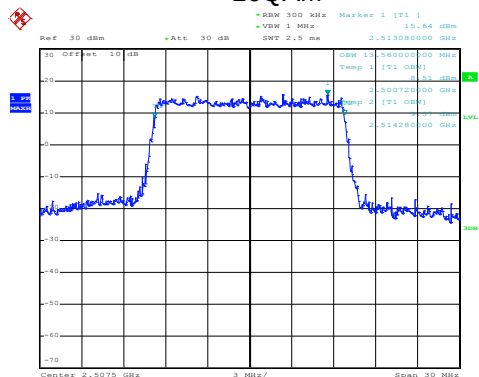


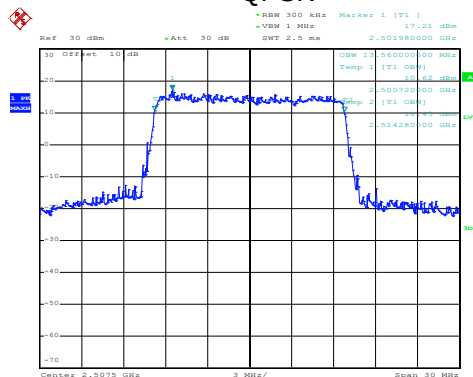
LTE Band 7: 99% Occupancy bandwidth
BW: 15MHz

16QAM



Date: 3.AUG.2020 11:48:12

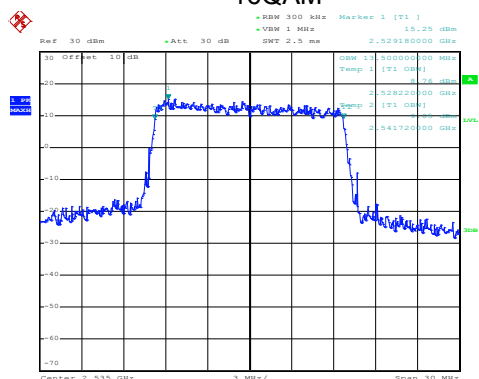
QPSK



Date: 3.AUG.2020 11:48:07

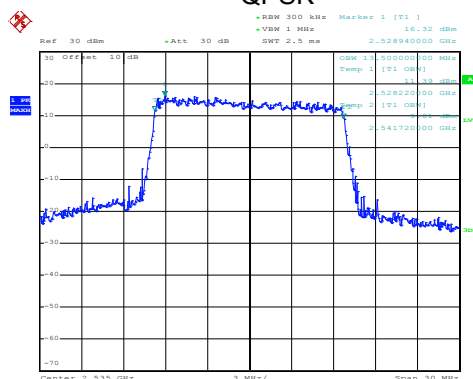
Lowest channel

16QAM



Date: 3.AUG.2020 11:48:41

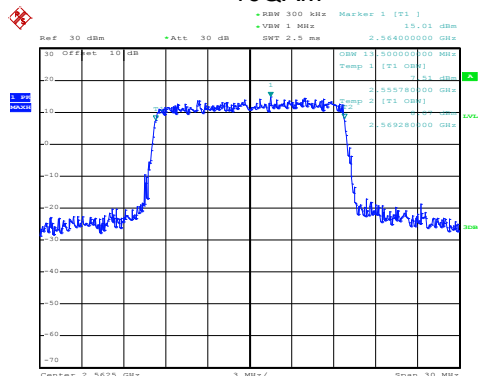
QPSK



Date: 3.AUG.2020 11:48:37

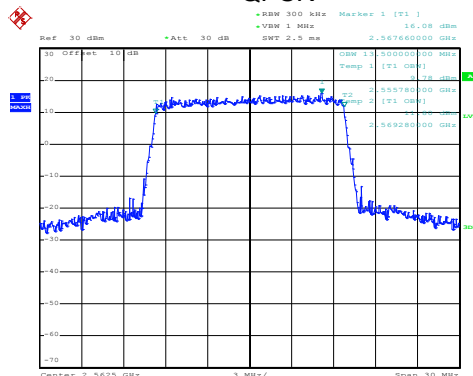
Middle channel

16QAM



Date: 3.AUG.2020 11:48:59

QPSK



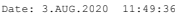
Date: 3.AUG.2020 11:48:56

Highest channel

16QAM



QPSK



16QAM



QPSK



16QAM



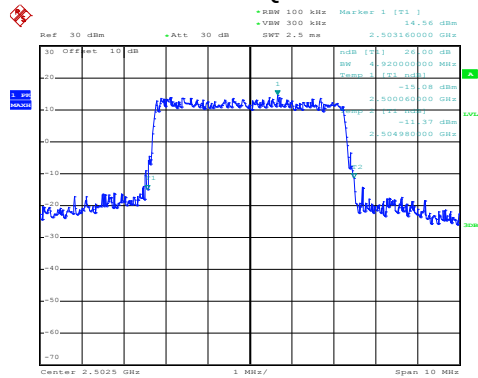
QPSK



Project No.: CCISE2007104

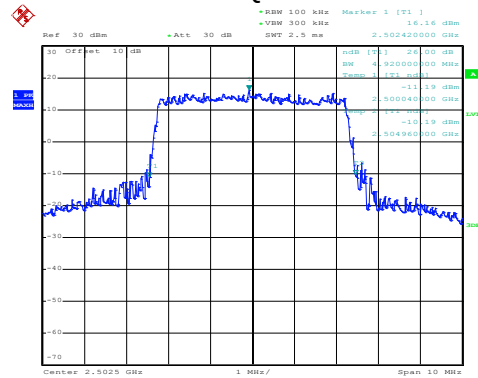
LTE Band 7: -26dBc bandwidth
BW: 5MHz

16QAM



Date: 3.AUG.2020 11:45:29

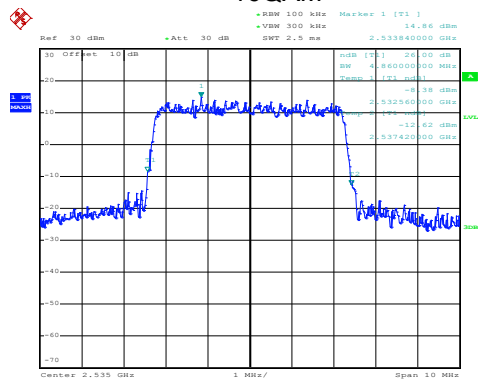
QPSK



Date: 3.AUG.2020 11:45:26

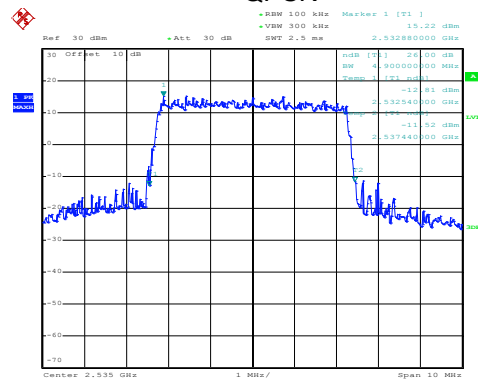
Lowest channel

16QAM



Date: 3.AUG.2020 11:45:43

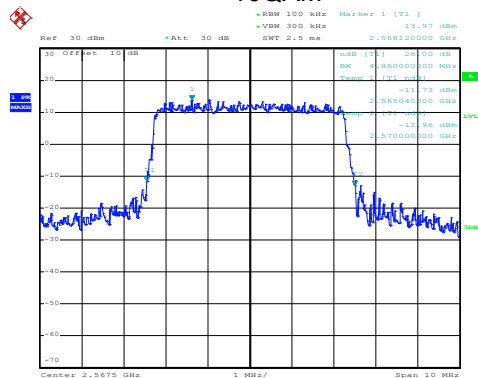
QPSK



Date: 3.AUG.2020 11:45:40

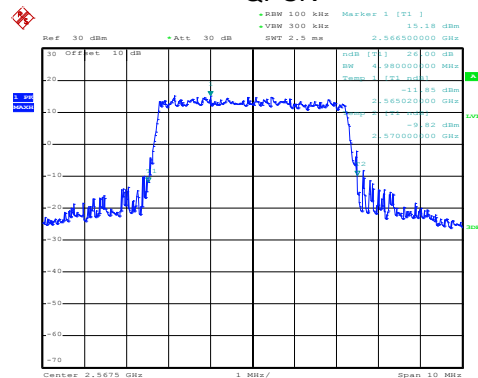
Middle channel

16QAM



Date: 3.AUG.2020 11:46:14

QPSK



Date: 3.AUG.2020 11:46:11

Highest channel

16QAM



Date: 3.AUG.2020 11:46:38

16QAM



Date: 3.AUG.2020 11:47:13

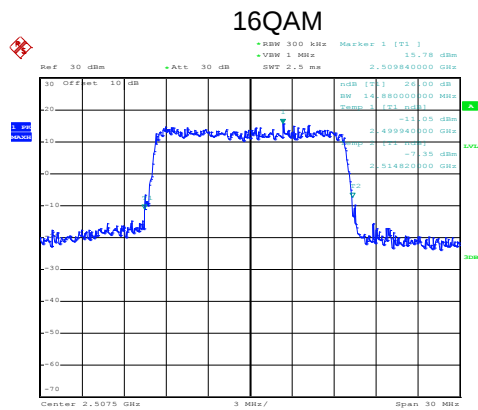
16QAM



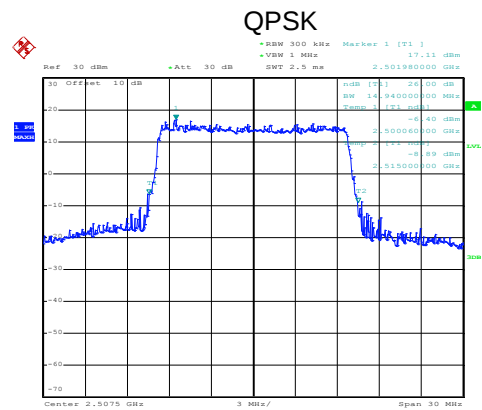
Date: 3.AUG.2020 11:47:28

Page 74 of

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

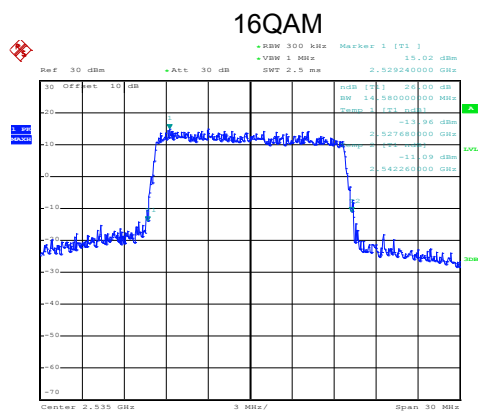


Date: 3.AUG.2020 11:48:21

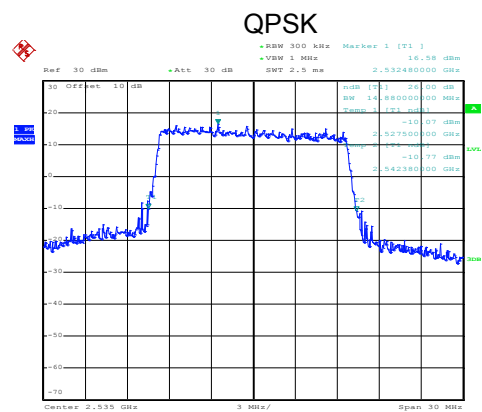


Date: 3.AUG.2020 11:48:18

Lowest channel

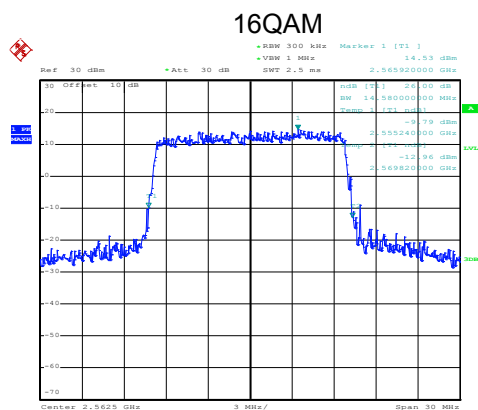


Date: 3.AUG.2020 11:48:32

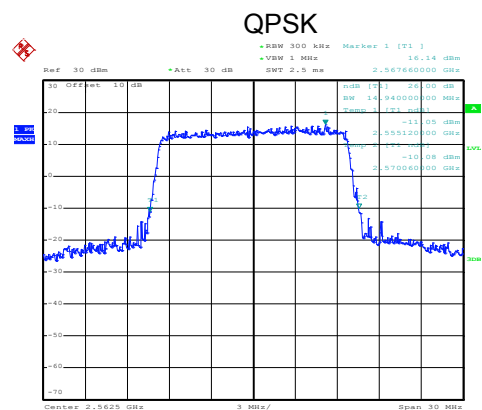


Date: 3.AUG.2020 11:48:29

Middle channel



Date: 3.AUG.2020 11:49:08



Date: 3.AUG.2020 11:49:05

Highest channel

16QAM



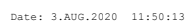
Date: 3.AUG.2020 11:49:27

16QAM



Date: 3.AUG.2020 11:49:56

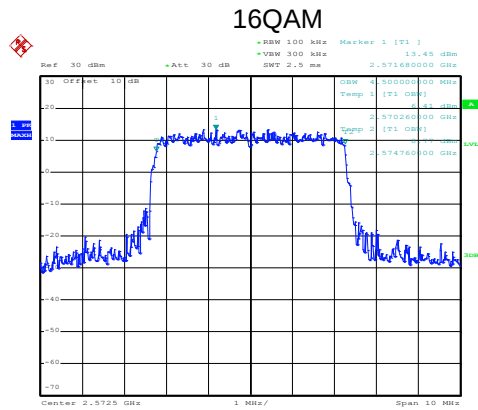
16QAM



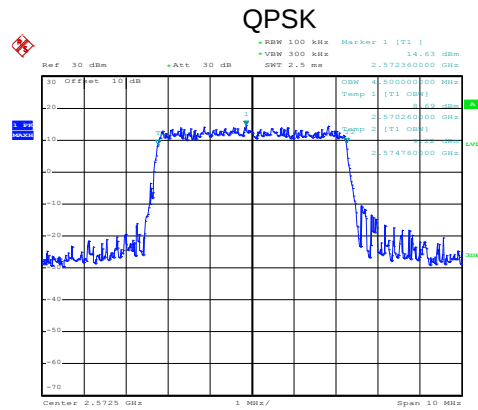
Date: 3.AUG.2020 11:50:10

Page 76 of

LTE-Band 38 part:

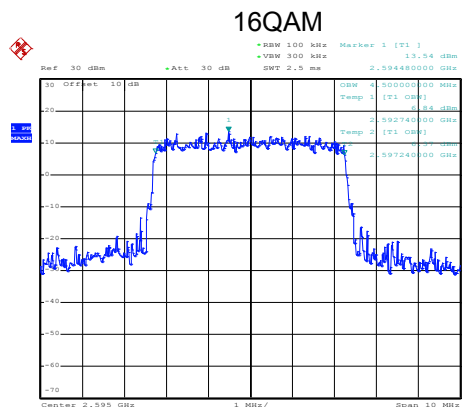
LTE Band 38: 99% Occupy bandwidth
BW: 5MHz

Date: 3.AUG.2020 11:55:02

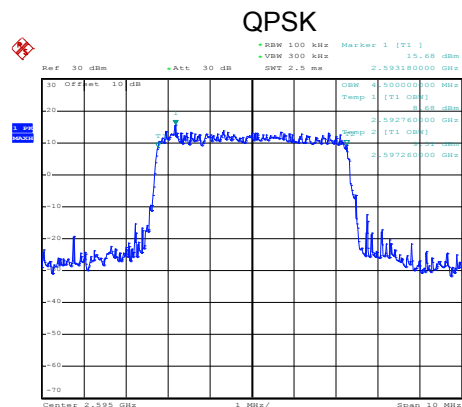


Date: 3.AUG.2020 11:54:58

Lowest channel

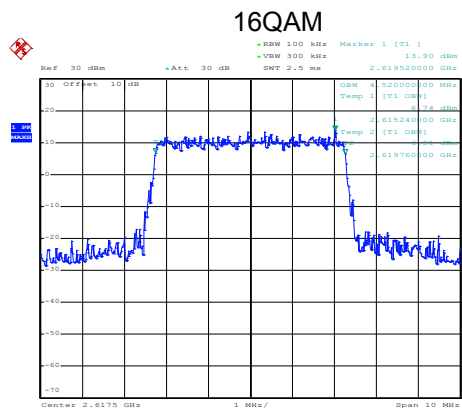


Date: 3.AUG.2020 11:55:14

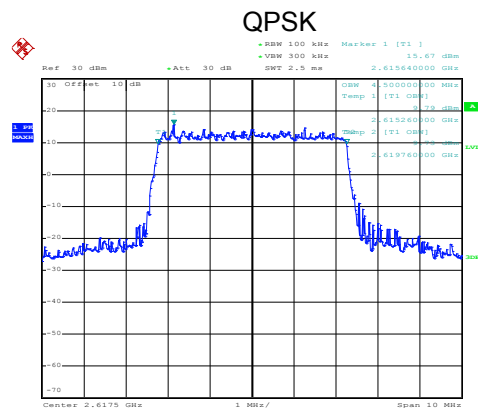


Date: 3.AUG.2020 11:55:11

Middle channel



Date: 3.AUG.2020 11:56:01



Date: 3.AUG.2020 11:55:55

Highest channel

16QAM



Date: 3.AUG.2020 11:53:28

16QAM



Date: 3.AUG.2020 11:53:56

16QAM

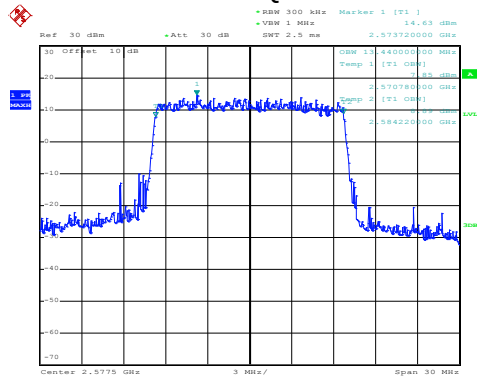


Date: 3.AUG.2020 11:54:12

Page 78 of

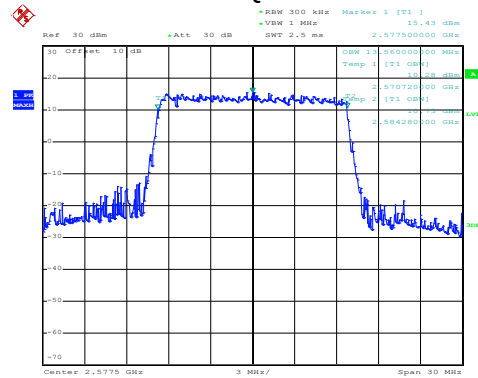
LTE Band 38: 99% Occupancy bandwidth
BW: 15MHz

16QAM



Date: 3.AUG.2020 11:52:19

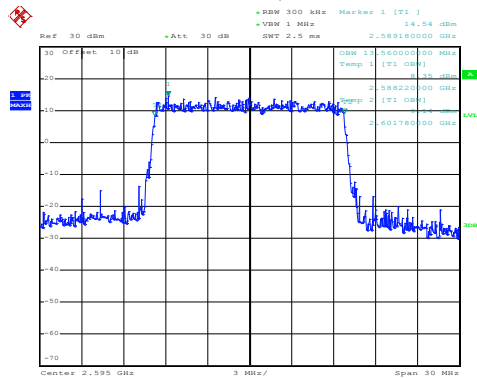
QPSK



Date: 3.AUG.2020 11:52:16

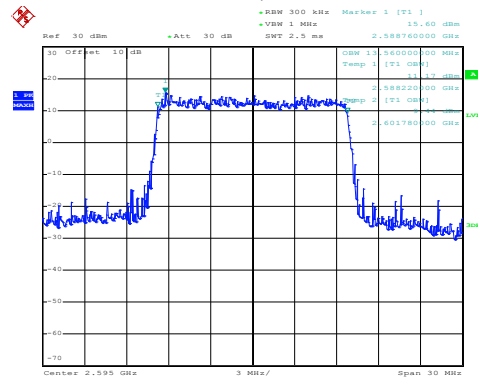
Lowest channel

16QAM



Date: 3.AUG.2020 11:52:30

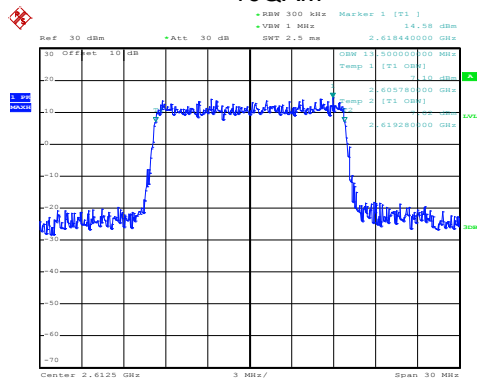
QPSK



Date: 3.AUG.2020 11:52:26

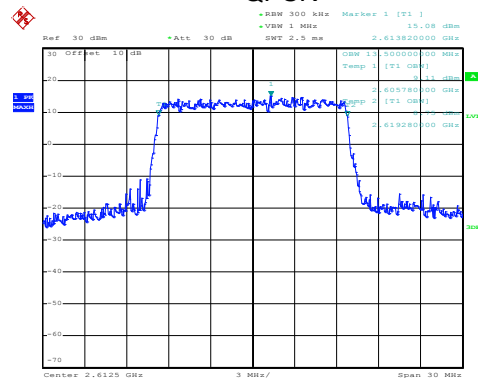
Middle channel

16QAM



Date: 3.AUG.2020 11:53:04

QPSK

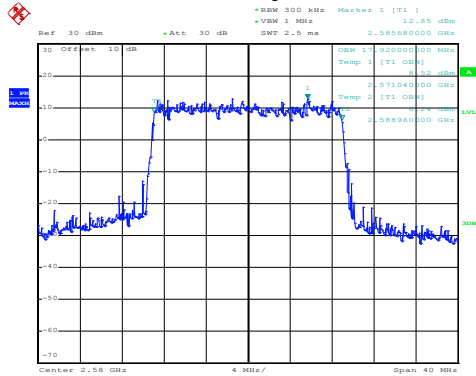


Date: 3.AUG.2020 11:53:01

Highest channel

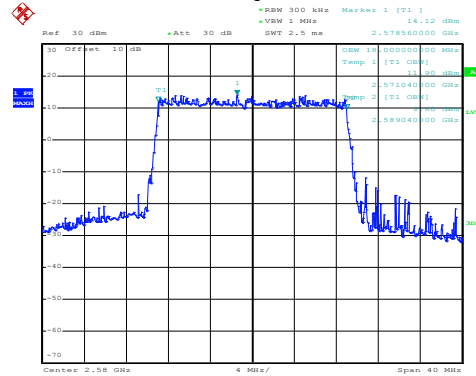
LTE Band 38: 99% Occupancy bandwidth
BW: 20MHz

16QAM



Date: 3.AUG.2020 11:51:32

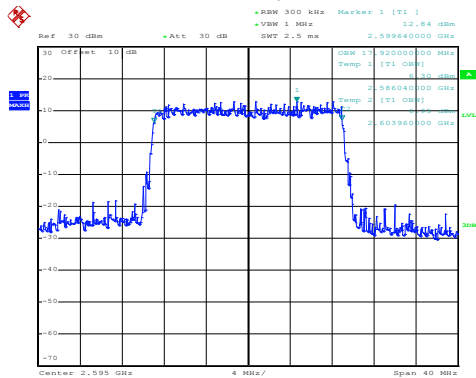
QPSK



Date: 3.AUG.2020 11:51:28

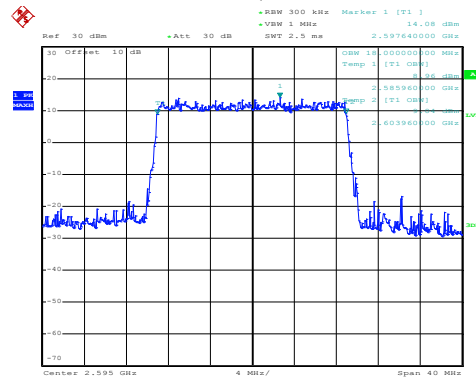
Lowest channel

16QAM



Date: 3.AUG.2020 11:51:12

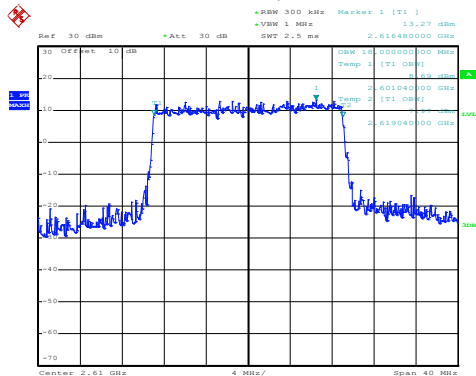
QPSK



Date: 3.AUG.2020 11:51:09

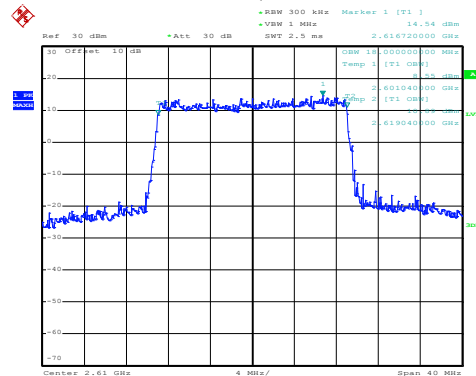
Middle channel

16QAM



Date: 3.AUG.2020 11:50:42

QPSK

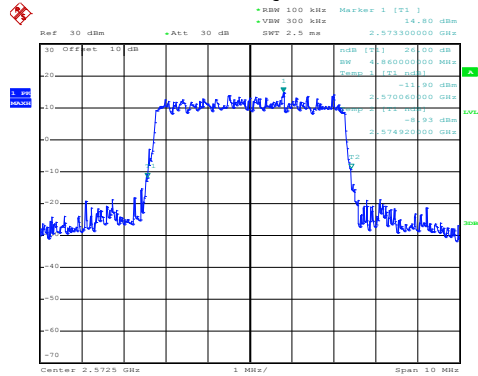


Date: 3.AUG.2020 11:50:38

Highest channel

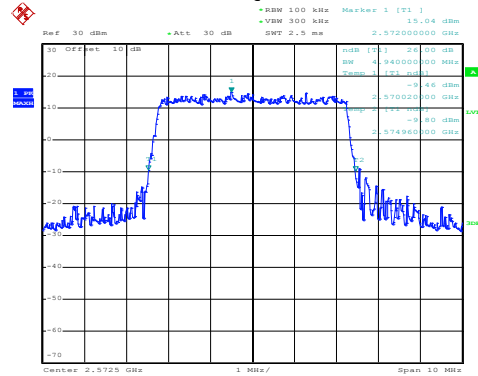
LTE Band 38: -26dBc bandwidth
BW: 5MHz

16QAM



Date: 3.AUG.2020 11:54:52

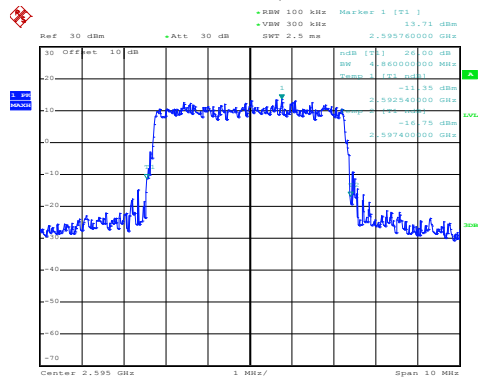
QPSK



Date: 3.AUG.2020 11:54:49

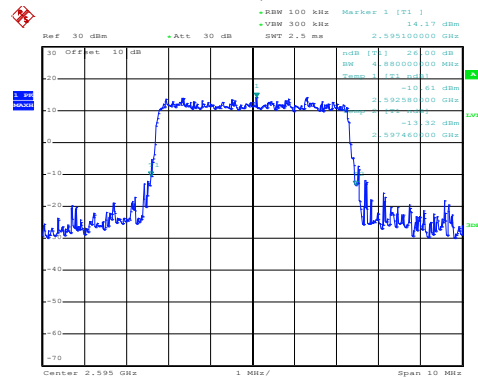
Lowest channel

16QAM



Date: 3.AUG.2020 11:55:25

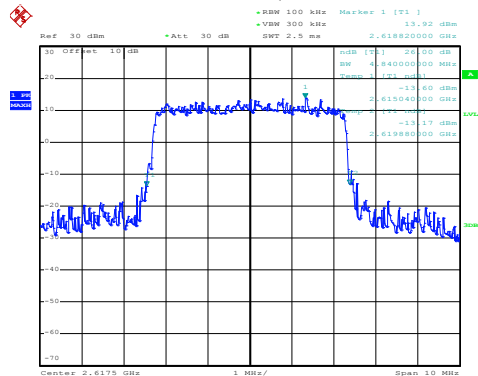
QPSK



Date: 3.AUG.2020 11:55:22

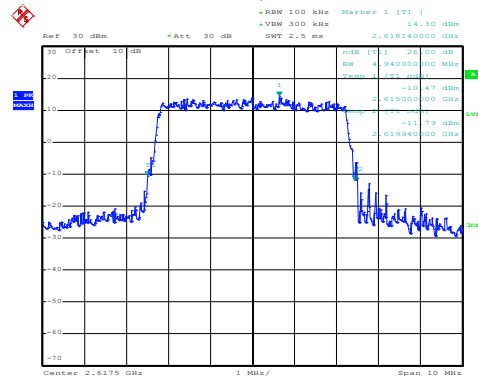
Middle channel

16QAM



Date: 3.AUG.2020 11:55:45

QPSK

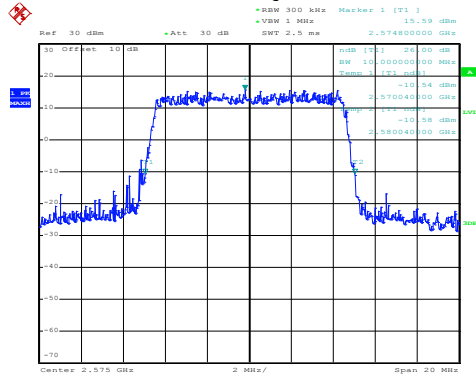


Date: 3.AUG.2020 11:55:41

Highest channel

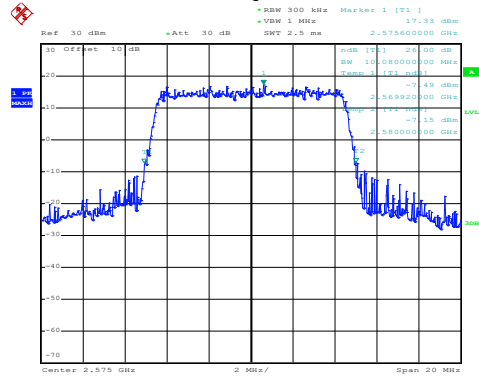
LTE Band 38: -26dBc bandwidth
BW: 10MHz

16QAM



Date: 3.AUG.2020 11:53:40

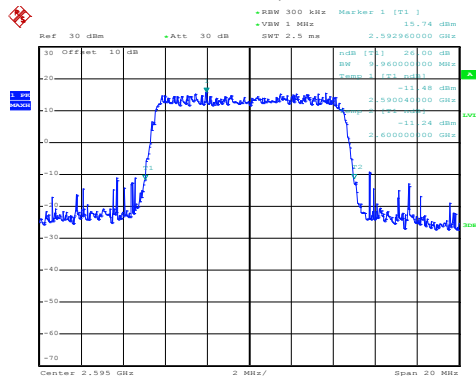
QPSK



Date: 3.AUG.2020 11:53:37

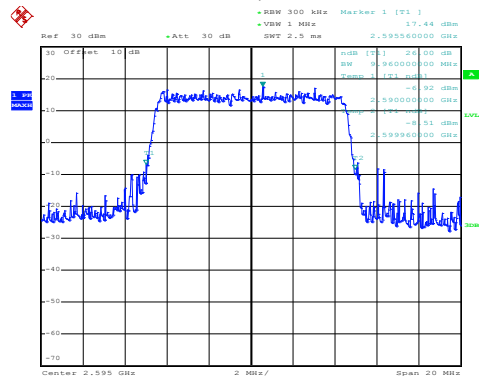
Lowest channel

16QAM



Date: 3.AUG.2020 11:53:50

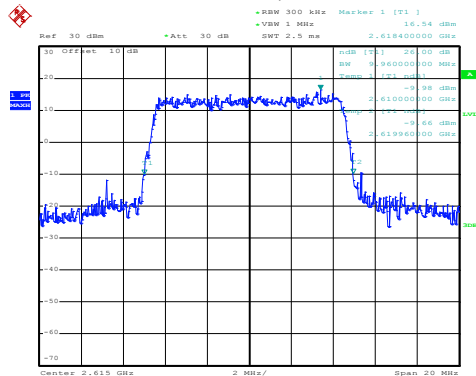
QPSK



Date: 3.AUG.2020 11:53:47

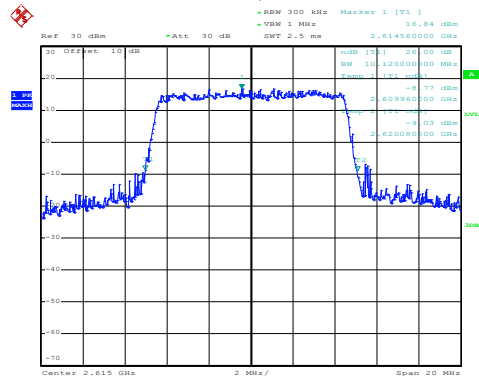
Middle channel

16QAM



Date: 3.AUG.2020 11:54:24

QPSK



Date: 3.AUG.2020 11:54:21

Highest channel

16QAM



QPSK



Lowest channel

16QAM



QPSK



Middle channel

16QAM



QPSK



Highest channel

16QAM



QPSK



Lowest channel

16QAM



QPSK



Middle channel

16QAM

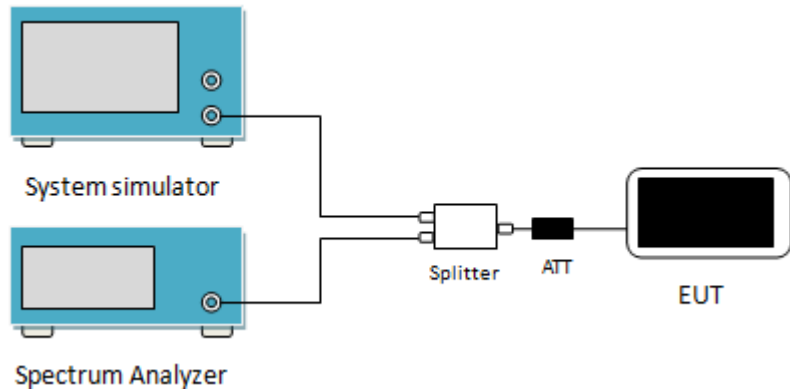


QPSK



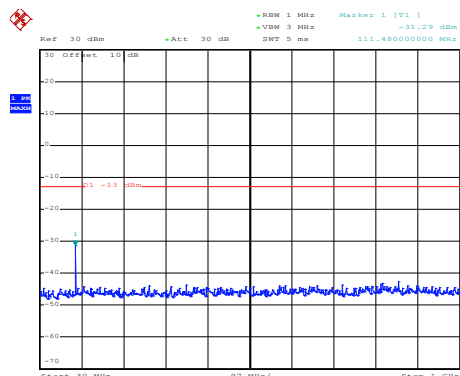
Highest channel

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:	LTE Band 2 & 4 & 5: The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB (-13 dBm). LTE Band 7 & 38: For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ 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 $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz.
Test Setup:	 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 small 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 screen.
Test Procedure:	1 The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. 2 For the out of band: For Band 5 & 12 & 17 set the RBW=100 kHz, VBW=300 kHz and for Band 2 & 4 & 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. 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.
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.

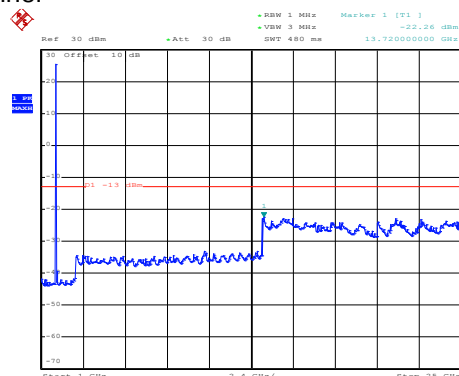
Test plots as follows (Conducted spurious emission) (worst case):
LTE Band 2 part:

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



Date: 3.AUG.2020 11:26:34

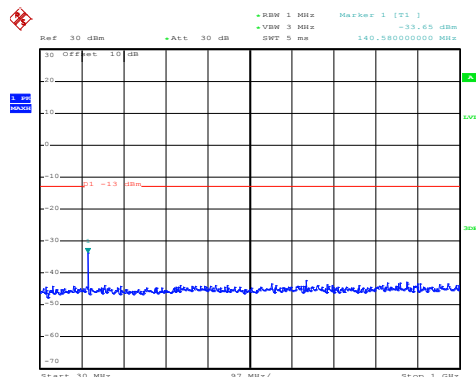
30MHz~1GHz



Date: 3.AUG.2020 11:28:10

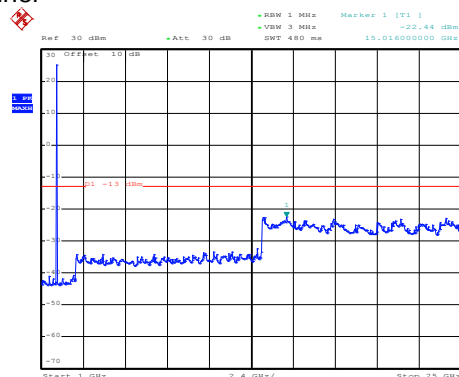
1GHz~25GHz

Middle channel



Date: 3.AUG.2020 11:26:48

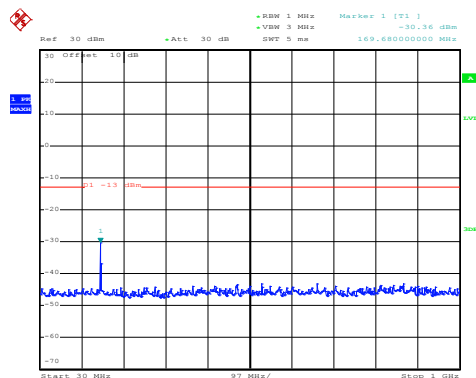
30MHz~1GHz



Date: 3.AUG.2020 11:27:49

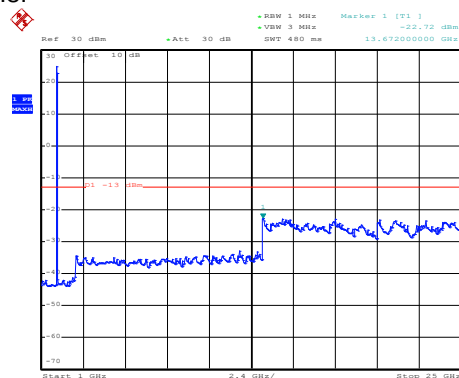
1GHz~25GHz

High channel



Date: 3.AUG.2020 11:27:03

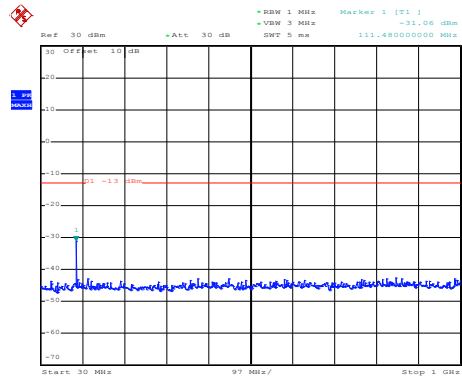
30MHz~1GHz



Date: 3.AUG.2020 11:27:29

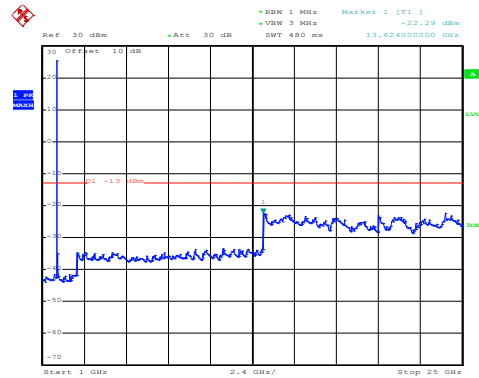
1GHz~25GHz

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



Date: 3.AUG.2020 11:26:29

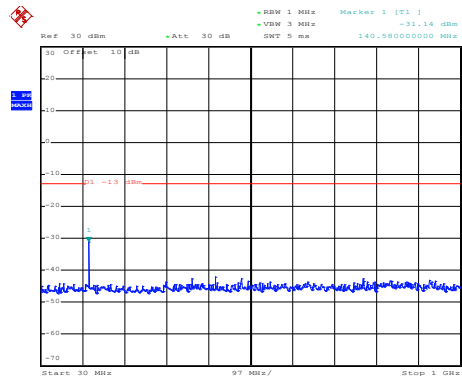
30MHz~1GHz



Date: 3.AUG.2020 11:28:02

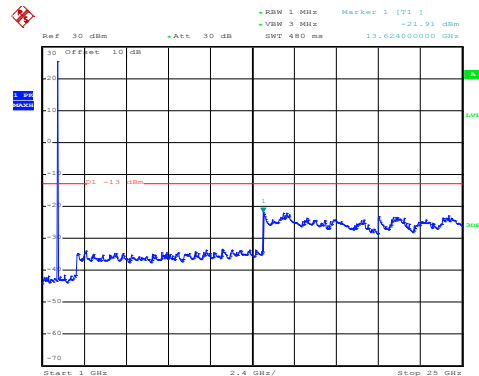
1GHz~25GHz

Middle channel



Date: 3.AUG.2020 11:26:41

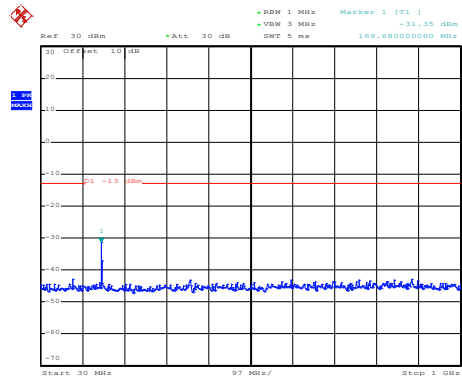
30MHz~1GHz



Date: 3.AUG.2020 11:27:41

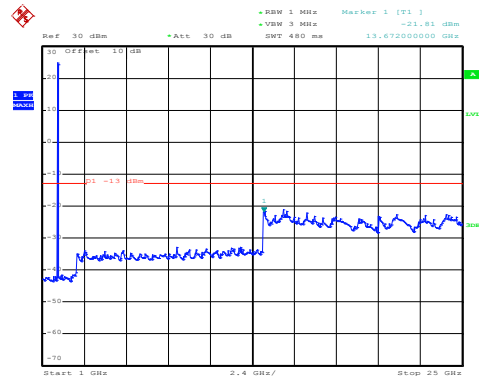
1GHz~25GHz

High channel



Date: 3.AUG.2020 11:26:58

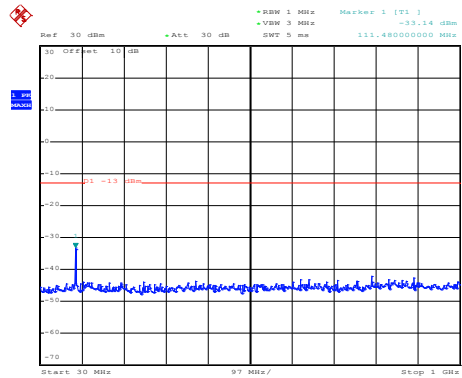
30MHz~1GHz



Date: 3.AUG.2020 11:27:21

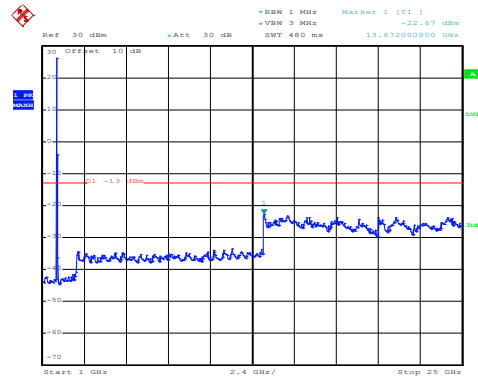
1GHz~25GHz

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



Date: 3.AUG.2020 11:21:49

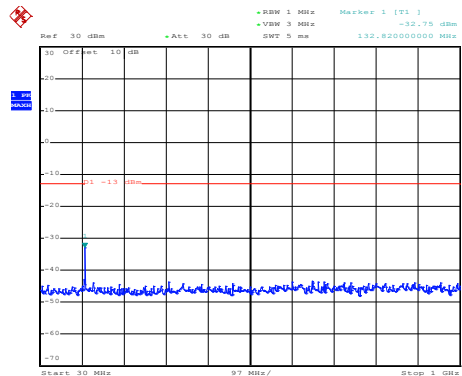
30MHz~1GHz



Date: 3.AUG.2020 11:21:17

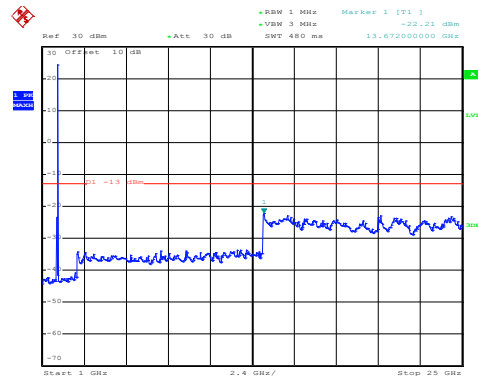
1GHz~25GHz

Middle channel



Date: 3.AUG.2020 11:21:34

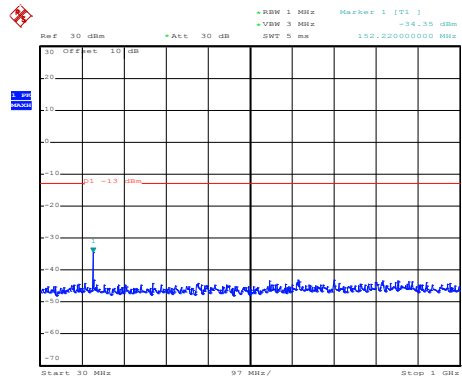
30MHz~1GHz



Date: 3.AUG.2020 11:22:35

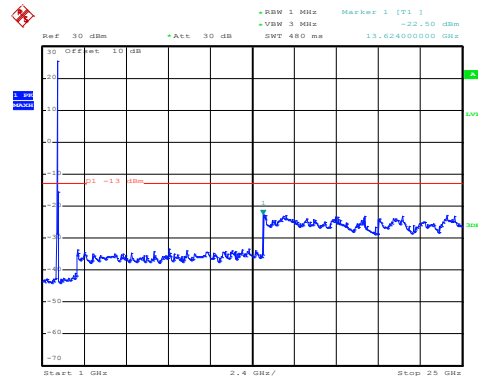
1GHz~25GHz

High channel



Date: 3.AUG.2020 11:21:22

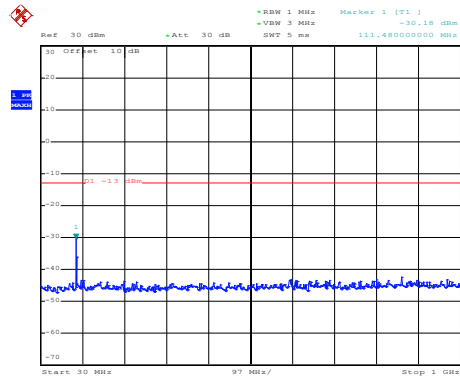
30MHz~1GHz



Date: 3.AUG.2020 11:22:53

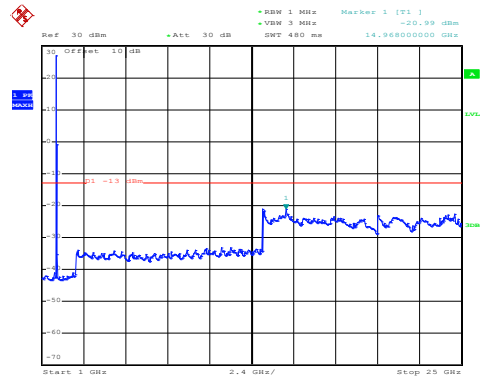
1GHz~25GHz

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



Date: 3.AUG.2020 11:21:43

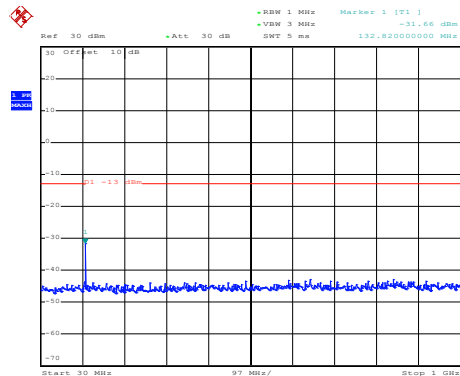
30MHz~1GHz



Date: 3.AUG.2020 11:22:08

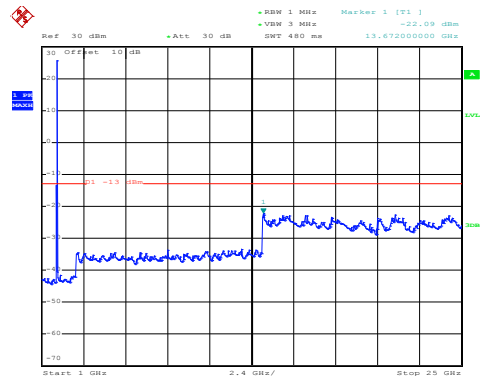
1GHz~25GHz

Middle channel



Date: 3.AUG.2020 11:21:30

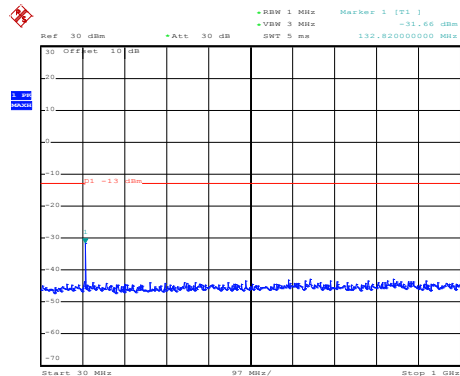
30MHz~1GHz



Date: 3.AUG.2020 11:22:28

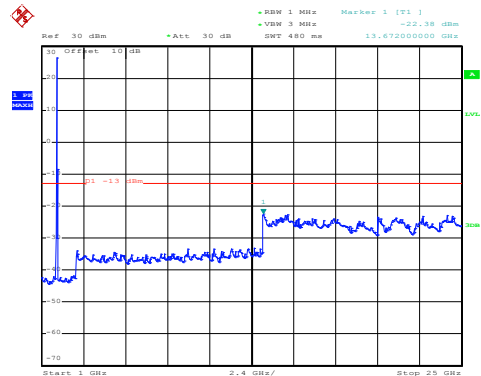
1GHz~25GHz

High channel



Date: 3.AUG.2020 11:21:30

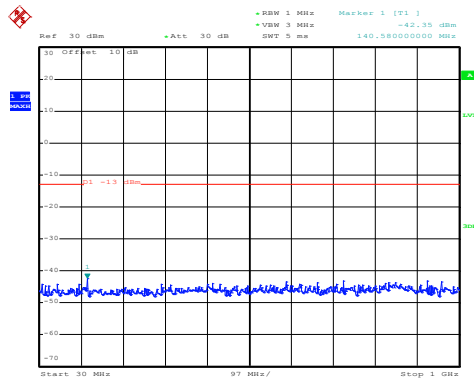
30MHz~1GHz



Date: 3.AUG.2020 11:22:45

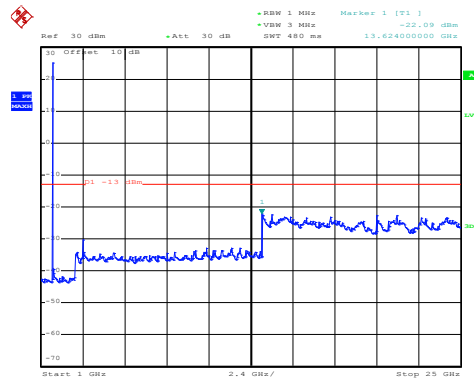
1GHz~25GHz

LTE Band 4 part:

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

Date: 3.AUG.2020 11:26:20

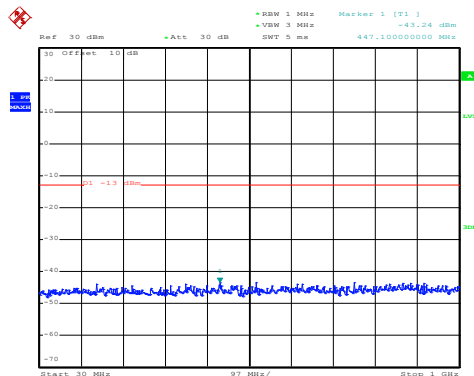
30MHz~1GHz



Date: 3.AUG.2020 11:24:48

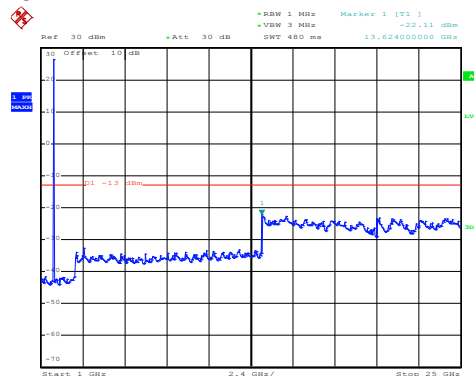
1GHz~25GHz

Middle channel



Date: 3.AUG.2020 11:26:02

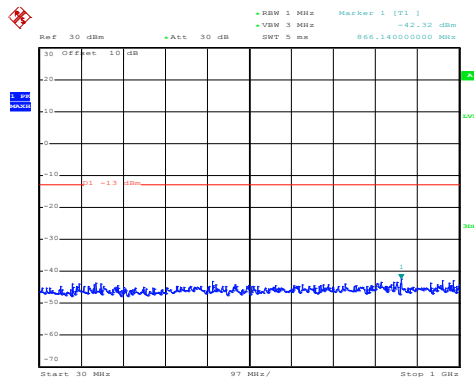
30MHz~1GHz



Date: 3.AUG.2020 11:25:09

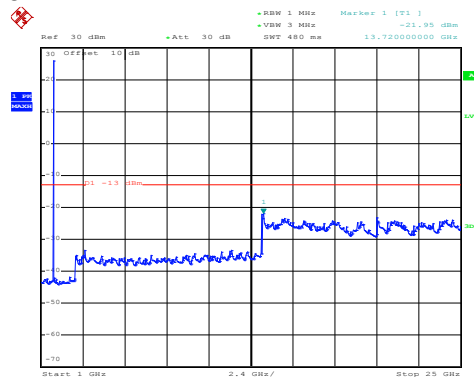
1GHz~25GHz

High channel



Date: 3.AUG.2020 11:25:51

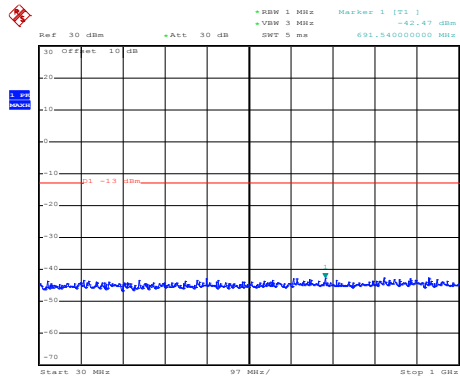
30MHz~1GHz



Date: 3.AUG.2020 11:25:29

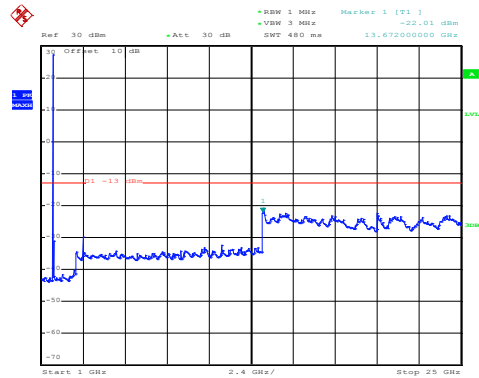
1GHz~25GHz

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



Date: 3.AUG.2020 11:26:17

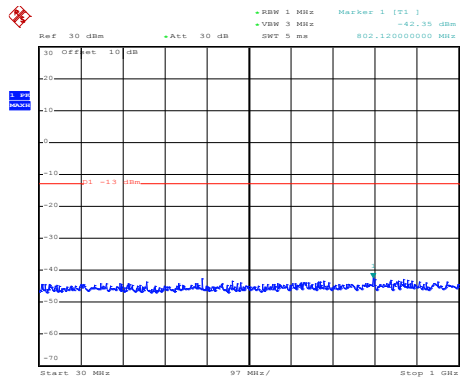
30MHz~1GHz



Date: 3.AUG.2020 11:24:38

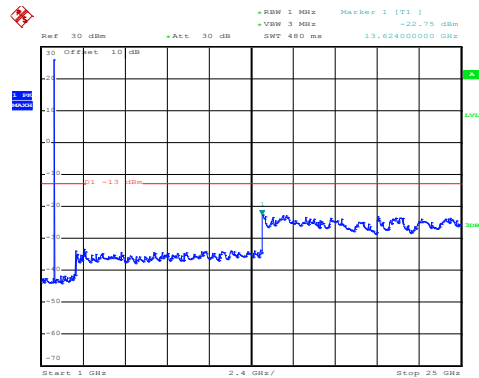
1GHz~25GHz

Middle channel



Date: 3.AUG.2020 11:25:58

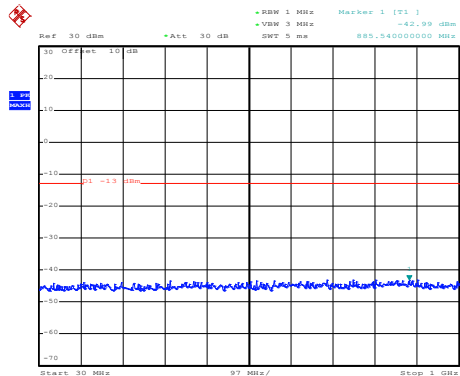
30MHz~1GHz



Date: 3.AUG.2020 11:24:58

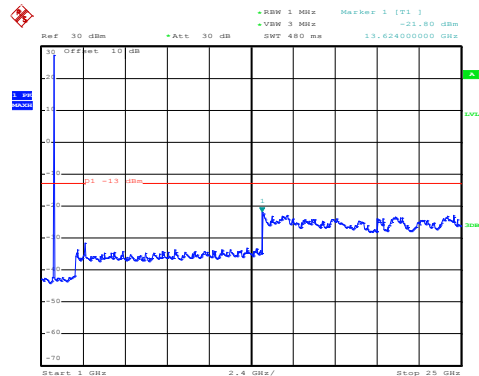
1GHz~25GHz

High channel



Date: 3.AUG.2020 11:25:46

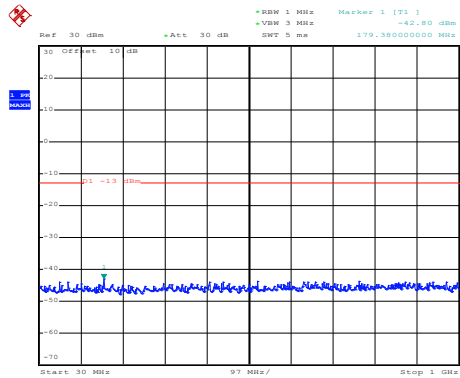
30MHz~1GHz



Date: 3.AUG.2020 11:25:23

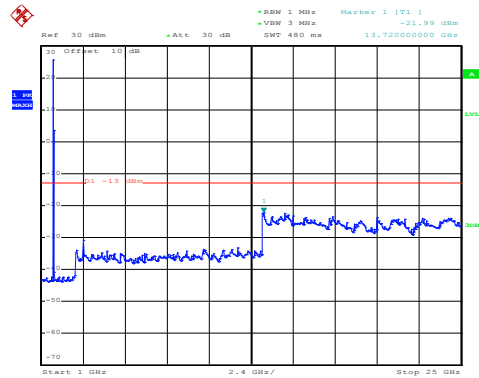
1GHz~25GHz

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



Date: 3.AUG.2020 11:20:40

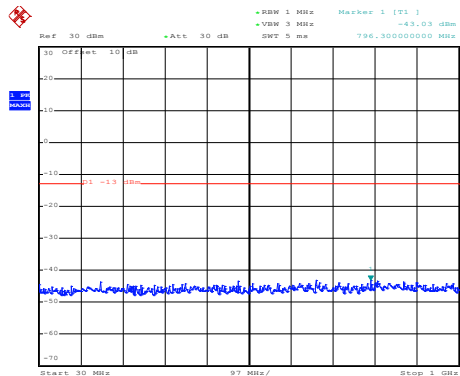
30MHz~1GHz



Date: 3.AUG.2020 11:23:17

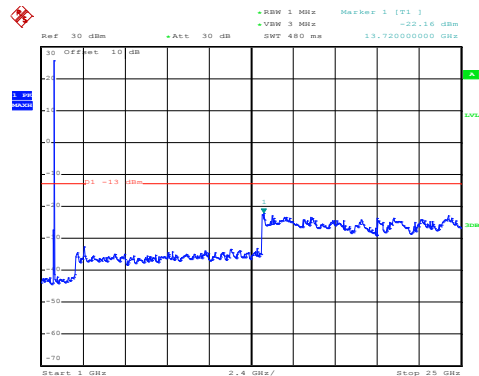
1GHz~25GHz

Middle channel



Date: 3.AUG.2020 11:20:52

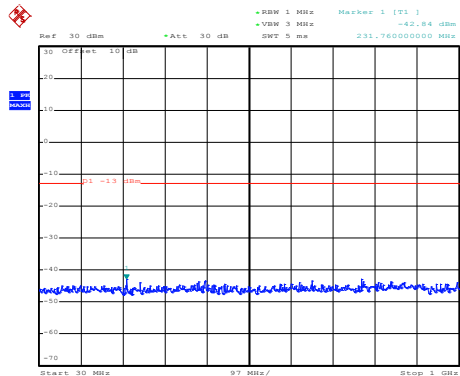
30MHz~1GHz



Date: 3.AUG.2020 11:23:38

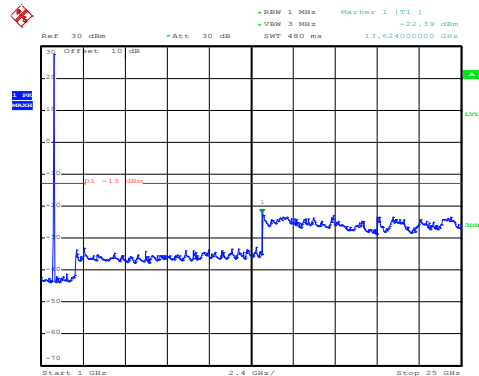
1GHz~25GHz

High channel



Date: 3.AUG.2020 11:21:04

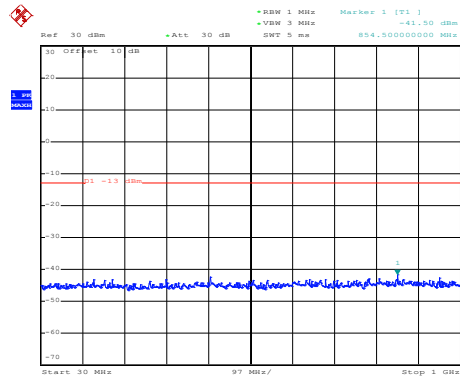
30MHz~1GHz



Date: 3.AUG.2020 11:23:59

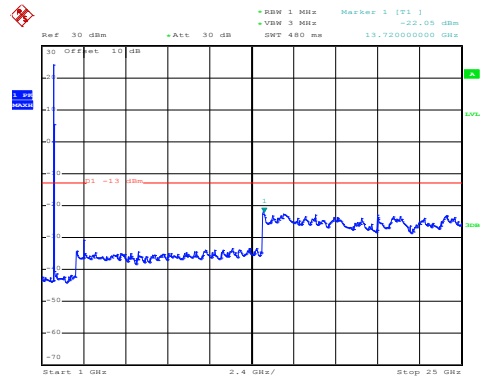
1GHz~25GHz

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



Date: 3.AUG.2020 11:20:36

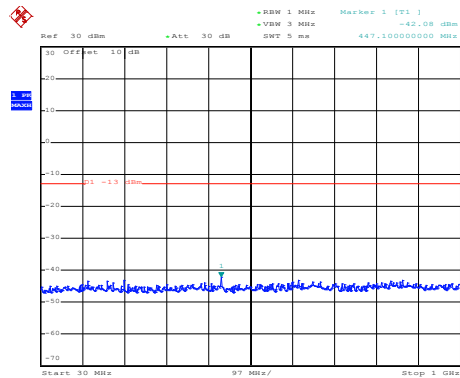
30MHz~1GHz



Date: 3.AUG.2020 11:23:08

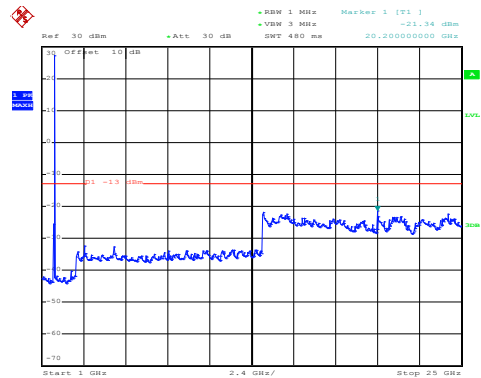
1GHz~25GHz

Middle channel



Date: 3.AUG.2020 11:20:47

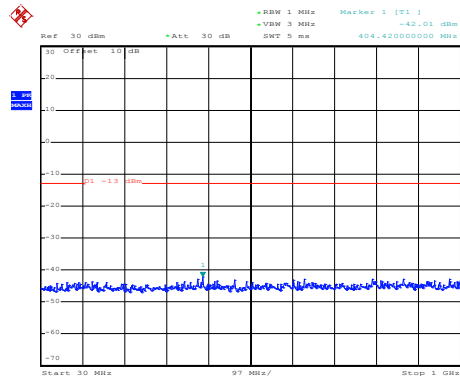
30MHz~1GHz



Date: 3.AUG.2020 11:23:29

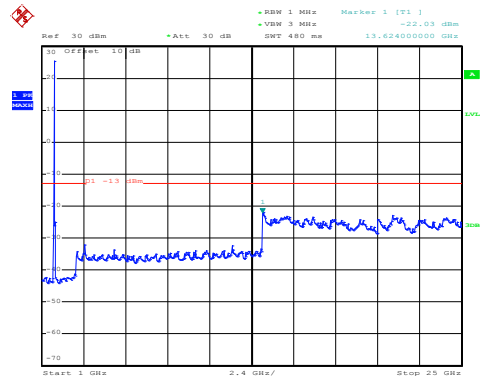
1GHz~25GHz

High channel



Date: 3.AUG.2020 11:21:00

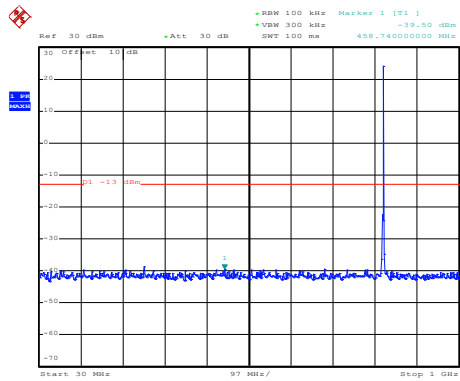
30MHz~1GHz



Date: 3.AUG.2020 11:23:52

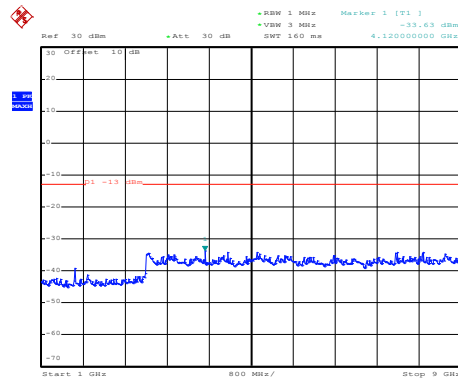
1GHz~25GHz

LTE Band 5 part:

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

Date: 3.AUG.2020 11:30:09

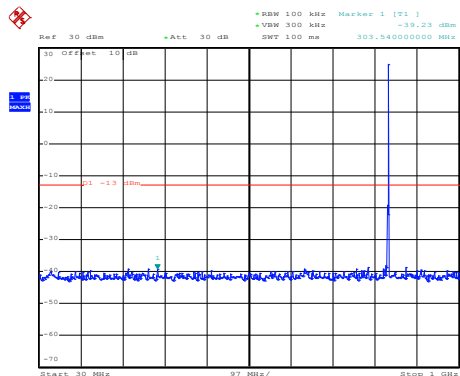
30MHz~1GHz



Date: 3.AUG.2020 11:28:28

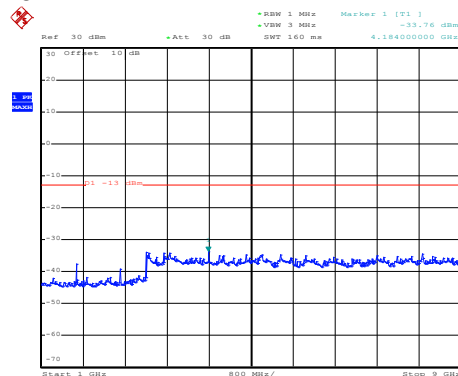
1GHz~9GHz

Middle channel



Date: 3.AUG.2020 11:29:48

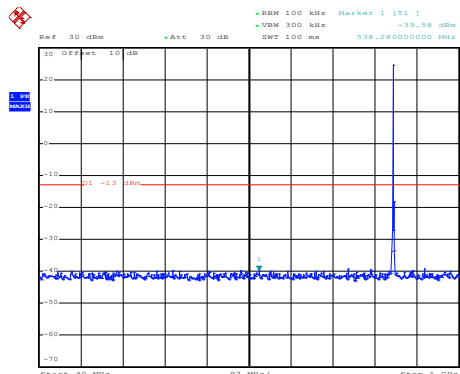
30MHz~1GHz



Date: 3.AUG.2020 11:28:43

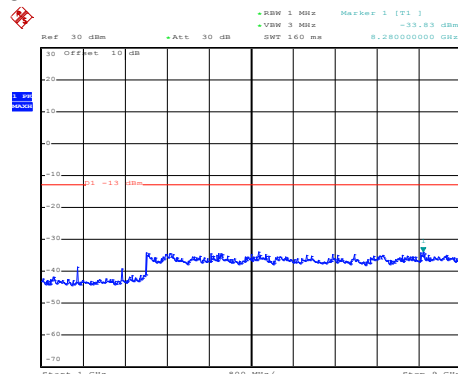
1GHz~9GHz

High channel



Date: 3.AUG.2020 11:29:28

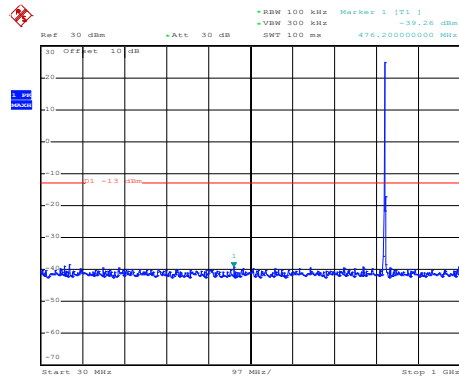
30MHz~1GHz



Date: 3.AUG.2020 11:29:02

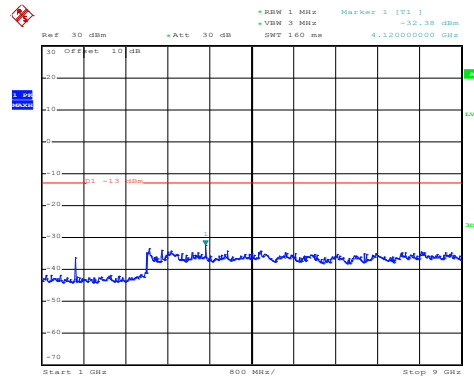
1GHz~9GHz

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



Date: 3.AUG.2020 11:30:02

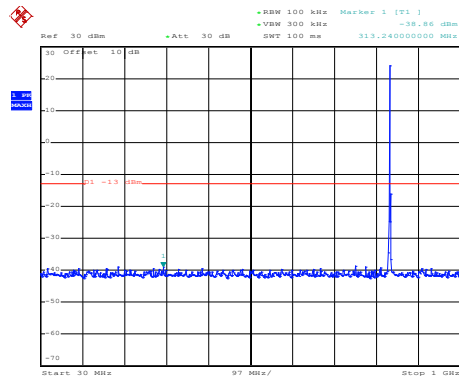
30MHz~1GHz



Date: 3.AUG.2020 11:28:23

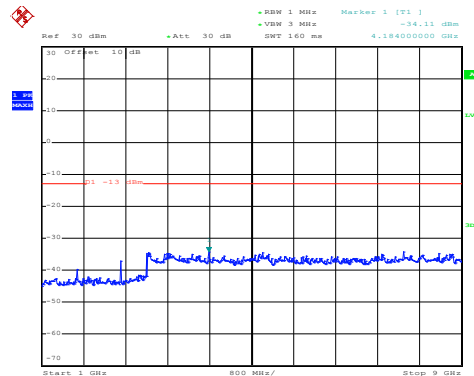
1GHz~9GHz

Middle channel



Date: 3.AUG.2020 11:29:40

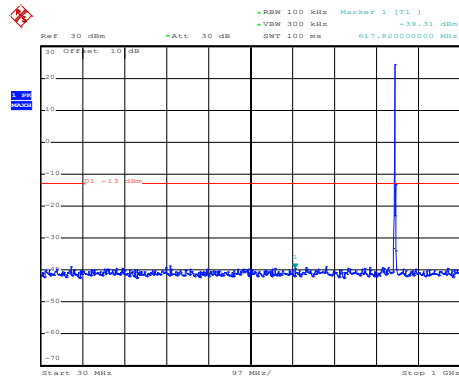
30MHz~1GHz



Date: 3.AUG.2020 11:28:37

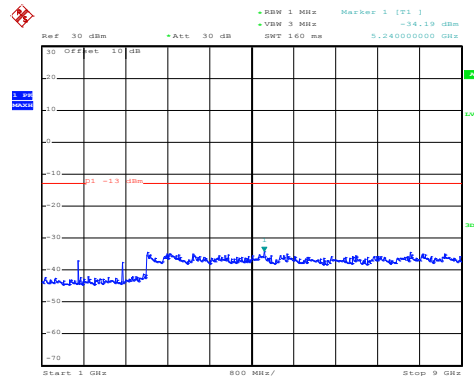
1GHz~9GHz

High channel



Date: 3.AUG.2020 11:29:21

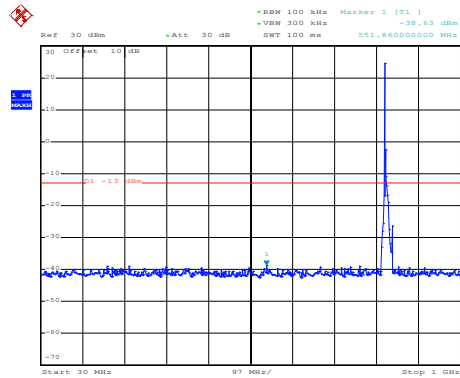
30MHz~1GHz



Date: 3.AUG.2020 11:28:53

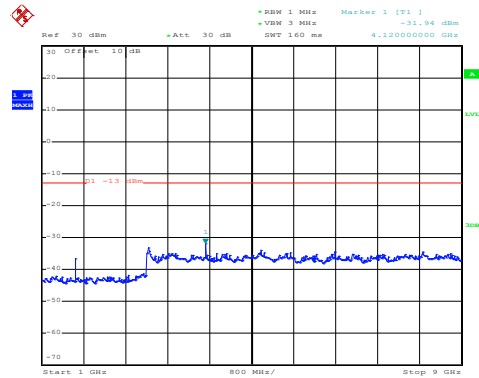
1GHz~9GHz

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



Date: 3.AUG.2020 11:30:49

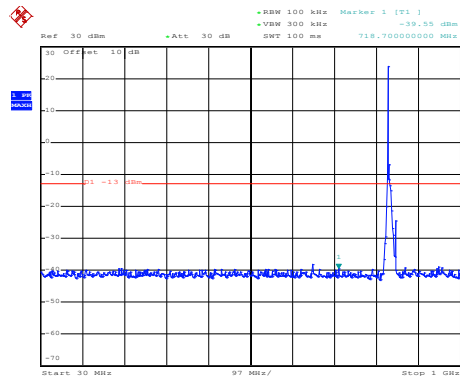
30MHz~1GHz



Date: 3.AUG.2020 11:32:31

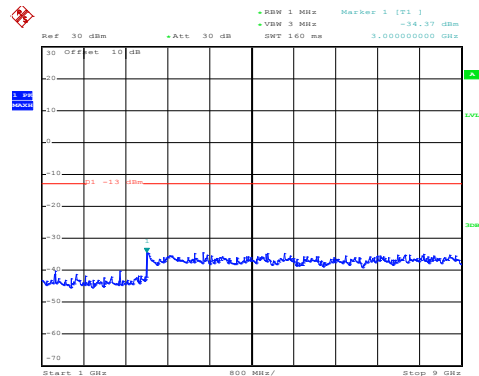
1GHz~9GHz

Middle channel



Date: 3.AUG.2020 11:31:10

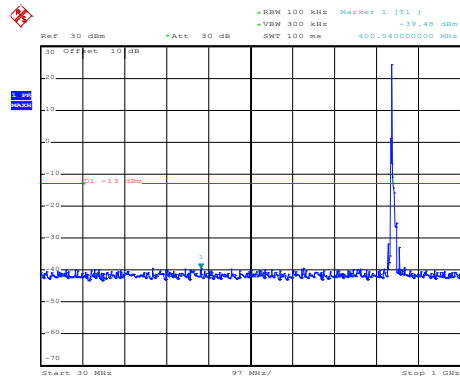
30MHz~1GHz



Date: 3.AUG.2020 11:32:11

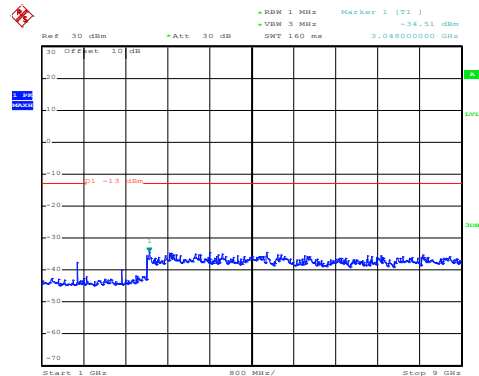
1GHz~9GHz

High channel



Date: 3.AUG.2020 11:31:29

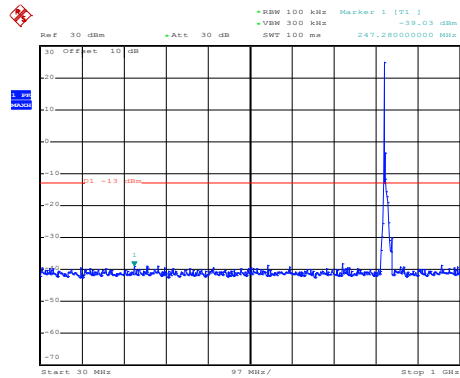
30MHz~1GHz



Date: 3.AUG.2020 11:31:58

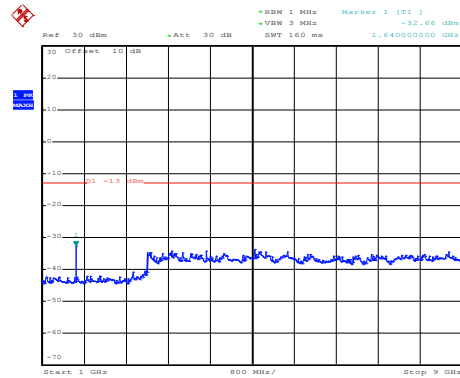
1GHz~9GHz

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



Date: 3.AUG.2020 11:30:37

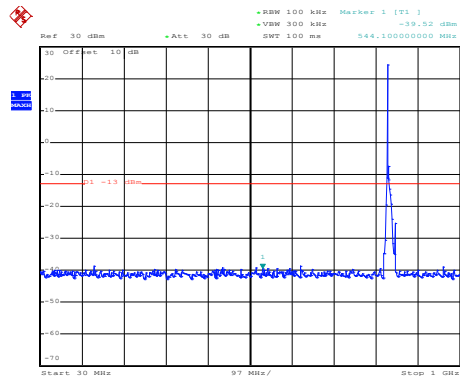
30MHz~1GHz



Date: 3.AUG.2020 11:32:22

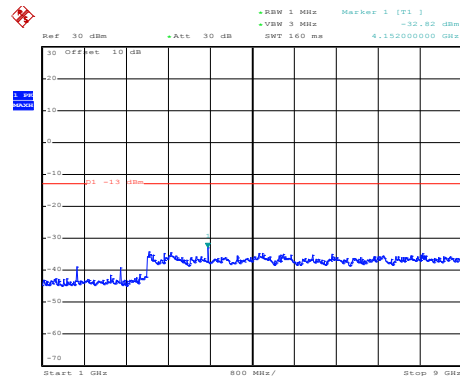
1GHz~9GHz

Middle channel



Date: 3.AUG.2020 11:30:59

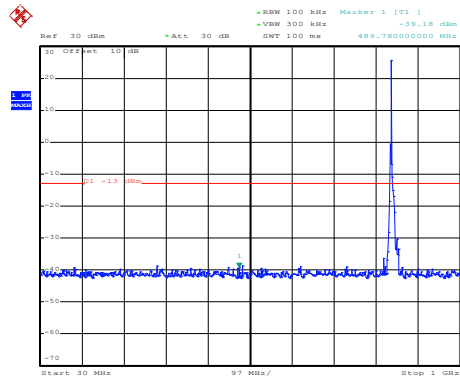
30MHz~1GHz



Date: 3.AUG.2020 11:32:06

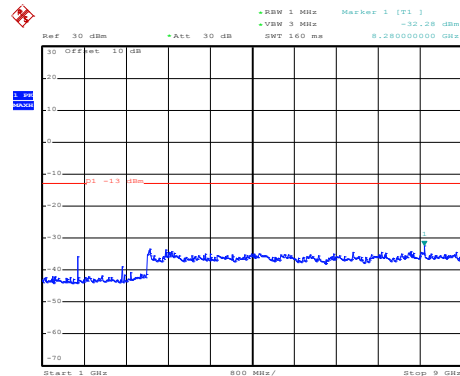
1GHz~9GHz

High channel



Date: 3.AUG.2020 11:31:22

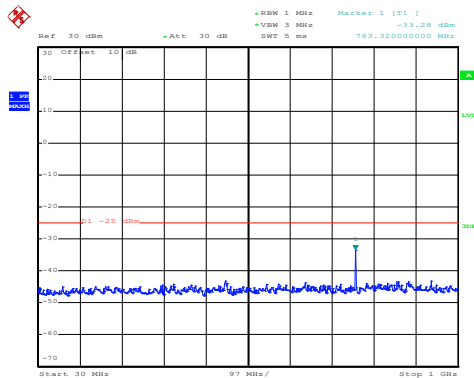
30MHz~1GHz



Date: 3.AUG.2020 11:31:53

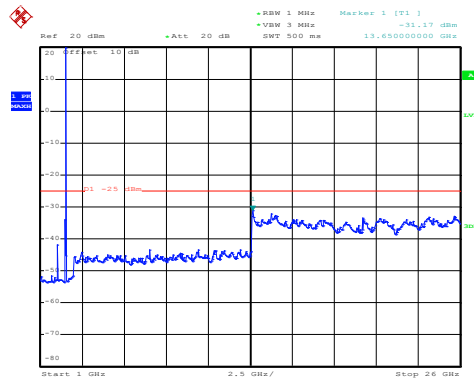
1GHz~9GHz

LTE Band 7 part:

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

Date: 3.AUG.2020 11:00:42

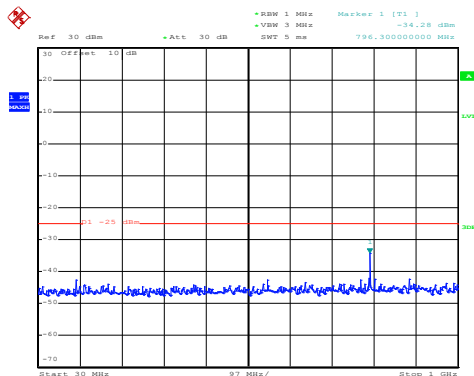
30MHz~1GHz



Date: 3.AUG.2020 11:02:48

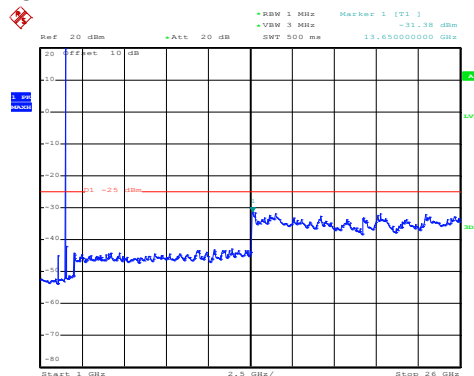
1GHz~26GHz

Middle channel



Date: 3.AUG.2020 11:00:56

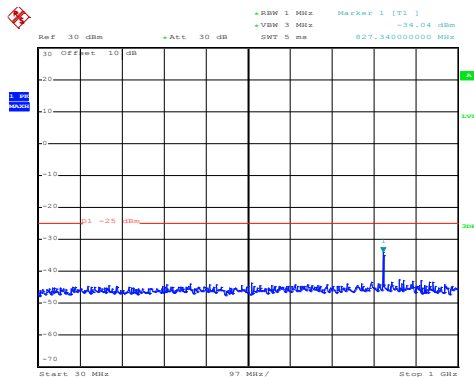
30MHz~1GHz



Date: 3.AUG.2020 11:02:27

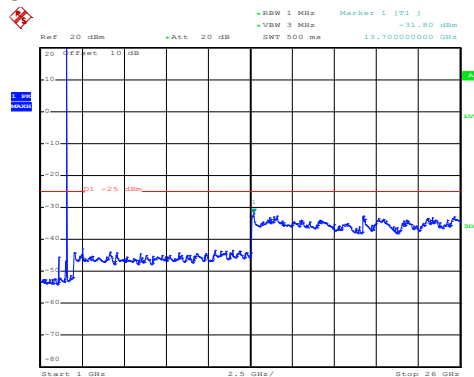
1GHz~26GHz

High channel



Date: 3.AUG.2020 11:01:10

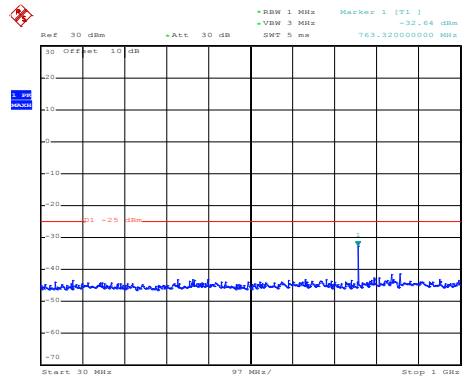
30MHz~1GHz



Date: 3.AUG.2020 11:01:50

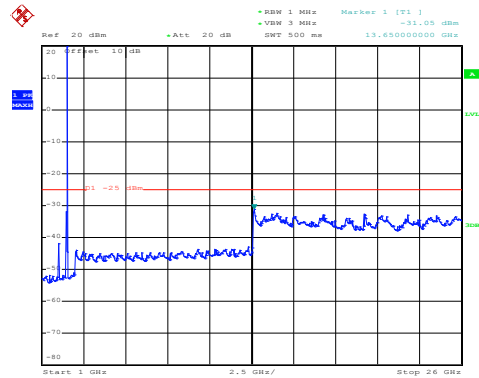
1GHz~26GHz

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



Date: 3.AUG.2020 11:00:37

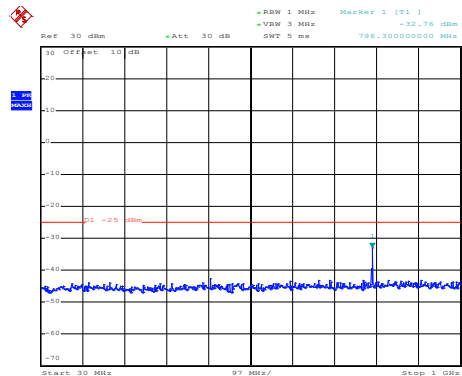
30MHz~1GHz



Date: 3.AUG.2020 11:02:40

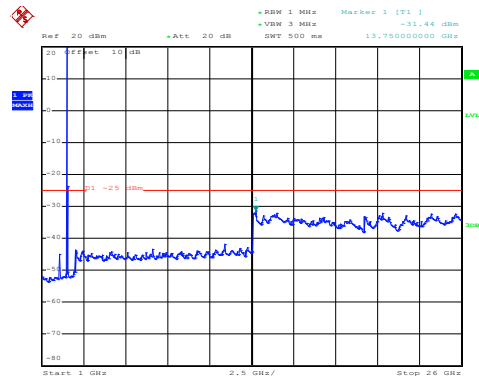
1GHz~26GHz

Middle channel



Date: 3.AUG.2020 11:00:51

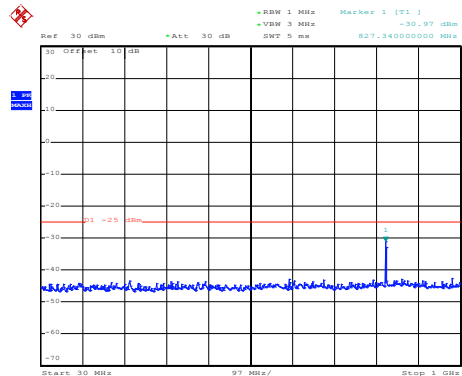
30MHz~1GHz



Date: 3.AUG.2020 11:02:11

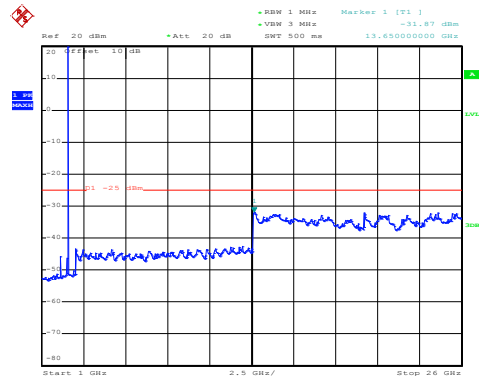
1GHz~26GHz

High channel



Date: 3.AUG.2020 11:01:04

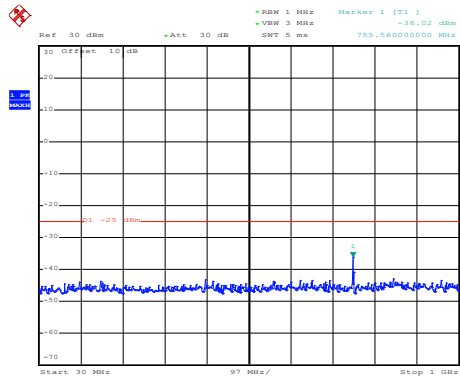
30MHz~1GHz



Date: 3.AUG.2020 11:01:41

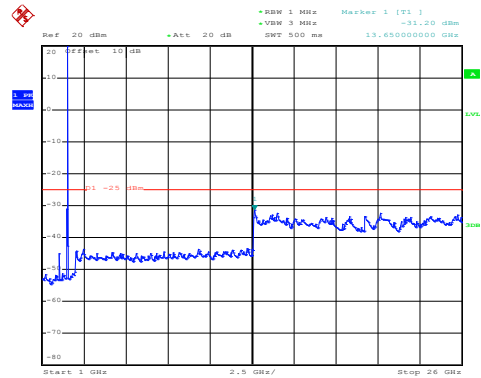
1GHz~26GHz

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



Date: 3.AUG.2020 11:19:28

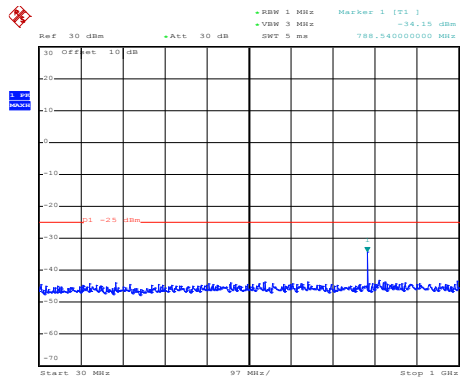
30MHz~1GHz



Date: 3.AUG.2020 11:17:44

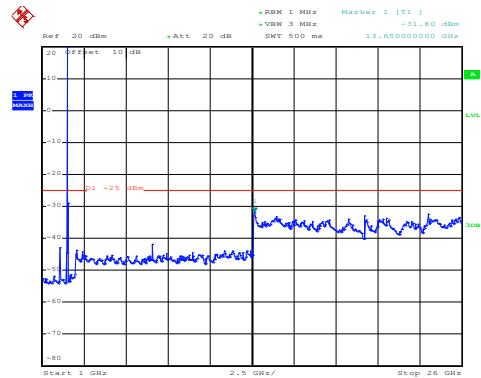
1GHz~26GHz

Middle channel



Date: 3.AUG.2020 11:19:13

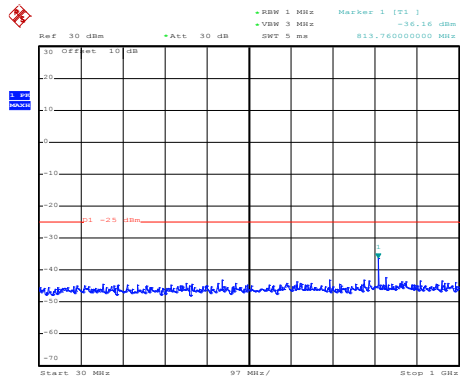
30MHz~1GHz



Date: 3.AUG.2020 11:18:10

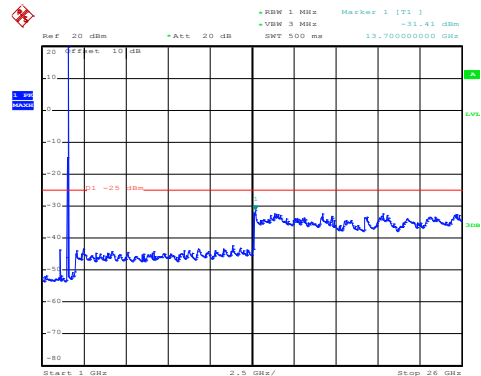
1GHz~26GHz

High channel



Date: 3.AUG.2020 11:19:01

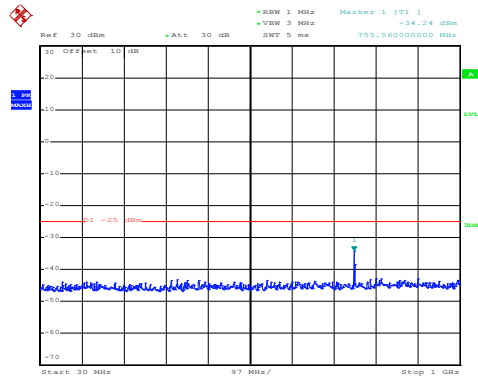
30MHz~1GHz



Date: 3.AUG.2020 11:18:41

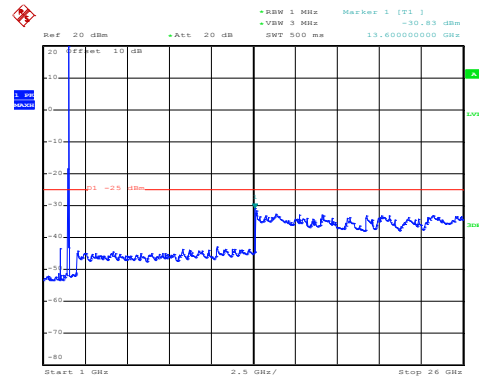
1GHz~26GHz

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



Date: 3.AUG.2020 11:19:21

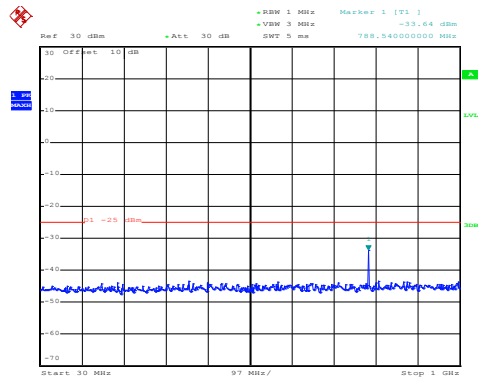
30MHz~1GHz



Date: 3.AUG.2020 11:17:34

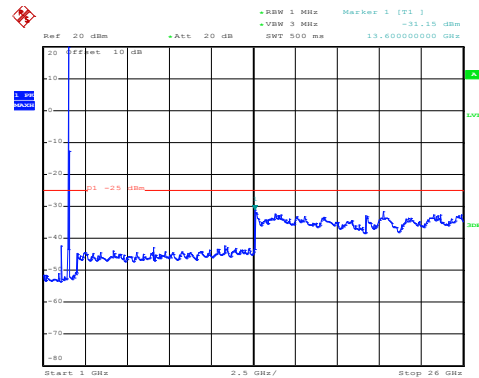
1GHz~26GHz

Middle channel



Date: 3.AUG.2020 11:19:08

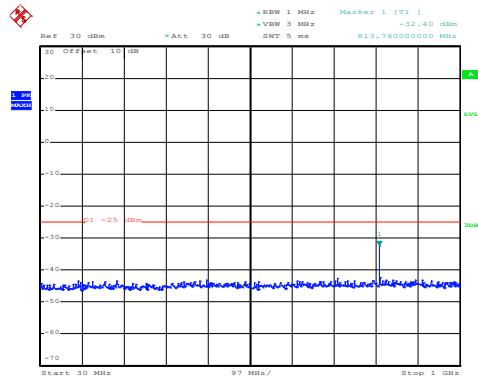
30MHz~1GHz



Date: 3.AUG.2020 11:18:04

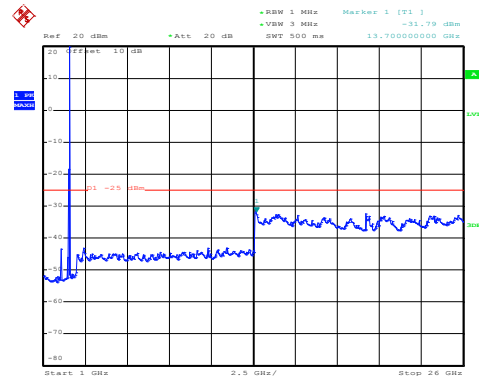
1GHz~26GHz

High channel



Date: 3.AUG.2020 11:18:57

30MHz~1GHz



Date: 3.AUG.2020 11:18:27

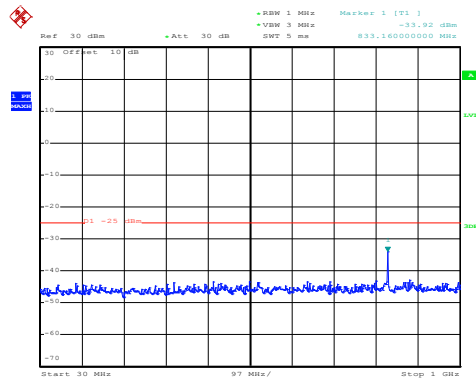
1GHz~26GHz

LTE Band 38 part:

LTE Band 38: 16 QAM & RB Size 1

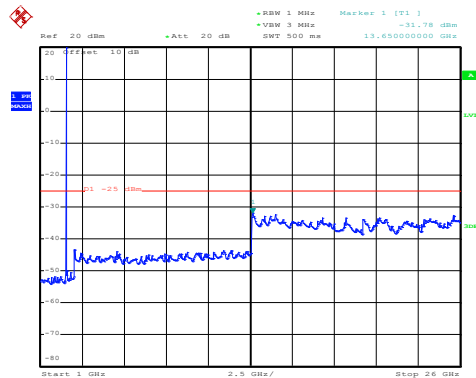
BW: 5MHz

Lowest channel



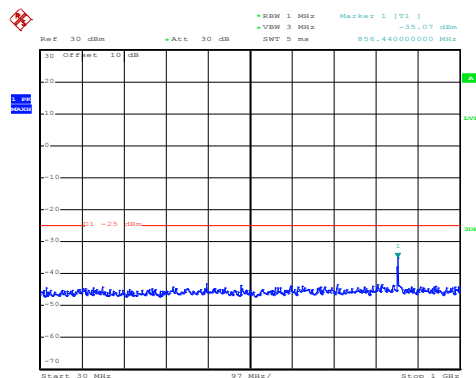
Date: 3.AUG.2020 11:00:24

30MHz~1GHz



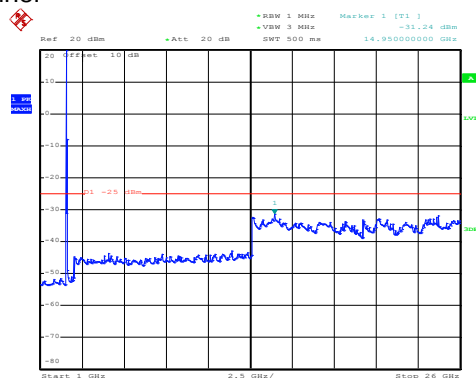
Date: 3.AUG.2020 11:03:33

1GHz~26GHz



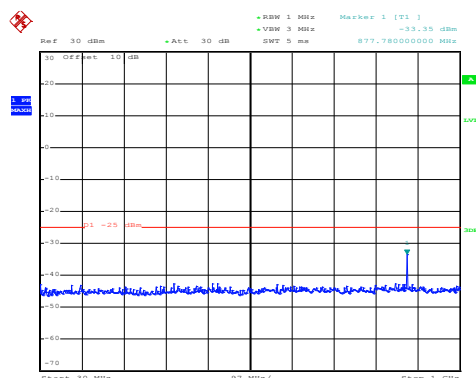
Date: 3.AUG.2020 11:00:07

30MHz~1GHz



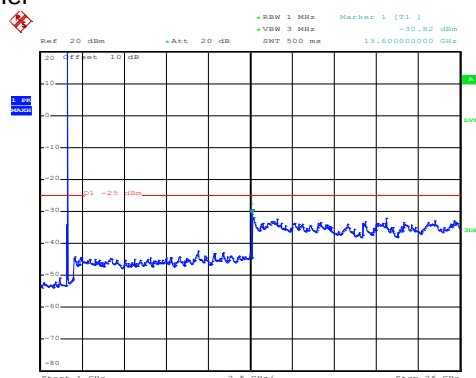
Date: 3.AUG.2020 11:03:58

1GHz~26GHz



Date: 3.AUG.2020 10:59:48

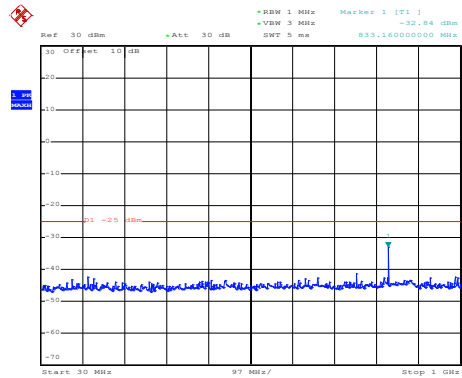
30MHz~1GHz



Date: 3.AUG.2020 11:04:24

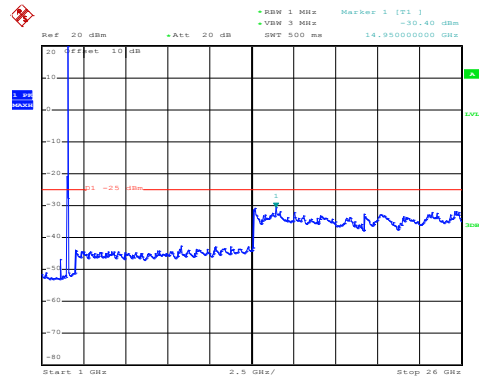
1GHz~26GHz

LTE Band 38: QPSK & RB Size 1
BW: 5MHz
Lowest channel



Date: 3.AUG.2020 11:00:18

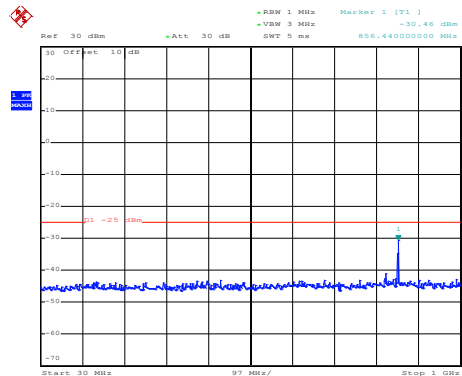
30MHz~1GHz



Date: 3.AUG.2020 11:03:24

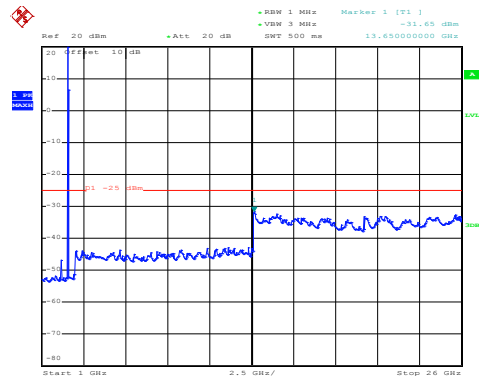
1GHz~26GHz

Middle channel



Date: 3.AUG.2020 11:00:02

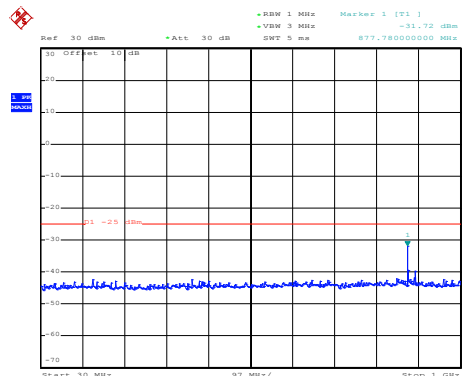
30MHz~1GHz



Date: 3.AUG.2020 11:03:49

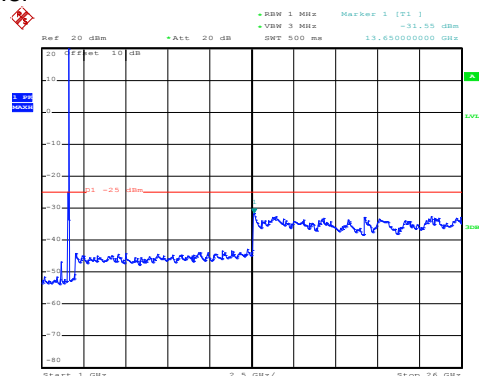
1GHz~26GHz

High channel



Date: 3.AUG.2020 10:59:37

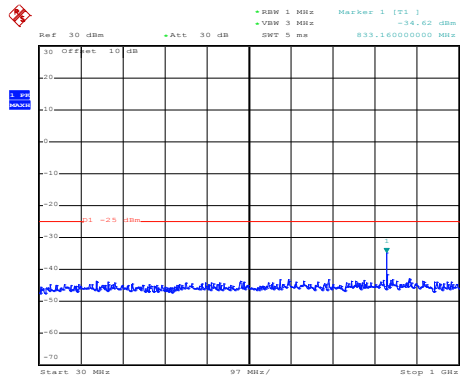
30MHz~1GHz



Date: 3.AUG.2020 11:04:15

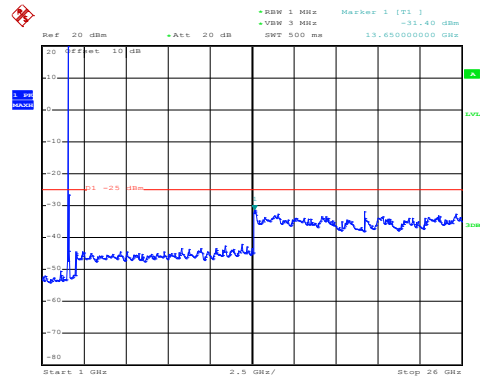
1GHz~26GHz

LTE Band 38: 16 QAM & RB Size 1
BW: 20MHz
Lowest channel



Date: 3.AUG.2020 11:19:47

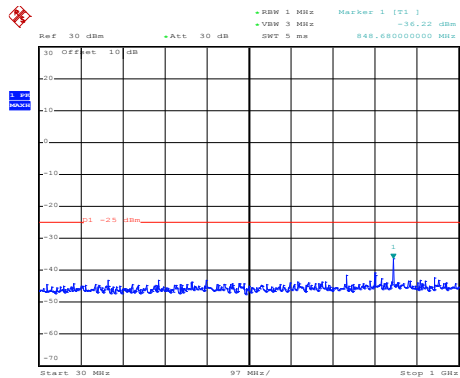
30MHz~1GHz



Date: 3.AUG.2020 11:16:10

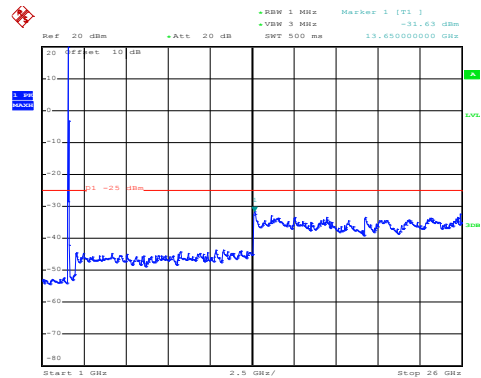
1GHz~26GHz

Middle channel



Date: 3.AUG.2020 11:20:01

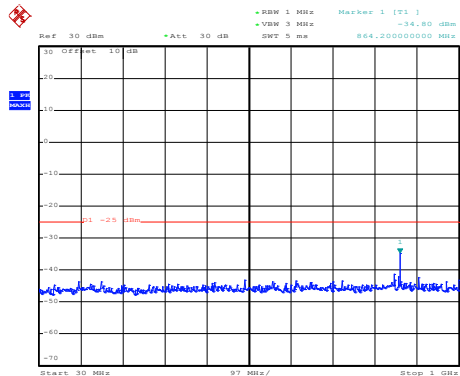
30MHz~1GHz



Date: 3.AUG.2020 11:16:36

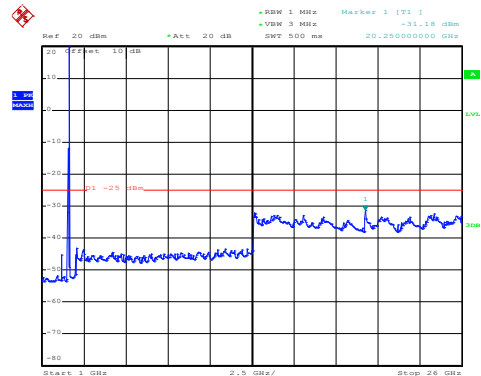
1GHz~26GHz

High channel



Date: 3.AUG.2020 11:20:15

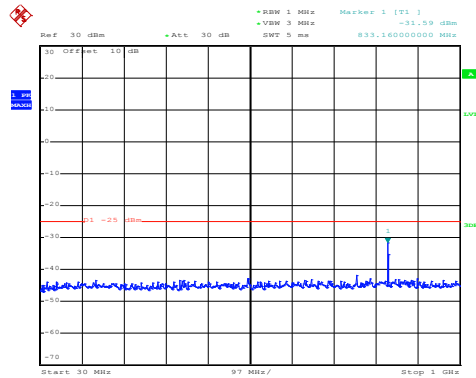
30MHz~1GHz



Date: 3.AUG.2020 11:17:17

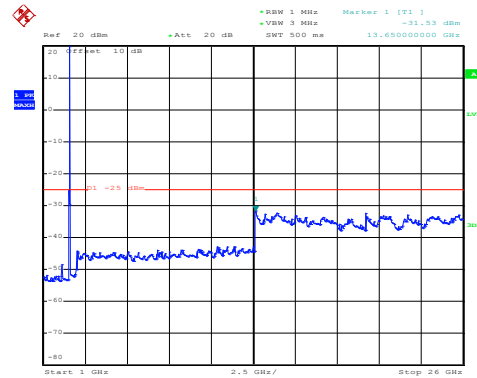
1GHz~26GHz

LTE Band 38: QPSK & RB Size 1
BW: 20MHz
Lowest channel



Date: 3.AUG.2020 11:19:41

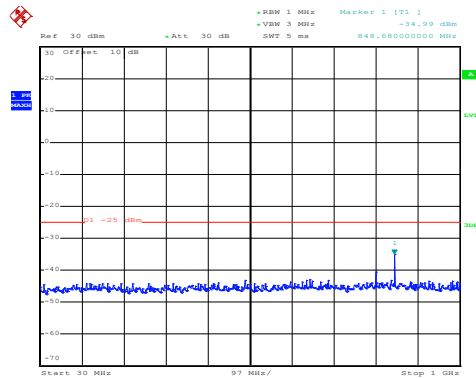
30MHz~1GHz



Date: 3.AUG.2020 11:16:00

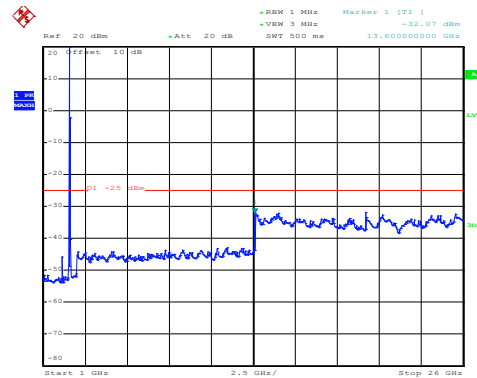
1GHz~26GHz

Middle channel



Date: 3.AUG.2020 11:19:56

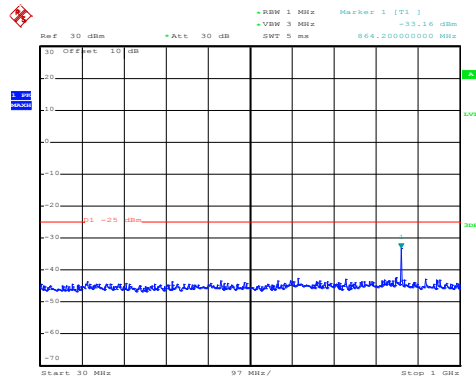
30MHz~1GHz



Date: 3.AUG.2020 11:16:26

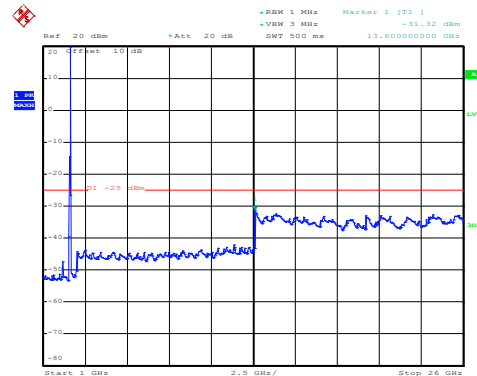
1GHz~26GHz

High channel



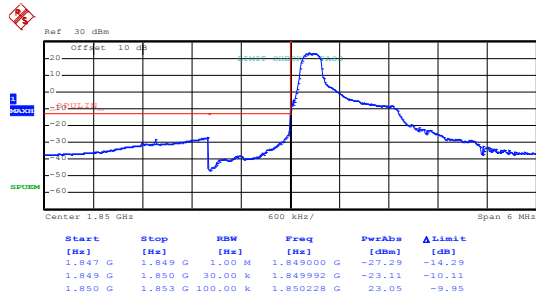
Date: 3.AUG.2020 11:20:10

30MHz~1GHz



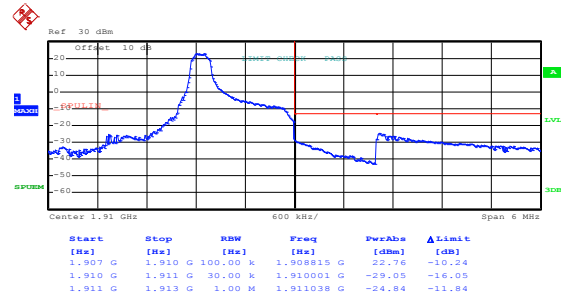
Date: 3.AUG.2020 11:17:04

1GHz~26GHz

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

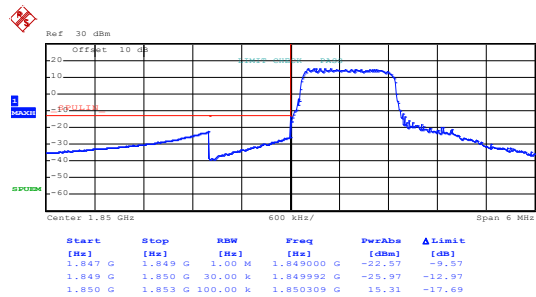
Date: 3.AUG.2020 10:25:15

Lowest channel



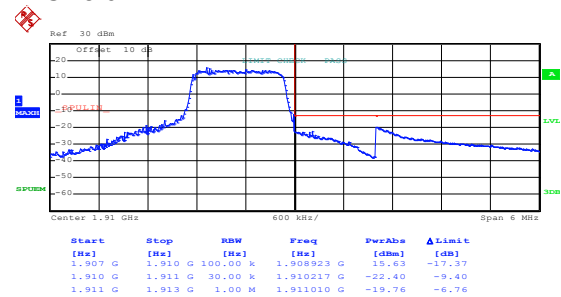
Date: 3.AUG.2020 10:26:50

Highest channel

16QAM & RB Size 6

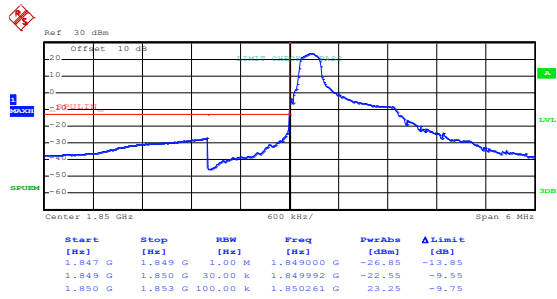
Date: 3.AUG.2020 10:25:33

Lowest channel



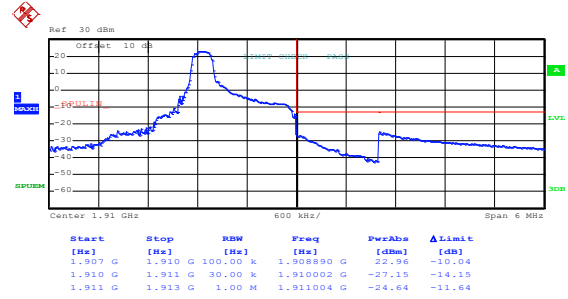
Date: 3.AUG.2020 10:25:56

Highest channel

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

Date: 3.AUG.2020 10:24:35

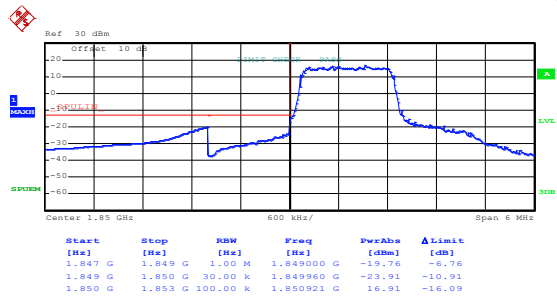
Lowest channel



Date: 3.AUG.2020 10:26:27

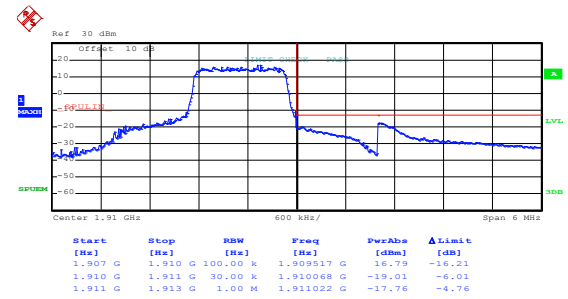
Highest channel

QPSK & RB Size 6



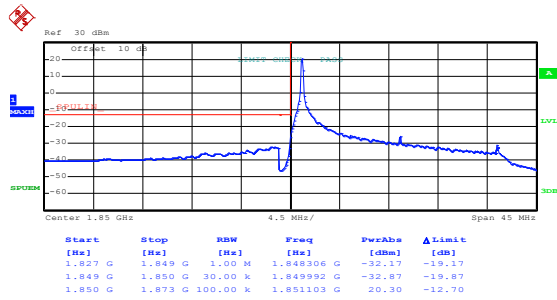
Date: 3.AUG.2020 10:25:25

Lowest channel



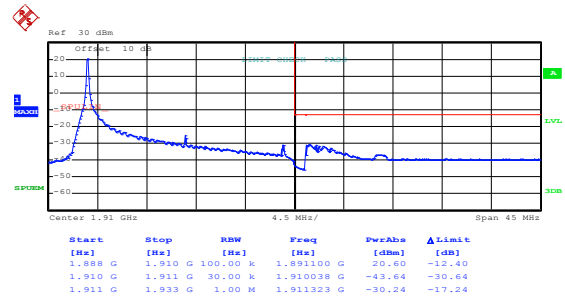
Date: 3.AUG.2020 10:25:51

Highest channel

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

Date: 3.AUG.2020 10:28:21

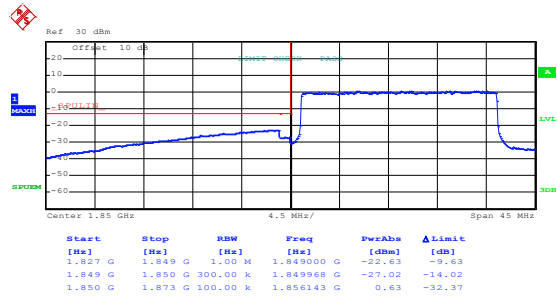
Lowest channel



Date: 3.AUG.2020 10:27:36

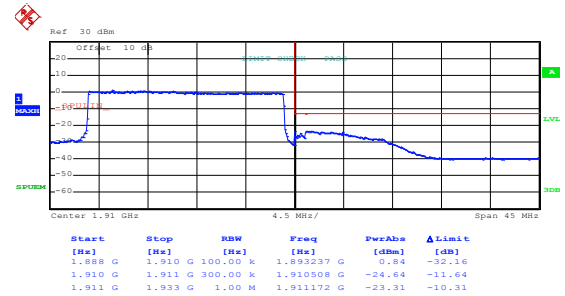
Highest channel

16QAM & RB Size 100



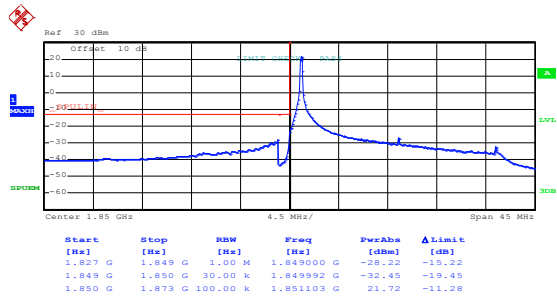
Date: 3.AUG.2020 10:28:37

Lowest channel



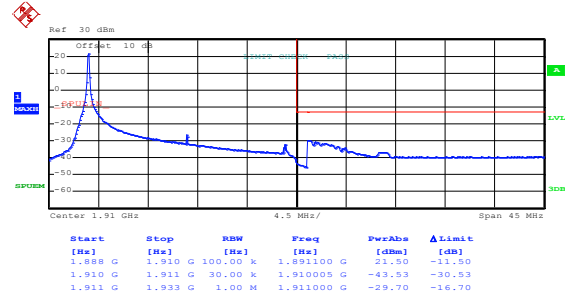
Date: 3.AUG.2020 10:27:56

Highest channel

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

Date: 3.AUG.2020 10:28:10

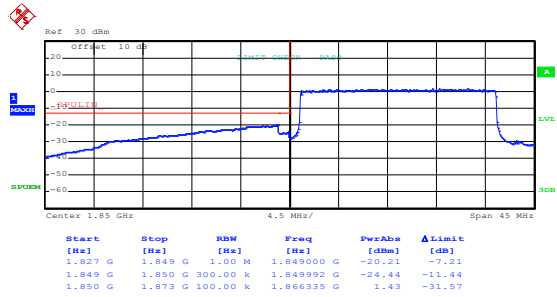
Lowest channel



Date: 3.AUG.2020 10:27:20

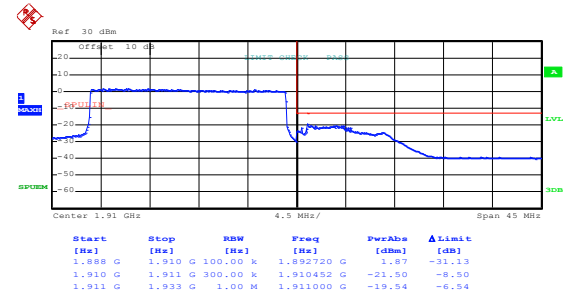
Highest channel

QPSK & RB Size 100



Date: 3.AUG.2020 10:28:32

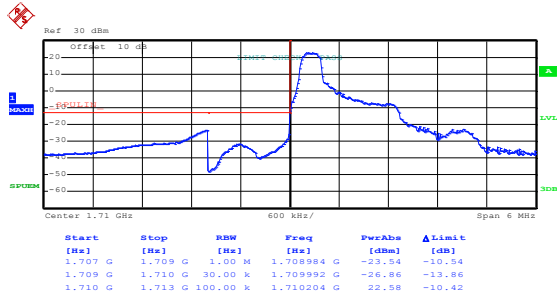
Lowest channel



Date: 3.AUG.2020 10:27:51

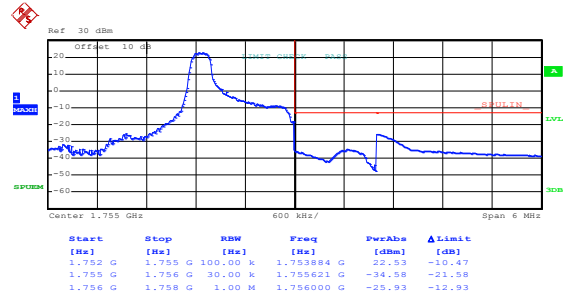
Highest channel

LTE Band 4 part:

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

Date: 3.AUG.2020 10:34:14

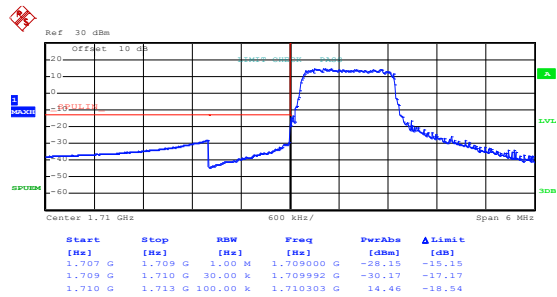
Lowest channel



Date: 3.AUG.2020 10:32:09

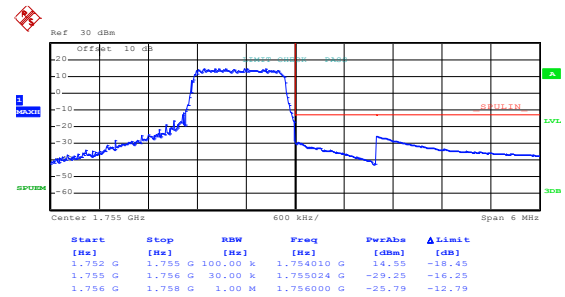
Highest channel

16QAM & RB Size 6



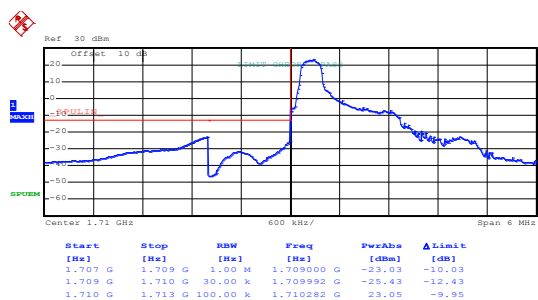
Date: 3.AUG.2020 10:32:55

Lowest channel



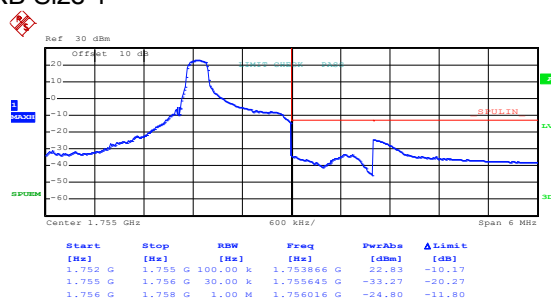
Date: 3.AUG.2020 10:32:24

Highest channel

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

Date: 3.AUG.2020 10:33:30

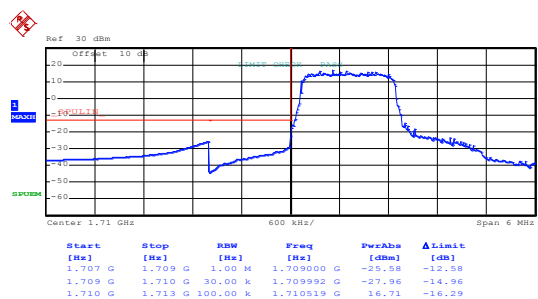
Lowest channel



Date: 3.AUG.2020 10:31:49

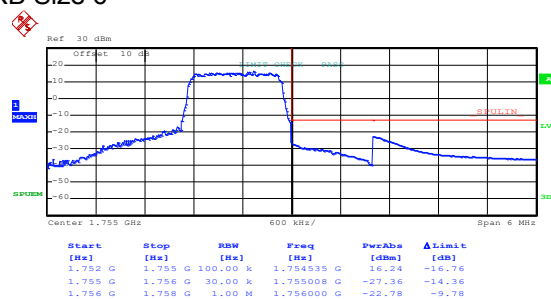
Highest channel

QPSK & RB Size 6



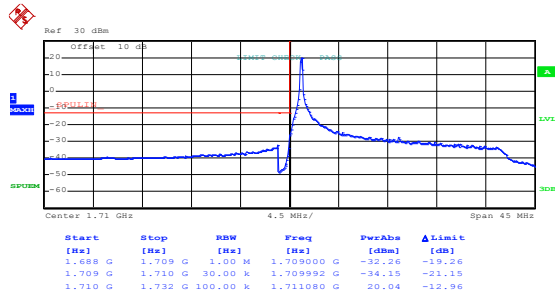
Date: 3.AUG.2020 10:32:47

Lowest channel



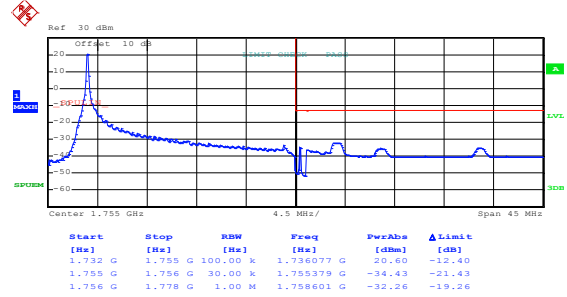
Date: 3.AUG.2020 10:32:18

Highest channel

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

Date: 3.AUG.2020 10:29:11

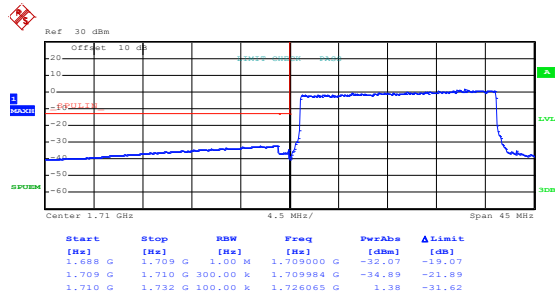
Lowest channel



Date: 3.AUG.2020 10:30:08

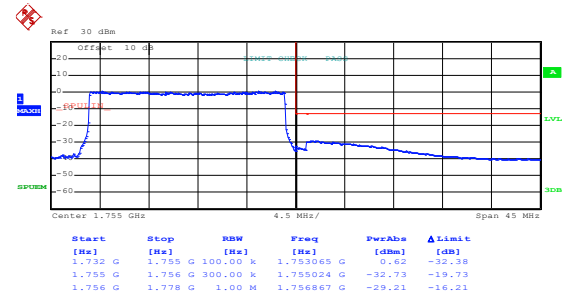
Highest channel

16QAM & RB Size 100



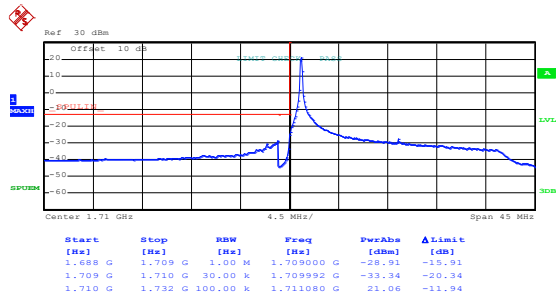
Date: 3.AUG.2020 10:29:27

Lowest channel



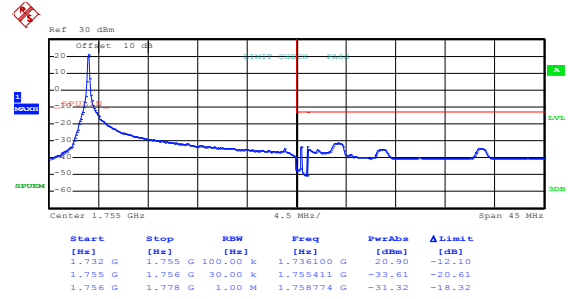
Date: 3.AUG.2020 10:29:43

Highest channel

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

Date: 3.AUG.2020 10:29:02

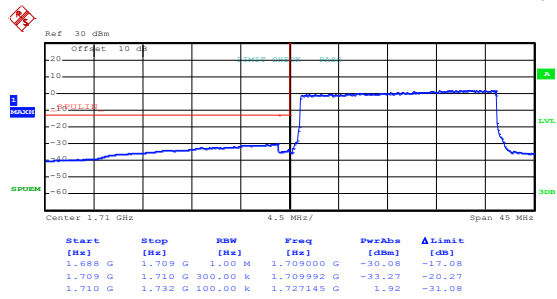
Lowest channel



Date: 3.AUG.2020 10:29:59

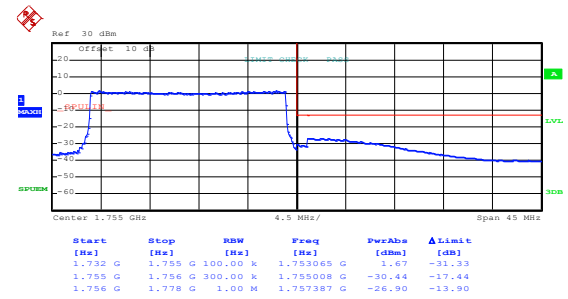
Highest channel

QPSK & RB Size 100



Date: 3.AUG.2020 10:29:22

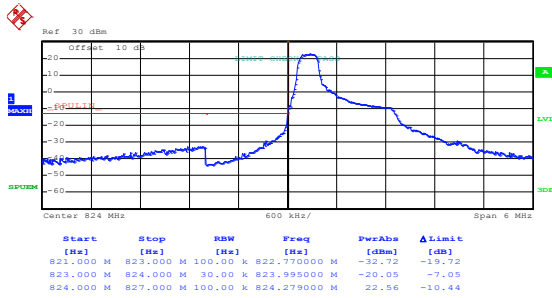
Lowest channel



Date: 3.AUG.2020 10:29:39

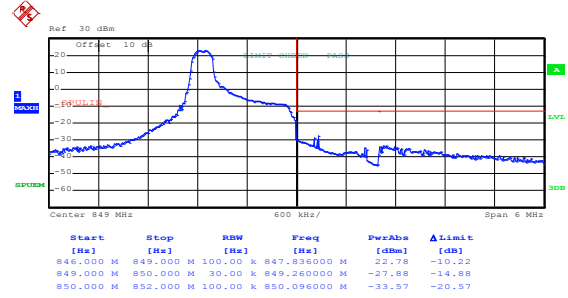
Highest channel

LTE Band 5 part:

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

Date: 3.AUG.2020 10:35:51

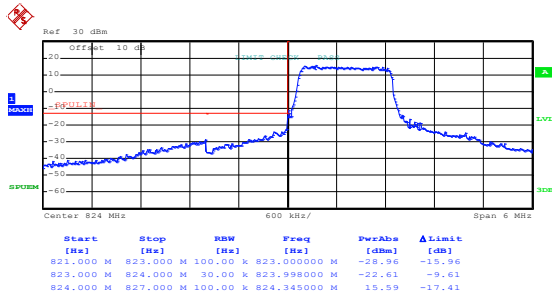
Lowest channel



Date: 3.AUG.2020 10:38:51

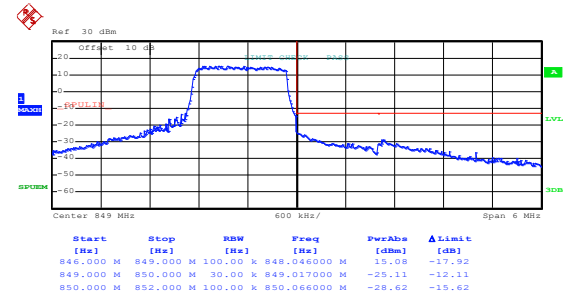
Highest channel

16QAM & RB Size 6



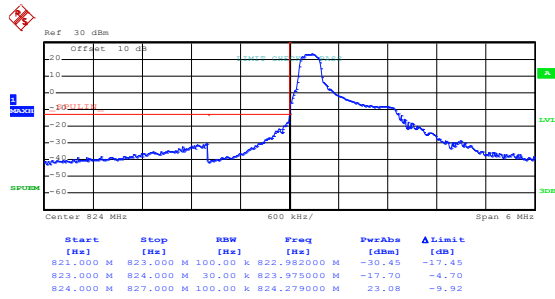
Date: 3.AUG.2020 10:36:29

Lowest channel



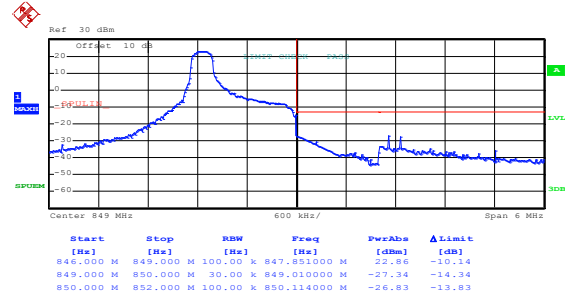
Date: 3.AUG.2020 10:36:57

Highest channel

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

Date: 3.AUG.2020 10:35:09

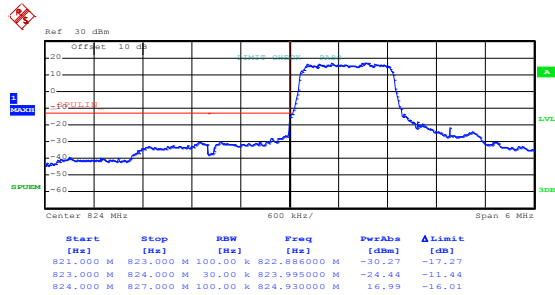
Lowest channel



Date: 3.AUG.2020 10:37:53

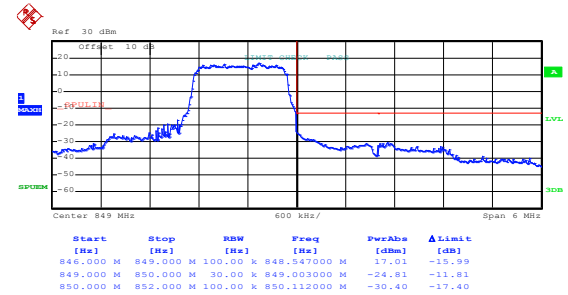
Highest channel

QPSK & RB Size 6



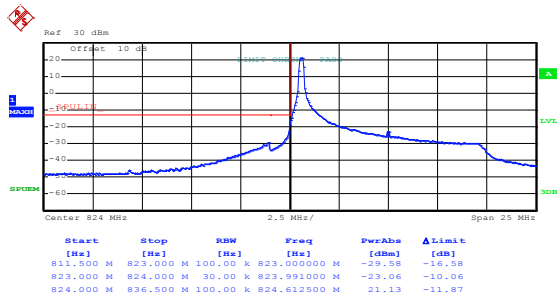
Date: 3.AUG.2020 10:36:16

Lowest channel



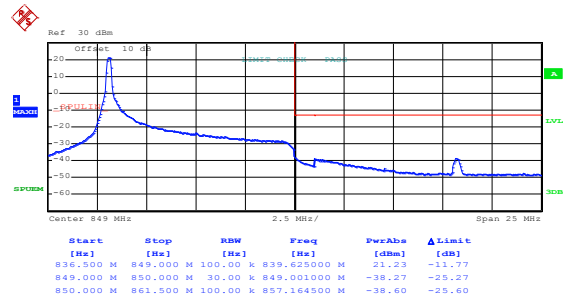
Date: 3.AUG.2020 10:36:43

Highest channel

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

Date: 3.AUG.2020 10:41:55

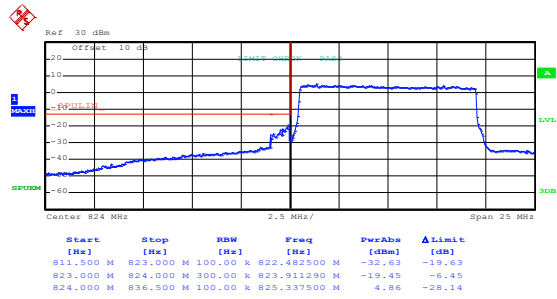
Lowest channel



Date: 3.AUG.2020 10:40:18

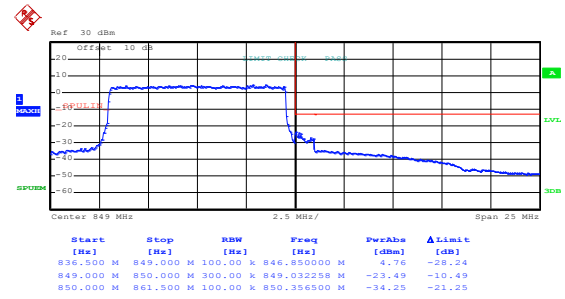
Highest channel

16QAM & RB Size 50



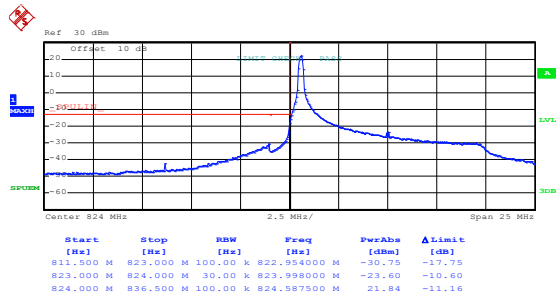
Date: 3.AUG.2020 10:42:25

Lowest channel



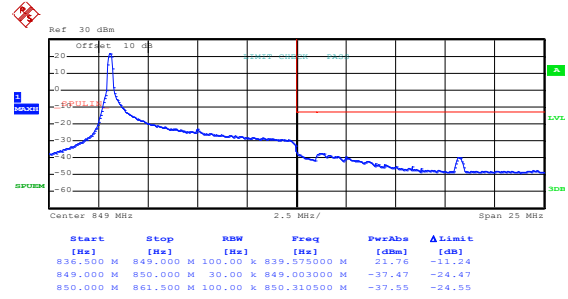
Date: 3.AUG.2020 10:40:48

Highest channel

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

Date: 3.AUG.2020 10:41:21

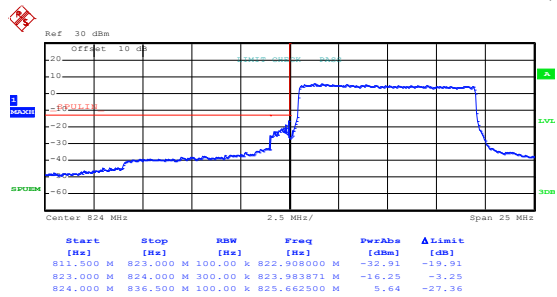
Lowest channel



Date: 3.AUG.2020 10:39:41

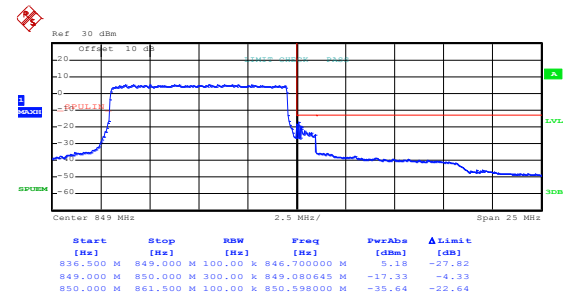
Highest channel

QPSK & RB Size 50



Date: 3.AUG.2020 10:42:17

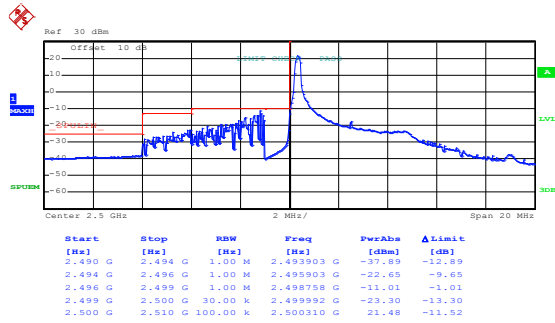
Lowest channel



Date: 3.AUG.2020 10:40:40

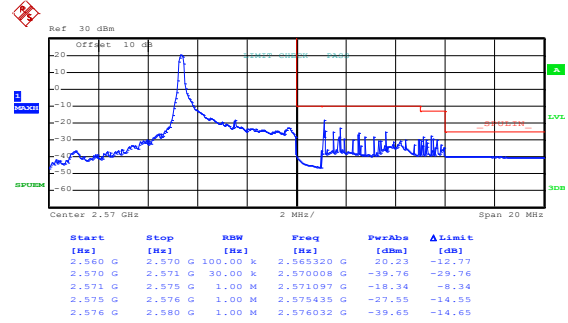
Highest channel

LTE Band 7 part:

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

Date: 3.AUG.2020 10:44:31

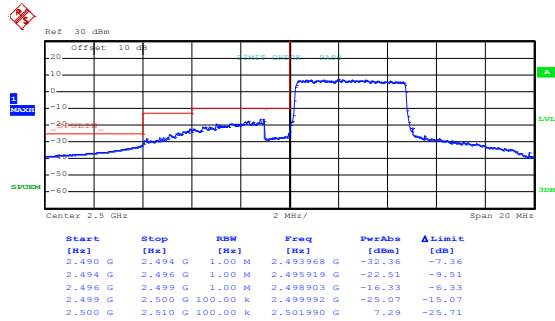
Lowest channel



Date: 3.AUG.2020 10:46:19

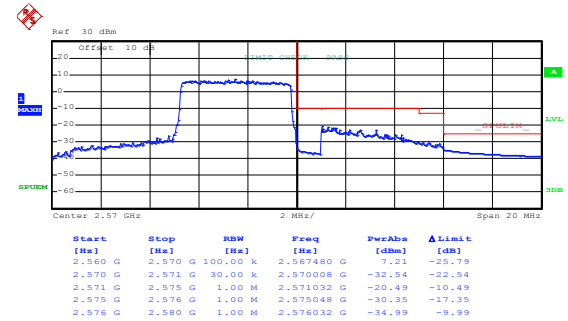
Highest channel

16QAM & RB Size 25



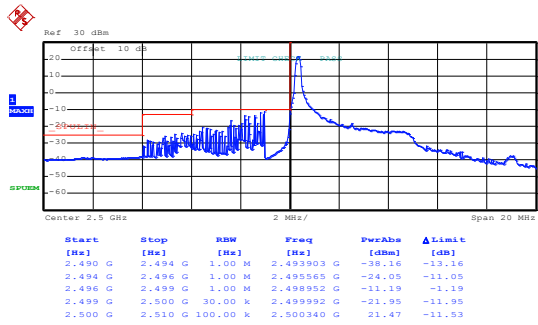
Date: 3.AUG.2020 10:45:12

Lowest channel



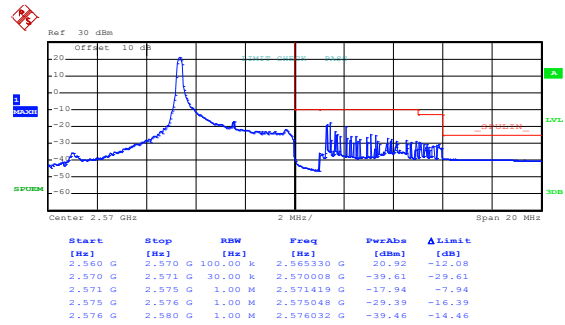
Date: 3.AUG.2020 10:46:37

Highest channel

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

Date: 3.AUG.2020 10:43:53

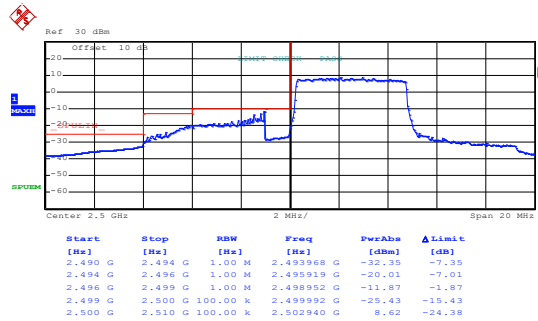
Lowest channel



Date: 3.AUG.2020 10:45:59

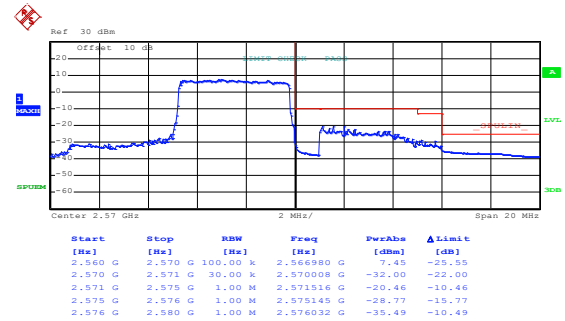
Highest channel

QPSK & RB Size 25



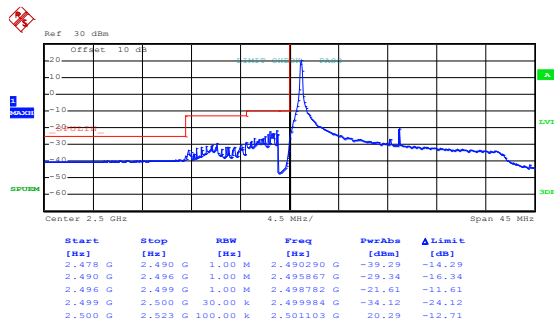
Date: 3.AUG.2020 10:45:03

Lowest channel



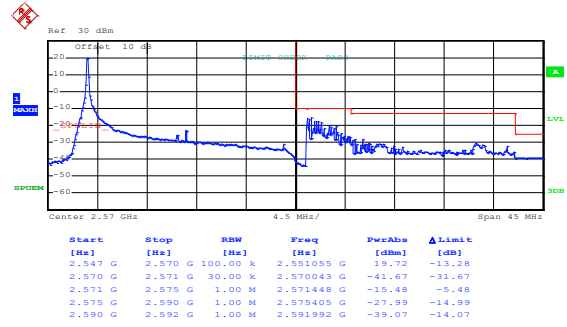
Date: 3.AUG.2020 10:46:30

Highest channel

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

Date: 3.AUG.2020 10:47:51

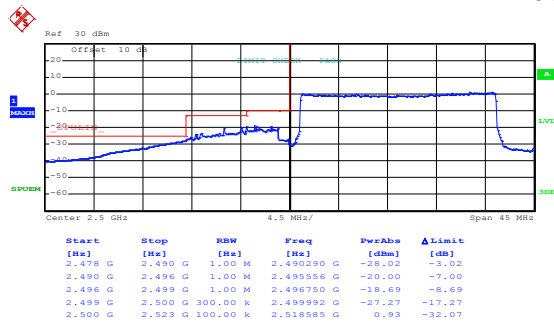
Lowest channel



Date: 3.AUG.2020 10:48:57

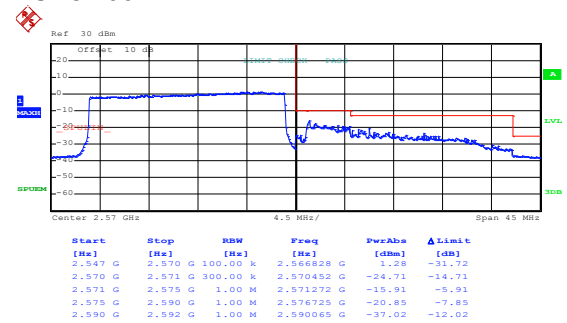
Highest channel

16QAM & RB Size 100



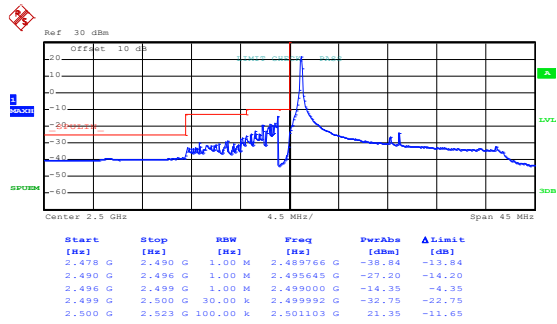
Date: 3.AUG.2020 10:48:11

Lowest channel



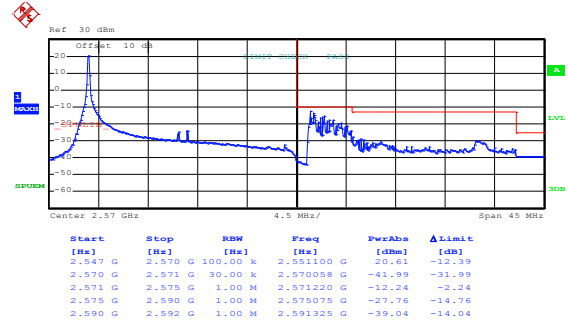
Date: 3.AUG.2020 10:49:34

Highest channel

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

Date: 3.AUG.2020 10:47:35

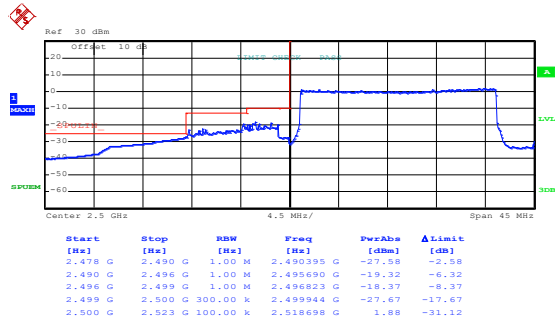
Lowest channel



Date: 3.AUG.2020 10:48:40

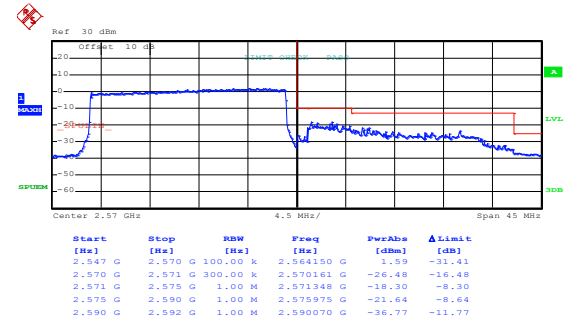
Highest channel

QPSK & RB Size 100



Date: 3.AUG.2020 10:48:05

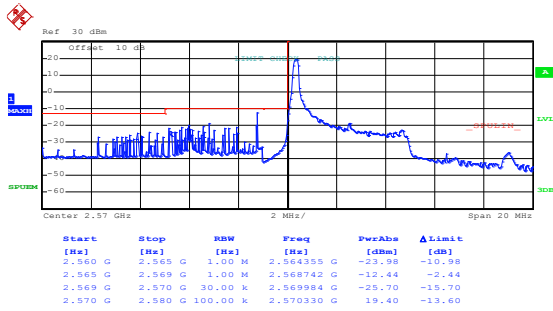
Lowest channel



Date: 3.AUG.2020 10:49:18

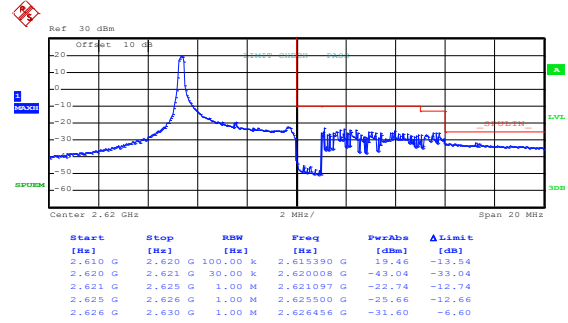
Highest channel

LTE band 38 part:

LTE Band 38, BW: 5MHz
16QAM & RB Size 1

Date: 3.AUG.2020 10:54:49

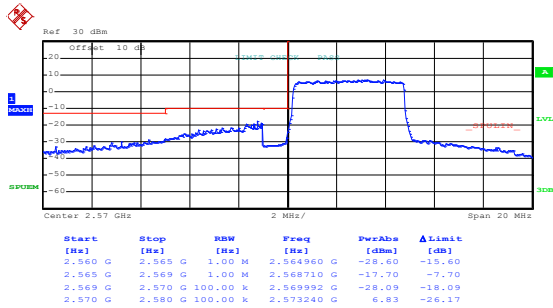
Lowest channel



Date: 3.AUG.2020 10:57:54

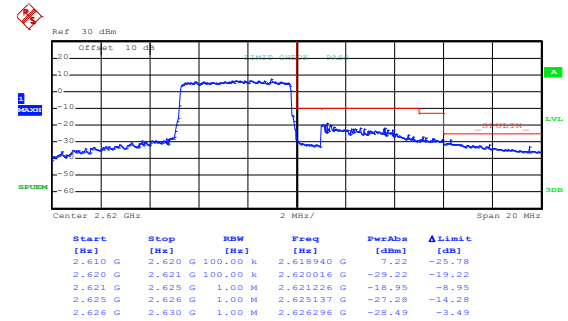
Highest channel

16QAM & RB Size 25



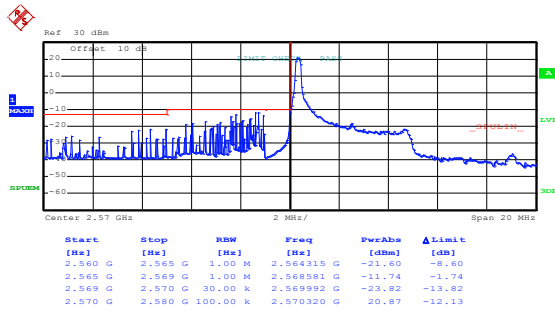
Date: 3.AUG.2020 10:55:48

Lowest channel



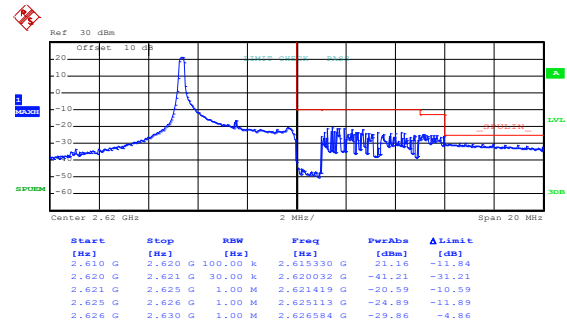
Date: 3.AUG.2020 10:58:28

Highest channel

LTE Band 38, BW: 5MHz
QPSK & RB Size 1

Date: 3.AUG.2020 10:54:25

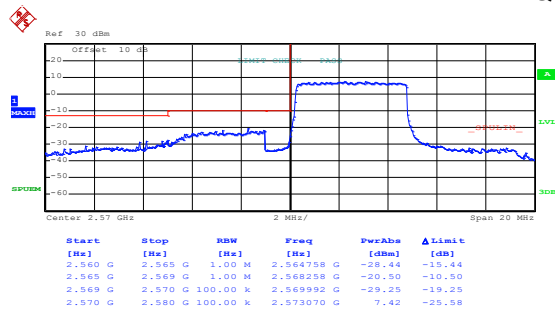
Lowest channel



Date: 3.AUG.2020 10:56:51

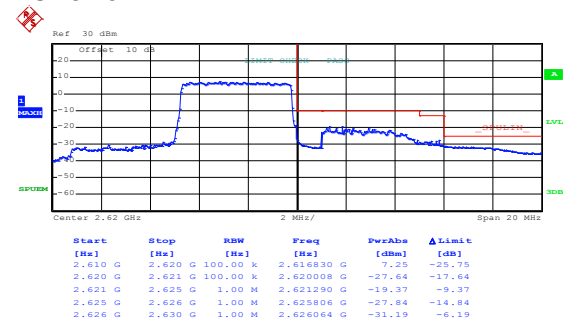
Highest channel

QPSK & RB Size 25



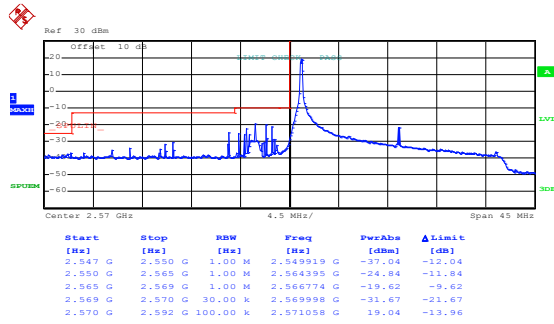
Date: 3.AUG.2020 10:55:15

Lowest channel



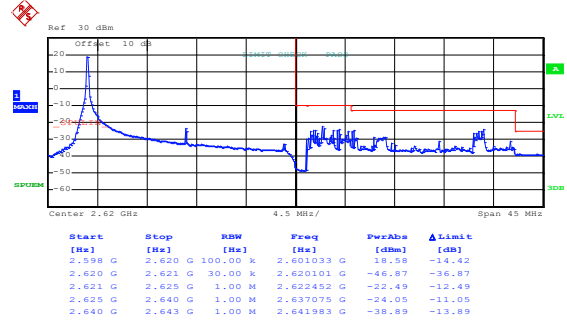
Date: 3.AUG.2020 10:58:18

Highest channel

LTE Band 38, BW: 20MHz
16QAM & RB Size 1

Date: 3.AUG.2020 10:50:46

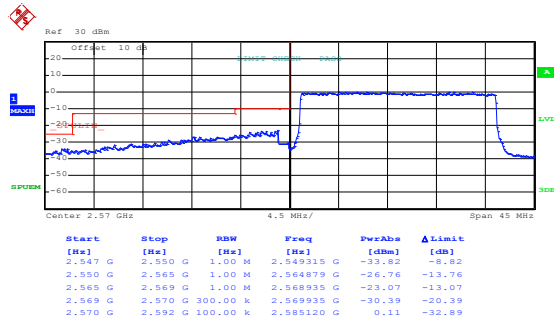
Lowest channel



Date: 3.AUG.2020 10:51:56

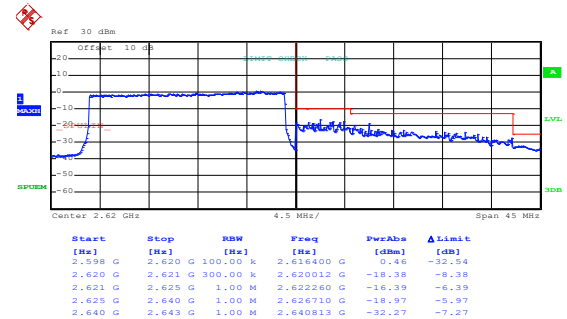
Highest channel

16QAM & RB Size 100



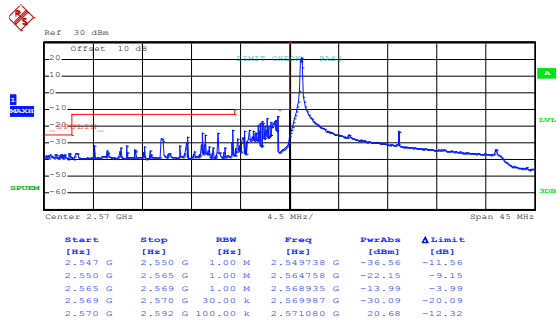
Date: 3.AUG.2020 10:51:20

Lowest channel



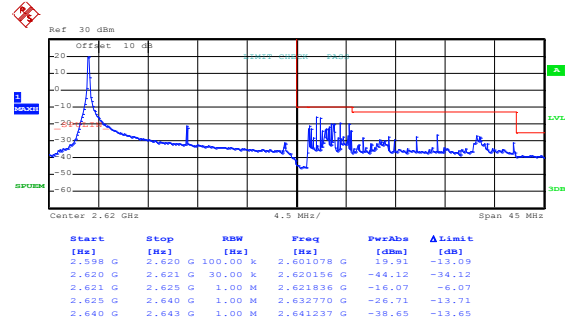
Date: 3.AUG.2020 10:52:37

Highest channel

LTE Band 38, BW: 20MHz
QPSK & RB Size 1

Date: 3.AUG.2020 10:50:37

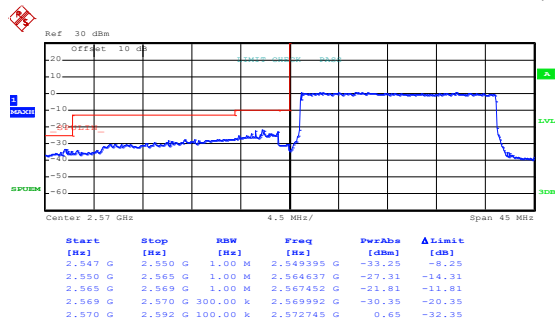
Lowest channel



Date: 3.AUG.2020 10:51:41

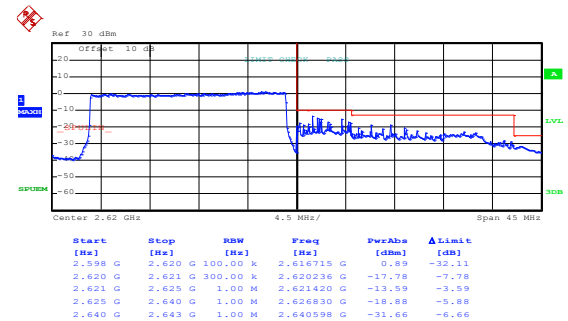
Highest channel

QPSK & RB Size 100



Date: 3.AUG.2020 10:51:10

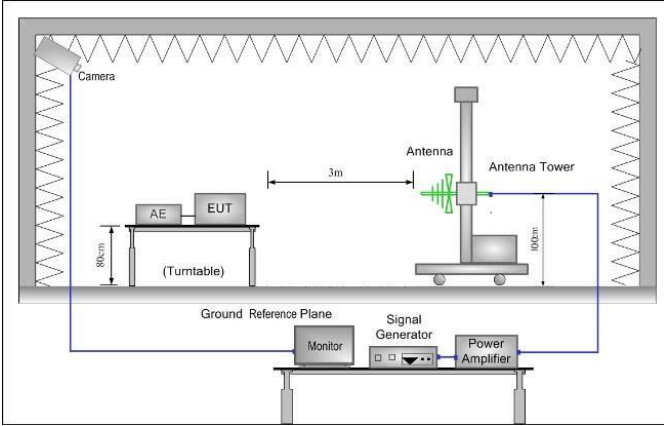
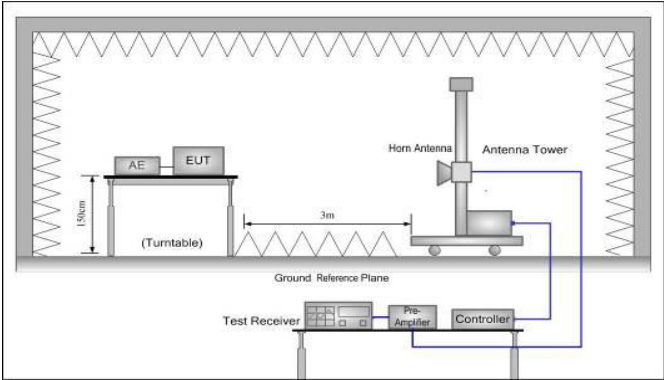
Lowest channel



Date: 3.AUG.2020 10:52:20

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:	LTE Band 2 & 4 & 5 : The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB (-13 dBm). LTE Band 7 & 38: For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ 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 $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz.
Test setup:	Below 1GHz  Above 1GHz 
Test Procedure:	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. 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. 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

	was determined using the substitution method. 4. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency. $\text{ERP / EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain(dB/dBi)} - \text{Cable Loss (dB)}$
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	-51.84	12.64	0.75	-39.95	-13.00	-26.95	Vertical
5552.10	-56.43	12.76	1.13	-44.80	-13.00	-31.80	Vertical
7402.00	-51.95	11.44	1.63	-42.14	-13.00	-29.14	Vertical
3701.40	-53.11	12.64	0.75	-41.22	-13.00	-28.22	Horizontal
5552.10	-57.68	12.76	1.13	-46.05	-13.00	-33.05	Horizontal
7402.00	-48.72	11.44	1.63	-38.91	-13.00	-25.91	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	-50.54	12.71	0.79	-38.62	-13.00	-25.62	Vertical
5640.00	-56.86	12.87	1.15	-45.14	-13.00	-32.14	Vertical
7520.00	-51.44	11.48	1.66	-41.62	-13.00	-28.62	Vertical
3760.00	-54.54	12.71	0.79	-42.62	-13.00	-29.62	Horizontal
5640.00	-57.71	12.87	1.15	-45.99	-13.00	-32.99	Horizontal
7520.00	-46.49	11.48	1.66	-36.67	-13.00	-23.67	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	-49.59	12.78	0.81	-37.62	-13.00	-24.62	Vertical
5724.90	-55.95	12.97	1.19	-44.17	-13.00	-31.17	Vertical
7633.20	-52.28	11.34	1.71	-42.65	-13.00	-29.65	Vertical
3816.60	-55.59	12.78	0.81	-43.62	-13.00	-30.62	Horizontal
5724.90	-55.93	12.97	1.19	-44.15	-13.00	-31.15	Horizontal
7633.20	-46.32	11.34	1.71	-36.69	-13.00	-23.69	Horizontal
Remark:							
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	-50.54	12.66	0.77	-38.65	-13.00	-25.65	Vertical
5580.00	-57.17	12.80	1.15	-45.52	-13.00	-32.52	Vertical
7440.00	-50.97	11.46	1.64	-41.15	-13.00	-28.15	Vertical
3720.00	-54.51	12.66	0.77	-42.62	-13.00	-29.62	Horizontal
5580.00	-57.63	12.80	1.15	-45.98	-13.00	-32.98	Horizontal
7440.00	-47.77	11.46	1.64	-37.95	-13.00	-24.95	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	-49.33	12.71	0.79	-37.41	-13.00	-24.41	Vertical
5640.00	-56.32	12.87	1.15	-44.60	-13.00	-31.60	Vertical
7520.00	-52.44	11.48	1.66	-42.62	-13.00	-29.62	Vertical
3760.00	-53.09	12.71	0.79	-41.17	-13.00	-28.17	Horizontal
5640.00	-56.67	12.87	1.15	-44.95	-13.00	-31.95	Horizontal
7520.00	-46.51	11.48	1.66	-36.69	-13.00	-23.69	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	-48.59	12.76	0.79	-36.62	-13.00	-23.62	Vertical
5700.00	-56.91	12.94	1.18	-45.15	-13.00	-32.15	Vertical
7600.00	-51.31	11.38	1.69	-41.62	-13.00	-28.62	Vertical
3800.00	-55.22	12.76	0.79	-43.25	-13.00	-30.25	Horizontal
5700.00	-56.34	12.94	1.18	-44.58	-13.00	-31.58	Horizontal
7600.00	-45.38	11.38	1.69	-35.69	-13.00	-22.69	Horizontal
Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.							

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	-51.19	12.24	0.70	-39.65	-13.00	-26.65	Vertical
5132.10	-54.43	12.92	1.01	-42.52	-13.00	-29.52	Vertical
6842.80	-48.06	11.42	1.53	-38.17	-13.00	-25.17	Vertical
3421.40	-52.76	12.24	0.70	-41.22	-13.00	-28.22	Horizontal
5132.10	-57.96	12.92	1.01	-46.05	-13.00	-33.05	Horizontal
6842.80	-49.87	11.42	1.53	-39.98	-13.00	-26.98	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	-50.23	12.33	0.72	-38.62	-13.00	-25.62	Vertical
5197.50	-52.99	12.88	1.04	-41.15	-13.00	-28.15	Vertical
6930.00	-46.36	11.30	1.56	-36.62	-13.00	-23.62	Vertical
3465.00	-54.26	12.33	0.72	-42.65	-13.00	-29.65	Horizontal
5197.50	-59.49	12.88	1.04	-47.65	-13.00	-34.65	Horizontal
6930.00	-48.72	11.30	1.56	-38.98	-13.00	-25.98	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
3508.60	-48.82	12.41	0.74	-37.15	-13.00	-24.15	Vertical
5262.90	-53.39	12.84	1.07	-41.62	-13.00	-28.62	Vertical
7017.20	-46.25	11.21	1.58	-36.62	-13.00	-23.62	Vertical
3508.60	-54.17	12.41	0.74	-42.50	-13.00	-29.50	Horizontal
5262.90	-57.29	12.84	1.07	-45.52	-13.00	-32.52	Horizontal
7017.20	-48.61	11.21	1.58	-38.98	-13.00	-25.98	Horizontal
Remark:							
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	-50.19	12.28	0.71	-38.62	-13.00	-25.62	Vertical
5160.00	-53.02	12.90	1.03	-41.15	-13.00	-28.15	Vertical
6880.00	-46.45	11.37	1.54	-36.62	-13.00	-23.62	Vertical
3440.00	-54.15	12.28	0.71	-42.58	-13.00	-29.58	Horizontal
5160.00	-57.85	12.90	1.03	-45.98	-13.00	-32.98	Horizontal
6880.00	-46.50	11.37	1.54	-36.67	-13.00	-23.67	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	-49.23	12.33	0.72	-37.62	-13.00	-24.62	Vertical
5197.50	-54.35	12.88	1.04	-42.51	-13.00	-29.51	Vertical
6930.00	-46.39	11.30	1.56	-36.65	-13.00	-23.65	Vertical
3465.00	-53.13	12.33	0.72	-41.52	-13.00	-28.52	Horizontal
5197.50	-59.73	12.88	1.04	-47.89	-13.00	-34.89	Horizontal
6930.00	-46.42	11.30	1.56	-36.68	-13.00	-23.68	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	-47.79	12.38	0.73	-36.14	-13.00	-23.14	Vertical
5235.00	-54.38	12.86	1.06	-42.58	-13.00	-29.58	Vertical
6980.00	-45.31	11.23	1.57	-35.65	-13.00	-22.65	Vertical
3490.00	-52.82	12.38	0.73	-41.17	-13.00	-28.17	Horizontal
5235.00	-56.25	12.86	1.06	-44.45	-13.00	-31.45	Horizontal
6980.00	-45.85	11.23	1.57	-36.19	-13.00	-23.19	Horizontal
Remark: 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	-51.64	9.57	0.20	-42.27	-13.00	-29.27	Vertical
2474.10	-61.78	10.86	0.43	-51.35	-13.00	-38.35	Vertical
3298.80	-61.33	12.00	0.64	-49.97	-13.00	-36.97	Vertical
1649.40	-55.65	9.57	0.20	-46.28	-13.00	-33.28	Horizontal
2474.10	-58.36	10.86	0.43	-47.93	-13.00	-34.93	Horizontal
3298.80	-61.88	12.00	0.64	-50.52	-13.00	-37.52	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	-50.96	9.66	0.22	-41.52	-13.00	-28.52	Vertical
2509.50	-62.77	10.91	0.46	-52.32	-13.00	-39.32	Vertical
3346.00	-60.08	12.09	0.66	-48.65	-13.00	-35.65	Vertical
1673.30	-56.96	9.66	0.22	-47.52	-13.00	-34.52	Horizontal
2509.50	-55.63	10.91	0.46	-45.18	-13.00	-32.18	Horizontal
3346.00	-61.39	12.09	0.66	-49.96	-13.00	-36.96	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	-51.92	9.74	0.23	-42.41	-13.00	-29.41	Vertical
2544.90	-61.79	10.94	0.49	-51.34	-13.00	-38.34	Vertical
3393.20	-59.49	12.19	0.68	-47.98	-13.00	-34.98	Vertical
1696.60	-56.13	9.74	0.23	-46.62	-13.00	-33.62	Horizontal
2544.90	-54.70	10.94	0.49	-44.25	-13.00	-31.25	Horizontal
3393.20	-60.22	12.19	0.68	-48.71	-13.00	-35.71	Horizontal
Remark: 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	-53.01	9.60	0.21	-43.62	-13.00	-30.62	Vertical
2487.00	-60.45	10.88	0.45	-50.02	-13.00	-37.02	Vertical
3316.00	-59.54	12.03	0.65	-48.16	-13.00	-35.16	Vertical
1658.00	-56.02	9.60	0.21	-46.63	-13.00	-33.63	Horizontal
2487.00	-55.95	10.88	0.45	-45.52	-13.00	-32.52	Horizontal
3316.00	-61.35	12.03	0.65	-49.97	-13.00	-36.97	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	-51.60	9.66	0.21	-42.15	-13.00	-29.15	Vertical
2509.50	-61.89	10.91	0.46	-51.44	-13.00	-38.44	Vertical
3346.00	-59.08	12.09	0.66	-47.65	-13.00	-34.65	Vertical
1673.30	-57.97	9.66	0.21	-48.52	-13.00	-35.52	Horizontal
2509.50	-54.67	10.91	0.46	-44.22	-13.00	-31.22	Horizontal
3346.00	-59.60	12.09	0.66	-48.17	-13.00	-35.17	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	-51.10	9.71	0.23	-41.62	-13.00	-28.62	Vertical
2532.00	-60.10	10.93	0.48	-49.65	-13.00	-36.65	Vertical
3376.00	-60.30	12.15	0.67	-48.82	-13.00	-35.82	Vertical
1688.00	-54.99	9.71	0.23	-45.51	-13.00	-32.51	Horizontal
2532.00	-55.16	10.93	0.48	-44.71	-13.00	-31.71	Horizontal
3376.00	-59.46	12.15	0.67	-47.98	-13.00	-34.98	Horizontal
Remark: 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	-54.37	13.00	0.94	-42.31	-25.00	-17.31	Vertical
7507.50	-50.43	11.49	1.65	-40.59	-25.00	-15.59	Vertical
10010.00	-44.95	11.69	1.91	-35.17	-25.00	-10.17	Vertical
5005.00	-54.93	13.00	0.94	-42.87	-25.00	-17.87	Horizontal
7507.50	-48.93	11.49	1.65	-39.09	-25.00	-14.09	Horizontal
10010.00	-46.43	11.69	1.91	-36.65	-25.00	-11.65	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	-53.34	12.96	0.98	-41.36	-25.00	-16.36	Vertical
7605.00	-49.33	11.37	1.69	-39.65	-25.00	-14.65	Vertical
10140.00	-45.93	11.62	1.94	-36.25	-25.00	-11.25	Vertical
5070.00	-53.16	12.96	0.98	-41.18	-25.00	-16.18	Horizontal
7605.00	-49.83	11.37	1.69	-40.15	-25.00	-15.15	Horizontal
10140.00	-44.55	11.62	1.94	-34.87	-25.00	-9.87	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	-54.57	12.92	1.01	-42.66	-25.00	-17.66	Vertical
7702.50	-48.19	11.26	1.72	-38.65	-25.00	-13.65	Vertical
10270.00	-44.73	11.54	1.95	-35.14	-25.00	-10.14	Vertical
5135.00	-52.16	12.92	1.01	-40.25	-25.00	-15.25	Horizontal
7702.50	-49.19	11.26	1.72	-39.65	-25.00	-14.65	Horizontal
10270.00	-42.76	11.54	1.95	-33.17	-25.00	-8.17	Horizontal
Remark: 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	-53.65	12.99	0.97	-41.63	-25.00	-16.63	Vertical
7530.00	-49.43	11.46	1.68	-39.65	-25.00	-14.65	Vertical
10040.00	-45.36	11.68	1.94	-35.62	-25.00	-10.62	Vertical
5020.00	-54.16	12.99	0.97	-42.14	-25.00	-17.14	Horizontal
7530.00	-49.43	11.46	1.68	-39.65	-25.00	-14.65	Horizontal
10040.00	-46.28	11.68	1.94	-36.54	-25.00	-11.54	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	-54.56	12.96	0.98	-42.58	-25.00	-17.58	Vertical
7605.00	-49.83	11.37	1.69	-40.15	-25.00	-15.15	Vertical
10140.00	-45.63	11.62	1.94	-35.95	-25.00	-10.95	Vertical
5070.00	-54.49	12.96	0.98	-42.51	-25.00	-17.51	Horizontal
7605.00	-49.33	11.37	1.69	-39.65	-25.00	-14.65	Horizontal
10140.00	-44.36	11.62	1.94	-34.68	-25.00	-9.68	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	-53.58	12.93	1.00	-41.65	-25.00	-16.65	Vertical
7680.00	-47.04	11.28	1.72	-37.48	-25.00	-12.48	Vertical
10240.00	-45.22	11.56	1.95	-35.61	-25.00	-10.61	Vertical
5120.00	-52.13	12.93	1.00	-40.20	-25.00	-15.20	Horizontal
7680.00	-49.53	11.28	1.72	-39.97	-25.00	-14.97	Horizontal
10240.00	-42.86	11.56	1.95	-33.25	-25.00	-8.25	Horizontal
Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.							

LTE Band 38 part:

Band 38 (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
5145.00	-49.18	13.00	0.94	-37.12	-25.00	-12.12	Vertical
7717.50	-48.57	11.50	1.65	-38.72	-25.00	-13.72	Vertical
10290.00	-41.98	11.70	1.91	-32.19	-25.00	-7.19	Vertical
5145.00	-54.22	13.00	0.94	-42.16	-25.00	-17.16	Horizontal
7717.50	-47.83	11.50	1.65	-37.98	-25.00	-12.98	Horizontal
10290.00	-41.47	11.70	1.91	-31.68	-25.00	-6.68	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
5190.00	-48.83	12.89	1.04	-36.98	-25.00	-11.98	Vertical
7785.00	-46.89	11.17	1.73	-37.45	-25.00	-12.45	Vertical
10380.00	-40.93	11.48	1.97	-31.42	-25.00	-6.42	Vertical
5190.00	-53.00	12.89	1.04	-41.15	-25.00	-16.15	Horizontal
7785.00	-46.09	11.17	1.73	-36.65	-25.00	-11.65	Horizontal
10380.00	-39.88	11.48	1.97	-30.37	-25.00	-5.37	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
5235.00	-47.65	12.78	1.11	-35.98	-25.00	-10.98	Vertical
7852.50	-45.24	10.92	1.82	-36.14	-25.00	-11.14	Vertical
10470.00	-41.72	11.25	2.00	-32.47	-25.00	-7.47	Vertical
5235.00	-53.42	12.78	1.11	-41.75	-25.00	-16.75	Horizontal
7852.50	-45.05	10.92	1.82	-35.95	-25.00	-10.95	Horizontal
10470.00	-39.22	11.25	2.00	-29.97	-25.00	-4.97	Horizontal
Remark:							
The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.							

Band 38 (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
5160.00	-48.15	12.99	0.95	-36.11	-25.00	-11.11	Vertical
7740.00	-47.44	11.48	1.66	-37.62	-25.00	-12.62	Vertical
10320.00	-41.32	11.69	1.92	-31.55	-25.00	-6.55	Vertical
5160.00	-54.02	12.99	0.95	-41.98	-25.00	-16.98	Horizontal
7740.00	-46.51	11.48	1.66	-36.69	-25.00	-11.69	Horizontal
10320.00	-42.24	11.69	1.92	-32.47	-25.00	-7.47	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
5190.00	-47.67	12.89	1.04	-35.82	-25.00	-10.82	Vertical
7785.00	-46.04	11.17	1.73	-36.60	-25.00	-11.60	Vertical
10380.00	-41.92	11.48	1.97	-32.41	-25.00	-7.41	Vertical
5190.00	-52.37	12.89	1.04	-40.52	-25.00	-15.52	Horizontal
7785.00	-45.39	11.17	1.73	-35.95	-25.00	-10.95	Horizontal
10380.00	-41.76	11.48	1.97	-32.25	-25.00	-7.25	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
5220.00	-48.63	12.78	1.10	-36.95	-25.00	-11.95	Vertical
7830.00	-44.64	10.91	1.79	-35.52	-25.00	-10.52	Vertical
10440.00	-40.72	11.27	1.99	-31.44	-25.00	-6.44	Vertical
5220.00	-54.26	12.78	1.10	-42.58	-25.00	-17.58	Horizontal
7830.00	-43.93	10.91	1.79	-34.81	-25.00	-9.81	Horizontal
10440.00	-39.25	11.27	1.99	-29.97	-25.00	-4.97	Horizontal
Remark: 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:	± 2.5 ppm for Band 5 Within authorized band for Band 2 & 4 & 7 & 38
Test setup:	
Test procedure:	1. The equipment under test was connected to an external DC power supply and input rated voltage. 2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. 3. The EUT was placed inside the temperature chamber. 4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. 5. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. 6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached
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					
3.80	-30	180	0.095745	Within authorized band for Band 2	Pass
	-20	173	0.092021		
	-10	165	0.087766		
	0	158	0.084043		
	10	150	0.079787		
	20	146	0.077660		
	30	138	0.073404		
	40	131	0.069681		
	50	120	0.063830		
16QAM					
3.80	-30	183	0.097340	Within authorized band for Band 2	Pass
	-20	176	0.093617		
	-10	169	0.089894		
	0	160	0.085106		
	10	154	0.081915		
	20	143	0.076064		
	30	136	0.072340		
	40	130	0.069149		
	50	123	0.065426		
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					
3.80	-30	173	0.099856	Within authorized band for Band 4	Pass
	-20	163	0.094084		
	-10	157	0.090620		
	0	149	0.086003		
	10	143	0.082540		
	20	139	0.080231		
	30	134	0.077345		
	40	124	0.071573		
	50	112	0.064646		
16QAM					
3.80	-30	170	0.098124	Within authorized band for Band 4	Pass
	-20	160	0.092352		
	-10	154	0.088889		
	0	144	0.083117		
	10	136	0.078499		
	20	124	0.071573		
	30	119	0.068687		
	40	112	0.064646		
	50	130	0.075036		
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					
3.80	-30	168	0.200837	±2.5	Pass
	-20	156	0.186491		
	-10	149	0.178123		
	0	142	0.169755		
	10	135	0.161387		
	20	127	0.151823		
	30	121	0.144650		
	40	113	0.135087		
	50	162	0.193664		
16QAM					
3.80	-30	166	0.198446	±2.5	Pass
	-20	134	0.160191		
	-10	127	0.151823		
	0	121	0.144650		
	10	111	0.132696		
	20	159	0.190078		
	30	153	0.182905		
	40	146	0.174537		
	50	139	0.166169		
Note: Only the worst case shown in the report.					

LTE Band 7 part:

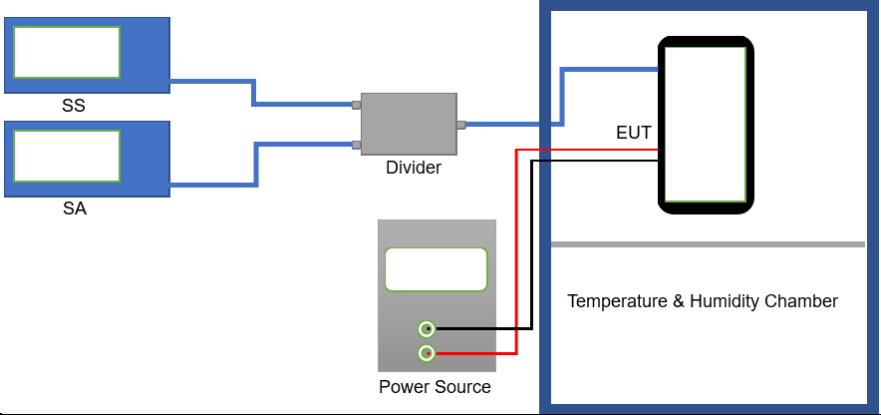
Reference Frequency: LTE Band 7 (10MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	173	0.068245	Within authorized band for Band 7	Pass
	-20	156	0.061538		
	-10	140	0.055227		
	0	130	0.051282		
	10	120	0.047337		
	20	110	0.043393		
	30	134	0.052860		
	40	148	0.058383		
	50	162	0.063905		
16QAM					
3.80	-30	170	0.067061	Within authorized band for Band 7	Pass
	-20	166	0.065483		
	-10	157	0.061933		
	0	118	0.046548		
	10	109	0.042998		
	20	150	0.059172		
	30	143	0.056410		
	40	134	0.052860		
	50	125	0.049310		
Note: Only the worst case shown in the report.					

LTE Band 38 part:

LTE Band 38 part

Reference Frequency: LTE Band 38 (10MHz) Middle channel=38000 channel=2595.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	173	0.066667	Within authorized band for Band 12	Pass
	-20	168	0.064740		
	-10	160	0.061657		
	0	153	0.058960		
	10	147	0.056647		
	20	140	0.053950		
	30	132	0.050867		
	40	127	0.048940		
	50	116	0.044701		
16QAM					
3.85	-30	169	0.065125	Within authorized band for Band 12	Pass
	-20	158	0.060886		
	-10	144	0.055491		
	0	137	0.052794		
	10	130	0.050096		
	20	126	0.048555		
	30	118	0.045472		
	40	107	0.041233		
	50	150	0.057803		
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 Within authorized band for Band 2 & 4 & 7 & 38
Test setup:	 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 & Humidity Chamber. A Power Source is also connected to the EUT.
Test procedure:	1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage. 2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. 3. Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.
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 (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	89	0.047340	Within authorized band for Band 2	Pass
	3.80	76	0.040426		
	3.55	65	0.034574		
16QAM					
25	4.35	80	0.042553	Within authorized band for Band 2	Pass
	3.80	70	0.037234		
	3.55	59	0.031383		
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	4.35	88	0.050794	Within authorized band for Band 4	Pass
	3.80	76	0.043867		
	3.55	63	0.036364		
16QAM					
25	4.35	80	0.046176	Within authorized band for Band 4	Pass
	3.80	74	0.042713		
	3.55	53	0.030592		
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	4.35	90	0.107591	±2.5	Pass
	3.80	76	0.090855		
	3.55	54	0.064555		
16QAM					
25	4.35	83	0.099223	±2.5	Pass
	3.80	74	0.088464		
	3.55	62	0.074118		
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	4.35	90	0.035503	Within authorized band for Band 7	Pass
	3.80	76	0.029980		
	3.55	54	0.021302		
16QAM					
25	4.35	83	0.032742	Within authorized band for Band 7	Pass
	3.80	74	0.029191		
	3.55	62	0.024458		
Note: Only the worst case shown in the report.					

LTE Band 38 part:

Reference Frequency: LTE Band 38(10MHz) Middle channel=38000 channel=2595.00MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	88	0.033911	Within authorized band for Band 12	Pass
	3.80	77	0.029672		
	3.55	66	0.025434		
16QAM					
25	4.35	83	0.031985	Within authorized band for Band 12	Pass
	3.80	70	0.026975		
	3.55	61	0.023507		
Note: Only the worst case shown in the report.					