

# FCC 15B TEST REPORT

**REPORT NO.:** FD121120C26

**MODEL NO.:** FPA16242T

(Refer to item 3.1 for the more details)

**RECEIVED:** Nov. 20, 2012

**TESTED:** Nov. 27 ~ Dec. 05, 2012

**ISSUED:** Dec. 11, 2012

**APPLICANT:** TECOM CO., LTD

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

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**TEST LOCATION:** No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei  
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## TABLE OF CONTENTS

|                                                                                                |    |
|------------------------------------------------------------------------------------------------|----|
| RELEASE CONTROL RECORD .....                                                                   | 3  |
| 1. CERTIFICATION .....                                                                         | 4  |
| 2. SUMMARY OF TEST RESULTS .....                                                               | 5  |
| 2.1 MEASUREMENT UNCERTAINTY .....                                                              | 5  |
| 3. GENERAL INFORMATION .....                                                                   | 6  |
| 3.1 GENERAL DESCRIPTION OF EUT .....                                                           | 6  |
| 3.2 DESCRIPTION OF TEST MODES .....                                                            | 7  |
| 3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL .....                                  | 8  |
| 3.3 DESCRIPTION OF SUPPORT UNITS .....                                                         | 9  |
| 3.3.1 CONFIGURATION OF SYSTEM UNDER TEST .....                                                 | 10 |
| 3.4 GENERAL DESCRIPTION OF APPLIED STANDARDS .....                                             | 11 |
| 4. TEST TYPES AND RESULTS .....                                                                | 12 |
| 4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT .....                                           | 12 |
| 4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT .....                               | 12 |
| 4.1.2 TEST INSTRUMENTS .....                                                                   | 13 |
| 4.1.3 TEST PROCEDURES .....                                                                    | 14 |
| 4.1.4 DEVIATION FROM TEST STANDARD .....                                                       | 14 |
| 4.1.5 TEST SETUP .....                                                                         | 15 |
| 4.1.6 EUT OPERATING CONDITIONS .....                                                           | 15 |
| 4.1.7 TEST RESULTS .....                                                                       | 16 |
| 4.2 CONDUCTED EMISSION MEASUREMENT .....                                                       | 32 |
| 4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT .....                                           | 32 |
| 4.2.2 TEST INSTRUMENTS .....                                                                   | 32 |
| 4.2.3 TEST PROCEDURES .....                                                                    | 33 |
| 4.2.4 DEVIATION FROM TEST STANDARD .....                                                       | 33 |
| 4.2.5 TEST SETUP .....                                                                         | 33 |
| 4.2.6 EUT OPERATING CONDITIONS .....                                                           | 33 |
| 4.2.7 TEST RESULTS .....                                                                       | 34 |
| 5. PHOTOGRAPHS OF THE TEST CONFIGURATION .....                                                 | 42 |
| 6. INFORMATION ON THE TESTING LABORATORIES .....                                               | 43 |
| 7. APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO<br>THE EUT BY THE LAB ..... | 44 |



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## RELEASE CONTROL RECORD

| ISSUE NO.   | REASON FOR CHANGE | DATE ISSUED   |
|-------------|-------------------|---------------|
| FD121120C26 | Original release  | Dec. 11, 2012 |

## 1. CERTIFICATION

**PRODUCT:** 3G Small Cell

**MODEL NO.:** FPA16242T (Refer to item 3.1 for the more details)

**BRAND:** NEC

**APPLICANT:** TECOM CO., LTD

**TESTED:** Nov. 27 ~ Dec. 05, 2012

**TEST SAMPLE:** ENGINEERING SAMPLE

**STANDARDS:** FCC Part 15, Subpart B, Class B

ICES-003:2012 Issue 5, Class B

The above equipment (model: FPA16242T) 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** :  , **DATE** : Dec. 11, 2012  
Pettie Chen / Senior Specialist

**APPROVED BY** :  , **DATE** : Dec. 11, 2012  
Anderson Chiu / Senior Engineer

## 2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

| Standard Section                                                  | Test Type          | Result | Remark                                                                          |
|-------------------------------------------------------------------|--------------------|--------|---------------------------------------------------------------------------------|
| FCC Part 15, Subpart B, Class B<br>ICES-003:2012 Issue 5, Class B | Conducted Emission | PASS   | Meet the requirement of limit. Minimum passing margin is -9.32dB at 0.18906MHz. |
|                                                                   | Radiated Emission  | PASS   | Meet the requirement of limit. Minimum passing margin is -2.5dB at 32.59MHz     |

### 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   | 3.34 dB     |
|                     | 200MHz ~ 1000MHz | 3.35 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  $k = 2$ .

### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

|                              |                                                                                                             |
|------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>EUT</b>                   | 3G Small Cell                                                                                               |
| <b>MODEL NO.</b>             | FPA16242T (Refer to NOTE for the more details)                                                              |
| <b>POWER SUPPLY</b>          | 12Vdc (adapter)                                                                                             |
| <b>FREQUENCY RANGE</b>       | <b>WCDMA:</b><br>UL: 824-849 MHz, 1850-1910 MHz<br>DL: 869-894 MHz, 1930-1990 MHz<br><b>GPS: 1575.42MHz</b> |
| <b>WCDMA RELEASE VERSION</b> | 7                                                                                                           |
| <b>ANTENNA TYPE</b>          | Refer to Note                                                                                               |
| <b>I/O PORTS</b>             | Refer to user's manual                                                                                      |
| <b>DATA CABLE</b>            | 1.8m non-shielded ether cable                                                                               |
| <b>ACCESSORY DEVICES</b>     | Adapter                                                                                                     |

**NOTE:**

1. All models are listed as below.

| Brand | Model     | NEC Naming     | Branding                         | Description              |
|-------|-----------|----------------|----------------------------------|--------------------------|
| NEC   | FPA16242T | FPA16242T-01US | No Branding,<br>US power adaptor | Tecom 24dBm band 2/5 FAP |
|       |           | FPA16242T-02US | With Logo,<br>US power adaptor   | Tecom 24dBm band 2/5 FAP |

2. The EUT with following antenna.

| Item | Antenna Type | Antenna Connector | Antenna Gain (dBi) |               |
|------|--------------|-------------------|--------------------|---------------|
|      |              |                   | 824-849 MHz        | 1850-1910 MHz |
| 1    | PIFA         | I-PEX             | 2.0                | 2.0           |
| 2    | Dipole       | SMA               | 3.0                | 3.5           |

\*The dipole antenna (Model: TMGR-OD-03C) was supplied for optional accessory.

3. The EUT uses following adapter.

|                     |                                      |
|---------------------|--------------------------------------|
| <b>BRAND</b>        | LEADER ELECTRONICS INC.              |
| <b>MODEL</b>        | MU18-D120150-C5                      |
| <b>INPUT POWER</b>  | 100-240Vac, 50-60Hz, 0.6A            |
| <b>OUTPUT POWER</b> | 12Vdc, 1.5A                          |
| <b>POWER LINE</b>   | 1.5m non-shielded cable without core |

4. SW version is BV2.13.0.3A.
5. HW version is G3.5.1.
6. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

### 3.2 DESCRIPTION OF TEST MODES

#### WWAN function:

Three channels had been tested.

|                    | WCDMA V |                 | WCDMA II |                 |
|--------------------|---------|-----------------|----------|-----------------|
|                    | Channel | Frequency (MHz) | Channel  | Frequency (MHz) |
| Low channel (L)    | 4357    | 871.4           | 9662     | 1932.4          |
| Middle channel (M) | 4408    | 881.6           | 9800     | 1960.0          |
| High channel (H)   | 4458    | 891.6           | 9938     | 1987.6          |

#### GPS function:

1 channel is provided to the EUT.

| Channel | Freq. (MHz) |
|---------|-------------|
| 1       | 1575.42MHz  |

### 3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

| EUT CONFIGURE MODE | APPLICABLE TO |       |     | DESCRIPTION             |
|--------------------|---------------|-------|-----|-------------------------|
|                    | RE $\geq$ 1G  | RE<1G | PLC |                         |
| A                  | √             | √     | √   | EUT with PIFA antenna   |
| B                  | √             | √     | √   | EUT with Dipole antenna |

Where **RE $\geq$ 1G**: Radiated Emission above 1GHz **RE<1G**: Radiated Emission below 1GHz  
**PLC**: Power Line Conducted Emission

#### **RADIATED EMISSION TEST (ABOVE 1GHz):**

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT CONFIGURE MODE | BAND     | AVAILABLE CHANNEL | TESTED CHANNEL   |
|--------------------|----------|-------------------|------------------|
| A, B               | WCDMA V  | 4357 to 4458      | 4357, 4408, 4458 |
|                    | GPS      | 1                 | 1                |
| A, B               | WCDMA II | 9662 to 9938      | 9662, 9880, 9938 |
|                    | GPS      | 1                 | 1                |

#### **RADIATED EMISSION TEST (BELOW 1GHz):**

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT CONFIGURE MODE | BAND     | AVAILABLE CHANNEL | TESTED CHANNEL   |
|--------------------|----------|-------------------|------------------|
| A, B               | WCDMA V  | 4357 to 4458      | 4357, 4408, 4458 |
|                    | GPS      | 1                 | 1                |
| A, B               | WCDMA II | 9662 to 9938      | 9662, 9880, 9938 |
|                    | GPS      | 1                 | 1                |



### POWER LINE CONDUCTED EMISSION TEST:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT CONFIGURE MODE | BAND     | AVAILABLE CHANNEL | TESTED CHANNEL |
|--------------------|----------|-------------------|----------------|
| A, B               | WCDMA V  | 4357 to 4458      | 4357           |
|                    | GPS      | 1                 | 1              |
| A, B               | WCDMA II | 9662 to 9938      | 9662           |
|                    | GPS      | 1                 | 1              |

### TEST CONDITION:

| APPLICABLE TO | ENVIRONMENTAL CONDITIONS | INPUT POWER  | TESTED BY  |
|---------------|--------------------------|--------------|------------|
| RE $\geq$ 1G  | 24deg. C, 64%RH          | 120Vac, 60Hz | Match Tsui |
| RE<1G         | 24deg. C, 64%RH          | 120Vac, 60Hz | Match Tsui |
| PLC           | 24deg. C, 64%RH          | 120Vac, 60Hz | Match Tsui |

### 3.3 DESCRIPTION OF SUPPORT UNITS

| NO. | PRODUCT     | BRAND | MODEL NO. | SERIAL NO.               | FCC ID       |
|-----|-------------|-------|-----------|--------------------------|--------------|
| 1   | Notebook    | DELL  | D531      | CN-0XM006-48643-81U-2610 | QDS-BRCM1020 |
| 2   | GPS antenna | NA    | NA        | NA                       | NA           |

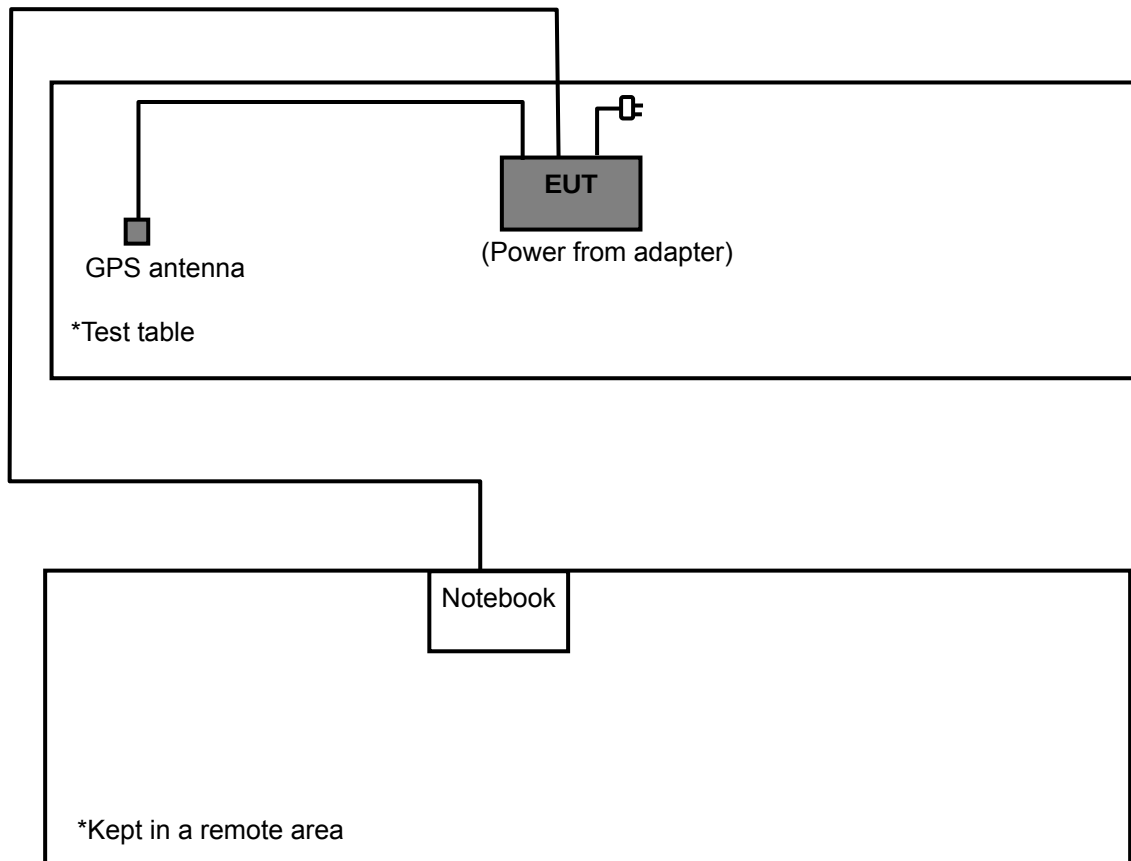
| NO. | SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS |
|-----|-----------------------------------------------------|
| 1   | 10m RJ45 cable without core                         |
| 2   | 5m cable.                                           |

#### NOTE:

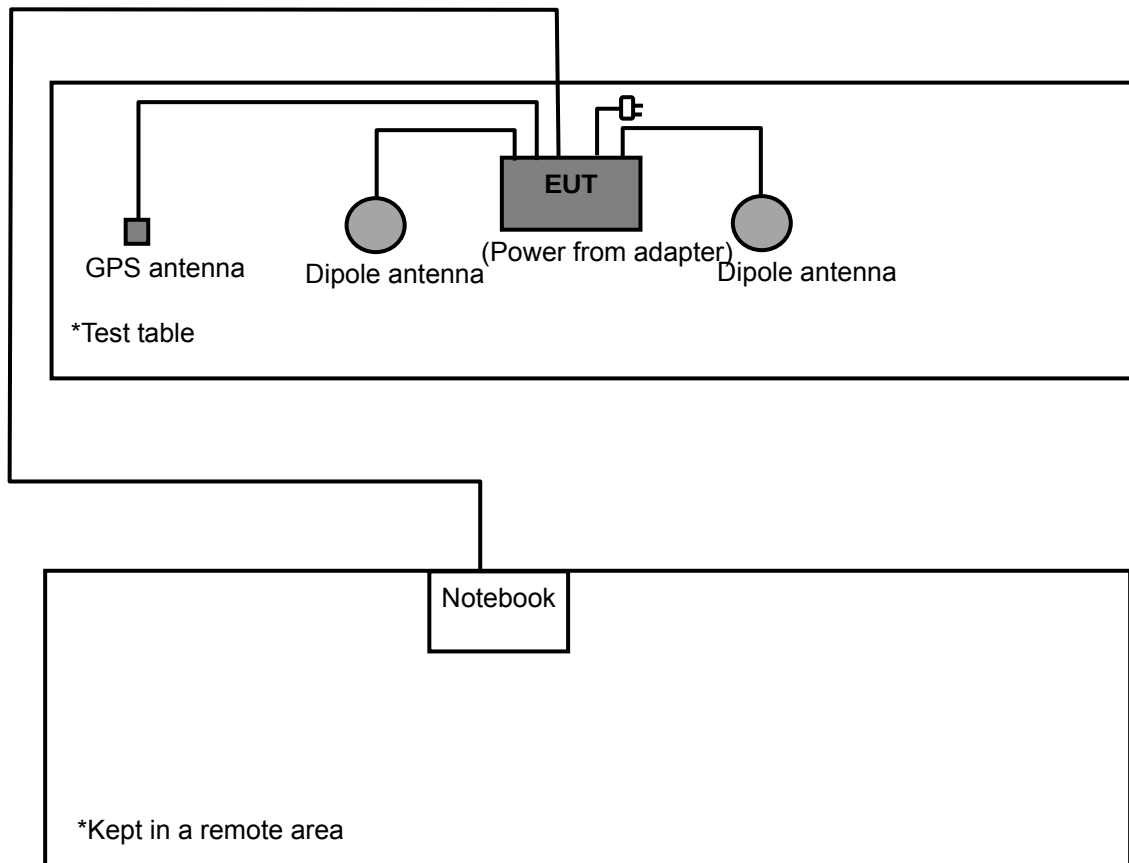
- All power cords of the above support units are non shielded (1.8m).
- Item 1 act as a communication partner to transfer data.
- Item 2 was supplied for optional accessory.

### 3.3.1 CONFIGURATION OF SYSTEM UNDER TEST

#### Test Mode A



## Test Mode B



### 3.4 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 Part 15, Subpart B, Class B**

**ICES-003:2012 Issue 5, Class B**

**ANSI C63.4-2009**

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

## 4. TEST TYPES AND RESULTS

### 4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

#### 4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.109 as following:

| FREQUENCIES<br>(MHz) | FIELD STRENGTH<br>(microvolts/meter) | MEASUREMENT DISTANCE<br>(meters) |
|----------------------|--------------------------------------|----------------------------------|
| 30 ~ 88              | 100                                  | 3                                |
| 88 ~ 216             | 150                                  | 3                                |
| 216 ~ 960            | 200                                  | 3                                |
| Above 960            | 500                                  | 3                                |

**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

#### 4.1.2 TEST INSTRUMENTS

| DESCRIPTION & MANUFACTURER              | MODEL NO.                    | SERIAL NO.           | DATE OF CALIBRATION | DUE DATE OF CALIBRATION |
|-----------------------------------------|------------------------------|----------------------|---------------------|-------------------------|
| Test Receiver<br>ROHDE & SCHWARZ        | ESIB7                        | 100212               | Aug. 06, 2012       | Aug. 05, 2013           |
| Spectrum Analyzer<br>ROHDE & SCHWARZ    | FSP40                        | 100039               | Feb. 03, 2012       | Feb. 02, 2013           |
| BILOG Antenna<br>SCHWARZBECK            | VULB9168                     | 9168-160             | Apr. 06, 2012       | Apr. 05, 2013           |
| HORN Antenna<br>SCHWARZBECK             | 9120D                        | 209                  | Sep. 03, 2012       | Sep. 02, 2013           |
| HORN Antenna<br>SCHWARZBECK             | BBHA 9170                    | 148                  | Jul. 11, 2012       | Jul. 10, 2013           |
| Preamplifier<br>Agilent                 | 8447D                        | 2944A10633           | Oct. 25, 2012       | Oct. 24, 2013           |
| Preamplifier<br>Agilent                 | 8449B                        | 3008A01964           | Oct. 25, 2012       | Oct. 24, 2013           |
| RF signal cable<br>HUBER+SUHNNER        | SUCOFLEX 104                 | 250723/4             | Aug. 28, 2012       | Aug. 27, 2013           |
| RF signal cable<br>HUBER+SUHNNER        | SUCOFLEX 106                 | 12738/6+309224/<br>4 | Aug. 28, 2012       | Aug. 27, 2013           |
| Software<br>ADT.                        | ADT_Radiated_<br>V7.6.15.9.2 | NA                   | NA                  | NA                      |
| Antenna Tower<br>inn-co GmbH            | MA 4000                      | 013303               | NA                  | NA                      |
| Antenna Tower Controller<br>inn-co GmbH | CO2000                       | 017303               | NA                  | NA                      |
| Turn Table<br>ADT.                      | TT100                        | TT93021703           | NA                  | NA                      |
| Turn Table Controller<br>ADT.           | SC100                        | SC93021703           | NA                  | NA                      |
| Mini-Circuits Power Splitter            | ZN2PD-9G                     | NA                   | Mar. 23, 2012       | Mar. 22, 2013           |
| JFW 20dB attenuation                    | 50HF-020-SMA                 | NA                   | NA                  | NA                      |
| Communications<br>Tester-Wireless       | E5515C                       | MY50266653           | Oct. 08, 2012       | Oct. 27, 2013           |
| Radio Communication<br>Analyzer         | MT8820C                      | 6201127458           | May 25, 2012        | May 24, 2013            |

- 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 3.
  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 988962.
  5. The IC Site Registration No. is IC 7450F-3.

#### 4.1.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Height of receiving antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

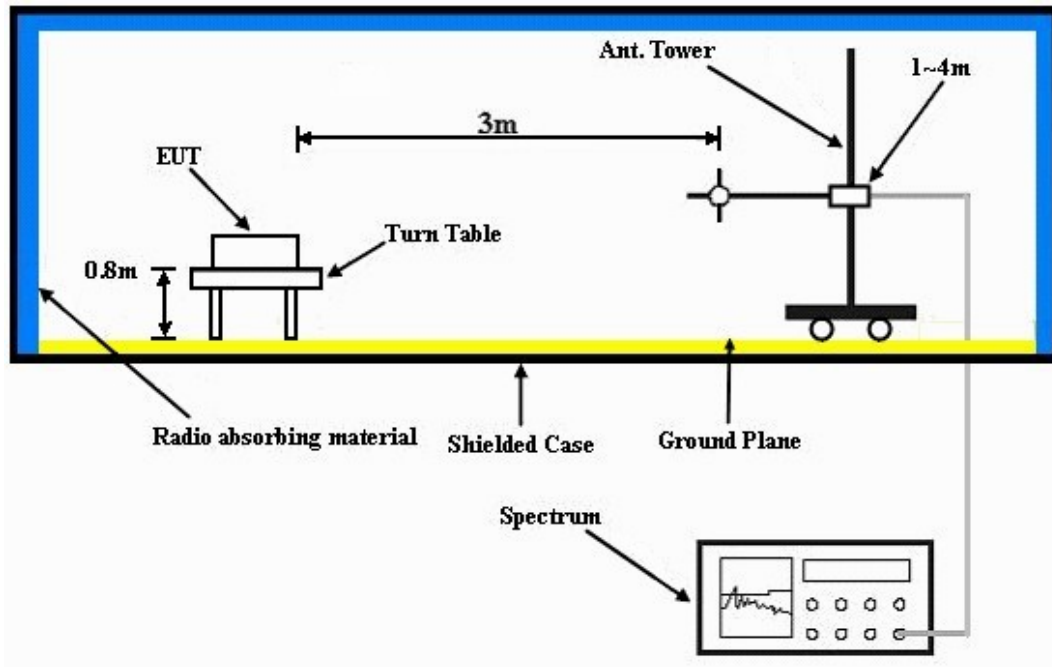
**NOTE:**

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

#### 4.1.4 DEVIATION FROM TEST STANDARD

No deviation.

#### 4.1.5 TEST SETUP



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

#### 4.1.6 EUT OPERATING CONDITIONS

- The communication simulator station system controlled EUT under idle mode and specific channel frequency.

#### 4.1.7 TEST RESULTS

##### ABOVE 1GHz WORST-CASE DATA :

##### WCDMA V+GPS

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | CH 4357+CH 1    | FREQUENCY RANGE    | 1 ~ 12.5GHz               |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 24deg. C, 64%RH | TESTED BY          | Match Tsui                |
| TEST MODE                | A               |                    |                           |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 1742.80     | 40.2 PK                 | 74.0           | -33.8       | 1.20 H             | 180                  | 10.60            | 29.60                    |
| 2                                                   | 1742.80     | 30.3 AV                 | 54.0           | -23.7       | 1.20 H             | 180                  | 0.70             | 29.60                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 1742.80     | 39.1 PK                 | 74.0           | -34.9       | 1.23 V             | 360                  | 9.50             | 29.60                    |
| 2                                                   | 1742.80     | 29.5 AV                 | 54.0           | -24.5       | 1.23 V             | 360                  | -0.10            | 29.60                    |

##### REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.





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| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | CH 4408+CH 1    | FREQUENCY RANGE    | 1 ~ 12.5GHz               |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 24deg. C, 64%RH | TESTED BY          | Match Tsui                |
| TEST MODE                | A               |                    |                           |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 1763.20     | 40.4 PK                 | 74.0           | -33.6       | 1.00 H             | 0                    | 10.70            | 29.70                    |
| 2                                                   | 1763.20     | 30.1 AV                 | 54.0           | -23.9       | 1.00 H             | 0                    | 0.40             | 29.70                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 1763.20     | 39.4 PK                 | 74.0           | -34.6       | 1.07 V             | 180                  | 9.70             | 29.70                    |
| 2                                                   | 1763.20     | 29.7 AV                 | 54.0           | -24.3       | 1.07 V             | 180                  | 0.00             | 29.70                    |

**REMARKS:**

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | CH 4458+CH 1    | FREQUENCY RANGE    | 1 ~ 12.5GHz               |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 24deg. C, 64%RH | TESTED BY          | Match Tsui                |
| TEST MODE                | A               |                    |                           |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 1783.20     | 40.5 PK                 | 74.0           | -33.5       | 1.31 H             | 280                  | 10.80            | 29.70                    |
| 2                                                   | 1783.20     | 30.4 AV                 | 54.0           | -23.6       | 1.31 H             | 280                  | 0.70             | 29.70                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 1783.20     | 39.2 PK                 | 74.0           | -34.8       | 1.20 V             | 0                    | 9.50             | 29.70                    |
| 2                                                   | 1783.20     | 29.5 AV                 | 54.0           | -24.5       | 1.20 V             | 0                    | -0.20            | 29.70                    |

**REMARKS:**

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | CH 4357+CH 1    | FREQUENCY RANGE    | 1 ~ 12.5GHz               |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 24deg. C, 64%RH | TESTED BY          | Match Tsui                |
| TEST MODE                | B               |                    |                           |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 1742.80     | 40.1 PK                 | 74.0           | -33.9       | 1.23 H             | 360                  | 10.50            | 29.60                    |
| 2                                                   | 1742.80     | 30.1 AV                 | 54.0           | -23.9       | 1.23 H             | 360                  | 0.50             | 29.60                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 1742.80     | 39.2 PK                 | 74.0           | -34.8       | 1.47 V             | 0                    | 9.60             | 29.60                    |
| 2                                                   | 1742.80     | 29.4 AV                 | 54.0           | -24.6       | 1.47 V             | 0                    | -0.20            | 29.60                    |

**REMARKS:**

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | CH 4408+CH 1    | FREQUENCY RANGE    | 1 ~ 12.5GHz               |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 24deg. C, 64%RH | TESTED BY          | Match Tsui                |
| TEST MODE                | B               |                    |                           |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 1763.20     | 40.3 PK                 | 74.0           | -33.7       | 1.20 H             | 180                  | 10.60            | 29.70                    |
| 2                                                   | 1763.20     | 30.0 AV                 | 54.0           | -24.0       | 1.20 H             | 180                  | 0.30             | 29.70                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 1763.20     | 39.5 PK                 | 74.0           | -34.5       | 1.03 V             | 360                  | 9.80             | 29.70                    |
| 2                                                   | 1763.20     | 29.6 AV                 | 54.0           | -24.4       | 1.03 V             | 360                  | -0.10            | 29.70                    |

**REMARKS:**

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | CH 4458+CH 1    | FREQUENCY RANGE    | 1 ~ 12.5GHz               |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 24deg. C, 64%RH | TESTED BY          | Match Tsui                |
| TEST MODE                | B               |                    |                           |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 1783.20     | 40.3 PK                 | 74.0           | -33.7       | 1.27 H             | 180                  | 10.60            | 29.70                    |
| 2                                                   | 1783.20     | 30.2 AV                 | 54.0           | -23.8       | 1.27 H             | 180                  | 0.50             | 29.70                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 1783.20     | 39.0 PK                 | 74.0           | -35.0       | 1.30 V             | 0                    | 9.30             | 29.70                    |
| 2                                                   | 1783.20     | 29.2 AV                 | 54.0           | -24.8       | 1.30 V             | 0                    | -0.50            | 29.70                    |

**REMARKS:**

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

# WCDMA II+GPS

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | CH 9662+CH 1    | FREQUENCY RANGE    | 1 ~ 12.5GHz               |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 24deg. C, 64%RH | TESTED BY          | Match Tsui                |
| TEST MODE                | A               |                    |                           |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 3864.80     | 43.2 PK                 | 74.0           | -30.8       | 1.00 H             | 190                  | 7.70             | 35.50                    |
| 2                                                   | 3864.80     | 30.3 AV                 | 54.0           | -23.7       | 1.00 H             | 190                  | -5.20            | 35.50                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 3864.80     | 43.2 PK                 | 74.0           | -30.8       | 1.20 V             | 360                  | 7.70             | 35.50                    |
| 2                                                   | 3864.80     | 30.5 AV                 | 54.0           | -23.5       | 1.20 V             | 360                  | -5.00            | 35.50                    |

## REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



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| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | CH 9880+CH 1    | FREQUENCY RANGE    | 1 ~ 12.5GHz               |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 24deg. C, 64%RH | TESTED BY          | Match Tsui                |
| TEST MODE                | A               |                    |                           |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 3920.00     | 43.4 PK                 | 74.0           | -30.6       | 1.20 H             | 360                  | 7.80             | 35.60                    |
| 2                                                   | 3920.00     | 30.2 AV                 | 54.0           | -23.8       | 1.20 H             | 360                  | -5.40            | 35.60                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 3920.00     | 43.3 PK                 | 74.0           | -30.7       | 1.00 V             | 330                  | 7.70             | 35.60                    |
| 2                                                   | 3920.00     | 30.7 AV                 | 54.0           | -23.3       | 1.00 V             | 330                  | -4.90            | 35.60                    |

**REMARKS:**

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | CH 9938+CH 1    | FREQUENCY RANGE    | 1 ~ 12.5GHz               |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 24deg. C, 64%RH | TESTED BY          | Match Tsui                |
| TEST MODE                | A               |                    |                           |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 3975.20     | 43.0 PK                 | 74.0           | -31.0       | 1.00 H             | 180                  | 7.30             | 35.70                    |
| 2                                                   | 3975.20     | 30.3 AV                 | 54.0           | -23.7       | 1.00 H             | 180                  | -5.40            | 35.70                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 3975.20     | 43.1 PK                 | 74.0           | -30.9       | 1.40 V             | 350                  | 7.40             | 35.70                    |
| 2                                                   | 3975.20     | 30.5 AV                 | 54.0           | -23.5       | 1.40 V             | 350                  | -5.20            | 35.70                    |

**REMARKS:**

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | CH 9662+CH 1    | FREQUENCY RANGE    | 1 ~ 12.5GHz               |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 24deg. C, 64%RH | TESTED BY          | Match Tsui                |
| TEST MODE                | B               |                    |                           |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 3864.80     | 43.5 PK                 | 74.0           | -30.5       | 1.04 H             | 210                  | 8.00             | 35.50                    |
| 2                                                   | 3864.80     | 30.6 AV                 | 54.0           | -23.4       | 1.04 H             | 210                  | -4.90            | 35.50                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 3864.80     | 43.5 PK                 | 74.0           | -30.5       | 1.10 V             | 300                  | 8.00             | 35.50                    |
| 2                                                   | 3864.80     | 30.2 AV                 | 54.0           | -23.8       | 1.10 V             | 300                  | -5.30            | 35.50                    |

**REMARKS:**

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | CH 9880+CH 1    | FREQUENCY RANGE    | 1 ~ 12.5GHz               |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 24deg. C, 64%RH | TESTED BY          | Match Tsui                |
| TEST MODE                | B               |                    |                           |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 3920.00     | 43.6 PK                 | 74.0           | -30.4       | 1.10 H             | 180                  | 8.00             | 35.60                    |
| 2                                                   | 3920.00     | 30.5 AV                 | 54.0           | -23.5       | 1.10 H             | 180                  | -5.10            | 35.60                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 3920.00     | 43.6 PK                 | 74.0           | -30.4       | 1.20 V             | 310                  | 8.00             | 35.60                    |
| 2                                                   | 3920.00     | 30.6 AV                 | 54.0           | -23.4       | 1.20 V             | 310                  | -5.00            | 35.60                    |

**REMARKS:**

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |                           |
|--------------------------|-----------------|--------------------|---------------------------|
| CHANNEL                  | CH 9938+CH 1    | FREQUENCY RANGE    | 1 ~ 12.5GHz               |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Peak (PK)<br>Average (AV) |
| ENVIRONMENTAL CONDITIONS | 24deg. C, 64%RH | TESTED BY          | Match Tsui                |
| TEST MODE                | B               |                    |                           |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 3975.20     | 43.1 PK                 | 74.0           | -30.9       | 1.07 H             | 110                  | 7.40             | 35.70                    |
| 2                                                   | 3975.20     | 30.6 AV                 | 54.0           | -23.4       | 1.07 H             | 110                  | -5.10            | 35.70                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 3795.20     | 43.6 PK                 | 74.0           | -30.4       | 1.10 V             | 0                    | 8.20             | 35.40                    |
| 2                                                   | 3795.20     | 30.7 AV                 | 54.0           | -23.3       | 1.10 V             | 0                    | -4.70            | 35.40                    |

**REMARKS:**

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

# BELOW 1GHz WORST-CASE DATA :

## WCDMA V+GPS

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |               |
|--------------------------|-----------------|--------------------|---------------|
| CHANNEL                  | CH 4357+CH 1    | FREQUENCY RANGE    | Below 1000MHz |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Quasi-Peak    |
| ENVIRONMENTAL CONDITIONS | 24deg. C, 64%RH | TESTED BY          | Match Tsui    |
| TEST MODE                | A               |                    |               |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 97.81       | 37.1 QP                 | 43.5           | -6.4        | 1.99 H             | 115                  | 28.00            | 9.10                     |
| 2                                                   | 148.26      | 33.3 QP                 | 43.5           | -10.2       | 1.99 H             | 79                   | 19.40            | 13.90                    |
| 3                                                   | 223.94      | 36.2 QP                 | 46.0           | -9.8        | 1.50 H             | 4                    | 24.40            | 11.80                    |
| 4                                                   | 274.39      | 33.9 QP                 | 46.0           | -12.1       | 1.00 H             | 208                  | 20.10            | 13.80                    |
| 5                                                   | 324.84      | 37.0 QP                 | 46.0           | -9.0        | 1.00 H             | 291                  | 21.60            | 15.40                    |
| 6                                                   | 350.07      | 35.9 QP                 | 46.0           | -10.1       | 1.00 H             | 291                  | 19.90            | 16.00                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 64.83       | 35.8 QP                 | 40.0           | -4.2        | 1.00 V             | 200                  | 22.90            | 12.90                    |
| 2                                                   | 105.58      | 35.0 QP                 | 43.5           | -8.5        | 1.00 V             | 138                  | 25.00            | 10.00                    |
| 3                                                   | 148.26      | 35.9 QP                 | 43.5           | -7.6        | 1.00 V             | 229                  | 22.00            | 13.90                    |
| 4                                                   | 249.17      | 31.3 QP                 | 46.0           | -14.7       | 2.00 V             | 222                  | 18.50            | 12.80                    |
| 5                                                   | 299.62      | 34.3 QP                 | 46.0           | -11.7       | 1.00 V             | 134                  | 19.60            | 14.70                    |
| 6                                                   | 324.84      | 35.2 QP                 | 46.0           | -10.8       | 1.50 V             | 204                  | 19.80            | 15.40                    |
| 7                                                   | 400.52      | 34.2 QP                 | 46.0           | -11.8       | 1.00 V             | 347                  | 17.10            | 17.10                    |

### REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



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| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |               |
|--------------------------|-----------------|--------------------|---------------|
| CHANNEL                  | CH 4357+CH 1    | FREQUENCY RANGE    | Below 1000MHz |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Quasi-Peak    |
| ENVIRONMENTAL CONDITIONS | 24deg. C, 64%RH | TESTED BY          | Match Tsui    |
| TEST MODE                | B               |                    |               |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 97.81       | 36.6 QP                 | 43.5           | -6.9        | 1.50 H             | 285                  | 27.50            | 9.10                     |
| 2                                                   | 148.26      | 34.9 QP                 | 43.5           | -8.6        | 1.00 H             | 59                   | 21.00            | 13.90                    |
| 3                                                   | 223.94      | 37.0 QP                 | 46.0           | -9.0        | 1.50 H             | 6                    | 25.20            | 11.80                    |
| 4                                                   | 299.62      | 36.3 QP                 | 46.0           | -9.7        | 1.00 H             | 82                   | 21.60            | 14.70                    |
| 5                                                   | 324.84      | 36.7 QP                 | 46.0           | -9.3        | 1.50 H             | 283                  | 21.30            | 15.40                    |
| 6                                                   | 375.29      | 32.1 QP                 | 46.0           | -13.9       | 1.00 H             | 113                  | 15.50            | 16.60                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 60.95       | 34.7 QP                 | 40.0           | -5.3        | 1.49 V             | 214                  | 21.40            | 13.30                    |
| 2                                                   | 105.58      | 34.9 QP                 | 43.5           | -8.6        | 1.00 V             | 260                  | 24.90            | 10.00                    |
| 3                                                   | 148.26      | 35.6 QP                 | 43.5           | -7.9        | 1.00 V             | 240                  | 21.70            | 13.90                    |
| 4                                                   | 223.94      | 34.2 QP                 | 46.0           | -11.8       | 1.00 V             | 109                  | 22.40            | 11.80                    |
| 5                                                   | 324.84      | 35.3 QP                 | 46.0           | -10.7       | 1.00 V             | 307                  | 19.90            | 15.40                    |
| 6                                                   | 350.07      | 34.7 QP                 | 46.0           | -11.3       | 1.00 V             | 139                  | 18.70            | 16.00                    |

**REMARKS:**

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

# WCDMA II+GPS

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |               |
|--------------------------|-----------------|--------------------|---------------|
| CHANNEL                  | CH 9662+CH 1    | FREQUENCY RANGE    | Below 1000MHz |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Quasi-Peak    |
| ENVIRONMENTAL CONDITIONS | 24deg. C, 64%RH | TESTED BY          | Match Tsui    |
| TEST MODE                | A               |                    |               |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 97.81       | 37.0 QP                 | 43.5           | -6.5        | 1.99 H             | 121                  | 27.90            | 9.10                     |
| 2                                                   | 148.26      | 33.5 QP                 | 43.5           | -10.0       | 1.99 H             | 52                   | 19.60            | 13.90                    |
| 3                                                   | 223.94      | 37.6 QP                 | 46.0           | -8.4        | 1.49 H             | 8                    | 25.80            | 11.80                    |
| 4                                                   | 249.17      | 35.9 QP                 | 46.0           | -10.1       | 1.49 H             | 101                  | 23.10            | 12.80                    |
| 5                                                   | 299.62      | 34.8 QP                 | 46.0           | -11.2       | 1.49 H             | 269                  | 20.10            | 14.70                    |
| 6                                                   | 324.84      | 33.9 QP                 | 46.0           | -12.1       | 1.49 H             | 292                  | 18.50            | 15.40                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 64.83       | 35.7 QP                 | 40.0           | -4.3        | 1.00 V             | 207                  | 22.80            | 12.90                    |
| 2                                                   | 105.58      | 33.3 QP                 | 43.5           | -10.2       | 1.00 V             | 141                  | 23.30            | 10.00                    |
| 3                                                   | 148.26      | 36.5 QP                 | 43.5           | -7.0        | 1.00 V             | 217                  | 22.60            | 13.90                    |
| 4                                                   | 299.62      | 36.4 QP                 | 46.0           | -9.6        | 1.50 V             | 111                  | 21.70            | 14.70                    |
| 5                                                   | 324.84      | 38.8 QP                 | 46.0           | -7.2        | 1.00 V             | 118                  | 23.40            | 15.40                    |
| 6                                                   | 350.07      | 33.8 QP                 | 46.0           | -12.2       | 1.00 V             | 192                  | 17.80            | 16.00                    |

## REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



A D T

| EUT TEST CONDITION       |                 | MEASUREMENT DETAIL |               |
|--------------------------|-----------------|--------------------|---------------|
| CHANNEL                  | CH 9662+CH 1    | FREQUENCY RANGE    | Below 1000MHz |
| INPUT POWER (SYSTEM)     | 120Vac, 60 Hz   | DETECTOR FUNCTION  | Quasi-Peak    |
| ENVIRONMENTAL CONDITIONS | 24deg. C, 64%RH | TESTED BY          | Match Tsui    |
| TEST MODE                | B               |                    |               |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 93.93       | 37.5 QP                 | 43.5           | -6.0        | 2.00 H             | 258                  | 28.80            | 8.70                     |
| 2                                                   | 148.26      | 35.3 QP                 | 43.5           | -8.2        | 2.00 H             | 62                   | 21.40            | 13.90                    |
| 3                                                   | 223.94      | 36.8 QP                 | 46.0           | -9.2        | 1.00 H             | 3                    | 25.00            | 11.80                    |
| 4                                                   | 249.17      | 36.5 QP                 | 46.0           | -9.5        | 1.00 H             | 18                   | 23.70            | 12.80                    |
| 5                                                   | 324.84      | 36.2 QP                 | 46.0           | -9.8        | 1.49 H             | 118                  | 20.80            | 15.40                    |
| 6                                                   | 350.07      | 35.0 QP                 | 46.0           | -11.0       | 1.00 H             | 291                  | 19.00            | 16.00                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 105.58      | 35.6 QP                 | 43.5           | -7.9        | 1.00 V             | 109                  | 25.60            | 10.00                    |
| 2                                                   | 148.26      | 35.5 QP                 | 43.5           | -8.0        | 1.00 V             | 223                  | 21.60            | 13.90                    |
| 3                                                   | 223.94      | 34.1 QP                 | 46.0           | -11.9       | 1.00 V             | 96                   | 22.30            | 11.80                    |
| 4                                                   | 249.17      | 32.4 QP                 | 46.0           | -13.6       | 2.00 V             | 224                  | 19.60            | 12.80                    |
| 5                                                   | 324.84      | 36.0 QP                 | 46.0           | -10.0       | 1.49 V             | 307                  | 20.60            | 15.40                    |
| 6                                                   | 425.74      | 34.5 QP                 | 46.0           | -11.5       | 1.00 V             | 36                   | 16.80            | 17.70                    |

**REMARKS:**

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

## 4.2 CONDUCTED EMISSION MEASUREMENT

### 4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

| FREQUENCY OF EMISSION (MHz) | CONDUCTED LIMIT (dB $\mu$ V) |          |
|-----------------------------|------------------------------|----------|
|                             | Quasi-peak                   | Average  |
| 0.15 ~ 0.5                  | 66 to 56                     | 56 to 46 |
| 0.5 ~ 5                     | 56                           | 46       |
| 5 ~ 30                      | 60                           | 50       |

- NOTE:** 1. The lower limit shall apply at the transition frequencies.  
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.  
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

### 4.2.2 TEST INSTRUMENTS

| DESCRIPTION & MANUFACTURER              | MODEL NO.                | SERIAL NO.     | DATE OF CALIBRATION | DUE DATE OF CALIBRATION |
|-----------------------------------------|--------------------------|----------------|---------------------|-------------------------|
| Test Receiver<br>ROHDE & SCHWARZ        | ESCS30                   | 100288         | Nov. 09, 2012       | Nov. 08, 2013           |
| RF signal cable<br>Woken                | 5D-FB                    | Cable-HYCO2-01 | Dec. 29, 2011       | Dec. 28, 2012           |
| LISN<br>ROHDE & SCHWARZ<br>(EUT)        | ESH2-Z5                  | 100100         | Dec. 30, 2011       | Dec. 29, 2012           |
| LISN<br>ROHDE & SCHWARZ<br>(Peripheral) | ESH3-Z5                  | 100311         | Jul. 06, 2012       | Jul. 05, 2013           |
| Software<br>ADT                         | BV ADT_Cond_<br>V7.3.7.3 | NA             | NA                  | NA                      |

- 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 Shielded Room 2.  
 3. The VCCI Site Registration No. is C-2047.



#### 4.2.3 TEST PROCEDURES

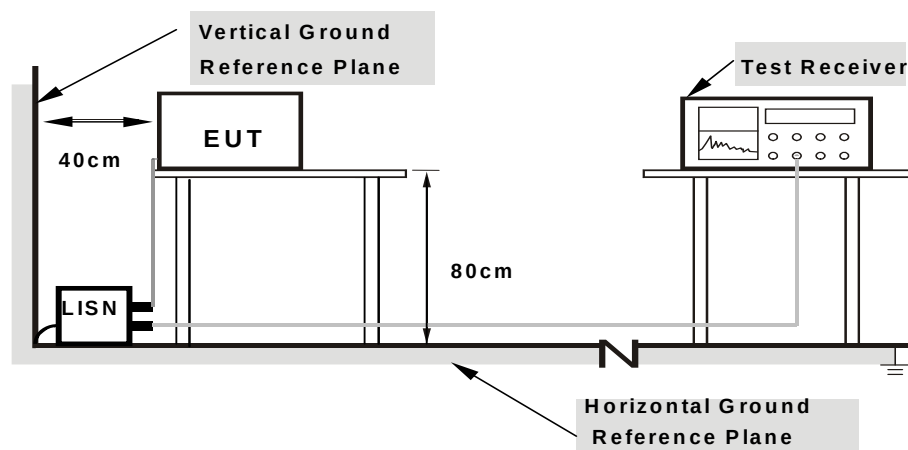
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

**NOTE:** All modes of operation were investigated and the worst-case emissions are reported.

#### 4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

#### 4.2.5 TEST SETUP



**Note:** 1.Support units were connected to second LISN.  
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

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

#### 4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

## 4.2.7 TEST RESULTS

### CONDUCTED WORST-CASE DATA :

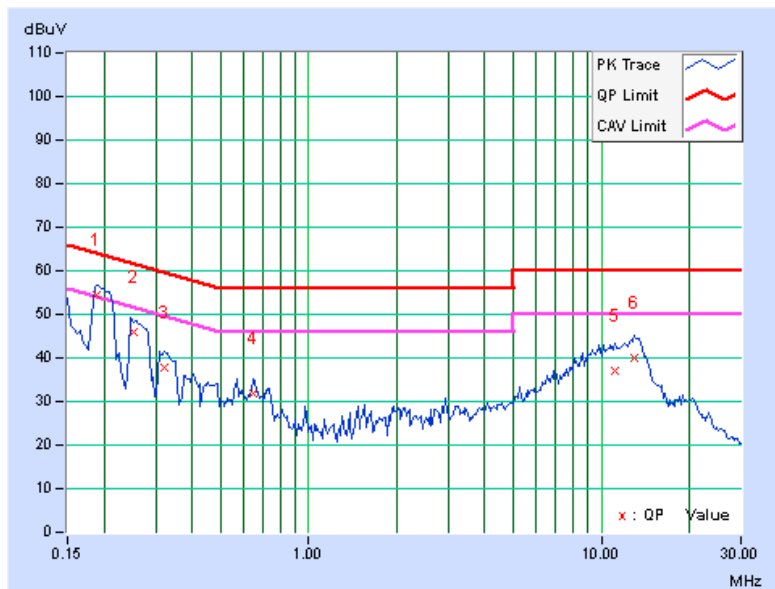
#### WCDMA V+GPS

|           |        |               |      |
|-----------|--------|---------------|------|
| PHASE     | Line 1 | 6dB BANDWIDTH | 9kHz |
| TEST MODE | A      |               |      |

| No | Freq.<br>[MHz] | Corr.<br>Factor<br>(dB) | Reading Value |       | Emission Level |       | Limit     |       | Margin |        |
|----|----------------|-------------------------|---------------|-------|----------------|-------|-----------|-------|--------|--------|
|    |                |                         | [dB (uV)]     |       | [dB (uV)]      |       | [dB (uV)] |       | (dB)   |        |
|    |                |                         | Q.P.          | AV.   | Q.P.           | AV.   | Q.P.      | AV.   | Q.P.   | AV.    |
| 1  | 0.18898        | 0.15                    | 54.22         | 37.48 | 54.37          | 37.63 | 64.08     | 54.08 | -9.71  | -16.45 |
| 2  | 0.25148        | 0.16                    | 45.81         | 28.94 | 45.97          | 29.10 | 61.71     | 51.71 | -15.74 | -22.61 |
| 3  | 0.32188        | 0.16                    | 37.47         | 24.45 | 37.63          | 24.61 | 59.66     | 49.66 | -22.03 | -25.05 |
| 4  | 0.65000        | 0.18                    | 31.66         | 29.55 | 31.84          | 29.73 | 56.00     | 46.00 | -24.16 | -16.27 |
| 5  | 11.12891       | 0.45                    | 36.53         | 30.01 | 36.98          | 30.46 | 60.00     | 50.00 | -23.02 | -19.54 |
| 6  | 12.96875       | 0.49                    | 39.53         | 33.18 | 40.02          | 33.67 | 60.00     | 50.00 | -19.98 | -16.33 |

#### REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

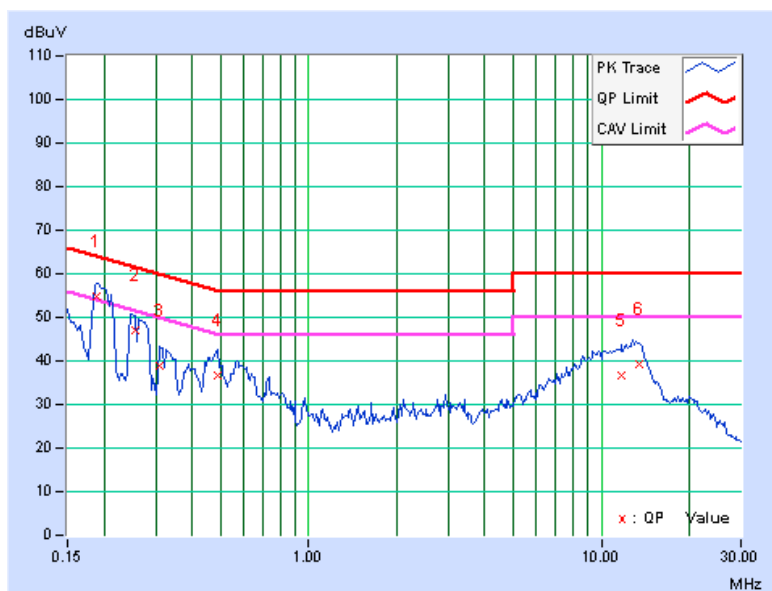


|           |        |               |      |
|-----------|--------|---------------|------|
| PHASE     | Line 2 | 6dB BANDWIDTH | 9kHz |
| TEST MODE | A      |               |      |

| No | Freq.    | Corr. Factor | Reading Value |       | Emission Level |       | Limit     |       | Margin |        |
|----|----------|--------------|---------------|-------|----------------|-------|-----------|-------|--------|--------|
|    |          |              | [dB (uV)]     |       | [dB (uV)]      |       | [dB (uV)] |       | (dB)   |        |
|    |          |              | Q.P.          | AV.   | Q.P.           | AV.   | Q.P.      | AV.   | Q.P.   | AV.    |
| 1  | 0.18906  | 0.14         | 54.62         | 38.98 | 54.76          | 39.12 | 64.08     | 54.08 | -9.32  | -14.96 |
| 2  | 0.25547  | 0.15         | 46.79         | 33.03 | 46.94          | 33.18 | 61.58     | 51.58 | -14.64 | -18.40 |
| 3  | 0.31144  | 0.15         | 38.60         | 21.76 | 38.75          | 21.91 | 59.93     | 49.93 | -21.18 | -28.02 |
| 4  | 0.48984  | 0.16         | 36.65         | 22.72 | 36.81          | 22.88 | 56.17     | 46.17 | -19.36 | -23.29 |
| 5  | 11.77344 | 0.52         | 36.32         | 30.08 | 36.84          | 30.60 | 60.00     | 50.00 | -23.16 | -19.40 |
| 6  | 13.41797 | 0.56         | 38.86         | 33.04 | 39.42          | 33.60 | 60.00     | 50.00 | -20.58 | -16.40 |

#### REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

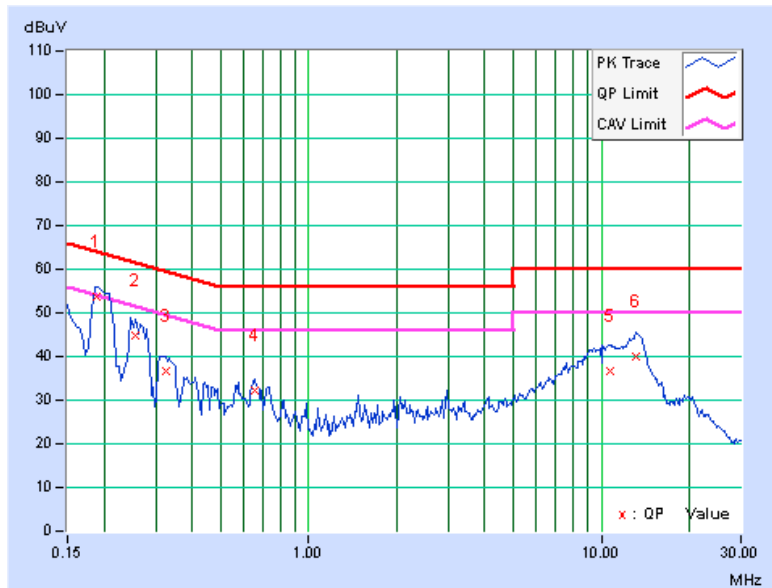


|           |        |               |      |
|-----------|--------|---------------|------|
| PHASE     | Line 1 | 6dB BANDWIDTH | 9kHz |
| TEST MODE | B      |               |      |

| No | Freq.<br>[MHz] | Corr.<br>Factor<br>(dB) | Reading Value |       | Emission Level |       | Limit     |       | Margin |        |
|----|----------------|-------------------------|---------------|-------|----------------|-------|-----------|-------|--------|--------|
|    |                |                         | [dB (uV)]     |       | [dB (uV)]      |       | [dB (uV)] |       | (dB)   |        |
|    |                |                         | Q.P.          | AV.   | Q.P.           | AV.   | Q.P.      | AV.   | Q.P.   | AV.    |
| 1  | 0.18906        | 0.15                    | 53.56         | 37.24 | 53.71          | 37.39 | 64.08     | 54.08 | -10.37 | -16.69 |
| 2  | 0.25547        | 0.16                    | 44.74         | 30.04 | 44.90          | 30.20 | 61.58     | 51.58 | -16.68 | -21.38 |
| 3  | 0.32578        | 0.16                    | 36.35         | 24.67 | 36.51          | 24.83 | 59.56     | 49.56 | -23.05 | -24.73 |
| 4  | 0.65391        | 0.18                    | 32.08         | 29.91 | 32.26          | 30.09 | 56.00     | 46.00 | -23.74 | -15.91 |
| 5  | 10.66797       | 0.44                    | 36.36         | 29.64 | 36.80          | 30.08 | 60.00     | 50.00 | -23.20 | -19.92 |
| 6  | 13.09375       | 0.49                    | 39.47         | 33.34 | 39.96          | 33.83 | 60.00     | 50.00 | -20.04 | -16.17 |

#### REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

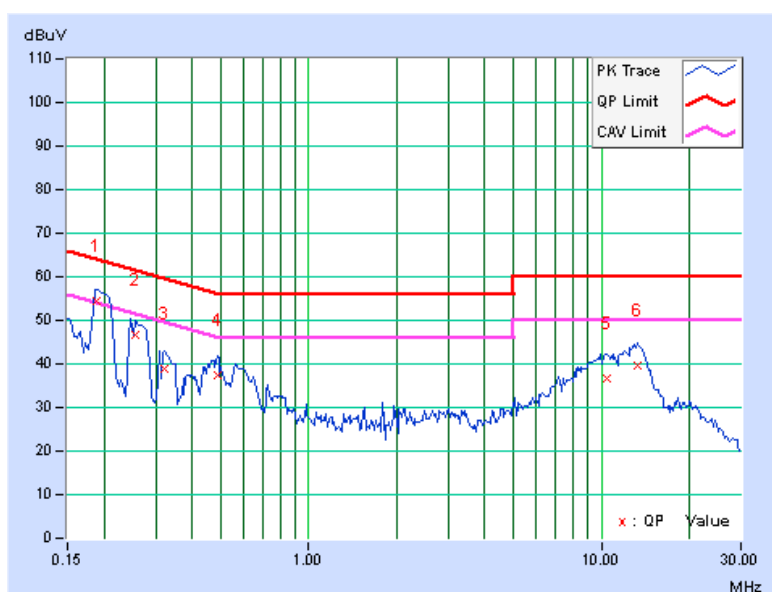


|           |        |               |      |
|-----------|--------|---------------|------|
| PHASE     | Line 2 | 6dB BANDWIDTH | 9kHz |
| TEST MODE | B      |               |      |

| No | Freq.    | Corr. Factor | Reading Value |       | Emission Level |       | Limit     |       | Margin |        |
|----|----------|--------------|---------------|-------|----------------|-------|-----------|-------|--------|--------|
|    |          |              | [dB (uV)]     |       | [dB (uV)]      |       | [dB (uV)] |       | (dB)   |        |
|    |          |              | Q.P.          | AV.   | Q.P.           | AV.   | Q.P.      | AV.   | Q.P.   | AV.    |
| 1  | 0.18906  | 0.14         | 54.13         | 38.63 | 54.27          | 38.77 | 64.08     | 54.08 | -9.81  | -15.31 |
| 2  | 0.25547  | 0.15         | 46.39         | 32.79 | 46.54          | 32.94 | 61.58     | 51.58 | -15.04 | -18.64 |
| 3  | 0.32188  | 0.15         | 38.56         | 26.14 | 38.71          | 26.29 | 59.66     | 49.66 | -20.95 | -23.37 |
| 4  | 0.48594  | 0.16         | 37.37         | 24.59 | 37.53          | 24.75 | 56.24     | 46.24 | -18.70 | -21.48 |
| 5  | 10.44531 | 0.49         | 36.18         | 29.19 | 36.67          | 29.68 | 60.00     | 50.00 | -23.33 | -20.32 |
| 6  | 13.28906 | 0.56         | 39.09         | 32.99 | 39.65          | 33.55 | 60.00     | 50.00 | -20.35 | -16.45 |

#### REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.



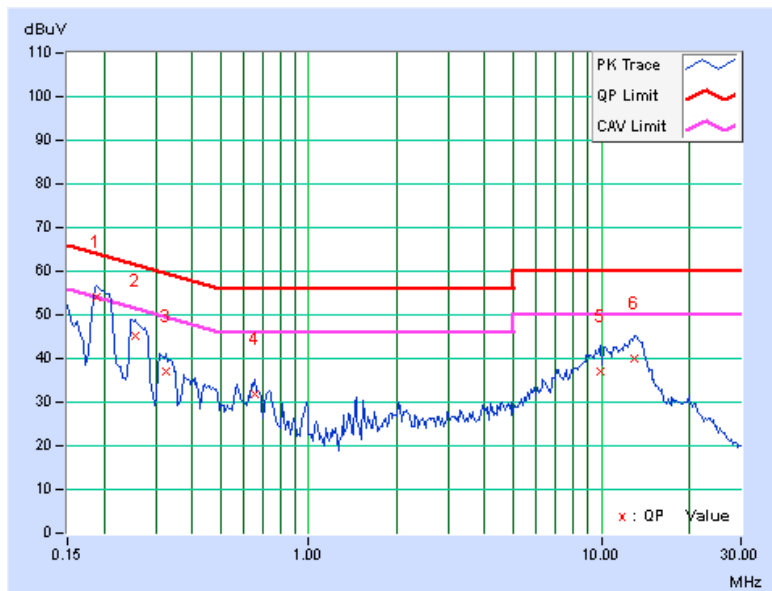
# WCDMA II+GPS

|           |        |               |      |
|-----------|--------|---------------|------|
| PHASE     | Line 1 | 6dB BANDWIDTH | 9kHz |
| TEST MODE | A      |               |      |

| No | Freq.<br>[MHz] | Corr.<br>Factor<br>(dB) | Reading Value |       | Emission Level |       | Limit     |       | Margin |        |
|----|----------------|-------------------------|---------------|-------|----------------|-------|-----------|-------|--------|--------|
|    |                |                         | [dB (uV)]     |       | [dB (uV)]      |       | [dB (uV)] |       | (dB)   |        |
|    |                |                         | Q.P.          | AV.   | Q.P.           | AV.   | Q.P.      | AV.   | Q.P.   | AV.    |
| 1  | 0.18906        | 0.15                    | 53.89         | 37.63 | 54.04          | 37.78 | 64.08     | 54.08 | -10.04 | -16.30 |
| 2  | 0.25547        | 0.16                    | 45.14         | 30.26 | 45.30          | 30.42 | 61.58     | 51.58 | -16.28 | -21.16 |
| 3  | 0.32578        | 0.16                    | 36.84         | 24.50 | 37.00          | 24.66 | 59.56     | 49.56 | -22.56 | -24.90 |
| 4  | 0.65391        | 0.18                    | 31.66         | 28.71 | 31.84          | 28.89 | 56.00     | 46.00 | -24.16 | -17.11 |
| 5  | 9.94922        | 0.43                    | 36.65         | 29.37 | 37.08          | 29.80 | 60.00     | 50.00 | -22.92 | -20.20 |
| 6  | 13.03906       | 0.49                    | 39.51         | 33.05 | 40.00          | 33.54 | 60.00     | 50.00 | -20.00 | -16.46 |

## REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

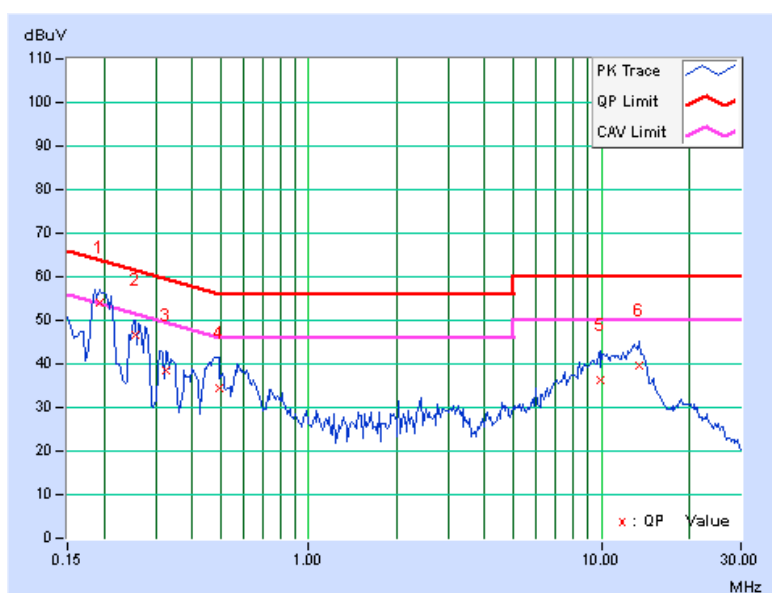


|           |        |               |      |
|-----------|--------|---------------|------|
| PHASE     | Line 2 | 6dB BANDWIDTH | 9kHz |
| TEST MODE | A      |               |      |

| No | Freq.    | Corr. Factor | Reading Value |       | Emission Level |       | Limit     |       | Margin |        |
|----|----------|--------------|---------------|-------|----------------|-------|-----------|-------|--------|--------|
|    |          |              | [dB (uV)]     |       | [dB (uV)]      |       | [dB (uV)] |       | (dB)   |        |
|    |          |              | Q.P.          | AV.   | Q.P.           | AV.   | Q.P.      | AV.   | Q.P.   | AV.    |
| 1  | 0.19297  | 0.14         | 53.93         | 40.55 | 54.07          | 40.69 | 63.91     | 53.91 | -9.84  | -13.22 |
| 2  | 0.25547  | 0.15         | 46.53         | 32.83 | 46.68          | 32.98 | 61.58     | 51.58 | -14.90 | -18.60 |
| 3  | 0.32578  | 0.15         | 38.33         | 26.74 | 38.48          | 26.89 | 59.56     | 49.56 | -21.08 | -22.67 |
| 4  | 0.49375  | 0.16         | 34.39         | 21.41 | 34.55          | 21.57 | 56.10     | 46.10 | -21.55 | -24.53 |
| 5  | 9.98438  | 0.48         | 35.94         | 29.05 | 36.42          | 29.53 | 60.00     | 50.00 | -23.58 | -20.47 |
| 6  | 13.43359 | 0.56         | 38.92         | 32.70 | 39.48          | 33.26 | 60.00     | 50.00 | -20.52 | -16.74 |

#### REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

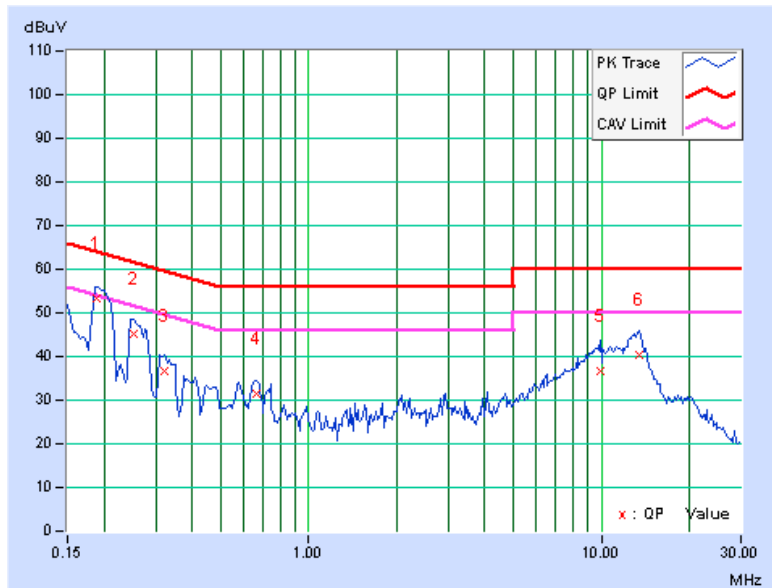


|           |        |               |      |
|-----------|--------|---------------|------|
| PHASE     | Line 1 | 6dB BANDWIDTH | 9kHz |
| TEST MODE | B      |               |      |

| No | Freq.    | Corr. Factor | Reading Value |       | Emission Level |       | Limit     |       | Margin |        |
|----|----------|--------------|---------------|-------|----------------|-------|-----------|-------|--------|--------|
|    |          |              | [dB (uV)]     |       | [dB (uV)]      |       | [dB (uV)] |       | (dB)   |        |
|    |          |              | Q.P.          | AV.   | Q.P.           | AV.   | Q.P.      | AV.   | Q.P.   | AV.    |
| 1  | 0.18771  | 0.15         | 53.35         | 35.81 | 53.50          | 35.96 | 64.14     | 54.14 | -10.64 | -18.18 |
| 2  | 0.25156  | 0.16         | 44.96         | 28.94 | 45.12          | 29.10 | 61.71     | 51.71 | -16.59 | -22.61 |
| 3  | 0.32188  | 0.16         | 36.58         | 22.26 | 36.74          | 22.42 | 59.66     | 49.66 | -22.92 | -27.24 |
| 4  | 0.66044  | 0.18         | 31.34         | 26.25 | 31.52          | 26.43 | 56.00     | 46.00 | -24.48 | -19.57 |
| 5  | 9.89063  | 0.43         | 36.40         | 29.10 | 36.83          | 29.53 | 60.00     | 50.00 | -23.17 | -20.47 |
| 6  | 13.48047 | 0.50         | 40.02         | 34.16 | 40.52          | 34.66 | 60.00     | 50.00 | -19.48 | -15.34 |

#### REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.



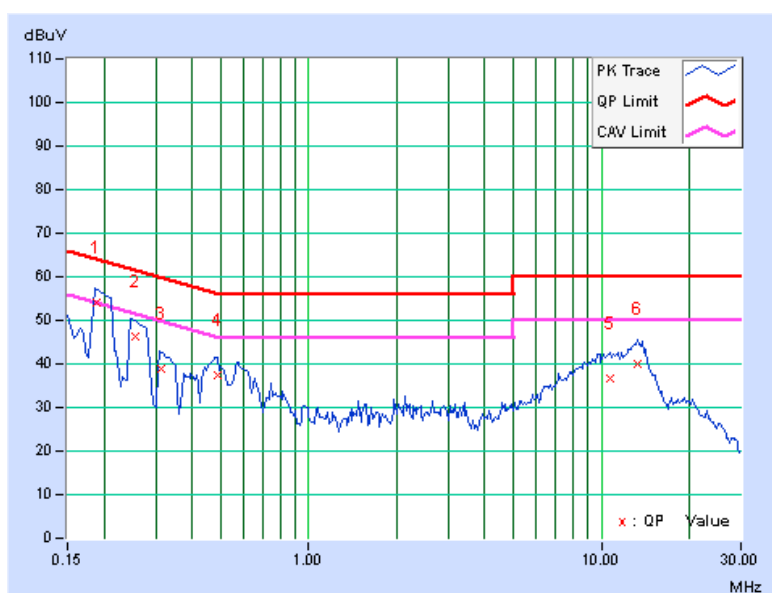


|           |        |               |      |
|-----------|--------|---------------|------|
| PHASE     | Line 2 | 6dB BANDWIDTH | 9kHz |
| TEST MODE | B      |               |      |

| No | Freq.    | Corr. Factor | Reading Value |       | Emission Level |       | Limit     |       | Margin |        |
|----|----------|--------------|---------------|-------|----------------|-------|-----------|-------|--------|--------|
|    |          |              | [dB (uV)]     |       | [dB (uV)]      |       | [dB (uV)] |       | (dB)   |        |
|    |          |              | Q.P.          | AV.   | Q.P.           | AV.   | Q.P.      | AV.   | Q.P.   | AV.    |
| 1  | 0.18898  | 0.14         | 53.91         | 38.43 | 54.05          | 38.57 | 64.08     | 54.08 | -10.03 | -15.51 |
| 2  | 0.25547  | 0.15         | 46.25         | 32.75 | 46.40          | 32.90 | 61.58     | 51.58 | -15.18 | -18.68 |
| 3  | 0.31525  | 0.15         | 38.81         | 23.93 | 38.96          | 24.08 | 59.83     | 49.83 | -20.87 | -25.75 |
| 4  | 0.48594  | 0.16         | 37.29         | 24.13 | 37.45          | 24.29 | 56.24     | 46.24 | -18.78 | -21.94 |
| 5  | 10.74609 | 0.50         | 36.15         | 29.64 | 36.65          | 30.14 | 60.00     | 50.00 | -23.35 | -19.86 |
| 6  | 13.32422 | 0.56         | 39.28         | 33.23 | 39.84          | 33.79 | 60.00     | 50.00 | -20.16 | -16.21 |

#### REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.





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## 5. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

## 6. 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.

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



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## **7. APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB**

No any modifications are made to the EUT by the lab during the test.

**---END---**