### CTEST

### PCTEST ENGINEERING LABORATORY, INC.

6660-B Dobbin Road, Columbia, MD 21045 USA Tel. 410.290.6652 / Fax 410.290.6554 http://www.pctestlab.com



# CERTIFICATE OF COMPLIANCE FCC Part 22 & 24 Certification

Applicant Name: LG Electronics USA 1000 Sylvan Avenue Englewood Cliffs, NJ 07632 United States Date of Testing: Sept. 2, 2008 Test Site/Location:

PCTEST Lab., Columbia, MD, USA

**Test Report Serial No.:** 0808211150.BEJ

FCC ID: BEJCF360

APPLICANT: LG ELECTRONICS USA

**Application Type:** Certification

FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)

FCC Rule Part(s): §2; §22(H), §24(E)

**EUT Type:** 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth

Model(s): CF360

**Tx Frequency Range:** 824.20 - 848.80MHz (Cell. GSM) / 1850.20 - 1909.80MHz (PCS GSM)

826.40 - 846.60MHz (Cell. WCDMA) / 1852.4 - 1907.6MHz (PCS WCDMA)

**Max. RF Output Power:** 1.14 W ERP Cell. GSM (30.57 dBm) / 0.879 W EIRP PCS GSM (29.44 dBm)

0.142 W ERP Cell. WCDMA (21.53 dBm) / 0.157 W EIRP PCS WCDMA (21.96 dBm)

0.718 W ERP EDGE850 (28.56 dBm) / 0.61 W EIRP EDGE1900 (27.85 dBm)

Emission Designator(s): 244KGXW (Cellular GSM), 246KGXW (PCS GSM)

241KG7W (EDGE850), 235KG7W (EDGE1900)

4M18F9W (Cellular WCDMA), 4M19F9W (PCS WCDMA)

**Test Device Serial No.:** identical prototype [S/N: N/A]

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Grant Conditions: Power output listed is ERP for Part 22 and EIRP for Part 24.

PCTEST certifies that no party to this application has been denied the FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862.





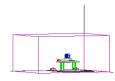
| FCC ID: BEJCF360 | PCTEST        | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | 1 LG | Reviewed by:<br>Quality Manager |
|------------------|---------------|---|------|---------------------------------|
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| <b>Test Rep</b> 0808211 | port S/N:<br>150.BEJ |       | Test Dates:<br>Sept. 2, 2008 | EUT Type:<br>850/1900 GSM/WCDMA/EDGE Phone with Bluetooth       | Page 2 of 60                 |





### MEASUREMENT REPORT FCC Part 22 & 24



§2.1033 General Information

APPLICANT: LG Electronics USA
APPLICANT ADDRESS: 1000 Sylvan Avenue

Englewood Cliffs, NJ 07632

**TEST SITE:** PCTEST ENGINEERING LABORATORY, INC. **TEST SITE ADDRESS:** 6660-B Dobbin Road, Columbia, MD 21045 USA

FCC RULE PART(S): §2; §22(H), §24(E)

**BASE MODEL:** CF360 **FCC ID:** BEJCF360

FCC CLASSIFICATION: PCS Licensed Transmitter Held to Ear (PCE)

244KGXW (Cellular GSM), 246KGXW (PCS GSM)

EMISSION DESIGNATOR(S): 241KG7W (EDGE850), 235KG7W (EDGE1900)

4M18F9W (Cellular WCDMA), 4M19F9W (PCS WCDMA)

MODE: GSM/EDGE/WCDMA FREQUENCY TOLERANCE: ±0.00025 % (2.5 ppm)

Test Device Serial No.: N/A ☐ Production ☐ Production ☐ Engineering

**DATE(S) OF TEST:** Sept. 2, 2008 **TEST REPORT S/N:** 0808211150.BEJ

#### **Test Facility / Accreditations**

Measurements were performed at PCTEST Engineering Lab located in Columbia, MD 21045, U.S.A.



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- PCTEST facility is an FCC registered (PCTEST Reg. No. 90864) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules and Industry Canada (IC-2451).
- PCTEST Lab is accredited to ISO 17025 by U.S. National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP Lab code: 100431-0) in EMC, FCC and Telecommunications.
- PCTEST Lab is accredited to ISO 17025-2005 by the American Association for Laboratory Accreditation (A2LA) in Specific Absorption Rate (SAR) testing, Hearing Aid Compatibility (HAC) testing, CTIA Test Plans, and wireless testing for FCC and Industry Canada Rules.
- PCTEST Lab is a recognized U.S. Conformity Assessment Body (CAB) in EMC and R&TTE (n.b. 0982) under the U.S.-EU Mutual Recognition Agreement (MRA).
- PCTEST TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC Guide 65 by the American National Standards Institute (ANSI) in all scopes of FCC Rules and Industry Canada Standards (RSS).
- PCTEST facility is an IC registered (IC-2451) test laboratory with the site description on file at Industry Canada.
- PCTEST is a CTIA Authorized Test Laboratory (CATL) for AMPS, CDMA, and EvDO wireless devices and for Over-the-Air (OTA) Antenna Performance testing for AMPS, CDMA, GSM, GPRS, EGPRS, UMTS (W-CDMA), CDMA 1xEVDO, and CDMA 1xRTT.

| FCC ID: BEJCF360          | PCTEST         | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION) |  | Reviewed by:<br>Quality Manager |
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#### 1.0 INTRODUCTION

### 1.1 Scope

Measurement and determination of electromagnetic emissions (EME) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission.

### 1.2 Testing Facility

The map below shows the location of the PCTEST LABORATORY, its proximity to the FCC Laboratory, the Columbia vicinity are, the Baltimore-Washington Internt'l (BWI) airport, the city of Baltimore and the Washington, DC area, (see Figure 1-1).

These measurement tests were conducted at the PCTEST Engineering Laboratory, Inc. facility in New Concept Business Park, Guilford Industrial Park, Columbia, Maryland. The site address is 6660-B Dobbin Road, Columbia, MD 21045. The test site is one of the highest points in the Columbia area with an elevation of 390 feet above mean sea level. The site coordinates are 39° 11'15" N latitude and 76° 49'38" W longitude. The facility is 1.5 miles North of the FCC laboratory, and the ambient signal and ambient signal strength are approximately equal to those of the FCC laboratory. There are no FM or TV transmitters within 15 miles of the site. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2003 on January 27, 2006 and Industry Canada.

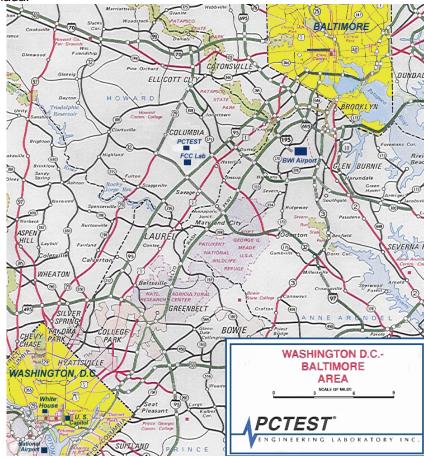


Figure 1-1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area

|                           | 3 3                                  |  |       |                 |  |  |
|---------------------------|--------------------------------------|--|-------|-----------------|--|--|
| FCC ID: BEJCF360          | A PCTEST                             | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT     |       | Reviewed by:    |  |  |
| FCC ID: BEJCF360          | *** V EMELOGISHME LEBOURATEDOS, INC. | REPORT<br>(CERTIFICATION)                    | LG LG | Quality Manager |  |  |
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### 2.0 PRODUCT INFORMATION

### 2.1 Equipment Description

The Equipment Under Test (EUT) is the LGE 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth FCC ID: BEJCF360. The EUT consisted of the following component(s):

| Trade Name / Base Model | FCC ID   | Description                                  |
|-------------------------|----------|--|
| LGE / Model: CF360      | BEJCF360 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth |

Table 2-1. EUT Equipment Description

### 2.2 EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and no modifications were made during testing.

### 2.3 Labeling Requirements

#### Per 2.925

The FCC identifier shall be permanently affixed to the equipment and shall be readily visible to the purchaser at the time of purchase.

#### Per 15.19; Docket 95-19

In addition to this requirement, a device subject to certification shall be labeled as follows:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase. However, when the device is so small wherein placement of the label with specified statement is not practical, only the trade name and FCC ID must be displayed on the device per Section 15.19(b)(2).

Please see attachment for FCC ID label and label location.

| FCC ID: BEJCF360                           | PCTEST*       | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION) |  | Reviewed by:<br>Quality Manager |
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#### 3.0 DESCRIPTION OF TESTS

#### 3.1 Measurement Procedure

The radiated spurious measurements were made outdoors at a 3-meter test range (see Figure 3-1). The equipment under test is placed on a wooden turntable 3-meters from the receive antenna. The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic antenna are taken into consideration.

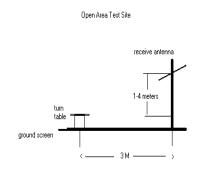


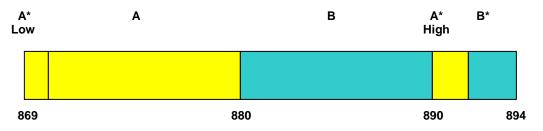
Figure 3-1. Diagram of 3-meter outdoor test range

Deviation from Measurement Procedure.....None

## 3.2 Occupied Bandwidth Emission Limits §2.1049, 22.917(a), 24.238(a)

- a. On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log(P) dB.
- b. Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.
- c. When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges, both upper and lower, as the design permits.
- d. The measurement of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.

### 3.3 Cellular - Base Frequency Blocks



BLOCK 1: 869 – 880 MHz (A\* Low + A) BLOCK 3: 890 – 891.5 MHz (A\* High)

BLOCK 2: 880 – 890 MHz (B) BLOCK 4: 891.5 – 894 MHz (B\*)

| <b></b>                                    | , , , , , , , , , , , , , , , , , , , | 220011 11 00 110 00 1 111 12 (2 )            |                 |
|--|---------------------------------------|--|-----------------|
| FCC ID: BEJCF360                           | A PCTEST                              | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT     | Reviewed by:    |
| FCC ID: BEJCF360                           | TRAINCIBING LEGGRAPHO, INC.           | REPORT<br>(CERTIFICATION)                    | Quality Manager |
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### 3.4 Cellular - Mobile Frequency Blocks



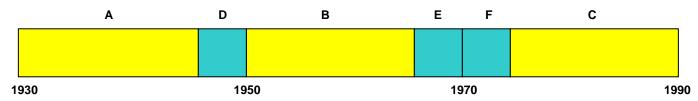
BLOCK 1: 824 – 835 MHz (A\* Low + A)

BLOCK 3: 845 - 846.5 MHz (A\* High)

BLOCK 2: 835 - 845 MHz (B)

BLOCK 4: 846.5 - 849 MHz (B\*)

#### 3.5 PCS - Base Frequency Blocks



BLOCK 1: 1930 – 1945 MHz (A) BLOCK 4: 1965 – 1970 MHz (E)

BLOCK 2: 1945 – 1950 MHz (D) BLOCK 5: 1970 – 1975 MHz (F)

BLOCK 3: 1950 – 1965 MHz (B) BLOCK 6: 1975 – 1990 MHz (C)

#### 3.6 PCS - Mobile Frequency Blocks



BLOCK 1: 1850 – 1865 MHz (A) BLOCK 4: 1885 – 1890 MHz (E)

BLOCK 2: 1865 – 1870 MHz (D) BLOCK 5: 1890 – 1895 MHz (F)

BLOCK 3: 1870 – 1885 MHz (B) BLOCK 6: 1895 – 1910 MHz (C)

### 3.7 Spurious and Harmonic Emissions at Antenna Terminal §2.1051, 22.917(a), 24.238(a)

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10<sup>th</sup> harmonic.

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## 3.8 Radiated Spurious and Harmonic Emissions §2.1053, 22.917(a), 24.238(a)

Spurious and harmonic radiated emissions are measured outdoors at our 3-meter test range. The equipment under test is placed on a wooden turntable 3-meters from the receive antenna. The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10<sup>th</sup> harmonic. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer reading. This level is recorded. For readings above 1 GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Active at 12.2 kbps 850 MHz RMC, 1900 MHz AMR and TPC bits all set to "1" and in GPRS mode and using a Power Control Level of "0" in the PCS Band and "5" in the Cellular Band.

## 3.9 Peak-Average Ratio §24.232(d)

A peak to average ratio measurement is performed at the conducted port of the EUT. For CDMA and WCDMA signals, the spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level. For GSM signals, an average and a peak trace are used on a spectrum analyzer to determine the largest deviation between the average and the peak power of the EUT in a bandwidth greater than the emission bandwidth.

## 3.10 Frequency Stability / Temperature Variation §2.1055, 22.355, 24.235

The frequency stability of the transmitter is measured by:

- a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
- b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

Specification – The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within  $\pm 0.00025\%$  ( $\pm 2.5$  ppm) of the center frequency.

#### **Time Period and Procedure:**

- 1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
- 2. The equipment is turned on in a "standby" condition for one minute before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.

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3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

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### 4.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST).

| Manufacturer      | Model            | Description                        | Calibration<br>Date | Cal<br>Interval | Calibration<br>Due | Serial No.  |
|-------------------|------------------|------------------------------------|---------------------|-----------------|--------------------|-------------|
| -                 | 263-10dB         | (DC-18GHz) 10 dB Attenuator        | N/A                 |                 | N/A                | N/A         |
| -                 | No.165           | (30MHz - 1000MHz) RG58 Coax Cable  | N/A                 |                 | N/A                | N/A         |
| -                 | No.166           | (1000-26500MHz) Microwave RF Cable | N/A                 |                 | N/A                | N/A         |
| -                 | No.167           | (100kHz - 100MHz) RG58 Coax Cable  | N/A                 |                 | N/A                | N/A         |
| Agilent           | 11713A           | Attenuation/Switch Driver          | 12/13/07            | Annual          | 12/13/08           | 3439A02645  |
| Agilent           | 8449B            | (1-26.5GHz) Pre-Amplifier          | 12/13/07            | Annual          | 12/12/08           | 3008A00985  |
| Agilent           | 8495A            | (0-70dB) DC-4GHz Attenuator        | N/A                 |                 | N/A                | N/A         |
| Agilent           | 85650A           | Quasi-Peak Adapter                 | 03/13/08            | Annual          | 03/13/09           | 2043A00301  |
| Agilent           | 8566B            | (100Hz-22GHz) Spectrum Analyzer    | 12/13/07            | Annual          | 12/13/08           | 3638A08713  |
| Agilent           | 8566B            | Opt. 462 Impulse Bandwidth         | 12/13/07            | Annual          | 12/12/08           | 3701A22204  |
| Agilent           | 8591A            | (9kHz-1.8GHz) Spectrum Analyzer    | 09/18/07            | Annual          | 09/18/08           | 3144A02458  |
| Agilent           | 8648D            | (9kHz-4GHz) Signal Generator       | 10/11/07            | Biennial        | 10/10/09           | 3613A00315  |
| Agilent           | E4407B           | ESA Spectrum Analyzer              | 03/13/08            | Annual          | 03/13/09           | US39210313  |
| Agilent           | E4448A           | (3Hz-50GHz) Spectrum Analyzer      | 01/24/08            | Annual          | 01/24/09           | US42510244  |
| Agilent           | E5515C           | Wireless Communications Test Set   | 06/08/07            | Biennial        | 06/08/09           | GB46110872  |
| Agilent           | E5515C           | Wireless Communications Test Set   | 06/08/07            | Biennial        | 06/08/09           | GB46310798  |
| Agilent           | E5515C           | Wireless Communications Test Set   | 08/31/07            | Biennial        | 08/31/09           | GB41450275  |
| Agilent           | E6651A           | Mobile WiMAX Tester                | 08/23/07            | Biennial        | 08/22/09           | MY47310109  |
| Agilent           | E8257D           | (250kHz-20GHz) Signal Generator    | 03/08/07            | Biennial        | 03/08/09           | MY45470194  |
| Compliance Design | Roberts          | Dipole Set                         | 11/09/07            | Biennial        | 11/08/09           | 146         |
| Compliance Design | Roberts          | Dipole Set                         | 11/09/07            | Biennial        | 11/08/09           | 147         |
| Emco              | 3115             | Horn Antenna (1-18GHz)             | 9/24/07             | Biennial        | 9/23/09            | 9704-5182   |
| Emco              | 3115             | Horn Antenna (1-18GHz)             | 10/4/07             | Biennial        | 10/3/09            | 9205-3874   |
| Emco              | 3121C-DB4        | Dipole Antenna                     | 1/23/07             | Biennial        | 1/22/09            | 00023951    |
| Espec             | ESX-2CA          | Environmental Chamber              | 3/12/08             | Annual          | 3/12/09            | 017620      |
| K&L               | 11SH10           | Band Pass Filter                   | N/A                 | Annual          | N/A                | 1300/4000   |
| K&L               | 11SH10           | Band Pass Filter                   | N/A                 | Annual          | N/A                |             |
| MiniCircuits      | VHF-1300+        | High Pass Filter                   | N/A                 |                 | N/A                | 30716       |
| MiniCircuits      | VHF-3100+        | High Pass Filter                   | N/A                 |                 | N/A                | 30721       |
| Pasternack        | PE2208-6         | Bidirectional Coupler              | N/A                 |                 | N/A                |             |
| Rohde & Schwarz   | CMU200           | Base Station Simulator             | 5/29/08             | Annual          | 5/29/09            | 836371/0079 |
| Rohde & Schwarz   | CMU200           | Base Station Simulator             | 9/7/07              | Annual          | 9/6/08             | 833855/0010 |
| Rohde & Schwarz   | CMU200           | Base Station Simulator             | 12/6/07             | Annual          | 12/5/08            | 107826      |
| Rohde & Schwarz   | CMU200           | Base Station Simulator             | 7/23/08             | Annual          | 7/23/09            | 109892      |
| Rohde & Schwarz   | NRVD             | Dual Channel Power Meter           | 12/12/06            | Biennial        | 12/11/08           | 101695      |
| Rohde & Schwarz   | NRVS             | Single Channel Power Meter         | 7/3/07              | Biennial        | 7/2/09             | 835360/0079 |
| Rohde & Schwarz   | NRV-Z32          | Peak Power Sensor (100uW-2W)       | 12/21/06            | Biennial        | 12/20/08           | 100155      |
| Rohde & Schwarz   | NRV-Z33          | Peak Power Sensor (1mW-20W)        | 11/28/06            | Biennial        | 11/27/08           | 100004      |
| Rohde & Schwarz   | NRV-Z53          | Power Sensor                       | 7/3/07              | Biennial        | 7/2/09             | 846076/0007 |
| Schwarzbeck       | UHA9105          | Dipole Antenna (400 - 1GHz) Rx     | 6/19/07             | Biennial        | 6/18/09            | 9105-2404   |
| Schwarzbeck       | UHA9105          | Dipole Antenna (400 - 1GHz) Tx     | 6/19/07             | Biennial        | 6/18/09            | 9105-2403   |
| Solar Electronics | 8012-50-R-24-BNC | LISN                               | 11/8/07             | Biennial        | 11/8/09            | 0310233     |
| Sunol             | DRH-118          | Horn Antenna (1 - 18GHz)           | 5/9/07              | Biennial        | 5/8/09             | A050307     |

Table 4-1. Test Equipment

| FCC ID: BEJCF360 | PCTEST*          | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION) |  | Reviewed by:<br>Quality Manager |
|------------------|------------------|---|--|---------------------------------|
| Test Report S/N: | Test Dates:      | EUT Type:   |  | Page 10 of 60                   |
| 0808211150.BEJ   | Sept. 2, 2008    | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                    |  | rage 10 01 60                   |
| @ COCO DOTEOT E  | Laboration, Inc. |   |  | DEV 0.70W0                      |

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### 5.0 SAMPLE CALCULATIONS

### **GSM Emission Designator**

#### Emission Designator = 250KGXW

GSM BW = 250 kHz G = Phase Modulation X = Cases not otherwise covered W = Combination (Audio/Data)

### WCDMA Emission Designator

#### **Emission Designator = 4M16F9W**

WCDMA BW = 4.16 MHz
F = Frequency Modulation
9 = Composite Digital Info

W = Combination (Audio/Data) (Measured at the 99.75% power bandwidth)

### Spurious Radiated Emission - PCS Band

### Example: GSM Channel 512 PCS Mode 2<sup>nd</sup> Harmonic (3700.40 MHz)

The receive analyzer reading at 3 meters with the EUT on the turntable was -81.0 dBm. The gain of the substituted antenna is 8.1 dBi. The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of -81.0 dBm on the receive analyzer. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 3700.40 MHz. So 6.1 dB is added to the signal generator reading of -30.9 dBm yielding -24.80 dBm. The fundamental EIRP was 25.501 dBm so this harmonic was 25.501 dBm - (-24.80) = 50.3 dBc.

| FCC ID: BEJCF360 | PCTEST        | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|------------------|---------------|---|-----------|---------------------------------|
| Test Report S/N: | Test Dates:   | EUT Type:   |           | Page 11 of 60                   |
| 0808211150.BEJ   | Sept. 2, 2008 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | Fage 11 01 00                   |



### 6.0 TEST RESULTS

### 6.1 Summary

Company Name: <u>LG Electronics USA</u>

FCC ID: BEJCF360

FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)

Mode(s): <u>GSM/EDGE/WCDMA</u>

| FCC Part<br>Section(s)          | Test Description  | Test Limit   | Test<br>Condition                      | Test<br>Result | Reference                         |
|---------------------------------|---|--|--|----------------|-----------------------------------|
| TRANSMITTER MODE                | (TX)  |  |  |                |                                   |
| 2.1049, 22.917(a),<br>24.238(a) | Occupied Bandwidth  | N/A  |  | PASS           | Section 7.0                       |
| 2.1051, 22.917(a),<br>24.238(a) | Band Edge / Conducted<br>Spurious Emissions   | < 43 + log <sub>10</sub> (P[Watts]) at Band<br>Edge and for all out-of-band<br>emissions | CONDUCTED                              | PASS           | Section 7.0                       |
| 24.232(d)                       | Peak-Average Ratio  | < 13 dB  | CONDUCTED                              | PASS           | Section 7.0                       |
| 2.1046                          | GSM/WCDMA Conducted<br>Output Power   | N/A  |  | PASS           | Section 6.2                       |
| 22.913(a)(2)                    | Effective Radiated Power  | < 7 Watts max. ERP<br>(<6.3 Watts max. ERP (IC))   |  | PASS           | Section 6.3                       |
| 24.232(c)                       | Equivalent Isotropic<br>Radiated Power  | < 2 Watts max. EIRP  | RADIATED                               | PASS           | Section 6.4                       |
| 2.1053, 22.917(a),<br>24.238(a) | Undesirable Emissions   | < 43 + log <sub>10</sub> (P[Watts]) for all out-of-<br>band emissions                    |  | PASS           | Sections 6.5,<br>6.6, 6.7, 6.8    |
| 2.1055, 22.355, 24.235          | Frequency Stability   | < 2.5 ppm  |  | PASS           | Sections 6.9,<br>6.10, 6.11, 6.12 |
| RECEIVER MODE (RX)              | / DIGITAL EMISSIONS   | •  |  |                | _                                 |
| 15.107                          | AC Conducted Emissions<br>150kHz – 30MHz  | < FCC 15.107 limits  | LINE<br>CONDUCTED                      | PASS           | Pt. 15B Test<br>Report            |
| 15.109                          | General Field Strength<br>Limits (Restricted Bands<br>and Radiated Emissions<br>Limits) | < FCC 15.109 limits  | RADIATED<br>(30MHz-1GHz)<br>(1-25 GHz) | PASS           | Pt. 15B Test<br>Report            |
| RF EXPOSURE (SAR)               |   |  |  |                |                                   |
| 2.1091 / 2.1093                 | SAR Test  | 1.6 W/kg (SAR Limit)   | SAR                                    | PASS           | SAR Report                        |

Table 6-1. Summary of Test Results

| FCC ID: BEJCF360         | PCTEST*          | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|--------------------------|------------------|---|-----------|---------------------------------|
| Test Report S/N:         | Test Dates:      | EUT Type:   |           | Page 12 of 60                   |
| 0808211150.BEJ           | Sept. 2, 2008    | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | Fage 12 01 60                   |
| © 2009 DCTEST Engineerin | a Laboratory Inc | •   |           | DEV/ 2.7C/M/C                   |



## 6.2 Conducted Output Power §2.1046

A base station simulator (Rhode and Schwartz Model: CMU200) was used to establish communication with the LGE 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth FCC ID: BEJCF360. The base station simulator parameters were set to produce the maximum power from the EUT. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Active at 12.2 kbps 850 MHz RMC, 1900 MHz AMR and TPC bits all set to "1" and in GPRS mode and using a Power Control Level of "0" in the PCS Band and "5" in the Cellular Band. The GSM and WCDMA conducted powers are reported below, respectively.

| FCC ID: BEJCF360 | PCTEST        | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|------------------|---------------|---|-----------|---------------------------------|
| Test Report S/N: | Test Dates:   | EUT Type:   |           | Page 13 of 60                   |
| 0808211150.BEJ   | Sept. 2, 2008 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | Fage 13 01 60                   |



|          |         | G                         | SM                 | GP                                 | RS                 | ED                                 | GE                 |
|----------|---------|---------------------------|--------------------|------------------------------------|--------------------|------------------------------------|--------------------|
| Band     | Channel | Power<br>Control<br>Level | Conducted<br>Power | Uplink /<br>Downlink<br>Slots Used | Conducted<br>Power | Uplink /<br>Downlink<br>Slots Used | Conducted<br>Power |
|          |         |                           | [dBm]              |                                    | [dBm]              |                                    | [dBm]              |
|          | 128     | 5                         | 32.70              | 1/1                                | 32.80              | 1/1                                | 27.40              |
| Cellular | 190     | 5                         | 32.80              | 1/1                                | 32.90              | 1/1                                | 27.70              |
|          | 251     | 5                         | 32.60              | 1/1                                | 32.70              | 1/1                                | 27.60              |
|          | 512     | 0                         | 29.60              | 1/1                                | 29.60              | 1/1                                | 25.80              |
| PCS      | 661     | 0                         | 29.40              | 1/1                                | 29.40              | 1/1                                | 25.60              |
|          | 810     | 0                         | 29.40              | 1/1                                | 29.40              | 1/1                                | 25.70              |

**Table 6-2. GSM Conducted Output Powers** 

|          |         | HSDPA            | Inactive         | HSDPA            | Active           |
|----------|---------|------------------|------------------|------------------|------------------|
| Band     | Channel | 12.2 kbps<br>RMC | 12.2 kbps<br>AMR | 12.2 kbps<br>RMC | 12.2 kbps<br>AMR |
|          |         | [dBm]            | [dBm]            | [dBm]            | [dBm]            |
|          | 4132    | 22.43            | 22.39            | 22.44            | 22.41            |
| Cellular | 4183    | 22.16            | 22.21            | 22.15            | 22.19            |
|          | 4233    | 22.28            | 22.25            | 22.26            | 22.23            |
|          | 9262    | 22.23            | 22.28            | 22.25            | 22.26            |
| PCS      | 9400    | 22.14            | 22.11            | 22.16            | 22.24            |
|          | 9538    | 22.17            | 22.08            | 22.19            | 22.05            |

**Table 6-3. WCDMA Conducted Output Powers** 

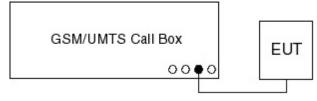


Figure 6-1. GSM/WCDMA Conducted Power Test Setup Diagram

| FCC ID: BEJCF360 | PCTEST        | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|------------------|---------------|---|-----------|---------------------------------|
| Test Report S/N: | Test Dates:   | EUT Type:   |           | Page 14 of 60                   |
| 0808211150.BEJ   | Sept. 2, 2008 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | Fage 14 01 60                   |



## 6.3 Effective Radiated Power Output Data §22.913(a)(2)

POWER: PCL "5" (Cellular GSM Mode)

| Frequency<br>[MHz] | Mode    | Measured<br>Level<br>[dBm] | Substitute<br>Level<br>[dBm] | Antenna<br>Gain<br>[dBd] | Pol<br>[H/V] | ERP<br>[dBm] | ERP<br>[Watts] | Battery<br>Type |
|--------------------|---------|----------------------------|------------------------------|--------------------------|--------------|--------------|----------------|-----------------|
| 824.20             | GSM850  | -9.840                     | 30.57                        | 0.00                     | Н            | 30.57        | 1.140          | Standard        |
| 836.60             | GSM850  | -11.370                    | 29.04                        | 0.00                     | Н            | 29.04        | 0.802          | Standard        |
| 848.80             | GSM850  | -12.600                    | 27.81                        | 0.00                     | Н            | 27.81        | 0.604          | Standard        |
| 824.20             | EDGE850 | -11.850                    | 28.56                        | 0.00                     | Н            | 28.56        | 0.718          | Standard        |

Table 6-4. Effective Radiated Power Output Data (GSM)

POWER: All "1" bits (Cellular WCDMA Mode)

| Frequency<br>[MHz] | Measured<br>Level<br>[dBm] | Substitute<br>Level<br>[dBm] | Level Gain Pol ERP |   | ERP<br>[Watts] | Battery<br>Type |          |
|--------------------|----------------------------|------------------------------|--------------------|---|----------------|-----------------|----------|
| 826.40             | -18.880                    | 21.53                        | 0.00               | Н | 21.53          | 0.142           | Standard |
| 836.60             | -19.840                    | 20.57                        | 0.00               | Н | 20.57          | 0.114           | Standard |
| 846.60             | -20.100                    | 20.31                        | 0.00               | Н | 20.31          | 0.107           | Standard |

Table 6-5. Effective Radiated Power Output Data (WCDMA)

#### NOTES:

<u>Effective Radiated Power Output Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:</u>

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. The conducted power at the terminals of the dipole is measured. The ERP is recorded.

| FCC ID: BEJCF360          | PCTEST*        | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|---------------------------|----------------|---|-----------|---------------------------------|
| Test Report S/N:          | Test Dates:    | EUT Type:   |           | Page 15 of 60                   |
| 0808211150.BEJ            | Sept. 2, 2008  | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | rage 15 01 60                   |
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## 6.4 Equivalent Isotropic Radiated Power Output Data §24.232(c)

POWER: PCL "0" (PCS GSM Mode)

| Frequency [MHz] | Mode     | Measured<br>Level<br>[dBm] | Substitute<br>Level<br>[dBm] | Antenna<br>Gain<br>[dBi] | Pol<br>[H/V] | EIRP<br>[dBm] | EIRP<br>[Watts] | Battery<br>Type |
|-----------------|----------|----------------------------|------------------------------|--------------------------|--------------|---------------|-----------------|-----------------|
| 1850.20         | GSM1900  | -12.760                    | 21.44                        | 8.00                     | Н            | 29.44         | 0.879           | Standard        |
| 1880.00         | GSM1900  | -13.470                    | 20.73                        | 8.00                     | Н            | 28.73         | 0.746           | Standard        |
| 1909.80         | GSM1900  | -14.030                    | 20.17                        | 8.00                     | Н            | 28.17         | 0.656           | Standard        |
| 1850.20         | EDGE1900 | -14.350                    | 19.85                        | 8.00                     | Н            | 27.85         | 0.610           | Standard        |

Table 6-6. Equivalent Isotropic Radiated Power Output Data (GSM)

#### POWER: All "1" bits (PCS WCDMA Mode)

| Frequency<br>[MHz] | Measured<br>Level<br>[dBm] | Substitute<br>Level<br>[dBm] | Antenna<br>Gain<br>[dBi] | Pol<br>[H/V] | EIRP<br>[dBm] | EIRP<br>[Watts] | Battery<br>Type |
|--------------------|----------------------------|------------------------------|--------------------------|--------------|---------------|-----------------|-----------------|
| 1852.40            | -20.900                    | 13.30                        | 8.00                     | Н            | 21.30         | 0.135           | Standard        |
| 1880.00            | -22.380                    | 11.82                        | 8.00                     | Н            | 19.82         | 0.096           | Standard        |
| 1907.60            | -20.240                    | 13.96                        | 8.00                     | Η            | 21.96         | 0.157           | Standard        |

Table 6-7. Equivalent Isotropic Radiated Power Output Data (WCDMA)

#### NOTES:

<u>Equivalent Isotropic Radiated Power Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:</u>

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. A Horn antenna was substituted in place of the EUT. This Horn antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. The conducted power at the terminals of the Horn antenna is measured. The difference between the gain of the horn and an isotropic antenna is taken into consideration and the EIRP is recorded.

| FCC ID: BEJCF360          | PCTEST*          | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | 1 LG | Reviewed by:<br>Quality Manager |
|---------------------------|------------------|---|------|---------------------------------|
| Test Report S/N:          | Test Dates:      | EUT Type:   |      | Page 16 of 60                   |
| 0808211150.BEJ            | Sept. 2, 2008    | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |      | rage 10 01 00                   |
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## 6.5 Cellular GSM Radiated Measurements §2.1053, 22.917(a)

### Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 824.20 MHz

CHANNEL: 128

MEASURED OUTPUT POWER: 30.570 dBm = 1.140 W

MODULATION SIGNAL: GSM (Internal)

DISTANCE: \_\_\_\_\_ meters

LIMIT:  $43 + 10 \log 10 (W) = 43.57$  dBc

| FREQUENCY<br>(MHz) | LEVEL @<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA GAIN<br>(dBd) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) | POL<br>(H/V) | (dBc) |
|--------------------|--|-------------------------------------|--|--------------|-------|
| 1648.40            | -59.70                                   | 6.32                                | -53.39                                 | Н            | 84.0  |
| 2472.60            | -56.40                                   | 7.69                                | -48.71                                 | Н            | 79.3  |
| 3296.80            | -76.15                                   | 7.83                                | -68.32                                 | Н            | 98.9  |
| 4121.00            | -54.55                                   | 7.83                                | -46.72                                 | Ι            | 77.3  |
| 4945.20            | -96.35                                   | 8.62                                | -87.73                                 | Н            | 118.3 |

Table 6-8. Radiated Spurious Data (Cellular GSM Mode - Ch. 128)

#### NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This spurious level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

| FCC ID: BEJCF360          | PCTEST            | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | 1 LG | Reviewed by:<br>Quality Manager |
|---------------------------|-------------------|---|------|---------------------------------|
| Test Report S/N:          | Test Dates:       | EUT Type:   |      | Page 17 of 60                   |
| 0808211150.BEJ            | Sept. 2, 2008     | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |      | rage 17 01 00                   |
| @ 2000 DOTECT Engineering | u I abaratanı Ina |   |      | DEV 2.7CMC                      |



## Cellular GSM Radiated Measurements (Cont'd) §2.1053, 22.917(a)

### Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 836.60 MHz

CHANNEL: 190

MEASURED OUTPUT POWER: 30.570 dBm = 1.140 W

MODULATION SIGNAL: GSM (Internal)

DISTANCE: \_\_\_\_\_ 3 \_\_\_ meters

LIMIT:  $43 + 10 \log 10 (W) = 43.57$  dBc

| FREQUENCY<br>(MHz) | LEVEL @<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA GAIN<br>(dBd) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) | POL<br>(H/V) | (dBc) |
|--------------------|--|-------------------------------------|--|--------------|-------|
| 1673.20            | -56.43                                   | 6.33                                | -50.11                                 | Н            | 80.7  |
| 2509.80            | -54.39                                   | 7.75                                | -46.64                                 | Н            | 77.2  |
| 3346.40            | -76.04                                   | 7.86                                | -68.18                                 | Н            | 98.7  |
| 4183.00            | -54.32                                   | 8.07                                | -46.25                                 | Н            | 76.8  |
| 5019.60            | -96.10                                   | 8.55                                | -87.56                                 | Н            | 118.1 |

Table 6-9. Radiated Spurious Data (Cellular GSM Mode – Ch. 190)

#### NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This spurious level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

| FCC ID: BEJCF360          | PCTEST            | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | 1 LG | Reviewed by:<br>Quality Manager |
|---------------------------|-------------------|---|------|---------------------------------|
| Test Report S/N:          | Test Dates:       | EUT Type:   |      | Page 18 of 60                   |
| 0808211150.BEJ            | Sept. 2, 2008     | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |      | rage 10 01 00                   |
| @ 2000 DOTECT Engineering | u I abaratanı Ina |   |      | DEV 2.7CMC                      |



## Cellular GSM Radiated Measurements (Cont'd) §2.1053, 22.917(a)

### Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 848.80 MHz

CHANNEL: 251

MEASURED OUTPUT POWER: 30.570 dBm = 1.140 W

MODULATION SIGNAL: GSM (Internal)

DISTANCE: \_\_\_\_\_ meters

LIMIT:  $43 + 10 \log 10 (W) = 43.57$  dBc

| FREQUENCY<br>(MHz) | LEVEL @<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA GAIN<br>(dBd) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) | POL<br>(H/V) | (dBc) |
|--------------------|--|-------------------------------------|--|--------------|-------|
| 1697.60            | -55.98                                   | 6.34                                | -49.64                                 | Н            | 80.2  |
| 2546.40            | -56.56                                   | 7.74                                | -48.82                                 | Н            | 79.4  |
| 3395.20            | -75.93                                   | 7.89                                | -68.04                                 | Н            | 98.6  |
| 4244.00            | -53.29                                   | 8.31                                | -44.98                                 | Н            | 75.6  |
| 5092.80            | -95.86                                   | 8.53                                | -87.33                                 | Н            | 117.9 |

Table 6-10. Radiated Spurious Data (Cellular GSM Mode - Ch. 251)

#### NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This spurious level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

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## 6.6 Cellular WCDMA Radiated Measurements §2.1053, 22.917(a)

### Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 826.40 MHz

CHANNEL: 4132

MEASURED OUTPUT POWER: 21.530 dBm = 0.142 W

MODULATION SIGNAL: WCDMA (Internal)

DISTANCE: 3 meters

LIMIT:  $43 + 10 \log 10 (W) = 34.53$  dBc

| FREQUENCY<br>(MHz) | LEVEL @<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA GAIN<br>(dBd) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) | POL<br>(H/V) | (dBc) |
|--------------------|--|-------------------------------------|--|--------------|-------|
| 1652.80            | -57.18                                   | 6.32                                | -50.87                                 | Н            | 72.4  |
| 2479.20            | -101.57                                  | 7.70                                | -93.87                                 | Н            | 115.4 |
| 3305.60            | -99.51                                   | 7.84                                | -91.67                                 | Н            | 113.2 |
| 4132.00            | -97.37                                   | 7.87                                | -89.50                                 | Н            | 111.0 |
| 4958.40            | -96.31                                   | 8.61                                | -87.70                                 | Н            | 109.2 |

Table 6-11. Radiated Spurious Data (Cellular WCDMA Mode – Ch. 4132)

#### NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This spurious level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

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## Cellular WCDMA Radiated Measurements (Cont'd) §2.1053, 22.917(a)

### Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 836.60 MHz

CHANNEL: 4183

MEASURED OUTPUT POWER: 21.530 dBm = 0.142 W

MODULATION SIGNAL: WCDMA (Internal)

DISTANCE: 3 meters

LIMIT:  $43 + 10 \log 10 (W) = 34.53$  dBc

| FREQUENCY<br>(MHz) | LEVEL @<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA GAIN<br>(dBd) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) | POL<br>(H/V) | (dBc) |
|--------------------|--|-------------------------------------|--|--------------|-------|
| 1673.20            | -58.94                                   | 6.32                                | -52.62                                 | Н            | 74.1  |
| 2509.80            | -101.53                                  | 7.75                                | -93.78                                 | Н            | 115.3 |
| 3346.40            | -99.44                                   | 7.86                                | -91.58                                 | Н            | 113.1 |
| 4183.00            | -97.44                                   | 8.04                                | -89.40                                 | Ι            | 110.9 |
| 5019.60            | -96.13                                   | 8.55                                | -87.59                                 | Н            | 109.1 |

Table 6-12. Radiated Spurious Data (Cellular WCDMA Mode – Ch. 4183)

#### NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This spurious level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

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## Cellular WCDMA Radiated Measurements (Cont'd) §2.1053, 22.917(a)

### Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 846.60 MHz

CHANNEL: 4233

MEASURED OUTPUT POWER: 21.530 dBm = 0.142 W

MODULATION SIGNAL: WCDMA (Internal)

DISTANCE: 3 meters

LIMIT:  $43 + 10 \log 10 (W) = 34.53$  dBd

| FREQUENCY<br>(MHz) | LEVEL @ ANTENNA TERMINALS (dBm) | SUBSTITUTE<br>ANTENNA GAIN<br>(dBd) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) | POL<br>(H/V) | (dBc) |
|--------------------|---------------------------------|-------------------------------------|--|--------------|-------|
| 1693.20            | -57.31                          | 6.33                                | -50.97                                 | Н            | 72.5  |
| 2539.80            | -101.43                         | 7.74                                | -93.69                                 | Н            | 115.2 |
| 3386.40            | -99.34                          | 7.89                                | -91.46                                 | Н            | 113.0 |
| 4233.00            | -97.53                          | 8.26                                | -89.26                                 | Н            | 110.8 |
| 5079.60            | -95.91                          | 8.53                                | -87.37                                 | Н            | 108.9 |

Table 6-13. Radiated Spurious Data (Cellular WCDMA Mode – Ch. 4233)

#### NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This spurious level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

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## 6.7 PCS GSM Radiated Measurements §2.1053, 24.238(a)

### Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1850.20 MHz

CHANNEL: 512

MODULATION SIGNAL: GSM (Internal)

DISTANCE: 3 meters

LIMIT:  $43 + 10 \log 10 (W) = 42.44$  dBc

| FREQUENCY<br>(MHz) | LEVEL @<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA GAIN<br>(dBd) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) | POL<br>(H/V) | (dBc) |
|--------------------|--|-------------------------------------|--|--------------|-------|
| 3700.40            | -53.66                                   | 9.85                                | -43.81                                 | Н            | 73.2  |
| 5550.60            | -54.66                                   | 10.72                               | -43.94                                 | Н            | 73.4  |
| 7400.80            | -94.06                                   | 11.60                               | -82.45                                 | Н            | 111.9 |
| 9251.00            | -90.79                                   | 11.36                               | -79.44                                 | Н            | 108.9 |
| 11101.20           | -90.06                                   | 12.74                               | -77.32                                 | Н            | 106.8 |

Table 6-14. Radiated Spurious Data (PCS GSM Mode - Ch. 512)

#### NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This spurious level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

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## PCS GSM Radiated Measurements (Cont'd) §2.1053, 24.238(a)

### Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1880.00 MHz

CHANNEL: 661

MODULATION SIGNAL: GSM (Internal)

DISTANCE: 3 meters

LIMIT:  $43 + 10 \log 10 (W) = 42.44$  dBc

| FREQUENCY<br>(MHz) | LEVEL @<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA GAIN<br>(dBd) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) | POL<br>(H/V) | (dBc) |
|--------------------|--|-------------------------------------|--|--------------|-------|
| 3760.00            | -52.23                                   | 9.78                                | -42.45                                 | Н            | 71.9  |
| 5640.00            | -53.30                                   | 10.92                               | -42.38                                 | Н            | 71.8  |
| 7520.00            | -93.87                                   | 11.66                               | -82.21                                 | Н            | 111.7 |
| 9400.00            | -91.22                                   | 11.56                               | -79.65                                 | Н            | 109.1 |
| 11280.00           | -89.34                                   | 12.63                               | -76.71                                 | Н            | 106.1 |

Table 6-15. Radiated Spurious Data (PCS GSM Mode - Ch. 661)

#### **NOTES:**

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This spurious level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

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## PCS GSM Radiated Measurements (Cont'd) §2.1053, 24.238(a)

### Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1909.80 MHz

CHANNEL: 810

MEASURED OUTPUT POWER: 29.440 dBm = 0.879 W

MODULATION SIGNAL: GSM (Internal)

DISTANCE: \_\_\_\_\_ meters

LIMIT:  $43 + 10 \log 10 (W) = 42.44$  dBc

| FREQUENCY<br>(MHz) | LEVEL @<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA GAIN<br>(dBd) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) | POL<br>(H/V) | (dBc) |
|--------------------|--|-------------------------------------|--|--------------|-------|
| 3819.60            | -51.58                                   | 9.71                                | -41.87                                 | Н            | 71.3  |
| 5729.40            | -52.08                                   | 11.12                               | -40.97                                 | Н            | 70.4  |
| 7639.20            | -93.35                                   | 11.44                               | -81.91                                 | Н            | 111.4 |
| 9549.00            | -91.46                                   | 11.73                               | -79.73                                 | Н            | 109.2 |
| 11458.80           | -88.63                                   | 12.52                               | -76.11                                 | Н            | 105.5 |

Table 6-16. Radiated Spurious Data (PCS GSM Mode - Ch. 810)

#### NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This spurious level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

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## 6.8 PCS WCDMA Radiated Measurements §2.1053, 24.238(a)

### Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1852.40 MHz

CHANNEL: 9262

MEASURED OUTPUT POWER: 21.960 dBm = 0.157 W

MODULATION SIGNAL: WCDMA (Internal)

DISTANCE: 3 meters

LIMIT:  $43 + 10 \log 10 (W) = 34.96$  dBc

| FREQUENCY<br>(MHz) | LEVEL @<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA GAIN<br>(dBd) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) | POL<br>(H/V) | (dBc) |
|--------------------|--|-------------------------------------|--|--------------|-------|
| 3704.80            | -53.46                                   | 9.84                                | -43.62                                 | Н            | 65.6  |
| 5557.20            | -95.78                                   | 10.73                               | -85.05                                 | Н            | 107.0 |
| 7409.60            | -94.05                                   | 11.61                               | -82.44                                 | Н            | 104.4 |
| 9262.00            | -90.83                                   | 11.37                               | -79.45                                 | Η            | 101.4 |
| 11114.40           | -90.00                                   | 12.73                               | -77.27                                 | Н            | 99.2  |

Table 6-17. Radiated Spurious Data (PCS WCDMA Mode - Ch. 9262)

#### NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This spurious level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

| FCC ID: BEJCF360          | PCTEST*        | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
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## PCS WCDMA Radiated Measurements (Cont'd) §2.1053, 24.238(a)

### Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1880.00 MHz

CHANNEL: 9400

MEASURED OUTPUT POWER: 21.960 dBm = 0.157 W

MODULATION SIGNAL: WCDMA (Internal)

DISTANCE: 3 meters

LIMIT:  $43 + 10 \log 10 (W) = 34.96$  dBc

| FREQUENCY<br>(MHz) | LEVEL @<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA GAIN<br>(dBd) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) | POL<br>(H/V) | (dBc) |
|--------------------|--|-------------------------------------|--|--------------|-------|
| 3760.00            | -54.53                                   | 9.78                                | -44.75                                 | Н            | 66.7  |
| 5640.00            | -95.81                                   | 10.92                               | -84.89                                 | Н            | 106.9 |
| 7520.00            | -93.87                                   | 11.66                               | -82.21                                 | Н            | 104.2 |
| 9400.00            | -91.22                                   | 11.56                               | -79.65                                 | Н            | 101.6 |
| 11280.00           | -89.34                                   | 12.63                               | -76.71                                 | Н            | 98.7  |

Table 6-18. Radiated Spurious Data (PCS WCDMA Mode - Ch. 9400)

#### NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This spurious level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

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## PCS WCDMA Radiated Measurements (Cont'd) §2.1053, 24.238(a)

### Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1907.60 MHz

CHANNEL: 9538

MEASURED OUTPUT POWER: 21.960 dBm = 0.157 W

MODULATION SIGNAL: WCDMA (Internal)

DISTANCE: 3 meters

LIMIT:  $43 + 10 \log 10 (W) = 34.96$  dBc

| FREQUENCY<br>(MHz) | LEVEL @<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA GAIN<br>(dBd) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) | POL<br>(H/V) | (dBc) |
|--------------------|--|-------------------------------------|--|--------------|-------|
| 3815.20            | -53.80                                   | 9.71                                | -44.09                                 | Н            | 66.0  |
| 5722.80            | -95.84                                   | 11.10                               | -84.74                                 | Н            | 106.7 |
| 7630.40            | -93.39                                   | 11.46                               | -81.93                                 | Н            | 103.9 |
| 9538.00            | -91.47                                   | 11.72                               | -79.74                                 | Ι            | 101.7 |
| 11445.60           | -88.68                                   | 12.53                               | -76.15                                 | Н            | 98.1  |

Table 6-19. Radiated Spurious Data (PCS WCDMA Mode - Ch. 9538)

#### **NOTES:**

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This spurious level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

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## 6.9 Cellular GSM Frequency Stability Measurements §2.1055, 22.355

OPERATING FREQUENCY: 836,600,000 Hz

CHANNEL: 190

REFERENCE VOLTAGE: 3.7 VDC

DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

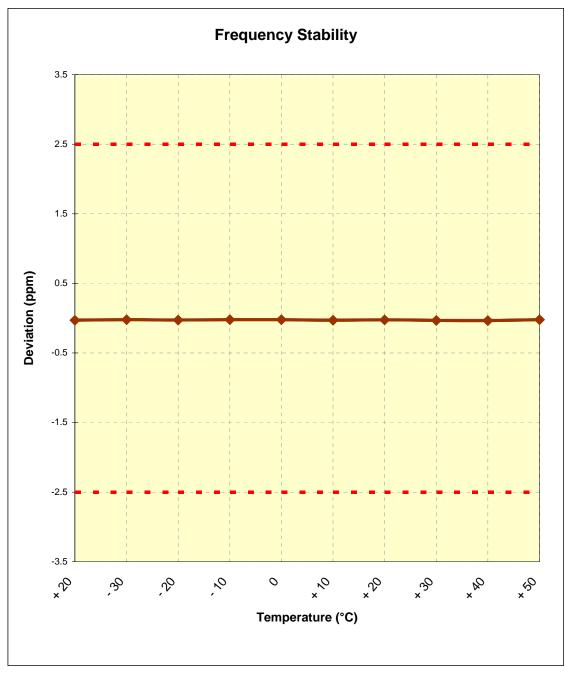
| VOLTAGE (%)    | POWER<br>(VDC) | TEMP (°C)  | FREQUENCY<br>(Hz) | Freq. Dev.<br>(Hz) | Deviation (%) |
|----------------|----------------|------------|-------------------|--------------------|---------------|
| 100 %          | 3.70           | + 20 (Ref) | 836,599,975       | -25                | -0.000003     |
| 100 %          |                | - 30       | 836,599,981       | -19                | -0.000002     |
| 100 %          |                | - 20       | 836,599,978       | -22                | -0.000003     |
| 100 %          |                | - 10       | 836,599,983       | -17                | -0.000002     |
| 100 %          |                | 0          | 836,599,982       | -18                | -0.000002     |
| 100 %          |                | + 10       | 836,599,976       | -24                | -0.000003     |
| 100 %          |                | + 20       | 836,599,979       | -21                | -0.000003     |
| 100 %          |                | + 30       | 836,599,973       | -27                | -0.000003     |
| 100 %          |                | + 40       | 836,599,971       | -29                | -0.000003     |
| 100 %          |                | + 50       | 836,599,981       | -19                | -0.000002     |
| 115 %          | 4.26           | + 20       | 836,599,973       | -27                | -0.000003     |
| BATT. ENDPOINT | 3.40           | + 20       | 836,599,969       | -31                | -0.000004     |

Table 6-20. Frequency Stability Data (Cellular GSM Mode - Ch. 190)

| FCC ID: BEJCF360             | PCTEST      | REPORT<br>(CERTIFICATION)                    | U LG | Reviewed by: Quality Manager |  |
|------------------------------|-------------|--|------|------------------------------|--|
| Test Report S/N:             | Test Dates: | EUT Type:                                    |      | Page 29 of 60                |  |
| 0808211150.BEJ Sept. 2, 2008 |             | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth |      | Page 29 01 60                |  |



## Cellular GSM Frequency Stability Measurements (Cont'd) §2.1055, 22.355



Plot 6-1. Frequency Stability Graph (Cellular GSM Mode - Ch. 190)

| FCC ID: BEJCF360                           | PCTEST*     | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |  |
|--|-------------|---|-----------|---------------------------------|--|
| Test Report S/N:                           | Test Dates: | EUT Type:   |           | Page 30 of 60                   |  |
| 0808211150.BEJ Sept. 2, 2008               |             | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | rage 30 of 60                   |  |
| © 2009 PCTEST Engineering Laboratory, Inc. |             |   |           |                                 |  |



## 6.10 Cellular WCDMA Frequency Stability Measurements §2.1055, 22.355

OPERATING FREQUENCY: 836,600,000 Hz

CHANNEL: 4183

REFERENCE VOLTAGE: 3.7 VDC

DEVIATION LIMIT: \_ ± 0.00025 \_ % or 2.5 ppm

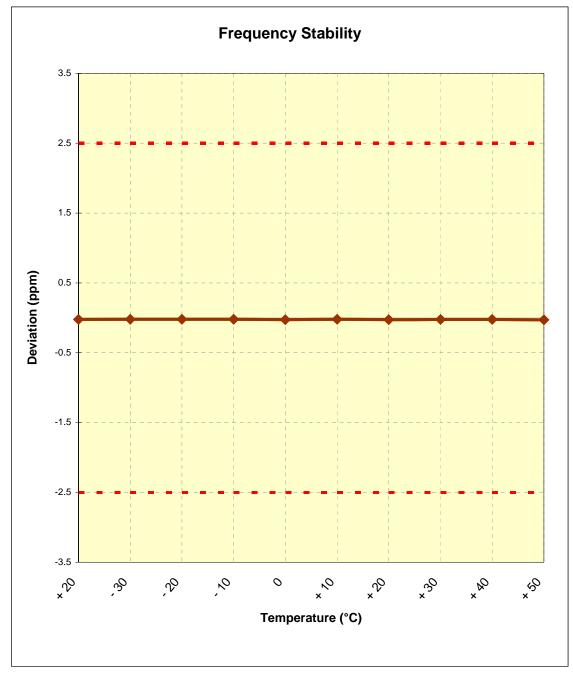
| VOLTAGE (%)    | POWER<br>(VDC) | TEMP (°C)  | FREQUENCY<br>(Hz) | Freq. Dev.<br>(Hz) | Deviation (%) |
|----------------|----------------|------------|-------------------|--------------------|---------------|
| 100 %          | 3.70           | + 20 (Ref) | 836,599,980       | -20                | -0.000002     |
| 100 %          |                | - 30       | 836,599,981       | -19                | -0.000002     |
| 100 %          |                | - 20       | 836,599,981       | -19                | -0.000002     |
| 100 %          |                | - 10       | 836,599,982       | -18                | -0.000002     |
| 100 %          |                | 0          | 836,599,977       | -23                | -0.000003     |
| 100 %          |                | + 10       | 836,599,982       | -18                | -0.000002     |
| 100 %          |                | + 20       | 836,599,978       | -22                | -0.000003     |
| 100 %          |                | + 30       | 836,599,980       | -20                | -0.000002     |
| 100 %          |                | + 40       | 836,599,979       | -21                | -0.000003     |
| 100 %          |                | + 50       | 836,599,975       | -25                | -0.000003     |
| 115 %          | 4.26           | + 20       | 836,599,977       | -23                | -0.000003     |
| BATT. ENDPOINT | 3.40           | + 20       | 836,599,973       | -27                | -0.000003     |

Table 6-21. Frequency Stability Data (Cellular WCDMA Mode – Ch. 4183)

| FCC ID: BEJCF360 | @\PSTEST      | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | 1 LG | Reviewed by:<br>Quality Manager |
|------------------|---------------|---|------|---------------------------------|
| Test Report S/N: | Test Dates:   | EUT Type:   |      | Page 31 of 60                   |
| 0808211150.BEJ   | Sept. 2, 2008 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |      | Page 31 01 60                   |



### **Cellular WCDMA Frequency Stability Measurements (Cont'd)** §2.1055, 22.355



Plot 6-2. Frequency Stability Graph (Cellular WCDMA Mode – Ch. 4183)

| FCC ID: BEJCF360             | PCTEST*             | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |  |
|------------------------------|---------------------|---|-----------|---------------------------------|--|
| Test Report S/N:             | Test Dates:         | EUT Type:   |           | Page 32 of 60                   |  |
| 0808211150.BEJ Sept. 2, 2008 |                     | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | Page 32 01 60                   |  |
| @ 2000 DCTECT Engineering    | u I alaawatamii Iaa |   |           | DEV/ 2 7CM/C                    |  |

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## **6.11 PCS GSM Frequency Stability Measurements** §2.1055, 24.235

OPERATING FREQUENCY: 1,880,000,000 Hz

CHANNEL: \_\_\_\_\_\_\_661

REFERENCE VOLTAGE: 3.7 VDC

DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

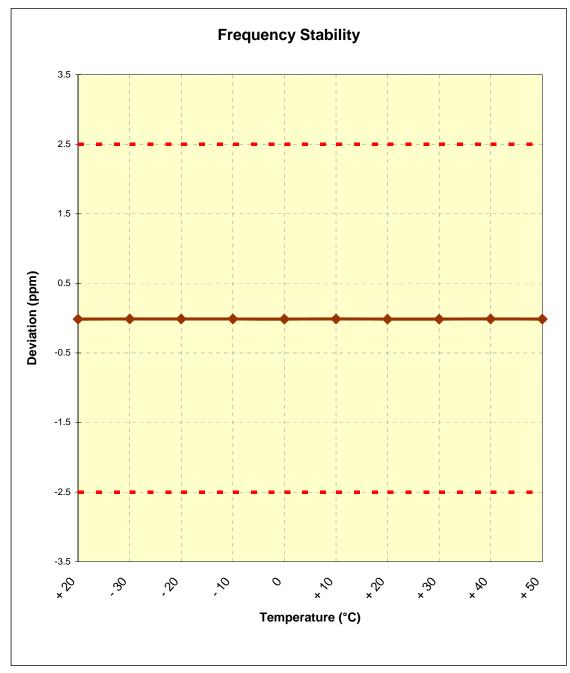
| VOLTAGE (%)    | POWER<br>(VDC) | TEMP (°C)  | FREQUENCY<br>(Hz) | Freq. Dev.<br>(Hz) | Deviation (%) |
|----------------|----------------|------------|-------------------|--------------------|---------------|
| 100 %          | 3.70           | + 20 (Ref) | 1,879,999,977     | -23                | -0.000001     |
| 100 %          |                | - 30       | 1,879,999,980     | -20                | -0.000001     |
| 100 %          |                | - 20       | 1,879,999,981     | -19                | -0.000001     |
| 100 %          |                | - 10       | 1,879,999,978     | -22                | -0.000001     |
| 100 %          |                | 0          | 1,879,999,974     | -26                | -0.000001     |
| 100 %          |                | + 10       | 1,879,999,979     | -21                | -0.000001     |
| 100 %          |                | + 20       | 1,879,999,977     | -23                | -0.000001     |
| 100 %          |                | + 30       | 1,879,999,975     | -25                | -0.000001     |
| 100 %          |                | + 40       | 1,879,999,981     | -19                | -0.000001     |
| 100 %          |                | + 50       | 1,879,999,974     | -26                | -0.000001     |
| 115 %          | 4.26           | + 20       | 1,879,999,976     | -24                | -0.000001     |
| BATT. ENDPOINT | 3.40           | + 20       | 1,879,999,971     | -29                | -0.000002     |

Table 6-22. Frequency Stability Data (PCS GSM Mode - Ch. 661)

| FCC ID: BEJCF360 | PCTEST        | REPORT<br>(CERTIFICATION)                    | U LG | Reviewed by: Quality Manager |
|------------------|---------------|--|------|------------------------------|
| Test Report S/N: | Test Dates:   | EUT Type:                                    |      | Page 33 of 60                |
| 0808211150.BEJ   | Sept. 2, 2008 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth |      | rage 33 01 60                |



## PCS GSM Frequency Stability Measurements (Cont'd) §2.1055, 24.235



Plot 6-3. Frequency Stability Graph (PCS GSM Mode - Ch. 661)

| FCC ID: BEJCF360             | PCTEST            | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|------------------------------|-------------------|---|-----------|---------------------------------|
| Test Report S/N:             | Test Dates:       | EUT Type:   |           | Page 34 of 60                   |
| 0808211150.BEJ Sept. 2, 2008 |                   | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | Fage 34 01 60                   |
| @ 2000 DCTECT Engineering    | u I abaratanı Ina |   |           | DEV/ 2 ZCM/C                    |



## **6.12 PCS WCDMA Frequency Stability Measurements** §2.1055, 24.235

OPERATING FREQUENCY: 1,880,000,000 Hz

CHANNEL: 9400

REFERENCE VOLTAGE: 3.7 VDC

DEVIATION LIMIT:  $\pm 0.00025$  % or 2.5 ppm

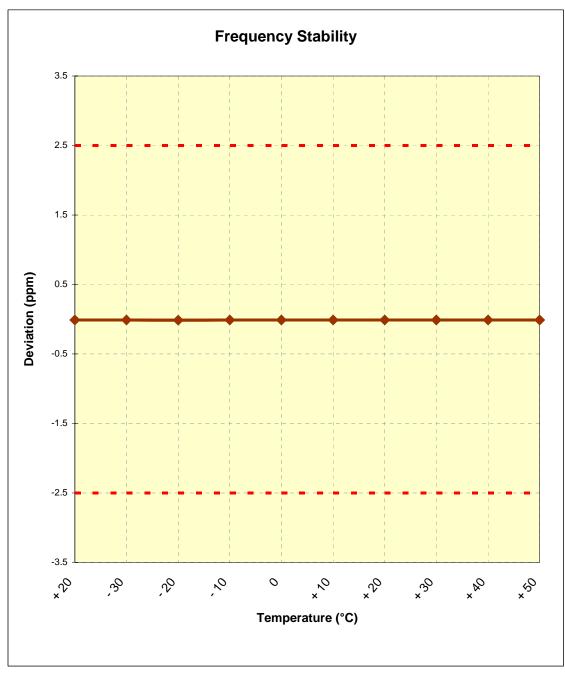
| VOLTAGE (%)    | POWER<br>(VDC) | TEMP (°C)  | FREQUENCY<br>(Hz) | Freq. Dev.<br>(Hz) | Deviation (%) |
|----------------|----------------|------------|-------------------|--------------------|---------------|
| 100 %          | 3.70           | + 20 (Ref) | 1,879,999,980     | -20                | -0.000001     |
| 100 %          |                | - 30       | 1,879,999,981     | -19                | -0.000001     |
| 100 %          |                | - 20       | 1,879,999,976     | -24                | -0.000001     |
| 100 %          |                | - 10       | 1,879,999,979     | -21                | -0.000001     |
| 100 %          |                | 0          | 1,879,999,981     | -19                | -0.000001     |
| 100 %          |                | + 10       | 1,879,999,978     | -22                | -0.000001     |
| 100 %          |                | + 20       | 1,879,999,982     | -18                | -0.000001     |
| 100 %          |                | + 30       | 1,879,999,980     | -20                | -0.000001     |
| 100 %          |                | + 40       | 1,879,999,981     | -19                | -0.000001     |
| 100 %          |                | + 50       | 1,879,999,978     | -22                | -0.000001     |
| 115 %          | 4.26           | + 20       | 1,879,999,976     | -24                | -0.000001     |
| BATT. ENDPOINT | 3.40           | + 20       | 1,879,999,972     | -28                | -0.000001     |

Table 6-23. Frequency Stability Data (PCS WCDMA Mode – Ch. 9400)

| FCC ID: BEJCF360             | PCTEST*             | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | 1 LG | Reviewed by:<br>Quality Manager |  |
|------------------------------|---------------------|---|------|---------------------------------|--|
| Test Report S/N:             | Test Dates:         | EUT Type:   |      | Page 35 of 60                   |  |
| 0808211150.BEJ Sept. 2, 2008 |                     | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |      | Page 35 01 60                   |  |
| © 0000 DOTEOT Familia in -   | . Labracation . Lab | ·   |      | DEV 0.70M/                      |  |



## PCS WCDMA Frequency Stability Measurements (Cont'd) §2.1055, 24.235

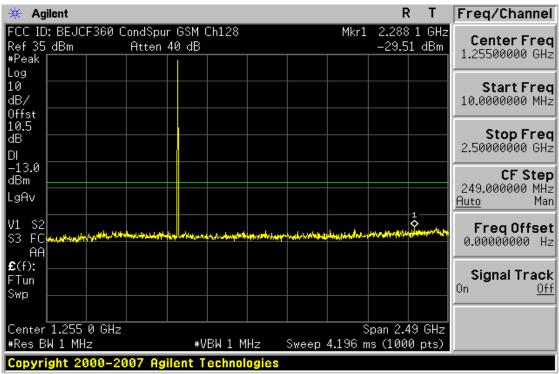


Plot 6-4. Frequency Stability Graph (PCS WCDMA Mode - Ch. 9400)

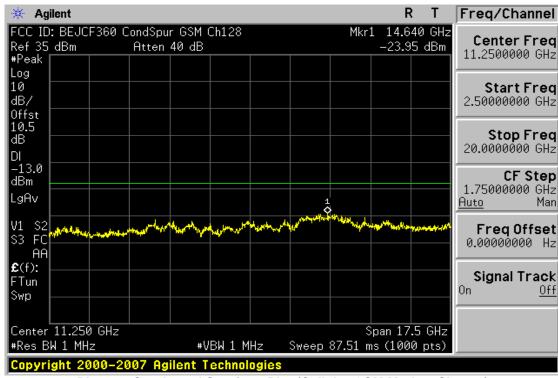
| FCC ID: BEJCF360                        | PCTEST        | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | 1 LG | Reviewed by:<br>Quality Manager |
|---|---------------|---|------|---------------------------------|
| Test Report S/N:                        | Test Dates:   | EUT Type:   |      | Page 36 of 60                   |
| 0808211150.BEJ                          | Sept. 2, 2008 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |      | rage 30 01 60                   |
| © 2000 DCTECT Facinagina Laboratory Inc |               |   |      | DEV 2.7CMC                      |



## 7.0 PLOTS OF EMISSIONS



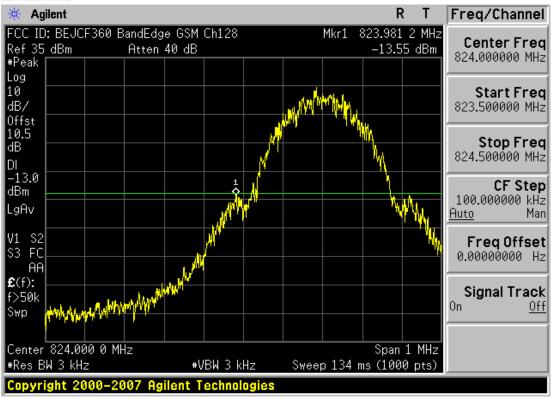
Plot 7-1. Conducted Spurious Plot (Cellular GSM Mode – Ch. 128)



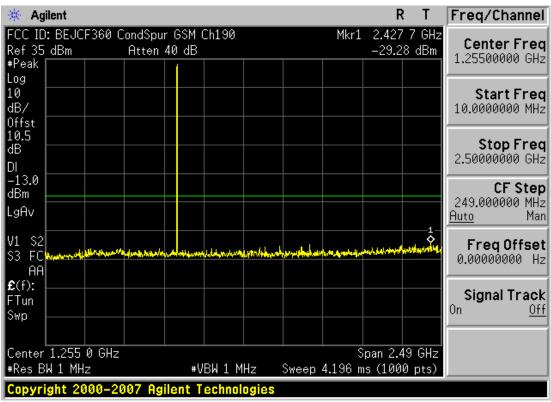
Plot 7-2. Conducted Spurious Plot (Cellular GSM Mode - Ch. 128)

| FCC ID: BEJCF360      | PETEST              | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION) | Reviewed by: Quality Manager |
|-----------------------|---------------------|---|------------------------------|
| Test Report S/N:      | Test Dates:         | EUT Type:   | Page 37 of 60                |
| 0808211150.BEJ        | Sept. 2, 2008       | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                    | Fage 37 01 60                |
| © 0000 DOTEOT Familia | n I alcanatamo loca |   | DEV 0.70W0                   |





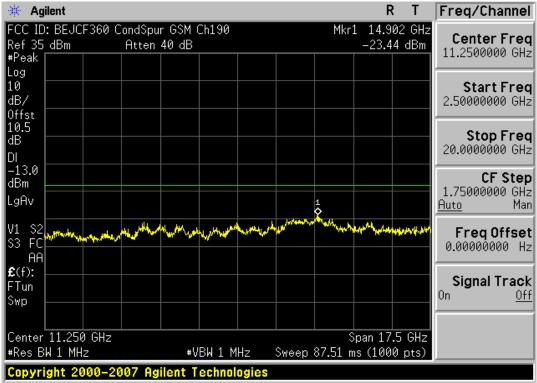
Plot 7-3. Band Edge Plot (Cellular GSM Mode - Ch. 128)



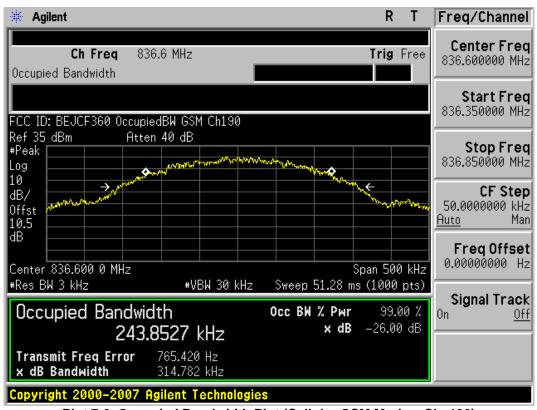
Plot 7-4. Conducted Spurious (Cellular GSM Mode – Ch. 190)

| FCC ID: BEJCF360         | PCTEST'          | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|--------------------------|------------------|---|-----------|---------------------------------|
| Test Report S/N:         | Test Dates:      | EUT Type:   |           | Page 38 of 60                   |
| 0808211150.BEJ           | Sept. 2, 2008    | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | rage 30 01 00                   |
| @ 2000 DCTECT Engineerin | a Laboratory Inc |   |           | DEV/ 2.7CM/C                    |





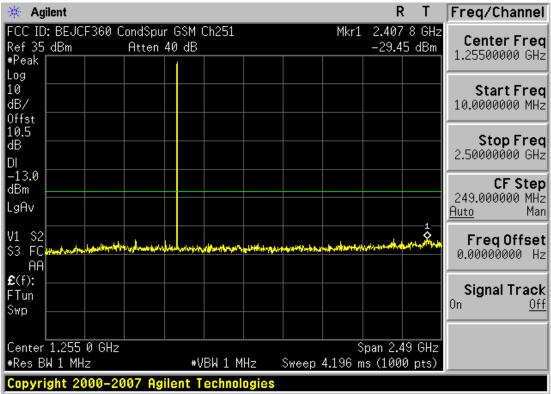
Plot 7-5. Conducted Spurious Plot (Cellular GSM Mode – Ch. 190)



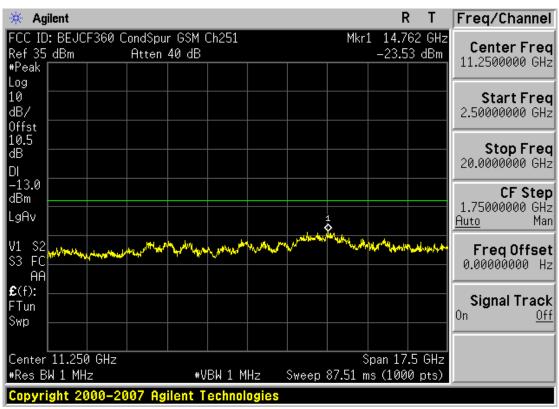
Plot 7-6. Occupied Bandwidth Plot (Cellular GSM Mode - Ch. 190)

| FCC ID: BEJCF360         | PCTEST*          | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|--------------------------|------------------|---|-----------|---------------------------------|
| Test Report S/N:         | Test Dates:      | EUT Type:   |           | Page 39 of 60                   |
| 0808211150.BEJ           | Sept. 2, 2008    | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | rage 39 01 60                   |
| © 2009 DCTEST Engineerin | a Laboratory Inc | •   |           | DEV/ 2.7C/M/C                   |





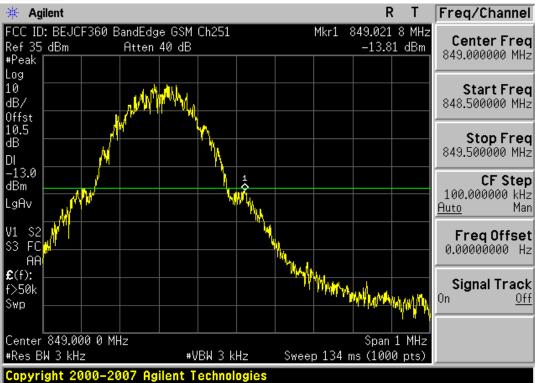
Plot 7-7. Conducted Spurious Plot (Cellular GSM Mode – Ch. 251)



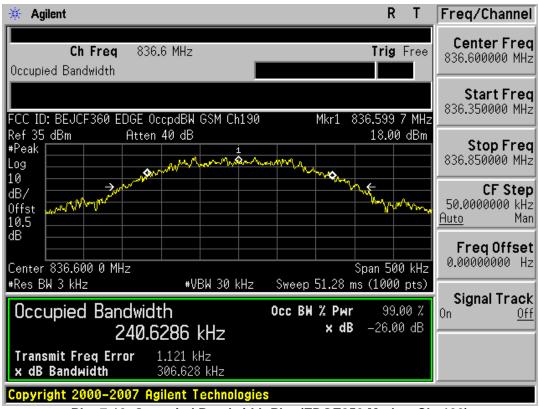
Plot 7-8. Conducted Spurious Plot (Cellular GSM Mode - Ch. 251)

|                           |                                      | ,   |                                 |
|---------------------------|--------------------------------------|---|---------------------------------|
| FCC ID: BEJCF360          | A PCTEST                             | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT | Reviewed by:<br>Quality Manager |
| FCC ID: BEJCF360          | *** V EMELOGISHME LEBOURATEDOS, INC. | (CERTIFICATION)                                 |                                 |
| Test Report S/N:          | Test Dates:                          | EUT Type:                                       | Page 40 of 60                   |
| 0808211150.BEJ            | Sept. 2, 2008                        | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth    | rage 40 of 60                   |
| @ 2000 DOTECT Engineering | u I obovotowi Ino                    |   | DEV/ 2.7CM/C                    |





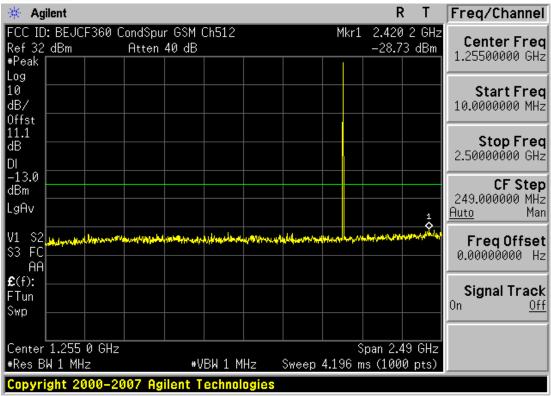
Plot 7-9. Band Edge Plot (Cellular GSM Mode - Ch. 251)



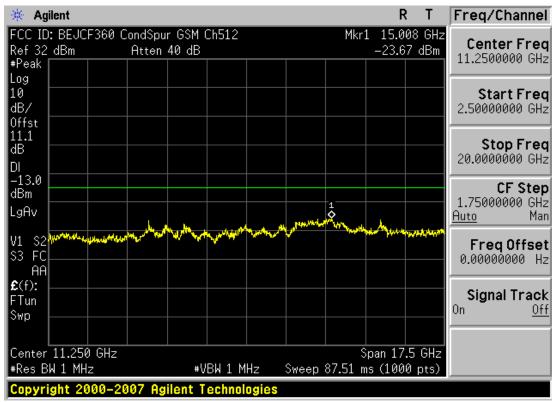
Plot 7-10. Occupied Bandwidth Plot (EDGE850 Mode - Ch. 190)

| FCC ID: BEJCF360          | PCTEST         | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | 1 LG | Reviewed by:<br>Quality Manager |
|---------------------------|----------------|---|------|---------------------------------|
| Test Report S/N:          | Test Dates:    | EUT Type:   |      | Page 41 of 60                   |
| 0808211150.BEJ            | Sept. 2, 2008  | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |      | Fage 41 01 60                   |
| @ 2000 DCTECT Engineering | Laboratory Inc |   |      | DEV/ 2 7CM/C                    |





Plot 7-11. Conducted Spurious Plot (PCS GSM Mode – Ch. 512)



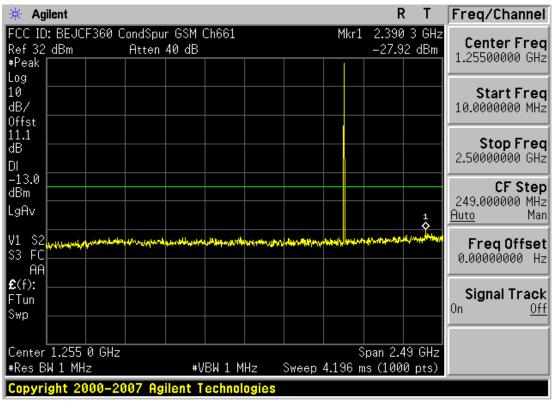
Plot 7-12. Conducted Spurious Plot (PCS GSM Mode – Ch. 512)

| FCC ID: BEJCF360          | PCTEST           | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|---------------------------|------------------|---|-----------|---------------------------------|
| Test Report S/N:          | Test Dates:      | EUT Type:   |           | Page 42 of 60                   |
| 0808211150.BEJ            | Sept. 2, 2008    | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | Fage 42 01 60                   |
| @ 2000 DOTECT Engineering | . Labaratanı Ina |   |           | DEV/ 2 7CM/C                    |





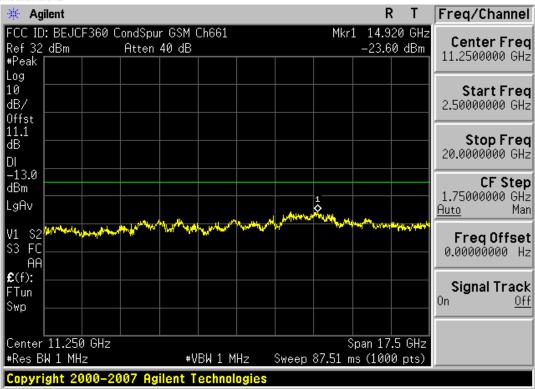
Plot 7-13. Band Edge Plot (PCS GSM Mode – Ch. 512)



Plot 7-14. Conducted Spurious Plot (PCS GSM Mode - Ch. 661)

| FCC ID: BEJCF360 | PCTEST        | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | LG | Reviewed by:<br>Quality Manager |
|------------------|---------------|---|----|---------------------------------|
| Test Report S/N: | Test Dates:   | EUT Type:   |    | Page 43 of 60                   |
| 0808211150.BEJ   | Sept. 2, 2008 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |    | rage 43 01 00                   |





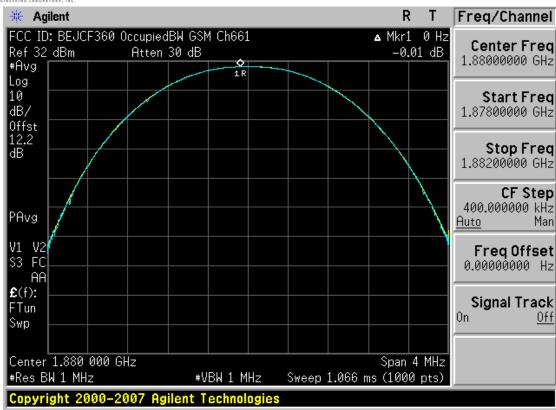
Plot 7-15. Conducted Spurious Plot (PCS GSM Mode - Ch. 661)



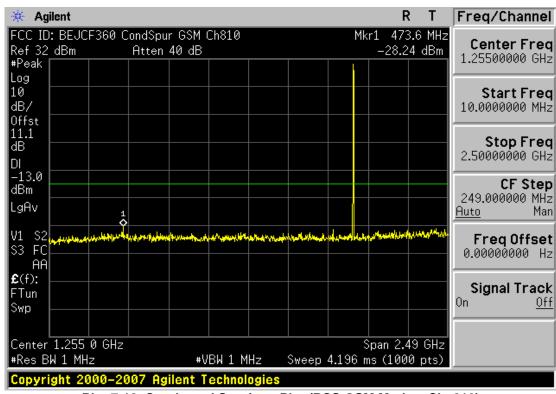
Plot 7-16. Occupied Bandwidth Plot (PCS GSM Mode - Ch. 661)

| FCC ID: BEJCF360          | PCTEST*          | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | ① LG | Reviewed by:<br>Quality Manager |
|---------------------------|------------------|---|------|---------------------------------|
| Test Report S/N:          | Test Dates:      | EUT Type:   |      | Page 44 of 60                   |
| 0808211150.BEJ            | Sept. 2, 2008    | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |      | rage 44 01 60                   |
| @ 2000 DCTECT Engineering | a Labaratani laa |   |      | DEV/ 2 ZCM/C                    |





Plot 7-17. Peak-Average Ratio Plot (PCS GSM Mode - Ch. 661)



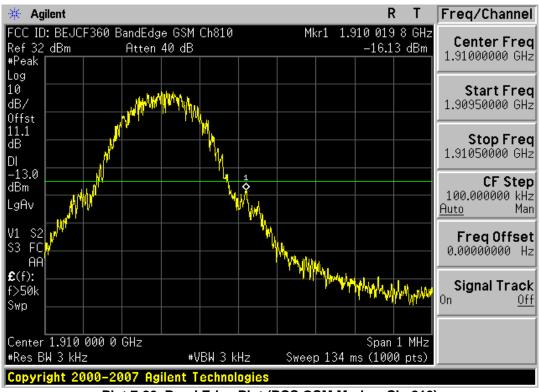
Plot 7-18. Conducted Spurious Plot (PCS GSM Mode - Ch. 810)

|                          |                | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT     | ,    | Reviewed by:    |
|--------------------------|----------------|--|------|-----------------|
| FCC ID: BEJCF360         | PCTEST         | REPORT<br>(CERTIFICATION)                    | U LG | Quality Manager |
| Test Report S/N:         | Test Dates:    | EUT Type:                                    |      | Page 45 of 60   |
| 0808211150.BEJ           | Sept. 2, 2008  | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth |      | Fage 45 01 60   |
| @ 0000 DOTEOT Facilities | Labanatan, Isa |  |      | DEV 0.70M0      |





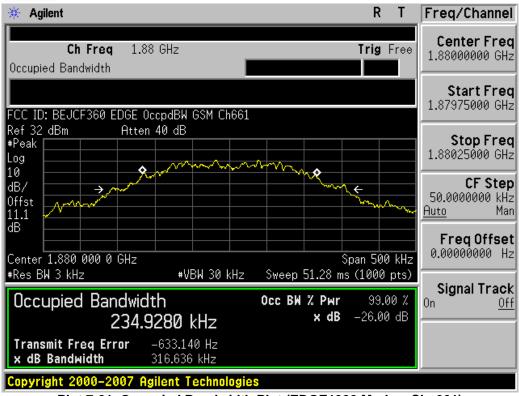
Plot 7-19. Conducted Spurious Plot (PCS GSM Mode - Ch. 810)

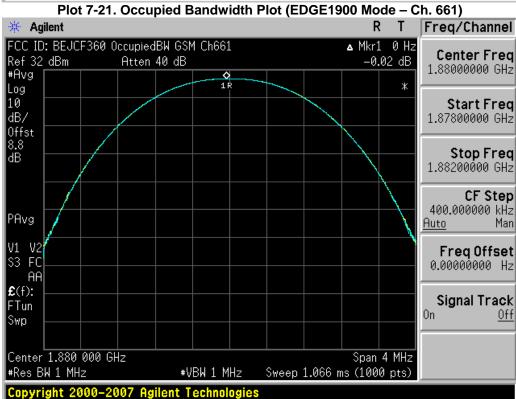


Plot 7-20. Band Edge Plot (PCS GSM Mode - Ch. 810)

| FCC ID: BEJCF360          | PCTEST                                   | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | ① LG | Reviewed by:<br>Quality Manager |
|---------------------------|--|---|------|---------------------------------|
| Test Report S/N:          | Test Dates:                              | EUT Type:   |      | Page 46 of 60                   |
| 0808211150.BEJ            | Sept. 2, 2008                            | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |      | raye 40 01 00                   |
| © 2008 PCTEST Engineering | 2008 PCTEST Engineering Laboratory, Inc. |   |      |                                 |



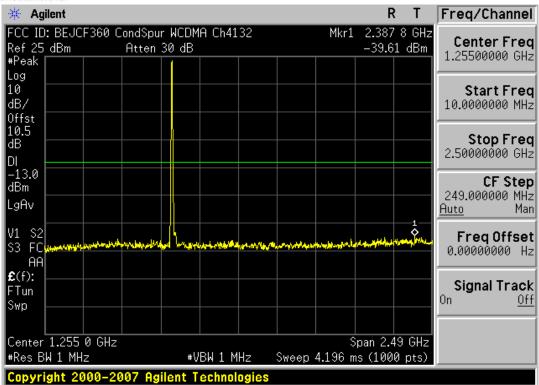


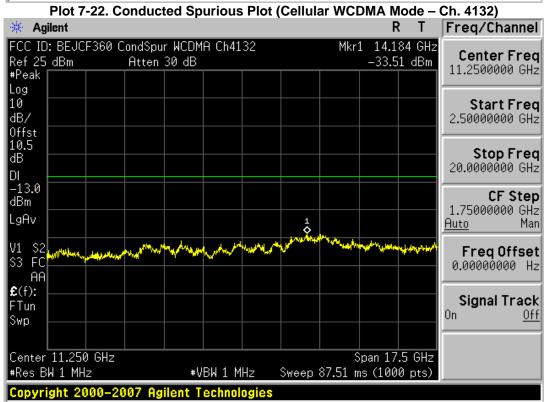


Plot 7-21b. Peak-Average Ratio Plot (EDGE1900 Mode - Ch. 661)

| FCC ID: BEJCF360         | PCTEST                                   | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|--------------------------|--|---|-----------|---------------------------------|
| Test Report S/N:         | Test Dates:                              | EUT Type:   |           | Page 47 of 60                   |
| 0808211150.BEJ           | Sept. 2, 2008                            | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | rage 47 01 60                   |
| © 2008 PCTEST Engineerin | 2008 PCTEST Engineering Laboratory, Inc. |   |           | REV 3.7GWC                      |



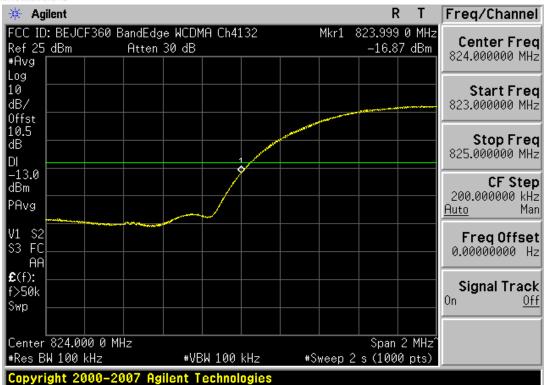


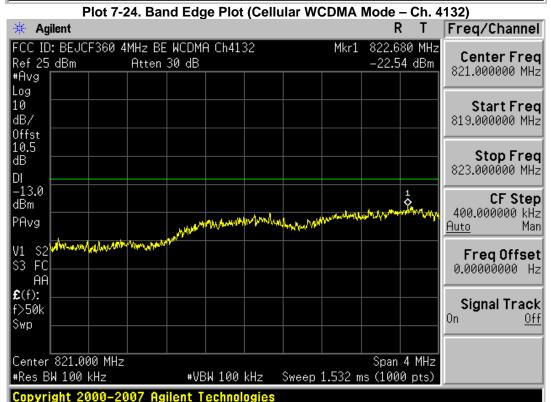


Plot 7-23. Conducted Spurious Plot (Cellular WCDMA Mode – Ch. 4132)

| FCC ID: BEJCF360         | PCTEST*                                 | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|--------------------------|---|---|-----------|---------------------------------|
| Test Report S/N:         | Test Dates:                             | EUT Type:   |           | Page 48 of 60                   |
| 0808211150.BEJ           | Sept. 2, 2008                           | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | rage 46 01 60                   |
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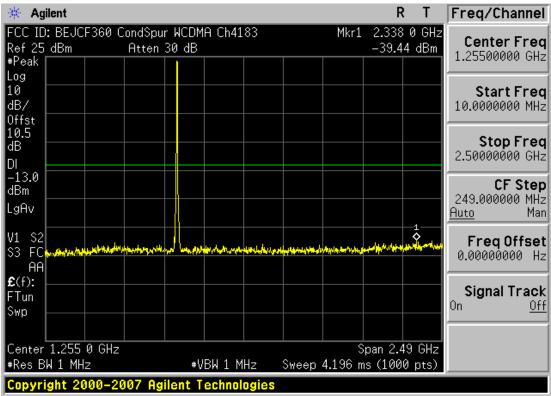




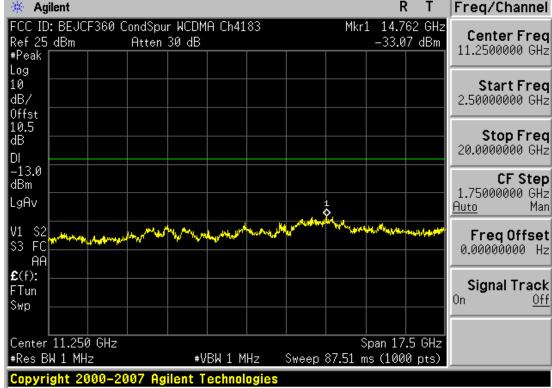
Plot 7-25. 4MHz Span Plot (Cellular WCDMA Mode – Ch. 4132)

| FCC ID: BEJCF360                         | POTEST*       | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|--|---------------|---|-----------|---------------------------------|
| Test Report S/N:                         | Test Dates:   | EUT Type:   |           | Page 49 of 60                   |
| 0808211150.BEJ                           | Sept. 2, 2008 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | rage 49 01 60                   |
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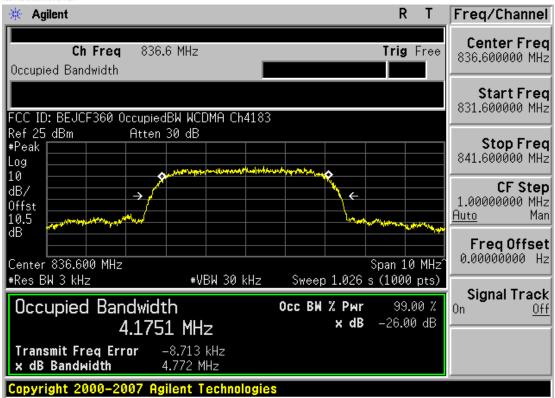


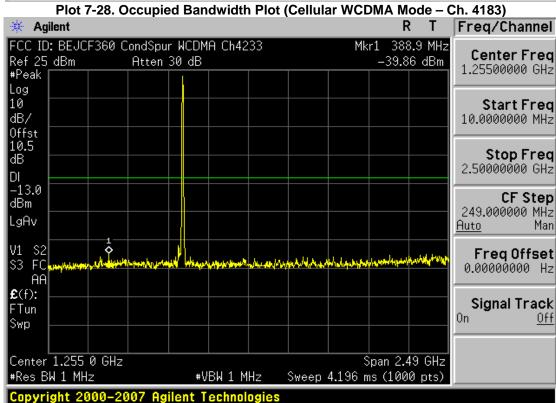


Plot 7-27. Conducted Spurious Plot (Cellular WCDMA Mode – Ch. 4183)

| FCC ID: BEJCF360                         | PCTEST*       | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|--|---------------|---|-----------|---------------------------------|
| Test Report S/N:                         | Test Dates:   | EUT Type:   |           | Page 50 of 60                   |
| 0808211150.BEJ                           | Sept. 2, 2008 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | rage 50 01 60                   |
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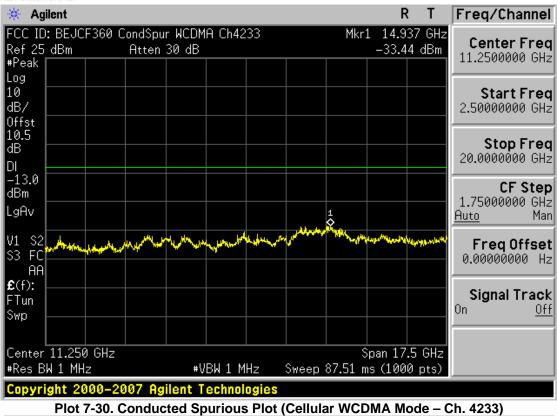




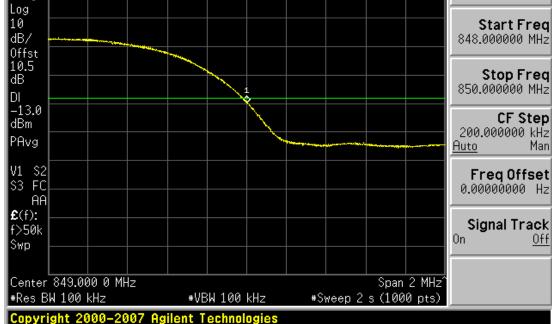
Plot 7-29. Conducted Spurious Plot (Cellular WCDMA Mode – Ch. 4233)

| FCC ID: BEJCF360         | PCTEST*                                  | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |  |
|--------------------------|--|---|-----------|---------------------------------|--|
| Test Report S/N:         | Test Dates:                              | EUT Type:   |           | Page 51 of 60                   |  |
| 0808211150.BEJ           | Sept. 2, 2008                            | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | rage 51 01 00                   |  |
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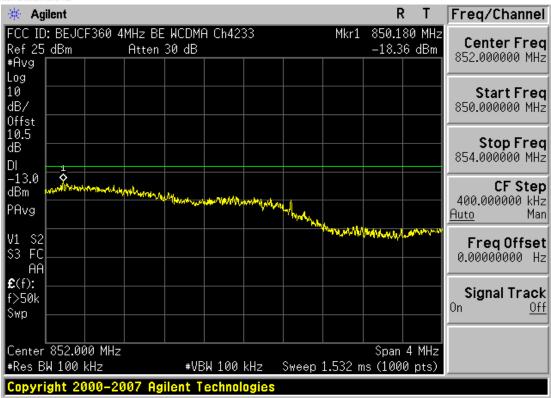


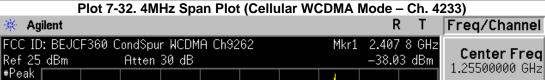


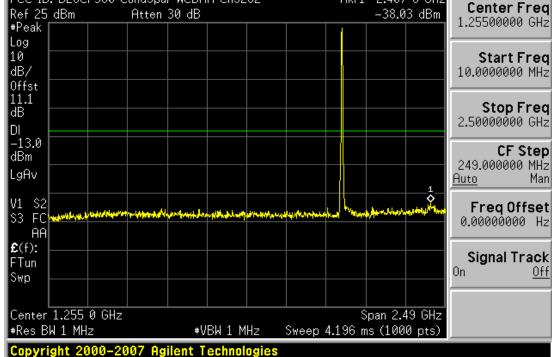
Plot 7-31. Band Edge Plot (Cellular WCDMA Mode - Ch. 4233)

| FCC ID: BEJCF360                          | PCTEST        | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|---|---------------|---|-----------|---------------------------------|
| Test Report S/N:                          | Test Dates:   | EUT Type:   |           | Page 52 of 60                   |
| 0808211150.BEJ                            | Sept. 2, 2008 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | Page 52 01 60                   |
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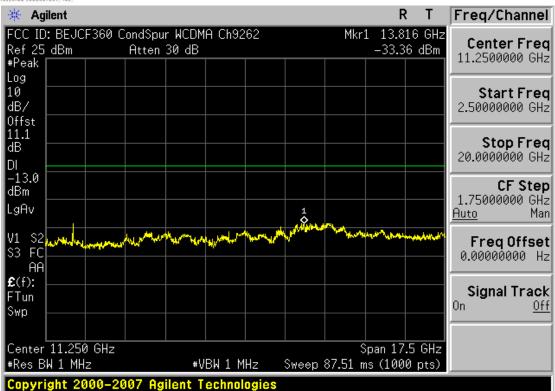


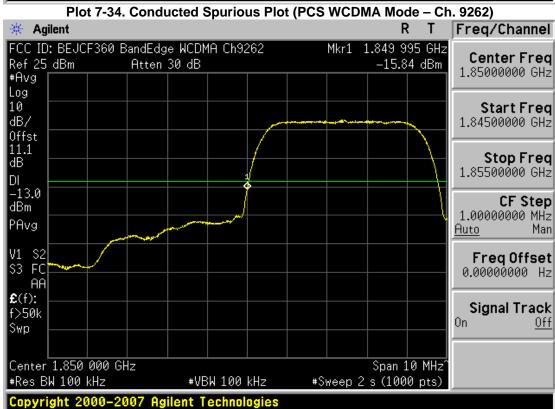


Plot 7-33. Conducted Spurious Plot (PCS WCDMA Mode – Ch. 9262)

| FCC ID: BEJCF360                         | PCTEST*       | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|--|---------------|---|-----------|---------------------------------|
| Test Report S/N:                         | Test Dates:   | EUT Type:   |           | Page 53 of 60                   |
| 0808211150.BEJ                           | Sept. 2, 2008 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | rage 55 01 60                   |
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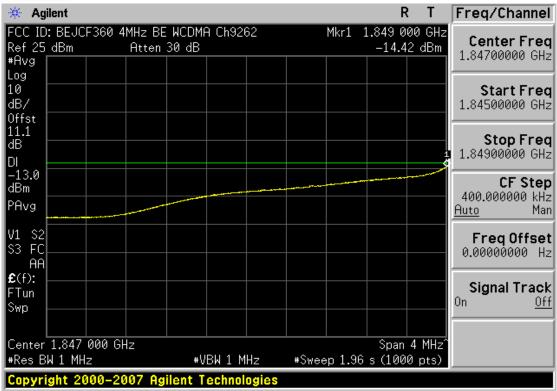


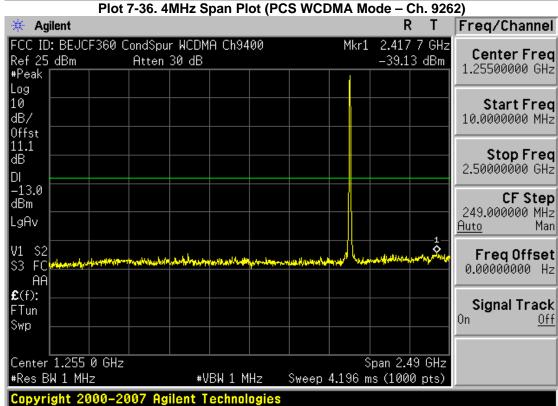


Plot 7-35. Band Edge Plot (PCS WCDMA Mode - Ch. 9262)

| FCC ID: BEJCF360                           | PCTEST'       | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|--|---------------|---|-----------|---------------------------------|
| Test Report S/N:                           | Test Dates:   | EUT Type:   |           | Page 54 of 60                   |
| 0808211150.BEJ                             | Sept. 2, 2008 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | rage 34 01 60                   |
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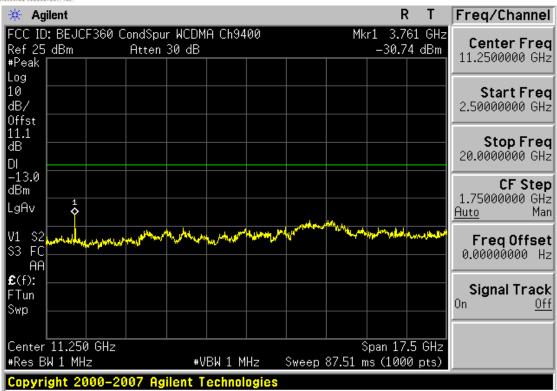


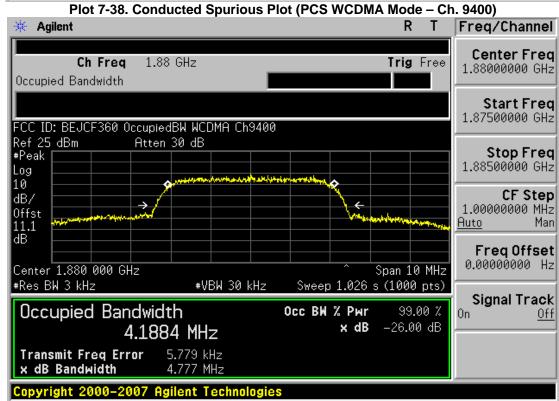


Plot 7-37. Conducted Spurious Plot (PCS WCDMA Mode – Ch. 9400)

| FCC ID: BEJCF360                           | PCTEST*       | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|--|---------------|---|-----------|---------------------------------|
| Test Report S/N:                           | Test Dates:   | EUT Type:   |           | Dogo EE of 60                   |
| 0808211150.BEJ                             | Sept. 2, 2008 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | Page 55 of 60                   |
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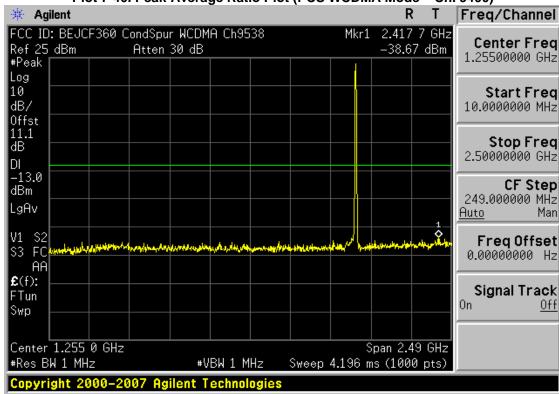
Plot 7-39. Occupied Bandwidth Plot (PCS WCDMA Mode - Ch. 9400)

| FCC ID: BEJCF360                           | PCTEST*       | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | 1 LG | Reviewed by:<br>Quality Manager |
|--|---------------|---|------|---------------------------------|
| Test Report S/N:                           | Test Dates:   | EUT Type:   |      | Page 56 of 60                   |
| 0808211150.BEJ                             | Sept. 2, 2008 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |      | rage 30 01 00                   |
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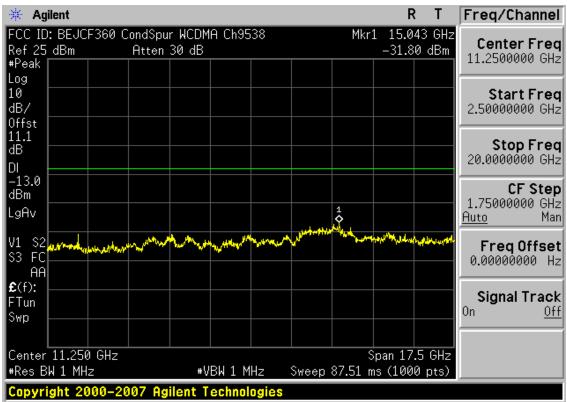
Plot 7-40. Peak-Average Ratio Plot (PCS WCDMA Mode - Ch. 9400)



Plot 7-41. Conducted Spurious Plot (PCS WCDMA Mode – Ch. 9538)

| FCC ID: BEJCF360                           | PCTEST*       | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|--|---------------|---|-----------|---------------------------------|
| Test Report S/N:                           | Test Dates:   | EUT Type:   |           | Page 57 of 60                   |
| 0808211150.BEJ                             | Sept. 2, 2008 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | rage 37 01 60                   |
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Plot 7-42. Conducted Spurious Plot (PCS WCDMA Mode - Ch. 9538)



Plot 7-43. Band Edge Plot (PCS WCDMA Mode - Ch. 9538)

| FCC ID: BEJCF360     | A PCTEST                      | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT | 5  | Reviewed by:    |
|----------------------|-------------------------------|--|----|-----------------|
| FCC ID: BEJCF300     | THE RESIDENCE LEGGERTON, INC. | (CERTIFICATION)                                    | LG | Quality Manager |
| Test Report S/N:     | Test Dates:                   | EUT Type:  |    | Page 58 of 60   |
| 0808211150.BEJ       | Sept. 2, 2008                 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth       |    | rage 56 01 60   |
| O COCCO DOTEOT F : : |                               |  |    | DEV 0.70VV      |





Plot 7-44. 4MHz Span Plot (PCS WCDMA Mode - Ch. 9538)

| FCC ID: BEJCF360                           | PCTEST*       | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
|--|---------------|---|-----------|---------------------------------|
| Test Report S/N:                           | Test Dates:   | EUT Type:   |           | Page 59 of 60                   |
| 0808211150.BEJ                             | Sept. 2, 2008 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | rage 59 01 60                   |
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## 8.0 CONCLUSION

The data collected show that the LGE 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth

FCC ID: BEJCF360 complies with all the requirements of Parts 2, 22, and 24 of the FCC rules.

| FCC ID: BEJCF360 | PCTEST        | FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT<br>REPORT<br>(CERTIFICATION) | <b>LG</b> | Reviewed by:<br>Quality Manager |
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| Test Report S/N: | Test Dates:   | EUT Type:   |           | Page 60 of 60                   |
| 0808211150.BEJ   | Sept. 2, 2008 | 850/1900 GSM/WCDMA/EDGE Phone with Bluetooth                          |           | rage ou oi ou                   |