

# FCC RF Test Report

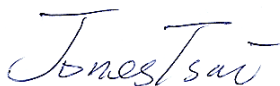
APPLICANT : Sony Mobile Communications AB  
EQUIPMENT : Smart phone  
BRAND NAME : SONY  
MODEL NAME : D2303  
TYPE NAME : PM-0722-BV  
FCC ID : PY7PM-0722  
STANDARD : 47 CFR Part 2, 22(H), 27(M)  
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Nov. 15, 2014 and testing was completed on Dec. 30, 2014. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI / TIA / EIA-603-C-2004 and shown compliance with the applicable technical standards.

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



Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager



## SPORTON INTERNATIONAL INC.

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## REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION             | ISSUED DATE   |
|------------|---------|-------------------------|---------------|
| FG3N1532B  | Rev. 01 | Initial issue of report | Jan. 24, 2014 |
|            |         |                         |               |
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## SUMMARY OF TEST RESULT

| Report Section | FCC Rule                               | IC Rule                                          | Description                                     | Limit                               | Result | Remark |
|----------------|----------------------------------------|--------------------------------------------------|-------------------------------------------------|-------------------------------------|--------|--------|
| 3.1            | §2.1046                                | RSS-Gen(4.8)<br>RSS-132 (5.4)<br>RSS-199 (4.4)   | Conducted Output Power                          | Reporting Only                      | PASS   | -      |
| 3.2            | §27.50(d)(5)                           | RSS-132 (5.4)                                    | Peak-to-Average Ratio                           | <13 dB                              | PASS   | -      |
| 3.3            | §22.913(a)(2)                          | RSS-132(5.4)<br>SRSP-503(5.1.3)                  | Effective Radiated Power<br>(Band 5)            | ERP < 7 Watts                       | PASS   | -      |
|                | §27.50(h)(2)                           | RSS-199 (4.4)                                    | Equivalent Isotropic Radiated Power<br>(Band 7) | EIRP < 2 Watts                      | PASS   | -      |
| 3.4            | §2.1049<br>§22.917(a)<br>§27.53 (l)(4) | RSS-GEN(4.6.1)<br>RSS-132 (3.1)<br>RSS-199 (4.2) | Occupied Bandwidth                              | Reporting Only                      | PASS   | -      |
| 3.5            | §2.1051<br>§22.917(a)<br>§27.53 (l)(4) | RSS-GEN(4.9)<br>RSS-132 (5.5)<br>RSS-199 (4.5)   | Conducted Band Edge<br>Measurement              | < 43+10log <sub>10</sub> (P[Watts]) | PASS   | -      |
| 3.6            | §2.1051<br>§22.917(a)                  | RSS-GEN(4.9)<br>RSS-132 (5.5)                    | Conducted Spurious Emission<br>(Band 5)         | < 43+10log <sub>10</sub> (P[Watts]) | PASS   | -      |
|                | §2.1051<br>§27.53(l)(4)                | RSS-GEN(4.9)<br>RSS-199 (4.5)                    | Conducted Spurious Emission<br>(Band 7)         | < 55+10log <sub>10</sub> (P[Watts]) | PASS   | -      |



| Report Section | FCC Rule                     | IC Rule                                       | Description                                  | Limit                               | Result | Remark                                   |
|----------------|------------------------------|-----------------------------------------------|----------------------------------------------|-------------------------------------|--------|------------------------------------------|
| 3.7            | §2.1053<br>§22.917(a)        | RSS-GEN(4.9)<br>RSS-132 (5.5)                 | Radiated Spurious Emission<br>(Band 5)       | $< 43+10\log_{10}(P[\text{Watts}])$ | PASS   | Under limit<br>3.12 dB at<br>7710.00 MHz |
|                | §2.1053<br>§27.53(l)(4)      | RSS-GEN(4.9)<br>RSS-199 (4.5)                 | Radiated Spurious Emission<br>(Band 7)       | $< 55+10\log_{10}(P[\text{Watts}])$ | PASS   |                                          |
| 3.8            | §2.1055<br>§22.355<br>§27.54 | RSS-GEN(4.7)<br>RSS-132(5.3)<br>RSS-199 (4.3) | Frequency Stability<br>Temperature & Voltage | $< 2.5 \text{ ppm}$                 | PASS   | -                                        |

# 1 General Description

## 1.1 Applicant

**Sony Mobile Communications AB**  
Nya Vattentorget, 22188 Lund, Sweden

## 1.2 Manufacturer

**Compal Communications, INC.**  
No. 385, Yangguang Street, Neihu, Taipei 11491, Taiwan

## 1.3 Feature of Equipment Under Test

The Equipment Under Test (hereafter called: EUT) is Smart phone supporting, GSM / WCDMA / LTE, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n, Bluetooth with FM Receiver, GPS, and NFC features, and below is details of information.

| Product Feature               |                                           |
|-------------------------------|-------------------------------------------|
| Equipment                     | Smart phone                               |
| Brand Name                    | SONY                                      |
| Model Name                    | D2303                                     |
| Type Name                     | PM-0722-BV                                |
| FCC ID                        | PY7PM-0722                                |
| GSM Operating Band(s)         | GSM 850/900/1800/1900MHz                  |
| GPRS / EGPRS Multi Slot Class | GPRS Class 33, EGPRS Class 33             |
| WCDMA Operating Band(s)       | FDD Band I / V / VIII                     |
| WCDMA Rel. Version            | Rel. 8                                    |
| LTE Operating Band(s)         | FDD Band I / III / V / VII / VIII / XX    |
| Wi-Fi Specification           | 802.11b/g/n (HT20), 802.11a/n (HT20/HT40) |
| Bluetooth Version             | v3.0 + EDR / v4.0-LE                      |
| NFC Specification             | ISO14443A / ISO14443B / Felica            |
| Power Supply                  | Battery / AC Adapter / Car Charger        |

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

## 1.4 Product Specification of Equipment Under Test

| Product Specification subjective to this standard |                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tx Frequency</b>                               | LTE Band 5 : 824.7 MHz ~ 848.3 MHz<br>LTE Band 7 : 2506.5 MHz ~ 2534.5 MHz<br>and 2556 MHz ~ 2567.5 MHz                                                                                                                                                                                                      |
| <b>Rx Frequency</b>                               | LTE Band 5 : 869.7 MHz ~ 893.3 MHz<br>LTE Band 7 : 2626.5MHz ~ 2654.5 MHz<br>and 2676 MHz ~ 2687.5 MHz                                                                                                                                                                                                       |
| <b>Bandwidth</b>                                  | 1.4MHz / 3MHz / 5MHz / 10MHz (LTE Band 5)<br>5MHz/ 10MHz / 15MHz / 20MHz (LTE Band 7)                                                                                                                                                                                                                        |
| <b>Maximum Output Power to Antenna</b>            | <b>&lt;LTE Band 5&gt;</b><br>1.4MHz: 23.94 dBm / 0.2477 W<br>3MHz: 23.95 dBm / 0.2483 W<br>5MHz: 23.89 dBm / 0.2449 W<br>10MHz: 23.92 dBm / 0.2466 W<br><b>&lt;LTE Band 7&gt;</b><br>5MHz: 23.53 dBm / 0.2254 W<br>10MHz: 23.80 dBm / 0.2399 W<br>15MHz: 23.60 dBm / 0.2291 W<br>20MHz: 23.90 dBm / 0.2455 W |
| <b>Antenna Type</b>                               | PIFA with Parasitic Strip Antenna                                                                                                                                                                                                                                                                            |
| <b>Type of Modulation</b>                         | QPSK / 16QAM                                                                                                                                                                                                                                                                                                 |
| <b>EUT Serial Number</b>                          | IMEI : 004402451655769<br>S/N : 468186597BB                                                                                                                                                                                                                                                                  |
| <b>HW Version</b>                                 | A                                                                                                                                                                                                                                                                                                            |
| <b>SW Version</b>                                 | 18.0.C.0.30                                                                                                                                                                                                                                                                                                  |
| <b>EUT Stage</b>                                  | Production Unit                                                                                                                                                                                                                                                                                              |

| Accessory List    |                             |
|-------------------|-----------------------------|
| <b>AC Adapter</b> | Model No. : EP800           |
|                   | Type No. : CAA-0002016-US B |
| <b>Battery</b>    | Model No. : LIS1502ERPC     |
|                   | Type No. : LIS1502ERPC      |
| <b>Earphone</b>   | Model No. : MH410c          |
|                   | Type No. : AG-1100          |
| <b>USB Cable</b>  | Model No. : AHAB EC450      |
|                   | Part No. : 1242-6715.4      |

## 1.5 Modification of EUT

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

## 1.6 Emission Designator

| FCC Rule | System     | Type of Modulation | BW      | Emission Designator | Frequency Tolerance (ppm) | Maximum ERP/EIRP |
|----------|------------|--------------------|---------|---------------------|---------------------------|------------------|
| Part 22  | LTE Band 5 | QPSK               | 1.4 MHz | 1M10G7D             | -                         | 0.05 W           |
| Part 22  | LTE Band 5 | 16QAM              | 1.4 MHz | 1M10D7W             | -                         | 0.04 W           |
| Part 22  | LTE Band 5 | QPSK               | 3 MHz   | 2M72G7D             | -                         | 0.08 W           |
| Part 22  | LTE Band 5 | 16QAM              | 3 MHz   | 2M72D7W             | -                         | 0.05 W           |
| Part 22  | LTE Band 5 | QPSK               | 5MHz    | 4M50G7D             | -                         | 0.08 W           |
| Part 22  | LTE Band 5 | 16QAM              | 5MHz    | 4M49D7W             | -                         | 0.06 W           |
| Part 22  | LTE Band 5 | QPSK               | 10MHz   | 9M14G7D             | 0.05 ppm                  | 0.06 W           |
| Part 22  | LTE Band 5 | 16QAM              | 10MHz   | 9M08D7W             | -                         | 0.05 W           |
| Part 27  | LTE Band 7 | QPSK               | 5MHz    | 4M52G7D             | -                         | 0.19 W           |
| Part 27  | LTE Band 7 | 16QAM              | 5MHz    | 4M52D7W             | -                         | 0.15 W           |
| Part 27  | LTE Band 7 | QPSK               | 10MHz   | 9M10G7D             | 0.08 ppm                  | 0.20 W           |
| Part 27  | LTE Band 7 | 16QAM              | 10MHz   | 9M04D7W             | -                         | 0.14 W           |
| Part 27  | LTE Band 7 | QPSK               | 15MHz   | 13M50G7D            | -                         | 0.17 W           |
| Part 27  | LTE Band 7 | 16QAM              | 15MHz   | 13M47D7W            | -                         | 0.21 W           |
| Part 27  | LTE Band 7 | QPSK               | 20MHz   | 18M48G7D            | -                         | 0.22 W           |
| Part 27  | LTE Band 7 | 16QAM              | 20MHz   | 18M52D7W            | -                         | 0.14 W           |

## 1.7 Testing Site

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

## 1.8 Applied Standards

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

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

**Remark:** All test items were verified and recorded according to the standards and without any deviation during the test.

## 2 Test Configuration of Equipment Under Test

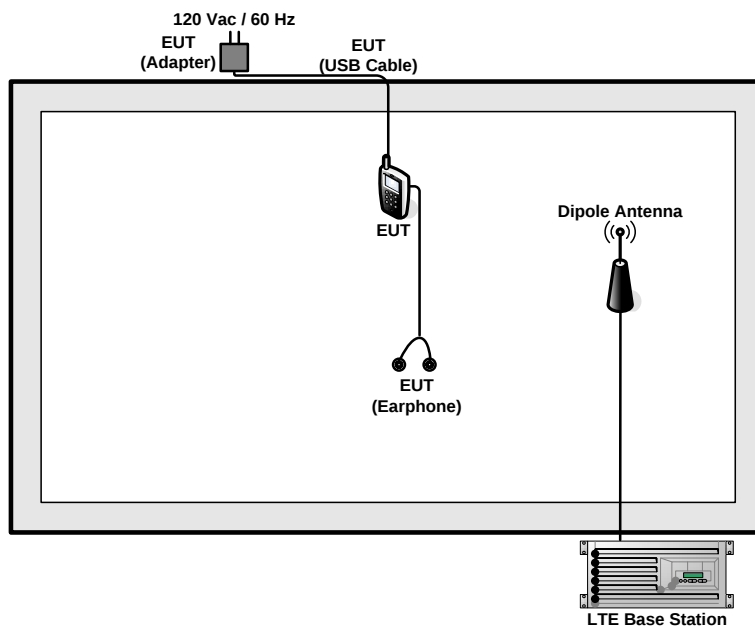
### 2.1 Test Mode

During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT was rotated on three test planes to find out the worst emission.

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

| Test Modes    |              |                        |                                                                               |
|---------------|--------------|------------------------|-------------------------------------------------------------------------------|
| Band          |              | Radiated TCs           | Conducted TCs                                                                 |
| LTE<br>Band 5 | BW<br>1.4MHz | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 3) Link<br>■ LTE (RB Size 6) Link    |
|               | BW<br>3MHz   | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 8) Link<br>■ LTE (RB Size 15) Link   |
|               | BW<br>5MHz   | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 12) Link<br>■ LTE (RB Size 25) Link  |
|               | BW<br>10MHz  | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 25) Link<br>■ LTE (RB Size 50) Link  |
| LTE<br>Band 7 | BW<br>5MHz   | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 12) Link<br>■ LTE (RB Size 25) Link  |
|               | BW<br>10MHz  | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 25) Link<br>■ LTE (RB Size 50) Link  |
|               | BW<br>15MHz  | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 36) Link<br>■ LTE (RB Size 75) Link  |
|               | BW<br>20MHz  | ■ LTE (RB Size 1) Link | ■ LTE (RB Size 1) Link<br>■ LTE (RB Size 50) Link<br>■ LTE (RB Size 100) Link |

## 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 |

## 2.4 Measurement Results Explanation Example

For all conducted test items:

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

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

*Offset = RF cable loss + attenuator factor.*

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

Example :

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

### 3 Test Result

#### 3.1 Conducted Output Power Measurement

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

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

##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedures

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

##### 3.1.4 Test Setup



### 3.1.5 Test Result of Conducted Output Power

#### <LTE Band 5 Conducted Power>

| BW [MHz]        | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|-----------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| Channel         |            |         |           | 20450                             | 20525                                | 20600                              |
| Frequency (MHz) |            |         |           | 829                               | 836.5                                | 844                                |
| 10              | QPSK       | 1       | 0         | 23.92                             | 23.92                                | 23.77                              |
| 10              | QPSK       | 1       | 24        | 23.81                             | 23.77                                | 23.79                              |
| 10              | QPSK       | 1       | 49        | 23.79                             | 23.86                                | 23.80                              |
| 10              | QPSK       | 25      | 0         | 23.50                             | 23.63                                | 23.64                              |
| 10              | QPSK       | 25      | 12        | 23.41                             | 23.54                                | 23.78                              |
| 10              | QPSK       | 25      | 24        | 23.30                             | 23.52                                | 23.60                              |
| 10              | QPSK       | 50      | 0         | 23.29                             | 23.24                                | 23.30                              |
| 10              | 16QAM      | 1       | 0         | 22.68                             | 22.75                                | 22.52                              |
| 10              | 16QAM      | 1       | 24        | 22.53                             | 22.48                                | 22.45                              |
| 10              | 16QAM      | 1       | 49        | 22.69                             | 22.51                                | 22.82                              |
| 10              | 16QAM      | 25      | 0         | 22.50                             | 22.46                                | 22.67                              |
| 10              | 16QAM      | 25      | 12        | 22.31                             | 22.44                                | 22.61                              |
| 10              | 16QAM      | 25      | 24        | 22.28                             | 22.33                                | 22.62                              |
| 10              | 16QAM      | 50      | 0         | 22.24                             | 22.24                                | 22.50                              |
| Channel         |            |         |           | 20425                             | 20525                                | 20625                              |
| Frequency (MHz) |            |         |           | 826.5                             | 836.5                                | 846.5                              |
| 5               | QPSK       | 1       | 0         | 23.89                             | 23.75                                | 23.55                              |
| 5               | QPSK       | 1       | 12        | 23.76                             | 23.83                                | 23.76                              |
| 5               | QPSK       | 1       | 24        | 23.77                             | 23.85                                | 23.85                              |
| 5               | QPSK       | 12      | 0         | 23.57                             | 23.82                                | 23.71                              |
| 5               | QPSK       | 12      | 6         | 23.53                             | 23.78                                | 23.83                              |
| 5               | QPSK       | 12      | 11        | 23.52                             | 23.70                                | 23.79                              |
| 5               | QPSK       | 25      | 0         | 23.29                             | 23.30                                | 23.50                              |
| 5               | 16QAM      | 1       | 0         | 22.97                             | 22.94                                | 22.91                              |
| 5               | 16QAM      | 1       | 12        | 22.95                             | 22.98                                | 22.89                              |
| 5               | 16QAM      | 1       | 24        | 22.97                             | 22.89                                | 22.97                              |
| 5               | 16QAM      | 12      | 0         | 22.78                             | 22.87                                | 22.85                              |
| 5               | 16QAM      | 12      | 6         | 22.61                             | 22.84                                | 22.85                              |
| 5               | 16QAM      | 12      | 11        | 22.59                             | 22.85                                | 22.78                              |
| 5               | 16QAM      | 25      | 0         | 22.53                             | 22.88                                | 22.50                              |



| BW [MHz]               | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|------------------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| <b>Channel</b>         |            |         |           | <b>20415</b>                      | <b>20525</b>                         | <b>20635</b>                       |
| <b>Frequency (MHz)</b> |            |         |           | <b>825.5</b>                      | <b>836.5</b>                         | <b>847.5</b>                       |
| 3                      | QPSK       | 1       | 0         | 23.85                             | 23.83                                | 23.87                              |
| 3                      | QPSK       | 1       | 7         | 23.91                             | 23.92                                | 23.87                              |
| 3                      | QPSK       | 1       | 14        | 23.95                             | 23.90                                | 23.88                              |
| 3                      | QPSK       | 8       | 0         | 23.60                             | 23.85                                | 23.76                              |
| 3                      | QPSK       | 8       | 4         | 23.54                             | 23.84                                | 23.63                              |
| 3                      | QPSK       | 8       | 7         | 23.49                             | 23.87                                | 23.78                              |
| 3                      | QPSK       | 15      | 0         | 23.33                             | 23.23                                | 23.30                              |
| 3                      | 16QAM      | 1       | 0         | 22.97                             | 22.95                                | 22.84                              |
| 3                      | 16QAM      | 1       | 7         | 22.96                             | 22.88                                | 22.93                              |
| 3                      | 16QAM      | 1       | 14        | 22.81                             | 22.94                                | 22.97                              |
| 3                      | 16QAM      | 8       | 0         | 22.56                             | 22.91                                | 22.85                              |
| 3                      | 16QAM      | 8       | 4         | 22.59                             | 22.92                                | 22.83                              |
| 3                      | 16QAM      | 8       | 7         | 22.65                             | 22.81                                | 22.99                              |
| 3                      | 16QAM      | 15      | 0         | 22.31                             | 22.50                                | 22.34                              |
| <b>Channel</b>         |            |         |           | <b>20407</b>                      | <b>20525</b>                         | <b>20643</b>                       |
| <b>Frequency (MHz)</b> |            |         |           | <b>824.7</b>                      | <b>836.5</b>                         | <b>848.3</b>                       |
| 1.4                    | QPSK       | 1       | 0         | 23.94                             | 23.77                                | 23.58                              |
| 1.4                    | QPSK       | 1       | 2         | 23.74                             | 23.85                                | 23.67                              |
| 1.4                    | QPSK       | 1       | 5         | 23.85                             | 23.83                                | 23.80                              |
| 1.4                    | QPSK       | 3       | 0         | 23.66                             | 23.91                                | 23.79                              |
| 1.4                    | QPSK       | 3       | 1         | 23.47                             | 23.82                                | 23.90                              |
| 1.4                    | QPSK       | 3       | 2         | 23.61                             | 23.65                                | 23.70                              |
| 1.4                    | QPSK       | 6       | 0         | 23.43                             | 23.21                                | 23.48                              |
| 1.4                    | 16QAM      | 1       | 0         | 22.91                             | 22.93                                | 22.86                              |
| 1.4                    | 16QAM      | 1       | 2         | 22.97                             | 22.98                                | 22.92                              |
| 1.4                    | 16QAM      | 1       | 5         | 22.98                             | 22.89                                | 22.99                              |
| 1.4                    | 16QAM      | 3       | 0         | 22.88                             | 22.79                                | 22.91                              |
| 1.4                    | 16QAM      | 3       | 1         | 22.63                             | 22.89                                | 22.80                              |
| 1.4                    | 16QAM      | 3       | 2         | 22.68                             | 22.87                                | 22.76                              |
| 1.4                    | 16QAM      | 6       | 0         | 22.55                             | 22.91                                | 22.45                              |

**<LTE Band 7 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         |            |            |              | 20850                             | 21100                                | 21350                              |
| Frequency (MHz) |            |            |              | 2510                              | 2535                                 | 2560                               |
| 20              | QPSK       | 1          | 0            | 23.64                             | 23.46                                | 23.90                              |
| 20              | QPSK       | 1          | 49           | 23.51                             | 23.45                                | 23.42                              |
| 20              | QPSK       | 1          | 99           | 23.46                             | 23.72                                | 23.60                              |
| 20              | QPSK       | 50         | 0            | 22.78                             | 22.50                                | 22.90                              |
| 20              | QPSK       | 50         | 24           | 22.50                             | 22.16                                | 22.39                              |
| 20              | QPSK       | 50         | 49           | 22.35                             | 22.65                                | 22.33                              |
| 20              | QPSK       | 100        | 0            | 22.46                             | 22.39                                | 22.37                              |
| 20              | 16QAM      | 1          | 0            | 22.53                             | 22.58                                | 22.57                              |
| 20              | 16QAM      | 1          | 49           | 22.64                             | 22.35                                | 22.40                              |
| 20              | 16QAM      | 1          | 99           | 22.67                             | 22.61                                | 22.55                              |
| 20              | 16QAM      | 50         | 0            | 21.07                             | 21.54                                | 21.50                              |
| 20              | 16QAM      | 50         | 24           | 21.38                             | 21.42                                | 21.50                              |
| 20              | 16QAM      | 50         | 49           | 21.22                             | 21.57                                | 21.54                              |
| 20              | 16QAM      | 100        | 0            | 21.03                             | 21.38                                | 21.37                              |
| Channel         |            |            |              | 20825                             | 21100                                | 21375                              |
| Frequency (MHz) |            |            |              | 2507.5                            | 2535                                 | 2562.5                             |
| 15              | QPSK       | 1          | 0            | 23.43                             | 23.39                                | 23.17                              |
| 15              | QPSK       | 1          | 37           | 23.23                             | 23.30                                | 23.49                              |
| 15              | QPSK       | 1          | 74           | 23.51                             | 23.39                                | 23.60                              |
| 15              | QPSK       | 36         | 0            | 22.57                             | 22.40                                | 22.20                              |
| 15              | QPSK       | 36         | 18           | 22.76                             | 22.34                                | 22.52                              |
| 15              | QPSK       | 36         | 37           | 22.57                             | 22.33                                | 22.52                              |
| 15              | QPSK       | 75         | 0            | 22.49                             | 22.19                                | 22.45                              |
| 15              | 16QAM      | 1          | 0            | 22.39                             | 22.55                                | 22.35                              |
| 15              | 16QAM      | 1          | 37           | 22.33                             | 22.45                                | 22.58                              |
| 15              | 16QAM      | 1          | 74           | 22.40                             | 22.10                                | 22.57                              |
| 15              | 16QAM      | 36         | 0            | 21.32                             | 21.40                                | 21.15                              |
| 15              | 16QAM      | 36         | 18           | 21.57                             | 21.40                                | 21.58                              |
| 15              | 16QAM      | 36         | 37           | 21.49                             | 21.43                                | 21.49                              |
| 15              | 16QAM      | 75         | 0            | 21.41                             | 21.13                                | 21.31                              |



| BW [MHz]               | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
|------------------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| <b>Channel</b>         |            |         |           | <b>20800</b>                      | <b>21100</b>                         | <b>21400</b>                       |
| <b>Frequency (MHz)</b> |            |         |           | <b>2505</b>                       | <b>2535</b>                          | <b>2565</b>                        |
| 10                     | QPSK       | 1       | 0         | 23.50                             | 23.11                                | 23.32                              |
| 10                     | QPSK       | 1       | 24        | 23.77                             | 23.28                                | 23.77                              |
| 10                     | QPSK       | 1       | 49        | 23.80                             | 23.33                                | 23.55                              |
| 10                     | QPSK       | 25      | 0         | 22.42                             | 22.31                                | 22.71                              |
| 10                     | QPSK       | 25      | 12        | 22.58                             | 22.26                                | 22.65                              |
| 10                     | QPSK       | 25      | 24        | 22.38                             | 22.37                                | 22.36                              |
| 10                     | QPSK       | 50      | 0         | 22.31                             | 22.17                                | 22.45                              |
| 10                     | 16QAM      | 1       | 0         | 22.65                             | 22.15                                | 22.56                              |
| 10                     | 16QAM      | 1       | 24        | 22.55                             | 22.06                                | 22.41                              |
| 10                     | 16QAM      | 1       | 49        | 22.24                             | 22.24                                | 22.30                              |
| 10                     | 16QAM      | 25      | 0         | 21.39                             | 21.34                                | 21.38                              |
| 10                     | 16QAM      | 25      | 12        | 21.47                             | 21.20                                | 21.26                              |
| 10                     | 16QAM      | 25      | 24        | 21.39                             | 21.37                                | 21.43                              |
| 10                     | 16QAM      | 50      | 0         | 21.31                             | 21.07                                | 21.09                              |
| <b>Channel</b>         |            |         |           | <b>20775</b>                      | <b>21100</b>                         | <b>21425</b>                       |
| <b>Frequency (MHz)</b> |            |         |           | <b>2502.5</b>                     | <b>2535</b>                          | <b>2567.5</b>                      |
| 5                      | QPSK       | 1       | 0         | 23.19                             | 23.26                                | 23.50                              |
| 5                      | QPSK       | 1       | 12        | 23.20                             | 23.26                                | 23.50                              |
| 5                      | QPSK       | 1       | 24        | 23.53                             | 23.38                                | 23.48                              |
| 5                      | QPSK       | 12      | 0         | 22.30                             | 21.99                                | 22.24                              |
| 5                      | QPSK       | 12      | 6         | 22.39                             | 21.98                                | 22.23                              |
| 5                      | QPSK       | 12      | 11        | 22.41                             | 22.39                                | 22.58                              |
| 5                      | QPSK       | 25      | 0         | 22.34                             | 22.42                                | 22.62                              |
| 5                      | 16QAM      | 1       | 0         | 22.06                             | 22.06                                | 22.43                              |
| 5                      | 16QAM      | 1       | 12        | 22.30                             | 22.07                                | 22.44                              |
| 5                      | 16QAM      | 1       | 24        | 22.17                             | 22.21                                | 21.98                              |
| 5                      | 16QAM      | 12      | 0         | 21.23                             | 21.03                                | 21.26                              |
| 5                      | 16QAM      | 12      | 6         | 21.15                             | 20.92                                | 21.23                              |
| 5                      | 16QAM      | 12      | 11        | 21.31                             | 21.35                                | 21.60                              |
| 5                      | 16QAM      | 25      | 0         | 21.24                             | 21.45                                | 21.67                              |

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

## 3.2 Peak-to-Average Ratio

### 3.2.1 Description of the PAR Measurement

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

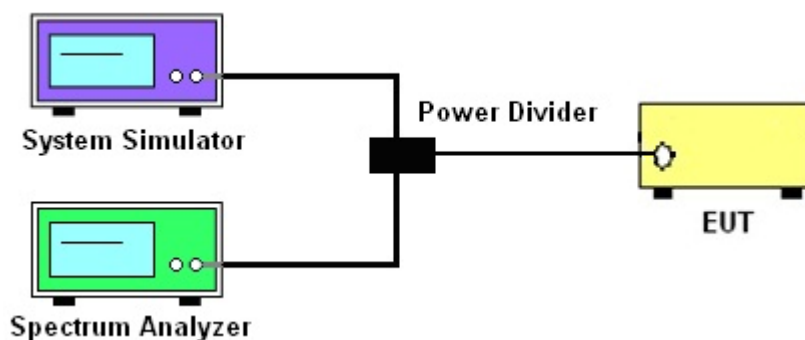
### 3.2.2 Measuring Instruments

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

### 3.2.3 Test Procedures

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

### 3.2.4 Test Setup



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

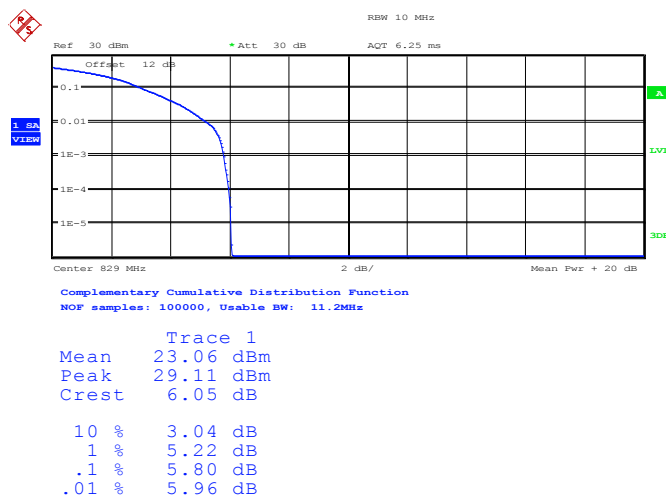
| LTE Band 5      |            |         |           |                                   |                                      |                                    |
|-----------------|------------|---------|-----------|-----------------------------------|--------------------------------------|------------------------------------|
| BW [MHz]        | Modulation | RB Size | RB Offset | Power (dBm)<br>Low<br>Ch. / Freq. | Power (dBm)<br>Middle<br>Ch. / Freq. | Power (dBm)<br>High<br>Ch. / Freq. |
| Channel         |            |         |           | 20450                             | 20525                                | 20600                              |
| Frequency (MHz) |            |         |           | 829                               | 836.5                                | 844                                |
| 10              | 16QAM      | 1       | 0         | 5.80                              | 6.76                                 | 5.64                               |
| 10              | 16QAM      | 50      | 0         | 6.44                              | 6.25                                 | 6.35                               |

| 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              | 16QAM      | 1       | 0         | 4.81                              | 5.19                                 | 5.38                               |
| 20              | 16QAM      | 100     | 0         | 5.96                              | 6.19                                 | 5.90                               |

## 3.2.6 Peak to Average Power Ratio

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

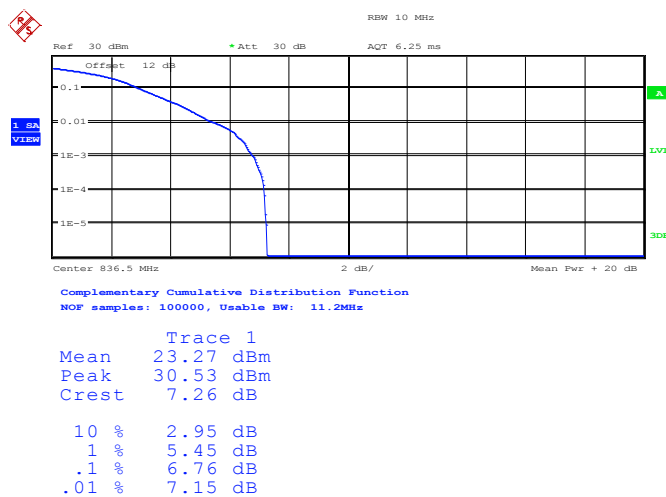
10MHz / 16QAM in Ch. 20450 (1RB Size)



Date: 21.DEC.2013 12:54:09

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

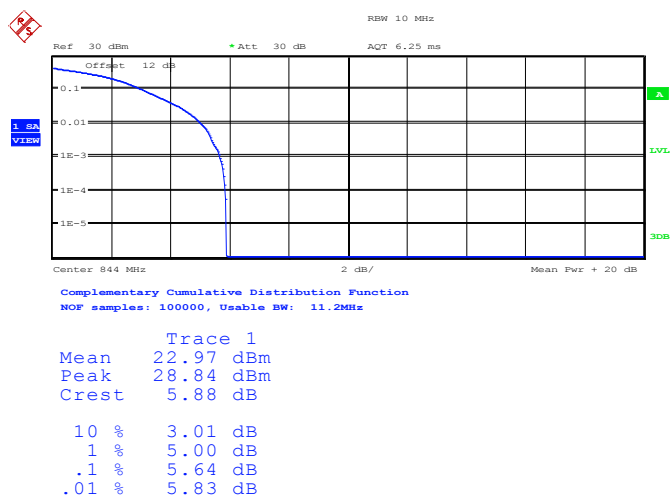
10MHz / 16QAM in Ch. 20525 (1RB Size)



Date: 21.DEC.2013 13:04:56

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

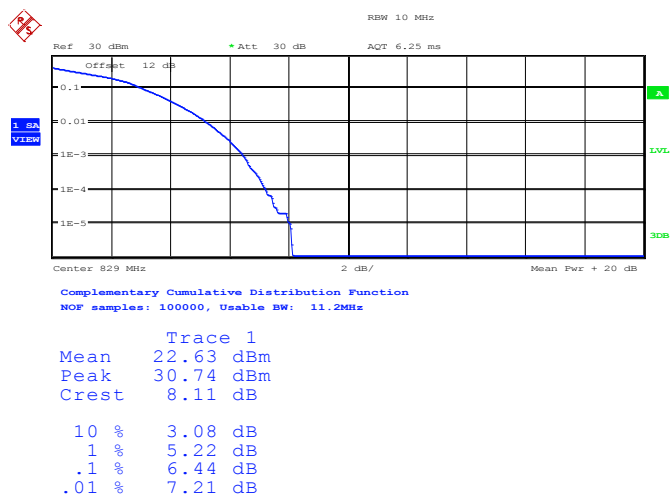
### 10MHz / 16QAM in Ch. 20600 (1RB Size)



Date: 21.DEC.2013 12:55:47

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

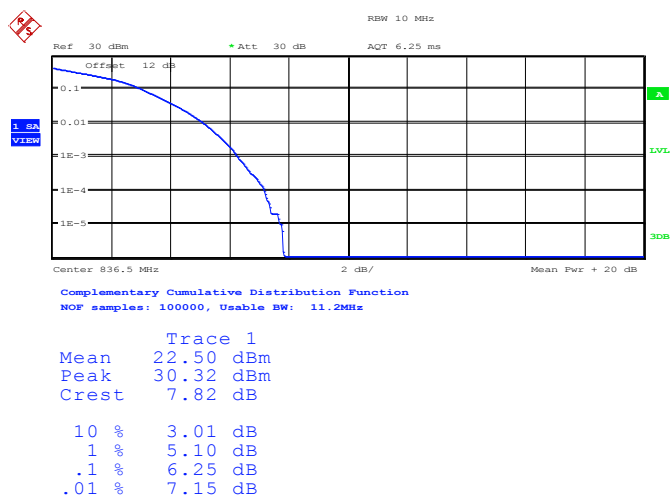
### 10MHz / 16QAM in Ch. 20450 (50RB Size)



Date: 21.DEC.2013 12:54:31

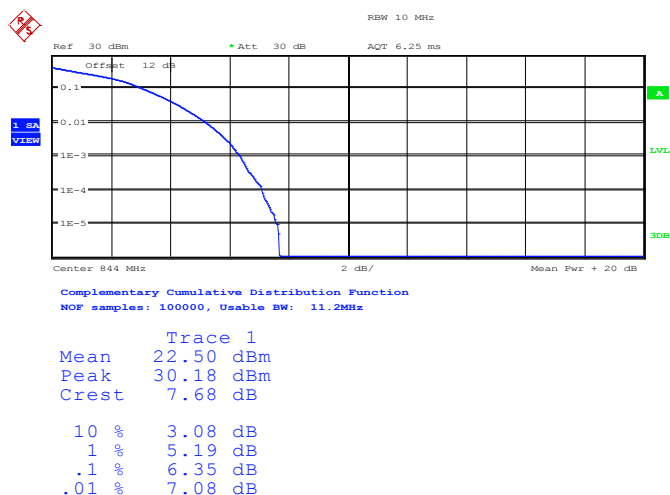


Peak-to-Average Ratio on LTE Band 5  
10MHz / 16QAM in Ch. 20525 (50RB Size)



Date: 21.DEC.2013 13:04:40

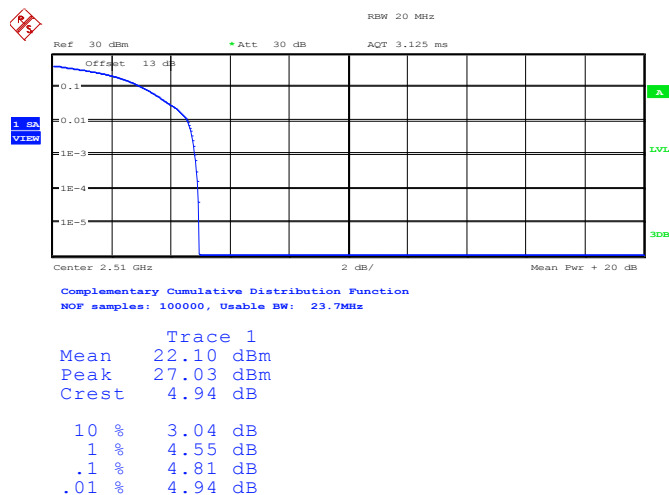
Peak-to-Average Ratio on LTE Band 5  
10MHz / 16QAM in Ch. 20600 (50RB Size)



Date: 21.DEC.2013 12:56:20

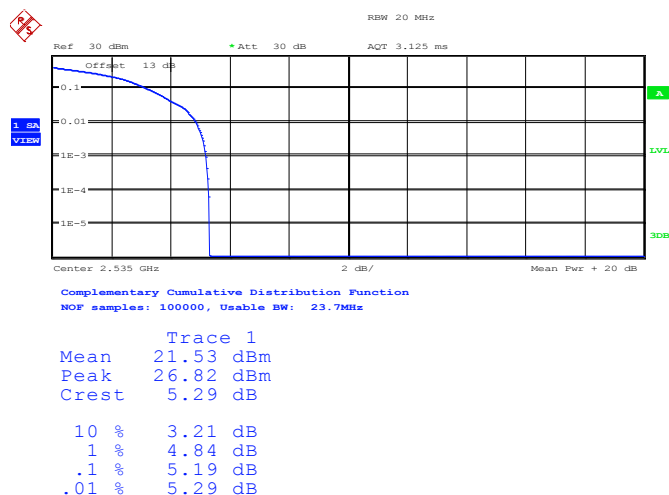
**Note:** The total loss is 12 dB of the RF cable and attenuator for LTE Band 5,  
and has been compensated to the spectrum analyzer offset.

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



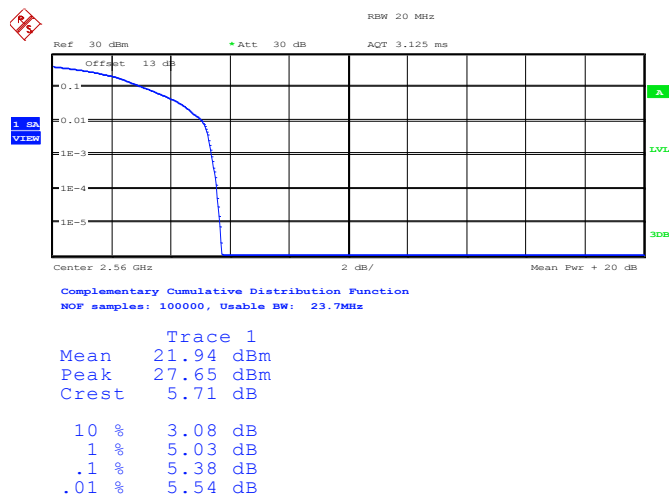
Date: 21.DEC.2013 13:06:55

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



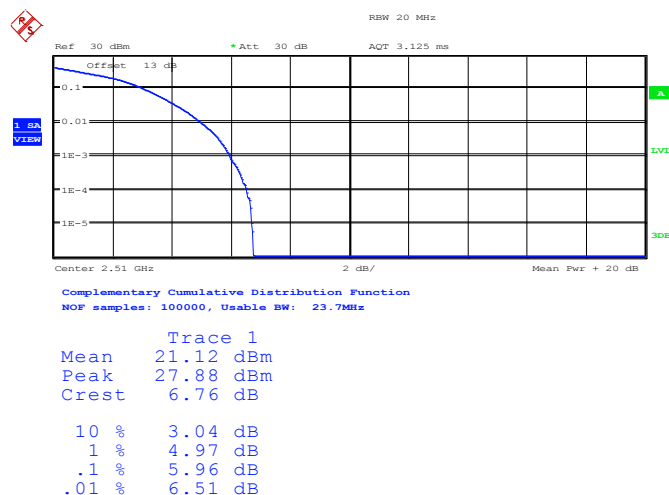
Date: 21.DEC.2013 13:07:56

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



Date: 21.DEC.2013 13:08:21

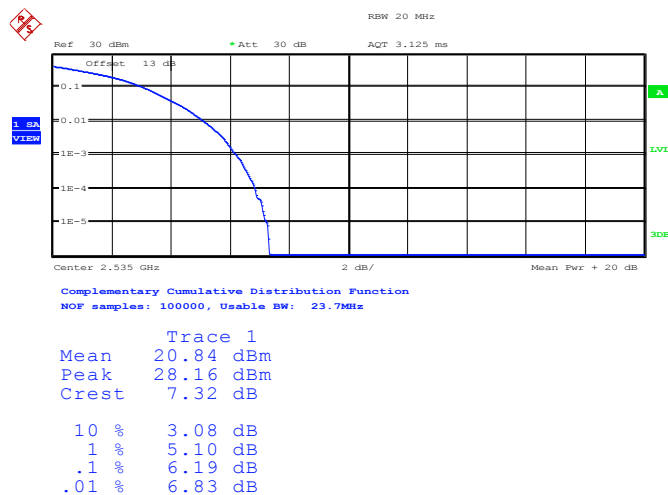
## Peak-to-Average Ratio on LTE Band 7 20MHz / 16QAM in Ch. 20850 (100RB Size)



Date: 21.DEC.2013 13:07:17

## Peak-to-Average Ratio on LTE Band 7

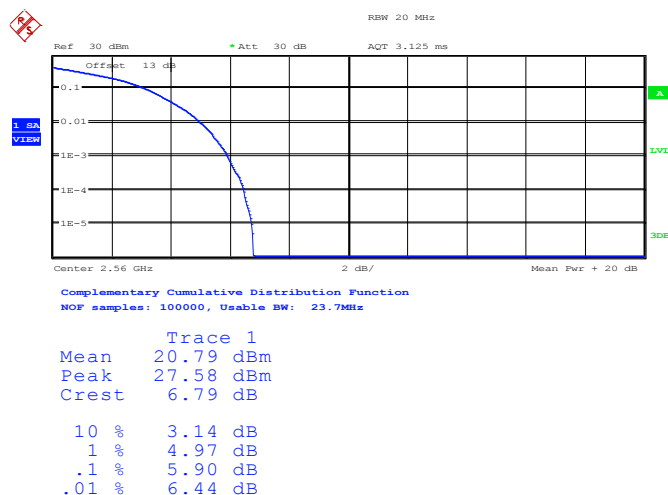
### 20MHz / 16QAM in Ch. 21100 (100RB Size)



Date: 21.DEC.2013 13:07:37

## Peak-to-Average Ratio on LTE Band 7

### 20MHz / 16QAM in Ch. 21350 (100RB Size)



Date: 21.DEC.2013 13:08:44

**Note:** The total loss is 13 dB of the RF cable and attenuator for LTE Band 7, and has been compensated to the spectrum analyzer offset.

### 3.3 Effective Radiated Power and Equivalent Isotropic Radiated Power Measurement

#### 3.3.1 Description of the ERP/EIRP Measurement

Effective 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 v01. Mobile and portable (hand-held) stations operating are limited to average ERP of 7 watts with LTE band 5.

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 v01. Mobile and portable (hand-held) stations operating are limited to average EIRP of 2 watts with LTE band 7.

#### 3.3.2 Measuring Instruments

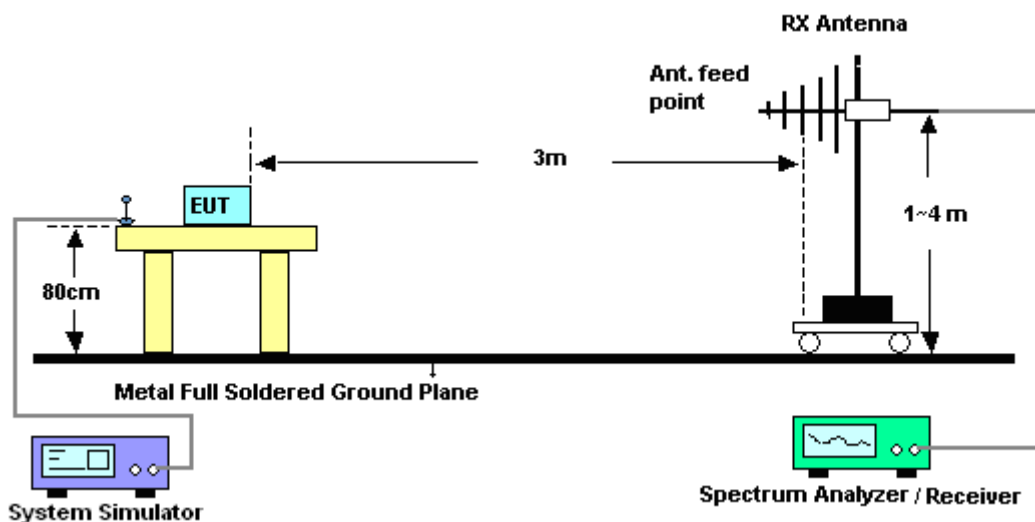
The measuring equipment is listed in the section 4 of this test report.

#### 3.3.3 Test Procedures

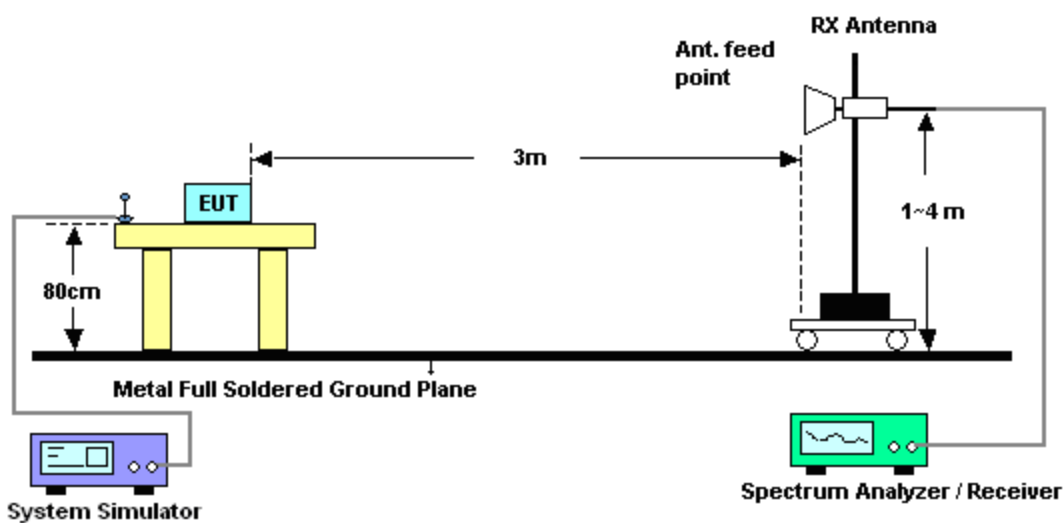
1. The EUT was placed on a non-conductive rotating platform with 0.8 meter height in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer which used a channel power option across EUT's signal bandwidth per section 4.0 of KDB 971168 D01.
2. During the measurement, the EUT was enforced in maximum power and linked with a base station. The highest emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
3. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-C. The EUT was replaced by dipole antenna (substitution antenna) at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor,  $EIRP = LVL + \text{Correction factor}$  and  $ERP = EIRP - 2.15$ .

### 3.3.4 Test Setup

For Effective Radiated Power



For Equivalent Isotropic Radiated Power



**3.3.5 Test Result of ERP/EIRP**

| LTE Band 5 Radiated Power ERP for BW 1.4MHz / QPSK |              |                           |              |            |
|----------------------------------------------------|--------------|---------------------------|--------------|------------|
| Horizontal Polarization                            |              |                           |              |            |
| Frequency<br>(MHz)                                 | LVL<br>(dBm) | Correction Factor<br>(dB) | ERP<br>(dBm) | ERP<br>(W) |
| 824.7                                              | -14.28       | 31.54                     | 15.11        | 0.03       |
| 836.5                                              | -13.72       | 32.04                     | 16.17        | 0.04       |
| 848.3                                              | -13.69       | 32.59                     | 16.75        | 0.05       |
| Vertical Polarization                              |              |                           |              |            |
| Frequency<br>(MHz)                                 | LVL<br>(dBm) | Correction Factor<br>(dB) | ERP<br>(dBm) | ERP<br>(W) |
| 824.7                                              | -19.48       | 32.93                     | 11.30        | 0.01       |
| 836.5                                              | -19.29       | 32.82                     | 11.38        | 0.01       |
| 848.3                                              | -18.59       | 33.62                     | 12.88        | 0.02       |

| LTE Band 5 Radiated Power ERP for BW 1.4MHz / 16QAM |              |                           |              |            |
|-----------------------------------------------------|--------------|---------------------------|--------------|------------|
| Horizontal Polarization                             |              |                           |              |            |
| Frequency<br>(MHz)                                  | LVL<br>(dBm) | Correction Factor<br>(dB) | ERP<br>(dBm) | ERP<br>(W) |
| 824.7                                               | -15.11       | 31.54                     | 14.28        | 0.03       |
| 836.5                                               | -14.83       | 32.04                     | 15.06        | 0.03       |
| 848.3                                               | -14.66       | 32.59                     | 15.78        | 0.04       |
| Vertical Polarization                               |              |                           |              |            |
| Frequency<br>(MHz)                                  | LVL<br>(dBm) | Correction Factor<br>(dB) | ERP<br>(dBm) | ERP<br>(W) |
| 824.7                                               | -20.22       | 32.93                     | 10.56        | 0.01       |
| 836.5                                               | -20.20       | 32.82                     | 10.47        | 0.01       |
| 848.3                                               | -19.40       | 33.62                     | 12.07        | 0.02       |

\* ERP = LVL (dBm) + Correction Factor (dB) - 2.15

| LTE Band 5 Radiated Power ERP for BW 3MHz / QPSK |              |                           |              |            |
|--------------------------------------------------|--------------|---------------------------|--------------|------------|
| Horizontal Polarization                          |              |                           |              |            |
| Frequency<br>(MHz)                               | LVL<br>(dBm) | Correction Factor<br>(dB) | ERP<br>(dBm) | ERP<br>(W) |
| 825.5                                            | -11.27       | 31.54                     | 18.12        | 0.06       |
| 836.5                                            | -11.80       | 32.04                     | 18.09        | 0.06       |
| 847.5                                            | -11.54       | 32.59                     | 18.90        | 0.08       |
| Vertical Polarization                            |              |                           |              |            |
| Frequency<br>(MHz)                               | LVL<br>(dBm) | Correction Factor<br>(dB) | ERP<br>(dBm) | ERP<br>(W) |
| 825.5                                            | -19.62       | 32.93                     | 11.16        | 0.01       |
| 836.5                                            | -19.03       | 32.82                     | 11.64        | 0.01       |
| 847.5                                            | -18.97       | 33.62                     | 12.50        | 0.02       |

| LTE Band 5 Radiated Power ERP for BW 3MHz / 16QAM |              |                           |              |            |
|---------------------------------------------------|--------------|---------------------------|--------------|------------|
| Horizontal Polarization                           |              |                           |              |            |
| Frequency<br>(MHz)                                | LVL<br>(dBm) | Correction Factor<br>(dB) | ERP<br>(dBm) | ERP<br>(W) |
| 825.5                                             | -13.32       | 31.44                     | 15.97        | 0.04       |
| 836.5                                             | -13.72       | 32.04                     | 16.17        | 0.04       |
| 847.5                                             | -13.59       | 32.63                     | 16.89        | 0.05       |
| Vertical Polarization                             |              |                           |              |            |
| Frequency<br>(MHz)                                | LVL<br>(dBm) | Correction Factor<br>(dB) | ERP<br>(dBm) | ERP<br>(W) |
| 825.5                                             | -21.62       | 32.78                     | 9.01         | 0.01       |
| 836.5                                             | -21.02       | 32.82                     | 9.65         | 0.01       |
| 847.5                                             | -20.98       | 33.40                     | 10.27        | 0.01       |

\* ERP = LVL (dBm) + Correction Factor (dB) - 2.15

| LTE Band 5 Radiated Power ERP for BW 5MHz / QPSK |              |                           |              |            |
|--------------------------------------------------|--------------|---------------------------|--------------|------------|
| Horizontal Polarization                          |              |                           |              |            |
| Frequency<br>(MHz)                               | LVL<br>(dBm) | Correction Factor<br>(dB) | ERP<br>(dBm) | ERP<br>(W) |
| 826.5                                            | -11.80       | 31.44                     | 17.49        | 0.06       |
| 836.5                                            | -11.77       | 32.04                     | 18.12        | 0.06       |
| 846.5                                            | -11.46       | 32.63                     | 19.02        | 0.08       |
| Vertical Polarization                            |              |                           |              |            |
| Frequency<br>(MHz)                               | LVL<br>(dBm) | Correction Factor<br>(dB) | ERP<br>(dBm) | ERP<br>(W) |
| 826.5                                            | -20.14       | 32.78                     | 10.49        | 0.01       |
| 836.5                                            | -19.21       | 32.82                     | 11.46        | 0.01       |
| 846.5                                            | -18.81       | 33.40                     | 12.44        | 0.02       |

| LTE Band 5 Radiated Power ERP for BW 5MHz / 16QAM |              |                           |              |            |
|---------------------------------------------------|--------------|---------------------------|--------------|------------|
| Horizontal Polarization                           |              |                           |              |            |
| Frequency<br>(MHz)                                | LVL<br>(dBm) | Correction Factor<br>(dB) | ERP<br>(dBm) | ERP<br>(W) |
| 826.5                                             | -12.43       | 31.44                     | 16.86        | 0.05       |
| 836.5                                             | -12.86       | 32.04                     | 17.03        | 0.05       |
| 846.5                                             | -12.51       | 32.63                     | 17.97        | 0.06       |
| Vertical Polarization                             |              |                           |              |            |
| Frequency<br>(MHz)                                | LVL<br>(dBm) | Correction Factor<br>(dB) | ERP<br>(dBm) | ERP<br>(W) |
| 826.5                                             | -20.84       | 32.78                     | 9.79         | 0.01       |
| 836.5                                             | -20.10       | 32.82                     | 10.57        | 0.01       |
| 846.5                                             | -19.90       | 33.40                     | 11.35        | 0.01       |

\* ERP = LVL (dBm) + Correction Factor (dB) - 2.15

| LTE Band 5 Radiated Power ERP for BW 10MHz / QPSK |              |                           |              |            |
|---------------------------------------------------|--------------|---------------------------|--------------|------------|
| Horizontal Polarization                           |              |                           |              |            |
| Frequency<br>(MHz)                                | LVL<br>(dBm) | Correction Factor<br>(dB) | ERP<br>(dBm) | ERP<br>(W) |
| 829.0                                             | -12.42       | 31.44                     | 16.87        | 0.05       |
| 836.5                                             | -12.54       | 32.04                     | 17.35        | 0.05       |
| 844.0                                             | -12.65       | 32.63                     | 17.83        | 0.06       |
| Vertical Polarization                             |              |                           |              |            |
| Frequency<br>(MHz)                                | LVL<br>(dBm) | Correction Factor<br>(dB) | ERP<br>(dBm) | ERP<br>(W) |
| 829.0                                             | -19.96       | 32.78                     | 10.67        | 0.01       |
| 836.5                                             | -19.40       | 32.82                     | 11.27        | 0.01       |
| 844.0                                             | -19.90       | 33.40                     | 11.35        | 0.01       |

| LTE Band 5 Radiated Power ERP for BW 10MHz / 16QAM |              |                           |              |            |
|----------------------------------------------------|--------------|---------------------------|--------------|------------|
| Horizontal Polarization                            |              |                           |              |            |
| Frequency<br>(MHz)                                 | LVL<br>(dBm) | Correction Factor<br>(dB) | ERP<br>(dBm) | ERP<br>(W) |
| 829.0                                              | -13.20       | 31.44                     | 16.09        | 0.04       |
| 836.5                                              | -13.14       | 32.04                     | 16.75        | 0.05       |
| 844.0                                              | -13.24       | 32.63                     | 17.24        | 0.05       |
| Vertical Polarization                              |              |                           |              |            |
| Frequency<br>(MHz)                                 | LVL<br>(dBm) | Correction Factor<br>(dB) | ERP<br>(dBm) | ERP<br>(W) |
| 829.0                                              | -20.24       | 32.78                     | 10.39        | 0.01       |
| 836.5                                              | -20.15       | 32.82                     | 10.52        | 0.01       |
| 844.0                                              | -20.74       | 33.40                     | 10.51        | 0.01       |

\* ERP = LVL (dBm) + Correction Factor (dB) - 2.15

| LTE Band 7 Radiated Power EIRP for BW 5MHz / QPSK |              |                           |               |             |
|---------------------------------------------------|--------------|---------------------------|---------------|-------------|
| Horizontal Polarization                           |              |                           |               |             |
| Frequency<br>(MHz)                                | LVL<br>(dBm) | Correction Factor<br>(dB) | EIRP<br>(dBm) | EIRP<br>(W) |
| 2502.5                                            | -21.98       | 44.76                     | 22.78         | 0.19        |
| 2535.0                                            | -22.71       | 45.37                     | 22.66         | 0.18        |
| 2567.5                                            | -23.11       | 45.12                     | 22.01         | 0.16        |
| Vertical Polarization                             |              |                           |               |             |
| Frequency<br>(MHz)                                | LVL<br>(dBm) | Correction Factor<br>(dB) | EIRP<br>(dBm) | EIRP<br>(W) |
| 2502.5                                            | -30.74       | 45.76                     | 15.02         | 0.03        |
| 2535.0                                            | -29.89       | 47.04                     | 17.15         | 0.05        |
| 2567.5                                            | -30.35       | 46.31                     | 15.96         | 0.04        |

| LTE Band 7 Radiated Power EIRP for BW 5MHz / 16QAM |              |                           |               |             |
|----------------------------------------------------|--------------|---------------------------|---------------|-------------|
| Horizontal Polarization                            |              |                           |               |             |
| Frequency<br>(MHz)                                 | LVL<br>(dBm) | Correction Factor<br>(dB) | EIRP<br>(dBm) | EIRP<br>(W) |
| 2502.5                                             | -22.95       | 44.76                     | 21.81         | 0.15        |
| 2535.0                                             | -23.47       | 45.37                     | 21.90         | 0.15        |
| 2567.5                                             | -24.71       | 45.12                     | 20.41         | 0.11        |
| Vertical Polarization                              |              |                           |               |             |
| Frequency<br>(MHz)                                 | LVL<br>(dBm) | Correction Factor<br>(dB) | EIRP<br>(dBm) | EIRP<br>(W) |
| 2502.5                                             | -30.63       | 45.76                     | 15.13         | 0.03        |
| 2535.0                                             | -30.79       | 47.04                     | 16.25         | 0.04        |
| 2567.5                                             | -31.23       | 46.31                     | 15.08         | 0.03        |

| LTE Band 7 Radiated Power EIRP for BW 10MHz / QPSK |              |                           |               |             |
|----------------------------------------------------|--------------|---------------------------|---------------|-------------|
| Horizontal Polarization                            |              |                           |               |             |
| Frequency<br>(MHz)                                 | LVL<br>(dBm) | Correction Factor<br>(dB) | EIRP<br>(dBm) | EIRP<br>(W) |
| 2505.0                                             | -21.88       | 44.97                     | 23.09         | 0.20        |
| 2535.0                                             | -23.10       | 45.37                     | 22.27         | 0.17        |
| 2565.0                                             | -23.37       | 45.11                     | 21.74         | 0.15        |
| Vertical Polarization                              |              |                           |               |             |
| Frequency<br>(MHz)                                 | LVL<br>(dBm) | Correction Factor<br>(dB) | EIRP<br>(dBm) | EIRP<br>(W) |
| 2505.0                                             | -30.05       | 45.97                     | 15.92         | 0.04        |
| 2535.0                                             | -29.14       | 47.04                     | 17.90         | 0.06        |
| 2565.0                                             | -29.76       | 46.30                     | 16.54         | 0.05        |

| LTE Band 7 Radiated Power EIRP for BW 10MHz / 16QAM |              |                           |               |             |
|-----------------------------------------------------|--------------|---------------------------|---------------|-------------|
| Horizontal Polarization                             |              |                           |               |             |
| Frequency<br>(MHz)                                  | LVL<br>(dBm) | Correction Factor<br>(dB) | EIRP<br>(dBm) | EIRP<br>(W) |
| 2505.0                                              | -24.39       | 44.97                     | 20.58         | 0.11        |
| 2535.0                                              | -23.77       | 45.37                     | 21.60         | 0.14        |
| 2565.0                                              | -24.45       | 45.11                     | 20.66         | 0.12        |
| Vertical Polarization                               |              |                           |               |             |
| Frequency<br>(MHz)                                  | LVL<br>(dBm) | Correction Factor<br>(dB) | EIRP<br>(dBm) | EIRP<br>(W) |
| 2505.0                                              | -30.16       | 45.97                     | 15.81         | 0.04        |
| 2535.0                                              | -30.60       | 47.04                     | 16.44         | 0.04        |
| 2565.0                                              | -31.22       | 46.30                     | 15.08         | 0.03        |

| LTE Band 7 Radiated Power EIRP for BW 15MHz / QPSK |              |                           |               |             |
|----------------------------------------------------|--------------|---------------------------|---------------|-------------|
| Horizontal Polarization                            |              |                           |               |             |
| Frequency<br>(MHz)                                 | LVL<br>(dBm) | Correction Factor<br>(dB) | EIRP<br>(dBm) | EIRP<br>(W) |
| 2507.5                                             | -23.06       | 44.92                     | 21.86         | 0.15        |
| 2535.0                                             | -23.13       | 45.37                     | 22.24         | 0.17        |
| 2562.5                                             | -23.16       | 45.10                     | 21.94         | 0.16        |
| Vertical Polarization                              |              |                           |               |             |
| Frequency<br>(MHz)                                 | LVL<br>(dBm) | Correction Factor<br>(dB) | EIRP<br>(dBm) | EIRP<br>(W) |
| 2507.5                                             | -32.13       | 45.92                     | 13.79         | 0.02        |
| 2535.0                                             | -32.30       | 47.04                     | 14.74         | 0.03        |
| 2562.5                                             | -30.62       | 46.29                     | 15.67         | 0.04        |

| LTE Band 7 Radiated Power EIRP for BW 15MHz / 16QAM |              |                           |               |             |
|-----------------------------------------------------|--------------|---------------------------|---------------|-------------|
| Horizontal Polarization                             |              |                           |               |             |
| Frequency<br>(MHz)                                  | LVL<br>(dBm) | Correction Factor<br>(dB) | EIRP<br>(dBm) | EIRP<br>(W) |
| 2507.5                                              | -21.61       | 44.92                     | 23.31         | 0.21        |
| 2535.0                                              | -23.46       | 45.37                     | 21.91         | 0.16        |
| 2562.5                                              | -24.19       | 45.10                     | 20.91         | 0.12        |
| Vertical Polarization                               |              |                           |               |             |
| Frequency<br>(MHz)                                  | LVL<br>(dBm) | Correction Factor<br>(dB) | EIRP<br>(dBm) | EIRP<br>(W) |
| 2507.5                                              | -30.42       | 45.92                     | 15.50         | 0.04        |
| 2535.0                                              | -32.70       | 47.04                     | 14.34         | 0.03        |
| 2562.5                                              | -31.12       | 46.29                     | 15.17         | 0.03        |

| LTE Band 7 Radiated Power EIRP for BW 20MHz / QPSK |              |                           |               |             |
|----------------------------------------------------|--------------|---------------------------|---------------|-------------|
| Horizontal Polarization                            |              |                           |               |             |
| Frequency<br>(MHz)                                 | LVL<br>(dBm) | Correction Factor<br>(dB) | EIRP<br>(dBm) | EIRP<br>(W) |
| 2510.0                                             | -21.58       | 44.94                     | 23.36         | 0.22        |
| 2535.0                                             | -22.32       | 45.37                     | 23.05         | 0.20        |
| 2560.0                                             | -23.45       | 45.10                     | 21.65         | 0.15        |
| Vertical Polarization                              |              |                           |               |             |
| Frequency<br>(MHz)                                 | LVL<br>(dBm) | Correction Factor<br>(dB) | EIRP<br>(dBm) | EIRP<br>(W) |
| 2510.0                                             | -29.38       | 45.94                     | 16.56         | 0.05        |
| 2535.0                                             | -30.44       | 47.04                     | 16.60         | 0.05        |
| 2560.0                                             | -31.57       | 46.29                     | 14.72         | 0.03        |

| LTE Band 7 Radiated Power EIRP for BW 20MHz / 16QAM |              |                           |               |             |
|-----------------------------------------------------|--------------|---------------------------|---------------|-------------|
| Horizontal Polarization                             |              |                           |               |             |
| Frequency<br>(MHz)                                  | LVL<br>(dBm) | Correction Factor<br>(dB) | EIRP<br>(dBm) | EIRP<br>(W) |
| 2510.0                                              | -23.90       | 44.94                     | 21.04         | 0.13        |
| 2535.0                                              | -24.16       | 45.37                     | 21.21         | 0.13        |
| 2560.0                                              | -23.72       | 45.10                     | 21.38         | 0.14        |
| Vertical Polarization                               |              |                           |               |             |
| Frequency<br>(MHz)                                  | LVL<br>(dBm) | Correction Factor<br>(dB) | EIRP<br>(dBm) | EIRP<br>(W) |
| 2510.0                                              | -31.48       | 45.94                     | 14.46         | 0.03        |
| 2535.0                                              | -32.41       | 47.04                     | 14.63         | 0.03        |
| 2560.0                                              | -33.11       | 46.29                     | 13.18         | 0.02        |

### 3.4 Occupied Bandwidth

#### 3.4.1 Description of Occupied Bandwidth Measurement

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

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

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

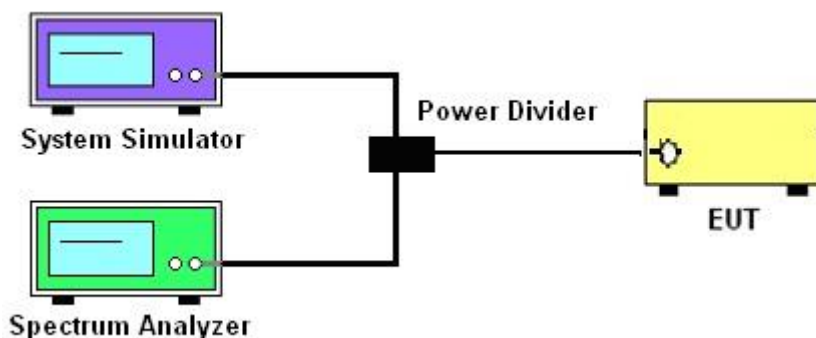
#### 3.4.2 Measuring Instruments

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

#### 3.4.4 Test Setup

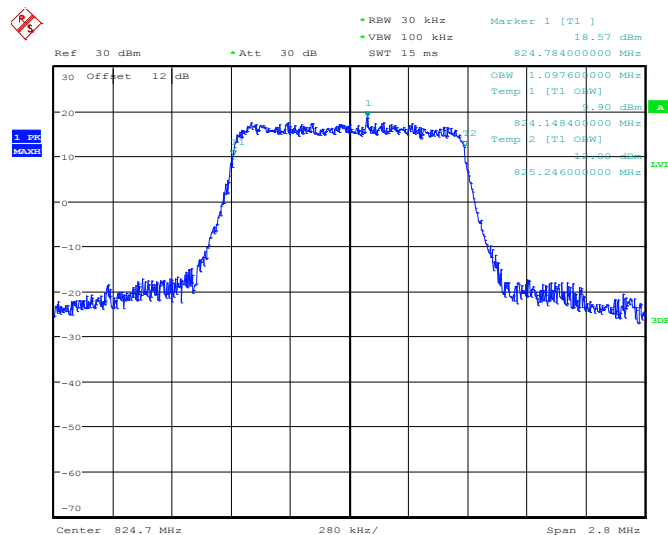




### 3.4.5 Test Result (Plots) of Occupied Bandwidth

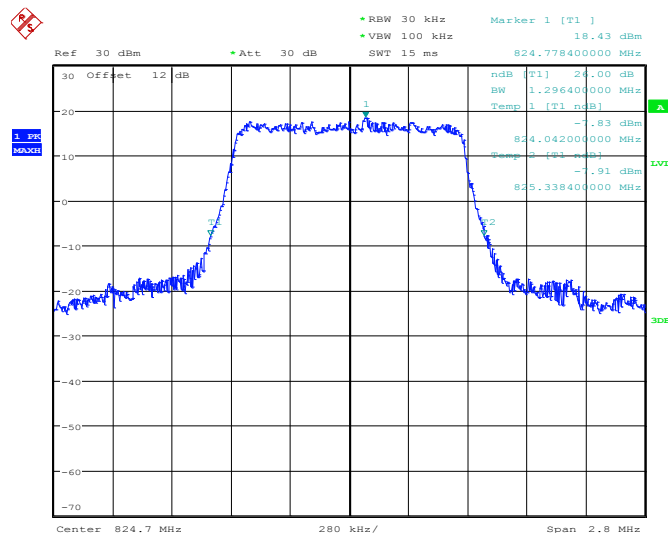
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 5 | BW / Mod. : | 1.4MHz / QPSK |
|--------|------------|-------------|---------------|

99% Occupied Bandwidth Plot on Channel 20407

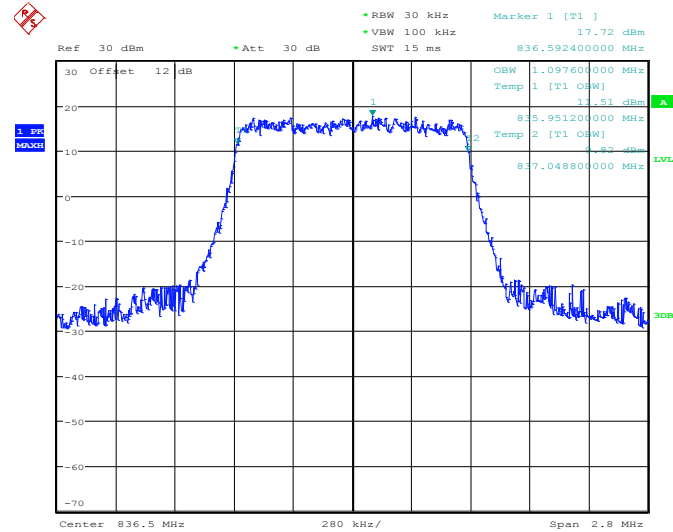


Date: 19.DEC.2013 14:56:06

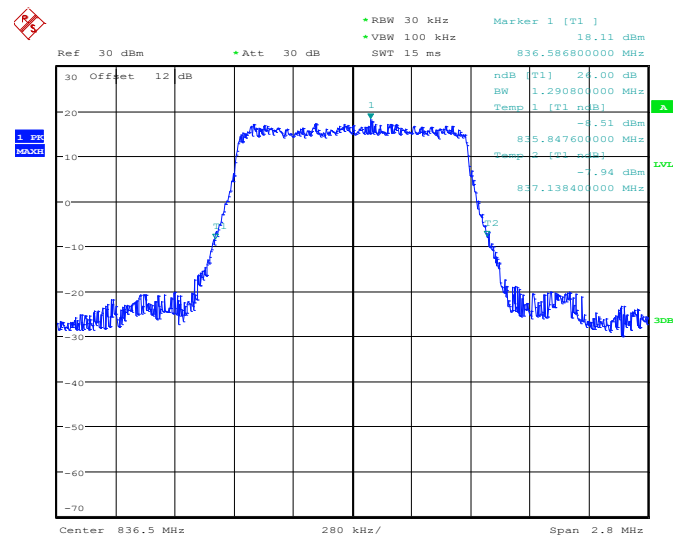
26dB Bandwidth Plot on Channel 20407



Date: 19.DEC.2013 14:56:24

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


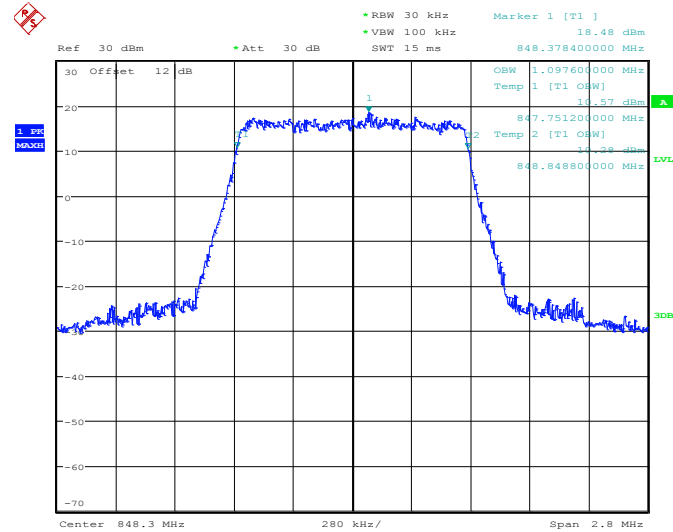
Date: 19.DEC.2013 14:56:48

**26dB Bandwidth Plot on Channel 20525**


Date: 19.DEC.2013 14:57:05

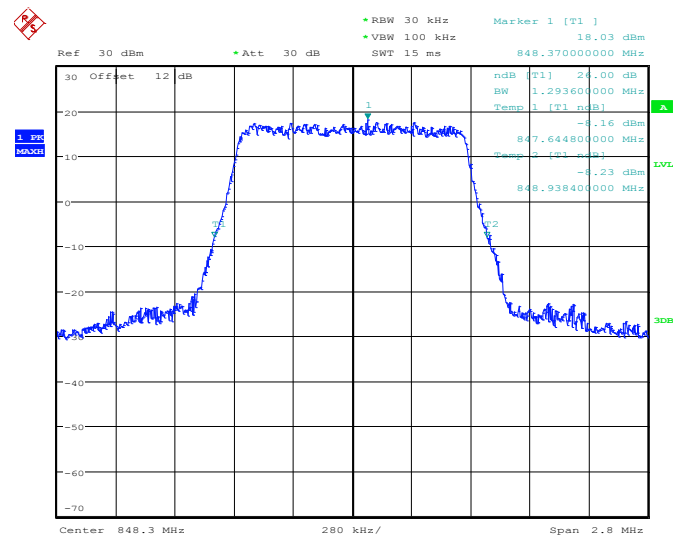


### 99% Occupied Bandwidth Plot on Channel 20643



Date: 19.DEC.2013 14:58:35

### 26dB Bandwidth Plot on Channel 20643

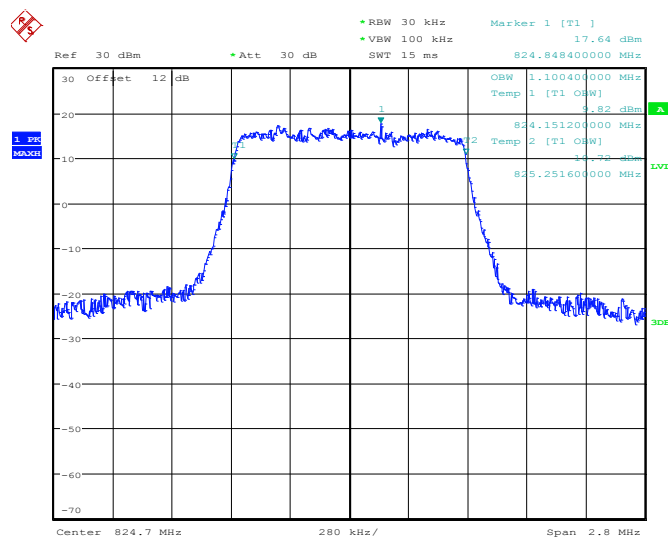


Date: 19.DEC.2013 14:58:51



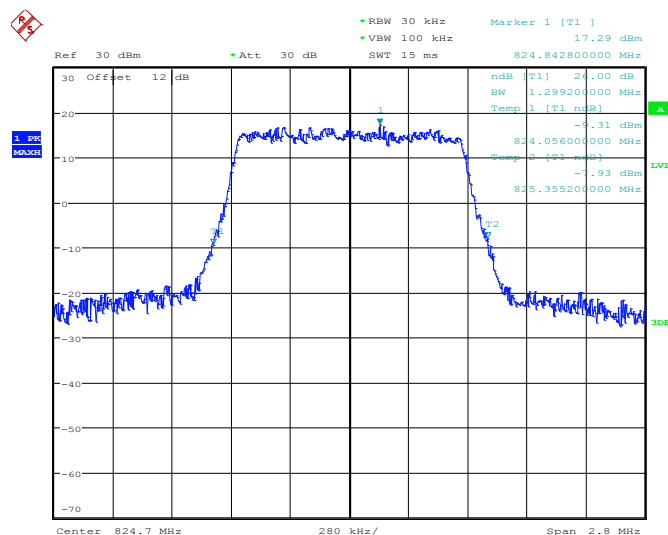
|        |            |             |                |
|--------|------------|-------------|----------------|
| Band : | LTE Band 5 | BW / Mod. : | 1.4MHz / 16QAM |
|--------|------------|-------------|----------------|

99% Occupied Bandwidth Plot on Channel 20407



Date: 19.DEC.2013 14:55:39

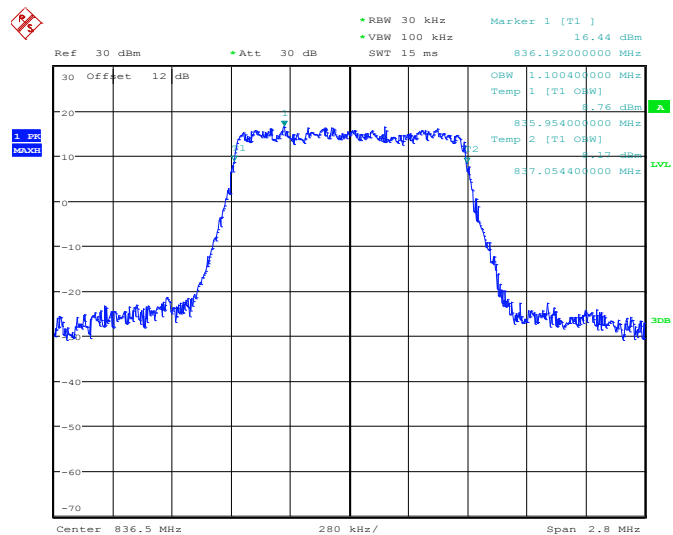
26dB Bandwidth Plot on Channel 20407



Date: 19.DEC.2013 14:55:52

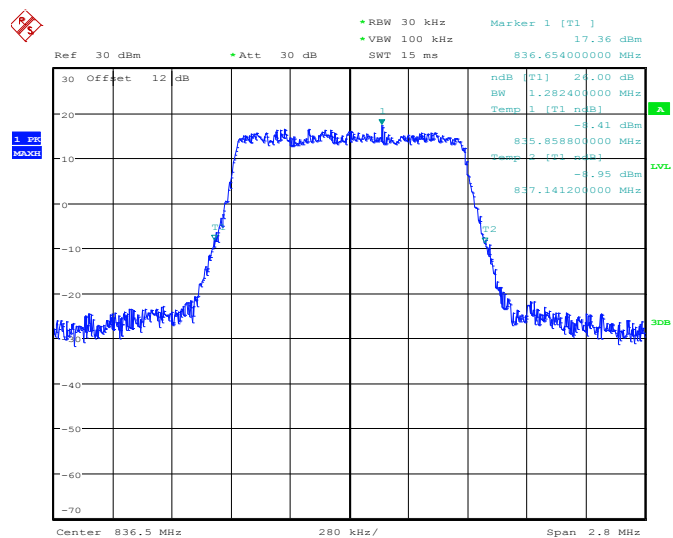


### 99% Occupied Bandwidth Plot on Channel 20525

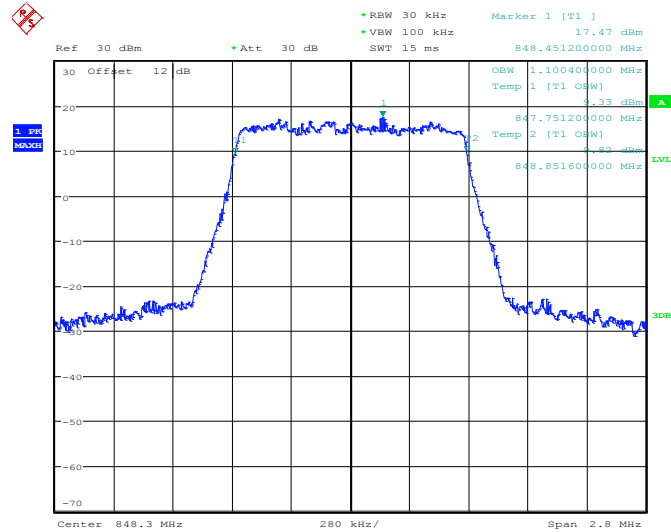


Date: 19.DEC.2013 14:57:21

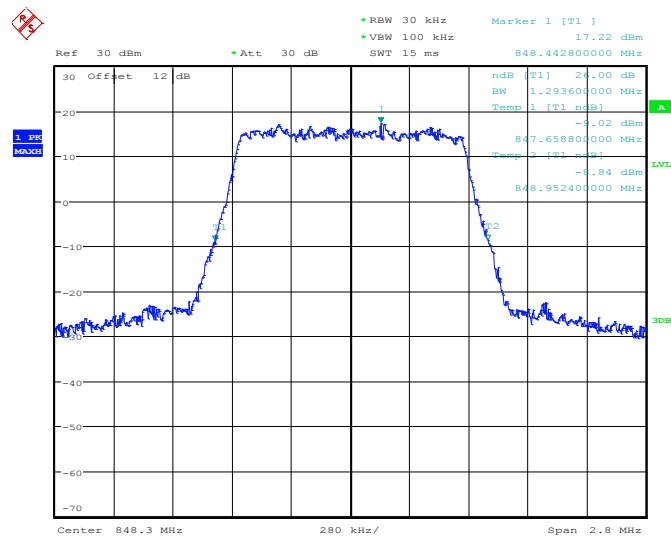
### 26dB Bandwidth Plot on Channel 20525



Date: 19.DEC.2013 14:57:35

**99% Occupied Bandwidth Plot on Channel 20643**


Date: 19.DEC.2013 14:57:58

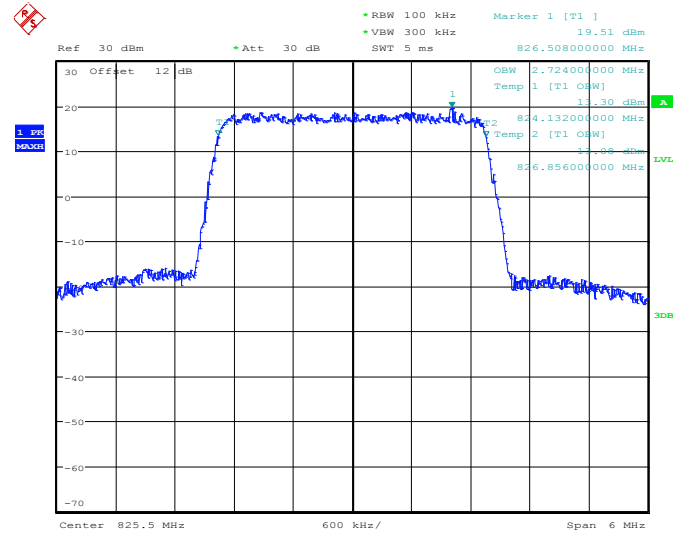
**26dB Bandwidth Plot on Channel 20643**


Date: 19.DEC.2013 14:58:19



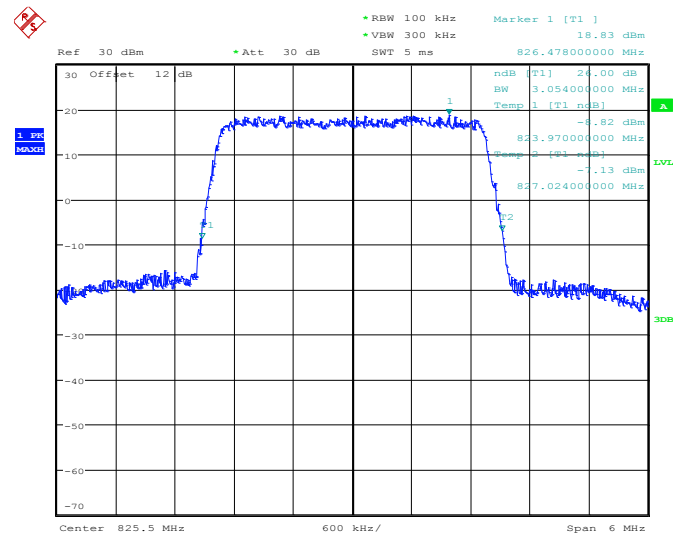
|        |            |             |             |
|--------|------------|-------------|-------------|
| Band : | LTE Band 5 | BW / Mod. : | 3MHz / QPSK |
|--------|------------|-------------|-------------|

99% Occupied Bandwidth Plot on Channel 20415



Date: 19.DEC.2013 14:59:52

26dB Bandwidth Plot on Channel 20415



Date: 19.DEC.2013 15:00:08

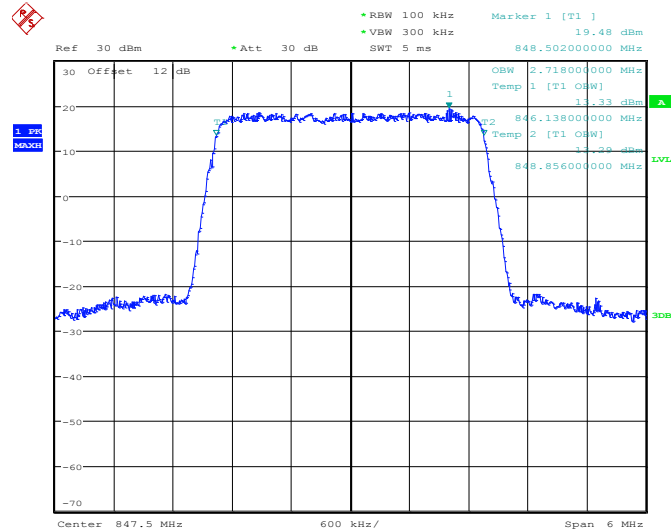


### 26dB Bandwidth Plot on Channel 20525



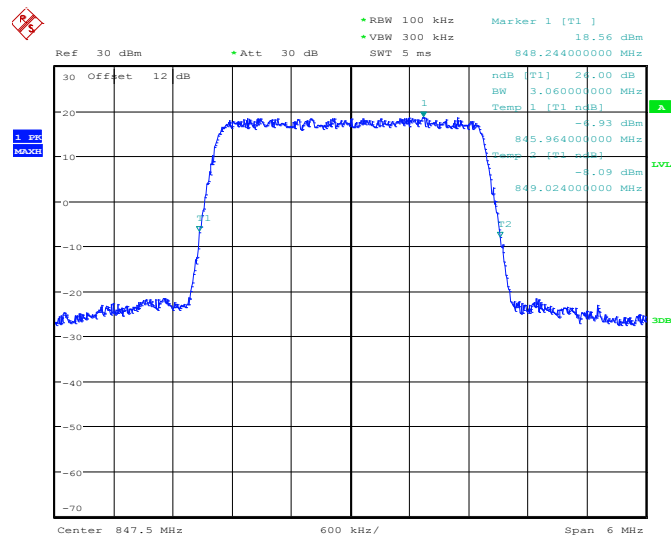


### 99% Occupied Bandwidth Plot on Channel 20635



Date: 19.DEC.2013 15:02:33

### 26dB Bandwidth Plot on Channel 20635

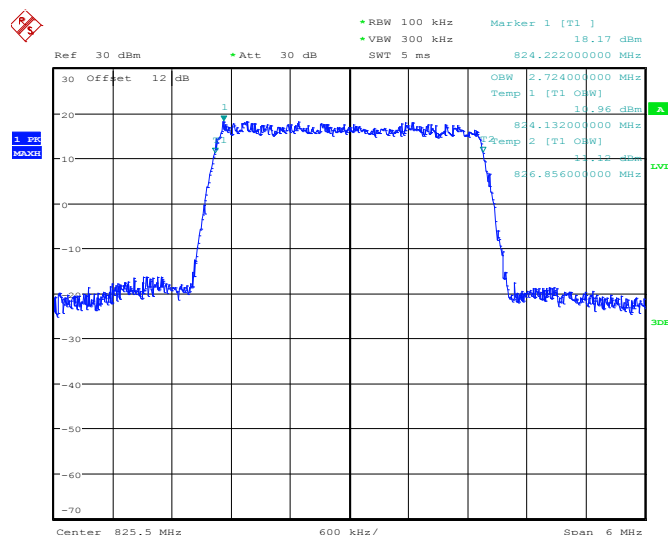


Date: 19.DEC.2013 15:02:55



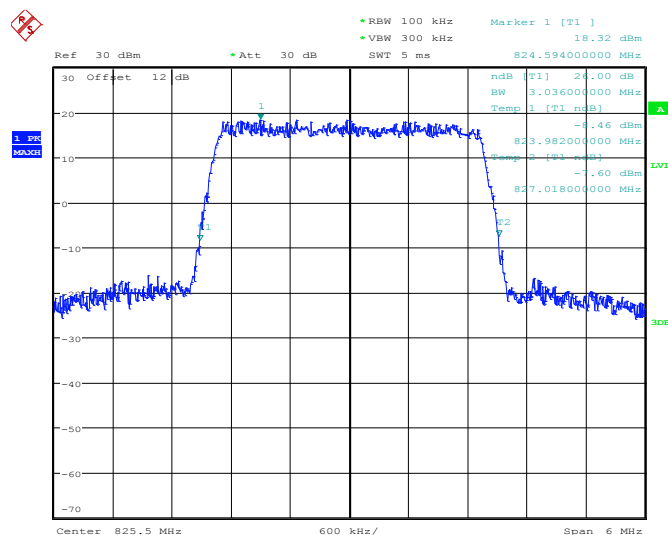
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 5 | BW / Mod. : | 3MHz / 16QAM |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 20415

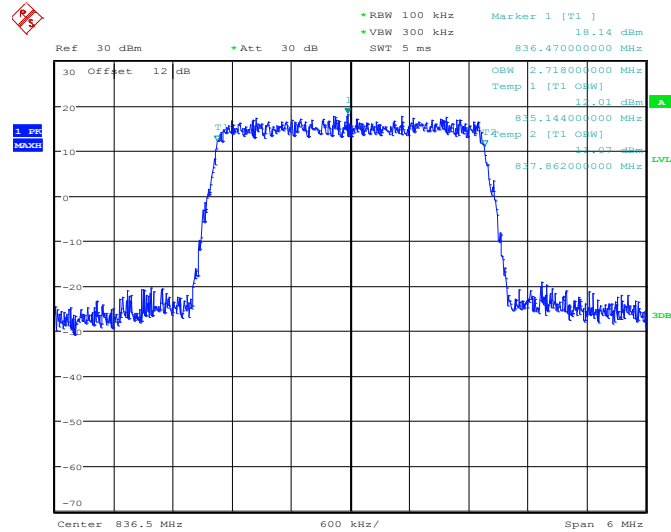


Date: 19.DEC.2013 15:00:25

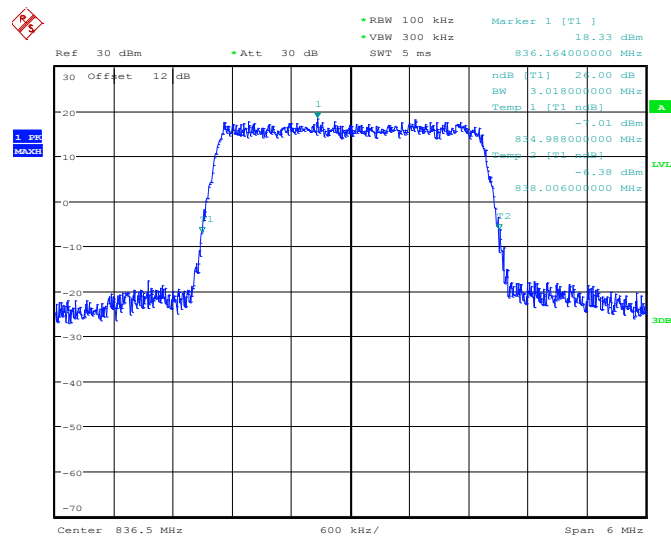
26dB Bandwidth Plot on Channel 20415



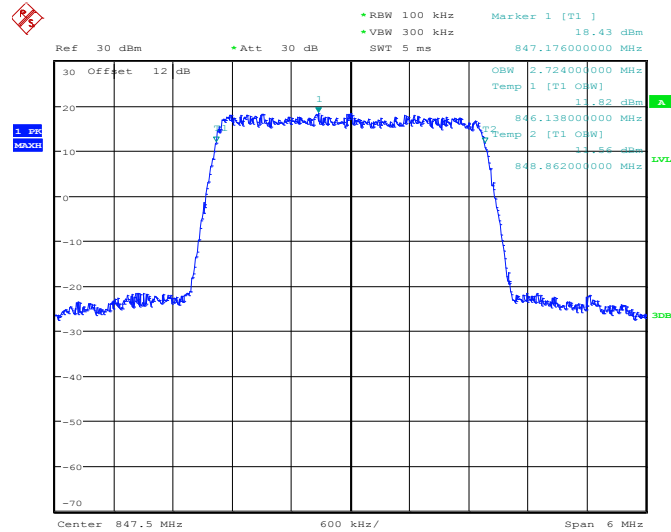
Date: 19.DEC.2013 15:00:39

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


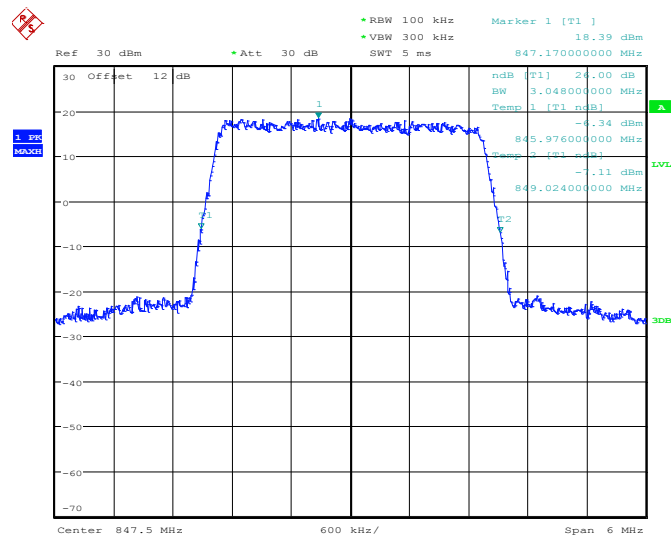
Date: 19.DEC.2013 15:00:54

**26dB Bandwidth Plot on Channel 20525**


Date: 19.DEC.2013 15:01:10

**99% Occupied Bandwidth Plot on Channel 20635**


Date: 19.DEC.2013 15:03:24

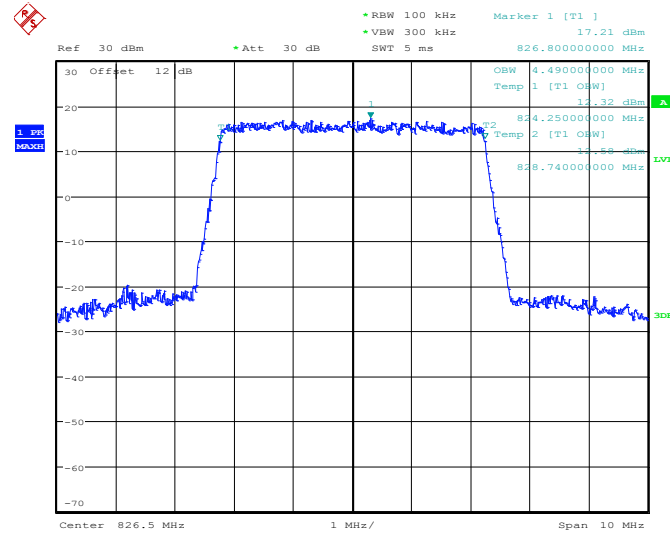
**26dB Bandwidth Plot on Channel 20635**


Date: 19.DEC.2013 15:03:46



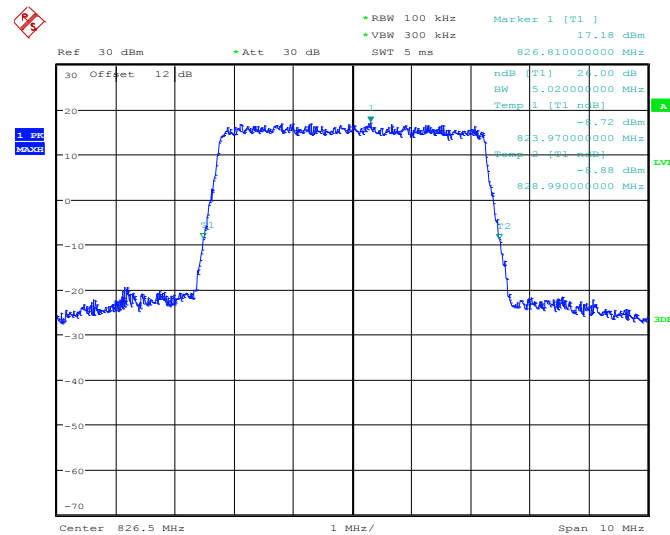
|        |            |             |             |
|--------|------------|-------------|-------------|
| Band : | LTE Band 5 | BW / Mod. : | 5MHz / QPSK |
|--------|------------|-------------|-------------|

99% Occupied Bandwidth Plot on Channel 20425



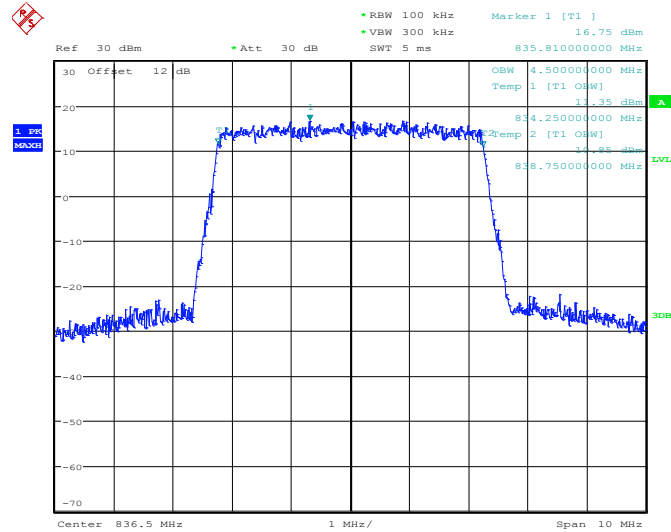
Date: 19.DEC.2013 15:04:50

26dB Bandwidth Plot on Channel 20425



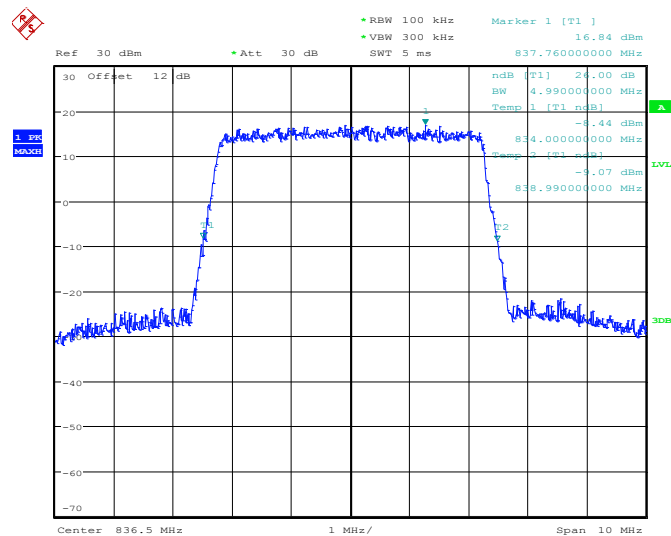
Date: 19.DEC.2013 15:05:13

## 99% Occupied Bandwidth Plot on Channel 20525



Date: 19.DEC.2013 15:05:35

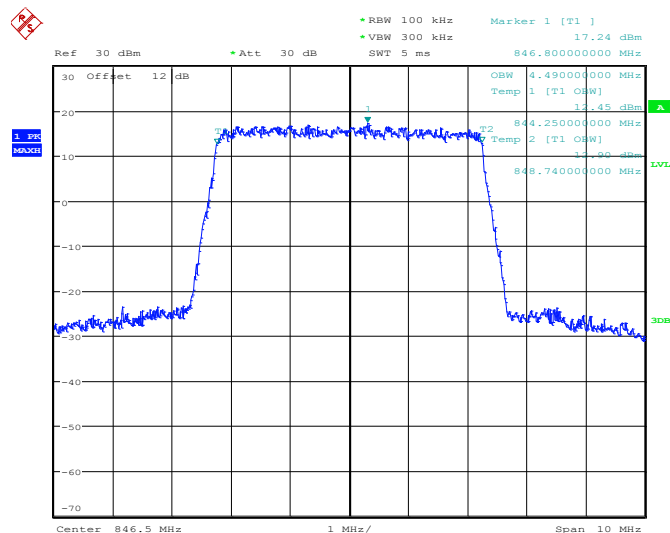
## 26dB Bandwidth Plot on Channel 20525



Date: 19.DEC.2013 15:05:57

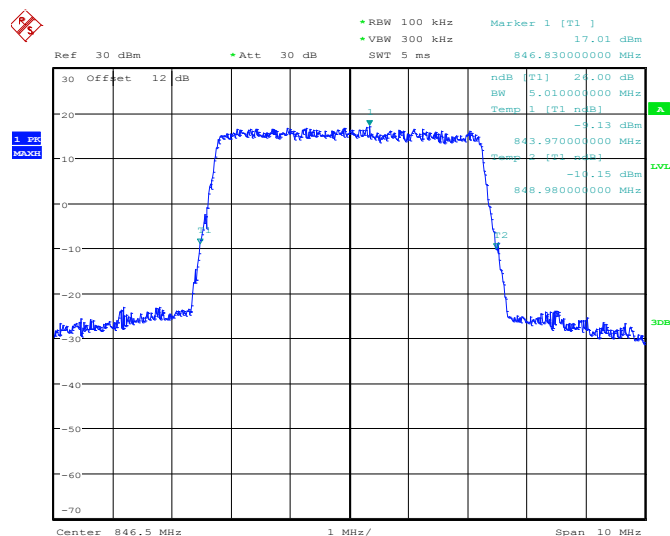


### 99% Occupied Bandwidth Plot on Channel 20625



Date: 19.DEC.2013 15:07:59

### 26dB Bandwidth Plot on Channel 20625

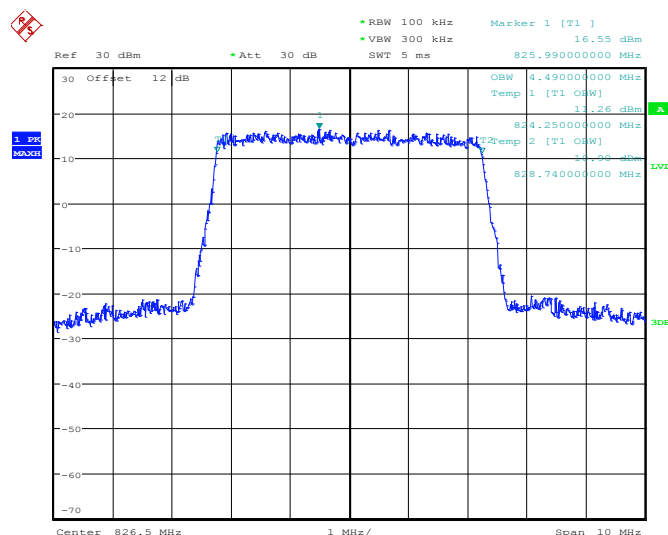


Date: 19.DEC.2013 15:08:21



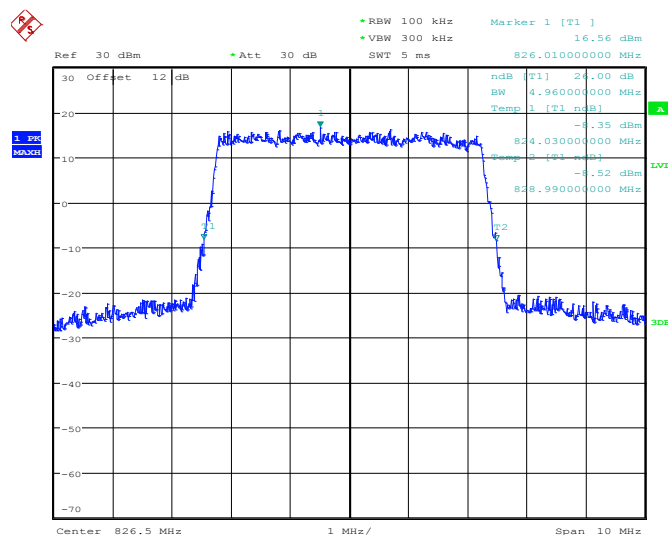
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 5 | BW / Mod. : | 5MHz / 16QAM |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 20425



Date: 19.DEC.2013 15:04:11

26dB Bandwidth Plot on Channel 20425



Date: 19.DEC.2013 15:04:26

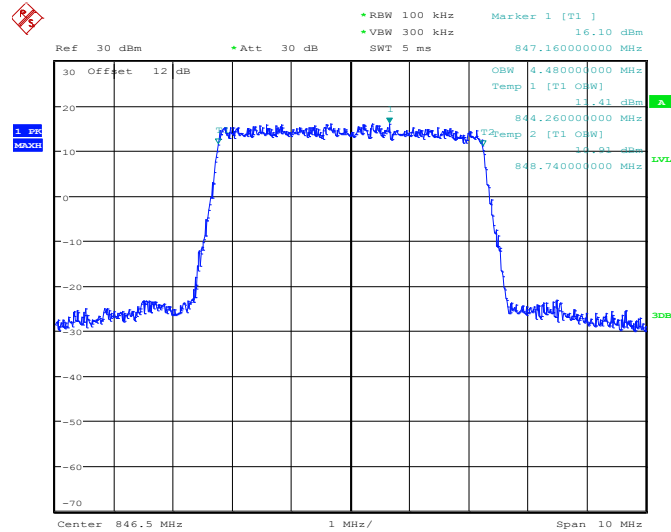


### 26dB Bandwidth Plot on Channel 20525



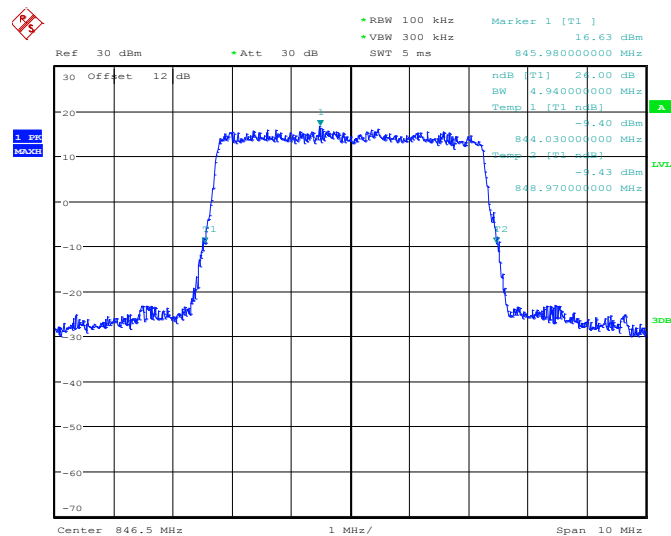


### 99% Occupied Bandwidth Plot on Channel 20625



Date: 19.DEC.2013 15:07:16

### 26dB Bandwidth Plot on Channel 20625

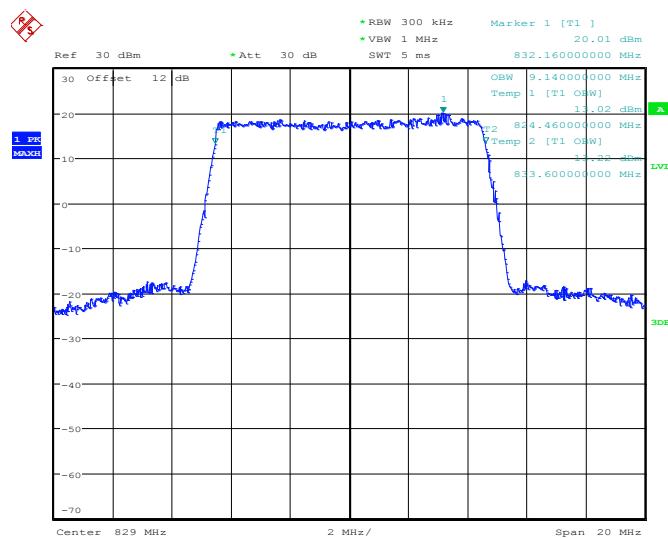


Date: 19.DEC.2013 15:07:36



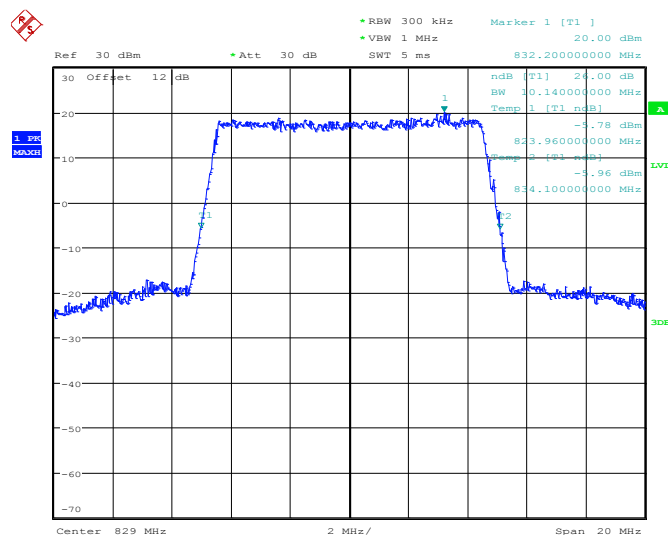
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 5 | BW / Mod. : | 10MHz / QPSK |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 20450

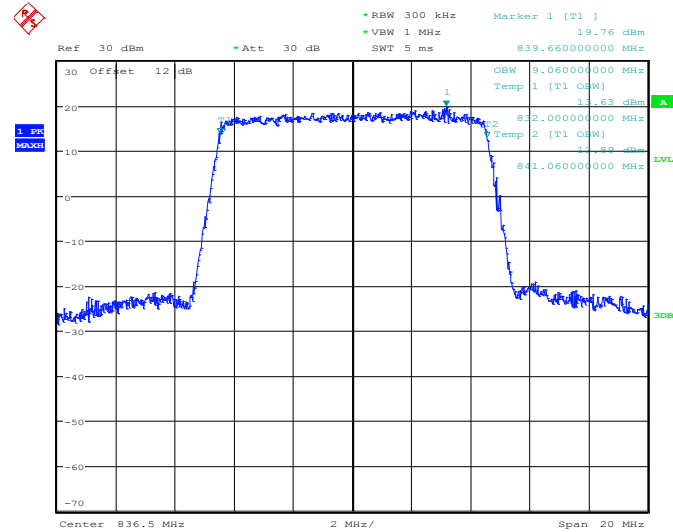


Date: 19.DEC.2013 15:10:41

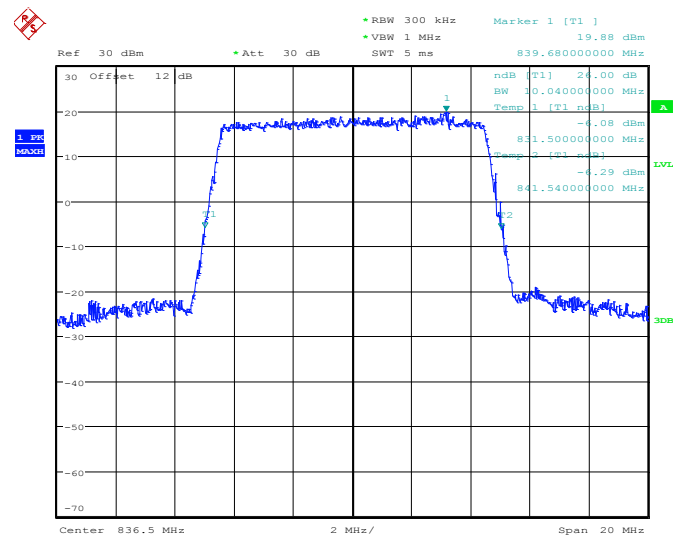
26dB Bandwidth Plot on Channel 20450



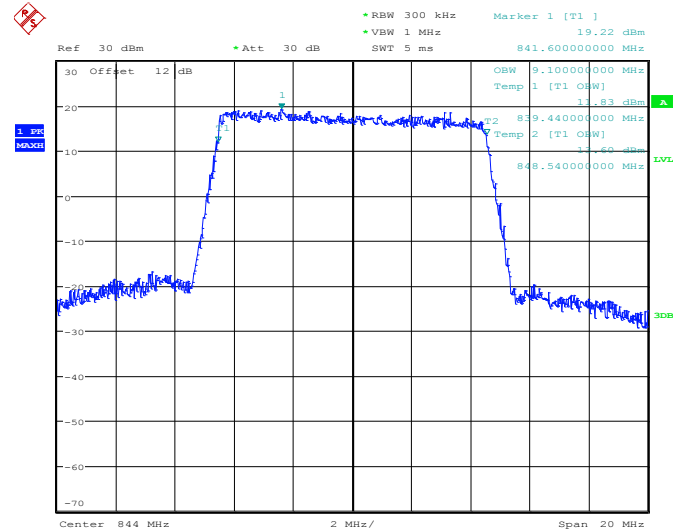
Date: 19.DEC.2013 15:09:01

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


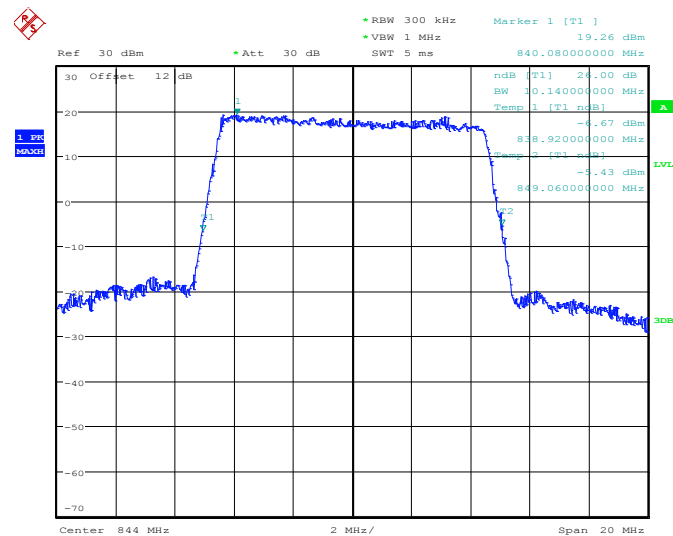
Date: 19.DEC.2013 15:12:45

**26dB Bandwidth Plot on Channel 20525**


Date: 19.DEC.2013 15:13:02

**99% Occupied Bandwidth Plot on Channel 20600**


Date: 19.DEC.2013 15:14:31

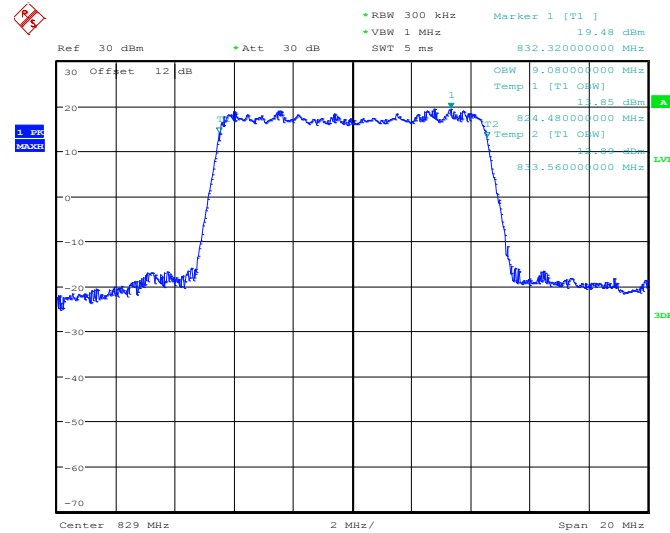
**26dB Bandwidth Plot on Channel 20600**


Date: 19.DEC.2013 15:14:52



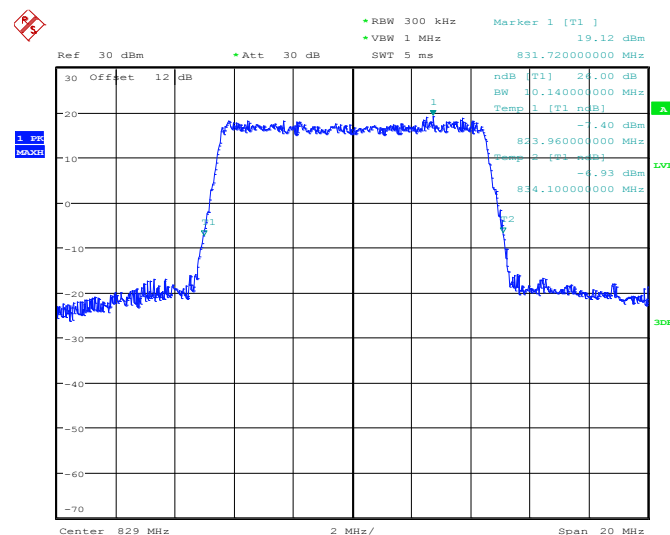
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 5 | BW / Mod. : | 10MHz / 16QAM |
|--------|------------|-------------|---------------|

99% Occupied Bandwidth Plot on Channel 20450



Date: 19.DEC.2013 15:11:33

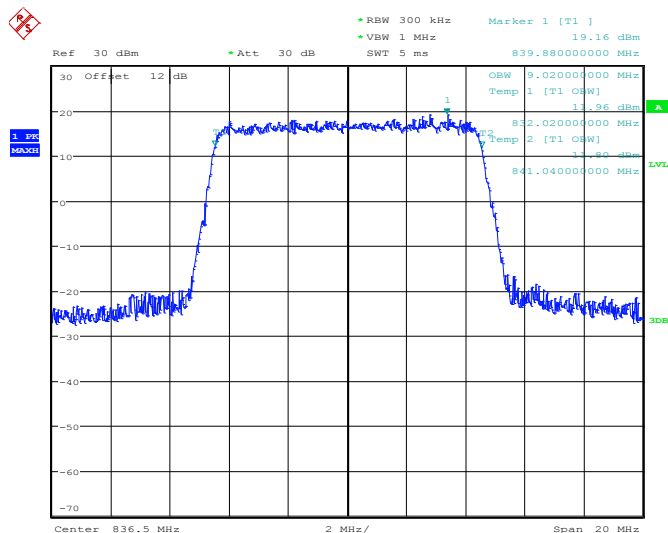
26dB Bandwidth Plot on Channel 20450



Date: 19.DEC.2013 15:11:48

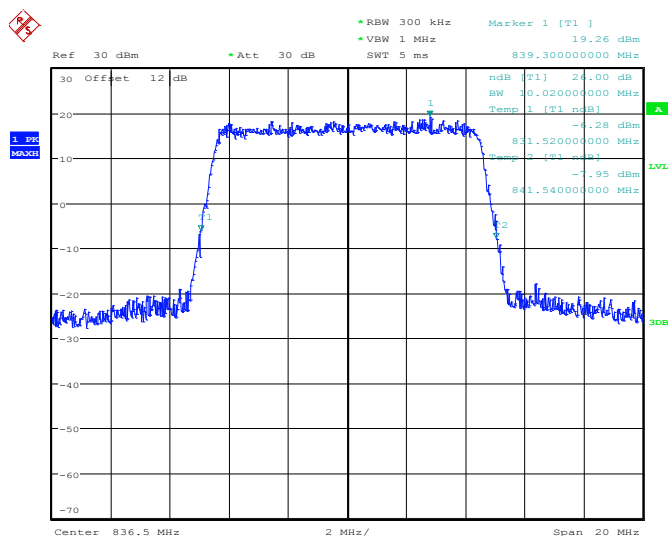


### 99% Occupied Bandwidth Plot on Channel 20525



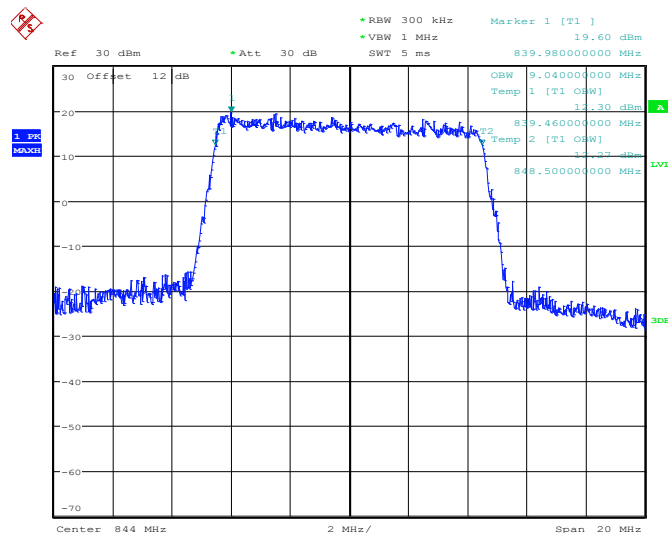
Date: 19.DEC.2013 15:13:24

### 26dB Bandwidth Plot on Channel 20525



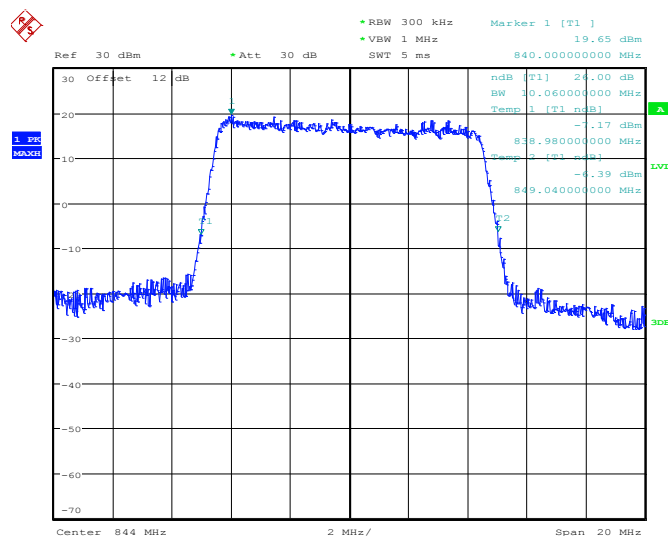
Date: 19.DEC.2013 15:13:37

## 99% Occupied Bandwidth Plot on Channel 20600



Date: 19.DEC.2013 15:13:58

## 26dB Bandwidth Plot on Channel 20600



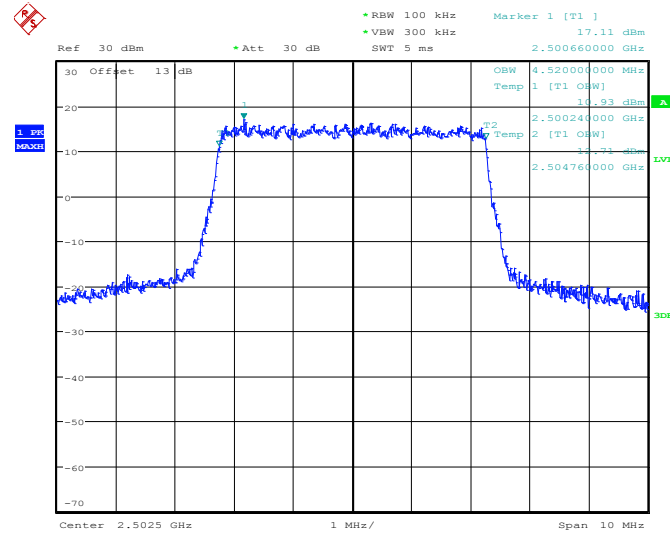
Date: 19.DEC.2013 15:14:15

**Note:** The total loss is 12 dB of the RF cable and attenuator of LTE Band 5, and has been compensated to the spectrum analyzer offset.



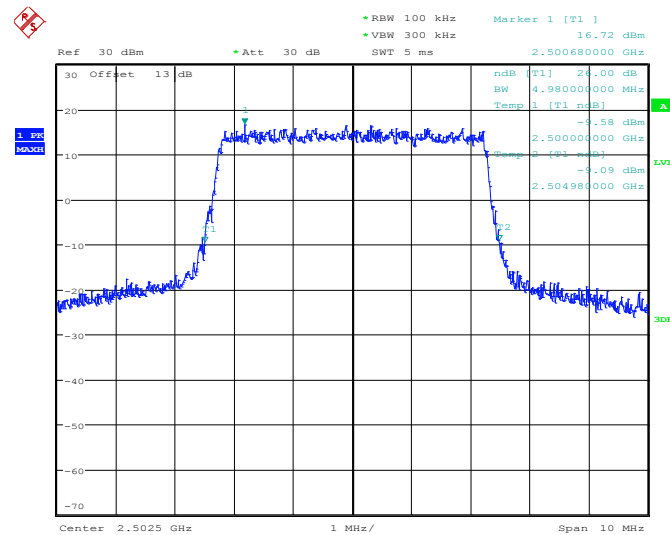
|        |            |             |             |
|--------|------------|-------------|-------------|
| Band : | LTE Band 7 | BW / Mod. : | 5MHz / QPSK |
|--------|------------|-------------|-------------|

99% Occupied Bandwidth Plot on Channel 20775



Date: 21.DEC.2013 10:48:36

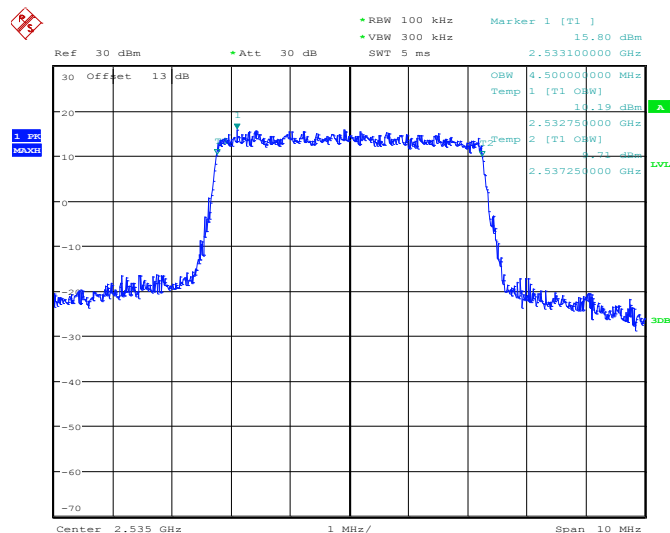
26dB Bandwidth Plot on Channel 20775



Date: 21.DEC.2013 10:48:54

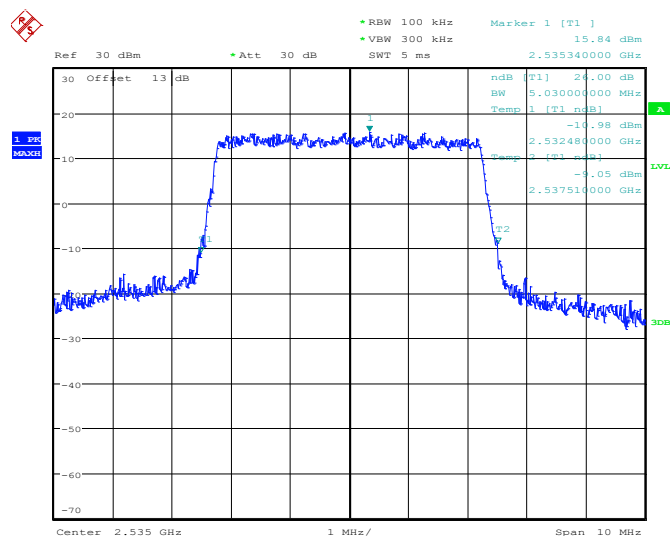


### 99% Occupied Bandwidth Plot on Channel 21100



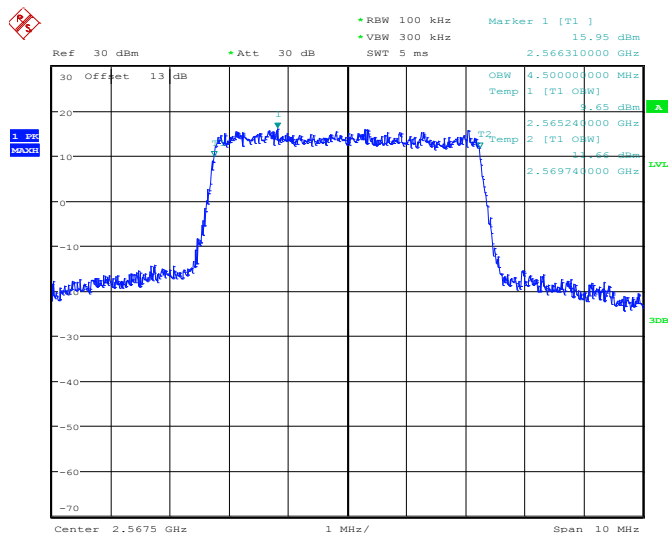
Date: 21.DEC.2013 10:52:44

### 26dB Bandwidth Plot on Channel 21100



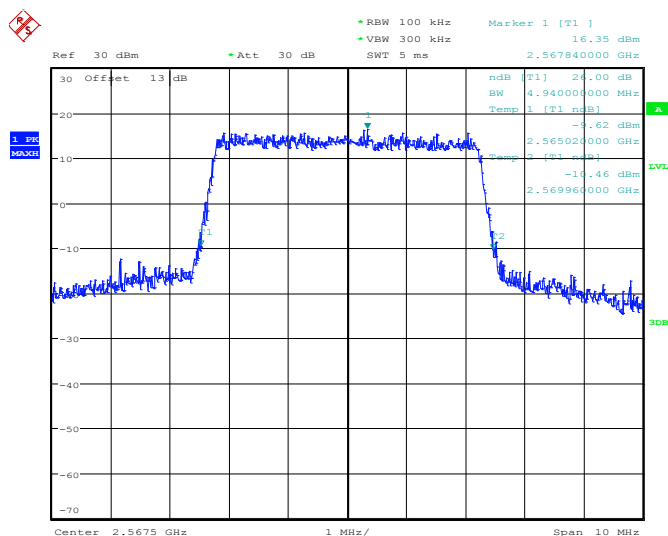
Date: 21.DEC.2013 10:50:28

## 99% Occupied Bandwidth Plot on Channel 21425



Date: 21.DEC.2013 10:52:03

## 26dB Bandwidth Plot on Channel 21425

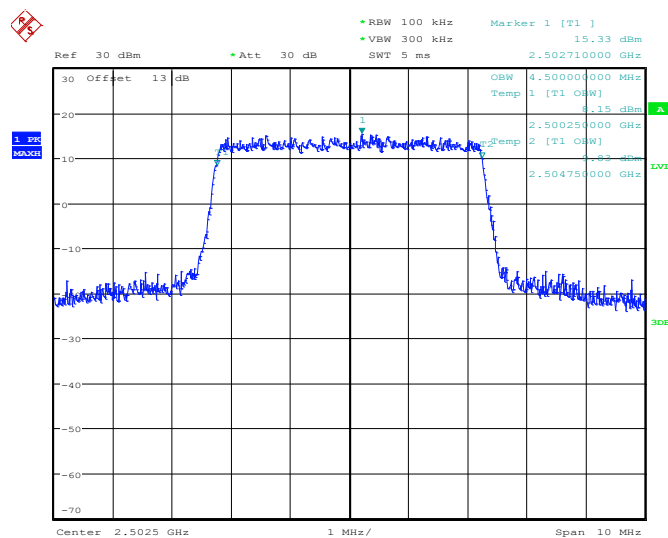


Date: 21.DEC.2013 10:52:17



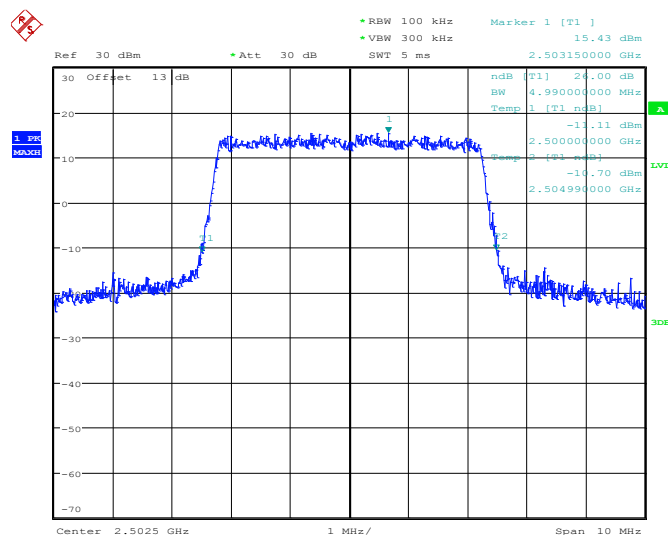
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 7 | BW / Mod. : | 5MHz / 16QAM |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 20775

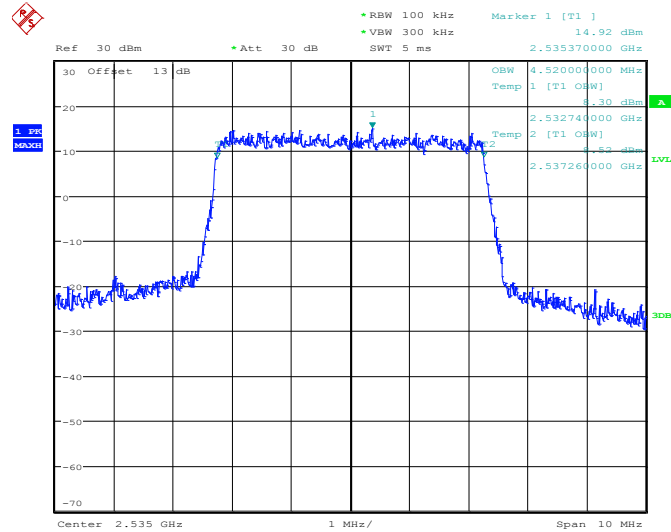


Date: 21.DEC.2013 10:49:21

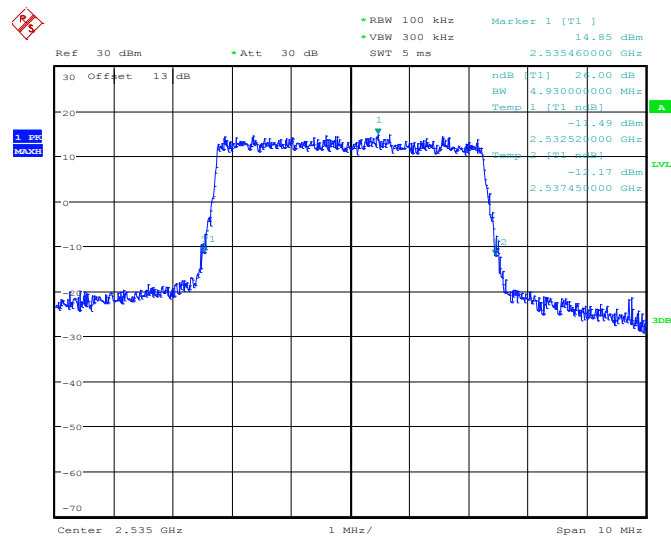
26dB Bandwidth Plot on Channel 20775



Date: 21.DEC.2013 10:49:38

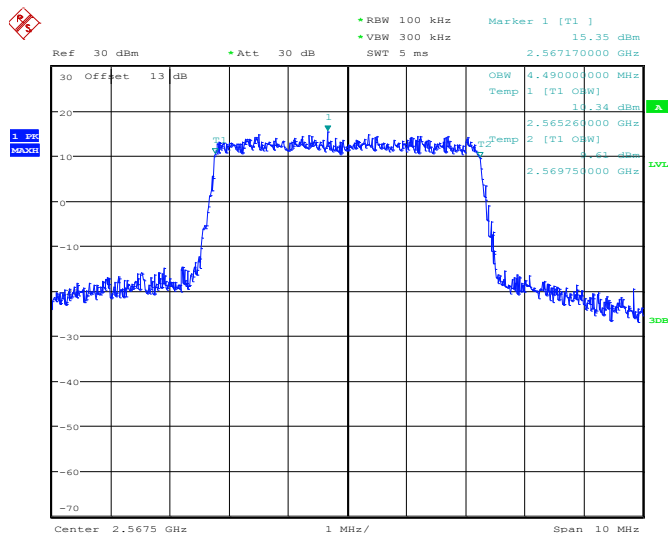
**99% Occupied Bandwidth Plot on Channel 21100**


Date: 21.DEC.2013 10:50:42

**26dB Bandwidth Plot on Channel 21100**


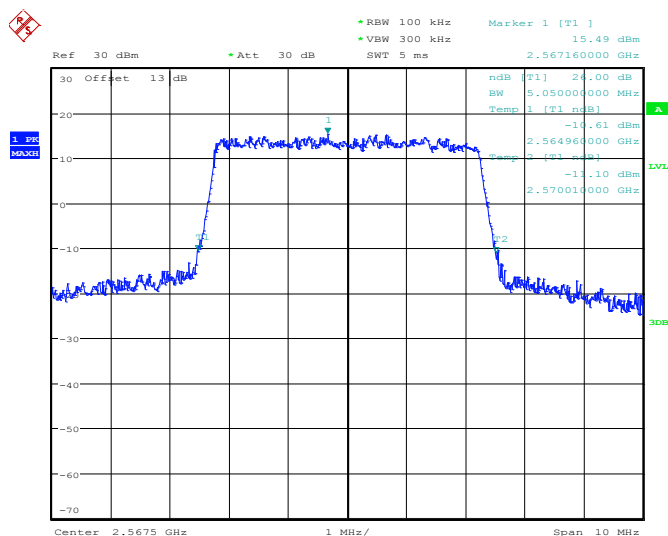
Date: 21.DEC.2013 10:50:56

## 99% Occupied Bandwidth Plot on Channel 21425



Date: 21.DEC.2013 10:51:08

## 26dB Bandwidth Plot on Channel 21425

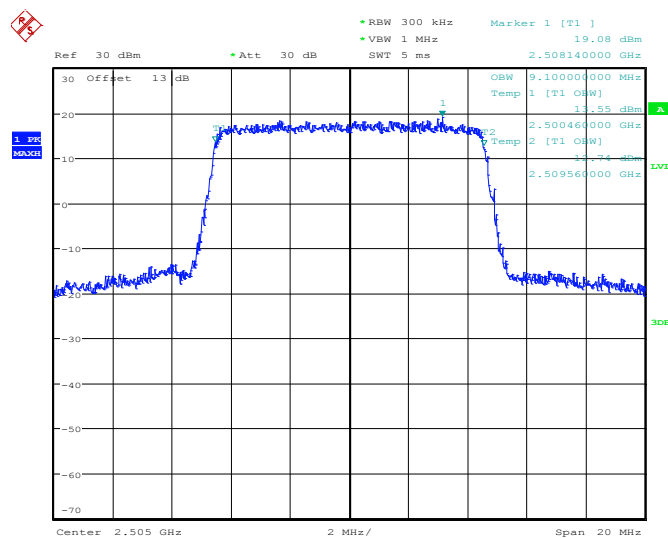


Date: 21.DEC.2013 10:51:36



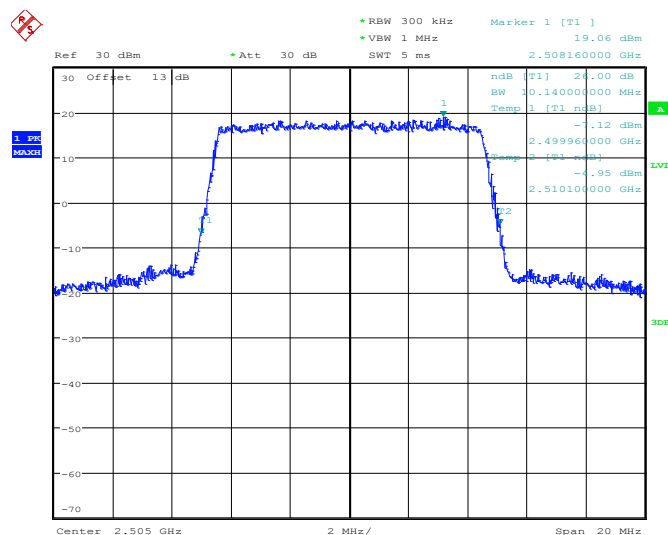
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 7 | BW / Mod. : | 10MHz / QPSK |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 20800

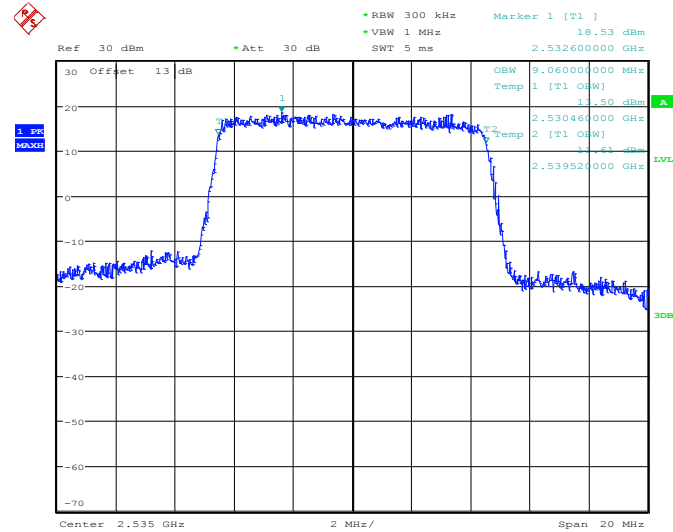


Date: 21.DEC.2013 10:53:06

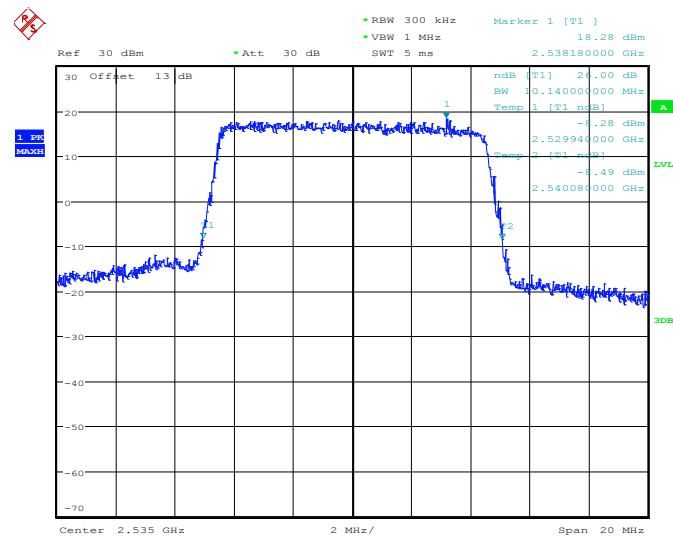
26dB Bandwidth Plot on Channel 20800



Date: 21.DEC.2013 10:53:22

**99% Occupied Bandwidth Plot on Channel 21100**


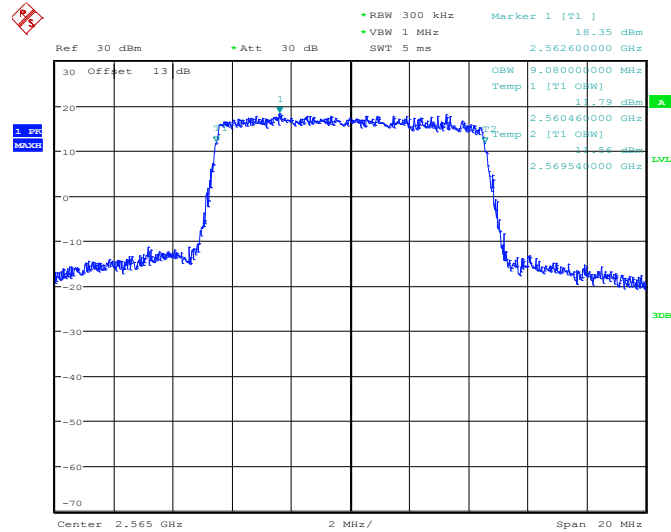
Date: 21.DEC.2013 10:54:39

**26dB Bandwidth Plot on Channel 21100**


Date: 21.DEC.2013 10:54:51

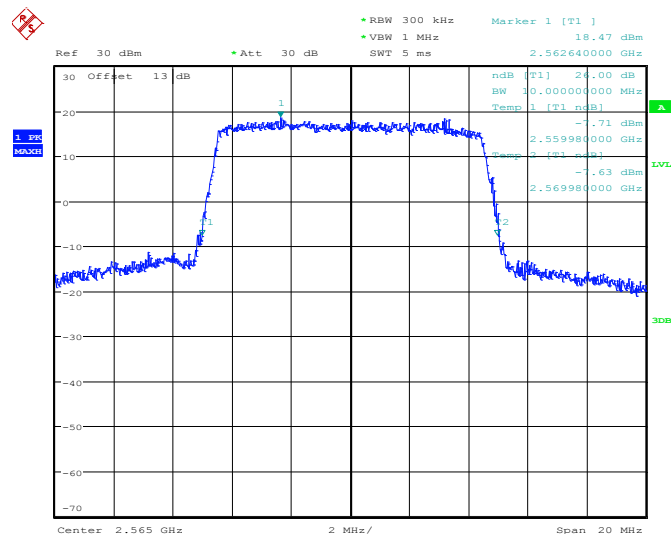


### 99% Occupied Bandwidth Plot on Channel 21400



Date: 21.DEC.2013 10:55:08

### 26dB Bandwidth Plot on Channel 21400

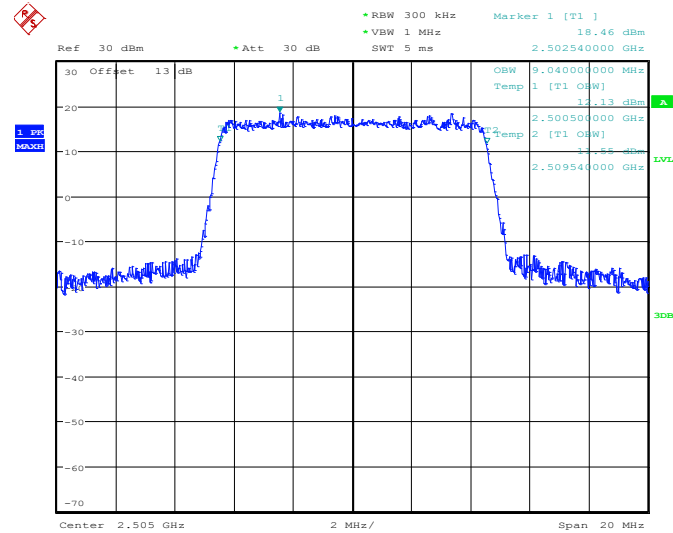


Date: 21.DEC.2013 10:55:21



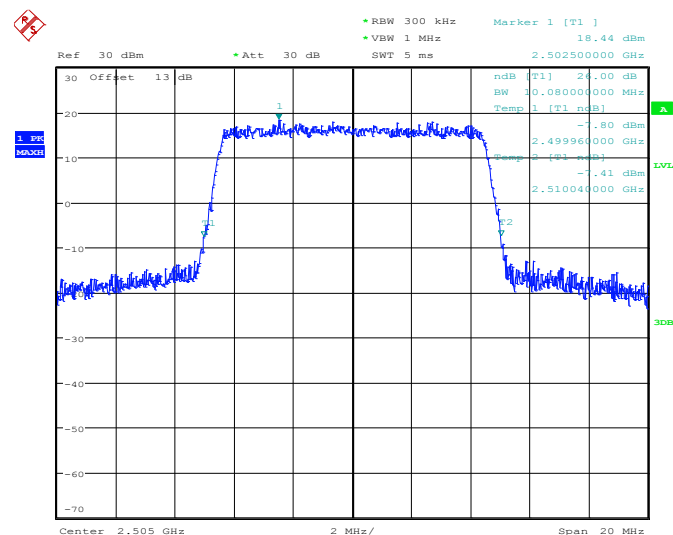
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 7 | BW / Mod. : | 10MHz / 16QAM |
|--------|------------|-------------|---------------|

99% Occupied Bandwidth Plot on Channel 20800



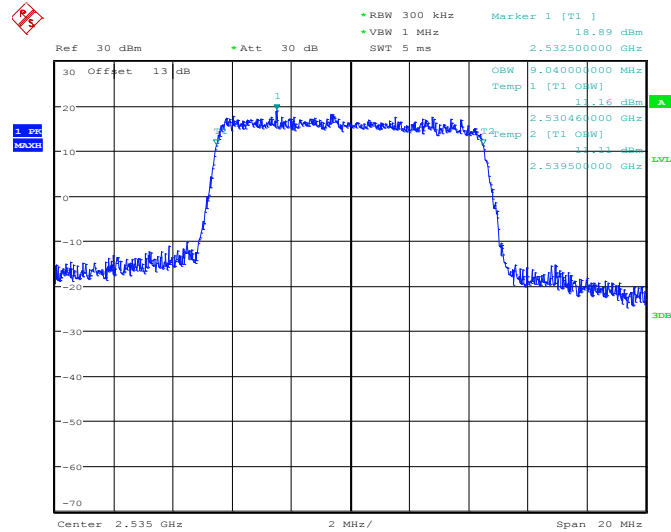
Date: 21.DEC.2013 10:53:41

26dB Bandwidth Plot on Channel 20800



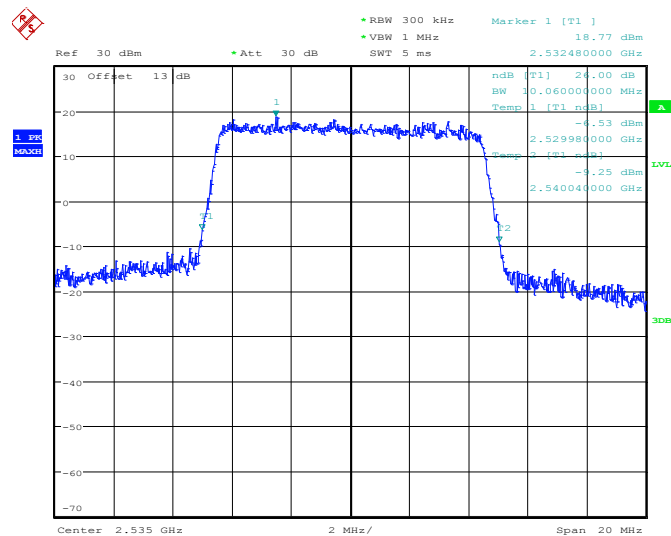
Date: 21.DEC.2013 10:53:53

## 99% Occupied Bandwidth Plot on Channel 21100



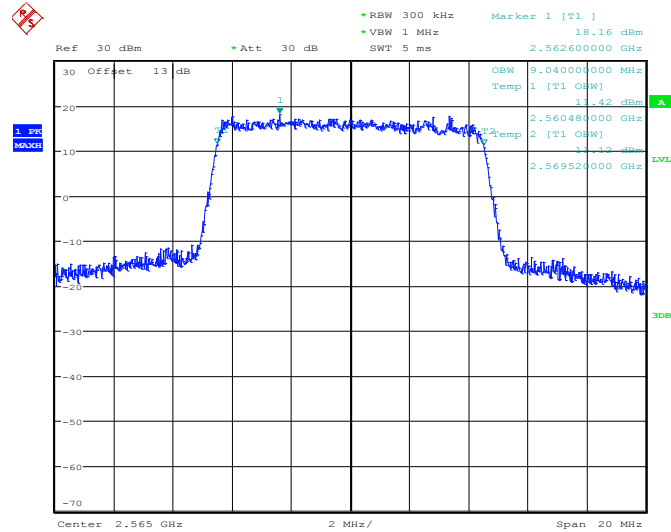
Date: 21.DEC.2013 10:54:08

## 26dB Bandwidth Plot on Channel 21100



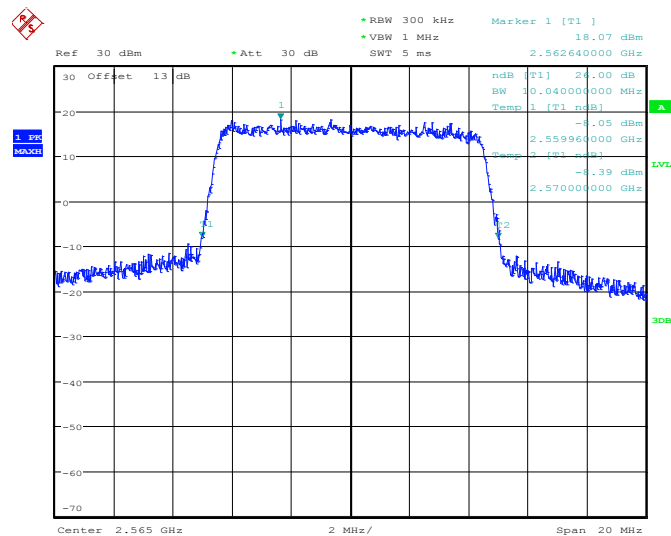
Date: 21.DEC.2013 10:54:24

## 99% Occupied Bandwidth Plot on Channel 21400



Date: 21.DEC.2013 10:55:36

## 26dB Bandwidth Plot on Channel 21400

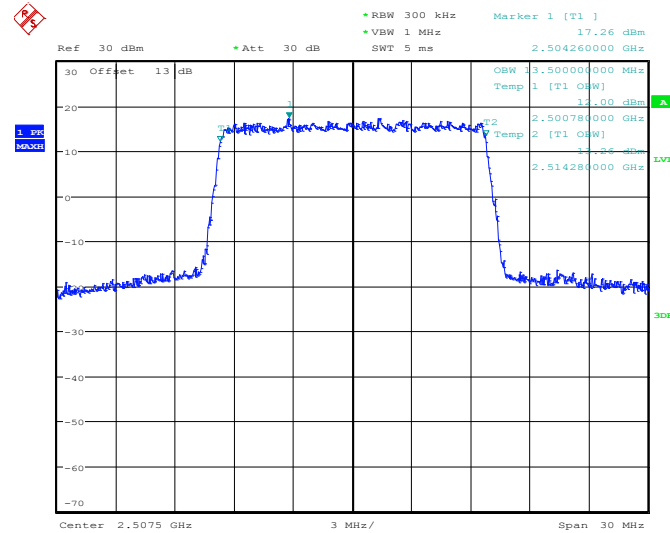


Date: 21.DEC.2013 10:55:49



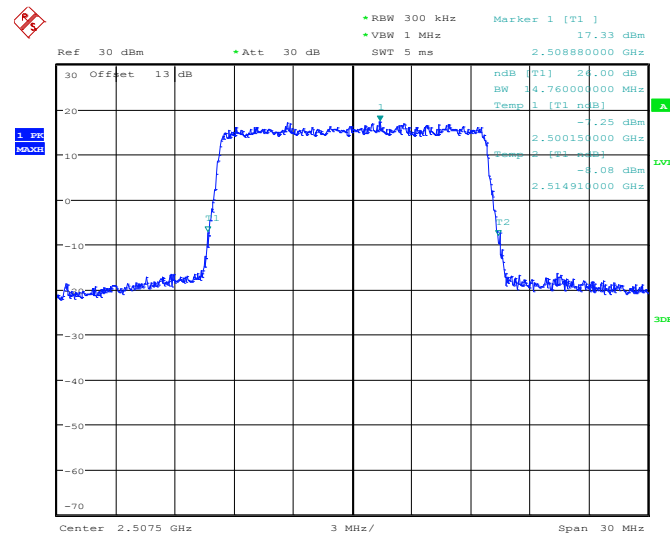
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 7 | BW / Mod. : | 15MHz / QPSK |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 20825

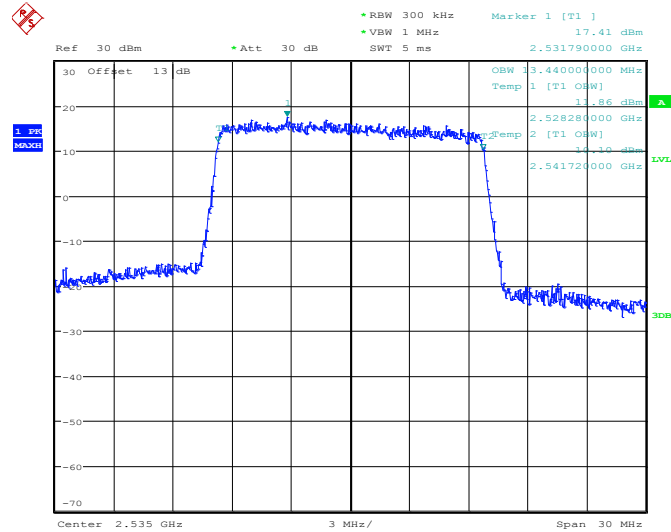


Date: 21.DEC.2013 10:59:15

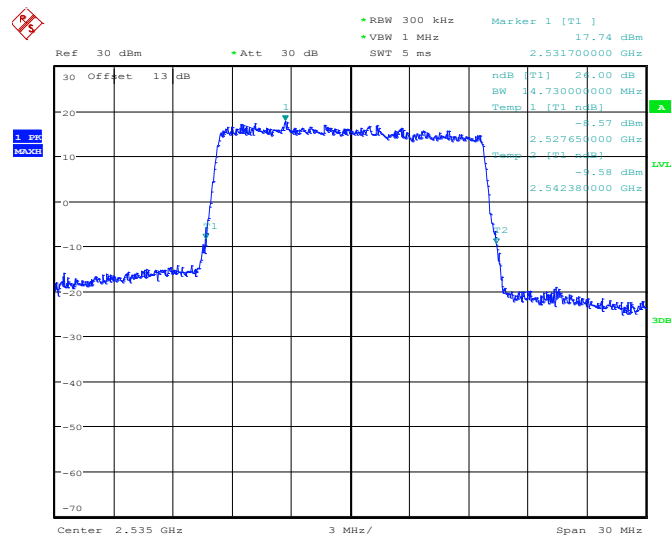
26dB Bandwidth Plot on Channel 20825



Date: 21.DEC.2013 10:59:36

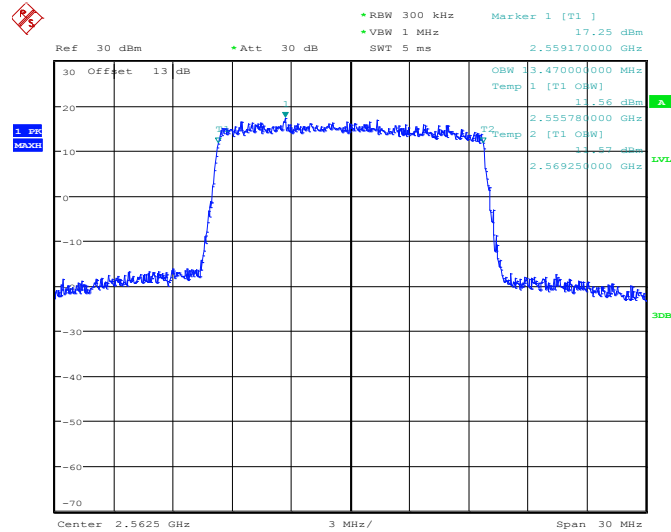
**99% Occupied Bandwidth Plot on Channel 21100**


Date: 21.DEC.2013 10:59:50

**26dB Bandwidth Plot on Channel 21100**


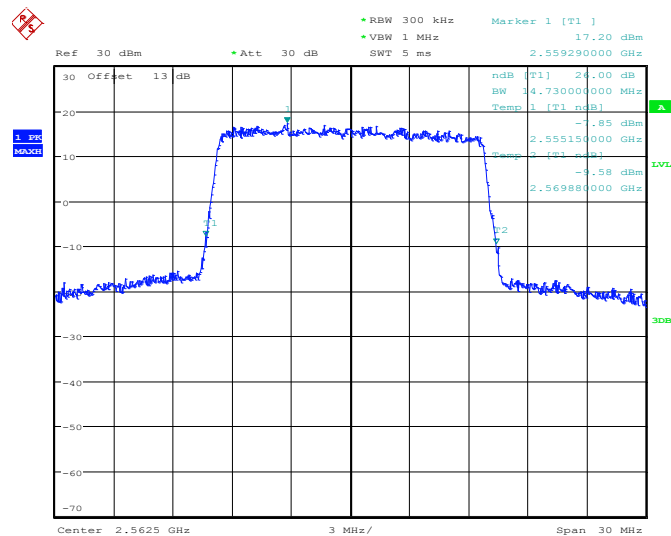
Date: 21.DEC.2013 11:00:17

## 99% Occupied Bandwidth Plot on Channel 21375



Date: 21.DEC.2013 11:01:28

## 26dB Bandwidth Plot on Channel 21375

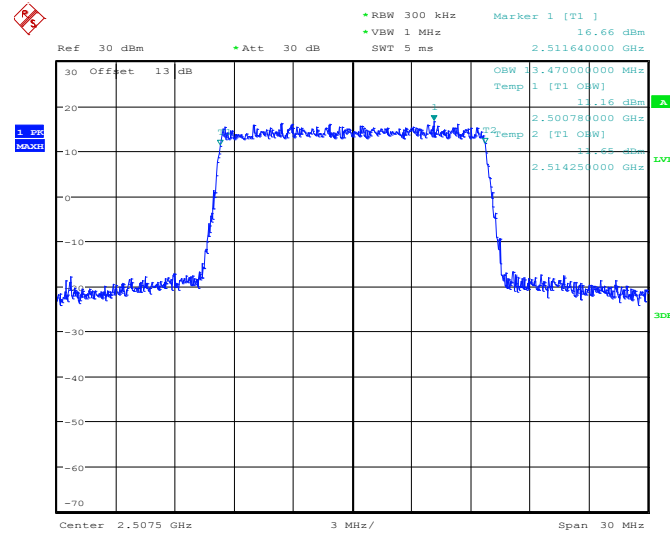


Date: 21.DEC.2013 11:01:49



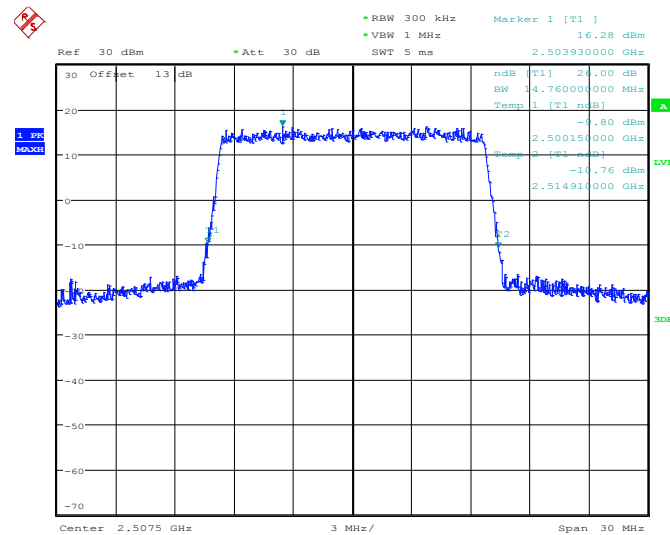
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 7 | BW / Mod. : | 15MHz / 16QAM |
|--------|------------|-------------|---------------|

99% Occupied Bandwidth Plot on Channel 20825

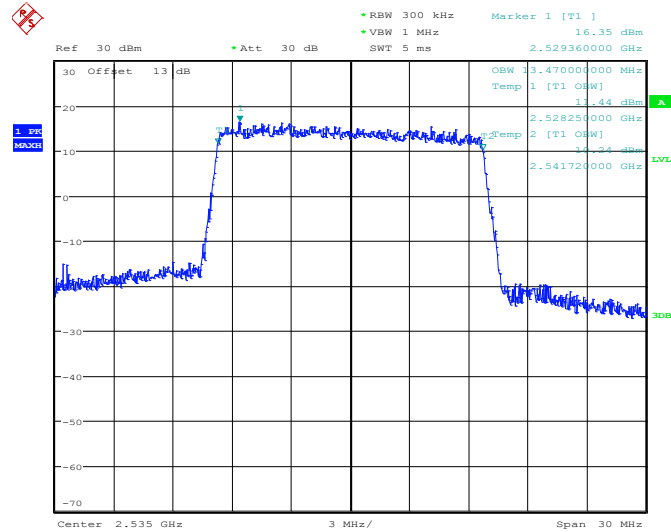


Date: 21.DEC.2013 10:56:16

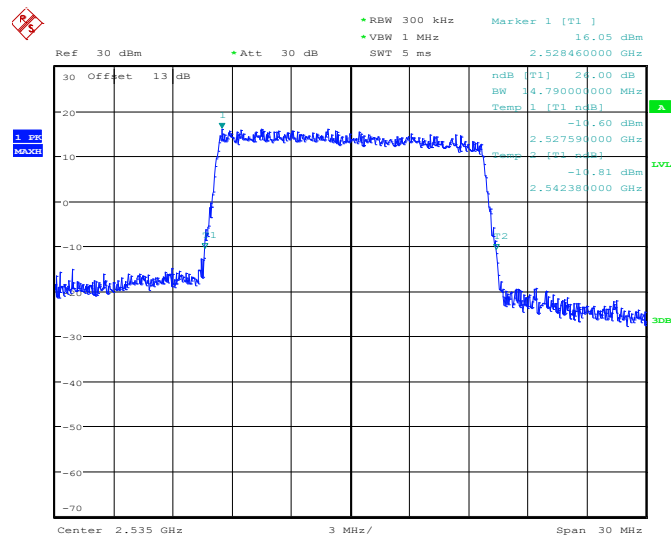
26dB Bandwidth Plot on Channel 20825



Date: 21.DEC.2013 10:58:48

**99% Occupied Bandwidth Plot on Channel 21100**


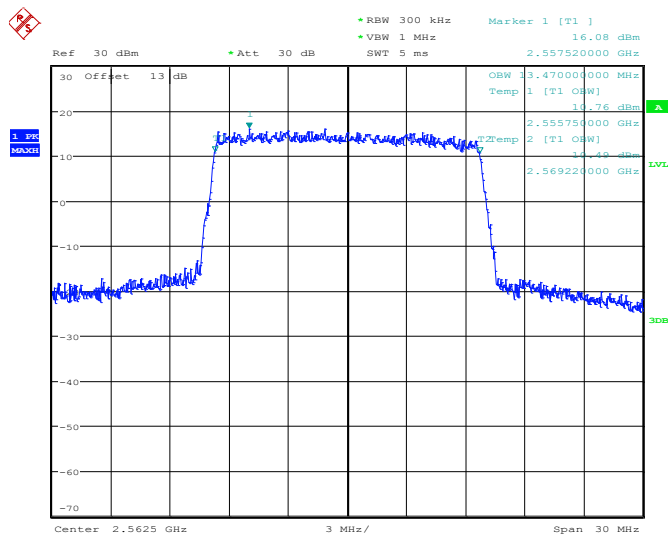
Date: 21.DEC.2013 11:00:31

**26dB Bandwidth Plot on Channel 21100**


Date: 21.DEC.2013 11:00:43

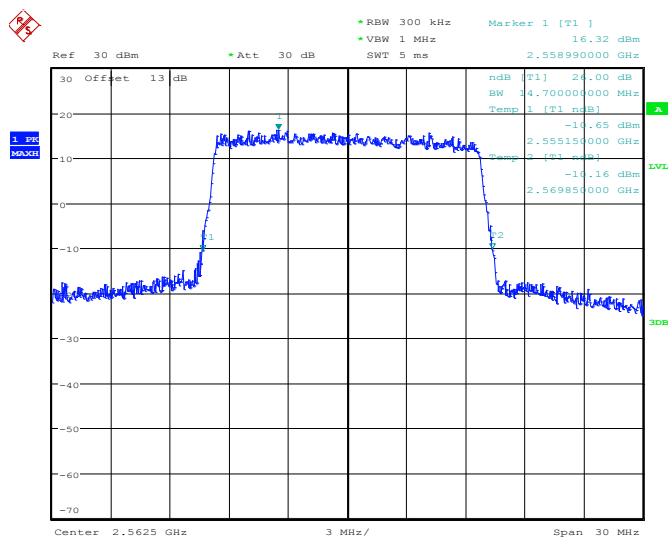


### 99% Occupied Bandwidth Plot on Channel 21375



Date: 21.DEC.2013 11:00:59

### 26dB Bandwidth Plot on Channel 21375

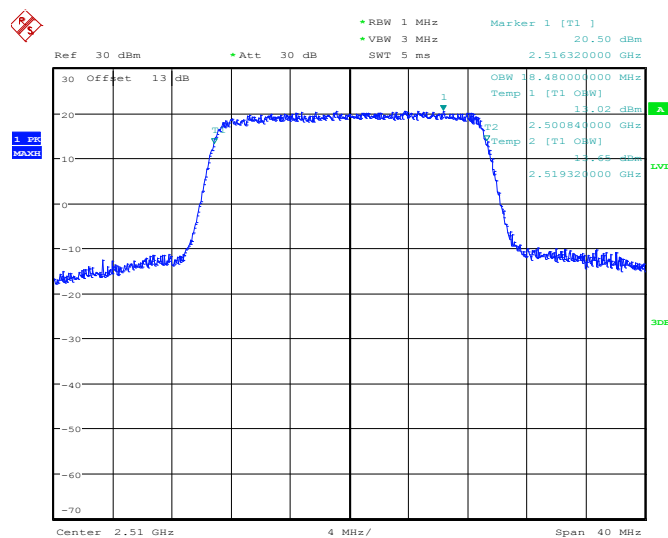


Date: 21.DEC.2013 11:01:13



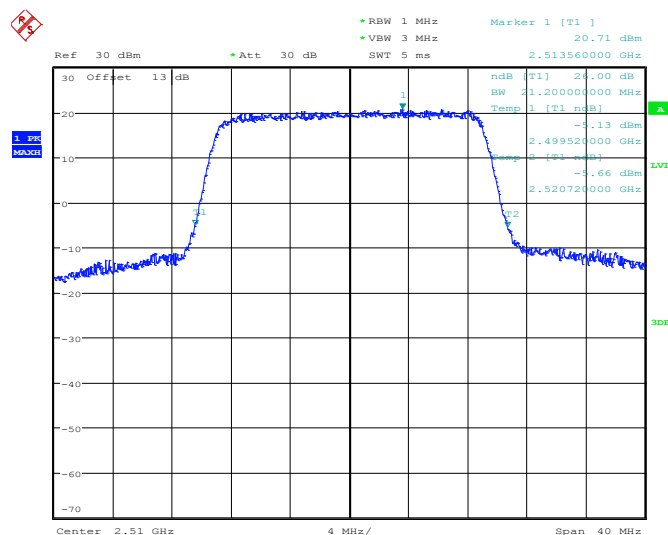
|        |            |             |              |
|--------|------------|-------------|--------------|
| Band : | LTE Band 7 | BW / Mod. : | 20MHz / QPSK |
|--------|------------|-------------|--------------|

99% Occupied Bandwidth Plot on Channel 20850



Date: 21.DEC.2013 11:02:37

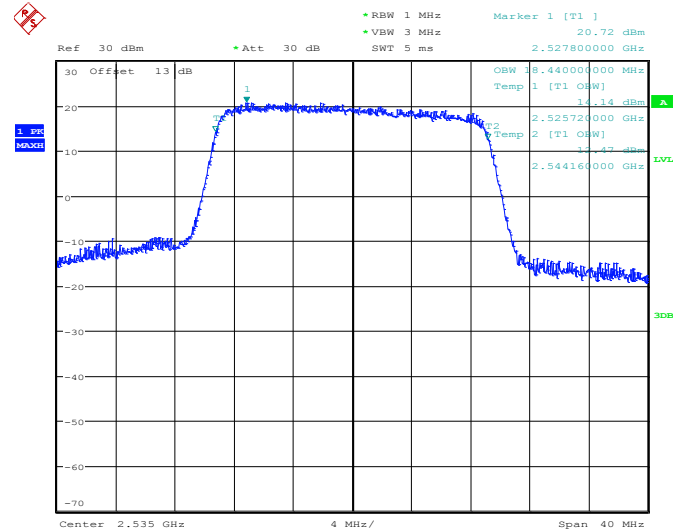
26dB Bandwidth Plot on Channel 20850



Date: 21.DEC.2013 11:02:54

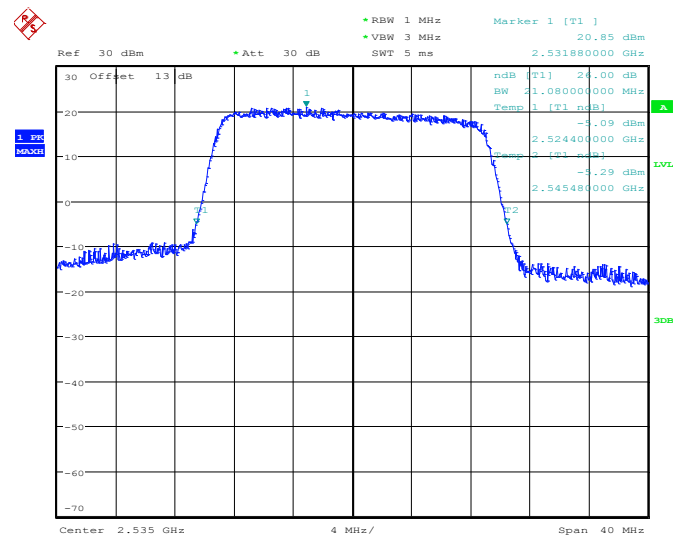


### 99% Occupied Bandwidth Plot on Channel 21100



Date: 21.DEC.2013 11:03:58

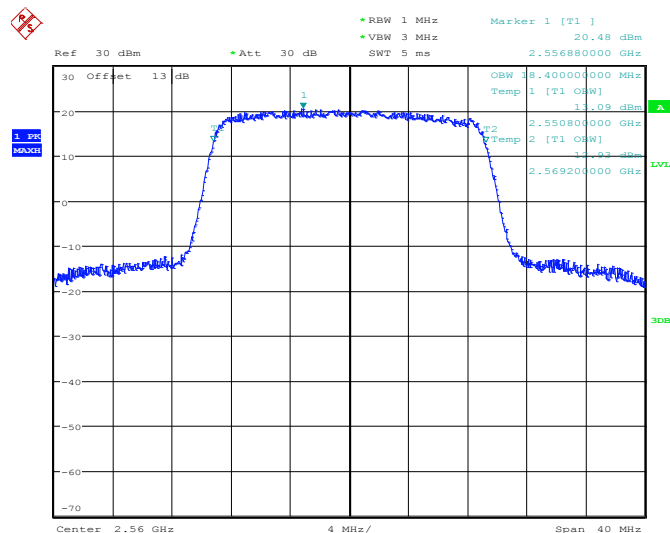
### 26dB Bandwidth Plot on Channel 21100



Date: 21.DEC.2013 11:04:11

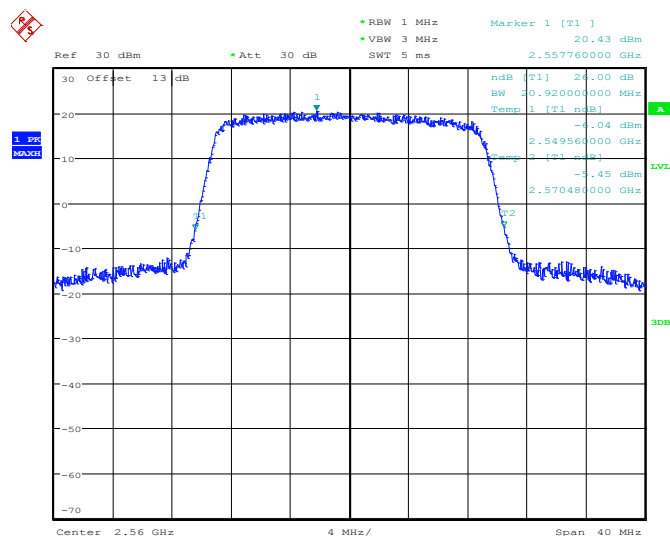


### 99% Occupied Bandwidth Plot on Channel 21350



Date: 21.DEC.2013 11:04:29

### 26dB Bandwidth Plot on Channel 21350

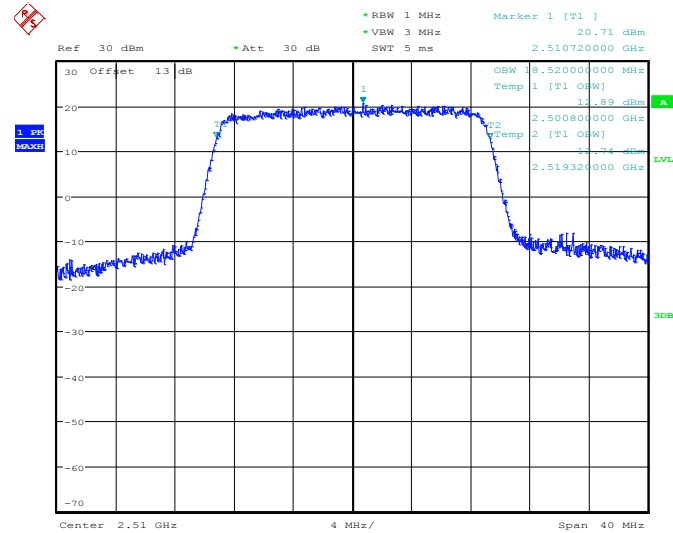


Date: 21.DEC.2013 11:04:42



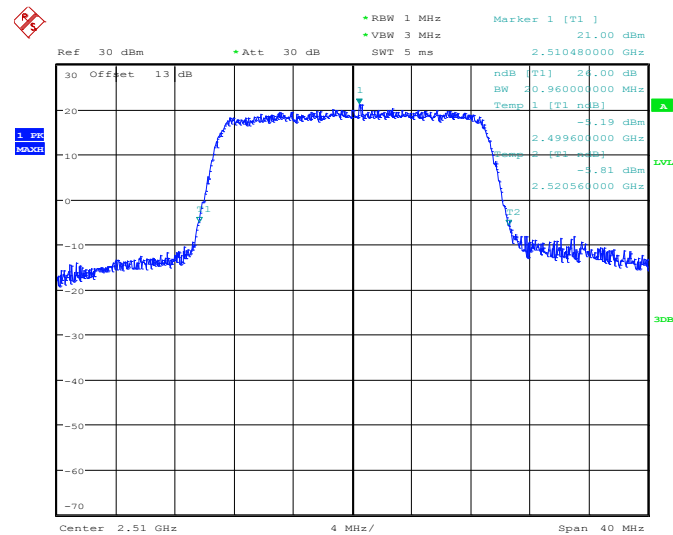
|        |            |             |               |
|--------|------------|-------------|---------------|
| Band : | LTE Band 7 | BW / Mod. : | 20MHz / 16QAM |
|--------|------------|-------------|---------------|

99% Occupied Bandwidth Plot on Channel 20850



Date: 21.DEC.2013 11:03:07

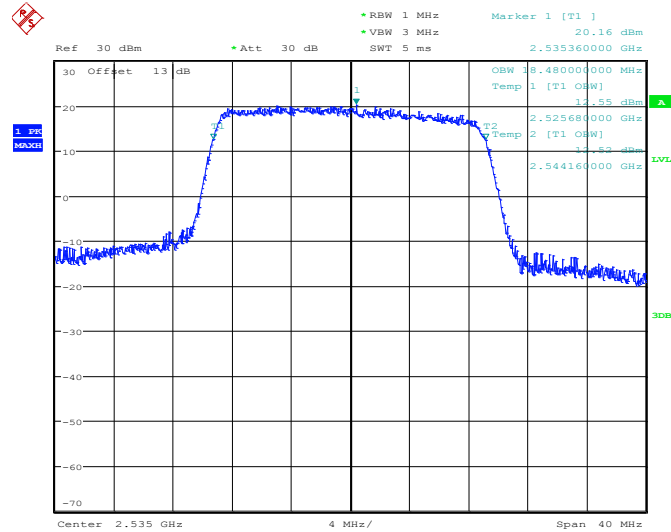
26dB Bandwidth Plot on Channel 20850



Date: 21.DEC.2013 11:03:18

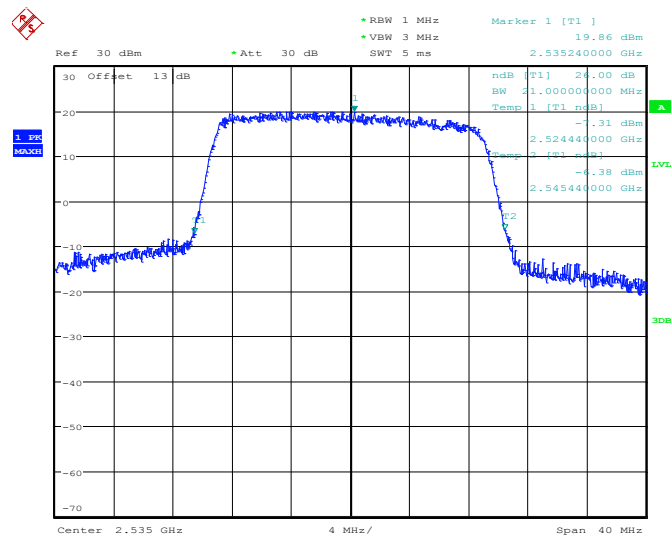


### 99% Occupied Bandwidth Plot on Channel 21100



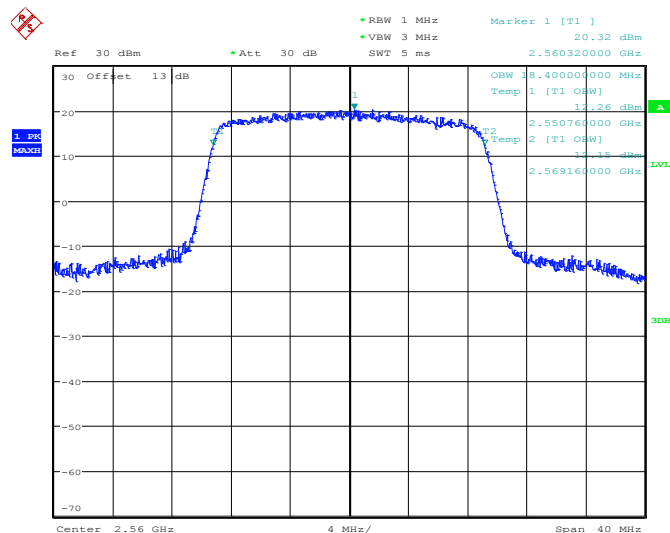
Date: 21.DEC.2013 11:03:33

### 26dB Bandwidth Plot on Channel 21100



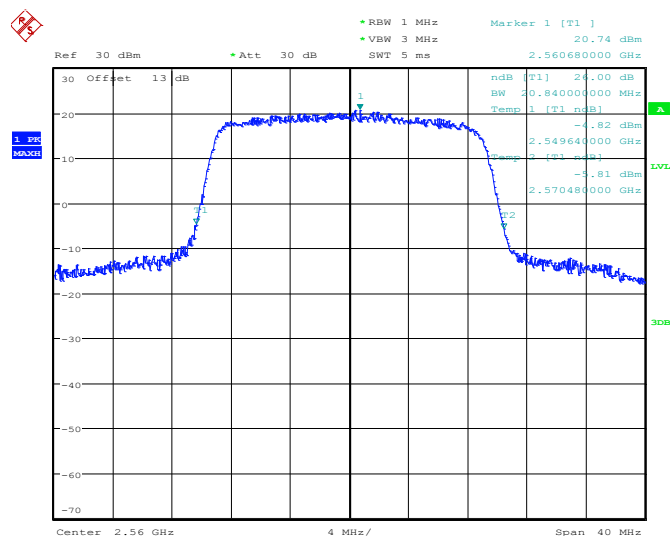
Date: 21.DEC.2013 11:03:45

## 99% Occupied Bandwidth Plot on Channel 21350



Date: 21.DEC.2013 11:04:59

## 26dB Bandwidth Plot on Channel 21350



Date: 21.DEC.2013 11:05:16

**Note:** The total loss is 13 dB of the RF cable and attenuator of LTE Band 7, and has been compensated to the spectrum analyzer offset.

### 3.5 Conducted Band Edge Measurement

#### 3.5.1 Description of Conducted Band Edge Measurement

22.917(a) For Band 5

For operations in the 824 – 849 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53(l) (4) For Band 7

The emissions be operated in the 2496-2690 MHz band, the attenuation factor of transmitter Power ( $P$ ) shall be not less than  $43 + 10 \log (P)$  dB at the channel edge and  $55 + 10 \log (P)$  dB at 5.5 MHz from the channel edges.

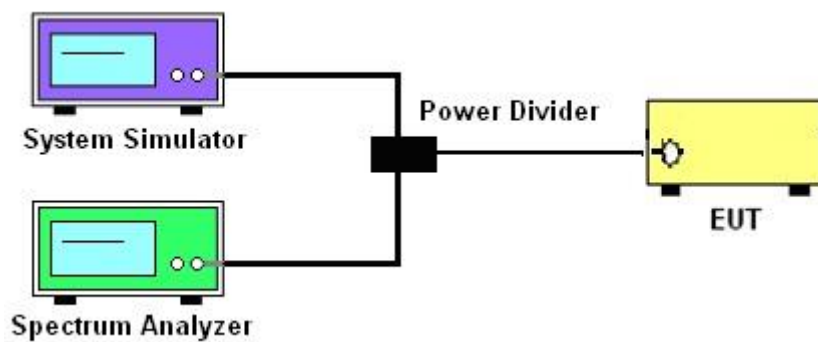
#### 3.5.2 Measuring Instruments

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

#### 3.5.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The band edges of low and high channels for the highest RF powers were measured. Setting  $RBW \geq 1\%$  EBW, and measuring bandwidth = 1MHz.
3. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
4. The limit line is derived from  $43 + 10\log(P)$ dB below the transmitter power  $P(\text{Watts})$   
 $= P(W) - [43 + 10\log(P)] \text{ (dB)}$   
 $= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$   
 $= -13\text{dBm}.$

### 3.5.4 Test Setup

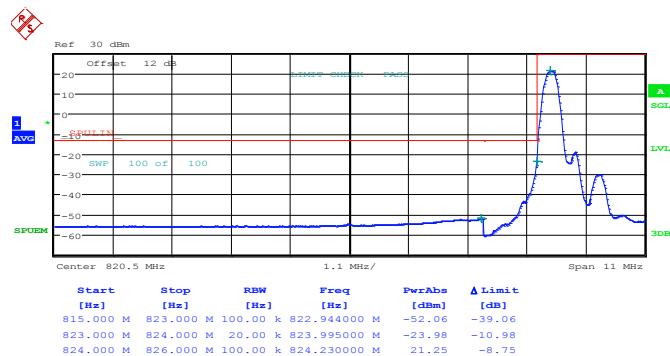




## 3.5.5 Test Result (Plots) of Conducted Band Edge

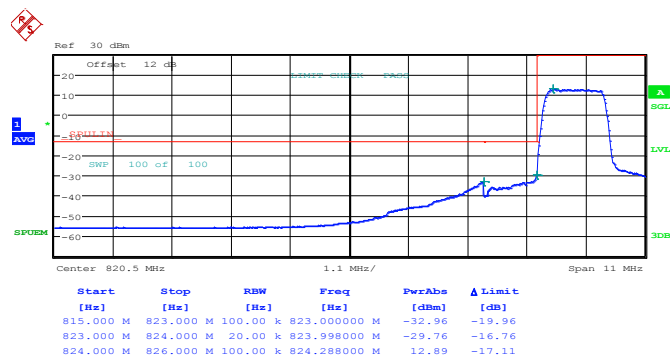
|        |            |              |               |
|--------|------------|--------------|---------------|
| Band : | LTE Band 5 | Band Width : | 1.4MHz / QPSK |
|--------|------------|--------------|---------------|

Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 19.DEC.2013 14:54:22

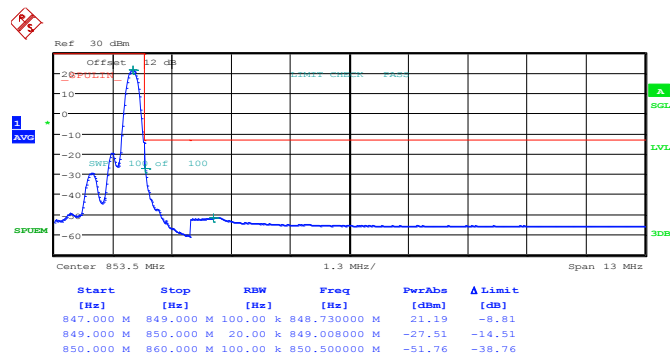
Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 19.DEC.2013 14:53:33

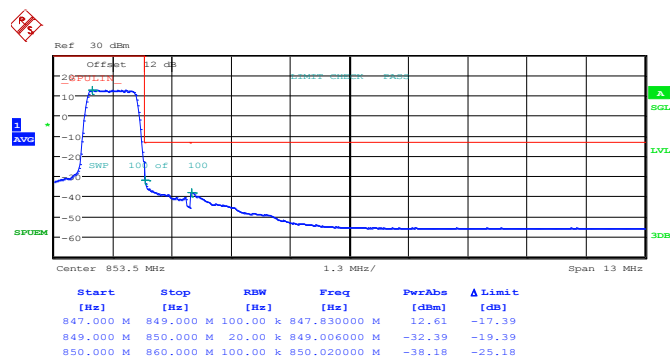


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



Date: 19.DEC.2013 14:50:35

Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0

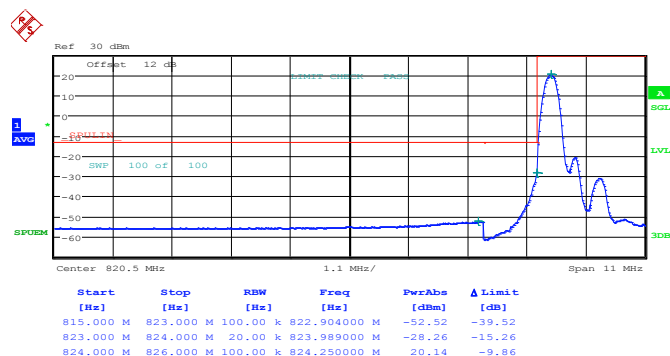


Date: 19.DEC.2013 14:51:24



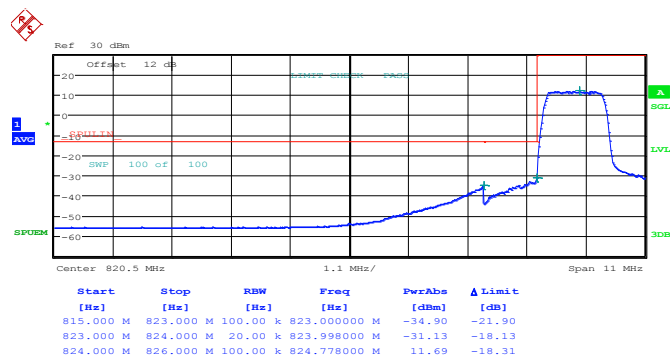
|        |            |              |                |
|--------|------------|--------------|----------------|
| Band : | LTE Band 5 | Band Width : | 1.4MHz / 16QAM |
|--------|------------|--------------|----------------|

Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 19.DEC.2013 14:55:01

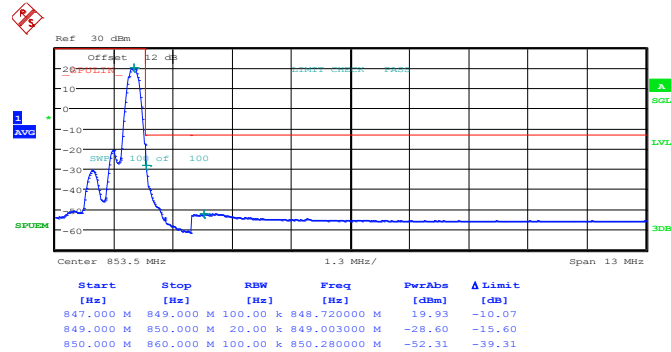
Lower Band Edge Plot for 16QAM -RB Size 6, RB Offset 0



Date: 19.DEC.2013 14:52:52

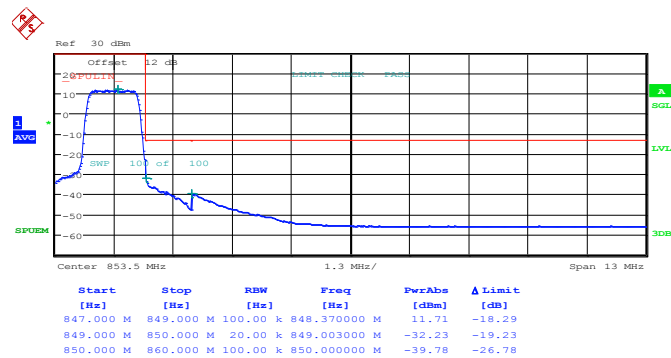


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 5



Date: 19.DEC.2013 14:49:16

Higher Band Edge Plot for 16QAM -RB Size 6, RB Offset 0

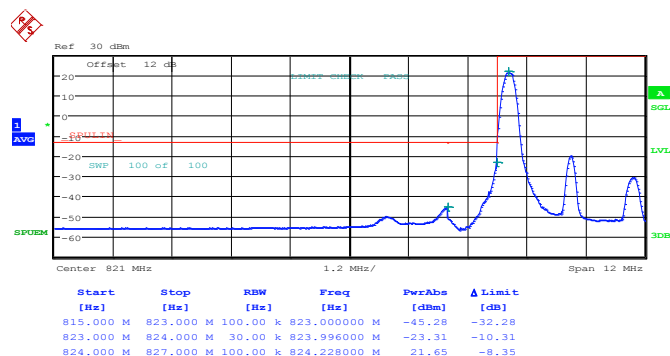


Date: 19.DEC.2013 14:52:10



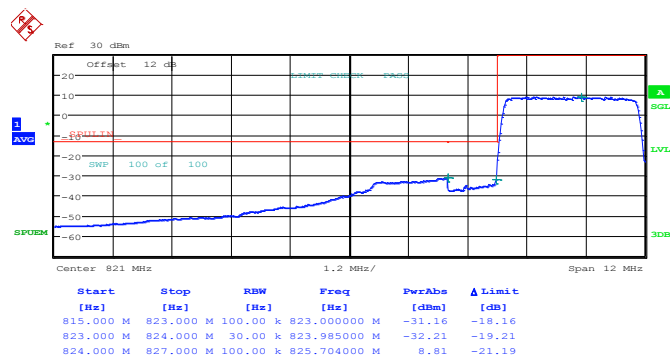
|        |            |              |             |
|--------|------------|--------------|-------------|
| Band : | LTE Band 5 | Band Width : | 3MHz / QPSK |
|--------|------------|--------------|-------------|

Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 19.DEC.2013 14:43:00

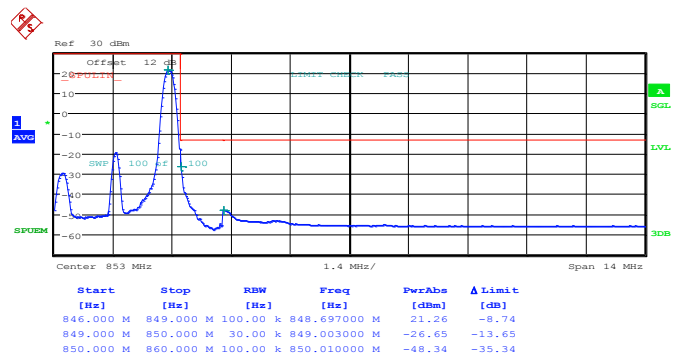
Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 19.DEC.2013 14:43:50

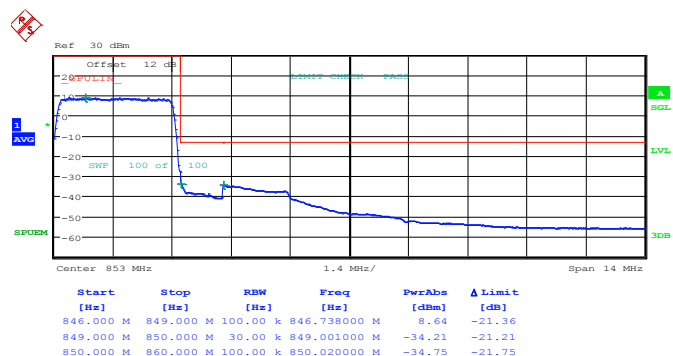


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14



Date: 19.DEC.2013 14:47:07

Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0

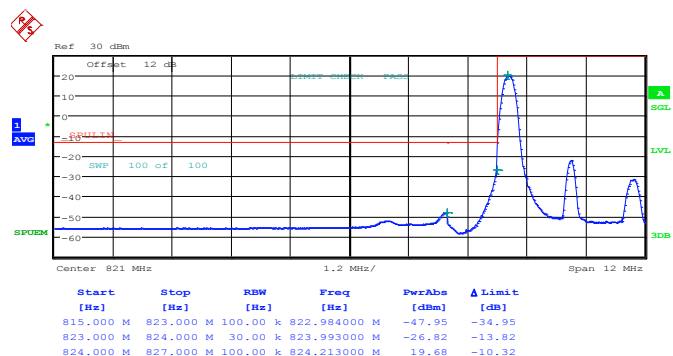


Date: 19.DEC.2013 14:46:13



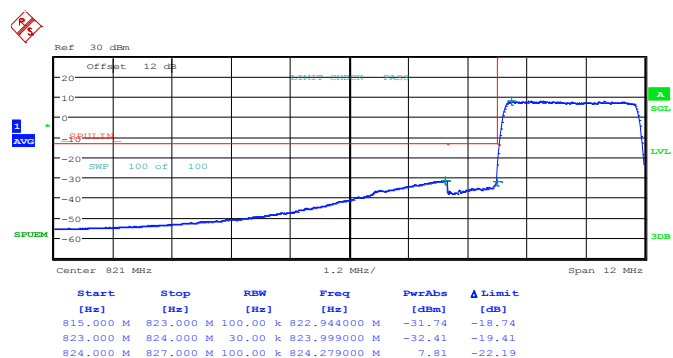
|        |            |              |              |
|--------|------------|--------------|--------------|
| Band : | LTE Band 5 | Band Width : | 3MHz / 16QAM |
|--------|------------|--------------|--------------|

Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 19.DEC.2013 14:42:17

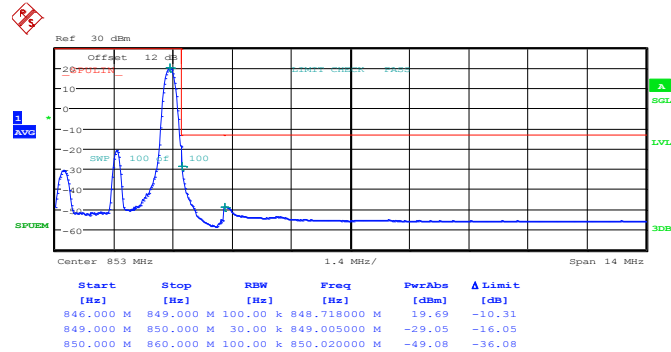
Lower Band Edge Plot for 16QAM -RB Size 15, RB Offset 0



Date: 19.DEC.2013 14:44:32

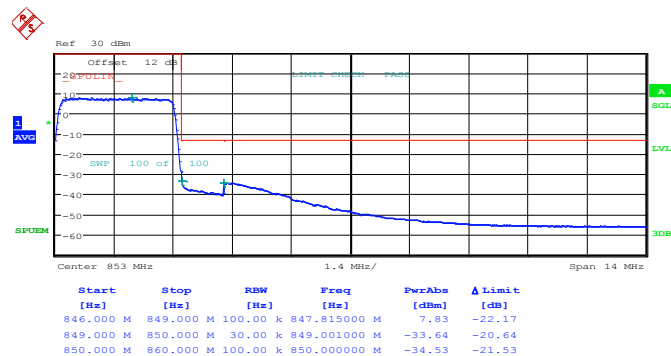


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 14



Date: 19.DEC.2013 14:47:59

Higher Band Edge Plot for 16QAM -RB Size 15, RB Offset 0

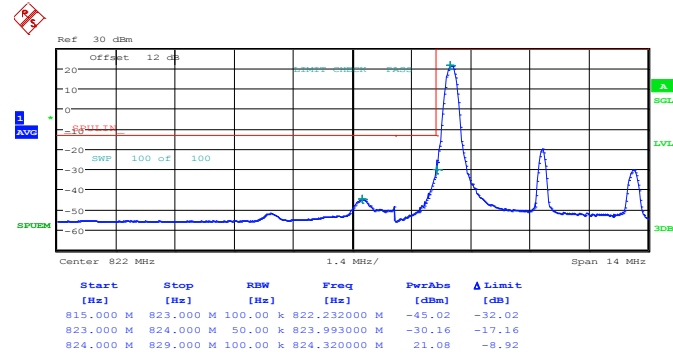


Date: 19.DEC.2013 14:45:27



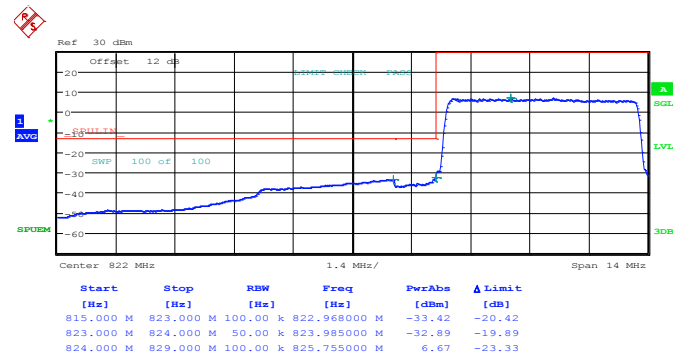
|        |            |              |             |
|--------|------------|--------------|-------------|
| Band : | LTE Band 5 | Band Width : | 5MHz / QPSK |
|--------|------------|--------------|-------------|

Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 19.DEC.2013 14:40:33

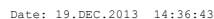
Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 19.DEC.2013 14:39:42



### Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0





### Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0

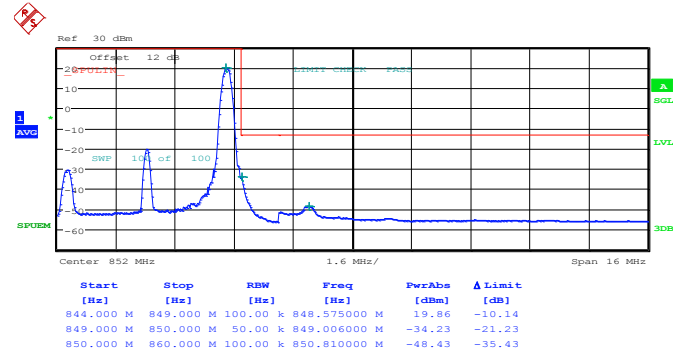


### Lower Band Edge Plot for 16QAM -RB Size 25, RB Offset 0



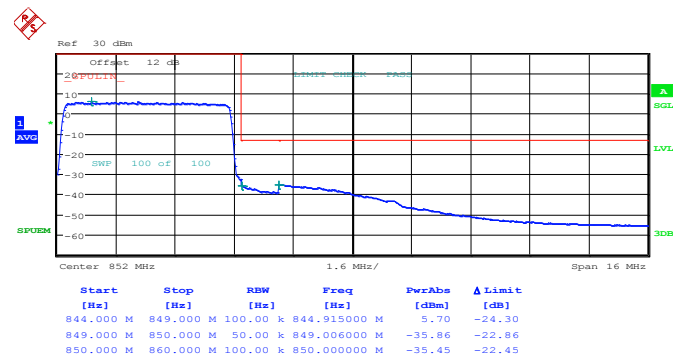


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 24



Date: 19.DEC.2013 14:34:56

Higher Band Edge Plot for 16QAM -RB Size 25, RB Offset 0



Date: 19.DEC.2013 14:37:30



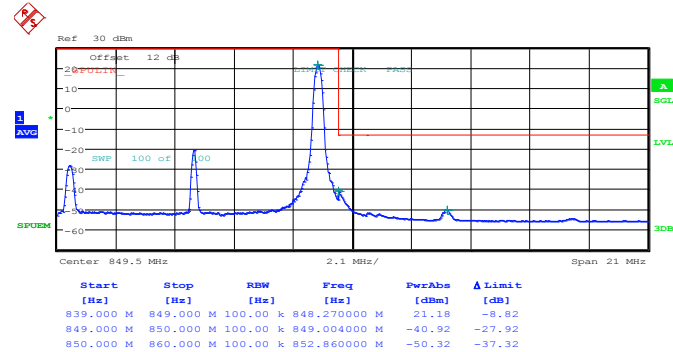
### Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



### Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0

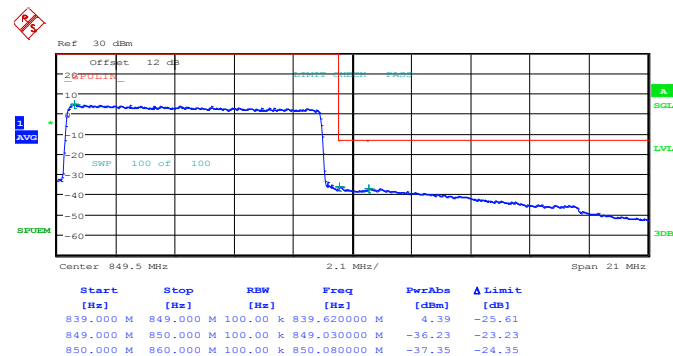


### Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 19.DEC.2013 14:32:36

### Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0

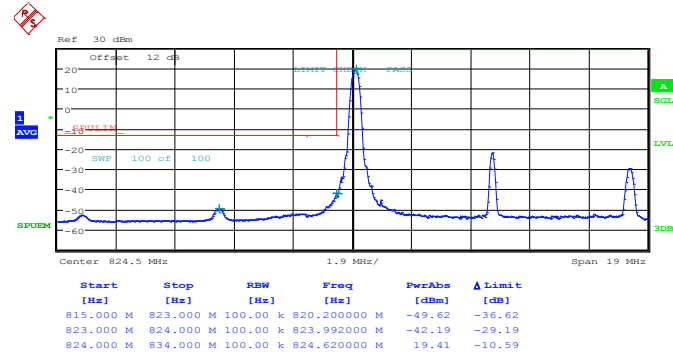


Date: 19.DEC.2013 14:31:42



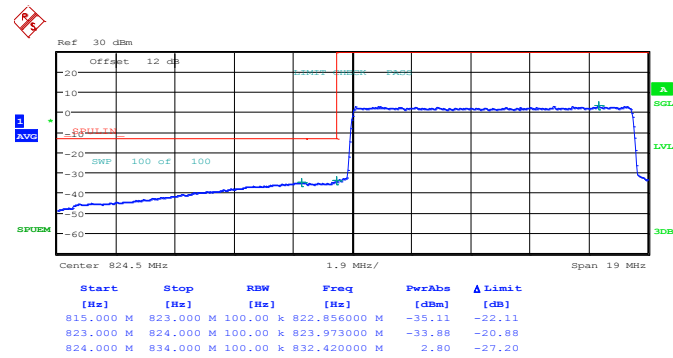
|        |            |              |               |
|--------|------------|--------------|---------------|
| Band : | LTE Band 5 | Band Width : | 10MHz / 16QAM |
|--------|------------|--------------|---------------|

Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



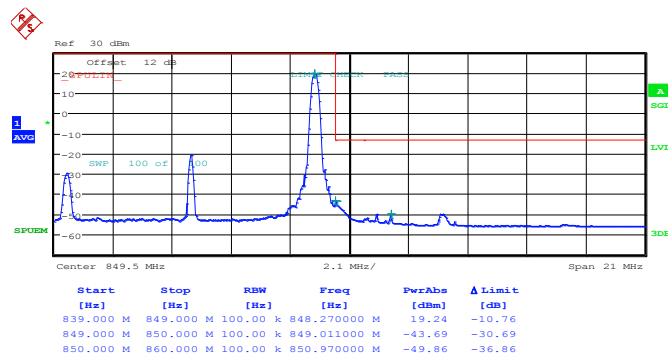
Date: 19.DEC.2013 14:29:15

Lower Band Edge Plot for 16QAM -RB Size 50, RB Offset 0



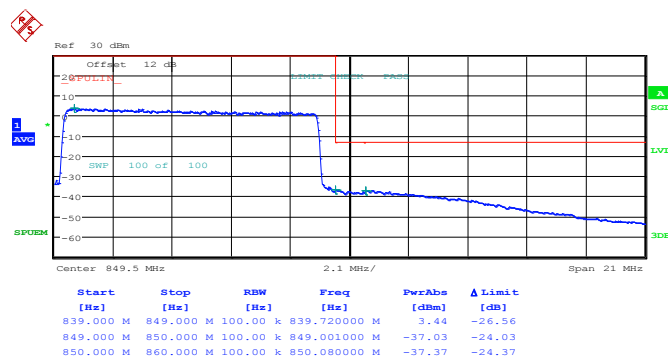
Date: 19.DEC.2013 14:30:02

## Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 49



Date: 19.DEC.2013 14:33:56

## Higher Band Edge Plot for 16QAM -RB Size 50, RB Offset 0



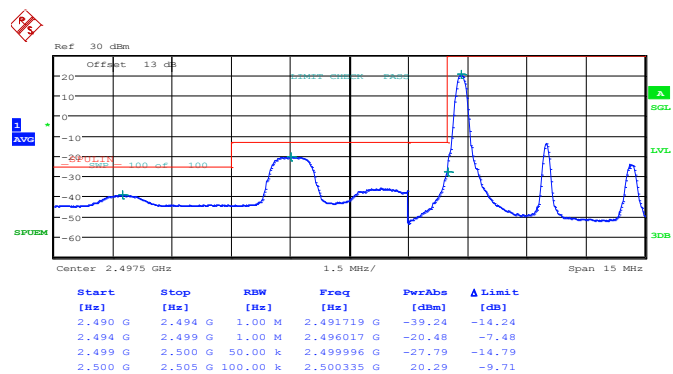
Date: 19.DEC.2013 14:30:52

**Note:** The total loss is 12 dB of the RF cable and attenuator of LTE Band 5, and has been compensated to the spectrum analyzer offset.



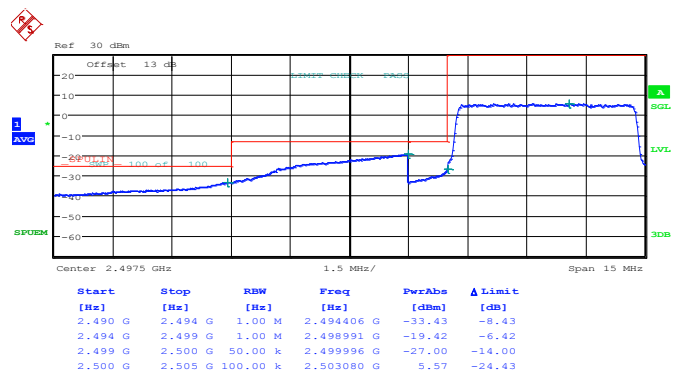
|        |            |              |             |
|--------|------------|--------------|-------------|
| Band : | LTE Band 7 | Band Width : | 5MHz / QPSK |
|--------|------------|--------------|-------------|

Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 19.DEC.2013 15:19:24

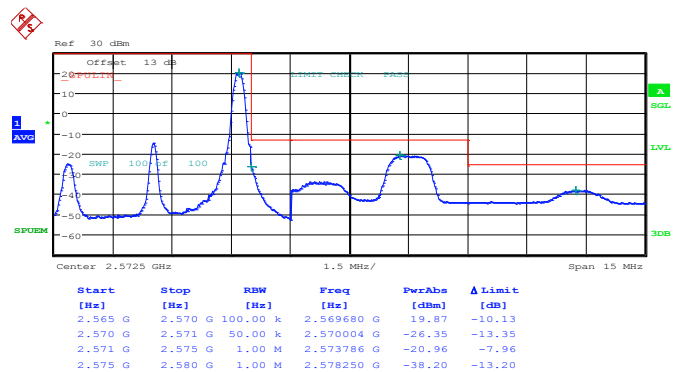
Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 19.DEC.2013 15:18:24

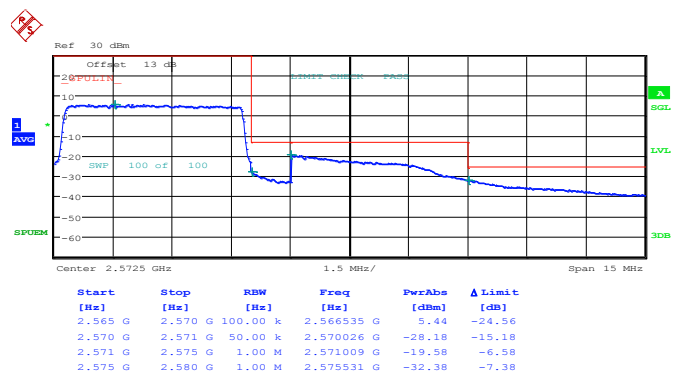


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Date: 19.DEC.2013 15:21:24

Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0

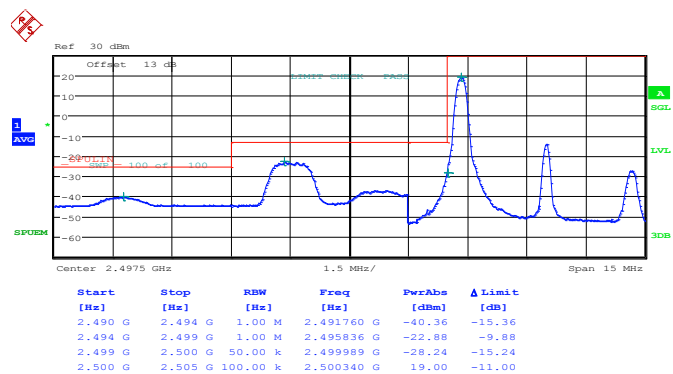


Date: 19.DEC.2013 15:20:56



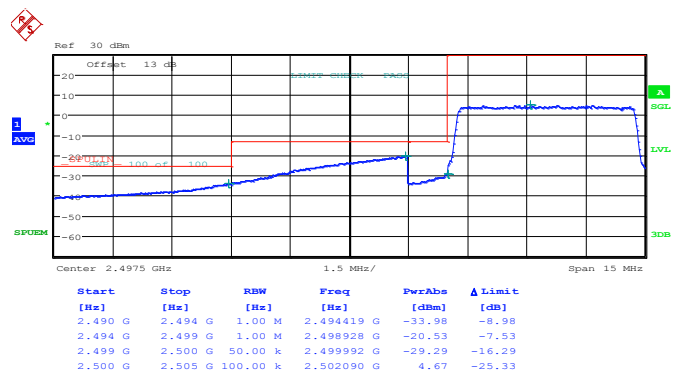
|        |            |              |              |
|--------|------------|--------------|--------------|
| Band : | LTE Band 7 | Band Width : | 5MHz / 16QAM |
|--------|------------|--------------|--------------|

Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 19.DEC.2013 15:19:52

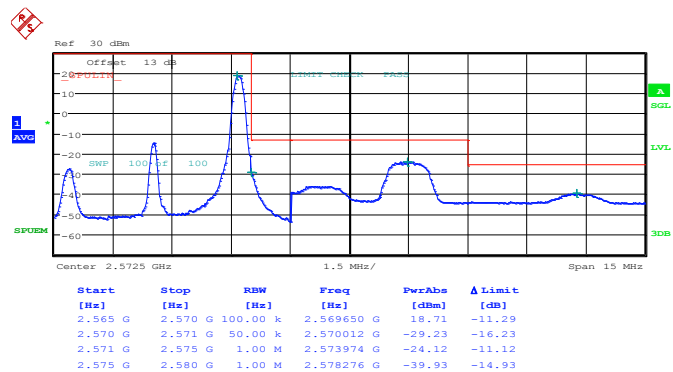
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 19.DEC.2013 15:17:50

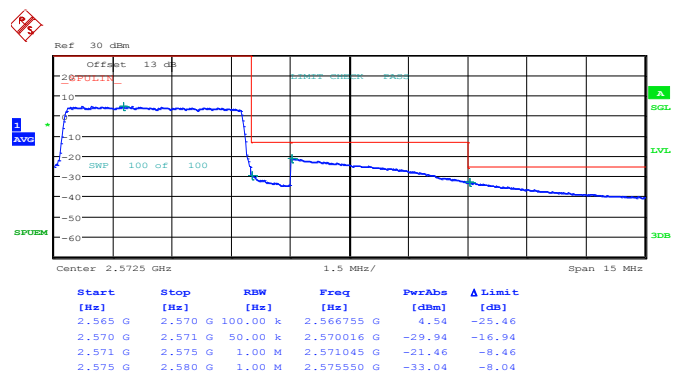


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 19.DEC.2013 15:21:54

Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0

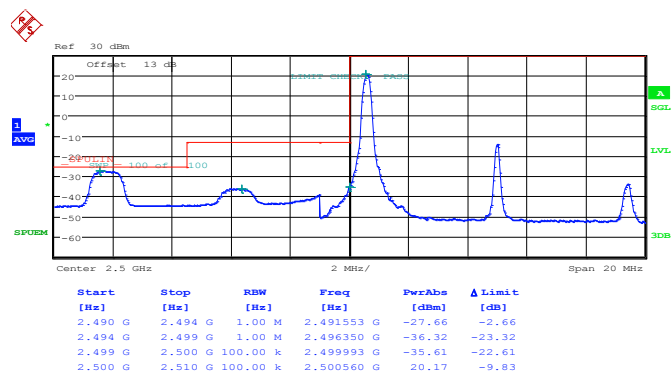


Date: 19.DEC.2013 15:20:28



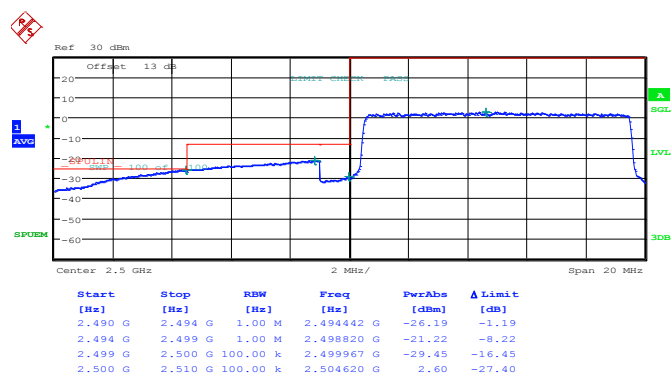
|        |            |              |              |
|--------|------------|--------------|--------------|
| Band : | LTE Band 7 | Band Width : | 10MHz / QPSK |
|--------|------------|--------------|--------------|

Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 19.DEC.2013 15:24:18

Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 19.DEC.2013 13:49:21



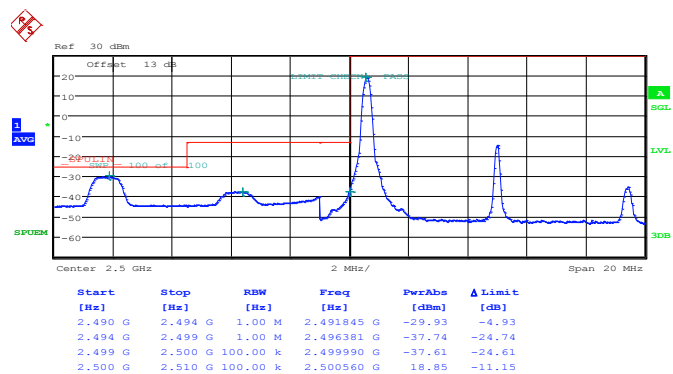
### Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0





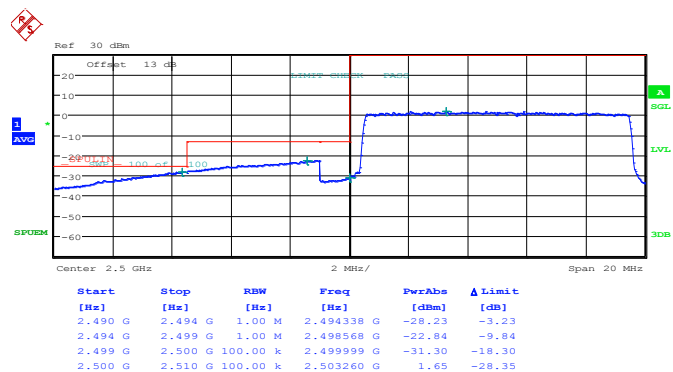
|        |            |              |               |
|--------|------------|--------------|---------------|
| Band : | LTE Band 7 | Band Width : | 10MHz / 16QAM |
|--------|------------|--------------|---------------|

Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



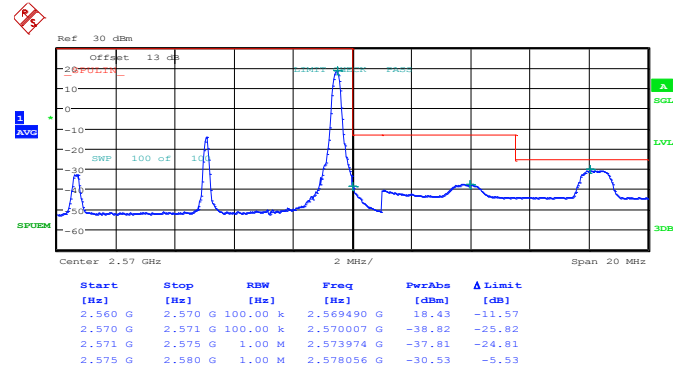
Date: 19.DEC.2013 15:23:40

Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



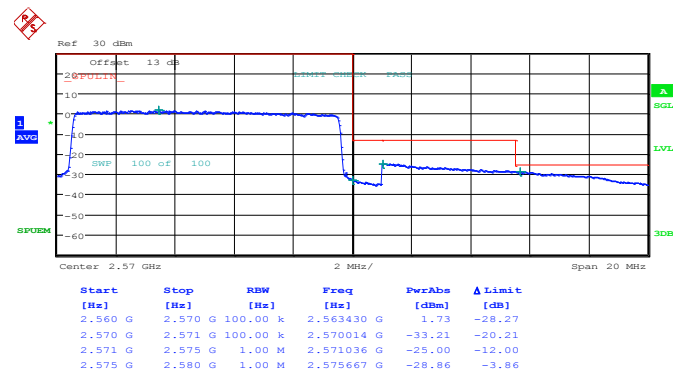
Date: 19.DEC.2013 15:22:41

## Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 19.DEC.2013 15:25:38

## Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0

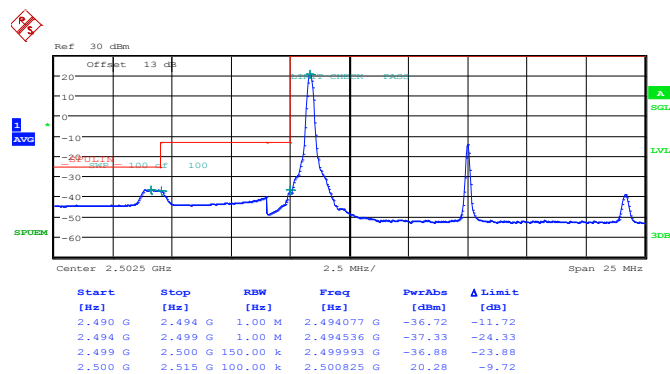


Date: 19.DEC.2013 15:26:11



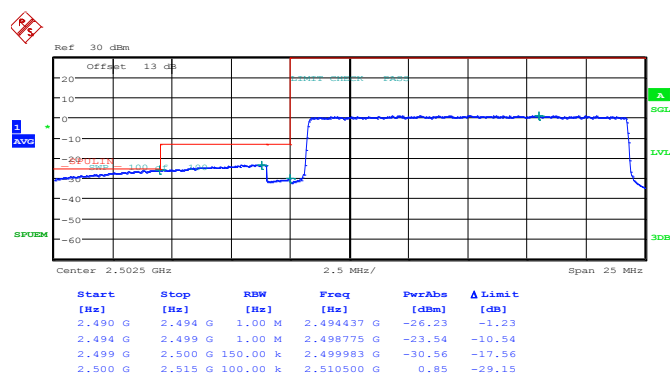
|        |            |              |              |
|--------|------------|--------------|--------------|
| Band : | LTE Band 7 | Band Width : | 15MHz / QPSK |
|--------|------------|--------------|--------------|

Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 19.DEC.2013 14:01:16

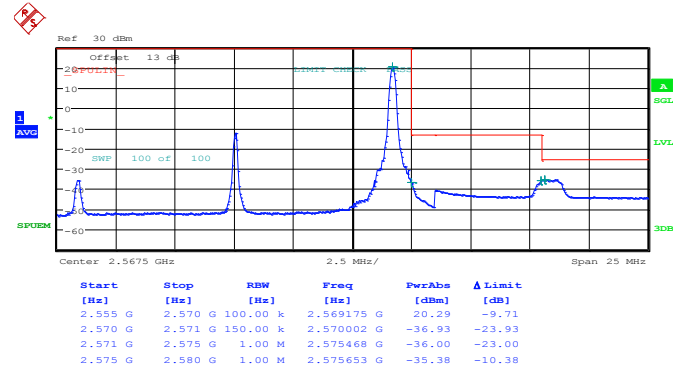
Lower Band Edge Plot for QPSK-RB Size 75, RB Offset 0



Date: 19.DEC.2013 14:00:39

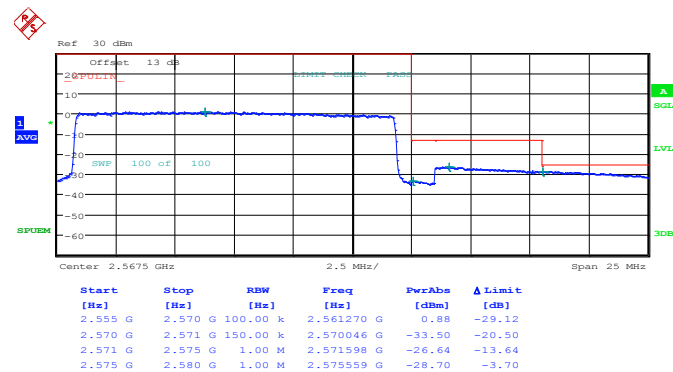


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



Date: 19.DEC.2013 13:59:45

Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0

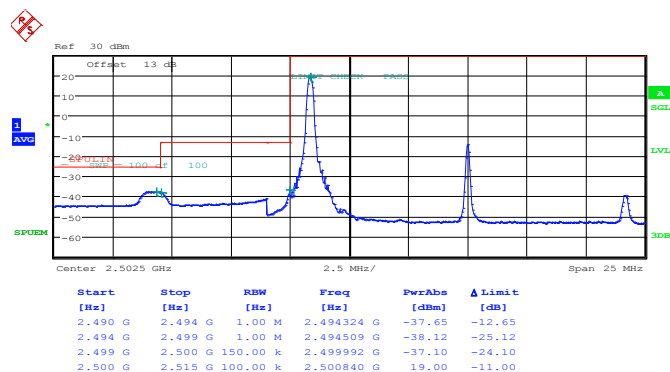


Date: 19.DEC.2013 13:55:16



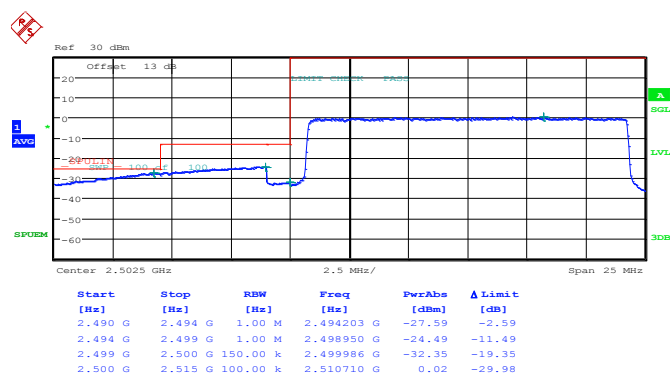
|        |            |              |               |
|--------|------------|--------------|---------------|
| Band : | LTE Band 7 | Band Width : | 15MHz / 16QAM |
|--------|------------|--------------|---------------|

Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 19.DEC.2013 15:27:44

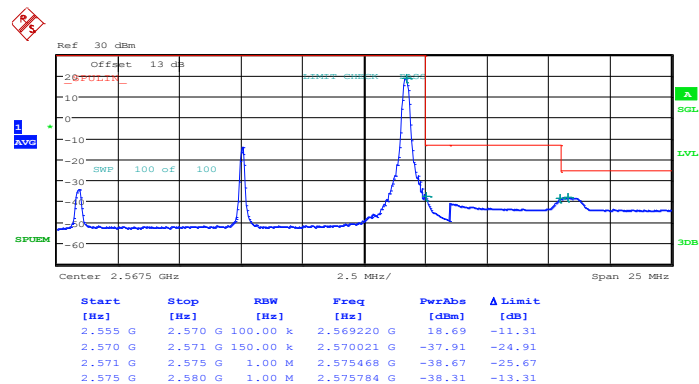
Lower Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



Date: 19.DEC.2013 15:26:59

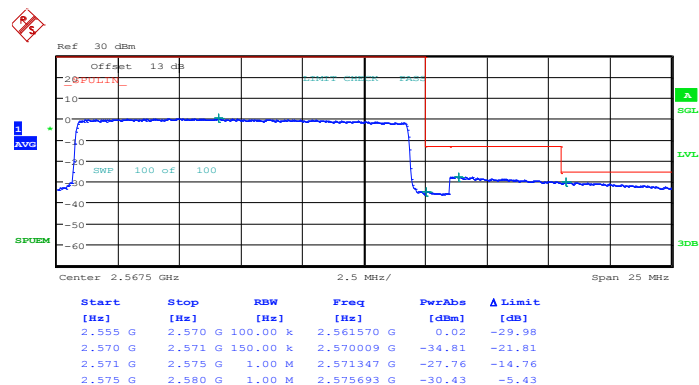


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74



Date: 19.DEC.2013 15:28:51

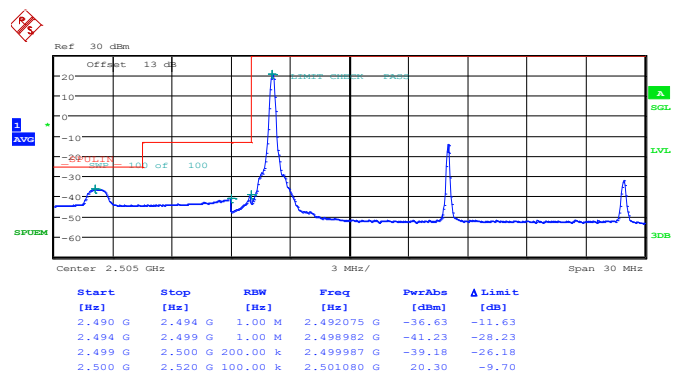
Higher Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



Date: 19.DEC.2013 15:28:20

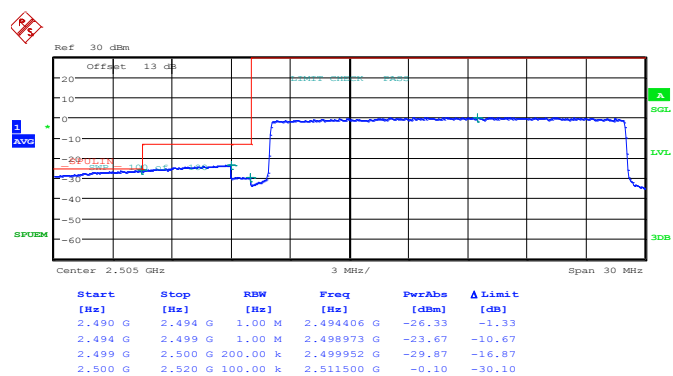
|        |            |              |              |
|--------|------------|--------------|--------------|
| Band : | LTE Band 7 | Band Width : | 20MHz / QPSK |
|--------|------------|--------------|--------------|

## Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 19.DEC.2013 14:03:05

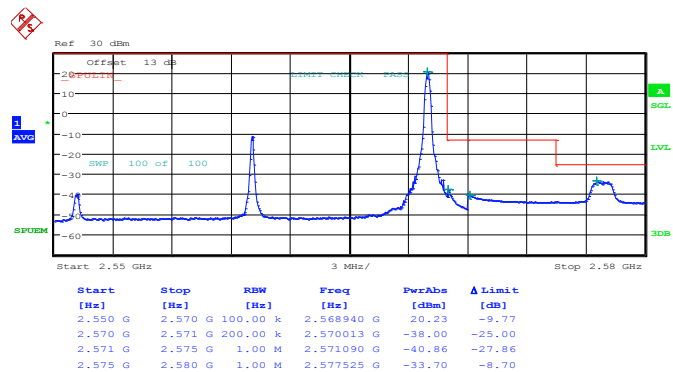
## Lower Band Edge Plot for QPSK-RB Size 100, RB Offset 0



Date: 19.DEC.2013 14:02:27

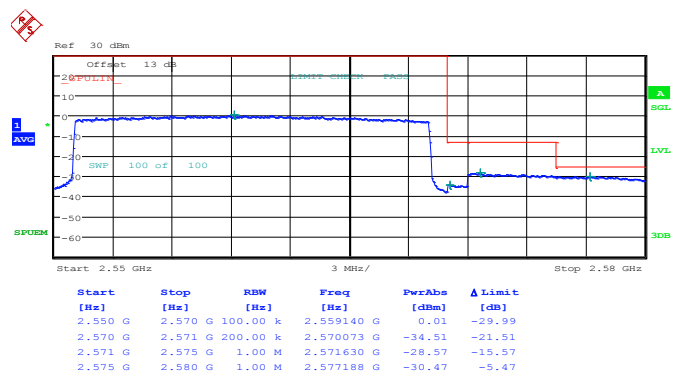


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



Date: 19.DEC.2013 15:33:16

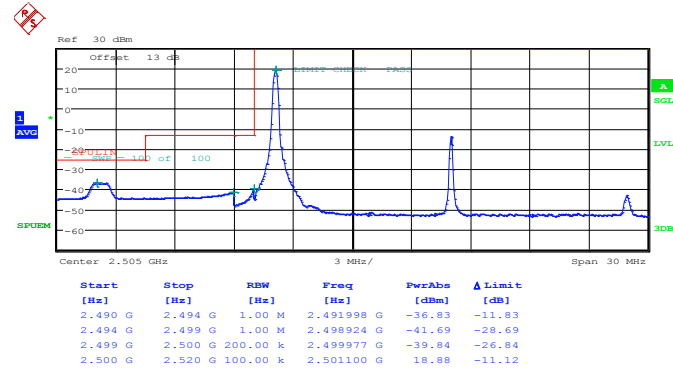
Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0



Date: 19.DEC.2013 15:31:00

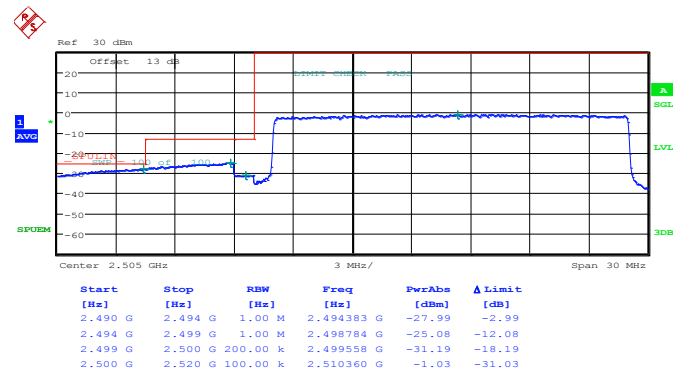
|        |            |              |               |
|--------|------------|--------------|---------------|
| Band : | LTE Band 7 | Band Width : | 20MHz / 16QAM |
|--------|------------|--------------|---------------|

## Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



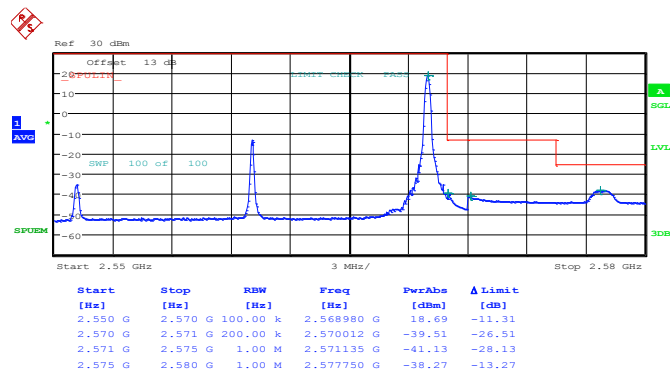
Date: 19.DEC.2013 15:30:06

## Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



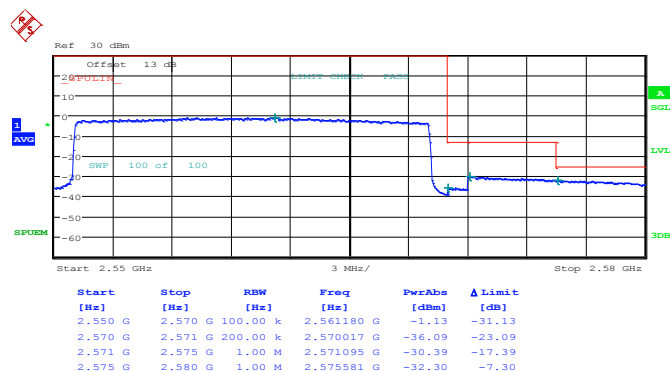
Date: 19.DEC.2013 15:29:33

## Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99



Date: 19.DEC.2013 15:32:35

## Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



Date: 19.DEC.2013 15:31:53

**Note:** The total loss is 13 dB of the RF cable and attenuator of LTE Band 7, and has been compensated to the spectrum analyzer offset.

## 3.6 Conducted Spurious Emission Measurement

### 3.6.1 Description of Conducted Spurious Emission Measurement

For Band 5

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

For Band 7

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least  $55 + 10 \log (P)$  dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 9 kHz up to a frequency including its 10<sup>th</sup> harmonic.

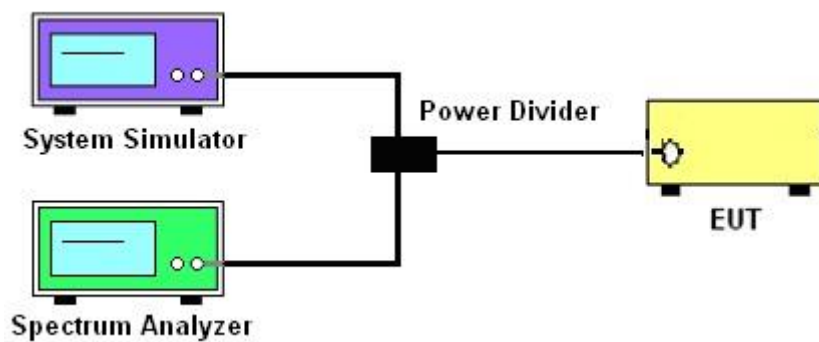
### 3.6.2 Measuring Instruments

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

### 3.6.3 Test Procedures

1. The EUT was connected to spectrum analyzer and base station via power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. The limit line is derived from  $43 + 10\log(P)$ dB below the transmitter power P(Watts)  
 $= P(W) - [43 + 10\log(P)]$  (dB)  
 $= [30 + 10\log(P)]$  (dBm) -  $[43 + 10\log(P)]$  (dB)  
 $= -13$ dBm.

### 3.6.4 Test Setup

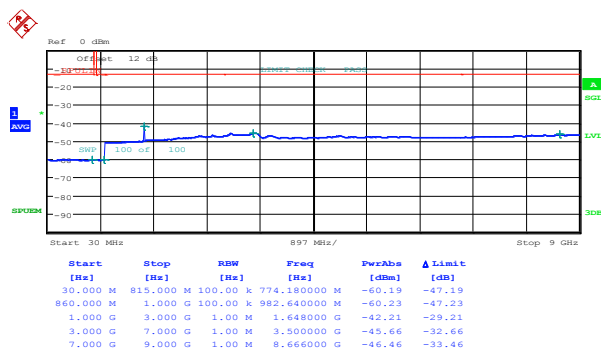




## 3.6.5 Test Result (Plots) of Conducted Spurious Emission

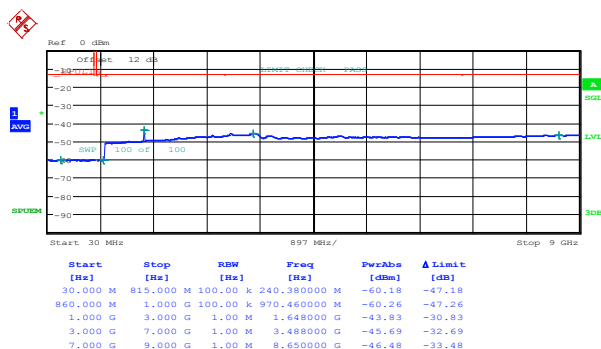
|              |            |           |               |
|--------------|------------|-----------|---------------|
| Band :       | LTE Band 5 | Channel : | CH20407 (Low) |
| Band Width : | 1.4MHz     |           |               |

## QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 12:27:36

## 16QAM (RB Size 1, RB Offset 0)

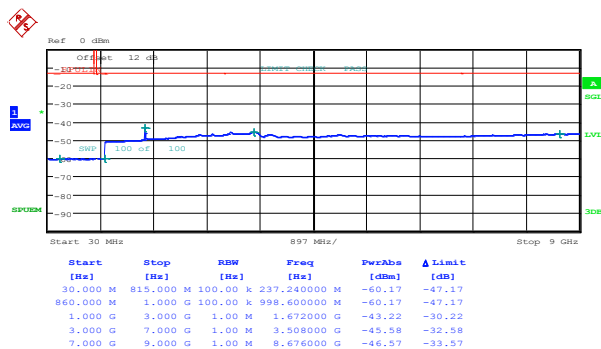


Date: 21.DEC.2013 12:28:27



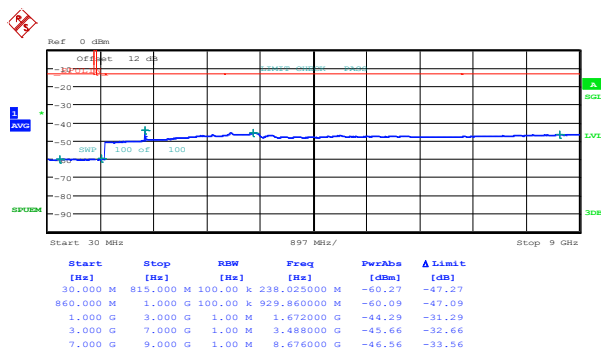
|              |            |           |                  |
|--------------|------------|-----------|------------------|
| Band :       | LTE Band 5 | Channel : | CH20525 (Middle) |
| Band Width : | 1.4MHz     |           |                  |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 12:30:08

16QAM (RB Size 1, RB Offset 0)

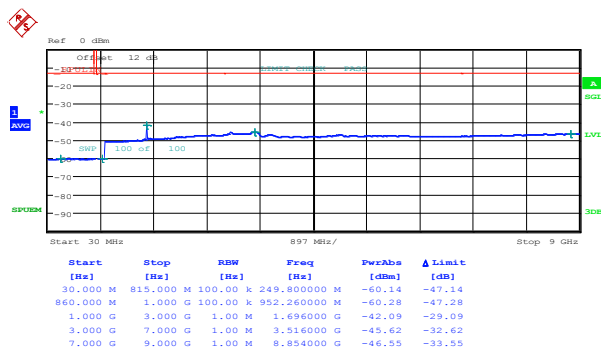


Date: 21.DEC.2013 12:29:18



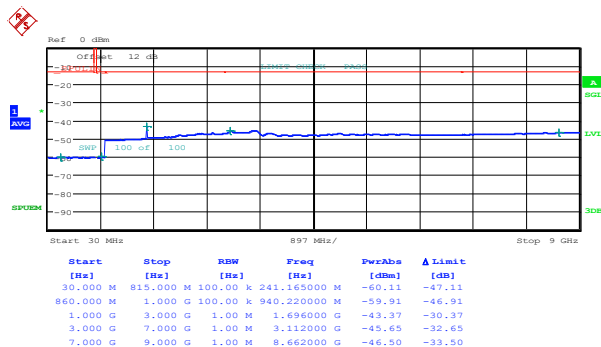
|              |            |           |                |
|--------------|------------|-----------|----------------|
| Band :       | LTE Band 5 | Channel : | CH20643 (High) |
| Band Width : | 1.4MHz     |           |                |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 12:30:59

16QAM (RB Size 1, RB Offset 0)

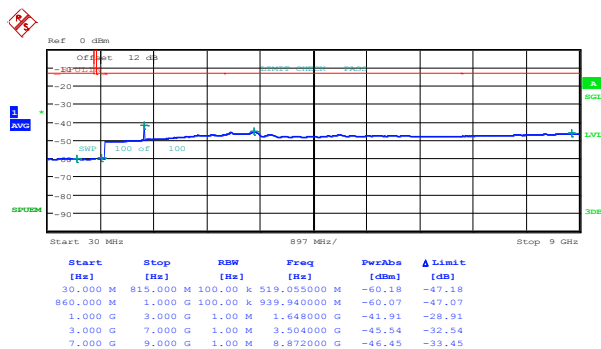


Date: 21.DEC.2013 12:31:53



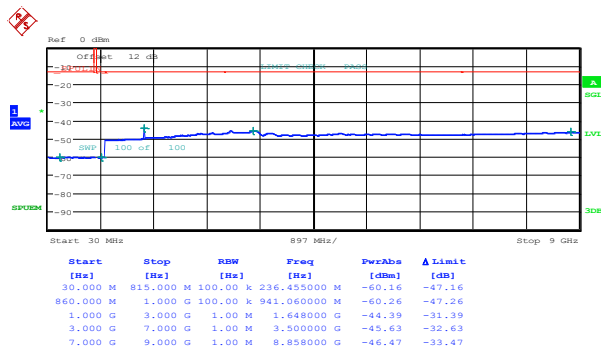
|              |            |           |               |
|--------------|------------|-----------|---------------|
| Band :       | LTE Band 5 | Channel : | CH20415 (Low) |
| Band Width : | 3MHz       |           |               |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 12:34:49

16QAM (RB Size 1, RB Offset 0)

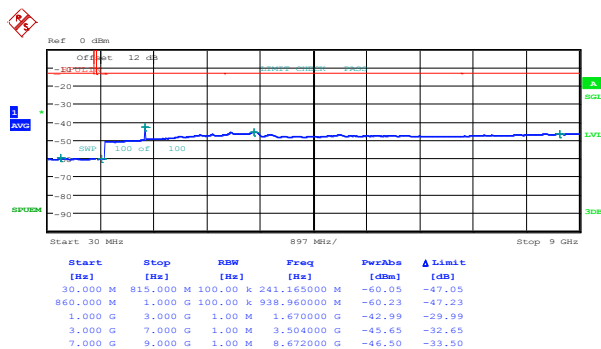


Date: 21.DEC.2013 12:35:46



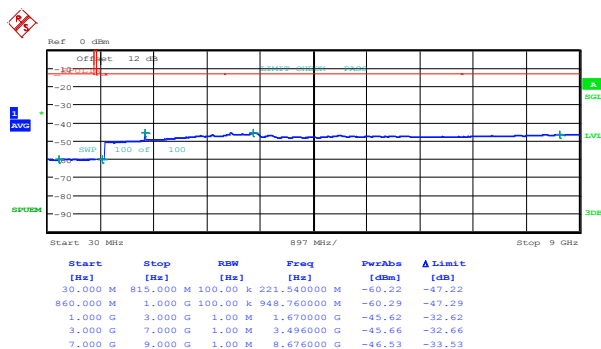
|              |            |           |                  |
|--------------|------------|-----------|------------------|
| Band :       | LTE Band 5 | Channel : | CH20525 (Middle) |
| Band Width : | 3MHz       |           |                  |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 12:36:34

16QAM (RB Size 1, RB Offset 0)

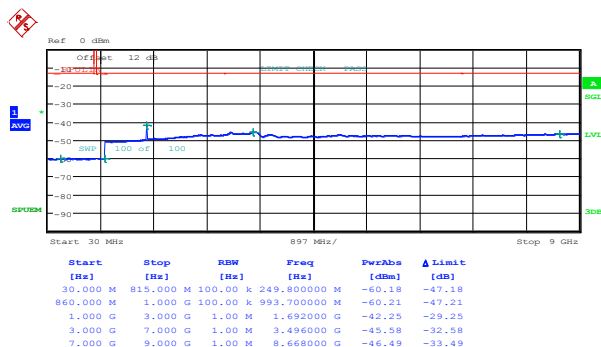


Date: 21.DEC.2013 12:37:54



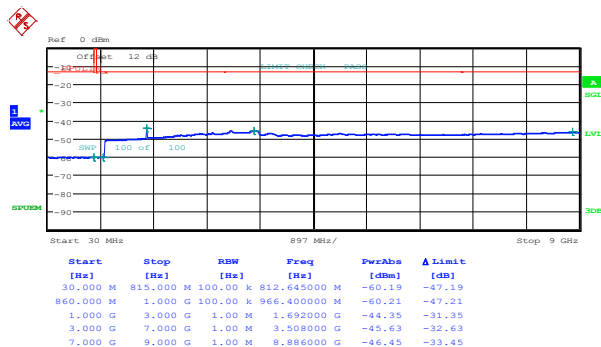
|              |            |           |                |
|--------------|------------|-----------|----------------|
| Band :       | LTE Band 5 | Channel : | CH20635 (High) |
| Band Width : | 3MHz       |           |                |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 12:38:43

16QAM (RB Size 1, RB Offset 0)

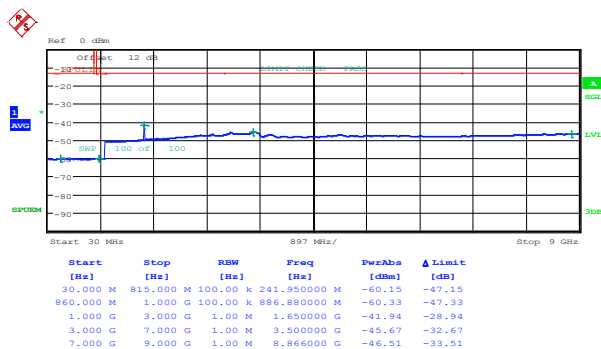


Date: 21.DEC.2013 12:39:32



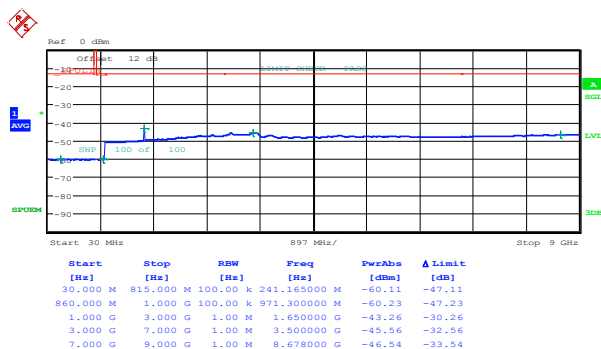
|              |            |           |               |
|--------------|------------|-----------|---------------|
| Band :       | LTE Band 5 | Channel : | CH20425 (Low) |
| Band Width : | 5MHz       |           |               |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 12:40:52

16QAM (RB Size 1, RB Offset 0)

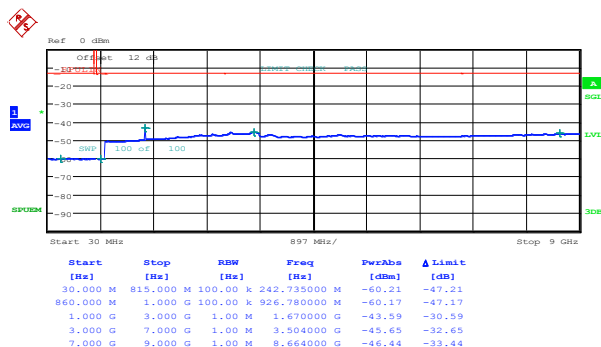


Date: 21.DEC.2013 12:41:42



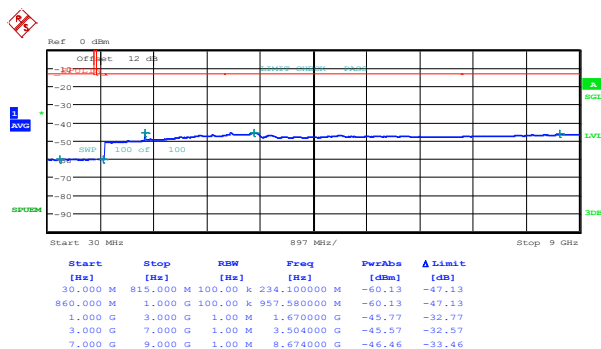
|              |            |           |                  |
|--------------|------------|-----------|------------------|
| Band :       | LTE Band 5 | Channel : | CH20525 (Middle) |
| Band Width : | 5MHz       |           |                  |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 12:42:37

16QAM (RB Size 1, RB Offset 0)

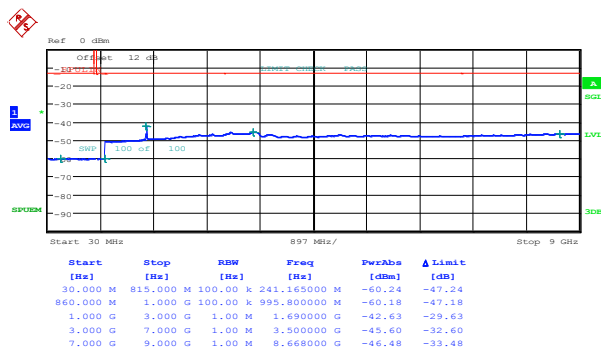


Date: 21.DEC.2013 12:43:26



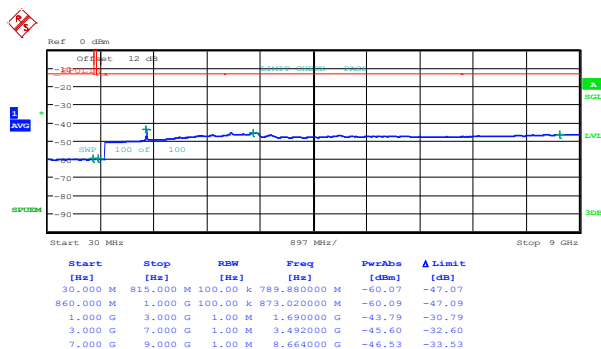
|              |            |           |                |
|--------------|------------|-----------|----------------|
| Band :       | LTE Band 5 | Channel : | CH20625 (High) |
| Band Width : | 5MHz       |           |                |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 12:44:26

16QAM (RB Size 1, RB Offset 0)

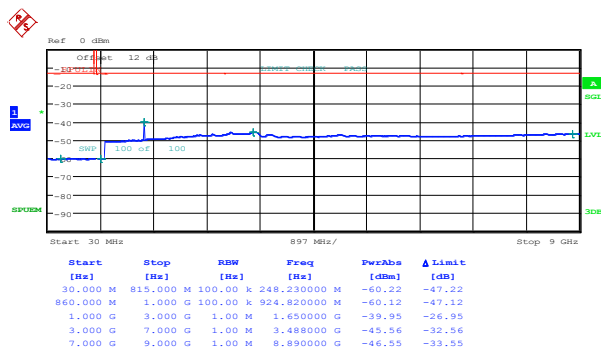


Date: 21.DEC.2013 12:46:23



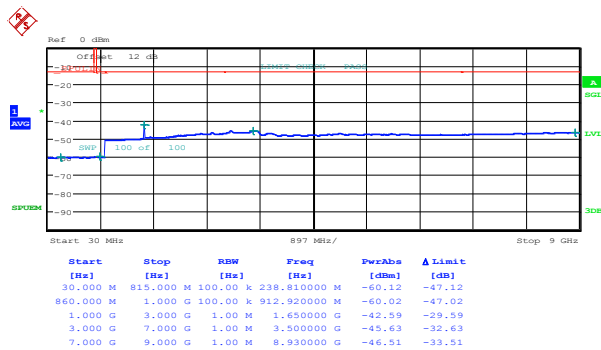
|              |            |           |               |
|--------------|------------|-----------|---------------|
| Band :       | LTE Band 5 | Channel : | CH20450 (Low) |
| Band Width : | 10MHz      |           |               |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 12:47:45

16QAM (RB Size 1, RB Offset 0)

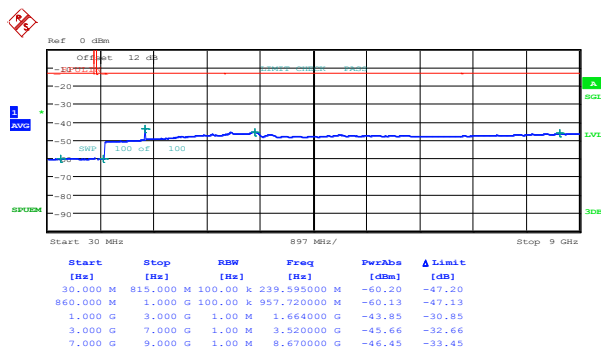


Date: 21.DEC.2013 12:48:35



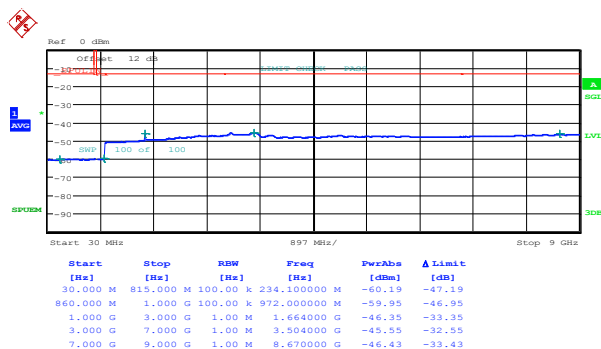
|              |            |           |                  |
|--------------|------------|-----------|------------------|
| Band :       | LTE Band 5 | Channel : | CH20525 (Middle) |
| Band Width : | 10MHz      |           |                  |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 12:49:25

16QAM (RB Size 1, RB Offset 0)

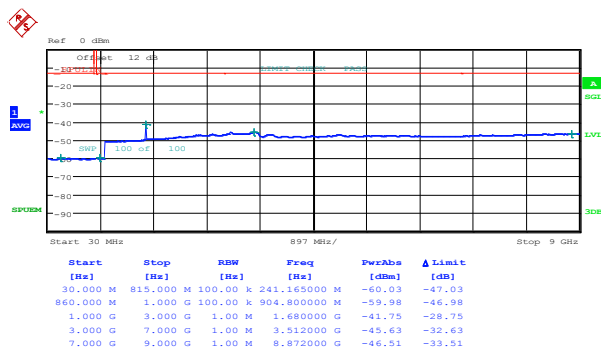


Date: 21.DEC.2013 12:50:35



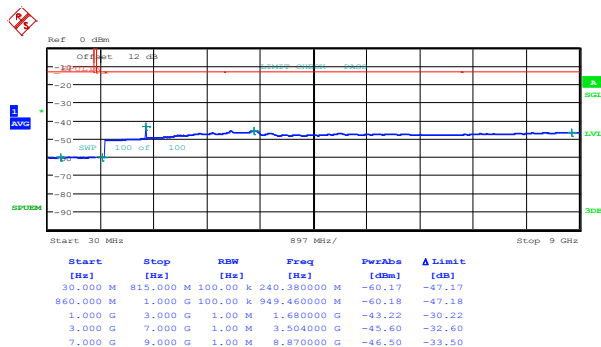
|              |            |           |                |
|--------------|------------|-----------|----------------|
| Band :       | LTE Band 5 | Channel : | CH20600 (High) |
| Band Width : | 10MHz      |           |                |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 12:51:25

16QAM (RB Size 1, RB Offset 0)



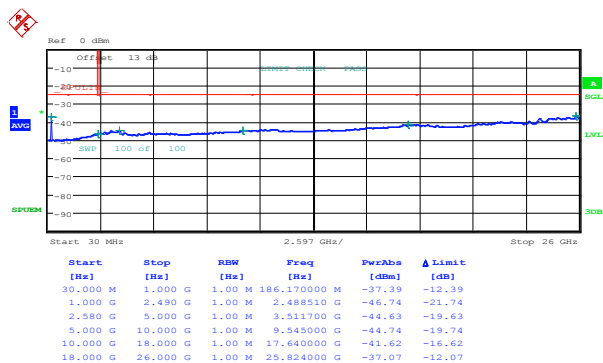
Date: 21.DEC.2013 12:52:14

**Note:** The total loss is 12 dB of the RF cable and attenuator of LTE Band 5, and has been compensated to the spectrum analyzer offset.



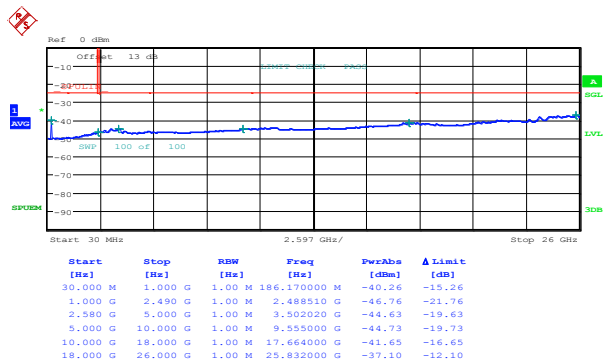
|              |            |           |               |
|--------------|------------|-----------|---------------|
| Band :       | LTE Band 7 | Channel : | CH20775 (Low) |
| Band Width : | 5MHz       |           |               |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 11:30:24

16QAM (RB Size 1, RB Offset 0)

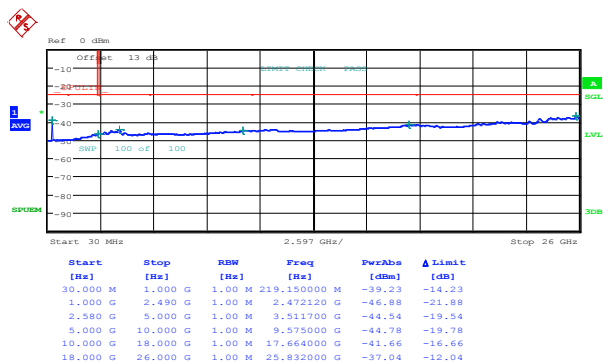


Date: 21.DEC.2013 11:31:49



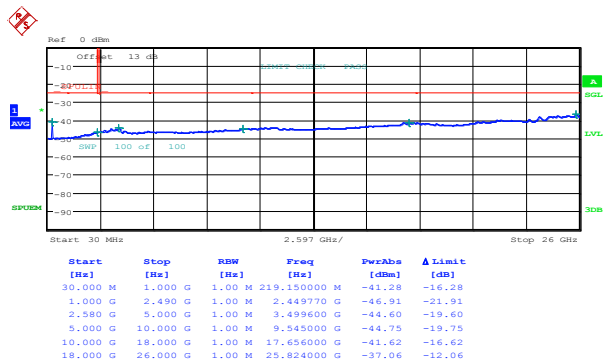
|              |            |           |                  |
|--------------|------------|-----------|------------------|
| Band :       | LTE Band 7 | Channel : | CH21100 (Middle) |
| Band Width : | 5MHz       |           |                  |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 11:34:42

16QAM (RB Size 1, RB Offset 0)

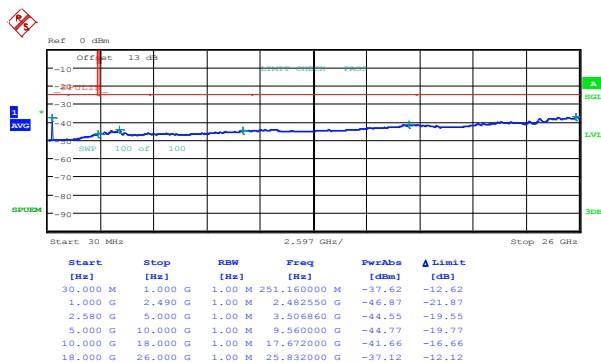


Date: 21.DEC.2013 11:33:02



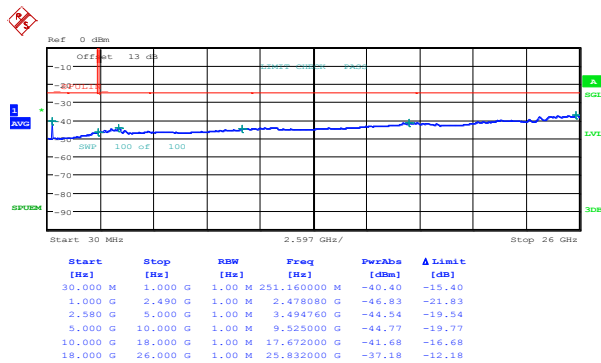
|              |            |           |                |
|--------------|------------|-----------|----------------|
| Band :       | LTE Band 7 | Channel : | CH21425 (High) |
| Band Width : | 5MHz       |           |                |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 11:36:04

16QAM (RB Size 1, RB Offset 0)

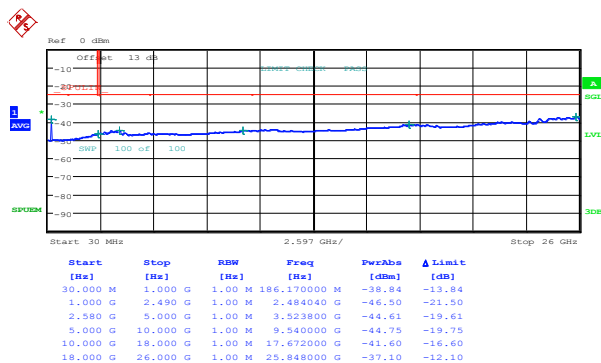


Date: 21.DEC.2013 11:37:09



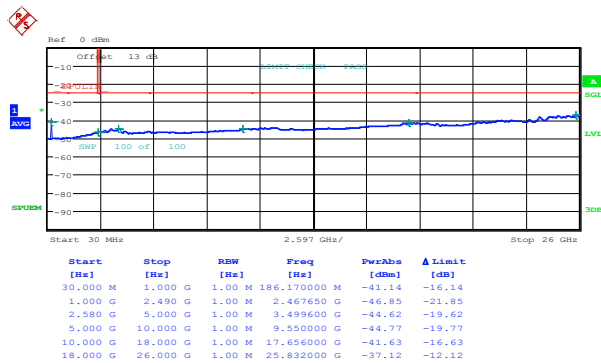
|              |            |           |               |
|--------------|------------|-----------|---------------|
| Band :       | LTE Band 7 | Channel : | CH20800 (Low) |
| Band Width : | 10MHz      |           |               |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 11:23:59

16QAM (RB Size 1, RB Offset 0)

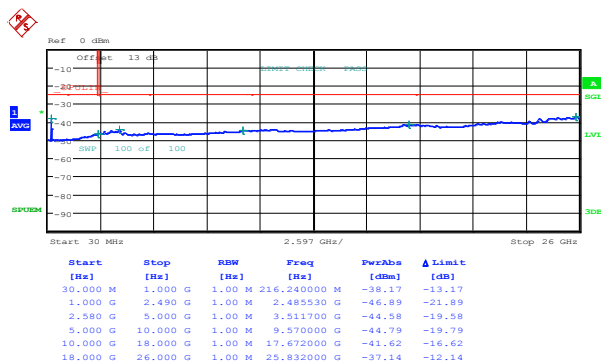


Date: 21.DEC.2013 11:22:27



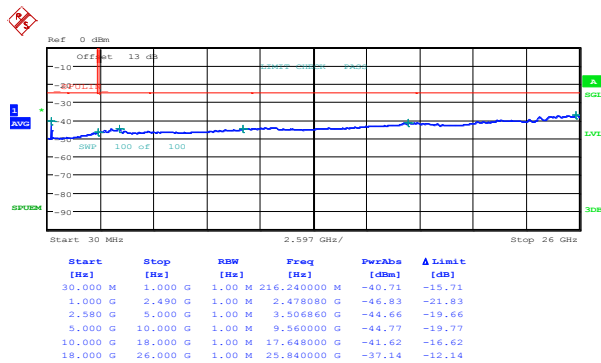
|              |            |           |                  |
|--------------|------------|-----------|------------------|
| Band :       | LTE Band 7 | Channel : | CH21100 (Middle) |
| Band Width : | 10MHz      |           |                  |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 11:28:35

16QAM (RB Size 1, RB Offset 0)

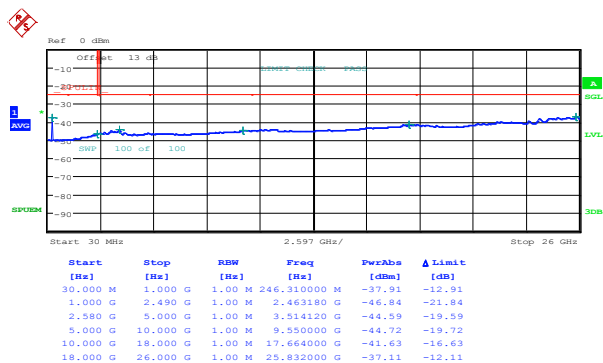


Date: 21.DEC.2013 11:27:33



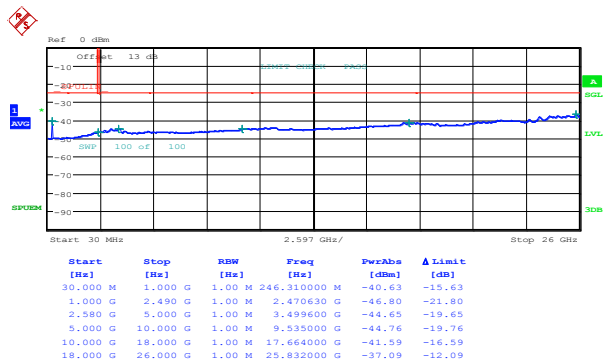
|              |            |           |                |
|--------------|------------|-----------|----------------|
| Band :       | LTE Band 7 | Channel : | CH21400 (High) |
| Band Width : | 10MHz      |           |                |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 11:25:08

16QAM (RB Size 1, RB Offset 0)

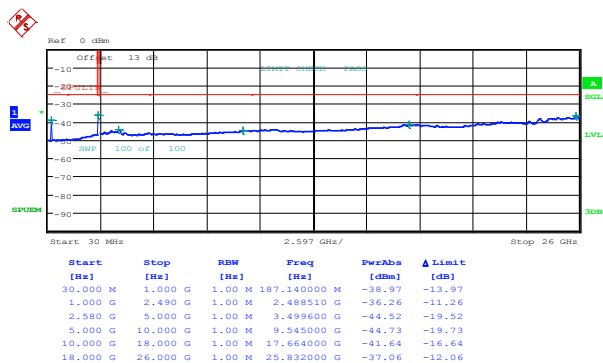


Date: 21.DEC.2013 11:26:22



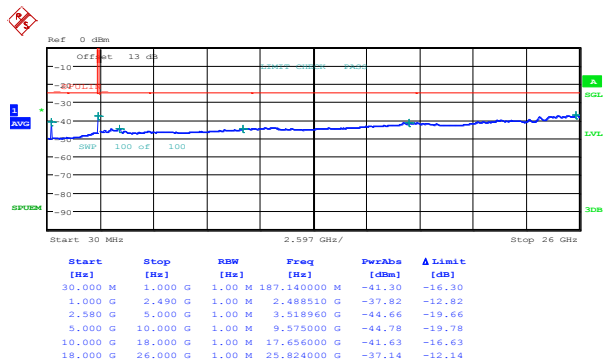
|              |            |           |               |
|--------------|------------|-----------|---------------|
| Band :       | LTE Band 7 | Channel : | CH20825 (Low) |
| Band Width : | 15MHz      |           |               |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 11:14:31

16QAM (RB Size 1, RB Offset 0)

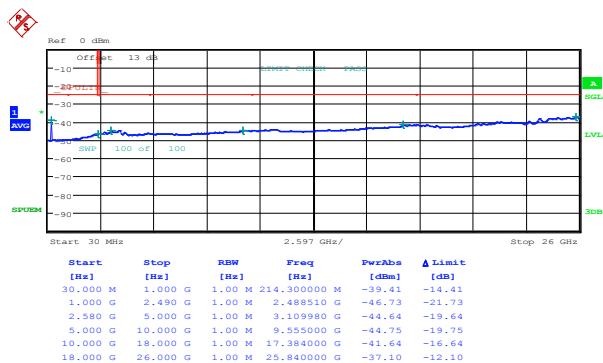


Date: 21.DEC.2013 11:15:37



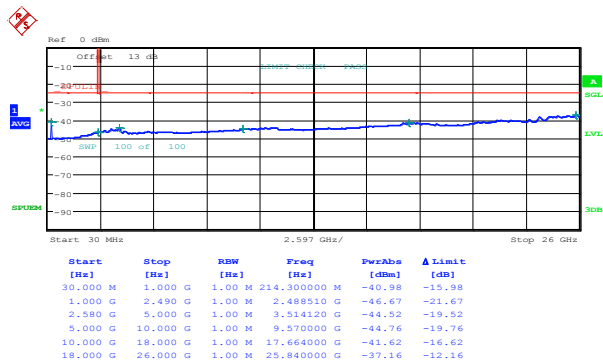
|              |            |           |                  |
|--------------|------------|-----------|------------------|
| Band :       | LTE Band 7 | Channel : | CH21100 (Middle) |
| Band Width : | 15MHz      |           |                  |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 11:17:51

16QAM (RB Size 1, RB Offset 0)

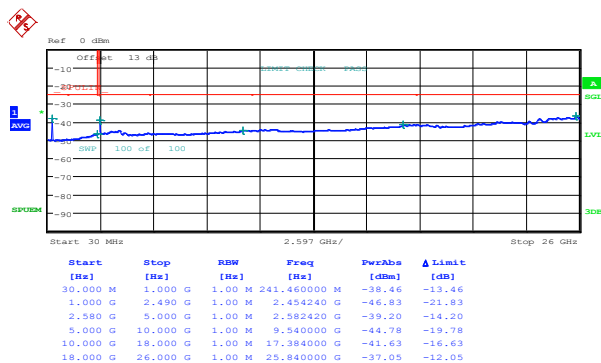


Date: 21.DEC.2013 11:16:47



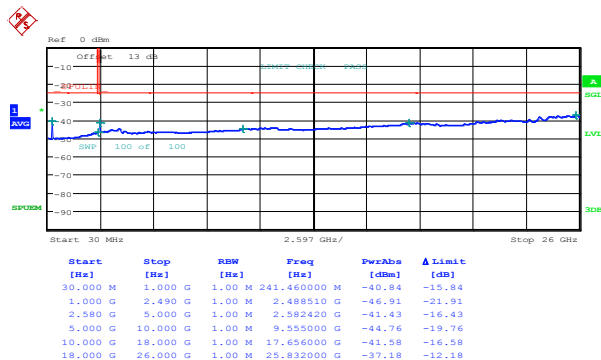
|              |            |           |                |
|--------------|------------|-----------|----------------|
| Band :       | LTE Band 7 | Channel : | CH21375 (High) |
| Band Width : | 15MHz      |           |                |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 11:19:30

16QAM (RB Size 1, RB Offset 0)

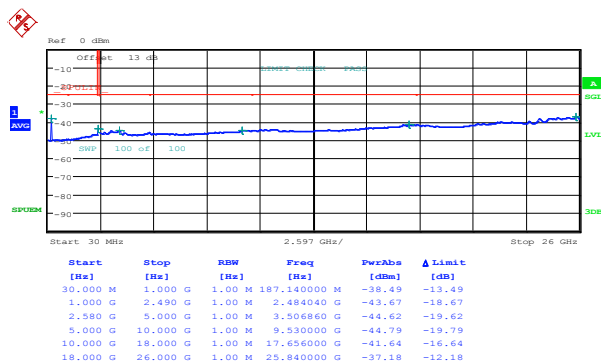


Date: 21.DEC.2013 11:21:05



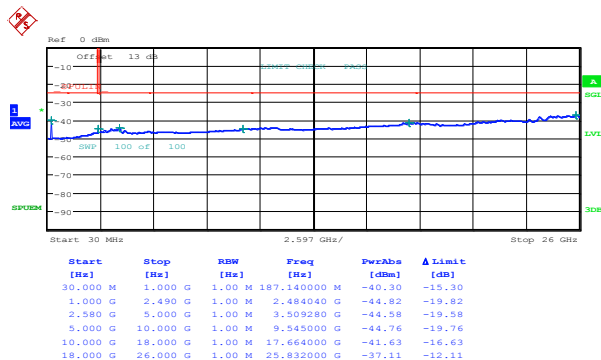
|              |            |           |               |
|--------------|------------|-----------|---------------|
| Band :       | LTE Band 7 | Channel : | CH20850 (Low) |
| Band Width : | 20MHz      |           |               |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 11:12:08

16QAM (RB Size 1, RB Offset 0)

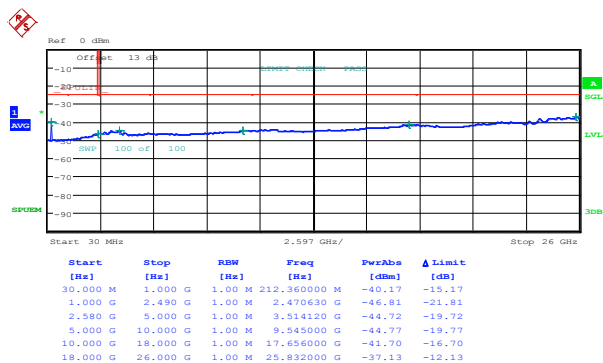


Date: 21.DEC.2013 11:13:11



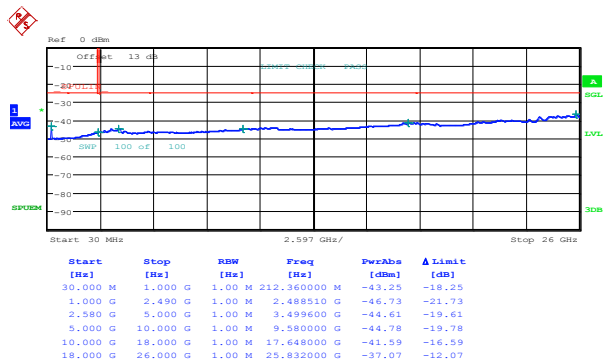
|              |            |           |                  |
|--------------|------------|-----------|------------------|
| Band :       | LTE Band 7 | Channel : | CH21100 (Middle) |
| Band Width : | 20MHz      |           |                  |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 11:10:00

16QAM (RB Size 1, RB Offset 0)

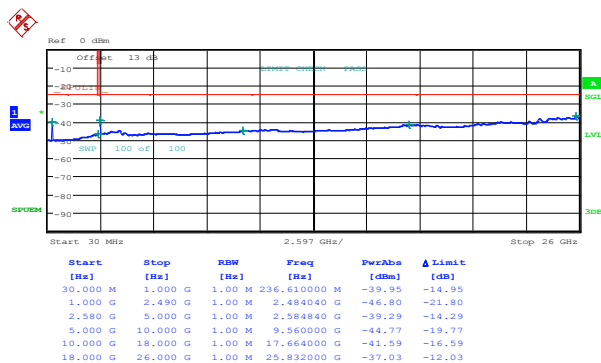


Date: 21.DEC.2013 11:08:56



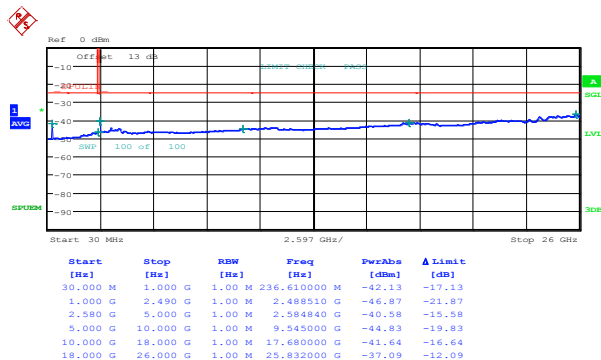
|              |            |           |                |
|--------------|------------|-----------|----------------|
| Band :       | LTE Band 7 | Channel : | CH21350 (High) |
| Band Width : | 20MHz      |           |                |

QPSK (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 11:06:34

16QAM (RB Size 1, RB Offset 0)



Date: 21.DEC.2013 11:07:37

**Note:** The total loss is 13 dB of the RF cable and attenuator of LTE Band 7, and has been compensated to the spectrum analyzer offset.



## **3.7 Radiated Spurious Emission Measurement**

### **3.7.1 Description of Radiated Spurious Emission**

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-C-2004.

For Band 5

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

For Band 7

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $55 + 10 \log (P)$  dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

### **3.7.2 Measuring Instruments**

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

### 3.7.3 Test Procedures

1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

For Band 5

The limit line is derived from  $43 + 10\log(P)$ dB below the transmitter power P(Watts)  
 $= P(W) - [43 + 10\log(P)]$  (dB)  
 $= [30 + 10\log(P)]$  (dBm) -  $[43 + 10\log(P)]$  (dB)  
 $= -13$ dBm.

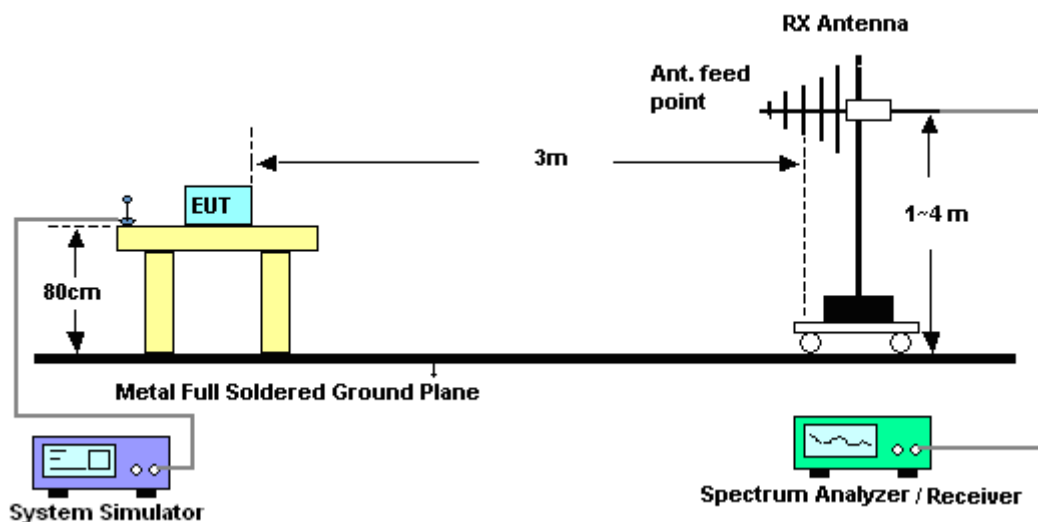
For Band 7

The limit line is derived from  $55 + 10\log(P)$ dB below the transmitter power P(Watts)

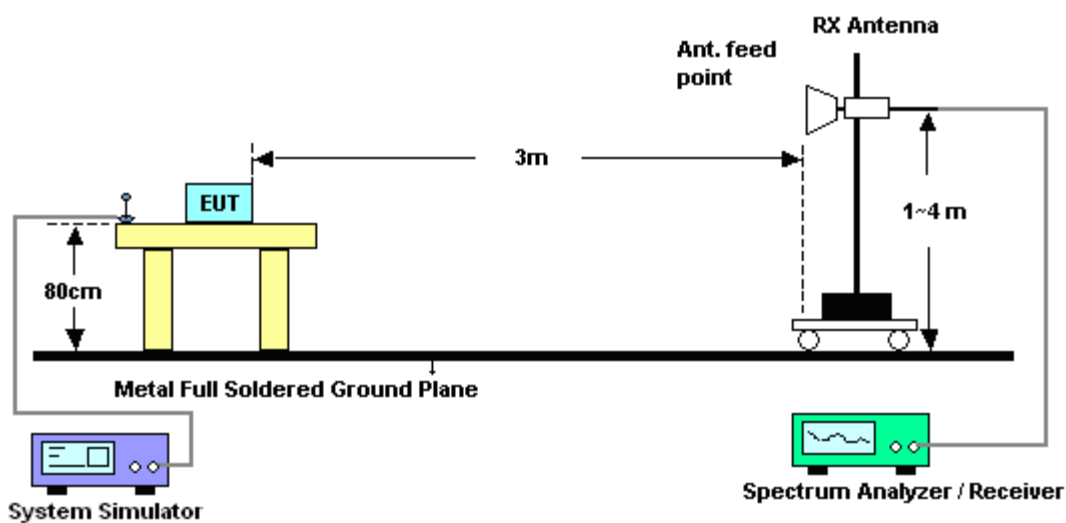
11. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
12. ERP (dBm) = EIRP - 2.15

### 3.7.4 Test Setup

For radiated emissions from 30MHz to 1GHz



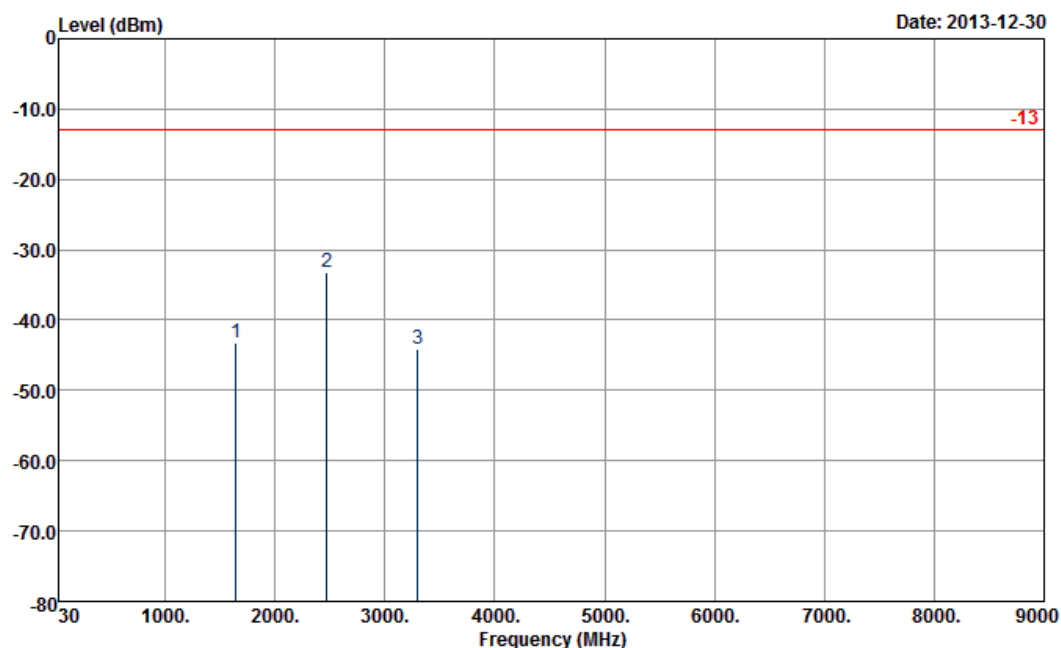
For radiated emissions above 1GHz



### 3.7.5 Test Result of Field Strength of Spurious Radiated

#### <Low Channel>

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 1.4MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 20407                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

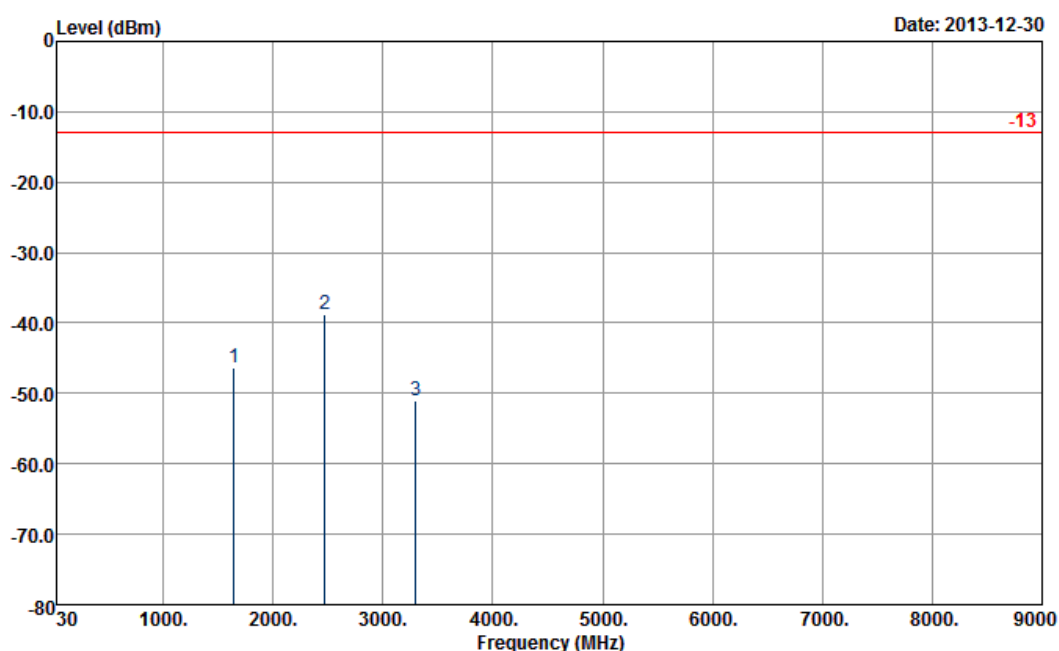


Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>( dBm ) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>( dBi ) | Polarization<br>( H/V ) | Result |
|----------------------|----------------|------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| 1648                 | -43.22         | -13              | -30.22                  | -52.49                    | -47.11                   | 1.61                       | 5.50                          | H                       | Pass   |
| 2473                 | -33.31         | -13              | -20.31                  | -46.87                    | -37.46                   | 2.09                       | 6.24                          | H                       | Pass   |
| 3298                 | -44.02         | -13              | -31.02                  | -58.14                    | -49.03                   | 3.08                       | 8.09                          | H                       | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 1.4MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 20407                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



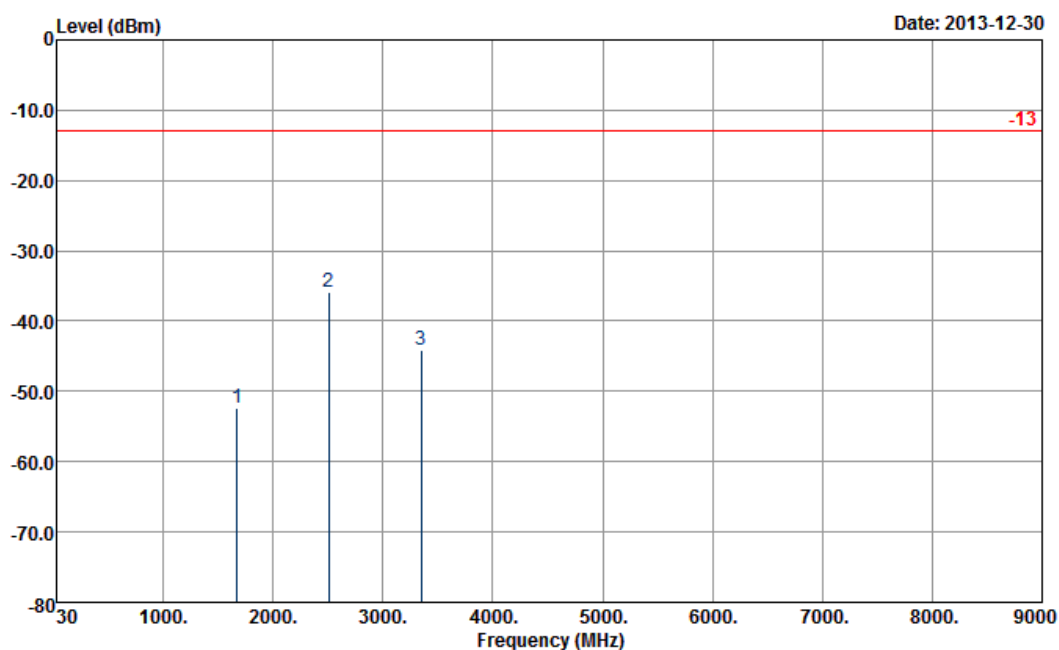
Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1648                 | -46.24         | -13              | -33.24                  | -57.37                  | -50.13                   | 1.61                       | 5.50                        | V                     | Pass   |
| 2473                 | -38.71         | -13              | -25.71                  | -52.53                  | -42.86                   | 2.09                       | 6.24                        | V                     | Pass   |
| 3298                 | -50.98         | -13              | -37.98                  | -65.7                   | -55.99                   | 3.08                       | 8.09                        | V                     | Pass   |

Other harmonics are lower than background noise

**<Middle Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 1.4MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 20525                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

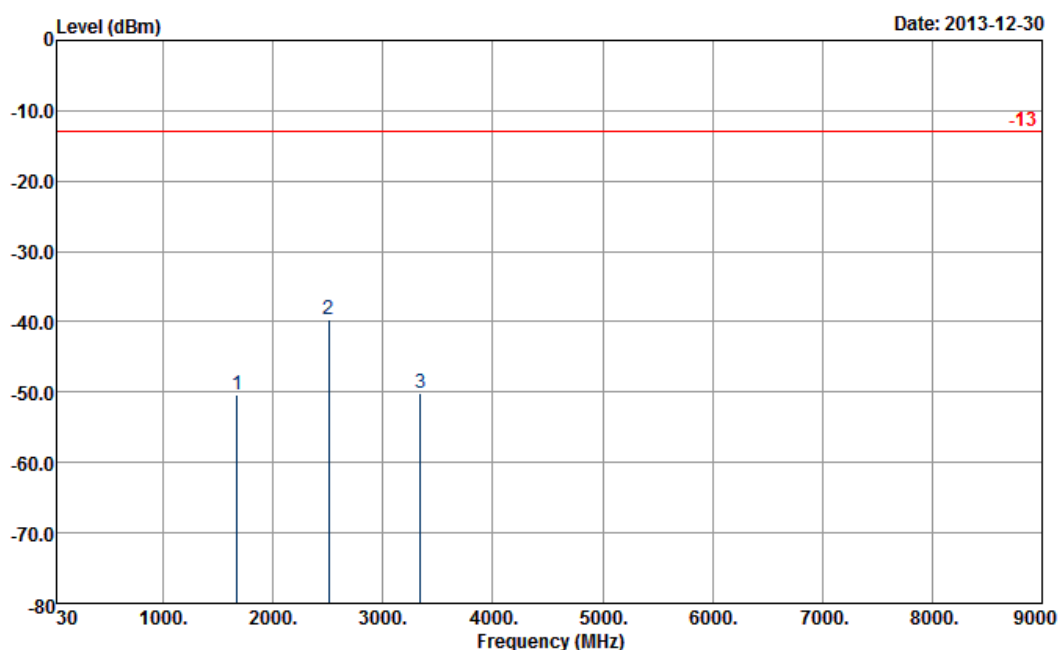


Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1672                 | -52.40         | -13              | -39.40                  | -61.09                  | -56.27                   | 1.62                       | 5.49                        | H                     | Pass   |
| 2509                 | -35.94         | -13              | -22.94                  | -48.41                  | -40.06                   | 2.1                        | 6.22                        | H                     | Pass   |
| 3346                 | -44.02         | -13              | -31.02                  | -59.02                  | -49.06                   | 3.03                       | 8.07                        | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 1.4MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 20525                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



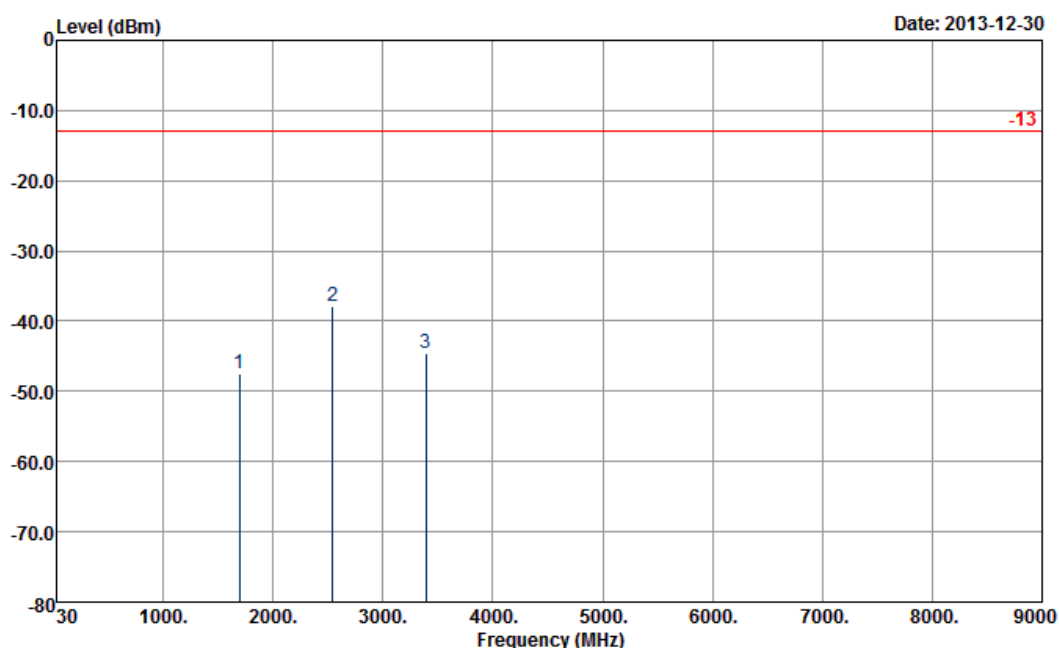
Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1672                 | -50.36         | -13              | -37.36                  | -61.99                  | -54.23                   | 1.62                       | 5.49                        | V                     | Pass   |
| 2509                 | -39.56         | -13              | -26.56                  | -54.47                  | -43.68                   | 2.1                        | 6.22                        | V                     | Pass   |
| 3343                 | -50.23         | -13              | -37.23                  | -66.22                  | -55.27                   | 3.03                       | 8.07                        | V                     | Pass   |

Other harmonics are lower than background noise

**<High Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 1.4MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 20643                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

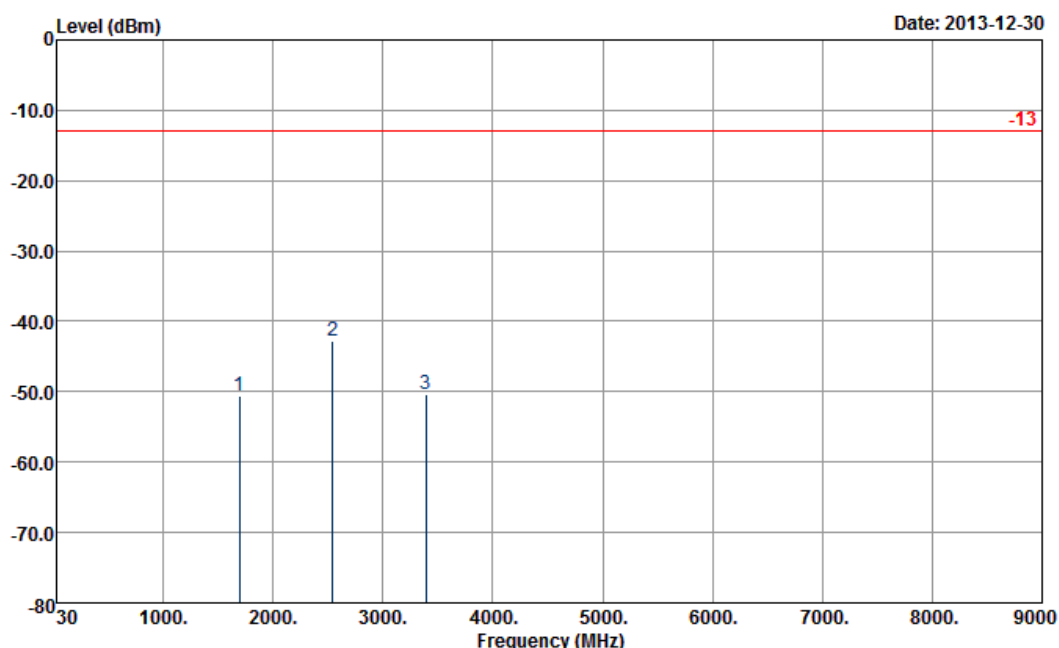


Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>( dBm ) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>( dBi ) | Polarization<br>( H/V ) | Result |
|----------------------|----------------|------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| 1696                 | -47.55         | -13              | -34.55                  | -56.02                    | -51.44                   | 1.58                       | 5.47                          | H                       | Pass   |
| 2542                 | -37.83         | -13              | -24.83                  | -51.1                     | -42.11                   | 2.03                       | 6.31                          | H                       | Pass   |
| 3394                 | -44.47         | -13              | -31.47                  | -58.92                    | -50.39                   | 2.31                       | 8.23                          | H                       | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 1.4MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 20643                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



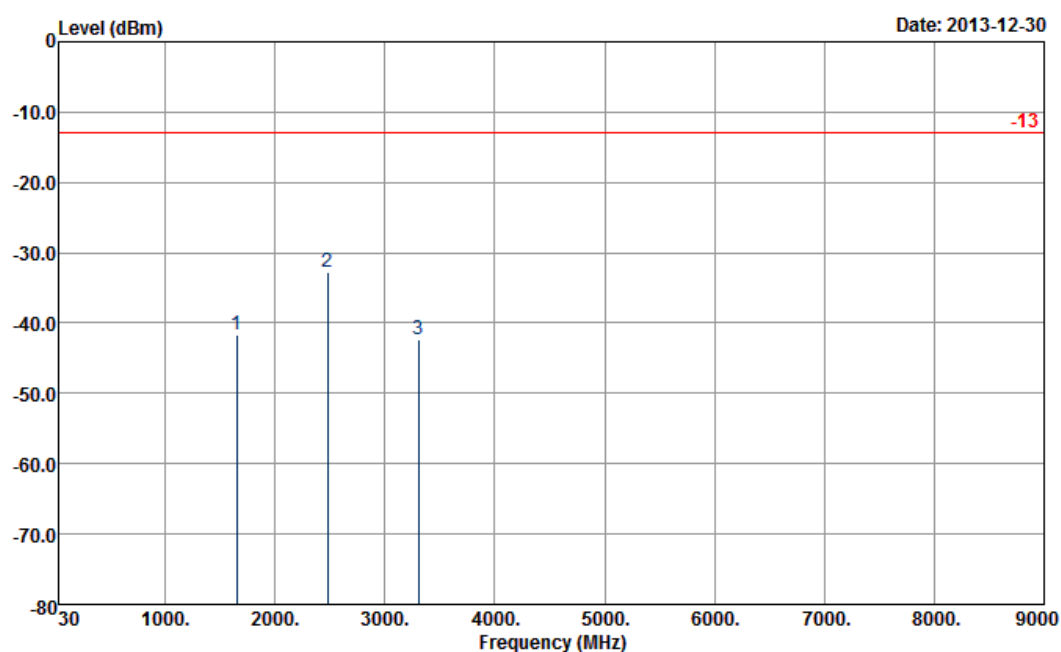
Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1696                 | -50.68         | -13              | -37.68                  | -61.74                  | -54.57                   | 1.58                       | 5.47                        | V                     | Pass   |
| 2545                 | -42.78         | -13              | -29.78                  | -55.97                  | -47.06                   | 2.03                       | 6.31                        | V                     | Pass   |
| 3391                 | -50.41         | -13              | -37.41                  | -65.97                  | -56.33                   | 2.31                       | 8.23                        | V                     | Pass   |

Other harmonics are lower than background noise

**<Low Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 3MHz QPSK RB Size 1 Offset 14                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 20415                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

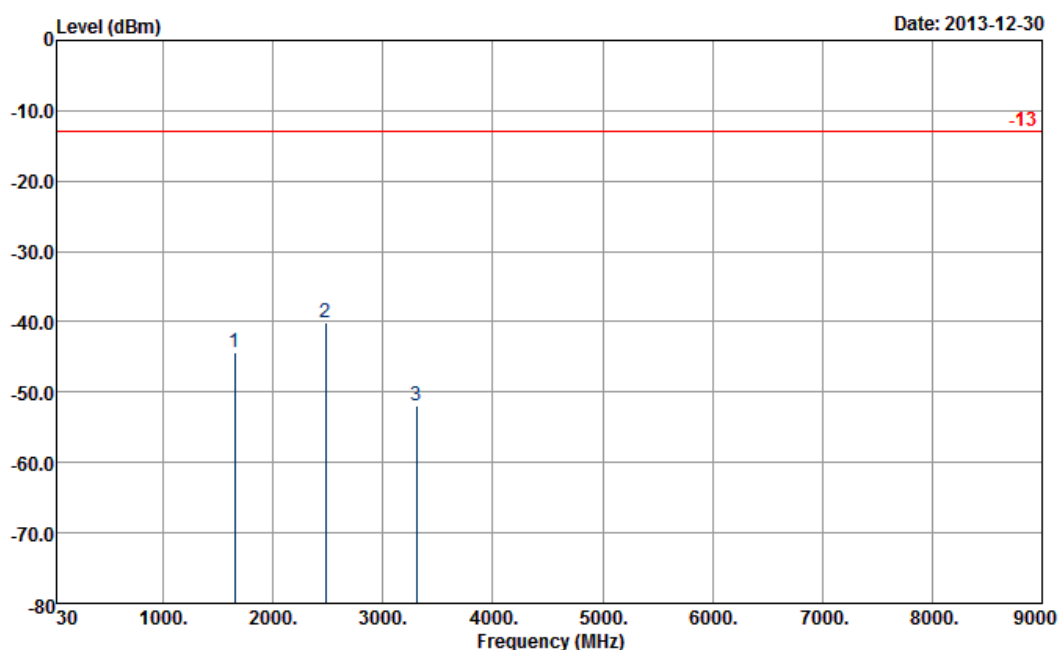


Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1654                 | -41.77         | -13              | -28.77                  | -50.73                  | -45.66                   | 1.6                        | 5.49                        | H                     | Pass   |
| 2482                 | -32.85         | -13              | -19.85                  | -45.94                  | -37.03                   | 2.08                       | 6.26                        | H                     | Pass   |
| 3304                 | -42.24         | -13              | -29.24                  | -56.93                  | -47.26                   | 3.09                       | 8.11                        | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 3MHz QPSK RB Size 1 Offset 14                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 20415                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



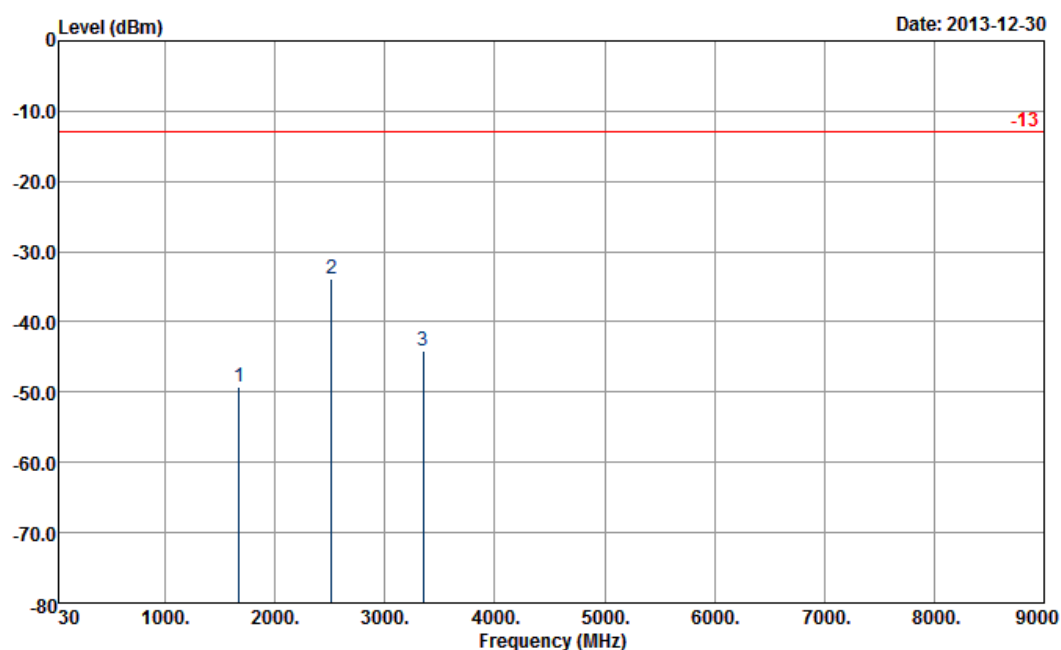
Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1654                 | -44.40         | -13              | -31.40                  | -55.7                   | -48.29                   | 1.6                        | 5.49                        | V                     | Pass   |
| 2479                 | -40.15         | -13              | -27.15                  | -53.65                  | -44.33                   | 2.08                       | 6.26                        | V                     | Pass   |
| 3307                 | -51.96         | -13              | -38.96                  | -66.94                  | -56.98                   | 3.09                       | 8.11                        | V                     | Pass   |

Other harmonics are lower than background noise

**<Middle Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 3MHz QPSK RB Size 1 Offset 14                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 20525                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

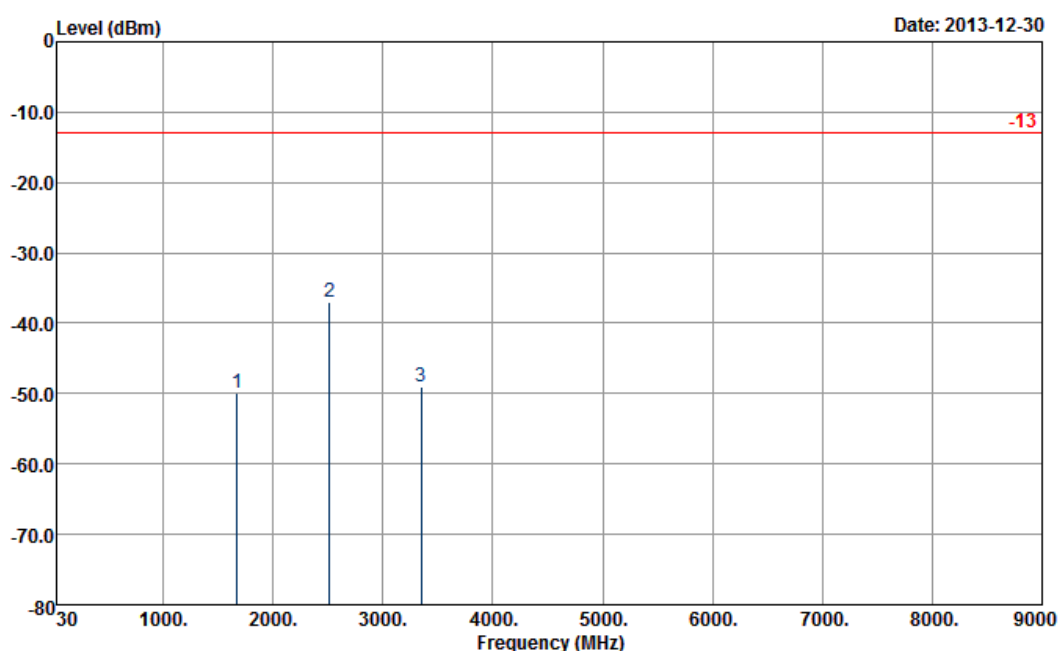


Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1675                 | -49.27         | -13              | -36.27                  | -58.15                  | -53.14                   | 1.62                       | 5.49                        | H                     | Pass   |
| 2512                 | -33.90         | -13              | -20.90                  | -47.01                  | -38.02                   | 2.1                        | 6.22                        | H                     | Pass   |
| 3352                 | -44.19         | -13              | -31.19                  | -58.09                  | -49.23                   | 3.03                       | 8.07                        | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 3MHz QPSK RB Size 1 Offset 14                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 20525                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



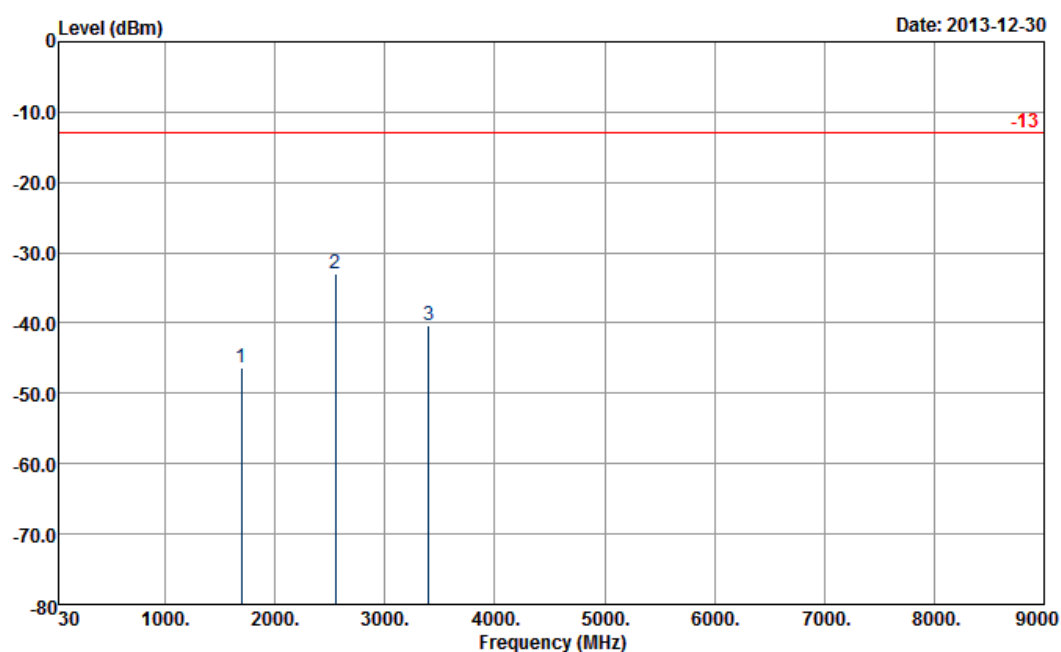
Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1675                 | -49.98         | -13              | -36.98                  | -60.75                  | -53.85                   | 1.62                       | 5.49                        | V                     | Pass   |
| 2512                 | -37.10         | -13              | -24.10                  | -51.27                  | -41.22                   | 2.1                        | 6.22                        | V                     | Pass   |
| 3352                 | -48.99         | -13              | -35.99                  | -63.78                  | -54.03                   | 3.03                       | 8.07                        | V                     | Pass   |

Other harmonics are lower than background noise

**<High Channel>**

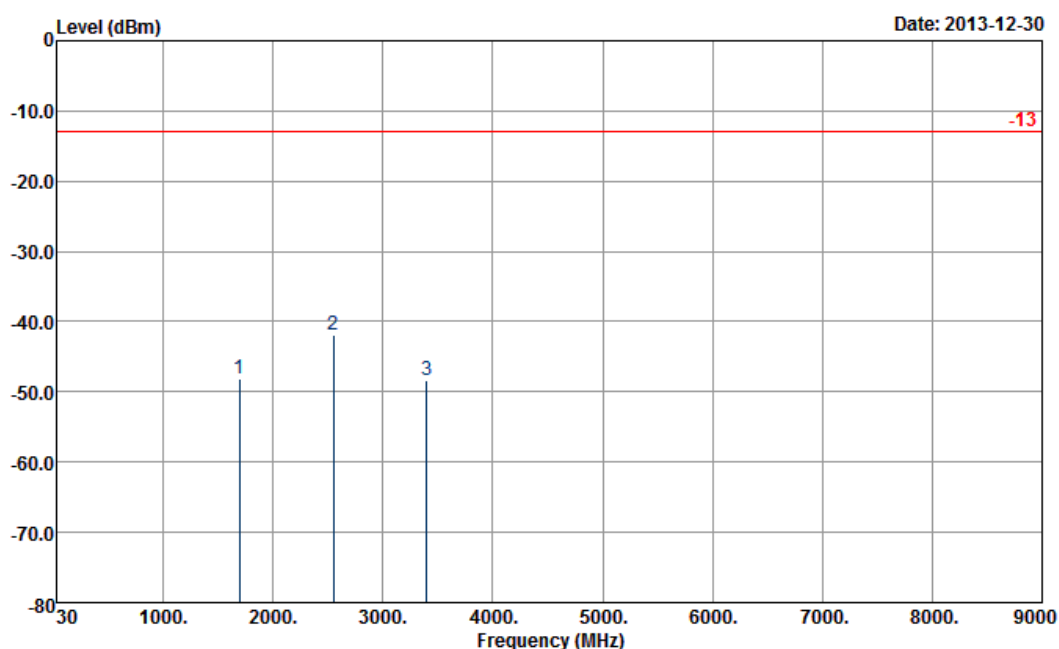
|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 3MHz QPSK RB Size 1 Offset 14                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 20635                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |



| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1696                 | -46.33         | -13              | -33.33                  | -55.77                  | -50.22                   | 1.56                       | 5.45                        | H                     | Pass   |
| 2548                 | -32.96         | -13              | -19.96                  | -46.29                  | -37.22                   | 2.02                       | 6.28                        | H                     | Pass   |
| 3397                 | -40.37         | -13              | -27.37                  | -55.15                  | -46.27                   | 2.29                       | 8.19                        | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 3MHz QPSK RB Size 1 Offset 14                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 20635                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |

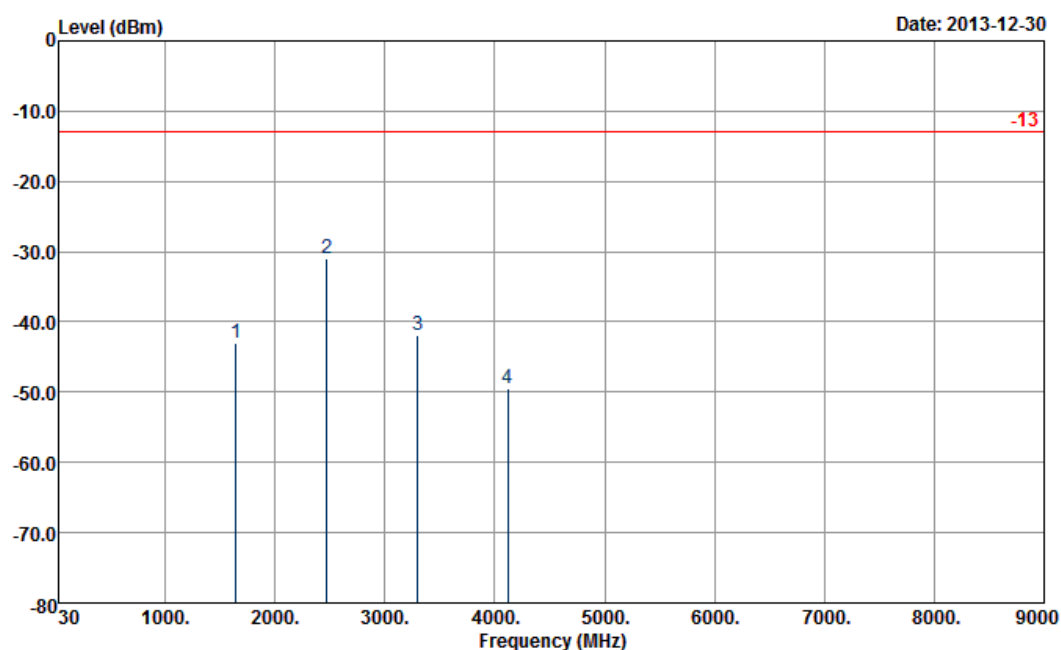


| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1696                 | -48.14         | -13              | -35.14                  | -59.98                  | -52.03                   | 1.56                       | 5.45                        | V                     | Pass   |
| 2548                 | -41.96         | -13              | -28.96                  | -55.4                   | -46.22                   | 2.02                       | 6.28                        | V                     | Pass   |
| 3397                 | -48.43         | -13              | -35.43                  | -63.86                  | -54.33                   | 2.29                       | 8.19                        | V                     | Pass   |

Other harmonics are lower than background noise

**<Low Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 5MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                            | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 20425                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (6 <sup>th</sup> , 7 <sup>th</sup> , 8 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

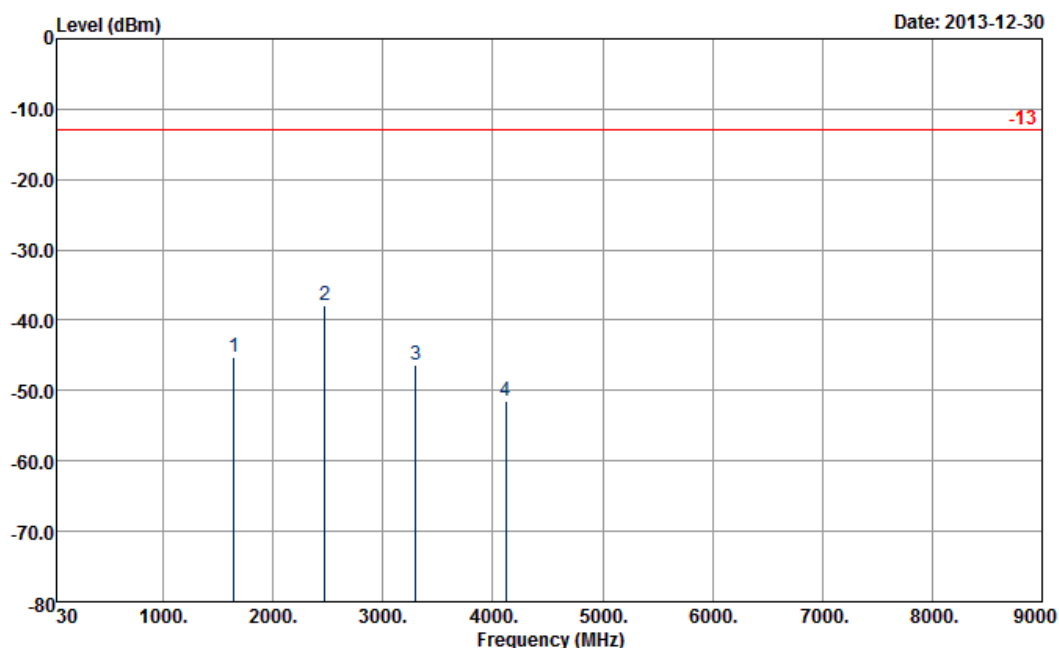


Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1648                 | -43.09         | -13              | -30.09                  | -51.89                  | -46.99                   | 1.61                       | 5.51                        | H                     | Pass   |
| 2472                 | -30.97         | -13              | -17.97                  | -43.7                   | -35.13                   | 2.1                        | 6.26                        | H                     | Pass   |
| 3296                 | -41.94         | -13              | -28.94                  | -55.13                  | -46.94                   | 3.12                       | 8.12                        | H                     | Pass   |
| 4120                 | -49.51         | -13              | -36.51                  | -66.05                  | -56.21                   | 2.63                       | 9.33                        | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 5MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                            | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 20425                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (6 <sup>th</sup> , 7 <sup>th</sup> , 8 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



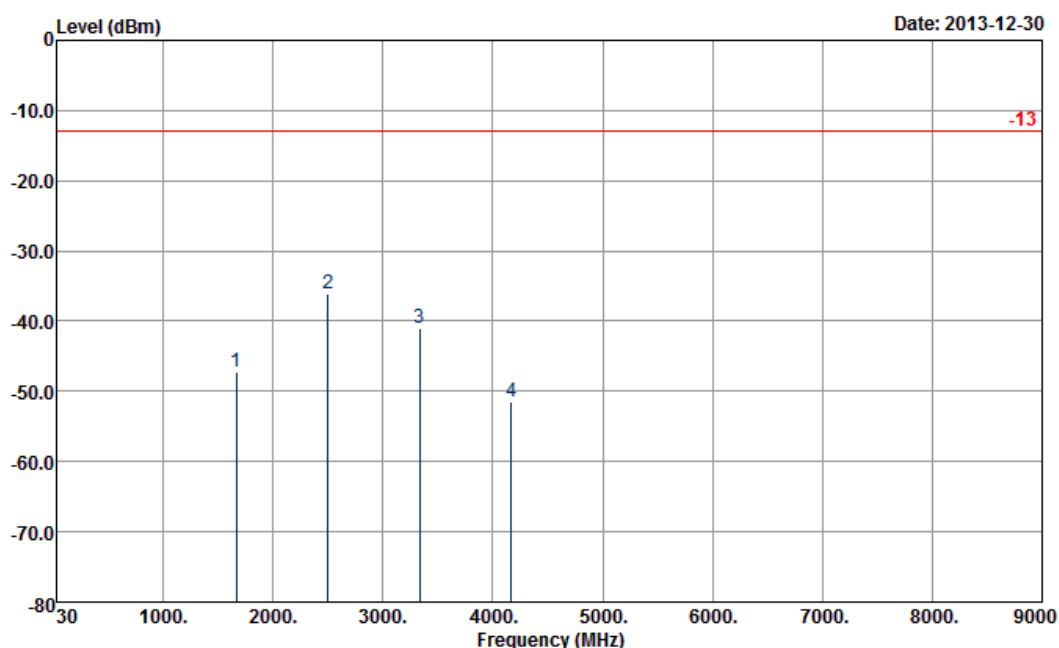
Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1648                 | -45.32         | -13              | -32.32                  | -56.22                  | -49.22                   | 1.61                       | 5.51                        | V                     | Pass   |
| 2472                 | -37.95         | -13              | -24.95                  | -51.51                  | -42.11                   | 2.1                        | 6.26                        | V                     | Pass   |
| 3296                 | -46.33         | -13              | -33.33                  | -62.5                   | -51.33                   | 3.12                       | 8.12                        | V                     | Pass   |
| 4120                 | -51.44         | -13              | -38.44                  | -68.86                  | -58.14                   | 2.63                       | 9.33                        | V                     | Pass   |

Other harmonics are lower than background noise

**<Middle Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 5MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                            | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 20525                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (6 <sup>th</sup> , 7 <sup>th</sup> , 8 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

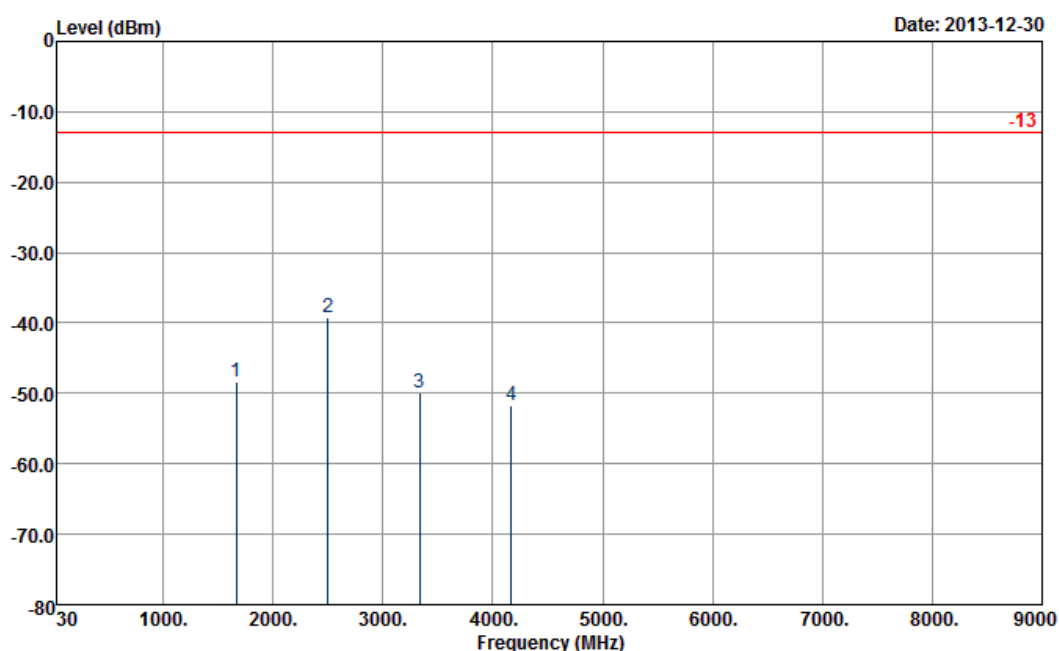


Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1664                 | -47.21         | -13              | -34.21                  | -56.23                  | -51.08                   | 1.62                       | 5.49                        | H                     | Pass   |
| 2504                 | -36.12         | -13              | -23.12                  | -50.26                  | -40.24                   | 2.1                        | 6.22                        | H                     | Pass   |
| 3336                 | -40.95         | -13              | -27.95                  | -54.61                  | -45.99                   | 3.03                       | 8.07                        | H                     | Pass   |
| 4168                 | -51.42         | -13              | -38.42                  | -67.63                  | -58.11                   | 2.52                       | 9.21                        | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 5MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                            | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 20525                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (6 <sup>th</sup> , 7 <sup>th</sup> , 8 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |

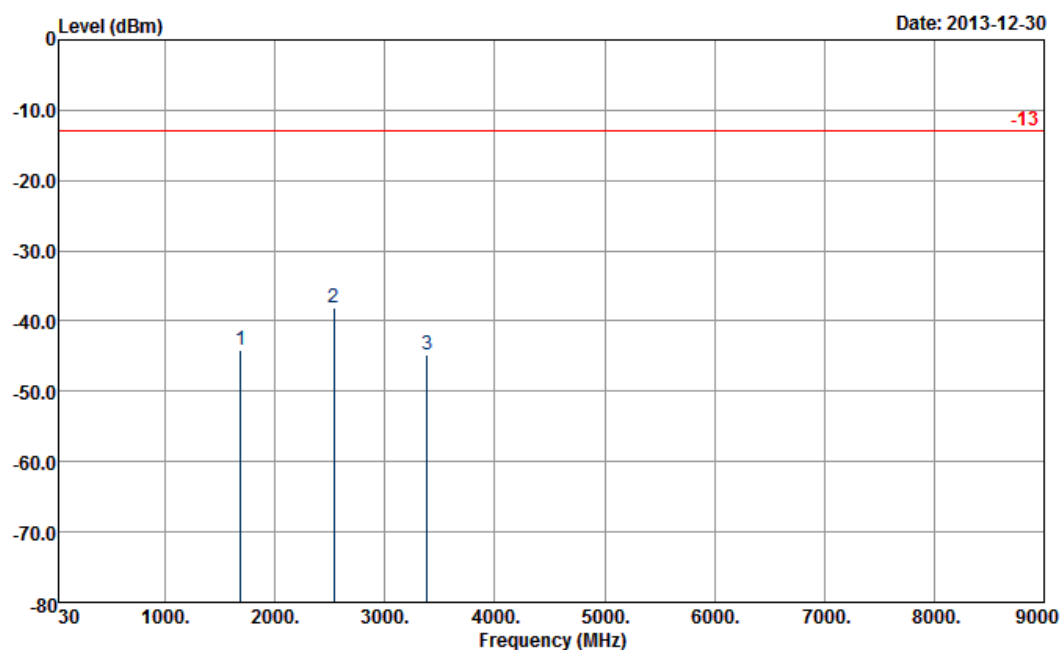


| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1664                 | -48.46         | -13              | -35.46                  | -59.47                  | -52.33                   | 1.62                       | 5.49                        | V                     | Pass   |
| 2504                 | -39.17         | -13              | -26.17                  | -53.66                  | -43.29                   | 2.1                        | 6.22                        | V                     | Pass   |
| 3336                 | -50.01         | -13              | -37.01                  | -66.06                  | -55.05                   | 3.03                       | 8.07                        | V                     | Pass   |
| 4168                 | -51.70         | -13              | -38.70                  | -68.98                  | -58.39                   | 2.52                       | 9.21                        | V                     | Pass   |

Other harmonics are lower than background noise

**<High Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 5MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                            | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 20625                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

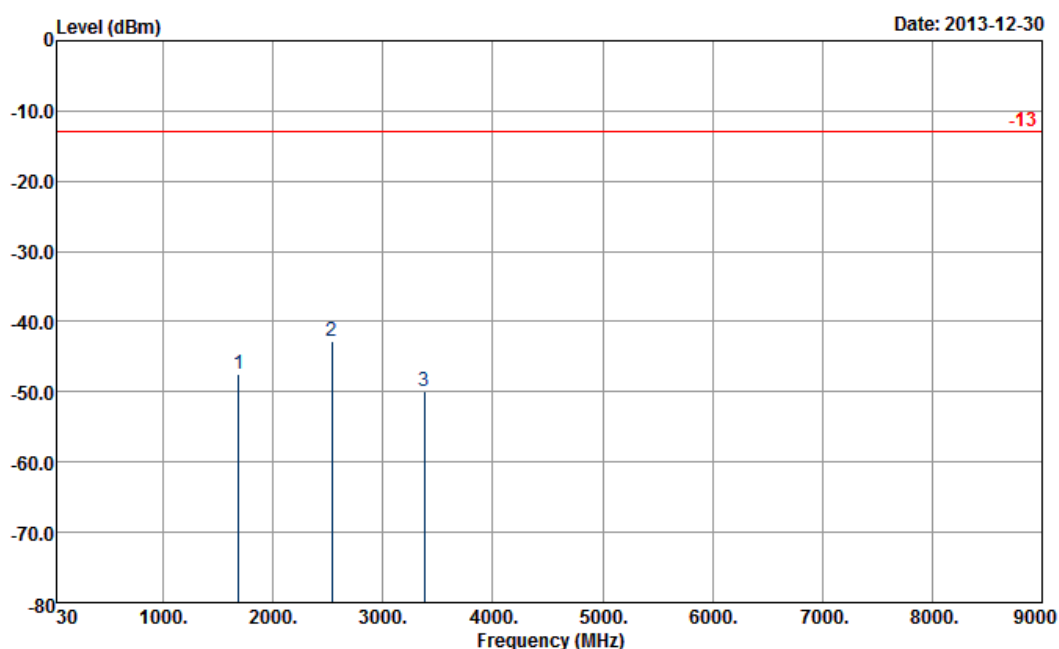


Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1688                 | -44.23         | -13              | -31.23                  | -53.12                  | -48.13                   | 1.54                       | 5.44                        | H                     | Pass   |
| 2536                 | -38.07         | -13              | -25.07                  | -51.43                  | -42.33                   | 2.01                       | 6.27                        | H                     | Pass   |
| 3384                 | -44.86         | -13              | -31.86                  | -58.97                  | -50.86                   | 2.18                       | 8.18                        | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 5MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                            | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 20625                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



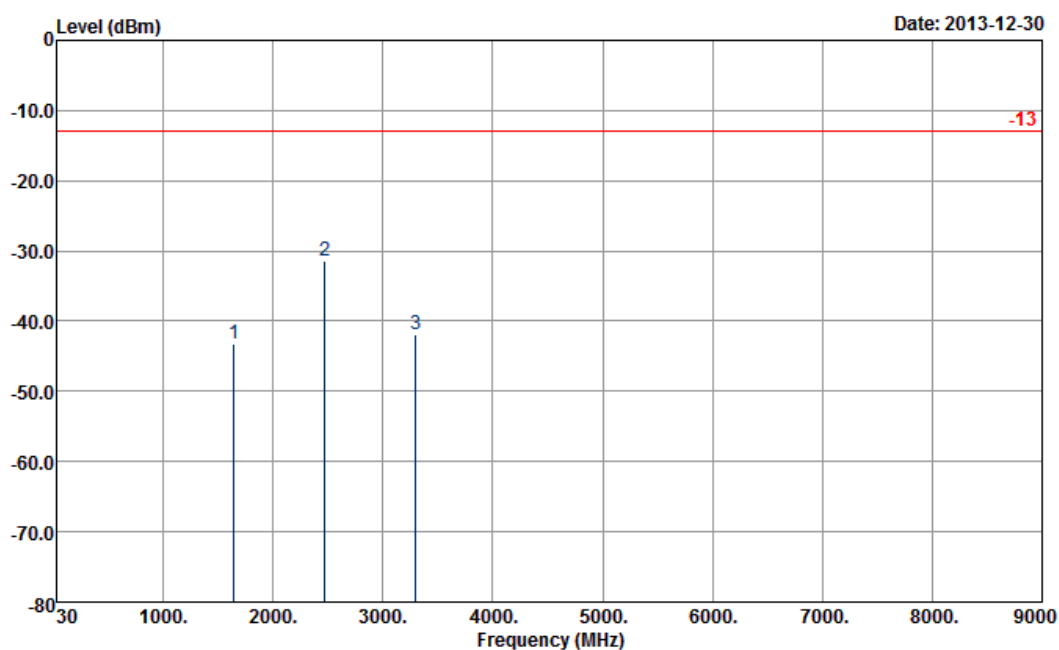
Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1688                 | -47.47         | -13              | -34.47                  | -59.04                  | -51.37                   | 1.54                       | 5.44                        | V                     | Pass   |
| 2536                 | -42.80         | -13              | -29.80                  | -56.46                  | -47.06                   | 2.01                       | 6.27                        | V                     | Pass   |
| 3376                 | -49.85         | -13              | -36.85                  | -65.56                  | -55.85                   | 2.18                       | 8.18                        | V                     | Pass   |

Other harmonics are lower than background noise

**<Low Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 10MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 20450                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

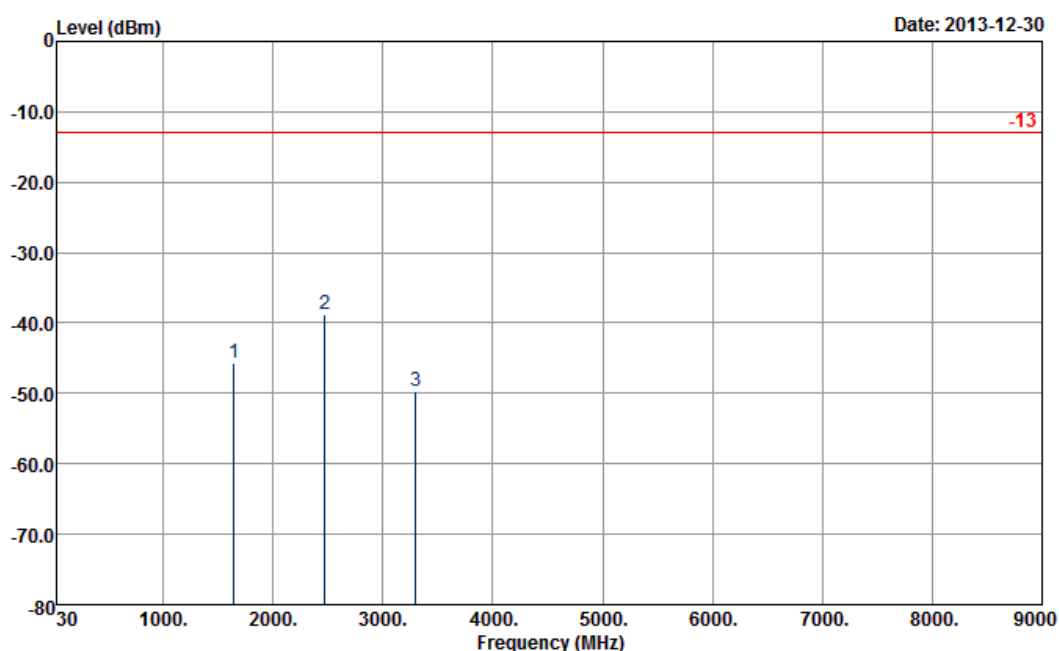


Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1648                 | -43.32         | -13              | -30.32                  | -51.96                  | -47.27                   | 1.63                       | 5.58                        | H                     | Pass   |
| 2472                 | -31.42         | -13              | -18.42                  | -44.52                  | -35.52                   | 2.21                       | 6.31                        | H                     | Pass   |
| 3296                 | -41.89         | -13              | -28.89                  | -55.79                  | -46.92                   | 3.1                        | 8.13                        | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 10MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 20450                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |

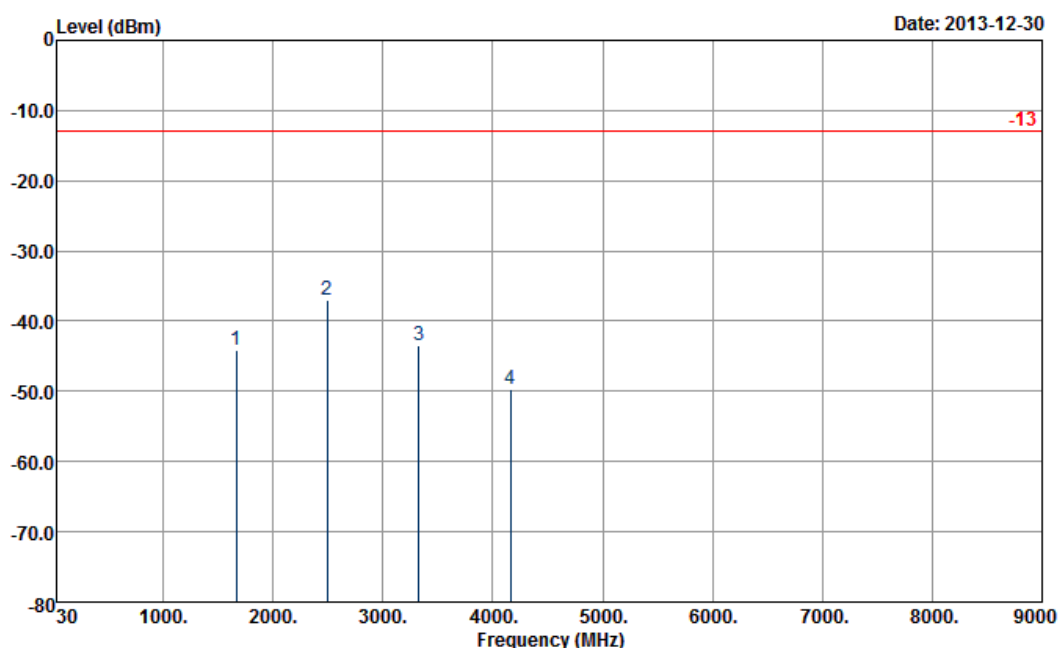


| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1648                 | -45.66         | -13              | -32.66                  | -56.88                  | -49.61                   | 1.63                       | 5.58                        | V                     | Pass   |
| 2472                 | -38.72         | -13              | -25.72                  | -51.78                  | -42.82                   | 2.21                       | 6.31                        | V                     | Pass   |
| 3296                 | -49.63         | -13              | -36.63                  | -65.46                  | -54.66                   | 3.1                        | 8.13                        | V                     | Pass   |

Other harmonics are lower than background noise

**<Middle Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 10MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 20525                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (6 <sup>th</sup> , 7 <sup>th</sup> , 8 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

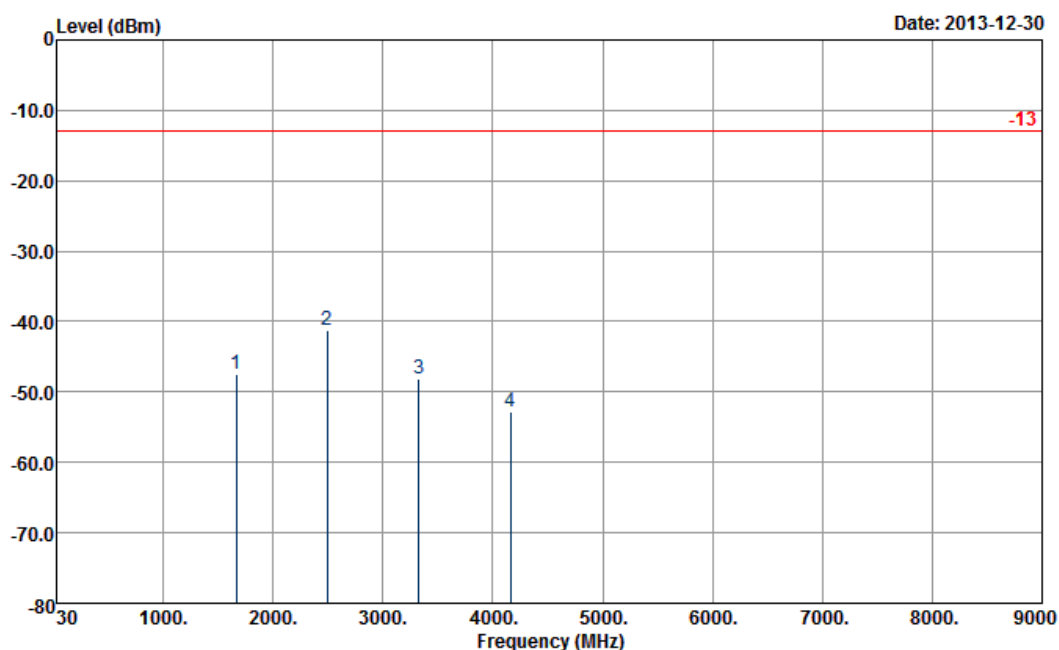


Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1664                 | -44.08         | -13              | -31.08                  | -53.61                  | -47.95                   | 1.62                       | 5.49                        | H                     | Pass   |
| 2496                 | -37.09         | -13              | -24.09                  | -51.02                  | -41.21                   | 2.1                        | 6.22                        | H                     | Pass   |
| 3328                 | -43.50         | -13              | -30.50                  | -57.57                  | -48.54                   | 3.03                       | 8.07                        | H                     | Pass   |
| 4160                 | -49.75         | -13              | -36.75                  | -65.96                  | -56.44                   | 2.52                       | 9.21                        | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 10MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 20525                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (6 <sup>th</sup> , 7 <sup>th</sup> , 8 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |

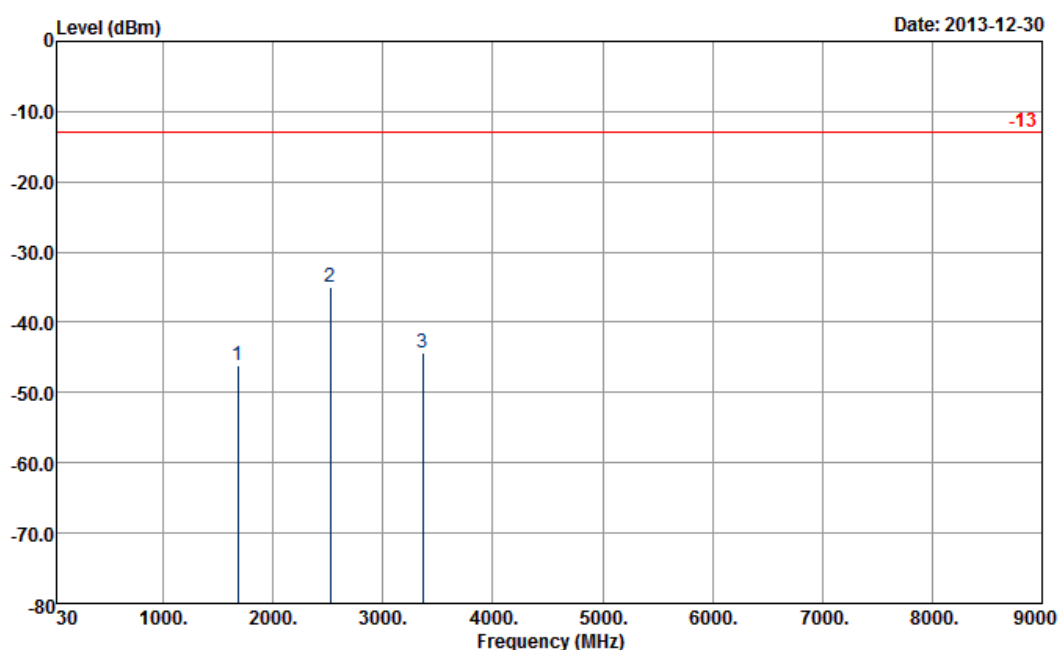


| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>( dBm ) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>( dBi ) | Polarization<br>( H/V ) | Result |
|----------------------|----------------|------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| 1664                 | -47.40         | -13              | -34.40                  | -58.7                     | -51.27                   | 1.62                       | 5.49                          | V                       | Pass   |
| 2496                 | -41.21         | -13              | -28.21                  | -55.14                    | -45.33                   | 2.1                        | 6.22                          | V                       | Pass   |
| 3328                 | -48.20         | -13              | -35.20                  | -63.73                    | -53.24                   | 3.03                       | 8.07                          | V                       | Pass   |
| 4160                 | -52.86         | -13              | -39.86                  | -69.14                    | -59.55                   | 2.52                       | 9.21                          | V                       | Pass   |

Other harmonics are lower than background noise

**<High Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 10MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 20600                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

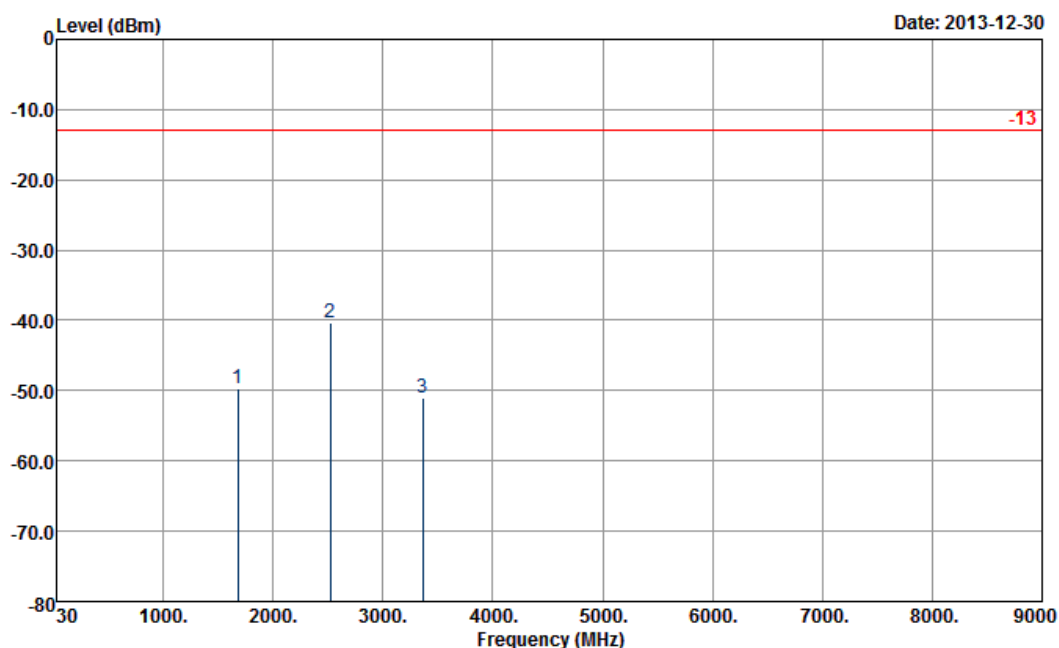


Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1680                 | -46.19         | -13              | -33.19                  | -54.97                  | -50.09                   | 1.52                       | 5.42                        | H                     | Pass   |
| 2520                 | -35.02         | -13              | -22.02                  | -48.53                  | -39.28                   | 1.99                       | 6.25                        | H                     | Pass   |
| 3360                 | -44.33         | -13              | -31.33                  | -58.73                  | -50.33                   | 2.14                       | 8.14                        | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 5                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 10MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 20600                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



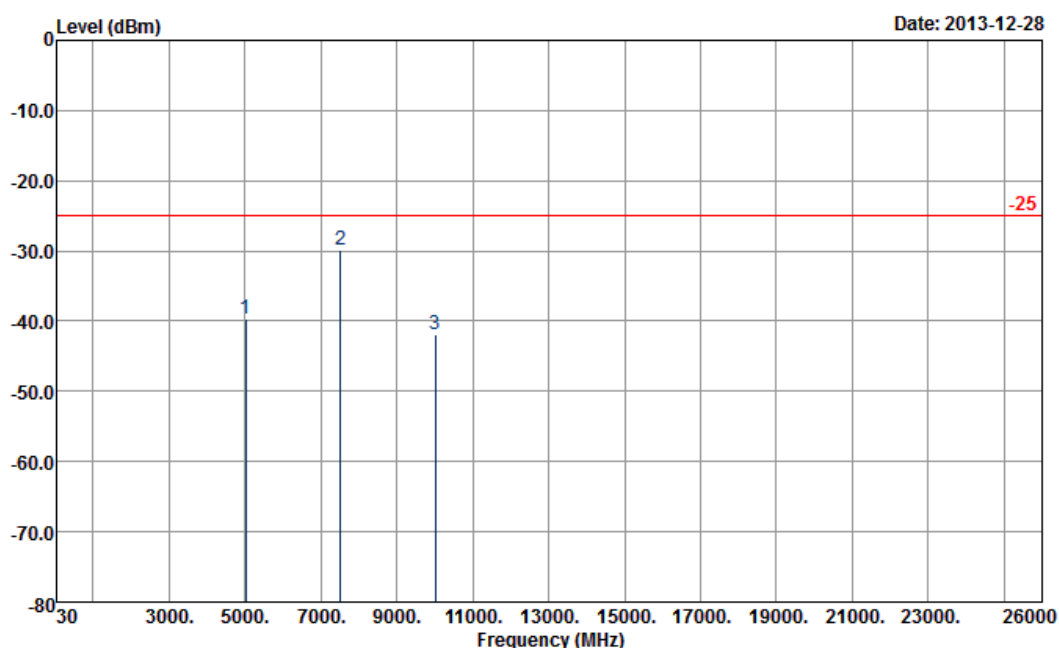
Site : 03CH07-HY  
 Condition : -13 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 1680                 | -49.74         | -13              | -36.74                  | -60.29                  | -53.64                   | 1.52                       | 5.42                        | V                     | Pass   |
| 2520                 | -40.38         | -13              | -27.38                  | -54.72                  | -44.64                   | 1.99                       | 6.25                        | V                     | Pass   |
| 3360                 | -51.09         | -13              | -38.09                  | -67.44                  | -57.09                   | 2.14                       | 8.14                        | V                     | Pass   |

Other harmonics are lower than background noise

**<Low Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 5MHz QPSK RB Size 1 Offset 24                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 20775                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

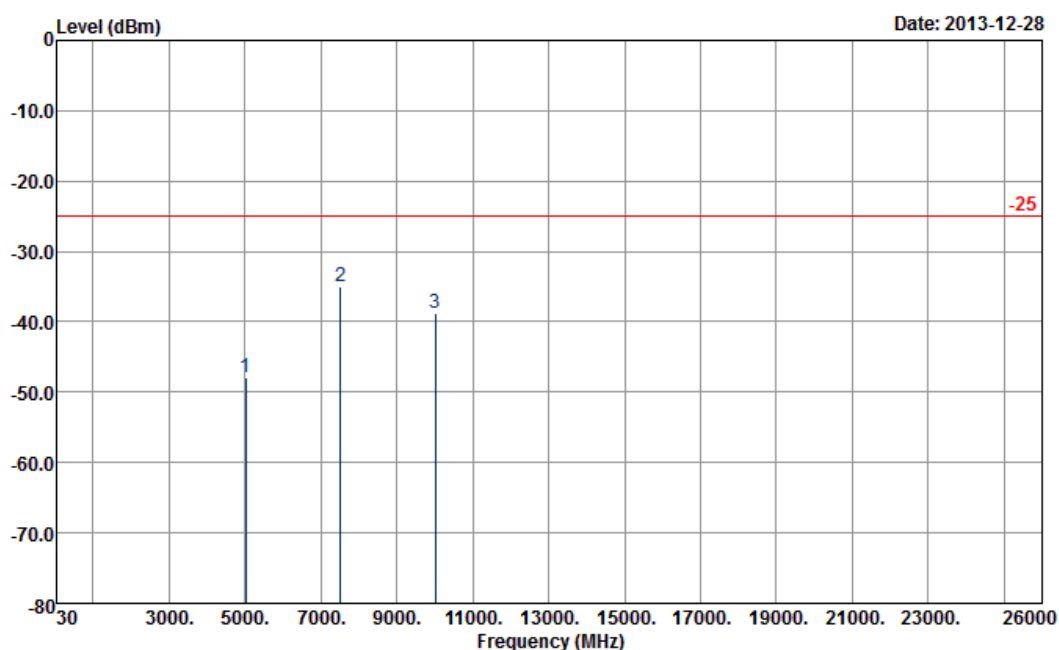


Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5010                 | -39.72          | -25              | -14.72                  | -57.37                  | -43.28                   | 6.78                       | 10.34                       | H                     | Pass   |
| 7512                 | -29.92          | -25              | -4.92                   | -57.07                  | -32.96                   | 9.22                       | 12.26                       | H                     | Pass   |
| 10020                | -41.93          | -25              | -16.93                  | -69.89                  | -46.27                   | 8.51                       | 12.85                       | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 5MHz QPSK RB Size 1 Offset 24                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 20775                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



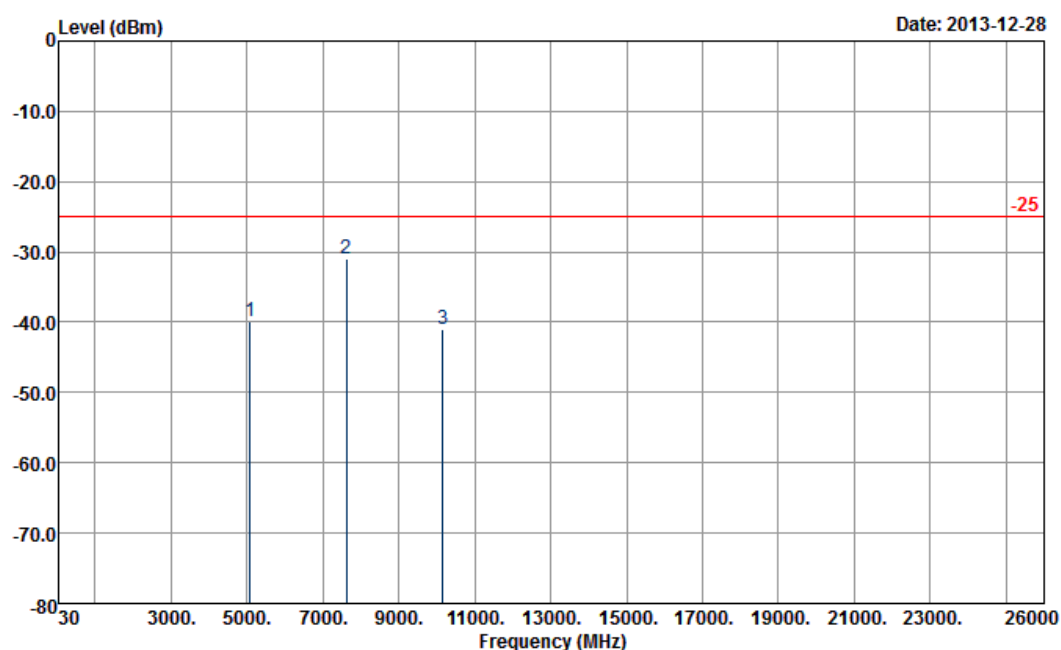
Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5010                 | -47.88          | -25              | -22.88                  | -65.34                  | -51.44                   | 6.78                       | 10.34                       | V                     | Pass   |
| 7512                 | -34.95          | -25              | -9.95                   | -61.31                  | -37.99                   | 9.22                       | 12.26                       | V                     | Pass   |
| 10020                | -38.77          | -25              | -13.77                  | -67.52                  | -43.11                   | 8.51                       | 12.85                       | V                     | Pass   |

Other harmonics are lower than background noise

**<Middle Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 5MHz QPSK RB Size 1 Offset 24                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 21100                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

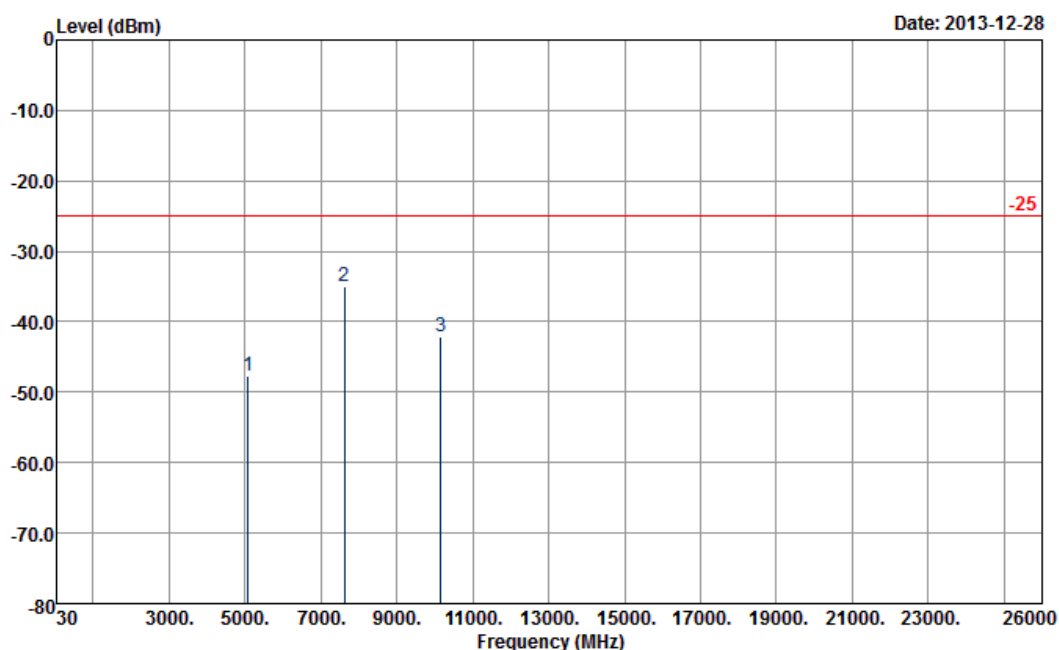


Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5076                 | -39.89          | -25              | -14.89                  | -58.01                  | -43.38                   | 6.86                       | 10.35                       | H                     | Pass   |
| 7614                 | -31.05          | -25              | -6.05                   | -58.41                  | -33.94                   | 9.34                       | 12.23                       | H                     | Pass   |
| 10152                | -40.93          | -25              | -15.93                  | -69.71                  | -45.03                   | 8.64                       | 12.74                       | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 5MHz QPSK RB Size 1 Offset 24                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 21100                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



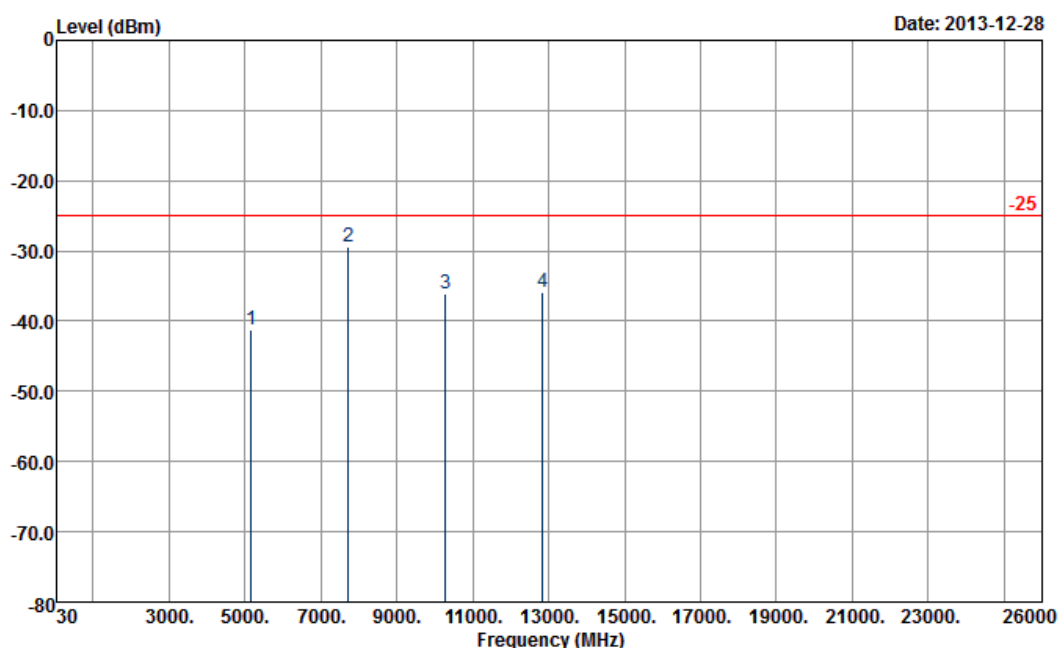
Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5076                 | -47.73          | -25              | -22.73                  | -66.11                  | -51.22                   | 6.86                       | 10.35                       | V                     | Pass   |
| 7614                 | -35.02          | -25              | -10.02                  | -61.75                  | -37.91                   | 9.34                       | 12.23                       | V                     | Pass   |
| 10152                | -42.16          | -25              | -17.16                  | -70.45                  | -46.26                   | 8.64                       | 12.74                       | V                     | Pass   |

Other harmonics are lower than background noise

**<High Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 5MHz QPSK RB Size 1 Offset 24                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 21425                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (6 <sup>th</sup> , 7 <sup>th</sup> , 8 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

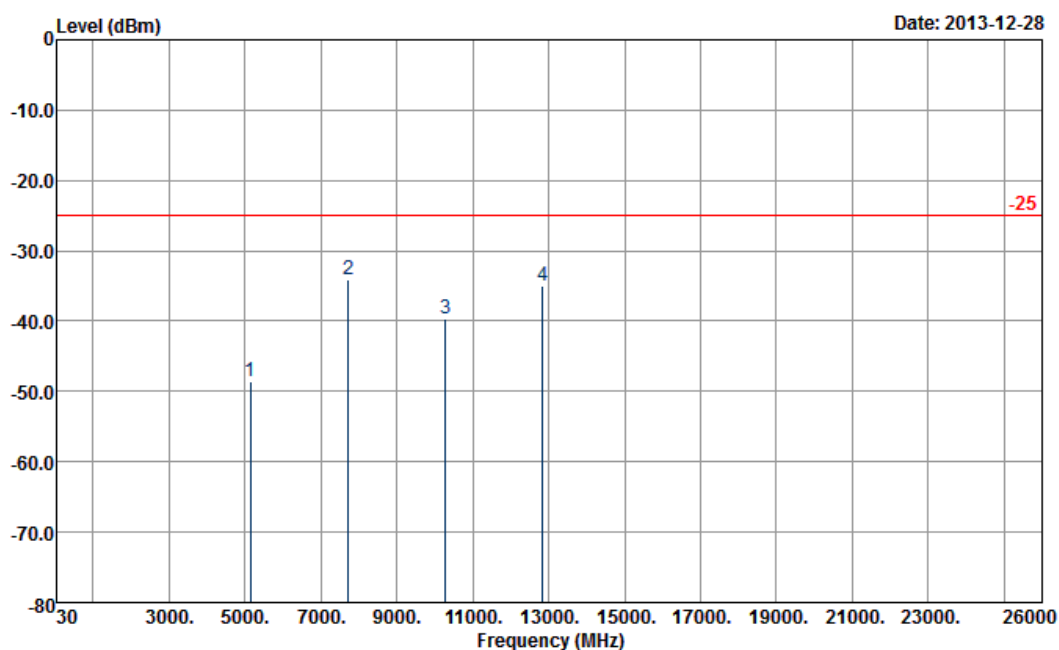


Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5136                 | -41.33          | -25              | -16.33                  | -59.87                  | -44.86                   | 6.9                        | 10.43                       | H                     | Pass   |
| 7710                 | -29.31          | -25              | -4.31                   | -54.97                  | -32.24                   | 9.39                       | 12.32                       | H                     | Pass   |
| 10278                | -36.09          | -25              | -11.09                  | -65.59                  | -40.23                   | 8.71                       | 12.85                       | H                     | Pass   |
| 12846                | -35.88          | -25              | -10.88                  | -68.91                  | -40.17                   | 9.02                       | 13.31                       | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 5MHz QPSK RB Size 1 Offset 24                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 21425                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (6 <sup>th</sup> , 7 <sup>th</sup> , 8 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



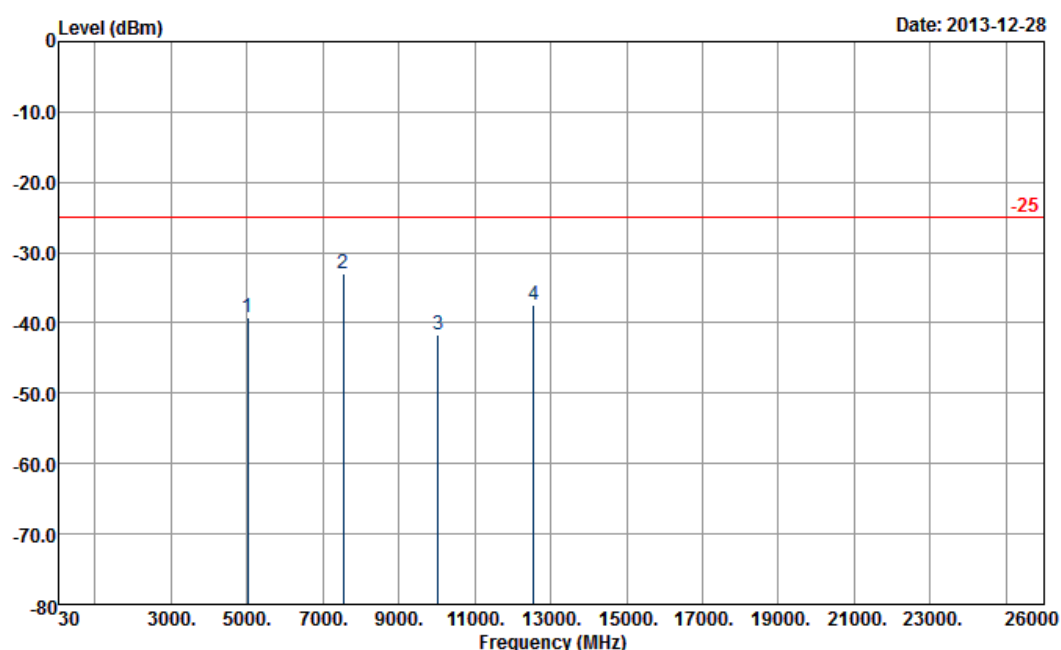
Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5142                 | -48.50          | -25              | -23.50                  | -66.8                   | -52.03                   | 6.9                        | 10.43                       | V                     | Pass   |
| 7710                 | -34.20          | -25              | -9.20                   | -60.15                  | -37.13                   | 9.39                       | 12.32                       | V                     | Pass   |
| 10278                | -39.74          | -25              | -14.74                  | -67.56                  | -43.88                   | 8.71                       | 12.85                       | V                     | Pass   |
| 12846                | -34.93          | -25              | -9.93                   | -66.11                  | -39.22                   | 9.02                       | 13.31                       | V                     | Pass   |

Other harmonics are lower than background noise

**<Low Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 10MHz QPSK RB Size 1 Offset 49                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 20800                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (6 <sup>th</sup> , 7 <sup>th</sup> , 8 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

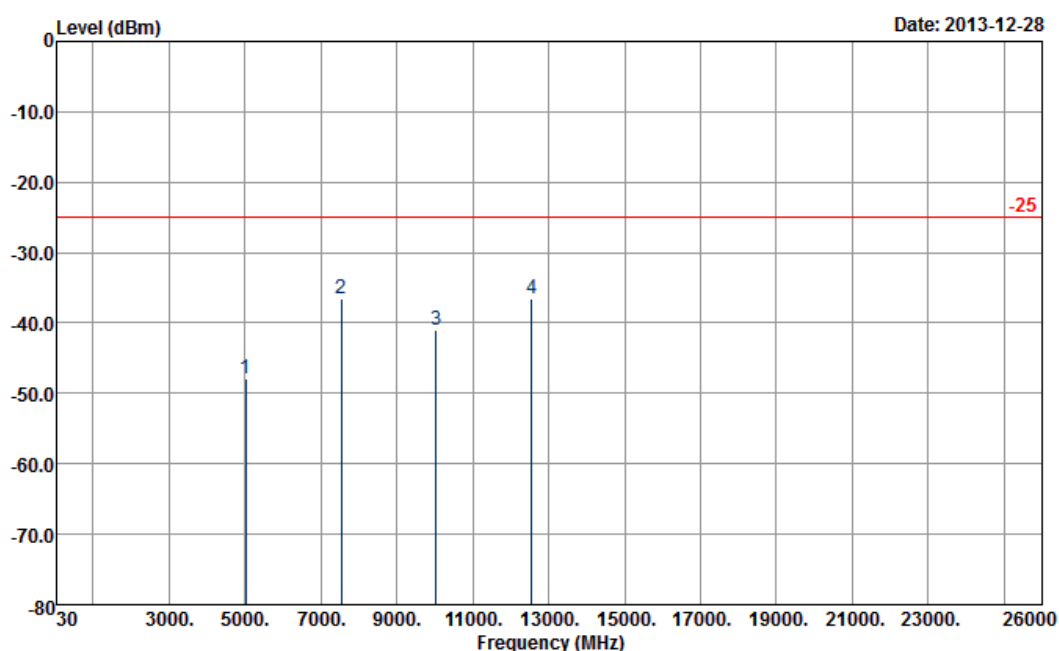


Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5016                 | -39.31          | -25              | -14.31                  | -57.01                  | -42.85                   | 6.81                       | 10.35                       | H                     | Pass   |
| 7530                 | -33.08          | -25              | -8.08                   | -60.33                  | -36.06                   | 9.26                       | 12.24                       | H                     | Pass   |
| 10038                | -41.56          | -25              | -16.56                  | -70.04                  | -45.85                   | 8.54                       | 12.83                       | H                     | Pass   |
| 12546                | -37.48          | -25              | -12.48                  | -70.25                  | -41.88                   | 8.87                       | 13.27                       | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 10MHz QPSK RB Size 1 Offset 49                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 20800                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (6 <sup>th</sup> , 7 <sup>th</sup> , 8 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



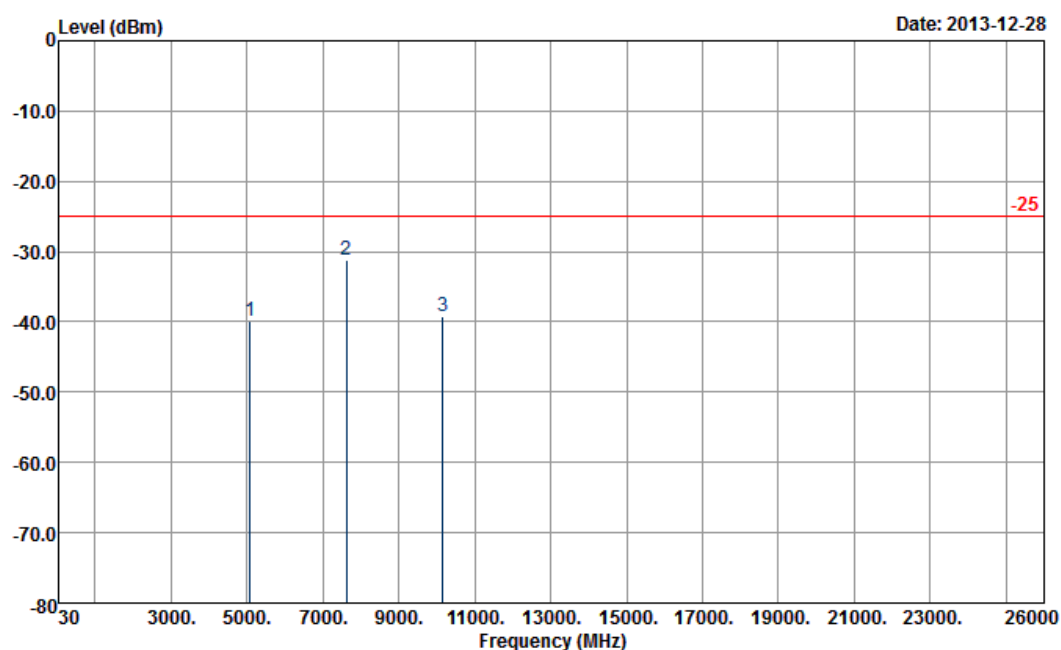
Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5016                 | -47.91          | -25              | -22.91                  | -66.11                  | -51.45                   | 6.81                       | 10.35                       | V                     | Pass   |
| 7530                 | -36.57          | -25              | -11.57                  | -63.98                  | -39.55                   | 9.26                       | 12.24                       | V                     | Pass   |
| 10038                | -40.95          | -25              | -15.95                  | -67.99                  | -45.24                   | 8.54                       | 12.83                       | V                     | Pass   |
| 12546                | -36.54          | -25              | -11.54                  | -67.61                  | -40.94                   | 8.87                       | 13.27                       | V                     | Pass   |

Other harmonics are lower than background noise

**<Middle Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 10MHz QPSK RB Size 1 Offset 49                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 21100                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

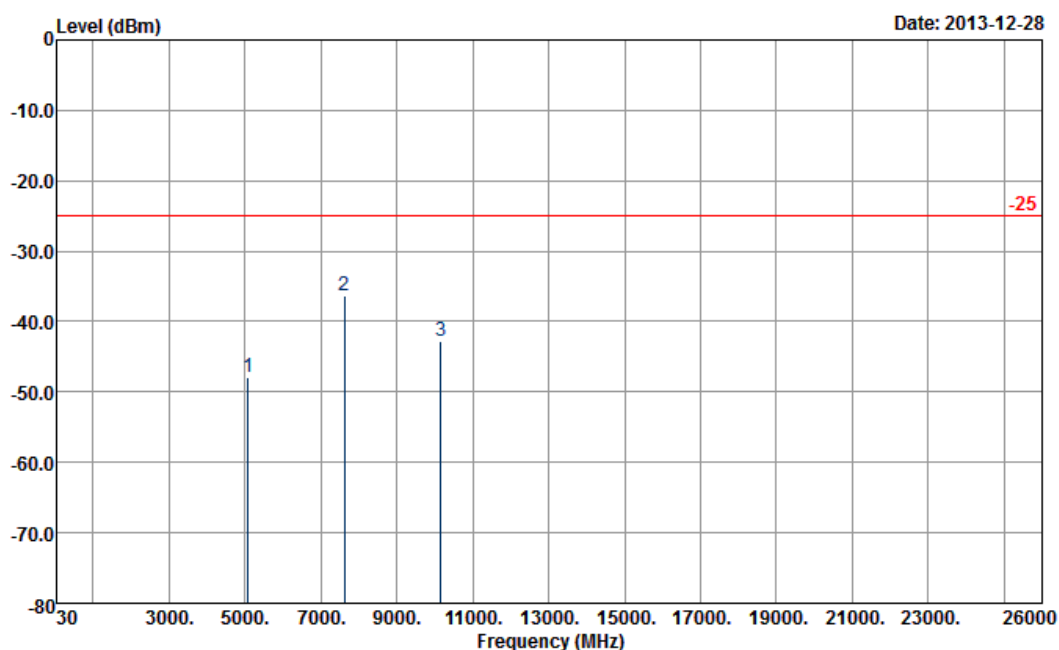


Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5076                 | -39.78          | -25              | -14.78                  | -57.63                  | -43.27                   | 6.86                       | 10.35                       | H                     | Pass   |
| 7620                 | -31.16          | -25              | -6.16                   | -58.36                  | -34.05                   | 9.34                       | 12.23                       | H                     | Pass   |
| 10158                | -39.18          | -25              | -14.18                  | -68.71                  | -43.28                   | 8.64                       | 12.74                       | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 10MHz QPSK RB Size 1 Offset 49                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 21100                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



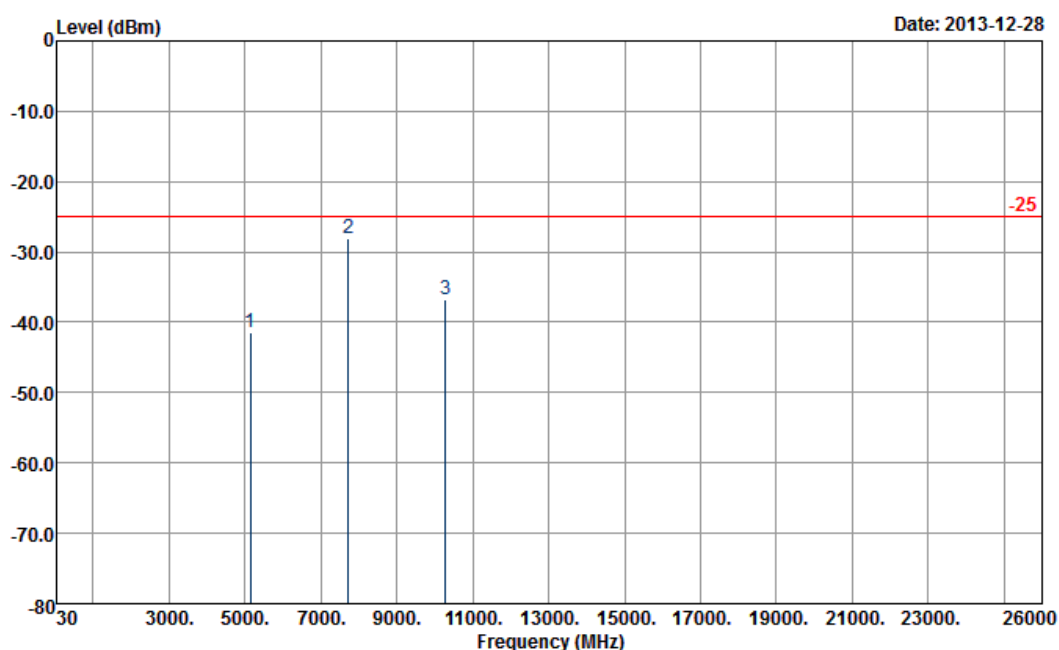
Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5076                 | -47.80          | -25              | -22.80                  | -66.18                  | -51.29                   | 6.86                       | 10.35                       | V                     | Pass   |
| 7620                 | -36.37          | -25              | -11.37                  | -62.71                  | -39.26                   | 9.34                       | 12.23                       | V                     | Pass   |
| 10158                | -42.74          | -25              | -17.74                  | -70.16                  | -46.84                   | 8.64                       | 12.74                       | V                     | Pass   |

Other harmonics are lower than background noise

**<High Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 10MHz QPSK RB Size 1 Offset 49                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 21400                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

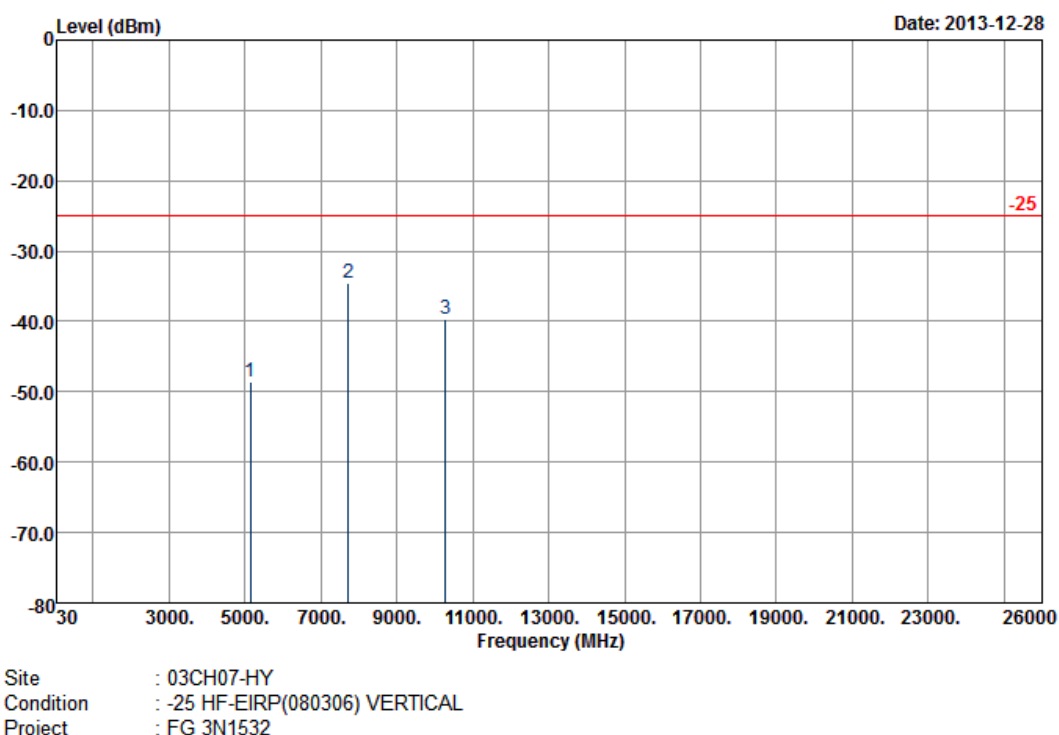


Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5136                 | -41.51          | -25              | -16.51                  | -59.52                  | -45.05                   | 6.88                       | 10.42                       | H                     | Pass   |
| 7710                 | -28.12          | -25              | -3.12                   | -54.79                  | -31.06                   | 9.37                       | 12.31                       | H                     | Pass   |
| 10278                | -36.66          | -25              | -11.66                  | -66.02                  | -40.85                   | 8.64                       | 12.83                       | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 10MHz QPSK RB Size 1 Offset 49                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 21400                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |

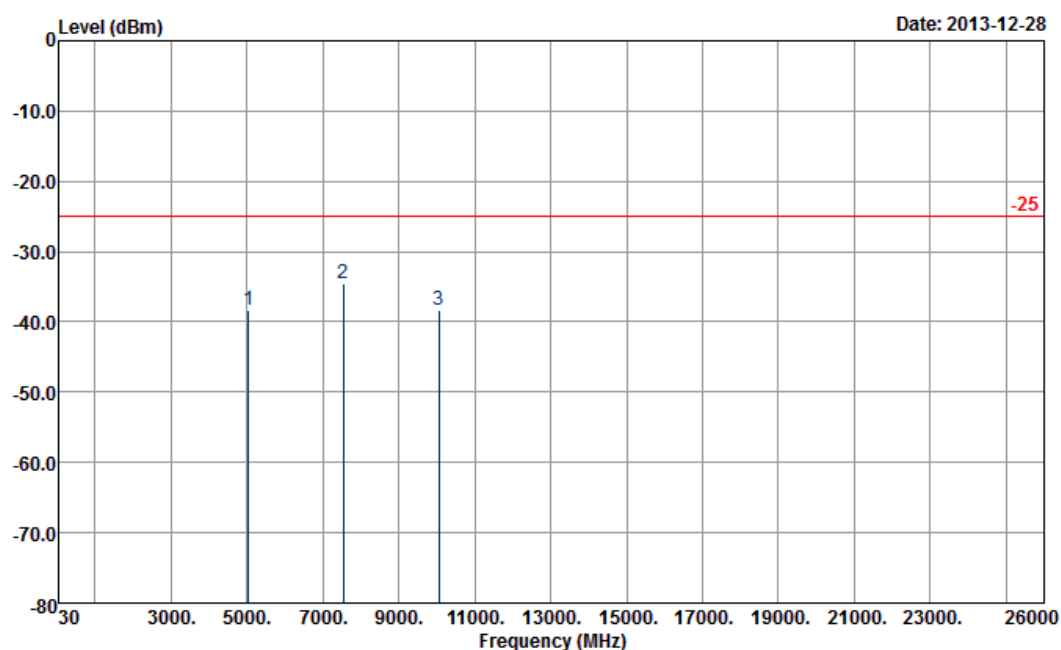


| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5136                 | -48.53          | -25              | -23.53                  | -66.81                  | -52.07                   | 6.88                       | 10.42                       | V                     | Pass   |
| 7710                 | -34.50          | -25              | -9.50                   | -60.15                  | -37.44                   | 9.37                       | 12.31                       | V                     | Pass   |
| 10278                | -39.70          | -25              | -14.70                  | -67.4                   | -43.89                   | 8.64                       | 12.83                       | V                     | Pass   |

Other harmonics are lower than background noise

**<Low Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 15MHz QPSK RB Size 1 Offset 74                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 20825                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

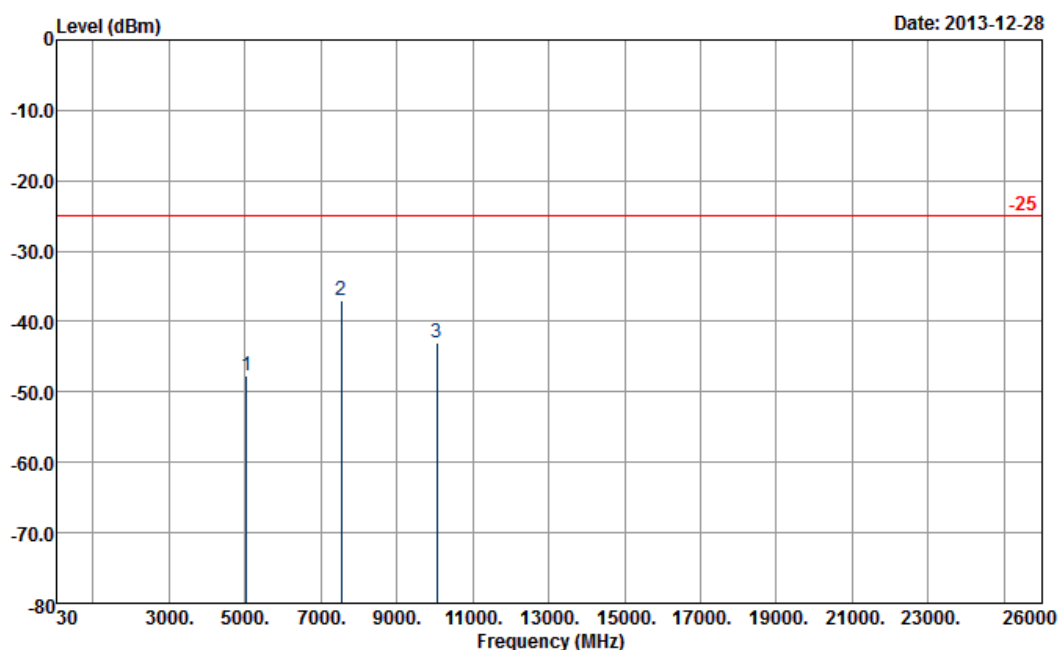


Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5028                 | -38.27          | -25              | -13.27                  | -56.13                  | -41.82                   | 6.82                       | 10.37                       | H                     | Pass   |
| 7542                 | -34.56          | -25              | -9.56                   | -61.22                  | -37.55                   | 9.27                       | 12.26                       | H                     | Pass   |
| 10056                | -38.31          | -25              | -13.31                  | -66.84                  | -42.64                   | 8.55                       | 12.88                       | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 15MHz QPSK RB Size 1 Offset 74                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 20825                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



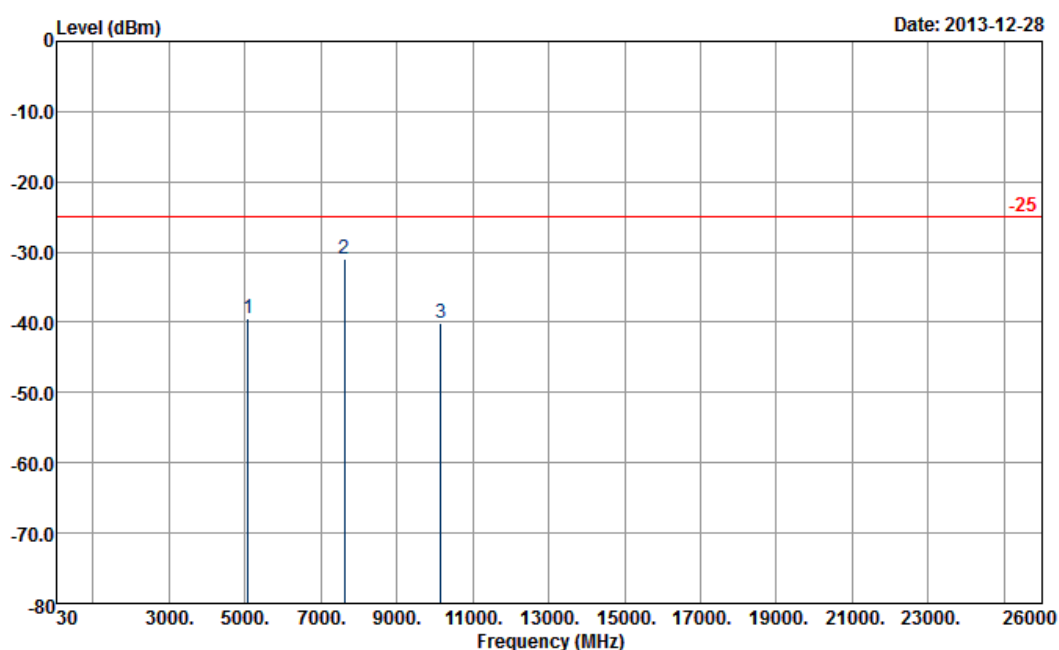
Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5028                 | -47.66          | -25              | -22.66                  | -65.67                  | -51.21                   | 6.82                       | 10.37                       | V                     | Pass   |
| 7542                 | -37.07          | -25              | -12.07                  | -64.14                  | -40.06                   | 9.27                       | 12.26                       | V                     | Pass   |
| 10056                | -42.90          | -25              | -17.90                  | -70.1                   | -47.23                   | 8.55                       | 12.88                       | V                     | Pass   |

Other harmonics are lower than background noise

**<Middle Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 15MHz QPSK RB Size 1 Offset 74                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 21100                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

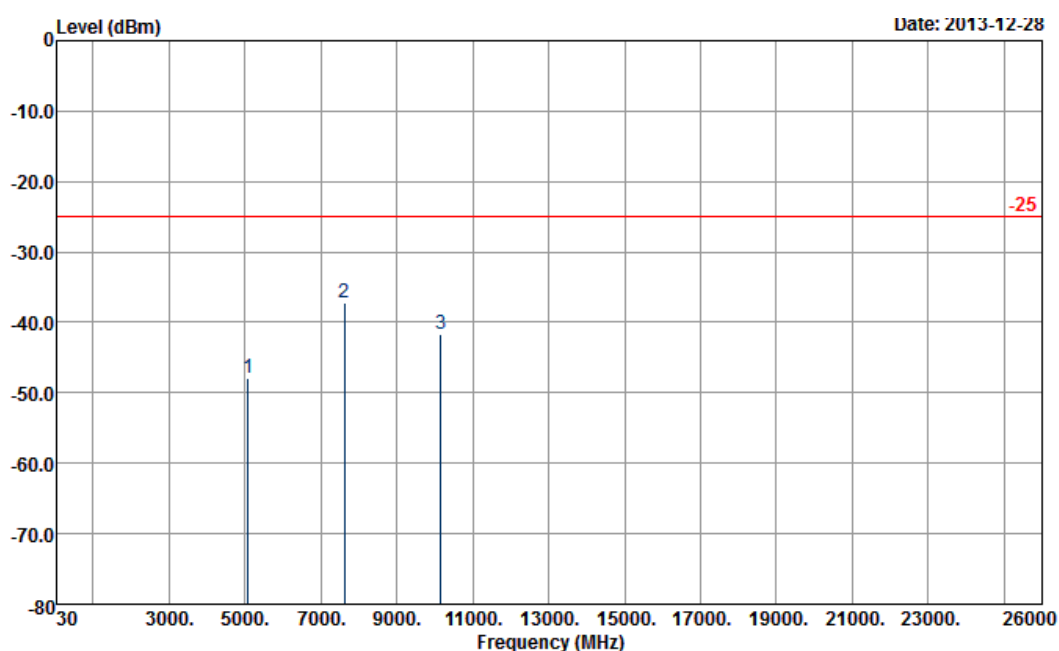


Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5082                 | -39.34          | -25              | -14.34                  | -57.64                  | -42.83                   | 6.86                       | 10.35                       | H                     | Pass   |
| 7626                 | -31.05          | -25              | -6.05                   | -57.71                  | -33.94                   | 9.34                       | 12.23                       | H                     | Pass   |
| 10164                | -40.14          | -25              | -15.14                  | -69.78                  | -44.24                   | 8.64                       | 12.74                       | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 15MHz QPSK RB Size 1 Offset 74                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 21100                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



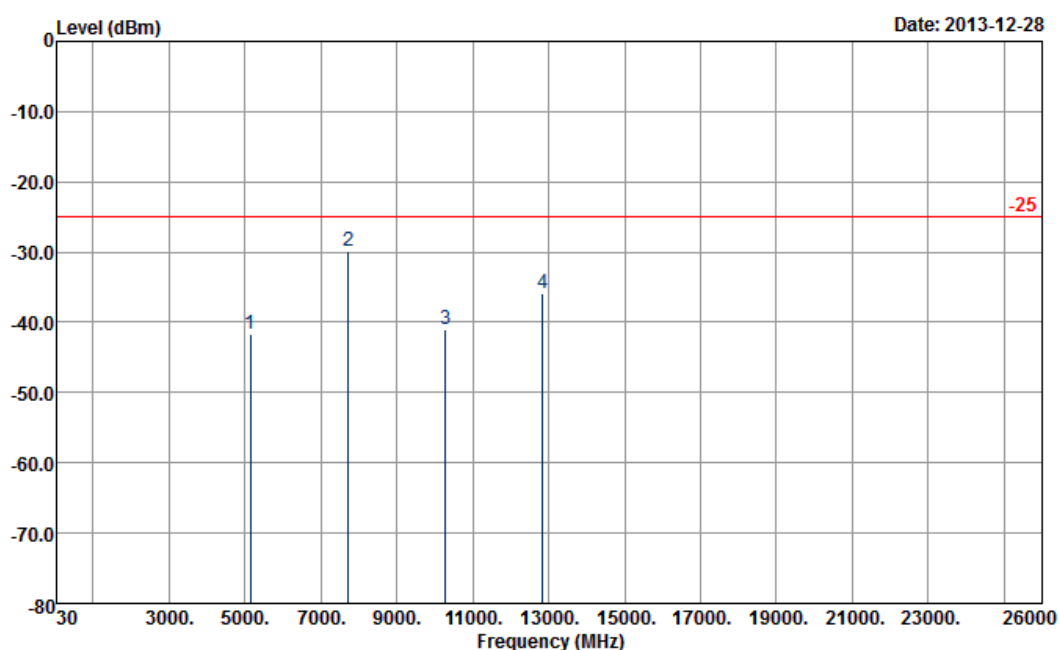
Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5082                 | -47.95          | -25              | -22.95                  | -65.56                  | -51.44                   | 6.86                       | 10.35                       | V                     | Pass   |
| 7626                 | -37.17          | -25              | -12.17                  | -63.66                  | -40.06                   | 9.34                       | 12.23                       | V                     | Pass   |
| 10164                | -41.57          | -25              | -16.57                  | -69.91                  | -45.67                   | 8.64                       | 12.74                       | V                     | Pass   |

Other harmonics are lower than background noise

**<High Channel>**

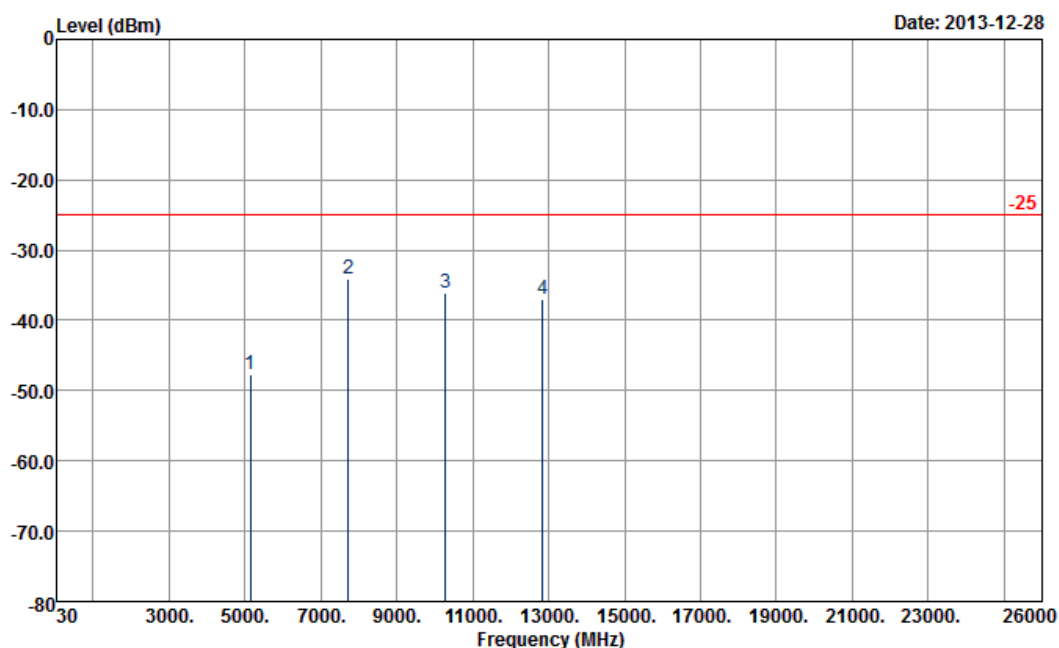
|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 15MHz QPSK RB Size 1 Offset 74                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 21375                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (6 <sup>th</sup> , 7 <sup>th</sup> , 8 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |



Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz )                            | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|-------------------------------------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5136                                            | -41.73          | -25              | -16.73                  | -60.15                  | -45.27                   | 6.87                       | 10.41                       | H                     | Pass   |
| 7710                                            | -29.83          | -25              | -4.83                   | -55.35                  | -32.78                   | 9.35                       | 12.30                       | H                     | Pass   |
| 10272                                           | -40.97          | -25              | -15.97                  | -69.5                   | -45.16                   | 8.63                       | 12.82                       | H                     | Pass   |
| 12846                                           | -35.80          | -25              | -10.80                  | -68.97                  | -40.05                   | 9                          | 13.25                       | H                     | Pass   |
| Other harmonics are lower than background noise |                 |                  |                         |                         |                          |                            |                             |                       |        |

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 15MHz QPSK RB Size 1 Offset 74                                                                                                                                                                                                                                                          | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 21375                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (6 <sup>th</sup> , 7 <sup>th</sup> , 8 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



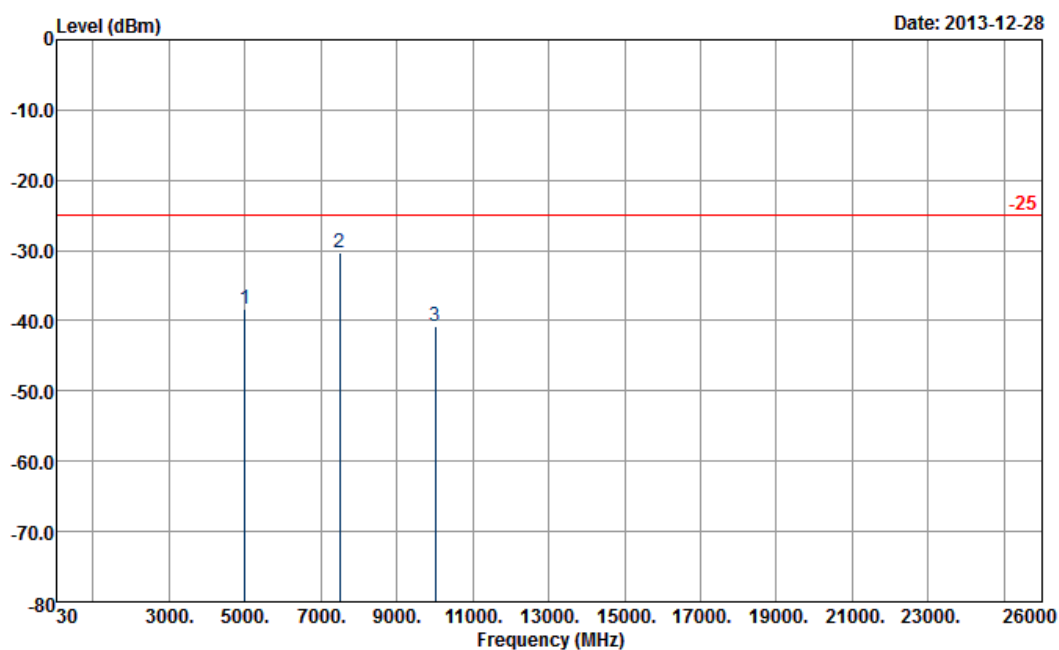
Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5136                 | -47.68          | -25              | -22.68                  | -66.96                  | -51.22                   | 6.87                       | 10.41                       | V                     | Pass   |
| 7710                 | -34.19          | -25              | -9.19                   | -60.65                  | -37.14                   | 9.35                       | 12.30                       | V                     | Pass   |
| 10278                | -36.10          | -25              | -11.10                  | -64.53                  | -40.29                   | 8.63                       | 12.82                       | V                     | Pass   |
| 12846                | -36.97          | -25              | -11.97                  | -67.2                   | -41.22                   | 9                          | 13.25                       | V                     | Pass   |

Other harmonics are lower than background noise

**<Low Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 20MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 20850                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |



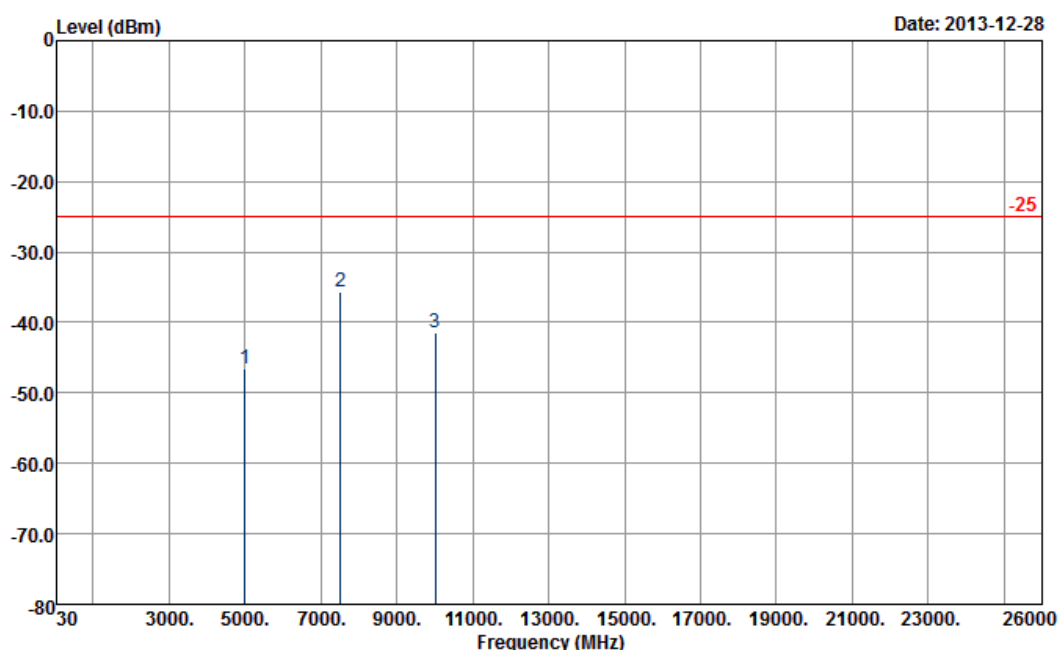
| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5004                 | -38.29          | -25              | -13.29                  | -56.11                  | -41.84                   | 6.83                       | 10.38                       | H                     | Pass   |
| 7500                 | -30.24          | -25              | -5.24                   | -58.11                  | -33.21                   | 9.28                       | 12.25                       | H                     | Pass   |
| 10002                | -40.86          | -25              | -15.86                  | -69.31                  | -45.21                   | 8.54                       | 12.89                       | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                               |                            |          |
|------------------------|-------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 7                    | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 20MHz QPSK RB Size 1 Offset 0 | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                     | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 20850                         |                            |          |

**Remark :**

1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.
2. The harmonic (5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup>,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.



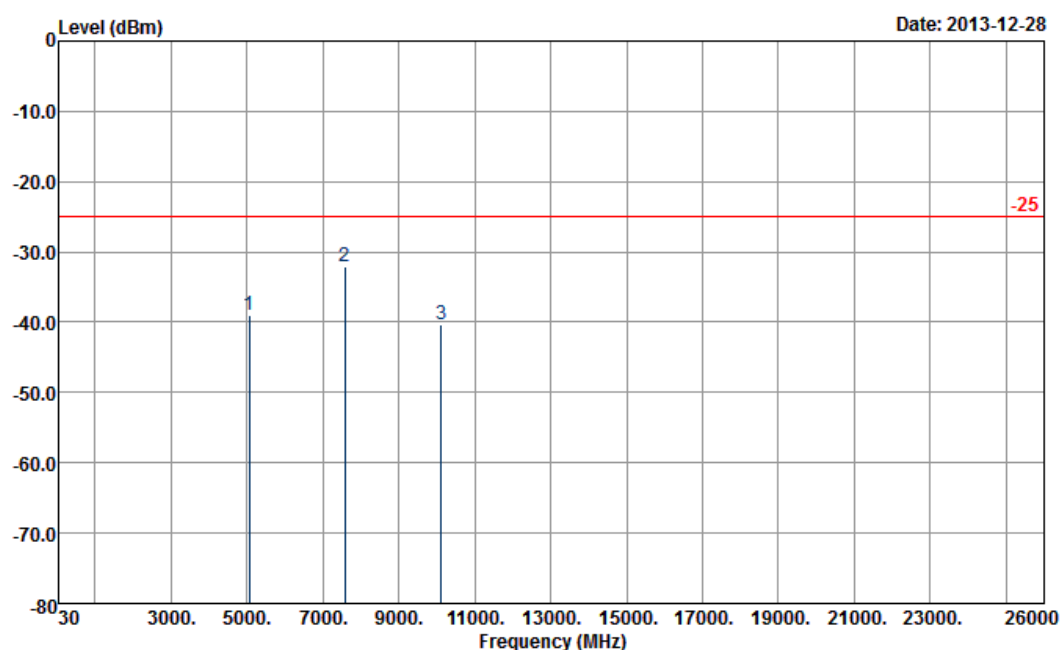
Site : 03CH07-HY  
Condition : -25 HF-EIRP(080306) VERTICAL  
Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5004                 | -46.60          | -25              | -21.60                  | -64.53                  | -50.15                   | 6.83                       | 10.38                       | V                     | Pass   |
| 7506                 | -35.58          | -25              | -10.58                  | -62.49                  | -38.55                   | 9.28                       | 12.25                       | V                     | Pass   |
| 10002                | -41.50          | -25              | -16.50                  | -69.34                  | -45.85                   | 8.54                       | 12.89                       | V                     | Pass   |

Other harmonics are lower than background noise

**<Middle Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 20MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 21100                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

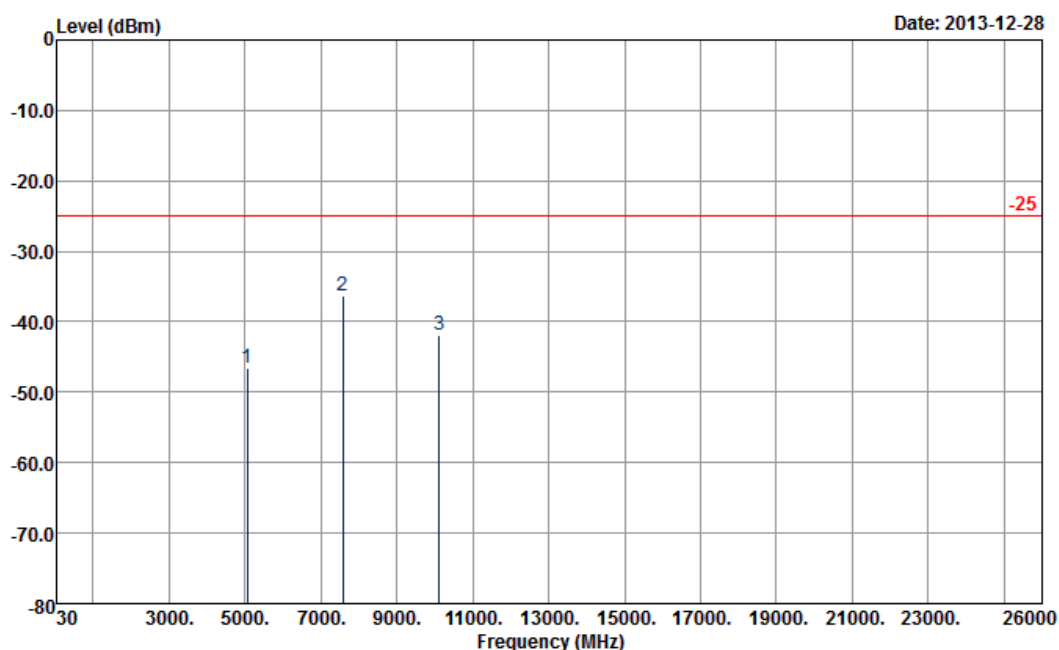


Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5052                 | -38.92          | -25              | -13.92                  | -56.98                  | -42.41                   | 6.86                       | 10.35                       | H                     | Pass   |
| 7578                 | -32.14          | -25              | -7.14                   | -59.27                  | -35.03                   | 9.34                       | 12.23                       | H                     | Pass   |
| 10108                | -40.39          | -25              | -15.39                  | -68.96                  | -44.49                   | 8.64                       | 12.74                       | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 20MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 21100                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



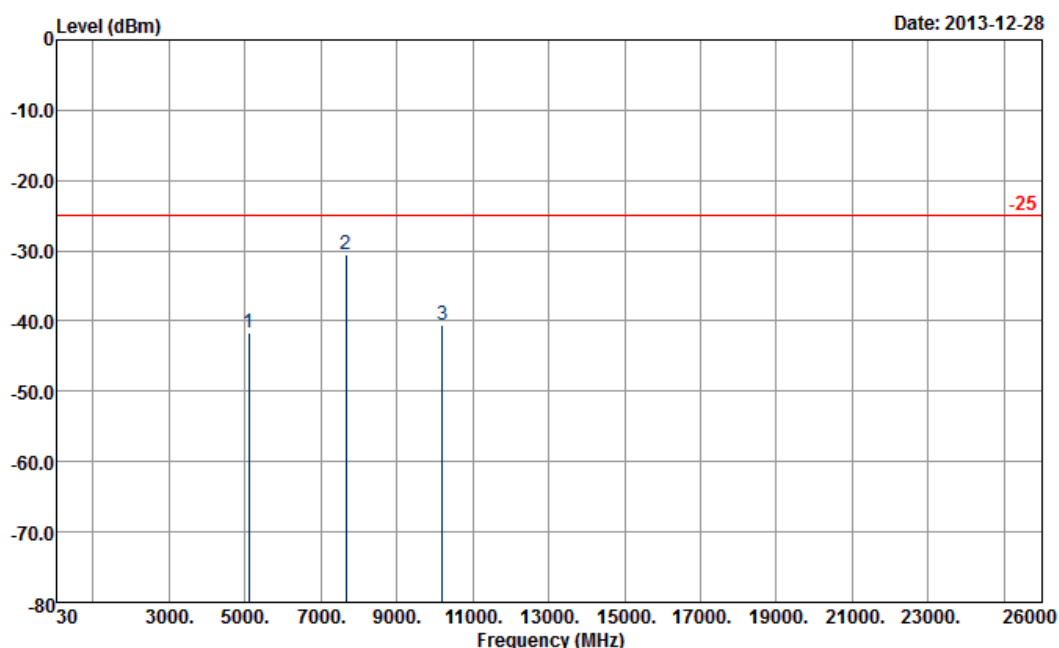
Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5052                 | -46.59          | -25              | -21.59                  | -64.39                  | -50.08                   | 6.86                       | 10.35                       | V                     | Pass   |
| 7578                 | -36.36          | -25              | -11.36                  | -63.5                   | -39.25                   | 9.34                       | 12.23                       | V                     | Pass   |
| 10108                | -41.84          | -25              | -16.84                  | -69.04                  | -45.94                   | 8.64                       | 12.74                       | V                     | Pass   |

Other harmonics are lower than background noise

**<High Channel>**

|                        |                                                                                                                                                                                                                                                                                         |                            |            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C    |
| <b>Test Mode :</b>     | 20MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%     |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Horizontal |
| <b>Channel :</b>       | 21350                                                                                                                                                                                                                                                                                   |                            |            |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |            |

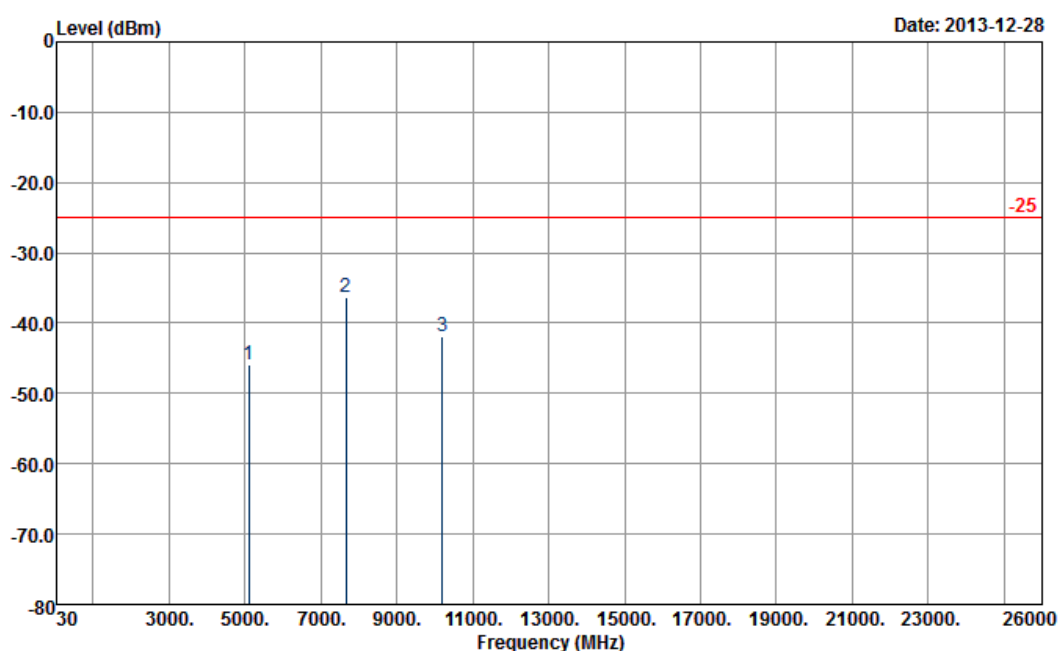


Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) HORIZONTAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5100                 | -41.74          | -25              | -16.74                  | -60.3                   | -46.28                   | 5.84                       | 10.38                       | H                     | Pass   |
| 7650                 | -30.50          | -25              | -5.50                   | -56.95                  | -33.44                   | 9.33                       | 12.27                       | H                     | Pass   |
| 10206                | -40.47          | -25              | -15.47                  | -69.33                  | -44.67                   | 8.6                        | 12.80                       | H                     | Pass   |

Other harmonics are lower than background noise

|                        |                                                                                                                                                                                                                                                                                         |                            |          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>Band :</b>          | LTE Band 7                                                                                                                                                                                                                                                                              | <b>Temperature :</b>       | 21~23°C  |
| <b>Test Mode :</b>     | 20MHz QPSK RB Size 1 Offset 0                                                                                                                                                                                                                                                           | <b>Relative Humidity :</b> | 47~49%   |
| <b>Test Engineer :</b> | Eric Shih                                                                                                                                                                                                                                                                               | <b>Polarization :</b>      | Vertical |
| <b>Channel :</b>       | 21350                                                                                                                                                                                                                                                                                   |                            |          |
| <b>Remark :</b>        | 1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.<br>2. The harmonic (5 <sup>th</sup> , 6 <sup>th</sup> , 7 <sup>th</sup> ,...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise. |                            |          |



Site : 03CH07-HY  
 Condition : -25 HF-EIRP(080306) VERTICAL  
 Project : FG 3N1532

| Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) | Result |
|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|--------|
| 5100                 | -46.01          | -25              | -21.01                  | -65.29                  | -50.55                   | 5.84                       | 10.38                       | V                     | Pass   |
| 7656                 | -36.31          | -25              | -11.31                  | -62.51                  | -39.25                   | 9.33                       | 12.27                       | V                     | Pass   |
| 10206                | -41.86          | -25              | -16.86                  | -69.71                  | -46.06                   | 8.6                        | 12.80                       | V                     | Pass   |

Other harmonics are lower than background noise

### 3.8 Frequency Stability Measurement

#### 3.8.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within  $\pm 0.00025\%$  ( $\pm 2.5\text{ppm}$ ) of the center frequency.

#### 3.8.2 Measuring Instruments

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

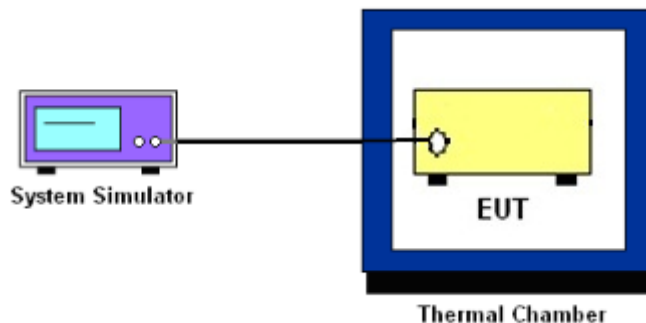
#### 3.8.3 Test Procedures for Temperature Variation

1. The EUT was set up in the thermal chamber and connected with the base station.
2. With power OFF, the temperature was decreased to  $-30^{\circ}\text{C}$  and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in  $10^{\circ}\text{C}$  step up to  $50^{\circ}\text{C}$ . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

#### 3.8.4 Test Procedures for Voltage Variation

1. The EUT was placed in a temperature chamber at  $25\pm 5^{\circ}\text{C}$  and connected with the base station.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

### 3.8.5 Test Setup



### 3.8.6 Test Result of Temperature Variation

|                  |                   |               |     |
|------------------|-------------------|---------------|-----|
| Band :           | LTE Band 5 (QPSK) | Limit (ppm) : | 2.5 |
| Temperature (°C) | BW 10MHz          | Result        |     |
|                  | Deviation (ppm)   |               |     |
| 50               | 0.05              | PASS          |     |
| 40               | 0.04              |               |     |
| 30               | 0.04              |               |     |
| 20               | 0.03              |               |     |
| 10               | 0.03              |               |     |
| 0                | 0.04              |               |     |
| -10              | 0.04              |               |     |
| -20              | 0.05              |               |     |
| -30              | 0.05              |               |     |

| <b>Band :</b>    | LTE Band 7 (QPSK) | <b>Limit (ppm) :</b> | 2.5 |
|------------------|-------------------|----------------------|-----|
| Temperature (°C) | BW 10MHz          | Result               |     |
|                  | Deviation (ppm)   |                      |     |
| 50               | 0.08              | PASS                 |     |
| 40               | 0.07              |                      |     |
| 30               | 0.05              |                      |     |
| 20               | 0.06              |                      |     |
| 10               | 0.04              |                      |     |
| 0                | 0.04              |                      |     |
| -10              | 0.05              |                      |     |
| -20              | 0.07              |                      |     |
| -30              | 0.07              |                      |     |

### 3.8.7 Test Result of Voltage Variation

| Band       | Bandwidth | Voltage (Volt) | Deviation (ppm) | Limit (ppm) | Result |
|------------|-----------|----------------|-----------------|-------------|--------|
| LTE Band 5 | 10M       | 4.20           | 0.04            | 2.5         | PASS   |
|            |           | Normal         | 0.03            |             |        |
|            |           | 3.40           | 0.04            |             |        |
| LTE Band 7 | 10M       | 4.20           | 0.06            | 2.5         | PASS   |
|            |           | Normal         | 0.06            |             |        |
|            |           | 3.40           | 0.05            |             |        |

**Remark:**

1. Normal Voltage = 3.80V.
2. The manufacturer declared that the EUT could work properly between voltage 3.40V ~ 4.20V.

## 4 List of Measuring Equipment

| Instrument                | Manufacturer           | Model No.                               | Serial No.    | Characteristics | Calibration Date | Test Date                       | Due Date      | Remark                |
|---------------------------|------------------------|-----------------------------------------|---------------|-----------------|------------------|---------------------------------|---------------|-----------------------|
| LTE Base Station          | Anritsu                | MT8820C                                 | 6201026480    | MIMO FDD        | Jan. 04, 2013    | Dec. 19, 2013~<br>Dec. 21, 2013 | Jan. 03, 2014 | Conducted (TH02-HY)   |
| Spectrum Analyzer         | Rohde & Schwarz        | FSP40                                   | 100055        | 9kHz~40GHz      | Jun. 07, 2013    | Dec. 19, 2013~<br>Dec. 21, 2013 | Jun. 06, 2014 | Conducted (TH02-HY)   |
| Thermal Chamber           | Ten Billion            | TTH-D3SP                                | TBN-930701    | N/A             | Jul. 19, 2013    | Dec. 19, 2013~<br>Dec. 21, 2013 | Jul. 18, 2014 | Conducted (TH02-HY)   |
| RF cable                  | WOKEN                  | SMA(M)-SMA (M) for SS405 Cable Assembly | S05-130703-32 | N/A             | Jul. 09, 2013    | Dec. 19, 2013~<br>Dec. 21, 2013 | Jul. 08, 2014 | Conducted (TH02-HY)   |
| Hygrometer                | Testo                  | 608-H1                                  | 34897199      | N/A             | May 07, 2013     | Dec. 19, 2013~<br>Dec. 21, 2013 | May 06, 2014  | Conducted (TH02-HY)   |
| Spectrum Analyzer         | Rohde & Schwarz        | FSP30                                   | 101067        | 9KHz ~ 30GHz    | Nov. 20, 2013    | Dec. 28, 2013~<br>Dec. 30, 2013 | Nov. 19, 2014 | Radiation (03CH07-HY) |
| Bilog Antenna             | Schaffner              | CBL6111C                                | 2726          | 30MHz ~ 1GHz    | Oct. 10, 2013    | Dec. 28, 2013~<br>Dec. 30, 2013 | Oct. 09, 2014 | Radiation (03CH07-HY) |
| Double Ridge Horn Antenna | ESCO                   | 3117                                    | 75962         | 1GHz~18GHz      | Aug. 22, 2013    | Dec. 28, 2013~<br>Dec. 30, 2013 | Aug. 21, 2014 | Radiation (03CH07-HY) |
| SHF-EHF Horn Antenna      | SCHWARZBEC K           | BBHA 9170                               | BBHA9170251   | 15GHz- 40GHz    | Oct. 03, 2013    | Dec. 28, 2013~<br>Dec. 30, 2013 | Oct. 02, 2014 | Radiation (03CH07-HY) |
| Preamplifier              | COM-POWER              | PA-103A                                 | 161241        | 30MHz~1GHz      | Feb. 26, 2013    | Dec. 28, 2013~<br>Dec. 30, 2013 | Feb. 25, 2014 | Radiation (03CH07-HY) |
| Preamplifier              | Agilent                | 8449B                                   | 3008A02362    | 1GHz~26.5GHz    | Nov. 29, 2013    | Dec. 28, 2013~<br>Dec. 30, 2013 | Nov. 28, 2014 | Radiation (03CH07-HY) |
| Filter                    | Microwave Circuits     | H1G013G1                                | SN477215      | 1GHz HPF        | Nov. 28, 2013    | Dec. 28, 2013~<br>Dec. 30, 2013 | Nov. 27, 2014 | Radiation (03CH07-HY) |
| Filter                    | Wainwright Instruments | WHKX1.5G/1 5G-10SS                      | SN32          | 1.5GHz HPF      | Nov. 28, 2013    | Dec. 28, 2013~<br>Dec. 30, 2013 | Nov. 27, 2014 | Radiation (03CH07-HY) |
| Filter                    | Wainwright Instruments | WLKS1200-8 SS                           | SN3           | 1.2GHz LPF      | Nov. 28, 2013    | Dec. 28, 2013~<br>Dec. 30, 2013 | Nov. 27, 2014 | Radiation (03CH07-HY) |
| Filter                    | Microwave Circuits     | H3G018G1                                | SN477220      | 3GHz HPF        | Nov. 28, 2013    | Dec. 28, 2013~<br>Dec. 30, 2013 | Nov. 27, 2014 | Radiation (03CH07-HY) |
| Notch Filter              | Wainwright             | WRCT 2500/2700-10 /20-10                | SN3           | LTE Band 7      | Nov. 28, 2013    | Dec. 28, 2013~<br>Dec. 30, 2013 | Nov. 27, 2014 | Radiation (03CH07-HY) |
| Notch Filter              | Wainwright             | WRCG 824/849/814/ 859-40 8SS            | SN35          | LTE Band 5      | Nov. 28, 2013    | Dec. 28, 2013~<br>Dec. 30, 2013 | Nov. 27, 2014 | Radiation (03CH07-HY) |



| Instrument    | Manufacturer             | Model No.           | Serial No.              | Characteristics | Calibration Date | Test Date                       | Due Date      | Remark                   |
|---------------|--------------------------|---------------------|-------------------------|-----------------|------------------|---------------------------------|---------------|--------------------------|
| HF RF Cable   | HUBER<br>SUHNER          | SUCOFLEX<br>104     | 38411/6                 | 1GHz ~ 18GHz    | Nov. 28, 2013    | Dec. 28, 2013~<br>Dec. 30, 2013 | Nov. 27, 2014 | Radiation<br>(03CH07-HY) |
| LF RF Cable   | Warison+HUBE<br>R SUHNER | WCBA-WC04<br>NM.NM2 | N/A                     | 30MHz ~ 1GHz    | Nov. 28, 2013    | Dec. 28, 2013~<br>Dec. 30, 2013 | Nov. 27, 2014 | Radiation<br>(03CH07-HY) |
| Turn Table    | ChainTek                 | ChainTek<br>3000    | N/A                     | 0 ~ 360 degree  | N/A              | Dec. 28, 2013~<br>Dec. 30, 2013 | N/A           | Radiation<br>(03CH07-HY) |
| Antenna Mast  | ChainTek                 | M-400-0             | 114/8000604/L           | N/A             | N/A              | Dec. 28, 2013~<br>Dec. 30, 2013 | N/A           | Radiation<br>(03CH07-HY) |
| Test Software | Audix                    | E3                  | Version<br>6.2009-08-24 | N/A             | N/A              | Dec. 28, 2013~<br>Dec. 30, 2013 | N/A           | Radiation<br>(03CH07-HY) |
| Hygrometer    | Testo                    | 608-H1              | 34897197                | N/A             | May 07, 2013     | Dec. 28, 2013~<br>Dec. 30, 2013 | May 06, 2014  | Radiation<br>(03CH07-HY) |

**Note:** Test equipment calibration is traceable to the procedure of ISO17025.



## **5 Uncertainty of Evaluation**

### **Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)**

|                                                                                         |             |
|-----------------------------------------------------------------------------------------|-------------|
| <b>Measuring Uncertainty for a Level of Confidence of 95% (<math>U = 2Uc(y)</math>)</b> | <b>4.50</b> |
|-----------------------------------------------------------------------------------------|-------------|