

# FCC TEST REPORT

## (PART 27)

**REPORT NO.:** RF131114C03-2

**MODEL NO.:** C6730

**FCC ID:** V65C6730

**RECEIVED:** Nov. 14, 2013

**TESTED:** Nov. 29, 2013 ~ Feb. 14, 2014

**ISSUED:** Feb. 25, 2014

**APPLICANT:** Kyocera Communications, Inc. c/o Kyocera Corporation

**ADDRESS:** 8611 Balboa Ave. San Diego, CA 92123

**ISSUED BY:** Bureau Veritas Consumer Products Services  
(H.K.) Ltd., Taoyuan Branch

**LAB ADDRESS:** No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist.,  
New Taipei City, Taiwan, R.O.C.

**TEST LOCATION:** No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei  
Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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## RELEASE CONTROL RECORD

| ISSUE NO.     | REASON FOR CHANGE | DATE ISSUED   |
|---------------|-------------------|---------------|
| RF131114C03-2 | Original release  | Feb. 25, 2014 |

## 1 CERTIFICATION

**PRODUCT:** Kyocera phone  
**MODEL NO.:** C6730  
**BRAND:** Kyocera  
**APPLICANT:** Kyocera Communications, Inc. c/o Kyocera Corporation  
**TESTED:** Nov. 29, 2013 ~ Feb. 14, 2014  
**TEST SAMPLE:** Identical Prototype  
**TEST STANDARDS:** **FCC Part 27, Subpart C, M**  
**FCC Part 2**  
**ANSI C63.4-2003**

The above equipment (model: C6730) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**PREPARED BY** : Vera Huang , **DATE** : Feb. 25, 2014

Vera Huang / Specialist

**APPROVED BY** : Sam chen , **DATE** : Feb. 25, 2014

Sam Chen / Senior Project Engineer

## 2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

| STANDARD SECTION   | TEST TYPE AND LIMIT                     | RESULT | REMARK                                                                              |
|--------------------|-----------------------------------------|--------|-------------------------------------------------------------------------------------|
| 2.1046<br>27.50(h) | Equivalent isotropically radiated power | PASS   | Meet the requirement of limit.                                                      |
| 2.1055<br>27.54    | Frequency Stability                     | PASS   | Meet the requirement of limit.                                                      |
| 2.1049             | Occupied Bandwidth                      | PASS   | Meet the requirement of limit.                                                      |
|                    | Peak to average ratio                   | PASS   | Meet the requirement of limit.                                                      |
| 2.1051<br>27.53(l) | Band Edge Measurements                  | PASS   | Meet the requirement of limit.                                                      |
| 2.1051<br>27.53(l) | Conducted Spurious Emissions            | PASS   | Meet the requirement of limit.                                                      |
| 2.1053<br>27.53(l) | Radiated Spurious Emissions             | PASS   | Meet the requirement of limit.<br>Minimum passing margin is -13.09dB at 5172.80MHz. |

### 2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

| MEASUREMENT         | FREQUENCY       | UNCERTAINTY |
|---------------------|-----------------|-------------|
| Conducted emissions | 150kHz~30MHz    | 2.44 dB     |
| Radiated emissions  | 30MHz ~ 200MHz  | 2.93 dB     |
|                     | 200MHz ~1000MHz | 2.95 dB     |
|                     | 1GHz ~ 18GHz    | 2.26 dB     |
|                     | 18GHz ~ 40GHz   | 1.94 dB     |

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

## 2.2 TEST SITE AND INSTRUMENTS

| DESCRIPTION & MANUFACTURER                     | MODEL NO.      | SERIAL NO.          | DATE OF CALIBRATION | DUE DATE OF CALIBRATION |
|------------------------------------------------|----------------|---------------------|---------------------|-------------------------|
| Test Receiver<br>ROHDE & SCHWARZ               | ESCI           | 100744              | Apr. 15, 2013       | Apr. 14, 2014           |
| Spectrum Analyzer<br>Agilent                   | E4446A         | MY51100039          | Jul. 31, 2013       | Jul. 30, 2014           |
| BILOG Antenna<br>SCHWARZBECK                   | VULB9168       | 9168-472            | Mar. 25, 2013       | Mar. 24, 2014           |
| HORN Antenna<br>SCHWARZBECK                    | BBHA 9120 D    | 9120D- 209          | Sep. 12, 2013       | Sep. 11, 2014           |
| HORN Antenna<br>SCHWARZBECK                    | BBHA 9170      | 9170-480            | Dec. 25, 2012       | Dec. 24, 2013           |
| HORN Antenna<br>SCHWARZBECK                    | BBHA 9170      | 9170-480            | Dec. 18, 2013       | Dec. 17, 2014           |
| Loop Antenna                                   | 3127-836       | 00099258            | Aug. 09, 2013       | Aug. 08, 2014           |
| Preamplifier<br>EMCI                           | EMC 330H       | 980112              | Dec. 28, 2012       | Dec. 27, 2013           |
| Preamplifier<br>EMCI                           | EMC 330H       | 980112              | Dec. 27, 2013       | Dec. 26, 2014           |
| RF signal cable<br>HUBER+SUHNNER               | SUCOFLEX 104   | 309219/4<br>2950114 | Oct. 18, 2013       | Oct. 17, 2014           |
| RF signal cable<br>HUBER+SUHNNER               | SUCOFLEX 104   | 250130/4            | Oct. 18, 2013       | Oct. 17, 2014           |
| RF signal cable<br>Worken                      | RG-213         | NA                  | Nov. 07, 2013       | Nov. 06, 2014           |
| Software<br>BV ADT                             | E3<br>6.120103 | NA                  | NA                  | NA                      |
| Antenna Tower<br>MF                            | MFA-440H       | NA                  | NA                  | NA                      |
| Turn Table<br>MF                               | MFT-201SS      | NA                  | NA                  | NA                      |
| Antenna Tower & Turn Table<br>Controller<br>MF | MF-7802        | NA                  | NA                  | NA                      |
| Mini-Circuits Power Splitter                   | ZN2PD-9G       | NA                  | Jul. 18, 2013       | Jul. 17, 2014           |
| JFW 20dB attenuation                           | 50HF-020-SMA   | NA                  | NA                  | NA                      |
| Communications<br>Tester-Wireless              | E5515C         | MY52102544          | Sep. 05, 2012       | Sep. 04, 2014           |
| Radio Communication<br>Analyzer                | MT8820C        | 6201300640          | Aug. 01, 2013       | Jul. 31, 2014           |

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 10.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 690701.
5. The IC Site Registration No. is IC 7450F-10.

### 3 GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

|                              |                                                        |                       |
|------------------------------|--------------------------------------------------------|-----------------------|
| <b>PRODUCT</b>               | Kyocera phone                                          |                       |
| <b>MODEL NO.</b>             | C6730                                                  |                       |
| <b>POWER SUPPLY</b>          | 5.0Vdc (adapter or host equipment)<br>3.8Vdc (battery) |                       |
| <b>MODULATION TECHNOLOGY</b> | LTE Band 41                                            | QPSK, 16QAM           |
| <b>FREQUENCY RANGE</b>       | LTE Band 41<br>Channel Bandwidth: 10MHz                | 2501.0MHz ~ 2685.0MHz |
|                              | LTE Band 41<br>Channel Bandwidth: 15MHz                | 2503.5MHz ~ 2682.5MHz |
|                              | LTE Band 41<br>Channel Bandwidth: 20MHz                | 2506.0MHz ~ 2680.0MHz |
| <b>EMISSION DESIGNATOR</b>   | LTE Band 41<br>Channel Bandwidth: 10MHz                | 8M92W7D               |
|                              | LTE Band 41<br>Channel Bandwidth: 15MHz                | 13M4G7D               |
|                              | LTE Band 41<br>Channel Bandwidth: 20MHz                | 17M8G7D               |
| <b>MAX. EIRP POWER</b>       | LTE Band 41<br>Channel Bandwidth: 10MHz                | 178.24mW              |
|                              | LTE Band 41<br>Channel Bandwidth: 15MHz                | 174.98mW              |
|                              | LTE Band 41<br>Channel Bandwidth: 20MHz                | 187.50mW              |
| <b>ANTENNA TYPE</b>          | Fixed Internal Antenna with -1.5dBi gain               |                       |
| <b>DATA CABLE</b>            | Refer to Note as below                                 |                       |
| <b>I/O PORTS</b>             | Refer to users' manual                                 |                       |
| <b>ACCESSORY DEVICES</b>     | Refer to Note as below                                 |                       |

**NOTE:**

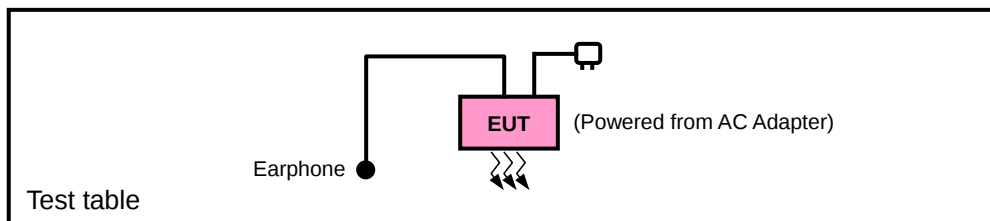
1. The EUT has following accessories.

| ITEM           | BRAND   | MODEL      | DESCRIPTION                                          |
|----------------|---------|------------|------------------------------------------------------|
| AC Adapter     | Kyocera | SCP-42ADT  | I/P: 100-240Vac, 50/60Hz, 200mA<br>O/P: 5Vdc, 1000mA |
| Li-ion Battery | Kyocera | SCP-59LBPS | Rating: 3.8Vdc, 2000mAh                              |
| USB cable      | Kyocera | SCP-11SDC  | 1.2m non-shielded cable w/o ferrite core             |

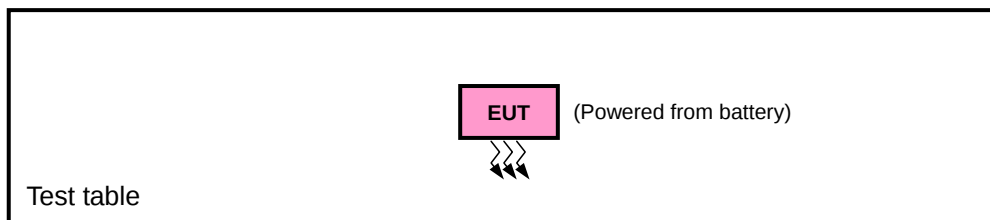
2. The above EUT information is declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

### 3.2 CONFIGURATION OF SYSTEM UNDER TEST

#### FOR RADIATION EMISSION TEST



#### FOR E.I.R.P. TEST



### 3.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| NO. | PRODUCT  | BRAND  | MODEL NO. | SERIAL NO. | FCC ID |
|-----|----------|--------|-----------|------------|--------|
| 1   | EARPHONE | GALIEN | HF-HB04D  | N/A        | N/A    |

| NO. | SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS |
|-----|-----------------------------------------------------|
| 1   | N/A                                                 |

**NOTE:**

1. All power cords of the above support units are non-shielded (1.8m).
2. Item 1 was provided by client.

### 3.4 DESCRIPTION OF TEST MODES

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports. The worst case was found when positioned on Y-plane for EIRP and X-axis for radiated emission. Following channel(s) was (were) selected for the final test as listed below:

#### LTE Band 41

| EUT CONFIGURE MODE | TEST ITEM             | AVAILABLE CHANNEL | TESTED CHANNEL      | CHANNEL BANDWIDTH | MODULATION  | MODE                 |
|--------------------|-----------------------|-------------------|---------------------|-------------------|-------------|----------------------|
| -                  | EIRP                  | 39700 to 41540    | 39700, 40620, 41540 | 10MHz             | QPSK, 16QAM | 1 RB / 0 RB Offset   |
|                    |                       | 39725 to 41515    | 39725, 40620, 41515 | 15MHz             | QPSK, 16QAM | 1 RB / 0 RB Offset   |
|                    |                       | 39750 to 41490    | 39750, 40620, 41515 | 20MHz             | QPSK, 16QAM | 1 RB / 0 RB Offset   |
| -                  | FREQUENCY STABILITY   | 39700 to 41540    | 40620               | 10MHz             | QPSK        | 1 RB / 0 RB Offset   |
|                    |                       | 39725 to 41515    | 40620               | 15MHz             | QPSK        | 1 RB / 0 RB Offset   |
|                    |                       | 39750 to 41490    | 40620               | 20MHz             | QPSK        | 1 RB / 0 RB Offset   |
| -                  | OCCUPIED BANDWIDTH    | 39700 to 41540    | 39700, 40620, 41540 | 10MHz             | QPSK, 16QAM | 50 RB / 0 RB Offset  |
|                    |                       | 39725 to 41515    | 39725, 40620, 41515 | 15MHz             | QPSK, 16QAM | 75 RB / 0 RB Offset  |
|                    |                       | 39750 to 41490    | 39750, 40620, 41515 | 20MHz             | QPSK, 16QAM | 100 RB / 0 RB Offset |
| -                  | PEAK TO AVERAGE RATIO | 39700 to 41540    | 39700, 40620, 41540 | 10MHz             | QPSK, 16QAM | 1 RB / 0 RB Offset   |
|                    |                       | 39725 to 41515    | 39725, 40620, 41515 | 15MHz             | QPSK, 16QAM | 1 RB / 0 RB Offset   |
|                    |                       | 39750 to 41490    | 39750, 40620, 41515 | 20MHz             | QPSK, 16QAM | 1 RB / 0 RB Offset   |
| -                  | BAND EDGE             | 39700 to 41540    | 39700, 41540        | 10MHz             | QPSK, 16QAM | 50 RB / 0 RB Offset  |
|                    |                       | 39725 to 41515    | 39725, 41515        | 15MHz             | QPSK, 16QAM | 75 RB / 0 RB Offset  |
|                    |                       | 39750 to 41490    | 39750, 41490        | 20MHz             | QPSK, 16QAM | 100 RB / 0 RB Offset |
| -                  | CONDCUDED EMISSION    | 39700 to 41540    | 40620               | 10MHz             | QPSK        | 1 RB / 0 RB Offset   |
|                    |                       | 39725 to 41515    | 40620               | 15MHz             | QPSK        | 1 RB / 0 RB Offset   |
|                    |                       | 39750 to 41490    | 40620               | 20MHz             | QPSK        | 1 RB / 0 RB Offset   |
| -                  | RADIATED EMISSION     | 39700 to 41540    | 40620               | 10MHz             | QPSK        | 1 RB / 0 RB Offset   |
|                    |                       |                   |                     |                   |             | 50 RB / 0 RB Offset  |
|                    |                       | 39725 to 41515    | 40620               | 15MHz             | QPSK        | 1 RB / 0 RB Offset   |
|                    |                       |                   |                     |                   |             | 75 RB / 0 RB Offset  |
|                    |                       | 39750 to 41490    | 40620               | 20MHz             | QPSK        | 1 RB / 0 RB Offset   |
|                    |                       |                   |                     |                   |             | 100 RB / 0 RB Offset |

**Note:** This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

# **TEST CONDITION:**

| TEST ITEM           | ENVIRONMENTAL CONDITIONS | INPUT POWER  | TESTED BY  |
|---------------------|--------------------------|--------------|------------|
| ERP/EIRP            | 26deg. C, 58%RH          | 3.8Vdc       | Howard Kao |
| FREQUENCY STABILITY | 26deg. C, 58%RH          | 3.8Vdc       | Howard Kao |
| OCCUPIED BANDWIDTH  | 26deg. C, 58%RH          | 3.8Vdc       | Howard Kao |
| BAND EDGE           | 26deg. C, 58%RH          | 3.8Vdc       | Howard Kao |
| CONDCUDED EMISSION  | 26deg. C, 58%RH          | 3.8Vdc       | Howard Kao |
| RADIATED EMISSION   | 25deg. C, 65%RH          | 120Vac, 60Hz | Anson Lin  |

## **3.5 GENERAL DESCRIPTION OF APPLIED STANDARDS**

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC 47 CFR Part 2**

**FCC 47 CFR Part 27**

**ANSI C63.4-2003**

**ANSI/TIA/EIA-603-C 2004**

**NOTE:** All test items have been performed and recorded as per the above standards.

## 4 TEST TYPES AND RESULTS

### 4.1 OUTPUT POWER MEASUREMENT

#### 4.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

The radiated peak output power shall be according to the specific rule Part 27.50(h)(2) that “User stations are limited to 2 watts” and 27.50(i) specific that “Peak transmit power must be measure over any interval of continuous transmission using instrumentation calibration in terms of rms-equivalent voltage.”

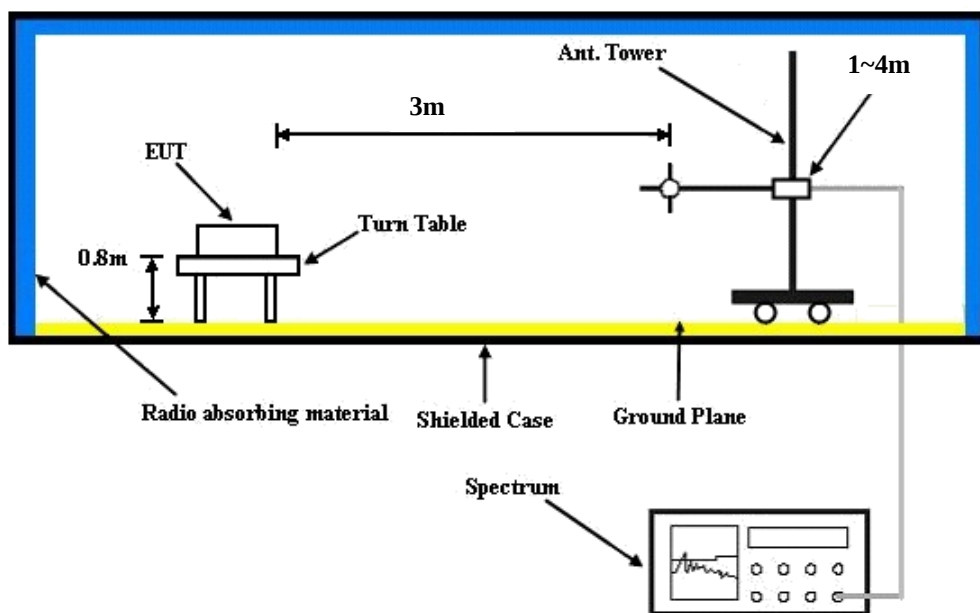
#### 4.1.2 TEST PROCEDURES

- a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 10MHz for LTE mode.
- b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
- c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a tx cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value” of step b. Record the power level of S.G
- d.  $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}.$

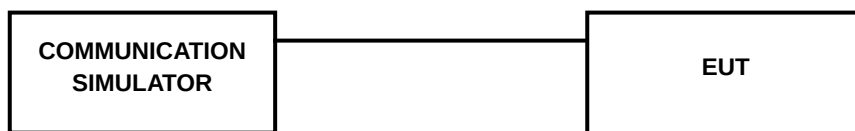
#### CONDUCTED POWER MEASUREMENT:

- a. The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
- b. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

### 4.1.3 TEST SETUP



### CONDUCTED POWER MEASUREMENT:



#### 4.1.4 TEST RESULTS

##### AVERAGE CONDUCTED OUTPUT POWER (dBm)

| Band / BW | Modulation | RB Size | RB Offset | Low CH 39700         | Mid CH 40160         | Mid CH 40620         | Mid CH 41080         | High CH 41540        | 3PGG MPR (dB) |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------|
|           |            |         |           | Frequency 2501.0 MHz | Frequency 2547.0 MHz | Frequency 2593.0 MHz | Frequency 2639.0 MHz | Frequency 2685.0 MHz |               |
| 41 / 10M  | QPSK       | 1       | 0         | 23.27                | 23.09                | 23.19                | 23.39                | 23.54                | 0             |
|           |            | 1       | 24        | 23.44                | 23.23                | 23.39                | 23.47                | 23.53                | 0             |
|           |            | 1       | 49        | 23.11                | 22.88                | 22.97                | 23.13                | 23.17                | 0             |
|           |            | 25      | 0         | 22.43                | 22.06                | 22.09                | 22.37                | 22.45                | 1             |
|           |            | 25      | 12        | 22.29                | 21.93                | 22.23                | 22.31                | 22.34                | 1             |
|           |            | 25      | 25        | 22.16                | 21.84                | 22.13                | 22.15                | 22.14                | 1             |
|           |            | 50      | 0         | 22.19                | 21.88                | 22.15                | 22.31                | 22.37                | 1             |
|           | 16QAM      | 1       | 0         | 22.17                | 21.99                | 22.09                | 22.29                | 22.44                | 1             |
|           |            | 1       | 24        | 22.34                | 22.13                | 22.29                | 22.37                | 22.43                | 1             |
|           |            | 1       | 49        | 22.01                | 21.87                | 21.87                | 22.03                | 22.07                | 1             |
|           |            | 25      | 0         | 21.33                | 20.96                | 20.99                | 21.27                | 21.35                | 2             |
|           |            | 25      | 12        | 21.19                | 20.83                | 21.13                | 21.21                | 21.24                | 2             |
|           |            | 25      | 25        | 21.06                | 20.85                | 21.03                | 21.05                | 21.04                | 2             |
|           |            | 50      | 0         | 21.09                | 20.88                | 21.05                | 21.21                | 21.27                | 2             |

| Band / BW | Modulation | RB Size | RB Offset | Low CH 39725         | Mid CH 40173         | Mid CH 40620         | Mid CH 41068         | High CH 41515        | 3PGG MPR (dB) |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------|
|           |            |         |           | Frequency 2503.5 MHz | Frequency 2548.3 MHz | Frequency 2593.0 MHz | Frequency 2637.8 MHz | Frequency 2682.5 MHz |               |
| 41 / 15M  | QPSK       | 1       | 0         | 23.40                | 23.22                | 23.32                | 23.52                | 23.67                | 0             |
|           |            | 1       | 37        | 23.57                | 23.36                | 23.52                | 23.60                | 23.66                | 0             |
|           |            | 1       | 74        | 23.24                | 22.90                | 23.10                | 23.26                | 23.30                | 0             |
|           |            | 36      | 0         | 22.56                | 22.19                | 22.22                | 22.50                | 22.58                | 1             |
|           |            | 36      | 19        | 22.42                | 22.06                | 22.36                | 22.44                | 22.47                | 1             |
|           |            | 36      | 39        | 22.29                | 21.97                | 22.26                | 22.28                | 22.27                | 1             |
|           |            | 75      | 0         | 22.32                | 21.90                | 22.28                | 22.44                | 22.50                | 1             |
|           | 16QAM      | 1       | 0         | 22.30                | 22.12                | 22.22                | 22.42                | 22.57                | 1             |
|           |            | 1       | 37        | 22.47                | 22.26                | 22.42                | 22.50                | 22.56                | 1             |
|           |            | 1       | 74        | 22.14                | 21.89                | 22.00                | 22.16                | 22.20                | 1             |
|           |            | 36      | 0         | 21.46                | 21.09                | 21.12                | 21.40                | 21.48                | 2             |
|           |            | 36      | 19        | 21.32                | 20.96                | 21.26                | 21.34                | 21.37                | 2             |
|           |            | 36      | 39        | 21.19                | 20.87                | 21.16                | 21.18                | 21.17                | 2             |
|           |            | 75      | 0         | 21.22                | 20.90                | 21.18                | 21.34                | 21.40                | 2             |

| Band / BW | Modulation | RB Size | RB Offset | Low CH 39750         | Mid CH 40185         | Mid CH 40620         | Mid CH 41055         | High CH 41490        | 3PGG MPR (dB) |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------|
|           |            |         |           | Frequency 2506.0 MHz | Frequency 2549.5 MHz | Frequency 2593.0 MHz | Frequency 2636.5 MHz | Frequency 2680.0 MHz |               |
| 41 / 20M  | QPSK       | 1       | 0         | 23.51                | 23.33                | 23.43                | 23.63                | <b>23.78</b>         | 0             |
|           |            | 1       | 50        | 23.68                | 23.47                | 23.63                | 23.71                | 23.77                | 0             |
|           |            | 1       | 99        | 23.35                | 23.01                | 23.21                | 23.37                | 23.41                | 0             |
|           |            | 50      | 0         | 22.67                | 22.30                | 22.33                | 22.61                | 22.69                | 1             |
|           |            | 50      | 25        | 22.53                | 22.17                | 22.47                | 22.55                | 22.58                | 1             |
|           |            | 50      | 50        | 22.40                | 22.08                | 22.37                | 22.39                | 22.38                | 1             |
|           |            | 100     | 0         | 22.43                | 22.01                | 22.39                | 22.55                | 22.61                | 1             |
|           | 16QAM      | 1       | 0         | 22.41                | 22.23                | 22.33                | 22.53                | 22.68                | 1             |
|           |            | 1       | 50        | 22.58                | 22.37                | 22.53                | 22.61                | 22.67                | 1             |
|           |            | 1       | 99        | 22.25                | 21.91                | 22.11                | 22.27                | 22.31                | 1             |
|           |            | 50      | 0         | 21.57                | 21.20                | 21.23                | 21.51                | 21.59                | 2             |
|           |            | 50      | 25        | 21.43                | 21.07                | 21.37                | 21.45                | 21.48                | 2             |
|           |            | 50      | 50        | 21.30                | 20.98                | 21.27                | 21.29                | 21.28                | 2             |
|           |            | 100     | 0         | 21.33                | 20.91                | 21.29                | 21.45                | 21.51                | 2             |

### AVERAGE EIRP (dBm)

#### LTE BAND 41

#### CHANNEL BANDWIDTH: 10MHZ QPSK

| Plane | Channel | Frequency (MHz) | LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) |
|-------|---------|-----------------|-----------|-----------------------|-----------|----------|--------------------|
| Y     | 39700   | 2501.0          | -16.47    | 38.98                 | 22.51     | 178.24   | H                  |
|       | 40620   | 2593.0          | -16.61    | 38.17                 | 21.56     | 143.22   | H                  |
|       | 41540   | 2685.0          | -16.33    | 38.45                 | 22.12     | 162.93   | H                  |
|       | 39700   | 2501.0          | -24.05    | 39.04                 | 14.99     | 31.55    | V                  |
|       | 40620   | 2593.0          | -23.94    | 38.68                 | 14.74     | 29.79    | V                  |
|       | 41540   | 2685.0          | -24.48    | 38.60                 | 14.12     | 25.82    | V                  |

#### CHANNEL BANDWIDTH: 10MHZ 16QAM

| Plane | Channel | Frequency (MHz) | LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) |
|-------|---------|-----------------|-----------|-----------------------|-----------|----------|--------------------|
| Y     | 39700   | 2501.0          | -17.53    | 38.98                 | 21.45     | 139.64   | H                  |
|       | 40620   | 2593.0          | -17.76    | 38.17                 | 20.41     | 109.90   | H                  |
|       | 41540   | 2685.0          | -17.30    | 38.45                 | 21.15     | 130.32   | H                  |
|       | 39700   | 2501.0          | -25.96    | 39.04                 | 13.08     | 20.32    | V                  |
|       | 40620   | 2593.0          | -25.82    | 38.68                 | 12.86     | 19.32    | V                  |
|       | 41540   | 2685.0          | -26.24    | 38.60                 | 12.36     | 17.22    | V                  |

### CHANNEL BANDWIDTH: 15MHZ QPSK

| Plane | Channel | Frequency (MHz) | LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) |
|-------|---------|-----------------|-----------|-----------------------|-----------|----------|--------------------|
| Y     | 39725   | 2503.5          | -16.66    | 39.09                 | 22.43     | 174.98   | H                  |
|       | 40620   | 2593.0          | -16.49    | 38.17                 | 21.68     | 147.23   | H                  |
|       | 41515   | 2682.5          | -16.79    | 38.52                 | 21.73     | 148.94   | H                  |
|       | 39725   | 2503.5          | -24.01    | 39.04                 | 15.03     | 31.84    | V                  |
|       | 40620   | 2593.0          | -24.08    | 38.68                 | 14.60     | 28.84    | V                  |
|       | 41515   | 2682.5          | -24.97    | 38.66                 | 13.69     | 23.39    | V                  |

### CHANNEL BANDWIDTH: 15MHZ 16QAM

| Plane | Channel | Frequency (MHz) | LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) |
|-------|---------|-----------------|-----------|-----------------------|-----------|----------|--------------------|
| Y     | 39725   | 2503.5          | -17.33    | 39.09                 | 21.76     | 149.97   | H                  |
|       | 40620   | 2593.0          | -17.32    | 38.17                 | 20.85     | 121.62   | H                  |
|       | 41515   | 2682.5          | -17.47    | 38.52                 | 21.05     | 127.35   | H                  |
|       | 39725   | 2503.5          | -25.83    | 39.04                 | 13.21     | 20.94    | V                  |
|       | 40620   | 2593.0          | -25.75    | 38.68                 | 12.93     | 19.63    | V                  |
|       | 41515   | 2682.5          | -25.75    | 38.66                 | 12.91     | 19.54    | V                  |

### CHANNEL BANDWIDTH: 20MHZ QPSK

| Plane | Channel | Frequency (MHz) | LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) |
|-------|---------|-----------------|-----------|-----------------------|-----------|----------|--------------------|
| Y     | 39750   | 2506.0          | -16.53    | 39.26                 | 22.73     | 187.50   | H                  |
|       | 40620   | 2593.0          | -16.49    | 38.17                 | 21.68     | 147.23   | H                  |
|       | 41490   | 2680.0          | -16.46    | 38.71                 | 22.25     | 167.88   | H                  |
|       | 39750   | 2506.0          | -23.98    | 39.33                 | 15.35     | 34.28    | V                  |
|       | 40620   | 2593.0          | -24.07    | 38.68                 | 14.61     | 28.91    | V                  |
|       | 41490   | 2680.0          | -25.02    | 38.76                 | 13.74     | 23.66    | V                  |

### CHANNEL BANDWIDTH: 20MHZ 16QAM

| Plane | Channel | Frequency (MHz) | LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) |
|-------|---------|-----------------|-----------|-----------------------|-----------|----------|--------------------|
| Y     | 39750   | 2506.0          | -17.29    | 39.26                 | 21.97     | 157.40   | H                  |
|       | 40620   | 2593.0          | -17.00    | 38.17                 | 21.17     | 130.92   | H                  |
|       | 41490   | 2680.0          | -17.08    | 38.71                 | 21.63     | 145.55   | H                  |
|       | 39750   | 2506.0          | -25.92    | 39.33                 | 13.41     | 21.93    | V                  |
|       | 40620   | 2593.0          | -25.06    | 38.68                 | 13.62     | 23.01    | V                  |
|       | 41490   | 2680.0          | -24.85    | 38.76                 | 13.91     | 24.60    | V                  |

## 4.2 FREQUENCY STABILITY MEASUREMENT

### 4.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

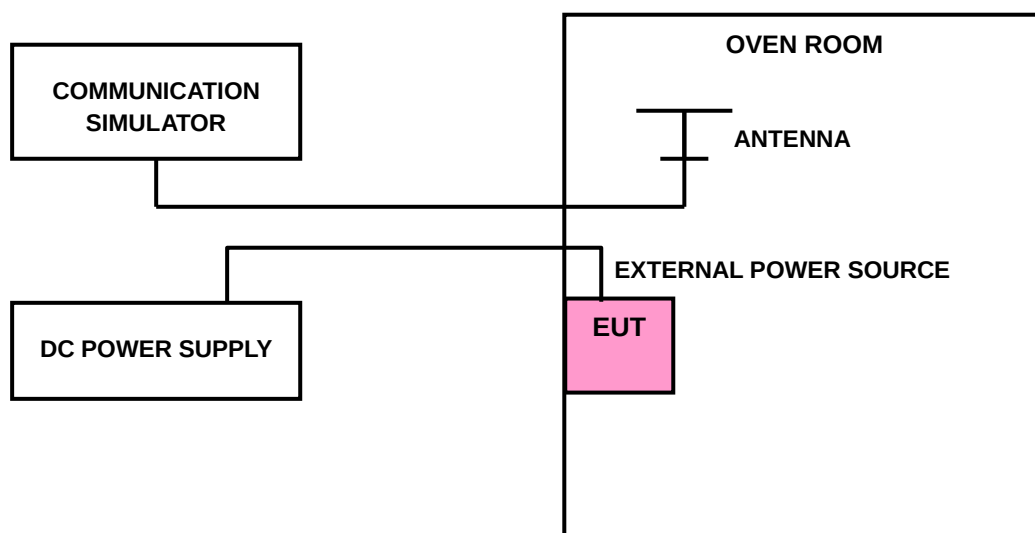
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

### 4.2.2 TEST PROCEDURE

- Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the  $\pm 0.5^{\circ}\text{C}$  during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

**NOTE:** The frequency error was recorded frequency error from the communication simulator.

### 4.2.3 TEST SETUP



## 4.2.4 TEST RESULTS

### FREQUENCY ERROR vs. VOLTAGE

| VOLTAGE<br>(Volts) | FREQUENCY ERROR (ppm) |        |        | LIMIT (ppm) |
|--------------------|-----------------------|--------|--------|-------------|
|                    | LTE BAND 41           |        |        |             |
|                    | 10MHz                 | 15MHz  | 20MHz  |             |
| 3.7                | -0.0019               | -0.002 | -0.005 | 2.5         |
| 3.3                | -0.0041               | 0.002  | 0.005  | 2.5         |
| 4.2                | 0.0023                | 0.002  | -0.003 | 2.5         |

**NOTE:** The applicant defined the normal working voltage of the battery is from 3.3Vdc to 4.2Vdc.

### FREQUENCY ERROR vs. TEMPERATURE

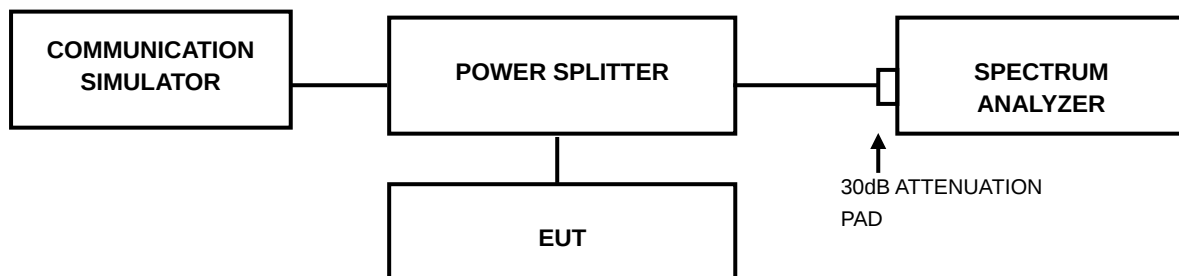
| TEMP. (°C) | FREQUENCY ERROR (ppm) |        |        | LIMIT (ppm) |
|------------|-----------------------|--------|--------|-------------|
|            | LTE BAND 41           |        |        |             |
|            | 10MHz                 | 15MHz  | 20MHz  |             |
| -30        | 0.0034                | 0.006  | 0.009  | 2.5         |
| -20        | -0.0028               | -0.003 | 0.004  | 2.5         |
| -10        | 0.0039                | 0.009  | 0.005  | 2.5         |
| 0          | 0.0019                | 0.009  | 0.002  | 2.5         |
| 10         | 0.0008                | 0.004  | -0.001 | 2.5         |
| 20         | 0.0021                | 0.002  | 0.004  | 2.5         |
| 30         | 0.0023                | 0.009  | 0.004  | 2.5         |
| 40         | 0.0014                | 0.002  | 0.004  | 2.5         |
| 50         | 0.0008                | 0.010  | 0.005  | 2.5         |

## 4.3 OCCUPIED BANDWIDTH MEASUREMENT

### 4.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

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 power of a given emission.

### 4.3.2 TEST SETUP

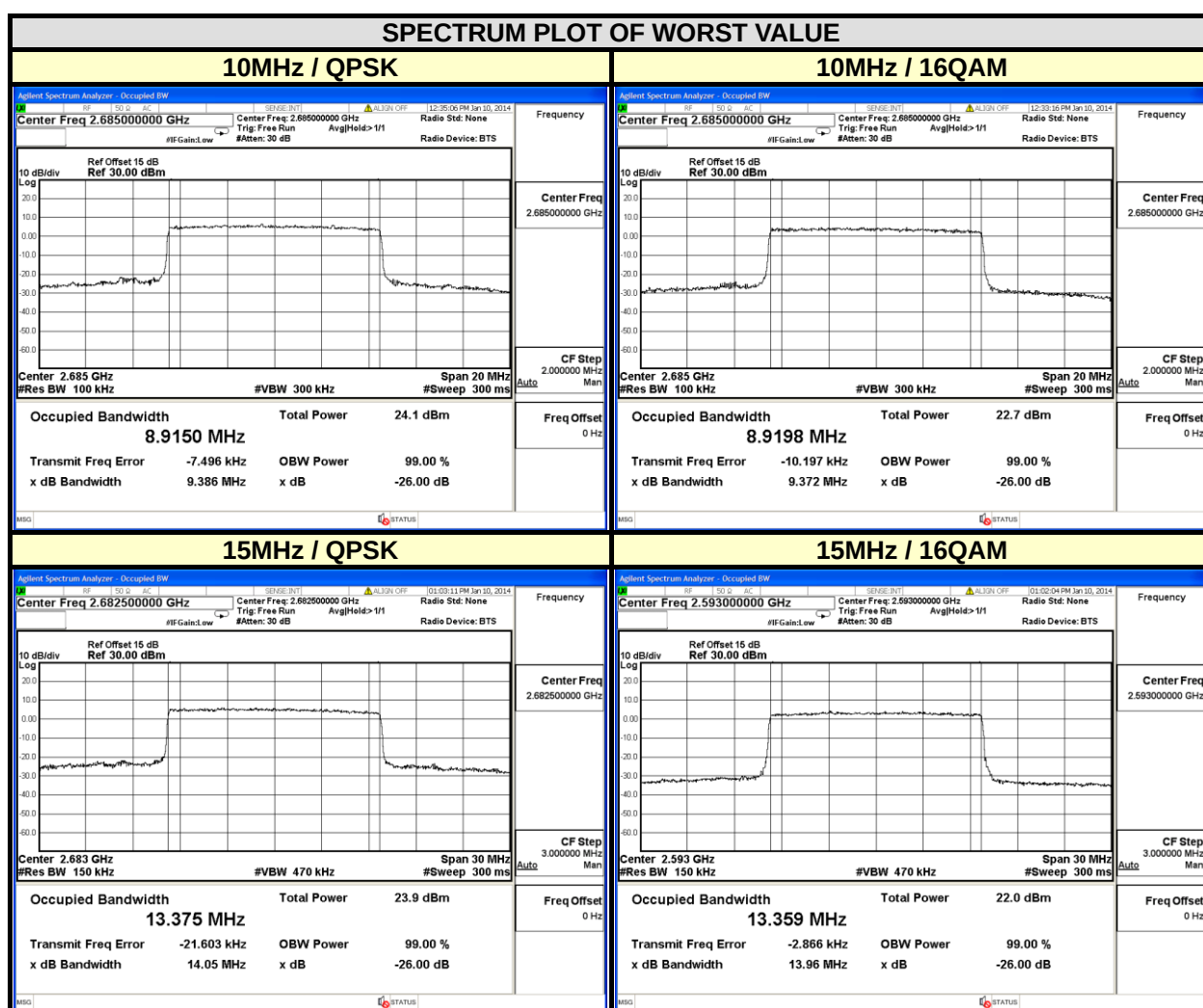


### 4.3.3 TEST PROCEDURES

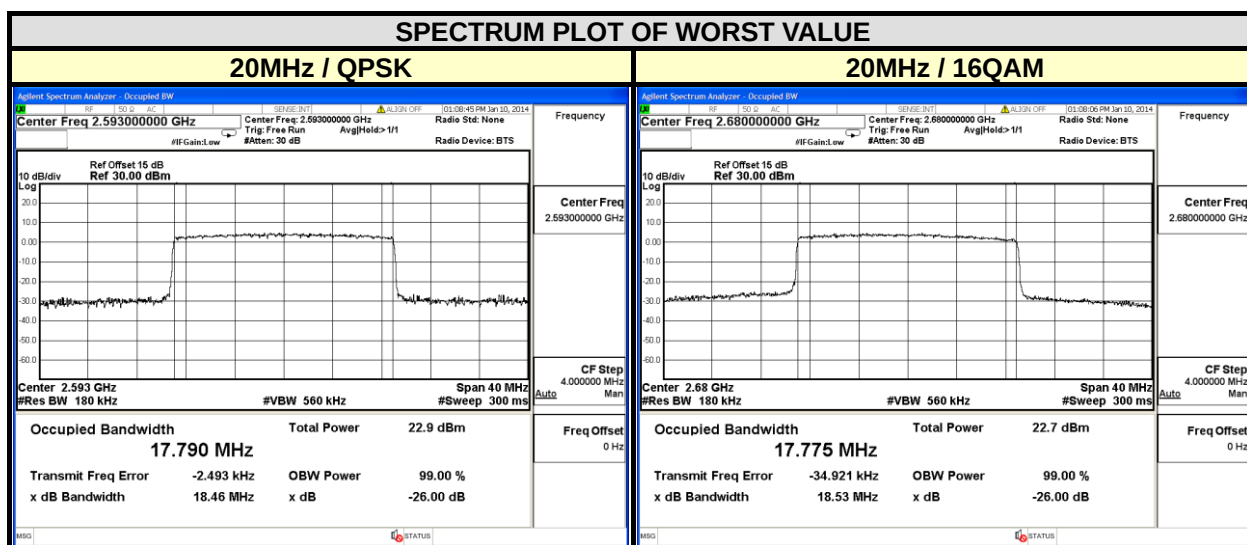
- The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

#### 4.3.4 TEST RESULTS

| LTE BAND 41              |                 |                              |        |                          |                 |                              |        |
|--------------------------|-----------------|------------------------------|--------|--------------------------|-----------------|------------------------------|--------|
| CHANNEL BANDWIDTH: 10MHz |                 |                              |        | CHANNEL BANDWIDTH: 15MHz |                 |                              |        |
| CHANNEL                  | FREQUENCY (MHz) | 99% OCCUPIED BANDWIDTH (MHz) |        | CHANNEL                  | FREQUENCY (MHz) | 99% OCCUPIED BANDWIDTH (MHz) |        |
|                          |                 | QPSK                         | 16QAM  |                          |                 | QPSK                         | 16QAM  |
| 39700                    | 2501.0          | 8.9131                       | 8.9097 | 39725                    | 2503.5          | 13.362                       | 13.349 |
| 40620                    | 2593.0          | 8.9125                       | 8.9152 | 40620                    | 2593.0          | 13.368                       | 13.359 |
| 41540                    | 2685.0          | 8.9150                       | 8.9198 | 41515                    | 2682.5          | 13.375                       | 13.357 |



| LTE BAND 41              |                 |                              |        |
|--------------------------|-----------------|------------------------------|--------|
| CHANNEL BANDWIDTH: 20MHz |                 |                              |        |
| CHANNEL                  | FREQUENCY (MHz) | 99% OCCUPIED BANDWIDTH (MHz) |        |
|                          |                 | QPSK                         | 16QAM  |
| 39750                    | 2506.0          | 17.777                       | 17.773 |
| 40620                    | 2593.0          | 17.790                       | 17.775 |
| 41490                    | 2680.0          | 17.785                       | 17.775 |

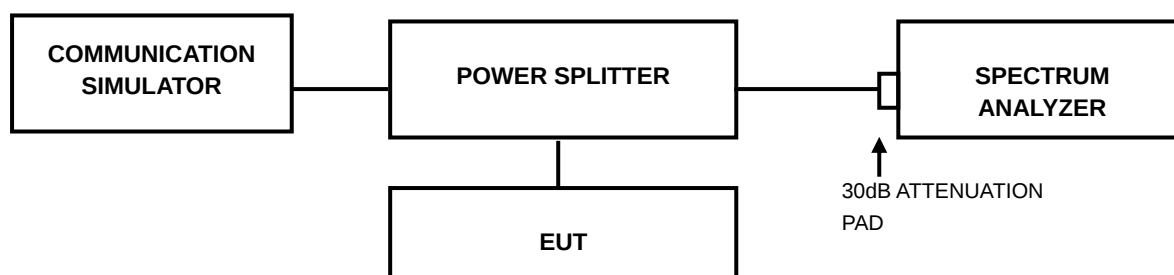


## 4.4 PEAK TO AVERAGE RATIO

### 4.4.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

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

### 4.4.2 TEST SETUP



### 4.4.3 TEST PROCEDURES

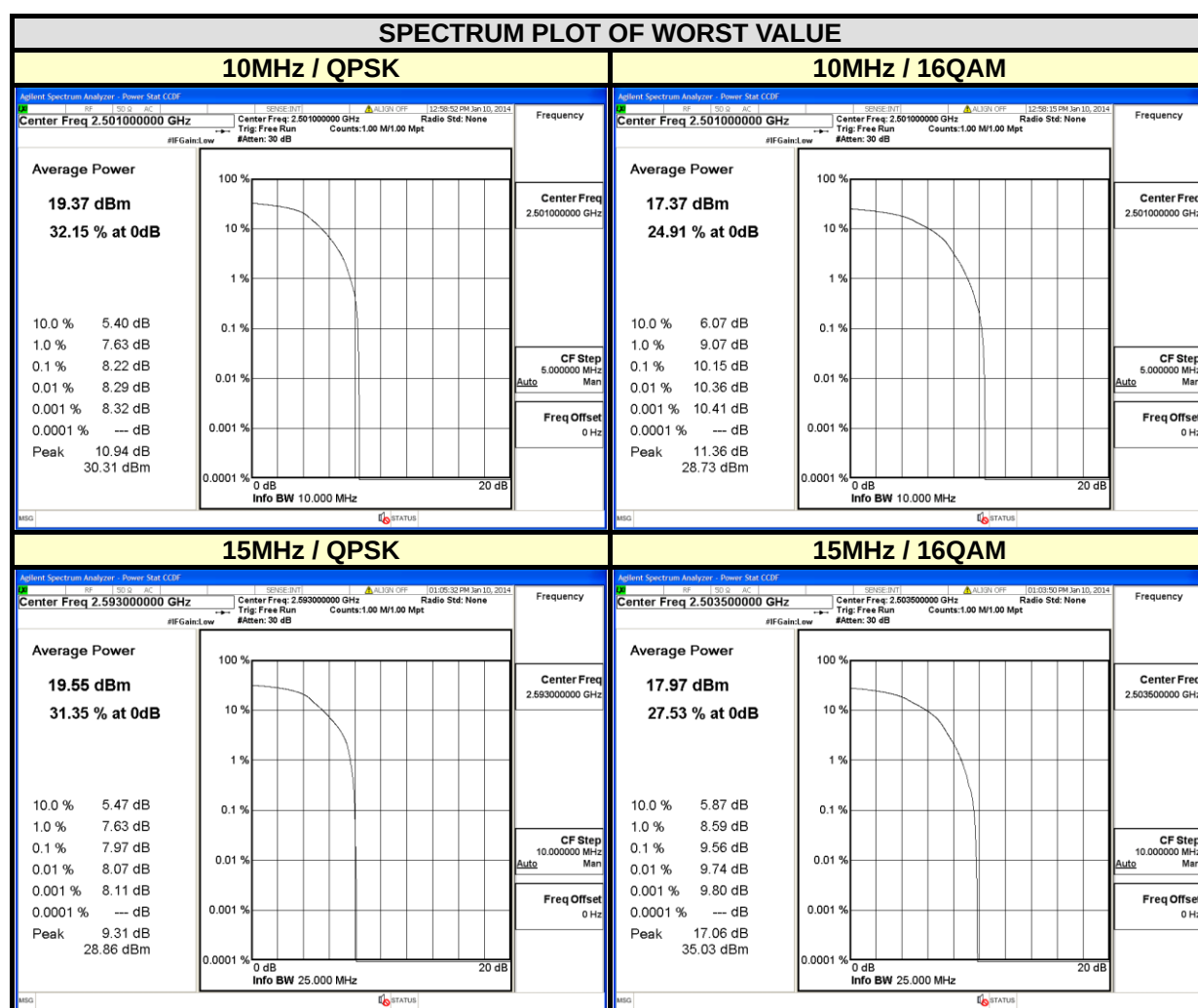
1. Set resolution/measurement bandwidth  $\geq$  signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.



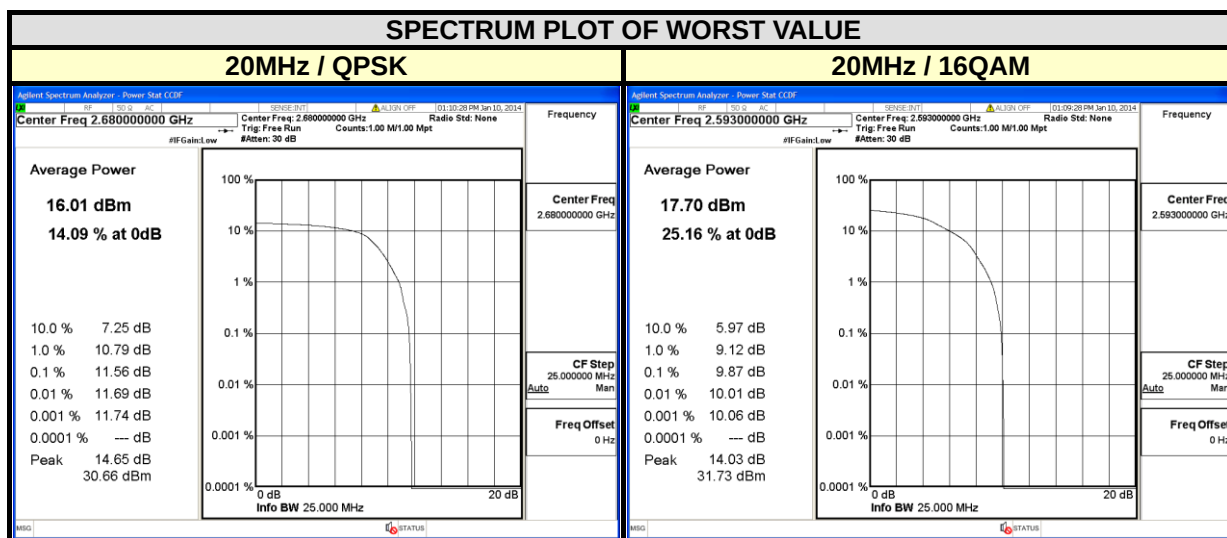
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## 4.4.4 TEST RESULTS

| LTE BAND 41              |                 |                            |       |                          |                 |                            |       |
|--------------------------|-----------------|----------------------------|-------|--------------------------|-----------------|----------------------------|-------|
| CHANNEL BANDWIDTH: 10MHz |                 |                            |       | CHANNEL BANDWIDTH: 15MHz |                 |                            |       |
| CHANNEL                  | FREQUENCY (MHz) | PEAK TO AVERAGE RATIO (dB) |       | CHANNEL                  | FREQUENCY (MHz) | PEAK TO AVERAGE RATIO (dB) |       |
|                          |                 | QPSK                       | 16QAM |                          |                 | QPSK                       | 16QAM |
| 39700                    | 2501.0          | 8.22                       | 10.15 | 39725                    | 2503.5          | 6.64                       | 9.56  |
| 40620                    | 2593.0          | 7.59                       | 9.70  | 40620                    | 2593.0          | 7.97                       | 9.53  |
| 41540                    | 2685.0          | 7.17                       | 8.75  | 41515                    | 2682.5          | 7.28                       | 8.32  |



| LTE BAND 41              |                 |                            |       |
|--------------------------|-----------------|----------------------------|-------|
| CHANNEL BANDWIDTH: 20MHz |                 |                            |       |
| CHANNEL                  | FREQUENCY (MHz) | PEAK TO AVERAGE RATIO (dB) |       |
|                          |                 | QPSK                       | 16QAM |
| 39750                    | 2506.0          | 7.25                       | 7.58  |
| 40620                    | 2593.0          | 8.46                       | 9.87  |
| 41490                    | 2680.0          | 11.56                      | 9.16  |

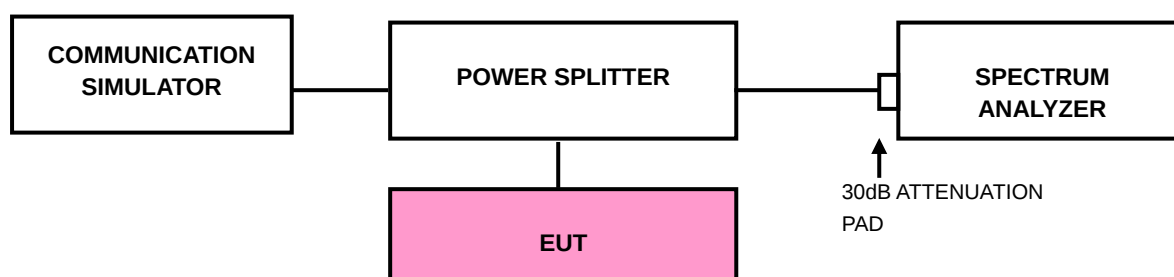


## 4.5 BAND EDGE MEASUREMENT

### 4.5.1 LIMITS OF BAND EDGE MEASUREMENT

According to FCC 27.53(l)(4) specified that power of any emission outside of the channel edge must be attenuated below the transmitting power (P) by a factor shall be not less than  $43 + 10 \log (P)$  dB at the channel edge, the limit of emission equal to  $-13\text{dBm}$ . And  $55 + 10 \log (P)$  dB at 5.5 MHz from the channel edges, the limit of emission equal to  $-25\text{dBm}$ . In the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

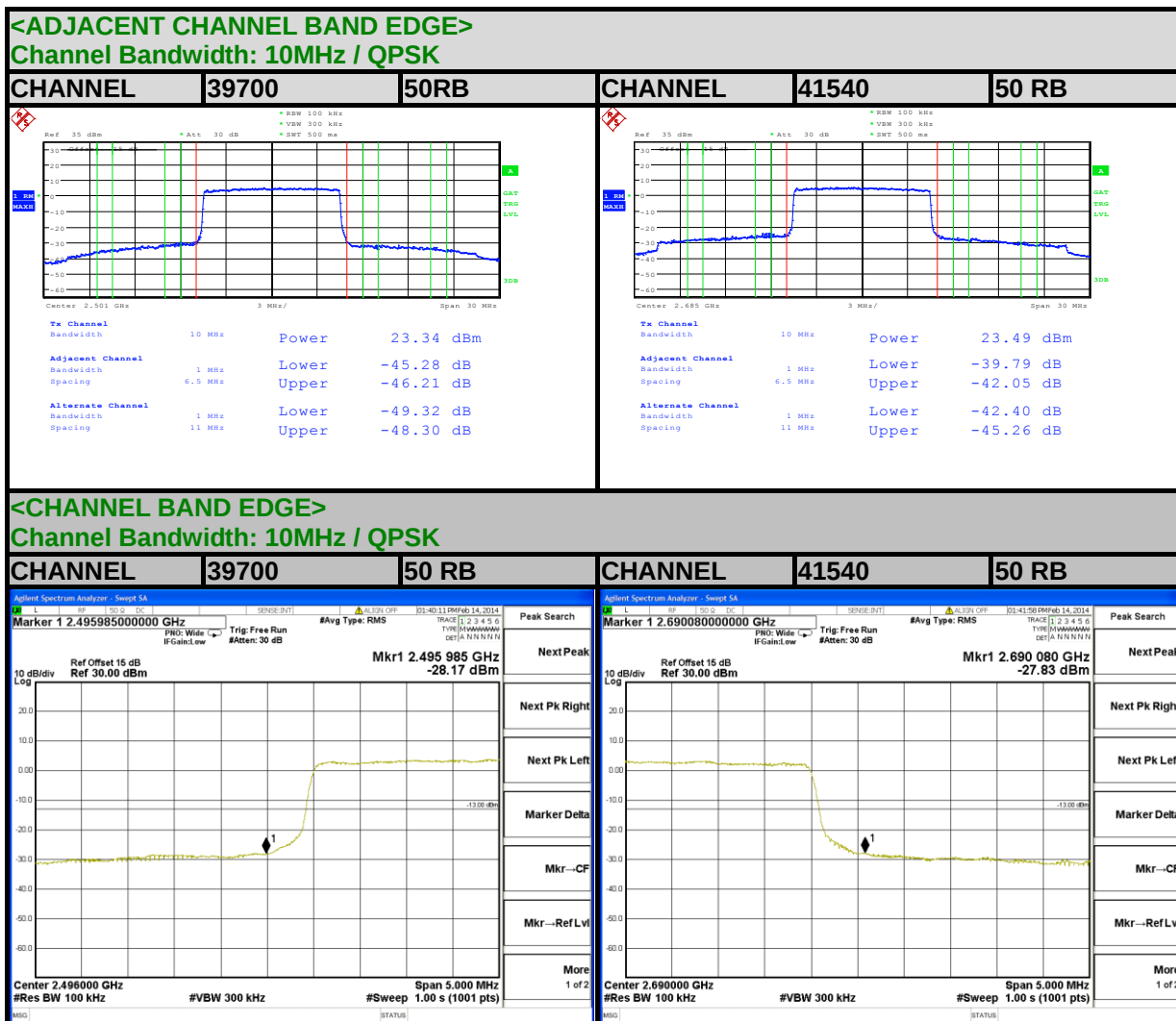
### 4.5.2 TEST SETUP

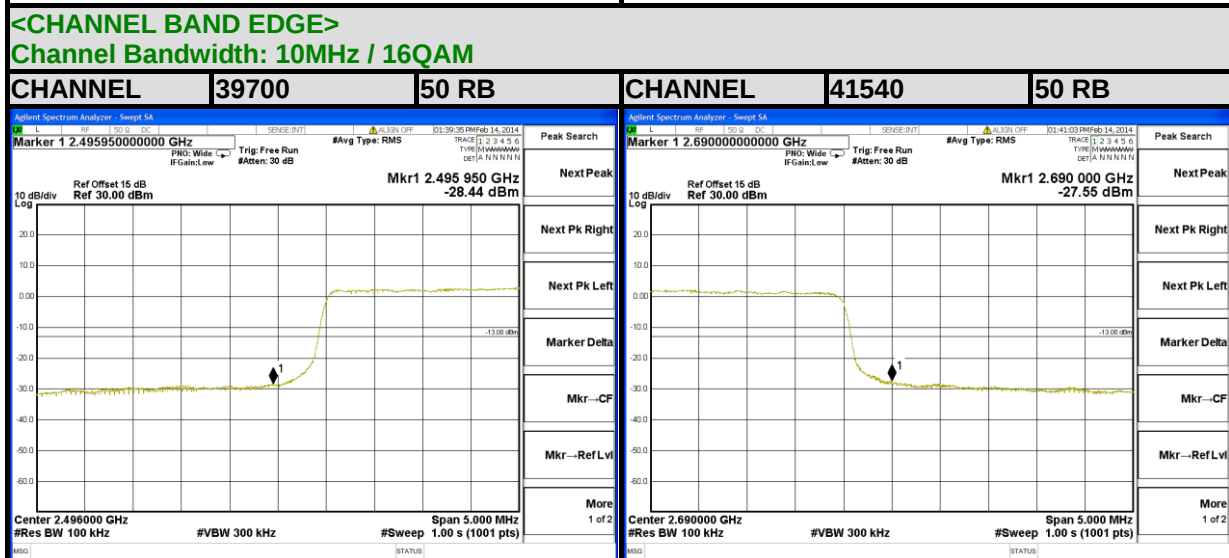
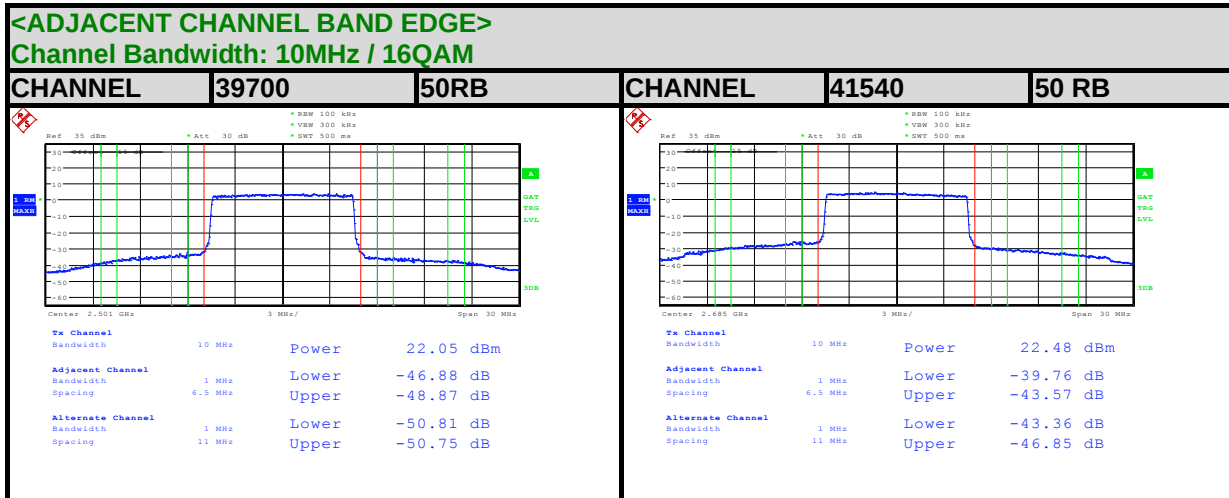


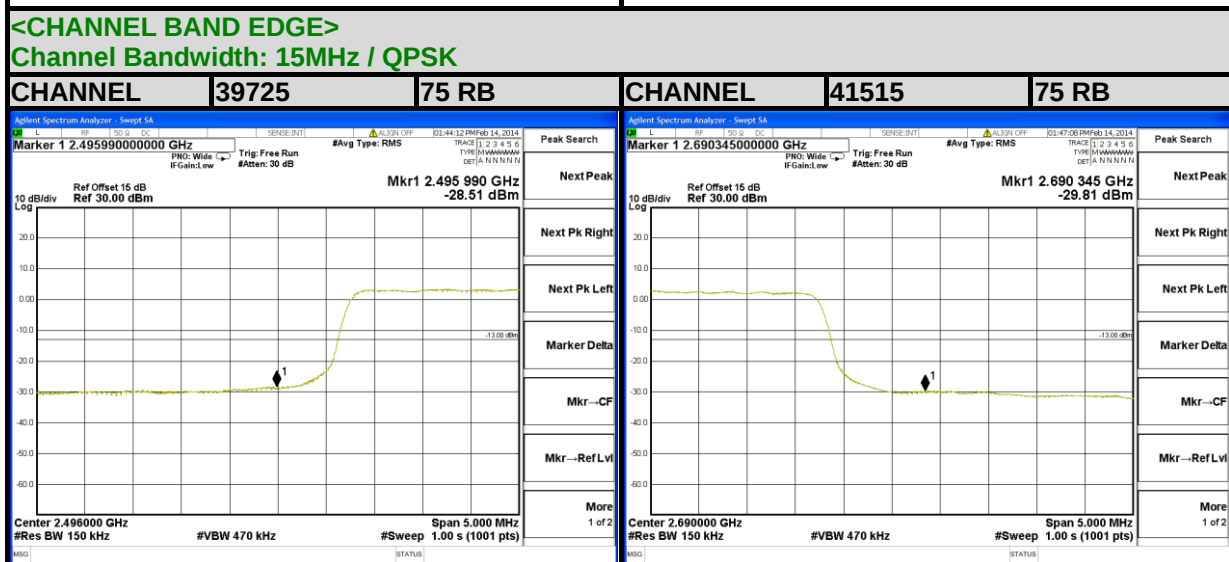
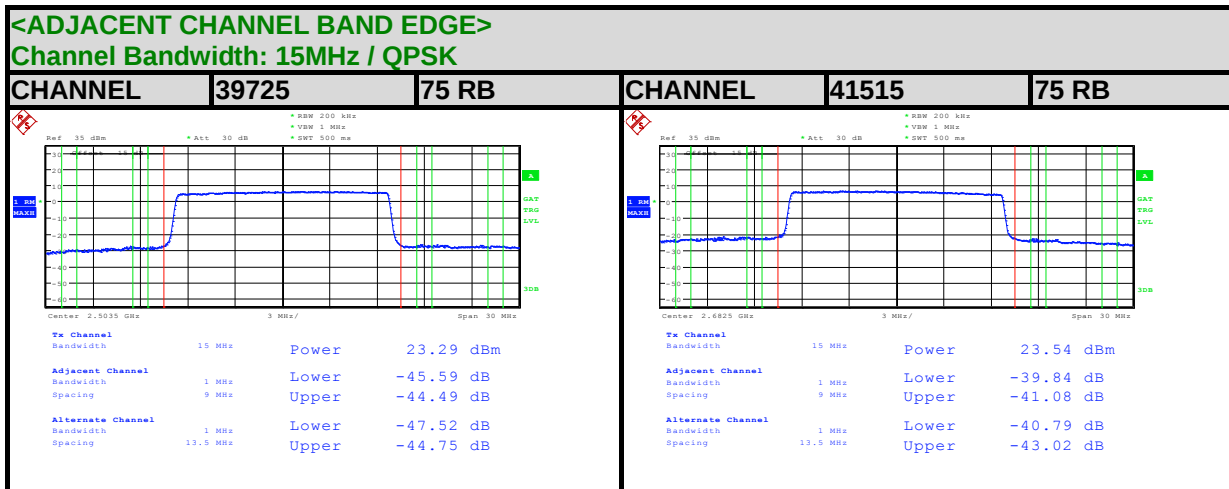
#### 4.5.3 TEST PROCEDURES

- a. The EUT was set up for the maximum peak power with LTE link data modulation. The power was measured with R&S Spectrum Analyzer. All measurements were done at 2 channels (low and high operational frequency range.).
- b. The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- c. The center frequency of spectrum is the band edge frequency and span is 20 MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz (Channel bandwidth 5MHz).
- d. The center frequency of spectrum is the band edge frequency and span is 40 MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz (Channel bandwidth 10MHz).
- e. The center frequency of spectrum is the band edge frequency and span is 60 MHz. RB of the spectrum is 200kHz and VB of the spectrum is 1MHz (Channel bandwidth 15MHz).
- f. The center frequency of spectrum is the band edge frequency and span is 80 MHz. RB of the spectrum is 200kHz and VB of the spectrum is 1MHz (Channel bandwidth 20MHz).
- g. Record the max trace plot into the test report.

## 4.5.4 TEST RESULTS

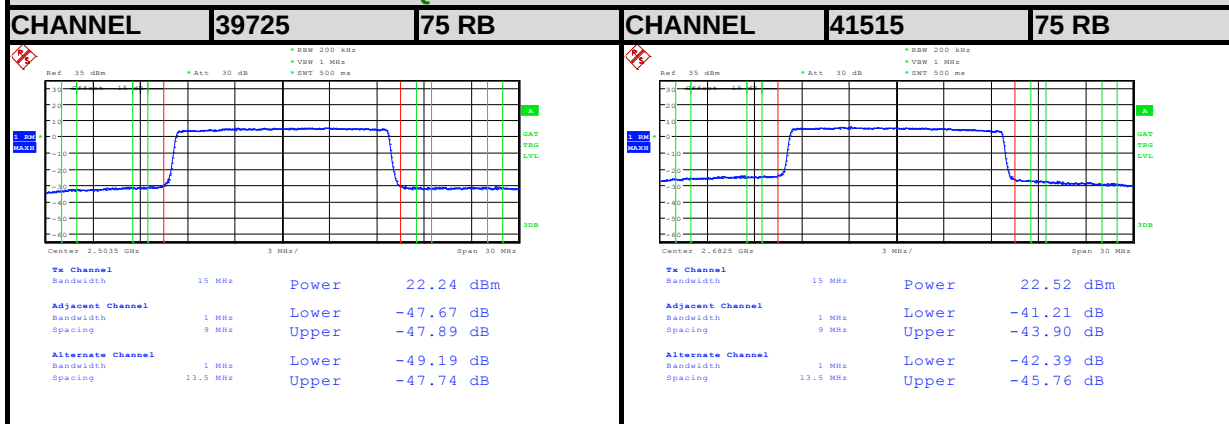






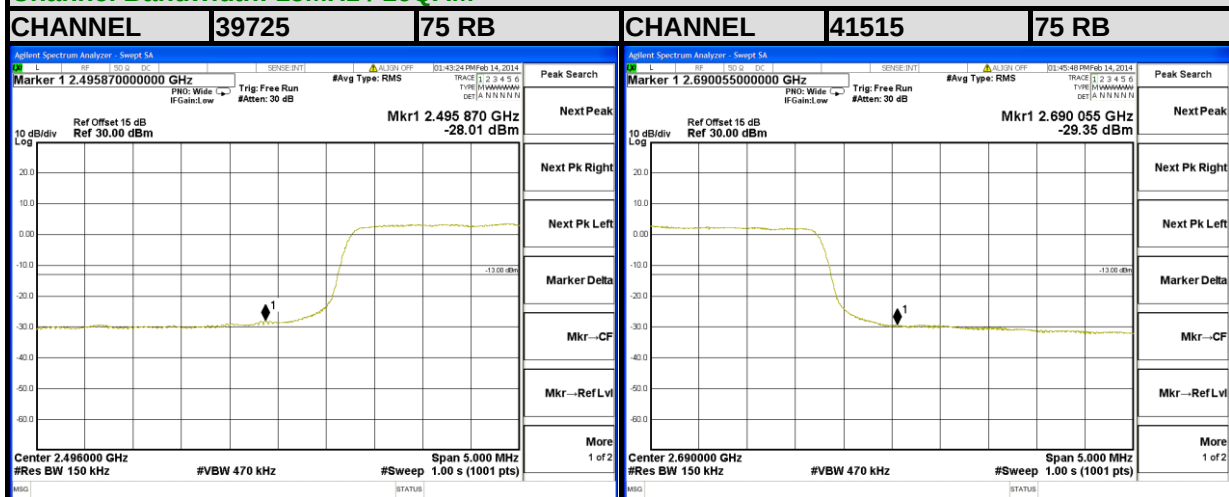
## <ADJACENT CHANNEL BAND EDGE>

### Channel Bandwidth: 15MHz / 16QAM



## <CHANNEL BAND EDGE>

### Channel Bandwidth: 15MHz / 16QAM





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## <ADJACENT CHANNEL BAND EDGE> Channel Bandwidth: 20MHz / QPSK

| CHANNEL                                                                                                                                                                                                                                                                                                                                       | 39750 | 100 RB | CHANNEL                                                                                                                                                                                                                                                                                                                                      | 41490 | 100 RB |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|
|                                                                                                                                                                                                                                                                                                                                               |       |        |                                                                                                                                                                                                                                                                                                                                              |       |        |
| <p>Ref: 35 dBm<br/>Att: 30 dB<br/>PSW: 200 kHz<br/>VBW: 1 MHz<br/>SWT: 500 ms</p> <p>Center: 2.500 GHz<br/>Span: 40 MHz</p> <p>Power: 23.29 dBm<br/>Adjacent Channel: 1 MHz<br/>Spacing: 11.5 MHz<br/>Alternate Channel: 1 MHz<br/>Spacing: 16 MHz</p> <p>Lower: -47.30 dB<br/>Upper: -44.67 dB<br/>Lower: -49.49 dB<br/>Upper: -45.67 dB</p> |       |        | <p>Ref: 35 dBm<br/>Att: 30 dB<br/>PSW: 200 kHz<br/>VBW: 1 MHz<br/>SWT: 500 ms</p> <p>Center: 2.69 GHz<br/>Span: 40 MHz</p> <p>Power: 23.64 dBm<br/>Adjacent Channel: 1 MHz<br/>Spacing: 11.5 MHz<br/>Alternate Channel: 1 MHz<br/>Spacing: 16 MHz</p> <p>Lower: -40.93 dB<br/>Upper: -41.58 dB<br/>Lower: -42.31 dB<br/>Upper: -44.44 dB</p> |       |        |

## <CHANNEL BAND EDGE> Channel Bandwidth: 20MHz / QPSK

| CHANNEL                                                                                                                                                                                                                                                                                                                                                | 39750 | 100 RB | CHANNEL                                                                                                                                                                                                                                                                                                                                                | 41490 | 100 RB |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|
|                                                                                                                                                                                                                                                                                                                                                        |       |        |                                                                                                                                                                                                                                                                                                                                                        |       |        |
| <p>Marker 1 2.495990000000 GHz<br/>Ref Offset 15 dB<br/>Ref 30.00 dBm<br/>Mkr1 2.495 990 GHz<br/>-29.96 dBm</p> <p>Center: 2.496000 GHz<br/>#Res BW 180 kHz<br/>#VBW 560 kHz<br/>#Sweep 1.00 s (1001 pts)</p> <p>Span: 5.000 MHz</p> <p>Next Peak<br/>Next Pk Right<br/>Next Pk Left<br/>Marker Delta<br/>Mkr--CF<br/>Mkr--Ref Lvl<br/>More 1 of 2</p> |       |        | <p>Marker 1 2.690030000000 GHz<br/>Ref Offset 15 dB<br/>Ref 30.00 dBm<br/>Mkr1 2.690 030 GHz<br/>-31.85 dBm</p> <p>Center: 2.690000 GHz<br/>#Res BW 180 kHz<br/>#VBW 560 kHz<br/>#Sweep 1.00 s (1001 pts)</p> <p>Span: 5.000 MHz</p> <p>Next Peak<br/>Next Pk Right<br/>Next Pk Left<br/>Marker Delta<br/>Mkr--CF<br/>Mkr--Ref Lvl<br/>More 1 of 2</p> |       |        |

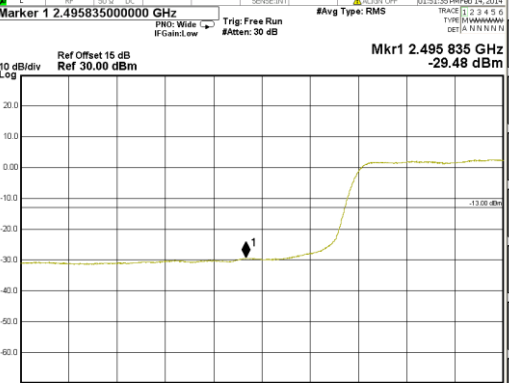
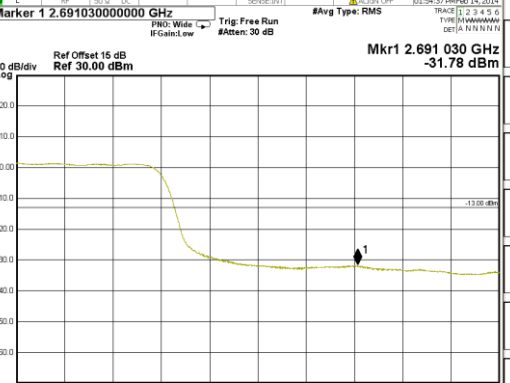
## <ADJACENT CHANNEL BAND EDGE>

### Channel Bandwidth: 20MHz / 16QAM

| CHANNEL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |          | 39750 |           | 100 RB |  | CHANNEL   |        | 41490 |           | 100 RB           |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------|-----------|--------|--|-----------|--------|-------|-----------|------------------|--|-------|-----------|-----------|-------|-------|-----------|---------|----------|--|--|-------------------|--|-------|-----------|-----------|-------|-------|-----------|---------|--------|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|-----------|--------|-------|-----------|------------------|--|-------|-----------|-----------|-------|-------|-----------|---------|----------|--|--|-------------------|--|-------|-----------|-----------|-------|-------|-----------|---------|--------|--|--|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |       |           |        |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |
| <p><b>Tx Channel</b></p> <table><tr><td>Bandwidth</td><td>20 MHz</td><td>Power</td><td>22.18 dBm</td></tr><tr><td>Adjacent Channel</td><td></td><td>Lower</td><td>-48.48 dB</td></tr><tr><td>Bandwidth</td><td>1 MHz</td><td>Upper</td><td>-47.17 dB</td></tr><tr><td>Spacing</td><td>11.5 MHz</td><td></td><td></td></tr><tr><td>Alternate Channel</td><td></td><td>Lower</td><td>-50.70 dB</td></tr><tr><td>Bandwidth</td><td>1 MHz</td><td>Upper</td><td>-47.44 dB</td></tr><tr><td>Spacing</td><td>16 MHz</td><td></td><td></td></tr></table> |          |       |           |        |  | Bandwidth | 20 MHz | Power | 22.18 dBm | Adjacent Channel |  | Lower | -48.48 dB | Bandwidth | 1 MHz | Upper | -47.17 dB | Spacing | 11.5 MHz |  |  | Alternate Channel |  | Lower | -50.70 dB | Bandwidth | 1 MHz | Upper | -47.44 dB | Spacing | 16 MHz |  |  | <p><b>Tx Channel</b></p> <table><tr><td>Bandwidth</td><td>20 MHz</td><td>Power</td><td>22.54 dBm</td></tr><tr><td>Adjacent Channel</td><td></td><td>Lower</td><td>-42.12 dB</td></tr><tr><td>Bandwidth</td><td>1 MHz</td><td>Upper</td><td>-44.48 dB</td></tr><tr><td>Spacing</td><td>11.5 MHz</td><td></td><td></td></tr><tr><td>Alternate Channel</td><td></td><td>Lower</td><td>-43.80 dB</td></tr><tr><td>Bandwidth</td><td>1 MHz</td><td>Upper</td><td>-46.23 dB</td></tr><tr><td>Spacing</td><td>16 MHz</td><td></td><td></td></tr></table> |  |  |  |  |  | Bandwidth | 20 MHz | Power | 22.54 dBm | Adjacent Channel |  | Lower | -42.12 dB | Bandwidth | 1 MHz | Upper | -44.48 dB | Spacing | 11.5 MHz |  |  | Alternate Channel |  | Lower | -43.80 dB | Bandwidth | 1 MHz | Upper | -46.23 dB | Spacing | 16 MHz |  |  |
| Bandwidth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 20 MHz   | Power | 22.18 dBm |        |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |
| Adjacent Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          | Lower | -48.48 dB |        |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |
| Bandwidth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1 MHz    | Upper | -47.17 dB |        |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |
| Spacing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 11.5 MHz |       |           |        |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |
| Alternate Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          | Lower | -50.70 dB |        |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |
| Bandwidth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1 MHz    | Upper | -47.44 dB |        |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |
| Spacing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 16 MHz   |       |           |        |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |
| Bandwidth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 20 MHz   | Power | 22.54 dBm |        |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |
| Adjacent Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          | Lower | -42.12 dB |        |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |
| Bandwidth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1 MHz    | Upper | -44.48 dB |        |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |
| Spacing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 11.5 MHz |       |           |        |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |
| Alternate Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          | Lower | -43.80 dB |        |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |
| Bandwidth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1 MHz    | Upper | -46.23 dB |        |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |
| Spacing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 16 MHz   |       |           |        |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |           |        |       |           |                  |  |       |           |           |       |       |           |         |          |  |  |                   |  |       |           |           |       |       |           |         |        |  |  |

## <CHANNEL BAND EDGE>

### Channel Bandwidth: 20MHz / 16QAM

| CHANNEL                                                                                                                                                                      | 39750 | 100 RB | CHANNEL                                                                                                                                                                       | 41490 | 100 RB |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|
|  <p>Center: 2.496000 GHz Span: 5.000 MHz</p> <p>Marker 1 2.495835000000 GHz -29.48 dBm</p> |       |        |  <p>Center: 2.690000 GHz Span: 5.000 MHz</p> <p>Marker 1 2.691030000000 GHz -31.78 dBm</p> |       |        |

## 4.6 CONDUCTED SPURIOUS EMISSIONS

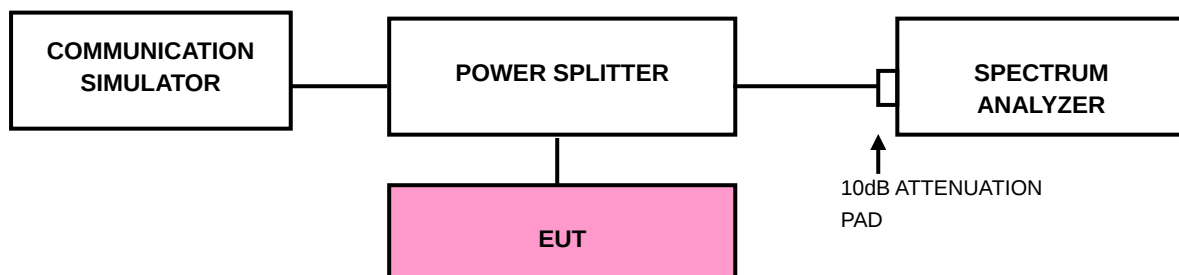
### 4.6.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least  $55 + 10 \log_{10}(P)$  dB. The limit of emission equal to  $-25\text{dBm}$

### 4.6.2 TEST PROCEDURE

- The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- Measuring frequency range is from 30 MHz to 27GHz for LTE Band 41. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz are used for conducted emission measurement.

### 4.6.3 TEST SETUP



## 4.6.4 TEST RESULTS



## 4.7 RADIATED EMISSION MEASUREMENT

### 4.7.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least  $55 + 10 \log_{10}(P)$  dB. The limit of emission equal to  $-25\text{dBm}$

### 4.7.2 TEST PROCEDURES

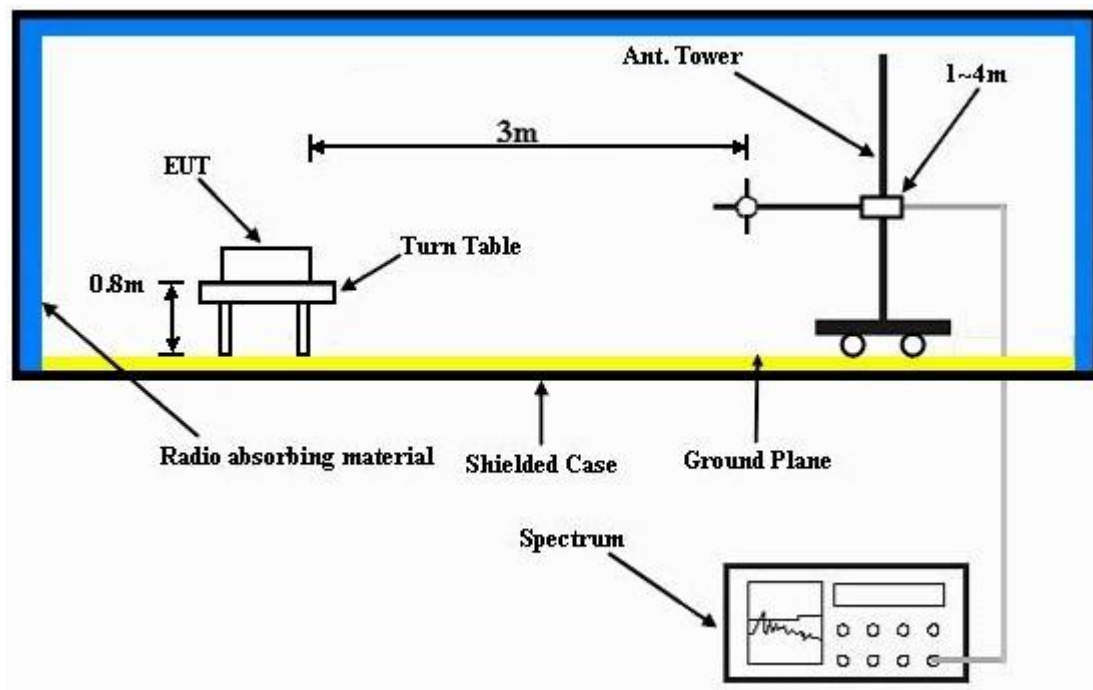
- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G
- c.  $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}.$
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole,  $\text{E.R.P power} = \text{E.I.P.R power} - 2.15\text{dBi}.$

**NOTE:** The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

### 4.7.3 DEVIATION FROM TEST STANDARD

No deviation

#### 4.7.4 TEST SETUP



For the actual test configuration, please refer to the attached file (Test Setup Photo).

## 4.7.5 TEST RESULTS

### LTE BAND 41

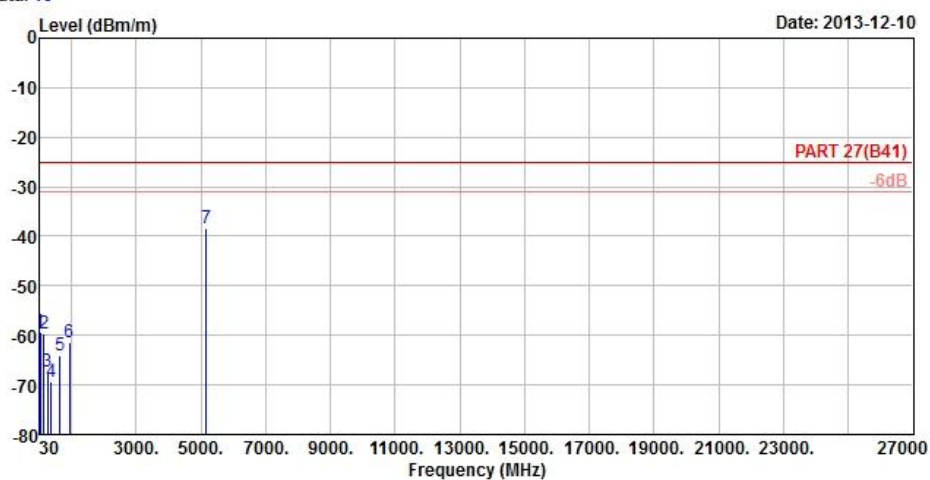
CHANNEL BANDWIDTH: 10MHz / QPSK (1 RB / 0 RB Offset)



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Data: 13



Site : 966 Chamber 5  
Condition : PART 27(B41) 3m HORIZONTAL  
Brand/Model: G81-C6730  
Remark : Band 41 10M QPSK(1,0) Link  
Tested by : Anson Lin  
Temperature : 25°C  
Humidity : 65%  
Plane : X  
Sample No : C131120-002-024-006

|      |         | Read   | Limit  | Over   |        |               |
|------|---------|--------|--------|--------|--------|---------------|
|      | Freq    | Level  | Level  | Line   | Limit  | Factor Remark |
|      | MHz     | dBm/m  | dBm    | dBm/m  | dB     | dB/m          |
| 1    | 39.45   | -59.20 | -57.67 | -25.00 | -34.20 | -1.53 Peak    |
| 2    | 146.10  | -59.58 | -53.47 | -25.00 | -34.58 | -6.11 Peak    |
| 3    | 258.96  | -67.23 | -61.43 | -25.00 | -42.23 | -5.80 Peak    |
| 4    | 379.10  | -69.23 | -63.44 | -25.00 | -44.23 | -5.79 Peak    |
| 5    | 653.50  | -64.06 | -64.67 | -25.00 | -39.06 | 0.61 Peak     |
| 6    | 948.20  | -61.35 | -65.01 | -25.00 | -36.35 | 3.66 Peak     |
| 7 pp | 5177.20 | -38.36 | -35.21 | -25.00 | -13.36 | -3.15 Peak    |



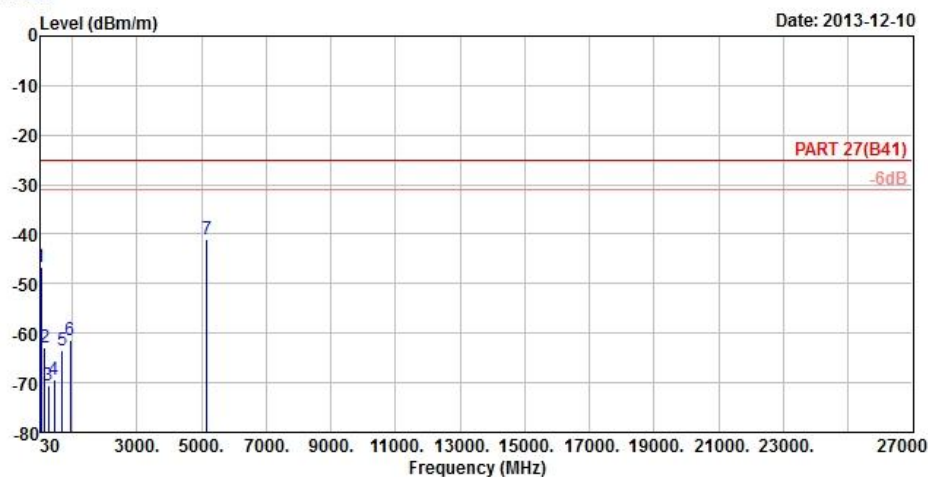
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A D T

Data: 14



Site : 966 Chamber 5  
Condition : PART 27(B41) 3m VERTICAL  
Brand/Model: G81-C6730  
Remark : Band 41 10M QPSK(1,0) Link  
Tested by : Anson Lin  
Temperature : 25°C  
Humidity : 65%  
Plane : X  
Sample No : C131120-002-024-006

|      | Freq    | Level  | Read Level | Limit Line | Over Limit | Factor | Remark |
|------|---------|--------|------------|------------|------------|--------|--------|
|      | MHz     | dBm/m  | dBm        | dBm/m      | dB         | dB/m   |        |
| 1    | 40.80   | -46.67 | -45.21     | -25.00     | -21.67     | -1.46  | Peak   |
| 2    | 140.97  | -62.81 | -57.08     | -25.00     | -37.81     | -5.73  | Peak   |
| 3    | 261.66  | -70.54 | -64.70     | -25.00     | -45.54     | -5.84  | Peak   |
| 4    | 440.70  | -69.52 | -64.91     | -25.00     | -44.52     | -4.61  | Peak   |
| 5    | 685.70  | -63.34 | -64.53     | -25.00     | -38.34     | 1.19   | Peak   |
| 6    | 932.80  | -61.52 | -64.87     | -25.00     | -36.52     | 3.35   | Peak   |
| 7 pp | 5177.20 | -40.92 | -37.77     | -25.00     | -15.92     | -3.15  | Peak   |



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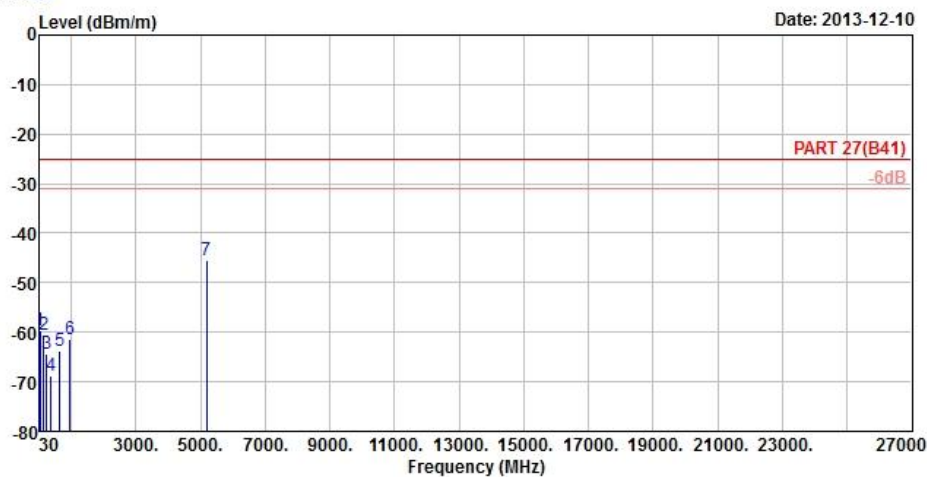
## CHANNEL BANDWIDTH: 10MHz / QPSK (50 RB / 0 RB Offset)



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 13



Site : 966 Chamber 5  
Condition : PART 27(B41) 3m HORIZONTAL  
Brand/Model: G81-C6730  
Remark : Band 41 10M QPSK(50,0) Link  
Tested by : Anson Lin  
Temperature : 25°C  
Humidity : 65%  
Plane : X  
Sample No : C131120-002-024-006

|      |         |        | Read   | Limit  | Over   |               |
|------|---------|--------|--------|--------|--------|---------------|
|      | Freq    | Level  | Level  | Line   | Limit  | Factor Remark |
|      | MHz     | dBm/m  | dBm    | dBm/m  | dB     | dB/m          |
| 1    | 41.61   | -59.58 | -58.19 | -25.00 | -34.58 | -1.39 Peak    |
| 2    | 146.10  | -60.64 | -54.53 | -25.00 | -35.64 | -6.11 Peak    |
| 3    | 243.03  | -64.21 | -58.22 | -25.00 | -39.21 | -5.99 Peak    |
| 4    | 374.90  | -68.85 | -63.03 | -25.00 | -43.85 | -5.82 Peak    |
| 5    | 643.70  | -63.62 | -64.06 | -25.00 | -38.62 | 0.44 Peak     |
| 6    | 958.70  | -61.43 | -65.28 | -25.00 | -36.43 | 3.85 Peak     |
| 7 pp | 5186.00 | -45.54 | -42.48 | -25.00 | -20.54 | -3.06 Peak    |



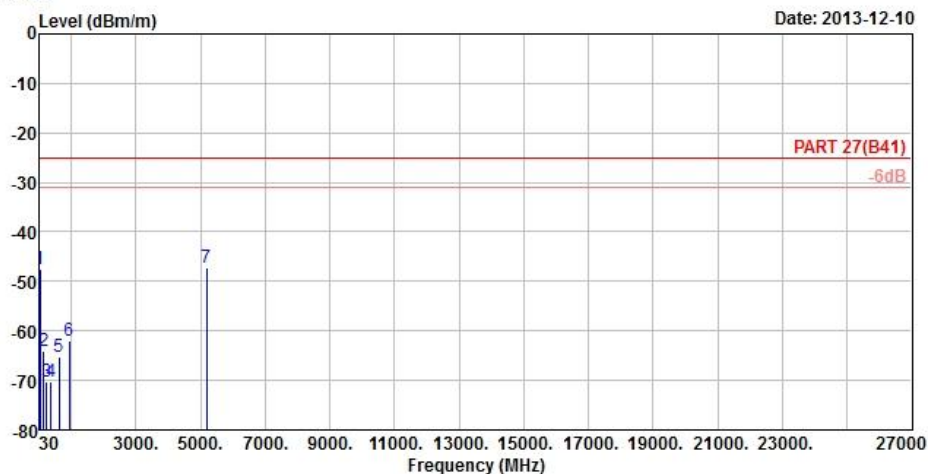
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Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 14



Site : 966 Chamber 5  
Condition : PART 27(B41) 3m VERTICAL  
Brand/Model: G81-C6730  
Remark : Band 41 10M QPSK(50,0) Link  
Tested by : Anson Lin  
Temperature : 25°C  
Humidity : 65%  
Plane : X  
Sample No : C131120-002-024-006

|      |         | Read   | Limit  | Over   |        |        |        |
|------|---------|--------|--------|--------|--------|--------|--------|
|      | Freq    | Level  | Level  | Line   | Limit  | Factor | Remark |
|      | MHz     | dBm/m  | dBm    | dBm/m  | dB     | dB/m   |        |
| 1    | 39.45   | -47.57 | -46.04 | -25.00 | -22.57 | -1.53  | Peak   |
| 2    | 140.16  | -64.11 | -58.38 | -25.00 | -39.11 | -5.73  | Peak   |
| 3    | 251.40  | -70.25 | -64.56 | -25.00 | -45.25 | -5.69  | Peak   |
| 4    | 371.40  | -70.29 | -64.44 | -25.00 | -45.29 | -5.85  | Peak   |
| 5    | 622.70  | -65.22 | -65.27 | -25.00 | -40.22 | 0.05   | Peak   |
| 6    | 930.00  | -61.98 | -65.27 | -25.00 | -36.98 | 3.29   | Peak   |
| 7 pp | 5186.00 | -47.11 | -44.05 | -25.00 | -22.11 | -3.06  | Peak   |



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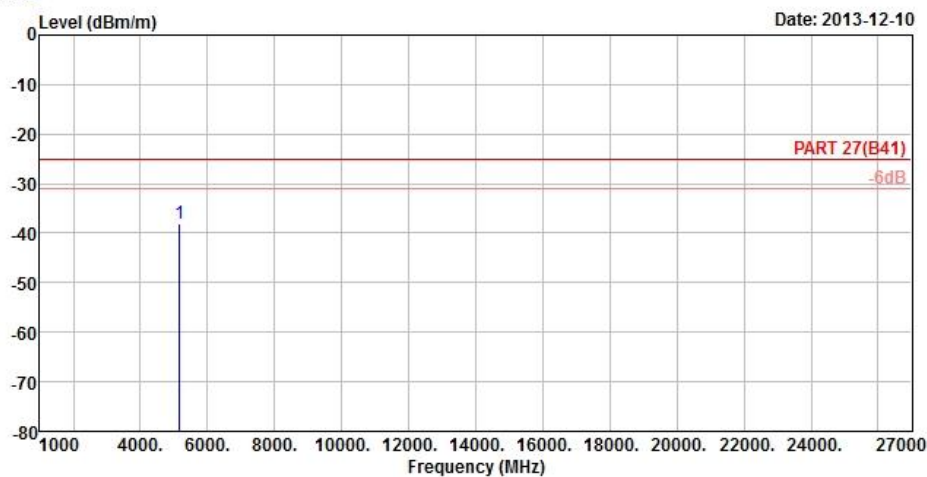
# CHANNEL BANDWIDTH: 15MHz / QPSK (1 RB / 0 RB Offset)



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Data: 9



Site : 966 Chamber 5  
Condition : PART 27(B41) 3m HORIZONTAL  
Brand/Model: G81-C6730  
Remark : Band 41 15M QPSK(1,0) Link  
Tested by : Anson Lin  
Temperature : 25°C  
Humidity : 65%  
Plane : X  
Sample No : C131120-002-024-006

| Freq         | Level  | Read   |        | Limit  |       | Over | Factor | Remark |
|--------------|--------|--------|--------|--------|-------|------|--------|--------|
|              |        | Level  | Line   | Level  | Line  |      |        |        |
| MHz          | dBm/m  | dBm    | dBm/m  | dB     | dB/m  |      |        |        |
| 1 pp 5172.80 | -38.09 | -34.94 | -25.00 | -13.09 | -3.15 | Peak |        |        |



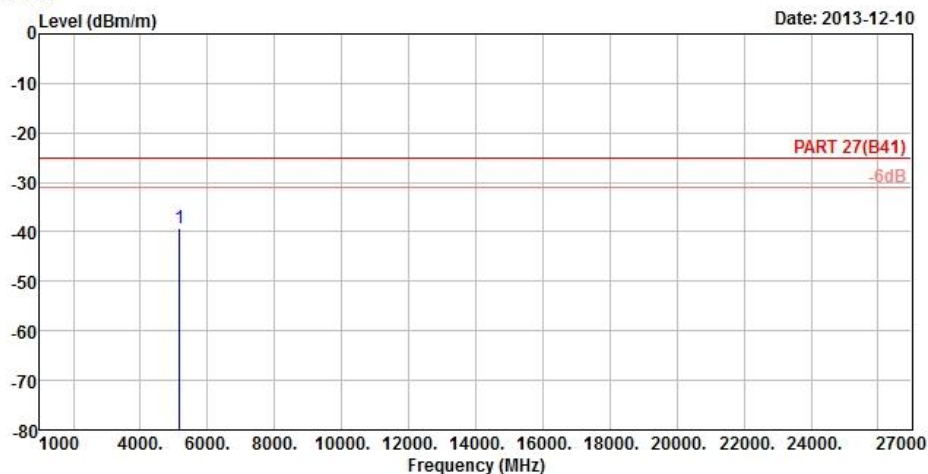
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A D T

Data: 10



Site : 966 Chamber 5  
Condition : PART 27(B41) 3m VERTICAL  
Brand/Model: G81-C6730  
Remark : Band 41 15M QPSK(1,0) Link  
Tested by : Anson Lin  
Temperature : 25°C  
Humidity : 65%  
Plane : X  
Sample No : C131120-002-024-006

| Freq         | Level  | Read   | Limit  | Over   | Factor | Remark |
|--------------|--------|--------|--------|--------|--------|--------|
|              |        | Level  | Line   | Limit  |        |        |
| MHz          | dBm/m  | dBm    | dBm/m  | dB     | dB/m   |        |
| 1 pp 5172.80 | -39.17 | -36.02 | -25.00 | -14.17 | -3.15  | Peak   |



A D T

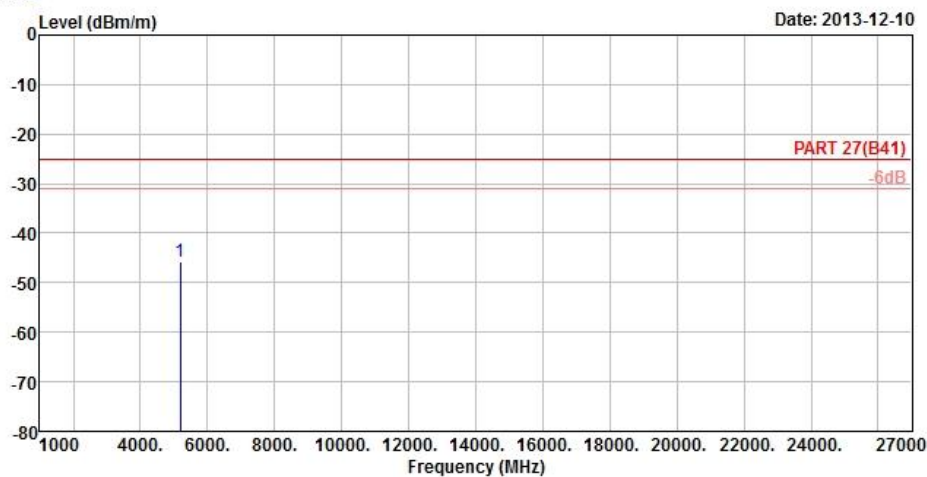
# CHANNEL BANDWIDTH: 15MHz / QPSK (75 RB / 0 RB Offset)



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9



Site : 966 Chamber 5  
Condition : PART 27(B41) 3m HORIZONTAL  
Brand/Model: G81-C6730  
Remark : Band 41 15M QPSK(75,0) Link  
Tested by : Anson Lin  
Temperature : 25°C  
Humidity : 65%  
Plane : X  
Sample No : C131120-002-024-006

| Freq         | Level  | Read   |        | Limit  |       | Over | Factor | Remark |
|--------------|--------|--------|--------|--------|-------|------|--------|--------|
|              |        | Level  | Line   | Level  | Line  |      |        |        |
| MHz          | dBm/m  | dBm    | dBm/m  | dB     | dB/m  |      |        |        |
| 1 pp 5186.00 | -45.79 | -42.73 | -25.00 | -20.79 | -3.06 | Peak |        |        |



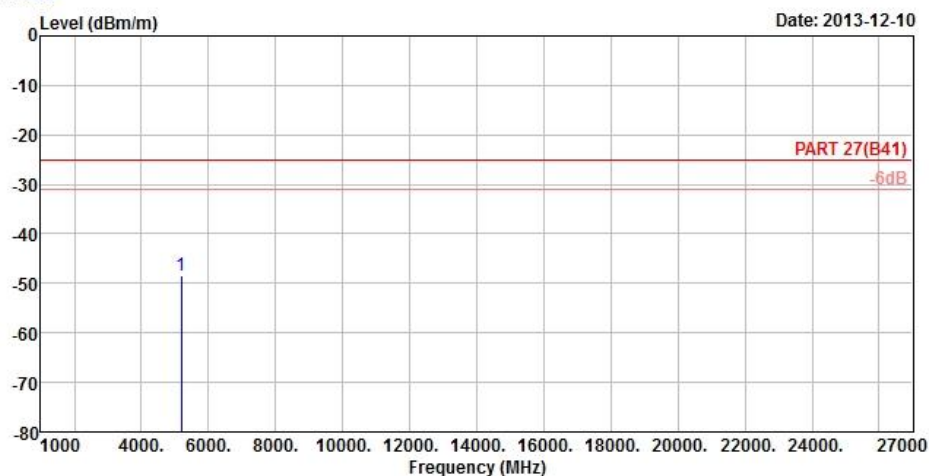
A D T



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10



Site : 966 Chamber 5  
Condition : PART 27(B41) 3m VERTICAL  
Brand/Model: G81-C6730  
Remark : Band 41 15M QPSK(75,0) Link  
Tested by : Anson Lin  
Temperature : 25°C  
Humidity : 65%  
Plane : X  
Sample No : C131120-002-024-006

| Freq         | Level  | Read   | Limit  | Over   | Factor | Remark |
|--------------|--------|--------|--------|--------|--------|--------|
|              |        | Level  | Line   | Limit  |        |        |
| MHz          | dBm/m  | dBm    | dBm/m  | dB     | dB/m   |        |
| 1 pp 5186.00 | -48.32 | -45.26 | -25.00 | -23.32 | -3.06  | Peak   |

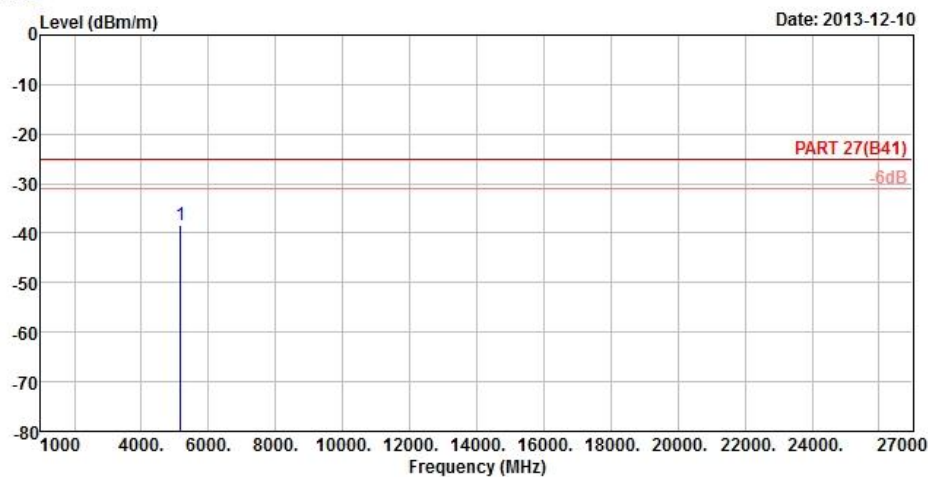
# CHANNEL BANDWIDTH: 20MHz / QPSK (1 RB / 0 RB Offset)



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9



Site : 966 Chamber 5  
Condition : PART 27(B41) 3m HORIZONTAL  
Brand/Model: G81-C6730  
Remark : Band 41 20M QPSK(1,0) Link  
Tested by : Anson Lin  
Temperature : 25°C  
Humidity : 65%  
Plane : X  
Sample No : C131120-002-024-006

| Freq         | Level  | Read Limit |        | Over   |        | Remark |
|--------------|--------|------------|--------|--------|--------|--------|
|              |        | Level      | Line   | Limit  | Factor |        |
| MHz          | dBm/m  | dBm        | dBm/m  | dB     | dB/m   |        |
| 1 pp 5168.40 | -38.34 | -35.19     | -25.00 | -13.34 | -3.15  | Peak   |



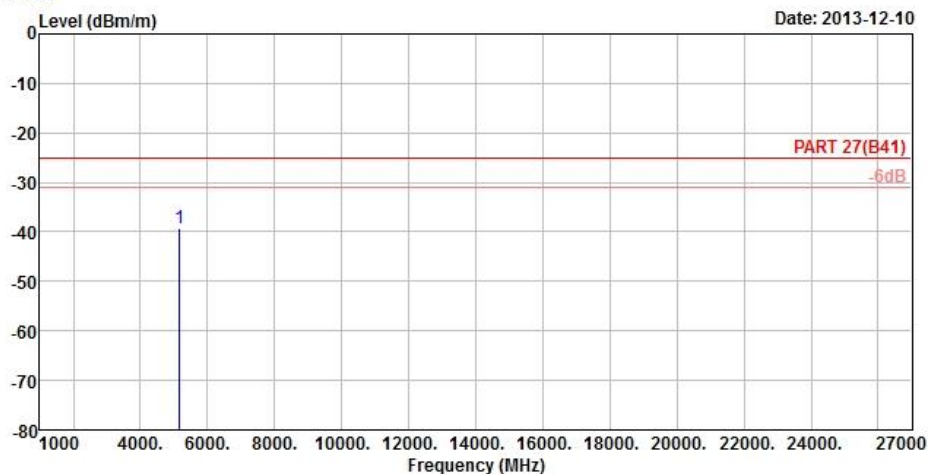
A D T



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10



Site : 966 Chamber 5  
Condition : PART 27(B41) 3m VERTICAL  
Brand/Model: G81-C6730  
Remark : Band 41 20M QPSK(1,0) Link  
Tested by : Anson Lin  
Temperature : 25°C  
Humidity : 65%  
Plane : X  
Sample No : C131120-002-024-006

| Freq         | Level  | Read   | Limit  | Over   | Factor | Remark |
|--------------|--------|--------|--------|--------|--------|--------|
|              |        | Level  | Line   | Limit  |        |        |
| MHz          | dBm/m  | dBm    | dBm/m  | dB     | dB/m   |        |
| 1 pp 5168.40 | -39.24 | -36.09 | -25.00 | -14.24 | -3.15  | Peak   |



A D T

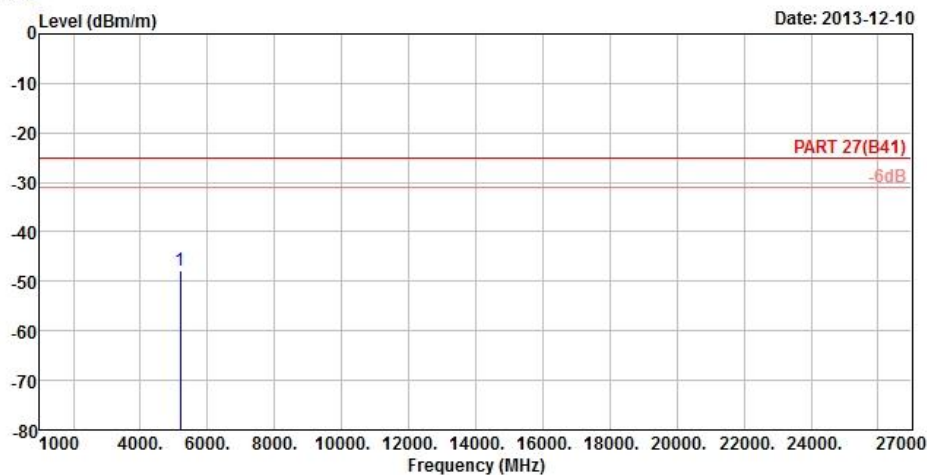
## CHANNEL BANDWIDTH: 20MHz / QPSK (100 RB / 0 RB Offset)



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9



Site : 966 Chamber 5  
Condition : PART 27(B41) 3m HORIZONTAL  
Brand/Model: G81-C6730  
Remark : Band 41 20M QPSK(100,0) Link  
Tested by : Anson Lin  
Temperature : 25°C  
Humidity : 65%  
Plane : X  
Sample No : C131120-002-024-006

| Freq         | Level  | Read   | Limit  | Over   | Factor | Remark |
|--------------|--------|--------|--------|--------|--------|--------|
|              |        | Level  | Line   | Limit  |        |        |
| MHz          | dBm/m  | dBm    | dBm/m  | dB     | dB/m   |        |
| 1 pp 5186.00 | -47.97 | -44.91 | -25.00 | -22.97 | -3.06  | Peak   |



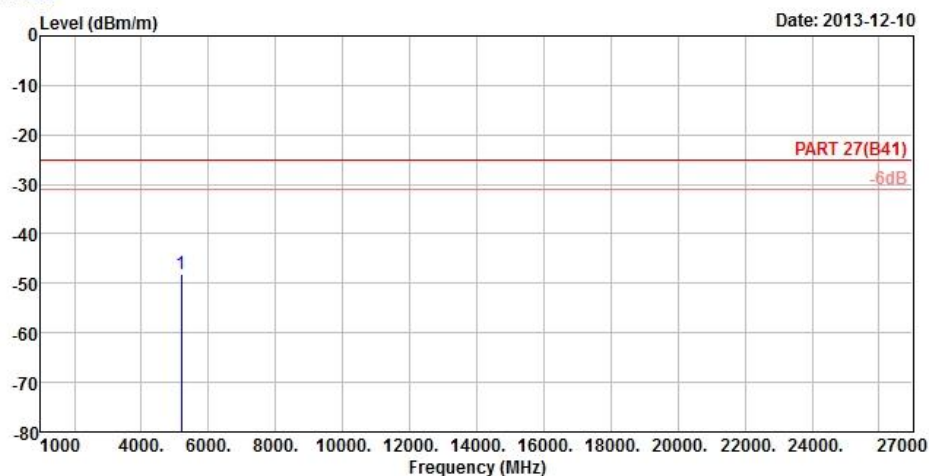
A D T



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10



Site : 966 Chamber 5  
Condition : PART 27(B41) 3m VERTICAL  
Brand/Model: G81-C6730  
Remark : Band 41 20M QPSK(100,0) Link  
Tested by : Anson Lin  
Temperature : 25°C  
Humidity : 65%  
Plane : X  
Sample No : C131120-002-024-006

| Freq         | Level  | Read   | Limit  | Over   | Factor | Remark |
|--------------|--------|--------|--------|--------|--------|--------|
|              |        | Level  | Line   | Limit  |        |        |
| MHz          | dBm/m  | dBm    | dBm/m  | dB     | dB/m   |        |
| 1 pp 5186.00 | -48.06 | -45.00 | -25.00 | -23.06 | -3.06  | Peak   |

## 5 INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

**Linko EMC/RF Lab:**

Tel: 886-2-26052180

Fax: 886-2-26051924

**Hsin Chu EMC/RF Lab:**

Tel: 886-3-5935343

Fax: 886-3-5935342

**Hwa Ya EMC/RF/Safety/Telecom Lab:**

Tel: 886-3-3183232

Fax: 886-3-3270892

**Email:** [service.adt@tw.bureauveritas.com](mailto:service.adt@tw.bureauveritas.com)

**Web Site:** [www.adt.com.tw](http://www.adt.com.tw)

The address and road map of all our labs can be found in our web site also.

## **6 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB**

No modifications were made to the EUT by the lab during the test.

**---END---**