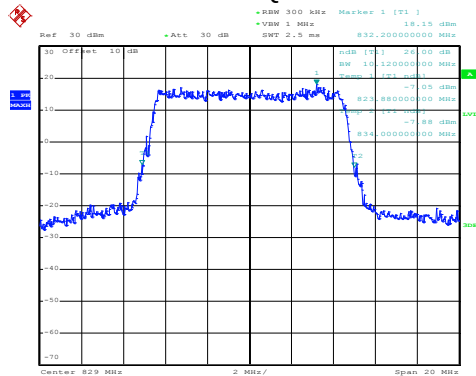


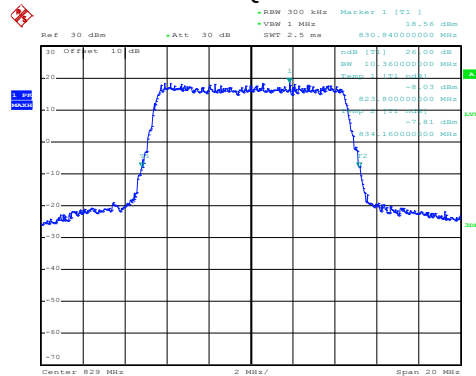
LTE Band 5: -26dBc bandwidth
BW: 10MHz

16QAM



Date: 24.OCT.2019 15:52:02

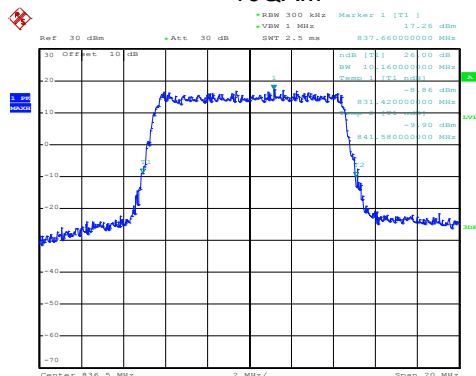
QPSK



Date: 24.OCT.2019 15:51:58

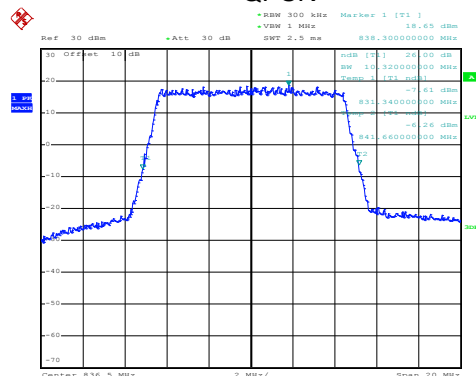
Lowest channel

16QAM



Date: 24.OCT.2019 15:52:40

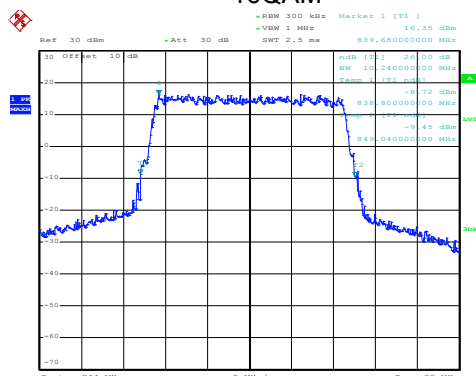
QPSK



Date: 24.OCT.2019 15:52:36

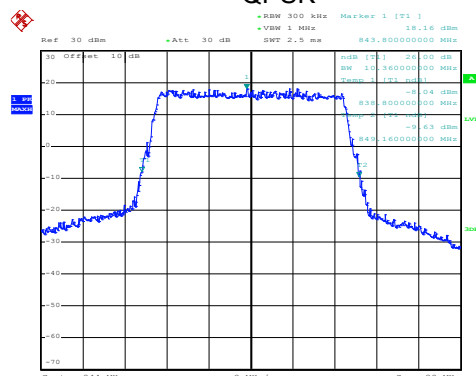
Middle channel

16QAM



Date: 24.OCT.2019 15:52:55

QPSK



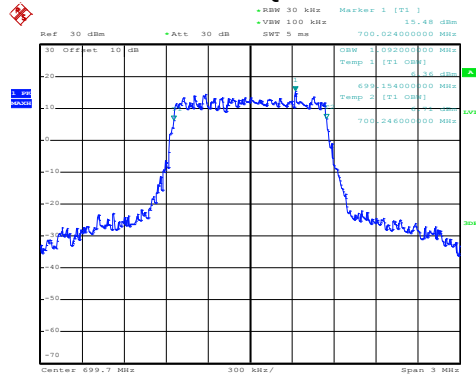
Date: 24.OCT.2019 15:52:51

Highest channel

LTE Band 12 part:

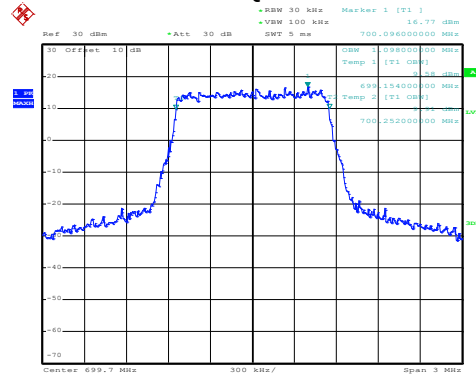
LTE Band 12: 99% Occupancy bandwidth
BW: 1.4MHz

16QAM



Date: 24.OCT.2019 15:53:52

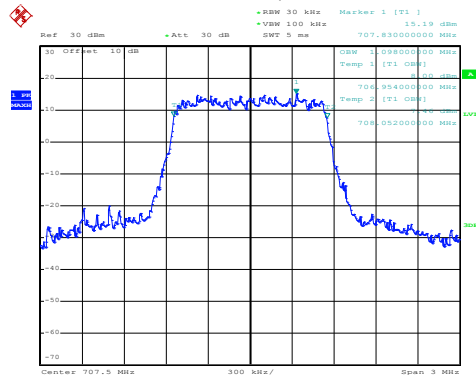
QPSK



Date: 24.OCT.2019 15:53:48

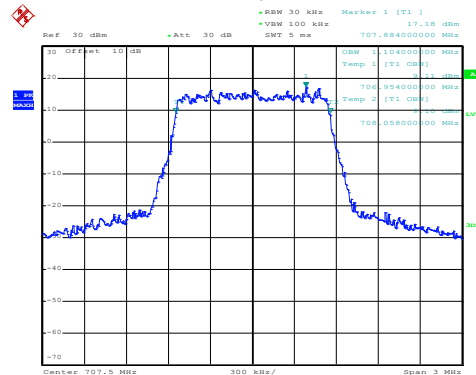
Lowest channel

16QAM



Date: 24.OCT.2019 15:54:33

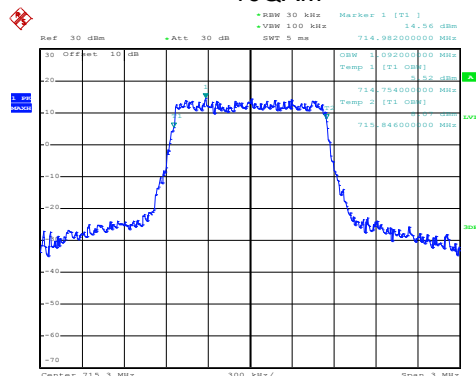
QPSK



Date: 24.OCT.2019 15:54:29

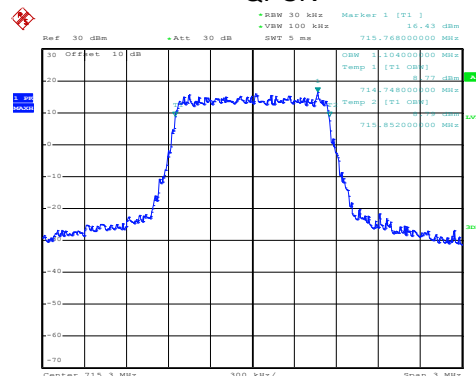
Middle channel

16QAM



Date: 24.OCT.2019 15:54:47

QPSK

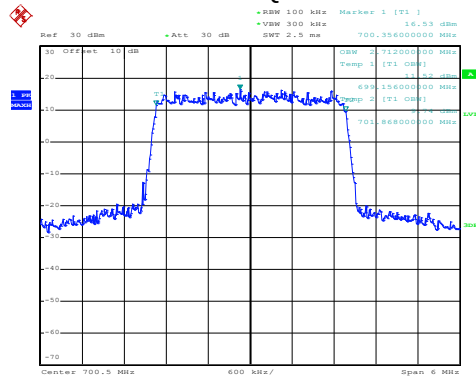


Date: 24.OCT.2019 15:54:44

Highest channel

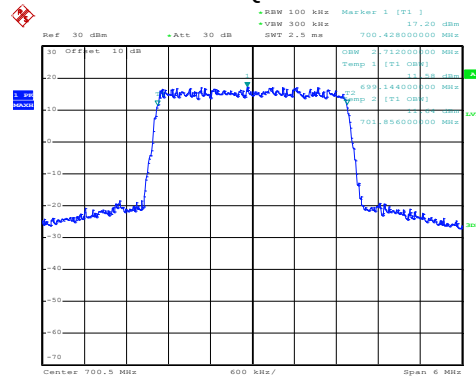
LTE Band 12: 99% Occupy bandwidth
BW: 3MHz

16QAM



Date: 24.OCT.2019 15:55:47

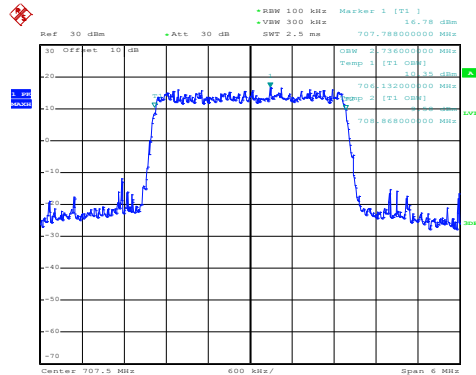
QPSK



Date: 24.OCT.2019 15:55:43

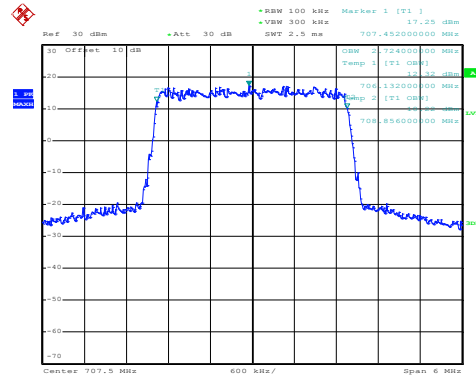
Lowest channel

16QAM



Date: 24.OCT.2019 15:56:06

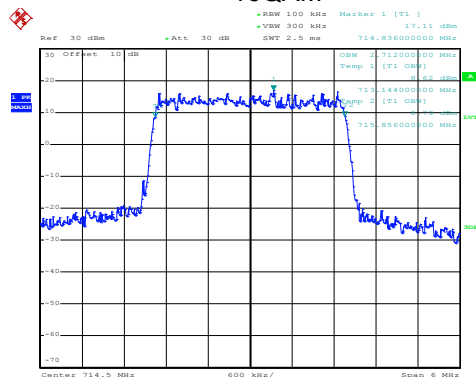
QPSK



Date: 24.OCT.2019 15:56:02

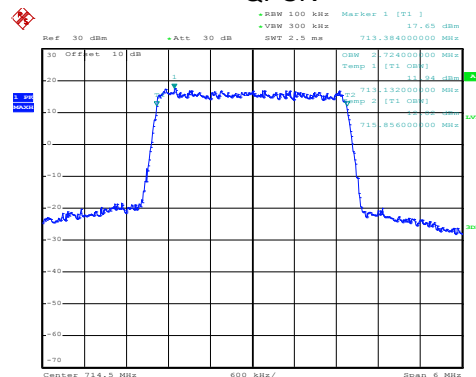
Middle channel

16QAM



Date: 24.OCT.2019 15:56:45

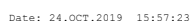
QPSK



Date: 24.OCT.2019 15:56:41

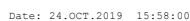
Highest channel

16QAM



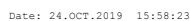
Date: 24.OCT.2019 15:57:18

16QAM



Date: 24.OCT.2019 15:57:56

16QAM



Date: 24.OCT.2019 15:58:19

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16QAM



Date: 24.OCT.2019 15:59:19

16QAM



Date: 24.OCT.2019 15:59:33

16QAM

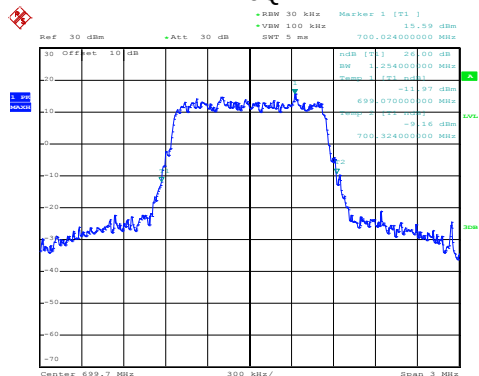


Date: 24.OCT.2019 16:00:09

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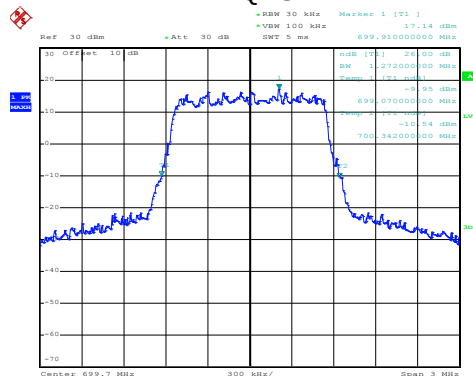
LTE Band 12: -26dBc bandwidth
BW: 1.4MHz

16QAM



Date: 24.OCT.2019 15:54:03

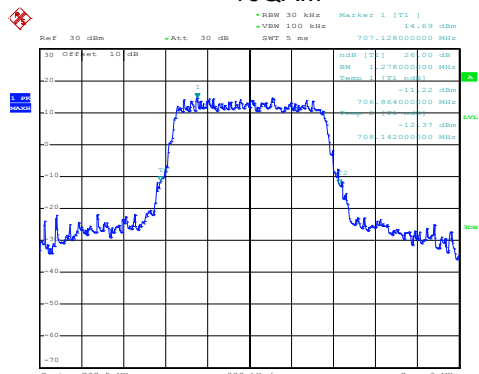
QPSK



Date: 24.OCT.2019 15:53:59

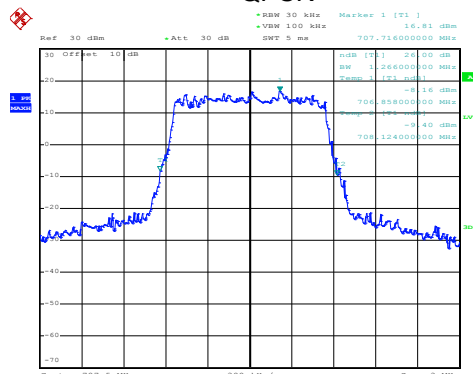
Lowest channel

16QAM



Date: 24.OCT.2019 15:54:21

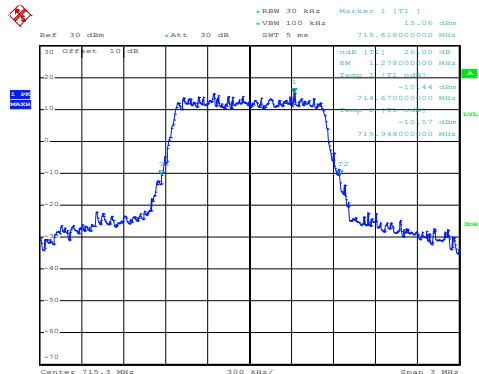
QPSK



Date: 24.OCT.2019 15:54:17

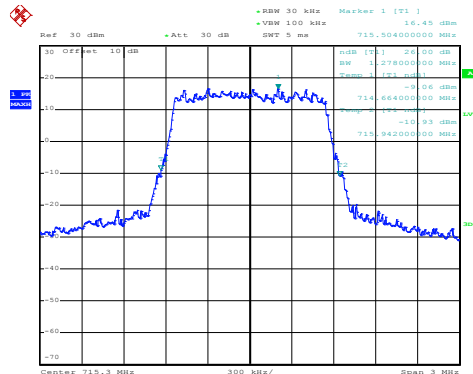
Middle channel

16QAM



Date: 24.OCT.2019 15:55:01

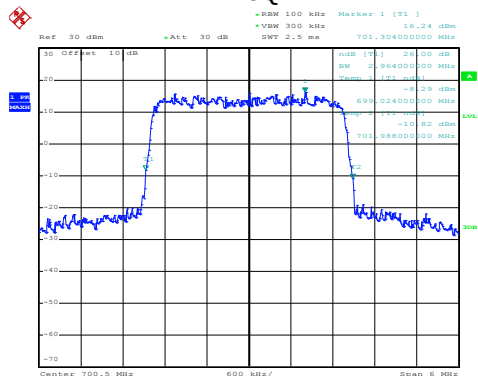
QPSK



Date: 24.OCT.2019 15:54:56

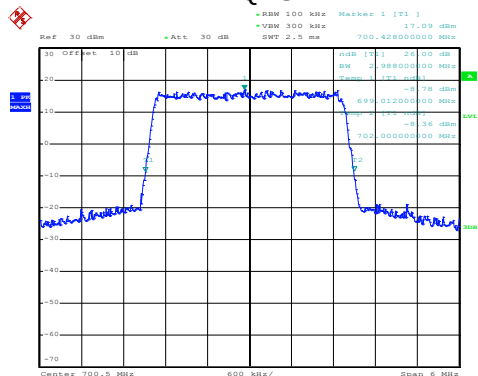
Highest channel

16QAM



Date: 24.OCT.2019 15:55:35

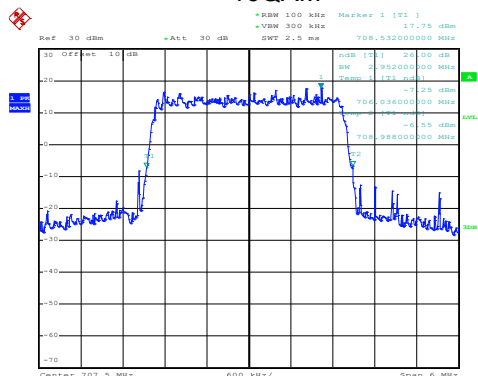
QPSK



Date: 24.OCT.2019 15:55:30

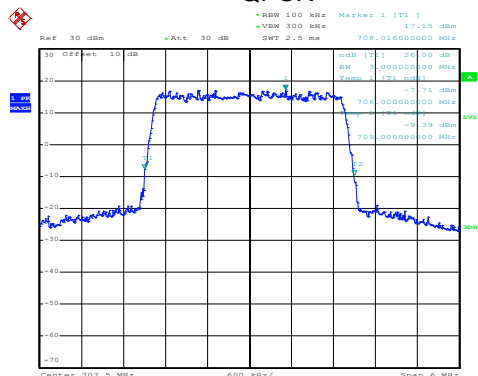
Lowest channel

16QAM



Date: 24.OCT.2019 15:56:17

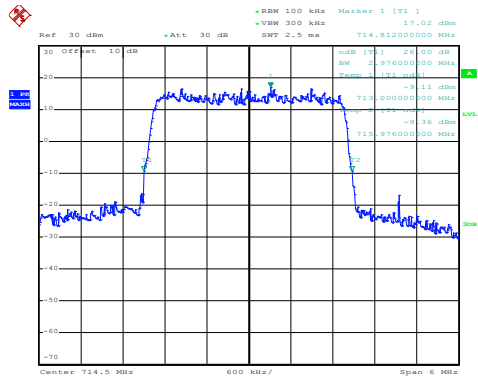
QPSK



Date: 24.OCT.2019 15:56:13

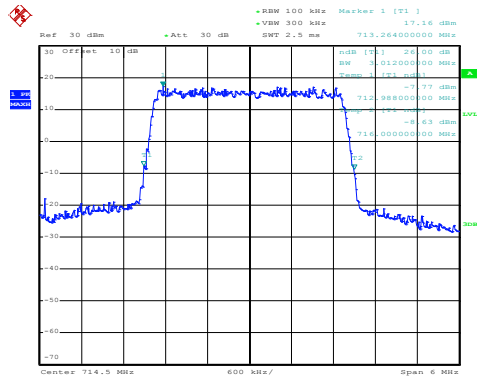
Middle channel

16QAM



Date: 24.OCT.2019 15:56:33

QPSK

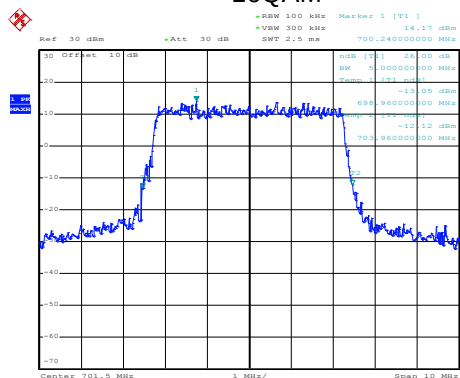


Date: 24.OCT.2019 15:56:29

Highest channel

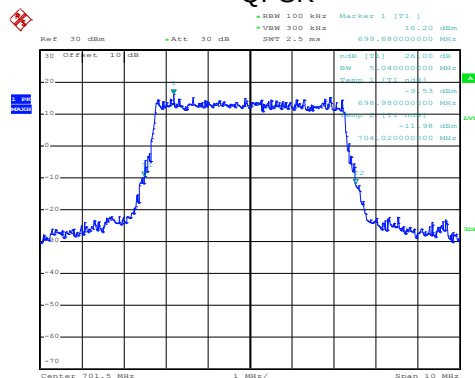
LTE Band 12: -26dBc bandwidth
BW: 5MHz

16QAM



Date: 24.OCT.2019 15:57:33

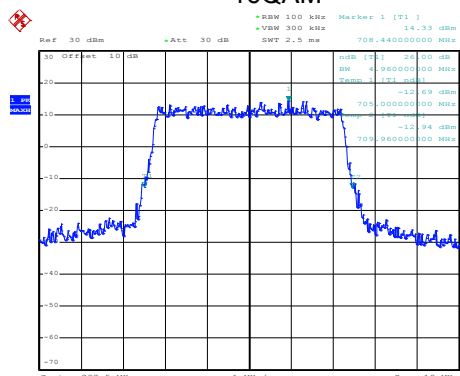
QPSK



Date: 24.OCT.2019 15:57:29

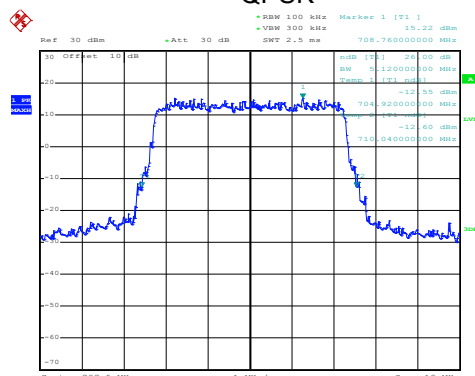
Lowest channel

16QAM



Date: 24.OCT.2019 15:57:49

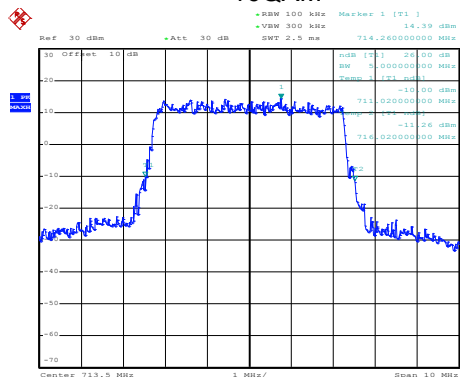
QPSK



Date: 24.OCT.2019 15:57:45

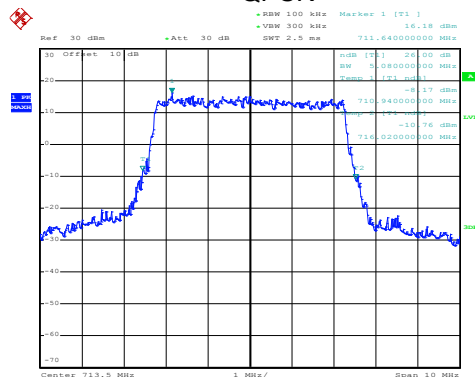
Middle channel

16QAM



Date: 24.OCT.2019 15:58:34

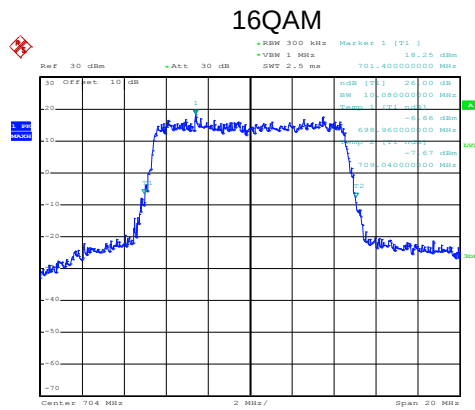
QPSK



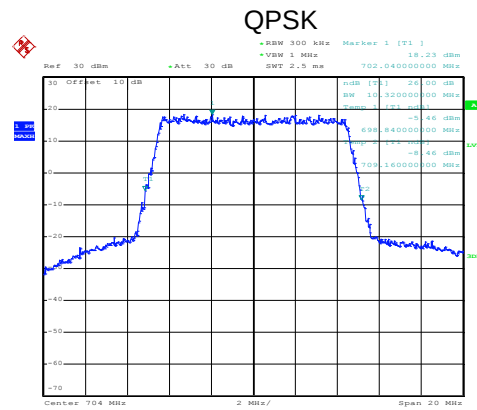
Date: 24.OCT.2019 15:58:30

Highest channel

LTE Band 12: -26dBc bandwidth
BW: 10MHz

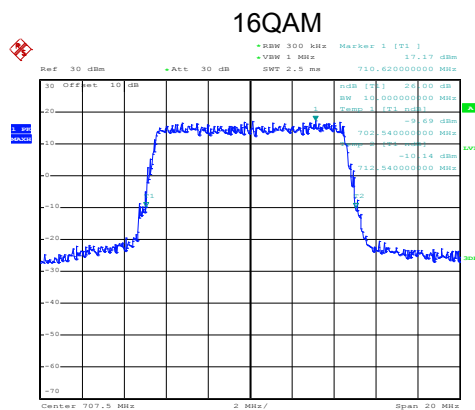


Date: 24.OCT.2019 15:59:11

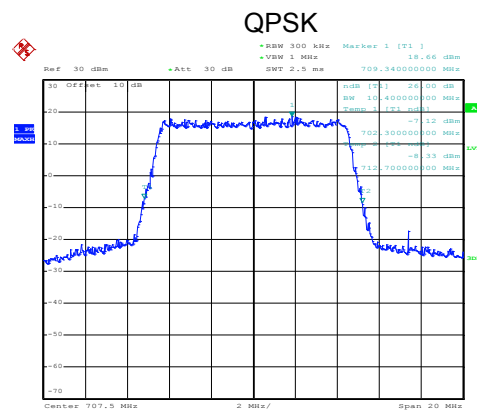


Date: 24.OCT.2019 15:59:07

Lowest channel

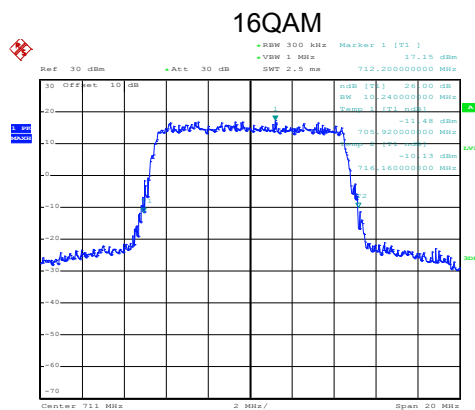


Date: 24.OCT.2019 15:59:48

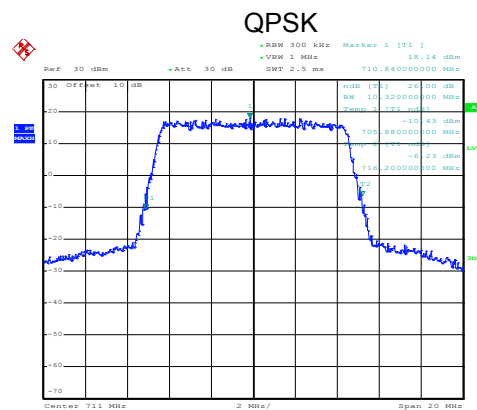


Date: 24.OCT.2019 15:59:44

Middle channel



Date: 24.OCT.2019 16:00:02

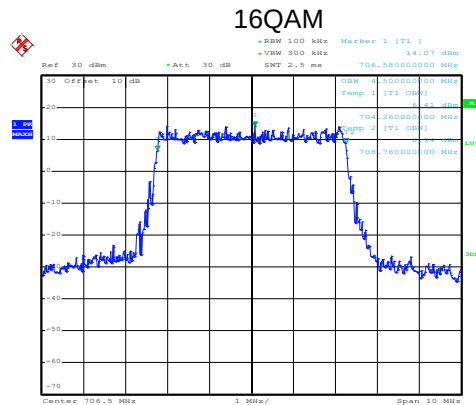


Date: 24.OCT.2019 15:59:58

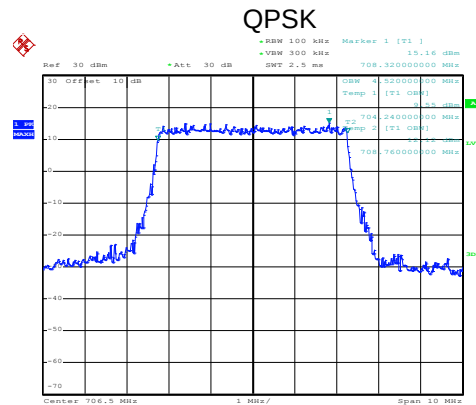
Highest channel

LTE Band 17 part:

LTE Band 17: 99% Occupy bandwidth
BW: 5MHz

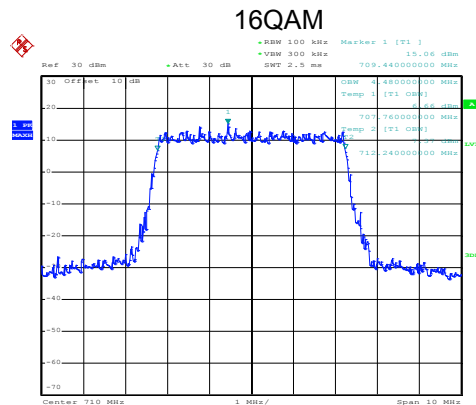


Date: 24.OCT.2019 16:02:56

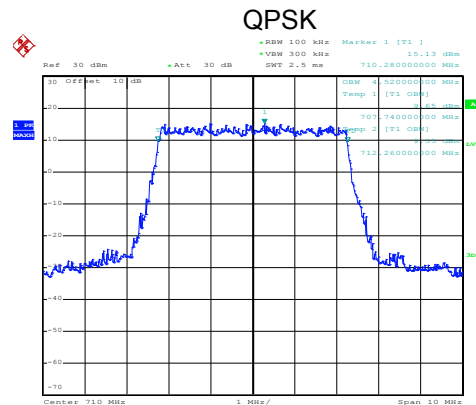


Date: 24.OCT.2019 16:02:52

Lowest channel

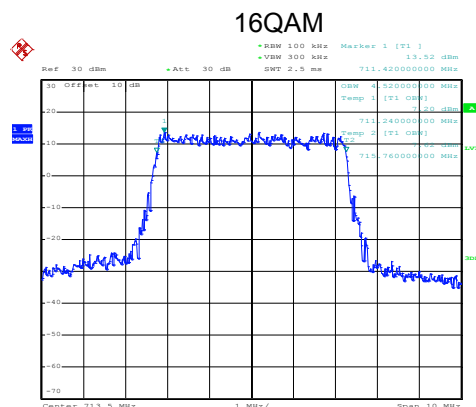


Date: 24.OCT.2019 16:03:13

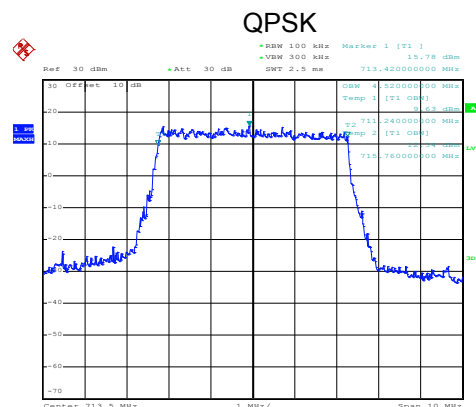


Date: 24.OCT.2019 16:03:08

Middle channel



Date: 24.OCT.2019 16:03:52

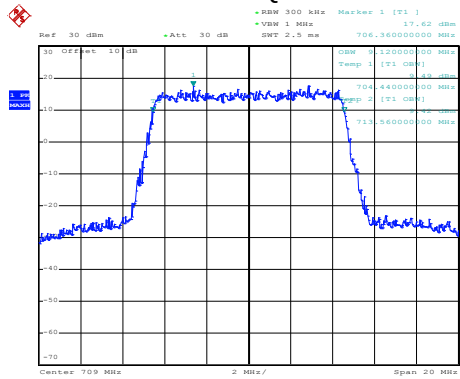


Date: 24.OCT.2019 16:03:48

Highest channel

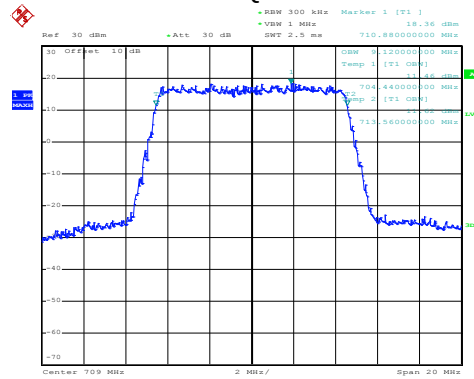
LTE Band 17: 99% Occupy bandwidth
BW: 10MHz

16QAM



Date: 24.OCT.2019 16:00:47

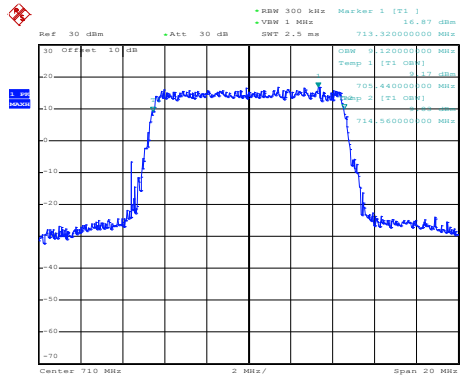
QPSK



Date: 24.OCT.2019 16:00:43

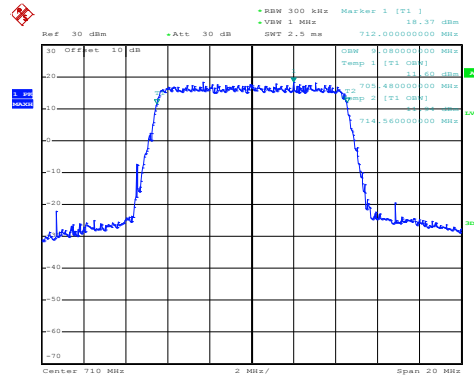
Lowest channel

16QAM



Date: 24.OCT.2019 16:01:25

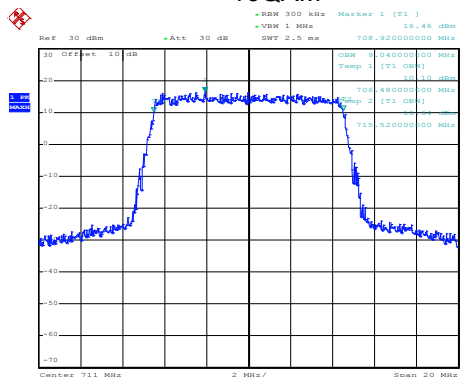
QPSK



Date: 24.OCT.2019 16:01:21

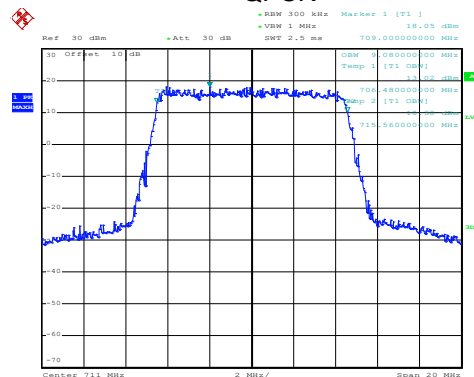
Middle channel

16QAM



Date: 24.OCT.2019 16:01:39

QPSK

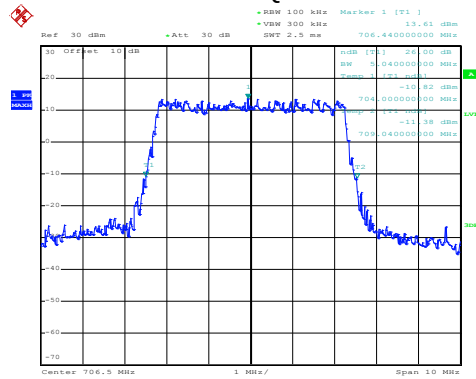


Date: 24.OCT.2019 16:01:36

Highest channel

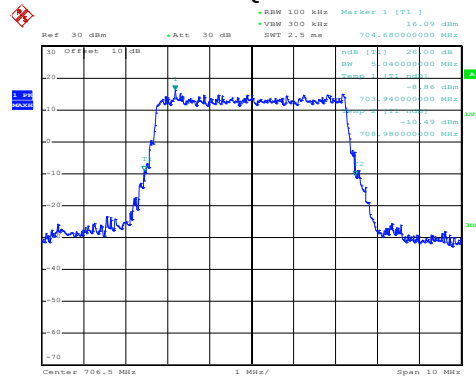
LTE Band 17: -26dBc bandwidth
BW: 5MHz

16QAM



Date: 24.OCT.2019 16:02:45

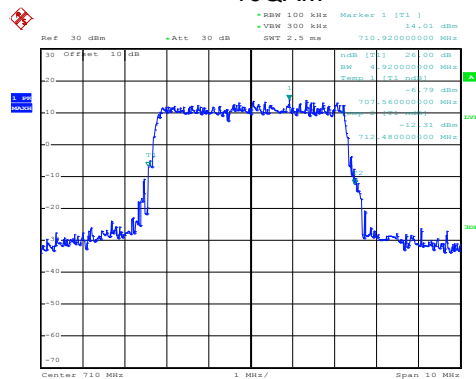
QPSK



Date: 24.OCT.2019 16:02:40

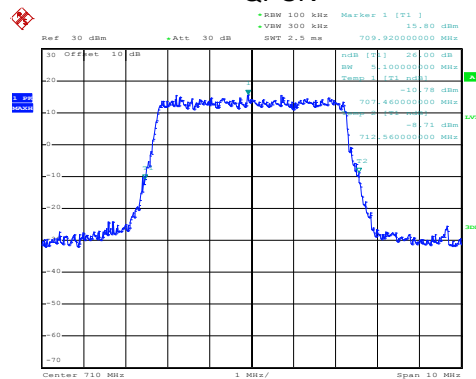
Lowest channel

16QAM



Date: 24.OCT.2019 16:03:23

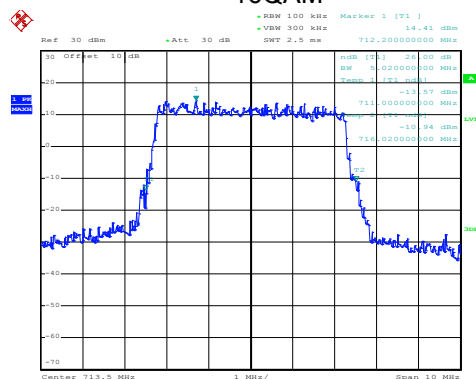
QPSK



Date: 24.OCT.2019 16:03:19

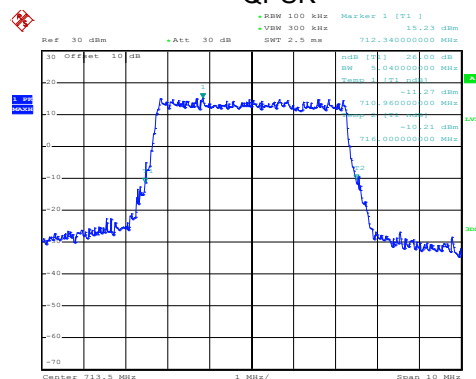
Middle channel

16QAM



Date: 24.OCT.2019 16:03:40

QPSK

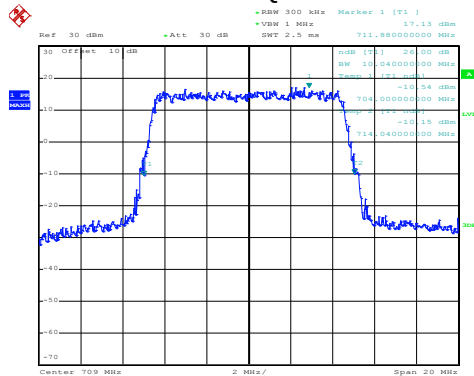


Date: 24.OCT.2019 16:03:36

Highest channel

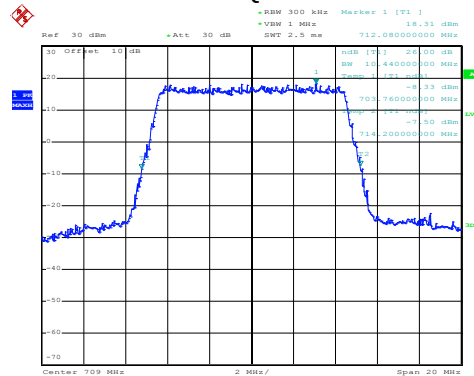
LTE Band 17: -26dBc bandwidth
BW: 10MHz

16QAM



Date: 24.OCT.2019 16:00:59

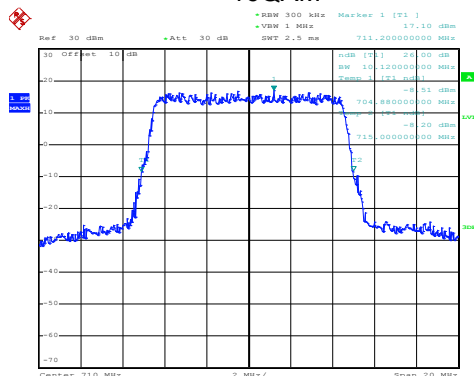
QPSK



Date: 24.OCT.2019 16:00:55

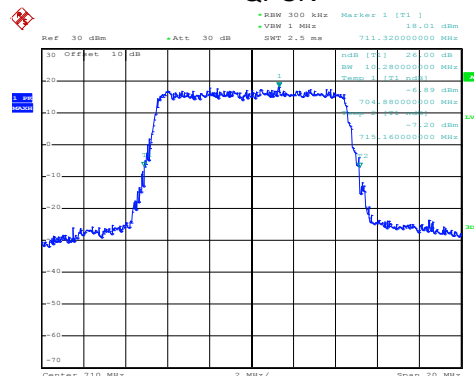
Lowest channel

16QAM



Date: 24.OCT.2019 16:01:14

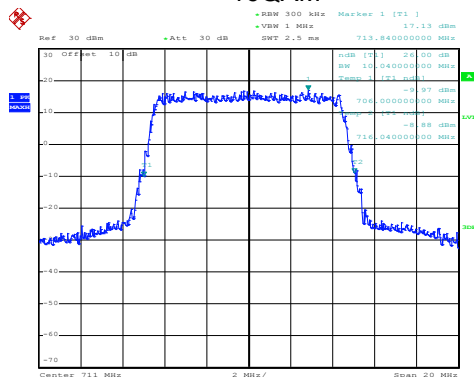
QPSK



Date: 24.OCT.2019 16:01:10

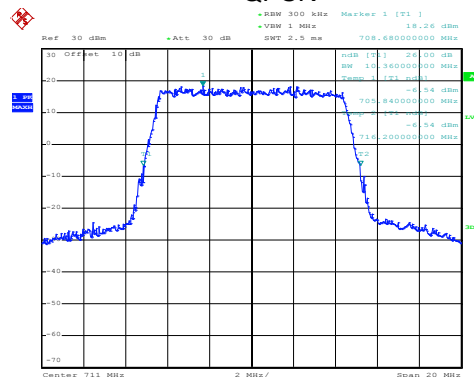
Middle channel

16QAM



Date: 24.OCT.2019 16:01:51

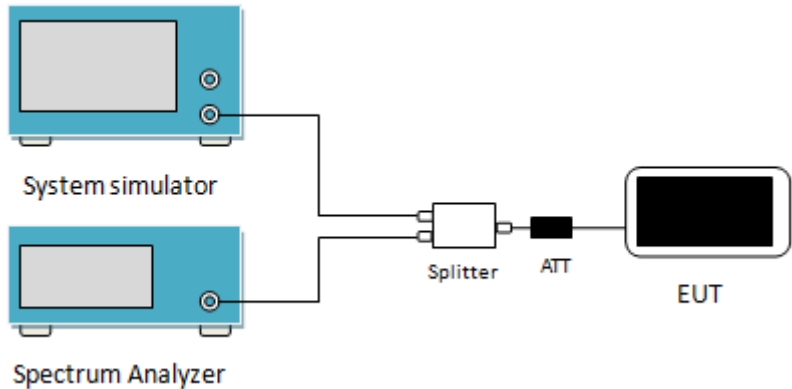
QPSK



Date: 24.OCT.2019 16:01:47

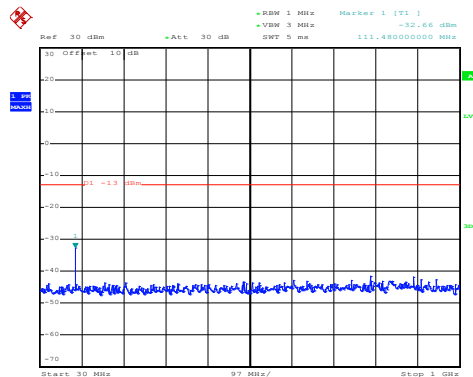
Highest channel

6.4 Out of band emission at antenna terminals

Test Requirement:	Part 22.917(b), Part 24.238 (a), part 27.53(g), part 27.53(h)
Limit:	LTE Band 2 & 4 & 5 & 12 & 17: 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).
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 single input port of a white rectangular unit labeled 'Splitter'. The 'Splitter' has two output ports. One output port is connected to a black rectangular unit labeled 'ATT' (Attenuator). The other output port of the 'Splitter' is connected to the input port of a black rectangular unit labeled 'EUT' (Equipment Under Test).
Test Procedure:	1 The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. 2 The resolution bandwidth of the spectrum analyzer was set at 100 kHz when below 1GHz, 1MHz when above 1 GHz; sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic. 3 For the out of band: Set the RBW=100 kHz, VBW=300 kHz when below 1 GHz, RBW =1 MHz, VBW=3 MHz when above 1 GHz, Start=30MHz, Stop= 10th harmonic. 4 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.

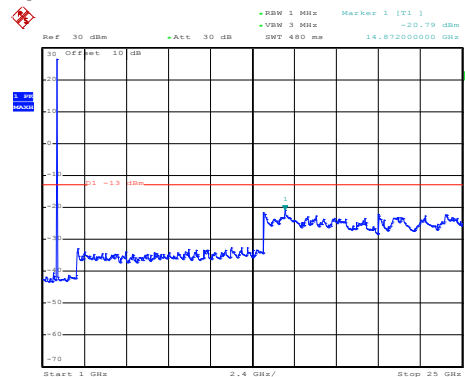
Test plots as follows (Conducted spurious emission) (worst case):
LTE Band 2 part:

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



Date: 24.OCT.2019 17:00:30

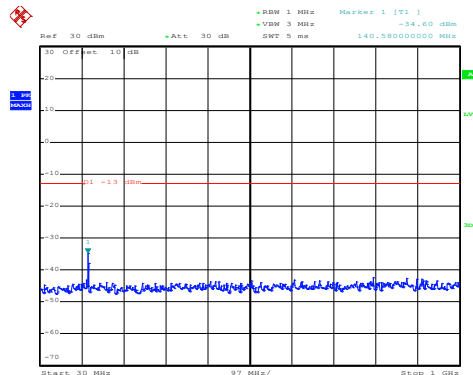
30MHz~1GHz



Date: 24.OCT.2019 17:04:17

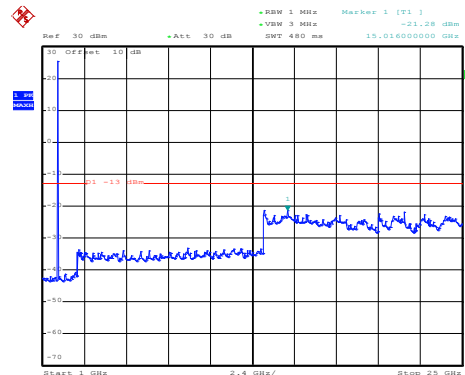
1GHz~25GHz

Middle channel



Date: 24.OCT.2019 17:00:41

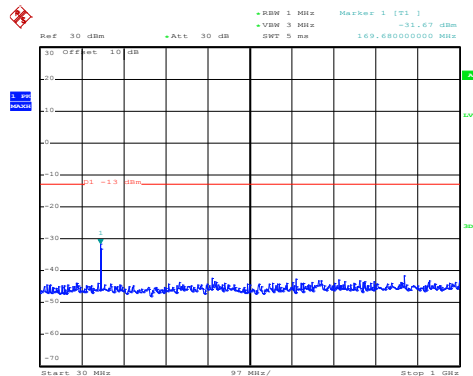
30MHz~1GHz



Date: 24.OCT.2019 17:03:53

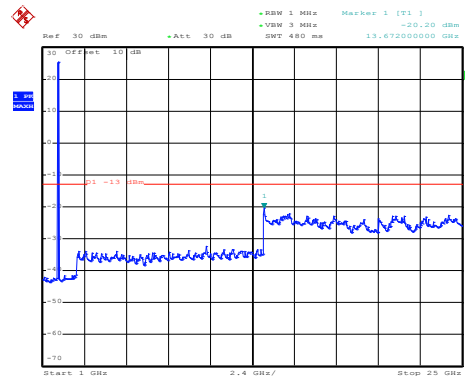
1GHz~25GHz

High channel



Date: 24.OCT.2019 17:00:54

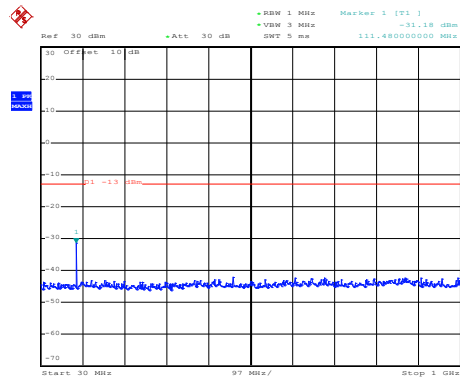
30MHz~1GHz



Date: 24.OCT.2019 17:03:34

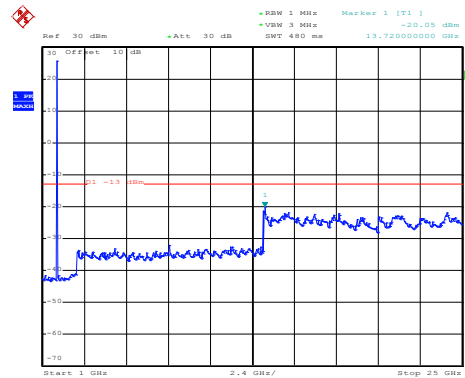
1GHz~25GHz

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



Date: 24.OCT.2019 17:00:26

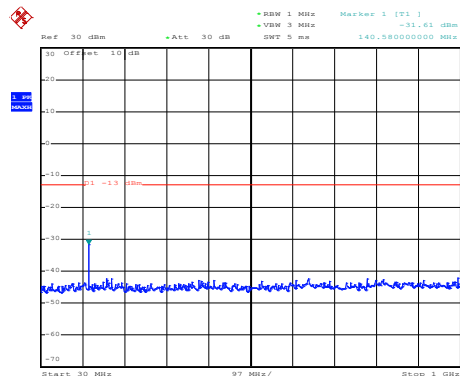
30MHz~1GHz



Date: 24.OCT.2019 17:04:10

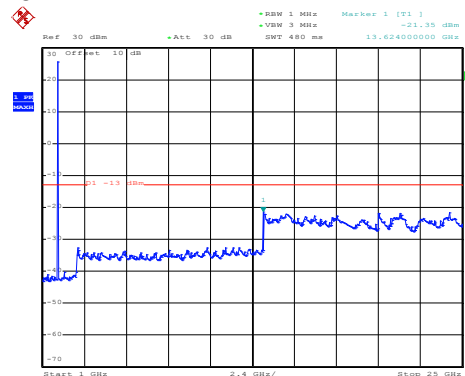
1GHz~25GHz

Middle channel



Date: 24.OCT.2019 17:00:37

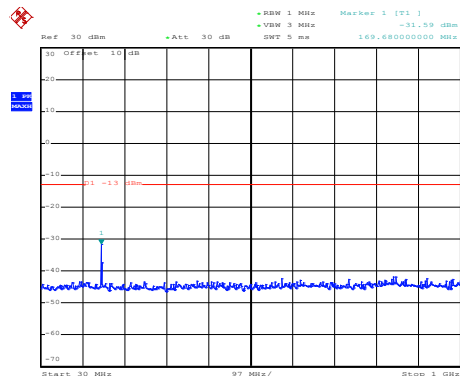
30MHz~1GHz



Date: 24.OCT.2019 17:03:47

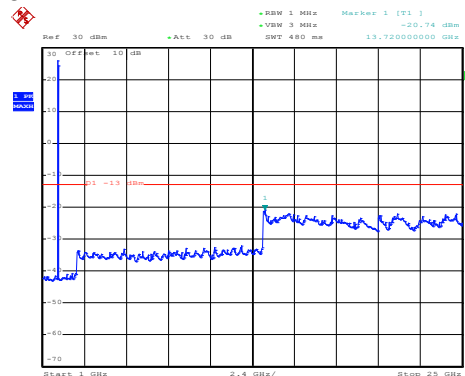
1GHz~25GHz

High channel



Date: 24.OCT.2019 17:00:51

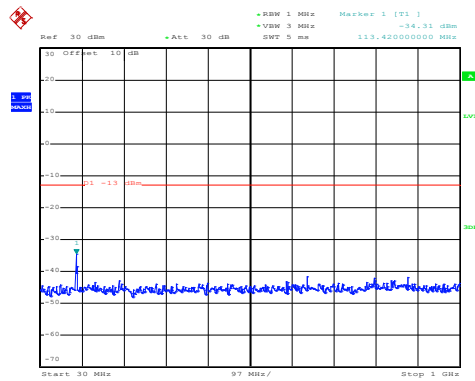
30MHz~1GHz



Date: 24.OCT.2019 17:03:29

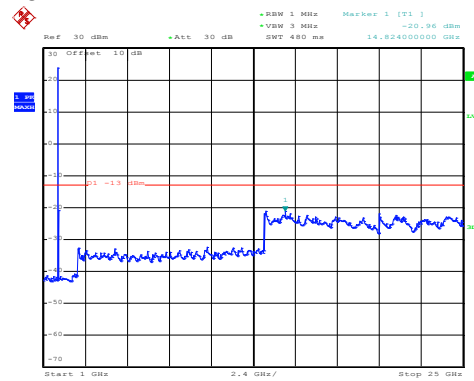
1GHz~25GHz

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



Date: 24.OCT.2019 17:01:40

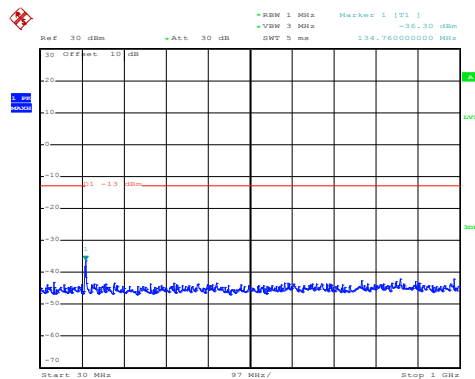
30MHz~1GHz



Date: 24.OCT.2019 17:02:22

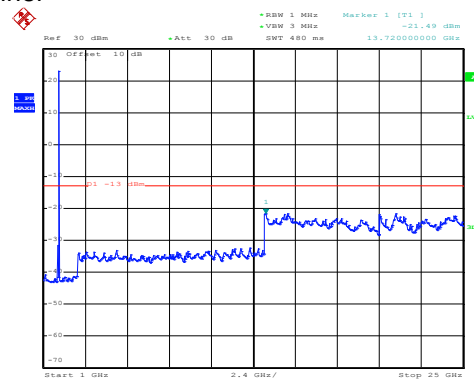
1GHz~25GHz

Middle channel



Date: 24.OCT.2019 17:01:29

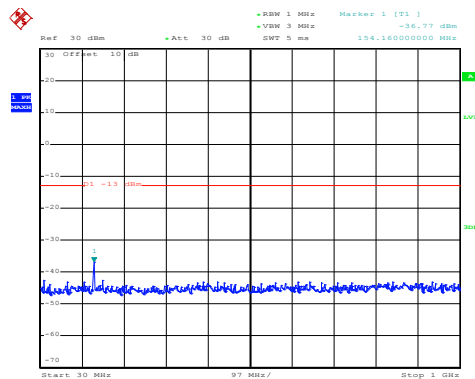
30MHz~1GHz



Date: 24.OCT.2019 17:02:43

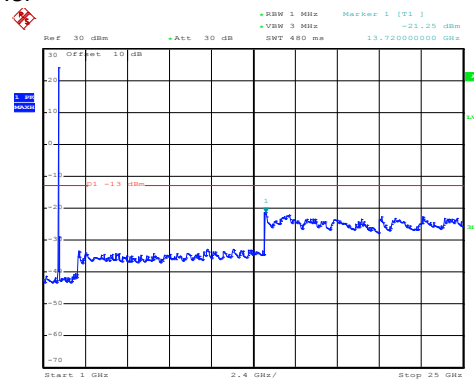
1GHz~25GHz

High channel



Date: 24.OCT.2019 17:01:16

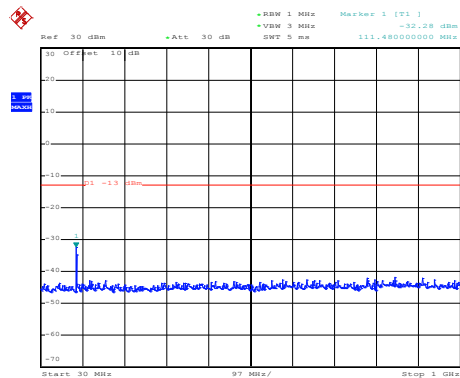
30MHz~1GHz



Date: 24.OCT.2019 17:03:11

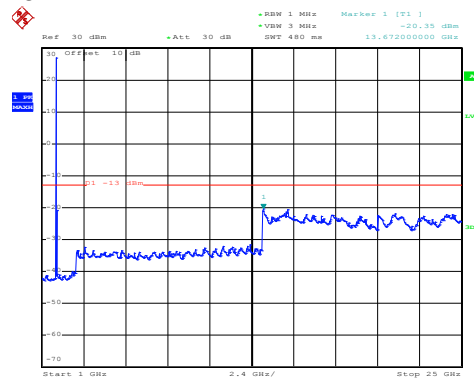
1GHz~25GHz

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



Date: 24.OCT.2019 17:01:37

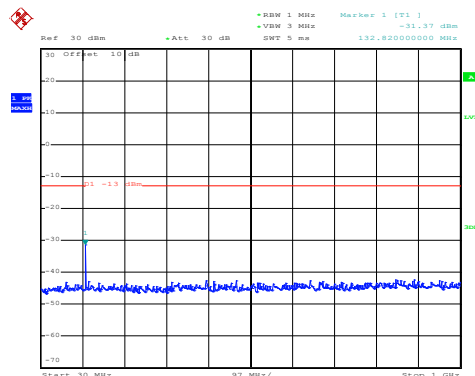
30MHz~1GHz



Date: 24.OCT.2019 17:02:12

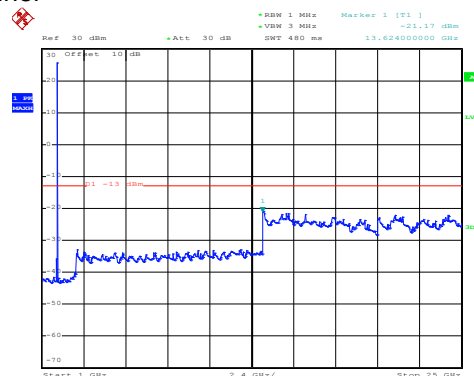
1GHz~25GHz

Middle channel



Date: 24.OCT.2019 17:01:25

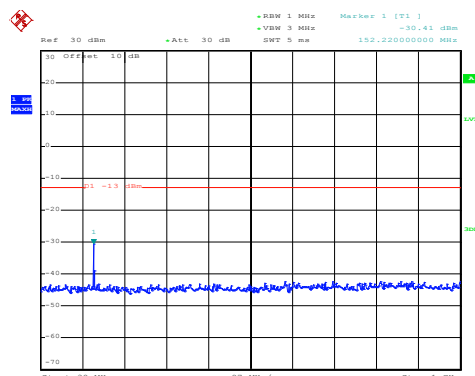
30MHz~1GHz



Date: 24.OCT.2019 17:02:34

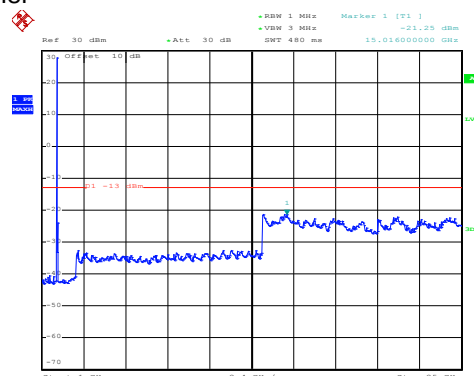
1GHz~25GHz

High channel



Date: 24.OCT.2019 17:01:12

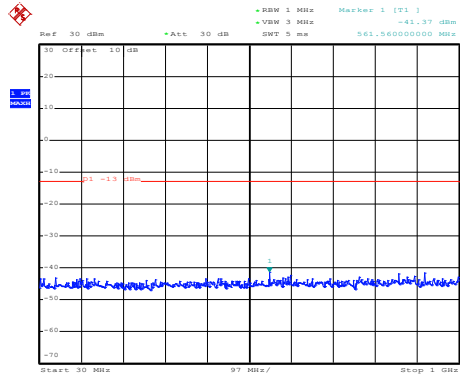
30MHz~1GHz



Date: 24.OCT.2019 17:03:01

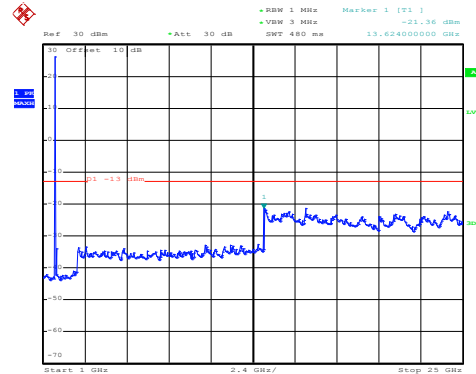
1GHz~25GHz

LTE Band 4 part:

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

Date: 24.OCT.2019 17:00:07

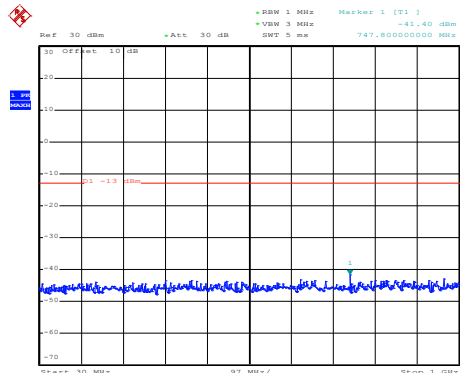
30MHz~1GHz



Date: 24.OCT.2019 16:56:36

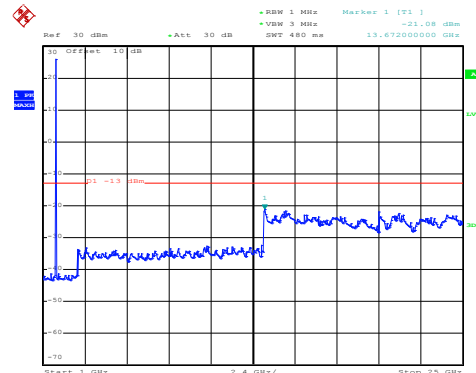
1GHz~25GHz

Middle channel



Date: 24.OCT.2019 16:59:51

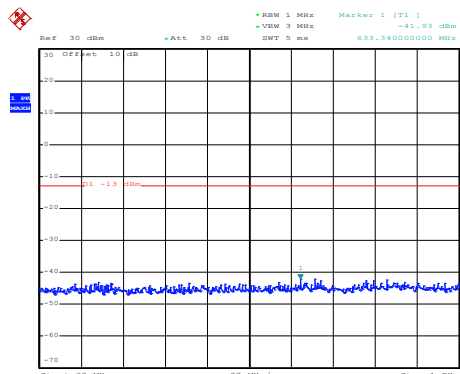
30MHz~1GHz



Date: 24.OCT.2019 16:56:54

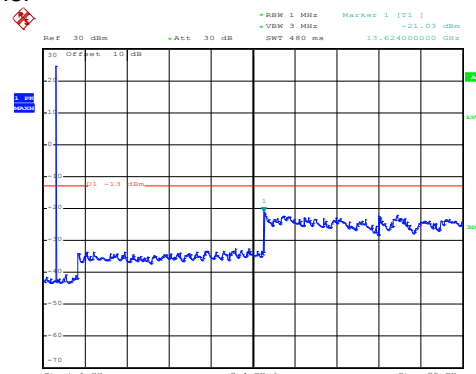
1GHz~25GHz

High channel



Date: 24.OCT.2019 16:59:38

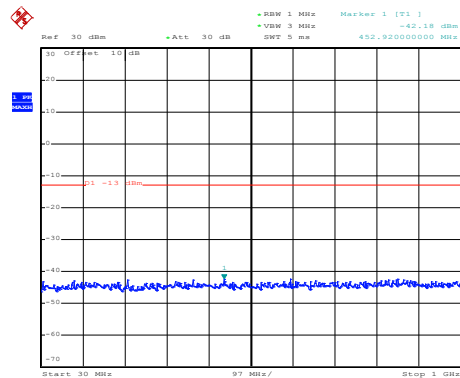
30MHz~1GHz



Date: 24.OCT.2019 16:57:17

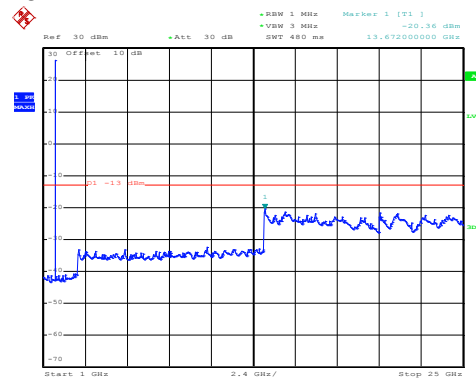
1GHz~25GHz

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



Date: 24.OCT.2019 17:00:03

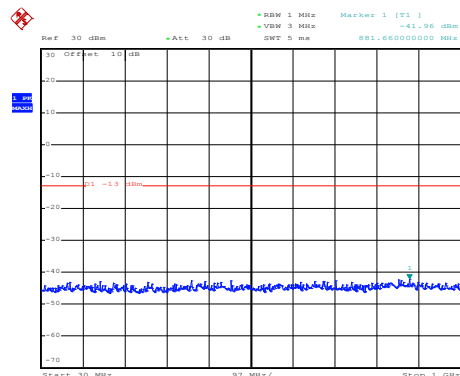
30MHz~1GHz



Date: 24.OCT.2019 16:56:31

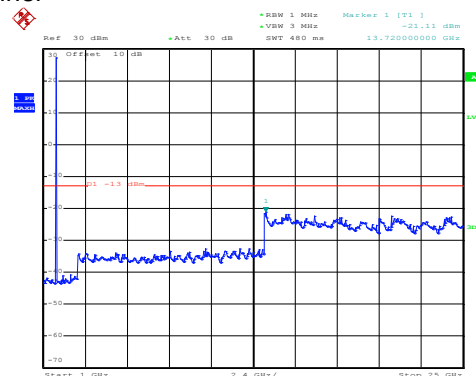
1GHz~25GHz

Middle channel



Date: 24.OCT.2019 16:59:47

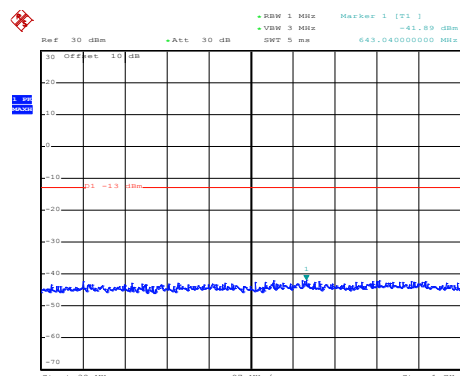
30MHz~1GHz



Date: 24.OCT.2019 16:56:46

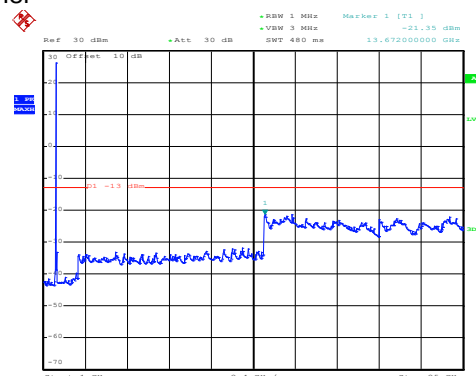
1GHz~25GHz

High channel



Date: 24.OCT.2019 16:59:34

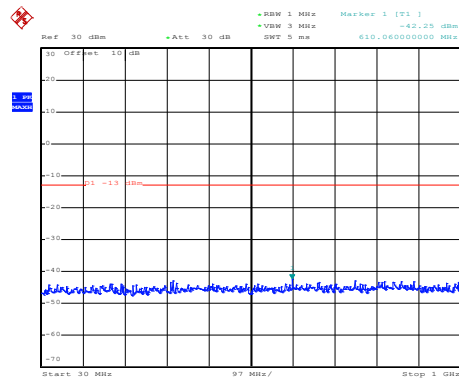
30MHz~1GHz



Date: 24.OCT.2019 16:57:07

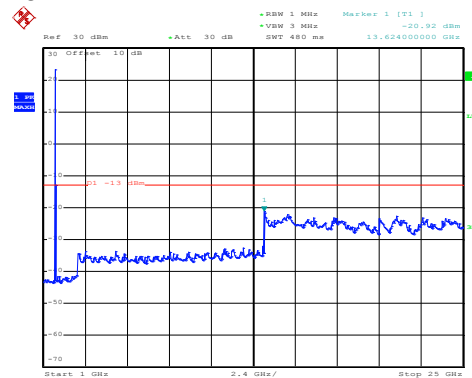
1GHz~25GHz

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



Date: 24.OCT.2019 16:58:52

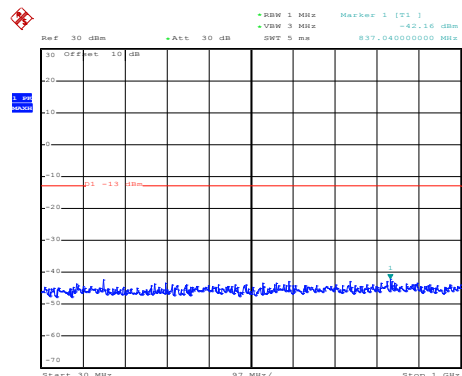
30MHz~1GHz



Date: 24.OCT.2019 16:58:33

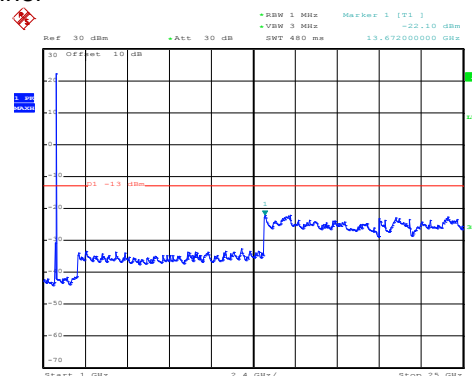
1GHz~25GHz

Middle channel



Date: 24.OCT.2019 16:59:04

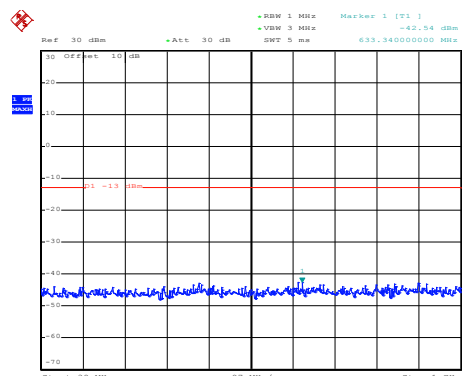
30MHz~1GHz



Date: 24.OCT.2019 16:58:15

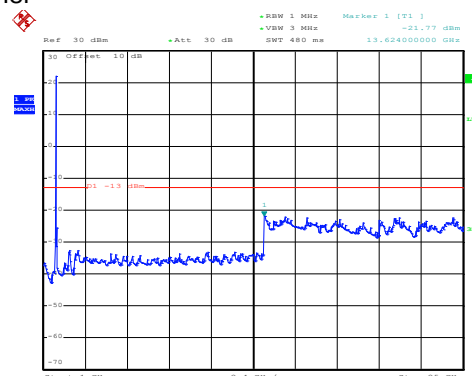
1GHz~25GHz

High channel



Date: 24.OCT.2019 16:59:17

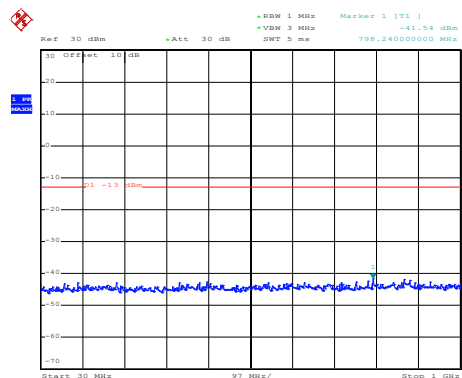
30MHz~1GHz



Date: 24.OCT.2019 16:57:52

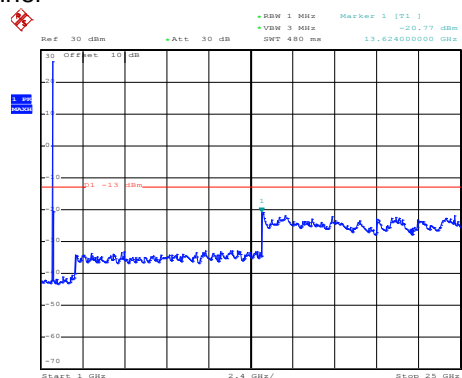
1GHz~25GHz

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



Date: 24.OCT.2019 16:58:48

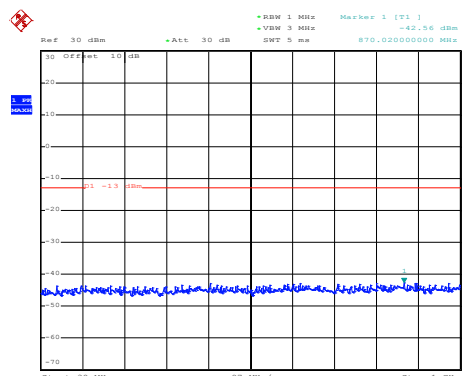
30MHz~1GHz



Date: 24.OCT.2019 16:58:28

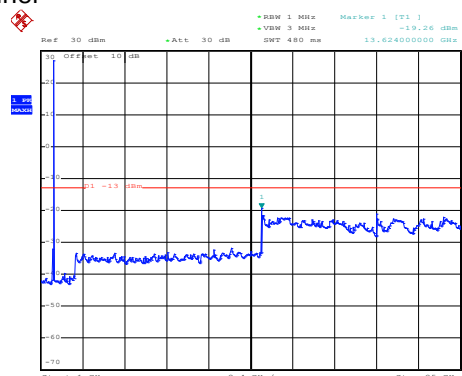
1GHz~25GHz

Middle channel



Date: 24.OCT.2019 16:59:00

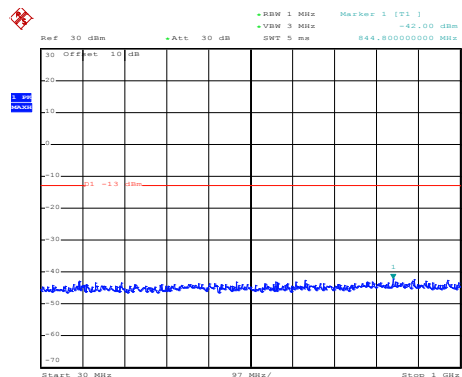
30MHz~1GHz



Date: 24.OCT.2019 16:58:10

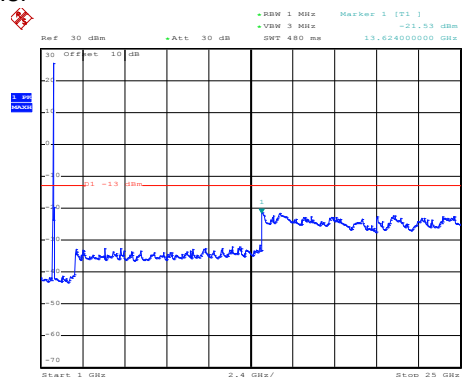
1GHz~25GHz

High channel



Date: 24.OCT.2019 16:59:12

30MHz~1GHz

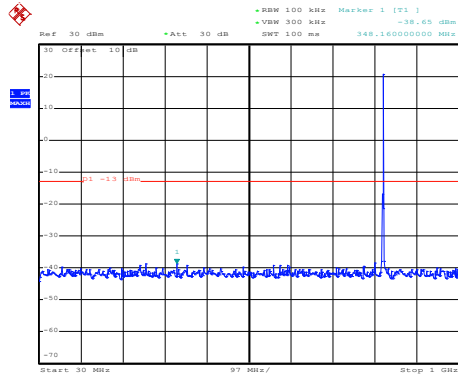


Date: 24.OCT.2019 16:57:46

1GHz~25GHz

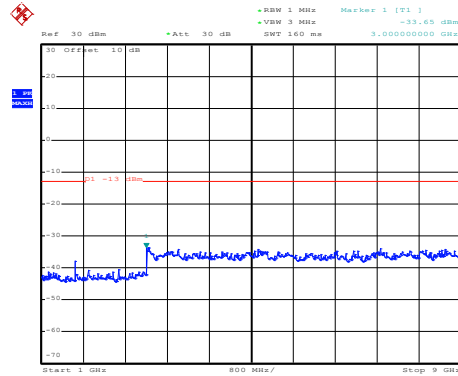
LTE Band 5 part:

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



Date: 24.OCT.2019 16:51:31

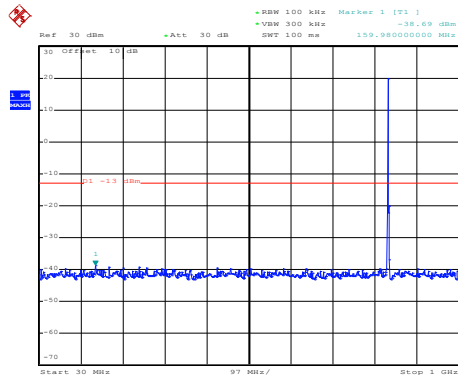
30MHz~1GHz



Date: 24.OCT.2019 16:55:45

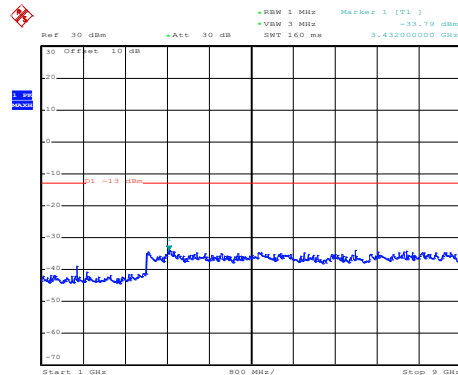
1GHz~9GHz

Middle channel



Date: 24.OCT.2019 16:51:50

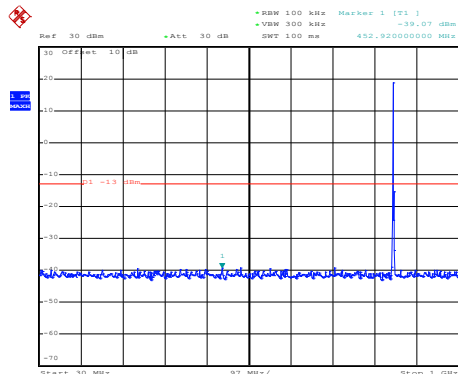
30MHz~1GHz



Date: 24.OCT.2019 16:55:29

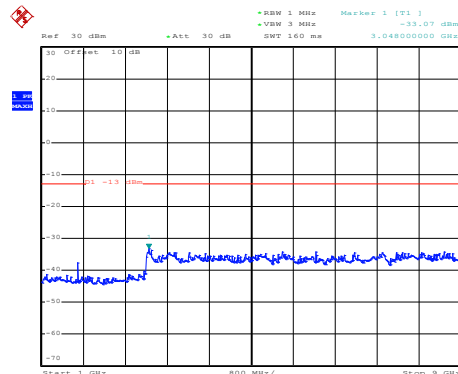
1GHz~9GHz

High channel



Date: 24.OCT.2019 16:52:14

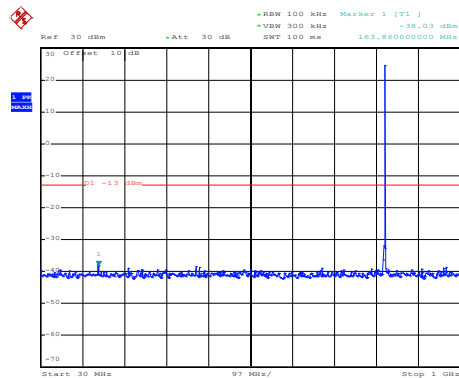
30MHz~1GHz



Date: 24.OCT.2019 16:55:18

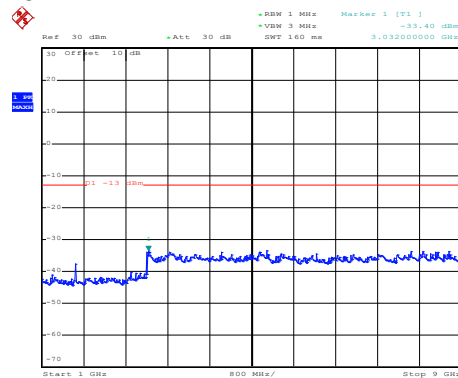
1GHz~9GHz

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



Date: 24.OCT.2019 16:51:25

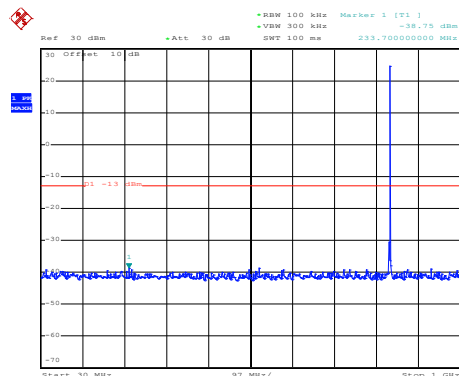
30MHz~1GHz



Date: 24.OCT.2019 16:55:40

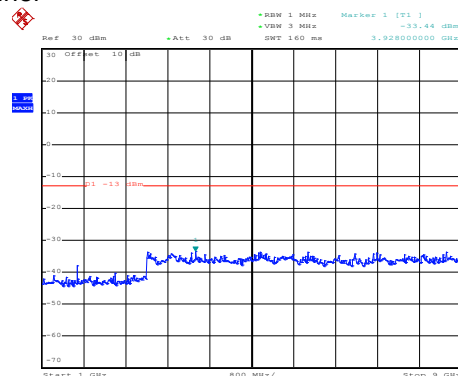
1GHz~9GHz

Middle channel



Date: 24.OCT.2019 16:51:43

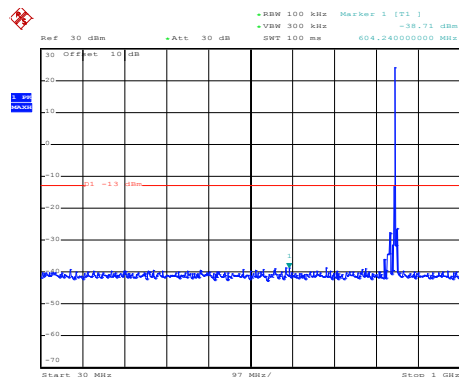
30MHz~1GHz



Date: 24.OCT.2019 16:55:25

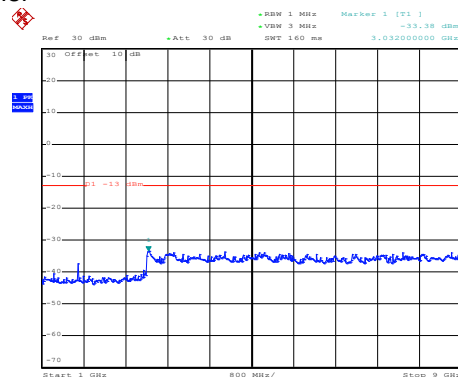
1GHz~9GHz

High channel



Date: 24.OCT.2019 16:52:06

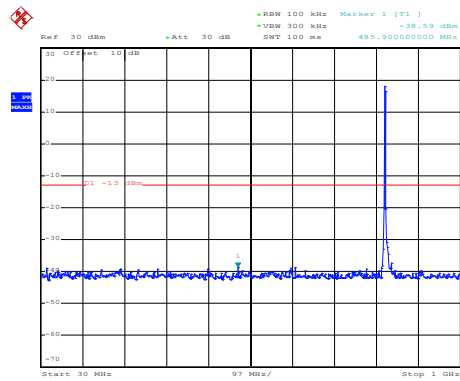
30MHz~1GHz



Date: 24.OCT.2019 16:55:13

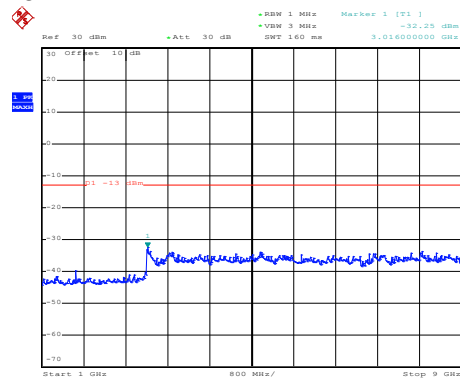
1GHz~9GHz

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



Date: 24.OCT.2019 16:53:35

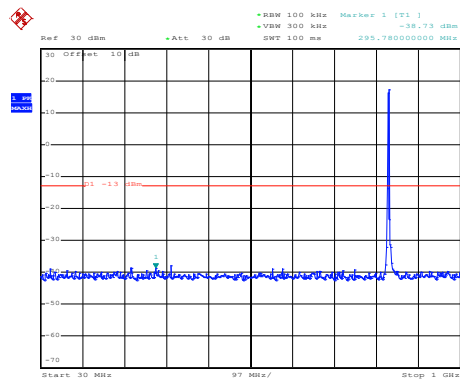
30MHz~1GHz



Date: 24.OCT.2019 16:54:07

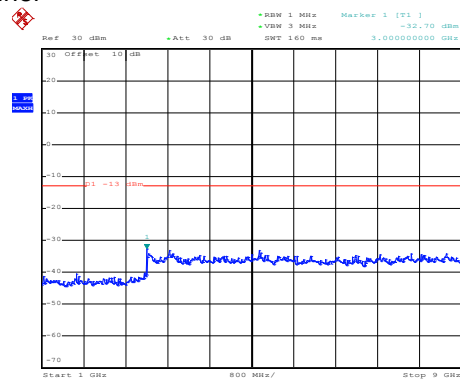
1GHz~9GHz

Middle channel



Date: 24.OCT.2019 16:53:12

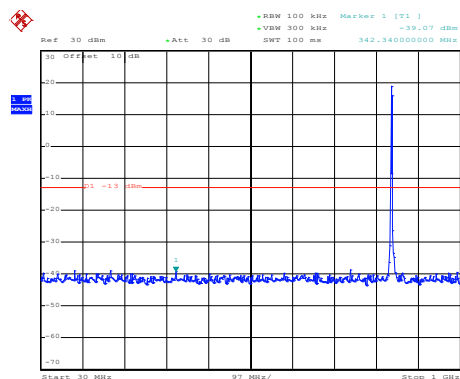
30MHz~1GHz



Date: 24.OCT.2019 16:54:22

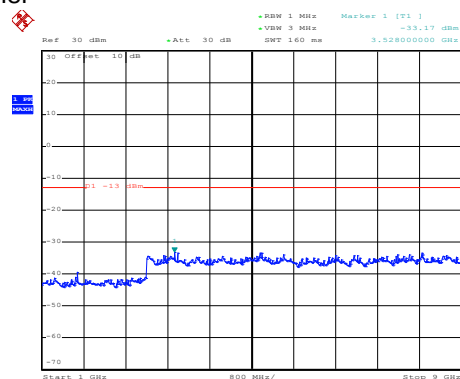
1GHz~9GHz

High channel



Date: 24.OCT.2019 16:52:48

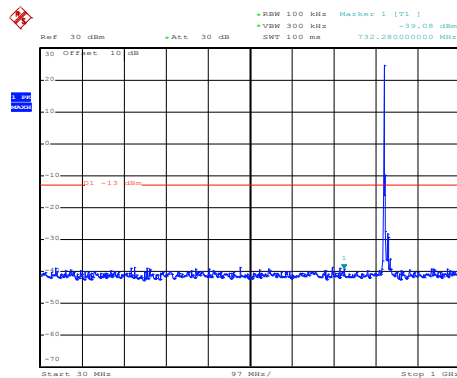
30MHz~1GHz



Date: 24.OCT.2019 16:54:54

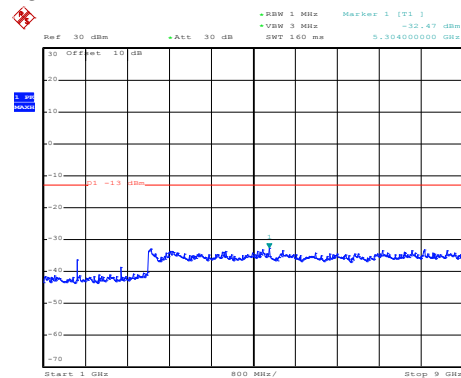
1GHz~9GHz

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



Date: 24.OCT.2019 16:53:25

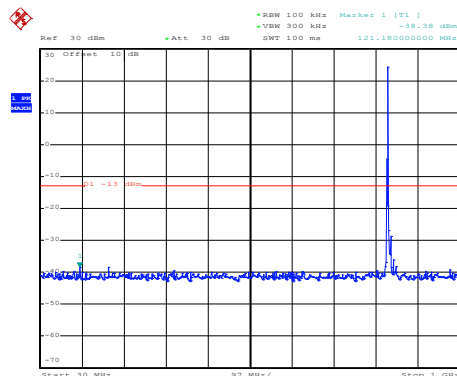
30MHz~1GHz



Date: 24.OCT.2019 16:54:01

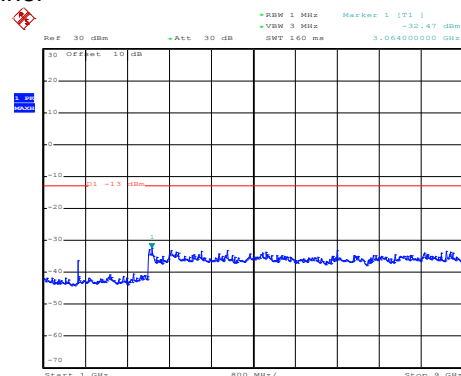
1GHz~9GHz

Middle channel



Date: 24.OCT.2019 16:53:01

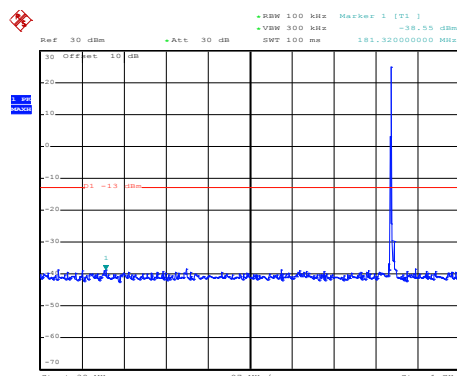
30MHz~1GHz



Date: 24.OCT.2019 16:54:17

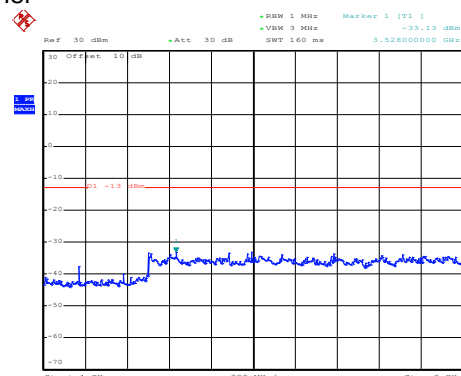
1GHz~9GHz

High channel



Date: 24.OCT.2019 16:52:42

30MHz~1GHz

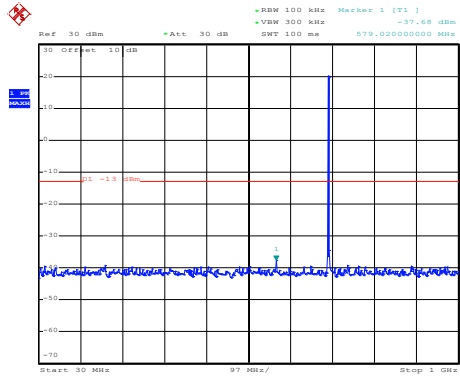


Date: 24.OCT.2019 16:54:48

1GHz~9GHz

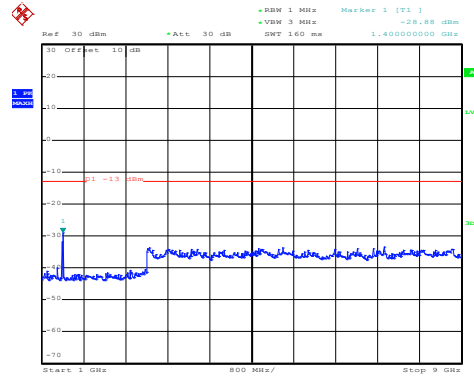
LTE Band 12 part:

LTE Band 12: 16 QAM & RB Size 1 BW: 1.4MHz Lowest channel



Date: 24.OCT.2019 16:50:48

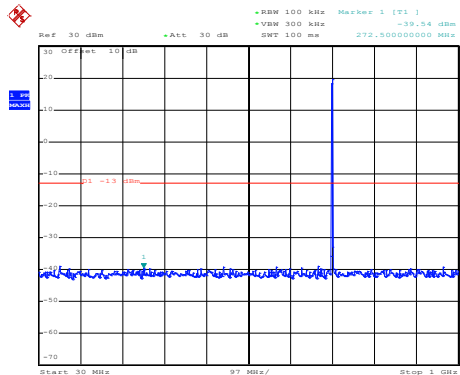
30MHz~1GHz



Date: 24.OCT.2019 16:45:45

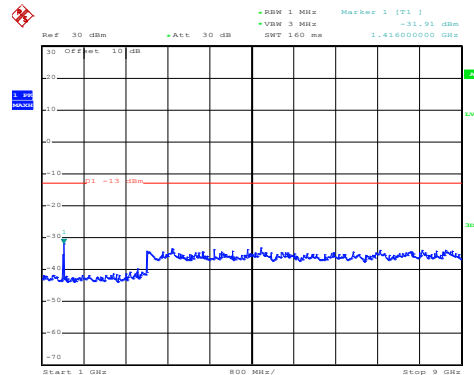
1GHz~9GHz

Middle channel



Date: 24.OCT.2019 16:50:25

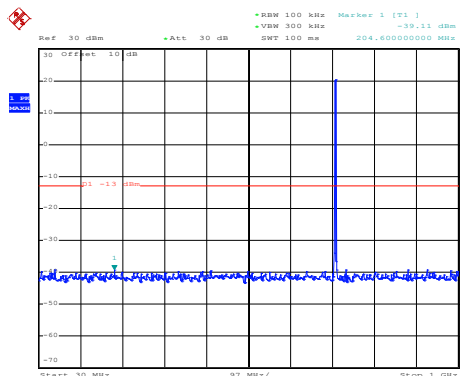
30MHz~1GHz



Date: 24.OCT.2019 16:46:05

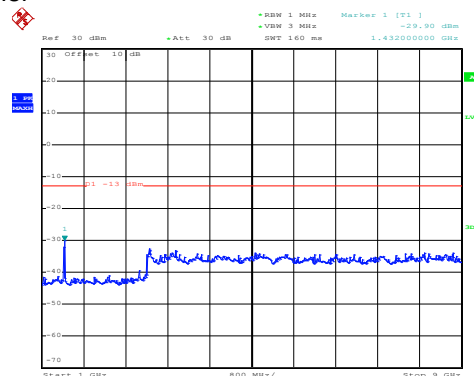
1GHz~9GHz

High channel



Date: 24.OCT.2019 16:50:01

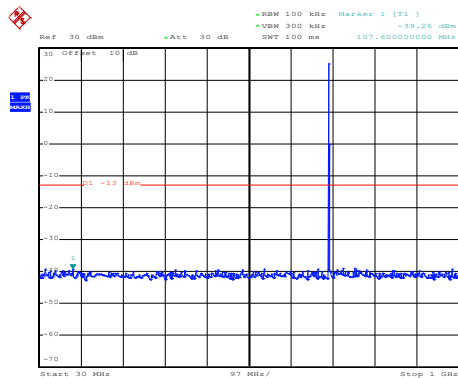
30MHz~1GHz



Date: 24.OCT.2019 16:46:24

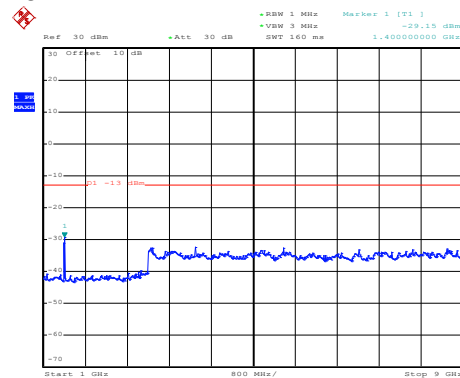
1GHz~9GHz

LTE Band 12: QPSK & RB Size 1
BW: 1.4MHz
Lowest channel



Date: 24.OCT.2019 16:50:40

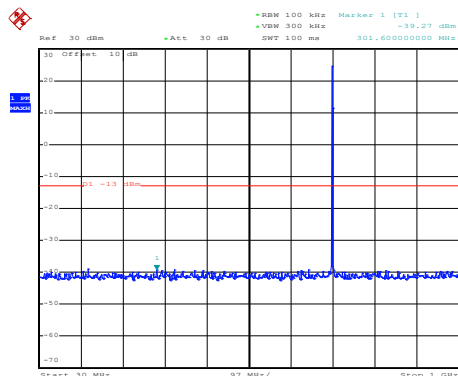
30MHz~1GHz



Date: 24.OCT.2019 16:45:34

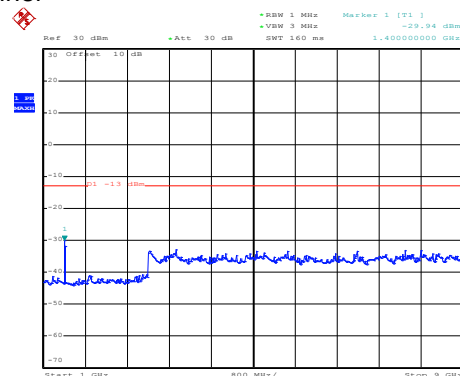
1GHz~9GHz

Middle channel



Date: 24.OCT.2019 16:50:15

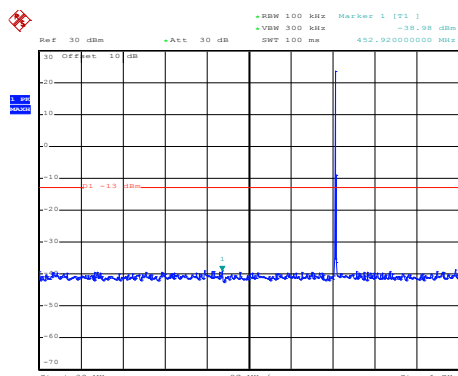
30MHz~1GHz



Date: 24.OCT.2019 16:45:58

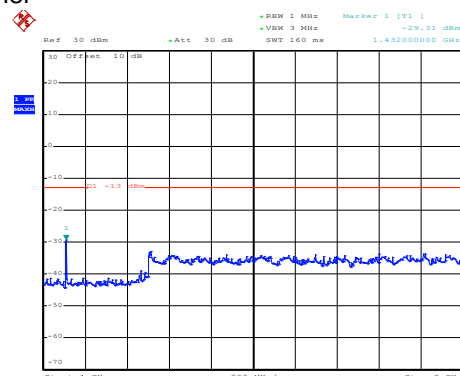
1GHz~9GHz

High channel



Date: 24.OCT.2019 16:49:54

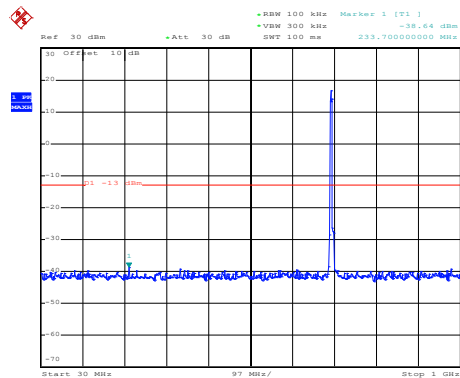
30MHz~1GHz



Date: 24.OCT.2019 16:46:17

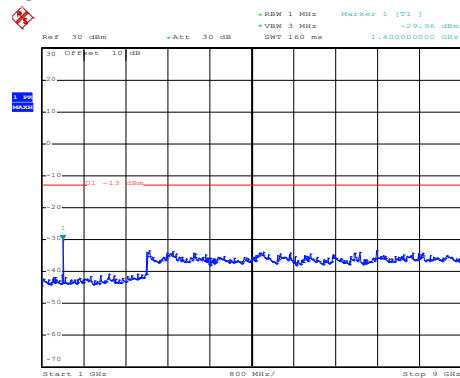
1GHz~9GHz

LTE Band 12: 16 QAM & RB Size 1
BW: 10MHz
Lowest channel



Date: 24.OCT.2019 16:48:29

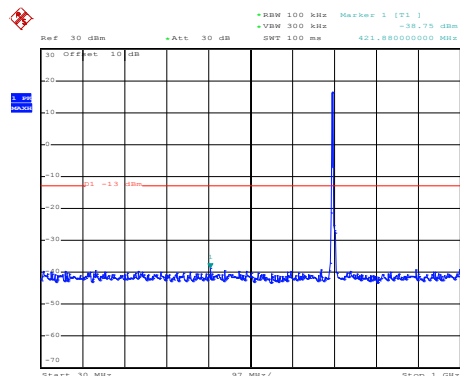
30MHz~1GHz



Date: 24.OCT.2019 16:47:53

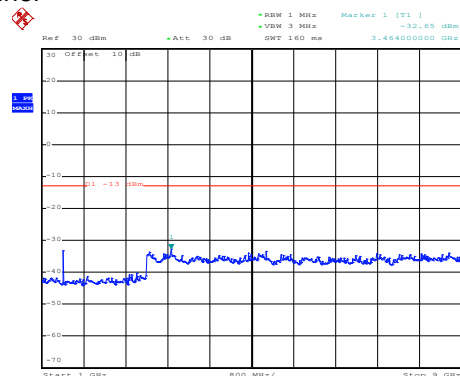
1GHz~9GHz

Middle channel



Date: 24.OCT.2019 16:48:48

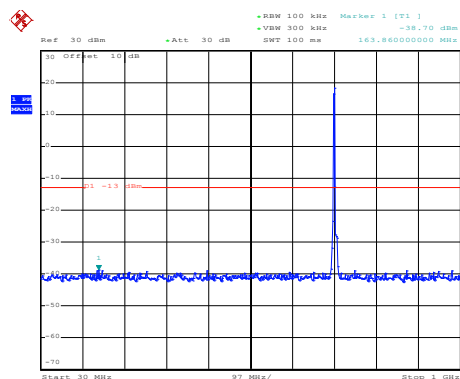
30MHz~1GHz



Date: 24.OCT.2019 16:47:38

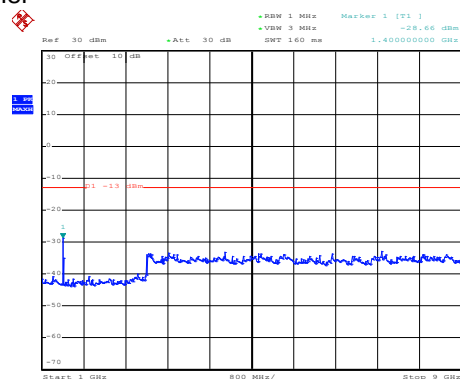
1GHz~9GHz

High channel



Date: 24.OCT.2019 16:49:14

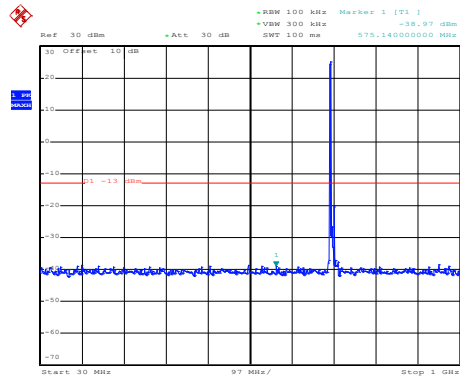
30MHz~1GHz



Date: 24.OCT.2019 16:47:20

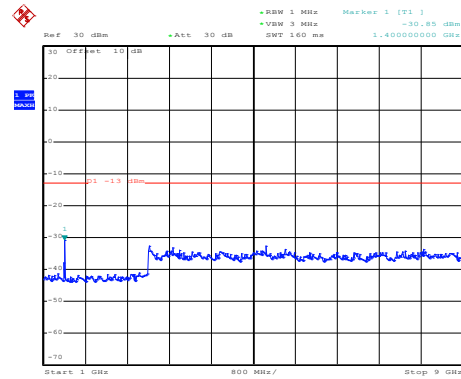
1GHz~9GHz

LTE Band 12: QPSK & RB Size 1
BW: 10MHz
Lowest channel



Date: 24.OCT.2019 16:48:21

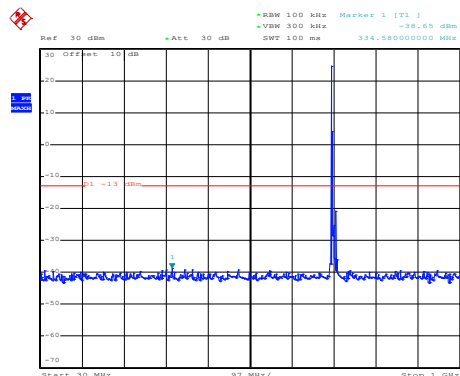
30MHz~1GHz



Date: 24.OCT.2019 16:47:48

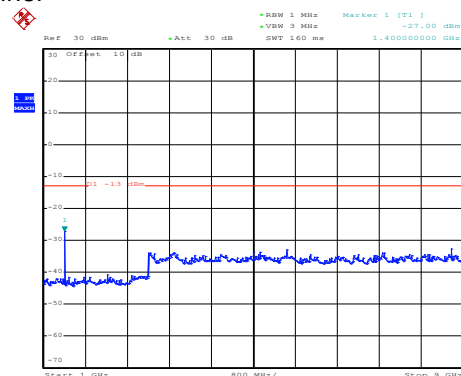
1GHz~9GHz

Middle channel



Date: 24.OCT.2019 16:48:41

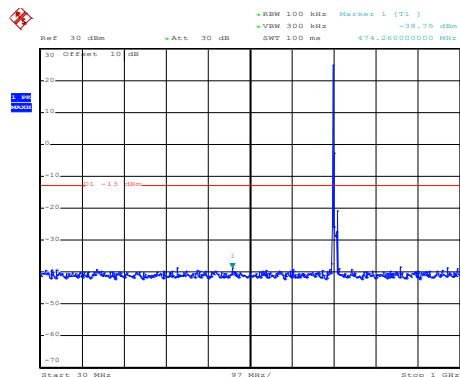
30MHz~1GHz



Date: 24.OCT.2019 16:47:32

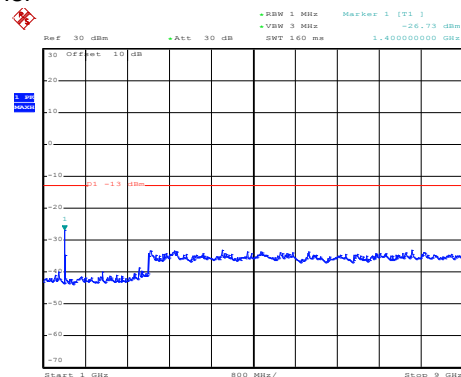
1GHz~9GHz

High channel



Date: 24.OCT.2019 16:49:03

30MHz~1GHz

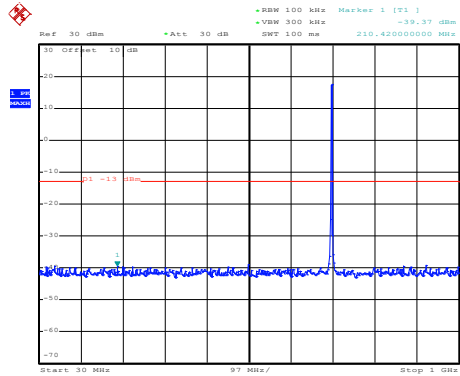


Date: 24.OCT.2019 16:47:06

1GHz~9GHz

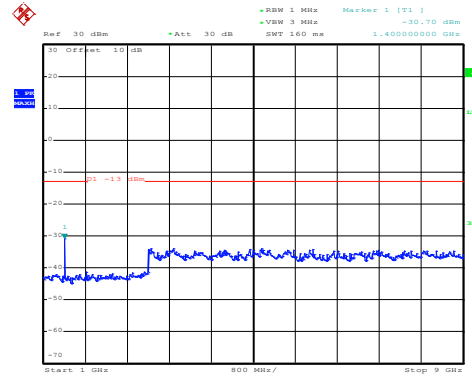
LTE Band 17 part:

LTE Band 17: 16 QAM & RB Size 1 BW: 5MHz Lowest channel



Date: 24.OCT.2019 16:42:16

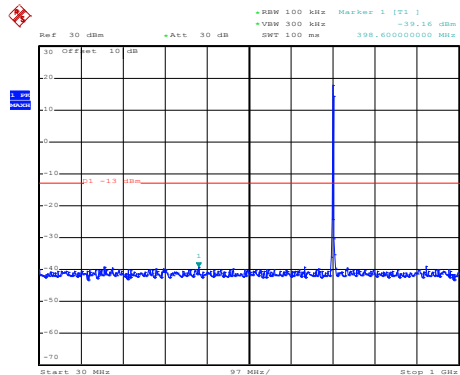
30MHz~1GHz



Date: 24.OCT.2019 16:43:55

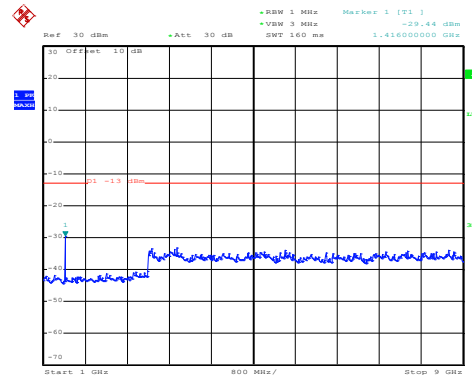
1GHz~9GHz

Middle channel



Date: 24.OCT.2019 16:42:37

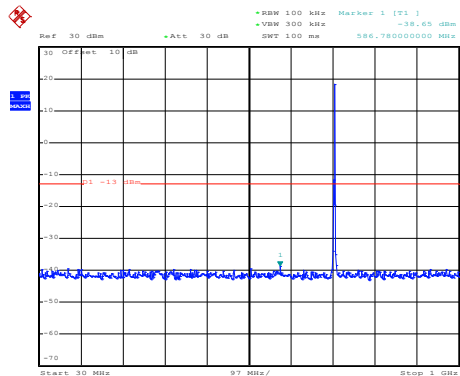
30MHz~1GHz



Date: 24.OCT.2019 16:43:42

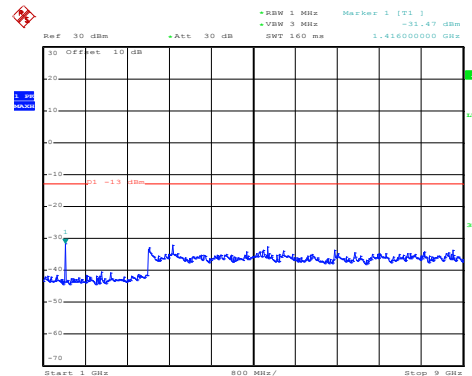
1GHz~9GHz

High channel



Date: 24.OCT.2019 16:42:57

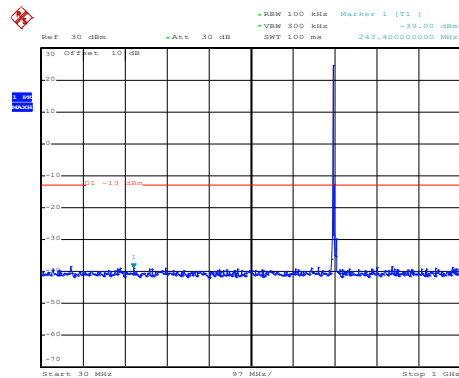
30MHz~1GHz



Date: 24.OCT.2019 16:43:29

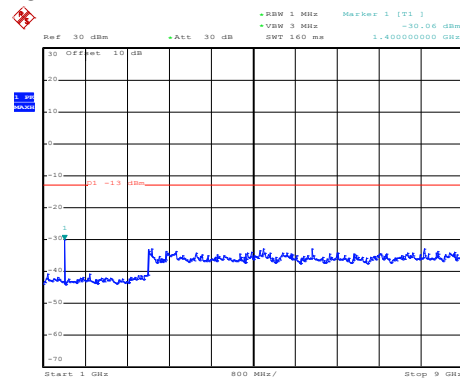
1GHz~9GHz

LTE Band 17: QPSK & RB Size 1
BW: 5MHz
Lowest channel



Date: 24.OCT.2019 16:42:10

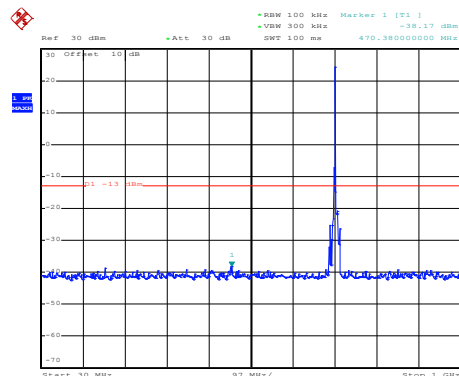
30MHz~1GHz



Date: 24.OCT.2019 16:43:51

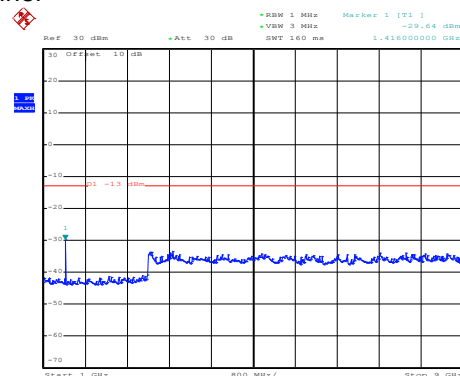
1GHz~9GHz

Middle channel



Date: 24.OCT.2019 16:42:29

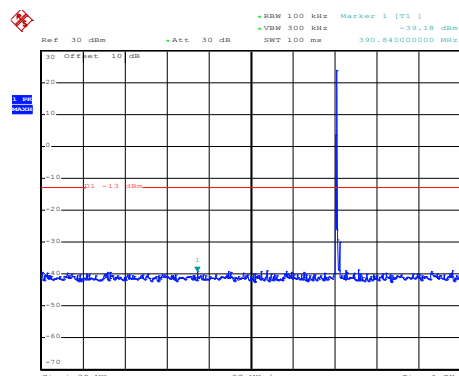
30MHz~1GHz



Date: 24.OCT.2019 16:43:38

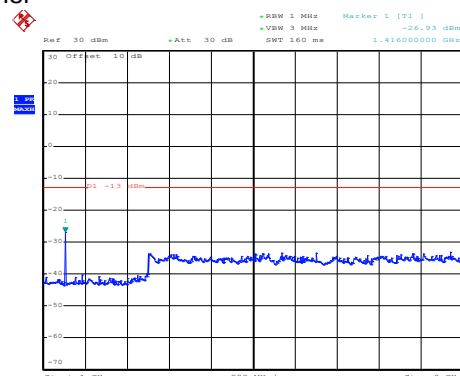
1GHz~9GHz

High channel



Date: 24.OCT.2019 16:42:50

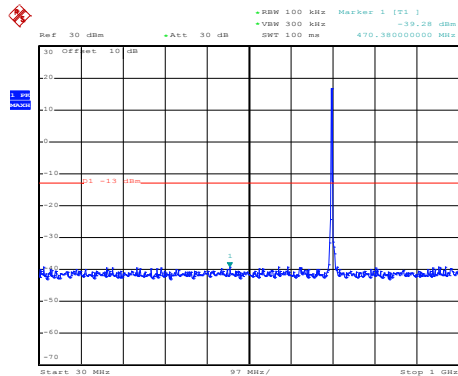
30MHz~1GHz



Date: 24.OCT.2019 16:43:24

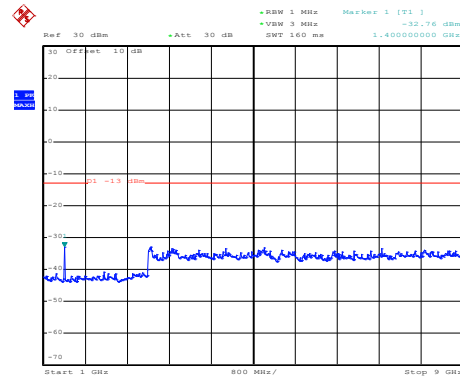
1GHz~9GHz

LTE Band 17: 16 QAM & RB Size 1
BW: 10MHz
Lowest channel



Date: 24.OCT.2019 16:40:47

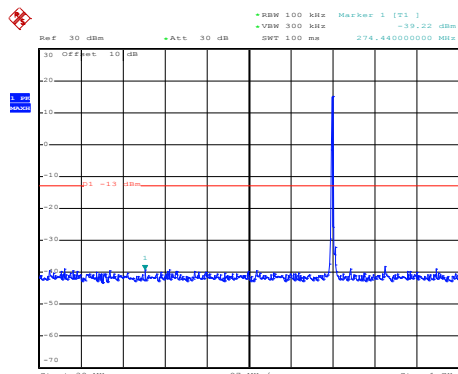
30MHz~1GHz



Date: 24.OCT.2019 16:44:22

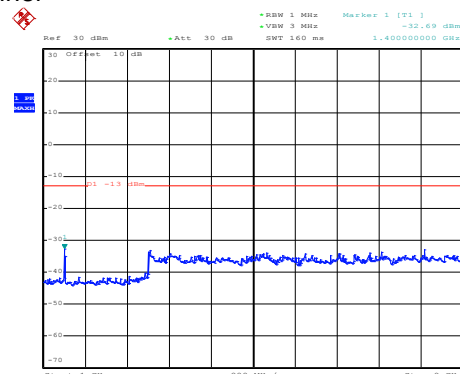
1GHz~9GHz

Middle channel



Date: 24.OCT.2019 16:41:09

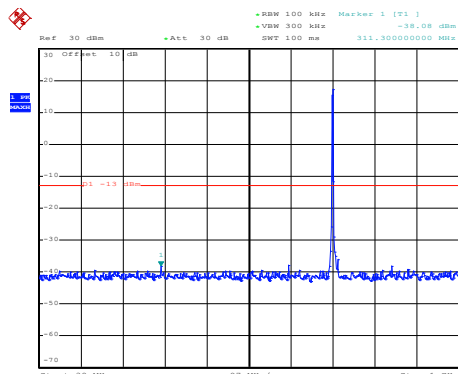
30MHz~1GHz



Date: 24.OCT.2019 16:44:35

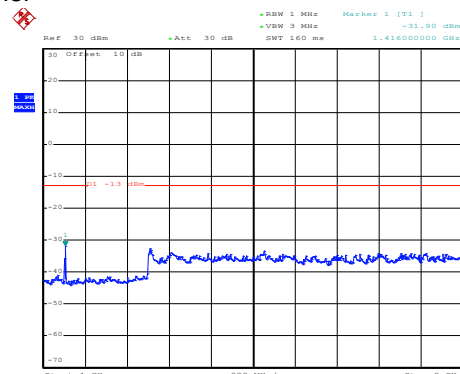
1GHz~9GHz

High channel



Date: 24.OCT.2019 16:41:33

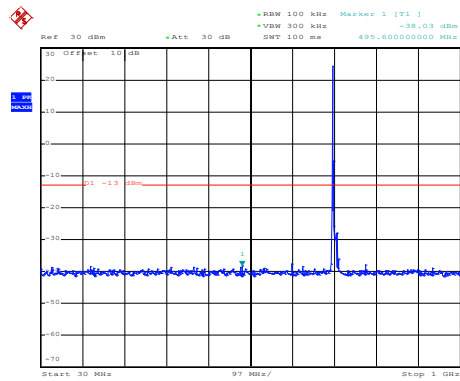
30MHz~1GHz



Date: 24.OCT.2019 16:44:49

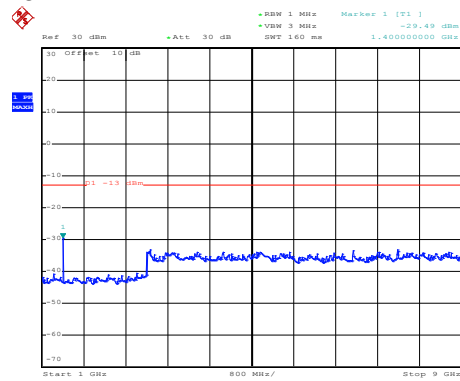
1GHz~9GHz

LTE Band 17: QPSK & RB Size 1 BW: 10MHz Lowest channel



Date: 24.OCT.2019 16:40:37

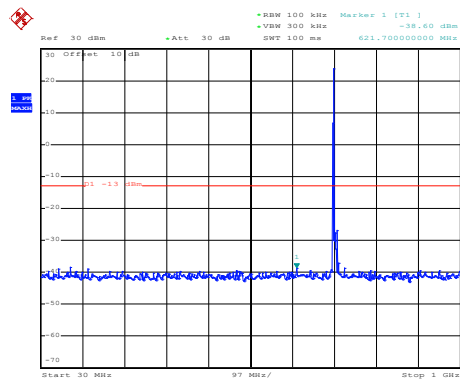
30MHz~1GHz



Date: 24.OCT.2019 16:44:15

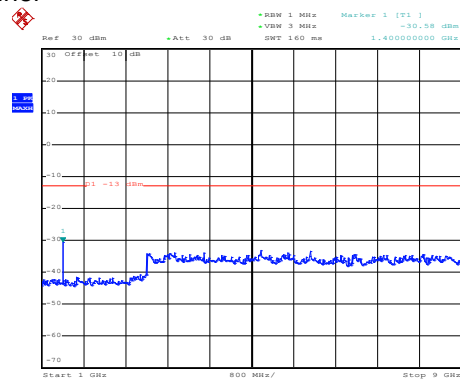
1GHz~9GHz

Middle channel



Date: 24.OCT.2019 16:41:02

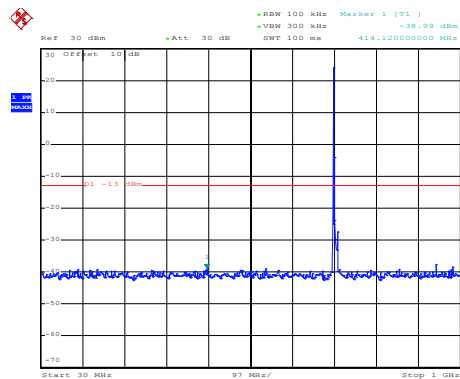
30MHz~1GHz



Date: 24.OCT.2019 16:44:30

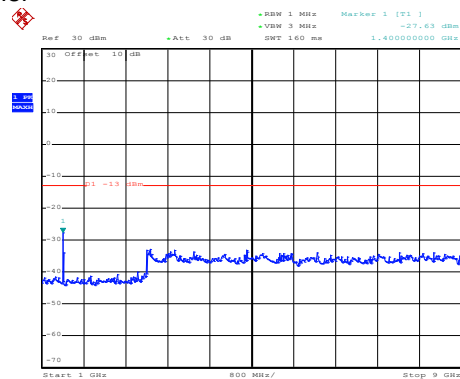
1GHz~9GHz

High channel



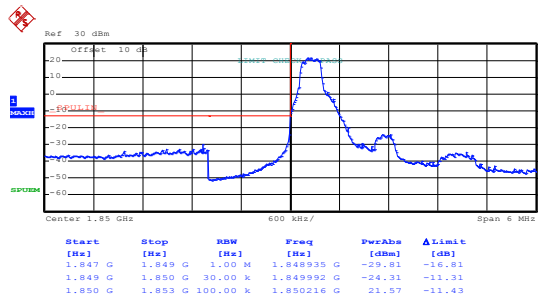
Date: 24.OCT.2019 16:41:25

30MHz~1GHz



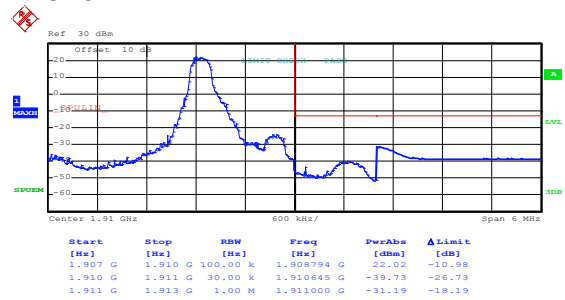
Date: 24.OCT.2019 16:44:43

1GHz~9GHz

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

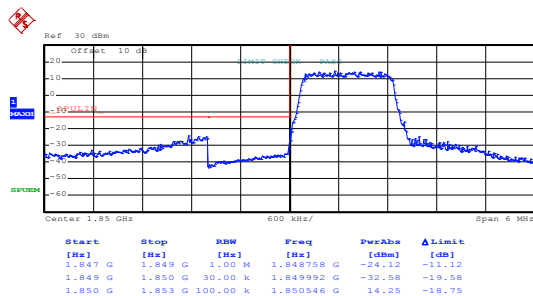
Date: 24.OCT.2019 16:09:15

Lowest channel



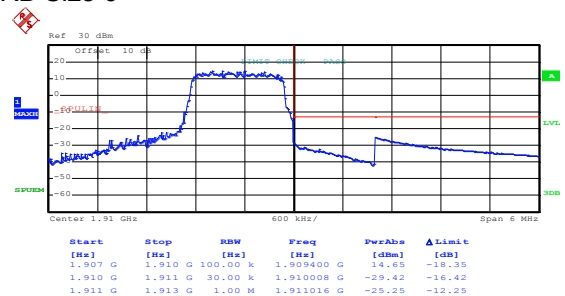
Date: 24.OCT.2019 16:10:07

Highest channel

16QAM & RB Size 6

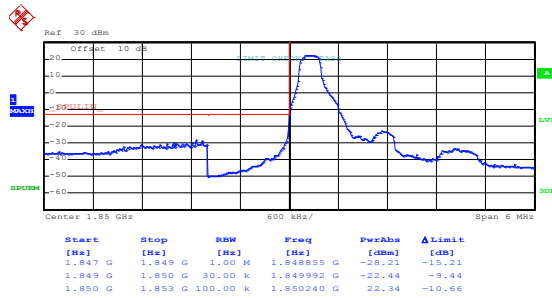
Date: 24.OCT.2019 16:09:28

Lowest channel



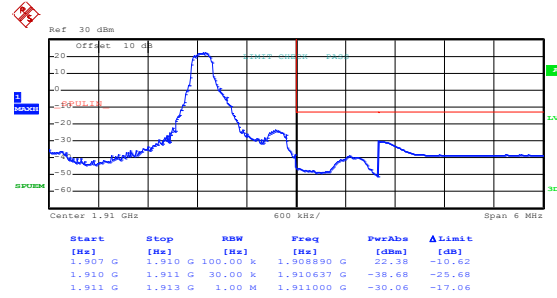
Date: 24.OCT.2019 16:09:48

Highest channel

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

Date: 24.OCT.2019 16:09:03

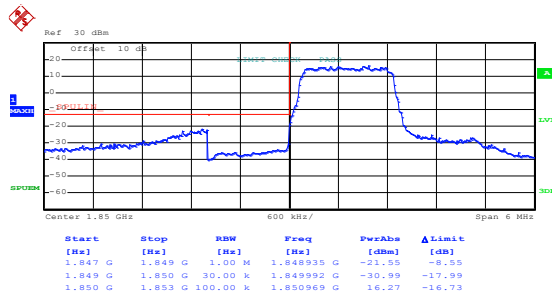
Lowest channel



Date: 24.OCT.2019 16:09:55

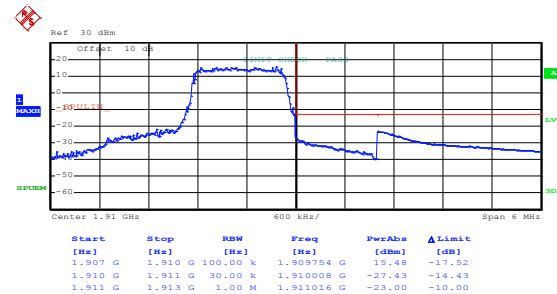
Highest channel

QPSK & RB Size 6



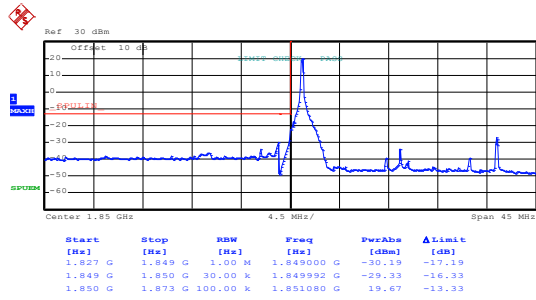
Date: 24.OCT.2019 16:09:24

Lowest channel



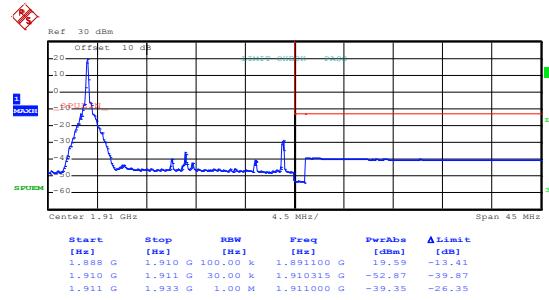
Date: 24.OCT.2019 16:09:44

Highest channel

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

Date: 24.OCT.2019 16:11:40

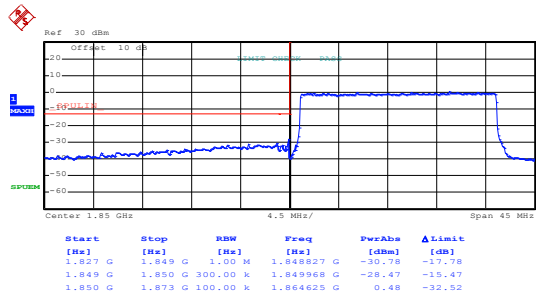
Lowest channel



Date: 24.OCT.2019 16:10:43

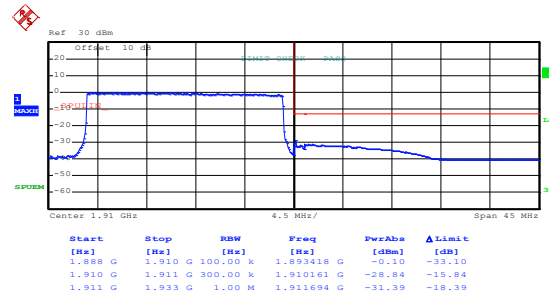
Highest channel

16QAM & RB Size 100



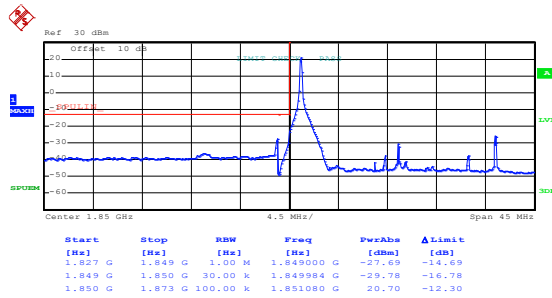
Date: 24.OCT.2019 16:11:24

Lowest channel



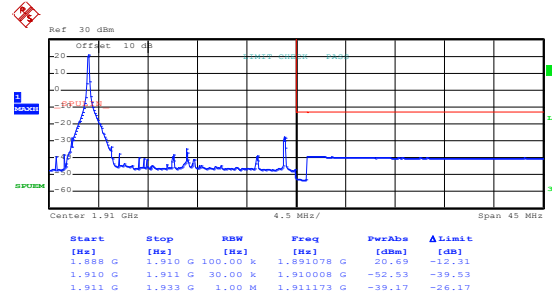
Date: 24.OCT.2019 16:11:01

Highest channel

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

Date: 24.OCT.2019 16:11:35

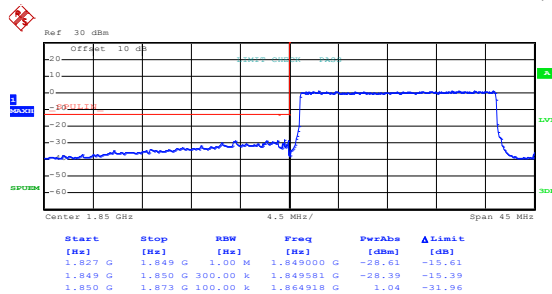
Lowest channel



Date: 24.OCT.2019 16:10:35

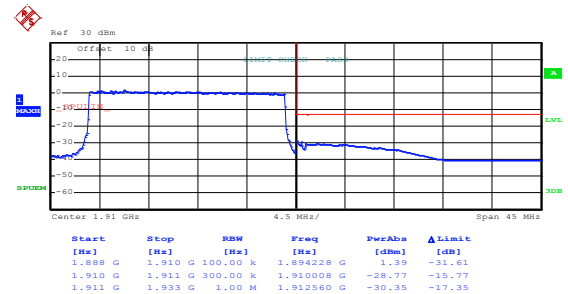
Highest channel

QPSK & RB Size 100



Date: 24.OCT.2019 16:11:20

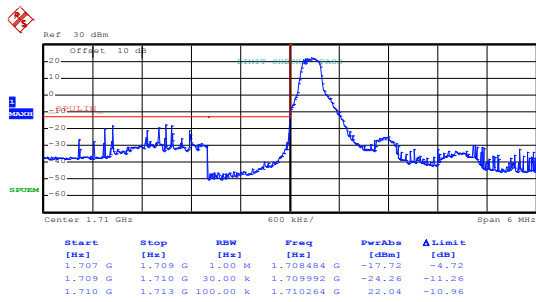
Lowest channel



Date: 24.OCT.2019 16:10:56

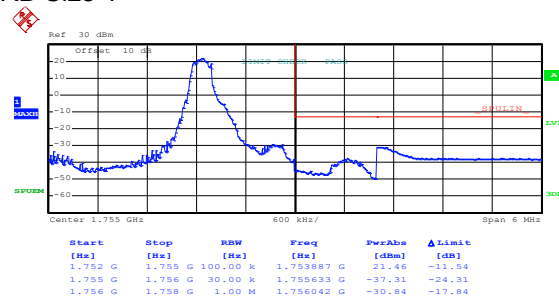
Highest channel

LTE Band 4 part:

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

Date: 24.OCT.2019 16:12:36

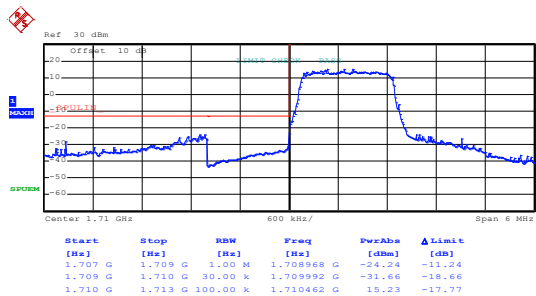
Lowest channel



Date: 24.OCT.2019 16:20:07

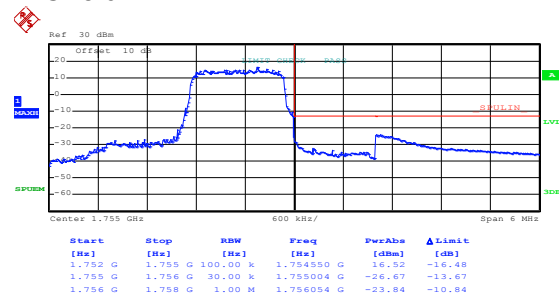
Highest channel

16QAM & RB Size 6



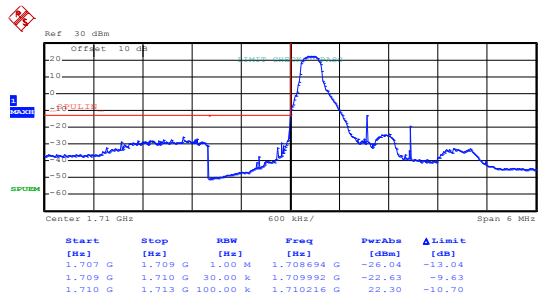
Date: 24.OCT.2019 16:20:36

Lowest channel



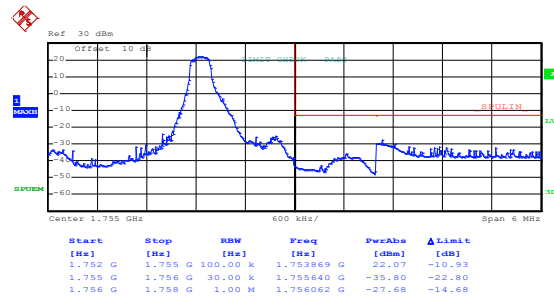
Date: 24.OCT.2019 16:19:49

Highest channel

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

Date: 24.OCT.2019 16:12:28

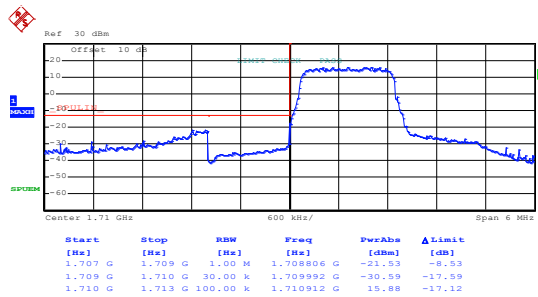
Lowest channel



Date: 24.OCT.2019 16:19:59

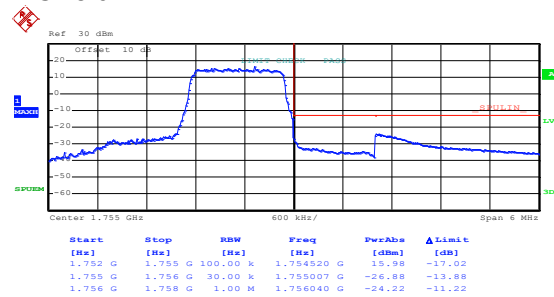
Highest channel

QPSK & RB Size 6



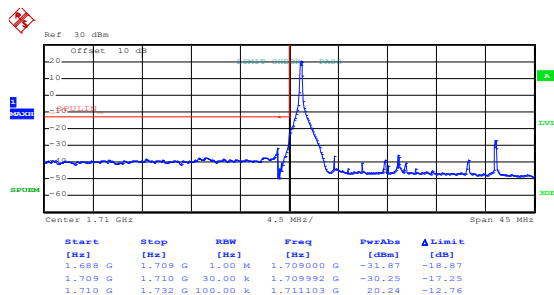
Date: 24.OCT.2019 16:20:31

Lowest channel



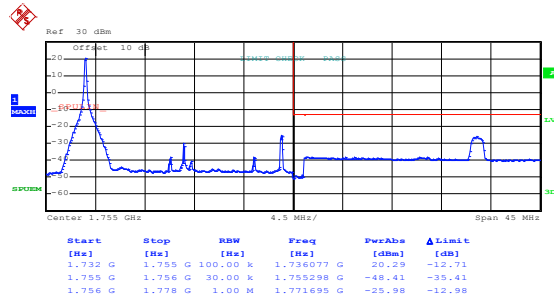
Date: 24.OCT.2019 16:19:44

Highest channel

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

Date: 24.OCT.2019 16:21:17

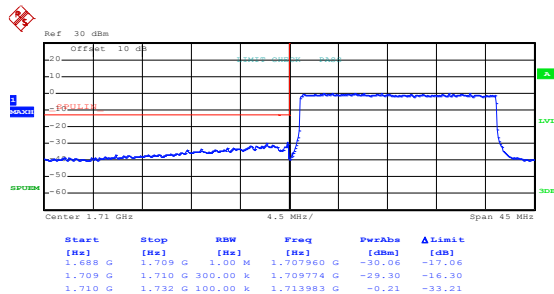
Lowest channel



Date: 24.OCT.2019 16:22:20

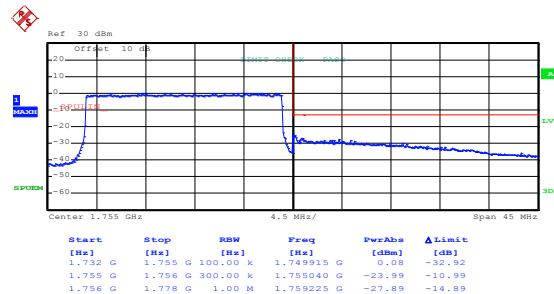
Highest channel

16QAM & RB Size 100



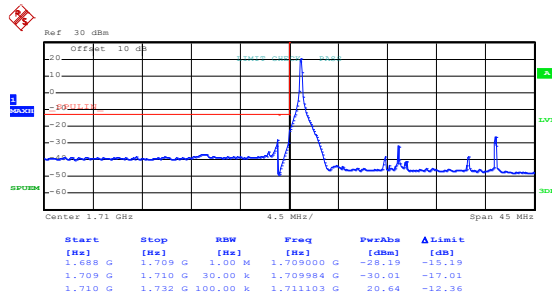
Date: 24.OCT.2019 16:21:34

Lowest channel



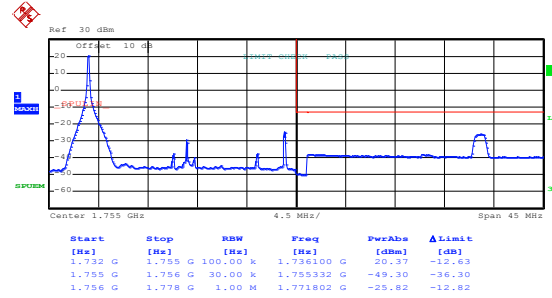
Date: 24.OCT.2019 16:22:01

Highest channel

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

Date: 24.OCT.2019 16:21:11

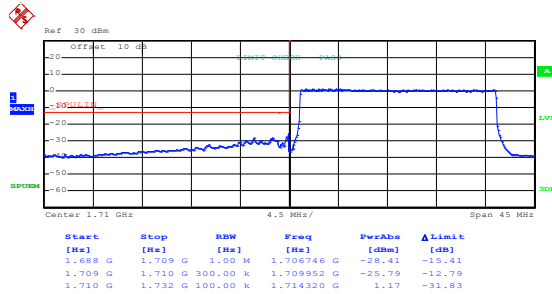
Lowest channel



Date: 24.OCT.2019 16:22:16

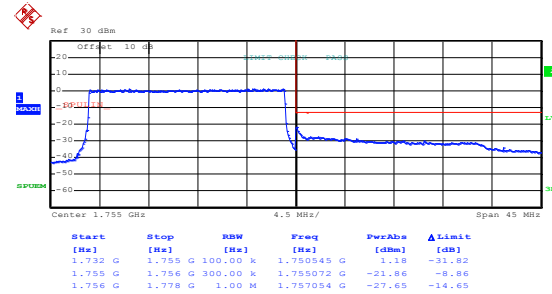
Highest channel

QPSK & RB Size 100



Date: 24.OCT.2019 16:21:30

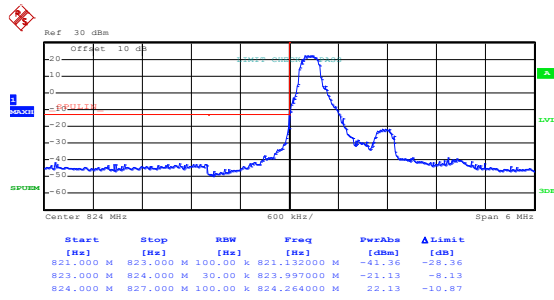
Lowest channel



Date: 24.OCT.2019 16:21:56

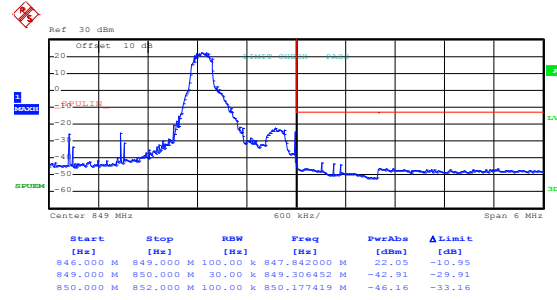
Highest channel

LTE Band 5 part:

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

Date: 24.OCT.2019 16:23:14

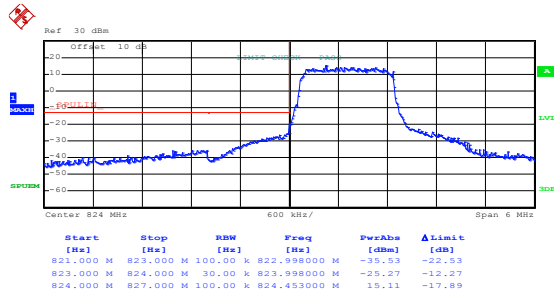
Lowest channel



Date: 24.OCT.2019 16:24:11

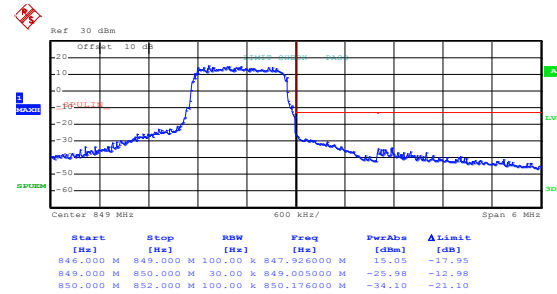
Highest channel

16QAM & RB Size 6



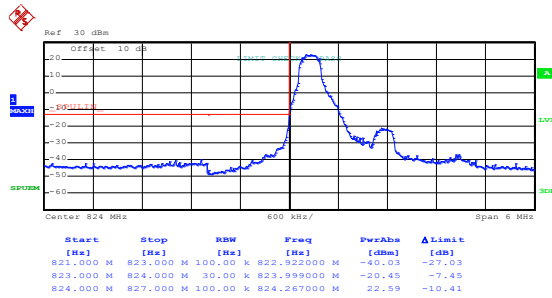
Date: 24.OCT.2019 16:23:26

Lowest channel



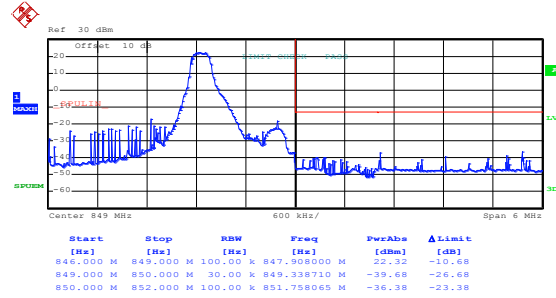
Date: 24.OCT.2019 16:23:42

Highest channel

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

Date: 24.OCT.2019 16:23:09

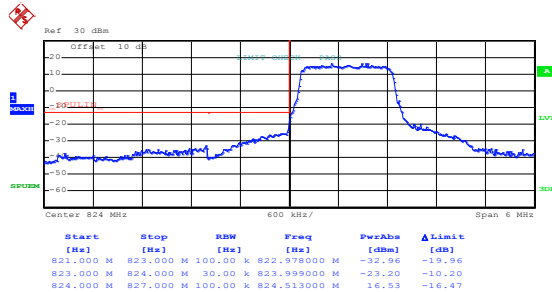
Lowest channel



Date: 24.OCT.2019 16:23:59

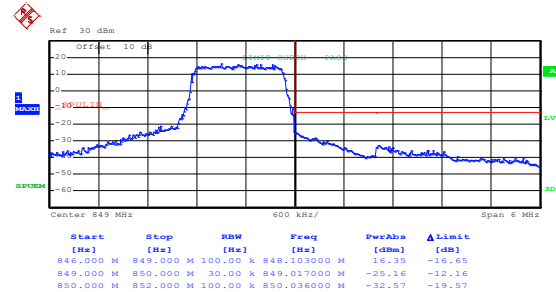
Highest channel

QPSK & RB Size 6



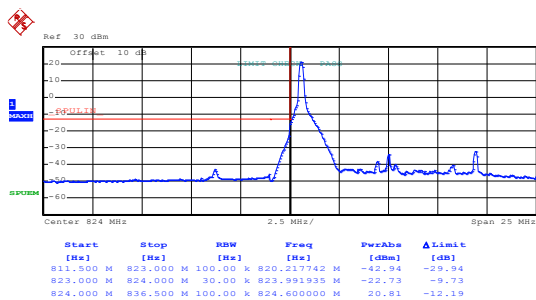
Date: 24.OCT.2019 16:23:22

Lowest channel



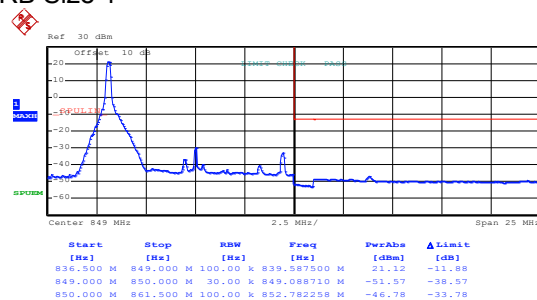
Date: 24.OCT.2019 16:23:38

Highest channel

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

Date: 24.OCT.2019 16:26:02

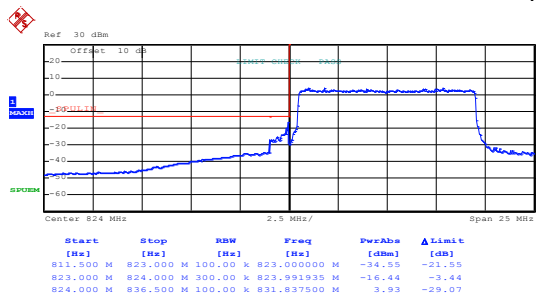
Lowest channel



Date: 24.OCT.2019 16:24:49

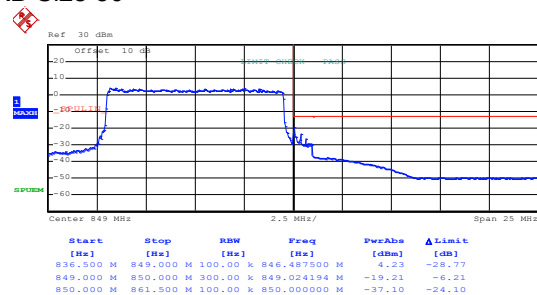
Highest channel

16QAM & RB Size 50



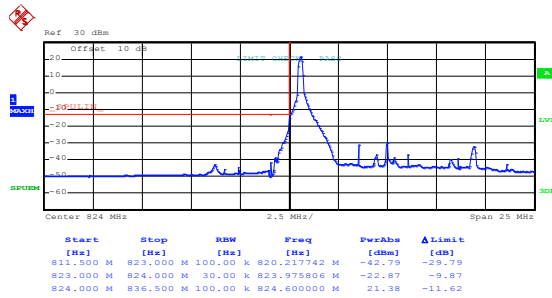
Date: 24.OCT.2019 16:25:45

Lowest channel



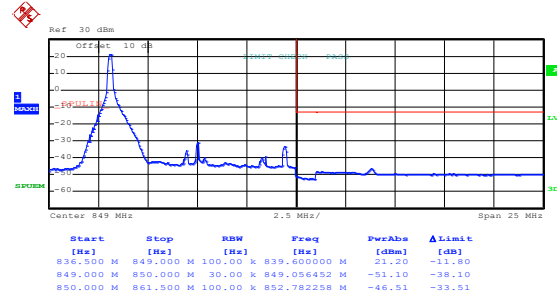
Date: 24.OCT.2019 16:25:06

Highest channel

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

Date: 24.OCT.2019 16:25:57

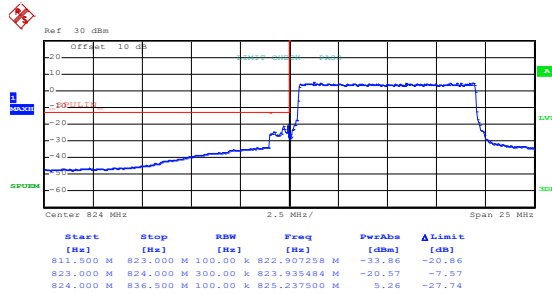
Lowest channel



Date: 24.OCT.2019 16:24:44

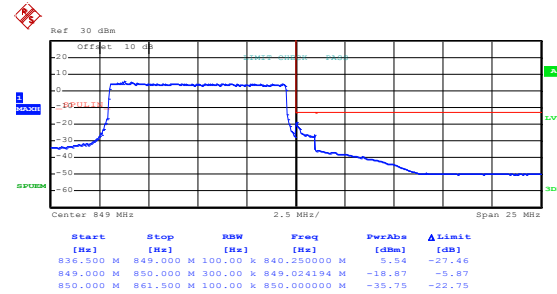
Highest channel

QPSK & RB Size 50



Date: 24.OCT.2019 16:25:41

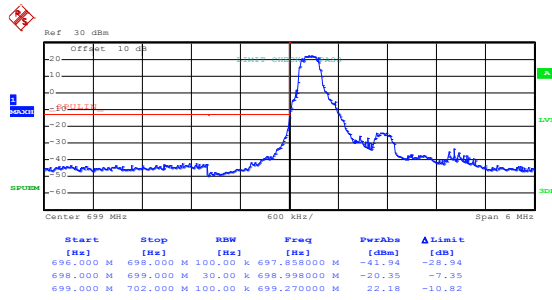
Lowest channel



Date: 24.OCT.2019 16:25:02

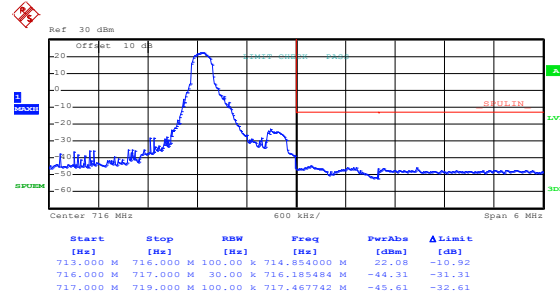
Highest channel

LTE band 12 part:

LTE Band 12, BW: 1.4MHz
16QAM & RB Size 1

Date: 24.OCT.2019 16:26:57

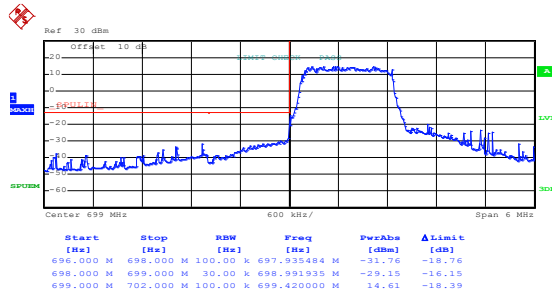
Lowest channel



Date: 24.OCT.2019 16:27:53

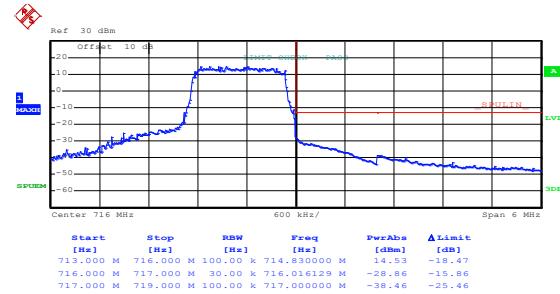
Highest channel

16QAM & RB Size 6



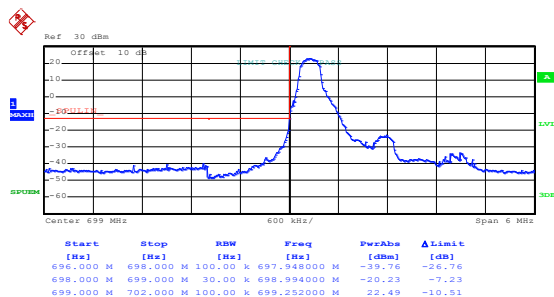
Date: 24.OCT.2019 16:27:19

Lowest channel



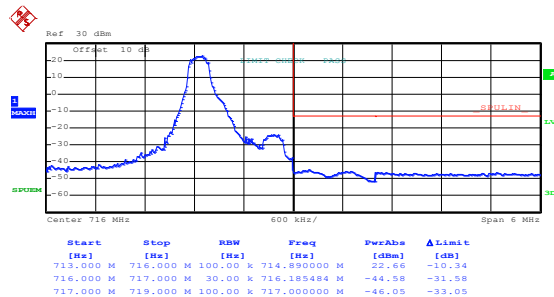
Date: 24.OCT.2019 16:27:41

Highest channel

LTE Band 12, BW: 1.4MHz
QPSK & RB Size 1

Date: 24.OCT.2019 16:26:52

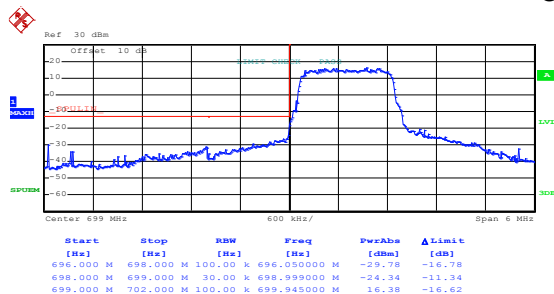
Lowest channel



Date: 24.OCT.2019 16:27:48

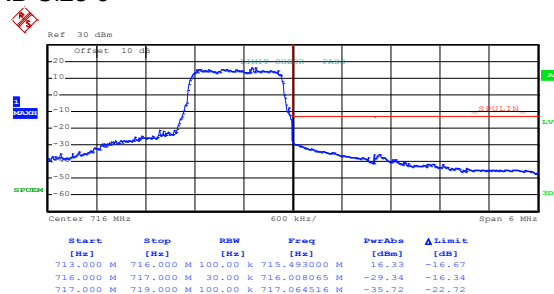
Highest channel

QPSK & RB Size 6



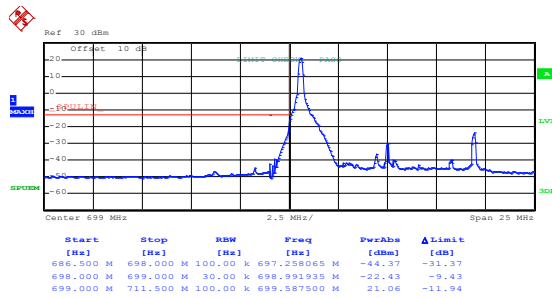
Date: 24.OCT.2019 16:27:06

Lowest channel



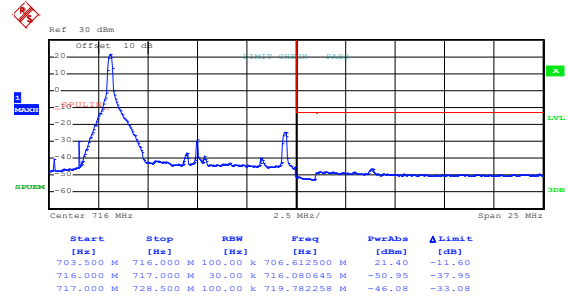
Date: 24.OCT.2019 16:27:37

Highest channel

LTE Band 12, BW: 10MHz
16QAM & RB Size 1

Date: 24.OCT.2019 16:29:40

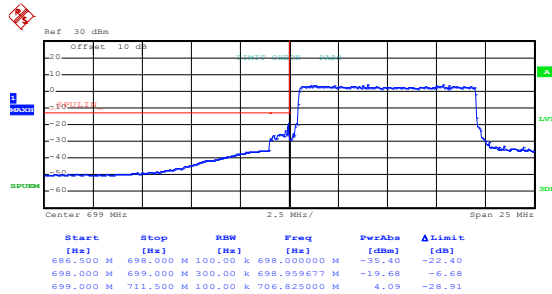
Lowest channel



Date: 24.OCT.2019 16:28:31

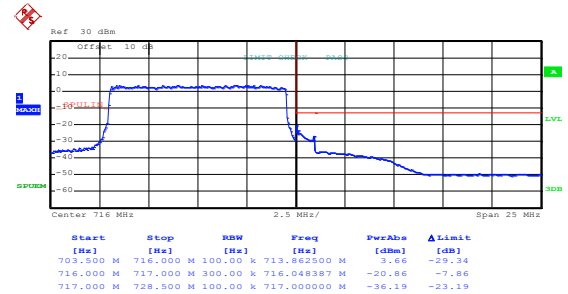
Highest channel

16QAM & RB Size 50



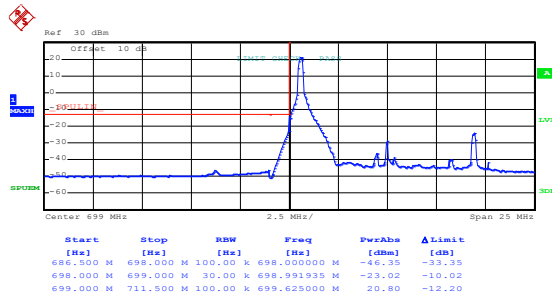
Date: 24.OCT.2019 16:29:20

Lowest channel



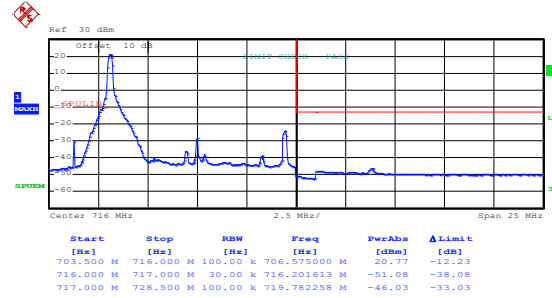
Date: 24.OCT.2019 16:28:51

Highest channel

LTE Band 12, BW: 10MHz
QPSK & RB Size 1

Date: 24.OCT.2019 16:29:31

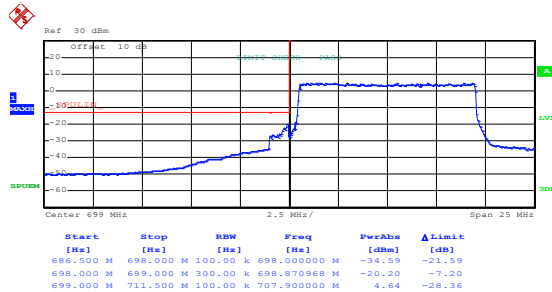
Lowest channel



Date: 24.OCT.2019 16:28:25

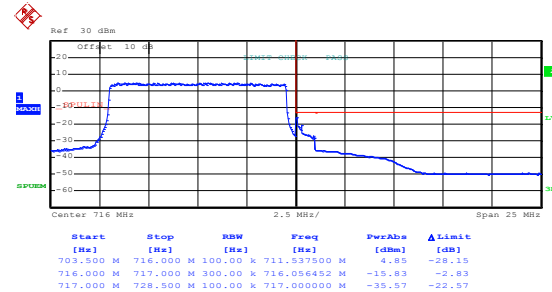
Highest channel

QPSK & RB Size 50



Date: 24.OCT.2019 16:29:15

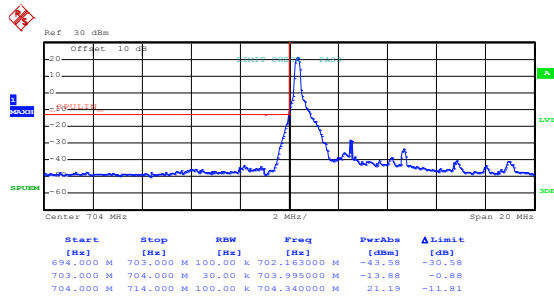
Lowest channel



Date: 24.OCT.2019 16:28:46

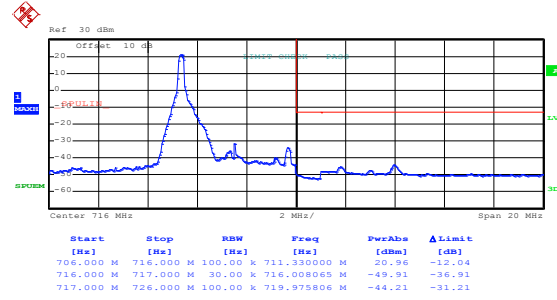
Highest channel

LTE Band 17 part:

LTE Band 17, BW: 5MHz
16QAM & RB Size 1

Date: 24.OCT.2019 16:30:35

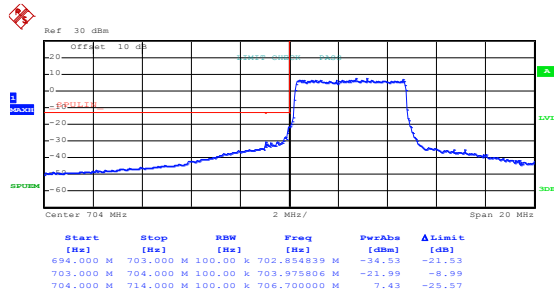
Lowest channel



Date: 24.OCT.2019 16:32:51

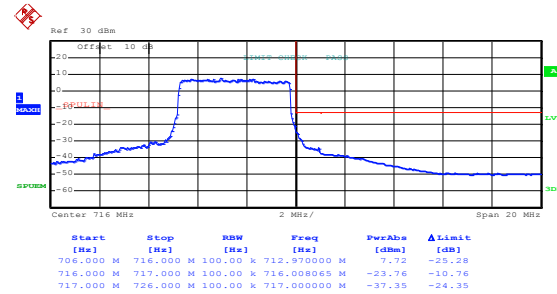
Highest channel

16QAM & RB Size 25



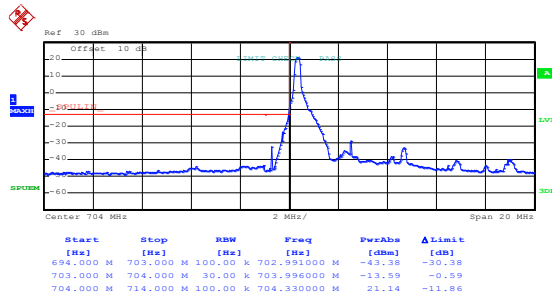
Date: 24.OCT.2019 16:31:05

Lowest channel



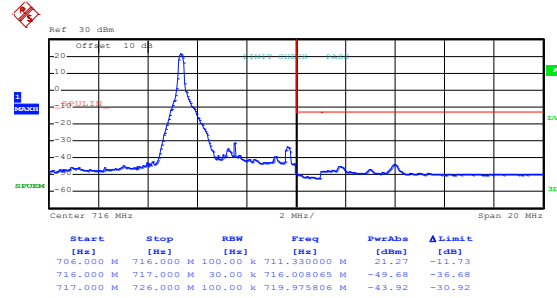
Date: 24.OCT.2019 16:32:33

Highest channel

LTE Band 17, BW: 5MHz
QPSK & RB Size 1

Date: 24.OCT.2019 16:30:30

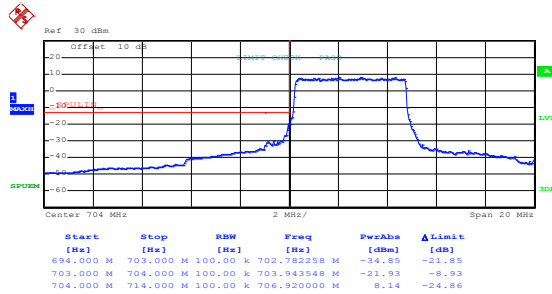
Lowest channel



Date: 24.OCT.2019 16:32:47

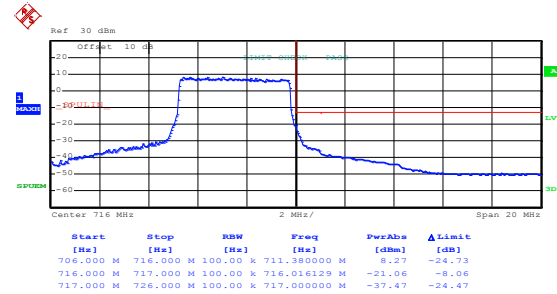
Highest channel

QPSK & RB Size 25



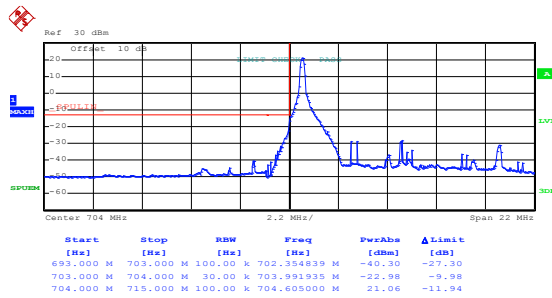
Date: 24.OCT.2019 16:31:01

Lowest channel



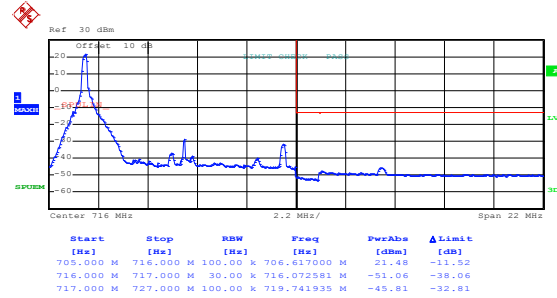
Date: 24.OCT.2019 16:32:26

Highest channel

LTE Band 17, BW: 10MHz
16QAM & RB Size 1

Date: 24.OCT.2019 16:37:06

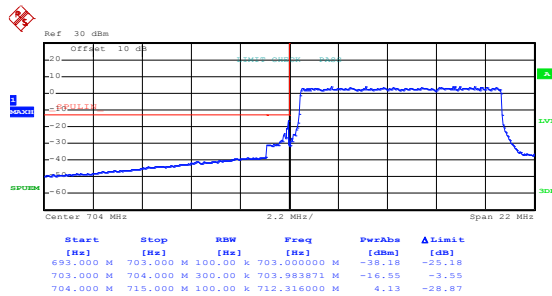
Lowest channel



Date: 24.OCT.2019 16:35:52

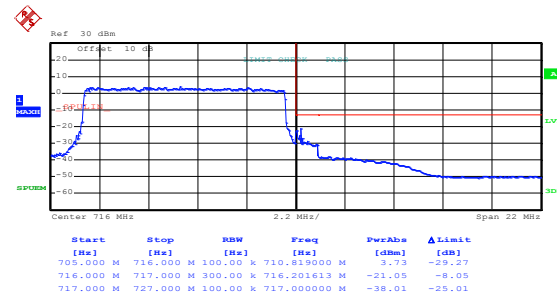
Highest channel

16QAM & RB Size 50



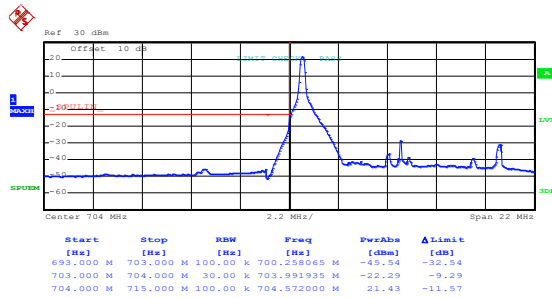
Date: 24.OCT.2019 16:36:44

Lowest channel



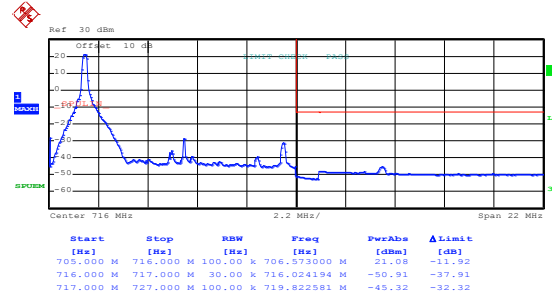
Date: 24.OCT.2019 16:36:10

Highest channel

LTE Band 17, BW: 10MHz
QPSK & RB Size 1

Date: 24.OCT.2019 16:37:01

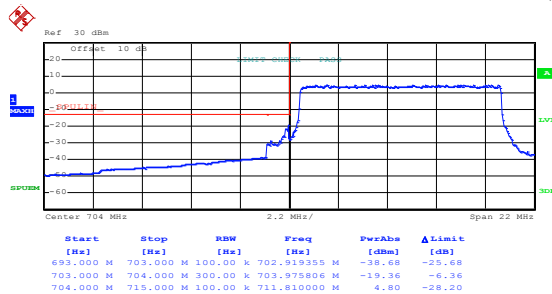
Lowest channel



Date: 24.OCT.2019 16:35:47

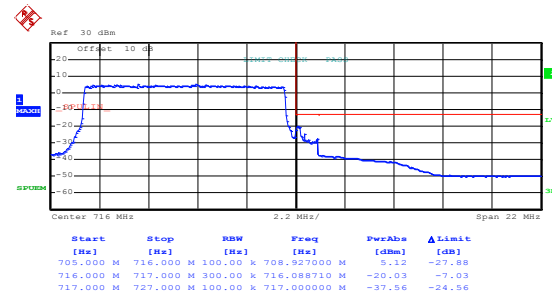
Highest channel

QPSK & RB Size 50



Date: 24.OCT.2019 16:36:37

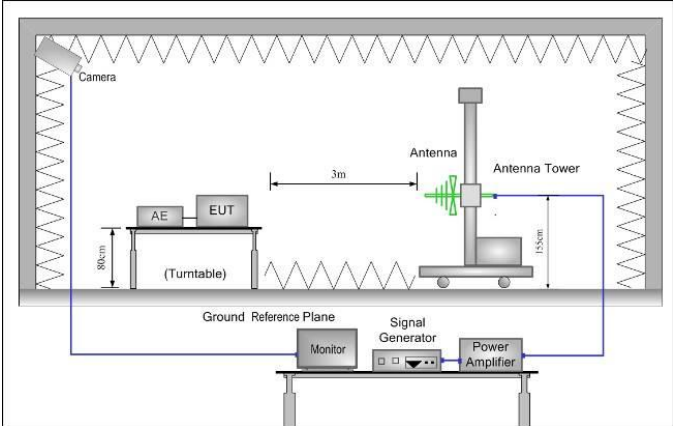
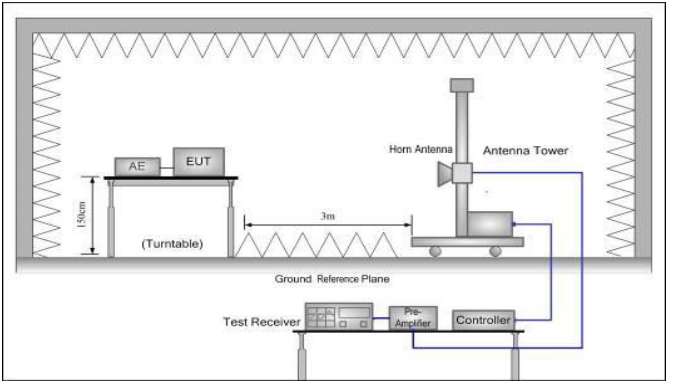
Lowest channel



Date: 24.OCT.2019 16:36:05

Highest channel

6.5 Field strength of spurious radiation measurement

Test Requirement:	Part 22.917(b), Part 24.238 (a), Part 27.53(g), Part 27.53(h)
Limit:	LTE Band 2 & 4 & 5 & 12 & 17: 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).
Test setup:	Below 1GHz  Above 1GHz 
Test Procedure:	1. The EUT was placed on an non-conductive turntable using a non-conductive support. 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. $ERP / EIRP = S.G. \text{ output (dBm)} + \text{Antenna Gain(dB/dBi)} - \text{Cable Loss (dB)}$
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:

LTE Band 2, WB: 1.4MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3701.40	Vertical	-46.93	-13.00	Pass
5552.10	V	-43.97		
7402.00	V	-39.91		
3701.40	Horizontal	-48.78		
5552.10	H	-44.04		
7402.00	H	-39.41		
Middle Channel				
3760.00	Vertical	-46.37	-13.00	Pass
5640.00	V	-43.82		
7520.00	V	-39.27		
3760.00	Horizontal	-48.57		
5640.00	H	-44.61		
7520.00	H	-39.37		
Highest Channel				
3816.60	Vertical	-46.57	-13.00	Pass
5724.90	V	-43.46		
7633.20	V	-39.27		
3816.60	Horizontal	-48.75		
5724.90	H	-44.64		
7633.20	H	-39.52		
Note: 1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report. 2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 2, WB: 20MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3720.00	Vertical	-46.42	-13.00	Pass
5580.00	V	-43.47		
7440.00	V	-39.50		
3720.00	Horizontal	-48.61		
5580.00	H	-44.11		
7440.00	H	-39.45		
Middle Channel				
3760.00	Vertical	-46.74	-13.00	Pass
5640.00	V	-43.85		
7520.00	V	-39.37		
3760.00	Horizontal	-48.45		
5640.00	H	-44.12		
7520.00	H	-39.44		
Highest Channel				
3800.00	Vertical	-46.56	-13.00	Pass
5700.00	V	-43.07		
7600.00	V	-39.28		
3800.00	Horizontal	-48.79		
5700.00	H	-44.44		
7600.00	H	-39.29		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 4 part:

LTE Band 4, WB: 1.4MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3421.40	Vertical	-49.64	-13.00	Pass
5132.10	V	-44.95		
6842.80	V	-39.52		
3421.40	Horizontal	-50.31		
5132.10	H	-44.34		
6842.80	H	-39.35		
Middle Channel				
3465.00	Vertical	-49.34	-13.00	Pass
5197.50	V	-44.51		
6930.00	V	-39.69		
3465.00	Horizontal	-50.29		
5197.50	H	-44.46		
6930.00	H	-39.93		
Highest Channel				
3508.60	Vertical	-49.63	-13.00	Pass
5262.90	V	-44.91		
7017.20	V	-39.38		
3508.60	Horizontal	-50.29		
5262.90	H	-44.23		
7017.20	H	-39.57		
Note: 1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report. 2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 4, WB: 20MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
3440.00	Vertical	-49.41	-13.00	Pass
5160.00	V	-44.32		
6880.00	V	-39.35		
3440.00	Horizontal	-50.22		
5160.00	H	-44.08		
6880.00	H	-39.91		
Middle Channel				
3465.00	Vertical	-49.34	-13.00	Pass
5197.50	V	-44.50		
6930.00	V	-39.45		
3465.00	Horizontal	-50.42		
5197.50	H	-44.71		
6930.00	H	-39.26		
Highest Channel				
3490.00	Vertical	-49.33	-13.00	Pass
5235.00	V	-44.90		
6980.00	V	-39.82		
3490.00	Horizontal	-50.84		
5235.00	H	-44.94		
6980.00	H	-39.89		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 5 part:

LTE Band 5, WB: 1.4MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1649.40	Vertical	-45.70	-13.00	Pass
2474.10	V	-56.47		
3298.80	V	-51.12		
1649.40	Horizontal	-51.89		
2474.10	H	-54.56		
3298.80	H	-51.02		
Middle Channel				
1673.00	Vertical	-45.16	-13.00	Pass
2509.50	V	-56.25		
3346.00	V	-51.33		
1673.00	Horizontal	-51.72		
2509.50	H	-54.50		
3346.00	H	-51.35		
Highest Channel				
1696.60	Vertical	-45.72	-13.00	Pass
2544.90	V	-56.06		
3393.20	V	-51.50		
1696.60	Horizontal	-51.22		
2544.90	H	-54.62		
3393.20	H	-51.42		
Note: 1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report. 2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 5, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1658.00	Vertical	-45.41	-13.00	Pass
2487.00	V	-56.42		
3316.00	V	-51.56		
1658.00	Horizontal	-51.39		
2487.00	H	-54.45		
3316.00	H	-51.55		
Middle Channel				
1673.00	Vertical	-45.57	-13.00	Pass
2509.50	V	-56.32		
3346.00	V	-51.36		
1673.00	Horizontal	-51.99		
2509.50	H	-54.32		
3346.00	H	-51.48		
Highest Channel				
1688.00	Vertical	-45.13	-13.00	Pass
2532.00	V	-56.12		
3376.00	V	-51.57		
1688.00	Horizontal	-51.42		
2532.00	H	-54.24		
3376.00	H	-51.96		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 12 part:

LTE Band 12, WB: 1.4MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1399.40	Vertical	-58.69	-13.00	Pass
2099.10	V	-56.04		
2798.80	V	-52.57		
1399.40	Horizontal	-58.59		
2099.10	H	-57.94		
2798.80	H	-52.53		
Middle Channel				
1415.00	Vertical	-58.32	-13.00	Pass
2122.50	V	-56.59		
2830.00	V	-52.34		
1415.00	Horizontal	-58.21		
2122.50	H	-57.28		
2830.00	H	-52.14		
Highest Channel				
1430.60	Vertical	-58.13	-13.00	Pass
2145.90	V	-56.29		
2861.20	V	-52.41		
1430.60	Horizontal	-58.12		
2145.90	H	-57.83		
2861.20	H	-52.67		
Note: 1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report. 2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

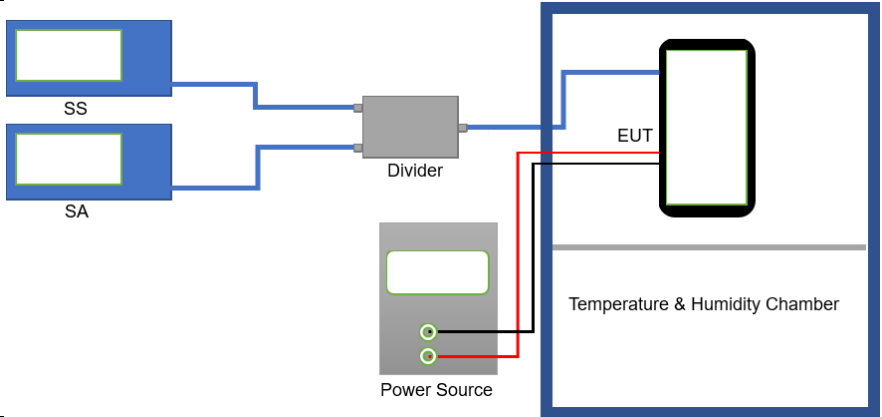
LTE Band 12, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1408.00	Vertical	-58.36	-13.00	Pass
2112.00	V	-56.37		
2816.00	V	-52.41		
1408.00	Horizontal	-58.67		
2112.00	H	-57.78		
2816.00	H	-52.39		
Middle Channel				
1415.00	Vertical	-58.32	-13.00	Pass
2122.50	V	-56.34		
2830.00	V	-52.14		
1415.00	Horizontal	-58.82		
2122.50	H	-57.99		
2830.00	H	-52.23		
Highest Channel				
1422.00	Vertical	-58.63	-13.00	Pass
2133.00	V	-56.45		
2844.00	V	-52.17		
1422.00	Horizontal	-58.03		
2133.00	H	-57.67		
2844.00	H	-52.63		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 17 part:

LTE Band 17, WB: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1413.00	Vertical	-57.50	-13.00	Pass
2119.50	V	-56.32		
2826.00	V	-52.54		
1413.00	Horizontal	-57.43		
2119.50	H	-57.63		
2826.00	H	-51.37		
Middle Channel				
1420.00	Vertical	-57.14	-13.00	Pass
2130.00	V	-56.21		
2840.00	V	-52.28		
1420.00	Horizontal	-57.13		
2130.00	H	-57.29		
2840.00	H	-51.32		
Highest Channel				
1427.00	Vertical	-57.41	-13.00	Pass
2140.50	V	-56.58		
2854.00	V	-52.36		
1427.00	Horizontal	-57.36		
2140.50	H	-57.12		
2854.00	H	-51.51		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 17, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
Lowest Channel				
1418.00	Vertical	-57.57	-13.00	Pass
2127.00	V	-56.56		
2836.00	V	-52.52		
1418.00	Horizontal	-57.50		
2127.00	H	-57.32		
2836.00	H	-51.54		
Middle Channel				
1420.00	Vertical	-57.12	-13.00	Pass
2130.00	V	-56.51		
2840.00	V	-52.33		
1420.00	Horizontal	-57.55		
2130.00	H	-57.15		
2840.00	H	-51.39		
Highest Channel				
1422.00	Vertical	-57.45	-13.00	Pass
2133.00	V	-56.36		
2844.00	V	-52.33		
1422.00	Horizontal	-57.41		
2133.00	H	-57.44		
2844.00	H	-51.23		
Note:				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the 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:	$\pm 2.5\text{ppm}$
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					
3.85	-30	199	0.105851	±2.5	Pass
	-20	155	0.082447		
	-10	163	0.086702		
	0	126	0.067021		
	10	188	0.100000		
	20	174	0.092553		
	30	114	0.060638		
	40	101	0.053723		
	50	155	0.082447		
16QAM					
3.85	-30	126	0.067021	±2.5	Pass
	-20	155	0.082447		
	-10	166	0.088298		
	0	122	0.064894		
	10	144	0.076596		
	20	140	0.074468		
	30	156	0.082979		
	40	138	0.073404		
	50	131	0.069681		
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	197	0.113709	±2.5	Pass
	-20	155	0.089466		
	-10	163	0.094084		
	0	121	0.069841		
	10	188	0.108514		
	20	174	0.100433		
	30	114	0.065801		
	40	105	0.060606		
	50	155	0.089466		
16QAM					
3.85	-30	130	0.075036	±2.5	Pass
	-20	150	0.086580		
	-10	166	0.095815		
	0	125	0.072150		
	10	144	0.083117		
	20	140	0.080808		
	30	156	0.090043		
	40	134	0.077345		
	50	110	0.063492		
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	180	0.215182	±2.5	Pass
	-20	151	0.180514		
	-10	165	0.197250		
	0	123	0.147041		
	10	181	0.216378		
	20	174	0.208010		
	30	114	0.136282		
	40	106	0.126718		
	50	154	0.184100		
16QAM					
3.85	-30	133	0.158996	±2.5	Pass
	-20	150	0.179319		
	-10	164	0.196055		
	0	128	0.153019		
	10	144	0.172146		
	20	140	0.167364		
	30	156	0.186491		
	40	134	0.160191		
	50	130	0.155409		
Note: Only the worst case shown in the report.					

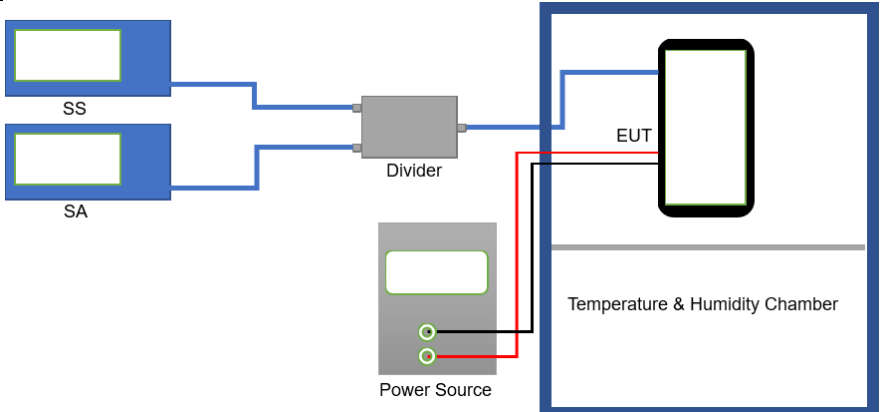
LTE Band 12 part:

Reference Frequency: LTE Band 12 (10MHz) Middle channel=23095 channel=707.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	199	0.281272	±2.5	Pass
	-20	154	0.217668		
	-10	160	0.226148		
	0	123	0.173852		
	10	184	0.260071		
	20	174	0.245936		
	30	111	0.156890		
	40	105	0.148410		
	50	155	0.219081		
16QAM					
3.85	-30	144	0.203534	±2.5	Pass
	-20	150	0.212014		
	-10	161	0.227562		
	0	125	0.176678		
	10	141	0.199293		
	20	140	0.197880		
	30	156	0.220495		
	40	134	0.189399		
	50	139	0.196466		
Note: Only the worst case shown in the report.					

LTE Band 17 part:

Reference Frequency: LTE Band 17 (10MHz) Middle channel=23790 channel=710.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	197	0.277465	±2.5	Pass
	-20	154	0.216901		
	-10	160	0.225352		
	0	126	0.177465		
	10	180	0.253521		
	20	171	0.240845		
	30	110	0.154930		
	40	101	0.142254		
	50	158	0.222535		
16QAM					
3.85	-30	157	0.221127	±2.5	Pass
	-20	160	0.225352		
	-10	144	0.202817		
	0	128	0.180282		
	10	140	0.197183		
	20	148	0.208451		
	30	151	0.212676		
	40	130	0.183099		
	50	136	0.191549		
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:	$\pm 2.5\text{ppm}$
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	4.40	87	0.046277	±2.5	Pass
	3.85	90	0.047872		
	3.50	73	0.038830		
16QAM					
25	4.40	99	0.052660	±2.5	Pass
	3.85	88	0.046809		
	3.50	71	0.037766		
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	98	0.056566	±2.5	Pass
	3.85	67	0.038672		
	3.50	79	0.045599		
16QAM					
25	4.40	87	0.050216	±2.5	Pass
	3.85	90	0.051948		
	3.50	74	0.042713		
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	99	0.118350	±2.5	Pass
	3.85	87	0.104005		
	3.50	90	0.107591		
16QAM					
25	4.40	96	0.114764	±2.5	Pass
	3.85	87	0.104005		
	3.50	74	0.088464		
Note: Only the worst case shown in the report.					

LTE Band 12 part:

Reference Frequency: LTE Band 12(10MHz) Middle channel=23095 channel=707.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.40	87	0.122968	±2.5	Pass
	3.85	90	0.127208		
	3.50	65	0.091873		
16QAM					
25	4.40	87	0.122968	±2.5	Pass
	3.85	90	0.127208		
	3.50	45	0.063604		
Note: Only the worst case shown in the report.					

Note: Only the worst case shown in the report.

LTE Band 17 part:

Reference Frequency: LTE Band 17(10MHz) Middle channel=23790 channel=710.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.40	97	0.136620	±2.5	Pass
	3.85	88	0.123944		
	3.50	60	0.084507		
16QAM					
25	4.40	80	0.112676	±2.5	Pass
	3.85	77	0.108451		
	3.50	90	0.126761		
Note: Only the worst case shown in the report.					

Note: Only the worst case shown in the report.