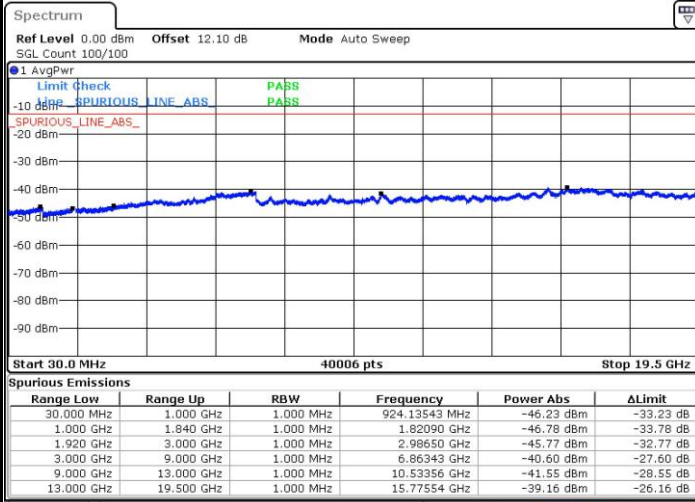




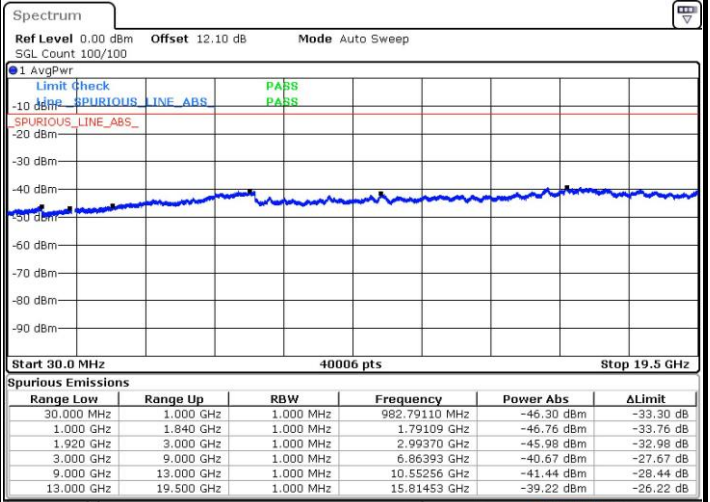
LTE Band 2 / 15MHz

Highest Channel / QPSK



Date: 26 FEB 2019 22:58:35

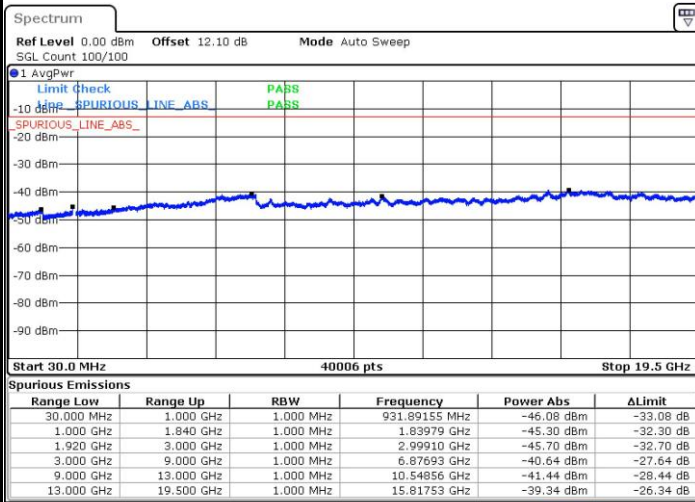
Highest Channel / 16QAM



Date: 26 FEB 2019 22:59:36

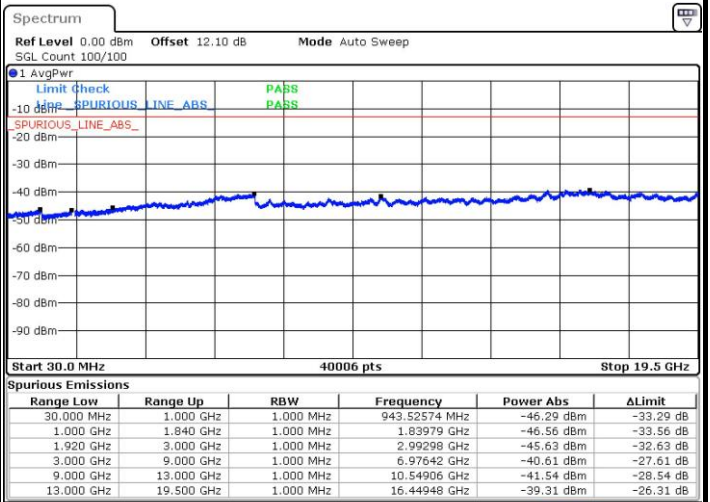
LTE Band 2 / 20MHz

Lowest Channel / QPSK



Date: 26 FEB 2019 23:05:24

Lowest Channel / 16QAM



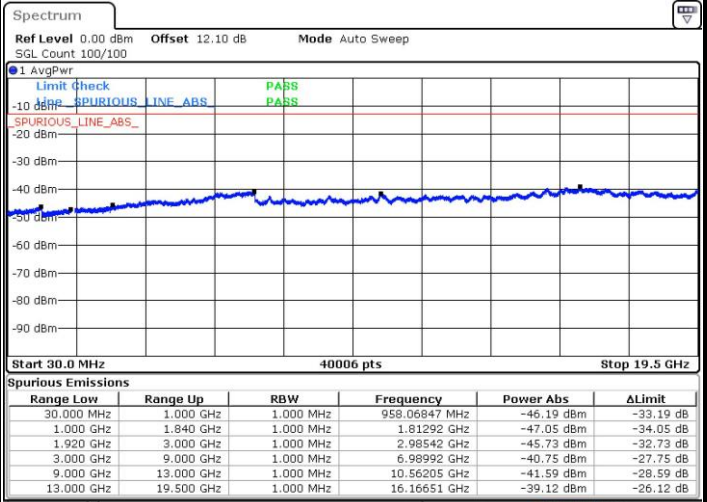
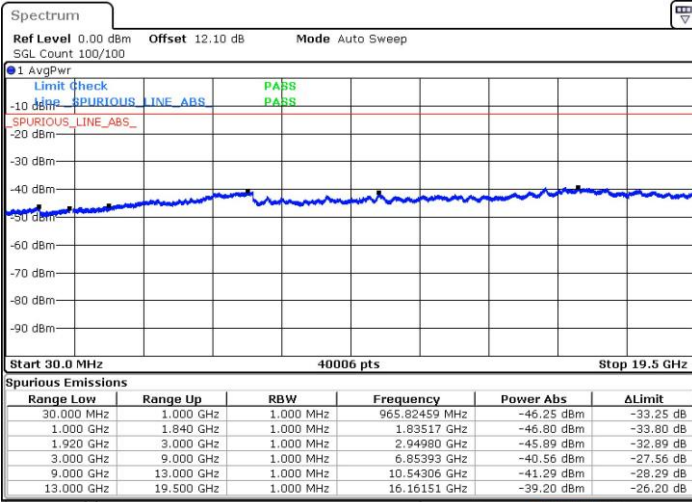
Date: 26 FEB 2019 23:06:25



LTE Band 2 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

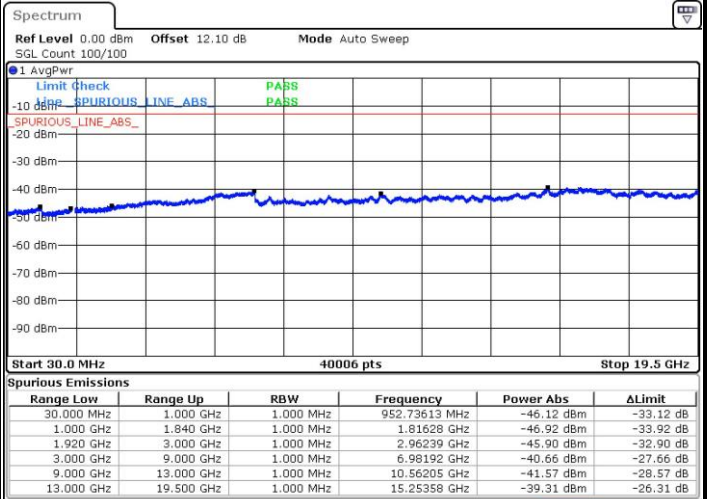
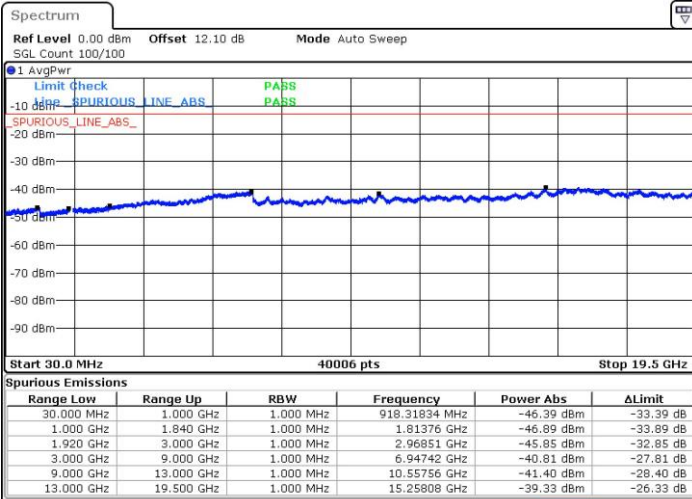


Date: 26 FEB 2019 23:08:12

Date: 26 FEB 2019 23:09:13

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 26 FEB 2019 23:15:00

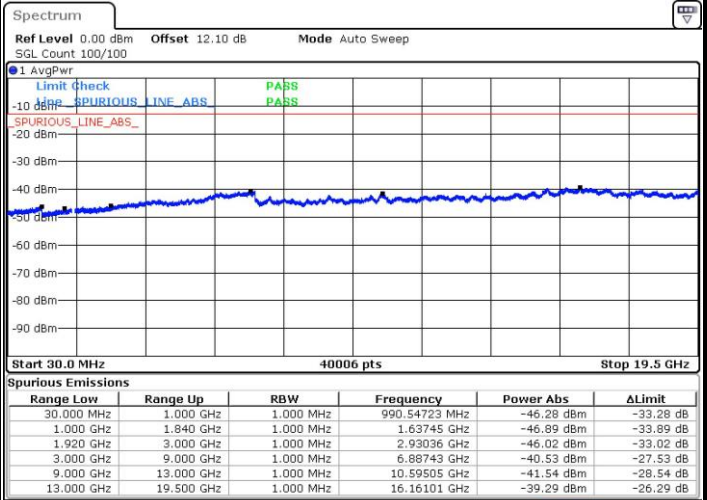
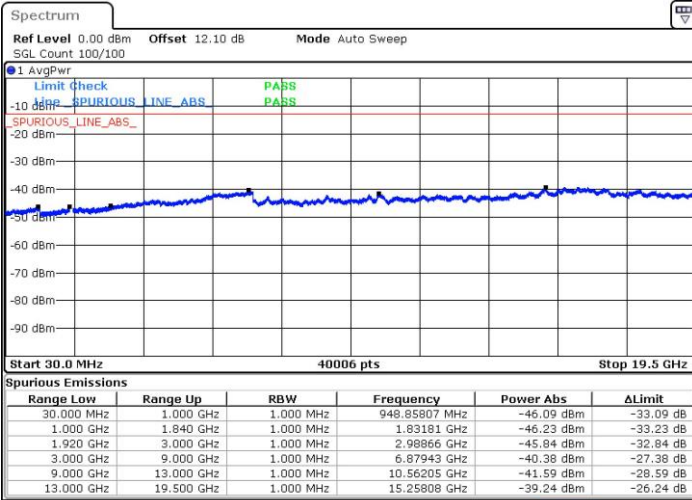
Date: 26 FEB 2019 23:16:01



LTE Band 2 / 1.4MHz

Lowest Channel / 64QAM

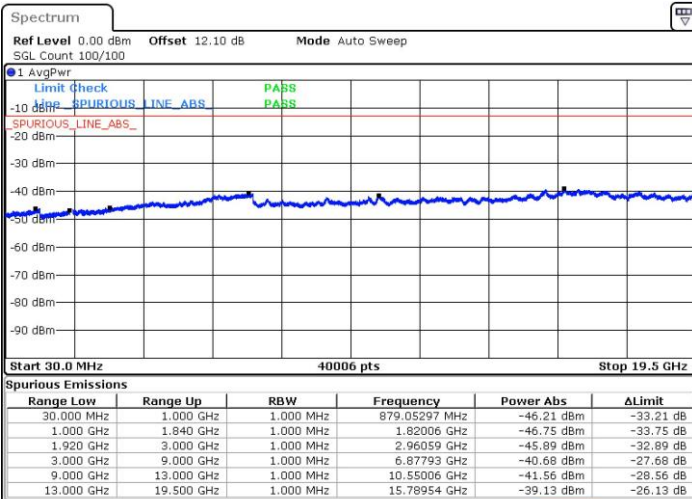
Middle Channel / 64QAM



Date: 27.FEB.2019 00:04:56

Date: 27.FEB.2019 00:06:20

Highest Channel / 64QAM



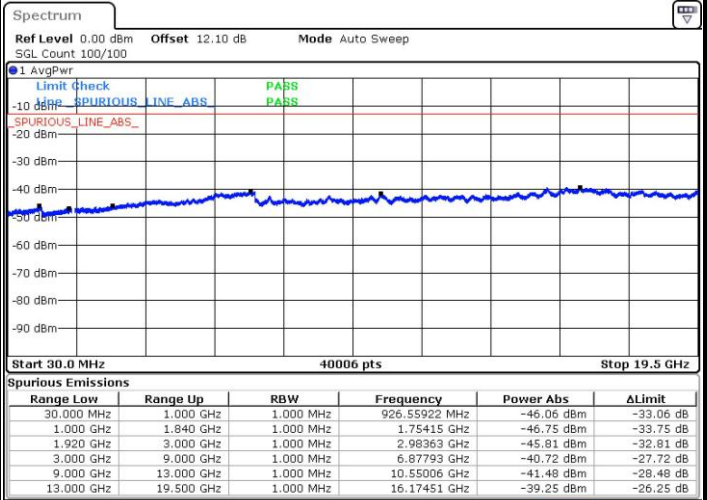
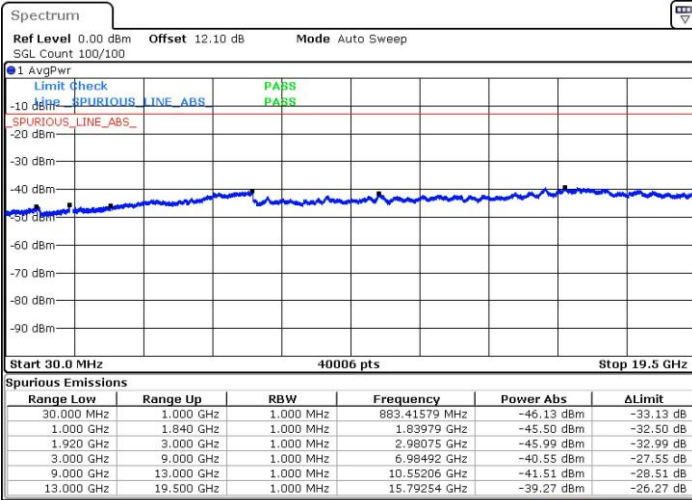
Date: 27.FEB.2019 00:09:50



LTE Band 2 / 3MHz

Lowest Channel / 64QAM

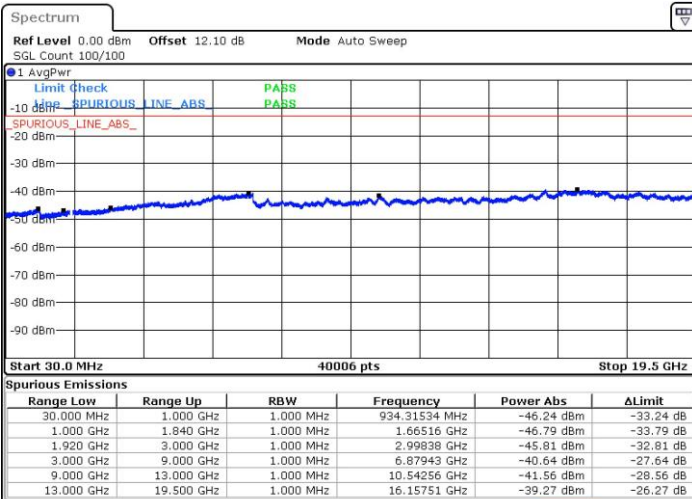
Middle Channel / 64QAM



Date: 26 FEB 2019 23:22:52

Date: 26 FEB 2019 23:24:16

Highest Channel / 64QAM



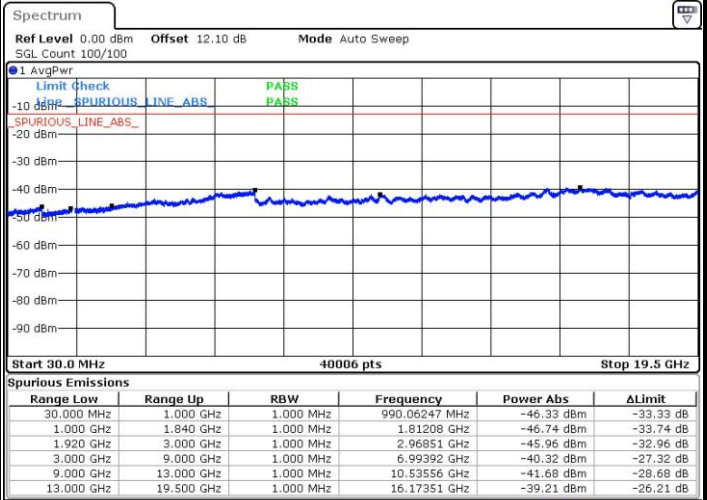
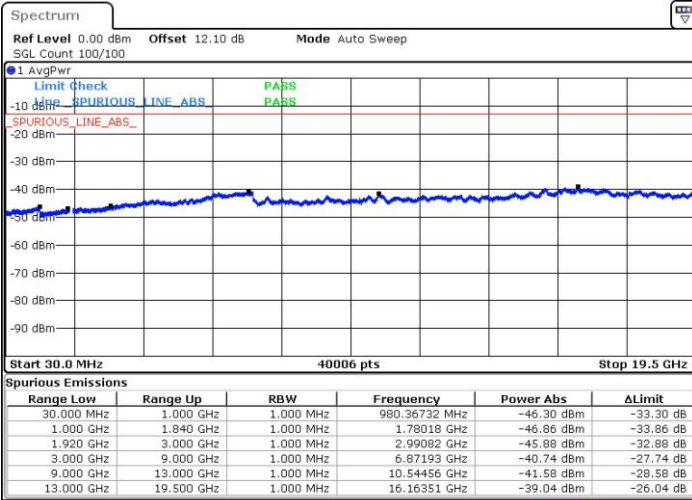
Date: 26 FEB 2019 23:27:40



LTE Band 2 / 5MHz

Lowest Channel / 64QAM

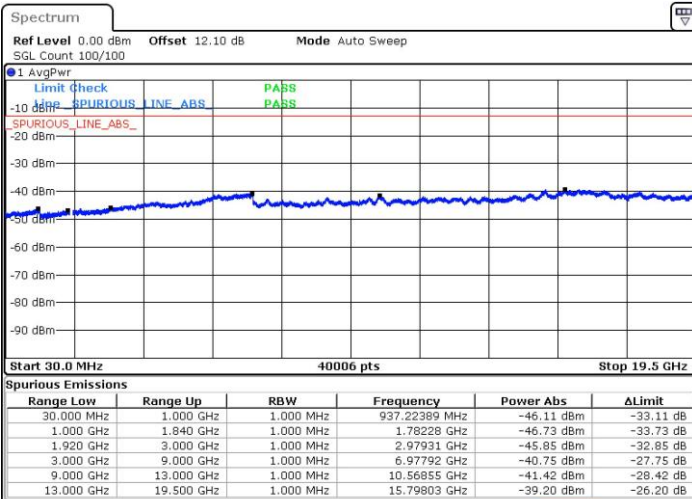
Middle Channel / 64QAM



Date: 26 FEB 2019 23:31:05

Date: 26 FEB 2019 23:32:29

Highest Channel / 64QAM



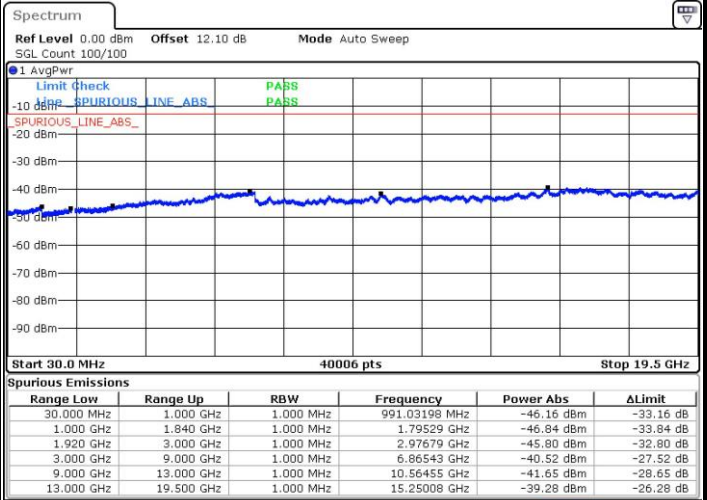
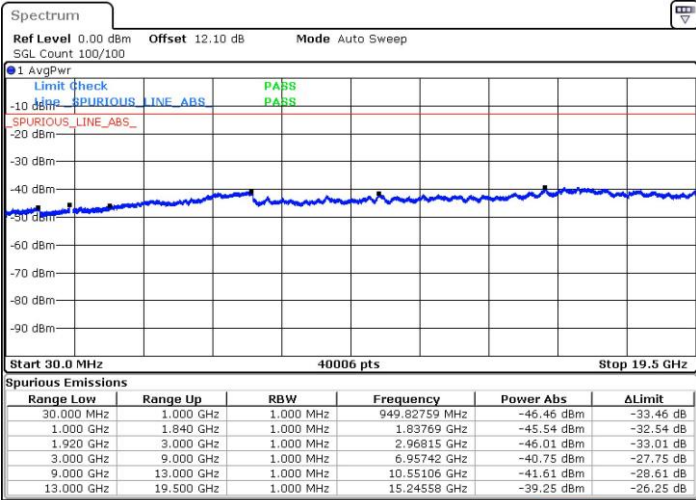
Date: 26 FEB 2019 23:35:52



LTE Band 2 / 10MHz

Lowest Channel / 64QAM

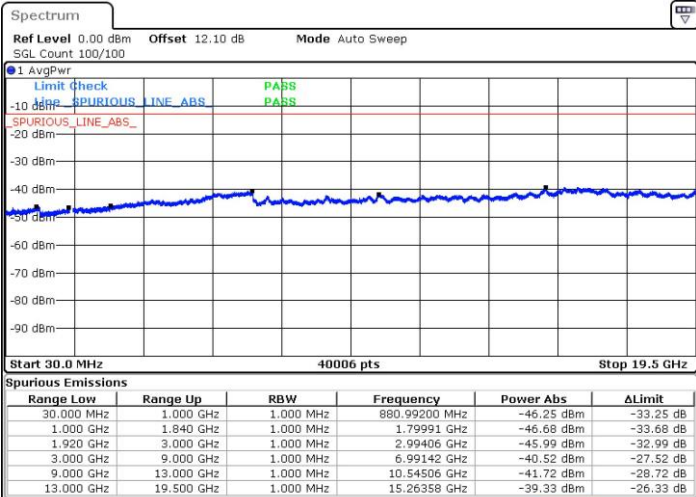
Middle Channel / 64QAM



Date: 26 FEB 2019 23:39:17

Date: 26 FEB 2019 23:40:41

Highest Channel / 64QAM



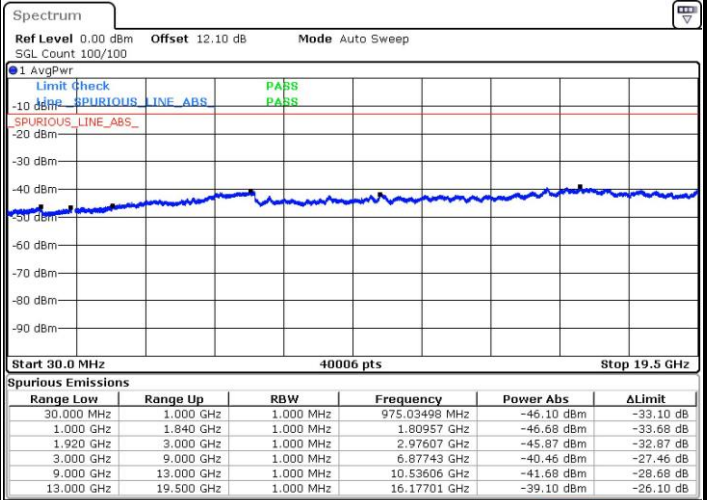
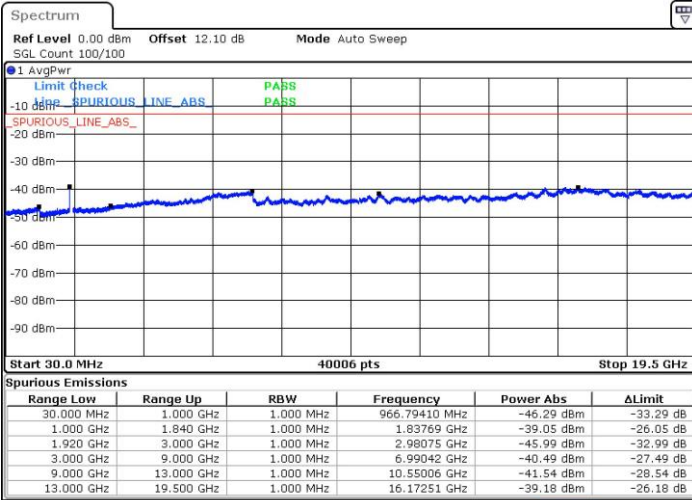
Date: 26 FEB 2019 23:44:05



LTE Band 2 / 15MHz

Lowest Channel / 64QAM

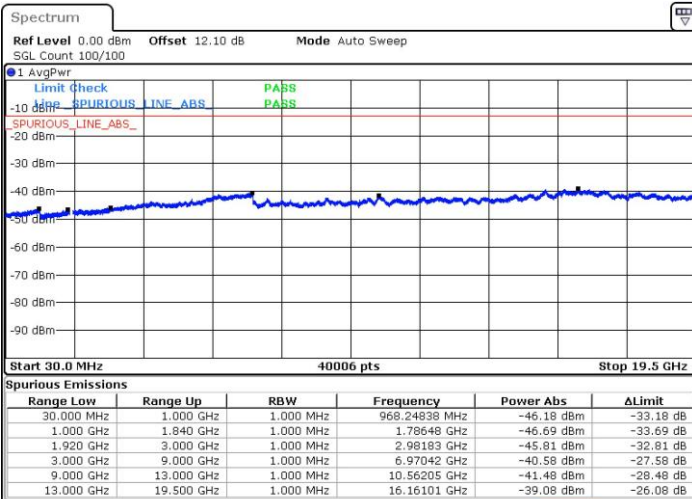
Middle Channel / 64QAM



Date: 26 FEB 2019 23:47:29

Date: 26 FEB 2019 23:48:53

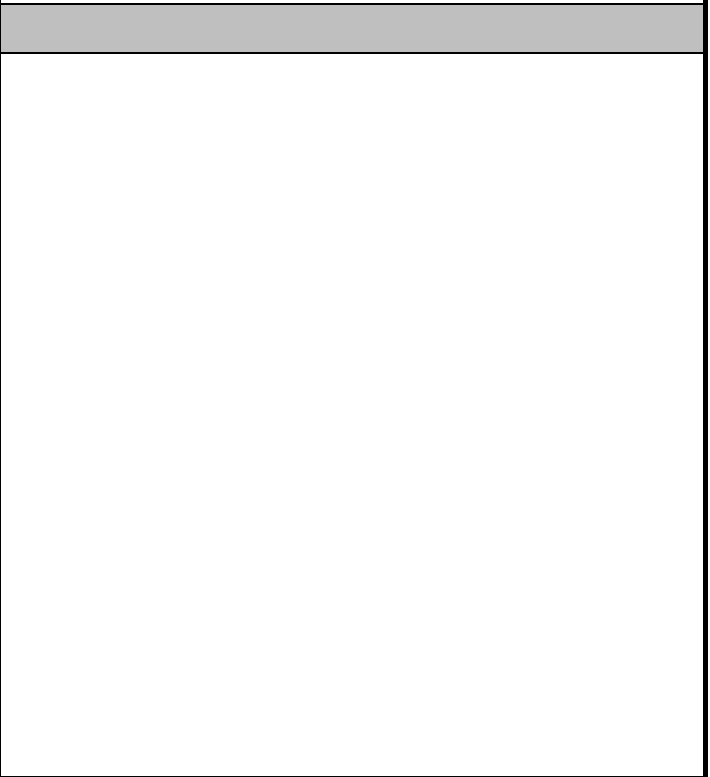
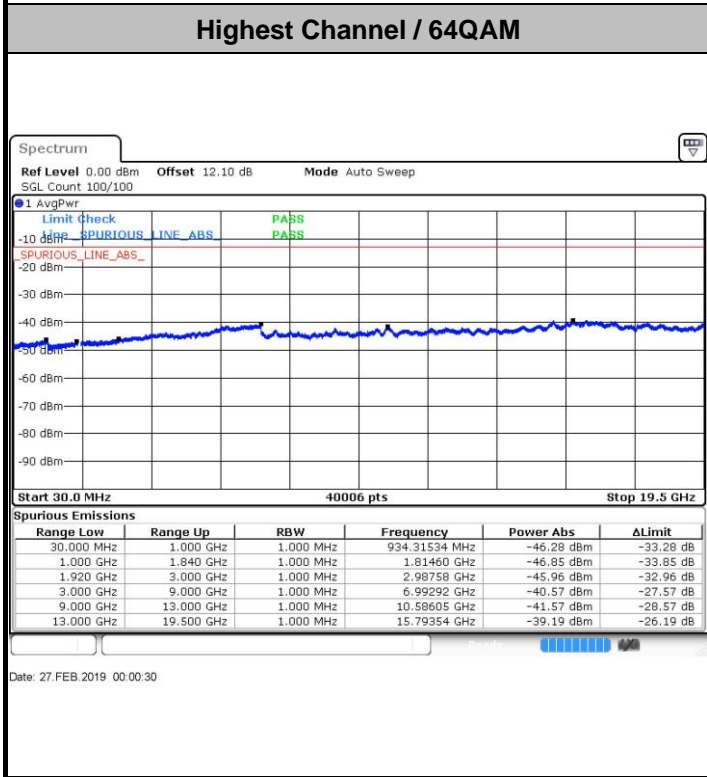
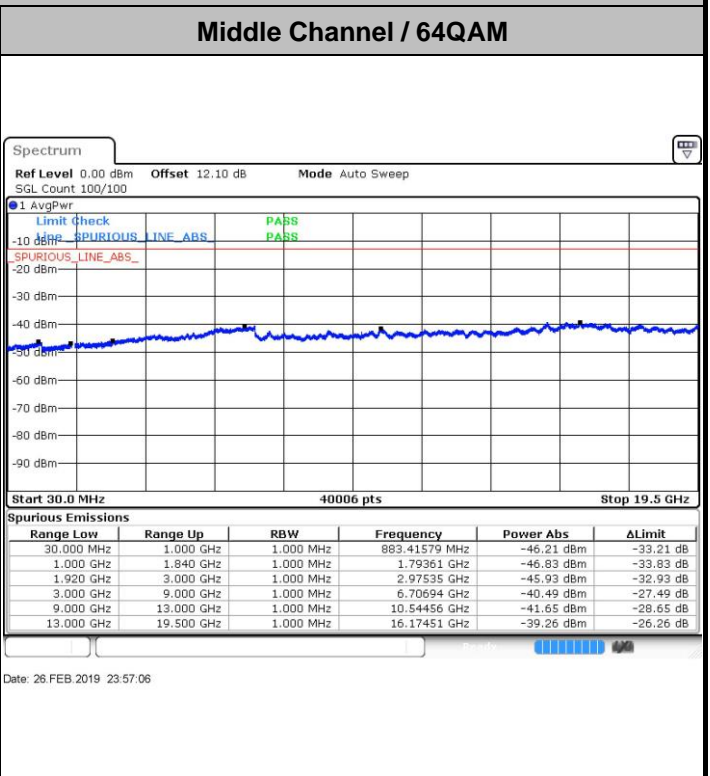
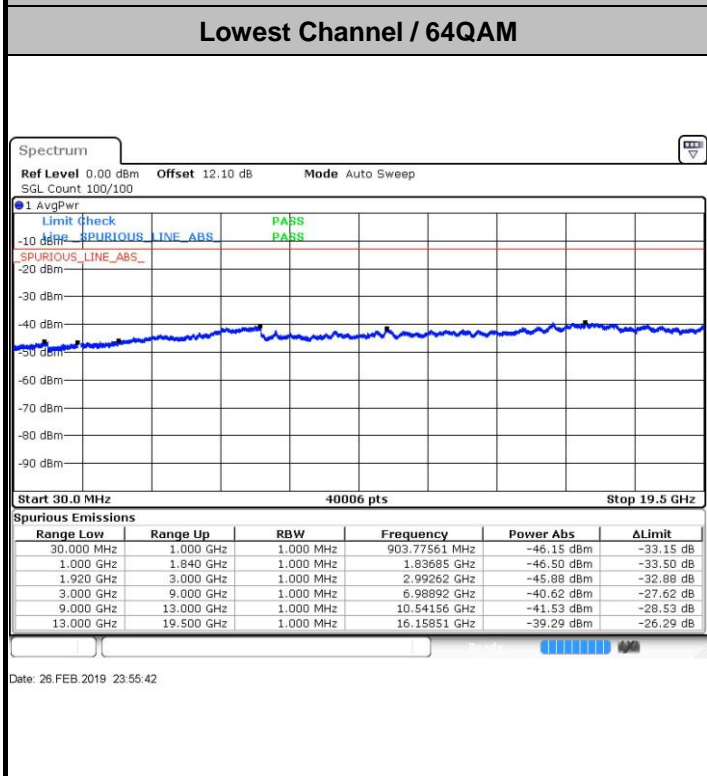
Highest Channel / 64QAM



Date: 26 FEB 2019 23:52:17



**LTE Band 2 / 20MHz**







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    | 0.0013                             | PASS    |
| 40               | Normal Voltage    | 0.0005                             |         |
| 30               | Normal Voltage    | 0.0009                             |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                             |         |
| 10               | Normal Voltage    | 0.0010                             |         |
| 0                | Normal Voltage    | 0.0005                             |         |
| -10              | Normal Voltage    | 0.0026                             |         |
| -20              | Normal Voltage    | 0.0011                             |         |
| -30              | Normal Voltage    | 0.0009                             |         |
| 20               | Maximum Voltage   | 0.0005                             |         |
| 20               | Normal Voltage    | 0.0000                             |         |
| 20               | Battery End Point | 0.0015                             |         |

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.65 V. ; Maximum Voltage =4.25 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 4

### Peak-to-Average Ratio

| Mode       | LTE Band 4 / 20MHz |         |       |         |             |
|------------|--------------------|---------|-------|---------|-------------|
| Mod.       | QPSK               |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | 3.22               | 4.52    | 3.91  | 5.54    | PASS        |
| Middle CH  | 3.10               | 4.46    | 3.74  | 5.48    |             |
| Highest CH | 3.48               | 4.70    | 4.14  | 5.59    |             |
| Mode       | LTE Band 4 / 20MHz |         |       |         |             |
| Mod.       | 64QAM              |         |       |         | Limit: 13dB |
| RB Size    | 1RB                | Full RB |       |         | Result      |
| Lowest CH  | 4.96               | 6.23    | -     | -       | PASS        |
| Middle CH  | 4.75               | 6.12    | -     | -       |             |
| Highest CH | 5.13               | 6.23    | -     | -       |             |



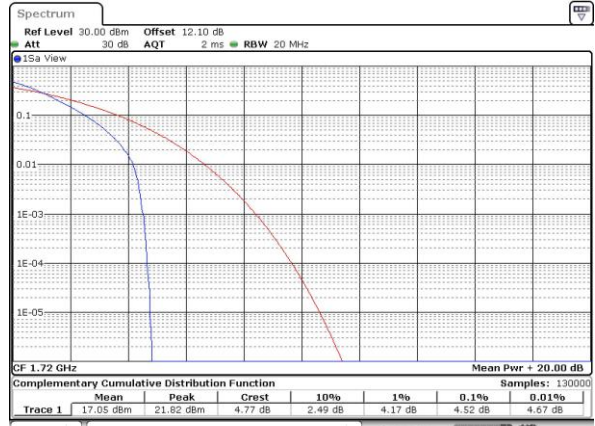
LTE Band 4 / 20MHz / QPSK

Lowest Channel / 1RB



Date: 1 MAR 2019 20:34:47

Lowest Channel / Full RB



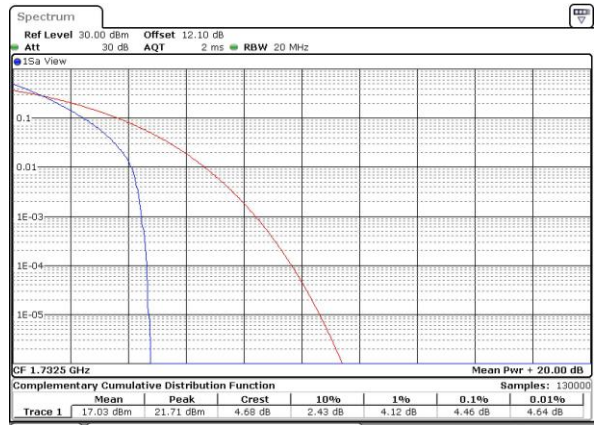
Date: 1 MAR 2019 20:34:56

Middle Channel / 1RB



Date: 1 MAR 2019 20:35:06

Middle Channel / Full RB



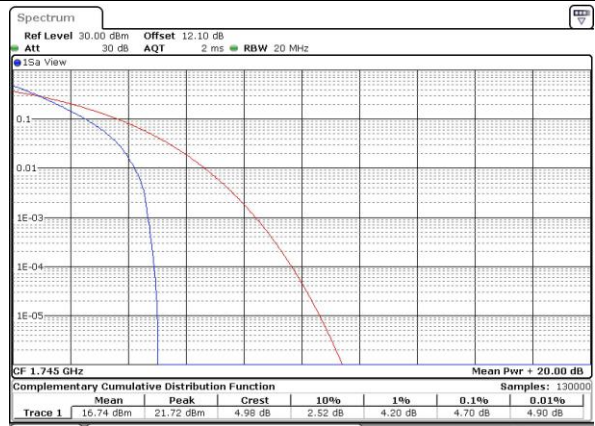
Date: 1 MAR 2019 20:35:16

Highest Channel / 1RB



Date: 1 MAR 2019 20:35:26

Highest Channel / Full RB

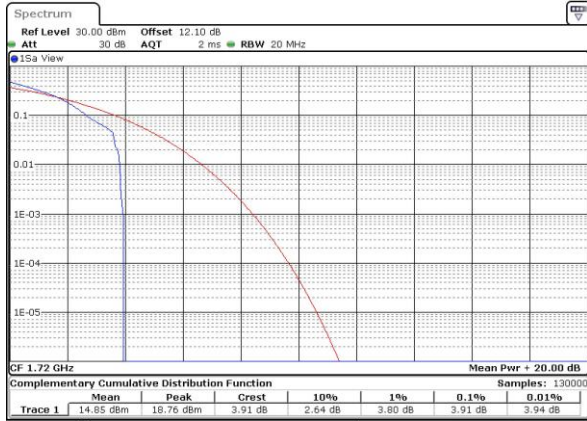


Date: 1 MAR 2019 20:35:36



LTE Band 4 / 20MHz / 16QAM

Lowest Channel / 1RB



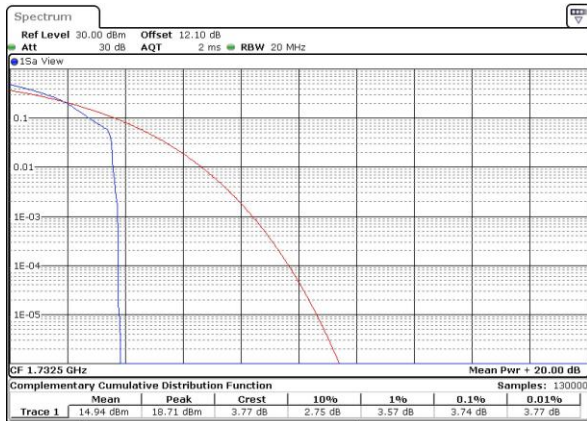
Date: 1 MAR 2019 20:33:49

Lowest Channel / Full RB



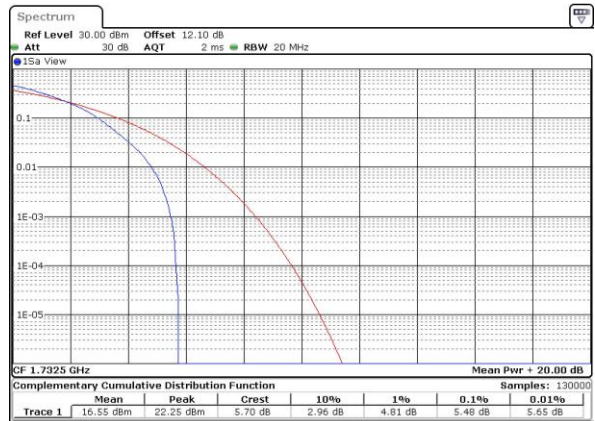
Date: 1 MAR 2019 20:33:58

Middle Channel / 1RB



Date: 1 MAR 2019 20:34:08

Middle Channel / Full RB



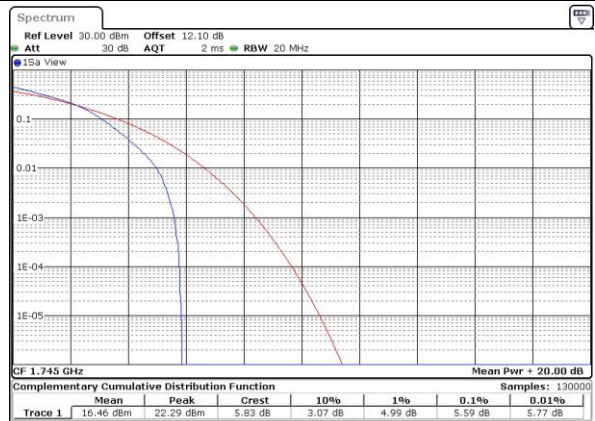
Date: 1 MAR 2019 20:34:18

Highest Channel / 1RB



Date: 1 MAR 2019 20:34:27

Highest Channel / Full RB

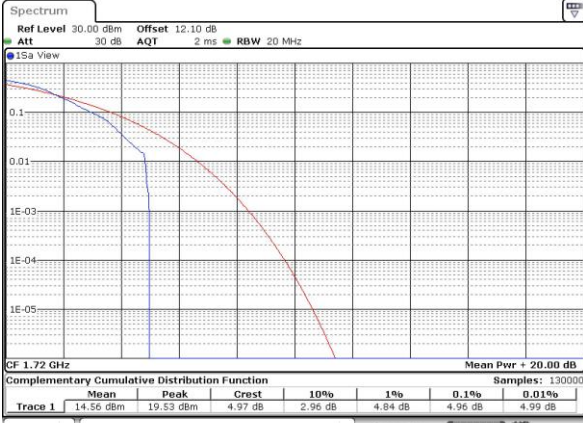


Date: 1 MAR 2019 20:34:37



LTE Band 4 / 20MHz / 64QAM

Lowest Channel / 1RB



Date: 1 MAR 2019 20:35:49

Lowest Channel / Full RB



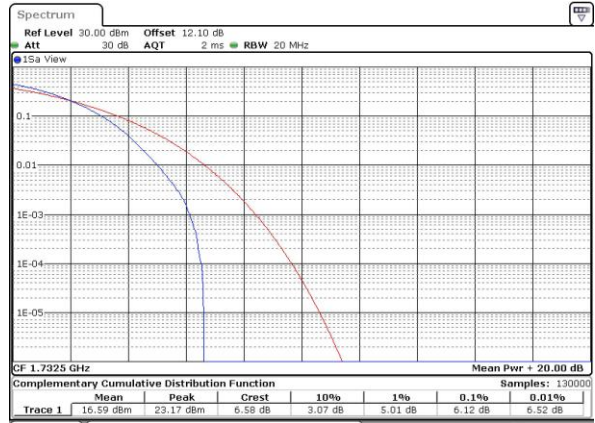
Date: 1 MAR 2019 20:37:26

Middle Channel / 1RB



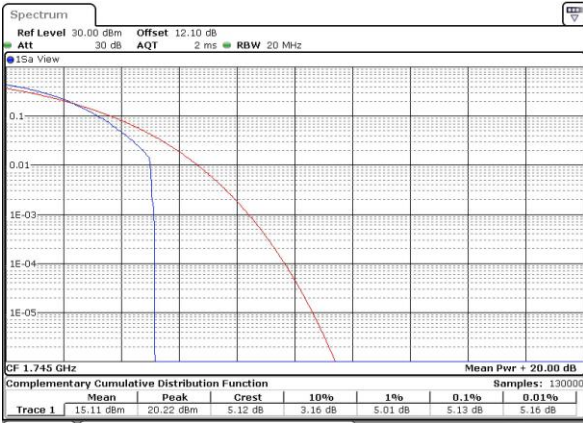
Date: 1 MAR 2019 20:37:36

Middle Channel / Full RB



Date: 1 MAR 2019 20:37:45

Highest Channel / 1RB



Date: 1 MAR 2019 20:37:55

Highest Channel / Full RB



Date: 1 MAR 2019 20:38:05



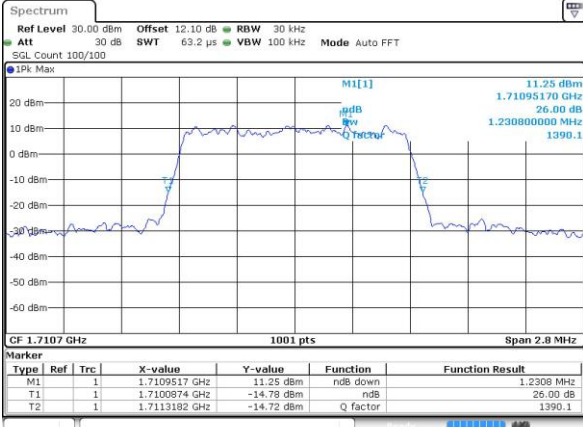
**26dB Bandwidth**

| Mode       | LTE Band 4 : 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  | 1.23                      | 1.23  | 2.98  | 3.02  | 4.94  | 4.88  | 9.67  | 9.87  | 14.27 | 14.42 | 20.06 | 20.14 |
| Middle CH  | 1.22                      | 1.20  | 3.02  | 3.02  | 4.92  | 4.94  | 9.83  | 9.83  | 14.39 | 14.45 | 20.26 | 20.18 |
| Highest CH | 1.23                      | 1.22  | 2.99  | 3.05  | 4.83  | 4.90  | 9.71  | 9.83  | 14.30 | 14.39 | 20.18 | 20.06 |
| Mode       | LTE Band 4 : 26dB BW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
| BW         | 1.4MHz                    |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                     |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | 1.23                      | -     | 3.01  | -     | 4.84  | -     | 9.81  | -     | 14.39 | -     | 20.14 | -     |
| Middle CH  | 1.24                      | -     | 3.02  | -     | 4.94  | -     | 9.75  | -     | 14.36 | -     | 20.06 | -     |
| Highest CH | 1.22                      | -     | 3.01  | -     | 4.97  | -     | 9.73  | -     | 14.36 | -     | 20.06 | -     |



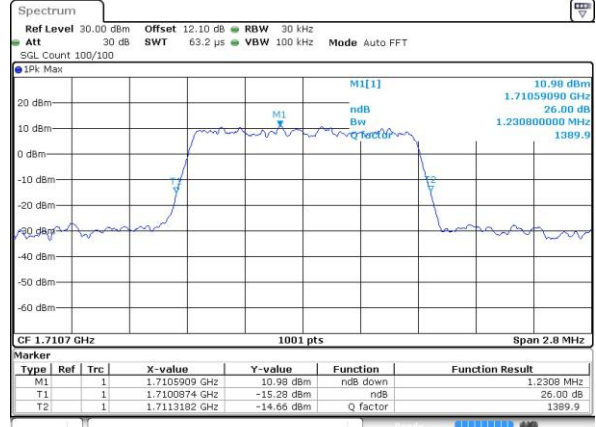
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



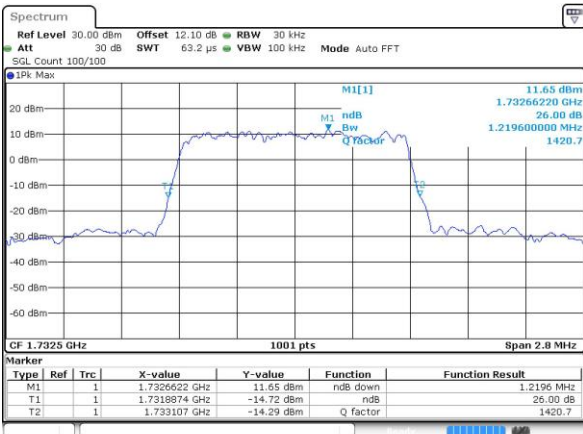
Date: 1 MAR 2019 20:15:35

Lowest Channel / 1.4MHz / 16QAM



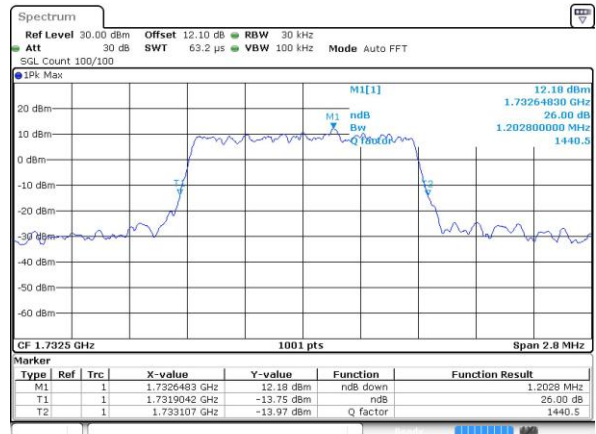
Date: 1 MAR 2019 20:15:46

Middle Channel / 1.4MHz / QPSK



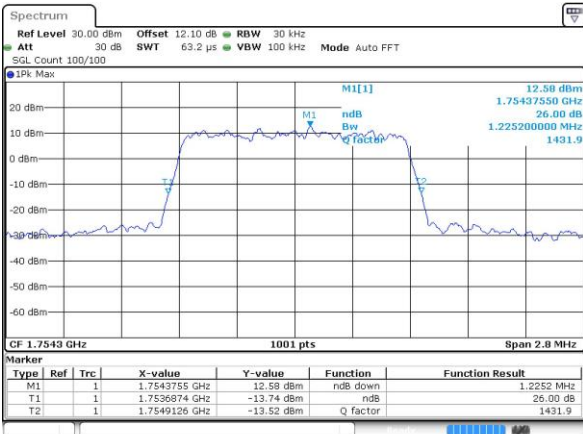
Date: 1 MAR 2019 20:22:26

Middle Channel / 1.4MHz / 16QAM



Date: 1 MAR 2019 20:22:37

Highest Channel / 1.4MHz / QPSK



Date: 1 MAR 2019 20:25:10

Highest Channel / 1.4MHz / 16QAM

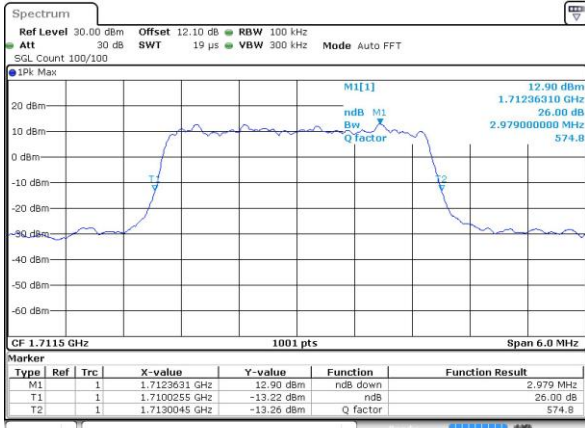


Date: 1 MAR 2019 20:25:22



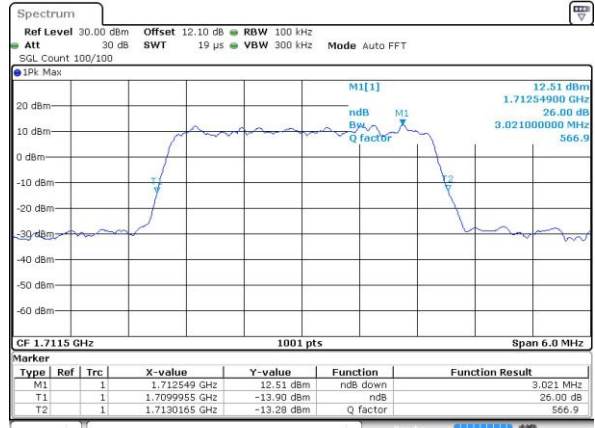
LTE Band 4

Lowest Channel / 3MHz / QPSK



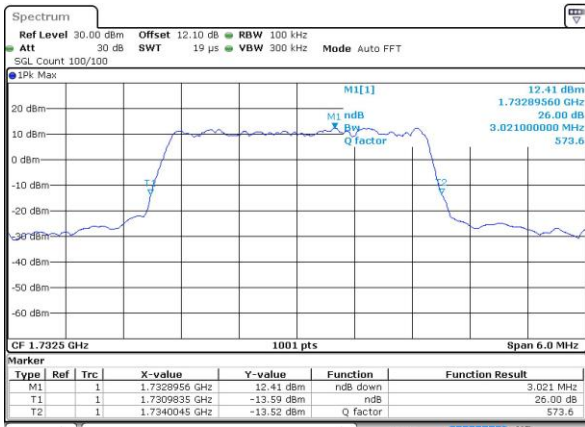
Date: 28 FEB 2019 23:57:45

Lowest Channel / 3MHz / 16QAM



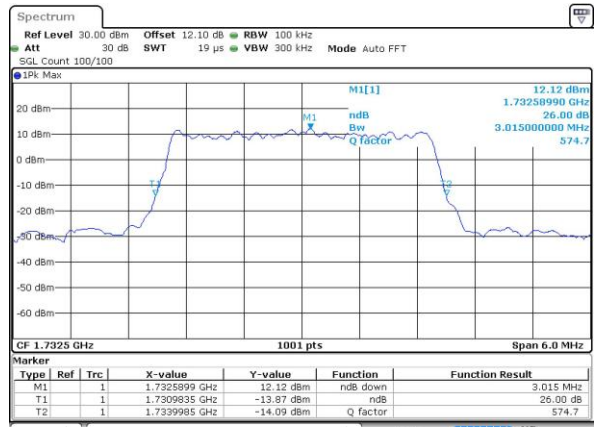
Date: 28 FEB 2019 23:57:57

Middle Channel / 3MHz / QPSK



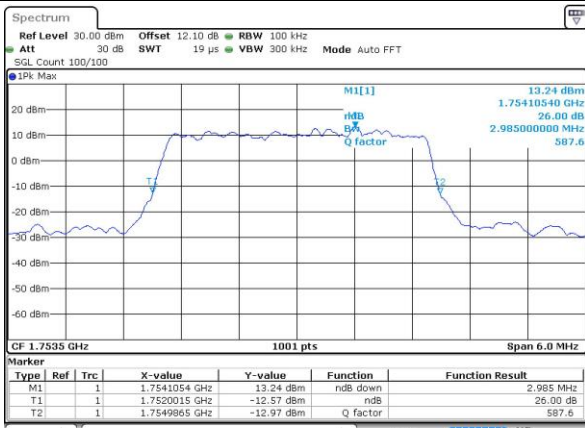
Date: 1 MAR 2019 00:04:32

Middle Channel / 3MHz / 16QAM



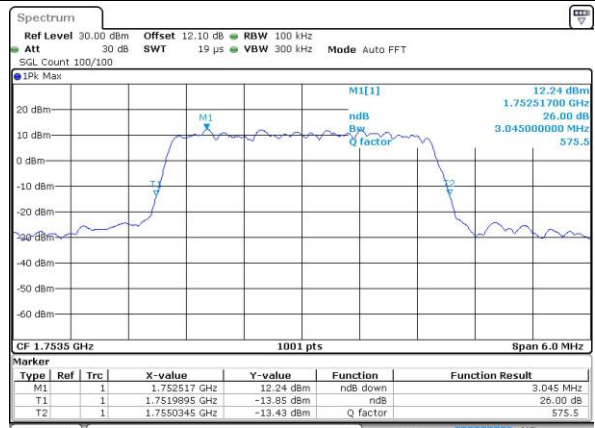
Date: 1 MAR 2019 00:04:44

Highest Channel / 3MHz / QPSK



Date: 1 MAR 2019 00:07:21

Highest Channel / 3MHz / 16QAM



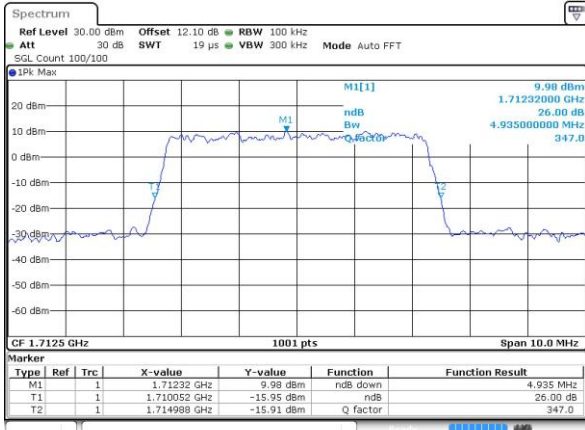
Date: 1 MAR 2019 00:07:33





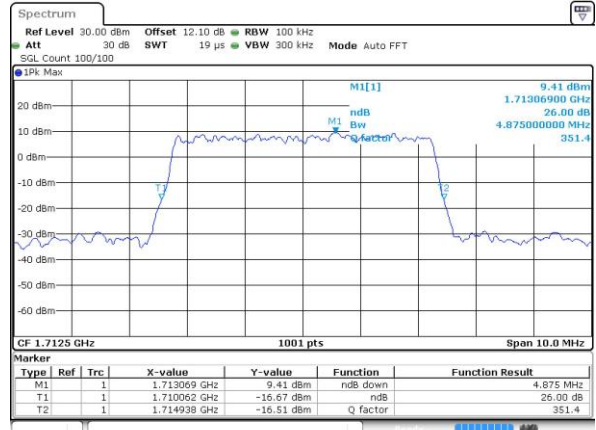
LTE Band 4

Lowest Channel / 5MHz / QPSK



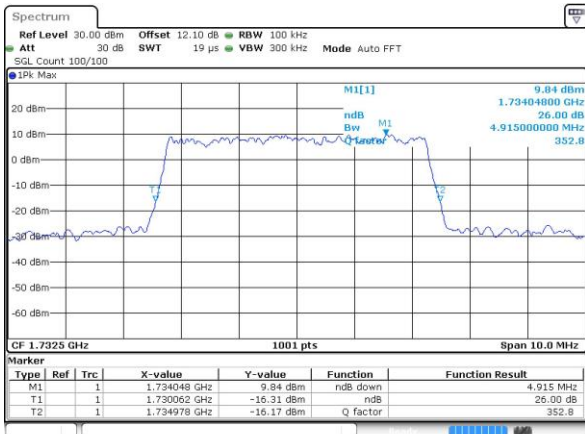
Date: 1 MAR 2019 00:14:09

Lowest Channel / 5MHz / 16QAM



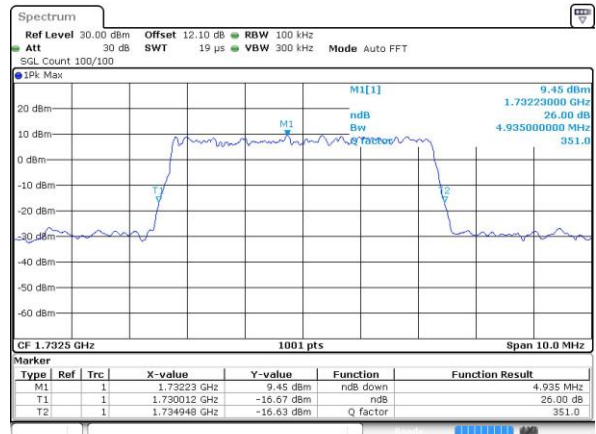
Date: 1 MAR 2019 00:14:21

Middle Channel / 5MHz / QPSK



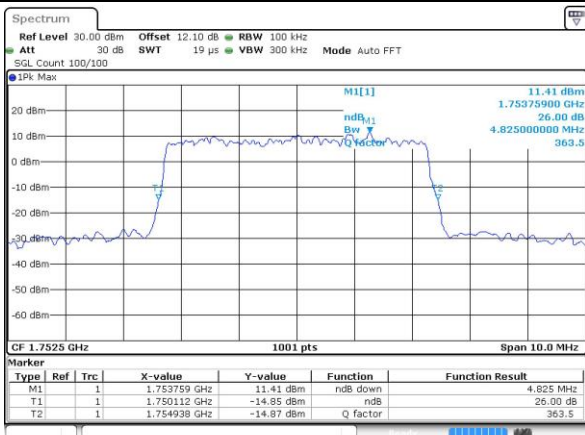
Date: 1 MAR 2019 00:20:56

Middle Channel / 5MHz / 16QAM



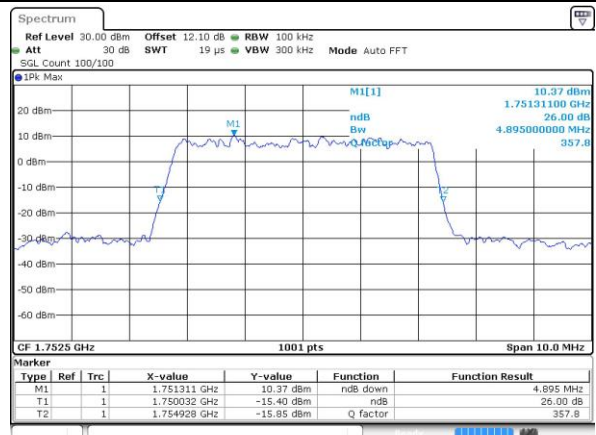
Date: 1 MAR 2019 00:21:06

Highest Channel / 5MHz / QPSK



Date: 1 MAR 2019 00:23:44

Highest Channel / 5MHz / 16QAM

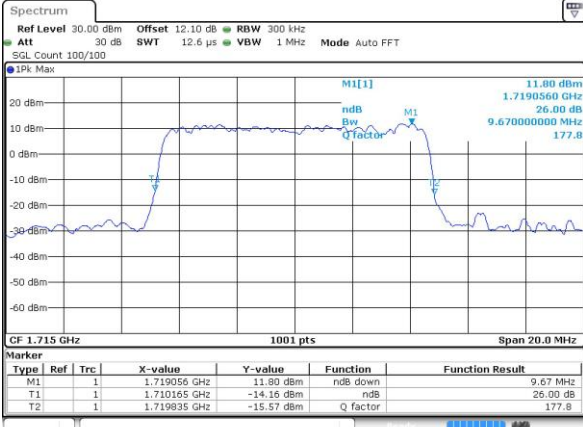


Date: 1 MAR 2019 00:23:56



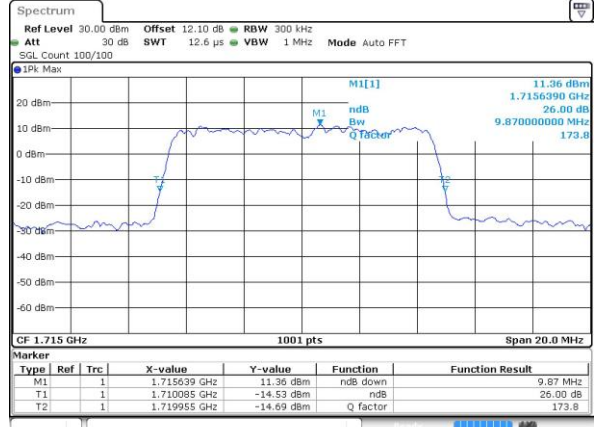
LTE Band 4

Lowest Channel / 10MHz / QPSK



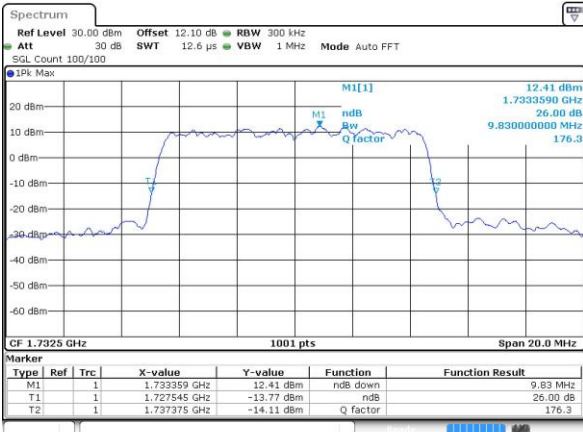
Date: 1 MAR 2019 00:30:33

Lowest Channel / 10MHz / 16QAM



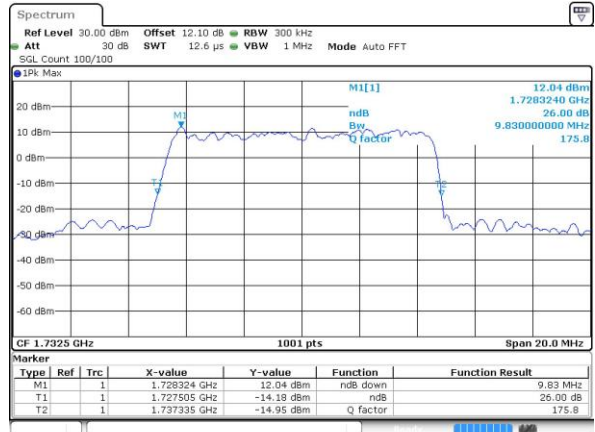
Date: 1 MAR 2019 00:30:45

Middle Channel / 10MHz / QPSK



Date: 1 MAR 2019 00:37:20

Middle Channel / 10MHz / 16QAM



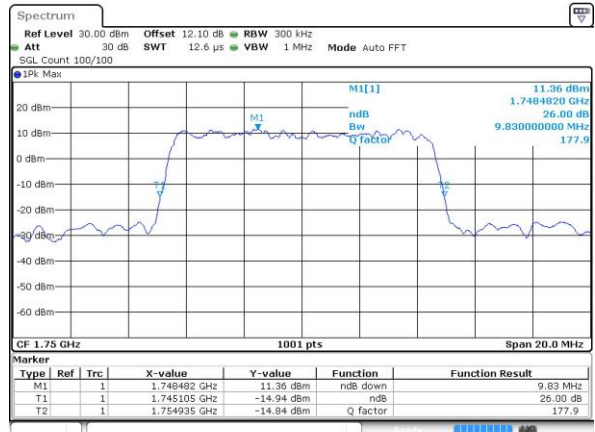
Date: 1 MAR 2019 00:37:31

Highest Channel / 10MHz / QPSK



Date: 1 MAR 2019 00:40:08

Highest Channel / 10MHz / 16QAM

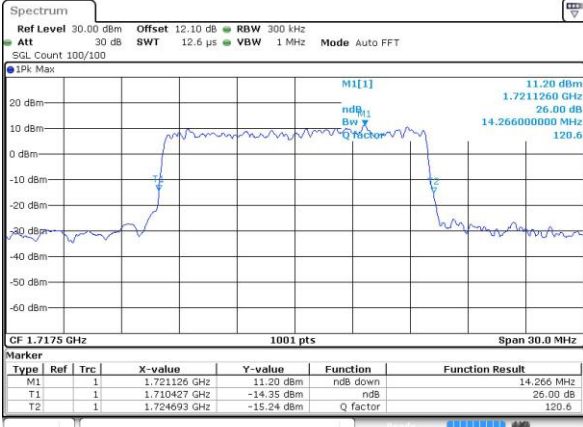


Date: 1 MAR 2019 00:40:20



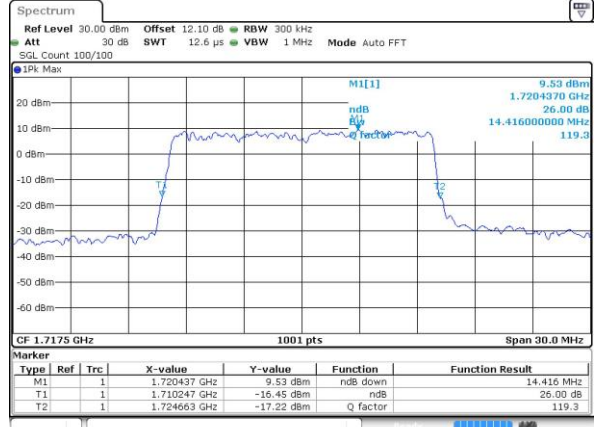
LTE Band 4

Lowest Channel / 15MHz / QPSK



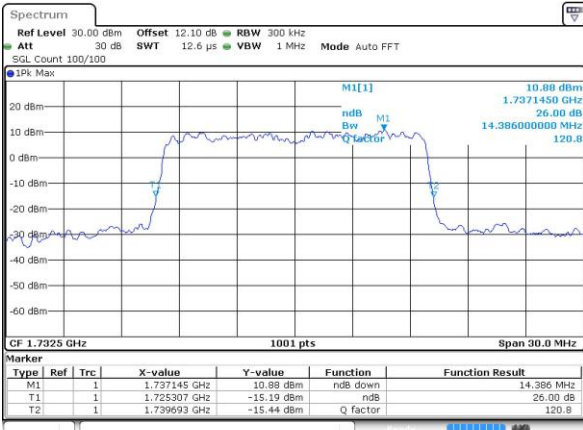
Date: 1 MAR 2019 00:46:57

Lowest Channel / 15MHz / 16QAM



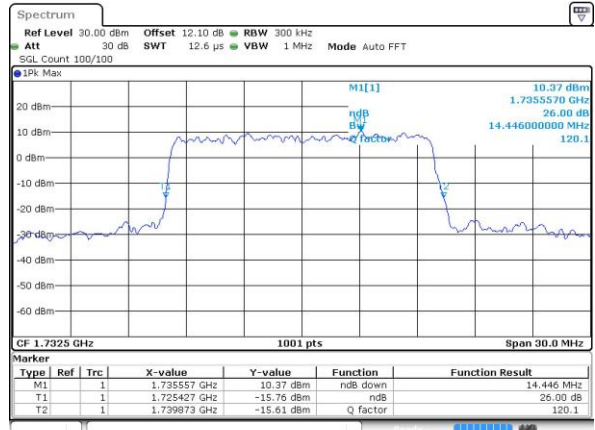
Date: 1 MAR 2019 00:47:09

Middle Channel / 15MHz / QPSK



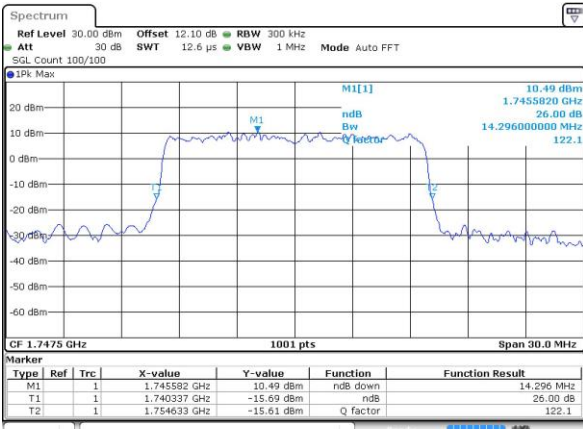
Date: 1 MAR 2019 00:53:44

Middle Channel / 15MHz / 16QAM



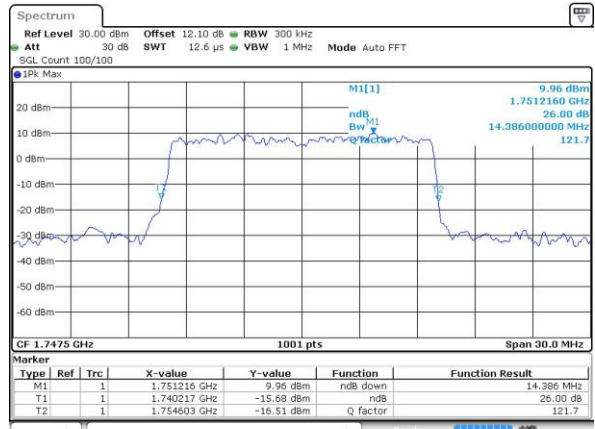
Date: 1 MAR 2019 00:53:55

Highest Channel / 15MHz / QPSK



Date: 1 MAR 2019 00:56:32

Highest Channel / 15MHz / 16QAM



Date: 1 MAR 2019 00:56:45