



# FCC RF Test Report

APPLICANT : TCT Mobile Limited  
EQUIPMENT : GSM Quad-band / UMTS Quad-band / LTE  
Penta-band mobile phone  
BRAND NAME : Alcatel  
MODEL NAME : 6039A  
FCC ID : RAD544  
STANDARD : 47 CFR Part 2, 24(E), 27(L), 27(M)  
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Jan. 13, 2015 and testing was completed on Feb. 22, 2015. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA / EIA-603-C-2004 and the testing has shown the tested sample to be in 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 (KUNSHAN) INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager



**SPORTON INTERNATIONAL (KUNSHAN) INC.**  
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## REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION             | ISSUED DATE   |
|------------|---------|-------------------------|---------------|
| FG511303B  | Rev. 01 | Initial issue of report | Apr. 20, 2015 |
|            |         |                         |               |
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|            |         |                         |               |
|            |         |                         |               |

## SUMMARY OF TEST RESULT

| Report Section | FCC Rule                                              | Description                                              | Limit                                                                                  | Result | Remark |
|----------------|-------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------|--------|--------|
| 3.1            | §2.1046                                               | Conducted Output Power                                   | Reporting Only                                                                         | PASS   | -      |
| 3.2            | §24.232(d)                                            | Peak-to-Average Ratio                                    | <13 dB                                                                                 | PASS   | -      |
| 3.3            | §24.232(c)<br>§27.50(h)(2)                            | Equivalent Isotropic Radiated Power<br>(Band 2) (Band 7) | EIRP < 2Watt                                                                           | PASS   | -      |
|                | §27.50(d)(4)                                          | Equivalent Isotropic Radiated Power<br>(Band 4)          | EIRP < 1Watt                                                                           |        |        |
| 3.4            | §2.1049<br>§24.238(b)<br>§27.53(h)(3)<br>§27.53(m)(6) | 99% Occupied Bandwidth and<br>26dB Bandwidth             | Reporting Only                                                                         | PASS   | -      |
| 3.5            | §2.1051<br>§24.238(a)<br>§27.53(h)                    | Conducted Band Edge Measurement<br>(Band 2) (Band 4)     | $< 43 + 10 \log_{10}(P[\text{Watt}])$                                                  | PASS   | -      |
|                | §2.1051<br>§27.53(m)(4)                               | Conducted Band Edge Measurement<br>(Band 7)              | < 5MHz: -10 dBm<br>5 MHz~6MHz or<br>26dB(BW): -13 dBm<br>≥6MHz or 26dB(BW):<br>-25 dBm |        |        |



| Report Section | FCC Rule                           | Description                                      | Limit                               | Result | Remark                                         |
|----------------|------------------------------------|--------------------------------------------------|-------------------------------------|--------|------------------------------------------------|
| 3.6            | §2.1051<br>§24.238(a)<br>§27.53(h) | Conducted Spurious Emission<br>(Band 2) (Band 4) | $< 43+10\log_{10}(P[\text{Watts}])$ | PASS   | -                                              |
|                | §2.1051<br>§27.53(m)(4)            | Conducted Spurious Emission<br>(Band 7)          | $< 55+10\log_{10}(P[\text{Watts}])$ | PASS   | -                                              |
| 3.7            | §2.1053<br>§24.238(a)<br>§27.53(h) | Radiated Spurious Emission<br>(Band 2) (Band 4)  | $< 43+10\log_{10}(P[\text{Watts}])$ | PASS   | Under limit<br>18.90 dB at<br>10120.000<br>MHz |
|                | §2.1053<br>§27.53(m)(4)            | Radiated Spurious Emission<br>(Band 7)           | $< 55+10\log_{10}(P[\text{Watts}])$ | PASS   |                                                |
| 3.8            | §2.1055<br>§24.235<br>§27.54       | Frequency Stability<br>Temperature & Voltage     | within authorized band              | PASS   | -                                              |



# 1 General Description

## 1.1 Applicant

**TCT Mobile Limited**

5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P. R. China. 201203

## 1.2 Manufacturer

**TCT Mobile Limited**

5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P. R. China. 201203

## 1.3 Product Feature of Equipment Under Test

| Product Feature                 |                                                                                                                                              |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Equipment                       | GSM Quad-band / UMTS Quad-band / LTE Penta-band mobile phone                                                                                 |
| Brand Name                      | Alcatel                                                                                                                                      |
| Model Name                      | 6039A                                                                                                                                        |
| FCC ID                          | RAD544                                                                                                                                       |
| EUT supports Radios application | GSM/GPRS/EGPRS/WCDMA/HSPA/<br>HSPA+(Downlink Only)/DC-HSDPA/LTE/NFC/<br>WLAN2.4GHz 802.11b/g/n HT20/<br>Bluetooth v3.0+EDR/Bluetooth v4.1 LE |
| IMEI Code                       | Conducted: 014322000050866<br>Radiated: 014368000006976<br>ERP/EIRP: 014368000051146                                                         |
| HW Version                      | BAB34D000GCX                                                                                                                                 |
| SW Version                      | vA7M                                                                                                                                         |
| EUT Stage                       | Identical Prototype                                                                                                                          |

**Remark:**

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. There are two types of EUT sample 1 and sample 2, the differences between two samples is only for memory, sample 1 is 1GB capacity and sample 2 is 1.5GB capacity. We only chose the sample 1 to perform all tests.
3. The device has two acoustic receives function, when a voice call is coming, user can choose any one receiver to response. And only when receiver on the bottom of the EUT is enabled, the power reduction will be activated to limit the maximum power of any cellular band.

## 1.4 Product Specification subjective to this standard

| Product Specification subjective to this standard |                                                                                                                                                                    |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tx Frequency</b>                               | LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz<br>LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz<br>LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz                                               |
| <b>Rx Frequency</b>                               | LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz<br>LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz<br>LTE Band 7 : 2622.5MHz ~ 2687.5 MHz                                                |
| <b>Bandwidth</b>                                  | LTE Band 2 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz<br>LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz<br>LTE Band 7 : 5MHz/ 10MHz / 15MHz / 20MHz |
| <b>Maximum Output Power to Antenna</b>            | LTE Band 2 : 23.85 dBm<br>LTE Band 4 : 23.60 dBm<br>LTE Band 7 : 23.39 dBm                                                                                         |
| <b>Antenna Type</b>                               | PIFA Antenna                                                                                                                                                       |
| <b>Type of Modulation</b>                         | QPSK / 16QAM                                                                                                                                                       |

## 1.5 Accessories and Support Equipment

| Specification of Accessory |                  |                                           |            |              |
|----------------------------|------------------|-------------------------------------------|------------|--------------|
| AC Adapter 1               | Brand Name       | ACE-Tenpao                                | Model Name | UC11US       |
|                            | Power Rating     | I/P: 100-240Vac, 200mA, O/P: 5Vdc, 1000mA |            |              |
|                            | P/N              | CBA0058AG0C2                              |            |              |
| AC Adapter 2               | Brand Name       | ACE-Yingju                                | Model Name | UC11US       |
|                            | Power Rating     | I/P: 100-240Vac, 200mA, O/P: 5Vdc, 1000mA |            |              |
|                            | P/N              | CBA0058AG0C3                              |            |              |
| Battery 1                  | Brand Name       | ALCATEL onetouch                          | Model Name | TLp020K2     |
|                            | Power Rating     | 3.8Vdc, 2000mAh                           |            |              |
|                            | P/N              | CAC2000023C2                              |            |              |
| Battery 2                  | Brand Name       | ALCATEL onetouch                          | Model Name | TLp020KJ     |
|                            | Power Rating     | 3.8Vdc, 2000mAh                           |            |              |
|                            | P/N              | CAC2000025CJ                              |            |              |
| USB Cable 1                | Brand Name       | ACE-Shenhua                               | Model Name | CDA0000025C1 |
|                            | Signal Line Type | 1.10m shielded without core               |            |              |
| USB Cable 2                | Brand Name       | ACE-Juwei                                 | Model Name | CDA0000025C2 |
|                            | Signal Line Type | 1.10m shielded without core               |            |              |
| USB Cable 3                | Brand Name       | ACE-Juwei                                 | Model Name | CDA0000025C8 |
|                            | Signal Line Type | 1.10m shielded without core               |            |              |
| Earphone 1                 | Brand Name       | ACE-Lianyun                               | Model Name | CCB0023A10C2 |
|                            | Signal Line Type | 1.16m non-shielded without core           |            |              |
| Earphone 2                 | Brand Name       | ACE-JBL                                   | Model Name | J22C         |
|                            | Signal Line Type | 1.38m non-shielded without core           |            |              |
| Earphone 3                 | Brand Name       | ACE-Lianyun                               | Model Name | CCB0023A11C2 |
|                            | Signal Line Type | 1.26m non-shielded without core           |            |              |
| Earphone 4                 | Brand Name       | ACE-JBL                                   | Model Name | CCA0001A10C9 |
|                            | Signal Line Type | 1.28m non-shielded without core           |            |              |



## 1.6 Modification of EUT

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

## 1.7 Maximum EIRP Power, Frequency Tolerance, and Emission Designator

| FCC Rule | System     | Type of Modulation | BW      | Emission Designator | Frequency Tolerance (ppm) | Maximum EIRP |
|----------|------------|--------------------|---------|---------------------|---------------------------|--------------|
| Part 24  | LTE Band 2 | QPSK               | 1.4 MHz | 1M09G7D             | -                         | 0.4529 W     |
| Part 24  | LTE Band 2 | 16QAM              | 1.4 MHz | 1M10W7D             | -                         | 0.3715 W     |
| Part 24  | LTE Band 2 | QPSK               | 3 MHz   | 2M73G7D             | -                         | 0.4365 W     |
| Part 24  | LTE Band 2 | 16QAM              | 3 MHz   | 2M73W7D             | -                         | 0.3733 W     |
| Part 24  | LTE Band 2 | QPSK               | 5 MHz   | 4M51G7D             | -                         | 0.4217 W     |
| Part 24  | LTE Band 2 | 16QAM              | 5 MHz   | 4M50W7D             | -                         | 0.4457 W     |
| Part 24  | LTE Band 2 | QPSK               | 10 MHz  | 9M07G7D             | 0.0088 ppm                | 0.4508 W     |
| Part 24  | LTE Band 2 | 16QAM              | 10 MHz  | 9M05W7D             | -                         | 0.3724 W     |
| Part 24  | LTE Band 2 | QPSK               | 15 MHz  | 13M5G7D             | -                         | 0.4406 W     |
| Part 24  | LTE Band 2 | 16QAM              | 15 MHz  | 13M4W7D             | -                         | 0.3090 W     |
| Part 24  | LTE Band 2 | QPSK               | 20 MHz  | 18M3G7D             | -                         | 0.4345 W     |
| Part 24  | LTE Band 2 | 16QAM              | 20 MHz  | 18M3W7D             | -                         | 0.3837 W     |



| FCC Rule | System     | Type of Modulation | BW      | Emission Designator | Frequency Tolerance (ppm) | Maximum EIRP |
|----------|------------|--------------------|---------|---------------------|---------------------------|--------------|
| Part 27  | LTE Band 4 | QPSK               | 1.4 MHz | 1M10G7D             | -                         | 0.5689 W     |
| Part 27  | LTE Band 4 | 16QAM              | 1.4 MHz | 1M10W7D             | -                         | 0.4742 W     |
| Part 27  | LTE Band 4 | QPSK               | 3 MHz   | 2M73G7D             | -                         | 0.5483 W     |
| Part 27  | LTE Band 4 | 16QAM              | 3 MHz   | 2M73W7D             | -                         | 0.4603 W     |
| Part 27  | LTE Band 4 | QPSK               | 5MHz    | 4M50G7D             | -                         | 0.5224 W     |
| Part 27  | LTE Band 4 | 16QAM              | 5MHz    | 4M50W7D             | -                         | 0.4550 W     |
| Part 27  | LTE Band 4 | QPSK               | 10MHz   | 9M07G7D             | 0.0058 ppm                | 0.5572 W     |
| Part 27  | LTE Band 4 | 16QAM              | 10MHz   | 9M05W7D             | -                         | 0.4375 W     |
| Part 27  | LTE Band 4 | QPSK               | 15MHz   | 13M5G7D             | -                         | 0.5702 W     |
| Part 27  | LTE Band 4 | 16QAM              | 15MHz   | 13M5W7D             | -                         | 0.4831 W     |
| Part 27  | LTE Band 4 | QPSK               | 20MHz   | 18M5G7D             | -                         | 0.5420 W     |
| Part 27  | LTE Band 4 | 16QAM              | 20MHz   | 18M3W7D             | -                         | 0.4624 W     |
| Part 27  | LTE Band 7 | QPSK               | 5MHz    | 4M51G7D             | -                         | 0.4721 W     |
| Part 27  | LTE Band 7 | 16QAM              | 5MHz    | 4M51W7D             | -                         | 0.3811 W     |
| Part 27  | LTE Band 7 | QPSK               | 10MHz   | 9M07G7D             | 0.0043 ppm                | 0.4932 W     |
| Part 27  | LTE Band 7 | 16QAM              | 10MHz   | 9M05W7D             | -                         | 0.3890 W     |
| Part 27  | LTE Band 7 | QPSK               | 15MHz   | 13M5G7D             | -                         | 0.4819 W     |
| Part 27  | LTE Band 7 | 16QAM              | 15MHz   | 13M5W7D             | -                         | 0.4426 W     |
| Part 27  | LTE Band 7 | QPSK               | 20MHz   | 18M5G7D             | -                         | 0.4842 W     |
| Part 27  | LTE Band 7 | 16QAM              | 20MHz   | 18M4W7D             | -                         | 0.3436 W     |

## 1.8 Testing Location

|                           |                                                                                                                       |           |                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------|-----------------------------|
| <b>Test Site</b>          | SPORTON INTERNATIONAL (KUNSHAN) INC.                                                                                  |           |                             |
| <b>Test Site Location</b> | No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P. R. China<br>TEL: +86-0512-5790-0158<br>FAX: +86-0512-5790-0958 |           |                             |
| <b>Test Site No.</b>      | <b>Sporton Site No.</b>                                                                                               |           | <b>FCC Registration No.</b> |
|                           | TH01-KS                                                                                                               | 03CH01-KS | 149928                      |

|                           |                                                                                                                                                                                     |  |  |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| <b>Test Site</b>          | SPORTON INTERNATIONAL (SHENZHEN) INC.                                                                                                                                               |  |  |
| <b>Test Site Location</b> | 1F & 2F, Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town, Nanshan District, Shenzhen, Guangdong, P. R. China<br>TEL: +86-755-8637-9589<br>FAX: +86-755-8637-9595 |  |  |
| <b>Test Site No.</b>      | <b>Sporton Site No.</b>                                                                                                                                                             |  |  |
|                           | OTA02-SZ                                                                                                                                                                            |  |  |

## 1.9 Applicable Standards

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

- ♦ 47 CFR Part 2, 24(E), 27(L), 27(M)
- ♦ ANSI / TIA / EIA-603-C-2004
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v02r02

### 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

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v02r02 with maximum output power.

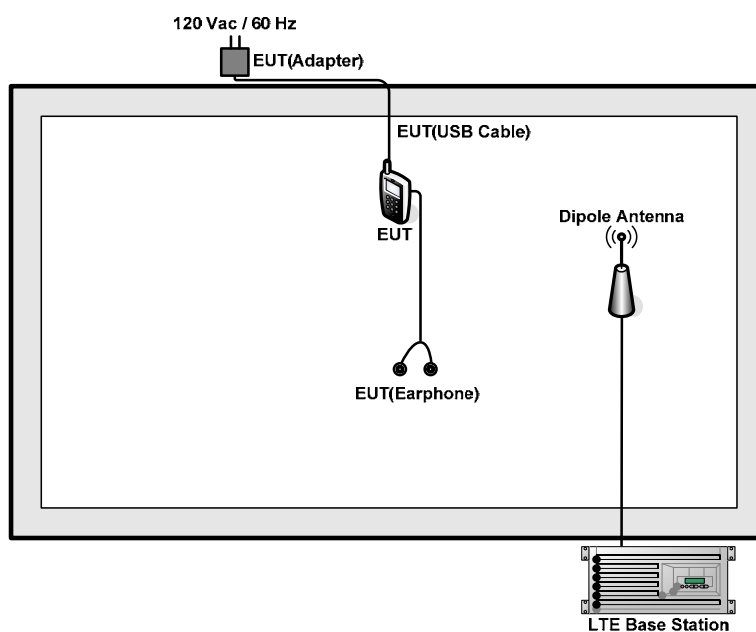
Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

| Test Items             | Band | Bandwidth (MHz) |   |   |    |    |    | Modulation |       | RB # |      |      | Test Channel |   |   |
|------------------------|------|-----------------|---|---|----|----|----|------------|-------|------|------|------|--------------|---|---|
|                        |      | 1.4             | 3 | 5 | 10 | 15 | 20 | QPSK       | 16QAM | 1    | Half | Full | L            | M | H |
| Max. Output Power      | 2    | v               | v | v | v  | v  | v  | v          | v     | v    | v    | v    | v            | v | v |
|                        | 4    | v               | v | v | v  | v  | v  | v          | v     | v    | v    | v    | v            | v | v |
|                        | 7    | -               | - | v | v  | v  | v  | v          | v     | v    | v    | v    | v            | v | v |
| Peak-to-Average Ratio  | 2    |                 |   |   |    |    | v  | v          | v     | v    |      | v    | v            | v | v |
|                        | 4    |                 |   |   |    |    | v  | v          | v     | v    |      | v    | v            | v | v |
|                        | 7    | -               | - |   |    |    | v  | v          | v     | v    |      | v    | v            | v | v |
| 26dB and 99% Bandwidth | 2    | v               | v | v | v  | v  | v  | v          | v     |      |      | v    |              | v |   |
|                        | 4    | v               | v | v | v  | v  | v  | v          | v     |      |      | v    |              | v |   |
|                        | 7    | -               | - | v | v  | v  | v  | v          | v     |      |      | v    |              | v |   |
| Conducted Band Edge    | 2    | v               | v | v | v  | v  | v  | v          | v     | v    |      | v    | v            |   | v |
|                        | 4    | v               | v | v | v  | v  | v  | v          | v     | v    |      | v    | v            |   | v |
|                        | 7    | -               | - | v | v  | v  | v  | v          | v     | v    |      | v    | v            |   | v |



| Test Items                                 | Band                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Bandwidth (MHz) |   |   |    |    |    | Modulation |       | RB # |      |      | Test Channel |   |   |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|----|----|----|------------|-------|------|------|------|--------------|---|---|
|                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1.4             | 3 | 5 | 10 | 15 | 20 | QPSK       | 16QAM | 1    | Half | Full | L            | M | H |
| <b>Conducted<br/>Spurious<br/>Emission</b> | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | v               | v | v | v  | v  | v  | v          | v     | v    | v    |      | v            | v | v |
|                                            | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | v               | v | v | v  | v  | v  | v          | v     | v    | v    |      | v            | v | v |
|                                            | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -               | - | v | v  | v  | v  | v          | v     | v    |      |      | v            | v | v |
| <b>Frequency<br/>Stability</b>             | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |   |   | v  |    |    | v          |       |      |      | v    |              | v |   |
|                                            | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |   |   | v  |    |    | v          |       |      |      | v    |              | v |   |
|                                            | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -               | - |   | v  |    |    | v          |       |      |      | v    |              | v |   |
| <b>E.I.R.P.</b>                            | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | v               | v | v | v  | v  | v  | v          | v     | v    | v    |      | v            | v | v |
|                                            | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | v               | v | v | v  | v  | v  | v          | v     | v    | v    |      | v            | v | v |
|                                            | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -               | - | v | v  | v  | v  | v          | v     | v    |      |      | v            | v | v |
| <b>Radiated<br/>Spurious<br/>Emission</b>  | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | v               | v | v | v  | v  | v  | v          |       | v    |      |      |              | v |   |
|                                            | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | v               | v | v | v  | v  | v  | v          |       | v    |      |      |              | v |   |
|                                            | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -               | - | v | v  | v  | v  | v          |       | v    |      |      |              | v |   |
| <b>Note</b>                                | <ol style="list-style-type: none"> <li>1. The mark "v " means that this configuration is chosen for testing</li> <li>2. The mark "- " means that this bandwidth is not supported.</li> <li>3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.</li> <li>4. According the functionality of the EUT, the maximum power levels are chosen to test all test cases listed in this report as the worst case configuration is when top acoustic receiver works.</li> </ol> |                 |   |   |    |    |    |            |       |      |      |      |              |   |   |

## 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.   | DC Power Supply  | GW INSTEK  | GPD-2303S | N/A    | N/A        | Unshielded, 1.8 m |



## 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 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.

*Offset = RF cable loss.*

Following shows an offset computation example with cable loss 5 dB.

Example :

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)}. \\ &= 5 \text{ (dB)}\end{aligned}$$

### 3 Test Result

#### 3.1 Conducted Output Power Measurement

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

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

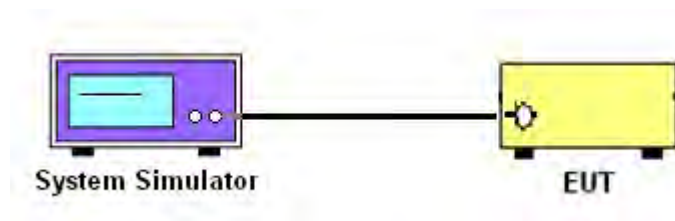
##### 3.1.2 Measuring Instruments

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 the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

##### 3.1.4 Test Setup







## 3.1.5 Test Result of Conducted Output Power

&lt;Full Power Mode&gt;:

&lt;LTE Band 2 Conducted Power&gt;

| 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         | 21.93                             | 21.98                                | 21.94                              |
| 20              | QPSK       | 1       | 49        | 21.95                             | 22.30                                | 22.28                              |
| 20              | QPSK       | 1       | 99        | 21.71                             | 21.89                                | 21.86                              |
| 20              | QPSK       | 50      | 0         | 20.62                             | 20.93                                | 20.90                              |
| 20              | QPSK       | 50      | 24        | 20.63                             | 20.96                                | 20.94                              |
| 20              | QPSK       | 50      | 49        | 20.59                             | 20.80                                | 20.91                              |
| 20              | QPSK       | 100     | 0         | 20.70                             | 20.95                                | 20.93                              |
| 20              | 16QAM      | 1       | 0         | 21.12                             | 21.41                                | 21.37                              |
| 20              | 16QAM      | 1       | 49        | 21.20                             | 21.05                                | 21.33                              |
| 20              | 16QAM      | 1       | 99        | 21.09                             | 21.02                                | 21.24                              |
| 20              | 16QAM      | 50      | 0         | 19.84                             | 19.99                                | 19.96                              |
| 20              | 16QAM      | 50      | 24        | 19.76                             | 19.86                                | 19.91                              |
| 20              | 16QAM      | 50      | 49        | 19.66                             | 19.88                                | 19.91                              |
| 20              | 16QAM      | 100     | 0         | 19.75                             | 19.85                                | 19.93                              |
| Channel         |            |         |           | 18675                             | 18900                                | 19125                              |
| Frequency (MHz) |            |         |           | 1857.5                            | 1880                                 | 1902.5                             |
| 15              | QPSK       | 1       | 0         | 21.88                             | 22.10                                | 22.29                              |
| 15              | QPSK       | 1       | 37        | 22.07                             | 22.14                                | 22.21                              |
| 15              | QPSK       | 1       | 74        | 21.84                             | 21.87                                | 22.12                              |
| 15              | QPSK       | 36      | 0         | 20.80                             | 20.95                                | 20.95                              |
| 15              | QPSK       | 36      | 18        | 20.65                             | 20.85                                | 20.90                              |
| 15              | QPSK       | 36      | 37        | 20.62                             | 20.90                                | 20.90                              |
| 15              | QPSK       | 75      | 0         | 20.69                             | 20.91                                | 20.91                              |
| 15              | 16QAM      | 1       | 0         | 21.49                             | 20.84                                | 21.35                              |
| 15              | 16QAM      | 1       | 37        | 21.46                             | 21.41                                | 20.65                              |
| 15              | 16QAM      | 1       | 74        | 21.16                             | 20.80                                | 21.48                              |
| 15              | 16QAM      | 36      | 0         | 19.89                             | 19.91                                | 20.05                              |
| 15              | 16QAM      | 36      | 18        | 19.75                             | 19.86                                | 19.92                              |
| 15              | 16QAM      | 36      | 37        | 19.77                             | 19.84                                | 19.79                              |
| 15              | 16QAM      | 75      | 0         | 19.72                             | 19.94                                | 19.90                              |



| 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         |            |         |           | 18650                             | 18900                                | 19150                              |
| Frequency (MHz) |            |         |           | 1855                              | 1880                                 | 1905                               |
| 10              | QPSK       | 1       | 0         | 21.87                             | 22.08                                | 22.02                              |
| 10              | QPSK       | 1       | 24        | 21.81                             | 22.01                                | 22.09                              |
| 10              | QPSK       | 1       | 49        | 21.82                             | 21.68                                | 21.94                              |
| 10              | QPSK       | 25      | 0         | 20.78                             | 20.98                                | 20.92                              |
| 10              | QPSK       | 25      | 12        | 20.74                             | 20.95                                | 20.96                              |
| 10              | QPSK       | 25      | 24        | 20.65                             | 20.91                                | 20.97                              |
| 10              | QPSK       | 50      | 0         | 20.66                             | 20.82                                | 21.04                              |
| 10              | 16QAM      | 1       | 0         | 21.25                             | 21.45                                | 21.47                              |
| 10              | 16QAM      | 1       | 24        | 20.90                             | 21.44                                | 21.45                              |
| 10              | 16QAM      | 1       | 49        | 21.11                             | 21.40                                | 21.37                              |
| 10              | 16QAM      | 25      | 0         | 19.91                             | 19.93                                | 20.05                              |
| 10              | 16QAM      | 25      | 12        | 19.88                             | 20.02                                | 19.96                              |
| 10              | 16QAM      | 25      | 24        | 19.77                             | 19.99                                | 19.80                              |
| 10              | 16QAM      | 50      | 0         | 19.85                             | 19.88                                | 19.94                              |
| Channel         |            |         |           | 18625                             | 18900                                | 19175                              |
| Frequency (MHz) |            |         |           | 1852.5                            | 1880                                 | 1907.5                             |
| 5               | QPSK       | 1       | 0         | 21.73                             | 21.84                                | 22.17                              |
| 5               | QPSK       | 1       | 12        | 21.88                             | 22.11                                | 22.23                              |
| 5               | QPSK       | 1       | 24        | 21.67                             | 21.83                                | 22.06                              |
| 5               | QPSK       | 12      | 0         | 20.67                             | 20.92                                | 20.95                              |
| 5               | QPSK       | 12      | 6         | 20.73                             | 20.90                                | 21.00                              |
| 5               | QPSK       | 12      | 11        | 20.63                             | 20.88                                | 20.97                              |
| 5               | QPSK       | 25      | 0         | 20.67                             | 20.84                                | 20.99                              |
| 5               | 16QAM      | 1       | 0         | 21.17                             | 21.26                                | 21.47                              |
| 5               | 16QAM      | 1       | 12        | 21.06                             | 20.87                                | 21.43                              |
| 5               | 16QAM      | 1       | 24        | 20.70                             | 21.22                                | 20.91                              |
| 5               | 16QAM      | 12      | 0         | 19.65                             | 19.83                                | 19.73                              |
| 5               | 16QAM      | 12      | 6         | 19.72                             | 20.02                                | 19.80                              |
| 5               | 16QAM      | 12      | 11        | 19.66                             | 19.91                                | 19.78                              |
| 5               | 16QAM      | 25      | 0         | 19.64                             | 19.97                                | 19.93                              |



| BW<br>[MHz]     | Modulation | RB<br>Size | RB<br>Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|-----------------|------------|------------|--------------|-----------------------------------|--------------------------------------|------------------------------------|
| Channel         |            |            |              | <b>18615</b>                      | <b>18900</b>                         | <b>19185</b>                       |
| Frequency (MHz) |            |            |              | <b>1851.5</b>                     | <b>1880</b>                          | <b>1908.5</b>                      |
| 3               | QPSK       | 1          | 0            | 21.36                             | 21.36                                | 21.34                              |
| 3               | QPSK       | 1          | 7            | 21.99                             | 21.59                                | 21.58                              |
| 3               | QPSK       | 1          | 14           | 21.31                             | 21.56                                | 21.65                              |
| 3               | QPSK       | 8          | 0            | 20.49                             | 20.48                                | 20.47                              |
| 3               | QPSK       | 8          | 4            | 20.46                             | 20.43                                | 20.40                              |
| 3               | QPSK       | 8          | 7            | 20.45                             | 20.58                                | 20.45                              |
| 3               | QPSK       | 15         | 0            | 20.36                             | 20.44                                | 20.39                              |
| 3               | 16QAM      | 1          | 0            | 21.05                             | 20.98                                | 20.30                              |
| 3               | 16QAM      | 1          | 7            | 21.44                             | 21.42                                | 19.85                              |
| 3               | 16QAM      | 1          | 14           | 21.29                             | 21.08                                | 19.90                              |
| 3               | 16QAM      | 8          | 0            | 19.65                             | 19.76                                | 19.23                              |
| 3               | 16QAM      | 8          | 4            | 19.64                             | 19.61                                | 19.11                              |
| 3               | 16QAM      | 8          | 7            | 19.67                             | 19.76                                | 19.30                              |
| 3               | 16QAM      | 15         | 0            | 19.56                             | 19.79                                | 19.04                              |
| Channel         |            |            |              | <b>18607</b>                      | <b>18900</b>                         | <b>19193</b>                       |
| Frequency (MHz) |            |            |              | <b>1850.7</b>                     | <b>1880</b>                          | <b>1909.3</b>                      |
| 1.4             | QPSK       | 1          | 0            | 21.47                             | 21.44                                | 21.47                              |
| 1.4             | QPSK       | 1          | 2            | 21.44                             | 21.60                                | 21.40                              |
| 1.4             | QPSK       | 1          | 5            | 21.41                             | 21.48                                | 21.40                              |
| 1.4             | QPSK       | 3          | 0            | 21.54                             | 21.63                                | 21.56                              |
| 1.4             | QPSK       | 3          | 1            | 21.62                             | 21.72                                | 21.65                              |
| 1.4             | QPSK       | 3          | 2            | 21.59                             | 21.56                                | 21.54                              |
| 1.4             | QPSK       | 6          | 0            | 20.42                             | 20.54                                | 20.40                              |
| 1.4             | 16QAM      | 1          | 0            | 20.80                             | 20.92                                | 20.82                              |
| 1.4             | 16QAM      | 1          | 2            | 20.75                             | 20.47                                | 20.92                              |
| 1.4             | 16QAM      | 1          | 5            | 20.39                             | 21.00                                | 20.49                              |
| 1.4             | 16QAM      | 3          | 0            | 20.23                             | 20.17                                | 20.33                              |
| 1.4             | 16QAM      | 3          | 1            | 20.33                             | 20.49                                | 20.90                              |
| 1.4             | 16QAM      | 3          | 2            | 20.57                             | 20.38                                | 20.82                              |
| 1.4             | 16QAM      | 6          | 0            | 19.33                             | 19.30                                | 19.39                              |



## &lt;LTE Band 4 Conducted Power&gt;

| BW<br>[MHz]     | Modulation | RB<br>Size | RB<br>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            | 22.18                             | 22.37                                | 22.33                              |
| 20              | QPSK       | 1          | 49           | 22.14                             | 22.35                                | 22.06                              |
| 20              | QPSK       | 1          | 99           | 21.93                             | 21.91                                | 21.77                              |
| 20              | QPSK       | 50         | 0            | 21.11                             | 21.20                                | 21.17                              |
| 20              | QPSK       | 50         | 24           | 21.03                             | 21.13                                | 20.97                              |
| 20              | QPSK       | 50         | 49           | 20.96                             | 21.08                                | 21.02                              |
| 20              | QPSK       | 100        | 0            | 21.11                             | 21.17                                | 21.06                              |
| 20              | 16QAM      | 1          | 0            | 21.47                             | 21.20                                | 20.97                              |
| 20              | 16QAM      | 1          | 49           | 21.44                             | 21.43                                | 21.37                              |
| 20              | 16QAM      | 1          | 99           | 21.48                             | 20.94                                | 20.81                              |
| 20              | 16QAM      | 50         | 0            | 20.22                             | 20.27                                | 20.20                              |
| 20              | 16QAM      | 50         | 24           | 20.08                             | 20.19                                | 19.93                              |
| 20              | 16QAM      | 50         | 49           | 20.07                             | 20.07                                | 19.93                              |
| 20              | 16QAM      | 100        | 0            | 20.10                             | 20.20                                | 20.04                              |
| Channel         |            |            |              | 20025                             | 20175                                | 20325                              |
| Frequency (MHz) |            |            |              | 1717.5                            | 1732.5                               | 1747.5                             |
| 15              | QPSK       | 1          | 0            | 22.28                             | 22.26                                | 22.32                              |
| 15              | QPSK       | 1          | 37           | 22.35                             | 22.35                                | 22.30                              |
| 15              | QPSK       | 1          | 74           | 22.20                             | 21.98                                | 22.05                              |
| 15              | QPSK       | 36         | 0            | 21.15                             | 21.23                                | 21.03                              |
| 15              | QPSK       | 36         | 18           | 21.05                             | 21.22                                | 21.24                              |
| 15              | QPSK       | 36         | 37           | 20.99                             | 21.08                                | 20.98                              |
| 15              | QPSK       | 75         | 0            | 21.02                             | 21.17                                | 21.20                              |
| 15              | 16QAM      | 1          | 0            | 21.39                             | 21.43                                | 21.28                              |
| 15              | 16QAM      | 1          | 37           | 21.41                             | 21.48                                | 21.11                              |
| 15              | 16QAM      | 1          | 74           | 21.42                             | 21.41                                | 21.40                              |
| 15              | 16QAM      | 36         | 0            | 20.18                             | 20.24                                | 20.02                              |
| 15              | 16QAM      | 36         | 18           | 20.15                             | 20.22                                | 19.97                              |
| 15              | 16QAM      | 36         | 37           | 20.20                             | 20.09                                | 20.04                              |
| 15              | 16QAM      | 75         | 0            | 20.10                             | 20.22                                | 19.94                              |



| 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         |            |         |           | 20000                             | 20175                                | 20350                              |
| Frequency (MHz) |            |         |           | 1715                              | 1732.5                               | 1750                               |
| 10              | QPSK       | 1       | 0         | 22.12                             | 22.27                                | 22.26                              |
| 10              | QPSK       | 1       | 24        | 22.24                             | 22.28                                | 22.23                              |
| 10              | QPSK       | 1       | 49        | 22.23                             | 22.02                                | 21.93                              |
| 10              | QPSK       | 25      | 0         | 21.15                             | 21.27                                | 21.15                              |
| 10              | QPSK       | 25      | 12        | 21.07                             | 21.26                                | 21.15                              |
| 10              | QPSK       | 25      | 24        | 21.09                             | 21.11                                | 21.04                              |
| 10              | QPSK       | 50      | 0         | 21.03                             | 21.20                                | 21.10                              |
| 10              | 16QAM      | 1       | 0         | 21.45                             | 21.45                                | 21.44                              |
| 10              | 16QAM      | 1       | 24        | 21.36                             | 21.48                                | 20.97                              |
| 10              | 16QAM      | 1       | 49        | 21.20                             | 21.46                                | 21.22                              |
| 10              | 16QAM      | 25      | 0         | 20.11                             | 20.19                                | 20.25                              |
| 10              | 16QAM      | 25      | 12        | 20.14                             | 20.33                                | 20.16                              |
| 10              | 16QAM      | 25      | 24        | 20.06                             | 20.08                                | 20.08                              |
| 10              | 16QAM      | 50      | 0         | 20.14                             | 20.26                                | 20.09                              |
| Channel         |            |         |           | 19975                             | 20175                                | 20375                              |
| Frequency (MHz) |            |         |           | 1712.5                            | 1732.5                               | 1752.5                             |
| 5               | QPSK       | 1       | 0         | 22.03                             | 22.20                                | 22.20                              |
| 5               | QPSK       | 1       | 12        | 22.27                             | 22.36                                | 22.32                              |
| 5               | QPSK       | 1       | 24        | 21.93                             | 22.06                                | 21.89                              |
| 5               | QPSK       | 12      | 0         | 21.07                             | 21.17                                | 21.13                              |
| 5               | QPSK       | 12      | 6         | 21.09                             | 21.15                                | 21.08                              |
| 5               | QPSK       | 12      | 11        | 21.07                             | 21.08                                | 20.94                              |
| 5               | QPSK       | 25      | 0         | 21.09                             | 21.14                                | 20.97                              |
| 5               | 16QAM      | 1       | 0         | 21.48                             | 21.43                                | 21.03                              |
| 5               | 16QAM      | 1       | 12        | 21.42                             | 21.48                                | 21.39                              |
| 5               | 16QAM      | 1       | 24        | 21.32                             | 20.89                                | 20.85                              |
| 5               | 16QAM      | 12      | 0         | 20.25                             | 20.24                                | 20.25                              |
| 5               | 16QAM      | 12      | 6         | 20.25                             | 20.17                                | 20.18                              |
| 5               | 16QAM      | 12      | 11        | 20.03                             | 19.98                                | 19.91                              |
| 5               | 16QAM      | 25      | 0         | 20.01                             | 20.23                                | 19.83                              |



| BW<br>[MHz]     | Modulation | RB<br>Size | RB<br>Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|-----------------|------------|------------|--------------|-----------------------------------|--------------------------------------|------------------------------------|
| Channel         |            |            |              | 19965                             | 20175                                | 20385                              |
| Frequency (MHz) |            |            |              | 1711.5                            | 1732.5                               | 1753.5                             |
| 3               | QPSK       | 1          | 0            | 21.69                             | 21.83                                | 21.52                              |
| 3               | QPSK       | 1          | 7            | 22.15                             | 21.88                                | 21.39                              |
| 3               | QPSK       | 1          | 14           | 21.74                             | 21.36                                | 21.31                              |
| 3               | QPSK       | 8          | 0            | 20.68                             | 20.78                                | 20.71                              |
| 3               | QPSK       | 8          | 4            | 20.69                             | 20.75                                | 20.59                              |
| 3               | QPSK       | 8          | 7            | 20.68                             | 20.70                                | 20.52                              |
| 3               | QPSK       | 15         | 0            | 20.68                             | 20.81                                | 20.55                              |
| 3               | 16QAM      | 1          | 0            | 20.84                             | 20.74                                | 20.31                              |
| 3               | 16QAM      | 1          | 7            | 21.04                             | 20.59                                | 20.12                              |
| 3               | 16QAM      | 1          | 14           | 20.75                             | 20.96                                | 20.75                              |
| 3               | 16QAM      | 8          | 0            | 19.73                             | 19.94                                | 19.56                              |
| 3               | 16QAM      | 8          | 4            | 19.81                             | 19.99                                | 19.39                              |
| 3               | 16QAM      | 8          | 7            | 19.77                             | 19.92                                | 19.36                              |
| 3               | 16QAM      | 15         | 0            | 19.66                             | 20.08                                | 19.22                              |
| Channel         |            |            |              | 19957                             | 20175                                | 20393                              |
| Frequency (MHz) |            |            |              | 1710.7                            | 1732.5                               | 1754.3                             |
| 1.4             | QPSK       | 1          | 0            | 21.62                             | 21.48                                | 21.48                              |
| 1.4             | QPSK       | 1          | 2            | 21.57                             | 21.72                                | 21.61                              |
| 1.4             | QPSK       | 1          | 5            | 21.56                             | 21.73                                | 21.38                              |
| 1.4             | QPSK       | 3          | 0            | 21.78                             | 21.82                                | 21.62                              |
| 1.4             | QPSK       | 3          | 1            | 21.81                             | 21.87                                | 21.71                              |
| 1.4             | QPSK       | 3          | 2            | 21.74                             | 21.80                                | 21.60                              |
| 1.4             | QPSK       | 6          | 0            | 20.57                             | 20.73                                | 20.55                              |
| 1.4             | 16QAM      | 1          | 0            | 21.18                             | 21.38                                | 21.09                              |
| 1.4             | 16QAM      | 1          | 2            | 20.72                             | 21.48                                | 21.28                              |
| 1.4             | 16QAM      | 1          | 5            | 20.85                             | 20.69                                | 21.14                              |
| 1.4             | 16QAM      | 3          | 0            | 20.54                             | 20.61                                | 20.78                              |
| 1.4             | 16QAM      | 3          | 1            | 20.61                             | 20.82                                | 20.83                              |
| 1.4             | 16QAM      | 3          | 2            | 20.50                             | 20.63                                | 20.79                              |
| 1.4             | 16QAM      | 6          | 0            | 19.42                             | 19.22                                | 19.49                              |

**<LTE Band 7 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         |            |         |           | 20850                             | 21100                                | 21350                              |
| Frequency (MHz) |            |         |           | 2510                              | 2535                                 | 2560                               |
| 20              | QPSK       | 1       | 0         | 22.94                             | 22.99                                | 22.89                              |
| 20              | QPSK       | 1       | 49        | 22.84                             | 22.89                                | 22.81                              |
| 20              | QPSK       | 1       | 99        | 22.73                             | 22.73                                | 22.70                              |
| 20              | QPSK       | 50      | 0         | 21.74                             | 21.84                                | 21.72                              |
| 20              | QPSK       | 50      | 24        | 21.69                             | 21.73                                | 21.62                              |
| 20              | QPSK       | 50      | 49        | 21.70                             | 21.64                                | 21.60                              |
| 20              | QPSK       | 100     | 0         | 21.74                             | 21.85                                | 21.62                              |
| 20              | 16QAM      | 1       | 0         | 22.07                             | 22.43                                | 21.83                              |
| 20              | 16QAM      | 1       | 49        | 22.23                             | 22.40                                | 21.82                              |
| 20              | 16QAM      | 1       | 99        | 22.43                             | 22.28                                | 21.69                              |
| 20              | 16QAM      | 50      | 0         | 20.79                             | 20.77                                | 20.71                              |
| 20              | 16QAM      | 50      | 24        | 20.71                             | 20.73                                | 20.57                              |
| 20              | 16QAM      | 50      | 49        | 20.68                             | 20.74                                | 20.59                              |
| 20              | 16QAM      | 100     | 0         | 20.83                             | 20.81                                | 20.61                              |
| Channel         |            |         |           | 20825                             | 21100                                | 21375                              |
| Frequency (MHz) |            |         |           | 2507.5                            | 2535                                 | 2562.5                             |
| 15              | QPSK       | 1       | 0         | 22.97                             | 22.95                                | 22.83                              |
| 15              | QPSK       | 1       | 37        | 22.96                             | 22.81                                | 22.89                              |
| 15              | QPSK       | 1       | 74        | 22.87                             | 22.79                                | 22.82                              |
| 15              | QPSK       | 36      | 0         | 21.81                             | 21.71                                | 21.63                              |
| 15              | QPSK       | 36      | 18        | 21.50                             | 21.69                                | 21.62                              |
| 15              | QPSK       | 36      | 37        | 21.64                             | 21.65                                | 21.51                              |
| 15              | QPSK       | 75      | 0         | 21.56                             | 21.65                                | 21.59                              |
| 15              | 16QAM      | 1       | 0         | 22.03                             | 22.01                                | 21.81                              |
| 15              | 16QAM      | 1       | 37        | 21.97                             | 22.18                                | 21.89                              |
| 15              | 16QAM      | 1       | 74        | 22.15                             | 21.96                                | 21.69                              |
| 15              | 16QAM      | 36      | 0         | 20.78                             | 20.75                                | 20.57                              |
| 15              | 16QAM      | 36      | 18        | 20.69                             | 20.67                                | 20.71                              |
| 15              | 16QAM      | 36      | 37        | 20.56                             | 20.67                                | 20.64                              |
| 15              | 16QAM      | 75      | 0         | 20.70                             | 20.78                                | 20.55                              |



| BW<br>[MHz]     | Modulation | RB<br>Size | RB<br>Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|-----------------|------------|------------|--------------|-----------------------------------|--------------------------------------|------------------------------------|
| Channel         |            |            |              | 20800                             | 21100                                | 21400                              |
| Frequency (MHz) |            |            |              | 2505                              | 2535                                 | 2565                               |
| 10              | QPSK       | 1          | 0            | 22.91                             | 22.80                                | 22.77                              |
| 10              | QPSK       | 1          | 24           | 22.89                             | 22.82                                | 22.71                              |
| 10              | QPSK       | 1          | 49           | 22.69                             | 22.85                                | 22.61                              |
| 10              | QPSK       | 25         | 0            | 21.82                             | 21.70                                | 21.67                              |
| 10              | QPSK       | 25         | 12           | 21.78                             | 21.63                                | 21.56                              |
| 10              | QPSK       | 25         | 24           | 21.72                             | 21.66                                | 21.53                              |
| 10              | QPSK       | 50         | 0            | 21.70                             | 21.72                                | 21.60                              |
| 10              | 16QAM      | 1          | 0            | 22.49                             | 22.45                                | 21.90                              |
| 10              | 16QAM      | 1          | 24           | 22.47                             | 21.86                                | 21.87                              |
| 10              | 16QAM      | 1          | 49           | 22.37                             | 22.19                                | 21.78                              |
| 10              | 16QAM      | 25         | 0            | 20.77                             | 20.88                                | 20.68                              |
| 10              | 16QAM      | 25         | 12           | 20.91                             | 20.71                                | 20.65                              |
| 10              | 16QAM      | 25         | 24           | 20.71                             | 20.69                                | 20.57                              |
| 10              | 16QAM      | 50         | 0            | 20.70                             | 20.69                                | 20.58                              |
| Channel         |            |            |              | 20775                             | 21100                                | 21425                              |
| Frequency (MHz) |            |            |              | 2502.5                            | 2535                                 | 2567.5                             |
| 5               | QPSK       | 1          | 0            | 22.74                             | 22.64                                | 22.56                              |
| 5               | QPSK       | 1          | 12           | 22.68                             | 22.87                                | 22.92                              |
| 5               | QPSK       | 1          | 24           | 22.73                             | 22.65                                | 22.54                              |
| 5               | QPSK       | 12         | 0            | 21.80                             | 21.66                                | 21.56                              |
| 5               | QPSK       | 12         | 6            | 21.77                             | 21.71                                | 21.60                              |
| 5               | QPSK       | 12         | 11           | 21.86                             | 21.71                                | 21.57                              |
| 5               | QPSK       | 25         | 0            | 21.75                             | 21.59                                | 21.57                              |
| 5               | 16QAM      | 1          | 0            | 21.59                             | 21.96                                | 21.92                              |
| 5               | 16QAM      | 1          | 12           | 22.33                             | 21.97                                | 22.42                              |
| 5               | 16QAM      | 1          | 24           | 22.09                             | 22.07                                | 22.03                              |
| 5               | 16QAM      | 12         | 0            | 20.50                             | 20.85                                | 20.70                              |
| 5               | 16QAM      | 12         | 6            | 20.70                             | 20.70                                | 20.61                              |
| 5               | 16QAM      | 12         | 11           | 20.75                             | 20.88                                | 20.52                              |
| 5               | 16QAM      | 25         | 0            | 20.68                             | 20.75                                | 20.58                              |



**<Reduced Power Mode>:****<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         | 16.44                             | 16.69                                | 16.33                              |
| 20              | QPSK       | 1       | 49        | 16.18                             | 16.03                                | 15.99                              |
| 20              | QPSK       | 1       | 99        | 15.78                             | 16.40                                | 16.32                              |
| 20              | QPSK       | 50      | 0         | 15.90                             | 16.09                                | 15.95                              |
| 20              | QPSK       | 50      | 24        | 15.93                             | 16.14                                | 15.97                              |
| 20              | QPSK       | 50      | 49        | 15.92                             | 16.03                                | 15.92                              |
| 20              | QPSK       | 100     | 0         | 16.02                             | 16.12                                | 15.94                              |
| 20              | 16QAM      | 1       | 0         | 16.39                             | 16.16                                | 15.95                              |
| 20              | 16QAM      | 1       | 49        | 16.02                             | 16.19                                | 15.99                              |
| 20              | 16QAM      | 1       | 99        | 16.17                             | 16.13                                | 15.92                              |
| 20              | 16QAM      | 50      | 0         | 16.07                             | 16.12                                | 15.96                              |
| 20              | 16QAM      | 50      | 24        | 15.86                             | 16.16                                | 15.91                              |
| 20              | 16QAM      | 50      | 49        | 15.87                             | 16.07                                | 15.95                              |
| 20              | 16QAM      | 100     | 0         | 16.06                             | 16.03                                | 15.91                              |
| Channel         |            |         |           | 18675                             | 18900                                | 19125                              |
| Frequency (MHz) |            |         |           | 1857.5                            | 1880                                 | 1902.5                             |
| 15              | QPSK       | 1       | 0         | 16.00                             | 16.32                                | 16.16                              |
| 15              | QPSK       | 1       | 37        | 16.13                             | 16.24                                | 16.21                              |
| 15              | QPSK       | 1       | 74        | 15.95                             | 15.99                                | 16.31                              |
| 15              | QPSK       | 36      | 0         | 15.84                             | 15.96                                | 16.03                              |
| 15              | QPSK       | 36      | 18        | 15.80                             | 15.93                                | 15.98                              |
| 15              | QPSK       | 36      | 37        | 15.66                             | 15.95                                | 15.96                              |
| 15              | QPSK       | 75      | 0         | 15.88                             | 15.94                                | 15.98                              |
| 15              | 16QAM      | 1       | 0         | 16.37                             | 16.40                                | 16.33                              |
| 15              | 16QAM      | 1       | 37        | 16.51                             | 16.09                                | 16.08                              |
| 15              | 16QAM      | 1       | 74        | 15.93                             | 16.06                                | 16.14                              |
| 15              | 16QAM      | 36      | 0         | 15.82                             | 16.05                                | 16.02                              |
| 15              | 16QAM      | 36      | 18        | 15.87                             | 15.99                                | 16.01                              |
| 15              | 16QAM      | 36      | 37        | 15.82                             | 15.94                                | 15.85                              |
| 15              | 16QAM      | 75      | 0         | 15.89                             | 15.83                                | 16.05                              |



| BW<br>[MHz]     | Modulation | RB<br>Size | RB<br>Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|-----------------|------------|------------|--------------|-----------------------------------|--------------------------------------|------------------------------------|
| Channel         |            |            |              | 18650                             | 18900                                | 19150                              |
| Frequency (MHz) |            |            |              | 1855                              | 1880                                 | 1905                               |
| 10              | QPSK       | 1          | 0            | 16.25                             | 16.05                                | 16.27                              |
| 10              | QPSK       | 1          | 24           | 15.93                             | 16.22                                | 16.21                              |
| 10              | QPSK       | 1          | 49           | 15.83                             | 15.87                                | 16.18                              |
| 10              | QPSK       | 25         | 0            | 15.82                             | 15.99                                | 16.03                              |
| 10              | QPSK       | 25         | 12           | 15.85                             | 16.02                                | 16.03                              |
| 10              | QPSK       | 25         | 24           | 15.85                             | 16.00                                | 16.06                              |
| 10              | QPSK       | 50         | 0            | 15.81                             | 15.95                                | 16.11                              |
| 10              | 16QAM      | 1          | 0            | 16.66                             | 15.88                                | 16.63                              |
| 10              | 16QAM      | 1          | 24           | 16.18                             | 16.21                                | 16.58                              |
| 10              | 16QAM      | 1          | 49           | 16.68                             | 16.64                                | 16.47                              |
| 10              | 16QAM      | 25         | 0            | 15.79                             | 15.98                                | 16.00                              |
| 10              | 16QAM      | 25         | 12           | 15.91                             | 16.01                                | 15.91                              |
| 10              | 16QAM      | 25         | 24           | 15.84                             | 15.93                                | 16.14                              |
| 10              | 16QAM      | 50         | 0            | 15.87                             | 15.95                                | 16.06                              |
| Channel         |            |            |              | 18625                             | 18900                                | 19175                              |
| Frequency (MHz) |            |            |              | 1852.5                            | 1880                                 | 1907.5                             |
| 5               | QPSK       | 1          | 0            | 15.84                             | 16.10                                | 16.11                              |
| 5               | QPSK       | 1          | 12           | 16.17                             | 16.17                                | 16.41                              |
| 5               | QPSK       | 1          | 24           | 15.83                             | 15.80                                | 16.14                              |
| 5               | QPSK       | 12         | 0            | 15.76                             | 15.96                                | 15.99                              |
| 5               | QPSK       | 12         | 6            | 15.81                             | 15.96                                | 16.01                              |
| 5               | QPSK       | 12         | 11           | 15.85                             | 15.93                                | 15.99                              |
| 5               | QPSK       | 25         | 0            | 15.76                             | 15.91                                | 16.07                              |
| 5               | 16QAM      | 1          | 0            | 16.20                             | 16.13                                | 16.57                              |
| 5               | 16QAM      | 1          | 12           | 16.57                             | 16.52                                | 16.62                              |
| 5               | 16QAM      | 1          | 24           | 16.03                             | 16.32                                | 15.83                              |
| 5               | 16QAM      | 12         | 0            | 15.63                             | 16.05                                | 15.80                              |
| 5               | 16QAM      | 12         | 6            | 15.80                             | 15.95                                | 15.99                              |
| 5               | 16QAM      | 12         | 11           | 15.76                             | 15.98                                | 16.14                              |
| 5               | 16QAM      | 25         | 0            | 15.81                             | 15.89                                | 16.04                              |



| BW<br>[MHz]     | Modulation | RB<br>Size | RB<br>Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|-----------------|------------|------------|--------------|-----------------------------------|--------------------------------------|------------------------------------|
| Channel         |            |            |              | 18615                             | 18900                                | 19185                              |
| Frequency (MHz) |            |            |              | 1851.5                            | 1880                                 | 1908.5                             |
| 3               | QPSK       | 1          | 0            | 15.26                             | 15.34                                | 15.20                              |
| 3               | QPSK       | 1          | 7            | 15.15                             | 15.25                                | 15.35                              |
| 3               | QPSK       | 1          | 14           | 15.09                             | 15.26                                | 15.17                              |
| 3               | QPSK       | 8          | 0            | 15.30                             | 15.44                                | 15.21                              |
| 3               | QPSK       | 8          | 4            | 15.29                             | 15.39                                | 15.27                              |
| 3               | QPSK       | 8          | 7            | 15.28                             | 15.37                                | 15.29                              |
| 3               | QPSK       | 15         | 0            | 15.29                             | 15.41                                | 15.25                              |
| 3               | 16QAM      | 1          | 0            | 15.85                             | 15.95                                | 15.08                              |
| 3               | 16QAM      | 1          | 7            | 15.01                             | 15.64                                | 15.37                              |
| 3               | 16QAM      | 1          | 14           | 15.24                             | 15.77                                | 15.89                              |
| 3               | 16QAM      | 8          | 0            | 15.50                             | 15.29                                | 15.47                              |
| 3               | 16QAM      | 8          | 4            | 15.42                             | 15.46                                | 15.54                              |
| 3               | 16QAM      | 8          | 7            | 15.50                             | 15.69                                | 15.20                              |
| 3               | 16QAM      | 15         | 0            | 15.37                             | 15.40                                | 15.07                              |
| Channel         |            |            |              | 18607                             | 18900                                | 19193                              |
| Frequency (MHz) |            |            |              | 1850.7                            | 1880                                 | 1909.3                             |
| 1.4             | QPSK       | 1          | 0            | 15.00                             | 15.23                                | 15.14                              |
| 1.4             | QPSK       | 1          | 2            | 15.05                             | 15.37                                | 15.47                              |
| 1.4             | QPSK       | 1          | 5            | 15.12                             | 15.41                                | 15.23                              |
| 1.4             | QPSK       | 3          | 0            | 15.34                             | 15.43                                | 15.42                              |
| 1.4             | QPSK       | 3          | 1            | 15.27                             | 15.66                                | 15.45                              |
| 1.4             | QPSK       | 3          | 2            | 15.28                             | 15.38                                | 15.32                              |
| 1.4             | QPSK       | 6          | 0            | 15.26                             | 15.36                                | 15.29                              |
| 1.4             | 16QAM      | 1          | 0            | 15.08                             | 15.45                                | 15.39                              |
| 1.4             | 16QAM      | 1          | 2            | 15.11                             | 15.52                                | 15.21                              |
| 1.4             | 16QAM      | 1          | 5            | 15.18                             | 15.10                                | 15.12                              |
| 1.4             | 16QAM      | 3          | 0            | 15.02                             | 15.74                                | 15.35                              |
| 1.4             | 16QAM      | 3          | 1            | 15.11                             | 15.80                                | 15.44                              |
| 1.4             | 16QAM      | 3          | 2            | 15.02                             | 15.53                                | 15.43                              |
| 1.4             | 16QAM      | 6          | 0            | 15.13                             | 15.13                                | 15.02                              |

**<LTE Band 4 Conducted Power>**

| BW<br>[MHz]     | Modulation | RB<br>Size | RB<br>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            | 17.76                             | 17.81                                | 17.67                              |
| 20              | QPSK       | 1          | 49           | 17.65                             | 17.14                                | 17.46                              |
| 20              | QPSK       | 1          | 99           | 17.68                             | 17.24                                | 17.14                              |
| 20              | QPSK       | 50         | 0            | 17.39                             | 17.65                                | 17.35                              |
| 20              | QPSK       | 50         | 24           | 17.19                             | 17.16                                | 17.01                              |
| 20              | QPSK       | 50         | 49           | 17.21                             | 17.15                                | 17.10                              |
| 20              | QPSK       | 100        | 0            | 17.20                             | 17.31                                | 17.04                              |
| 20              | 16QAM      | 1          | 0            | 17.51                             | 17.50                                | 17.29                              |
| 20              | 16QAM      | 1          | 49           | 17.58                             | 17.54                                | 17.26                              |
| 20              | 16QAM      | 1          | 99           | 17.33                             | 17.53                                | 17.02                              |
| 20              | 16QAM      | 50         | 0            | 17.34                             | 17.13                                | 17.11                              |
| 20              | 16QAM      | 50         | 24           | 17.27                             | 17.13                                | 17.06                              |
| 20              | 16QAM      | 50         | 49           | 17.22                             | 17.12                                | 17.09                              |
| 20              | 16QAM      | 100        | 0            | 17.32                             | 17.16                                | 17.01                              |
| Channel         |            |            |              | 20025                             | 20175                                | 20325                              |
| Frequency (MHz) |            |            |              | 1717.5                            | 1732.5                               | 1747.5                             |
| 15              | QPSK       | 1          | 0            | 17.38                             | 17.36                                | 17.15                              |
| 15              | QPSK       | 1          | 37           | 17.34                             | 17.45                                | 17.47                              |
| 15              | QPSK       | 1          | 74           | 17.22                             | 16.94                                | 16.78                              |
| 15              | QPSK       | 36         | 0            | 17.20                             | 17.20                                | 16.89                              |
| 15              | QPSK       | 36         | 18           | 17.06                             | 17.20                                | 16.93                              |
| 15              | QPSK       | 36         | 37           | 16.95                             | 17.04                                | 16.97                              |
| 15              | QPSK       | 75         | 0            | 17.04                             | 17.17                                | 16.88                              |
| 15              | 16QAM      | 1          | 0            | 17.58                             | 17.79                                | 17.11                              |
| 15              | 16QAM      | 1          | 37           | 17.59                             | 17.40                                | 17.41                              |
| 15              | 16QAM      | 1          | 74           | 17.24                             | 17.39                                | 17.01                              |
| 15              | 16QAM      | 36         | 0            | 17.12                             | 17.23                                | 16.98                              |
| 15              | 16QAM      | 36         | 18           | 17.15                             | 17.17                                | 17.00                              |
| 15              | 16QAM      | 36         | 37           | 17.01                             | 17.00                                | 16.99                              |
| 15              | 16QAM      | 75         | 0            | 17.01                             | 17.15                                | 16.87                              |



| 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         |            |         |           | 20000                             | 20175                                | 20350                              |
| Frequency (MHz) |            |         |           | 1715                              | 1732.5                               | 1750                               |
| 10              | QPSK       | 1       | 0         | 17.24                             | 17.35                                | 17.35                              |
| 10              | QPSK       | 1       | 24        | 17.35                             | 17.23                                | 17.15                              |
| 10              | QPSK       | 1       | 49        | 17.21                             | 17.12                                | 16.90                              |
| 10              | QPSK       | 25      | 0         | 17.05                             | 17.19                                | 17.01                              |
| 10              | QPSK       | 25      | 12        | 17.04                             | 17.23                                | 17.08                              |
| 10              | QPSK       | 25      | 24        | 17.02                             | 16.99                                | 17.00                              |
| 10              | QPSK       | 50      | 0         | 17.11                             | 17.17                                | 17.05                              |
| 10              | 16QAM      | 1       | 0         | 17.31                             | 17.31                                | 17.50                              |
| 10              | 16QAM      | 1       | 24        | 17.64                             | 17.62                                | 17.21                              |
| 10              | 16QAM      | 1       | 49        | 17.50                             | 17.21                                | 16.81                              |
| 10              | 16QAM      | 25      | 0         | 17.11                             | 17.05                                | 17.06                              |
| 10              | 16QAM      | 25      | 12        | 17.03                             | 17.09                                | 17.13                              |
| 10              | 16QAM      | 25      | 24        | 17.00                             | 17.10                                | 16.92                              |
| 10              | 16QAM      | 50      | 0         | 17.10                             | 17.20                                | 17.08                              |
| Channel         |            |         |           | 19975                             | 20175                                | 20375                              |
| Frequency (MHz) |            |         |           | 1712.5                            | 1732.5                               | 1752.5                             |
| 5               | QPSK       | 1       | 0         | 17.04                             | 17.32                                | 17.05                              |
| 5               | QPSK       | 1       | 12        | 17.27                             | 17.35                                | 17.28                              |
| 5               | QPSK       | 1       | 24        | 16.98                             | 17.10                                | 16.73                              |
| 5               | QPSK       | 12      | 0         | 16.98                             | 17.12                                | 17.03                              |
| 5               | QPSK       | 12      | 6         | 16.98                             | 17.15                                | 17.00                              |
| 5               | QPSK       | 12      | 11        | 16.92                             | 17.11                                | 16.92                              |
| 5               | QPSK       | 25      | 0         | 17.02                             | 17.09                                | 16.90                              |
| 5               | 16QAM      | 1       | 0         | 17.22                             | 17.38                                | 17.23                              |
| 5               | 16QAM      | 1       | 12        | 17.74                             | 17.24                                | 17.65                              |
| 5               | 16QAM      | 1       | 24        | 17.16                             | 17.33                                | 17.64                              |
| 5               | 16QAM      | 12      | 0         | 17.20                             | 17.33                                | 17.12                              |
| 5               | 16QAM      | 12      | 6         | 16.96                             | 17.24                                | 17.13                              |
| 5               | 16QAM      | 12      | 11        | 17.04                             | 17.29                                | 16.67                              |
| 5               | 16QAM      | 25      | 0         | 17.14                             | 17.19                                | 16.97                              |



| BW<br>[MHz]     | Modulation | RB<br>Size | RB<br>Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|-----------------|------------|------------|--------------|-----------------------------------|--------------------------------------|------------------------------------|
| Channel         |            |            |              | 19965                             | 20175                                | 20385                              |
| Frequency (MHz) |            |            |              | 1711.5                            | 1732.5                               | 1753.5                             |
| 3               | QPSK       | 1          | 0            | 16.58                             | 16.56                                | 16.36                              |
| 3               | QPSK       | 1          | 7            | 16.54                             | 16.53                                | 16.41                              |
| 3               | QPSK       | 1          | 14           | 16.51                             | 16.44                                | 16.24                              |
| 3               | QPSK       | 8          | 0            | 16.61                             | 16.69                                | 16.56                              |
| 3               | QPSK       | 8          | 4            | 16.58                             | 16.77                                | 16.44                              |
| 3               | QPSK       | 8          | 7            | 16.54                             | 16.64                                | 16.44                              |
| 3               | QPSK       | 15         | 0            | 16.57                             | 16.65                                | 16.46                              |
| 3               | 16QAM      | 1          | 0            | 16.80                             | 16.96                                | 16.31                              |
| 3               | 16QAM      | 1          | 7            | 16.96                             | 17.07                                | 16.23                              |
| 3               | 16QAM      | 1          | 14           | 17.18                             | 16.91                                | 16.11                              |
| 3               | 16QAM      | 8          | 0            | 16.49                             | 16.89                                | 16.80                              |
| 3               | 16QAM      | 8          | 4            | 16.58                             | 16.70                                | 16.61                              |
| 3               | 16QAM      | 8          | 7            | 16.54                             | 16.55                                | 16.62                              |
| 3               | 16QAM      | 15         | 0            | 16.66                             | 16.53                                | 16.54                              |
| Channel         |            |            |              | 19957                             | 20175                                | 20393                              |
| Frequency (MHz) |            |            |              | 1710.7                            | 1732.5                               | 1754.3                             |
| 1.4             | QPSK       | 1          | 0            | 16.66                             | 16.69                                | 16.39                              |
| 1.4             | QPSK       | 1          | 2            | 16.63                             | 16.77                                | 16.51                              |
| 1.4             | QPSK       | 1          | 5            | 16.60                             | 16.49                                | 16.29                              |
| 1.4             | QPSK       | 3          | 0            | 16.71                             | 16.63                                | 16.37                              |
| 1.4             | QPSK       | 3          | 1            | 16.82                             | 16.68                                | 16.51                              |
| 1.4             | QPSK       | 3          | 2            | 16.54                             | 16.70                                | 16.63                              |
| 1.4             | QPSK       | 6          | 0            | 16.67                             | 16.75                                | 16.46                              |
| 1.4             | 16QAM      | 1          | 0            | 16.70                             | 16.95                                | 16.51                              |
| 1.4             | 16QAM      | 1          | 2            | 16.62                             | 16.83                                | 16.42                              |
| 1.4             | 16QAM      | 1          | 5            | 16.78                             | 16.90                                | 16.69                              |
| 1.4             | 16QAM      | 3          | 0            | 16.94                             | 16.81                                | 16.54                              |
| 1.4             | 16QAM      | 3          | 1            | 16.98                             | 17.20                                | 16.66                              |
| 1.4             | 16QAM      | 3          | 2            | 16.96                             | 16.97                                | 16.63                              |
| 1.4             | 16QAM      | 6          | 0            | 16.53                             | 16.67                                | 16.12                              |



## &lt;LTE Band 7 Conducted Power&gt;

| 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         |            |         |           | 20850                             | 21100                                | 21350                              |
| Frequency (MHz) |            |         |           | 2510                              | 2535                                 | 2560                               |
| 20              | QPSK       | 1       | 0         | 14.89                             | 14.96                                | 14.92                              |
| 20              | QPSK       | 1       | 49        | 14.46                             | 14.44                                | 14.44                              |
| 20              | QPSK       | 1       | 99        | 14.43                             | 14.44                                | 14.43                              |
| 20              | QPSK       | 50      | 0         | 14.38                             | 14.53                                | 14.44                              |
| 20              | QPSK       | 50      | 24        | 14.27                             | 14.44                                | 14.32                              |
| 20              | QPSK       | 50      | 49        | 14.35                             | 14.36                                | 14.24                              |
| 20              | QPSK       | 100     | 0         | 14.38                             | 14.41                                | 14.38                              |
| 20              | 16QAM      | 1       | 0         | 14.88                             | 14.68                                | 14.61                              |
| 20              | 16QAM      | 1       | 49        | 14.82                             | 14.66                                | 14.59                              |
| 20              | 16QAM      | 1       | 99        | 14.65                             | 14.47                                | 14.45                              |
| 20              | 16QAM      | 50      | 0         | 14.41                             | 14.43                                | 14.52                              |
| 20              | 16QAM      | 50      | 24        | 14.20                             | 14.43                                | 14.26                              |
| 20              | 16QAM      | 50      | 49        | 14.29                             | 14.45                                | 14.29                              |
| 20              | 16QAM      | 100     | 0         | 14.42                             | 14.46                                | 14.30                              |
| Channel         |            |         |           | 20825                             | 21100                                | 21375                              |
| Frequency (MHz) |            |         |           | 2507.5                            | 2535                                 | 2562.5                             |
| 15              | QPSK       | 1       | 0         | 14.59                             | 14.57                                | 14.49                              |
| 15              | QPSK       | 1       | 37        | 14.71                             | 14.65                                | 14.54                              |
| 15              | QPSK       | 1       | 74        | 14.39                             | 14.47                                | 14.26                              |
| 15              | QPSK       | 36      | 0         | 14.35                             | 14.53                                | 14.37                              |
| 15              | QPSK       | 36      | 18        | 14.36                             | 14.47                                | 14.37                              |
| 15              | QPSK       | 36      | 37        | 14.21                             | 14.44                                | 14.21                              |
| 15              | QPSK       | 75      | 0         | 14.23                             | 14.48                                | 14.29                              |
| 15              | 16QAM      | 1       | 0         | 14.42                             | 14.78                                | 14.83                              |
| 15              | 16QAM      | 1       | 37        | 14.95                             | 14.72                                | 14.62                              |
| 15              | 16QAM      | 1       | 74        | 14.88                             | 14.58                                | 14.59                              |
| 15              | 16QAM      | 36      | 0         | 14.41                             | 14.60                                | 14.35                              |
| 15              | 16QAM      | 36      | 18        | 14.32                             | 14.50                                | 14.39                              |
| 15              | 16QAM      | 36      | 37        | 14.23                             | 14.46                                | 14.22                              |
| 15              | 16QAM      | 75      | 0         | 14.27                             | 14.52                                | 14.25                              |



| 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         |            |         |           | 20800                             | 21100                                | 21400                              |
| Frequency (MHz) |            |         |           | 2505                              | 2535                                 | 2565                               |
| 10              | QPSK       | 1       | 0         | 14.64                             | 14.71                                | 14.68                              |
| 10              | QPSK       | 1       | 24        | 14.77                             | 14.65                                | 14.38                              |
| 10              | QPSK       | 1       | 49        | 14.42                             | 14.69                                | 14.47                              |
| 10              | QPSK       | 25      | 0         | 14.54                             | 14.53                                | 14.53                              |
| 10              | QPSK       | 25      | 12        | 14.59                             | 14.44                                | 14.33                              |
| 10              | QPSK       | 25      | 24        | 14.50                             | 14.43                                | 14.28                              |
| 10              | QPSK       | 50      | 0         | 14.34                             | 14.52                                | 14.39                              |
| 10              | 16QAM      | 1       | 0         | 14.81                             | 14.60                                | 14.69                              |
| 10              | 16QAM      | 1       | 24        | 14.58                             | 14.65                                | 14.68                              |
| 10              | 16QAM      | 1       | 49        | 14.41                             | 14.66                                | 14.61                              |
| 10              | 16QAM      | 25      | 0         | 14.50                             | 14.61                                | 14.51                              |
| 10              | 16QAM      | 25      | 12        | 14.67                             | 14.57                                | 14.38                              |
| 10              | 16QAM      | 25      | 24        | 14.43                             | 14.49                                | 14.28                              |
| 10              | 16QAM      | 50      | 0         | 14.45                             | 14.56                                | 14.43                              |
| Channel         |            |         |           | 20775                             | 21100                                | 21425                              |
| Frequency (MHz) |            |         |           | 2502.5                            | 2535                                 | 2567.5                             |
| 5               | QPSK       | 1       | 0         | 14.43                             | 14.55                                | 14.43                              |
| 5               | QPSK       | 1       | 12        | 14.63                             | 14.58                                | 14.64                              |
| 5               | QPSK       | 1       | 24        | 14.43                             | 14.45                                | 14.36                              |
| 5               | QPSK       | 12      | 0         | 14.48                             | 14.55                                | 14.39                              |
| 5               | QPSK       | 12      | 6         | 14.47                             | 14.45                                | 14.28                              |
| 5               | QPSK       | 12      | 11        | 14.55                             | 14.44                                | 14.25                              |
| 5               | QPSK       | 25      | 0         | 14.45                             | 14.48                                | 14.32                              |
| 5               | 16QAM      | 1       | 0         | 14.93                             | 14.86                                | 14.51                              |
| 5               | 16QAM      | 1       | 12        | 14.91                             | 14.62                                | 14.55                              |
| 5               | 16QAM      | 1       | 24        | 14.90                             | 14.63                                | 14.43                              |
| 5               | 16QAM      | 12      | 0         | 14.81                             | 14.54                                | 14.29                              |
| 5               | 16QAM      | 12      | 6         | 14.49                             | 14.48                                | 14.32                              |
| 5               | 16QAM      | 12      | 11        | 14.56                             | 14.30                                | 14.11                              |
| 5               | 16QAM      | 25      | 0         | 14.38                             | 14.53                                | 14.35                              |

**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.

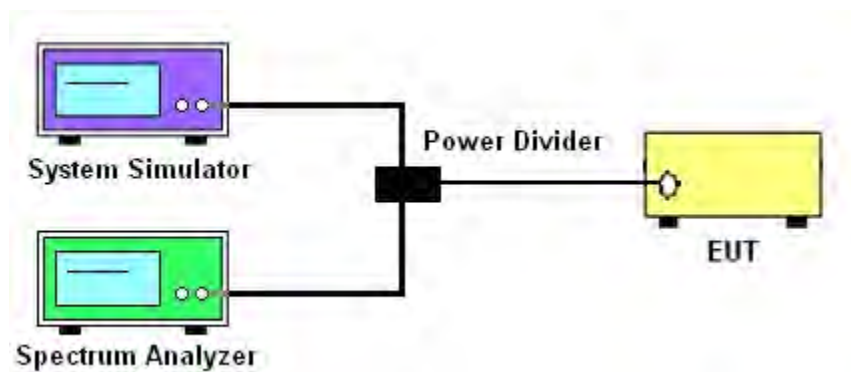
### **3.2.2 Measuring Instruments**

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 and system simulator via a power divider.
2. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
3. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
4. 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 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              | QPSK       | 1       | 0         | 3.68                              | 3.54                                 | 4.17                               |
| 20              | QPSK       | 100     | 0         | 4.87                              | 4.38                                 | 4.61                               |
| 20              | 16QAM      | 1       | 0         | 4.26                              | 4.75                                 | 4.58                               |
| 20              | 16QAM      | 100     | 0         | 5.86                              | 5.45                                 | 5.83                               |

| 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              | QPSK       | 1       | 0         | 3.68                              | 4.75                                 | 4.49                               |
| 20              | QPSK       | 100     | 0         | 5.01                              | 4.90                                 | 4.81                               |
| 20              | 16QAM      | 1       | 0         | 4.58                              | 5.33                                 | 5.25                               |
| 20              | 16QAM      | 100     | 0         | 5.91                              | 6.00                                 | 5.77                               |

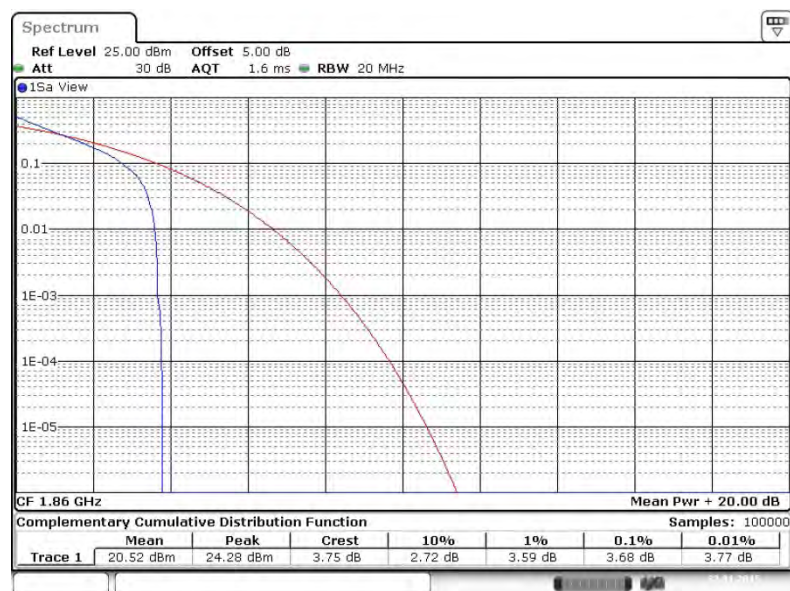
| LTE Band 7      |            |         |           |                                   |                                      |                                    |
|-----------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| 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         |            |         |           | 20850                             | 21100                                | 21350                              |
| Frequency (MHz) |            |         |           | 2510                              | 2535                                 | 2560                               |
| 20              | QPSK       | 1       | 0         | 3.25                              | 3.74                                 | 3.10                               |
| 20              | QPSK       | 100     | 0         | 4.35                              | 4.41                                 | 4.35                               |
| 20              | 16QAM      | 1       | 0         | 4.20                              | 4.14                                 | 3.74                               |
| 20              | 16QAM      | 100     | 0         | 5.16                              | 5.22                                 | 5.25                               |



### 3.2.7 Peak to Average Power Ratio

#### Peak-to-Average Ratio on LTE Band 2

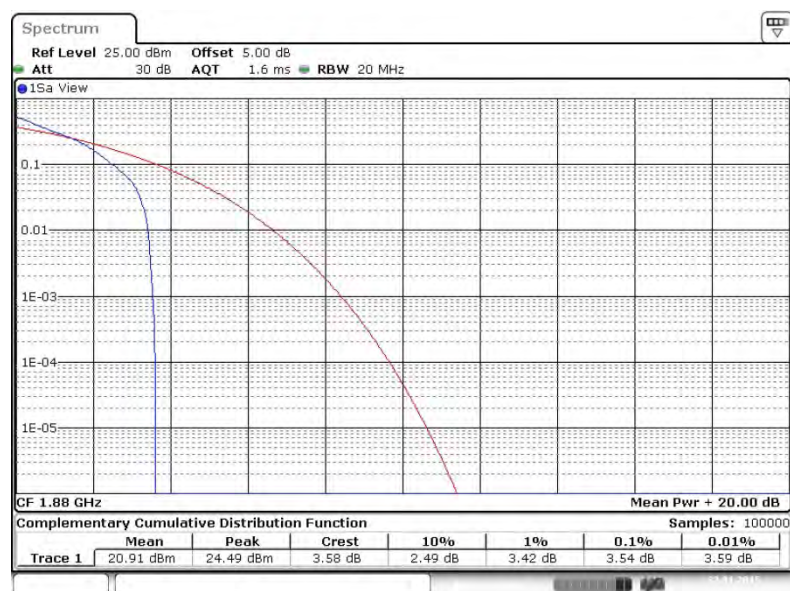
20MHz / QPSK in Ch. 18700 (1RB Size)



Date: 22.JAN.2015 13:09:47

#### Peak-to-Average Ratio on LTE Band 2

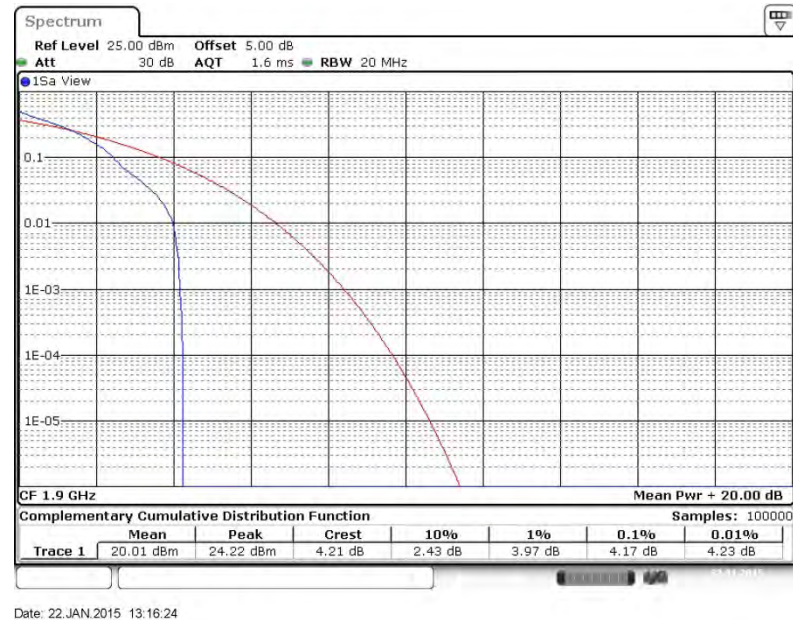
20MHz / QPSK in Ch. 18900 (1RB Size)



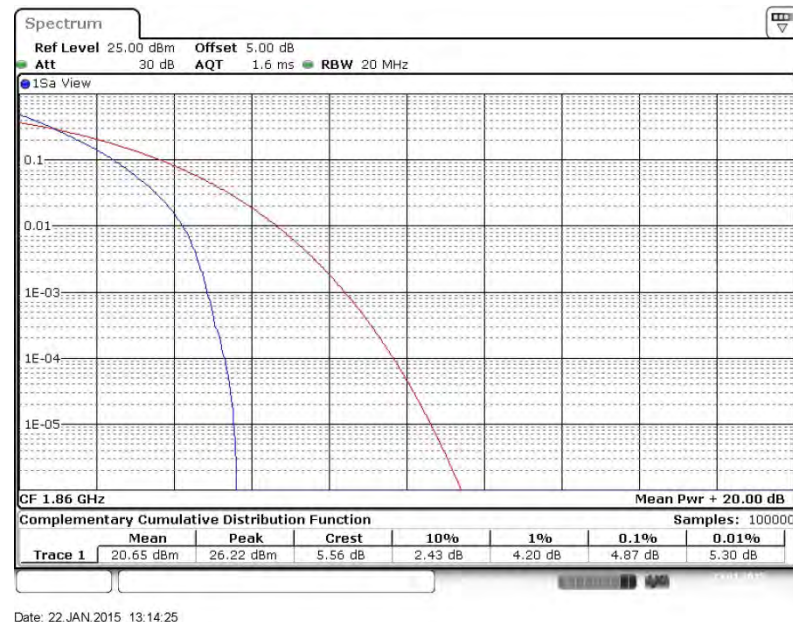
Date: 22.JAN.2015 13:15:19



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



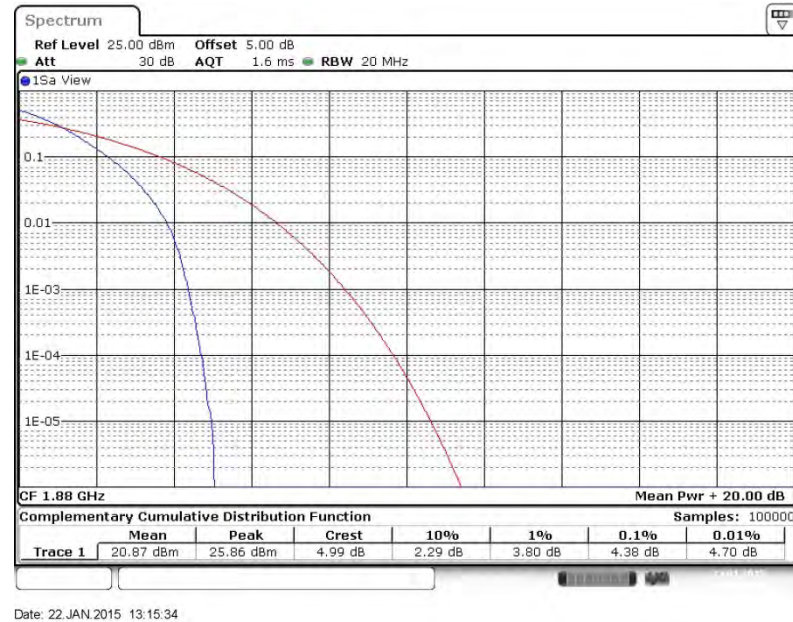
Peak-to-Average Ratio on LTE Band 2  
20MHz / QPSK in Ch. 18700 (100RB Size)



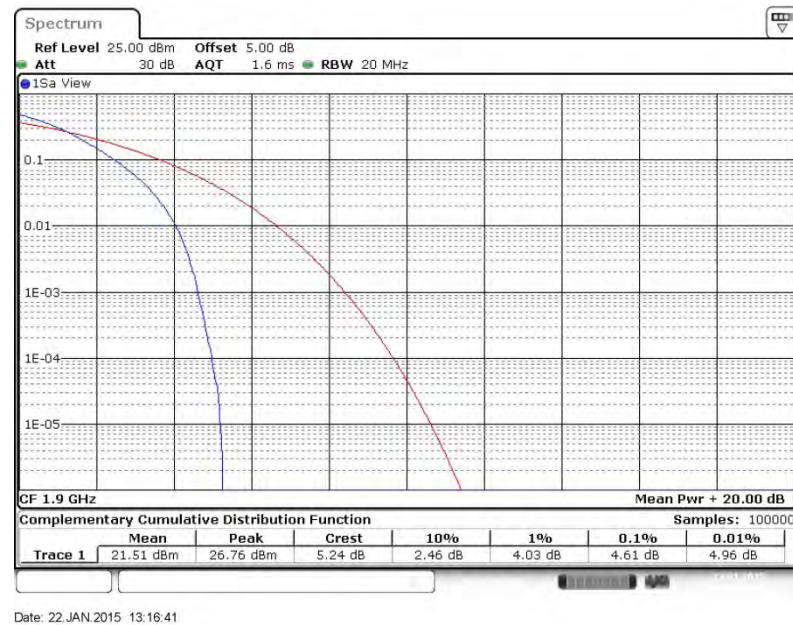




Peak-to-Average Ratio on LTE Band 2  
20MHz / QPSK in Ch. 18900 (100RB Size)

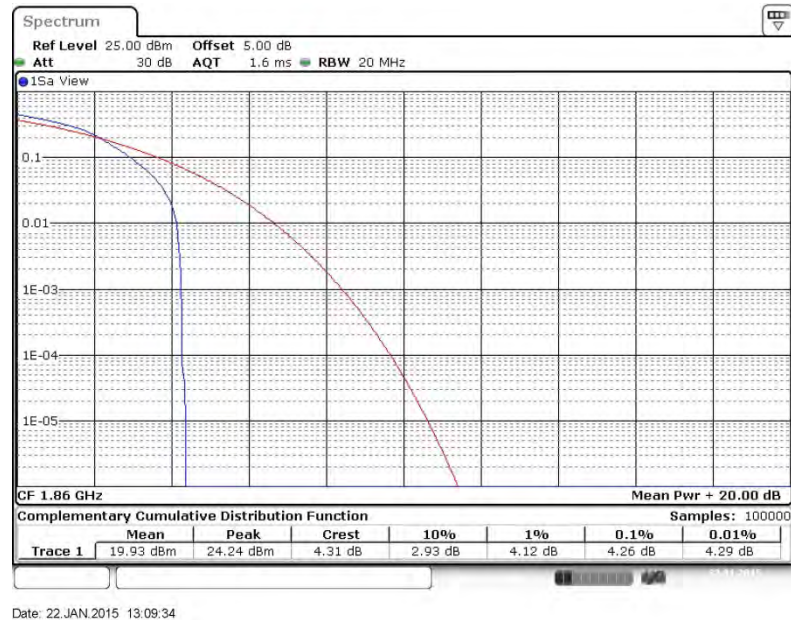


Peak-to-Average Ratio on LTE Band 2  
20MHz / QPSK in Ch. 19100 (100RB Size)





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



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

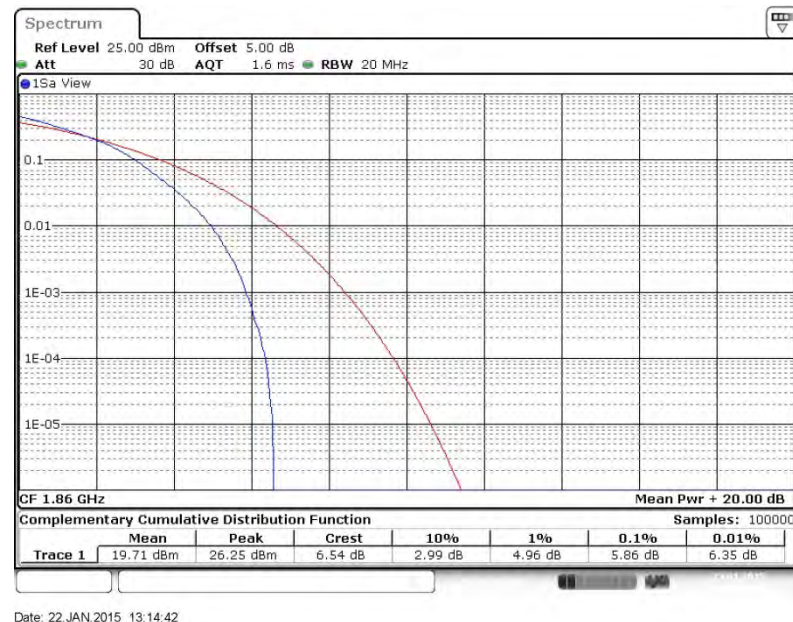




Peak-to-Average Ratio on LTE Band 2  
20MHz / 16QAM in Ch. 19100 (1RB Size)



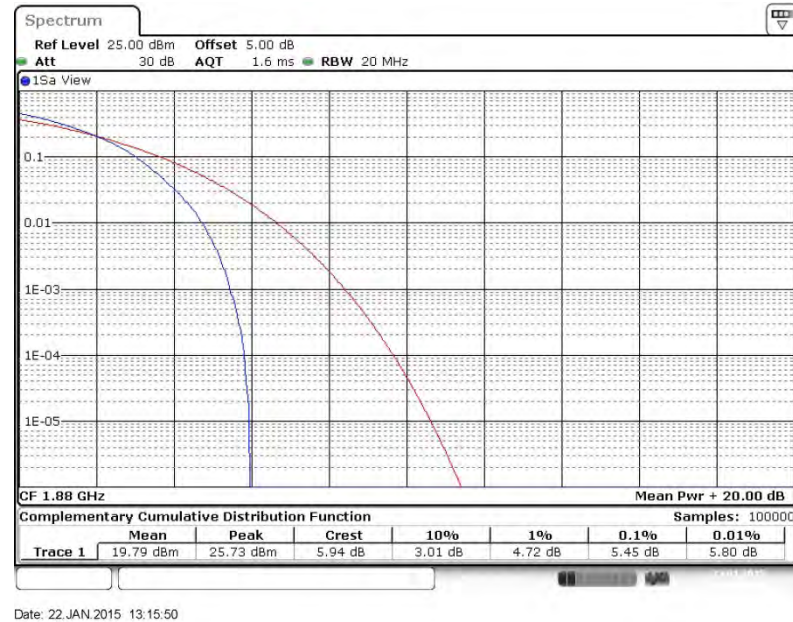
Peak-to-Average Ratio on LTE Band 2  
20MHz / 16QAM in Ch. 18700 (100RB Size)



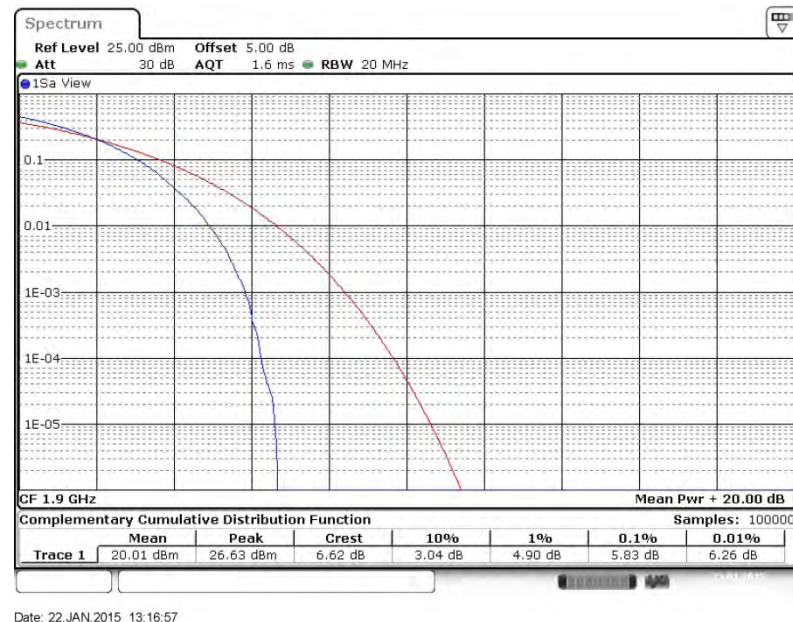




Peak-to-Average Ratio on LTE Band 2  
20MHz / 16QAM in Ch. 18900 (100RB Size)



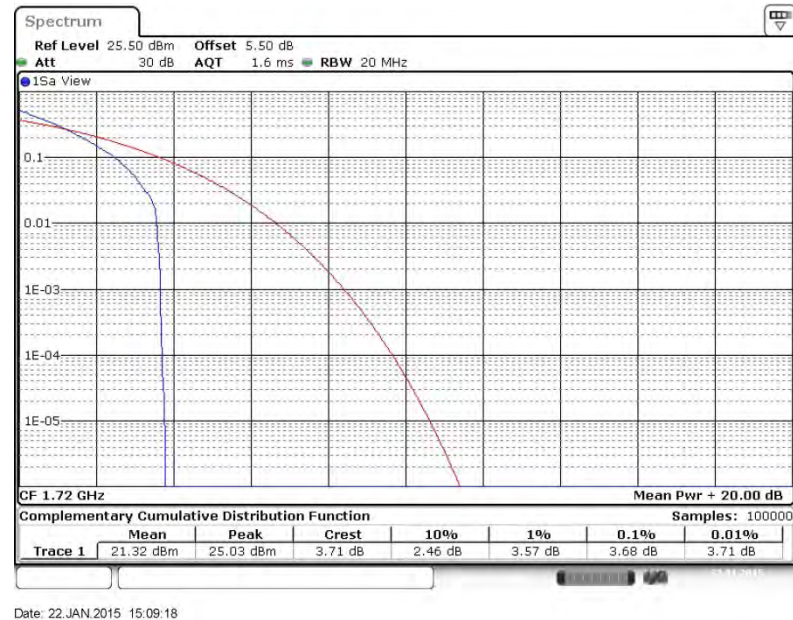
Peak-to-Average Ratio on LTE Band 2  
20MHz / 16QAM in Ch. 19100 (100RB Size)







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



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





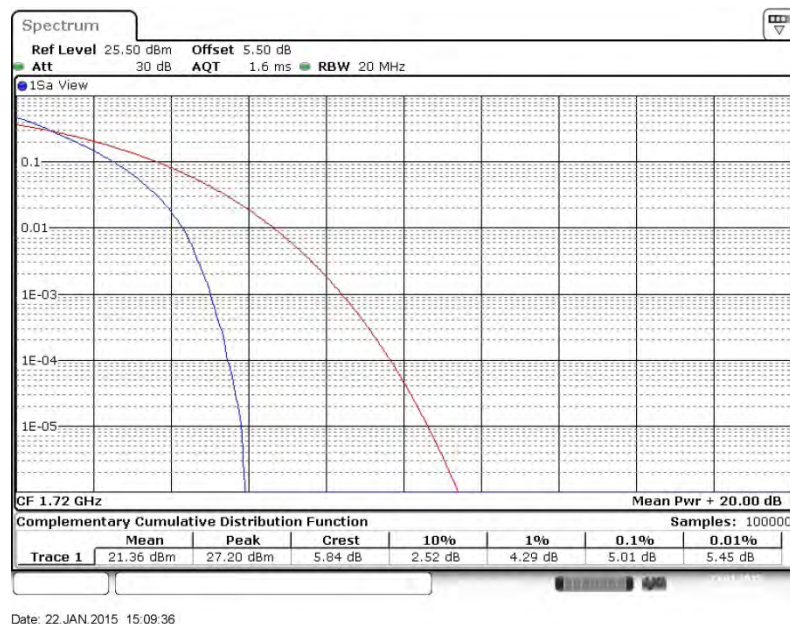
Peak-to-Average Ratio on LTE Band 4

20MHz / QPSK in Ch. 20300 (1RB Size)



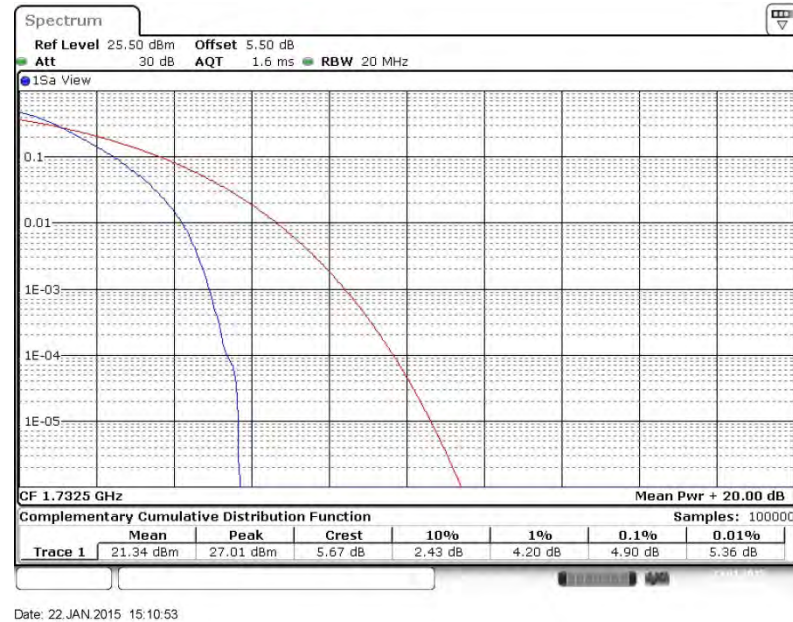
Peak-to-Average Ratio on LTE Band 4

20MHz / QPSK in Ch. 20500 (100RB Size)

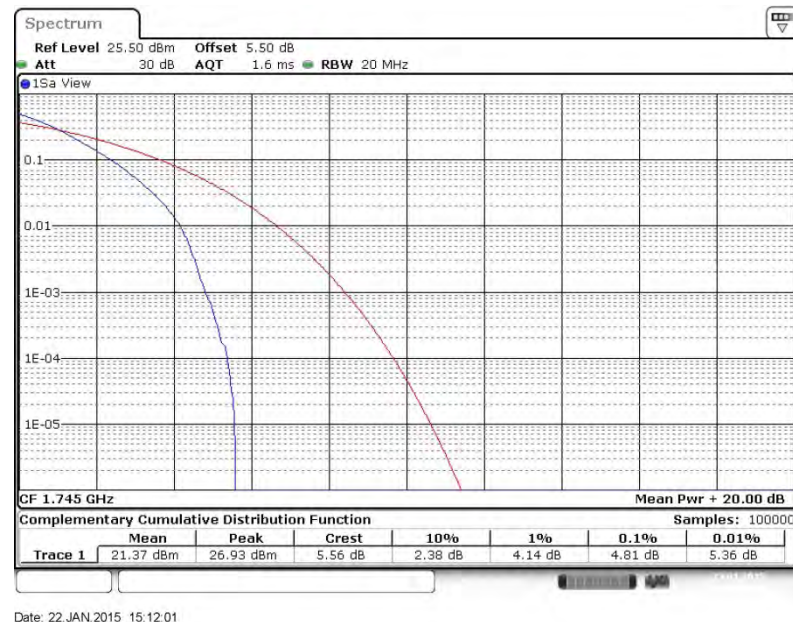




Peak-to-Average Ratio on LTE Band 4  
20MHz / QPSK in Ch. 20175 (100RB Size)

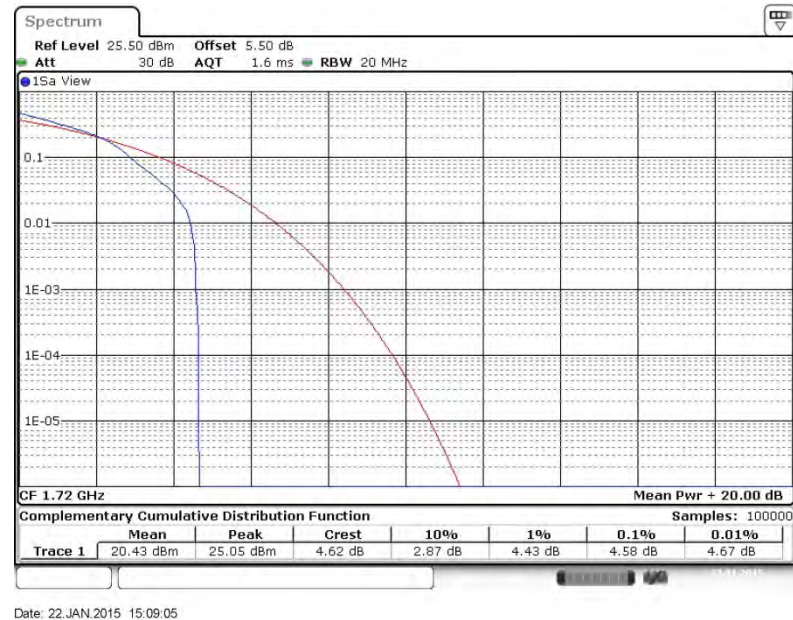


Peak-to-Average Ratio on LTE Band 4  
20MHz / QPSK in Ch. 20300 (100RB Size)





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

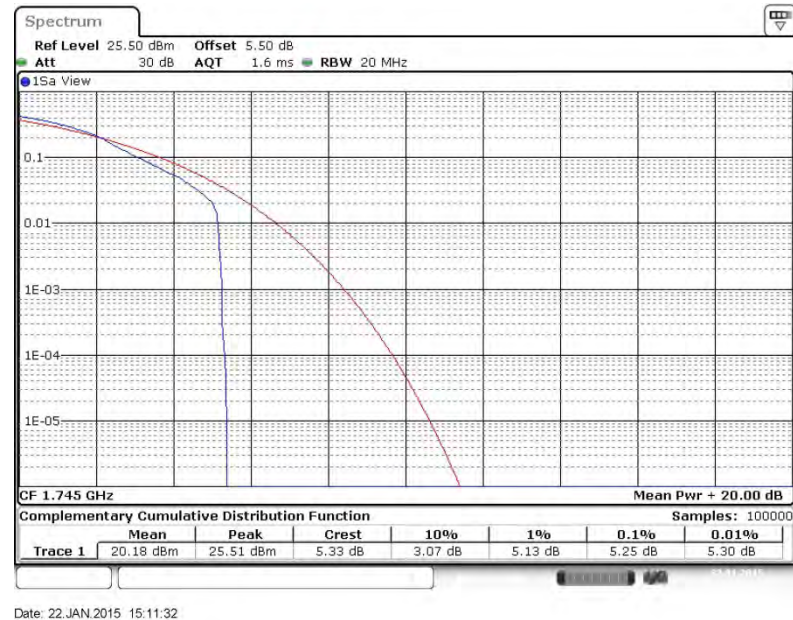


**Peak-to-Average Ratio on LTE Band 4**  
**20MHz / 16QAM in Ch. 20175 (1RB Size)**

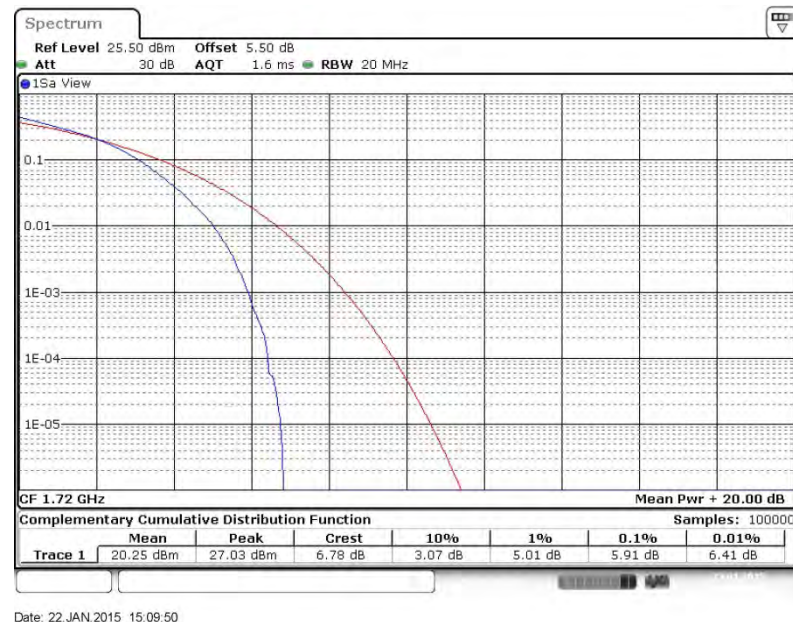




Peak-to-Average Ratio on LTE Band 4  
20MHz / 16QAM in Ch. 20300 (1RB Size)

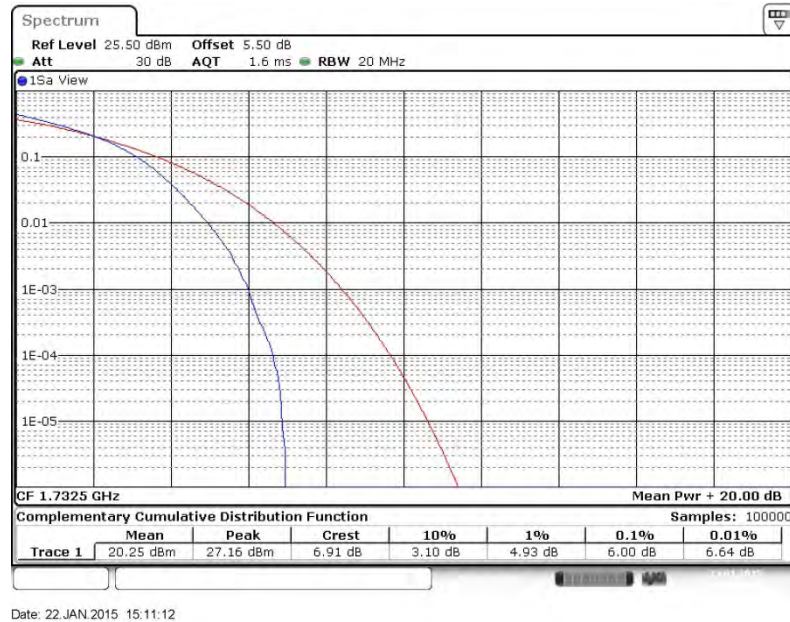


Peak-to-Average Ratio on LTE Band 4  
20MHz / 16QAM in Ch. 20500 (100RB Size)

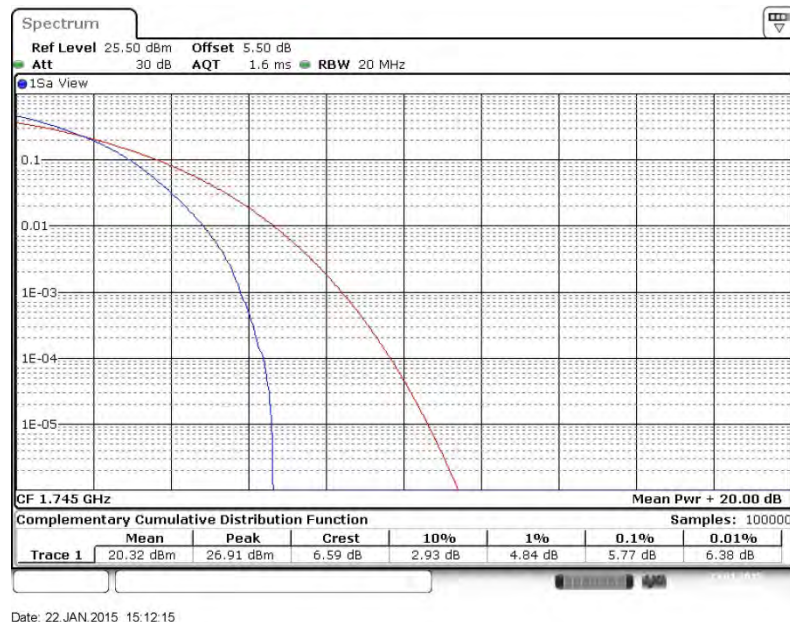




Peak-to-Average Ratio on LTE Band 4  
20MHz / 16QAM in Ch. 20175 (100RB Size)



Peak-to-Average Ratio on LTE Band 4  
20MHz / 16QAM in Ch. 20300 (100RB Size)

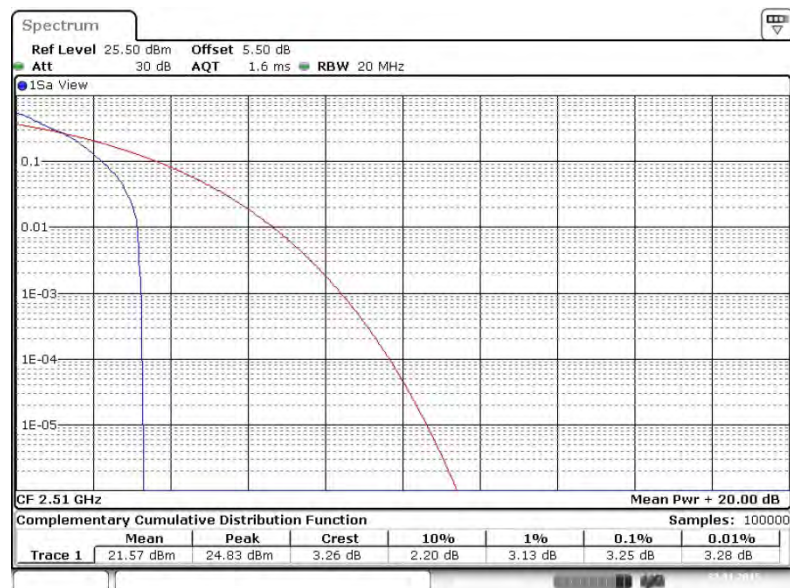






Peak-to-Average Ratio on LTE Band 7

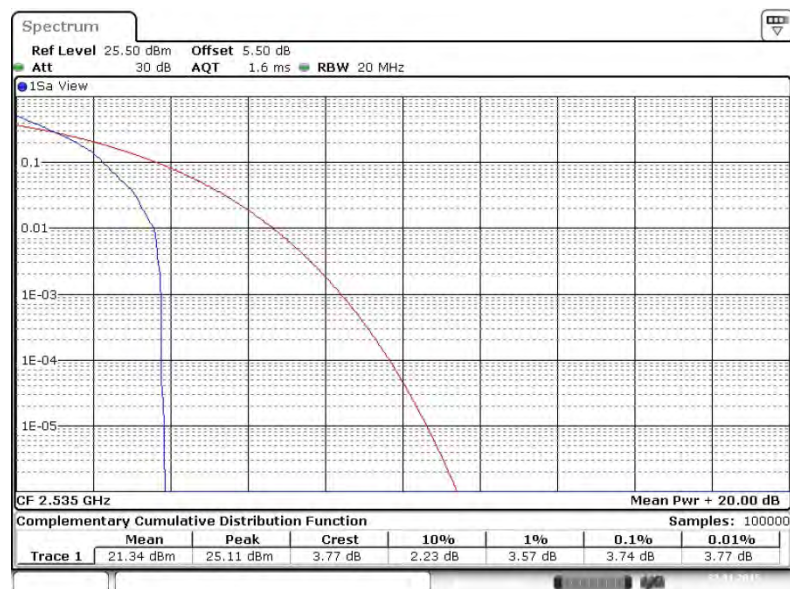
20MHz / QPSK in Ch. 20850 (1RB Size)



Date: 22.JAN.2015 16:35:43

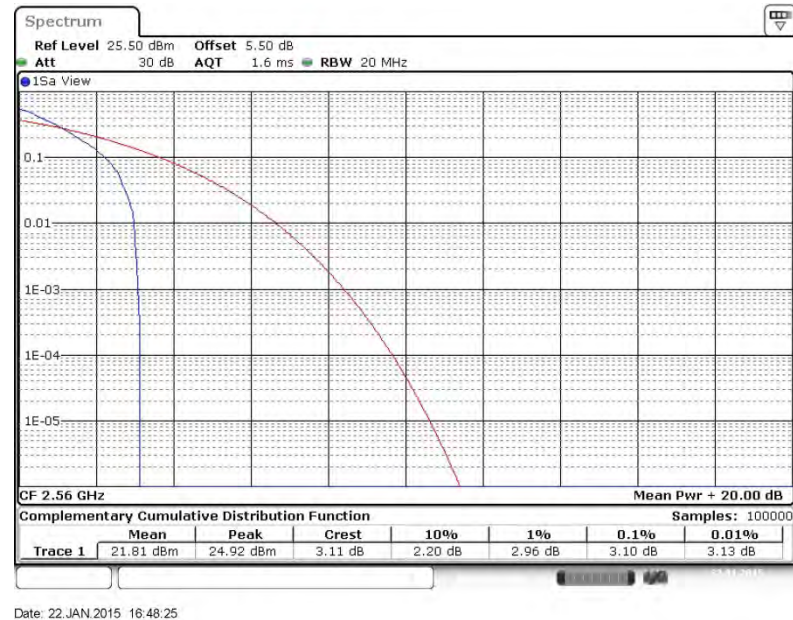
Peak-to-Average Ratio on LTE Band 7

20MHz / QPSK in Ch. 21100 (1RB Size)

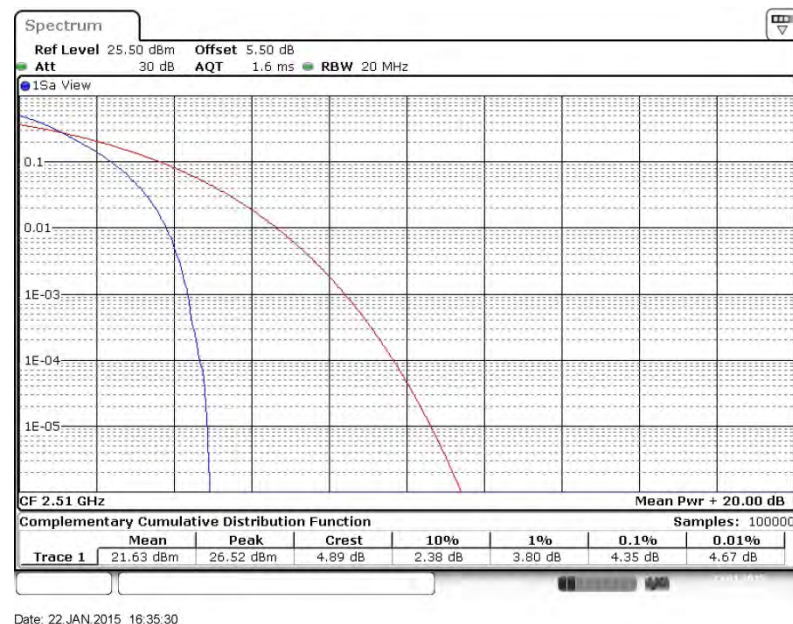


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**Peak-to-Average Ratio on LTE Band 7**  
**20MHz / QPSK in Ch. 21350 (1RB Size)**

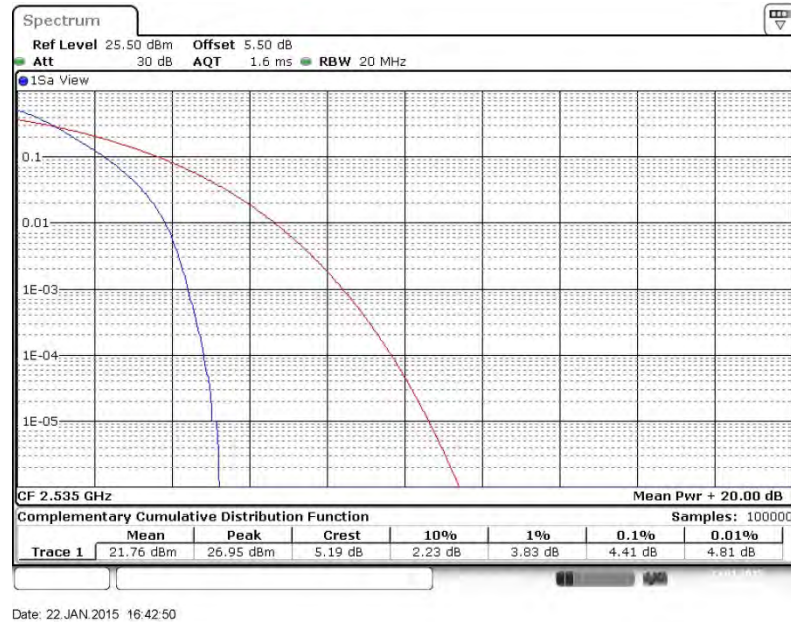


**Peak-to-Average Ratio on LTE Band 7**  
**20MHz / QPSK in Ch. 20850 (100RB Size)**

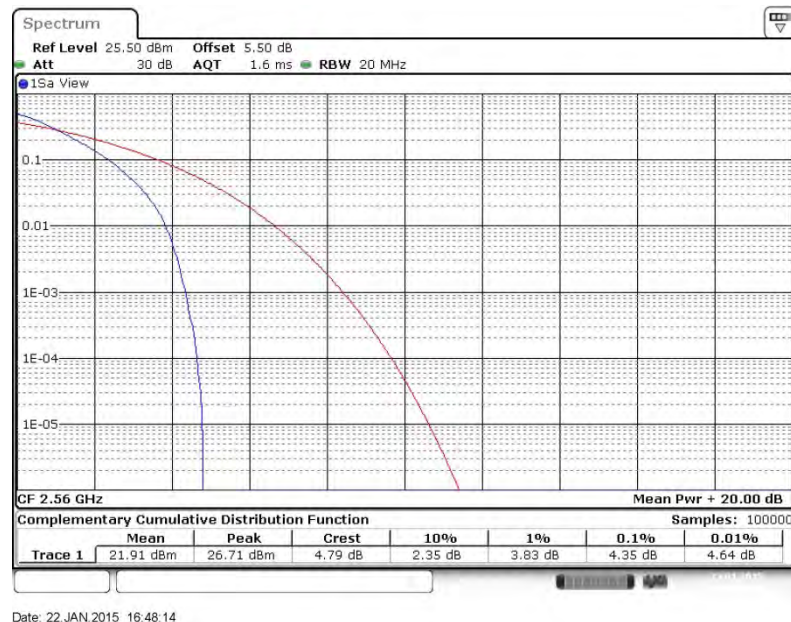




**Peak-to-Average Ratio on LTE Band 7**  
**20MHz / QPSK in Ch. 21100 (100RB Size)**

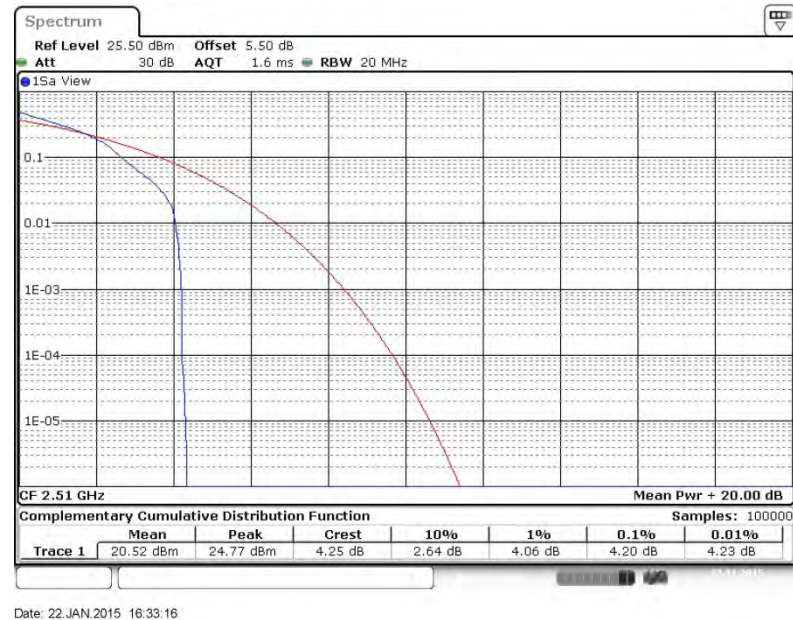


**Peak-to-Average Ratio on LTE Band 7**  
**20MHz / QPSK in Ch. 21350 (100RB Size)**

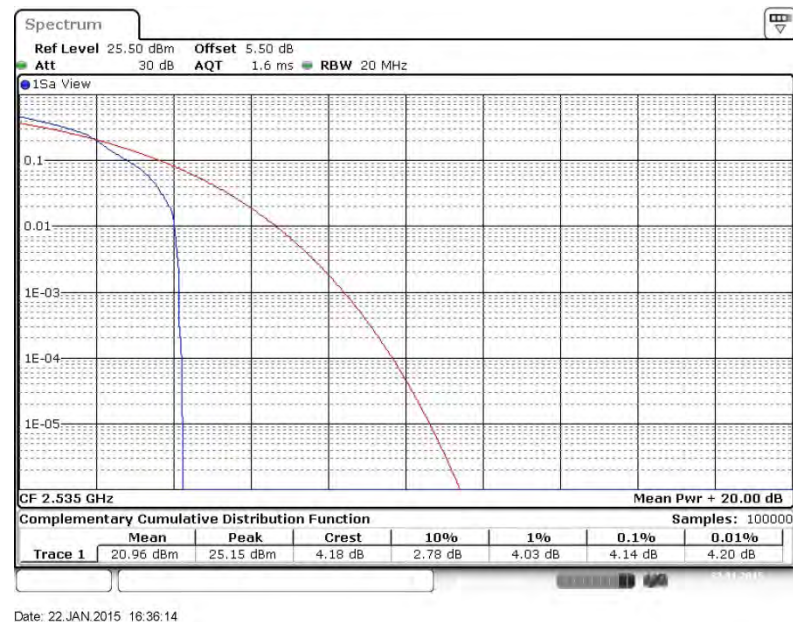




Peak-to-Average Ratio on LTE Band 7  
20MHz / 16QAM in Ch. 20850 (1RB Size)

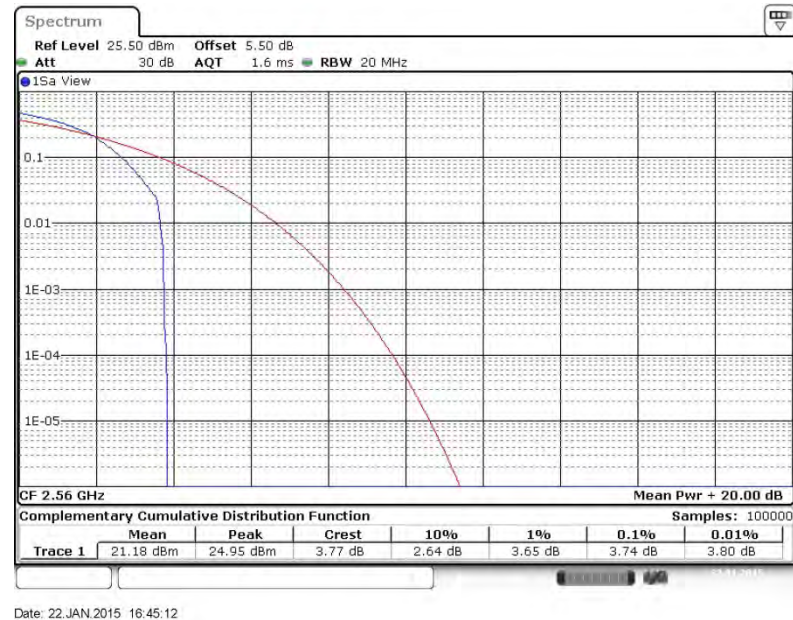


Peak-to-Average Ratio on LTE Band 7  
20MHz / 16QAM in Ch. 21100 (1RB Size)

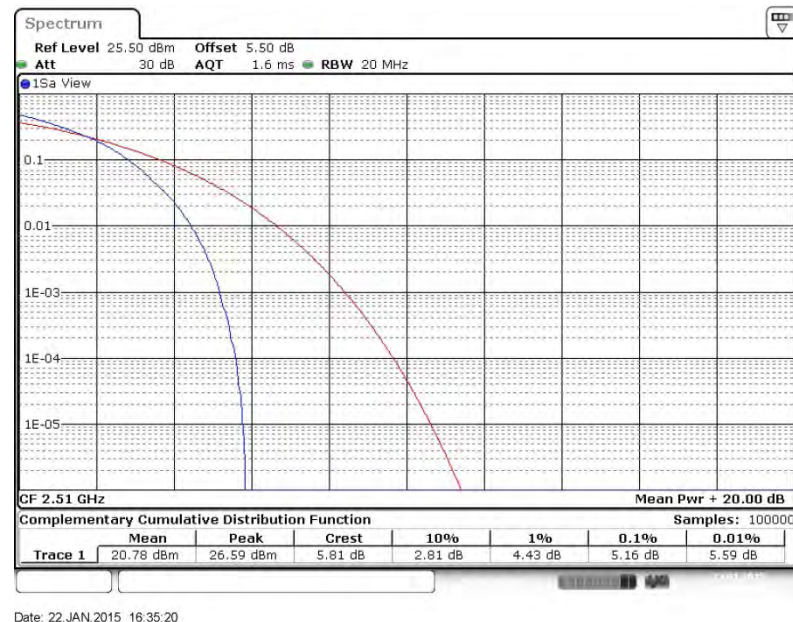




Peak-to-Average Ratio on LTE Band 7  
20MHz / 16QAM in Ch. 21350 (1RB Size)



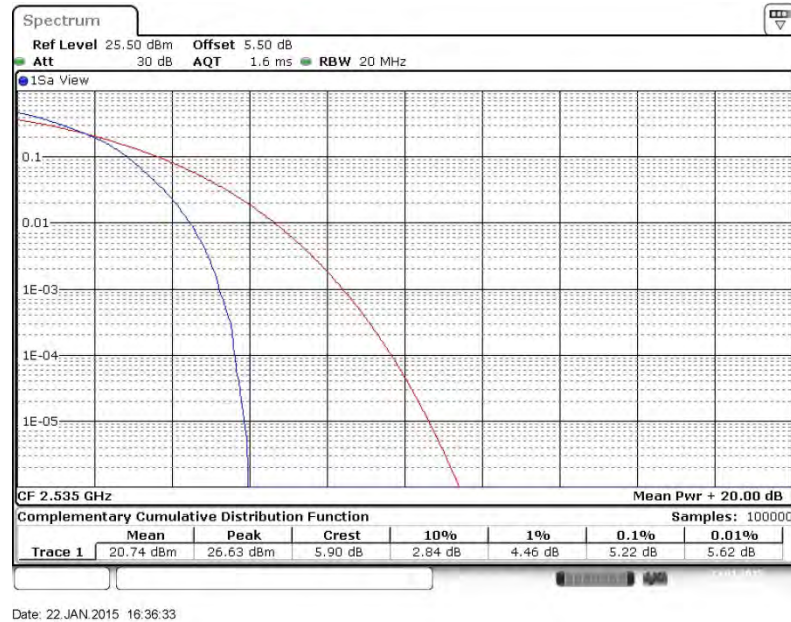
Peak-to-Average Ratio on LTE Band 7  
20MHz / 16QAM in Ch. 20850 (100RB Size)



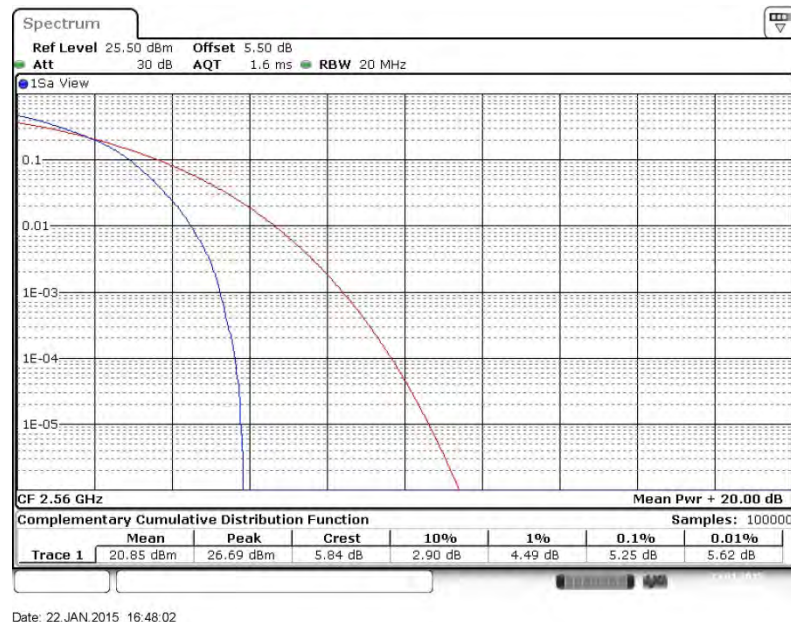




Peak-to-Average Ratio on LTE Band 7  
20MHz / 16QAM in Ch. 21100 (100RB Size)



Peak-to-Average Ratio on LTE Band 7  
20MHz / 16QAM in Ch. 21350 (100RB Size)



### **3.3 Equivalent Isotropic Radiated Power Measurement**

#### **3.3.1 Description of the EIRP Measurement**

Equivalent isotropic radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-C-2004, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r02. Mobile and portable (hand-held) stations operating are limited to average EIRP of 2 watts with LTE band 2 / 7 and 1 watt with LTE band 4.

#### **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 placed on a turntable with 1.5 meter height in a fully anechoic chamber.
2. The EUT was set at 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer which used a channel power option across EUT's signal bandwidth per section 4.0 of KDB 971168 D01.
4. The table was rotated 360 degrees to determine the position of the highest radiated power.
5. The height of the receiving antenna is adjusted to look for the maximum EIRP.
6. Taking the record of maximum EIRP.
7. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
8. The conducted power at the terminal of the dipole antenna is measured.
9. Repeat step 3 to step 5 to get the maximum EIRP of the substitution antenna.
10.  $EIRP = P_s + E_t - E_s + G_s = P_s + R_t - R_s + G_s$

$P_s$  (dBm) : Input power to substitution antenna.

$G_s$  (dBi or dBd) : Substitution antenna Gain.

$E_t = R_t + AF$

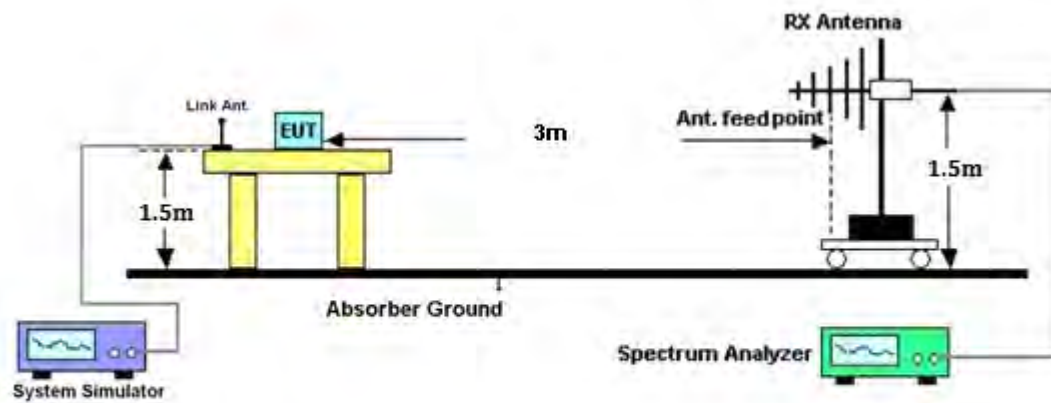
$E_s = R_s + AF$

$AF$  (dB/m) : Receive antenna factor

$R_t$  : The highest received signal in spectrum analyzer for EUT.

$R_s$  : The highest received signal in spectrum analyzer for substitution antenna.

### 3.3.4 Test Setup





### 3.3.5 Test Result of EIRP

| LTE Band 2 Radiated Power EIRP |                  |            |                  |           |             |            |          |     |
|--------------------------------|------------------|------------|------------------|-----------|-------------|------------|----------|-----|
| LTE Band                       | Channel BW (MHz) | Modulation | RB Configuration |           | Freq. (MHz) | EIRP (dBm) | EIRP (W) | H/V |
|                                |                  |            | RB Size          | RB Offset |             |            |          |     |
| 2                              | 1.4              | QPSK       | 3                | 0         | 1850.7      | 25.55      | 0.3589   | H   |
| 2                              | 1.4              | QPSK       | 3                | 1         | 1880        | 25.54      | 0.3581   | H   |
| 2                              | 1.4              | QPSK       | 1                | 2         | 1909.3      | 26.47      | 0.4436   | H   |
| 2                              | 1.4              | QPSK       | 3                | 0         | 1850.7      | 25.94      | 0.3926   | V   |
| 2                              | 1.4              | QPSK       | 3                | 1         | 1880        | 25.90      | 0.3890   | V   |
| 2                              | 1.4              | QPSK       | 1                | 2         | 1909.3      | 26.56      | 0.4529   | V   |
| 2                              | 1.4              | 16QAM      | 1                | 5         | 1850.7      | 25.64      | 0.3664   | H   |
| 2                              | 1.4              | 16QAM      | 3                | 1         | 1880        | 24.09      | 0.2564   | H   |
| 2                              | 1.4              | 16QAM      | 3                | 1         | 1909.3      | 25.53      | 0.3573   | H   |
| 2                              | 1.4              | 16QAM      | 1                | 5         | 1850.7      | 25.23      | 0.3334   | V   |
| 2                              | 1.4              | 16QAM      | 3                | 1         | 1880        | 25.02      | 0.3177   | V   |
| 2                              | 1.4              | 16QAM      | 3                | 1         | 1909.3      | 25.70      | 0.3715   | V   |
| 2                              | 3                | QPSK       | 8                | 0         | 1851.5      | 25.28      | 0.3373   | H   |
| 2                              | 3                | QPSK       | 8                | 0         | 1880        | 25.92      | 0.3908   | H   |
| 2                              | 3                | QPSK       | 1                | 7         | 1908.5      | 26.26      | 0.4227   | H   |
| 2                              | 3                | QPSK       | 8                | 0         | 1851.5      | 25.94      | 0.3926   | V   |
| 2                              | 3                | QPSK       | 8                | 0         | 1880        | 25.83      | 0.3828   | V   |
| 2                              | 3                | QPSK       | 1                | 7         | 1908.5      | 26.40      | 0.4365   | V   |
| 2                              | 3                | 16QAM      | 1                | 0         | 1851.5      | 25.01      | 0.3170   | H   |
| 2                              | 3                | 16QAM      | 1                | 0         | 1880        | 24.64      | 0.2911   | H   |
| 2                              | 3                | 16QAM      | 1                | 14        | 1908.5      | 25.57      | 0.3606   | H   |
| 2                              | 3                | 16QAM      | 1                | 0         | 1851.5      | 25.17      | 0.3289   | V   |
| 2                              | 3                | 16QAM      | 1                | 0         | 1880        | 25.15      | 0.3273   | V   |
| 2                              | 3                | 16QAM      | 1                | 14        | 1908.5      | 25.72      | 0.3733   | V   |



| LTE Band 2 Radiated Power EIRP |                  |            |                  |           |             |            |          |     |
|--------------------------------|------------------|------------|------------------|-----------|-------------|------------|----------|-----|
| LTE Band                       | Channel BW (MHz) | Modulation | RB Configuration |           | Freq. (MHz) | EIRP (dBm) | EIRP (W) | H/V |
|                                |                  |            | RB Size          | RB Offset |             |            |          |     |
| 2                              | 5                | QPSK       | 1                | 12        | 1852.5      | 25.33      | 0.3412   | H   |
| 2                              | 5                | QPSK       | 1                | 12        | 1880        | 25.48      | 0.3532   | H   |
| 2                              | 5                | QPSK       | 1                | 12        | 1907.5      | 25.97      | 0.3954   | H   |
| 2                              | 5                | QPSK       | 1                | 12        | 1852.5      | 26.25      | 0.4217   | V   |
| 2                              | 5                | QPSK       | 1                | 12        | 1880        | 25.66      | 0.3681   | V   |
| 2                              | 5                | QPSK       | 1                | 12        | 1907.5      | 26.20      | 0.4169   | V   |
| 2                              | 5                | 16QAM      | 1                | 12        | 1852.5      | 24.47      | 0.2799   | H   |
| 2                              | 5                | 16QAM      | 1                | 12        | 1880        | 24.49      | 0.2812   | H   |
| 2                              | 5                | 16QAM      | 1                | 12        | 1907.5      | 26.49      | 0.4457   | H   |
| 2                              | 5                | 16QAM      | 1                | 12        | 1852.5      | 25.08      | 0.3221   | V   |
| 2                              | 5                | 16QAM      | 1                | 12        | 1880        | 26.16      | 0.4130   | V   |
| 2                              | 5                | 16QAM      | 1                | 12        | 1907.5      | 25.66      | 0.3681   | V   |
| 2                              | 10               | QPSK       | 1                | 0         | 1855        | 25.61      | 0.3639   | H   |
| 2                              | 10               | QPSK       | 1                | 24        | 1880        | 25.84      | 0.3837   | H   |
| 2                              | 10               | QPSK       | 1                | 0         | 1905        | 26.42      | 0.4385   | H   |
| 2                              | 10               | QPSK       | 1                | 0         | 1855        | 25.90      | 0.3890   | V   |
| 2                              | 10               | QPSK       | 1                | 24        | 1880        | 25.90      | 0.3890   | V   |
| 2                              | 10               | QPSK       | 1                | 0         | 1905        | 26.54      | 0.4508   | V   |
| 2                              | 10               | 16QAM      | 1                | 0         | 1855        | 25.18      | 0.3296   | H   |
| 2                              | 10               | 16QAM      | 1                | 49        | 1880        | 24.73      | 0.2972   | H   |
| 2                              | 10               | 16QAM      | 1                | 0         | 1905        | 25.65      | 0.3673   | H   |
| 2                              | 10               | 16QAM      | 1                | 0         | 1855        | 25.08      | 0.3221   | V   |
| 2                              | 10               | 16QAM      | 1                | 49        | 1880        | 24.91      | 0.3097   | V   |
| 2                              | 10               | 16QAM      | 1                | 0         | 1905        | 25.71      | 0.3724   | V   |



| LTE Band 2 Radiated Power EIRP |                  |            |                  |           |             |            |          |     |
|--------------------------------|------------------|------------|------------------|-----------|-------------|------------|----------|-----|
| LTE Band                       | Channel BW (MHz) | Modulation | RB Configuration |           | Freq. (MHz) | EIRP (dBm) | EIRP (W) | H/V |
|                                |                  |            | RB Size          | RB Offset |             |            |          |     |
| 2                              | 15               | QPSK       | 1                | 37        | 1857.5      | 25.52      | 0.3565   | H   |
| 2                              | 15               | QPSK       | 1                | 0         | 1880        | 25.58      | 0.3614   | H   |
| 2                              | 15               | QPSK       | 1                | 74        | 1902.5      | 26.22      | 0.4188   | H   |
| 2                              | 15               | QPSK       | 1                | 37        | 1857.5      | 25.88      | 0.3873   | V   |
| 2                              | 15               | QPSK       | 1                | 0         | 1880        | 26.02      | 0.3999   | V   |
| 2                              | 15               | QPSK       | 1                | 74        | 1902.5      | 26.44      | 0.4406   | V   |
| 2                              | 15               | 16QAM      | 1                | 37        | 1857.5      | 23.91      | 0.2460   | H   |
| 2                              | 15               | 16QAM      | 1                | 0         | 1880        | 24.77      | 0.2999   | H   |
| 2                              | 15               | 16QAM      | 1                | 0         | 1902.5      | 24.25      | 0.2661   | H   |
| 2                              | 15               | 16QAM      | 1                | 37        | 1857.5      | 24.47      | 0.2799   | V   |
| 2                              | 15               | 16QAM      | 1                | 0         | 1880        | 24.90      | 0.3090   | V   |
| 2                              | 15               | 16QAM      | 1                | 0         | 1902.5      | 24.53      | 0.2838   | V   |
| 2                              | 20               | QPSK       | 1                | 0         | 1860        | 25.17      | 0.3289   | H   |
| 2                              | 20               | QPSK       | 1                | 0         | 1880        | 25.61      | 0.3639   | H   |
| 2                              | 20               | QPSK       | 1                | 0         | 1900        | 26.10      | 0.4074   | H   |
| 2                              | 20               | QPSK       | 1                | 0         | 1860        | 25.61      | 0.3639   | V   |
| 2                              | 20               | QPSK       | 1                | 0         | 1880        | 25.88      | 0.3873   | V   |
| 2                              | 20               | QPSK       | 1                | 0         | 1900        | 26.38      | 0.4345   | V   |
| 2                              | 20               | 16QAM      | 1                | 0         | 1860        | 24.74      | 0.2979   | H   |
| 2                              | 20               | 16QAM      | 1                | 49        | 1880        | 23.71      | 0.2350   | H   |
| 2                              | 20               | 16QAM      | 1                | 49        | 1900        | 25.52      | 0.3565   | H   |
| 2                              | 20               | 16QAM      | 1                | 0         | 1860        | 24.84      | 0.3048   | V   |
| 2                              | 20               | 16QAM      | 1                | 49        | 1880        | 24.27      | 0.2673   | V   |
| 2                              | 20               | 16QAM      | 1                | 49        | 1900        | 25.84      | 0.3837   | V   |



| LTE Band 4 Radiated Power EIRP |                  |            |                  |           |             |            |          |     |
|--------------------------------|------------------|------------|------------------|-----------|-------------|------------|----------|-----|
| LTE Band                       | Channel BW (MHz) | Modulation | RB Configuration |           | Freq. (MHz) | EIRP (dBm) | EIRP (W) | H/V |
|                                |                  |            | RB Size          | RB Offset |             |            |          |     |
| 4                              | 1.4              | QPSK       | 3                | 1         | 1710.7      | 27.24      | 0.5297   | H   |
| 4                              | 1.4              | QPSK       | 1                | 2         | 1732.5      | 26.92      | 0.4920   | H   |
| 4                              | 1.4              | QPSK       | 3                | 2         | 1754.3      | 26.77      | 0.4753   | H   |
| 4                              | 1.4              | QPSK       | 3                | 1         | 1710.7      | 27.55      | 0.5689   | V   |
| 4                              | 1.4              | QPSK       | 1                | 2         | 1732.5      | 27.39      | 0.5483   | V   |
| 4                              | 1.4              | QPSK       | 3                | 2         | 1754.3      | 27.12      | 0.5152   | V   |
| 4                              | 1.4              | 16QAM      | 3                | 1         | 1710.7      | 26.56      | 0.4529   | H   |
| 4                              | 1.4              | 16QAM      | 3                | 1         | 1732.5      | 26.17      | 0.4140   | H   |
| 4                              | 1.4              | 16QAM      | 1                | 5         | 1754.3      | 25.93      | 0.3917   | H   |
| 4                              | 1.4              | 16QAM      | 3                | 1         | 1710.7      | 26.76      | 0.4742   | V   |
| 4                              | 1.4              | 16QAM      | 3                | 1         | 1732.5      | 25.69      | 0.3707   | V   |
| 4                              | 1.4              | 16QAM      | 1                | 5         | 1754.3      | 25.43      | 0.3491   | V   |
| 4                              | 3                | QPSK       | 8                | 0         | 1711.5      | 27.01      | 0.5023   | H   |
| 4                              | 3                | QPSK       | 8                | 4         | 1732.5      | 26.79      | 0.4775   | H   |
| 4                              | 3                | QPSK       | 8                | 0         | 1753.5      | 26.73      | 0.4710   | H   |
| 4                              | 3                | QPSK       | 8                | 0         | 1711.5      | 27.39      | 0.5483   | V   |
| 4                              | 3                | QPSK       | 8                | 4         | 1732.5      | 27.36      | 0.5445   | V   |
| 4                              | 3                | QPSK       | 8                | 0         | 1753.5      | 27.13      | 0.5164   | V   |
| 4                              | 3                | 16QAM      | 1                | 14        | 1711.5      | 26.35      | 0.4315   | H   |
| 4                              | 3                | 16QAM      | 1                | 7         | 1732.5      | 25.74      | 0.3750   | H   |
| 4                              | 3                | 16QAM      | 8                | 0         | 1753.5      | 25.97      | 0.3954   | H   |
| 4                              | 3                | 16QAM      | 1                | 14        | 1711.5      | 26.63      | 0.4603   | V   |
| 4                              | 3                | 16QAM      | 1                | 7         | 1732.5      | 26.50      | 0.4467   | V   |
| 4                              | 3                | 16QAM      | 8                | 0         | 1753.5      | 26.45      | 0.4416   | V   |



| LTE Band 4 Radiated Power EIRP |                  |            |                  |           |             |            |          |     |
|--------------------------------|------------------|------------|------------------|-----------|-------------|------------|----------|-----|
| LTE Band                       | Channel BW (MHz) | Modulation | RB Configuration |           | Freq. (MHz) | EIRP (dBm) | EIRP (W) | H/V |
|                                |                  |            | RB Size          | RB Offset |             |            |          |     |
| 4                              | 5                | QPSK       | 1                | 12        | 1712.5      | 26.77      | 0.4753   | H   |
| 4                              | 5                | QPSK       | 1                | 12        | 1732.5      | 27.15      | 0.5188   | H   |
| 4                              | 5                | QPSK       | 1                | 12        | 1752.5      | 26.54      | 0.4508   | H   |
| 4                              | 5                | QPSK       | 1                | 12        | 1712.5      | 27.03      | 0.5047   | V   |
| 4                              | 5                | QPSK       | 1                | 12        | 1732.5      | 27.18      | 0.5224   | V   |
| 4                              | 5                | QPSK       | 1                | 12        | 1752.5      | 26.82      | 0.4808   | V   |
| 4                              | 5                | 16QAM      | 1                | 12        | 1712.5      | 26.10      | 0.4074   | H   |
| 4                              | 5                | 16QAM      | 1                | 0         | 1732.5      | 26.06      | 0.4036   | H   |
| 4                              | 5                | 16QAM      | 1                | 12        | 1752.5      | 25.15      | 0.3273   | H   |
| 4                              | 5                | 16QAM      | 1                | 12        | 1712.5      | 26.58      | 0.4550   | V   |
| 4                              | 5                | 16QAM      | 1                | 0         | 1732.5      | 26.12      | 0.4093   | V   |
| 4                              | 5                | 16QAM      | 1                | 12        | 1752.5      | 26.28      | 0.4246   | V   |
| 4                              | 10               | QPSK       | 1                | 24        | 1715        | 27.01      | 0.5023   | H   |
| 4                              | 10               | QPSK       | 1                | 0         | 1732.5      | 26.91      | 0.4909   | H   |
| 4                              | 10               | QPSK       | 1                | 0         | 1750        | 26.78      | 0.4764   | H   |
| 4                              | 10               | QPSK       | 1                | 24        | 1715        | 27.46      | 0.5572   | V   |
| 4                              | 10               | QPSK       | 1                | 0         | 1732.5      | 27.23      | 0.5284   | V   |
| 4                              | 10               | QPSK       | 1                | 0         | 1750        | 27.16      | 0.5200   | V   |
| 4                              | 10               | 16QAM      | 1                | 24        | 1715        | 26.18      | 0.4150   | H   |
| 4                              | 10               | 16QAM      | 1                | 24        | 1732.5      | 25.76      | 0.3767   | H   |
| 4                              | 10               | 16QAM      | 1                | 0         | 1750        | 25.85      | 0.3846   | H   |
| 4                              | 10               | 16QAM      | 1                | 24        | 1715        | 25.74      | 0.3750   | V   |
| 4                              | 10               | 16QAM      | 1                | 24        | 1732.5      | 25.94      | 0.3926   | V   |
| 4                              | 10               | 16QAM      | 1                | 0         | 1750        | 26.41      | 0.4375   | V   |



| LTE Band 4 Radiated Power EIRP |                  |            |                  |           |             |            |          |     |
|--------------------------------|------------------|------------|------------------|-----------|-------------|------------|----------|-----|
| LTE Band                       | Channel BW (MHz) | Modulation | RB Configuration |           | Freq. (MHz) | EIRP (dBm) | EIRP (W) | H/V |
|                                |                  |            | RB Size          | RB Offset |             |            |          |     |
| 4                              | 15               | QPSK       | 1                | 0         | 1717.5      | 27.21      | 0.5260   | H   |
| 4                              | 15               | QPSK       | 1                | 37        | 1732.5      | 27.04      | 0.5058   | H   |
| 4                              | 15               | QPSK       | 1                | 37        | 1747.5      | 27.02      | 0.5035   | H   |
| 4                              | 15               | QPSK       | 1                | 0         | 1717.5      | 27.56      | 0.5702   | V   |
| 4                              | 15               | QPSK       | 1                | 37        | 1732.5      | 27.29      | 0.5358   | V   |
| 4                              | 15               | QPSK       | 1                | 37        | 1747.5      | 27.49      | 0.5610   | V   |
| 4                              | 15               | 16QAM      | 1                | 37        | 1717.5      | 26.49      | 0.4457   | H   |
| 4                              | 15               | 16QAM      | 1                | 0         | 1732.5      | 26.52      | 0.4487   | H   |
| 4                              | 15               | 16QAM      | 1                | 37        | 1747.5      | 26.23      | 0.4198   | H   |
| 4                              | 15               | 16QAM      | 1                | 37        | 1717.5      | 26.81      | 0.4797   | V   |
| 4                              | 15               | 16QAM      | 1                | 0         | 1732.5      | 26.84      | 0.4831   | V   |
| 4                              | 15               | 16QAM      | 1                | 37        | 1747.5      | 26.40      | 0.4365   | V   |
| 4                              | 20               | QPSK       | 1                | 0         | 1720        | 26.89      | 0.4887   | H   |
| 4                              | 20               | QPSK       | 1                | 0         | 1732.5      | 26.78      | 0.4764   | H   |
| 4                              | 20               | QPSK       | 1                | 0         | 1745        | 26.87      | 0.4864   | H   |
| 4                              | 20               | QPSK       | 1                | 0         | 1720        | 27.25      | 0.5309   | V   |
| 4                              | 20               | QPSK       | 1                | 0         | 1732.5      | 27.21      | 0.5260   | V   |
| 4                              | 20               | QPSK       | 1                | 0         | 1745        | 27.34      | 0.5420   | V   |
| 4                              | 20               | 16QAM      | 1                | 49        | 1720        | 25.41      | 0.3475   | H   |
| 4                              | 20               | 16QAM      | 1                | 49        | 1732.5      | 25.99      | 0.3972   | H   |
| 4                              | 20               | 16QAM      | 1                | 0         | 1745        | 25.74      | 0.3750   | H   |
| 4                              | 20               | 16QAM      | 1                | 49        | 1720        | 25.76      | 0.3767   | V   |
| 4                              | 20               | 16QAM      | 1                | 49        | 1732.5      | 26.65      | 0.4624   | V   |
| 4                              | 20               | 16QAM      | 1                | 0         | 1745        | 26.23      | 0.4198   | V   |





| LTE Band 7 Radiated Power EIRP |                  |            |                  |           |             |            |          |     |
|--------------------------------|------------------|------------|------------------|-----------|-------------|------------|----------|-----|
| LTE Band                       | Channel BW (MHz) | Modulation | RB Configuration |           | Freq. (MHz) | EIRP (dBm) | EIRP (W) | H/V |
|                                |                  |            | RB Size          | RB Offset |             |            |          |     |
| 7                              | 5                | QPSK       | 1                | 12        | 2502.5      | 26.27      | 0.4236   | H   |
| 7                              | 5                | QPSK       | 1                | 12        | 2535        | 25.83      | 0.3828   | H   |
| 7                              | 5                | QPSK       | 1                | 12        | 2567.5      | 24.57      | 0.2864   | H   |
| 7                              | 5                | QPSK       | 1                | 12        | 2502.5      | 26.74      | 0.4721   | V   |
| 7                              | 5                | QPSK       | 1                | 12        | 2535        | 25.83      | 0.3828   | V   |
| 7                              | 5                | QPSK       | 1                | 12        | 2567.5      | 24.54      | 0.2844   | V   |
| 7                              | 5                | 16QAM      | 1                | 0         | 2502.5      | 25.61      | 0.3639   | H   |
| 7                              | 5                | 16QAM      | 1                | 0         | 2535        | 24.87      | 0.3069   | H   |
| 7                              | 5                | 16QAM      | 1                | 12        | 2567.5      | 24.04      | 0.2535   | H   |
| 7                              | 5                | 16QAM      | 1                | 0         | 2502.5      | 25.81      | 0.3811   | V   |
| 7                              | 5                | 16QAM      | 1                | 0         | 2535        | 25.14      | 0.3266   | V   |
| 7                              | 5                | 16QAM      | 1                | 12        | 2567.5      | 23.95      | 0.2483   | V   |
| 7                              | 10               | QPSK       | 1                | 24        | 2505        | 26.29      | 0.4256   | H   |
| 7                              | 10               | QPSK       | 1                | 0         | 2535        | 25.69      | 0.3707   | H   |
| 7                              | 10               | QPSK       | 1                | 0         | 2565        | 25.27      | 0.3365   | H   |
| 7                              | 10               | QPSK       | 1                | 24        | 2505        | 26.93      | 0.4932   | V   |
| 7                              | 10               | QPSK       | 1                | 0         | 2535        | 25.95      | 0.3936   | V   |
| 7                              | 10               | QPSK       | 1                | 0         | 2565        | 25.23      | 0.3334   | V   |
| 7                              | 10               | 16QAM      | 1                | 0         | 2505        | 25.86      | 0.3855   | H   |
| 7                              | 10               | 16QAM      | 1                | 49        | 2535        | 25.31      | 0.3396   | H   |
| 7                              | 10               | 16QAM      | 1                | 0         | 2565        | 24.72      | 0.2965   | H   |
| 7                              | 10               | 16QAM      | 1                | 0         | 2505        | 25.90      | 0.3890   | V   |
| 7                              | 10               | 16QAM      | 1                | 49        | 2535        | 25.59      | 0.3622   | V   |
| 7                              | 10               | 16QAM      | 1                | 0         | 2565        | 24.50      | 0.2818   | V   |



| LTE Band 7 Radiated Power EIRP |                  |            |                  |           |             |            |          |     |
|--------------------------------|------------------|------------|------------------|-----------|-------------|------------|----------|-----|
| LTE Band                       | Channel BW (MHz) | Modulation | RB Configuration |           | Freq. (MHz) | EIRP (dBm) | EIRP (W) | H/V |
|                                |                  |            | RB Size          | RB Offset |             |            |          |     |
| 7                              | 15               | QPSK       | 1                | 37        | 2507.5      | 26.40      | 0.4365   | H   |
| 7                              | 15               | QPSK       | 1                | 37        | 2535        | 26.03      | 0.4009   | H   |
| 7                              | 15               | QPSK       | 1                | 37        | 2562.5      | 25.09      | 0.3228   | H   |
| 7                              | 15               | QPSK       | 1                | 37        | 2507.5      | 26.83      | 0.4819   | V   |
| 7                              | 15               | QPSK       | 1                | 37        | 2535        | 26.18      | 0.4150   | V   |
| 7                              | 15               | QPSK       | 1                | 37        | 2562.5      | 25.07      | 0.3214   | V   |
| 7                              | 15               | 16QAM      | 1                | 37        | 2507.5      | 26.01      | 0.3990   | H   |
| 7                              | 15               | 16QAM      | 1                | 0         | 2535        | 25.23      | 0.3334   | H   |
| 7                              | 15               | 16QAM      | 1                | 0         | 2562.5      | 24.71      | 0.2958   | H   |
| 7                              | 15               | 16QAM      | 1                | 37        | 2507.5      | 26.46      | 0.4426   | V   |
| 7                              | 15               | 16QAM      | 1                | 0         | 2535        | 25.27      | 0.3365   | V   |
| 7                              | 15               | 16QAM      | 1                | 0         | 2562.5      | 24.80      | 0.3020   | V   |
| 7                              | 20               | QPSK       | 1                | 0         | 2510        | 26.52      | 0.4487   | H   |
| 7                              | 20               | QPSK       | 1                | 0         | 2535        | 26.11      | 0.4083   | H   |
| 7                              | 20               | QPSK       | 1                | 0         | 2560        | 25.31      | 0.3396   | H   |
| 7                              | 20               | QPSK       | 1                | 0         | 2510        | 26.85      | 0.4842   | V   |
| 7                              | 20               | QPSK       | 1                | 0         | 2535        | 26.24      | 0.4207   | V   |
| 7                              | 20               | QPSK       | 1                | 0         | 2560        | 25.36      | 0.3436   | V   |
| 7                              | 20               | 16QAM      | 1                | 0         | 2510        | 24.90      | 0.3090   | H   |
| 7                              | 20               | 16QAM      | 1                | 0         | 2535        | 25.12      | 0.3251   | H   |
| 7                              | 20               | 16QAM      | 1                | 0         | 2560        | 25.11      | 0.3243   | H   |
| 7                              | 20               | 16QAM      | 1                | 0         | 2510        | 25.36      | 0.3436   | V   |
| 7                              | 20               | 16QAM      | 1                | 0         | 2535        | 25.12      | 0.3251   | V   |
| 7                              | 20               | 16QAM      | 1                | 0         | 2560        | 25.01      | 0.3170   | V   |

### 3.4 99% Occupied Bandwidth and 26dB Bandwidth Measurement

#### 3.4.1 Description of 99% Occupied Bandwidth and 26dB 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 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.

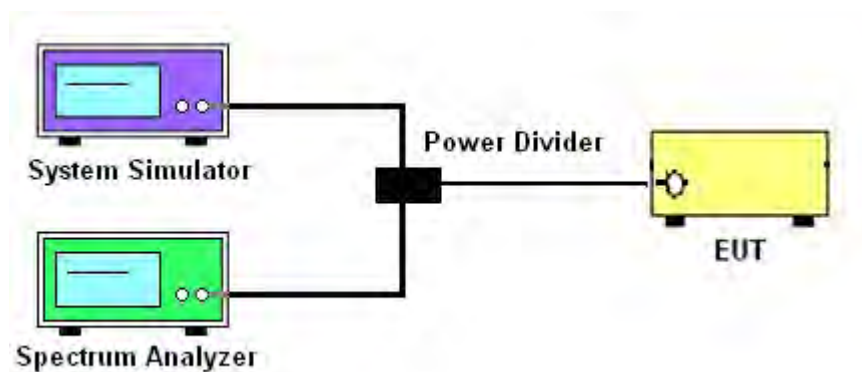
#### 3.4.2 Measuring Instruments

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

#### 3.4.3 Test Procedures

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The 26dB and 99% occupied bandwidth (BW) of the middle channel for the highest RF power with full RB sizes were measured.

#### 3.4.4 Test Setup



**3.4.5 Test Result of 99% Occupied Bandwidth and 26dB Bandwidth**

| Modes         | LTE Band 2    |                |              |               |
|---------------|---------------|----------------|--------------|---------------|
| BW / Mod.     | 1.4MHz / QPSK | 1.4MHz / 16QAM | 3MHz / QPSK  | 3MHz / 16QAM  |
| 99% OBW (MHz) | 1.094         | 1.097          | 2.727        | 2.727         |
| 26dB BW (MHz) | 1.301         | 1.301          | 3.045        | 3.051         |
| BW / Mod.     | 5MHz / QPSK   | 5MHz / 16QAM   | 10MHz / QPSK | 10MHz / 16QAM |
| 99% OBW (MHz) | 4.505         | 4.496          | 9.071        | 9.051         |
| 26dB BW (MHz) | 5.075         | 5.045          | 10.050       | 10.030        |
| BW / Mod.     | 15MHz / QPSK  | 15MHz / 16QAM  | 20MHz / QPSK | 20MHz / 16QAM |
| 99% OBW (MHz) | 13.457        | 13.397         | 18.262       | 18.302        |
| 26dB BW (MHz) | 14.715        | 14.595         | 20.300       | 20.380        |

| Modes         | LTE Band 4    |                |              |               |
|---------------|---------------|----------------|--------------|---------------|
| BW / Mod.     | 1.4MHz / QPSK | 1.4MHz / 16QAM | 3MHz / QPSK  | 3MHz / 16QAM  |
| 99% OBW (MHz) | 1.097         | 1.097          | 2.727        | 2.727         |
| 26dB BW (MHz) | 1.287         | 1.304          | 3.051        | 3.063         |
| BW / Mod.     | 5MHz / QPSK   | 5MHz / 16QAM   | 10MHz / QPSK | 10MHz / 16QAM |
| 99% OBW (MHz) | 4.496         | 4.496          | 9.071        | 9.051         |
| 26dB BW (MHz) | 5.025         | 5.045          | 10.090       | 9.990         |
| BW / Mod.     | 15MHz / QPSK  | 15MHz / 16QAM  | 20MHz / QPSK | 20MHz / 16QAM |
| 99% OBW (MHz) | 13.457        | 13.487         | 18.462       | 18.262        |
| 26dB BW (MHz) | 14.595        | 14.745         | 20.300       | 20.140        |

| Modes         | LTE Band 7   |               |              |               |
|---------------|--------------|---------------|--------------|---------------|
| BW / Mod.     | 5MHz / QPSK  | 5MHz / 16QAM  | 10MHz / QPSK | 10MHz / 16QAM |
| 99% OBW (MHz) | 4.505        | 4.505         | 9.071        | 9.051         |
| 26dB BW (MHz) | 5.075        | 5.065         | 10.090       | 10.090        |
| BW / Mod.     | 15MHz / QPSK | 15MHz / 16QAM | 20MHz / QPSK | 20MHz / 16QAM |
| 99% OBW (MHz) | 13.487       | 13.487        | 18.541       | 18.382        |
| 26dB BW (MHz) | 14.685       | 14.625        | 20.340       | 20.420        |

**Note:**

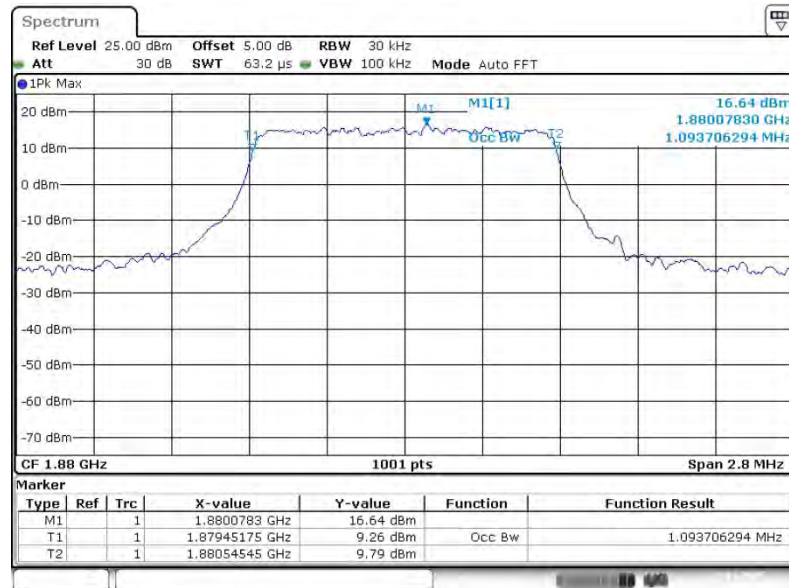
The maximum RB configurations of the 99% Occupied Bandwidth and 26dB Bandwidth summary as below:

BW1.4MHz RB setting : RB Size 6, RB offset 0  
 BW3.0MHz RB setting : RB Size 15, RB offset 0  
 BW5.0MHz RB setting : RB Size 25, RB offset 0  
 BW10MHz RB setting : RB Size 50, RB offset 0  
 BW15MHz RB setting : RB Size 75, RB offset 0  
 BW20MHz RB setting : RB Size 100, RB offset 0

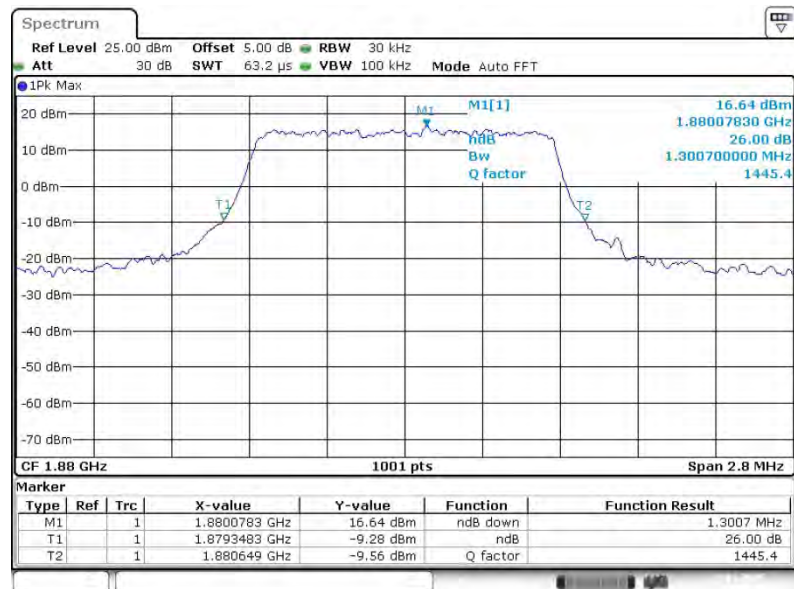
### 3.4.6 Test Result (Plots) of Occupied Bandwidth

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

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



#### 26dB Bandwidth Plot on Channel 18900

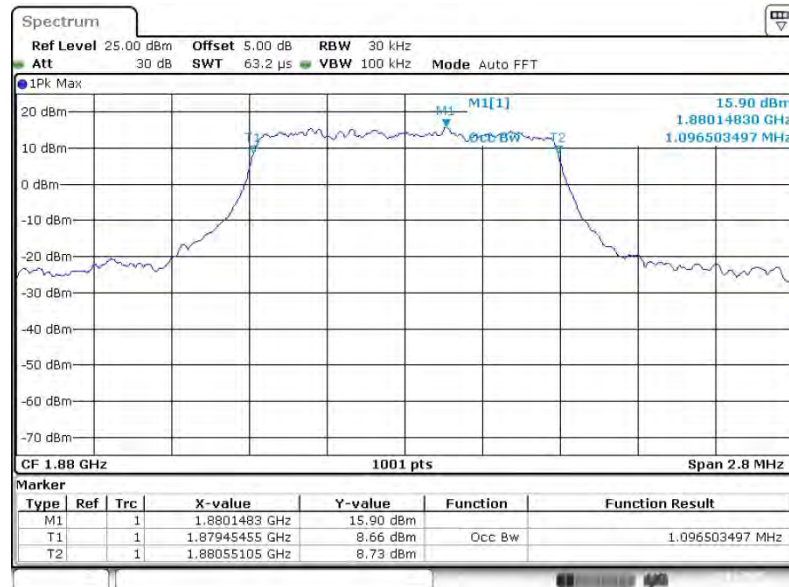






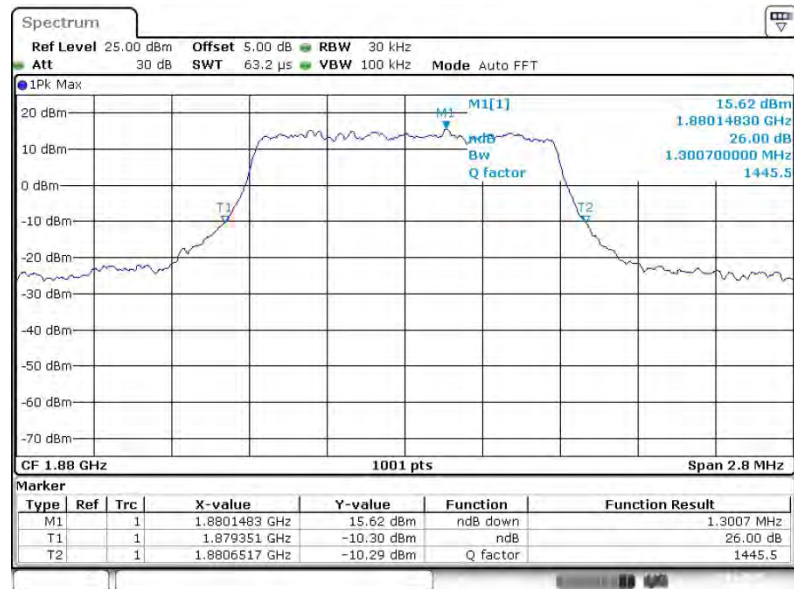
|        |            |             |                |
|--------|------------|-------------|----------------|
| Band : | LTE Band 2 | BW / Mod. : | 1.4MHz / 16QAM |
|--------|------------|-------------|----------------|

## 99% Occupied Bandwidth Plot on Channel 18900



Date: 22.JAN.2015 11:34:26

## 26dB Bandwidth Plot on Channel 18900

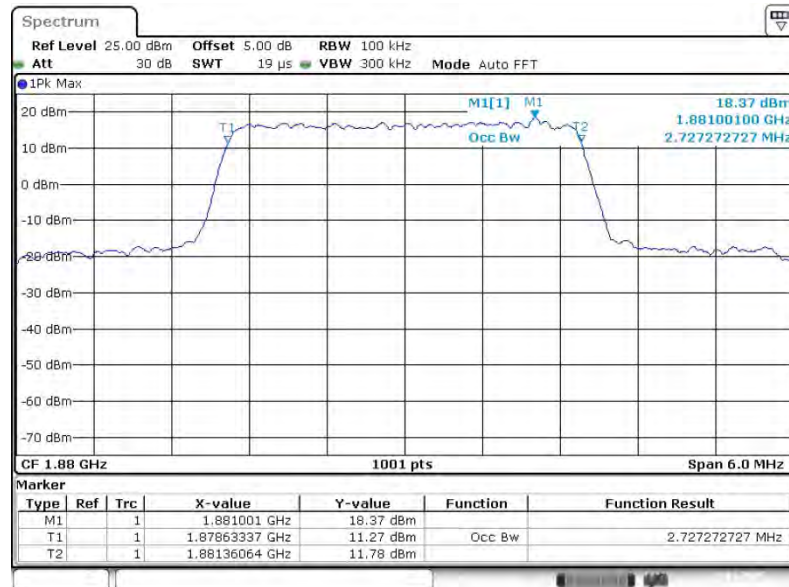


Date: 22.JAN.2015 11:34:49

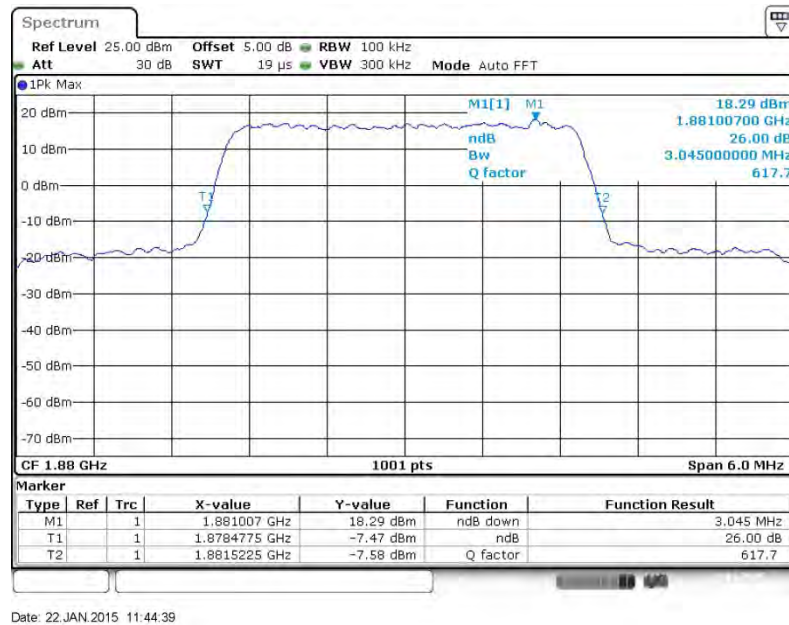


|        |            |             |             |
|--------|------------|-------------|-------------|
| Band : | LTE Band 2 | BW / Mod. : | 3MHz / QPSK |
|--------|------------|-------------|-------------|

## 99% Occupied Bandwidth Plot on Channel 18900



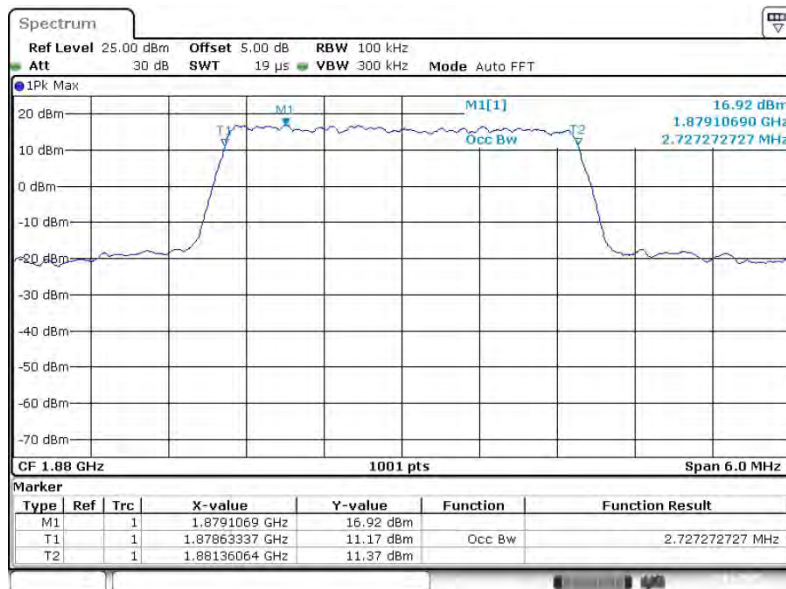
## 26dB Bandwidth Plot on Channel 18900





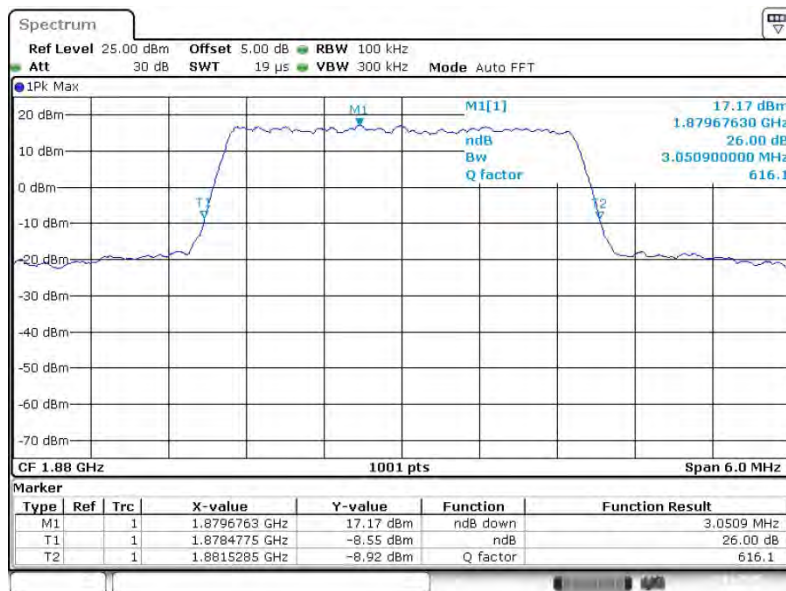
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 2 | BW / Mod. : | 3MHz / 16QAM |
|--------|------------|-------------|--------------|

## 99% Occupied Bandwidth Plot on Channel 18900



Date: 22.JAN.2015 11:44:28

## 26dB Bandwidth Plot on Channel 18900

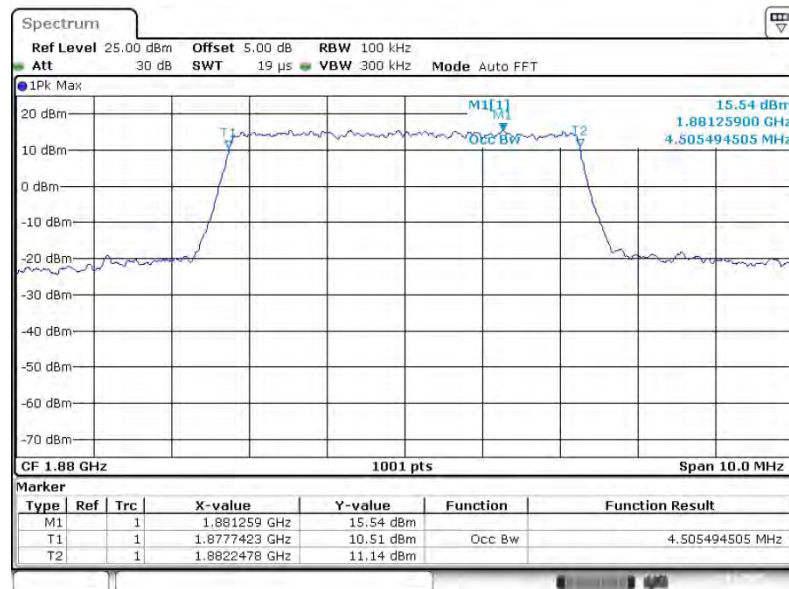


Date: 22.JAN.2015 11:44:51



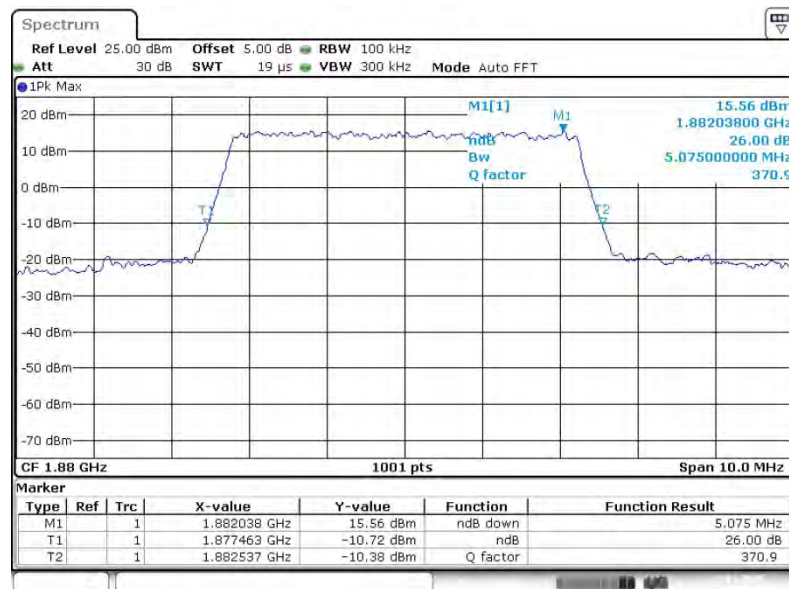
|        |            |             |             |
|--------|------------|-------------|-------------|
| Band : | LTE Band 2 | BW / Mod. : | 5MHz / QPSK |
|--------|------------|-------------|-------------|

## 99% Occupied Bandwidth Plot on Channel 18900



Date: 22.JAN.2015 11:54:19

## 26dB Bandwidth Plot on Channel 18900

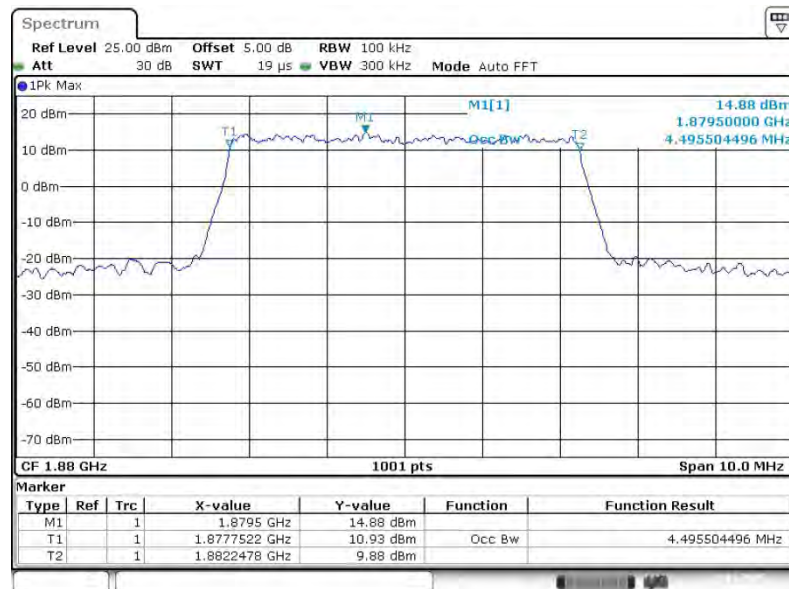


Date: 22.JAN.2015 11:54:41



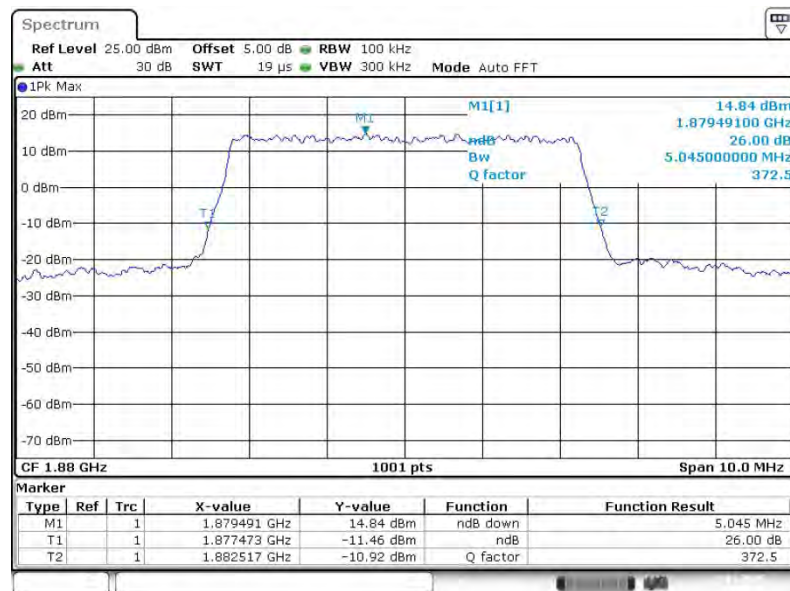
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 2 | BW / Mod. : | 5MHz / 16QAM |
|--------|------------|-------------|--------------|

## 99% Occupied Bandwidth Plot on Channel 18900



Date: 22.JAN.2015 11:54:29

## 26dB Bandwidth Plot on Channel 18900



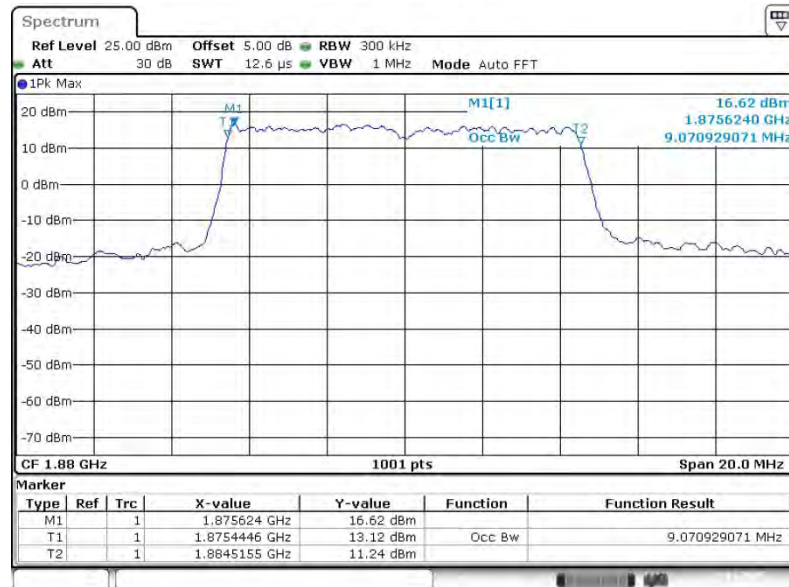
Date: 22.JAN.2015 11:54:53



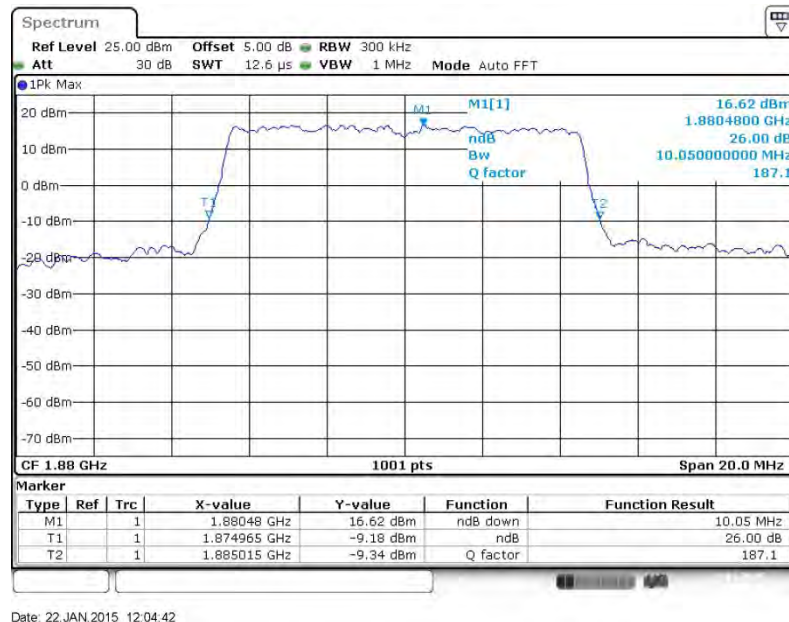


|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 2 | BW / Mod. : | 10MHz / QPSK |
|--------|------------|-------------|--------------|

## 99% Occupied Bandwidth Plot on Channel 18900



## 26dB Bandwidth Plot on Channel 18900

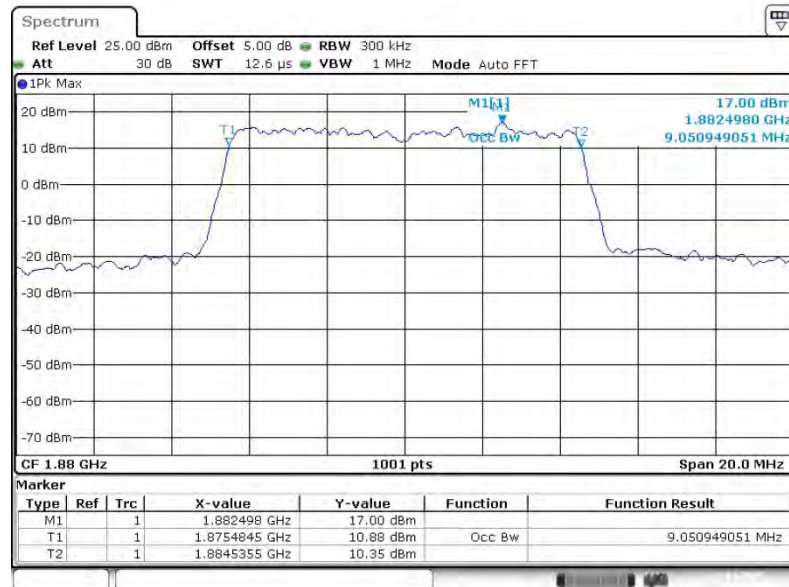






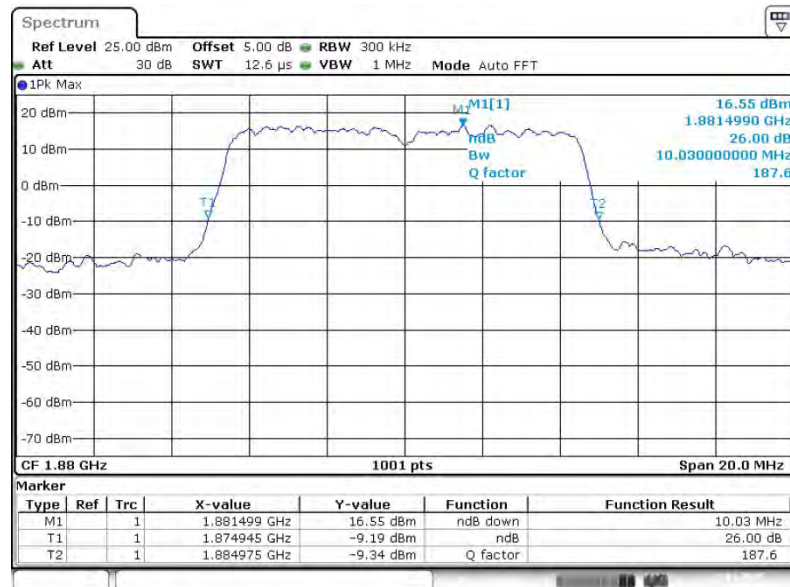
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 2 | BW / Mod. : | 10MHz / 16QAM |
|--------|------------|-------------|---------------|

## 99% Occupied Bandwidth Plot on Channel 18900



Date: 22.JAN.2015 12:04:30

## 26dB Bandwidth Plot on Channel 18900



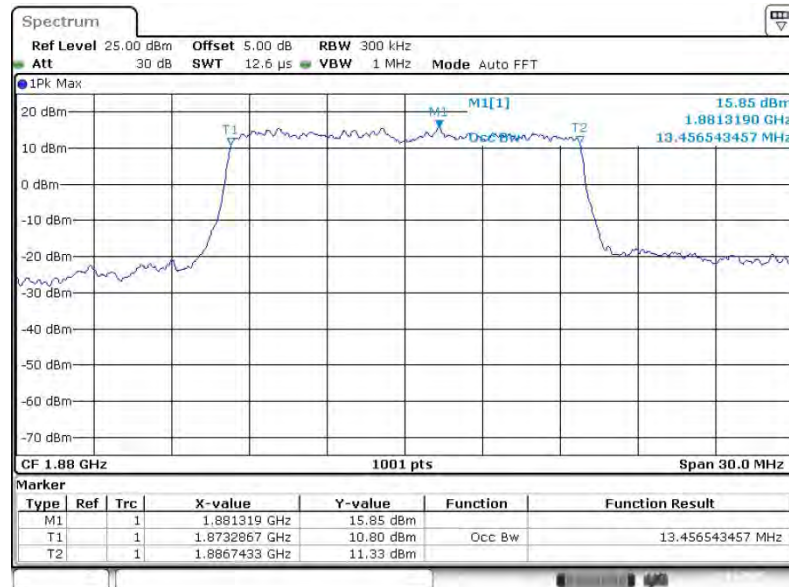
Date: 22.JAN.2015 12:04:54



Band : LTE Band 2

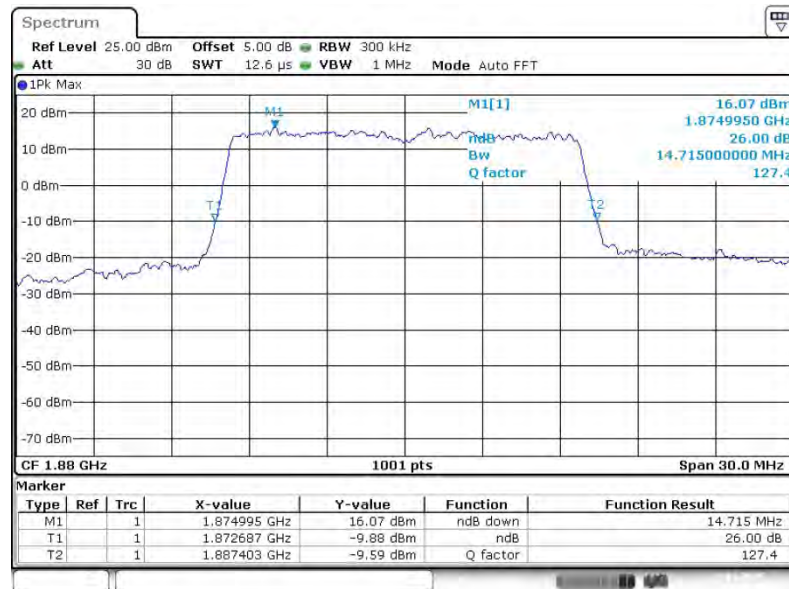
BW / Mod. : 15MHz / QPSK

## 99% Occupied Bandwidth Plot on Channel 18900



Date: 22.JAN.2015 12:14:23

## 26dB Bandwidth Plot on Channel 18900

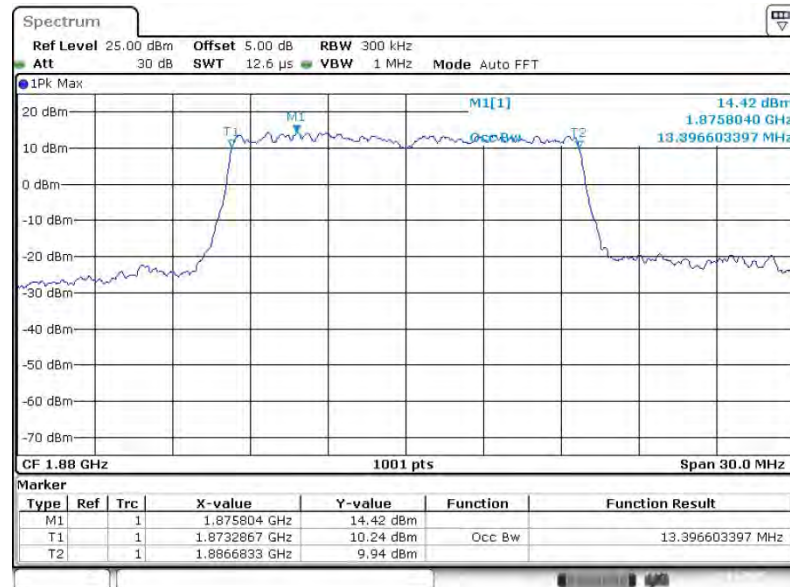


Date: 22.JAN.2015 12:14:45



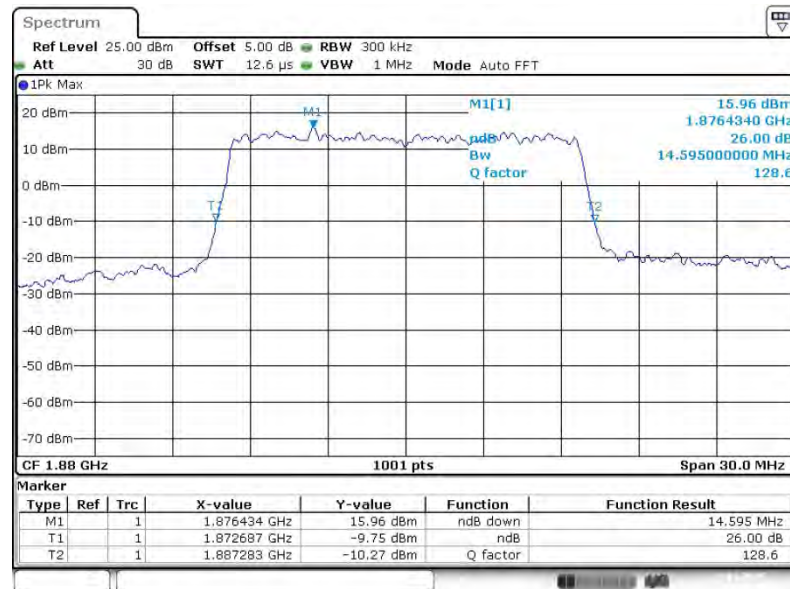
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 2 | BW / Mod. : | 15MHz / 16QAM |
|--------|------------|-------------|---------------|

## 99% Occupied Bandwidth Plot on Channel 18900



Date: 22.JAN.2015 12:14:33

## 26dB Bandwidth Plot on Channel 18900



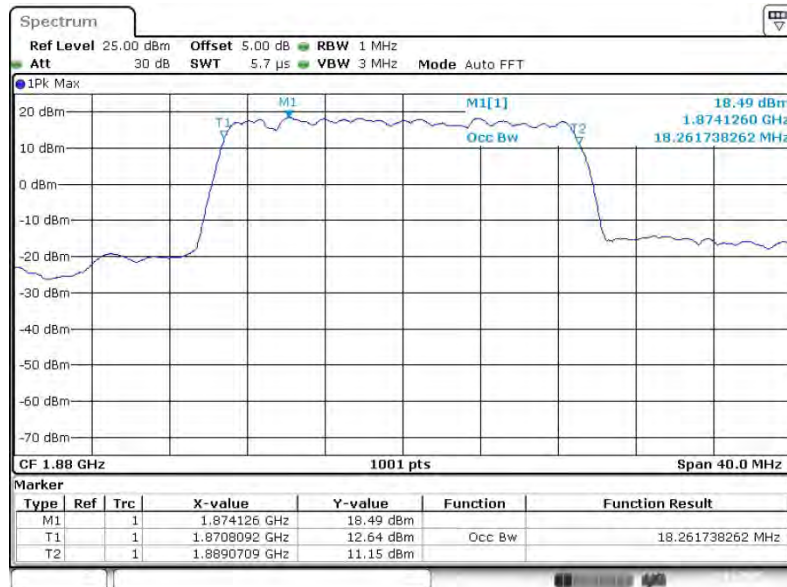
Date: 22.JAN.2015 12:14:57



Band : LTE Band 2

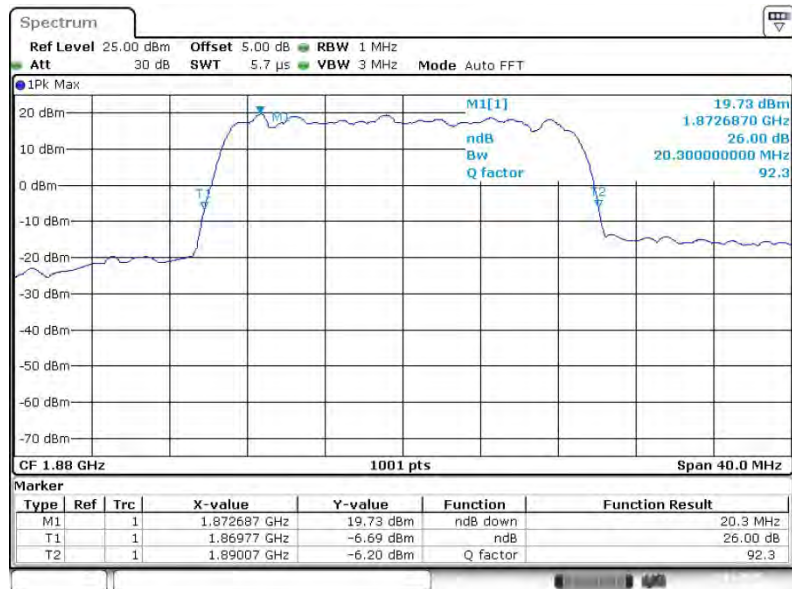
BW / Mod. : 20MHz / QPSK

## 99% Occupied Bandwidth Plot on Channel 18900

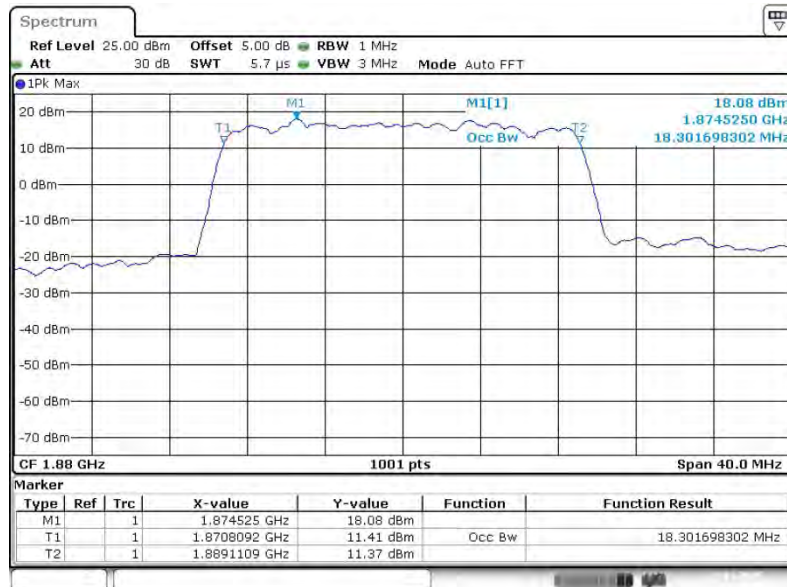


Date: 22.JAN.2015 12:24:25

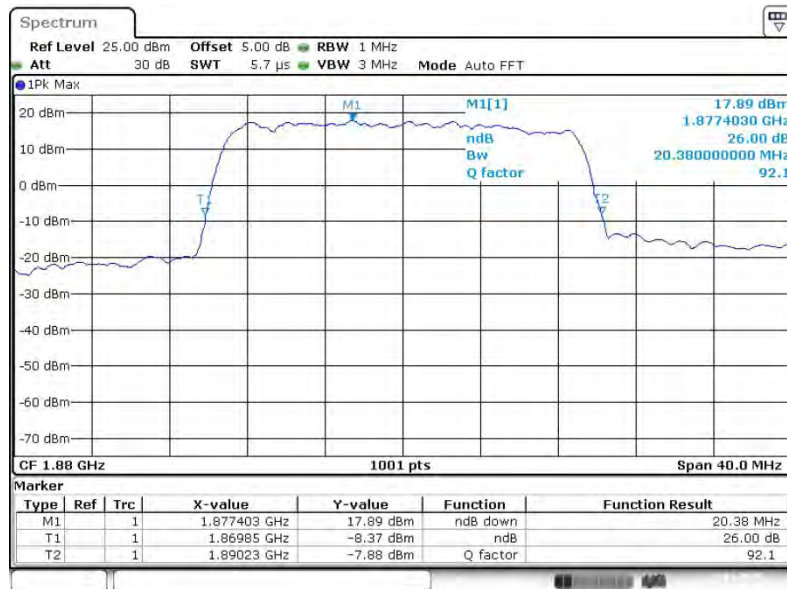
## 26dB Bandwidth Plot on Channel 18900



Date: 22.JAN.2015 12:24:47

**Band :** LTE Band 2**BW / Mod. :** 20MHz / 16QAM**99% Occupied Bandwidth Plot on Channel 18900**

Date: 22.JAN.2015 12:24:35

**26dB Bandwidth Plot on Channel 18900**

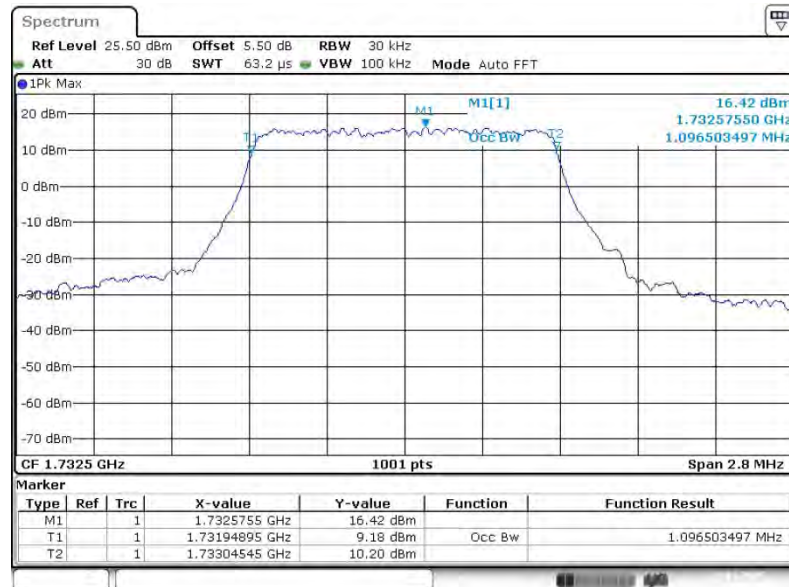
Date: 22.JAN.2015 12:24:59





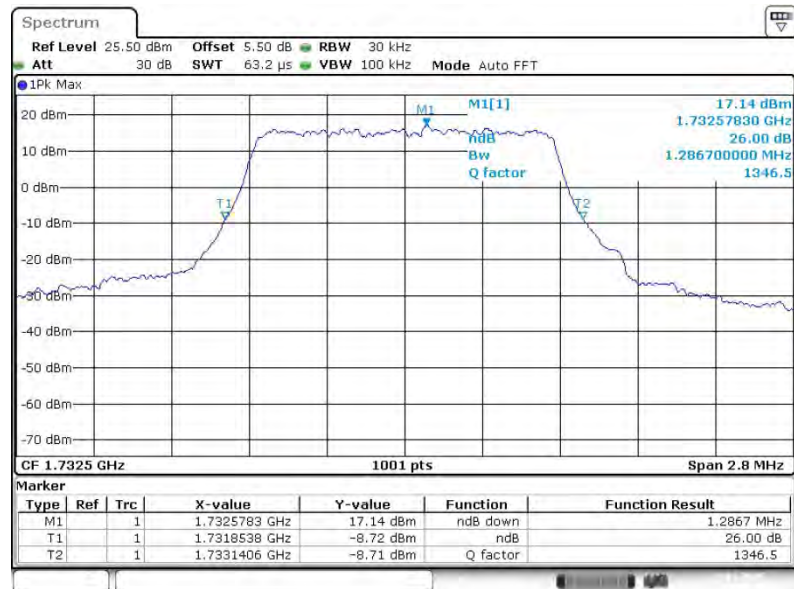
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 4 | BW / Mod. : | 1.4MHz / QPSK |
|--------|------------|-------------|---------------|

## 99% Occupied Bandwidth Plot on Channel 20175



Date: 22.JAN.2015 14:02:09

## 26dB Bandwidth Plot on Channel 20175



Date: 22.JAN.2015 14:02:31

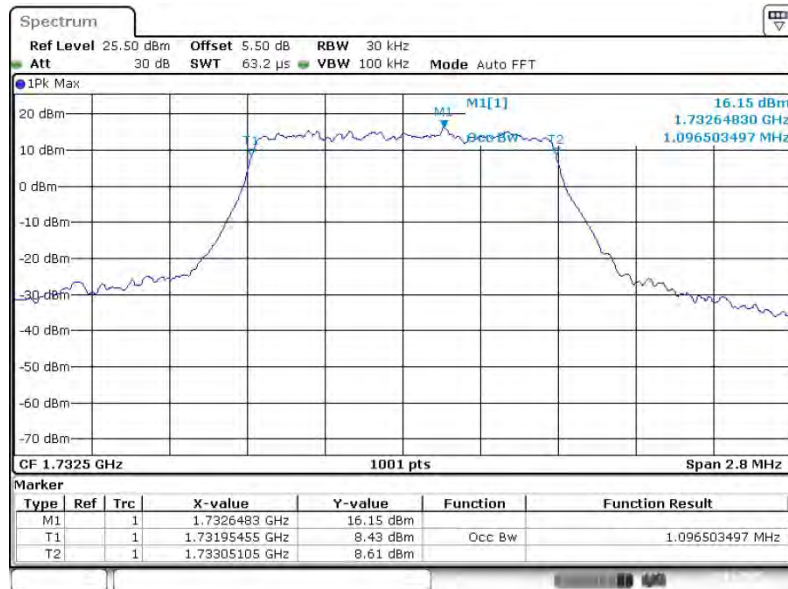




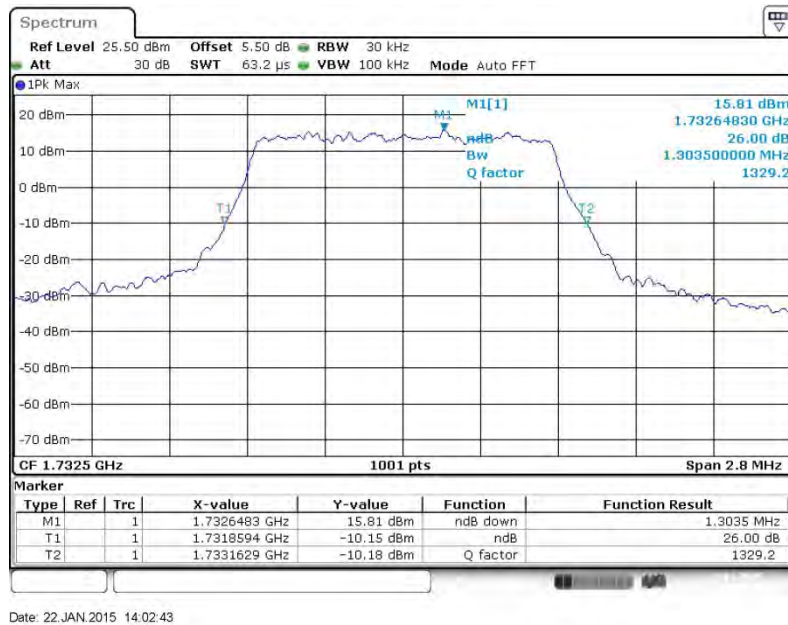
Band : LTE Band 4

BW / Mod. : 1.4MHz / 16QAM

## 99% Occupied Bandwidth Plot on Channel 20175



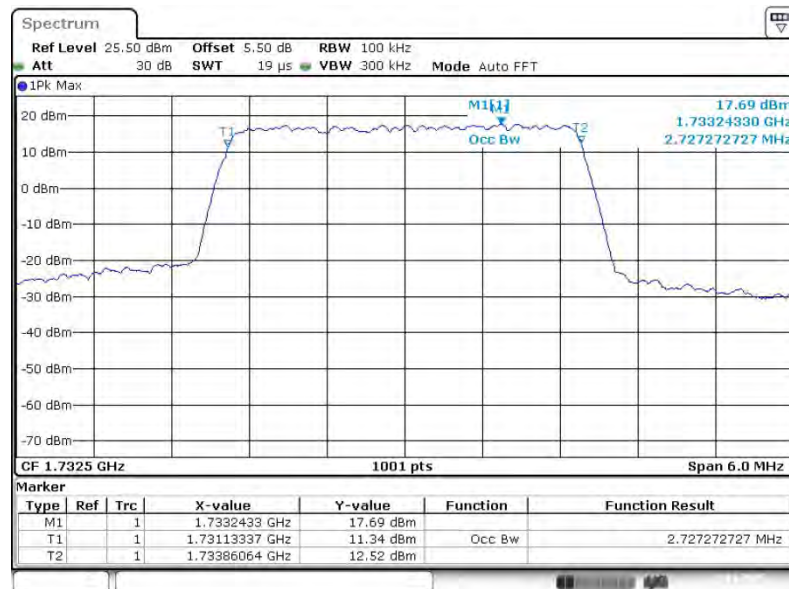
## 26dB Bandwidth Plot on Channel 20175



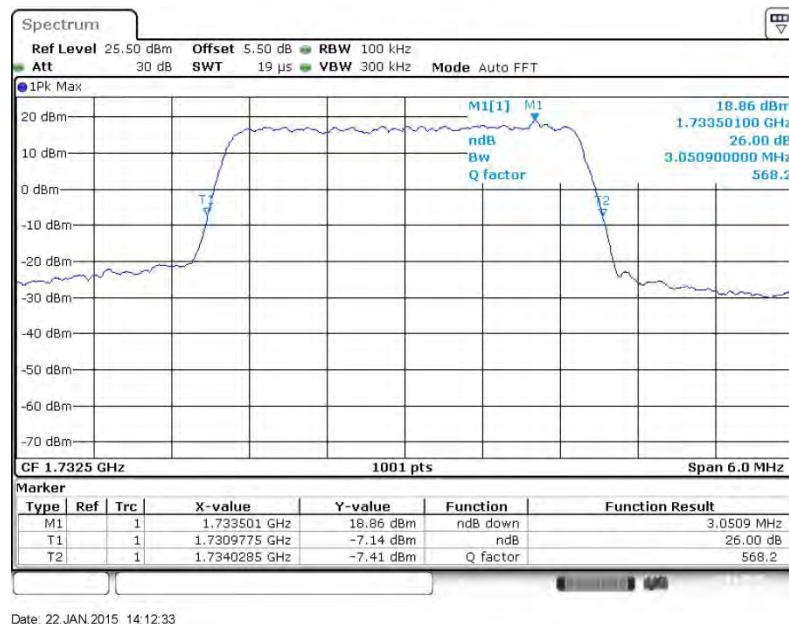


|        |            |             |             |
|--------|------------|-------------|-------------|
| Band : | LTE Band 4 | BW / Mod. : | 3MHz / QPSK |
|--------|------------|-------------|-------------|

## 99% Occupied Bandwidth Plot on Channel 20175



## 26dB Bandwidth Plot on Channel 20175

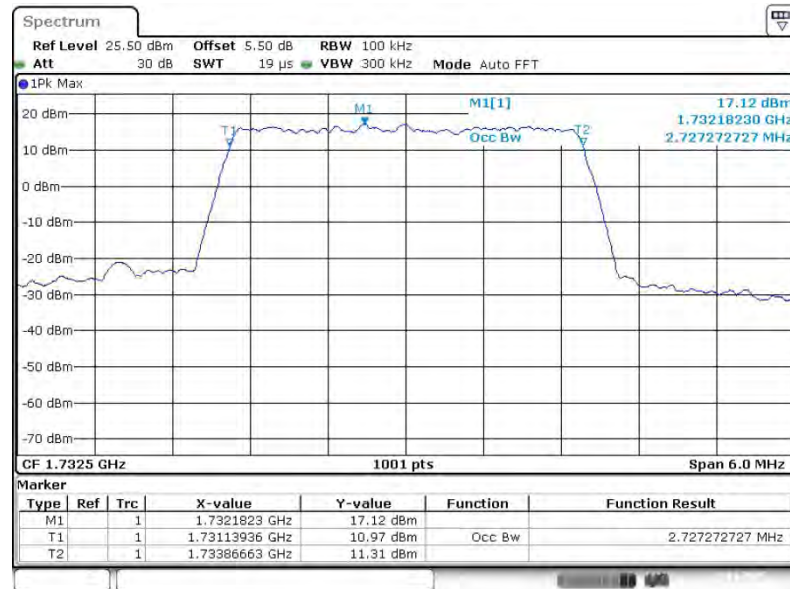




Band : LTE Band 4

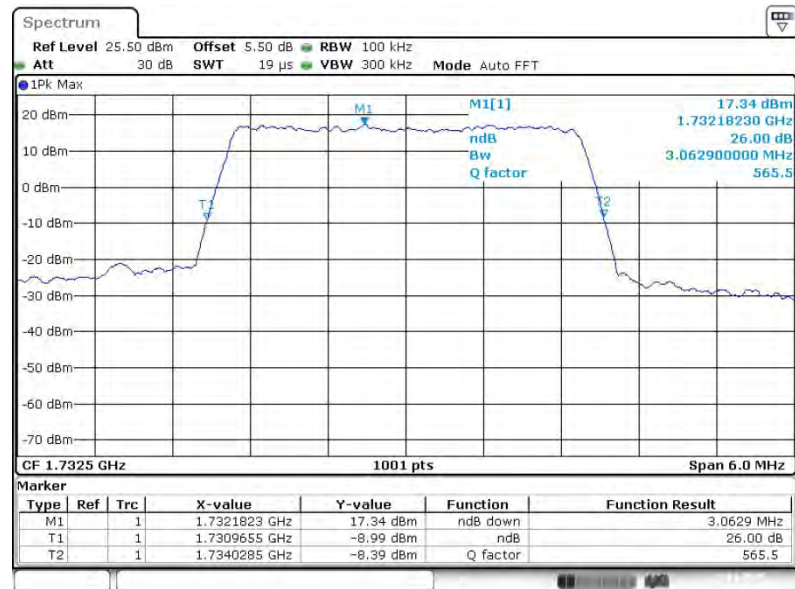
BW / Mod. : 3MHz / 16QAM

## 99% Occupied Bandwidth Plot on Channel 20175



Date: 22.JAN.2015 14:12:21

## 26dB Bandwidth Plot on Channel 20175

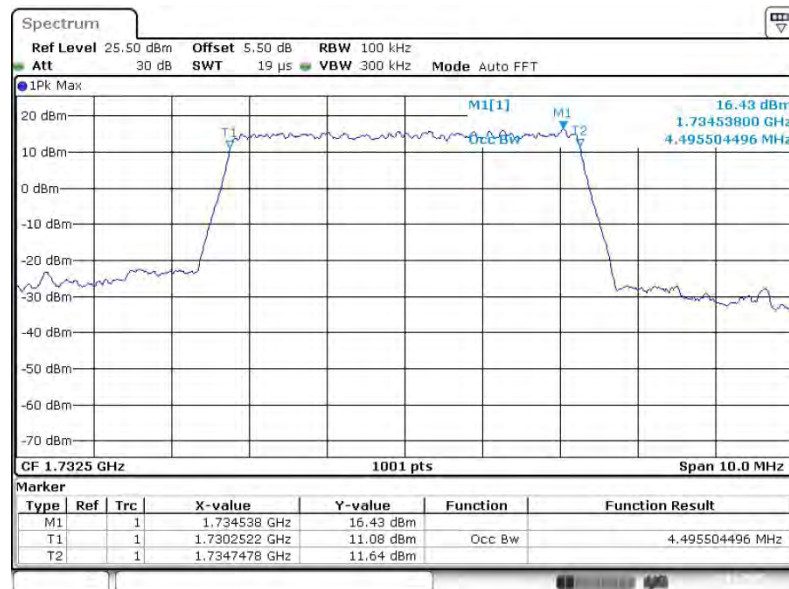


Date: 22.JAN.2015 14:12:44

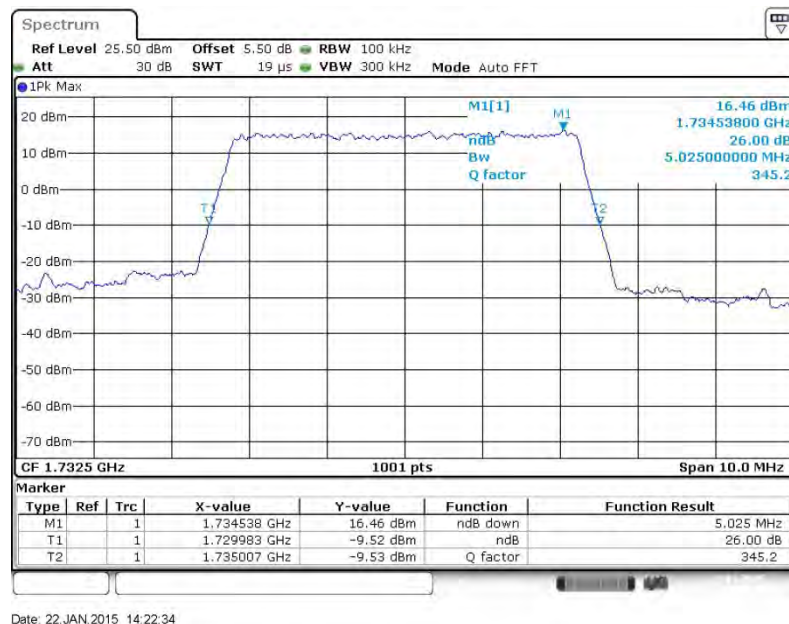


|        |            |             |             |
|--------|------------|-------------|-------------|
| Band : | LTE Band 4 | BW / Mod. : | 5MHz / QPSK |
|--------|------------|-------------|-------------|

## 99% Occupied Bandwidth Plot on Channel 20175



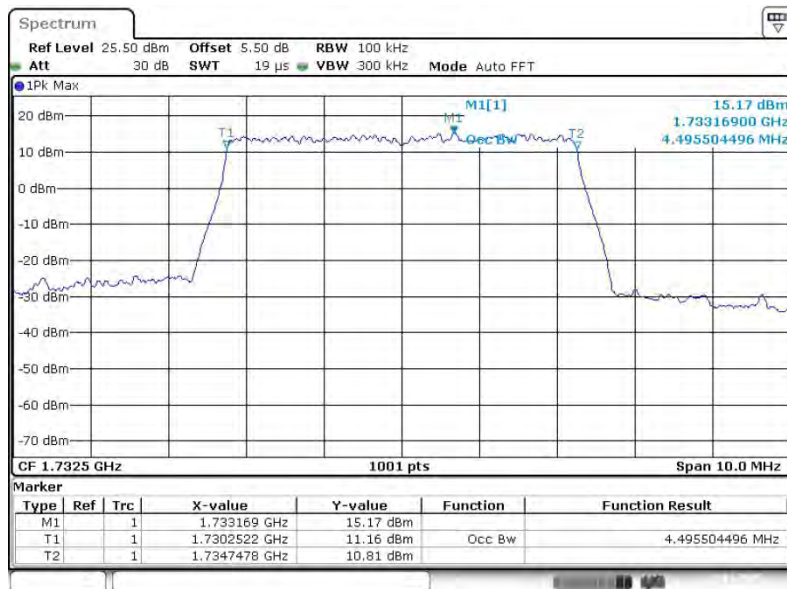
## 26dB Bandwidth Plot on Channel 20175





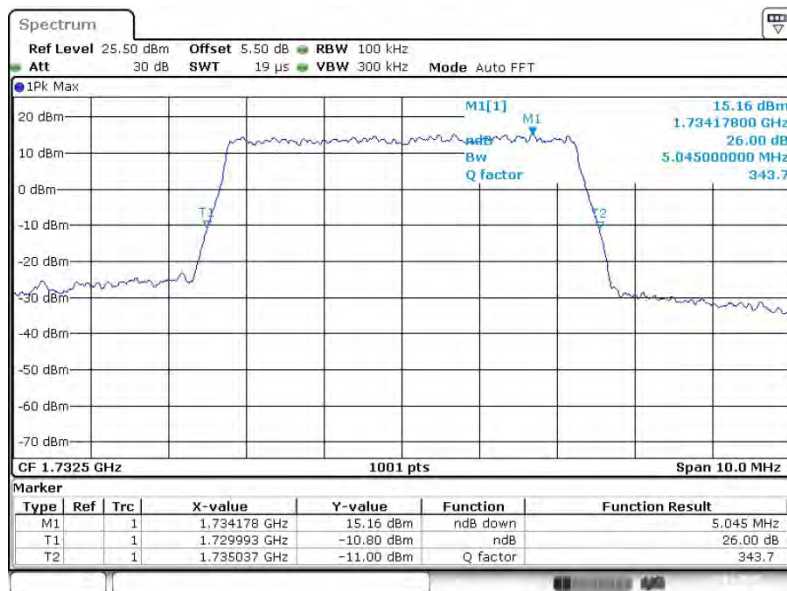
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 4 | BW / Mod. : | 5MHz / 16QAM |
|--------|------------|-------------|--------------|

## 99% Occupied Bandwidth Plot on Channel 20175



Date: 22.JAN.2015 14:22:22

## 26dB Bandwidth Plot on Channel 20175



Date: 22.JAN.2015 14:22:46

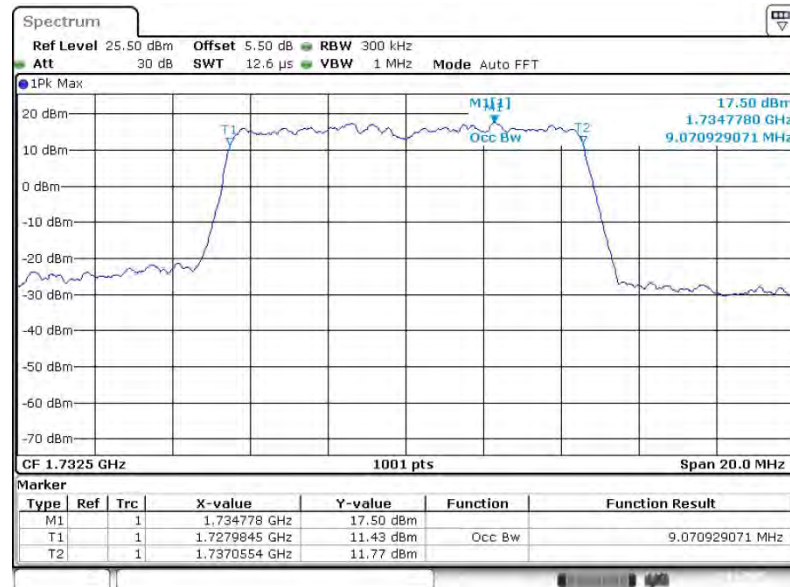




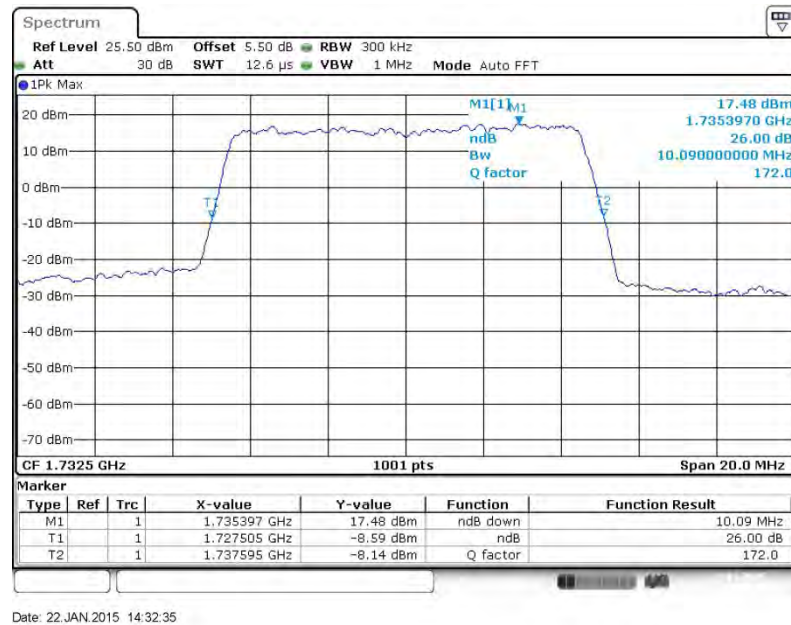
Band : LTE Band 4

BW / Mod. : 10MHz / QPSK

## 99% Occupied Bandwidth Plot on Channel 20175



## 26dB Bandwidth Plot on Channel 20175



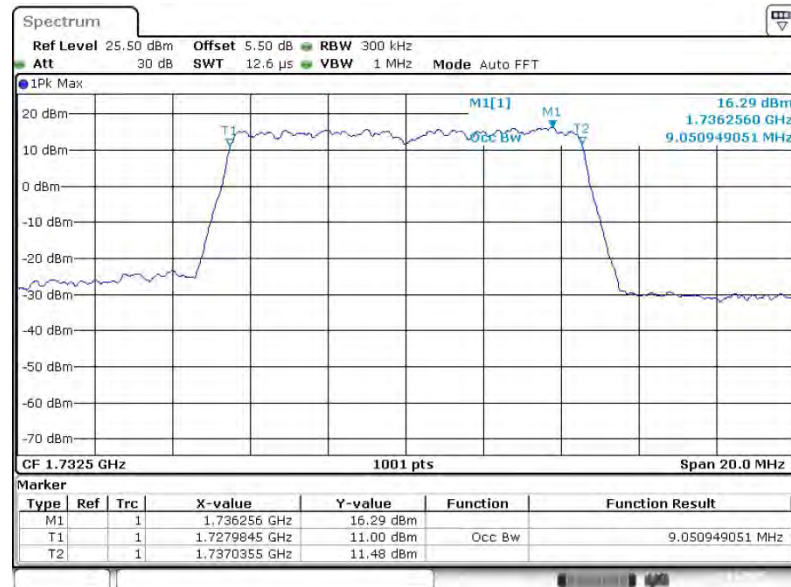




Band : LTE Band 4

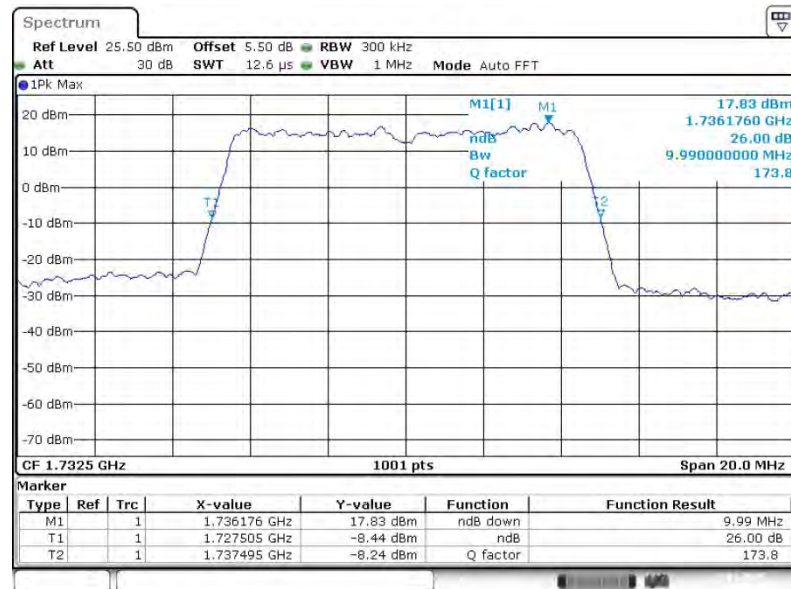
BW / Mod. : 10MHz / 16QAM

## 99% Occupied Bandwidth Plot on Channel 20175



Date: 22.JAN.2015 14:32:23

## 26dB Bandwidth Plot on Channel 20175

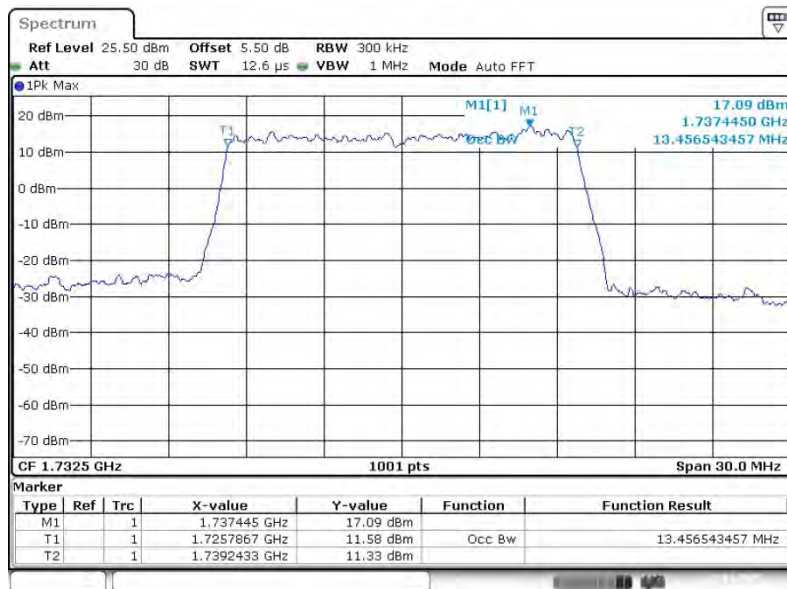


Date: 22.JAN.2015 14:32:47



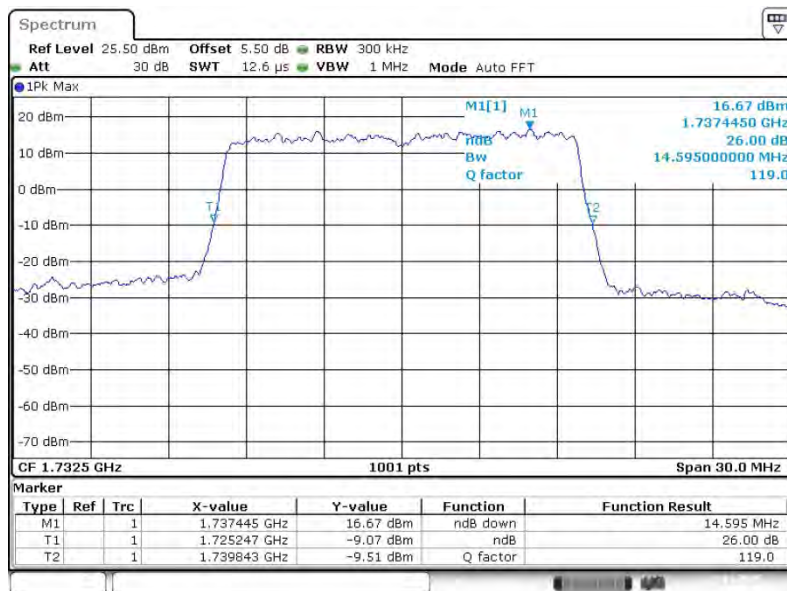
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 4 | BW / Mod. : | 15MHz / QPSK |
|--------|------------|-------------|--------------|

## 99% Occupied Bandwidth Plot on Channel 20175



Date: 22.JAN.2015 14:42:15

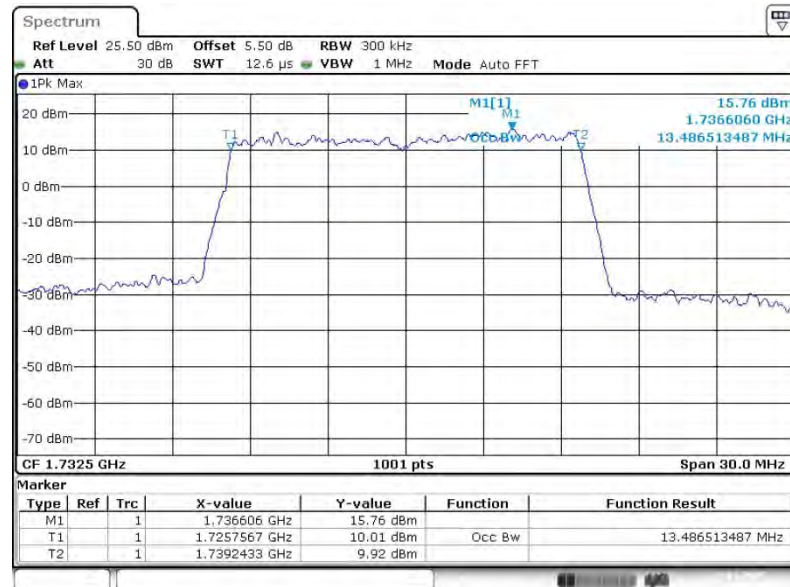
## 26dB Bandwidth Plot on Channel 20175



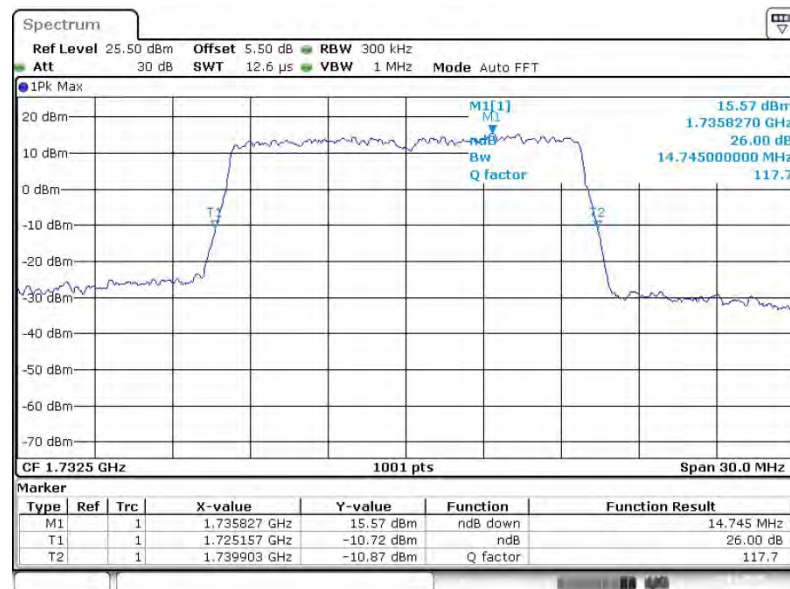
Date: 22.JAN.2015 14:42:37



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

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

Date: 22.JAN.2015 14:42:25

**26dB Bandwidth Plot on Channel 20175**

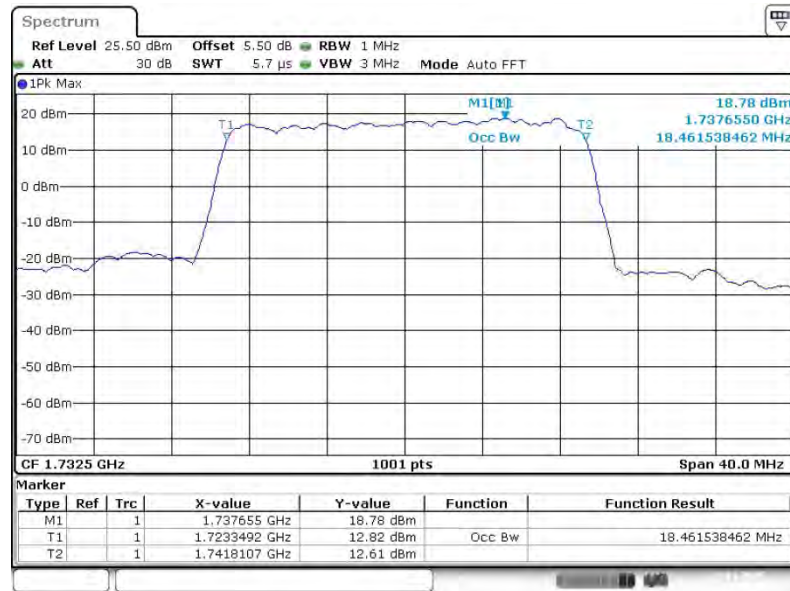
Date: 22.JAN.2015 14:42:49



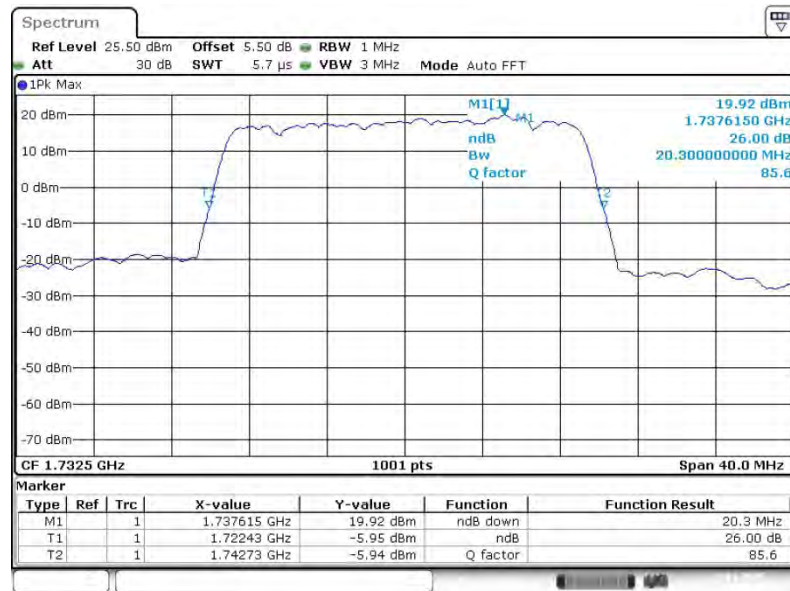
Band : LTE Band 4

BW / Mod. : 20MHz / QPSK

## 99% Occupied Bandwidth Plot on Channel 20175



## 26dB Bandwidth Plot on Channel 20175

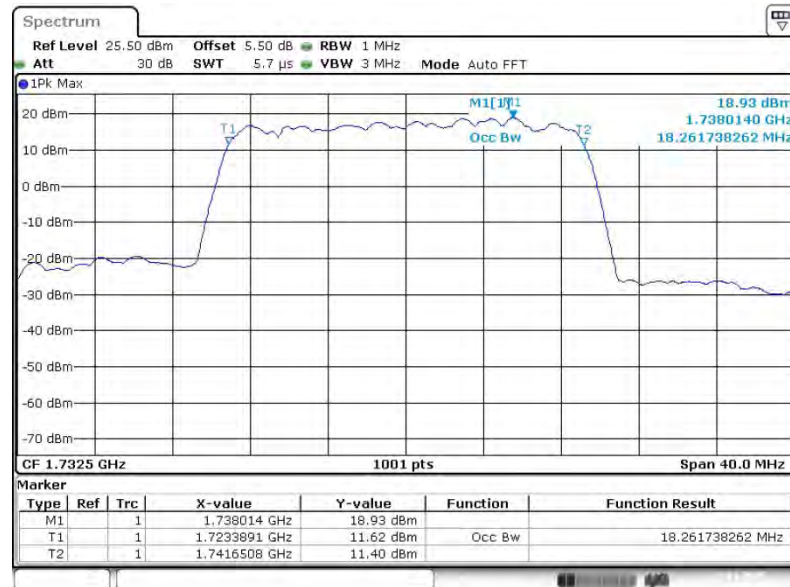




Band : LTE Band 4

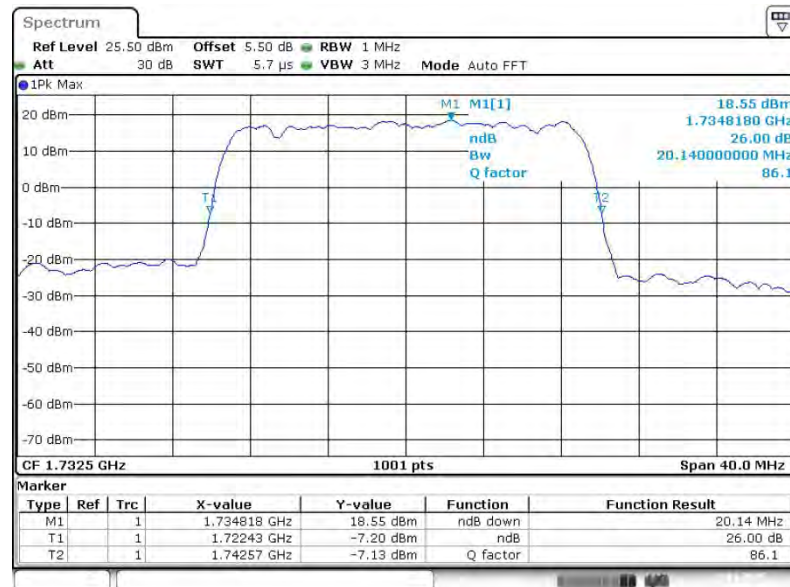
BW / Mod. : 20MHz / 16QAM

## 99% Occupied Bandwidth Plot on Channel 20175



Date: 22.JAN.2015 14:52:26

## 26dB Bandwidth Plot on Channel 20175



Date: 22.JAN.2015 14:52:50

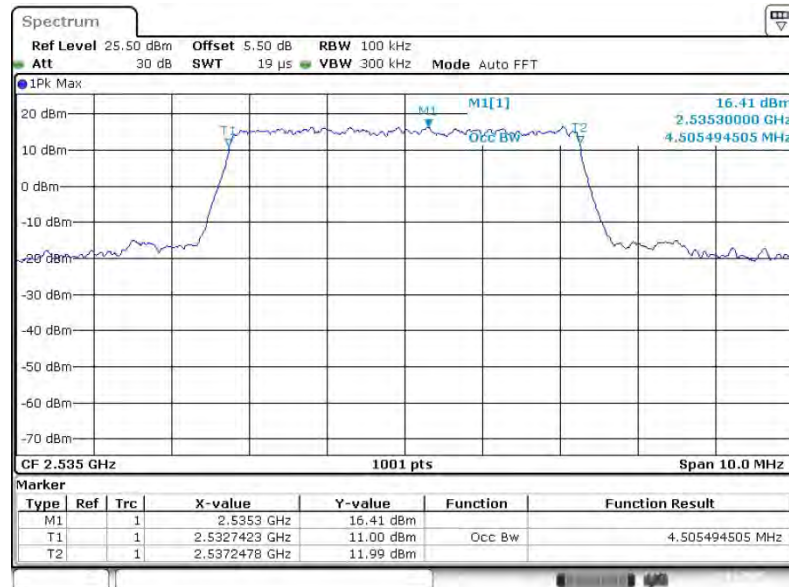




Band : LTE Band 7

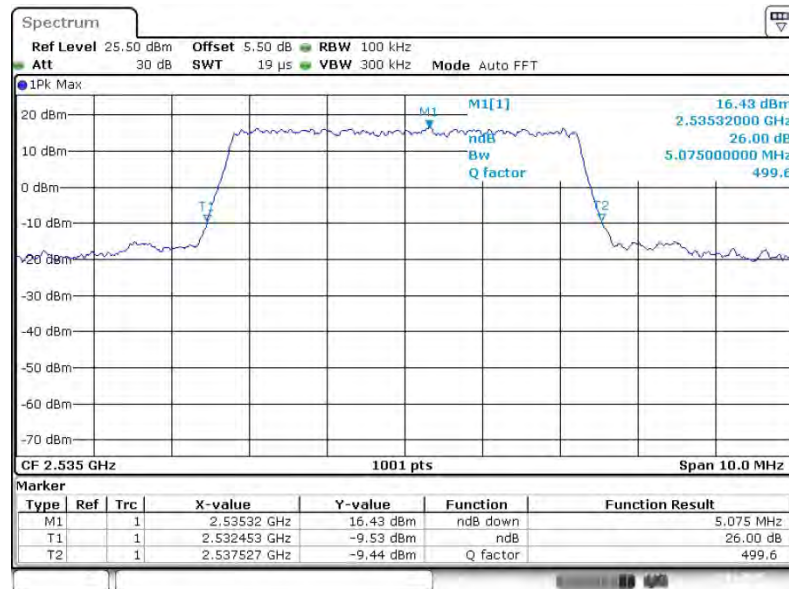
BW / Mod. : 5MHz / QPSK

## 99% Occupied Bandwidth Plot on Channel 21100



Date: 22.JAN.2015 15:54:08

## 26dB Bandwidth Plot on Channel 21100



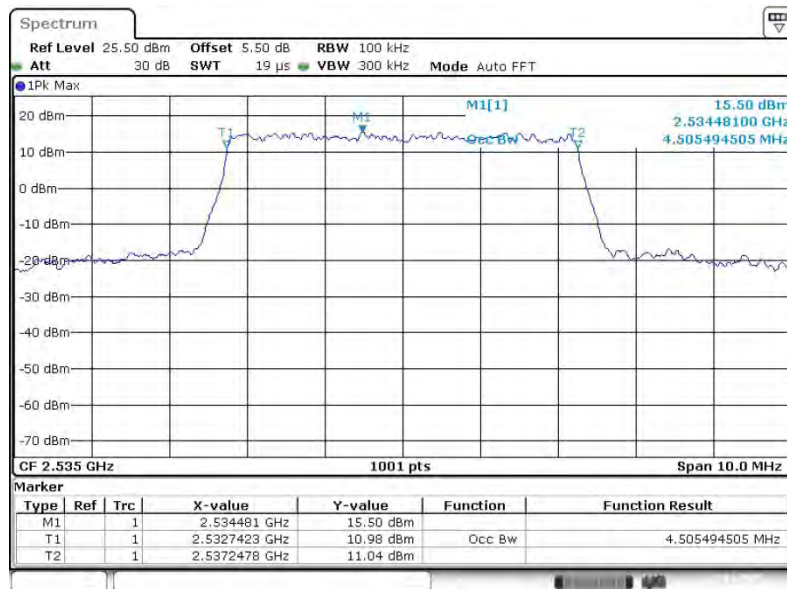
Date: 22.JAN.2015 15:54:29



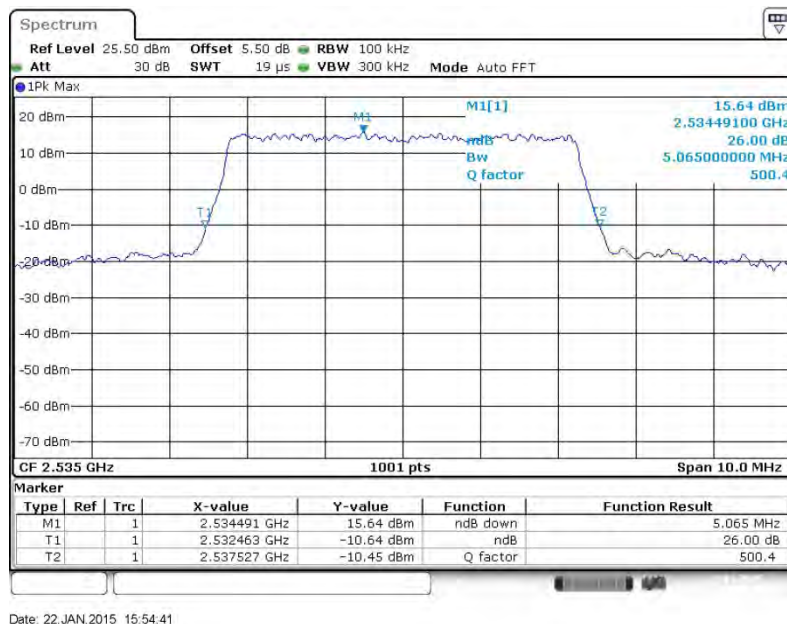


|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 7 | BW / Mod. : | 5MHz / 16QAM |
|--------|------------|-------------|--------------|

## 99% Occupied Bandwidth Plot on Channel 21100



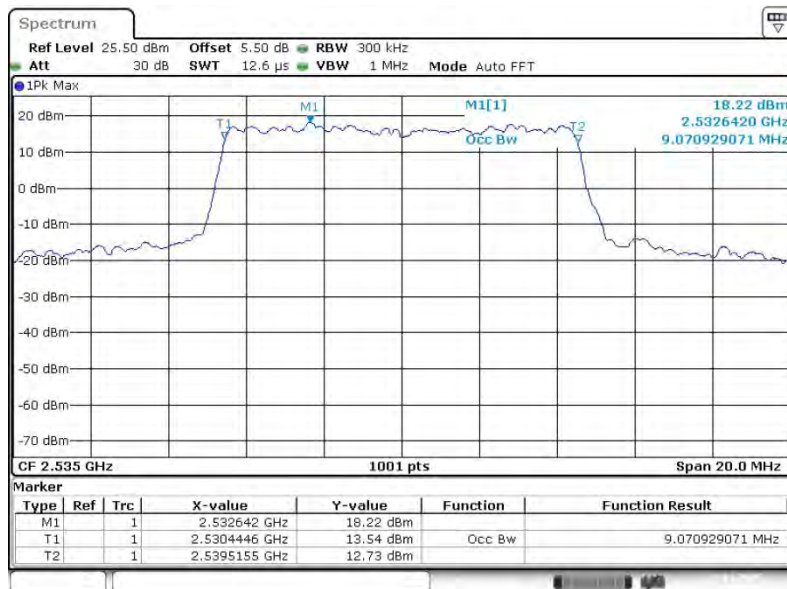
## 26dB Bandwidth Plot on Channel 21100





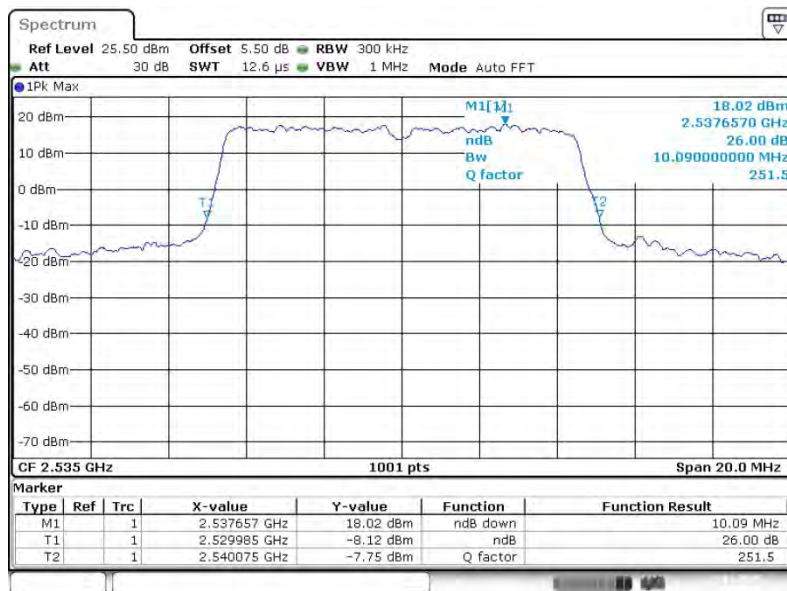
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 7 | BW / Mod. : | 10MHz / QPSK |
|--------|------------|-------------|--------------|

## 99% Occupied Bandwidth Plot on Channel 21100



Date: 22.JAN.2015 16:04:11

## 26dB Bandwidth Plot on Channel 21100

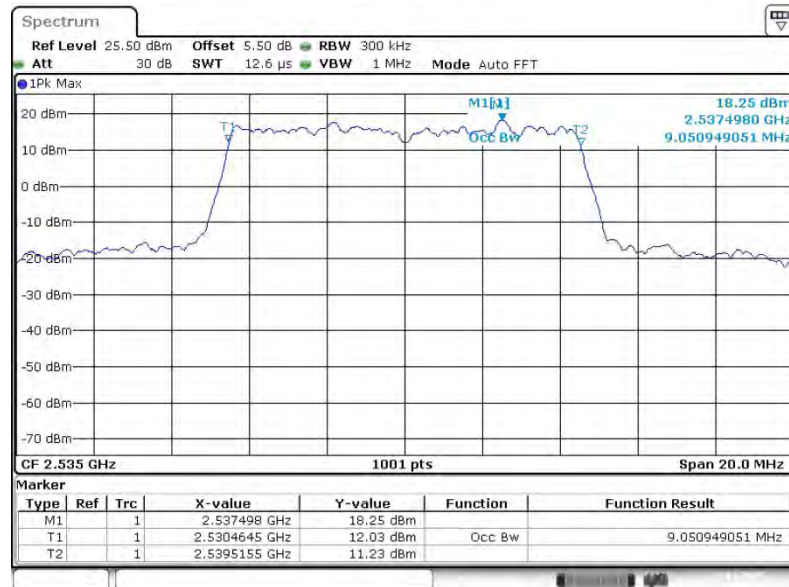


Date: 22.JAN.2015 16:04:32



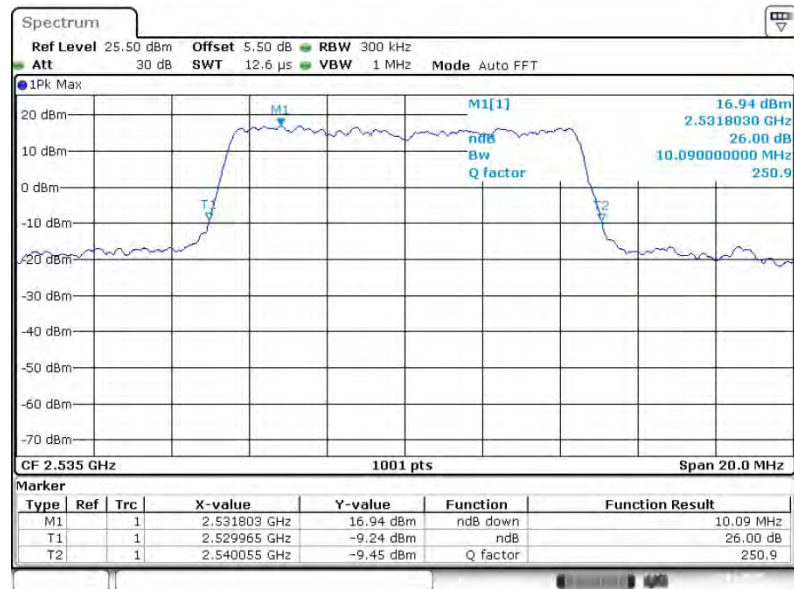
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 7 | BW / Mod. : | 10MHz / 16QAM |
|--------|------------|-------------|---------------|

## 99% Occupied Bandwidth Plot on Channel 21100



Date: 22.JAN.2015 16:04:21

## 26dB Bandwidth Plot on Channel 21100



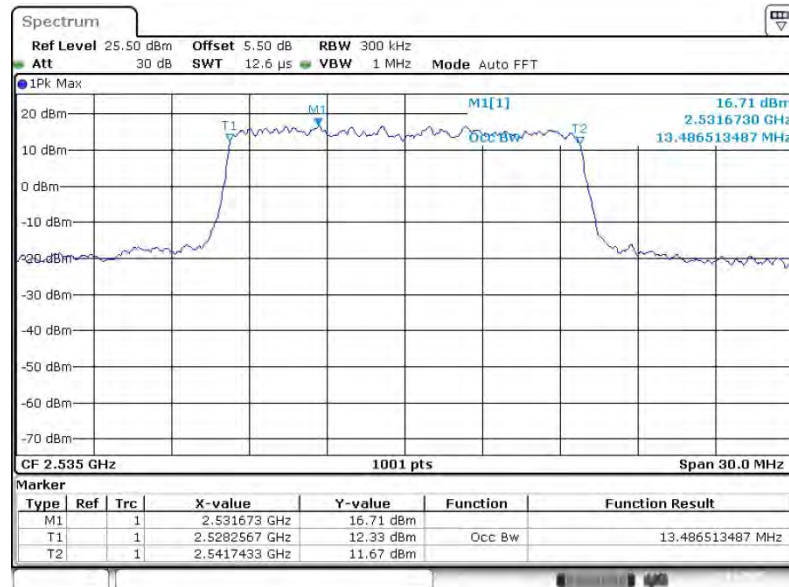
Date: 22.JAN.2015 16:04:44



Band : LTE Band 7

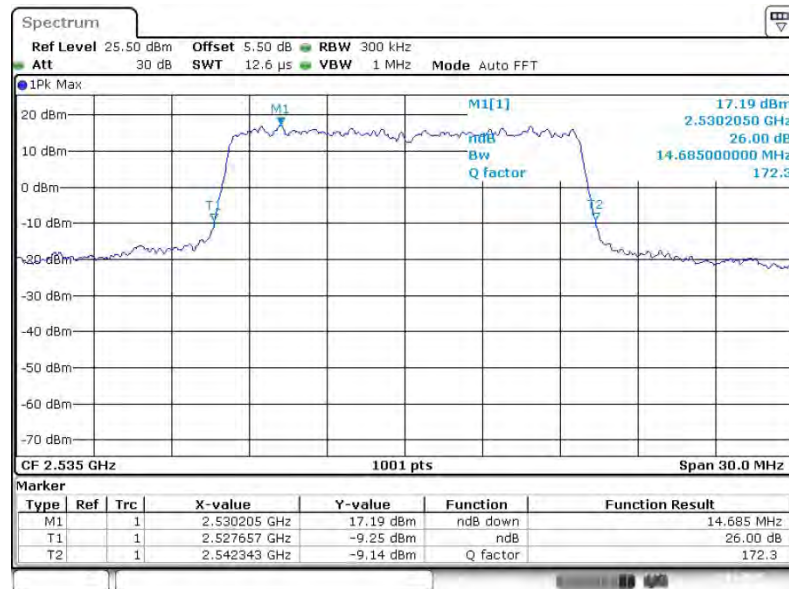
BW / Mod. : 15MHz / QPSK

## 99% Occupied Bandwidth Plot on Channel 21100



Date: 22.JAN.2015 16:14:13

## 26dB Bandwidth Plot on Channel 21100

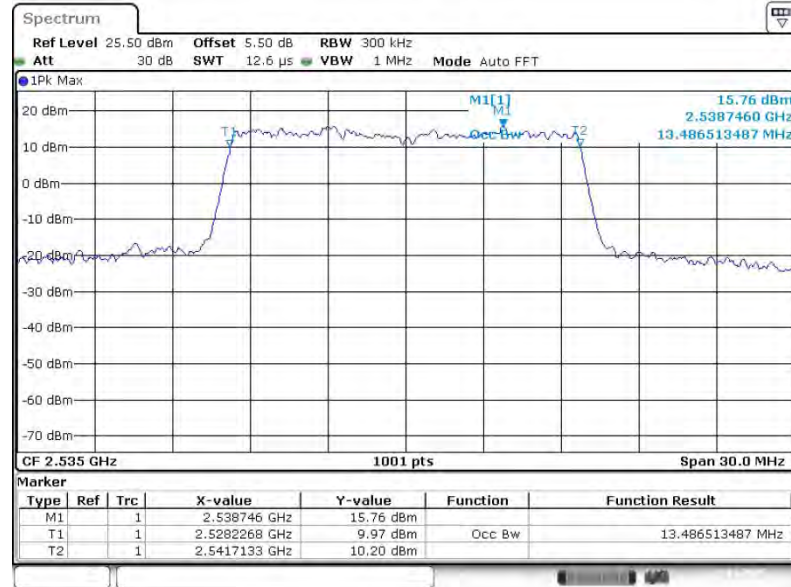


Date: 22.JAN.2015 16:14:35



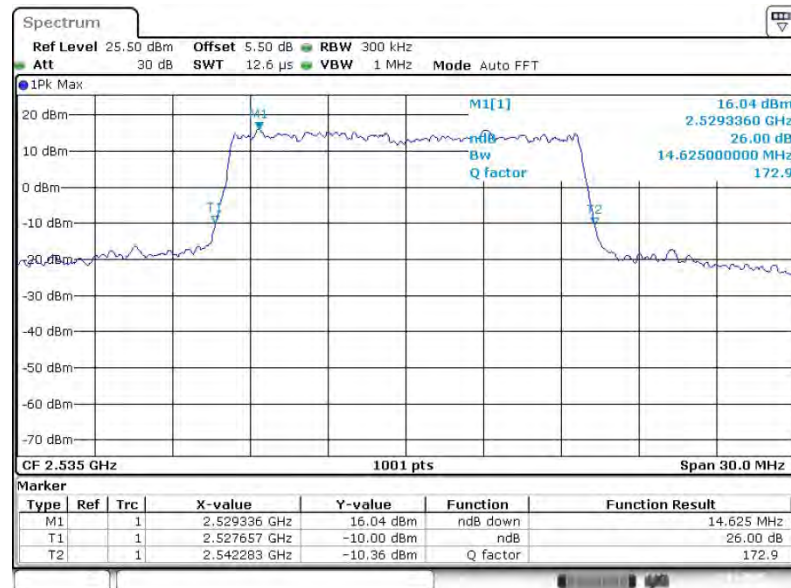
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 7 | BW / Mod. : | 15MHz / 16QAM |
|--------|------------|-------------|---------------|

## 99% Occupied Bandwidth Plot on Channel 21100



Date: 22.JAN.2015 16:14:23

## 26dB Bandwidth Plot on Channel 21100



Date: 22.JAN.2015 16:14:47

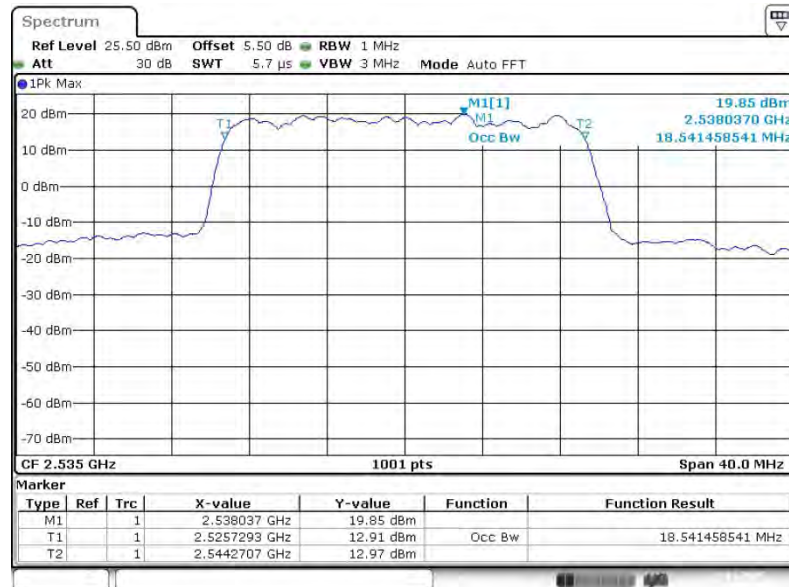




Band : LTE Band 7

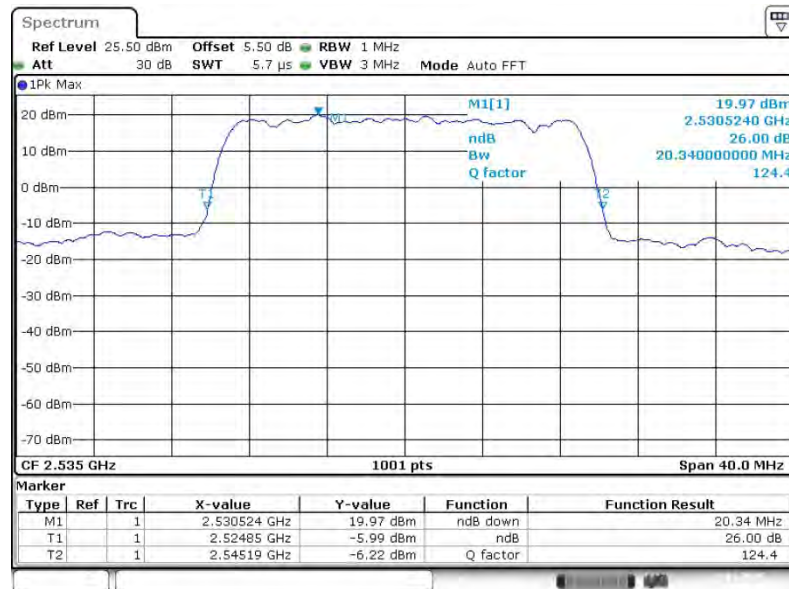
BW / Mod. : 20MHz / QPSK

## 99% Occupied Bandwidth Plot on Channel 21100



Date: 22.JAN.2015 16:24:16

## 26dB Bandwidth Plot on Channel 21100



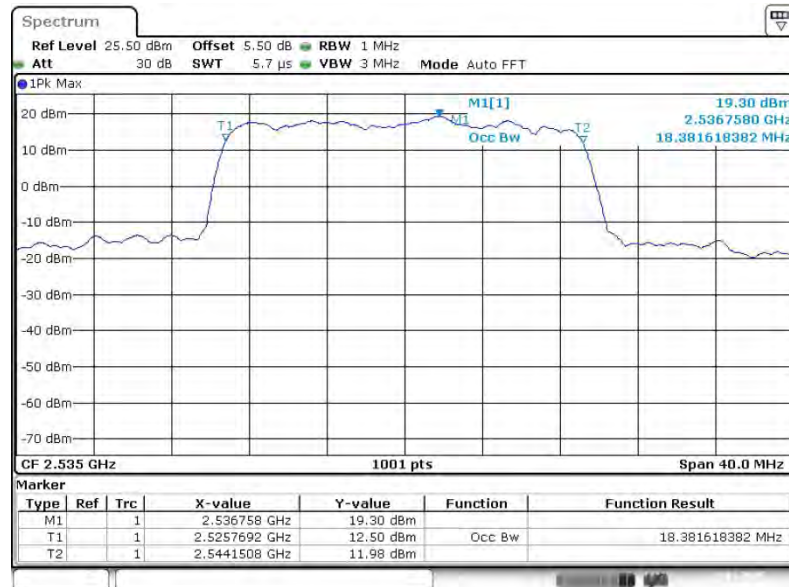
Date: 22.JAN.2015 16:24:38





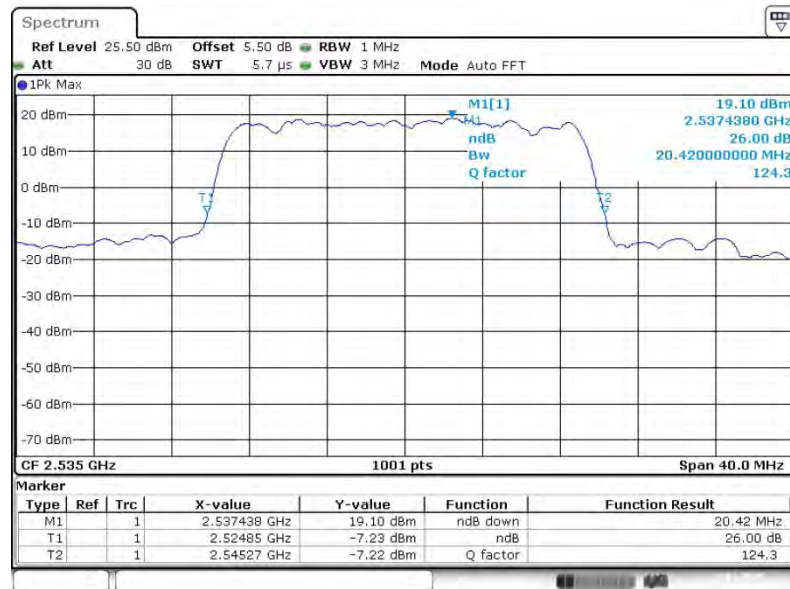
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 7 | BW / Mod. : | 20MHz / 16QAM |
|--------|------------|-------------|---------------|

## 99% Occupied Bandwidth Plot on Channel 21100



Date: 22.JAN.2015 16:24:26

## 26dB Bandwidth Plot on Channel 21100



Date: 22.JAN.2015 16:24:50