

# FCC RF Test Report

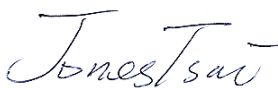
APPLICANT : BandRich Inc.  
EQUIPMENT : LTE/EVDO Rev. A module  
BRAND NAME : BandLuxe  
MODEL NAME : M535U  
FCC ID : UZI-35M168  
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27  
CLASSIFICATION : PCS Licensed Transmitter (PCB)

The product was received on Feb. 11, 2014 and testing was completed on Feb. 17, 2014. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI / TIA / EIA-603-C-2004 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.



Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager



## SPORTON INTERNATIONAL INC.

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Page Number : 1 of 351  
Report Issued Date : Feb. 26, 2014  
Report Version : Rev. 01



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## REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION             | ISSUED DATE   |
|------------|---------|-------------------------|---------------|
| FG421186B  | Rev. 01 | Initial issue of report | Feb. 26, 2014 |
|            |         |                         |               |
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## SUMMARY OF TEST RESULT

| Report Section | FCC Rule                                                       | IC Rule                                                                           | Description                                                                   | Limit                               | Result | Remark |
|----------------|----------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------|--------|--------|
| 3.1            | §2.1046                                                        | RSS-Gen(4.8)<br>RSS-130(4.4)<br>RSS-132 (5.4)<br>RSS-133 (6.4)<br>RSS-139 (6.4)   | Conducted Output Power                                                        | Reporting Only                      | PASS   | -      |
| 3.2            | §24.232(d)<br>27.50(d)(5)                                      | RSS-130(4.4)<br>RSS-132 (5.4)<br>RSS-133 (6.4)<br>RSS-139 (6.4)                   | Peak-to-Average Ratio                                                         | <13 dB                              | PASS   | -      |
| 3.3            | §2.1049<br>§22.917(a)<br>§24.238(a)<br>§27.53(g)(3)            | RSS-GEN(4.6.1)<br>RSS-132 (3.1)<br>RSS-133 (3.1)<br>RSS-139 (3.1)                 | Occupied Bandwidth                                                            | Reporting Only                      | PASS   | -      |
| 3.4            | §2.1051<br>§22.917(a)<br>§24.238(a)<br>§27.53(f)<br>§27.53(g)  | RSS-GEN(4.9)<br>RSS-132 (5.5)<br>RSS-133 (6.5.1)<br>RSS-130(4.6)<br>RSS-139 (6.5) | Conducted Band Edge<br>Measurement<br>(Band 2) (Band 4)<br>(Band 5) (Band 12) | < 43+10log <sub>10</sub> (P[Watts]) | PASS   | -      |
| 3.5            | §2.1051<br>§22.917(a)<br>§24.238(a)<br>§27.53 (f)<br>§27.53(g) | RSS-GEN(4.9)<br>RSS-132 (5.5)<br>RSS-133 (6.5.1)<br>RSS-130(4.6)<br>RSS-139 (6.5) | Conducted Spurious Emission<br>(Band 2) (Band 4)<br>(Band 5) (Band 12)        | < 43+10log <sub>10</sub> (P[Watts]) | PASS   | -      |



| Report Section | FCC Rule                                                       | IC Rule                                                                           | Description                                                           | Limit                                  | Result | Remark                                        |
|----------------|----------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------|--------|-----------------------------------------------|
| 3.6            | §2.1053<br>§22.917(a)<br>§24.238(a)<br>§27.53 (f)<br>§27.53(g) | RSS-GEN(4.9)<br>RSS-132 (5.5)<br>RSS-133 (6.5.1)<br>RSS-130(4.6)<br>RSS-139 (6.5) | Radiated Spurious Emission<br>(Band 2) (Band 4)<br>(Band 5) (Band 12) | $< 43 + 10 \log_{10}(P[\text{Watts}])$ | PASS   | Under limit<br>8.62 dB at<br>15591.000<br>MHz |
| 3.7            | §2.1055<br>§22.355<br>§24.235<br>§27.54                        | RSS-GEN(4.7)<br>RSS-132(5.3)<br>RSS-133(6.3)<br>RSS-130(4.3)<br>RSS-139 (6.3)     | Frequency Stability<br>Temperature & Voltage                          | $< 2.5 \text{ ppm}$                    | PASS   | -                                             |

# 1 General Description

## 1.1 Applicant

BandRich Inc.

6F., No. 71, Zhouzi St., Neihu Dist., Taipei City 11493, Taiwan (R.O.C.)

## 1.2 Manufacturer

FAIR GOAL ELECTRONIC CO.

1F., No. 97-1, Haihu, Luzhu Township, Taoyuan County 338, Taiwan (R.O.C.)

## 1.3 Feature of Equipment Under Test

| Product Feature                 |                          |
|---------------------------------|--------------------------|
| Equipment                       | LTE/EVDO Rev. A module   |
| Brand Name                      | BandLuxe                 |
| Model Name                      | M535U                    |
| FCC ID                          | UZI-35M168               |
| EUT supports Radios application | CDMA/EV-DO/LTE           |
| HW Version                      | V1614E01                 |
| SW Version                      | QC_2_00016739_3_001_0001 |
| EUT Stage                       | Identical Prototype      |

**Remark:** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

## 1.4 Product Specification of Equipment Under Test

| Product Specification subjective to this standard |                                                                                                                                                                                                   |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tx Frequency</b>                               | LTE Band 12 : 699.7 MHz ~ 715.3 MHz<br>LTE Band 5 : 824.7 MHz ~ 848.3 MHz<br>LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz<br>LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz                                         |
| <b>Rx Frequency</b>                               | LTE Band 12 : 729.7 MHz ~ 745.3 MHz<br>LTE Band 5 : 869.7 MHz ~ 893.3 MHz<br>LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz<br>LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz                                         |
| <b>Bandwidth</b>                                  | 1.4MHz / 3MHz / 5MHz / 10MHz (Band 12)<br>1.4MHz / 3MHz / 5MHz / 10MHz (Band 5)<br>1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz (Band 2)<br>1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz (Band 4) |
| <b>Maximum Output Power to Antenna</b>            | LTE Band 12 : 22.22 dBm / 0.17 W<br>LTE Band 5 : 22.26 dBm / 0.17 W<br>LTE Band 2 : 22.10 dBm / 0.16 W<br>LTE Band 4 : 22.49 dBm / 0.18 W                                                         |
| <b>Antenna Type</b>                               | Fixed External Antenna                                                                                                                                                                            |
| <b>Type of Modulation</b>                         | QPSK / 16QAM                                                                                                                                                                                      |

## 1.5 Modification of EUT

No modifications are made to the EUT during all test items.

## 1.6 Emission Designator

| FCC Rule | System     | Type of Modulation | BW      | Emission Designator | Frequency Tolerance (ppm) |
|----------|------------|--------------------|---------|---------------------|---------------------------|
| Part 22  | LTE Band 5 | QPSK               | 1.4 MHz | 1M10G7D             | -                         |
| Part 22  | LTE Band 5 | 16QAM              | 1.4 MHz | 1M10D7W             | -                         |
| Part 22  | LTE Band 5 | QPSK               | 3 MHz   | 2M73G7D             | -                         |
| Part 22  | LTE Band 5 | 16QAM              | 3 MHz   | 2M72D7W             | -                         |
| Part 22  | LTE Band 5 | QPSK               | 5 MHz   | 4M50G7D             | -                         |
| Part 22  | LTE Band 5 | 16QAM              | 5 MHz   | 4M49D7W             | -                         |
| Part 22  | LTE Band 5 | QPSK               | 10 MHz  | 9M08G7D             | 0.0044 ppm                |
| Part 22  | LTE Band 5 | 16QAM              | 10 MHz  | 9M04D7W             | -                         |
| Part 24  | LTE Band 2 | QPSK               | 1.4 MHz | 1M10G7D             | -                         |
| Part 24  | LTE Band 2 | 16QAM              | 1.4 MHz | 1M11D7W             | -                         |
| Part 24  | LTE Band 2 | QPSK               | 3 MHz   | 2M73G7D             | -                         |
| Part 24  | LTE Band 2 | 16QAM              | 3 MHz   | 2M74D7W             | -                         |
| Part 24  | LTE Band 2 | QPSK               | 5 MHz   | 4M50G7D             | -                         |
| Part 24  | LTE Band 2 | 16QAM              | 5 MHz   | 4M50D7W             | -                         |
| Part 24  | LTE Band 2 | QPSK               | 10 MHz  | 9M06G7D             | 0.0047 ppm                |
| Part 24  | LTE Band 2 | 16QAM              | 10 MHz  | 9M04D7W             | -                         |
| Part 24  | LTE Band 2 | QPSK               | 15 MHz  | 13M5G7D             | -                         |
| Part 24  | LTE Band 2 | 16QAM              | 15 MHz  | 13M5D7W             | -                         |
| Part 24  | LTE Band 2 | QPSK               | 20 MHz  | 18M4G7D             | -                         |
| Part 24  | LTE Band 2 | 16QAM              | 20 MHz  | 18M4D7W             | -                         |

| FCC Rule | System      | Type of Modulation | BW      | Emission Designator | Frequency Tolerance (ppm) |
|----------|-------------|--------------------|---------|---------------------|---------------------------|
| Part 27  | LTE Band 4  | QPSK               | 1.4 MHz | 1M10G7D             | -                         |
| Part 27  | LTE Band 4  | 16QAM              | 1.4 MHz | 1M10D7W             | -                         |
| Part 27  | LTE Band 4  | QPSK               | 3 MHz   | 2M72G7D             | -                         |
| Part 27  | LTE Band 4  | 16QAM              | 3 MHz   | 2M73D7W             | -                         |
| Part 27  | LTE Band 4  | QPSK               | 5MHz    | 4M51G7D             | -                         |
| Part 27  | LTE Band 4  | 16QAM              | 5MHz    | 4M51D7W             | -                         |
| Part 27  | LTE Band 4  | QPSK               | 10MHz   | 9M06G7D             | 0.0213 ppm                |
| Part 27  | LTE Band 4  | 16QAM              | 10MHz   | 9M04D7W             | -                         |
| Part 27  | LTE Band 4  | QPSK               | 15MHz   | 13M5G7D             | -                         |
| Part 27  | LTE Band 4  | 16QAM              | 15MHz   | 13M5D7W             | -                         |
| Part 27  | LTE Band 4  | QPSK               | 20MHz   | 18M4G7D             | -                         |
| Part 27  | LTE Band 4  | 16QAM              | 20MHz   | 18M5D7W             | -                         |
| Part 27  | LTE Band 12 | QPSK               | 1.4 MHz | 1M10G7D             | -                         |
| Part 27  | LTE Band 12 | 16QAM              | 1.4 MHz | 1M10D7W             | -                         |
| Part 27  | LTE Band 12 | QPSK               | 3 MHz   | 2M73G7D             | -                         |
| Part 27  | LTE Band 12 | 16QAM              | 3 MHz   | 2M74D7W             | -                         |
| Part 27  | LTE Band 12 | QPSK               | 5MHz    | 4M50G7D             | -                         |
| Part 27  | LTE Band 12 | 16QAM              | 5MHz    | 4M50D7W             | -                         |
| Part 27  | LTE Band 12 | QPSK               | 10MHz   | 9M10G7D             | 0.0066 ppm                |
| Part 27  | LTE Band 12 | 16QAM              | 10MHz   | 9M06D7W             | -                         |

## 1.7 Testing Site

|                    |                                                                                                                                                                 |           |                         |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------------|
| Test Site          | SPORTON INTERNATIONAL INC.                                                                                                                                      |           |                         |
| Test Site Location | No. 52, Hwa Ya 1 <sup>st</sup> Rd., Hwa Ya Technology Park,<br>Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.<br>TEL: +886-3-327-3456<br>FAX: +886-3-328-4978 |           |                         |
| Test Site No.      | Sporton Site No.                                                                                                                                                |           | FCC/IC Registration No. |
|                    | TH02-HY                                                                                                                                                         | 03CH07-HY | 722060/4086B-1          |

## 1.8 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR Part 2, 22(H), 24(E), 27
- ♦ ANSI / TIA / EIA-603-C-2004
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v02r01

### Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

## 2 Test Configuration of Equipment Under Test

### 2.1 Test Mode

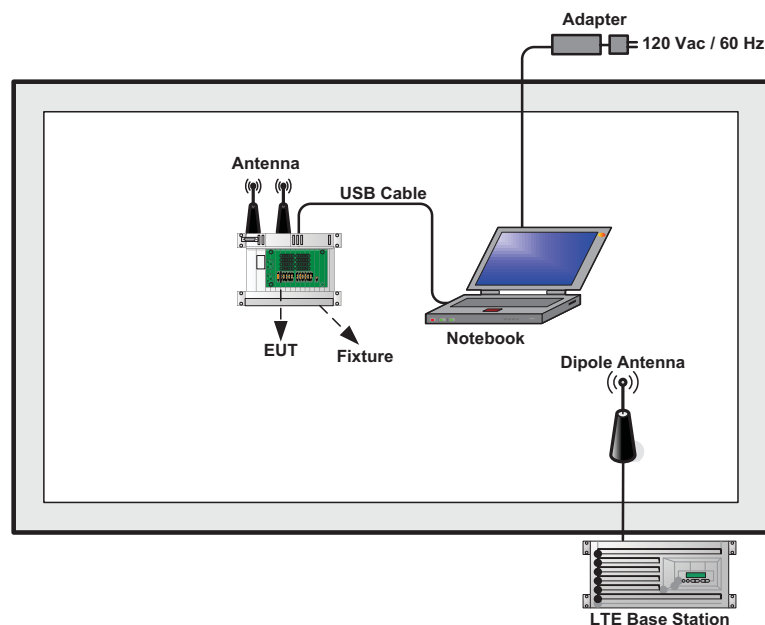
During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range.

Frequency range investigated for radiated emission: 30MHz to 10<sup>th</sup> harmonic.

| Test Modes    |              |                        |                                                                               |
|---------------|--------------|------------------------|-------------------------------------------------------------------------------|
| Band          |              | Radiated TCs           | Conducted TCs                                                                 |
| LTE<br>Band 5 | BW<br>1.4MHz | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 3) Link<br>■ LTE (RB Size 6) Link    |
|               | BW<br>3MHz   | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 8) Link<br>■ LTE (RB Size 15) Link   |
|               | BW<br>5MHz   | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 12) Link<br>■ LTE (RB Size 25) Link  |
|               | BW<br>10MHz  | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 25) Link<br>■ LTE (RB Size 50) Link  |
| LTE<br>Band 2 | BW<br>1.4MHz | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 3) Link<br>■ LTE (RB Size 6) Link    |
|               | BW<br>3MHz   | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 8) Link<br>■ LTE (RB Size 15) Link   |
|               | BW<br>5MHz   | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 12) Link<br>■ LTE (RB Size 25) Link  |
|               | BW<br>10MHz  | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 25) Link<br>■ LTE (RB Size 50) Link  |
|               | BW<br>15MHz  | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 36) Link<br>■ LTE (RB Size 75) Link  |
|               | BW<br>20MHz  | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 50) Link<br>■ LTE (RB Size 100) Link |

| Test Modes     |              |                        |                                                                               |
|----------------|--------------|------------------------|-------------------------------------------------------------------------------|
| Band           |              | Radiated TCs           | Conducted TCs                                                                 |
| LTE<br>Band 4  | BW<br>1.4MHz | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 3) Link<br>■ LTE (RB Size 6) Link    |
|                | BW<br>3MHz   | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 8) Link<br>■ LTE (RB Size 15) Link   |
|                | BW<br>5MHz   | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 12) Link<br>■ LTE (RB Size 25) Link  |
|                | BW<br>10MHz  | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 25) Link<br>■ LTE (RB Size 50) Link  |
|                | BW<br>15MHz  | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 36) Link<br>■ LTE (RB Size 75) Link  |
|                | BW<br>20MHz  | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 50) Link<br>■ LTE (RB Size 100) Link |
| LTE<br>Band 12 | BW<br>1.4MHz | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 3) Link<br>■ LTE (RB Size 6) Link    |
|                | BW<br>3MHz   | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 8) Link<br>■ LTE (RB Size 15) Link   |
|                | BW<br>5MHz   | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 12) Link<br>■ LTE (RB Size 25) Link  |
|                | BW<br>10MHz  | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 25) Link<br>■ LTE (RB Size 50) Link  |

## 2.2 Connection Diagram of Test System



## 2.3 Support Unit used in test configuration and system

| Item | Equipment        | Trade Name | Model No. | FCC ID  | Data Cable | Power Cord                                                 |
|------|------------------|------------|-----------|---------|------------|------------------------------------------------------------|
| 1.   | LTE Base Station | Anritsu    | MT8820C   | N/A     | N/A        | Unshielded, 1.8 m                                          |
| 2.   | Notebook         | DELL       | P20G      | FCC DoC | N/A        | AC I/P:<br>Unshielded, 1.2 m<br>DC O/P:<br>Shielded, 1.8 m |
| 3.   | Fixture          | NA         | NA        | NA      | NA         | NA                                                         |
| 4.   | Antenna          | NA         | NA        | NA      | NA         | NA                                                         |

## 2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

*Offset = RF cable loss + attenuator factor.*

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Example :

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 4.2 + 10 = 14.2 \text{ (dB)}\end{aligned}$$

### 3 Test Result

#### 3.1 Conducted Output Power Measurement

##### 3.1.1 Description of the Conducted Output Power Measurement

A base station simulator was used to establish communication with the EUT. Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals shall be reported.

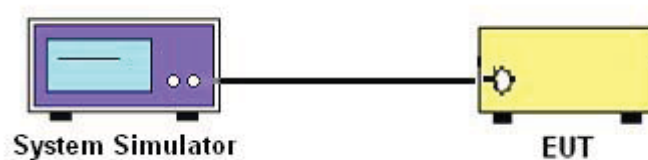
##### 3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

##### 3.1.3 Test Procedures

1. The transmitter output port was connected to base station.
2. Set EUT at maximum power through base station.
3. Select lowest, middle, and highest channels for each band and different modulation.

##### 3.1.4 Test Setup



### 3.1.5 Test Result of Conducted Output Power

#### <LTE Band 5 Conducted Power>

| BW [MHz]        | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|-----------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| Channel         |            |         |           | 20450                             | 20525                                | 20600                              |
| Frequency (MHz) |            |         |           | 829                               | 836.5                                | 844                                |
| 10              | QPSK       | 1       | 0         | 22.16                             | 22.10                                | 22.06                              |
| 10              | QPSK       | 1       | 24        | 22.03                             | 22.09                                | 22.05                              |
| 10              | QPSK       | 1       | 49        | 22.00                             | 22.04                                | 21.98                              |
| 10              | QPSK       | 25      | 0         | 21.08                             | 21.64                                | 21.61                              |
| 10              | QPSK       | 25      | 12        | 21.04                             | 21.54                                | 21.57                              |
| 10              | QPSK       | 25      | 24        | 20.98                             | 21.46                                | 21.55                              |
| 10              | QPSK       | 50      | 0         | 20.95                             | 20.85                                | 20.86                              |
| 10              | 16QAM      | 1       | 0         | 20.96                             | 20.81                                | 20.85                              |
| 10              | 16QAM      | 1       | 24        | 20.89                             | 20.85                                | 20.87                              |
| 10              | 16QAM      | 1       | 49        | 20.74                             | 20.83                                | 20.82                              |
| 10              | 16QAM      | 25      | 0         | 20.10                             | 20.56                                | 20.47                              |
| 10              | 16QAM      | 25      | 12        | 20.00                             | 20.48                                | 20.44                              |
| 10              | 16QAM      | 25      | 24        | 19.95                             | 20.44                                | 20.42                              |
| 10              | 16QAM      | 50      | 0         | 19.95                             | 19.73                                | 19.87                              |
| Channel         |            |         |           | 20425                             | 20525                                | 20625                              |
| Frequency (MHz) |            |         |           | 826.5                             | 836.5                                | 846.5                              |
| 5               | QPSK       | 1       | 0         | 22.08                             | 22.05                                | 22.04                              |
| 5               | QPSK       | 1       | 12        | 22.07                             | 22.03                                | 22.03                              |
| 5               | QPSK       | 1       | 24        | 22.09                             | 21.98                                | 21.94                              |
| 5               | QPSK       | 12      | 0         | 21.17                             | 21.53                                | 21.65                              |
| 5               | QPSK       | 12      | 6         | 21.20                             | 21.44                                | 21.60                              |
| 5               | QPSK       | 12      | 11        | 21.20                             | 21.40                                | 21.54                              |
| 5               | QPSK       | 25      | 0         | 21.10                             | 20.94                                | 20.97                              |
| 5               | 16QAM      | 1       | 0         | 21.03                             | 21.27                                | 21.27                              |
| 5               | 16QAM      | 1       | 12        | 20.99                             | 21.37                                | 21.33                              |
| 5               | 16QAM      | 1       | 24        | 21.33                             | 21.35                                | 21.25                              |
| 5               | 16QAM      | 12      | 0         | 20.22                             | 20.52                                | 20.69                              |
| 5               | 16QAM      | 12      | 6         | 20.25                             | 20.42                                | 20.59                              |
| 5               | 16QAM      | 12      | 11        | 20.26                             | 20.38                                | 20.53                              |
| 5               | 16QAM      | 25      | 0         | 20.15                             | 19.97                                | 20.01                              |



| BW [MHz]        | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|-----------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| Channel         |            |         |           | 20415                             | 20525                                | 20635                              |
| Frequency (MHz) |            |         |           | 825.5                             | 836.5                                | 847.5                              |
| 3               | QPSK       | 1       | 0         | 22.22                             | 22.12                                | 22.04                              |
| 3               | QPSK       | 1       | 7         | 22.16                             | 22.11                                | 21.99                              |
| 3               | QPSK       | 1       | 14        | 22.14                             | 22.03                                | 21.95                              |
| 3               | QPSK       | 8       | 0         | 21.23                             | 21.67                                | 21.66                              |
| 3               | QPSK       | 8       | 4         | 21.10                             | 21.57                                | 21.46                              |
| 3               | QPSK       | 8       | 7         | 21.21                             | 21.55                                | 21.36                              |
| 3               | QPSK       | 15      | 0         | 21.12                             | 20.98                                | 21.06                              |
| 3               | 16QAM      | 1       | 0         | 21.48                             | 21.29                                | 21.36                              |
| 3               | 16QAM      | 1       | 7         | 21.40                             | 21.39                                | 20.99                              |
| 3               | 16QAM      | 1       | 14        | 21.38                             | 21.29                                | 21.19                              |
| 3               | 16QAM      | 8       | 0         | 20.08                             | 20.54                                | 20.55                              |
| 3               | 16QAM      | 8       | 4         | 20.03                             | 20.52                                | 20.46                              |
| 3               | 16QAM      | 8       | 7         | 20.07                             | 20.43                                | 20.35                              |
| 3               | 16QAM      | 15      | 0         | 20.11                             | 19.97                                | 20.00                              |
| Channel         |            |         |           | 20407                             | 20525                                | 20643                              |
| Frequency (MHz) |            |         |           | 824.7                             | 836.5                                | 848.3                              |
| 1.4             | QPSK       | 1       | 0         | 22.10                             | 22.12                                | 22.09                              |
| 1.4             | QPSK       | 1       | 2         | 22.15                             | 22.07                                | 21.96                              |
| 1.4             | QPSK       | 1       | 5         | 22.14                             | 22.05                                | 21.93                              |
| 1.4             | QPSK       | 3       | 0         | 22.26                             | 22.11                                | 22.08                              |
| 1.4             | QPSK       | 3       | 1         | 22.17                             | 22.03                                | 22.05                              |
| 1.4             | QPSK       | 3       | 2         | 22.15                             | 21.99                                | 21.99                              |
| 1.4             | QPSK       | 6       | 0         | 21.17                             | 21.02                                | 21.04                              |
| 1.4             | 16QAM      | 1       | 0         | 21.13                             | 21.16                                | 21.06                              |
| 1.4             | 16QAM      | 1       | 2         | 21.13                             | 21.11                                | 20.97                              |
| 1.4             | 16QAM      | 1       | 5         | 21.11                             | 21.06                                | 21.15                              |
| 1.4             | 16QAM      | 3       | 0         | 21.25                             | 21.23                                | 21.11                              |
| 1.4             | 16QAM      | 3       | 1         | 21.27                             | 21.24                                | 21.10                              |
| 1.4             | 16QAM      | 3       | 2         | 21.27                             | 21.22                                | 21.12                              |
| 1.4             | 16QAM      | 6       | 0         | 20.33                             | 20.19                                | 20.10                              |

**<LTE Band 2 Conducted Power>**

| BW [MHz]        | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|-----------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| Channel         |            |         |           | 18700                             | 18900                                | 19100                              |
| Frequency (MHz) |            |         |           | 1860                              | 1880                                 | 1900                               |
| 20              | QPSK       | 1       | 0         | 22.10                             | 22.03                                | 22.07                              |
| 20              | QPSK       | 1       | 49        | 22.00                             | 22.02                                | 21.86                              |
| 20              | QPSK       | 1       | 99        | 21.99                             | 22.00                                | 21.59                              |
| 20              | QPSK       | 50      | 0         | 20.97                             | 20.85                                | 20.89                              |
| 20              | QPSK       | 50      | 24        | 20.94                             | 20.91                                | 20.81                              |
| 20              | QPSK       | 50      | 49        | 20.82                             | 20.99                                | 20.77                              |
| 20              | QPSK       | 100     | 0         | 20.93                             | 20.92                                | 20.86                              |
| 20              | 16QAM      | 1       | 0         | 21.12                             | 20.82                                | 21.00                              |
| 20              | 16QAM      | 1       | 49        | 21.05                             | 21.05                                | 20.83                              |
| 20              | 16QAM      | 1       | 99        | 21.04                             | 20.97                                | 20.59                              |
| 20              | 16QAM      | 50      | 0         | 19.90                             | 19.79                                | 19.80                              |
| 20              | 16QAM      | 50      | 24        | 19.89                             | 19.86                                | 19.77                              |
| 20              | 16QAM      | 50      | 49        | 19.76                             | 19.88                                | 19.75                              |
| 20              | 16QAM      | 100     | 0         | 19.81                             | 19.86                                | 19.81                              |
| Channel         |            |         |           | 18675                             | 18900                                | 19125                              |
| Frequency (MHz) |            |         |           | 1857.5                            | 1880                                 | 1902.5                             |
| 15              | QPSK       | 1       | 0         | 22.09                             | 22.07                                | 22.02                              |
| 15              | QPSK       | 1       | 37        | 22.09                             | 22.06                                | 21.83                              |
| 15              | QPSK       | 1       | 74        | 21.85                             | 22.05                                | 21.54                              |
| 15              | QPSK       | 36      | 0         | 21.08                             | 20.96                                | 20.87                              |
| 15              | QPSK       | 36      | 18        | 20.95                             | 20.94                                | 20.77                              |
| 15              | QPSK       | 36      | 37        | 20.84                             | 20.90                                | 20.73                              |
| 15              | QPSK       | 75      | 0         | 20.96                             | 20.87                                | 20.74                              |
| 15              | 16QAM      | 1       | 0         | 21.07                             | 20.94                                | 20.98                              |
| 15              | 16QAM      | 1       | 37        | 21.06                             | 20.99                                | 20.82                              |
| 15              | 16QAM      | 1       | 74        | 20.87                             | 20.98                                | 20.53                              |
| 15              | 16QAM      | 36      | 0         | 19.97                             | 19.93                                | 19.84                              |
| 15              | 16QAM      | 36      | 18        | 19.94                             | 19.93                                | 19.76                              |
| 15              | 16QAM      | 36      | 37        | 19.81                             | 19.89                                | 19.75                              |
| 15              | 16QAM      | 75      | 0         | 19.86                             | 19.82                                | 19.73                              |



| BW [MHz]               | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|------------------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| <b>Channel</b>         |            |         |           | <b>18650</b>                      | <b>18900</b>                         | <b>19150</b>                       |
| <b>Frequency (MHz)</b> |            |         |           | <b>1855</b>                       | <b>1880</b>                          | <b>1905</b>                        |
| 10                     | QPSK       | 1       | 0         | 22.05                             | 22.01                                | 22.04                              |
| 10                     | QPSK       | 1       | 24        | 21.99                             | 21.91                                | 21.94                              |
| 10                     | QPSK       | 1       | 49        | 21.96                             | 21.96                                | 21.83                              |
| 10                     | QPSK       | 25      | 0         | 21.07                             | 20.96                                | 20.94                              |
| 10                     | QPSK       | 25      | 12        | 21.09                             | 21.09                                | 21.00                              |
| 10                     | QPSK       | 25      | 24        | 21.00                             | 21.10                                | 20.87                              |
| 10                     | QPSK       | 50      | 0         | 20.83                             | 20.94                                | 20.79                              |
| 10                     | 16QAM      | 1       | 0         | 20.87                             | 20.98                                | 20.76                              |
| 10                     | 16QAM      | 1       | 24        | 20.95                             | 21.03                                | 20.94                              |
| 10                     | 16QAM      | 1       | 49        | 20.85                             | 21.01                                | 20.51                              |
| 10                     | 16QAM      | 25      | 0         | 20.03                             | 20.00                                | 19.87                              |
| 10                     | 16QAM      | 25      | 12        | 20.03                             | 19.99                                | 19.93                              |
| 10                     | 16QAM      | 25      | 24        | 20.00                             | 20.00                                | 19.81                              |
| 10                     | 16QAM      | 50      | 0         | 19.86                             | 19.89                                | 19.75                              |
| <b>Channel</b>         |            |         |           | <b>18625</b>                      | <b>18900</b>                         | <b>19175</b>                       |
| <b>Frequency (MHz)</b> |            |         |           | <b>1852.5</b>                     | <b>1880</b>                          | <b>1907.5</b>                      |
| 5                      | QPSK       | 1       | 0         | 22.05                             | 22.09                                | 22.04                              |
| 5                      | QPSK       | 1       | 12        | 22.04                             | 22.00                                | 21.84                              |
| 5                      | QPSK       | 1       | 24        | 21.88                             | 22.08                                | 21.37                              |
| 5                      | QPSK       | 12      | 0         | 21.02                             | 21.09                                | 20.92                              |
| 5                      | QPSK       | 12      | 6         | 21.09                             | 21.04                                | 20.80                              |
| 5                      | QPSK       | 12      | 11        | 21.03                             | 21.03                                | 20.69                              |
| 5                      | QPSK       | 25      | 0         | 21.01                             | 21.00                                | 20.76                              |
| 5                      | 16QAM      | 1       | 0         | 21.10                             | 21.20                                | 21.11                              |
| 5                      | 16QAM      | 1       | 12        | 21.21                             | 21.19                                | 20.98                              |
| 5                      | 16QAM      | 1       | 24        | 21.13                             | 21.21                                | 20.69                              |
| 5                      | 16QAM      | 12      | 0         | 20.00                             | 20.10                                | 19.81                              |
| 5                      | 16QAM      | 12      | 6         | 19.99                             | 20.01                                | 19.95                              |
| 5                      | 16QAM      | 12      | 11        | 19.99                             | 20.05                                | 19.71                              |
| 5                      | 16QAM      | 25      | 0         | 19.88                             | 19.94                                | 19.72                              |



| BW [MHz]               | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|------------------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| <b>Channel</b>         |            |         |           | <b>18615</b>                      | <b>18900</b>                         | <b>19185</b>                       |
| <b>Frequency (MHz)</b> |            |         |           | <b>1851.5</b>                     | <b>1880</b>                          | <b>1908.5</b>                      |
| 3                      | QPSK       | 1       | 0         | 22.06                             | 22.04                                | 22.02                              |
| 3                      | QPSK       | 1       | 7         | 21.99                             | 21.95                                | 21.66                              |
| 3                      | QPSK       | 1       | 14        | 22.05                             | 22.03                                | 21.44                              |
| 3                      | QPSK       | 8       | 0         | 21.09                             | 21.05                                | 20.77                              |
| 3                      | QPSK       | 8       | 4         | 21.06                             | 21.02                                | 20.64                              |
| 3                      | QPSK       | 8       | 7         | 21.07                             | 21.06                                | 20.53                              |
| 3                      | QPSK       | 15      | 0         | 21.08                             | 21.06                                | 20.70                              |
| 3                      | 16QAM      | 1       | 0         | 20.97                             | 21.01                                | 20.83                              |
| 3                      | 16QAM      | 1       | 7         | 20.98                             | 20.93                                | 20.63                              |
| 3                      | 16QAM      | 1       | 14        | 20.97                             | 21.00                                | 20.44                              |
| 3                      | 16QAM      | 8       | 0         | 19.96                             | 19.91                                | 19.70                              |
| 3                      | 16QAM      | 8       | 4         | 19.94                             | 19.93                                | 19.57                              |
| 3                      | 16QAM      | 8       | 7         | 19.96                             | 19.92                                | 19.51                              |
| 3                      | 16QAM      | 15      | 0         | 20.01                             | 19.97                                | 19.64                              |
| <b>Channel</b>         |            |         |           | <b>18607</b>                      | <b>18900</b>                         | <b>19193</b>                       |
| <b>Frequency (MHz)</b> |            |         |           | <b>1850.7</b>                     | <b>1880</b>                          | <b>1909.3</b>                      |
| 1.4                    | QPSK       | 1       | 0         | 22.07                             | 22.05                                | 22.04                              |
| 1.4                    | QPSK       | 1       | 2         | 22.01                             | 21.98                                | 21.54                              |
| 1.4                    | QPSK       | 1       | 5         | 22.04                             | 22.02                                | 21.52                              |
| 1.4                    | QPSK       | 3       | 0         | 22.01                             | 21.99                                | 21.62                              |
| 1.4                    | QPSK       | 3       | 1         | 22.05                             | 22.03                                | 21.56                              |
| 1.4                    | QPSK       | 3       | 2         | 22.06                             | 22.04                                | 21.55                              |
| 1.4                    | QPSK       | 6       | 0         | 21.04                             | 21.12                                | 20.56                              |
| 1.4                    | 16QAM      | 1       | 0         | 21.11                             | 21.23                                | 20.76                              |
| 1.4                    | 16QAM      | 1       | 2         | 21.16                             | 21.27                                | 20.77                              |
| 1.4                    | 16QAM      | 1       | 5         | 21.28                             | 21.26                                | 20.71                              |
| 1.4                    | 16QAM      | 3       | 0         | 21.03                             | 21.08                                | 20.51                              |
| 1.4                    | 16QAM      | 3       | 1         | 21.06                             | 21.12                                | 20.49                              |
| 1.4                    | 16QAM      | 3       | 2         | 21.06                             | 21.12                                | 20.63                              |
| 1.4                    | 16QAM      | 6       | 0         | 20.15                             | 20.23                                | 19.52                              |



<LTE Band 4 Conducted Power>

| BW [MHz]        | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|-----------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| Channel         |            |         |           | 20050                             | 20175                                | 20300                              |
| Frequency (MHz) |            |         |           | 1720                              | 1732.5                               | 1745                               |
| 20              | QPSK       | 1       | 0         | 22.33                             | 22.27                                | 22.22                              |
| 20              | QPSK       | 1       | 49        | 22.29                             | 22.22                                | 22.00                              |
| 20              | QPSK       | 1       | 99        | 22.32                             | 22.10                                | 22.06                              |
| 20              | QPSK       | 50      | 0         | 21.14                             | 21.31                                | 21.13                              |
| 20              | QPSK       | 50      | 24        | 21.19                             | 21.20                                | 21.00                              |
| 20              | QPSK       | 50      | 49        | 21.32                             | 21.03                                | 21.07                              |
| 20              | QPSK       | 100     | 0         | 21.21                             | 21.25                                | 21.06                              |
| 20              | 16QAM      | 1       | 0         | 21.30                             | 21.50                                | 21.27                              |
| 20              | 16QAM      | 1       | 49        | 21.50                             | 21.36                                | 21.17                              |
| 20              | 16QAM      | 1       | 99        | 21.45                             | 21.31                                | 21.60                              |
| 20              | 16QAM      | 50      | 0         | 20.26                             | 20.25                                | 20.02                              |
| 20              | 16QAM      | 50      | 24        | 20.19                             | 20.21                                | 20.01                              |
| 20              | 16QAM      | 50      | 49        | 20.30                             | 20.16                                | 20.10                              |
| 20              | 16QAM      | 100     | 0         | 20.29                             | 20.23                                | 20.19                              |
| Channel         |            |         |           | 20025                             | 20175                                | 20325                              |
| Frequency (MHz) |            |         |           | 1717.5                            | 1732.5                               | 1747.5                             |
| 15              | QPSK       | 1       | 0         | 22.36                             | 22.40                                | 22.27                              |
| 15              | QPSK       | 1       | 37        | 22.34                             | 22.31                                | 22.27                              |
| 15              | QPSK       | 1       | 74        | 22.35                             | 22.11                                | 22.16                              |
| 15              | QPSK       | 36      | 0         | 21.19                             | 21.23                                | 21.06                              |
| 15              | QPSK       | 36      | 18        | 21.06                             | 21.14                                | 20.98                              |
| 15              | QPSK       | 36      | 37        | 21.17                             | 21.07                                | 21.22                              |
| 15              | QPSK       | 75      | 0         | 21.11                             | 21.08                                | 21.05                              |
| 15              | 16QAM      | 1       | 0         | 21.40                             | 21.43                                | 21.38                              |
| 15              | 16QAM      | 1       | 37        | 21.56                             | 21.46                                | 21.43                              |
| 15              | 16QAM      | 1       | 74        | 21.58                             | 21.25                                | 21.51                              |
| 15              | 16QAM      | 36      | 0         | 20.19                             | 20.24                                | 20.05                              |
| 15              | 16QAM      | 36      | 18        | 20.17                             | 20.12                                | 20.09                              |
| 15              | 16QAM      | 36      | 37        | 20.28                             | 20.07                                | 20.24                              |
| 15              | 16QAM      | 75      | 0         | 20.09                             | 20.04                                | 20.04                              |



| BW [MHz]               | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|------------------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| <b>Channel</b>         |            |         |           | <b>20000</b>                      | <b>20175</b>                         | <b>20350</b>                       |
| <b>Frequency (MHz)</b> |            |         |           | <b>1715</b>                       | <b>1732.5</b>                        | <b>1750</b>                        |
| 10                     | QPSK       | 1       | 0         | 22.34                             | 22.45                                | 22.26                              |
| 10                     | QPSK       | 1       | 24        | 22.25                             | 22.23                                | 22.25                              |
| 10                     | QPSK       | 1       | 49        | 22.33                             | 22.15                                | 22.18                              |
| 10                     | QPSK       | 25      | 0         | 21.18                             | 21.22                                | 21.19                              |
| 10                     | QPSK       | 25      | 12        | 21.13                             | 21.24                                | 21.26                              |
| 10                     | QPSK       | 25      | 24        | 21.12                             | 21.22                                | 21.29                              |
| 10                     | QPSK       | 50      | 0         | 21.05                             | 21.10                                | 21.10                              |
| 10                     | 16QAM      | 1       | 0         | 21.03                             | 21.17                                | 21.07                              |
| 10                     | 16QAM      | 1       | 24        | 21.23                             | 21.27                                | 21.16                              |
| 10                     | 16QAM      | 1       | 49        | 21.25                             | 21.15                                | 21.18                              |
| 10                     | 16QAM      | 25      | 0         | 20.23                             | 20.29                                | 20.25                              |
| 10                     | 16QAM      | 25      | 12        | 20.19                             | 20.32                                | 20.33                              |
| 10                     | 16QAM      | 25      | 24        | 20.28                             | 20.30                                | 20.37                              |
| 10                     | 16QAM      | 50      | 0         | 20.01                             | 20.23                                | 20.13                              |
| <b>Channel</b>         |            |         |           | <b>19975</b>                      | <b>20175</b>                         | <b>20375</b>                       |
| <b>Frequency (MHz)</b> |            |         |           | <b>1712.5</b>                     | <b>1732.5</b>                        | <b>1752.5</b>                      |
| 5                      | QPSK       | 1       | 0         | 22.36                             | 22.22                                | 22.48                              |
| 5                      | QPSK       | 1       | 12        | 22.35                             | 22.17                                | 22.47                              |
| 5                      | QPSK       | 1       | 24        | 22.18                             | 22.21                                | 22.33                              |
| 5                      | QPSK       | 12      | 0         | 21.28                             | 21.33                                | 21.41                              |
| 5                      | QPSK       | 12      | 6         | 21.25                             | 21.22                                | 21.57                              |
| 5                      | QPSK       | 12      | 11        | 21.28                             | 21.27                                | 21.38                              |
| 5                      | QPSK       | 25      | 0         | 21.11                             | 21.20                                | 21.32                              |
| 5                      | 16QAM      | 1       | 0         | 21.05                             | 21.13                                | 21.15                              |
| 5                      | 16QAM      | 1       | 12        | 21.11                             | 21.04                                | 21.32                              |
| 5                      | 16QAM      | 1       | 24        | 20.91                             | 21.03                                | 21.06                              |
| 5                      | 16QAM      | 12      | 0         | 20.35                             | 20.34                                | 20.40                              |
| 5                      | 16QAM      | 12      | 6         | 20.44                             | 20.35                                | 20.48                              |
| 5                      | 16QAM      | 12      | 11        | 20.39                             | 20.39                                | 20.48                              |
| 5                      | 16QAM      | 25      | 0         | 20.12                             | 20.30                                | 20.43                              |



| BW [MHz]               | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|------------------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| <b>Channel</b>         |            |         |           | <b>19965</b>                      | <b>20175</b>                         | <b>20385</b>                       |
| <b>Frequency (MHz)</b> |            |         |           | <b>1711.5</b>                     | <b>1732.5</b>                        | <b>1753.5</b>                      |
| 3                      | QPSK       | 1       | 0         | 22.30                             | 22.26                                | 22.49                              |
| 3                      | QPSK       | 1       | 7         | 22.21                             | 22.25                                | 22.45                              |
| 3                      | QPSK       | 1       | 14        | 22.21                             | 22.19                                | 22.32                              |
| 3                      | QPSK       | 8       | 0         | 21.35                             | 21.28                                | 21.49                              |
| 3                      | QPSK       | 8       | 4         | 21.47                             | 21.34                                | 21.54                              |
| 3                      | QPSK       | 8       | 7         | 21.33                             | 21.29                                | 21.46                              |
| 3                      | QPSK       | 15      | 0         | 21.37                             | 21.28                                | 21.41                              |
| 3                      | 16QAM      | 1       | 0         | 21.23                             | 21.11                                | 21.77                              |
| 3                      | 16QAM      | 1       | 7         | 21.10                             | 21.13                                | 21.76                              |
| 3                      | 16QAM      | 1       | 14        | 21.01                             | 21.40                                | 21.57                              |
| 3                      | 16QAM      | 8       | 0         | 20.19                             | 20.25                                | 20.47                              |
| 3                      | 16QAM      | 8       | 4         | 20.31                             | 20.29                                | 20.43                              |
| 3                      | 16QAM      | 8       | 7         | 20.18                             | 20.30                                | 20.45                              |
| 3                      | 16QAM      | 15      | 0         | 20.35                             | 20.44                                | 20.56                              |
| <b>Channel</b>         |            |         |           | <b>19957</b>                      | <b>20175</b>                         | <b>20393</b>                       |
| <b>Frequency (MHz)</b> |            |         |           | <b>1710.7</b>                     | <b>1732.5</b>                        | <b>1754.3</b>                      |
| 1.4                    | QPSK       | 1       | 0         | 22.46                             | 22.29                                | 22.48                              |
| 1.4                    | QPSK       | 1       | 2         | 22.41                             | 22.28                                | 22.33                              |
| 1.4                    | QPSK       | 1       | 5         | 22.29                             | 22.27                                | 22.28                              |
| 1.4                    | QPSK       | 3       | 0         | 22.32                             | 22.28                                | 22.41                              |
| 1.4                    | QPSK       | 3       | 1         | 22.25                             | 22.19                                | 22.30                              |
| 1.4                    | QPSK       | 3       | 2         | 22.29                             | 22.20                                | 22.29                              |
| 1.4                    | QPSK       | 6       | 0         | 21.30                             | 21.27                                | 21.25                              |
| 1.4                    | 16QAM      | 1       | 0         | 21.57                             | 21.71                                | 21.74                              |
| 1.4                    | 16QAM      | 1       | 2         | 21.50                             | 21.67                                | 21.59                              |
| 1.4                    | 16QAM      | 1       | 5         | 21.62                             | 21.47                                | 21.35                              |
| 1.4                    | 16QAM      | 3       | 0         | 21.31                             | 21.21                                | 21.54                              |
| 1.4                    | 16QAM      | 3       | 1         | 21.22                             | 21.19                                | 21.48                              |
| 1.4                    | 16QAM      | 3       | 2         | 21.25                             | 21.29                                | 21.47                              |
| 1.4                    | 16QAM      | 6       | 0         | 20.27                             | 20.43                                | 20.46                              |

**<LTE Band 12 Conducted Power>**

| BW [MHz]        | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|-----------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| Channel         |            |         |           | 23060                             | 23095                                | 23130                              |
| Frequency (MHz) |            |         |           | 704                               | 707.5                                | 711                                |
| 10              | QPSK       | 1       | 0         | 22.12                             | 22.22                                | 22.06                              |
| 10              | QPSK       | 1       | 24        | 22.07                             | 22.21                                | 21.88                              |
| 10              | QPSK       | 1       | 49        | 21.93                             | 21.84                                | 21.91                              |
| 10              | QPSK       | 25      | 0         | 20.79                             | 21.82                                | 21.74                              |
| 10              | QPSK       | 25      | 12        | 20.77                             | 21.77                                | 21.76                              |
| 10              | QPSK       | 25      | 24        | 20.82                             | 21.78                                | 21.72                              |
| 10              | QPSK       | 50      | 0         | 20.58                             | 20.63                                | 20.61                              |
| 10              | 16QAM      | 1       | 0         | 20.87                             | 21.02                                | 20.88                              |
| 10              | 16QAM      | 1       | 24        | 21.32                             | 20.79                                | 20.79                              |
| 10              | 16QAM      | 1       | 49        | 20.90                             | 21.14                                | 20.77                              |
| 10              | 16QAM      | 25      | 0         | 19.80                             | 20.83                                | 20.80                              |
| 10              | 16QAM      | 25      | 12        | 19.79                             | 20.76                                | 20.71                              |
| 10              | 16QAM      | 25      | 24        | 19.85                             | 20.76                                | 20.80                              |
| 10              | 16QAM      | 50      | 0         | 19.61                             | 19.60                                | 19.57                              |
| Channel         |            |         |           | 23035                             | 23095                                | 23155                              |
| Frequency (MHz) |            |         |           | 701.5                             | 707.5                                | 713.5                              |
| 5               | QPSK       | 1       | 0         | 22.03                             | 22.05                                | 22.05                              |
| 5               | QPSK       | 1       | 12        | 21.94                             | 21.47                                | 21.70                              |
| 5               | QPSK       | 1       | 24        | 21.90                             | 21.71                                | 21.75                              |
| 5               | QPSK       | 12      | 0         | 20.92                             | 21.58                                | 21.56                              |
| 5               | QPSK       | 12      | 6         | 21.05                             | 21.52                                | 21.41                              |
| 5               | QPSK       | 12      | 11        | 20.95                             | 21.46                                | 21.36                              |
| 5               | QPSK       | 25      | 0         | 20.85                             | 20.75                                | 20.70                              |
| 5               | 16QAM      | 1       | 0         | 21.07                             | 20.84                                | 20.76                              |
| 5               | 16QAM      | 1       | 12        | 20.92                             | 20.91                                | 20.89                              |
| 5               | 16QAM      | 1       | 24        | 21.00                             | 20.86                                | 20.76                              |
| 5               | 16QAM      | 12      | 0         | 19.76                             | 20.82                                | 20.72                              |
| 5               | 16QAM      | 12      | 6         | 19.95                             | 20.80                                | 20.66                              |
| 5               | 16QAM      | 12      | 11        | 19.83                             | 20.72                                | 20.72                              |
| 5               | 16QAM      | 25      | 0         | 19.77                             | 19.78                                | 19.60                              |



| BW [MHz]               | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|------------------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| <b>Channel</b>         |            |         |           | <b>23025</b>                      | <b>23095</b>                         | <b>23165</b>                       |
| <b>Frequency (MHz)</b> |            |         |           | <b>700.5</b>                      | <b>707.5</b>                         | <b>714.5</b>                       |
| 3                      | QPSK       | 1       | 0         | 22.21                             | 22.01                                | 22.01                              |
| 3                      | QPSK       | 1       | 7         | 22.03                             | 21.59                                | 21.88                              |
| 3                      | QPSK       | 1       | 14        | 22.05                             | 21.99                                | 21.83                              |
| 3                      | QPSK       | 8       | 0         | 20.89                             | 21.52                                | 21.87                              |
| 3                      | QPSK       | 8       | 4         | 20.93                             | 21.46                                | 21.78                              |
| 3                      | QPSK       | 8       | 7         | 21.03                             | 21.43                                | 21.72                              |
| 3                      | QPSK       | 15      | 0         | 20.89                             | 20.86                                | 20.71                              |
| 3                      | 16QAM      | 1       | 0         | 21.23                             | 21.11                                | 20.64                              |
| 3                      | 16QAM      | 1       | 7         | 21.08                             | 21.16                                | 20.73                              |
| 3                      | 16QAM      | 1       | 14        | 21.14                             | 21.13                                | 20.60                              |
| 3                      | 16QAM      | 8       | 0         | 19.87                             | 20.96                                | 20.82                              |
| 3                      | 16QAM      | 8       | 4         | 19.84                             | 20.87                                | 20.87                              |
| 3                      | 16QAM      | 8       | 7         | 19.94                             | 20.77                                | 20.81                              |
| 3                      | 16QAM      | 15      | 0         | 19.83                             | 19.93                                | 19.91                              |
| <b>Channel</b>         |            |         |           | <b>23017</b>                      | <b>23095</b>                         | <b>23173</b>                       |
| <b>Frequency (MHz)</b> |            |         |           | <b>699.7</b>                      | <b>707.5</b>                         | <b>715.3</b>                       |
| 1.4                    | QPSK       | 1       | 0         | 22.04                             | 22.03                                | 22.01                              |
| 1.4                    | QPSK       | 1       | 2         | 21.94                             | 21.50                                | 21.85                              |
| 1.4                    | QPSK       | 1       | 5         | 21.92                             | 21.96                                | 21.75                              |
| 1.4                    | QPSK       | 3       | 0         | 21.94                             | 21.85                                | 21.74                              |
| 1.4                    | QPSK       | 3       | 1         | 21.89                             | 21.87                                | 21.85                              |
| 1.4                    | QPSK       | 3       | 2         | 21.85                             | 21.49                                | 21.72                              |
| 1.4                    | QPSK       | 6       | 0         | 20.97                             | 20.95                                | 21.08                              |
| 1.4                    | 16QAM      | 1       | 0         | 20.64                             | 20.56                                | 20.43                              |
| 1.4                    | 16QAM      | 1       | 2         | 20.81                             | 20.49                                | 20.39                              |
| 1.4                    | 16QAM      | 1       | 5         | 20.34                             | 20.49                                | 20.36                              |
| 1.4                    | 16QAM      | 3       | 0         | 20.98                             | 20.80                                | 20.92                              |
| 1.4                    | 16QAM      | 3       | 1         | 21.07                             | 20.76                                | 20.91                              |
| 1.4                    | 16QAM      | 3       | 2         | 21.02                             | 20.70                                | 20.90                              |
| 1.4                    | 16QAM      | 6       | 0         | 19.73                             | 19.86                                | 19.58                              |

**Note:** maximum average power for LTE.

## 3.2 Peak-to-Average Ratio

### 3.2.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

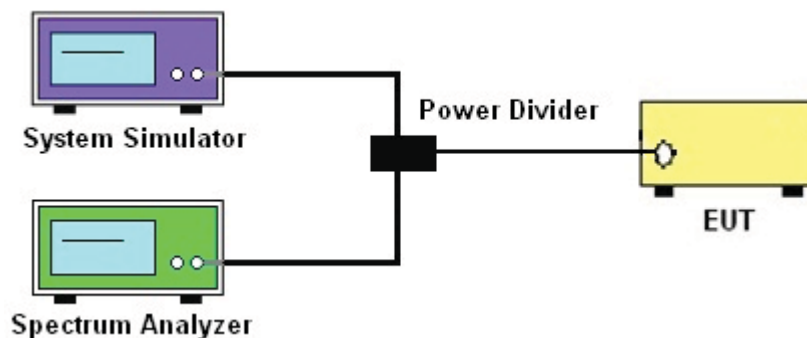
### 3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

### 3.2.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. For LTE operating modes:
  - a. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
  - b. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
3. Record the deviation as Peak to Average Ratio.

### 3.2.4 Test Setup



### 3.2.5 Test Result of Peak-to-Average Ratio

| LTE Band 5      |            |         |           |                                   |                                      |                                    |
|-----------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| BW [MHz]        | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
| Channel         |            |         |           | 20450                             | 20525                                | 20600                              |
| Frequency (MHz) |            |         |           | 829                               | 836.5                                | 844                                |
| 10              | 16QAM      | 1       | 0         | 6.92                              | 7.12                                 | 7.24                               |
| 10              | 16QAM      | 50      | 0         | 6.70                              | 6.63                                 | 6.60                               |

| LTE Band 2      |            |         |           |                                   |                                      |                                    |
|-----------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| BW [MHz]        | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
| Channel         |            |         |           | 18700                             | 18900                                | 19100                              |
| Frequency (MHz) |            |         |           | 1860                              | 1880                                 | 1900                               |
| 20              | 16QAM      | 1       | 0         | 6.79                              | 6.86                                 | 6.83                               |
| 20              | 16QAM      | 100     | 0         | 6.47                              | 6.60                                 | 6.60                               |

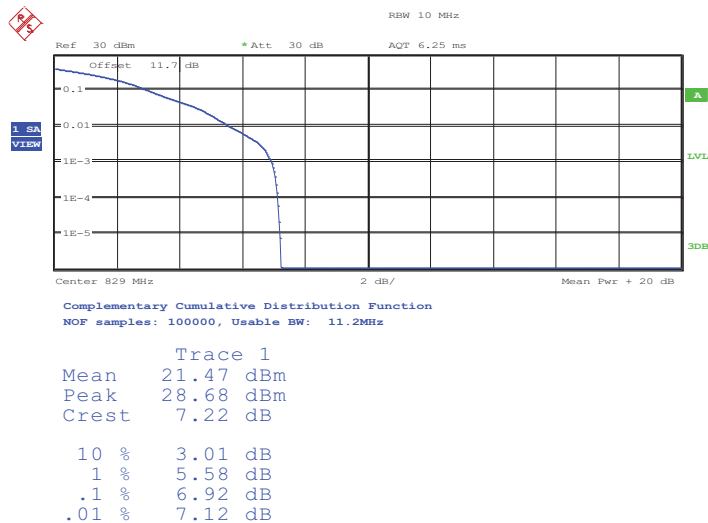
| LTE Band 4      |            |         |           |                                   |                                      |                                    |
|-----------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| BW [MHz]        | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
| Channel         |            |         |           | 20050                             | 20175                                | 20300                              |
| Frequency (MHz) |            |         |           | 1720                              | 1732.5                               | 1745                               |
| 20              | 16QAM      | 1       | 0         | 6.12                              | 6.96                                 | 6.70                               |
| 20              | 16QAM      | 100     | 0         | 6.47                              | 6.51                                 | 6.60                               |

| LTE Band 12     |            |         |           |                                   |                                      |                                    |
|-----------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| BW [MHz]        | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
| Channel         |            |         |           | 23060                             | 23095                                | 23130                              |
| Frequency (MHz) |            |         |           | 704                               | 707.5                                | 711                                |
| 10              | 16QAM      | 1       | 0         | 6.70                              | 6.92                                 | 6.96                               |
| 10              | 16QAM      | 50      | 0         | 6.60                              | 6.70                                 | 6.73                               |

### 3.2.6 Peak to Average Power Ratio

#### Peak-to-Average Ratio on LTE Band 5

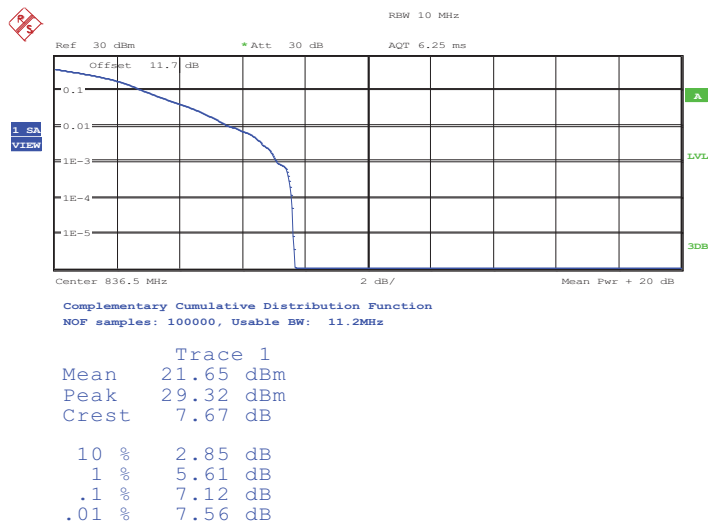
#### 10MHz / 16QAM in Ch. 20450 (1RB Size)



Date: 14.FEB.2014 13:56:58

#### Peak-to-Average Ratio on LTE Band 5

#### 10MHz / 16QAM in Ch. 20525 (1RB Size)

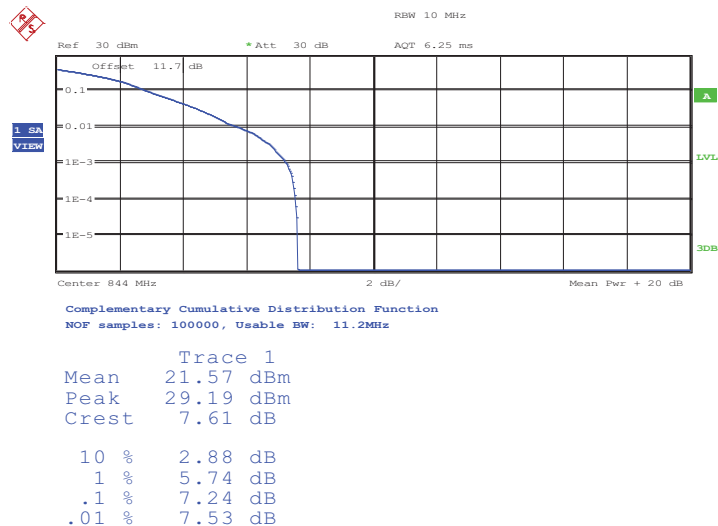


Date: 14.FEB.2014 13:57:52



Peak-to-Average Ratio on LTE Band 5

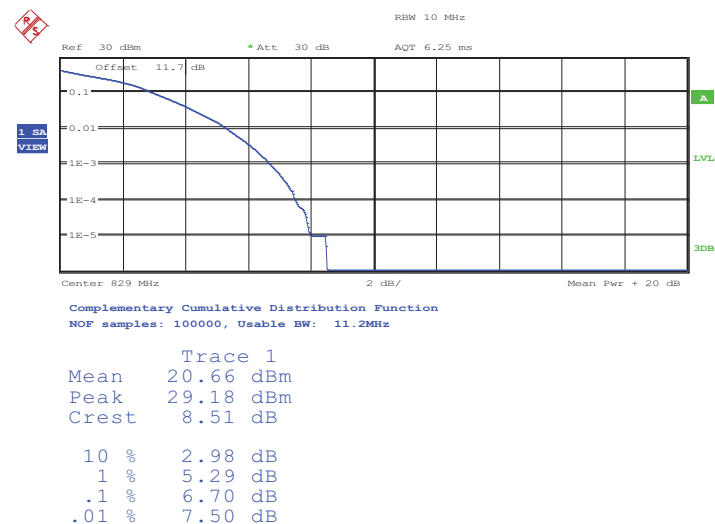
10MHz / 16QAM in Ch. 20600 (1RB Size)



Date: 14.FEB.2014 13:58:30

Peak-to-Average Ratio on LTE Band 5

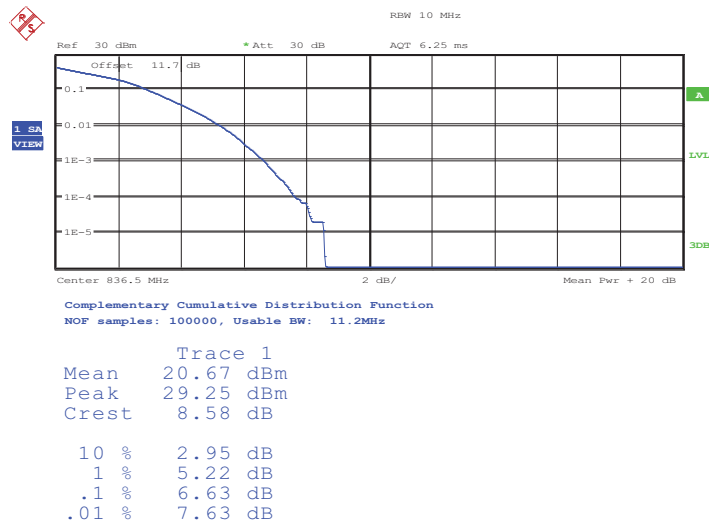
10MHz / 16QAM in Ch. 20450 (50RB Size)



Date: 14.FEB.2014 13:57:26

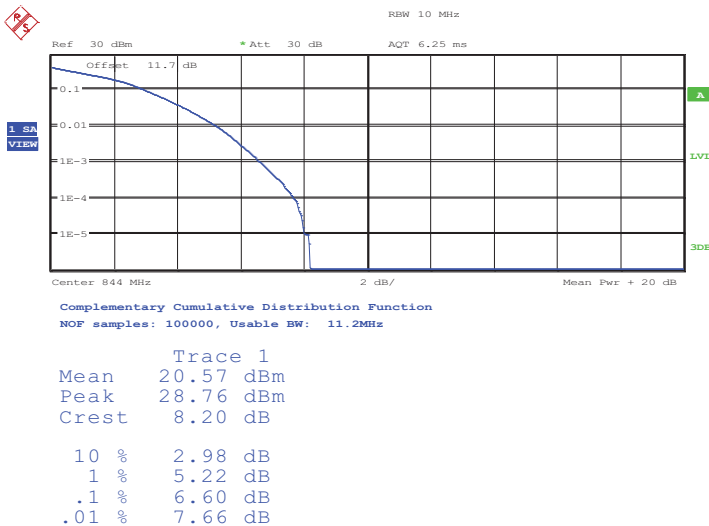


Peak-to-Average Ratio on LTE Band 5  
10MHz / 16QAM in Ch. 20525 (50RB Size)



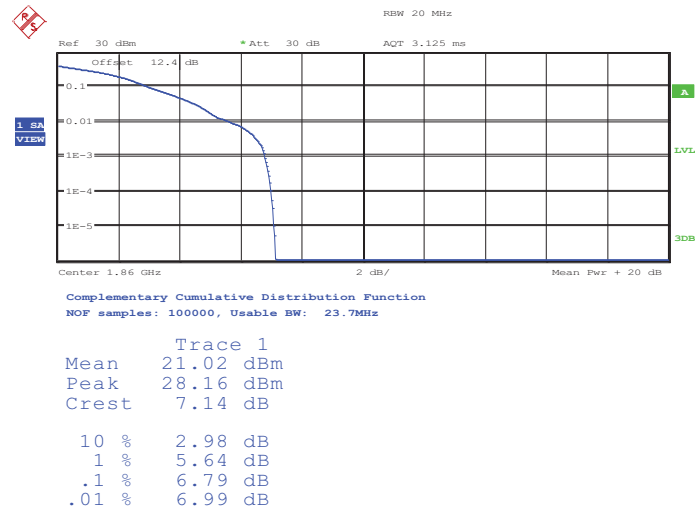
Date: 14.FEB.2014 13:58:10

Peak-to-Average Ratio on LTE Band 5  
10MHz / 16QAM in Ch. 20600 (50RB Size)



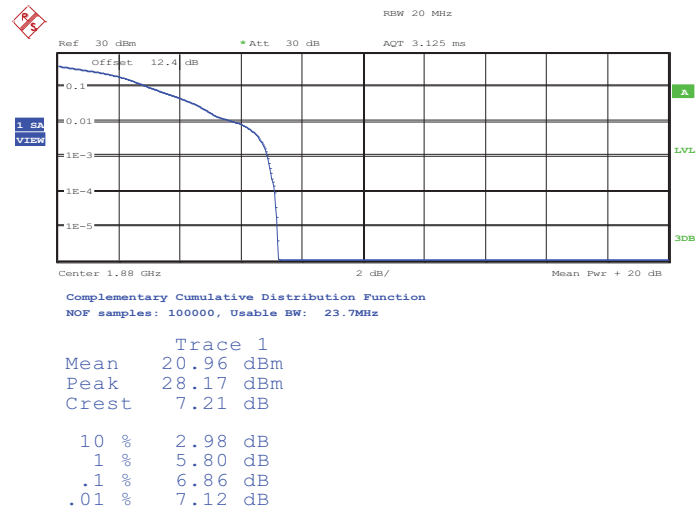
Date: 14.FEB.2014 13:58:51

**Peak-to-Average Ratio on LTE Band 2**  
**20MHz / 16QAM in Ch. 18700 (1RB Size)**



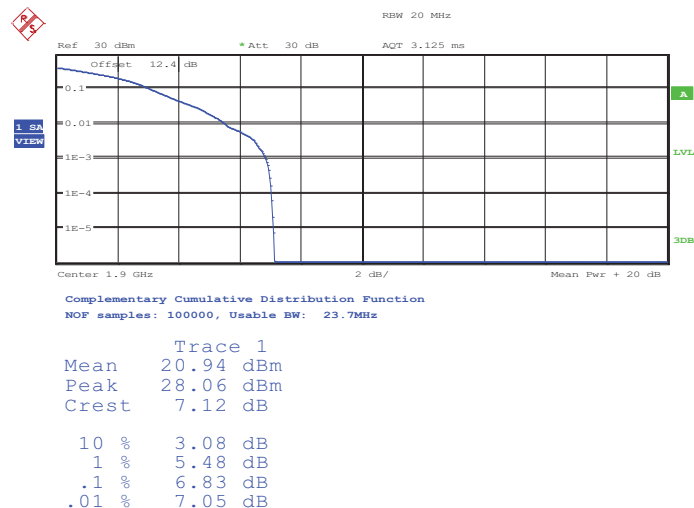
Date: 14.FEB.2014 10:09:56

**Peak-to-Average Ratio on LTE Band 2**  
**20MHz / 16QAM in Ch. 18900 (1RB Size)**



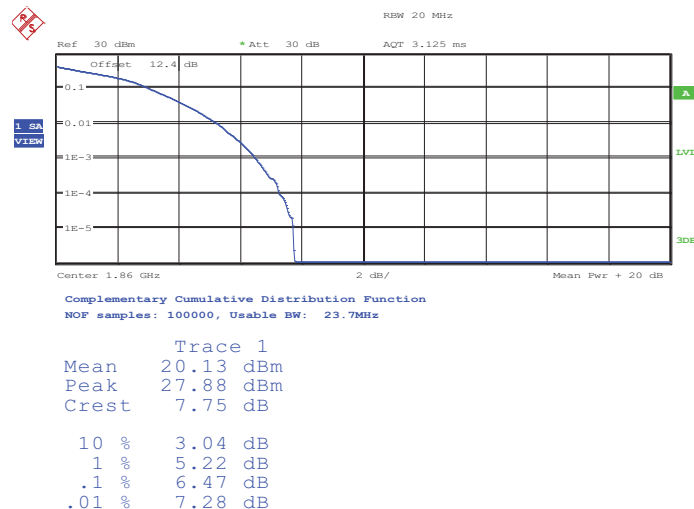
Date: 14.FEB.2014 10:10:37

**Peak-to-Average Ratio on LTE Band 2**  
**20MHz / 16QAM in Ch. 19100 (1RB Size)**



Date: 14.FEB.2014 10:11:04

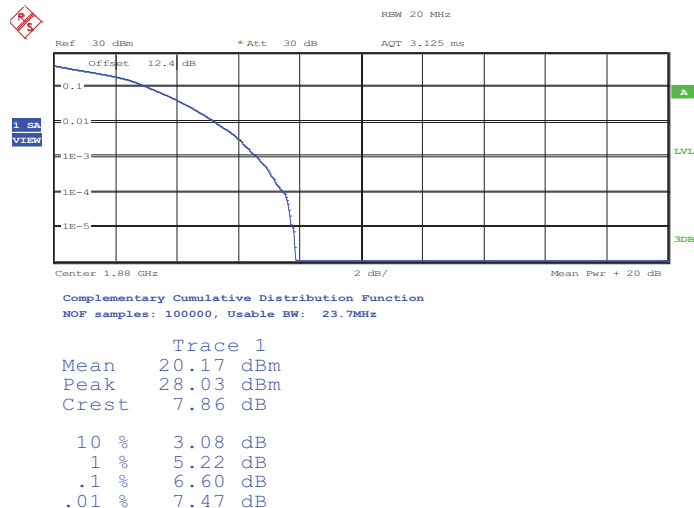
**Peak-to-Average Ratio on LTE Band 2**  
**20MHz / 16QAM in Ch. 18700 (100RB Size)**



Date: 14.FEB.2014 10:12:11

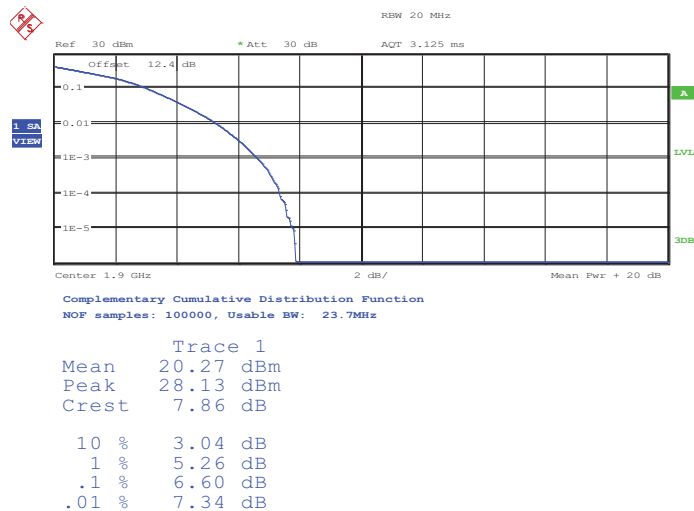


Peak-to-Average Ratio on LTE Band 2  
20MHz / 16QAM in Ch. 18900 (100RB Size)



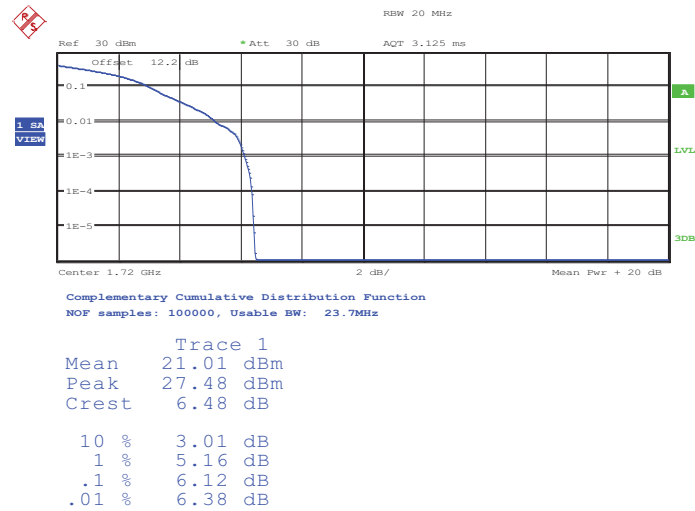
Date: 14.FEB.2014 10:11:46

Peak-to-Average Ratio on LTE Band 2  
20MHz / 16QAM in Ch. 19100 (100RB Size)



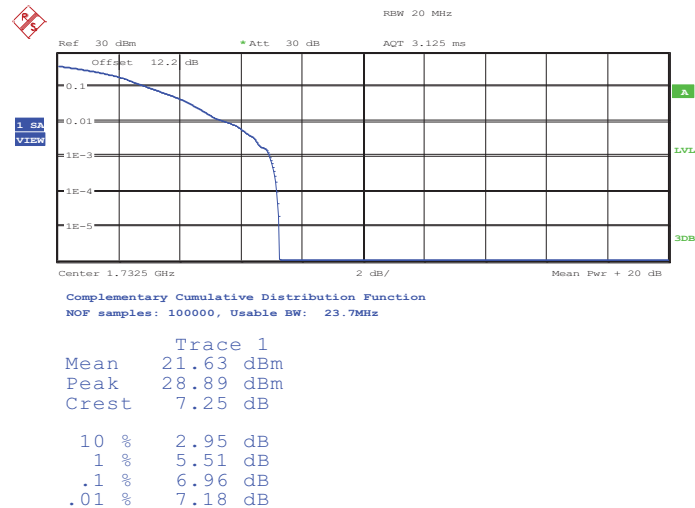
Date: 14.FEB.2014 10:11:27

**Peak-to-Average Ratio on LTE Band 4**  
**20MHz / 16QAM in Ch. 20050 (1RB Size)**



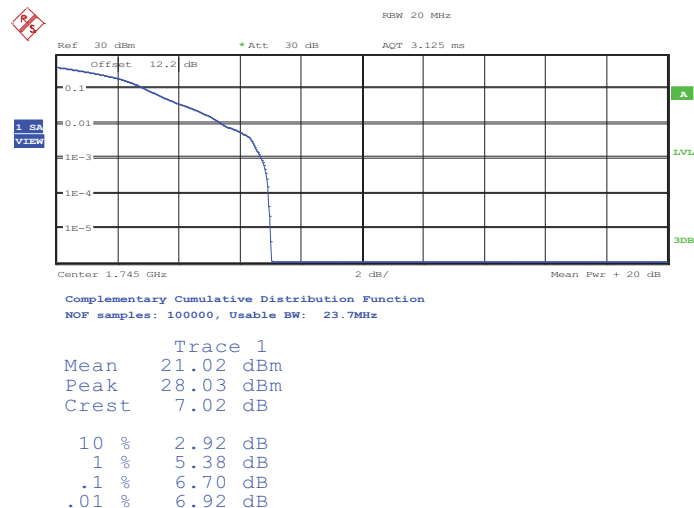
Date: 14.FEB.2014 12:51:14

**Peak-to-Average Ratio on LTE Band 4**  
**20MHz / 16QAM in Ch. 20175 (1RB Size)**



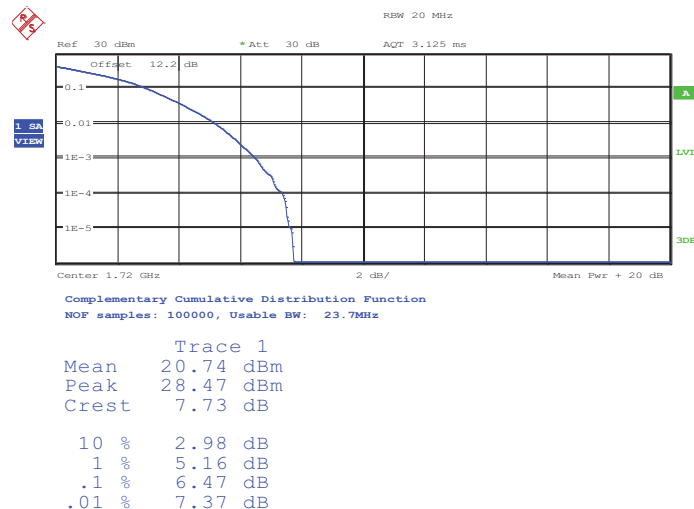
Date: 14.FEB.2014 12:50:24

**Peak-to-Average Ratio on LTE Band 4**  
**20MHz / 16QAM in Ch. 20300 (1RB Size)**



Date: 14.FEB.2014 12:49:20

**Peak-to-Average Ratio on LTE Band 4**  
**20MHz / 16QAM in Ch. 20500 (100RB Size)**

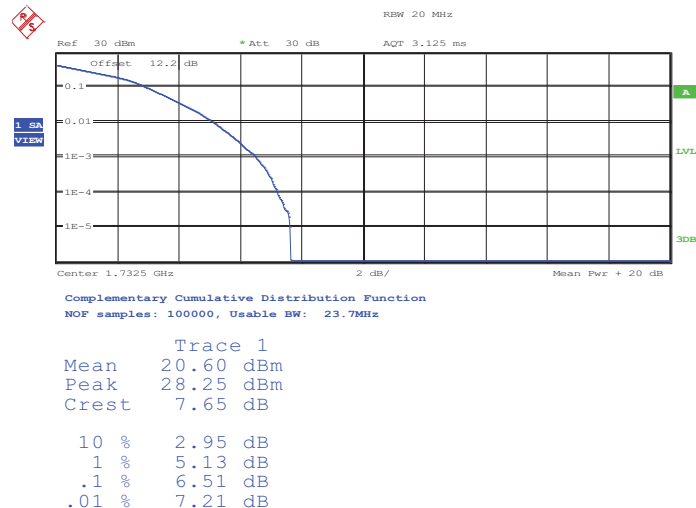


Date: 14.FEB.2014 12:48:03



Peak-to-Average Ratio on LTE Band 4

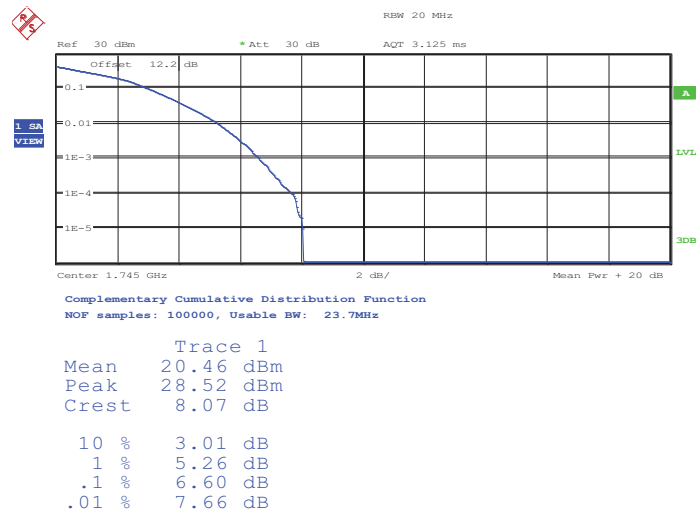
20MHz / 16QAM in Ch. 201750 (100RB Size)



Date: 14.FEB.2014 12:48:32

Peak-to-Average Ratio on LTE Band 4

20MHz / 16QAM in Ch. 20300 (100RB Size)

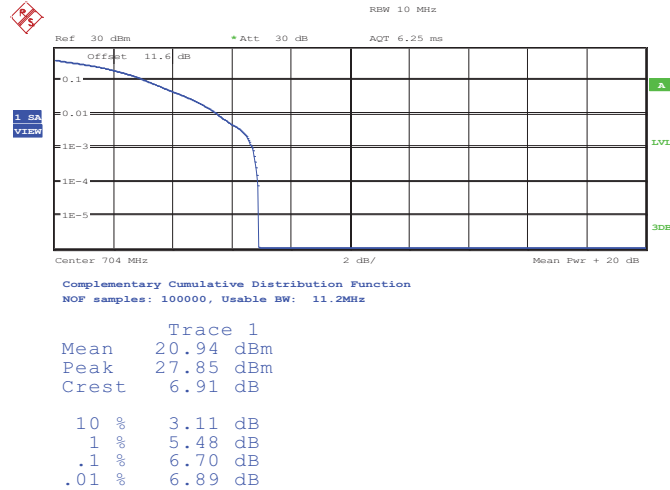


Date: 14.FEB.2014 12:48:58



Peak-to-Average Ratio on LTE Band 12

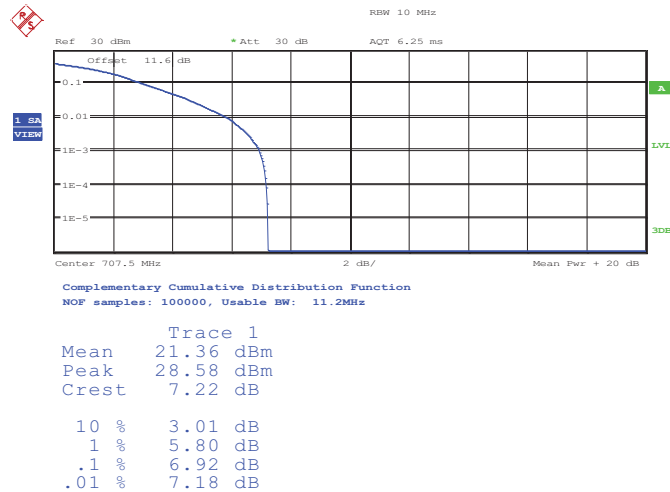
10MHz / 16QAM in Ch. 23060 (1RB Size)



Date: 14.FEB.2014 15:52:02

Peak-to-Average Ratio on LTE Band 12

10MHz / 16QAM in Ch. 23095 (1RB Size)

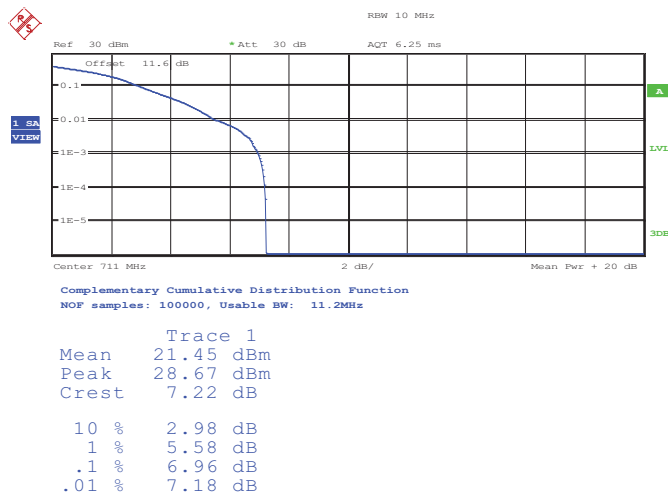


Date: 14.FEB.2014 15:52:18



Peak-to-Average Ratio on LTE Band 12

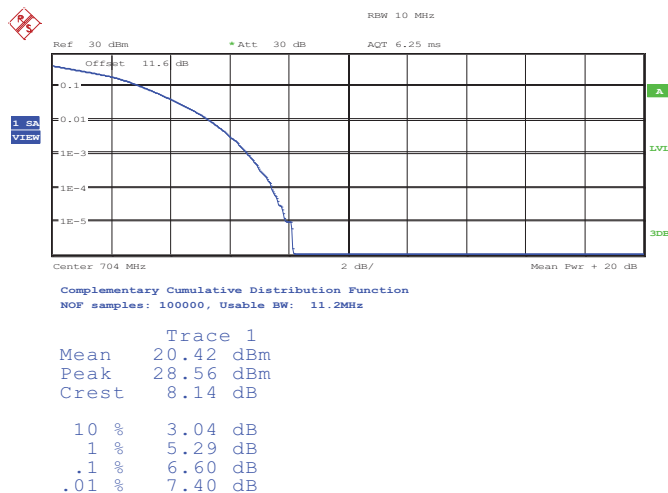
10MHz / 16QAM in Ch. 23130 (1RB Size)



Date: 14.FEB.2014 15:53:27

Peak-to-Average Ratio on LTE Band 12

10MHz / 16QAM in Ch. 23060 (50RB Size)

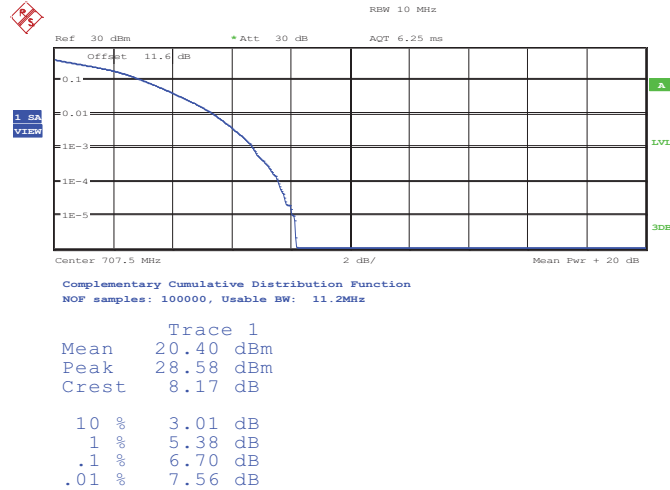


Date: 14.FEB.2014 15:51:44



Peak-to-Average Ratio on LTE Band 12

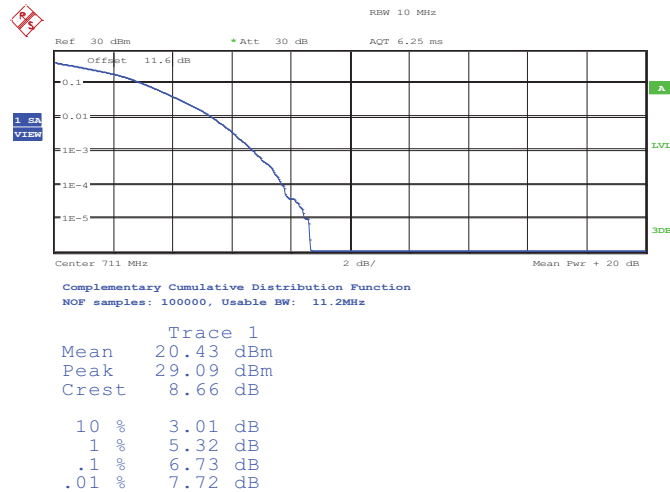
10MHz / 16QAM in Ch. 23095 (50RB Size)



Date: 14.FEB.2014 15:52:37

Peak-to-Average Ratio on LTE Band 12

10MHz / 16QAM in Ch. 23130 (50RB Size)



Date: 14.FEB.2014 15:52:56

### 3.3 Occupied Bandwidth

#### 3.3.1 Description of Occupied Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26dB occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal 26 dB.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

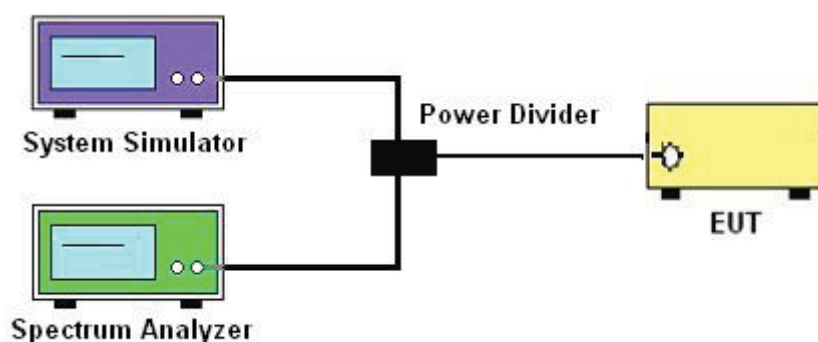
#### 3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

#### 3.3.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The 26dB and 99% occupied bandwidth (BW) of the middle channel for the highest RF powers with full RB sizes were measured.

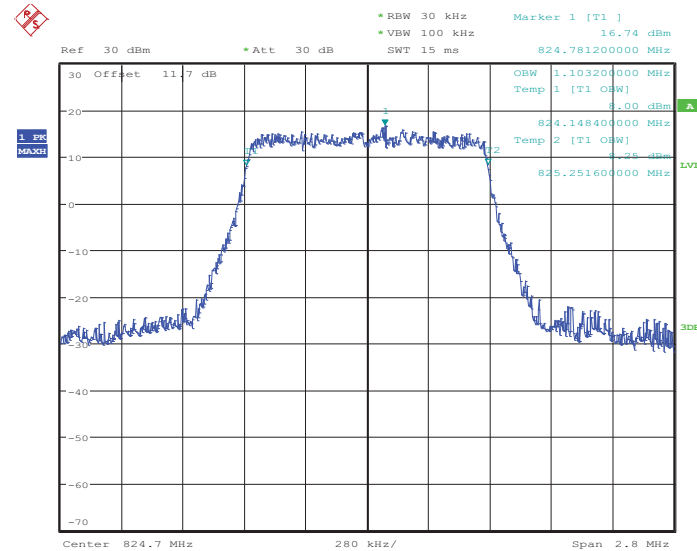
#### 3.3.4 Test Setup



### 3.3.5 Test Result (Plots) of Occupied Bandwidth

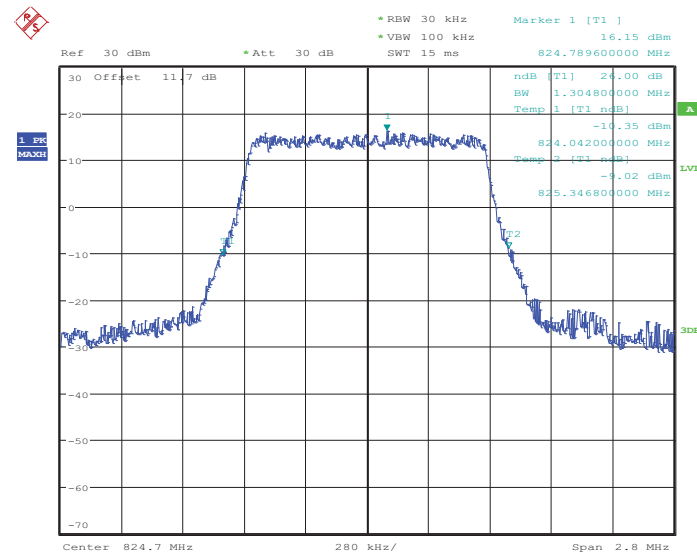
|               |            |                    |               |
|---------------|------------|--------------------|---------------|
| <b>Band :</b> | LTE Band 5 | <b>BW / Mod. :</b> | 1.4MHz / QPSK |
|---------------|------------|--------------------|---------------|

#### 99% Occupied Bandwidth Plot on Channel 20407



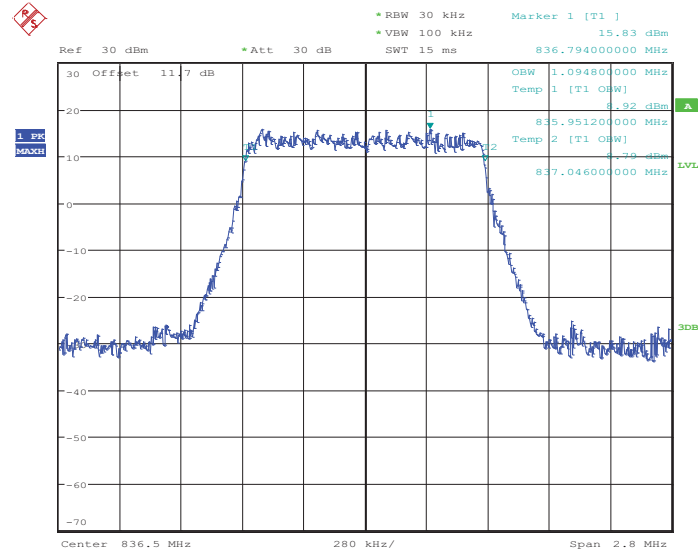
Date: 14.FEB.2014 12:55:56

#### 26dB Bandwidth Plot on Channel 20407



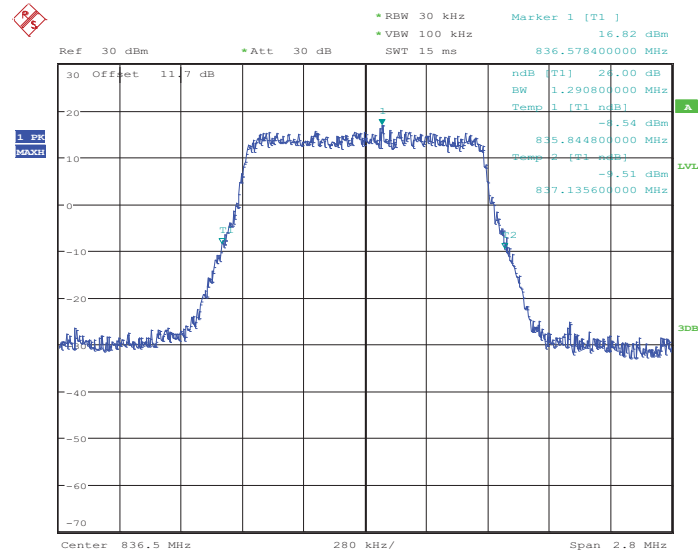
Date: 14.FEB.2014 12:56:35

### 99% Occupied Bandwidth Plot on Channel 20525



Date: 14.FEB.2014 13:01:31

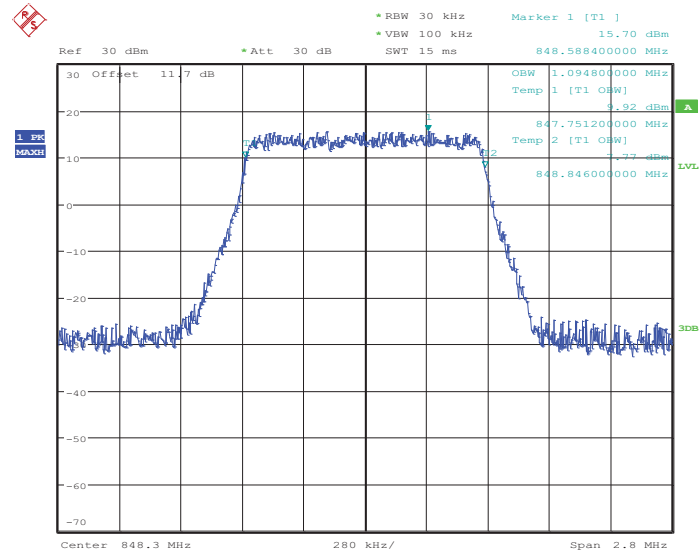
### 26dB Bandwidth Plot on Channel 20525



Date: 14.FEB.2014 13:01:56

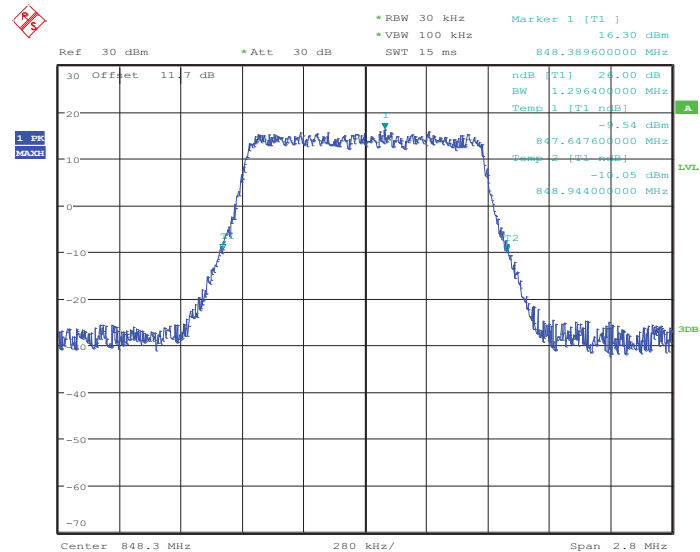


### 99% Occupied Bandwidth Plot on Channel 20643



Date: 14.FEB.2014 13:04:13

### 26dB Bandwidth Plot on Channel 20643

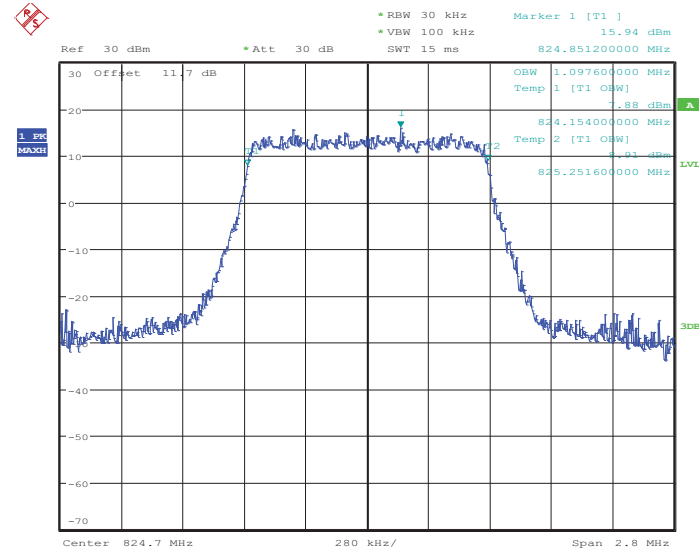


Date: 14.FEB.2014 13:04:38



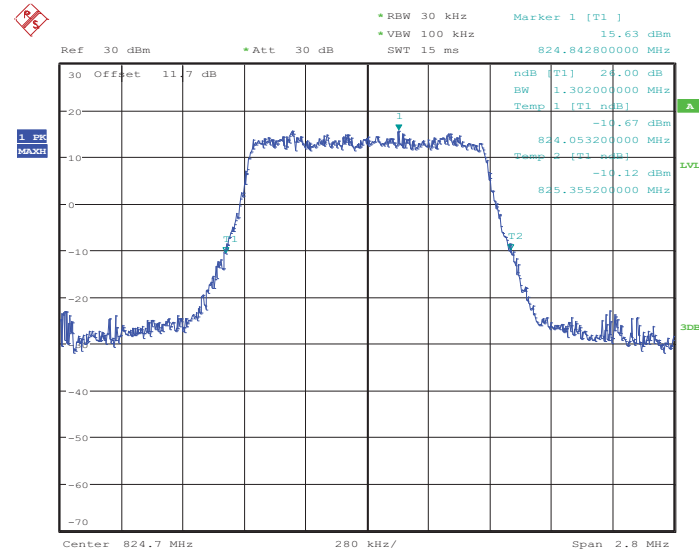
|        |            |             |                |
|--------|------------|-------------|----------------|
| Band : | LTE Band 5 | BW / Mod. : | 1.4MHz / 16QAM |
|--------|------------|-------------|----------------|

99% Occupied Bandwidth Plot on Channel 20407

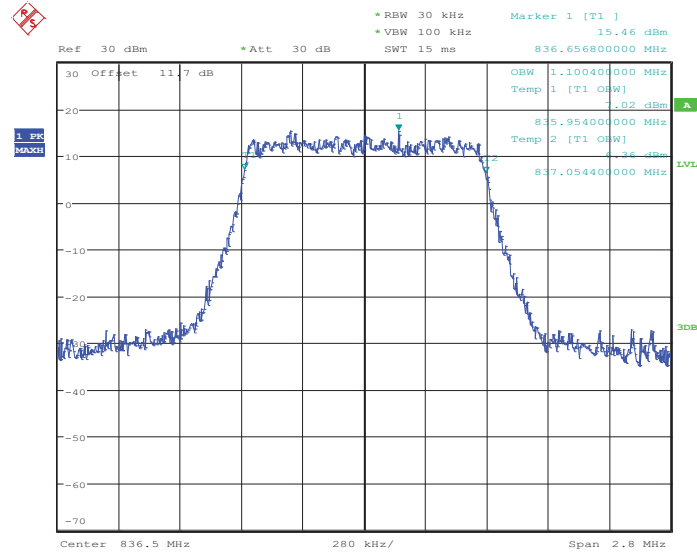


Date: 14.FEB.2014 12:56:08

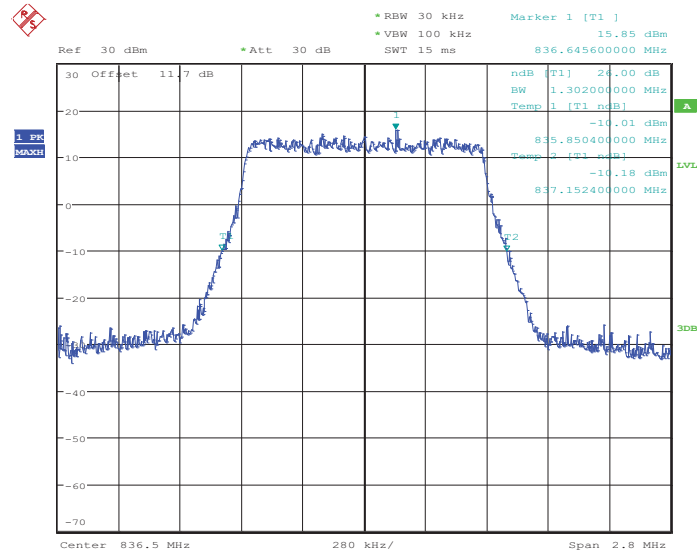
26dB Bandwidth Plot on Channel 20407



Date: 14.FEB.2014 12:56:22

**99% Occupied Bandwidth Plot on Channel 20525**


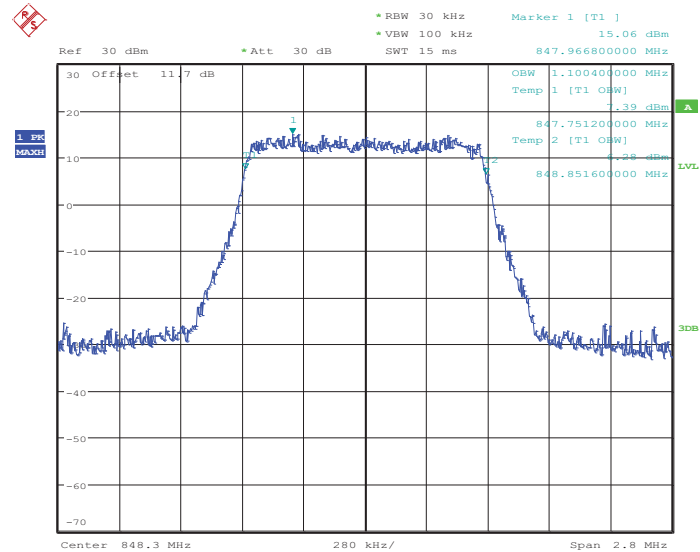
Date: 14.FEB.2014 13:01:42

**26dB Bandwidth Plot on Channel 20525**


Date: 14.FEB.2014 13:02:09

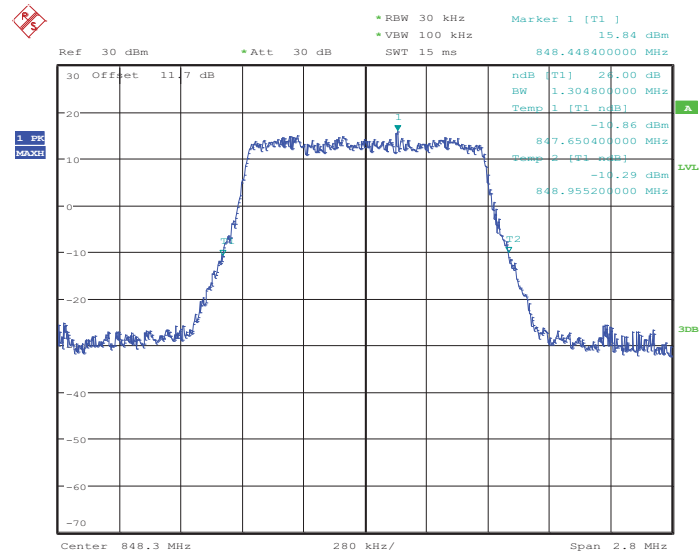


### 99% Occupied Bandwidth Plot on Channel 20643



Date: 14.FEB.2014 13:04:25

### 26dB Bandwidth Plot on Channel 20643

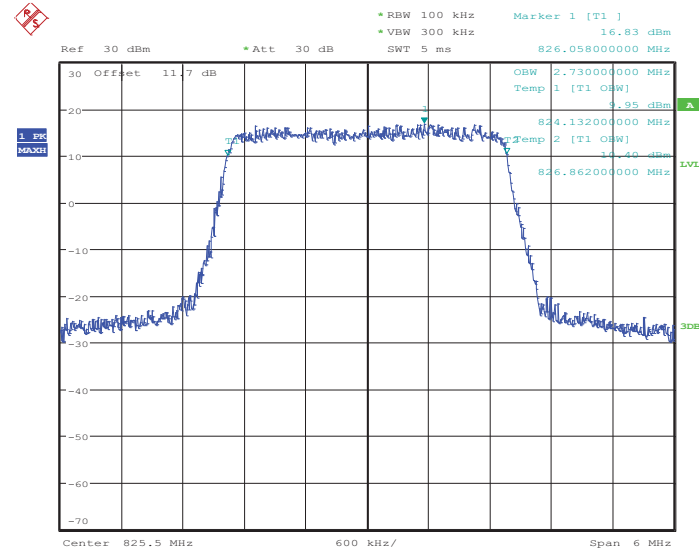


Date: 14.FEB.2014 13:04:52



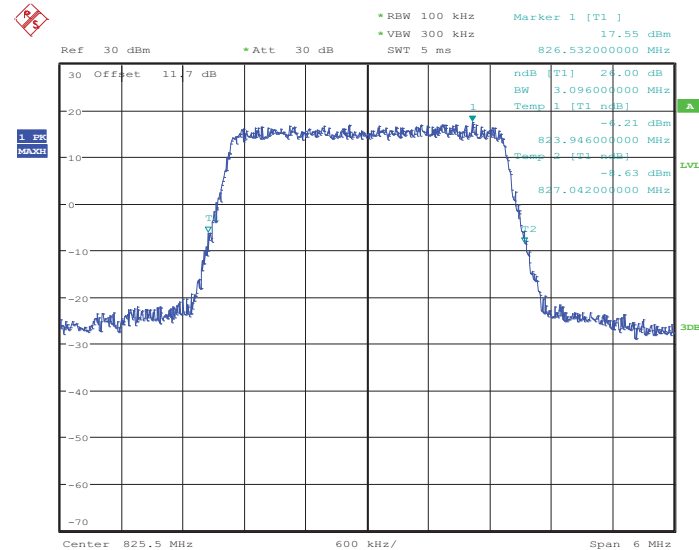
|        |            |             |             |
|--------|------------|-------------|-------------|
| Band : | LTE Band 5 | BW / Mod. : | 3MHz / QPSK |
|--------|------------|-------------|-------------|

99% Occupied Bandwidth Plot on Channel 20415



Date: 14.FEB.2014 13:09:51

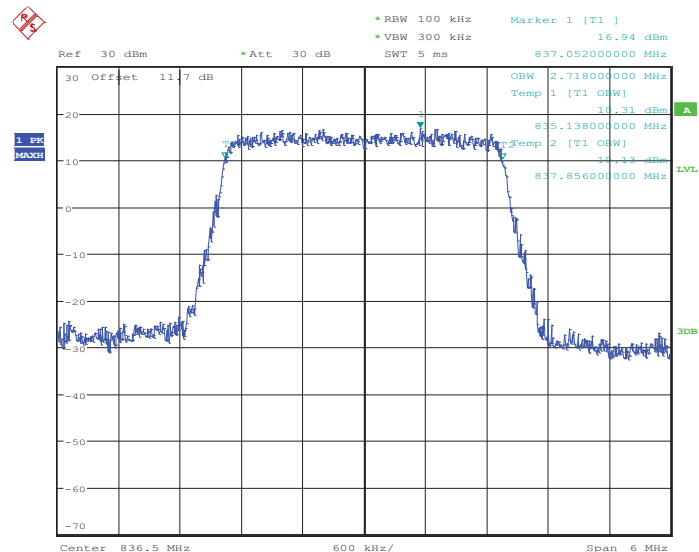
26dB Bandwidth Plot on Channel 20415



Date: 14.FEB.2014 13:10:16

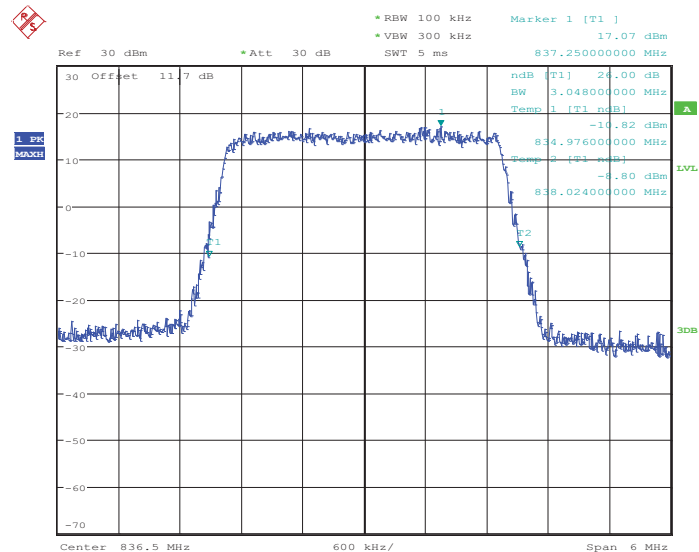


### 99% Occupied Bandwidth Plot on Channel 20525



Date: 14.FEB.2014 13:15:25

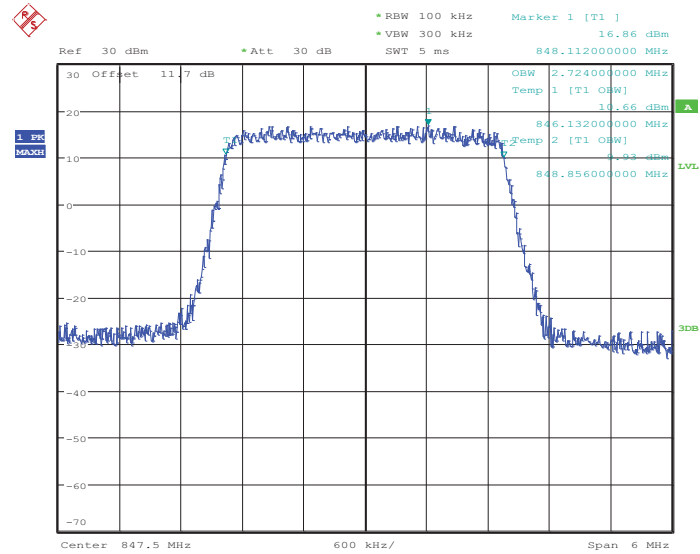
### 26dB Bandwidth Plot on Channel 20525



Date: 14.FEB.2014 13:15:50

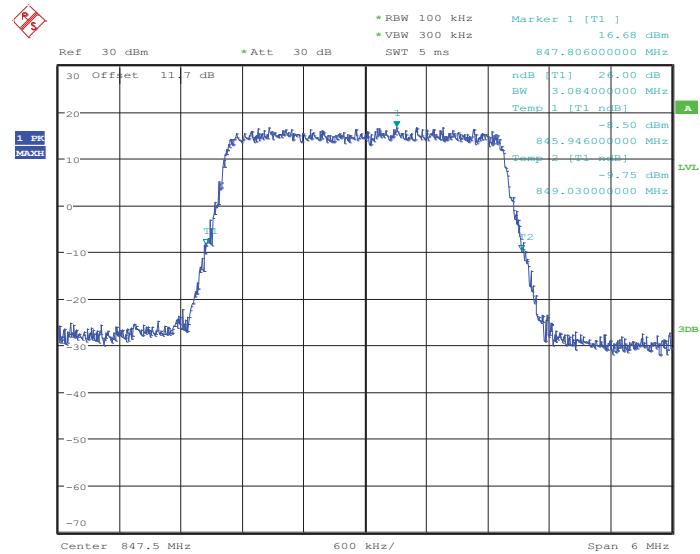


### 99% Occupied Bandwidth Plot on Channel 20635



Date: 14.FEB.2014 13:18:08

### 26dB Bandwidth Plot on Channel 20635

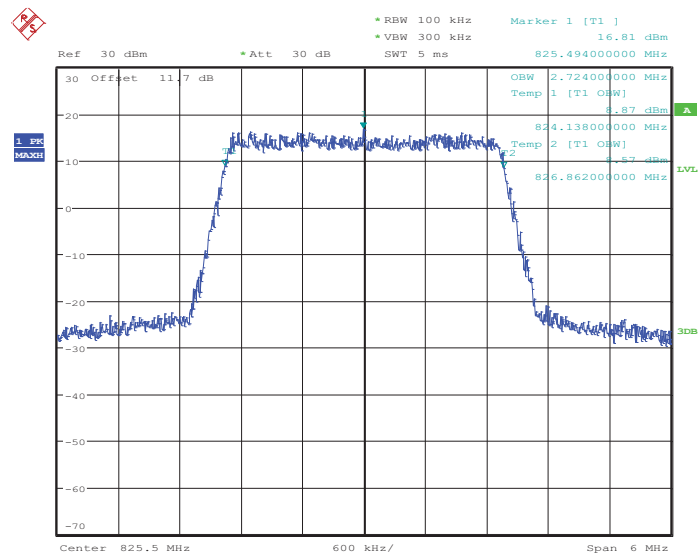


Date: 14.FEB.2014 13:18:33



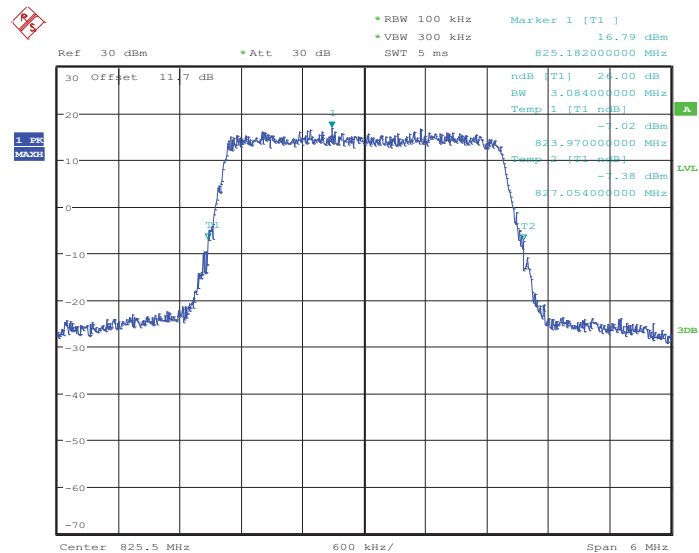
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 5 | BW / Mod. : | 3MHz / 16QAM |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 20415



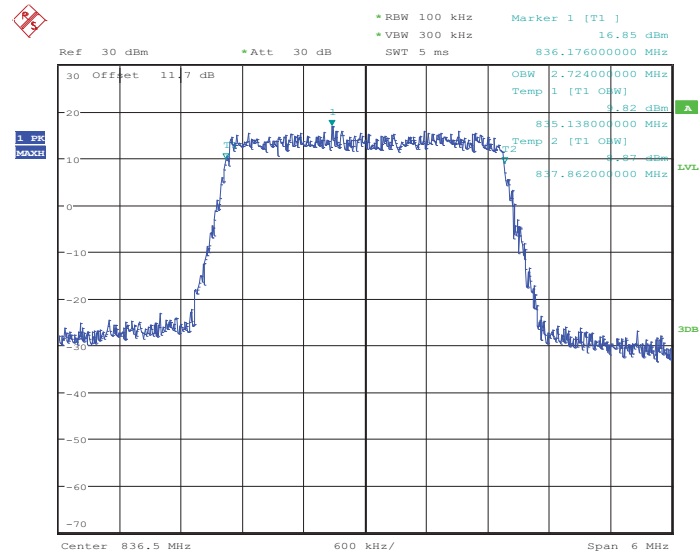
Date: 14.FEB.2014 13:10:03

26dB Bandwidth Plot on Channel 20415



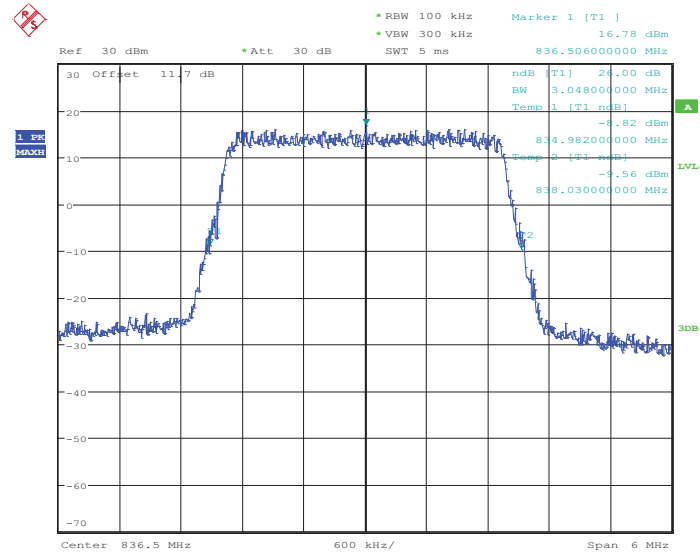
Date: 14.FEB.2014 13:10:30

## 99% Occupied Bandwidth Plot on Channel 20525



Date: 14.FEB.2014 13:15:37

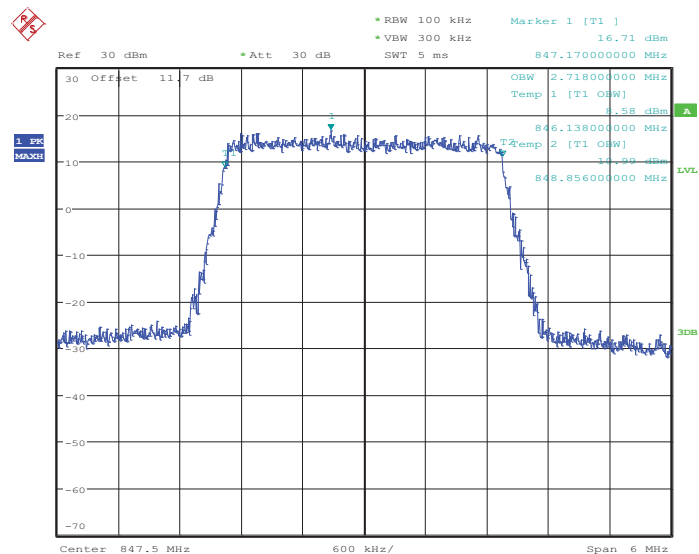
## 26dB Bandwidth Plot on Channel 20525



Date: 14.FEB.2014 13:16:04

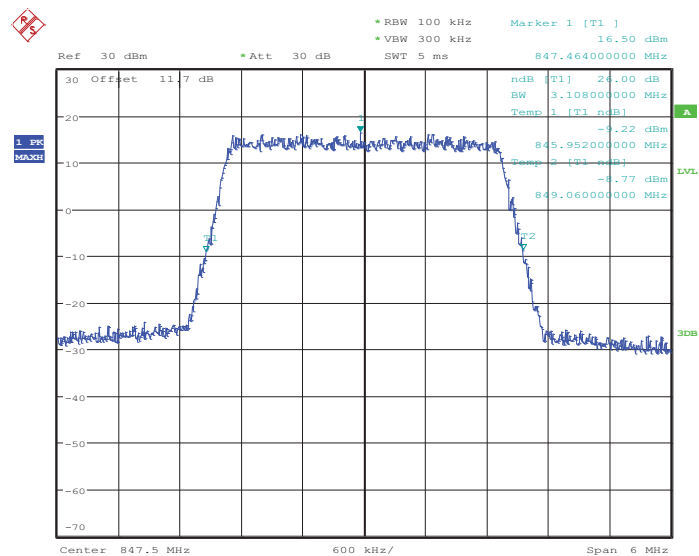


### 99% Occupied Bandwidth Plot on Channel 20635



Date: 14.FEB.2014 13:18:19

### 26dB Bandwidth Plot on Channel 20635

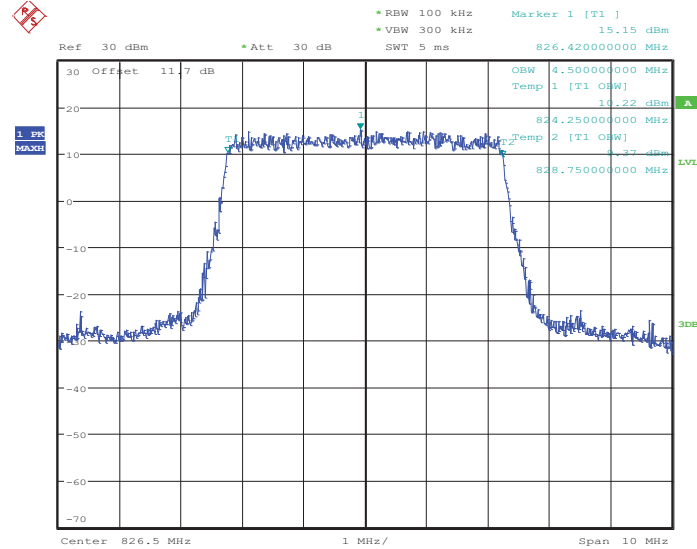


Date: 14.FEB.2014 13:18:46



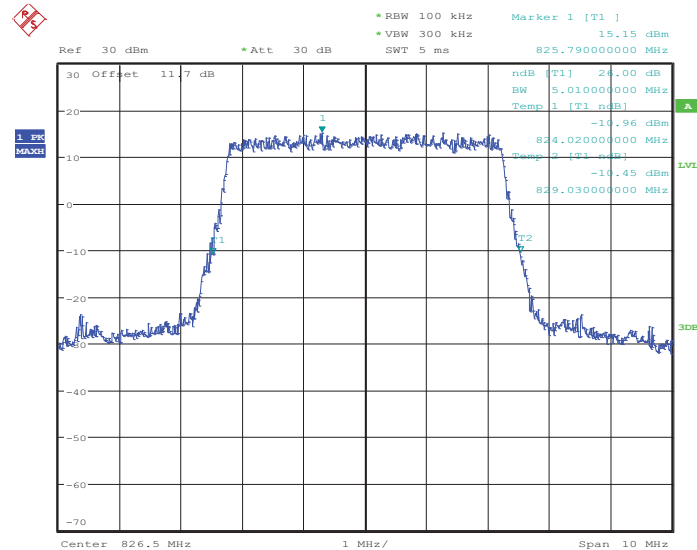
|        |            |             |             |
|--------|------------|-------------|-------------|
| Band : | LTE Band 5 | BW / Mod. : | 5MHz / QPSK |
|--------|------------|-------------|-------------|

99% Occupied Bandwidth Plot on Channel 20425



Date: 14.FEB.2014 13:23:46

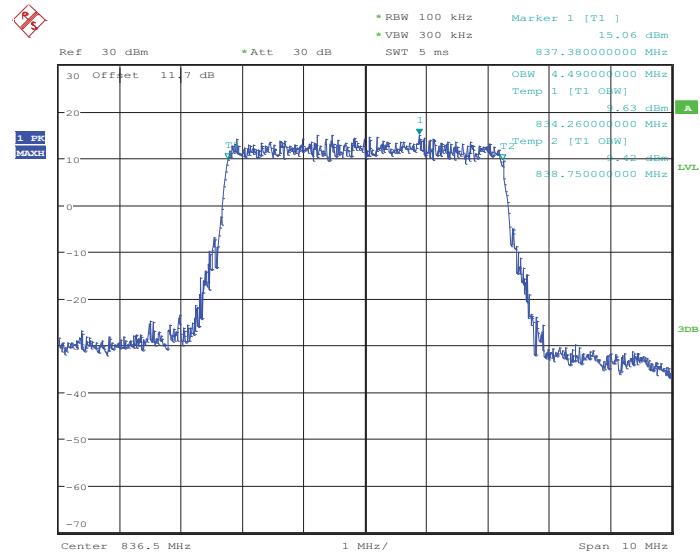
26dB Bandwidth Plot on Channel 20425



Date: 14.FEB.2014 13:24:11

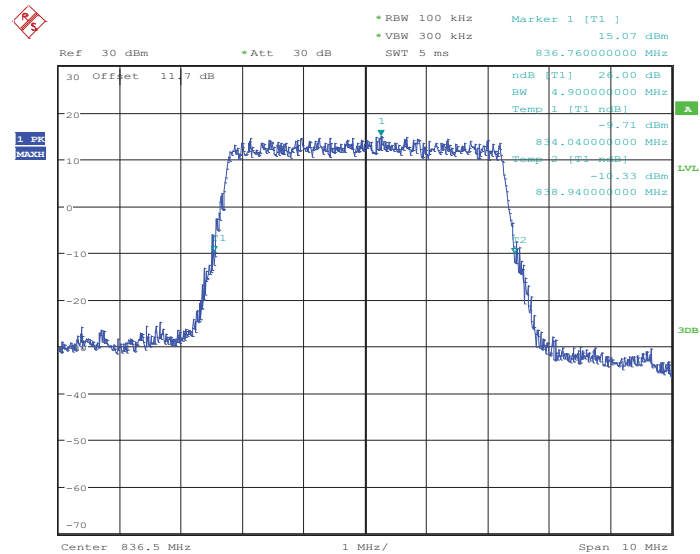


### 99% Occupied Bandwidth Plot on Channel 20525



Date: 14.FEB.2014 13:29:20

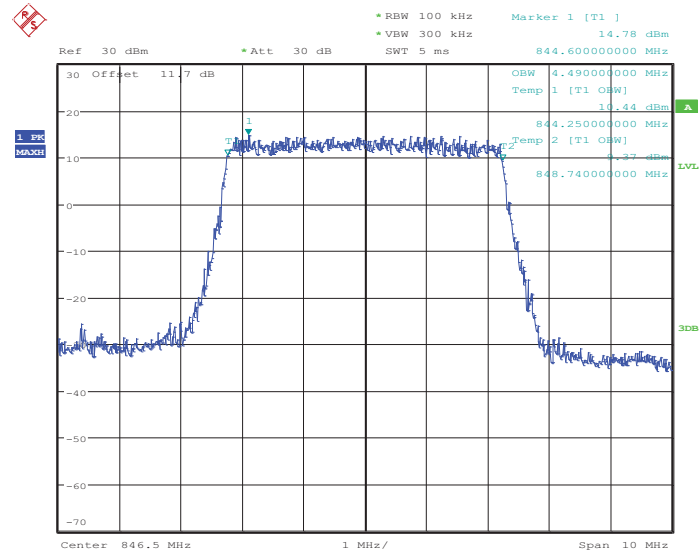
### 26dB Bandwidth Plot on Channel 20525



Date: 14.FEB.2014 13:29:45

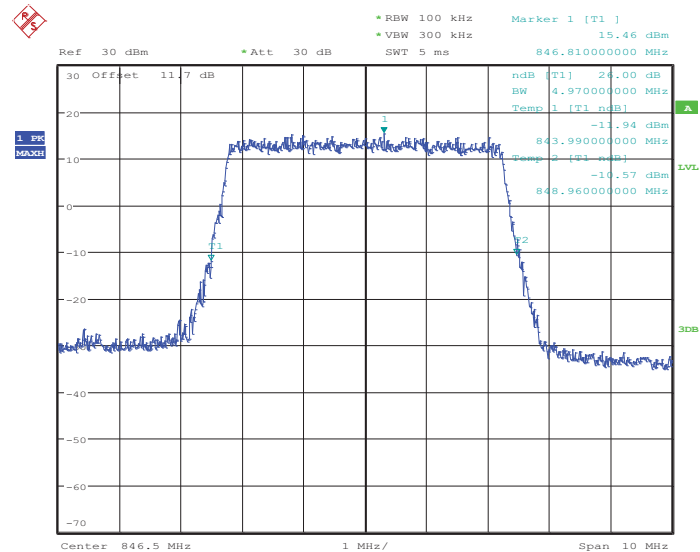


### 99% Occupied Bandwidth Plot on Channel 20625



Date: 14.FEB.2014 13:32:02

### 26dB Bandwidth Plot on Channel 20625

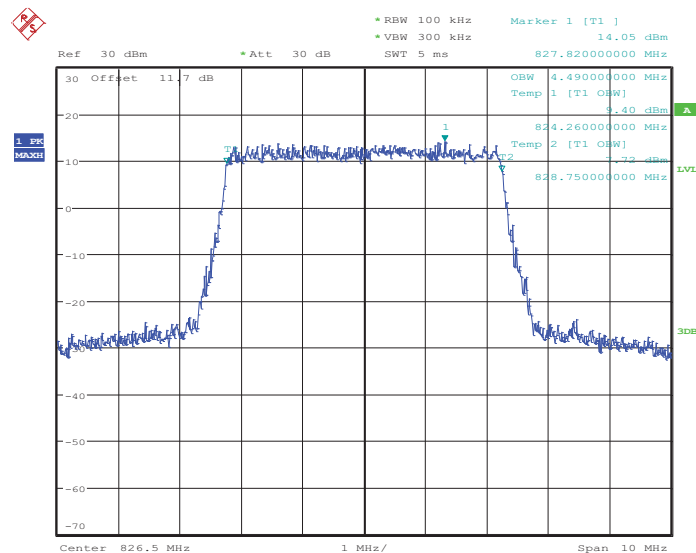


Date: 14.FEB.2014 13:32:28



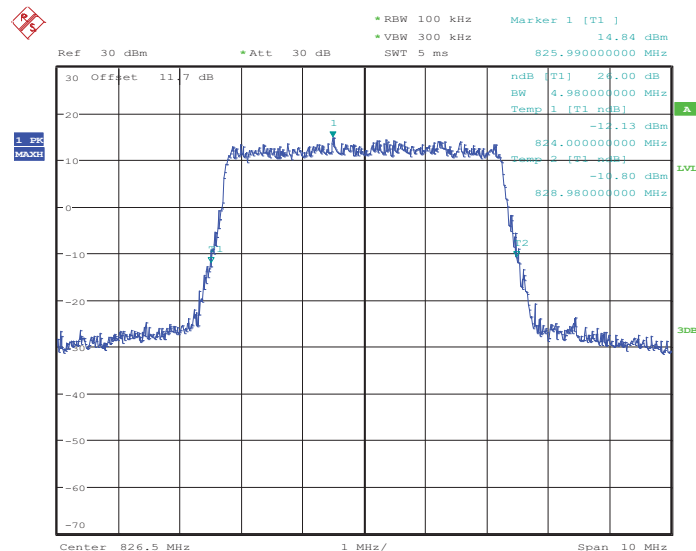
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 5 | BW / Mod. : | 5MHz / 16QAM |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 20425

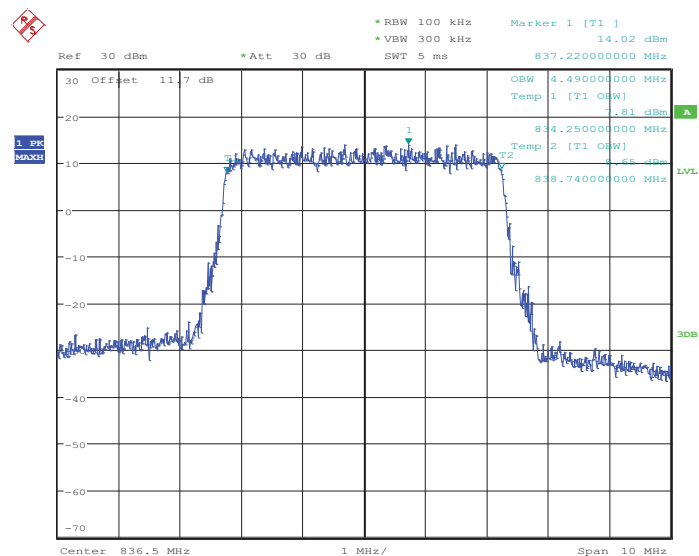


Date: 14.FEB.2014 13:23:57

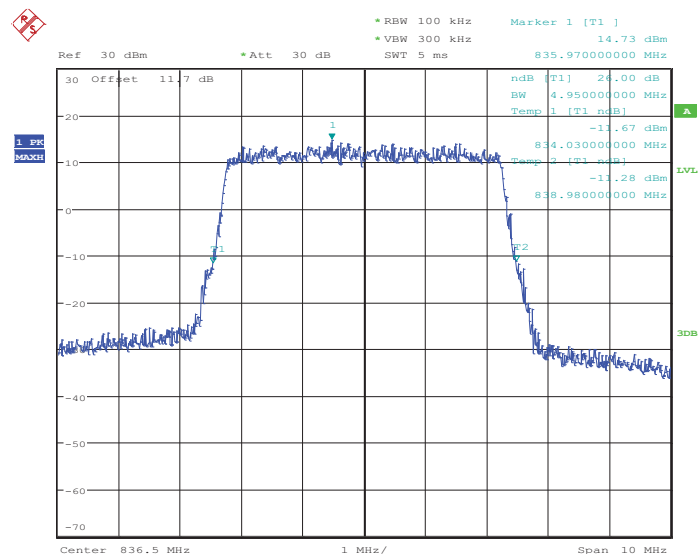
26dB Bandwidth Plot on Channel 20425



Date: 14.FEB.2014 13:24:24

**99% Occupied Bandwidth Plot on Channel 20525**


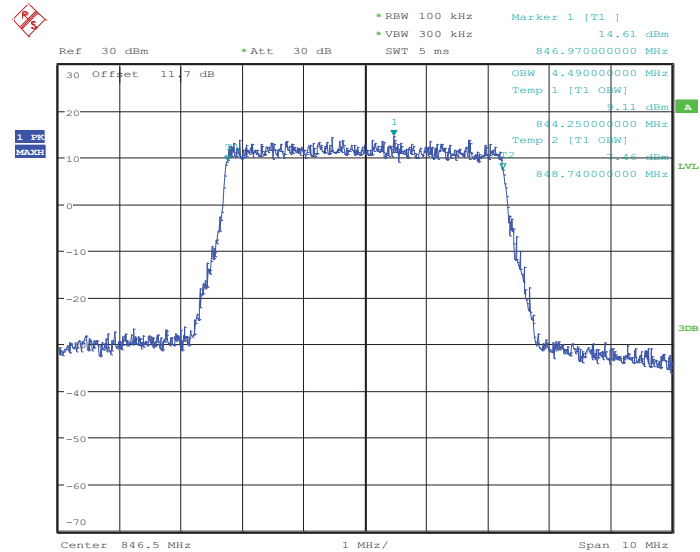
Date: 14.FEB.2014 13:29:32

**26dB Bandwidth Plot on Channel 20525**


Date: 14.FEB.2014 13:29:59

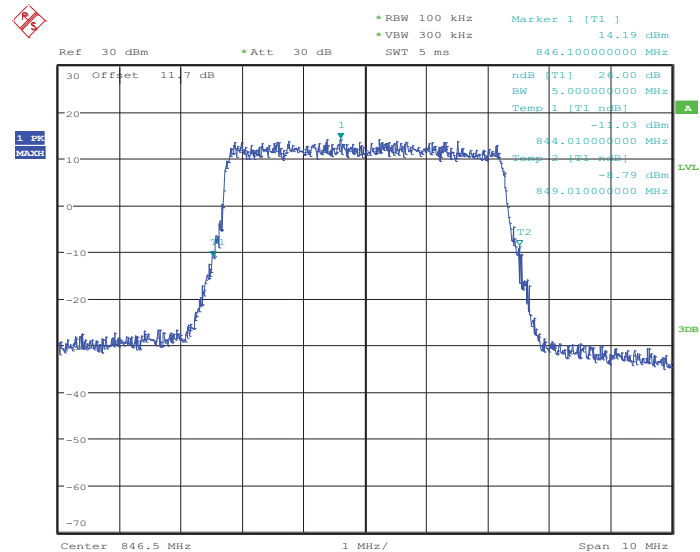


### 99% Occupied Bandwidth Plot on Channel 20625



Date: 14.FEB.2014 13:32:14

### 26dB Bandwidth Plot on Channel 20625

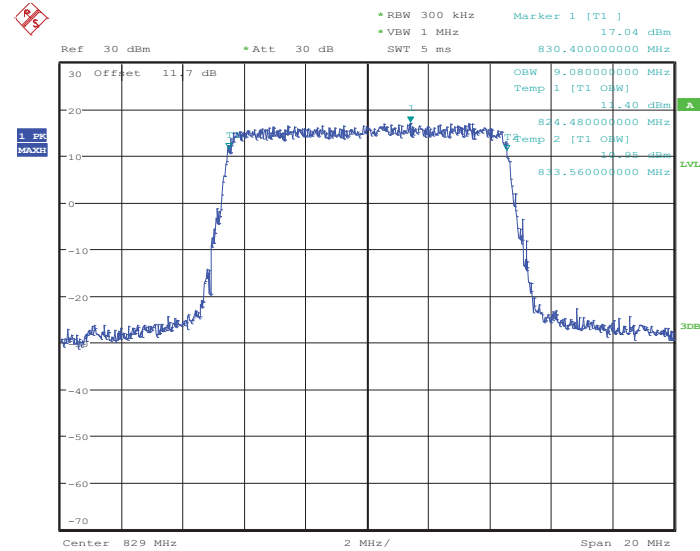


Date: 14.FEB.2014 13:32:41



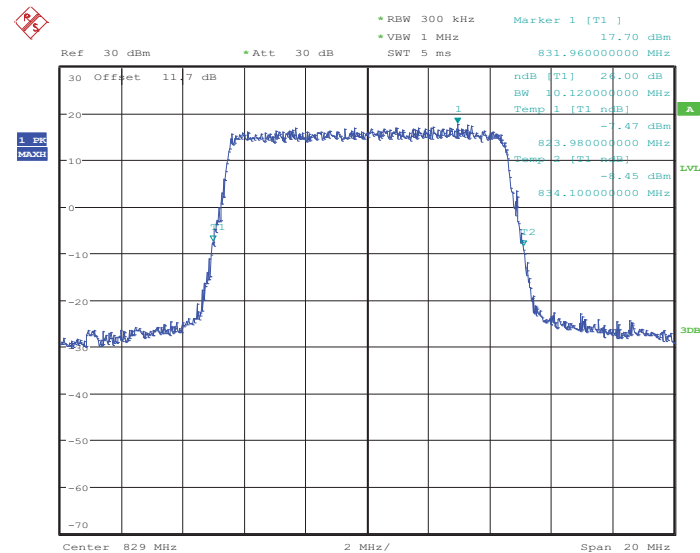
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 5 | BW / Mod. : | 10MHz / QPSK |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 20450



Date: 14.FEB.2014 13:37:41

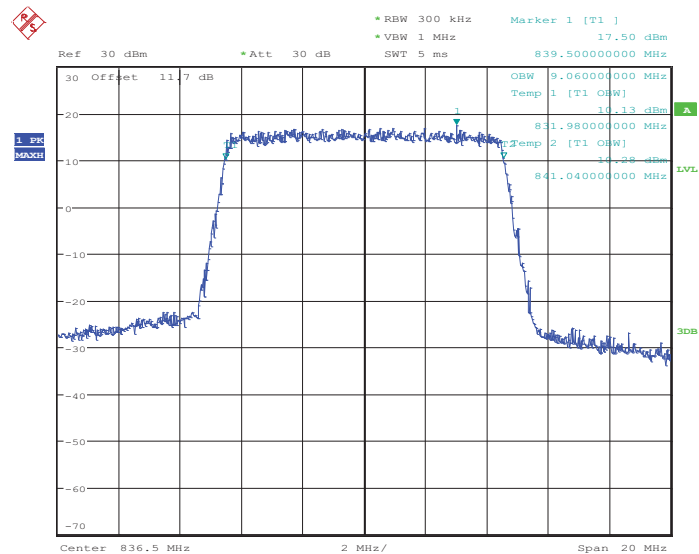
26dB Bandwidth Plot on Channel 20450



Date: 14.FEB.2014 13:38:06

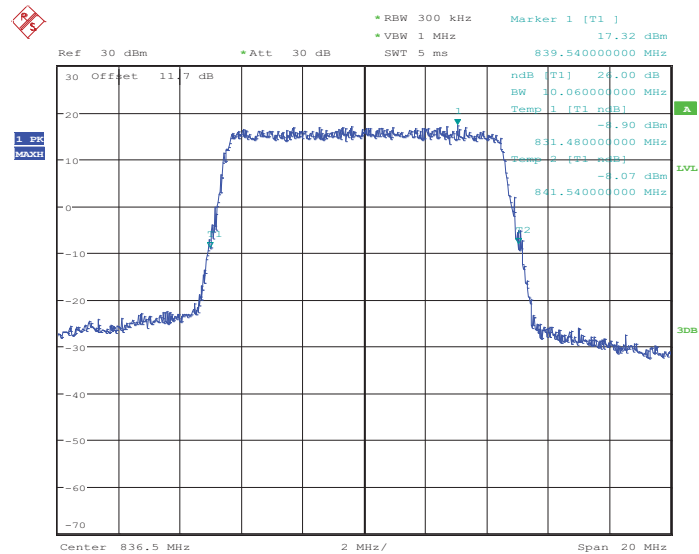


### 99% Occupied Bandwidth Plot on Channel 20525



Date: 14.FEB.2014 13:43:16

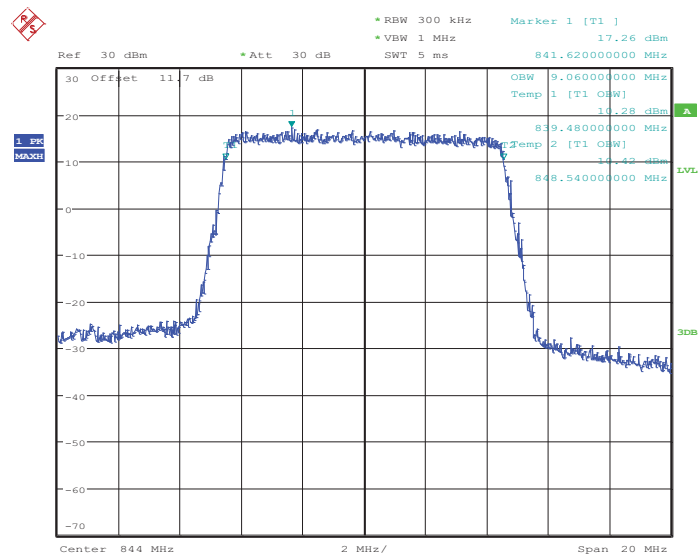
### 26dB Bandwidth Plot on Channel 20525



Date: 14.FEB.2014 13:43:41

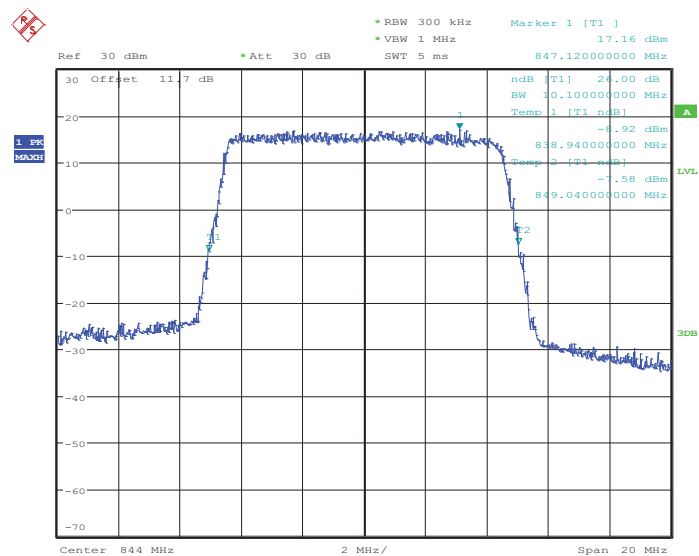


### 99% Occupied Bandwidth Plot on Channel 20600



Date: 14.FEB.2014 13:45:59

### 26dB Bandwidth Plot on Channel 20600

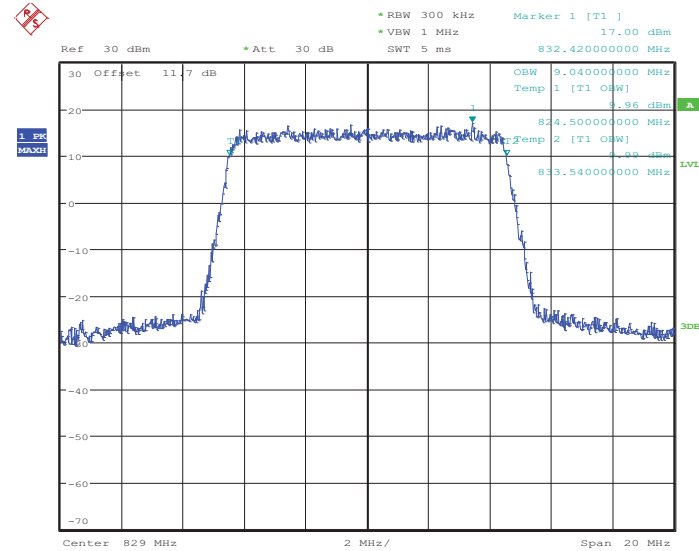


Date: 14.FEB.2014 13:46:24



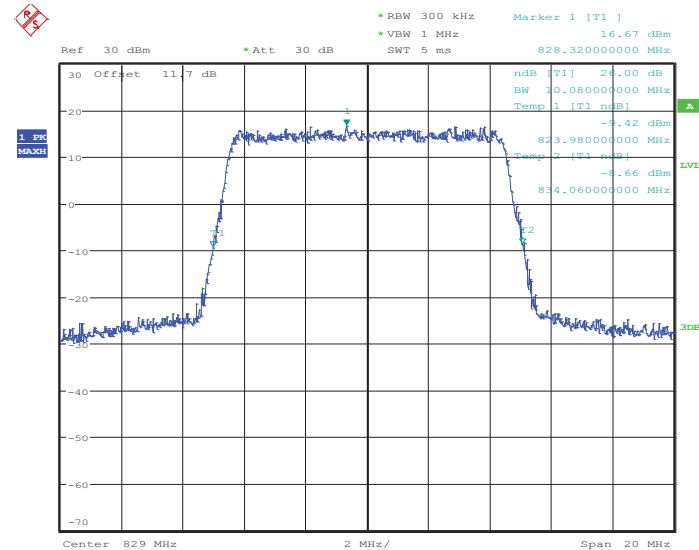
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 5 | BW / Mod. : | 10MHz / 16QAM |
|--------|------------|-------------|---------------|

99% Occupied Bandwidth Plot on Channel 20450



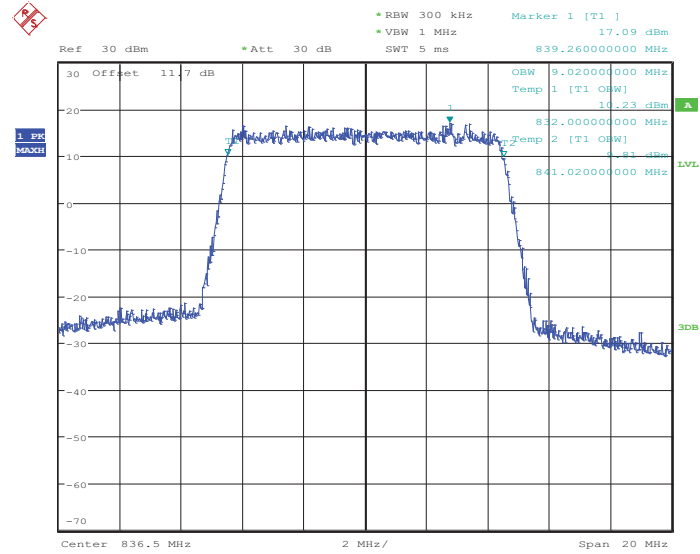
Date: 14.FEB.2014 13:37:53

26dB Bandwidth Plot on Channel 20450



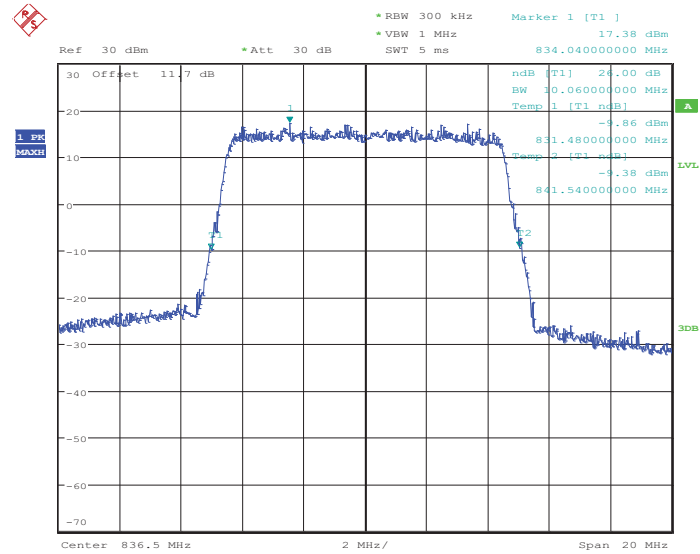
Date: 14.FEB.2014 13:38:20

### 99% Occupied Bandwidth Plot on Channel 20525



Date: 14.FEB.2014 13:43:28

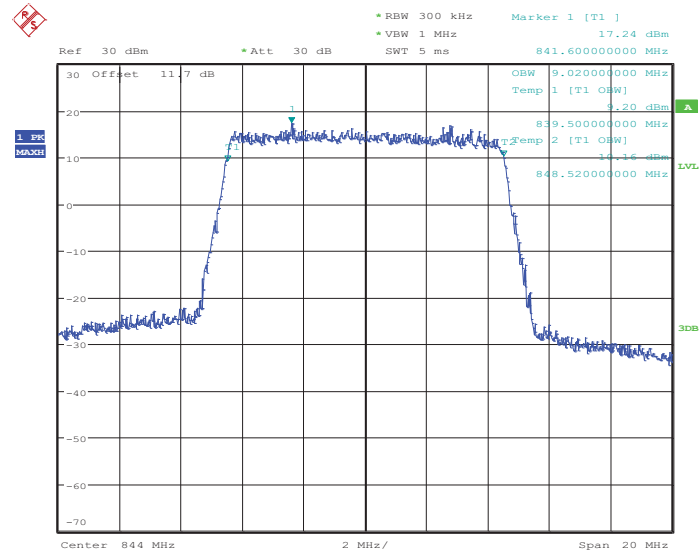
### 26dB Bandwidth Plot on Channel 20525



Date: 14.FEB.2014 13:43:55

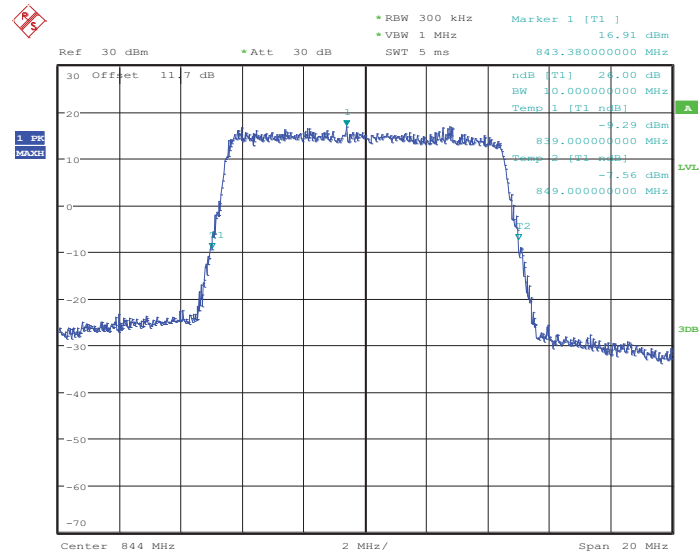


### 99% Occupied Bandwidth Plot on Channel 20600



Date: 14.FEB.2014 13:46:10

### 26dB Bandwidth Plot on Channel 20600

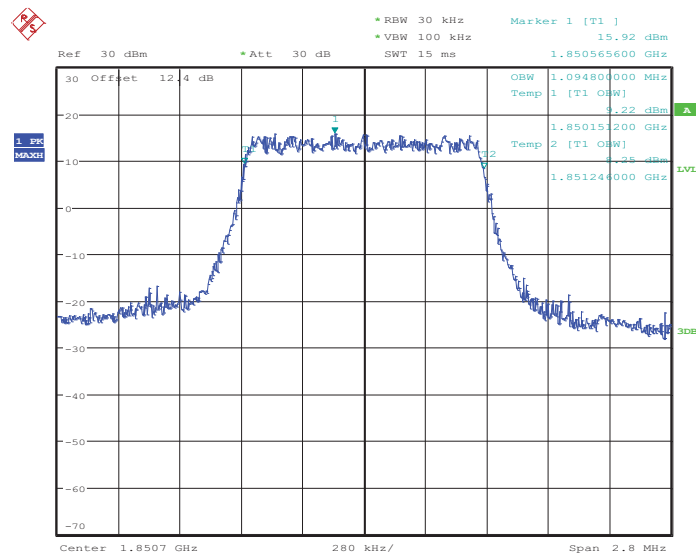


Date: 14.FEB.2014 13:46:37



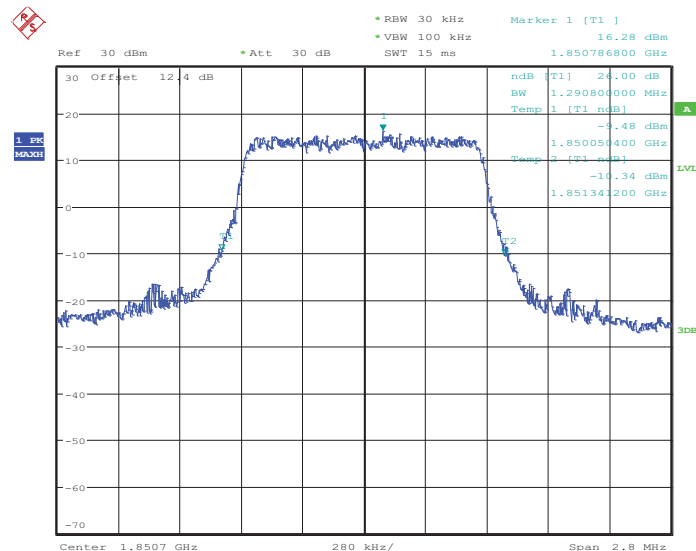
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 2 | BW / Mod. : | 1.4MHz / QPSK |
|--------|------------|-------------|---------------|

99% Occupied Bandwidth Plot on Channel 18607

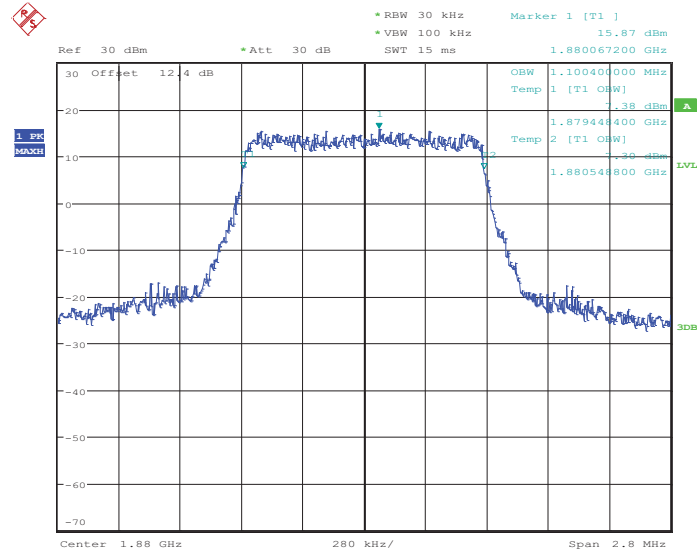


Date: 14.FEB.2014 08:33:17

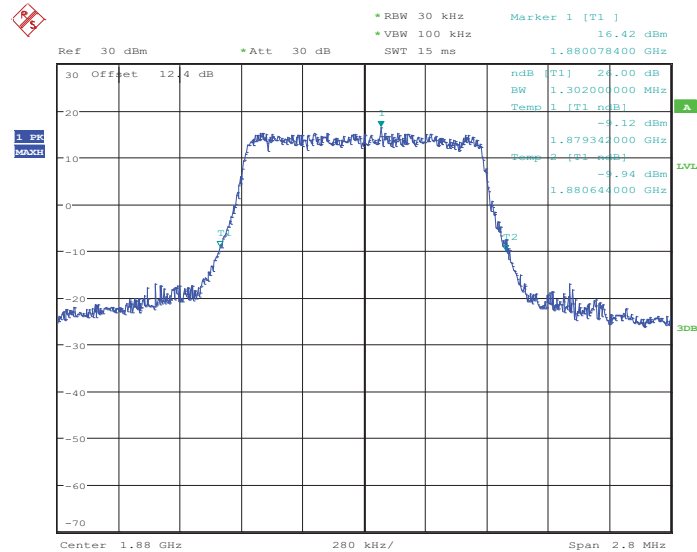
26dB Bandwidth Plot on Channel 18607



Date: 14.FEB.2014 08:33:42

**99% Occupied Bandwidth Plot on Channel 18900**


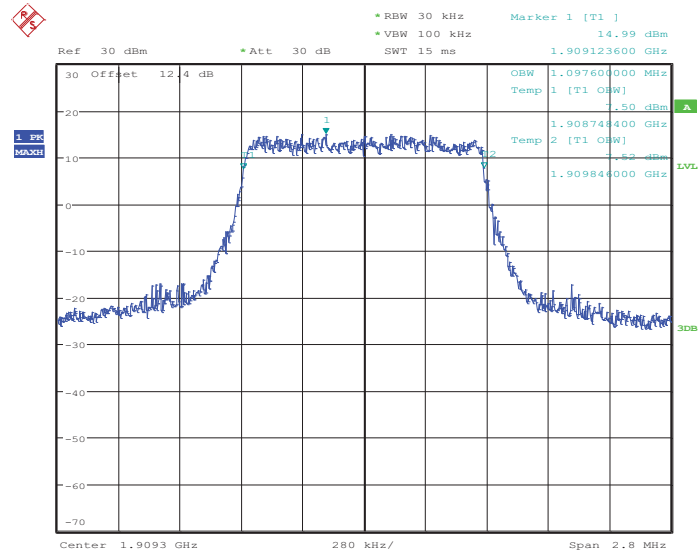
Date: 14.FEB.2014 08:38:51

**26dB Bandwidth Plot on Channel 18900**


Date: 14.FEB.2014 08:39:16

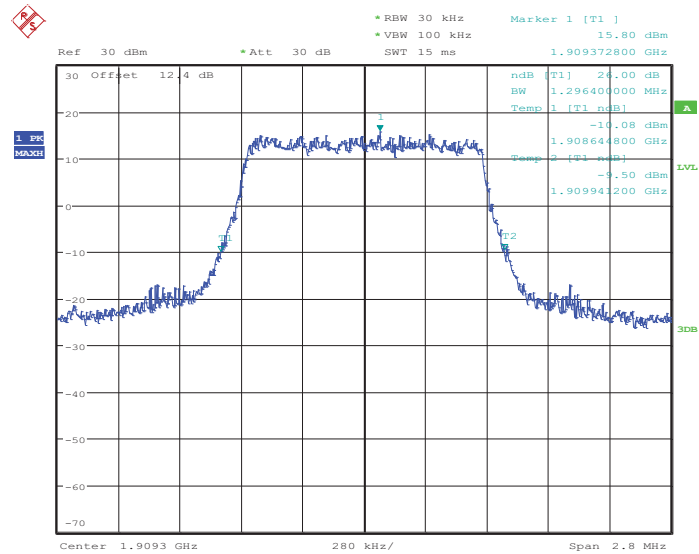


### 99% Occupied Bandwidth Plot on Channel 19193



Date: 14.FEB.2014 08:41:33

### 26dB Bandwidth Plot on Channel 19193

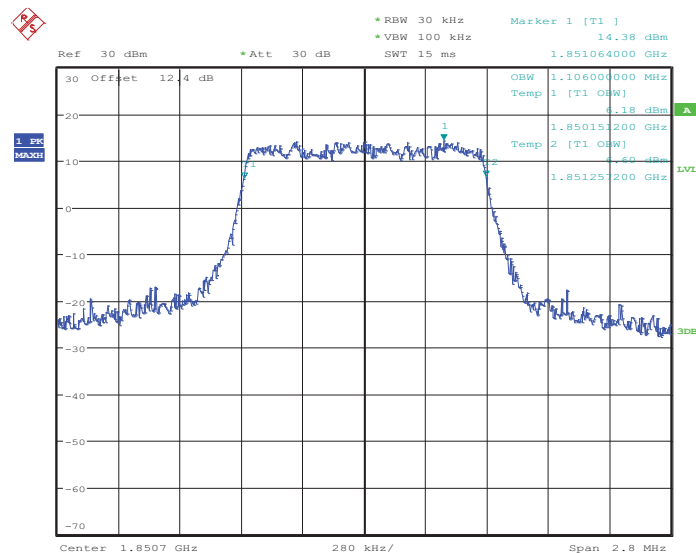


Date: 14.FEB.2014 08:41:59



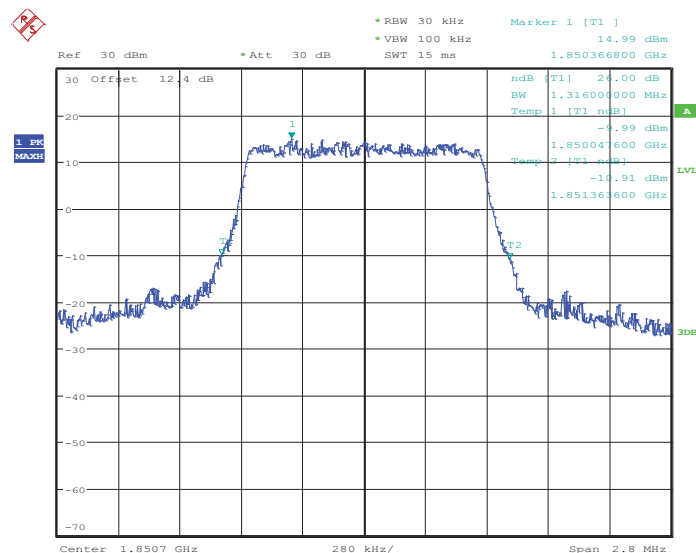
|        |            |             |                |
|--------|------------|-------------|----------------|
| Band : | LTE Band 2 | BW / Mod. : | 1.4MHz / 16QAM |
|--------|------------|-------------|----------------|

### 99% Occupied Bandwidth Plot on Channel 18607



Date: 14.FEB.2014 08:33:28

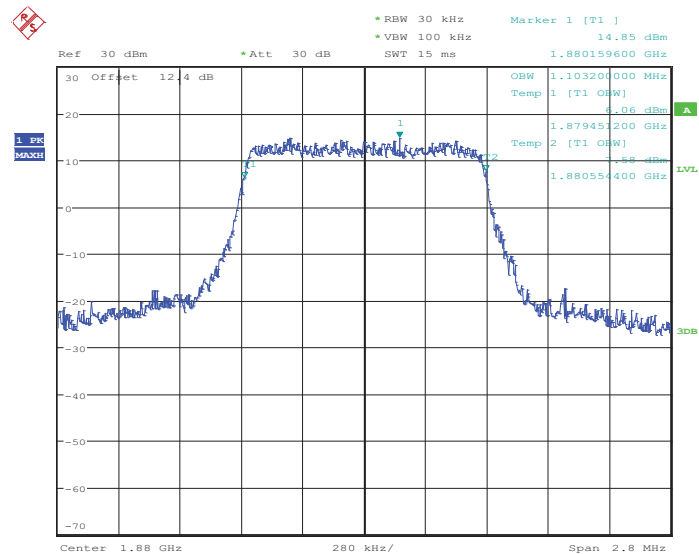
### 26dB Bandwidth Plot on Channel 18607



Date: 14.FEB.2014 08:33:55

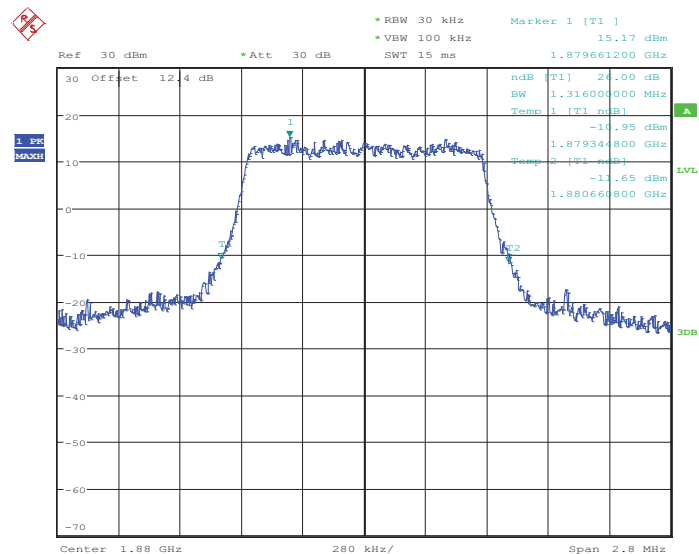


### 99% Occupied Bandwidth Plot on Channel 18900



Date: 14.FEB.2014 08:39:03

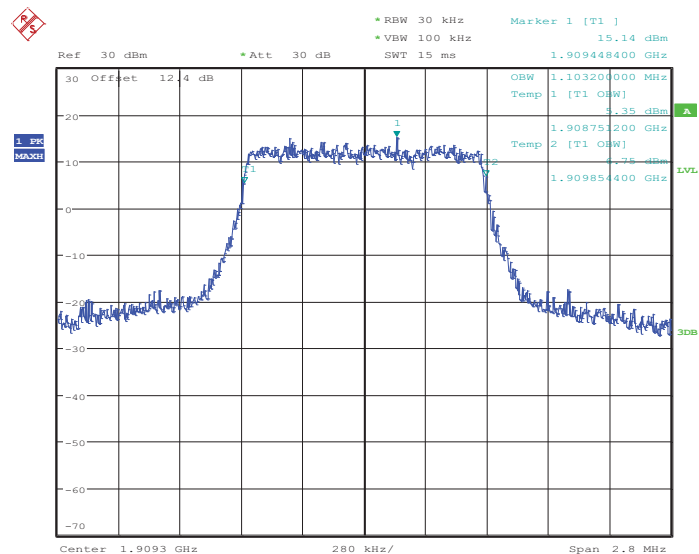
### 26dB Bandwidth Plot on Channel 18900



Date: 14.FEB.2014 08:39:30

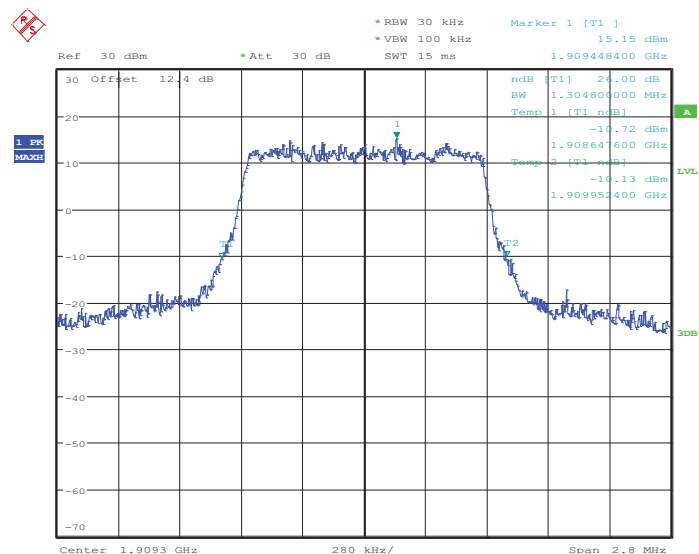


### 99% Occupied Bandwidth Plot on Channel 19193



Date: 14.FEB.2014 08:41:45

### 26dB Bandwidth Plot on Channel 19193

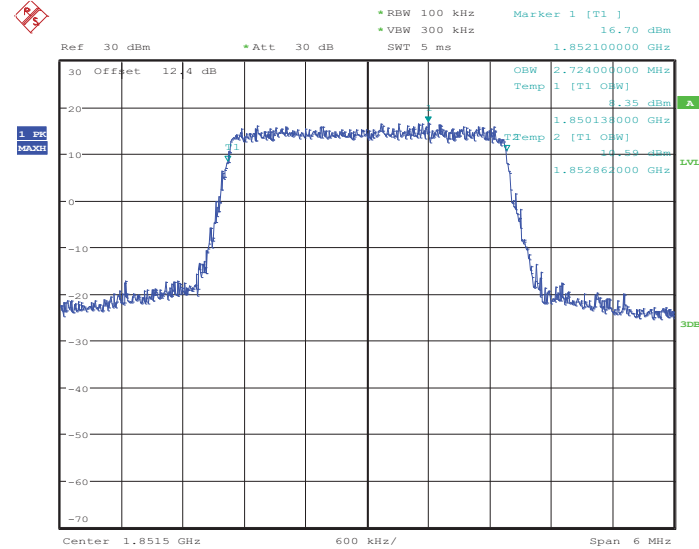


Date: 14.FEB.2014 08:42:12



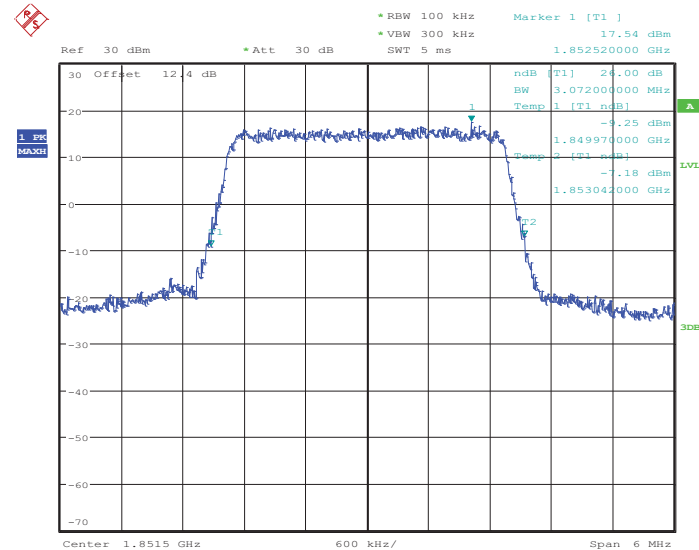
|        |            |             |             |
|--------|------------|-------------|-------------|
| Band : | LTE Band 2 | BW / Mod. : | 3MHz / QPSK |
|--------|------------|-------------|-------------|

99% Occupied Bandwidth Plot on Channel 18615



Date: 14.FEB.2014 08:47:12

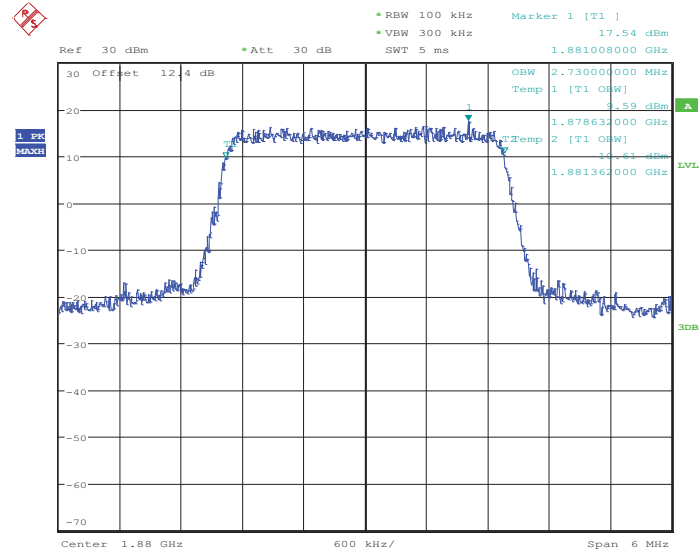
26dB Bandwidth Plot on Channel 18615



Date: 14.FEB.2014 08:47:37

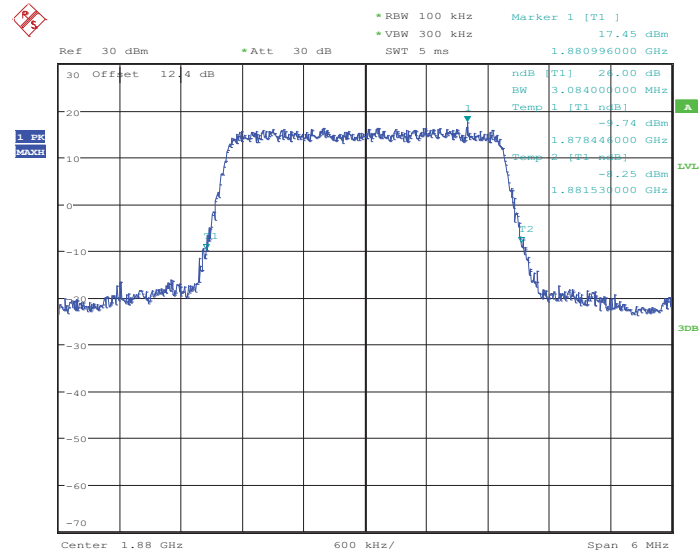


### 99% Occupied Bandwidth Plot on Channel 18900



Date: 14.FEB.2014 08:52:46

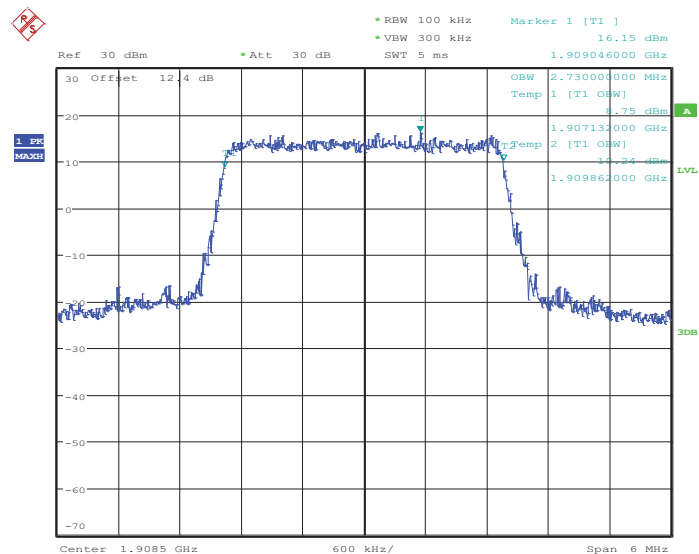
### 26dB Bandwidth Plot on Channel 18900



Date: 14.FEB.2014 08:53:11

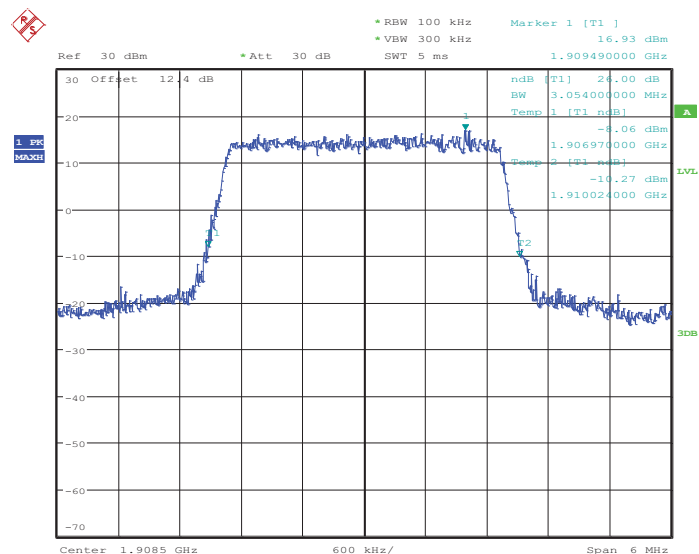


### 99% Occupied Bandwidth Plot on Channel 19185



Date: 14.FEB.2014 08:55:29

### 26dB Bandwidth Plot on Channel 19185

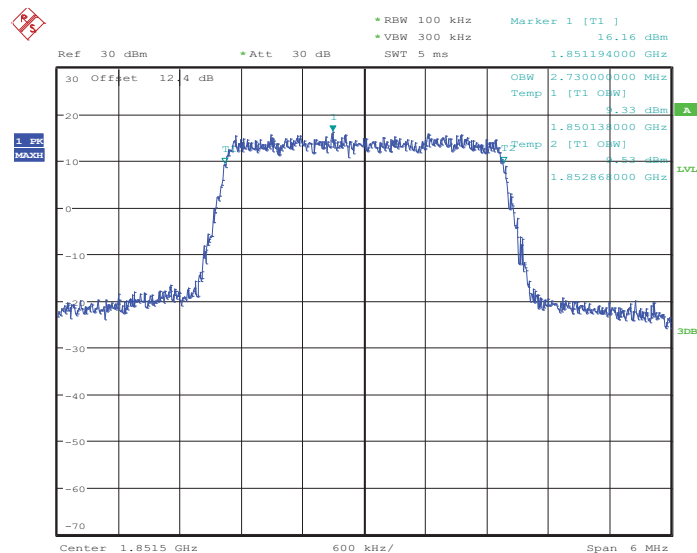


Date: 14.FEB.2014 08:55:54



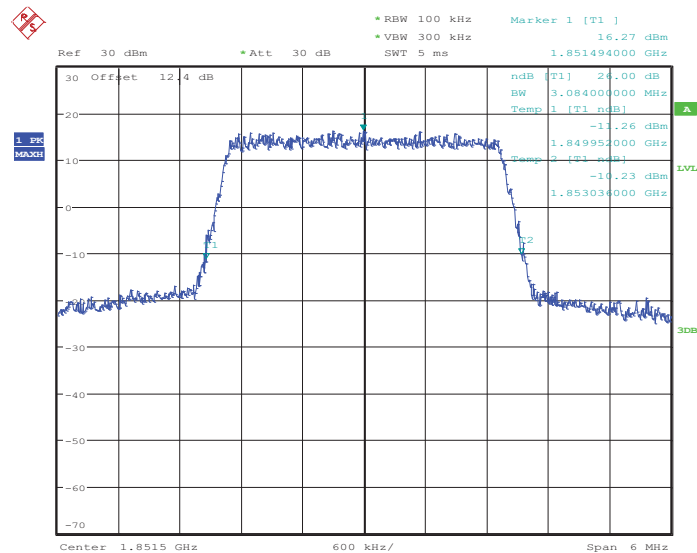
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 2 | BW / Mod. : | 3MHz / 16QAM |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 18615



Date: 14.FEB.2014 08:47:23

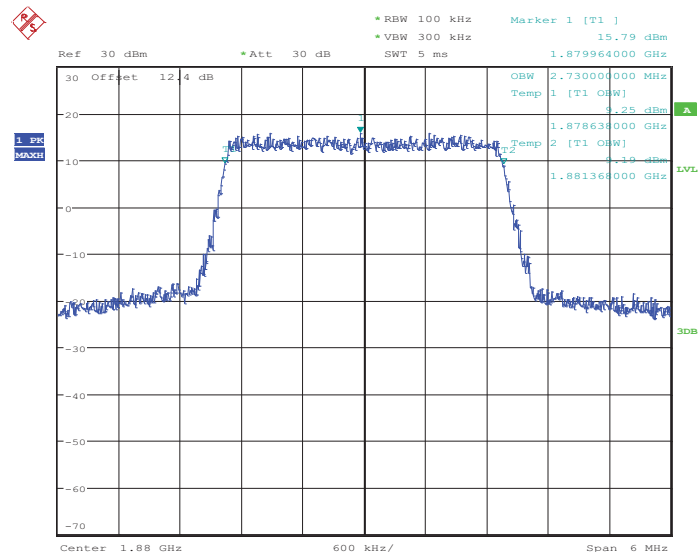
26dB Bandwidth Plot on Channel 18615



Date: 14.FEB.2014 08:47:50

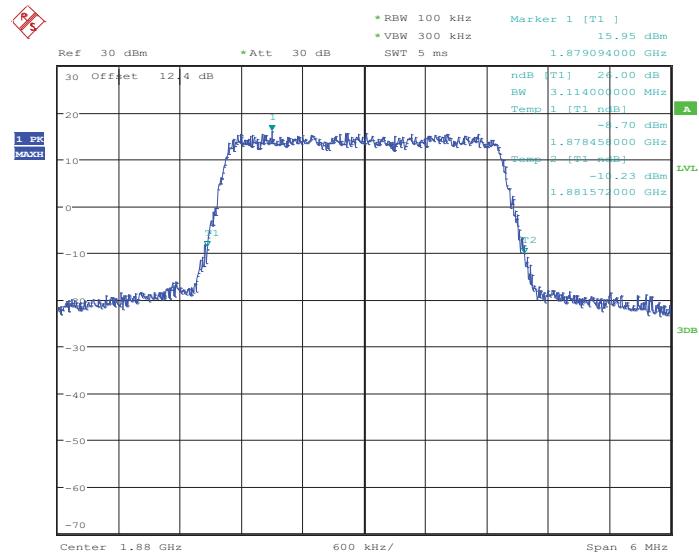


### 99% Occupied Bandwidth Plot on Channel 18900



Date: 14.FEB.2014 08:52:58

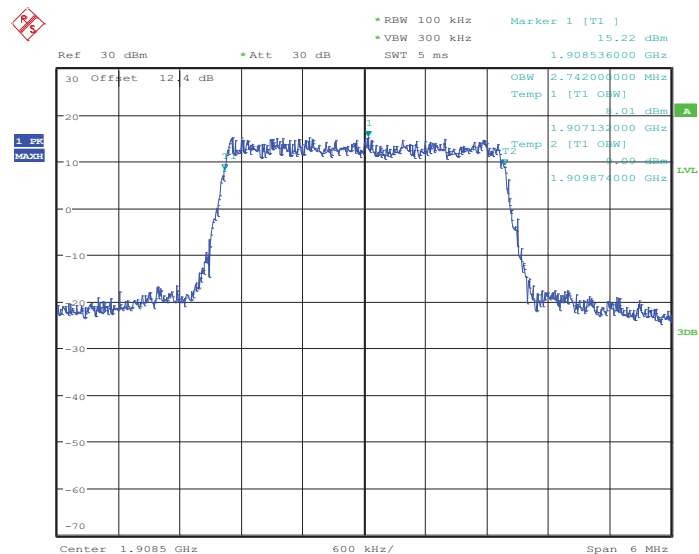
### 26dB Bandwidth Plot on Channel 18900



Date: 14.FEB.2014 08:53:25

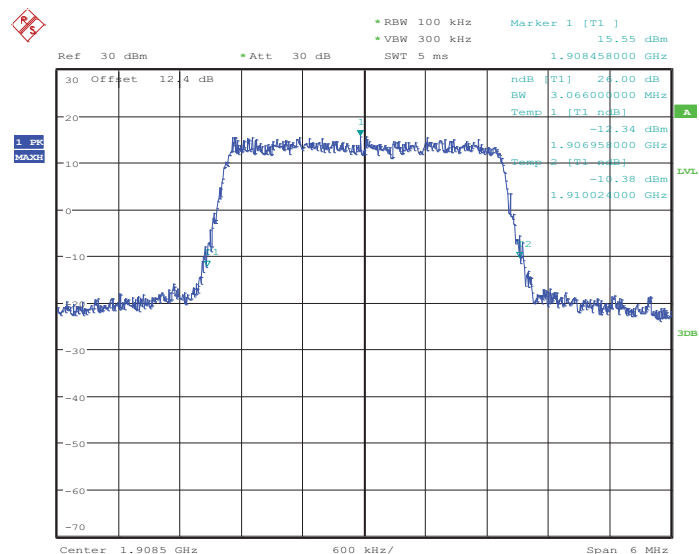


### 99% Occupied Bandwidth Plot on Channel 19185



Date: 14.FEB.2014 08:55:41

### 26dB Bandwidth Plot on Channel 19185



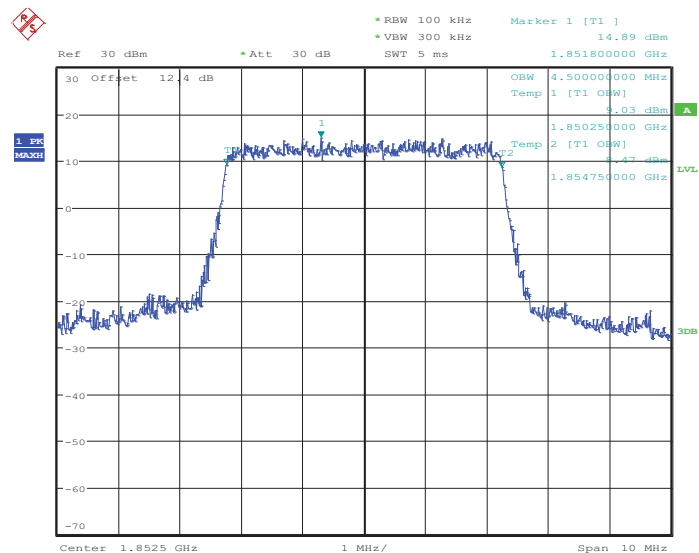
Date: 14.FEB.2014 08:56:08



Band : LTE Band 2

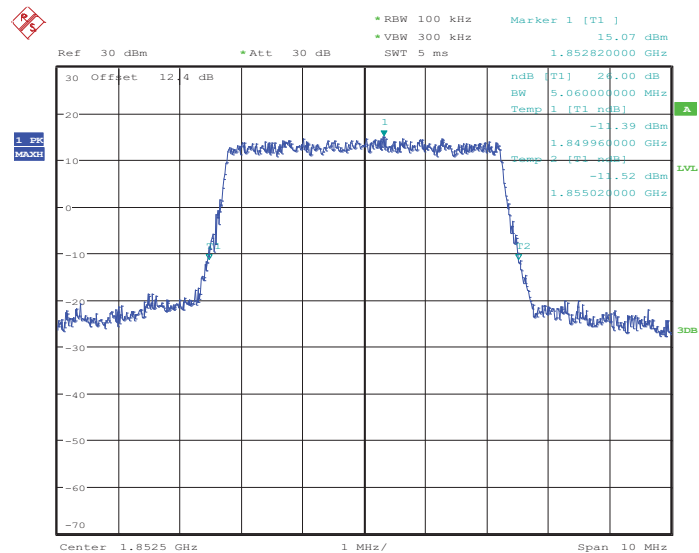
BW / Mod. : 5MHz / QPSK

## 99% Occupied Bandwidth Plot on Channel 18625



Date: 14.FEB.2014 09:01:07

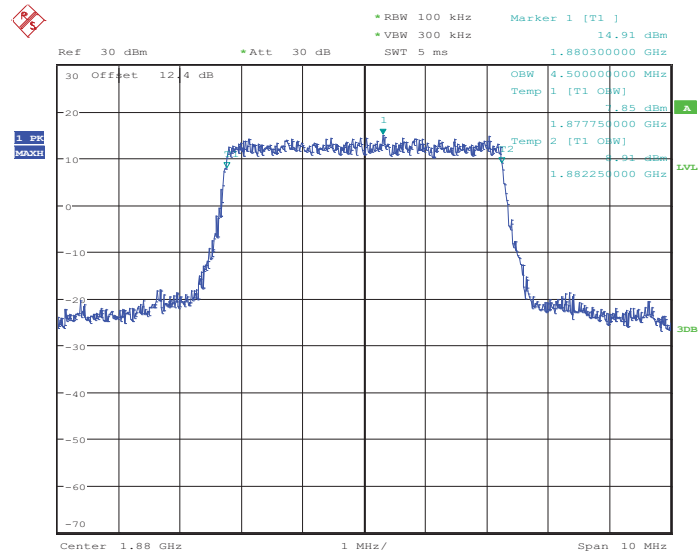
## 26dB Bandwidth Plot on Channel 18625



Date: 14.FEB.2014 09:01:32

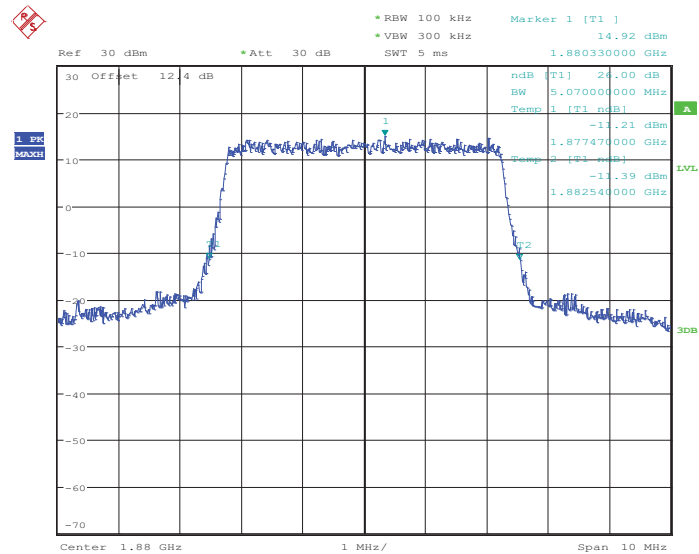


### 99% Occupied Bandwidth Plot on Channel 18900



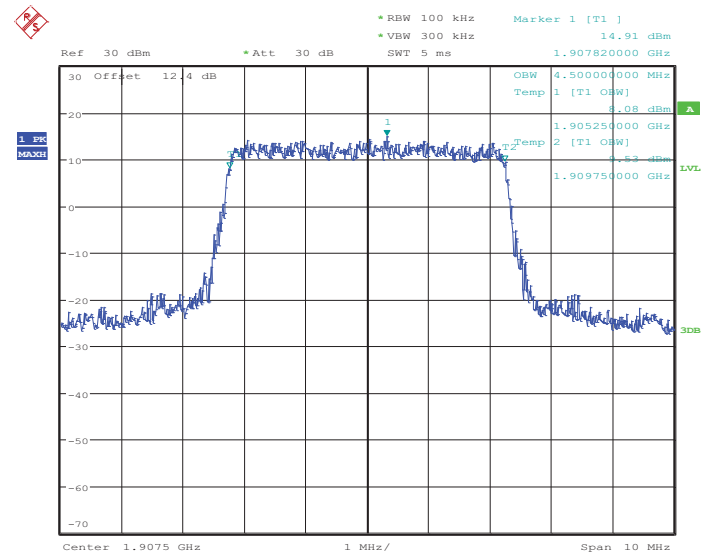
Date: 14.FEB.2014 09:06:41

### 26dB Bandwidth Plot on Channel 18900



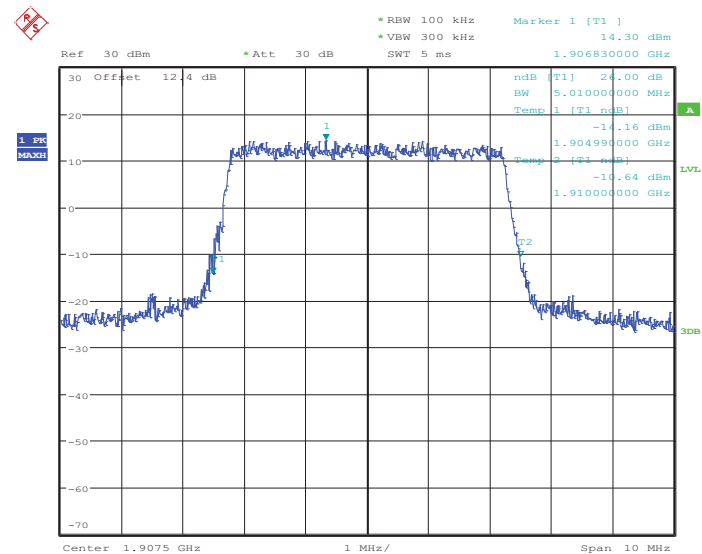
Date: 14.FEB.2014 09:07:07

## 99% Occupied Bandwidth Plot on Channel 19175



Date: 14.FEB.2014 09:09:24

## 26dB Bandwidth Plot on Channel 19175

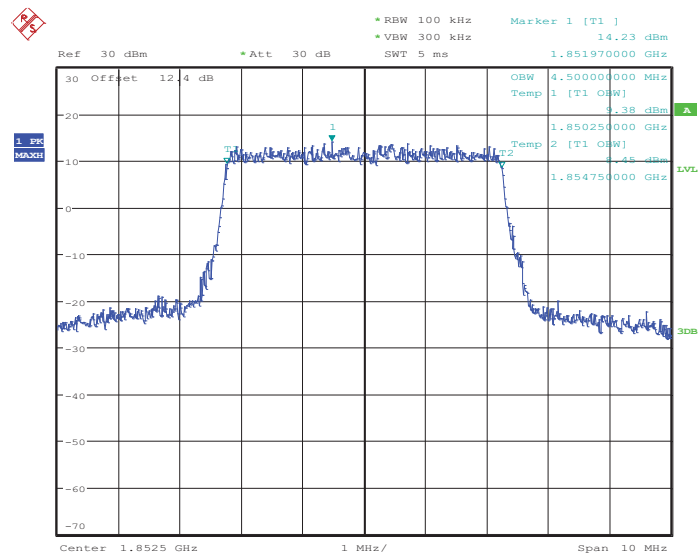


Date: 14.FEB.2014 09:09:49



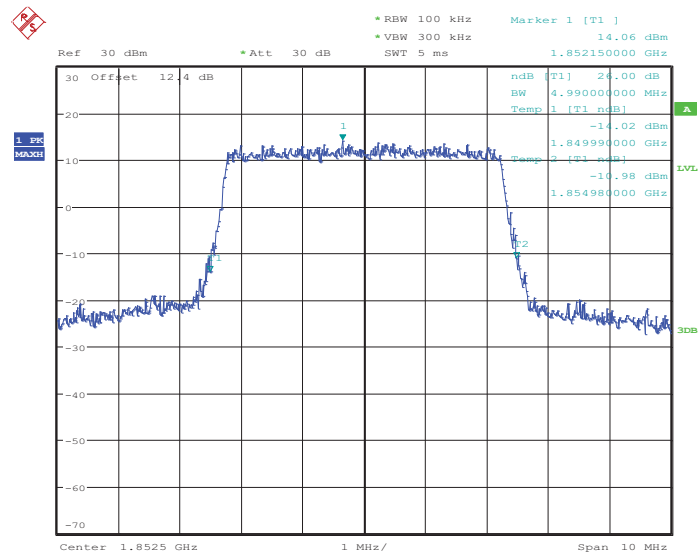
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 2 | BW / Mod. : | 5MHz / 16QAM |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 18625



Date: 14.FEB.2014 09:01:19

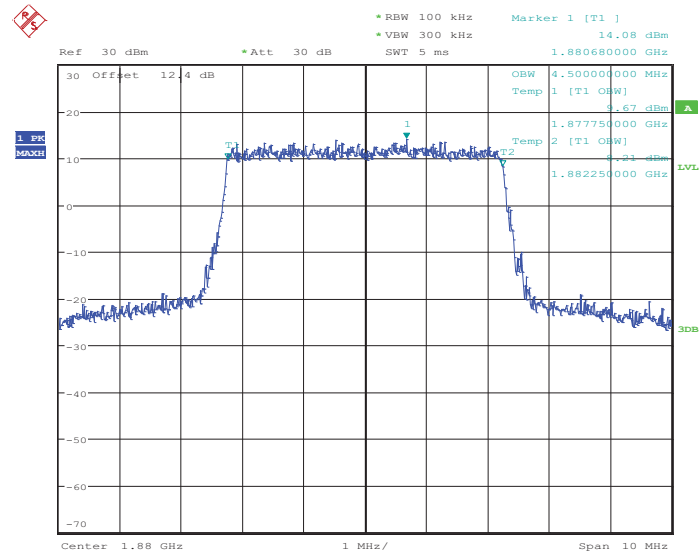
26dB Bandwidth Plot on Channel 18625



Date: 14.FEB.2014 09:01:46

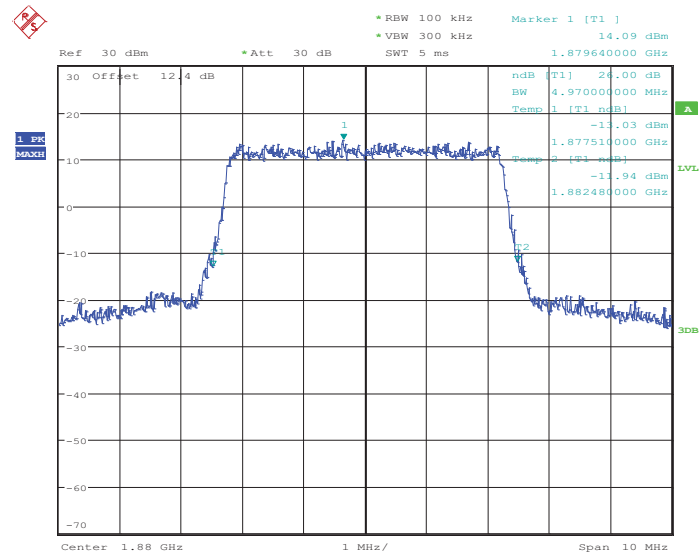


### 99% Occupied Bandwidth Plot on Channel 18900



Date: 14.FEB.2014 09:06:53

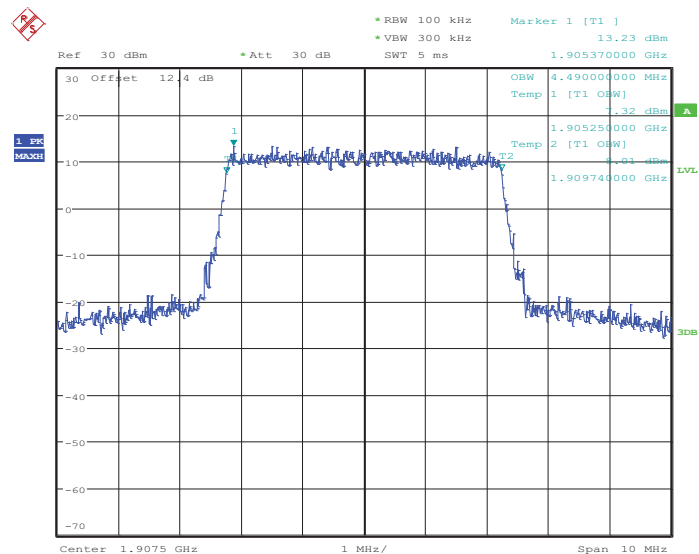
### 26dB Bandwidth Plot on Channel 18900



Date: 14.FEB.2014 09:07:20

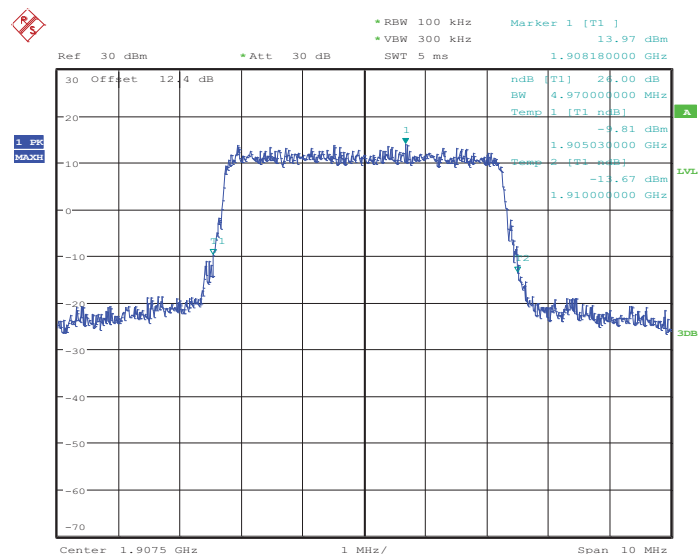


### 99% Occupied Bandwidth Plot on Channel 19175



Date: 14.FEB.2014 09:09:36

### 26dB Bandwidth Plot on Channel 19175

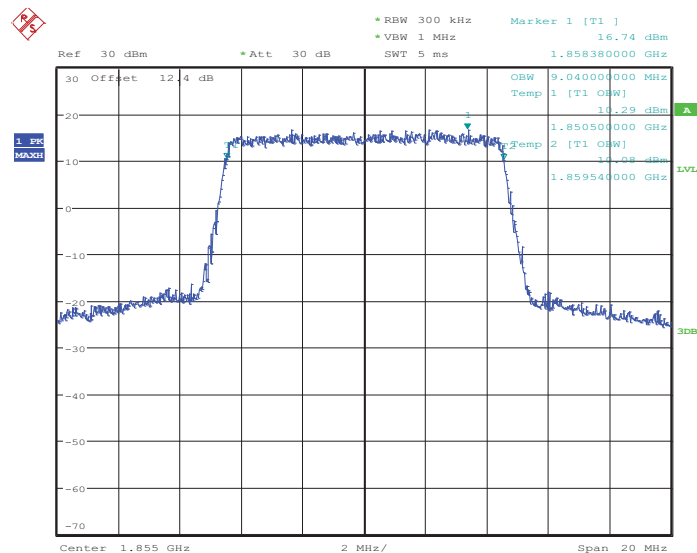


Date: 14.FEB.2014 09:10:03



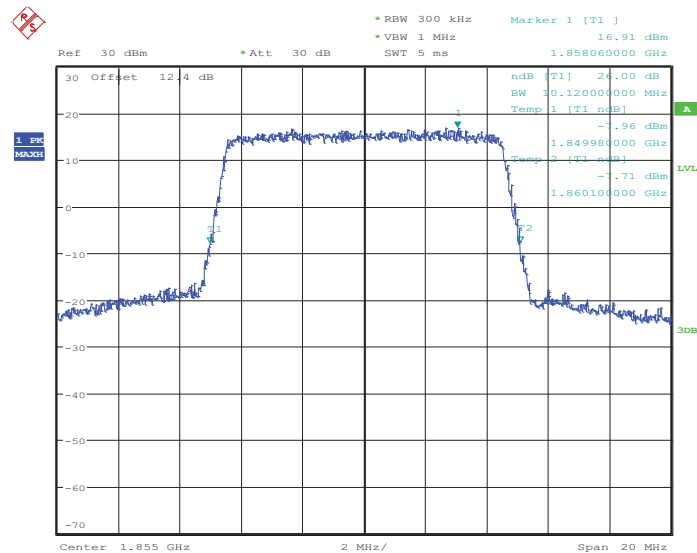
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 2 | BW / Mod. : | 10MHz / QPSK |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 18650



Date: 14.FEB.2014 09:14:59

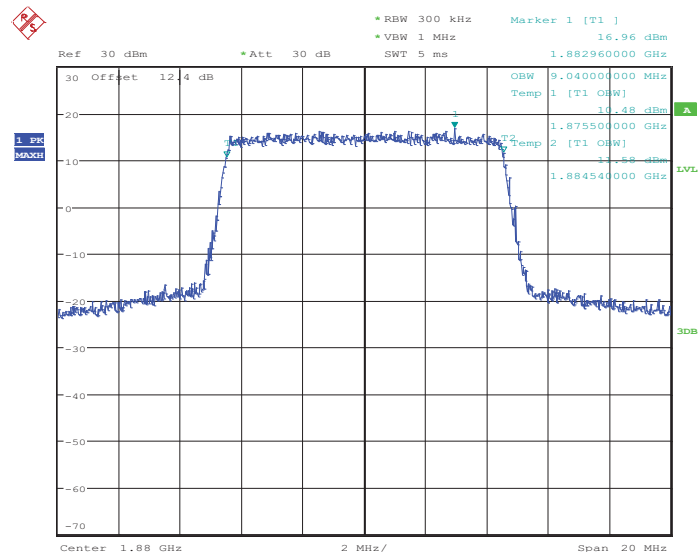
26dB Bandwidth Plot on Channel 18650



Date: 14.FEB.2014 09:15:23

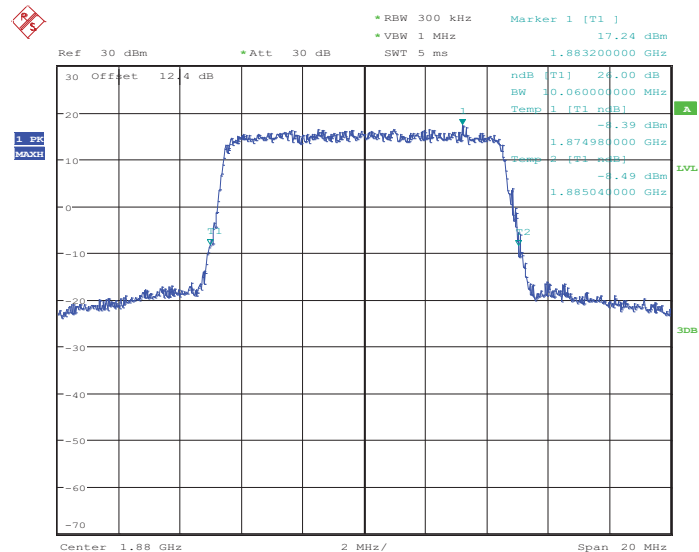


### 99% Occupied Bandwidth Plot on Channel 18900



Date: 14.FEB.2014 09:20:27

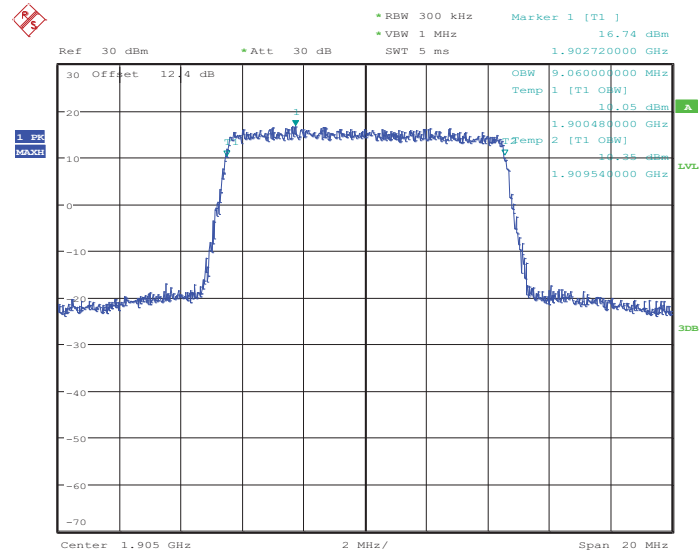
### 26dB Bandwidth Plot on Channel 18900



Date: 14.FEB.2014 09:20:51

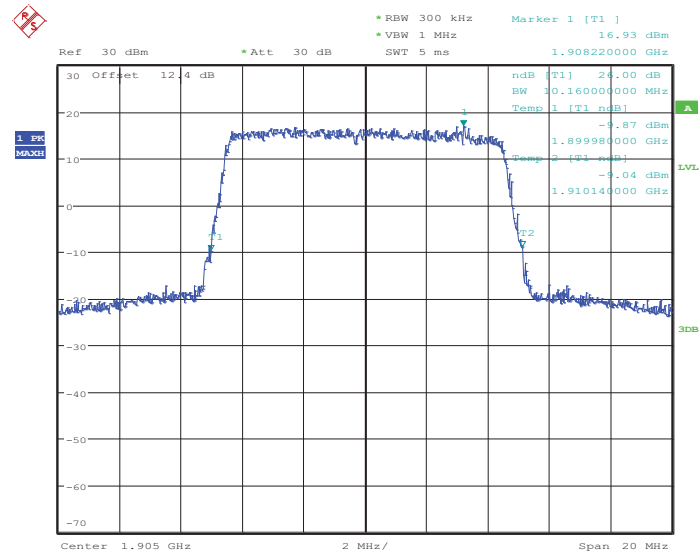


### 99% Occupied Bandwidth Plot on Channel 19150



Date: 14.FEB.2014 09:33:26

### 26dB Bandwidth Plot on Channel 19150

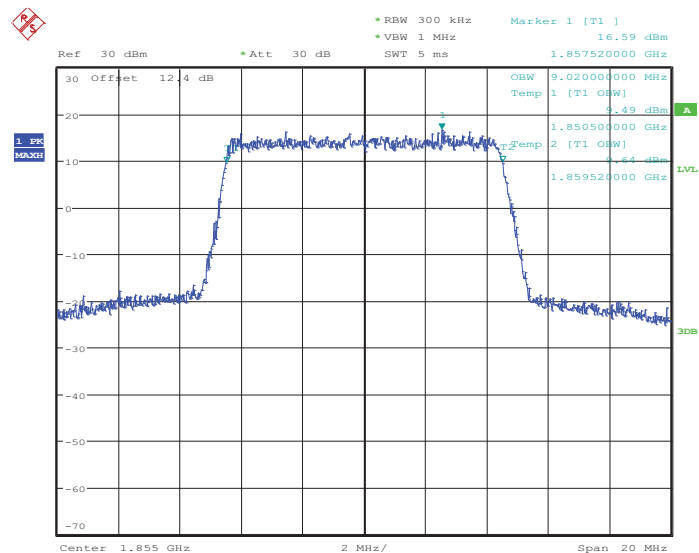


Date: 14.FEB.2014 09:33:52



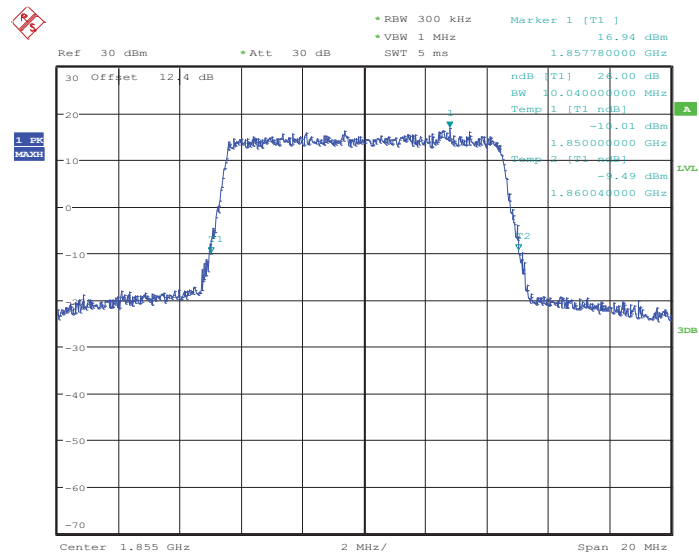
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 2 | BW / Mod. : | 10MHz / 16QAM |
|--------|------------|-------------|---------------|

99% Occupied Bandwidth Plot on Channel 18650



Date: 14.FEB.2014 09:15:10

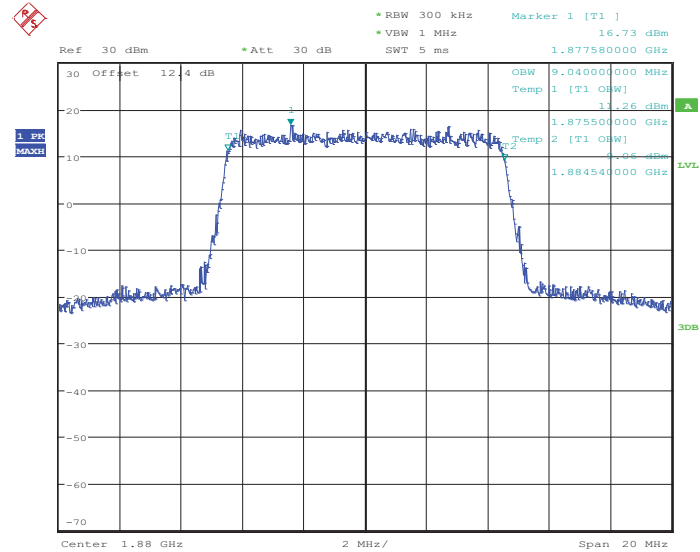
26dB Bandwidth Plot on Channel 18650



Date: 14.FEB.2014 09:15:36

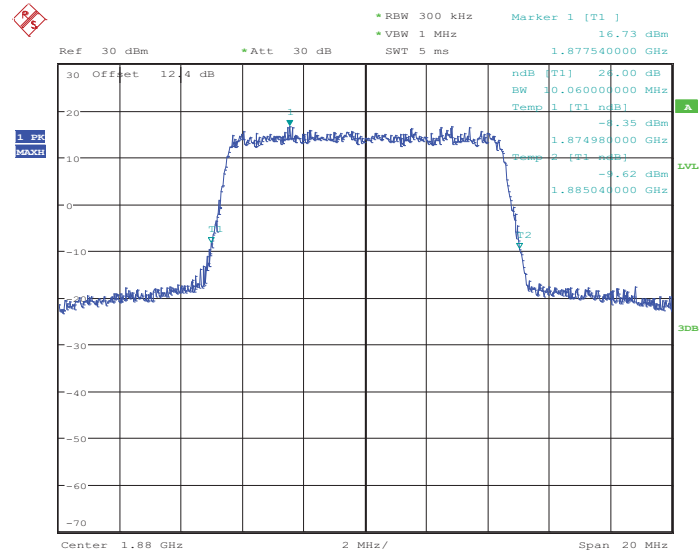


99% Occupied Bandwidth Plot on Channel 18900

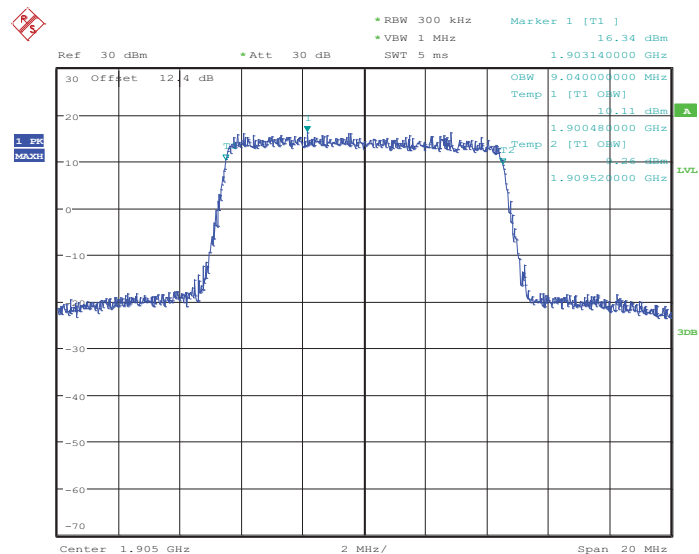


Date: 14.FEB.2014 09:20:38

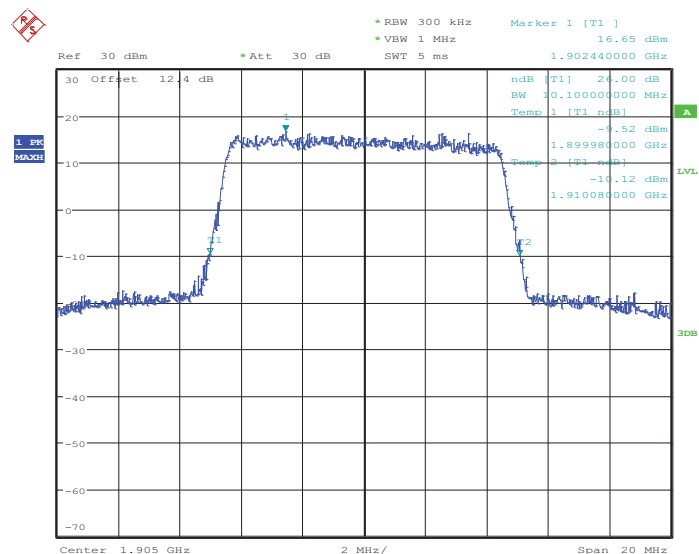
26dB Bandwidth Plot on Channel 18900



Date: 14.FEB.2014 09:21:04

**99% Occupied Bandwidth Plot on Channel 19150**


Date: 14.FEB.2014 09:33:38

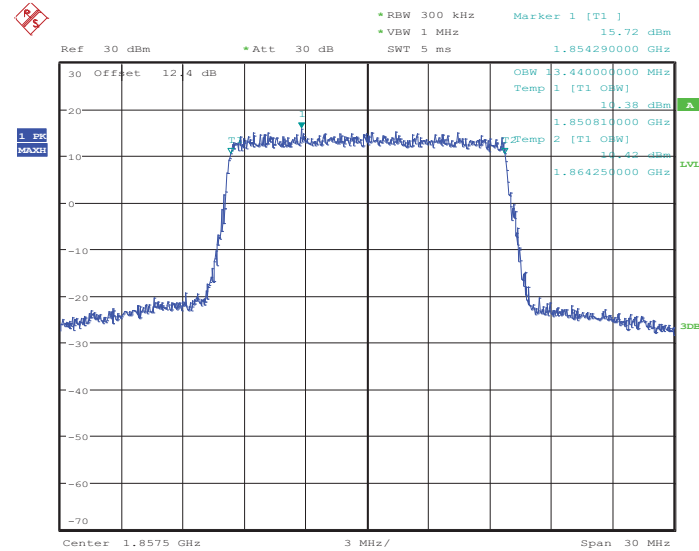
**26dB Bandwidth Plot on Channel 19150**


Date: 14.FEB.2014 09:34:05



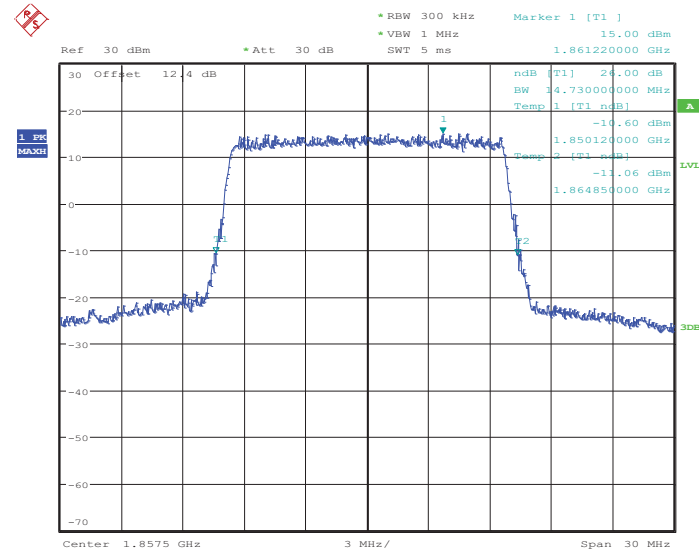
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 2 | BW / Mod. : | 15MHz / QPSK |
|--------|------------|-------------|--------------|

### 99% Occupied Bandwidth Plot on Channel 18675



Date: 14.FEB.2014 09:39:05

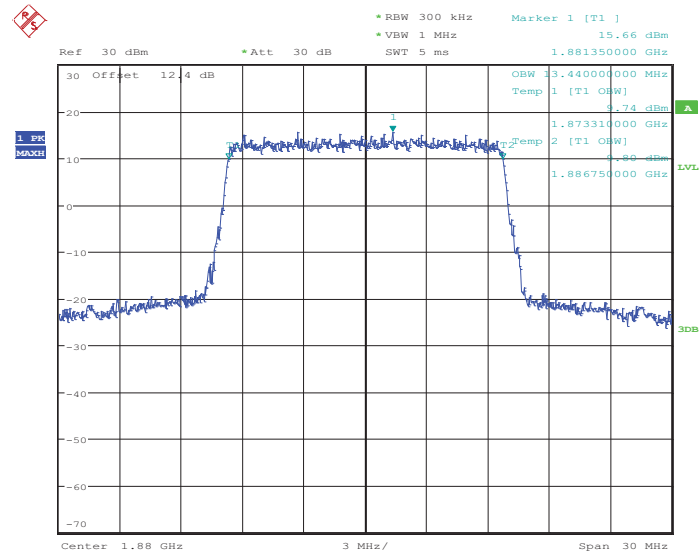
### 26dB Bandwidth Plot on Channel 18675



Date: 14.FEB.2014 09:39:30

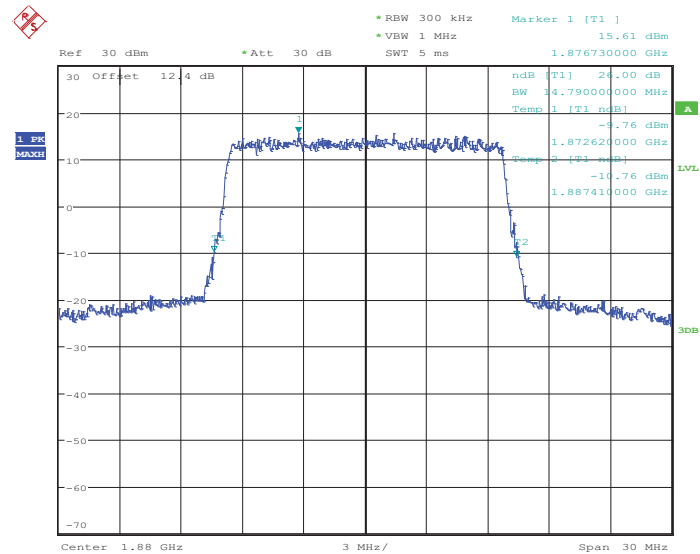


### 99% Occupied Bandwidth Plot on Channel 18900

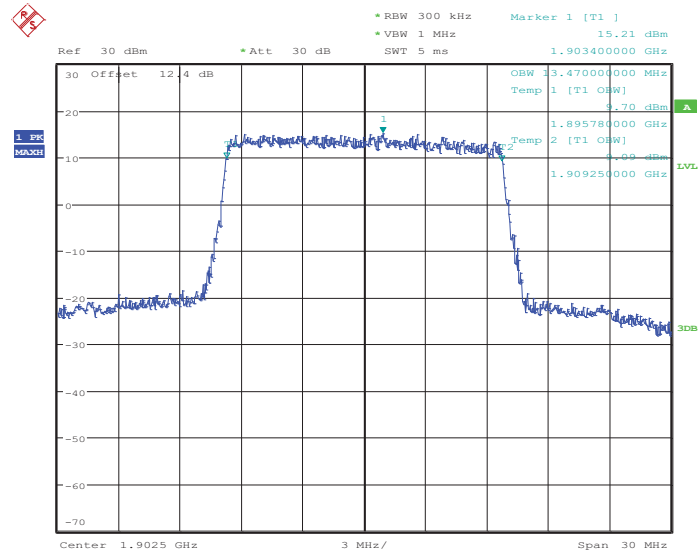


Date: 14.FEB.2014 09:44:39

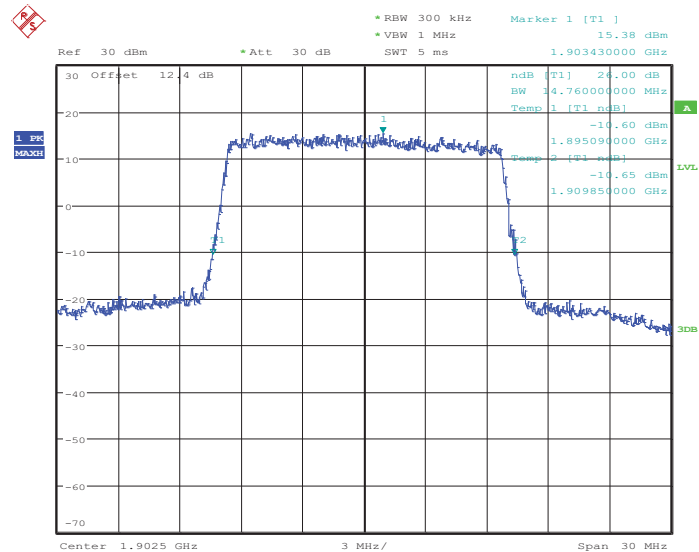
### 26dB Bandwidth Plot on Channel 18900



Date: 14.FEB.2014 09:45:04

**99% Occupied Bandwidth Plot on Channel 19125**


Date: 14.FEB.2014 09:47:22

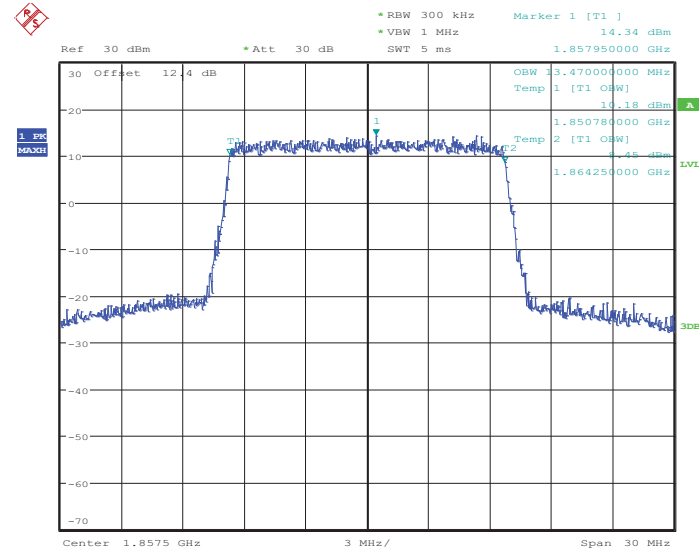
**26dB Bandwidth Plot on Channel 19125**


Date: 14.FEB.2014 09:47:47



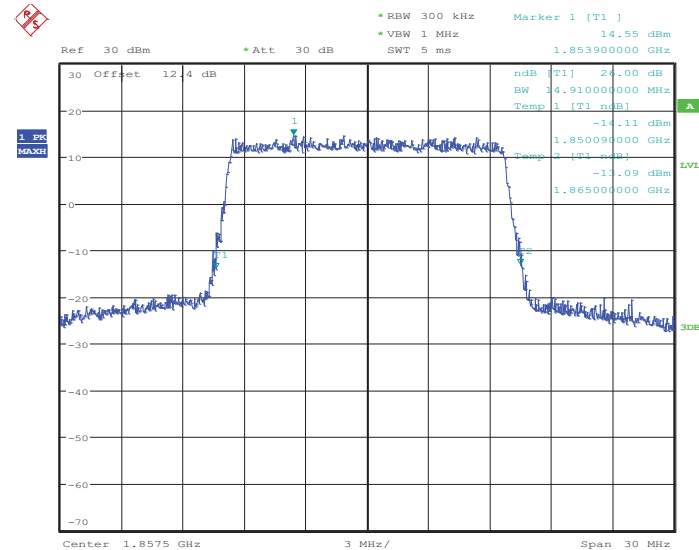
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 2 | BW / Mod. : | 15MHz / 16QAM |
|--------|------------|-------------|---------------|

99% Occupied Bandwidth Plot on Channel 18675

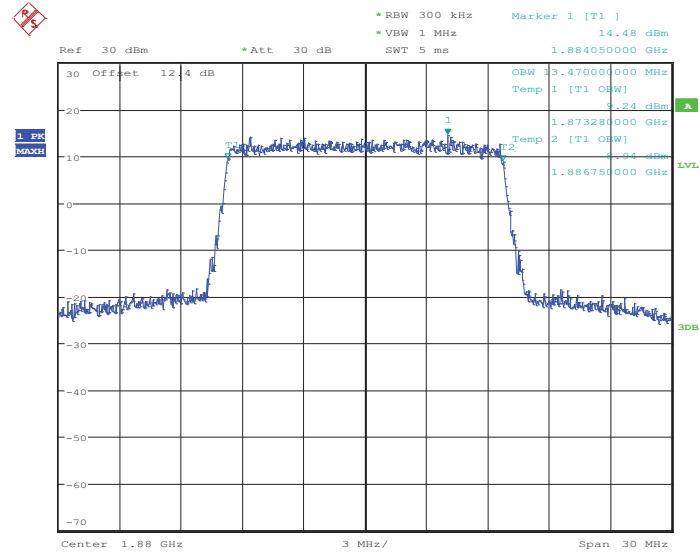


Date: 14.FEB.2014 09:39:16

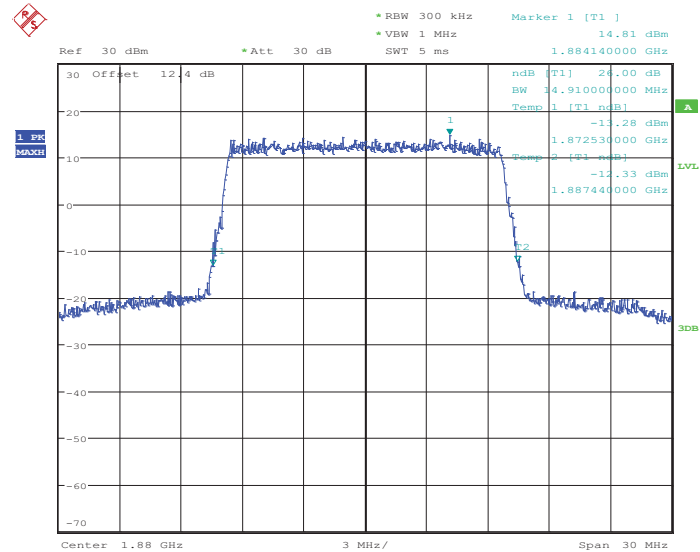
26dB Bandwidth Plot on Channel 18675



Date: 14.FEB.2014 09:39:43

**99% Occupied Bandwidth Plot on Channel 18900**


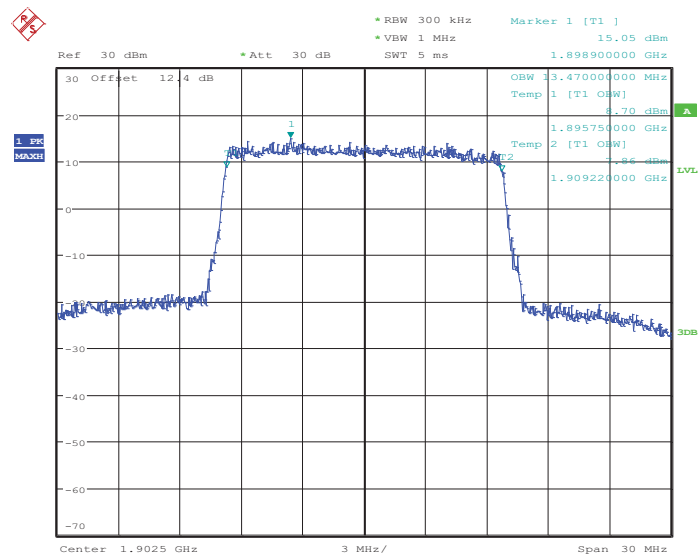
Date: 14.FEB.2014 09:44:51

**26dB Bandwidth Plot on Channel 18900**


Date: 14.FEB.2014 09:45:18

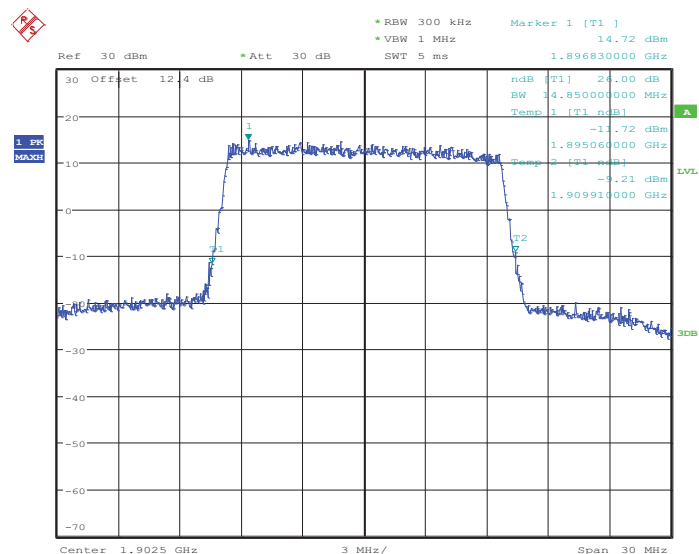


### 99% Occupied Bandwidth Plot on Channel 19125



Date: 14.FEB.2014 09:47:34

### 26dB Bandwidth Plot on Channel 19125

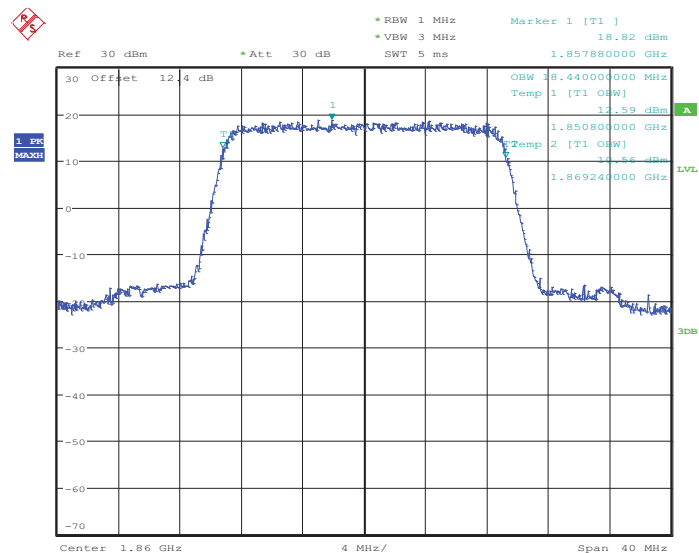


Date: 14.FEB.2014 09:48:01



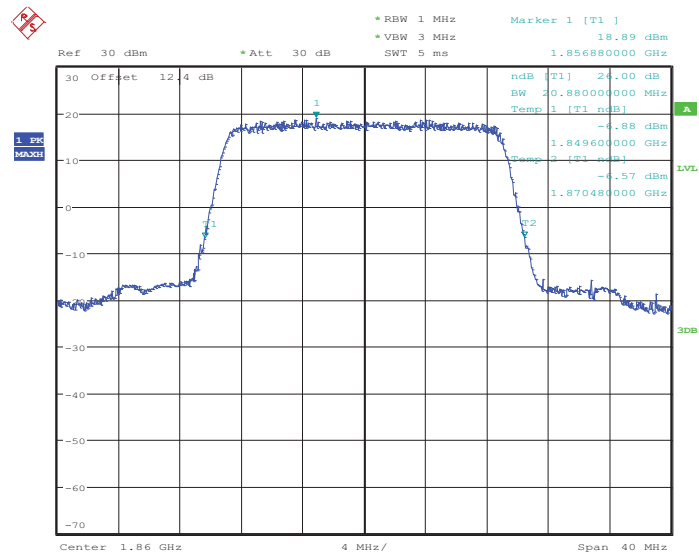
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 2 | BW / Mod. : | 20MHz / QPSK |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 18700



Date: 14.FEB.2014 09:54:46

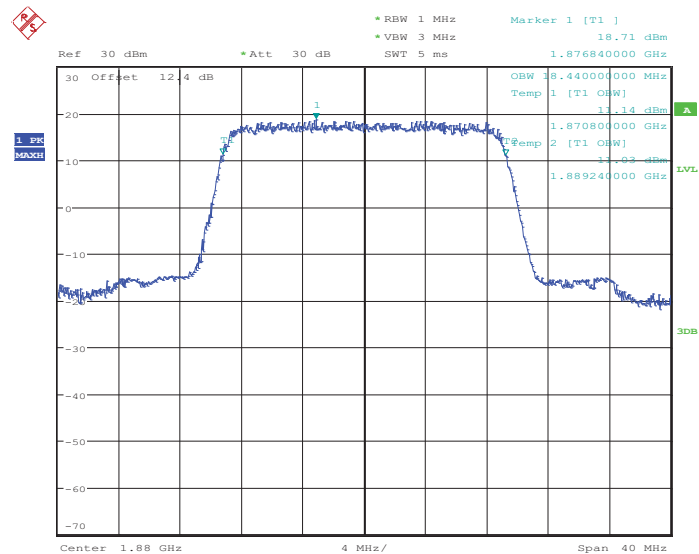
26dB Bandwidth Plot on Channel 18700



Date: 14.FEB.2014 09:55:11

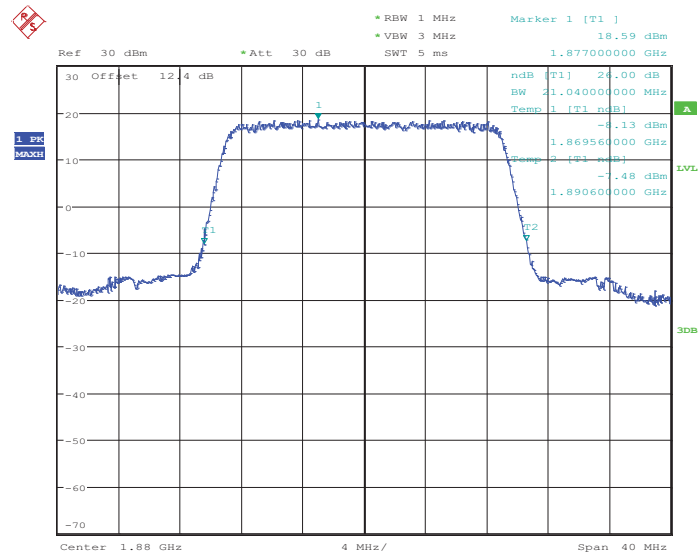


### 99% Occupied Bandwidth Plot on Channel 18900



Date: 14.FEB.2014 10:00:21

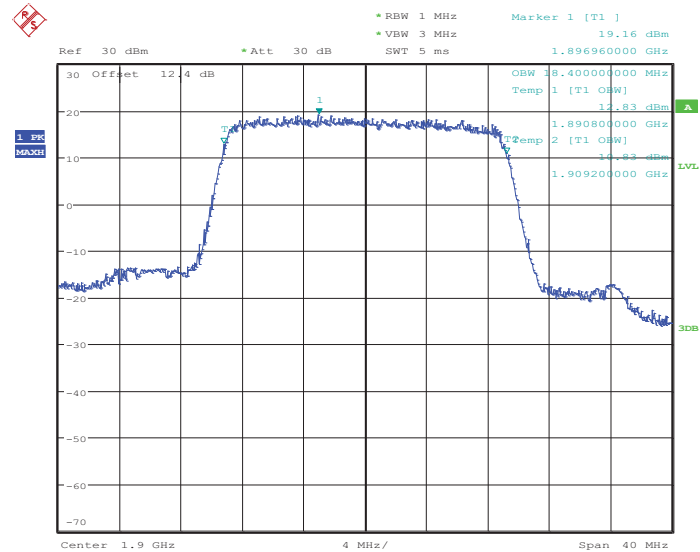
### 26dB Bandwidth Plot on Channel 18900



Date: 14.FEB.2014 10:00:46

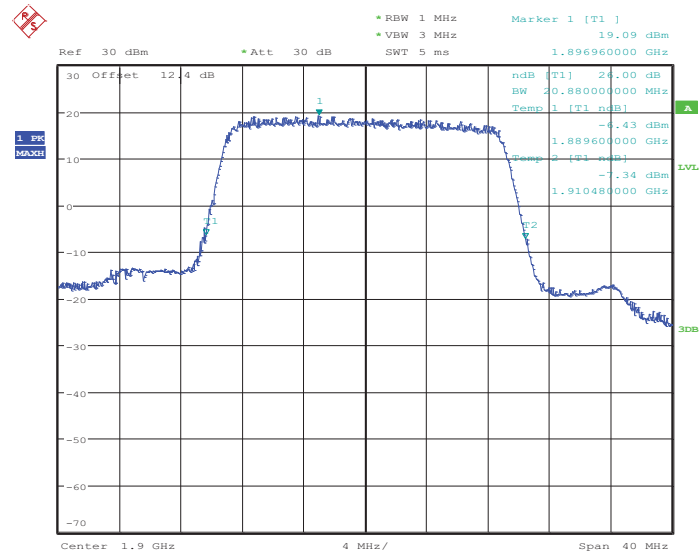


### 99% Occupied Bandwidth Plot on Channel 19100



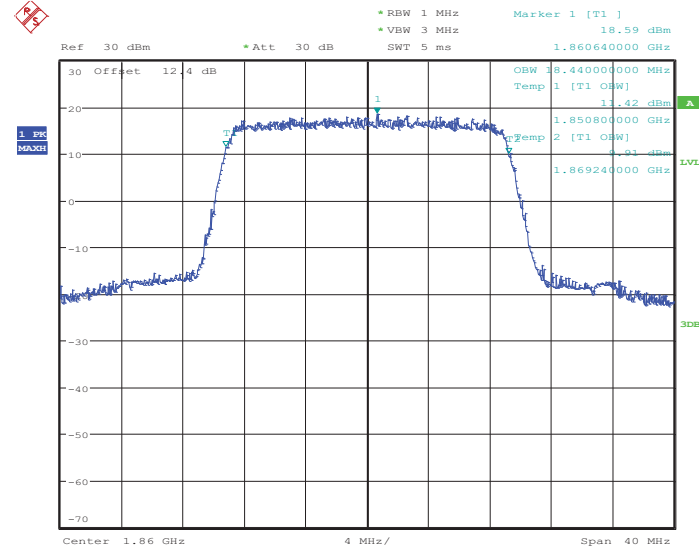
Date: 14.FEB.2014 10:03:04

### 26dB Bandwidth Plot on Channel 19100

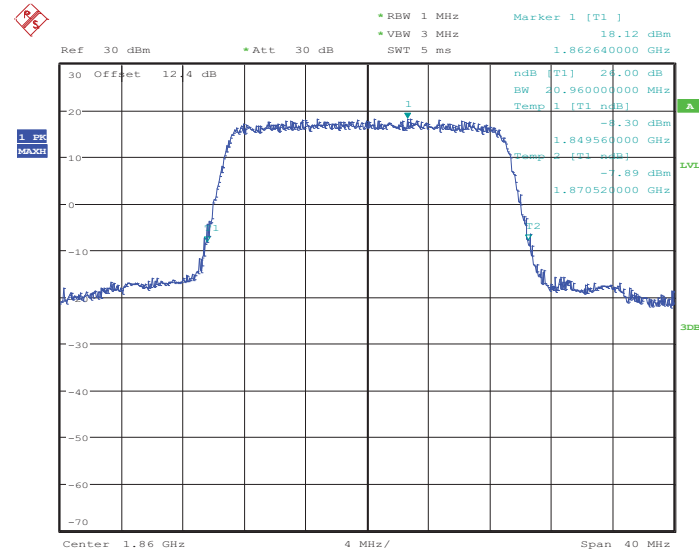


Date: 14.FEB.2014 10:03:29

|               |            |                    |               |
|---------------|------------|--------------------|---------------|
| <b>Band :</b> | LTE Band 2 | <b>BW / Mod. :</b> | 20MHz / 16QAM |
|---------------|------------|--------------------|---------------|

**99% Occupied Bandwidth Plot on Channel 18700**


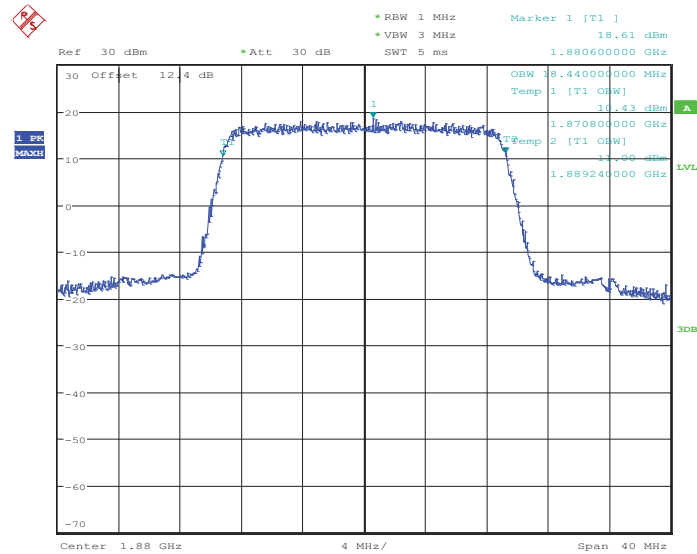
Date: 14.FEB.2014 09:54:58

**26dB Bandwidth Plot on Channel 18700**


Date: 14.FEB.2014 09:55:25

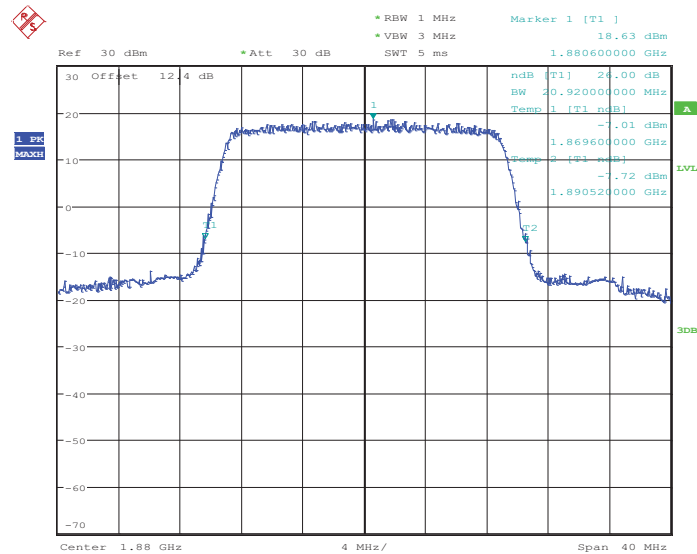


### 99% Occupied Bandwidth Plot on Channel 18900



Date: 14.FEB.2014 10:00:33

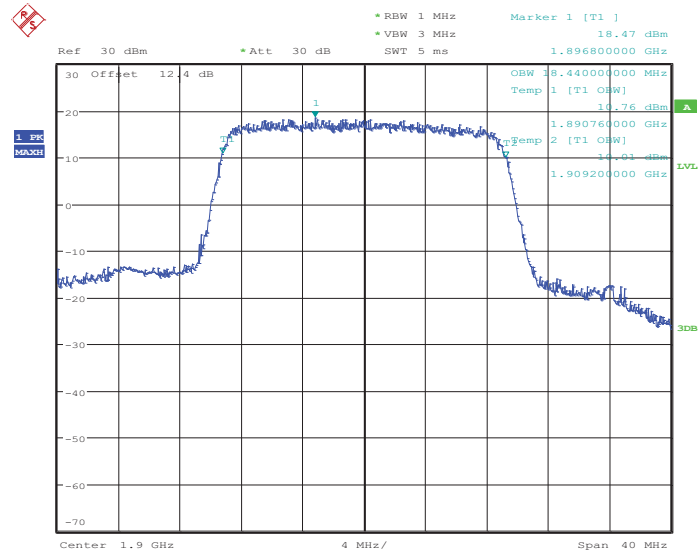
### 26dB Bandwidth Plot on Channel 18900



Date: 14.FEB.2014 10:01:00

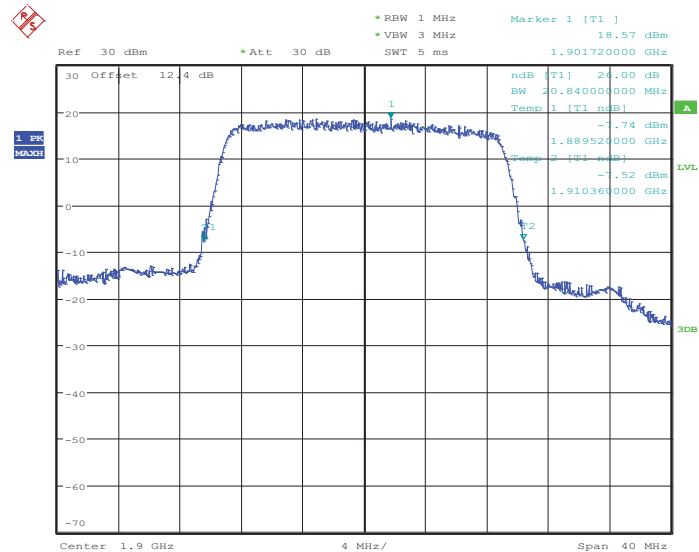


### 99% Occupied Bandwidth Plot on Channel 19100



Date: 14.FEB.2014 10:03:16

### 26dB Bandwidth Plot on Channel 19100

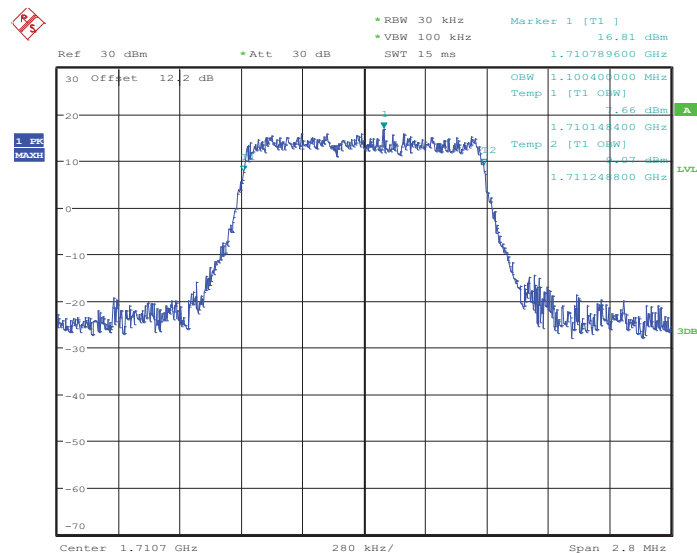


Date: 14.FEB.2014 10:03:43



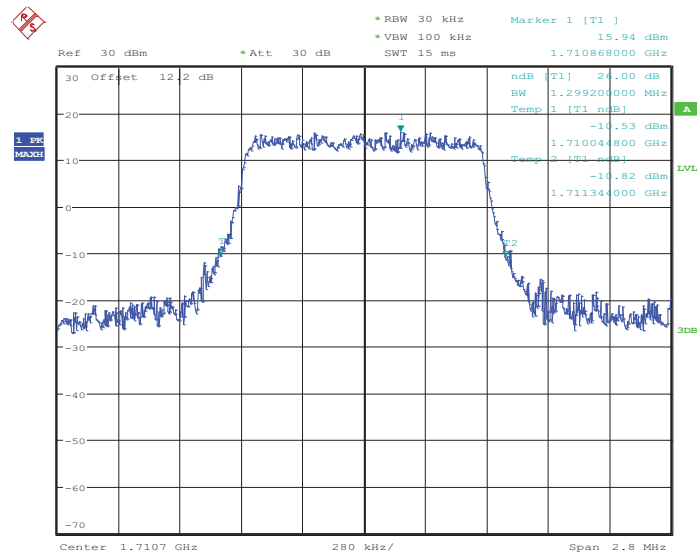
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 4 | BW / Mod. : | 1.4MHz / QPSK |
|--------|------------|-------------|---------------|

99% Occupied Bandwidth Plot on Channel 1957



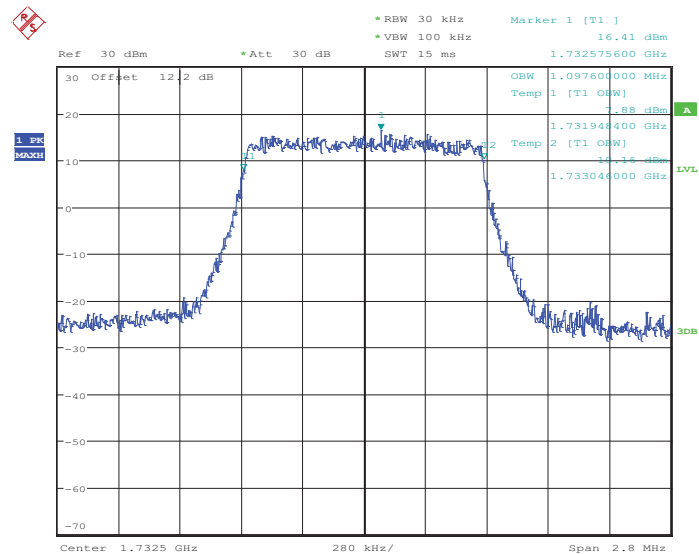
Date: 14.FEB.2014 10:15:33

26dB Bandwidth Plot on Channel 1957



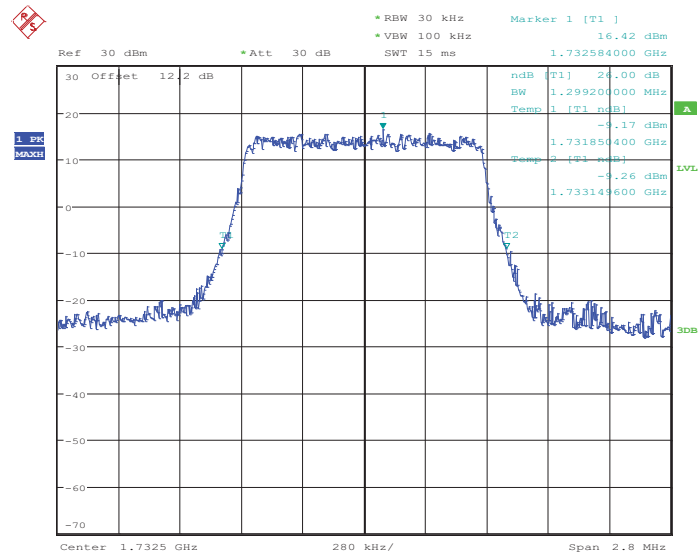
Date: 14.FEB.2014 10:15:58

### 99% Occupied Bandwidth Plot on Channel 20175



Date: 14.FEB.2014 10:21:08

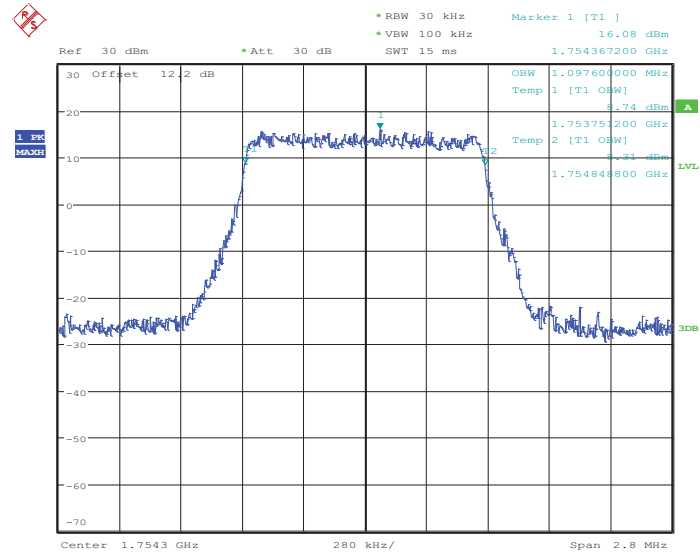
### 26dB Bandwidth Plot on Channel 20175



Date: 14.FEB.2014 10:21:34

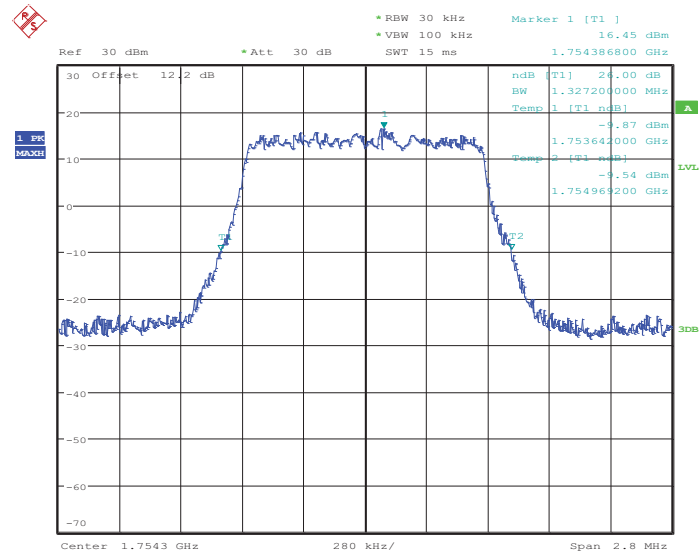


### 99% Occupied Bandwidth Plot on Channel 20393



Date: 14.FEB.2014 10:23:51

### 26dB Bandwidth Plot on Channel 20393

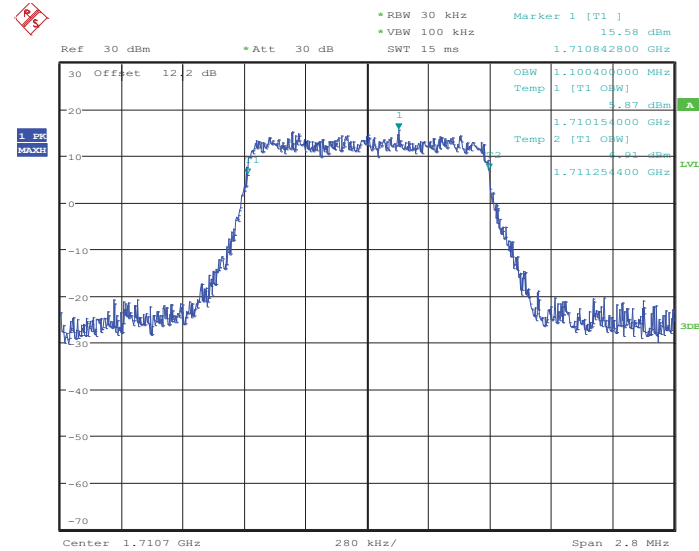


Date: 14.FEB.2014 10:24:16



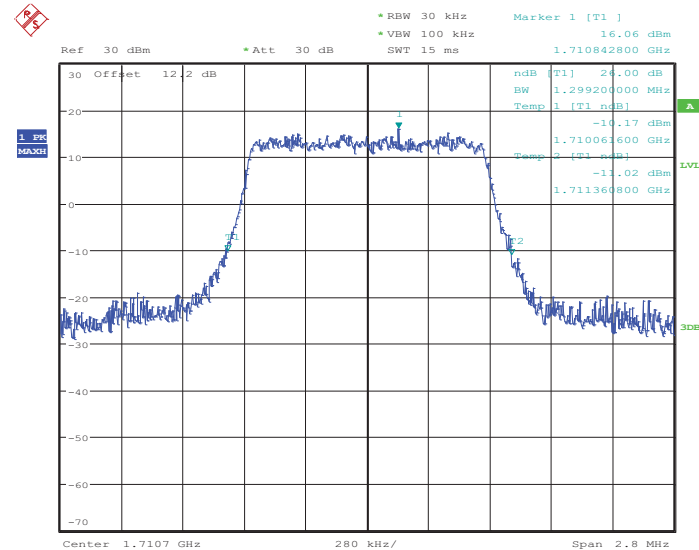
|        |            |             |                |
|--------|------------|-------------|----------------|
| Band : | LTE Band 4 | BW / Mod. : | 1.4MHz / 16QAM |
|--------|------------|-------------|----------------|

99% Occupied Bandwidth Plot on Channel 1957



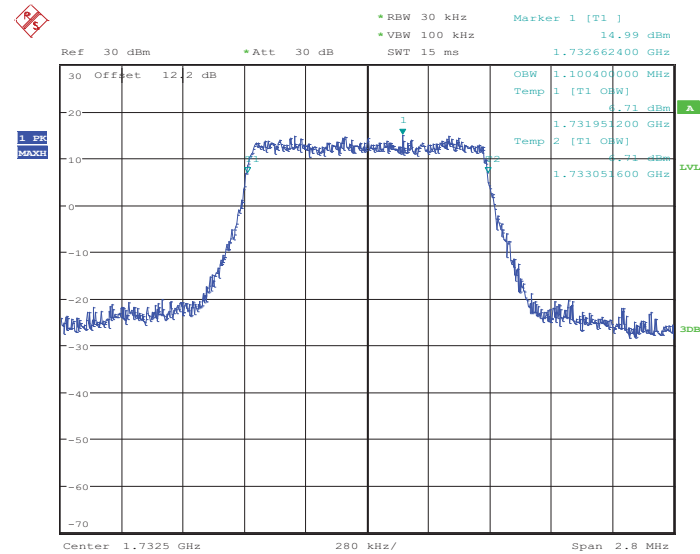
Date: 14.FEB.2014 10:15:45

26dB Bandwidth Plot on Channel 1957



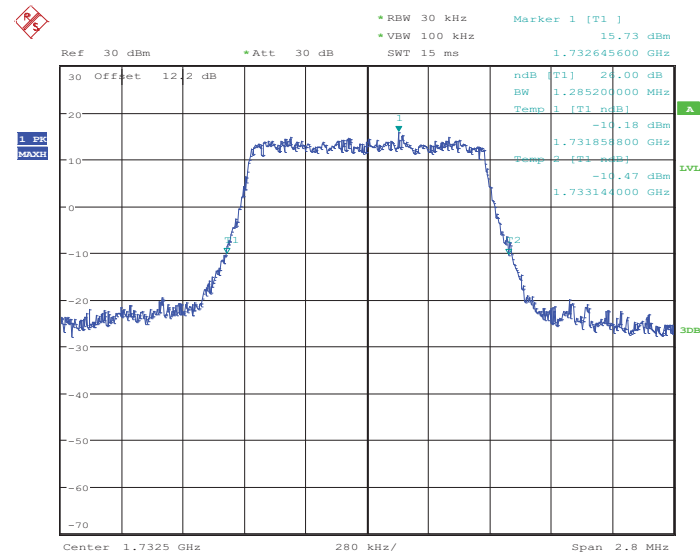
Date: 14.FEB.2014 10:16:12

### 99% Occupied Bandwidth Plot on Channel 20175



Date: 14.FEB.2014 10:21:20

### 26dB Bandwidth Plot on Channel 20175



Date: 14.FEB.2014 10:21:47



\* RBW 30 kHz  
 \* VBW 100 kHz  
 \* Att 30 dB  
 \* SWT 15 ms  
 Marker 1 [T1]  
 14.83 dBm  
 1.754196400 GHz

Ref 30 dBm  
 30 Offset 12.2 dB  
 30 dB  
 1.100404000 MHz  
 Temp 1 [T1 OSW]  
 14.95 dBm  
 1.753751200 GHz  
 Temp 2 [T1 OSW]  
 14.52 dBm  
 1.754851600 GHz

1  
 2

1.7543 GHz  
 280 kHz/  
 Span 2.8 MHz

Date: 14.FEB.2014 10:24:03

\* RBW 30 kHz  
 \* VBW 100 kHz  
 SWT 15 ms

Marker 1 [T1]  
 15.04 dBm

Ref 30 dBm  
 \* Att 30 dB

1.753961200 GHz  
 1.754969200 GHz

30 Offset 12.2 dB

1.753644800 MHz  
 1.754969200 MHz

-11.19 dBm  
 -17.21 dBm

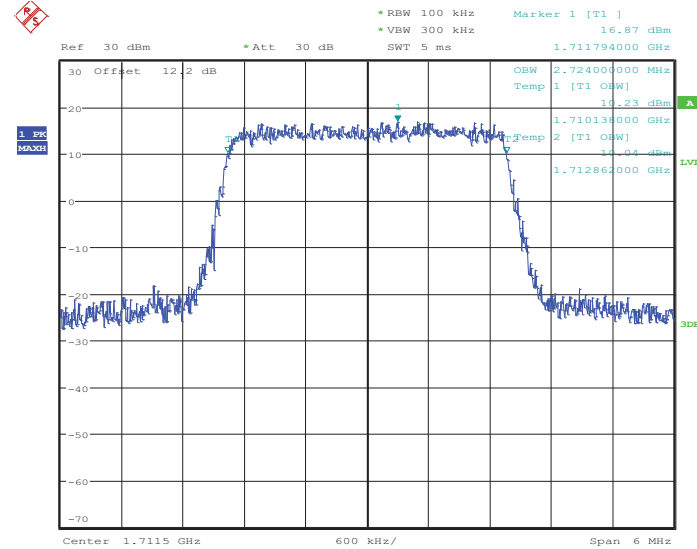
Center 1.7543 GHz  
 280 kHz/  
 Span 2.8 MHz

Date: 14.FEB.2014 10:24:30



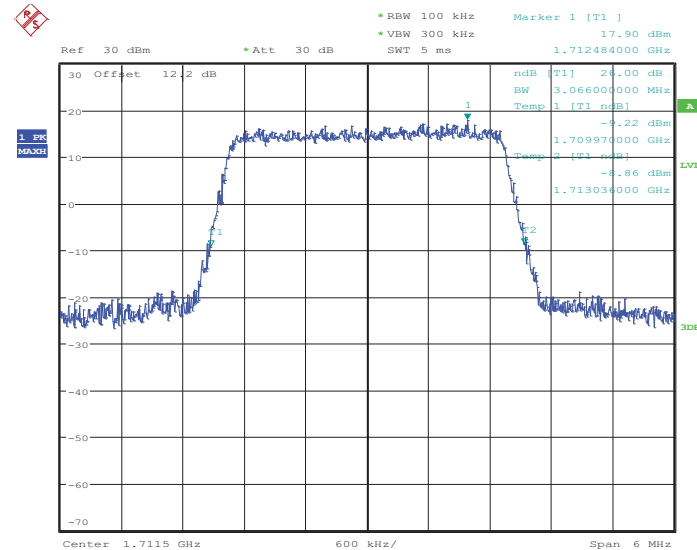
|        |            |             |             |
|--------|------------|-------------|-------------|
| Band : | LTE Band 4 | BW / Mod. : | 3MHz / QPSK |
|--------|------------|-------------|-------------|

99% Occupied Bandwidth Plot on Channel 19965



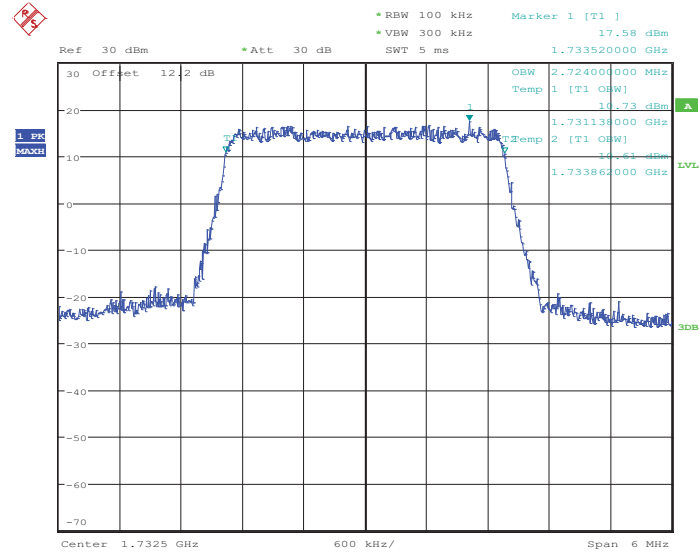
Date: 14.FEB.2014 10:29:31

26dB Bandwidth Plot on Channel 19965



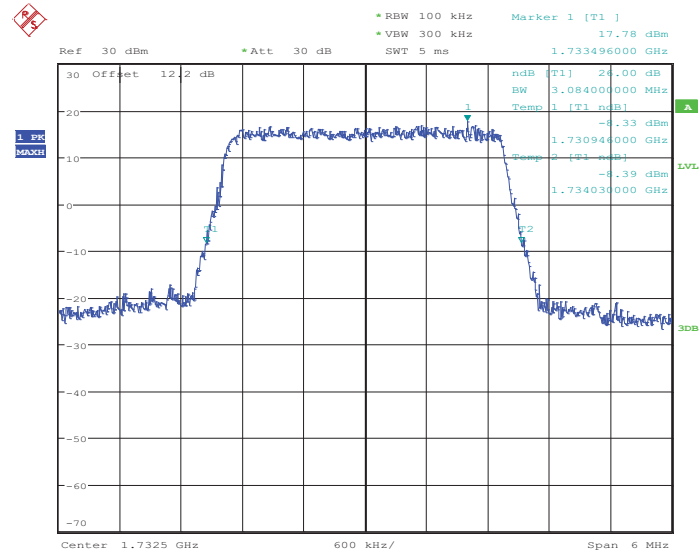
Date: 14.FEB.2014 10:29:56

### 99% Occupied Bandwidth Plot on Channel 20175



Date: 14.FEB.2014 10:35:05

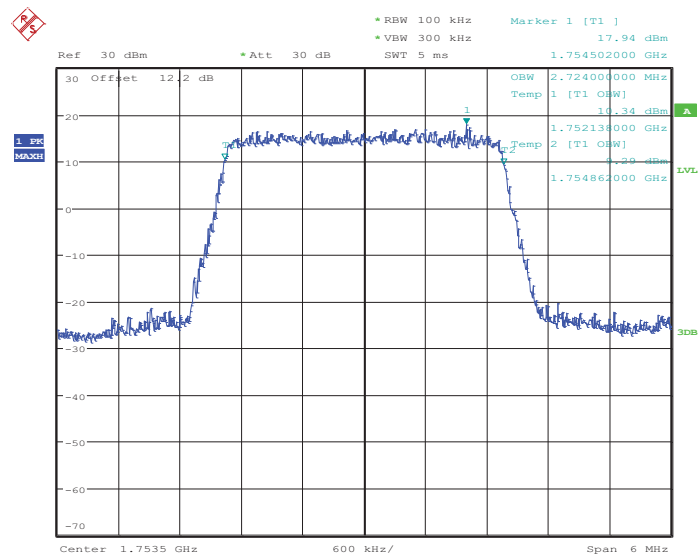
### 26dB Bandwidth Plot on Channel 20175



Date: 14.FEB.2014 10:35:30

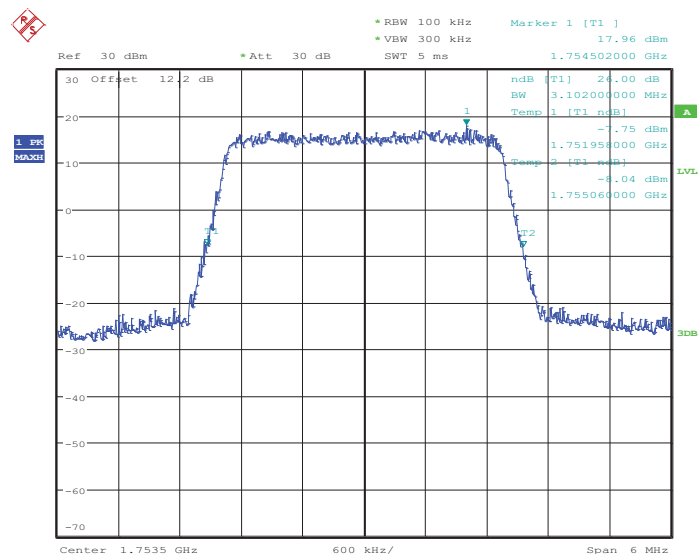


### 99% Occupied Bandwidth Plot on Channel 20385



Date: 14.FEB.2014 10:37:48

### 26dB Bandwidth Plot on Channel 20385

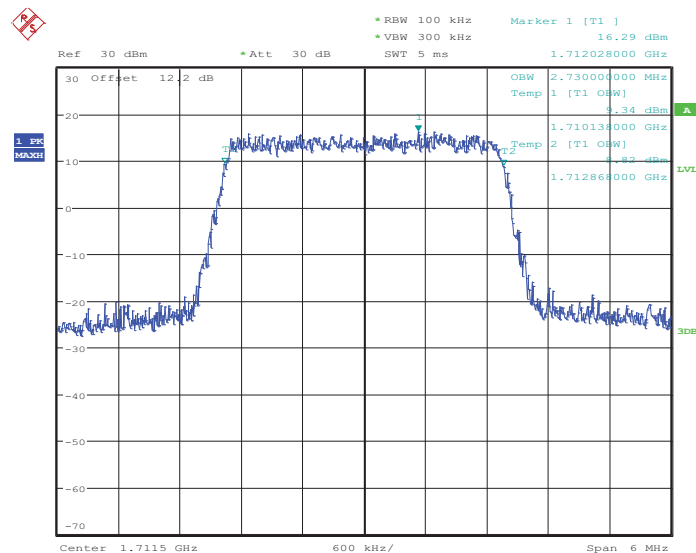


Date: 14.FEB.2014 10:38:14



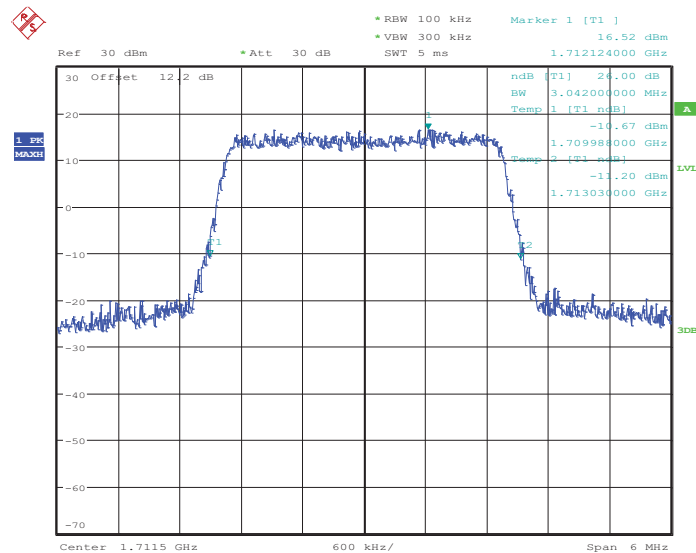
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 4 | BW / Mod. : | 3MHz / 16QAM |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 19965



Date: 14.FEB.2014 10:29:42

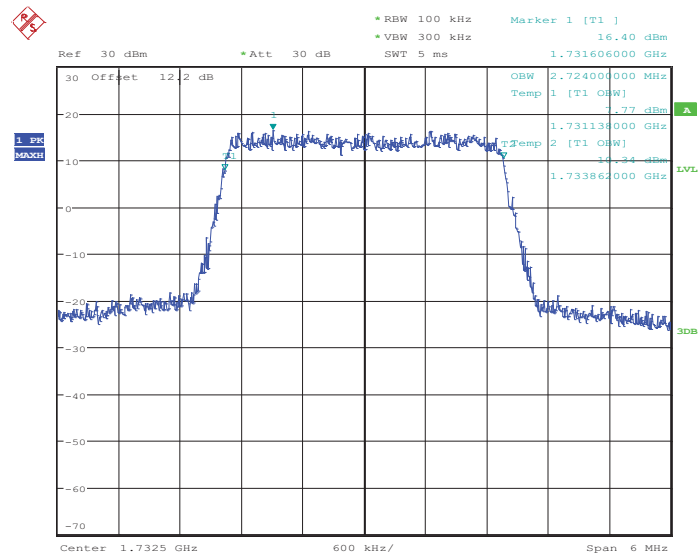
26dB Bandwidth Plot on Channel 19965



Date: 14.FEB.2014 10:30:09

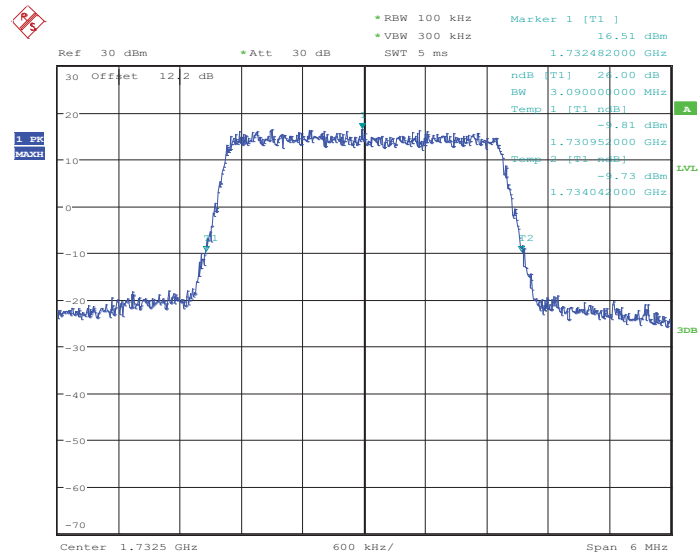


### 99% Occupied Bandwidth Plot on Channel 20175



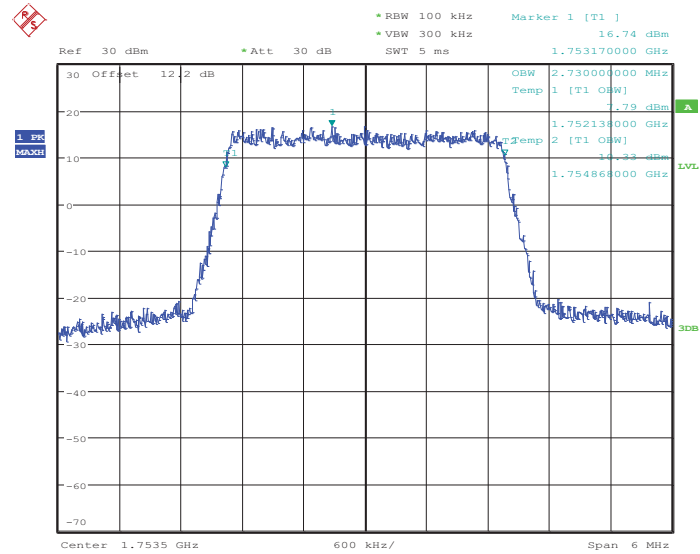
Date: 14.FEB.2014 10:35:17

### 26dB Bandwidth Plot on Channel 20175



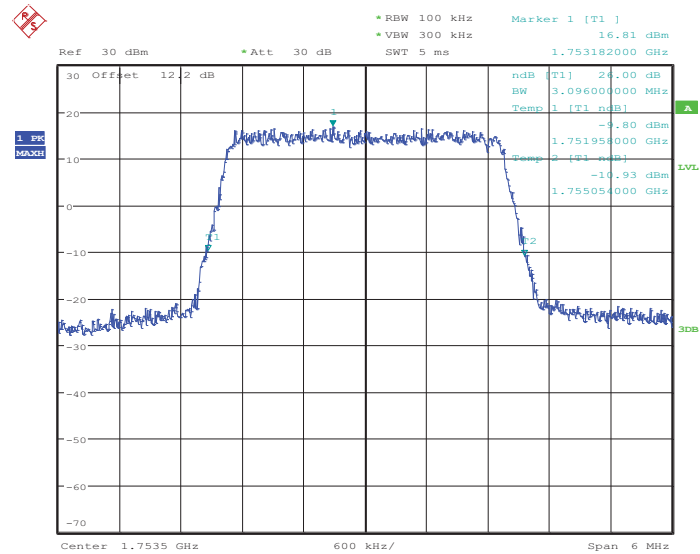
Date: 14.FEB.2014 10:35:44

## 99% Occupied Bandwidth Plot on Channel 20385



Date: 14.FEB.2014 10:38:00

## 26dB Bandwidth Plot on Channel 20385

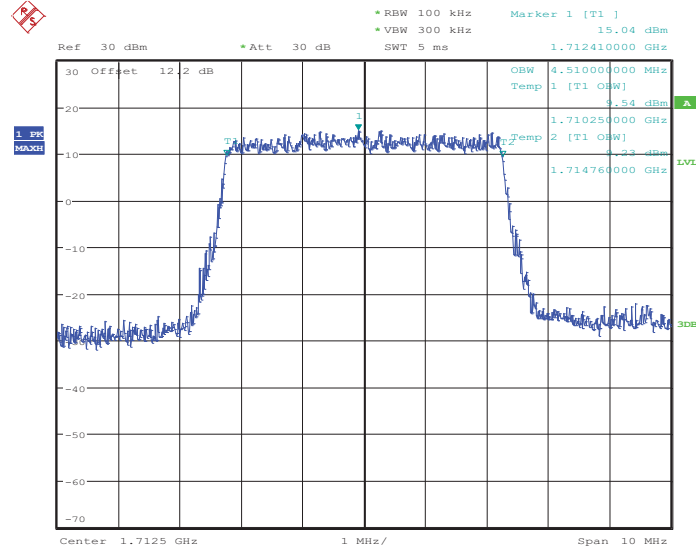


Date: 14.FEB.2014 10:38:27



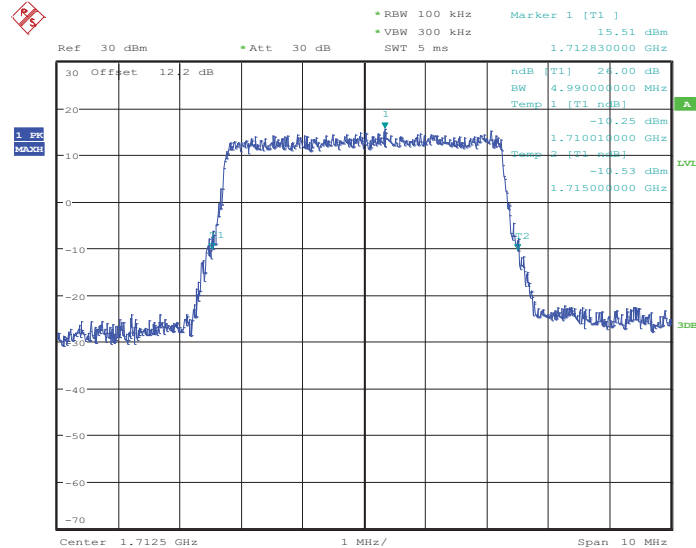
|        |            |             |             |
|--------|------------|-------------|-------------|
| Band : | LTE Band 4 | BW / Mod. : | 5MHz / QPSK |
|--------|------------|-------------|-------------|

99% Occupied Bandwidth Plot on Channel 19975



Date: 14.FEB.2014 10:43:27

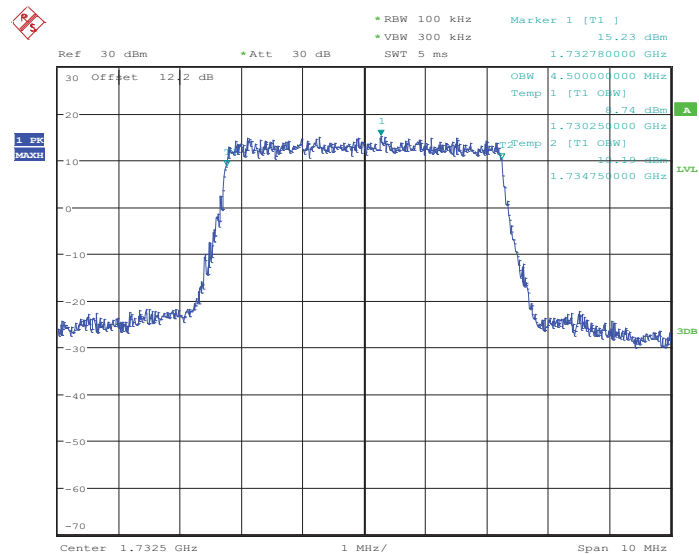
26dB Bandwidth Plot on Channel 19975



Date: 14.FEB.2014 10:43:53

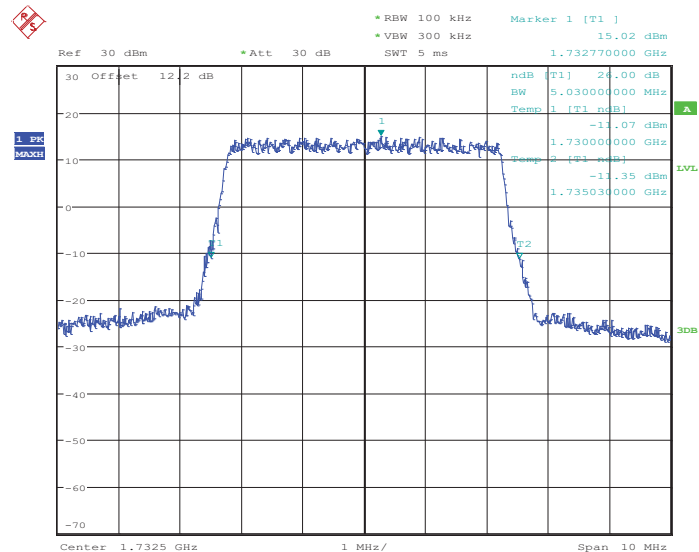


### 99% Occupied Bandwidth Plot on Channel 20175



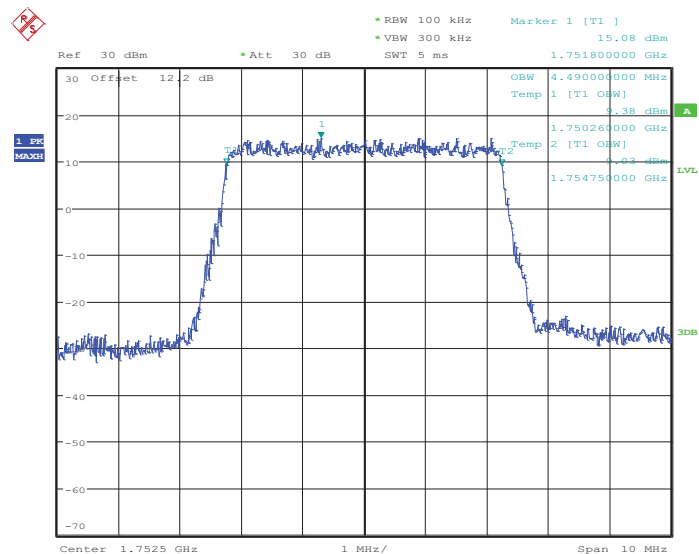
Date: 14.FEB.2014 10:49:02

### 26dB Bandwidth Plot on Channel 20175



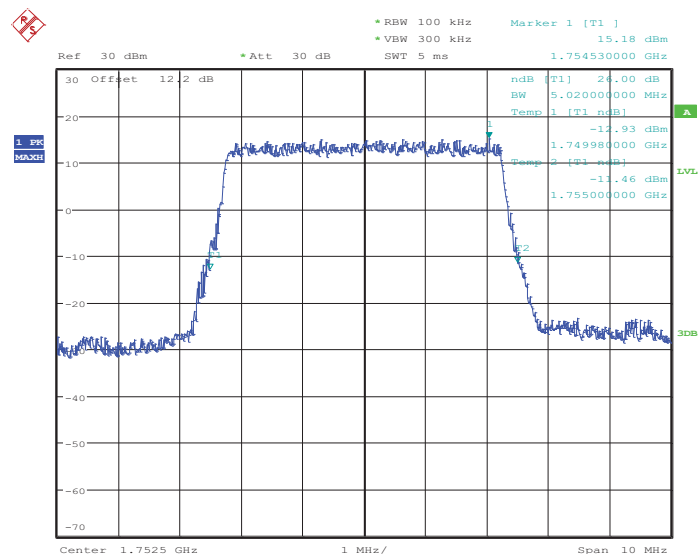
Date: 14.FEB.2014 10:49:27

## 99% Occupied Bandwidth Plot on Channel 20375



Date: 14.FEB.2014 10:51:45

## 26dB Bandwidth Plot on Channel 20375

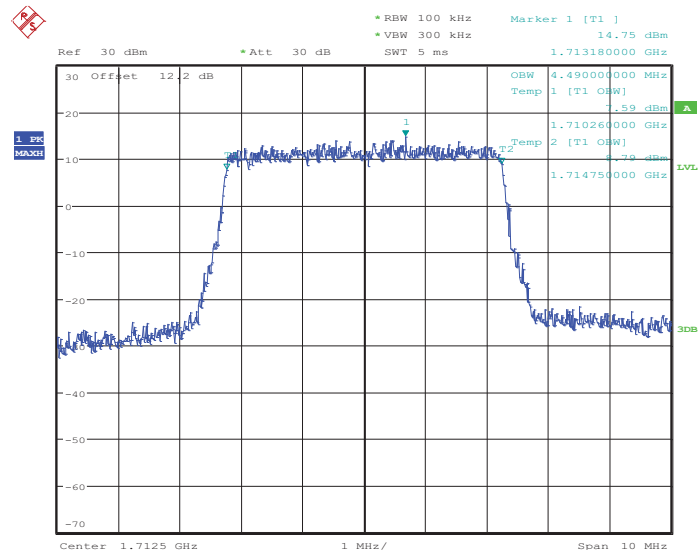


Date: 14.FEB.2014 10:52:11



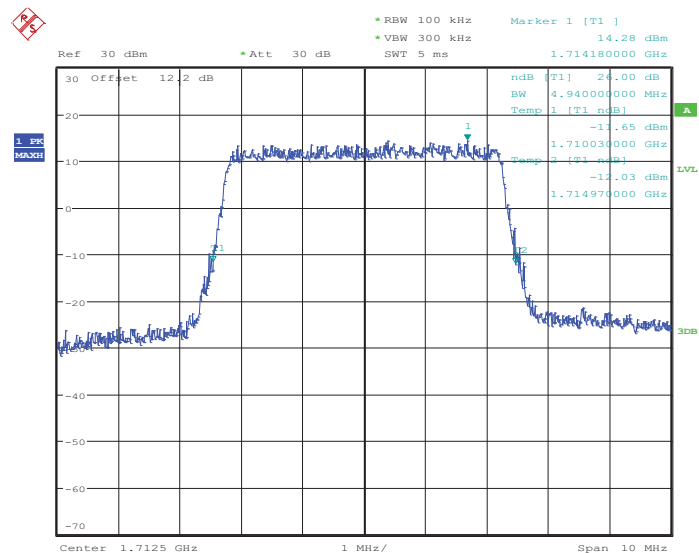
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 4 | BW / Mod. : | 5MHz / 16QAM |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 19975



Date: 14.FEB.2014 10:43:39

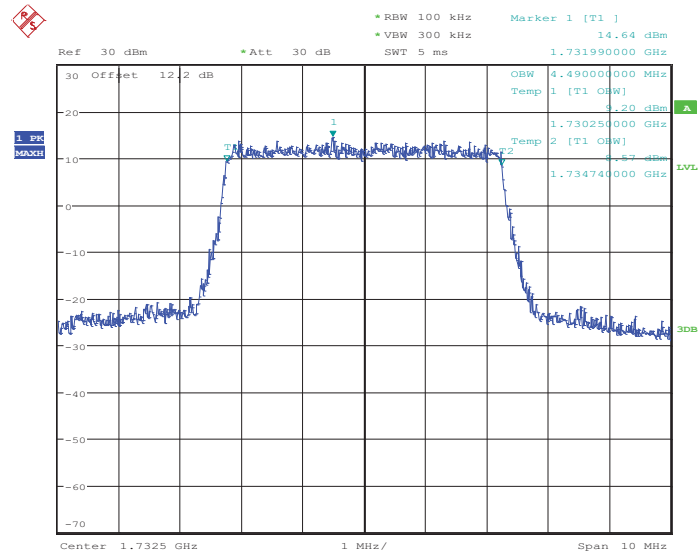
26dB Bandwidth Plot on Channel 19975



Date: 14.FEB.2014 10:44:06

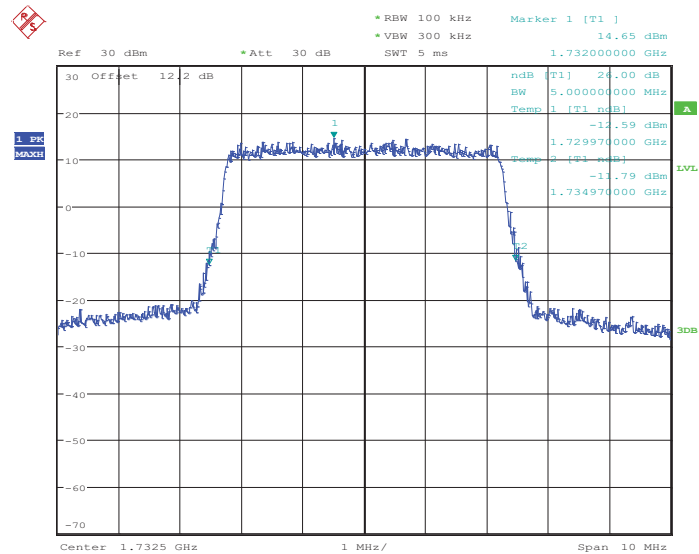


### 99% Occupied Bandwidth Plot on Channel 20175



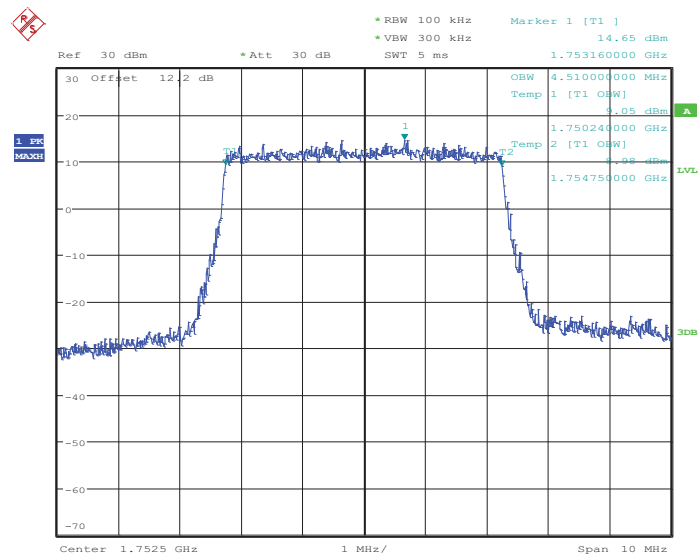
Date: 14.FEB.2014 10:49:14

### 26dB Bandwidth Plot on Channel 20175



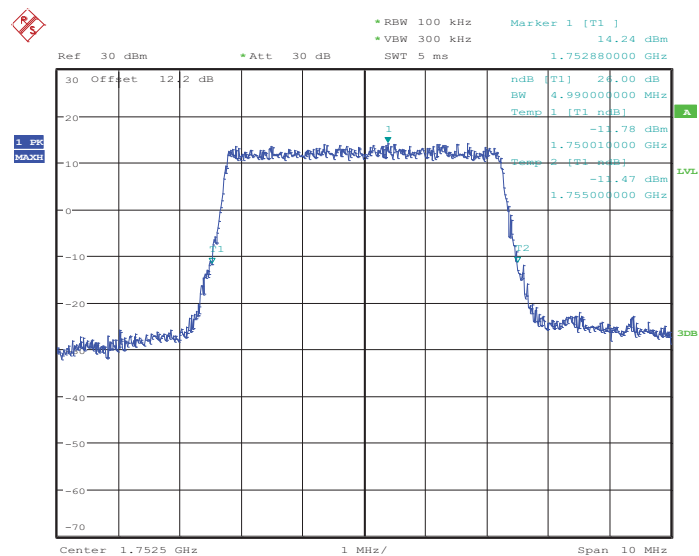
Date: 14.FEB.2014 10:49:41

### 99% Occupied Bandwidth Plot on Channel 20375



Date: 14.FEB.2014 10:51:57

### 26dB Bandwidth Plot on Channel 20375

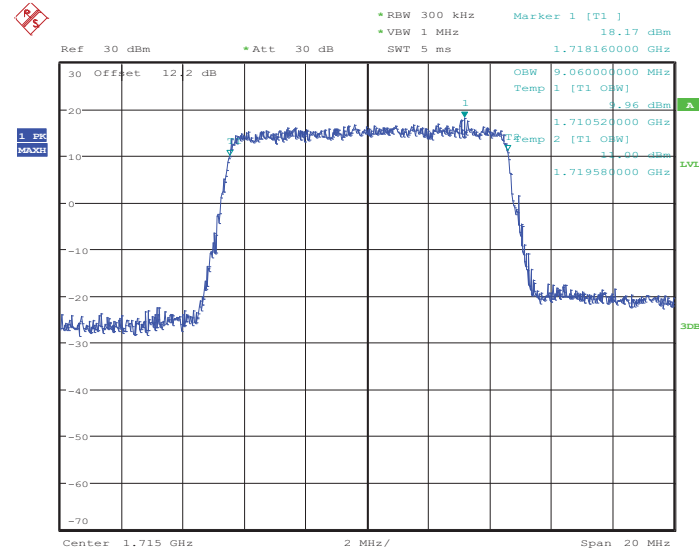


Date: 14.FEB.2014 10:52:24



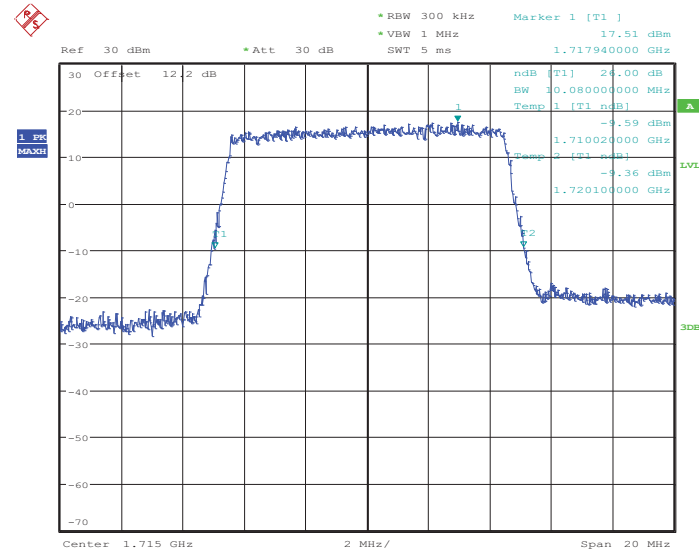
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 4 | BW / Mod. : | 10MHz / QPSK |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 20000



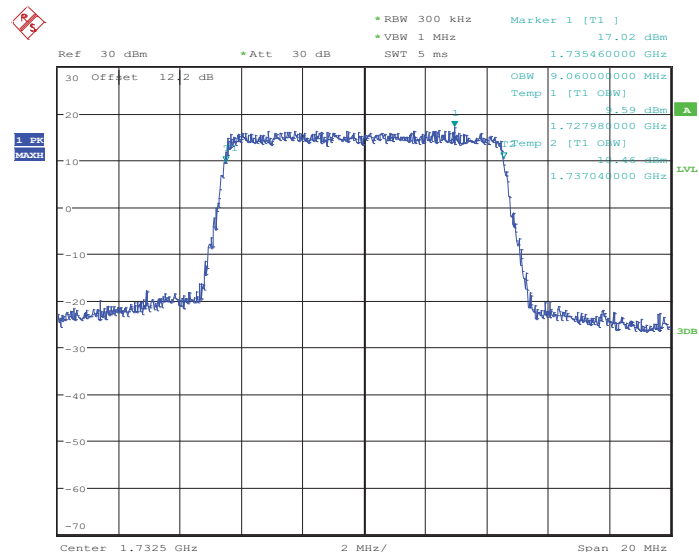
Date: 14.FEB.2014 10:57:25

26dB Bandwidth Plot on Channel 20000



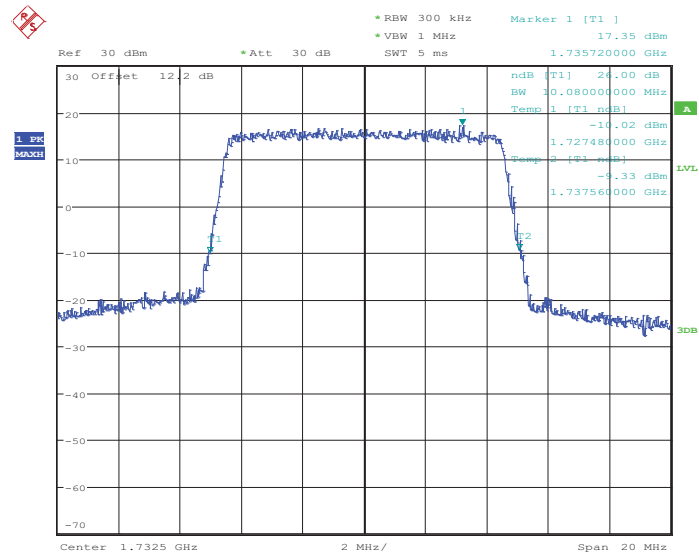
Date: 14.FEB.2014 10:57:50

### 99% Occupied Bandwidth Plot on Channel 20175



Date: 14.FEB.2014 11:02:59

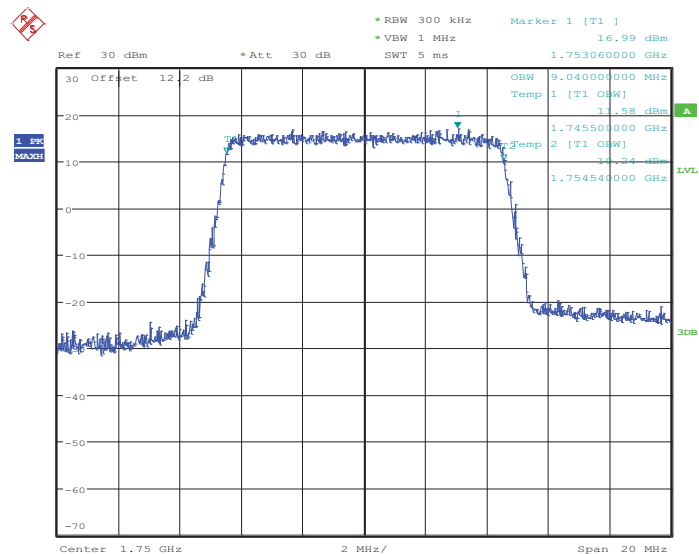
### 26dB Bandwidth Plot on Channel 20175



Date: 14.FEB.2014 11:03:25

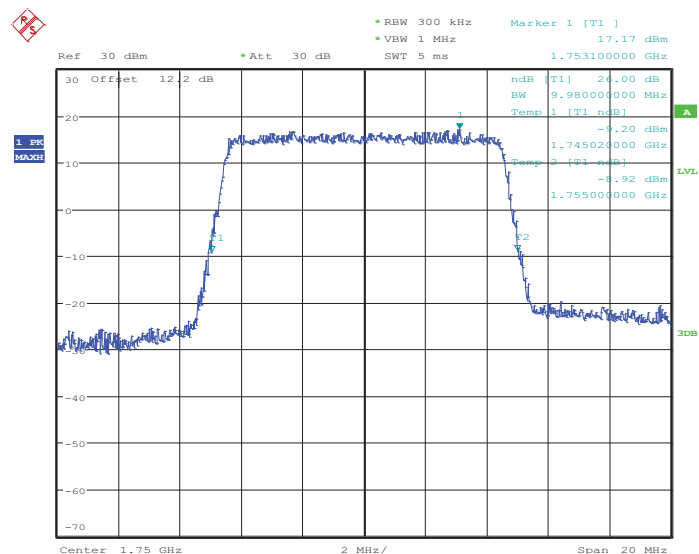


### 99% Occupied Bandwidth Plot on Channel 20350



Date: 14.FEB.2014 11:05:42

### 26dB Bandwidth Plot on Channel 20350

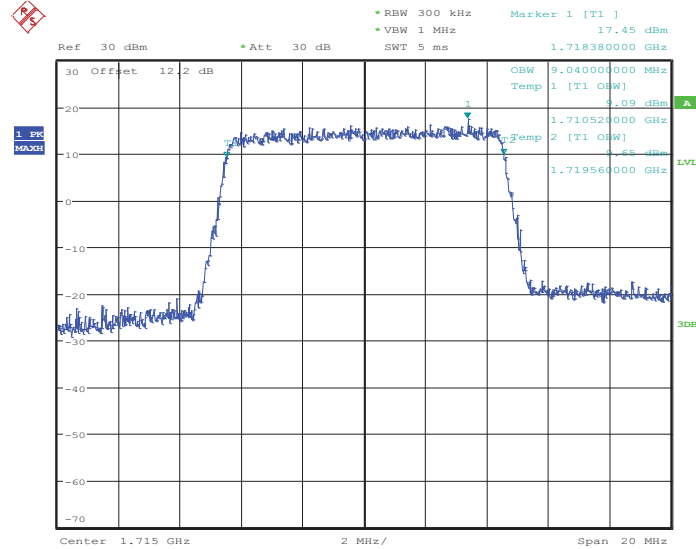


Date: 14.FEB.2014 11:06:07



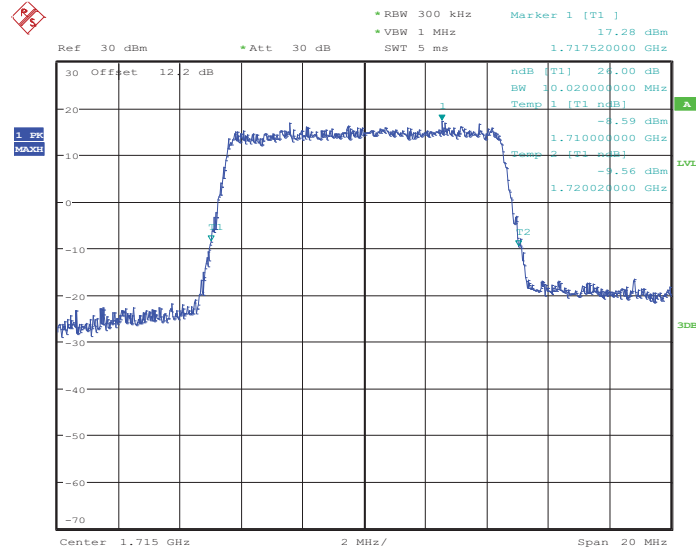
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 4 | BW / Mod. : | 10MHz / 16QAM |
|--------|------------|-------------|---------------|

99% Occupied Bandwidth Plot on Channel 20000

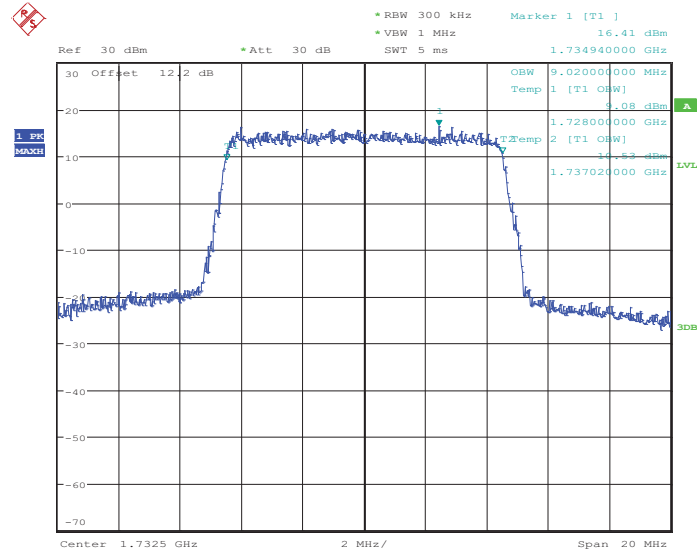


Date: 14.FEB.2014 10:57:36

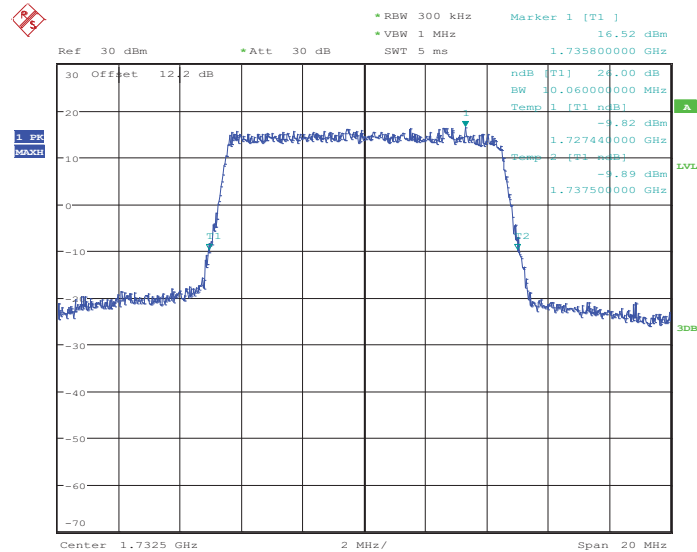
26dB Bandwidth Plot on Channel 20000



Date: 14.FEB.2014 10:58:03

**99% Occupied Bandwidth Plot on Channel 20175**


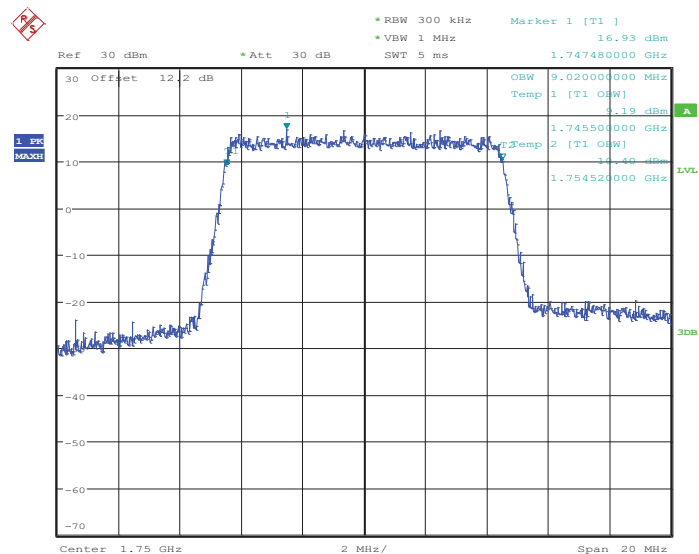
Date: 14.FEB.2014 11:03:11

**26dB Bandwidth Plot on Channel 20175**


Date: 14.FEB.2014 11:03:38

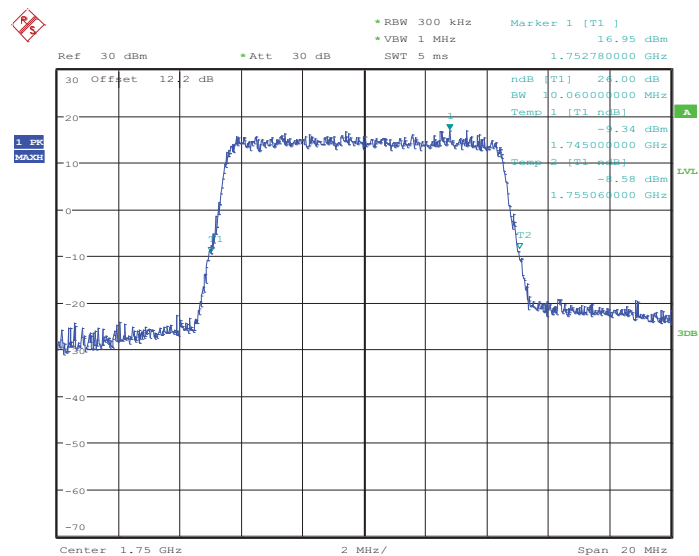


### 99% Occupied Bandwidth Plot on Channel 20350



Date: 14.FEB.2014 11:05:54

### 26dB Bandwidth Plot on Channel 20350

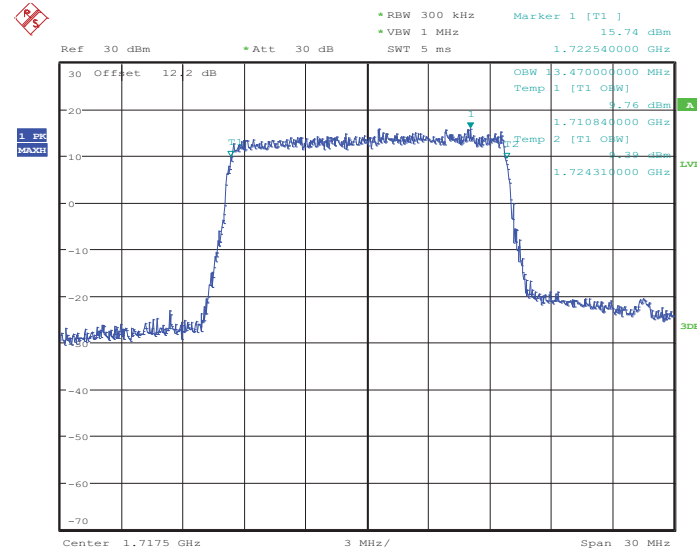


Date: 14.FEB.2014 11:06:21



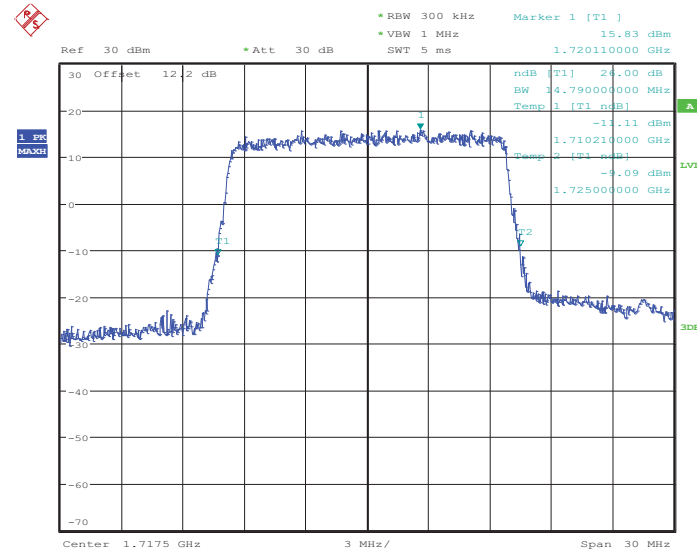
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 4 | BW / Mod. : | 15MHz / QPSK |
|--------|------------|-------------|--------------|

### 99% Occupied Bandwidth Plot on Channel 20025



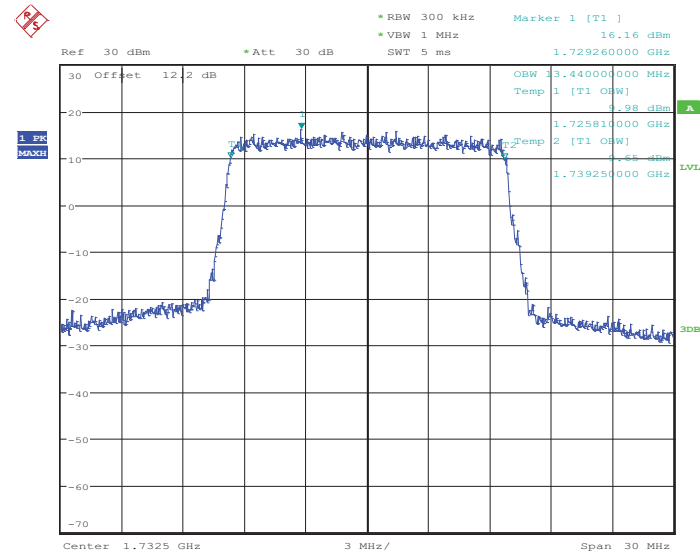
Date: 14.FEB.2014 11:11:22

### 26dB Bandwidth Plot on Channel 20025



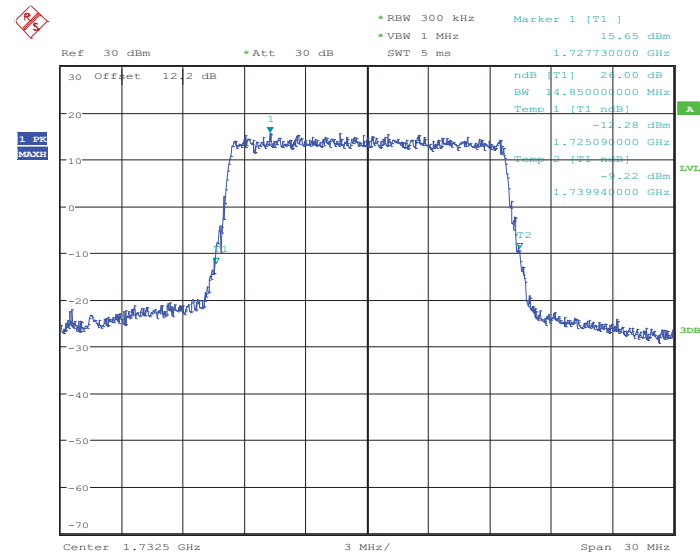
Date: 14.FEB.2014 11:11:47

### 99% Occupied Bandwidth Plot on Channel 20175



Date: 14.FEB.2014 11:16:56

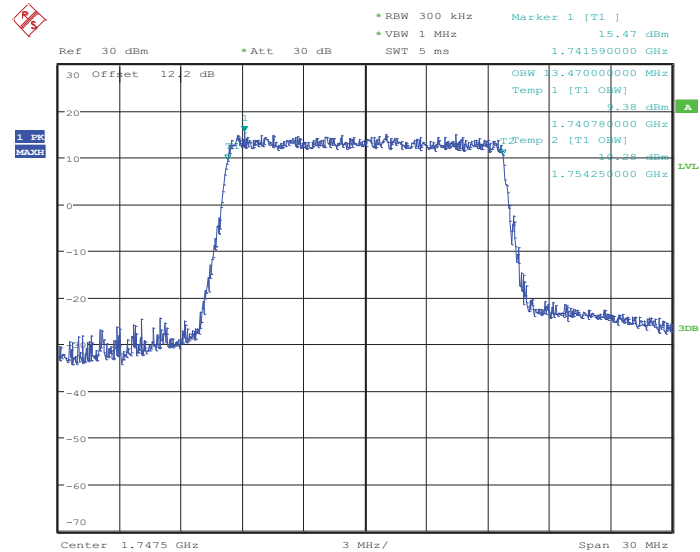
### 26dB Bandwidth Plot on Channel 20175



Date: 14.FEB.2014 11:17:21

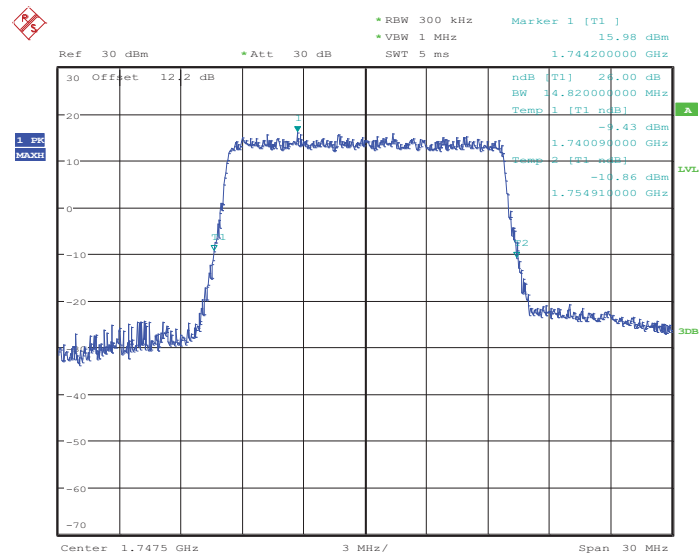


### 99% Occupied Bandwidth Plot on Channel 20325



Date: 14.FEB.2014 11:19:39

### 26dB Bandwidth Plot on Channel 20325

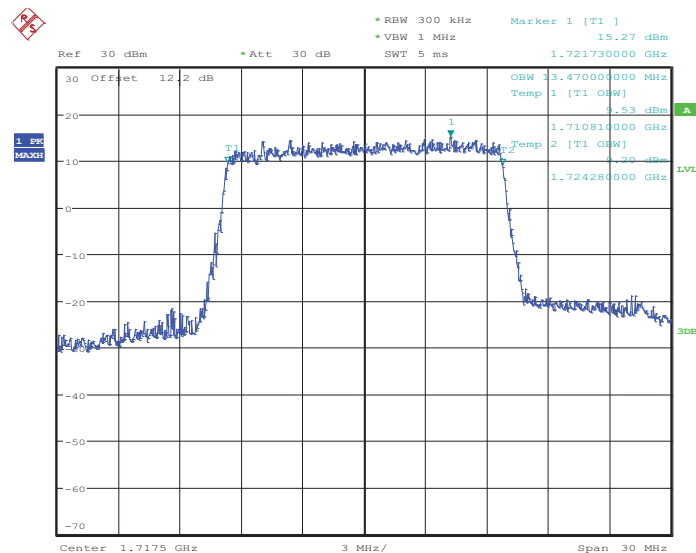


Date: 14.FEB.2014 11:20:04



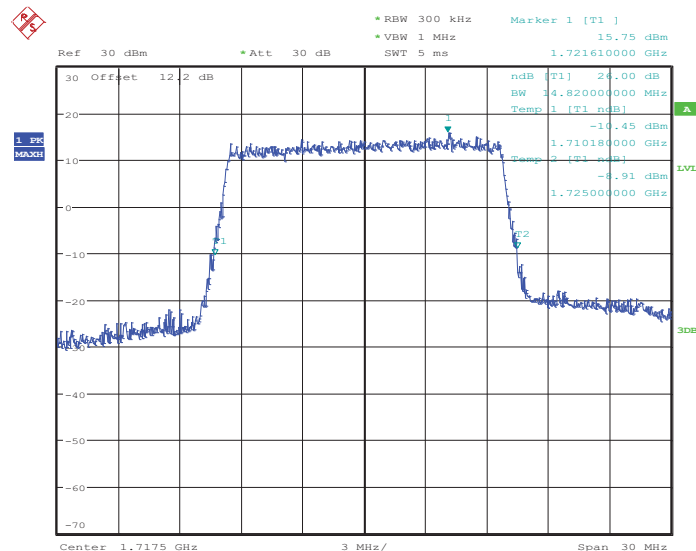
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 4 | BW / Mod. : | 15MHz / 16QAM |
|--------|------------|-------------|---------------|

### 99% Occupied Bandwidth Plot on Channel 20025



Date: 14.FEB.2014 11:11:33

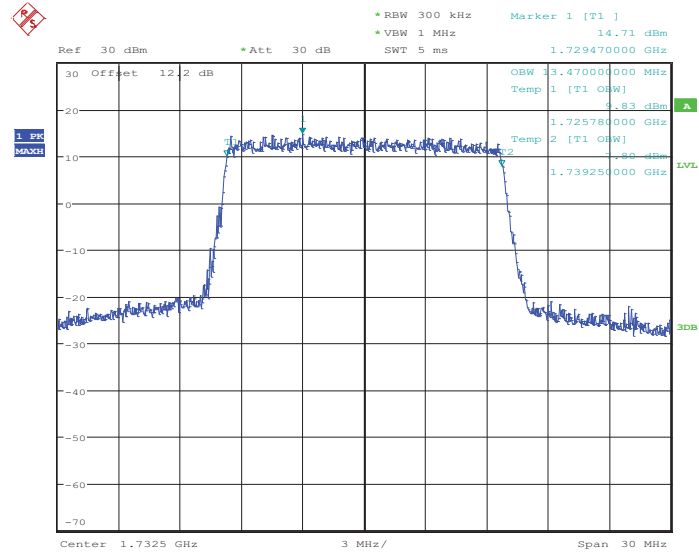
### 26dB Bandwidth Plot on Channel 20025



Date: 14.FEB.2014 11:12:00

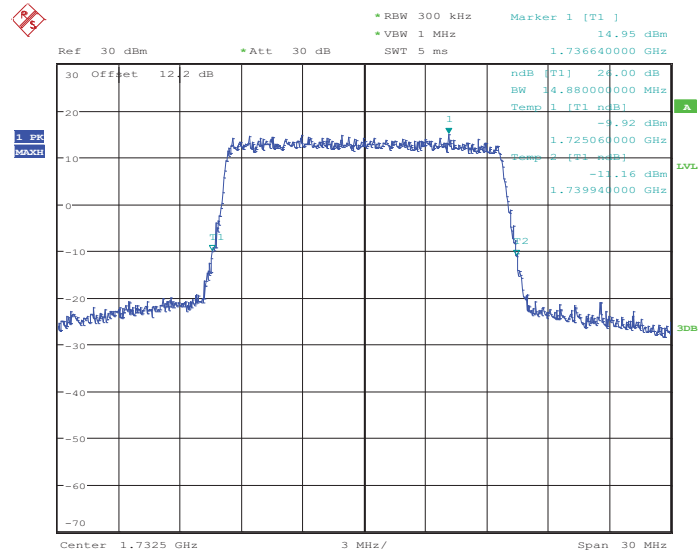


### 99% Occupied Bandwidth Plot on Channel 20175



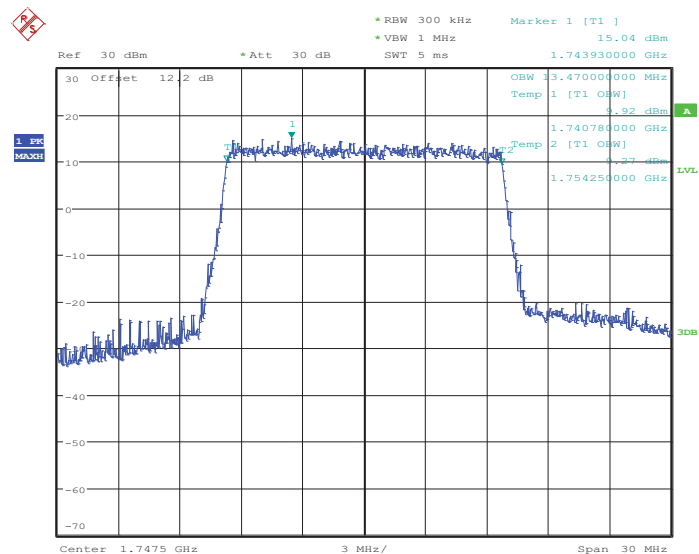
Date: 14.FEB.2014 11:17:08

### 26dB Bandwidth Plot on Channel 20175



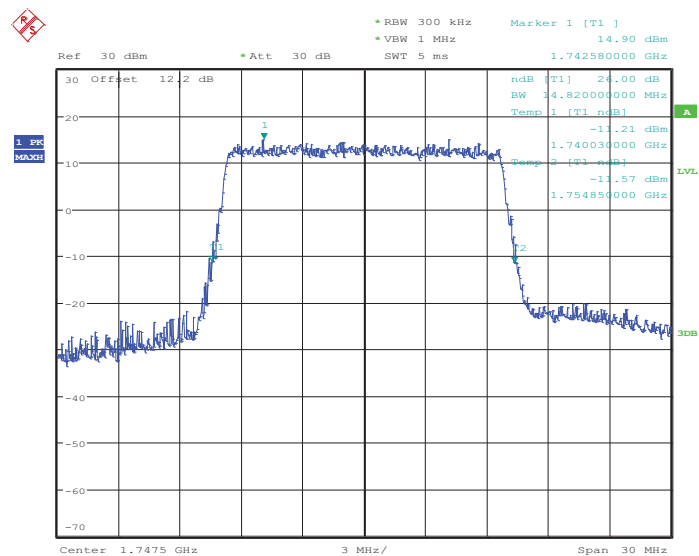
Date: 14.FEB.2014 11:17:35

## 99% Occupied Bandwidth Plot on Channel 20325



Date: 14.FEB.2014 11:19:51

## 26dB Bandwidth Plot on Channel 20325

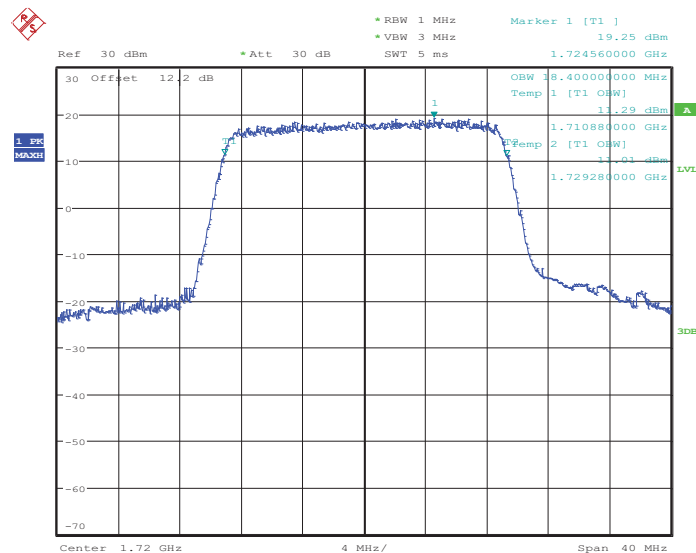


Date: 14.FEB.2014 11:20:19



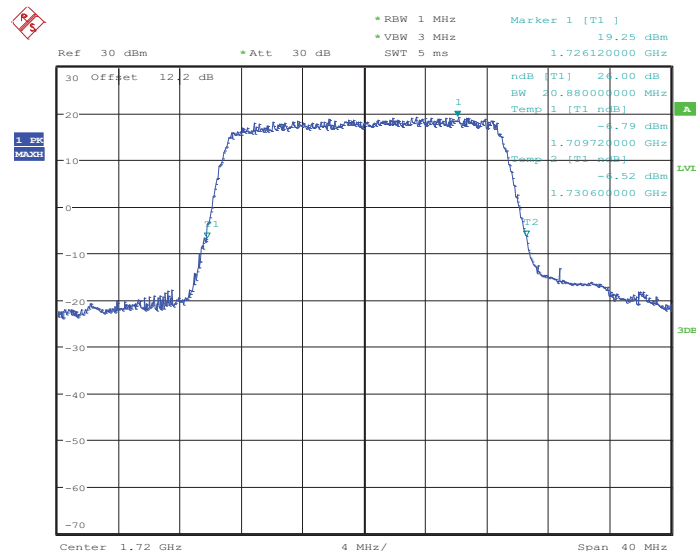
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 4 | BW / Mod. : | 20MHz / QPSK |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 20050



Date: 14.FEB.2014 11:25:20

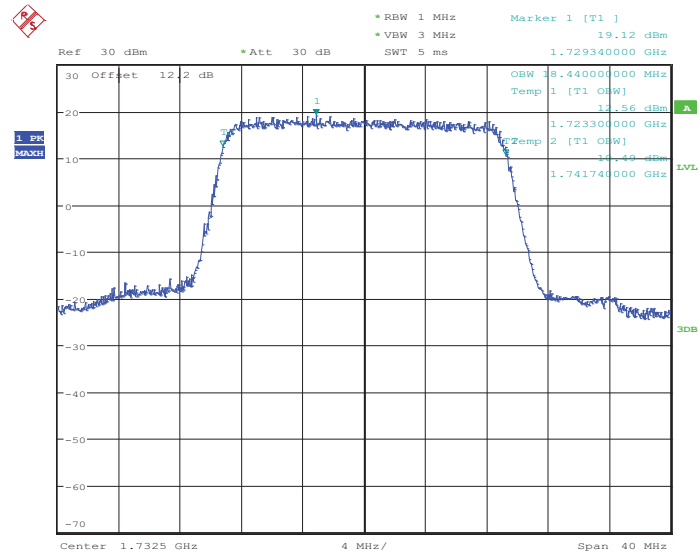
26dB Bandwidth Plot on Channel 20050



Date: 14.FEB.2014 11:25:45

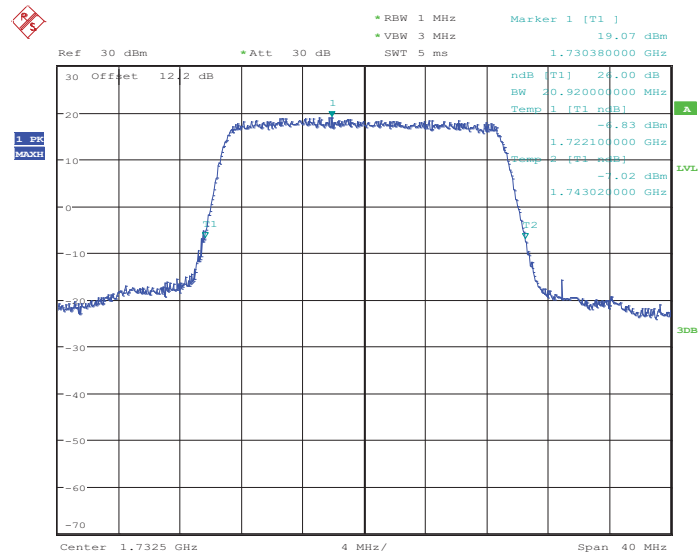


### 99% Occupied Bandwidth Plot on Channel 20175



Date: 14.FEB.2014 11:30:54

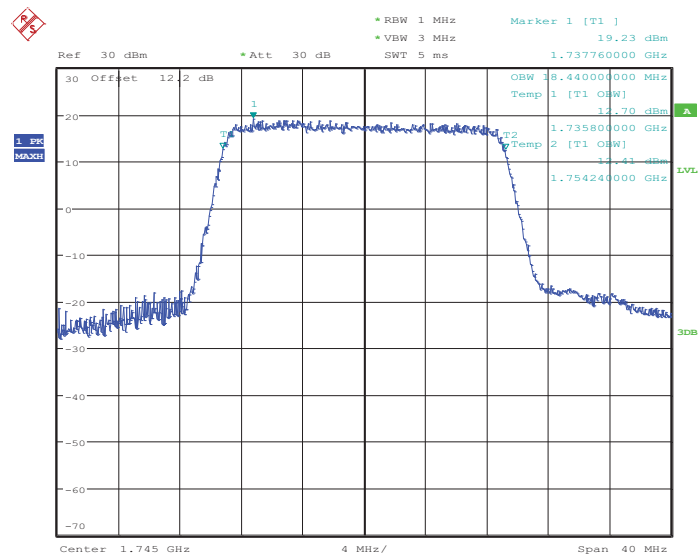
### 26dB Bandwidth Plot on Channel 20175



Date: 14.FEB.2014 11:31:19

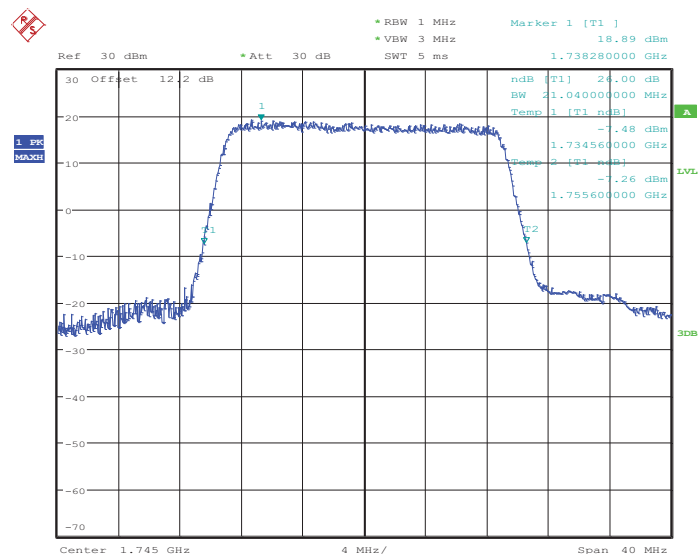


### 99% Occupied Bandwidth Plot on Channel 20300



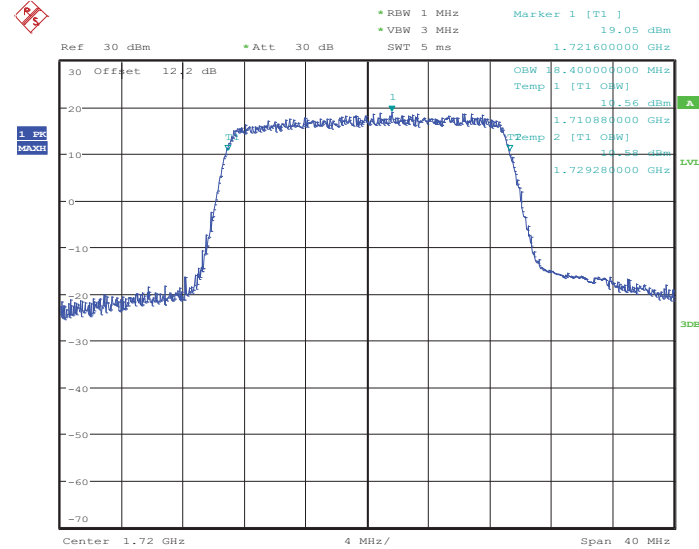
Date: 14.FEB.2014 11:33:37

### 26dB Bandwidth Plot on Channel 20300

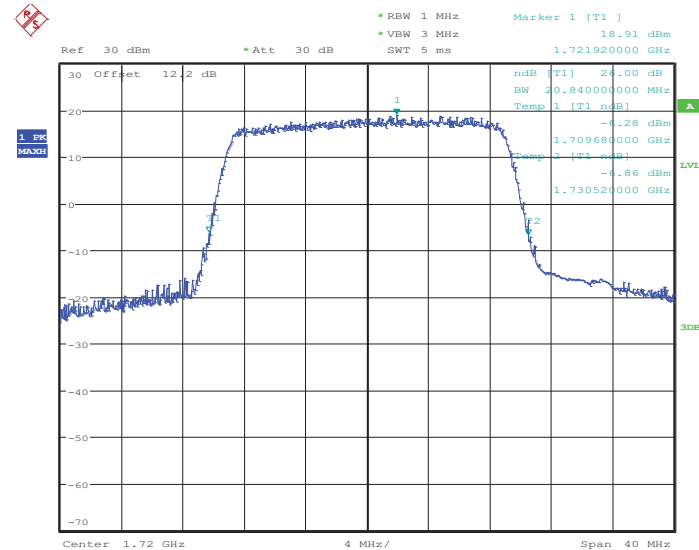


Date: 14.FEB.2014 11:34:02

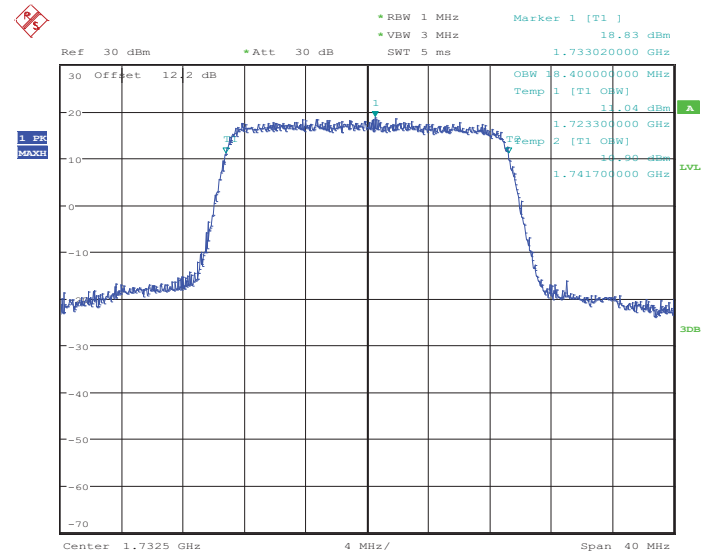
|               |            |                    |               |
|---------------|------------|--------------------|---------------|
| <b>Band :</b> | LTE Band 4 | <b>BW / Mod. :</b> | 20MHz / 16QAM |
|---------------|------------|--------------------|---------------|

**99% Occupied Bandwidth Plot on Channel 20050**


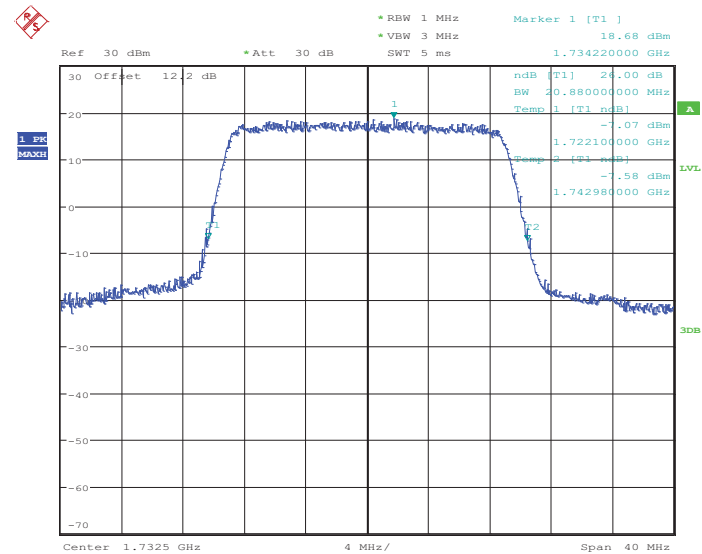
Date: 14.FEB.2014 11:25:31

**26dB Bandwidth Plot on Channel 20050**


Date: 14.FEB.2014 11:25:58

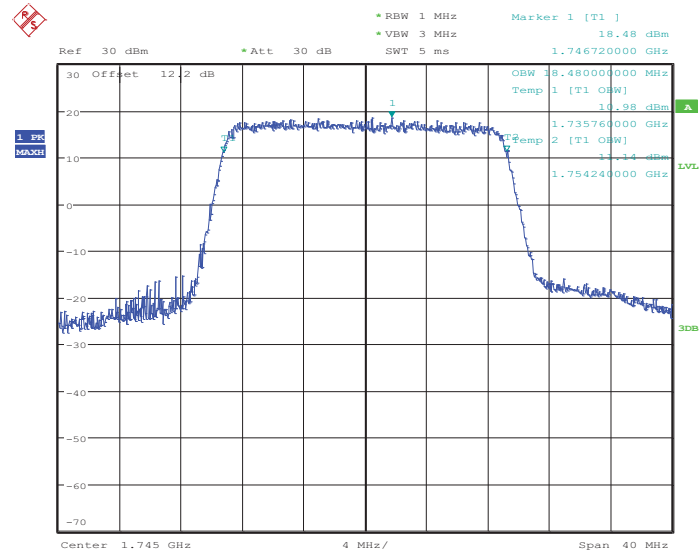
**99% Occupied Bandwidth Plot on Channel 20175**


Date: 14.FEB.2014 11:31:06

**26dB Bandwidth Plot on Channel 20175**


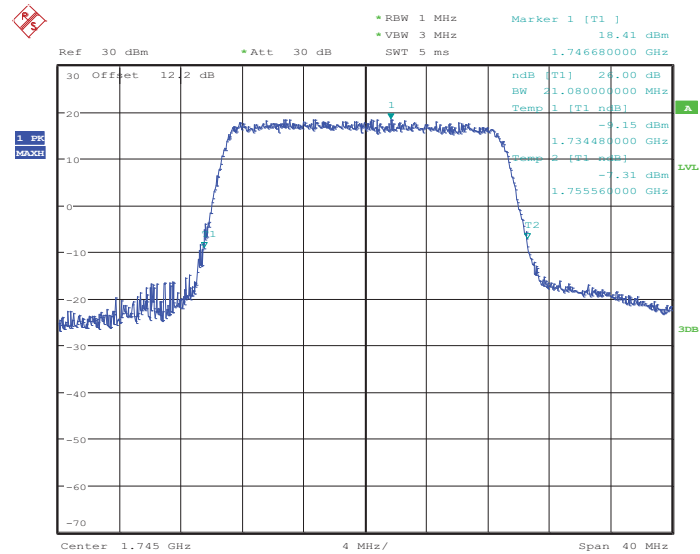
Date: 14.FEB.2014 11:31:33

## 99% Occupied Bandwidth Plot on Channel 20300



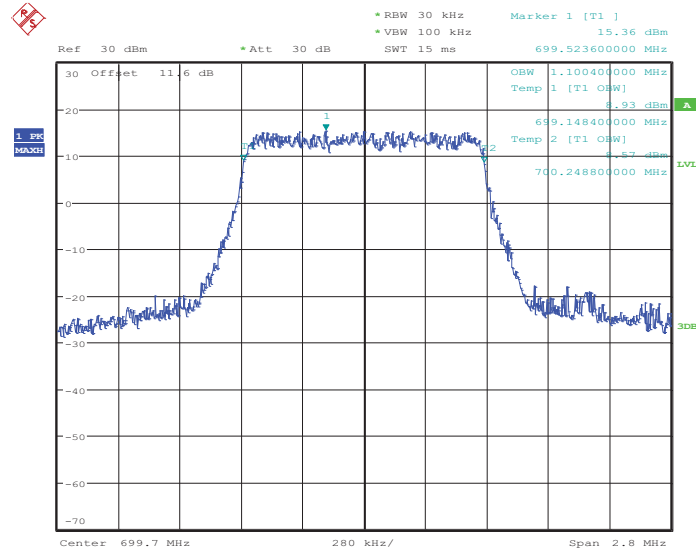
Date: 14.FEB.2014 11:33:49

## 26dB Bandwidth Plot on Channel 20300

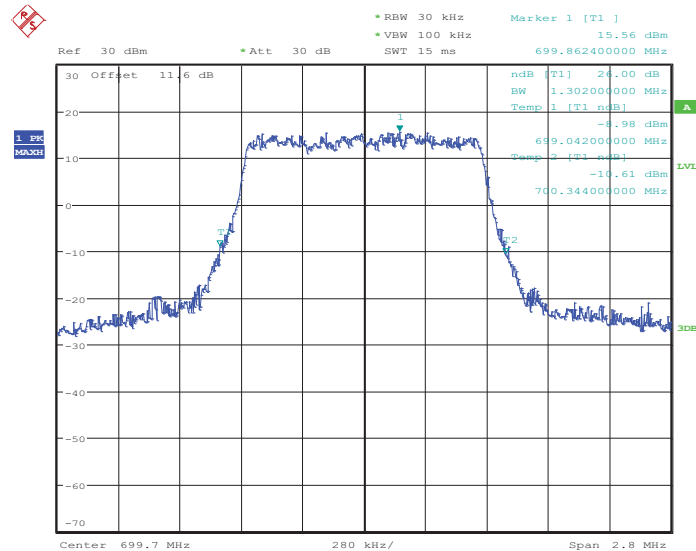


Date: 14.FEB.2014 11:34:16

|               |             |                    |               |
|---------------|-------------|--------------------|---------------|
| <b>Band :</b> | LTE Band 12 | <b>BW / Mod. :</b> | 1.4MHz / QPSK |
|---------------|-------------|--------------------|---------------|

**99% Occupied Bandwidth Plot on Channel 23017**


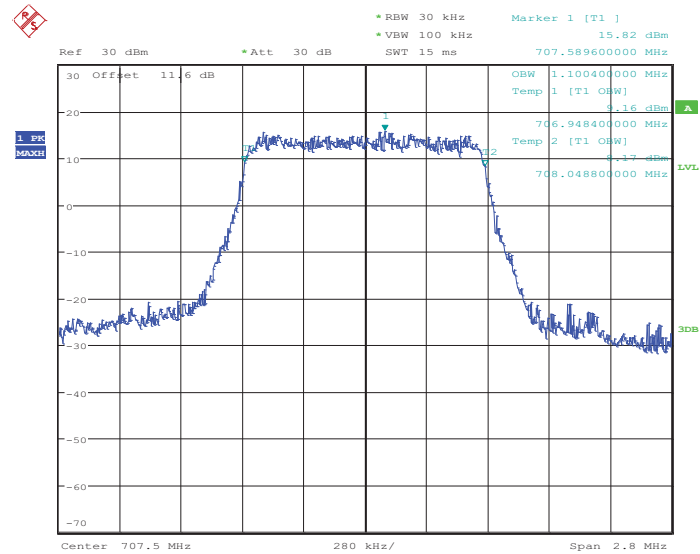
Date: 14.FEB.2014 14:32:18

**26dB Bandwidth Plot on Channel 23017**


Date: 14.FEB.2014 14:32:56

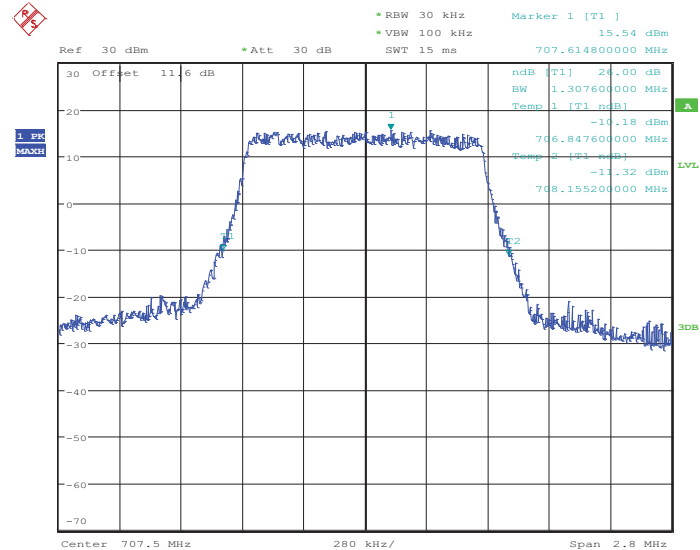


### 99% Occupied Bandwidth Plot on Channel 23095



Date: 14.FEB.2014 14:38:04

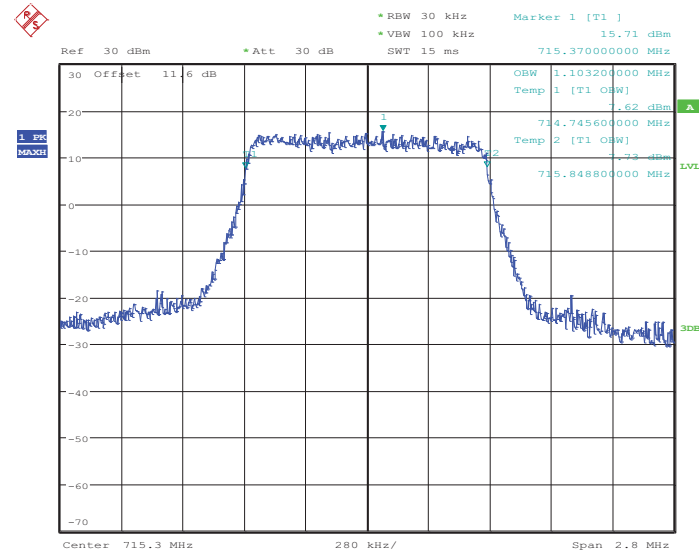
### 26dB Bandwidth Plot on Channel 23095



Date: 14.FEB.2014 14:38:17

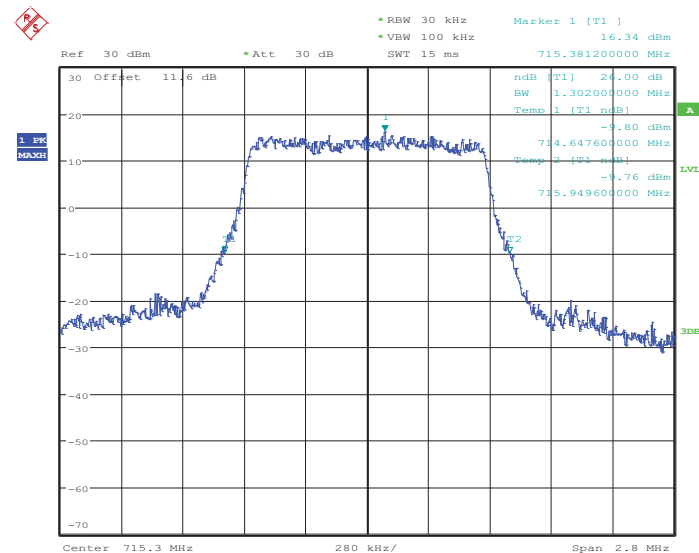


### 99% Occupied Bandwidth Plot on Channel 23173



Date: 14.FEB.2014 14:40:34

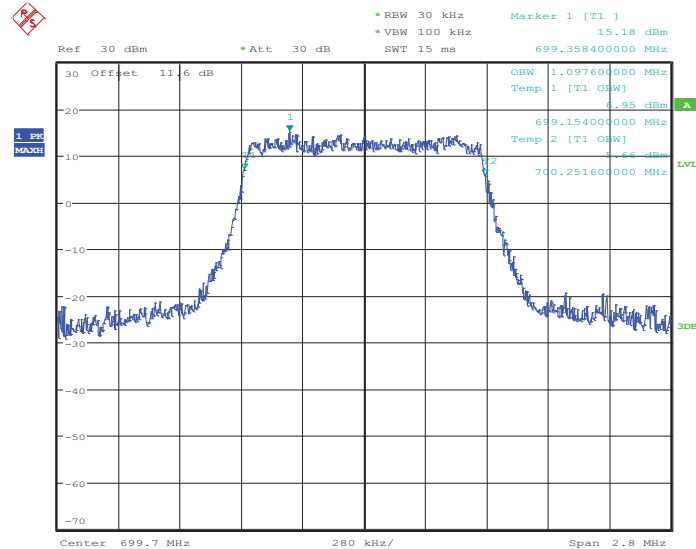
### 26dB Bandwidth Plot on Channel 23173



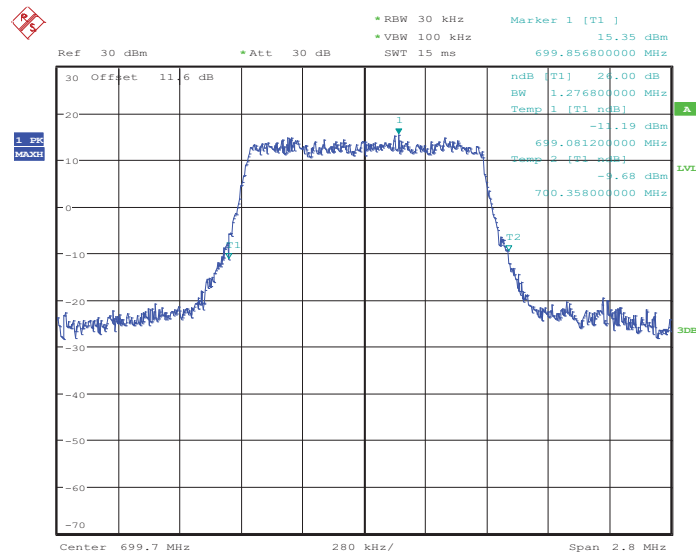
Date: 14.FEB.2014 14:41:13



|               |             |                    |                |
|---------------|-------------|--------------------|----------------|
| <b>Band :</b> | LTE Band 12 | <b>BW / Mod. :</b> | 1.4MHz / 16QAM |
|---------------|-------------|--------------------|----------------|

**99% Occupied Bandwidth Plot on Channel 23017**

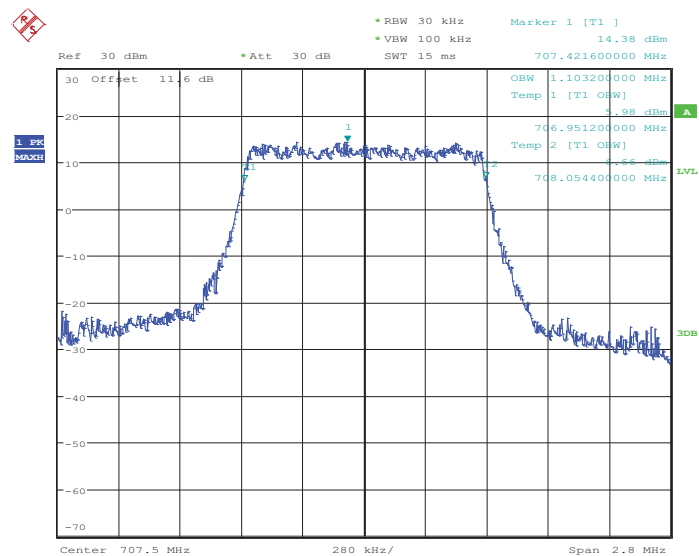
Date: 14.FEB.2014 14:32:29

**26dB Bandwidth Plot on Channel 23017**

Date: 14.FEB.2014 14:32:43

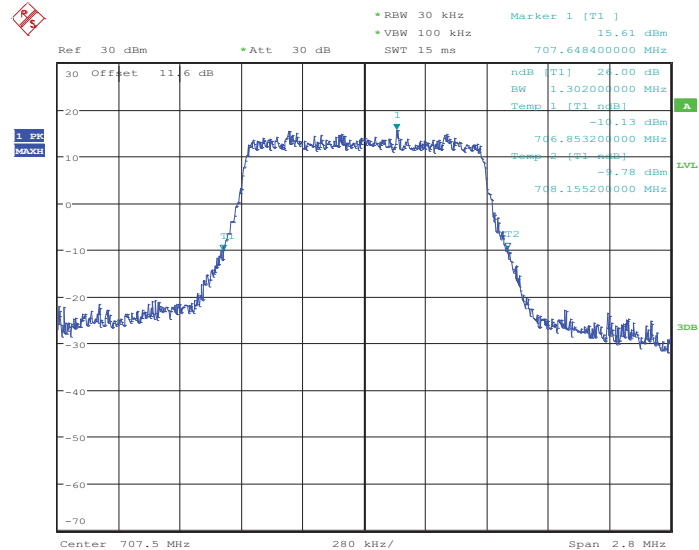


99% Occupied Bandwidth Plot on Channel 23095



Date: 14.FEB.2014 14:37:52

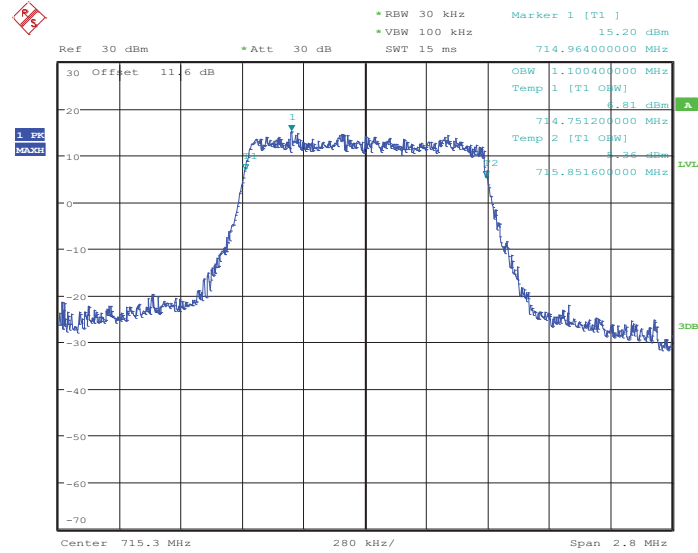
26dB Bandwidth Plot on Channel 23095



Date: 14.FEB.2014 14:38:31

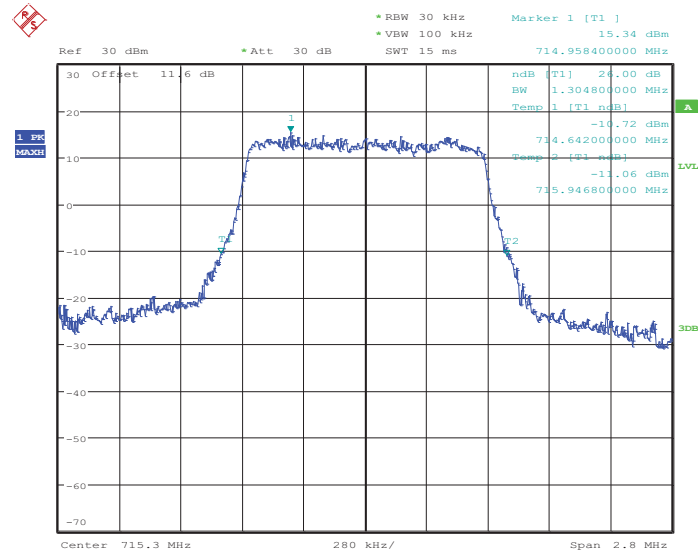


### 99% Occupied Bandwidth Plot on Channel 23173



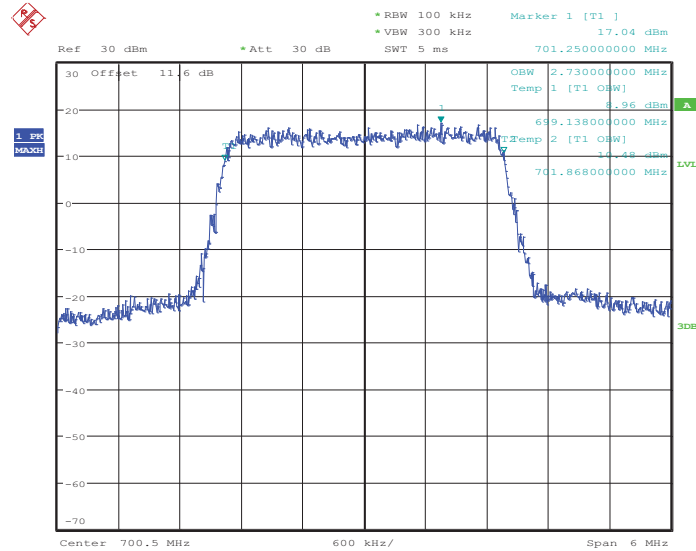
Date: 14.FEB.2014 14:40:46

### 26dB Bandwidth Plot on Channel 23173

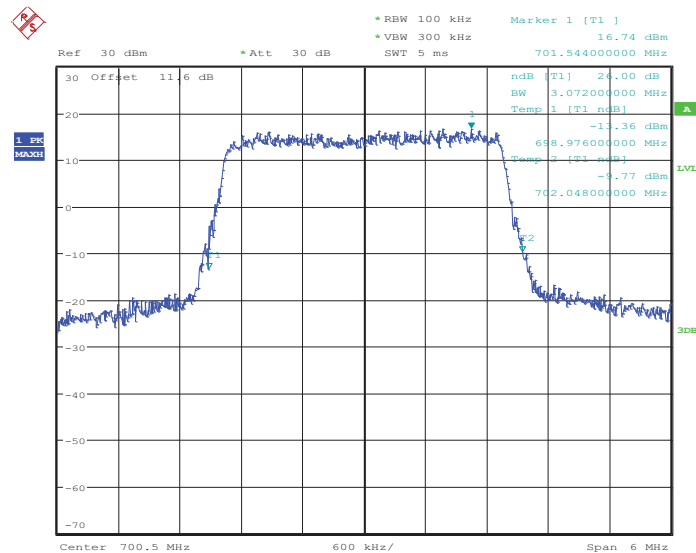


Date: 14.FEB.2014 14:40:59

|               |             |                    |             |
|---------------|-------------|--------------------|-------------|
| <b>Band :</b> | LTE Band 12 | <b>BW / Mod. :</b> | 3MHz / QPSK |
|---------------|-------------|--------------------|-------------|

**99% Occupied Bandwidth Plot on Channel 23025**


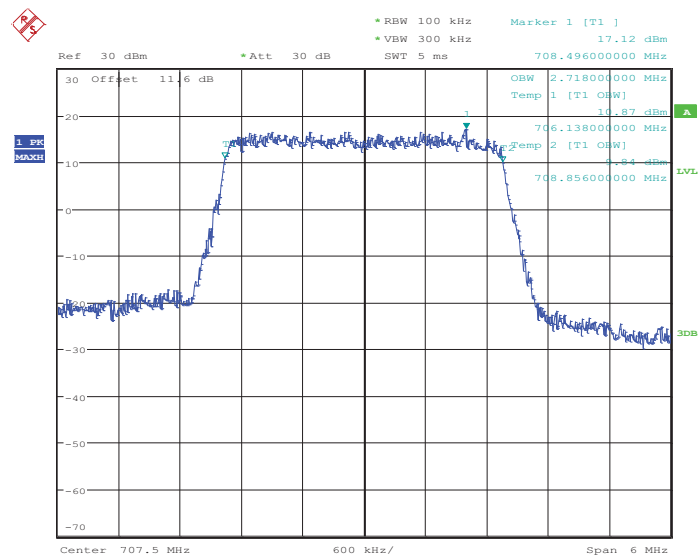
Date: 14.FEB.2014 14:46:12

**26dB Bandwidth Plot on Channel 23025**


Date: 14.FEB.2014 14:46:51

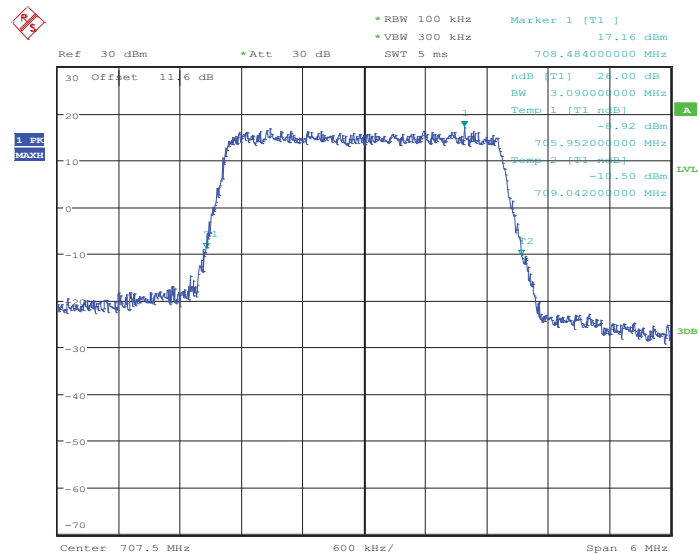


### 99% Occupied Bandwidth Plot on Channel 23095



Date: 14.FEB.2014 14:52:11

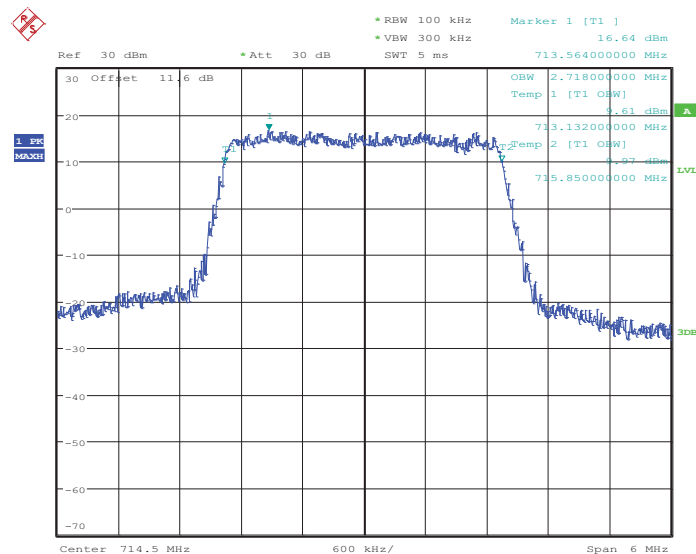
### 26dB Bandwidth Plot on Channel 23095



Date: 14.FEB.2014 14:52:24

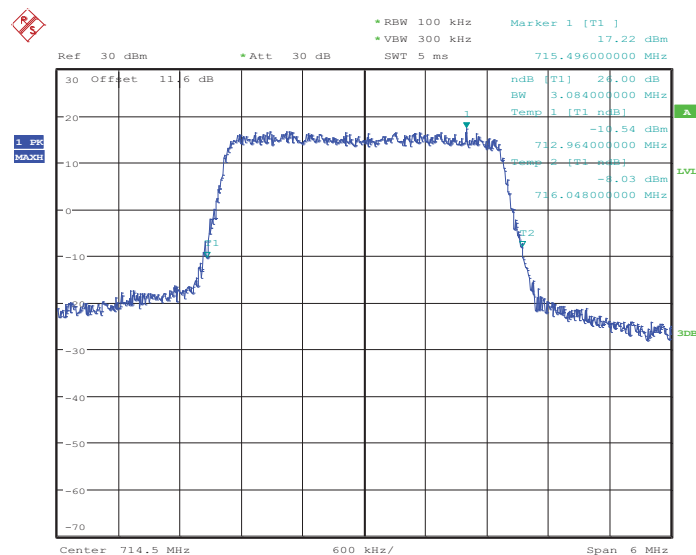


### 99% Occupied Bandwidth Plot on Channel 23165



Date: 14.FEB.2014 14:54:42

### 26dB Bandwidth Plot on Channel 23165

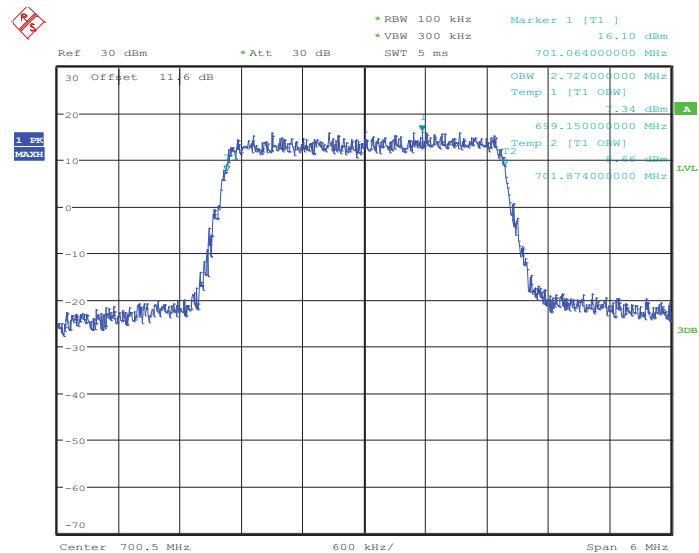


Date: 14.FEB.2014 14:55:21



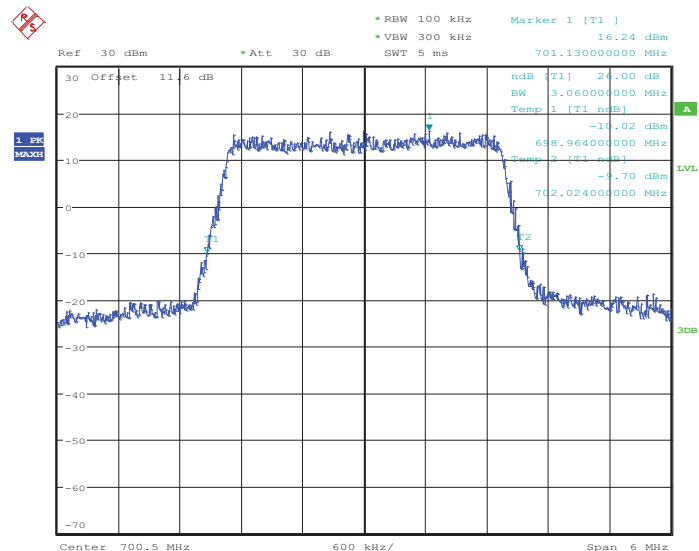
|        |             |             |              |
|--------|-------------|-------------|--------------|
| Band : | LTE Band 12 | BW / Mod. : | 3MHz / 16QAM |
|--------|-------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 23025



Date: 14.FEB.2014 14:46:24

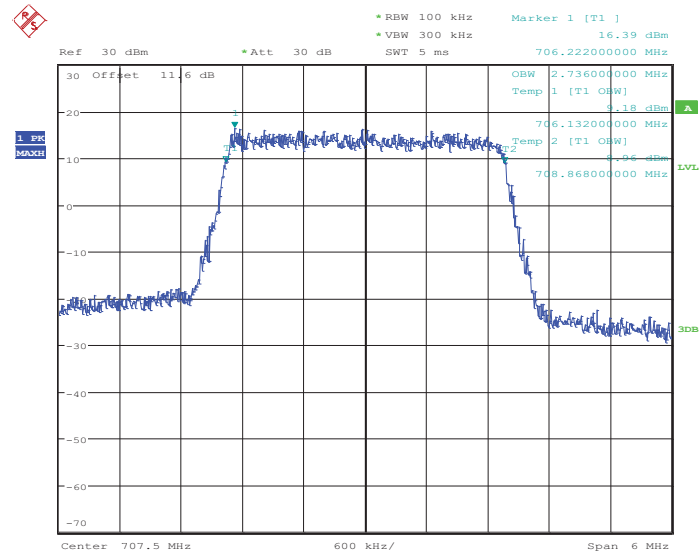
26dB Bandwidth Plot on Channel 23025



Date: 14.FEB.2014 14:46:38

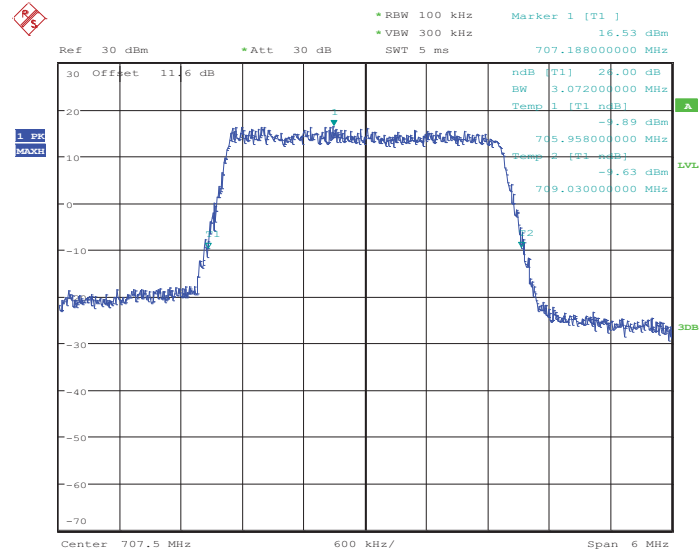


### 99% Occupied Bandwidth Plot on Channel 23095



Date: 14.FEB.2014 14:51:59

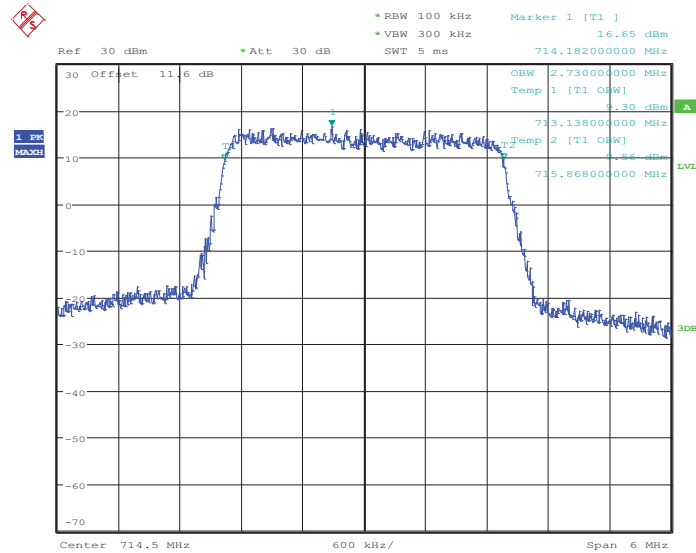
### 26dB Bandwidth Plot on Channel 23095



Date: 14.FEB.2014 14:52:38

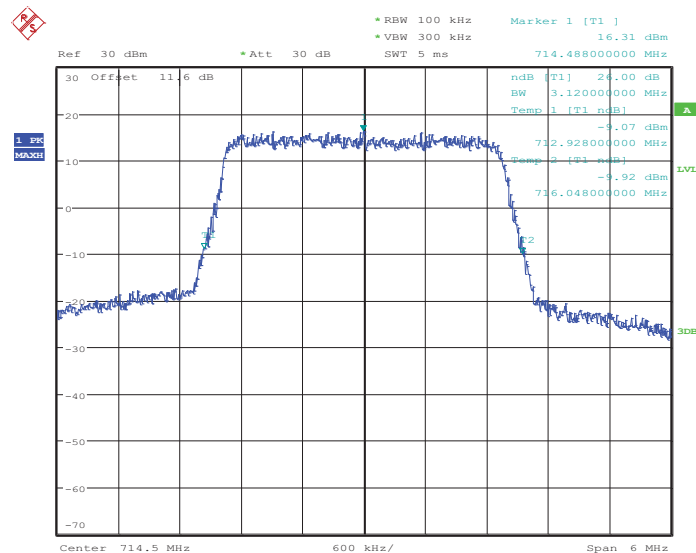


### 99% Occupied Bandwidth Plot on Channel 23165



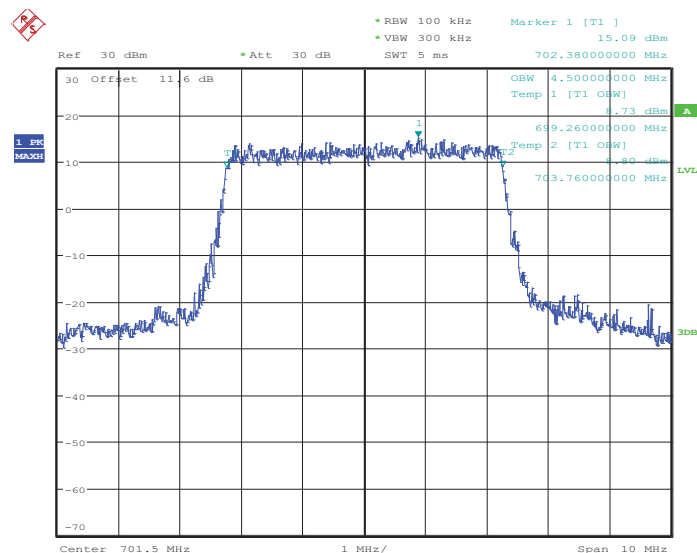
Date: 14.FEB.2014 14:54:54

### 26dB Bandwidth Plot on Channel 23165

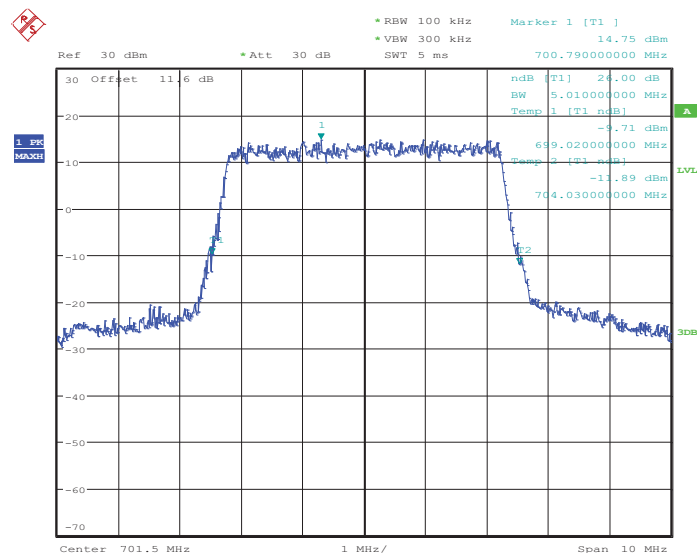


Date: 14.FEB.2014 14:55:07

|               |             |                    |             |
|---------------|-------------|--------------------|-------------|
| <b>Band :</b> | LTE Band 12 | <b>BW / Mod. :</b> | 5MHz / QPSK |
|---------------|-------------|--------------------|-------------|

**99% Occupied Bandwidth Plot on Channel 23035**


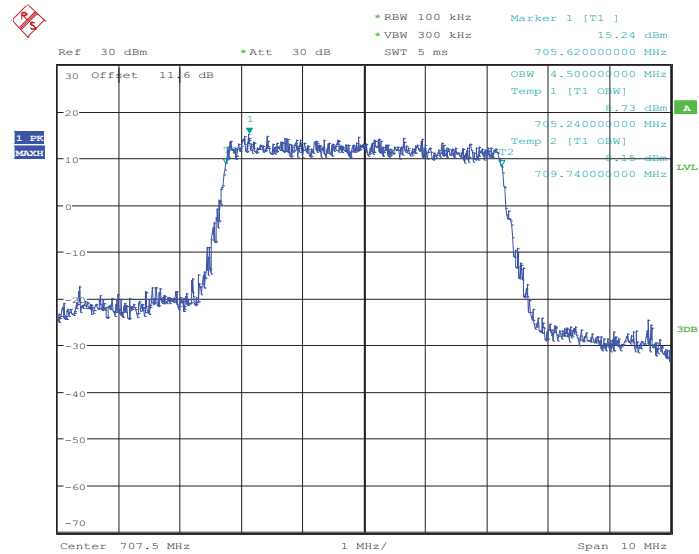
Date: 14.FEB.2014 15:00:24

**26dB Bandwidth Plot on Channel 23035**


Date: 14.FEB.2014 15:01:03

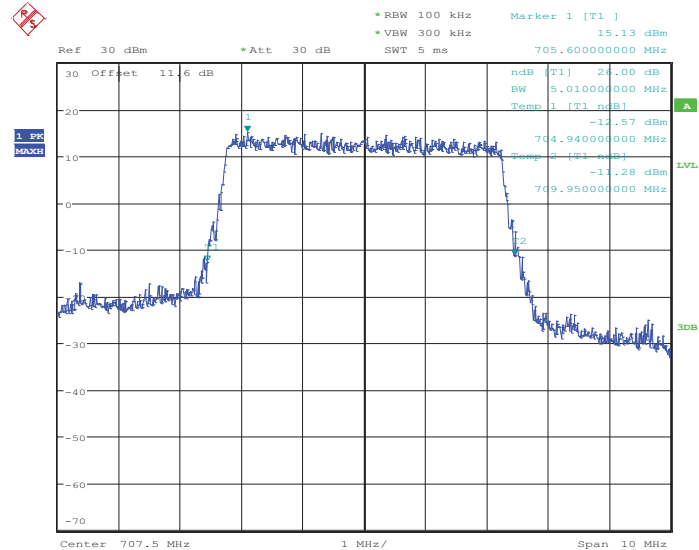


### 99% Occupied Bandwidth Plot on Channel 23095



Date: 14.FEB.2014 15:06:40

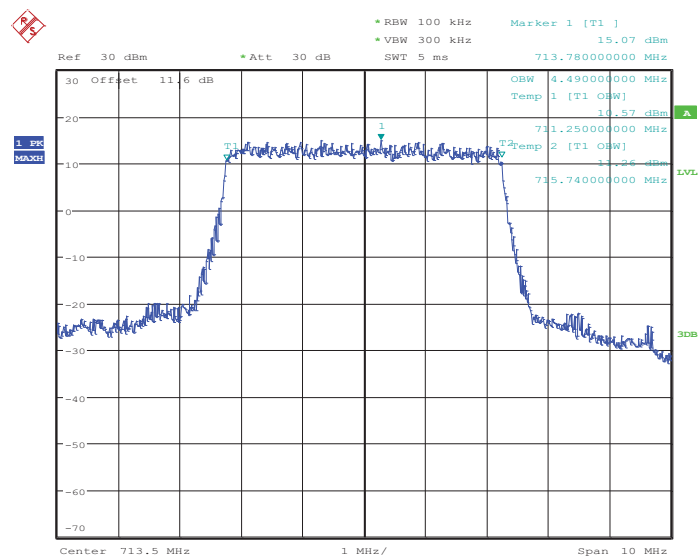
### 26dB Bandwidth Plot on Channel 23095



Date: 14.FEB.2014 15:06:53

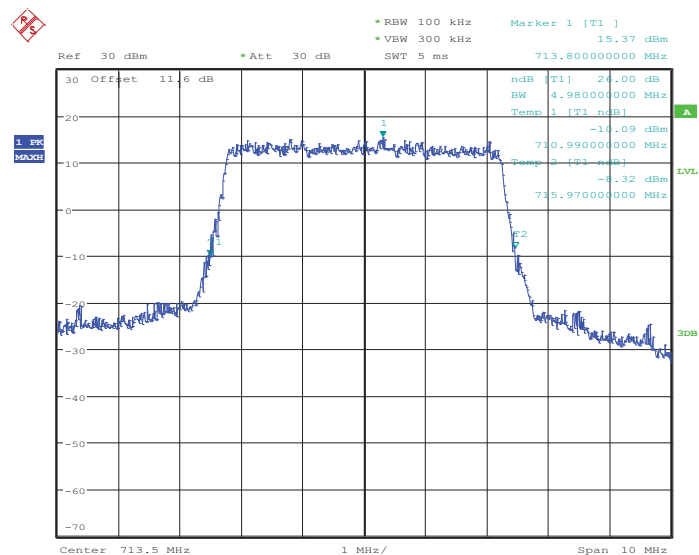


### 99% Occupied Bandwidth Plot on Channel 23155



Date: 14.FEB.2014 15:09:11

### 26dB Bandwidth Plot on Channel 23155

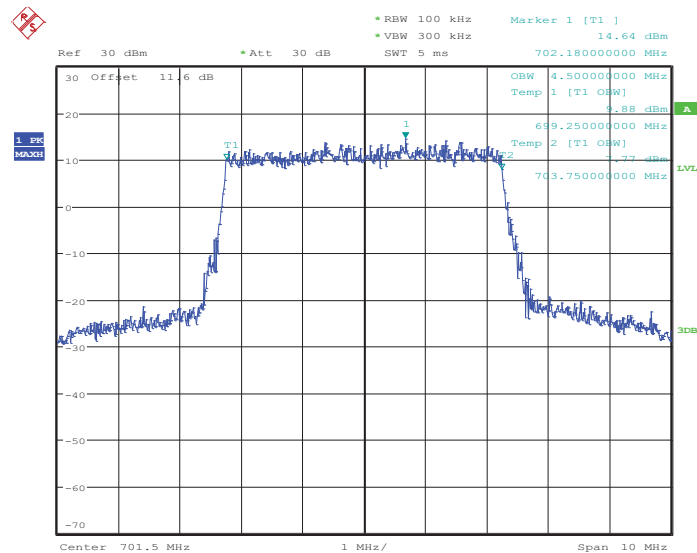


Date: 14.FEB.2014 15:09:50



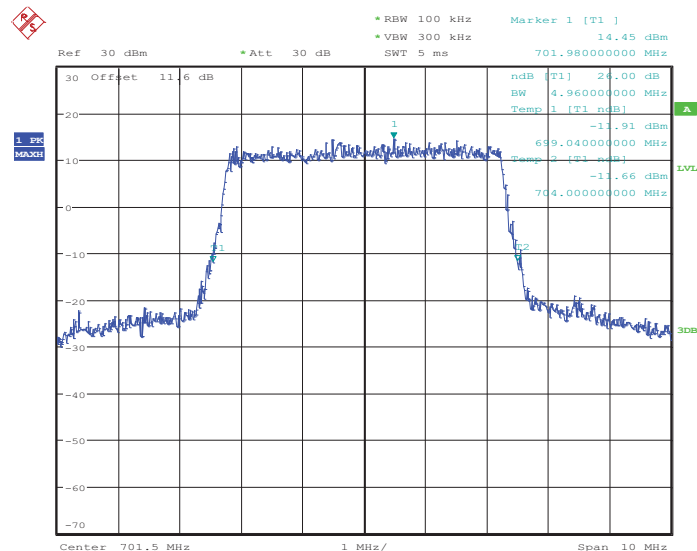
|        |             |             |              |
|--------|-------------|-------------|--------------|
| Band : | LTE Band 12 | BW / Mod. : | 5MHz / 16QAM |
|--------|-------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 23035



Date: 14.FEB.2014 15:00:36

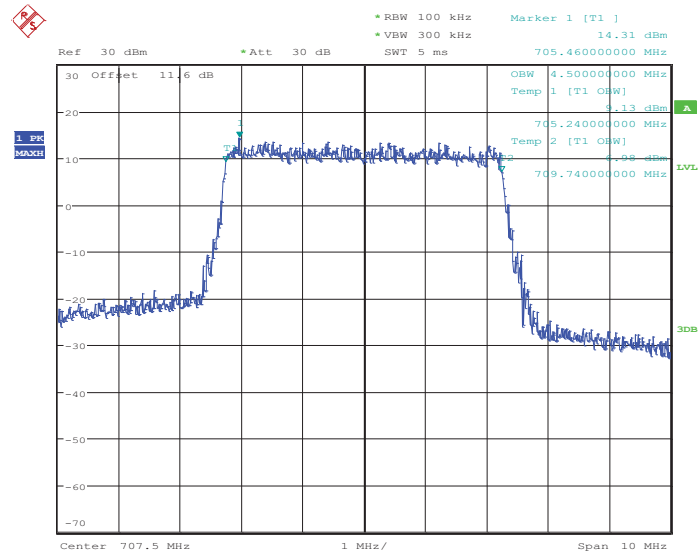
26dB Bandwidth Plot on Channel 23035



Date: 14.FEB.2014 15:00:49

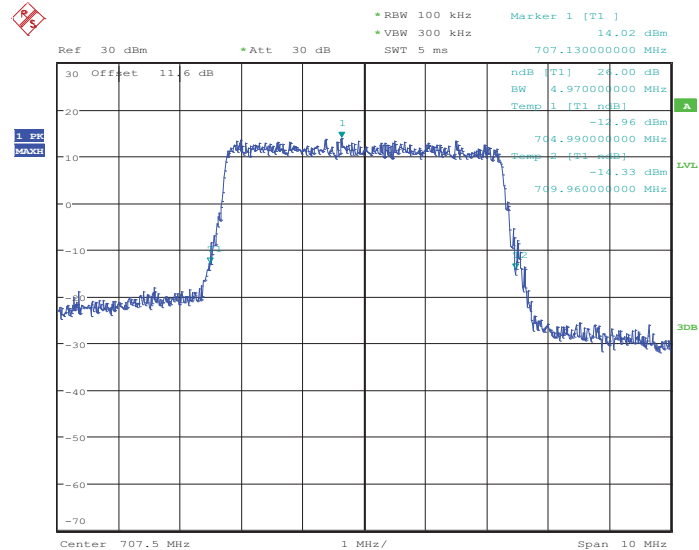


99% Occupied Bandwidth Plot on Channel 23095



Date: 14.FEB.2014 15:06:28

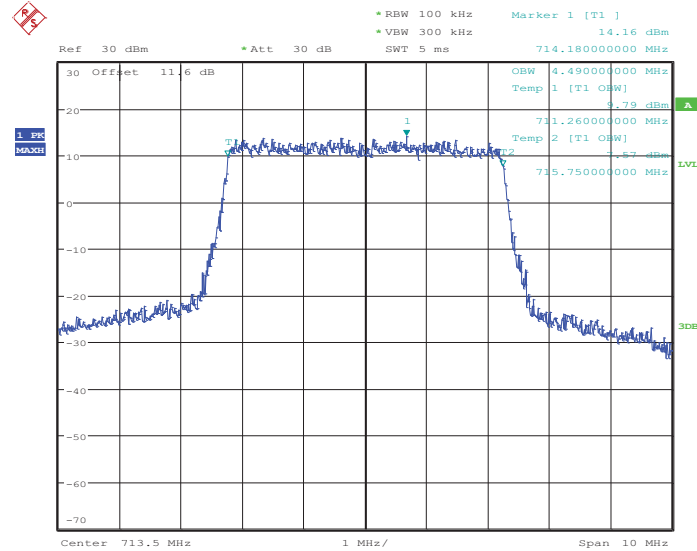
26dB Bandwidth Plot on Channel 23095



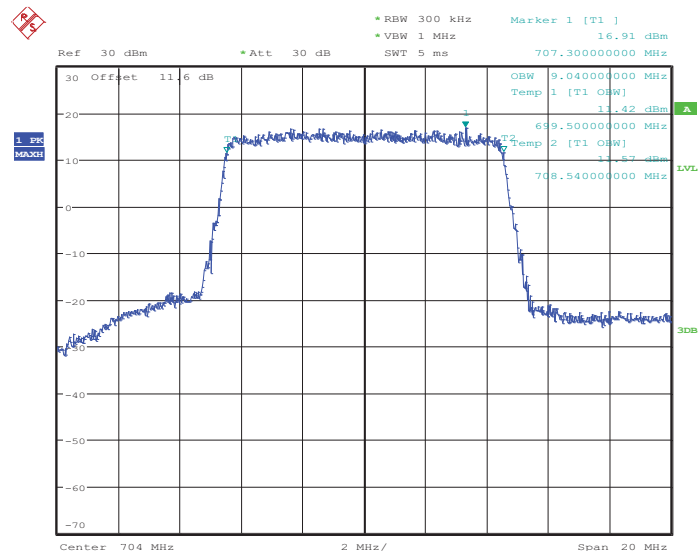
Date: 14.FEB.2014 15:07:07



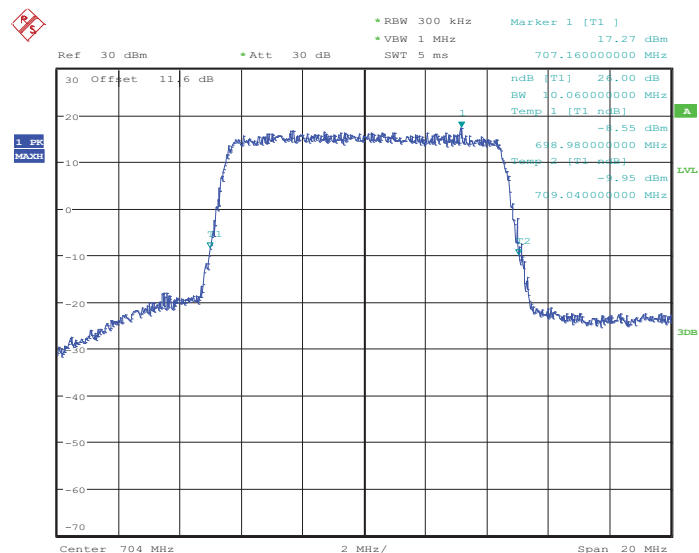
### 99% Occupied Bandwidth Plot on Channel 23155



|               |             |                    |              |
|---------------|-------------|--------------------|--------------|
| <b>Band :</b> | LTE Band 12 | <b>BW / Mod. :</b> | 10MHz / QPSK |
|---------------|-------------|--------------------|--------------|

**99% Occupied Bandwidth Plot on Channel 23060**


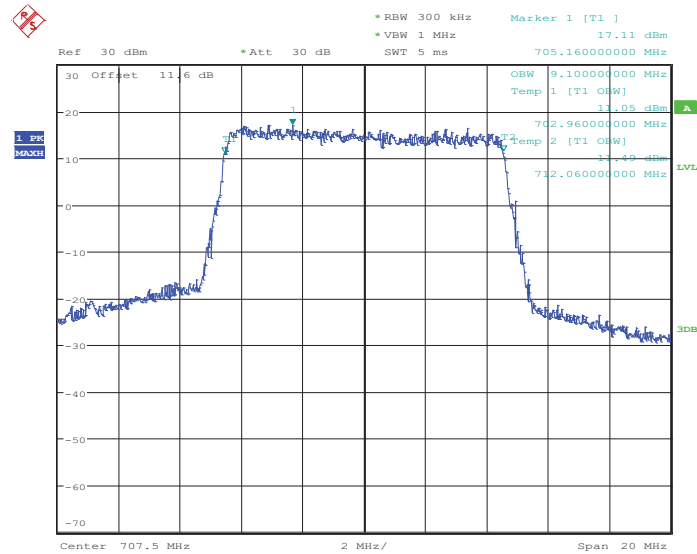
Date: 14.FEB.2014 15:37:24

**26dB Bandwidth Plot on Channel 23060**


Date: 14.FEB.2014 15:38:03

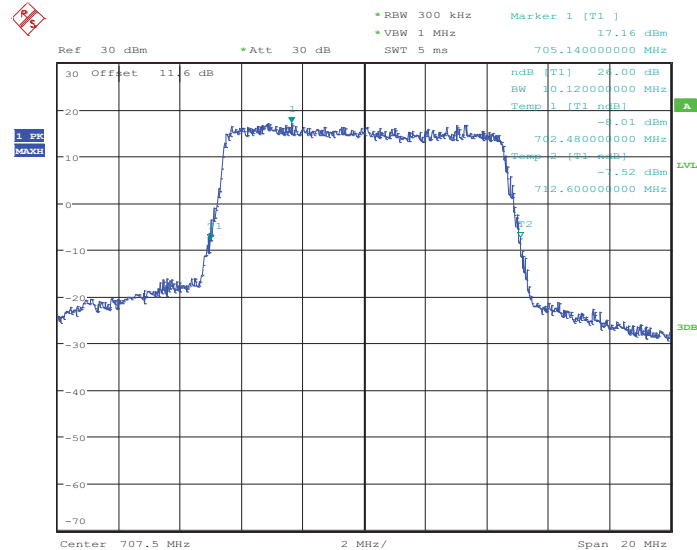


### 99% Occupied Bandwidth Plot on Channel 23095



Date: 14.FEB.2014 15:43:12

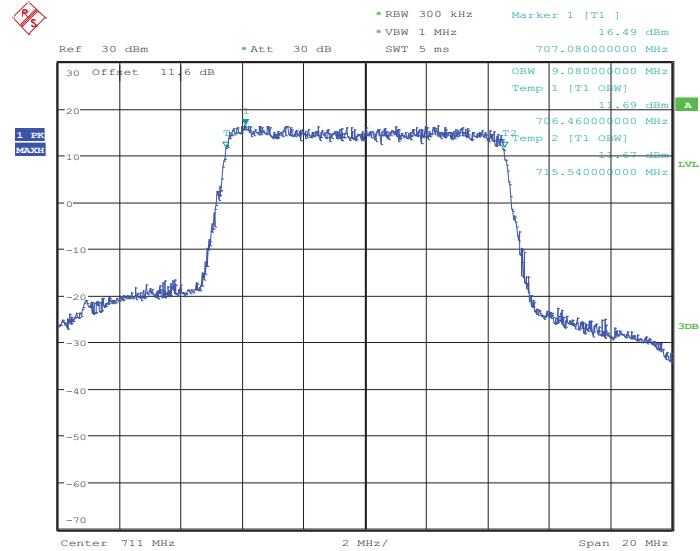
### 26dB Bandwidth Plot on Channel 23095



Date: 14.FEB.2014 15:43:26

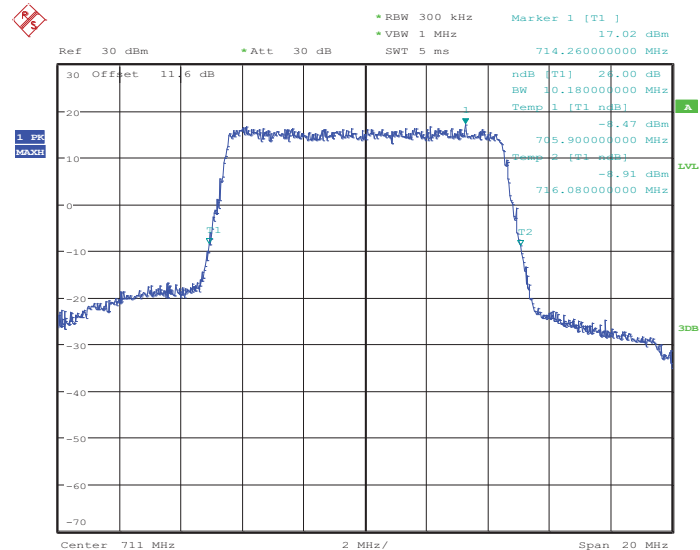


### 99% Occupied Bandwidth Plot on Channel 23130



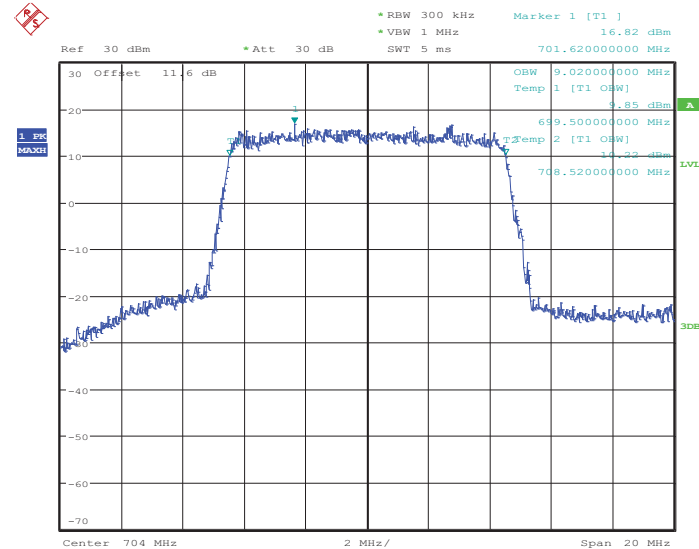
Date: 14.FEB.2014 15:45:43

### 26dB Bandwidth Plot on Channel 23130

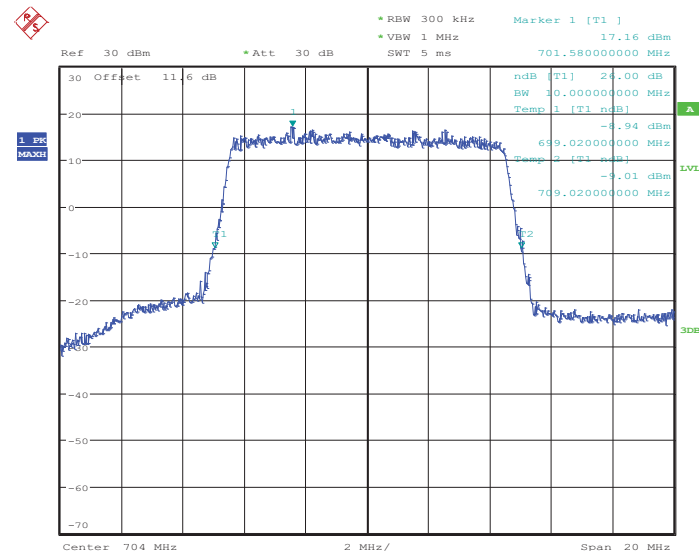


Date: 14.FEB.2014 15:46:22

|               |             |                    |               |
|---------------|-------------|--------------------|---------------|
| <b>Band :</b> | LTE Band 12 | <b>BW / Mod. :</b> | 10MHz / 16QAM |
|---------------|-------------|--------------------|---------------|

**99% Occupied Bandwidth Plot on Channel 23060**


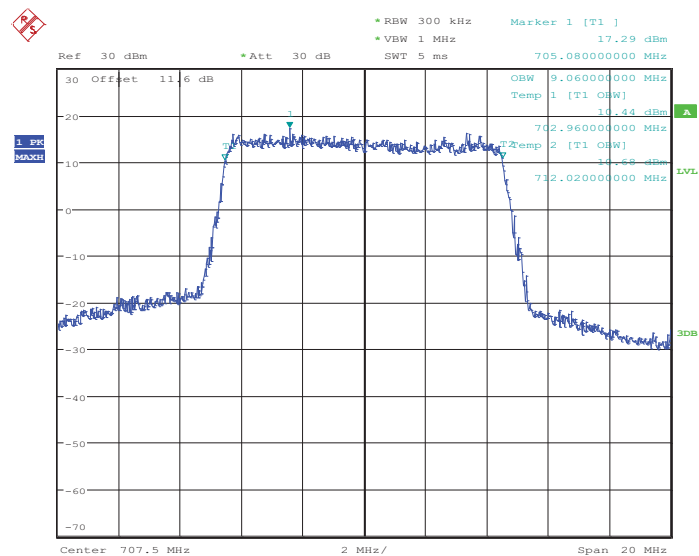
Date: 14.FEB.2014 15:37:36

**26dB Bandwidth Plot on Channel 23060**


Date: 14.FEB.2014 15:37:49

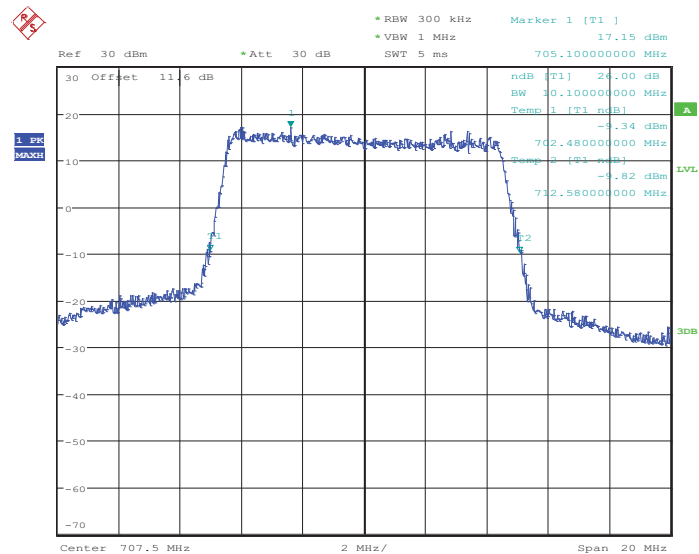


### 99% Occupied Bandwidth Plot on Channel 23095



Date: 14.FEB.2014 15:43:00

### 26dB Bandwidth Plot on Channel 23095



Date: 14.FEB.2014 15:43:39



### 26dB Bandwidth Plot on Channel 23130

