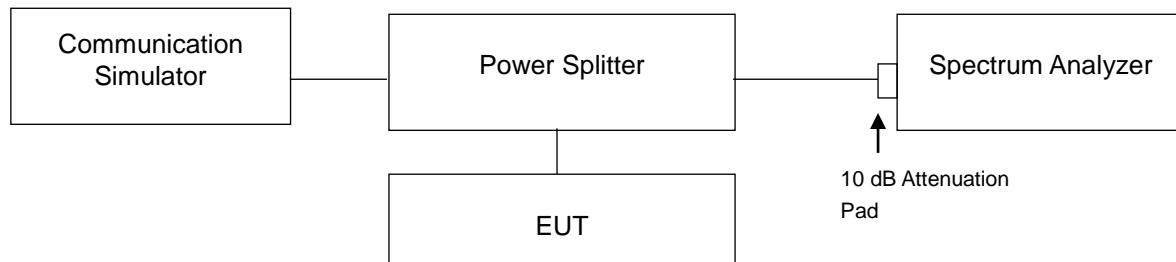


## 4.5 Out-of-Band Emissions Measurement

### 4.5.1 Limits of Out-of-Band Emissions Measurement

According to FCC 27.53(m)(4)&(6) specified that power of any emission outside of the channel edge must be attenuated below the transmitting power (P) by a factor shall be not less than  $40 + 10 \log (P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log (P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log (P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth. In addition, the attenuation factor shall not be less than  $43 + 10 \log (P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log (P)$  dB at or below 2490.5 MHz. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed.

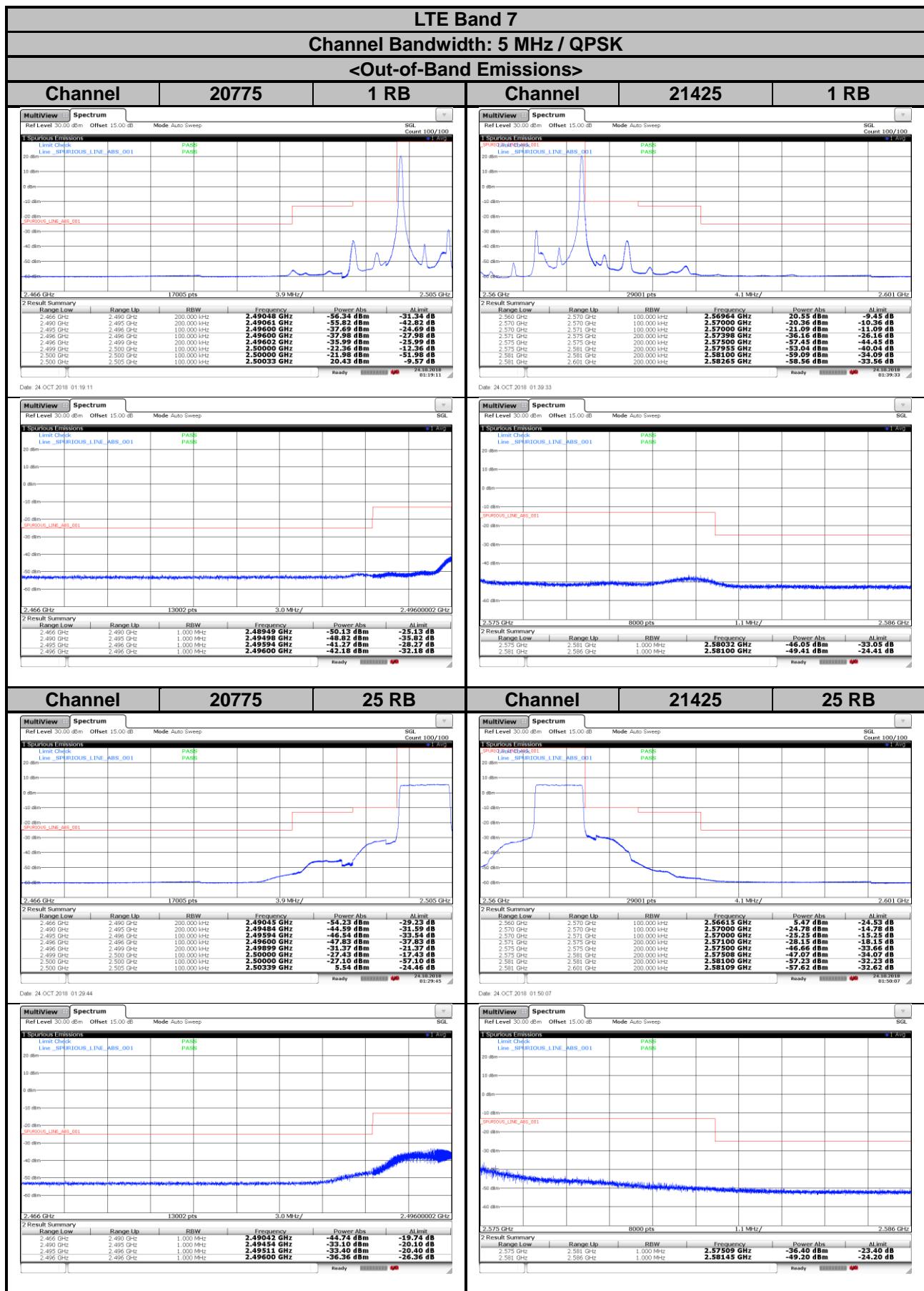
### 4.5.2 Test Setup

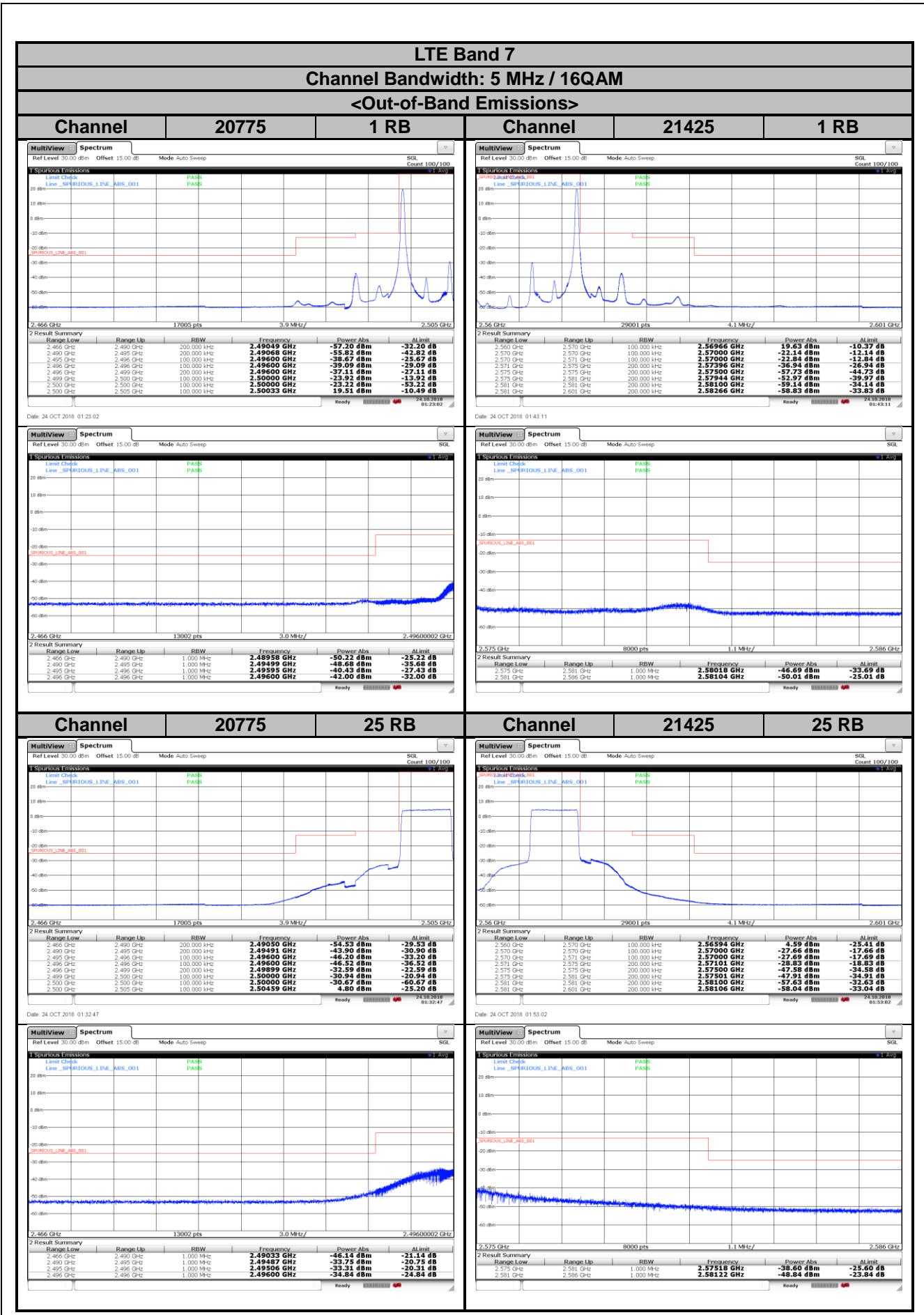


### 4.5.3 Test Procedures

- The EUT was set up for the maximum peak power with LTE link data modulation. The power was measured with R&S Spectrum Analyzer. All measurements were done at 2 channels (low and high operational frequency range.).
- The out-of-band emissions measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- Record the max. trace plot into the test report.

#### 4.5.4 Test Results





### LTE Band 7

#### Channel Bandwidth: 5 MHz / 64QAM

#### <Out-of-Band Emissions>

##### Channel

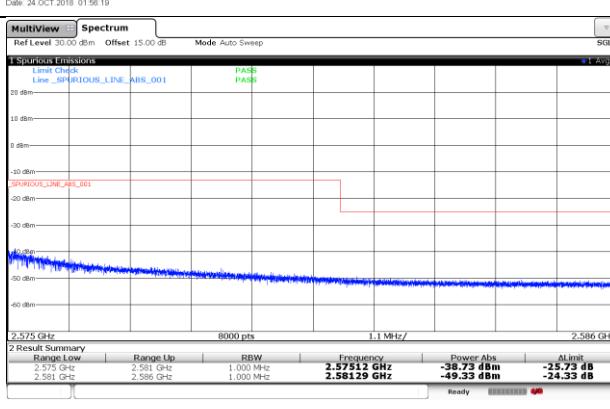
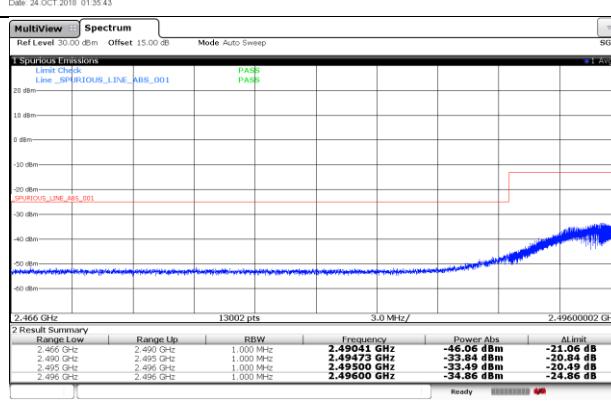
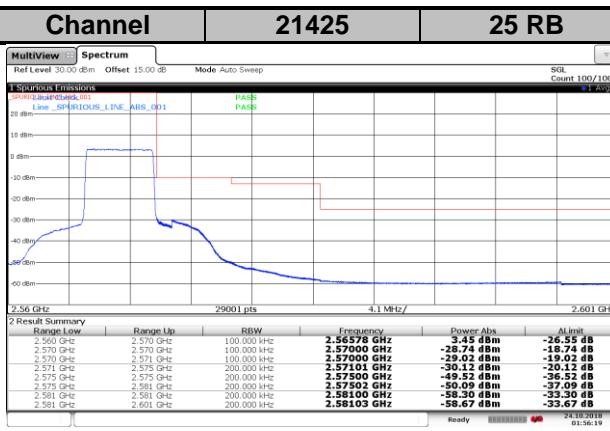
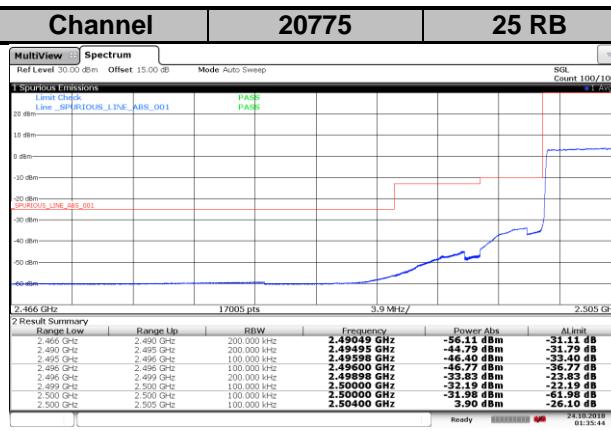
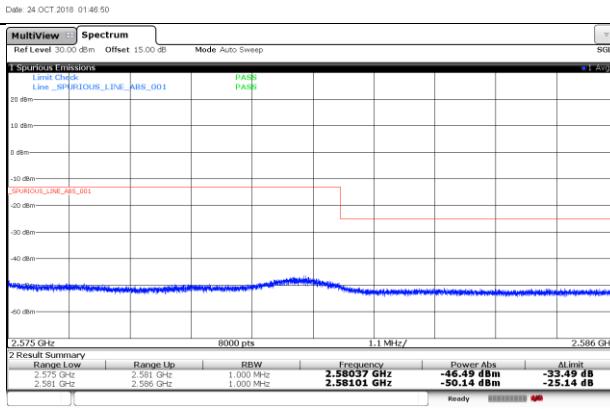
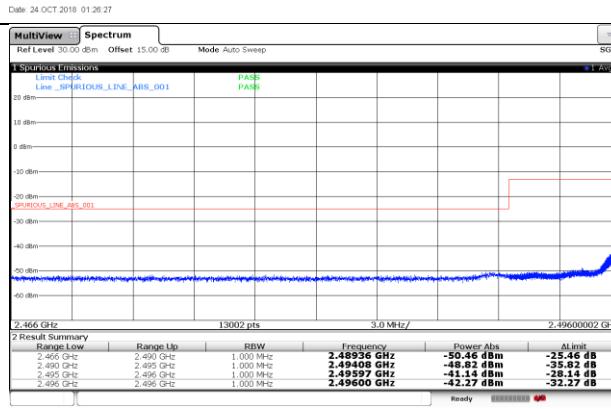
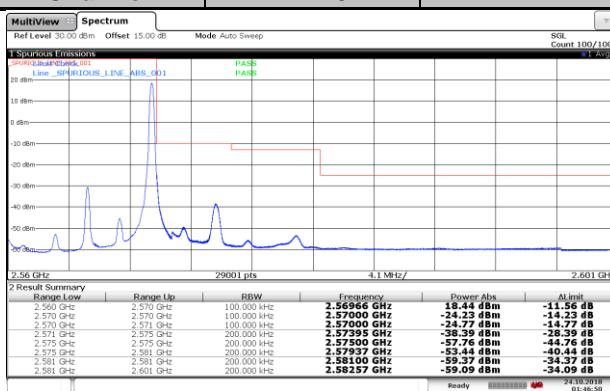
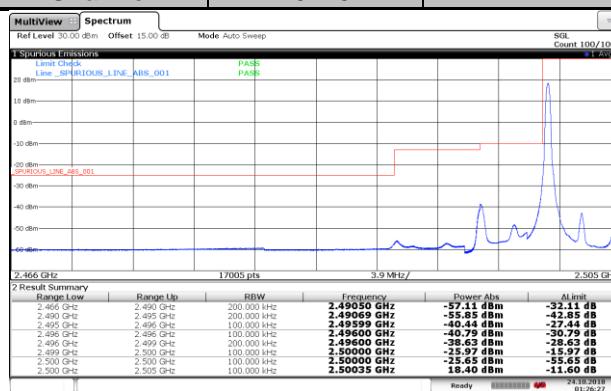
##### 20775

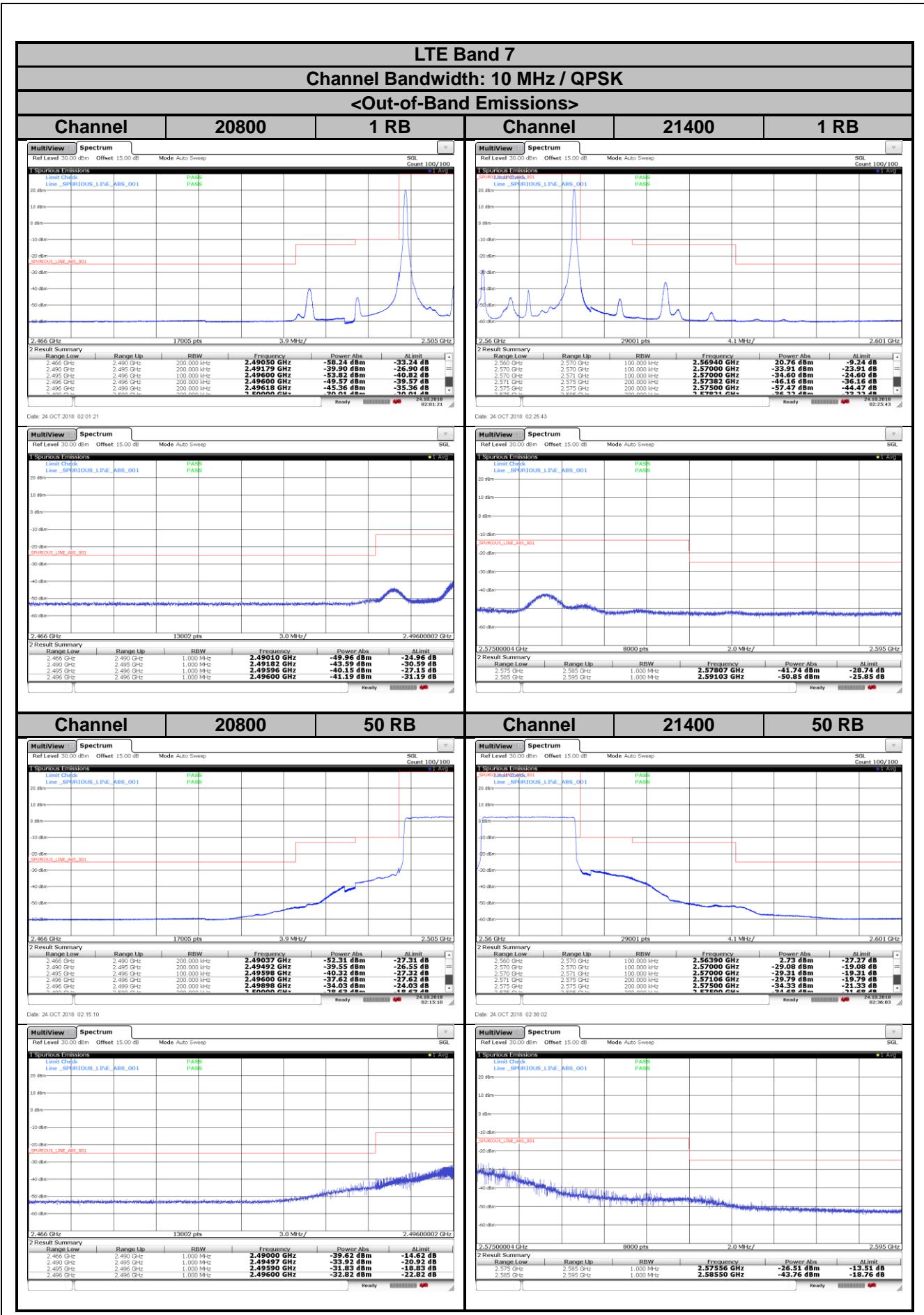
##### 1 RB

##### Channel

##### 21425

##### 1 RB





### LTE Band 7

#### Channel Bandwidth: 10 MHz / 16QAM <Out-of-Band Emissions>

##### Channel

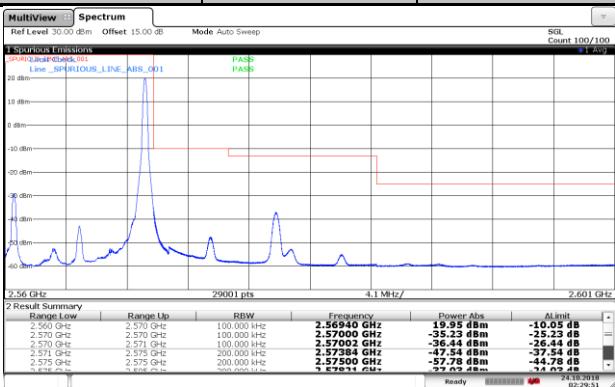
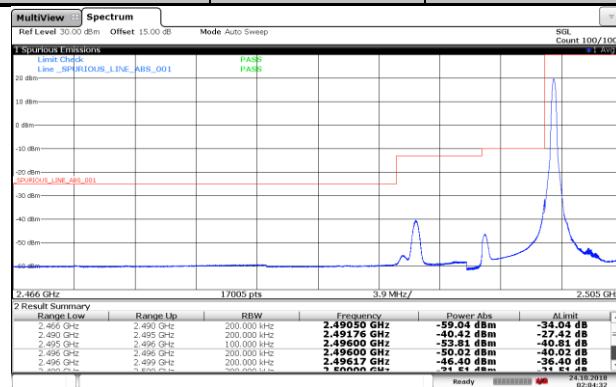
##### 20800

##### 1 RB

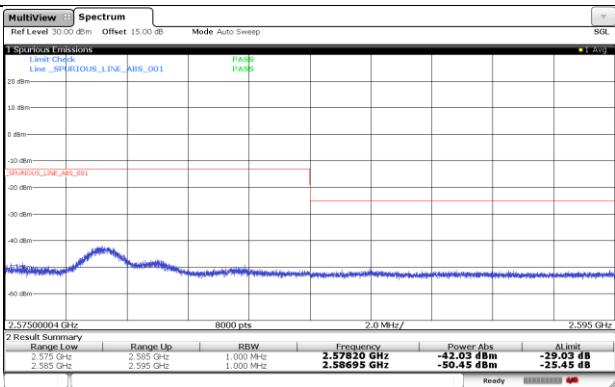
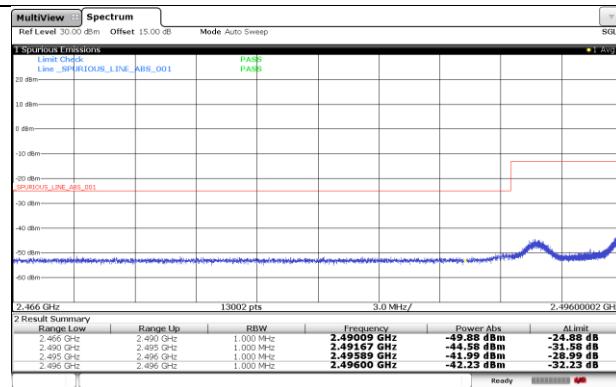
##### Channel

##### 21400

##### 1 RB



Date: 24.OCT.2018 02:43:31



##### Channel

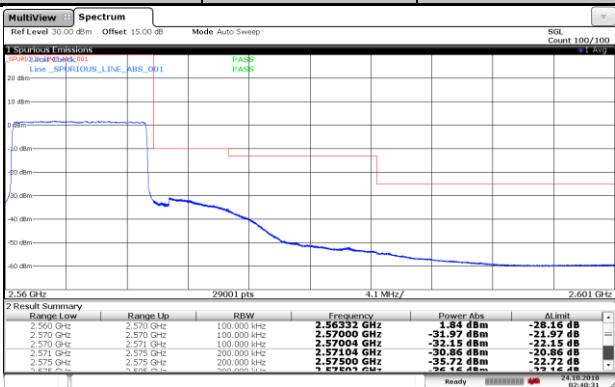
##### 20800

##### 50 RB

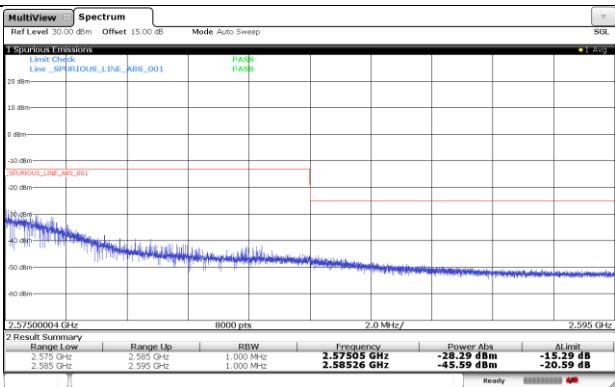
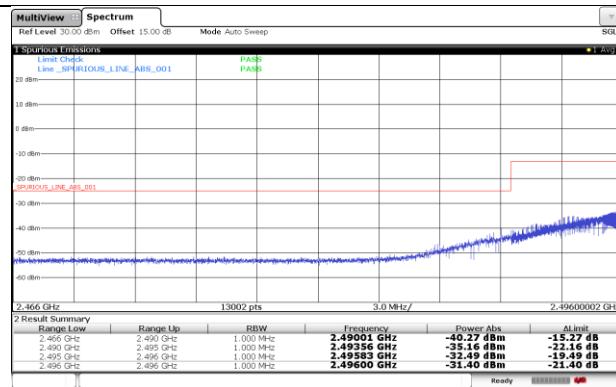
##### Channel

##### 21400

##### 50 RB



Date: 24.OCT.2018 02:19:09



## LTE Band 7

## Channel Bandwidth: 10 MHz / 64QAM

## &lt;Out-of-Band Emissions&gt;

Channel

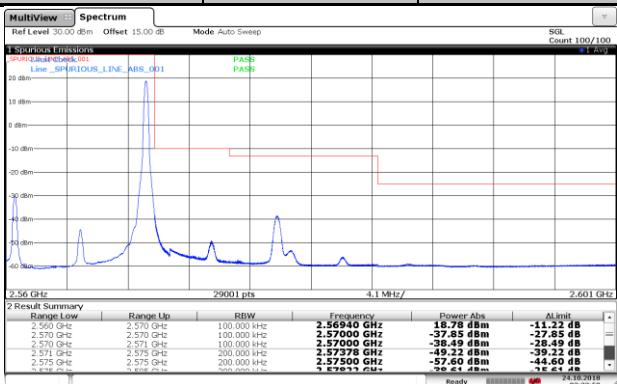
20800

1 RB

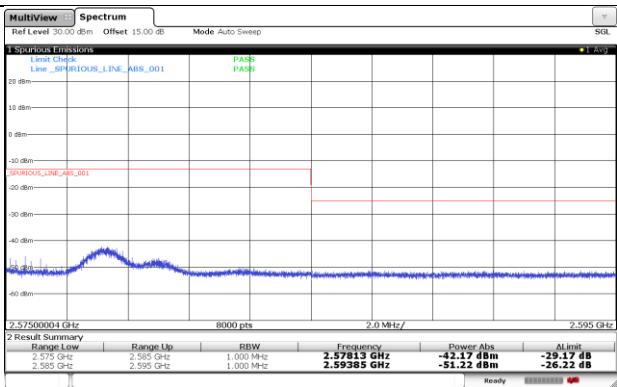
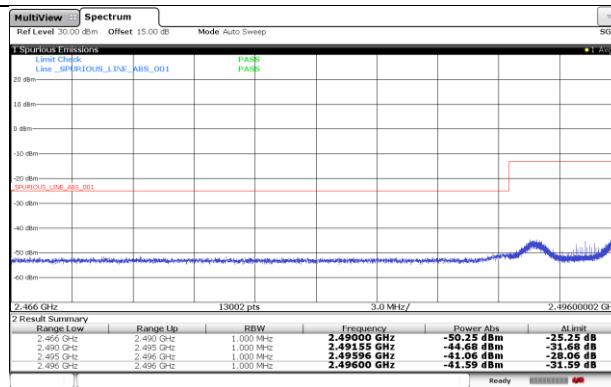
Channel

21400

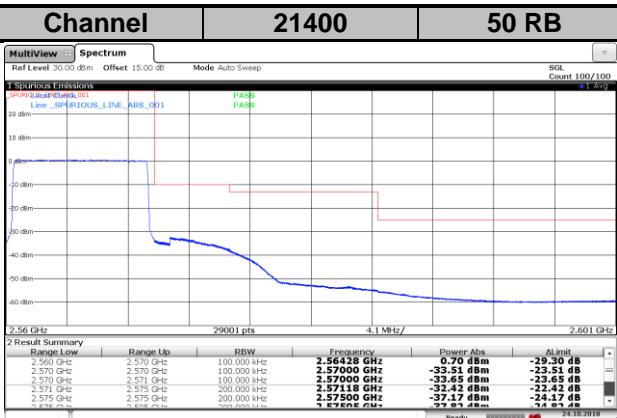
1 RB



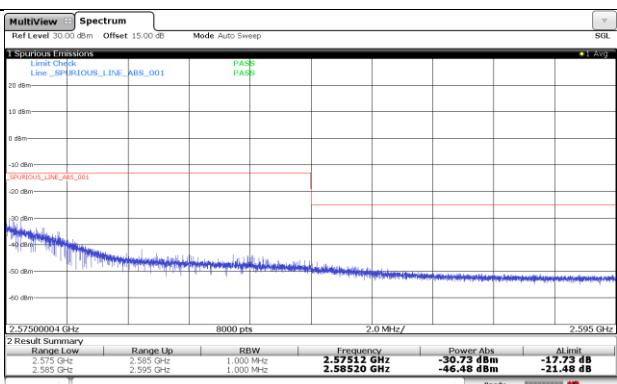
Date: 24.OCT.2018 02:07:49



Date: 24.OCT.2018 02:22:03



Date: 24.OCT.2018 02:22:03



## LTE Band 7

 Channel Bandwidth: 15 MHz / QPSK  
 <Out-of-Band Emissions>

Channel

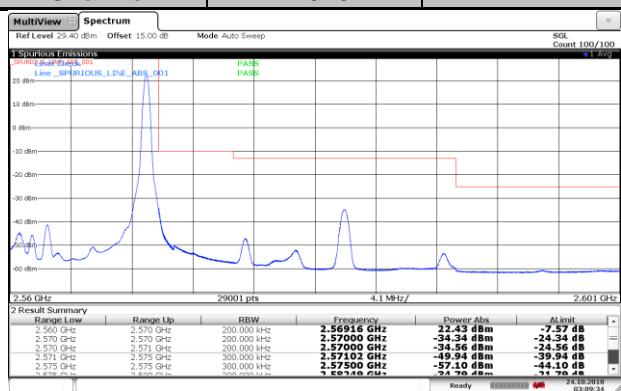
20825

1 RB

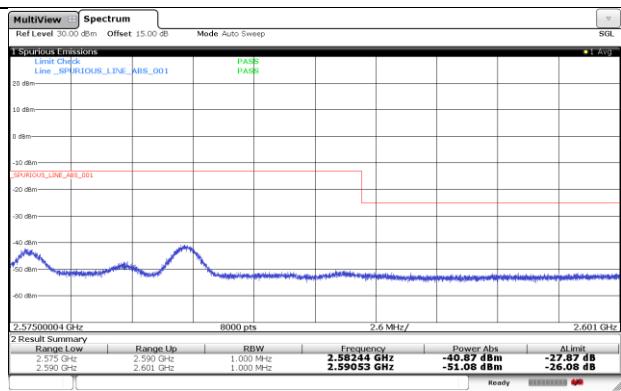
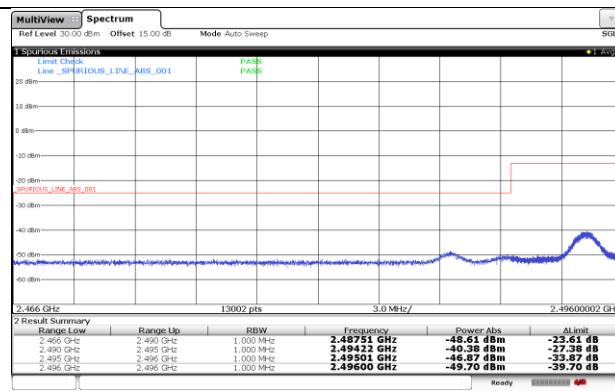
Channel

21375

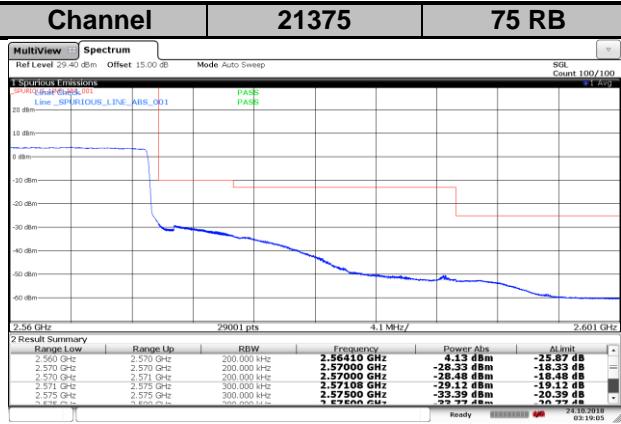
1 RB



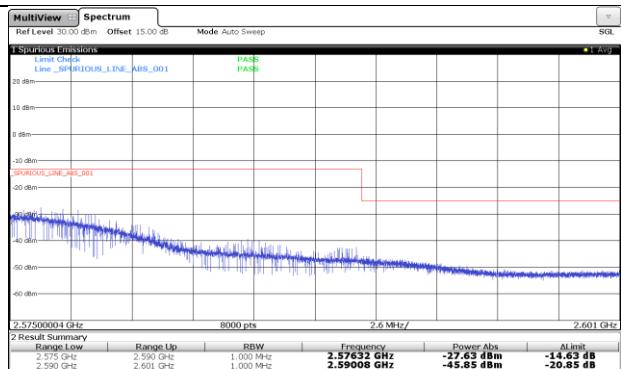
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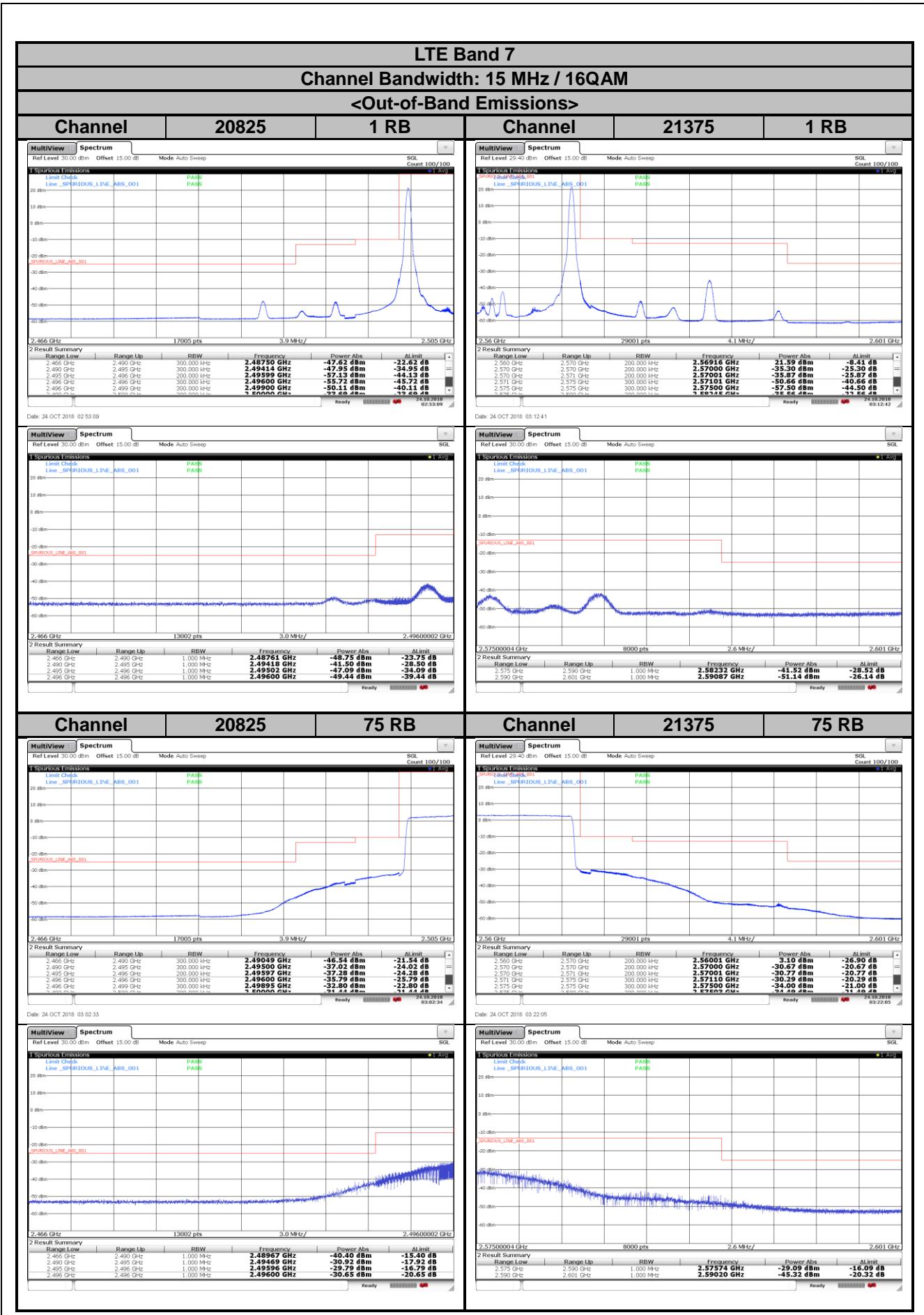


Channel 20825 75 RB



Date: 24.OCT.2018 02:59:35



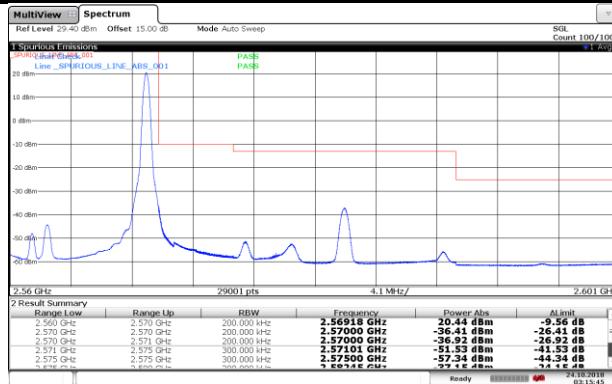
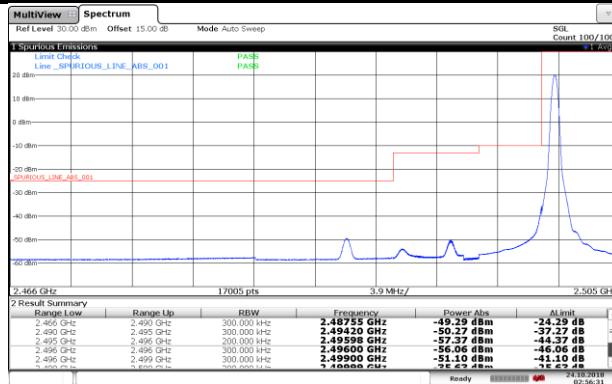


## LTE Band 7

### Channel Bandwidth: 15 MHz / 64QAM

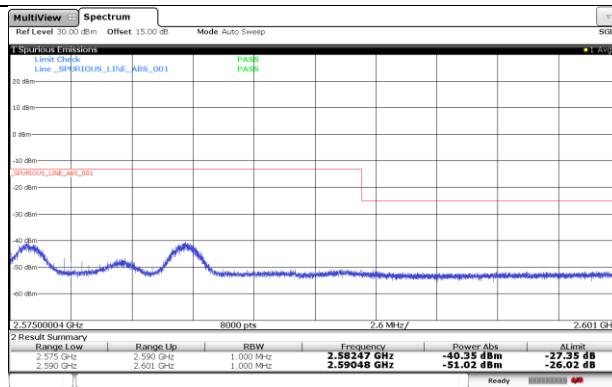
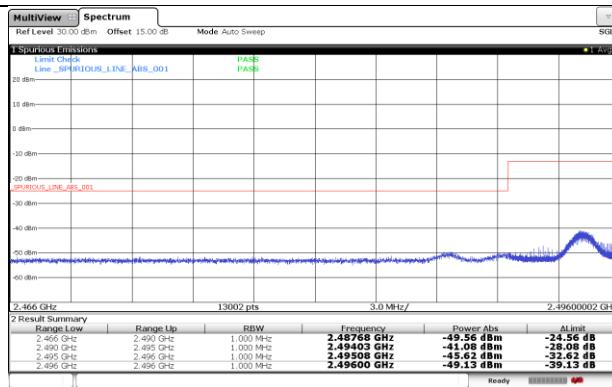
#### <Out-of-Band Emissions>

**Channel 20825 1 RB Channel 21375 1 RB**



Date: 24.OCT.2018 02:56:30

Date: 24.OCT.2018 03:15:44

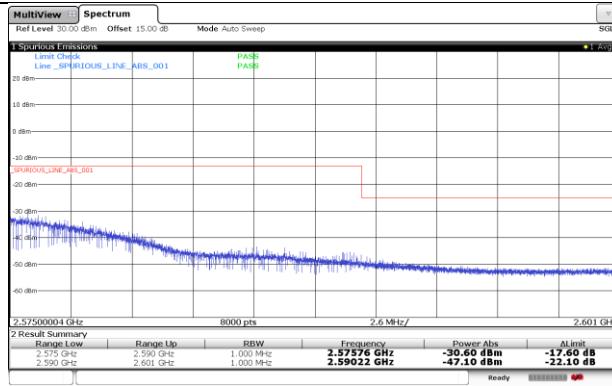
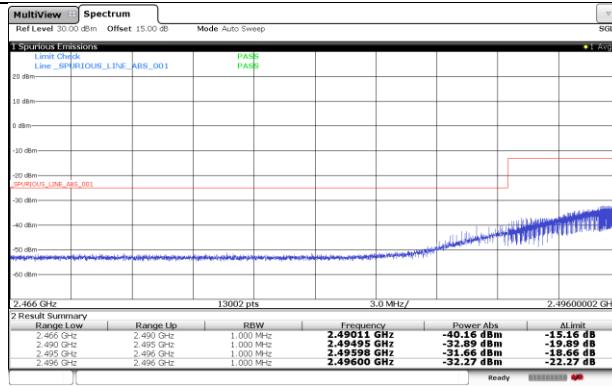


Chen

Chem

Date: 24.OCT.2018 03:05:37

Date: 24.OCT.2018 03:25:06



### LTE Band 7

#### Channel Bandwidth: 20 MHz / QPSK <Out-of-Band Emissions>

##### Channel

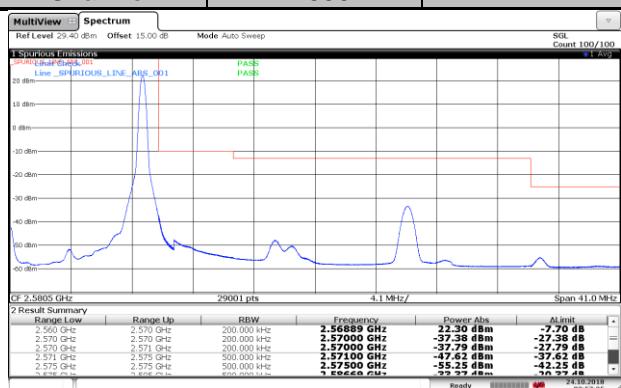
##### 20850

##### 1 RB

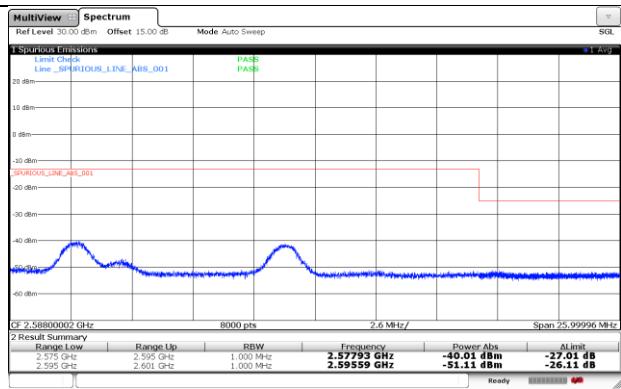
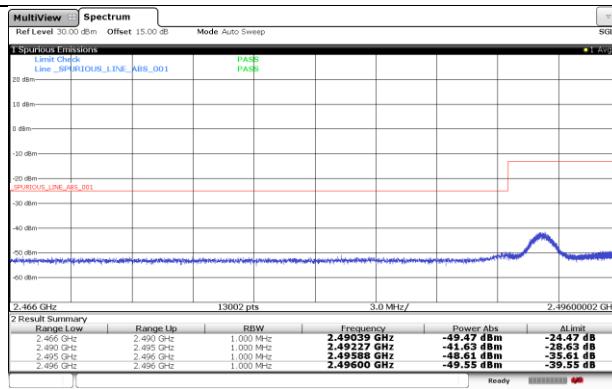
##### Channel

##### 21350

##### 1 RB



Date: 24.OCT.2018 03:30:35



##### Channel

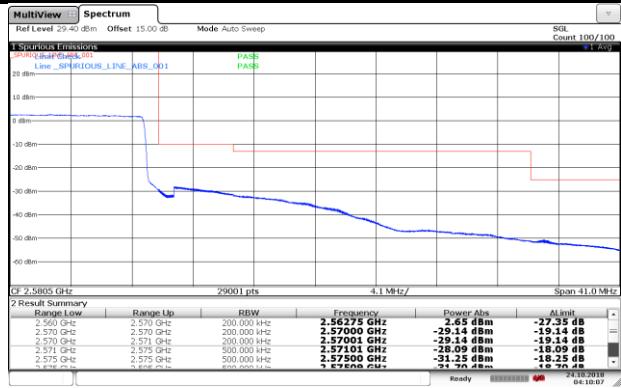
##### 20850

##### 100 RB

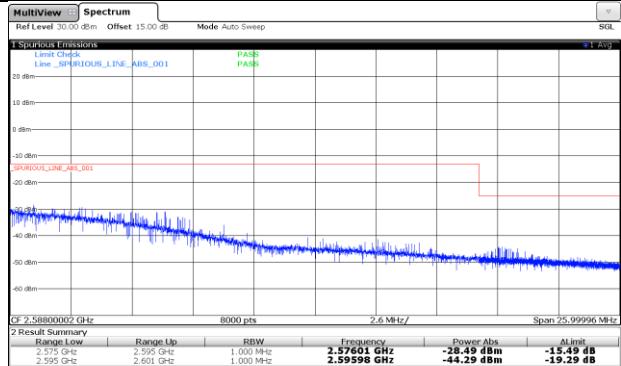
##### Channel

##### 21350

##### 100 RB



Date: 24.OCT.2018 03:41:50

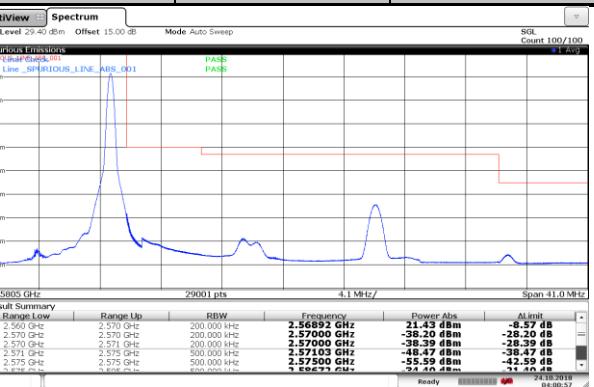


# LTE Band 7

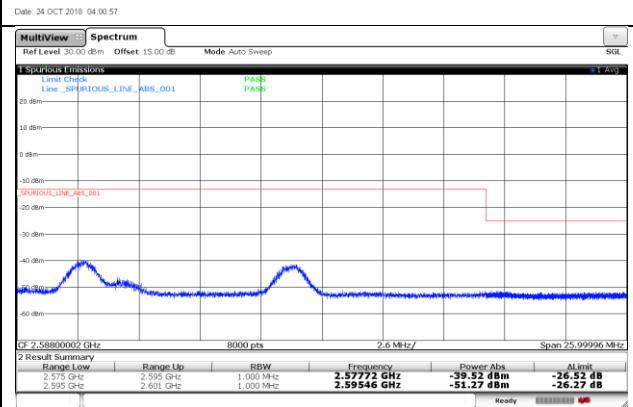
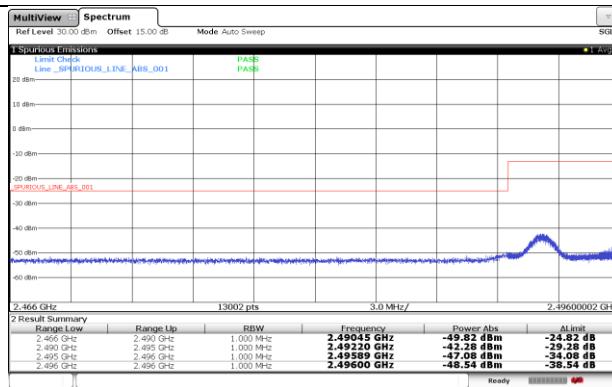
## Channel Bandwidth: 20 MHz / 16QAM

### <Out-of-Band Emissions>

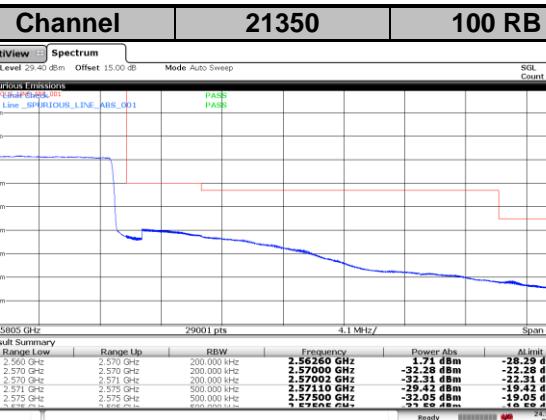
Channel	20850	1 RB	Channel	21350	1 RB
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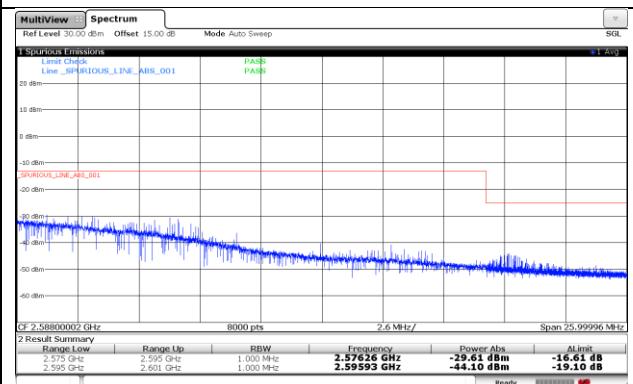
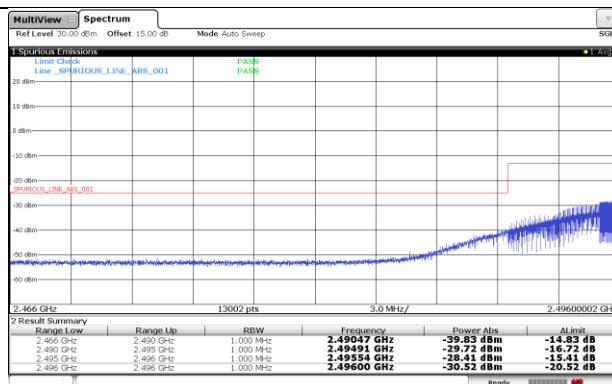
Date: 24.OCT.2018 03:33:56



Channel	20850	100 RB
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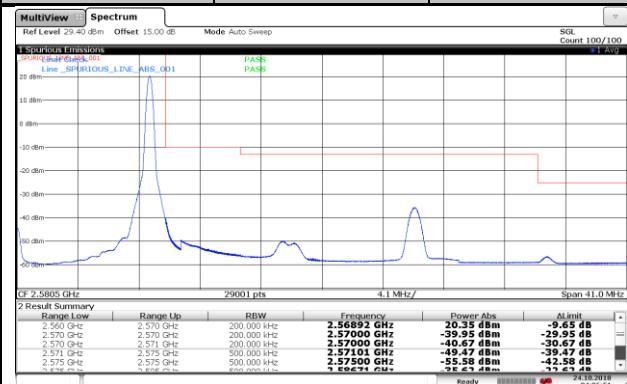


**LTE Band 7**  
**Channel Bandwidth: 20 MHz / 64QAM**  
**<Out-of-Band Emissions>**

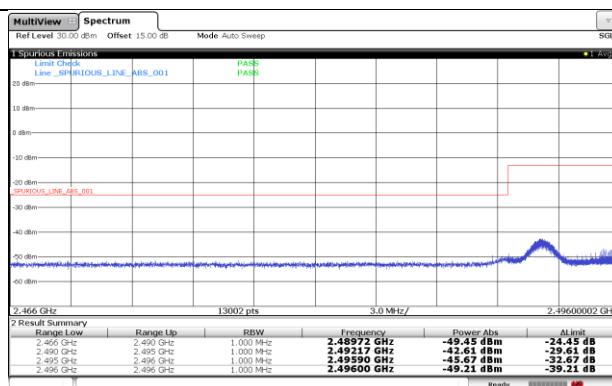
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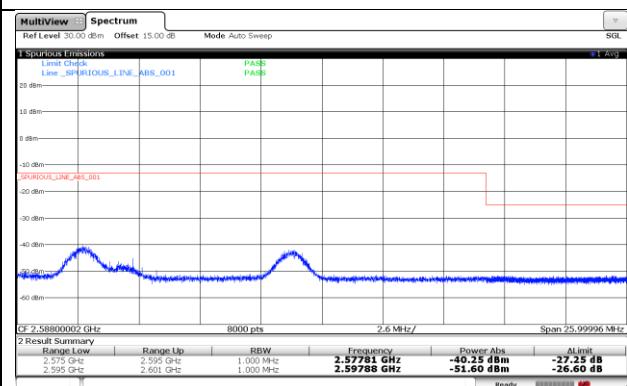
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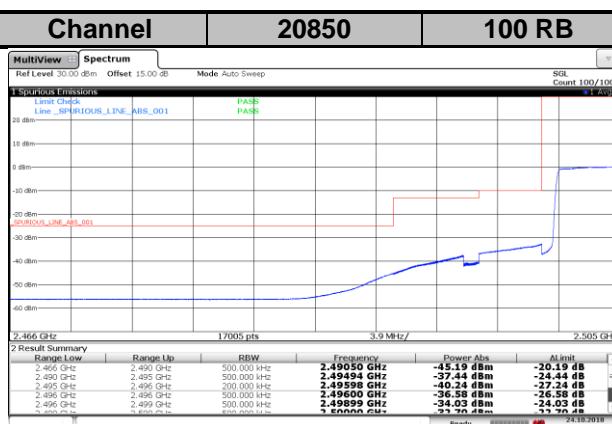
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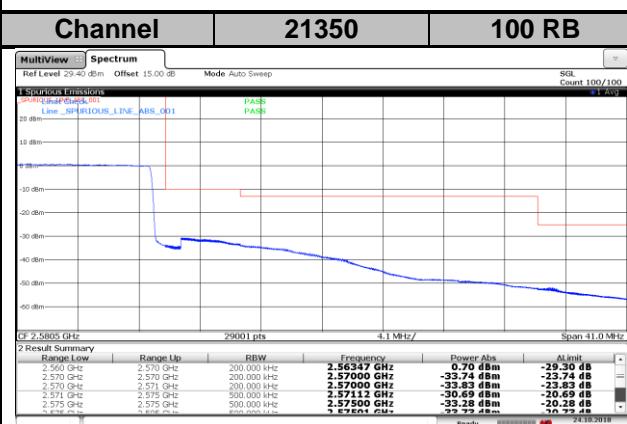
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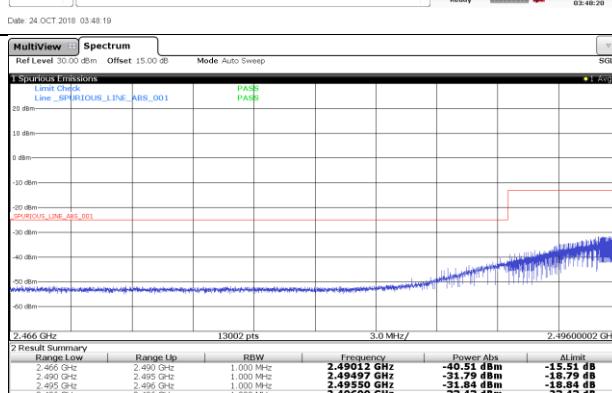
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Date: 24.OCT.2018 03:48:19



Date: 24.OCT.2018 04:16:03



Report No.: RF180920C22-10

### LTE Band 38

#### Channel Bandwidth: 5 MHz / QPSK

#### <Out-of-Band Emissions>

##### Channel

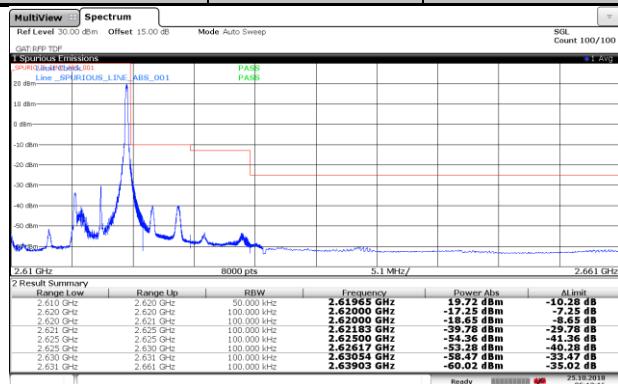
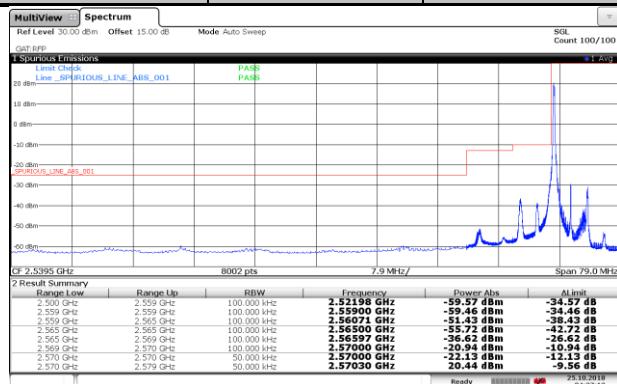
##### 37775

##### 1 RB

##### Channel

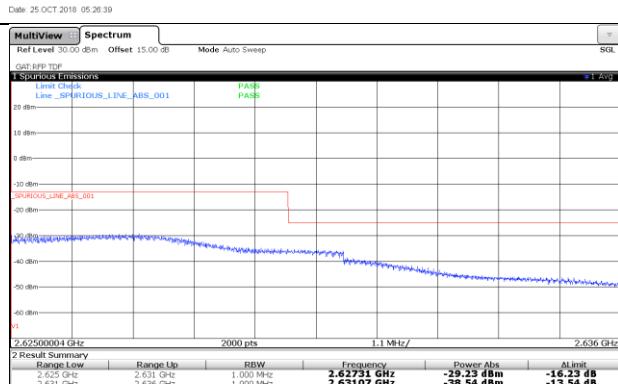
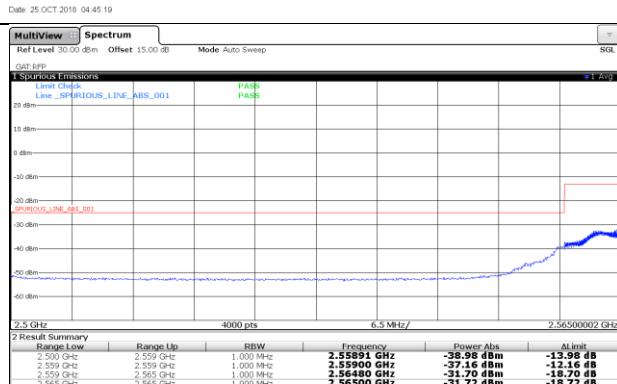
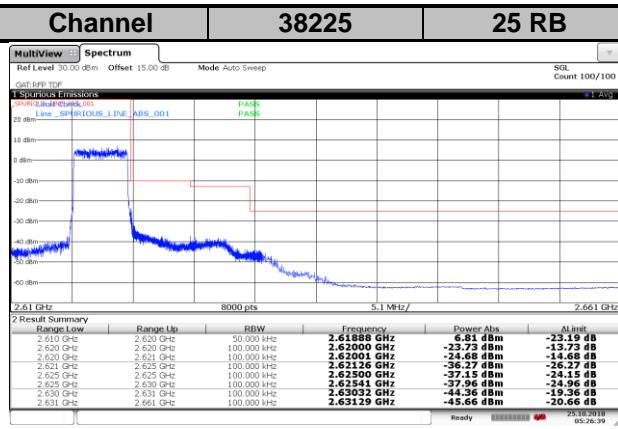
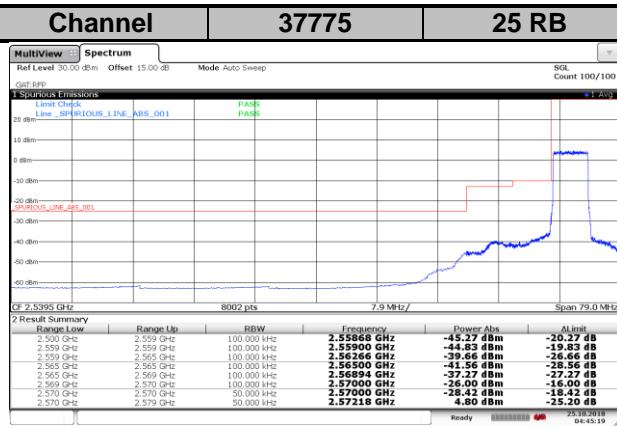
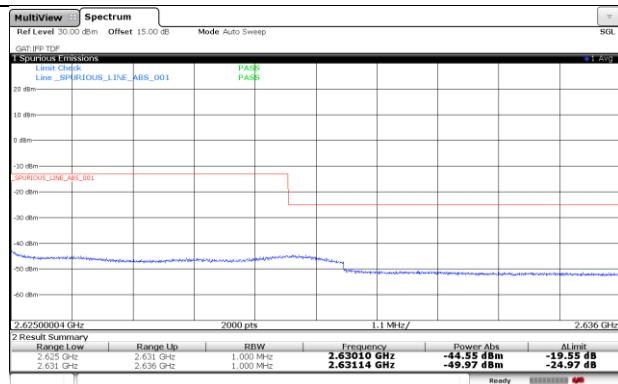
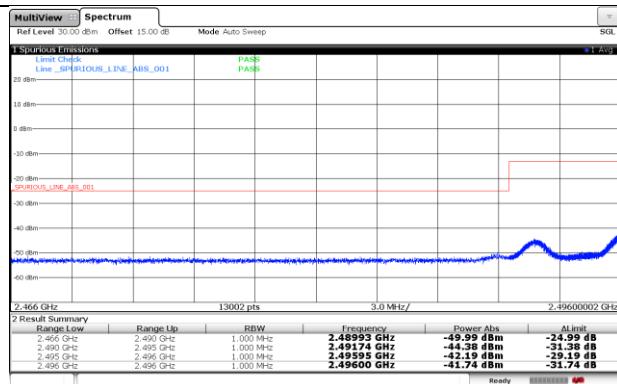
##### 38225

##### 1 RB



Date: 25.OCT.2018 04:27:12

Date: 25.OCT.2018 05:13:16



### LTE Band 38

#### Channel Bandwidth: 5 MHz / 16QAM

#### <Out-of-Band Emissions>

#### Channel

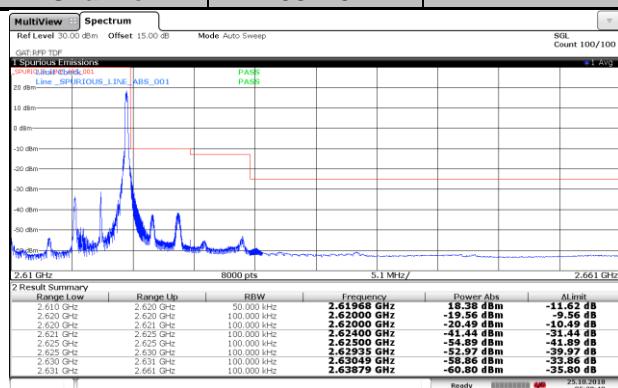
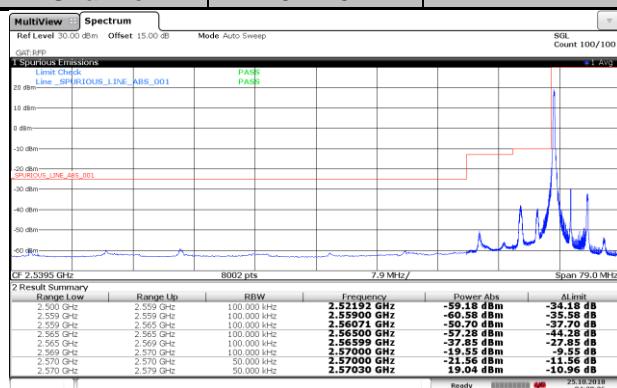
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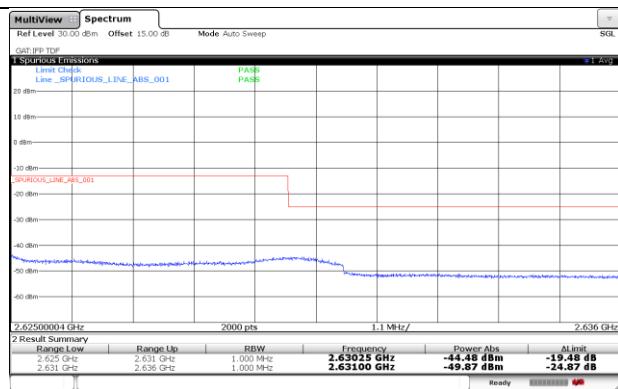
#### Channel

#### 38225

#### 1 RB

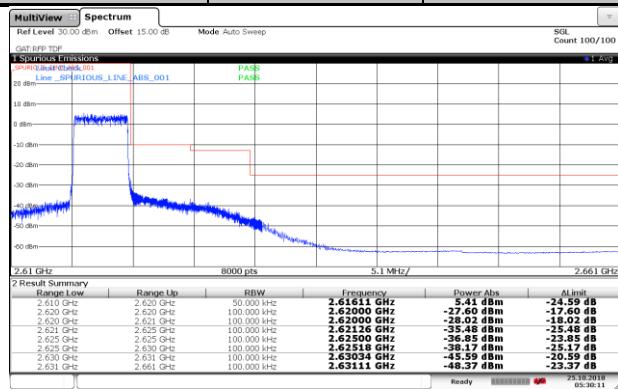
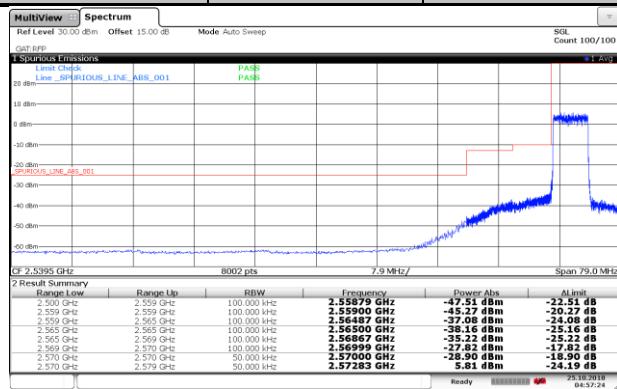


Date: 25.10.2018 04:30:26



Channel 37775 25 RB

Channel 38225 25 RB



Date: 25.10.2018 04:57:23

