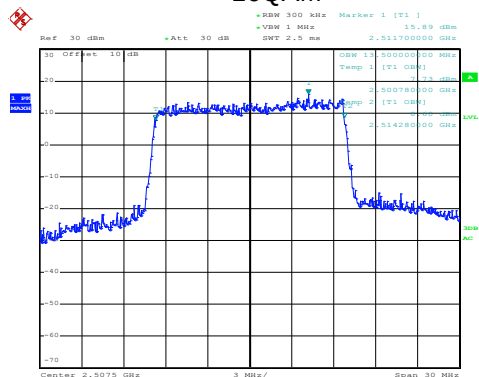


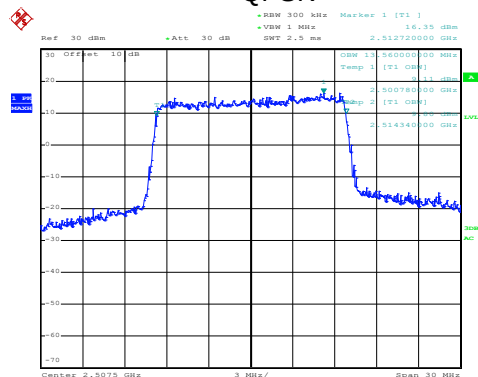
LTE Band 7: 99% Occupancy bandwidth  
BW: 15MHz

## 16QAM



Date: 15.JUN.2020 15:14:03

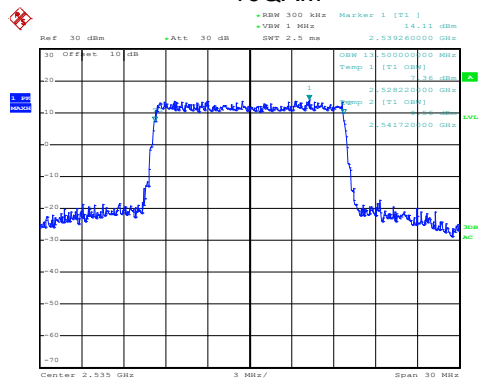
## QPSK



Date: 15.JUN.2020 15:16:19

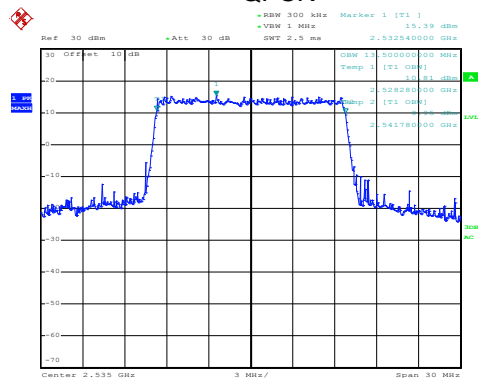
## Lowest channel

## 16QAM



Date: 15.JUN.2020 15:16:04

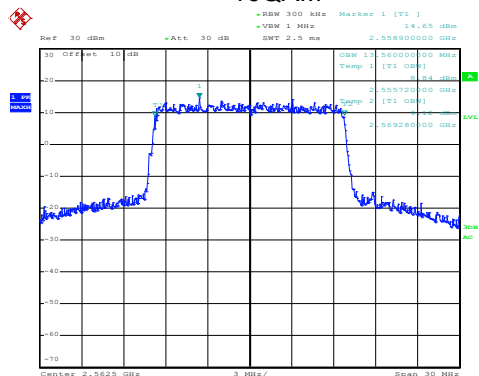
## QPSK



Date: 15.JUN.2020 15:15:59

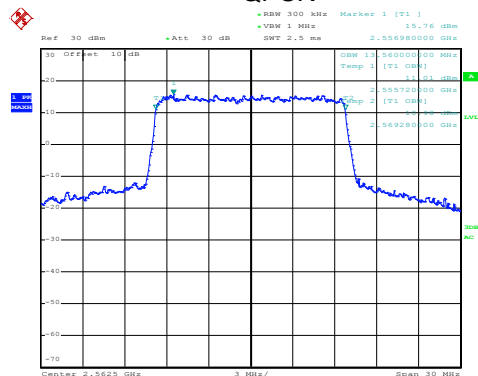
## Middle channel

## 16QAM



Date: 15.JUN.2020 15:15:23

## QPSK



Date: 15.JUN.2020 15:15:19

## Highest channel

16QAM



## Date: 15.JUN.2020 15:16:40

16QAM



Date: 15.JUN.2020 15:17:19

## 16QAM

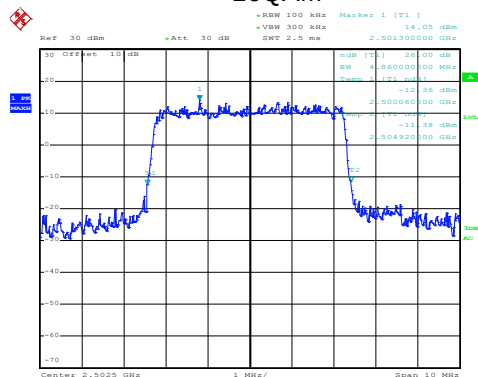


Date: 15.JUN.2020 15:17:36

Shenzhen Zhongjian Nanfang Testing Co., Ltd.  
No.110-116, Building B, Jinyuan Business Building, Xixiang Road,  
Bao'an District, Shenzhen, Guangdong, China  
Tel: +86-755-23118282, Fax: +86-755-23116366

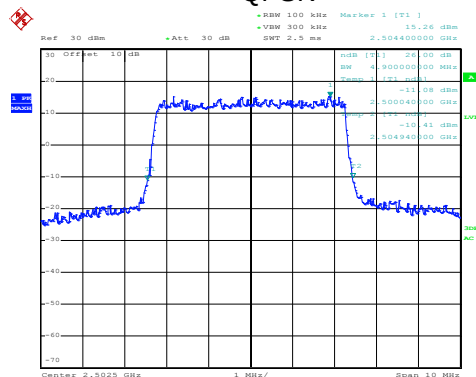
LTE Band 7: -26dBc bandwidth  
BW: 5MHz

## 16QAM



Date: 15.JUN.2020 15:09:11

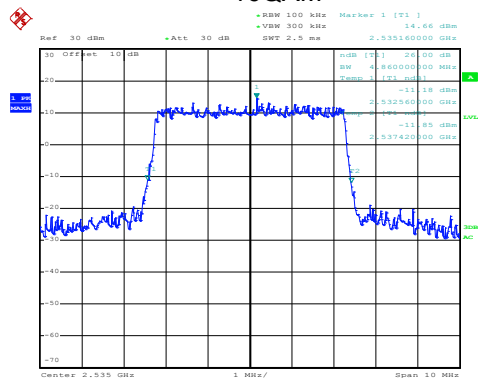
## QPSK



Date: 15.JUN.2020 15:09:07

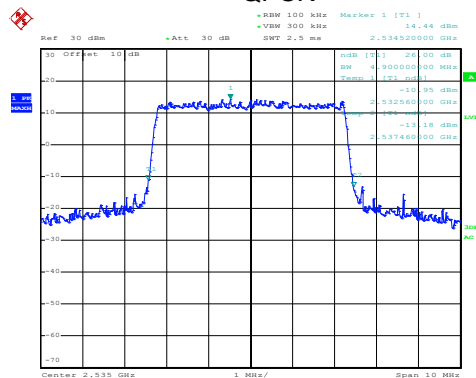
## Lowest channel

## 16QAM



Date: 15.JUN.2020 15:09:49

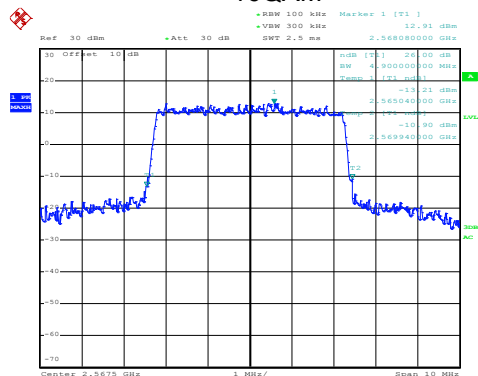
## QPSK



Date: 15.JUN.2020 15:09:44

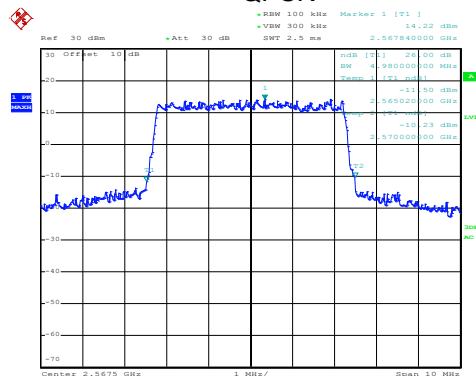
## Middle channel

## 16QAM



Date: 15.JUN.2020 15:10:16

## QPSK

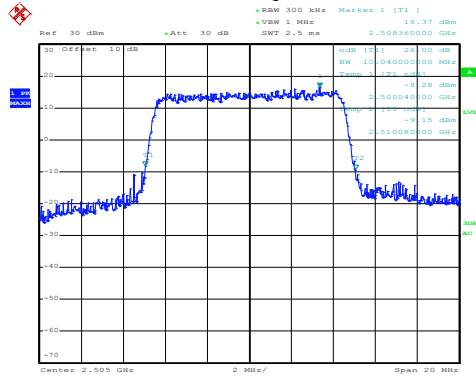


Date: 15.JUN.2020 15:10:12

## Highest channel

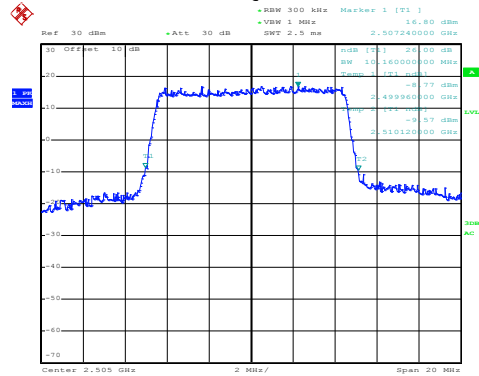
LTE Band 7: -26dBc bandwidth  
BW: 10MHz

## 16QAM



Date: 15.JUN.2020 15:11:08

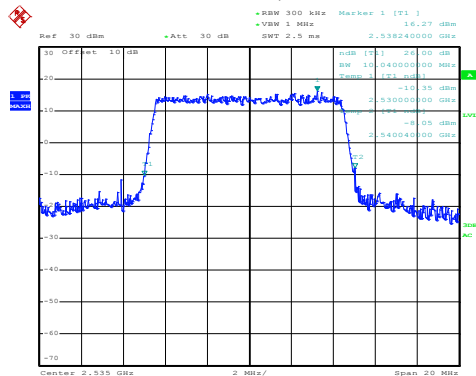
## QPSK



Date: 15.JUN.2020 15:11:04

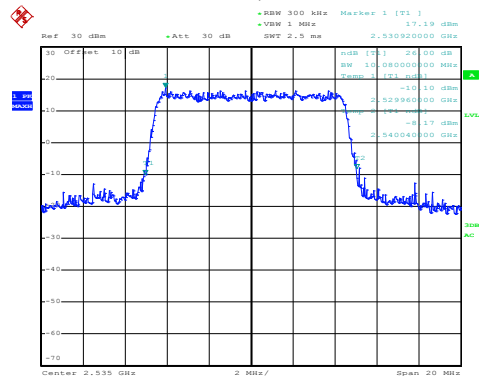
## Lowest channel

## 16QAM



Date: 15.JUN.2020 15:11:22

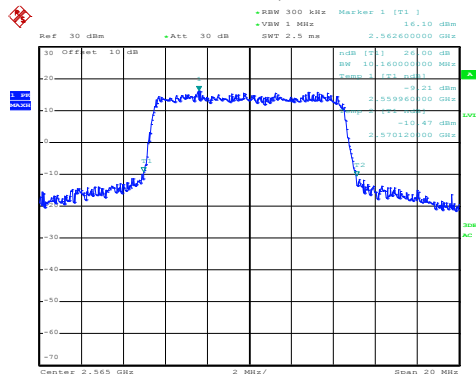
## QPSK



Date: 15.JUN.2020 15:11:17

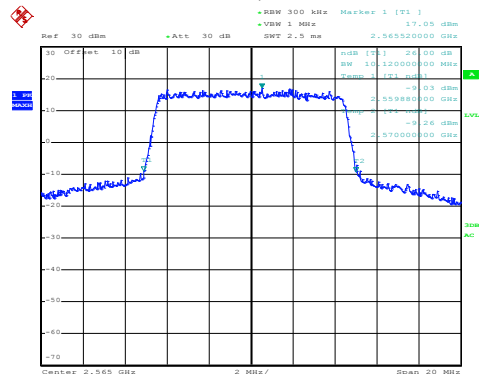
## Middle channel

## 16QAM



Date: 15.JUN.2020 15:13:13

## QPSK

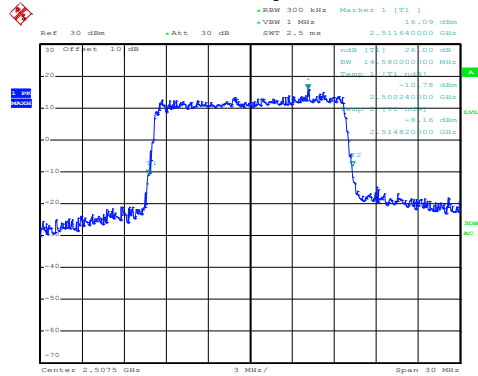


Date: 15.JUN.2020 15:13:07

## Highest channel

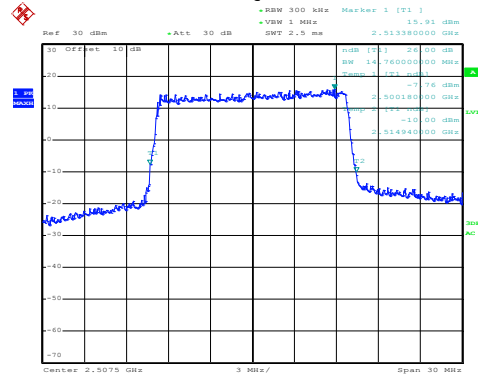
LTE Band 7: -26dBc bandwidth  
BW: 15MHz

## 16QAM



Date: 15.JUN.2020 15:13:50

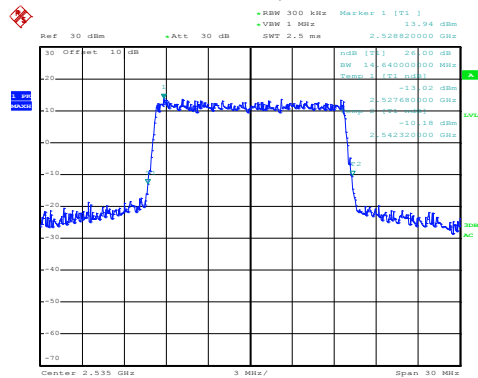
## QPSK



Date: 15.JUN.2020 15:13:45

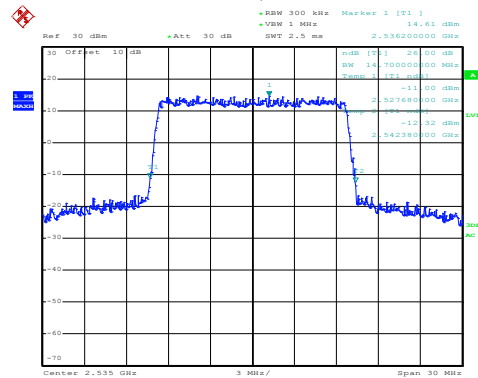
## Lowest channel

## 16QAM



Date: 15.JUN.2020 15:15:47

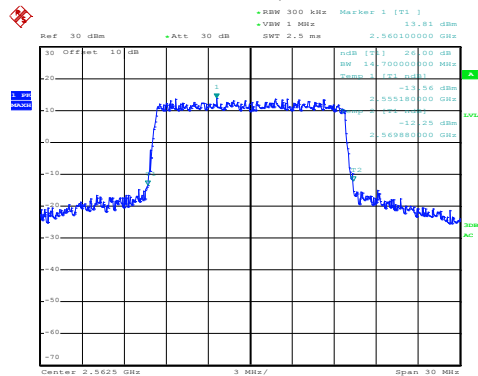
## QPSK



Date: 15.JUN.2020 15:15:43

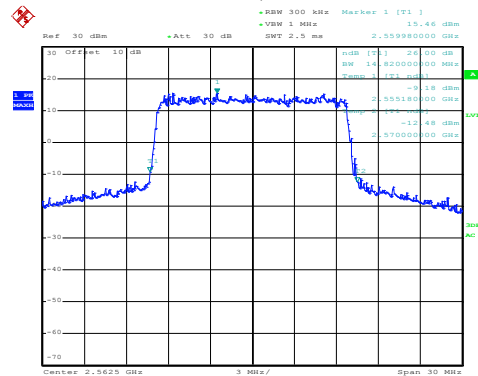
## Middle channel

## 16QAM



Date: 15.JUN.2020 15:15:34

## QPSK

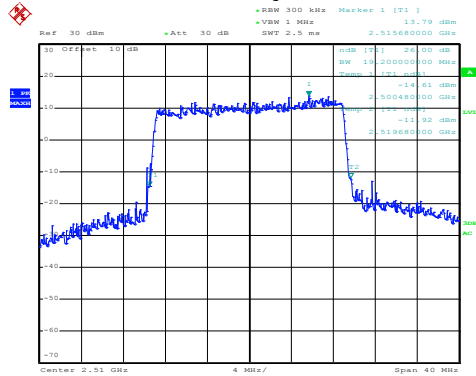


Date: 15.JUN.2020 15:15:30

## Highest channel

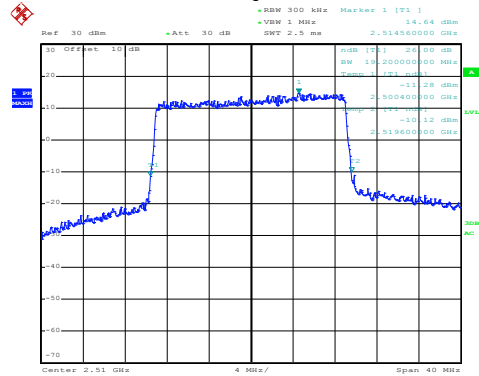
LTE Band 7: -26dBc bandwidth  
BW: 20MHz

## 16QAM



Date: 15.JUN.2020 15:16:56

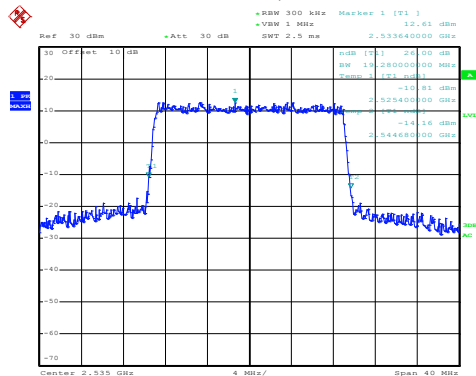
## QPSK



Date: 15.JUN.2020 15:16:52

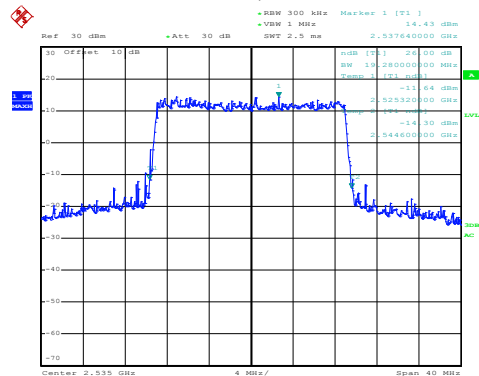
## Lowest channel

## 16QAM



Date: 15.JUN.2020 15:17:11

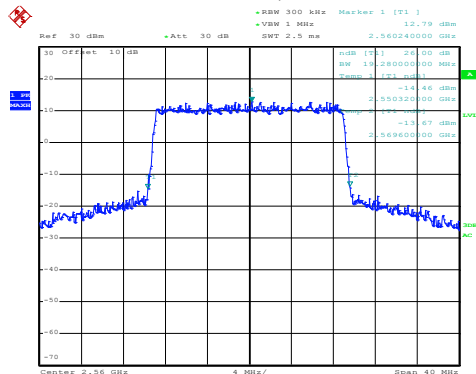
## QPSK



Date: 15.JUN.2020 15:17:07

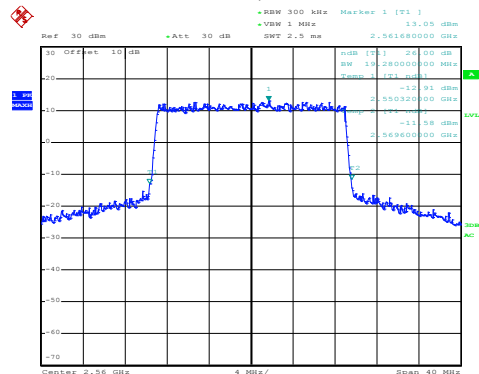
## Middle channel

## 16QAM



Date: 15.JUN.2020 15:17:53

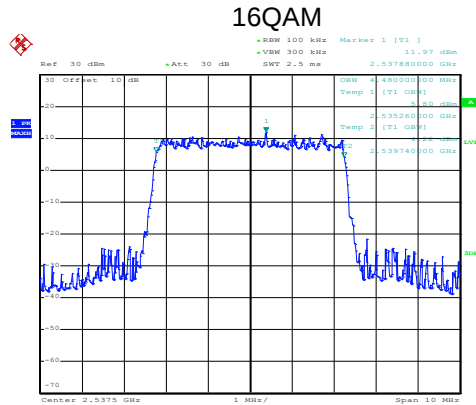
## QPSK



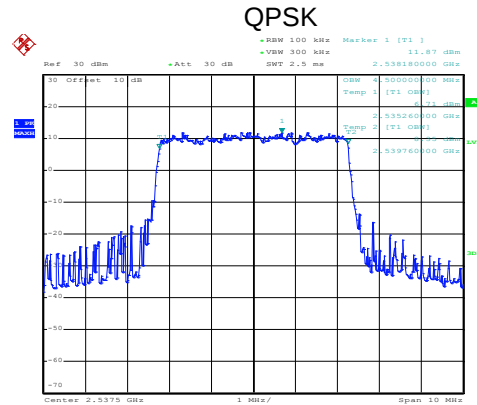
Date: 15.JUN.2020 15:17:48

## Highest channel

## LTE Band 41 part:

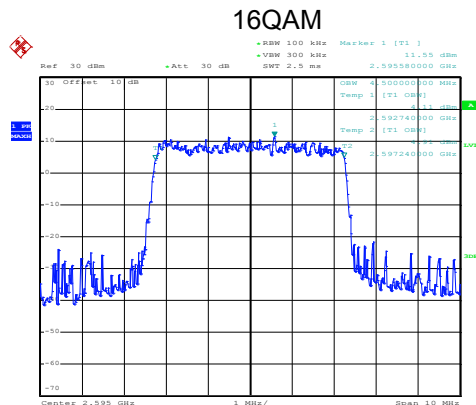
LTE Band 41: 99% Occupy bandwidth  
BW: 5MHz

Date: 16.JUN.2020 15:17:35

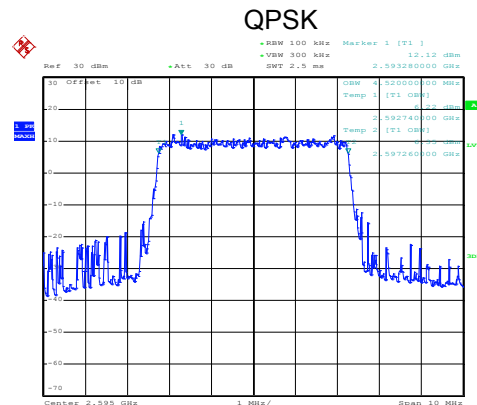


Date: 16.JUN.2020 15:17:30

## Lowest channel

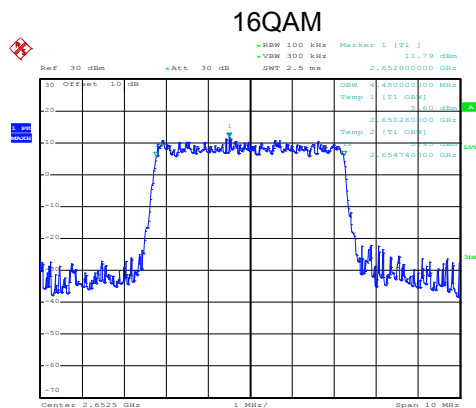


Date: 16.JUN.2020 15:17:50

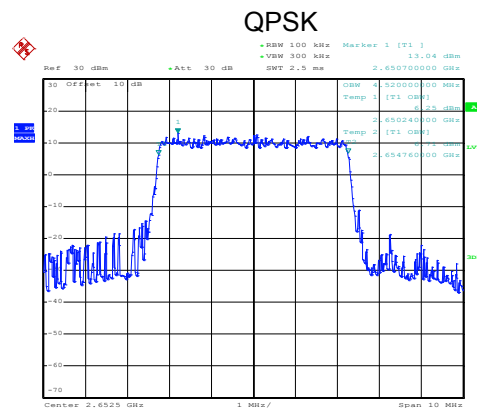


Date: 16.JUN.2020 15:17:46

## Middle channel



Date: 16.JUN.2020 15:18:34

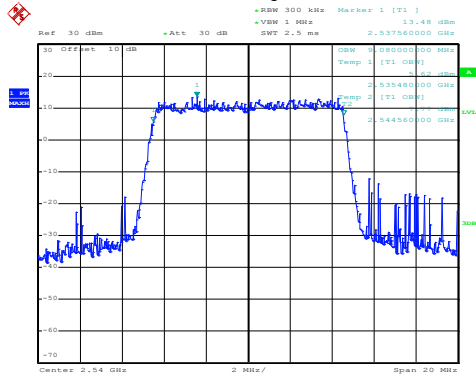


Date: 16.JUN.2020 15:18:29

## Highest channel

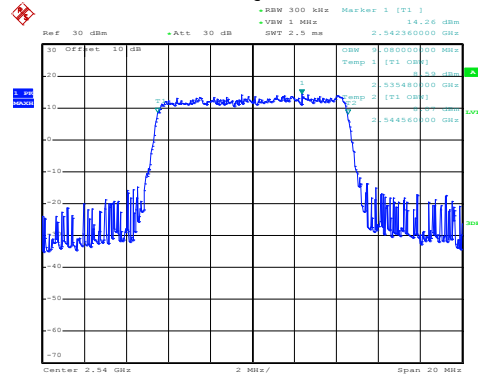
LTE Band 41: 99% Occupancy bandwidth  
BW: 10MHz

## 16QAM



Date: 16.JUN.2020 15:15:35

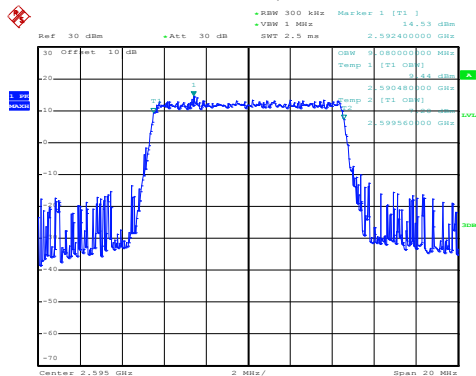
## QPSK



Date: 16.JUN.2020 15:15:31

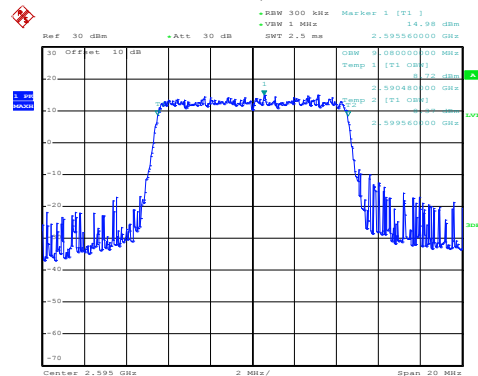
## Lowest channel

## 16QAM



Date: 16.JUN.2020 15:16:19

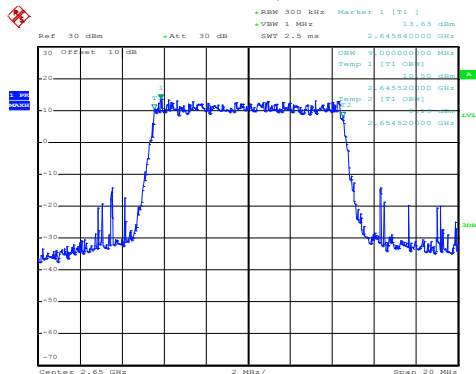
## QPSK



Date: 16.JUN.2020 15:16:09

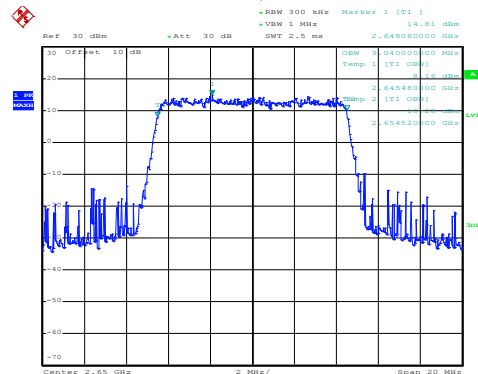
## Middle channel

## 16QAM



Date: 16.JUN.2020 15:16:38

## QPSK

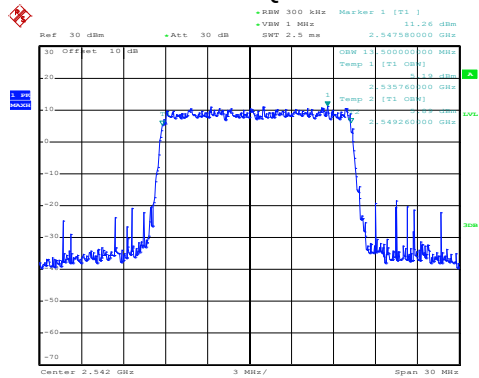


Date: 16.JUN.2020 15:16:35

## Highest channel

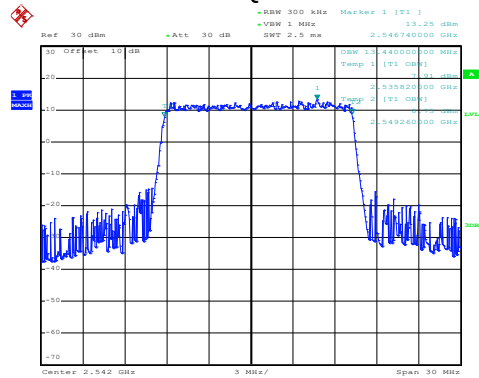
LTE Band 41: 99% Occupancy bandwidth  
BW: 15MHz

## 16QAM



Date: 16.JUN.2020 15:14:13

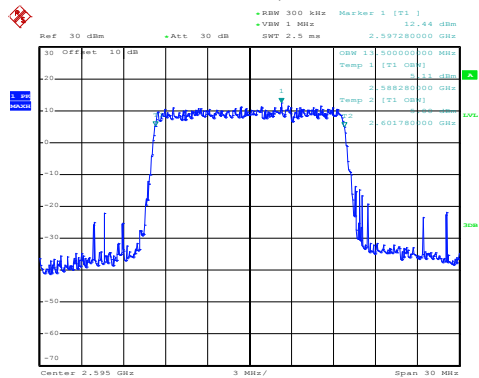
## QPSK



Date: 16.JUN.2020 15:14:09

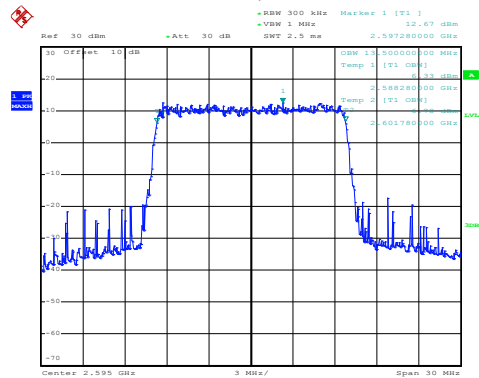
## Lowest channel

## 16QAM



Date: 16.JUN.2020 15:14:26

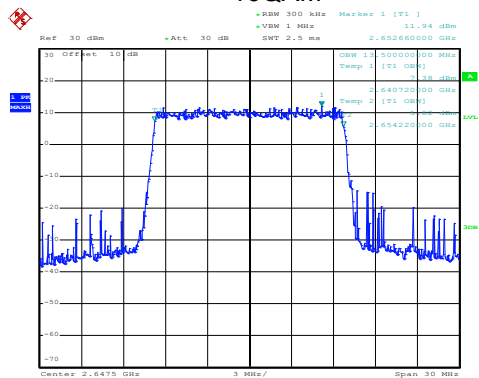
## QPSK



Date: 16.JUN.2020 15:14:22

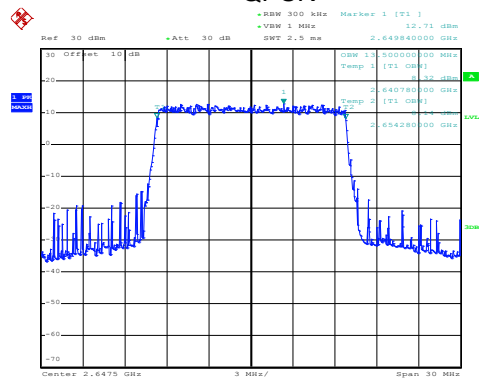
## Middle channel

## 16QAM



Date: 16.JUN.2020 15:15:08

## QPSK

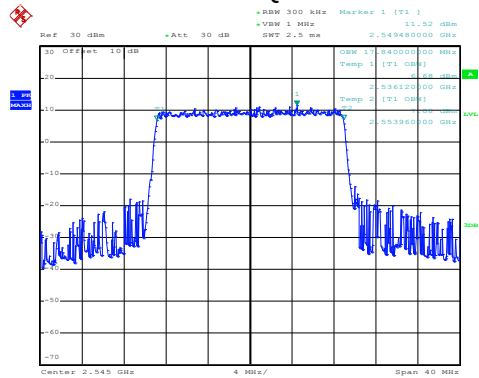


Date: 16.JUN.2020 15:15:04

## Highest channel

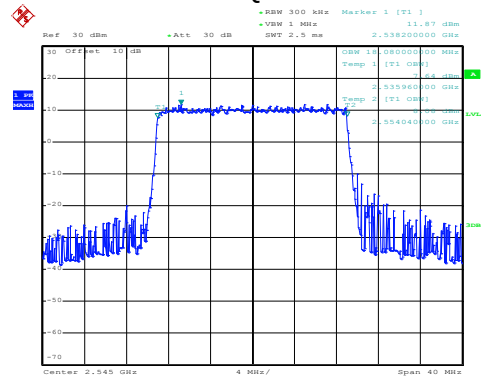
LTE Band 41: 99% Occupancy bandwidth  
BW: 20MHz

## 16QAM



Date: 16.JUN.2020 15:11:46

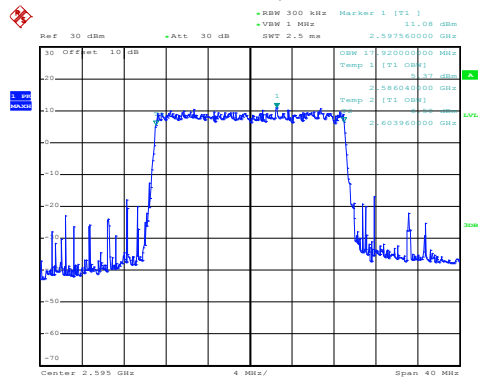
## QPSK



Date: 16.JUN.2020 15:11:27

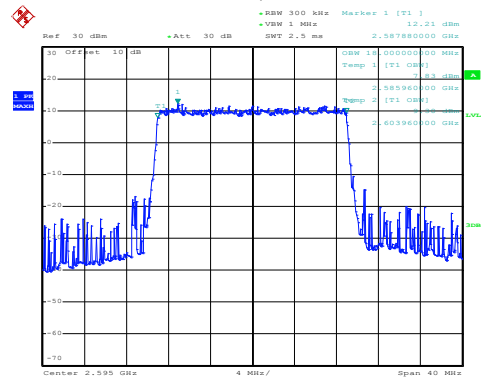
## Lowest channel

## 16QAM



Date: 16.JUN.2020 15:12:47

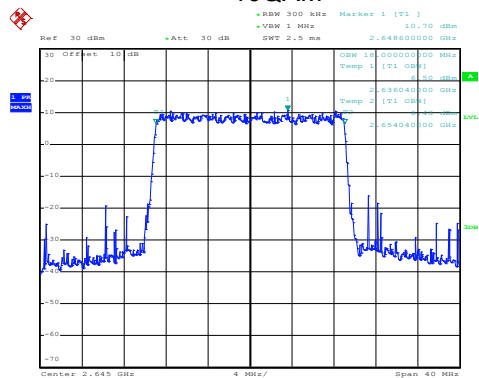
## QPSK



Date: 16.JUN.2020 15:12:43

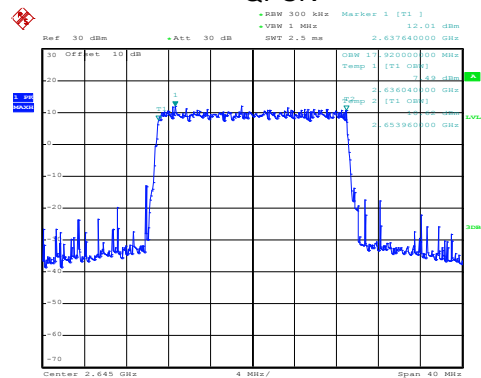
## Middle channel

## 16QAM



Date: 16.JUN.2020 15:13:08

## QPSK

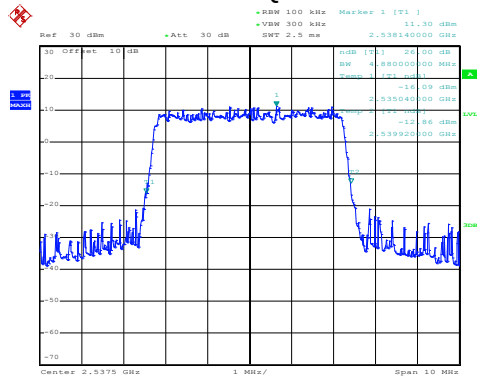


Date: 16.JUN.2020 15:13:04

## Highest channel

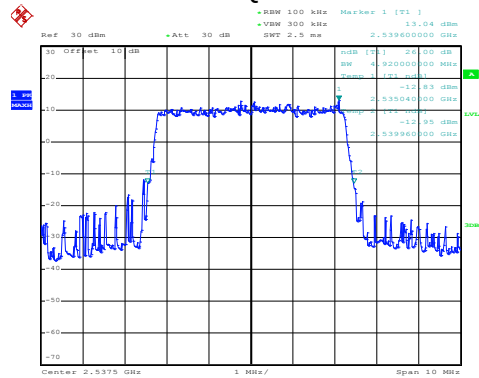
LTE Band 41: -26dBc bandwidth  
BW: 5MHz

## 16QAM



Date: 16.JUN.2020 15:17:20

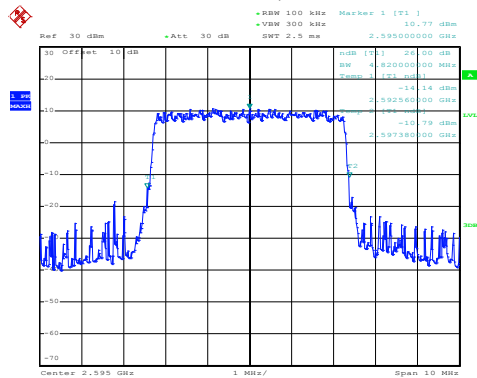
## QPSK



Date: 16.JUN.2020 15:17:15

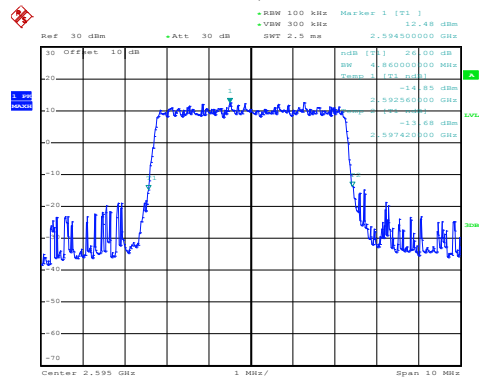
## Lowest channel

## 16QAM



Date: 16.JUN.2020 15:18:04

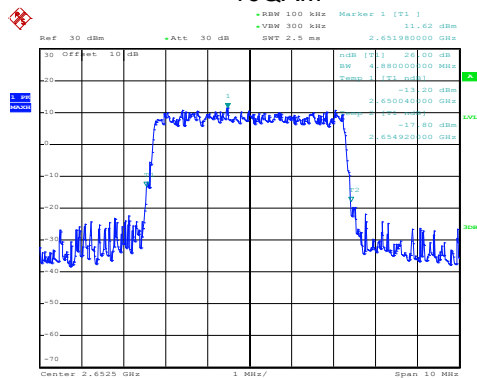
## QPSK



Date: 16.JUN.2020 15:17:59

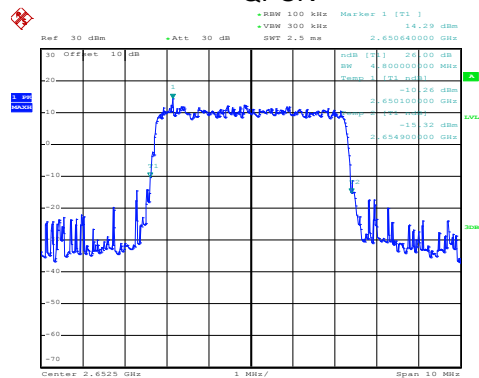
## Middle channel

## 16QAM



Date: 16.JUN.2020 15:18:21

## QPSK

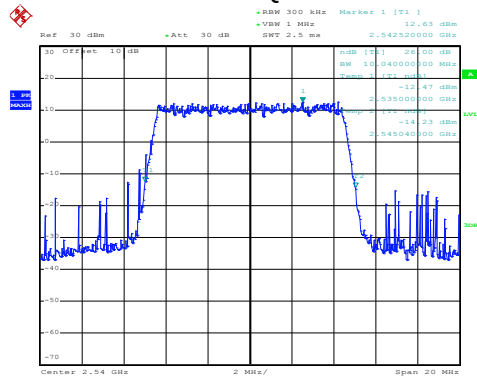


Date: 16.JUN.2020 15:18:16

## Highest channel

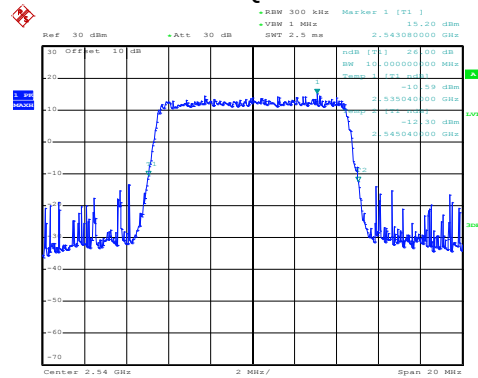
LTE Band 41: -26dBc bandwidth  
BW: 10MHz

## 16QAM



Date: 16.JUN.2020 15:15:46

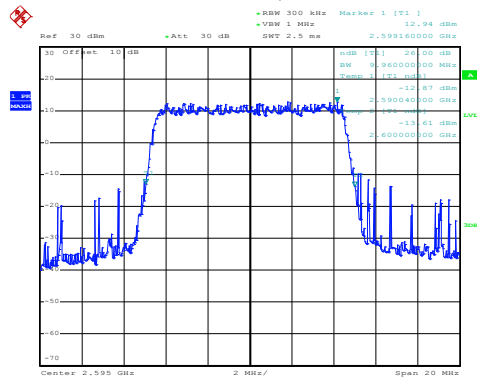
## QPSK



Date: 16.JUN.2020 15:15:41

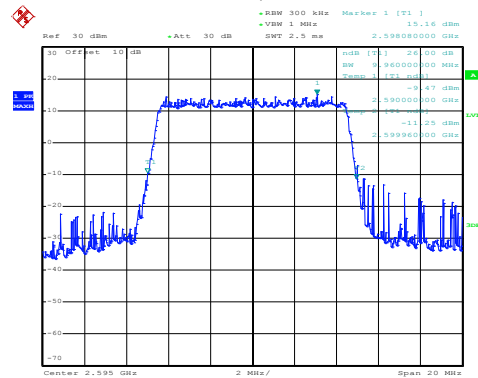
## Lowest channel

## 16QAM



Date: 16.JUN.2020 15:16:01

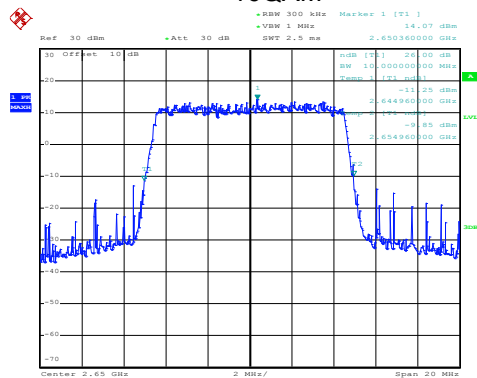
## QPSK



Date: 16.JUN.2020 15:15:57

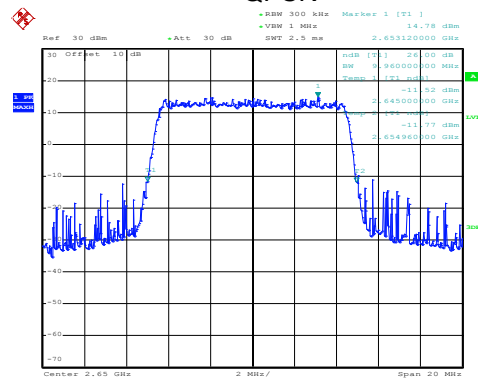
## Middle channel

## 16QAM



Date: 16.JUN.2020 15:16:49

## QPSK

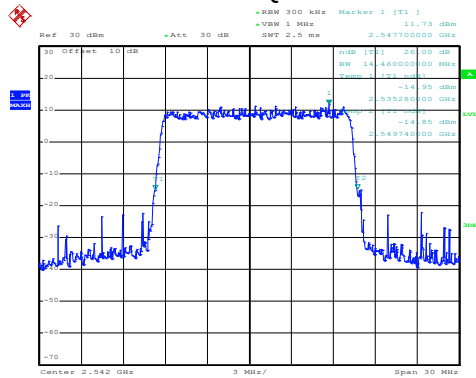


Date: 16.JUN.2020 15:16:45

## Highest channel

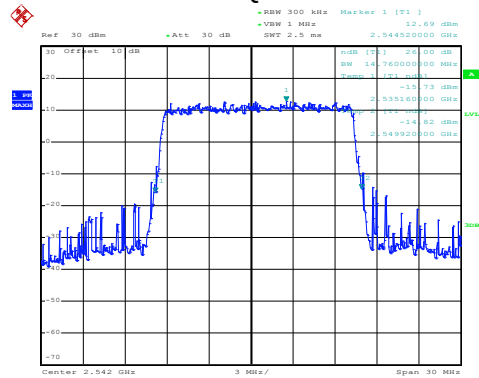
LTE Band 41: -26dBc bandwidth  
BW: 15MHz

## 16QAM



Date: 16.JUN.2020 15:13:51

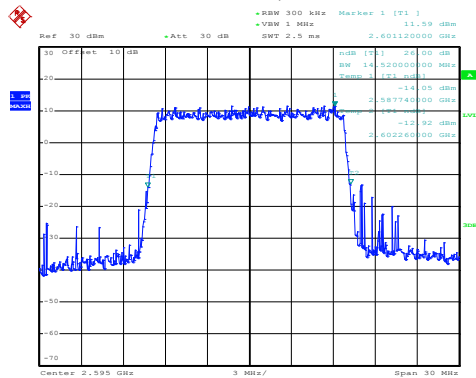
## QPSK



Date: 16.JUN.2020 15:13:47

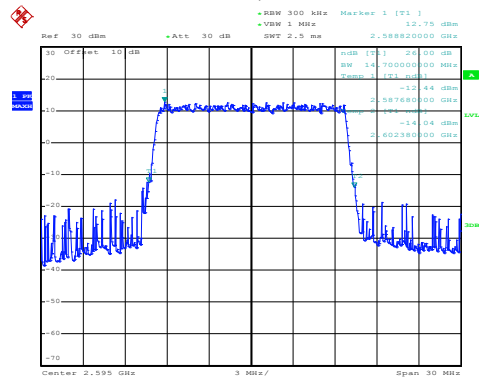
## Lowest channel

## 16QAM



Date: 16.JUN.2020 15:14:38

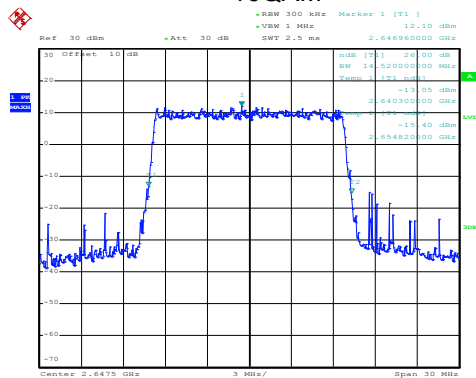
## QPSK



Date: 16.JUN.2020 15:14:35

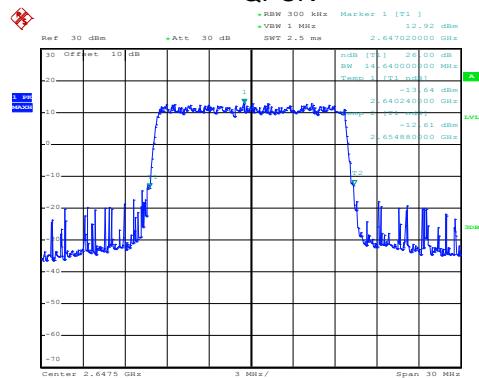
## Middle channel

## 16QAM



Date: 16.JUN.2020 15:14:58

## QPSK

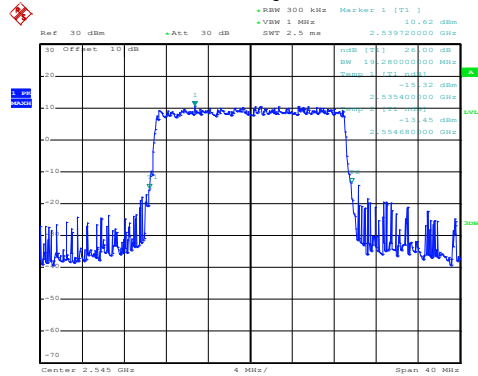


Date: 16.JUN.2020 15:14:54

## Highest channel

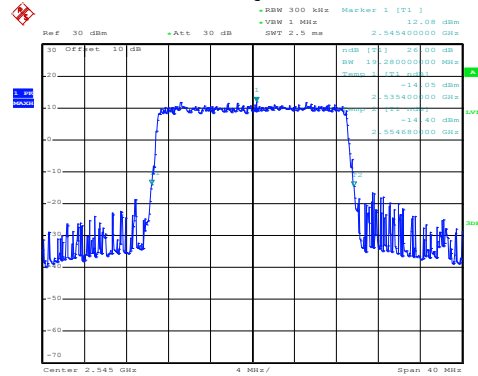
LTE Band 41: -26dBc bandwidth  
BW: 20MHz

## 16QAM



Date: 16.JUN.2020 15:12:13

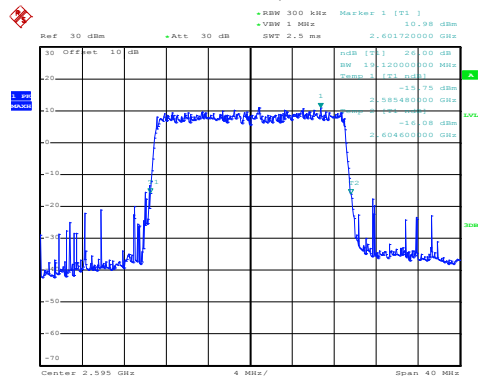
## QPSK



Date: 16.JUN.2020 15:12:01

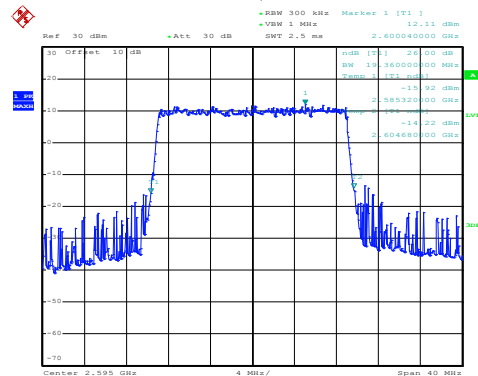
## Lowest channel

## 16QAM



Date: 16.JUN.2020 15:12:33

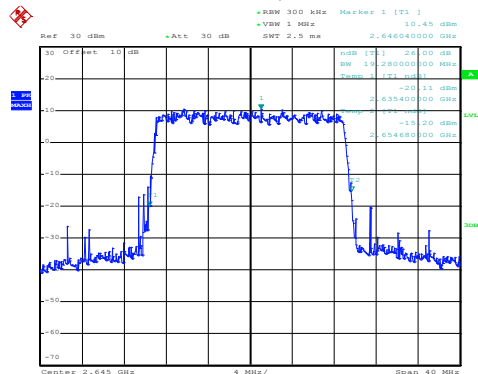
## QPSK



Date: 16.JUN.2020 15:12:28

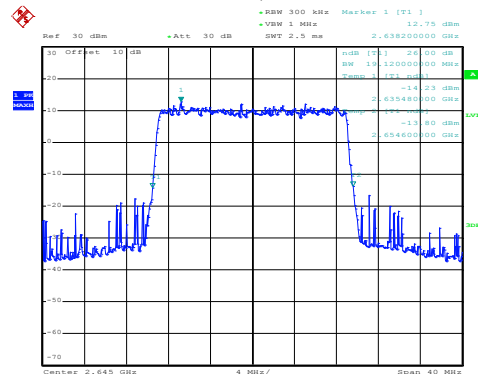
## Middle channel

## 16QAM



Date: 16.JUN.2020 15:13:17

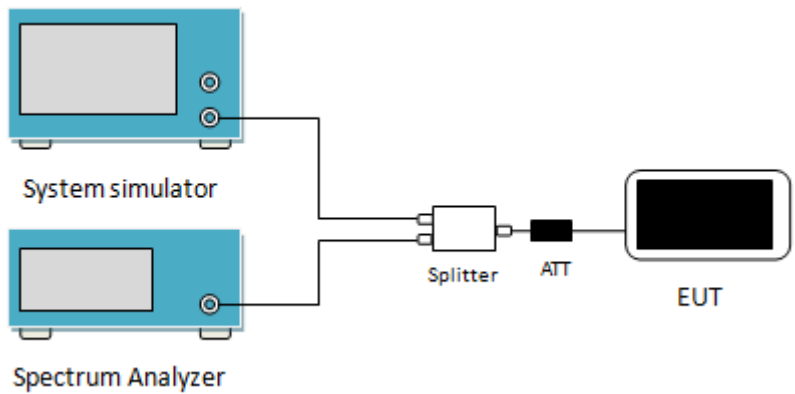
## QPSK



Date: 16.JUN.2020 15:13:14

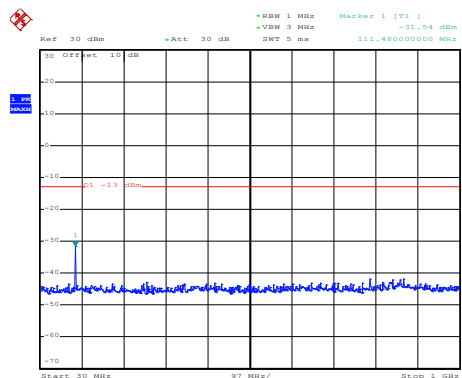
## Highest channel

## 6.4 Out of band emission at antenna terminals

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | Part 22.917(a), Part 24.238 (a), part 27.53(h), Part 27.53(m)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Limit:            | <p>LTE Band 2 &amp; 4 &amp; 5:<br/>The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least <math>43 + 10 \log_{10}(P)</math> dB (-13 dBm).</p> <p>LTE Band 7:<br/>For mobile digital stations, the attenuation factor shall be not less than <math>40 + 10 \log(P)</math> dB on all frequencies between the channel edge and 5 megahertz from the channel edge, <math>43 + 10 \log(P)</math> dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and <math>55 + 10 \log(P)</math> dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than <math>43 + 10 \log(P)</math> dB on all frequencies between 2490.5 MHz and 2496 MHz and <math>55 + 10 \log(P)</math> dB at or below 2490.5 MHz.</p> |
| Test Setup:       |  <p>The diagram illustrates the test setup. On the left, there are two blue rectangular units: the top one is labeled 'System simulator' and the bottom one is labeled 'Spectrum Analyzer'. Both have a single output port. These two ports are connected to a central 'Splitter' unit, which is a white rectangle with two input ports and one output port. The output of the Splitter is connected to an 'ATT' (Attenuator), represented by a black rectangle. Finally, the output of the ATT is connected to the 'EUT' (Equipment Under Test), which is a black rectangle with a white screen.</p>                                                                                                                                                                                                                                                                                                               |
| Test Procedure:   | <ol style="list-style-type: none"> <li>1 The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.</li> <li>2 For the out of band: For Band 5 &amp; 12 &amp; 17 set the RBW=100 kHz, VBW=300 kHz and for Band 2 &amp; 4 &amp; 7 set the RBW=1 MHz, VBW=3 MHz when below 1 GHz, RBW =1 MHz, VBW=3 MHz when above 1 GHz, Start=30MHz, Stop= 10th harmonic.</li> <li>3 Band Edge Requirements: In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions.</li> </ol>                                                                                                                                                                                                                                                                                            |
| Test Instruments: | Refer to section 5.10 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Test mode:        | Refer to section 5.3 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Test results:     | Passed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Remark:           | Pre-scan all RB Size and offset, and found the RB Size and offset of worst case, so the report shows only the worst case test data.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

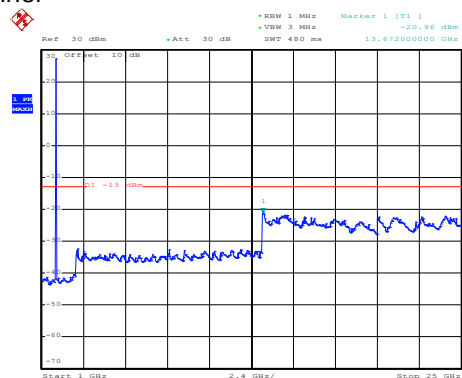
Test plots as follows (Conducted spurious emission) (worst case):  
LTE Band 2 part:

LTE Band 2: 16 QAM & RB Size 1  
BW: 1.4MHz  
Lowest channel



Date: 15.JUN.2020 09:37:01

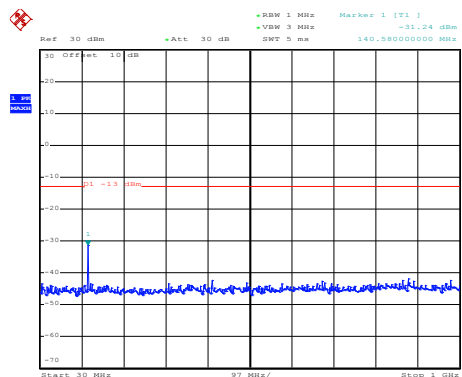
30MHz~1GHz



Date: 15.JUN.2020 09:35:02

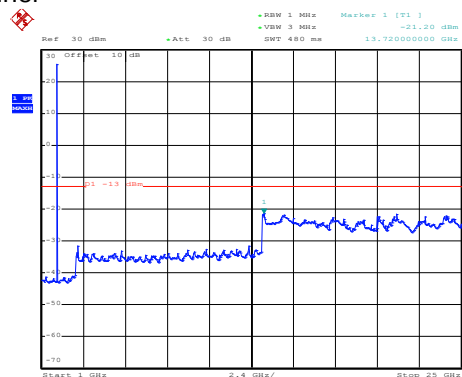
1GHz~25GHz

Middle channel



Date: 15.JUN.2020 09:36:39

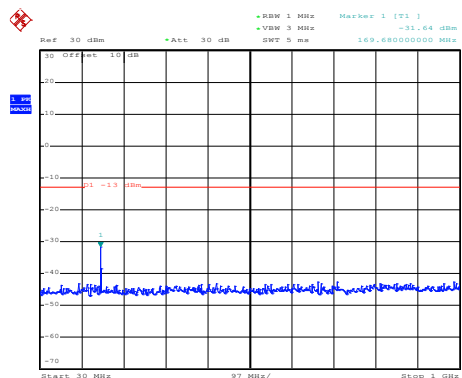
30MHz~1GHz



Date: 15.JUN.2020 09:35:32

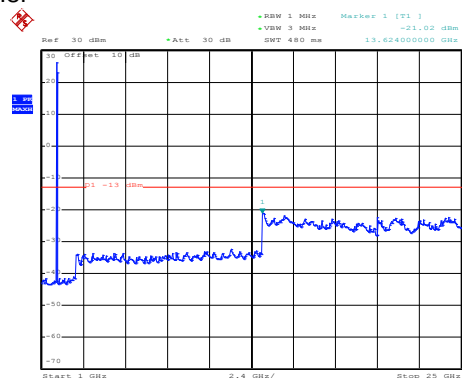
1GHz~25GHz

High channel



Date: 15.JUN.2020 09:36:23

30MHz~1GHz



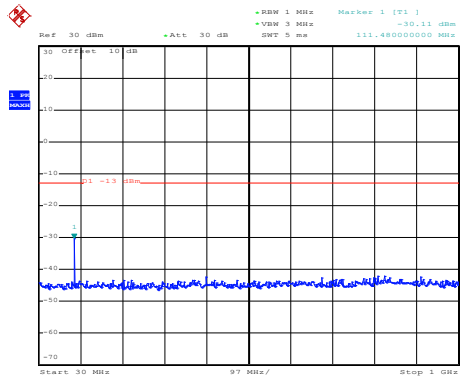
Date: 15.JUN.2020 09:35:58

1GHz~25GHz

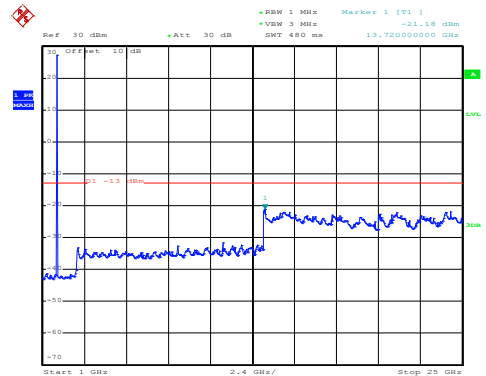
# LTE Band 2: QPSK & RB Size 1

## BW: 1.4MHz

### Lowest channel

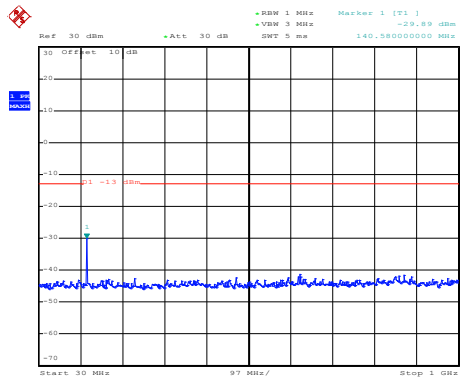


30MHz~1GHz

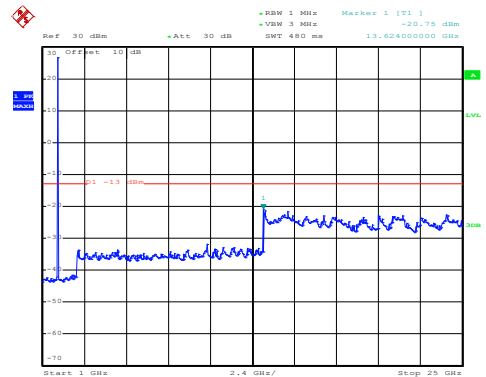


1GHz~25GHz

## Middle channel

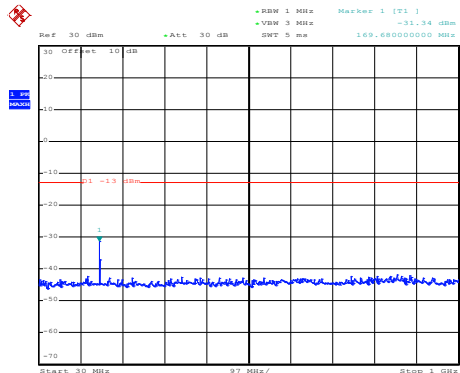


30MHz~1GHz

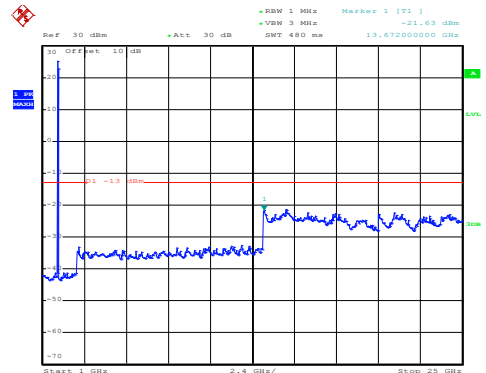


1GHz~25GHz

## High channel

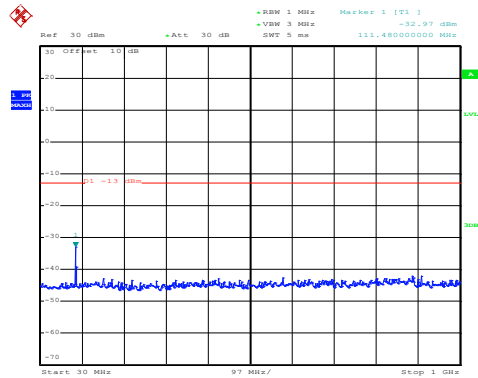


30MHz~1GHz



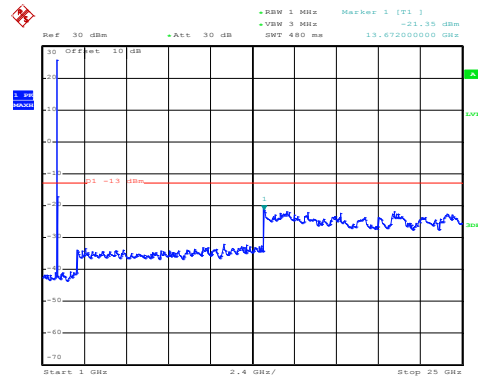
1GHz~25GHz

LTE Band 2: 16 QAM & RB Size 1  
BW: 20MHz  
Lowest channel



Date: 15.JUN.2020 09:38:19

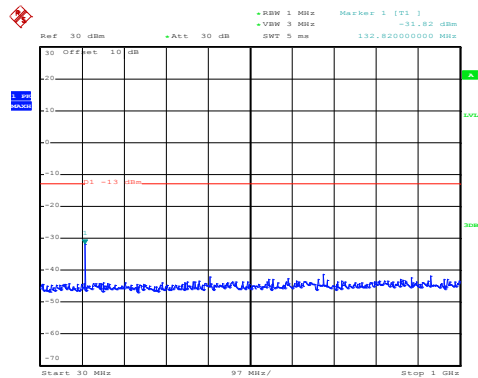
30MHz~1GHz



Date: 15.JUN.2020 09:39:56

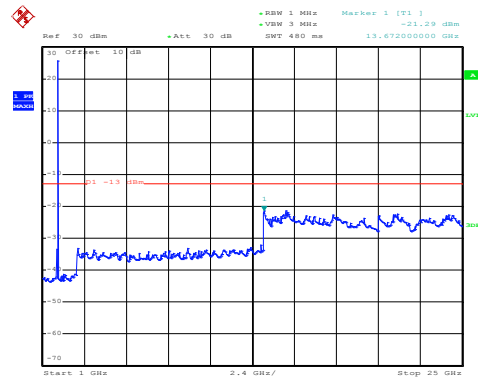
1GHz~25GHz

Middle channel



Date: 15.JUN.2020 09:37:45

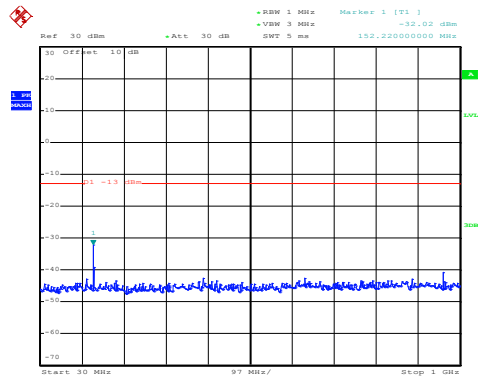
30MHz~1GHz



Date: 15.JUN.2020 09:40:26

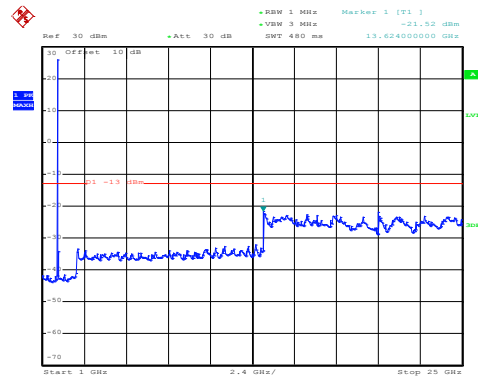
1GHz~25GHz

High channel



Date: 15.JUN.2020 09:38:00

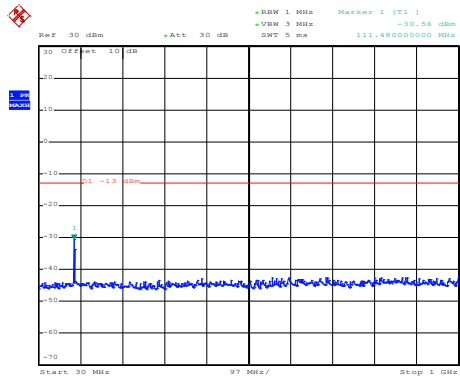
30MHz~1GHz



Date: 15.JUN.2020 09:41:01

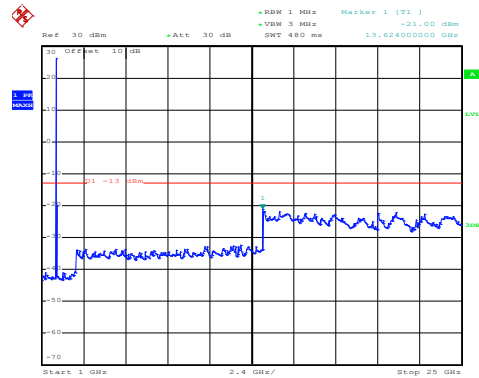
1GHz~25GHz

LTE Band 2: QPSK & RB Size 1  
BW: 20MHz  
Lowest channel



Date: 15.JUN.2020 09:38:12

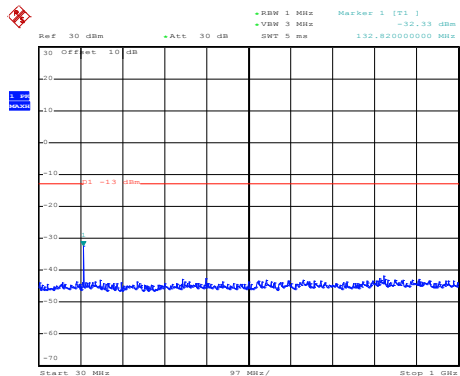
30MHz~1GHz



Date: 15.JUN.2020 09:39:46

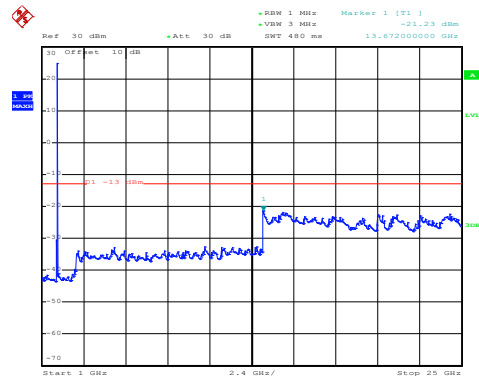
1GHz~25GHz

Middle channel



Date: 15.JUN.2020 09:37:39

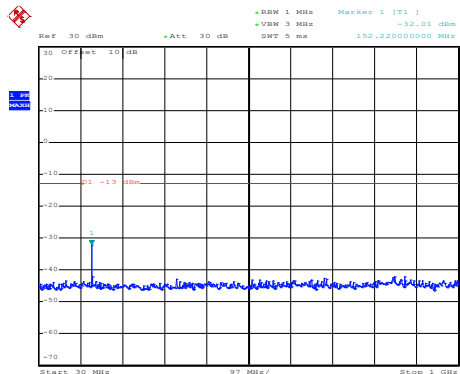
30MHz~1GHz



Date: 15.JUN.2020 09:40:16

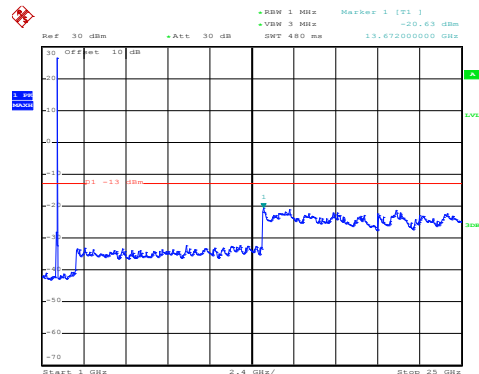
1GHz~25GHz

High channel



Date: 15.JUN.2020 09:37:55

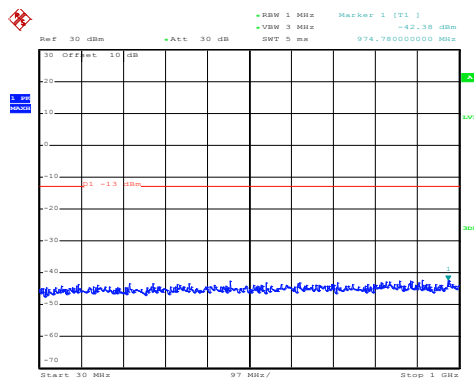
30MHz~1GHz



Date: 15.JUN.2020 09:40:54

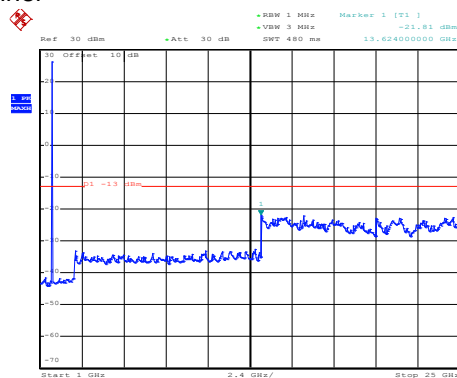
1GHz~25GHz

## LTE Band 4 part:

LTE Band 4: 16 QAM & RB Size 1  
BW: 1.4MHz  
Lowest channel

Date: 15.JUN.2020 09:32:44

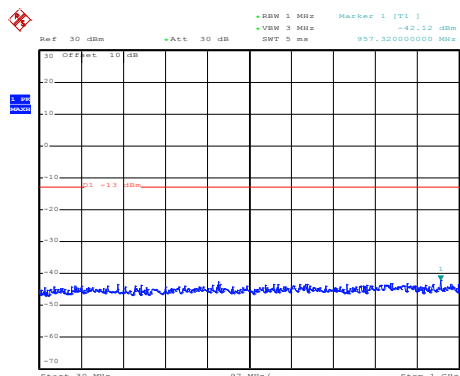
30MHz~1GHz



Date: 15.JUN.2020 09:34:25

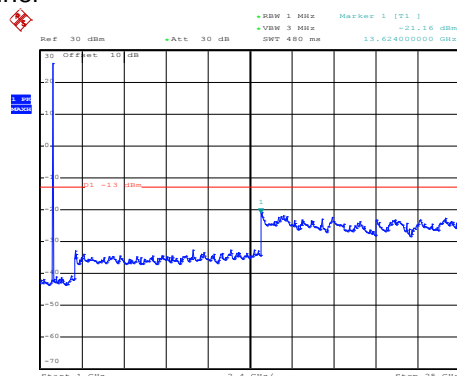
1GHz~25GHz

## Middle channel



Date: 15.JUN.2020 09:33:01

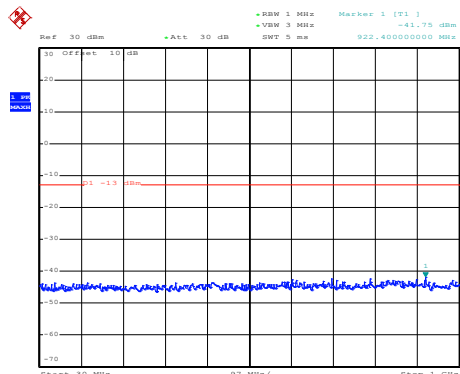
30MHz~1GHz



Date: 15.JUN.2020 09:34:03

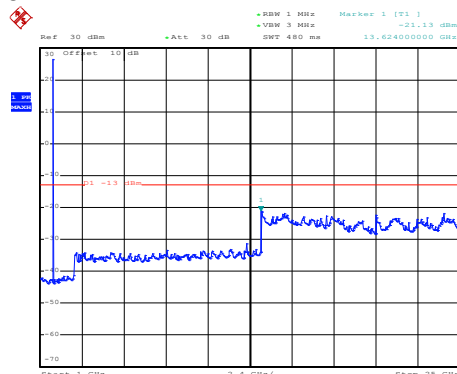
1GHz~25GHz

## High channel



Date: 15.JUN.2020 09:33:18

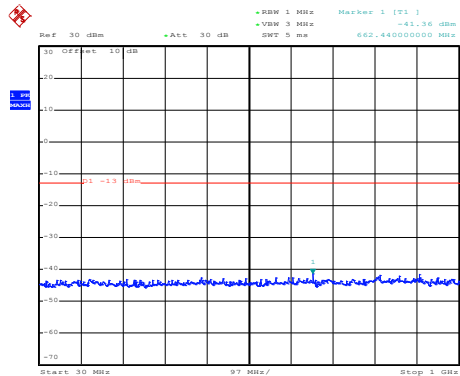
30MHz~1GHz



Date: 15.JUN.2020 09:33:43

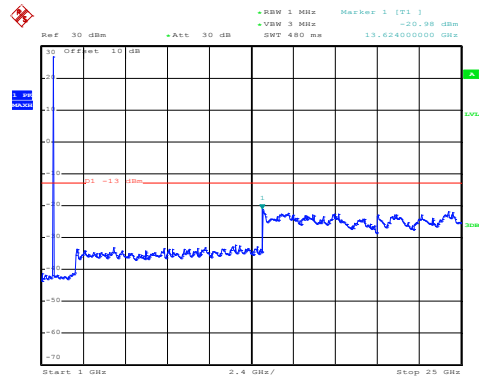
1GHz~25GHz

LTE Band 4: QPSK & RB Size 1  
BW: 1.4MHz  
Lowest channel



Date: 15.JUN.2020 09:32:40

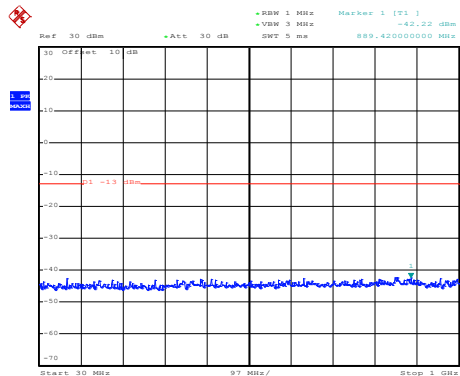
30MHz~1GHz



Date: 15.JUN.2020 09:34:18

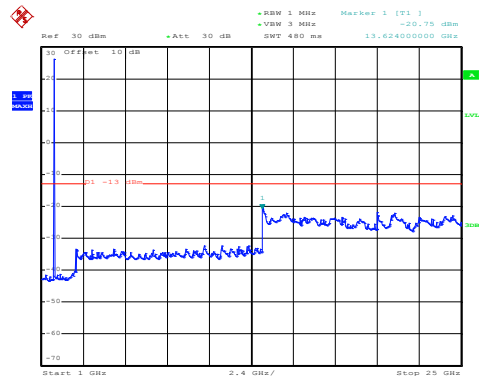
1GHz~25GHz

Middle channel



Date: 15.JUN.2020 09:32:57

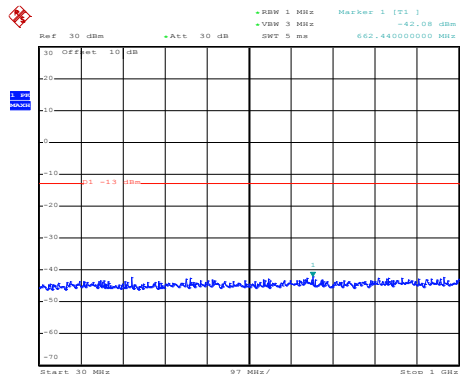
30MHz~1GHz



Date: 15.JUN.2020 09:33:56

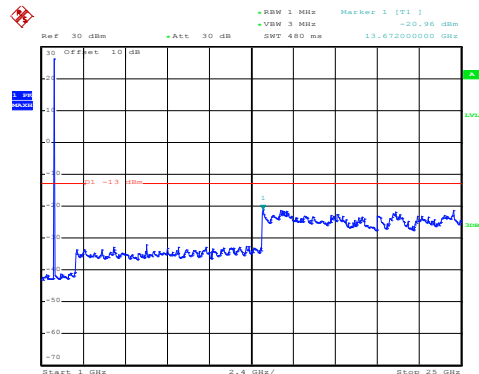
1GHz~25GHz

High channel



Date: 15.JUN.2020 09:33:12

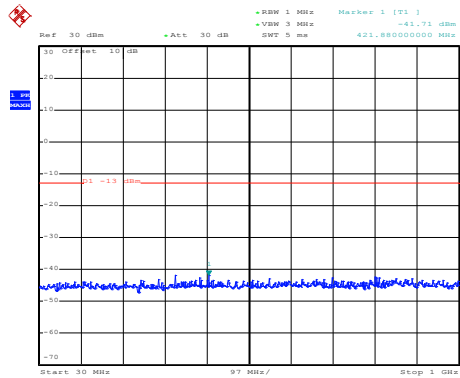
30MHz~1GHz



Date: 15.JUN.2020 09:33:36

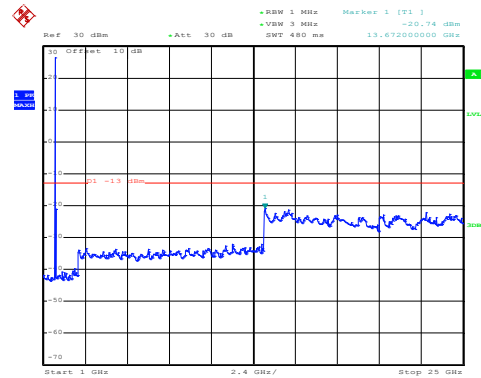
1GHz~25GHz

LTE Band 4: 16 QAM & RB Size 1  
BW: 20MHz  
Lowest channel



Date: 15.JUN.2020 09:44:13

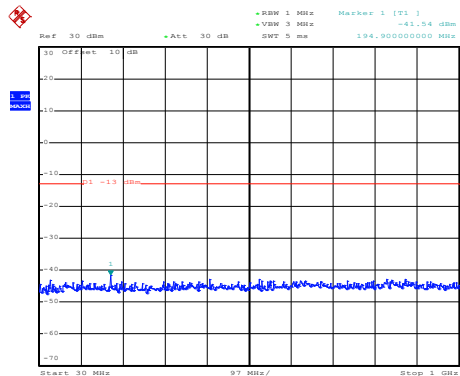
30MHz~1GHz



Date: 15.JUN.2020 09:42:59

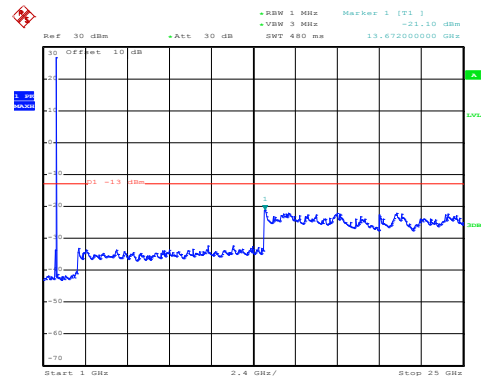
1GHz~25GHz

Middle channel



Date: 15.JUN.2020 09:43:57

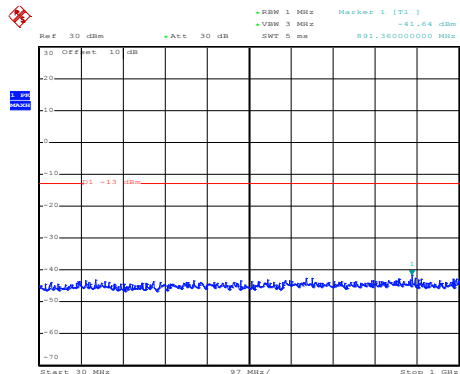
30MHz~1GHz



Date: 15.JUN.2020 09:42:37

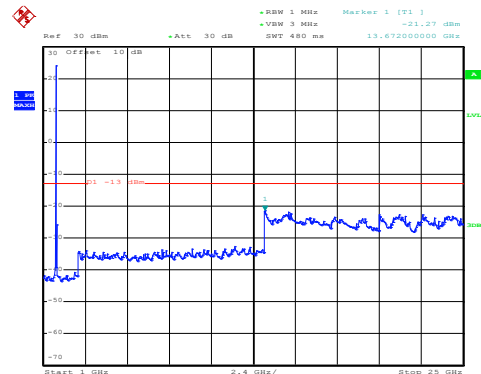
1GHz~25GHz

High channel



Date: 15.JUN.2020 09:43:44

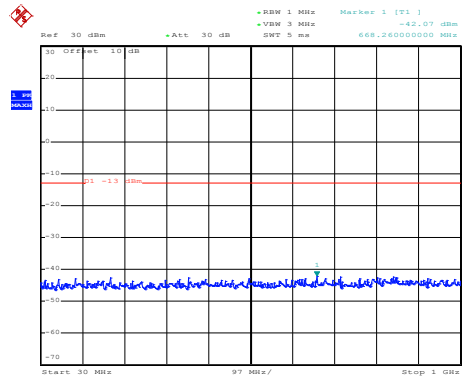
30MHz~1GHz



Date: 15.JUN.2020 09:43:24

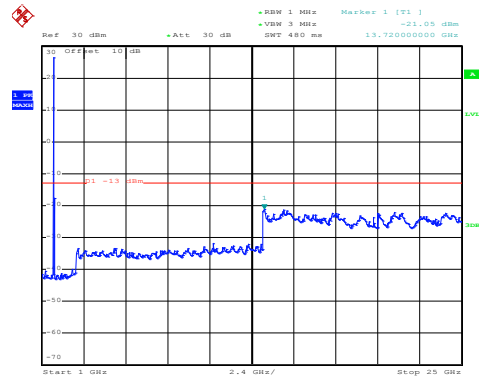
1GHz~25GHz

LTE Band 4: QPSK & RB Size 1  
BW: 20MHz  
Lowest channel



Date: 15.JUN.2020 09:44:07

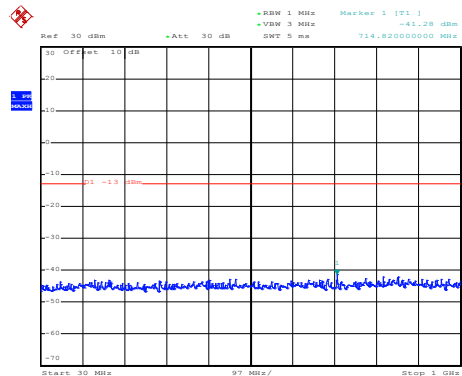
30MHz~1GHz



Date: 15.JUN.2020 09:41:30

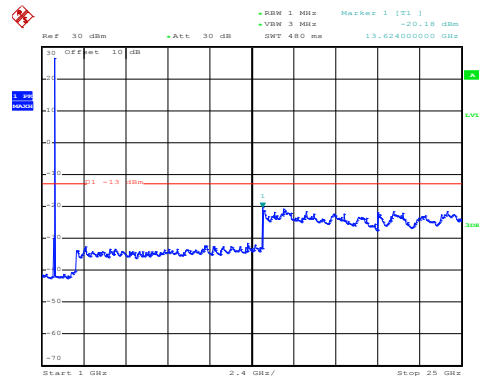
1GHz~25GHz

Middle channel



Date: 15.JUN.2020 09:43:52

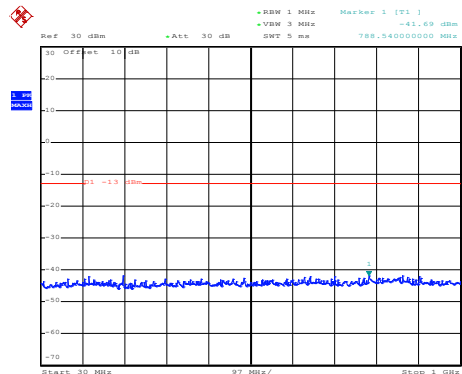
30MHz~1GHz



Date: 15.JUN.2020 09:42:23

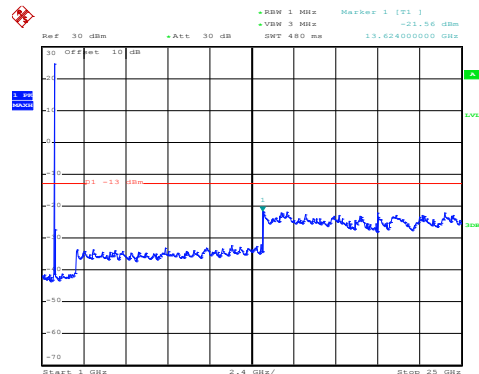
1GHz~25GHz

High channel



Date: 15.JUN.2020 09:43:38

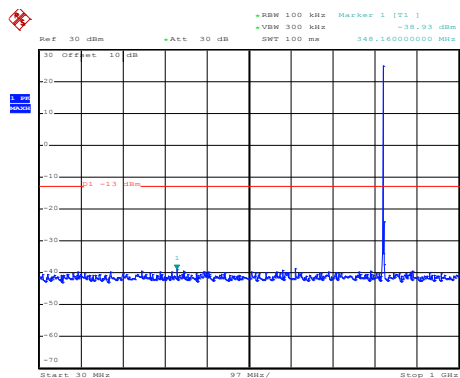
30MHz~1GHz



Date: 15.JUN.2020 09:43:15

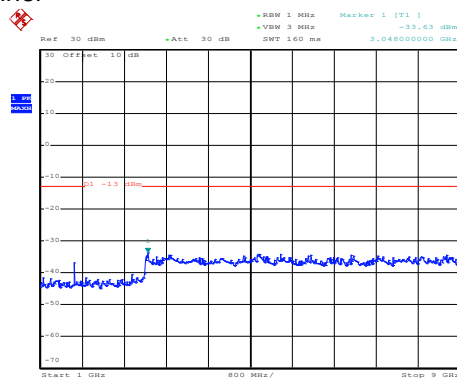
1GHz~25GHz

## LTE Band 5 part:

LTE Band 5: 16 QAM & RB Size 1  
BW: 1.4MHz  
Lowest channel

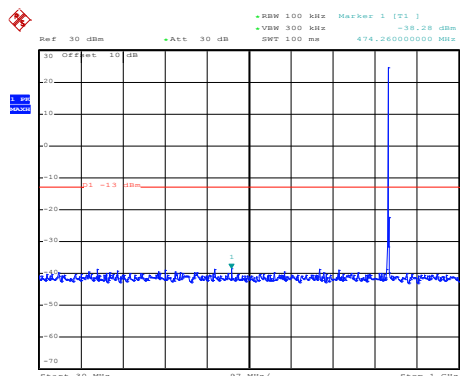
Date: 15.JUN.2020 09:32:03

30MHz~1GHz



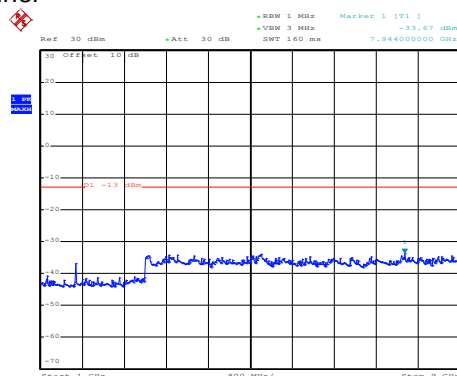
Date: 15.JUN.2020 09:29:16

1GHz~9GHz



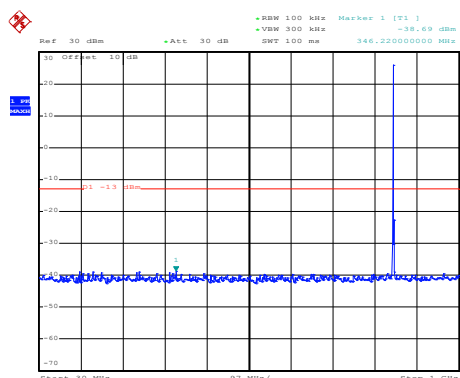
Date: 15.JUN.2020 09:30:37

30MHz~1GHz



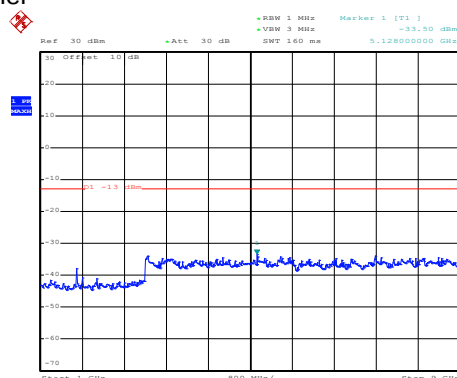
Date: 15.JUN.2020 09:29:32

1GHz~9GHz



Date: 15.JUN.2020 09:30:16

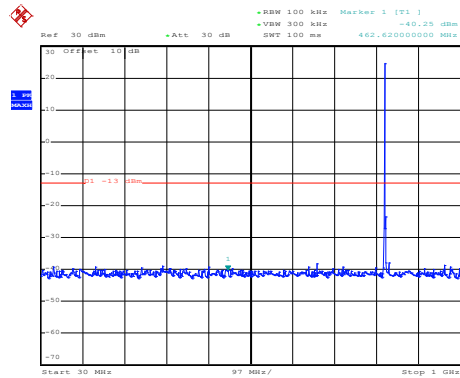
30MHz~1GHz



Date: 15.JUN.2020 09:29:46

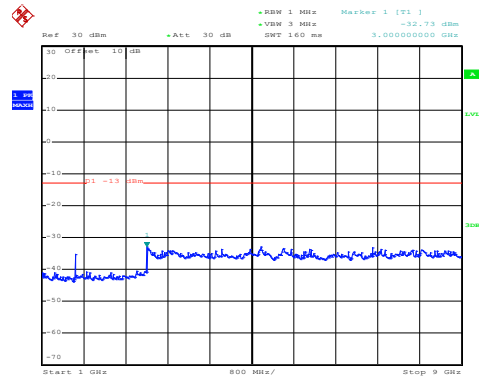
1GHz~9GHz

LTE Band 5: QPSK & RB Size 1  
BW: 1.4MHz  
Lowest channel



Date: 15.JUN.2020 09:31:56

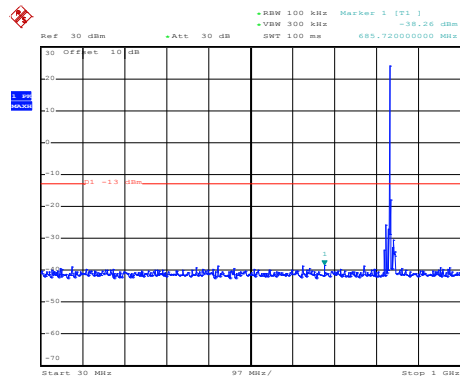
30MHz~1GHz



Date: 15.JUN.2020 09:29:11

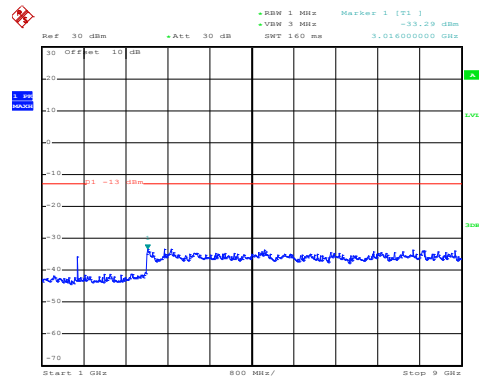
1GHz~9GHz

Middle channel



Date: 15.JUN.2020 09:30:29

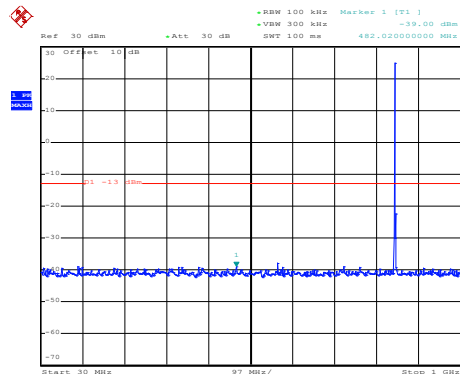
30MHz~1GHz



Date: 15.JUN.2020 09:29:27

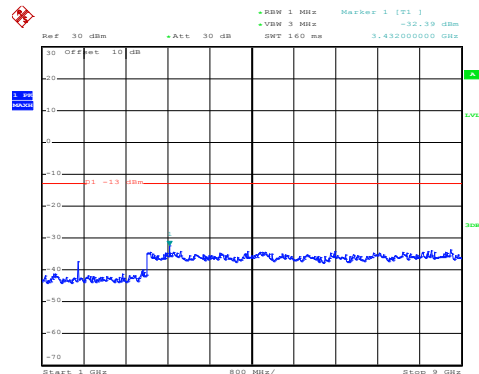
1GHz~9GHz

High channel



Date: 15.JUN.2020 09:30:06

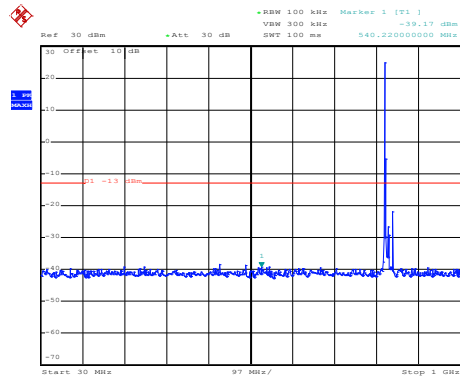
30MHz~1GHz



Date: 15.JUN.2020 09:29:41

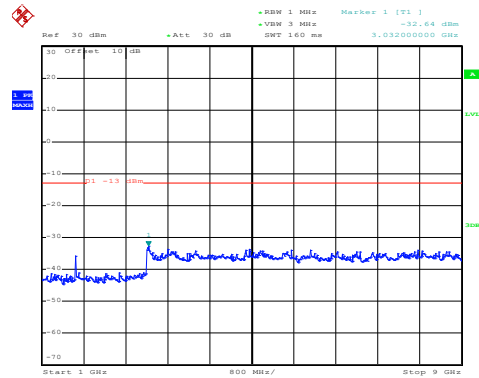
1GHz~9GHz

LTE Band 5: 16 QAM & RB Size 1  
BW: 10MHz  
Lowest channel



Date: 15.JUN.2020 09:27:30

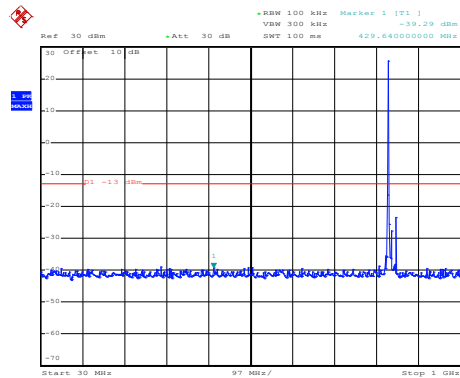
30MHz~1GHz



Date: 15.JUN.2020 09:28:08

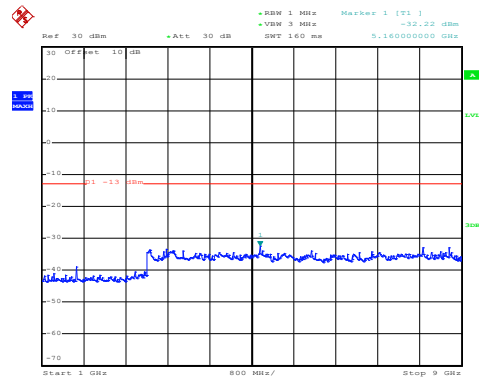
1GHz~9GHz

Middle channel



Date: 15.JUN.2020 09:27:01

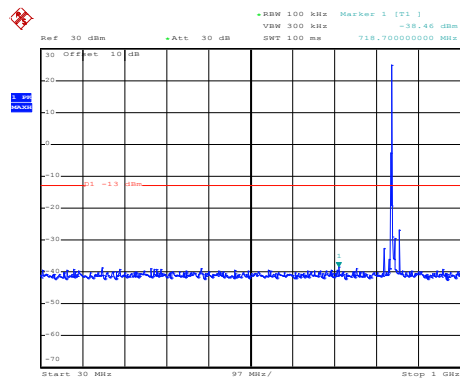
30MHz~1GHz



Date: 15.JUN.2020 09:28:27

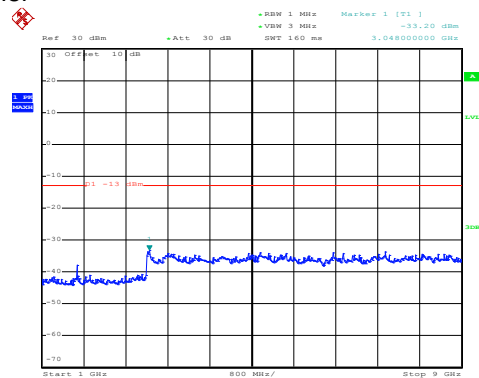
1GHz~9GHz

High channel



Date: 15.JUN.2020 09:26:39

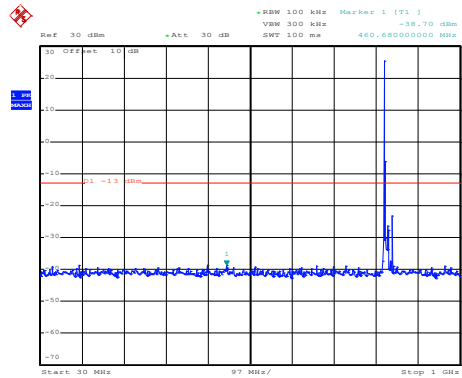
30MHz~1GHz



Date: 15.JUN.2020 09:28:44

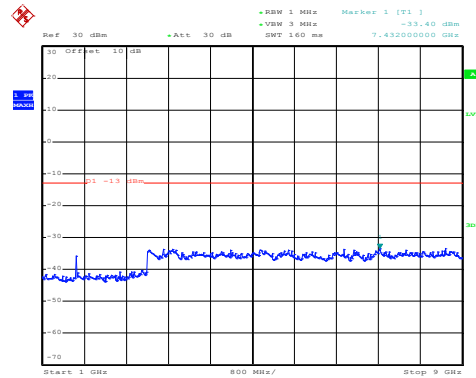
1GHz~9GHz

LTE Band 5: QPSK & RB Size 1  
BW: 10MHz  
Lowest channel



Date: 15.JUN.2020 09:27:20

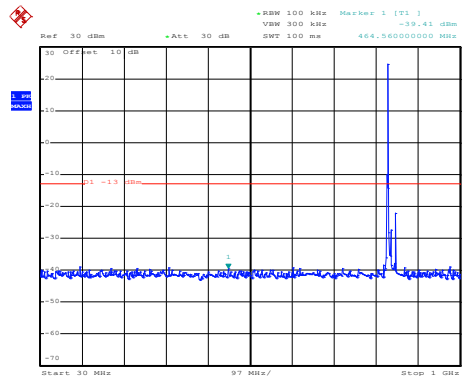
30MHz~1GHz



Date: 15.JUN.2020 09:28:01

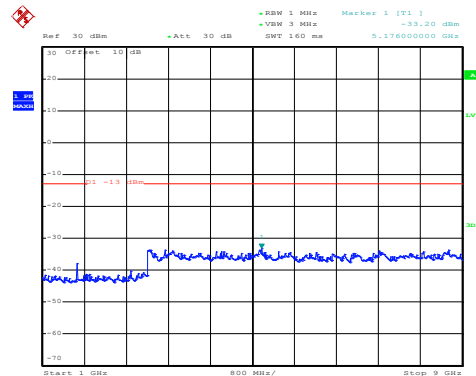
1GHz~9GHz

Middle channel



Date: 15.JUN.2020 09:26:52

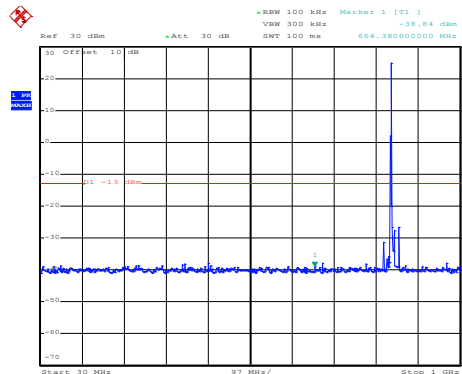
30MHz~1GHz



Date: 15.JUN.2020 09:28:18

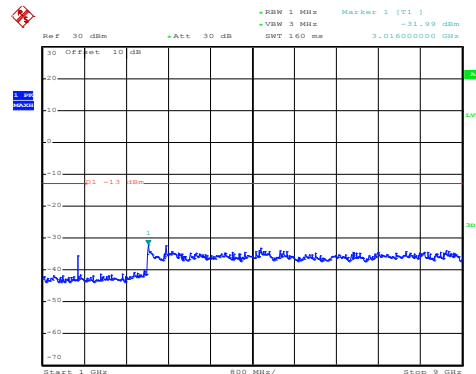
1GHz~9GHz

High channel



Date: 15.JUN.2020 09:26:23

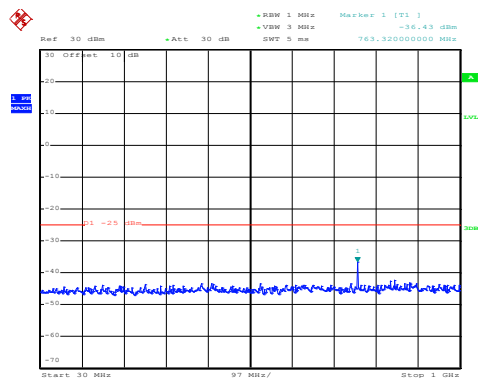
30MHz~1GHz



Date: 15.JUN.2020 09:28:38

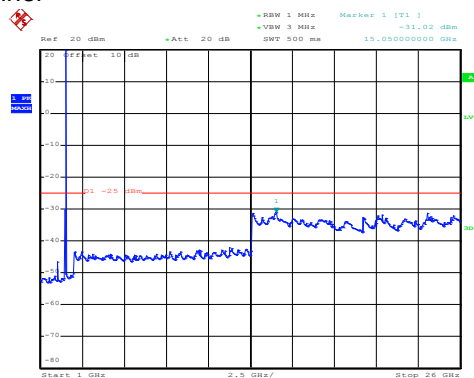
1GHz~9GHz

## LTE Band 7 part:

LTE Band 7: 16 QAM & RB Size 1  
BW: 5MHz  
Lowest channel

Date: 16.JUN.2020 14:59:41

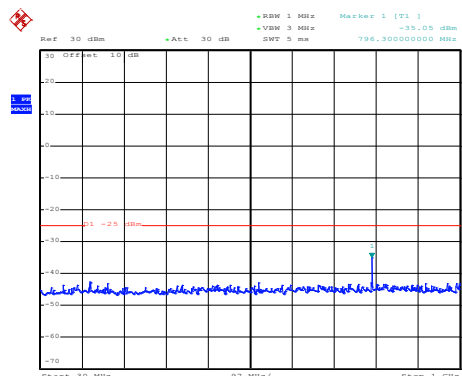
30MHz~1GHz



Date: 16.JUN.2020 15:03:24

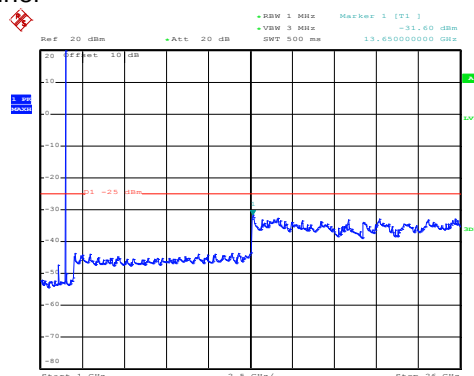
1GHz~26GHz

## Middle channel



Date: 16.JUN.2020 14:59:57

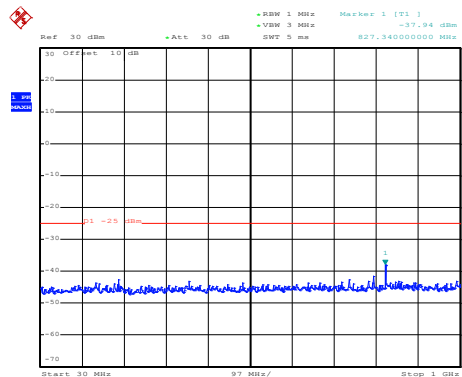
30MHz~1GHz



Date: 16.JUN.2020 15:02:08

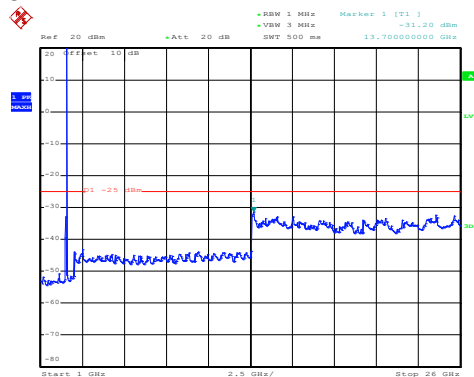
1GHz~26GHz

## High channel



Date: 16.JUN.2020 15:00:48

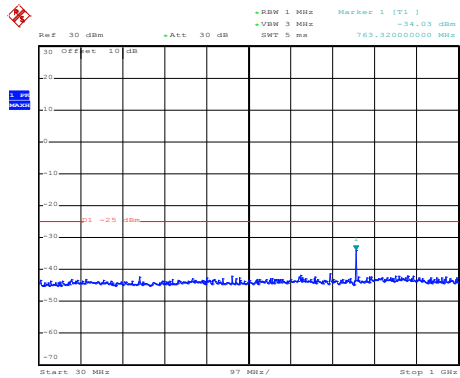
30MHz~1GHz



Date: 16.JUN.2020 15:01:46

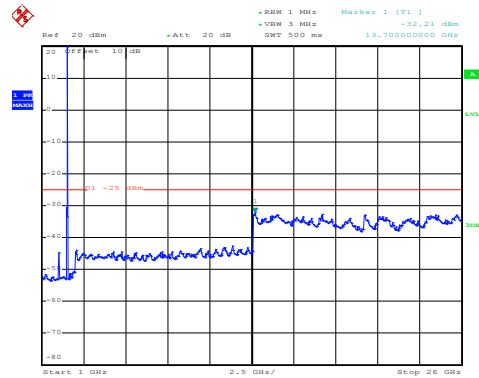
1GHz~26GHz

LTE Band 7: QPSK & RB Size 1  
BW: 5MHz  
Lowest channel



Date: 16.JUN.2020 14:59:32

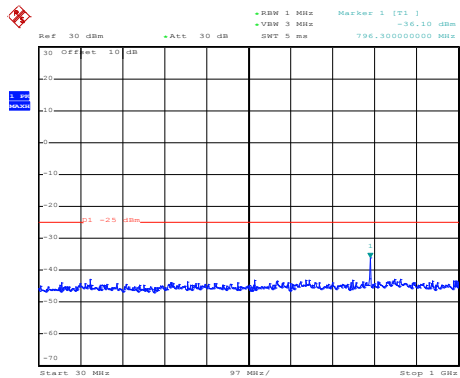
30MHz~1GHz



Date: 16.JUN.2020 15:02:24

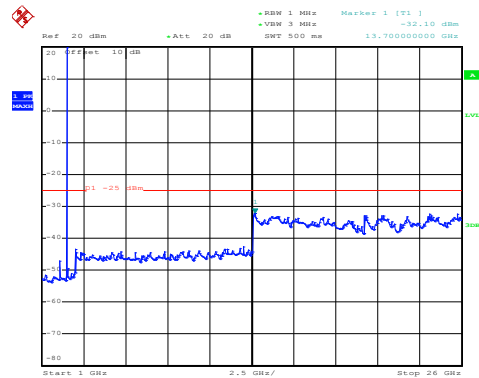
1GHz~26GHz

Middle channel



Date: 16.JUN.2020 14:59:50

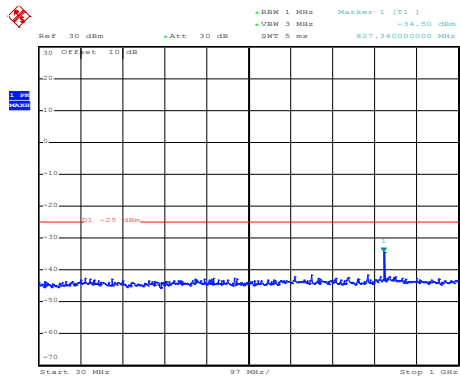
30MHz~1GHz



Date: 16.JUN.2020 15:01:59

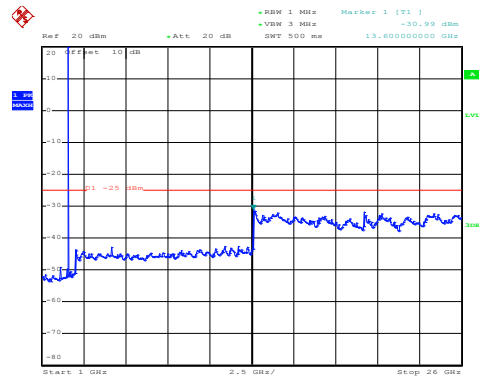
1GHz~26GHz

High channel



Date: 16.JUN.2020 15:00:42

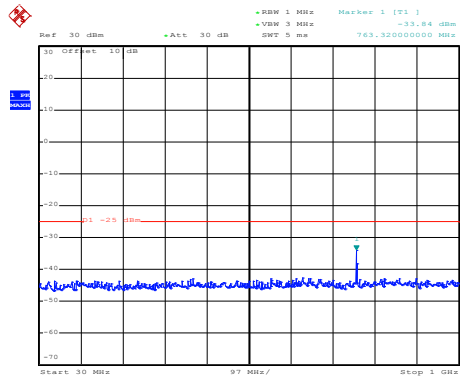
30MHz~1GHz



Date: 16.JUN.2020 15:01:38

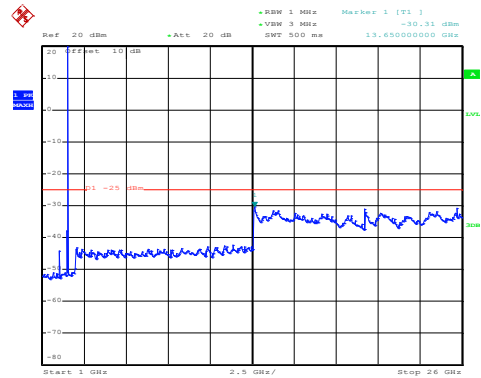
1GHz~26GHz

LTE Band 7: 16 QAM & RB Size 1  
BW: 20MHz  
Lowest channel



Date: 15.JUN.2020 09:47:40

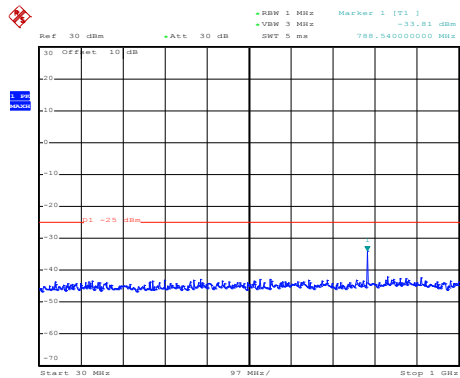
30MHz~1GHz



Date: 15.JUN.2020 09:47:16

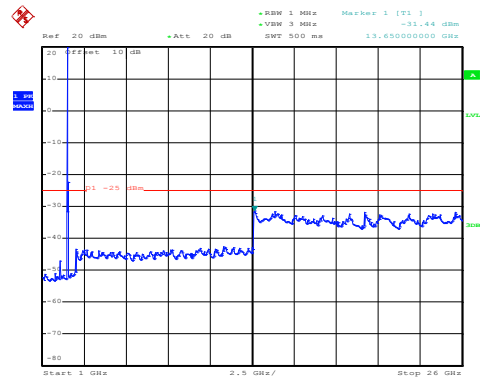
1GHz~26GHz

Middle channel



Date: 15.JUN.2020 09:47:53

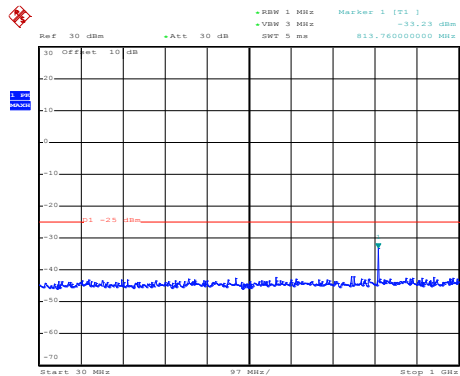
30MHz~1GHz



Date: 15.JUN.2020 09:46:38

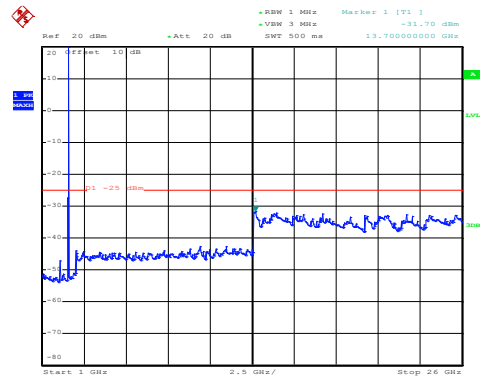
1GHz~26GHz

High channel



Date: 15.JUN.2020 09:48:12

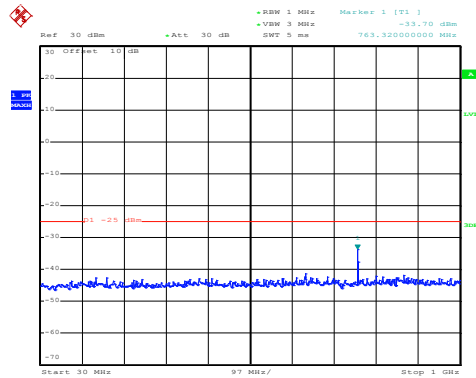
30MHz~1GHz



Date: 15.JUN.2020 09:46:12

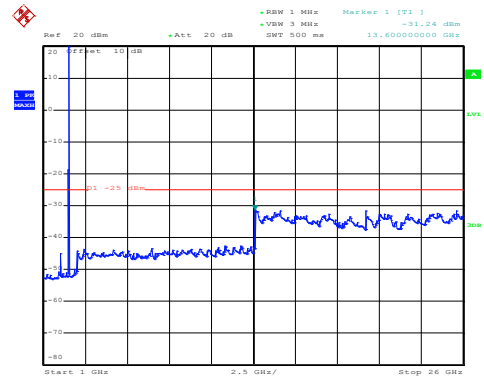
1GHz~26GHz

LTE Band 7: QPSK & RB Size 1  
BW: 20MHz  
Lowest channel



Date: 15.JUN.2020 09:47:34

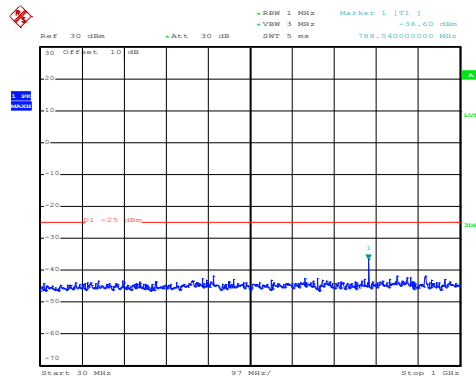
30MHz~1GHz



Date: 15.JUN.2020 09:46:55

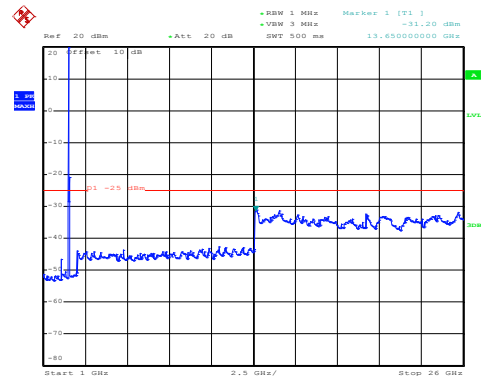
1GHz~26GHz

Middle channel



Date: 15.JUN.2020 09:47:47

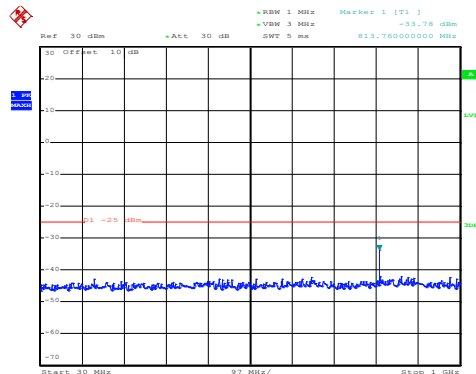
30MHz~1GHz



Date: 15.JUN.2020 09:46:24

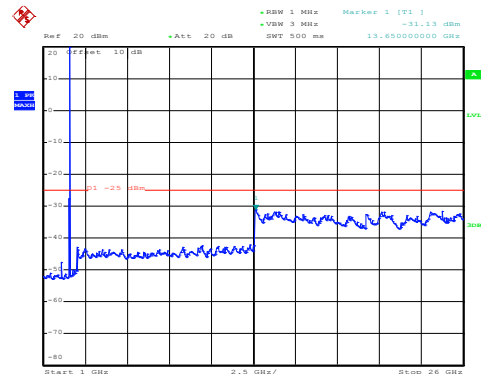
1GHz~26GHz

High channel



Date: 15.JUN.2020 09:48:02

30MHz~1GHz



Date: 15.JUN.2020 09:46:04

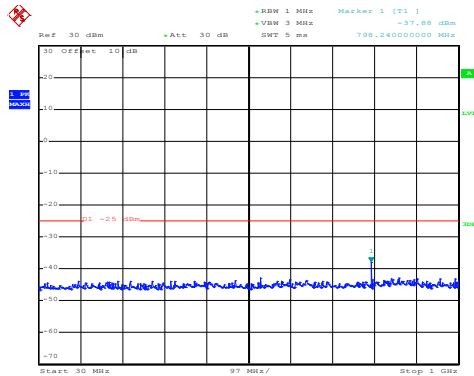
1GHz~26GHz

## LTE Band 41 part:

## LTE Band 41: 16 QAM &amp; RB Size 1

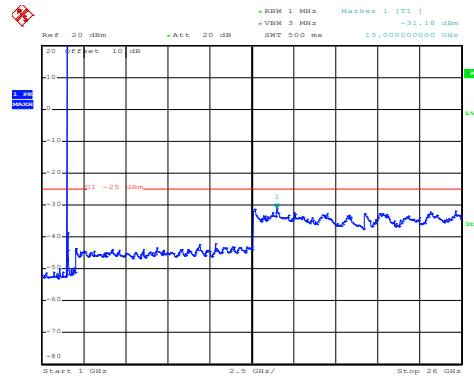
BW: 5MHz

## Lowest channel



Date: 16.JUN.2020 15:07:11

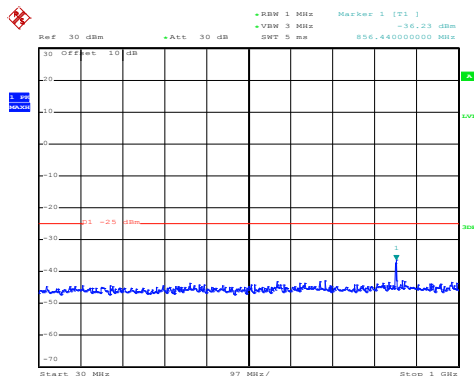
30MHz~1GHz



Date: 16.JUN.2020 15:04:45

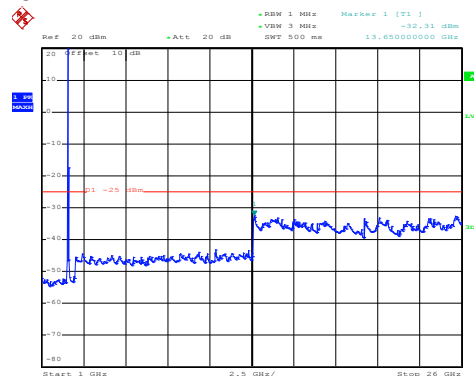
1GHz~26GHz

## Middle channel



Date: 16.JUN.2020 15:06:53

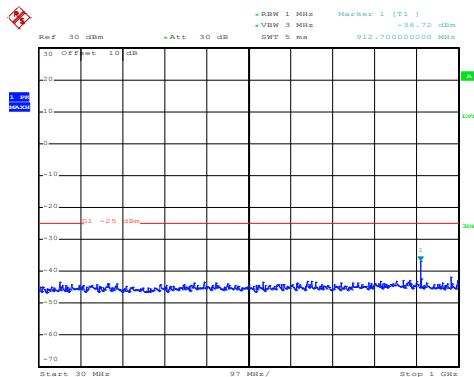
30MHz~1GHz



Date: 16.JUN.2020 15:05:22

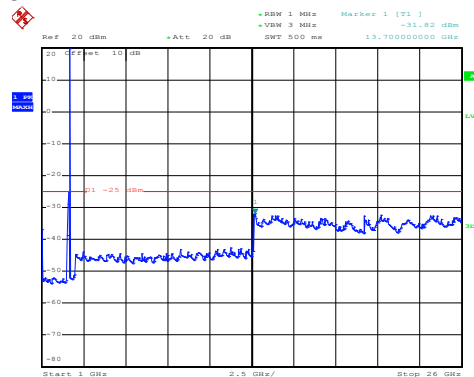
1GHz~26GHz

## High channel



Date: 16.JUN.2020 15:06:34

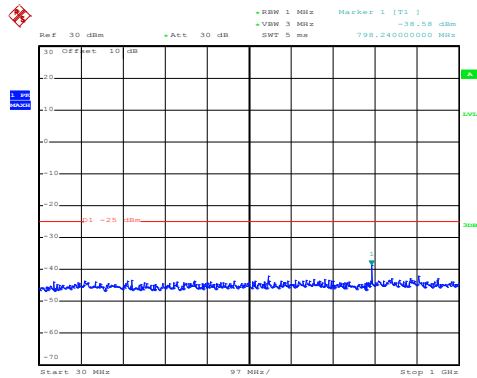
30MHz~1GHz



Date: 16.JUN.2020 15:05:58

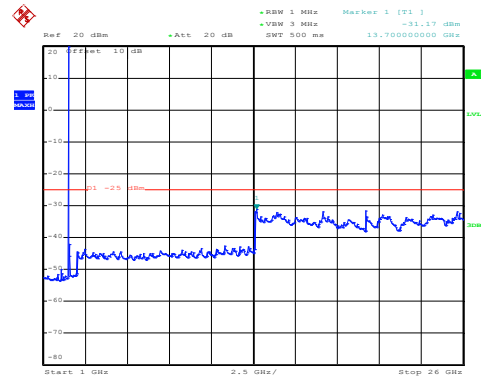
1GHz~26GHz

LTE Band 41: QPSK & RB Size 1  
BW: 5MHz  
Lowest channel



Date: 16.JUN.2020 15:07:04

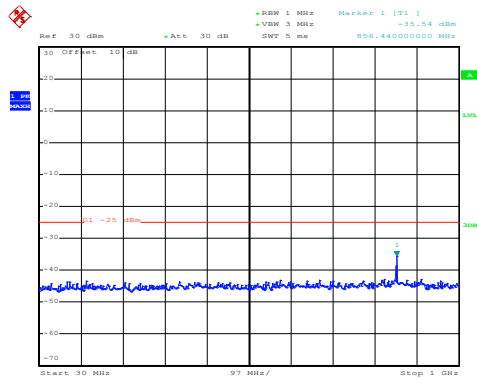
30MHz~1GHz



Date: 16.JUN.2020 15:03:55

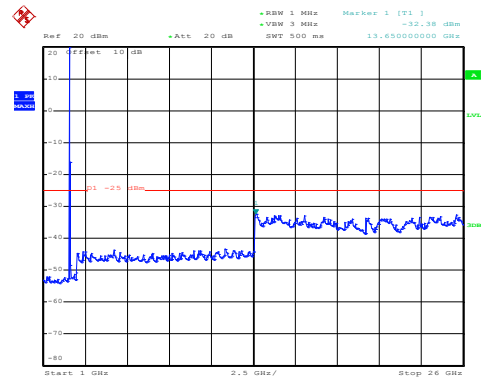
1GHz~26GHz

Middle channel



Date: 16.JUN.2020 15:06:47

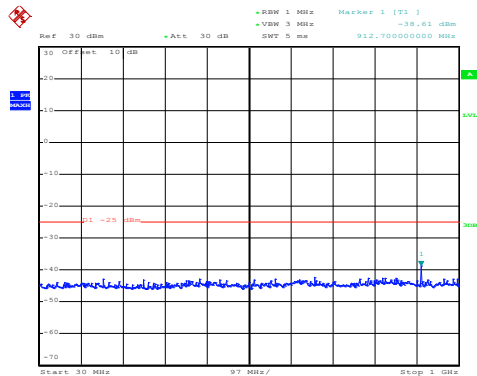
30MHz~1GHz



Date: 16.JUN.2020 15:05:14

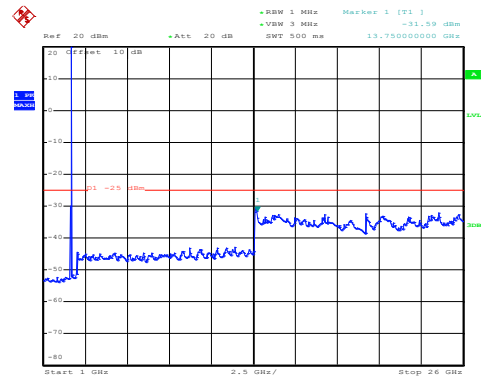
1GHz~26GHz

High channel



Date: 16.JUN.2020 15:06:26

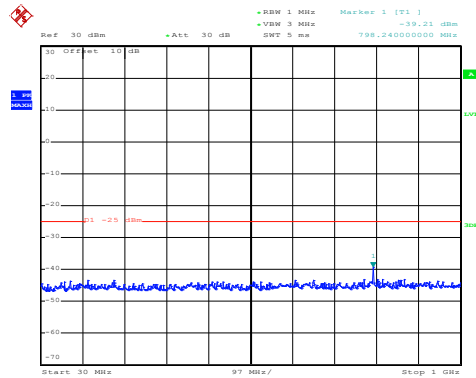
30MHz~1GHz



Date: 16.JUN.2020 15:05:41

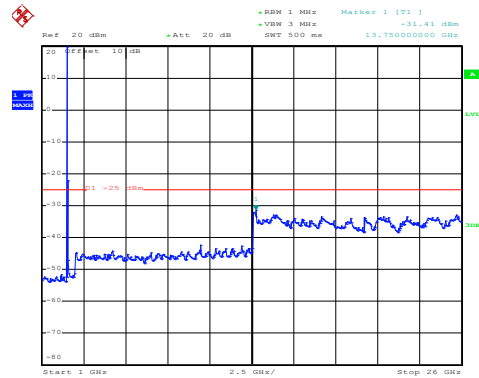
1GHz~26GHz

LTE Band 41: 16 QAM & RB Size 1  
BW: 20MHz  
Lowest channel



Date: 16.JUN.2020 15:07:50

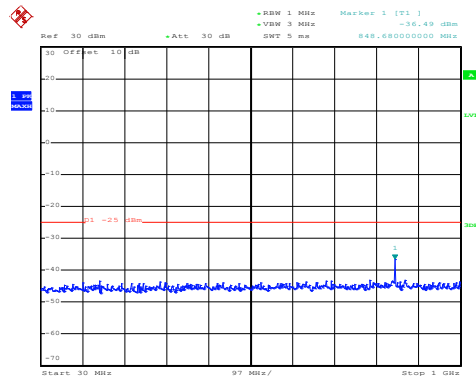
30MHz~1GHz



Date: 16.JUN.2020 15:10:13

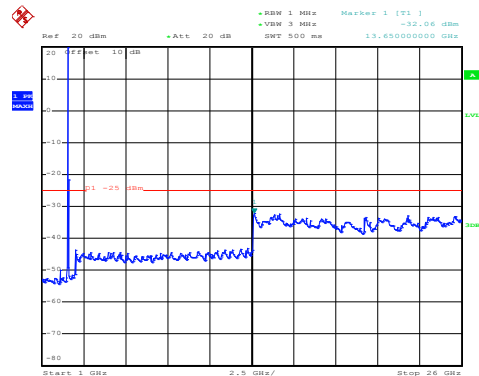
1GHz~26GHz

Middle channel



Date: 16.JUN.2020 15:08:06

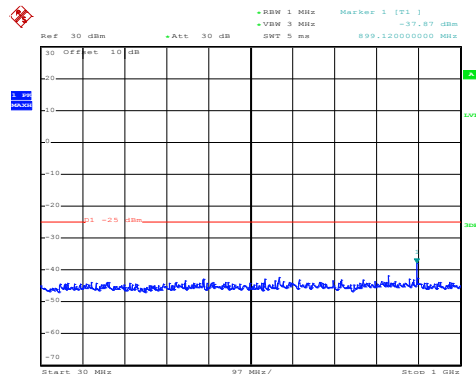
30MHz~1GHz



Date: 16.JUN.2020 15:09:47

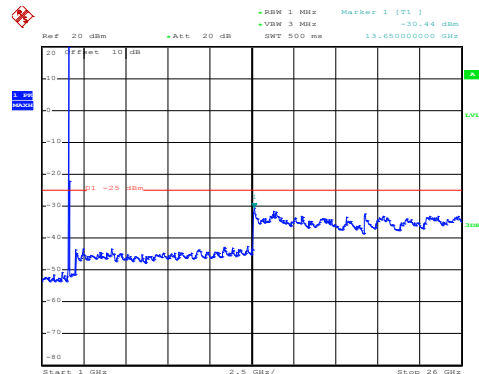
1GHz~26GHz

High channel



Date: 16.JUN.2020 15:08:25

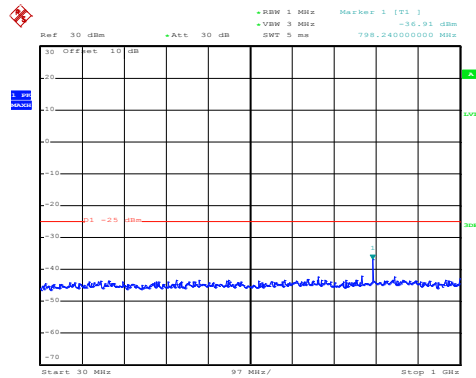
30MHz~1GHz



Date: 16.JUN.2020 15:09:10

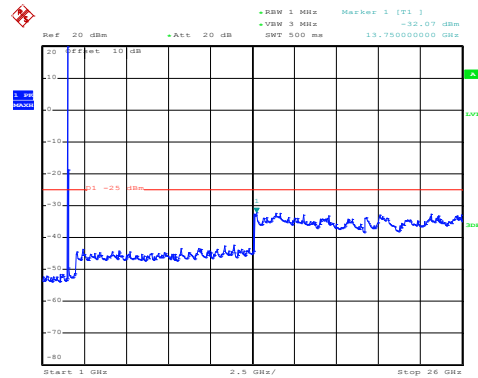
1GHz~26GHz

LTE Band 41: QPSK & RB Size 1  
BW: 20MHz  
Lowest channel



Date: 16.JUN.2020 15:07:43

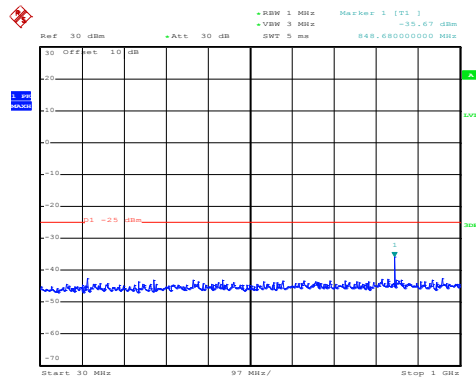
30MHz~1GHz



Date: 16.JUN.2020 15:10:02

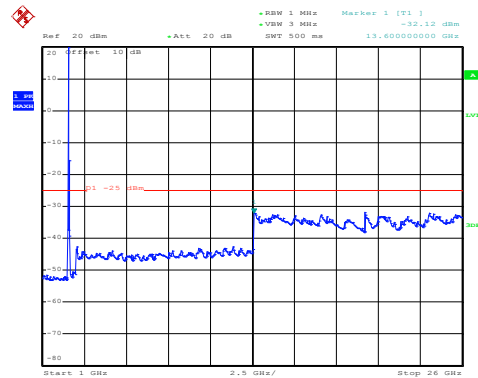
1GHz~26GHz

Middle channel



Date: 16.JUN.2020 15:08:00

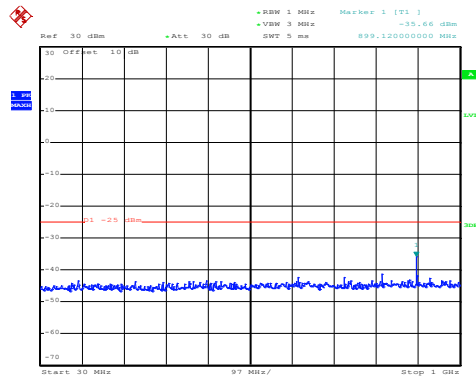
30MHz~1GHz



Date: 16.JUN.2020 15:09:37

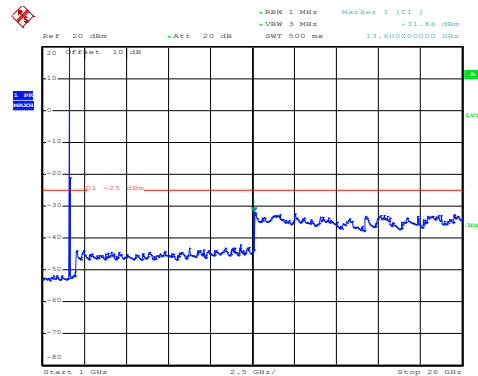
1GHz~26GHz

High channel



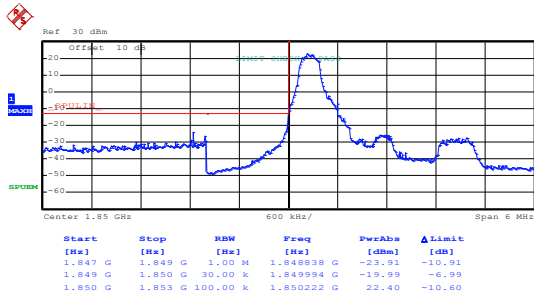
Date: 16.JUN.2020 15:08:19

30MHz~1GHz



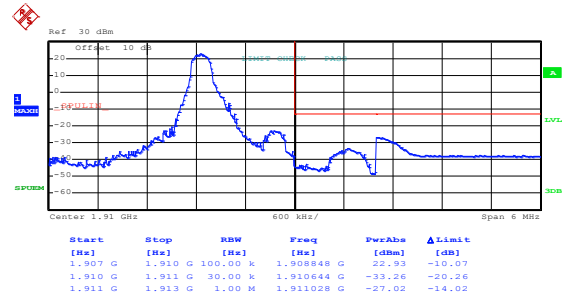
Date: 16.JUN.2020 15:08:53

1GHz~26GHz

**Band edge emission:****LTE Band 2 part:****LTE Band 2, BW: 1.4MHz  
16QAM & RB Size 1**

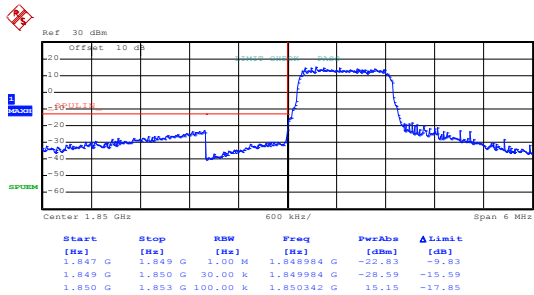
Date: 15.JUN.2020 08:50:52

Lowest channel



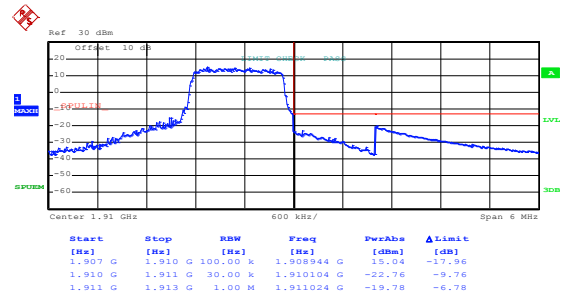
Date: 15.JUN.2020 08:52:10

Highest channel

**16QAM & RB Size 6**

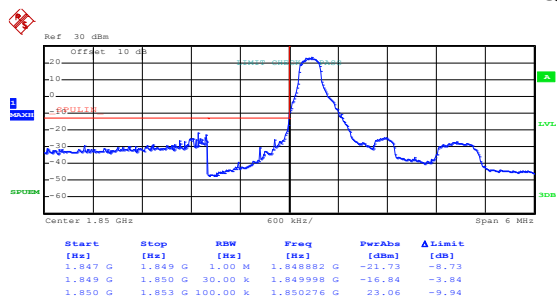
Date: 15.JUN.2020 08:51:22

Lowest channel



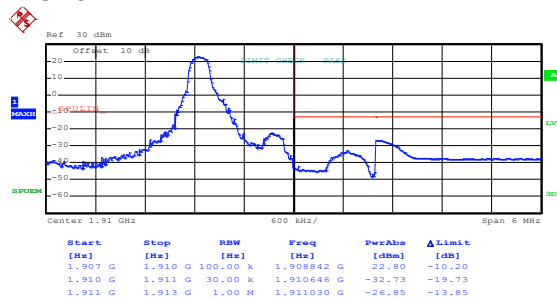
Date: 15.JUN.2020 08:51:41

Highest channel

LTE Band 2, BW: 1.4MHz  
QPSK & RB Size 1

Date: 15.JUN.2020 08:50:45

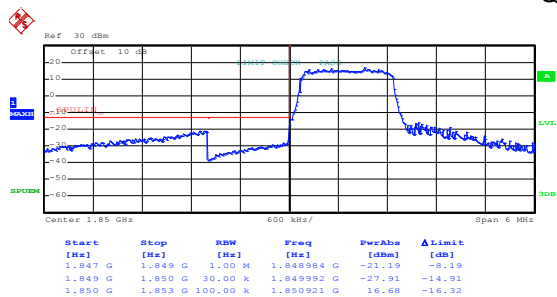
Lowest channel



Date: 15.JUN.2020 08:51:49

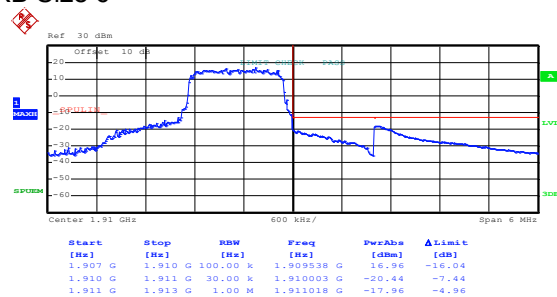
Highest channel

## QPSK &amp; RB Size 6



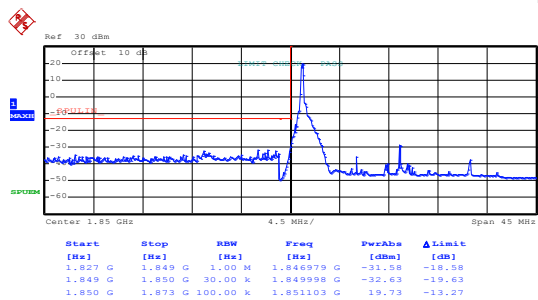
Date: 15.JUN.2020 08:51:17

Lowest channel



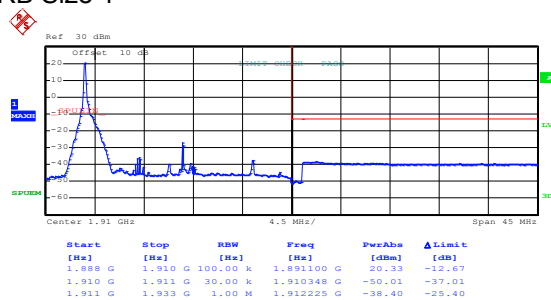
Date: 15.JUN.2020 08:51:37

Highest channel

LTE Band 2, BW: 20MHz  
16QAM & RB Size 1

Date: 15.JUN.2020 09:09:44

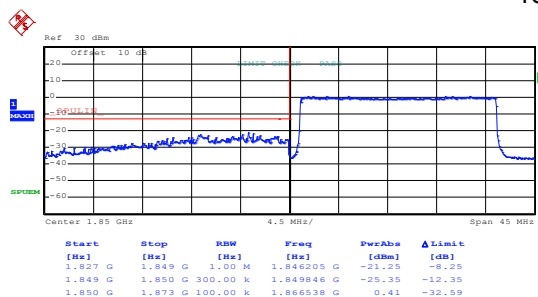
Lowest channel



Date: 15.JUN.2020 09:10:20

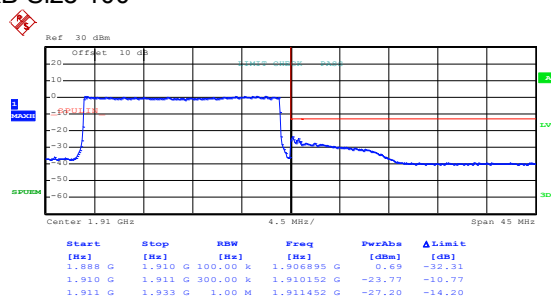
Highest channel

## 16QAM &amp; RB Size 100



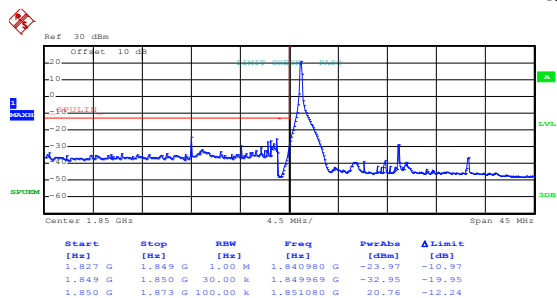
Date: 15.JUN.2020 09:10:01

Lowest channel



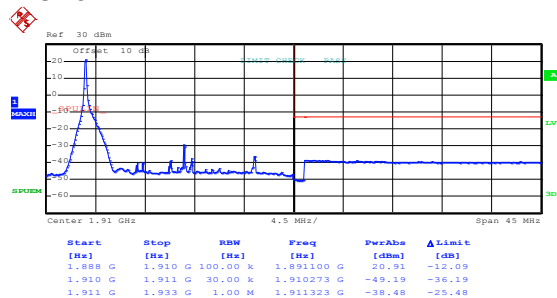
Date: 15.JUN.2020 09:10:45

Highest channel

LTE Band 2, BW: 20MHz  
QPSK & RB Size 1

Date: 15.JUN.2020 09:09:39

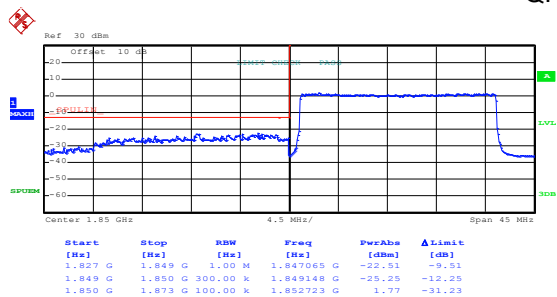
Lowest channel



Date: 15.JUN.2020 09:10:26

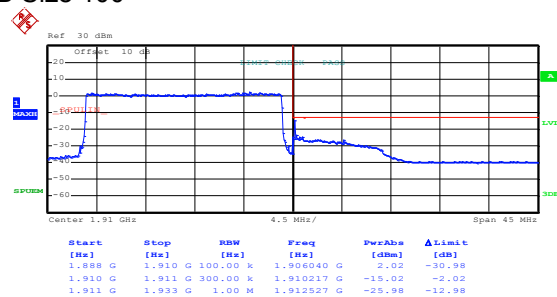
Highest channel

## QPSK &amp; RB Size 100



Date: 15.JUN.2020 09:09:56

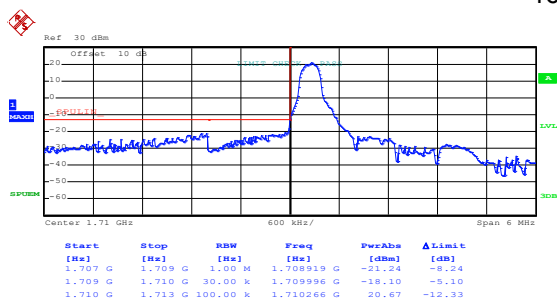
Lowest channel



Date: 15.JUN.2020 09:10:40

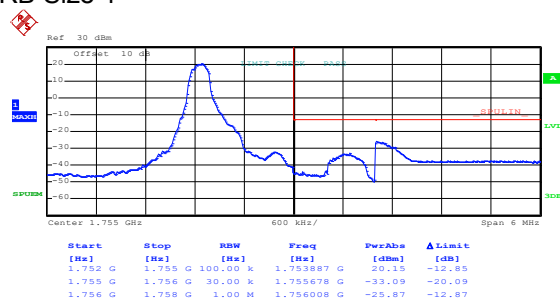
Highest channel

## LTE Band 4 part:

LTE Band 4, BW: 1.4MHz  
16QAM & RB Size 1

Date: 15.JUN.2020 08:55:14

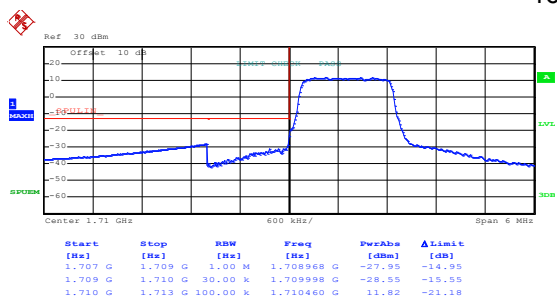
Lowest channel



Date: 15.JUN.2020 08:55:59

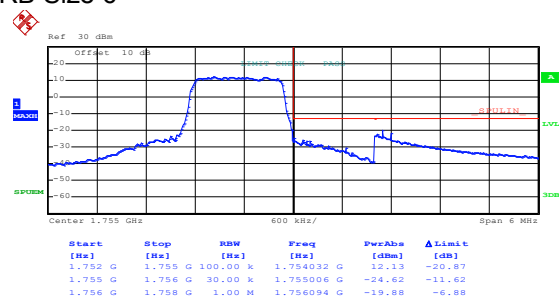
Highest channel

## 16QAM &amp; RB Size 6



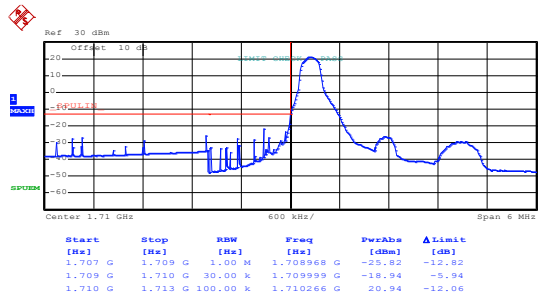
Date: 15.JUN.2020 08:55:26

Lowest channel



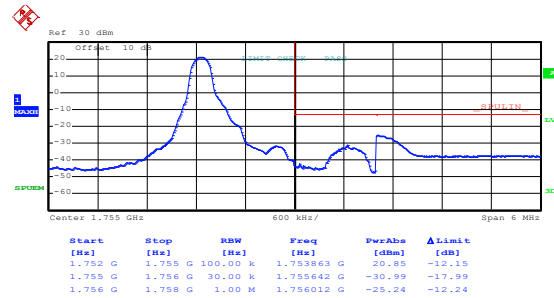
Date: 15.JUN.2020 08:55:44

Highest channel

LTE Band 4, BW: 1.4MHz  
QPSK & RB Size 1

Date: 15.JUN.2020 08:54:42

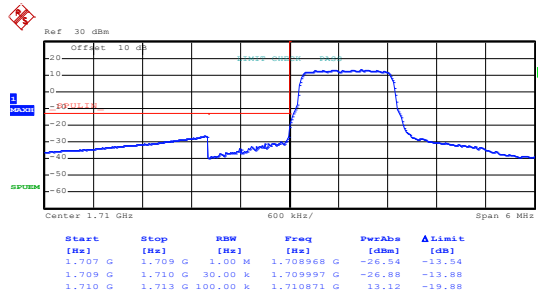
Lowest channel



Date: 15.JUN.2020 08:55:54

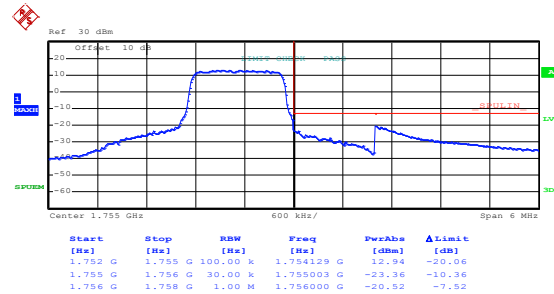
Highest channel

## QPSK &amp; RB Size 6



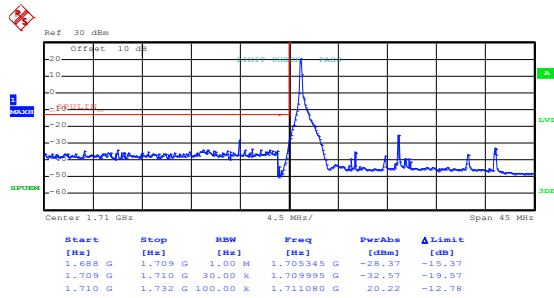
Date: 15.JUN.2020 08:55:22

Lowest channel



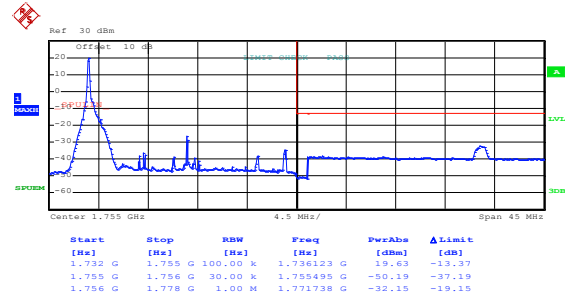
Date: 15.JUN.2020 08:55:40

Highest channel

LTE Band 4, BW: 20MHz  
16QAM & RB Size 1

Date: 15.JUN.2020 09:08:10

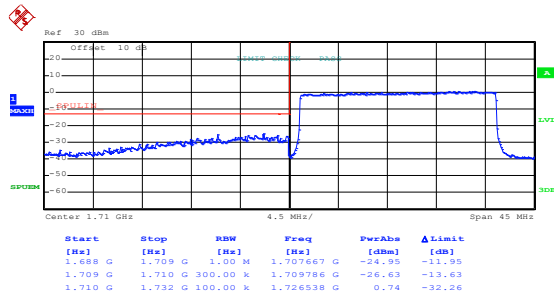
Lowest channel



Date: 15.JUN.2020 09:08:48

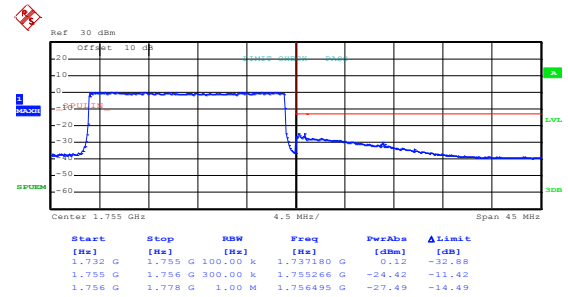
Highest channel

## 16QAM &amp; RB Size 100



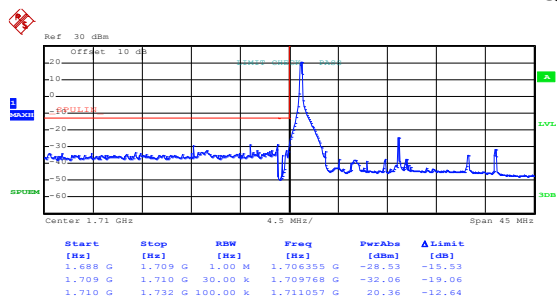
Date: 15.JUN.2020 09:08:28

Lowest channel



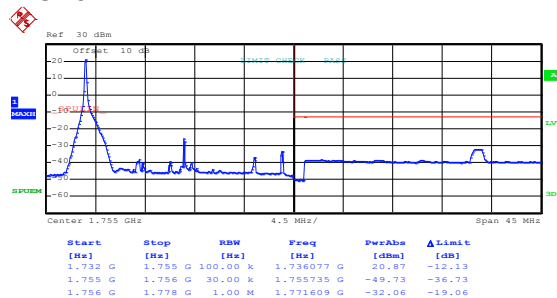
Date: 15.JUN.2020 09:09:05

Highest channel

LTE Band 4, BW: 20MHz  
QPSK & RB Size 1

Date: 15.JUN.2020 09:08:05

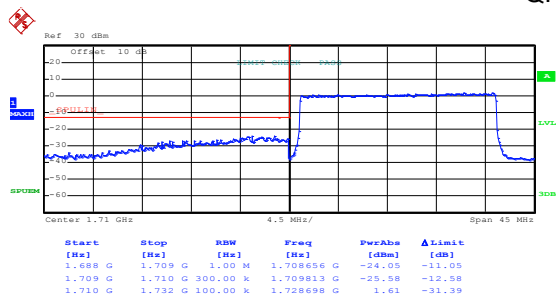
Lowest channel



Date: 15.JUN.2020 09:08:42

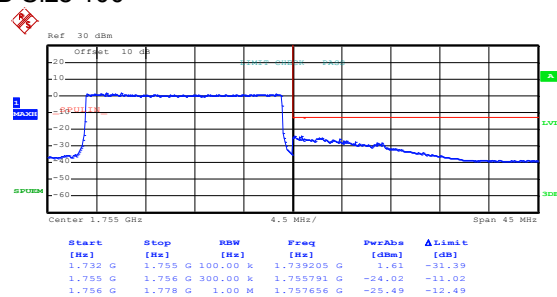
Highest channel

## QPSK &amp; RB Size 100



Date: 15.JUN.2020 09:08:22

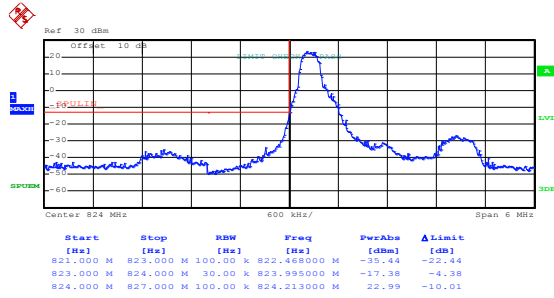
Lowest channel



Date: 15.JUN.2020 09:09:00

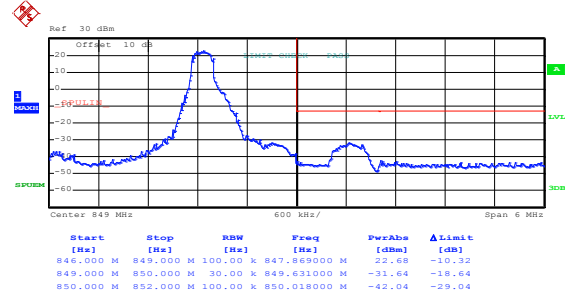
Highest channel

## LTE Band 5 part:

LTE Band 5, BW: 1.4MHz  
16QAM & RB Size 1

Date: 15.JUN.2020 08:58:08

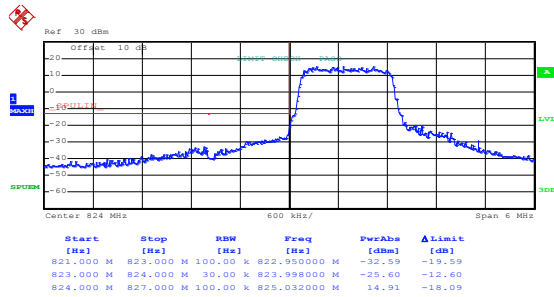
Lowest channel



Date: 15.JUN.2020 08:59:01

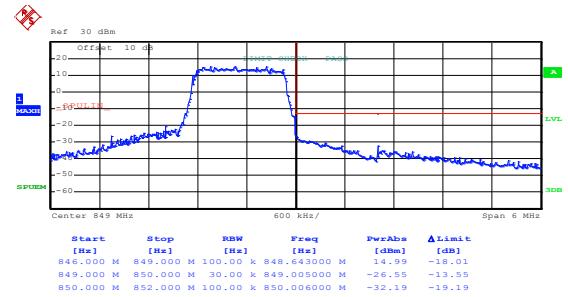
Highest channel

## 16QAM &amp; RB Size 6



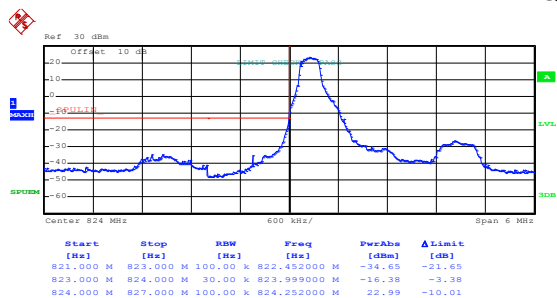
Date: 15.JUN.2020 08:58:19

Lowest channel



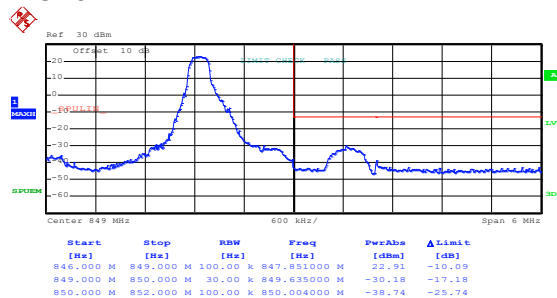
Date: 15.JUN.2020 08:58:47

Highest channel

LTE Band 5, BW: 1.4MHz  
QPSK & RB Size 1

Date: 15.JUN.2020 08:57:59

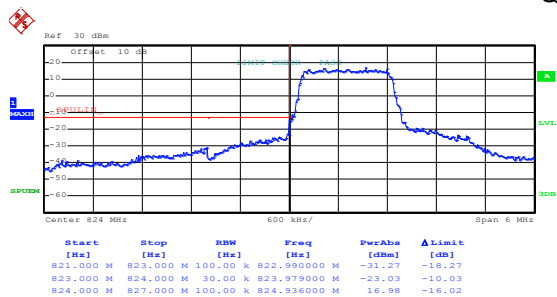
Lowest channel



Date: 15.JUN.2020 08:58:55

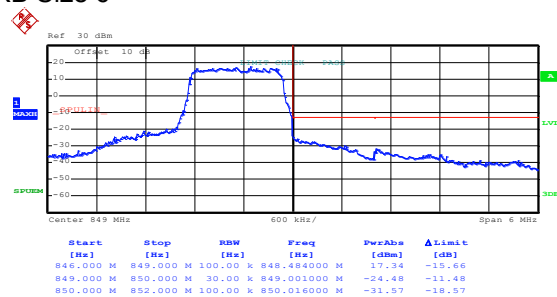
Highest channel

## QPSK &amp; RB Size 6



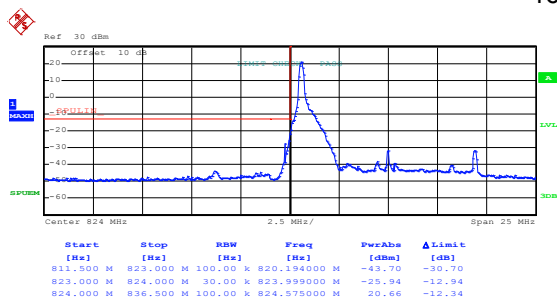
Date: 15.JUN.2020 08:58:15

Lowest channel



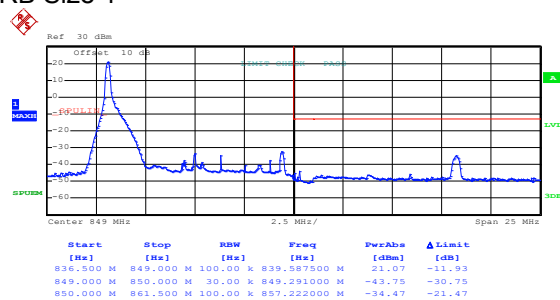
Date: 15.JUN.2020 08:58:43

Highest channel

LTE Band 5, BW: 10MHz  
16QAM & RB Size 1

Date: 15.JUN.2020 09:21:29

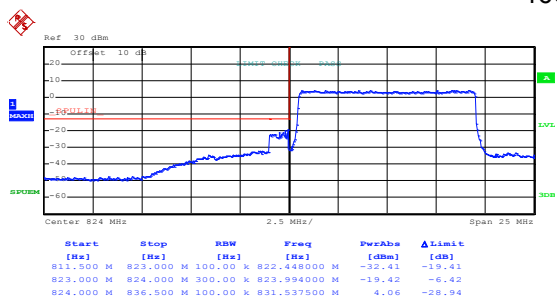
Lowest channel



Date: 15.JUN.2020 09:22:18

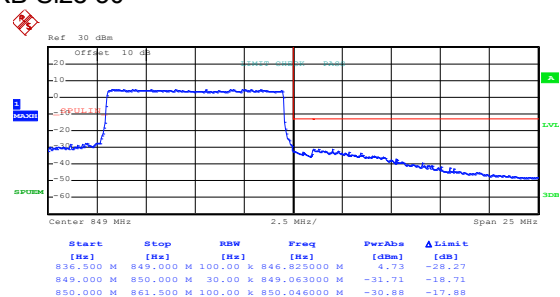
Highest channel

## 16QAM &amp; RB Size 50



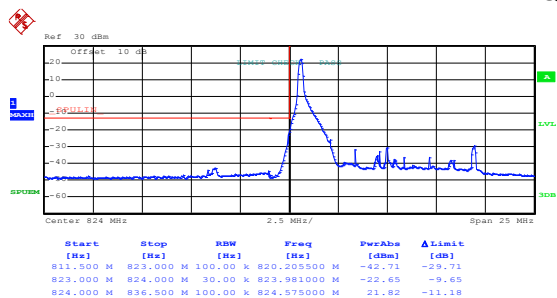
Date: 15.JUN.2020 09:21:58

Lowest channel



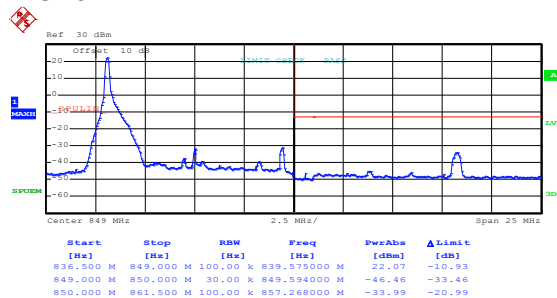
Date: 15.JUN.2020 09:24:42

Highest channel

LTE Band 5, BW: 10MHz  
QPSK & RB Size 1

Date: 15.JUN.2020 09:21:24

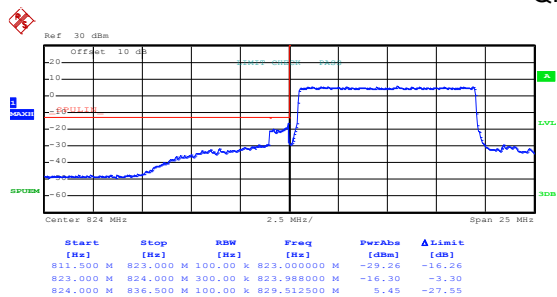
Lowest channel



Date: 15.JUN.2020 09:22:11

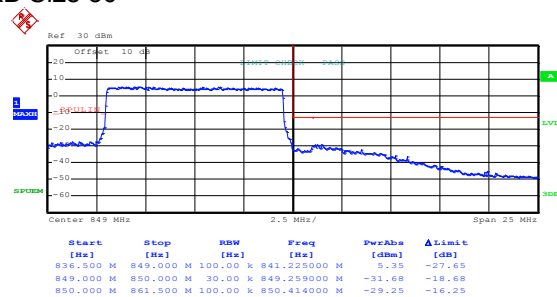
Highest channel

## QPSK &amp; RB Size 50



Date: 15.JUN.2020 09:21:53

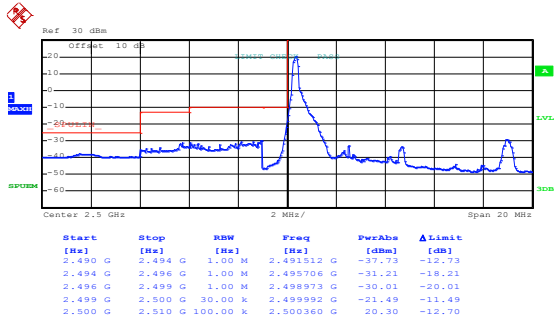
Lowest channel



Date: 15.JUN.2020 09:22:25

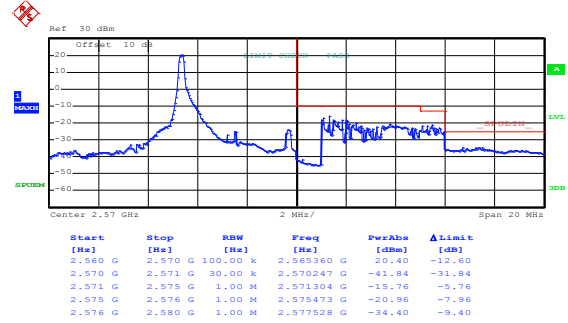
Highest channel

## LTE Band 7 part:

LTE Band 7, BW: 5MHz  
16QAM & RB Size 1

Date: 15.JUN.2020 09:01:49

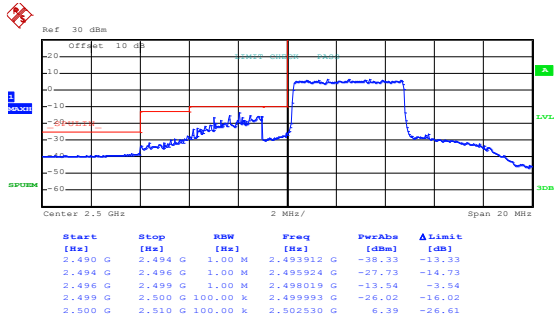
Lowest channel



Date: 15.JUN.2020 09:03:37

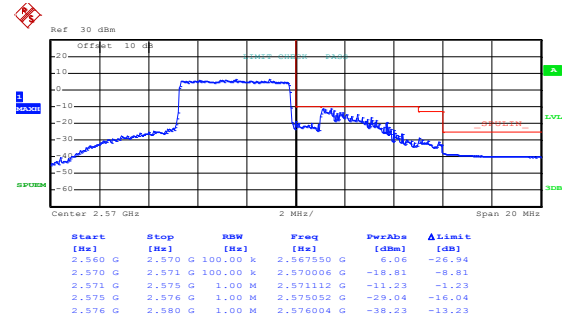
Highest channel

## 16QAM &amp; RB Size 25



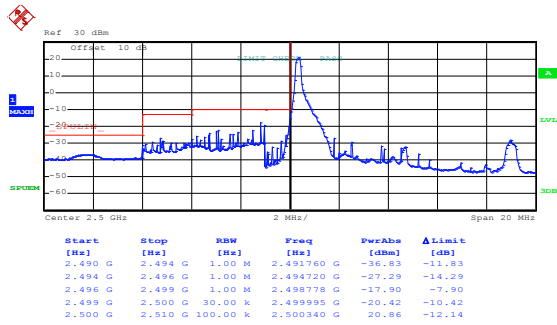
Date: 15.JUN.2020 09:02:17

Lowest channel



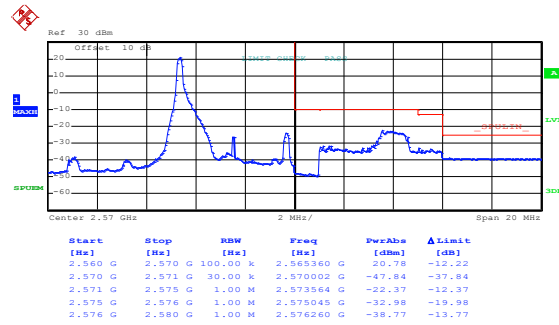
Date: 15.JUN.2020 09:04:45

Highest channel

LTE Band 7, BW: 5MHz  
QPSK & RB Size 1

Date: 15.JUN.2020 09:01:43

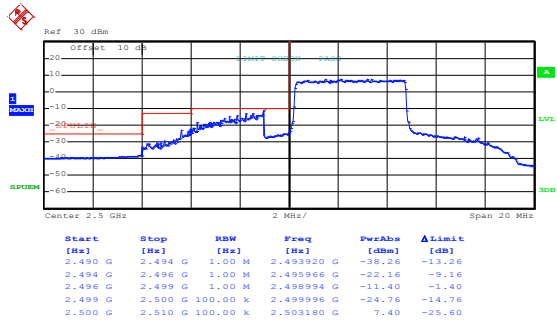
Lowest channel



Date: 15.JUN.2020 09:02:44

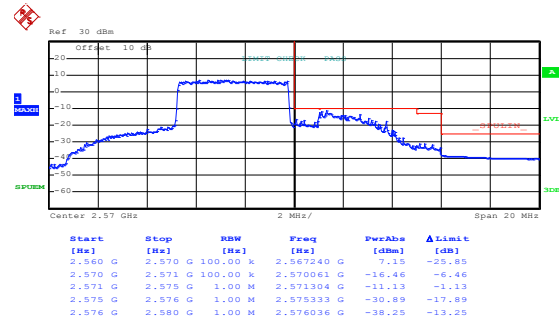
Highest channel

## QPSK &amp; RB Size 25



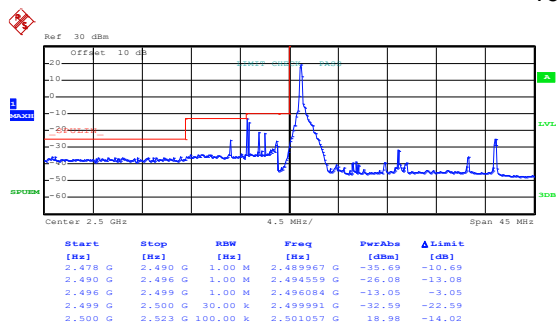
Date: 15.JUN.2020 09:02:05

Lowest channel



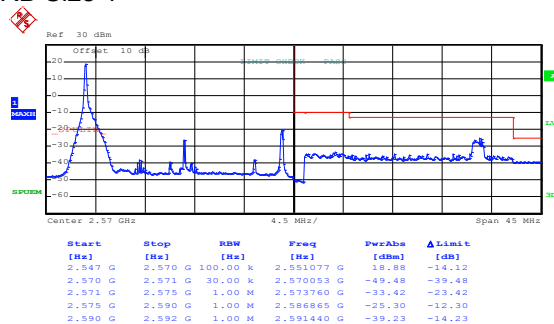
Date: 15.JUN.2020 09:04:15

Highest channel

LTE Band 7, BW: 20MHz  
16QAM & RB Size 1

Date: 15.JUN.2020 09:05:52

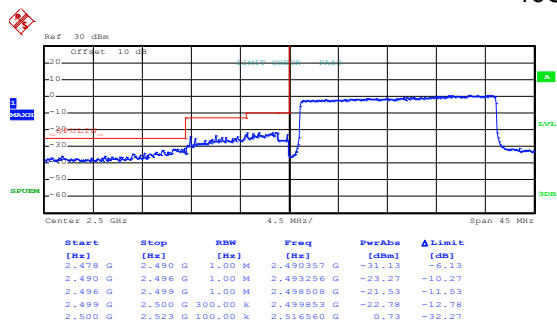
Lowest channel



Date: 15.JUN.2020 09:06:17

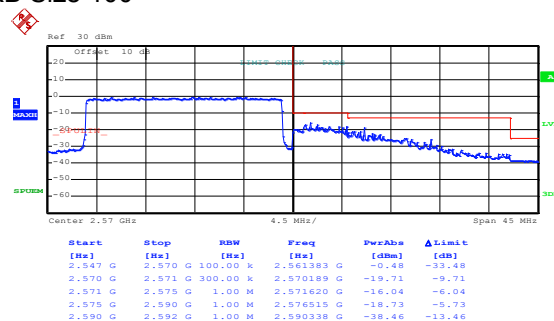
Highest channel

## 16QAM &amp; RB Size 100



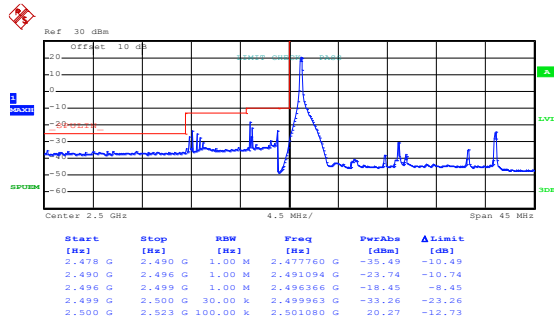
Date: 15.JUN.2020 09:07:17

Lowest channel



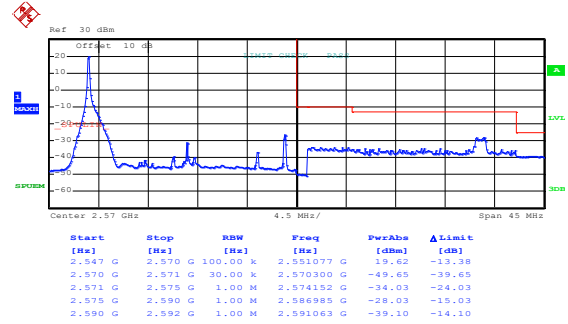
Date: 15.JUN.2020 09:06:55

Highest channel

LTE Band 7, BW: 20MHz  
QPSK & RB Size 1

Date: 15.JUN.2020 09:05:44

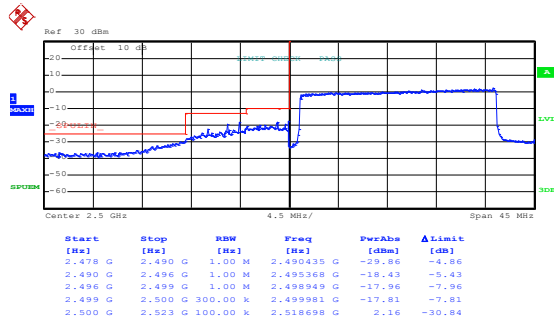
Lowest channel



Date: 15.JUN.2020 09:06:10

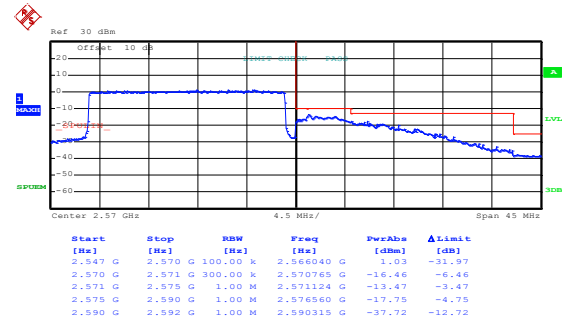
Highest channel

## QPSK &amp; RB Size 100



Date: 15.JUN.2020 09:07:10

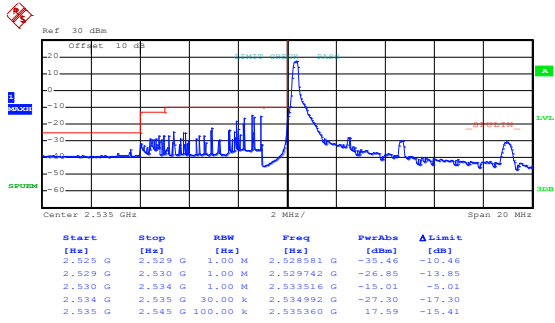
Lowest channel



Date: 15.JUN.2020 09:06:49

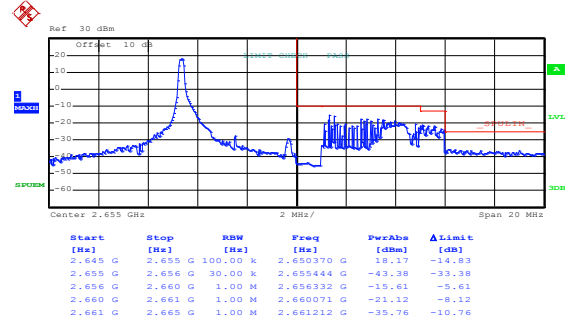
Highest channel

## LTE band 41 part:

LTE Band 4, BW: 5MHz  
16QAM & RB Size 1

Date: 16.JUN.2020 15:28:42

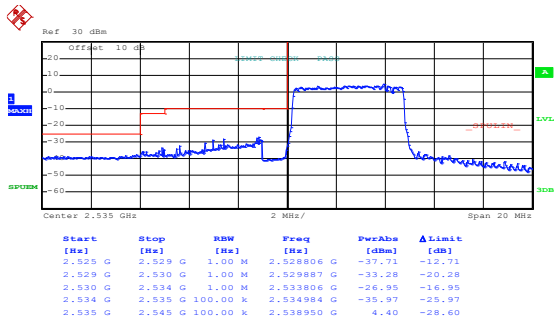
Lowest channel



Date: 16.JUN.2020 15:31:44

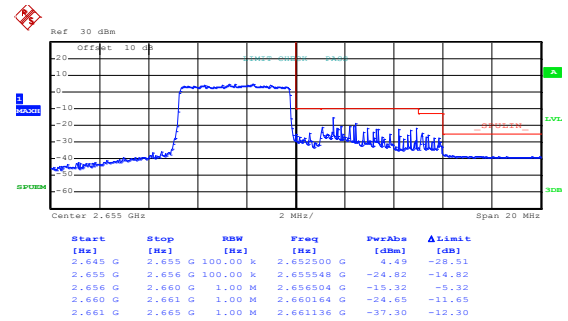
Highest channel

## 16QAM &amp; RB Size 25



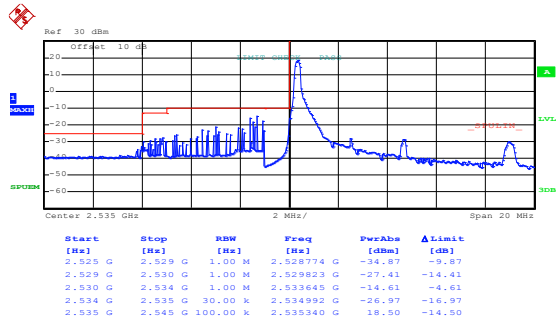
Date: 16.JUN.2020 15:29:21

Lowest channel



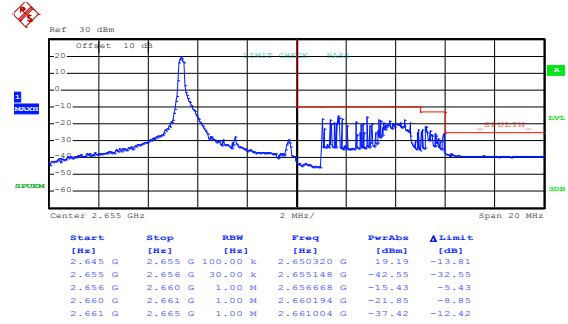
Date: 16.JUN.2020 15:32:14

Highest channel

LTE Band 41, BW: 5MHz  
QPSK & RB Size 1

Date: 16.JUN.2020 15:27:47

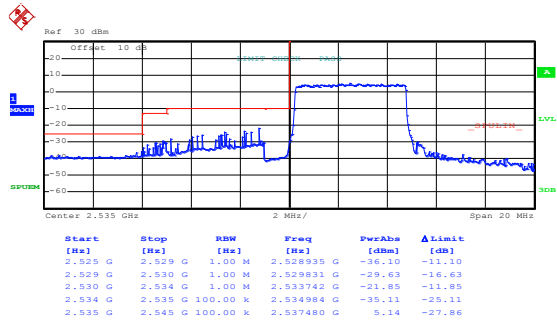
Lowest channel



Date: 16.JUN.2020 15:31:13

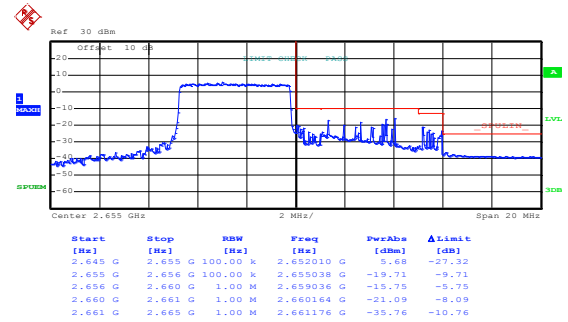
Highest channel

## QPSK &amp; RB Size 25



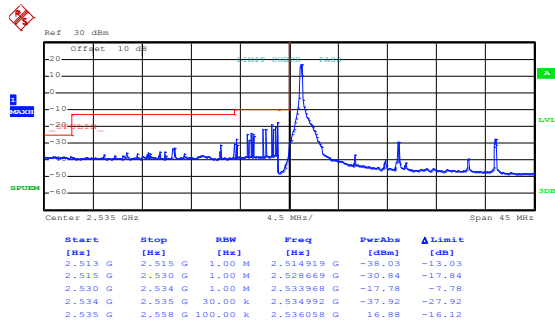
Date: 16.JUN.2020 15:29:07

Lowest channel



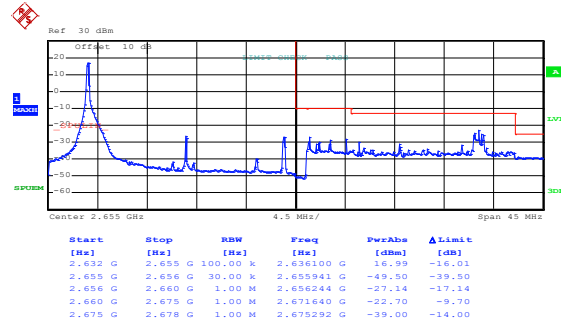
Date: 16.JUN.2020 15:32:05

Highest channel

LTE Band 41, BW: 20MHz  
16QAM & RB Size 1

Date: 16.JUN.2020 15:38:16

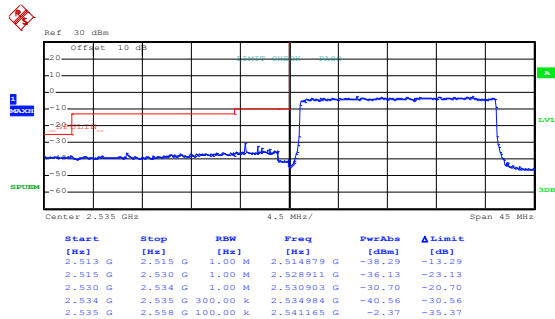
Lowest channel



Date: 16.JUN.2020 15:39:26

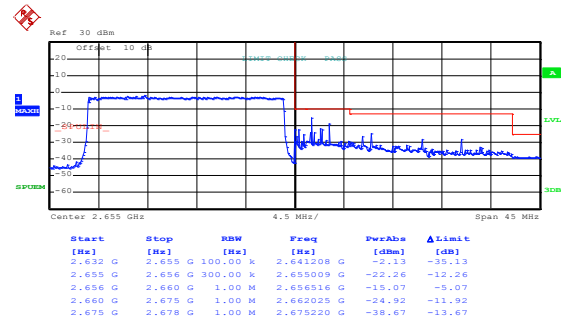
Highest channel

## 16QAM &amp; RB Size 100



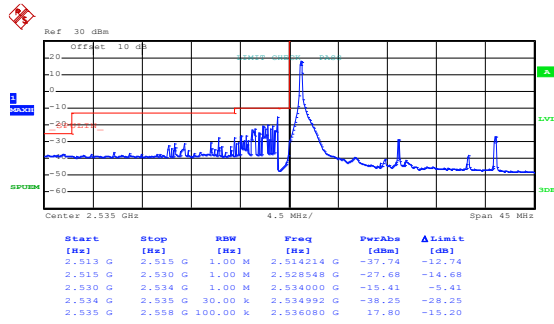
Date: 16.JUN.2020 15:38:44

Lowest channel



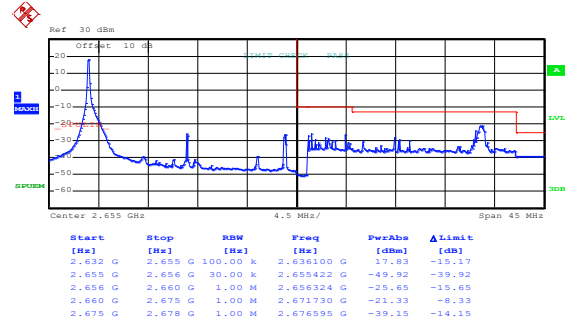
Date: 16.JUN.2020 15:39:49

Highest channel

LTE Band 41, BW: 20MHz  
QPSK & RB Size 1

Date: 16.JUN.2020 15:37:56

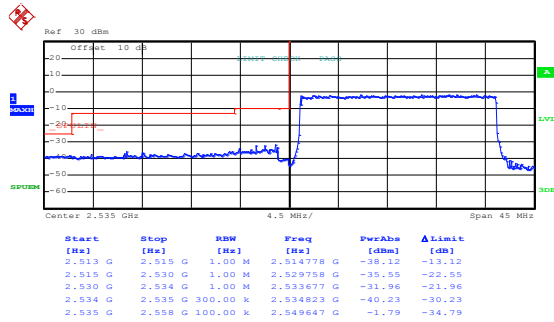
Lowest channel



Date: 16.JUN.2020 15:39:14

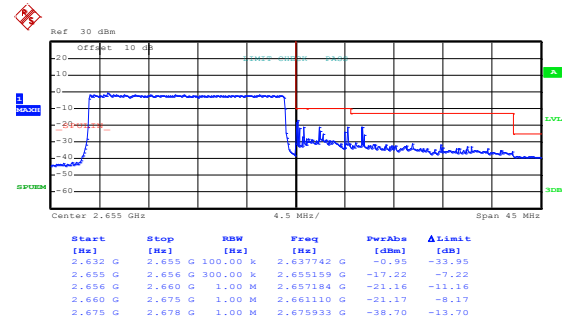
Highest channel

## QPSK &amp; RB Size 100



Date: 16.JUN.2020 15:38:32

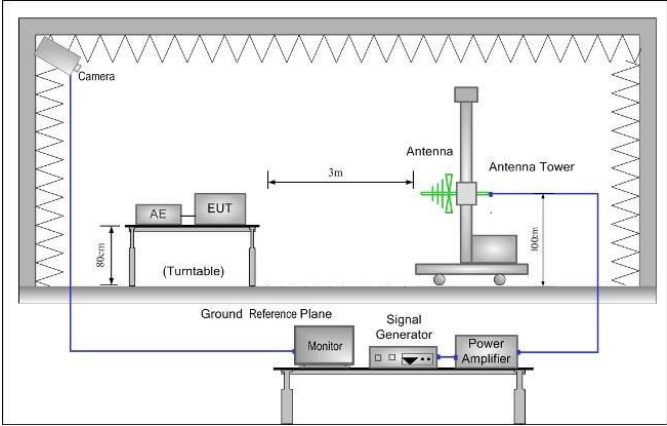
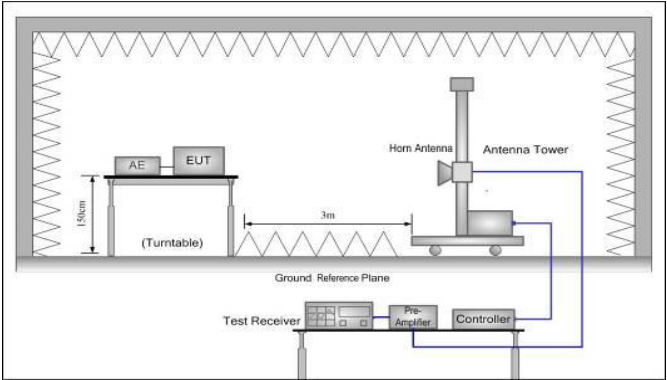
Lowest channel



Date: 16.JUN.2020 15:39:41

Highest channel

## 6.5 Field strength of spurious radiation measurement

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | Part 22.917(a), Part 24.238 (a), Part 27.53(m), Part 27.53(h)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Limit:            | <p>LTE Band 2 &amp; 4 &amp; 5:<br/>The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least <math>43 + 10 \log_{10}(P)</math> dB (-13 dBm).</p> <p>LTE Band 7:<br/>For mobile digital stations, the attenuation factor shall be not less than <math>40 + 10 \log (P)</math> dB on all frequencies between the channel edge and 5 megahertz from the channel edge, <math>43 + 10 \log (P)</math> dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and <math>55 + 10 \log (P)</math> dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that <math>43 + 10 \log (P)</math> dB on all frequencies between 2490.5 MHz and 2496 MHz and <math>55 + 10 \log (P)</math> dB at or below 2490.5 MHz.</p> |
| Test setup:       | <p>Below 1GHz</p>  <p>Above 1GHz</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Test Procedure:   | <ol style="list-style-type: none"> <li>1. The EUT was placed on the top of a rotating table 0.8m(below 1GHz)/1.5m(above 1GHz) above the ground at a 3 meter camber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.</li> <li>2. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.</li> <li>3. The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission</li> </ol>                                                                                                                                                                                                                        |

|                   |                                                                                                                                                                                                                                                                                                                                    |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <p>was determined using the substitution method.</p> <p>4. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.</p> $\text{ERP / EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain(dB/dBi)} - \text{Cable Loss (dB)}$ |
| Test Instruments: | Refer to section 5.10 for details                                                                                                                                                                                                                                                                                                  |
| Test mode:        | Refer to section 5.3 for details.                                                                                                                                                                                                                                                                                                  |
| Test results:     | Passed                                                                                                                                                                                                                                                                                                                             |

## Measurement Data:

## LTE Band 2 part:

| Band 2 (1.4MHz)                                                                                                 |                                  |                               |                  |                               |                  |                  |              |
|-----------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------|------------------|-------------------------------|------------------|------------------|--------------|
| Lowest channel                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 3701.40                                                                                                         | -61.42                           | 12.64                         | 0.75             | -49.53                        | -13.00           | -36.53           | Vertical     |
| 5552.10                                                                                                         | -56.37                           | 12.76                         | 1.13             | -44.74                        | -13.00           | -31.74           | Vertical     |
| 3701.40                                                                                                         | -57.32                           | 12.64                         | 0.75             | -45.43                        | -13.00           | -32.43           | Horizontal   |
| 5552.10                                                                                                         | -54.79                           | 12.76                         | 1.13             | -43.16                        | -13.00           | -30.16           | Horizontal   |
| Middle channel                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 3760.00                                                                                                         | -61.17                           | 12.71                         | 0.79             | -49.25                        | -13.00           | -36.25           | Vertical     |
| 5640.00                                                                                                         | -56.37                           | 12.87                         | 1.15             | -44.65                        | -13.00           | -31.65           | Vertical     |
| 3760.00                                                                                                         | -57.40                           | 12.71                         | 0.79             | -45.48                        | -13.00           | -32.48           | Horizontal   |
| 5640.00                                                                                                         | -55.37                           | 12.87                         | 1.15             | -43.65                        | -13.00           | -30.65           | Horizontal   |
| Highest channel                                                                                                 |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 3816.60                                                                                                         | -60.87                           | 12.78                         | 0.81             | -48.90                        | -13.00           | -35.90           | Vertical     |
| 5724.90                                                                                                         | -56.63                           | 12.97                         | 1.19             | -44.85                        | -13.00           | -31.85           | Vertical     |
| 3816.60                                                                                                         | -57.50                           | 12.78                         | 0.81             | -45.53                        | -13.00           | -32.53           | Horizontal   |
| 5724.90                                                                                                         | -55.40                           | 12.97                         | 1.19             | -43.62                        | -13.00           | -30.62           | Horizontal   |
| <b>Remark:</b><br>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report. |                                  |                               |                  |                               |                  |                  |              |

| Band 2 (20MHz)                                                                                                         |                                  |                               |                  |                               |                  |                  |              |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------|------------------|-------------------------------|------------------|------------------|--------------|
| Lowest channel                                                                                                         |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                        | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 3720.00                                                                                                                | -61.12                           | 12.66                         | 0.77             | -49.23                        | -13.00           | -36.23           | Vertical     |
| 5580.00                                                                                                                | -55.83                           | 12.80                         | 1.15             | -44.18                        | -13.00           | -31.18           | Vertical     |
| 3720.00                                                                                                                | -59.03                           | 12.66                         | 0.77             | -47.14                        | -13.00           | -34.14           | Horizontal   |
| 5580.00                                                                                                                | -55.03                           | 12.80                         | 1.15             | -43.38                        | -13.00           | -30.38           | Horizontal   |
| Middle channel                                                                                                         |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                        | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 3760.00                                                                                                                | -60.94                           | 12.71                         | 0.79             | -49.02                        | -13.00           | -36.02           | Vertical     |
| 5640.00                                                                                                                | -55.69                           | 12.87                         | 1.15             | -43.97                        | -13.00           | -30.97           | Vertical     |
| 3760.00                                                                                                                | -59.25                           | 12.71                         | 0.79             | -47.33                        | -13.00           | -34.33           | Horizontal   |
| 5640.00                                                                                                                | -54.82                           | 12.87                         | 1.15             | -43.10                        | -13.00           | -30.10           | Horizontal   |
| Highest channel                                                                                                        |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                        | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 3800.00                                                                                                                | -61.21                           | 12.76                         | 0.79             | -49.24                        | -13.00           | -36.24           | Vertical     |
| 5700.00                                                                                                                | -56.22                           | 12.94                         | 1.18             | -44.46                        | -13.00           | -31.46           | Vertical     |
| 3800.00                                                                                                                | -59.69                           | 12.76                         | 0.79             | -47.72                        | -13.00           | -34.72           | Horizontal   |
| 5700.00                                                                                                                | -54.98                           | 12.94                         | 1.18             | -43.22                        | -13.00           | -30.22           | Horizontal   |
| <b>Remark:</b><br><i>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.</i> |                                  |                               |                  |                               |                  |                  |              |

## LTE Band 4 part:

| Band 4 (1.4MHz)                                                                                          |                                  |                               |                  |                               |                  |                  |              |
|----------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------|------------------|-------------------------------|------------------|------------------|--------------|
| Lowest channel                                                                                           |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                          | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 3421.40                                                                                                  | -63.46                           | 12.24                         | 0.70             | -51.92                        | -13.00           | -38.92           | Vertical     |
| 5132.10                                                                                                  | -58.48                           | 12.92                         | 1.01             | -46.57                        | -13.00           | -33.57           | Vertical     |
| 3421.40                                                                                                  | -62.55                           | 12.24                         | 0.70             | -51.01                        | -13.00           | -38.01           | Horizontal   |
| 5132.10                                                                                                  | -57.72                           | 12.92                         | 1.01             | -45.81                        | -13.00           | -32.81           | Horizontal   |
| Middle channel                                                                                           |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                          | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 3465.00                                                                                                  | -63.83                           | 12.33                         | 0.72             | -52.22                        | -13.00           | -39.22           | Vertical     |
| 5197.50                                                                                                  | -57.98                           | 12.88                         | 1.04             | -46.14                        | -13.00           | -33.14           | Vertical     |
| 3465.00                                                                                                  | -62.57                           | 12.33                         | 0.72             | -50.96                        | -13.00           | -37.96           | Horizontal   |
| 5197.50                                                                                                  | -58.12                           | 12.88                         | 1.04             | -46.28                        | -13.00           | -33.28           | Horizontal   |
| Highest channel                                                                                          |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                          | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 3508.60                                                                                                  | -64.20                           | 12.41                         | 0.74             | -52.53                        | -13.00           | -39.53           | Vertical     |
| 5262.90                                                                                                  | -58.39                           | 12.84                         | 1.07             | -46.62                        | -13.00           | -33.62           | Vertical     |
| 3508.60                                                                                                  | -62.73                           | 12.41                         | 0.74             | -51.06                        | -13.00           | -38.06           | Horizontal   |
| 5262.90                                                                                                  | -58.14                           | 12.84                         | 1.07             | -46.37                        | -13.00           | -33.37           | Horizontal   |
| Remark:<br>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report. |                                  |                               |                  |                               |                  |                  |              |

| Band 4 (20MHz)                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
|-----------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------|------------------|-------------------------------|------------------|------------------|--------------|
| Lowest channel                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 3440.00                                                                                                         | -63.38                           | 12.28                         | 0.71             | -51.81                        | -13.00           | -38.81           | Vertical     |
| 5160.00                                                                                                         | -58.52                           | 12.90                         | 1.03             | -46.65                        | -13.00           | -33.65           | Vertical     |
| 3440.00                                                                                                         | -63.02                           | 12.28                         | 0.71             | -51.45                        | -13.00           | -38.45           | Horizontal   |
| 5160.00                                                                                                         | -57.37                           | 12.90                         | 1.03             | -45.50                        | -13.00           | -32.50           | Horizontal   |
| Middle channel                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 3465.00                                                                                                         | -63.85                           | 12.33                         | 0.72             | -52.24                        | -13.00           | -39.24           | Vertical     |
| 5197.50                                                                                                         | -58.41                           | 12.88                         | 1.04             | -46.57                        | -13.00           | -33.57           | Vertical     |
| 3465.00                                                                                                         | -62.91                           | 12.33                         | 0.72             | -51.30                        | -13.00           | -38.30           | Horizontal   |
| 5197.50                                                                                                         | -57.84                           | 12.88                         | 1.04             | -46.00                        | -13.00           | -33.00           | Horizontal   |
| Highest channel                                                                                                 |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 3490.00                                                                                                         | -63.95                           | 12.38                         | 0.73             | -52.30                        | -13.00           | -39.30           | Vertical     |
| 5235.00                                                                                                         | -58.28                           | 12.86                         | 1.06             | -46.48                        | -13.00           | -33.48           | Vertical     |
| 3490.00                                                                                                         | -63.02                           | 12.38                         | 0.73             | -51.37                        | -13.00           | -38.37           | Horizontal   |
| 5235.00                                                                                                         | -58.14                           | 12.86                         | 1.06             | -46.34                        | -13.00           | -33.34           | Horizontal   |
| <b>Remark:</b><br>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report. |                                  |                               |                  |                               |                  |                  |              |

| Band 5 (1.4MHz)                                                                                                 |                                  |                               |                  |                               |                  |                  |              |
|-----------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------|------------------|-------------------------------|------------------|------------------|--------------|
| Lowest channel                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 1649.40                                                                                                         | -69.92                           | 9.57                          | 0.20             | -60.55                        | -13.00           | -47.55           | Vertical     |
| 2474.10                                                                                                         | -67.13                           | 10.86                         | 0.43             | -56.70                        | -13.00           | -43.70           | Vertical     |
| 3298.80                                                                                                         | -53.82                           | 12.00                         | 0.64             | -42.46                        | -13.00           | -29.46           | Vertical     |
| 1649.40                                                                                                         | -69.72                           | 9.57                          | 0.20             | -60.35                        | -13.00           | -47.35           | Horizontal   |
| 2474.10                                                                                                         | -67.43                           | 10.86                         | 0.43             | -57.00                        | -13.00           | -44.00           | Horizontal   |
| 3298.80                                                                                                         | -53.69                           | 12.00                         | 0.64             | -42.33                        | -13.00           | -29.33           | Horizontal   |
| Middle channel                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 1673.30                                                                                                         | -70.15                           | 9.66                          | 0.22             | -60.71                        | -13.00           | -47.71           | Vertical     |
| 2509.50                                                                                                         | -67.37                           | 10.91                         | 0.46             | -56.92                        | -13.00           | -43.92           | Vertical     |
| 3346.00                                                                                                         | -53.50                           | 12.09                         | 0.66             | -42.07                        | -13.00           | -29.07           | Vertical     |
| 1673.30                                                                                                         | -69.93                           | 9.66                          | 0.22             | -60.49                        | -13.00           | -47.49           | Horizontal   |
| 2509.50                                                                                                         | -67.76                           | 10.91                         | 0.46             | -57.31                        | -13.00           | -44.31           | Horizontal   |
| 3346.00                                                                                                         | -54.18                           | 12.09                         | 0.66             | -42.75                        | -13.00           | -29.75           | Horizontal   |
| Highest channel                                                                                                 |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 1696.60                                                                                                         | -70.54                           | 9.74                          | 0.23             | -61.03                        | -13.00           | -48.03           | Vertical     |
| 2544.90                                                                                                         | -67.46                           | 10.94                         | 0.49             | -57.01                        | -13.00           | -44.01           | Vertical     |
| 3393.20                                                                                                         | -53.19                           | 12.19                         | 0.68             | -41.68                        | -13.00           | -28.68           | Vertical     |
| 1696.60                                                                                                         | -69.54                           | 9.74                          | 0.23             | -60.03                        | -13.00           | -47.03           | Horizontal   |
| 2544.90                                                                                                         | -67.53                           | 10.94                         | 0.49             | -57.08                        | -13.00           | -44.08           | Horizontal   |
| 3393.20                                                                                                         | -54.22                           | 12.19                         | 0.68             | -42.71                        | -13.00           | -29.71           | Horizontal   |
| <b>Remark:</b><br>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report. |                                  |                               |                  |                               |                  |                  |              |

| Band 5 (10MHz)                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
|-----------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------|------------------|-------------------------------|------------------|------------------|--------------|
| Lowest channel                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 1658.00                                                                                                         | -70.17                           | 9.60                          | 0.21             | -60.78                        | -13.00           | -47.78           | Vertical     |
| 2487.00                                                                                                         | -67.38                           | 10.88                         | 0.45             | -56.95                        | -13.00           | -43.95           | Vertical     |
| 3316.00                                                                                                         | -53.35                           | 12.03                         | 0.65             | -41.97                        | -13.00           | -28.97           | Vertical     |
| 1658.00                                                                                                         | -69.42                           | 9.60                          | 0.21             | -60.03                        | -13.00           | -47.03           | Horizontal   |
| 2487.00                                                                                                         | -67.86                           | 10.88                         | 0.45             | -57.43                        | -13.00           | -44.43           | Horizontal   |
| 3316.00                                                                                                         | -54.00                           | 12.03                         | 0.65             | -42.62                        | -13.00           | -29.62           | Horizontal   |
| Middle channel                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 1673.30                                                                                                         | -70.69                           | 9.66                          | 0.21             | -61.24                        | -13.00           | -48.24           | Vertical     |
| 2509.50                                                                                                         | -66.97                           | 10.91                         | 0.46             | -56.52                        | -13.00           | -43.52           | Vertical     |
| 3346.00                                                                                                         | -52.99                           | 12.09                         | 0.66             | -41.56                        | -13.00           | -28.56           | Vertical     |
| 1673.30                                                                                                         | -69.75                           | 9.66                          | 0.21             | -60.30                        | -13.00           | -47.30           | Horizontal   |
| 2509.50                                                                                                         | -67.59                           | 10.91                         | 0.46             | -57.14                        | -13.00           | -44.14           | Horizontal   |
| 3346.00                                                                                                         | -54.05                           | 12.09                         | 0.66             | -42.62                        | -13.00           | -29.62           | Horizontal   |
| Highest channel                                                                                                 |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 1688.00                                                                                                         | -70.96                           | 9.71                          | 0.23             | -61.48                        | -13.00           | -48.48           | Vertical     |
| 2532.00                                                                                                         | -66.73                           | 10.93                         | 0.48             | -56.28                        | -13.00           | -43.28           | Vertical     |
| 3376.00                                                                                                         | -52.87                           | 12.15                         | 0.67             | -41.39                        | -13.00           | -28.39           | Vertical     |
| 1688.00                                                                                                         | -69.64                           | 9.71                          | 0.23             | -60.16                        | -13.00           | -47.16           | Horizontal   |
| 2532.00                                                                                                         | -67.15                           | 10.93                         | 0.48             | -56.70                        | -13.00           | -43.70           | Horizontal   |
| 3376.00                                                                                                         | -53.94                           | 12.15                         | 0.67             | -42.46                        | -13.00           | -29.46           | Horizontal   |
| <b>Remark:</b><br>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report. |                                  |                               |                  |                               |                  |                  |              |

## LTE Band 7 part:

| Band 7 (5MHz)                                                                                                   |                                  |                               |                  |                               |                  |                  |              |
|-----------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------|------------------|-------------------------------|------------------|------------------|--------------|
| Lowest channel                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 5005.00                                                                                                         | -59.63                           | 13.00                         | 0.94             | -47.57                        | -25.00           | -22.57           | Vertical     |
| 7507.50                                                                                                         | -47.12                           | 11.49                         | 1.65             | -37.28                        | -25.00           | -12.28           | Vertical     |
| 5005.00                                                                                                         | -57.91                           | 13.00                         | 0.94             | -45.85                        | -25.00           | -20.85           | Horizontal   |
| 7507.50                                                                                                         | -43.44                           | 11.49                         | 1.65             | -33.60                        | -25.00           | -8.60            | Horizontal   |
| Middle channel                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 5070.00                                                                                                         | -60.05                           | 12.96                         | 0.98             | -48.07                        | -25.00           | -23.07           | Vertical     |
| 7605.00                                                                                                         | -47.00                           | 11.37                         | 1.69             | -37.32                        | -25.00           | -12.32           | Vertical     |
| 5070.00                                                                                                         | -57.67                           | 12.96                         | 0.98             | -45.69                        | -25.00           | -20.69           | Horizontal   |
| 7605.00                                                                                                         | -43.16                           | 11.37                         | 1.69             | -33.48                        | -25.00           | -8.48            | Horizontal   |
| Highest channel                                                                                                 |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 5135.00                                                                                                         | -59.93                           | 12.92                         | 1.01             | -48.02                        | -25.00           | -23.02           | Vertical     |
| 7702.50                                                                                                         | -46.37                           | 11.26                         | 1.72             | -36.83                        | -25.00           | -11.83           | Vertical     |
| 5135.00                                                                                                         | -57.47                           | 12.92                         | 1.01             | -45.56                        | -25.00           | -20.56           | Horizontal   |
| 7702.50                                                                                                         | -43.20                           | 11.26                         | 1.72             | -33.66                        | -25.00           | -8.66            | Horizontal   |
| <b>Remark:</b><br>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report. |                                  |                               |                  |                               |                  |                  |              |

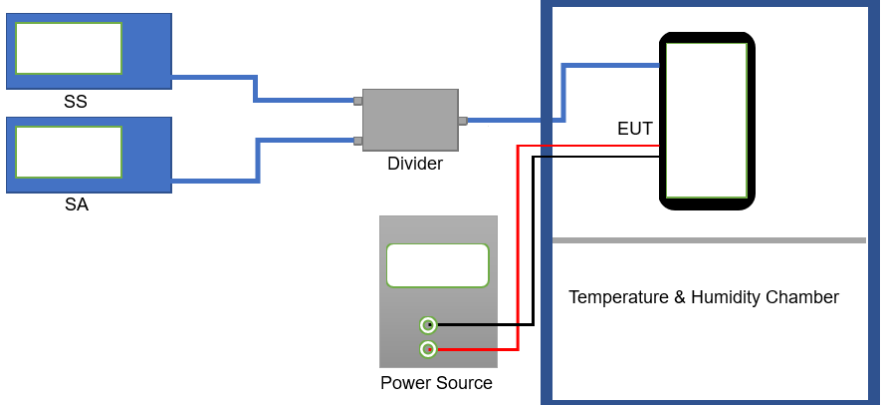
| Band 7 (20MHz)                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
|-----------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------|------------------|-------------------------------|------------------|------------------|--------------|
| Lowest channel                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 5020.00                                                                                                         | -59.54                           | 12.99                         | 0.97             | -47.52                        | -25.00           | -22.52           | Vertical     |
| 7530.00                                                                                                         | -47.20                           | 11.46                         | 1.68             | -37.42                        | -25.00           | -12.42           | Vertical     |
| 5020.00                                                                                                         | -57.39                           | 12.99                         | 0.97             | -45.37                        | -25.00           | -20.37           | Horizontal   |
| 7530.00                                                                                                         | -43.56                           | 11.46                         | 1.68             | -33.78                        | -25.00           | -8.78            | Horizontal   |
| Middle channel                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 5070.00                                                                                                         | -59.11                           | 12.96                         | 0.98             | -47.13                        | -25.00           | -22.13           | Vertical     |
| 7605.00                                                                                                         | -46.67                           | 11.37                         | 1.69             | -36.99                        | -25.00           | -11.99           | Vertical     |
| 5070.00                                                                                                         | -57.31                           | 12.96                         | 0.98             | -45.33                        | -25.00           | -20.33           | Horizontal   |
| 7605.00                                                                                                         | -43.66                           | 11.37                         | 1.69             | -33.98                        | -25.00           | -8.98            | Horizontal   |
| Highest channel                                                                                                 |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 5120.00                                                                                                         | -59.32                           | 12.93                         | 1.00             | -47.39                        | -25.00           | -22.39           | Vertical     |
| 7680.00                                                                                                         | -46.94                           | 11.28                         | 1.72             | -37.38                        | -25.00           | -12.38           | Vertical     |
| 5120.00                                                                                                         | -57.50                           | 12.93                         | 1.00             | -45.57                        | -25.00           | -20.57           | Horizontal   |
| 7680.00                                                                                                         | -43.32                           | 11.28                         | 1.72             | -33.76                        | -25.00           | -8.76            | Horizontal   |
| <b>Remark:</b><br>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report. |                                  |                               |                  |                               |                  |                  |              |

## LTE Band 41 part:

| Band 41 (5MHz)                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
|-----------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------|------------------|-------------------------------|------------------|------------------|--------------|
| Lowest channel                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 4997.00                                                                                                         | -58.28                           | 13.00                         | 0.94             | -46.22                        | -13.00           | -33.22           | Vertical     |
| 7495.50                                                                                                         | -48.73                           | 11.50                         | 1.65             | -38.88                        | -13.00           | -25.88           | Vertical     |
| 4997.00                                                                                                         | -58.48                           | 13.00                         | 0.94             | -46.42                        | -13.00           | -33.42           | Horizontal   |
| 7495.50                                                                                                         | -48.60                           | 11.50                         | 1.65             | -38.75                        | -13.00           | -25.75           | Horizontal   |
| Middle channel                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 5186.00                                                                                                         | -57.66                           | 12.89                         | 1.04             | -45.81                        | -13.00           | -32.81           | Vertical     |
| 7779.00                                                                                                         | -48.45                           | 11.17                         | 1.73             | -39.01                        | -13.00           | -26.01           | Vertical     |
| 5186.00                                                                                                         | -58.20                           | 12.89                         | 1.04             | -46.35                        | -13.00           | -33.35           | Horizontal   |
| 7779.00                                                                                                         | -48.16                           | 11.17                         | 1.73             | -38.72                        | -13.00           | -25.72           | Horizontal   |
| Highest channel                                                                                                 |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 5375.00                                                                                                         | -57.96                           | 12.78                         | 1.11             | -46.29                        | -13.00           | -33.29           | Vertical     |
| 8062.50                                                                                                         | -47.96                           | 10.92                         | 1.82             | -38.86                        | -13.00           | -25.86           | Vertical     |
| 5375.00                                                                                                         | -57.74                           | 12.78                         | 1.11             | -46.07                        | -13.00           | -33.07           | Horizontal   |
| 8062.50                                                                                                         | -47.53                           | 10.92                         | 1.82             | -38.43                        | -13.00           | -25.43           | Horizontal   |
| <b>Remark:</b><br>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report. |                                  |                               |                  |                               |                  |                  |              |

| Band 41 (20MHz)                                                                                                 |                                  |                               |                  |                               |                  |                  |              |
|-----------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------|------------------|-------------------------------|------------------|------------------|--------------|
| Lowest channel                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 5012.00                                                                                                         | -58.60                           | 12.99                         | 0.95             | -46.56                        | -13.00           | -33.56           | Vertical     |
| 7518.00                                                                                                         | -48.49                           | 11.48                         | 1.66             | -38.67                        | -13.00           | -25.67           | Vertical     |
| 5012.00                                                                                                         | -58.48                           | 12.99                         | 0.95             | -46.44                        | -13.00           | -33.44           | Horizontal   |
| 7518.00                                                                                                         | -49.04                           | 11.48                         | 1.66             | -39.22                        | -13.00           | -26.22           | Horizontal   |
| Middle channel                                                                                                  |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 5186.00                                                                                                         | -58.11                           | 12.89                         | 1.04             | -46.26                        | -13.00           | -33.26           | Vertical     |
| 7779.00                                                                                                         | -47.74                           | 11.17                         | 1.73             | -38.30                        | -13.00           | -25.30           | Vertical     |
| 5186.00                                                                                                         | -58.53                           | 12.89                         | 1.04             | -46.68                        | -13.00           | -33.68           | Horizontal   |
| 7779.00                                                                                                         | -49.08                           | 11.17                         | 1.73             | -39.64                        | -13.00           | -26.64           | Horizontal   |
| Highest channel                                                                                                 |                                  |                               |                  |                               |                  |                  |              |
| Frequency (MHz)                                                                                                 | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 5360.00                                                                                                         | -58.05                           | 12.78                         | 1.10             | -46.37                        | -13.00           | -33.37           | Vertical     |
| 8040.00                                                                                                         | -47.37                           | 10.91                         | 1.79             | -38.25                        | -13.00           | -25.25           | Vertical     |
| 5360.00                                                                                                         | -58.55                           | 12.78                         | 1.10             | -46.87                        | -13.00           | -33.87           | Horizontal   |
| 8040.00                                                                                                         | -48.27                           | 10.91                         | 1.79             | -39.15                        | -13.00           | -26.15           | Horizontal   |
| <b>Remark:</b><br>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report. |                                  |                               |                  |                               |                  |                  |              |

## 6.6 Frequency stability V.S. Temperature measurement

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | Part 22.355, Part 24.235, Part 27.54, Part 2.1055(a)(1)(b)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Limit:            | $\pm 2.5$ ppm for Band 5<br>Within authorized band for Band 2 & 4 & 7 & 41                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Test setup:       |  <p>The diagram illustrates the test setup. A Signal Source (SS) and a Spectrum Analyzer (SA) are connected to a Divider. The output of the Divider is connected to the EUT (Equipment Under Test) inside a Temperature &amp; Humidity Chamber. A Power Source is also connected to the EUT.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Test procedure:   | <ol style="list-style-type: none"> <li>1. The equipment under test was connected to an external DC power supply and input rated voltage.</li> <li>2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.</li> <li>3. The EUT was placed inside the temperature chamber.</li> <li>4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency.</li> <li>5. Turn EUT off and set the chamber temperature to <math>-30^{\circ}\text{C}</math>. After the temperature stabilized for approximately 30 minutes recorded the frequency.</li> <li>6. Repeat step measure with <math>10^{\circ}\text{C}</math> increased per stage until the highest temperature of <math>+50^{\circ}\text{C}</math> reached</li> </ol> |
| Test Instruments: | Refer to section 5.10 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Test mode:        | Refer to section 5.3 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Test results:     | Passed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Measurement Data (worst case):

## LTE Band 2 part:

| Reference Frequency: LTE Band 2 (10MHz) Middle channel=18900 channel=1880.00MHz |                  |                 |          |                                   |        |
|---------------------------------------------------------------------------------|------------------|-----------------|----------|-----------------------------------|--------|
| Power supplied (Vdc)                                                            | Temperature (°C) | Frequency error |          | Limit (ppm)                       | Result |
|                                                                                 |                  | Hz              | ppm      |                                   |        |
| QPSK                                                                            |                  |                 |          |                                   |        |
| 3.85                                                                            | -30              | 196             | 0.104255 | Within authorized band for Band 2 | Pass   |
|                                                                                 | -20              | 151             | 0.080319 |                                   |        |
|                                                                                 | -10              | 180             | 0.095745 |                                   |        |
|                                                                                 | 0                | 132             | 0.070213 |                                   |        |
|                                                                                 | 10               | 166             | 0.088298 |                                   |        |
|                                                                                 | 20               | 102             | 0.054255 |                                   |        |
|                                                                                 | 30               | 144             | 0.076596 |                                   |        |
|                                                                                 | 40               | 170             | 0.090426 |                                   |        |
|                                                                                 | 50               | 120             | 0.063830 |                                   |        |
| 16QAM                                                                           |                  |                 |          |                                   |        |
| 3.85                                                                            | -30              | 197             | 0.104787 | Within authorized band for Band 2 | Pass   |
|                                                                                 | -20              | 151             | 0.080319 |                                   |        |
|                                                                                 | -10              | 123             | 0.065426 |                                   |        |
|                                                                                 | 0                | 165             | 0.087766 |                                   |        |
|                                                                                 | 10               | 144             | 0.076596 |                                   |        |
|                                                                                 | 20               | 178             | 0.094681 |                                   |        |
|                                                                                 | 30               | 101             | 0.053723 |                                   |        |
|                                                                                 | 40               | 114             | 0.060638 |                                   |        |
|                                                                                 | 50               | 180             | 0.095745 |                                   |        |
| Note: Only the worst case shown in the report.                                  |                  |                 |          |                                   |        |

## LTE Band 4 part:

| Reference Frequency: LTE Band 4 (10MHz) Middle channel=20175 channel=1732.50MHz |                  |                 |          |                                   |        |
|---------------------------------------------------------------------------------|------------------|-----------------|----------|-----------------------------------|--------|
| Power supplied (Vdc)                                                            | Temperature (°C) | Frequency error |          | Limit (ppm)                       | Result |
|                                                                                 |                  | Hz              | ppm      |                                   |        |
| QPSK                                                                            |                  |                 |          |                                   |        |
| 3.85                                                                            | -30              | 198             | 0.114286 | Within authorized band for Band 4 | Pass   |
|                                                                                 | -20              | 123             | 0.070996 |                                   |        |
|                                                                                 | -10              | 165             | 0.095238 |                                   |        |
|                                                                                 | 0                | 177             | 0.102165 |                                   |        |
|                                                                                 | 10               | 180             | 0.103896 |                                   |        |
|                                                                                 | 20               | 126             | 0.072727 |                                   |        |
|                                                                                 | 30               | 130             | 0.075036 |                                   |        |
|                                                                                 | 40               | 144             | 0.083117 |                                   |        |
|                                                                                 | 50               | 105             | 0.060606 |                                   |        |
| 16QAM                                                                           |                  |                 |          |                                   |        |
| 3.85                                                                            | -30              | 187             | 0.107937 | Within authorized band for Band 4 | Pass   |
|                                                                                 | -20              | 155             | 0.089466 |                                   |        |
|                                                                                 | -10              | 165             | 0.095238 |                                   |        |
|                                                                                 | 0                | 170             | 0.098124 |                                   |        |
|                                                                                 | 10               | 132             | 0.076190 |                                   |        |
|                                                                                 | 20               | 122             | 0.070418 |                                   |        |
|                                                                                 | 30               | 161             | 0.092929 |                                   |        |
|                                                                                 | 40               | 100             | 0.057720 |                                   |        |
|                                                                                 | 50               | 111             | 0.064069 |                                   |        |
| Note: Only the worst case shown in the report.                                  |                  |                 |          |                                   |        |

## LTE Band 5 part:

| Reference Frequency: LTE Band 5 (10MHz) Middle channel=20525 channel=836.50MHz |                  |                 |          |             |        |
|--------------------------------------------------------------------------------|------------------|-----------------|----------|-------------|--------|
| Power supplied (Vdc)                                                           | Temperature (°C) | Frequency error |          | Limit (ppm) | Result |
|                                                                                |                  | Hz              | ppm      |             |        |
| QPSK                                                                           |                  |                 |          |             |        |
| 3.85                                                                           | -30              | 198             | 0.236701 | ±2.5        | Pass   |
|                                                                                | -20              | 165             | 0.197250 |             |        |
|                                                                                | -10              | 121             | 0.144650 |             |        |
|                                                                                | 0                | 136             | 0.162582 |             |        |
|                                                                                | 10               | 144             | 0.172146 |             |        |
|                                                                                | 20               | 150             | 0.179319 |             |        |
|                                                                                | 30               | 128             | 0.153019 |             |        |
|                                                                                | 40               | 111             | 0.132696 |             |        |
|                                                                                | 50               | 105             | 0.125523 |             |        |
| 16QAM                                                                          |                  |                 |          |             |        |
| 3.85                                                                           | -30              | 199             | 0.237896 | ±2.5        | Pass   |
|                                                                                | -20              | 181             | 0.216378 |             |        |
|                                                                                | -10              | 179             | 0.213987 |             |        |
|                                                                                | 0                | 165             | 0.197250 |             |        |
|                                                                                | 10               | 186             | 0.222355 |             |        |
|                                                                                | 20               | 144             | 0.172146 |             |        |
|                                                                                | 30               | 100             | 0.119546 |             |        |
|                                                                                | 40               | 123             | 0.147041 |             |        |
|                                                                                | 50               | 138             | 0.164973 |             |        |
| Note: Only the worst case shown in the report.                                 |                  |                 |          |             |        |

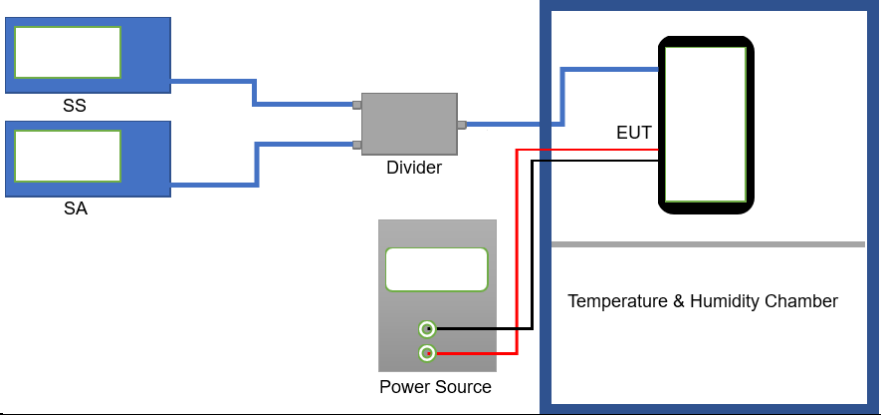
## LTE Band 7 part:

| Reference Frequency: LTE Band 7 (10MHz) Middle channel=21100 Frequency=2535.00MHz |                  |                 |          |                                   |        |
|-----------------------------------------------------------------------------------|------------------|-----------------|----------|-----------------------------------|--------|
| Power supplied (Vdc)                                                              | Temperature (°C) | Frequency error |          | Limit (ppm)                       | Result |
|                                                                                   |                  | Hz              | ppm      |                                   |        |
| QPSK                                                                              |                  |                 |          |                                   |        |
| 3.85                                                                              | -30              | 181             | 0.071400 | Within authorized band for Band 7 | Pass   |
|                                                                                   | -20              | 123             | 0.048521 |                                   |        |
|                                                                                   | -10              | 130             | 0.051282 |                                   |        |
|                                                                                   | 0                | 145             | 0.057199 |                                   |        |
|                                                                                   | 10               | 165             | 0.065089 |                                   |        |
|                                                                                   | 20               | 174             | 0.068639 |                                   |        |
|                                                                                   | 30               | 114             | 0.044970 |                                   |        |
|                                                                                   | 40               | 102             | 0.040237 |                                   |        |
|                                                                                   | 50               | 169             | 0.066667 |                                   |        |
| 16QAM                                                                             |                  |                 |          |                                   |        |
| 3.85                                                                              | -30              | 195             | 0.076923 | Within authorized band for Band 7 | Pass   |
|                                                                                   | -20              | 155             | 0.061144 |                                   |        |
|                                                                                   | -10              | 161             | 0.063511 |                                   |        |
|                                                                                   | 0                | 123             | 0.048521 |                                   |        |
|                                                                                   | 10               | 138             | 0.054438 |                                   |        |
|                                                                                   | 20               | 177             | 0.069822 |                                   |        |
|                                                                                   | 30               | 180             | 0.071006 |                                   |        |
|                                                                                   | 40               | 145             | 0.057199 |                                   |        |
|                                                                                   | 50               | 100             | 0.039448 |                                   |        |
| Note: Only the worst case shown in the report.                                    |                  |                 |          |                                   |        |

## LTE Band 41 part:

| Reference Frequency: LTE Band 41 (10MHz) Middle channel=40640 channel=2595.0MHz |                  |                 |          |                                    |        |
|---------------------------------------------------------------------------------|------------------|-----------------|----------|------------------------------------|--------|
| Power supplied (Vdc)                                                            | Temperature (°C) | Frequency error |          | Limit (ppm)                        | Result |
|                                                                                 |                  | Hz              | ppm      |                                    |        |
| QPSK                                                                            |                  |                 |          |                                    |        |
| 3.85                                                                            | -30              | 196             | 0.075530 | Within authorized band for Band 41 | Pass   |
|                                                                                 | -20              | 123             | 0.047399 |                                    |        |
|                                                                                 | -10              | 187             | 0.072062 |                                    |        |
|                                                                                 | 0                | 177             | 0.068208 |                                    |        |
|                                                                                 | 10               | 160             | 0.061657 |                                    |        |
|                                                                                 | 20               | 132             | 0.050867 |                                    |        |
|                                                                                 | 30               | 145             | 0.055877 |                                    |        |
|                                                                                 | 40               | 108             | 0.041618 |                                    |        |
|                                                                                 | 50               | 116             | 0.044701 |                                    |        |
| 16QAM                                                                           |                  |                 |          |                                    |        |
| 3.85                                                                            | -30              | 191             | 0.073603 | Within authorized band for Band 41 | Pass   |
|                                                                                 | -20              | 150             | 0.057803 |                                    |        |
|                                                                                 | -10              | 171             | 0.065896 |                                    |        |
|                                                                                 | 0                | 164             | 0.063198 |                                    |        |
|                                                                                 | 10               | 177             | 0.068208 |                                    |        |
|                                                                                 | 20               | 123             | 0.047399 |                                    |        |
|                                                                                 | 30               | 134             | 0.051638 |                                    |        |
|                                                                                 | 40               | 100             | 0.038536 |                                    |        |
|                                                                                 | 50               | 115             | 0.044316 |                                    |        |
| Note: Only the worst case shown in the report.                                  |                  |                 |          |                                    |        |

## 6.7 Frequency stability V.S. Voltage measurement

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | Part 22.355, Part 24.235, Part 27.54, Part 2.1055(d)(2)                                                                                                                                                                                                                                                                                                                                                                                        |
| Limit:            | ±2.5 ppm for Band 5<br>Within authorized band for Band 2 & 4 & 7 & 41                                                                                                                                                                                                                                                                                                                                                                          |
| Test setup:       |  <p>The diagram illustrates the test setup. A Spectrum Analyzer (SA) and a Signal Source (SS) are connected to a Divider. The Divider is connected to the EUT (Equipment Under Test) inside a Temperature &amp; Humidity Chamber. A Power Source is also connected to the EUT.</p>                                                                           |
| Test procedure:   | <ol style="list-style-type: none"> <li>1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage.</li> <li>2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.</li> <li>3. Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.</li> </ol> |
| Test Instruments: | Refer to section 5.10 for details                                                                                                                                                                                                                                                                                                                                                                                                              |
| Test mode:        | Refer to section 5.3 for details                                                                                                                                                                                                                                                                                                                                                                                                               |
| Test results:     | Passed                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## Measurement Data (worst case):

## LTE Band 2 part:

| Reference Frequency: LTE Band 2(10MHz) Middle channel=18900 channel=1880.00MHz |                      |                 |          |                                   |        |
|--------------------------------------------------------------------------------|----------------------|-----------------|----------|-----------------------------------|--------|
| Temperature (℃)                                                                | Power supplied (Vdc) | Frequency error |          | Limit (ppm)                       | Result |
|                                                                                |                      | Hz              | ppm      |                                   |        |
| QPSK                                                                           |                      |                 |          |                                   |        |
| 25                                                                             | 4.40                 | 80              | 0.042553 | Within authorized band for Band 2 | Pass   |
|                                                                                | 3.85                 | 74              | 0.039362 |                                   |        |
|                                                                                | 3.50                 | 90              | 0.047872 |                                   |        |
| 16QAM                                                                          |                      |                 |          |                                   |        |
| 25                                                                             | 4.40                 | 90              | 0.047872 | Within authorized band for Band 2 | Pass   |
|                                                                                | 3.85                 | 68              | 0.036170 |                                   |        |
|                                                                                | 3.50                 | 70              | 0.037234 |                                   |        |
| Note: Only the worst case shown in the report.                                 |                      |                 |          |                                   |        |

## LTE Band 4 part:

| Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz |                      |                 |          |                                   |        |
|--------------------------------------------------------------------------------|----------------------|-----------------|----------|-----------------------------------|--------|
| Temperature (°C)                                                               | Power supplied (Vdc) | Frequency error |          | Limit (ppm)                       | Result |
|                                                                                |                      | Hz              | ppm      |                                   |        |
| QPSK                                                                           |                      |                 |          |                                   |        |
| 25                                                                             | 4.40                 | 90              | 0.051948 | Within authorized band for Band 4 | Pass   |
|                                                                                | 3.85                 | 68              | 0.039250 |                                   |        |
|                                                                                | 3.50                 | 70              | 0.040404 |                                   |        |
| 16QAM                                                                          |                      |                 |          |                                   |        |
| 25                                                                             | 4.40                 | 99              | 0.057143 | Within authorized band for Band 4 | Pass   |
|                                                                                | 3.85                 | 84              | 0.048485 |                                   |        |
|                                                                                | 3.50                 | 68              | 0.039250 |                                   |        |
| Note: Only the worst case shown in the report.                                 |                      |                 |          |                                   |        |

## LTE Band 5 part:

| Reference Frequency: LTE Band 5(10MHz) Middle channel=20525 channel=836.50MHz |                      |                 |          |             |        |
|-------------------------------------------------------------------------------|----------------------|-----------------|----------|-------------|--------|
| Temperature (°C)                                                              | Power supplied (Vdc) | Frequency error |          | Limit (ppm) | Result |
|                                                                               |                      | Hz              | ppm      |             |        |
| QPSK                                                                          |                      |                 |          |             |        |
| 25                                                                            | 4.40                 | 88              | 0.105200 | ±2.5        | Pass   |
|                                                                               | 3.85                 | 74              | 0.088464 |             |        |
|                                                                               | 3.50                 | 90              | 0.107591 |             |        |
| 16QAM                                                                         |                      |                 |          |             |        |
| 25                                                                            | 4.40                 | 98              | 0.117155 | ±2.5        | Pass   |
|                                                                               | 3.85                 | 78              | 0.093246 |             |        |
|                                                                               | 3.50                 | 65              | 0.077705 |             |        |
| Note: Only the worst case shown in the report.                                |                      |                 |          |             |        |

## LTE Band 7 part:

| Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.00MHz |                      |                 |          |                                   |        |
|----------------------------------------------------------------------------------|----------------------|-----------------|----------|-----------------------------------|--------|
| Temperature (°C)                                                                 | Power supplied (Vdc) | Frequency error |          | Limit (ppm)                       | Result |
|                                                                                  |                      | Hz              | ppm      |                                   |        |
| QPSK                                                                             |                      |                 |          |                                   |        |
| 25                                                                               | 4.40                 | 90              | 0.035503 | Within authorized band for Band 7 | Pass   |
|                                                                                  | 3.85                 | 68              | 0.026824 |                                   |        |
|                                                                                  | 3.50                 | 80              | 0.031558 |                                   |        |
| 16QAM                                                                            |                      |                 |          |                                   |        |
| 25                                                                               | 4.40                 | 80              | 0.031558 | Within authorized band for Band 7 | Pass   |
|                                                                                  | 3.85                 | 95              | 0.037475 |                                   |        |
|                                                                                  | 3.50                 | 74              | 0.029191 |                                   |        |
| Note: Only the worst case shown in the report.                                   |                      |                 |          |                                   |        |

## LTE Band 41 part:

| Reference Frequency: LTE Band 41(10MHz) Middle channel=40640 channel=2595.0MHz |                      |                 |          |                                    |        |
|--------------------------------------------------------------------------------|----------------------|-----------------|----------|------------------------------------|--------|
| Temperature (°C)                                                               | Power supplied (Vdc) | Frequency error |          | Limit (ppm)                        | Result |
|                                                                                |                      | Hz              | ppm      |                                    |        |
| QPSK                                                                           |                      |                 |          |                                    |        |
| 25                                                                             | 4.40                 | 98              | 0.037765 | Within authorized band for Band 12 | Pass   |
|                                                                                | 3.85                 | 65              | 0.025048 |                                    |        |
|                                                                                | 3.50                 | 80              | 0.030829 |                                    |        |
| 16QAM                                                                          |                      |                 |          |                                    |        |
| 25                                                                             | 4.40                 | 97              | 0.037380 | Within authorized band for Band 12 | Pass   |
|                                                                                | 3.85                 | 80              | 0.030829 |                                    |        |
|                                                                                | 3.50                 | 69              | 0.026590 |                                    |        |
| Note: Only the worst case shown in the report.                                 |                      |                 |          |                                    |        |

## **8 EUT Constructional Details**

Reference to the test report No. CCISE200604601

-----End of report-----