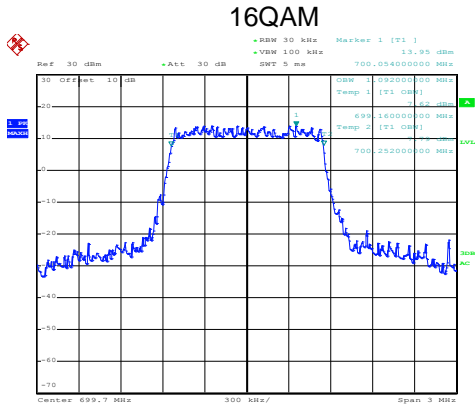
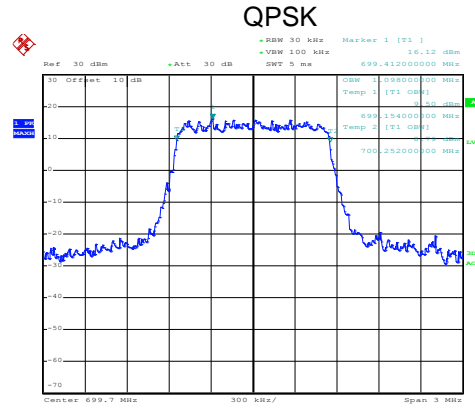


LTE Band 12 part:

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

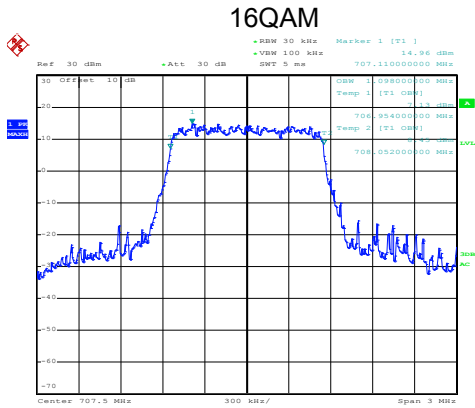


Date: 8.MAY.2020 15:11:24

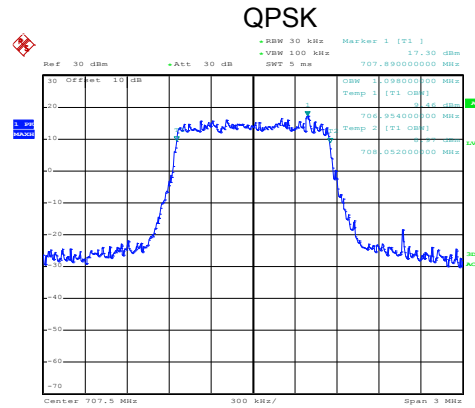


Date: 8.MAY.2020 15:11:21

Lowest channel

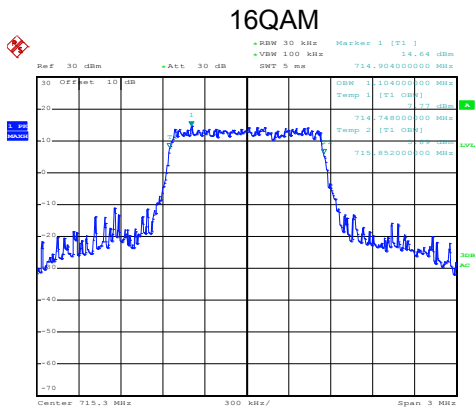


Date: 8.MAY.2020 15:11:41

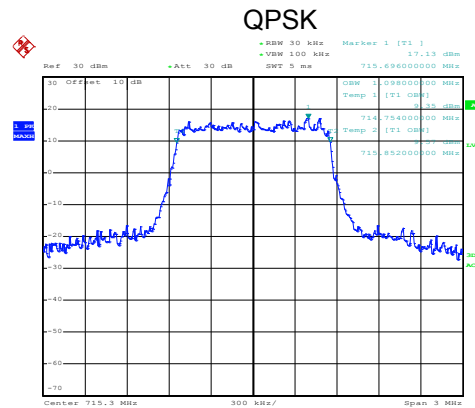


Date: 8.MAY.2020 15:11:35

Middle channel



Date: 8.MAY.2020 15:12:28

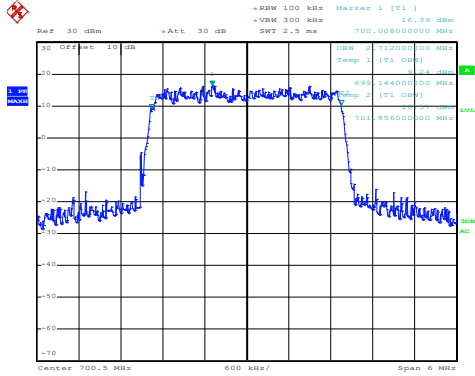


Date: 8.MAY.2020 15:12:23

Highest channel

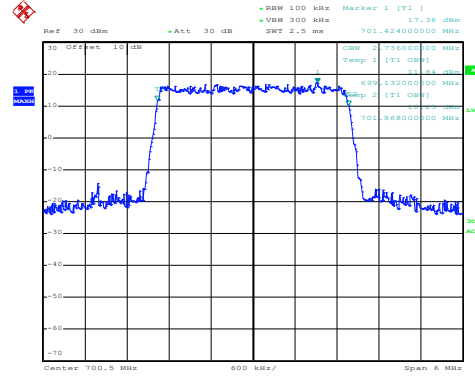
LTE Band 12: 99% Occupancy bandwidth
BW: 3MHz

16QAM



Date: 8.MAY.2020 15:09:43

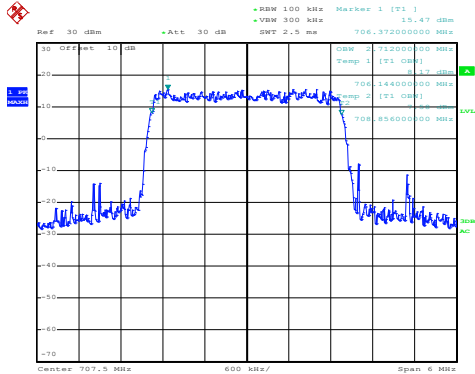
QPSK



Date: 8.MAY.2020 15:09:38

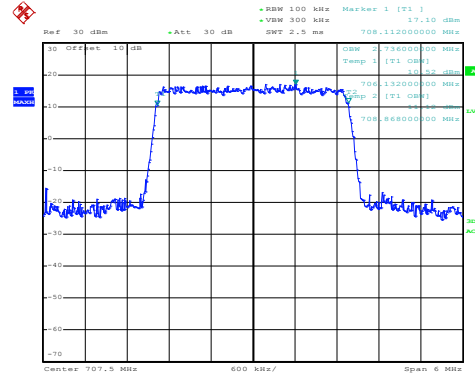
Lowest channel

16QAM



Date: 8.MAY.2020 15:10:16

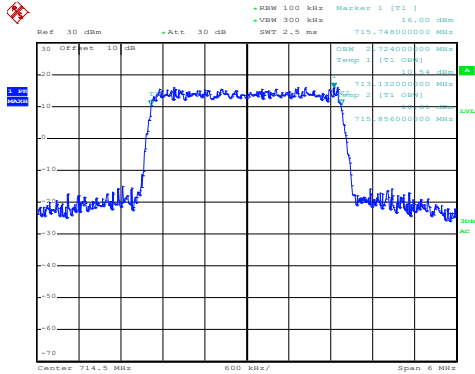
QPSK



Date: 8.MAY.2020 15:10:12

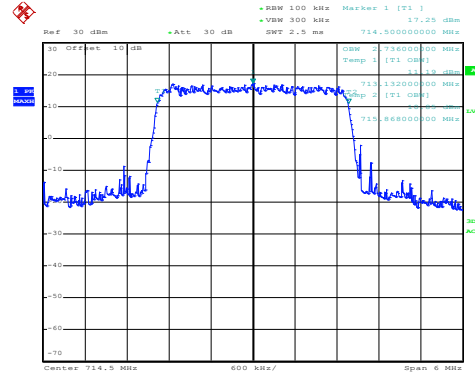
Middle channel

16QAM



Date: 8.MAY.2020 15:10:33

QPSK

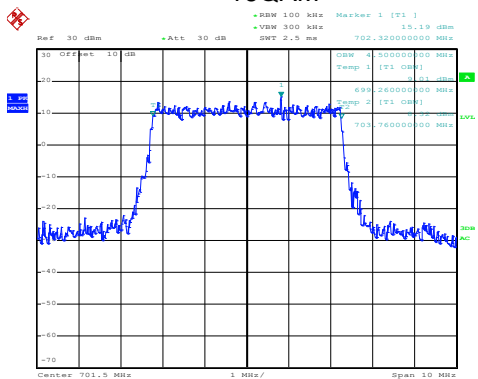


Date: 8.MAY.2020 15:10:29

Highest channel

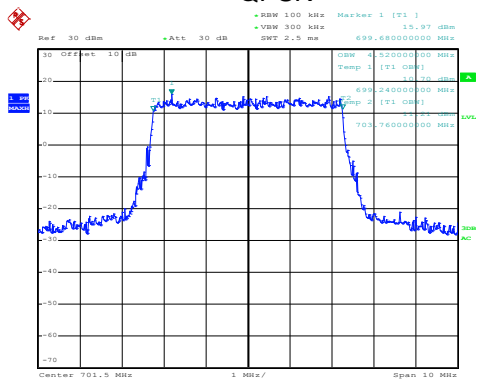
LTE Band 12: 99% Occupancy bandwidth
BW: 5MHz

16QAM



Date: 8.MAY.2020 15:08:22

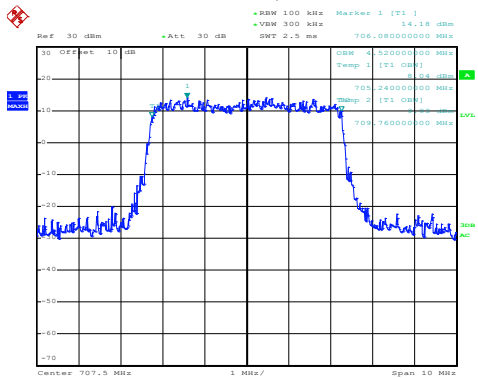
QPSK



Date: 8.MAY.2020 15:08:18

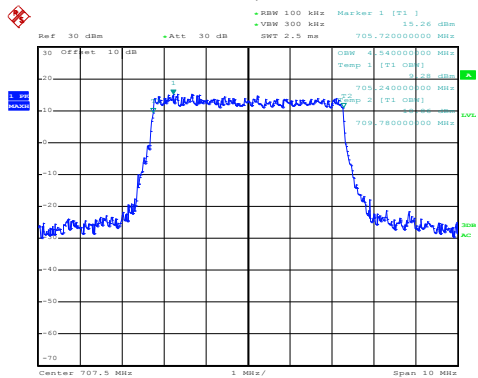
Lowest channel

16QAM



Date: 8.MAY.2020 15:08:37

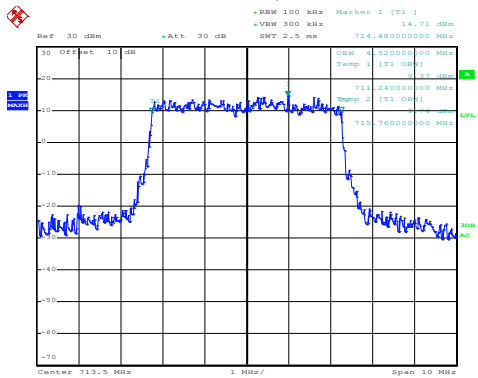
QPSK



Date: 8.MAY.2020 15:08:33

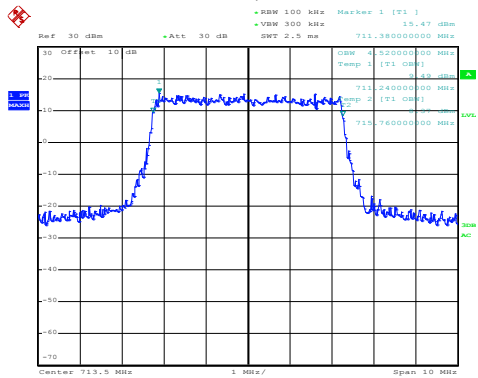
Middle channel

16QAM



Date: 8.MAY.2020 15:09:13

QPSK

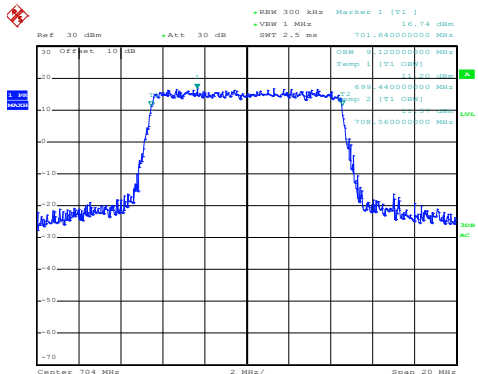


Date: 8.MAY.2020 15:09:10

Highest channel

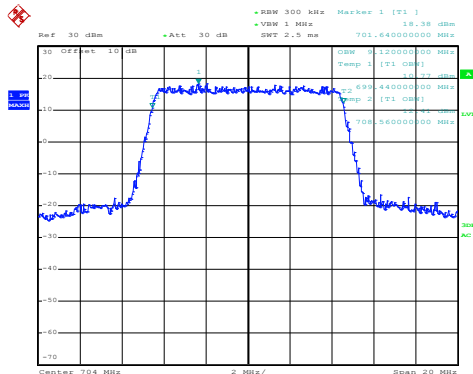
LTE Band 12: 99% Occupancy bandwidth
BW: 10MHz

16QAM



Date: 8.MAY.2020 15:06:32

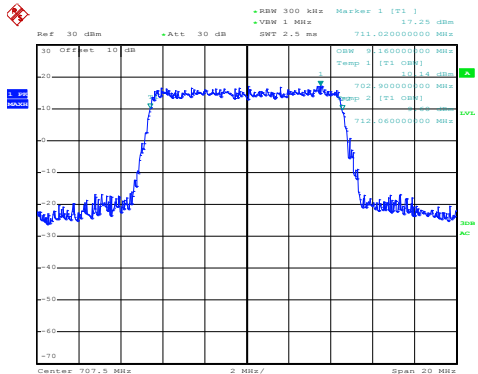
QPSK



Date: 8.MAY.2020 15:06:27

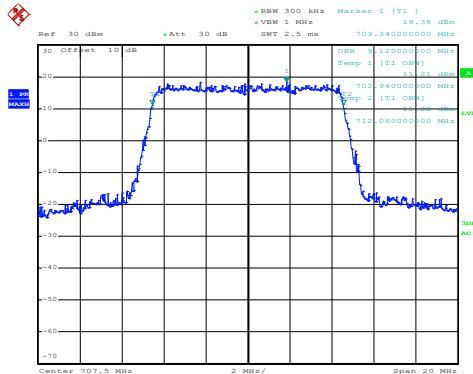
Lowest channel

16QAM



Date: 8.MAY.2020 15:07:11

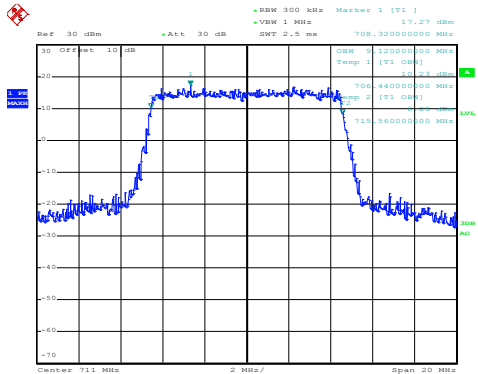
QPSK



Date: 8.MAY.2020 15:07:06

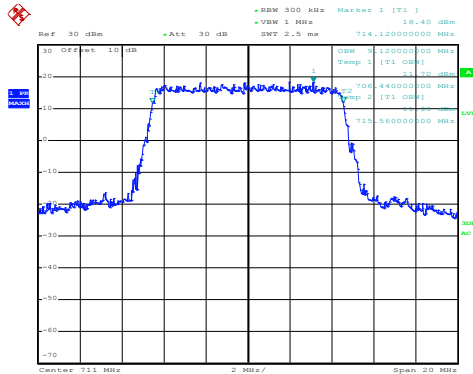
Middle channel

16QAM



Date: 8.MAY.2020 15:07:25

QPSK

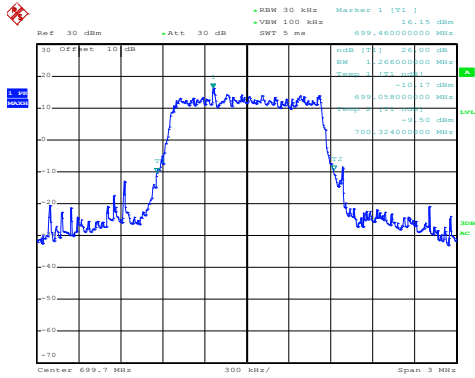


Date: 8.MAY.2020 15:07:21

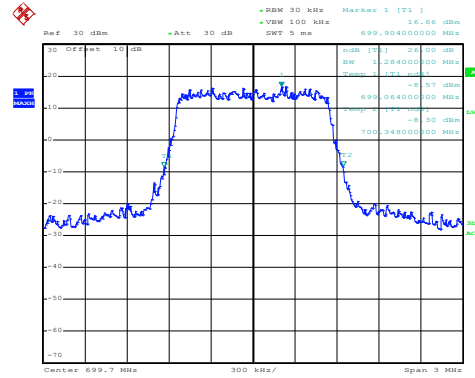
Highest channel

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

16QAM

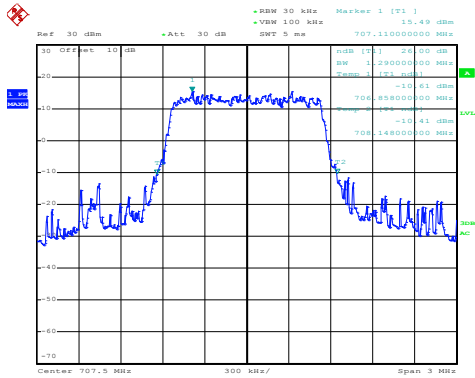


QPSK

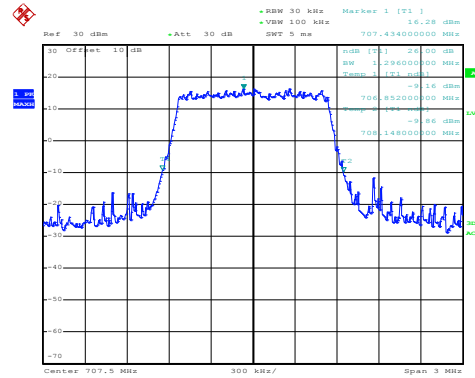


Lowest channel

16QAM

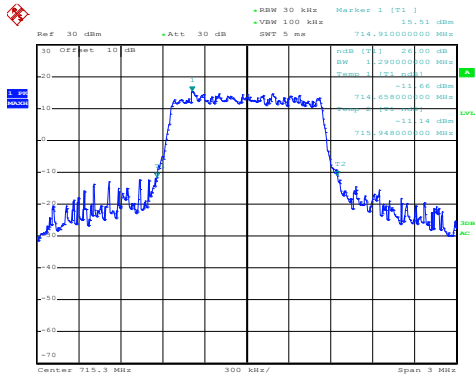


QPSK

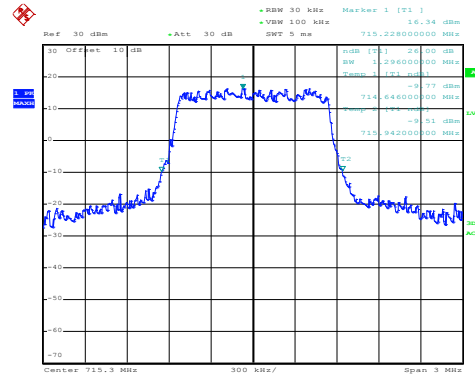


Middle channel

16QAM



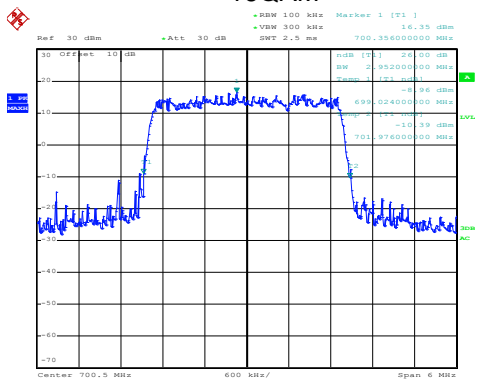
QPSK



Highest channel

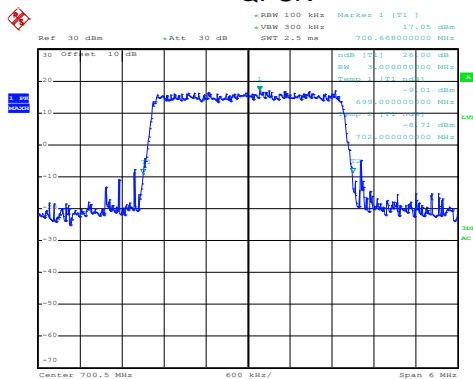
LTE Band 12: -26dBc bandwidth
BW: 3MHz

16QAM



Date: 8.MAY.2020 15:09:54

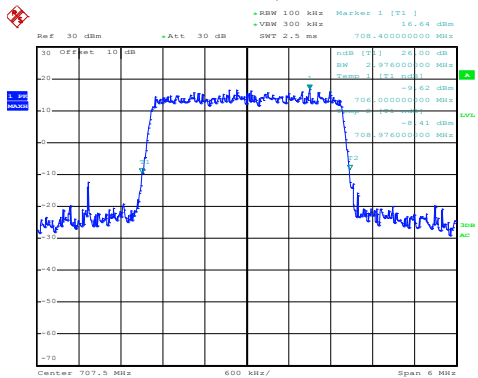
QPSK



Date: 8.MAY.2020 15:09:50

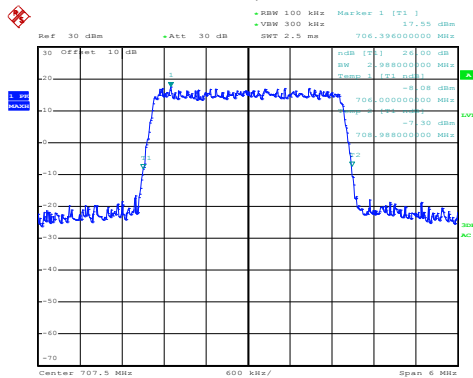
Lowest channel

16QAM



Date: 8.MAY.2020 15:10:06

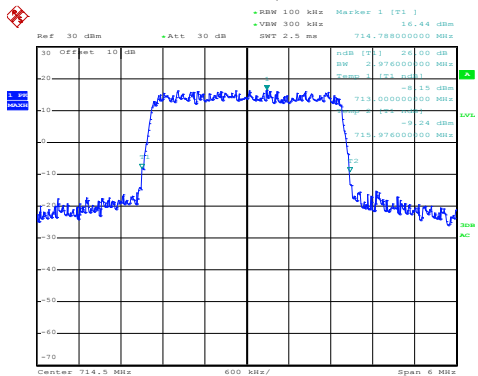
QPSK



Date: 8.MAY.2020 15:10:02

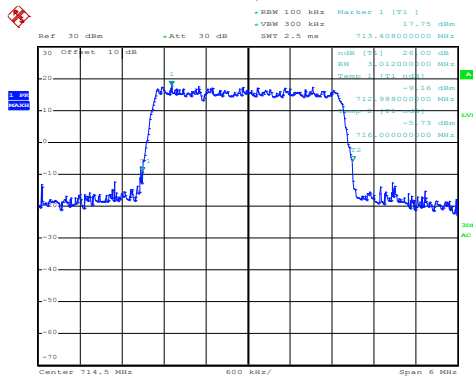
Middle channel

16QAM



Date: 8.MAY.2020 15:10:44

QPSK

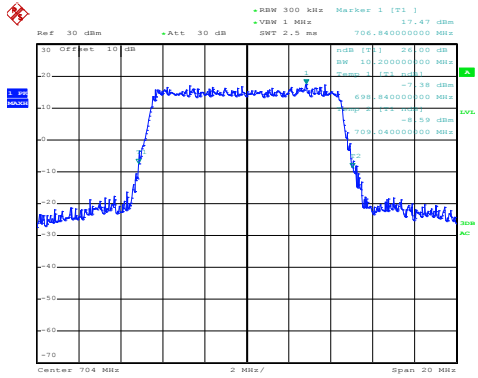


Date: 8.MAY.2020 15:10:40

Highest channel

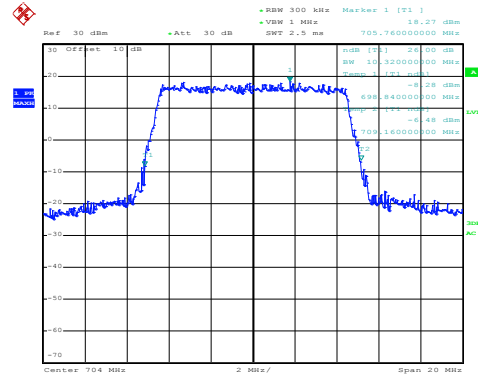
LTE Band 12: -26dBc bandwidth
BW: 10MHz

16QAM



Date: 8.MAY.2020 15:06:45

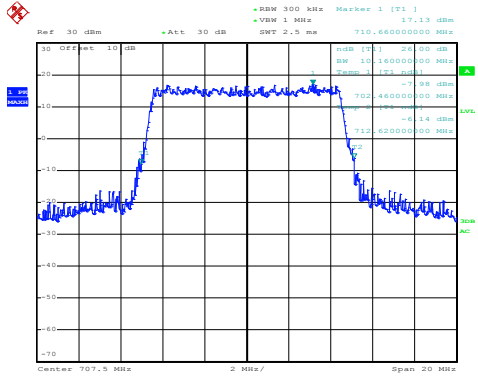
QPSK



Date: 8.MAY.2020 15:06:40

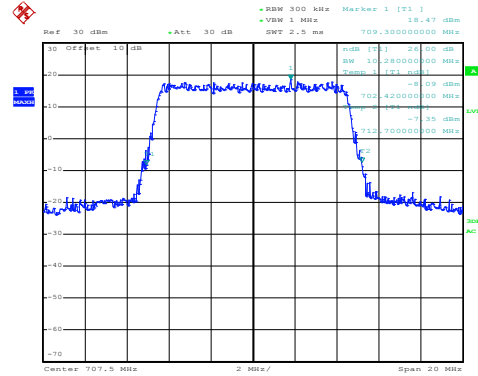
Lowest channel

16QAM



Date: 8.MAY.2020 15:06:59

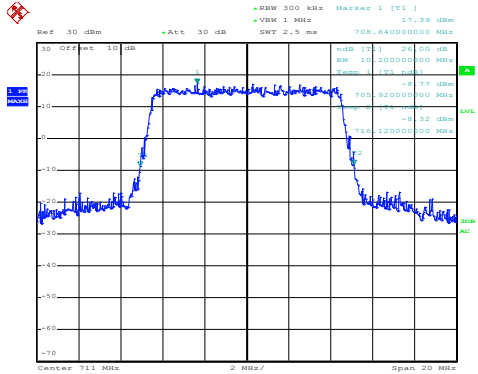
QPSK



Date: 8.MAY.2020 15:06:55

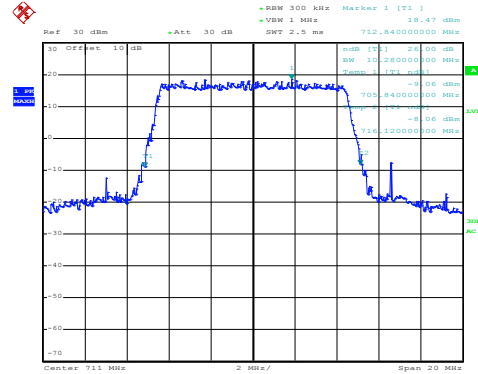
Middle channel

16QAM



Date: 8.MAY.2020 15:07:37

QPSK

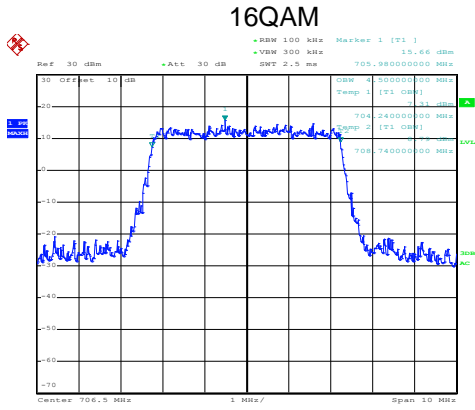


Date: 8.MAY.2020 15:07:33

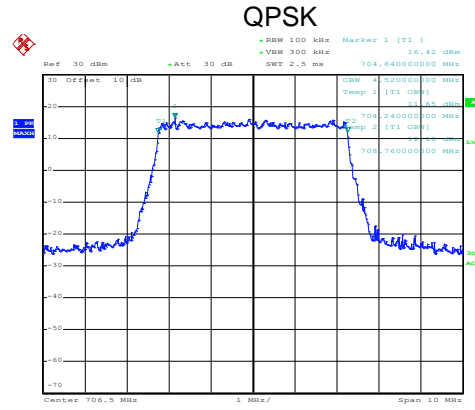
Highest channel

LTE Band 17 part:

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

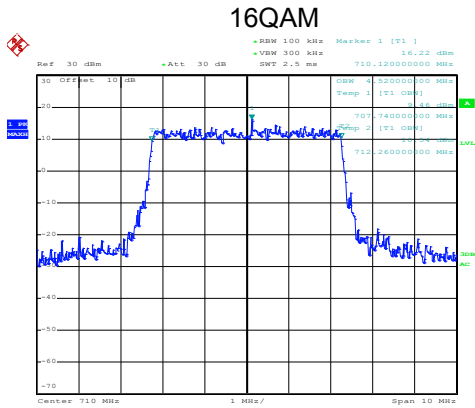


Date: 8.MAY.2020 15:03:04

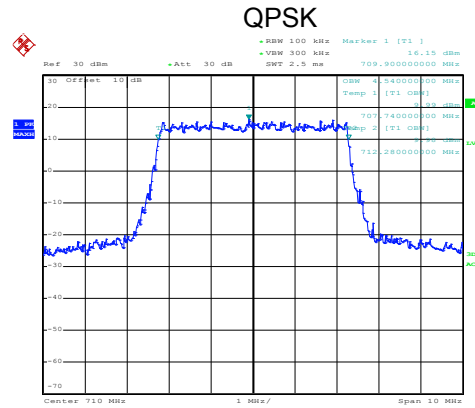


Date: 8.MAY.2020 15:02:58

Lowest channel

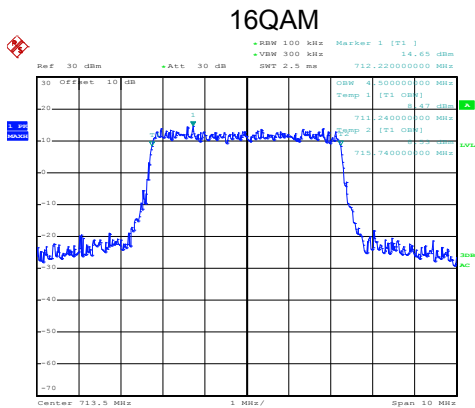


Date: 8.MAY.2020 15:03:49

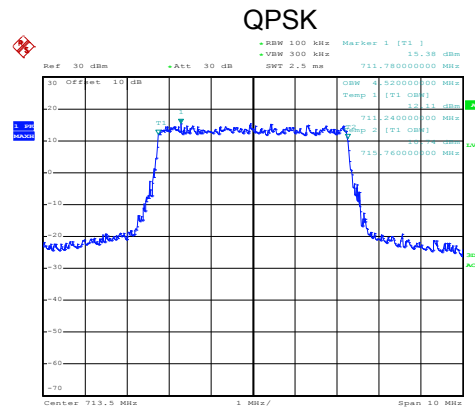


Date: 8.MAY.2020 15:03:45

Middle channel



Date: 8.MAY.2020 15:04:04

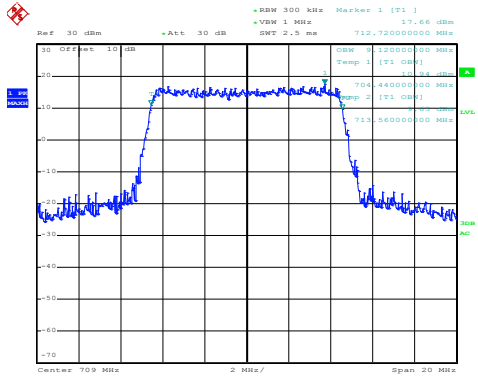


Date: 8.MAY.2020 15:04:00

Highest channel

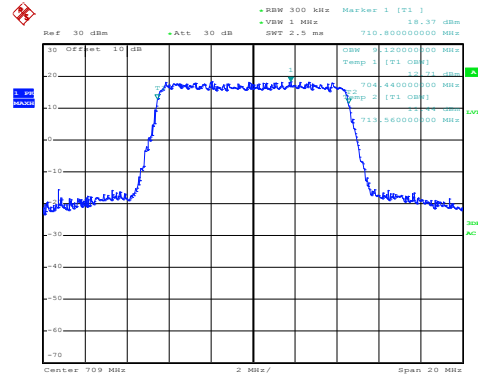
LTE Band 17: 99% Occupancy bandwidth BW: 10MHz

16QAM



Date: 8.MAY.2020 15:05:05

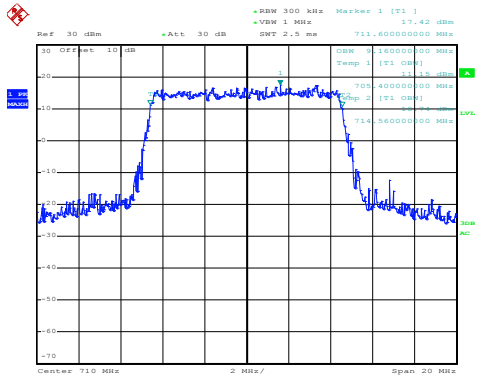
QPSK



Date: 8.MAY.2020 15:05:01

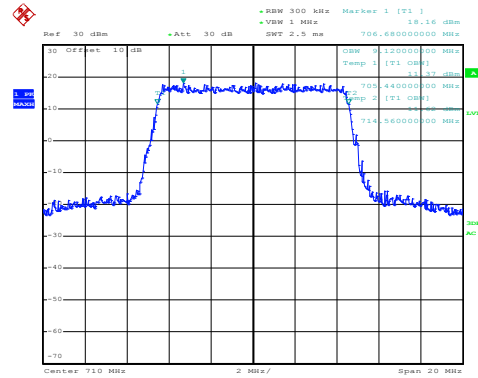
Lowest channel

16QAM



Date: 8.MAY.2020 15:05:22

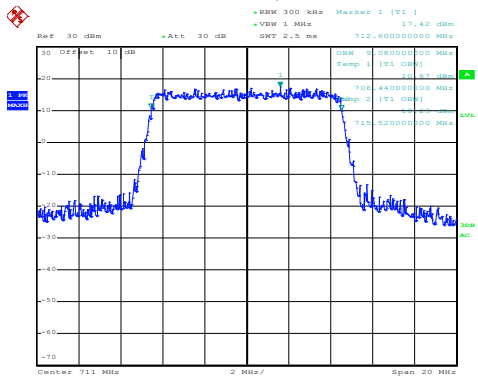
QPSK



Date: 8.MAY.2020 15:05:18

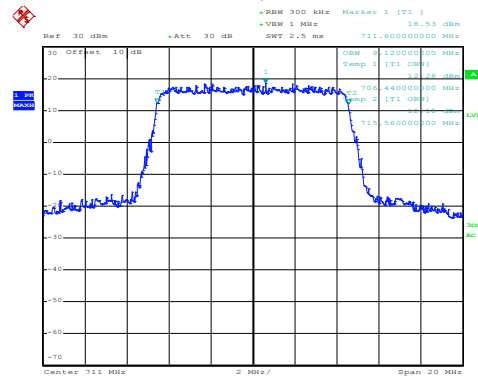
Middle channel

16QAM



Date: 8.MAY.2020 15:06:07

QPSK

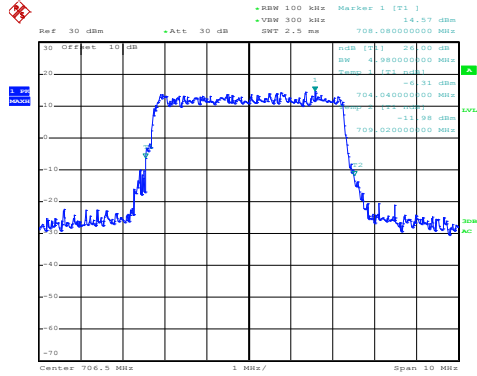


Date: 8.MAY.2020 15:06:03

Highest channel

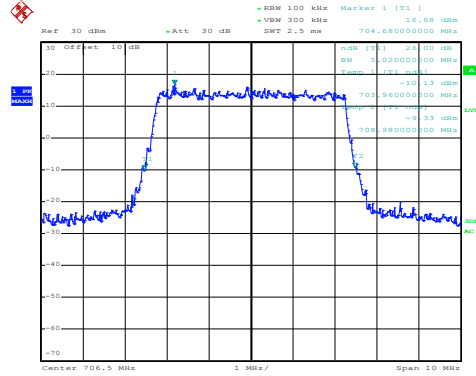
LTE Band 17: -26dBc bandwidth
BW: 5MHz

16QAM



Date: 8.MAY.2020 15:03:19

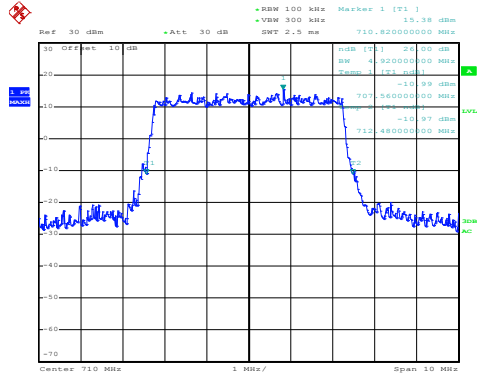
QPSK



Date: 8.MAY.2020 15:03:14

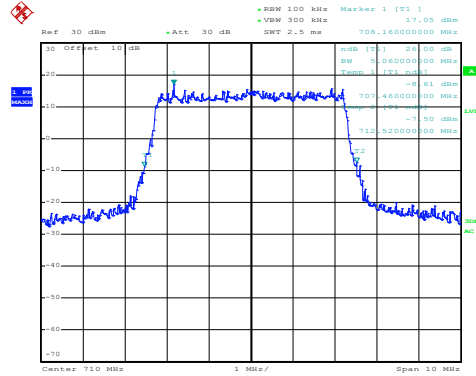
Lowest channel

16QAM



Date: 8.MAY.2020 15:03:34

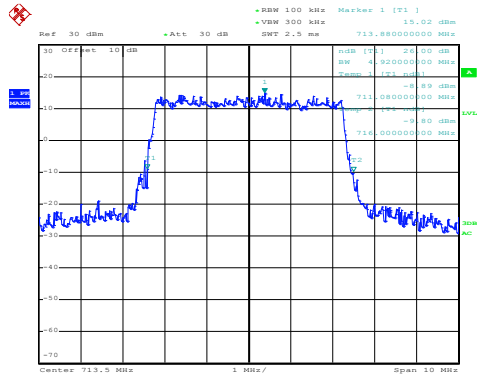
QPSK



Date: 8.MAY.2020 15:03:29

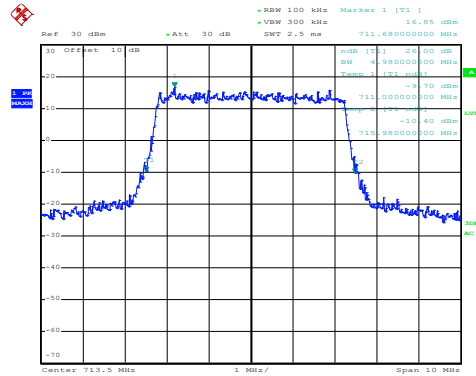
Middle channel

16QAM



Date: 8.MAY.2020 15:04:15

QPSK

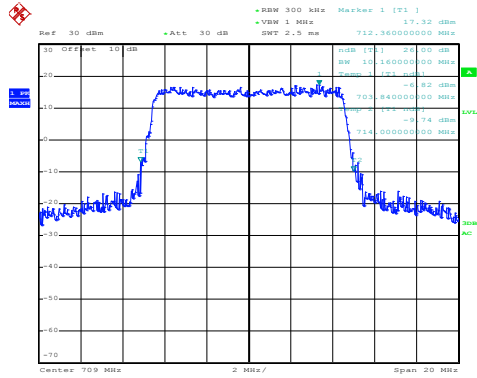


Date: 8.MAY.2020 15:04:11

Highest channel

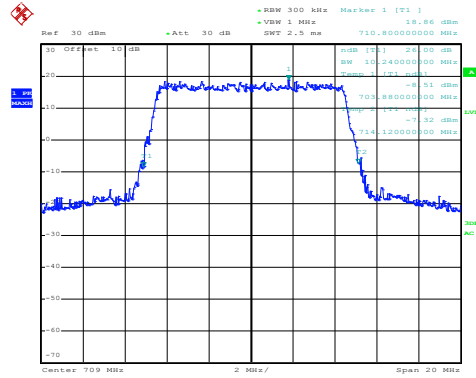
LTE Band 17: -26dBc bandwidth
BW: 10MHz

16QAM



Date: 8.MAY.2020 15:04:52

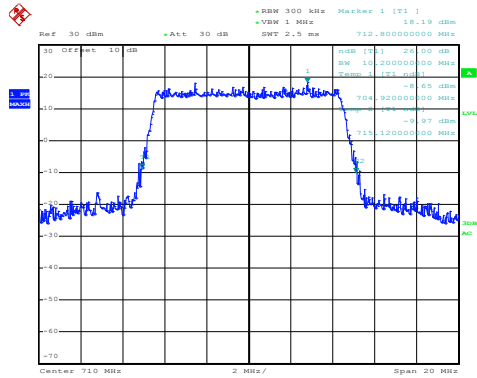
QPSK



Date: 8.MAY.2020 15:04:47

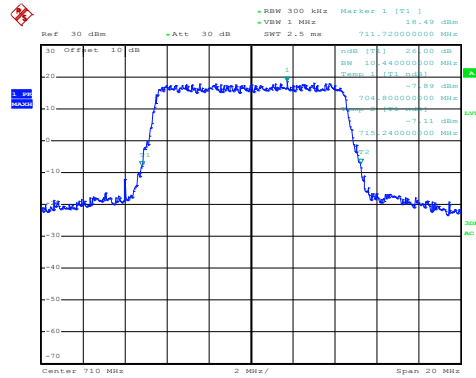
Lowest channel

16QAM



Date: 8.MAY.2020 15:05:34

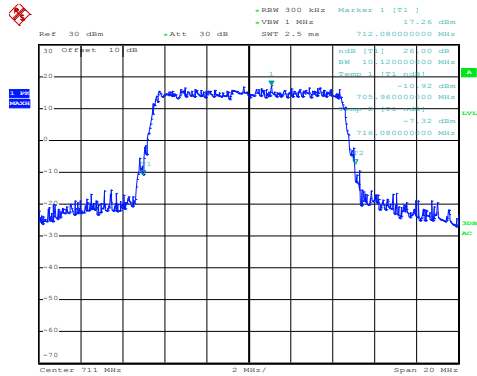
QPSK



Date: 8.MAY.2020 15:05:30

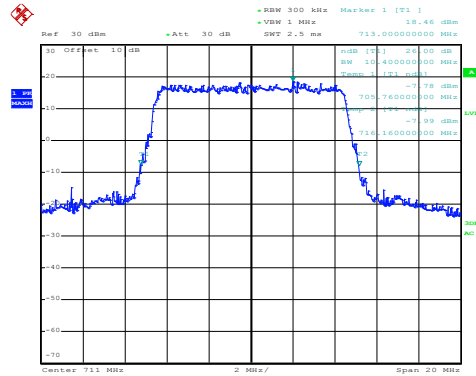
Middle channel

16QAM



Date: 8.MAY.2020 15:05:56

QPSK



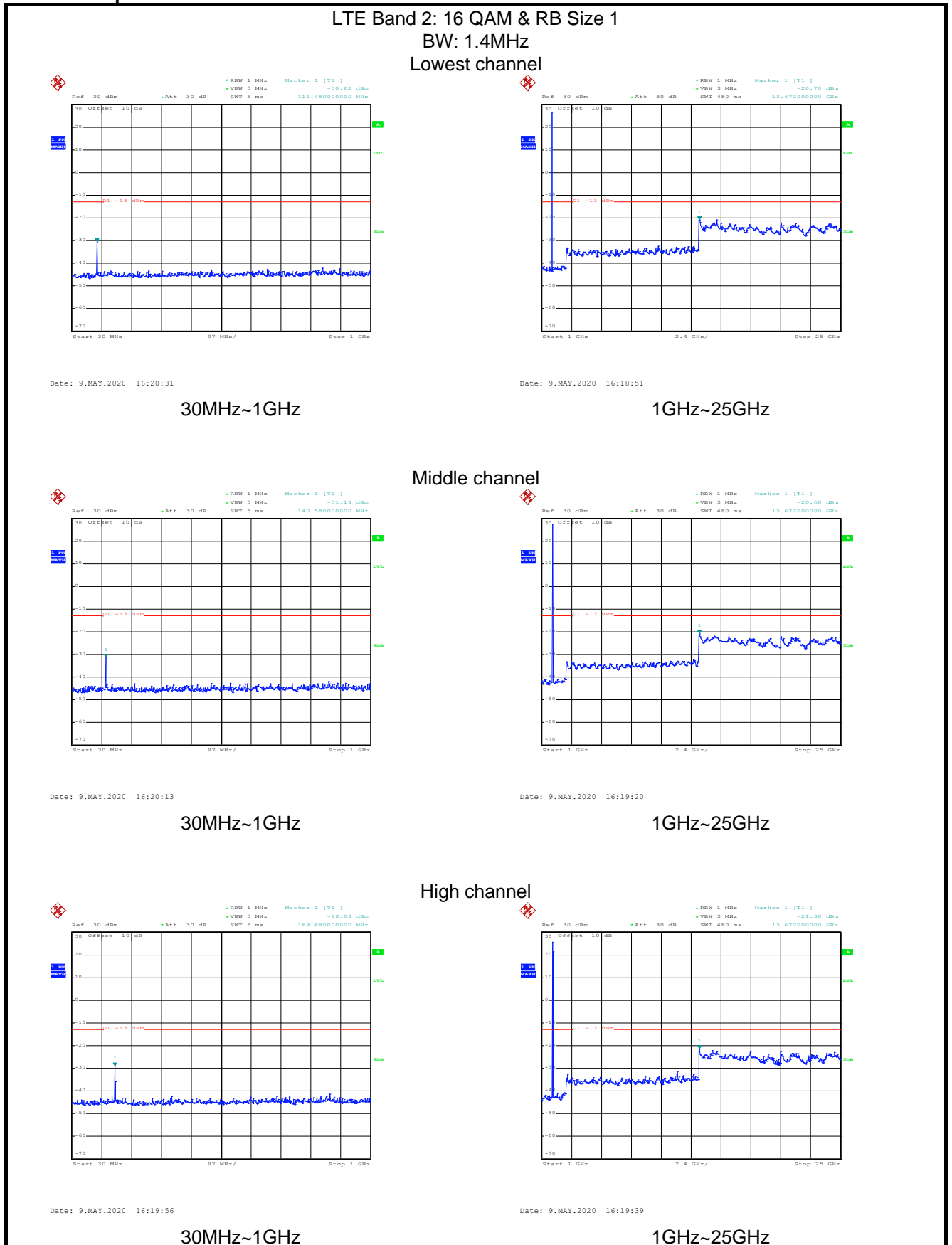
Date: 8.MAY.2020 15:05:52

Highest channel

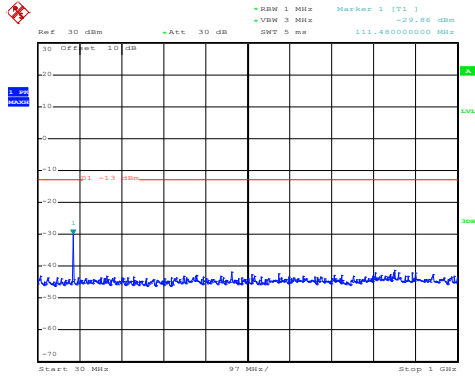
6.4 Out of band emission at antenna terminals

| | |
|-------------------|---|
| Test Requirement: | Part 22.917(a), 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: | |
| Test Procedure: | <ol style="list-style-type: none"> 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:

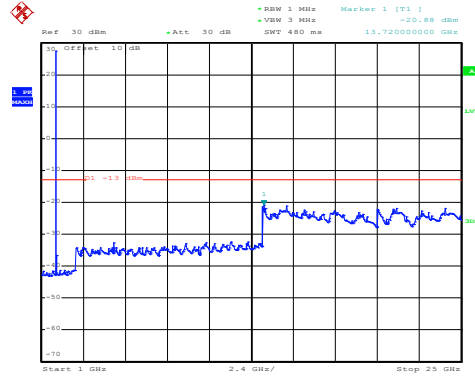


LTE Band 2: QPSK & RB Size 1 BW: 1.4MHz Lowest channel



Date: 9.MAY.2020 16:20:25

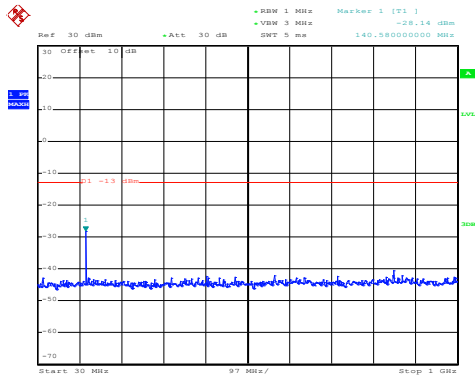
30MHz~1GHz



Date: 9.MAY.2020 16:18:41

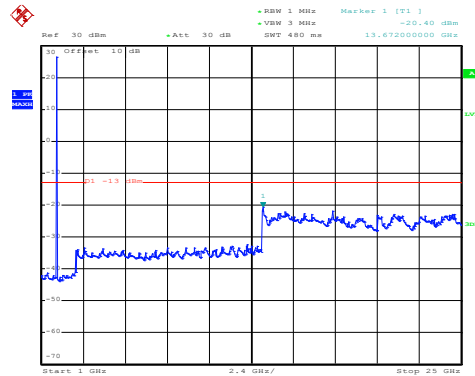
1GHz~25GHz

Middle channel



Date: 9.MAY.2020 16:20:07

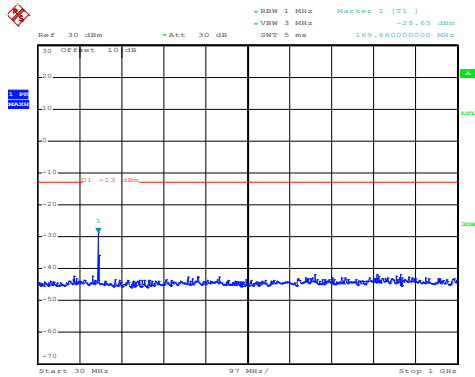
30MHz~1GHz



Date: 9.MAY.2020 16:19:03

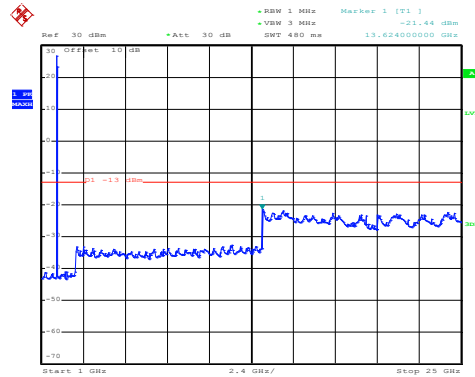
1GHz~25GHz

High channel



Date: 9.MAY.2020 16:19:50

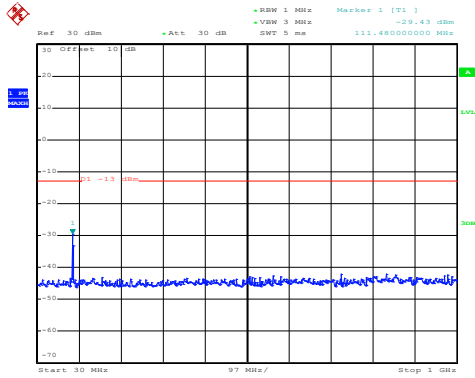
30MHz~1GHz



Date: 9.MAY.2020 16:19:33

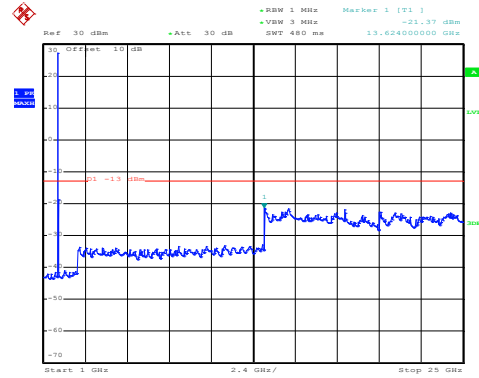
1GHz~25GHz

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



Date: 9.MAY.2020 16:16:25

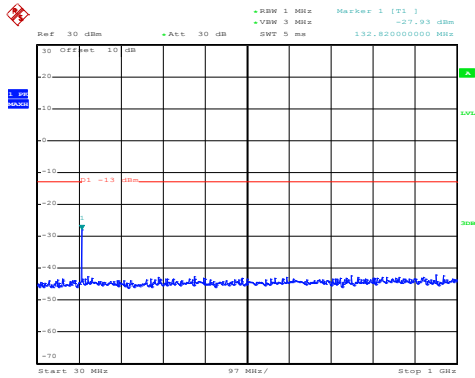
30MHz~1GHz



Date: 9.MAY.2020 16:18:11

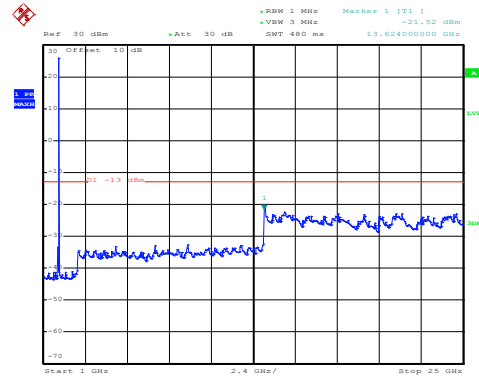
1GHz~25GHz

Middle channel



Date: 9.MAY.2020 16:16:42

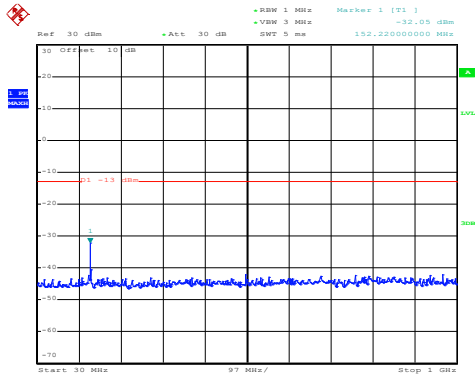
30MHz~1GHz



Date: 9.MAY.2020 16:17:43

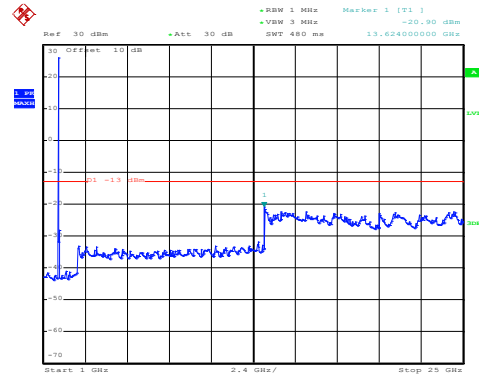
1GHz~25GHz

High channel



Date: 9.MAY.2020 16:17:00

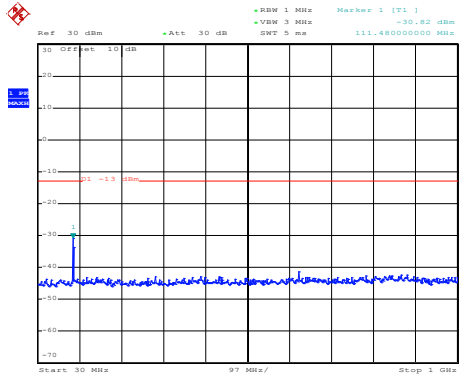
30MHz~1GHz



Date: 9.MAY.2020 16:17:23

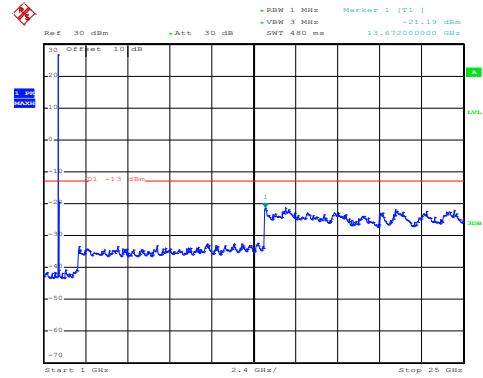
1GHz~25GHz

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



Date: 9.MAY.2020 16:16:19

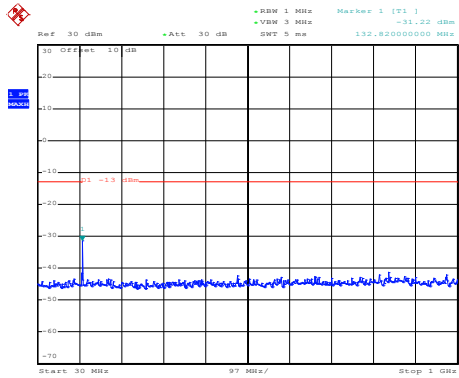
30MHz~1GHz



Date: 9.MAY.2020 16:18:02

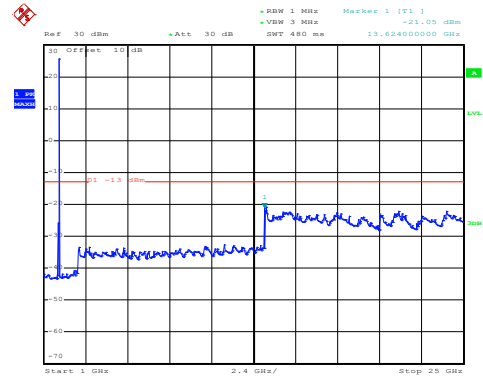
1GHz~25GHz

Middle channel



Date: 9.MAY.2020 16:16:34

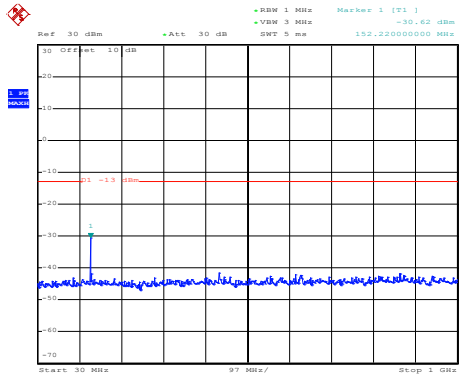
30MHz~1GHz



Date: 9.MAY.2020 16:17:36

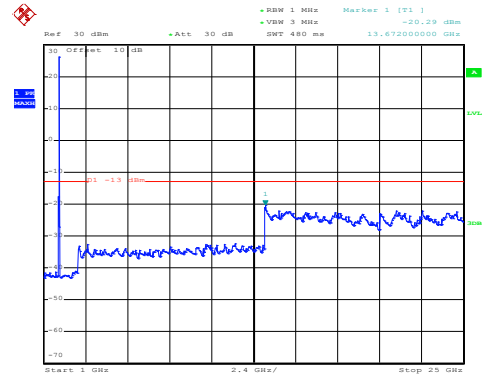
1GHz~25GHz

High channel



Date: 9.MAY.2020 16:16:53

30MHz~1GHz

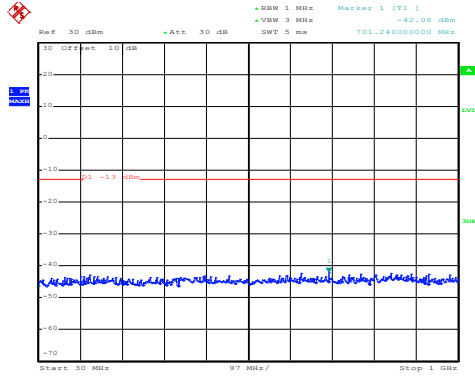


Date: 9.MAY.2020 16:17:16

1GHz~25GHz

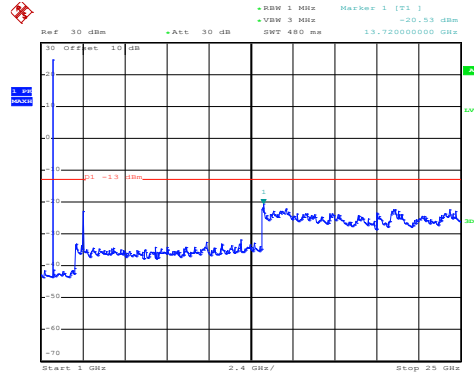
LTE Band 4 part:

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



Date: 9.MAY.2020 16:20:47

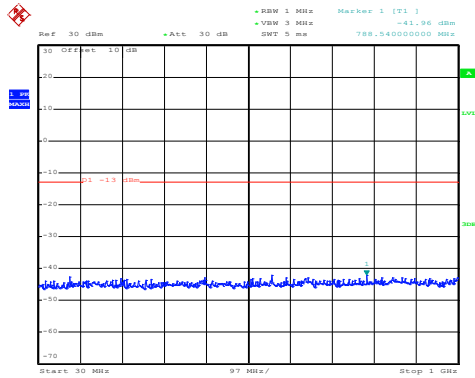
30MHz~1GHz



Date: 9.MAY.2020 16:22:33

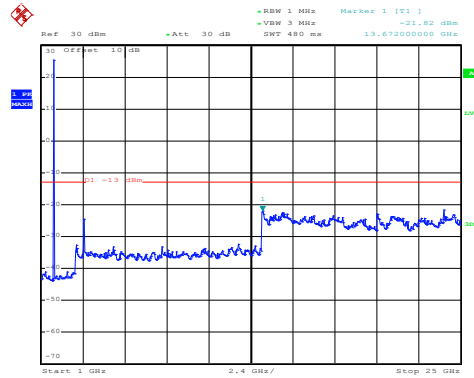
1GHz~25GHz

Middle channel



Date: 9.MAY.2020 16:21:03

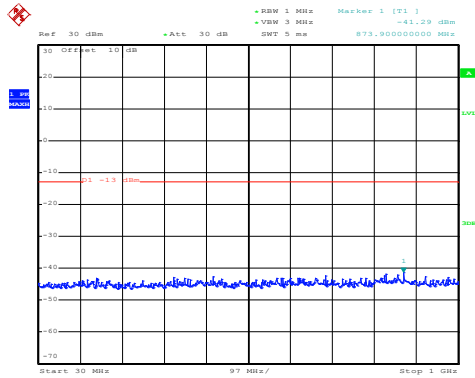
30MHz~1GHz



Date: 9.MAY.2020 16:22:11

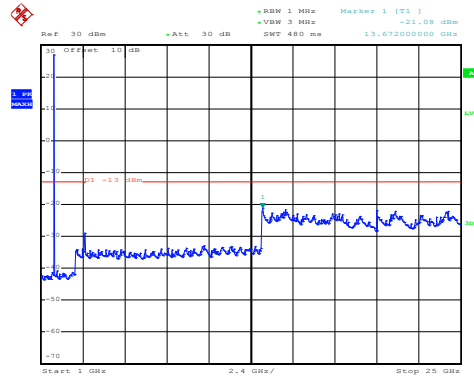
1GHz~25GHz

High channel



Date: 9.MAY.2020 16:21:19

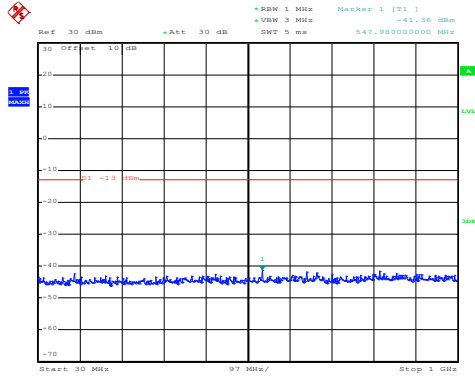
30MHz~1GHz



Date: 9.MAY.2020 16:21:46

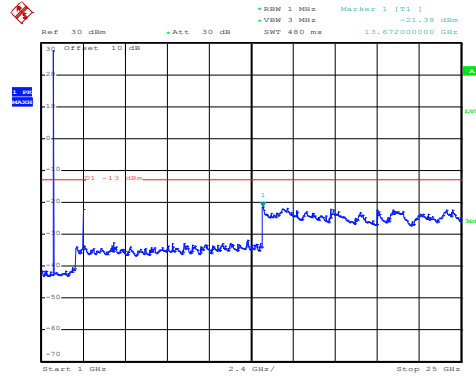
1GHz~25GHz

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



Date: 9.MAY.2020 16:20:41

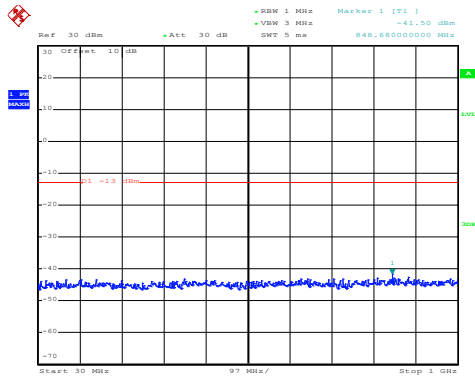
30MHz~1GHz



Date: 9.MAY.2020 16:22:27

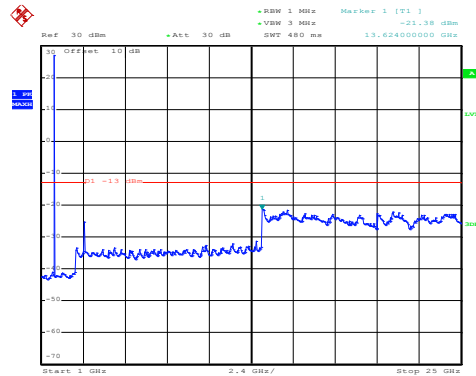
1GHz~25GHz

Middle channel



Date: 9.MAY.2020 16:20:58

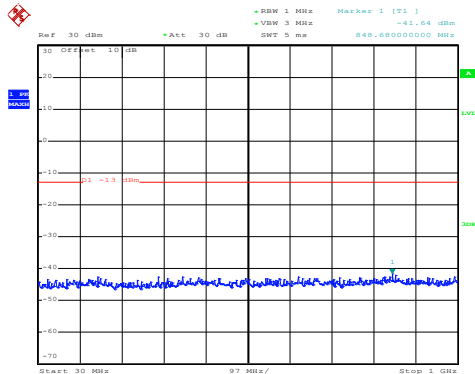
30MHz~1GHz



Date: 9.MAY.2020 16:22:04

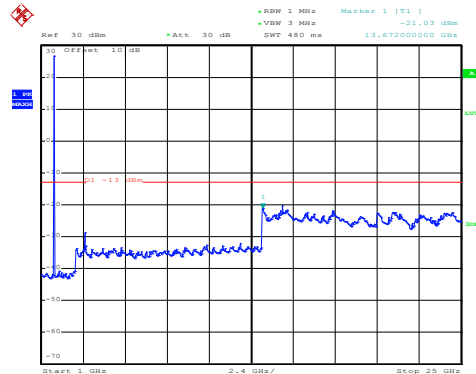
1GHz~25GHz

High channel



Date: 9.MAY.2020 16:21:14

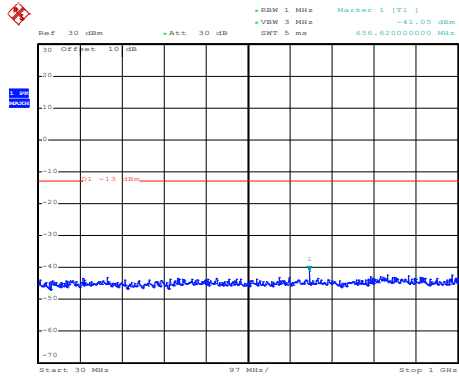
30MHz~1GHz



Date: 9.MAY.2020 16:21:38

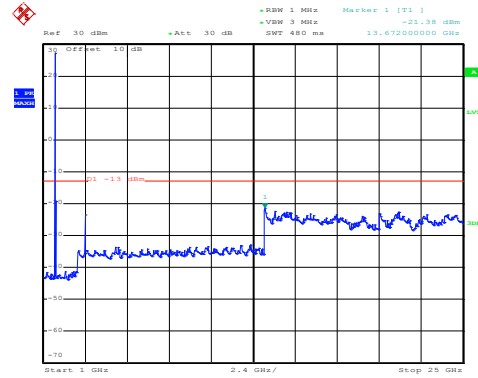
1GHz~25GHz

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



Date: 9.MAY.2020 16:15:34

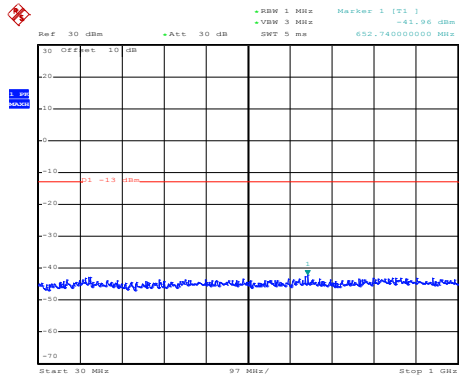
30MHz~1GHz



Date: 9.MAY.2020 16:15:14

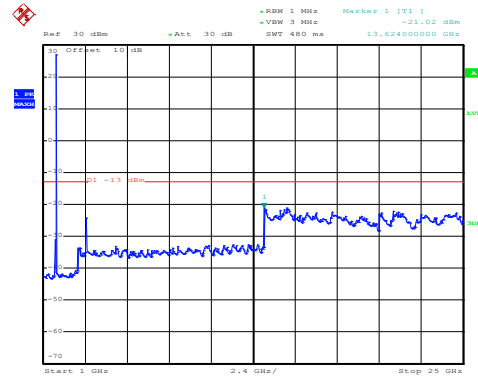
1GHz~25GHz

Middle channel



Date: 9.MAY.2020 16:15:48

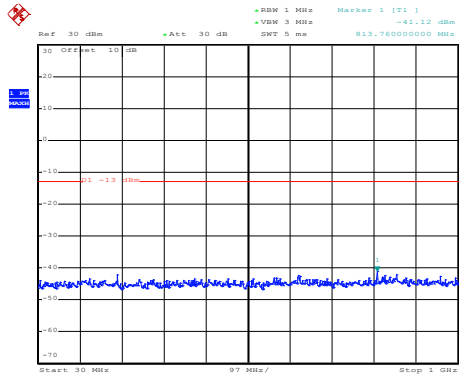
30MHz~1GHz



Date: 9.MAY.2020 16:14:55

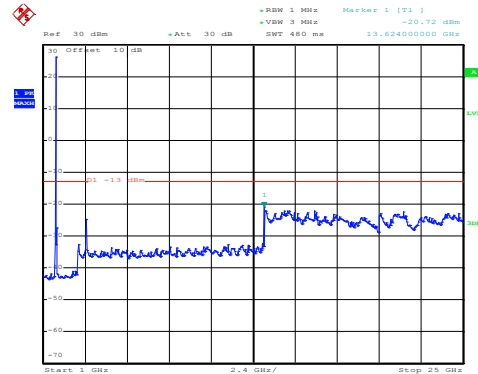
1GHz~25GHz

High channel



Date: 9.MAY.2020 16:16:06

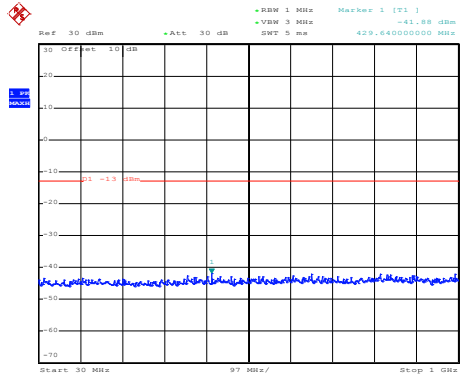
30MHz~1GHz



Date: 9.MAY.2020 16:14:29

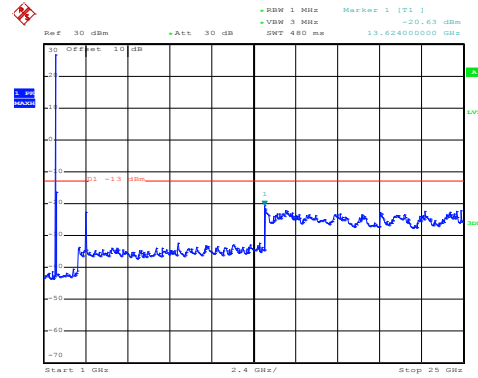
1GHz~25GHz

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



Date: 9.MAY.2020 16:15:28

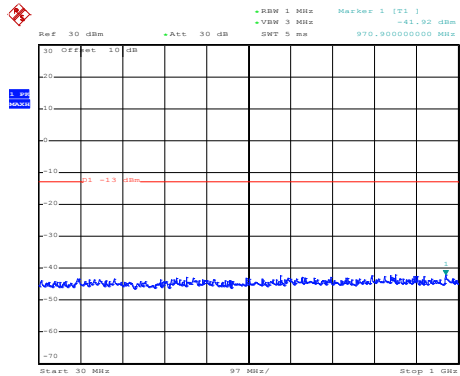
30MHz~1GHz



Date: 9.MAY.2020 16:15:06

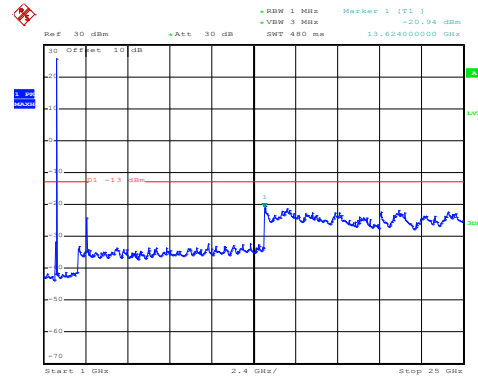
1GHz~25GHz

Middle channel



Date: 9.MAY.2020 16:15:42

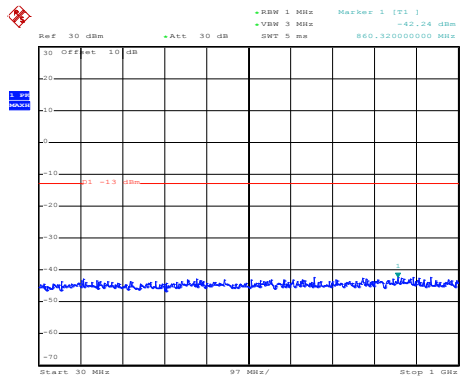
30MHz~1GHz



Date: 9.MAY.2020 16:14:41

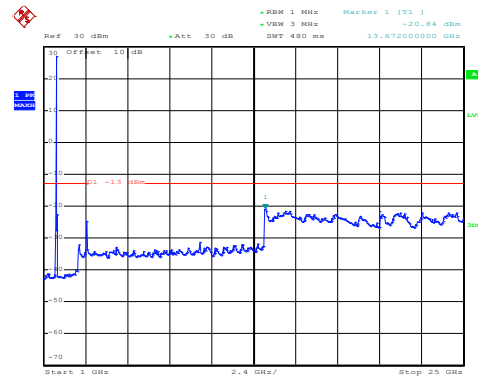
1GHz~25GHz

High channel



Date: 9.MAY.2020 16:15:59

30MHz~1GHz

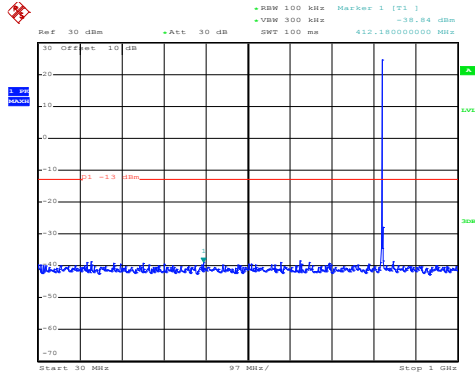


Date: 9.MAY.2020 16:14:17

1GHz~25GHz

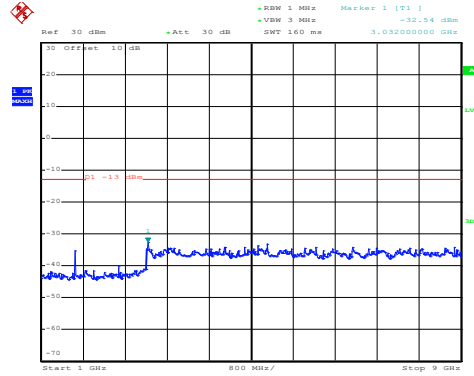
LTE Band 5 part:

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



Date: 9.MAY.2020 16:25:07

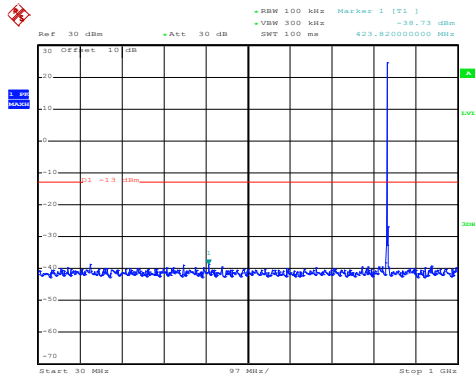
30MHz~1GHz



Date: 9.MAY.2020 16:23:17

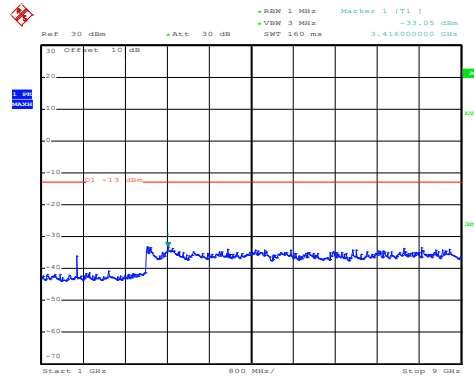
1GHz~9GHz

Middle channel



Date: 9.MAY.2020 16:24:44

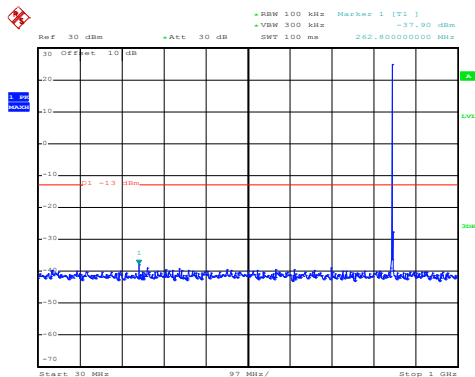
30MHz~1GHz



Date: 9.MAY.2020 16:23:37

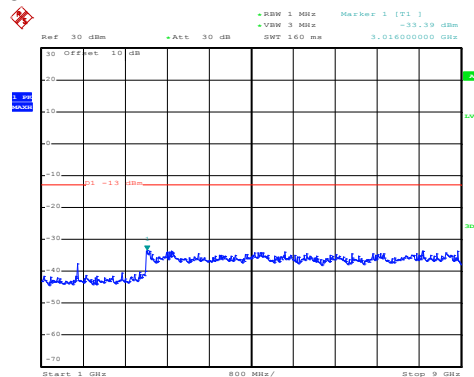
1GHz~9GHz

High channel



Date: 9.MAY.2020 16:24:25

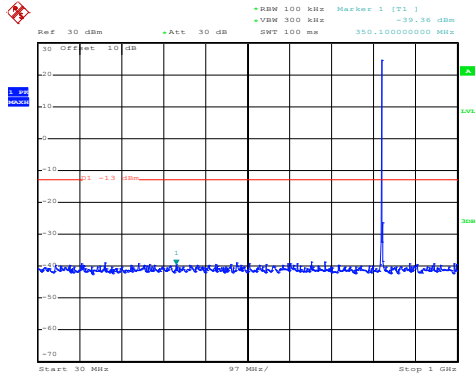
30MHz~1GHz



Date: 9.MAY.2020 16:23:52

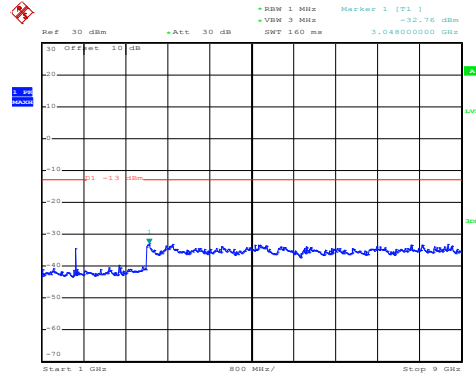
1GHz~9GHz

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



Date: 9.MAY.2020 16:24:57

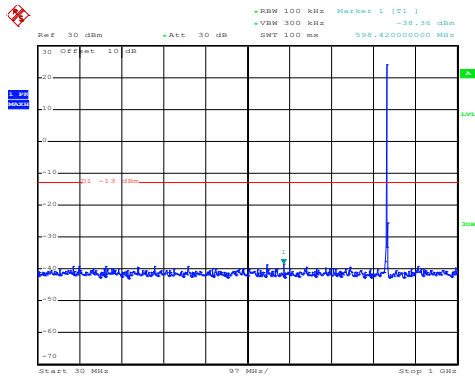
30MHz~1GHz



Date: 9.MAY.2020 16:23:11

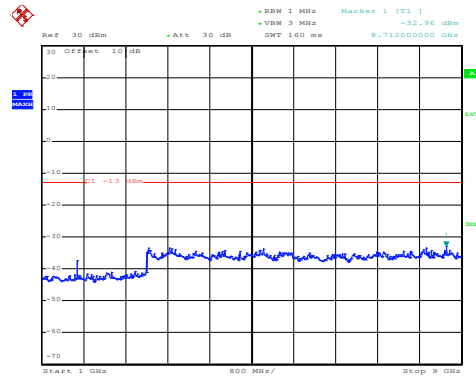
1GHz~9GHz

Middle channel



Date: 9.MAY.2020 16:24:35

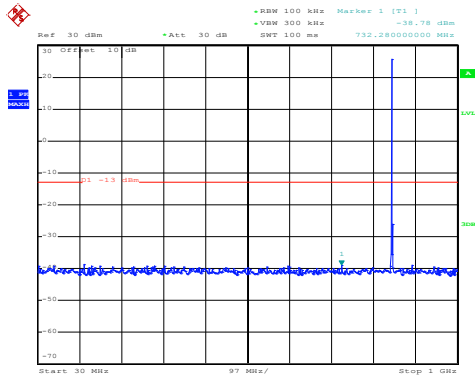
30MHz~1GHz



Date: 9.MAY.2020 16:23:28

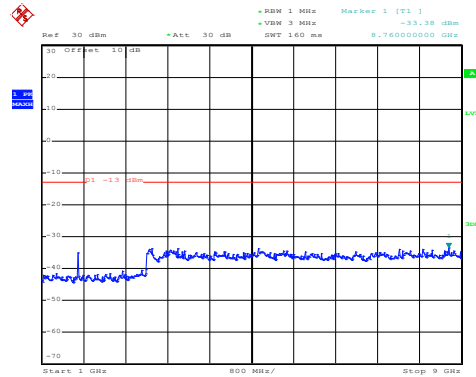
1GHz~9GHz

High channel



Date: 9.MAY.2020 16:24:15

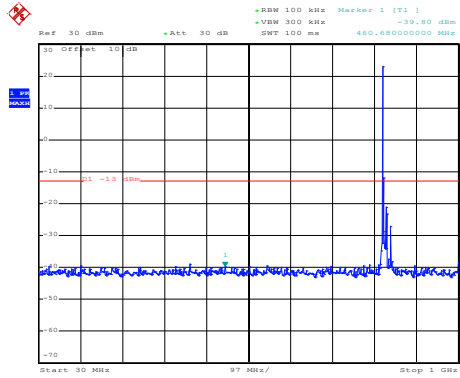
30MHz~1GHz



Date: 9.MAY.2020 16:23:46

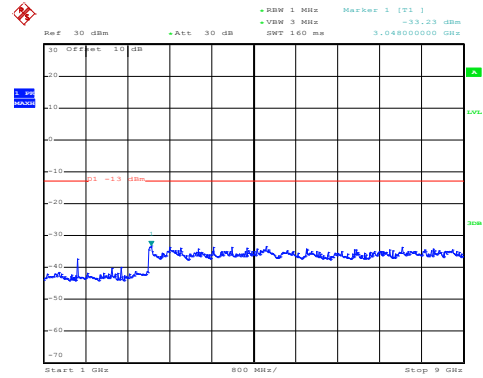
1GHz~9GHz

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



Date: 9.MAY.2020 16:31:00

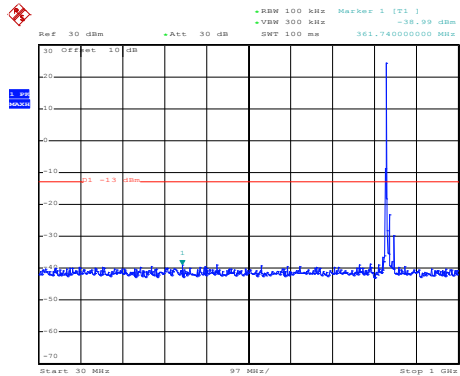
30MHz~1GHz



Date: 9.MAY.2020 16:32:46

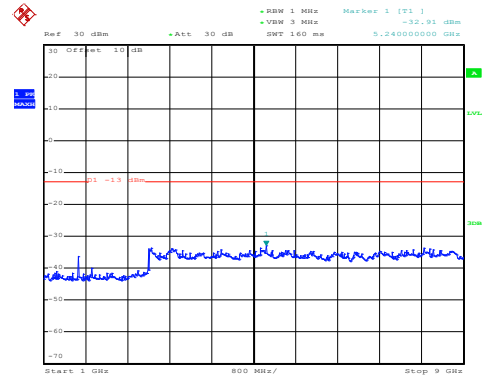
1GHz~9GHz

Middle channel



Date: 9.MAY.2020 16:31:22

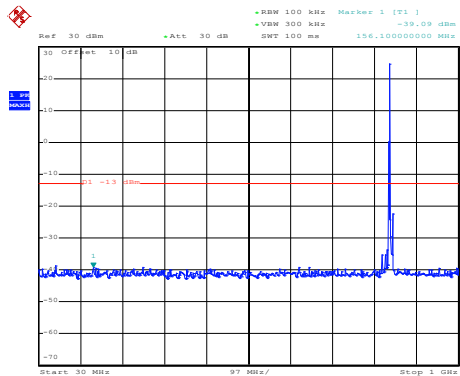
30MHz~1GHz



Date: 9.MAY.2020 16:32:29

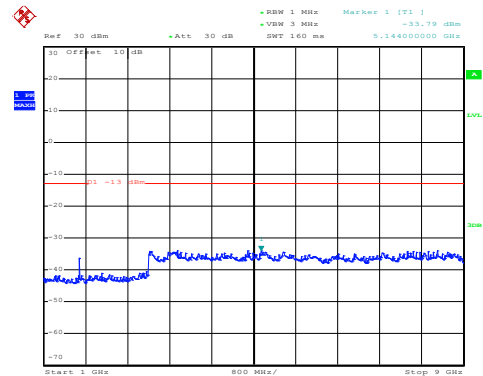
1GHz~9GHz

High channel



Date: 9.MAY.2020 16:31:45

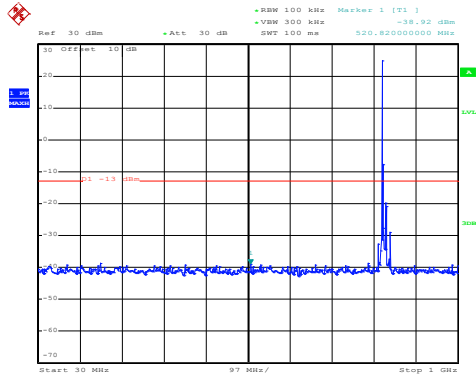
30MHz~1GHz



Date: 9.MAY.2020 16:32:11

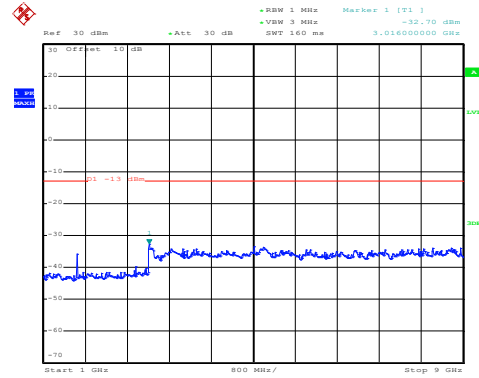
1GHz~9GHz

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



Date: 9.MAY.2020 16:30:52

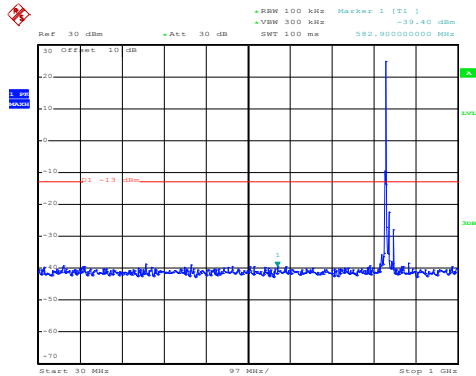
30MHz~1GHz



Date: 9.MAY.2020 16:32:38

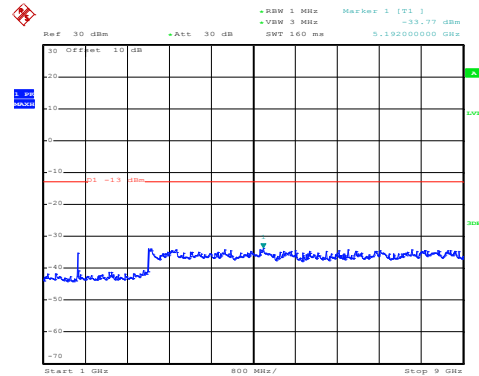
1GHz~9GHz

Middle channel



Date: 9.MAY.2020 16:31:13

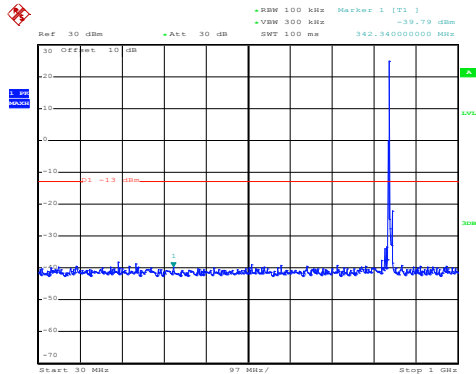
30MHz~1GHz



Date: 9.MAY.2020 16:32:20

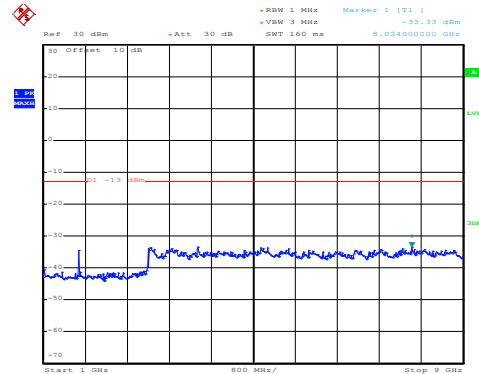
1GHz~9GHz

High channel



Date: 9.MAY.2020 16:31:35

30MHz~1GHz

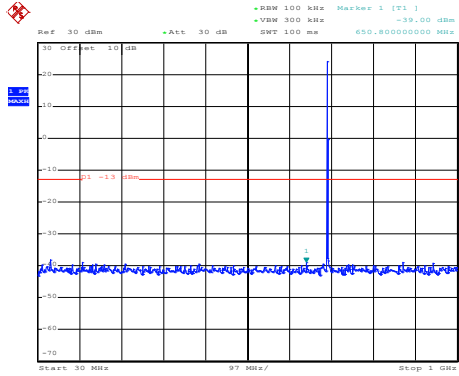


Date: 9.MAY.2020 16:32:04

1GHz~9GHz

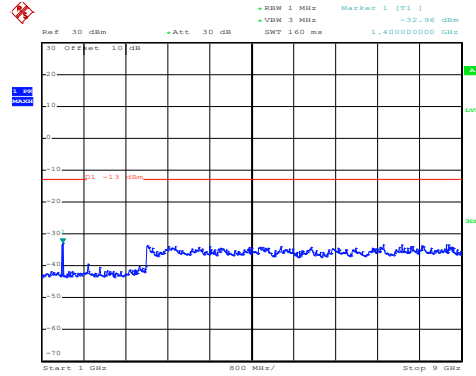
LTE Band 12 part:

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



Date: 9.MAY.2020 16:25:45

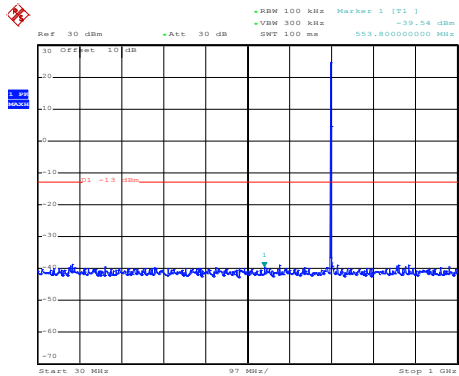
30MHz~1GHz



Date: 9.MAY.2020 16:27:44

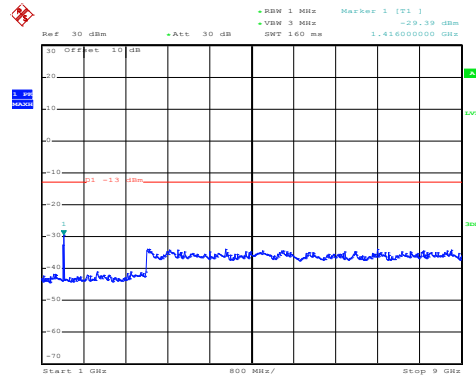
1GHz~9GHz

Middle channel



Date: 9.MAY.2020 16:26:13

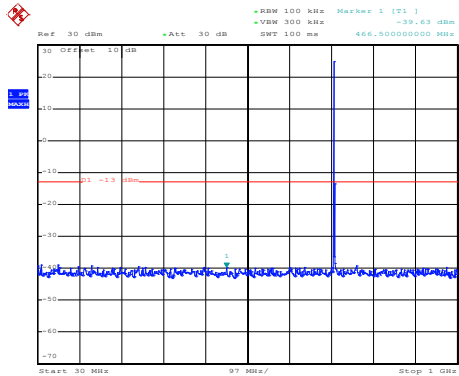
30MHz~1GHz



Date: 9.MAY.2020 16:27:18

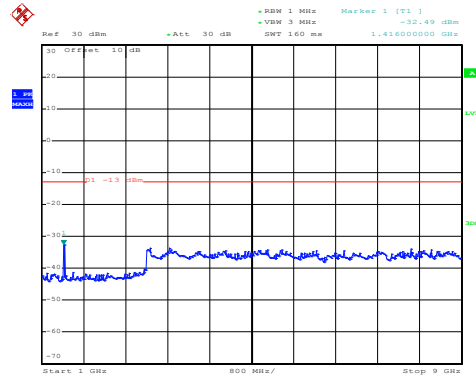
1GHz~9GHz

High channel



Date: 9.MAY.2020 16:26:35

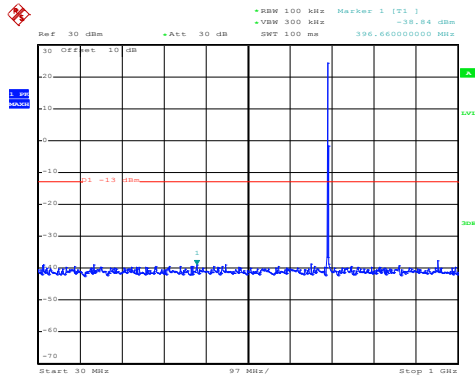
30MHz~1GHz



Date: 9.MAY.2020 16:27:02

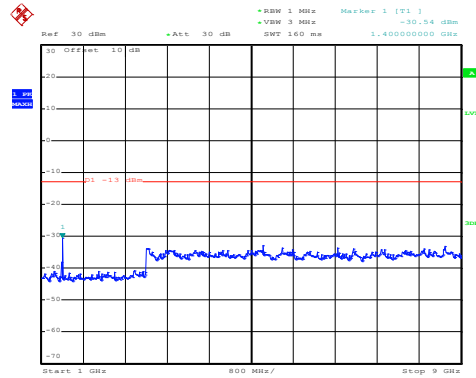
1GHz~9GHz

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



Date: 9.MAY.2020 16:25:36

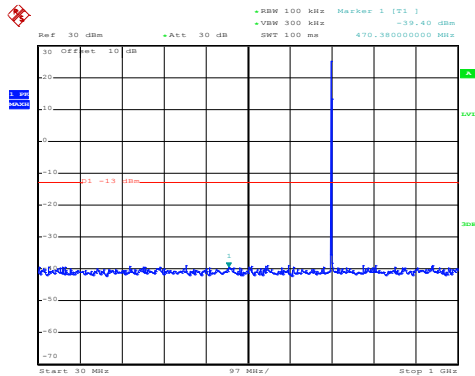
30MHz~1GHz



Date: 9.MAY.2020 16:27:33

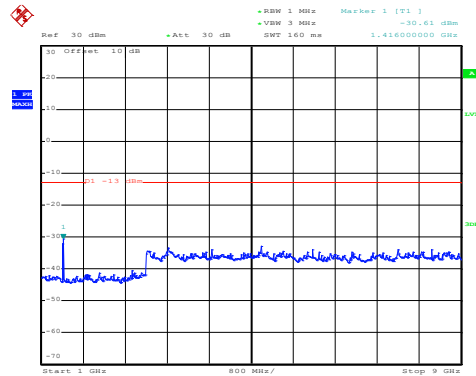
1GHz~9GHz

Middle channel



Date: 9.MAY.2020 16:26:03

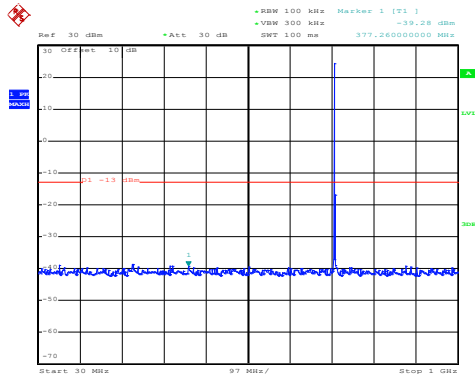
30MHz~1GHz



Date: 9.MAY.2020 16:27:11

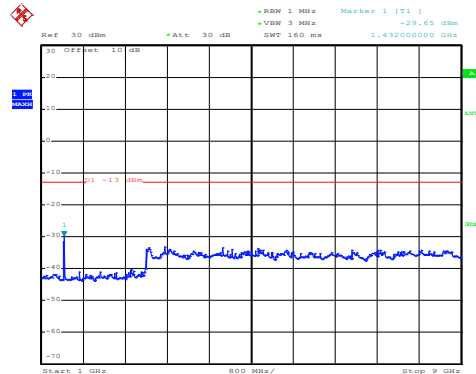
1GHz~9GHz

High channel



Date: 9.MAY.2020 16:26:27

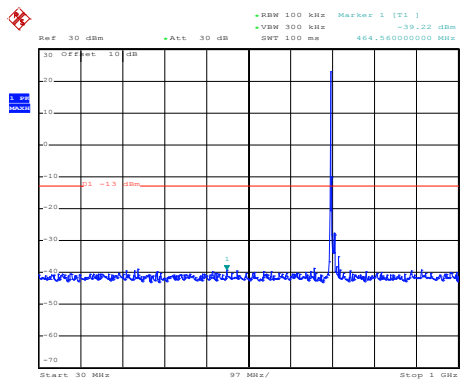
30MHz~1GHz



Date: 9.MAY.2020 16:26:54

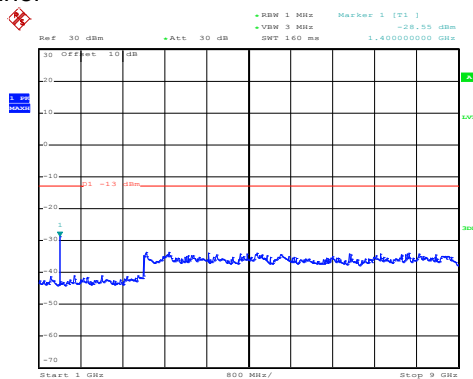
1GHz~9GHz

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



Date: 9.MAY.2020 16:30:18

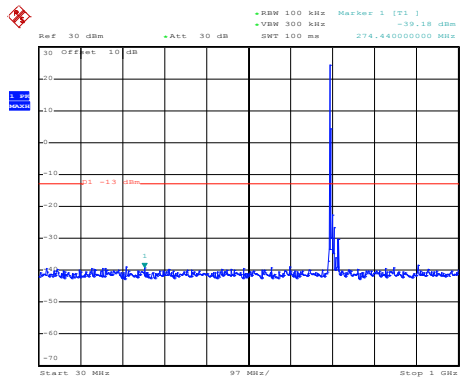
30MHz~1GHz



Date: 9.MAY.2020 16:28:30

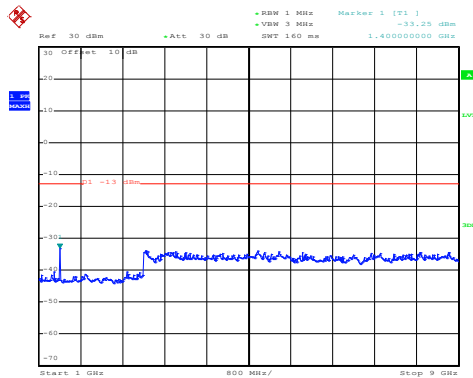
1GHz~9GHz

Middle channel



Date: 9.MAY.2020 16:29:56

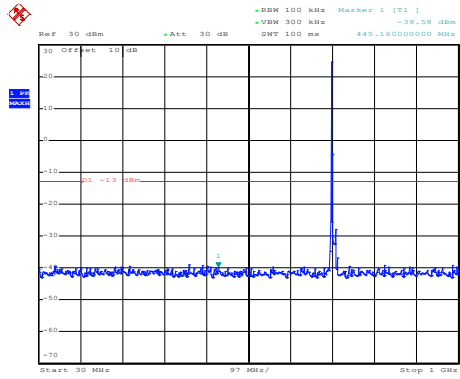
30MHz~1GHz



Date: 9.MAY.2020 16:28:49

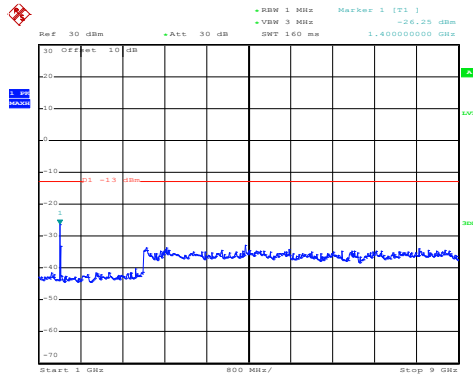
1GHz~9GHz

High channel



Date: 9.MAY.2020 16:29:34

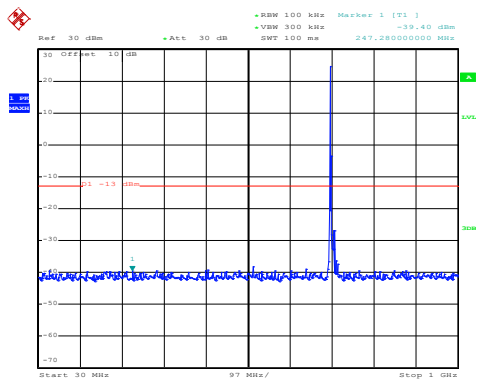
30MHz~1GHz



Date: 9.MAY.2020 16:29:08

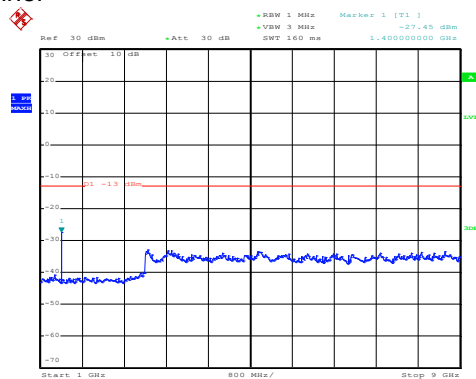
1GHz~9GHz

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



Date: 9.MAY.2020 16:30:10

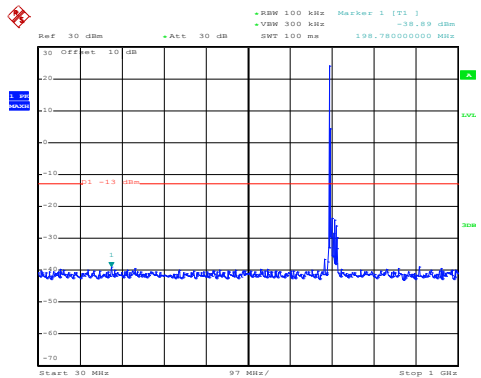
30MHz~1GHz



Date: 9.MAY.2020 16:28:23

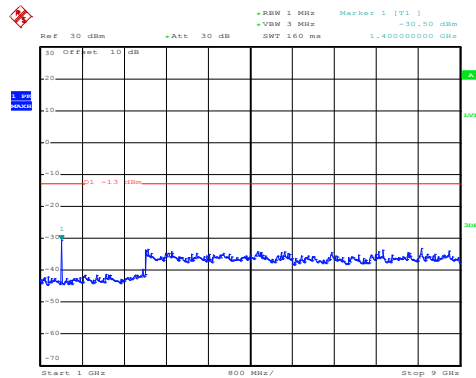
1GHz~9GHz

Middle channel



Date: 9.MAY.2020 16:29:45

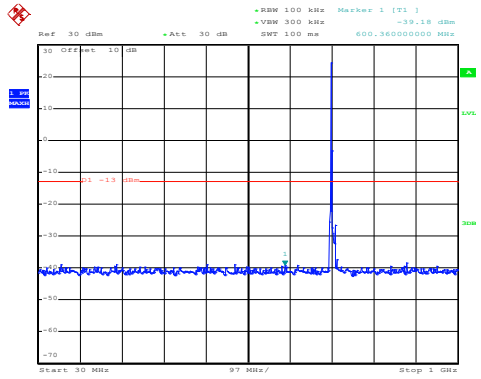
30MHz~1GHz



Date: 9.MAY.2020 16:28:41

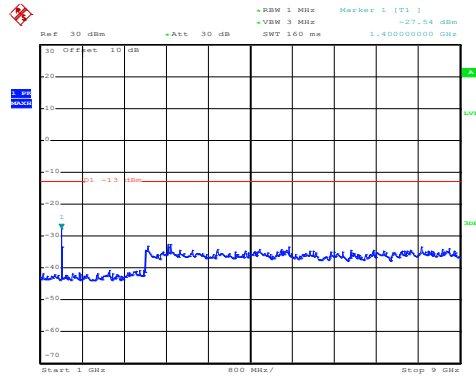
1GHz~9GHz

High channel



Date: 9.MAY.2020 16:29:26

30MHz~1GHz

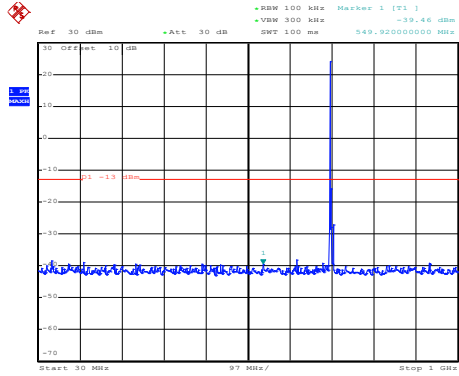


Date: 9.MAY.2020 16:29:02

1GHz~9GHz

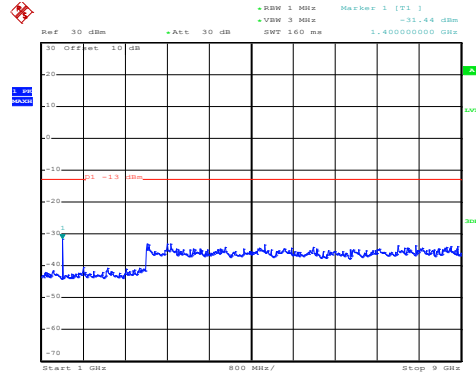
LTE Band 17 part:

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



Date: 9.MAY.2020 16:35:28

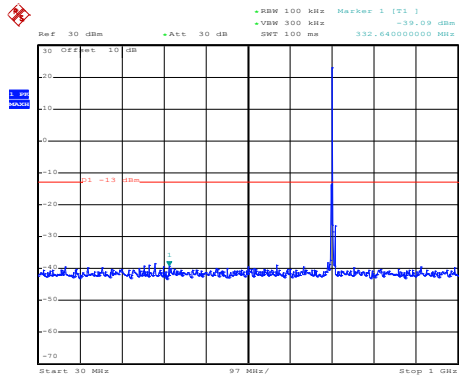
30MHz~1GHz



Date: 9.MAY.2020 16:37:14

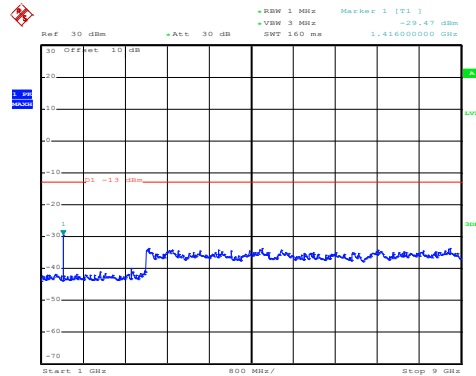
1GHz~9GHz

Middle channel



Date: 9.MAY.2020 16:35:50

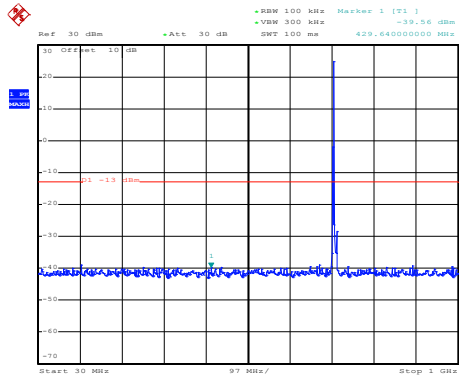
30MHz~1GHz



Date: 9.MAY.2020 16:36:55

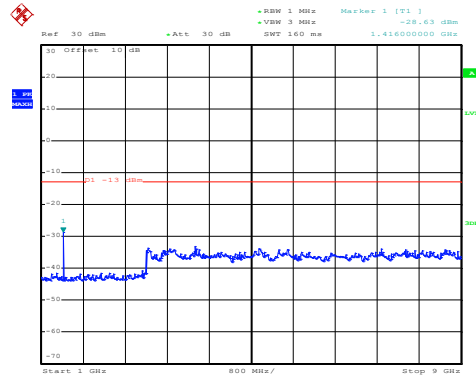
1GHz~9GHz

High channel



Date: 9.MAY.2020 16:36:12

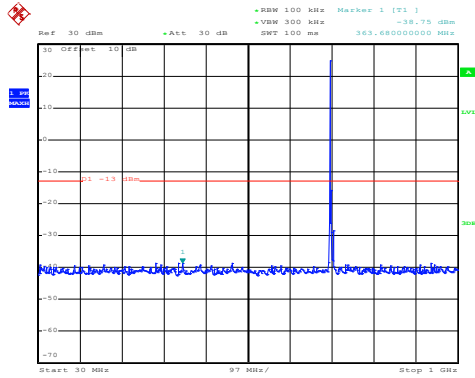
30MHz~1GHz



Date: 9.MAY.2020 16:36:37

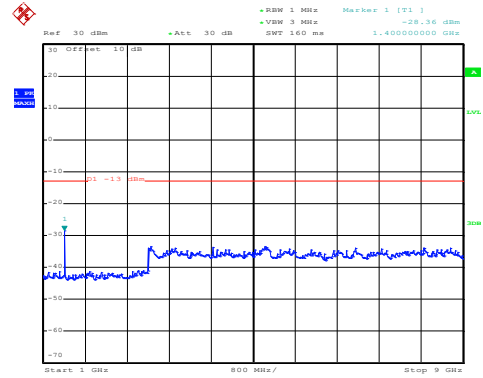
1GHz~9GHz

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



Date: 9.MAY.2020 16:35:19

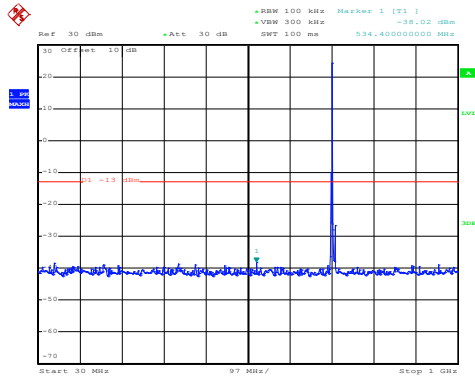
30MHz~1GHz



Date: 9.MAY.2020 16:37:06

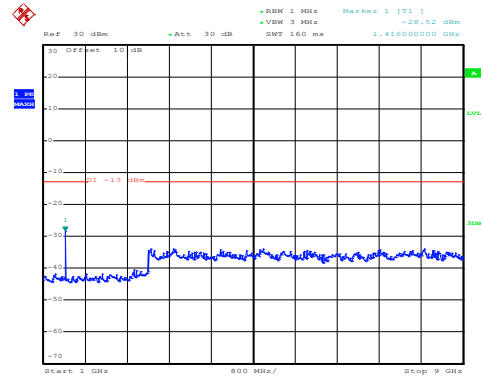
1GHz~9GHz

Middle channel



Date: 9.MAY.2020 16:35:42

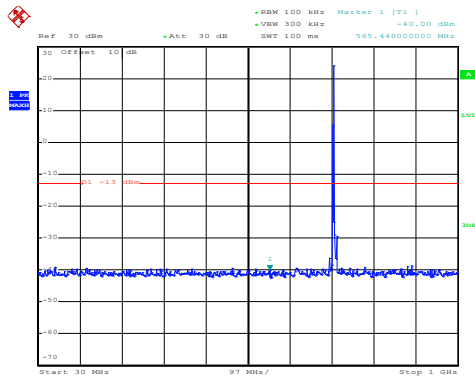
30MHz~1GHz



Date: 9.MAY.2020 16:36:46

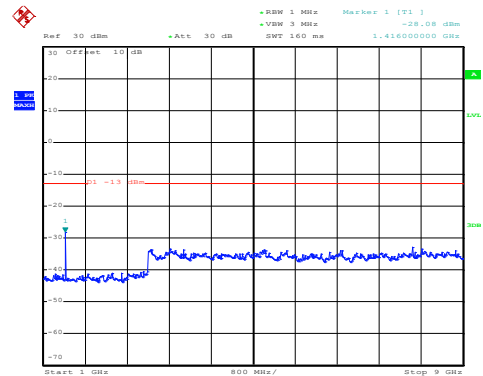
1GHz~9GHz

High channel



Date: 9.MAY.2020 16:36:04

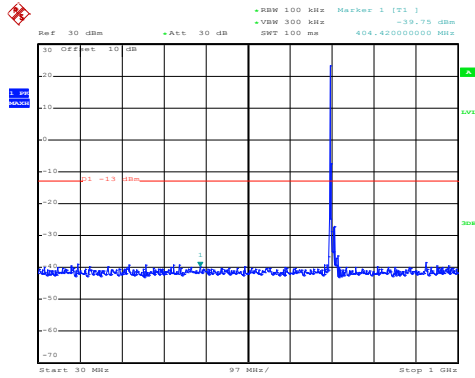
30MHz~1GHz



Date: 9.MAY.2020 16:36:30

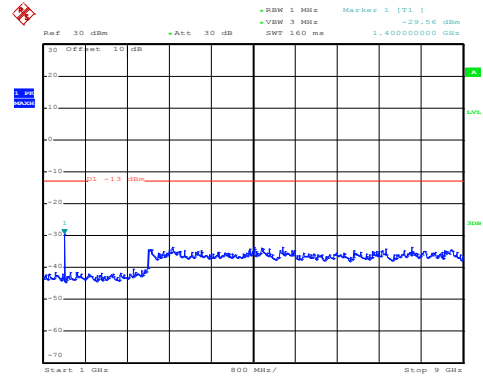
1GHz~9GHz

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



Date: 9.MAY.2020 16:34:51

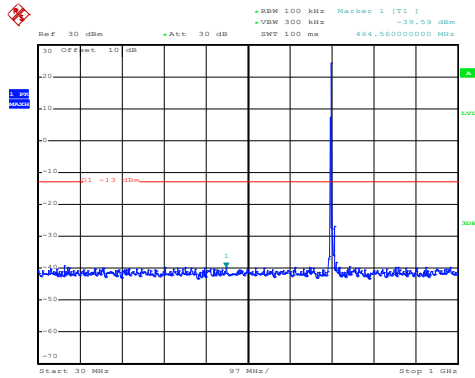
30MHz~1GHz



Date: 9.MAY.2020 16:33:05

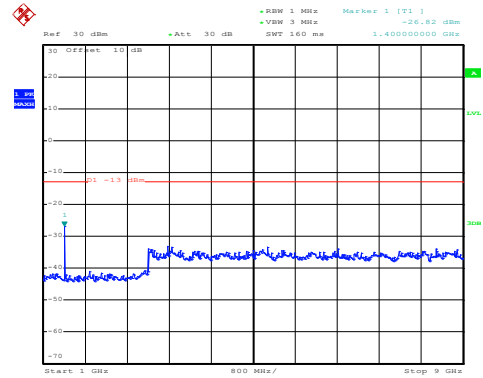
1GHz~9GHz

Middle channel



Date: 9.MAY.2020 16:34:29

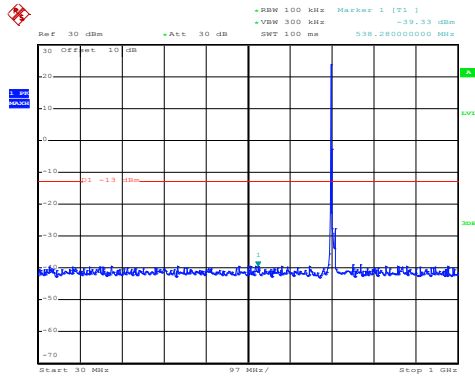
30MHz~1GHz



Date: 9.MAY.2020 16:33:21

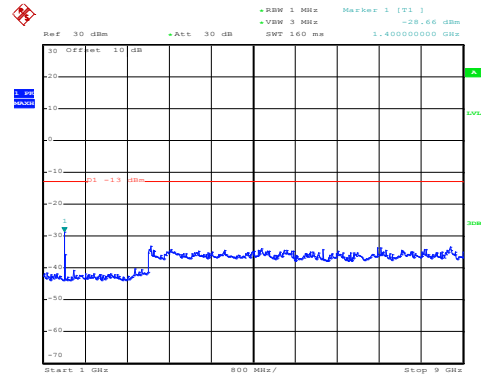
1GHz~9GHz

High channel



Date: 9.MAY.2020 16:34:08

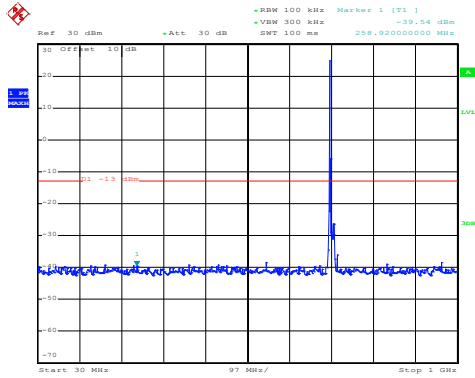
30MHz~1GHz



Date: 9.MAY.2020 16:33:41

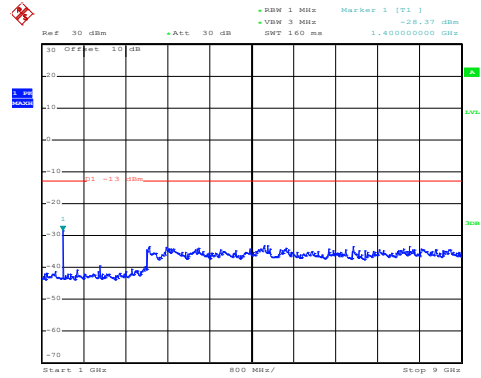
1GHz~9GHz

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



Date: 9.MAY.2020 16:34:43

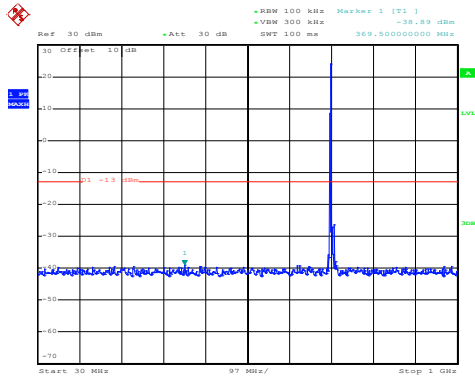
30MHz~1GHz



Date: 9.MAY.2020 16:32:58

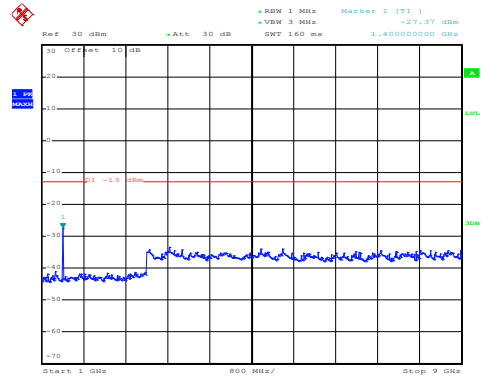
1GHz~9GHz

Middle channel



Date: 9.MAY.2020 16:34:21

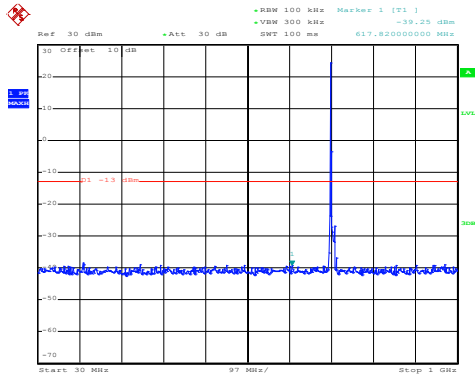
30MHz~1GHz



Date: 9.MAY.2020 16:33:14

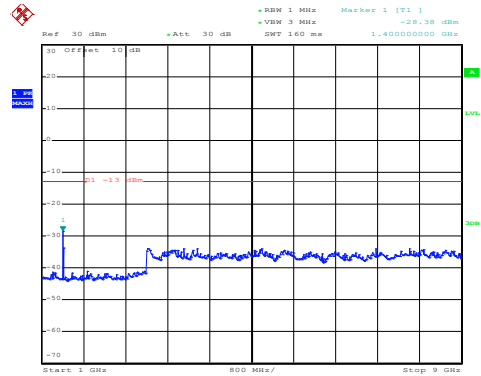
1GHz~9GHz

High channel



Date: 9.MAY.2020 16:34:00

30MHz~1GHz



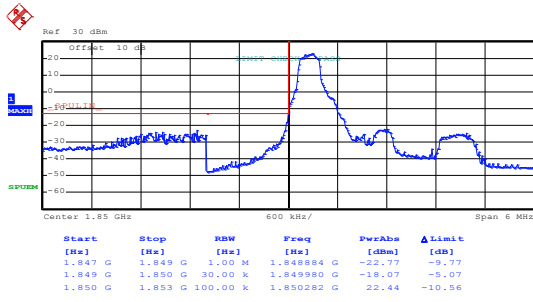
Date: 9.MAY.2020 16:33:34

1GHz~9GHz

Band edge emission:

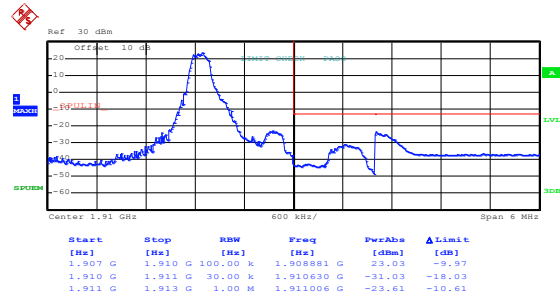
LTE Band 2 part:

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



Date: 9.MAY.2020 15:40:54

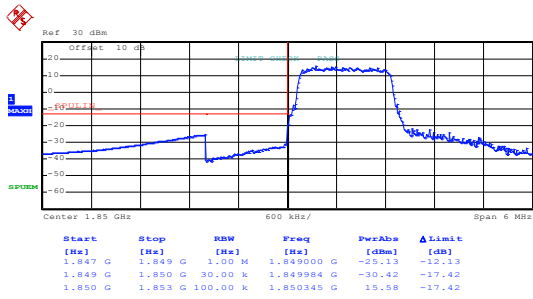
Lowest channel



Date: 9.MAY.2020 15:44:13

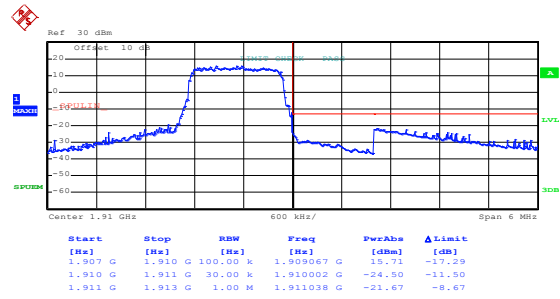
Highest channel

16QAM & RB Size 6



Date: 9.MAY.2020 15:41:21

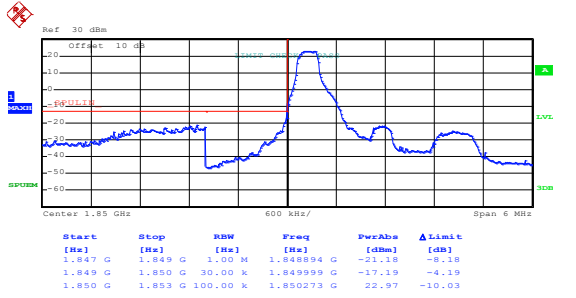
Lowest channel



Date: 9.MAY.2020 15:43:59

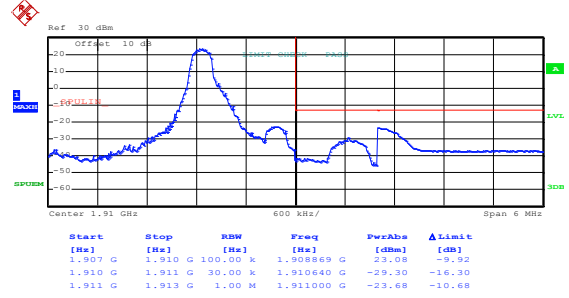
Highest channel

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



Date: 9.MAY.2020 15:40:46

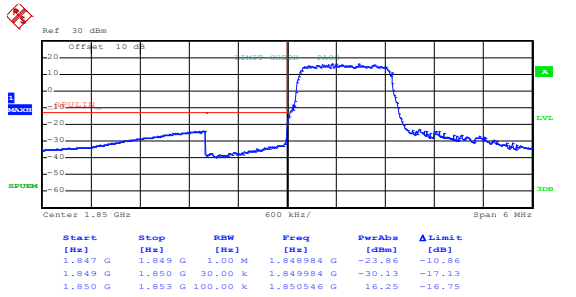
Lowest channel



Date: 9.MAY.2020 15:44:06

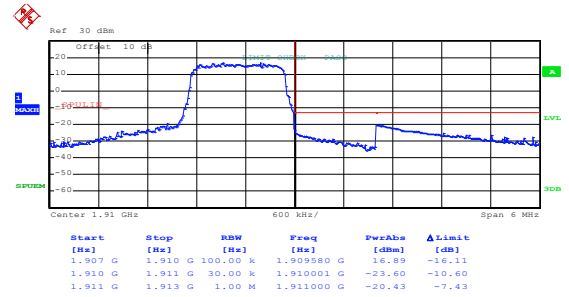
Highest channel

QPSK & RB Size 6



Date: 9.MAY.2020 15:41:14

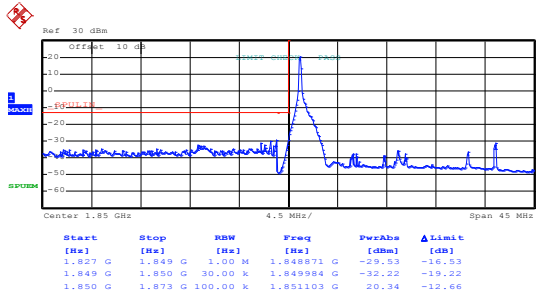
Lowest channel



Date: 9.MAY.2020 15:43:50

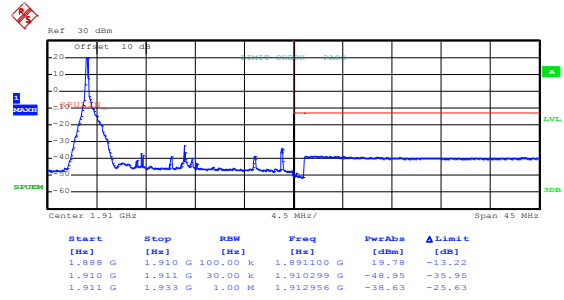
Highest channel

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



Date: 9.MAY.2020 16:06:45

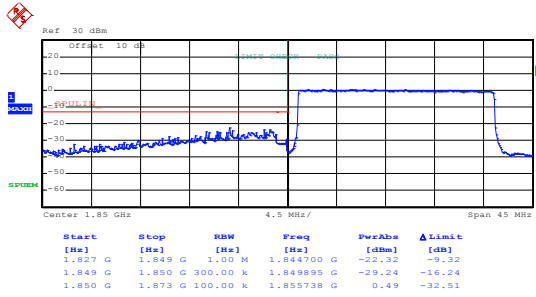
Lowest channel



Date: 9.MAY.2020 16:07:32

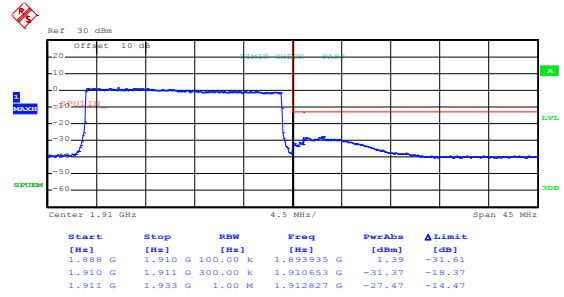
Highest channel

16QAM & RB Size 100



Date: 9.MAY.2020 16:07:07

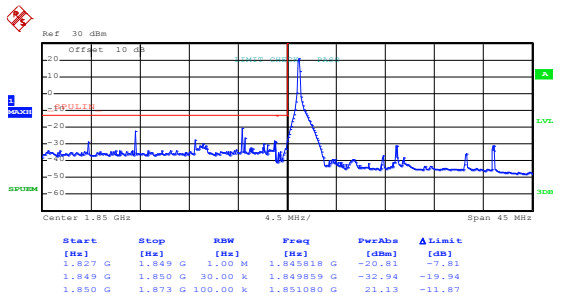
Lowest channel



Date: 9.MAY.2020 16:07:50

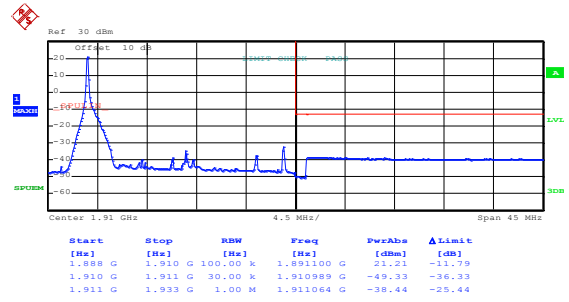
Highest channel

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



Date: 9.MAY.2020 16:06:38

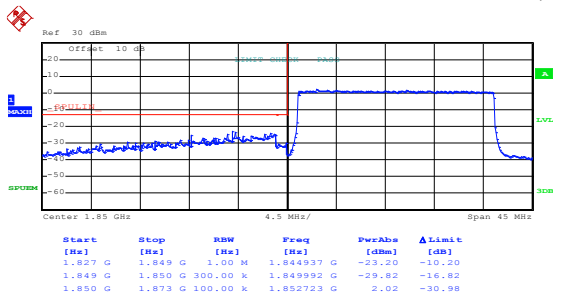
Lowest channel



Date: 9.MAY.2020 16:07:25

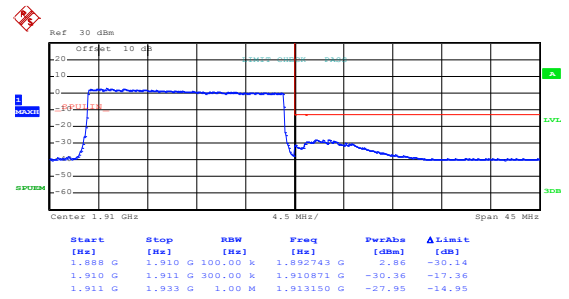
Highest channel

QPSK & RB Size 100



Date: 9.MAY.2020 16:07:02

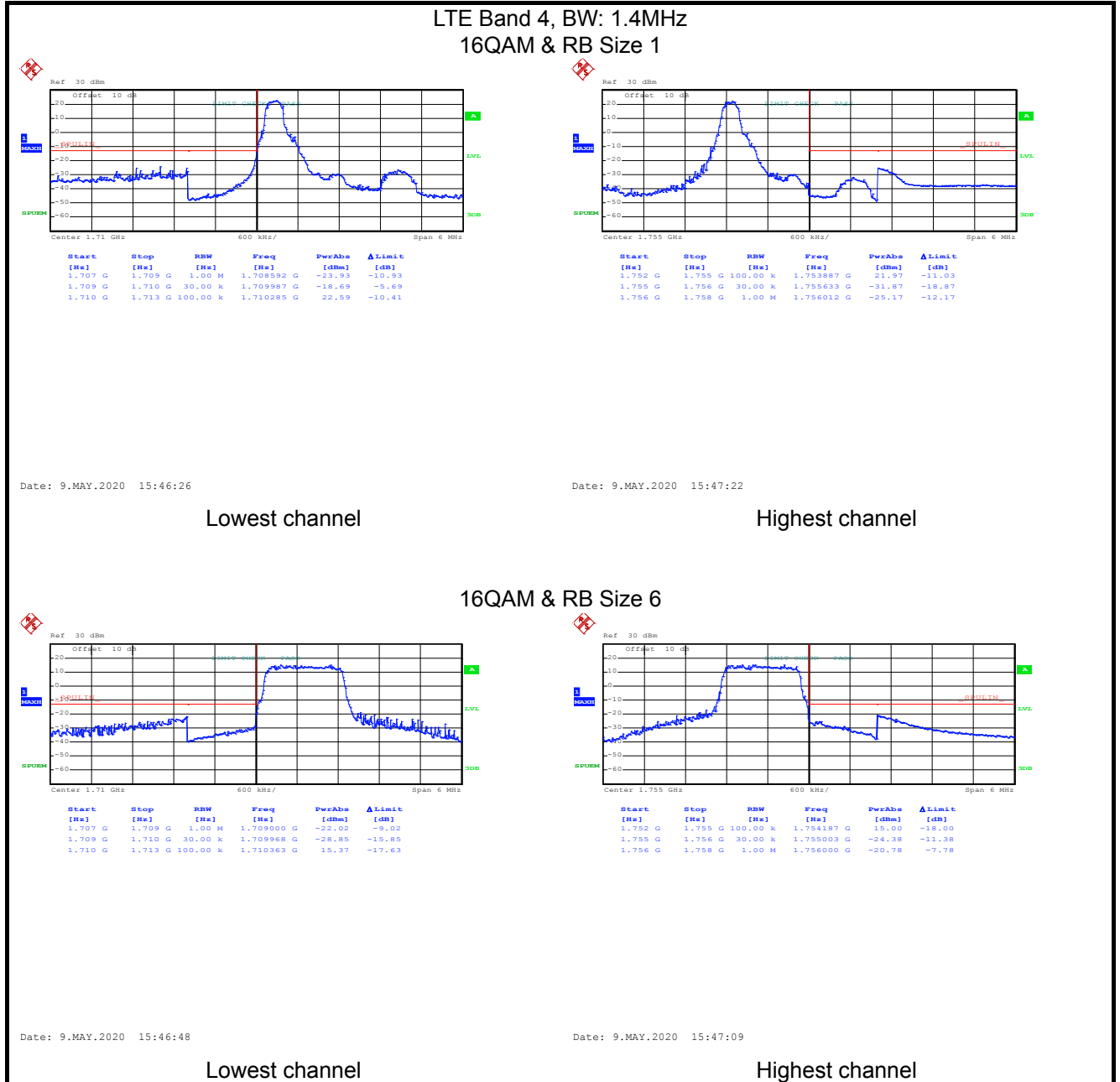
Lowest channel



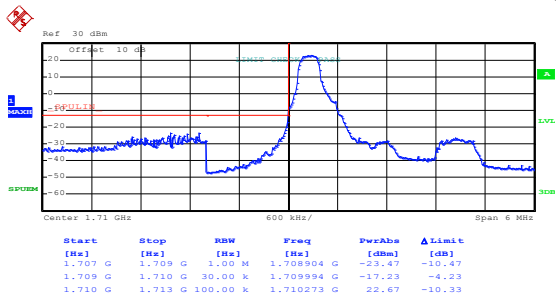
Date: 9.MAY.2020 16:07:45

Highest channel

LTE Band 4 part:

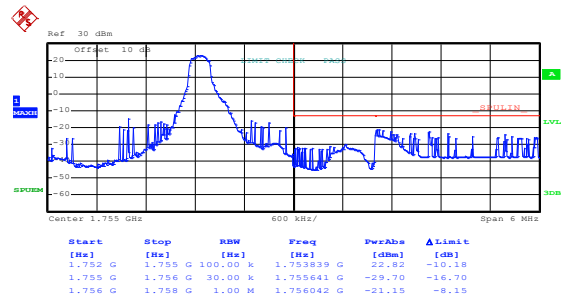


LTE Band 4, BW: 1.4MHz QPSK & RB Size 1



Date: 9.MAY.2020 15:46:19

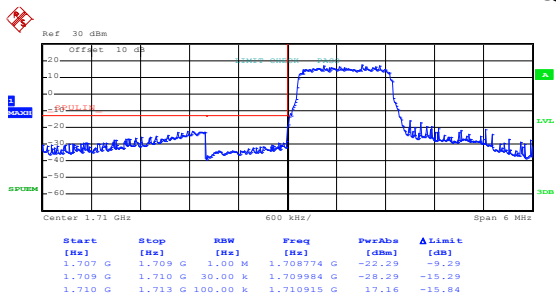
Lowest channel



Date: 9.MAY.2020 15:47:16

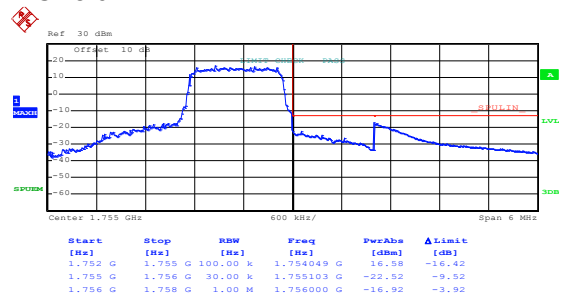
Highest channel

QPSK & RB Size 6



Date: 9.MAY.2020 15:46:41

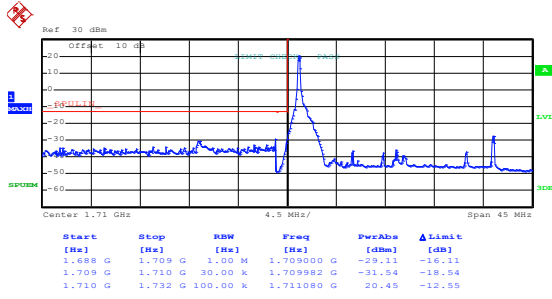
Lowest channel



Date: 9.MAY.2020 15:47:04

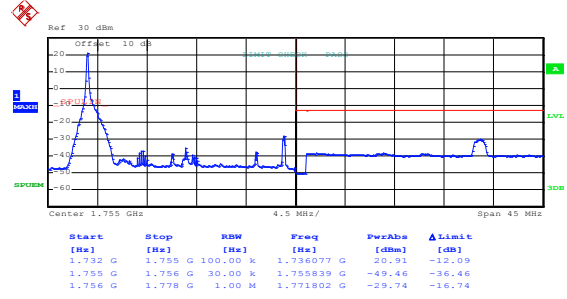
Highest channel

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



Date: 9.MAY.2020 16:08:27

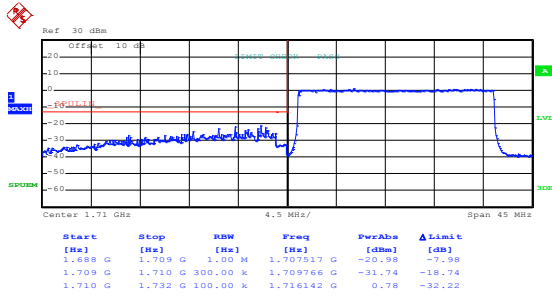
Lowest channel



Date: 9.MAY.2020 16:09:17

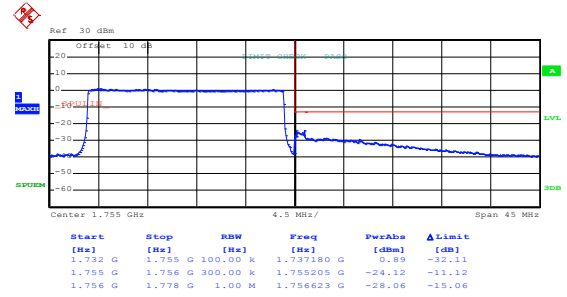
Highest channel

16QAM & RB Size 100



Date: 9.MAY.2020 16:08:49

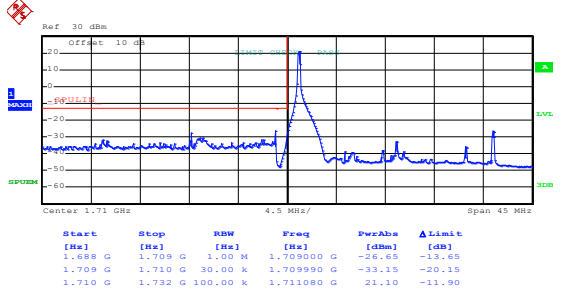
Lowest channel



Date: 9.MAY.2020 16:09:39

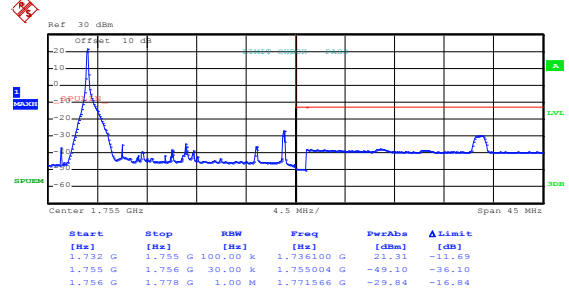
Highest channel

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



Date: 9.MAY.2020 16:08:21

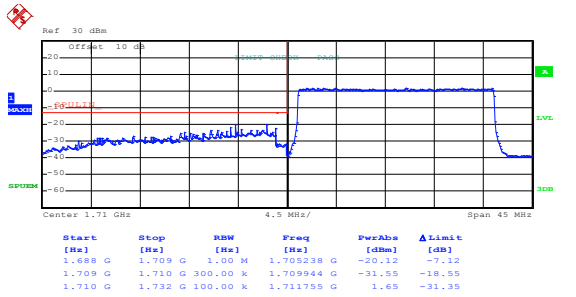
Lowest channel



Date: 9.MAY.2020 16:09:08

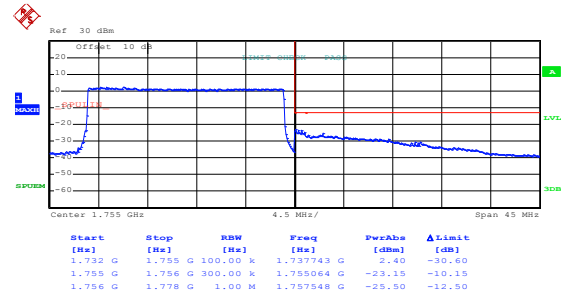
Highest channel

QPSK & RB Size 100



Date: 9.MAY.2020 16:08:43

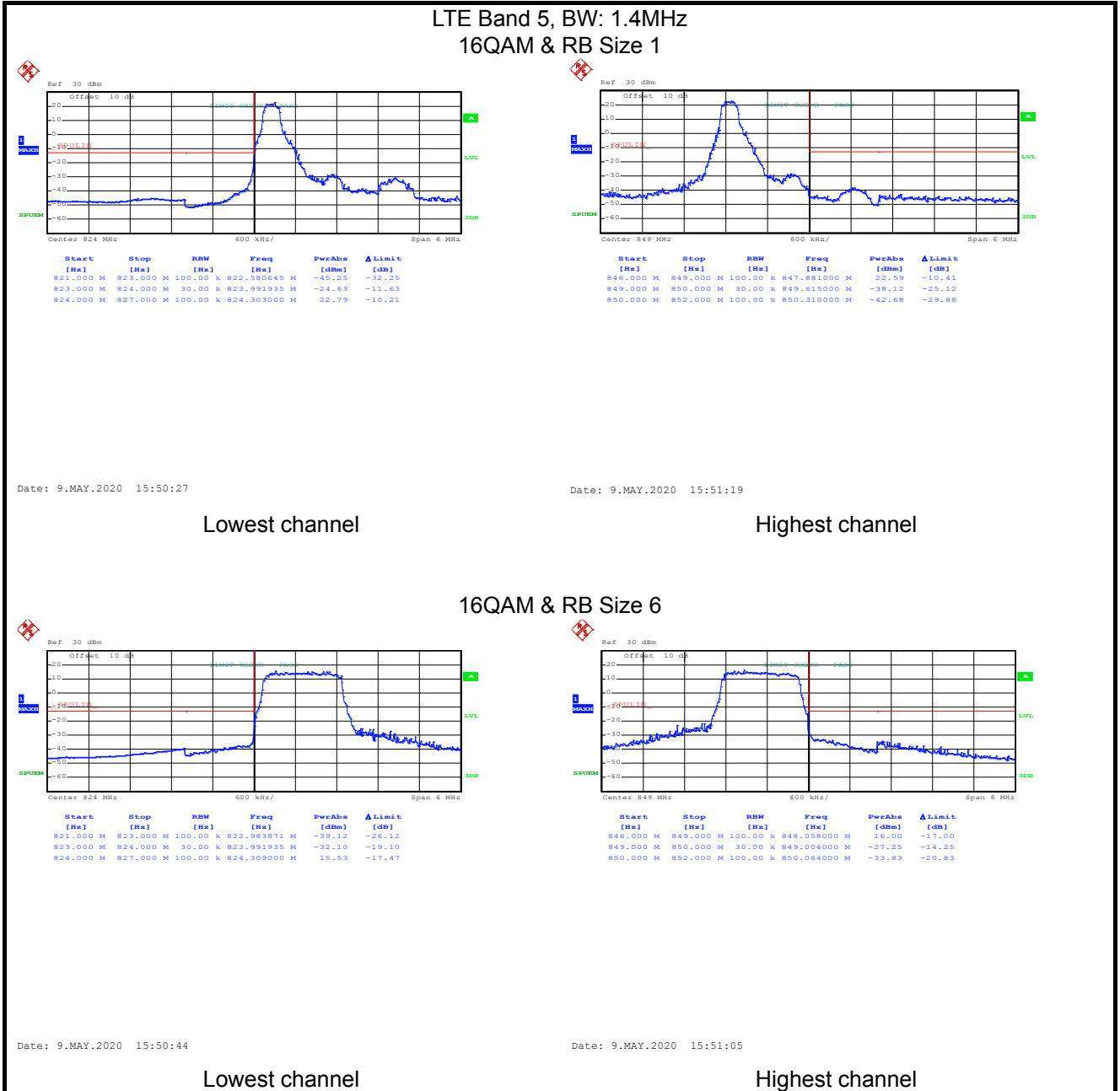
Lowest channel



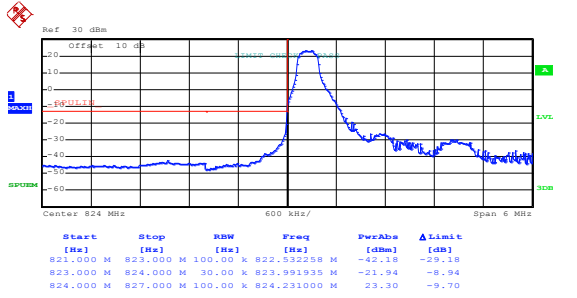
Date: 9.MAY.2020 16:09:33

Highest channel

LTE Band 5 part:

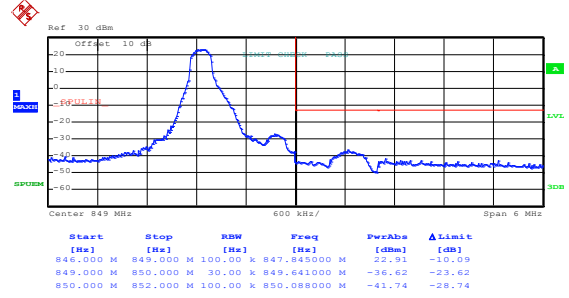


LTE Band 5, BW: 1.4MHz QPSK & RB Size 1



Date: 9.MAY.2020 15:50:21

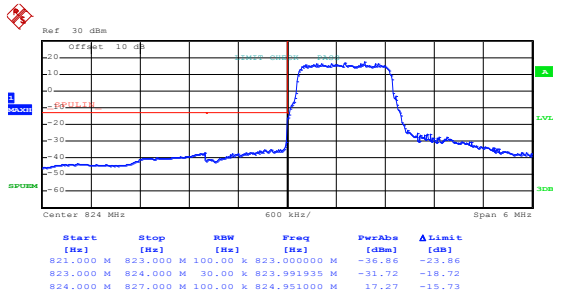
Lowest channel



Date: 9.MAY.2020 15:51:13

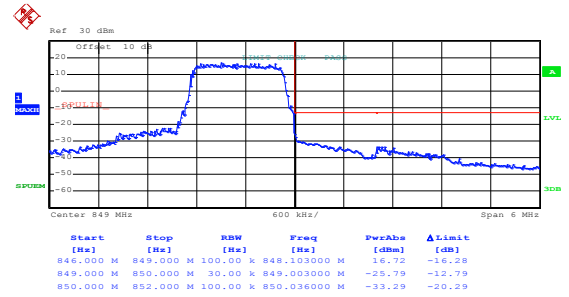
Highest channel

QPSK & RB Size 6



Date: 9.MAY.2020 15:50:37

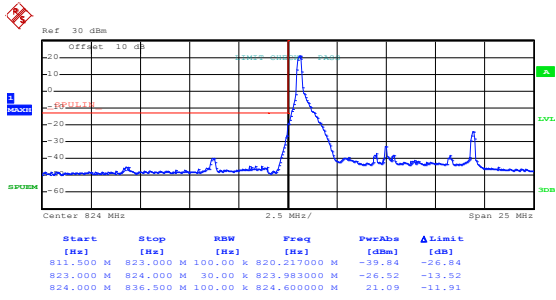
Lowest channel



Date: 9.MAY.2020 15:50:59

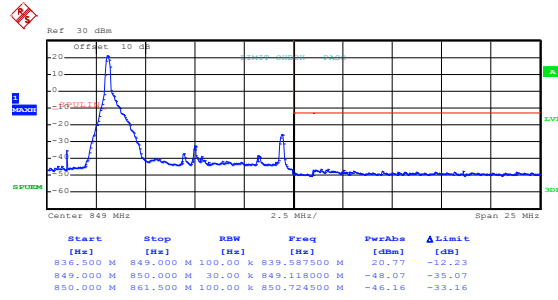
Highest channel

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



Date: 9.MAY.2020 15:58:53

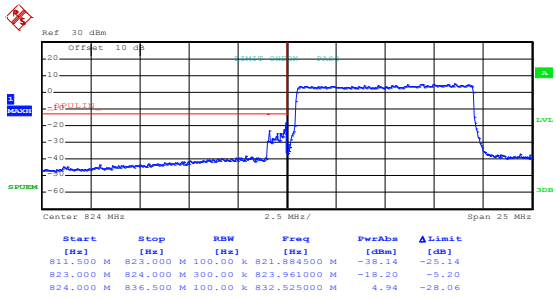
Lowest channel



Date: 9.MAY.2020 15:59:57

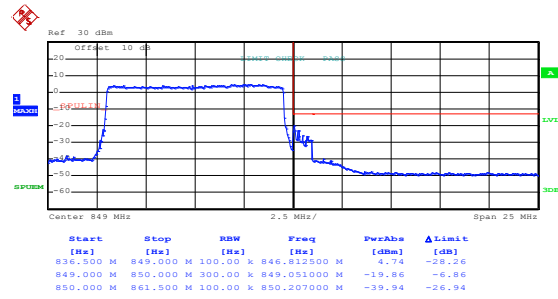
Highest channel

16QAM & RB Size 50



Date: 9.MAY.2020 15:59:28

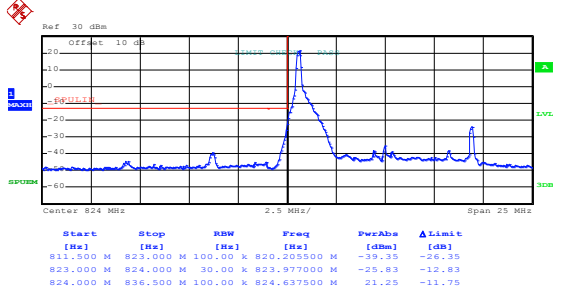
Lowest channel



Date: 9.MAY.2020 16:00:14

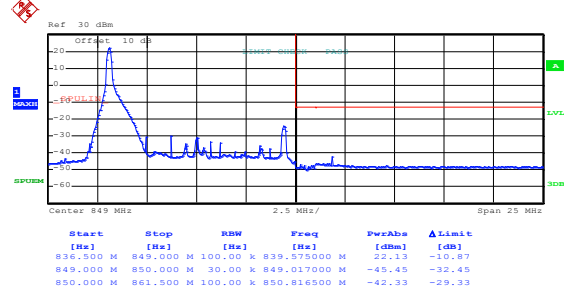
Highest channel

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



Date: 9.MAY.2020 15:59:09

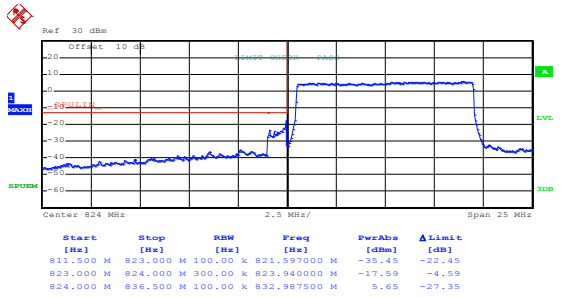
Lowest channel



Date: 9.MAY.2020 15:59:52

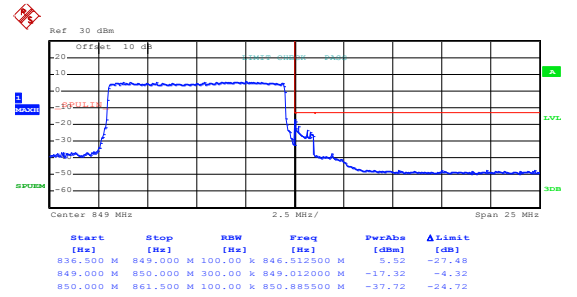
Highest channel

QPSK & RB Size 50



Date: 9.MAY.2020 15:59:22

Lowest channel

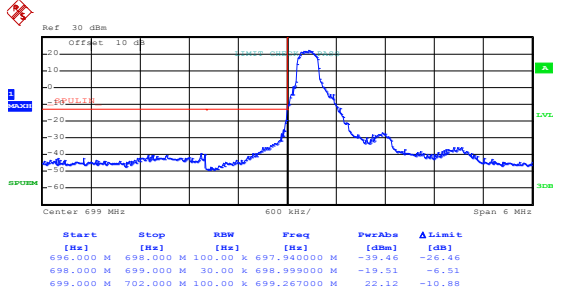


Date: 9.MAY.2020 16:00:08

Highest channel

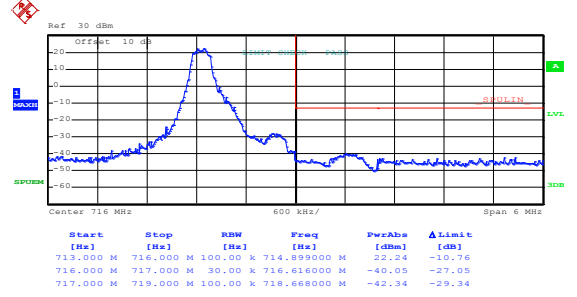
LTE band 12 part:

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



Date: 9.MAY.2020 15:53:30

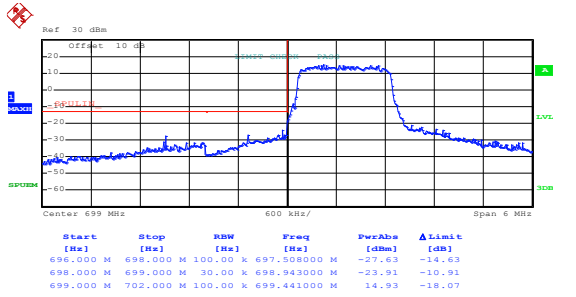
Lowest channel



Date: 9.MAY.2020 15:54:23

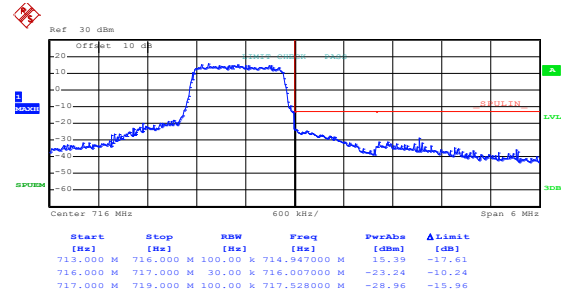
Highest channel

16QAM & RB Size 6



Date: 9.MAY.2020 15:53:44

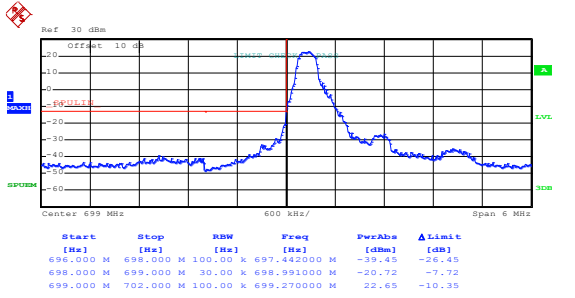
Lowest channel



Date: 9.MAY.2020 15:54:07

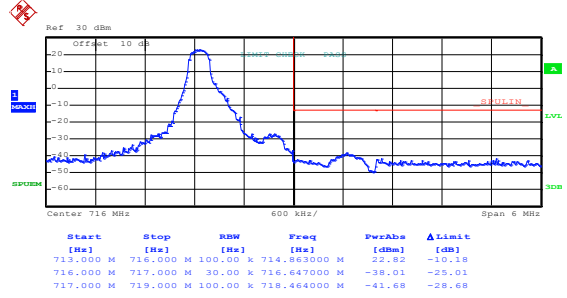
Highest channel

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



Date: 9.MAY.2020 15:53:24

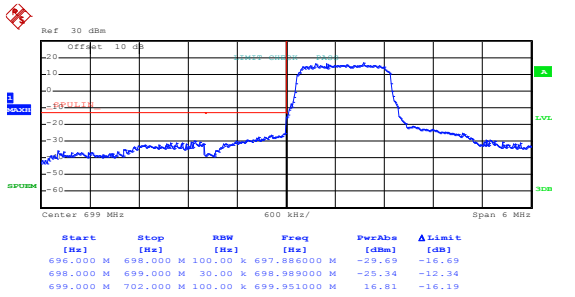
Lowest channel



Date: 9.MAY.2020 15:54:17

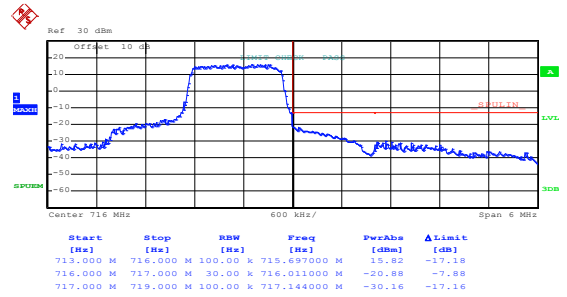
Highest channel

QPSK & RB Size 6



Date: 9.MAY.2020 15:53:39

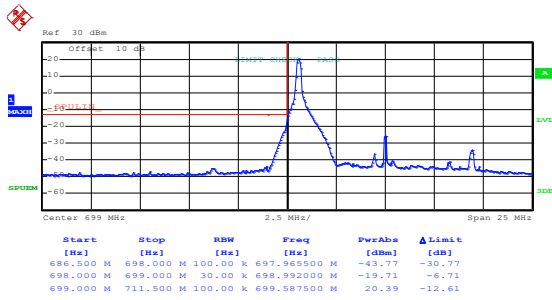
Lowest channel



Date: 9.MAY.2020 15:54:02

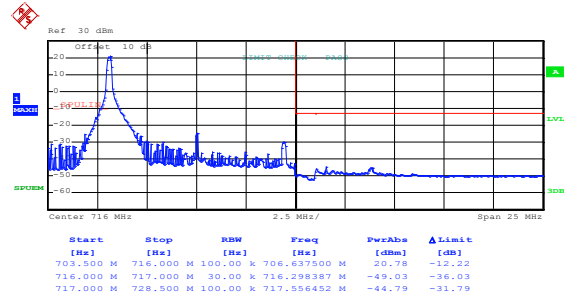
Highest channel

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



Date: 9.MAY.2020 15:55:57

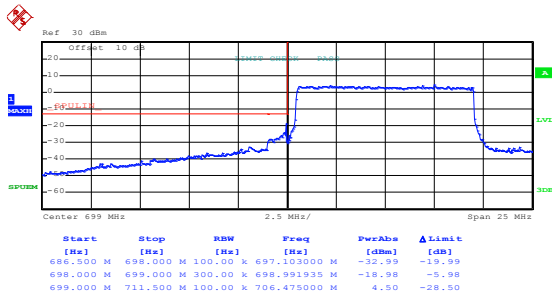
Lowest channel



Date: 9.MAY.2020 15:57:50

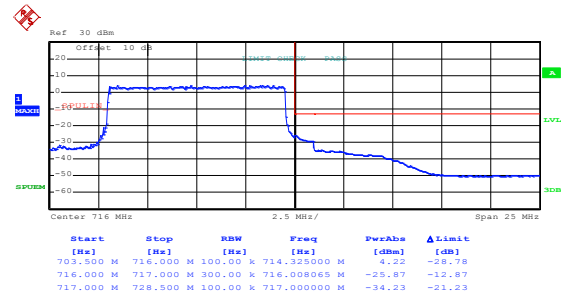
Highest channel

16QAM & RB Size 50



Date: 9.MAY.2020 15:56:24

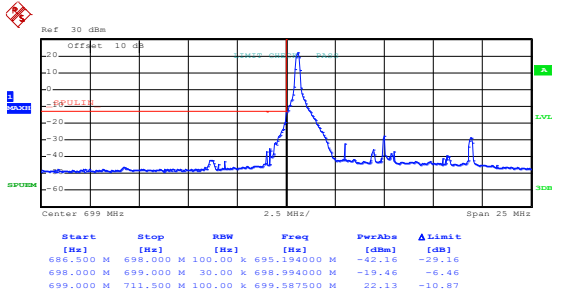
Lowest channel



Date: 9.MAY.2020 15:57:21

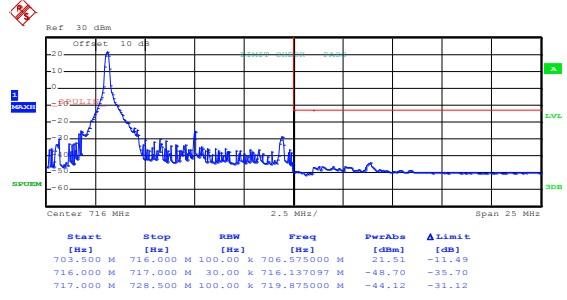
Highest channel

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



Date: 9.MAY.2020 15:55:50

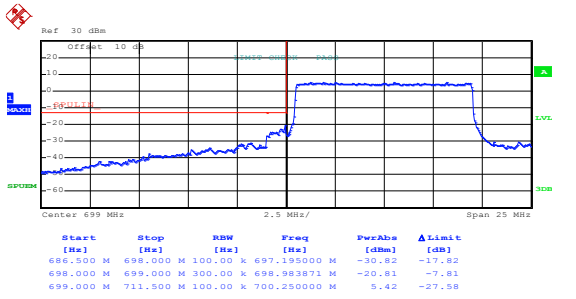
Lowest channel



Date: 9.MAY.2020 15:57:39

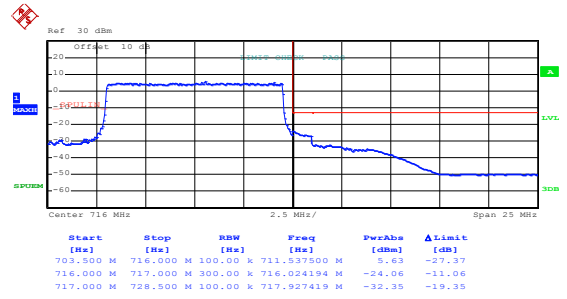
Highest channel

QPSK & RB Size 50



Date: 9.MAY.2020 15:56:17

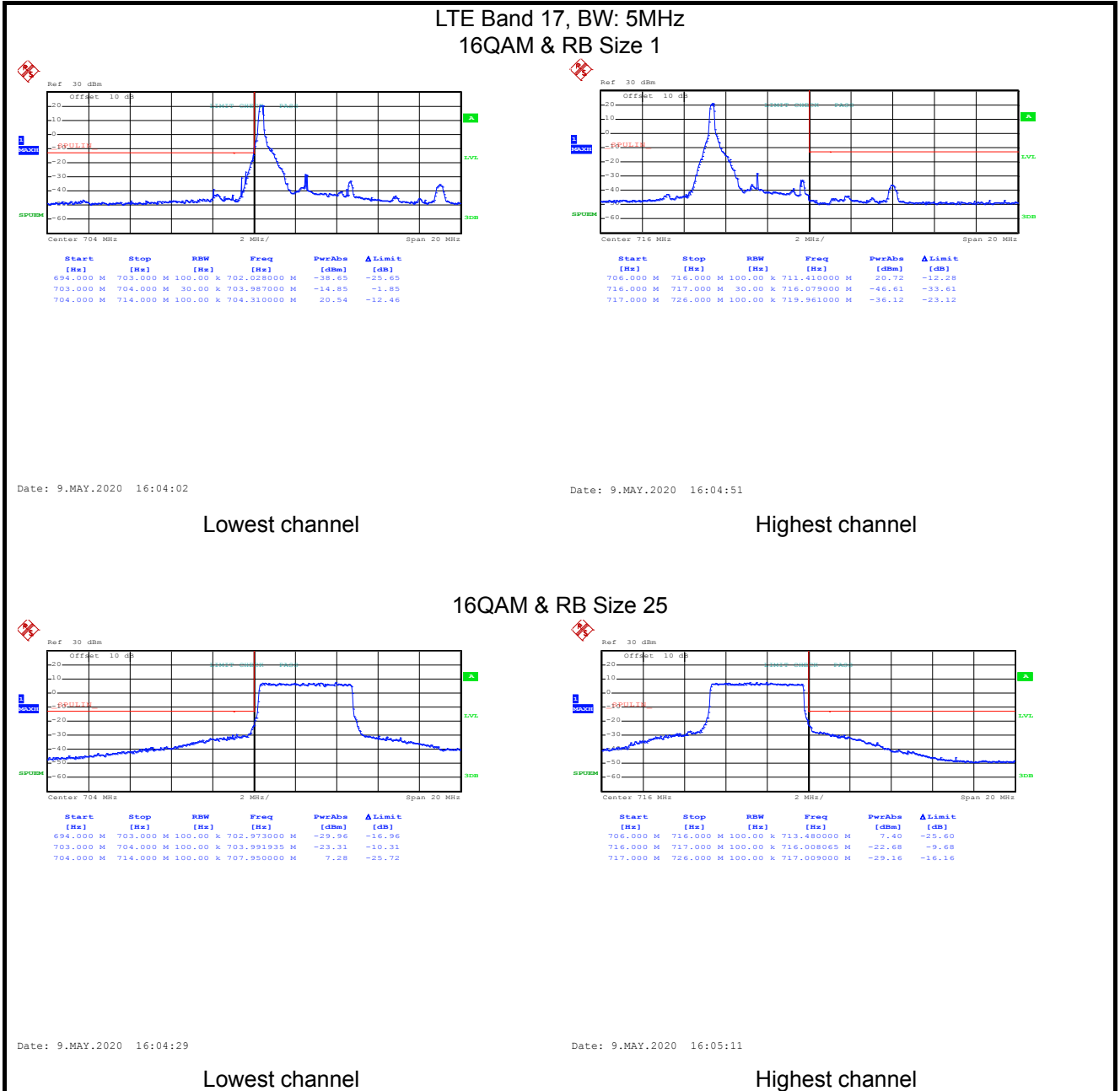
Lowest channel



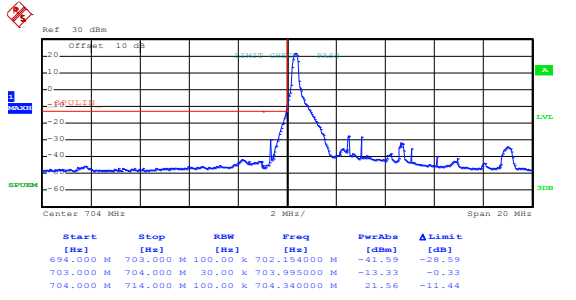
Date: 9.MAY.2020 15:57:15

Highest channel

LTE Band 17 part:

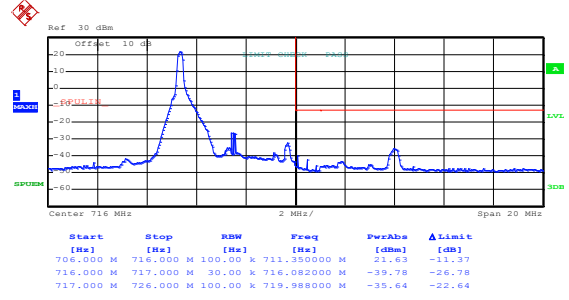


LTE Band 17, BW: 5MHz QPSK & RB Size 1



Date: 9.MAY.2020 16:03:56

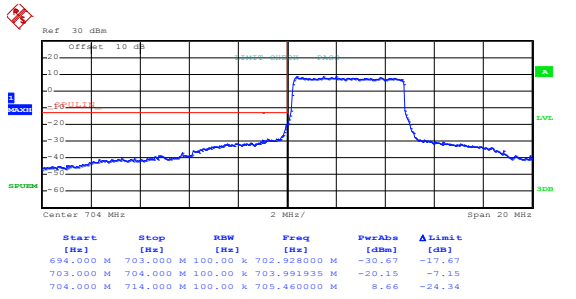
Lowest channel



Date: 9.MAY.2020 16:04:45

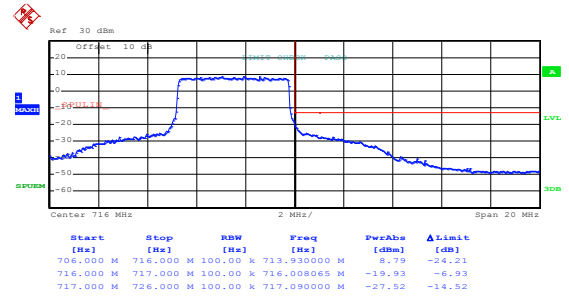
Highest channel

QPSK & RB Size 25



Date: 9.MAY.2020 16:04:24

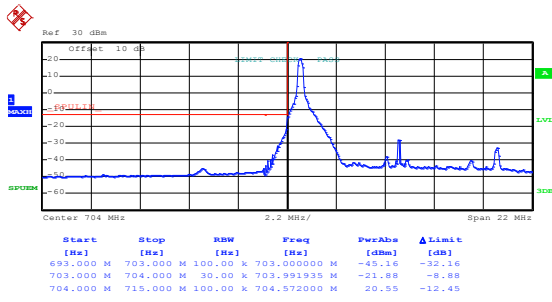
Lowest channel



Date: 9.MAY.2020 16:05:06

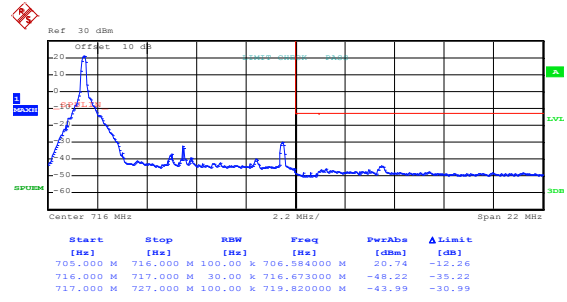
Highest channel

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



Date: 9.MAY.2020 16:02:05

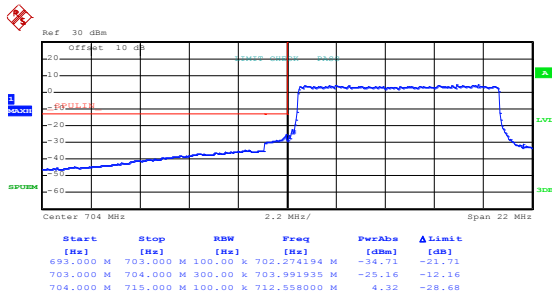
Lowest channel



Date: 9.MAY.2020 16:02:48

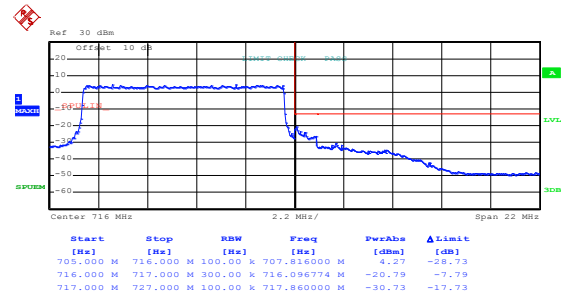
Highest channel

16QAM & RB Size 50



Date: 9.MAY.2020 16:02:26

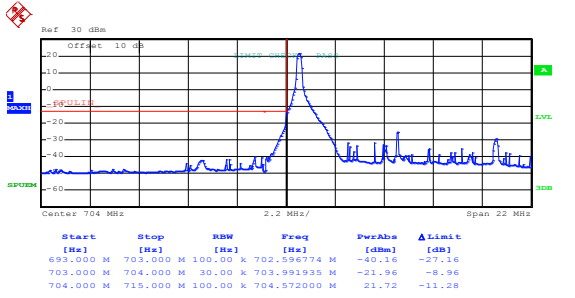
Lowest channel



Date: 9.MAY.2020 16:03:12

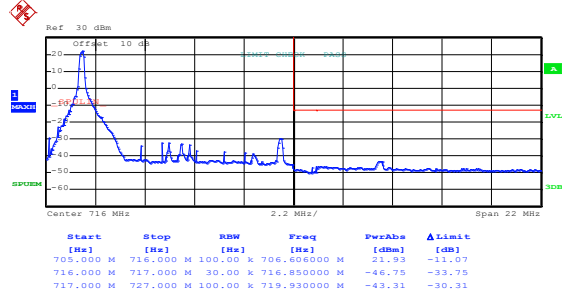
Highest channel

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



Date: 9.MAY.2020 16:01:59

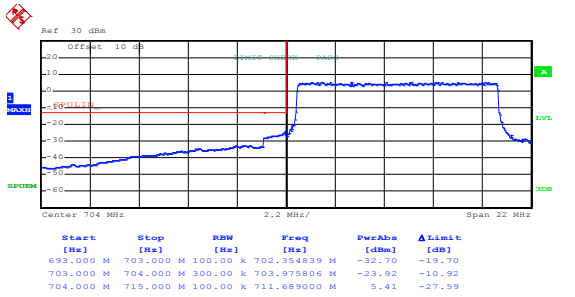
Lowest channel



Date: 9.MAY.2020 16:02:42

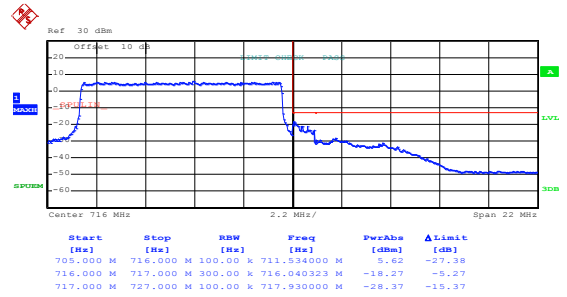
Highest channel

QPSK & RB Size 50



Date: 9.MAY.2020 16:02:20

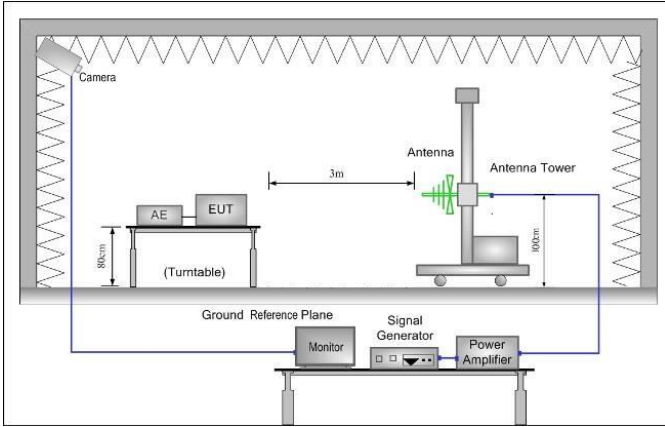
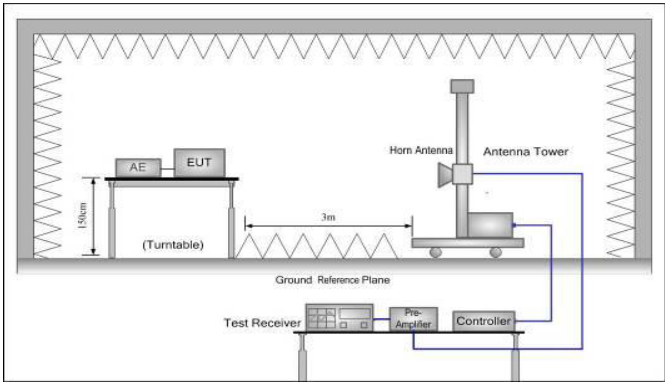
Lowest channel



Date: 9.MAY.2020 16:03:07

Highest channel

6.5 Field strength of spurious radiation measurement

| | |
|-------------------|---|
| Test Requirement: | Part 22.917(a), 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: | <p>Below 1GHz</p>  <p>Above 1GHz</p>  |
| Test Procedure: | <ol style="list-style-type: none"> 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. 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. 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. 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 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 | -55.73 | 12.26 | 0.75 | -44.22 | -42.68 | -1.54 | Vertical |
| 5552.10 | -53.91 | 12.47 | 1.13 | -42.57 | -37.40 | -5.17 | Vertical |
| 7402.00 | -47.36 | 11.26 | 1.63 | -37.73 | -48.47 | 10.74 | Vertical |
| 3701.40 | -60.53 | 12.26 | 0.75 | -49.02 | -41.87 | -7.15 | Horizontal |
| 5552.10 | -53.00 | 12.47 | 1.13 | -41.66 | -37.52 | -4.14 | Horizontal |
| 7402.00 | -47.51 | 11.26 | 1.63 | -37.88 | -13.00 | -24.88 | 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 | -55.43 | 12.19 | 0.79 | -44.03 | -13.00 | -31.03 | Vertical |
| 5640.00 | -53.91 | 12.60 | 1.15 | -42.46 | -13.00 | -29.46 | Vertical |
| 7520.00 | -47.37 | 11.18 | 1.66 | -37.85 | -13.00 | -24.85 | Vertical |
| 3760.00 | -60.31 | 12.19 | 0.79 | -48.91 | -13.00 | -35.91 | Horizontal |
| 5640.00 | -53.51 | 12.60 | 1.15 | -42.06 | -13.00 | -29.06 | Horizontal |
| 7520.00 | -46.99 | 11.18 | 1.66 | -37.47 | -13.00 | -24.47 | 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 | -55.51 | 12.12 | 0.81 | -44.20 | -13.00 | -31.20 | Vertical |
| 5724.90 | -54.20 | 12.71 | 1.19 | -42.68 | -13.00 | -29.68 | Vertical |
| 7633.20 | -46.78 | 11.09 | 1.71 | -37.40 | -13.00 | -24.40 | Vertical |
| 3816.60 | -59.78 | 12.12 | 0.81 | -48.47 | -13.00 | -35.47 | Horizontal |
| 5724.90 | -53.39 | 12.71 | 1.19 | -41.87 | -13.00 | -28.87 | Horizontal |
| 7633.20 | -46.90 | 11.09 | 1.71 | -37.52 | -13.00 | -24.52 | Horizontal |
| <i>Remark:</i> | | | | | | | |
| <i>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.</i> | | | | | | | |

| 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 | -54.55 | 12.24 | 0.77 | -43.08 | -13.00 | -30.08 | Vertical |
| 5580.00 | -54.32 | 12.51 | 1.15 | -42.96 | -13.00 | -29.96 | Vertical |
| 7440.00 | -46.99 | 11.24 | 1.64 | -37.39 | -13.00 | -24.39 | Vertical |
| 3720.00 | -59.24 | 12.24 | 0.77 | -47.77 | -13.00 | -34.77 | Horizontal |
| 5580.00 | -53.05 | 12.51 | 1.15 | -41.69 | -13.00 | -28.69 | Horizontal |
| 7440.00 | -46.82 | 11.24 | 1.64 | -37.22 | -13.00 | -24.22 | Horizontal |
| Middle channel | | | | | | | |
| Frequency (MHz) | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 3760.00 | -54.62 | 12.19 | 0.79 | -43.22 | -13.00 | -30.22 | Vertical |
| 5640.00 | -53.98 | 12.60 | 1.15 | -42.53 | -13.00 | -29.53 | Vertical |
| 7520.00 | -46.98 | 11.18 | 1.66 | -37.46 | -13.00 | -24.46 | Vertical |
| 3760.00 | -59.51 | 12.19 | 0.79 | -48.11 | -13.00 | -35.11 | Horizontal |
| 5640.00 | -53.15 | 12.60 | 1.15 | -41.70 | -13.00 | -28.70 | Horizontal |
| 7520.00 | -47.08 | 11.18 | 1.66 | -37.56 | -13.00 | -24.56 | 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 | -55.02 | 12.14 | 0.79 | -43.67 | -13.00 | -30.67 | Vertical |
| 5700.00 | -53.68 | 12.68 | 1.18 | -42.18 | -13.00 | -29.18 | Vertical |
| 7600.00 | -47.20 | 11.12 | 1.69 | -37.77 | -13.00 | -24.77 | Vertical |
| 3800.00 | -59.79 | 12.14 | 0.79 | -48.44 | -13.00 | -35.44 | Horizontal |
| 5700.00 | -53.28 | 12.68 | 1.18 | -41.78 | -13.00 | -28.78 | Horizontal |
| 7600.00 | -46.80 | 11.12 | 1.69 | -37.37 | -13.00 | -24.37 | Horizontal |
| <i>Remark:</i> | | | | | | | |
| <i>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.</i> | | | | | | | |

LTE Band 4 part:

| Band 4 (1.4MHz) | | | | | | | |
|--|----------------------------------|-------------------------------|------------------|-------------------------------|------------------|------------------|--------------|
| Lowest channel | | | | | | | |
| Frequency (MHz) | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 3421.40 | -56.73 | 12.30 | 0.70 | -45.13 | -13.00 | -32.13 | Vertical |
| 5132.10 | -56.24 | 12.69 | 1.01 | -44.56 | -13.00 | -31.56 | Vertical |
| 6842.80 | -49.25 | 11.56 | 1.53 | -39.22 | -13.00 | -26.22 | Vertical |
| 3421.40 | -58.46 | 12.30 | 0.70 | -46.86 | -13.00 | -33.86 | Horizontal |
| 5132.10 | -56.75 | 12.69 | 1.01 | -45.07 | -13.00 | -32.07 | Horizontal |
| 6842.80 | -48.81 | 11.56 | 1.53 | -38.78 | -13.00 | -25.78 | Horizontal |
| Middle channel | | | | | | | |
| Frequency (MHz) | Level at antenna terminals (dBm) | Substitute antenna gain (dBi) | Cable Loss (dBi) | Spurious Emission level (dBm) | Limit Line (dBm) | Over Limit (dBm) | Polarization |
| 3465.00 | -56.96 | 12.41 | 0.72 | -45.27 | -13.00 | -32.27 | Vertical |
| 5197.50 | -56.38 | 12.64 | 1.04 | -44.78 | -13.00 | -31.78 | Vertical |
| 6930.00 | -49.50 | 11.53 | 1.56 | -39.53 | -13.00 | -26.53 | Vertical |
| 3465.00 | -58.44 | 12.41 | 0.72 | -46.75 | -13.00 | -33.75 | Horizontal |
| 5197.50 | -56.75 | 12.64 | 1.04 | -45.15 | -13.00 | -32.15 | Horizontal |
| 6930.00 | -49.01 | 11.53 | 1.56 | -39.04 | -13.00 | -26.04 | 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 | -56.54 | 12.49 | 0.74 | -44.79 | -13.00 | -31.79 | Vertical |
| 5262.90 | -56.79 | 12.59 | 1.07 | -45.27 | -13.00 | -32.27 | Vertical |
| 7017.20 | -49.26 | 11.49 | 1.58 | -39.35 | -13.00 | -26.35 | Vertical |
| 3508.60 | -58.33 | 12.49 | 0.74 | -46.58 | -13.00 | -33.58 | Horizontal |
| 5262.90 | -56.75 | 12.59 | 1.07 | -45.23 | -13.00 | -32.23 | Horizontal |
| 7017.20 | -49.27 | 11.49 | 1.58 | -39.36 | -13.00 | -26.36 | Horizontal |
| <i>Remark:</i> | | | | | | | |
| <i>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.</i> | | | | | | | |

| 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 | -56.97 | 12.34 | 0.71 | -45.34 | -13.00 | -32.34 | Vertical |
| 5160.00 | -56.71 | 12.67 | 1.03 | -45.07 | -13.00 | -32.07 | Vertical |
| 6880.00 | -48.98 | 11.55 | 1.54 | -38.97 | -13.00 | -25.97 | Vertical |
| 3440.00 | -58.35 | 12.34 | 0.71 | -46.72 | -13.00 | -33.72 | Horizontal |
| 5160.00 | -56.96 | 12.67 | 1.03 | -45.32 | -13.00 | -32.32 | Horizontal |
| 6880.00 | -48.94 | 11.55 | 1.54 | -38.93 | -13.00 | -25.93 | 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 | -56.71 | 12.41 | 0.72 | -45.02 | -13.00 | -32.02 | Vertical |
| 5197.50 | -56.55 | 12.64 | 1.04 | -44.95 | -13.00 | -31.95 | Vertical |
| 6930.00 | -49.26 | 11.53 | 1.56 | -39.29 | -13.00 | -26.29 | Vertical |
| 3465.00 | -58.17 | 12.41 | 0.72 | -46.48 | -13.00 | -33.48 | Horizontal |
| 5197.50 | -57.15 | 12.64 | 1.04 | -45.55 | -13.00 | -32.55 | Horizontal |
| 6930.00 | -49.24 | 11.53 | 1.56 | -39.27 | -13.00 | -26.27 | 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 | -56.53 | 12.49 | 0.73 | -44.77 | -13.00 | -31.77 | Vertical |
| 5235.00 | -56.35 | 12.61 | 1.06 | -44.80 | -13.00 | -31.80 | Vertical |
| 6980.00 | -49.58 | 11.51 | 1.57 | -39.64 | -13.00 | -26.64 | Vertical |
| 3490.00 | -58.36 | 12.49 | 0.73 | -46.60 | -13.00 | -33.60 | Horizontal |
| 5235.00 | -57.16 | 12.61 | 1.06 | -45.61 | -13.00 | -32.61 | Horizontal |
| 6980.00 | -49.18 | 11.51 | 1.57 | -39.24 | -13.00 | -26.24 | Horizontal |
| <p><i>Remark:</i> <i>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.</i></p> | | | | | | | |

| 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 | -58.45 | 9.58 | 0.20 | -49.07 | -13.00 | -36.07 | Vertical |
| 2474.10 | -63.45 | 10.79 | 0.43 | -53.09 | -13.00 | -40.09 | Vertical |
| 3298.80 | -61.90 | 12.14 | 0.64 | -50.40 | -13.00 | -37.40 | Vertical |
| 1649.40 | -51.91 | 9.58 | 0.20 | -42.53 | -13.00 | -29.53 | Horizontal |
| 2474.10 | -60.13 | 10.79 | 0.43 | -49.77 | -13.00 | -36.77 | Horizontal |
| 3298.80 | -61.97 | 12.14 | 0.64 | -50.47 | -13.00 | -37.47 | 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 |
| 1673.30 | -58.39 | 9.62 | 0.22 | -48.99 | -13.00 | -35.99 | Vertical |
| 2509.50 | -63.47 | 10.83 | 0.46 | -53.10 | -13.00 | -40.10 | Vertical |
| 3346.00 | -62.20 | 12.23 | 0.66 | -50.63 | -13.00 | -37.63 | Vertical |
| 1673.30 | -51.75 | 9.62 | 0.22 | -42.35 | -13.00 | -29.35 | Horizontal |
| 2509.50 | -60.15 | 10.83 | 0.46 | -49.78 | -13.00 | -36.78 | Horizontal |
| 3346.00 | -61.96 | 12.23 | 0.66 | -50.39 | -13.00 | -37.39 | 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 | -58.58 | 9.66 | 0.23 | -49.15 | -13.00 | -36.15 | Vertical |
| 2544.90 | -63.46 | 10.88 | 0.49 | -53.07 | -13.00 | -40.07 | Vertical |
| 3393.20 | -62.57 | 12.32 | 0.68 | -50.93 | -13.00 | -37.93 | Vertical |
| 1696.60 | -52.07 | 9.66 | 0.23 | -42.64 | -13.00 | -29.64 | Horizontal |
| 2544.90 | -59.71 | 10.88 | 0.49 | -49.32 | -13.00 | -36.32 | Horizontal |
| 3393.20 | -61.83 | 12.32 | 0.68 | -50.19 | -13.00 | -37.19 | Horizontal |
| <p><i>Remark:</i> The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.</p> | | | | | | | |

| 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 | -58.74 | 9.58 | 0.21 | -49.37 | -13.00 | -36.37 | Vertical |
| 2487.00 | -63.57 | 10.79 | 0.45 | -53.23 | -13.00 | -40.23 | Vertical |
| 3316.00 | -62.34 | 12.14 | 0.65 | -50.85 | -13.00 | -37.85 | Vertical |
| 1658.00 | -51.65 | 9.58 | 0.21 | -42.28 | -13.00 | -29.28 | Horizontal |
| 2487.00 | -59.64 | 10.79 | 0.45 | -49.30 | -13.00 | -36.30 | Horizontal |
| 3316.00 | -61.33 | 12.14 | 0.65 | -49.84 | -13.00 | -36.84 | 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 | -58.99 | 9.62 | 0.21 | -49.58 | -13.00 | -36.58 | Vertical |
| 2509.50 | -63.73 | 10.83 | 0.46 | -53.36 | -13.00 | -40.36 | Vertical |
| 3346.00 | -62.03 | 12.23 | 0.66 | -50.46 | -13.00 | -37.46 | Vertical |
| 1673.30 | -51.53 | 9.62 | 0.21 | -42.12 | -13.00 | -29.12 | Horizontal |
| 2509.50 | -59.56 | 10.83 | 0.46 | -49.19 | -13.00 | -36.19 | Horizontal |
| 3346.00 | -61.42 | 12.23 | 0.66 | -49.85 | -13.00 | -36.85 | 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 | -59.13 | 9.66 | 0.23 | -49.70 | -13.00 | -36.70 | Vertical |
| 2532.00 | -63.92 | 10.88 | 0.48 | -53.52 | -13.00 | -40.52 | Vertical |
| 3376.00 | -61.84 | 12.32 | 0.67 | -50.19 | -13.00 | -37.19 | Vertical |
| 1688.00 | -51.22 | 9.66 | 0.23 | -41.79 | -13.00 | -28.79 | Horizontal |
| 2532.00 | -59.79 | 10.88 | 0.48 | -49.39 | -13.00 | -36.39 | Horizontal |
| 3376.00 | -61.59 | 12.32 | 0.67 | -49.94 | -13.00 | -36.94 | Horizontal |
| <i>Remark:</i> | | | | | | | |
| <i>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.</i> | | | | | | | |

LTE Band 12 part:

| Band 12 (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 |
| 1399.40 | -40.71 | 8.30 | 0.11 | -32.52 | -13.00 | -19.52 | Vertical |
| 2099.10 | -66.95 | 10.48 | 0.29 | -56.76 | -13.00 | -43.76 | Vertical |
| 2798.80 | -63.87 | 11.04 | 0.53 | -53.36 | -13.00 | -40.36 | Vertical |
| 1399.40 | -36.62 | 8.30 | 0.11 | -28.43 | -13.00 | -15.43 | Horizontal |
| 2099.10 | -68.46 | 10.48 | 0.29 | -58.27 | -13.00 | -45.27 | Horizontal |
| 2798.80 | -63.41 | 11.04 | 0.53 | -52.90 | -13.00 | -39.90 | 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 |
| 1415.00 | -40.65 | 8.35 | 0.13 | -32.43 | -13.00 | -19.43 | Vertical |
| 2122.50 | -67.10 | 10.50 | 0.32 | -56.92 | -13.00 | -43.92 | Vertical |
| 2830.00 | -64.25 | 11.06 | 0.55 | -53.74 | -13.00 | -40.74 | Vertical |
| 1415.00 | -36.64 | 8.35 | 0.13 | -28.42 | -13.00 | -15.42 | Horizontal |
| 2122.50 | -68.36 | 10.50 | 0.32 | -58.18 | -13.00 | -45.18 | Horizontal |
| 2830.00 | -63.48 | 11.06 | 0.55 | -52.97 | -13.00 | -39.97 | 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 |
| 1430.60 | -41.15 | 8.39 | 0.16 | -32.92 | -13.00 | -19.92 | Vertical |
| 2145.90 | -66.65 | 10.52 | 0.35 | -56.48 | -13.00 | -43.48 | Vertical |
| 2861.20 | -64.03 | 11.09 | 0.58 | -53.52 | -13.00 | -40.52 | Vertical |
| 1430.60 | -37.04 | 8.39 | 0.16 | -28.81 | -13.00 | -15.81 | Horizontal |
| 2145.90 | -67.93 | 10.52 | 0.35 | -57.76 | -13.00 | -44.76 | Horizontal |
| 2861.20 | -63.21 | 11.09 | 0.58 | -52.70 | -13.00 | -39.70 | Horizontal |
| <i>Remark:</i> | | | | | | | |
| <i>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.</i> | | | | | | | |

| Band 12 (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 |
| 1408.00 | -41.53 | 8.32 | 0.12 | -33.33 | -13.00 | -20.33 | Vertical |
| 2112.00 | -66.62 | 10.49 | 0.30 | -56.43 | -13.00 | -43.43 | Vertical |
| 2816.00 | -64.31 | 11.05 | 0.54 | -53.80 | -13.00 | -40.80 | Vertical |
| 1408.00 | -37.28 | 8.32 | 0.12 | -29.08 | -13.00 | -16.08 | Horizontal |
| 2112.00 | -67.47 | 10.49 | 0.30 | -57.28 | -13.00 | -44.28 | Horizontal |
| 2816.00 | -63.00 | 11.05 | 0.54 | -52.49 | -13.00 | -39.49 | 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 |
| 1415.00 | -41.86 | 8.35 | 0.13 | -33.64 | -13.00 | -20.64 | Vertical |
| 2122.50 | -66.49 | 10.50 | 0.32 | -56.31 | -13.00 | -43.31 | Vertical |
| 2830.00 | -63.95 | 11.06 | 0.55 | -53.44 | -13.00 | -40.44 | Vertical |
| 1415.00 | -37.67 | 8.35 | 0.13 | -29.45 | -13.00 | -16.45 | Horizontal |
| 2122.50 | -67.16 | 10.50 | 0.32 | -56.98 | -13.00 | -43.98 | Horizontal |
| 2830.00 | -63.11 | 11.06 | 0.55 | -52.60 | -13.00 | -39.60 | 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 |
| 1422.00 | -41.45 | 8.37 | 0.15 | -33.23 | -13.00 | -20.23 | Vertical |
| 2133.00 | -66.97 | 10.51 | 0.34 | -56.80 | -13.00 | -43.80 | Vertical |
| 2844.00 | -63.95 | 11.08 | 0.57 | -53.44 | -13.00 | -40.44 | Vertical |
| 1422.00 | -37.90 | 8.37 | 0.15 | -29.68 | -13.00 | -16.68 | Horizontal |
| 2133.00 | -67.43 | 10.51 | 0.34 | -57.26 | -13.00 | -44.26 | Horizontal |
| 2844.00 | -63.49 | 11.08 | 0.57 | -52.98 | -13.00 | -39.98 | Horizontal |
| <i>Remark:</i> | | | | | | | |
| <i>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.</i> | | | | | | | |

LTE Band 17 part:

| Band 17 (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 |
| 1413.00 | -39.35 | 8.34 | 0.12 | -31.13 | -13.00 | -18.13 | Vertical |
| 2119.50 | -65.97 | 10.50 | 0.31 | -55.78 | -13.00 | -42.78 | Vertical |
| 2826.00 | -63.97 | 11.06 | 0.54 | -53.45 | -13.00 | -40.45 | Vertical |
| 1413.00 | -36.86 | 8.34 | 0.12 | -28.64 | -13.00 | -15.64 | Horizontal |
| 2119.50 | -67.01 | 10.50 | 0.31 | -56.82 | -13.00 | -43.82 | Horizontal |
| 2826.00 | -63.78 | 11.06 | 0.54 | -53.26 | -13.00 | -40.26 | 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 |
| 1420.00 | -39.61 | 8.36 | 0.14 | -31.39 | -13.00 | -18.39 | Vertical |
| 2130.00 | -66.29 | 10.50 | 0.33 | -56.12 | -13.00 | -43.12 | Vertical |
| 2840.00 | -63.79 | 11.07 | 0.56 | -53.28 | -13.00 | -40.28 | Vertical |
| 1420.00 | -37.30 | 8.36 | 0.14 | -29.08 | -13.00 | -16.08 | Horizontal |
| 2130.00 | -66.60 | 10.50 | 0.33 | -56.43 | -13.00 | -43.43 | Horizontal |
| 2840.00 | -63.56 | 11.07 | 0.56 | -53.05 | -13.00 | -40.05 | 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 |
| 1427.00 | -39.56 | 8.38 | 0.16 | -31.34 | -13.00 | -18.34 | Vertical |
| 2140.50 | -66.05 | 10.51 | 0.34 | -55.88 | -13.00 | -42.88 | Vertical |
| 2854.00 | -63.86 | 11.08 | 0.57 | -53.35 | -13.00 | -40.35 | Vertical |
| 1427.00 | -37.38 | 8.38 | 0.16 | -29.16 | -13.00 | -16.16 | Horizontal |
| 2140.50 | -66.92 | 10.51 | 0.34 | -56.75 | -13.00 | -43.75 | Horizontal |
| 2854.00 | -63.15 | 11.08 | 0.57 | -52.64 | -13.00 | -39.64 | Horizontal |
| <i>Remark:</i> | | | | | | | |
| <i>The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.</i> | | | | | | | |

| Band 17 (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 |
| 1418.00 | -40.19 | 8.35 | 0.13 | -31.97 | -13.00 | -18.97 | Vertical |
| 2127.00 | -66.49 | 10.50 | 0.32 | -56.31 | -13.00 | -43.31 | Vertical |
| 2836.00 | -63.37 | 11.07 | 0.56 | -52.86 | -13.00 | -39.86 | Vertical |
| 1418.00 | -38.40 | 8.35 | 0.13 | -30.18 | -13.00 | -17.18 | Horizontal |
| 2127.00 | -67.04 | 10.50 | 0.32 | -56.86 | -13.00 | -43.86 | Horizontal |
| 2836.00 | -63.91 | 11.07 | 0.56 | -53.40 | -13.00 | -40.40 | 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 |
| 1420.00 | -40.21 | 8.36 | 0.14 | -31.99 | -13.00 | -18.99 | Vertical |
| 2130.00 | -66.44 | 10.50 | 0.33 | -56.27 | -13.00 | -43.27 | Vertical |
| 2840.00 | -63.52 | 11.07 | 0.56 | -53.01 | -13.00 | -40.01 | Vertical |
| 1420.00 | -37.97 | 8.36 | 0.14 | -29.75 | -13.00 | -16.75 | Horizontal |
| 2130.00 | -67.07 | 10.50 | 0.33 | -56.90 | -13.00 | -43.90 | Horizontal |
| 2840.00 | -64.06 | 11.07 | 0.56 | -53.55 | -13.00 | -40.55 | 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 |
| 1422.00 | -39.73 | 8.37 | 0.15 | -31.51 | -13.00 | -18.51 | Vertical |
| 2133.00 | -66.04 | 10.51 | 0.34 | -55.87 | -13.00 | -42.87 | Vertical |
| 2844.00 | -63.61 | 11.08 | 0.57 | -53.10 | -13.00 | -40.10 | Vertical |
| 1422.00 | -37.86 | 8.37 | 0.15 | -29.64 | -13.00 | -16.64 | Horizontal |
| 2133.00 | -66.76 | 10.51 | 0.34 | -56.59 | -13.00 | -43.59 | Horizontal |
| 2844.00 | -63.63 | 11.08 | 0.57 | -53.12 | -13.00 | -40.12 | Horizontal |
| <p><i>Remark:</i> The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.</p> | | | | | | | |

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 & 12 & 13 & 17 |
| Test setup: | |
| Test procedure: | <ol style="list-style-type: none"> 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 | 198 | 0.105319 | ±2.5 | Pass |
| | -20 | 155 | 0.082447 | | |
| | -10 | 163 | 0.086702 | | |
| | 0 | 123 | 0.065426 | | |
| | 10 | 188 | 0.100000 | | |
| | 20 | 174 | 0.092553 | | |
| | 30 | 114 | 0.060638 | | |
| | 40 | 105 | 0.055851 | | |
| | 50 | 150 | 0.079787 | | |
| 16QAM | | | | | |
| 3.85 | -30 | 123 | 0.065426 | ±2.5 | Pass |
| | -20 | 150 | 0.079787 | | |
| | -10 | 166 | 0.088298 | | |
| | 0 | 122 | 0.064894 | | |
| | 10 | 144 | 0.076596 | | |
| | 20 | 140 | 0.074468 | | |
| | 30 | 156 | 0.082979 | | |
| | 40 | 133 | 0.070745 | | |
| | 50 | 138 | 0.073404 | | |

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 | 195 | 0.112554 | ±2.5 | Pass |
| | -20 | 123 | 0.070996 | | |
| | -10 | 165 | 0.095238 | | |
| | 0 | 180 | 0.103896 | | |
| | 10 | 177 | 0.102165 | | |
| | 20 | 140 | 0.080808 | | |
| | 30 | 100 | 0.057720 | | |
| | 40 | 132 | 0.076190 | | |
| | 50 | 117 | 0.067532 | | |
| 16QAM | | | | | |
| 3.85 | -30 | 196 | 0.113131 | ±2.5 | Pass |
| | -20 | 151 | 0.087157 | | |
| | -10 | 188 | 0.108514 | | |
| | 0 | 171 | 0.098701 | | |
| | 10 | 123 | 0.070996 | | |
| | 20 | 136 | 0.078499 | | |
| | 30 | 161 | 0.092929 | | |
| | 40 | 145 | 0.083694 | | |
| | 50 | 102 | 0.058874 | | |

Note: Only the worst case shown in the report.

LTE Band 5 part:

| Reference Frequency: LTE Band 5 (10MHz) Middle channel=20525 channel=836.50MHz | | | | | |
|--|------------------|-----------------|----------|-------------|--------|
| Power supplied (Vdc) | Temperature (°C) | Frequency error | | Limit (ppm) | Result |
| | | Hz | ppm | | |
| QPSK | | | | | |
| 3.85 | -30 | 198 | 0.236701 | ±2.5 | Pass |
| | -20 | 196 | 0.234310 | | |
| | -10 | 177 | 0.211596 | | |
| | 0 | 180 | 0.215182 | | |
| | 10 | 165 | 0.197250 | | |
| | 20 | 144 | 0.172146 | | |
| | 30 | 150 | 0.179319 | | |
| | 40 | 100 | 0.119546 | | |
| | 50 | 132 | 0.157800 | | |
| 16QAM | | | | | |
| 3.85 | -30 | 196 | 0.234310 | ±2.5 | Pass |
| | -20 | 111 | 0.132696 | | |
| | -10 | 155 | 0.185296 | | |
| | 0 | 132 | 0.157800 | | |
| | 10 | 180 | 0.215182 | | |
| | 20 | 172 | 0.205619 | | |
| | 30 | 126 | 0.150628 | | |
| | 40 | 144 | 0.172146 | | |
| | 50 | 100 | 0.119546 | | |
| <i>Note: Only the worst case shown in the report.</i> | | | | | |

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 | 191 | 0.269965 | ±2.5 | Pass |
| | -20 | 144 | 0.203534 | | |
| | -10 | 180 | 0.254417 | | |
| | 0 | 174 | 0.245936 | | |
| | 10 | 165 | 0.233216 | | |
| | 20 | 132 | 0.186572 | | |
| | 30 | 100 | 0.141343 | | |
| | 40 | 111 | 0.156890 | | |
| | 50 | 147 | 0.207774 | | |
| 16QAM | | | | | |
| 3.85 | -30 | 190 | 0.268551 | ±2.5 | Pass |
| | -20 | 180 | 0.254417 | | |
| | -10 | 177 | 0.250177 | | |
| | 0 | 123 | 0.173852 | | |
| | 10 | 165 | 0.233216 | | |
| | 20 | 101 | 0.142756 | | |
| | 30 | 145 | 0.204947 | | |
| | 40 | 108 | 0.152650 | | |
| | 50 | 111 | 0.156890 | | |
| <i>Note: Only the worst case shown in the report.</i> | | | | | |

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 | 199 | 0.280282 | ±2.5 | Pass |
| | -20 | 188 | 0.264789 | | |
| | -10 | 144 | 0.202817 | | |
| | 0 | 165 | 0.232394 | | |
| | 10 | 123 | 0.173239 | | |
| | 20 | 136 | 0.191549 | | |
| | 30 | 177 | 0.249296 | | |
| | 40 | 101 | 0.142254 | | |
| | 50 | 111 | 0.156338 | | |
| 16QAM | | | | | |
| 3.85 | -30 | 198 | 0.278873 | ±2.5 | Pass |
| | -20 | 155 | 0.218310 | | |
| | -10 | 165 | 0.232394 | | |
| | 0 | 123 | 0.173239 | | |
| | 10 | 134 | 0.188732 | | |
| | 20 | 177 | 0.249296 | | |
| | 30 | 146 | 0.205634 | | |
| | 40 | 100 | 0.140845 | | |
| | 50 | 118 | 0.166197 | | |

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 & 5 & 12 & 17 |
| Test setup: | <p>The diagram illustrates the test setup. A Power Source is connected to a Divider. The Divider is connected to two Spectrum Analyzers (SS and SA) and an EUT (Equipment Under Test) inside a Temperature & Humidity Chamber. The Power Source is also connected to the EUT.</p> |
| Test procedure: | <ol style="list-style-type: none"> 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 | 98 | 0.052128 | ±2.5 | Pass |
| | 3.85 | 65 | 0.034574 | | |
| | 3.50 | 74 | 0.039362 | | |
| 16QAM | | | | | |
| 25 | 4.40 | 80 | 0.042553 | ±2.5 | Pass |
| | 3.85 | 96 | 0.051064 | | |
| | 3.50 | 48 | 0.025532 | | |

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 | 96 | 0.055411 | ±2.5 | Pass |
| | 3.85 | 88 | 0.050794 | | |
| | 3.50 | 74 | 0.042713 | | |
| 16QAM | | | | | |
| 25 | 4.40 | 90 | 0.051948 | ±2.5 | Pass |
| | 3.85 | 77 | 0.044444 | | |
| | 3.50 | 60 | 0.034632 | | |

Note: Only the worst case shown in the report.

LTE Band 5 part:

| Reference Frequency: LTE Band 5(10MHz) Middle channel=20525 channel=836.50MHz | | | | | |
|---|----------------------|-----------------|----------|-------------|--------|
| Temperature (°C) | Power supplied (Vdc) | Frequency error | | Limit (ppm) | Result |
| | | Hz | ppm | | |
| QPSK | | | | | |
| 25 | 4.40 | 88 | 0.105200 | ±2.5 | Pass |
| | 3.85 | 90 | 0.107591 | | |
| | 3.50 | 74 | 0.088464 | | |
| 16QAM | | | | | |
| 25 | 4.40 | 96 | 0.114764 | ±2.5 | Pass |
| | 3.85 | 80 | 0.095637 | | |
| | 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 | 91 | 0.128622 | ±2.5 | Pass |
| | 3.85 | 80 | 0.113074 | | |
| | 3.50 | 77 | 0.108834 | | |
| 16QAM | | | | | |
| 25 | 4.40 | 96 | 0.135689 | ±2.5 | Pass |
| | 3.85 | 88 | 0.124382 | | |
| | 3.50 | 76 | 0.107420 | | |

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 | 99 | 0.139437 | ±2.5 | Pass |
| | 3.85 | 80 | 0.112676 | | |
| | 3.50 | 76 | 0.107042 | | |
| 16QAM | | | | | |
| 25 | 4.40 | 80 | 0.112676 | ±2.5 | Pass |
| | 3.85 | 74 | 0.104225 | | |
| | 3.50 | 60 | 0.084507 | | |

Note: Only the worst case shown in the report.