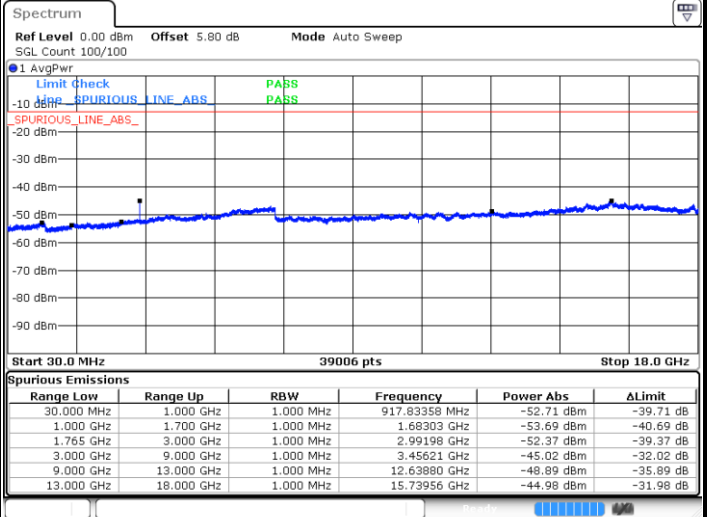
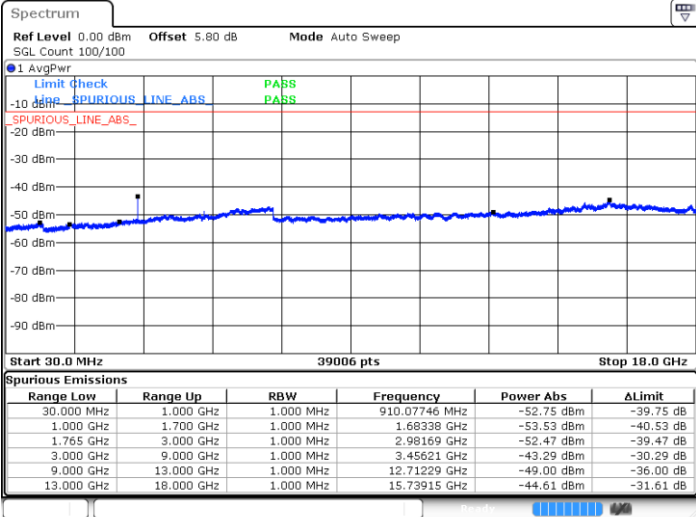




LTE Band 4 / 10MHz

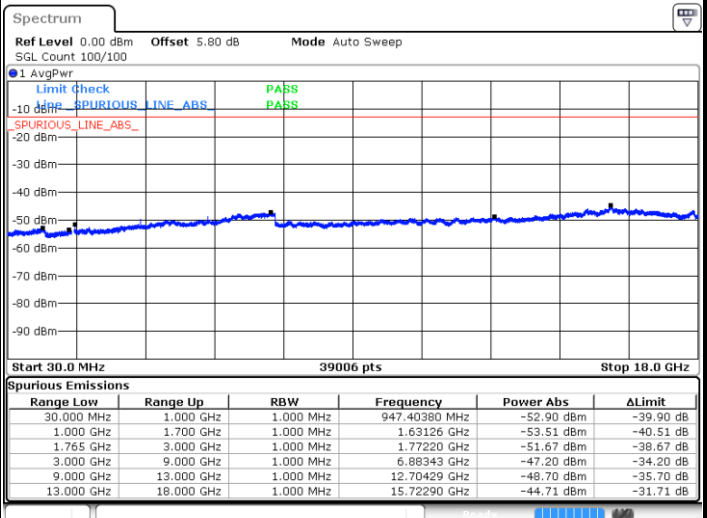
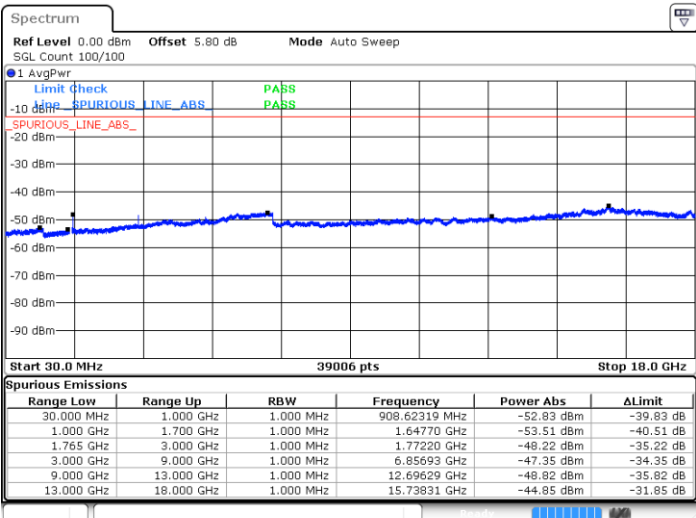
Middle Channel / QPSK

Middle Channel / 16QAM



Highest Channel / QPSK

Highest Channel / 16QAM

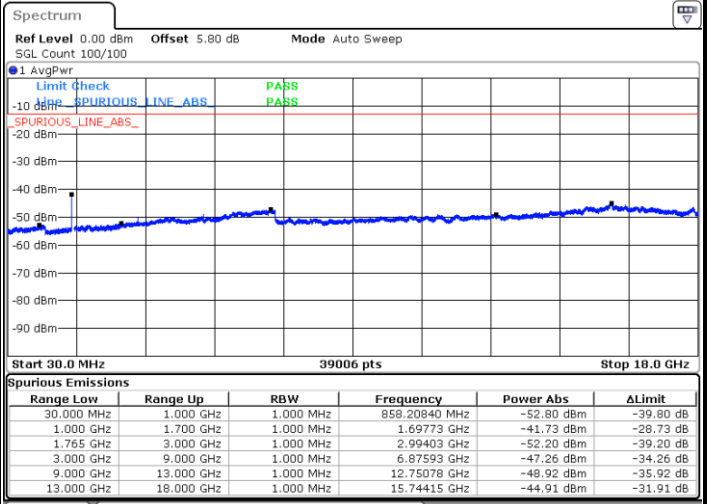
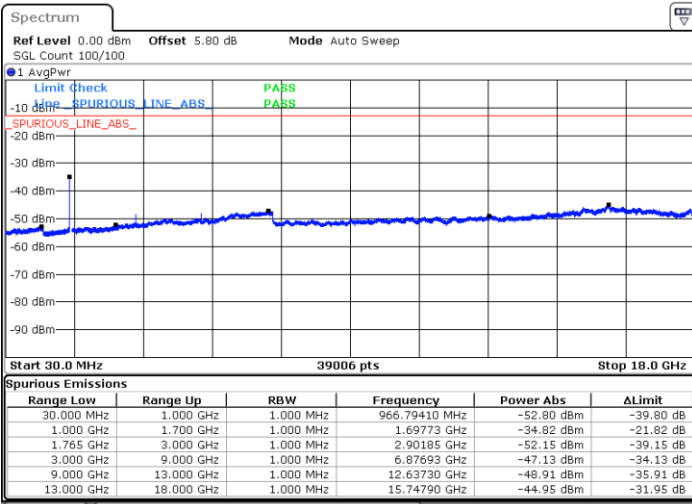




LTE Band 4 / 15MHz

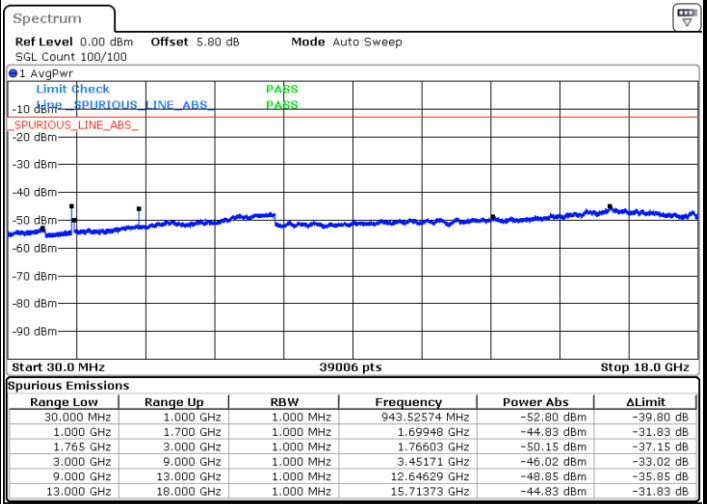
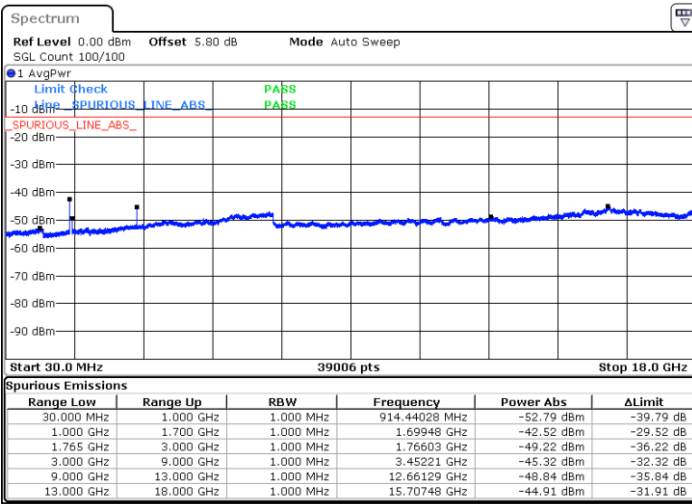
Lowest Channel / QPSK

Lowest Channel / 16QAM



Middle Channel / QPSK

Middle Channel / 16QAM

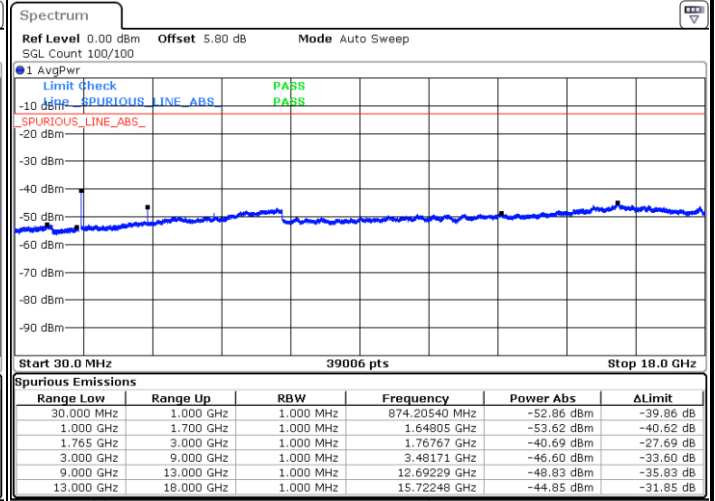
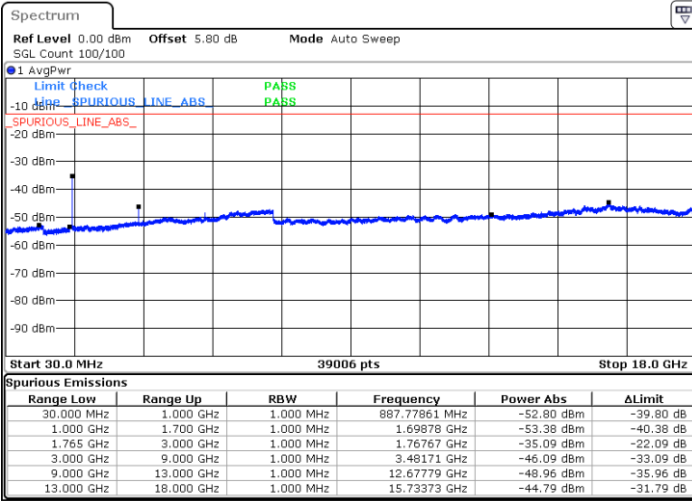




LTE Band 4 / 15MHz

Highest Channel / QPSK

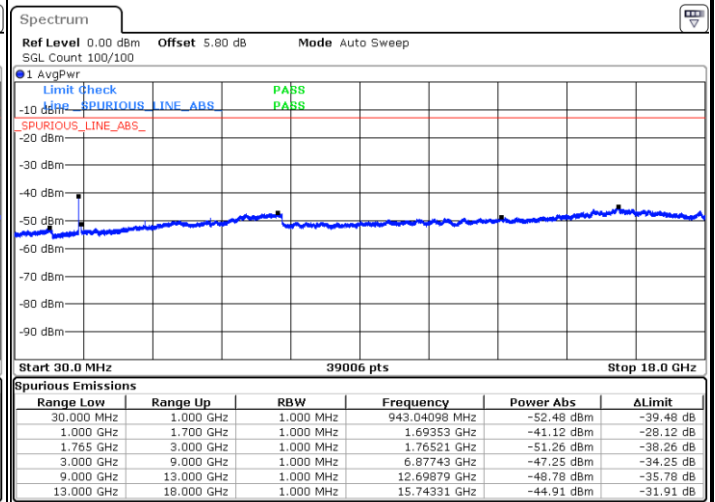
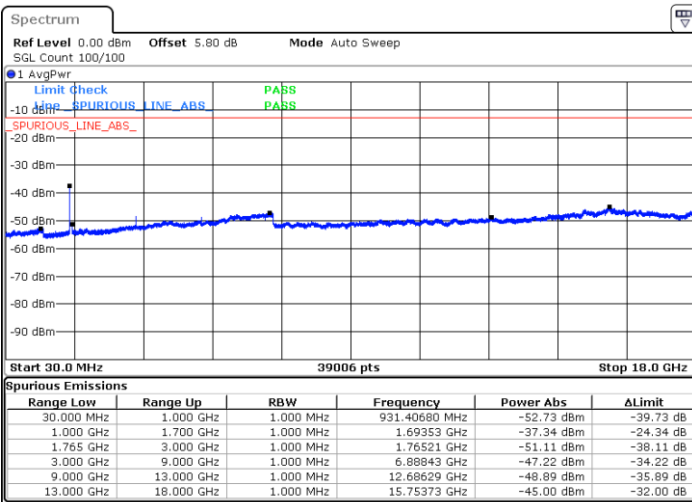
Highest Channel / 16QAM



LTE Band 4 / 20MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

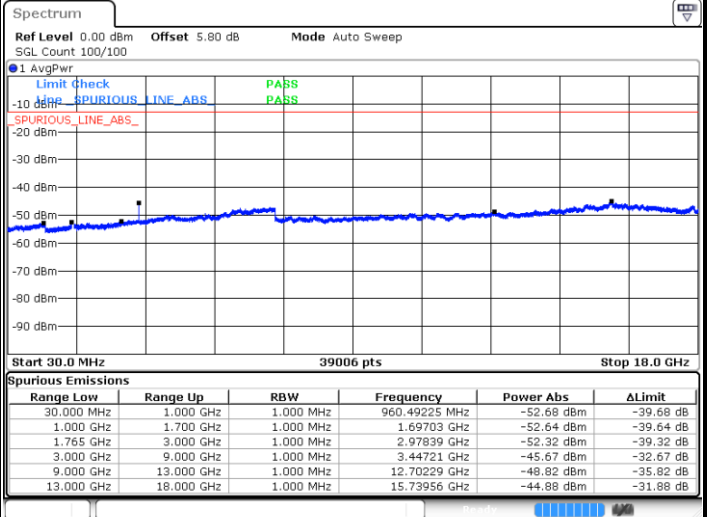
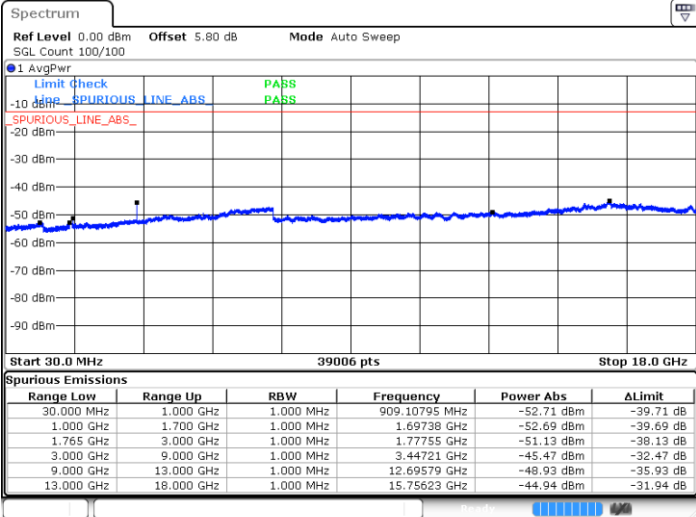




LTE Band 4 / 20MHz

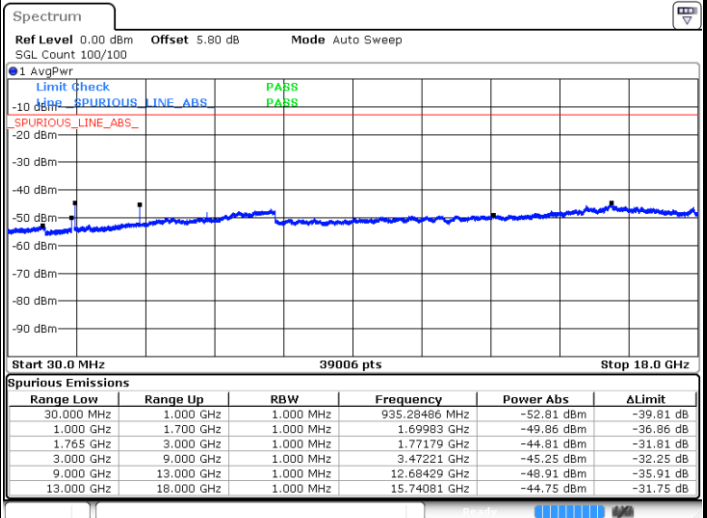
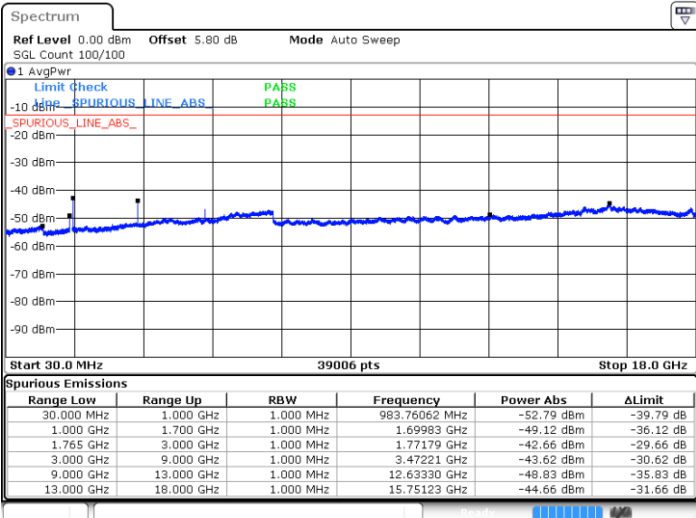
Middle Channel / QPSK

Middle Channel / 16QAM



Highest Channel / QPSK

Highest Channel / 16QAM

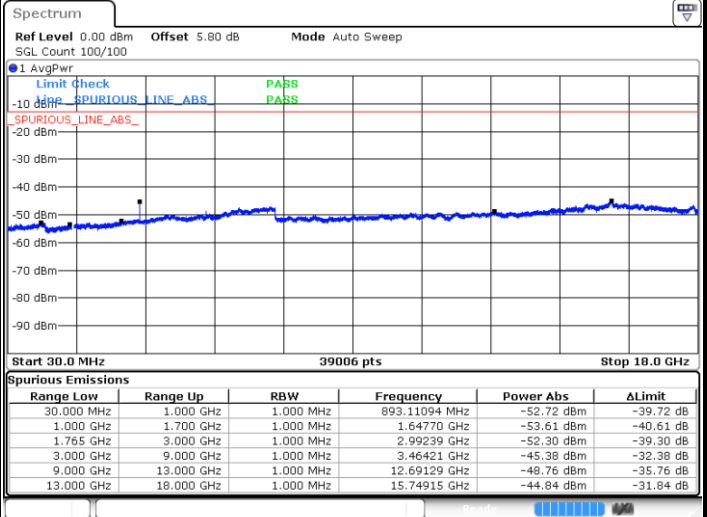
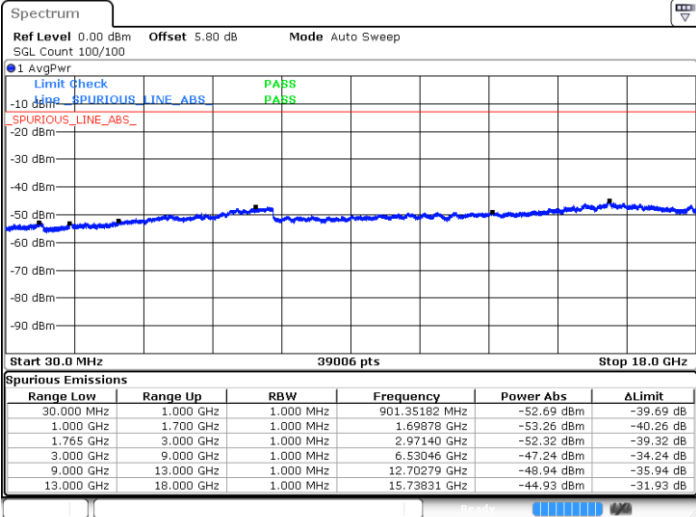




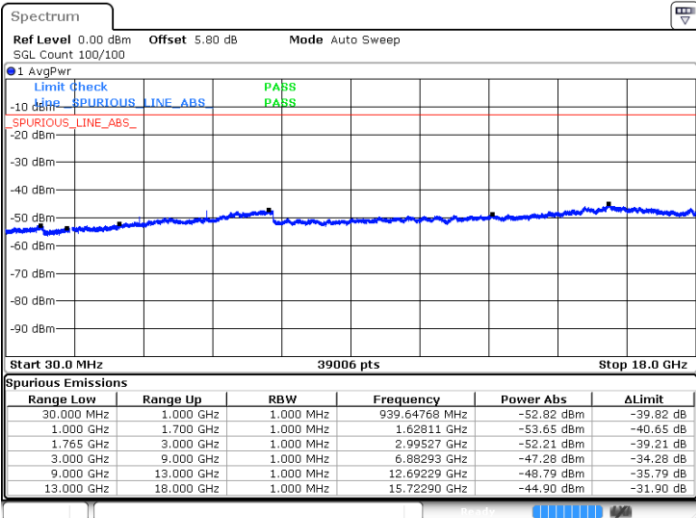
LTE Band 4 / 1.4MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM



Highest Channel / 64QAM

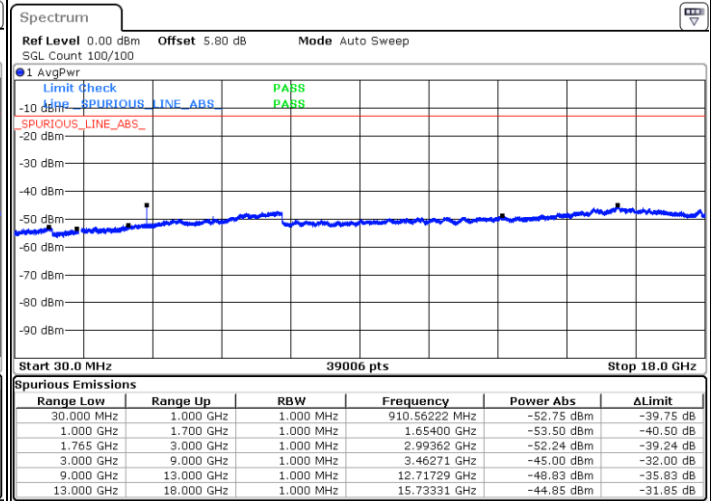
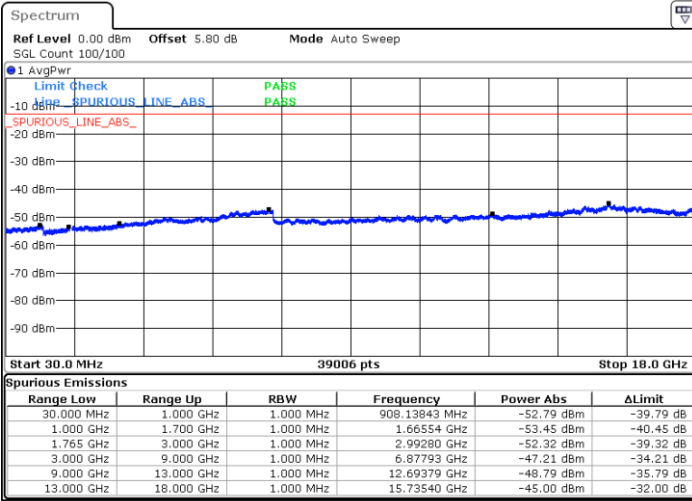




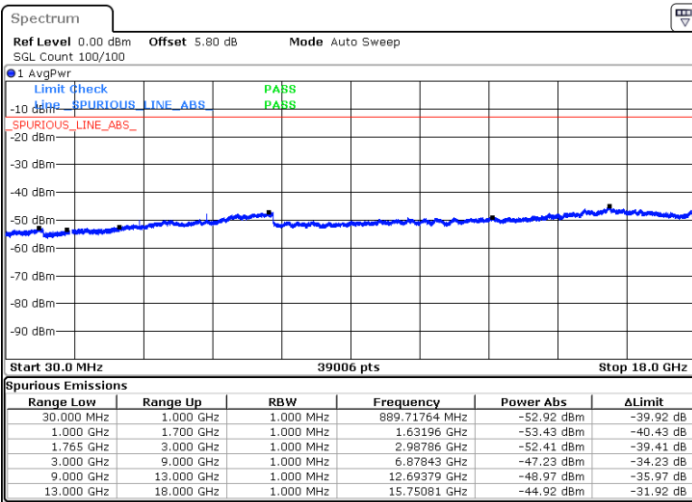
LTE Band 4 / 3MHz

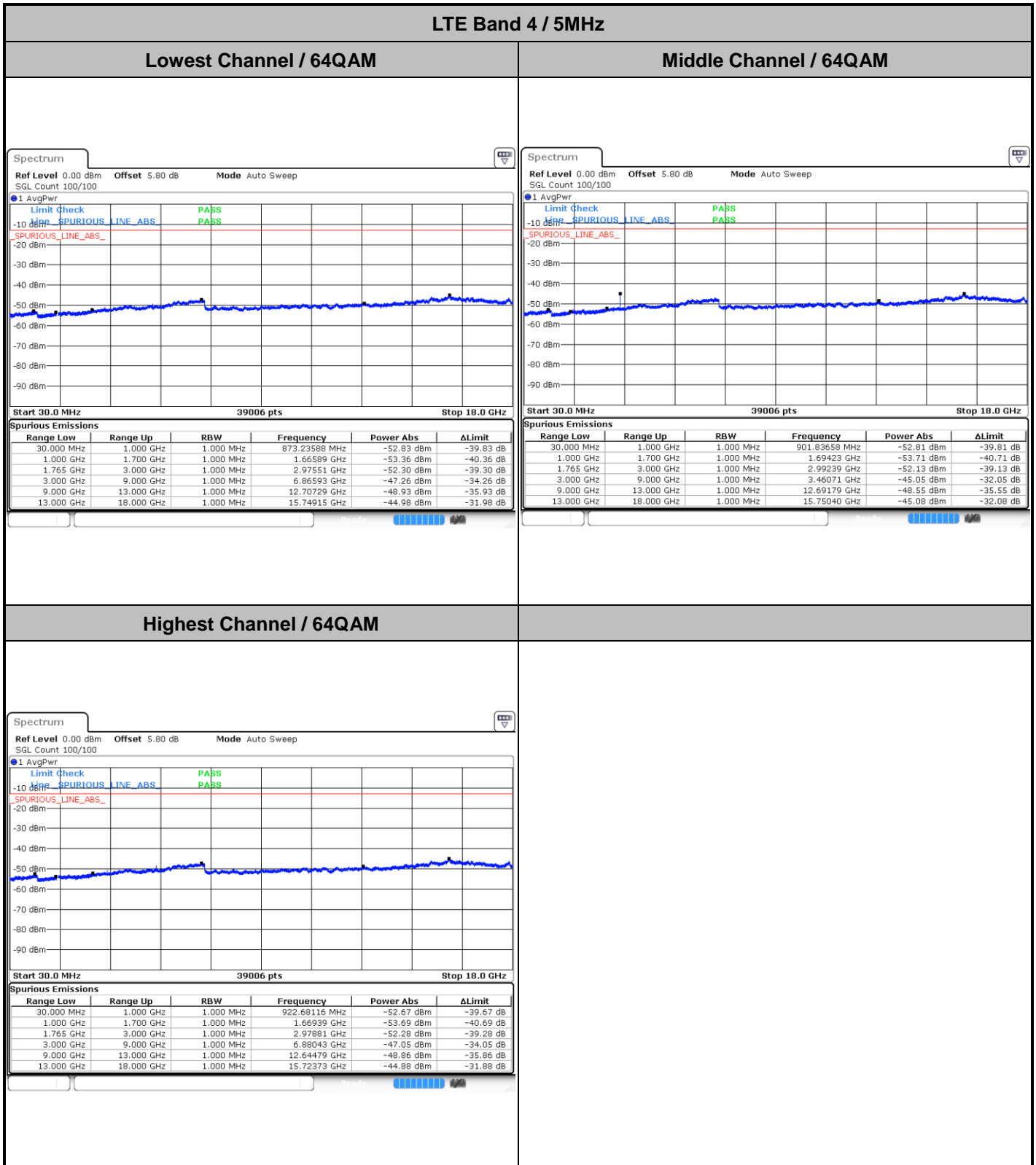
Lowest Channel / 64QAM

Middle Channel / 64QAM



Highest Channel / 64QAM

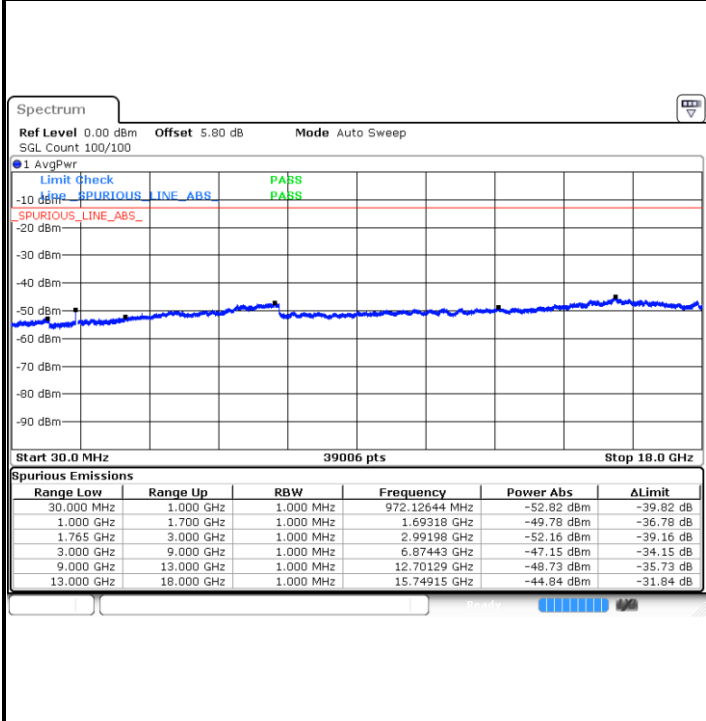




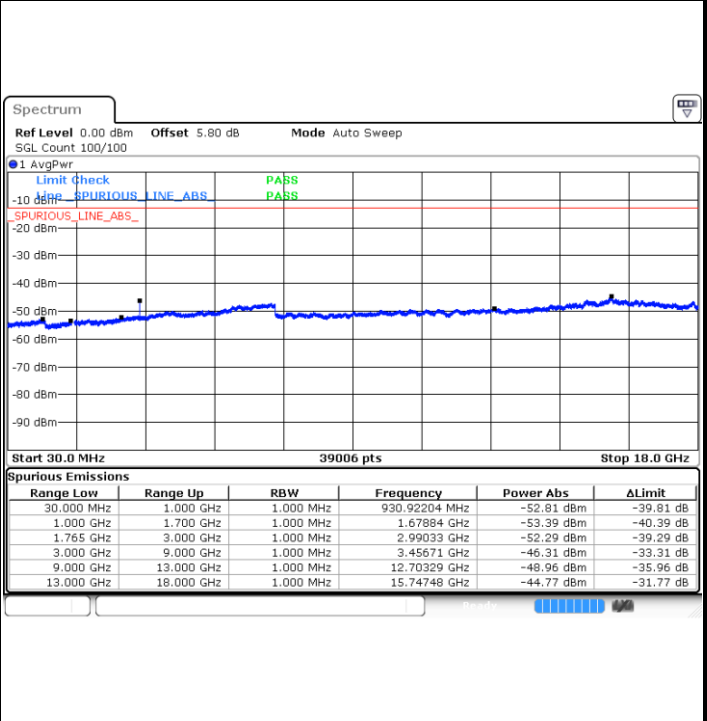


LTE Band 4 / 10MHz

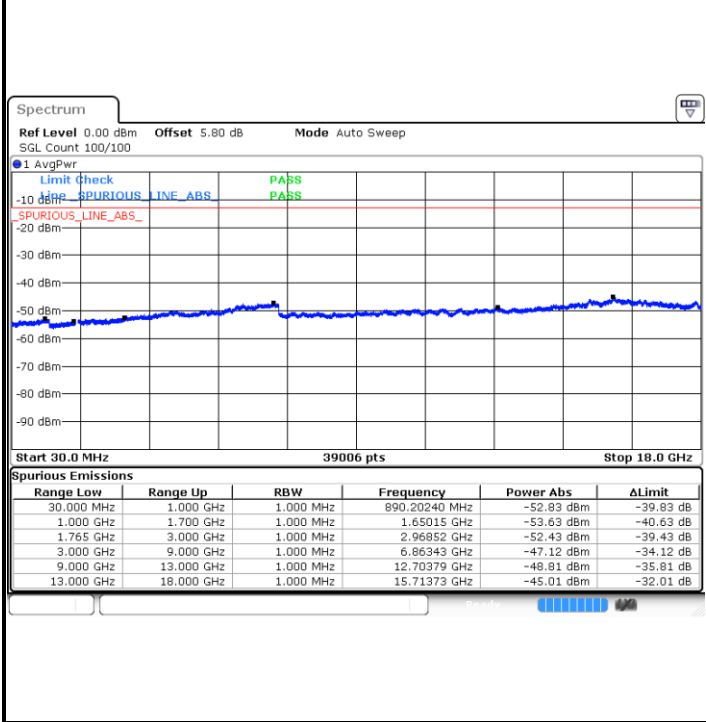
Lowest Channel / 64QAM



Middle Channel / 64QAM



Highest Channel / 64QAM

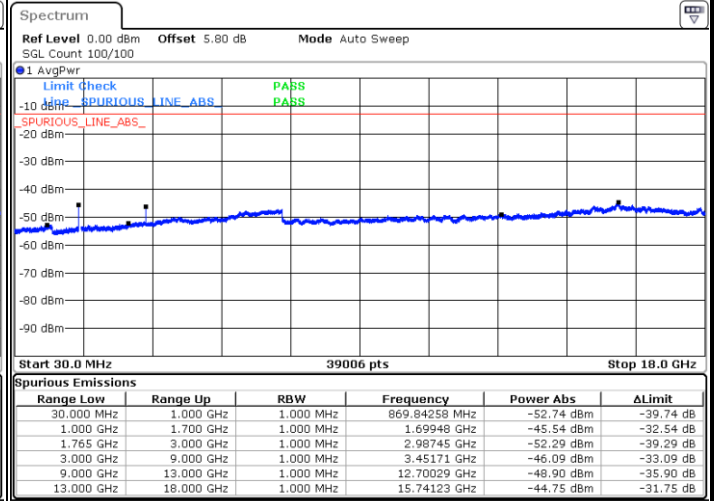
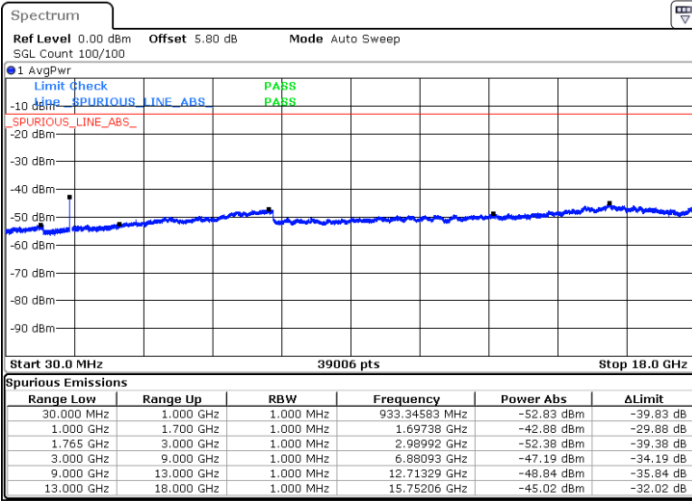




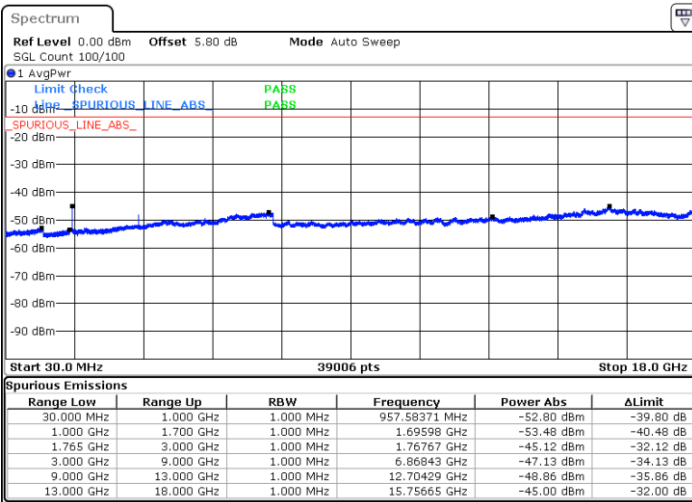
LTE Band 4 / 15MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM



Highest Channel / 64QAM

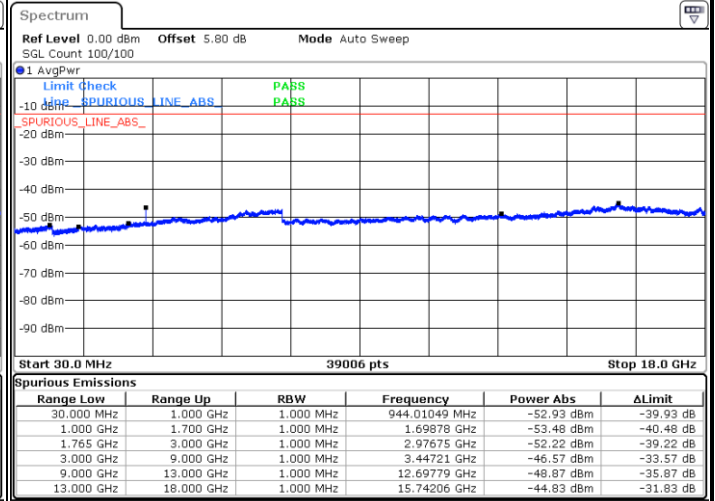
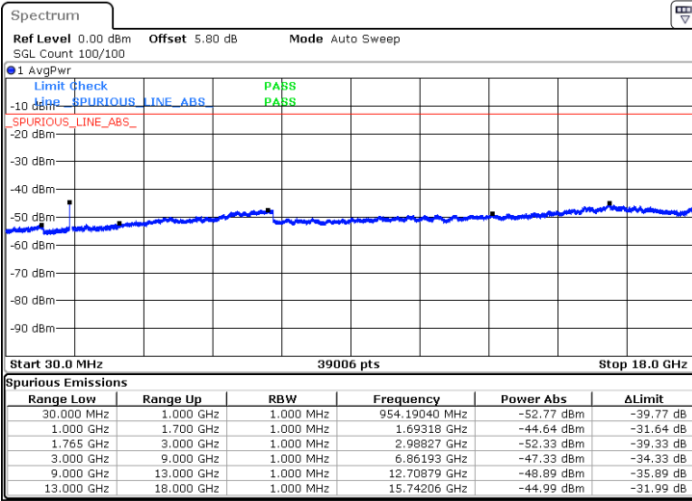




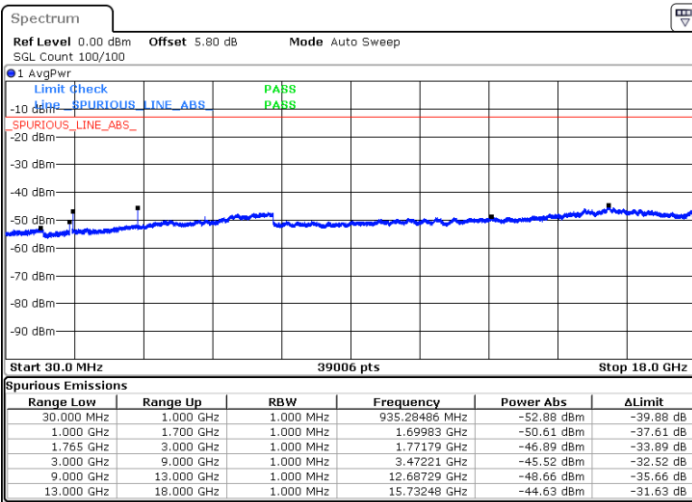
LTE Band 4 / 20MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM



Highest Channel / 64QAM





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 | 0.0011 | PASS |
| 40 | Normal Voltage | 0.0036 | |
| 30 | Normal Voltage | 0.0050 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0056 | |
| 0 | Normal Voltage | 0.0047 | |
| -10 | Normal Voltage | 0.0051 | |
| -20 | Normal Voltage | 0.0021 | |
| -30 | Normal Voltage | 0.0020 | |
| 20 | Maximum Voltage | 0.0051 | |
| 20 | Normal Voltage | 0.0060 | |
| 20 | Battery End Point | 0.0012 | |

Note:

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



LTE Band 5

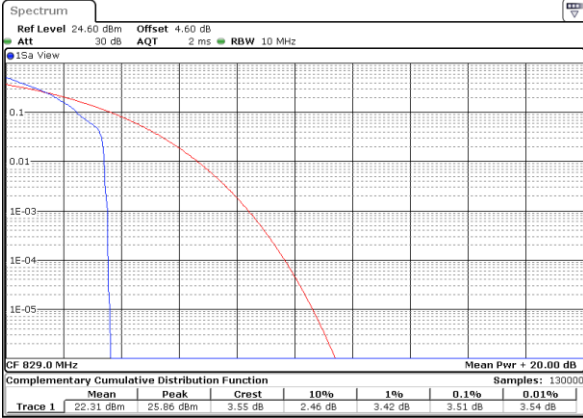
Peak-to-Average Ratio

| Mode | LTE Band 5 / 10MHz | | | | |
|------------|--------------------|---------|-------------|---------|-------------|
| Mod. | QPSK | | 16QAM | | Limit: 13dB |
| RB Size | 1RB | Full RB | 1RB | Full RB | Result |
| Lowest CH | 3.51 | 4.67 | 4.09 | 5.59 | PASS |
| Middle CH | 3.36 | 4.49 | 4.23 | 5.48 | |
| Highest CH | 3.36 | 4.32 | 4.20 | 5.22 | |
| Mod. | 64QAM | | Limit: 13dB | | |
| RB Size | 1RB | Full RB | Result | | |
| Lowest CH | 4.52 | 5.57 | PASS | | |
| Middle CH | 4.35 | 5.42 | | | |
| Highest CH | 4.41 | 5.25 | | | |



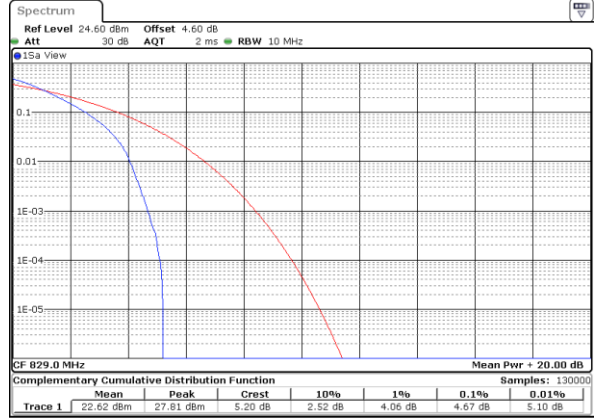
LTE Band 5 / 10MHz / QPSK

Lowest Channel / 1RB



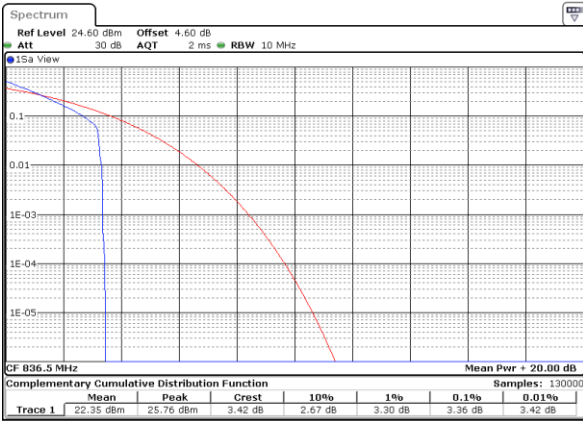
Date: 11 NOV 2019 20:47:43

Lowest Channel / Full RB



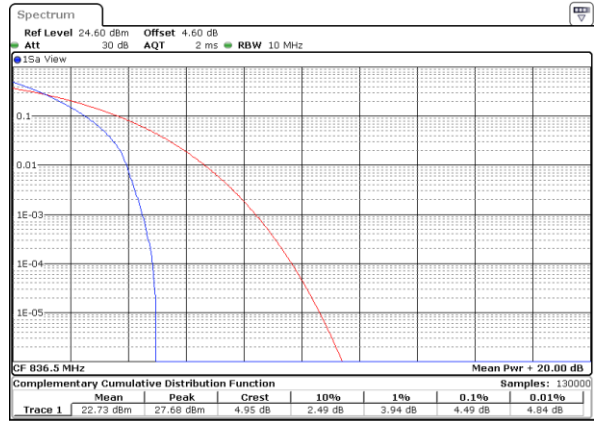
Date: 11 NOV 2019 20:46:50

Middle Channel / 1RB



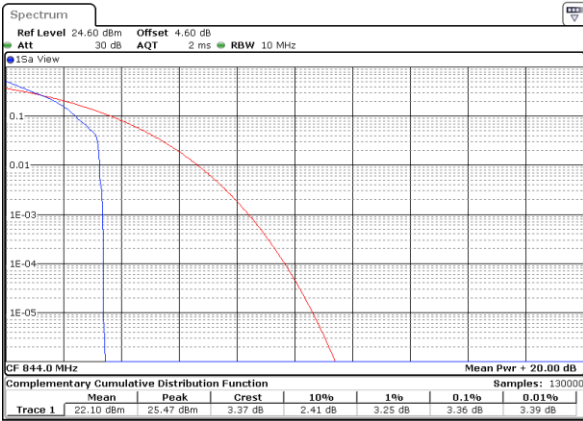
Date: 11 NOV 2019 20:46:06

Middle Channel / Full RB



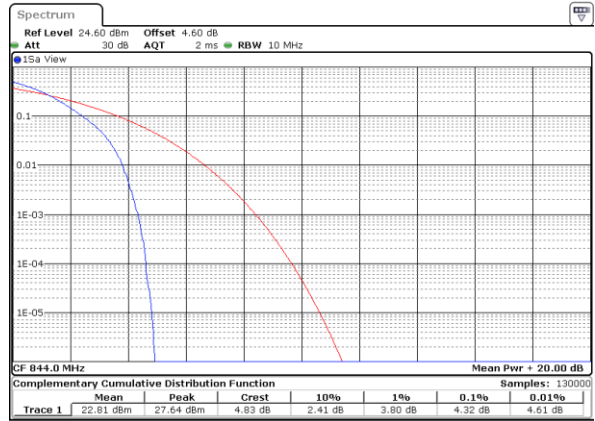
Date: 11 NOV 2019 20:46:39

Highest Channel / 1RB



Date: 11 NOV 2019 20:45:53

Highest Channel / Full RB

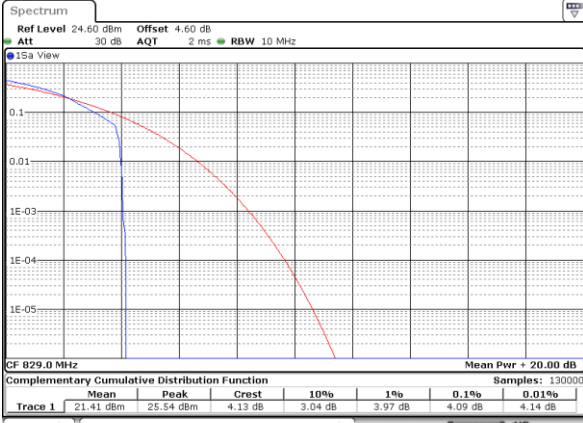


Date: 11 NOV 2019 20:45:19



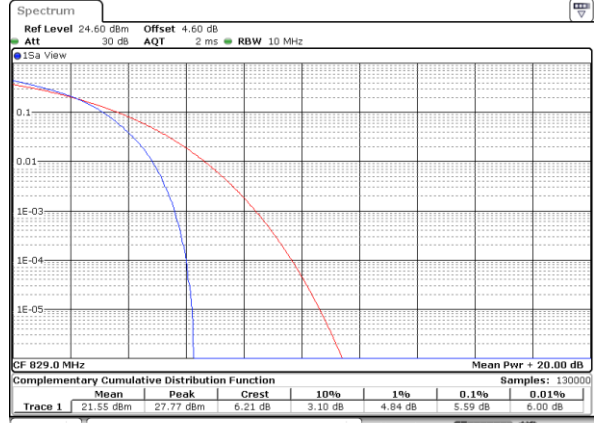
LTE Band 5 / 10MHz / 16QAM

Lowest Channel / 1RB



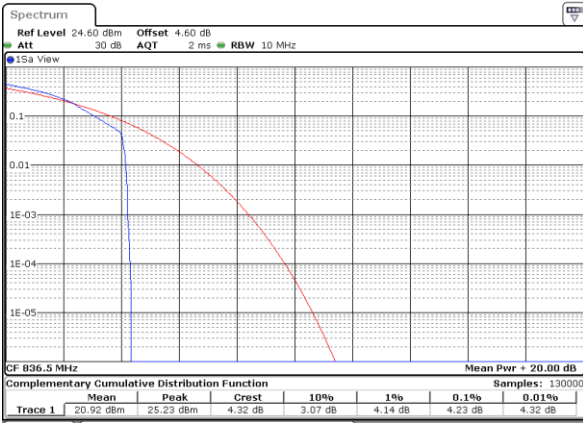
Date: 11 NOV 2019 20:44:01

Lowest Channel / Full RB



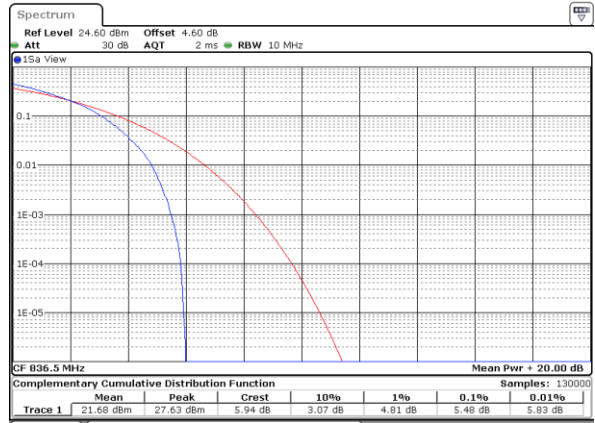
Date: 11 NOV 2019 20:44:10

Middle Channel / 1RB



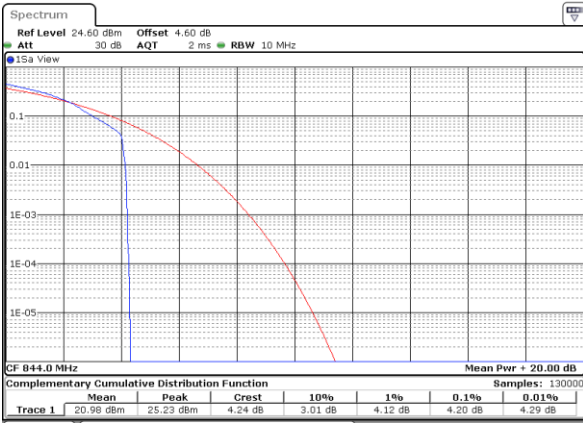
Date: 11 NOV 2019 20:44:19

Middle Channel / Full RB



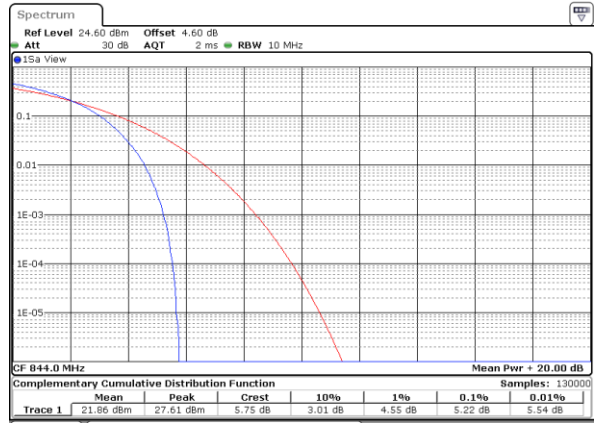
Date: 11 NOV 2019 20:44:28

Highest Channel / 1RB



Date: 11 NOV 2019 20:44:36

Highest Channel / Full RB

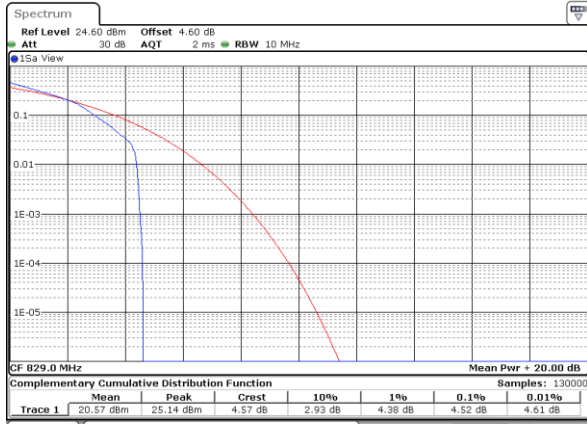


Date: 11 NOV 2019 20:44:45



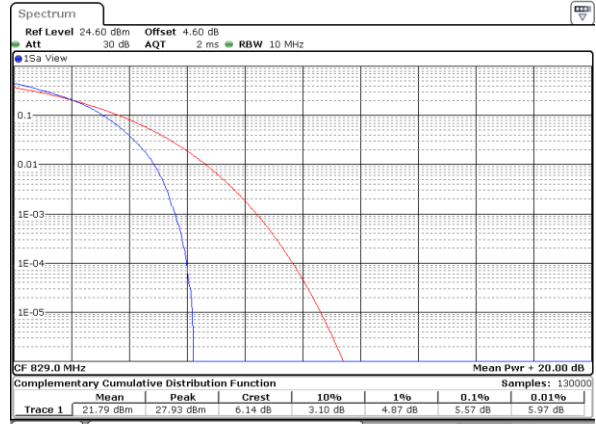
LTE Band 5 / 10MHz / 64QAM

Lowest Channel / 1RB



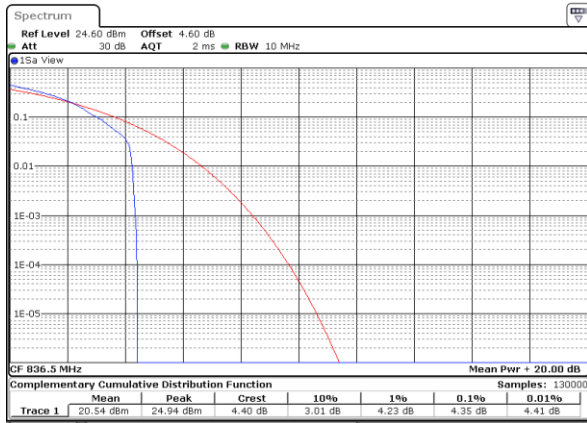
Date: 11 NOV 2019 20:47:33

Lowest Channel / Full RB



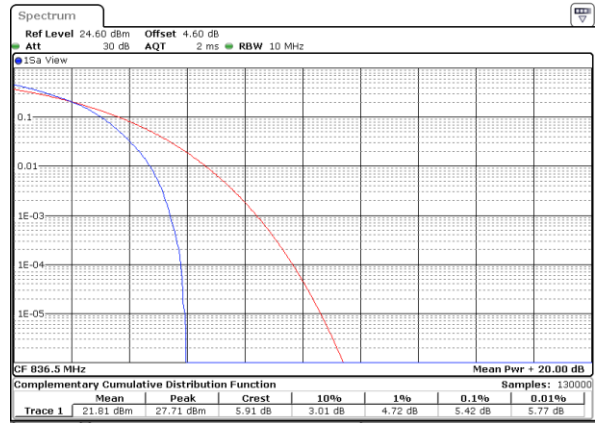
Date: 11 NOV 2019 20:47:21

Middle Channel / 1RB



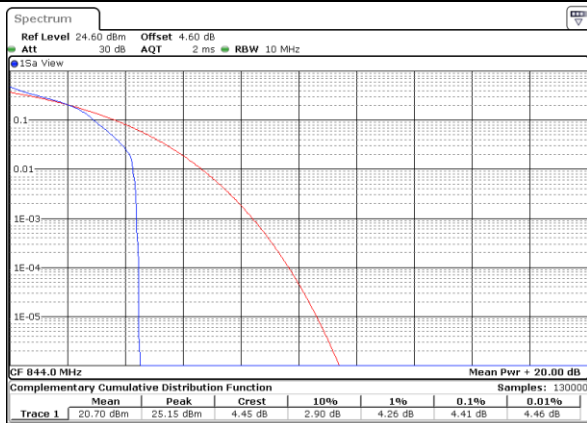
Date: 11 NOV 2019 20:46:17

Middle Channel / Full RB



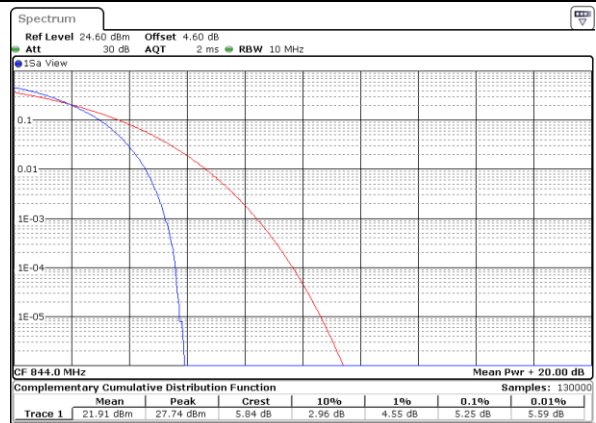
Date: 11 NOV 2019 20:46:28

Highest Channel / 1RB



Date: 11 NOV 2019 20:45:42

Highest Channel / Full RB



Date: 11 NOV 2019 20:45:30



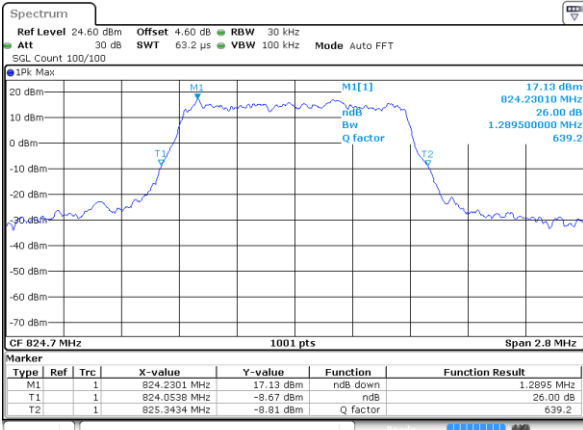
26dB Bandwidth

| 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 | 1.2895 | 1.2699 | 2.997 | 3.003 | 4.925 | 4.895 | 9.91 | 9.93 | - | - | - | - |
| Middle CH | 1.2923 | 1.2895 | 2.979 | 3.021 | 4.935 | 4.895 | 9.75 | 9.75 | - | - | - | - |
| Highest CH | 1.2839 | 1.3035 | 2.973 | 3.045 | 4.895 | 4.905 | 9.97 | 9.69 | - | - | - | - |
| Mode | LTE Band 5 : 26dB BW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | | | | |
| Mod. | 64QAM | | 64QAM | | 64QAM | | 64QAM | | | | | |
| Lowest CH | 1.2587 | | 3.015 | | 4.955 | | 9.77 | | - | - | - | - |
| Middle CH | 1.3119 | | 3.015 | | 4.925 | | 9.93 | | - | - | - | - |
| Highest CH | 1.3007 | | 3.027 | | 4.885 | | 9.97 | | - | - | - | - |



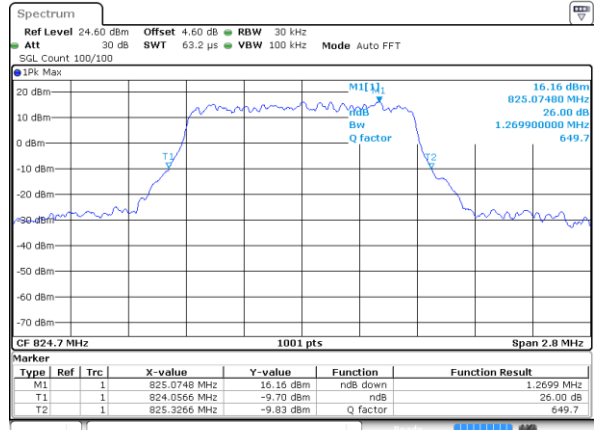
LTE Band 5

Lowest Channel / 1.4MHz / QPSK



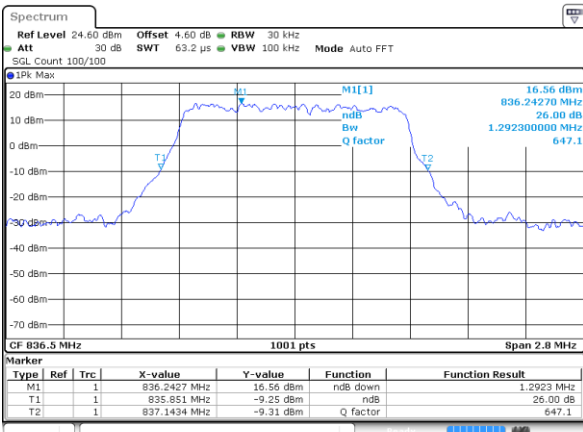
Date: 11 NOV 2019 19:50:17

Lowest Channel / 1.4MHz / 16QAM



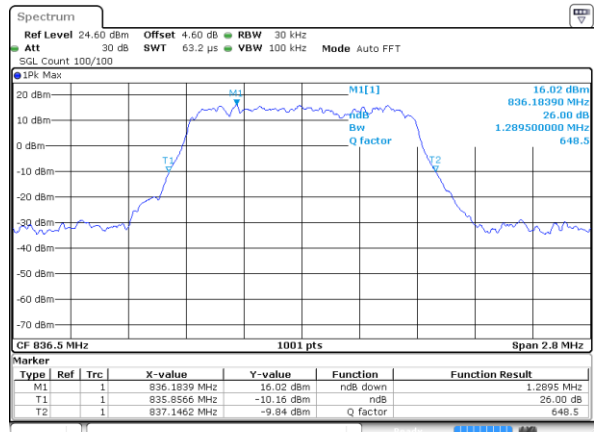
Date: 11 NOV 2019 19:50:07

Middle Channel / 1.4MHz / QPSK



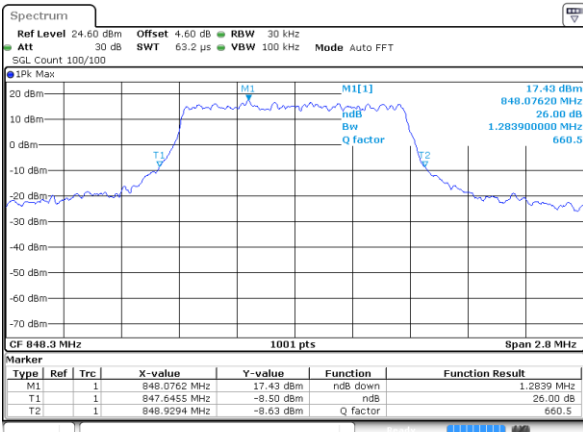
Date: 11 NOV 2019 19:59:08

Middle Channel / 1.4MHz / 16QAM



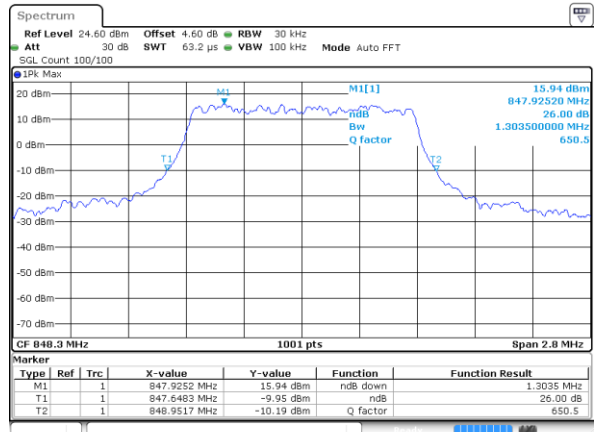
Date: 11 NOV 2019 19:59:18

Highest Channel / 1.4MHz / QPSK



Date: 11 NOV 2019 20:00:42

Highest Channel / 1.4MHz / 16QAM

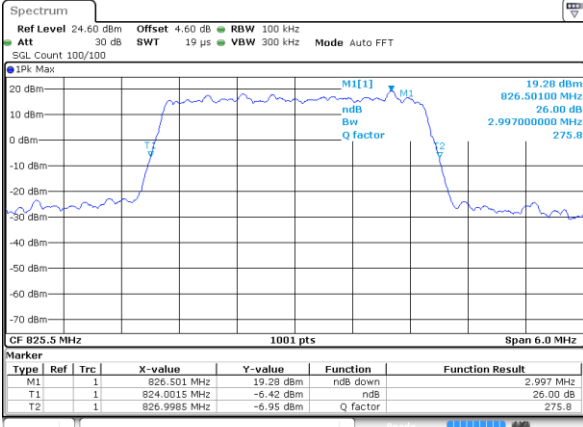


Date: 11 NOV 2019 20:00:52



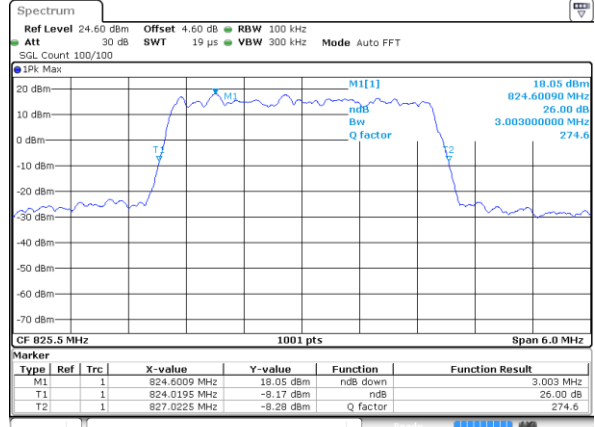
LTE Band 5

Lowest Channel / 3MHz / QPSK



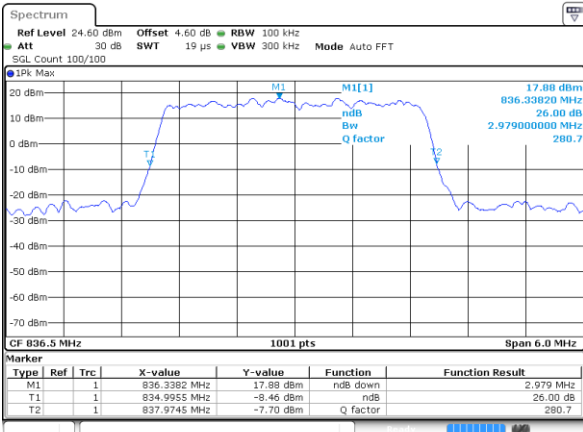
Date: 11 NOV 2019 21:45:28

Lowest Channel / 3MHz / 16QAM



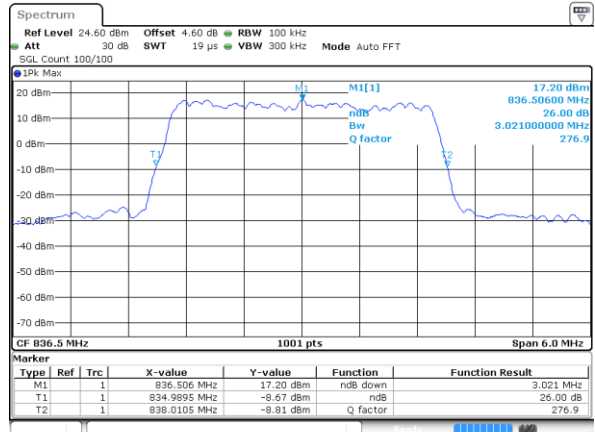
Date: 11 NOV 2019 21:45:38

Middle Channel / 3MHz / QPSK



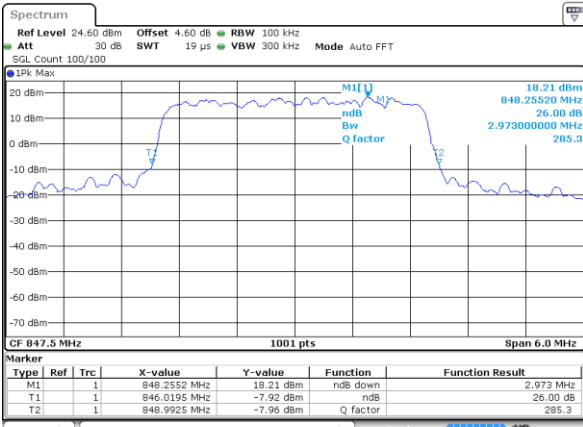
Date: 11 NOV 2019 21:54:30

Middle Channel / 3MHz / 16QAM



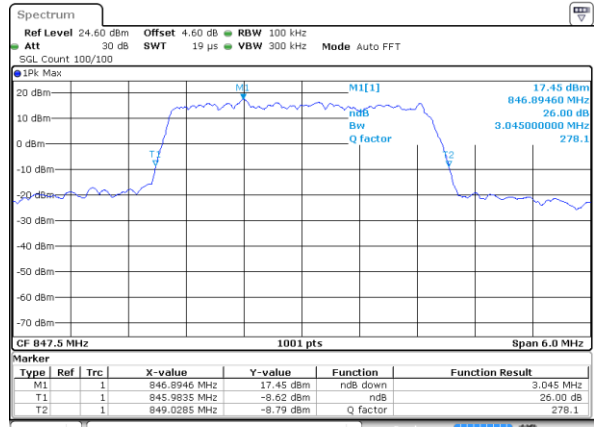
Date: 11 NOV 2019 21:54:40

Highest Channel / 3MHz / QPSK



Date: 11 NOV 2019 21:56:57

Highest Channel / 3MHz / 16QAM

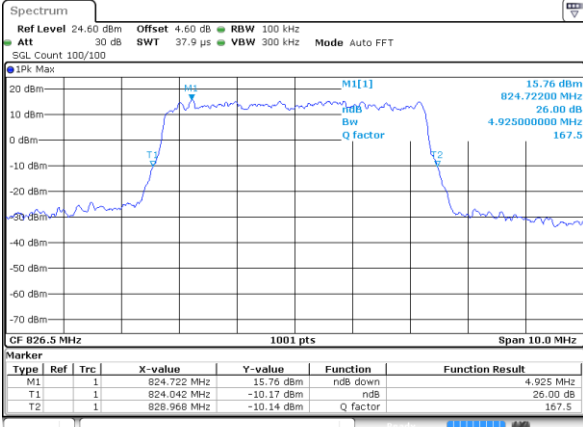


Date: 11 NOV 2019 21:57:07



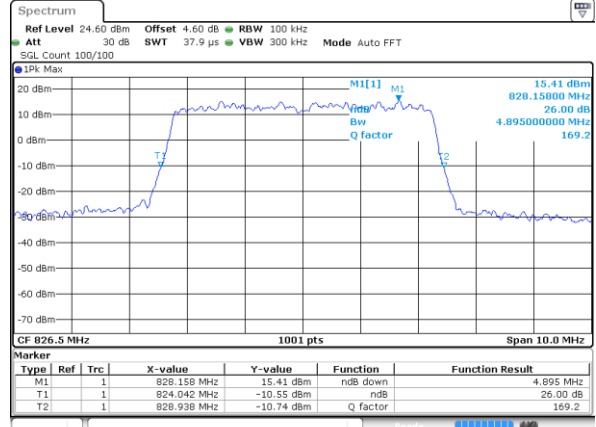
LTE Band 5

Lowest Channel / 5MHz / QPSK



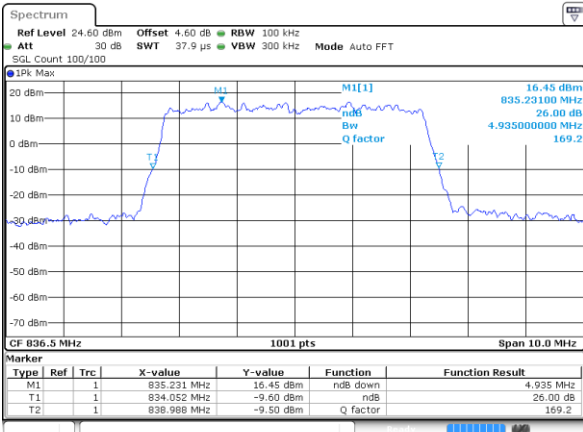
Date: 11 NOV 2019 21:37:16

Lowest Channel / 5MHz / 16QAM



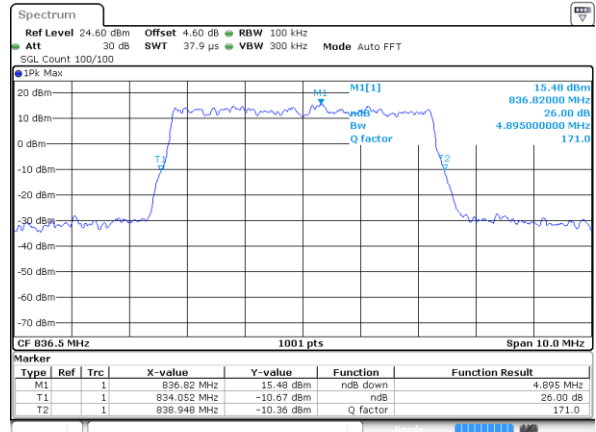
Date: 11 NOV 2019 21:37:36

Middle Channel / 5MHz / QPSK



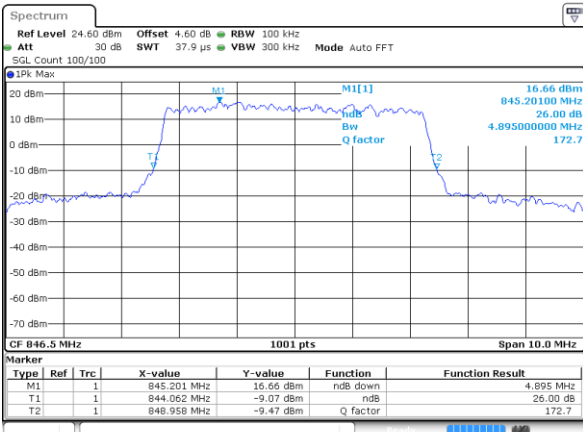
Date: 11 NOV 2019 20:11:17

Middle Channel / 5MHz / 16QAM



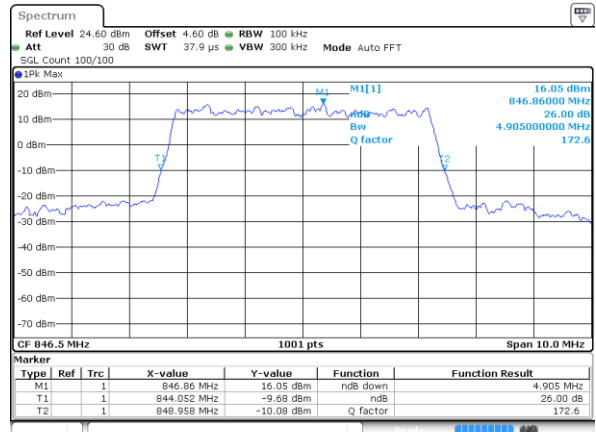
Date: 11 NOV 2019 20:11:27

Highest Channel / 5MHz / QPSK



Date: 11 NOV 2019 20:13:44

Highest Channel / 5MHz / 16QAM

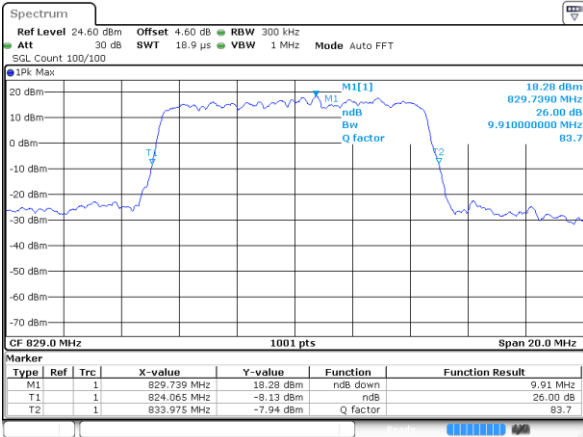


Date: 11 NOV 2019 20:13:54



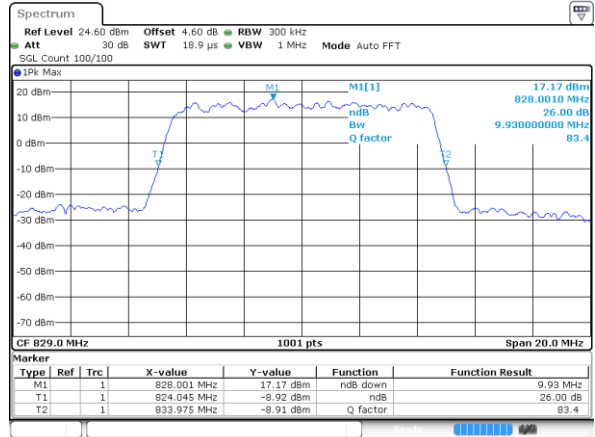
LTE Band 5

Lowest Channel / 10MHz / QPSK



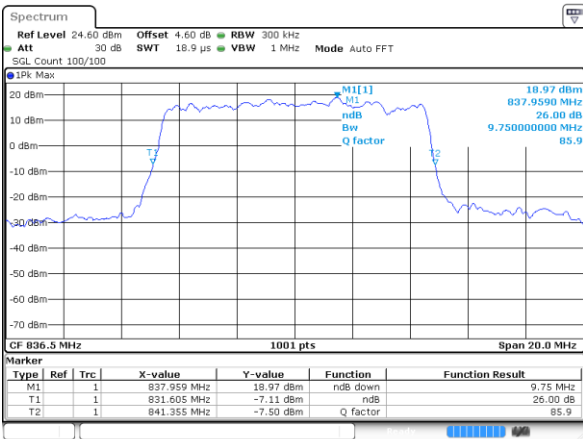
Date: 11 NOV 2019 20:22:46

Lowest Channel / 10MHz / 16QAM



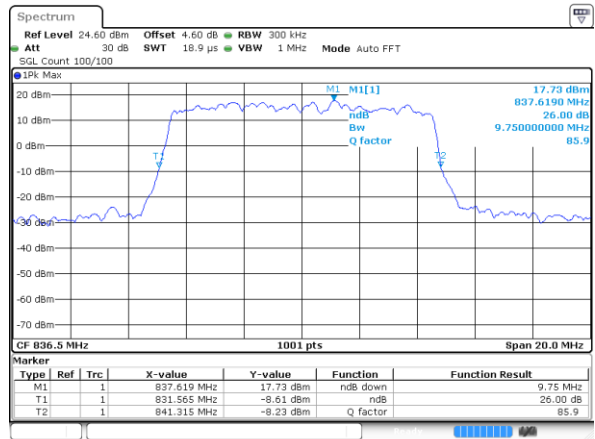
Date: 11 NOV 2019 20:22:56

Middle Channel / 10MHz / QPSK



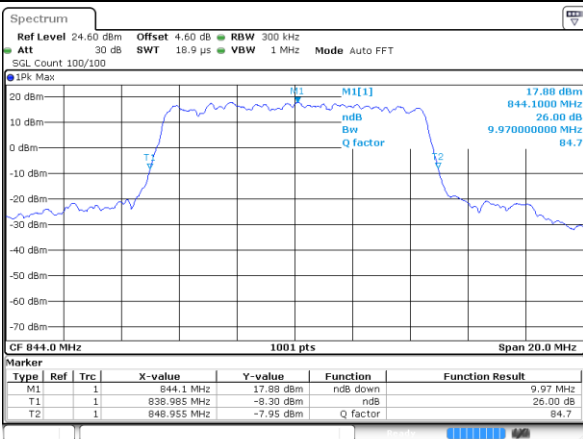
Date: 11 NOV 2019 20:31:47

Middle Channel / 10MHz / 16QAM



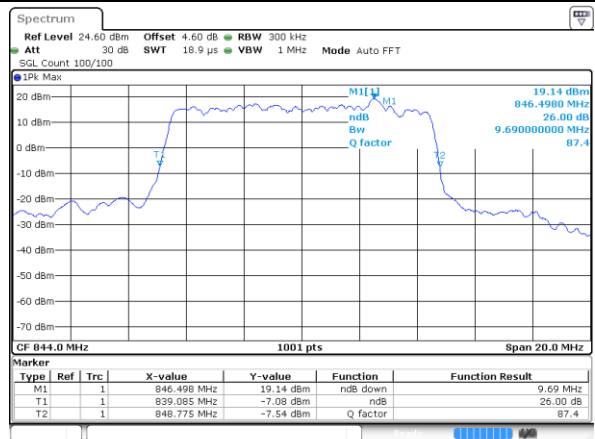
Date: 11 NOV 2019 20:31:57

Highest Channel / 10MHz / QPSK



Date: 11 NOV 2019 20:34:15

Highest Channel / 10MHz / 16QAM

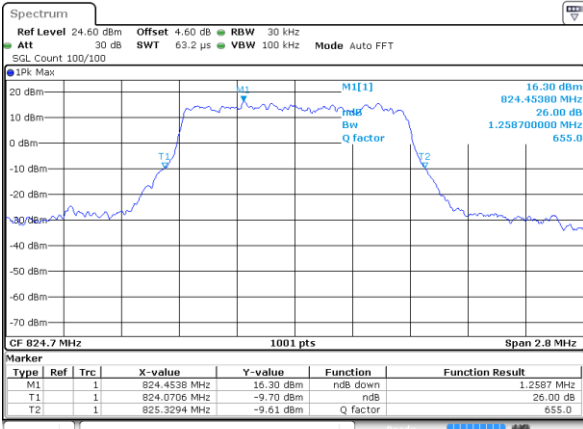


Date: 11 NOV 2019 20:34:25



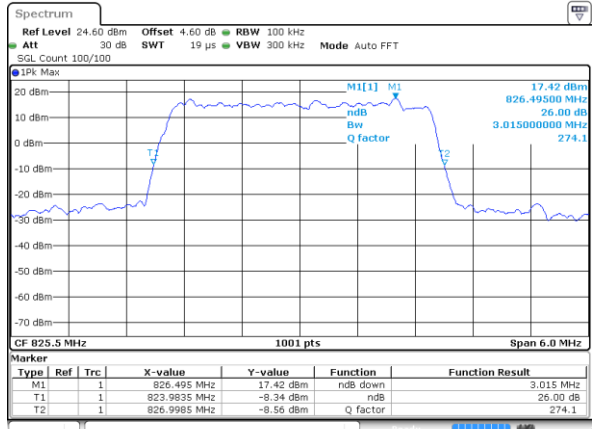
LTE Band 5

Lowest Channel / 1.4MHz / 64QAM



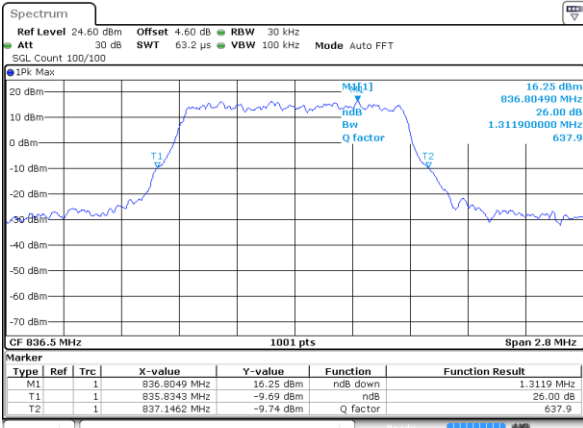
Date: 11 NOV 2019 20:48:33

Lowest Channel / 3MHz / 64QAM



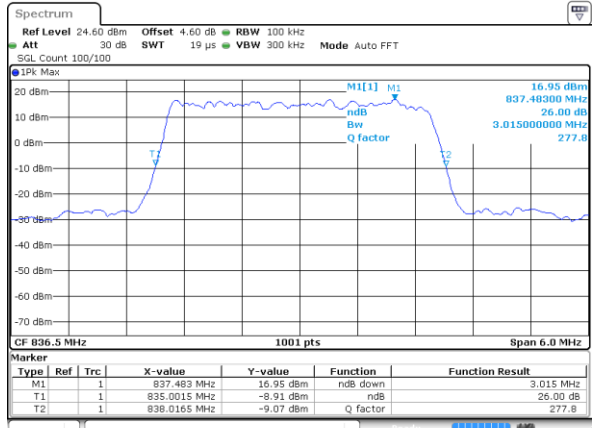
Date: 11 NOV 2019 20:58:48

Middle Channel / 1.4MHz / 64QAM



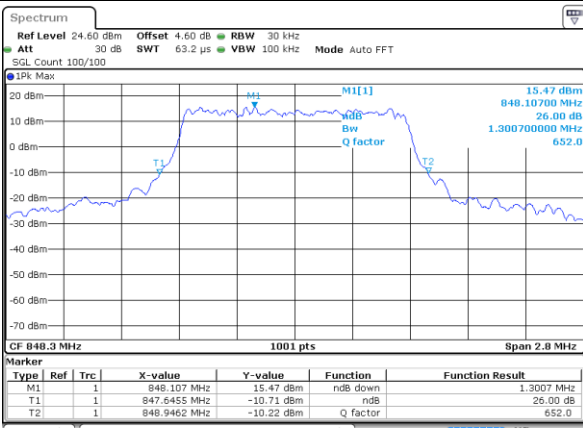
Date: 11 NOV 2019 20:53:57

Middle Channel / 3MHz / 64QAM



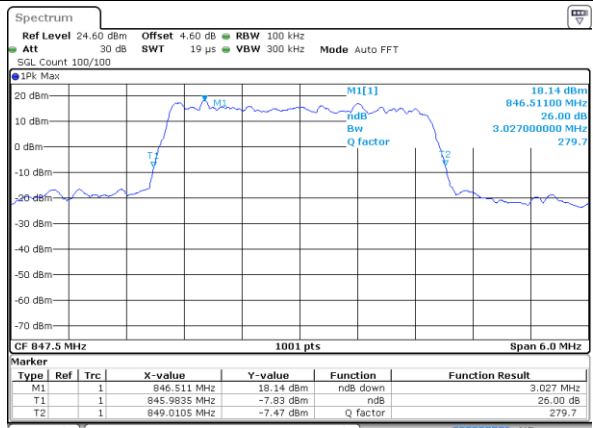
Date: 11 NOV 2019 21:04:12

Highest Channel / 1.4MHz / 64QAM



Date: 11 NOV 2019 20:54:17

Highest Channel / 3MHz / 64QAM

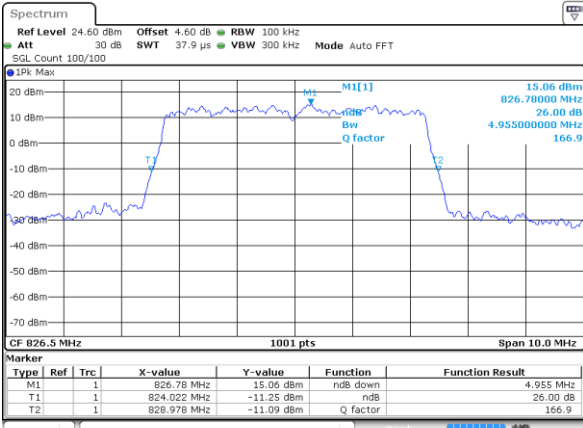


Date: 11 NOV 2019 21:04:32



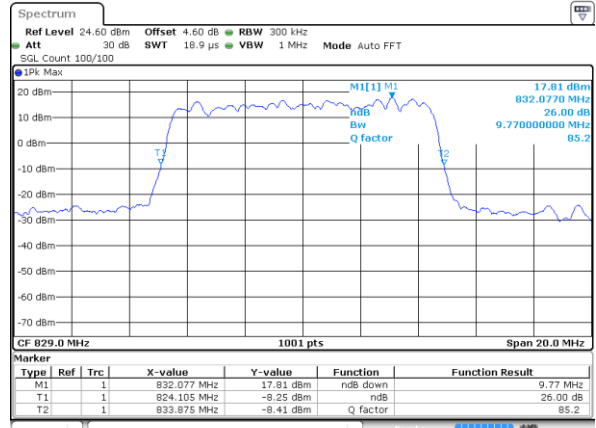
LTE Band 5

Lowest Channel / 5MHz / 64QAM



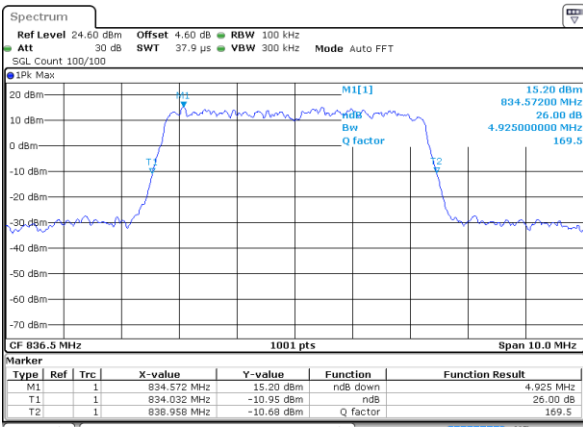
Date: 11 NOV 2019 21:09:03

Lowest Channel / 10MHz / 64QAM



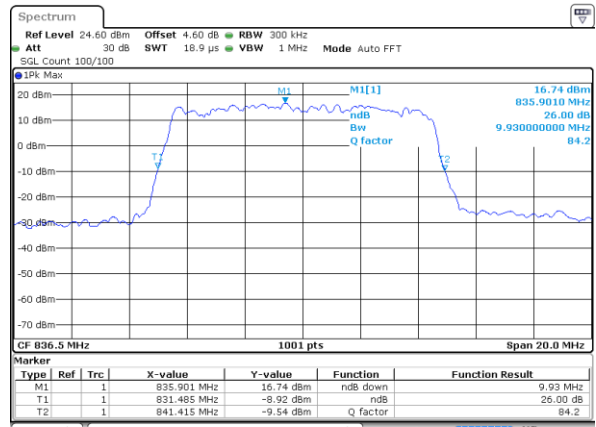
Date: 11 NOV 2019 21:19:18

Middle Channel / 5MHz / 64QAM



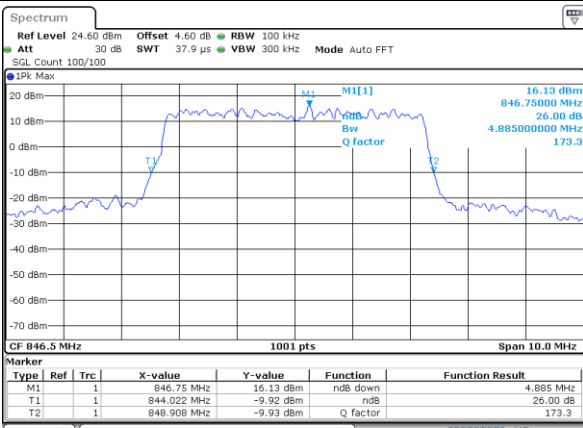
Date: 11 NOV 2019 21:14:28

Middle Channel / 10MHz / 64QAM



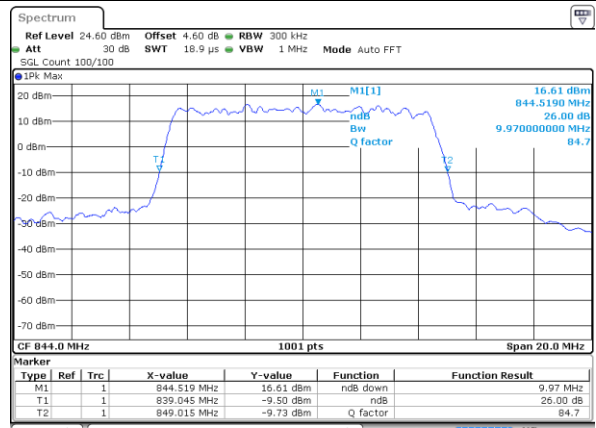
Date: 11 NOV 2019 21:24:43

Highest Channel / 5MHz / 64QAM



Date: 11 NOV 2019 21:14:48

Highest Channel / 10MHz / 64QAM



Date: 11 NOV 2019 21:25:03



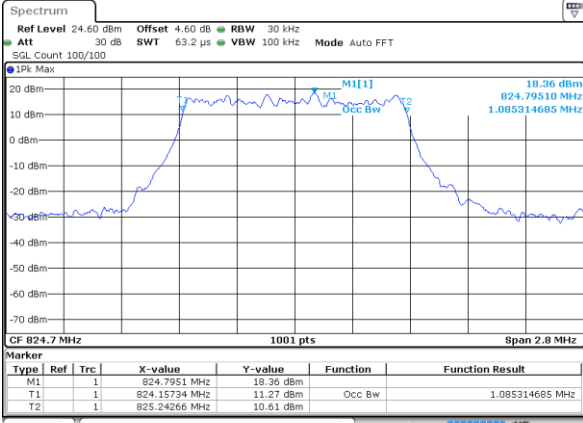
Occupied Bandwidth

| 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 | 1.09 | 1.09 | 2.71 | 2.71 | 4.50 | 4.49 | 9.01 | 8.99 | - | - | - | - |
| Middle CH | 1.09 | 1.09 | 2.69 | 2.71 | 4.50 | 4.50 | 9.05 | 9.03 | - | - | - | - |
| Highest CH | 1.09 | 1.09 | 2.72 | 2.72 | 4.49 | 4.49 | 8.95 | 8.99 | - | - | - | - |
| Mode | LTE Band 5 : 99%OBW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | | | | |
| Mod. | 64QAM | | 64QAM | | 64QAM | | 64QAM | | | | | |
| Lowest CH | 1.09 | | 2.72 | | 4.48 | | 8.97 | | - | - | - | - |
| Middle CH | 1.09 | | 2.71 | | 4.50 | | 9.01 | | - | - | - | - |
| Highest CH | 1.09 | | 2.73 | | 4.49 | | 9.01 | | - | - | - | - |



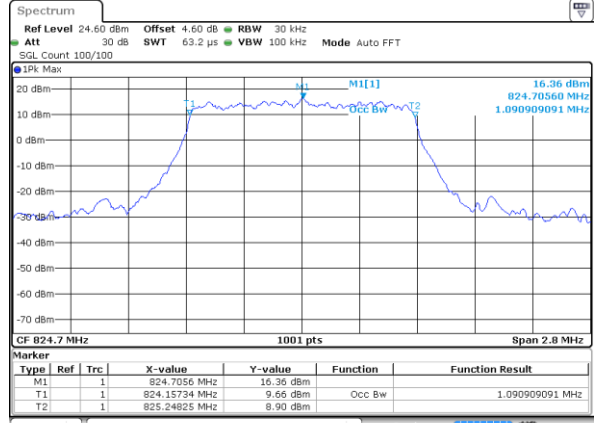
LTE Band 5

Lowest Channel / 1.4MHz / QPSK



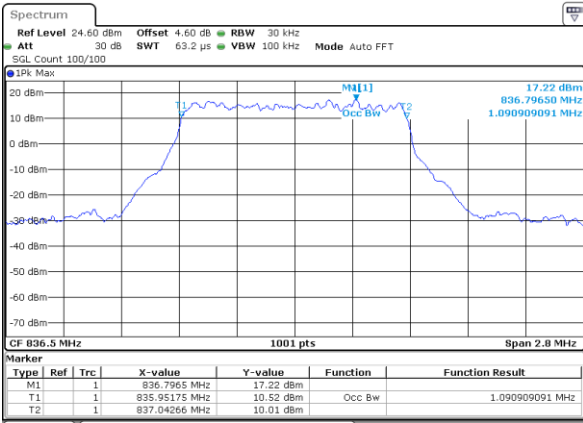
Date: 11 NOV 2019 19:49:46

Lowest Channel / 1.4MHz / 16QAM



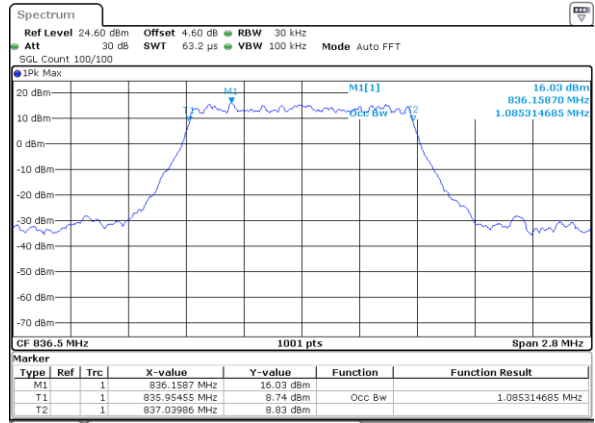
Date: 11 NOV 2019 19:49:57

Middle Channel / 1.4MHz / QPSK



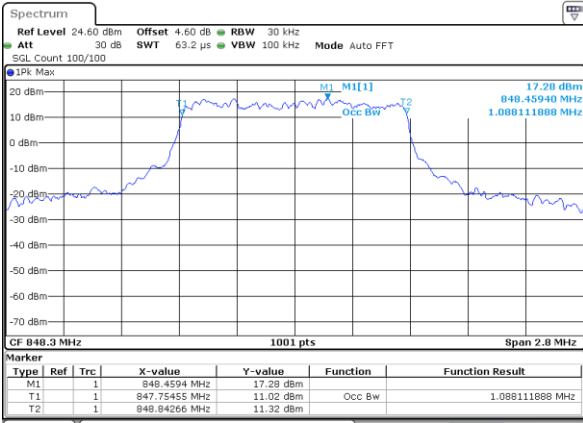
Date: 11 NOV 2019 19:58:48

Middle Channel / 1.4MHz / 16QAM



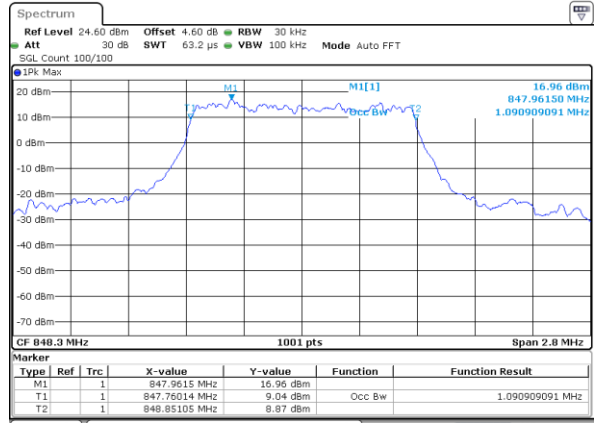
Date: 11 NOV 2019 19:58:58

Highest Channel / 1.4MHz / QPSK



Date: 11 NOV 2019 20:00:22

Highest Channel / 1.4MHz / 16QAM

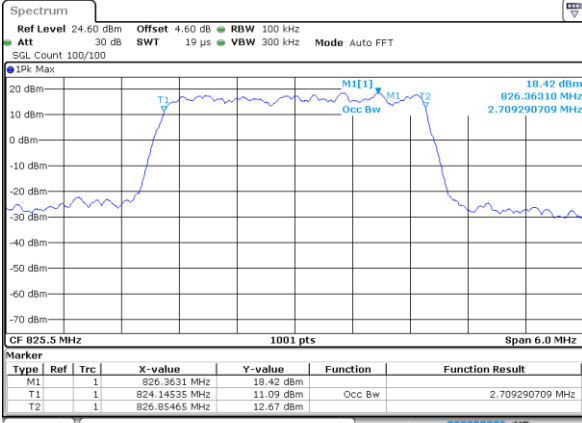


Date: 11 NOV 2019 20:00:32



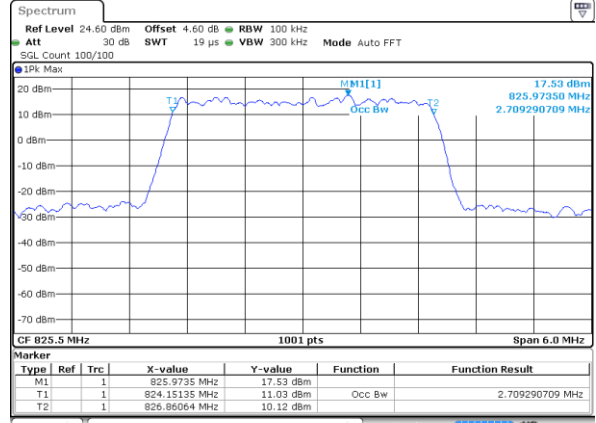
LTE Band 5

Lowest Channel / 3MHz / QPSK



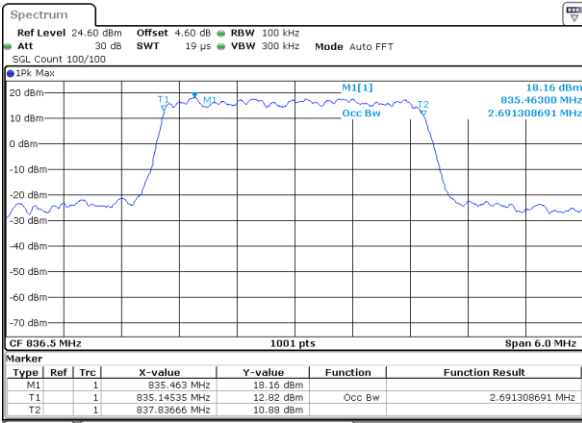
Date: 11 NOV 2019 21:45:08

Lowest Channel / 3MHz / 16QAM



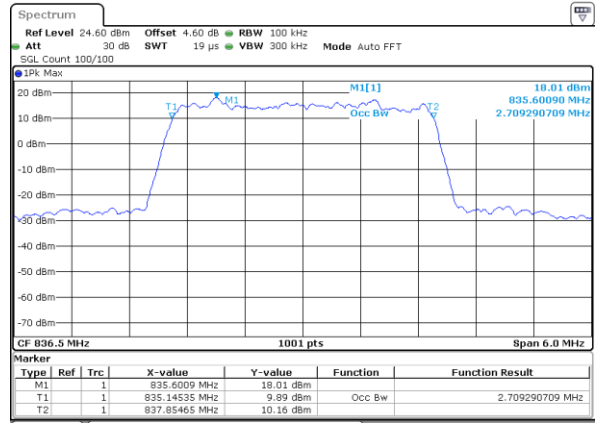
Date: 11 NOV 2019 21:45:18

Middle Channel / 3MHz / QPSK



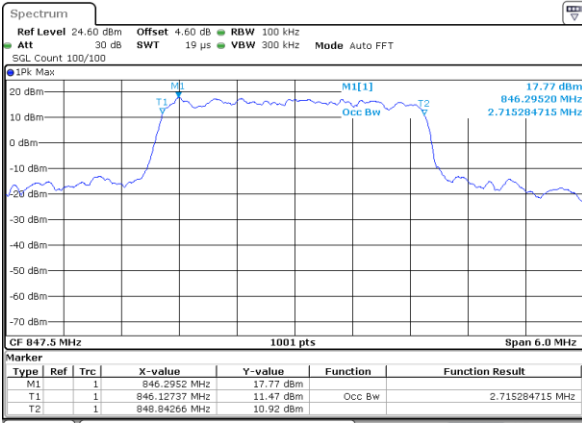
Date: 11 NOV 2019 21:54:10

Middle Channel / 3MHz / 16QAM



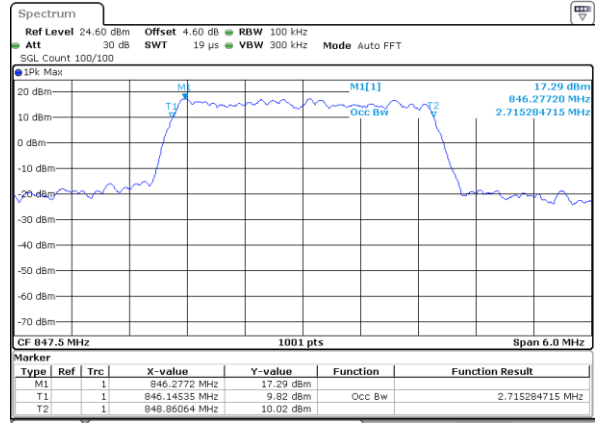
Date: 11 NOV 2019 21:54:20

Highest Channel / 3MHz / QPSK



Date: 11 NOV 2019 21:56:37

Highest Channel / 3MHz / 16QAM

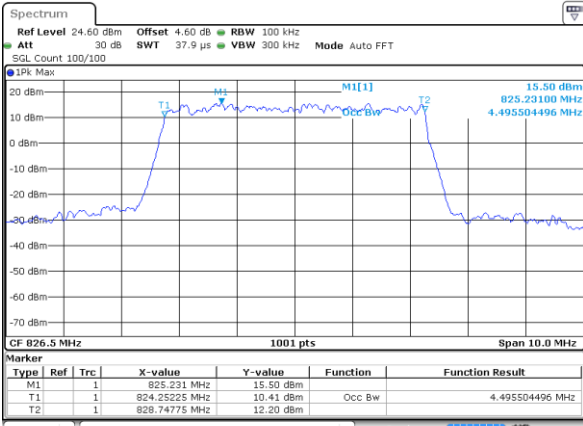


Date: 11 NOV 2019 21:56:47



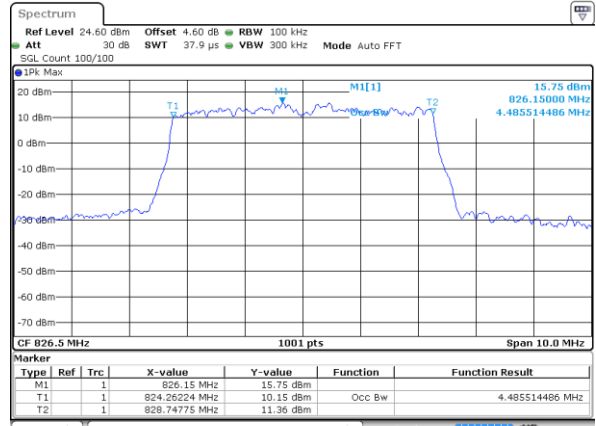
LTE Band 5

Lowest Channel / 5MHz / QPSK



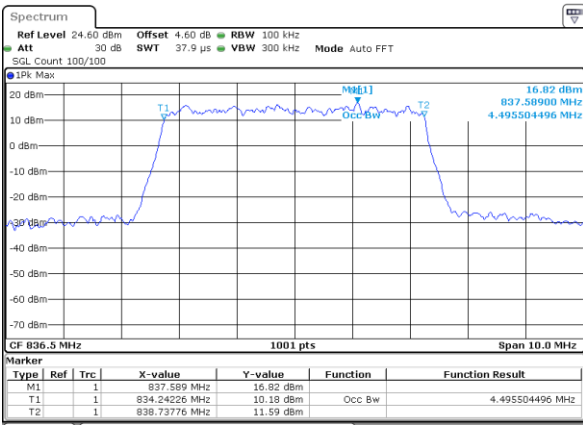
Date: 11 NOV 2019 21:37:08

Lowest Channel / 5MHz / 16QAM



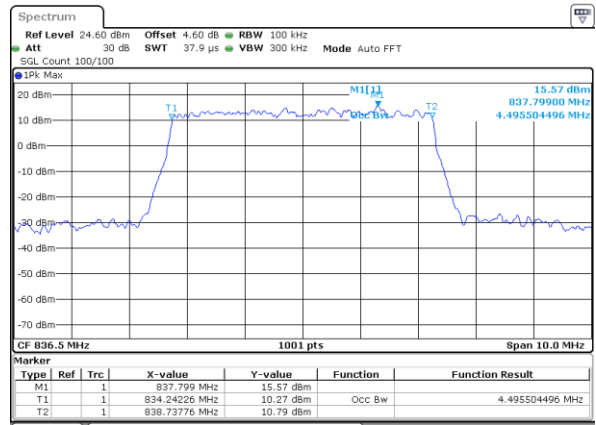
Date: 11 NOV 2019 21:37:27

Middle Channel / 5MHz / QPSK



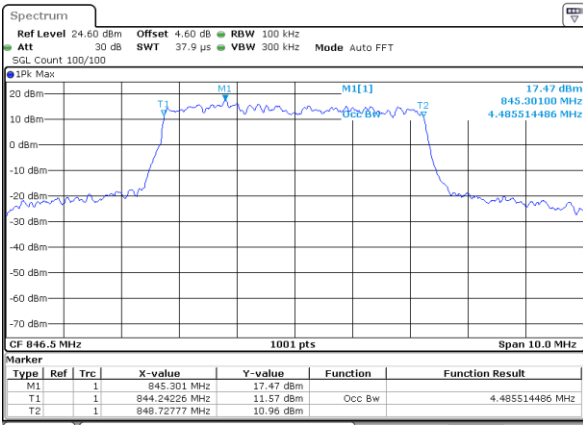
Date: 11 NOV 2019 20:10:57

Middle Channel / 5MHz / 16QAM



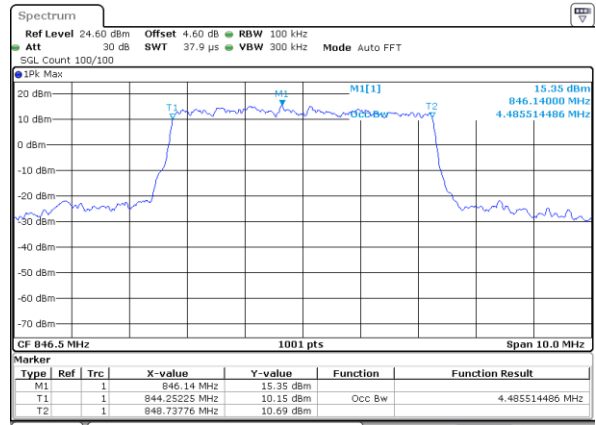
Date: 11 NOV 2019 20:11:07

Highest Channel / 5MHz / QPSK



Date: 11 NOV 2019 20:13:24

Highest Channel / 5MHz / 16QAM

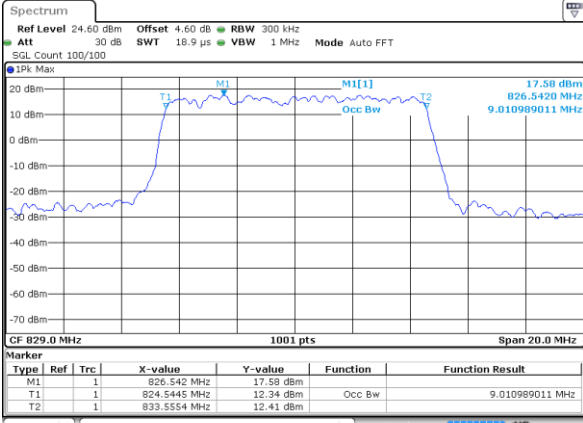


Date: 11 NOV 2019 20:13:34



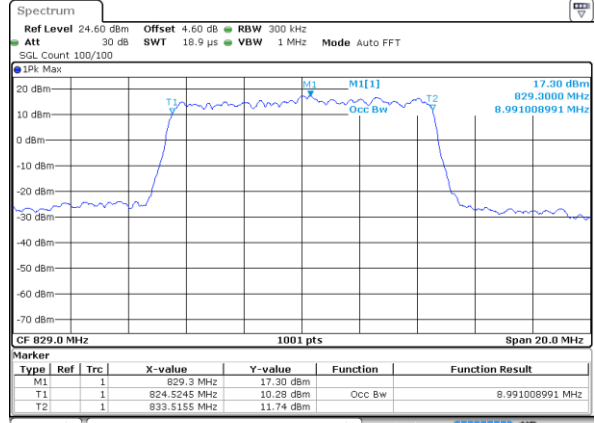
LTE Band 5

Lowest Channel / 10MHz / QPSK



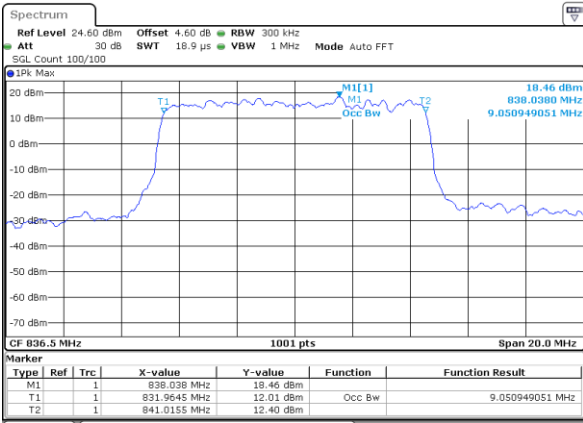
Date: 11 NOV 2019 20:22:26

Lowest Channel / 10MHz / 16QAM



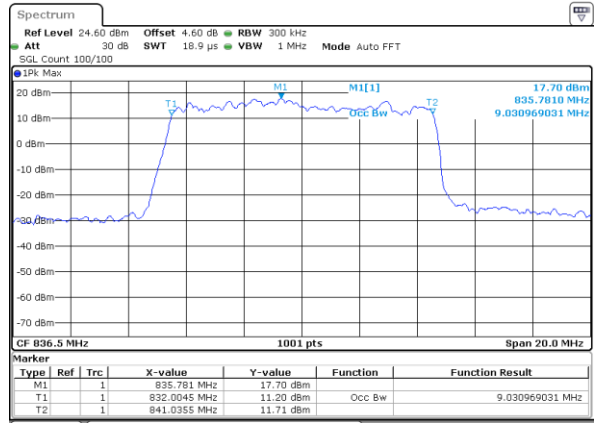
Date: 11 NOV 2019 20:22:36

Middle Channel / 10MHz / QPSK



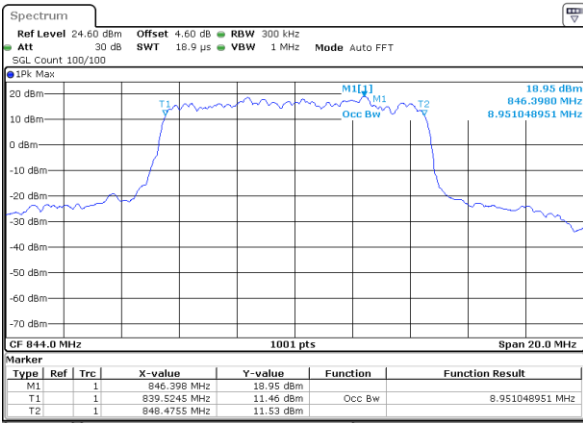
Date: 11 NOV 2019 20:31:27

Middle Channel / 10MHz / 16QAM



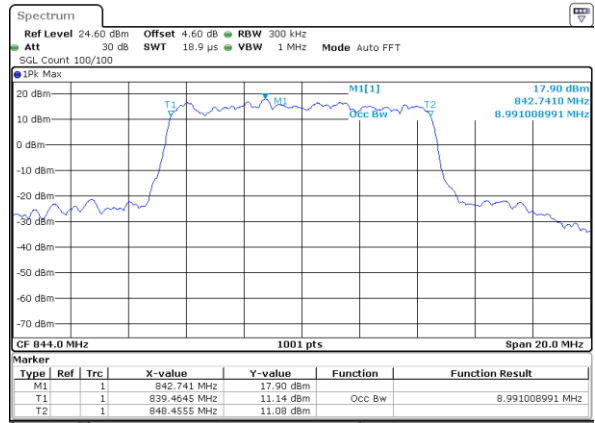
Date: 11 NOV 2019 20:31:37

Highest Channel / 10MHz / QPSK



Date: 11 NOV 2019 20:33:54

Highest Channel / 10MHz / 16QAM

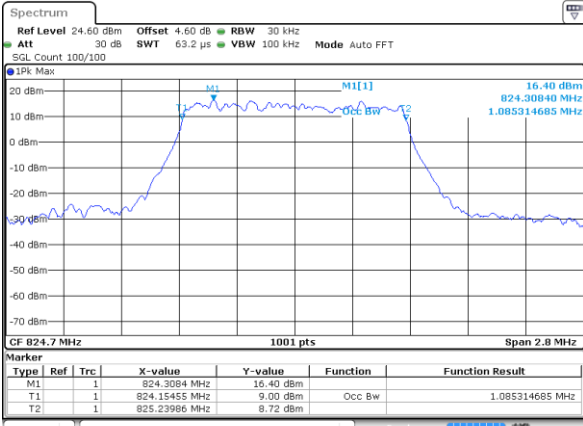


Date: 11 NOV 2019 20:34:05



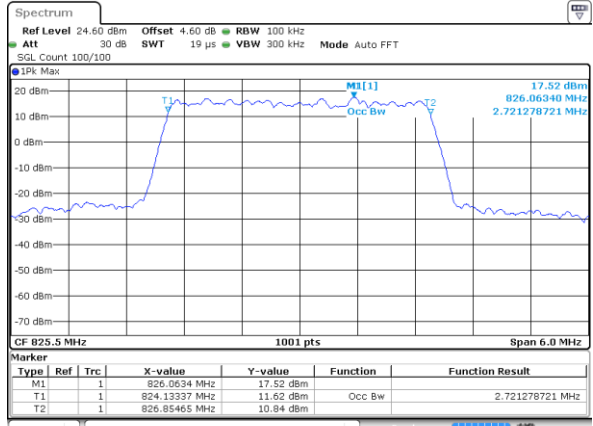
LTE Band 5

Lowest Channel / 1.4MHz / 64QAM



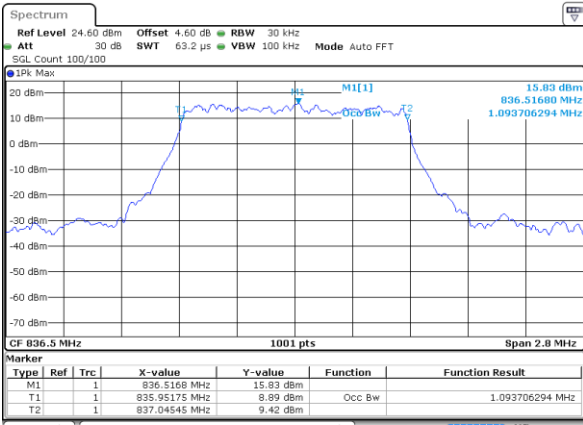
Date: 11 NOV 2019 20:48:23

Lowest Channel / 3MHz / 64QAM



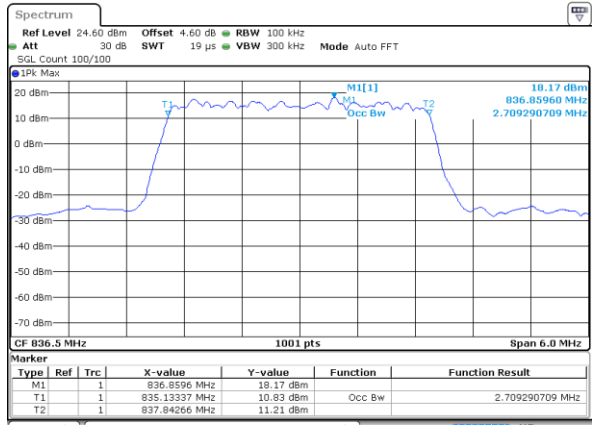
Date: 11 NOV 2019 20:58:38

Middle Channel / 1.4MHz / 64QAM



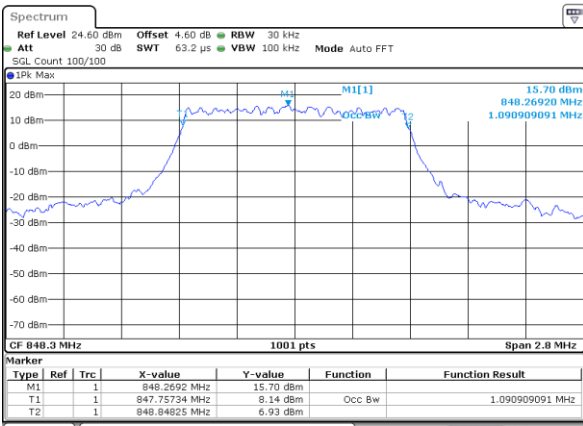
Date: 11 NOV 2019 20:53:47

Middle Channel / 3MHz / 64QAM



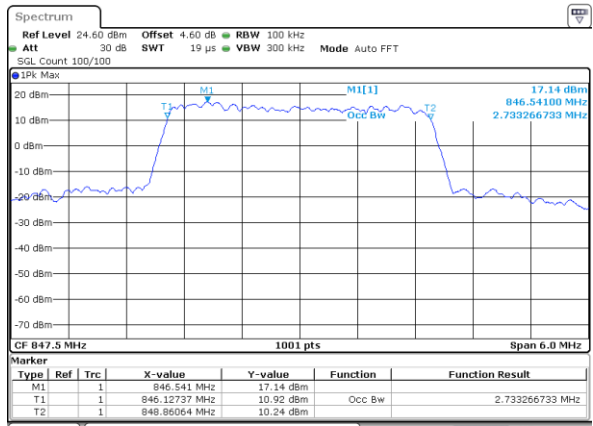
Date: 11 NOV 2019 21:04:02

Highest Channel / 1.4MHz / 64QAM



Date: 11 NOV 2019 20:54:07

Highest Channel / 3MHz / 64QAM



Date: 11 NOV 2019 21:04:22