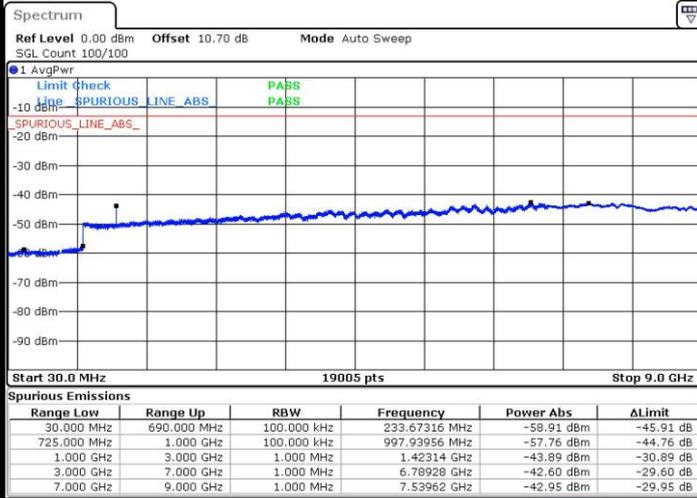




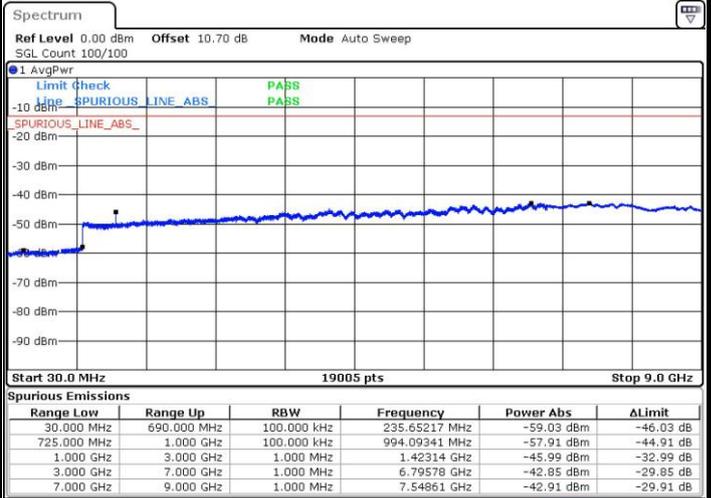
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 3 JUL 2019 07:53:51

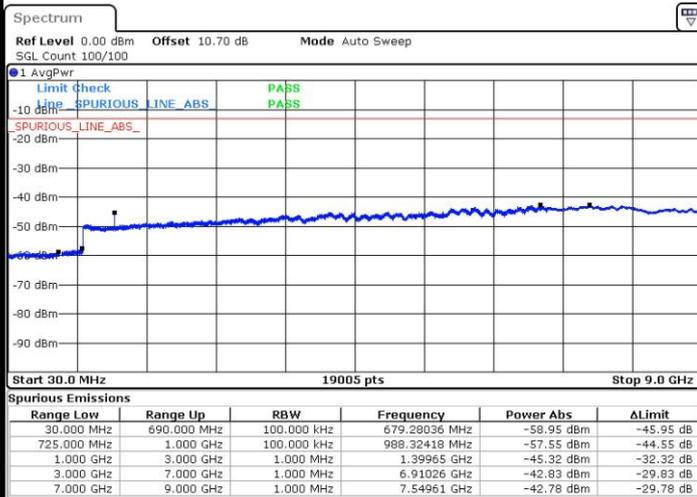
Highest Channel / 16QAM



Date: 3 JUL 2019 07:53:10

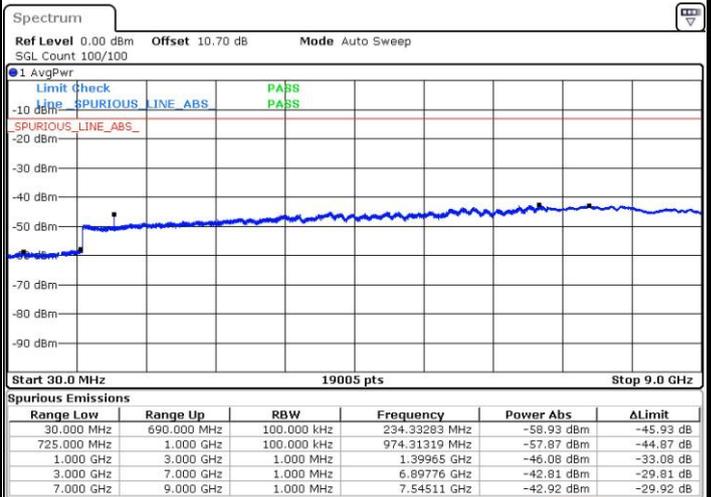
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 3 JUL 2019 07:58:06

Lowest Channel / 16QAM



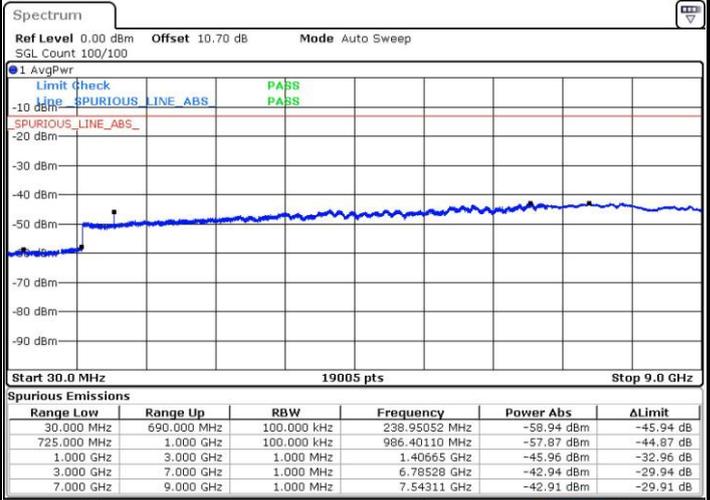
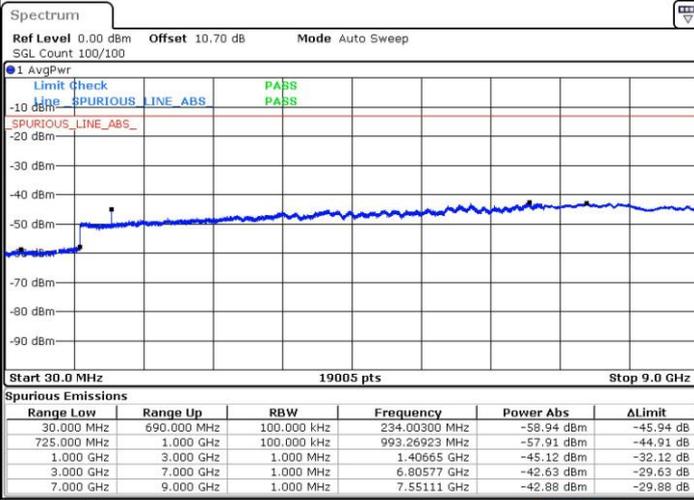
Date: 3 JUL 2019 07:58:47



LTE Band 12 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

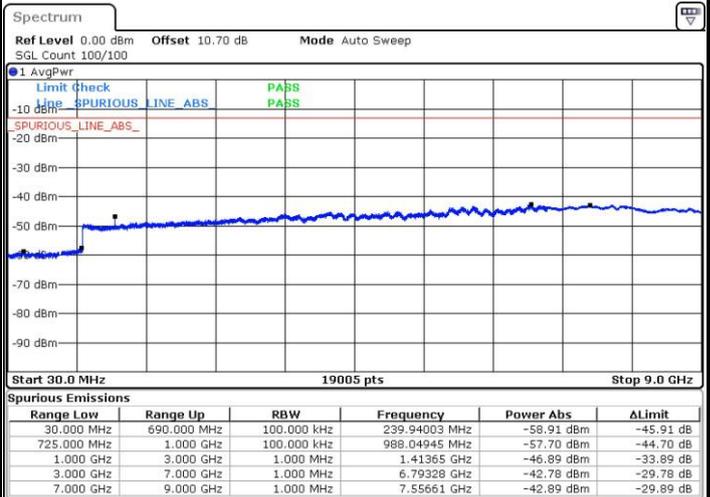
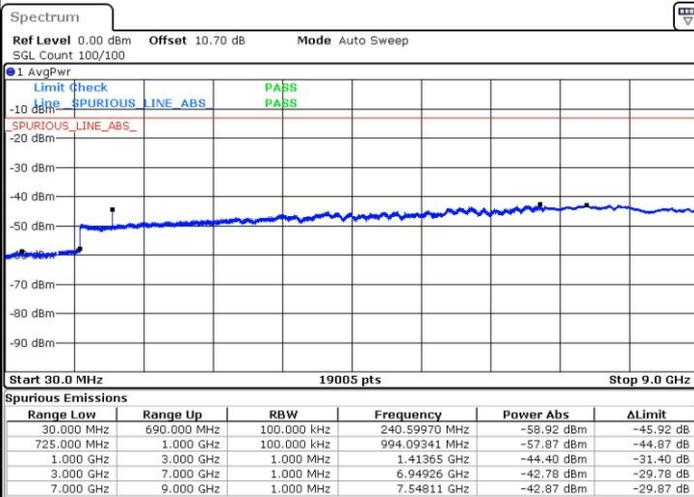


Date: 3 JUL 2019 08:00:58

Date: 3 JUL 2019 08:00:17

Highest Channel / QPSK

Highest Channel / 16QAM



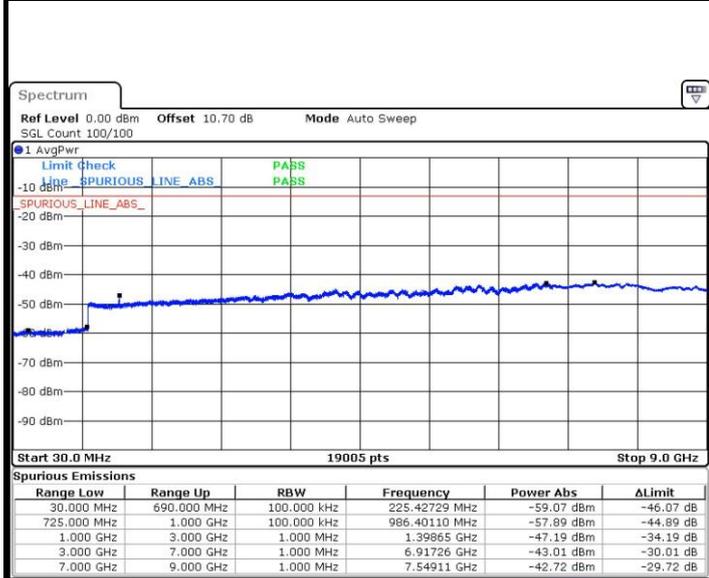
Date: 3 JUL 2019 08:05:12

Date: 3 JUL 2019 08:05:53



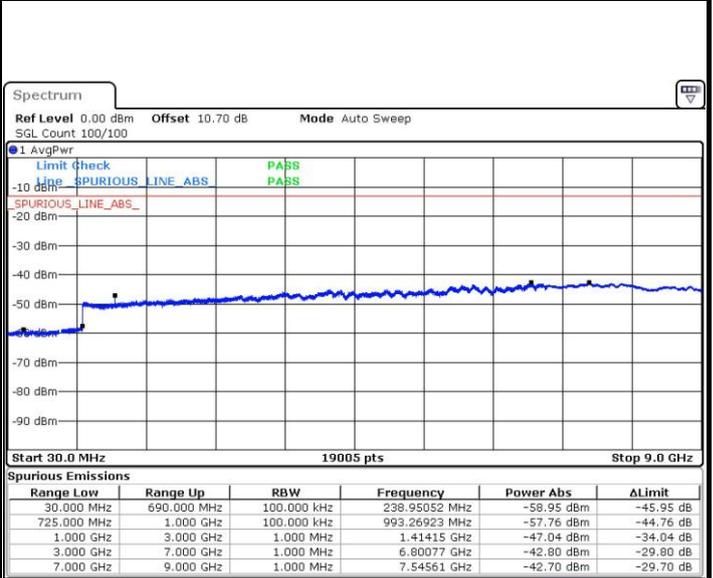
LTE Band 12 / 1.4MHz

Lowest Channel / 64QAM



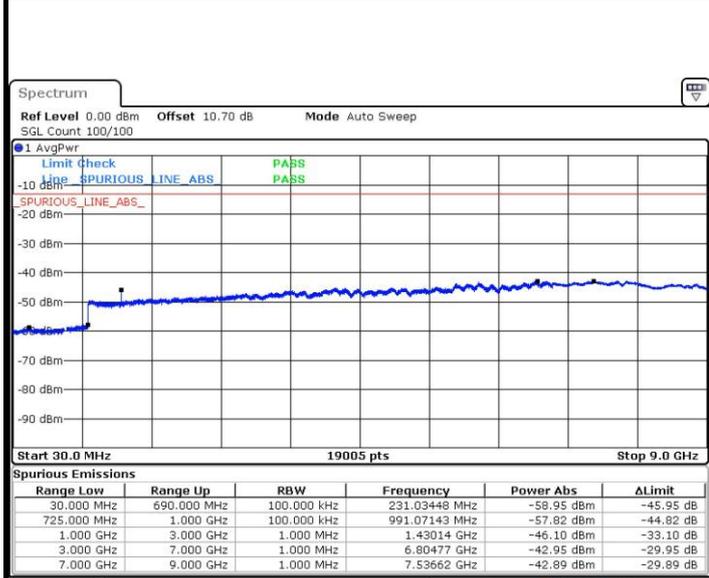
Date: 3 JUL 2019 07:23:24

Middle Channel / 64QAM



Date: 3 JUL 2019 07:24:28

Highest Channel / 64QAM



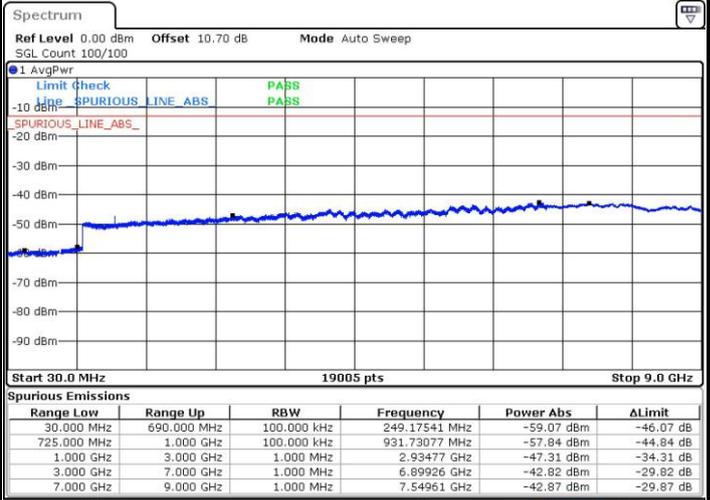
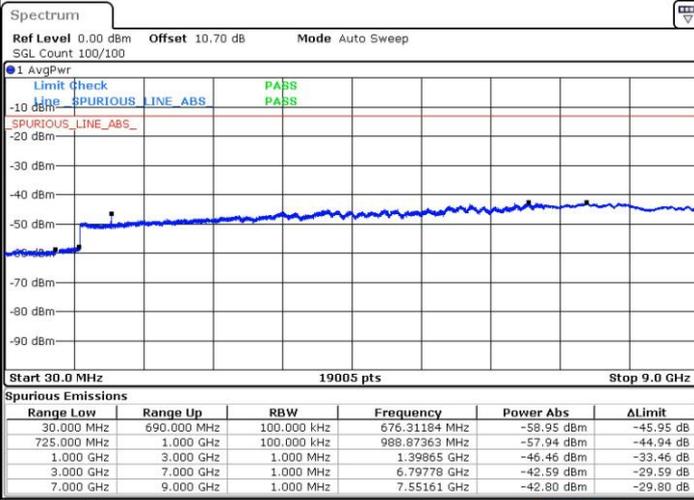
Date: 3 JUL 2019 07:27:46



LTE Band 12 / 3MHz

Lowest Channel / 64QAM

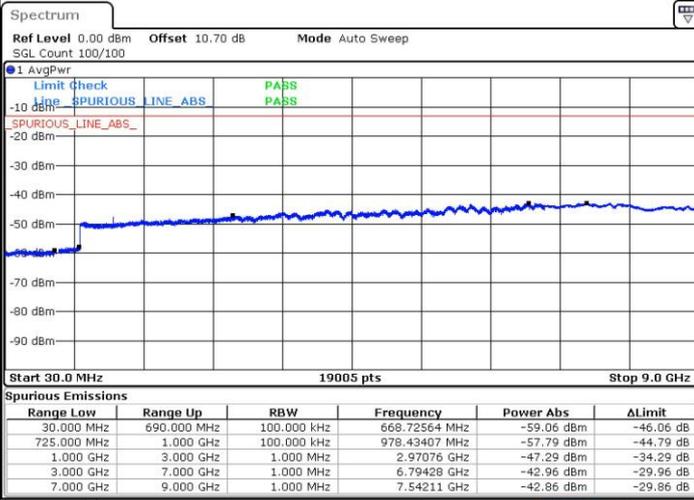
Middle Channel / 64QAM



Date: 3 JUL 2019 06:56:04

Date: 3 JUL 2019 06:57:08

Highest Channel / 64QAM



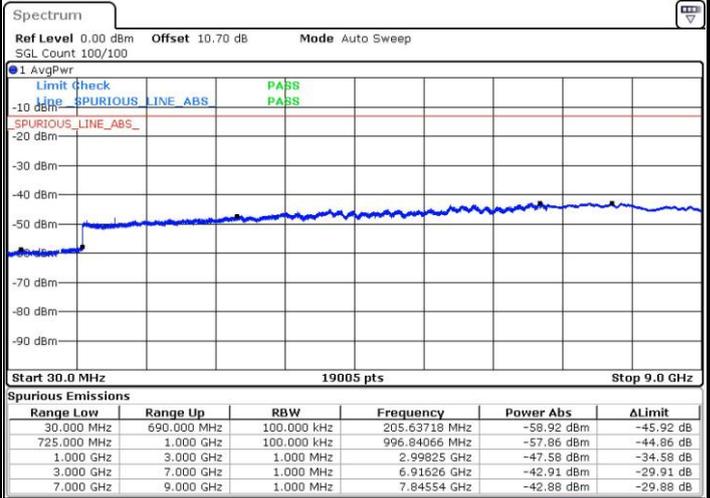
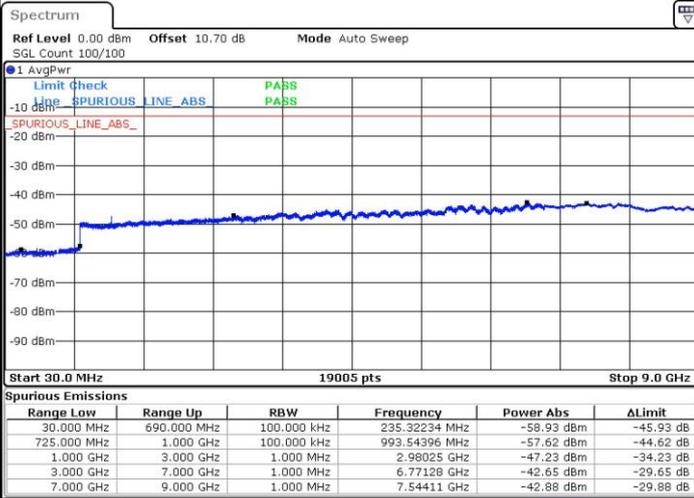
Date: 3 JUL 2019 07:00:25



LTE Band 12 / 5MHz

Lowest Channel / 64QAM

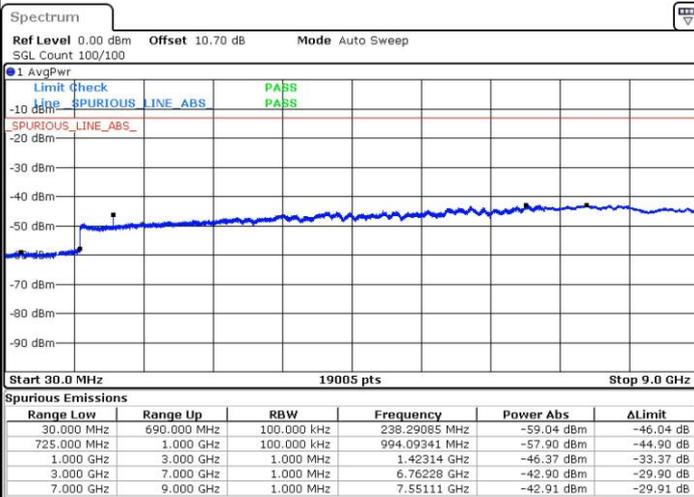
Middle Channel / 64QAM



Date: 3 JUL 2019 07:38:19

Date: 3 JUL 2019 07:39:24

Highest Channel / 64QAM



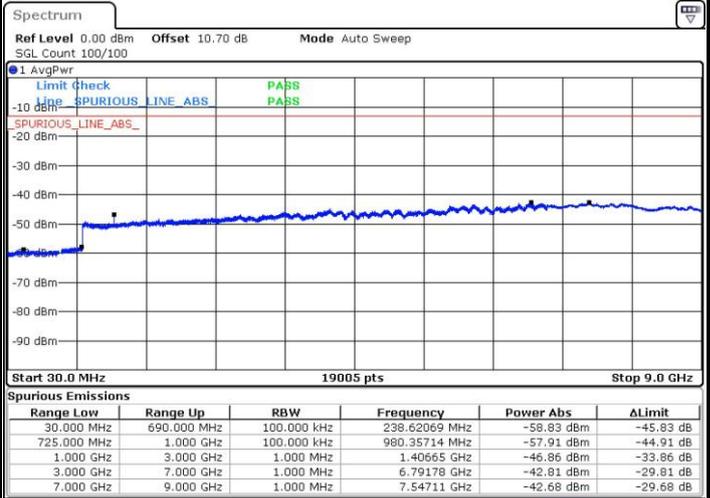
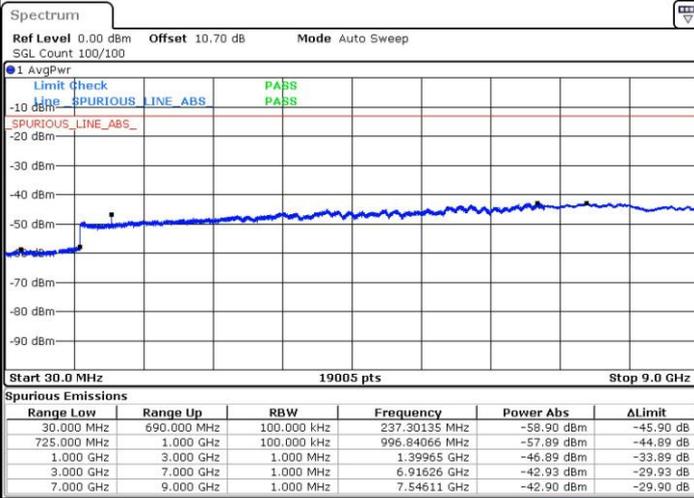
Date: 3 JUL 2019 07:41:51



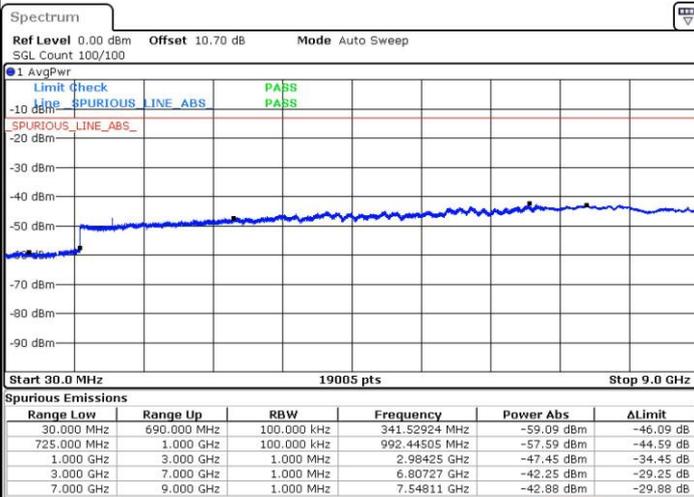
LTE Band 12 / 10MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM



Highest Channel / 64QAM





Frequency Stability

| Test Conditions | | LTE Band 12 (QPSK) / Middle Channel | Limit |
|------------------|-------------------|-------------------------------------|---------|
| Temperature (°C) | Voltage (Volt) | BW 10MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0086 | PASS |
| 40 | Normal Voltage | 0.0075 | |
| 30 | Normal Voltage | 0.0106 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0092 | |
| 0 | Normal Voltage | 0.0112 | |
| -10 | Normal Voltage | 0.0001 | |
| -20 | Normal Voltage | 0.0007 | |
| -30 | Normal Voltage | 0.0075 | |
| 20 | Maximum Voltage | 0.0076 | |
| 20 | Normal Voltage | 0.0000 | |
| 20 | Battery End Point | 0.0102 | |

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 41

Peak-to-Average Ratio

| Mode | LTE Band 41 / 20MHz | | | | |
|------------|---------------------|---------|-------|---------|-------------|
| Mod. | QPSK | | 16QAM | | Limit: 13dB |
| RB Size | 1RB | Full RB | 1RB | Full RB | Result |
| Lowest CH | 3.71 | 4.99 | 4.52 | 5.94 | PASS |
| Middle CH | 3.68 | 5.01 | 4.38 | 5.94 | |
| Highest CH | 3.74 | 4.96 | 4.64 | 5.97 | |
| Mode | LTE Band 41 / 20MHz | | | | |
| Mod. | 64QAM | | | | Limit: 13dB |
| RB Size | 1RB | Full RB | | | Result |
| Lowest CH | 5.59 | 6.64 | - | - | PASS |
| Middle CH | 5.28 | 6.49 | - | - | |
| Highest CH | 5.59 | 6.46 | - | - | |



LTE Band 41 / 20MHz / QPSK

Lowest Channel / 1RB



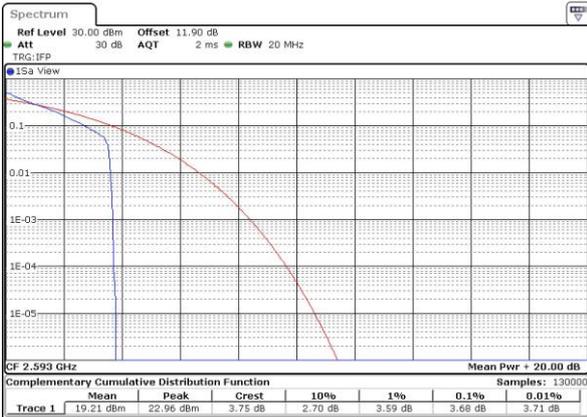
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Lowest Channel / Full RB



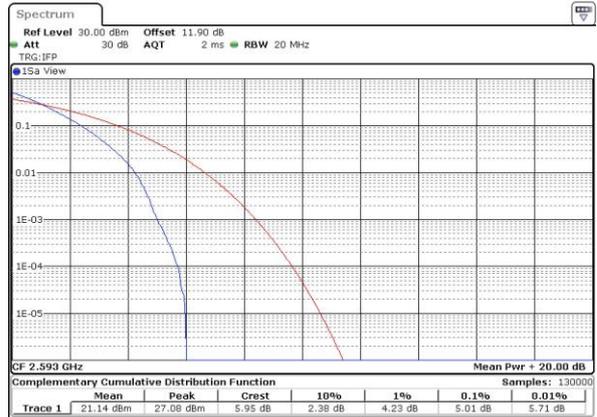
Date: 3.JUL.2019 15:09:10

Middle Channel / 1RB



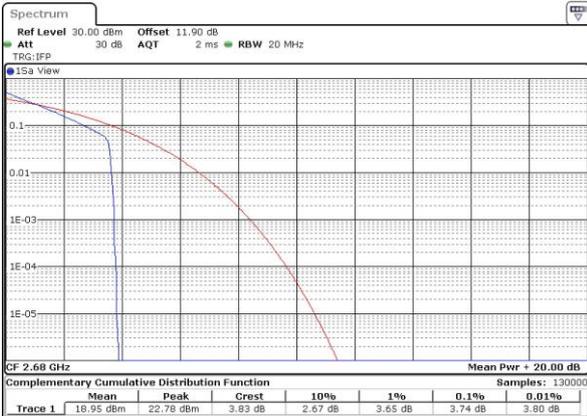
Date: 3.JUL.2019 15:09:24

Middle Channel / Full RB



Date: 3.JUL.2019 15:09:40

Highest Channel / 1RB



Date: 3.JUL.2019 15:10:01

Highest Channel / Full RB



Date: 3.JUL.2019 15:10:23



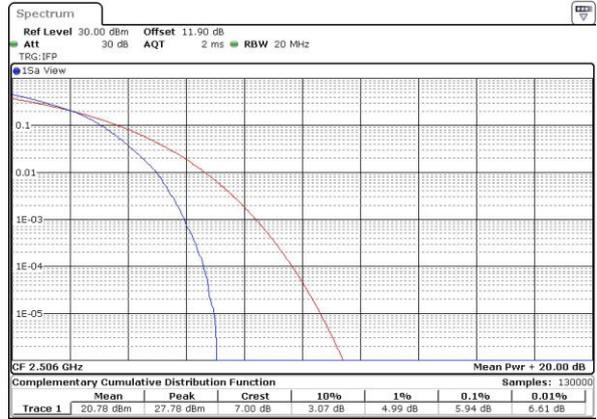
LTE Band 41 / 20MHz / 16QAM

Lowest Channel / 1RB



Date: 3.JUL.2019 15:06:02

Lowest Channel / Full RB



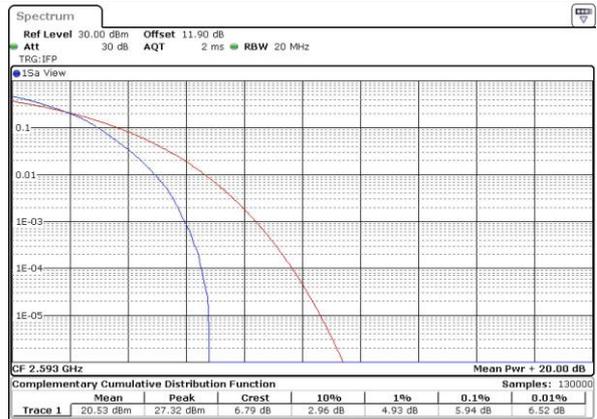
Date: 3.JUL.2019 15:06:17

Middle Channel / 1RB



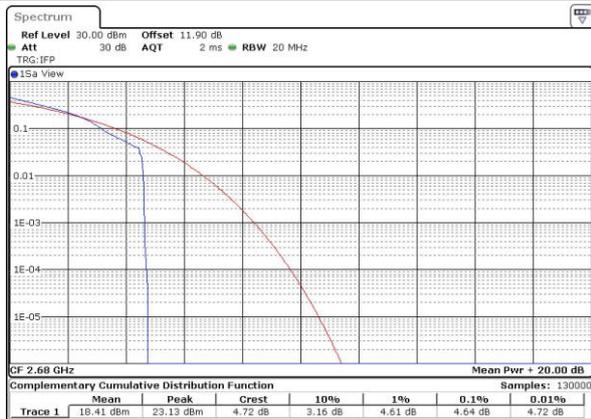
Date: 3.JUL.2019 15:07:35

Middle Channel / Full RB



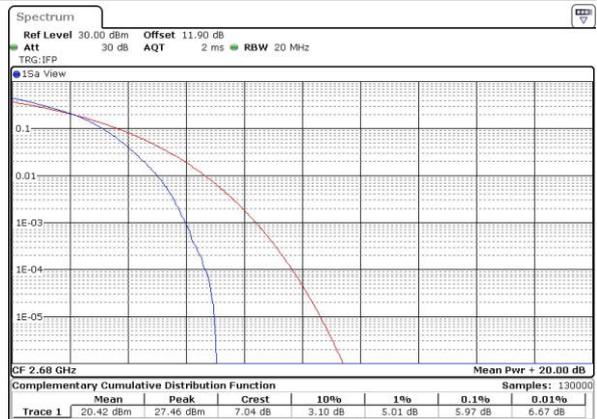
Date: 3.JUL.2019 15:07:54

Highest Channel / 1RB



Date: 3.JUL.2019 15:08:20

Highest Channel / Full RB

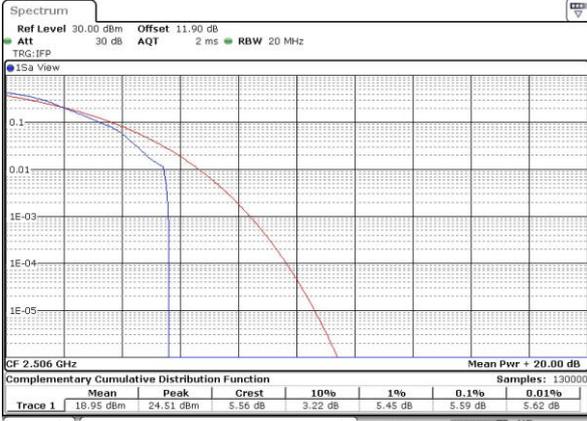


Date: 3.JUL.2019 15:08:38



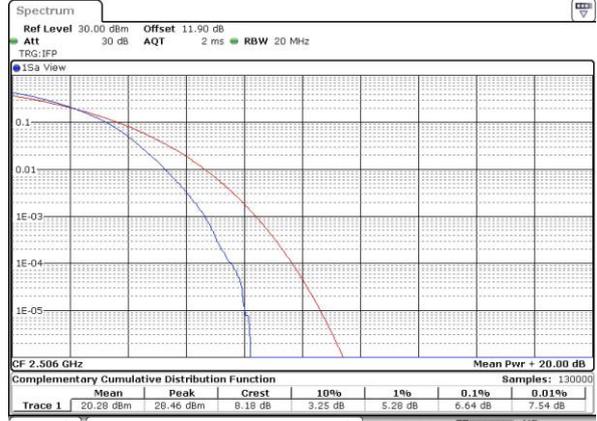
LTE Band 41 / 20MHz / 64QAM

Lowest Channel / 1RB



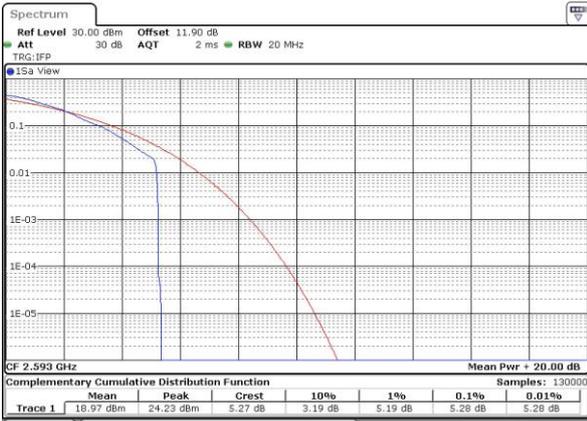
Date: 3.JUL.2019 15:04:18

Lowest Channel / Full RB



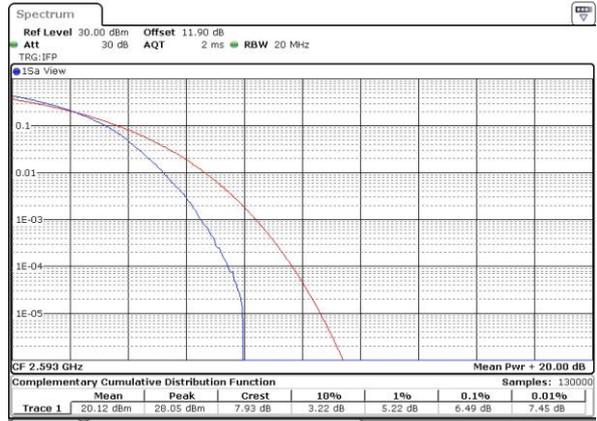
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Middle Channel / 1RB



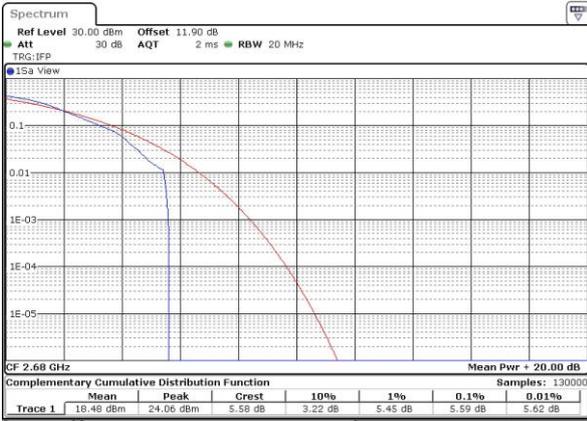
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Middle Channel / Full RB



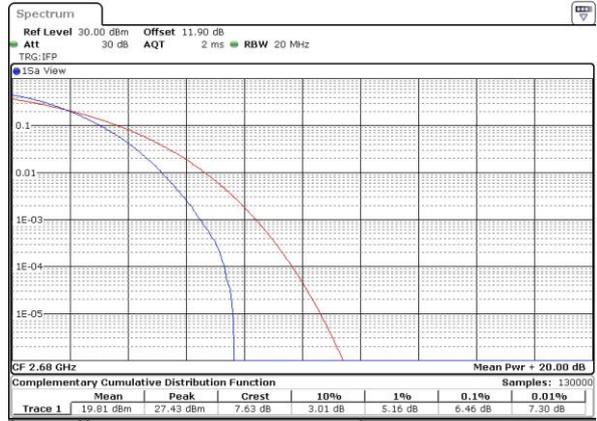
Date: 3.JUL.2019 15:05:10

Highest Channel / 1RB



Date: 3.JUL.2019 15:05:26

Highest Channel / Full RB



Date: 3.JUL.2019 15:05:44



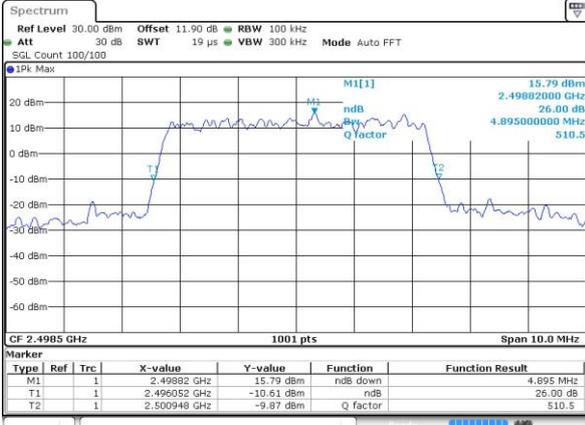
26dB Bandwidth

| Mode | LTE Band 41 : 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 | - | - | - | - | 4.90 | 4.73 | 9.63 | 9.73 | 14.18 | 14.24 | 18.74 | 18.78 |
| Middle CH | - | - | - | - | 4.86 | 4.86 | 9.81 | 9.65 | 14.15 | 14.24 | 19.18 | 18.66 |
| Highest CH | - | - | - | - | 4.80 | 4.85 | 9.65 | 9.77 | 14.18 | 14.12 | 18.90 | 18.90 |
| Mode | LTE Band 41 : 26dB BW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | |
| Lowest CH | - | - | - | - | 4.72 | - | 9.77 | - | 14.63 | - | 18.82 | - |
| Middle CH | - | - | - | - | 4.90 | - | 9.67 | - | 14.15 | - | 18.70 | - |
| Highest CH | - | - | - | - | 5.00 | - | 9.75 | - | 14.12 | - | 18.86 | - |



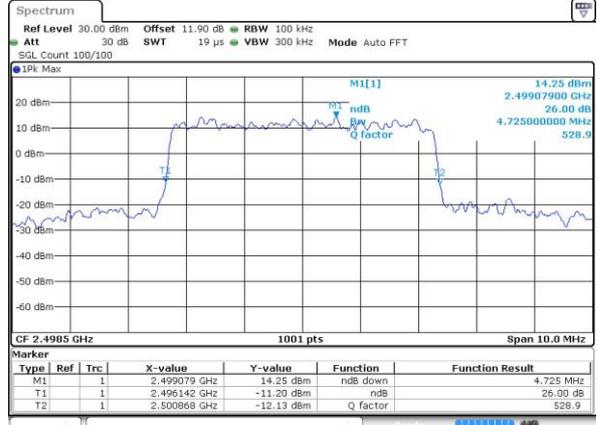
LTE Band 41

Lowest Channel / 5MHz / QPSK



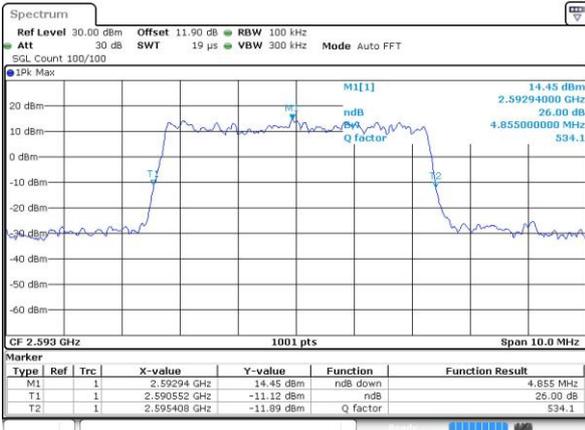
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Lowest Channel / 5MHz / 16QAM



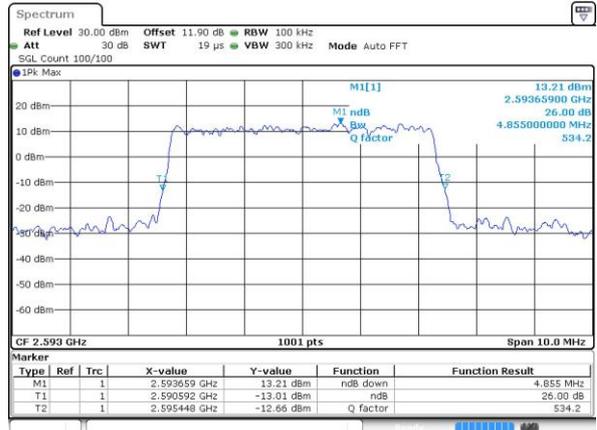
Date: 3.JUL.2019 14:48:38

Middle Channel / 5MHz / QPSK



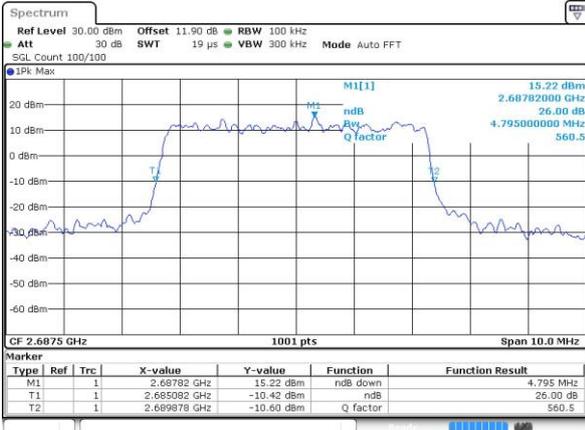
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Middle Channel / 5MHz / 16QAM



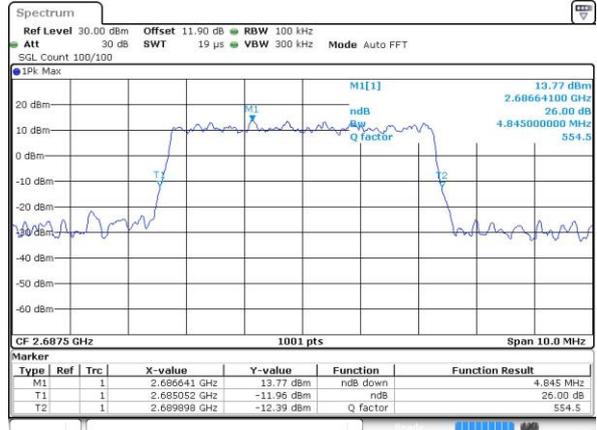
Date: 3.JUL.2019 14:49:25

Highest Channel / 5MHz / QPSK



Date: 3.JUL.2019 14:50:02

Highest Channel / 5MHz / 16QAM

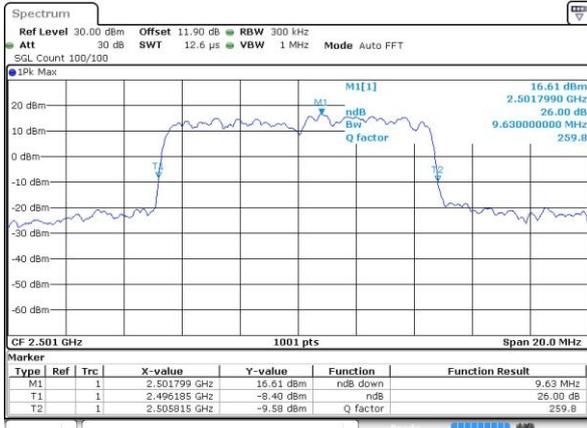


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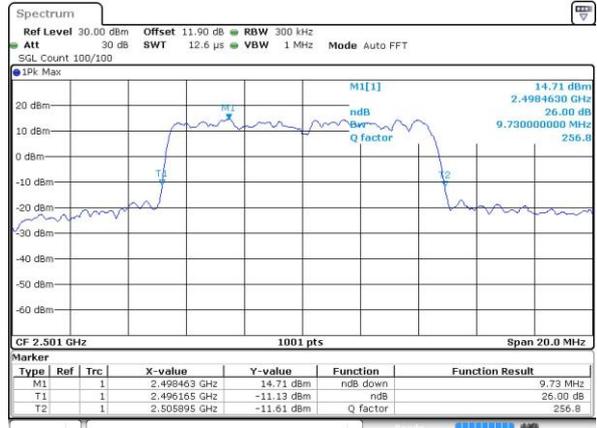
LTE Band 41

Lowest Channel / 10MHz / QPSK



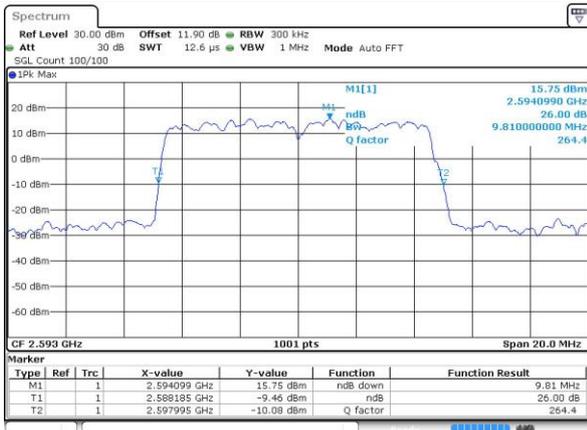
Date: 3.JUL.2019 14:50:53

Lowest Channel / 10MHz / 16QAM



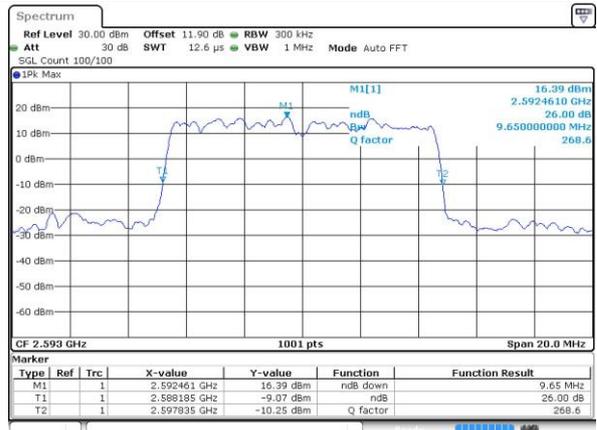
Date: 3.JUL.2019 14:51:05

Middle Channel / 10MHz / QPSK



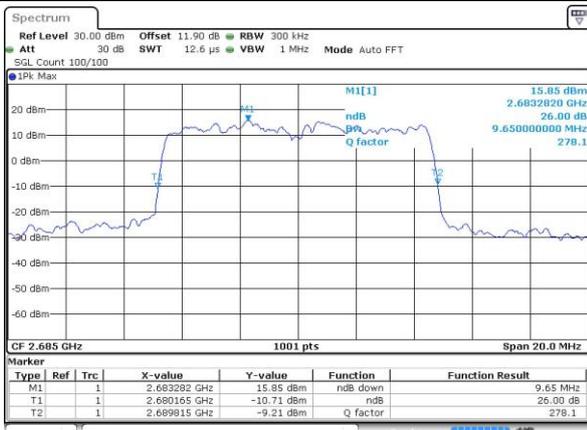
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Middle Channel / 10MHz / 16QAM



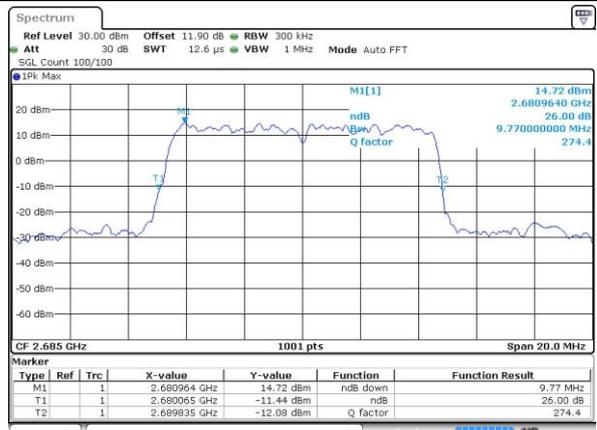
Date: 3.JUL.2019 14:51:52

Highest Channel / 10MHz / QPSK



Date: 3.JUL.2019 14:52:29

Highest Channel / 10MHz / 16QAM

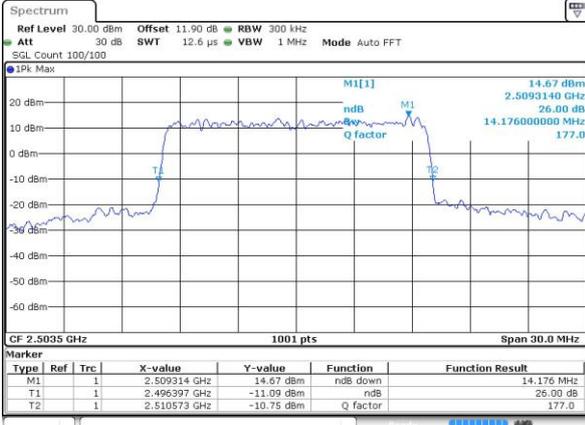


Date: 3.JUL.2019 14:52:41



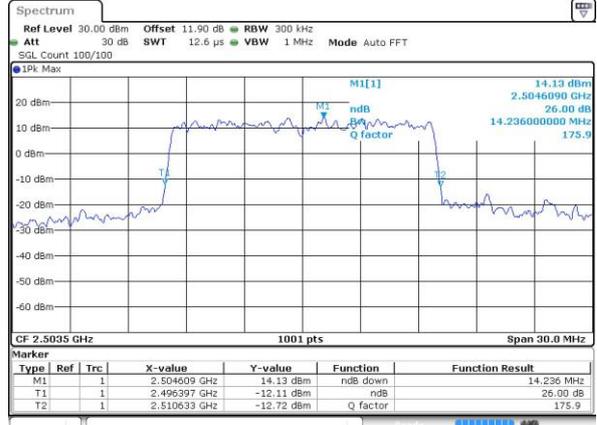
LTE Band 41

Lowest Channel / 15MHz / QPSK



Date: 3.JUL.2019 14:53:20

Lowest Channel / 15MHz / 16QAM



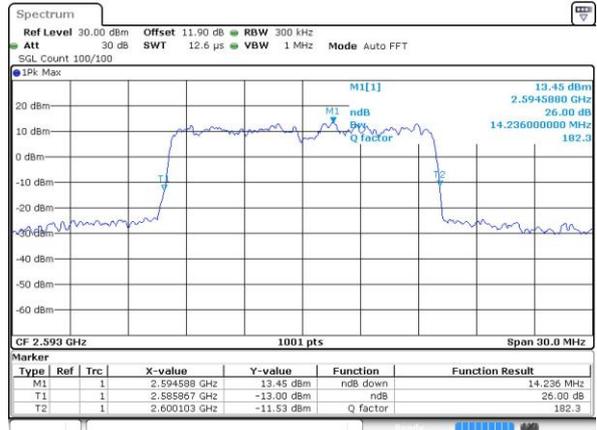
Date: 3.JUL.2019 14:53:32

Middle Channel / 15MHz / QPSK



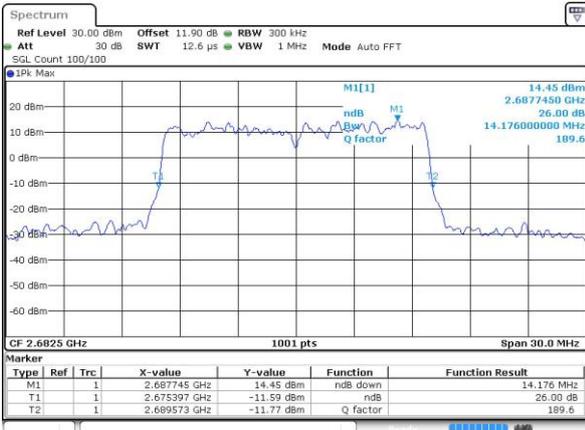
Date: 3.JUL.2019 14:54:08

Middle Channel / 15MHz / 16QAM



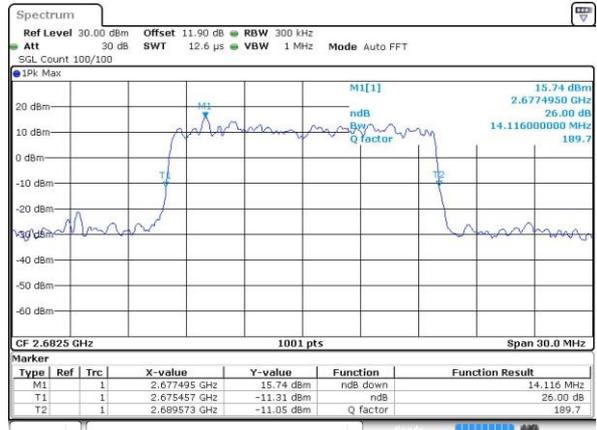
Date: 3.JUL.2019 14:54:19

Highest Channel / 15MHz / QPSK



Date: 3.JUL.2019 14:54:56

Highest Channel / 15MHz / 16QAM

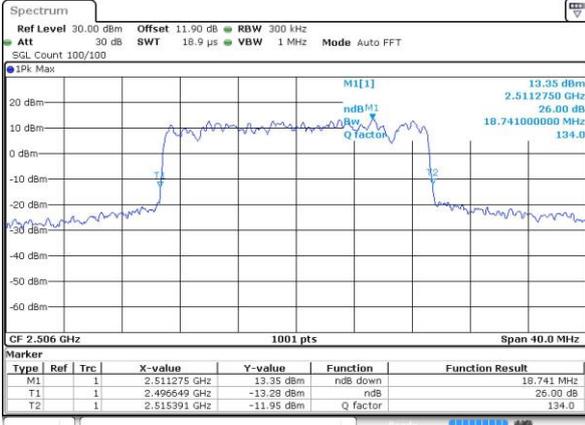


Date: 3.JUL.2019 14:55:08



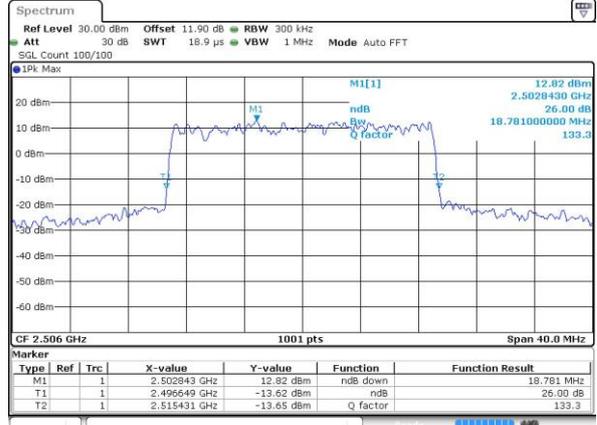
LTE Band 41

Lowest Channel / 20MHz / QPSK



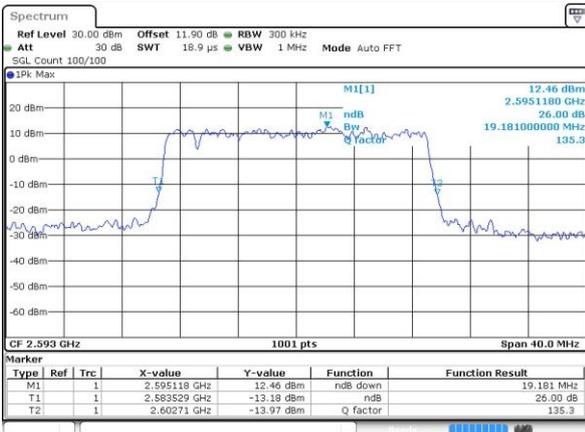
Date: 3.JUL.2019 14:55:47

Lowest Channel / 20MHz / 16QAM



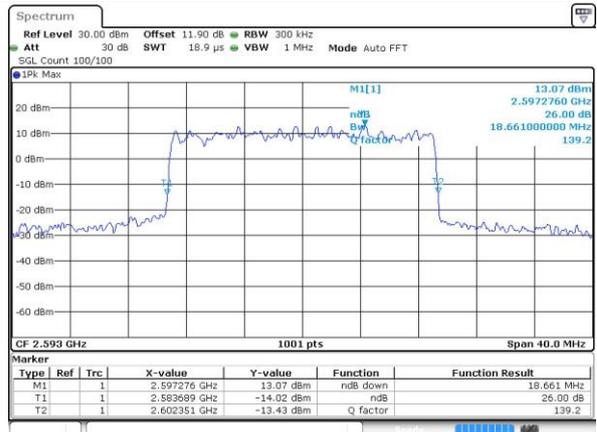
Date: 3.JUL.2019 14:55:59

Middle Channel / 20MHz / QPSK



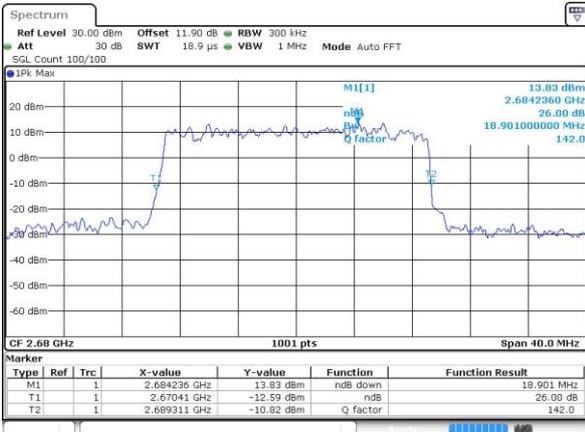
Date: 3.JUL.2019 14:56:35

Middle Channel / 20MHz / 16QAM



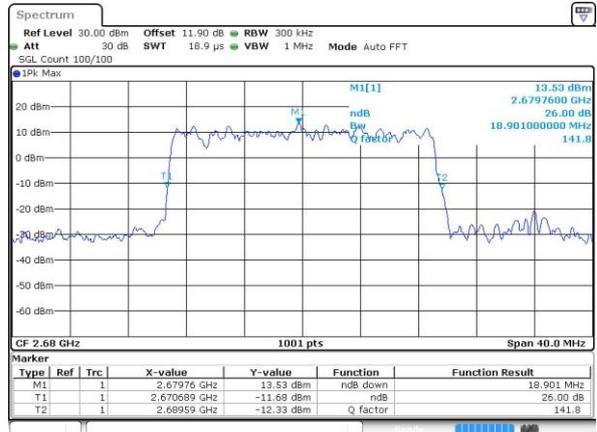
Date: 3.JUL.2019 14:56:46

Highest Channel / 20MHz / QPSK



Date: 3.JUL.2019 14:57:23

Highest Channel / 20MHz / 16QAM

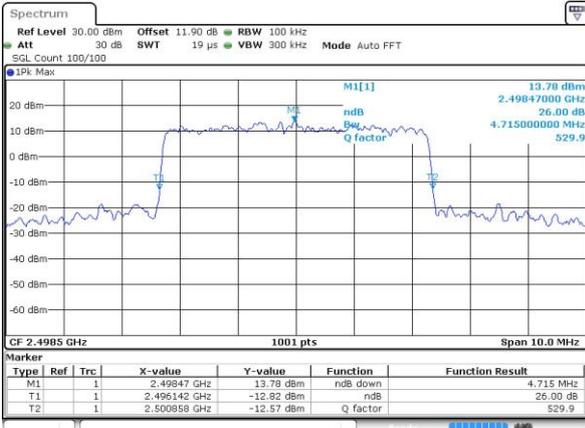


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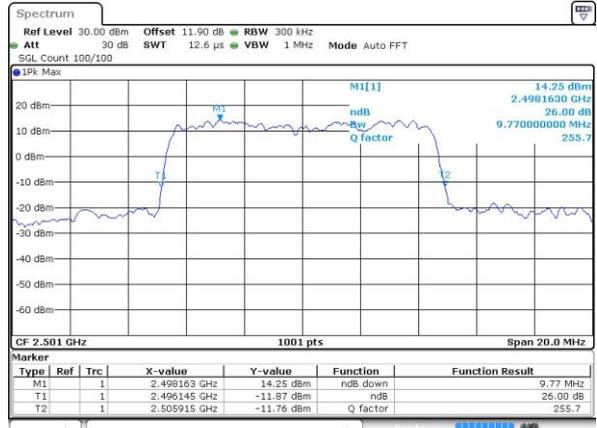
LTE Band 41

Lowest Channel / 5MHz / 64QAM



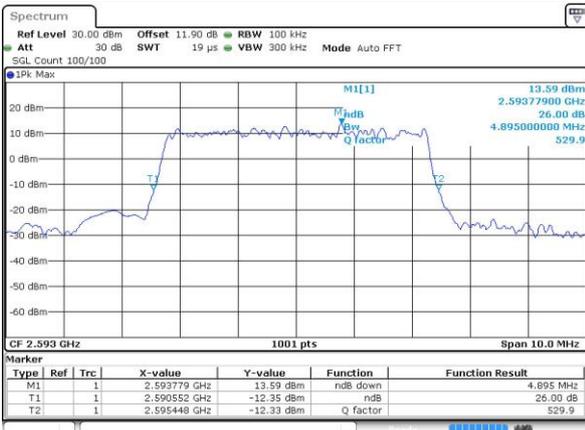
Date: 3.JUL.2019 14:58:01

Lowest Channel / 10MHz / 64QAM



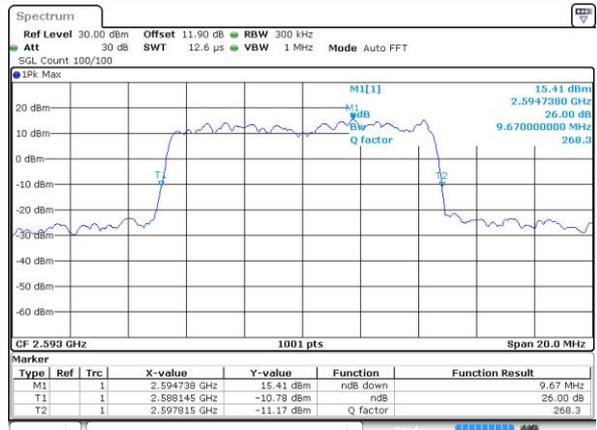
Date: 3.JUL.2019 14:58:15

Middle Channel / 5MHz / 64QAM



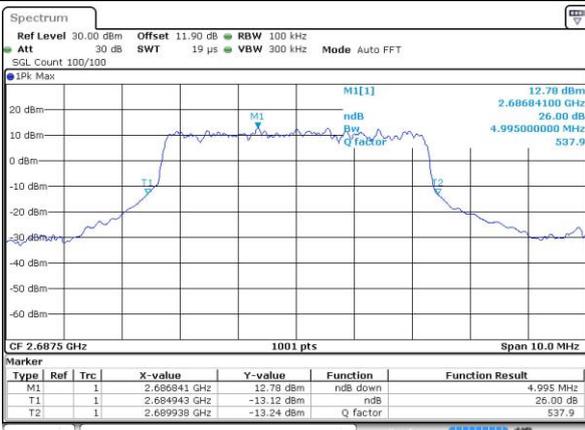
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Middle Channel / 10MHz / 64QAM



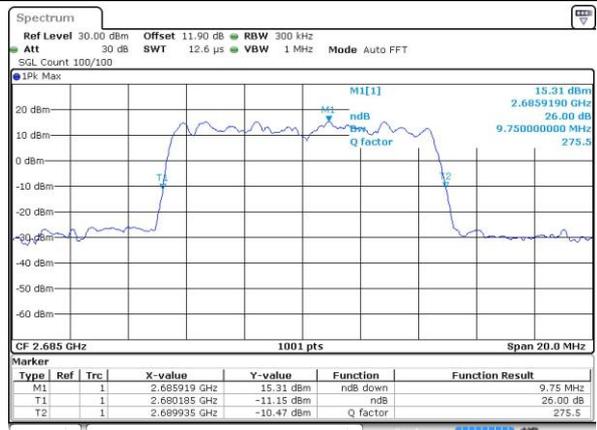
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Highest Channel / 5MHz / 64QAM



Date: 3.JUL.2019 14:58:49

Highest Channel / 10MHz / 64QAM

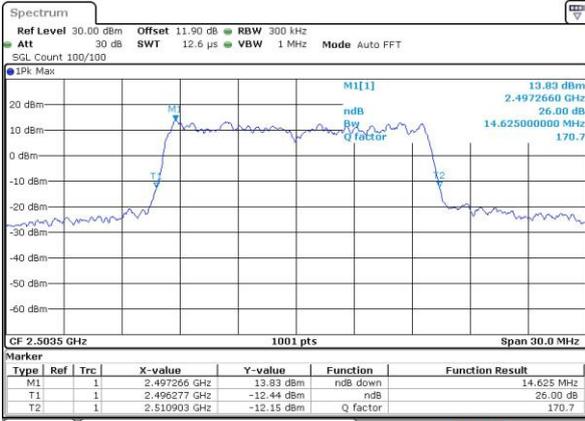


Date: 3.JUL.2019 15:00:03



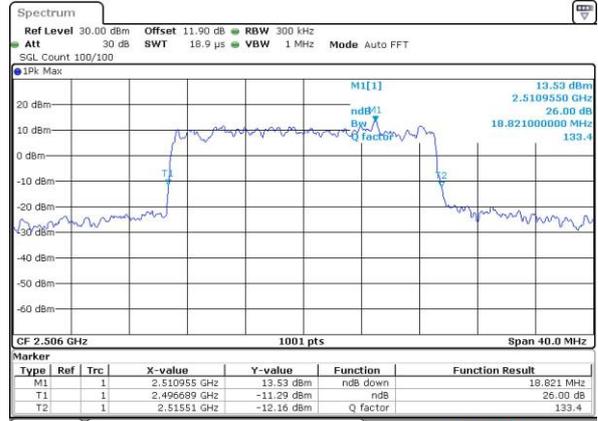
LTE Band 41

Lowest Channel / 15MHz / 64QAM



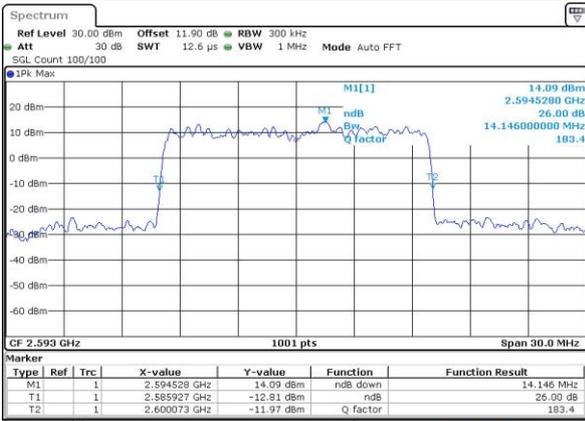
Date: 3.JUL.2019 15:00:29

Lowest Channel / 20MHz / 64QAM



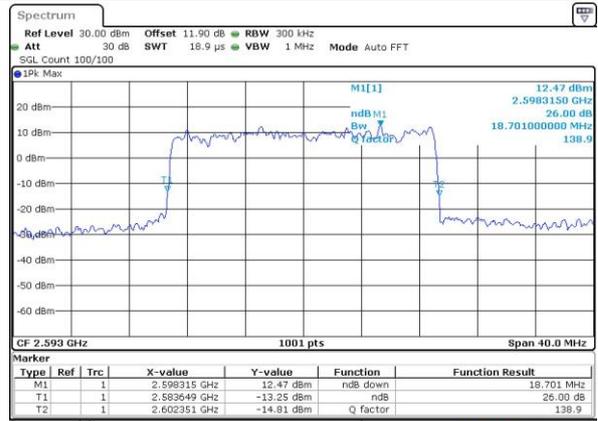
Date: 3.JUL.2019 15:01:43

Middle Channel / 15MHz / 64QAM



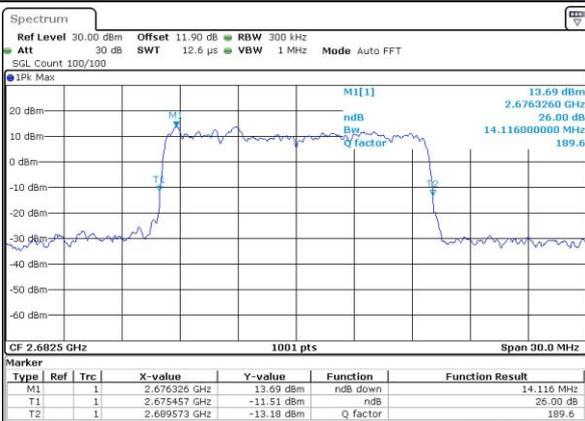
Date: 3.JUL.2019 15:00:53

Middle Channel / 20MHz / 64QAM



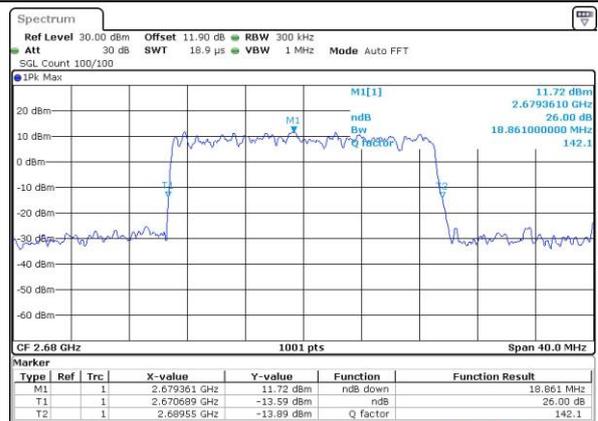
Date: 3.JUL.2019 15:02:06

Highest Channel / 15MHz / 64QAM



Date: 3.JUL.2019 15:01:17

Highest Channel / 20MHz / 64QAM



Date: 3.JUL.2019 15:02:31



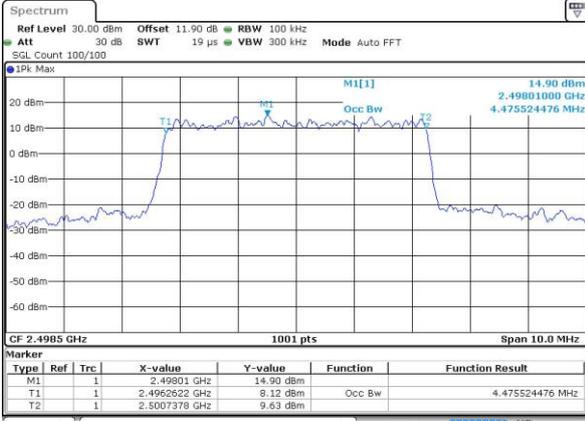
Occupied Bandwidth

| Mode | LTE Band 41 : 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 | - | - | - | - | 4.48 | 4.47 | 9.01 | 9.05 | 13.52 | 13.46 | 17.90 | 17.86 |
| Middle CH | - | - | - | - | 4.50 | 4.47 | 9.05 | 8.97 | 13.37 | 13.43 | 17.86 | 17.86 |
| Highest CH | - | - | - | - | 4.48 | 4.49 | 9.03 | 9.03 | 13.46 | 13.49 | 17.90 | 17.90 |
| Mode | LTE Band 41 : 99%OBW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | |
| Lowest CH | - | - | - | - | 4.48 | - | 8.99 | - | 13.43 | - | 17.86 | - |
| Middle CH | - | - | - | - | 4.51 | - | 9.05 | - | 13.43 | - | 17.86 | - |
| Highest CH | - | - | - | - | 4.50 | - | 9.01 | - | 13.40 | - | 17.86 | - |



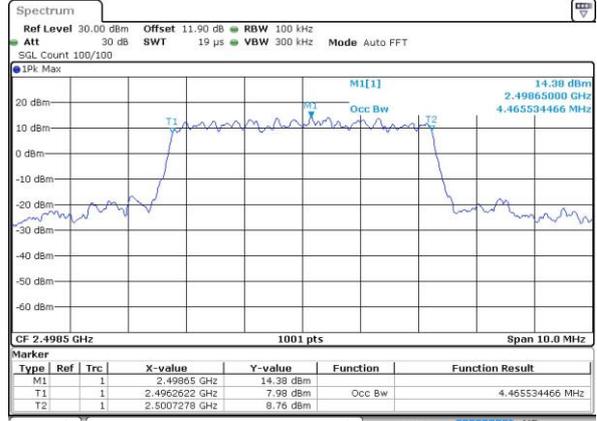
LTE Band 41

Lowest Channel / 5MHz / QPSK



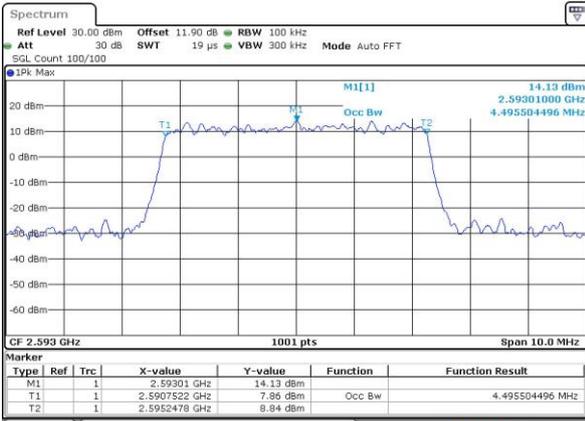
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Lowest Channel / 5MHz / 16QAM



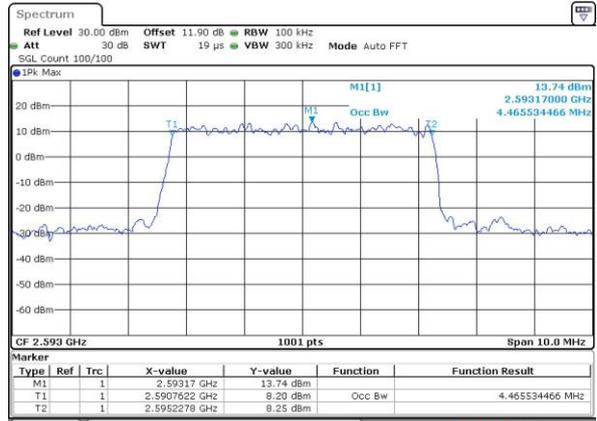
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Middle Channel / 5MHz / QPSK



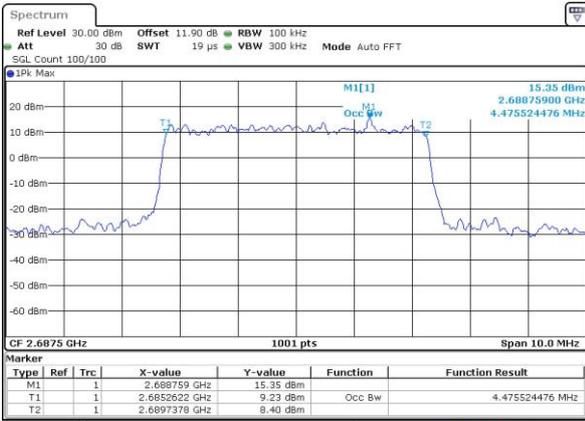
Date: 3.JUL.2019 14:48:50

Middle Channel / 5MHz / 16QAM



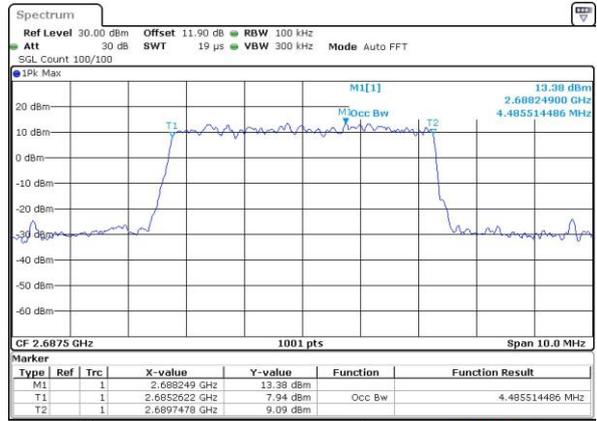
Date: 3.JUL.2019 14:49:02

Highest Channel / 5MHz / QPSK



Date: 3.JUL.2019 14:49:37

Highest Channel / 5MHz / 16QAM

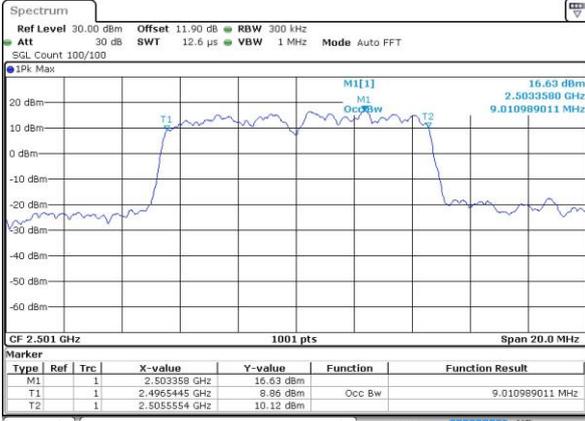


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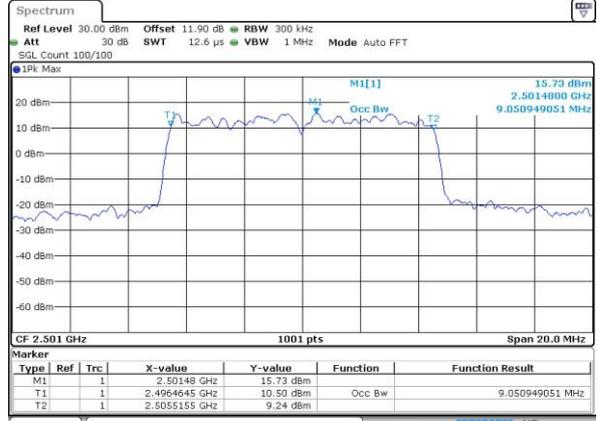
LTE Band 41

Lowest Channel / 10MHz / QPSK



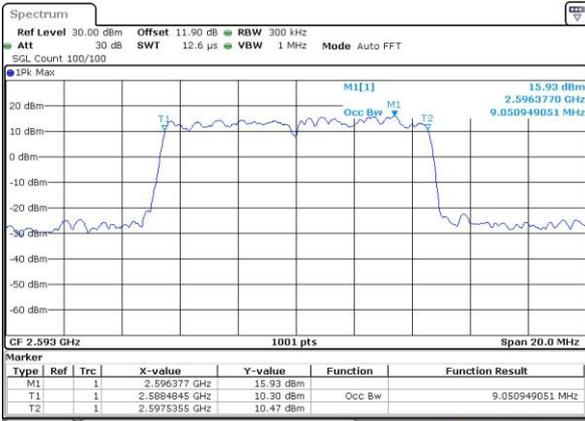
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Lowest Channel / 10MHz / 16QAM



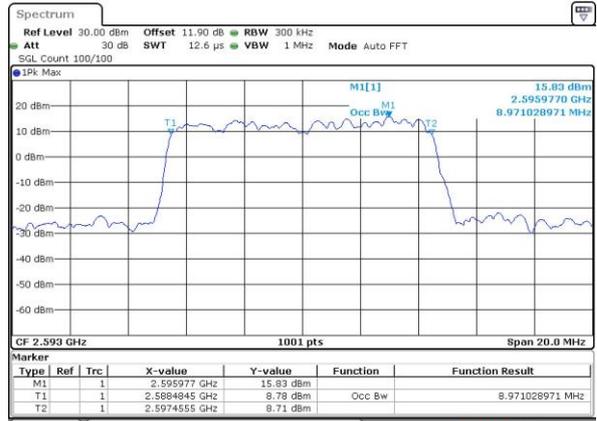
Date: 3.JUL.2019 14:50:40

Middle Channel / 10MHz / QPSK



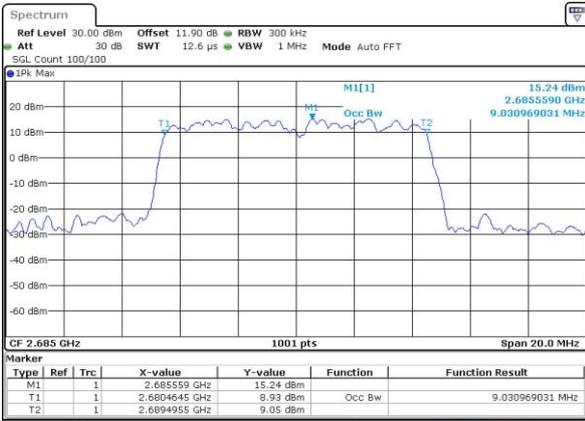
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Middle Channel / 10MHz / 16QAM



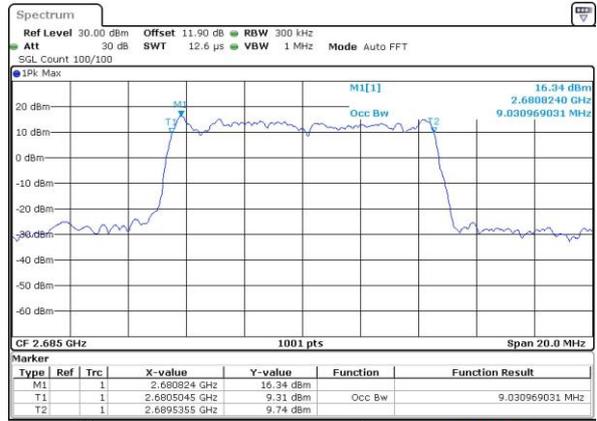
Date: 3.JUL.2019 14:51:29

Highest Channel / 10MHz / QPSK



Date: 3.JUL.2019 14:52:04

Highest Channel / 10MHz / 16QAM



Date: 3.JUL.2019 14:52:17