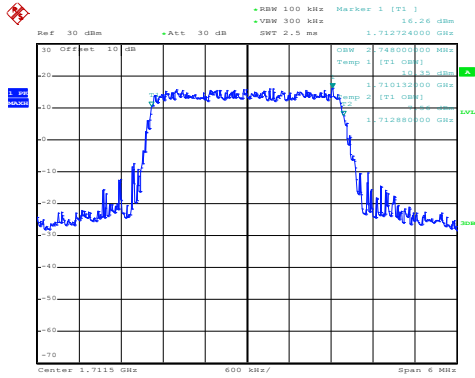


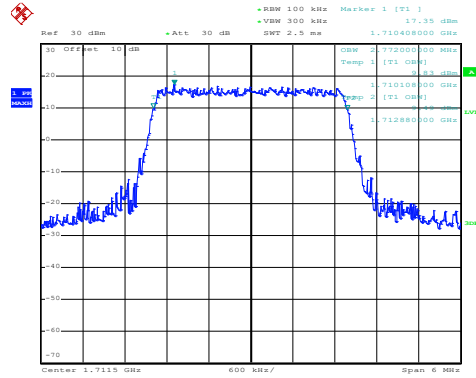
LTE Band 4: 99% Occupancy bandwidth  
BW: 3MHz

16QAM



Date: 28.AUG.2020 18:34:47

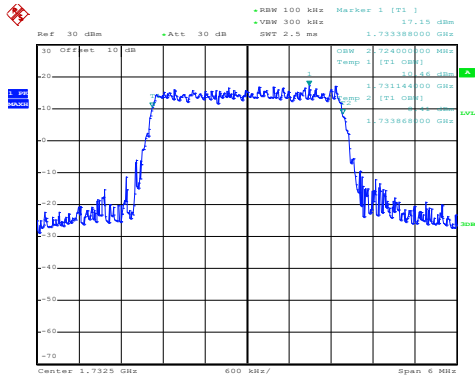
QPSK



Date: 28.AUG.2020 18:34:44

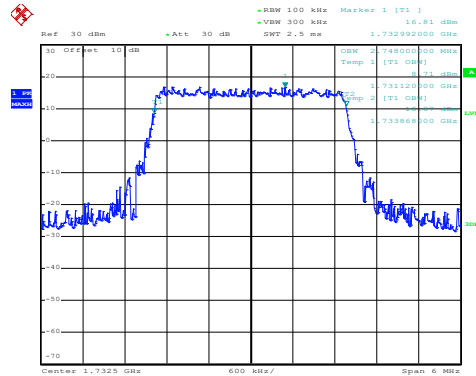
Lowest channel

16QAM



Date: 28.AUG.2020 18:35:00

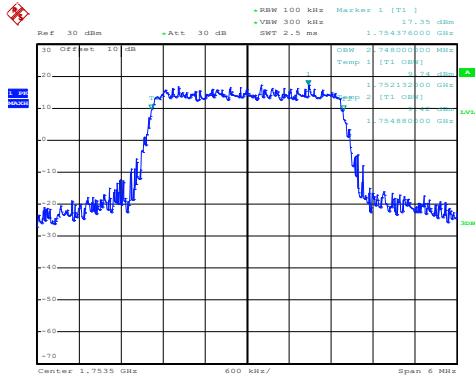
QPSK



Date: 28.AUG.2020 18:34:56

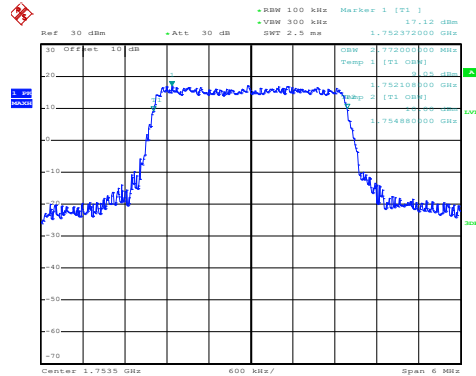
Middle channel

16QAM



Date: 28.AUG.2020 18:35:17

QPSK

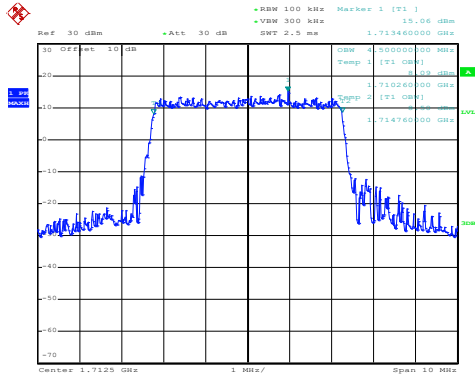


Date: 28.AUG.2020 18:35:33

Highest channel

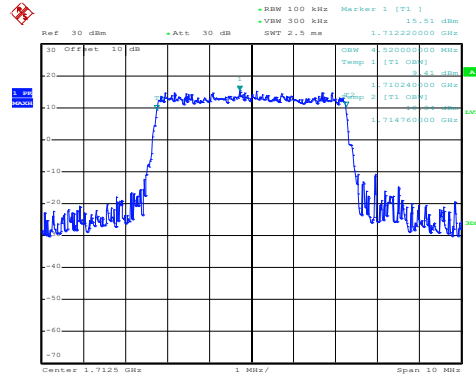
LTE Band 4: 99% Occupancy bandwidth  
BW: 5MHz

16QAM



Date: 28.AUG.2020 18:37:04

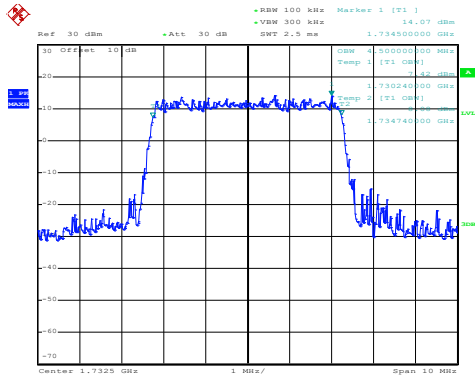
QPSK



Date: 28.AUG.2020 18:37:00

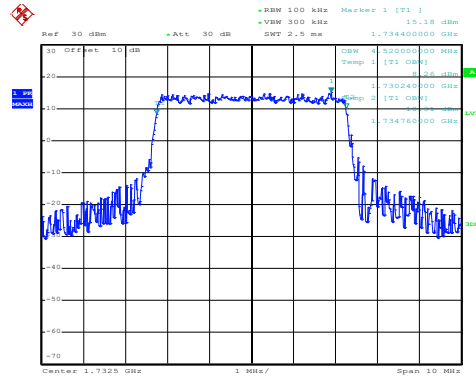
Lowest channel

16QAM



Date: 28.AUG.2020 18:37:39

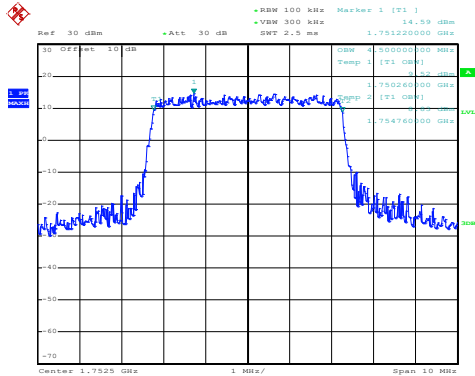
QPSK



Date: 28.AUG.2020 18:37:36

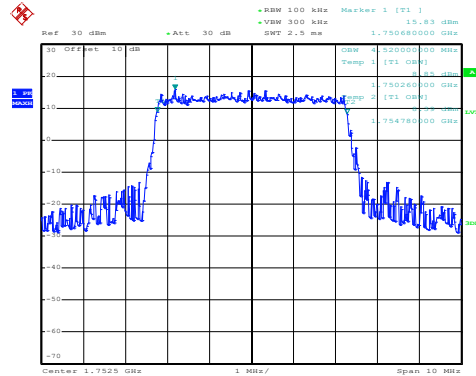
Middle channel

16QAM



Date: 28.AUG.2020 18:37:59

QPSK

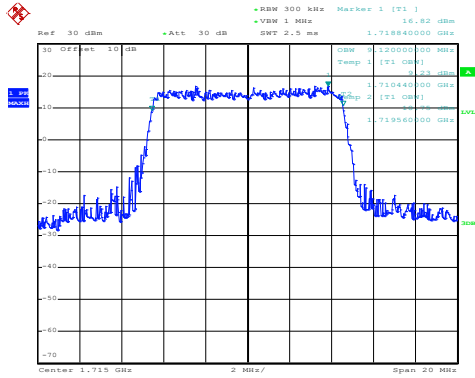


Date: 28.AUG.2020 18:37:53

Highest channel

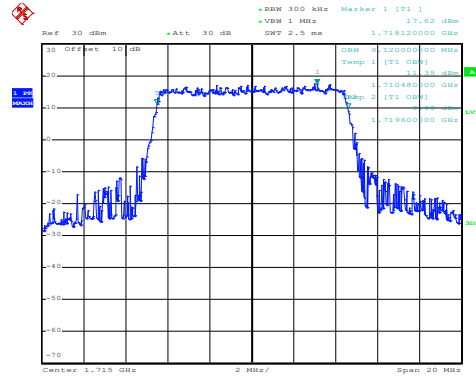
## LTE Band 4: 99% Occupancy bandwidth BW: 10MHz

16QAM



Date: 28.AUG.2020 18:38:54

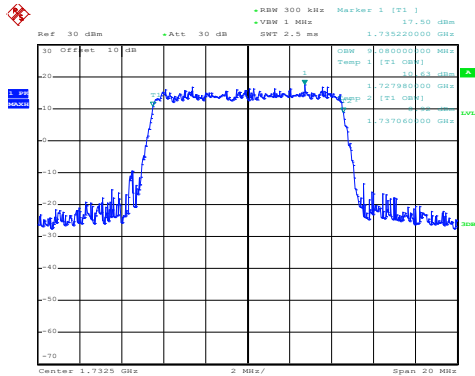
QPSK



Date: 28.AUG.2020 18:38:50

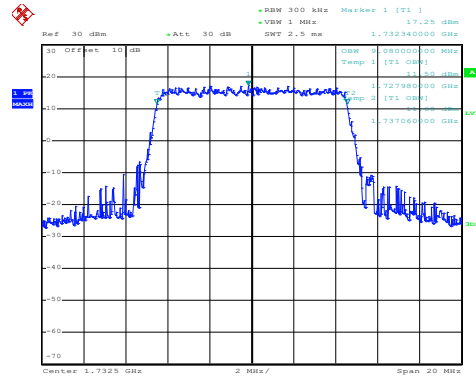
### Lowest channel

16QAM



Date: 28.AUG.2020 18:39:07

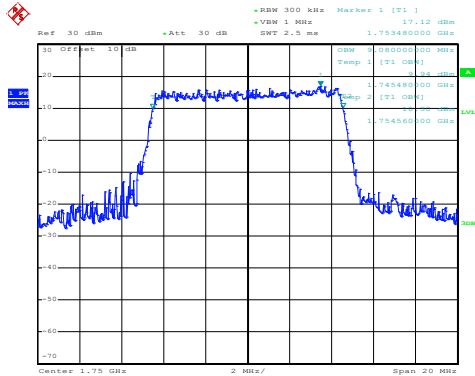
QPSK



Date: 28.AUG.2020 18:39:04

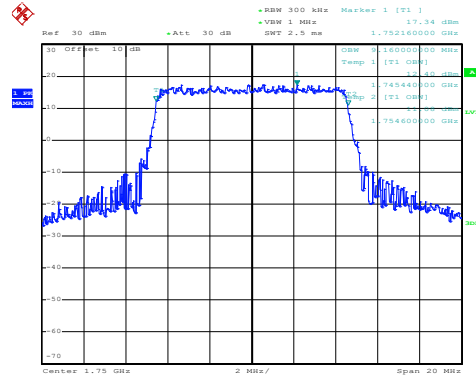
### Middle channel

16QAM



Date: 28.AUG.2020 18:39:49

QPSK

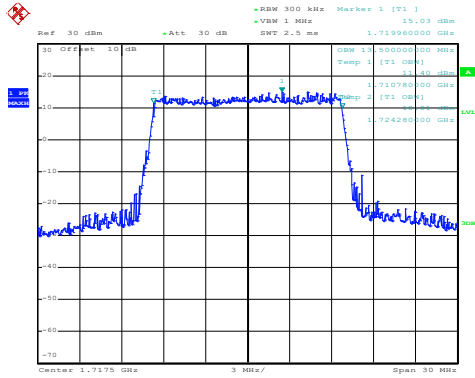


Date: 28.AUG.2020 18:39:45

### Highest channel

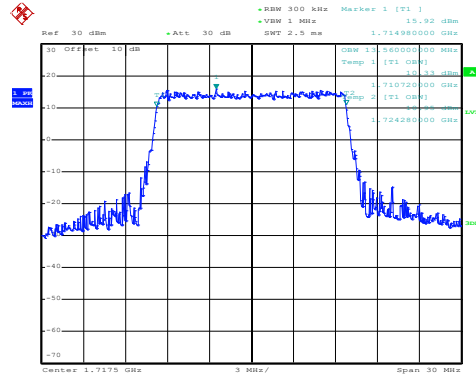
## LTE Band 4: 99% Occupancy bandwidth BW: 15MHz

16QAM



Date: 28.AUG.2020 18:40:12

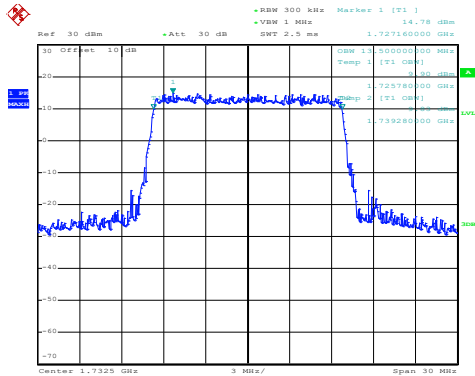
QPSK



Date: 28.AUG.2020 18:40:08

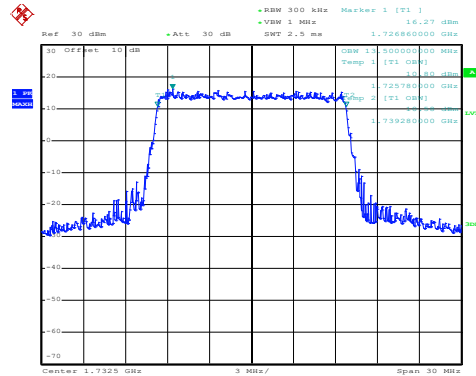
### Lowest channel

16QAM



Date: 28.AUG.2020 18:40:50

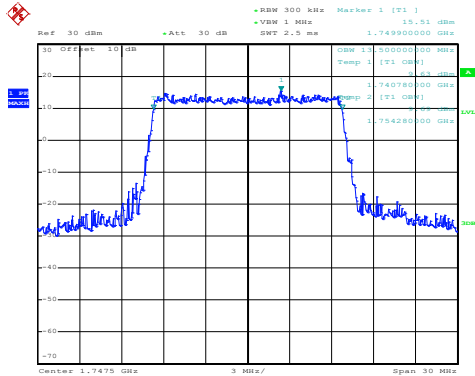
QPSK



Date: 28.AUG.2020 18:40:46

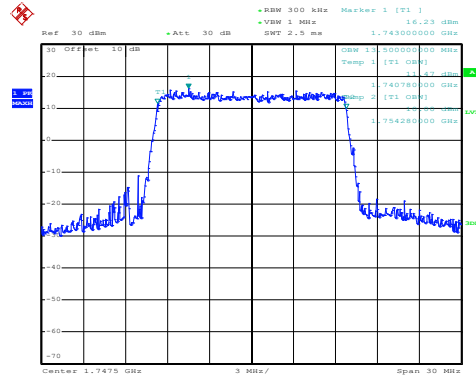
### Middle channel

16QAM



Date: 28.AUG.2020 18:41:05

QPSK

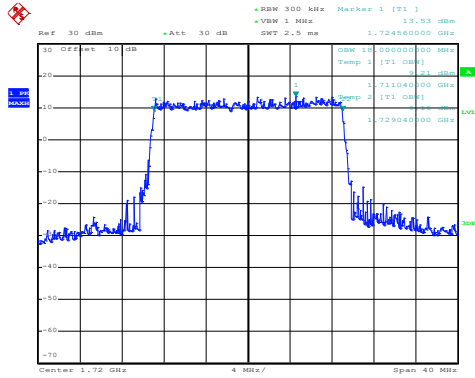


Date: 28.AUG.2020 18:41:00

### Highest channel

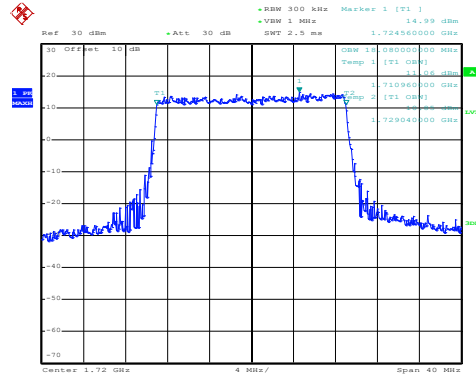
## LTE Band 4: 99% Occupancy bandwidth BW: 20MHz

16QAM



Date: 28.AUG.2020 18:41:52

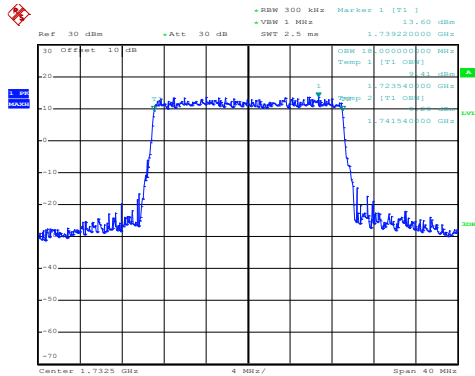
QPSK



Date: 28.AUG.2020 18:41:48

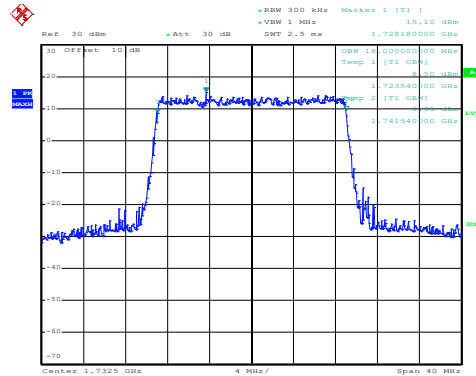
### Lowest channel

16QAM



Date: 28.AUG.2020 18:42:05

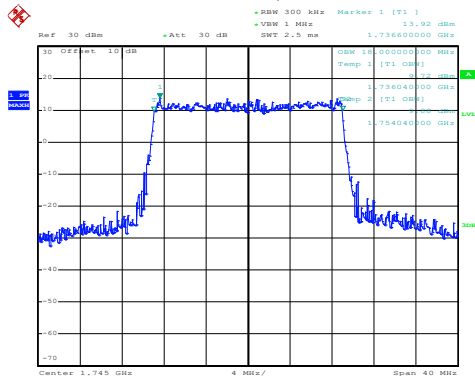
QPSK



Date: 28.AUG.2020 18:42:01

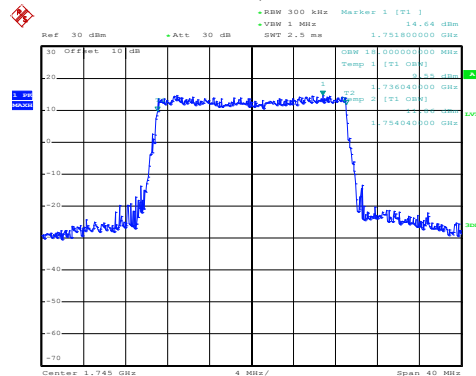
### Middle channel

16QAM



Date: 28.AUG.2020 18:42:43

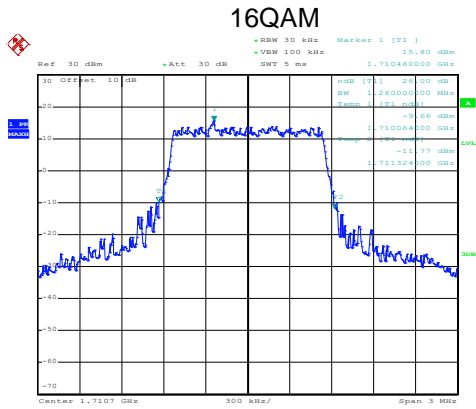
QPSK



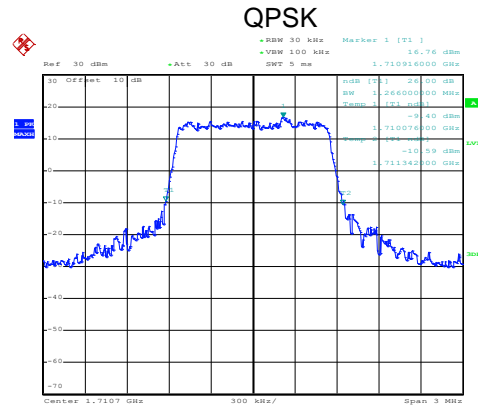
Date: 28.AUG.2020 18:42:39

### Highest channel

LTE Band 4: -26dBc bandwidth  
BW: 1.4MHz

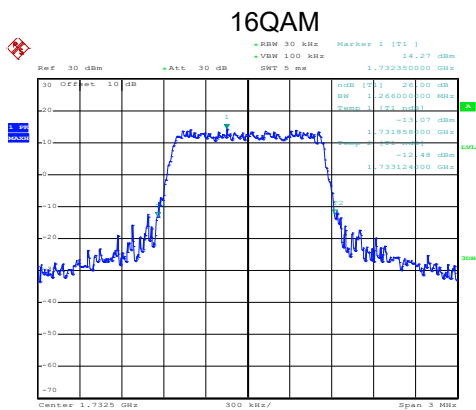


Date: 28.AUG.2020 18:33:07

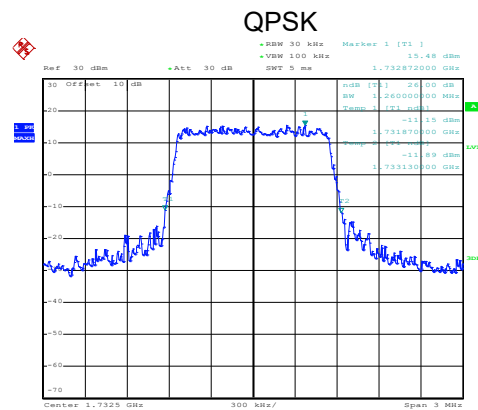


Date: 28.AUG.2020 18:33:03

Lowest channel

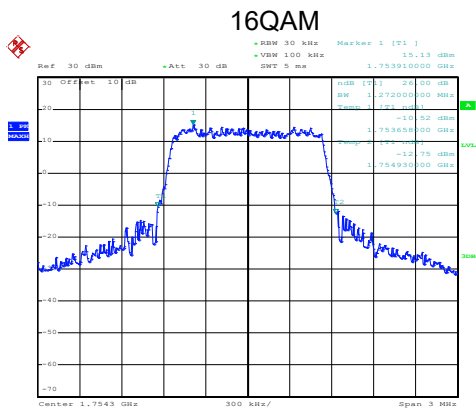


Date: 28.AUG.2020 18:33:26

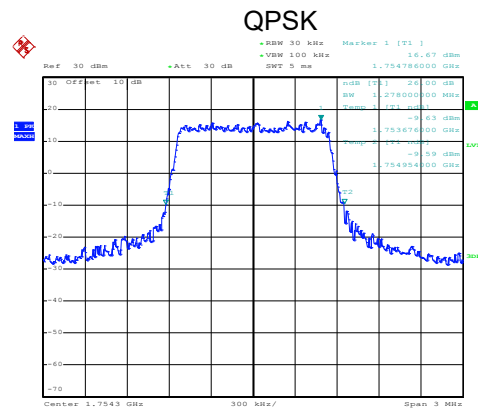


Date: 28.AUG.2020 18:33:23

Middle channel



Date: 28.AUG.2020 18:34:09

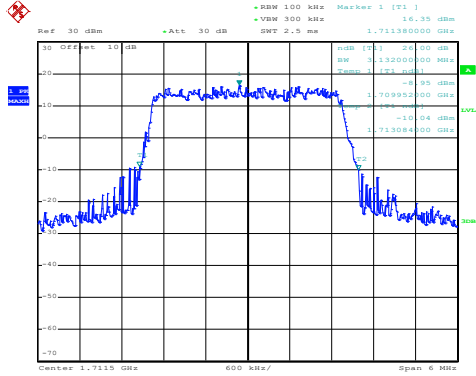


Date: 28.AUG.2020 18:34:04

Highest channel

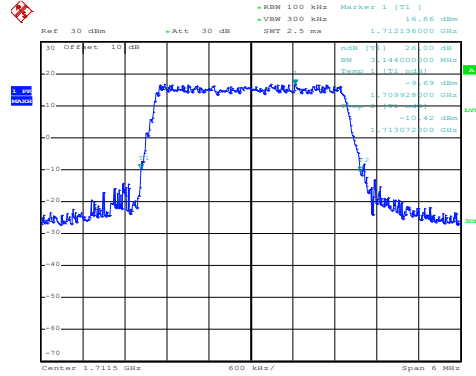
LTE Band 4: -26dBc bandwidth  
BW: 3MHz

16QAM



Date: 28.AUG.2020 18:34:38

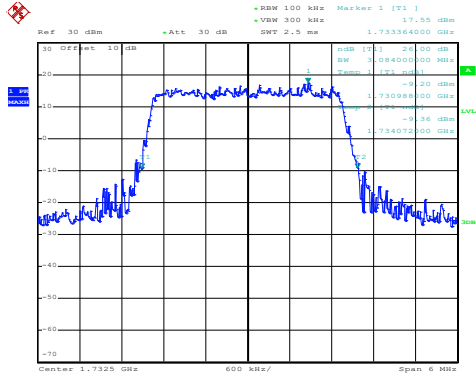
QPSK



Date: 28.AUG.2020 18:34:34

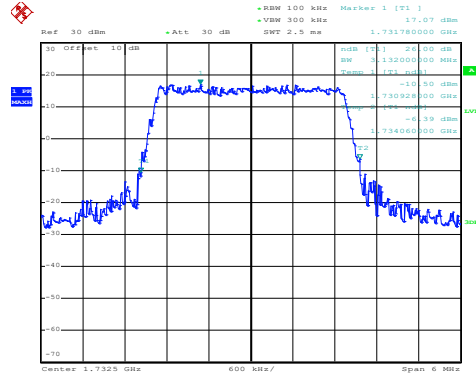
Lowest channel

16QAM



Date: 28.AUG.2020 18:35:10

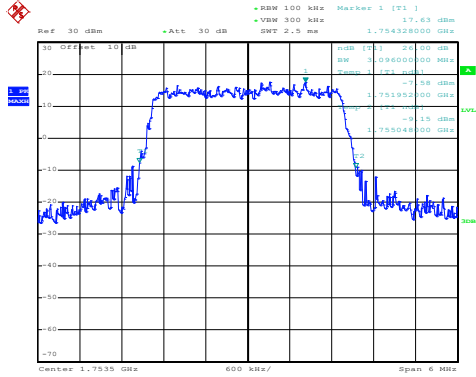
QPSK



Date: 28.AUG.2020 18:35:05

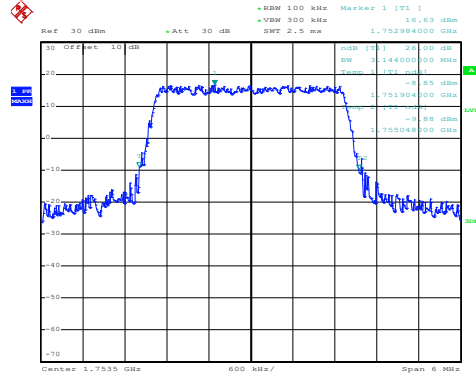
Middle channel

16QAM



Date: 28.AUG.2020 18:35:27

QPSK

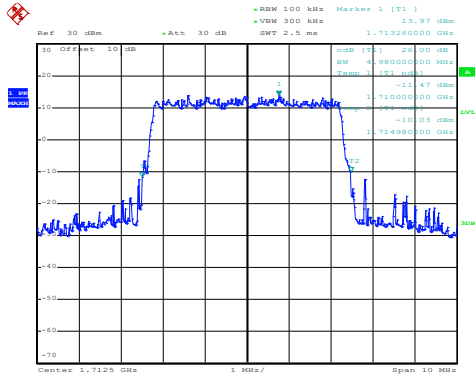


Date: 28.AUG.2020 18:35:23

Highest channel

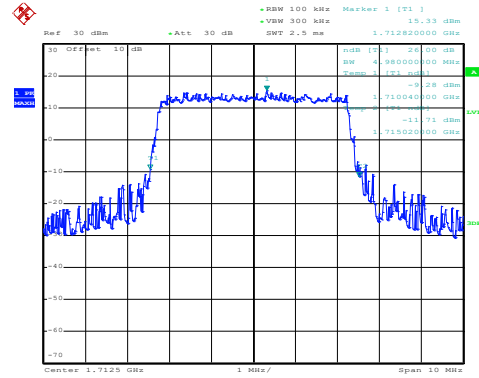
LTE Band 4: -26dBc bandwidth  
BW: 5MHz

16QAM



Date: 28.AUG.2020 18:37:15

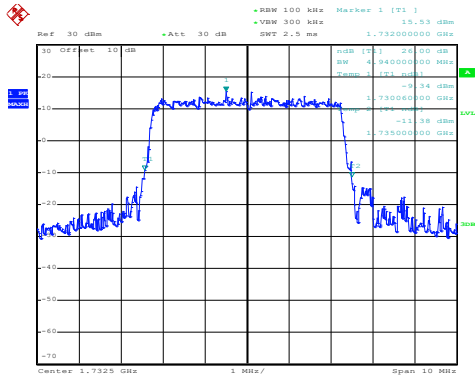
QPSK



Date: 28.AUG.2020 18:37:11

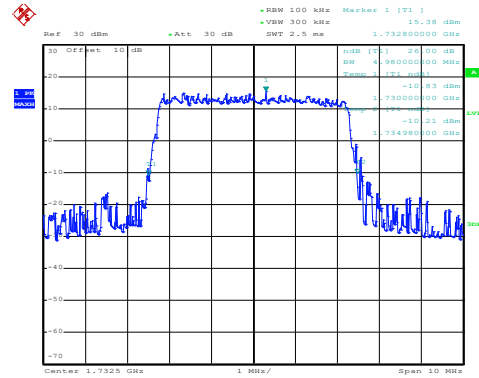
Lowest channel

16QAM



Date: 28.AUG.2020 18:37:28

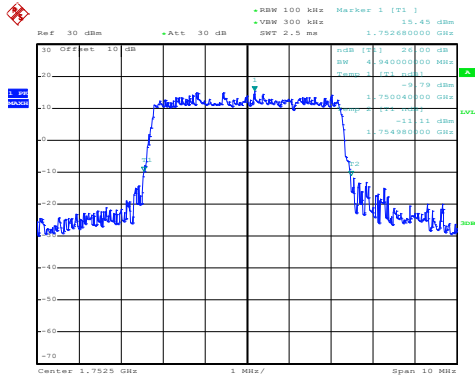
QPSK



Date: 28.AUG.2020 18:37:24

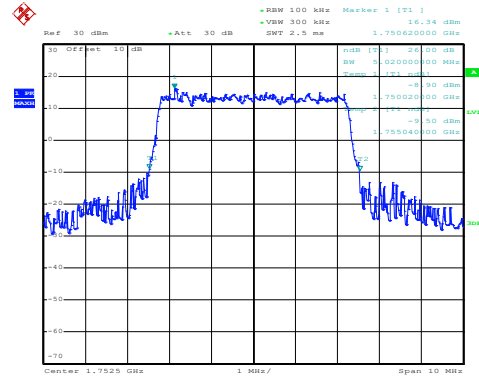
Middle channel

16QAM



Date: 28.AUG.2020 18:38:11

QPSK



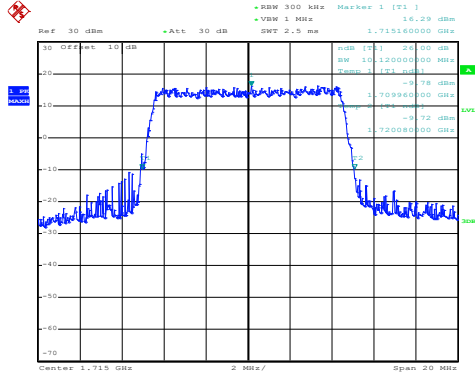
Date: 28.AUG.2020 18:38:06

Highest channel



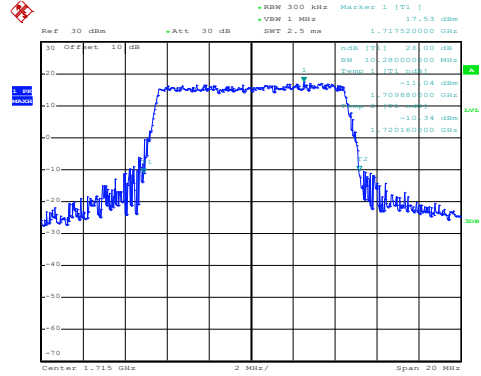
LTE Band 4: -26dBc bandwidth  
BW: 10MHz

16QAM



Date: 28.AUG.2020 18:38:44

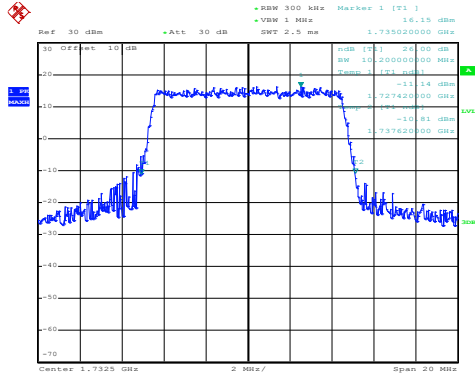
QPSK



Date: 28.AUG.2020 18:38:40

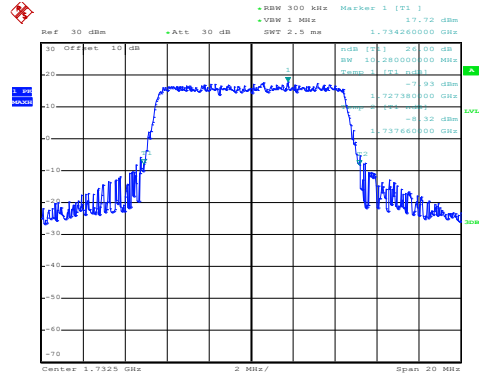
Lowest channel

16QAM



Date: 28.AUG.2020 18:39:19

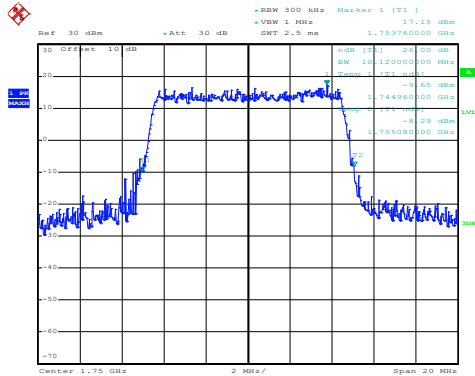
QPSK



Date: 28.AUG.2020 18:39:15

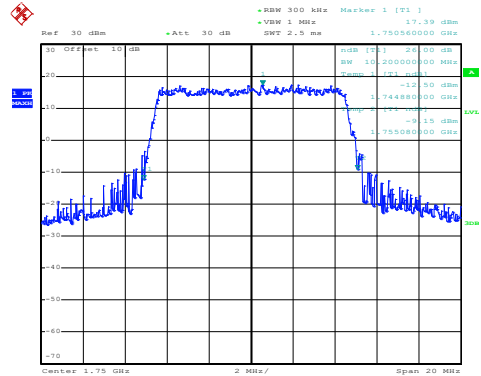
Middle channel

16QAM



Date: 28.AUG.2020 18:39:36

QPSK

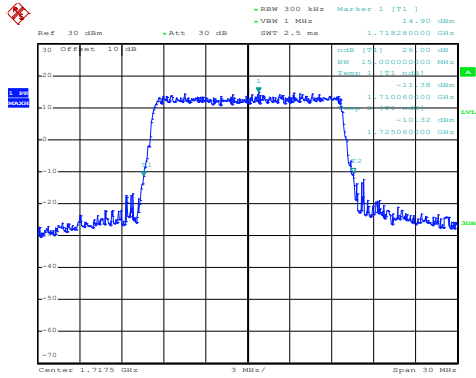


Date: 28.AUG.2020 18:39:32

Highest channel

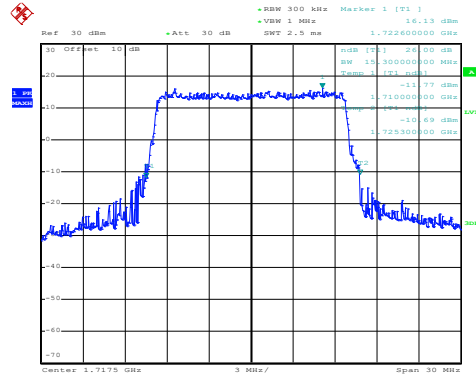
LTE Band 4: -26dBc bandwidth  
BW: 15MHz

16QAM



Date: 28.AUG.2020 18:40:24

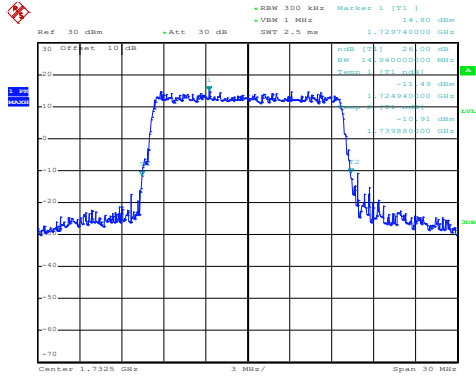
QPSK



Date: 28.AUG.2020 18:40:19

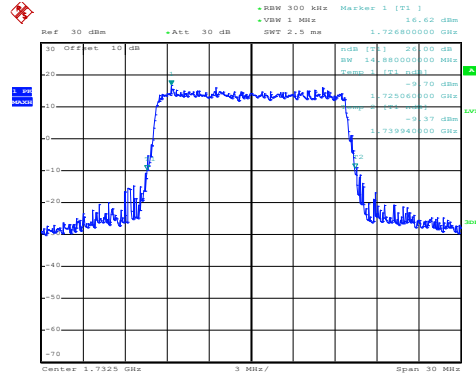
Lowest channel

16QAM



Date: 28.AUG.2020 18:40:39

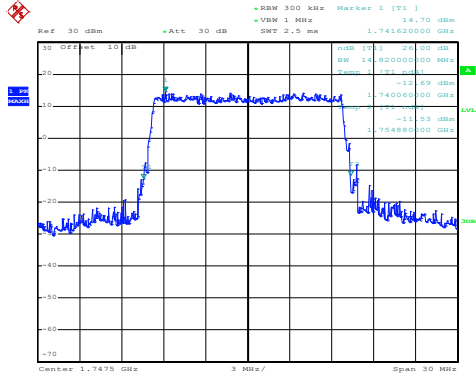
QPSK



Date: 28.AUG.2020 18:40:35

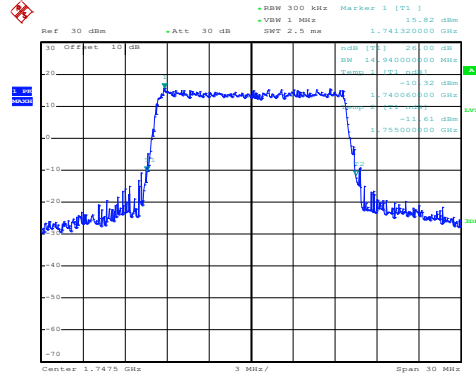
Middle channel

16QAM



Date: 28.AUG.2020 18:41:16

QPSK

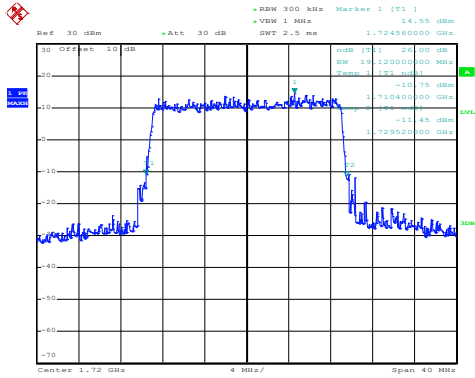


Date: 28.AUG.2020 18:41:12

Highest channel

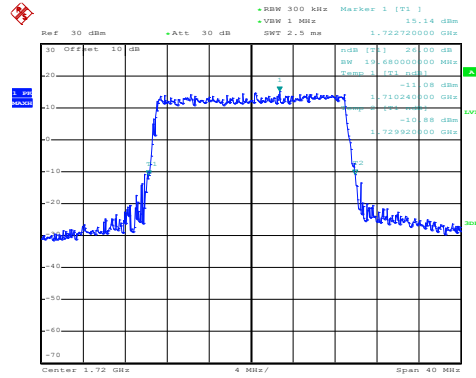
LTE Band 4: -26dBc bandwidth  
BW: 20MHz

16QAM



Date: 28.AUG.2020 18:41:41

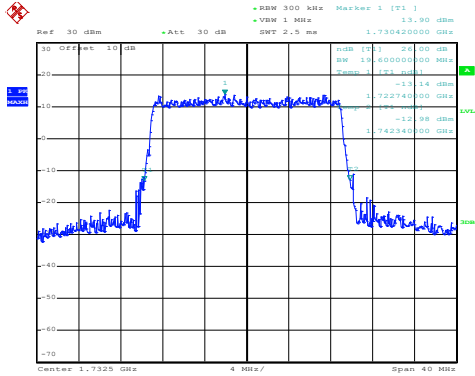
QPSK



Date: 28.AUG.2020 18:41:37

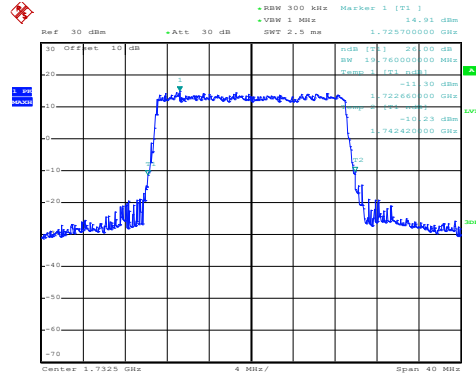
Lowest channel

16QAM



Date: 28.AUG.2020 18:42:17

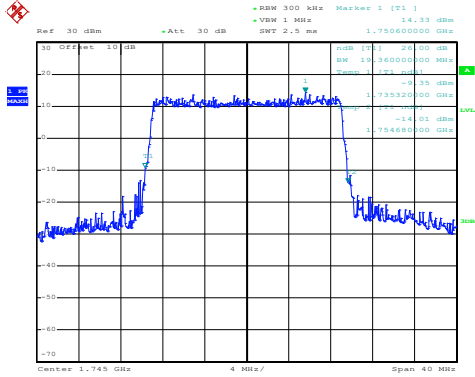
QPSK



Date: 28.AUG.2020 18:42:13

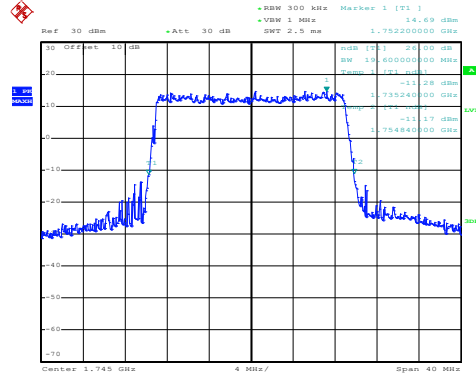
Middle channel

16QAM



Date: 28.AUG.2020 18:42:32

QPSK

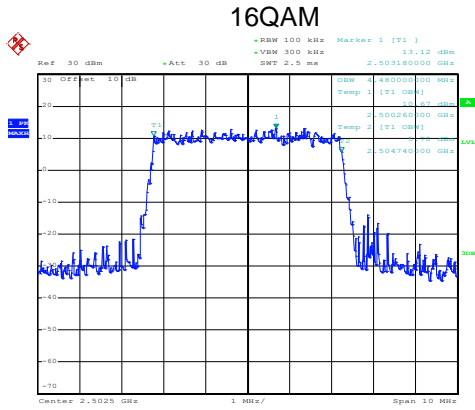


Date: 28.AUG.2020 18:42:28

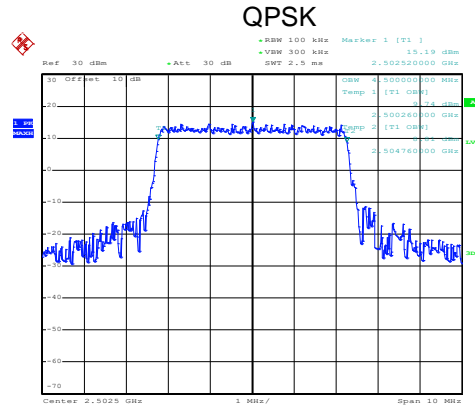
Highest channel

LTE-Band 7 part:

LTE Band 7: 99% Occupy bandwidth  
BW: 5MHz

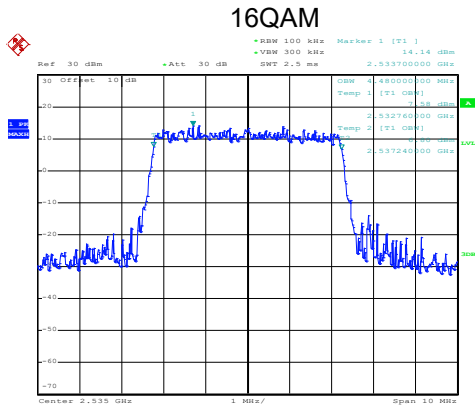


Date: 28.AUG.2020 18:47:54

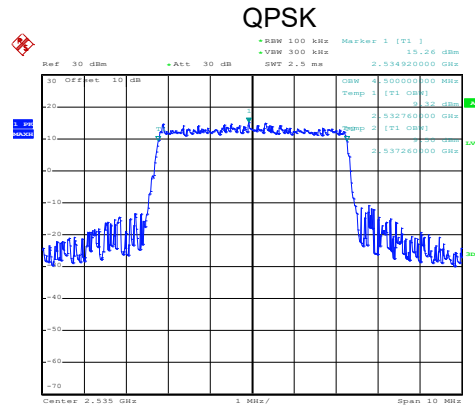


Date: 28.AUG.2020 18:47:48

Lowest channel

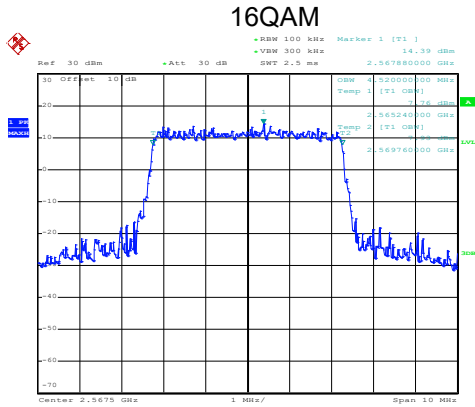


Date: 28.AUG.2020 18:48:35

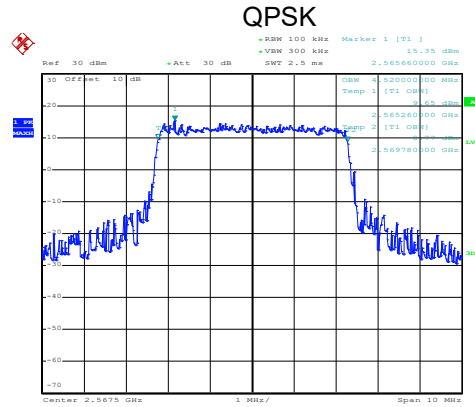


Date: 28.AUG.2020 18:48:31

Middle channel



Date: 28.AUG.2020 18:48:52

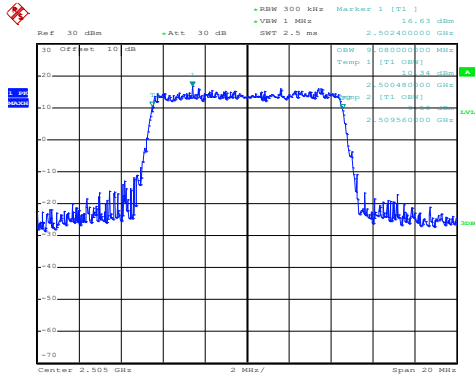


Date: 28.AUG.2020 18:48:49

Highest channel

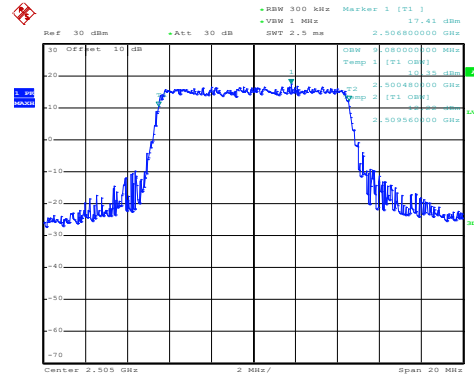
LTE Band 7: 99% Occupancy bandwidth  
BW: 10MHz

16QAM



Date: 28.AUG.2020 18:50:20

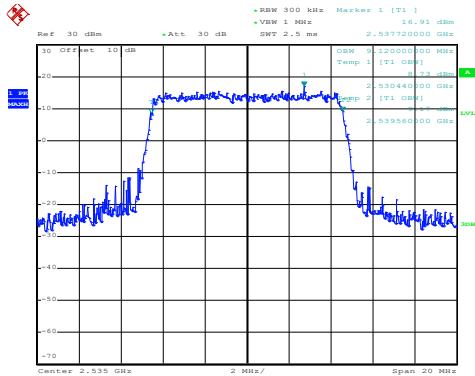
QPSK



Date: 28.AUG.2020 18:50:16

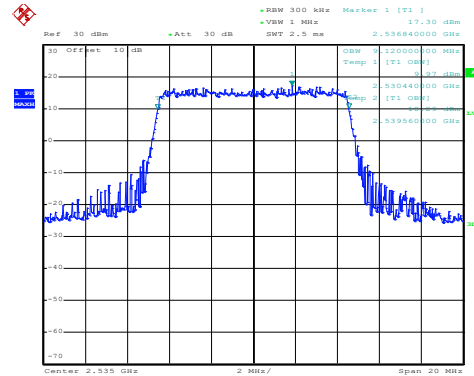
Lowest channel

16QAM



Date: 28.AUG.2020 18:50:34

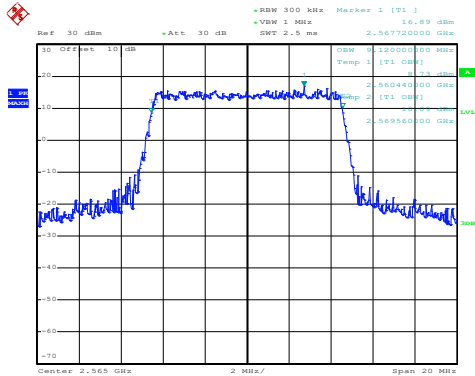
QPSK



Date: 28.AUG.2020 18:50:29

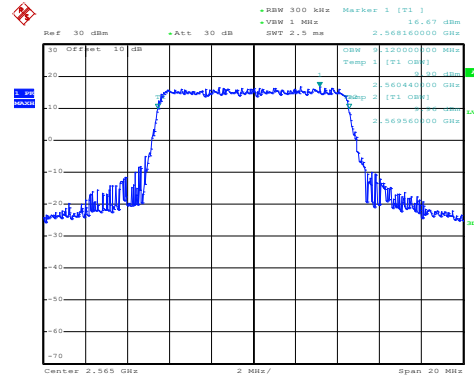
Middle channel

16QAM



Date: 28.AUG.2020 18:51:29

QPSK

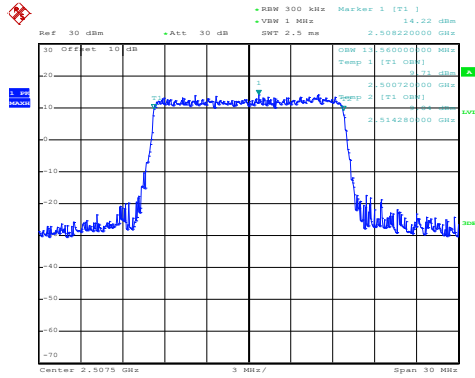


Date: 28.AUG.2020 18:51:25

Highest channel

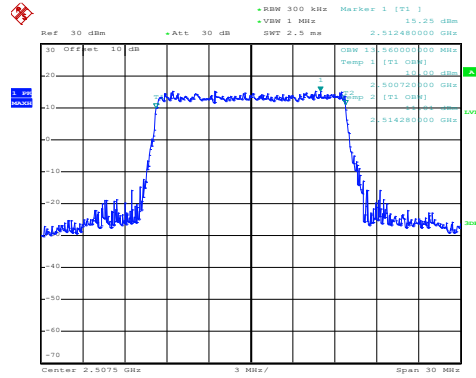
## LTE Band 7: 99% Occupancy bandwidth BW: 15MHz

16QAM



Date: 28.AUG.2020 18:52:14

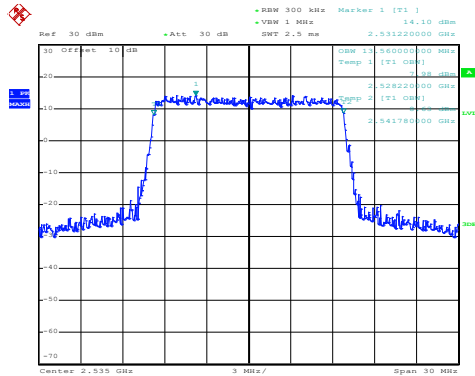
QPSK



Date: 28.AUG.2020 18:52:10

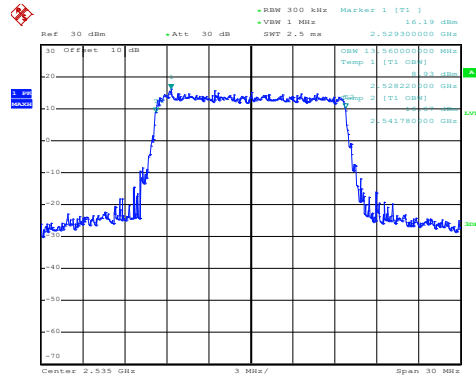
### Lowest channel

16QAM



Date: 28.AUG.2020 18:52:57

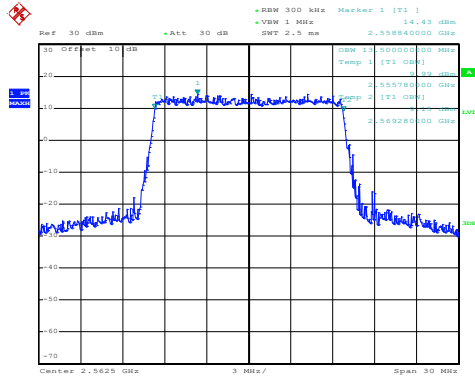
QPSK



Date: 28.AUG.2020 18:52:52

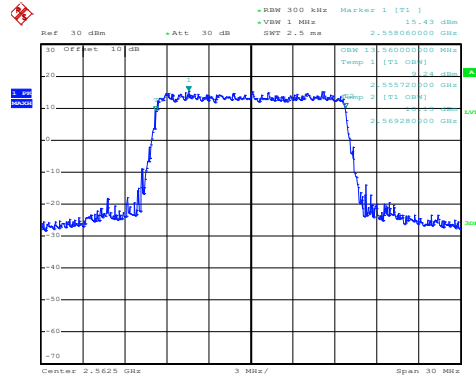
### Middle channel

16QAM



Date: 28.AUG.2020 18:53:19

QPSK

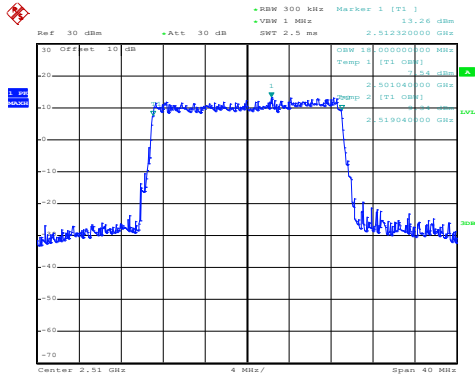


Date: 28.AUG.2020 18:53:14

### Highest channel

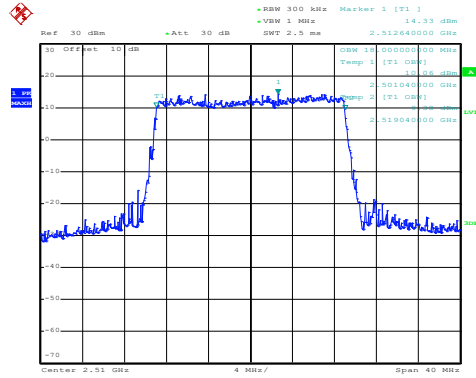
## LTE Band 7: 99% Occupancy bandwidth BW: 20MHz

16QAM



Date: 28.AUG.2020 18:54:17

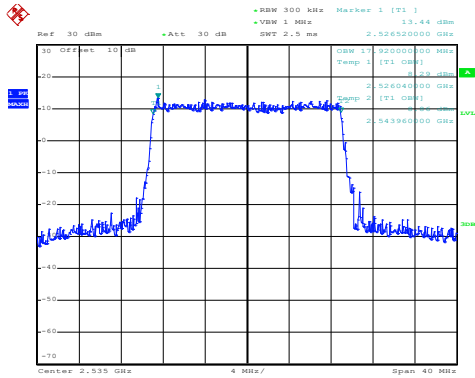
QPSK



Date: 28.AUG.2020 18:54:14

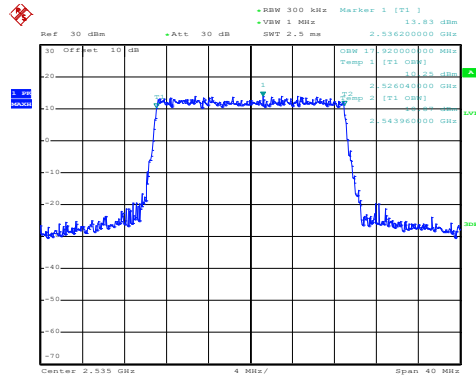
### Lowest channel

16QAM



Date: 28.AUG.2020 19:03:52

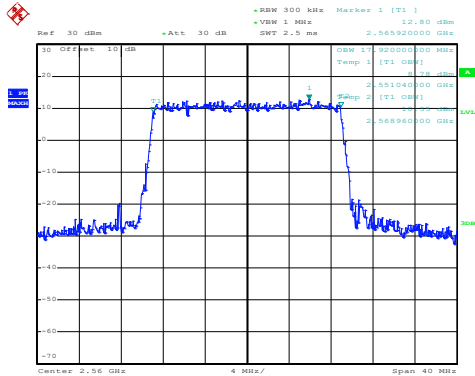
QPSK



Date: 28.AUG.2020 19:03:48

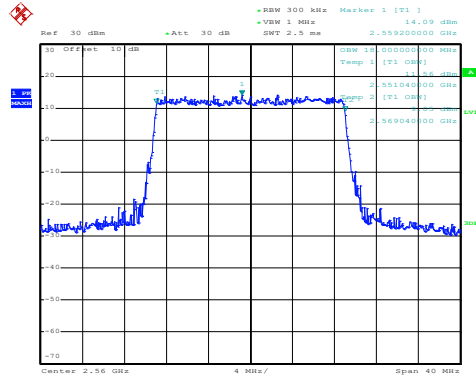
### Middle channel

16QAM



Date: 28.AUG.2020 19:04:35

QPSK

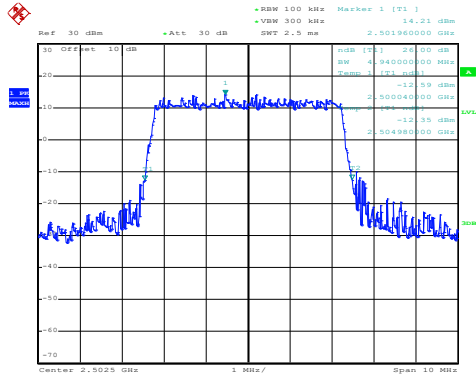


Date: 28.AUG.2020 19:04:31

### Highest channel

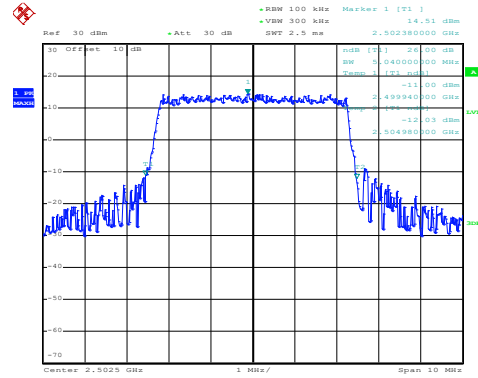
LTE Band 7: -26dBc bandwidth  
BW: 5MHz

16QAM



Date: 28.AUG.2020 18:48:07

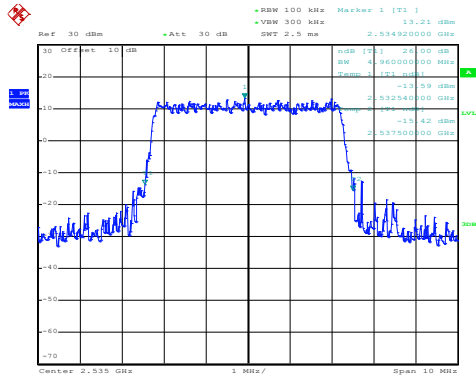
QPSK



Date: 28.AUG.2020 18:48:03

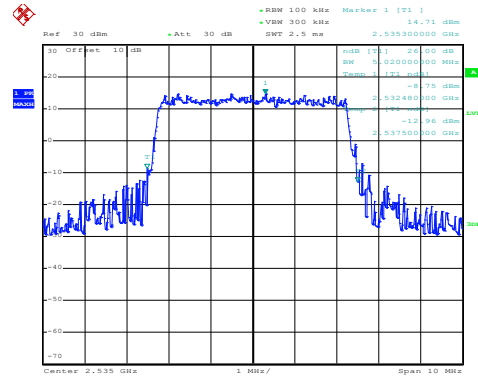
Lowest channel

16QAM



Date: 28.AUG.2020 18:48:23

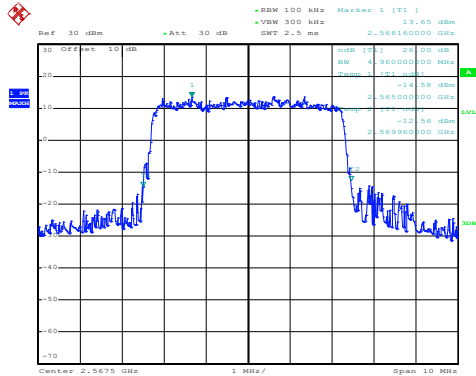
QPSK



Date: 28.AUG.2020 18:48:19

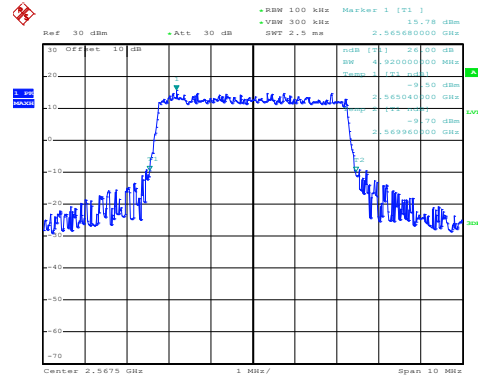
Middle channel

16QAM



Date: 28.AUG.2020 18:49:03

QPSK



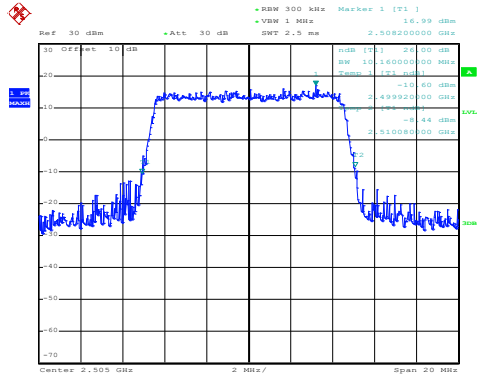
Date: 28.AUG.2020 18:48:59

Highest channel



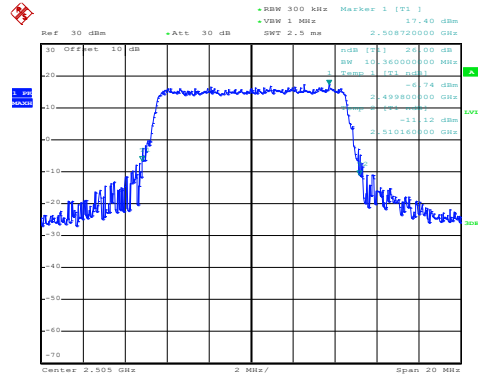
LTE Band 7: -26dBc bandwidth  
BW: 10MHz

16QAM



Date: 28.AUG.2020 18:50:08

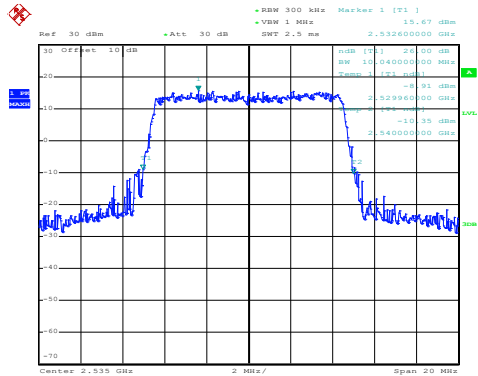
QPSK



Date: 28.AUG.2020 18:50:04

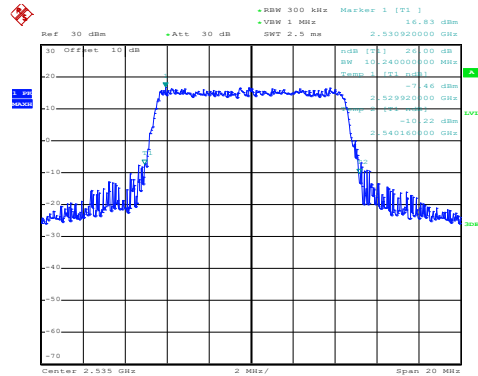
Lowest channel

16QAM



Date: 28.AUG.2020 18:50:45

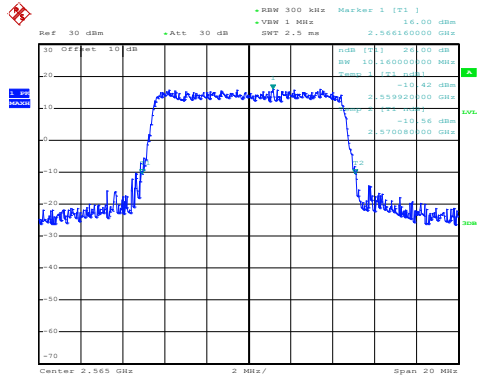
QPSK



Date: 28.AUG.2020 18:50:40

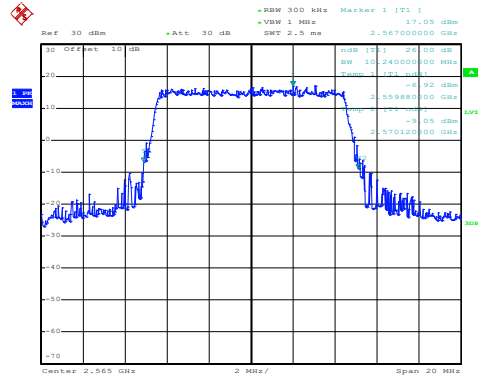
Middle channel

16QAM



Date: 28.AUG.2020 18:51:18

QPSK

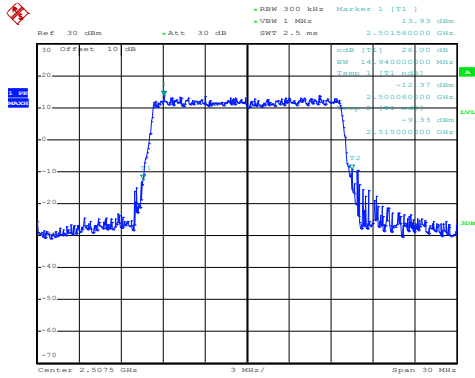


Date: 28.AUG.2020 18:51:13

Highest channel

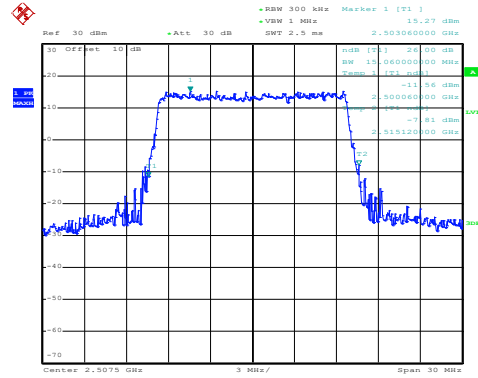
LTE Band 7: -26dBc bandwidth  
BW: 15MHz

16QAM



Date: 28.AUG.2020 18:52:26

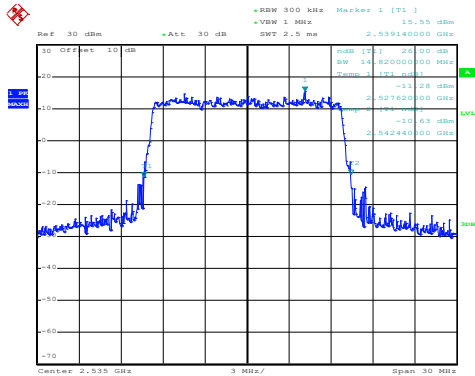
QPSK



Date: 28.AUG.2020 18:52:22

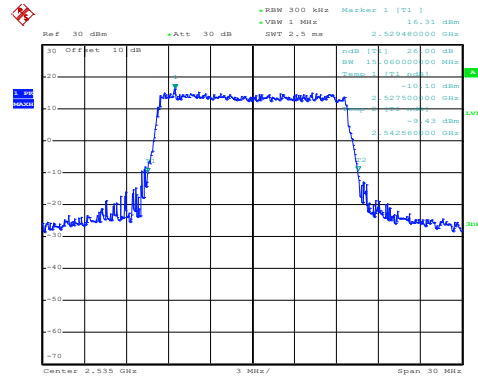
Lowest channel

16QAM



Date: 28.AUG.2020 18:52:46

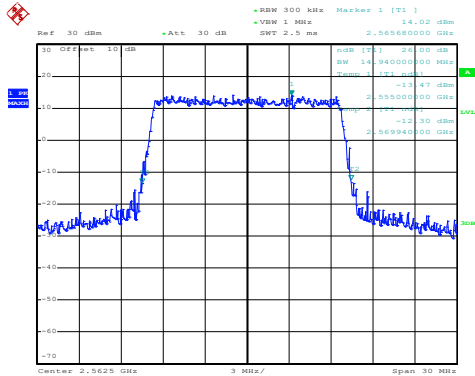
QPSK



Date: 28.AUG.2020 18:52:41

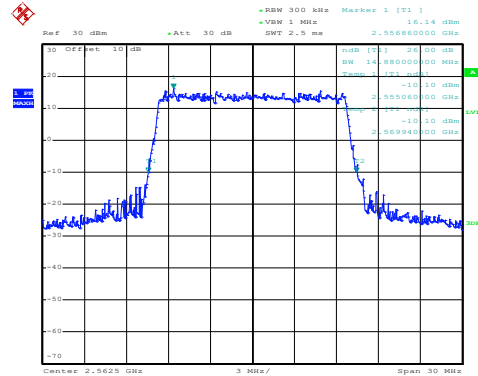
Middle channel

16QAM



Date: 28.AUG.2020 18:53:29

QPSK

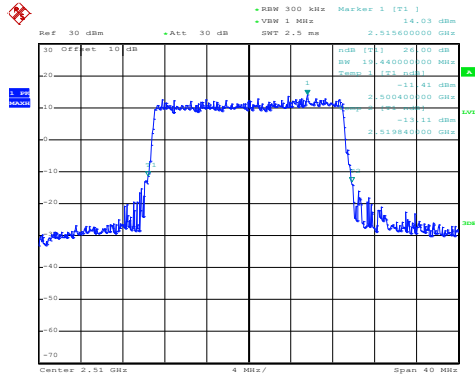


Date: 28.AUG.2020 18:53:25

Highest channel

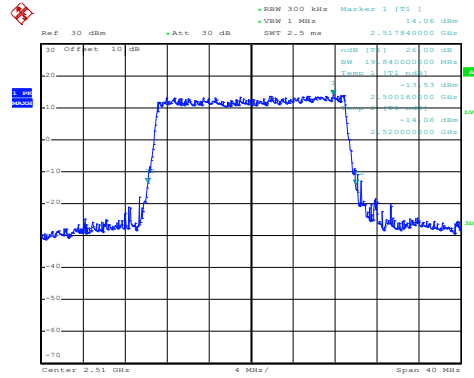
LTE Band 7: -26dBc bandwidth  
BW: 20MHz

16QAM



Date: 28.AUG.2020 18:54:07

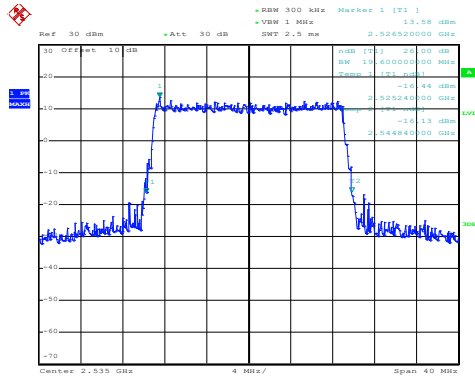
QPSK



Date: 28.AUG.2020 18:54:03

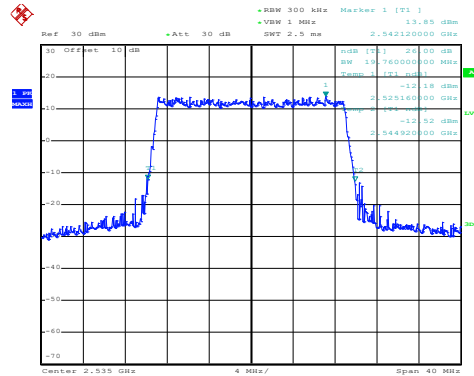
Lowest channel

16QAM



Date: 28.AUG.2020 19:04:02

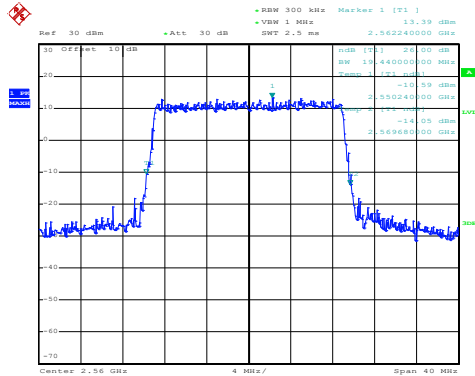
QPSK



Date: 28.AUG.2020 19:03:58

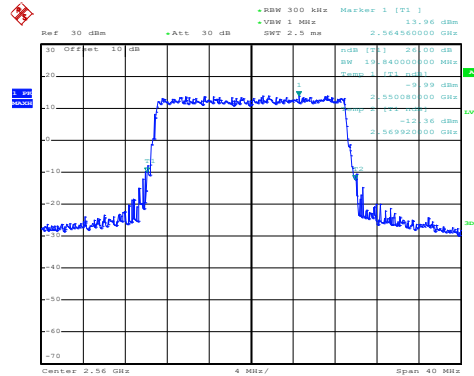
Middle channel

16QAM



Date: 28.AUG.2020 19:04:24

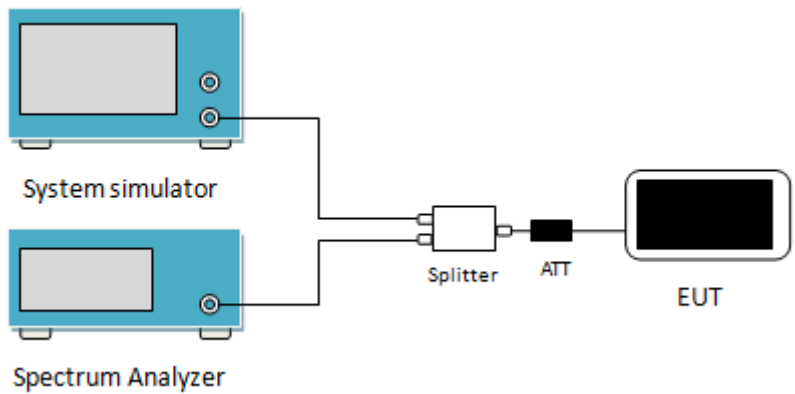
QPSK



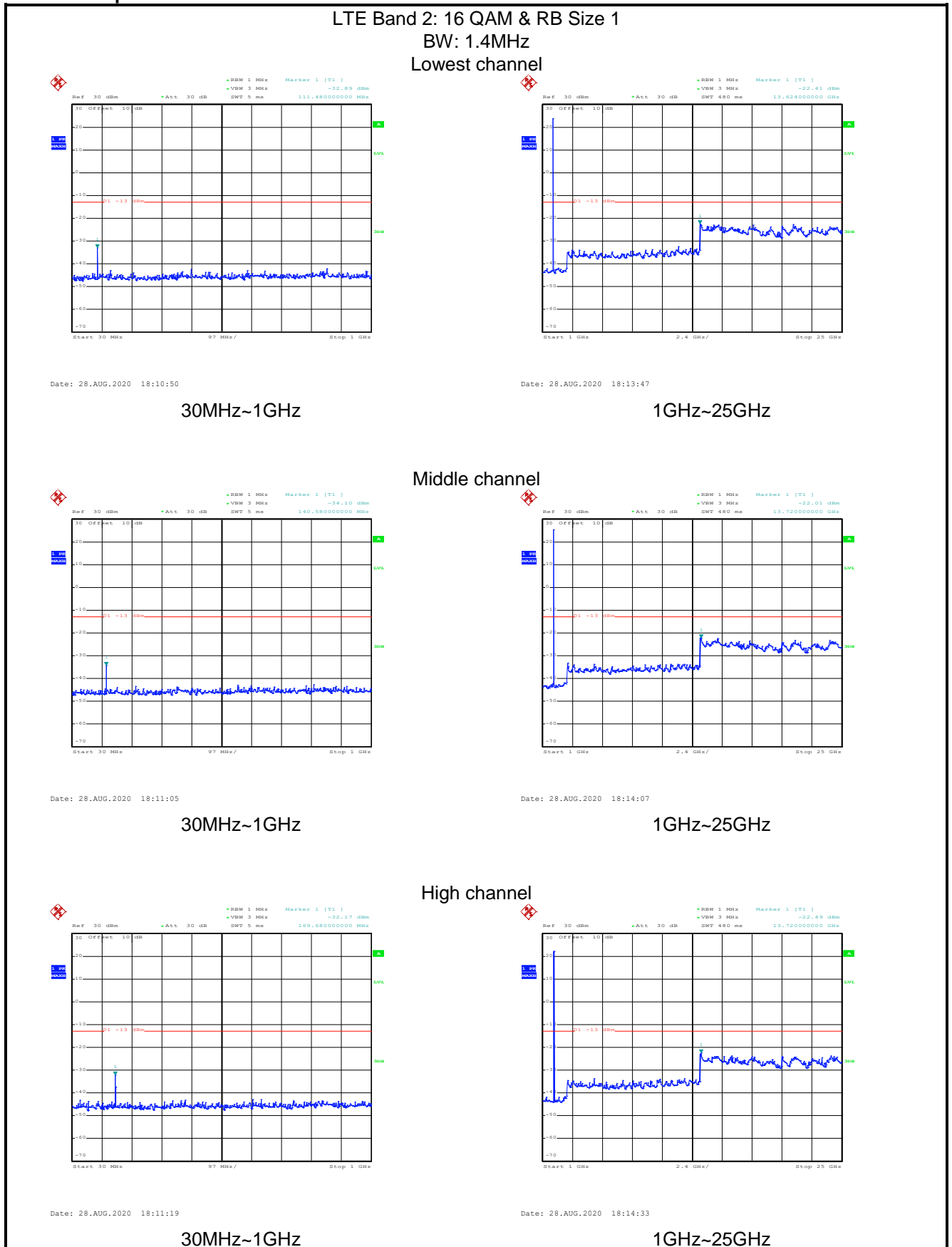
Date: 28.AUG.2020 19:04:20

Highest channel

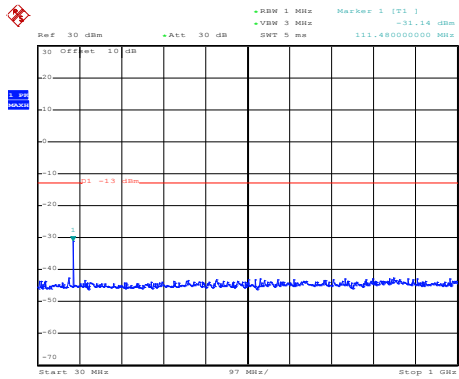
### 6.4 Out of band emission at antenna terminals

Test Requirement:	Part 24.238 (a), part 27.53(h), Part 27.53(m)
Limit:	<p>LTE Band 2 &amp; 4: The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least <math>43 + 10 \log_{10}(P)</math> dB (-13 dBm).</p> <p>LTE Band 7: For mobile digital stations, the attenuation factor shall be not less than <math>40 + 10 \log(P)</math> dB on all frequencies between the channel edge and 5 megahertz from the channel edge, <math>43 + 10 \log(P)</math> dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and <math>55 + 10 \log(P)</math> 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 <math>43 + 10 \log(P)</math> dB on all frequencies between 2490.5 MHz and 2496 MHz and <math>55 + 10 \log(P)</math> dB at or below 2490.5 MHz.</p>
Test Setup:	 <p>The diagram illustrates the test setup. On the left, there are two blue rectangular units: the top one is labeled 'System simulator' and the bottom one is labeled 'Spectrum Analyzer'. Both have a screen and control knobs. A single cable from the System simulator and another from the Spectrum Analyzer connect to a central white 'Splitter' box. From the splitter, one cable goes to a black 'ATT' (attenuator) block, and another goes to a black 'EUT' (Equipment Under Test) block, which is shaped like a mobile phone.</p>
Test Procedure:	<ol style="list-style-type: none"> <li>1 The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.</li> <li>2 For the out of band: For Band 5 &amp; 12 &amp; 17 set the RBW=100 kHz, VBW=300 kHz and for Band 2 &amp; 4 &amp; 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.</li> <li>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.</li> </ol>
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.

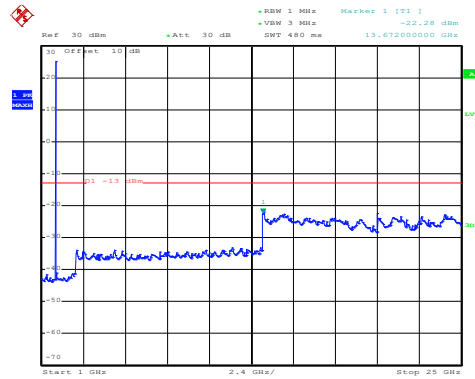
Test plots as follows (Conducted spurious emission) (worst case):  
 LTE Band 2 part:



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

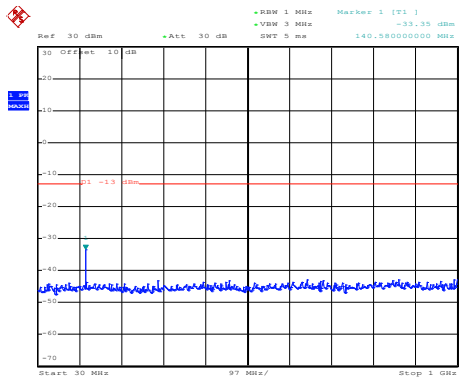


30MHz~1GHz

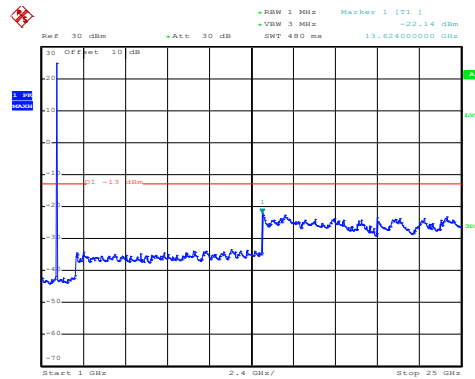


1GHz~25GHz

## Middle channel

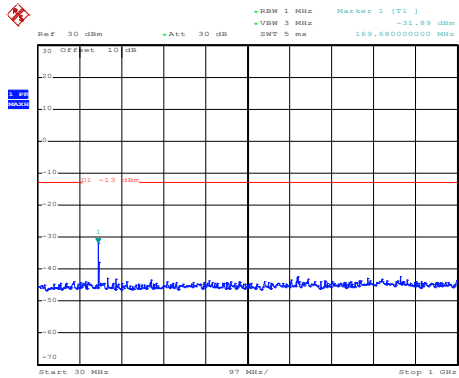


30MHz~1GHz

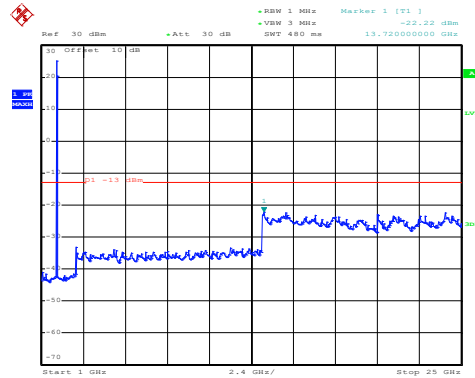


1GHz~25GHz

## High channel

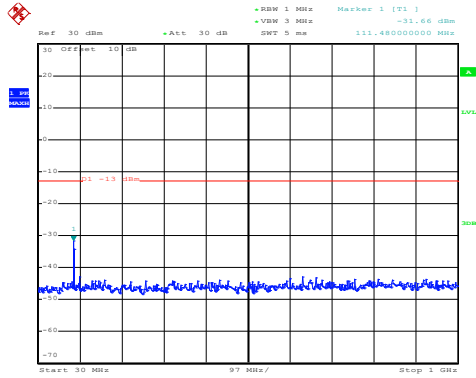


30MHz~1GHz

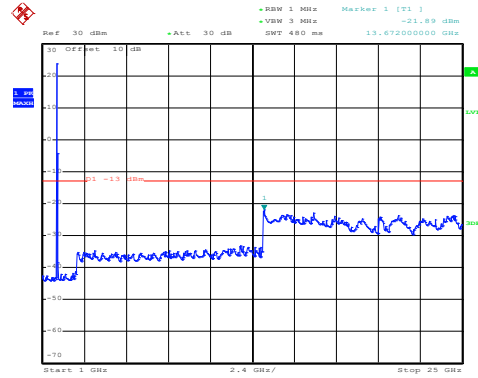


1GHz~25GHz

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

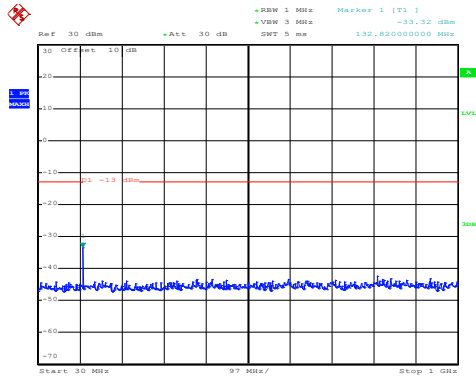


30MHz~1GHz

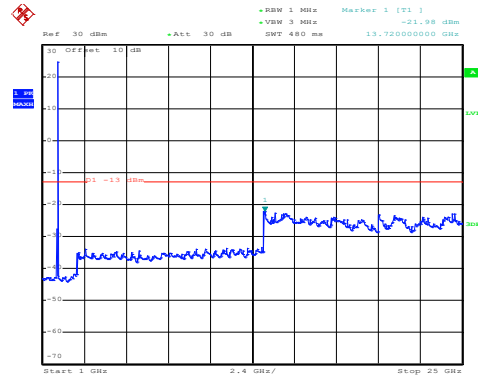


1GHz~25GHz

## Middle channel

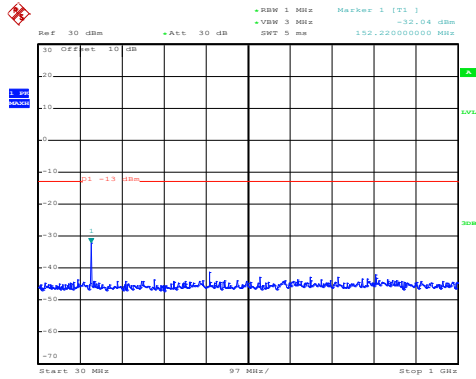


30MHz~1GHz

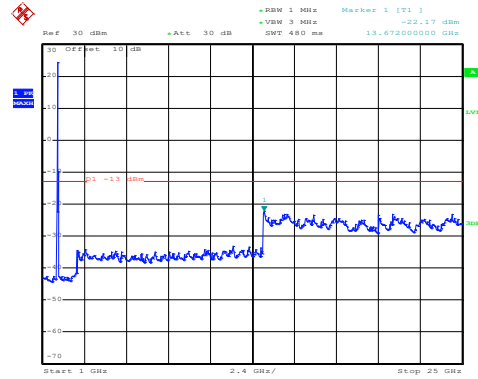


1GHz~25GHz

## High channel

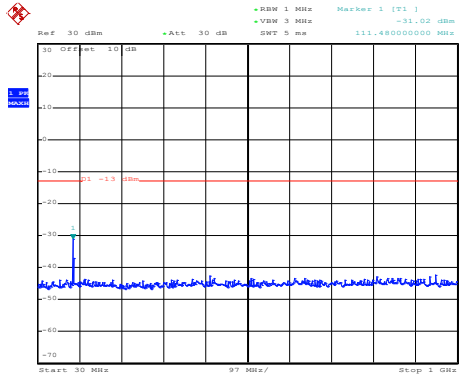


30MHz~1GHz

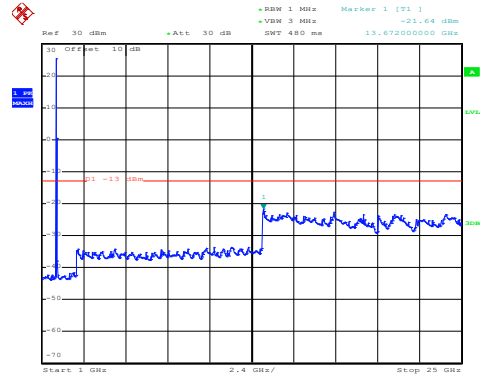


1GHz~25GHz

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

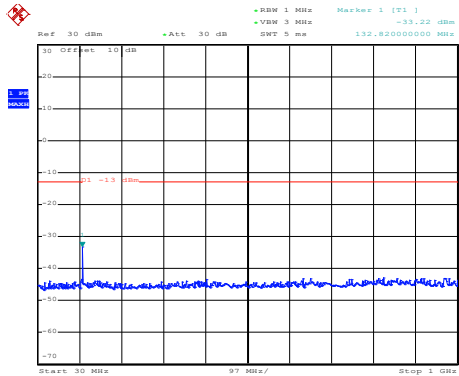


30MHz~1GHz

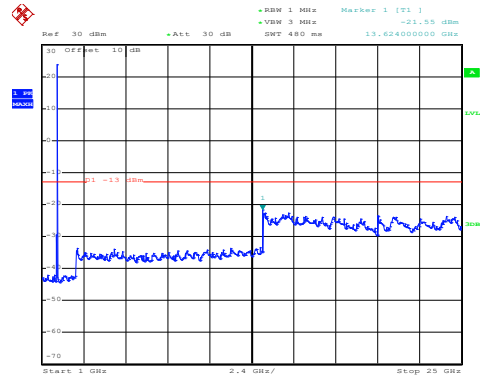


1GHz~25GHz

## Middle channel

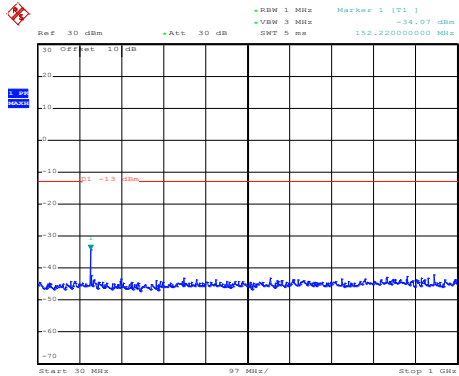


30MHz~1GHz

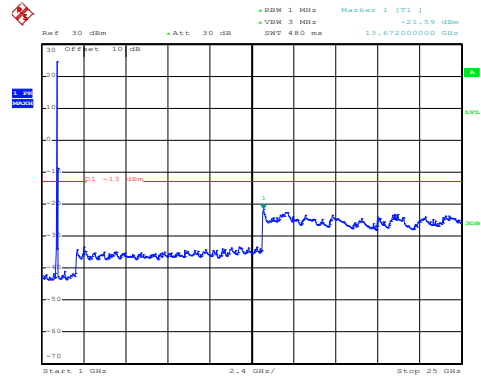


1GHz~25GHz

## High channel



30MHz~1GHz

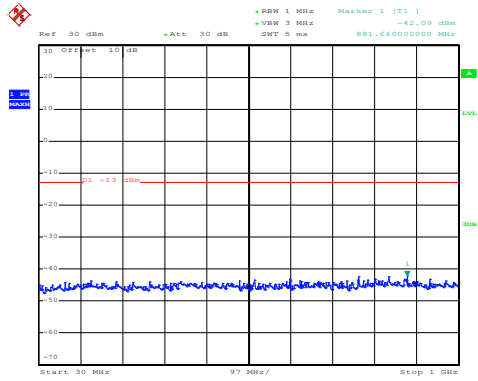


1GHz~25GHz



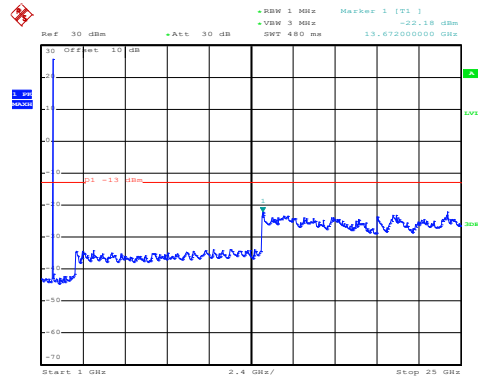
LTE Band 4 part:

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



Date: 28.AUG.2020 18:11:36

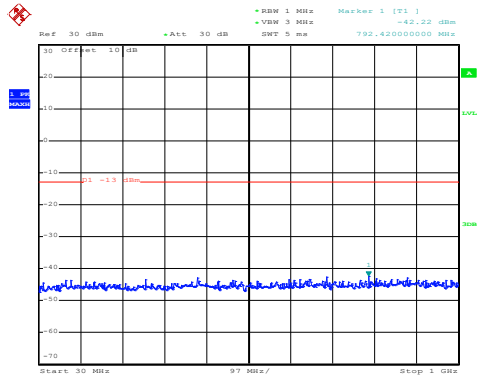
30MHz~1GHz



Date: 28.AUG.2020 18:13:18

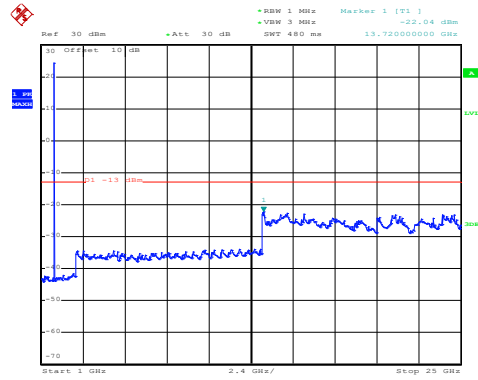
1GHz~25GHz

Middle channel



Date: 28.AUG.2020 18:11:50

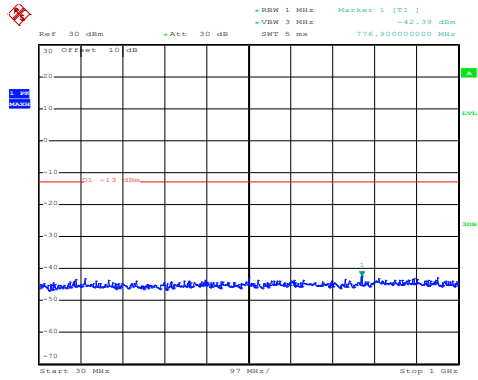
30MHz~1GHz



Date: 28.AUG.2020 18:12:59

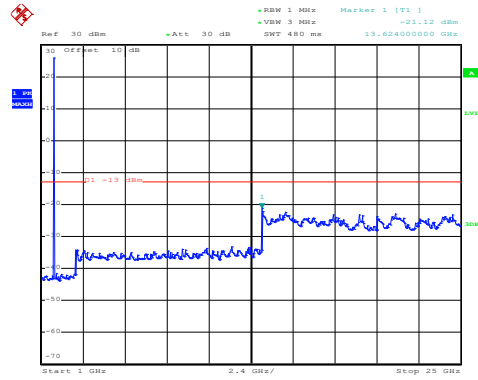
1GHz~25GHz

High channel



Date: 28.AUG.2020 18:12:05

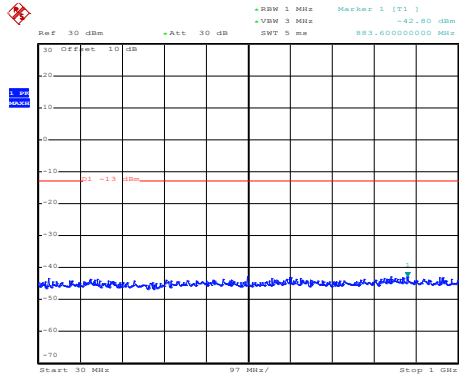
30MHz~1GHz



Date: 28.AUG.2020 18:12:41

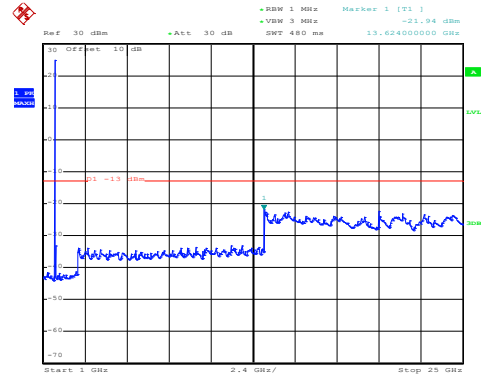
1GHz~25GHz

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



Date: 28.AUG.2020 18:11:31

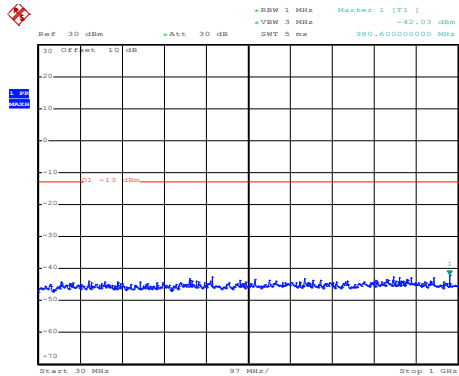
30MHz~1GHz



Date: 28.AUG.2020 18:13:11

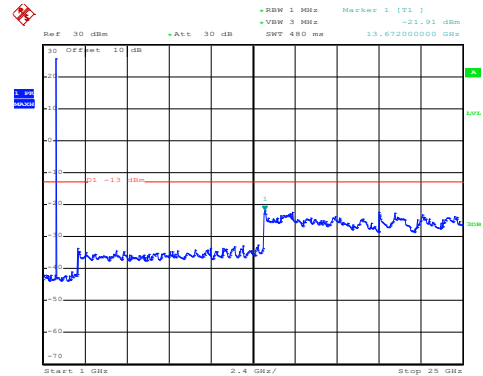
1GHz~25GHz

## Middle channel



Date: 28.AUG.2020 18:11:45

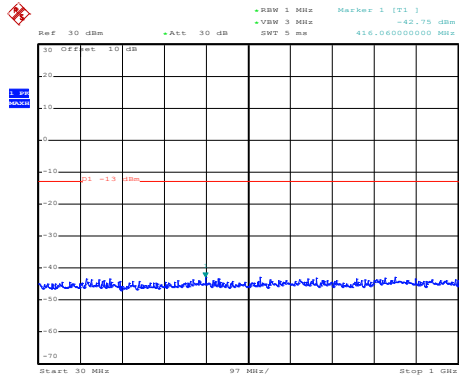
30MHz~1GHz



Date: 28.AUG.2020 18:12:51

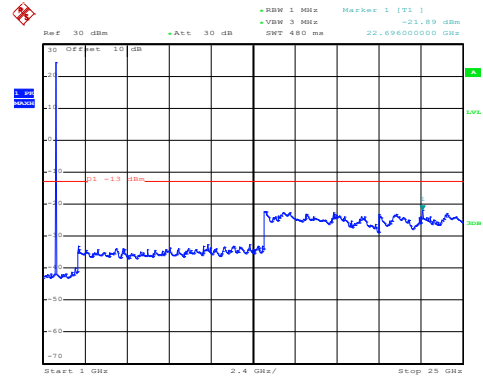
1GHz~25GHz

## High channel



Date: 28.AUG.2020 18:11:59

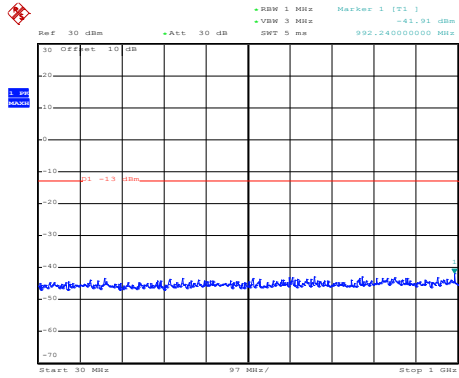
30MHz~1GHz



Date: 28.AUG.2020 18:12:30

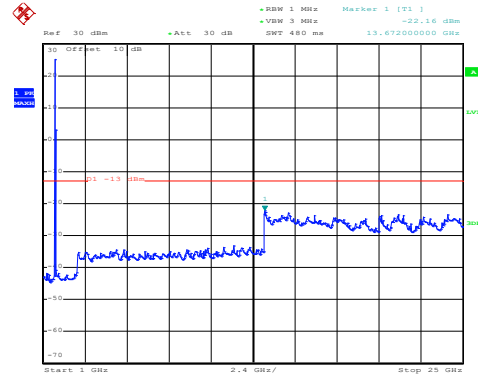
1GHz~25GHz

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



Date: 28.AUG.2020 18:17:44

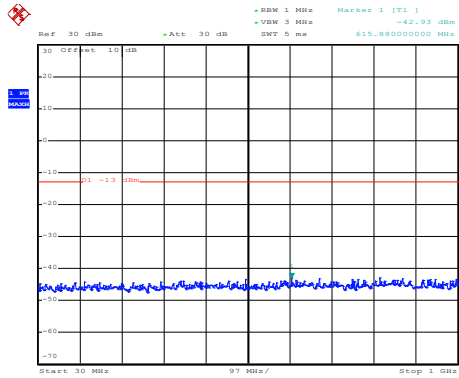
30MHz~1GHz



Date: 28.AUG.2020 18:16:06

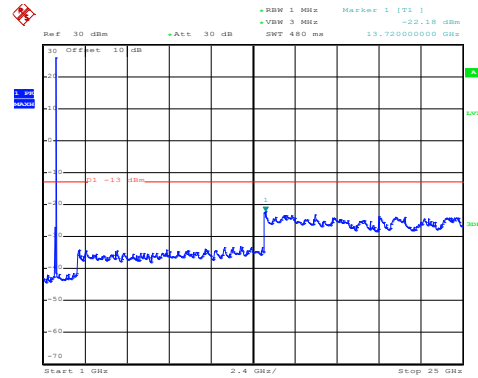
1GHz~25GHz

## Middle channel



Date: 28.AUG.2020 18:17:26

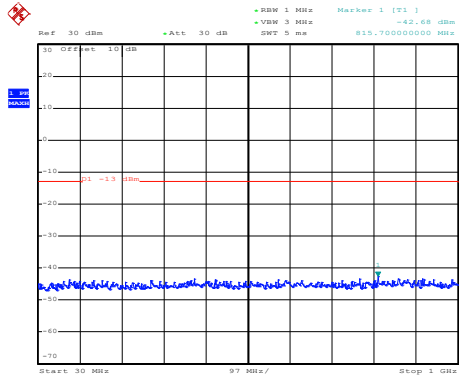
30MHz~1GHz



Date: 28.AUG.2020 18:16:24

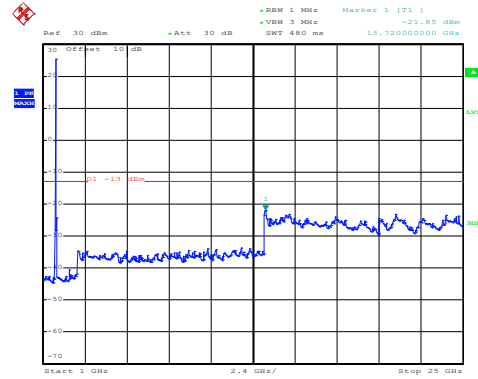
1GHz~25GHz

## High channel



Date: 28.AUG.2020 18:17:12

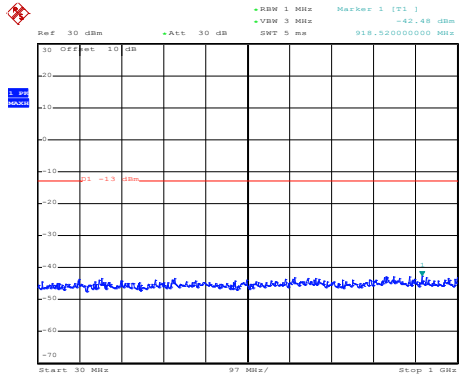
30MHz~1GHz



Date: 28.AUG.2020 18:16:52

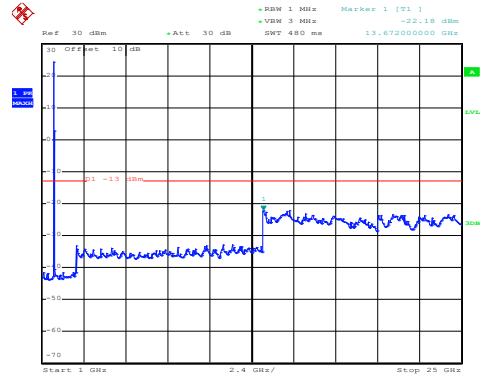
1GHz~25GHz

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



Date: 28.AUG.2020 18:17:36

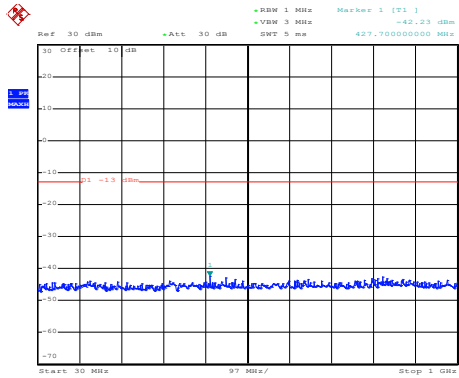
30MHz~1GHz



Date: 28.AUG.2020 18:16:00

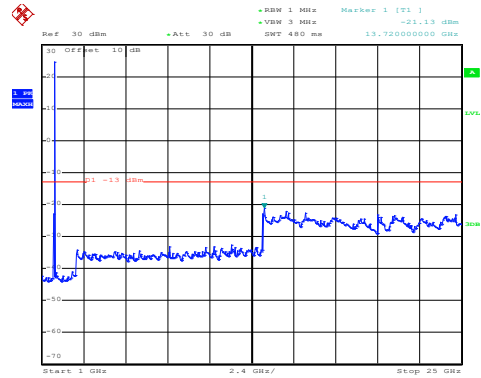
1GHz~25GHz

## Middle channel



Date: 28.AUG.2020 18:17:20

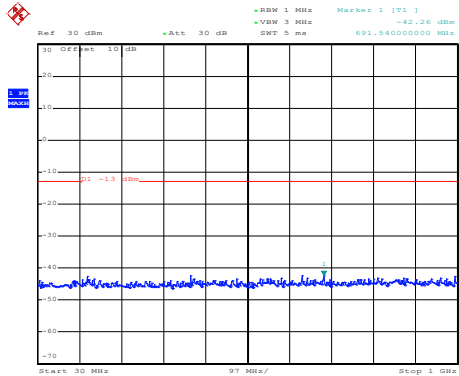
30MHz~1GHz



Date: 28.AUG.2020 18:16:16

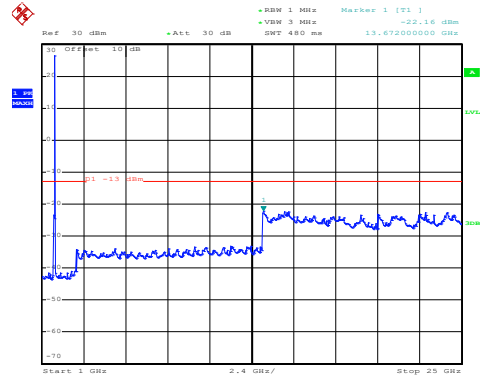
1GHz~25GHz

## High channel



Date: 28.AUG.2020 18:17:05

30MHz~1GHz

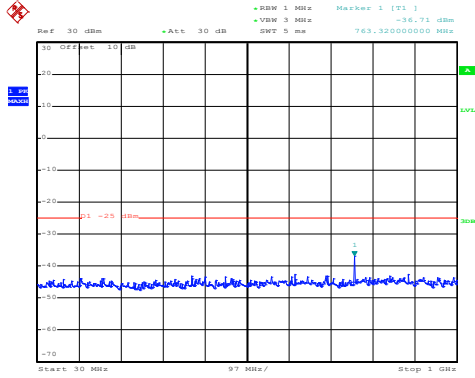


Date: 28.AUG.2020 18:16:45

1GHz~25GHz

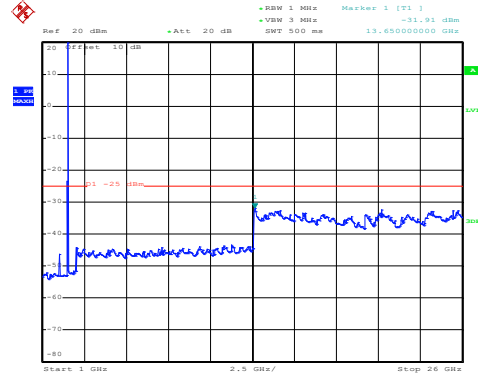
LTE Band 7 part:

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



Date: 28.AUG.2020 18:09:18

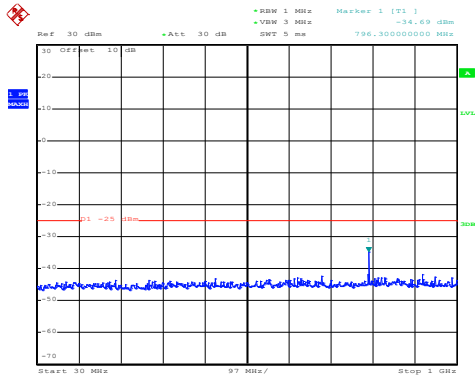
30MHz~1GHz



Date: 28.AUG.2020 18:07:37

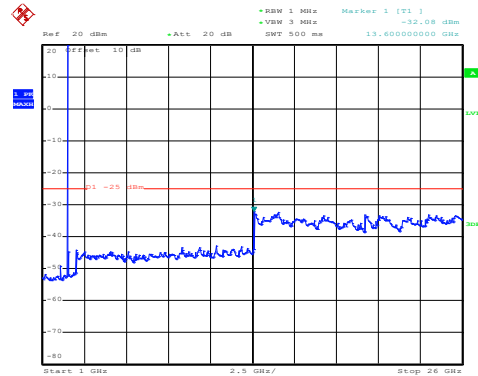
1GHz~26GHz

Middle channel



Date: 28.AUG.2020 18:09:04

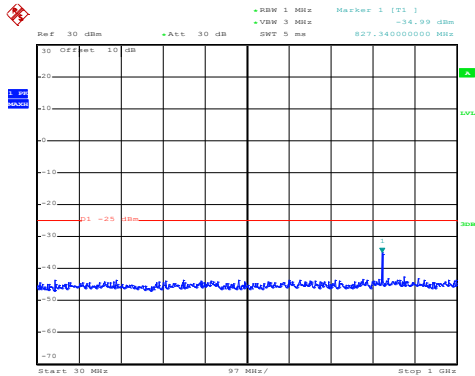
30MHz~1GHz



Date: 28.AUG.2020 18:08:07

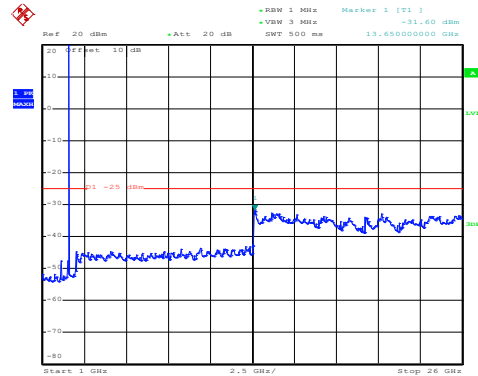
1GHz~26GHz

High channel



Date: 28.AUG.2020 18:08:51

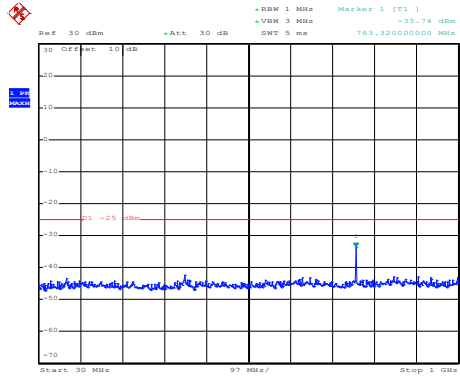
30MHz~1GHz



Date: 28.AUG.2020 18:08:30

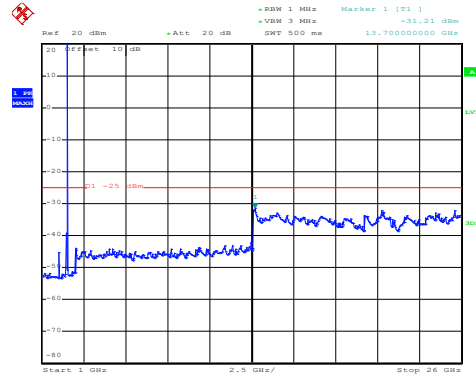
1GHz~26GHz

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



Date: 28.AUG.2020 18:09:12

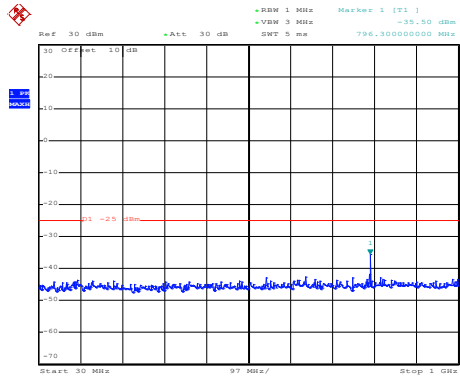
30MHz~1GHz



Date: 28.AUG.2020 18:07:26

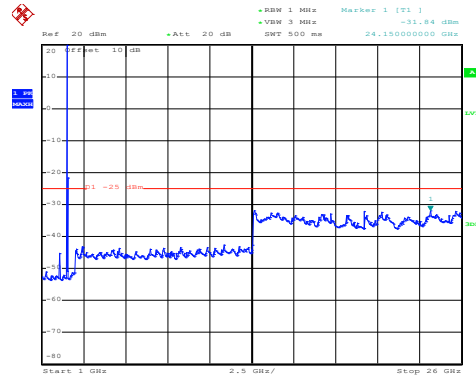
1GHz~26GHz

## Middle channel



Date: 28.AUG.2020 18:08:57

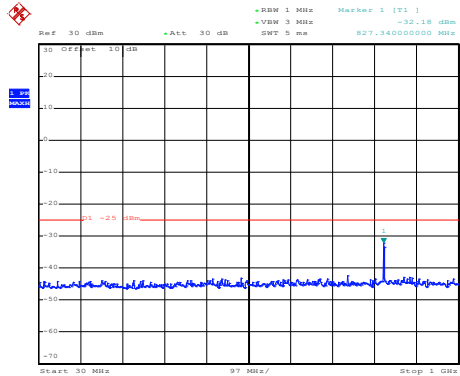
30MHz~1GHz



Date: 28.AUG.2020 18:07:56

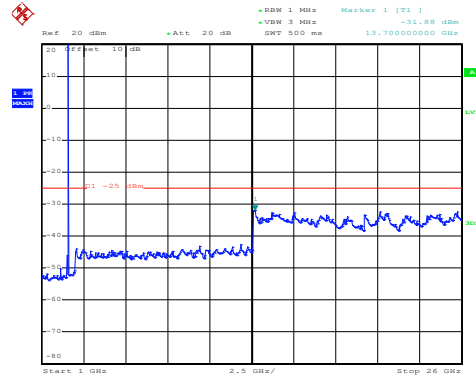
1GHz~26GHz

## High channel



Date: 28.AUG.2020 18:08:45

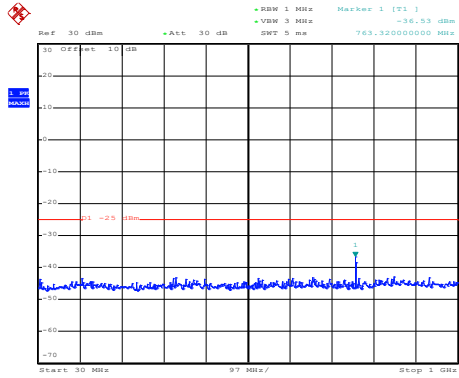
30MHz~1GHz



Date: 28.AUG.2020 18:08:21

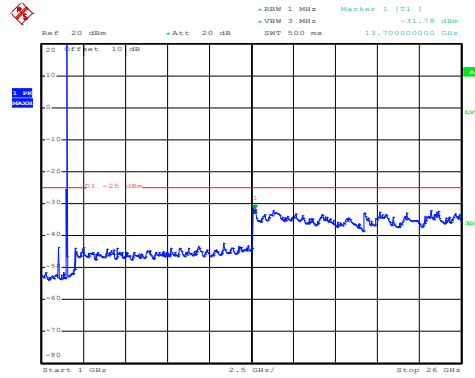
1GHz~26GHz

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



Date: 28.AUG.2020 18:05:45

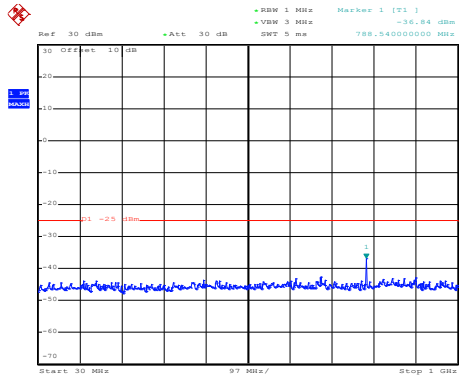
30MHz~1GHz



Date: 28.AUG.2020 18:06:20

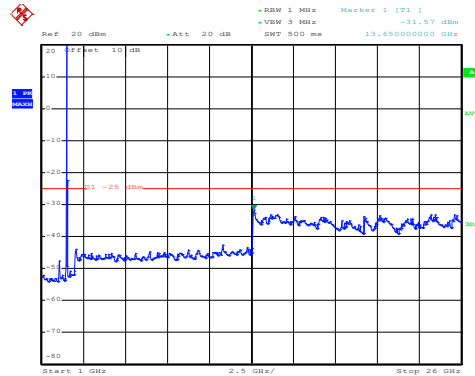
1GHz~26GHz

## Middle channel



Date: 28.AUG.2020 18:05:32

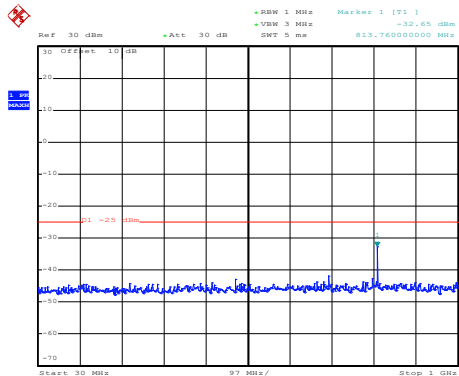
30MHz~1GHz



Date: 28.AUG.2020 18:06:41

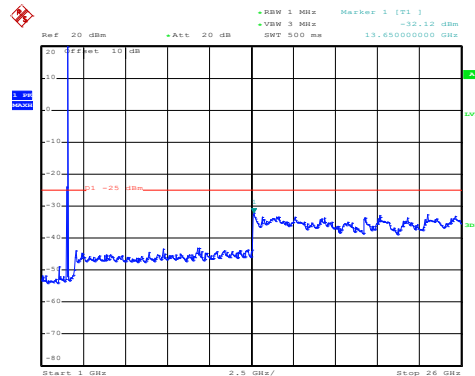
1GHz~26GHz

## High channel



Date: 28.AUG.2020 18:05:19

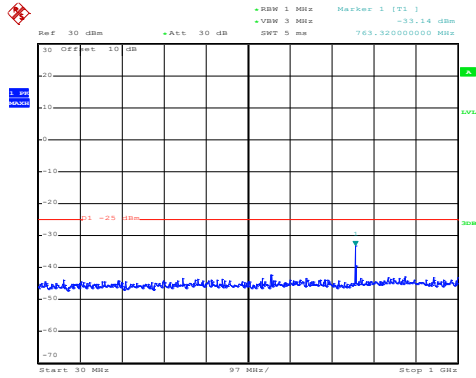
30MHz~1GHz



Date: 28.AUG.2020 18:07:01

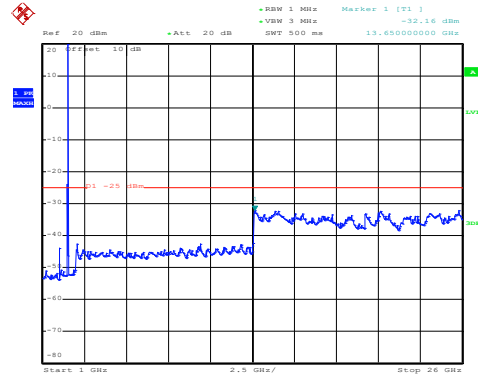
1GHz~26GHz

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



Date: 28.AUG.2020 18:05:40

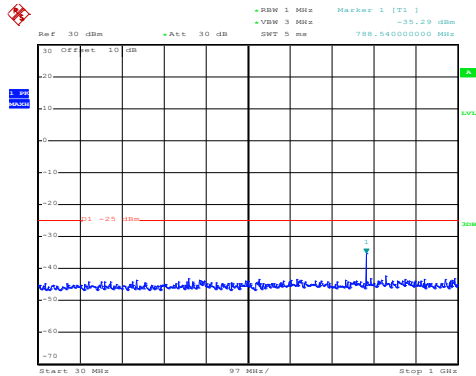
30MHz~1GHz



Date: 28.AUG.2020 18:06:06

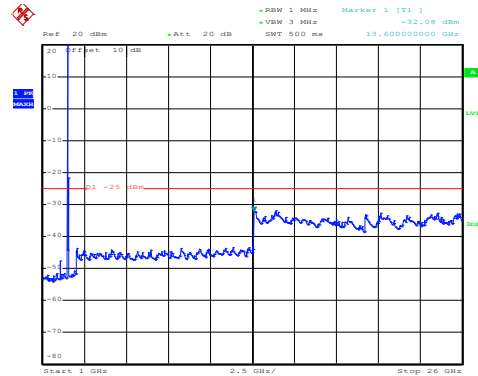
1GHz~26GHz

## Middle channel



Date: 28.AUG.2020 18:05:27

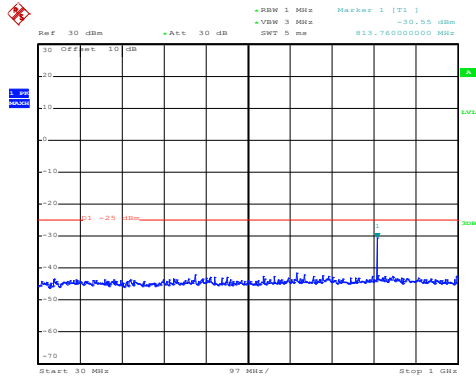
30MHz~1GHz



Date: 28.AUG.2020 18:06:32

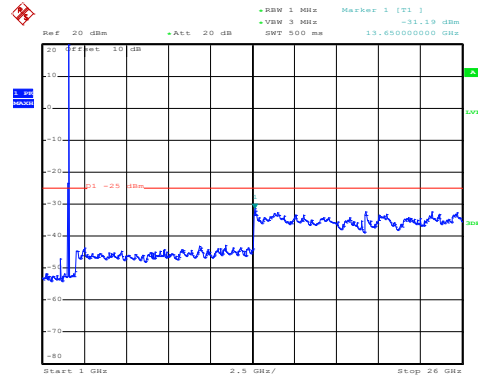
1GHz~26GHz

## High channel



Date: 28.AUG.2020 18:05:13

30MHz~1GHz



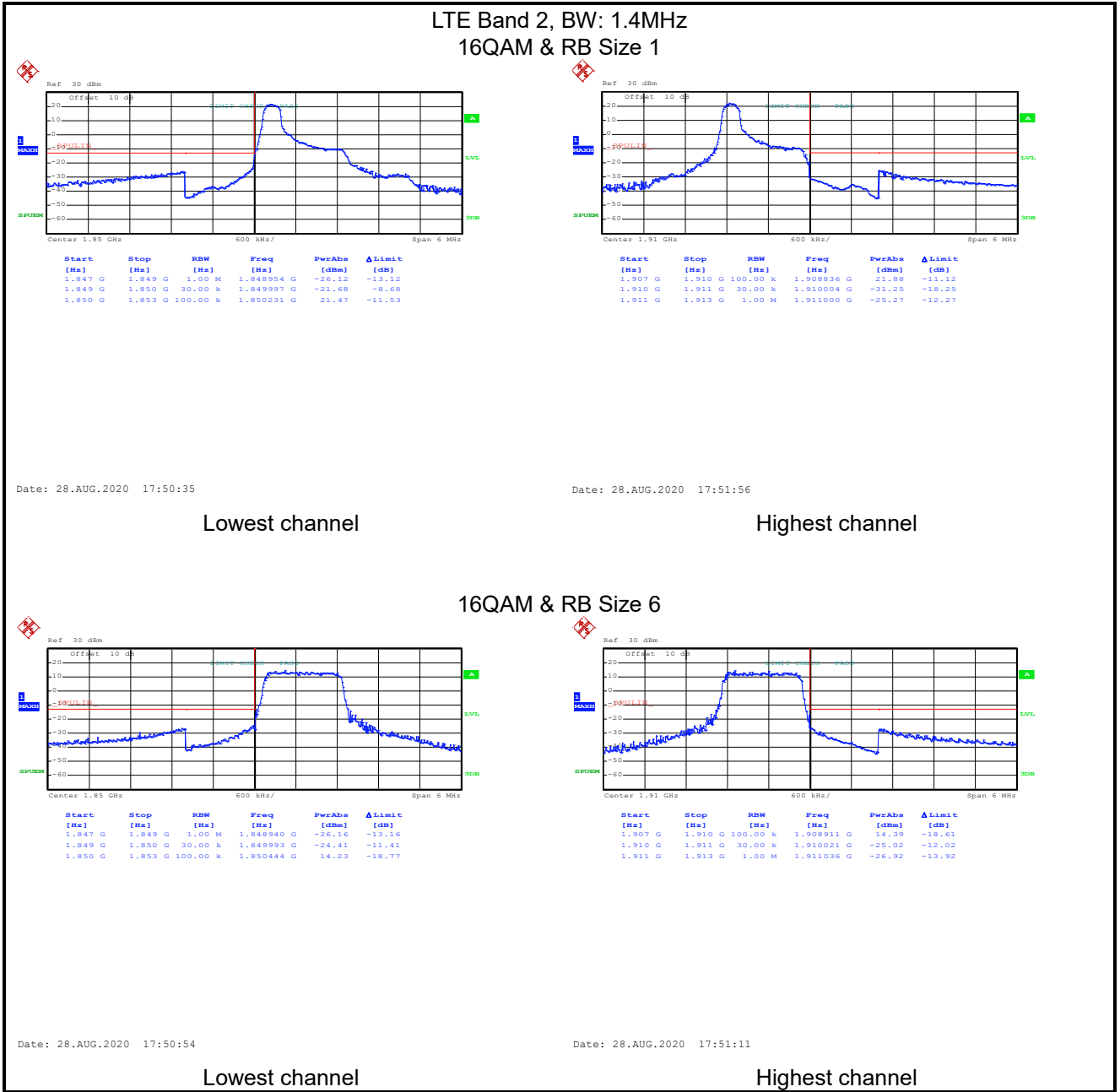
Date: 28.AUG.2020 18:06:54

1GHz~26GHz

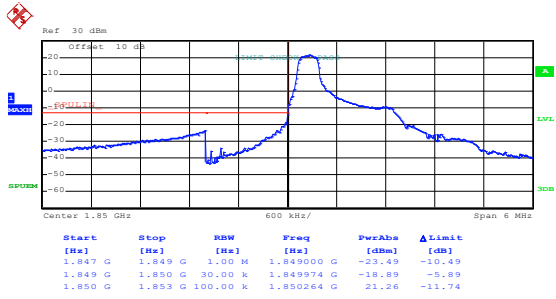


**Band edge emission:**

**LTE Band 2 part:**

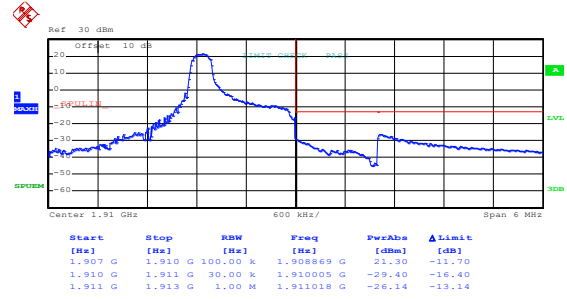


## LTE Band 2, BW: 1.4MHz QPSK & RB Size 1



Date: 28.AUG.2020 17:50:11

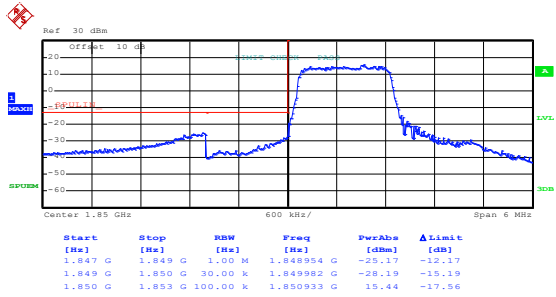
Lowest channel



Date: 28.AUG.2020 17:51:38

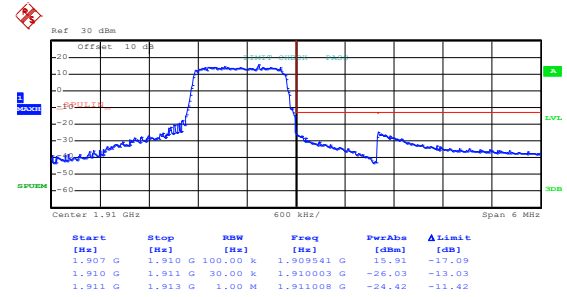
Highest channel

## QPSK & RB Size 6



Date: 28.AUG.2020 17:50:44

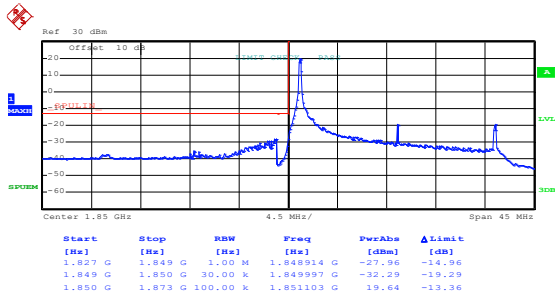
Lowest channel



Date: 28.AUG.2020 17:51:06

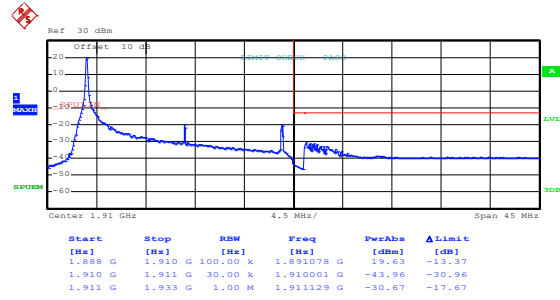
Highest channel

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



Date: 28.AUG.2020 17:53:21

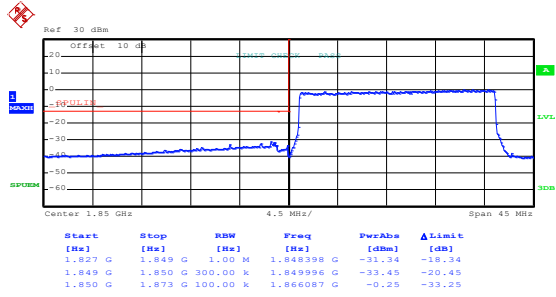
Lowest channel



Date: 28.AUG.2020 17:52:36

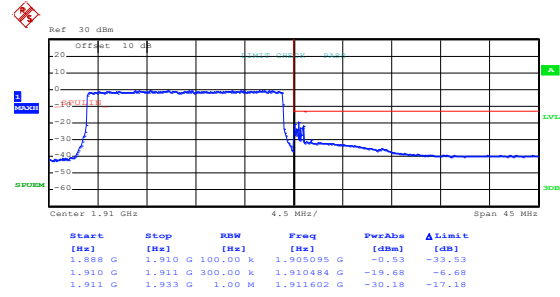
Highest channel

## 16QAM & RB Size 100



Date: 28.AUG.2020 17:53:38

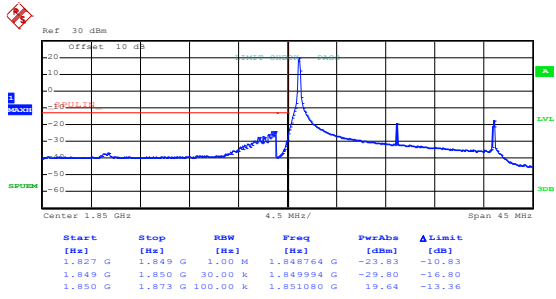
Lowest channel



Date: 28.AUG.2020 17:52:57

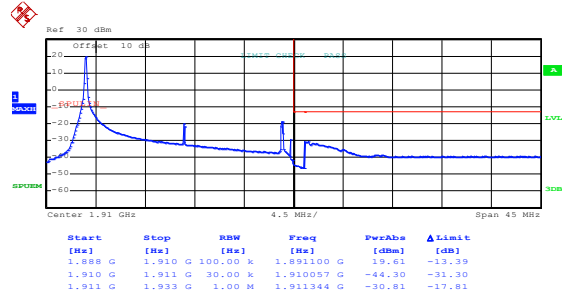
Highest channel

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



Date: 28.AUG.2020 17:53:12

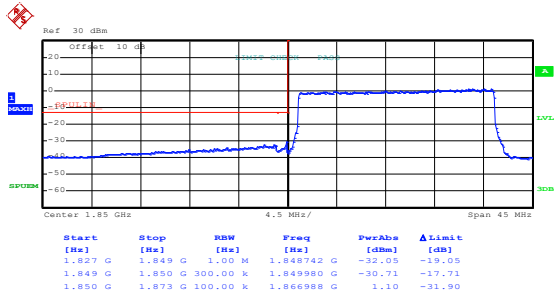
Lowest channel



Date: 28.AUG.2020 17:52:25

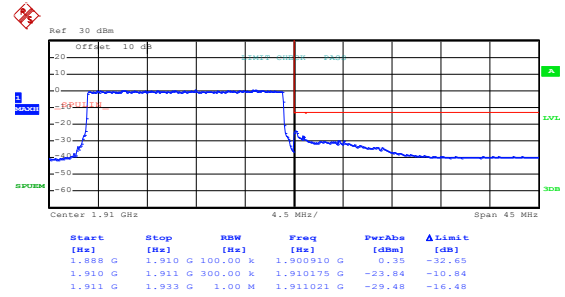
Highest channel

## QPSK & RB Size 100



Date: 28.AUG.2020 17:53:33

Lowest channel

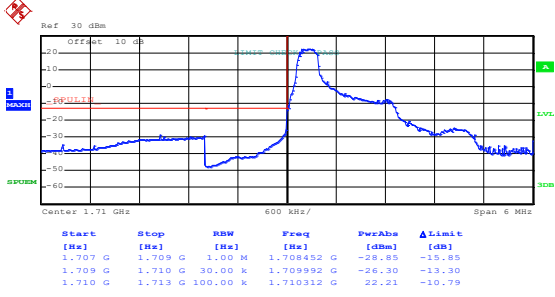


Date: 28.AUG.2020 17:52:50

Highest channel

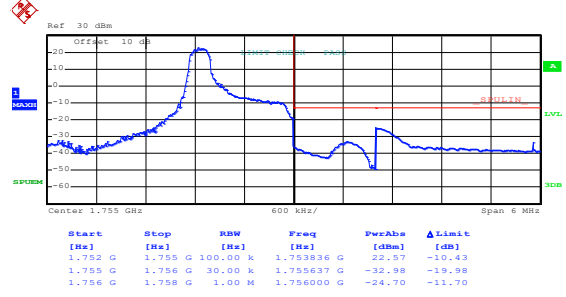
LTE Band 4 part:

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



Date: 28.AUG.2020 17:58:23

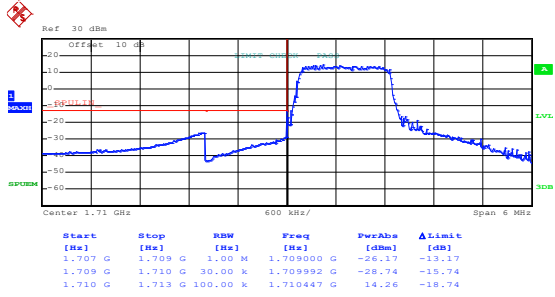
Lowest channel



Date: 28.AUG.2020 17:56:48

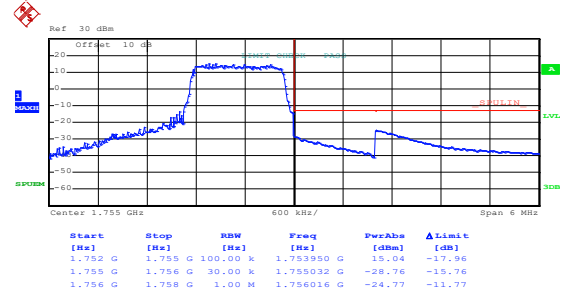
Highest channel

16QAM & RB Size 6



Date: 28.AUG.2020 17:57:26

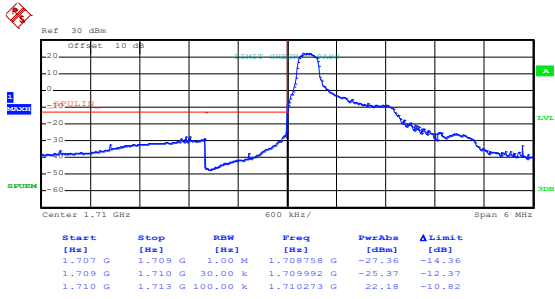
Lowest channel



Date: 28.AUG.2020 17:57:01

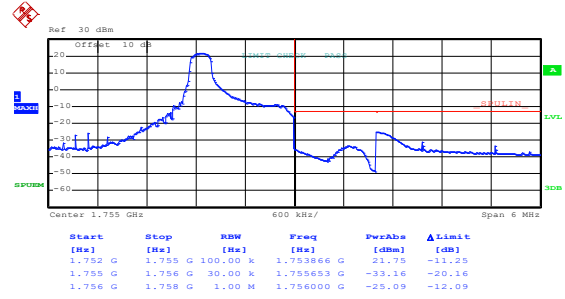
Highest channel

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



Date: 28.AUG.2020 17:57:59

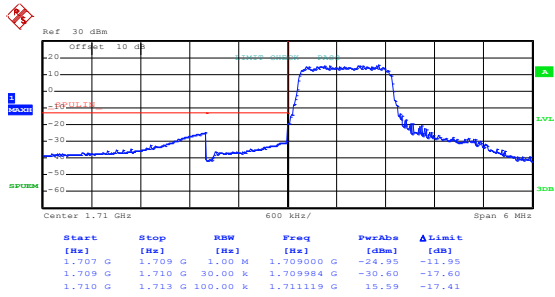
Lowest channel



Date: 28.AUG.2020 17:56:36

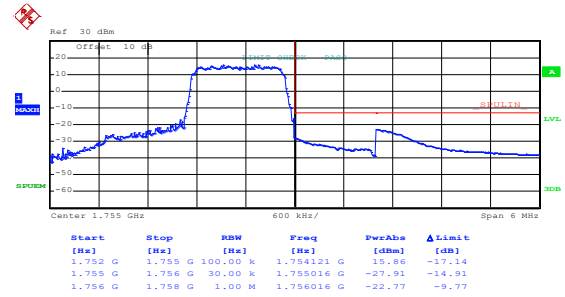
Highest channel

## QPSK & RB Size 6



Date: 28.AUG.2020 17:57:21

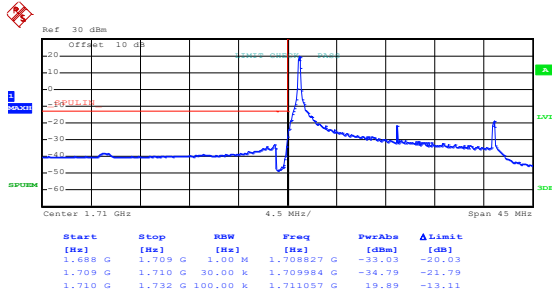
Lowest channel



Date: 28.AUG.2020 17:56:54

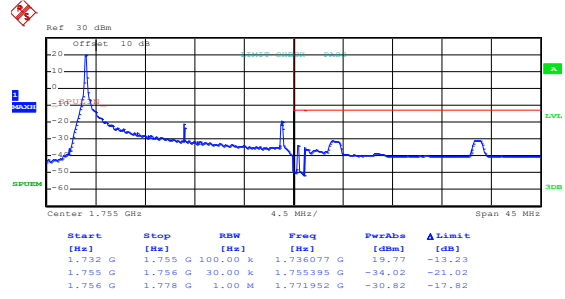
Highest channel

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



Date: 28.AUG.2020 17:54:11

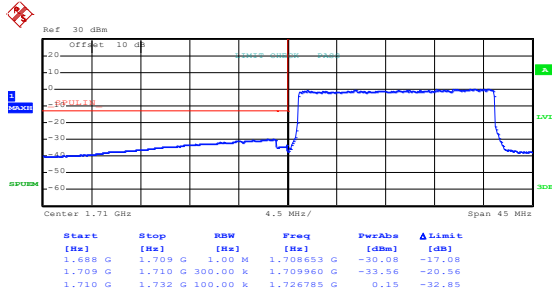
Lowest channel



Date: 28.AUG.2020 17:55:13

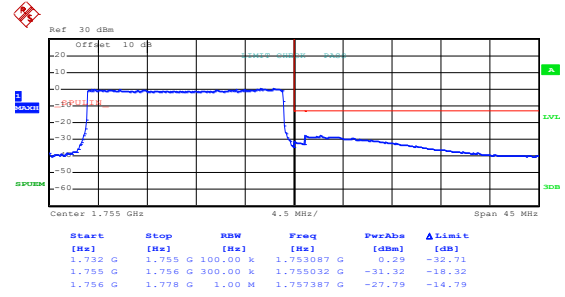
Highest channel

## 16QAM & RB Size 100



Date: 28.AUG.2020 17:54:32

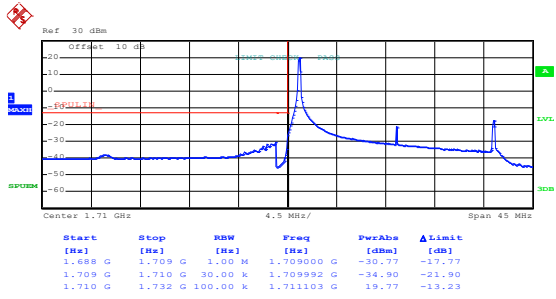
Lowest channel



Date: 28.AUG.2020 17:54:48

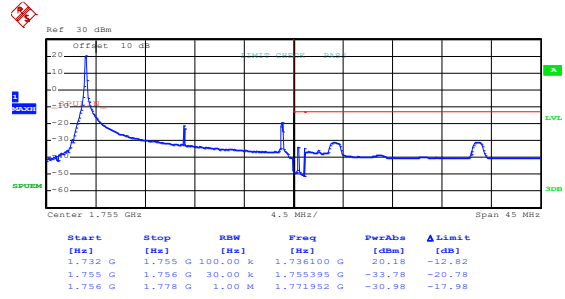
Highest channel

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



Date: 28.AUG.2020 17:54:01

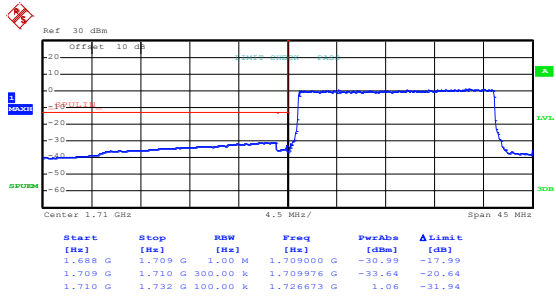
Lowest channel



Date: 28.AUG.2020 17:55:03

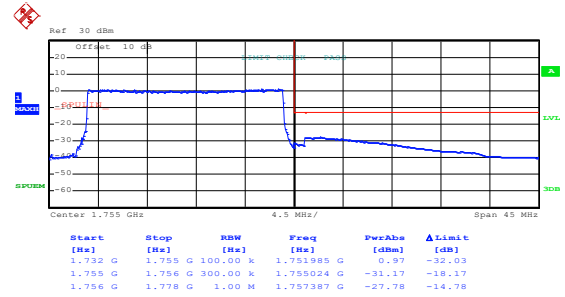
Highest channel

## QPSK & RB Size 100



Date: 28.AUG.2020 17:54:26

Lowest channel



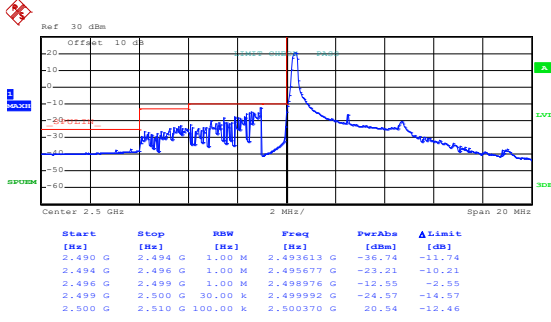
Date: 28.AUG.2020 17:54:43

Highest channel



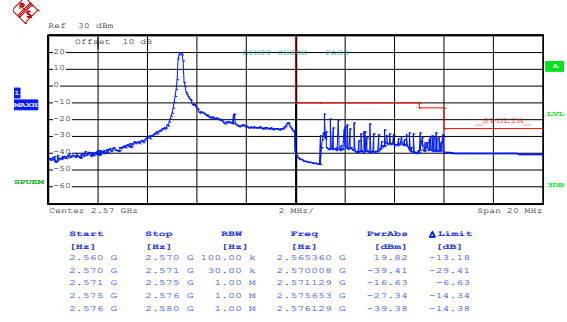
LTE Band 7 part:

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



Date: 28.AUG.2020 18:00:40

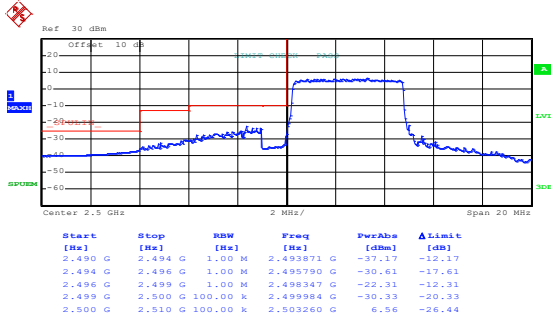
Lowest channel



Date: 28.AUG.2020 18:01:54

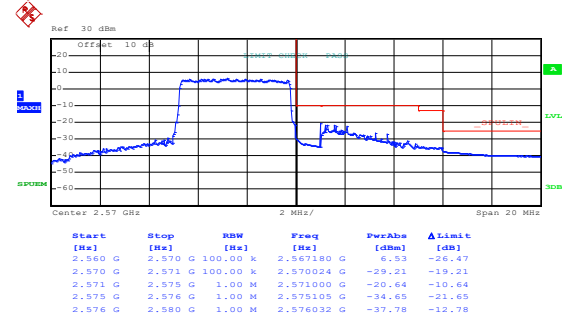
Highest channel

16QAM & RB Size 25



Date: 28.AUG.2020 18:01:02

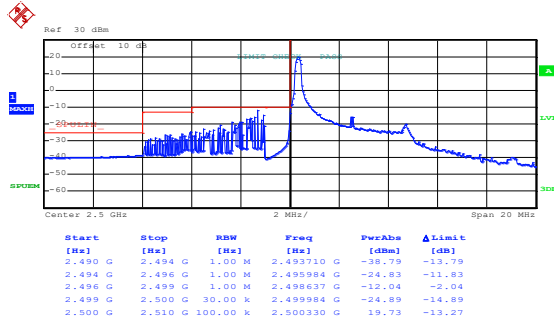
Lowest channel



Date: 28.AUG.2020 18:02:19

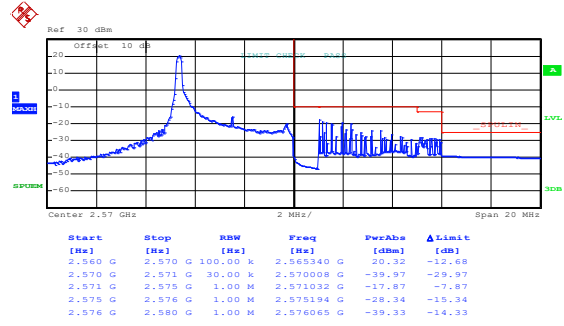
Highest channel

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



Date: 28.AUG.2020 17:59:52

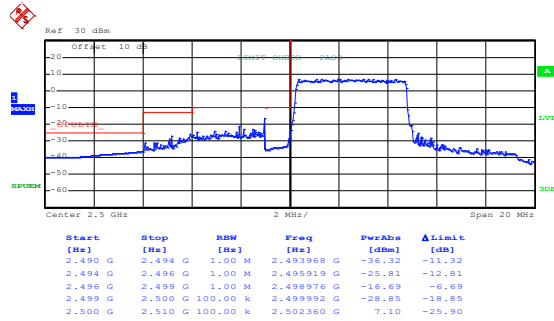
Lowest channel



Date: 28.AUG.2020 18:01:33

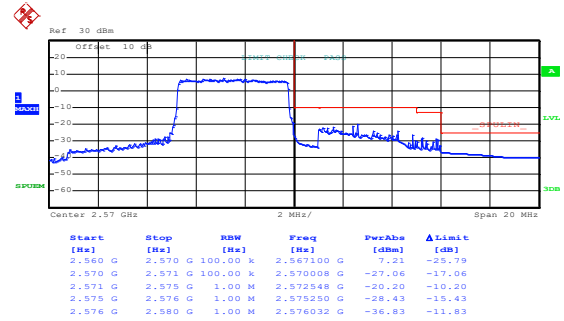
Highest channel

## QPSK & RB Size 25



Date: 28.AUG.2020 18:00:54

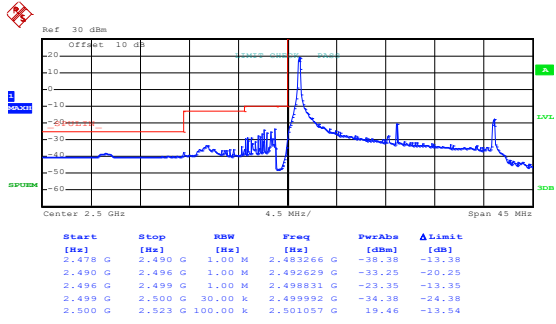
Lowest channel



Date: 28.AUG.2020 18:02:11

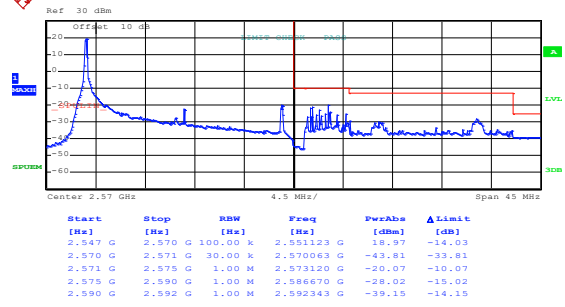
Highest channel

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



Date: 28.AUG.2020 18:03:35

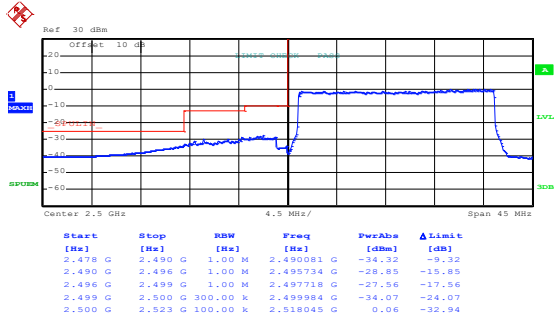
Lowest channel



Date: 28.AUG.2020 18:04:16

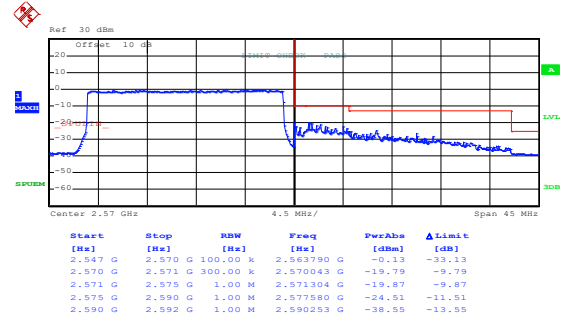
Highest channel

## 16QAM & RB Size 100



Date: 28.AUG.2020 18:03:52

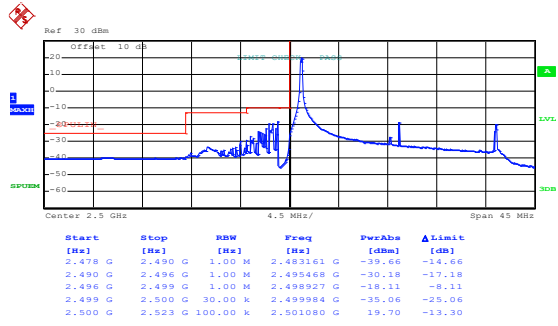
Lowest channel



Date: 28.AUG.2020 18:04:36

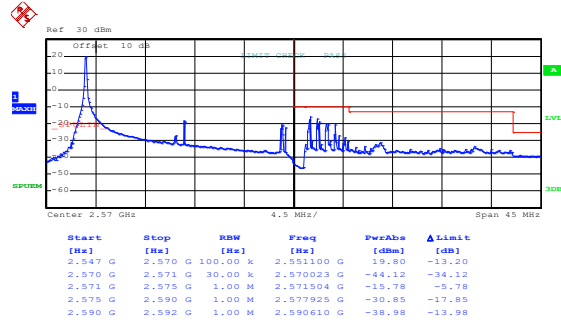
Highest channel

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



Date: 28.AUG.2020 18:03:11

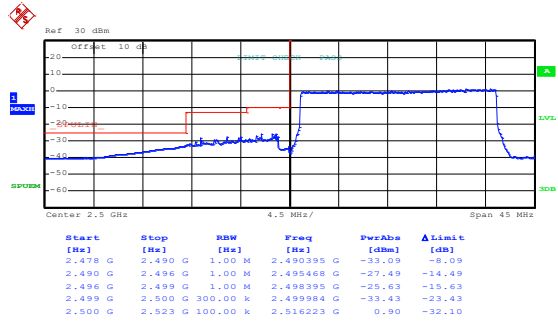
Lowest channel



Date: 28.AUG.2020 18:04:05

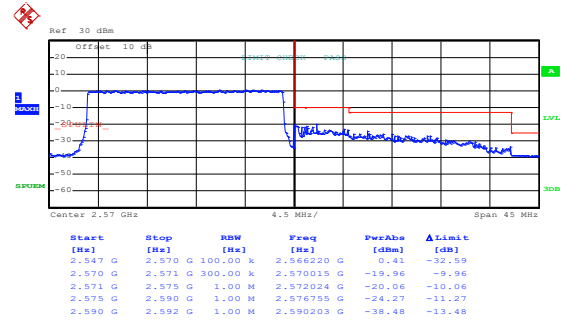
Highest channel

## QPSK & RB Size 100



Date: 28.AUG.2020 18:03:46

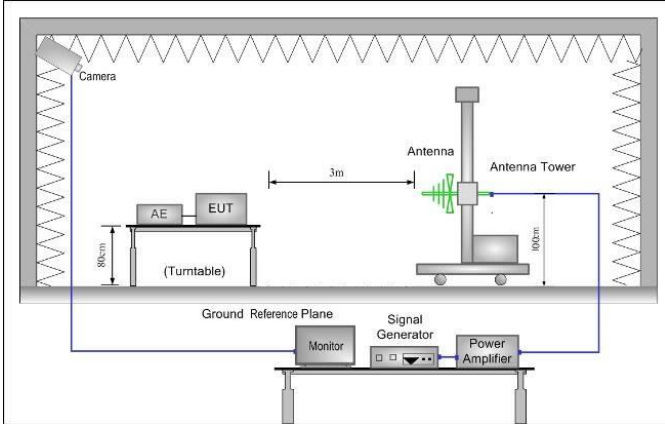
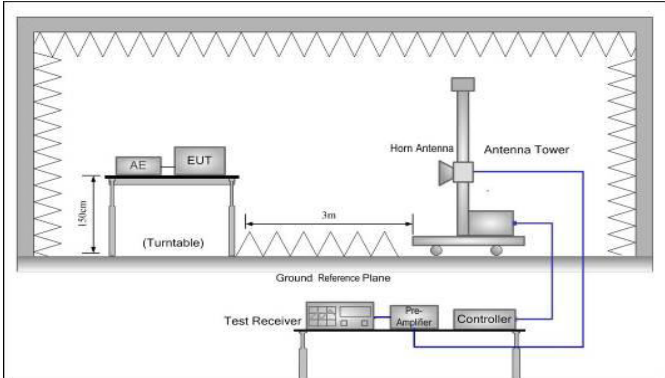
Lowest channel



Date: 28.AUG.2020 18:04:29

Highest channel

### 6.5 Field strength of spurious radiation measurement

<p>Test Requirement:</p>	<p>Part 24.238 (a), Part 27.53(m), Part 27.53(h)</p>
<p>Limit:</p>	<p>LTE Band 2 &amp; 4:          The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least <math>43 + 10 \log_{10}(P)</math> dB (-13 dBm).          LTE Band 7:          For mobile digital stations, the attenuation factor shall be not less than <math>40 + 10 \log (P)</math> dB on all frequencies between the channel edge and 5 megahertz from the channel edge, <math>43 + 10 \log (P)</math> dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and <math>55 + 10 \log (P)</math> 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 <math>43 + 10 \log (P)</math> dB on all frequencies between 2490.5 MHz and 2496 MHz and <math>55 + 10 \log (P)</math> 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"> <li>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.</li> <li>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.</li> <li>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.</li> </ol>

	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. output (dBm) + Antenna Gain(dB/dBi) – 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:**

<b>Band 2 (1.4MHz)</b>							
<b>Lowest channel</b>							
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	-62.84	12.64	0.75	-50.95	-13.00	-37.95	Vertical
5552.10	-56.06	12.76	1.13	-44.43	-13.00	-31.43	Vertical
7402.00	-47.05	11.44	1.63	-37.24	-13.00	-24.24	Vertical
3701.40	-62.74	12.64	0.75	-50.85	-13.00	-37.85	Horizontal
5552.10	-55.08	12.76	1.13	-43.45	-13.00	-30.45	Horizontal
7402.00	-47.79	11.44	1.63	-37.98	-13.00	-24.98	Horizontal
<b>Middle channel</b>							
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	-62.93	12.71	0.79	-51.01	-13.00	-38.01	Vertical
5640.00	-56.29	12.87	1.15	-44.57	-13.00	-31.57	Vertical
7520.00	-46.96	11.48	1.66	-37.14	-13.00	-24.14	Vertical
3760.00	-62.54	12.71	0.79	-50.62	-13.00	-37.62	Horizontal
5640.00	-55.06	12.87	1.15	-43.34	-13.00	-30.34	Horizontal
7520.00	-48.13	11.48	1.66	-38.31	-13.00	-25.31	Horizontal
<b>Highest channel</b>							
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	-62.75	12.78	0.81	-50.78	-13.00	-37.78	Vertical
5724.90	-55.84	12.97	1.19	-44.06	-13.00	-31.06	Vertical
7633.20	-47.11	11.34	1.71	-37.48	-13.00	-24.48	Vertical
3816.60	-63.32	12.78	0.81	-51.35	-13.00	-38.35	Horizontal
5724.90	-55.23	12.97	1.19	-43.45	-13.00	-30.45	Horizontal
7633.20	-47.14	11.34	1.71	-37.51	-13.00	-24.51	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>							

<b>Band 2 (20MHz)</b>							
<b>Lowest channel</b>							
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	-62.99	12.66	0.77	-51.10	-13.00	-38.10	Vertical
5580.00	-56.06	12.80	1.15	-44.41	-13.00	-31.41	Vertical
7440.00	-47.05	11.46	1.64	-37.23	-13.00	-24.23	Vertical
3720.00	-62.72	12.66	0.77	-50.83	-13.00	-37.83	Horizontal
5580.00	-54.98	12.80	1.15	-43.33	-13.00	-30.33	Horizontal
7440.00	-47.60	11.46	1.64	-37.78	-13.00	-24.78	Horizontal
<b>Middle channel</b>							
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	-63.50	12.71	0.79	-51.58	-13.00	-38.58	Vertical
5640.00	-56.53	12.87	1.15	-44.81	-13.00	-31.81	Vertical
7520.00	-46.77	11.48	1.66	-36.95	-13.00	-23.95	Vertical
3760.00	-62.28	12.71	0.79	-50.36	-13.00	-37.36	Horizontal
5640.00	-55.42	12.87	1.15	-43.70	-13.00	-30.70	Horizontal
7520.00	-48.04	11.48	1.66	-38.22	-13.00	-25.22	Horizontal
<b>Highest channel</b>							
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	-62.60	12.76	0.79	-50.63	-13.00	-37.63	Vertical
5700.00	-56.03	12.94	1.18	-44.27	-13.00	-31.27	Vertical
7600.00	-46.81	11.38	1.69	-37.12	-13.00	-24.12	Vertical
3800.00	-62.89	12.76	0.79	-50.92	-13.00	-37.92	Horizontal
5700.00	-55.17	12.94	1.18	-43.41	-13.00	-30.41	Horizontal
7600.00	-47.40	11.38	1.69	-37.71	-13.00	-24.71	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>							



**LTE Band 4 part:**

<b>Band 4 (1.4MHz)</b>							
<b>Lowest channel</b>							
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	-62.78	12.24	0.70	-51.24	-13.00	-38.24	Vertical
5132.10	-58.51	12.92	1.01	-46.60	-13.00	-33.60	Vertical
6842.80	-50.85	11.42	1.53	-40.96	-13.00	-27.96	Vertical
3421.40	-63.69	12.24	0.70	-52.15	-13.00	-39.15	Horizontal
5132.10	-68.46	12.92	1.01	-56.55	-13.00	-43.55	Horizontal
6842.80	-50.10	11.42	1.53	-40.21	-13.00	-27.21	Horizontal
<b>Middle channel</b>							
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	-62.46	12.33	0.72	-50.85	-13.00	-37.85	Vertical
5197.50	-58.04	12.88	1.04	-46.20	-13.00	-33.20	Vertical
6930.00	-50.35	11.30	1.56	-40.61	-13.00	-27.61	Vertical
3465.00	-64.01	12.33	0.72	-52.40	-13.00	-39.40	Horizontal
5197.50	-67.92	12.88	1.04	-56.08	-13.00	-43.08	Horizontal
6930.00	-49.99	11.30	1.56	-40.25	-13.00	-27.25	Horizontal
<b>Highest channel</b>							
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	-63.00	12.41	0.74	-51.33	-13.00	-38.33	Vertical
5262.90	-57.98	12.84	1.07	-46.21	-13.00	-33.21	Vertical
7017.20	-50.42	11.21	1.58	-40.79	-13.00	-27.79	Vertical
3508.60	-64.02	12.41	0.74	-52.35	-13.00	-39.35	Horizontal
5262.90	-68.30	12.84	1.07	-56.53	-13.00	-43.53	Horizontal
7017.20	-49.89	11.21	1.58	-40.26	-13.00	-27.26	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>							

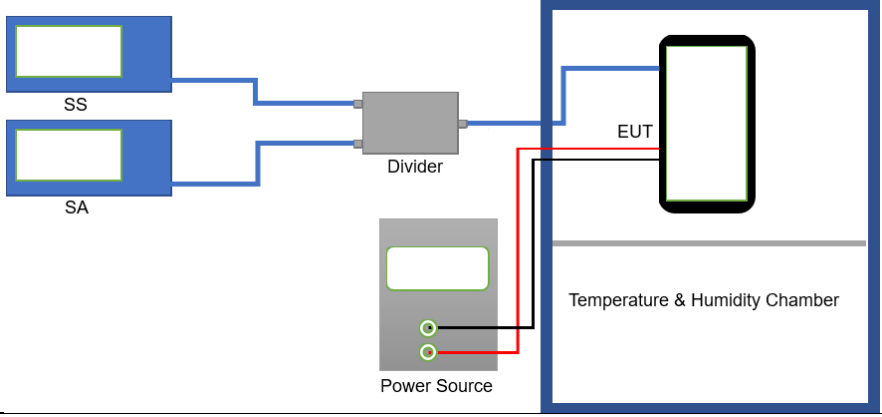
<b>Band 4 (20MHz)</b>							
<b>Lowest channel</b>							
Frequency (MHz)	Level at antenna terminals (dBm)	Substitute antenna gain (dBi)	Cable Loss (dBi)	Spurious Emission level (dBm)	Limit Line (dBm)	Over Limit (dBm)	Polarization
3440.00	-62.52	12.28	0.71	-50.95	-13.00	-37.95	Vertical
5160.00	-58.57	12.90	1.03	-46.70	-13.00	-33.70	Vertical
6880.00	-50.42	11.37	1.54	-40.59	-13.00	-27.59	Vertical
3440.00	-63.63	12.28	0.71	-52.06	-13.00	-39.06	Horizontal
5160.00	-68.64	12.90	1.03	-56.77	-13.00	-43.77	Horizontal
6880.00	-50.26	11.37	1.54	-40.43	-13.00	-27.43	Horizontal
<b>Middle channel</b>							
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	-62.63	12.33	0.72	-51.02	-13.00	-38.02	Vertical
5197.50	-58.76	12.88	1.04	-46.92	-13.00	-33.92	Vertical
6930.00	-50.25	11.30	1.56	-40.51	-13.00	-27.51	Vertical
3465.00	-63.71	12.33	0.72	-52.10	-13.00	-39.10	Horizontal
5197.50	-68.77	12.88	1.04	-56.93	-13.00	-43.93	Horizontal
6930.00	-50.27	11.30	1.56	-40.53	-13.00	-27.53	Horizontal
<b>Highest channel</b>							
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	-62.26	12.38	0.73	-50.61	-13.00	-37.61	Vertical
5235.00	-58.01	12.86	1.06	-46.21	-13.00	-33.21	Vertical
6980.00	-50.43	11.23	1.57	-40.77	-13.00	-27.77	Vertical
3490.00	-64.00	12.38	0.73	-52.35	-13.00	-39.35	Horizontal
5235.00	-67.77	12.86	1.06	-55.97	-13.00	-42.97	Horizontal
6980.00	-49.95	11.23	1.57	-40.29	-13.00	-27.29	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:**

<b>Band 7 (5MHz)</b>							
<b>Lowest channel</b>							
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	-59.50	13.00	0.94	-47.44	-25.00	-22.44	Vertical
7507.50	-50.45	11.49	1.65	-40.61	-25.00	-15.61	Vertical
10010.00	-45.99	11.69	1.91	-36.21	-25.00	-11.21	Vertical
5005.00	-59.28	13.00	0.94	-47.22	-25.00	-22.22	Horizontal
7507.50	-49.50	11.49	1.65	-39.66	-25.00	-14.66	Horizontal
10010.00	-45.68	11.69	1.91	-35.90	-25.00	-10.90	Horizontal
<b>Middle channel</b>							
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	-58.94	12.96	0.98	-46.96	-25.00	-21.96	Vertical
7605.00	-49.98	11.37	1.69	-40.30	-25.00	-15.30	Vertical
10140.00	-45.63	11.62	1.94	-35.95	-25.00	-10.95	Vertical
5070.00	-58.75	12.96	0.98	-46.77	-25.00	-21.77	Horizontal
7605.00	-49.26	11.37	1.69	-39.58	-25.00	-14.58	Horizontal
10140.00	-45.64	11.62	1.94	-35.96	-25.00	-10.96	Horizontal
<b>Highest channel</b>							
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	-58.75	12.92	1.01	-46.84	-25.00	-21.84	Vertical
7702.50	-49.90	11.26	1.72	-40.36	-25.00	-15.36	Vertical
10270.00	-45.45	11.54	1.95	-35.86	-25.00	-10.86	Vertical
5135.00	-58.72	12.92	1.01	-46.81	-25.00	-21.81	Horizontal
7702.50	-49.58	11.26	1.72	-40.04	-25.00	-15.04	Horizontal
10270.00	-45.32	11.54	1.95	-35.73	-25.00	-10.73	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>							

<b>Band 7 (20MHz)</b>							
<b>Lowest channel</b>							
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	-59.38	12.99	0.97	-47.36	-25.00	-22.36	Vertical
7530.00	-50.08	11.46	1.68	-40.30	-25.00	-15.30	Vertical
10040.00	-45.67	11.68	1.94	-35.93	-25.00	-10.93	Vertical
5020.00	-58.89	12.99	0.97	-46.87	-25.00	-21.87	Horizontal
7530.00	-49.90	11.46	1.68	-40.12	-25.00	-15.12	Horizontal
10040.00	-46.02	11.68	1.94	-36.28	-25.00	-11.28	Horizontal
<b>Middle channel</b>							
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	-58.81	12.96	0.98	-46.83	-25.00	-21.83	Vertical
7605.00	-50.12	11.37	1.69	-40.44	-25.00	-15.44	Vertical
10140.00	-45.25	11.62	1.94	-35.57	-25.00	-10.57	Vertical
5070.00	-59.19	12.96	0.98	-47.21	-25.00	-22.21	Horizontal
7605.00	-49.35	11.37	1.69	-39.67	-25.00	-14.67	Horizontal
10140.00	-45.16	11.62	1.94	-35.48	-25.00	-10.48	Horizontal
<b>Highest channel</b>							
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	-59.27	12.93	1.00	-47.34	-25.00	-22.34	Vertical
7680.00	-49.43	11.28	1.72	-39.87	-25.00	-14.87	Vertical
10240.00	-45.74	11.56	1.95	-36.13	-25.00	-11.13	Vertical
5120.00	-59.22	12.93	1.00	-47.29	-25.00	-22.29	Horizontal
7680.00	-49.34	11.28	1.72	-39.78	-25.00	-14.78	Horizontal
10240.00	-45.60	11.56	1.95	-35.99	-25.00	-10.99	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>							

## 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 & 7
Test setup:	
Test procedure:	<ol style="list-style-type: none"> <li>1. The equipment under test was connected to an external DC power supply and input rated voltage.</li> <li>2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.</li> <li>3. The EUT was placed inside the temperature chamber.</li> <li>4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency.</li> <li>5. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.</li> <li>6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached</li> </ol>
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		
<b>QPSK</b>					
3.85	-30	180	0.095745	Within authorized band for Band 2	Pass
	-20	173	0.092021		
	-10	165	0.087766		
	0	158	0.084043		
	10	150	0.079787		
	20	146	0.077660		
	30	138	0.073404		
	40	131	0.069681		
	50	120	0.063830		
<b>16QAM</b>					
3.85	-30	176	0.093617	Within authorized band for Band 2	Pass
	-20	169	0.089894		
	-10	160	0.085106		
	0	154	0.081915		
	10	143	0.076064		
	20	136	0.072340		
	30	130	0.069149		
	40	123	0.065426		
	50	150	0.079787		

*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		
<b>QPSK</b>					
3.85	-30	173	0.099856	Within authorized band for Band 4	Pass
	-20	163	0.094084		
	-10	157	0.090620		
	0	149	0.086003		
	10	143	0.082540		
	20	139	0.080231		
	30	134	0.077345		
	40	124	0.071573		
	50	112	0.064646		
<b>16QAM</b>					
3.85	-30	170	0.098124	Within authorized band for Band 4	Pass
	-20	160	0.092352		
	-10	154	0.088889		
	0	144	0.083117		
	10	136	0.078499		
	20	124	0.071573		
	30	119	0.068687		
	40	112	0.064646		
	50	130	0.075036		

*Note: Only the worst case shown in the report.*

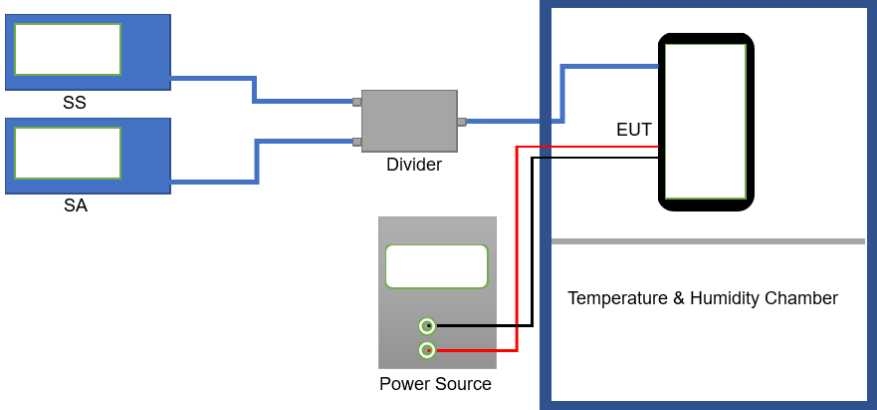
**LTE Band 7 part:**

Reference Frequency: LTE Band 7 (10MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
<b>QPSK</b>					
3.85	-30	173	0.068245	Within authorized band for Band 7	Pass
	-20	156	0.061538		
	-10	140	0.055227		
	0	130	0.051282		
	10	120	0.047337		
	20	110	0.043393		
	30	134	0.052860		
	40	148	0.058383		
	50	162	0.063905		
<b>16QAM</b>					
3.85	-30	170	0.067061	Within authorized band for Band 7	Pass
	-20	166	0.065483		
	-10	157	0.061933		
	0	118	0.046548		
	10	109	0.042998		
	20	150	0.059172		
	30	143	0.056410		
	40	134	0.052860		
	50	125	0.049310		

*Note: Only the worst case shown in the report.*



### 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 & 7
Test setup:	
Test procedure:	<ol style="list-style-type: none"> <li>1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage.</li> <li>2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.</li> <li>3. Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.</li> </ol>
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:**

<b>Reference Frequency: LTE Band 2(10MHz) Middle channel=18900 channel=1880.00MHz</b>					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
<b>QPSK</b>					
25	4.40	89	0.047340	Within authorized band for Band 2	Pass
	3.85	76	0.040426		
	3.50	65	0.034574		
<b>16QAM</b>					
25	4.40	80	0.042553	Within authorized band for Band 2	Pass
	3.85	70	0.037234		
	3.50	59	0.031383		

*Note: Only the worst case shown in the report.*

**LTE Band 4 part:**

<b>Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz</b>					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
<b>QPSK</b>					
25	4.40	88	0.050794	Within authorized band for Band 4	Pass
	3.85	76	0.043867		
	3.50	63	0.036364		
<b>16QAM</b>					
25	4.40	80	0.046176	Within authorized band for Band 4	Pass
	3.85	74	0.042713		
	3.50	53	0.030592		

*Note: Only the worst case shown in the report.*

**LTE Band 7 part:**

<b>Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.00MHz</b>					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
<b>QPSK</b>					
25	4.40	90	0.035503	Within authorized band for Band 7	Pass
	3.85	76	0.029980		
	3.50	54	0.021302		
<b>16QAM</b>					
25	4.40	83	0.032742	Within authorized band for Band 7	Pass
	3.85	74	0.029191		
	3.50	62	0.024458		

*Note: Only the worst case shown in the report.*