



**Frequency Stability**

| Test Conditions  |                   | LTE Band 26 (QPSK) / Middle Channel | Limit   |
|------------------|-------------------|-------------------------------------|---------|
| Temperature (°C) | Voltage (Volt)    | BW 10MHz                            | Note 2. |
|                  |                   | Deviation (ppm)                     | Result  |
| 50               | Normal Voltage    | 0.0044                              | PASS    |
| 40               | Normal Voltage    | 0.0018                              |         |
| 30               | Normal Voltage    | 0.0038                              |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                              |         |
| 10               | Normal Voltage    | 0.0041                              |         |
| 0                | Normal Voltage    | 0.0007                              |         |
| -10              | Normal Voltage    | 0.0020                              |         |
| -20              | Normal Voltage    | 0.0045                              |         |
| -30              | Normal Voltage    | 0.0007                              |         |
| 20               | Maximum Voltage   | 0.0010                              |         |
| 20               | Normal Voltage    | 0.0000                              |         |
| 20               | Battery End Point | 0.0012                              |         |

**Note:**

- 1. Normal Voltage =7.6 V. ; Battery End Point (BEP) =6.8 V. ; Maximum Voltage =8.7 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 38

### Peak-to-Average Ratio

| Mode       | LTE Band 38 / 20MHz |         |       |         |             |
|------------|---------------------|---------|-------|---------|-------------|
| Mod.       | QPSK                |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | 4.35                | 5.19    | 5.48  | 6.06    | <b>PASS</b> |
| Middle CH  | 4.58                | 5.19    | 5.42  | 6.03    |             |
| Highest CH | 4.55                | 5.16    | 5.33  | 6.00    |             |



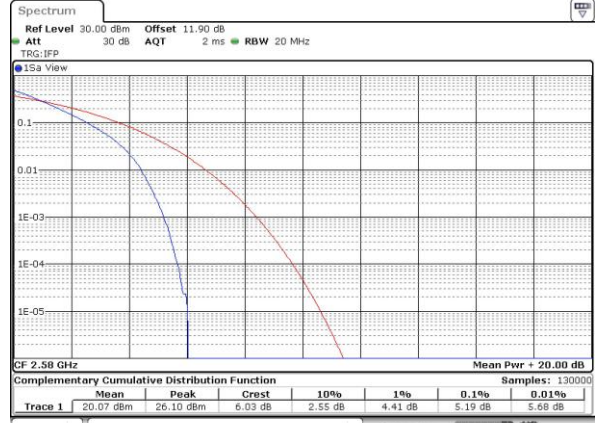
LTE Band 38 / 20MHz / QPSK

Lowest Channel / 1RB



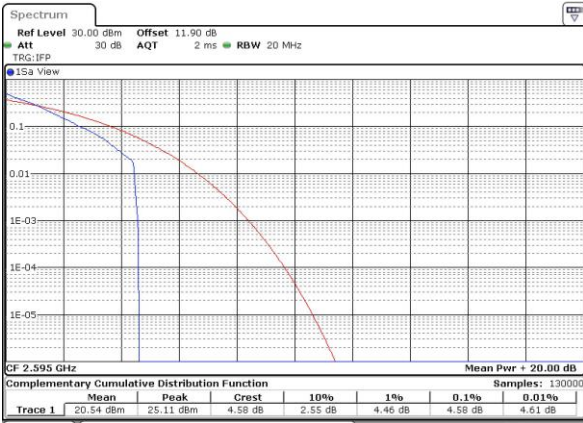
Date: 11.OCT.2018 01:00:42

Lowest Channel / Full RB



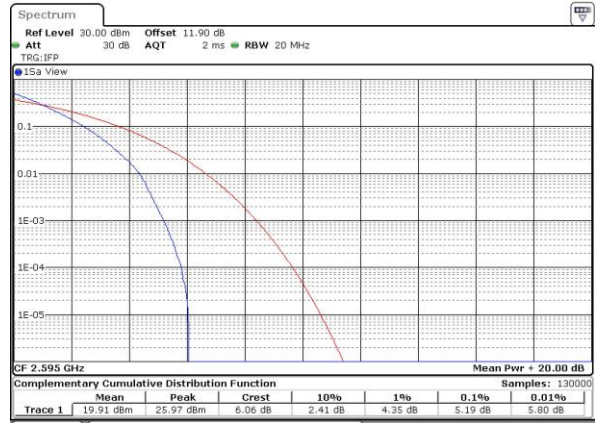
Date: 11.OCT.2018 01:00:57

Middle Channel / 1RB



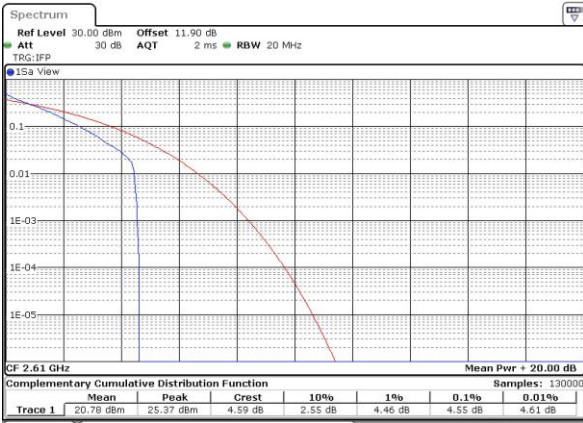
Date: 11.OCT.2018 01:01:20

Middle Channel / Full RB



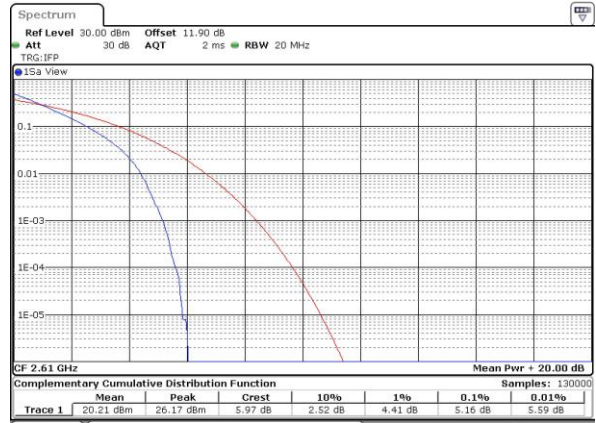
Date: 11.OCT.2018 01:01:35

Highest Channel / 1RB



Date: 11.OCT.2018 01:01:50

Highest Channel / Full RB

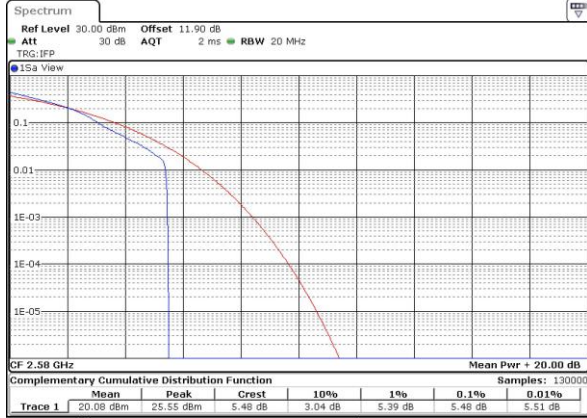


Date: 11.OCT.2018 01:02:05



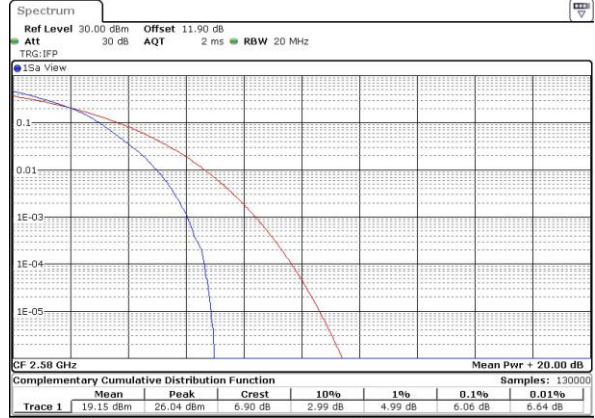
LTE Band 38 / 20MHz / 16QAM

Lowest Channel / 1RB



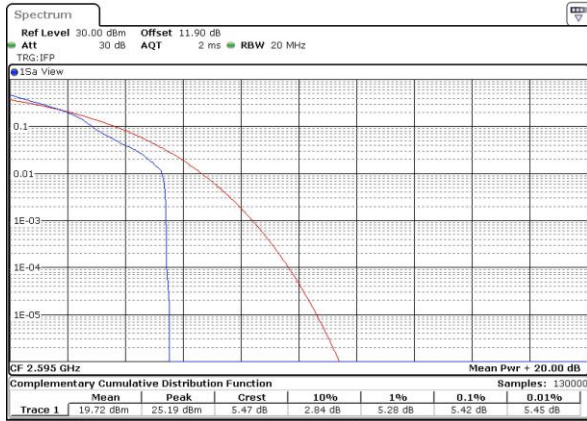
Date: 11.OCT.2018 00:58:28

Lowest Channel / Full RB



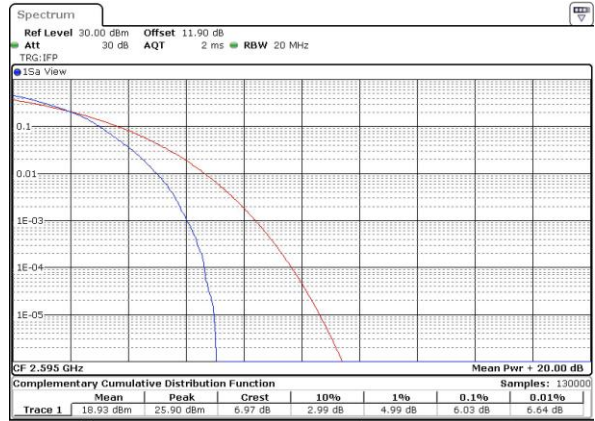
Date: 11.OCT.2018 00:58:47

Middle Channel / 1RB



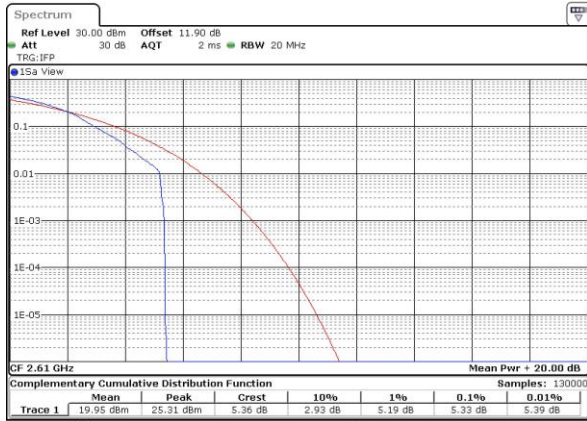
Date: 11.OCT.2018 00:59:04

Middle Channel / Full RB



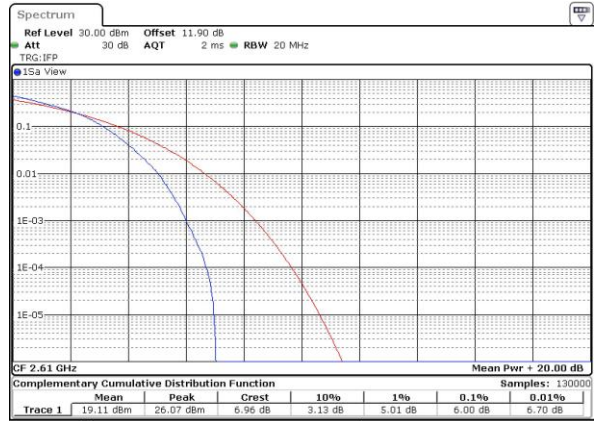
Date: 11.OCT.2018 00:59:55

Highest Channel / 1RB



Date: 11.OCT.2018 01:00:12

Highest Channel / Full RB



Date: 11.OCT.2018 01:00:27



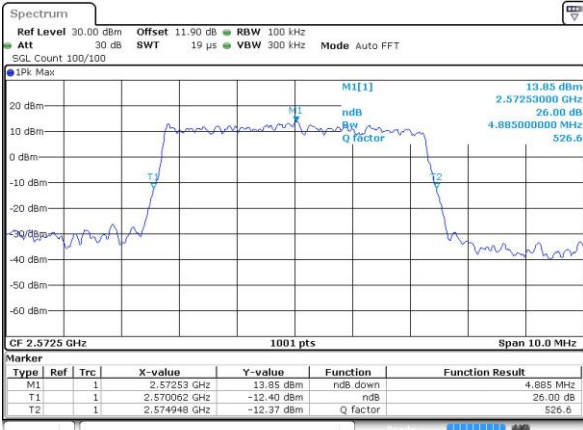
**26dB Bandwidth**

| Mode       | LTE Band 38 : 26dB BW(MHz) |       |      |       |      |       |       |       |       |       |       |       |
|------------|----------------------------|-------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|
|            | 1.4MHz                     |       | 3MHz |       | 5MHz |       | 10MHz |       | 15MHz |       | 20MHz |       |
| BW         | QPSK                       | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM |
| Mod.       | QPSK                       | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM |
| Lowest CH  | -                          | -     | -    | -     | 4.89 | 4.77  | 9.77  | 9.71  | 14.09 | 14.72 | 20.18 | 20.10 |
| Middle CH  | -                          | -     | -    | -     | 4.92 | 4.73  | 9.61  | 9.83  | 14.27 | 14.18 | 20.14 | 20.14 |
| Highest CH | -                          | -     | -    | -     | 4.87 | 5.05  | 9.73  | 9.59  | 14.42 | 14.39 | 20.06 | 20.14 |



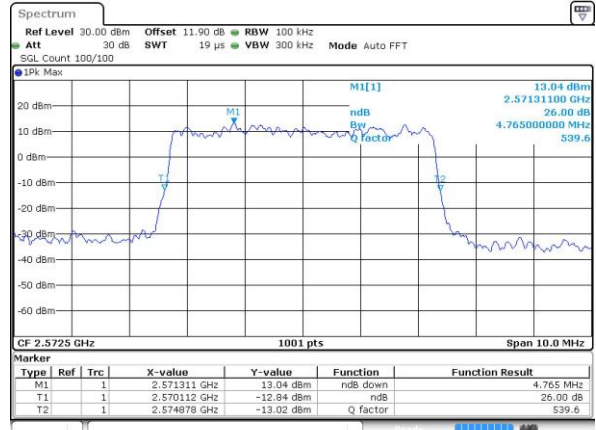
LTE Band 38

Lowest Channel / 5MHz / QPSK



Date: 11.OCT.2018 00:42:44

Lowest Channel / 5MHz / 16QAM



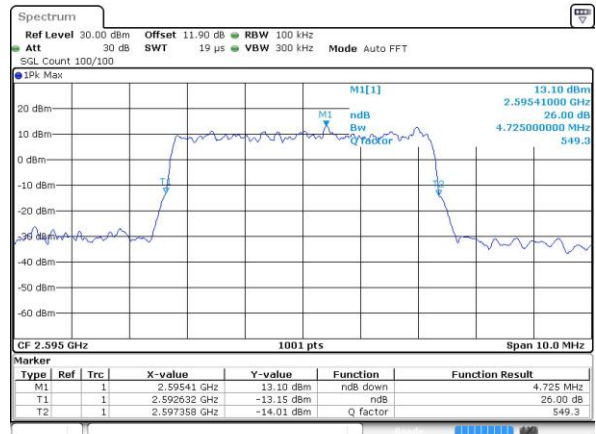
Date: 11.OCT.2018 00:42:55

Middle Channel / 5MHz / QPSK



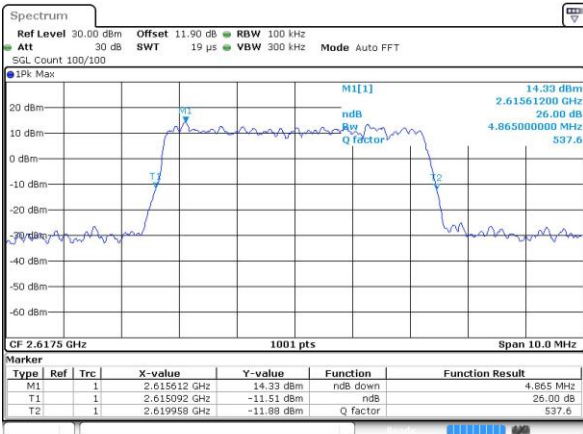
Date: 11.OCT.2018 00:43:29

Middle Channel / 5MHz / 16QAM



Date: 11.OCT.2018 00:43:41

Highest Channel / 5MHz / QPSK



Date: 11.OCT.2018 00:44:15

Highest Channel / 5MHz / 16QAM

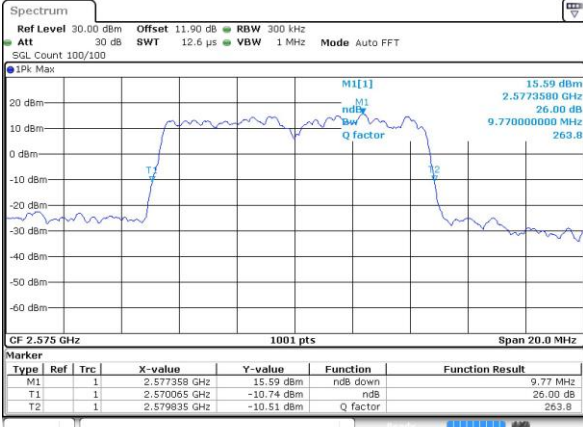


Date: 11.OCT.2018 00:44:26



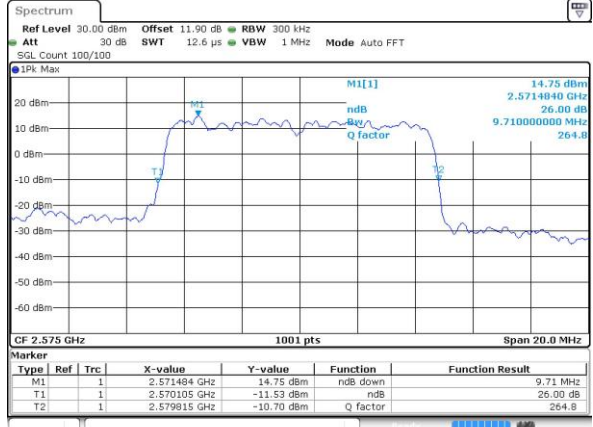
LTE Band 38

Lowest Channel / 10MHz / QPSK



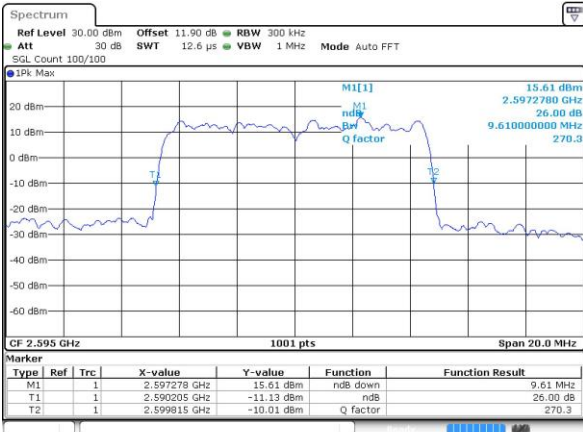
Date: 11.OCT.2018 00:45:00

Lowest Channel / 10MHz / 16QAM



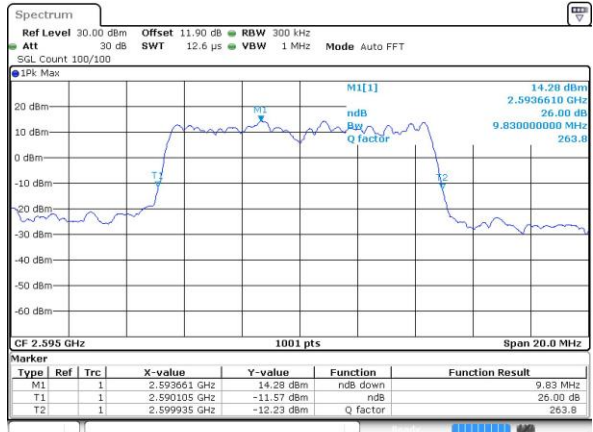
Date: 11.OCT.2018 00:45:12

Middle Channel / 10MHz / QPSK



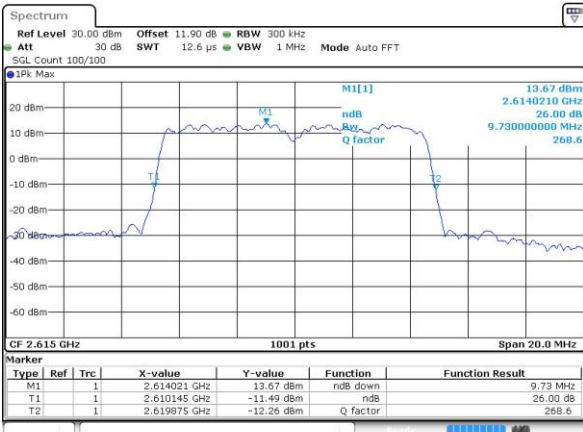
Date: 11.OCT.2018 00:45:48

Middle Channel / 10MHz / 16QAM



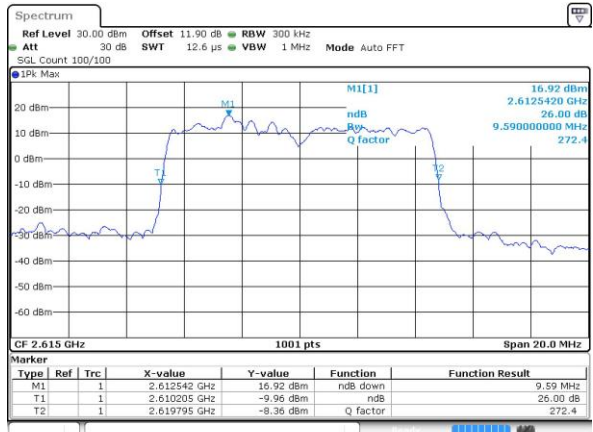
Date: 11.OCT.2018 00:45:58

Highest Channel / 10MHz / QPSK



Date: 11.OCT.2018 00:46:32

Highest Channel / 10MHz / 16QAM

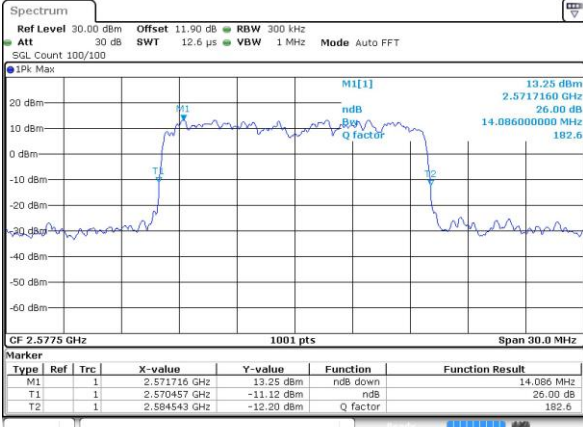


Date: 11.OCT.2018 00:46:43



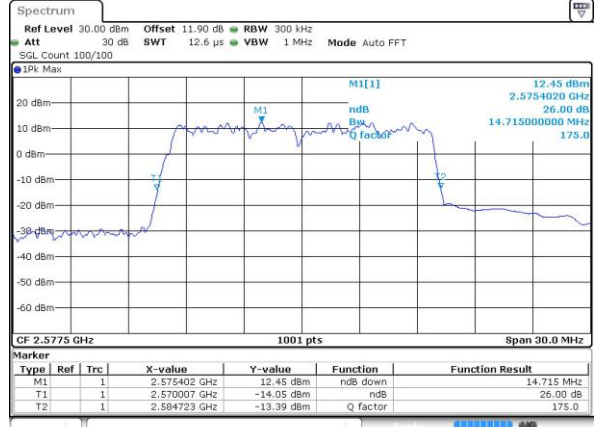
LTE Band 38

Lowest Channel / 15MHz / QPSK



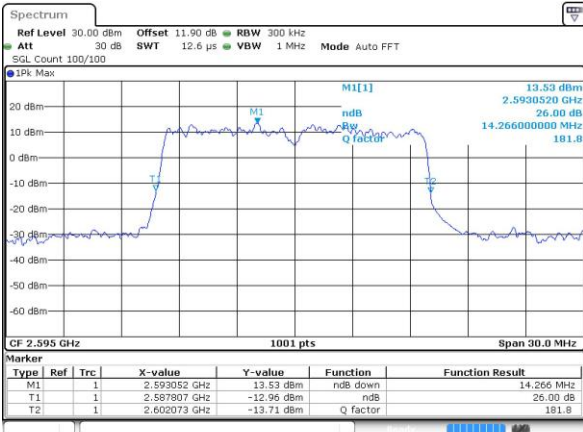
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Lowest Channel / 15MHz / 16QAM



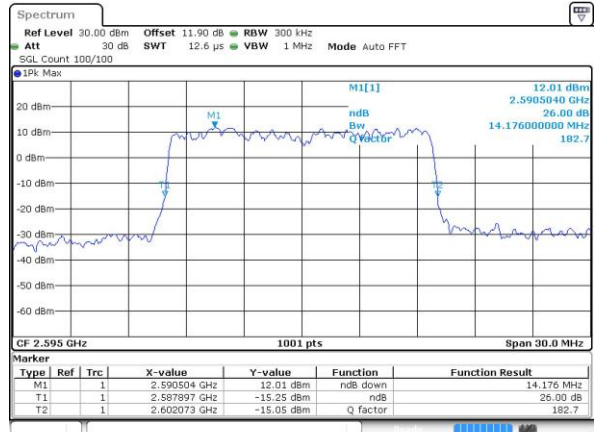
Date: 11.OCT.2018 00:47:28

Middle Channel / 15MHz / QPSK



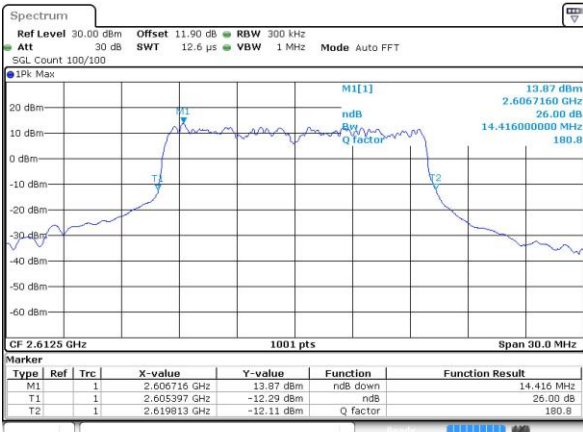
Date: 11.OCT.2018 00:48:03

Middle Channel / 15MHz / 16QAM



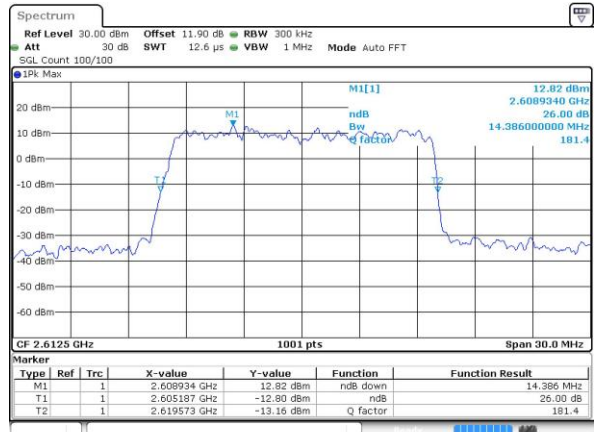
Date: 11.OCT.2018 00:48:14

Highest Channel / 15MHz / QPSK



Date: 11.OCT.2018 00:48:48

Highest Channel / 15MHz / 16QAM



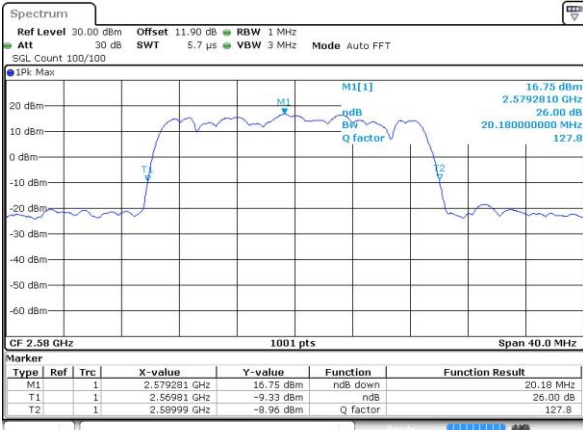
Date: 11.OCT.2018 00:49:00





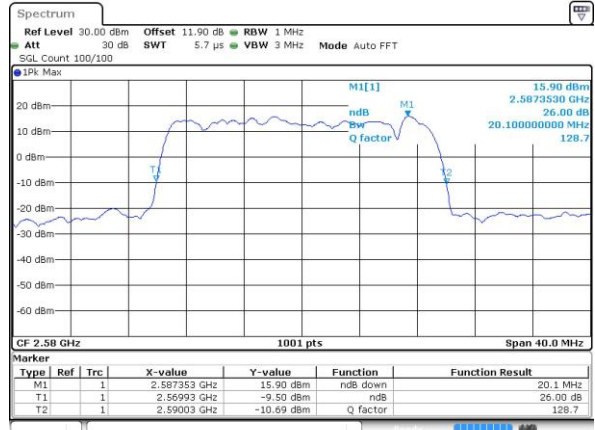
LTE Band 38

Lowest Channel / 20MHz / QPSK



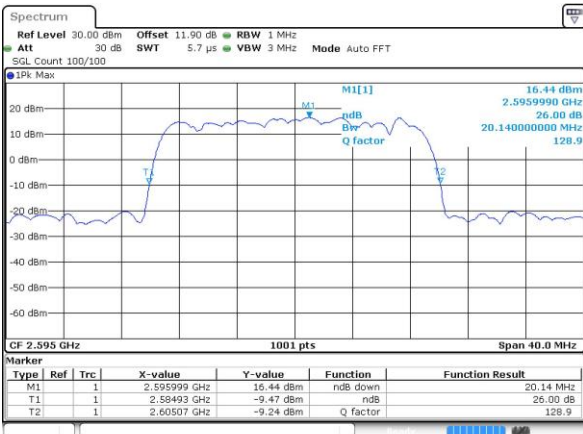
Date: 11.OCT.2018 00:49:34

Lowest Channel / 20MHz / 16QAM



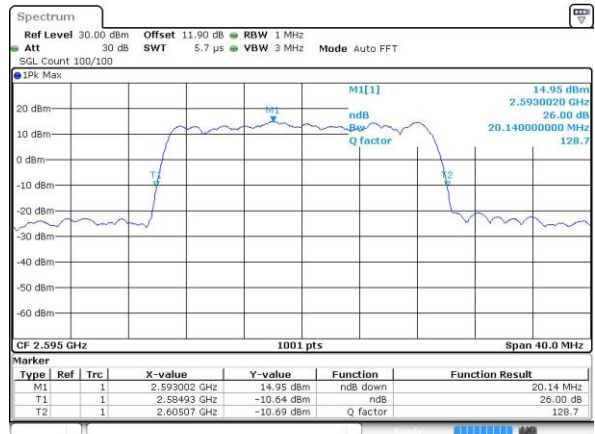
Date: 11.OCT.2018 00:49:45

Middle Channel / 20MHz / QPSK



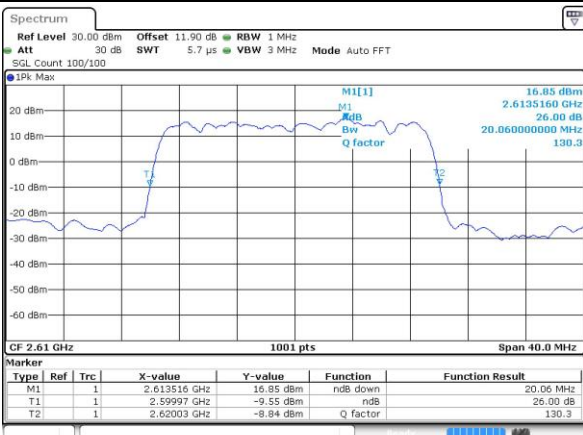
Date: 11.OCT.2018 00:50:19

Middle Channel / 20MHz / 16QAM



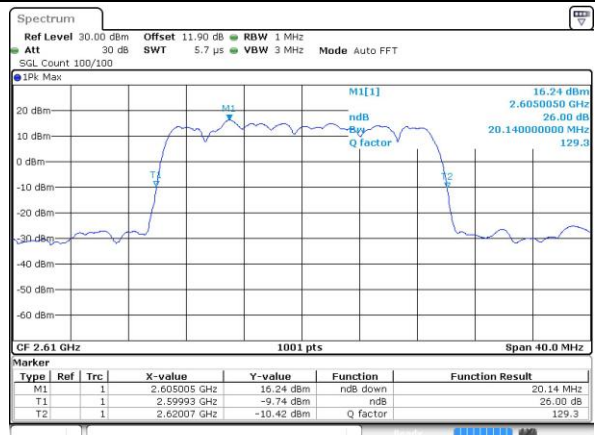
Date: 11.OCT.2018 00:50:31

Highest Channel / 20MHz / QPSK



Date: 11.OCT.2018 00:51:05

Highest Channel / 20MHz / 16QAM



Date: 11.OCT.2018 00:51:16



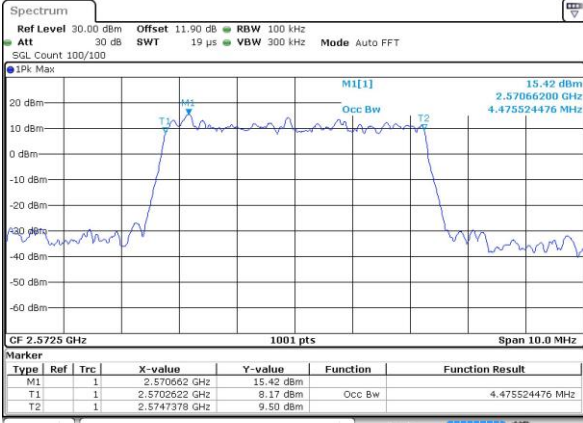
**Occupied Bandwidth**

| Mode       | LTE Band 38 : 99%OBW(MHz) |       |      |       |      |       |       |       |       |       |       |       |
|------------|---------------------------|-------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|
|            | 1.4MHz                    |       | 3MHz |       | 5MHz |       | 10MHz |       | 15MHz |       | 20MHz |       |
| BW         | QPSK                      | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM |
| Mod.       | QPSK                      | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM |
| Lowest CH  | -                         | -     | -    | -     | 4.48 | 4.51  | 8.97  | 9.05  | 13.49 | 13.46 | 18.46 | 18.38 |
| Middle CH  | -                         | -     | -    | -     | 4.47 | 4.52  | 9.03  | 9.03  | 13.52 | 13.49 | 18.50 | 18.38 |
| Highest CH | -                         | -     | -    | -     | 4.52 | 4.49  | 8.95  | 9.05  | 13.49 | 13.43 | 18.34 | 18.34 |



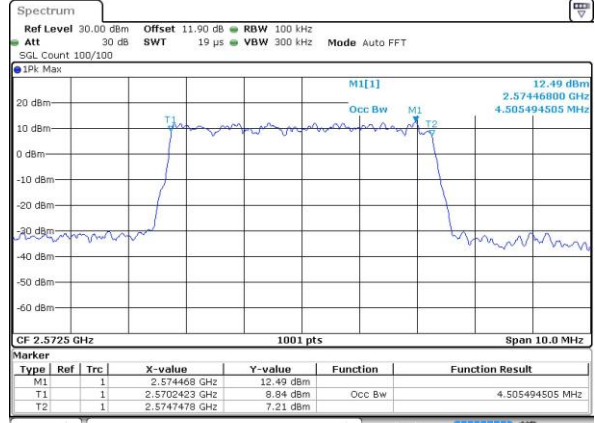
LTE Band 38

Lowest Channel / 5MHz / QPSK



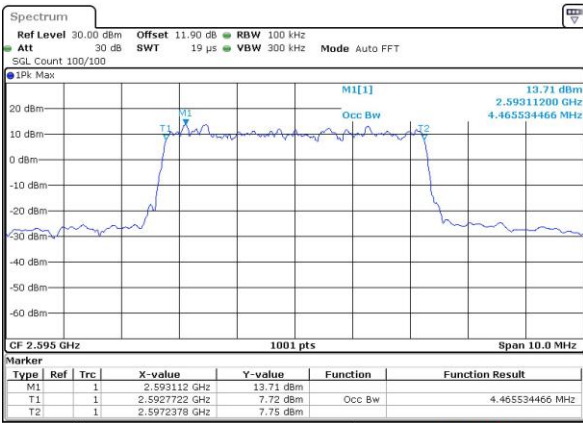
Date: 11.OCT.2018 00:42:21

Lowest Channel / 5MHz / 16QAM



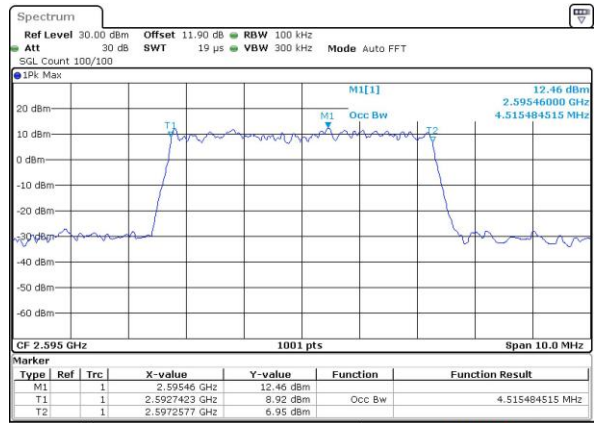
Date: 11.OCT.2018 00:42:32

Middle Channel / 5MHz / QPSK



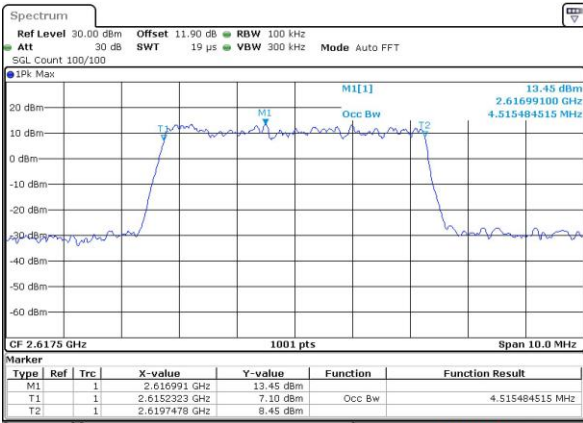
Date: 11.OCT.2018 00:43:07

Middle Channel / 5MHz / 16QAM



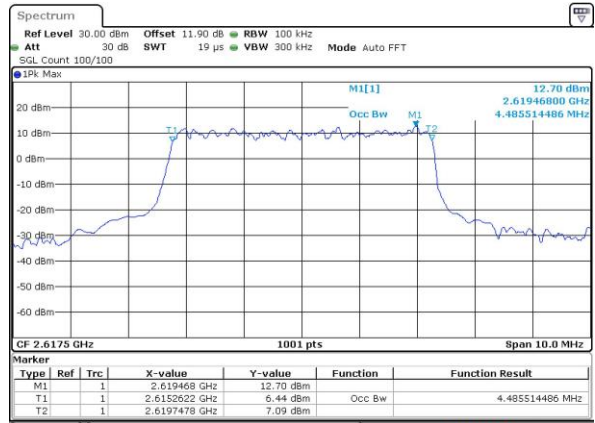
Date: 11.OCT.2018 00:43:18

Highest Channel / 5MHz / QPSK



Date: 11.OCT.2018 00:43:52

Highest Channel / 5MHz / 16QAM

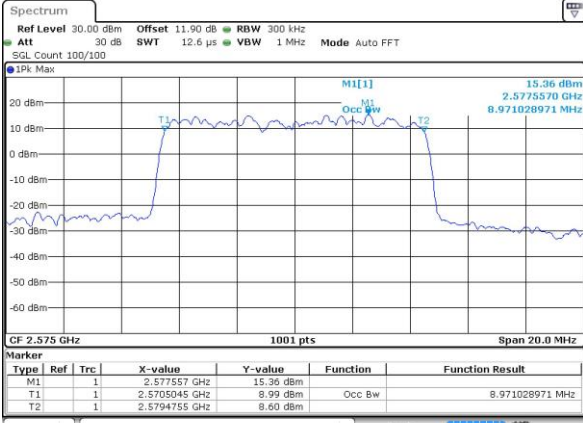


Date: 11.OCT.2018 00:44:03



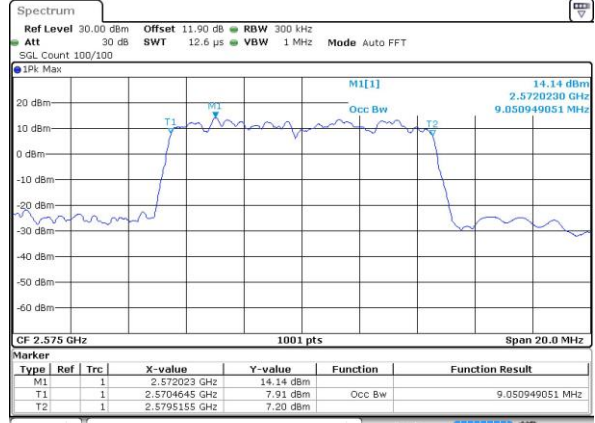
LTE Band 38

Lowest Channel / 10MHz / QPSK



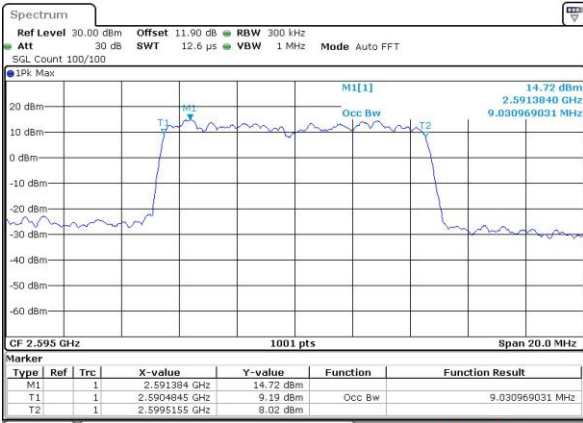
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Lowest Channel / 10MHz / 16QAM



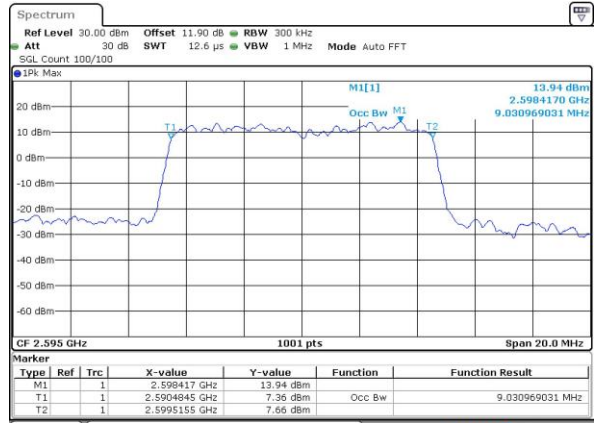
Date: 11.OCT.2018 00:44:49

Middle Channel / 10MHz / QPSK



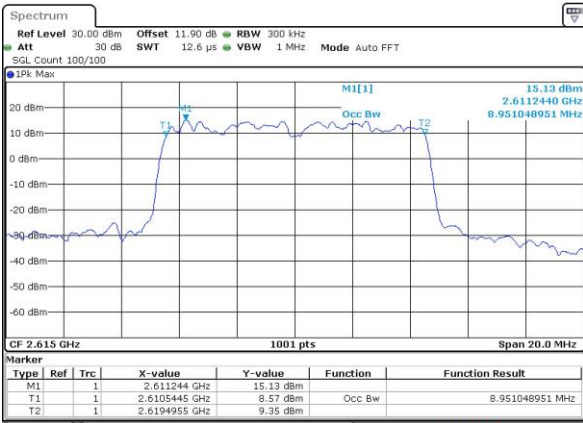
Date: 11.OCT.2018 00:45:23

Middle Channel / 10MHz / 16QAM



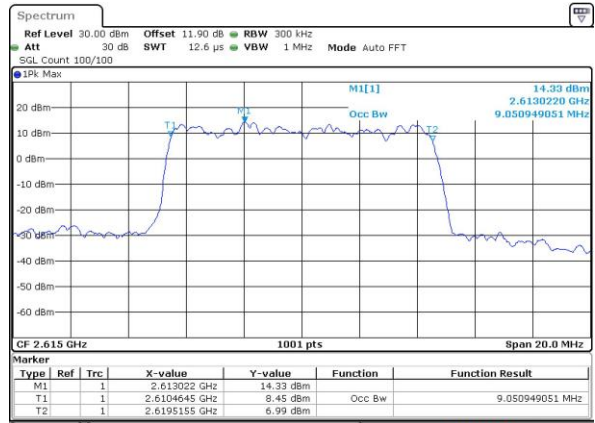
Date: 11.OCT.2018 00:45:35

Highest Channel / 10MHz / QPSK



Date: 11.OCT.2018 00:46:09

Highest Channel / 10MHz / 16QAM

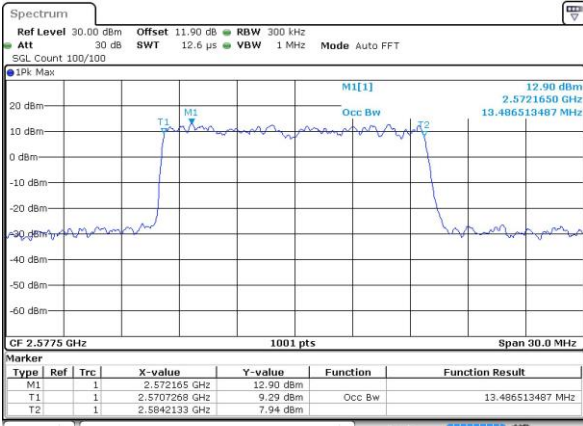


Date: 11.OCT.2018 00:46:20



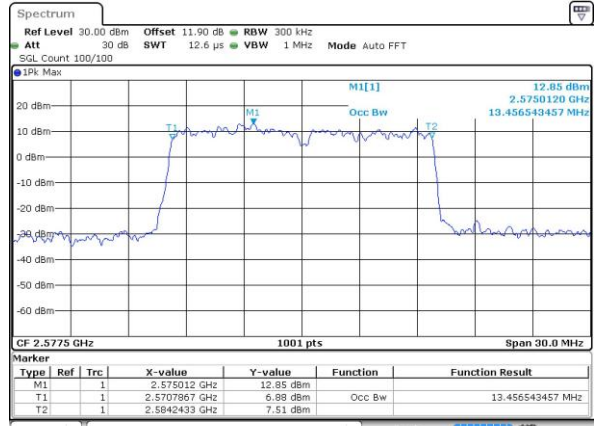
LTE Band 38

Lowest Channel / 15MHz / QPSK



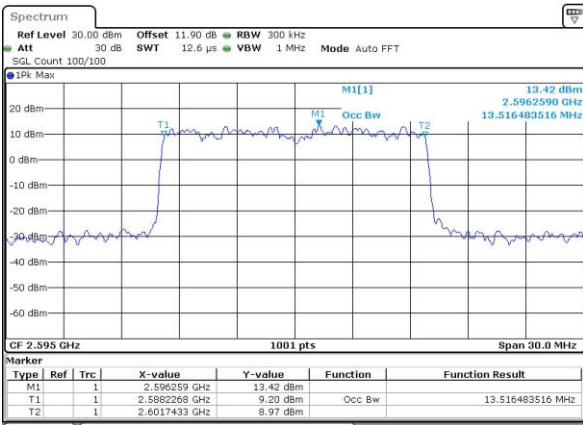
Date: 11.OCT.2018 00:46:54

Lowest Channel / 15MHz / 16QAM



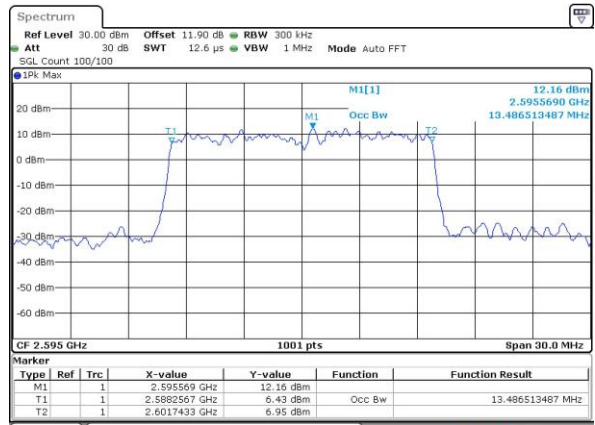
Date: 11.OCT.2018 00:47:06

Middle Channel / 15MHz / QPSK



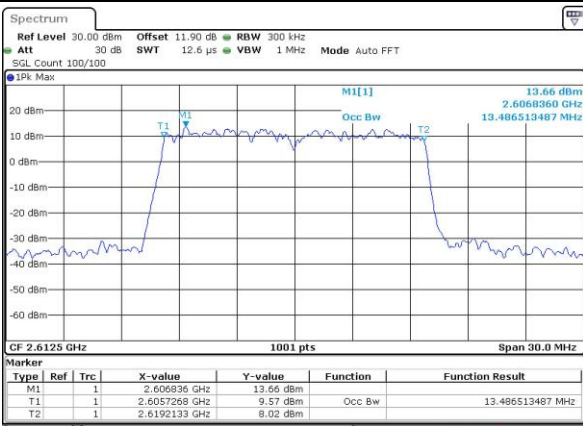
Date: 11.OCT.2018 00:47:40

Middle Channel / 15MHz / 16QAM



Date: 11.OCT.2018 00:47:51

Highest Channel / 15MHz / QPSK



Date: 11.OCT.2018 00:48:28

Highest Channel / 15MHz / 16QAM

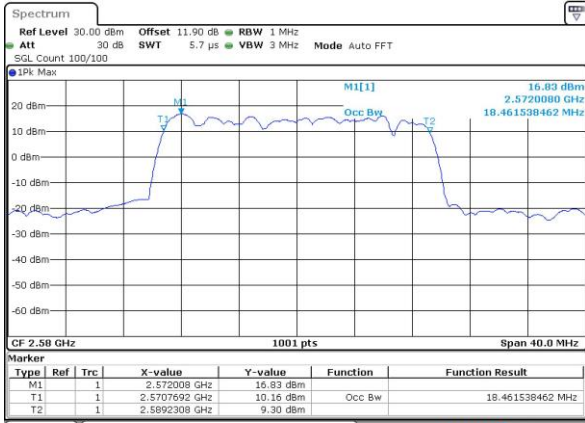


Date: 11.OCT.2018 00:48:37



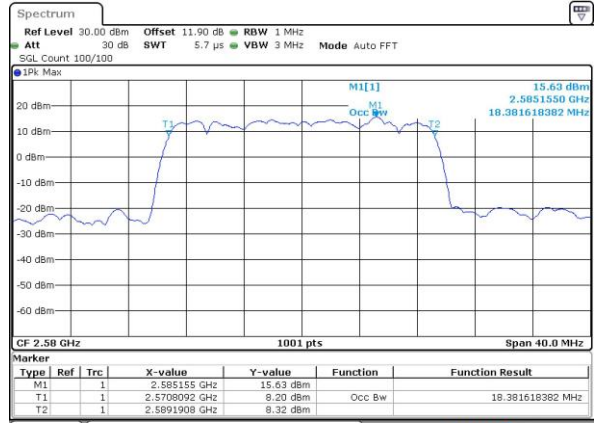
LTE Band 38

Lowest Channel / 20MHz / QPSK



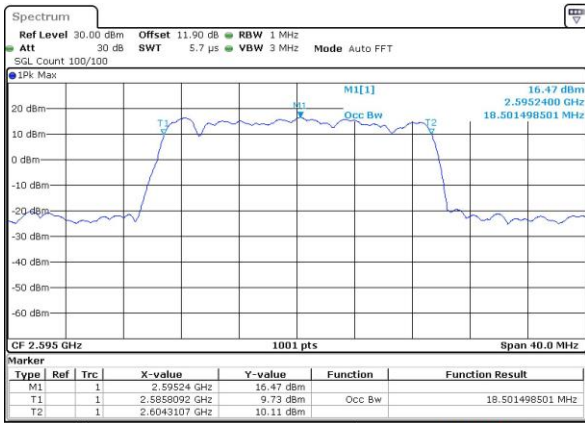
Date: 11.OCT.2018 00:49:11

Lowest Channel / 20MHz / 16QAM



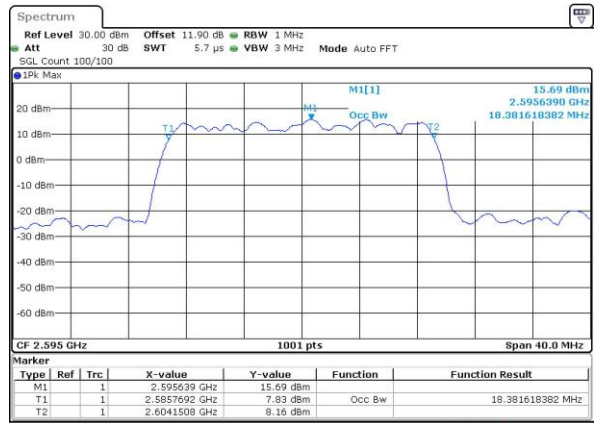
Date: 11.OCT.2018 00:49:23

Middle Channel / 20MHz / QPSK



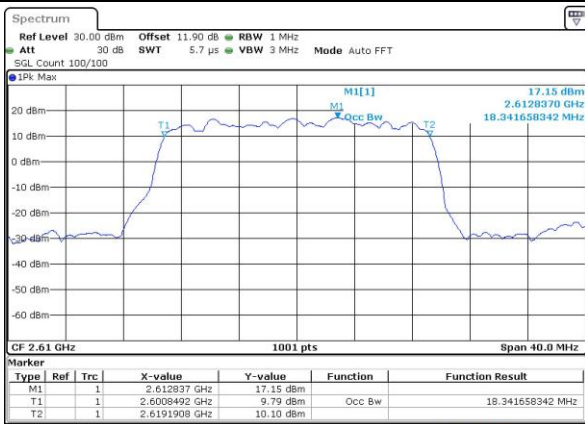
Date: 11.OCT.2018 00:49:57

Middle Channel / 20MHz / 16QAM



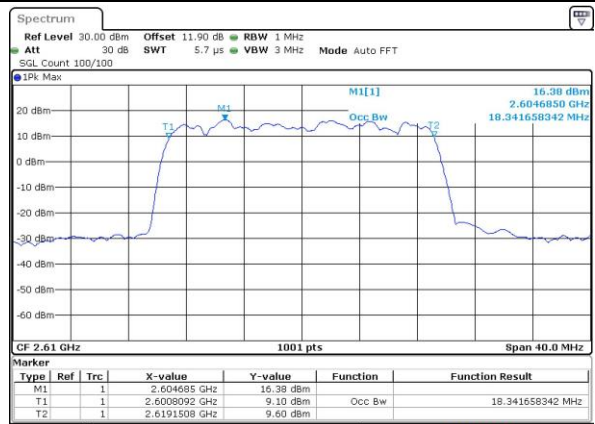
Date: 11.OCT.2018 00:50:08

Highest Channel / 20MHz / QPSK



Date: 11.OCT.2018 00:50:42

Highest Channel / 20MHz / 16QAM



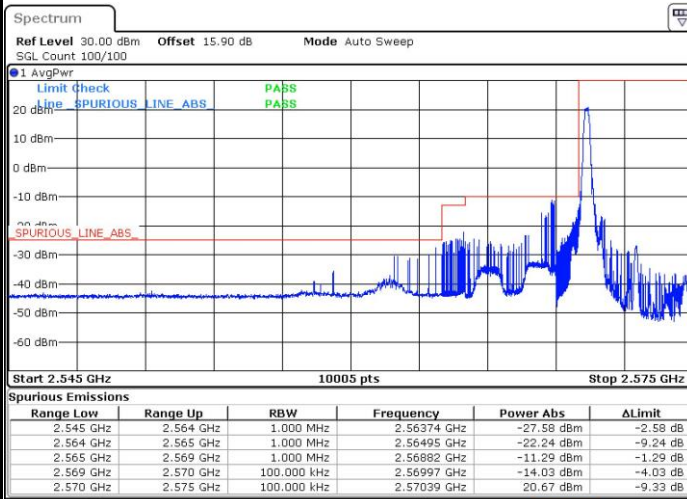
Date: 11.OCT.2018 00:50:53



# Conducted Band Edge

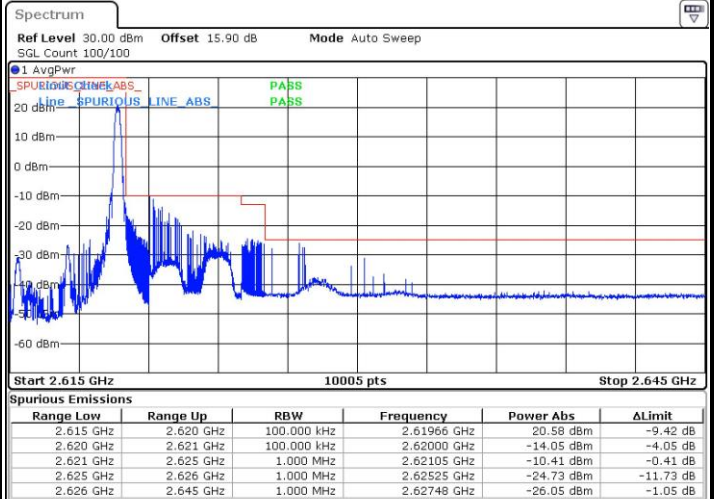
## LTE Band 38 / 5MHz / QPSK

### Lowest Band Edge / 1 RB



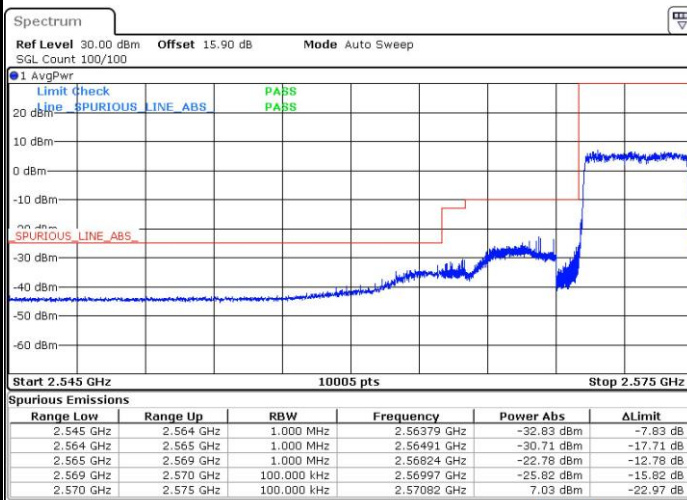
Date: 11.OCT.2018 02:13:48

### Highest Band Edge / 1 RB



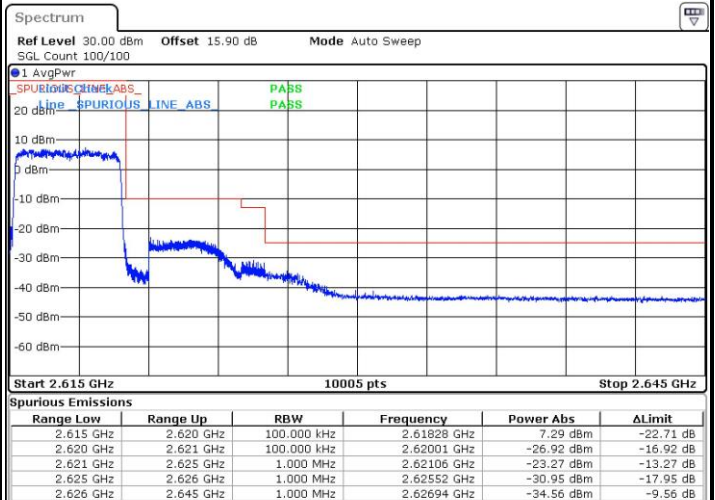
Date: 11.OCT.2018 01:13:00

### Lowest Band Edge / Full RB



Date: 11.OCT.2018 01:06:57

### Highest Band Edge / Full RB

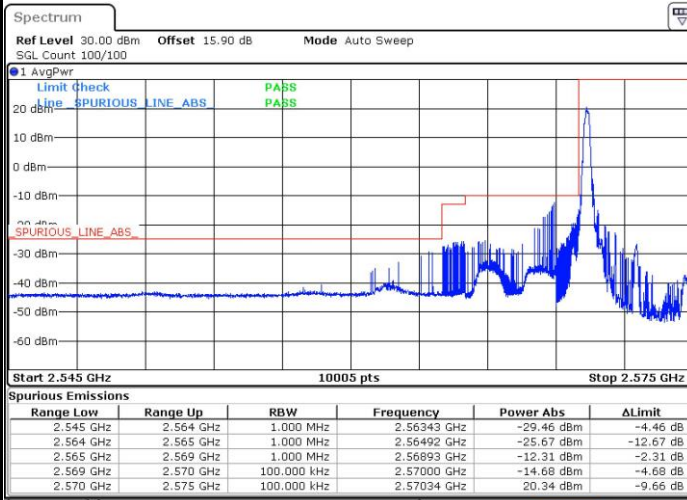


Date: 11.OCT.2018 01:09:59



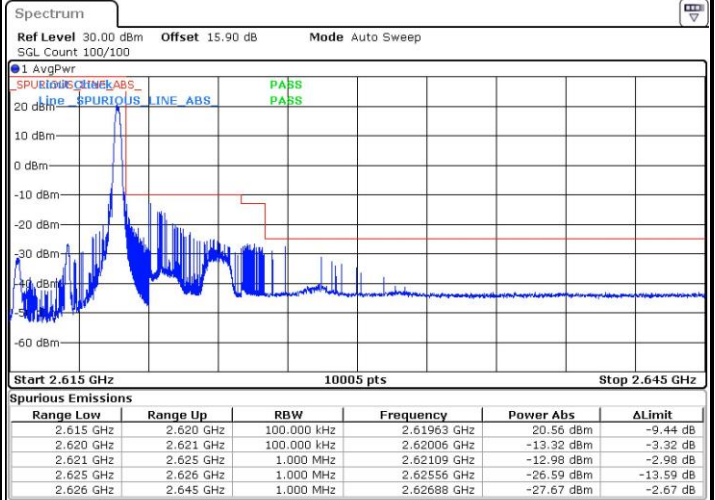
LTE Band 38 / 5MHz / 16QAM

Lowest Band Edge / 1RB



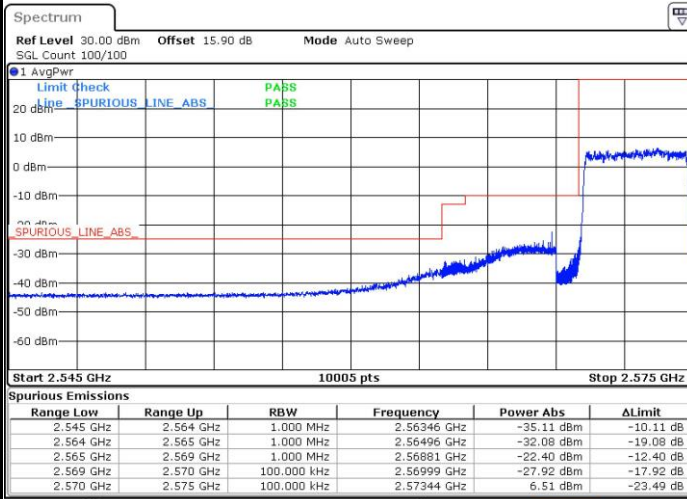
Date: 11.OCT.2018 01:05:26

Highest Band Edge / 1 RB



Date: 11.OCT.2018 01:14:31

Lowest Band Edge / Full RB



Date: 11.OCT.2018 01:08:28

Highest Band Edge / Full RB



Date: 11.OCT.2018 01:11:29

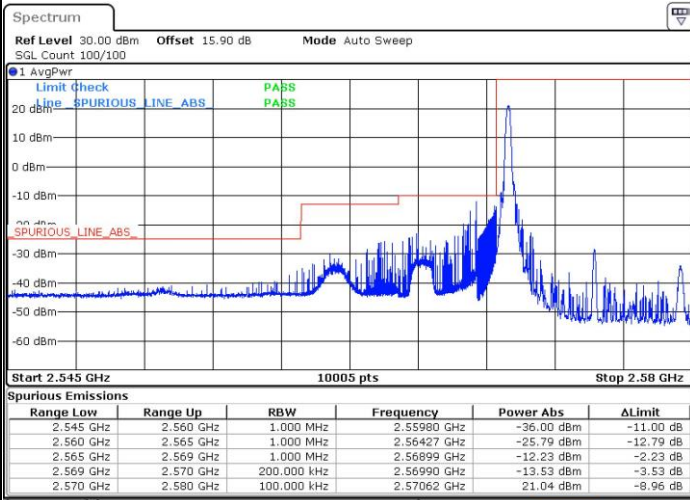




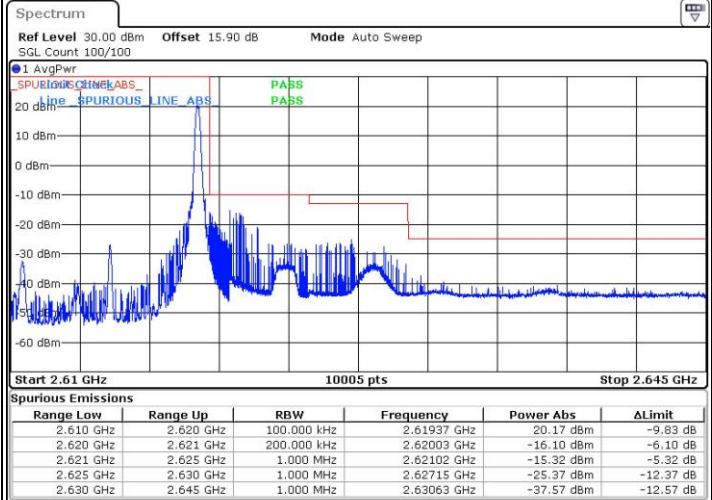
LTE Band 38 / 10MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



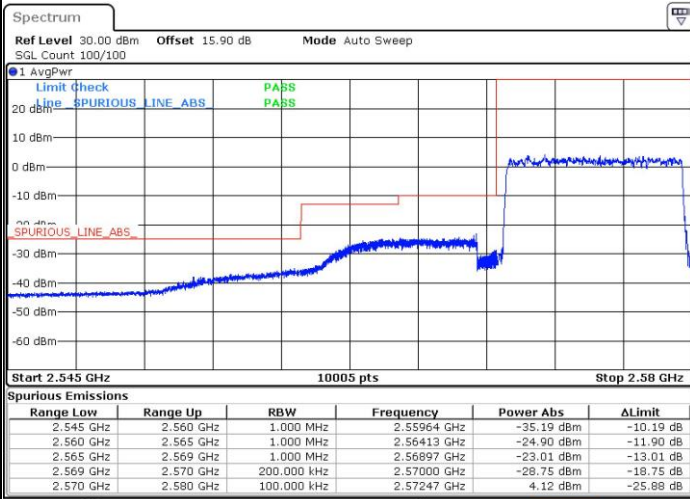
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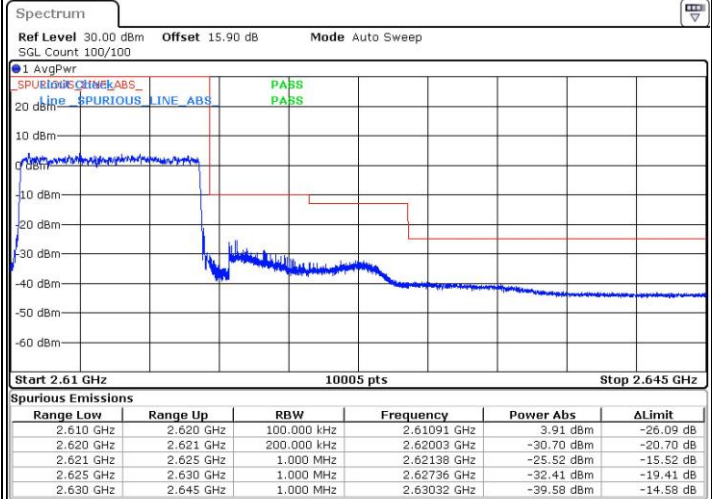
Date: 11.OCT.2018 01:25:06

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 11.OCT.2018 01:19:03

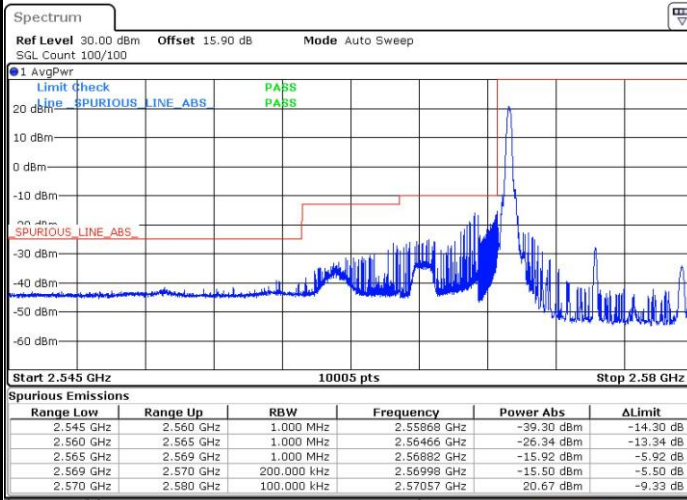


Date: 11.OCT.2018 01:22:05



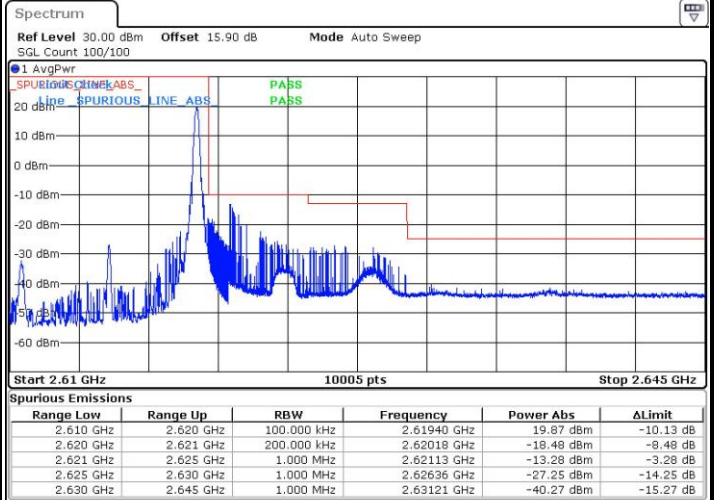
LTE Band 38 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



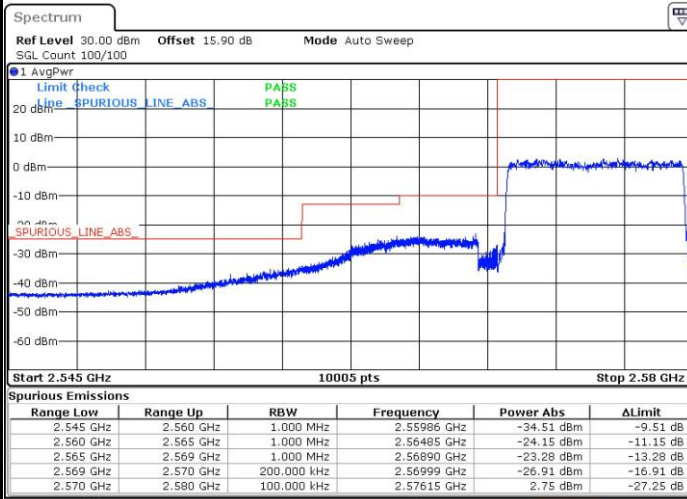
Date: 11.OCT.2018 01:17:33

Highest Band Edge / 1 RB



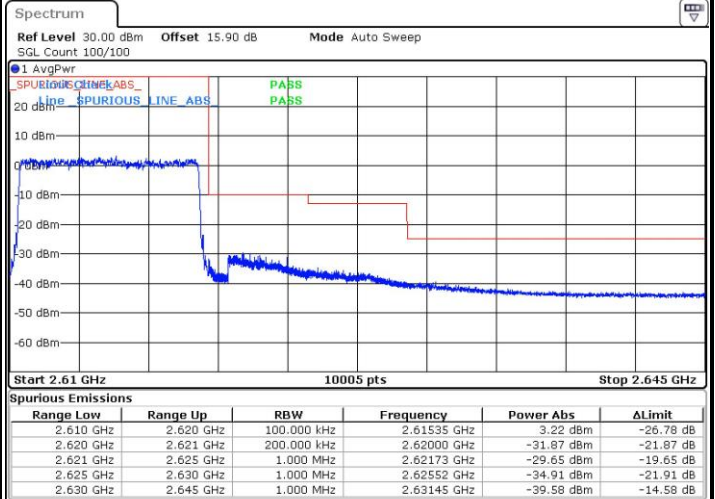
Date: 11.OCT.2018 01:26:37

Lowest Band Edge / Full RB



Date: 11.OCT.2018 01:20:34

Highest Band Edge / Full RB

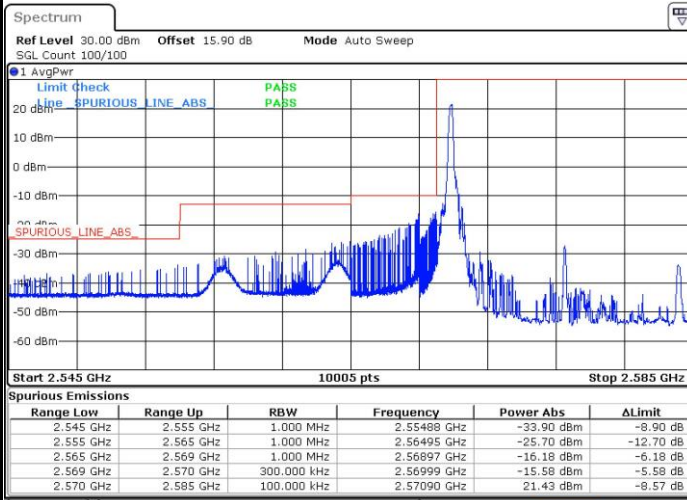


Date: 11.OCT.2018 01:23:35



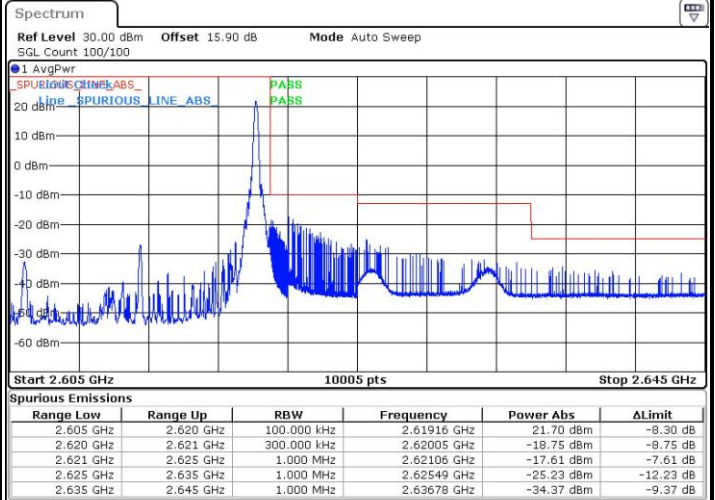
LTE Band 38 / 15MHz / QPSK

Lowest Band Edge / 1 RB



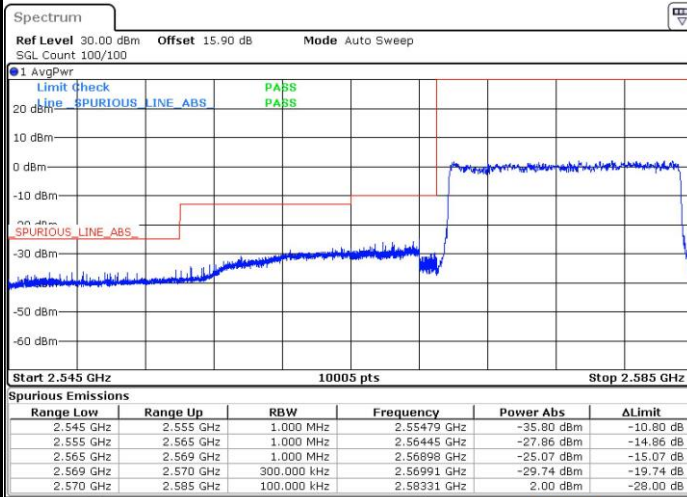
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Highest Band Edge / 1 RB



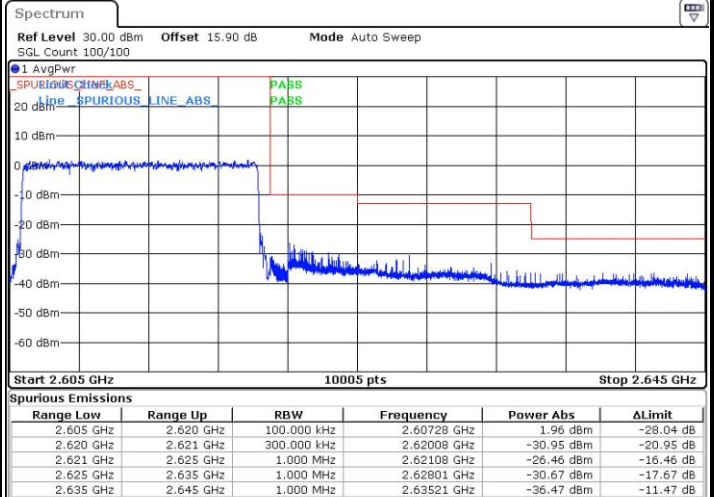
Date: 11.OCT.2018 01:37:12

Lowest Band Edge / Full RB



Date: 11.OCT.2018 01:31:09

Highest Band Edge / Full RB



Date: 11.OCT.2018 01:34:11