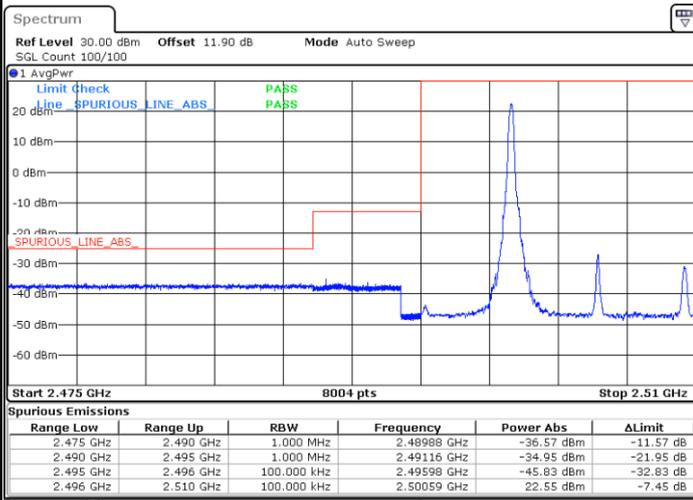




LTE Band 7 / 10MHz / QPSK

Lowest Band Edge / 1 RB



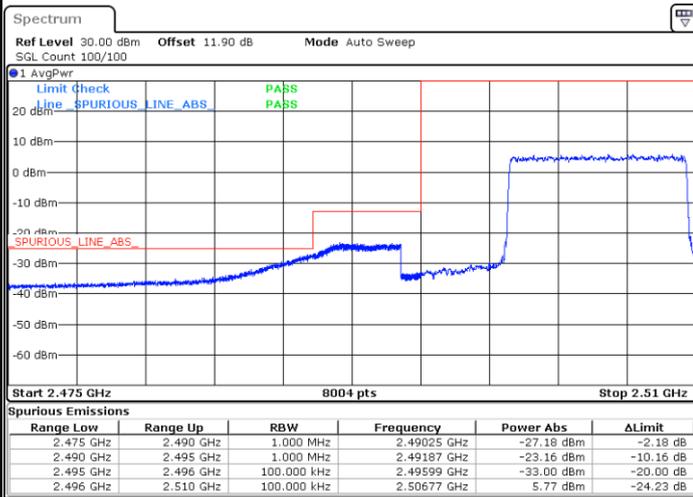
Date: 7 SEP.2017 10:20:00

Highest Band Edge / 1 RB



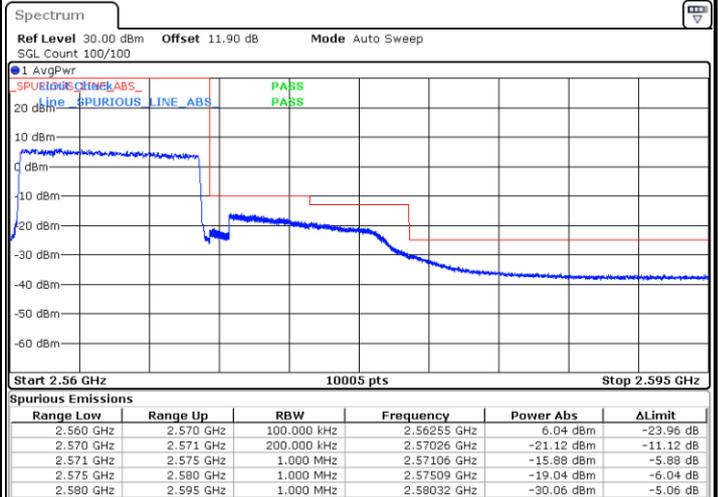
Date: 7 SEP.2017 10:29:30

Lowest Band Edge / Full RB



Date: 7 SEP.2017 10:22:18

Highest Band Edge / Full RB

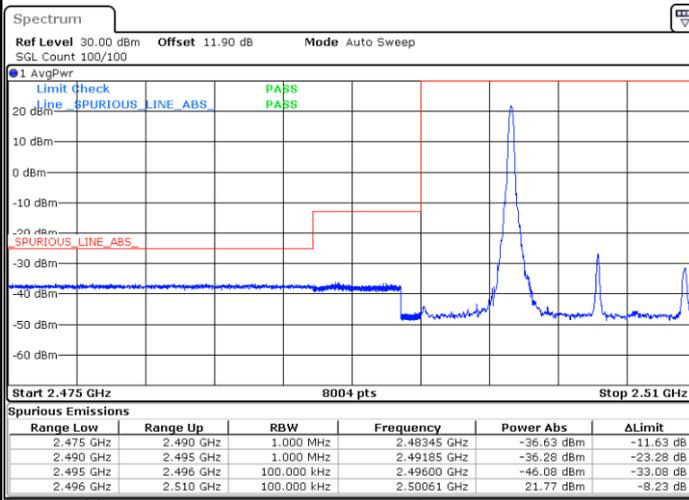


Date: 7 SEP.2017 10:31:48



LTE Band 7 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



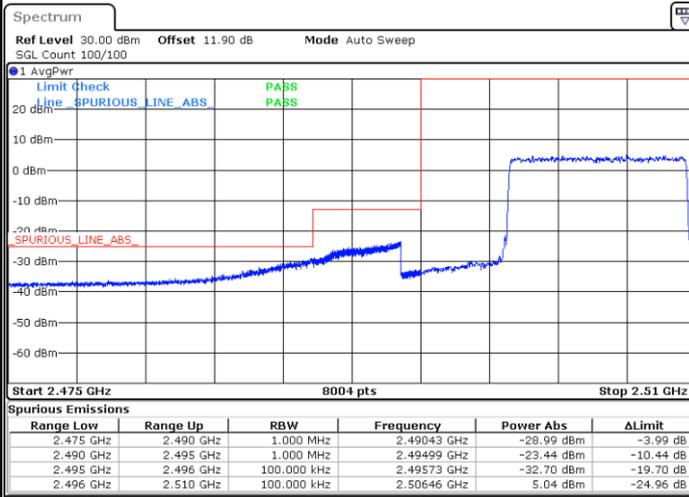
Date: 7 SEP. 2017 10:21:09

Highest Band Edge / 1 RB



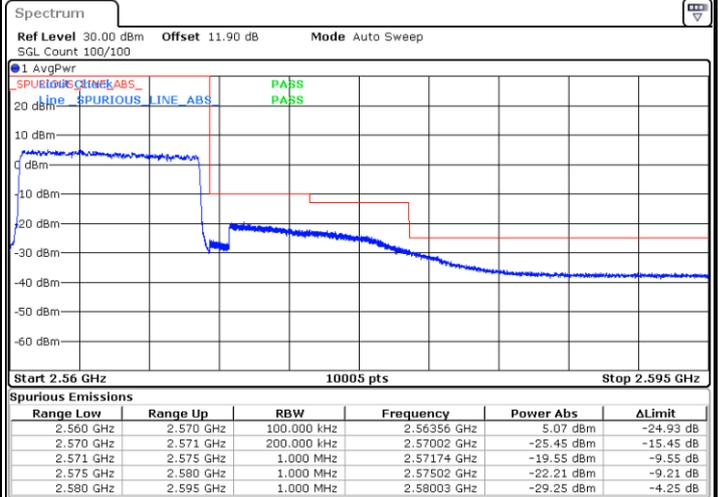
Date: 7 SEP. 2017 10:30:39

Lowest Band Edge / Full RB



Date: 7 SEP. 2017 10:23:28

Highest Band Edge / Full RB

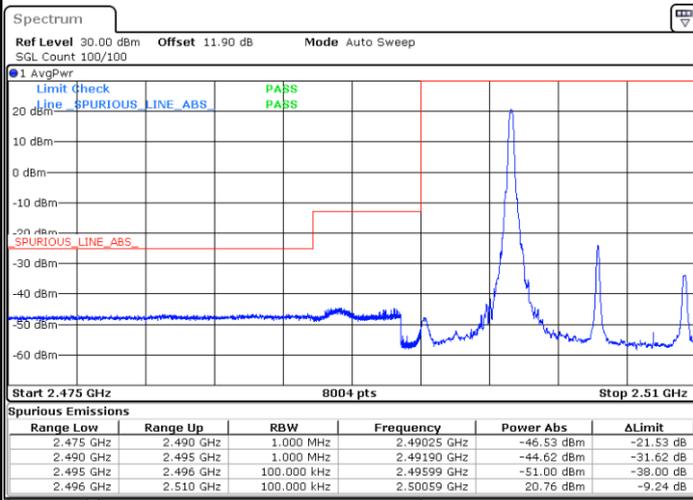


Date: 7 SEP. 2017 10:32:58



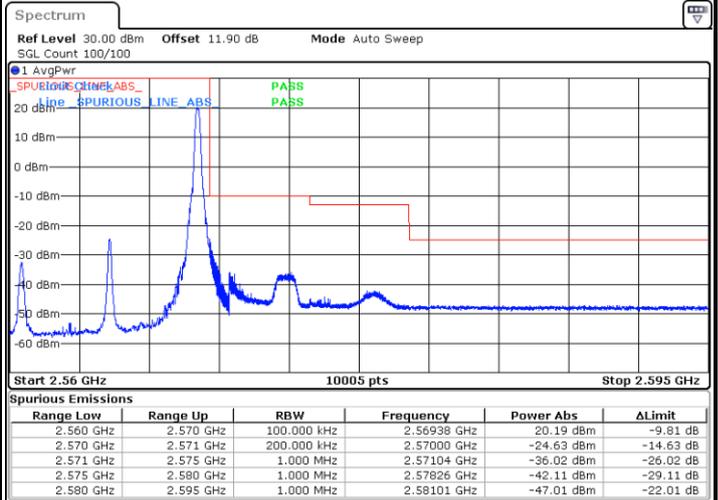
LTE Band 7 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



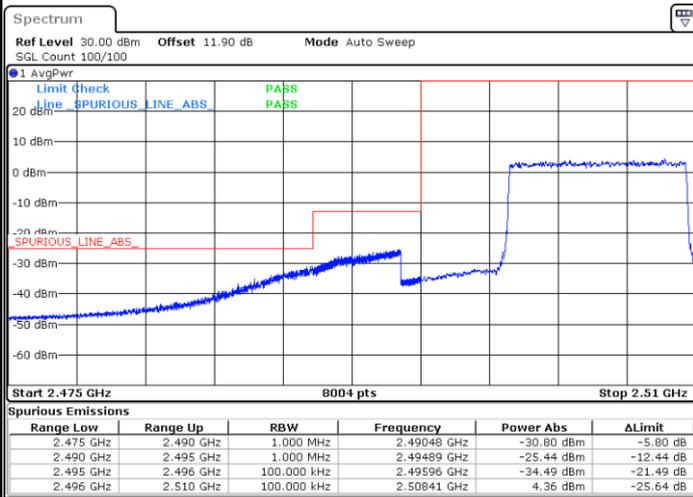
Date: 20.OCT.2017 09:11:01

Highest Band Edge / 1 RB



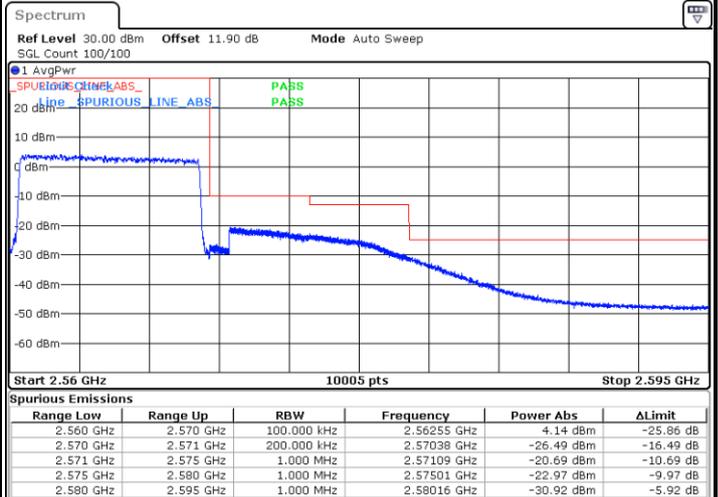
Date: 20.OCT.2017 09:15:59

Lowest Band Edge / Full RB



Date: 20.OCT.2017 09:12:14

Highest Band Edge / Full RB

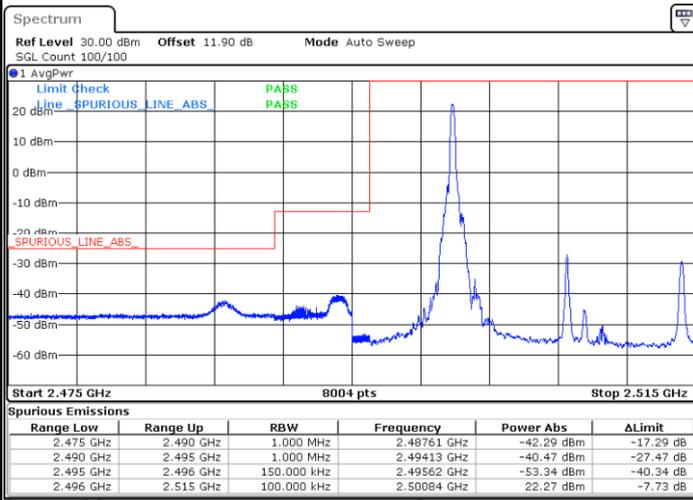


Date: 20.OCT.2017 09:17:09



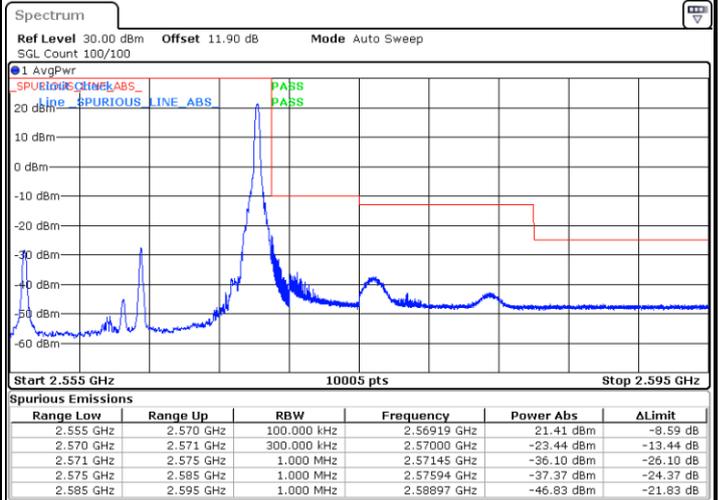
LTE Band 7 / 15MHz / QPSK

Lowest Band Edge / 1 RB



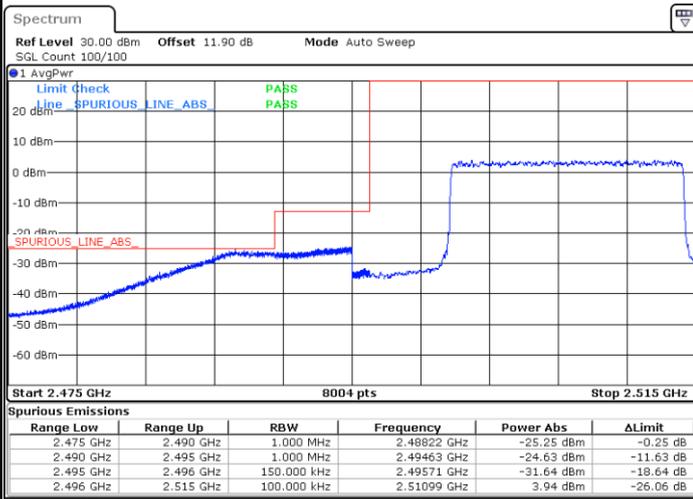
Date: 7 SEP. 2017 10:36:34

Highest Band Edge / 1 RB



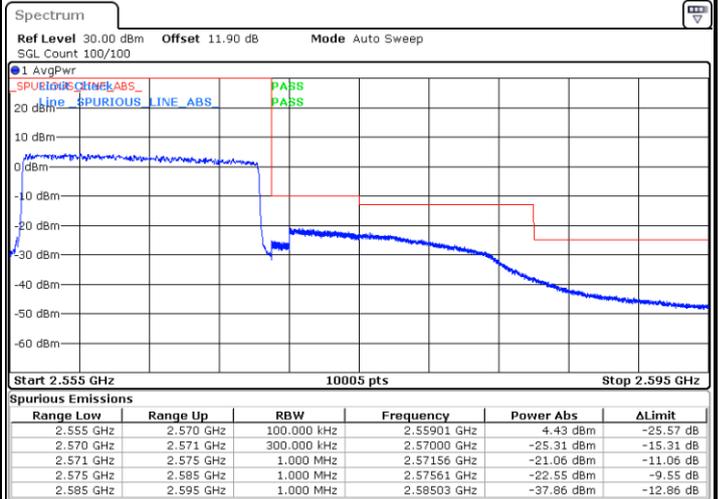
Date: 7 SEP. 2017 10:46:04

Lowest Band Edge / Full RB



Date: 7 SEP. 2017 10:38:52

Highest Band Edge / Full RB

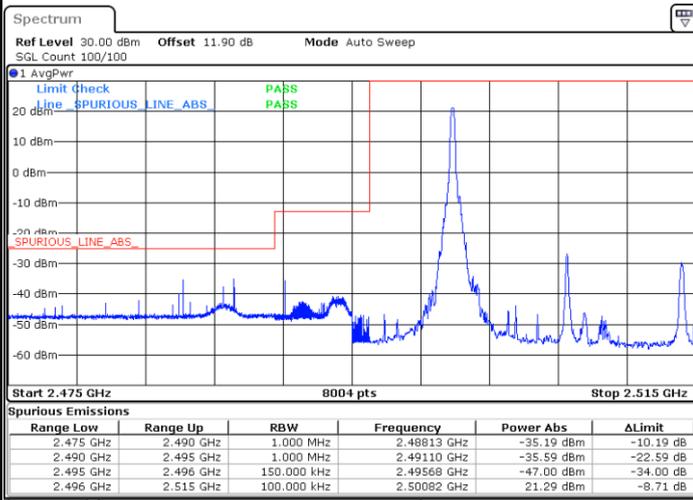


Date: 7 SEP. 2017 10:48:22



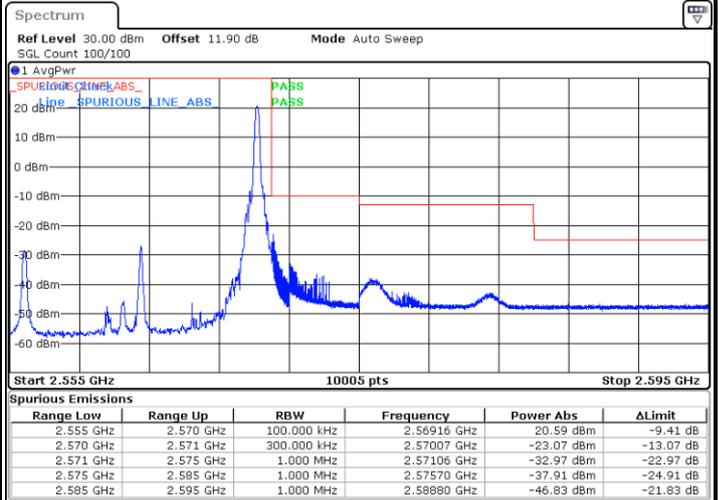
LTE Band 7 / 15MHz / 16QAM

Lowest Band Edge / 1 RB



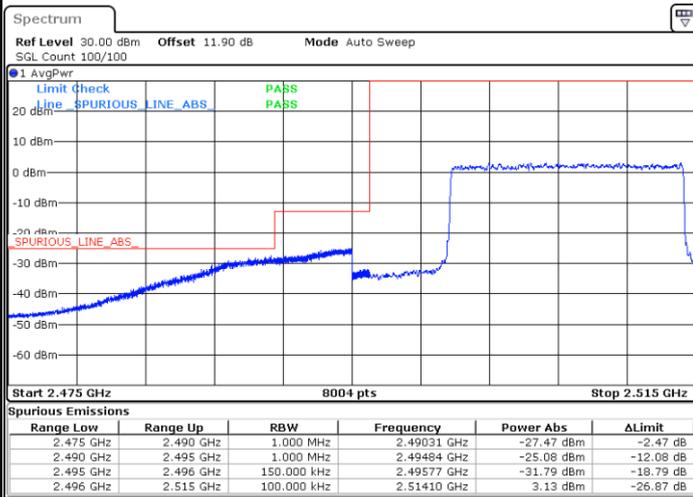
Date: 7 SEP. 2017 10:37:43

Highest Band Edge / 1 RB



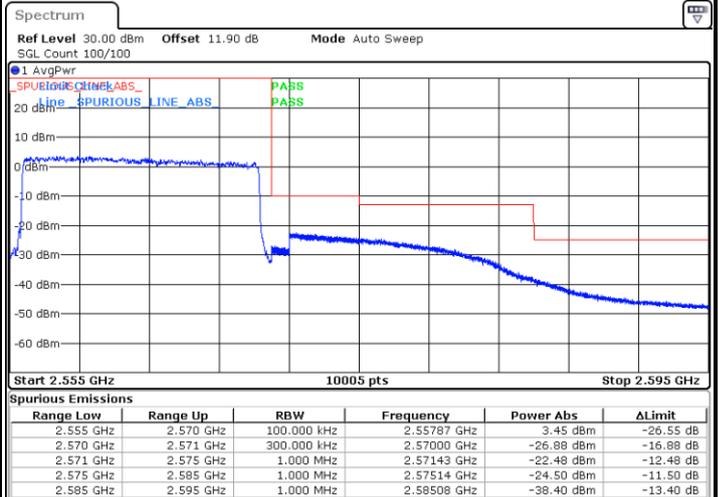
Date: 7 SEP. 2017 10:47:13

Lowest Band Edge / Full RB



Date: 7 SEP. 2017 10:40:02

Highest Band Edge / Full RB

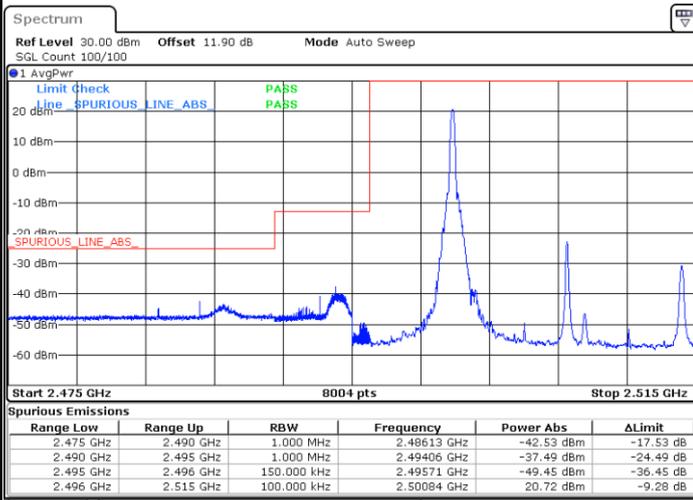


Date: 7 SEP. 2017 10:49:32



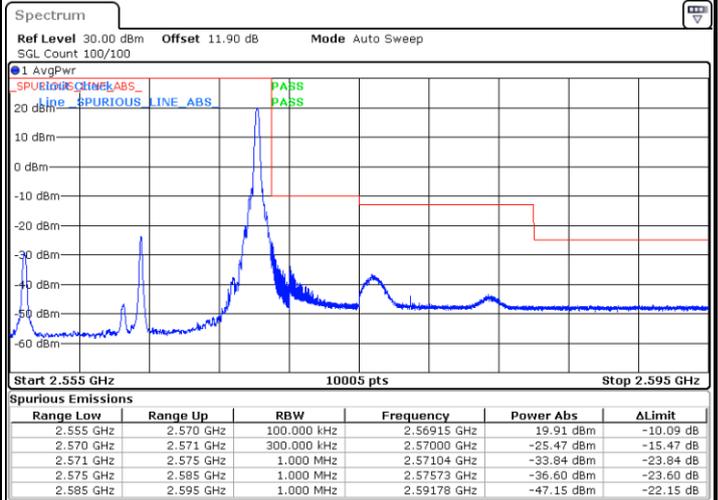
LTE Band 7 / 15MHz / 64QAM

Lowest Band Edge / 1 RB



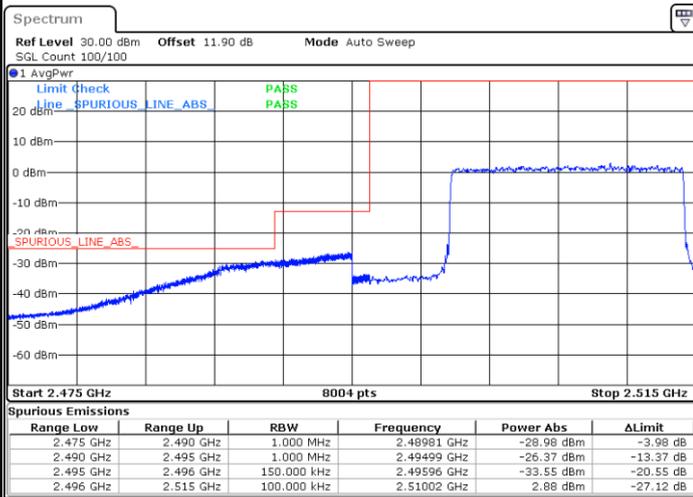
Date: 20.OCT.2017 09:19:32

Highest Band Edge / 1 RB



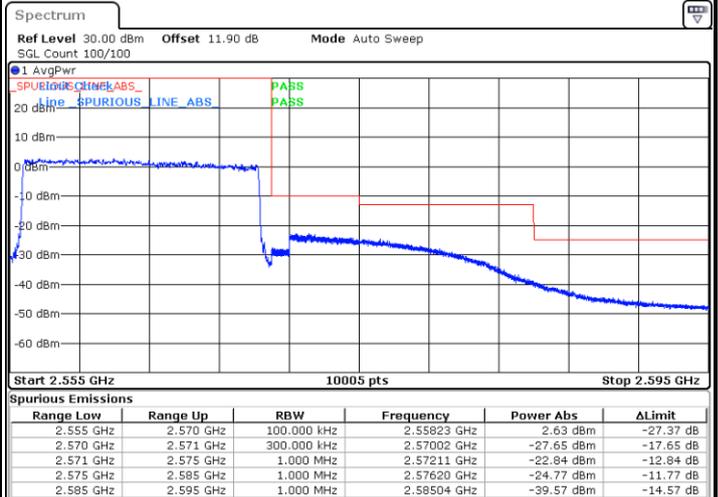
Date: 20.OCT.2017 09:24:19

Lowest Band Edge / Full RB



Date: 20.OCT.2017 09:20:41

Highest Band Edge / Full RB

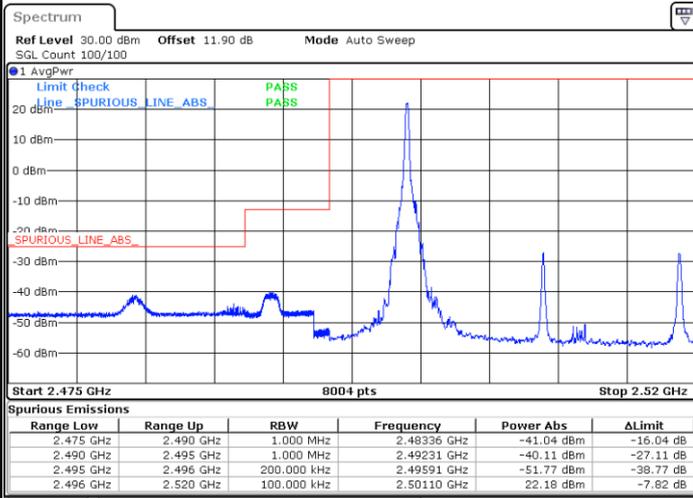


Date: 20.OCT.2017 09:25:28



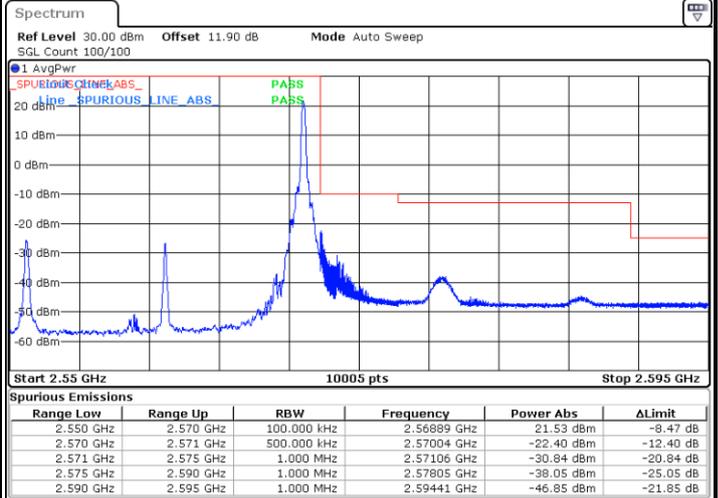
LTE Band 7 / 20MHz / QPSK

Lowest Band Edge / 1 RB



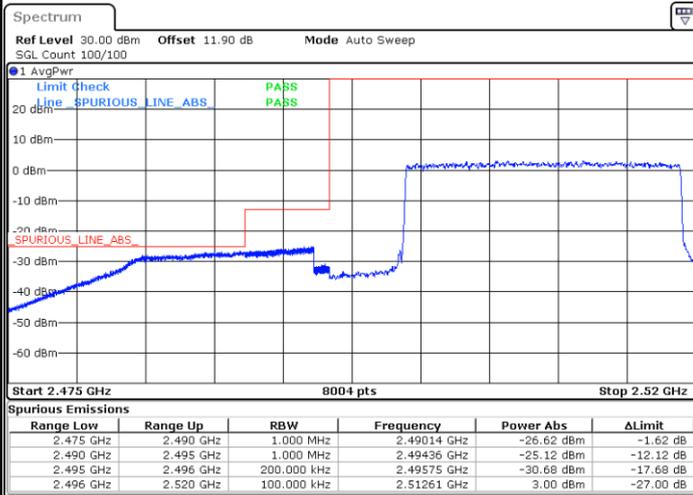
Date: 7 SEP. 2017 10:53:08

Highest Band Edge / 1 RB



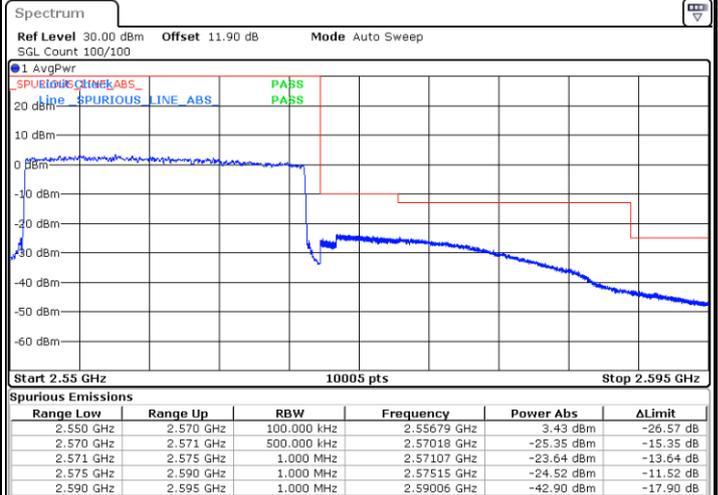
Date: 7 SEP. 2017 11:02:38

Lowest Band Edge / Full RB



Date: 7 SEP. 2017 10:55:26

Highest Band Edge / Full RB

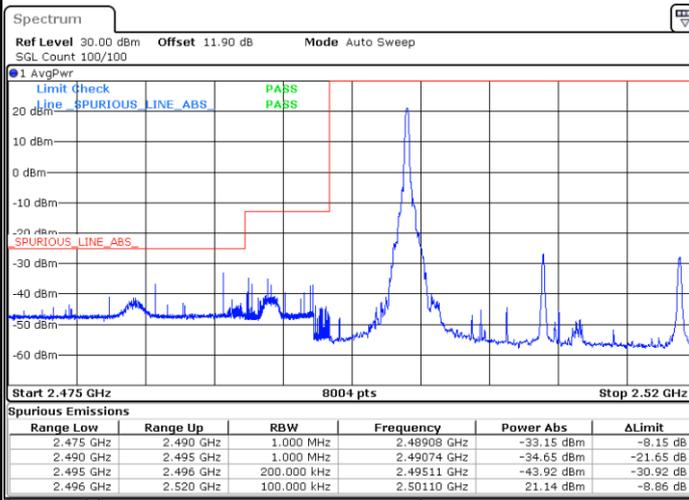


Date: 7 SEP. 2017 11:06:06



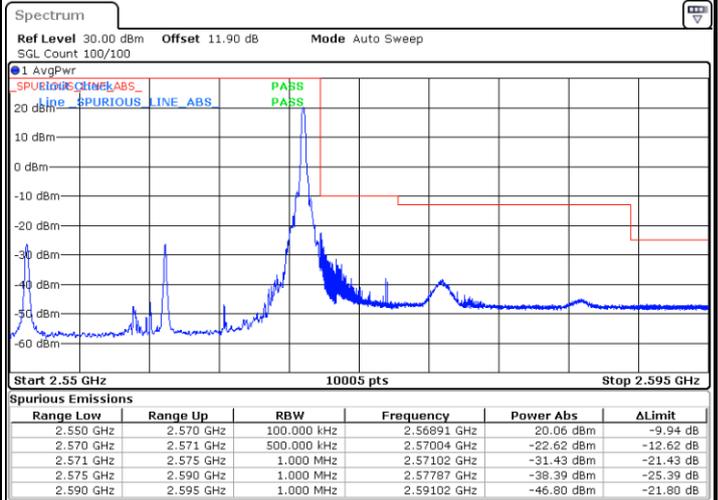
LTE Band 7 / 20MHz / 16QAM

Lowest Band Edge / 1 RB



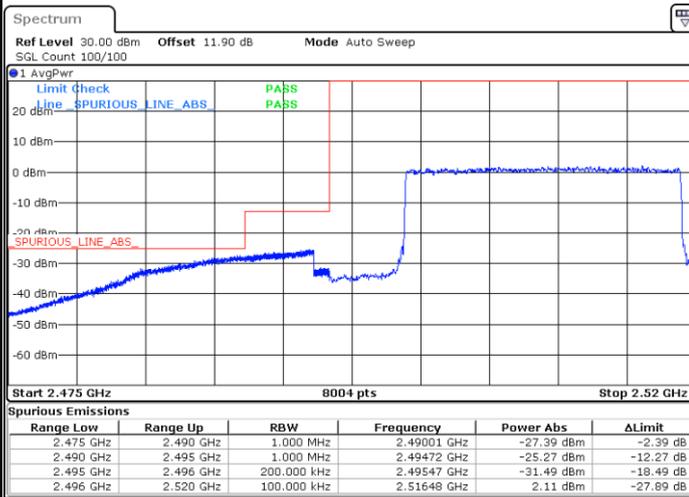
Date: 7 SEP.2017 10:54:17

Highest Band Edge / 1RB



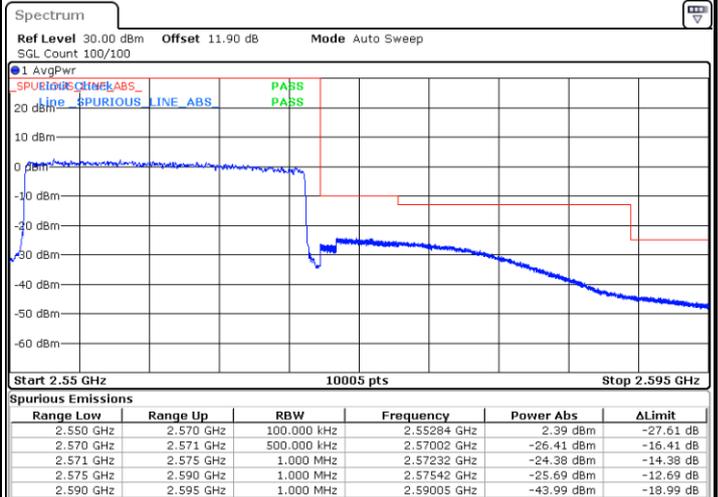
Date: 7 SEP.2017 11:03:47

Lowest Band Edge / Full RB



Date: 7 SEP.2017 10:56:35

Highest Band Edge / Full RB

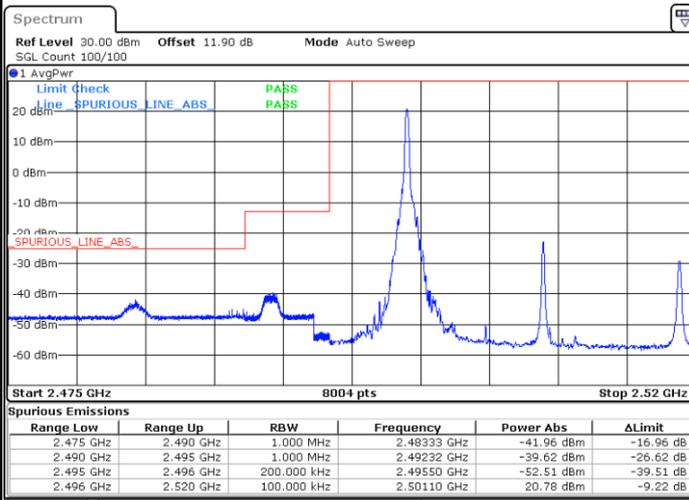


Date: 7 SEP.2017 11:04:56



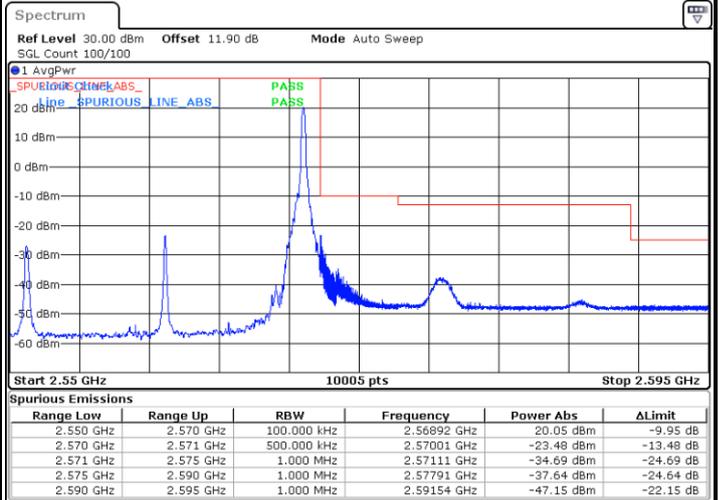
LTE Band 7 / 20MHz / 64QAM

Lowest Band Edge / 1 RB



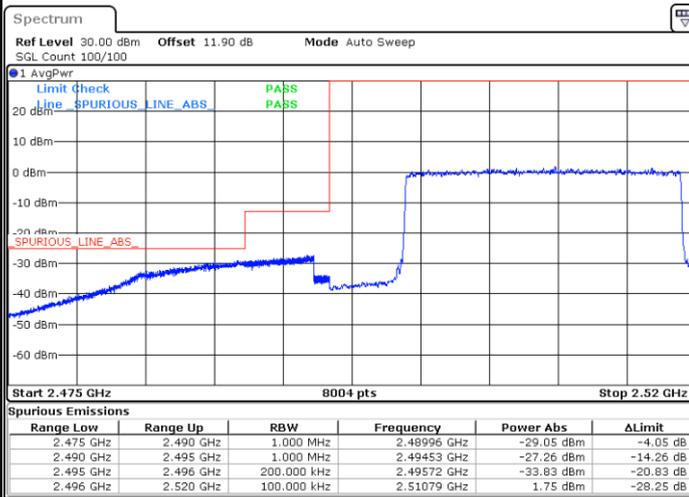
Date: 20.OCT.2017 09:27:51

Highest Band Edge / 1 RB



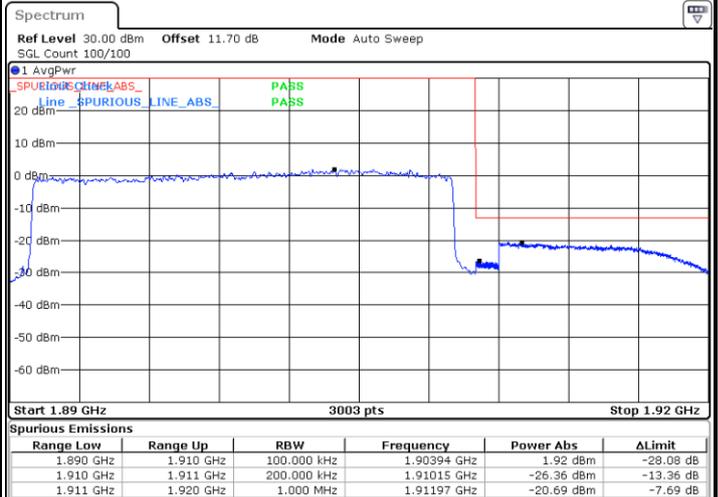
Date: 20.OCT.2017 09:32:36

Lowest Band Edge / Full RB



Date: 20.OCT.2017 09:29:01

Highest Band Edge / Full RB



Date: 27.OCT.2017 11:24:17



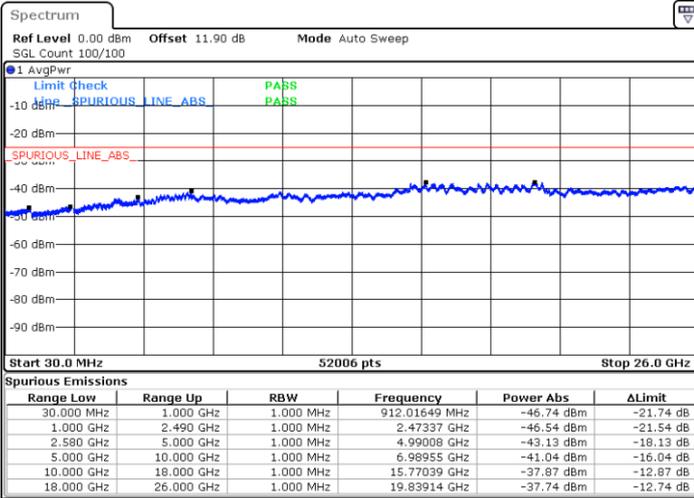
**Conducted Spurious Emission**



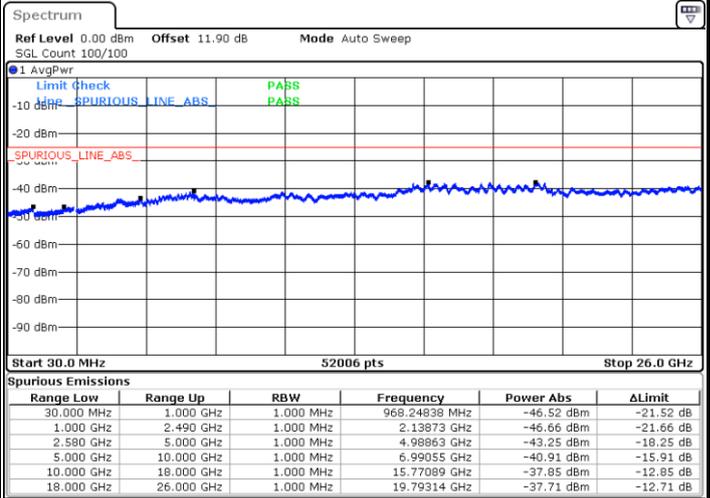
LTE Band 7 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



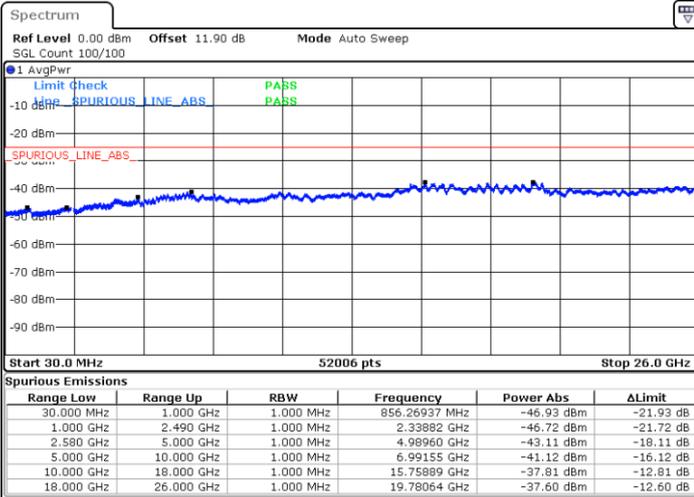
Date: 7.SEP.2017 10:07:47



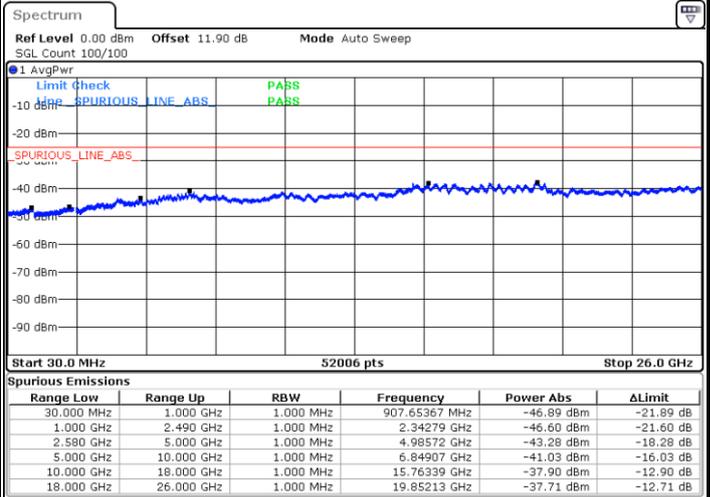
Date: 7.SEP.2017 10:08:40

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 7.SEP.2017 10:10:14

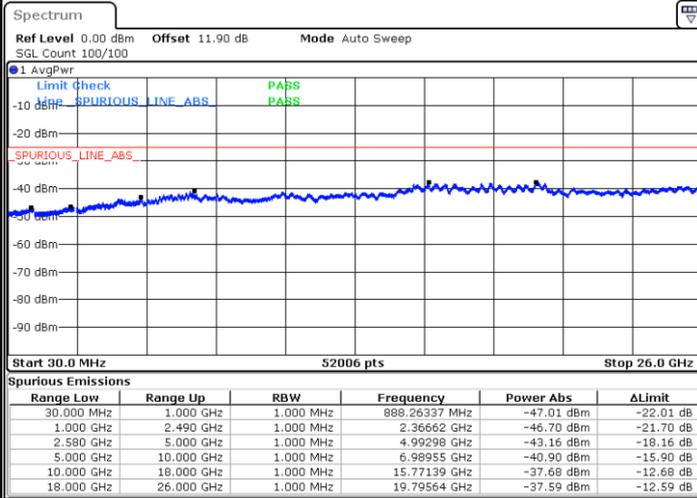


Date: 7.SEP.2017 10:11:07



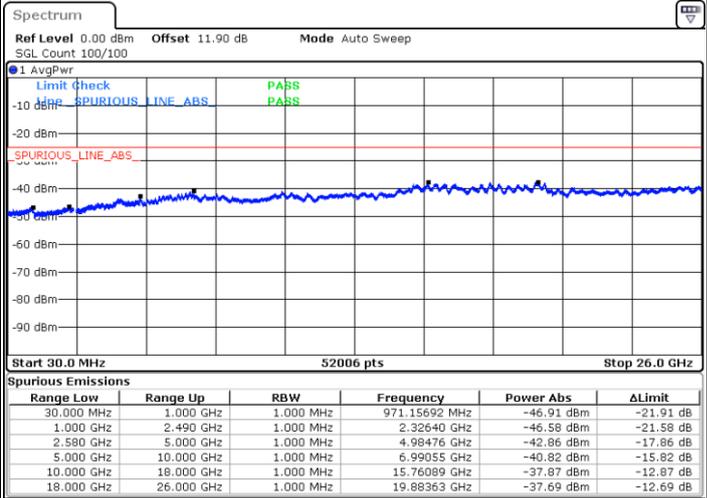
LTE Band 7 / 5MHz

Highest Channel / QPSK



Date: 7.SEP.2017 10:17:17

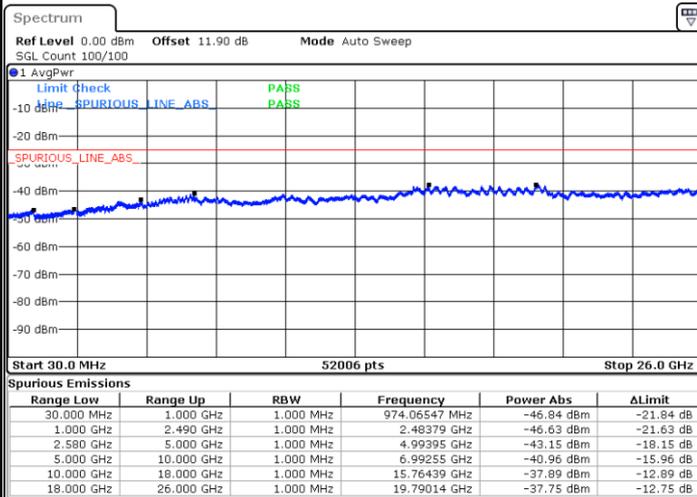
Highest Channel / 16QAM



Date: 7.SEP.2017 10:18:10

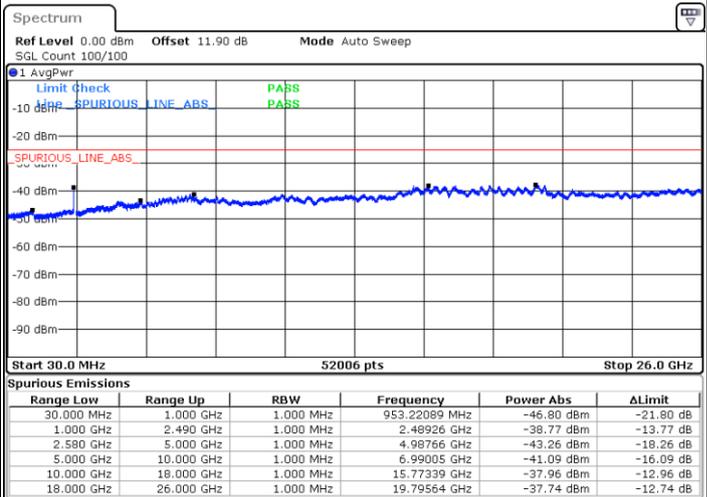
LTE Band 7 / 10MHz

Lowest Channel / QPSK



Date: 7.SEP.2017 10:24:21

Lowest Channel / 16QAM



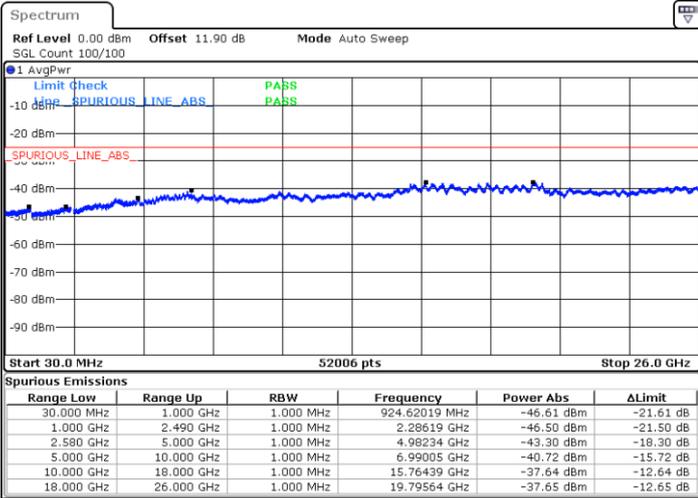
Date: 7.SEP.2017 10:25:14



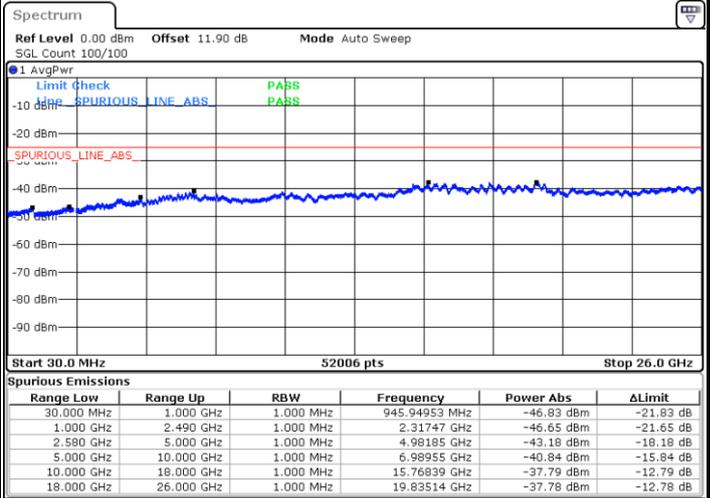
LTE Band 7 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM



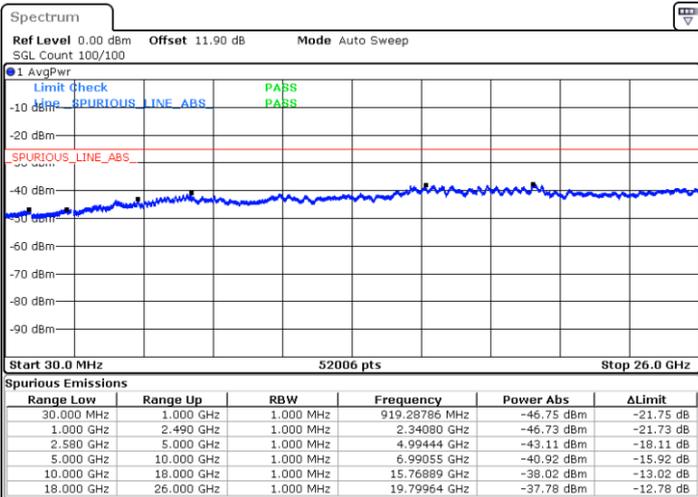
Date: 7.SEP.2017 10:26:48



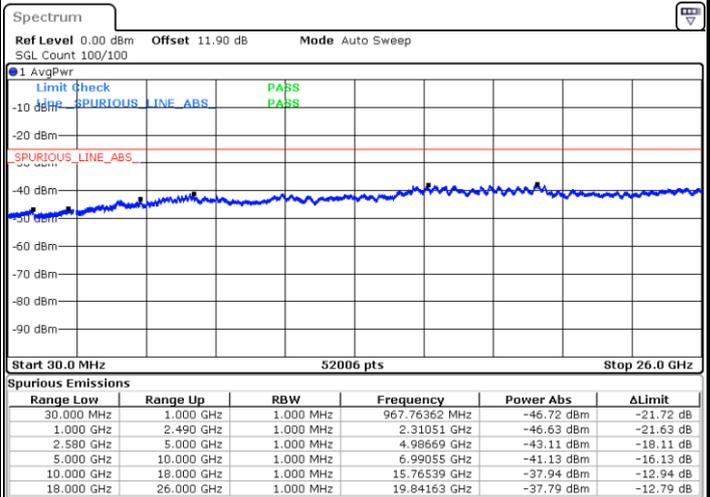
Date: 7.SEP.2017 10:27:41

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 7.SEP.2017 10:33:51



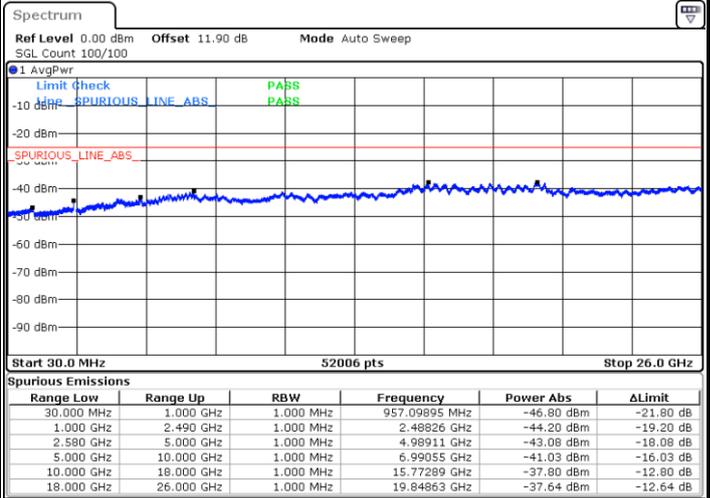
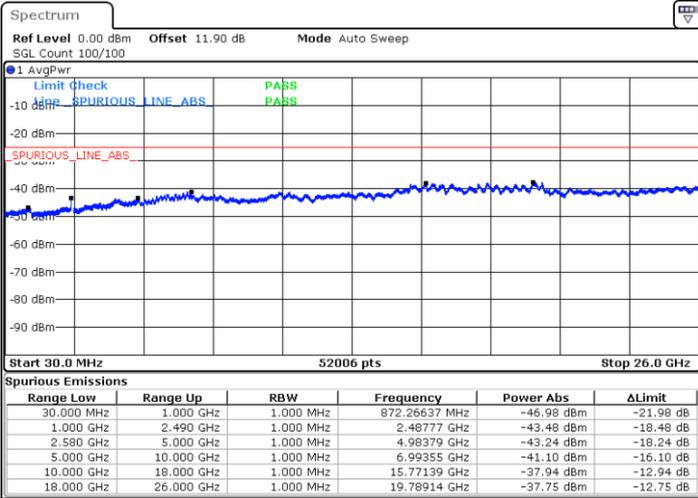
Date: 7.SEP.2017 10:34:45



LTE Band 7 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

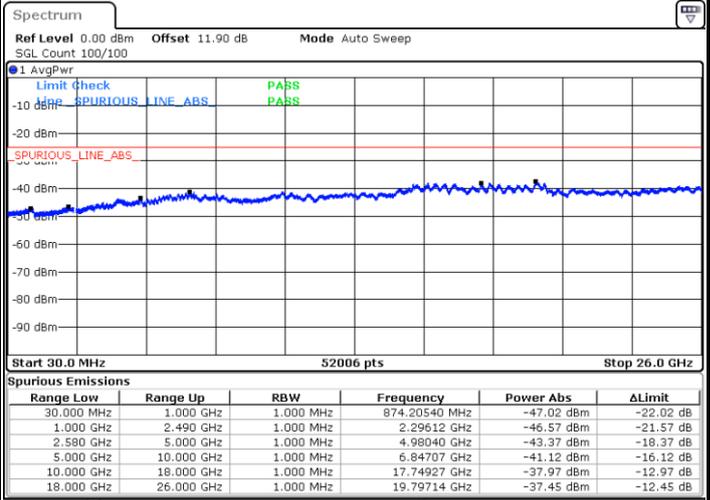
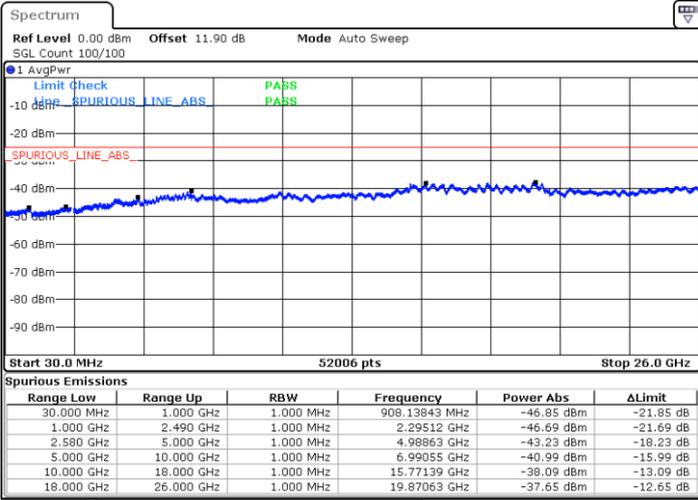


Date: 7.SEP.2017 10:40:55

Date: 7.SEP.2017 10:41:48

Middle Channel / QPSK

Middle Channel / 16QAM



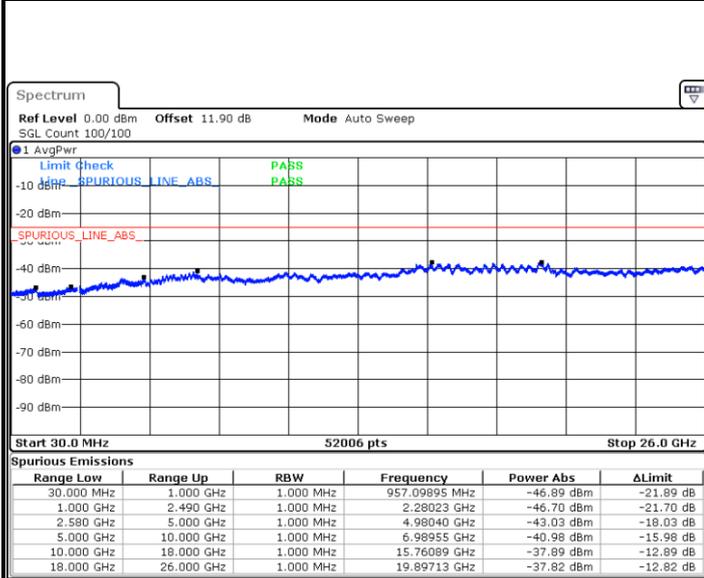
Date: 7.SEP.2017 10:43:21

Date: 7.SEP.2017 10:44:15



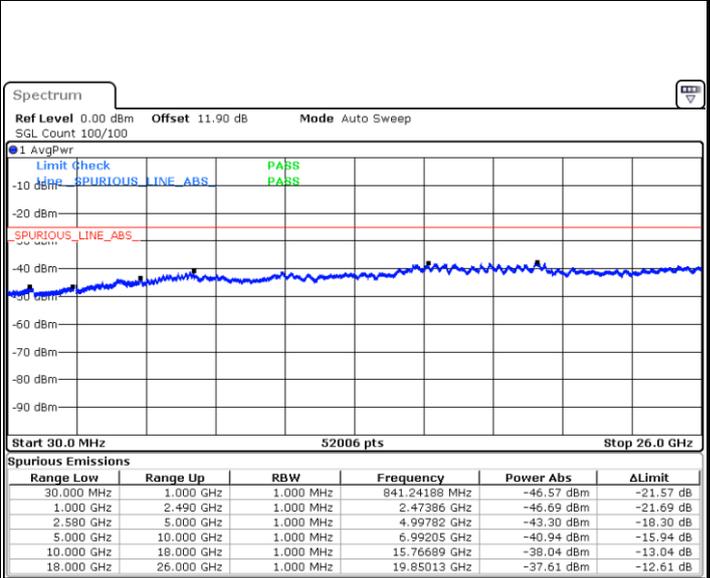
LTE Band 7 / 15MHz

Highest Channel / QPSK



Date: 7.SEP.2017 10:50:25

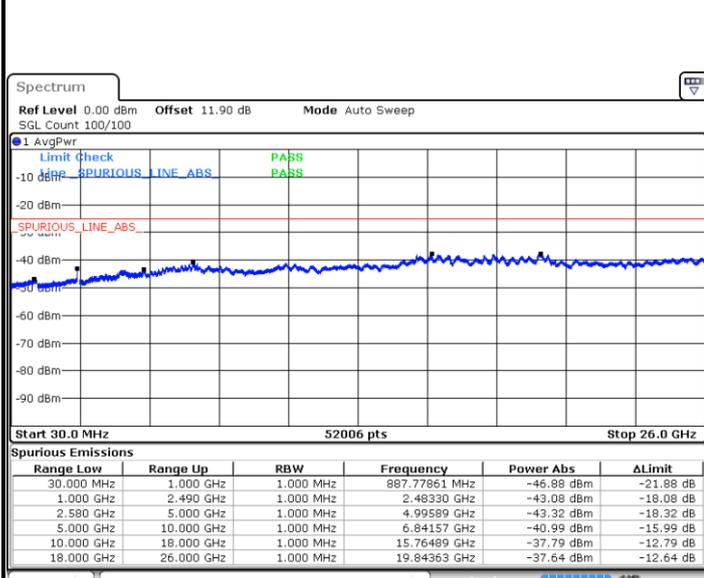
Highest Channel / 16QAM



Date: 7.SEP.2017 10:51:19

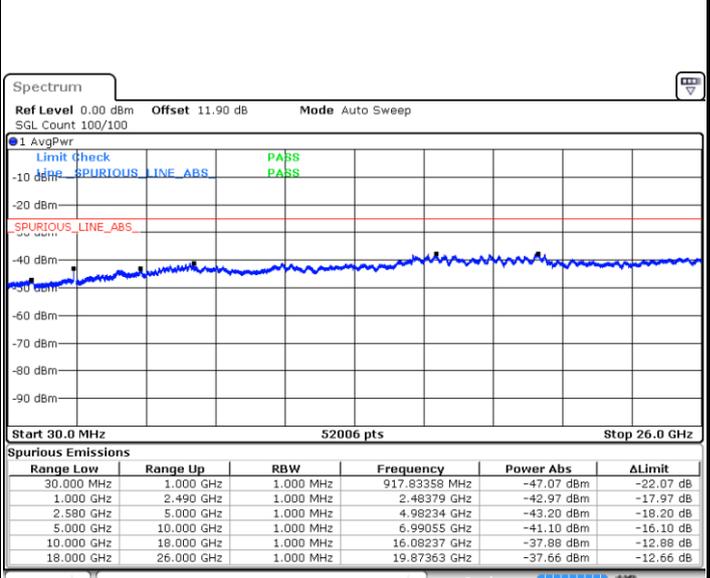
LTE Band 7 / 20MHz

Lowest Channel / QPSK



Date: 7.SEP.2017 10:57:29

Lowest Channel / 16QAM



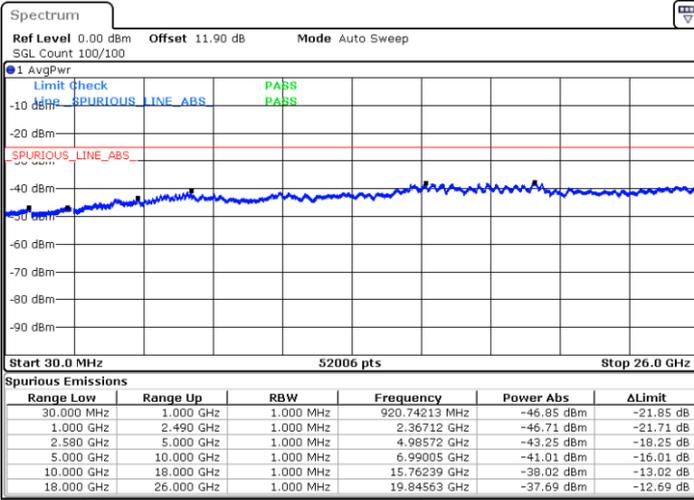
Date: 7.SEP.2017 10:58:22



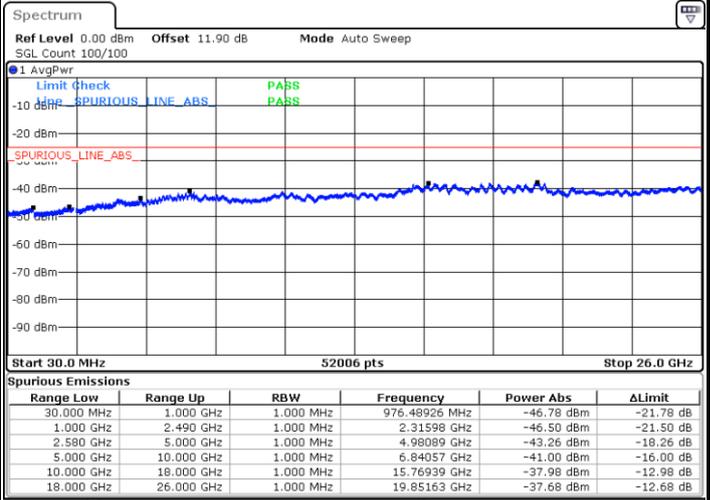
LTE Band 7 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM



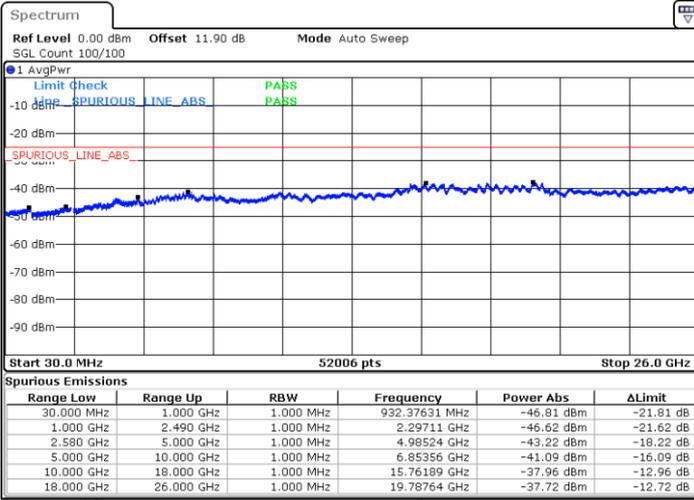
Date: 7.SEP.2017 10:59:55



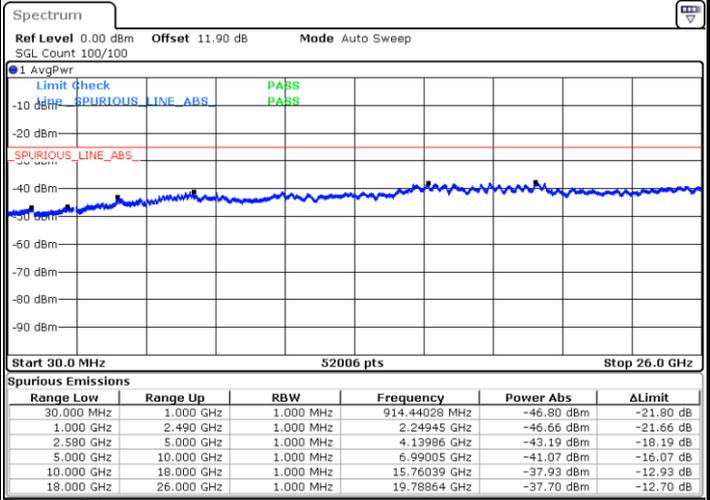
Date: 7.SEP.2017 11:00:49

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 7.SEP.2017 11:06:59



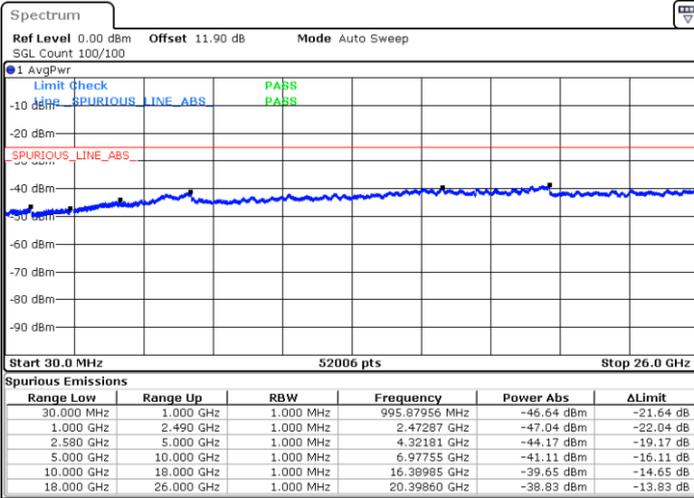
Date: 7.SEP.2017 11:07:52



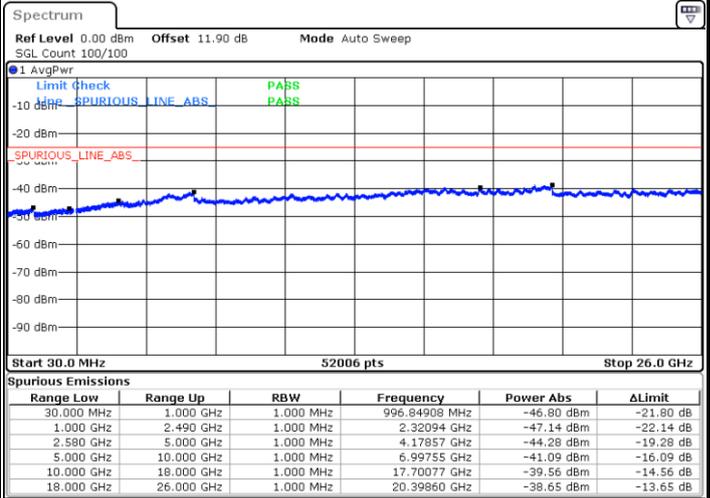
LTE Band 7 / 5MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

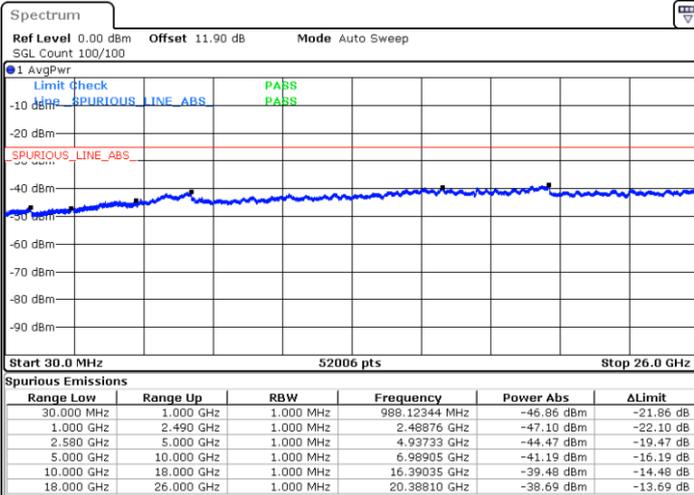


Date: 20.OCT.2017 09:04:30



Date: 20.OCT.2017 09:05:46

Highest Channel / 64QAM



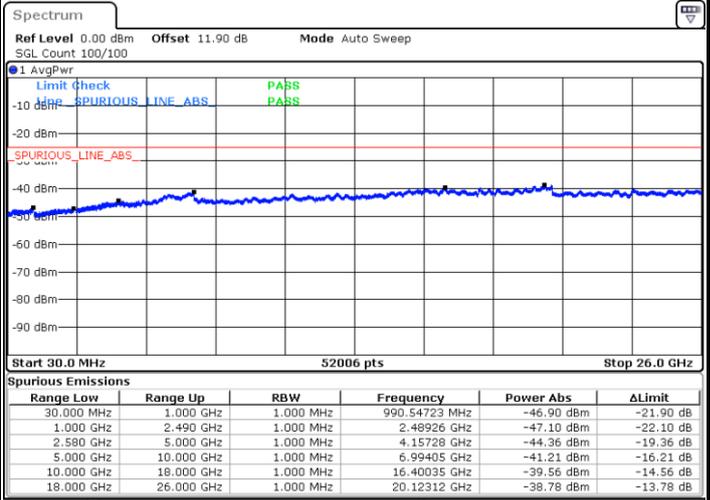
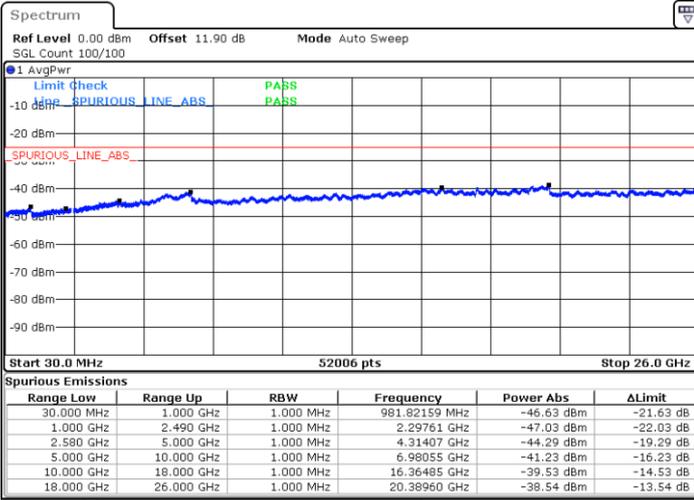
Date: 20.OCT.2017 09:09:27



LTE Band 7 / 10MHz

Lowest Channel / 64QAM

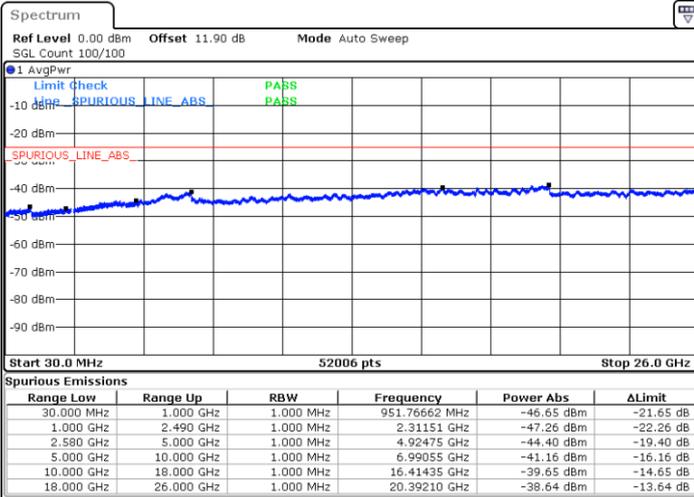
Middle Channel / 64QAM



Date: 20.OCT.2017 09:13:11

Date: 20.OCT.2017 09:14:28

Highest Channel / 64QAM



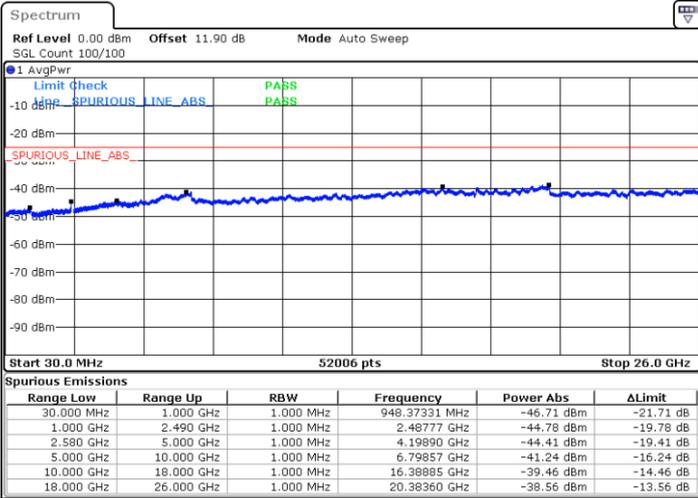
Date: 20.OCT.2017 09:18:03



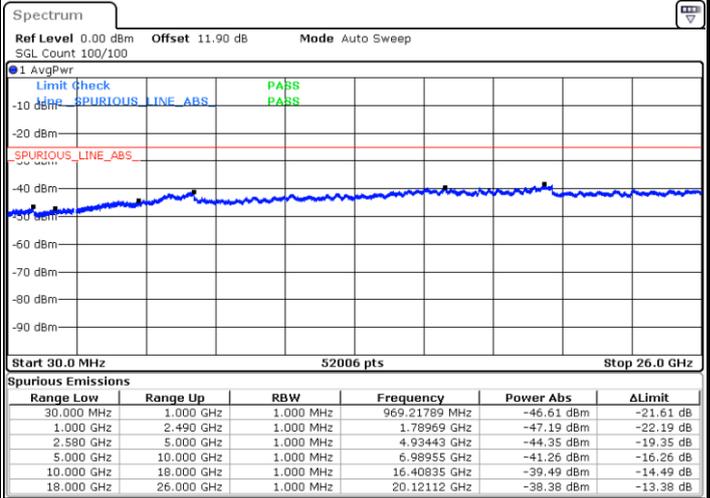
LTE Band 7 / 15MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

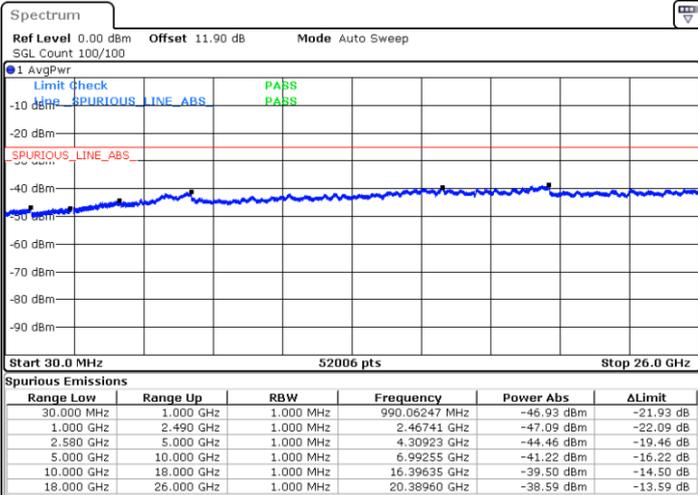


Date: 20.OCT.2017 09:21:36



Date: 20.OCT.2017 09:22:50

Highest Channel / 64QAM



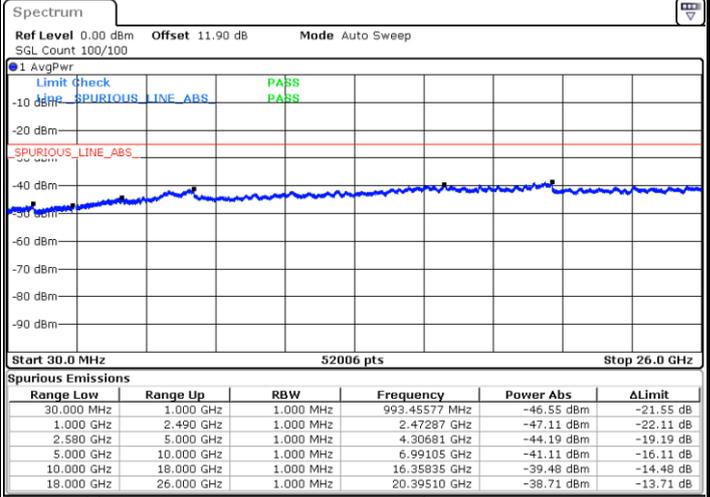
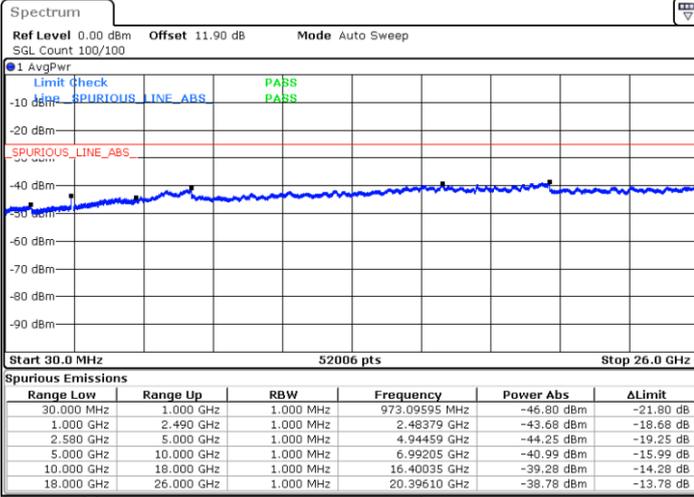
Date: 20.OCT.2017 09:26:22



LTE Band 7 / 20MHz

Lowest Channel / 64QAM

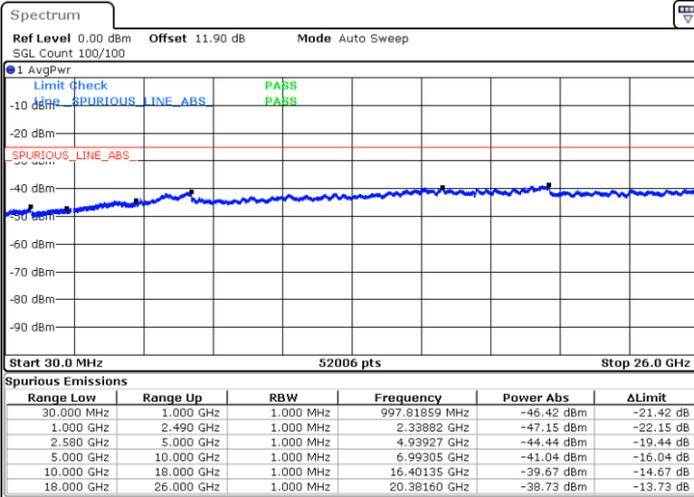
Middle Channel / 64QAM



Date: 20.OCT.2017 09:29:55

Date: 20.OCT.2017 09:31:08

Highest Channel / 64QAM



Date: 20.OCT.2017 09:34:40



**Frequency Stability**

| Test Conditions  |                   | LTE Band 7 (QPSK) / Middle Channel | Limit   |
|------------------|-------------------|------------------------------------|---------|
| Temperature (°C) | Voltage (Volt)    | BW 10MHz                           | Note 2. |
|                  |                   | Deviation (ppm)                    | Result  |
| 50               | Normal Voltage    | 0.0006                             | PASS    |
| 40               | Normal Voltage    | 0.0079                             |         |
| 30               | Normal Voltage    | 0.0090                             |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                             |         |
| 10               | Normal Voltage    | 0.0080                             |         |
| 0                | Normal Voltage    | 0.0088                             |         |
| -10              | Normal Voltage    | 0.0090                             |         |
| -20              | Normal Voltage    | 0.0086                             |         |
| -30              | Normal Voltage    | 0.0086                             |         |
| 20               | Maximum Voltage   | 0.0088                             |         |
| 20               | Normal Voltage    | 0.0000                             |         |
| 20               | Battery End Point | 0.0000                             |         |

**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.35 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 12

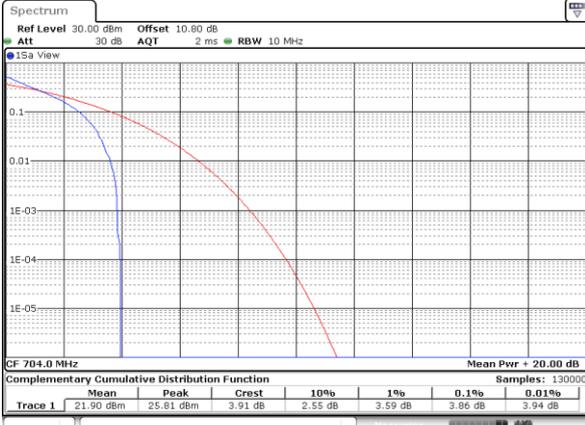
## Peak-to-Average Ratio

| Mode       | LTE Band 12 / 10MHz |         |       |         |             |
|------------|---------------------|---------|-------|---------|-------------|
| Mod.       | QPSK                |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | 3.86                | 4.78    | 4.87  | 5.71    | PASS        |
| Middle CH  | 4.12                | 4.81    | 4.99  | 5.8     |             |
| Highest CH | 4                   | 4.87    | 4.87  | 5.86    |             |
| Mode       | LTE Band 12 / 10MHz |         |       |         |             |
| Mod.       | 64QAM               |         |       |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB |       |         | Result      |
| Lowest CH  | 4.87                | 5.74    | -     | -       | PASS        |
| Middle CH  | 4.78                | 5.8     | -     | -       |             |
| Highest CH | 4.81                | 5.86    | -     | -       |             |



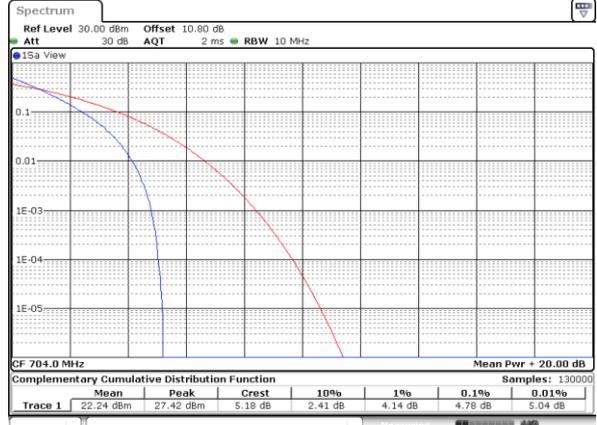
LTE Band 12 / 10MHz / QPSK

Lowest Channel / 1RB



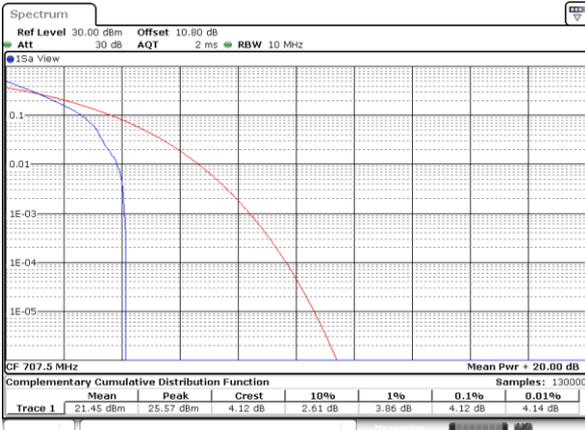
Date: 29 AUG 2017 14:53:24

Lowest Channel / Full RB



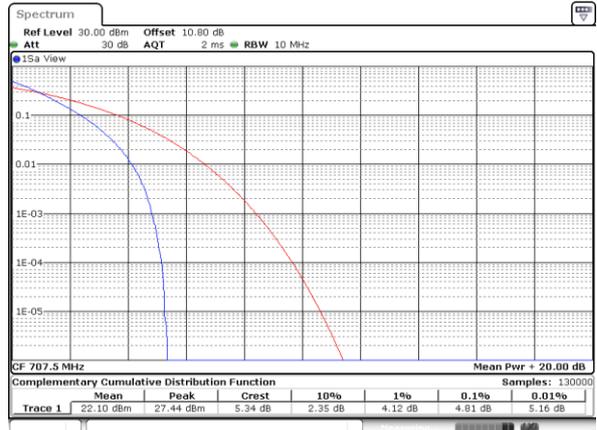
Date: 29 AUG 2017 14:53:11

Middle Channel / 1RB



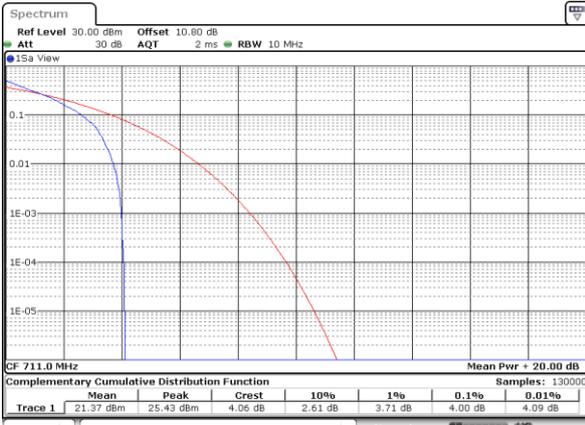
Date: 29 AUG 2017 14:53:45

Middle Channel / Full RB



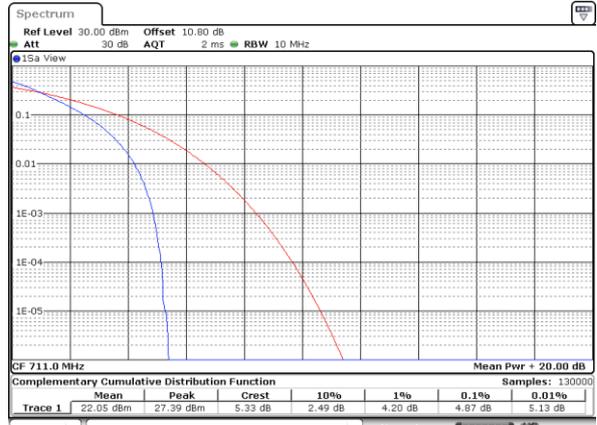
Date: 29 AUG 2017 14:53:57

Highest Channel / 1RB



Date: 29 AUG 2017 14:54:15

Highest Channel / Full RB

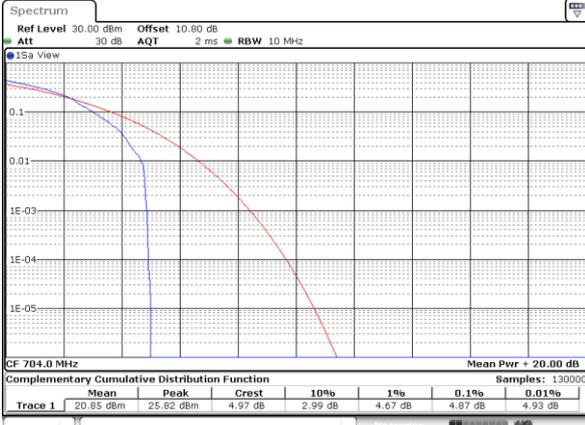


Date: 29 AUG 2017 14:54:06



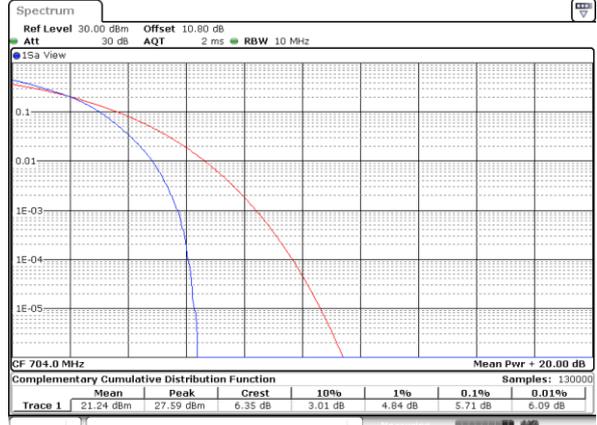
LTE Band 12 / 10MHz / 16QAM

Lowest Channel / 1RB



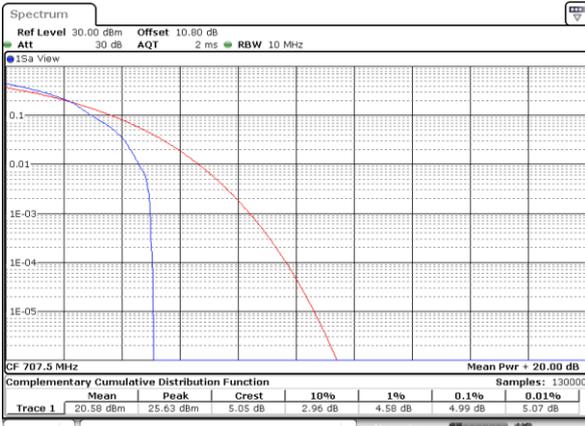
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Lowest Channel / Full RB



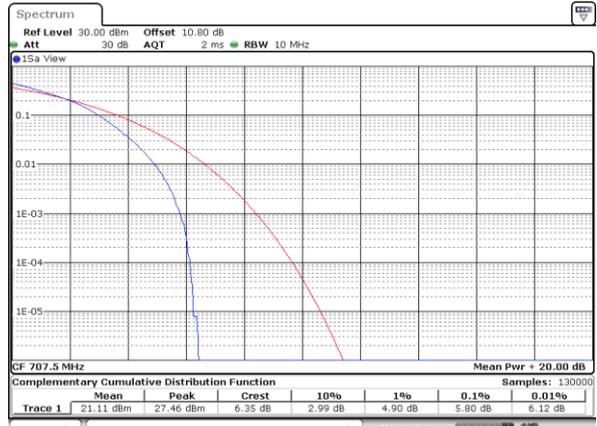
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Middle Channel / 1RB



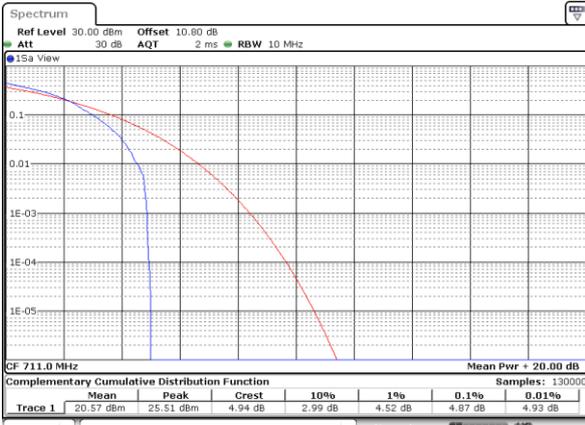
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Middle Channel / Full RB



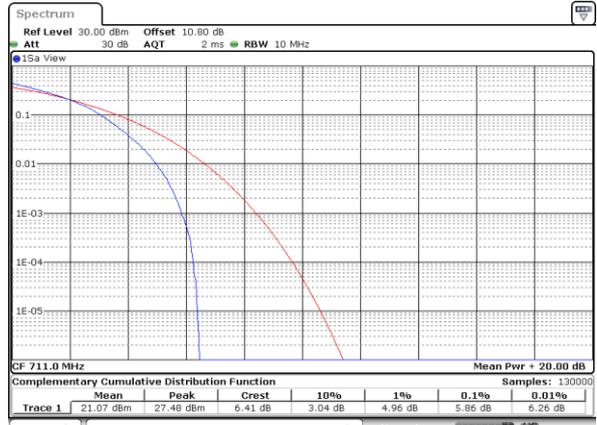
Date: 29 AUG 2017 14:51:55

Highest Channel / 1RB



Date: 29 AUG 2017 14:52:17

Highest Channel / Full RB

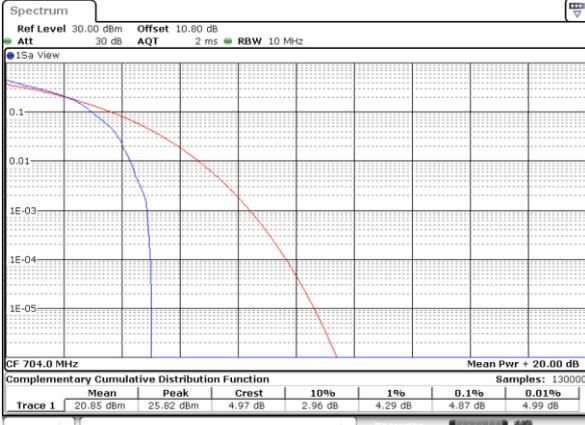


Date: 29 AUG 2017 14:52:07



LTE Band 12 / 10MHz / 64QAM

Lowest Channel / 1RB



Date: 31.OCT.2017 20:46:10

Lowest Channel / Full RB



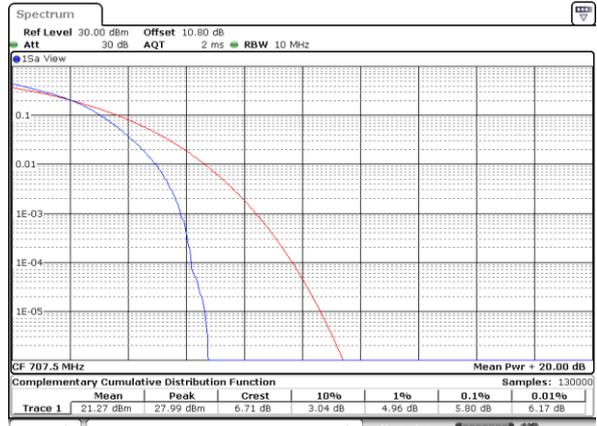
Date: 31.OCT.2017 20:46:00

Middle Channel / 1RB



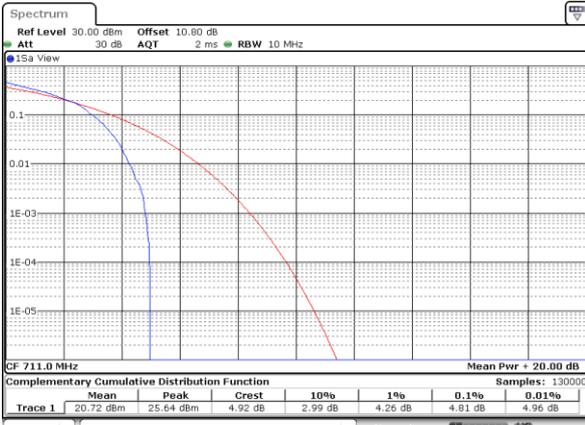
Date: 31.OCT.2017 20:46:23

Middle Channel / Full RB



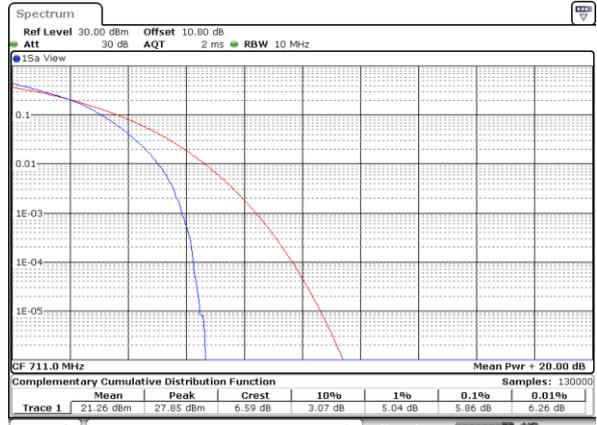
Date: 31.OCT.2017 20:46:34

Highest Channel / 1RB



Date: 31.OCT.2017 20:46:53

Highest Channel / Full RB



Date: 31.OCT.2017 20:46:44



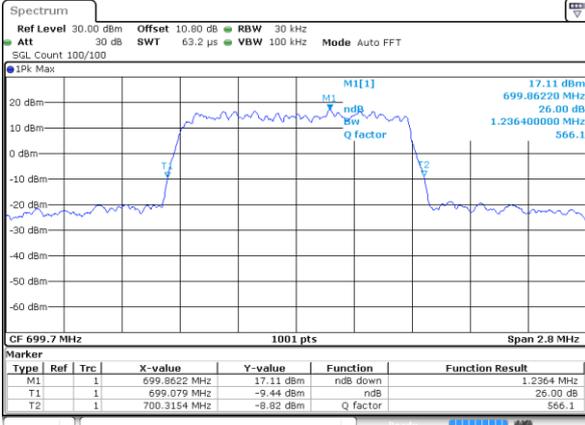
**26dB Bandwidth**

| Mode       | LTE Band 12 : 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  | 1.24                       | 1.21  | 3.05  | 3.02  | 4.97  | 4.97  | 9.75  | 9.79  | -     | -     | -     | -     |
| Middle CH  | 1.24                       | 1.21  | 3.03  | 3.06  | 4.85  | 4.82  | 9.75  | 9.89  | -     | -     | -     | -     |
| Highest CH | 1.22                       | 1.22  | 3.02  | 3.02  | 4.88  | 4.85  | 9.71  | 9.65  | -     | -     | -     | -     |
| Mode       | LTE Band 12 : 26dB BW(MHz) |       |       |       |       |       |       |       |       |       |       |       |
| BW         | 1.4MHz                     |       | 3MHz  |       | 5MHz  |       | 10MHz |       | 15MHz |       | 20MHz |       |
| Mod.       | 64QAM                      |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | 1.23                       | -     | 3.03  | -     | 4.9   | -     | 9.65  | -     | -     | -     | -     | -     |
| Middle CH  | 1.23                       | -     | 3.03  | -     | 4.86  | -     | 9.67  | -     | -     | -     | -     | -     |
| Highest CH | 1.239                      | -     | 3.01  | -     | 4.84  | -     | 9.79  | -     | -     | -     | -     | -     |



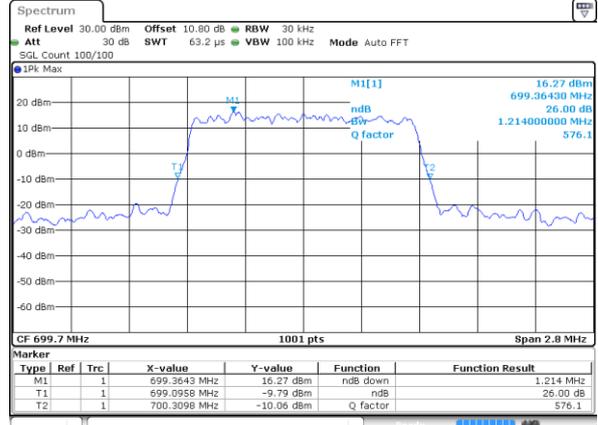
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



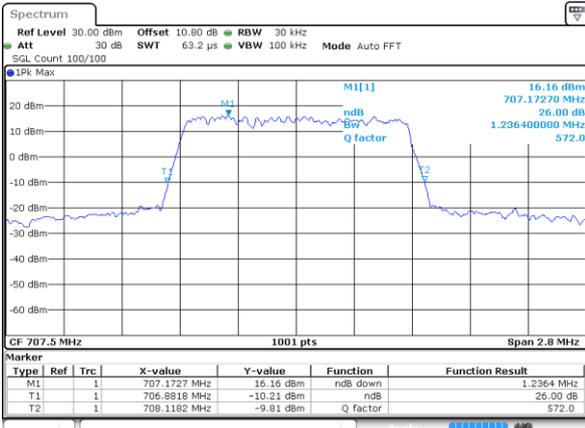
Date: 29 AUG 2017 14:32:46

Lowest Channel / 1.4MHz / 16QAM



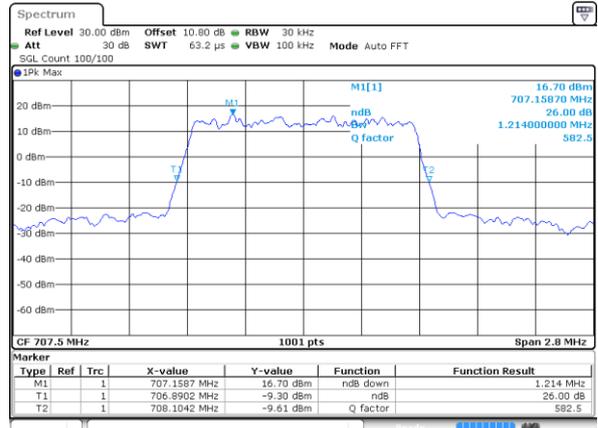
Date: 29 AUG 2017 14:32:37

Middle Channel / 1.4MHz / QPSK



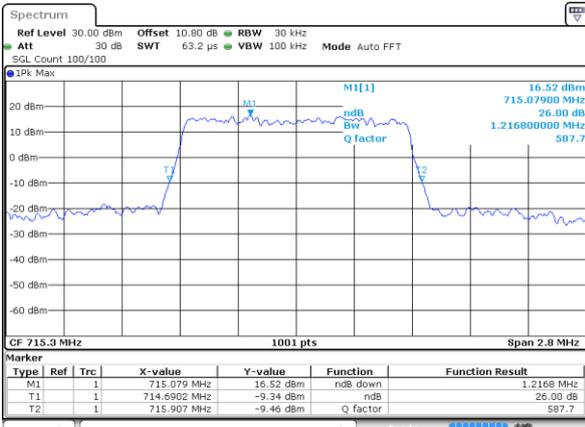
Date: 29 AUG 2017 14:39:39

Middle Channel / 1.4MHz / 16QAM



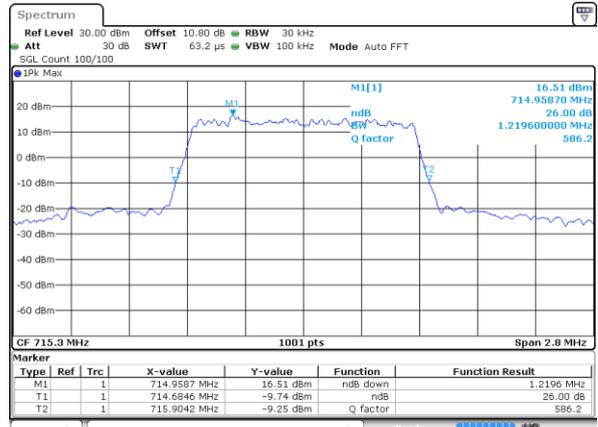
Date: 29 AUG 2017 14:39:49

Highest Channel / 1.4MHz / QPSK



Date: 29 AUG 2017 14:42:16

Highest Channel / 1.4MHz / 16QAM



Date: 29 AUG 2017 14:42:06