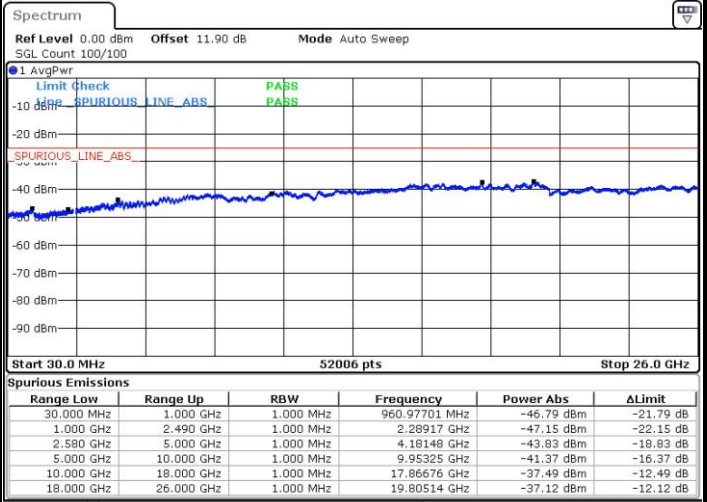
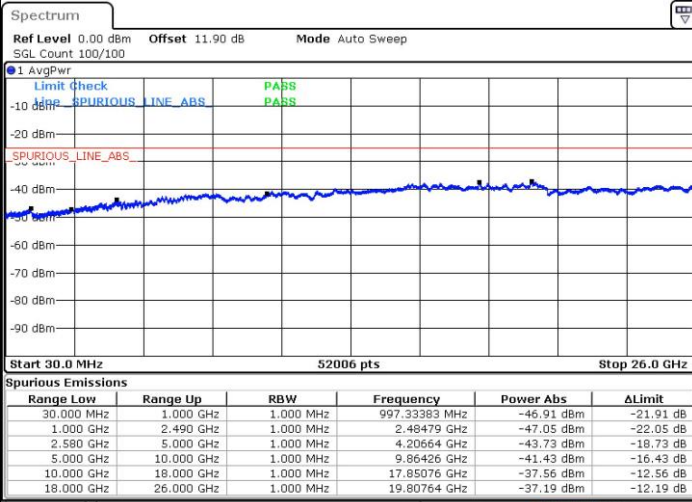




LTE Band 7 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

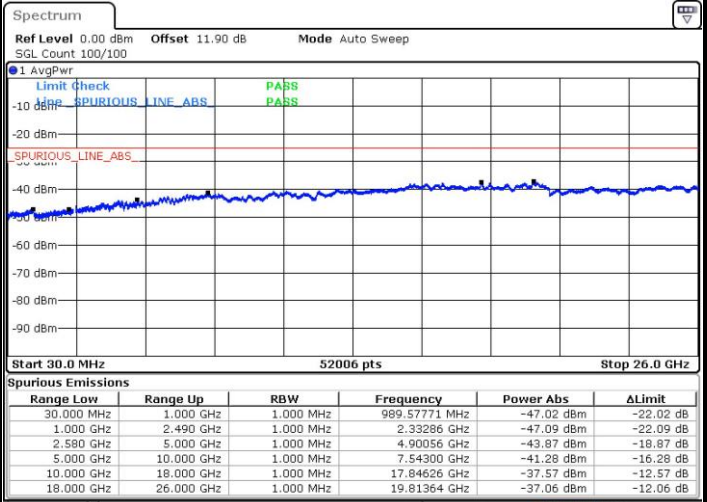
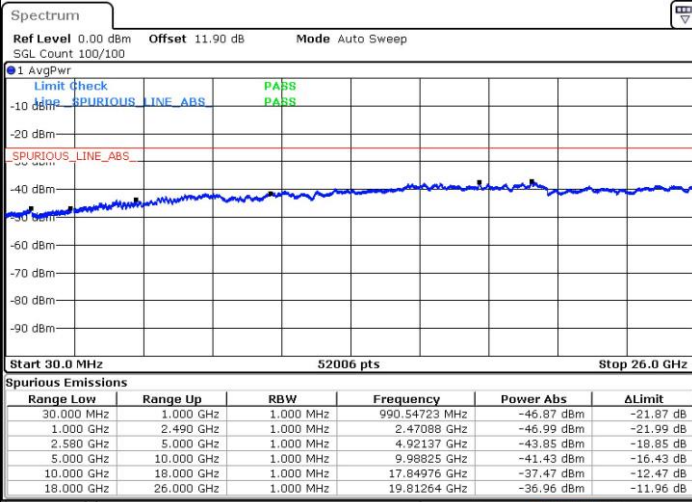


Date: 25 JUN 2019 19:53:58

Date: 25 JUN 2019 19:54:44

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 25 JUN 2019 19:58:26

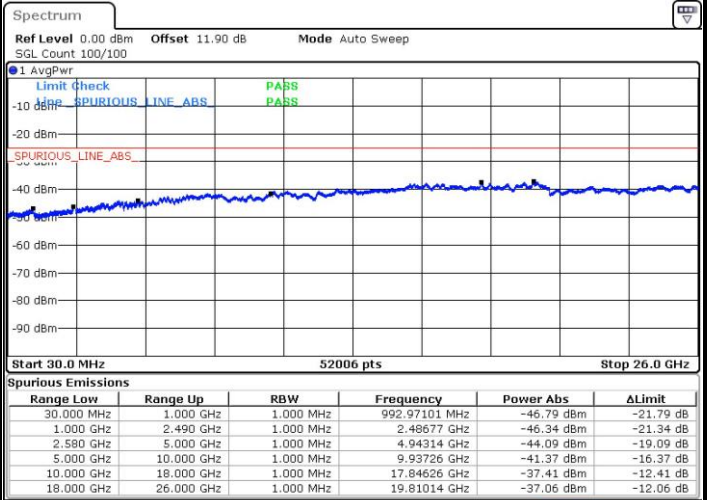
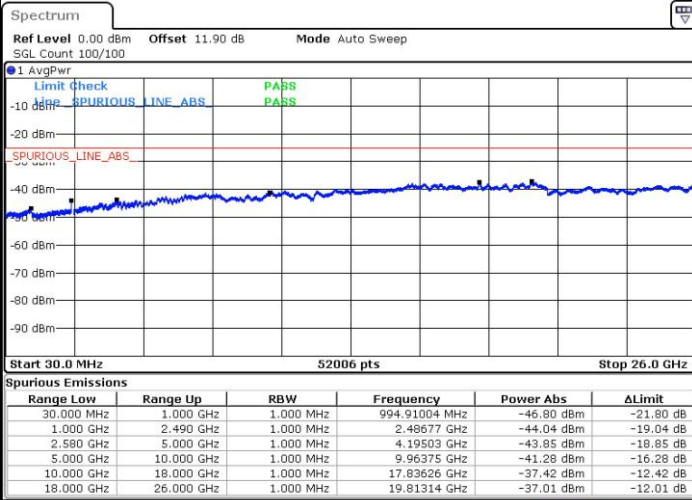
Date: 25 JUN 2019 19:59:12



LTE Band 7 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

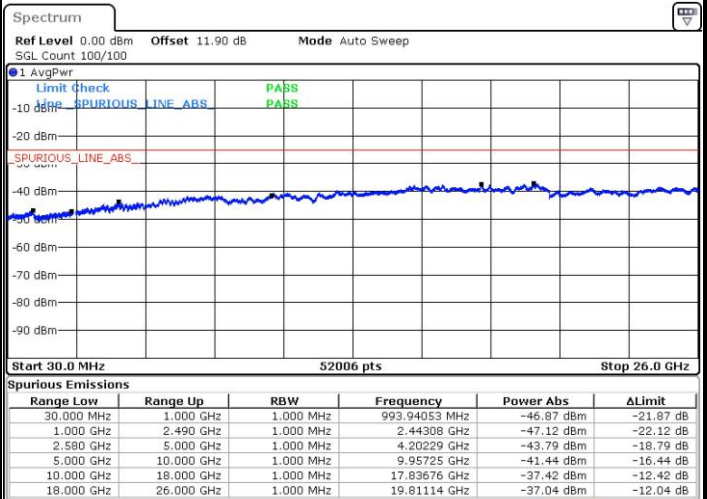
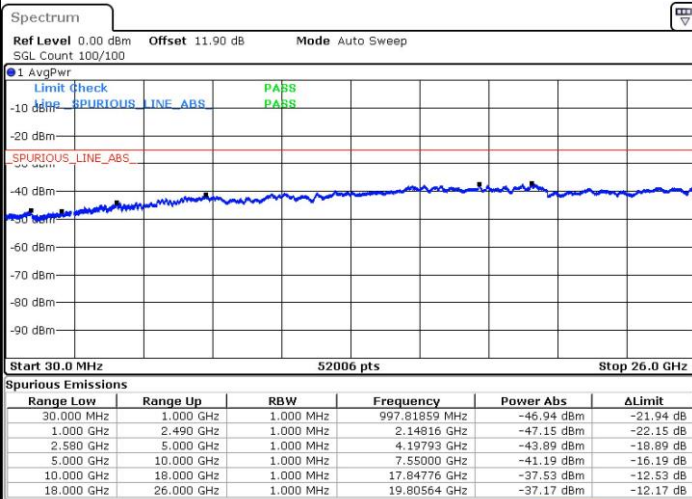


Date: 25 JUN 2019 20:08:33

Date: 25 JUN 2019 20:09:18

Middle Channel / QPSK

Middle Channel / 16QAM



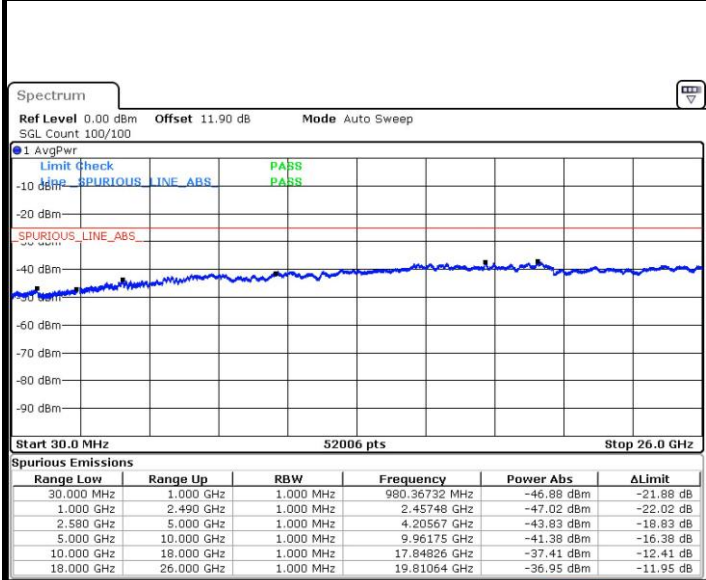
Date: 25 JUN 2019 20:10:51

Date: 25 JUN 2019 20:11:36



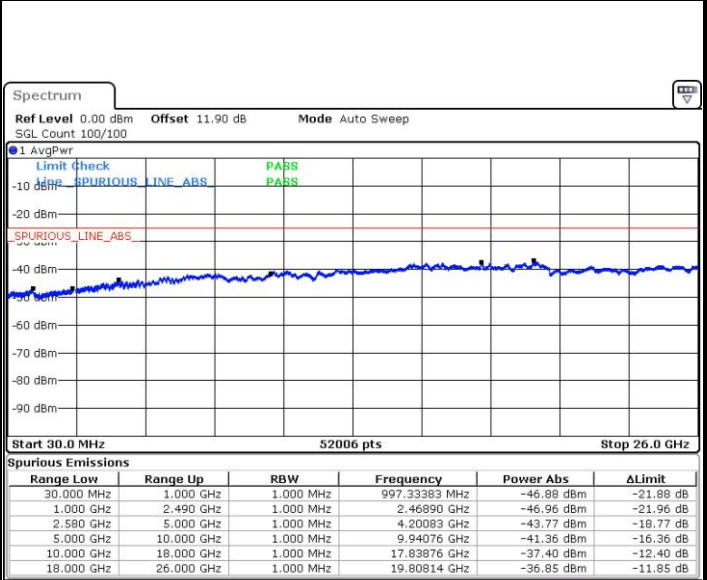
LTE Band7 / 15MHz

Highest Channel / QPSK



Date: 25 JUN 2019 20:15:19

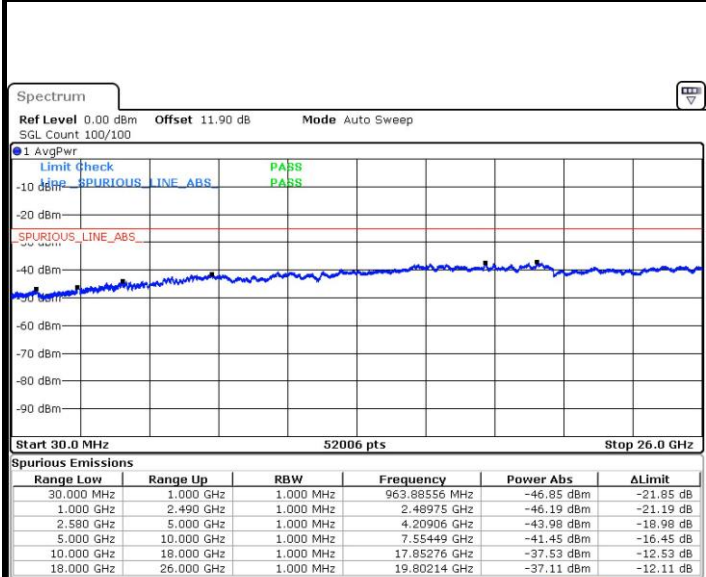
Highest Channel / 16QAM



Date: 25 JUN 2019 20:16:05

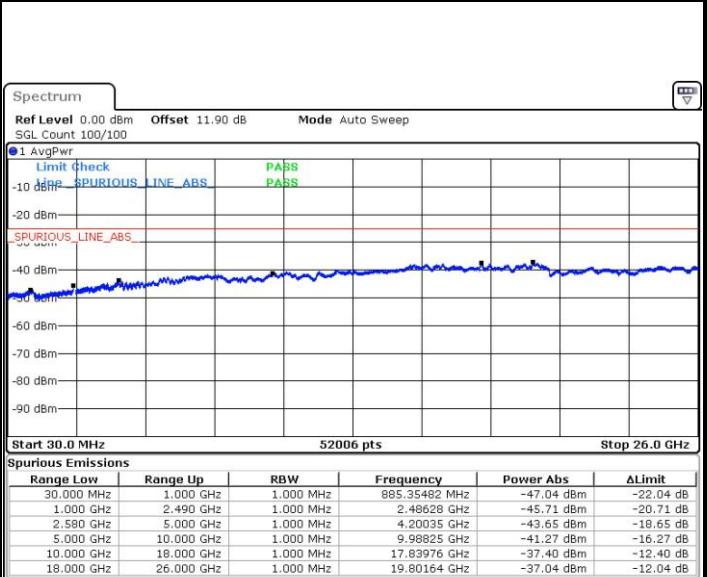
LTE Band 7 / 20MHz

Lowest Channel / QPSK



Date: 25 JUN 2019 20:25:25

Lowest Channel / 16QAM



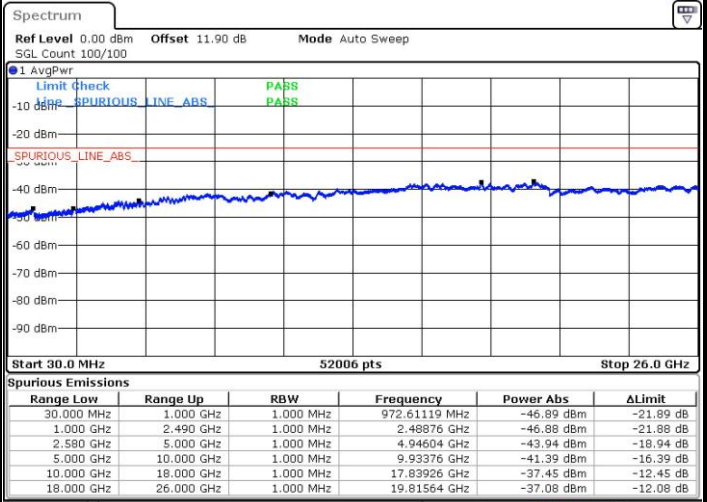
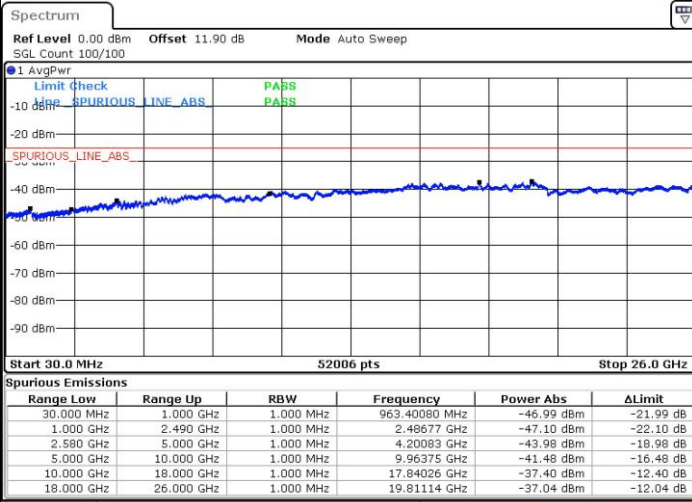
Date: 25 JUN 2019 20:26:10



LTE Band 7 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

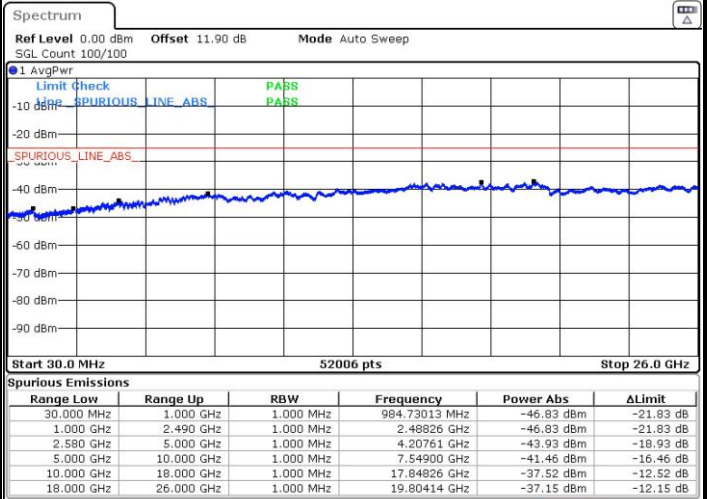
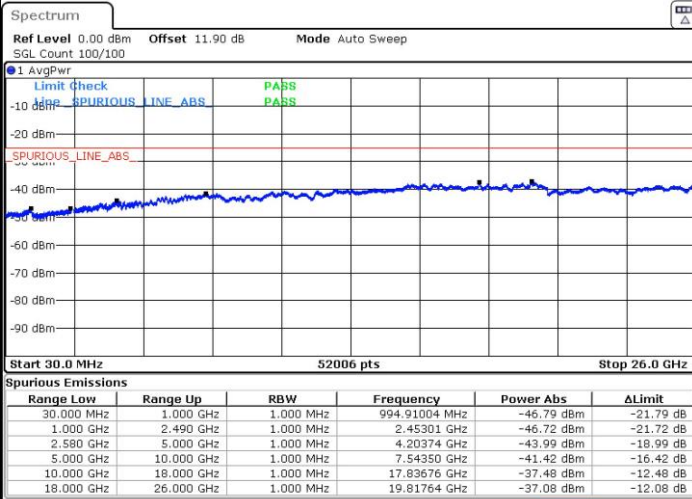


Date: 25 JUN 2019 20:27:43

Date: 25 JUN 2019 20:28:28

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 29 JUN 2019 08:43:16

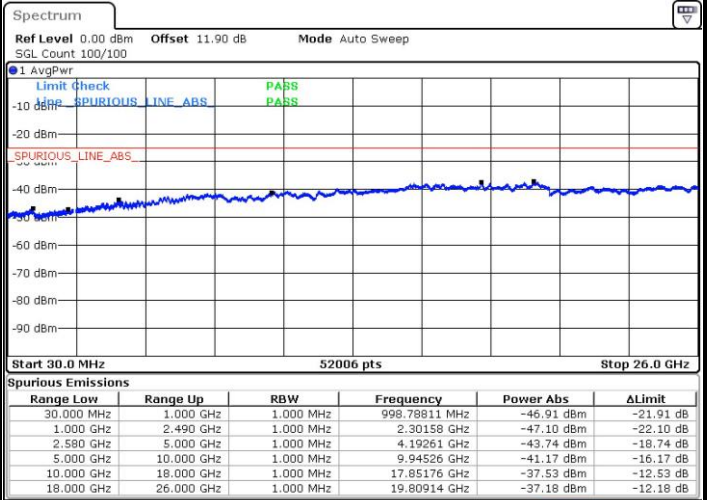
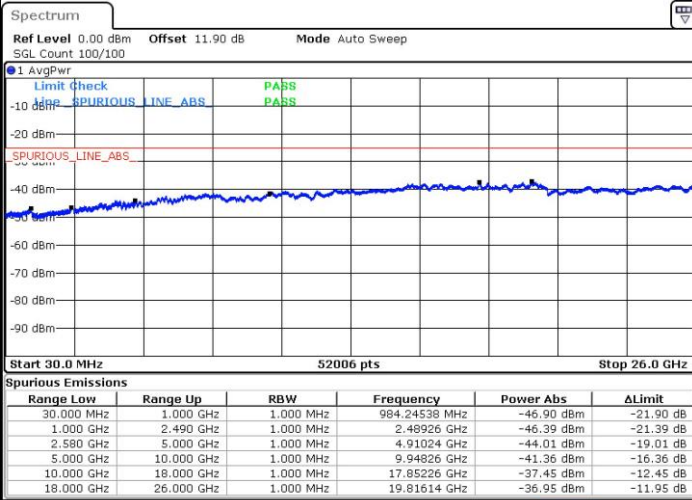
Date: 29 JUN 2019 08:44:00



LTE Band 7 / 5MHz

Lowest Channel / 64QAM

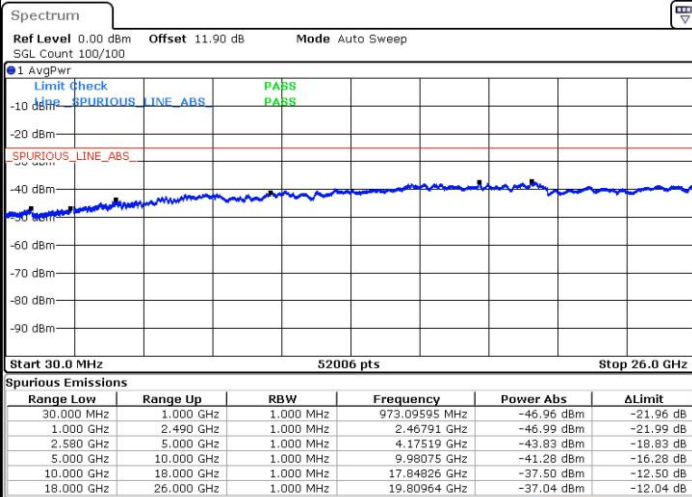
Middle Channel / 64QAM



Date: 25 JUN 2019 19:44:31

Date: 25 JUN 2019 19:45:41

Highest Channel / 64QAM



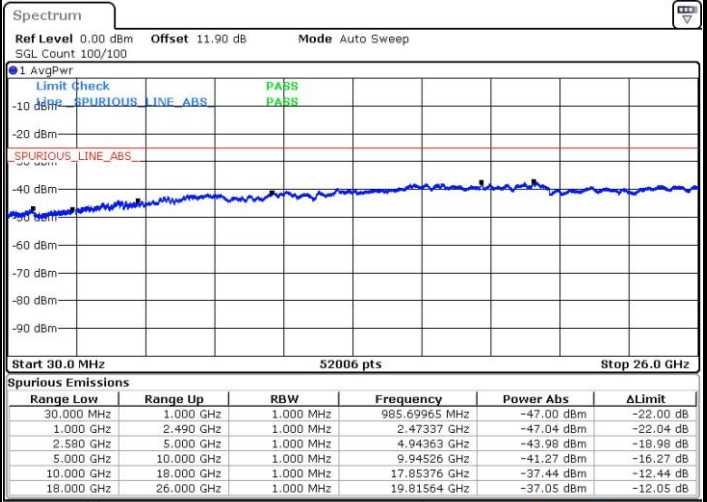
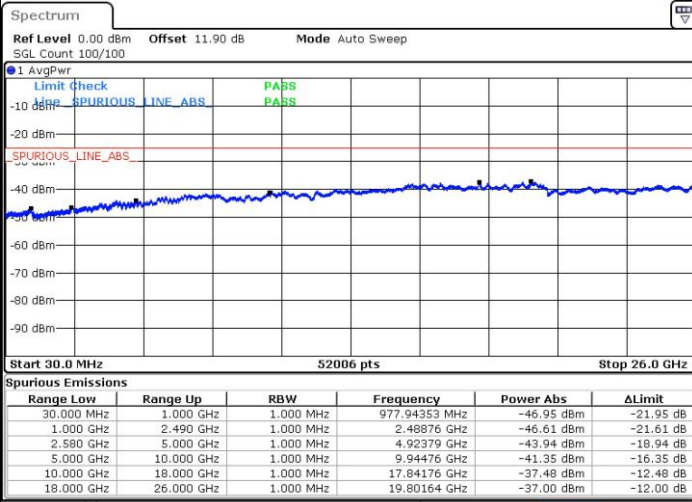
Date: 25 JUN 2019 19:47:54



LTE Band 7 / 10MHz

Lowest Channel / 64QAM

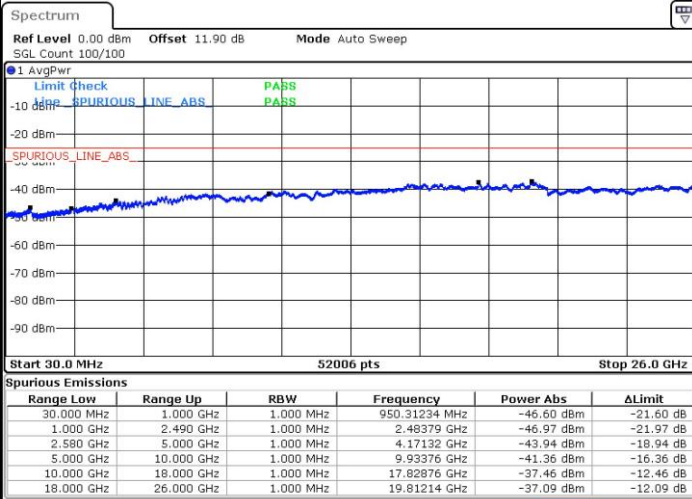
Middle Channel / 64QAM



Date: 25 JUN 2019 20:01:26

Date: 25 JUN 2019 20:02:35

Highest Channel / 64QAM



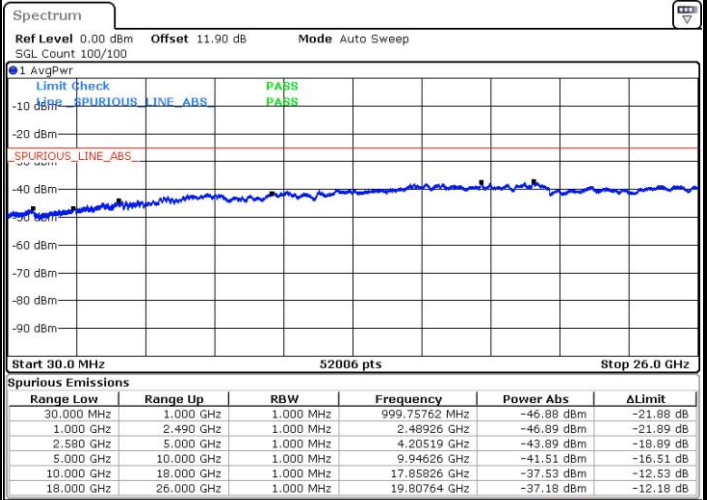
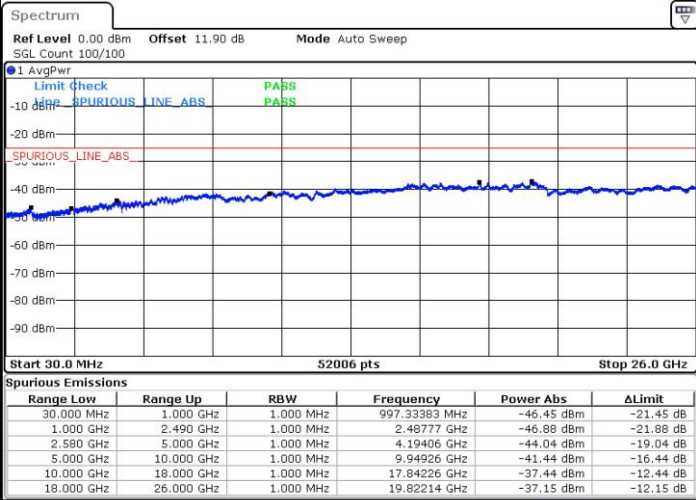
Date: 25 JUN 2019 20:04:49



LTE Band 7 / 15MHz

Lowest Channel / 64QAM

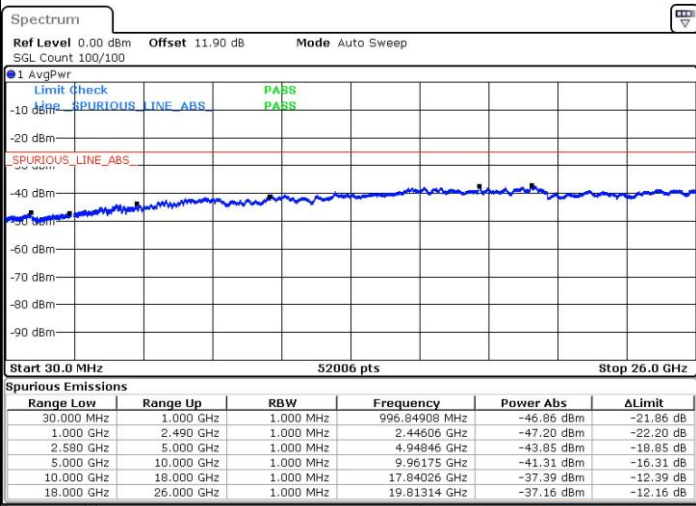
Middle Channel / 64QAM



Date: 25 JUN 2019 20:18:19

Date: 25 JUN 2019 20:19:28

Highest Channel / 64QAM



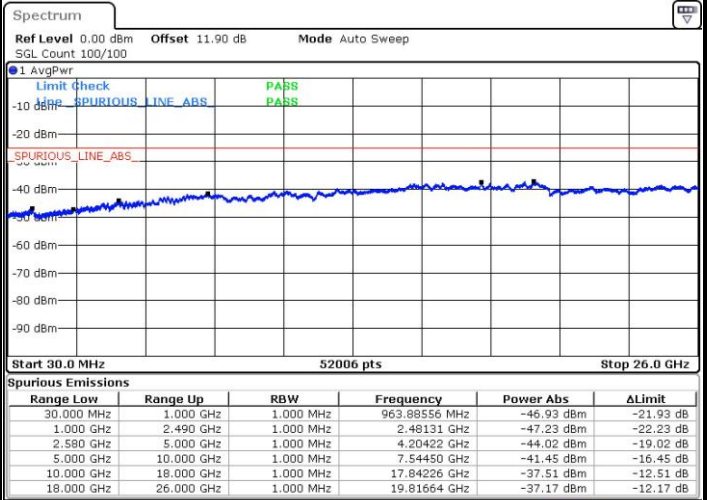
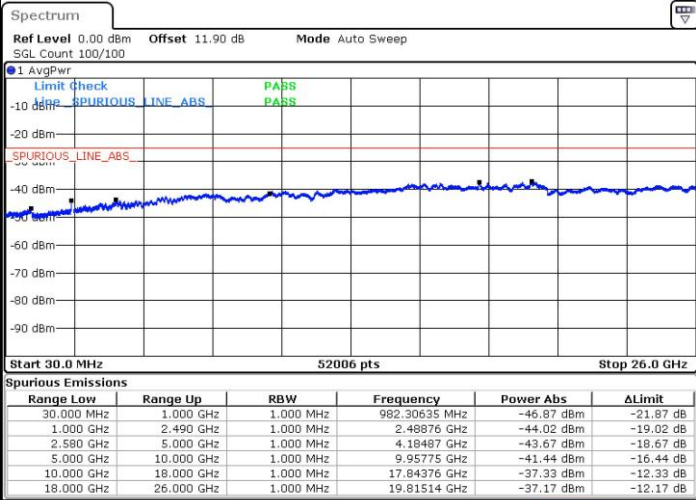
Date: 25 JUN 2019 20:21:42



LTE Band 7 / 20MHz

Lowest Channel / 64QAM

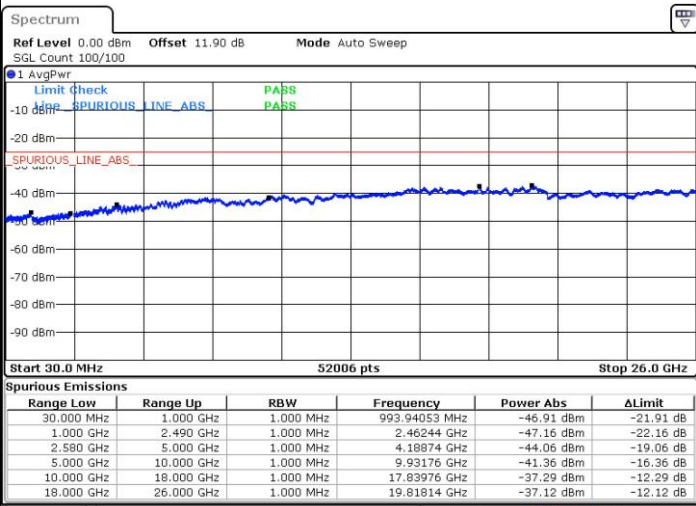
Middle Channel / 64QAM



Date: 25 JUN 2019 20:35:12

Date: 25 JUN 2019 20:36:21

Highest Channel / 64QAM



Date: 25 JUN 2019 20:38:36



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 | 0.0008 | PASS |
| 40 | Normal Voltage | 0.0099 | |
| 30 | Normal Voltage | 0.0103 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0072 | |
| 0 | Normal Voltage | 0.0073 | |
| -10 | Normal Voltage | 0.0079 | |
| -20 | Normal Voltage | 0.0077 | |
| -30 | Normal Voltage | 0.0083 | |
| 20 | Maximum Voltage | 0.0078 | |
| 20 | Normal Voltage | 0.0000 | |
| 20 | Battery End Point | 0.0080 | |

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 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 | 3.54 | 4.87 | 4.41 | 5.83 | PASS |
| Middle CH | 3.77 | 4.90 | 3.94 | 5.94 | |
| Highest CH | 3.62 | 5.13 | 4.09 | 5.86 | |
| Mode | LTE Band 12 / 10MHz | | | | |
| Mod. | 64QAM | | | | Limit: 13dB |
| RB Size | 1RB | Full RB | | | Result |
| Lowest CH | 5.10 | 6.35 | - | - | PASS |
| Middle CH | 5.16 | 6.29 | - | - | |
| Highest CH | 5.33 | 6.41 | - | - | |



LTE Band 12 / 10MHz / QPSK

Lowest Channel / 1RB



Date: 26 JUN 2019 04:29:31

Lowest Channel / Full RB



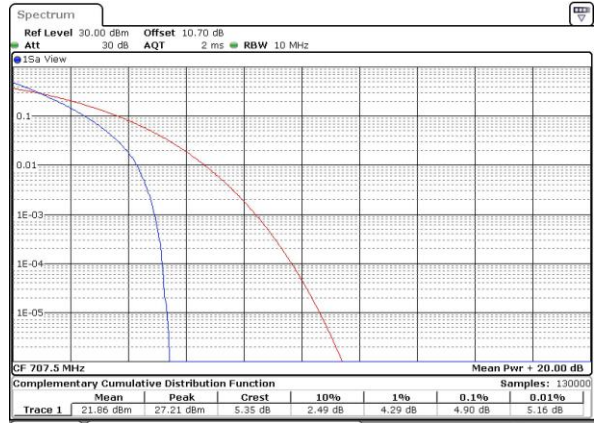
Date: 26 JUN 2019 04:29:20

Middle Channel / 1RB



Date: 26 JUN 2019 04:29:42

Middle Channel / Full RB



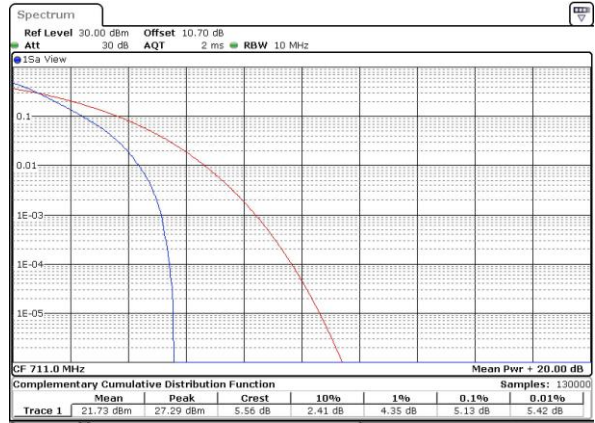
Date: 26 JUN 2019 04:30:11

Highest Channel / 1RB



Date: 26 JUN 2019 04:30:52

Highest Channel / Full RB



Date: 26 JUN 2019 04:30:41



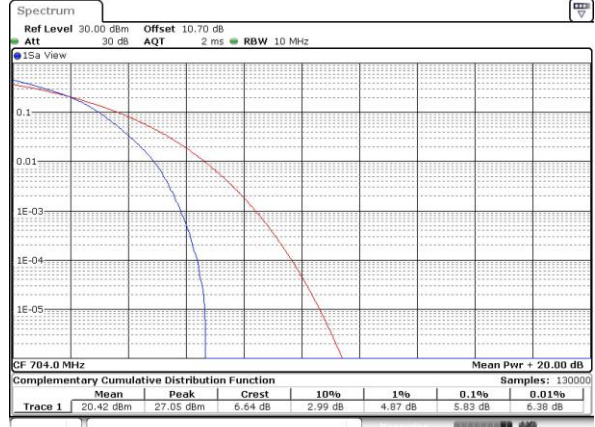
LTE Band 12 / 10MHz / 16QAM

Lowest Channel / 1RB



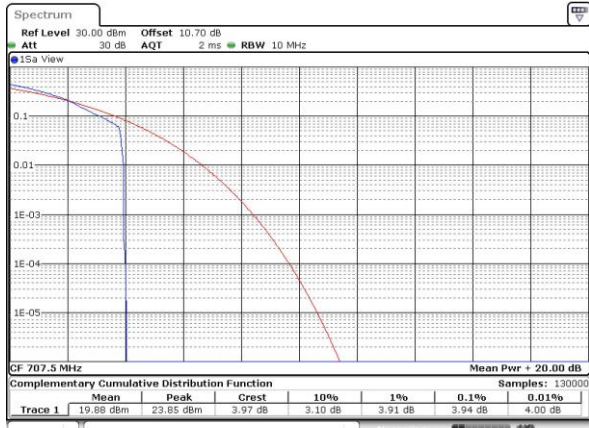
Date: 26 JUN 2019 04:27:49

Lowest Channel / Full RB



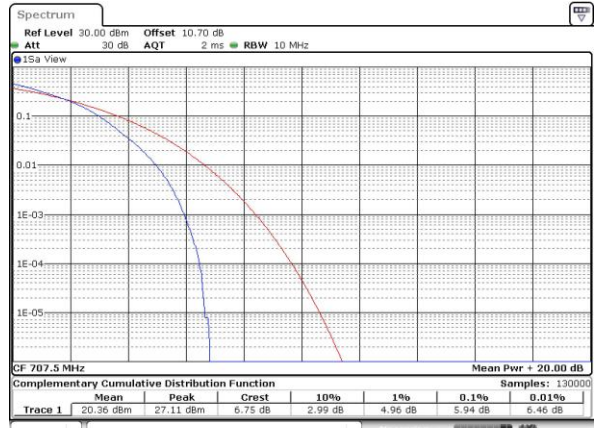
Date: 26 JUN 2019 04:27:33

Middle Channel / 1RB



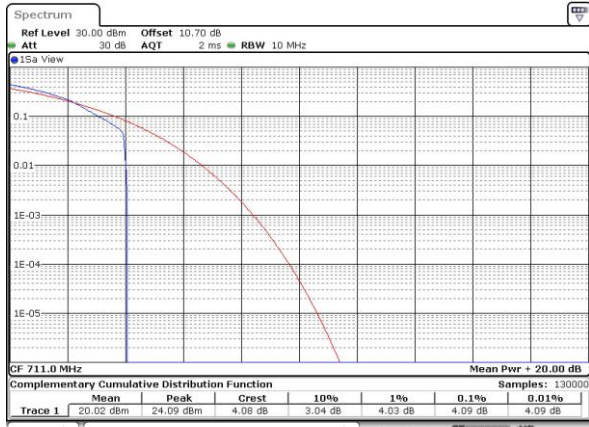
Date: 26 JUN 2019 04:28:04

Middle Channel / Full RB



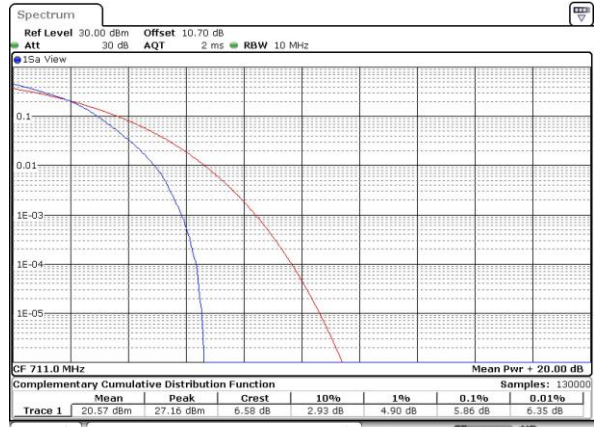
Date: 26 JUN 2019 04:28:16

Highest Channel / 1RB



Date: 26 JUN 2019 04:29:09

Highest Channel / Full RB



Date: 26 JUN 2019 04:28:58



LTE Band 12 / 10MHz / 64QAM

Lowest Channel / 1RB



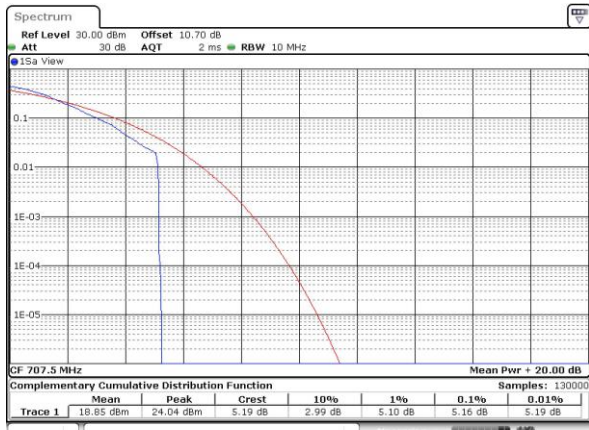
Date: 26 JUN 2019 04:26:20

Lowest Channel / Full RB



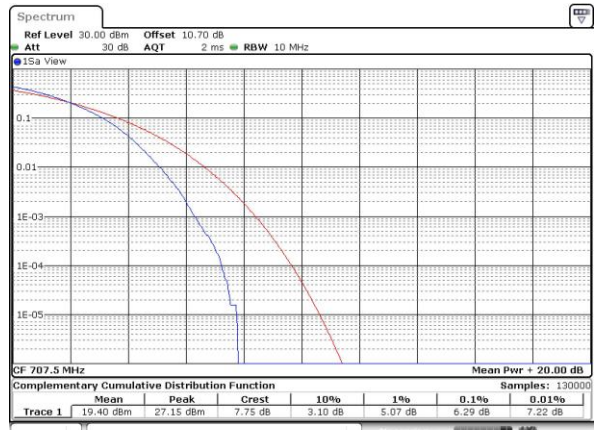
Date: 26 JUN 2019 04:26:08

Middle Channel / 1RB



Date: 26 JUN 2019 04:26:34

Middle Channel / Full RB



Date: 26 JUN 2019 04:26:52

Highest Channel / 1RB



Date: 26 JUN 2019 04:27:19

Highest Channel / Full RB



Date: 26 JUN 2019 04:27:05



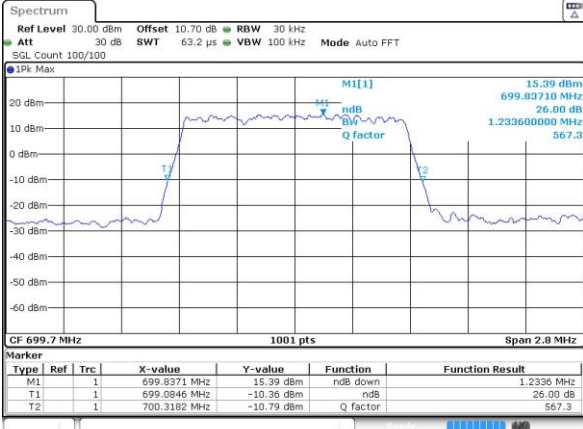
26dB Bandwidth

| 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 | 1.23 | 1.23 | 3.00 | 3.05 | 4.94 | 4.90 | 9.75 | 9.69 | - | - | - | - |
| Middle CH | 1.24 | 1.24 | 3.06 | 3.02 | 4.92 | 4.82 | 9.83 | 9.81 | - | - | - | - |
| Highest CH | 1.22 | 1.22 | 3.01 | 3.02 | 4.92 | 4.88 | 9.77 | 9.73 | - | - | - | - |
| Mode | LTE Band 12 : 26dB BW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | |
| Lowest CH | 1.22 | - | 2.99 | - | 4.99 | - | 9.83 | - | - | - | - | - |
| Middle CH | 1.23 | - | 3.02 | - | 4.90 | - | 9.83 | - | - | - | - | - |
| Highest CH | 1.24 | - | 3.01 | - | 4.87 | - | 9.81 | - | - | - | - | - |



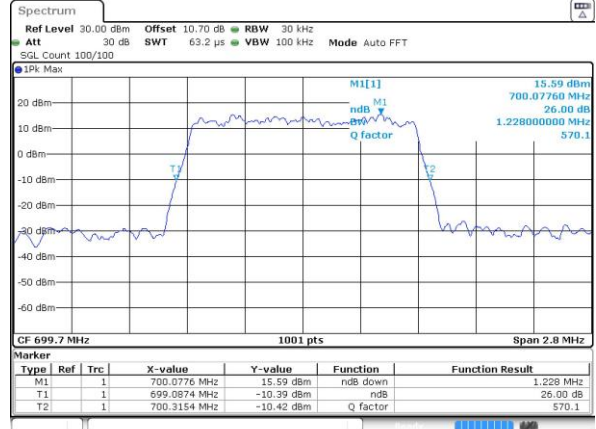
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



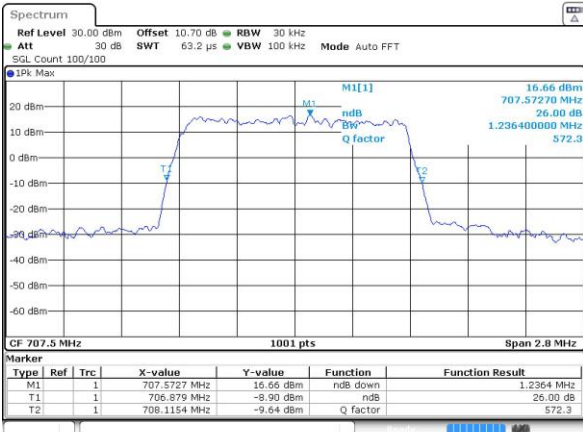
Date: 29 JUN 2019 06:13:51

Lowest Channel / 1.4MHz / 16QAM



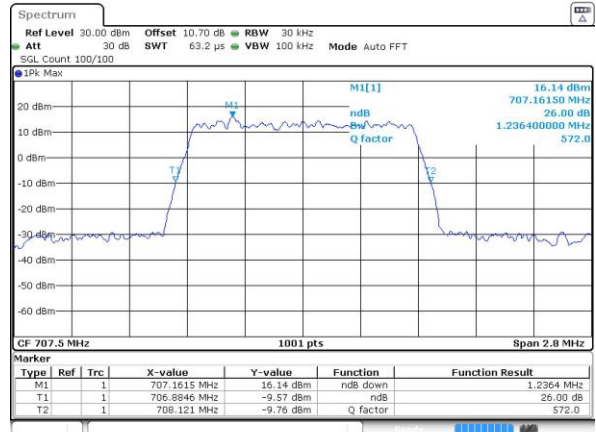
Date: 29 JUN 2019 06:13:39

Middle Channel / 1.4MHz / QPSK



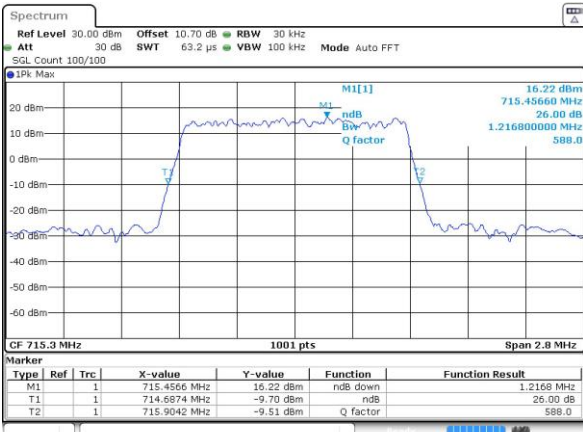
Date: 29 JUN 2019 06:14:26

Middle Channel / 1.4MHz / 16QAM



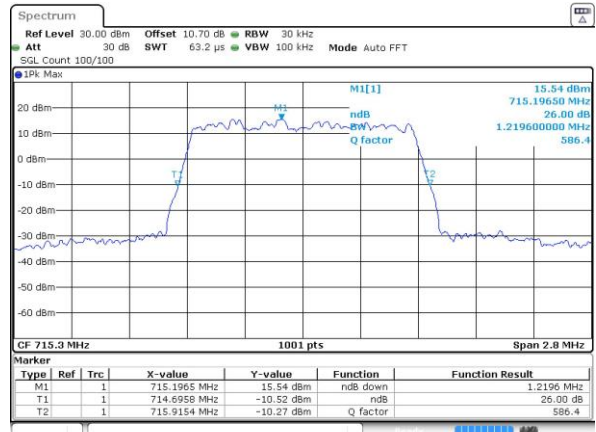
Date: 29 JUN 2019 06:14:38

Highest Channel / 1.4MHz / QPSK



Date: 29 JUN 2019 06:15:27

Highest Channel / 1.4MHz / 16QAM

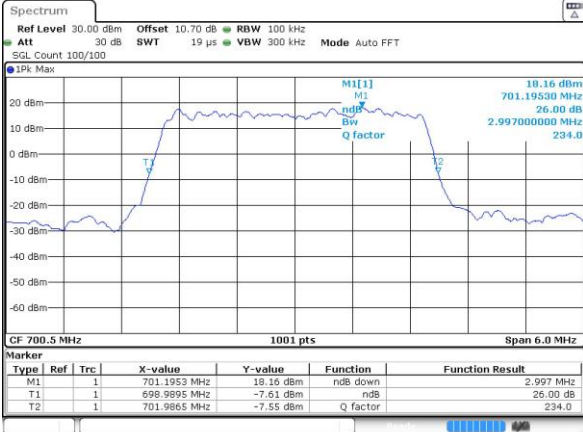


Date: 29 JUN 2019 06:15:14



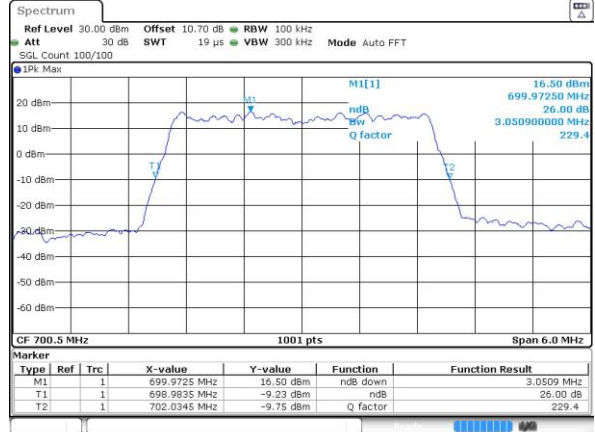
LTE Band 12

Lowest Channel / 3MHz / QPSK



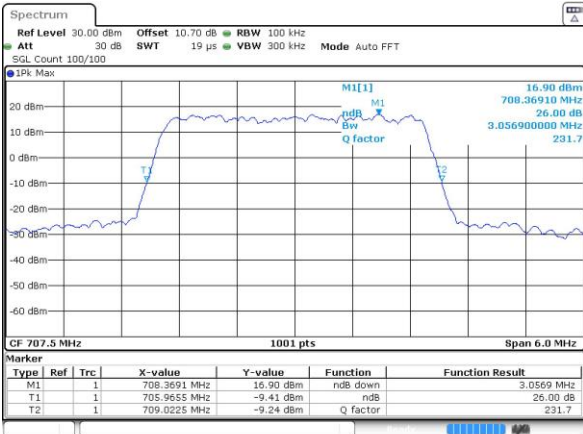
Date: 29 JUN 2019 06 01:53

Lowest Channel / 3MHz / 16QAM



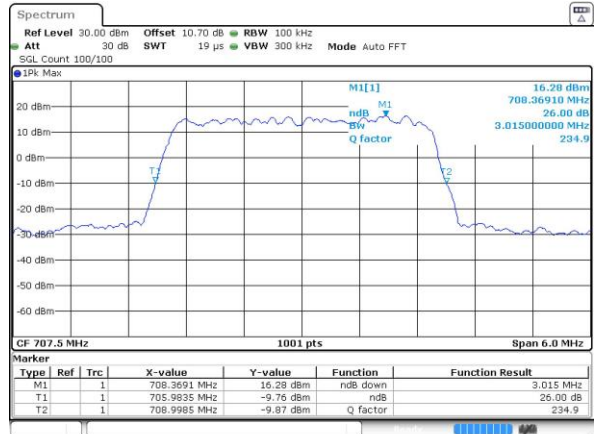
Date: 29 JUN 2019 06 01:41

Middle Channel / 3MHz / QPSK



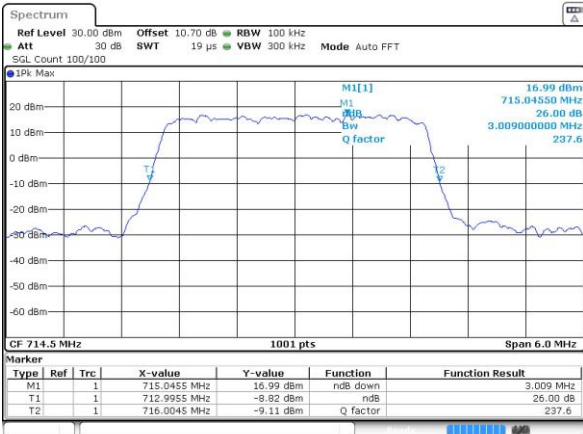
Date: 29 JUN 2019 06 02:29

Middle Channel / 3MHz / 16QAM



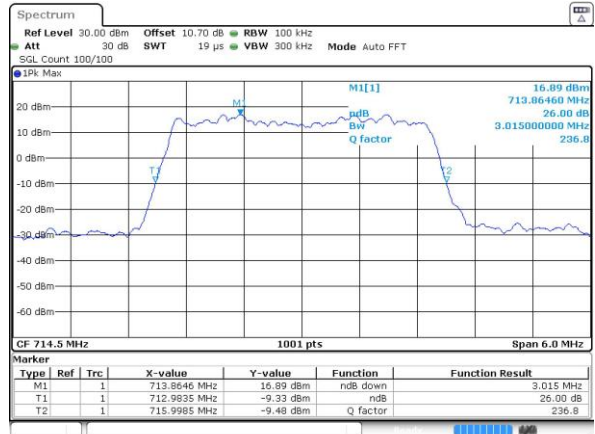
Date: 29 JUN 2019 06 02:40

Highest Channel / 3MHz / QPSK



Date: 29 JUN 2019 06 03:29

Highest Channel / 3MHz / 16QAM

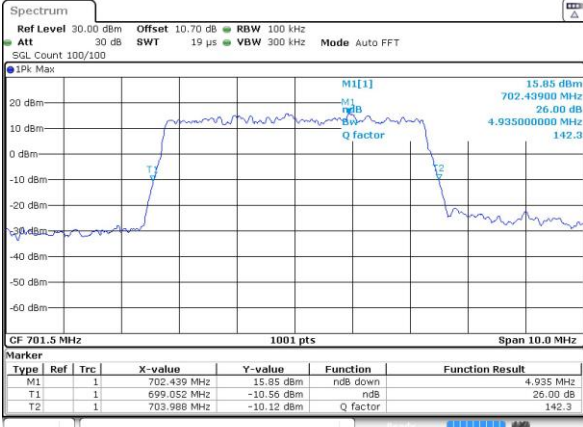


Date: 29 JUN 2019 06 03:17



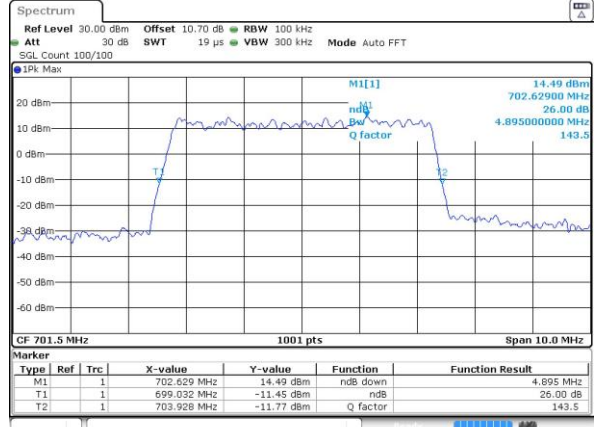
LTE Band 12

Lowest Channel / 5MHz / QPSK



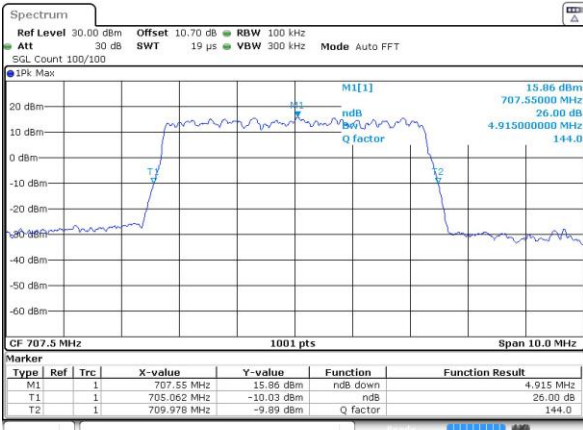
Date: 29 JUN 2019 06:06:43

Lowest Channel / 5MHz / 16QAM



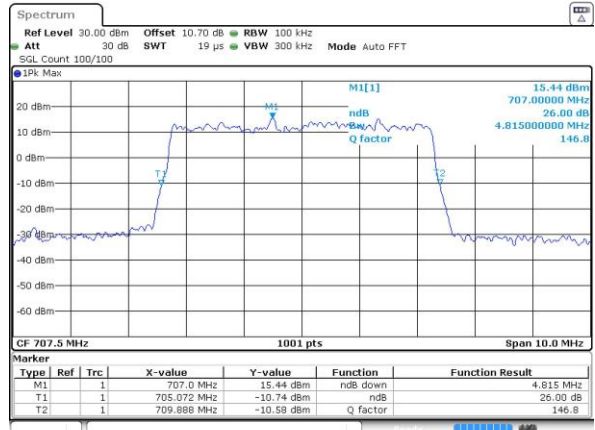
Date: 29 JUN 2019 06:06:30

Middle Channel / 5MHz / QPSK



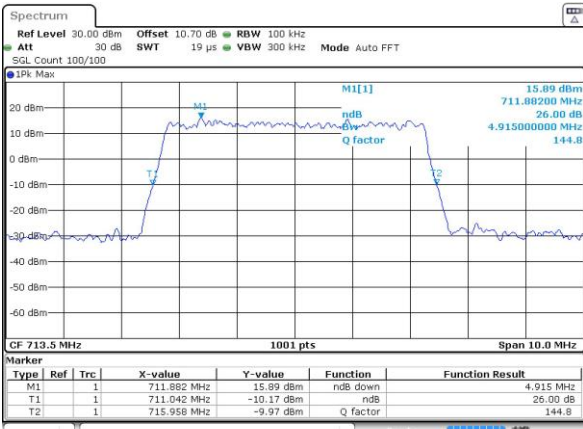
Date: 29 JUN 2019 06:07:18

Middle Channel / 5MHz / 16QAM



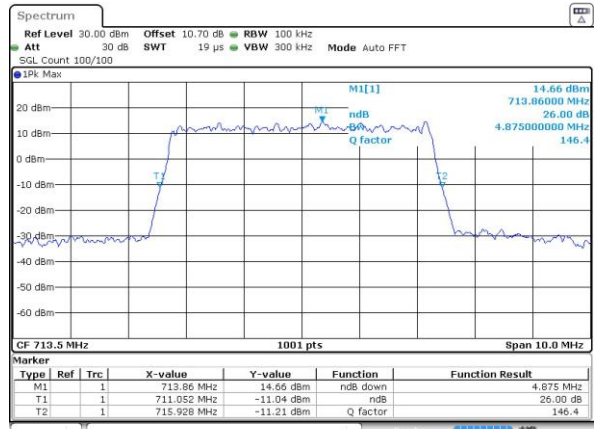
Date: 29 JUN 2019 06:07:30

Highest Channel / 5MHz / QPSK



Date: 29 JUN 2019 06:08:18

Highest Channel / 5MHz / 16QAM

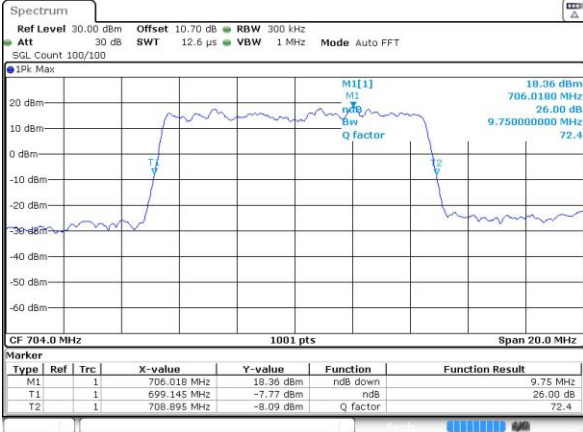


Date: 29 JUN 2019 06:08:06



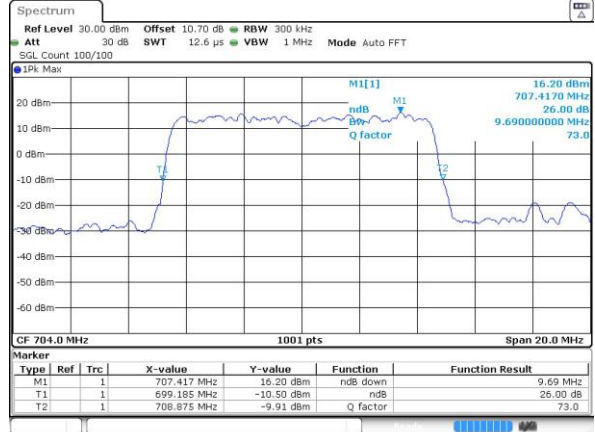
LTE Band 12

Lowest Channel / 10MHz / QPSK



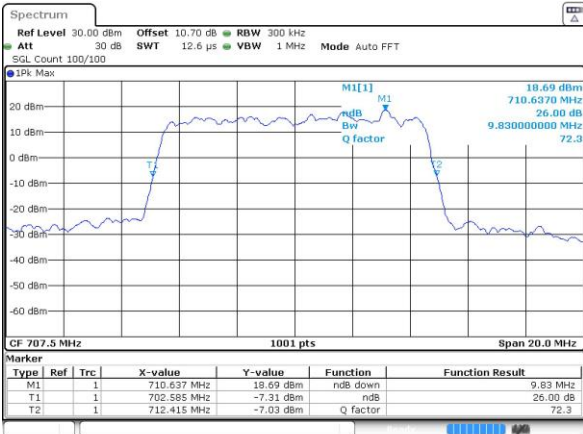
Date: 29 JUN 2019 06:09:08

Lowest Channel / 10MHz / 16QAM



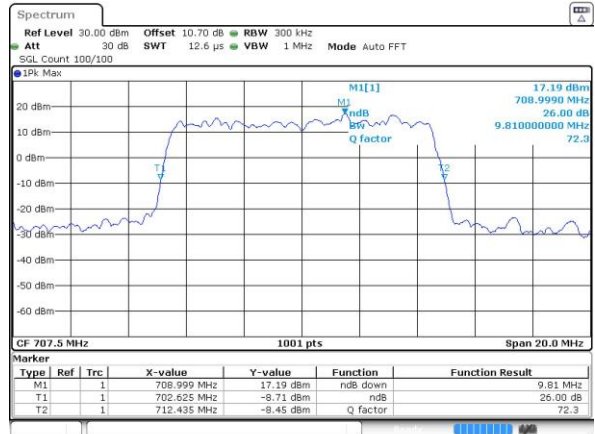
Date: 29 JUN 2019 06:08:56

Middle Channel / 10MHz / QPSK



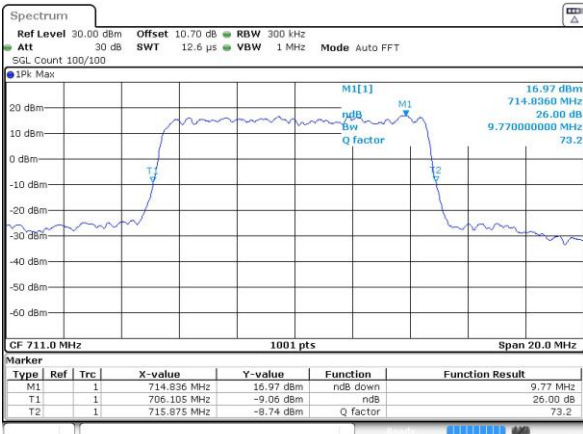
Date: 29 JUN 2019 06:09:44

Middle Channel / 10MHz / 16QAM



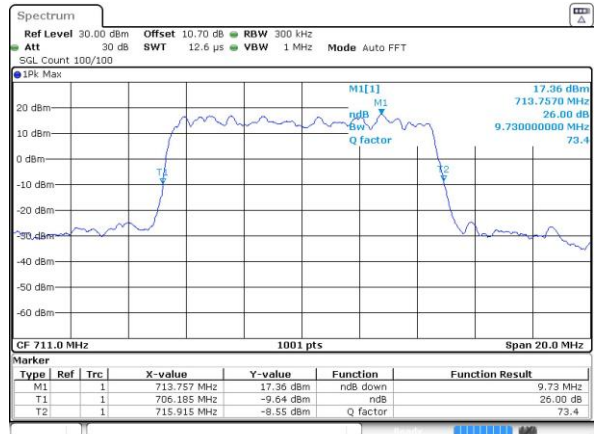
Date: 29 JUN 2019 06:09:55

Highest Channel / 10MHz / QPSK



Date: 29 JUN 2019 06:10:44

Highest Channel / 10MHz / 16QAM

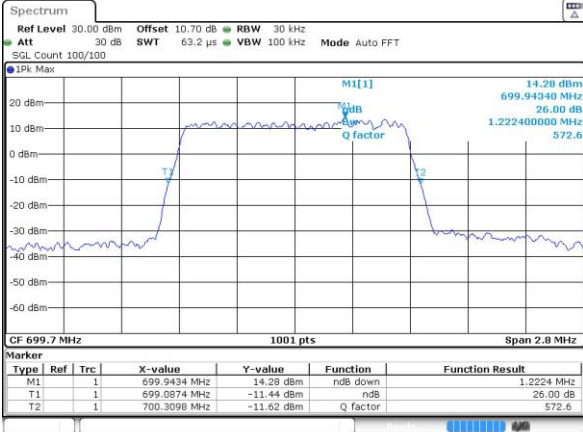


Date: 29 JUN 2019 06:10:32



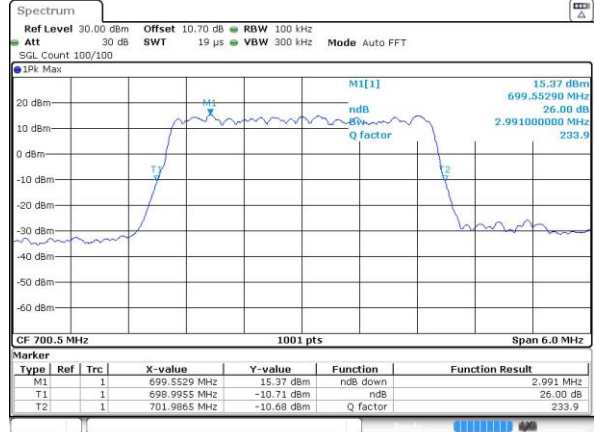
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



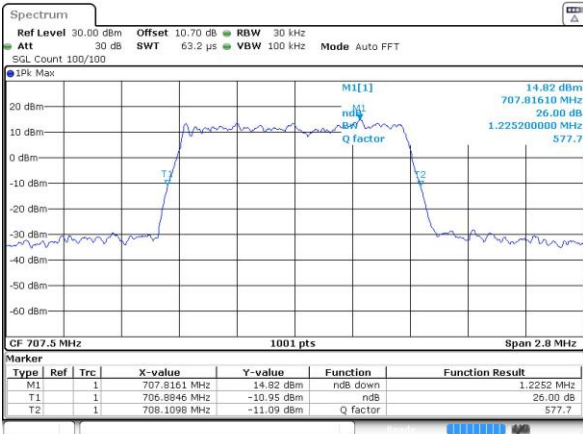
Date: 29 JUN 2019 06:15:51

Lowest Channel / 3MHz / 64QAM



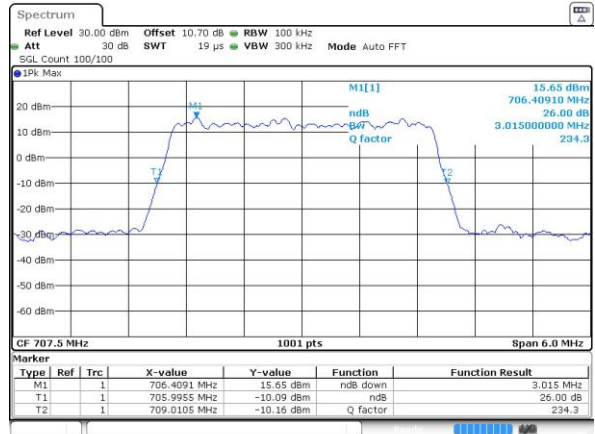
Date: 29 JUN 2019 06:03:53

Middle Channel / 1.4MHz / 64QAM



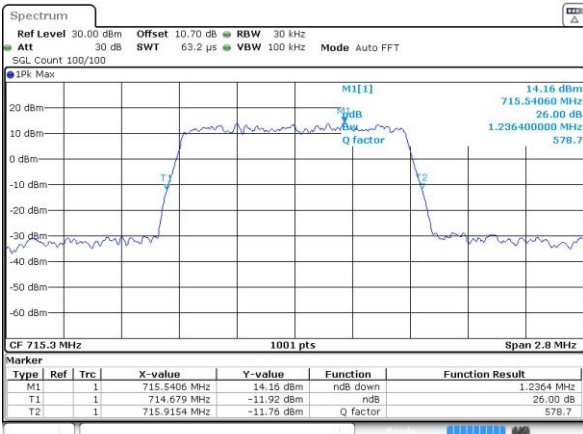
Date: 29 JUN 2019 06:16:15

Middle Channel / 3MHz / 64QAM



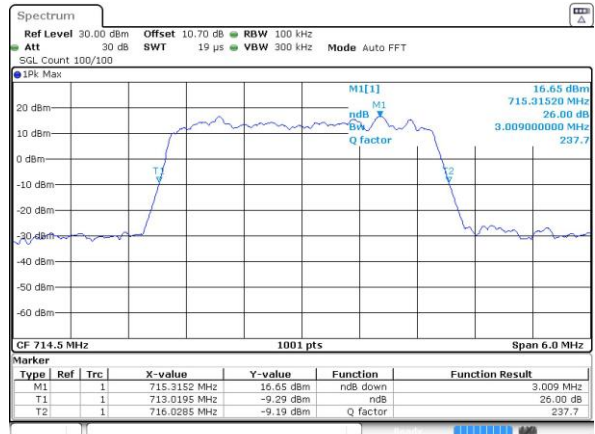
Date: 29 JUN 2019 06:04:17

Highest Channel / 1.4MHz / 64QAM



Date: 29 JUN 2019 06:16:39

Highest Channel / 3MHz / 64QAM

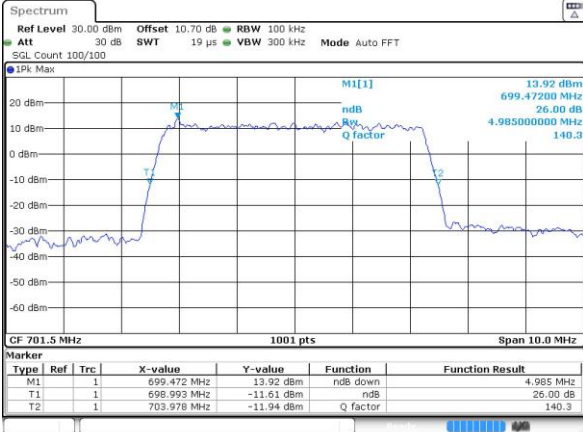


Date: 29 JUN 2019 06:04:41



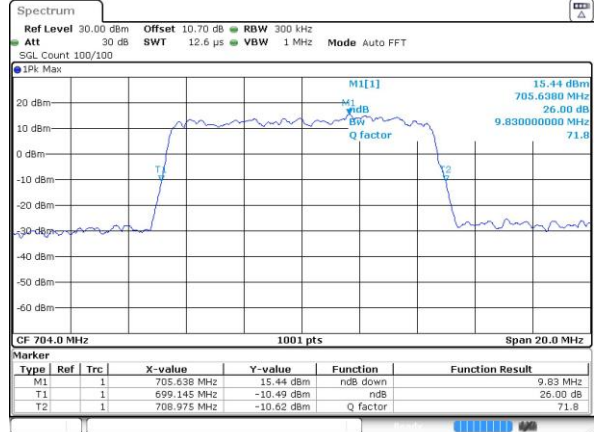
LTE Band 12

Lowest Channel / 5MHz / 64QAM



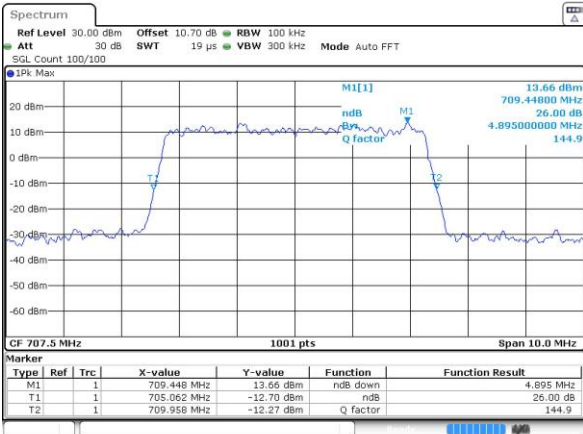
Date: 29 JUN 2019 06:05:06

Lowest Channel / 10MHz / 64QAM



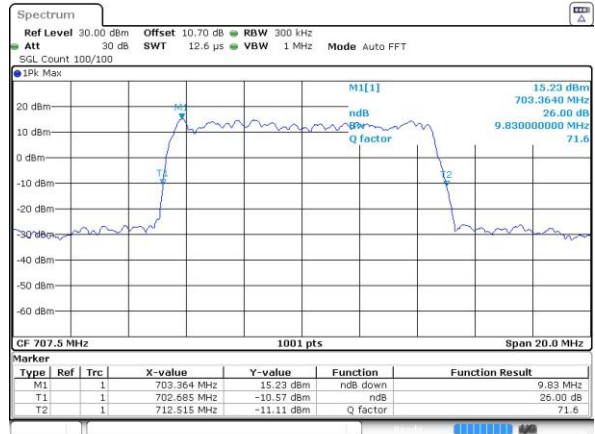
Date: 29 JUN 2019 06:11:08

Middle Channel / 5MHz / 64QAM



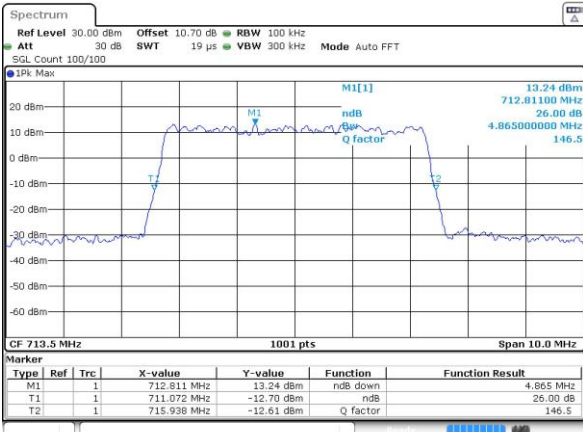
Date: 29 JUN 2019 06:05:29

Middle Channel / 10MHz / 64QAM



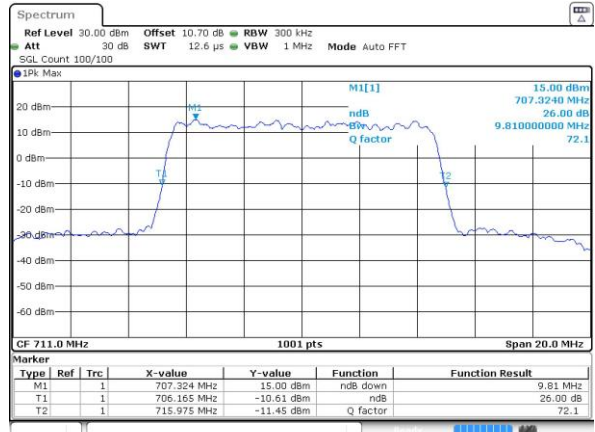
Date: 29 JUN 2019 06:11:32

Highest Channel / 5MHz / 64QAM



Date: 29 JUN 2019 06:05:54

Highest Channel / 10MHz / 64QAM



Date: 29 JUN 2019 06:11:56



Occupied Bandwidth

| Mode | LTE Band 12 : 99%OBW(MHz) | | | | | | | | | | | |
|------------|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Lowest CH | 1.09 | 1.10 | 2.72 | 2.73 | 4.47 | 4.50 | 9.01 | 8.99 | - | - | - | - |
| Middle CH | 1.09 | 1.10 | 2.70 | 2.71 | 4.48 | 4.49 | 9.03 | 9.07 | - | - | - | - |
| Highest CH | 1.09 | 1.09 | 2.72 | 2.72 | 4.48 | 4.48 | 9.09 | 9.01 | - | - | - | - |
| Mode | LTE Band 12 : 99%OBW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | |
| Lowest CH | 1.09 | - | 2.72 | - | 4.48 | - | 9.01 | - | - | - | - | - |
| Middle CH | 1.09 | - | 2.72 | - | 4.50 | - | 9.01 | - | - | - | - | - |
| Highest CH | 1.09 | - | 2.72 | - | 4.48 | - | 9.07 | - | - | - | - | - |