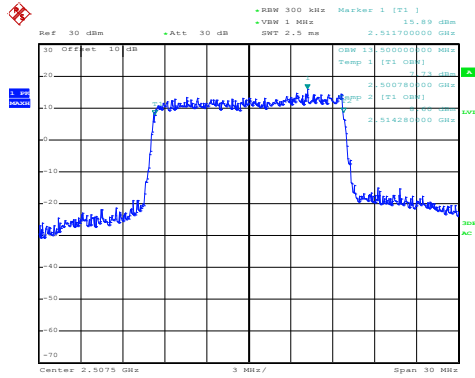


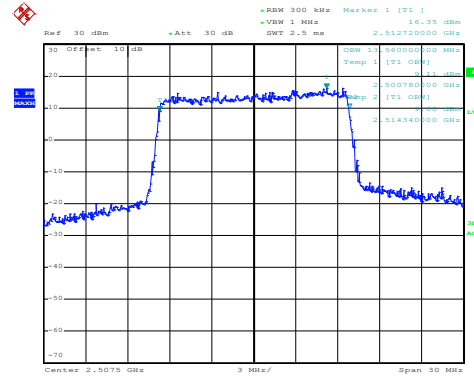
LTE Band 7: 99% Occupancy bandwidth BW: 15MHz

16QAM



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

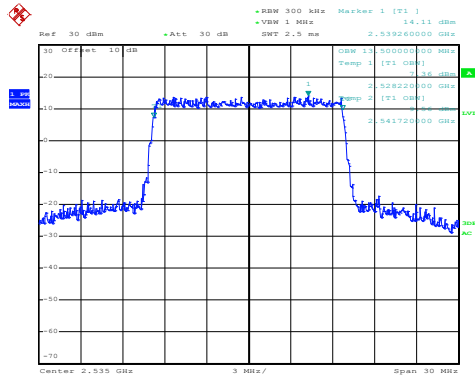
QPSK



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

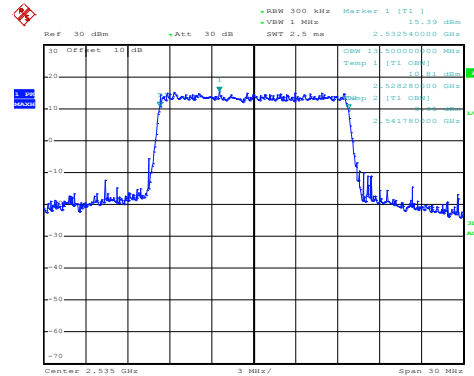
Lowest channel

16QAM



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

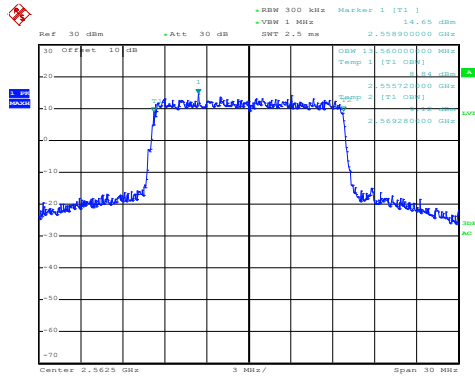
QPSK



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

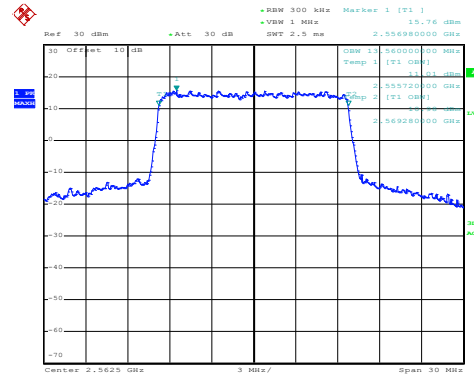
Middle channel

16QAM



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

QPSK

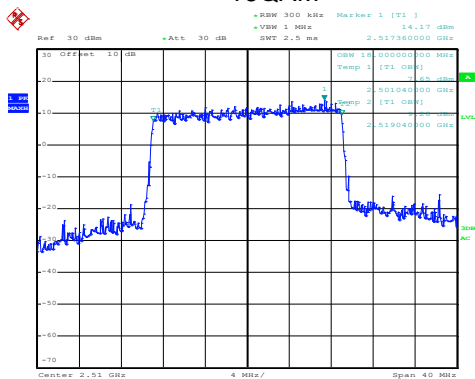


Date: 15.JUN.2020 15:15:19

Highest channel

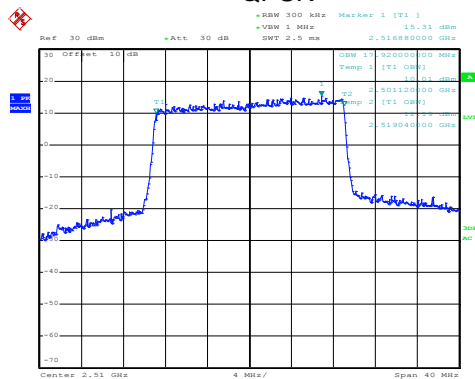
LTE Band 7: 99% Occupancy bandwidth BW: 20MHz

16QAM



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

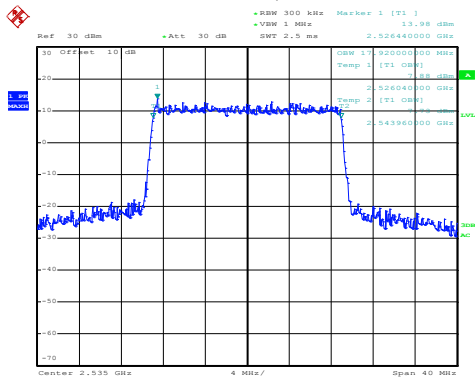
QPSK



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

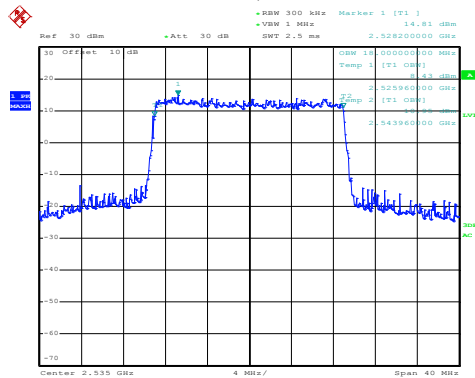
Lowest channel

16QAM



Date: 15.JUN.2020 15:17:24

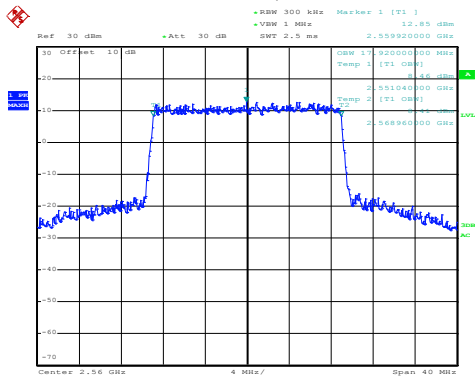
QPSK



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

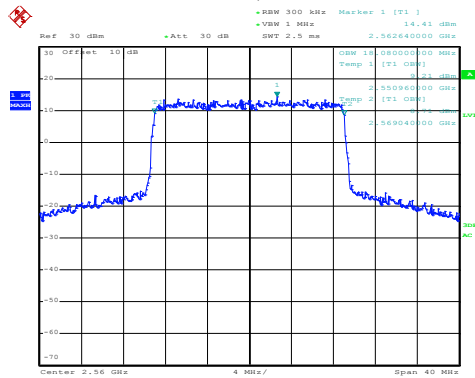
Middle channel

16QAM



Date: 15.JUN.2020 15:17:41

QPSK

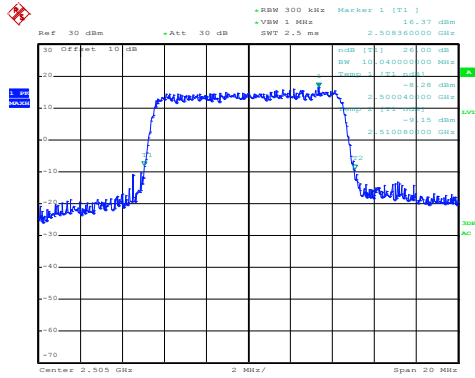


Date: 15.JUN.2020 15:17:36

Highest channel

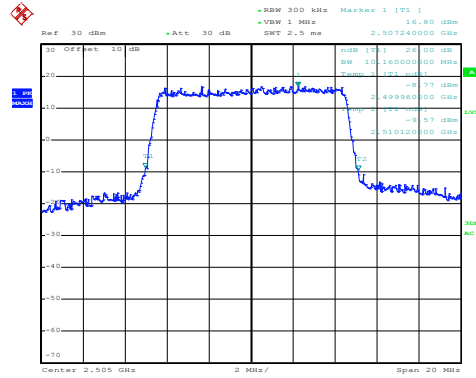
LTE Band 7: -26dBc bandwidth
BW: 10MHz

16QAM



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

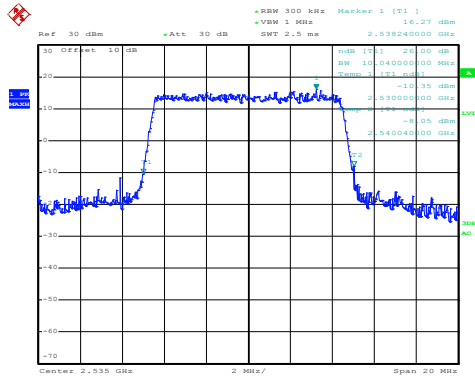
QPSK



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

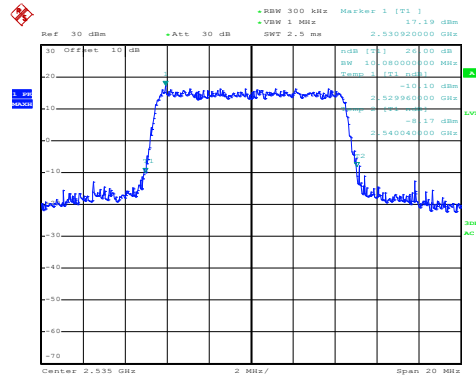
Lowest channel

16QAM



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

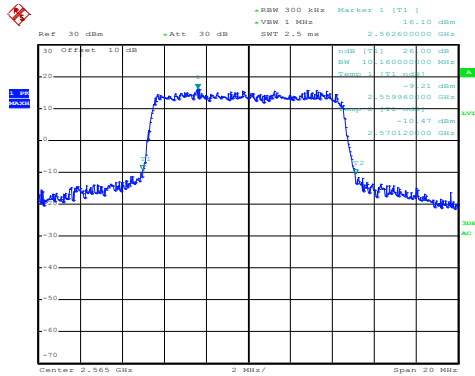
QPSK



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

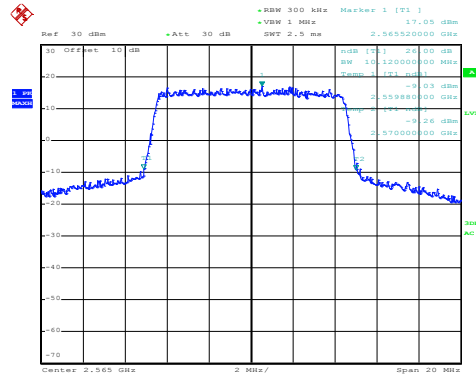
Middle channel

16QAM



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

QPSK

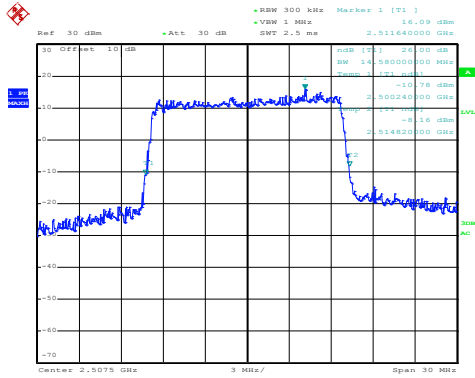


Date: 15.JUN.2020 15:13:07

Highest channel

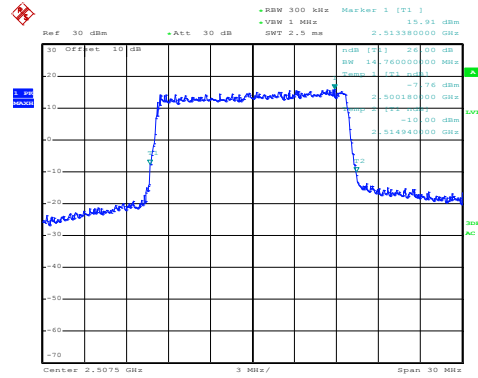
LTE Band 7: -26dBc bandwidth BW: 15MHz

16QAM



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

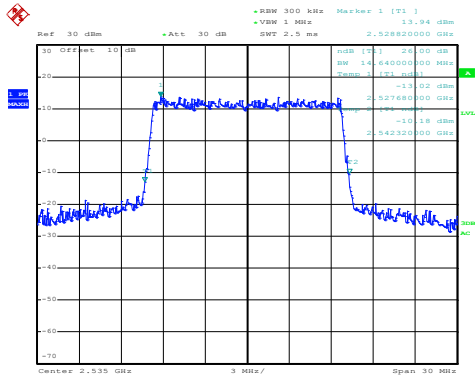
QPSK



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

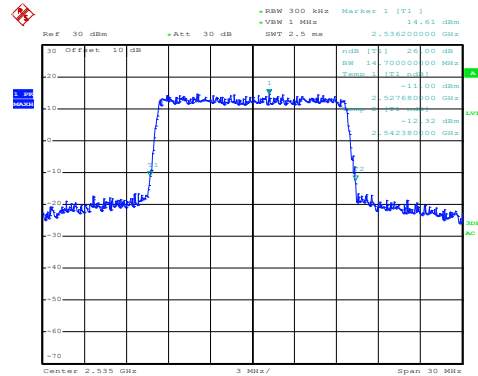
Lowest channel

16QAM



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

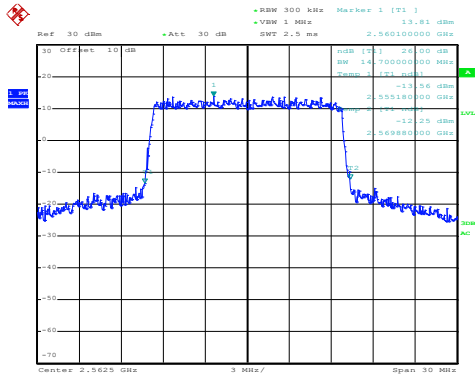
QPSK



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

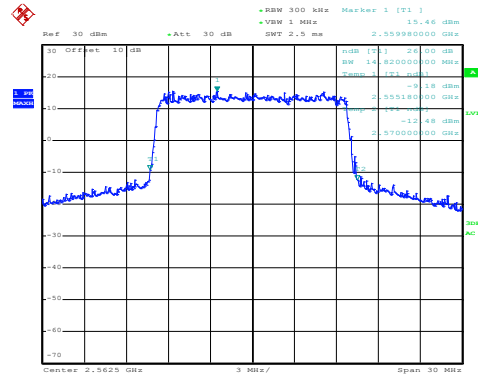
Middle channel

16QAM



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

QPSK

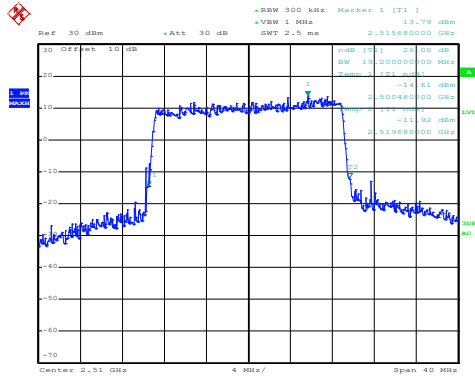


Date: 15.JUN.2020 15:15:30

Highest channel

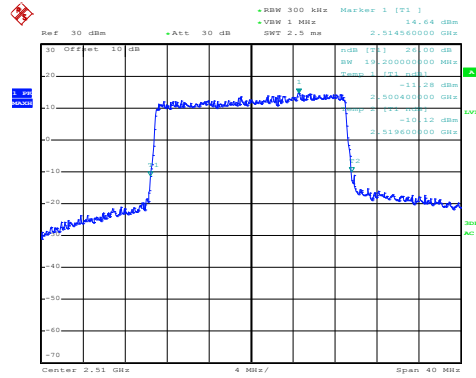
LTE Band 7: -26dBc bandwidth BW: 20MHz

16QAM



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

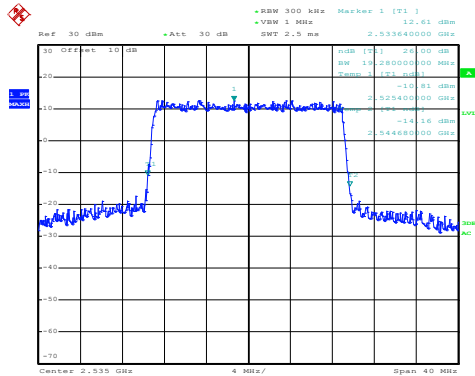
QPSK



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

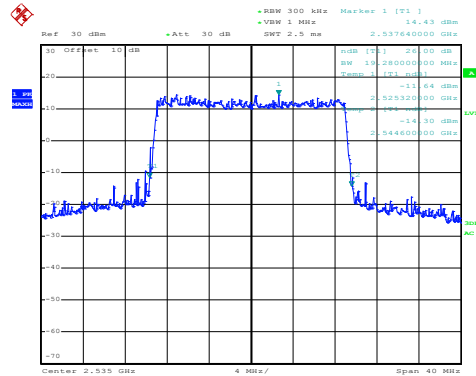
Lowest channel

16QAM



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

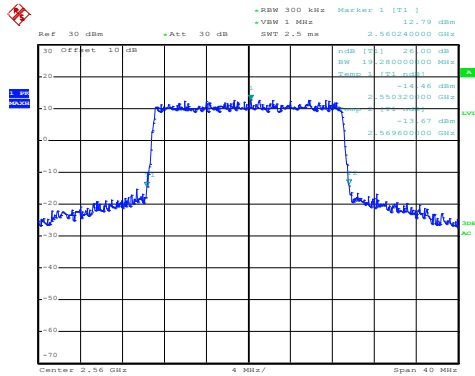
QPSK



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

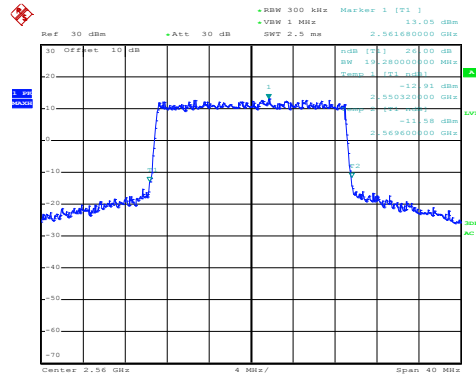
Middle channel

16QAM



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

QPSK

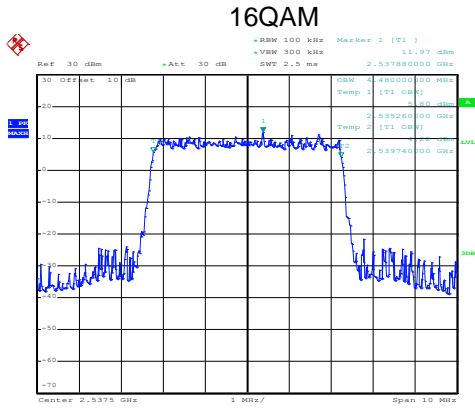


Date: 15.JUN.2020 15:17:48

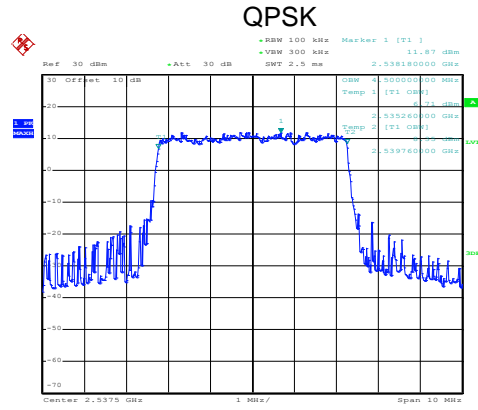
Highest channel

LTE Band 41 part:

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

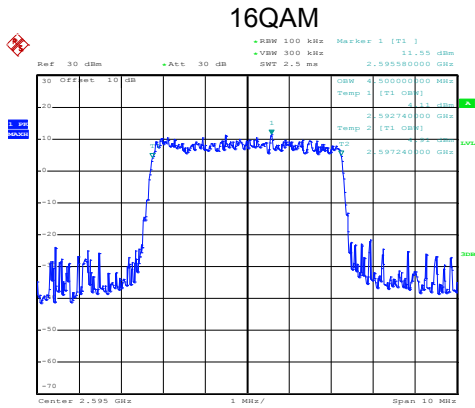


Date: 16.JUN.2020 15:17:35

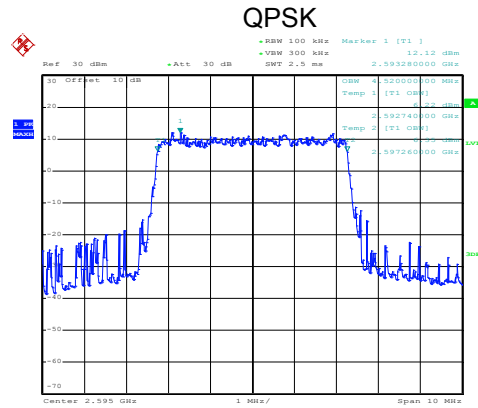


Date: 16.JUN.2020 15:17:30

Lowest channel

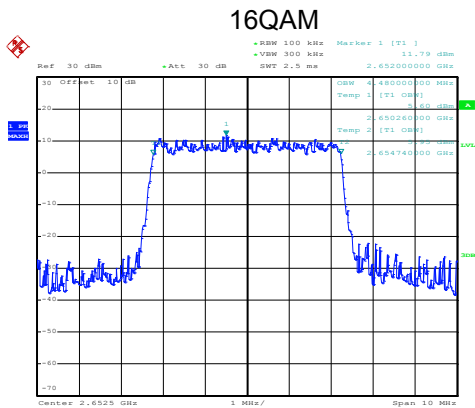


Date: 16.JUN.2020 15:17:50

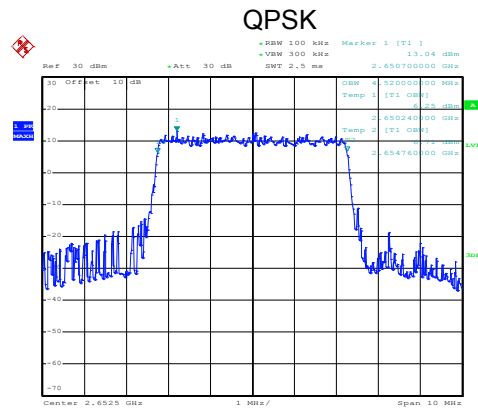


Date: 16.JUN.2020 15:17:46

Middle channel



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

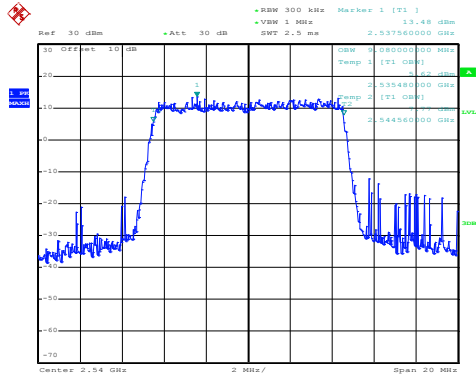


Date: 16.JUN.2020 15:18:29

Highest channel

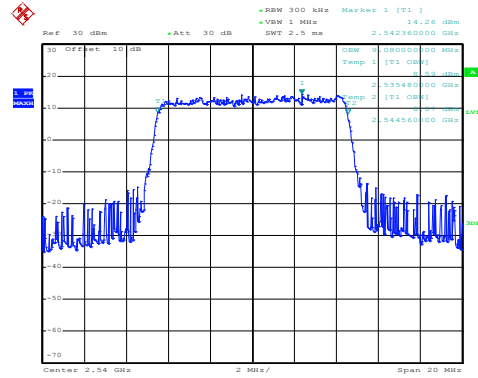
LTE Band 41: 99% Occupancy bandwidth BW: 10MHz

16QAM



Date: 16 JUN.2020 15:15:35

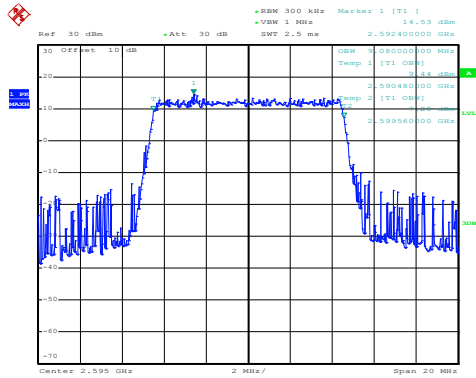
QPSK



Date: 16 JUN.2020 15:15:31

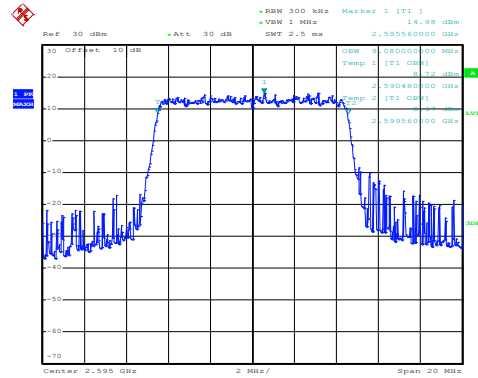
Lowest channel

16QAM



Date: 16 JUN.2020 15:16:19

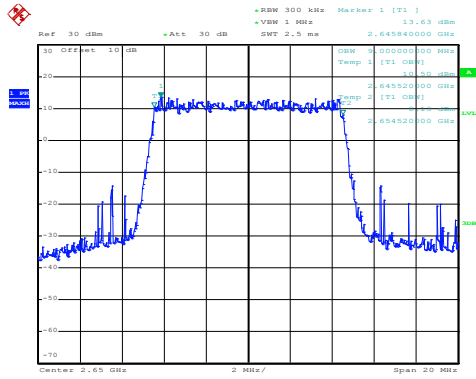
QPSK



Date: 16 JUN.2020 15:16:09

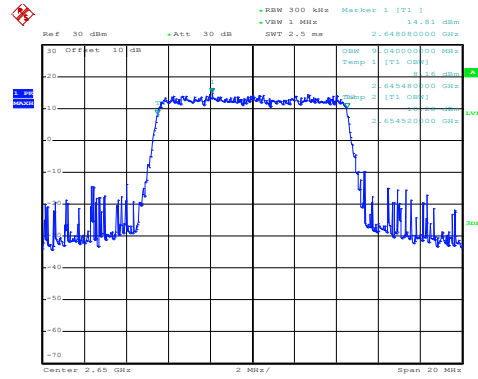
Middle channel

16QAM



Date: 16 JUN.2020 15:16:38

QPSK

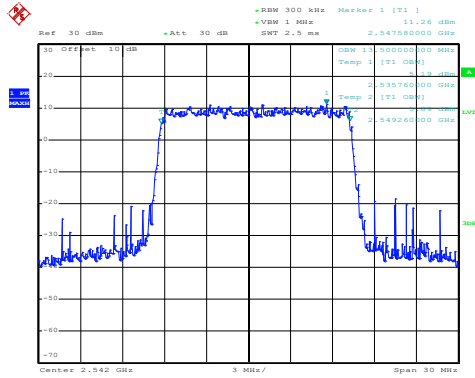


Date: 16 JUN.2020 15:16:35

Highest channel

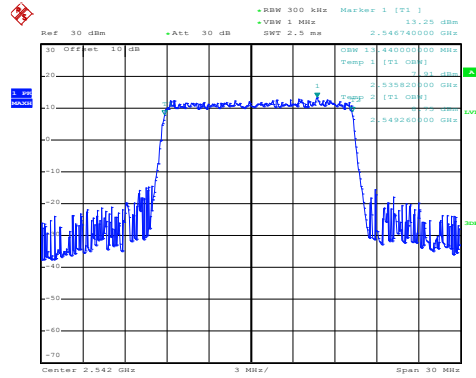
LTE Band 41: 99% Occupancy bandwidth BW: 15MHz

16QAM



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

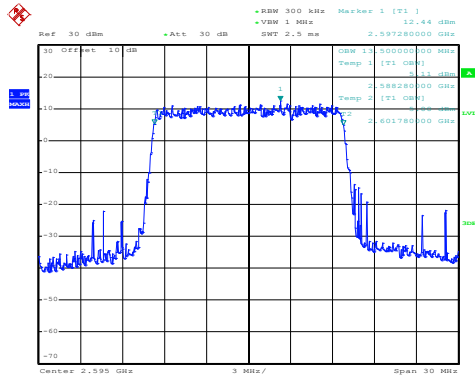
QPSK



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

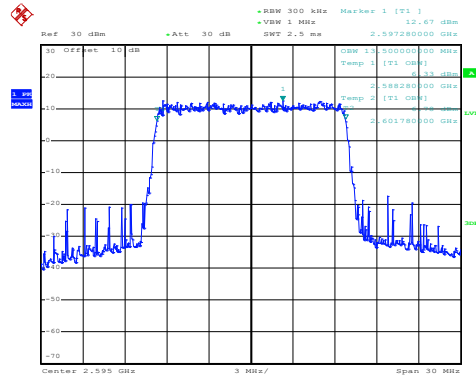
Lowest channel

16QAM



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

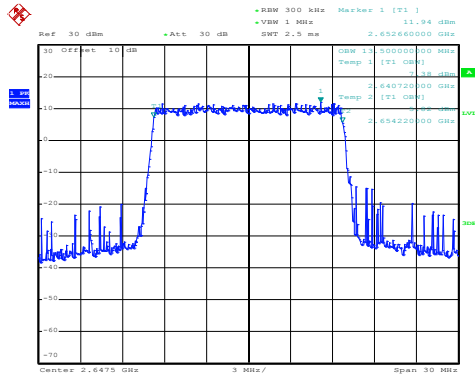
QPSK



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

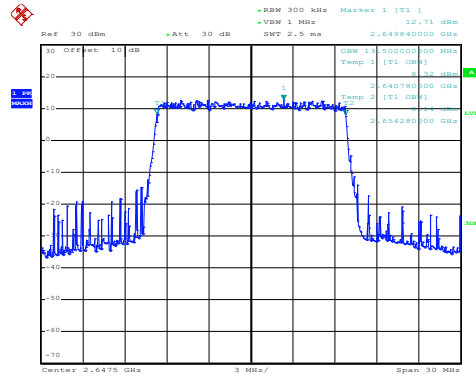
Middle channel

16QAM



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

QPSK

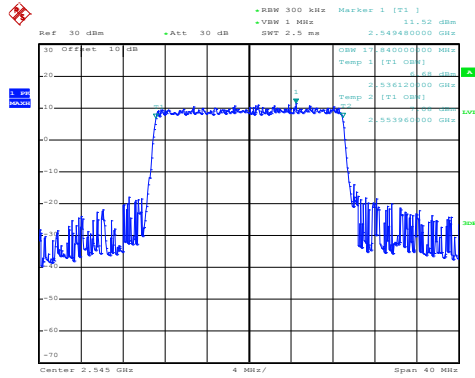


Date: 16.JUN.2020 15:15:04

Highest channel

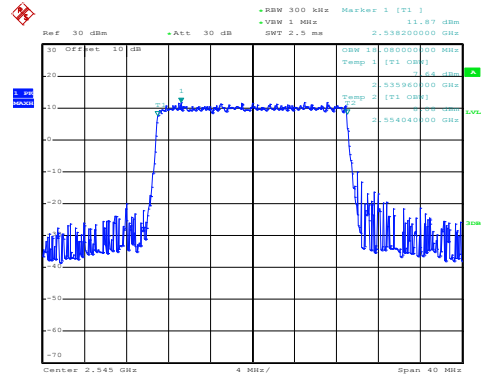
LTE Band 41: 99% Occupancy bandwidth BW: 20MHz

16QAM



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

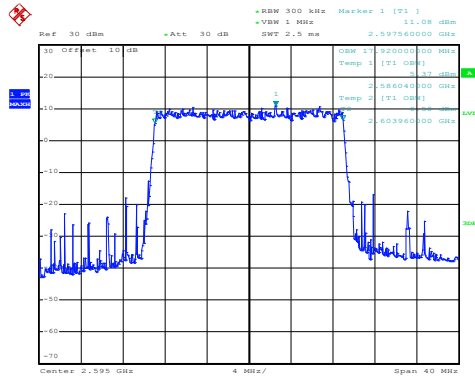
QPSK



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

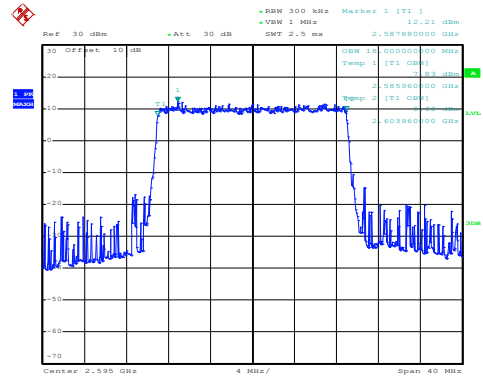
Lowest channel

16QAM



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

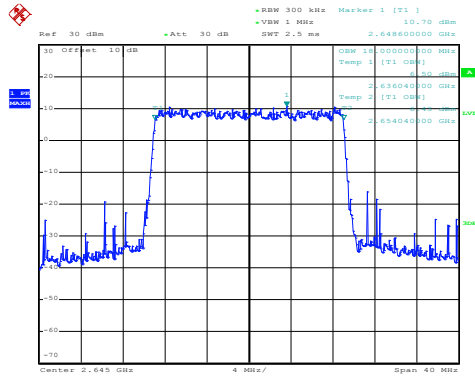
QPSK



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

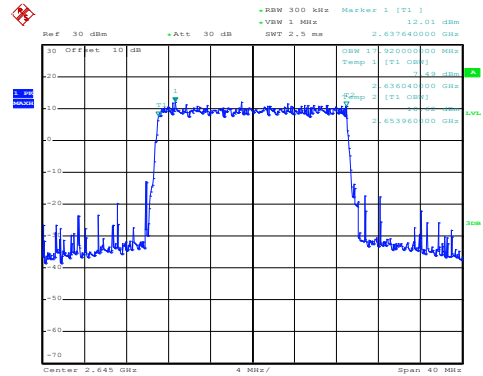
Middle channel

16QAM



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

QPSK

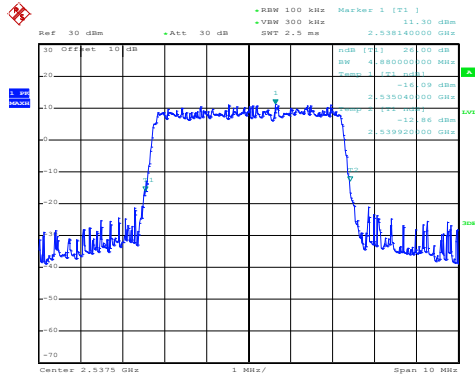


Date: 16.JUN.2020 15:13:04

Highest channel

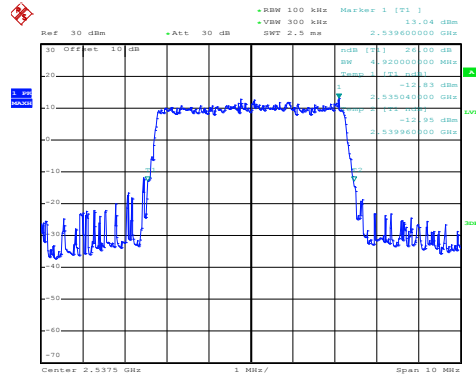
LTE Band 41: -26dBc bandwidth
BW: 5MHz

16QAM



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

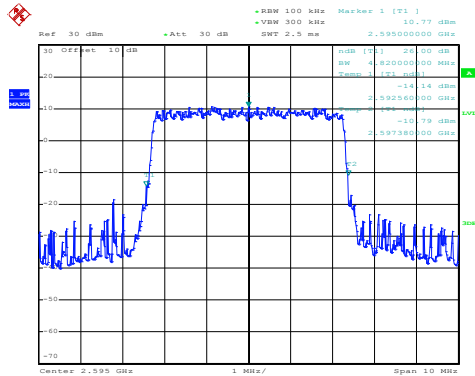
QPSK



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

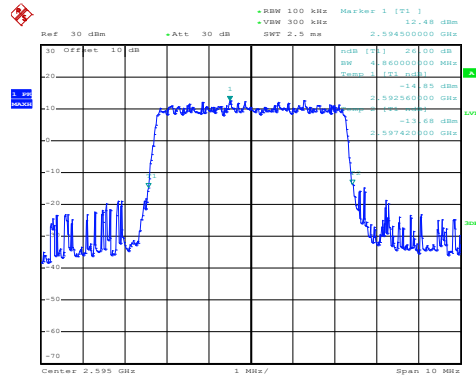
Lowest channel

16QAM



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

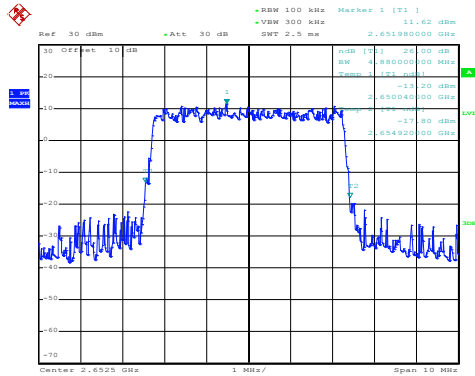
QPSK



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

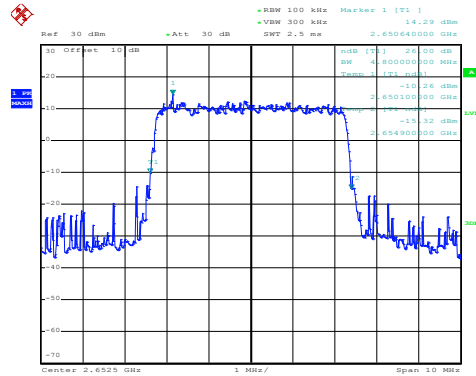
Middle channel

16QAM



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

QPSK

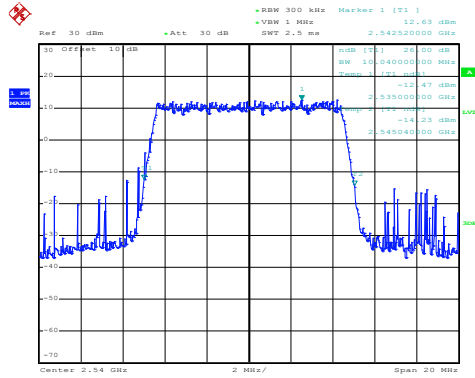


Date: 16.JUN.2020 15:18:16

Highest channel

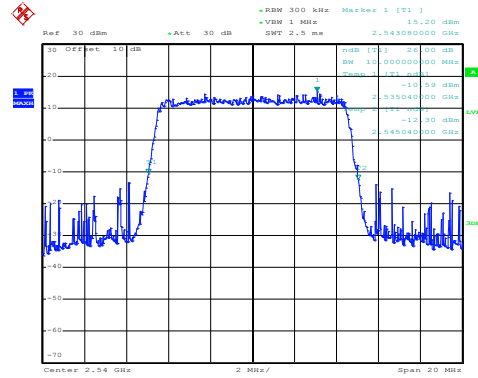
LTE Band 41: -26dBc bandwidth
BW: 10MHz

16QAM



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

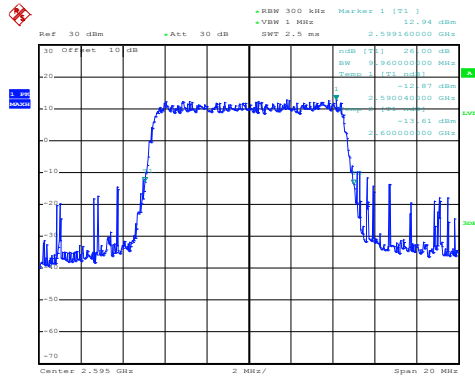
QPSK



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

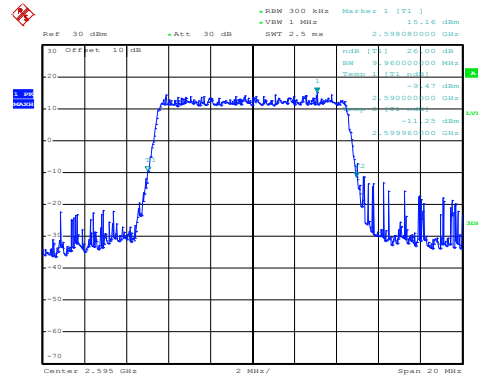
Lowest channel

16QAM



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

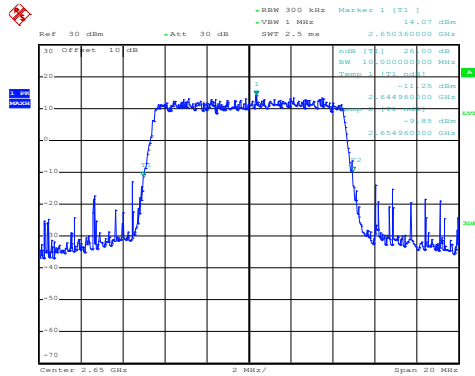
QPSK



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

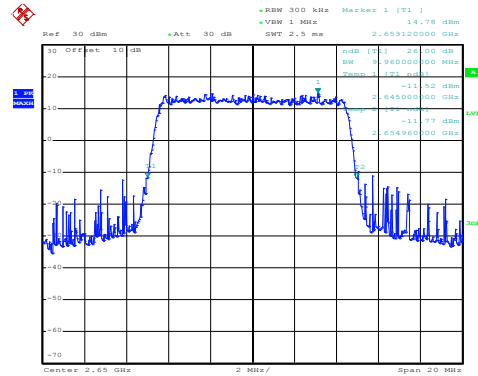
Middle channel

16QAM



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

QPSK

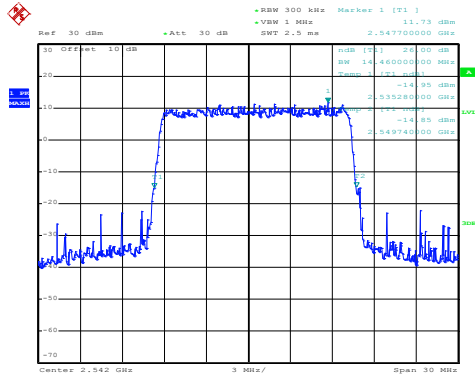


Date: 16.JUN.2020 15:16:45

Highest channel

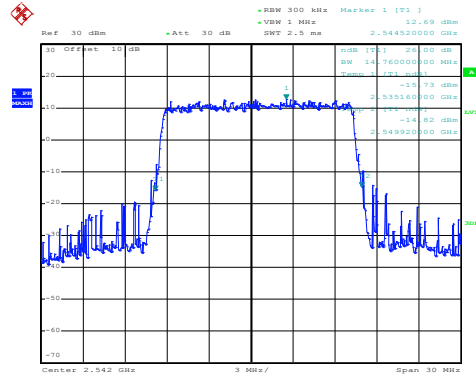
LTE Band 41: -26dBc bandwidth BW: 15MHz

16QAM



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

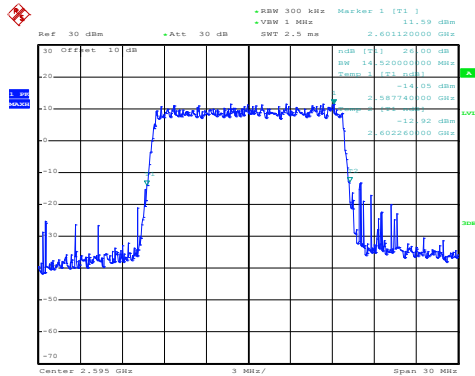
QPSK



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

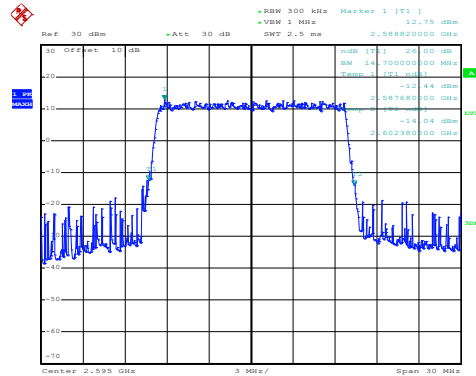
Lowest channel

16QAM



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

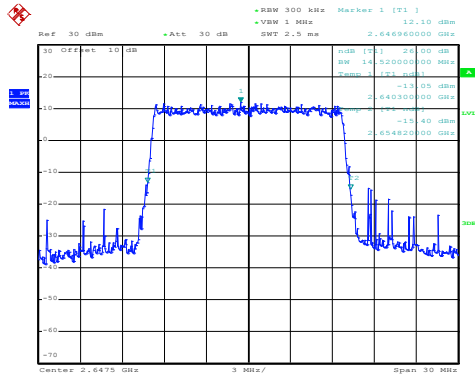
QPSK



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

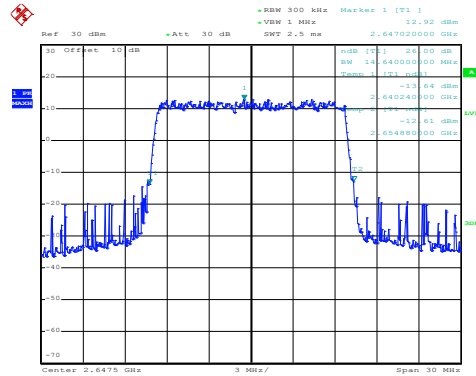
Middle channel

16QAM



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

QPSK

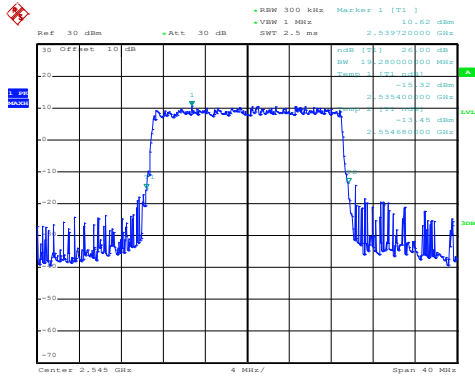


Date: 16.JUN.2020 15:14:54

Highest channel

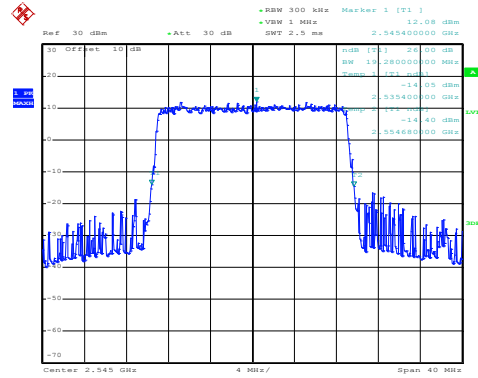
LTE Band 41: -26dBc bandwidth
BW: 20MHz

16QAM



Date: 16 JUN.2020 15:12:13

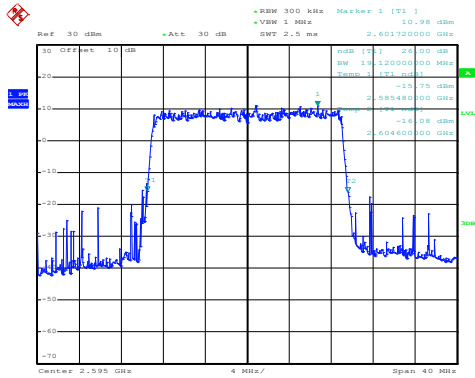
QPSK



Date: 16 JUN.2020 15:12:01

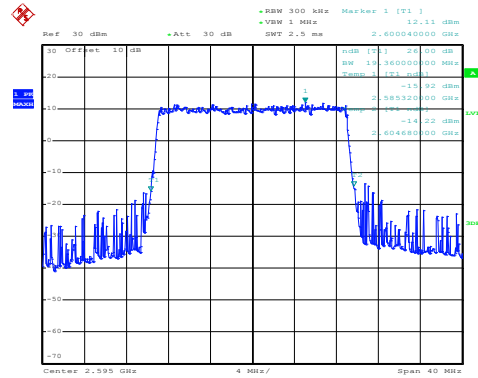
Lowest channel

16QAM



Date: 16 JUN.2020 15:12:33

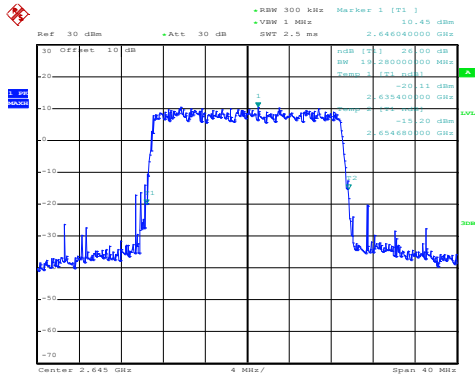
QPSK



Date: 16 JUN.2020 15:12:28

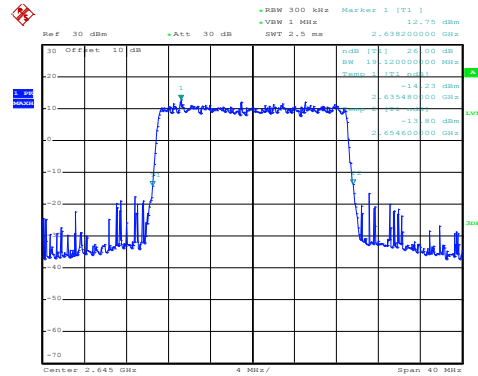
Middle channel

16QAM



Date: 16 JUN.2020 15:13:17

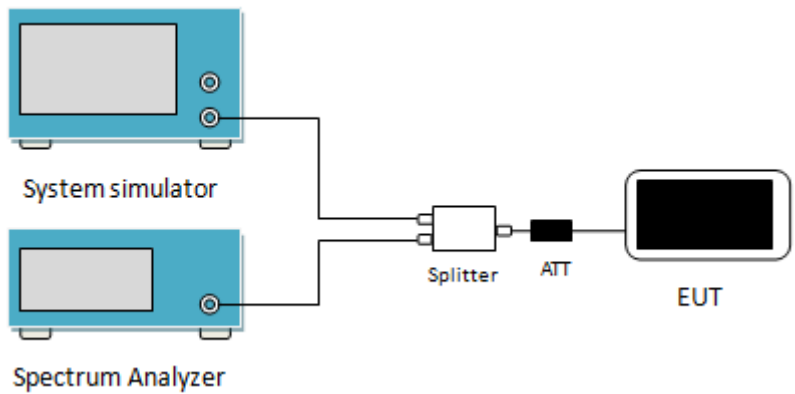
QPSK



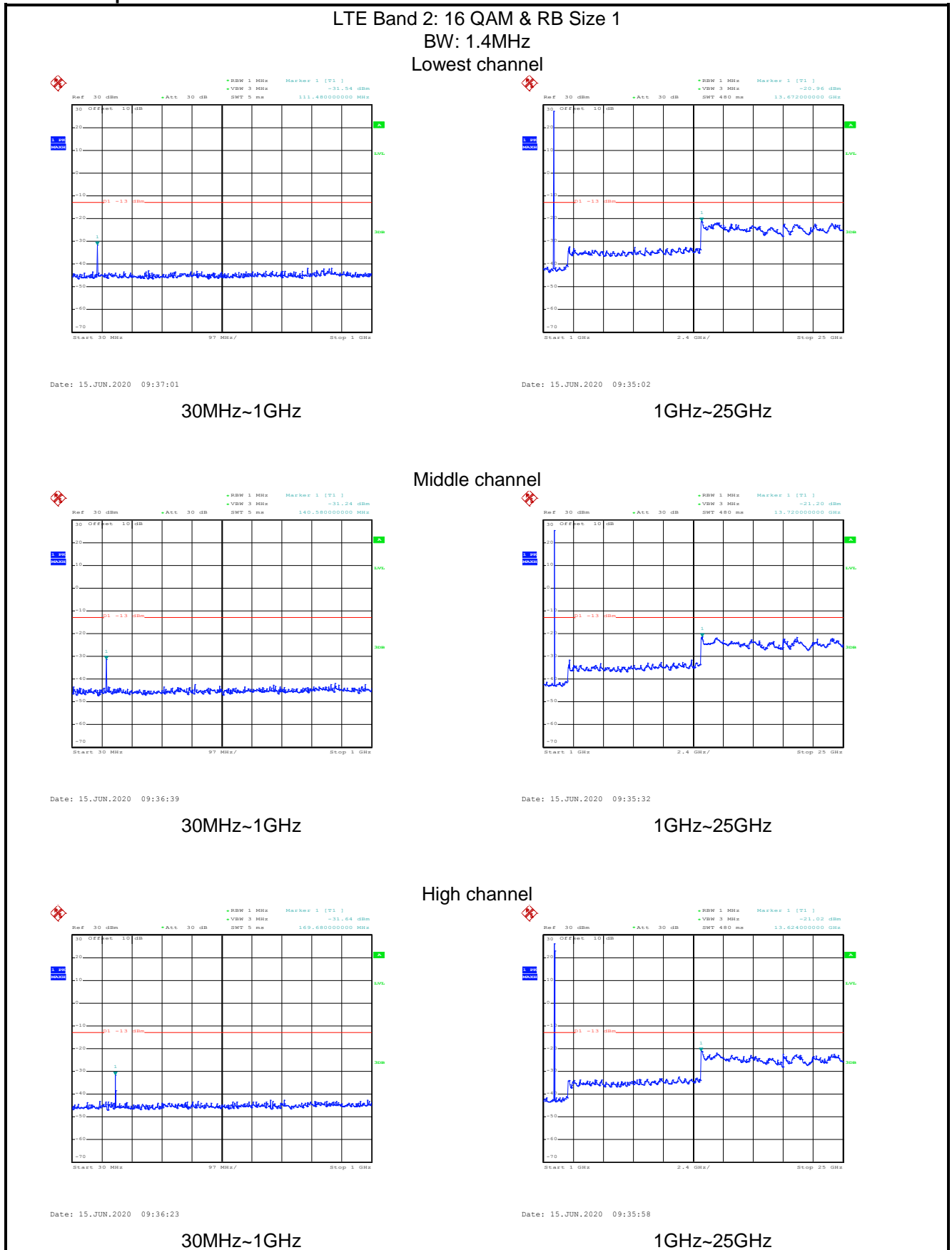
Date: 16 JUN.2020 15:13:14

Highest channel

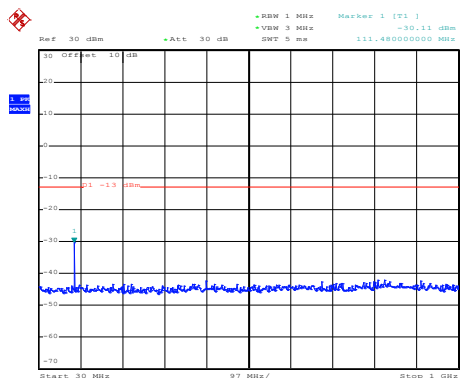
6.4 Out of band emission at antenna terminals

Test Requirement:	Part 22.917(a), Part 24.238 (a), part 27.53(h), Part 27.53(m)
Limit:	<p>LTE Band 2 & 4 & 5: The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB (-13 dBm).</p> <p>LTE Band 7: For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz.</p>
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.

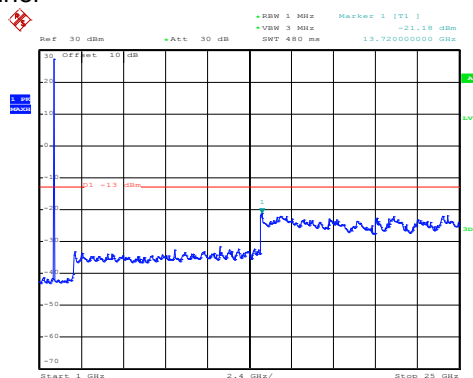
Test plots as follows (Conducted spurious emission) (worst case):
 LTE Band 2 part:



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

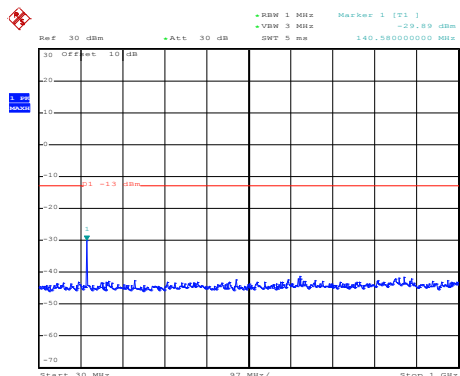


30MHz~1GHz

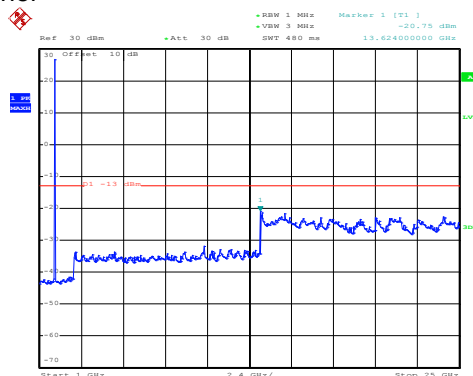


1GHz~25GHz

Middle channel

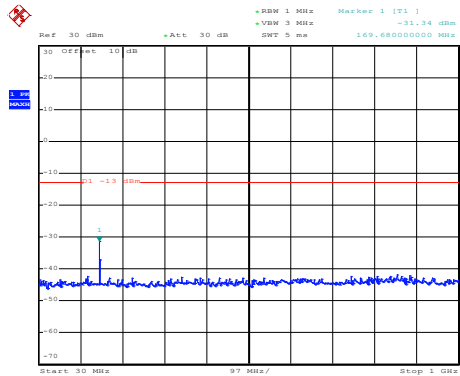


30MHz~1GHz

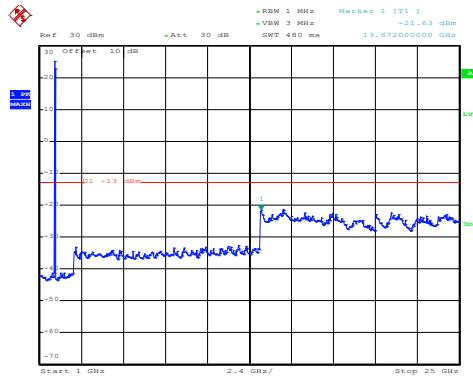


1GHz~25GHz

High channel

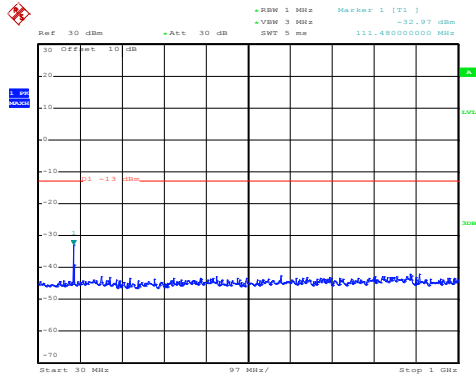


30MHz~1GHz



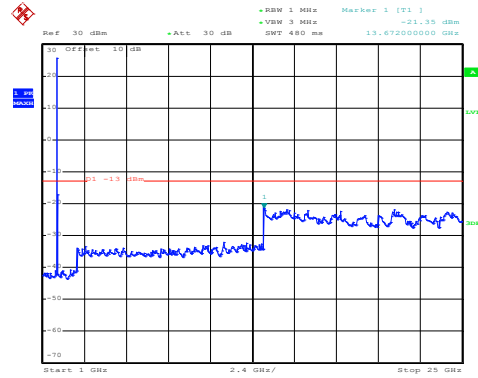
1GHz~25GHz

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



Date: 15 JUN.2020 09:38:19

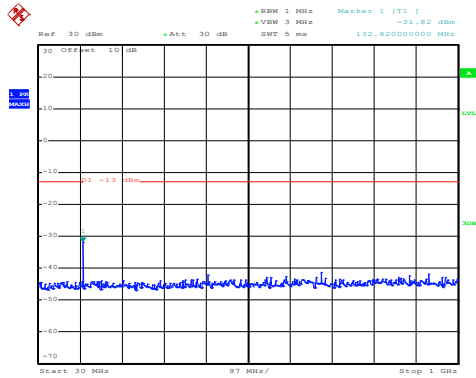
30MHz~1GHz



Date: 15 JUN.2020 09:39:56

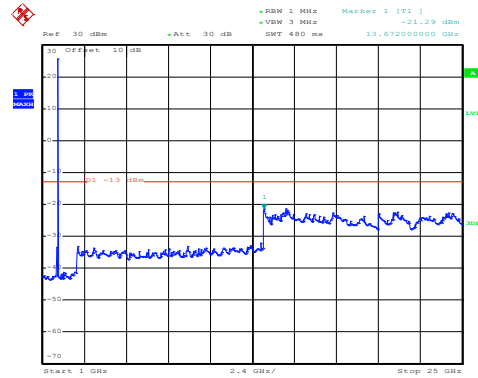
1GHz~25GHz

Middle channel



Date: 15 JUN.2020 09:37:45

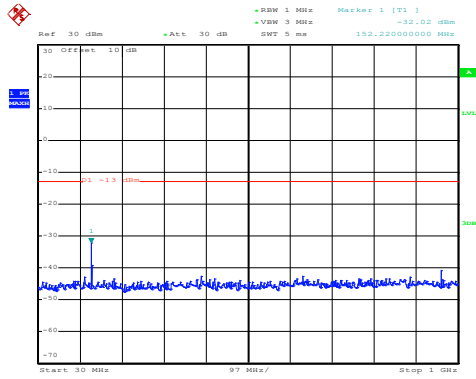
30MHz~1GHz



Date: 15 JUN.2020 09:40:26

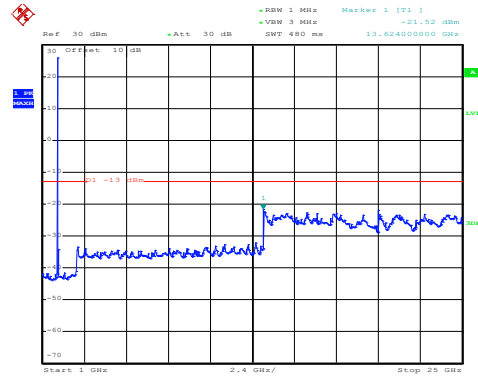
1GHz~25GHz

High channel



Date: 15 JUN.2020 09:38:00

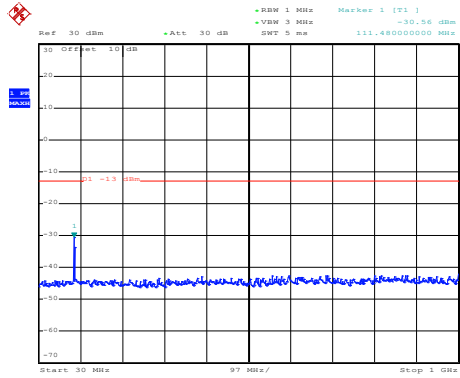
30MHz~1GHz



Date: 15 JUN.2020 09:41:01

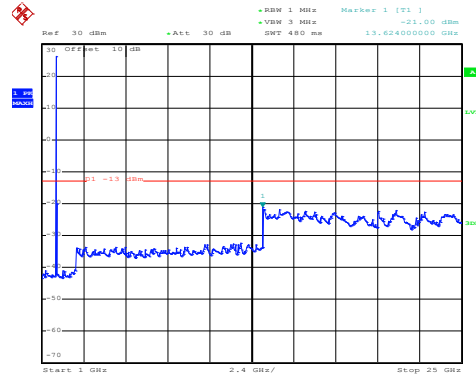
1GHz~25GHz

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



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

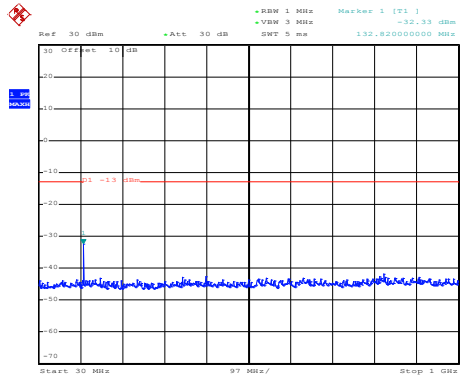
30MHz~1GHz



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

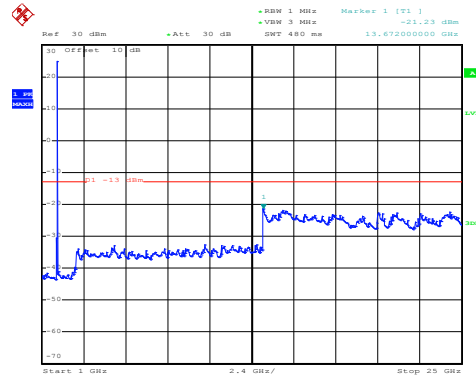
1GHz~25GHz

Middle channel



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

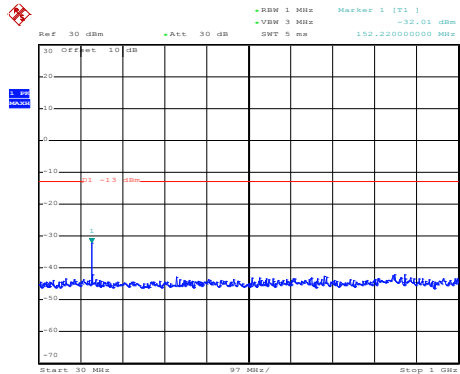
30MHz~1GHz



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

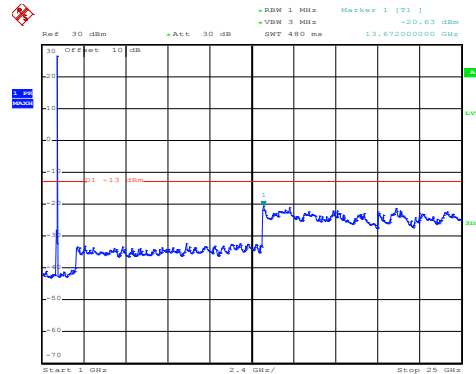
1GHz~25GHz

High channel



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

30MHz~1GHz

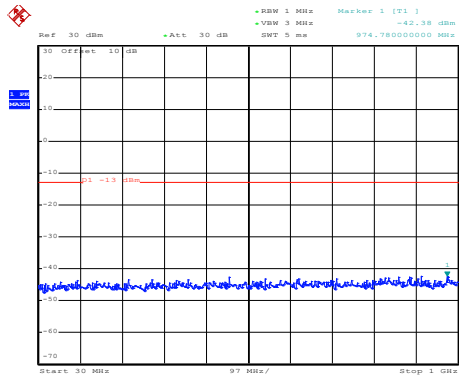


Date: 15.JUN.2020 09:40:54

1GHz~25GHz

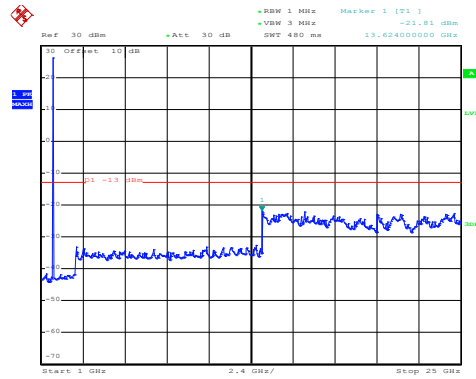
LTE Band 4 part:

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



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

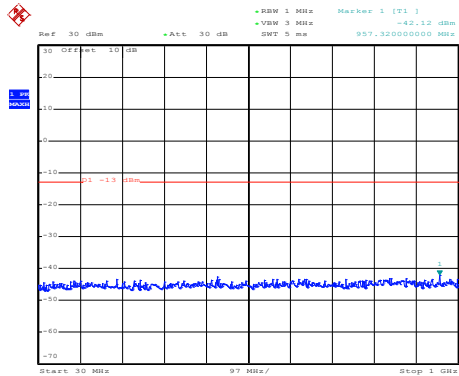
30MHz~1GHz



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

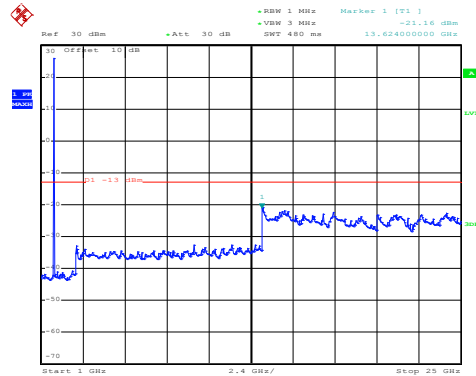
1GHz~25GHz

Middle channel



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

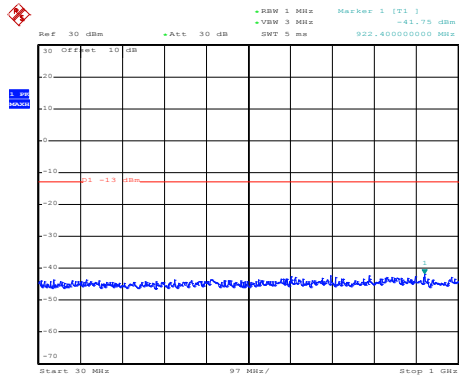
30MHz~1GHz



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

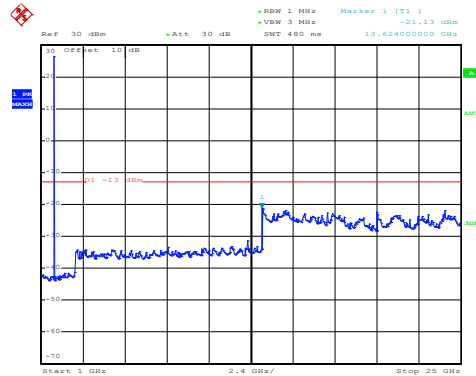
1GHz~25GHz

High channel



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

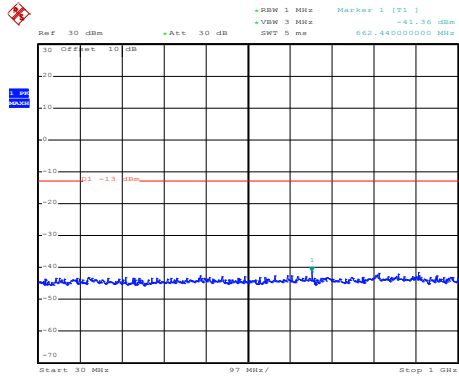
30MHz~1GHz



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

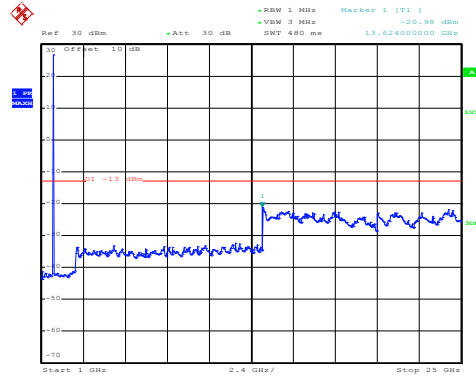
1GHz~25GHz

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



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

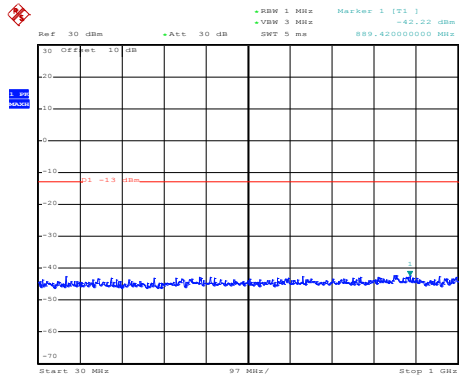
30MHz~1GHz



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

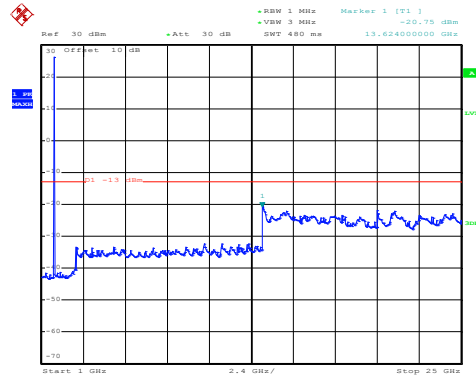
1GHz~25GHz

Middle channel



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

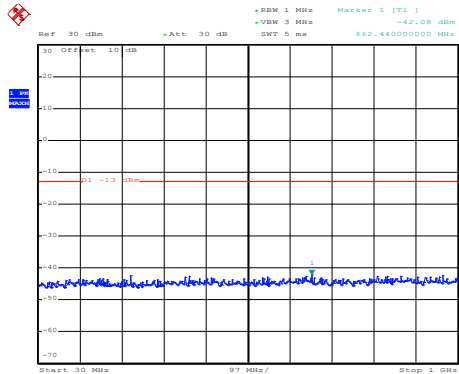
30MHz~1GHz



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

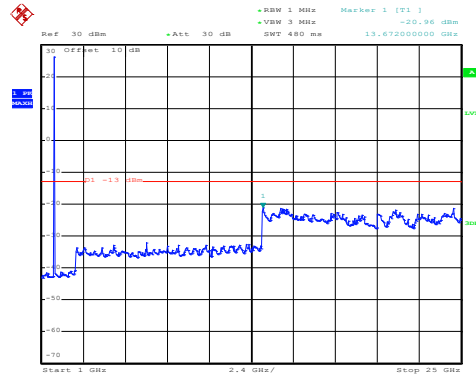
1GHz~25GHz

High channel



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

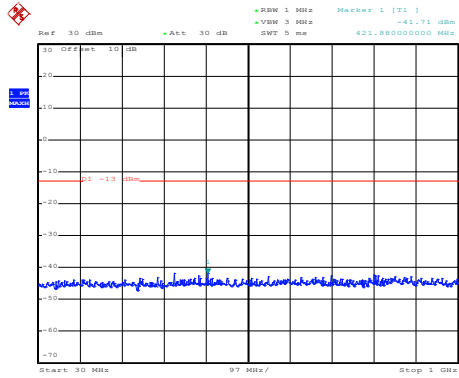
30MHz~1GHz



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

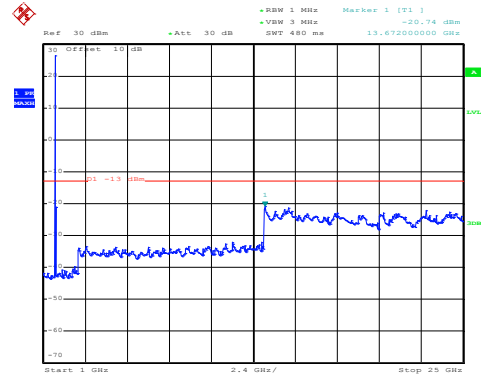
1GHz~25GHz

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



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

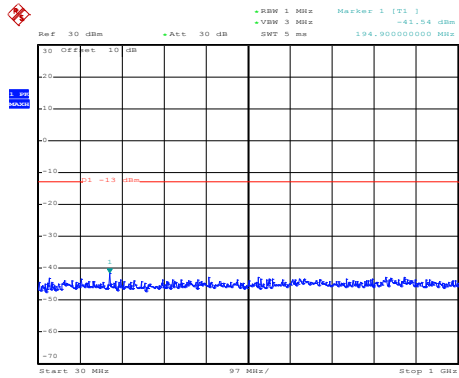
30MHz~1GHz



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

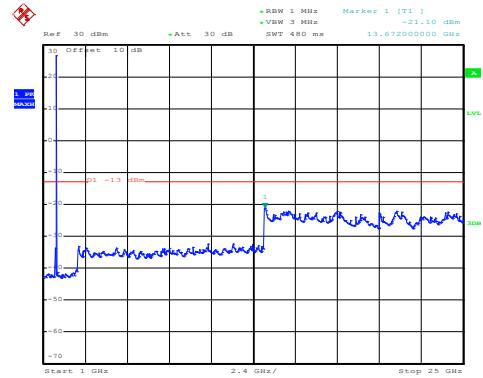
1GHz~25GHz

Middle channel



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

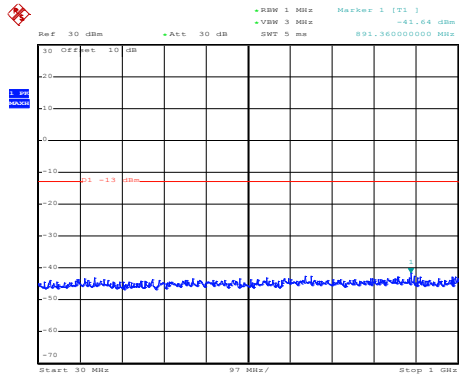
30MHz~1GHz



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

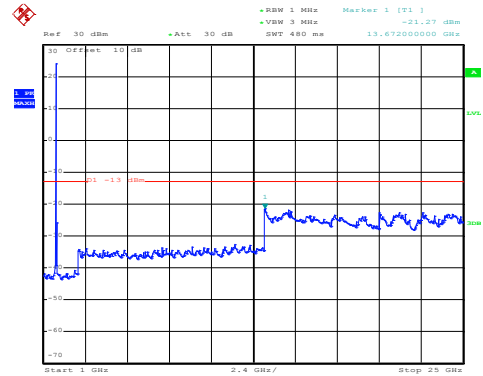
1GHz~25GHz

High channel



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

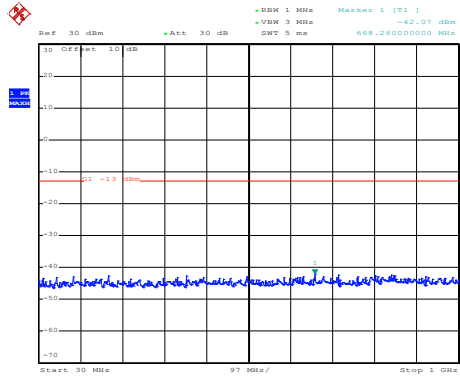
30MHz~1GHz



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

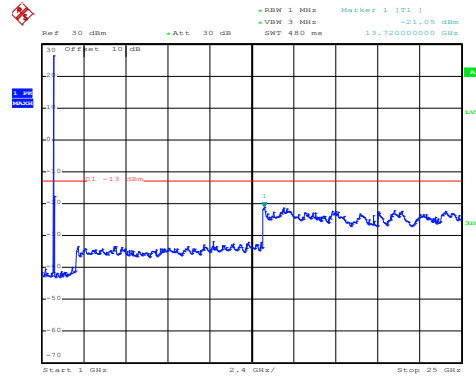
1GHz~25GHz

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



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

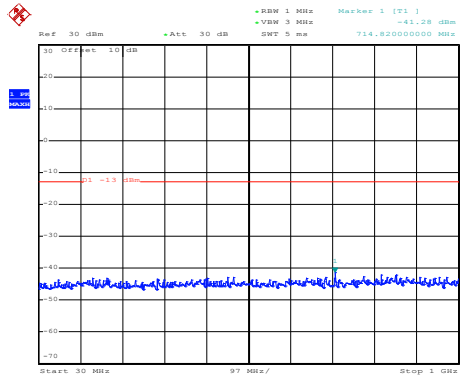
30MHz~1GHz



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

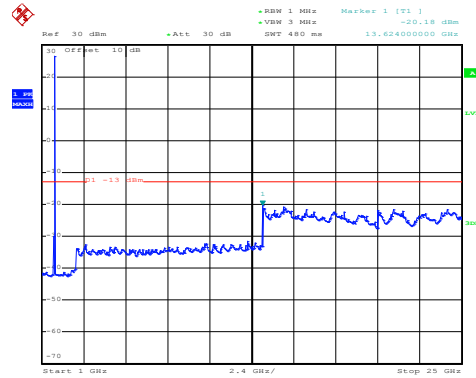
1GHz~25GHz

Middle channel



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

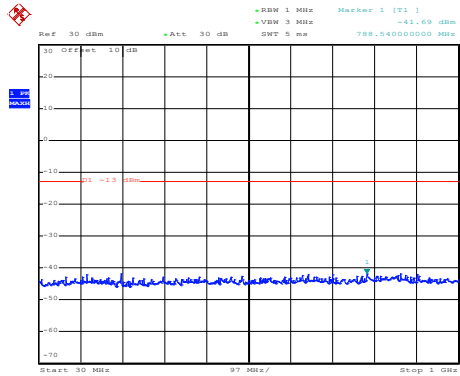
30MHz~1GHz



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

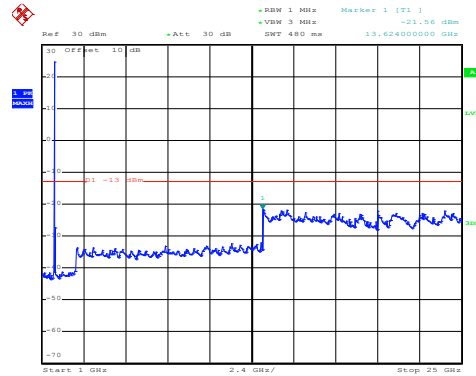
1GHz~25GHz

High channel



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

30MHz~1GHz

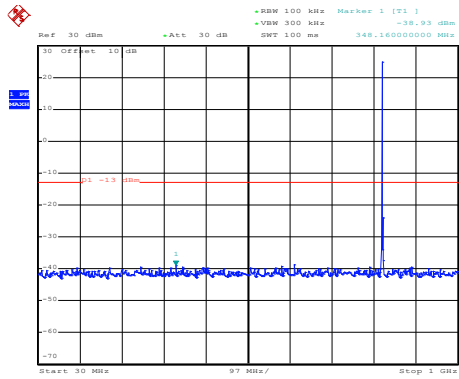


Date: 15.JUN.2020 09:43:15

1GHz~25GHz

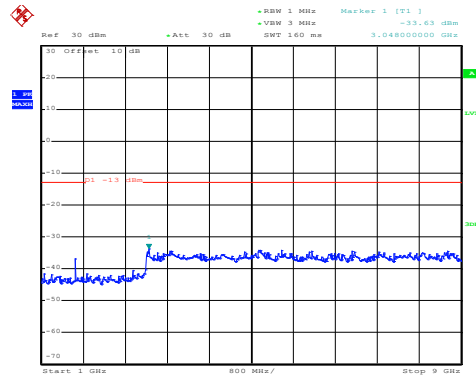
LTE Band 5 part:

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



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

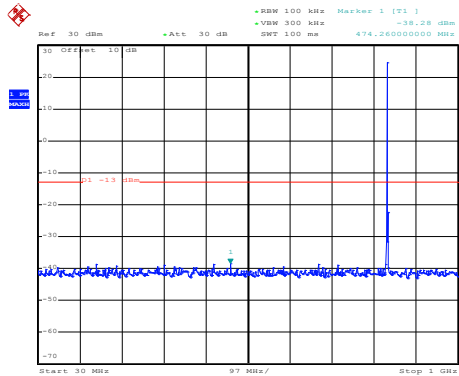
30MHz~1GHz



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

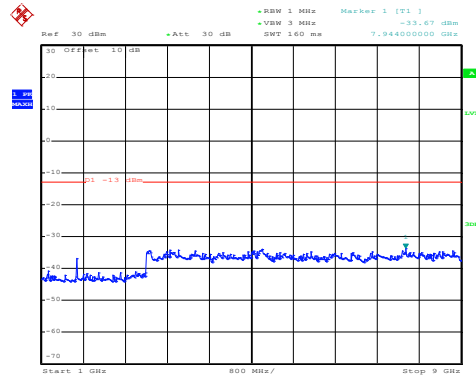
1GHz~9GHz

Middle channel



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

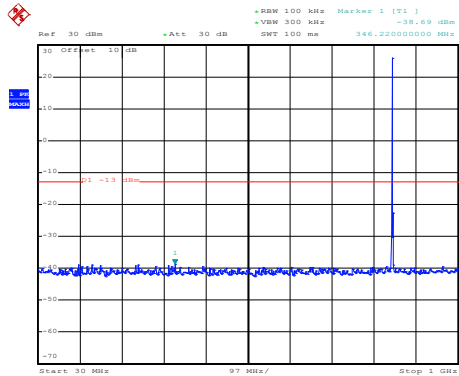
30MHz~1GHz



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

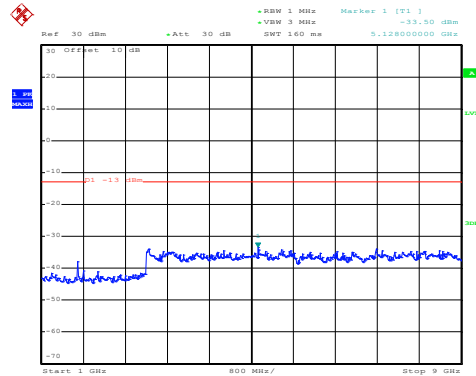
1GHz~9GHz

High channel



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

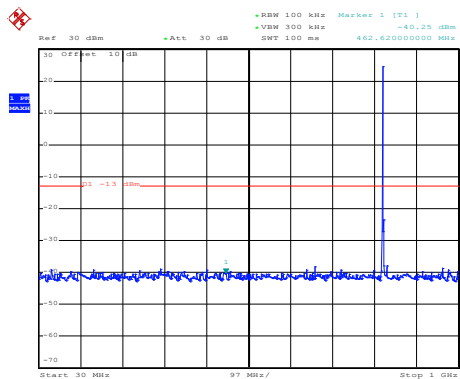
30MHz~1GHz



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

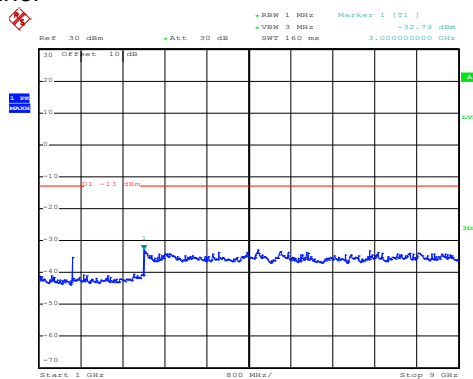
1GHz~9GHz

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



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

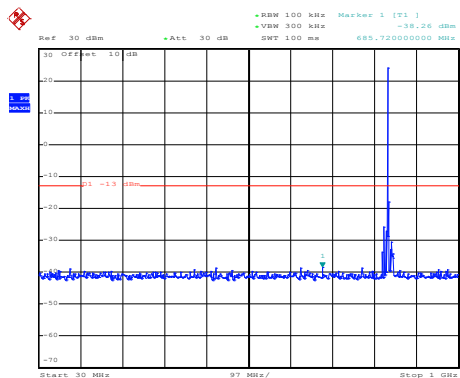
30MHz~1GHz



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

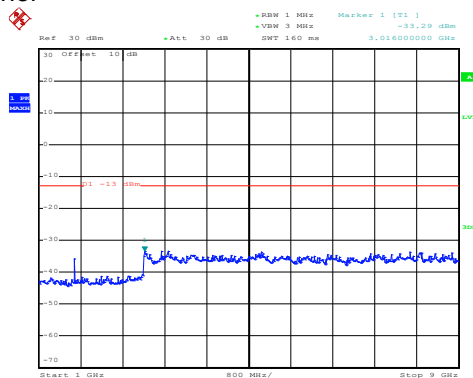
1GHz~9GHz

Middle channel



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

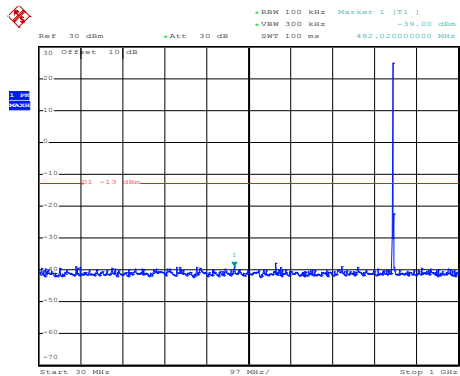
30MHz~1GHz



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

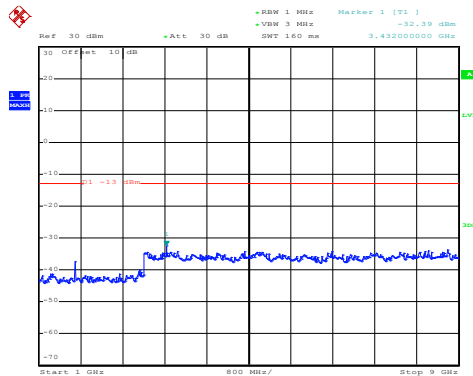
1GHz~9GHz

High channel



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

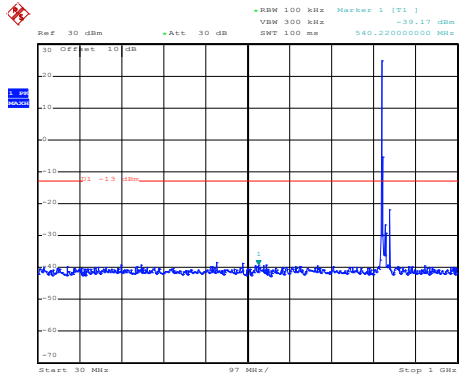
30MHz~1GHz



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

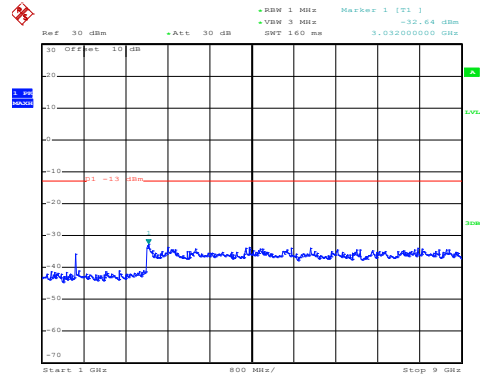
1GHz~9GHz

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



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

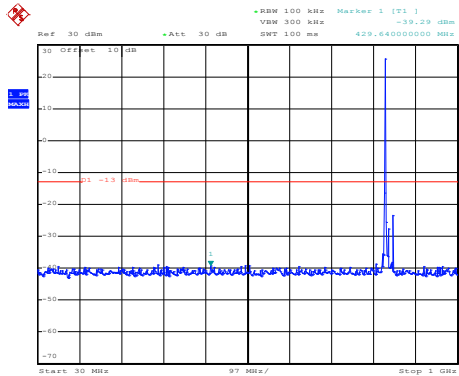
30MHz~1GHz



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

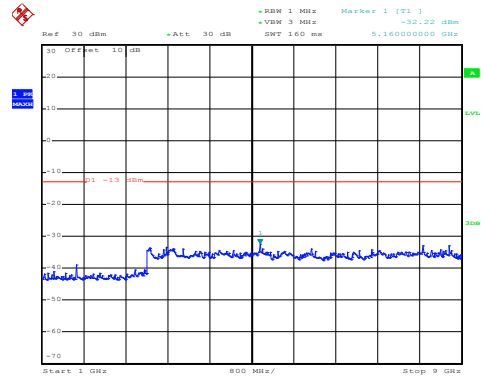
1GHz~9GHz

Middle channel



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

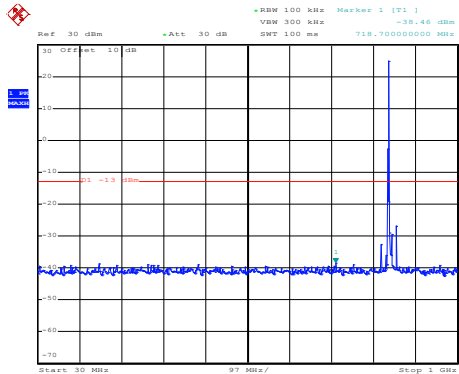
30MHz~1GHz



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

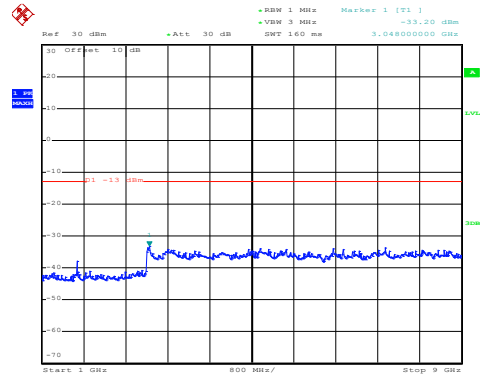
1GHz~9GHz

High channel



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

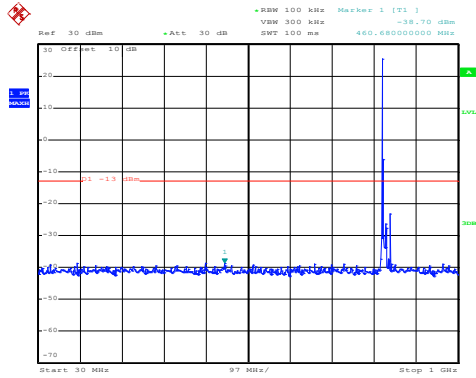
30MHz~1GHz



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

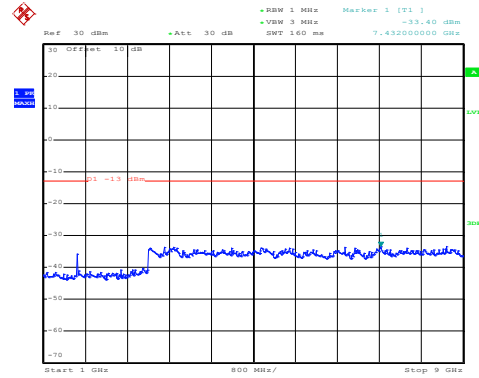
1GHz~9GHz

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



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

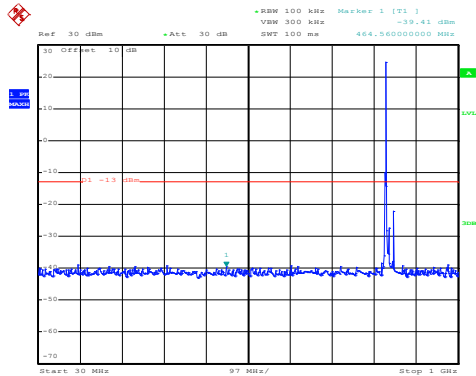
30MHz~1GHz



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

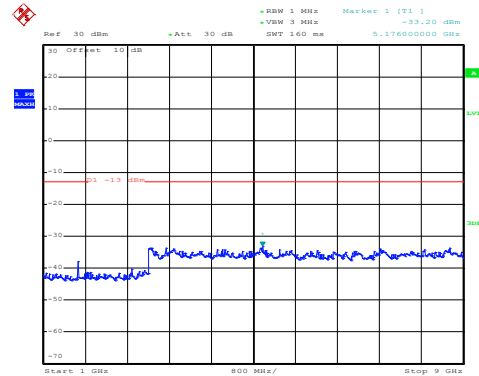
1GHz~9GHz

Middle channel



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

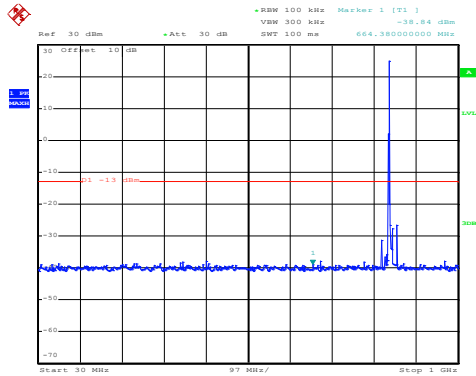
30MHz~1GHz



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

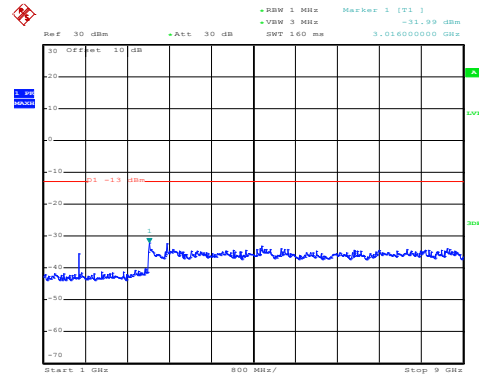
1GHz~9GHz

High channel



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

30MHz~1GHz

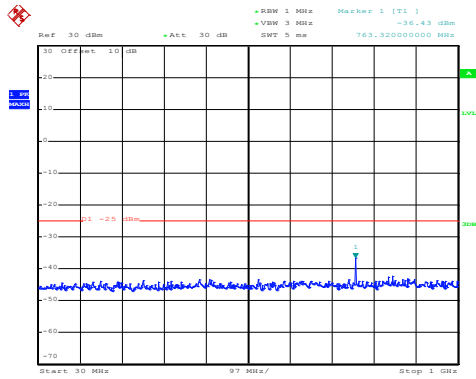


Date: 15.JUN.2020 09:28:38

1GHz~9GHz

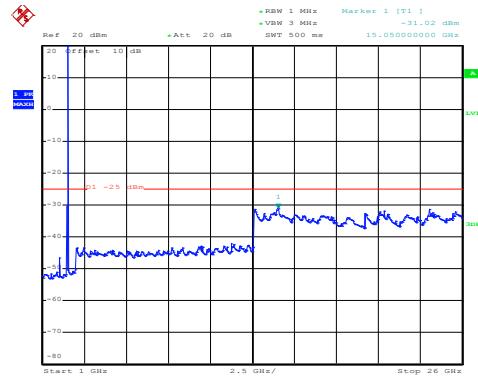
LTE Band 7 part:

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



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

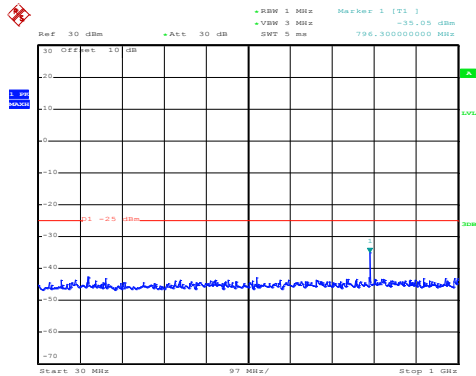
30MHz~1GHz



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

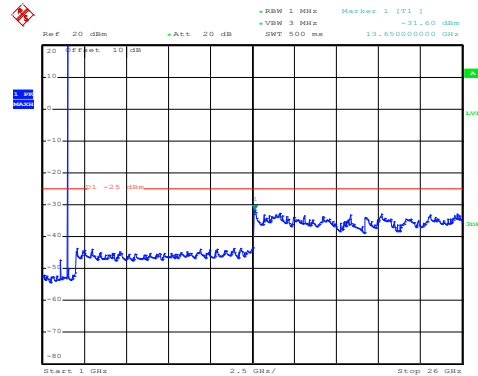
1GHz~26GHz

Middle channel



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

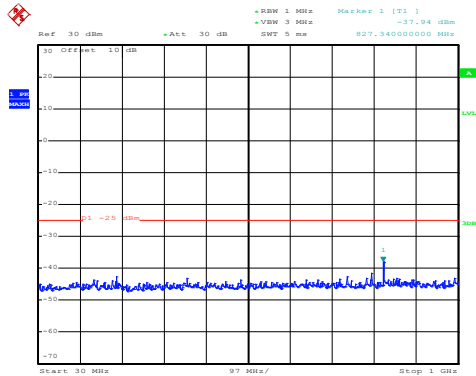
30MHz~1GHz



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

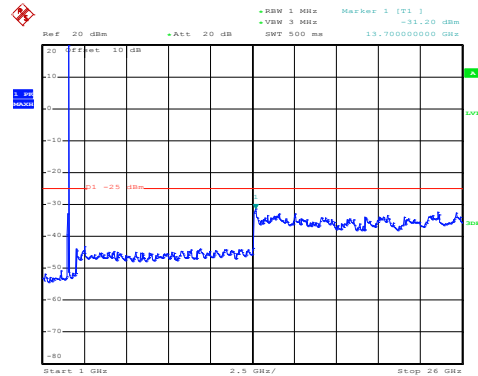
1GHz~26GHz

High channel



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

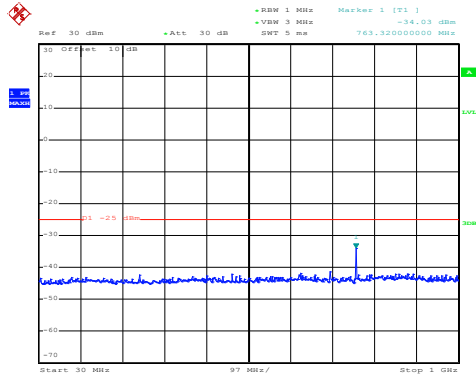
30MHz~1GHz



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

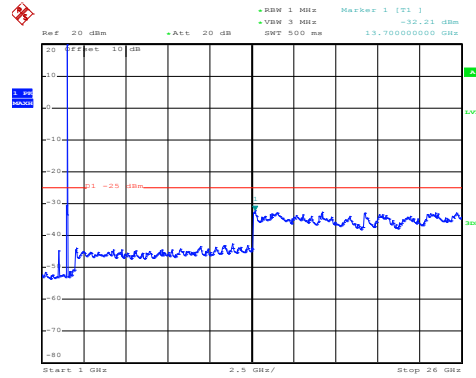
1GHz~26GHz

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



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

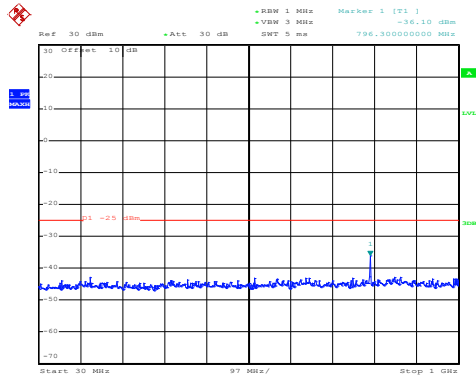
30MHz~1GHz



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

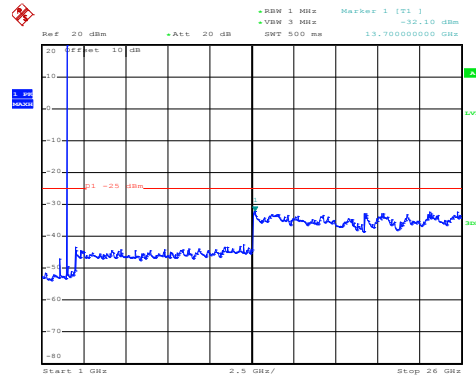
1GHz~26GHz

Middle channel



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

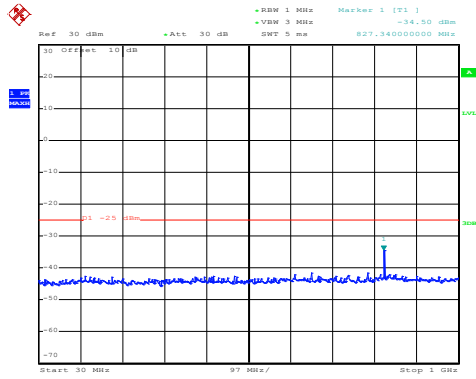
30MHz~1GHz



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

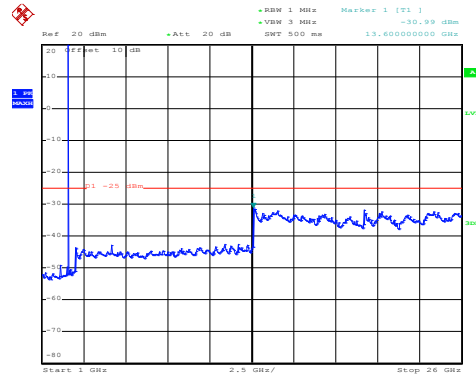
1GHz~26GHz

High channel



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

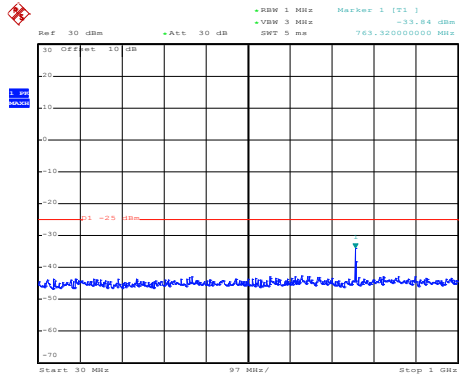
30MHz~1GHz



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

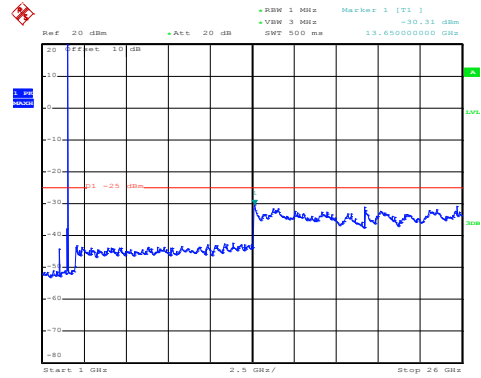
1GHz~26GHz

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



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

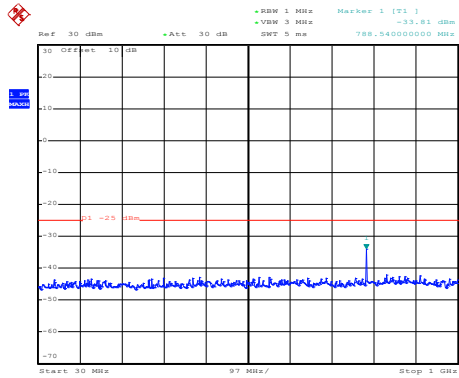
30MHz~1GHz



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

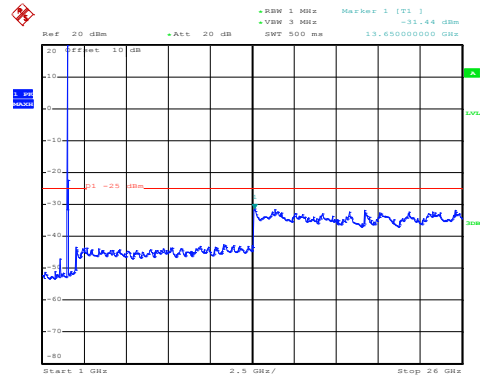
1GHz~26GHz

Middle channel



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

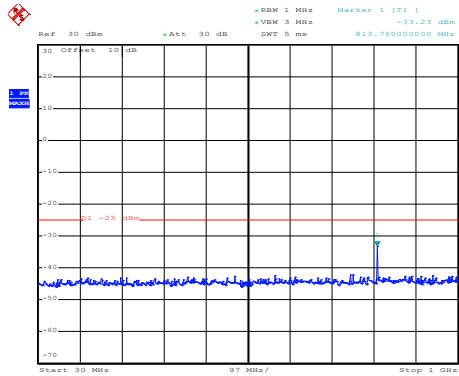
30MHz~1GHz



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

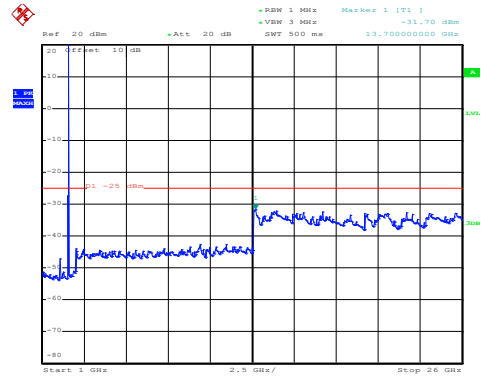
1GHz~26GHz

High channel



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

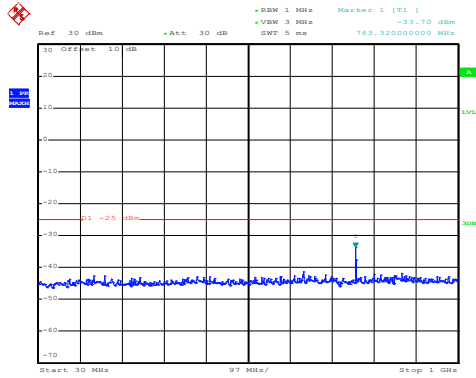
30MHz~1GHz



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

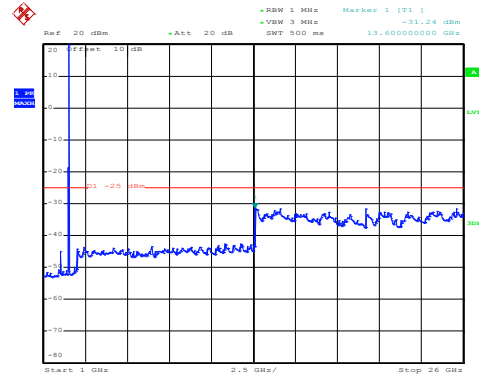
1GHz~26GHz

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



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

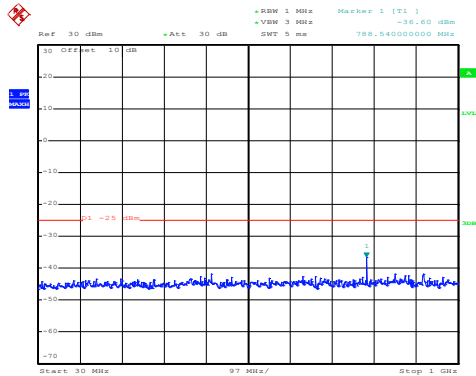
30MHz~1GHz



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

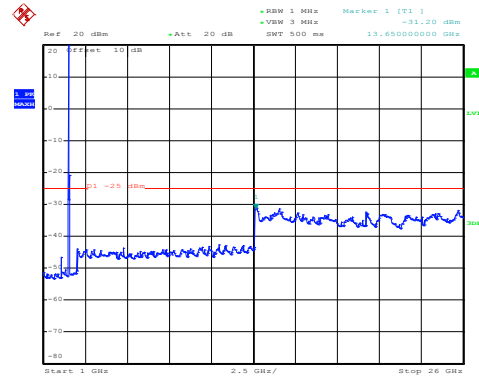
1GHz~26GHz

Middle channel



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

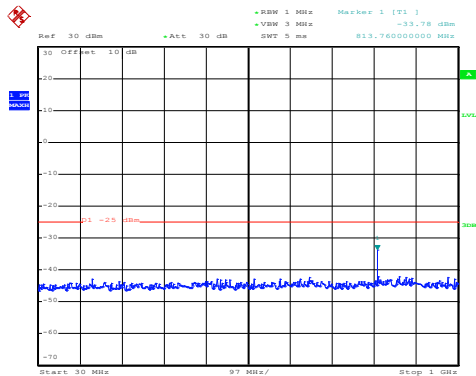
30MHz~1GHz



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

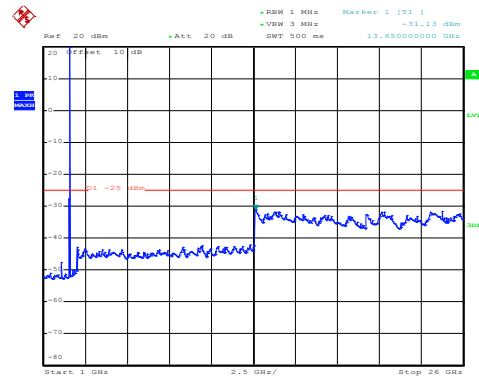
1GHz~26GHz

High channel



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

30MHz~1GHz

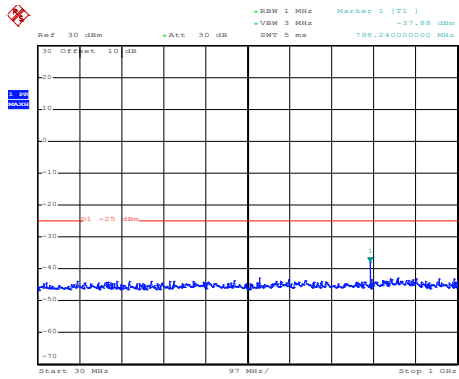


Date: 15.JUN.2020 09:46:04

1GHz~26GHz

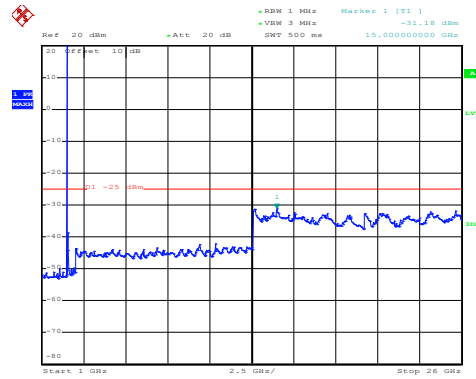
LTE Band 41 part:

LTE Band 41: 16 QAM & RB Size 1
 BW: 5MHz
 Lowest channel



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

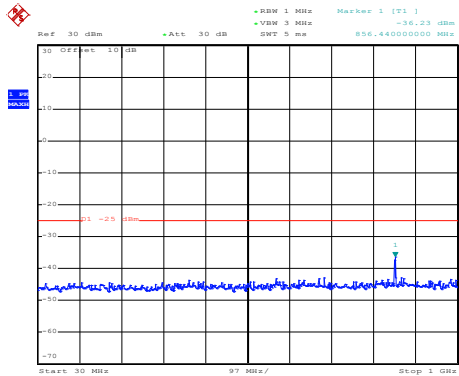
30MHz~1GHz



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

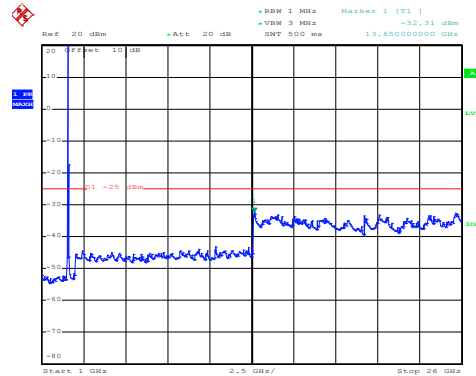
1GHz~26GHz

Middle channel



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

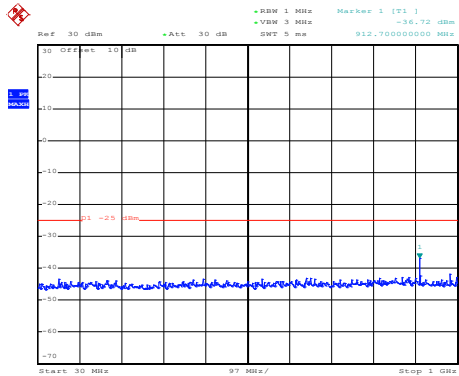
30MHz~1GHz



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

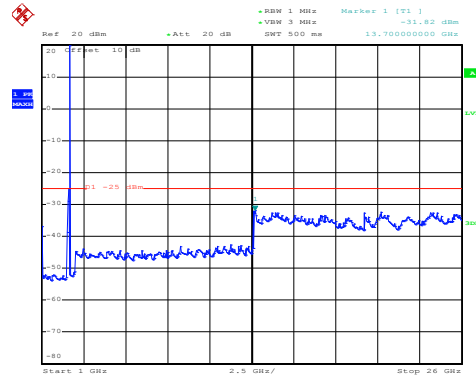
1GHz~26GHz

High channel



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

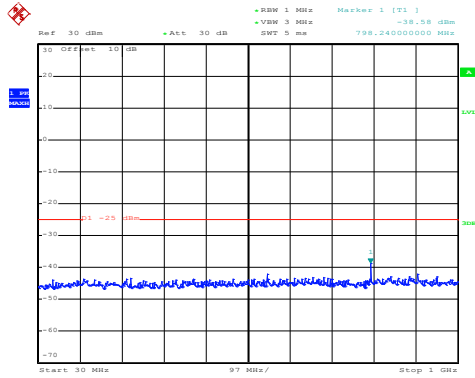
30MHz~1GHz



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

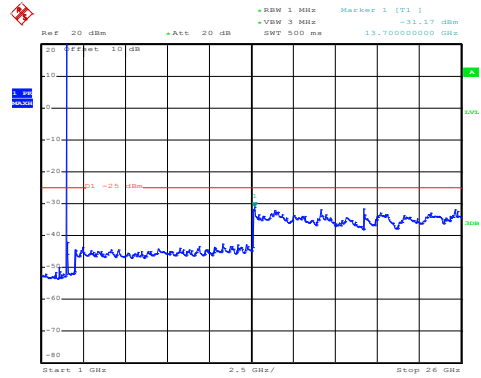
1GHz~26GHz

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



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

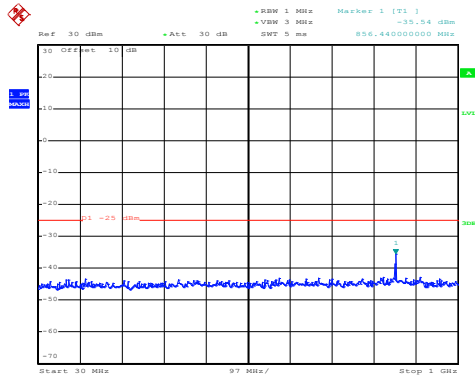
30MHz~1GHz



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

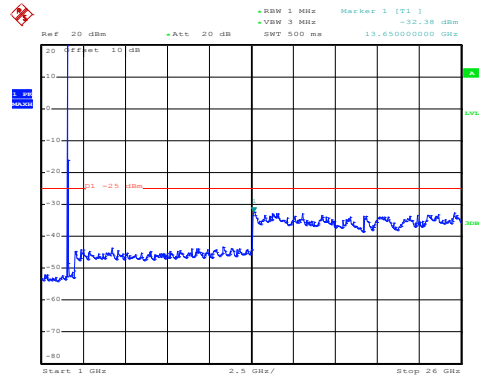
1GHz~26GHz

Middle channel



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

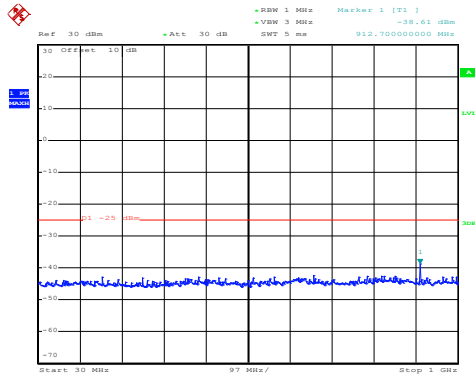
30MHz~1GHz



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

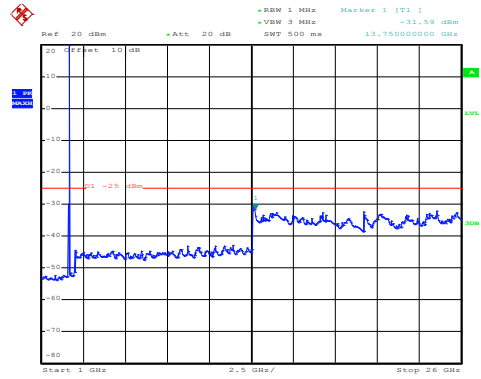
1GHz~26GHz

High channel



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

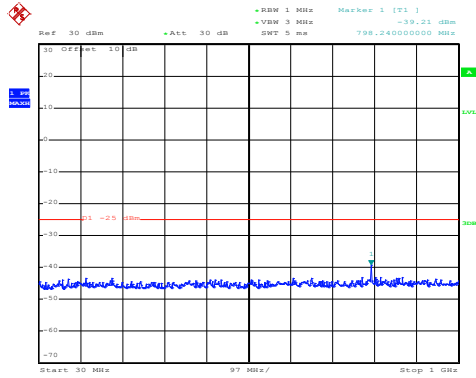
30MHz~1GHz



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

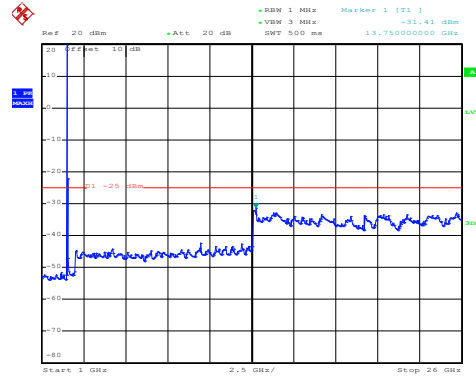
1GHz~26GHz

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



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

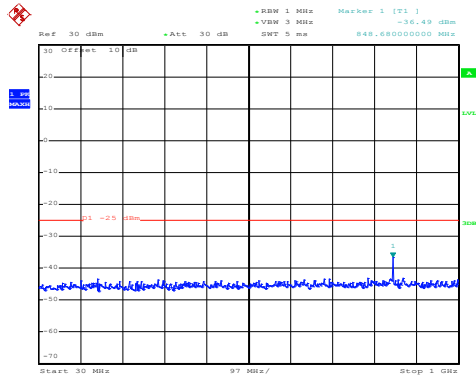
30MHz~1GHz



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

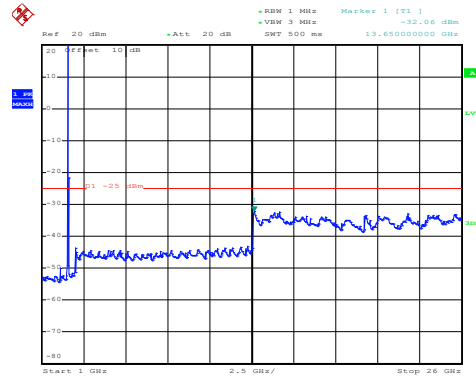
1GHz~26GHz

Middle channel



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

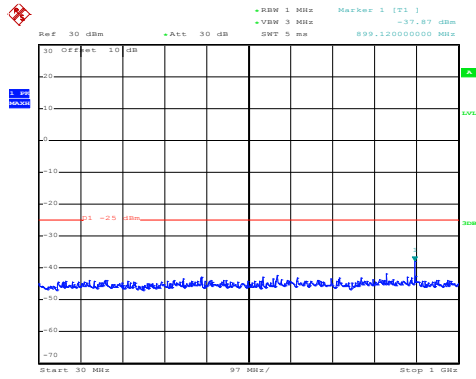
30MHz~1GHz



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

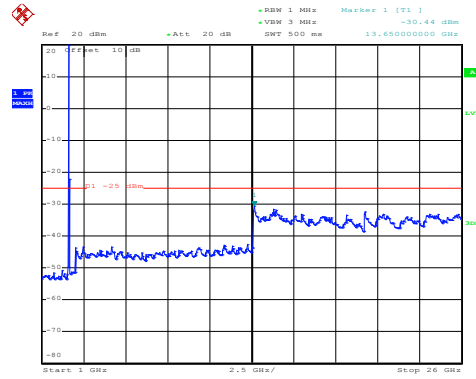
1GHz~26GHz

High channel



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

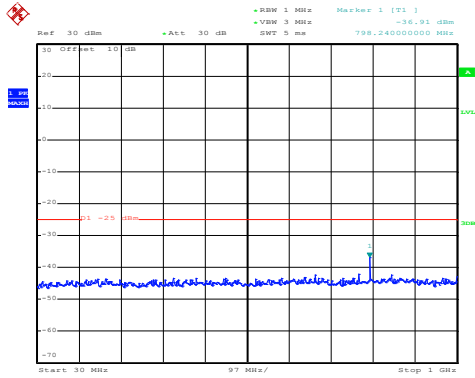
30MHz~1GHz



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

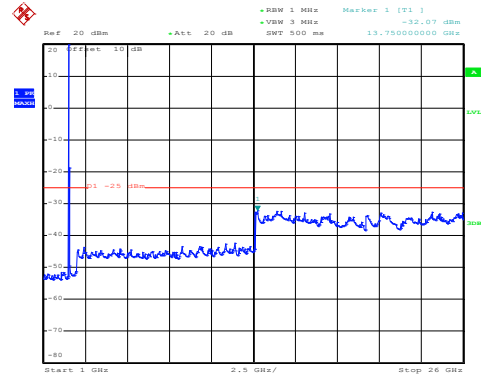
1GHz~26GHz

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



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

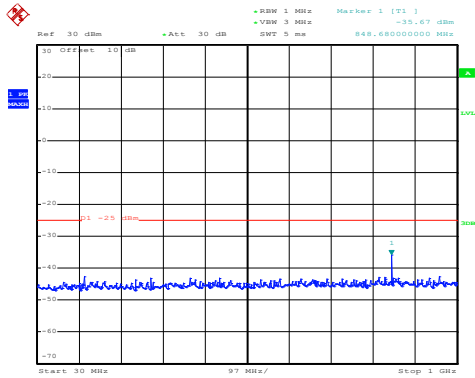
30MHz~1GHz



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

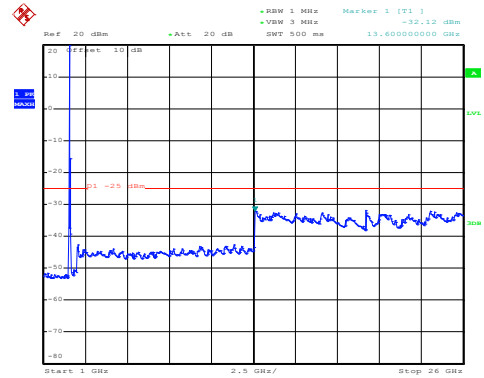
1GHz~26GHz

Middle channel



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

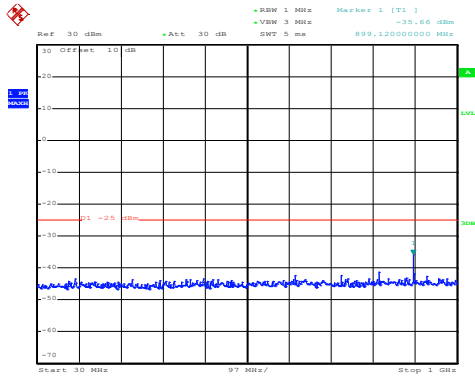
30MHz~1GHz



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

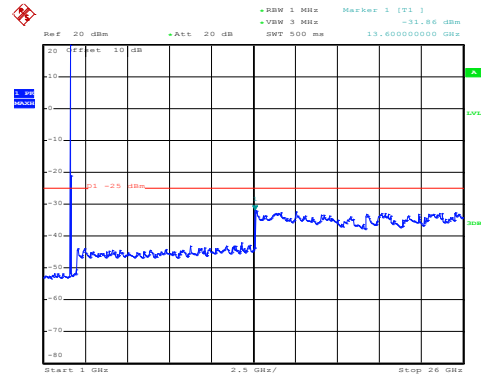
1GHz~26GHz

High channel



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

30MHz~1GHz

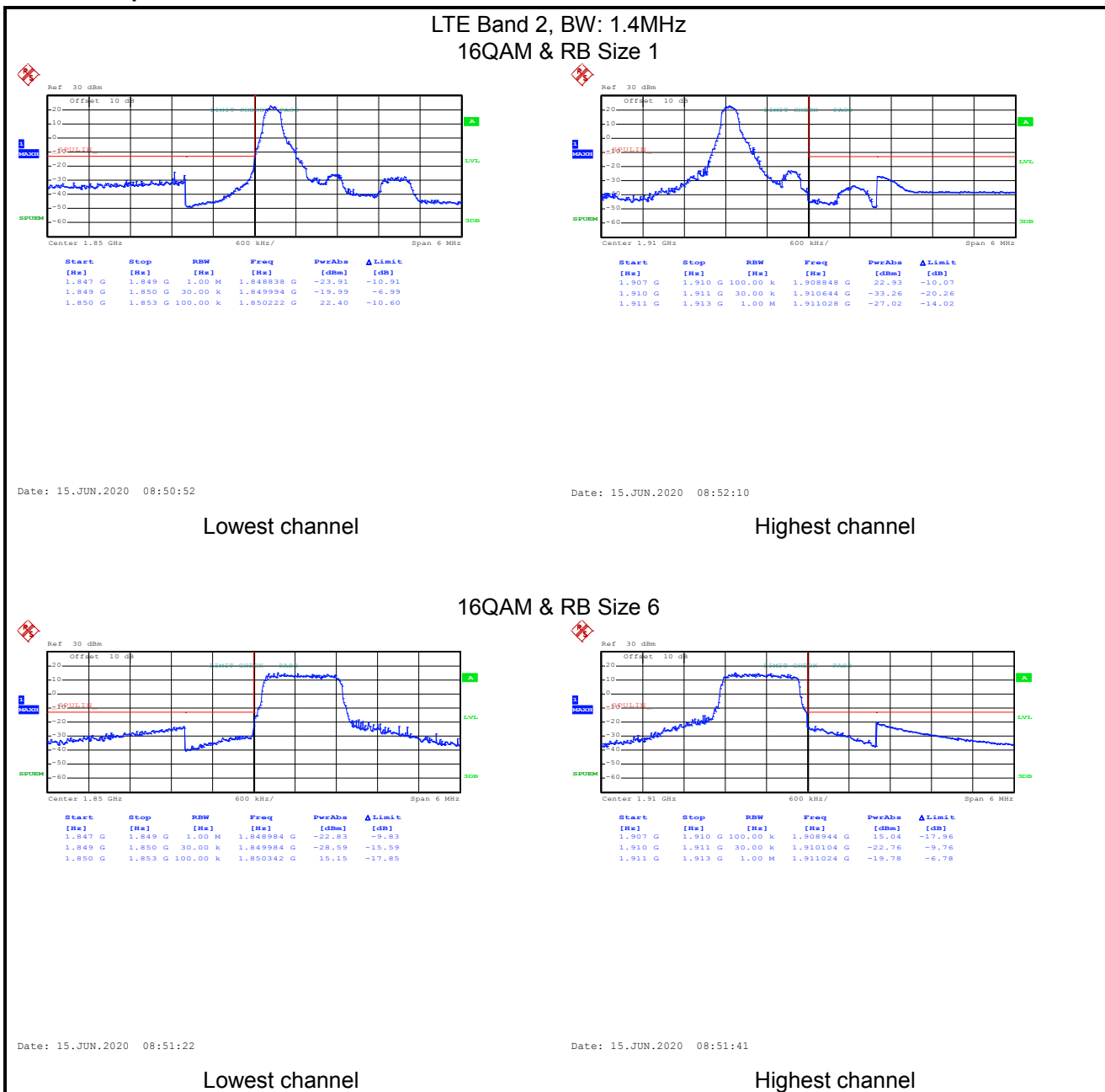


Date: 16.JUN.2020 15:08:53

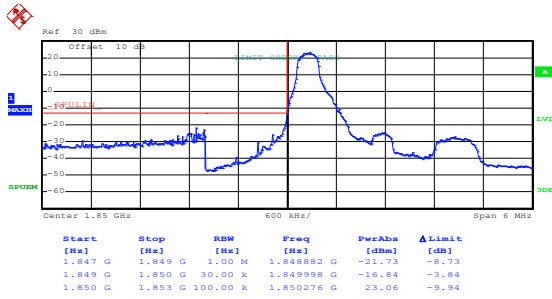
1GHz~26GHz

Band edge emission:

LTE Band 2 part:

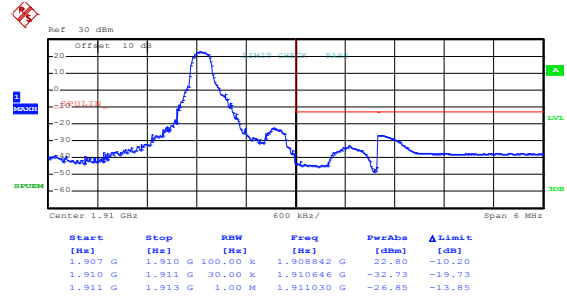


LTE Band 2, BW: 1.4MHz QPSK & RB Size 1



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

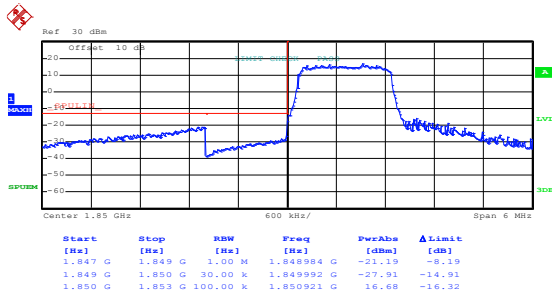
Lowest channel



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

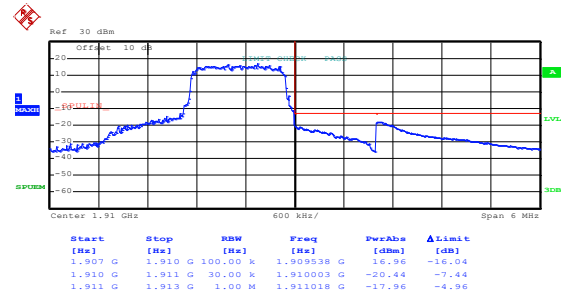
Highest channel

QPSK & RB Size 6



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

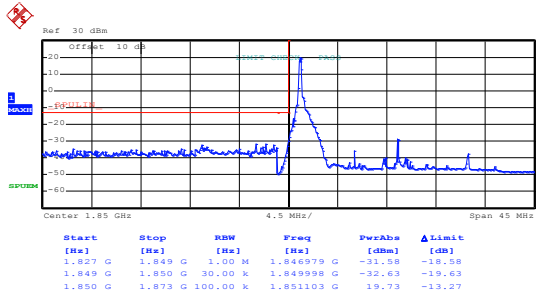
Lowest channel



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

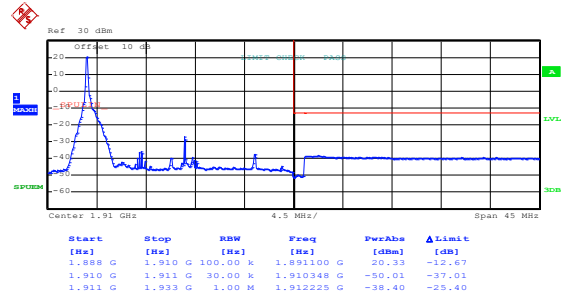
Highest channel

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



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

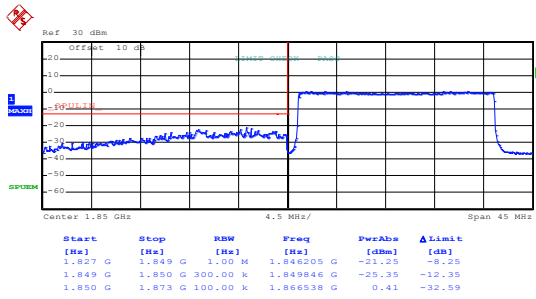
Lowest channel



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

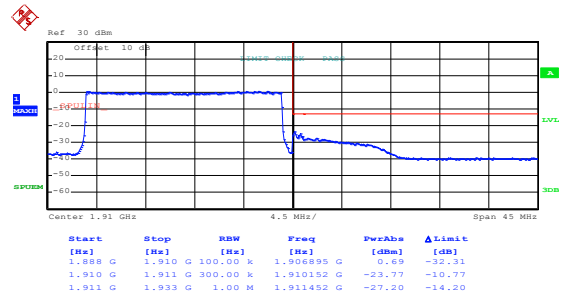
Highest channel

16QAM & RB Size 100



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

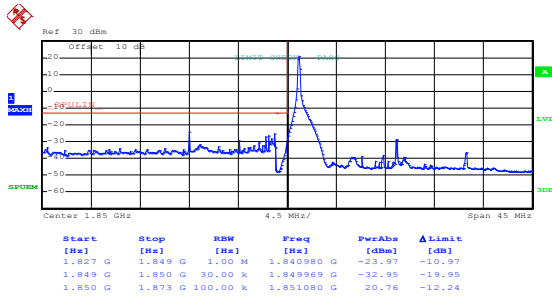
Lowest channel



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

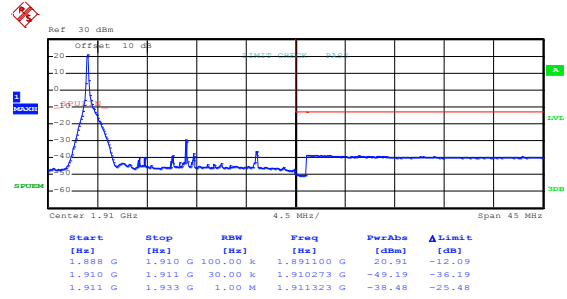
Highest channel

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



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

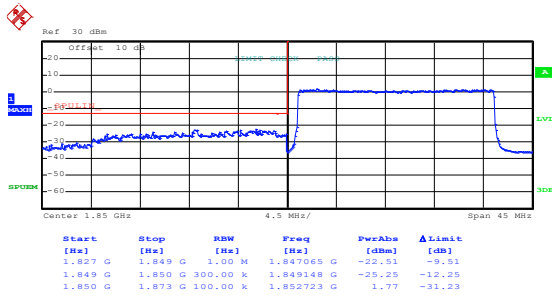
Lowest channel



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

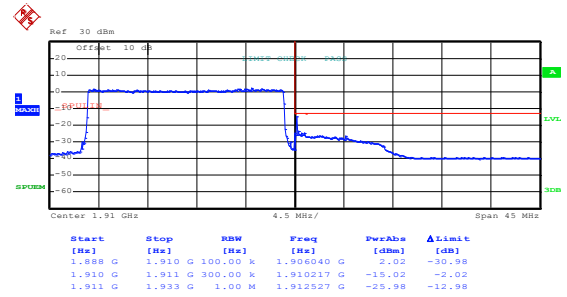
Highest channel

QPSK & RB Size 100



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

Lowest channel

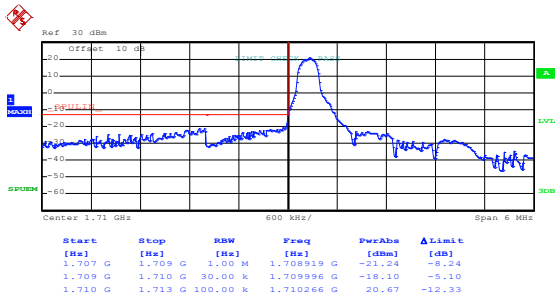


Date: 15.JUN.2020 09:10:40

Highest channel

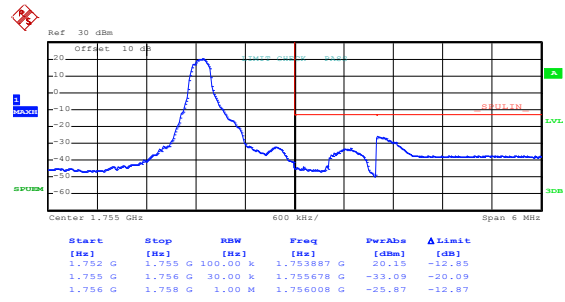
LTE Band 4 part:

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



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

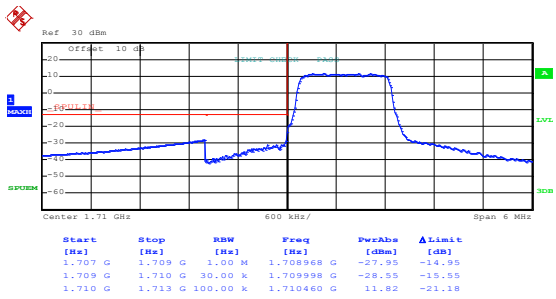
Lowest channel



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

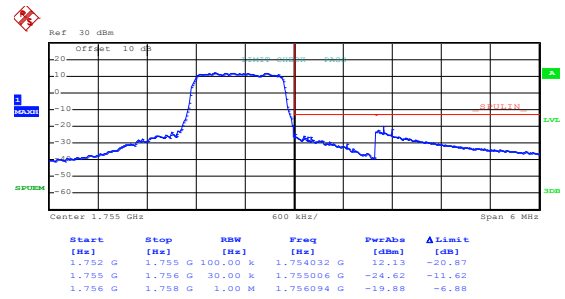
Highest channel

16QAM & RB Size 6



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

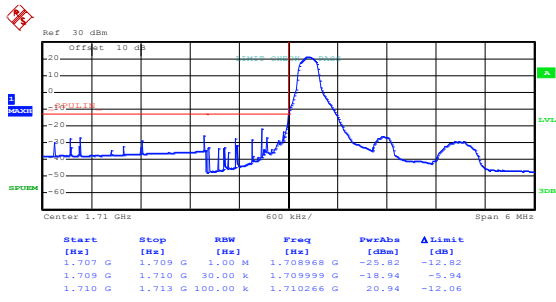
Lowest channel



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

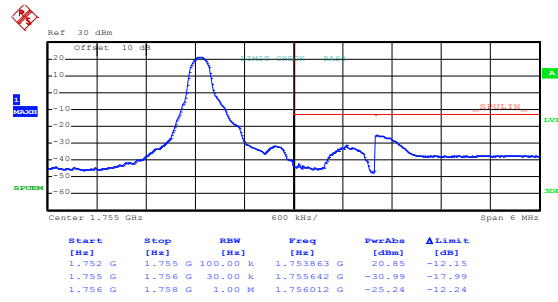
Highest channel

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



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

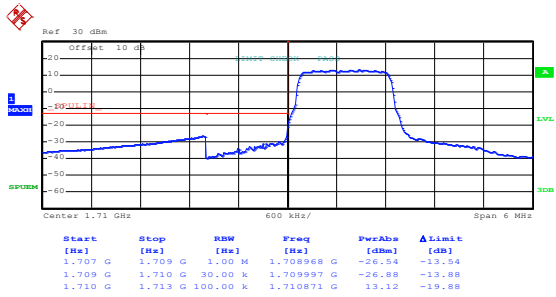
Lowest channel



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

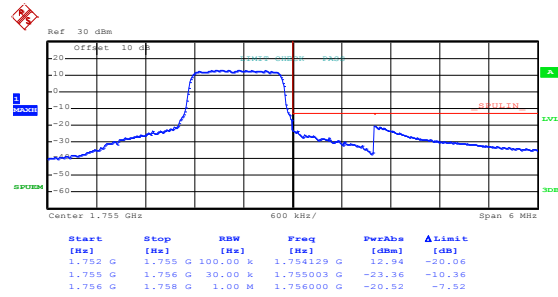
Highest channel

QPSK & RB Size 6



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

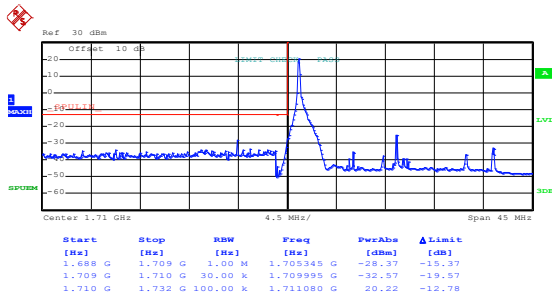
Lowest channel



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

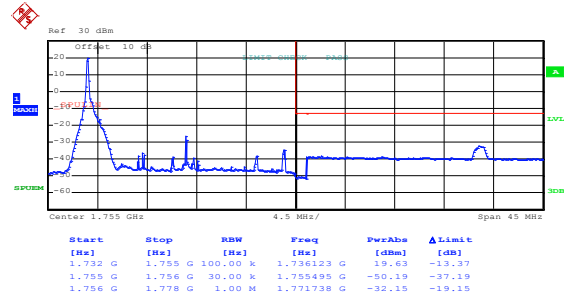
Highest channel

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



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

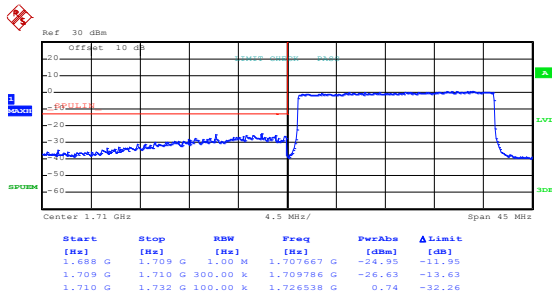
Lowest channel



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

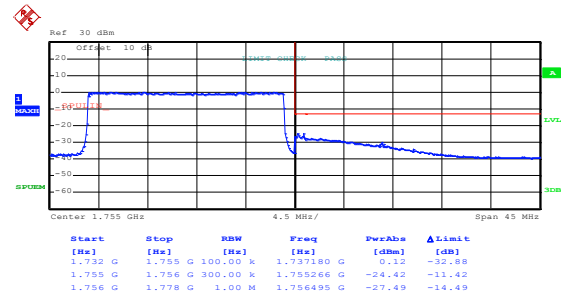
Highest channel

16QAM & RB Size 100



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

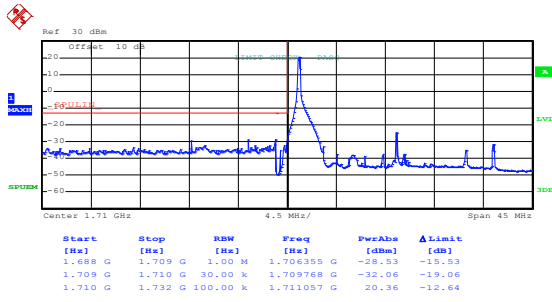
Lowest channel



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

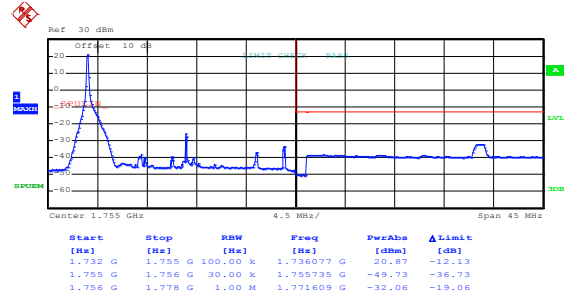
Highest channel

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



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

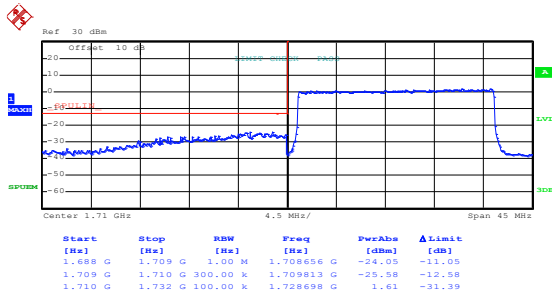
Lowest channel



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

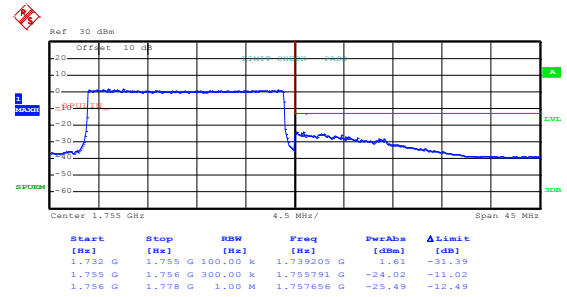
Highest channel

QPSK & RB Size 100



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

Lowest channel

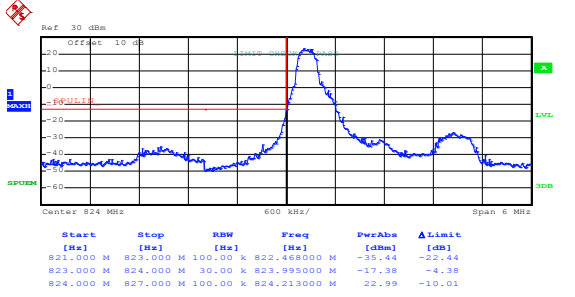


Date: 15.JUN.2020 09:09:00

Highest channel

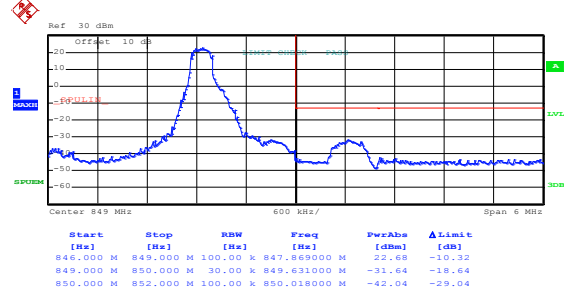
LTE Band 5 part:

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



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

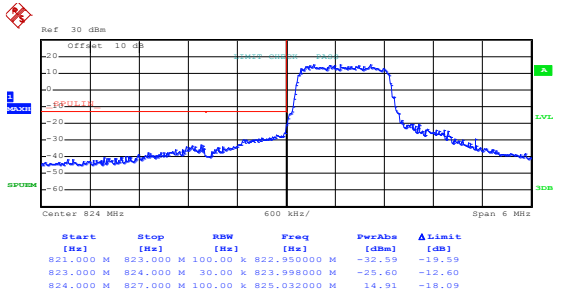
Lowest channel



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

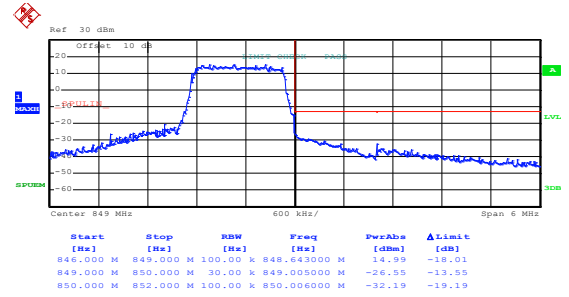
Highest channel

16QAM & RB Size 6



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

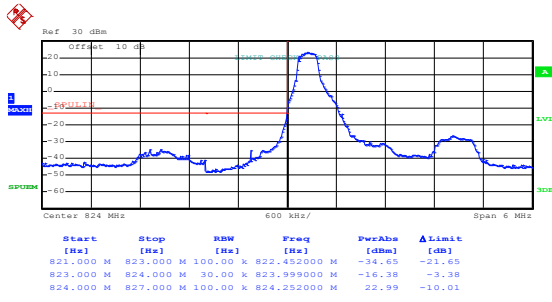
Lowest channel



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

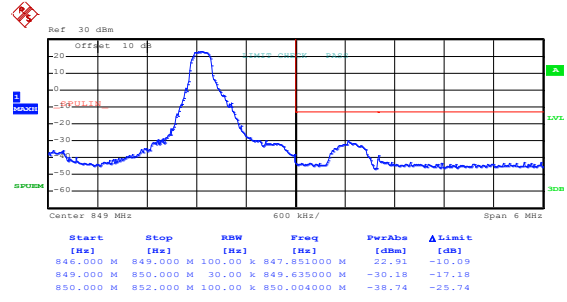
Highest channel

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



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

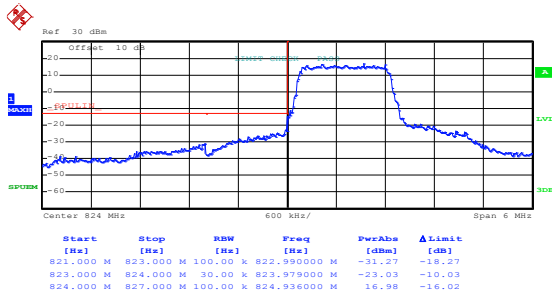
Lowest channel



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

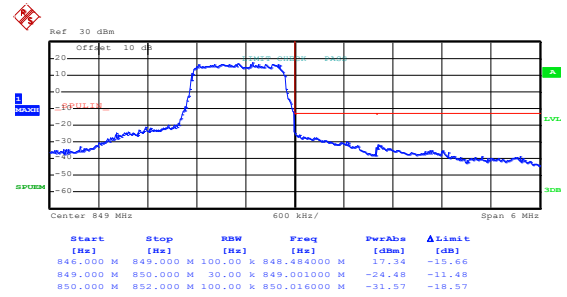
Highest channel

QPSK & RB Size 6



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

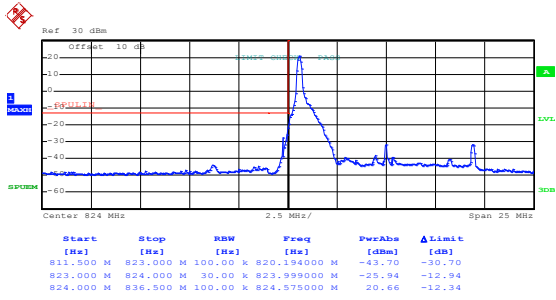
Lowest channel



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

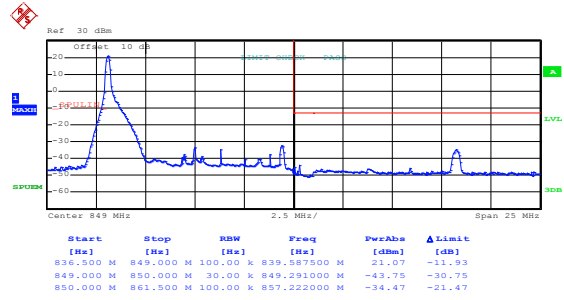
Highest channel

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



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

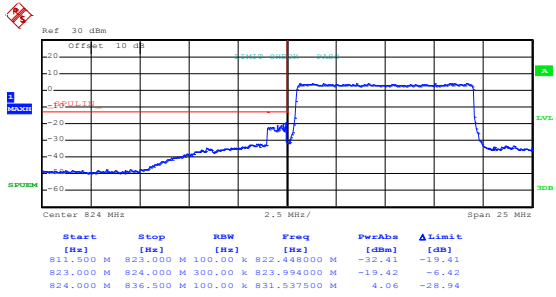
Lowest channel



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

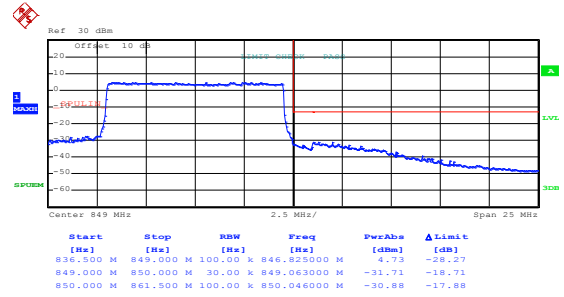
Highest channel

16QAM & RB Size 50



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

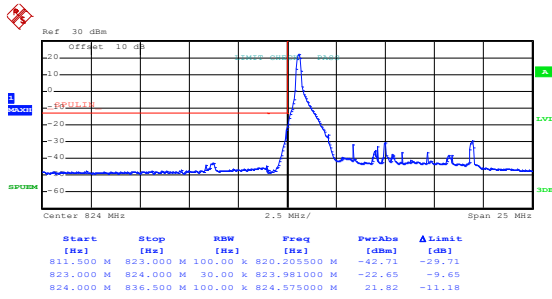
Lowest channel



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

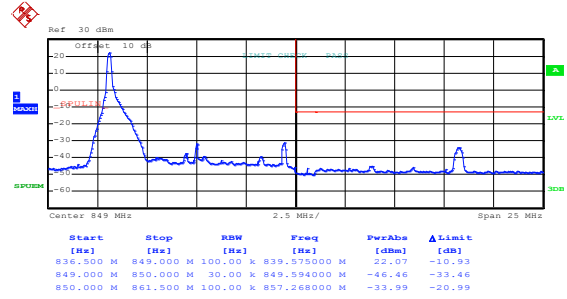
Highest channel

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



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

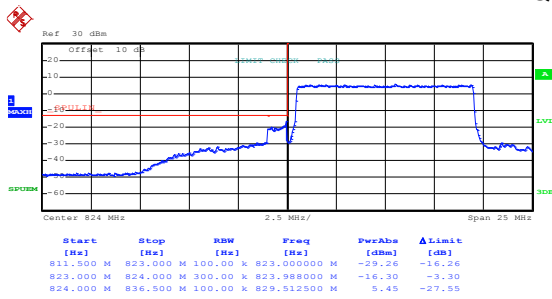
Lowest channel



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

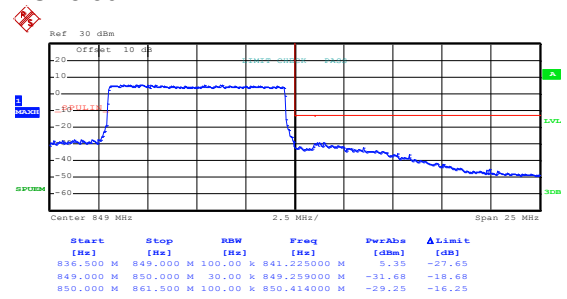
Highest channel

QPSK & RB Size 50



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

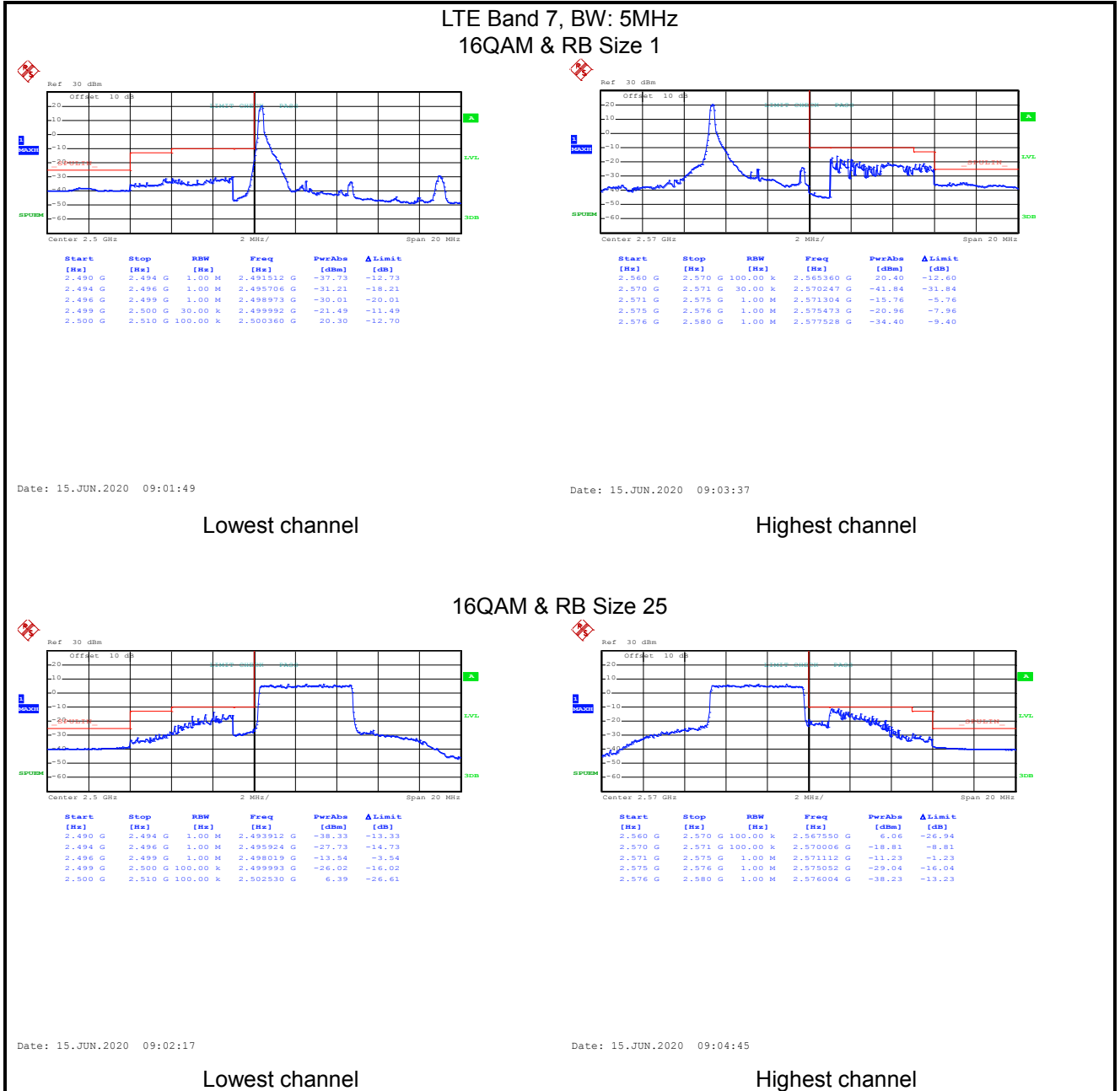
Lowest channel



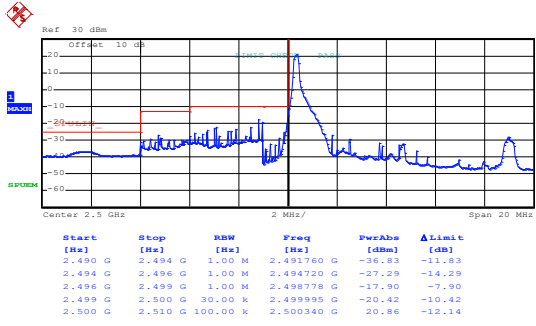
Date: 15.JUN.2020 09:22:25

Highest channel

LTE Band 7 part:

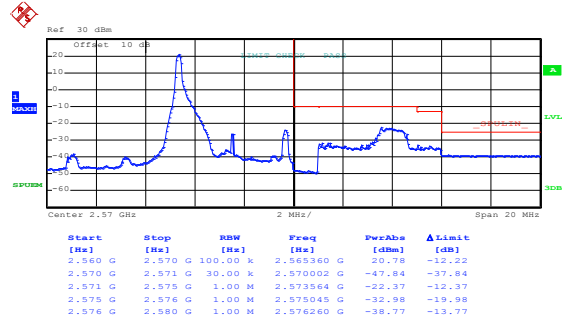


LTE Band 7, BW: 5MHz QPSK & RB Size 1



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

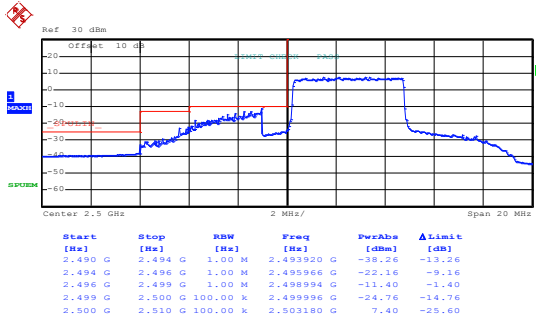
Lowest channel



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

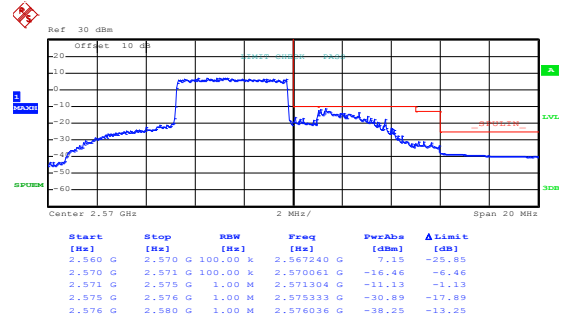
Highest channel

QPSK & RB Size 25



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

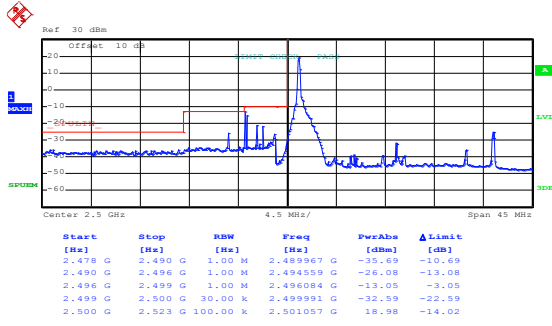
Lowest channel



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

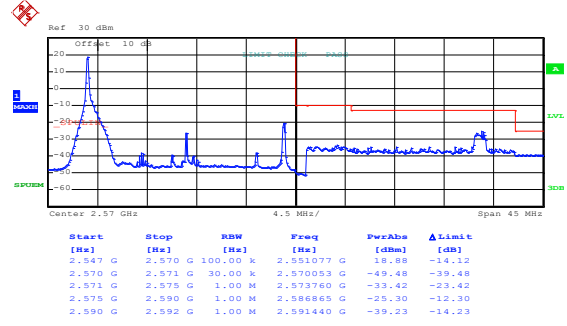
Highest channel

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



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

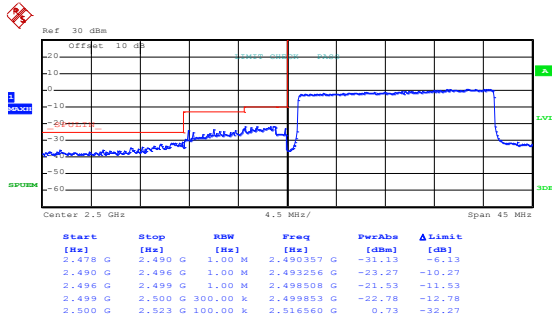
Lowest channel



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

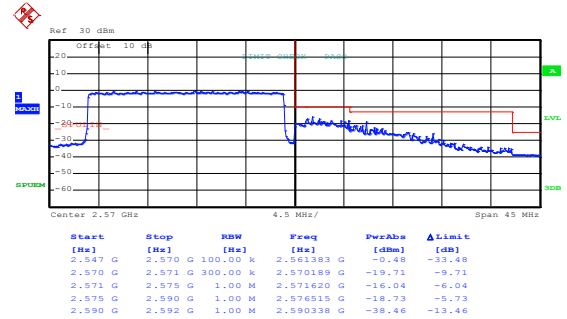
Highest channel

16QAM & RB Size 100



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

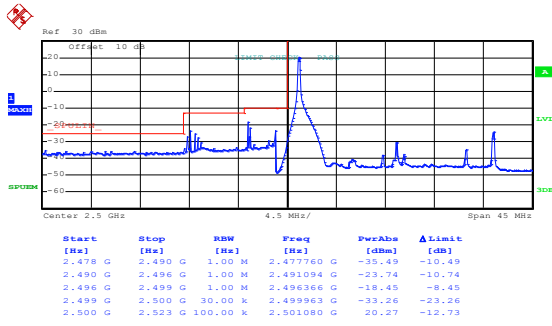
Lowest channel



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

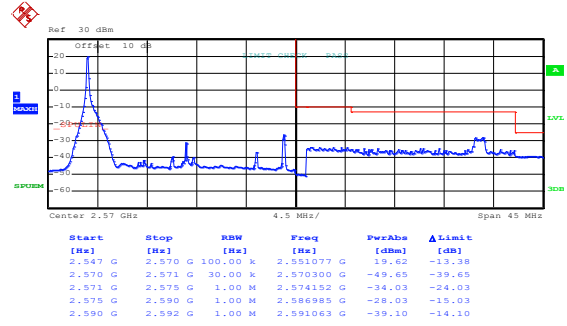
Highest channel

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



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

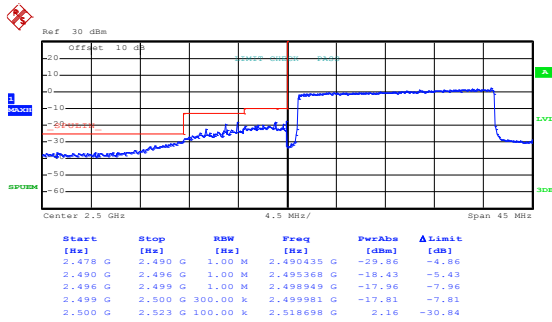
Lowest channel



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

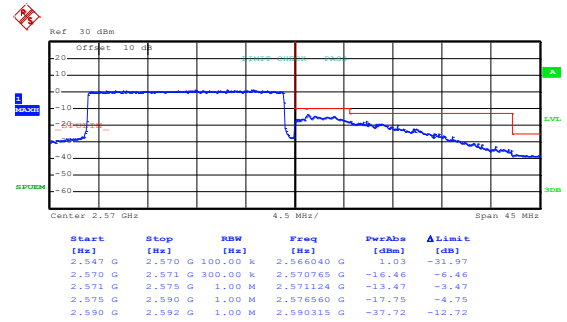
Highest channel

QPSK & RB Size 100



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

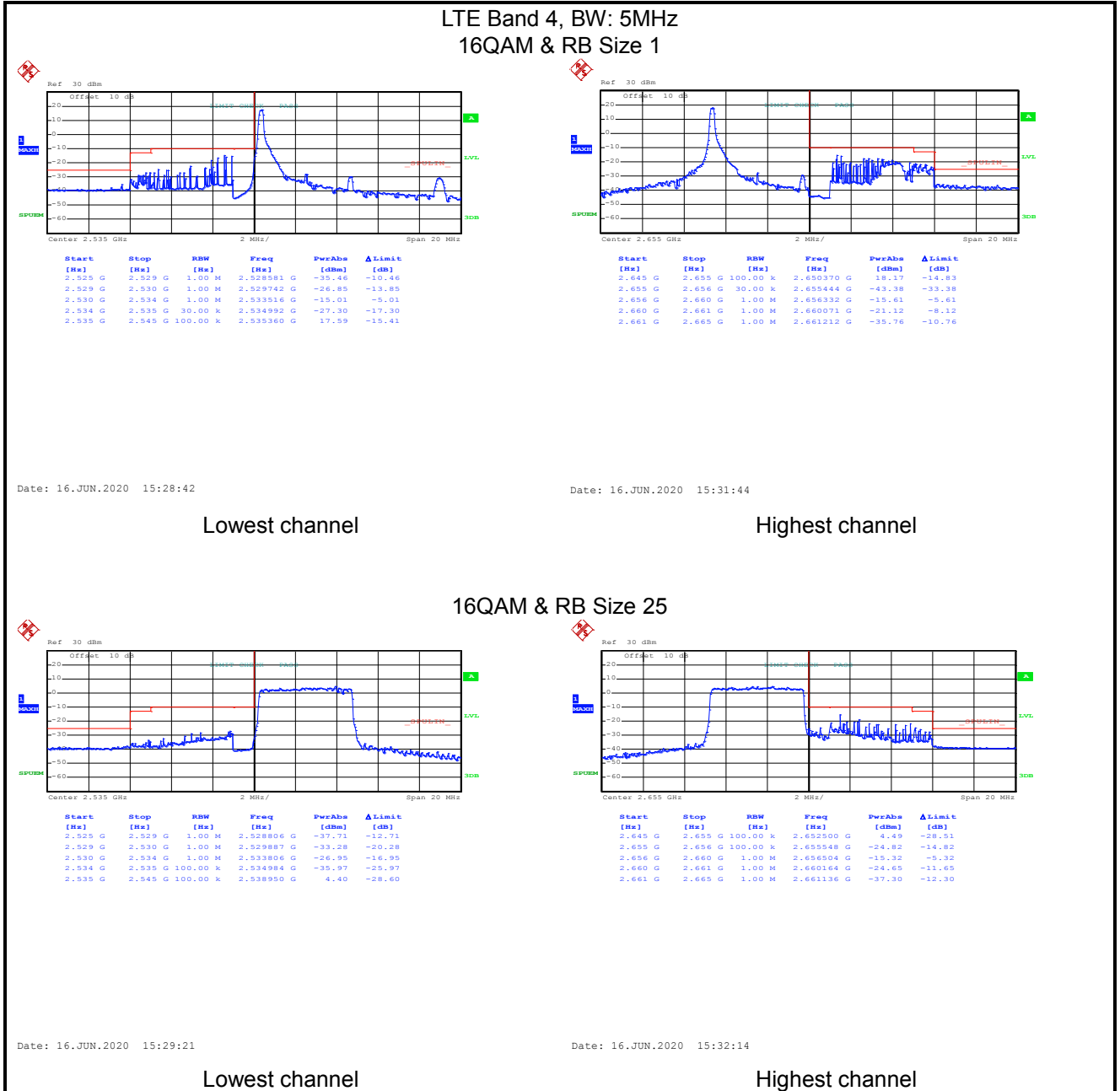
Lowest channel



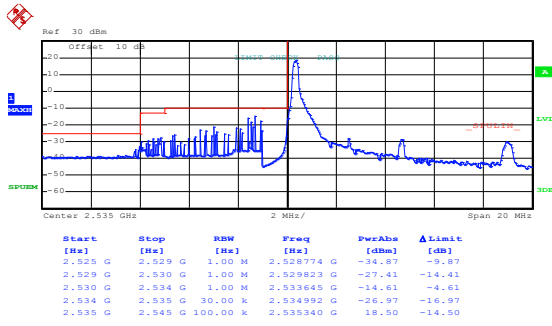
Date: 15.JUN.2020 09:06:49

Highest channel

LTE band 41 part:

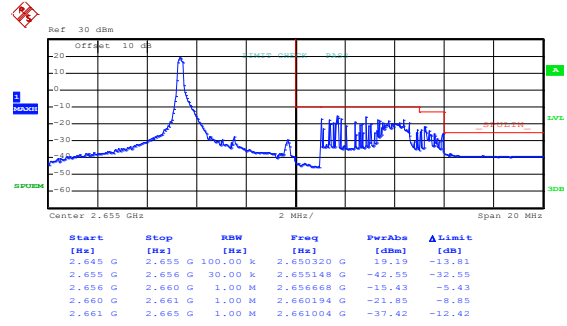


LTE Band 41, BW: 5MHz QPSK & RB Size 1



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

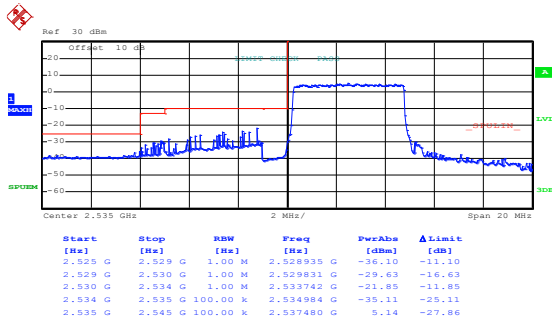
Lowest channel



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

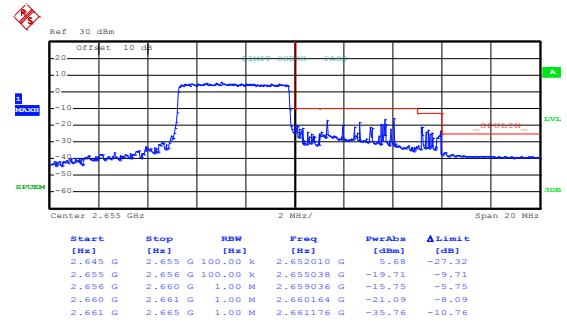
Highest channel

QPSK & RB Size 25



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

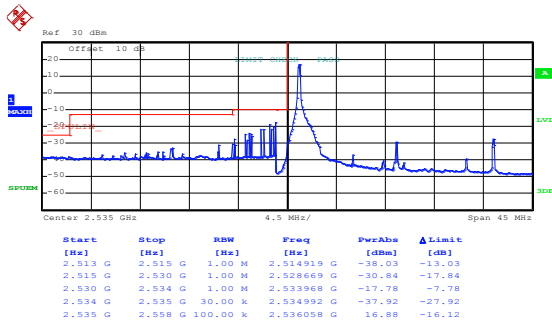
Lowest channel



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

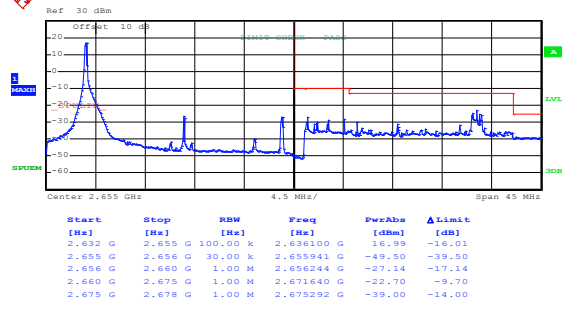
Highest channel

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



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

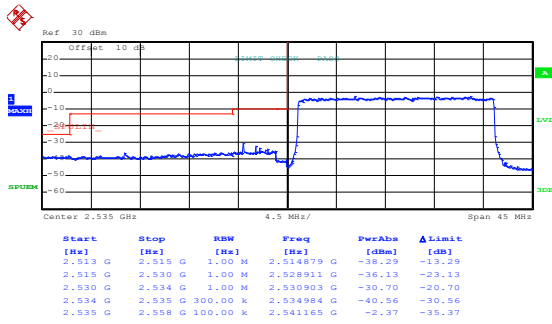
Lowest channel



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

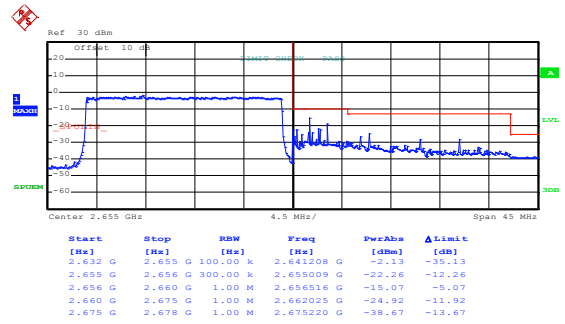
Highest channel

16QAM & RB Size 100



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

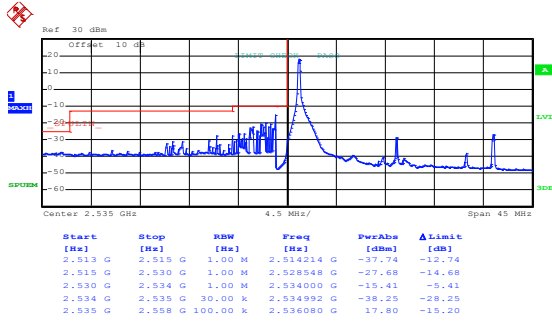
Lowest channel



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

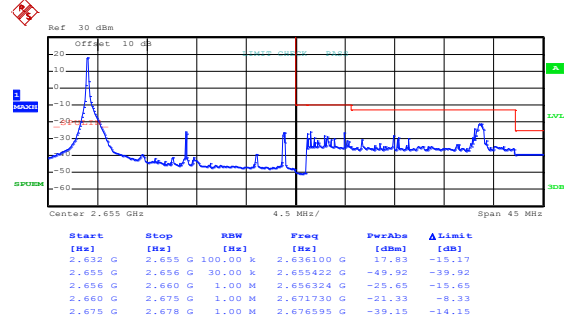
Highest channel

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



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

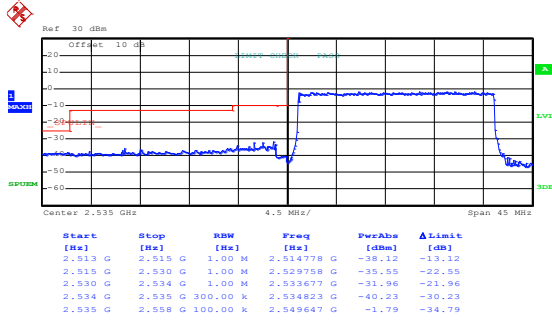
Lowest channel



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

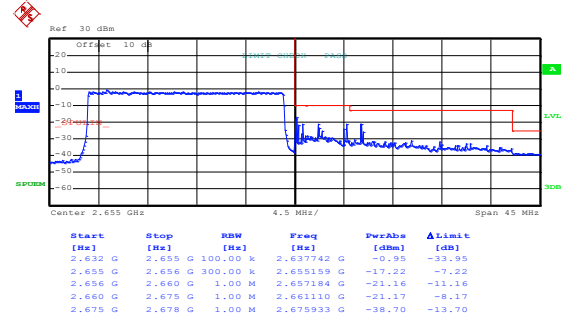
Highest channel

QPSK & RB Size 100



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

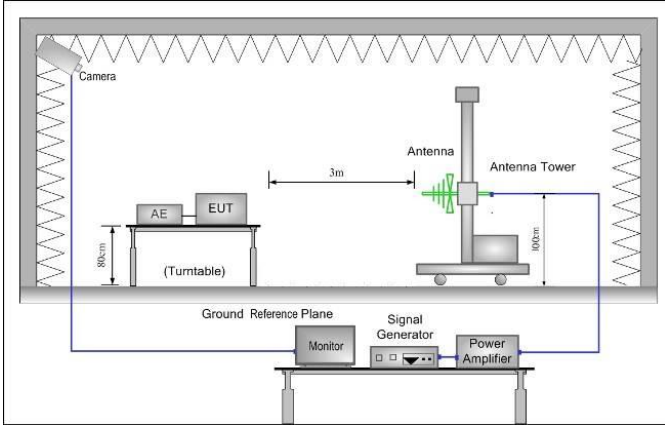
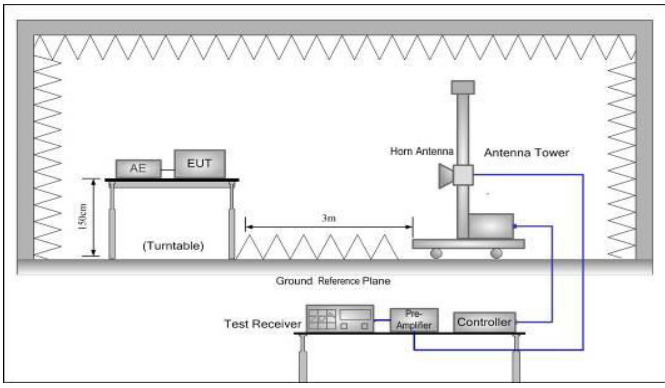
Lowest channel



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

Highest channel

6.5 Field strength of spurious radiation measurement

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

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

Measurement Data:

LTE Band 2 part:

Band 2 (1.4MHz)							
Lowest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3701.40	-61.42	12.64	0.75	-49.53	-13.00	-36.53	Vertical
5552.10	-56.37	12.76	1.13	-44.74	-13.00	-31.74	Vertical
3701.40	-57.32	12.64	0.75	-45.43	-13.00	-32.43	Horizontal
5552.10	-54.79	12.76	1.13	-43.16	-13.00	-30.16	Horizontal
Middle channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3760.00	-61.17	12.71	0.79	-49.25	-13.00	-36.25	Vertical
5640.00	-56.37	12.87	1.15	-44.65	-13.00	-31.65	Vertical
3760.00	-57.40	12.71	0.79	-45.48	-13.00	-32.48	Horizontal
5640.00	-55.37	12.87	1.15	-43.65	-13.00	-30.65	Horizontal
Highest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3816.60	-60.87	12.78	0.81	-48.90	-13.00	-35.90	Vertical
5724.90	-56.63	12.97	1.19	-44.85	-13.00	-31.85	Vertical
3816.60	-57.50	12.78	0.81	-45.53	-13.00	-32.53	Horizontal
5724.90	-55.40	12.97	1.19	-43.62	-13.00	-30.62	Horizontal
<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	-61.12	12.66	0.77	-49.23	-13.00	-36.23	Vertical
5580.00	-55.83	12.80	1.15	-44.18	-13.00	-31.18	Vertical
3720.00	-59.03	12.66	0.77	-47.14	-13.00	-34.14	Horizontal
5580.00	-55.03	12.80	1.15	-43.38	-13.00	-30.38	Horizontal
Middle channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3760.00	-60.94	12.71	0.79	-49.02	-13.00	-36.02	Vertical
5640.00	-55.69	12.87	1.15	-43.97	-13.00	-30.97	Vertical
3760.00	-59.25	12.71	0.79	-47.33	-13.00	-34.33	Horizontal
5640.00	-54.82	12.87	1.15	-43.10	-13.00	-30.10	Horizontal
Highest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3800.00	-61.21	12.76	0.79	-49.24	-13.00	-36.24	Vertical
5700.00	-56.22	12.94	1.18	-44.46	-13.00	-31.46	Vertical
3800.00	-59.69	12.76	0.79	-47.72	-13.00	-34.72	Horizontal
5700.00	-54.98	12.94	1.18	-43.22	-13.00	-30.22	Horizontal
<p><i>Remark:</i> The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.</p>							

LTE Band 4 part:

Band 4 (1.4MHz)							
Lowest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3421.40	-63.46	12.24	0.70	-51.92	-13.00	-38.92	Vertical
5132.10	-58.48	12.92	1.01	-46.57	-13.00	-33.57	Vertical
3421.40	-62.55	12.24	0.70	-51.01	-13.00	-38.01	Horizontal
5132.10	-57.72	12.92	1.01	-45.81	-13.00	-32.81	Horizontal
Middle channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3465.00	-63.83	12.33	0.72	-52.22	-13.00	-39.22	Vertical
5197.50	-57.98	12.88	1.04	-46.14	-13.00	-33.14	Vertical
3465.00	-62.57	12.33	0.72	-50.96	-13.00	-37.96	Horizontal
5197.50	-58.12	12.88	1.04	-46.28	-13.00	-33.28	Horizontal
Highest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3508.60	-64.20	12.41	0.74	-52.53	-13.00	-39.53	Vertical
5262.90	-58.39	12.84	1.07	-46.62	-13.00	-33.62	Vertical
3508.60	-62.73	12.41	0.74	-51.06	-13.00	-38.06	Horizontal
5262.90	-58.14	12.84	1.07	-46.37	-13.00	-33.37	Horizontal
<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	-63.38	12.28	0.71	-51.81	-13.00	-38.81	Vertical
5160.00	-58.52	12.90	1.03	-46.65	-13.00	-33.65	Vertical
3440.00	-63.02	12.28	0.71	-51.45	-13.00	-38.45	Horizontal
5160.00	-57.37	12.90	1.03	-45.50	-13.00	-32.50	Horizontal
Middle channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3465.00	-63.85	12.33	0.72	-52.24	-13.00	-39.24	Vertical
5197.50	-58.41	12.88	1.04	-46.57	-13.00	-33.57	Vertical
3465.00	-62.91	12.33	0.72	-51.30	-13.00	-38.30	Horizontal
5197.50	-57.84	12.88	1.04	-46.00	-13.00	-33.00	Horizontal
Highest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3490.00	-63.95	12.38	0.73	-52.30	-13.00	-39.30	Vertical
5235.00	-58.28	12.86	1.06	-46.48	-13.00	-33.48	Vertical
3490.00	-63.02	12.38	0.73	-51.37	-13.00	-38.37	Horizontal
5235.00	-58.14	12.86	1.06	-46.34	-13.00	-33.34	Horizontal
<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 (1.4MHz)							
Lowest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
1649.40	-69.92	9.57	0.20	-60.55	-13.00	-47.55	Vertical
2474.10	-67.13	10.86	0.43	-56.70	-13.00	-43.70	Vertical
3298.80	-53.82	12.00	0.64	-42.46	-13.00	-29.46	Vertical
1649.40	-69.72	9.57	0.20	-60.35	-13.00	-47.35	Horizontal
2474.10	-67.43	10.86	0.43	-57.00	-13.00	-44.00	Horizontal
3298.80	-53.69	12.00	0.64	-42.33	-13.00	-29.33	Horizontal
Middle channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
1673.30	-70.15	9.66	0.22	-60.71	-13.00	-47.71	Vertical
2509.50	-67.37	10.91	0.46	-56.92	-13.00	-43.92	Vertical
3346.00	-53.50	12.09	0.66	-42.07	-13.00	-29.07	Vertical
1673.30	-69.93	9.66	0.22	-60.49	-13.00	-47.49	Horizontal
2509.50	-67.76	10.91	0.46	-57.31	-13.00	-44.31	Horizontal
3346.00	-54.18	12.09	0.66	-42.75	-13.00	-29.75	Horizontal
Highest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
1696.60	-70.54	9.74	0.23	-61.03	-13.00	-48.03	Vertical
2544.90	-67.46	10.94	0.49	-57.01	-13.00	-44.01	Vertical
3393.20	-53.19	12.19	0.68	-41.68	-13.00	-28.68	Vertical
1696.60	-69.54	9.74	0.23	-60.03	-13.00	-47.03	Horizontal
2544.90	-67.53	10.94	0.49	-57.08	-13.00	-44.08	Horizontal
3393.20	-54.22	12.19	0.68	-42.71	-13.00	-29.71	Horizontal
<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 5 (10MHz)							
Lowest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
1658.00	-70.17	9.60	0.21	-60.78	-13.00	-47.78	Vertical
2487.00	-67.38	10.88	0.45	-56.95	-13.00	-43.95	Vertical
3316.00	-53.35	12.03	0.65	-41.97	-13.00	-28.97	Vertical
1658.00	-69.42	9.60	0.21	-60.03	-13.00	-47.03	Horizontal
2487.00	-67.86	10.88	0.45	-57.43	-13.00	-44.43	Horizontal
3316.00	-54.00	12.03	0.65	-42.62	-13.00	-29.62	Horizontal
Middle channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
1673.30	-70.69	9.66	0.21	-61.24	-13.00	-48.24	Vertical
2509.50	-66.97	10.91	0.46	-56.52	-13.00	-43.52	Vertical
3346.00	-52.99	12.09	0.66	-41.56	-13.00	-28.56	Vertical
1673.30	-69.75	9.66	0.21	-60.30	-13.00	-47.30	Horizontal
2509.50	-67.59	10.91	0.46	-57.14	-13.00	-44.14	Horizontal
3346.00	-54.05	12.09	0.66	-42.62	-13.00	-29.62	Horizontal
Highest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
1688.00	-70.96	9.71	0.23	-61.48	-13.00	-48.48	Vertical
2532.00	-66.73	10.93	0.48	-56.28	-13.00	-43.28	Vertical
3376.00	-52.87	12.15	0.67	-41.39	-13.00	-28.39	Vertical
1688.00	-69.64	9.71	0.23	-60.16	-13.00	-47.16	Horizontal
2532.00	-67.15	10.93	0.48	-56.70	-13.00	-43.70	Horizontal
3376.00	-53.94	12.15	0.67	-42.46	-13.00	-29.46	Horizontal
<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 7 part:

Band 7 (5MHz)							
Lowest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
5005.00	-59.63	13.00	0.94	-47.57	-25.00	-22.57	Vertical
7507.50	-47.12	11.49	1.65	-37.28	-25.00	-12.28	Vertical
5005.00	-57.91	13.00	0.94	-45.85	-25.00	-20.85	Horizontal
7507.50	-43.44	11.49	1.65	-33.60	-25.00	-8.60	Horizontal
Middle channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
5070.00	-60.05	12.96	0.98	-48.07	-25.00	-23.07	Vertical
7605.00	-47.00	11.37	1.69	-37.32	-25.00	-12.32	Vertical
5070.00	-57.67	12.96	0.98	-45.69	-25.00	-20.69	Horizontal
7605.00	-43.16	11.37	1.69	-33.48	-25.00	-8.48	Horizontal
Highest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
5135.00	-59.93	12.92	1.01	-48.02	-25.00	-23.02	Vertical
7702.50	-46.37	11.26	1.72	-36.83	-25.00	-11.83	Vertical
5135.00	-57.47	12.92	1.01	-45.56	-25.00	-20.56	Horizontal
7702.50	-43.20	11.26	1.72	-33.66	-25.00	-8.66	Horizontal
<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 7 (20MHz)							
Lowest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
5020.00	-59.54	12.99	0.97	-47.52	-25.00	-22.52	Vertical
7530.00	-47.20	11.46	1.68	-37.42	-25.00	-12.42	Vertical
5020.00	-57.39	12.99	0.97	-45.37	-25.00	-20.37	Horizontal
7530.00	-43.56	11.46	1.68	-33.78	-25.00	-8.78	Horizontal
Middle channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
5070.00	-59.11	12.96	0.98	-47.13	-25.00	-22.13	Vertical
7605.00	-46.67	11.37	1.69	-36.99	-25.00	-11.99	Vertical
5070.00	-57.31	12.96	0.98	-45.33	-25.00	-20.33	Horizontal
7605.00	-43.66	11.37	1.69	-33.98	-25.00	-8.98	Horizontal
Highest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
5120.00	-59.32	12.93	1.00	-47.39	-25.00	-22.39	Vertical
7680.00	-46.94	11.28	1.72	-37.38	-25.00	-12.38	Vertical
5120.00	-57.50	12.93	1.00	-45.57	-25.00	-20.57	Horizontal
7680.00	-43.32	11.28	1.72	-33.76	-25.00	-8.76	Horizontal
<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 41 part:

Band 41 (5MHz)							
Lowest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
4997.00	-58.28	13.00	0.94	-46.22	-13.00	-33.22	Vertical
7495.50	-48.73	11.50	1.65	-38.88	-13.00	-25.88	Vertical
4997.00	-58.48	13.00	0.94	-46.42	-13.00	-33.42	Horizontal
7495.50	-48.60	11.50	1.65	-38.75	-13.00	-25.75	Horizontal
Middle channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
5186.00	-57.66	12.89	1.04	-45.81	-13.00	-32.81	Vertical
7779.00	-48.45	11.17	1.73	-39.01	-13.00	-26.01	Vertical
5186.00	-58.20	12.89	1.04	-46.35	-13.00	-33.35	Horizontal
7779.00	-48.16	11.17	1.73	-38.72	-13.00	-25.72	Horizontal
Highest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
5375.00	-57.96	12.78	1.11	-46.29	-13.00	-33.29	Vertical
8062.50	-47.96	10.92	1.82	-38.86	-13.00	-25.86	Vertical
5375.00	-57.74	12.78	1.11	-46.07	-13.00	-33.07	Horizontal
8062.50	-47.53	10.92	1.82	-38.43	-13.00	-25.43	Horizontal
<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 41 (20MHz)							
Lowest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
5012.00	-58.60	12.99	0.95	-46.56	-13.00	-33.56	Vertical
7518.00	-48.49	11.48	1.66	-38.67	-13.00	-25.67	Vertical
5012.00	-58.48	12.99	0.95	-46.44	-13.00	-33.44	Horizontal
7518.00	-49.04	11.48	1.66	-39.22	-13.00	-26.22	Horizontal
Middle channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
5186.00	-58.11	12.89	1.04	-46.26	-13.00	-33.26	Vertical
7779.00	-47.74	11.17	1.73	-38.30	-13.00	-25.30	Vertical
5186.00	-58.53	12.89	1.04	-46.68	-13.00	-33.68	Horizontal
7779.00	-49.08	11.17	1.73	-39.64	-13.00	-26.64	Horizontal
Highest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
5360.00	-58.05	12.78	1.10	-46.37	-13.00	-33.37	Vertical
8040.00	-47.37	10.91	1.79	-38.25	-13.00	-25.25	Vertical
5360.00	-58.55	12.78	1.10	-46.87	-13.00	-33.87	Horizontal
8040.00	-48.27	10.91	1.79	-39.15	-13.00	-26.15	Horizontal
<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 & 7 & 41
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	196	0.104255	Within authorized band for Band 2	Pass
	-20	151	0.080319		
	-10	180	0.095745		
	0	132	0.070213		
	10	166	0.088298		
	20	102	0.054255		
	30	144	0.076596		
	40	170	0.090426		
	50	120	0.063830		
16QAM					
3.85	-30	197	0.104787	Within authorized band for Band 2	Pass
	-20	151	0.080319		
	-10	123	0.065426		
	0	165	0.087766		
	10	144	0.076596		
	20	178	0.094681		
	30	101	0.053723		
	40	114	0.060638		
	50	180	0.095745		

Note: Only the worst case shown in the report.

LTE Band 4 part:

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

Note: Only the worst case shown in the report.

LTE Band 5 part:

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

Note: Only the worst case shown in the report.

LTE Band 7 part:

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

Note: Only the worst case shown in the report.

LTE Band 41 part:

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

6.7 Frequency stability V.S. Voltage measurement

Test Requirement:	Part 22.355, Part 24.235, Part 27.54, Part 2.1055(d)(2)
Limit:	±2.5 ppm for Band 5 Within authorized band for Band 2 & 4 & 7 & 41
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	80	0.042553	Within authorized band for Band 2	Pass
	3.85	74	0.039362		
	3.50	90	0.047872		
16QAM					
25	4.40	90	0.047872	Within authorized band for Band 2	Pass
	3.85	68	0.036170		
	3.50	70	0.037234		

Note: Only the worst case shown in the report.

LTE Band 4 part:

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

Note: Only the worst case shown in the report.

LTE Band 5 part:

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

Note: Only the worst case shown in the report.

LTE Band 7 part:

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

Note: Only the worst case shown in the report.

LTE Band 41 part:

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

Note: Only the worst case shown in the report.

8 EUT Constructional Details

Reference to the test report No. CCISE200604601

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