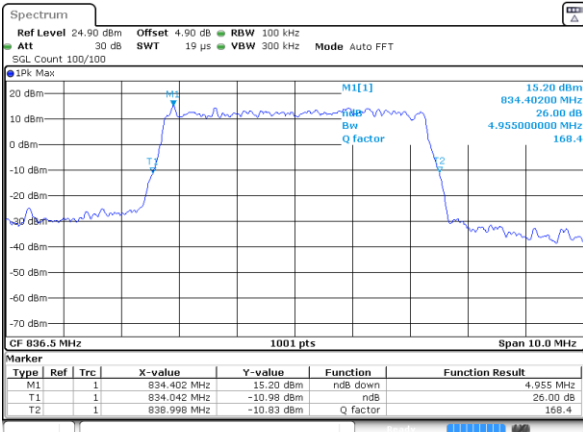
Date: 8 NOV 2019 14:33:40

Lowest Channel / 5MHz / 16QAM



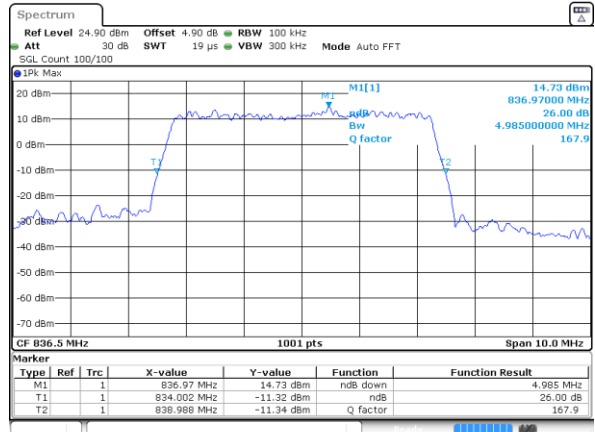
Date: 8 NOV 2019 14:32:49

Middle Channel / 5MHz / QPSK



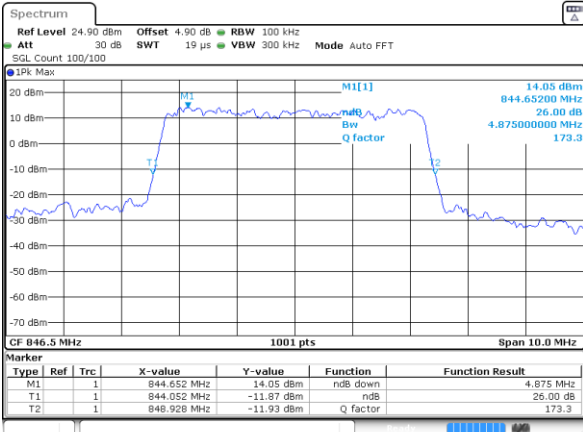
Date: 8 NOV 2019 12:21:52

Middle Channel / 5MHz / 16QAM



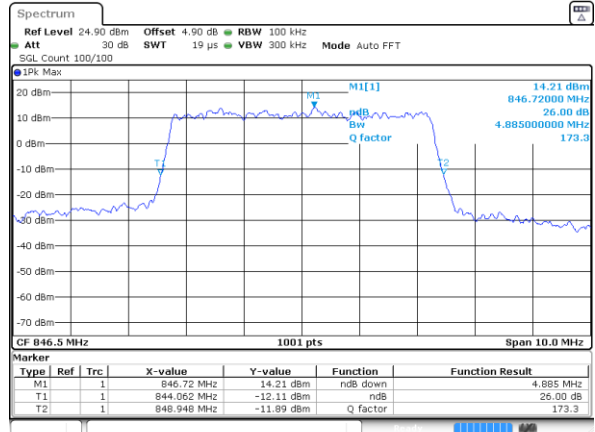
Date: 8 NOV 2019 12:22:02

Highest Channel / 5MHz / QPSK



Date: 8 NOV 2019 12:24:20

Highest Channel / 5MHz / 16QAM

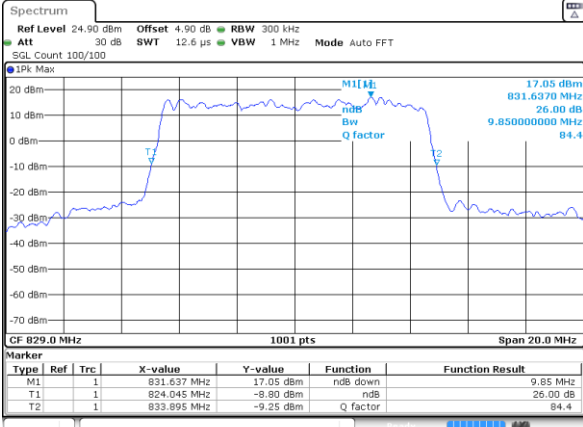


Date: 8 NOV 2019 12:24:31



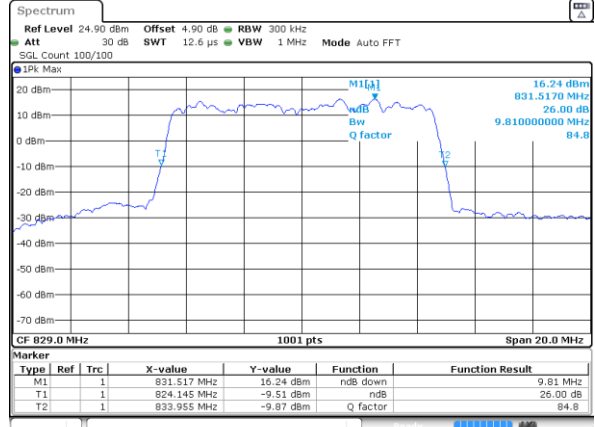
LTE Band 5

Lowest Channel / 10MHz / QPSK



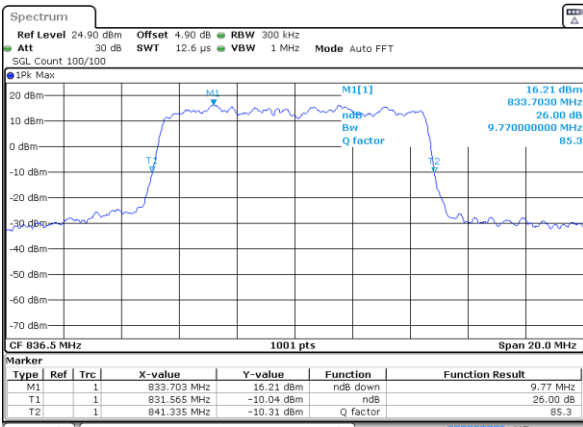
Date: 8 NOV 2019 12:33:18

Lowest Channel / 10MHz / 16QAM



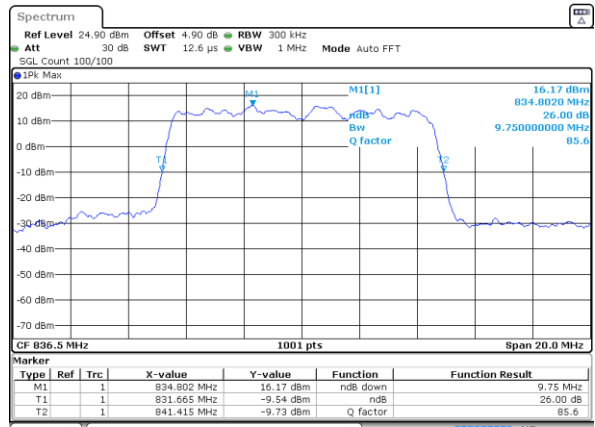
Date: 8 NOV 2019 12:33:28

Middle Channel / 10MHz / QPSK



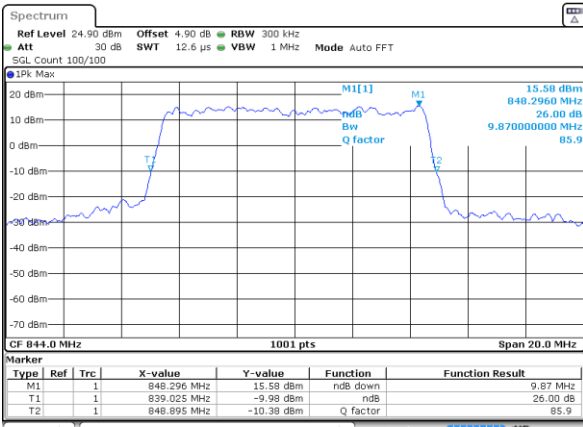
Date: 8 NOV 2019 12:42:16

Middle Channel / 10MHz / 16QAM



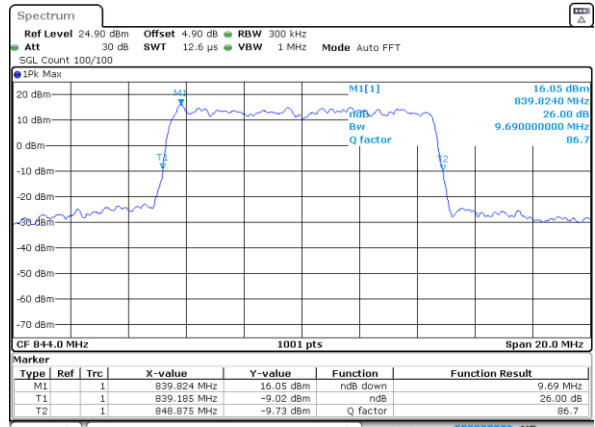
Date: 8 NOV 2019 12:42:26

Highest Channel / 10MHz / QPSK



Date: 8 NOV 2019 12:44:45

Highest Channel / 10MHz / 16QAM

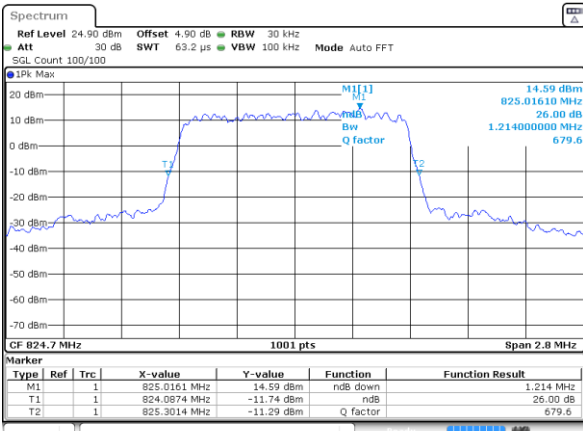


Date: 8 NOV 2019 12:44:55



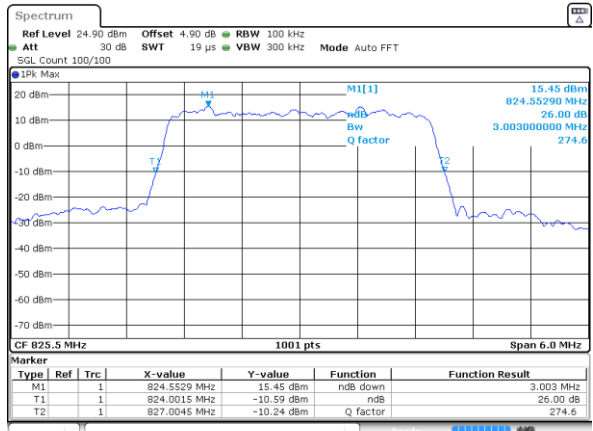
LTE Band 5

Lowest Channel / 1.4MHz / 64QAM



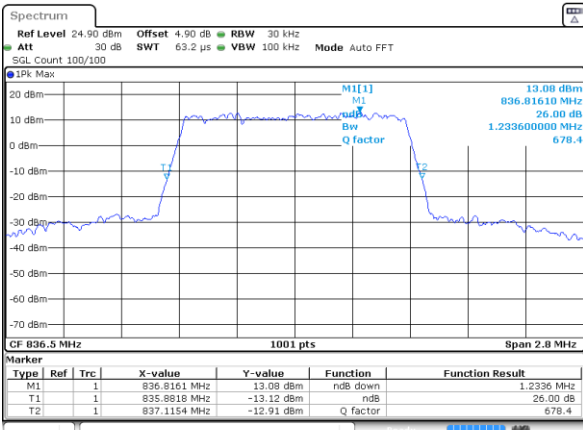
Date: 8 NOV 2019 13:07:36

Lowest Channel / 3MHz / 64QAM



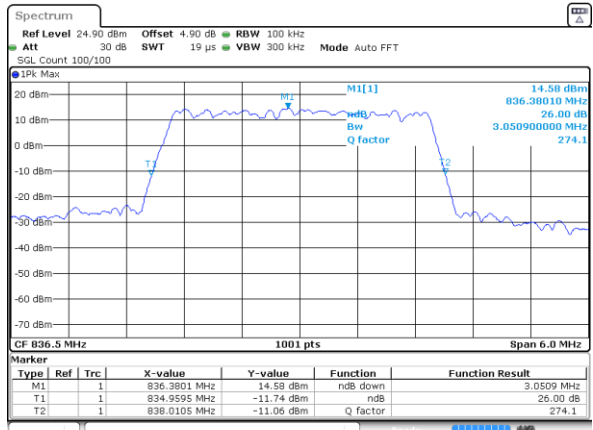
Date: 8 NOV 2019 13:17:49

Middle Channel / 1.4MHz / 64QAM



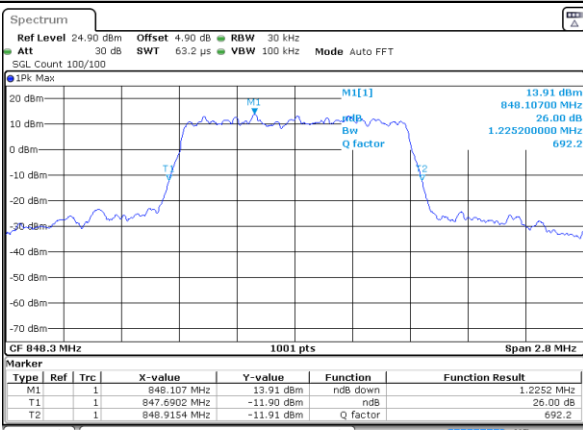
Date: 8 NOV 2019 13:13:00

Middle Channel / 3MHz / 64QAM



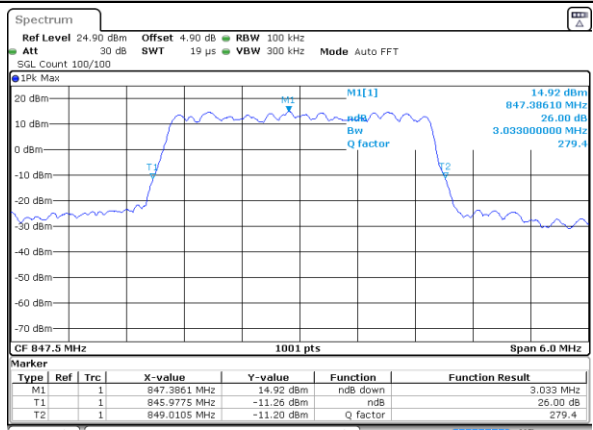
Date: 8 NOV 2019 13:23:14

Highest Channel / 1.4MHz / 64QAM



Date: 8 NOV 2019 13:13:21

Highest Channel / 3MHz / 64QAM

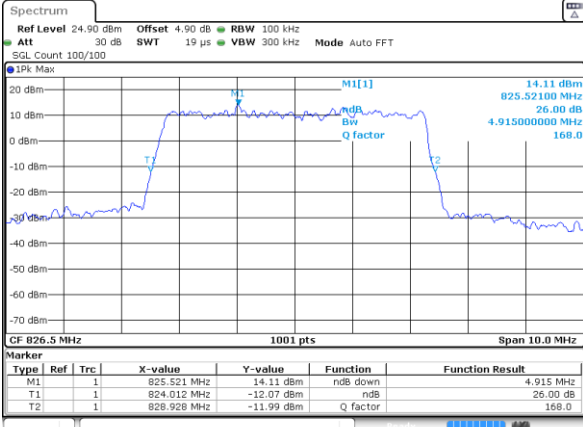


Date: 8 NOV 2019 13:23:34



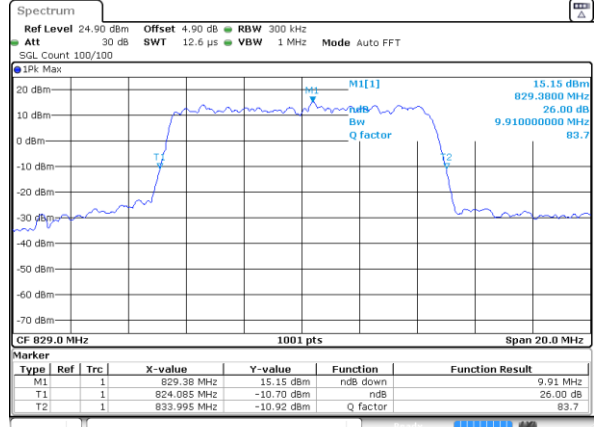
LTE Band 5

Lowest Channel / 5MHz / 64QAM



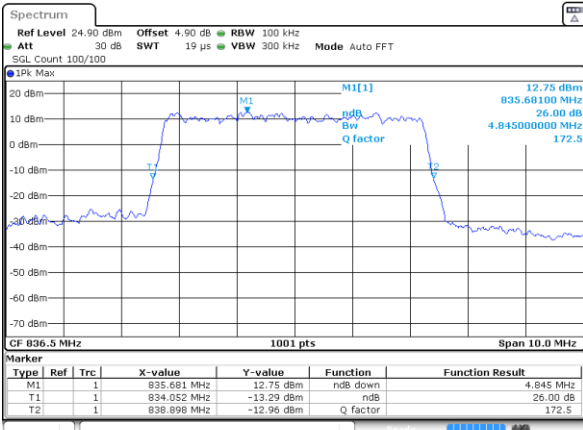
Date: 8 NOV 2019 13:28:03

Lowest Channel / 10MHz / 64QAM



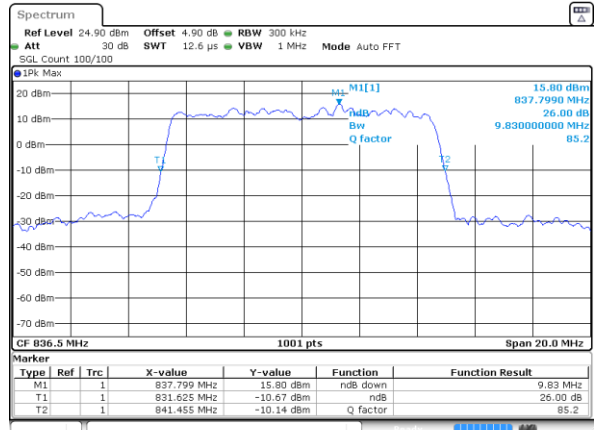
Date: 8 NOV 2019 13:38:16

Middle Channel / 5MHz / 64QAM



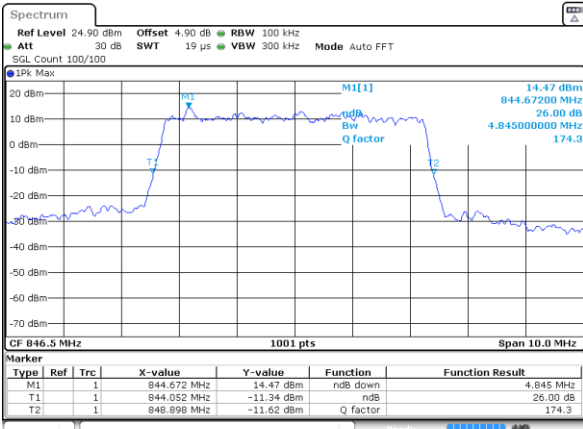
Date: 8 NOV 2019 13:33:27

Middle Channel / 10MHz / 64QAM



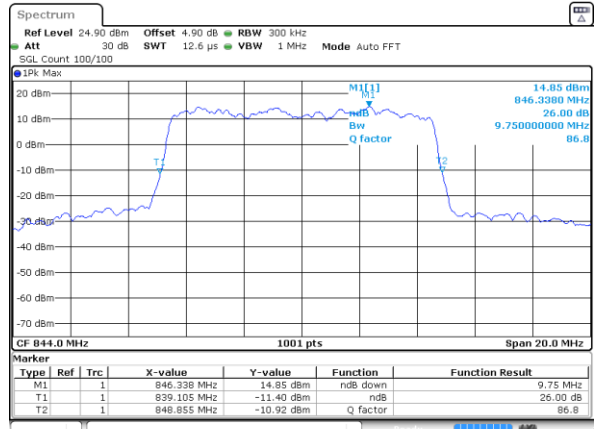
Date: 8 NOV 2019 13:43:40

Highest Channel / 5MHz / 64QAM



Date: 8 NOV 2019 13:33:47

Highest Channel / 10MHz / 64QAM



Date: 8 NOV 2019 13:44:00



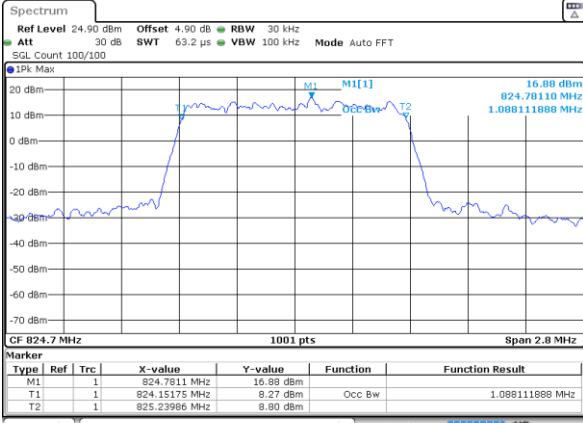
**Occupied Bandwidth**

| 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  | 1.088                    | 1.091 | 2.727 | 2.697 | 4.496 | 4.496 | 9.011 | 8.991 |       |       |       |       |
| Middle CH  | 1.097                    | 1.091 | 2.727 | 2.709 | 4.476 | 4.515 | 8.991 | 8.951 |       |       |       |       |
| Highest CH | 1.088                    | 1.085 | 2.709 | 2.703 | 4.466 | 4.496 | 8.991 | 8.991 |       |       |       |       |
| BW         | 1.4MHz                   |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                    |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | 1.097                    |       | 2.727 |       | 4.476 |       | 9.011 |       |       |       |       |       |
| Middle CH  | 1.094                    |       | 2.721 |       | 4.515 |       | 9.071 |       |       |       |       |       |
| Highest CH | 1.088                    |       | 2.733 |       | 4.496 |       | 9.071 |       |       |       |       |       |



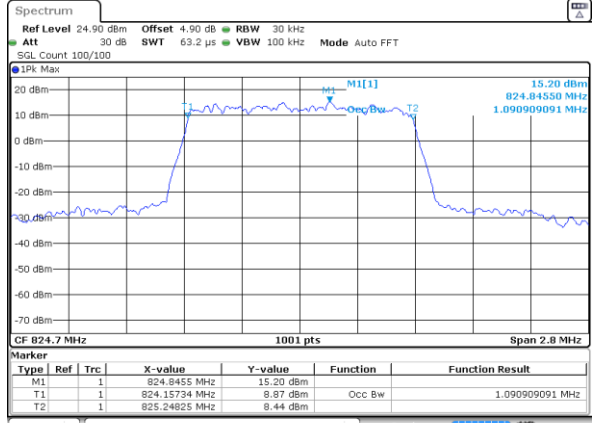
LTE Band 5

Lowest Channel / 1.4MHz / QPSK



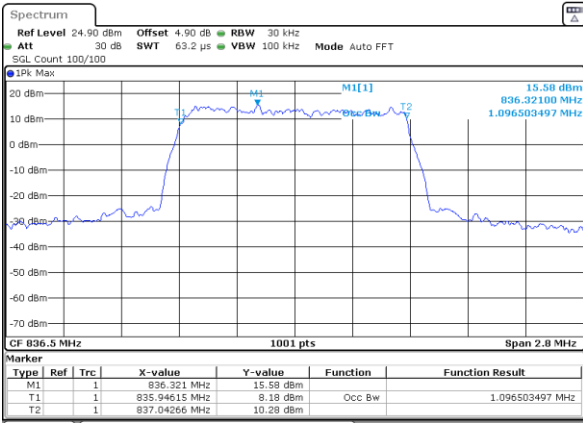
Date: 8 NOV 2019 11:59:31

Lowest Channel / 1.4MHz / 16QAM



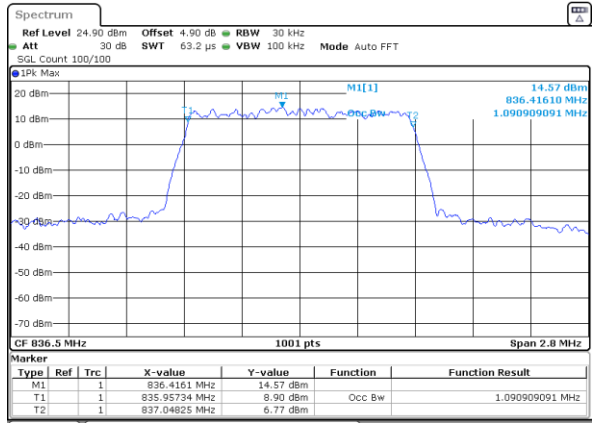
Date: 8 NOV 2019 11:59:42

Middle Channel / 1.4MHz / QPSK



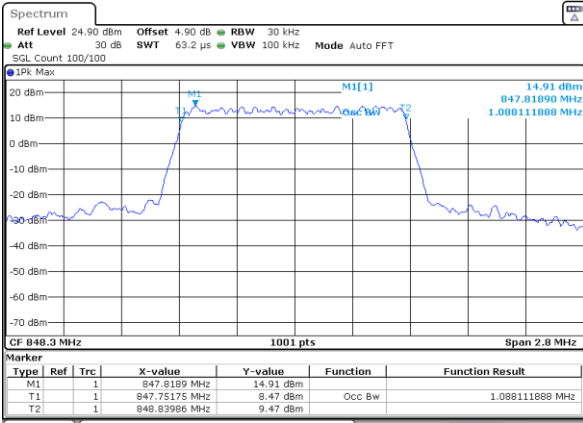
Date: 8 NOV 2019 12:08:30

Middle Channel / 1.4MHz / 16QAM



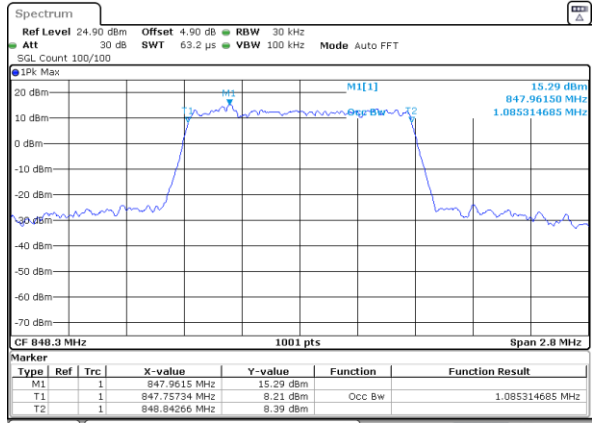
Date: 8 NOV 2019 12:08:40

Highest Channel / 1.4MHz / QPSK



Date: 8 NOV 2019 12:10:58

Highest Channel / 1.4MHz / 16QAM



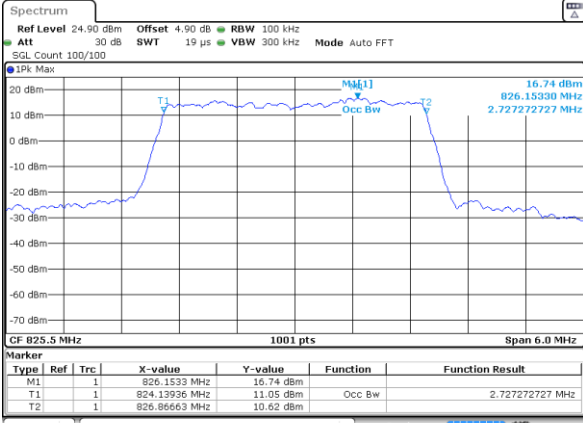
Date: 8 NOV 2019 12:11:09





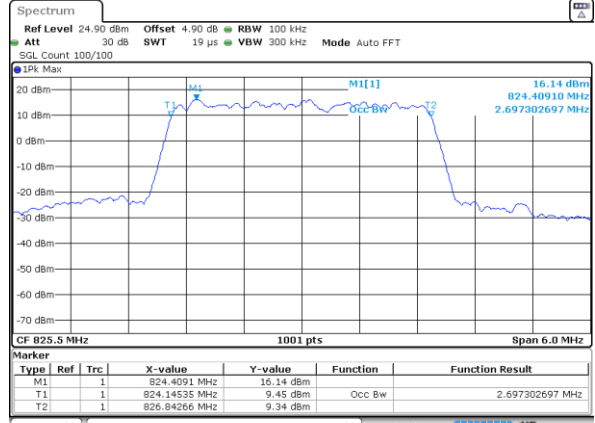
LTE Band 5

Lowest Channel / 3MHz / QPSK



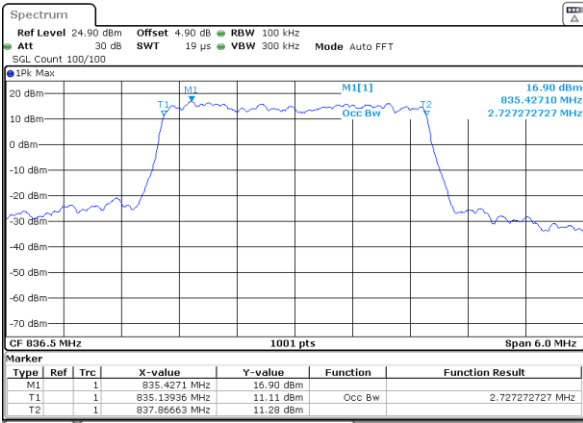
Date: 8 NOV 2019 12:19:57

Lowest Channel / 3MHz / 16QAM



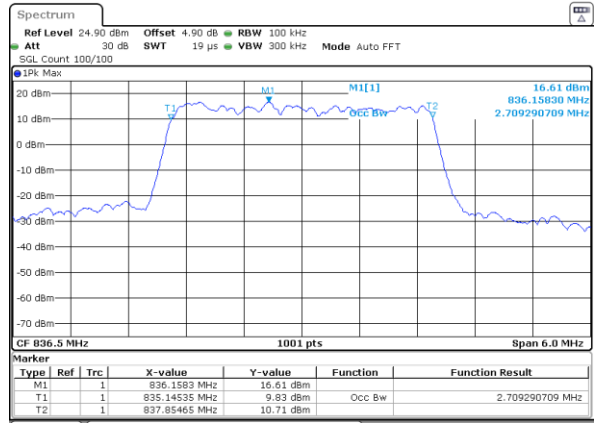
Date: 8 NOV 2019 12:20:07

Middle Channel / 3MHz / QPSK



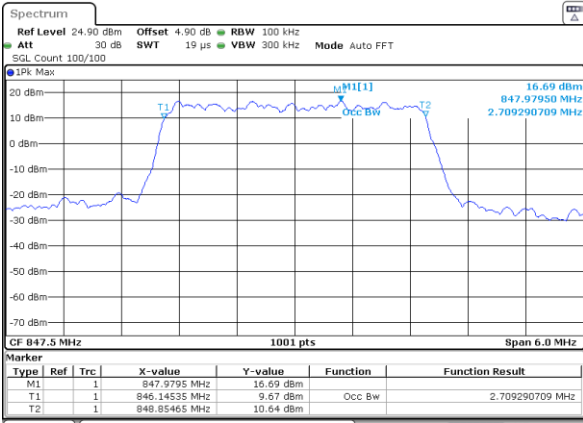
Date: 8 NOV 2019 14:21:06

Middle Channel / 3MHz / 16QAM



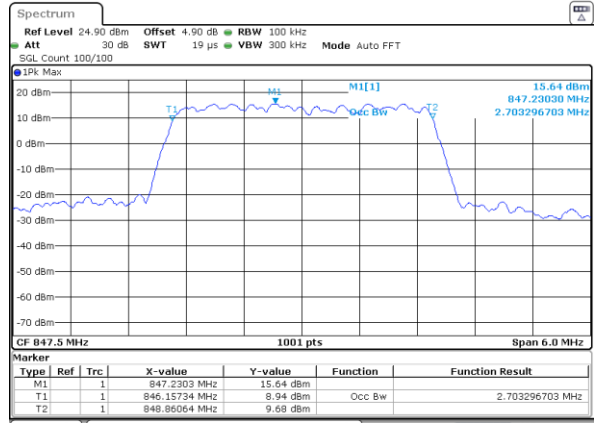
Date: 8 NOV 2019 14:21:25

Highest Channel / 3MHz / QPSK



Date: 8 NOV 2019 14:22:25

Highest Channel / 3MHz / 16QAM

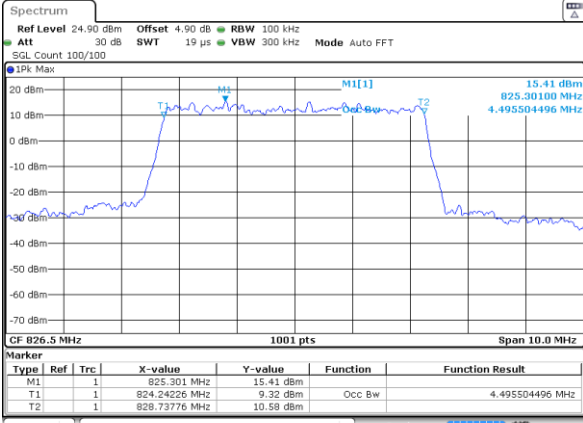


Date: 8 NOV 2019 14:22:05



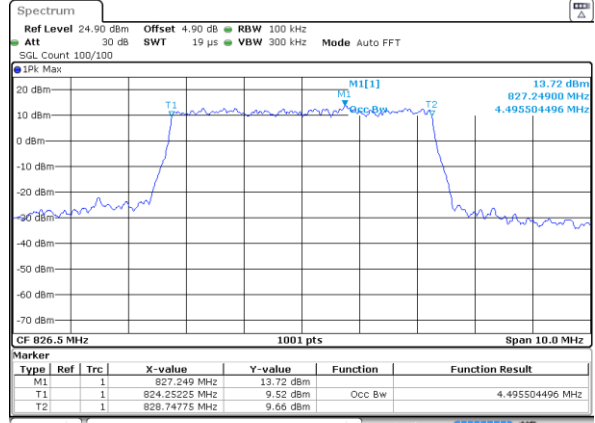
LTE Band 5

Lowest Channel / 5MHz / QPSK



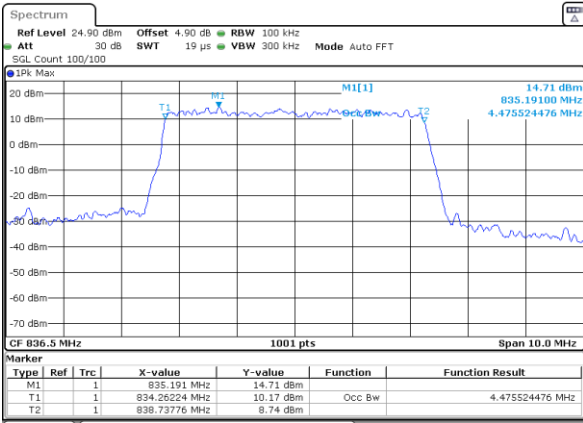
Date: 8 NOV 2019 14:33:08

Lowest Channel / 5MHz / 16QAM



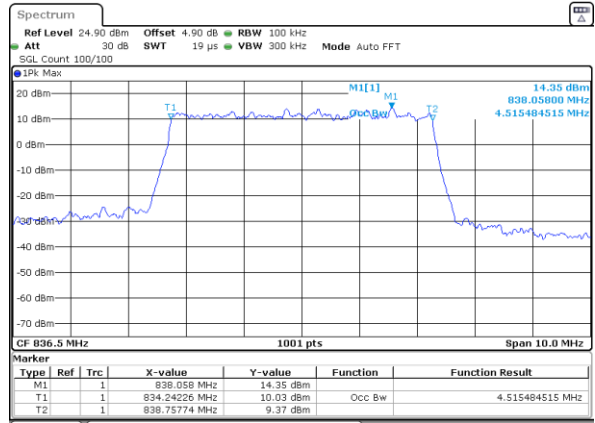
Date: 8 NOV 2019 14:32:40

Middle Channel / 5MHz / QPSK



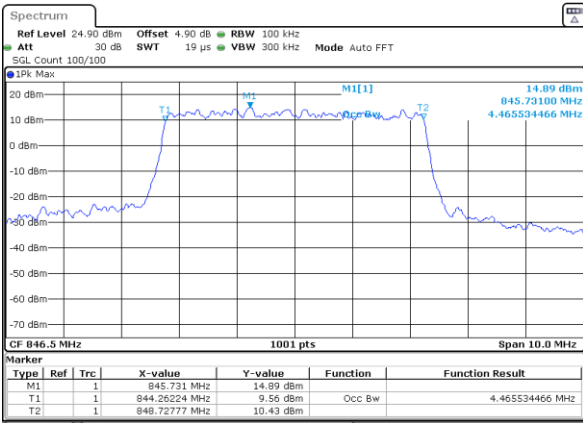
Date: 8 NOV 2019 12:21:32

Middle Channel / 5MHz / 16QAM



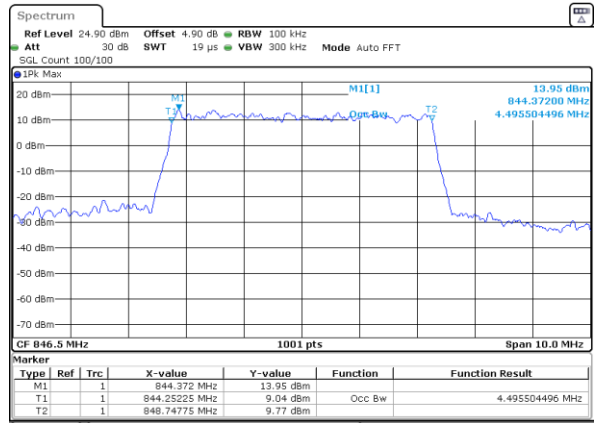
Date: 8 NOV 2019 12:21:42

Highest Channel / 5MHz / QPSK



Date: 8 NOV 2019 12:24:00

Highest Channel / 5MHz / 16QAM

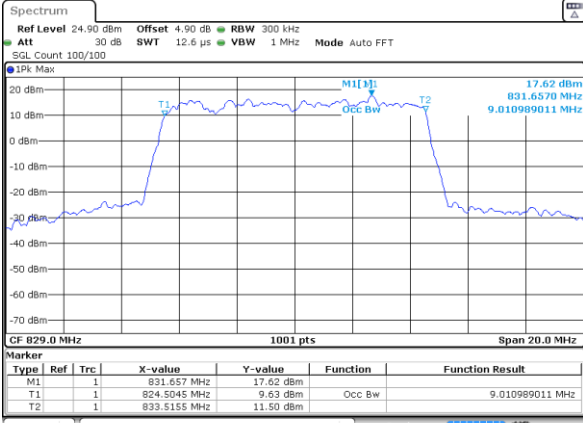


Date: 8 NOV 2019 12:24:10



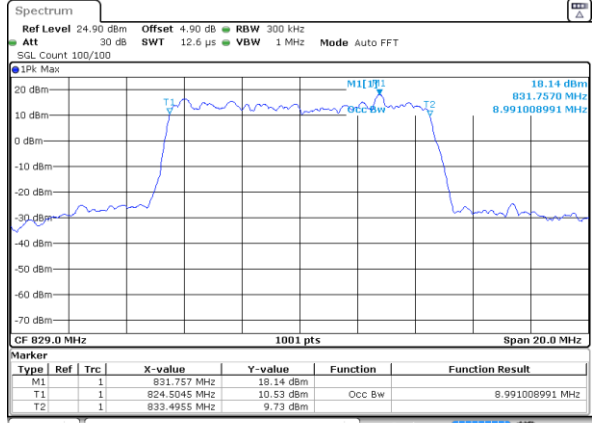
LTE Band 5

Lowest Channel / 10MHz / QPSK



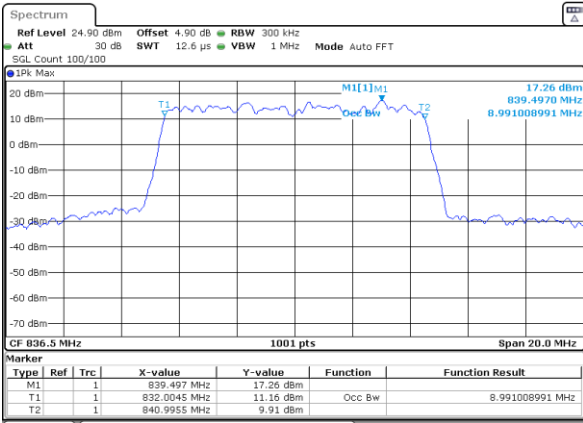
Date: 8 NOV 2019 12:32:58

Lowest Channel / 10MHz / 16QAM



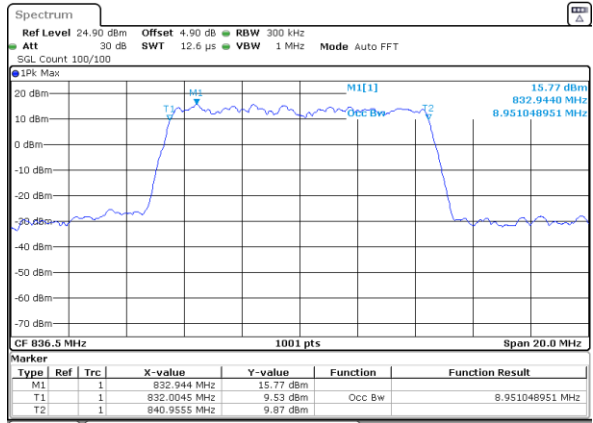
Date: 8 NOV 2019 12:33:08

Middle Channel / 10MHz / QPSK



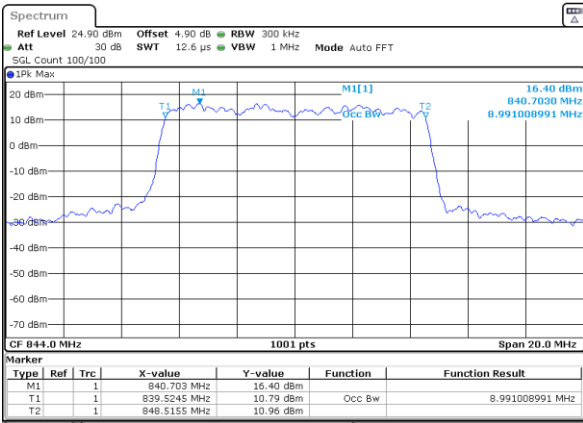
Date: 8 NOV 2019 12:41:56

Middle Channel / 10MHz / 16QAM



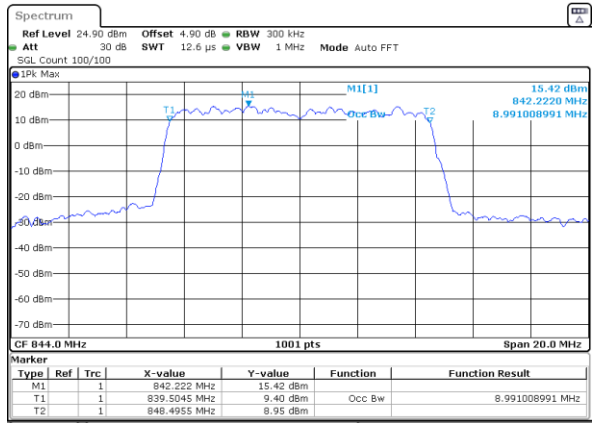
Date: 8 NOV 2019 12:42:06

Highest Channel / 10MHz / QPSK



Date: 8 NOV 2019 12:44:25

Highest Channel / 10MHz / 16QAM

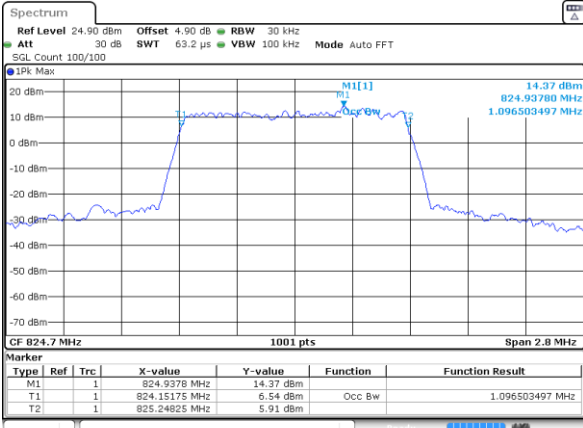


Date: 8 NOV 2019 12:44:35



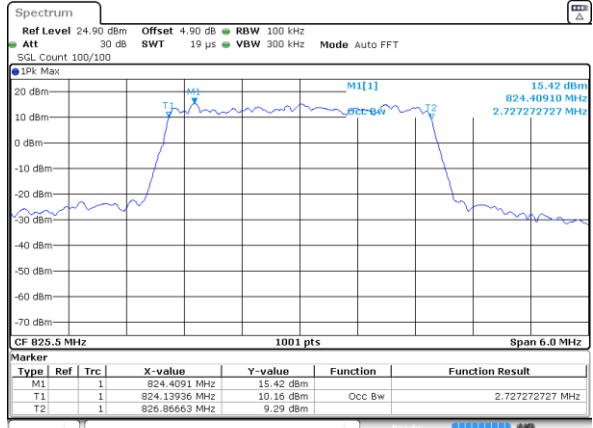
LTE Band 5

Lowest Channel / 1.4MHz / 64QAM



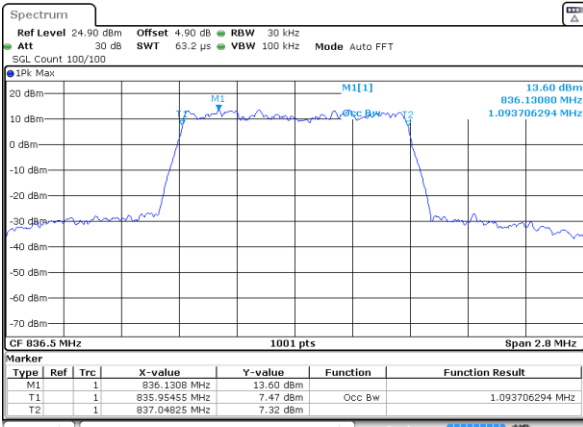
Date: 8 NOV 2019 13:07:26

Lowest Channel / 3MHz / 64QAM



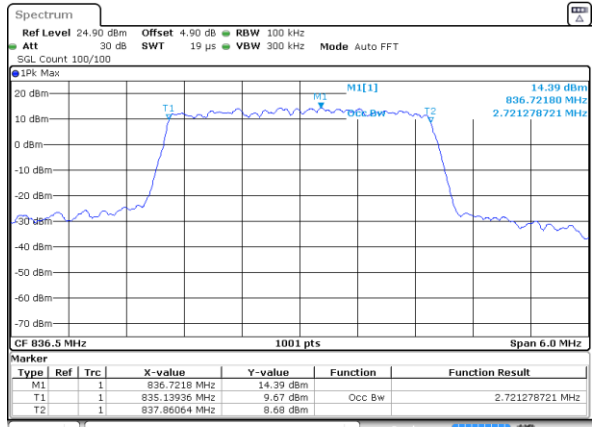
Date: 8 NOV 2019 13:17:39

Middle Channel / 1.4MHz / 64QAM



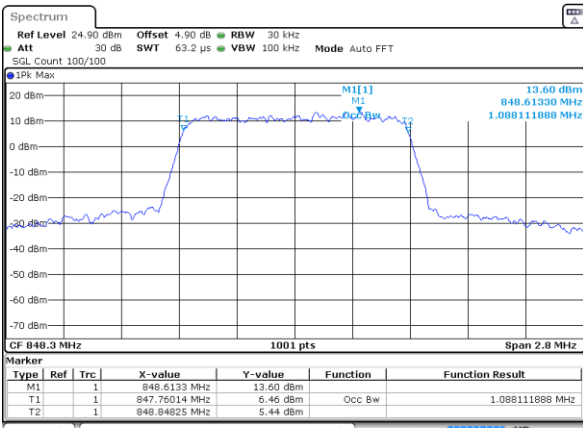
Date: 8 NOV 2019 13:12:50

Middle Channel / 3MHz / 64QAM



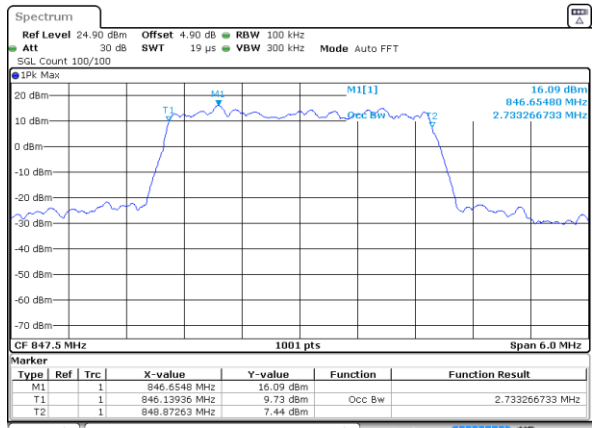
Date: 8 NOV 2019 13:23:04

Highest Channel / 1.4MHz / 64QAM



Date: 8 NOV 2019 13:13:10

Highest Channel / 3MHz / 64QAM



Date: 8 NOV 2019 13:23:24