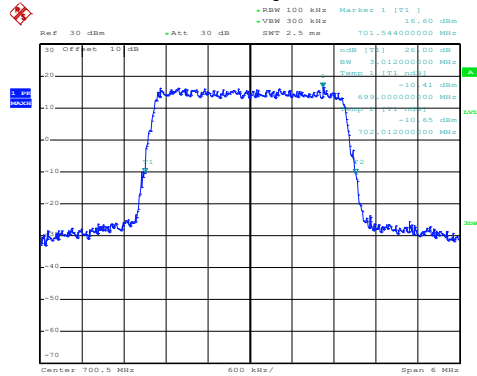


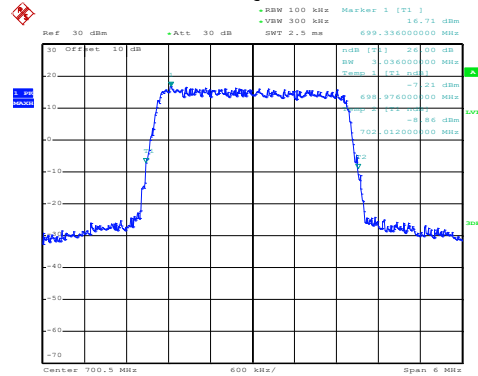
LTE Band 12: -26dBc bandwidth
BW: 3MHz

16QAM



Date: 28.MAR.2021 12:51:51

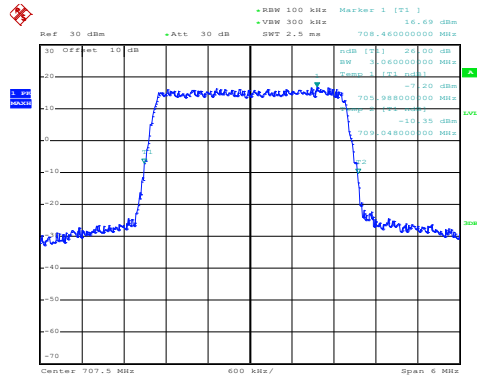
QPSK



Date: 28.MAR.2021 12:51:46

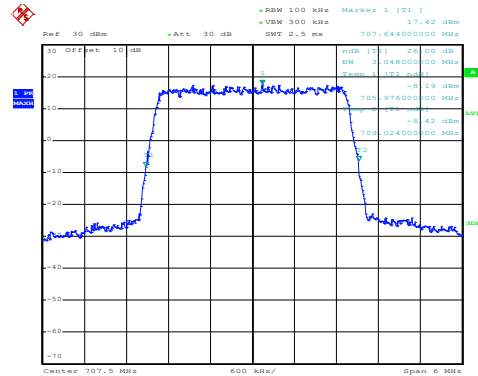
Lowest channel

16QAM



Date: 28.MAR.2021 12:53:20

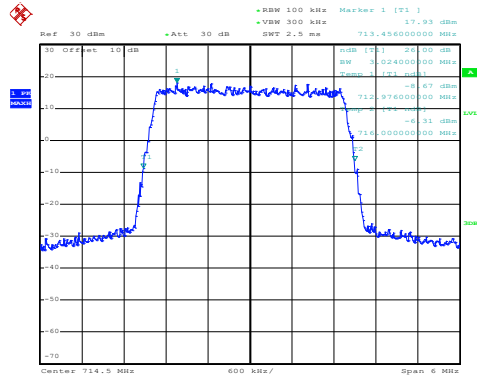
QPSK



Date: 28.MAR.2021 12:53:14

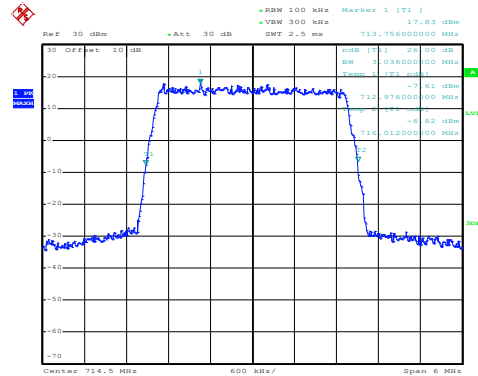
Middle channel

16QAM



Date: 28.MAR.2021 12:54:12

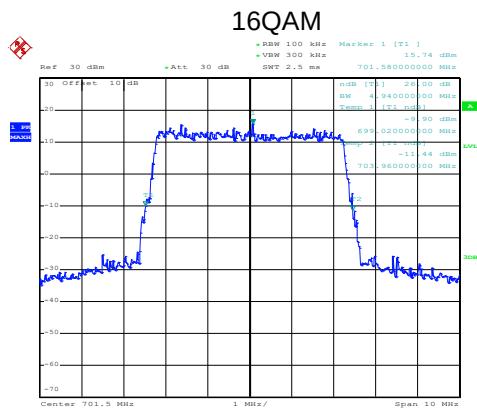
QPSK



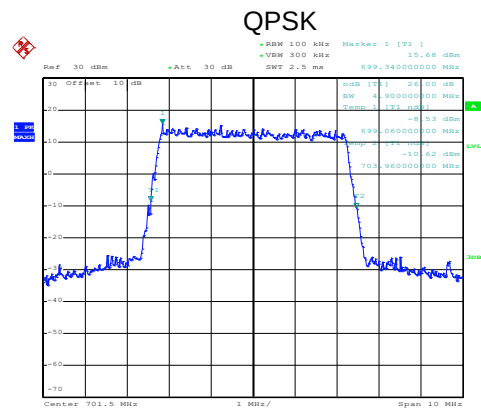
Date: 28.MAR.2021 12:54:05

Highest channel

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

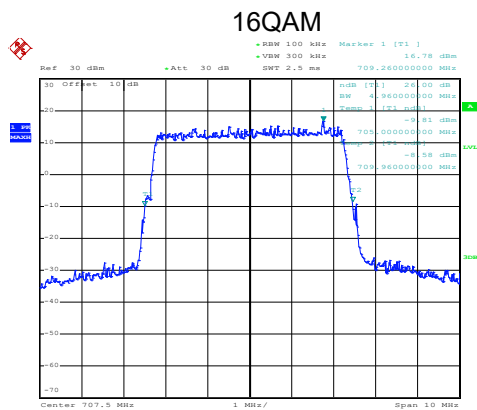


Date: 28.MAR.2021 13:00:22

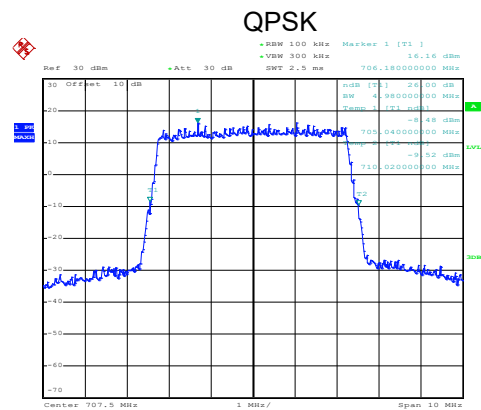


Date: 28.MAR.2021 13:00:16

Lowest channel

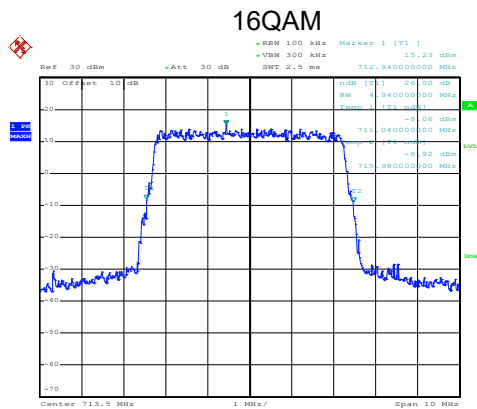


Date: 28.MAR.2021 12:58:06

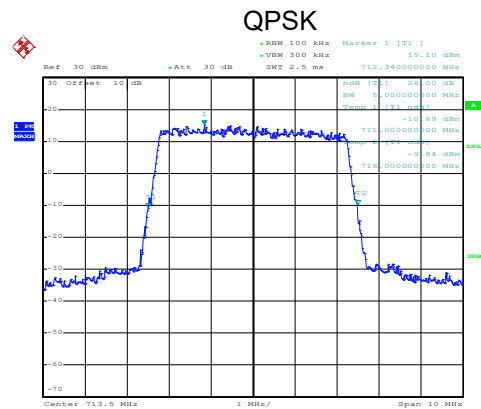


Date: 28.MAR.2021 12:58:00

Middle channel



Date: 28.MAR.2021 13:01:16

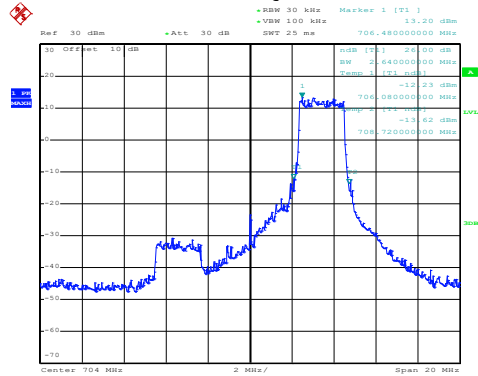


Date: 28.MAR.2021 13:01:11

Highest channel

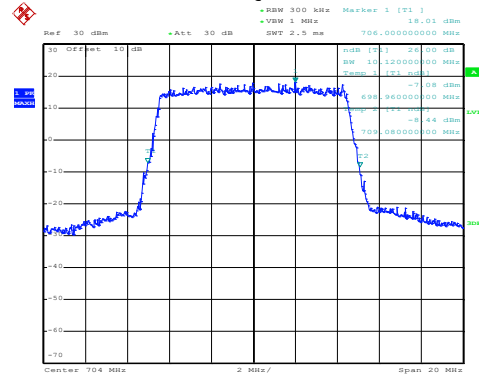
LTE Band 12: -26dBc bandwidth
BW: 10MHz

16QAM



Date: 27.MAR.2021 17:49:04

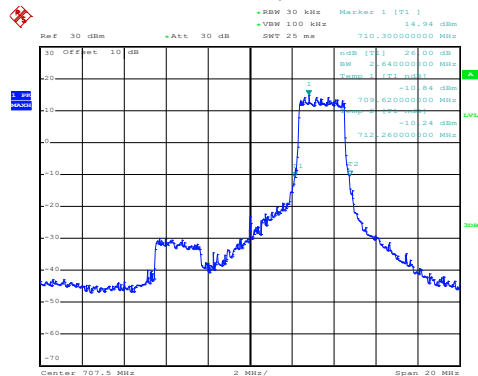
QPSK



Date: 27.MAR.2021 17:27:43

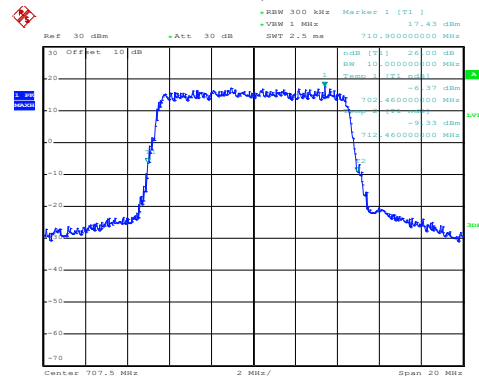
Lowest channel

16QAM



Date: 27.MAR.2021 17:52:10

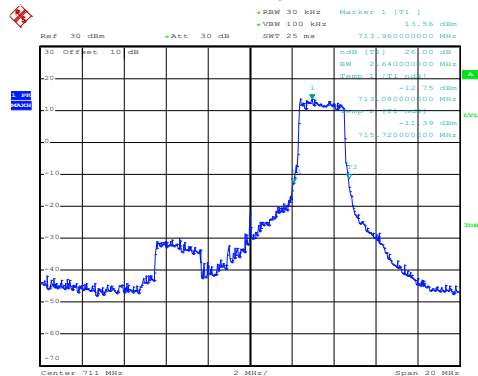
QPSK



Date: 27.MAR.2021 17:29:59

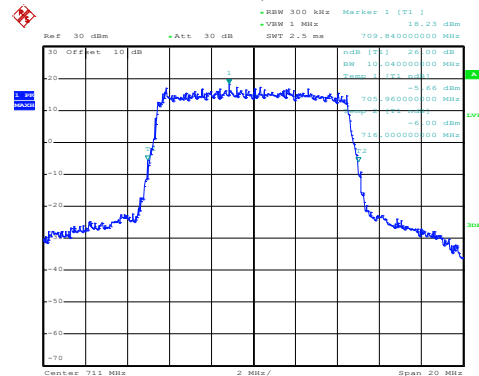
Middle channel

16QAM



Date: 27.MAR.2021 17:54:09

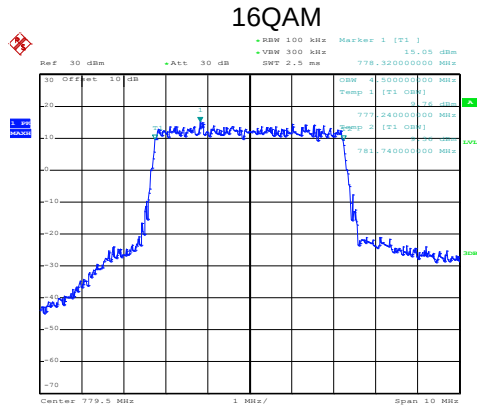
QPSK



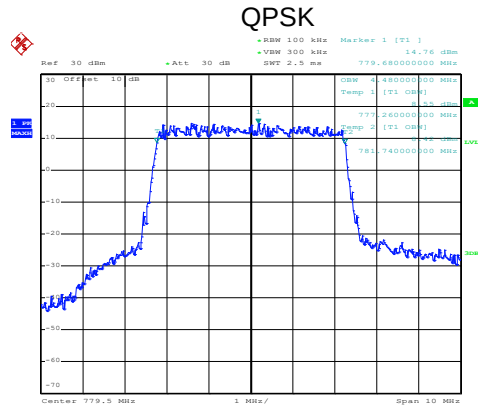
Date: 27.MAR.2021 17:32:10

Highest channel

LTE Band 13 part:

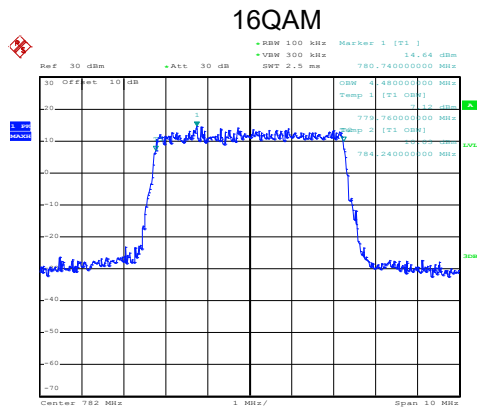
LTE Band 13: 99% Occupy bandwidth
BW: 5MHz


Date: 27.MAR.2021 17:35:05

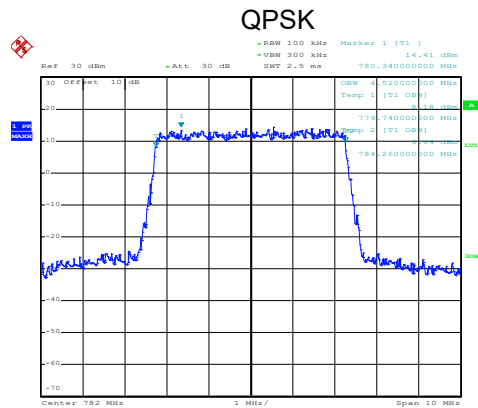


Date: 27.MAR.2021 17:35:09

Lowest channel

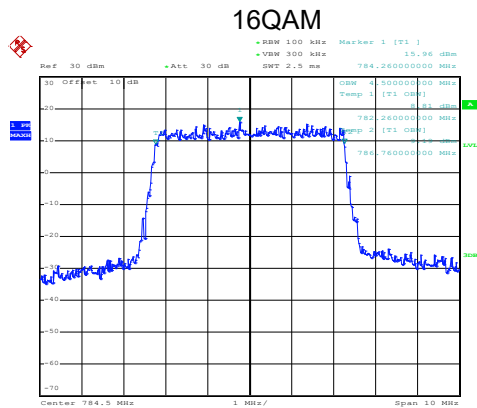


Date: 27.MAR.2021 17:39:42

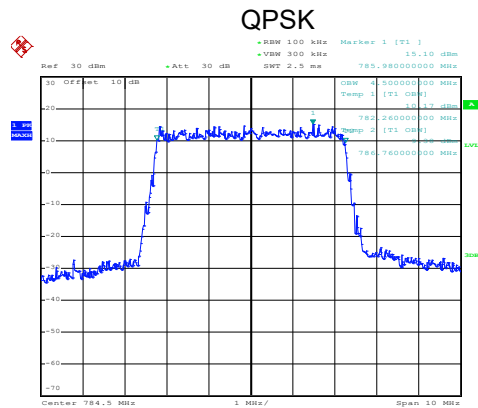


Date: 27.MAR.2021 17:39:38

Middle channel

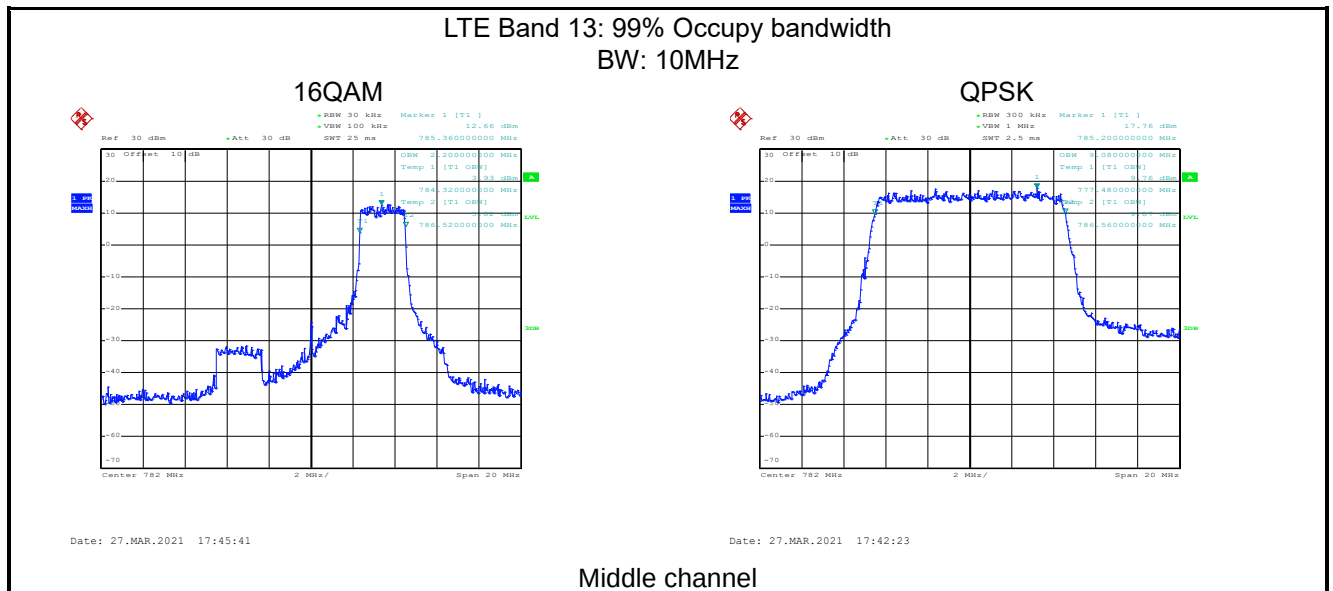


Date: 27.MAR.2021 17:41:12



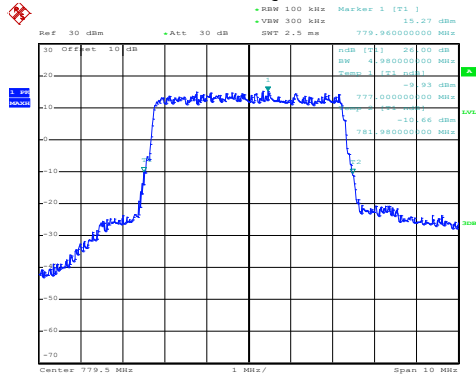
Date: 27.MAR.2021 17:41:09

Highest channel



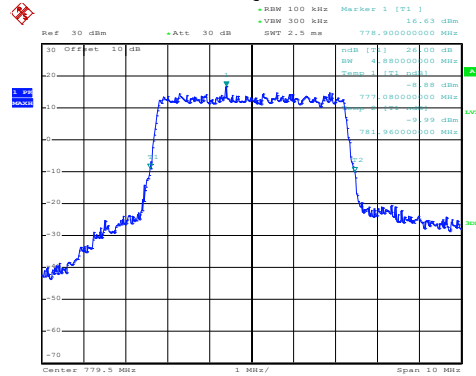
LTE Band 13: -26dBc bandwidth
BW: 5MHz

16QAM



Date: 27.MAR.2021 17:34:49

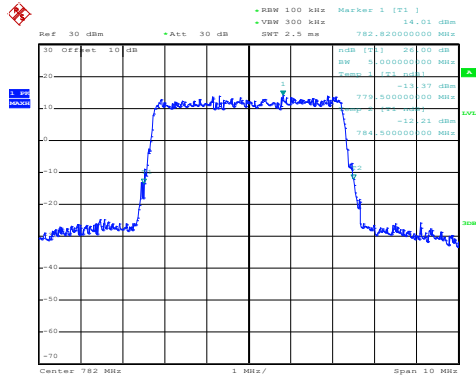
QPSK



Date: 27.MAR.2021 17:34:44

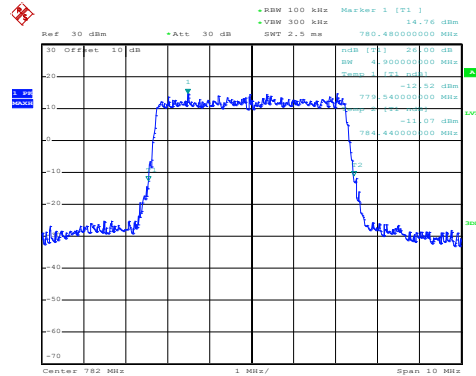
Lowest channel

16QAM



Date: 27.MAR.2021 17:40:04

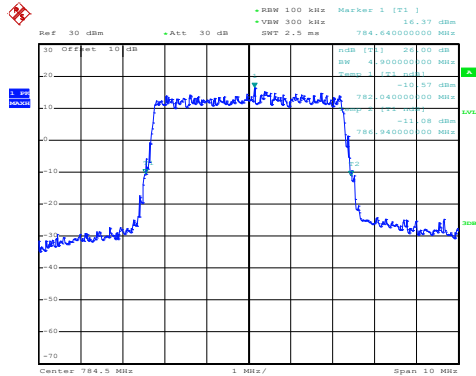
QPSK



Date: 27.MAR.2021 17:39:59

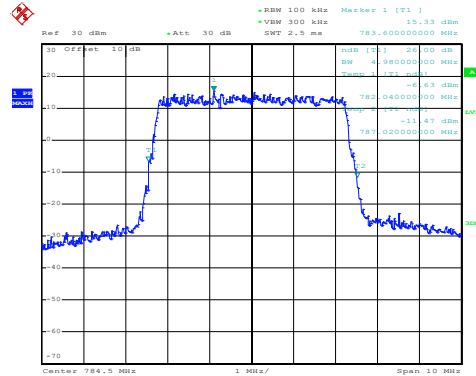
Middle channel

16QAM



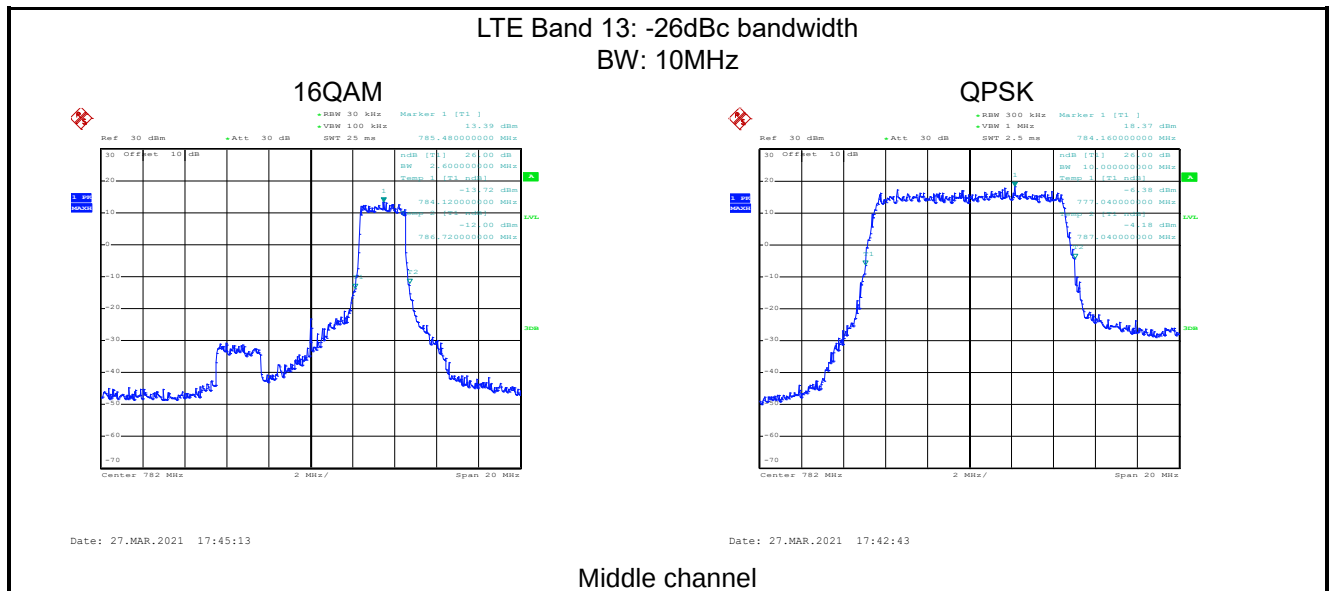
Date: 27.MAR.2021 17:40:53

QPSK



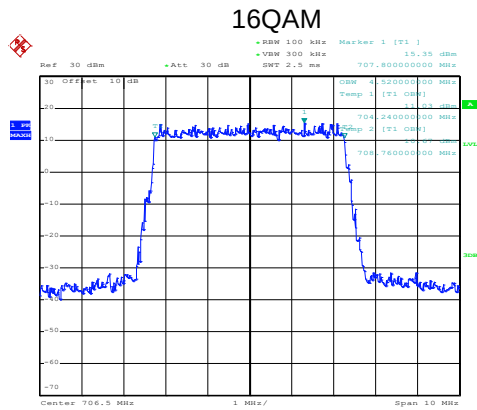
Date: 27.MAR.2021 17:40:48

Highest channel

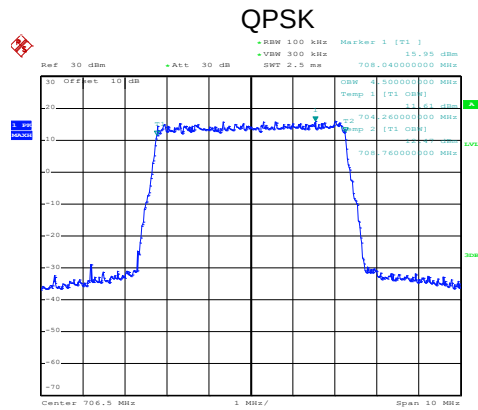


LTE Band 17 part:

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

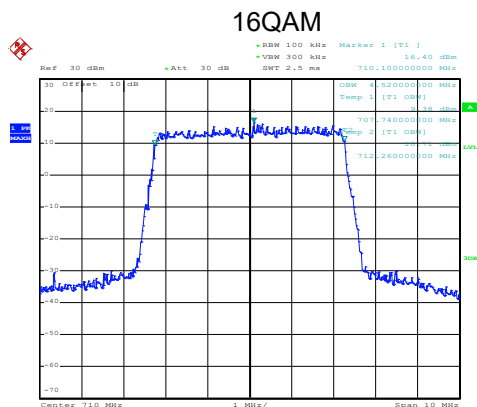


Date: 28.MAR.2021 12:21:31

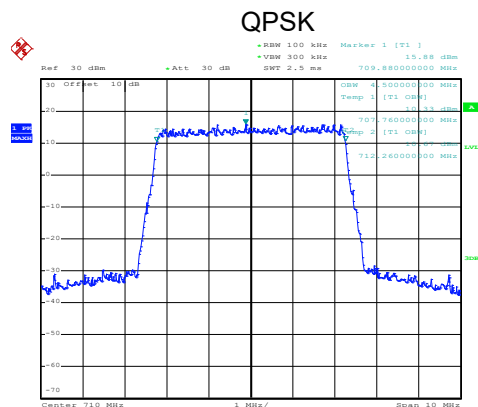


Date: 28.MAR.2021 12:21:27

Lowest channel

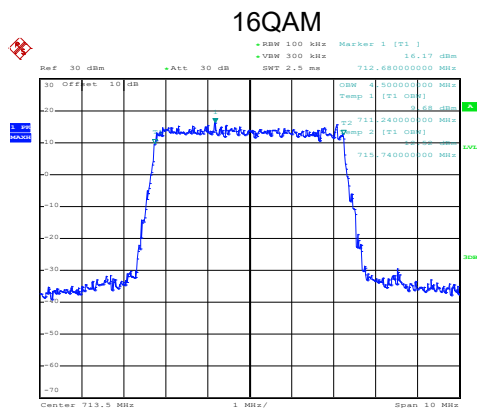


Date: 28.MAR.2021 12:22:30

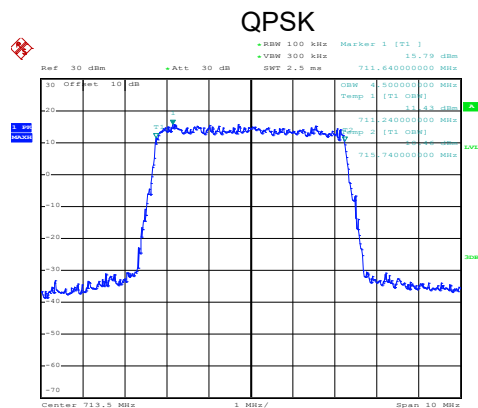


Date: 28.MAR.2021 12:22:25

Middle channel



Date: 28.MAR.2021 12:22:57

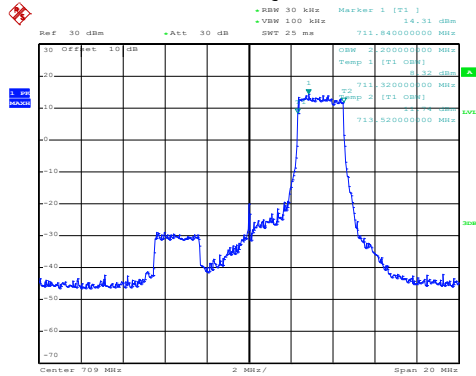


Date: 28.MAR.2021 12:22:52

Highest channel

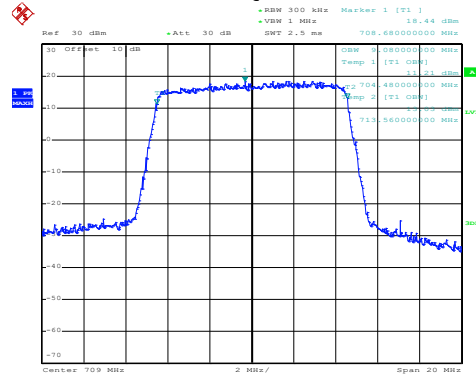
LTE Band 17: 99% Occupancy bandwidth
BW: 10MHz

16QAM



Date: 28.MAR.2021 12:25:48

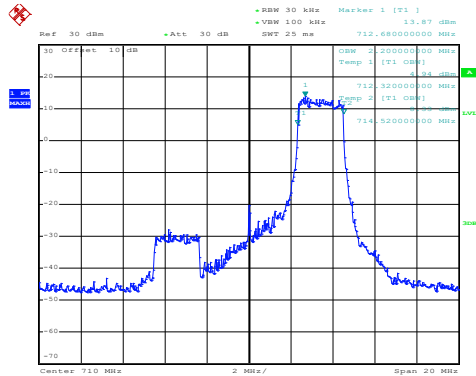
QPSK



Date: 28.MAR.2021 12:24:08

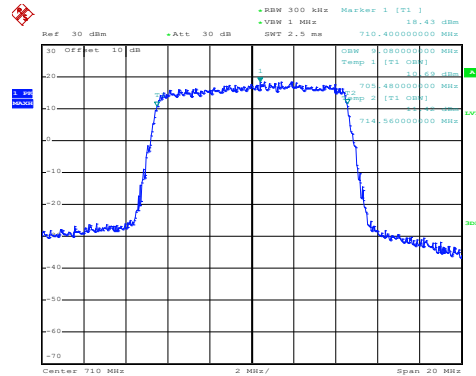
Lowest channel

16QAM



Date: 28.MAR.2021 12:26:30

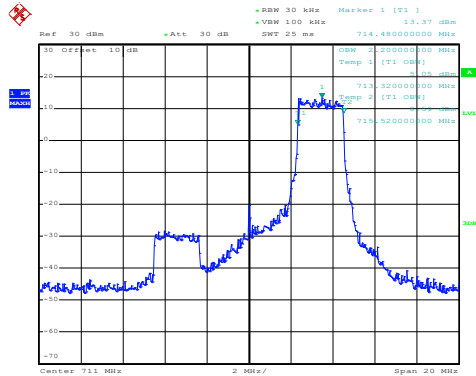
QPSK



Date: 28.MAR.2021 12:24:31

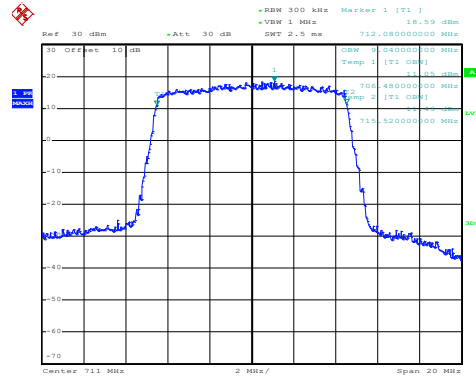
Middle channel

16QAM



Date: 28.MAR.2021 12:26:56

QPSK

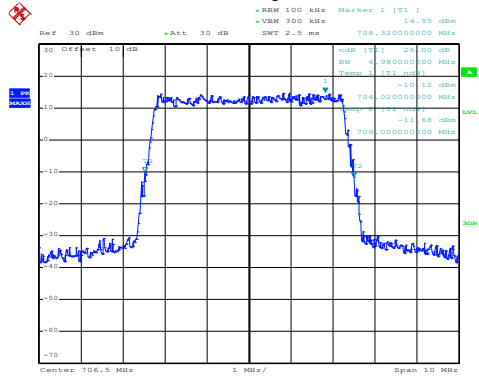


Date: 28.MAR.2021 12:24:58

Highest channel

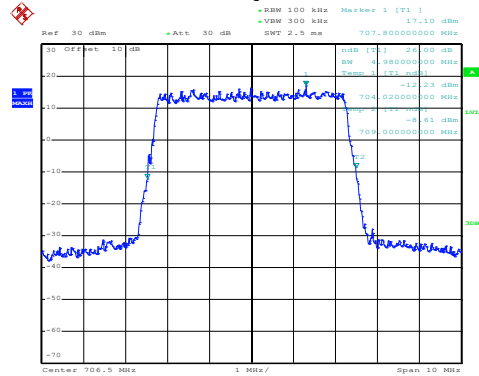
LTE Band 17: -26dBc bandwidth
BW: 5MHz

16QAM



Date: 28.MAR.2021 12:21:43

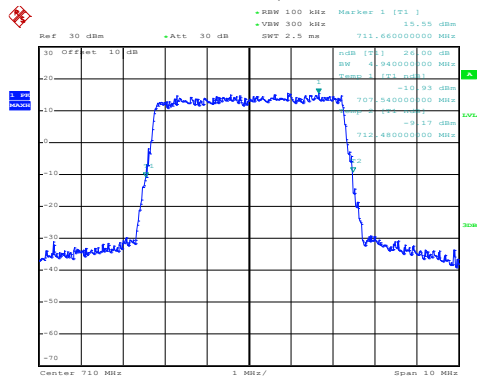
QPSK



Date: 28.MAR.2021 12:21:39

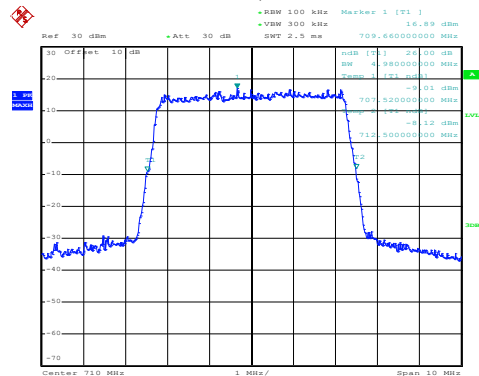
Lowest channel

16QAM



Date: 28.MAR.2021 12:22:15

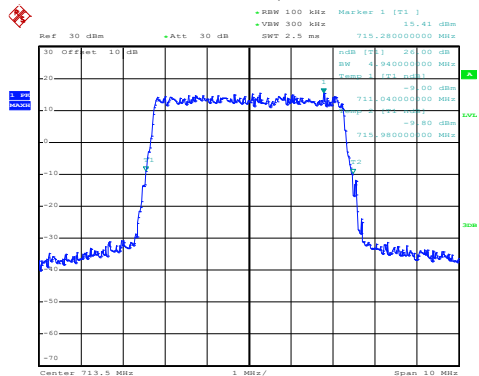
QPSK



Date: 28.MAR.2021 12:22:09

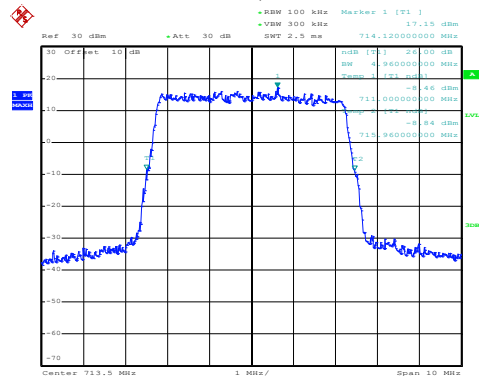
Middle channel

16QAM



Date: 28.MAR.2021 12:23:09

QPSK

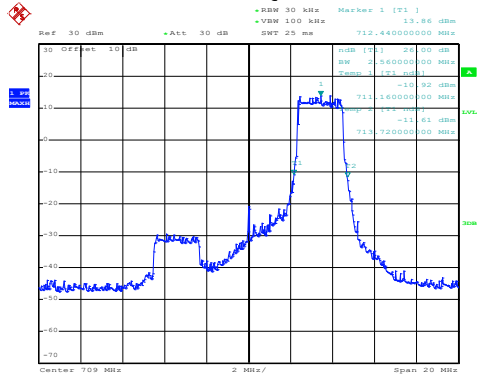


Date: 28.MAR.2021 12:23:05

Highest channel

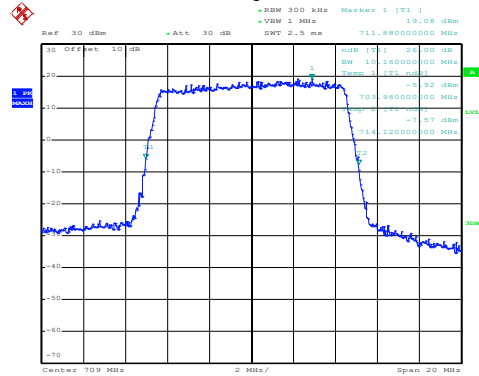
LTE Band 17: -26dBc bandwidth BW: 10MHz

16QAM



Date: 28.MAR.2021 12:25:58

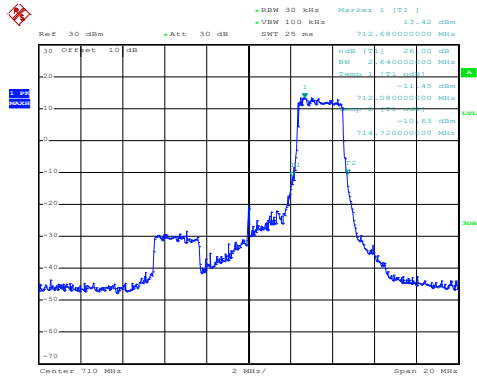
QPSK



Date: 28.MAR.2021 12:23:57

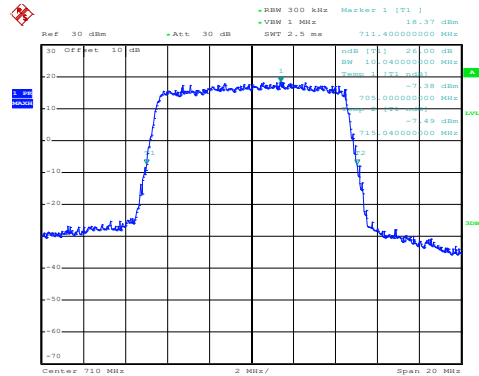
Lowest channel

16QAM



Date: 28.MAR.2021 12:26:21

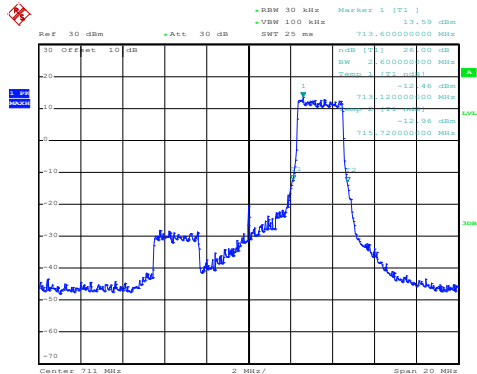
QPSK



Date: 28.MAR.2021 12:24:38

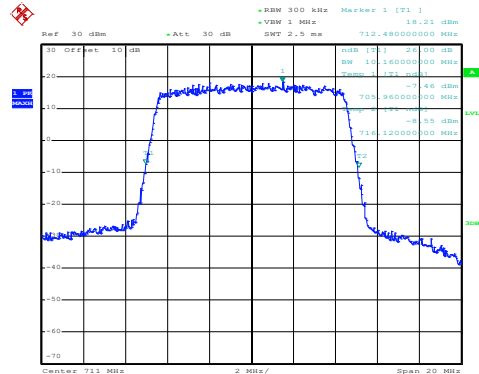
Middle channel

16QAM



Date: 28.MAR.2021 12:27:06

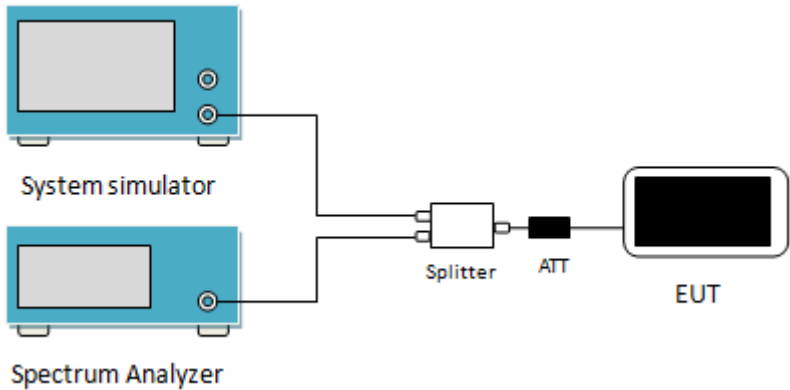
QPSK



Date: 28.MAR.2021 12:24:50

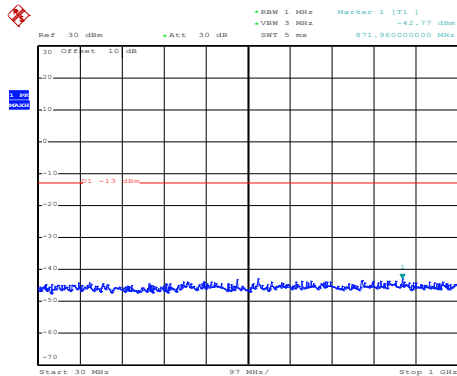
Highest channel

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), Part 27.53(m)
Limit:	LTE Band 2 & 4 & 12 & 13 & 17: The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB (-13 dBm).
Test Setup:	 The diagram shows a test setup for out-of-band emission testing. A System simulator and a Spectrum Analyzer are connected to a Splitter. The Splitter is connected to an ATT (Attenuator) and then to the EUT (Equipment Under Test).
Test Procedure:	1 The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. 2 For the out of band: For Band 5 & 12 & 17 set the RBW=100 kHz, VBW=300 kHz and for Band 2 & 4 & 7 set the RBW=1 MHz, VBW=3 MHz when below 1 GHz, RBW =1 MHz, VBW=3 MHz when above 1 GHz, Start=30MHz, Stop= 10th harmonic. 3 Band Edge Requirements: In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions.
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	Pre-scan all RB Size and offset, and found the RB Size and offset of worst case, so the report shows only the worst case test data.

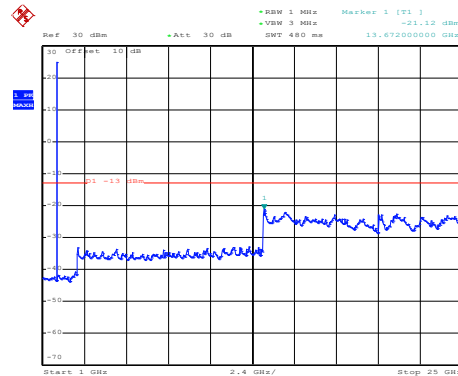
Test plots as follows (Conducted spurious emission) (worst case):
LTE Band 2 part:

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



Date: 24.MAR.2021 10:33:53

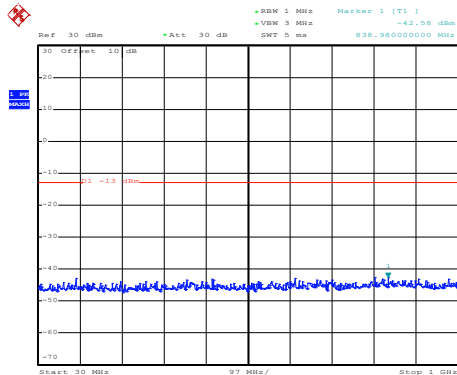
30MHz~1GHz



Date: 24.MAR.2021 09:50:23

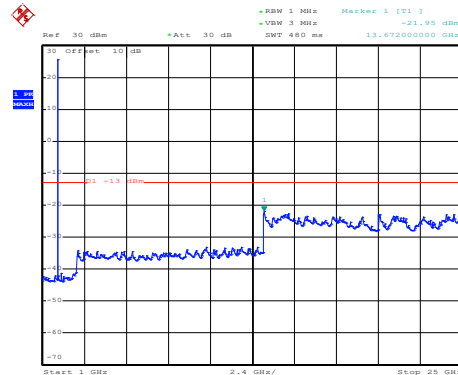
1GHz~25GHz

Middle channel



Date: 24.MAR.2021 10:34:12

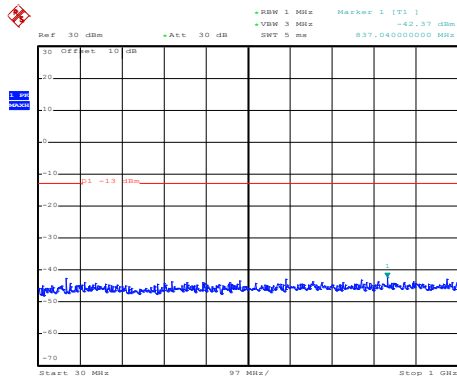
30MHz~1GHz



Date: 24.MAR.2021 09:50:50

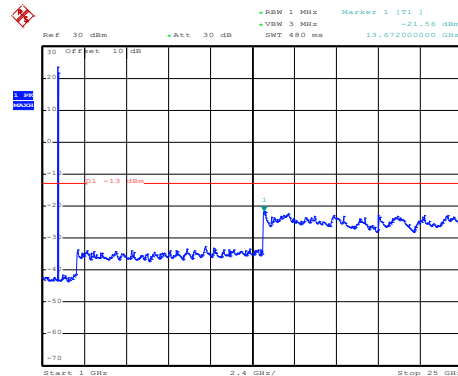
1GHz~25GHz

High channel



Date: 24.MAR.2021 10:34:23

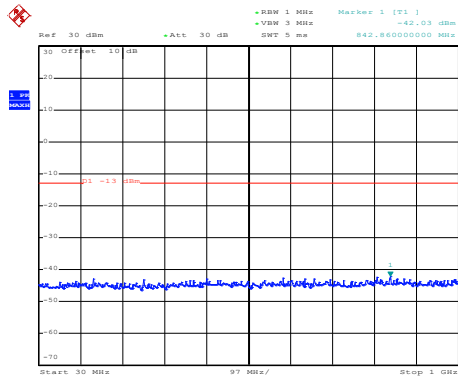
30MHz~1GHz



Date: 24.MAR.2021 09:51:16

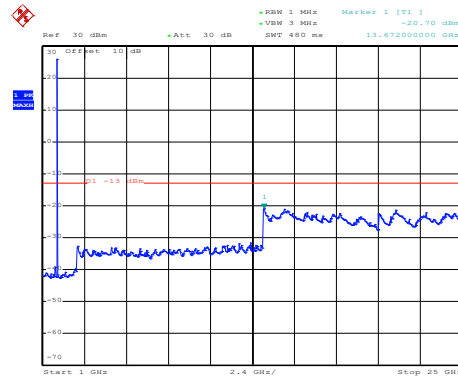
1GHz~25GHz

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



Date: 24.MAR.2021 10:33:49

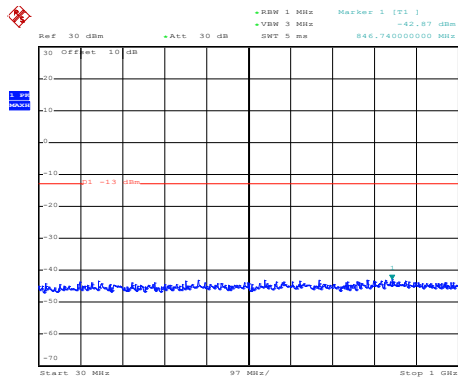
30MHz~1GHz



Date: 24.MAR.2021 09:50:10

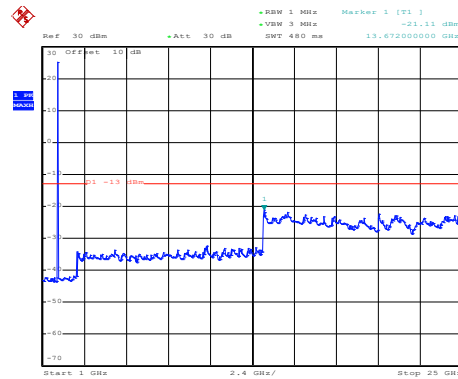
1GHz~25GHz

Middle channel



Date: 24.MAR.2021 10:34:06

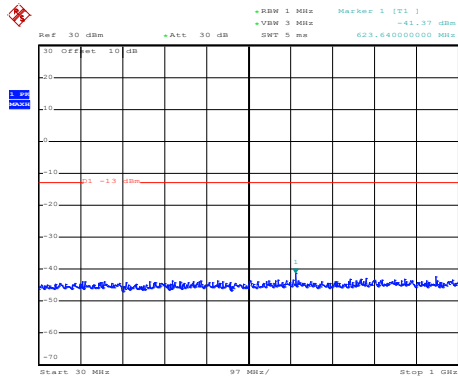
30MHz~1GHz



Date: 24.MAR.2021 09:50:43

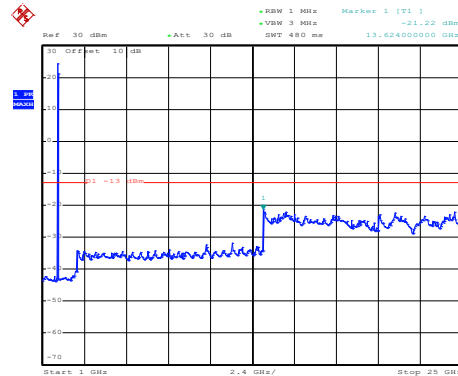
1GHz~25GHz

High channel



Date: 24.MAR.2021 10:34:19

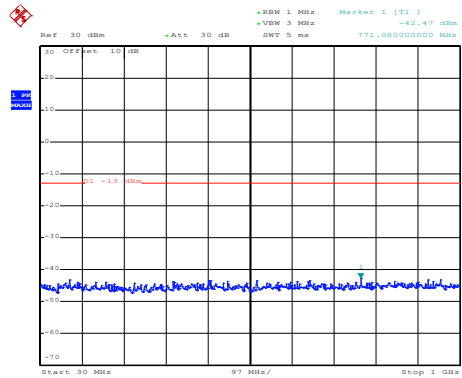
30MHz~1GHz



Date: 24.MAR.2021 09:51:05

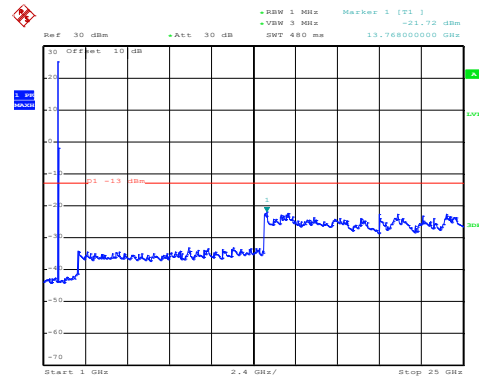
1GHz~25GHz

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



Date: 24.MAR.2021 10:34:39

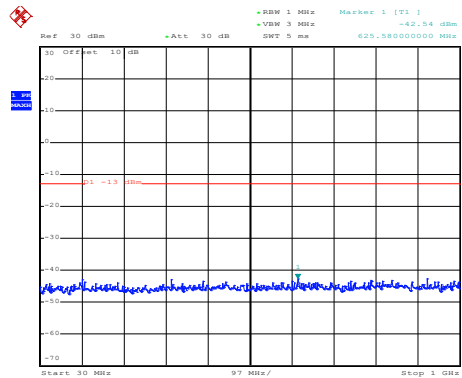
30MHz~1GHz



Date: 24.MAR.2021 09:54:10

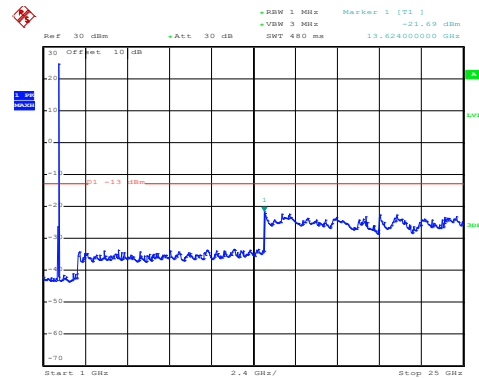
1GHz~25GHz

Middle channel



Date: 24.MAR.2021 10:34:51

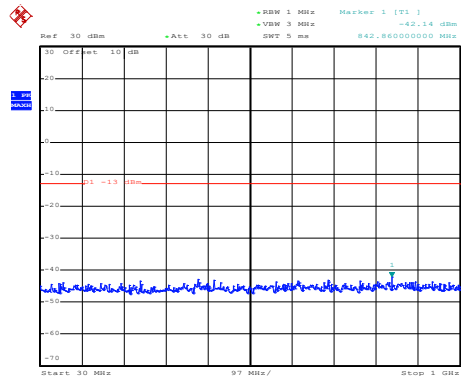
30MHz~1GHz



Date: 24.MAR.2021 09:54:30

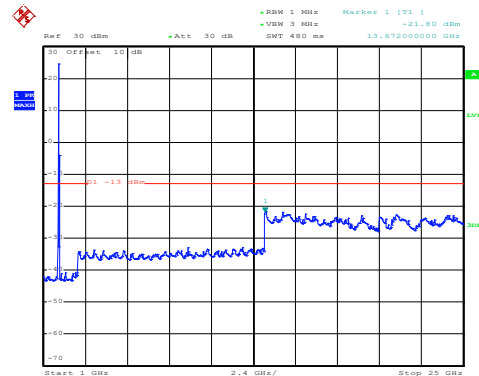
1GHz~25GHz

High channel



Date: 24.MAR.2021 10:35:02

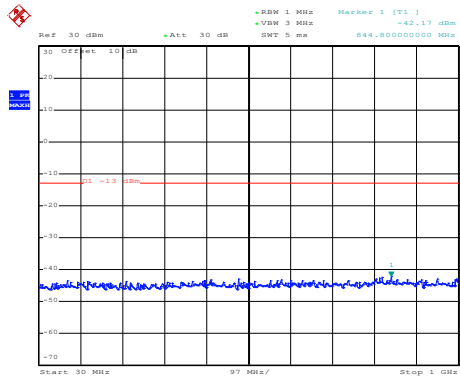
30MHz~1GHz



Date: 24.MAR.2021 09:55:02

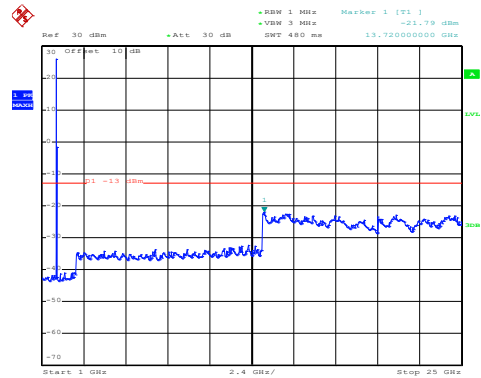
1GHz~25GHz

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



Date: 24.MAR.2021 10:34:33

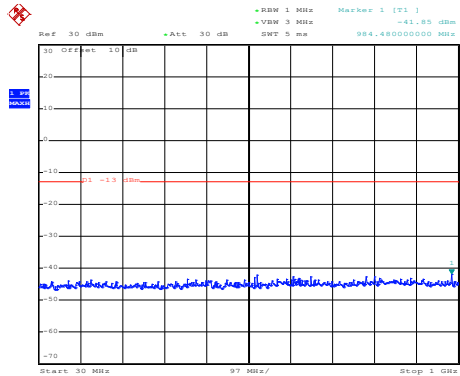
30MHz~1GHz



Date: 24.MAR.2021 09:54:02

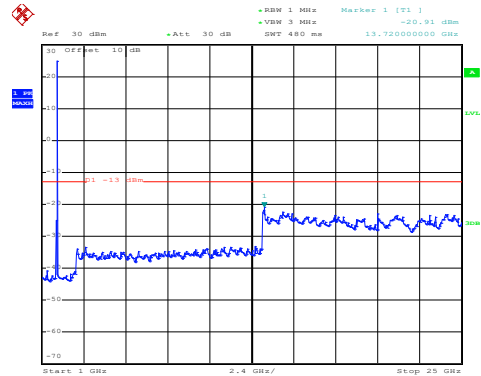
1GHz~25GHz

Middle channel



Date: 24.MAR.2021 10:34:46

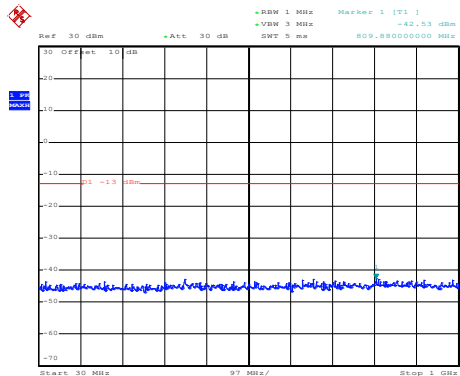
30MHz~1GHz



Date: 24.MAR.2021 09:54:22

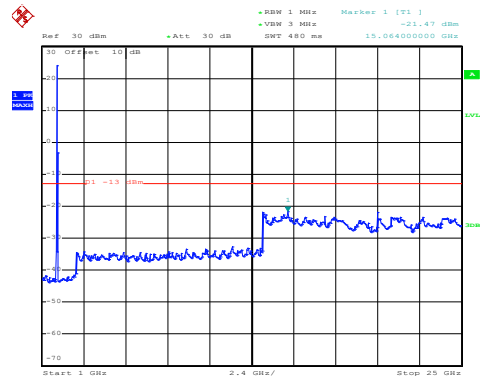
1GHz~25GHz

High channel



Date: 24.MAR.2021 10:34:57

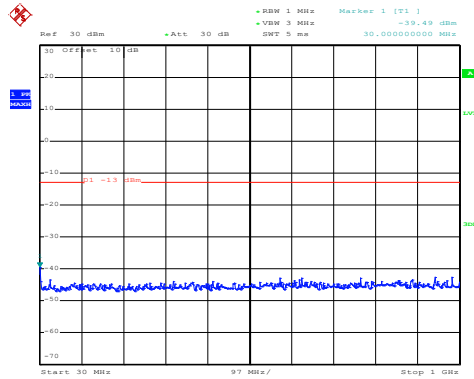
30MHz~1GHz



Date: 24.MAR.2021 09:54:45

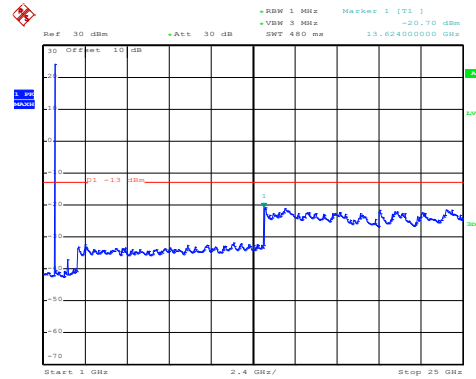
1GHz~25GHz

LTE Band 4 part:

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


Date: 24.MAR.2021 10:32:01

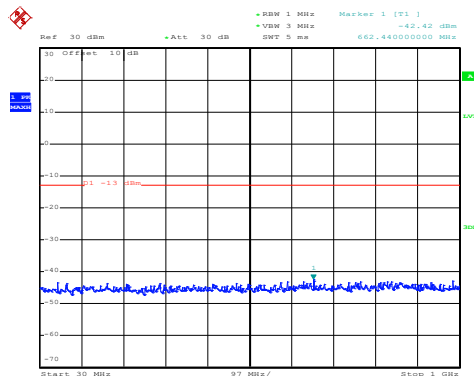
30MHz~1GHz



Date: 24.MAR.2021 10:01:40

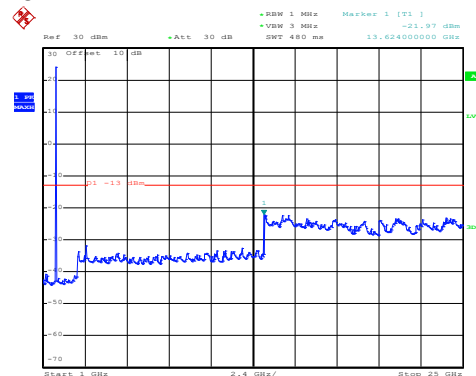
1GHz~25GHz

Middle channel



Date: 24.MAR.2021 10:32:43

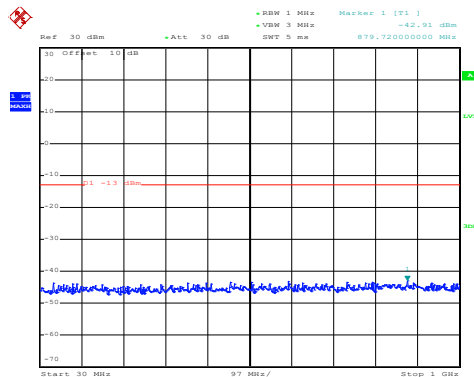
30MHz~1GHz



Date: 24.MAR.2021 10:02:05

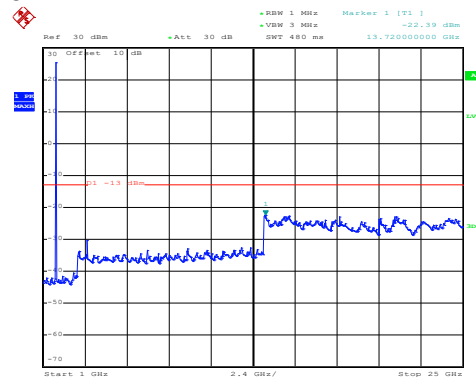
1GHz~25GHz

High channel



Date: 24.MAR.2021 10:32:56

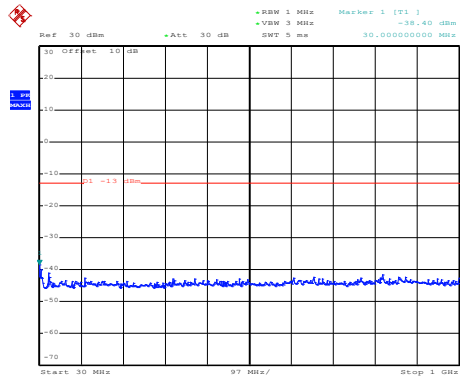
30MHz~1GHz



Date: 24.MAR.2021 10:02:34

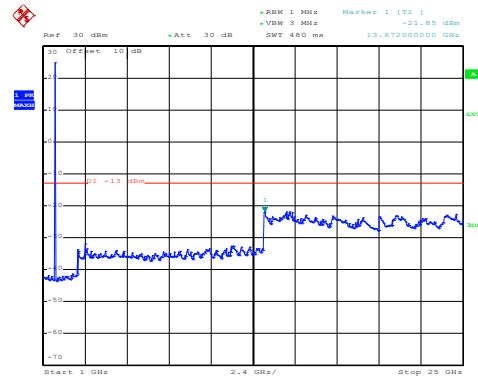
1GHz~25GHz

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



Date: 24.MAR.2021 10:31:57

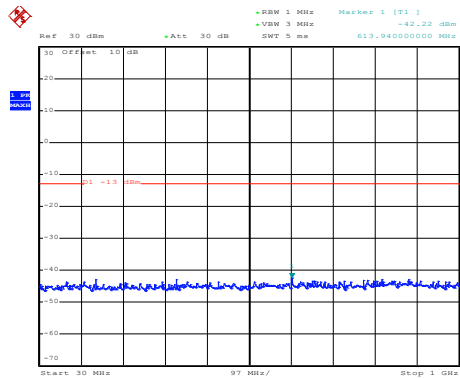
30MHz~1GHz



Date: 24.MAR.2021 09:57:45

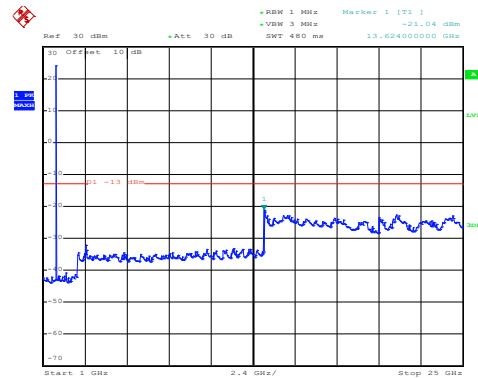
1GHz~25GHz

Middle channel



Date: 24.MAR.2021 10:32:37

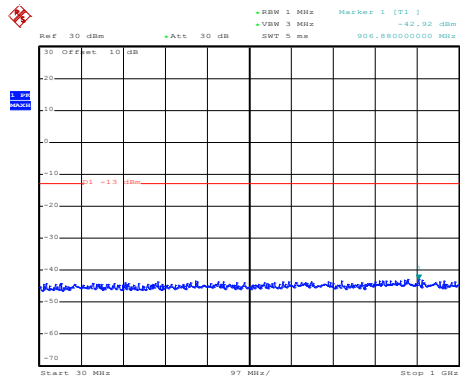
30MHz~1GHz



Date: 24.MAR.2021 10:01:58

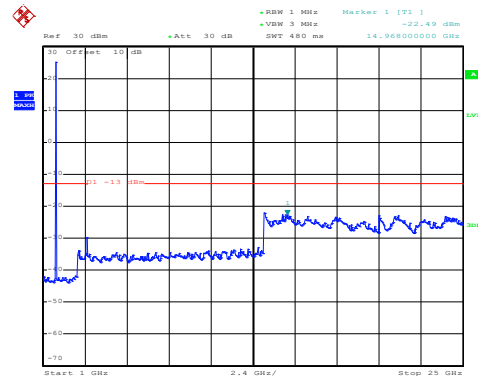
1GHz~25GHz

High channel



Date: 24.MAR.2021 10:32:51

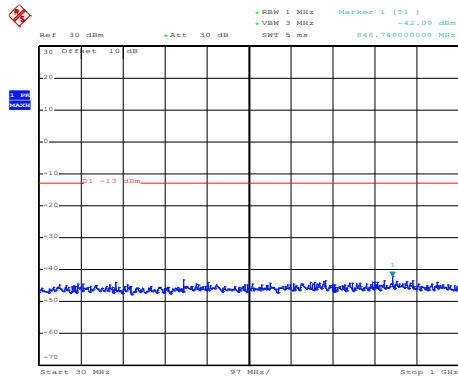
30MHz~1GHz



Date: 24.MAR.2021 10:02:27

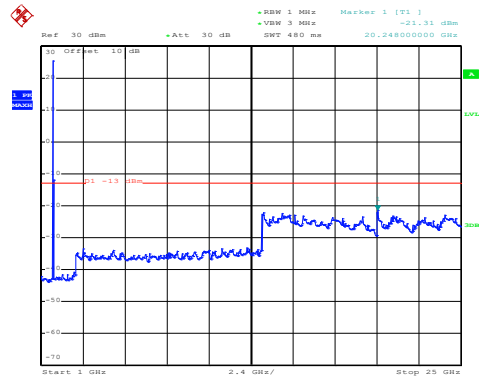
1GHz~25GHz

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



Date: 24.MAR.2021 10:33:10

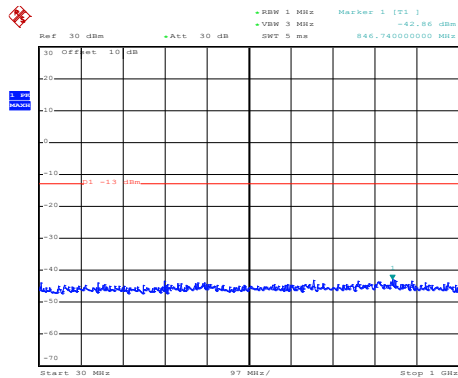
30MHz~1GHz



Date: 24.MAR.2021 10:03:26

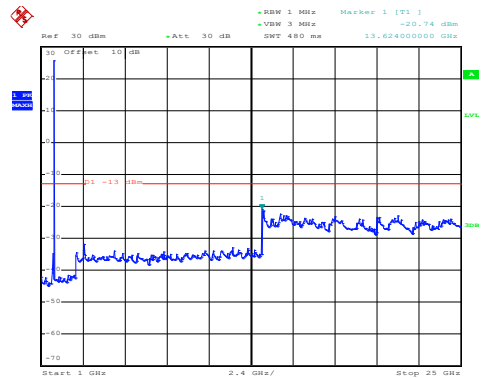
1GHz~25GHz

Middle channel



Date: 24.MAR.2021 10:33:20

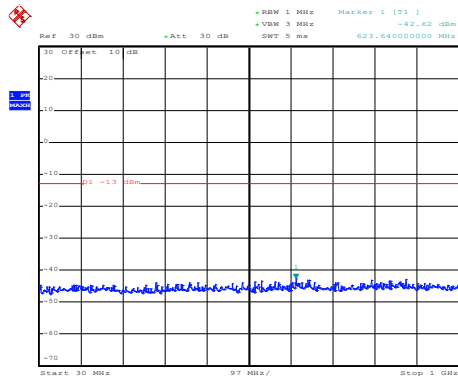
30MHz~1GHz



Date: 24.MAR.2021 10:03:52

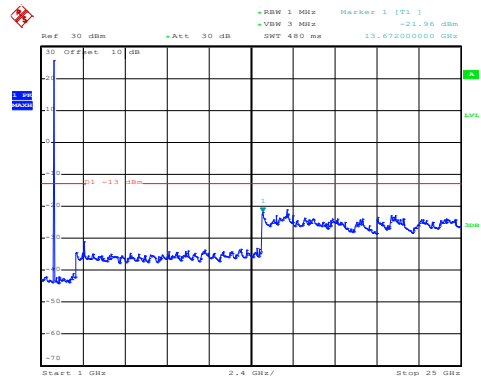
1GHz~25GHz

High channel



Date: 24.MAR.2021 10:33:37

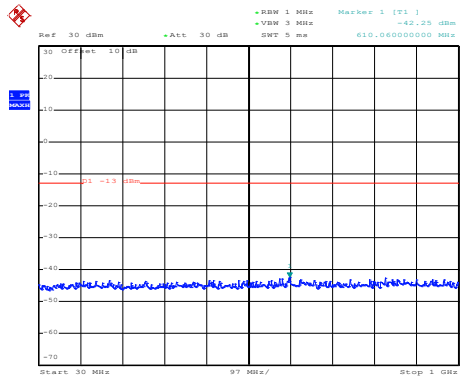
30MHz~1GHz



Date: 24.MAR.2021 10:04:14

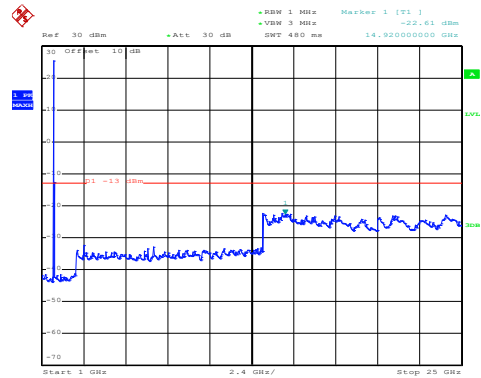
1GHz~25GHz

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



Date: 24.MAR.2021 10:33:05

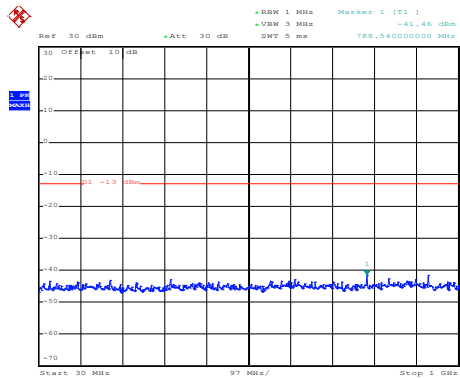
30MHz~1GHz



Date: 24.MAR.2021 10:03:18

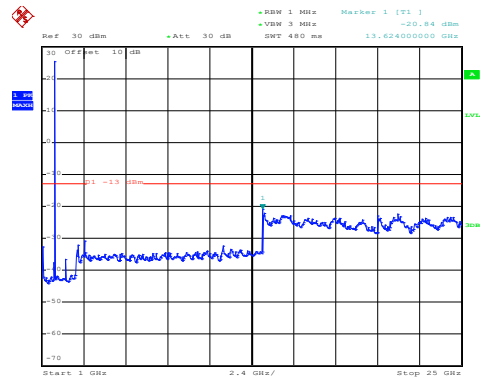
1GHz~25GHz

Middle channel



Date: 24.MAR.2021 10:33:16

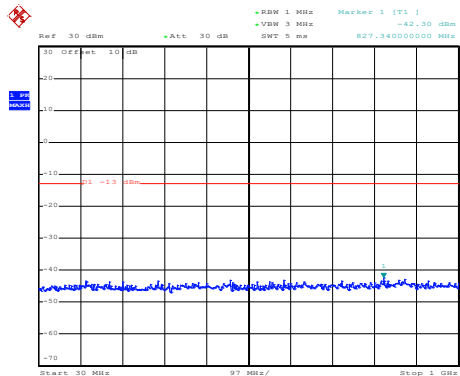
30MHz~1GHz



Date: 24.MAR.2021 10:03:46

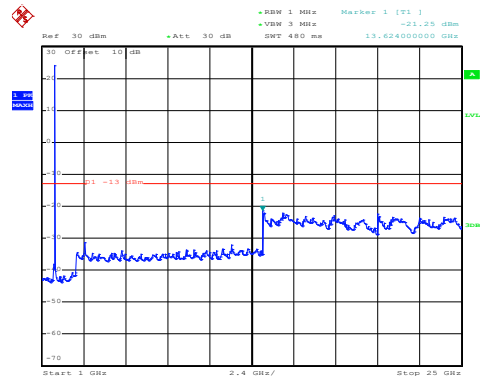
1GHz~25GHz

High channel



Date: 24.MAR.2021 10:33:26

30MHz~1GHz

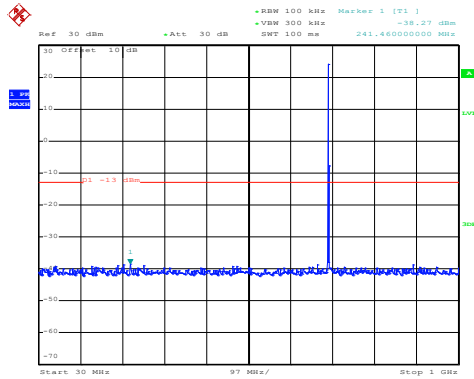


Date: 24.MAR.2021 10:04:08

1GHz~25GHz

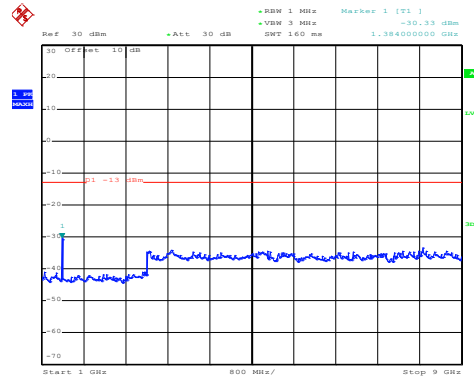
LTE Band 12 part:

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



Date: 24.MAR.2021 10:28:12

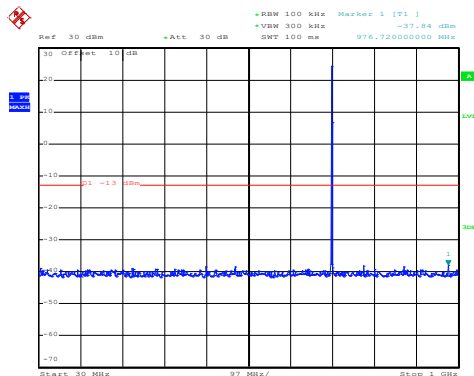
30MHz~1GHz



Date: 24.MAR.2021 10:05:33

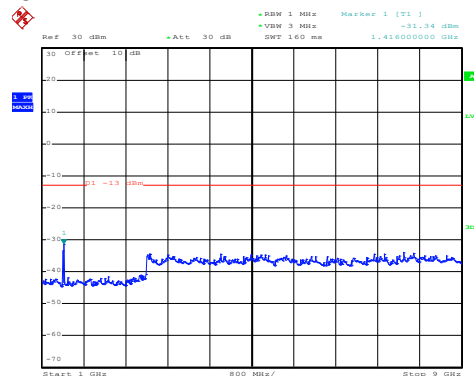
1GHz~9GHz

Middle channel



Date: 24.MAR.2021 10:28:51

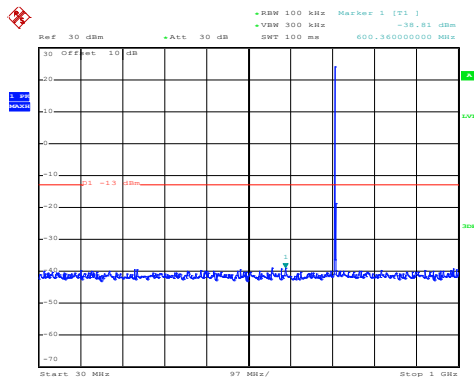
30MHz~1GHz



Date: 24.MAR.2021 10:05:58

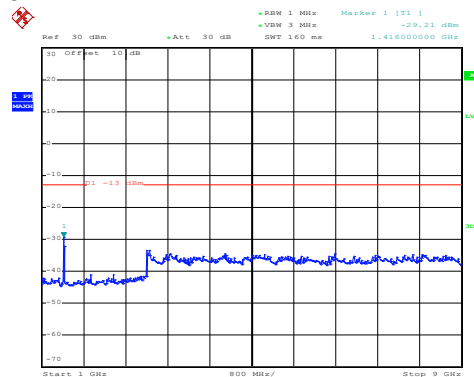
1GHz~9GHz

High channel



Date: 24.MAR.2021 10:29:18

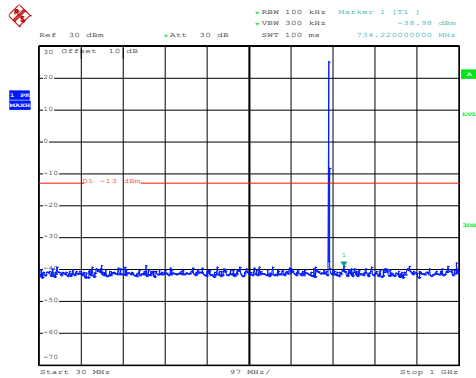
30MHz~1GHz



Date: 24.MAR.2021 10:06:22

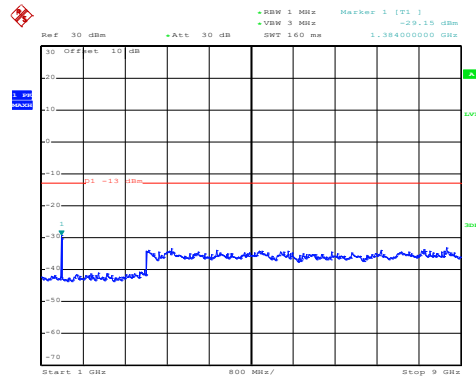
1GHz~9GHz

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



Date: 24.MAR.2021 10:28:00

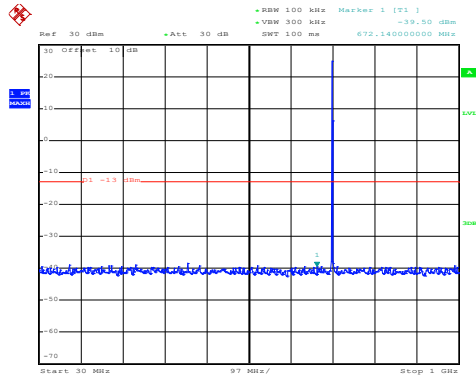
30MHz~1GHz



Date: 24.MAR.2021 10:05:24

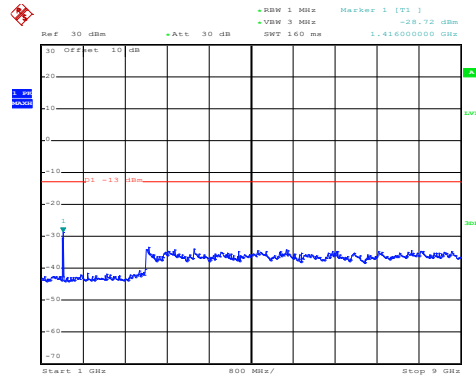
1GHz~9GHz

Middle channel



Date: 24.MAR.2021 10:28:32

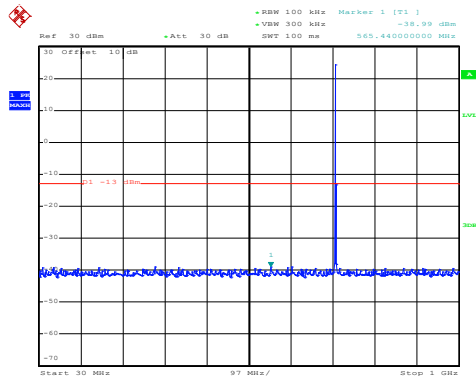
30MHz~1GHz



Date: 24.MAR.2021 10:05:53

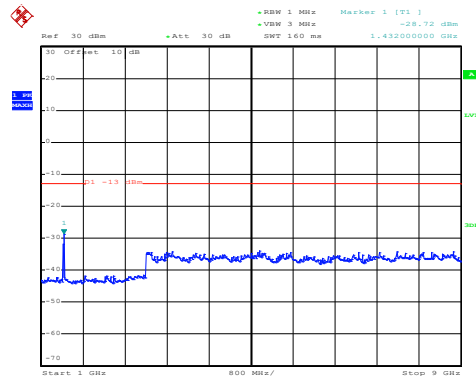
1GHz~9GHz

High channel



Date: 24.MAR.2021 10:29:11

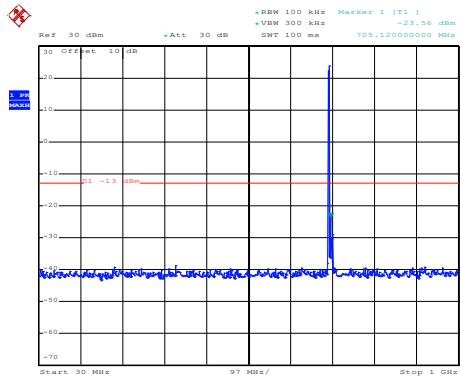
30MHz~1GHz



Date: 24.MAR.2021 10:06:15

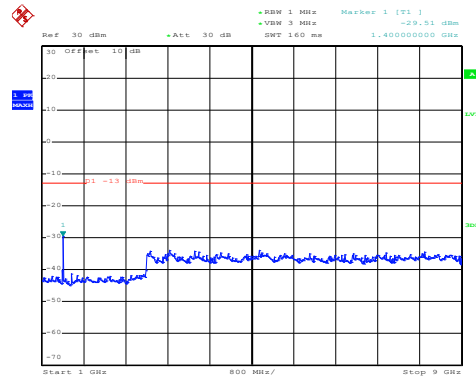
1GHz~9GHz

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



Date: 24.MAR.2021 10:29:56

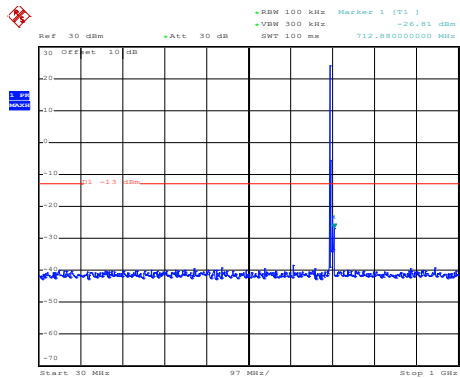
30MHz~1GHz



Date: 24.MAR.2021 10:07:09

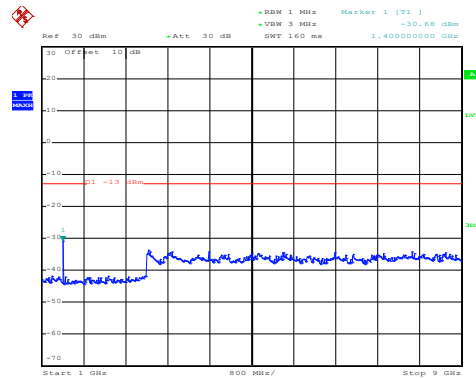
1GHz~9GHz

Middle channel



Date: 24.MAR.2021 10:30:18

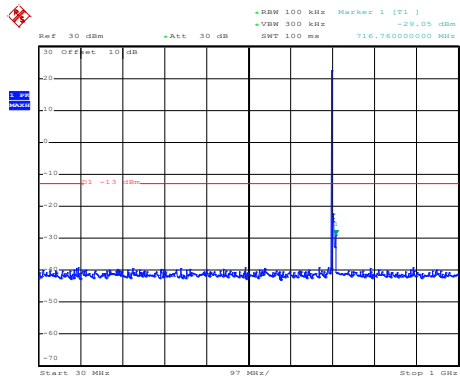
30MHz~1GHz



Date: 24.MAR.2021 10:07:41

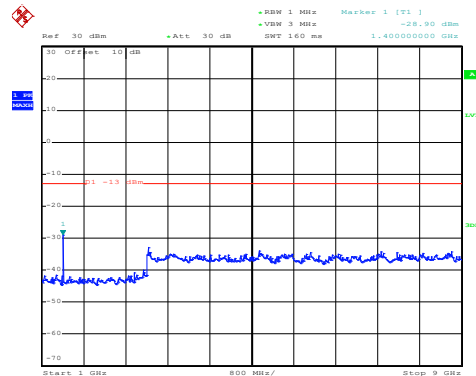
1GHz~9GHz

High channel



Date: 24.MAR.2021 10:30:40

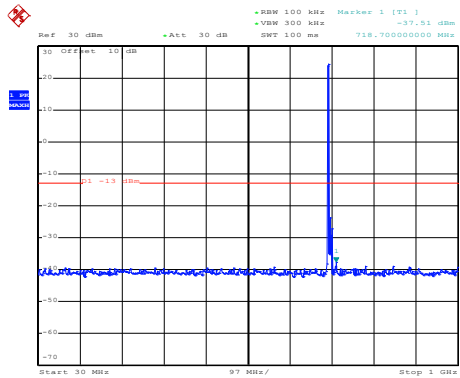
30MHz~1GHz



Date: 24.MAR.2021 10:08:04

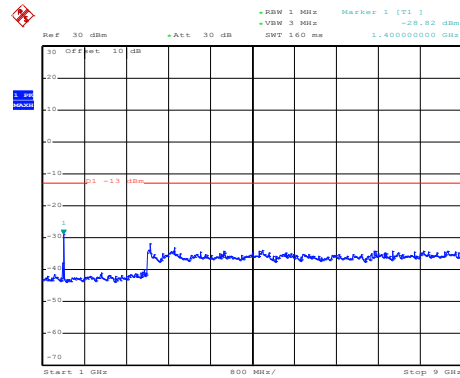
1GHz~9GHz

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



Date: 24.MAR.2021 10:29:49

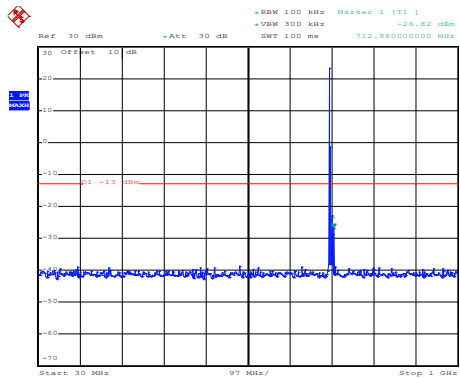
30MHz~1GHz



Date: 24.MAR.2021 10:07:03

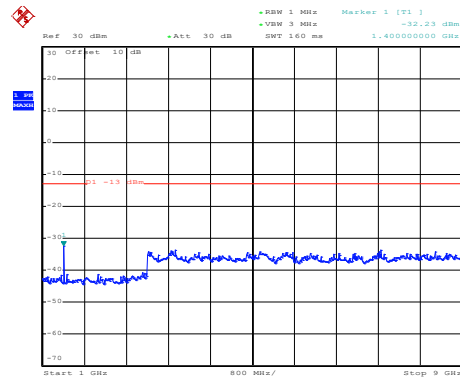
1GHz~9GHz

Middle channel



Date: 24.MAR.2021 10:30:10

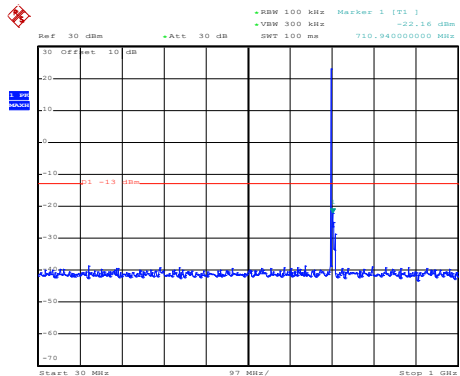
30MHz~1GHz



Date: 24.MAR.2021 10:07:35

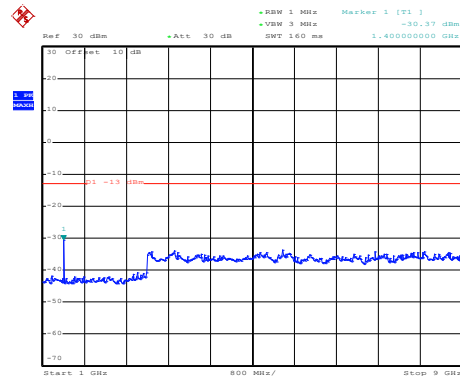
1GHz~9GHz

High channel



Date: 24.MAR.2021 10:30:34

30MHz~1GHz



Date: 24.MAR.2021 10:07:58

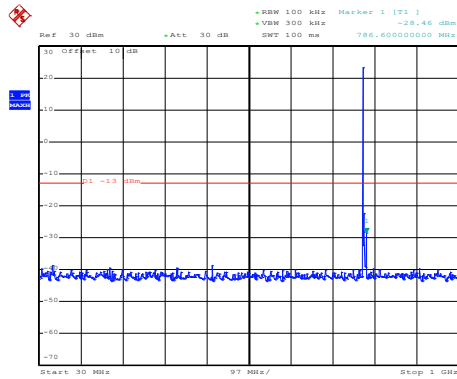
1GHz~9GHz

LTE Band 13 part:

JianYan Testing Group Shenzhen Co., Ltd.
 No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community,
 Xingqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.
 Tel: +86-755-23118282, Fax: +86-755-23116366

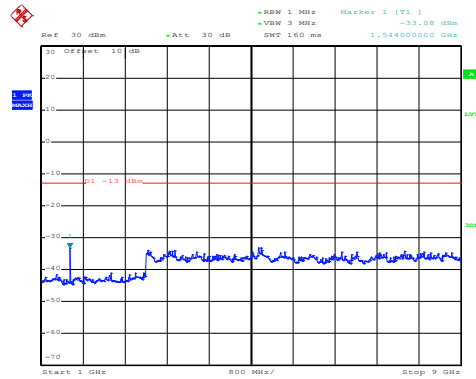
Project No.: JYTSZE2102004

LTE Band 13: 16 QAM & RB Size 1
BW: 5MHz
Lowest channel



Date: 24.MAR.2021 10:23:22

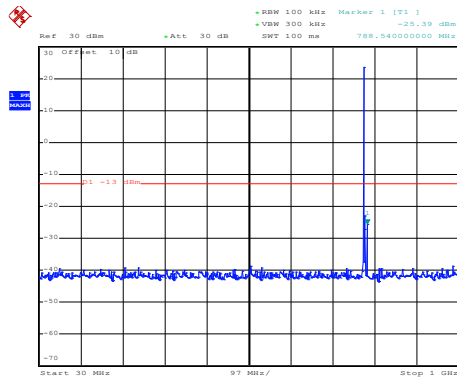
30MHz~1GHz



Date: 24.MAR.2021 10:08:48

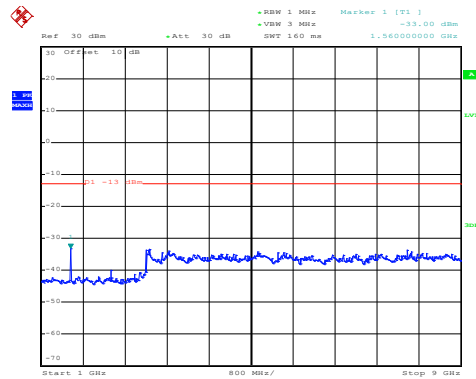
1GHz~9GHz

Middle channel



Date: 24.MAR.2021 10:23:41

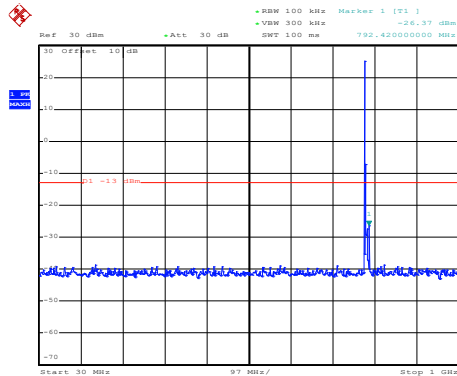
30MHz~1GHz



Date: 24.MAR.2021 10:09:22

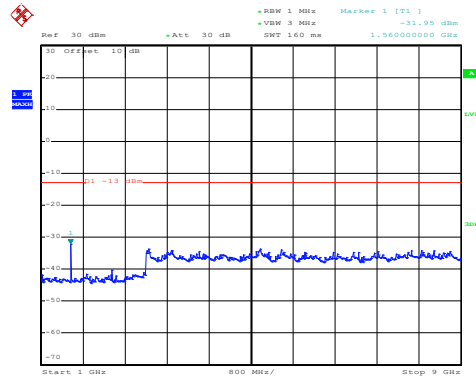
1GHz~9GHz

High channel



Date: 24.MAR.2021 10:24:06

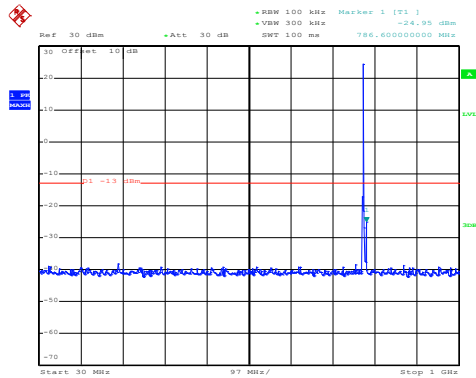
30MHz~1GHz



Date: 24.MAR.2021 10:09:46

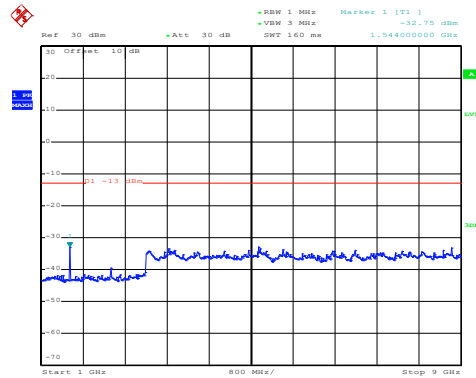
1GHz~9GHz

LTE Band 13: QPSK & RB Size 1
BW: 5MHz
Lowest channel



Date: 24.MAR.2021 10:23:17

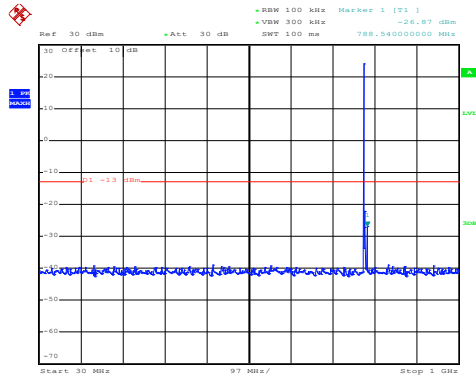
30MHz~1GHz



Date: 24.MAR.2021 10:08:41

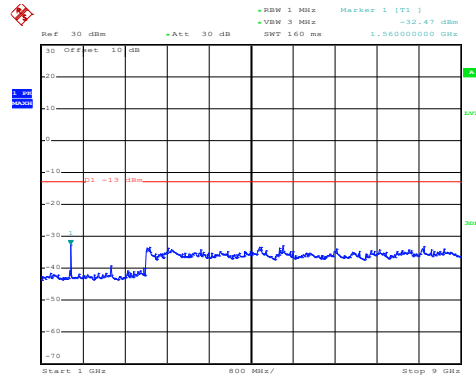
1GHz~9GHz

Middle channel



Date: 24.MAR.2021 10:23:35

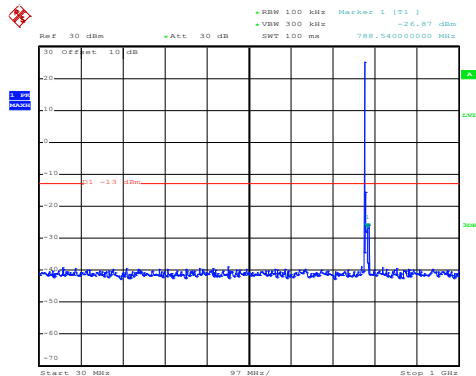
30MHz~1GHz



Date: 24.MAR.2021 10:09:14

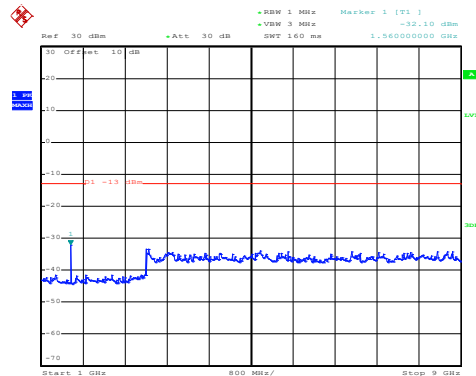
1GHz~9GHz

High channel



Date: 24.MAR.2021 10:23:58

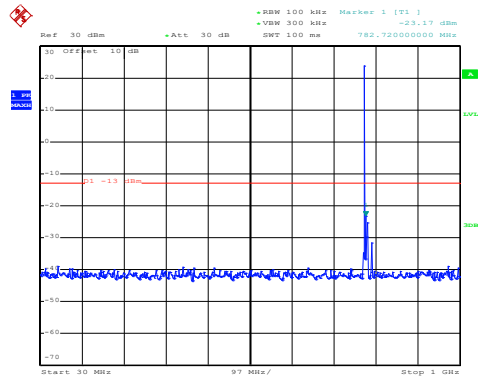
30MHz~1GHz



Date: 24.MAR.2021 10:09:38

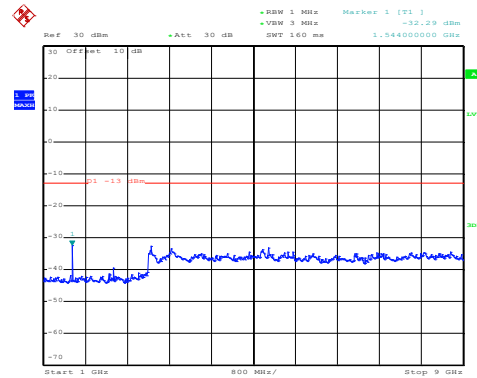
1GHz~9GHz

LTE Band 13: 16 QAM & RB Size 1
BW: 10MHz
Middle channel



Date: 24.MAR.2021 10:24:32

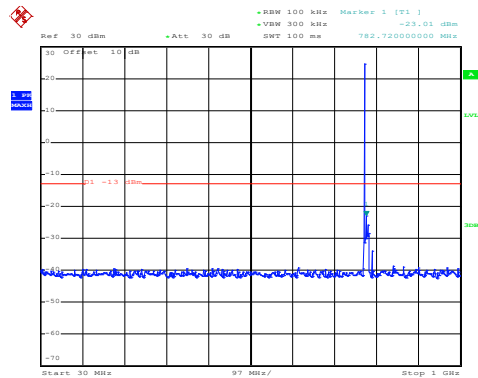
30MHz~1GHz



Date: 24.MAR.2021 10:10:22

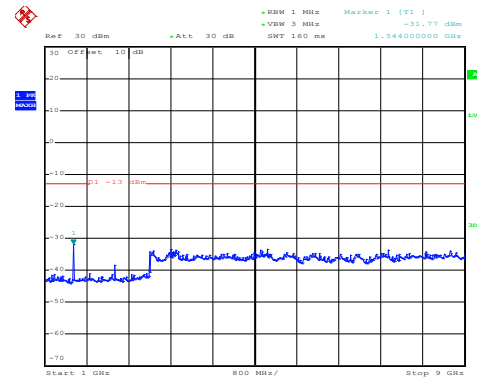
1GHz~9GHz

LTE Band 13: QPSK & RB Size 1
BW: 10MHz
Middle channel



Date: 24.MAR.2021 10:24:27

30MHz~1GHz



Date: 24.MAR.2021 10:10:13

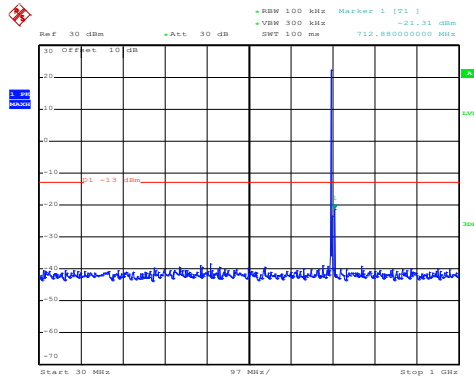
1GHz~9GHz

LTE Band 17 part:

LTE Band 17: 16 QAM & RB Size 1

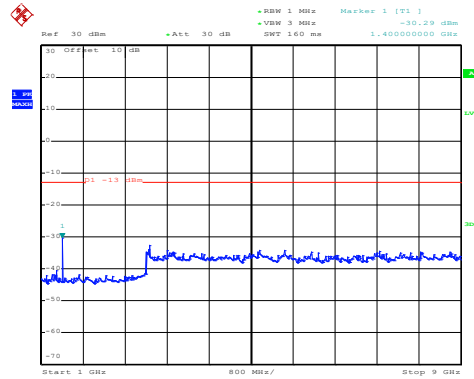
BW: 5MHz

Lowest channel



Date: 24.MAR.2021 10:17:32

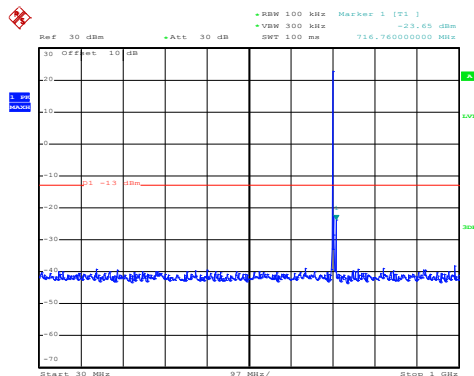
30MHz~1GHz



Date: 24.MAR.2021 10:11:25

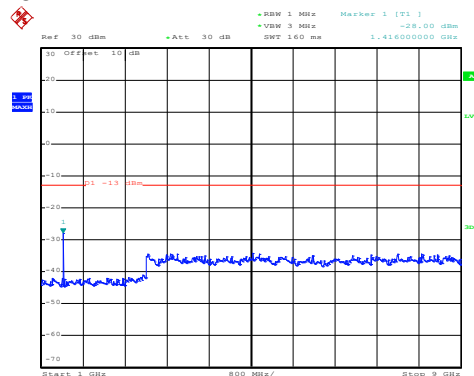
1GHz~9GHz

Middle channel



Date: 24.MAR.2021 10:17:57

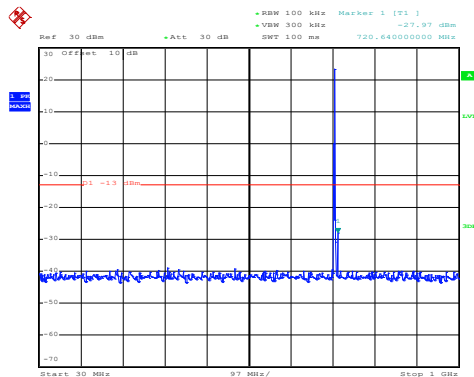
30MHz~1GHz



Date: 24.MAR.2021 10:11:48

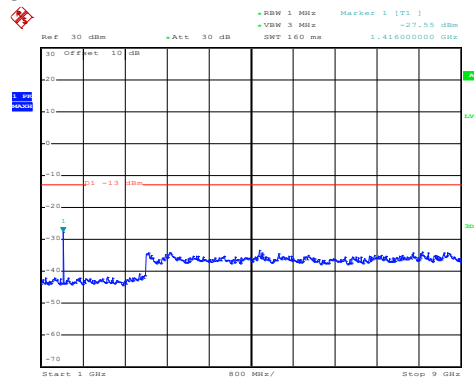
1GHz~9GHz

High channel



Date: 24.MAR.2021 10:18:35

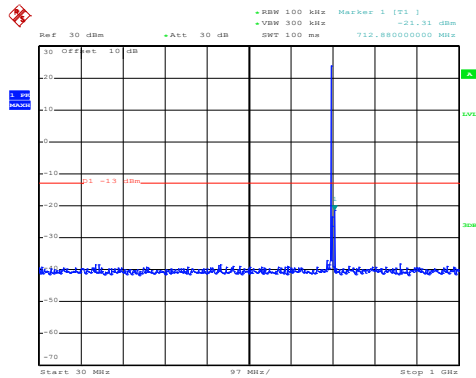
30MHz~1GHz



Date: 24.MAR.2021 10:14:15

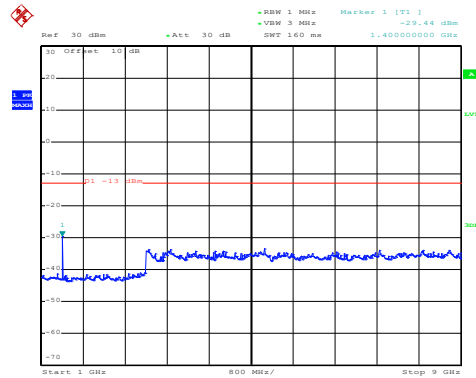
1GHz~9GHz

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



Date: 24.MAR.2021 10:17:27

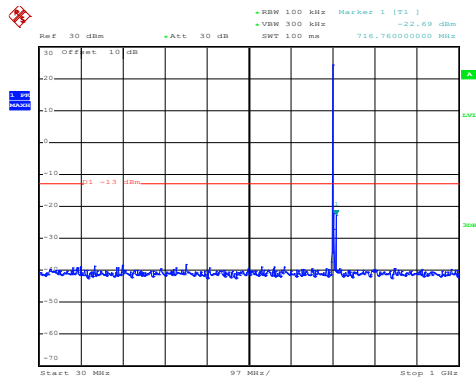
30MHz~1GHz



Date: 24.MAR.2021 10:11:19

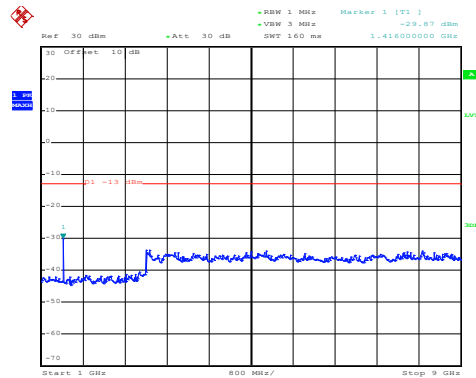
1GHz~9GHz

Middle channel



Date: 24.MAR.2021 10:17:52

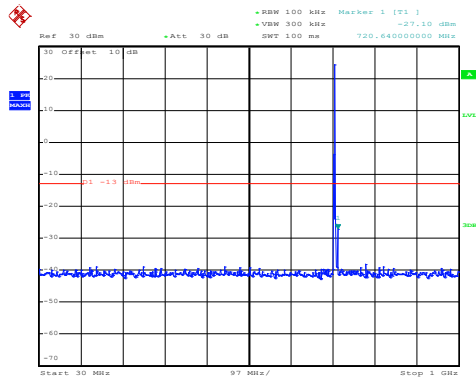
30MHz~1GHz



Date: 24.MAR.2021 10:11:42

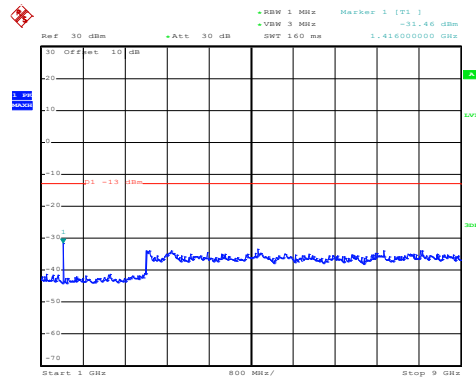
1GHz~9GHz

High channel



Date: 24.MAR.2021 10:18:29

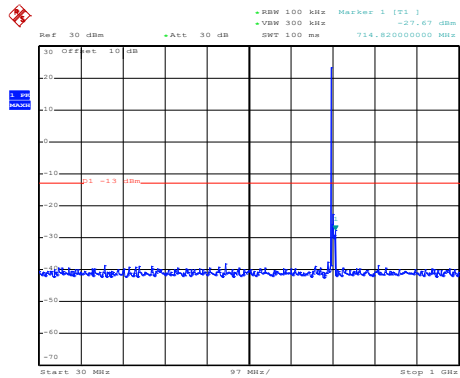
30MHz~1GHz



Date: 24.MAR.2021 10:12:04

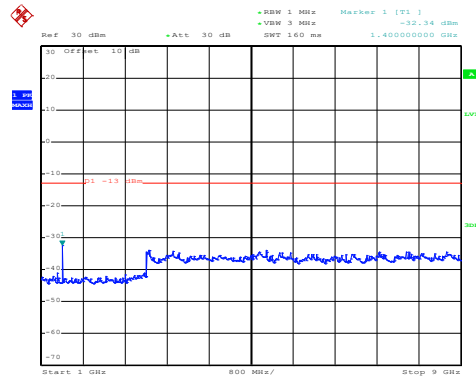
1GHz~9GHz

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



Date: 24.MAR.2021 10:19:09

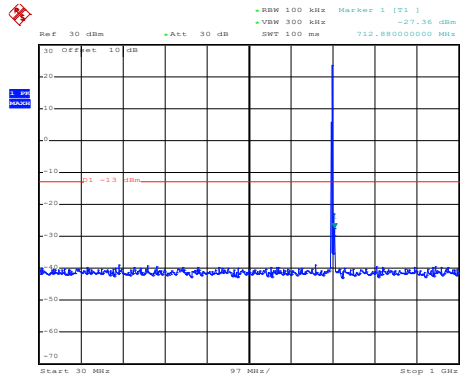
30MHz~1GHz



Date: 24.MAR.2021 10:14:44

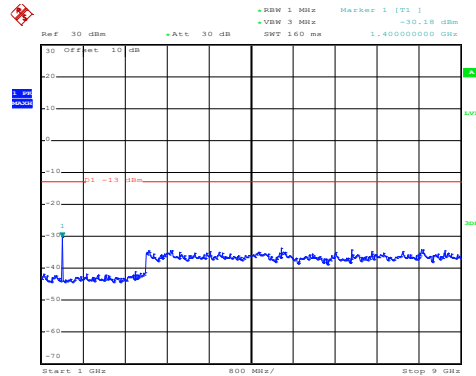
1GHz~9GHz

Middle channel



Date: 24.MAR.2021 10:19:37

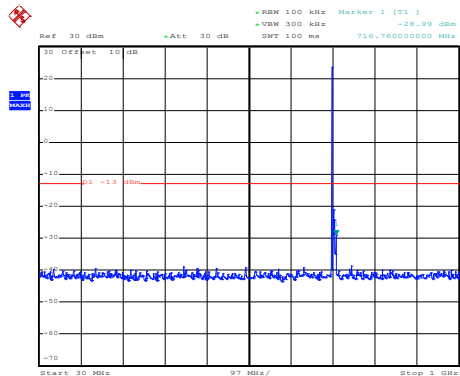
30MHz~1GHz



Date: 24.MAR.2021 10:15:04

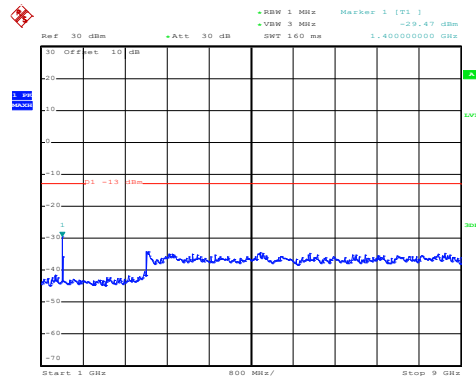
1GHz~9GHz

High channel



Date: 24.MAR.2021 10:22:44

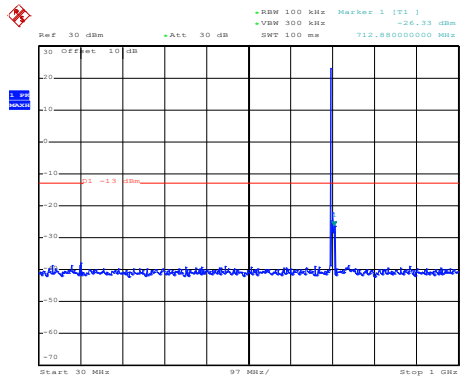
30MHz~1GHz



Date: 24.MAR.2021 10:15:25

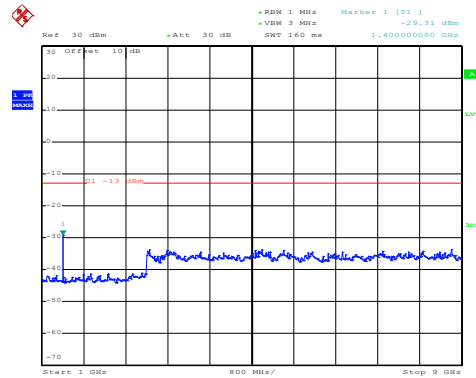
1GHz~9GHz

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



Date: 24.MAR.2021 10:18:58

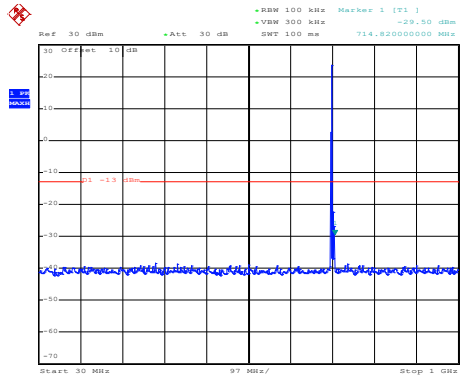
30MHz~1GHz



Date: 24.MAR.2021 10:14:38

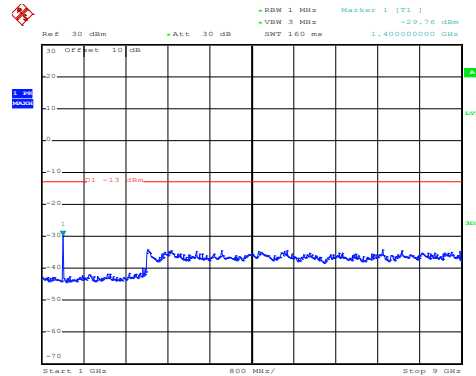
1GHz~9GHz

Middle channel



Date: 24.MAR.2021 10:19:30

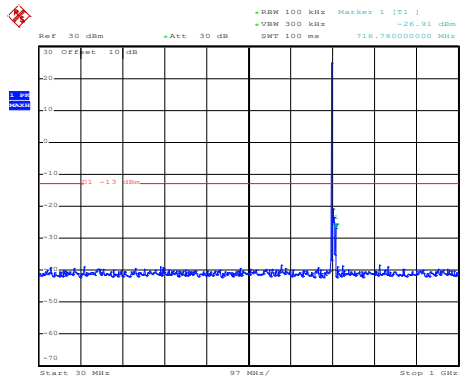
30MHz~1GHz



Date: 24.MAR.2021 10:14:58

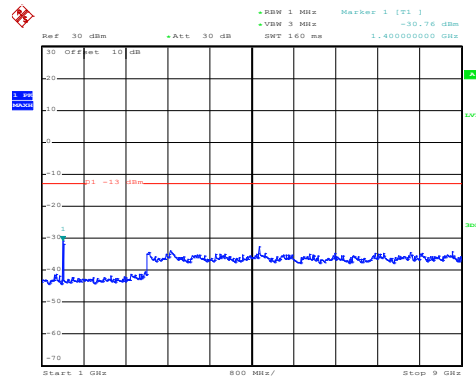
1GHz~9GHz

High channel



Date: 24.MAR.2021 10:22:40

30MHz~1GHz



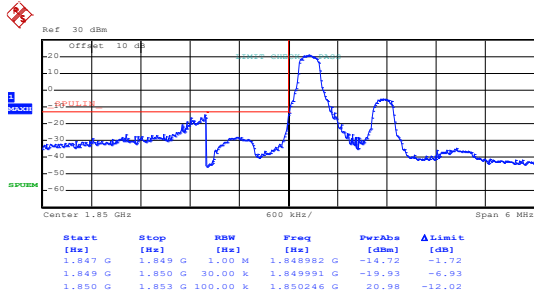
Date: 24.MAR.2021 10:15:20

1GHz~9GHz

Band edge emission:

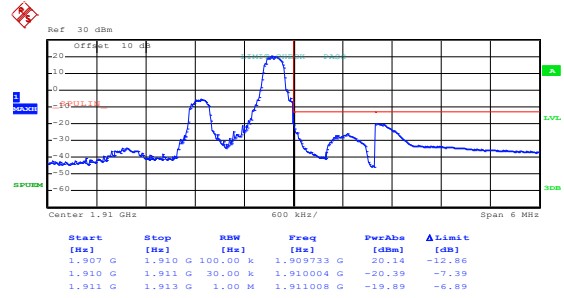
LTE Band 2 part:

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



Date: 23.MAR.2021 18:45:23

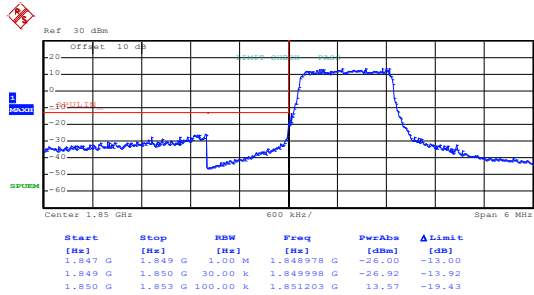
Lowest channel



Date: 23.MAR.2021 18:46:41

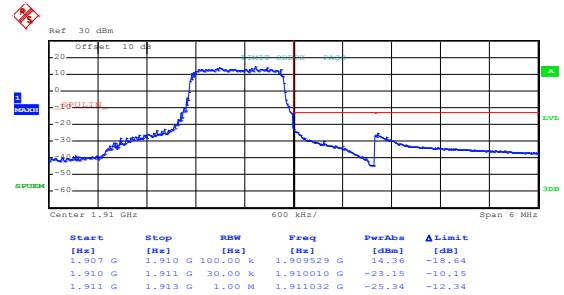
Highest channel

16QAM & RB Size 6



Date: 23.MAR.2021 18:45:38

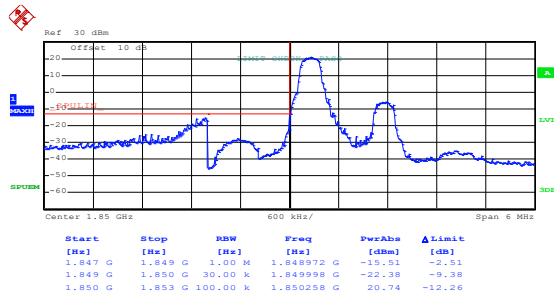
Lowest channel



Date: 23.MAR.2021 18:46:59

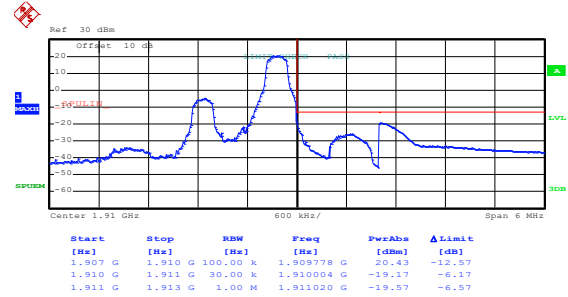
Highest channel

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



Date: 23.MAR.2021 18:45:17

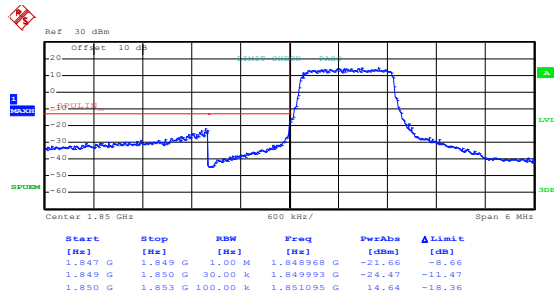
Lowest channel



Date: 23.MAR.2021 18:46:36

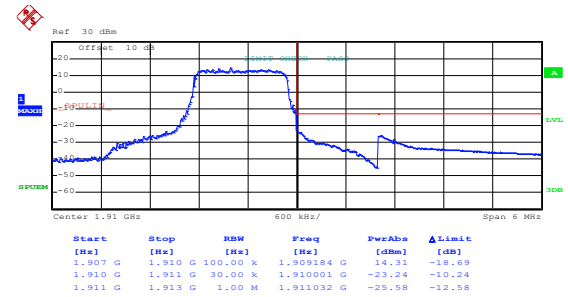
Highest channel

QPSK & RB Size 6



Date: 23.MAR.2021 18:45:33

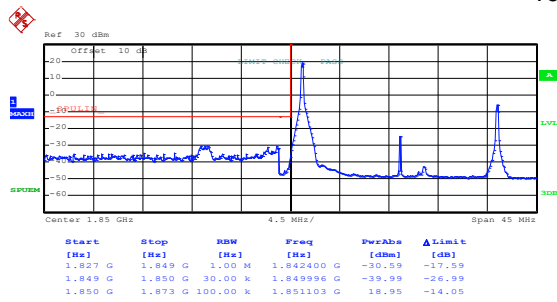
Lowest channel



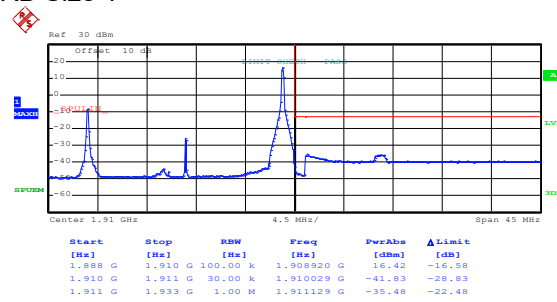
Date: 23.MAR.2021 18:46:53

Highest channel

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

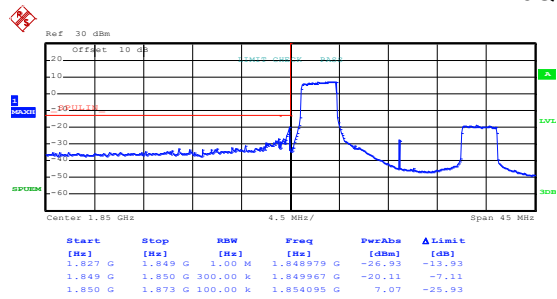


Date: 23.MAR.2021 18:47:55

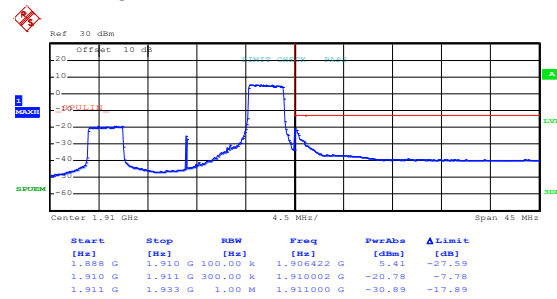


Date: 23.MAR.2021 18:50:59

16QAM & 18 RB Size 82



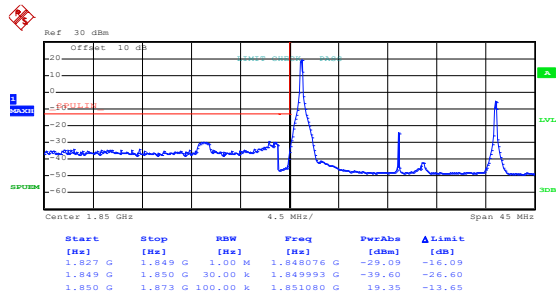
Date: 23.MAR.2021 18:49:45



Date: 23.MAR.2021 18:51:35

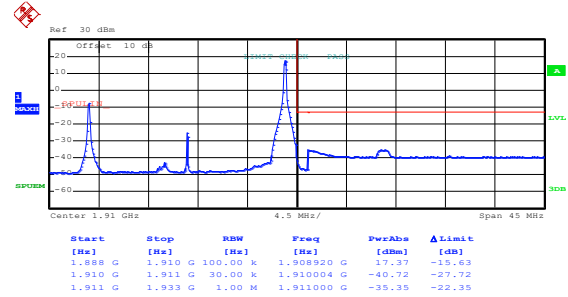
Lowest channel

Highest channel

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

Date: 23.MAR.2021 18:47:50

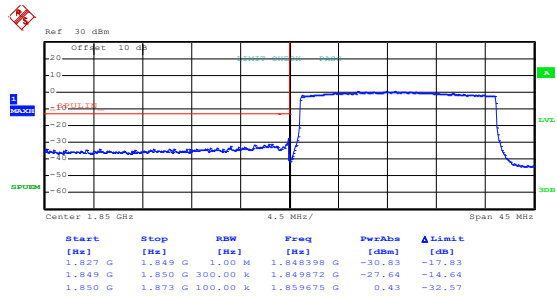
Lowest channel



Date: 23.MAR.2021 18:50:15

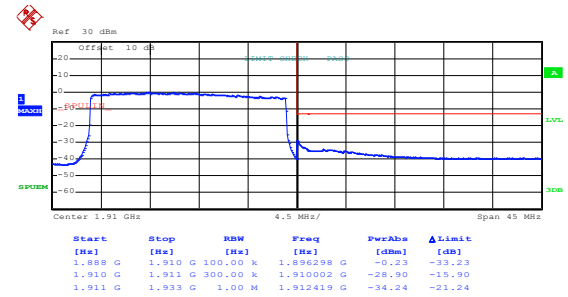
Highest channel

QPSK & RB Size 100



Date: 23.MAR.2021 18:49:27

Lowest channel

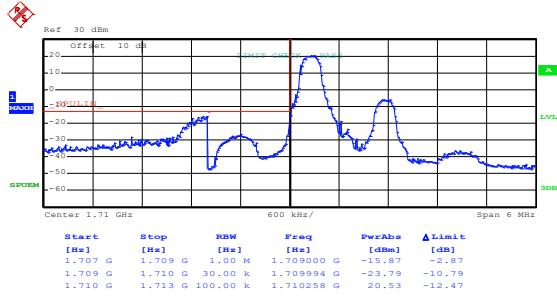


Date: 23.MAR.2021 18:51:19

Highest channel

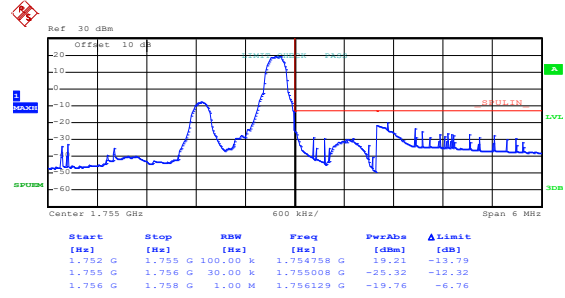
LTE Band 4 part:

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



Date: 23.MAR.2021 18:52:50

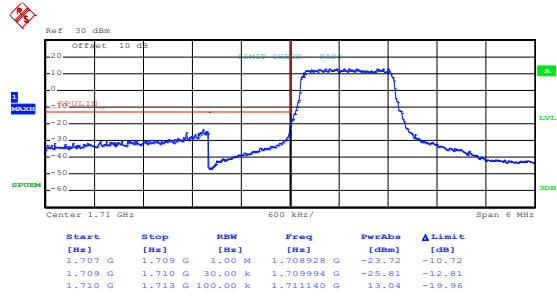
Lowest channel



Date: 23.MAR.2021 18:54:41

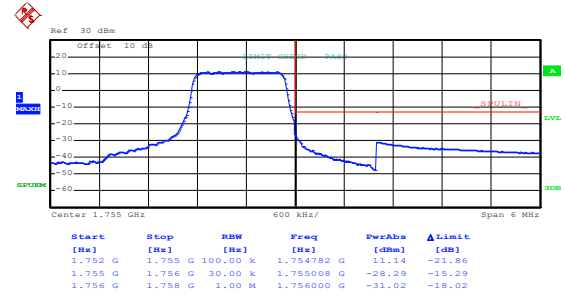
Highest channel

16QAM & RB Size 6



Date: 23.MAR.2021 18:53:06

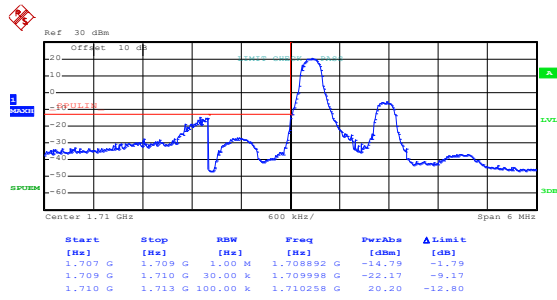
Lowest channel



Date: 23.MAR.2021 18:55:16

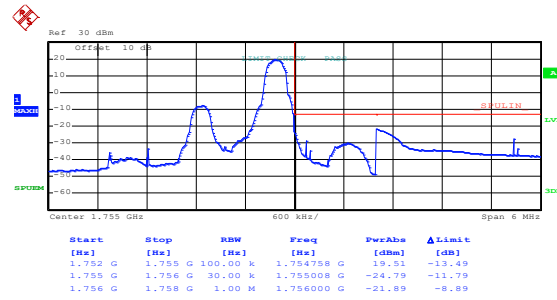
Highest channel

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



Date: 23.MAR.2021 18:52:42

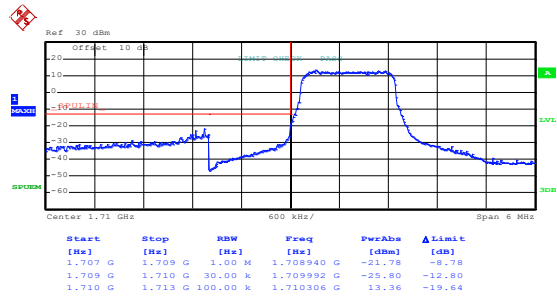
Lowest channel



Date: 23.MAR.2021 18:54:34

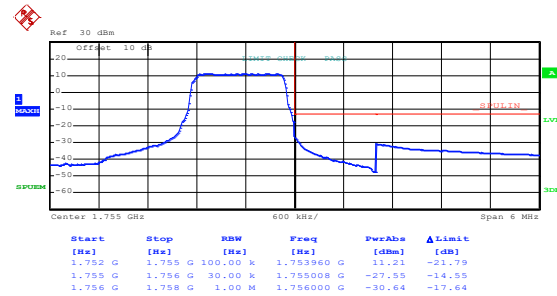
Highest channel

QPSK & RB Size 6



Date: 23.MAR.2021 18:53:00

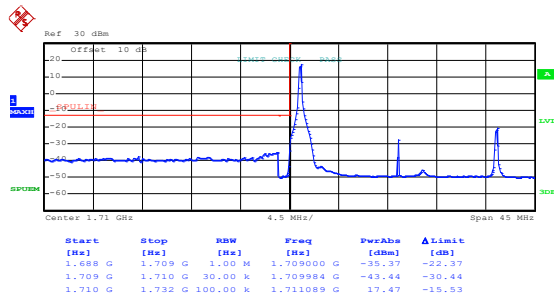
Lowest channel



Date: 23.MAR.2021 18:55:10

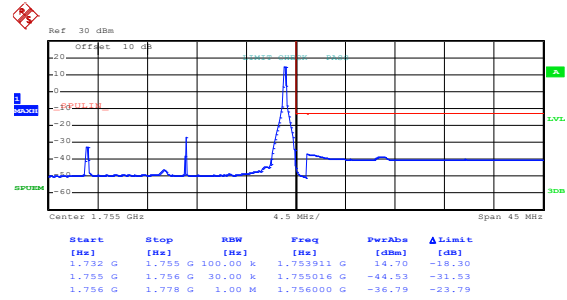
Highest channel

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



Date: 23.MAR.2021 18:58:03

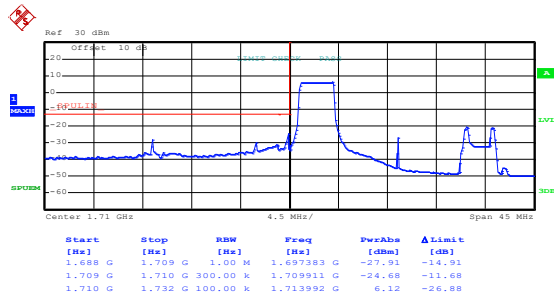
Lowest channel



Date: 23.MAR.2021 19:00:28

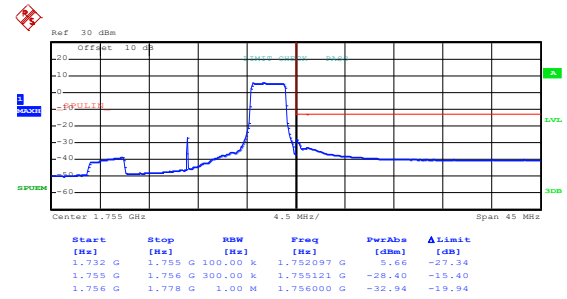
Highest channel

16QAM & 18 RB Size 82



Date: 23.MAR.2021 18:58:50

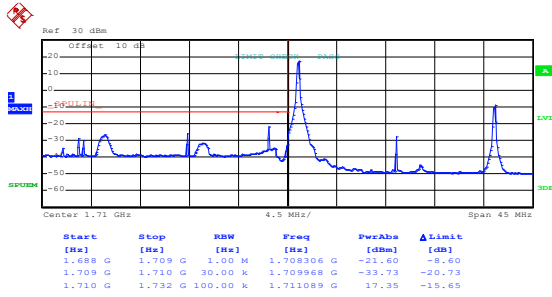
Lowest channel



Date: 23.MAR.2021 19:01:01

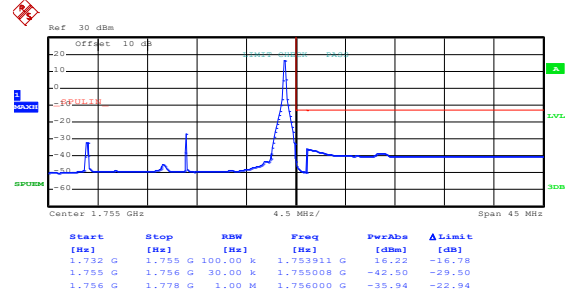
Highest channel

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



Date: 23.MAR.2021 18:57:57

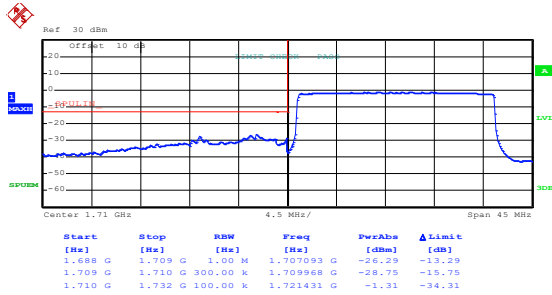
Lowest channel



Date: 23.MAR.2021 19:00:11

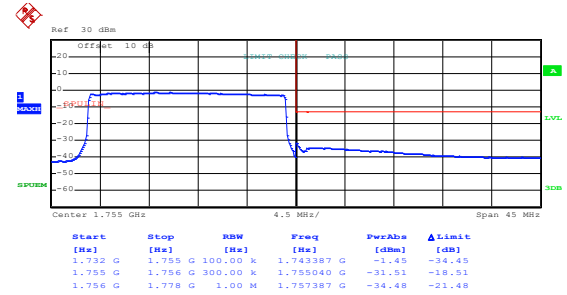
Highest channel

QPSK & RB Size 100



Date: 23.MAR.2021 18:58:23

Lowest channel

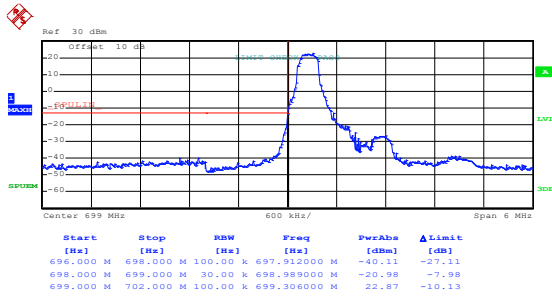


Date: 23.MAR.2021 19:00:46

Highest channel

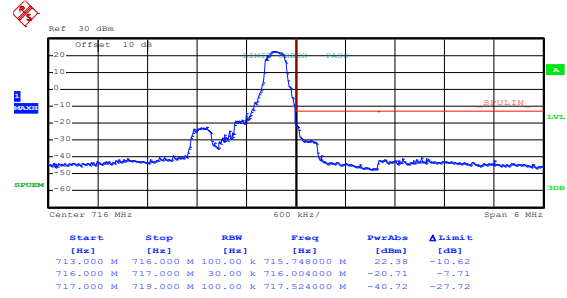
LTE band 12 part:

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



Date: 23.MAR.2021 19:05:50

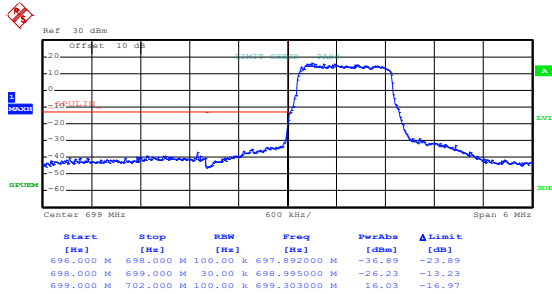
Lowest channel



Date: 23.MAR.2021 19:06:46

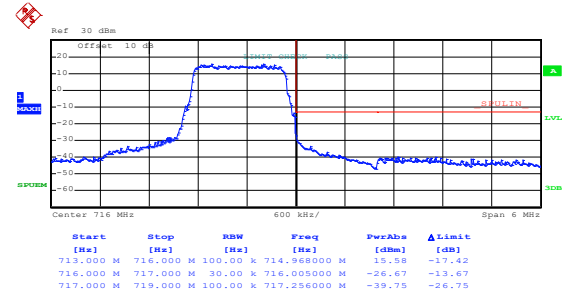
Highest channel

16QAM & RB Size 6



Date: 23.MAR.2021 19:06:05

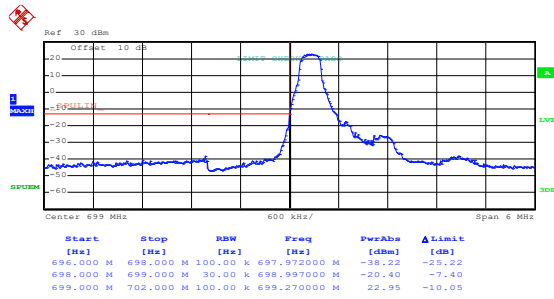
Lowest channel



Date: 23.MAR.2021 19:07:03

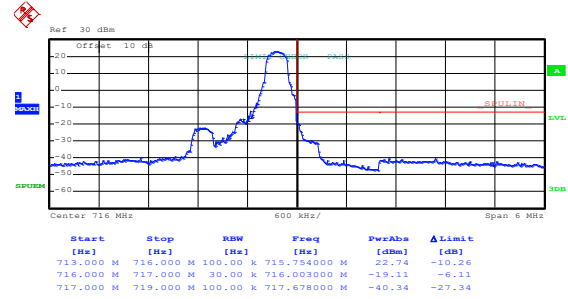
Highest channel

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



Date: 23.MAR.2021 19:05:45

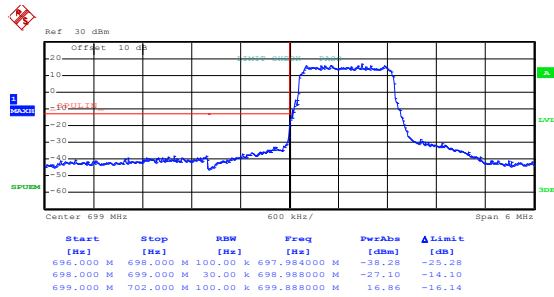
Lowest channel



Date: 23.MAR.2021 19:06:41

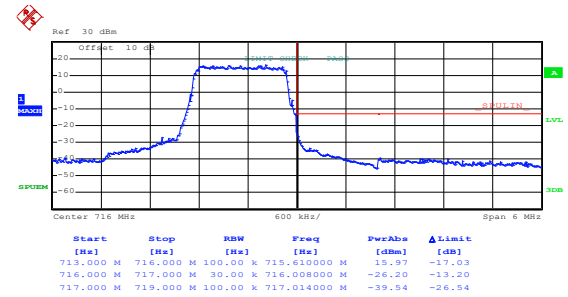
Highest channel

QPSK & RB Size 6



Date: 23.MAR.2021 19:06:00

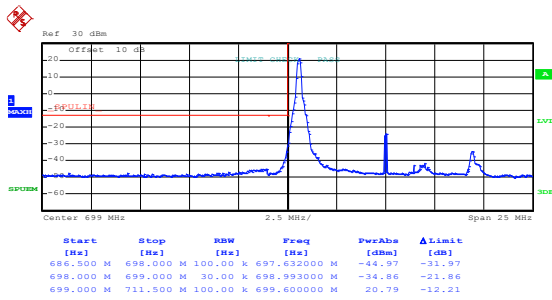
Lowest channel



Date: 23.MAR.2021 19:06:58

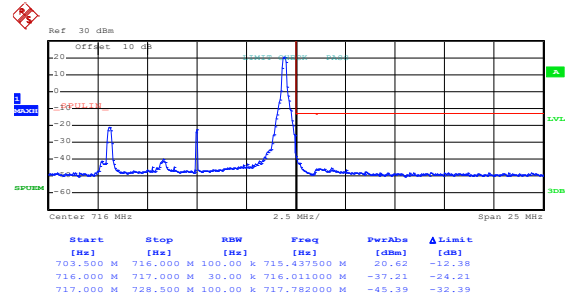
Highest channel

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



Date: 23.MAR.2021 19:08:22

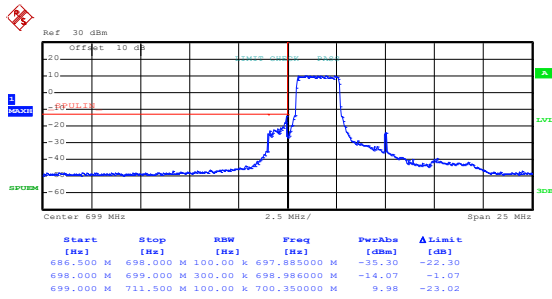
Lowest channel



Date: 23.MAR.2021 19:09:53

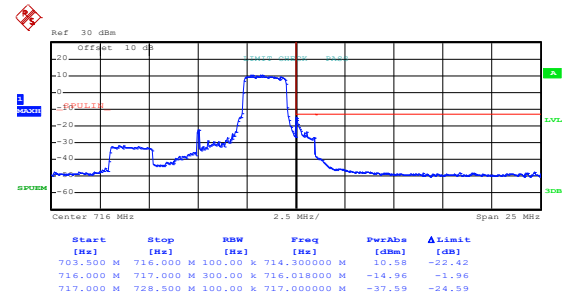
Highest channel

16QAM & 12RB Size 38



Date: 23.MAR.2021 19:09:05

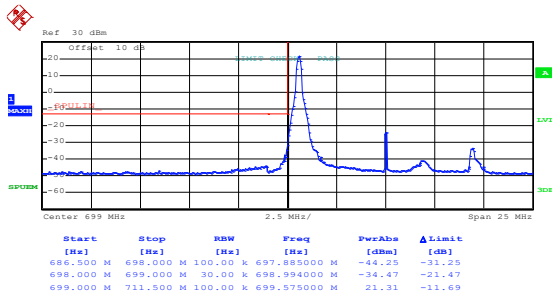
Lowest channel



Date: 23.MAR.2021 19:10:37

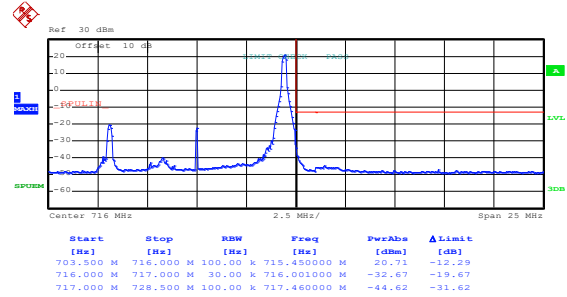
Highest channel

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



Date: 23.MAR.2021 19:08:18

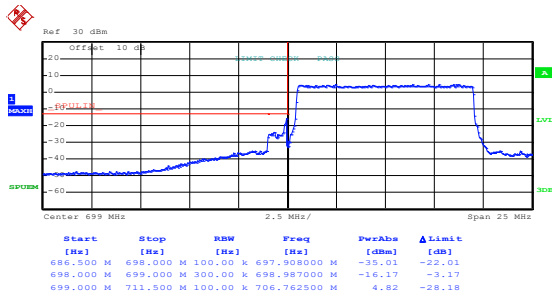
Lowest channel



Date: 23.MAR.2021 19:09:48

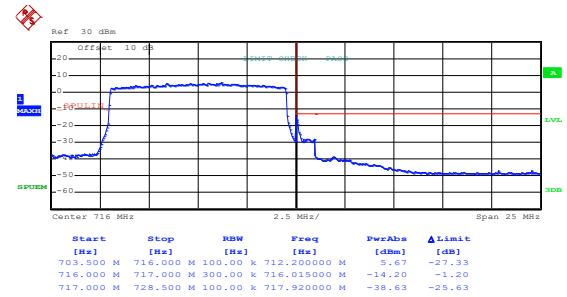
Highest channel

QPSK & RB Size 50



Date: 23.MAR.2021 19:08:50

Lowest channel

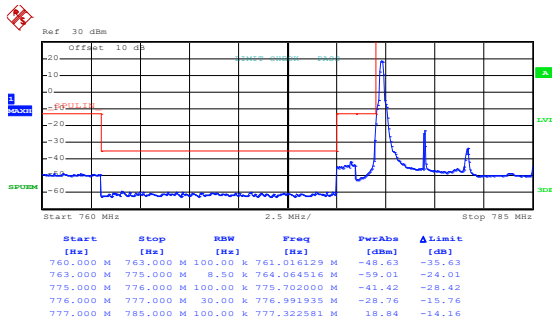


Date: 23.MAR.2021 19:10:10

Highest channel

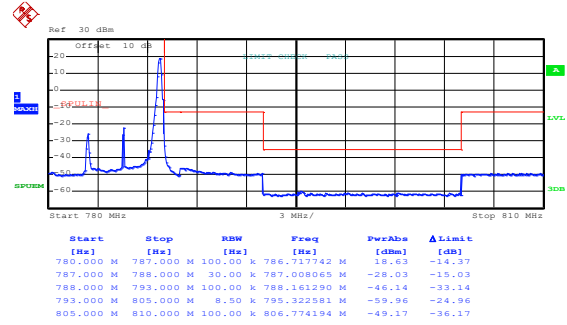
LTE Band 13 part:

**LTE Band 13, BW: 5MHz
16QAM & RB Size 1**



Date: 23.MAR.2021 19:32:16

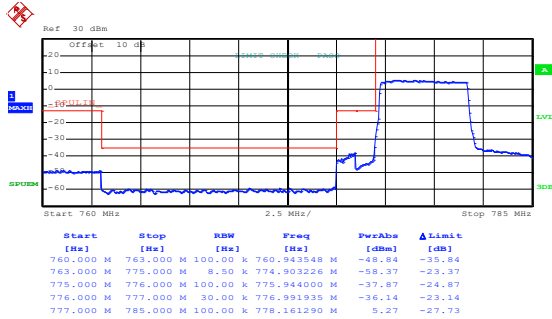
Lowest channel



Date: 23.MAR.2021 19:47:48

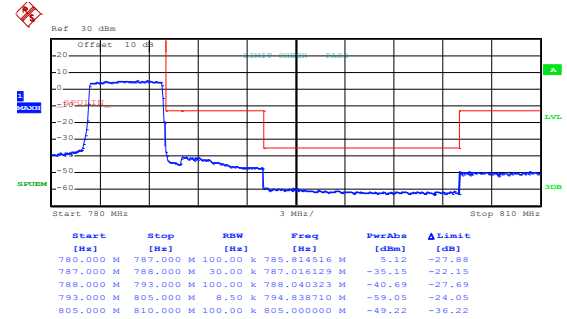
Highest channel

16QAM & RB Size 25



Date: 23.MAR.2021 19:46:37

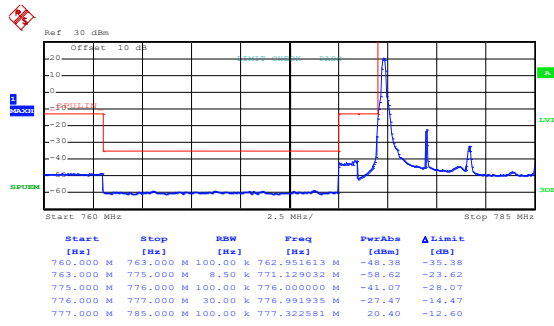
Lowest channel



Date: 23.MAR.2021 19:48:15

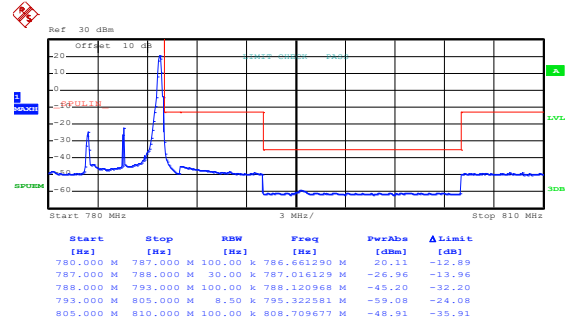
Highest channel

LTE Band 13, BW: 5MHz
QPSK & RB Size 1



Date: 23.MAR.2021 19:32:02

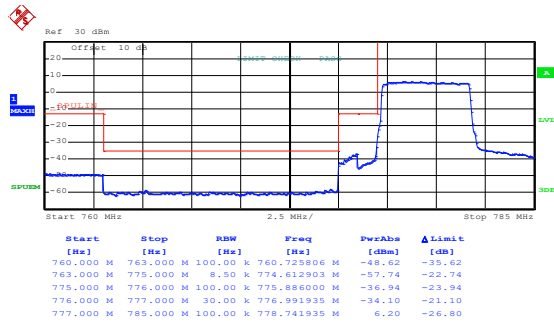
Lowest channel



Date: 23.MAR.2021 19:47:34

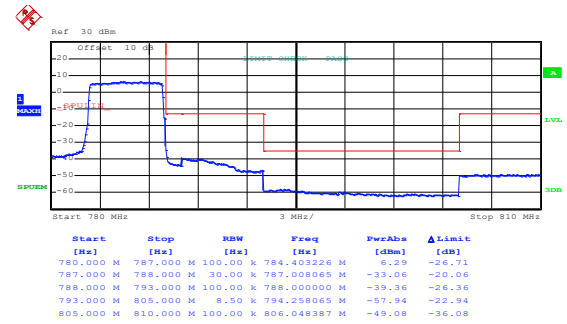
Highest channel

QPSK & RB Size 25



Date: 23.MAR.2021 19:45:45

Lowest channel

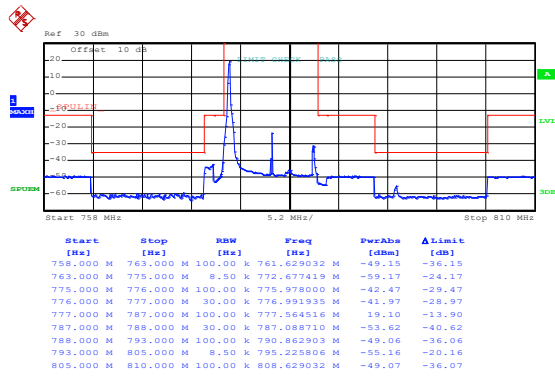


Date: 23.MAR.2021 19:48:05

Highest channel

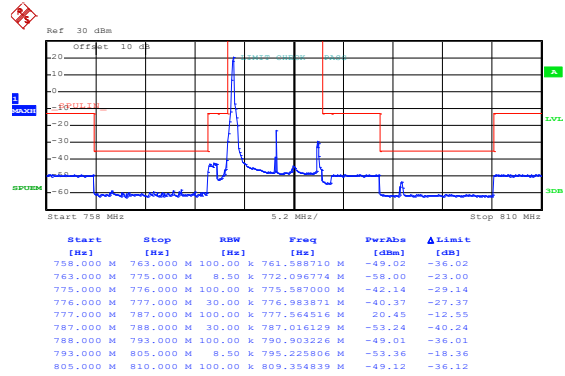
LTE Band 13, BW: 10MHz

16QAM & RB Size 1



Date: 23.MAR.2021 19:50:16

QPSK & RB Size 1

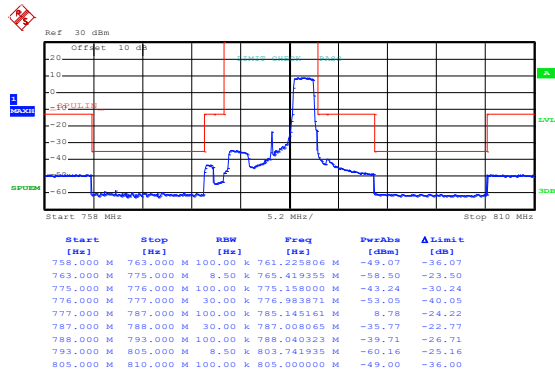


Date: 23.MAR.2021 19:49:57

Middle channel

Middle channel

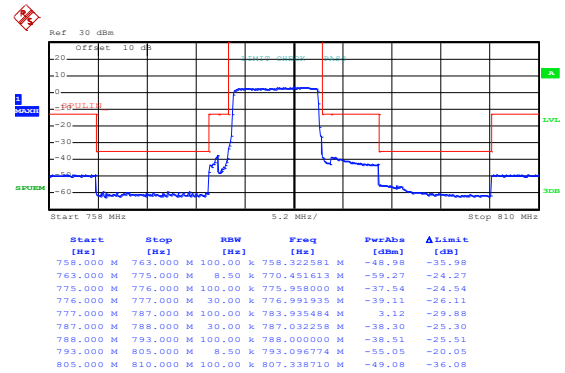
16QAM & 12RB Size 38



Date: 23.MAR.2021 19:51:51

Middle channel

QPSK & RB Size 50

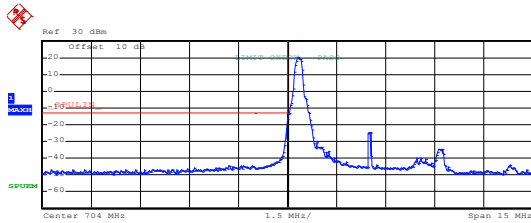


Date: 23.MAR.2021 19:51:02

Middle channel

LTE Band 17 part:

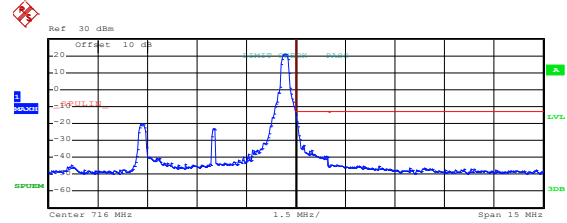
**LTE Band 17, BW: 5MHz
16QAM & RB Size 1**



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
696,500 M	703,000 M	100,00 k	702,226500 M	-44.41	-31.41
703,000 M	704,000 M	100,00 k	703,991935 M	-22.36	-9.36
704,000 M	711,500 M	100,00 k	704,330000 M	20.22	-12.78

Date: 23.MAR.2021 19:12:53

Lowest channel

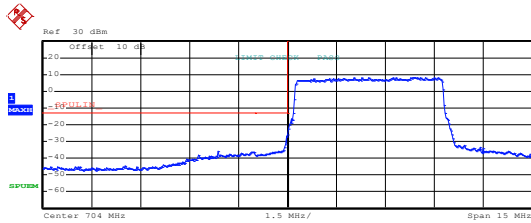


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
708,500 M	716,000 M	100,00 k	715,677500 M	21.02	-11.98
716,000 M	717,000 M	100,00 k	716,038000 M	-15.16	-2.16
717,000 M	723,500 M	100,00 k	717,052000 M	-43.93	-30.93

Date: 23.MAR.2021 19:15:25

Highest channel

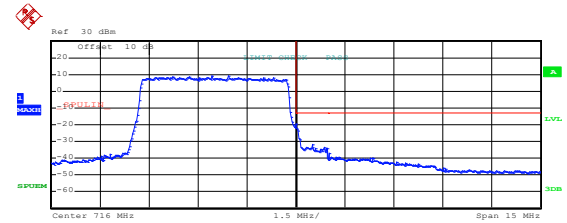
16QAM & RB Size 25



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
696,500 M	703,000 M	100,00 k	701,856000 M	-35.51	-22.51
703,000 M	704,000 M	100,00 k	703,983871 M	-28.62	-15.62
704,000 M	711,500 M	100,00 k	707,937500 M	8.29	-24.71

Date: 23.MAR.2021 19:21:08

Lowest channel

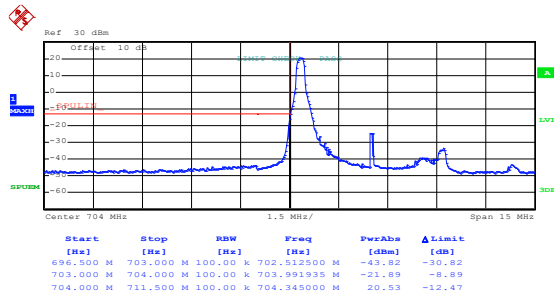


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
708,500 M	716,000 M	100,00 k	713,405000 M	9.18	-23.82
716,000 M	717,000 M	100,00 k	716,014000 M	-19.14	-6.14
717,000 M	723,500 M	100,00 k	717,013000 M	-37.24	-24.24

Date: 23.MAR.2021 19:20:04

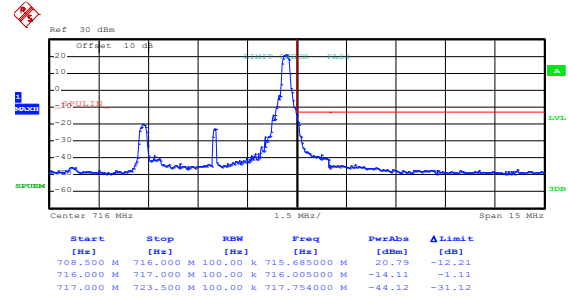
Highest channel

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



Date: 23.MAR.2021 19:12:47

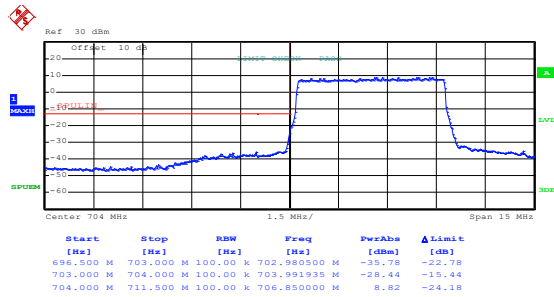
Lowest channel



Date: 23.MAR.2021 19:15:14

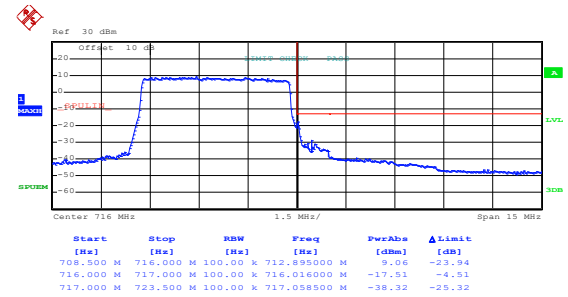
Highest channel

QPSK & RB Size 25



Date: 23.MAR.2021 19:21:01

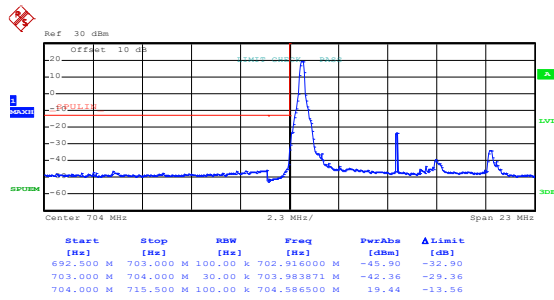
Lowest channel



Date: 23.MAR.2021 19:19:57

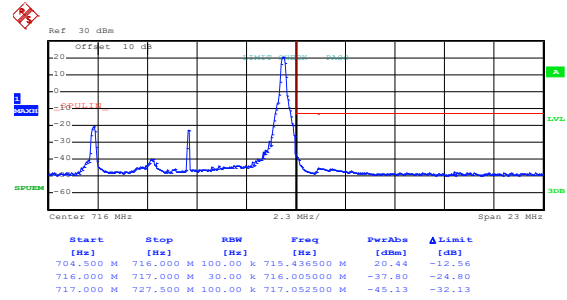
Highest channel

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



Date: 23.MAR.2021 19:22:19

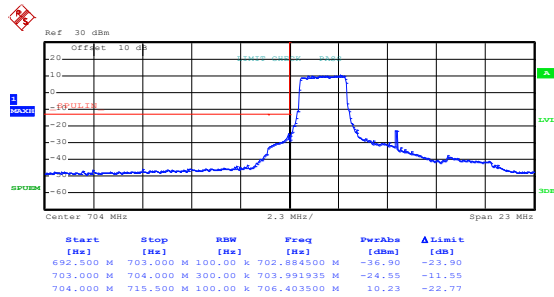
Lowest channel



Date: 23.MAR.2021 19:24:26

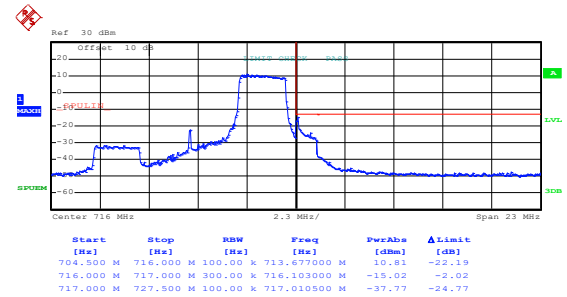
Highest channel

16QAM & 12RB Size 38



Date: 23.MAR.2021 19:23:30

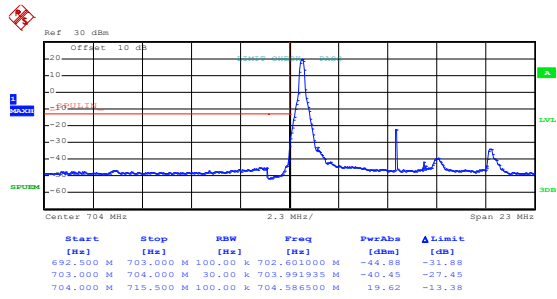
Lowest channel



Date: 23.MAR.2021 19:25:16

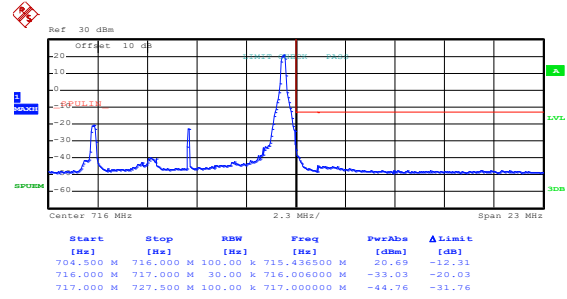
Highest channel

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



Date: 23.MAR.2021 19:22:14

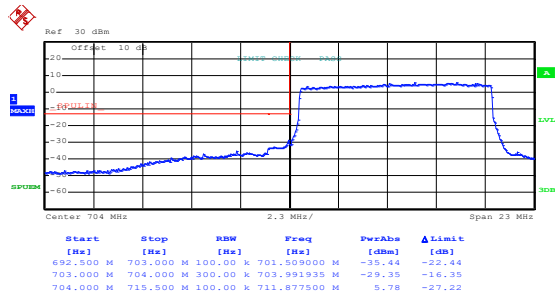
Lowest channel



Date: 23.MAR.2021 19:24:21

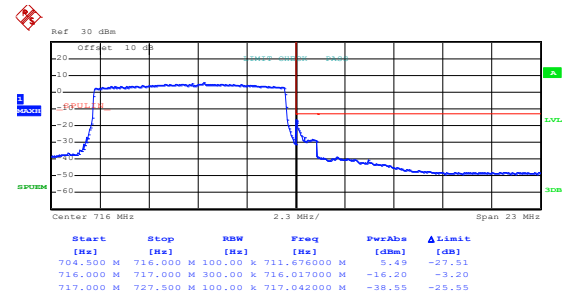
Highest channel

QPSK & RB Size 50



Date: 23.MAR.2021 19:23:01

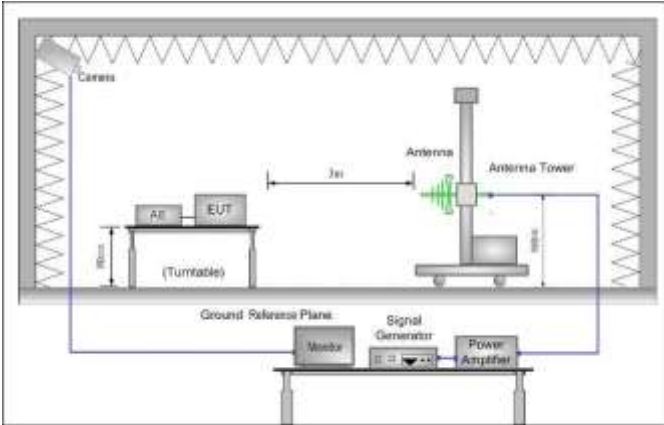
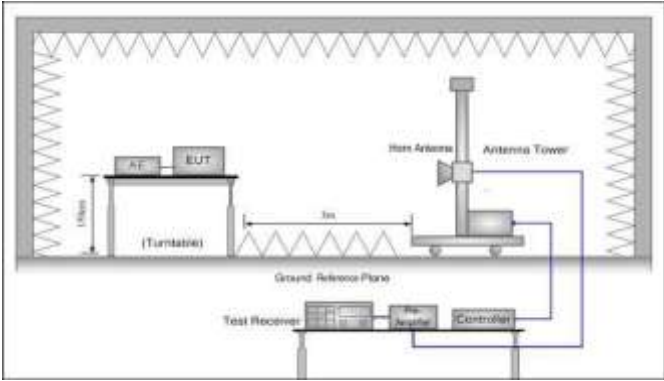
Lowest channel



Date: 23.MAR.2021 19:24:45

Highest channel

6.5 Field strength of spurious radiation measurement

Test Requirement:	Part 24.238 (a), Part 27.53(g), Part 27.53(m),
Limit:	LTE Band 2 & 4 & 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). LTE Band 13: The power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB(-13 dBm). For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals.
Test setup:	Below 1GHz  Above 1GHz 
Test Procedure:	1. The EUT was placed on the top of a rotating table 0.8m(below 1GHz)/1.5m(above 1GHz) above the ground at a 3 meter camber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer. 2. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations. 3. The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method. 4. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency. $ERP / EIRP = S.G. \text{ output (dBm)} + \text{Antenna Gain(dB/dBi)} - \text{Cable}$

	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:

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	-47.54	12.64	0.75	-35.65	-13.00	-22.65	Vertical
5552.10	-45.78	12.76	1.13	-34.15	-13.00	-21.15	Vertical
7402.00	-42.07	11.44	1.63	-32.26	-13.00	-19.26	Vertical
3701.40	-50.54	12.64	0.75	-38.65	-13.00	-25.65	Horizontal
5552.10	-48.61	12.76	1.13	-36.98	-13.00	-23.98	Horizontal
7402.00	-42.58	11.44	1.63	-32.77	-13.00	-19.77	Horizontal
Middle channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3760.00	-49.37	12.71	0.79	-37.45	-13.00	-24.45	Vertical
5640.00	-44.32	12.87	1.15	-32.60	-13.00	-19.60	Vertical
7520.00	-40.04	11.48	1.66	-30.22	-13.00	-17.22	Vertical
3760.00	-52.44	12.71	0.79	-40.52	-13.00	-27.52	Horizontal
5640.00	-47.37	12.87	1.15	-35.65	-13.00	-22.65	Horizontal
7520.00	-41.99	11.48	1.66	-32.17	-13.00	-19.17	Horizontal
Highest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3816.60	-48.62	12.78	0.81	-36.65	-13.00	-23.65	Vertical
5724.90	-43.23	12.97	1.19	-31.45	-13.00	-18.45	Vertical
7633.20	-38.39	11.34	1.71	-28.76	-13.00	-15.76	Vertical
3816.60	-51.92	12.78	0.81	-39.95	-13.00	-26.95	Horizontal
5724.90	-47.30	12.97	1.19	-35.52	-13.00	-22.52	Horizontal
7633.20	-40.77	11.34	1.71	-31.14	-13.00	-18.14	Horizontal
Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.							

Band 2 (20MHz)							
Lowest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3720.00	-47.54	12.66	0.77	-35.65	-13.00	-22.65	Vertical
5580.00	-48.24	12.80	1.15	-36.59	-13.00	-23.59	Vertical
7440.00	-41.26	11.46	1.64	-31.44	-13.00	-18.44	Vertical
3720.00	-49.34	12.66	0.77	-37.45	-13.00	-24.45	Horizontal
5580.00	-47.80	12.80	1.15	-36.15	-13.00	-23.15	Horizontal
7440.00	-41.26	11.46	1.64	-31.44	-13.00	-18.44	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	-48.57	12.71	0.79	-36.65	-13.00	-23.65	Vertical
5640.00	-43.31	12.87	1.15	-31.59	-13.00	-18.59	Vertical
7520.00	-39.80	11.48	1.66	-29.98	-13.00	-16.98	Vertical
3760.00	-51.57	12.71	0.79	-39.65	-13.00	-26.65	Horizontal
5640.00	-46.23	12.87	1.15	-34.51	-13.00	-21.51	Horizontal
7520.00	-40.99	11.48	1.66	-31.17	-13.00	-18.17	Horizontal
Highest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3800.00	-48.62	12.76	0.79	-36.65	-13.00	-23.65	Vertical
5700.00	-49.74	12.94	1.18	-37.98	-13.00	-24.98	Vertical
7600.00	-43.84	11.38	1.69	-34.15	-13.00	-21.15	Vertical
3800.00	-48.62	12.76	0.79	-36.65	-13.00	-23.65	Horizontal
5700.00	-44.08	12.94	1.18	-32.32	-13.00	-19.32	Horizontal
7600.00	-40.08	11.38	1.69	-30.39	-13.00	-17.39	Horizontal
Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.							

LTE Band 4 part:

Band 4 (1.4MHz)							
Lowest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3421.40	-58.19	12.24	0.70	-46.65	-13.00	-33.65	Vertical
5132.10	-52.06	12.92	1.01	-40.15	-13.00	-27.15	Vertical
6842.80	-48.66	11.42	1.53	-38.77	-13.00	-25.77	Vertical
3421.40	-54.86	12.24	0.70	-43.32	-13.00	-30.32	Horizontal
5132.10	-54.50	12.92	1.01	-42.59	-13.00	-29.59	Horizontal
6842.80	-48.50	11.42	1.53	-38.61	-13.00	-25.61	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	-56.76	12.33	0.72	-45.15	-13.00	-32.15	Vertical
5197.50	-50.49	12.88	1.04	-38.65	-13.00	-25.65	Vertical
6930.00	-46.93	11.30	1.56	-37.19	-13.00	-24.19	Vertical
3465.00	-53.23	12.33	0.72	-41.62	-13.00	-28.62	Horizontal
5197.50	-50.49	12.88	1.04	-38.65	-13.00	-25.65	Horizontal
6930.00	-46.43	11.30	1.56	-36.69	-13.00	-23.69	Horizontal
Highest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3508.60	-61.32	12.41	0.74	-49.65	-13.00	-36.65	Vertical
5262.90	-57.13	12.84	1.07	-45.36	-13.00	-32.36	Vertical
7017.20	-52.84	11.21	1.58	-43.21	-13.00	-30.21	Vertical
3508.60	-58.34	12.41	0.74	-46.67	-13.00	-33.67	Horizontal
5262.90	-55.36	12.84	1.07	-43.59	-13.00	-30.59	Horizontal
7017.20	-50.76	11.21	1.58	-41.13	-13.00	-28.13	Horizontal
Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.							

Band 4 (20MHz)							
Lowest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3440.00	-54.89	12.28	0.71	-43.32	-13.00	-30.32	Vertical
5160.00	-51.52	12.90	1.03	-39.65	-13.00	-26.65	Vertical
6880.00	-46.28	11.37	1.54	-36.45	-13.00	-23.45	Vertical
3440.00	-53.15	12.28	0.71	-41.58	-13.00	-28.58	Horizontal
5160.00	-54.63	12.90	1.03	-42.76	-13.00	-29.76	Horizontal
6880.00	-47.82	11.37	1.54	-37.99	-13.00	-24.99	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	-58.23	12.33	0.72	-46.62	-13.00	-33.62	Vertical
5197.50	-48.62	12.88	1.04	-36.78	-13.00	-23.78	Vertical
6930.00	-42.29	11.30	1.56	-32.55	-13.00	-19.55	Vertical
3465.00	-54.26	12.33	0.72	-42.65	-13.00	-29.65	Horizontal
5197.50	-50.81	12.88	1.04	-38.97	-13.00	-25.97	Horizontal
6930.00	-43.91	11.30	1.56	-34.17	-13.00	-21.17	Horizontal
Highest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3490.00	-60.30	12.38	0.73	-48.65	-13.00	-35.65	Vertical
5235.00	-54.45	12.86	1.06	-42.65	-13.00	-29.65	Vertical
6980.00	-51.99	11.23	1.57	-42.33	-13.00	-29.33	Vertical
3490.00	-59.16	12.38	0.73	-47.51	-13.00	-34.51	Horizontal
5235.00	-54.46	12.86	1.06	-42.66	-13.00	-29.66	Horizontal
6980.00	-52.03	11.23	1.57	-42.37	-13.00	-29.37	Horizontal
Remark:							
The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.							

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	-54.34	7.80	0.11	-46.65	-13.00	-33.65	Vertical
2099.10	-57.16	10.34	0.29	-47.11	-13.00	-34.11	Vertical
2798.80	-46.19	11.20	0.53	-35.52	-13.00	-22.52	Vertical
1399.40	-54.02	7.80	0.11	-46.33	-13.00	-33.33	Horizontal
2099.10	-55.63	10.34	0.29	-45.58	-13.00	-32.58	Horizontal
2798.80	-46.26	11.20	0.53	-35.59	-13.00	-22.59	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	-55.30	7.92	0.13	-47.51	-13.00	-34.51	Vertical
2122.50	-55.37	10.37	0.32	-45.32	-13.00	-32.32	Vertical
2830.00	-52.79	11.23	0.55	-42.11	-13.00	-29.11	Vertical
1415.00	-55.74	7.92	0.13	-47.95	-13.00	-34.95	Horizontal
2122.50	-56.63	10.37	0.32	-46.58	-13.00	-33.58	Horizontal
2830.00	-56.23	11.23	0.55	-45.55	-13.00	-32.55	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
1430.60	-54.03	8.04	0.16	-46.15	-13.00	-33.15	Vertical
2145.90	-54.78	10.40	0.35	-44.73	-13.00	-31.73	Vertical
2861.20	-52.03	11.26	0.58	-41.35	-13.00	-28.35	Vertical
1430.60	-54.53	8.04	0.16	-46.65	-13.00	-33.65	Horizontal
2145.90	-57.86	10.40	0.35	-47.81	-13.00	-34.81	Horizontal
2861.20	-54.04	11.26	0.58	-43.36	-13.00	-30.36	Horizontal
Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.							

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	-54.39	7.86	0.12	-46.65	-13.00	-33.65	Vertical
2112.00	-56.38	10.36	0.30	-46.32	-13.00	-33.32	Vertical
2816.00	-48.08	11.22	0.54	-37.40	-13.00	-24.40	Vertical
1408.00	-53.89	7.86	0.12	-46.15	-13.00	-33.15	Horizontal
2112.00	-55.04	10.36	0.30	-44.98	-13.00	-31.98	Horizontal
2816.00	-47.27	11.22	0.54	-36.59	-13.00	-23.59	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	-54.44	7.92	0.13	-46.65	-13.00	-33.65	Vertical
2122.50	-54.56	10.37	0.32	-44.51	-13.00	-31.51	Vertical
2830.00	-54.33	11.23	0.55	-43.65	-13.00	-30.65	Vertical
1415.00	-54.97	7.92	0.13	-47.18	-13.00	-34.18	Horizontal
2122.50	-56.74	10.37	0.32	-46.69	-13.00	-33.69	Horizontal
2830.00	-55.55	11.23	0.55	-44.87	-13.00	-31.87	Horizontal
Highest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
1422.00	-54.15	7.98	0.15	-46.32	-13.00	-33.32	Vertical
2133.00	-55.56	10.39	0.34	-45.51	-13.00	-32.51	Vertical
2844.00	-51.86	11.24	0.57	-41.19	-13.00	-28.19	Vertical
1422.00	-52.78	7.98	0.15	-44.95	-13.00	-31.95	Horizontal
2133.00	-52.21	10.39	0.34	-42.16	-13.00	-29.16	Horizontal
2844.00	-50.34	11.24	0.57	-39.67	-13.00	-26.67	Horizontal
Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.							

LTE Band 13 part:

Band 13 (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
1559.00	-55.55	9.07	0.17	-46.65	-40.00	-6.65	Vertical
2338.50	-52.59	10.67	0.40	-42.32	-13.00	-29.32	Vertical
3118.00	-51.16	11.64	0.59	-40.11	-13.00	-27.11	Vertical
1559.00	-56.85	9.07	0.17	-47.95	-40.00	-7.95	Horizontal
2338.50	-58.60	10.67	0.40	-48.33	-13.00	-35.33	Horizontal
3118.00	-52.74	11.64	0.59	-41.69	-13.00	-28.69	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
1564.00	-57.78	9.11	0.18	-48.85	-40.00	-8.85	Vertical
2346.00	-52.79	10.68	0.40	-42.51	-13.00	-29.51	Vertical
3128.00	-51.03	11.66	0.60	-39.97	-13.00	-26.97	Vertical
1564.00	-57.58	9.11	0.18	-48.65	-40.00	-8.65	Horizontal
2346.00	-57.41	10.68	0.40	-47.13	-13.00	-34.13	Horizontal
3128.00	-53.35	11.66	0.60	-42.29	-13.00	-29.29	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
1569.00	-56.92	9.15	0.18	-47.95	-40.00	-7.95	Vertical
2353.50	-56.61	10.69	0.41	-46.33	-13.00	-33.33	Vertical
3138.00	-49.63	11.68	0.61	-38.56	-13.00	-25.56	Vertical
1569.00	-56.82	9.15	0.18	-47.85	-40.00	-7.85	Horizontal
2353.50	-56.97	10.69	0.41	-46.69	-13.00	-33.69	Horizontal
3138.00	-49.31	11.68	0.61	-38.24	-13.00	-25.24	Horizontal
Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.							

Band 13 (10MHz)							
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
1564.00	-58.58	9.11	0.18	-49.65	-40.00	-9.65	Vertical
2346.00	-56.49	10.68	0.40	-46.21	-13.00	-33.21	Vertical
3128.00	-50.68	11.66	0.60	-39.62	-13.00	-26.62	Vertical
1564.00	-56.78	9.11	0.18	-47.85	-40.00	-7.85	Horizontal
2346.00	-52.78	10.68	0.40	-42.50	-13.00	-29.50	Horizontal
3128.00	-50.03	11.66	0.60	-38.97	-13.00	-25.97	Horizontal
<i>Remark:</i> The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.							

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	-55.91	7.90	0.12	-48.13	-13.00	-35.13	Vertical
2119.50	-56.72	10.37	0.31	-46.66	-13.00	-33.66	Vertical
2826.00	-49.67	11.23	0.54	-38.98	-13.00	-25.98	Vertical
1413.00	-57.73	7.90	0.12	-49.95	-13.00	-36.95	Horizontal
2119.50	-52.42	10.37	0.31	-42.36	-13.00	-29.36	Horizontal
2826.00	-48.10	11.23	0.54	-37.41	-13.00	-24.41	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	-55.67	7.96	0.14	-47.85	-13.00	-34.85	Vertical
2130.00	-56.70	10.38	0.33	-46.65	-13.00	-33.65	Vertical
2840.00	-48.87	11.24	0.56	-38.19	-13.00	-25.19	Vertical
1420.00	-54.47	7.96	0.14	-46.65	-13.00	-33.65	Horizontal
2130.00	-55.60	10.38	0.33	-45.55	-13.00	-32.55	Horizontal
2840.00	-47.05	11.24	0.56	-36.37	-13.00	-23.37	Horizontal
Highest channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
1427.00	-57.51	8.02	0.16	-49.65	-13.00	-36.65	Vertical
2140.50	-58.79	10.40	0.34	-48.73	-13.00	-35.73	Vertical
2854.00	-50.65	11.25	0.57	-39.97	-13.00	-26.97	Vertical
1427.00	-53.37	8.02	0.16	-45.51	-13.00	-32.51	Horizontal
2140.50	-51.83	10.40	0.34	-41.77	-13.00	-28.77	Horizontal
2854.00	-49.55	11.25	0.57	-38.87	-13.00	-25.87	Horizontal
Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.							

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	-57.46	7.94	0.13	-49.65	-13.00	-36.65	Vertical
2127.00	-57.87	10.38	0.32	-47.81	-13.00	-34.81	Vertical
2836.00	-50.33	11.24	0.56	-39.65	-13.00	-26.65	Vertical
1418.00	-55.96	7.94	0.13	-48.15	-13.00	-35.15	Horizontal
2127.00	-57.59	10.38	0.32	-47.53	-13.00	-34.53	Horizontal
2836.00	-49.65	11.24	0.56	-38.97	-13.00	-25.97	Horizontal
Middle channel							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
1420.00	-54.41	7.96	0.14	-46.59	-13.00	-33.59	Vertical
2130.00	-57.56	10.38	0.33	-47.51	-13.00	-34.51	Vertical
2840.00	-50.36	11.24	0.56	-39.68	-13.00	-26.68	Vertical
1420.00	-52.34	7.96	0.14	-44.52	-13.00	-31.52	Horizontal
2130.00	-51.43	10.38	0.33	-41.38	-13.00	-28.38	Horizontal
2840.00	-51.47	11.24	0.56	-40.79	-13.00	-27.79	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	-55.48	7.98	0.15	-47.65	-13.00	-34.65	Vertical
2133.00	-59.30	10.39	0.34	-49.25	-13.00	-36.25	Vertical
2844.00	-49.26	11.24	0.57	-38.59	-13.00	-25.59	Vertical
1422.00	-57.78	7.98	0.15	-49.95	-13.00	-36.95	Horizontal
2133.00	-51.48	10.39	0.34	-41.43	-13.00	-28.43	Horizontal
2844.00	-50.64	11.24	0.57	-39.97	-13.00	-26.97	Horizontal
Remark: The emission levels of below 1 GHz are lower than the limit 20dB and not show in test report.							

6.6 Frequency stability V.S. Temperature measurement

Test Requirement:	Part 22.355, Part 24.235, Part 27.54, Part 2.1055(a)(1)(b)
Limit:	Within authorized band for Band 2 & 4 & 12 & 13 & 17
Test setup:	
Test procedure:	1. The equipment under test was connected to an external DC power supply and input rated voltage. 2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. 3. The EUT was placed inside the temperature chamber. 4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. 5. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. 6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data (worst case):
LTE Band 2 part:

Reference Frequency: LTE Band 2 (10MHz) Middle channel=18900 channel=1880.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.70	-30	198	0.105319	Within authorized band for Band 2	Pass
	-20	177	0.094149		
	-10	123	0.065426		
	0	165	0.087766		
	10	144	0.076596		
	20	170	0.090426		
	30	121	0.064362		
	40	136	0.072340		
	50	111	0.059043		
16QAM					
3.70	-30	187	0.099468	Within authorized band for Band 2	Pass
	-20	177	0.094149		
	-10	180	0.095745		
	0	131	0.069681		
	10	165	0.087766		
	20	121	0.064362		
	30	100	0.053191		
	40	144	0.076596		
	50	118	0.062766		
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					
3.70	-30	198	0.114286	Within authorized band for Band 4	Pass
	-20	125	0.072150		
	-10	180	0.103896		
	0	177	0.102165		
	10	165	0.095238		
	20	160	0.092352		
	30	144	0.083117		
	40	151	0.087157		
	50	136	0.078499		
16QAM					
3.70	-30	187	0.107937	Within authorized band for Band 4	Pass
	-20	123	0.070996		
	-10	165	0.095238		
	0	181	0.104473		
	10	170	0.098124		
	20	145	0.083694		
	30	130	0.075036		
	40	118	0.068110		
	50	158	0.091198		
Note: Only the worst case shown in the report.					

LTE Band 12 part:

Reference Frequency: LTE Band 12 (10MHz) Middle channel=23095 channel=707.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.70	-30	198	0.279859	Within authorized band for Band 12	Pass
	-20	165	0.233216		
	-10	177	0.250177		
	0	180	0.254417		
	10	161	0.227562		
	20	144	0.203534		
	30	130	0.183746		
	40	138	0.195053		
	50	100	0.141343		
16QAM					
3.70	-30	187	0.264311	Within authorized band for Band 12	Pass
	-20	123	0.173852		
	-10	165	0.233216		
	0	170	0.240283		
	10	148	0.209187		
	20	120	0.169611		
	30	139	0.196466		
	40	140	0.197880		
	50	116	0.163958		
Note: Only the worst case shown in the report.					

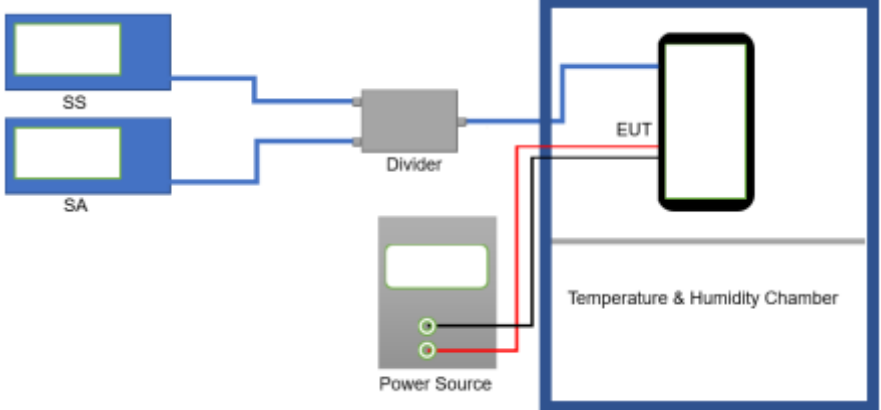
LTE Band 13 part:

Reference Frequency: LTE Band 13 (10MHz) Middle channel=23230 channel=782.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.70	-30	180	0.230179	Within authorized band for Band 13	Pass
	-20	123	0.157289		
	-10	161	0.205882		
	0	170	0.217391		
	10	146	0.186701		
	20	168	0.214834		
	30	156	0.199488		
	40	133	0.170077		
	50	101	0.129156		
16QAM					
3.70	-30	187	0.239130	Within authorized band for Band 13	Pass
	-20	176	0.225064		
	-10	165	0.210997		
	0	122	0.156010		
	10	134	0.171355		
	20	148	0.189258		
	30	101	0.129156		
	40	158	0.202046		
	50	100	0.127877		
Note: Only the worst case shown in the report.					

LTE Band 17 part:

Reference Frequency: LTE Band 17 (10MHz) Middle channel=23790 channel=710.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.70	-30	188	0.264789	Within authorized band for Band 17	Pass
	-20	170	0.239437		
	-10	165	0.232394		
	0	131	0.184507		
	10	144	0.202817		
	20	125	0.176056		
	30	100	0.140845		
	40	110	0.154930		
	50	177	0.249296		
16QAM					
3.70	-30	187	0.263380	Within authorized band for Band 17	Pass
	-20	165	0.232394		
	-10	171	0.240845		
	0	145	0.204225		
	10	150	0.211268		
	20	133	0.187324		
	30	122	0.171831		
	40	140	0.197183		
	50	111	0.156338		
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:	Within authorized band for Band 2 & 4 & 12 & 13 & 17
Test setup:	 The diagram illustrates the test setup. On the left, there are two blue boxes labeled 'SS' (Signal Source) and 'SA' (Spectrum Analyzer). They are connected to a central grey box labeled 'Divider'. The 'Divider' is connected to a black box labeled 'EUT' (Equipment Under Test) which is located inside a larger blue box labeled 'Temperature & Humidity Chamber'. A 'Power Source' (grey box) is also connected to the 'EUT' via red and black wires.
Test procedure:	1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage. 2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. 3. Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data (worst case):
LTE Band 2 part:

Reference Frequency: LTE Band 2(10MHz) Middle channel=18900 channel=1880.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.20	98	0.052128	Within authorized band for Band 2	Pass
	3.70	78	0.041489		
	3.50	80	0.042553		
16QAM					
25	4.20	99	0.052660	Within authorized band for Band 2	Pass
	3.70	68	0.036170		
	3.50	77	0.040957		
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	4.20	96	0.055411	Within authorized band for Band 4	Pass
	3.70	88	0.050794		
	3.50	80	0.046176		
16QAM					
25	4.20	87	0.050216	Within authorized band for Band 4	Pass
	3.70	80	0.046176		
	3.50	90	0.051948		
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	4.20	87	0.122968	Within authorized band for Band 12	Pass
	3.70	72	0.101767		
	3.50	90	0.127208		
16QAM					
25	4.20	98	0.138516	Within authorized band for Band 12	Pass
	3.70	78	0.110247		
	3.50	90	0.127208		
Note: Only the worst case shown in the report.					

LTE Band 13 part:

Reference Frequency: LTE Band 13(10MHz) Middle channel=23230 channel=782.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.20	96	0.122762	Within authorized band for Band 13	Pass
	3.70	80	0.102302		
	3.50	74	0.094629		
16QAM					
25	4.20	99	0.126598	Within authorized band for Band 13	Pass
	3.70	80	0.102302		
	3.50	74	0.094629		
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	4.20	99	0.139437	Within authorized band for Band 17	Pass
	3.70	87	0.122535		
	3.50	70	0.098592		
16QAM					
25	4.20	96	0.135211	Within authorized band for Band 17	Pass
	3.70	80	0.112676		
	3.50	74	0.104225		
Note: Only the worst case shown in the report.					