

Report No.: EI/2009/70003 Issue Date: Jul. 21, 2009

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## ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

# UN-INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART B CERTIFICATION REQUIREMENT

0F

Product Name: CDMA TSX04

FCC ID: WVS-RN10-J02

**Report No.:** EI/2009/70003

**Issue Date: Jul. 21, 2009** 

FCC Rule Part: Part 15 B, Class B

Filing Type: Certification

Prepared for: Toshiba Corporation, Mobile

**Communications Co., Quality Management** 

**Division** 

1-1, Asahigaoka 3-Chome, Hino-Shi, Tokyo,

191-8555, Japan

Prepared by: SGS Taiwan Ltd.

**Electronics & Communication Laboratory** 

No. 134, Wu Kung Rd., Wuku Industrial

**Zone, Taipei County, Taiwan** 





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## VERIFICATION OF COMPLIANCE

**Applicant:** Toshiba Corporation, Mobile Communications Co., Quality

Management Division

1-1, Asahigaoka 3-Chome, Hino-Shi, Tokyo, 191-8555, Japan

**Manufacturer:** Toshiba Corporation, Mobile Communications Co., Quality

Management Division

1-1, Asahigaoka 3-Chome, Hino-Shi, Tokyo, 191-8555, Japan

**Product Name:** CDMA TSX04

FCC ID: WVS-RN10-J02

File Number: EI/2009/70003

Date of test: Jul. 10, 2009 ~ Jul. 20, 2009

**Date of EUT Receive:** Jul. 10, 2009

## We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15B, Class B. The test results of this report relate only to the tested sample identified in this report.

| Test By:     | Nick Lin   | Date: | Jul. 21, 2009 |
|--------------|--|-------|---------------|
| Prepared By: | Nick Lin / Engineer                              | Date: | Jul. 21, 2009 |
| Approved By: | Eva Kao / Asst. Supervisor  Vincent Su / Manager | Date: | Jul. 21, 2009 |

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## Version

| Version No. | Date          | Description                  |
|-------------|---------------|------------------------------|
| 00          | Jul. 21, 2009 | Initial creation of document |
|             |               |                              |
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## 1. GENERAL INFORMATION

### **General:**

| Product Name:           | CDMA TSX04   |              |  |  |  |
|-------------------------|--|--------------|--|--|--|
| FCC ID:                 | WVS-RN10-  | WVS-RN10-J02 |  |  |  |
| Software Version:       | N/A  |              |  |  |  |
| Hardware Version:       | N/A  |              |  |  |  |
| Data Cable:             | 1 provided. Model: N/A                                       |              |  |  |  |
| Simple Hands-free (SHF) | 1 provided. M  | Model: N/A   |  |  |  |
|                         | 3.7 Vdc re-chargeable battery or 5Vdc by AC/DC power adapter |              |  |  |  |
| Power Supply:           | Battery: Model: TSX04UAA; Supplier: KDDI                     |              |  |  |  |
|                         | Adaptor: Model: MP-XKA; Supplier: MITSUMI                    |              |  |  |  |

#### CDMA:

| CDMA.            |          |                            |                   |                              |
|------------------|----------|----------------------------|-------------------|------------------------------|
| DUT Standards    | CDMA2000 | Frequency Range            |                   | Rated Maximum ERP/EIRP Power |
| And Power:       | Cellular | TX:                        | 824.70-848.31 MHz | 24.95 dBm                    |
|                  |          | RX:                        | 869.70-893.31 MHz | 24.73 <b>ub</b> iii          |
| Type of Emission |          | CDMA2000 Cellular: 1M28F9W |                   |                              |
| Antenna Type     |          | PIFA Type                  |                   |                              |

**Final Amplifier Voltage and Current Information:** 

| Test Mode         | DC voltage (V) DC current (m. |     |
|-------------------|-------------------------------|-----|
| CDMA2000 Cellular | 3.7Vdc                        | 250 |

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## 1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID:** <u>WVS-RN10-J02</u> filing to comply with Part15 Subpart B, class B of the FCC CFR 47 Rules.

## 1.3 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.4 (2003). Radiated testing was performed at an antenna to EUT distance 3 meters.

## 1.4 Test Facility

The measurement facilities used to collect the 3m Radiated Emission and AC power line conducted data are located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei Country, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003. FCC Registration Number are: 990257 and 236194, Canada Registration Number: 4620A-1

The 10 m Open Area Test Sites located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No. 29, Pau-Tou-Tsuo Valley Chia-Pau Tsuen, Linkou Hsiang, Taipei county, which is constructed and calibrated to meet the CISPR 22/EN 55022 requirements. SGS Site No. 1(3 & 10 meters) and FCC Registration Number: 94644

## 1.5 Special Accessories

Not available for this EUT intended for grant.

## 1.6 Equipment Modifications

Not available for this EUT intended for grant.



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## **System Test Configuration**

## 2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### 2.2 EUT Exercise

The Toshiba CDMA cellular phone FCC ID: WVS-RN10-J02 was tested with a computer connected via USB interface port. The Phone drivers were installed on the computer to be able to communicate with the phone by continuously sending a querying text file (AT commands) to the phone using HyperTerminal. For more information please see section 5.4 and section 6.5 for test data and APPENDIX 1 for set-up photographs.

#### 2.3 Test Procedure

#### 2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 7 of ANSI C63.4-2003. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.

## 2.3.2 Radiated Emissions

The EUT is placed on a turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 8 of ANSI C63.4-2003.

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### 2.4 Limitation

#### **(1) Conducted Emission**

According to section 15.107(a), Conducted Emission Class B Limits is as following.

| Frequency range | Class B Limits<br>dB (uV) |          |  |  |
|-----------------|---------------------------|----------|--|--|
| MHz             | Quasi-peak                | Average  |  |  |
| 0.15 to 0.50    | 66 to 56                  | 56 to 46 |  |  |
| 0.50 to 5       | 56                        | 46       |  |  |
| 5 to 30         | 60                        | 50       |  |  |

### Note

## (2) Radiated Emission

According to section 15.109(a), Radiated Emission Class B Limits is as following:

| Frequency (MHz) | Field strength $\mu V/m$ | Distance (m) | Field strength at 3m dBµV/m |
|-----------------|--------------------------|--------------|-----------------------------|
| 30-88           | 100                      | 3            | 40                          |
| 88-216          | 150                      | 3            | 43.5                        |
| 216-960         | 200                      | 3            | 46                          |
| Above 960       | 500                      | 3            | 54                          |

Remark: 1. Emission level in dBuV/m=20 log (uV/m)

2. Measurement was performed at an antenna to the closed point of EUT distance of 3 meters.

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<sup>1.</sup> The lower limit shall apply at the transition frequencies

<sup>2.</sup> The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.



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## 2.5 Configuration of Tested System

Fig. 2-1 Configuration of Tested System (config 1-2)

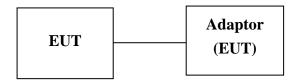


Fig. 2-2 Configuration of Tested System (config 3)

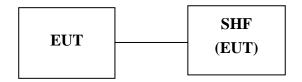


Fig. 2-1 Configuration of Tested System (config 4)

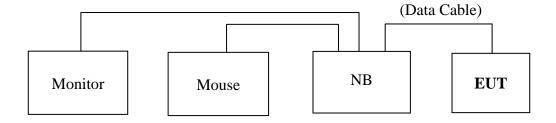


Fig. 2-4 Configuration of Tested System (Remote Side)

**CMU200** 

**Table 2-1 Support Equipment Used in Tested System** 

| Item | Equipment                       | Mfr/Brand | Model/Type No. | Series No. | Data Cable | Power Cord  |
|------|---------------------------------|-----------|----------------|------------|------------|-------------|
| 1.   | Notebook                        | IBM       | T60            | L3DK794    | Shielded   | Un-shielded |
| 2.   | Mouse                           | HP        | MO42KOA        | 0307012110 | Shielded   | N/A         |
| 3.   | Monitor                         | HP        | Vf51           | TWTFG01092 | Shielded   | Un-shielded |
| 4.   | Radio Communication<br>Analyzer | R&S       | CMU200         | 102189     | N/A        | Un-shielded |

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## 3. Summary of Test Results

| FCC Rules | <b>Description Of Test</b> | Result    |
|-----------|----------------------------|-----------|
| §15.107   | Conducted Emission Class B | Compliant |
| §15.109   | Radiated Emission Class B  | Compliant |

## 4. Description of test modes

The EUT was stayed in normal operation mode with CMU200.

The data cable was connected to notebook PC and data transferred by program.

### Test Plan:

|                               | Config 1       | Config 2     | Config 3  | Config 4     |
|-------------------------------|----------------|--------------|-----------|--------------|
| Accessories                   | UE             | UE           | UE        | UE           |
|                               | + Battery      | + Battery    | + Battery | + Battery    |
|                               | + AC Adaptor   | + AC Adaptor | + SHF     | + Data cable |
|                               | Audio & camera |              | Audio     | Data cable   |
| Description                   |                |              |           |              |
| radiated emission             | Play 1KHz      | Camera REC   | Play 1KHz | Data link    |
| conducted emission (AC Power) | Play 1KHz      | Camera REC   | N/A       | Data link    |



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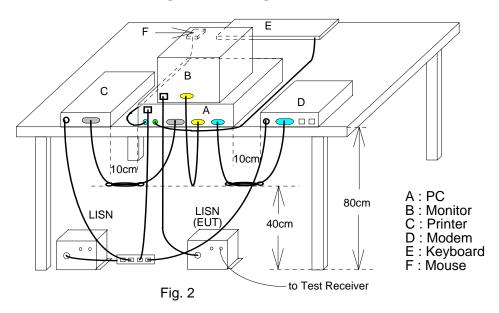
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## 5. Conducted Emissions Test

### **5.1** Measurement Procedure:

- 1. The EUT was placed on a table which is 0.8m above ground plane.
- 2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 3. Repeat above procedures until all frequency measured were complete.

## **5.2** Test SET-UP (Block Diagram of Configuration)



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## 5.3 Measurement Equipment Used:

| Conducted Emission Test Site |                                 |                         |            |            |            |  |  |
|------------------------------|---------------------------------|-------------------------|------------|------------|------------|--|--|
| EQUIPMENT                    | EQUIPMENT MFR MODEL SERIAL LAST |                         |            |            |            |  |  |
| TYPE                         |                                 | NUMBER                  | NUMBER     | CAL.       |            |  |  |
| EMI Test Receiver            | R&S                             | ESCS30                  | 828985/004 | 09/16/2008 | 09/15/2009 |  |  |
| LISN                         | Rolf-Heine                      | NNB-2/16Z               | 99012      | 02/18/2009 | 02/17/2010 |  |  |
| LISN                         | FCC                             | FCC-LISN-50/250-25-2-01 | 04034      | 02/18/2009 | 02/17/2010 |  |  |
| Coaxial Cables               | N/A                             | WK CE Cable             | N/A        | 10/30/2008 | 10/29/2009 |  |  |

### **5.4** Measurement Result

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

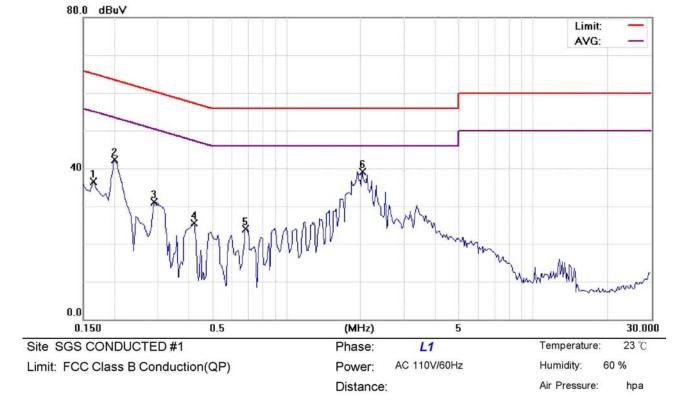


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## AC POWER LINE CONDUCTED EMISSION TEST DATA

| Operation Mode: | Config 1 |           |      | Test Date: | Jul. 15, 2009 |
|-----------------|----------|-----------|------|------------|---------------|
| Temperature:    | 23 ℃     | Humidity: | 60 % | Test By:   | Nick          |



Note: Charge + play 1KHz ( UE + battery + adaptor; MEID: A000006F3075E)

| No. Mk. | Freq.  | Reading<br>Level | Factor | Measure-<br>ment | Limit | Over   |          |         |
|---------|--------|------------------|--------|------------------|-------|--------|----------|---------|
|         | MHz    | dBuV             | dB     | dBuV             | dBuV  | dB     | Detector | Comment |
| 1       | 0.1650 | 36.39            | 0.16   | 36.55            | 65.21 | -28.66 | peak     |         |
| 2       | 0.2000 | 42.10            | 0.12   | 42.22            | 63.61 | -21.39 | peak     |         |
| 3       | 0.2900 | 31.07            | 0.10   | 31.17            | 60.52 | -29.35 | peak     |         |
| 4       | 0.4200 | 25.50            | 0.08   | 25.58            | 57.45 | -31.87 | peak     |         |
| 5       | 0.6800 | 23.91            | 0.08   | 23.99            | 56.00 | -32.01 | peak     |         |
| 6 *     | 2.0300 | 38.94            | 0.13   | 39.07            | 56.00 | -16.93 | peak     |         |

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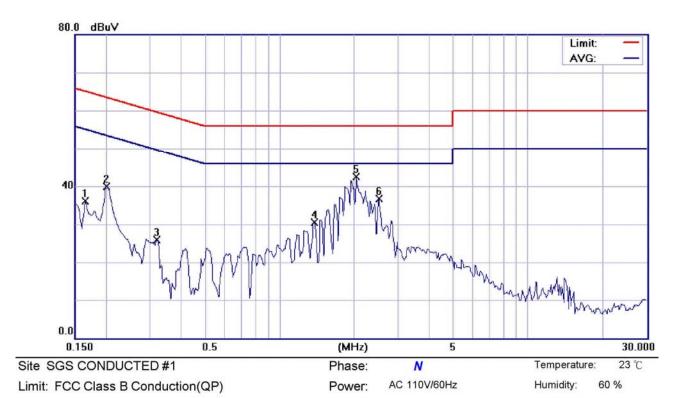


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Air Pressure:

hpa

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Distance:

Note: Charge + play 1KHz ( UE + battery + adaptor; MEID: A000006F3075E)

| No. Mk. | Freq.  | Reading<br>Level | Factor | Measure-<br>ment | Limit | Over   |          |         |  |
|---------|--------|------------------|--------|------------------|-------|--------|----------|---------|--|
|         | MHz    | dBuV             | dB     | dBuV             | dBuV  | dB     | Detector | Comment |  |
| 1       | 0.1650 | 35.89            | 0.17   | 36.06            | 65.21 | -29.15 | peak     |         |  |
| 2       | 0.2000 | 39.77            | 0.13   | 39.90            | 63.61 | -23.71 | peak     |         |  |
| 3       | 0.3200 | 25.70            | 0.11   | 25.81            | 59.71 | -33.90 | peak     |         |  |
| 4       | 1.3800 | 30.40            | 0.11   | 30.51            | 56.00 | -25.49 | peak     |         |  |
| 5 *     | 2.0400 | 42.37            | 0.13   | 42.50            | 56.00 | -13.50 | peak     |         |  |
| 6       | 2.5100 | 36.54            | 0.14   | 36.68            | 56.00 | -19.32 | peak     |         |  |

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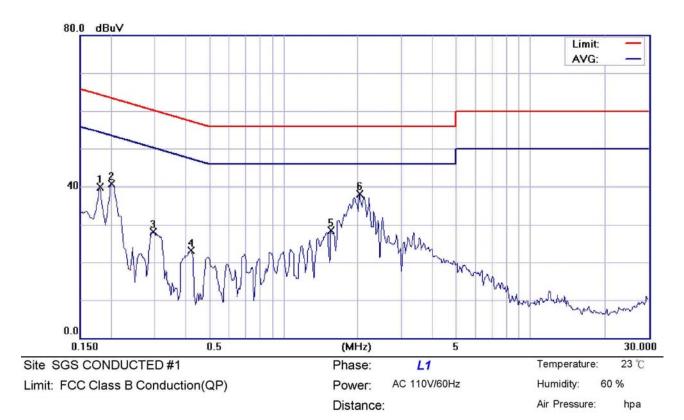


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## AC POWER LINE CONDUCTED EMISSION TEST DATA

| Operation Mode: | Config 2 |           |      | Test Date: | Jul. 15, 2009 |
|-----------------|----------|-----------|------|------------|---------------|
| Temperature:    | 23 ℃     | Humidity: | 60 % | Test By:   | Nick          |



Note: Charge + camera REC ( UE + battery + adaptor ; MEID : A000006F3075E )

| No. Mk. | Freq.  | Reading<br>Level | Factor | Measure-<br>ment | Limit | Over   |          |         |
|---------|--------|------------------|--------|------------------|-------|--------|----------|---------|
|         | MHz    | dBuV             | dB     | dBuV             | dBuV  | dB     | Detector | Comment |
| 1       | 0.1800 | 39.86            | 0.14   | 40.00            | 64.49 | -24.49 | peak     |         |
| 2       | 0.2000 | 40.53            | 0.12   | 40.65            | 63.61 | -22.96 | peak     |         |
| 3       | 0.2950 | 27.93            | 0.10   | 28.03            | 60.38 | -32.35 | peak     |         |
| 4       | 0.4200 | 22.99            | 0.08   | 23.07            | 57.45 | -34.38 | peak     |         |
| 5       | 1.5600 | 28.37            | 0.11   | 28.48            | 56.00 | -27.52 | peak     |         |
| 6 *     | 2.0300 | 38.01            | 0.13   | 38.14            | 56.00 | -17.86 | peak     |         |

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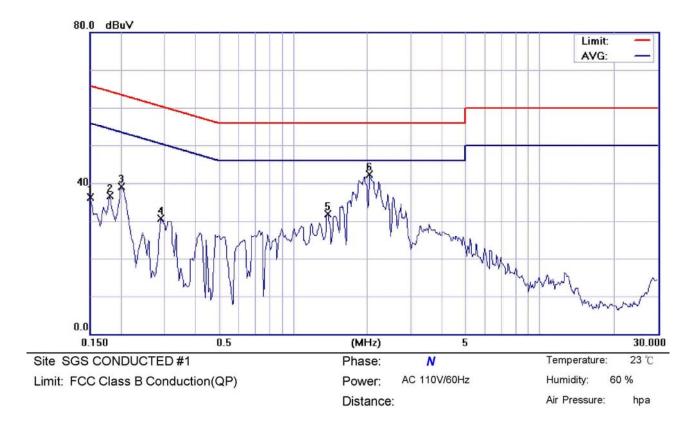
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Note: Charge + camera REC ( UE + battery + adaptor; MEID: A000006F3075E)

| No. Mk. | Freq.  | Reading<br>Level | Factor | Measure-<br>ment | Limit | Over   |          |         |  |
|---------|--------|------------------|--------|------------------|-------|--------|----------|---------|--|
|         | MHz    | dBuV             | dB     | dBuV             | dBuV  | dB     | Detector | Comment |  |
| 1       | 0.1500 | 36.21            | 0.18   | 36.39            | 66.00 | -29.61 | peak     |         |  |
| 2       | 0.1800 | 36.54            | 0.15   | 36.69            | 64.49 | -27.80 | peak     |         |  |
| 3       | 0.2000 | 38.98            | 0.13   | 39.11            | 63.61 | -24.50 | peak     |         |  |
| 4       | 0.2900 | 30.55            | 0.11   | 30.66            | 60.52 | -29.86 | peak     |         |  |
| 5       | 1.3800 | 31.81            | 0.11   | 31.92            | 56.00 | -24.08 | peak     |         |  |
| 6 *     | 2.0400 | 42.23            | 0.13   | 42.36            | 56.00 | -13.64 | peak     |         |  |

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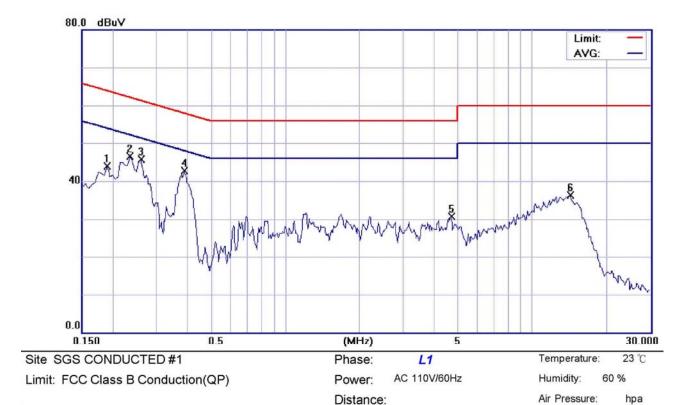


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## AC POWER LINE CONDUCTED EMISSION TEST DATA

| Operation Mode: | Config 4 |           |      | Test Date: | Jul. 15, 2009 |
|-----------------|----------|-----------|------|------------|---------------|
| Temperature:    | 23 ℃     | Humidity: | 60 % | Test By:   | Nick          |



Note: Data link ( UE + battery + USB cable ; MEID : A000006F3075E )

| No. Mk. | Freq.   | Reading<br>Level | Factor | Measure-<br>ment | Limit | Over   |          |         |
|---------|---------|------------------|--------|------------------|-------|--------|----------|---------|
|         | MHz     | dBuV             | dB     | dBuV             | dBuV  | dB     | Detector | Comment |
| 1       | 0.1900  | 43.86            | 0.13   | 43.99            | 64.04 | -20.05 | peak     |         |
| 2       | 0.2350  | 46.45            | 0.11   | 46.56            | 62.27 | -15.71 | peak     |         |
| 3       | 0.2600  | 45.54            | 0.11   | 45.65            | 61.43 | -15.78 | peak     |         |
| 4 *     | 0.3900  | 42.65            | 0.08   | 42.73            | 58.06 | -15.33 | peak     |         |
| 5       | 4.7100  | 30.55            | 0.16   | 30.71            | 56.00 | -25.29 | peak     |         |
| 6       | 14.2400 | 35.89            | 0.40   | 36.29            | 60.00 | -23.71 | peak     |         |

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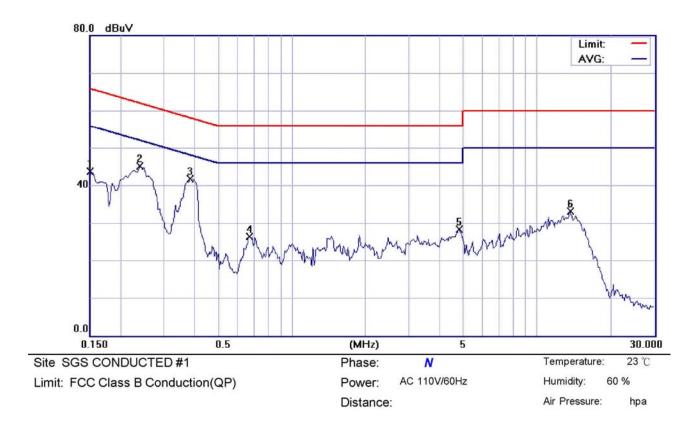
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Note: Data link ( UE + battery + USB cable ; MEID : A000006F3075E )

| No. | Mk. | Freq.   | Reading<br>Level | Factor | Measure-<br>ment | Limit | Over   |          |         |
|-----|-----|---------|------------------|--------|------------------|-------|--------|----------|---------|
|     |     | MHz     | dBuV             | dB     | dBuV             | dBuV  | dB     | Detector | Comment |
| 1   |     | 0.1508  | 43.62            | 0.18   | 43.80            | 65.96 | -22.16 | peak     |         |
| 2   |     | 0.2400  | 45.04            | 0.12   | 45.16            | 62.10 | -16.94 | peak     |         |
| 3   | *   | 0.3850  | 41.69            | 0.09   | 41.78            | 58.17 | -16.39 | peak     |         |
| 4   |     | 0.6700  | 26.19            | 0.09   | 26.28            | 56.00 | -29.72 | peak     |         |
| 5   |     | 4.8000  | 28.20            | 0.17   | 28.37            | 56.00 | -27.63 | peak     |         |
| 6   |     | 13.6800 | 32.69            | 0.43   | 33.12            | 60.00 | -26.88 | peak     |         |

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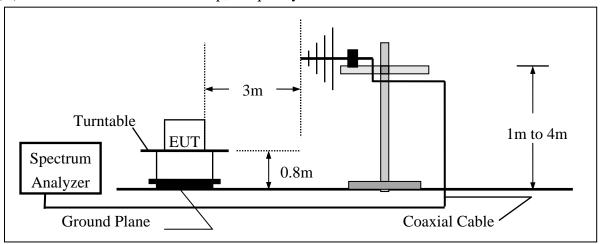
## 6. Radiated Emission Test

## **6.1** Measurement Procedure

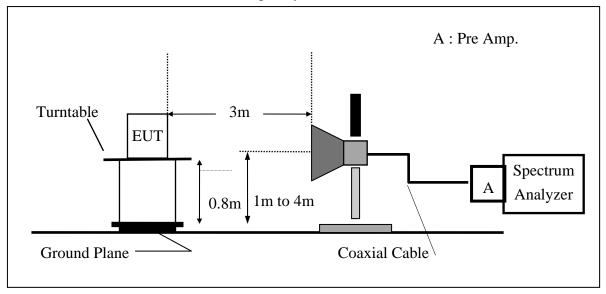
- 1. The EUT was placed on a turn table which is 0.8m above ground plane.
- 2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- And also, each emission was to be maximized by changing the polarization of 3. receiving antenna both horizontal and vertical.
- 4. Repeat above procedures until all frequency measured were complete.

## **6.2** Test SET-UP (Block Diagram of Configuration)

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



## (B) Radiated Emission Test Set-UP Frequency Over 1 GHz



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## 6.3 Measurement Equipment Used:

|                   |              | 966 Chambe             | r          |            |            |
|-------------------|--------------|------------------------|------------|------------|------------|
| EQUIPMENT         | MFR          | MODEL                  | SERIAL     | LAST       | CAL DUE.   |
| TYPE              |              | NUMBER                 | NUMBER     | CAL.       |            |
| Spectrum Analyzer | R&S          | FSP 40                 | 100034     | 02/12/2009 | 02/11/2010 |
| Bilog Antenna     | SCHWAZBECK   | VULB9160               | 9160-3136  | 11/15/2008 | 11/14/2009 |
| Horn antenna      | SCHWAZBECK   | BBHA 9120D             | 9120D-320  | 03/14/2009 | 03/13/2010 |
| Pre-Amplifier     | Agilent      | 8447D                  | 1937A02834 | 11/30/2008 | 11/29/2009 |
| Pre-Amplifier     | Agilent      | 8449B                  | 3008A01973 | 01/05/2009 | 01/04/2010 |
| Turn Table        | HD           | DT420                  | N/A        | N.C.R      | N.C.R      |
| Antenna Tower     | HD           | MA240-N                | 240/657    | N.C.R      | N.C.R      |
| Controller        | HD           | HD100                  | N/A        | N.C.R      | N.C.R      |
| Low Loss Cable    | HUBER+SUHNER | SUCOFLEX<br>104PEA-10M | 10m        | 01/05/2009 | 01/04/2010 |
| Low Loss Cable    | HUBER+SUHNER | SUCOFLEX<br>104PEA-3M  | 3m         | 01/05/2009 | 01/04/2010 |

## **6.4 Field Strength Calculation**

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

| Where | FS = Field Strength    | CL = Cable Attenuation Factor (Cable Loss) |
|-------|------------------------|--|
|       | RA = Reading Amplitude | AG = Amplifier Gain                        |
|       | AF = Antenna Factor    |  |

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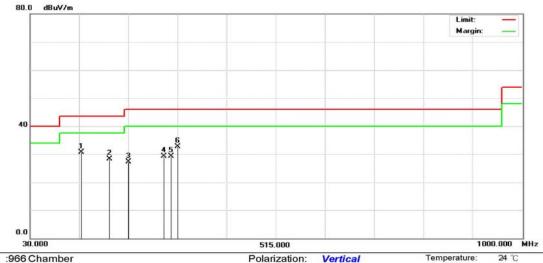
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## 6.5 Measurement Result (below 1G)

Test Date: Jul. 16, 2009 Test Mode: Config 1

Frequency Range: 30MHz-1GHz Test By: Nick

25 °C Humidity: Temperature: 65 %



Site :966 Chamber Vertical Limit: FCC Class B 3M Radiation AC 110V/60Hz Humidity: Power: Air Pressure:

Note: Charge + play 1KHz ( UE + battery + adaptor ; MEID : A000006F3075E )

| No. | Mk. | . Freq.  | Reading<br>Level | Factor | Measure-<br>ment | Limit  | Over   |          |         |
|-----|-----|----------|------------------|--------|------------------|--------|--------|----------|---------|
|     |     | MHz      | dBuV             | dВ     | dBuV/m           | dBuV/m | dВ     | Detector | Comment |
| 1   | *   | 131.8500 | 43.58            | -12.92 | 30.66            | 43.50  | -12.84 | QР       |         |
| 2   |     | 187.6250 | 42.34            | -14.02 | 28.32            | 43.50  | -15.18 | QР       |         |
| 3   |     | 224.0000 | 40.81            | -13.54 | 27.27            | 46.00  | -18.73 | QР       |         |
| 4   |     | 294.3250 | 40.59            | -11.28 | 29.31            | 46.00  | -16.69 | QР       |         |
| 5   |     | 308.8750 | 40,41            | -11.01 | 29.40            | 46.00  | -16.60 | QР       |         |
| 6   |     | 321.0000 | 43,39            | -10.75 | 32.64            | 46.00  | -13.36 | QP       |         |

## Remark:

- (1) Measuring frequencies from 30 MHz to the 10GHz •
- (2) All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

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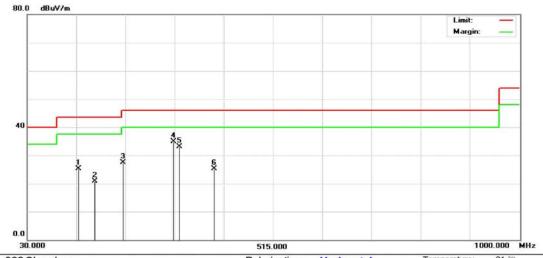


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Test Mode: Config 1 Test Date: Jul. 16, 2009

Frequency Range: 30 MHz-1GHz Test By: Nick Temperature:  $25 \, ^{\circ}\text{C}$  Humidity:  $65 \, ^{\circ}\text{MHz-1GHz}$ 



Site :966 Chamber Polarization: Horizontal Temperature: 24 °C

Limit: FCC Class B 3M Radiation Power: AC 110V/60Hz Humidity: 60%

Distance: 3m Air Pressure: hpa

Note: Charge + play 1KHz ( UE + battery + adaptor ; MEID : A000006F3075E )

| No. | Mk. | Freq.    | Reading<br>Level | Factor | Measure-<br>ment | Limit  | Over   |          |         |  |
|-----|-----|----------|------------------|--------|------------------|--------|--------|----------|---------|--|
|     |     | MHz      | dBuV             | dВ     | dBuV/m           | dBuV/m | dВ     | Detector | Comment |  |
| 1   | 1   | 131.8500 | 38.15            | -12.92 | 25.23            | 43.50  | -18.27 | QР       |         |  |
| 2   | 1   | 163.3750 | 33.59            | -12.64 | 20.95            | 43.50  | -22.55 | QΡ       |         |  |
| 3   | 2   | 219.1500 | 41.34            | -13.74 | 27.60            | 46.00  | -18.40 | QΡ       |         |  |
| 4   | * 3 | 318.5750 | 45.75            | -10.81 | 34.94            | 46.00  | -11.06 | QΡ       |         |  |
| 5   | 3   | 330.7000 | 43.65            | -10.55 | 33.10            | 46.00  | -12.90 | QΡ       |         |  |
| 6   | 3   | 398.6000 | 33.89            | -8.58  | 25.31            | 46.00  | -20.69 | QP       |         |  |

#### Remark:

- (1) Measuring frequencies from 30 MHz to the 10GHz •
- (2) All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

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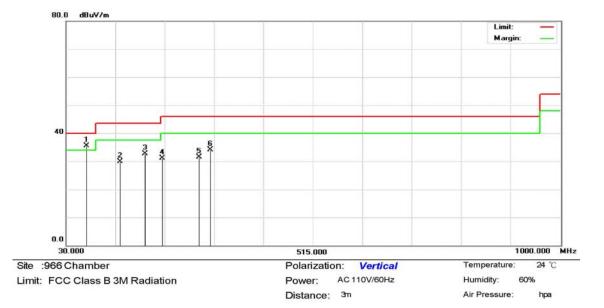
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Config 2 Test Date: Jul. 16, 2009 Test Mode:

Frequency Range: 30MHz-1GHz Test By: Nick

25 °C Humidity: 65 % Temperature:



Note: Charge + camera REC ( UE + battery + adaptor ; MEID : A000006F3075E )

| No. | Mk. | Freq.    | Reading<br>Level | Factor | Measure-<br>ment | Limit  | Over   |          |         |  |
|-----|-----|----------|------------------|--------|------------------|--------|--------|----------|---------|--|
|     |     | MHz      | dBuV             | dВ     | dBuV/m           | dBuV/m | dΒ     | Detector | Comment |  |
| 1   | *   | 71.2250  | 51.24            | -15.78 | 35.46            | 40.00  | -4.54  | QΡ       |         |  |
| 2   |     | 136.7000 | 42.70            | -12.75 | 29,95            | 43.50  | -13.55 | QΡ       |         |  |
| 3   |     | 184.5900 | 46.54            | -13.78 | 32.76            | 43.50  | -10.74 | QР       |         |  |
| 4   |     | 219.1500 | 44.87            | -13.74 | 31.13            | 46.00  | -14.87 | QΡ       |         |  |
| 5   |     | 291.9000 | 42.75            | -11.31 | 31.44            | 46.00  | -14.56 | QΡ       |         |  |
| 6   |     | 313.7250 | 45.06            | -10.91 | 34.15            | 46.00  | -11.85 | QP       |         |  |

## Remark:

- (1) Measuring frequencies from 30 MHz to the 10GHz •
- (2) All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

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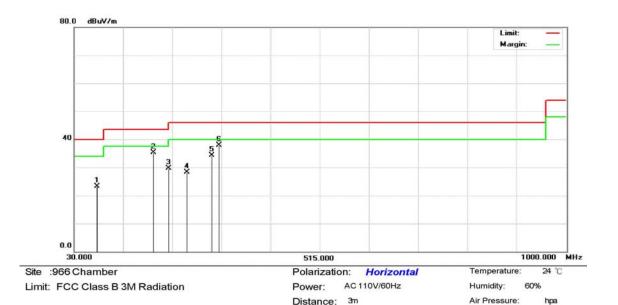


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Config 2 Test Date: Jul. 16, 2009 Test Mode:

Test By: Frequency Range: 30MHz-1GHz Nick Temperature: 25 °C Humidity: 65 %



Note: Charge + camera REC ( UE + battery + adaptor ; MEID : A000006F3075E )

| NI- | NAI- | F===     | Reading | Factor | Measure- | Limit  | Over   |          |         |  |
|-----|------|----------|---------|--------|----------|--------|--------|----------|---------|--|
| NO. | Mk.  | . Freq.  | Level   | Factor | ment     | LITTIL | Ovei   |          |         |  |
|     |      | MHz      | dBuV    | dВ     | dBuV/m   | dBuV/m | dВ     | Detector | Comment |  |
| 1   |      | 76.0750  | 40.06   | -16.69 | 23.37    | 40.00  | -16.63 | QР       |         |  |
| 2   | *    | 187.6250 | 49.42   | -14.02 | 35.40    | 43.50  | -8.10  | QP       |         |  |
| 3   |      | 216.7250 | 43.64   | -13.94 | 29.70    | 46.00  | -16.30 | QP       |         |  |
| 4   |      | 253.1000 | 41.19   | -12.83 | 28.36    | 46.00  | -17.64 | QР       |         |  |
| 5   |      | 301.6000 | 45.54   | -11.17 | 34.37    | 46.00  | -11.63 | QP       |         |  |
| 6   |      | 316.1500 | 48.71   | -10.86 | 37.85    | 46.00  | -8.15  | QP       |         |  |

#### Remark:

- (1) Measuring frequencies from 30 MHz to the 10GHz •
- (2) All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

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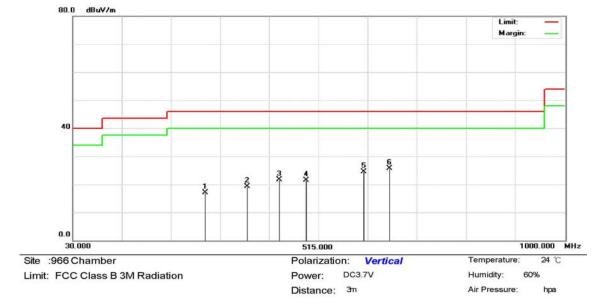
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Config 3 Test Date: Jul. 16, 2009 Test Mode:

Frequency Range: 30MHz-1GHz Test By: Nick

25 °C Humidity: Temperature: 65 %



Note: Play 1KHz ( UE + battery + SHF ; MEID : A000006F3075E )

|     |     |          | Dandina          |                   | N.4              |        |        |          |         |  |
|-----|-----|----------|------------------|-------------------|------------------|--------|--------|----------|---------|--|
| No. | Mk. | Freq.    | Reading<br>Level | Factor            | Measure-<br>ment | Limit  | Over   |          |         |  |
|     |     | MHz      | dBuV             | dВ                | dBuV/m           | dBuV/m | dΒ     | Detector | Comment |  |
| 1   | :   | 291.9000 | 28.45            | -11.31            | 17.14            | 46.00  | -28.86 | QΡ       |         |  |
| 2   | ;   | 374.3500 | 28.58            | -9.36             | 19.22            | 46.00  | -26.78 | QΡ       |         |  |
| 3   | •   | 437.4000 | 29.09            | -7.43             | 21,66            | 46.00  | -24.34 | QΡ       |         |  |
| 4   |     | 490.7500 | 28.38            | -6.95             | 21.43            | 46.00  | -24.57 | QР       |         |  |
| 5   | (   | 604.7250 | 28,66            | <del>-4</del> .18 | 24.48            | 46.00  | -21.52 | QΡ       |         |  |
| 6   | * ( | 655,6500 | 28.77            | -3.01             | 25.76            | 46.00  | -20.24 | QΡ       |         |  |

## Remark:

- (1) Measuring frequencies from 30 MHz to the 10GHz •
- (2) All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

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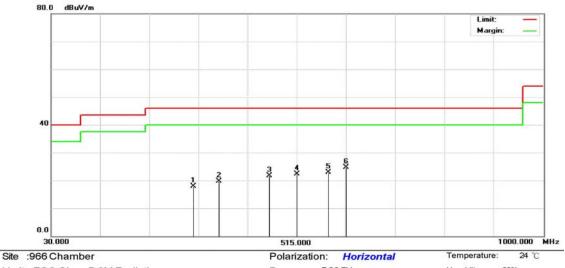


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Config 3 Test Date: Jul. 16, 2009 Test Mode:

Test By: Frequency Range: 30MHz-1GHz Nick Temperature: 25 °C Humidity: 65 %



Limit: FCC Class B 3M Radiation Power: DC3.7V Humidity: 60% Distance: 3m Air Pressure:

Note: Play 1KHz (UE + battery + SHF; MEID: A000006F3075E)

| No. | Mk. | Freq.    | Reading<br>Level | Factor | Measure-<br>ment | Limit  | Over   |          |         |  |
|-----|-----|----------|------------------|--------|------------------|--------|--------|----------|---------|--|
|     |     | MHz      | dBuV             | dВ     | dBuV/m           | dBuV/m | dВ     | Detector | Comment |  |
| 1   | 3   | 311.3000 | 28.94            | -10.96 | 17.98            | 46.00  | -28.02 | QP       |         |  |
| 2   | 3   | 362.2250 | 29.39            | -9.75  | 19.64            | 46.00  | -26.36 | QP       |         |  |
| 3   | 4   | 161.6500 | 28.69            | -7.03  | 21.66            | 46.00  | -24.34 | QP       |         |  |
| 4   | 5   | 515.0000 | 29.01            | -6.64  | 22.37            | 46.00  | -23.63 | QP       |         |  |
| 5   | 5   | 78.0500  | 27,90            | -5.04  | 22.86            | 46.00  | -23.14 | QP       |         |  |
| 6   | * 6 | 612.0000 | 28.64            | -4.02  | 24.62            | 46.00  | -21.38 | QP       |         |  |

#### Remark:

- (1) Measuring frequencies from 30 MHz to the 10GHz •
- (2) All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

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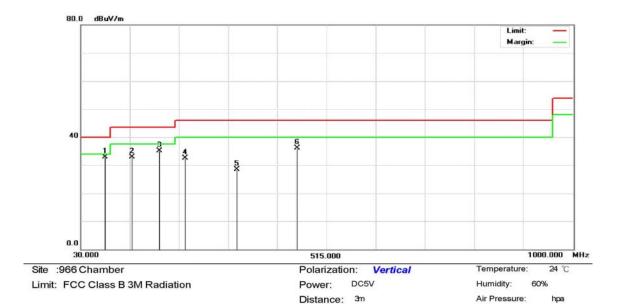


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Test Mode: Config 4 Test Date: Jul. 16, 2009

Test By: Frequency Range: 30MHz-1GHz Nick Temperature: 25 °C Humidity: 65 %



Note: Data link ( UE + battery + USB cable ; MEID : A000006F3075E )

|     |     |          | Reading |        | Measure- |        |        |          |         |
|-----|-----|----------|---------|--------|----------|--------|--------|----------|---------|
| No. | Mk. | . Freq.  | Level   | Factor | ment     | Limit  | Over   |          |         |
|     |     | MHz      | dBuV    | dВ     | dBuV/m   | dBuV/m | dВ     | Detector | Comment |
| 1   | *   | 78.5000  | 50.03   | -17.22 | 32.81    | 40.00  | -7.19  | QР       |         |
| 2   |     | 131.8500 | 45.89   | -12.92 | 32.97    | 43.50  | -10.53 | QР       |         |
| 3   |     | 185.2000 | 48.93   | -13.83 | 35.10    | 43.50  | -8.40  | QР       |         |
| 4   |     | 236.1250 | 45.76   | -13.21 | 32.55    | 46.00  | -13.45 | QР       |         |
| 5   |     | 337.9750 | 38.84   | -10.39 | 28.45    | 46.00  | -17.55 | QР       |         |
| 6   |     | 456.8000 | 43.11   | -7.04  | 36.07    | 46.00  | -9.93  | QP       |         |

### Remark:

- (1) Measuring frequencies from 1GHz to the 13GHz •
- (2) All Readings above 1GHz are Peak and Average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

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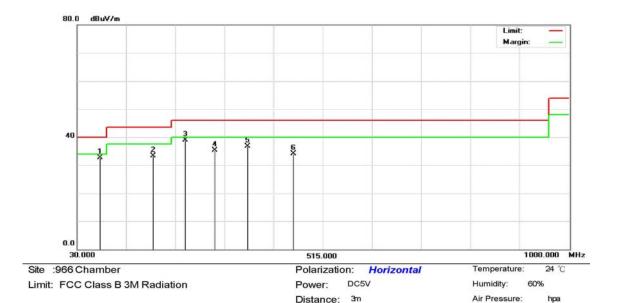


Report No.: EI/2009/70003 **Issue Date: Jul. 21, 2009** 

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Test Mode: Config 4 Test Date: Jul. 16, 2009

Test By: Frequency Range: 30MHz-1GHz Nick 25 °C Humidity: Temperature: 65 %



Note: Data link ( UE + battery + USB cable ; MEID : A000006F3075E )

| No. Mi | c. Freq. | Reading<br>Level | Factor | Measure-<br>ment | Limit  | Over   |          |         |  |
|--------|----------|------------------|--------|------------------|--------|--------|----------|---------|--|
|        | MHz      | dBuV             | dВ     | dBuV/m           | dBuV/m | dВ     | Detector | Comment |  |
| 1      | 76.0750  | 49.45            | -16.69 | 32.76            | 40.00  | -7.24  | QP       |         |  |
| 2      | 180.3500 | 46.68            | -13.44 | 33.24            | 43.50  | -10.26 | QΡ       |         |  |
| 3 *    | 243.4000 | 52.03            | -13.05 | 38.98            | 46.00  | -7.02  | QP       |         |  |
| 4      | 301.6000 | 46.45            | -11.17 | 35.28            | 46.00  | -10.72 | QΡ       |         |  |
| 5      | 367.0750 | 46,38            | -9.59  | 36,79            | 46.00  | -9.21  | QP       |         |  |
| 6      | 456.8000 | 41.08            | -7.04  | 34.04            | 46.00  | -11.96 | QP       |         |  |

#### Remark:

- (1) Measuring frequencies from 1GHz to the 13GHz •
- (2) All Readings above 1GHz are Peak and Average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

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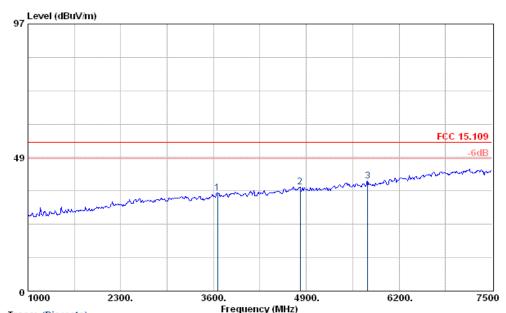


Report No.: EI/2009/70003 **Issue Date: Jul. 21, 2009** 

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Test Mode: Config 1 Test Date: Jul. 16, 2009

Frequency Range: 1GHz - 7.5GHz Test By: Nick Humidity: Temperature: 25 °C 65 %



Trace: (Discrete)

RF Site

Site Condition FCC 15.109 3m BBHA9120D VERTICAL

EI-2009-70003 AC Adapter:YES Project No. Accessary : Earphone:N/A

USB Cable:N/A Charge + play 1KHz (UE+Battery+Adaptor) 25 deg. C/65 RH

Test Mode Temp./Humid.

Engineer · Nick

|   | Freq                          |       |       | Preamp<br>Factor |      |       |                              | Limit<br>Line                |        | Remar |
|---|-------------------------------|-------|-------|------------------|------|-------|------------------------------|------------------------------|--------|-------|
| • | MHz                           | dBuV  | dB/m  | dB               | ₫B   | dB/m  | $\overline{\mathtt{dBuV/m}}$ | $\overline{\mathtt{dBuV/m}}$ | dB     |       |
|   | 3658.50<br>4815.50<br>5758.00 | 43.77 | 31.20 | 44.39            | 7.18 | -6.01 | 37.76                        | 54.00                        | -16.24 | Peak  |

## Remark:

23

- (1) Measuring frequencies from 1GHz to the 7.5GHz •
- (2) All Readings above 1GHz are Peak and Average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

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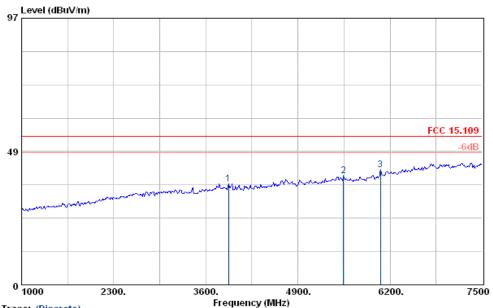
Report No.: EI/2009/70003 **Issue Date: Jul. 21, 2009** 

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Config 1 Test Date: Jul. 16, 2009 Test Mode:

Frequency Range: 1GHz - 7.5GHz Test By: Nick

Humidity: Temperature: 25 °C 65 %



Trace: (Discrete)

: RF Site Site

: FCC 15.109 3m BBHA9120D HORIZONTAL Condition

: EI-2009-70003 Project No. : AC Adapter:YES Accessary : Earphone:N/A

: USB Cable:N/A : Charge + play 1KHz (UE+Battery+Adaptor) : 25 deg. C/65 RH

Test Mode Temp./Humid.

Engineer

| • |                               | D4    |       | Preamp | C-11- |       |                              | Limit                        | Over   |       |
|---|-------------------------------|-------|-------|--------|-------|-------|------------------------------|------------------------------|--------|-------|
|   | Freq                          |       |       | Factor |       |       | Level                        |                              |        | Remar |
|   | MHz                           | dBu₹  | dB/m  | dB     | dB    | dB/m  | $\overline{\mathtt{dBuV/m}}$ | $\overline{\mathtt{dBuV/m}}$ | dB     |       |
|   | 3918.50<br>5543.50<br>6063.50 | 44.41 | 31.98 | 44.40  | 7.77  | -4.65 | 39.76                        | 54.00                        | -14.24 | Peak  |

### Remark:

1 2 3

- (1) Measuring frequencies from 1GHz to the 7.5GHz.
- (2) All Readings above 1GHz are Peak and Average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

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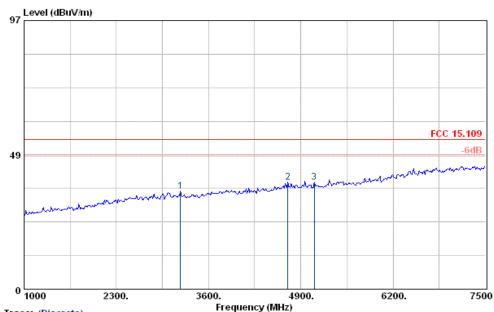


Report No.: EI/2009/70003 **Issue Date: Jul. 21, 2009** 

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Test Mode: Config 2 Test Date: Jul. 16, 2009

Frequency Range: 1GHz - 7.5GHz Test By: Nick Humidity: Temperature: 25 °C 65 %



Trace: (Discrete) Site

RF Site

: FCC 15.109 3m BBHA9120D VERTICAL

Condition EJ-2009-70003 Project No.

: AC Adapter:YES Accessary : Earphone:N/A

: USB Cable:N/A

Test Mode : Charge + camera REC (UE+Battery+Adaptor)

Temp./Humid. : 25 deg. C/65 RH

Engineer

: Nick

|             | Freq                          |       |       | Preamp<br>Factor |           |       |                              |                              |        | Remar |
|-------------|-------------------------------|-------|-------|------------------|-----------|-------|------------------------------|------------------------------|--------|-------|
|             | MHz                           | dBu₹  | dB/m  | <u>dB</u>        | <u>dB</u> | dB/m  | $\overline{\mathtt{dBuV/m}}$ | $\overline{\mathtt{dBuV/m}}$ | dB     |       |
| 1<br>2<br>3 | 3203.50<br>4718.00<br>5088.50 | 44.73 | 31.04 | 44.27            | 7.08      | -6.15 | 38.58                        | 54.00                        | -15.42 | Peak  |

### Remark:

- (1) Measuring frequencies from 1GHz to the 7.5GHz •
- (2) All Readings above 1GHz are Peak and Average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

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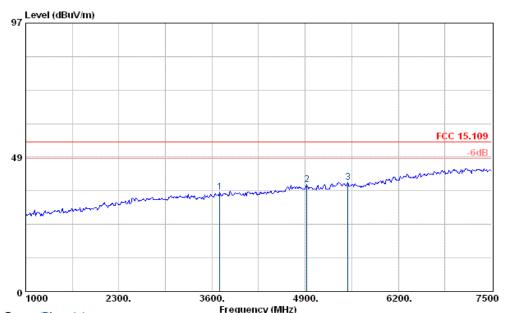


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Config 2 Test Date: Jul. 16, 2009 Test Mode:

Frequency Range: 1GHz - 7.5GHz Test By: Nick Humidity: Temperature: 25 °C 65 %



Trace: (Discrete)

Site RF Site Condition

: FCC 15.109 3m BBHA9120D HORIZONTAL

: EI-2009-70003 Project No. : AC Adapter:YES Accessary : Earphone:N/A : USB Cable:N/A

: Charge + camera REC (UE+Battery+Adaptor)

Test Mode 25 deg. C/65 RH Temp./Humid.

Engineer

| Freq                          |       |          | Preamp<br>Factor |      |          | Level                        | Limit<br>Line                | Over<br>Limit |      |
|-------------------------------|-------|----------|------------------|------|----------|------------------------------|------------------------------|---------------|------|
| MHz                           | dBu₹  | ${dB/m}$ |                  | dB   | ${dB/m}$ | $\overline{\mathtt{dBuV/m}}$ | $\overline{\mathtt{dBuV/m}}$ | ——dB          |      |
| 3710.50<br>4926.00<br>5498.00 | 44.58 | 31.42    | 44.54            | 7.21 | -5.91    | 38.67                        | 54.00                        | -15.33        | Peak |

### Remark:

2 3

- (1) Measuring frequencies from 1GHz to the 7.5GHz.
- (2) All Readings above 1GHz are Peak and Average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

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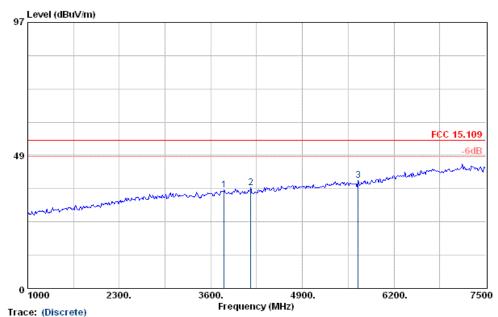


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Test Mode: Config 3 Test Date: Jul. 16, 2009

Frequency Range: 1GHz - 7.5GHz Test By: Nick Humidity: Temperature: 25 °C 65 %



Site

: RF Site

Condition FCC 15.109 3m BBHA9120D VERTICAL

EI-2009-70003 Project No. Accessary AC Adapter:N/A Earphone:YES USB Cable:N/A

Play 1KHz (UE+Battery+SHF) Test Mode

Temp./Humid. 25 deg. C/65 RH

Engineer : Nick

|          | Freq                          |       |       | Preamp<br>Factor |      |       |                              |                              |        |      |
|----------|-------------------------------|-------|-------|------------------|------|-------|------------------------------|------------------------------|--------|------|
|          | MHz                           | dBu₹  | dB/m  | dB               | dB   | dB/m  | $\overline{\mathtt{dBuV/m}}$ | $\overline{\mathtt{dBuV/m}}$ | dB     |      |
| <u>}</u> | 3788.50<br>4165.50<br>5693.00 | 44.96 | 29.98 | 44.65            | 6.54 | -8.13 | 36.83                        | 54.00                        | -17.17 | Peak |

## Remark:

- (1) Measuring frequencies from 1GHz to the 7.5GHz •
- (2) All Readings above 1GHz are Peak and Average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

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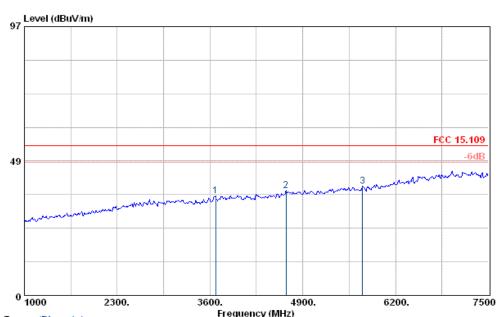


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Config 3 Test Date: Jul. 16, 2009 Test Mode:

Frequency Range: 1GHz - 7.5GHz Test By: Nick Humidity: Temperature: 25 °C 65 %



Trace: (Discrete) Site

RF Site

FCC 15.109 3m BBHA9120D HORIZONTAL Condition : EI-2009-70003 Project No.

Accessary : AC Adapter:N/A : Earphone:YES : USB Cable:N/A

Test Mode : Play 1KHz (UE+Battery+SHF)

Temp./Humid. : 25 deg. C/63 RH

Engineer

| <br>Freq                      |       |       | Preamp<br>Factor |      |       | Level                        | Limit<br>Line                |        | Remar |
|-------------------------------|-------|-------|------------------|------|-------|------------------------------|------------------------------|--------|-------|
| MHz                           | dBu₹  | dB/m  | dB               | dB   | dB/m  | $\overline{\mathtt{dBuV/m}}$ | $\overline{\mathtt{dBuV/m}}$ | dB     |       |
| 3678.00<br>4666.00<br>5738.50 | 44.24 | 30.94 | 44.27            | 6.99 | -6.34 | 37.90                        | 54.00                        | -16.10 | Peak  |

### Remark:

- (1) Measuring frequencies from 1GHz to the 7.5GHz.
- (2) All Readings above 1GHz are Peak and Average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

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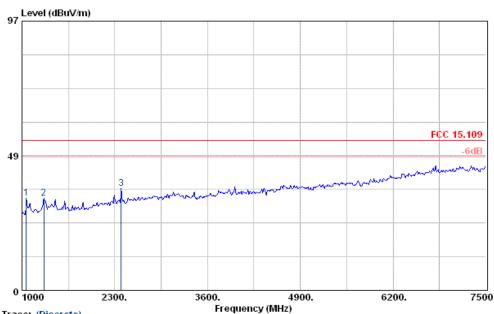


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Test Mode: Config 4 Test Date: Jul. 16, 2009

Frequency Range: 1GHz – 7.5GHz Test By: Nick 25 °C Humidity: Temperature: 65 %



Trace: (Discrete)

RF Site

FCC 15.109 3m BBHA9120D VERTICAL Condition

EI-2009-70003 Project No. : AC Adapter:N/A Accessary

Earphone:N/A : USB Cable:YES

: Data link (UE+Battery+USb cable) Test Mode

Temp./Humid. : 25 deg. C/65 RH

Engineer

1 2 3

Site

· Nick

| Freq                          |       |       | Preamp<br>Factor |      |        |                              |                              | Over<br>Limit 1 | Remar |
|-------------------------------|-------|-------|------------------|------|--------|------------------------------|------------------------------|-----------------|-------|
| MHz                           | dBu₹  | dB/m  | dB               | dB   | dB/m   | $\overline{\mathtt{dBuV/m}}$ | $\overline{\mathtt{dBuV/m}}$ | dB              |       |
| 1058.50<br>1305.50<br>2391.00 | 48.25 | 24.65 | 43.25            | 3.58 | -15.02 | 33.23                        | 54.00                        | -20.771         | Peak  |

## Remark:

- (1) Measuring frequencies from 1GHz to the 7.5GHz •
- (2) All Readings above 1GHz are Peak and Average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

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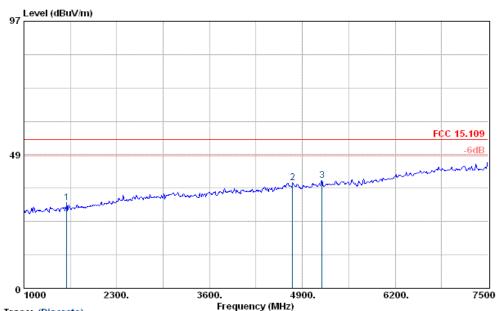


Report No.: EI/2009/70003 **Issue Date: Jul. 21, 2009** 

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Config 4 Test Date: Jul. 16, 2009 Test Mode:

Frequency Range: 1GHz - 7.5GHz Test By: Nick Humidity: Temperature: 25 °C 65 %



Trace: (Discrete)

Site : RF Site

: FCC 15.109 3m BBHA9120D HORIZONTAL Condition : EI-2009-70003

Project No. : AC Adapter:N/A Accessary : Earphone:N/A

: USB Cable:YES

: Data link (UE+Battery+USb cable) Test Mode

Temp./Humid. : 25 deg. C/65 RH

Engineer : Nick

| <br>                          | Read  | Antenna | Preamp | Cable |       |                              | Limit                        | Over   |       |
|-------------------------------|-------|---------|--------|-------|-------|------------------------------|------------------------------|--------|-------|
| Freq                          |       |         | Factor |       |       | Level                        | Line                         | Limit  | Remar |
| MHz                           | dBu₹  | dB/m    | dB     | dB    | dB/m  | $\overline{\mathtt{dBuV/m}}$ | $\overline{\mathtt{dBuV/m}}$ | dB     |       |
| 1598.00<br>4763.50<br>5173.00 | 44.38 | 31.10   | 44.31  | 7.17  | -6.04 | 38.34                        | 54.00                        | -15.66 | Peak  |

### Remark:

1 2 3

- (1) Measuring frequencies from 1GHz to the 7.5GHz.
- (2) All Readings above 1GHz are Peak and Average measurement as necessary.
- (3) The IF bandwidth of SPA 30MHz to 1GHz was 100KHz and 1GHz to 10GHz was 1MHz

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