



PCTEST ENGINEERING LABORATORY, INC.

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MEASUREMENT REPORT FCC Part 22 & 24 / IC RSS-132/RSS-133

Applicant Name:
LG Electronics MobileComm U.S.A
1000 Sylvan Avenue
Englewood Cliffs, NJ 07632
United States

Date of Testing:
05/21/12 - 05/23/12
Test Site/Location:
PCTEST Lab., Columbia, MD, USA
Test Report Serial No.:
0Y1205110678.ZNF

| | |
|-------------------|----------------------------------------|
| FCC ID: | ZNFLG530G |
| APPLICANT: | LG ELECTRONICS MOBILECOMM U.S.A |

Application Type: Class II Permissive Change
Model(s): LG530G, LG530g
EUT Type: Portable Handset
FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s): §2; §22(H), §24(E)
IC Specification(s): RSS-132 Issue 2; RSS-133 Issue 5
Test Procedure(s): ANSI/TIA-603-C-2004
Test Device Serial No.: *identical prototype* [S/N: LG530G RF]
Class II Perm. Change: *Please see FCC change documents.*
Original Grant Date: 07/25/2012

| Mode | Tx Frequency (MHz) | Emission Designator | ERP/EIRP | |
|-----------|--------------------|---------------------|----------------|------------------|
| | | | Max. Power (W) | Max. Power (dBm) |
| GSM850 | 824.2 - 848.8 | 245KGXW | 1.297 | 31.13 |
| GSM1900 | 1850.2 - 1909.8 | 244KGXW | 0.465 | 26.68 |
| WCDMA850 | 826.4 - 846.6 | 4M15F9W | 0.188 | 22.75 |
| WCDMA1900 | 1852.4 - 1907.6 | 4M17F9W | 0.108 | 20.33 |

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. Test results reported herein relate only to the item(s) tested.

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.

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



Randy Ortanez
President

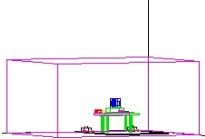


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| FCC ID: ZNFLG530G | | FCC Pt. 22/24 GSM/WCDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE) | | Reviewed by: Quality Manager |
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MEASUREMENT REPORT

FCC Part 22 & 24



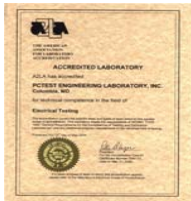
§2.1033 General Information



APPLICANT: LG Electronics MobileComm U.S.A
APPLICANT ADDRESS: 1000 Sylvan Avenue
 Englewood Cliffs, NJ 07632, United States
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)
IC SPECIFICATION(S): RSS-132 Issue 2; RSS-133 Issue 5
BASE MODEL: LG530G, LG530g
FCC ID: ZNFLG530G
FCC CLASSIFICATION: PCS Licensed Transmitter Held to Ear (PCE)
MODE: GSM/WCDMA
FREQUENCY TOLERANCE: ±0.00025 % (2.5 ppm)
Test Device Serial No.: LG530G RF Production Pre-Production Engineering
DATE(S) OF TEST: 05/21/12 - 05/23/12
TEST REPORT S/N: 0Y1205110678.ZNF

Test Facility / Accreditations

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

- 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.
- 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.
- 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 (2451A-1) 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.



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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 and the Industry Canada Certification and Engineering Bureau.

1.2 Testing Facility

The map below shows the location of the PCTEST LABORATORY, its proximity to the FCC Laboratory, the Columbia vicinity, 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 10, 2012.

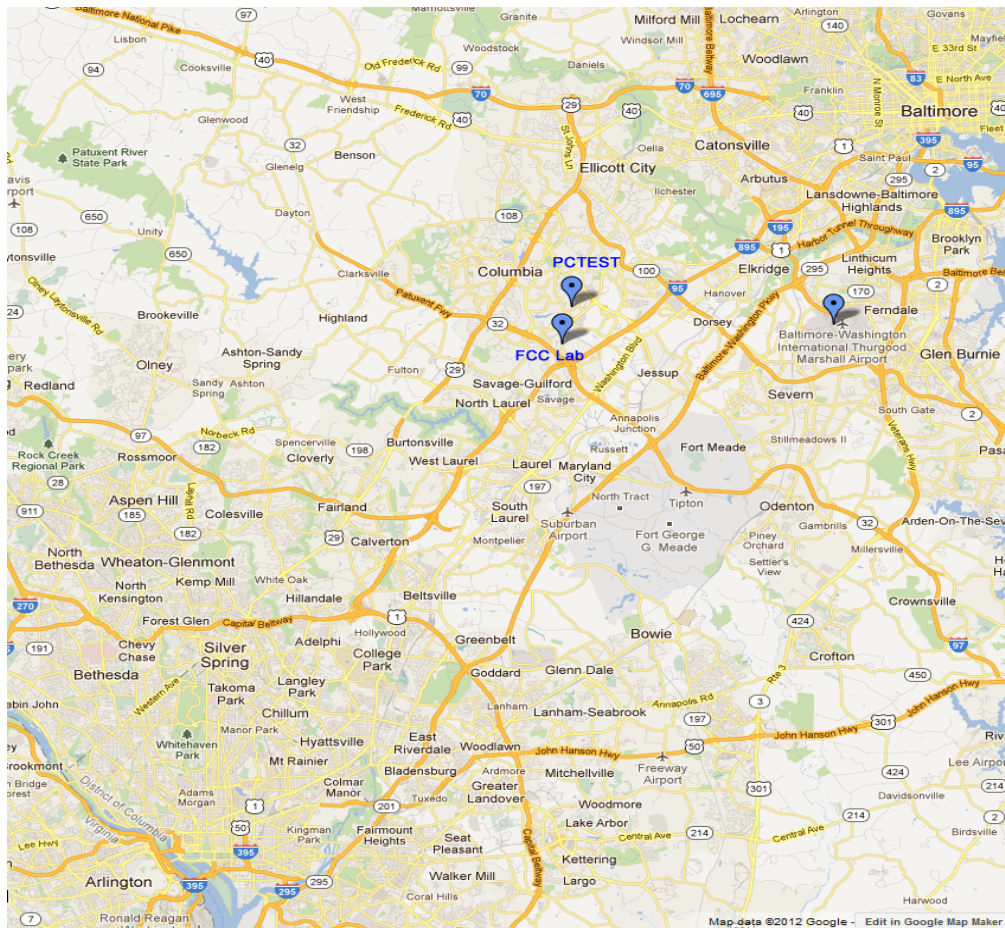




Figure 1-1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area

| | | | | |
|---------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------|
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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **LG Portable Handset FCC ID: ZNFLG530G**. The test data contained in this report pertains only to the emissions due to the EUT's licensed transmitter.

2.2 Device Capabilities

This device contains the following capabilities:

850/1900 GSM/GPRS, 850/1900 WCDMA, Bluetooth (1x,EDR)

2.3 Test Configuration

The LG Portable Handset FCC ID: ZNFLG530G was tested per the guidance of ANSI/TIA-603-C-2004. See Section 3.0 of this test report for a description of the radiated emissions tests.

2.4 EMI Suppression Device(s)/Modifications

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

2.5 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.

| | | | | |
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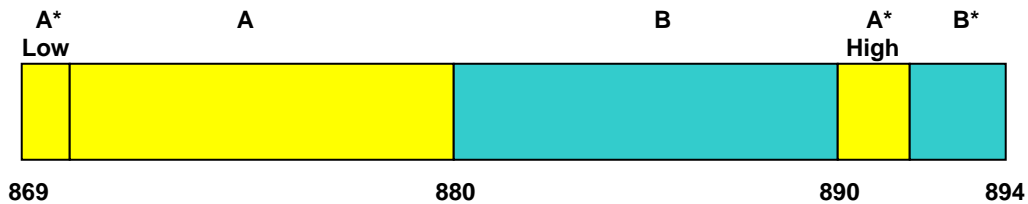
3.0 DESCRIPTION OF TESTS

3.1 Evaluation Procedure

The measurement procedures described in the document titled "Land Mobile FM or PM – Communications Equipment – Measurements and Performance Standards" (ANSI/TIA-603-C-2004) was used in the measurement of the measurement of the **LG Portable Handset FCC ID: ZNFLG530G**.

Deviation from Measurement Procedure.....None

3.2 Cellular - Base Frequency Blocks



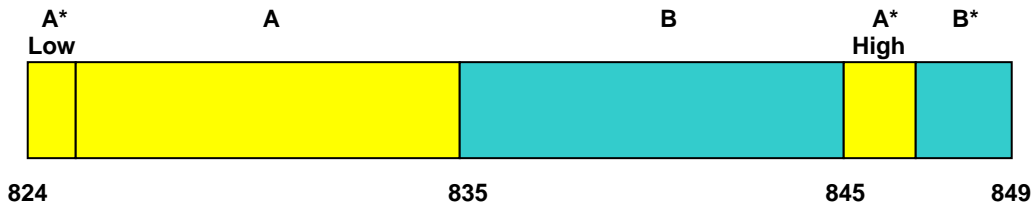
BLOCK 1: 869 – 880 MHz (A* Low + A)

BLOCK 3: 890 – 891.5 MHz (A* High)

BLOCK 2: 880 – 890 MHz (B)

BLOCK 4: 891.5 – 894 MHz (B*)

3.3 Cellular - Mobile Frequency Blocks



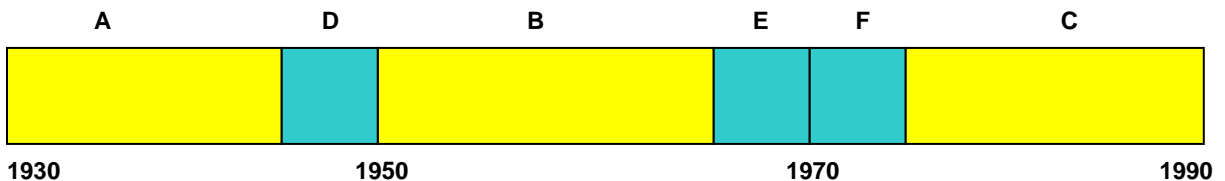
BLOCK 1: 824 – 835 MHz (A* Low + A)

BLOCK 3: 845 – 846.5 MHz (A* High)

BLOCK 2: 835 – 845 MHz (B)

BLOCK 4: 846.5 – 849 MHz (B*)

3.4 PCS - Base Frequency Blocks



BLOCK 1: 1930 – 1945 MHz (A)



BLOCK 4: 1965 – 1970 MHz (E)

BLOCK 2: 1945 – 1950 MHz (D)

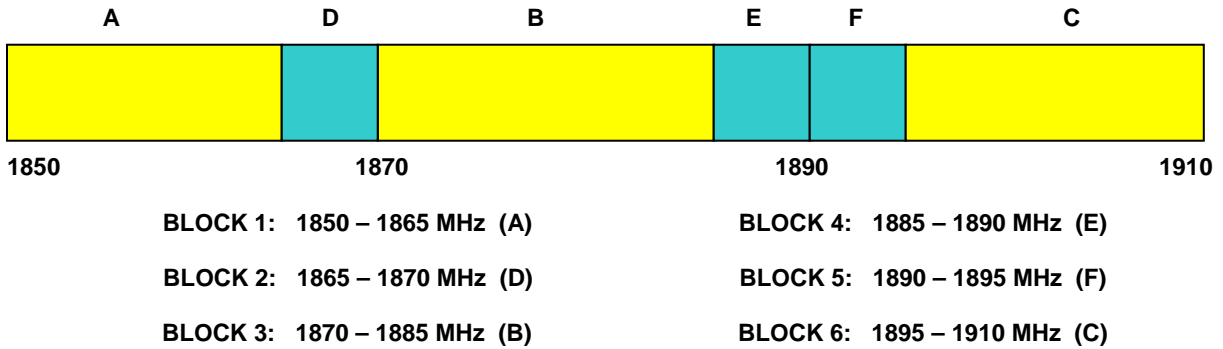
BLOCK 5: 1970 – 1975 MHz (F)

BLOCK 3: 1950 – 1965 MHz (B)

BLOCK 6: 1975 – 1990 MHz (C)

| | | | | |
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3.5 PCS - Mobile Frequency Blocks





3.6 Radiated Power and Radiated Spurious Emissions

§2.1053, 22.913(a)(2), 22.917(a), 24.232(c), 24.238(a); RSS-132 (4.5.1), RSS-133 (6.5.1)

Radiated spurious emissions are investigated indoors in a semi-anechoic chamber to determine the frequencies producing the worst case emissions. Final measurements for radiated power and radiated spurious emissions are performed on the 3 meter OATS per the guidelines of ANSI/TIA-603-C-2004. The measurement area is situated on an 18 meter x 20 meter galvanized 1/2" hardware cloth as the conducting ground plane. This material is sewn together in sections 4 feet wide and 60 feet long. A total of eighteen sections are required to cover the entire measurement area. Sections are laid across the width of the pad, overlapped 1" and sewn and soldered together at intervals of 3" (7.6 cm.) The terrain of the test site is reasonably flat and level. Power and cable to the test site are buried 18" deep into the ground outside the perimeter of the site. An all-weather non-metallic housing is situated on a 2 x 3 meter area adjacent to the measurement area to house the test equipment. The equipment under test was transmitting while connected to its integral antenna and is placed on a wooden turntable 80cm above the ground plane and 3 meters from the receive antenna. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. The receive antenna height is adjusted between 1 and 4 meter height, the turntable is rotated through 360 degrees, and the EUT is manipulated through all orthogonal planes representative of its typical use to achieve the highest reading on the receive spectrum analyzer. Emissions are also investigated with the receive antenna horizontally and vertically polarized. The level of the maximized emission is recorded with the spectrum analyzer using a peak detector with RBW = 1MHz, VBW = 3MHz for emissions greater than 1GHz. For emissions below 1GHz, the spectrum analyzer is set to RBW = 100kHz and VBW = 300kHz.

A half-wave dipole is then substituted in place of the EUT. For emissions above 1GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer level previously recorded from the spurious emission from the EUT. The power of the emission is calculated using the following formula:

$$P_d [dBm] = P_g [dBm] - \text{cable loss} [dB] + \text{antenna gain} [dBd/dBi]$$

| | | | | |
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Where, P_d is the dipole equivalent power, P_g is the generator output into the substitution antenna, and the antenna gain is the gain of the substitute antenna used relative to either a half-wave dipole (dBd) or an isotropic source (dBi). The substitute level is equal to P_g [dBm] – cable loss [dB].

The calculated P_d levels are then compared to the absolute spurious emission limit of -13dBm which is equivalent to the required minimum attenuation of $43 + 10\log_{10}(\text{Power}_{\text{[Watts]}})$ specified in 22.917(a) and 24.238(a).

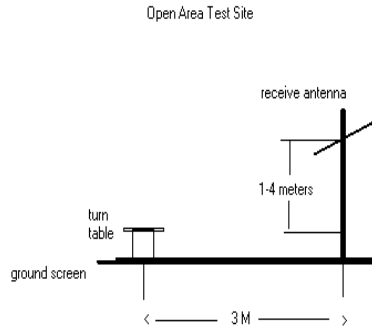




Figure 3-1. Diagram of 3-meter outdoor test range



| | | | | |
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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 | Cal Date | Cal Interval | Cal Due | Serial Number |
|-----------------|-----------|----------------------------------------|------------|--------------|------------|---------------|
| - | RE2 | Radiated Emissions Cable Set (VHF/UHF) | 2/13/2012 | Annual | 2/13/2013 | N/A |
| - | LTx2 | Licensed Transmitter Cable Set | 2/17/2012 | Annual | 2/17/2013 | N/A |
| Agilent | 8447D | Broadband Amplifier | 5/8/2012 | Annual | 5/8/2013 | 1937A03348 |
| Agilent | E4448A | PSA (3Hz-50GHz) Spectrum Analyzer | 2/15/2012 | Annual | 2/15/2013 | US42510244 |
| Agilent | E8267C | Vector Signal Generator | 10/10/2011 | Biennial | 10/10/2013 | US42340152 |
| Agilent | N9020A | MXA Signal Analyzer | 10/10/2011 | Annual | 10/10/2012 | US46470561 |
| Agilent | N9030A | PXA Signal Analyzer | 2/23/2012 | Annual | 2/23/2013 | MY49432391 |
| Anritsu | MA2411B | Power Sensor | 3/5/2012 | Annual | 3/5/2013 | 846215 |
| Anritsu | ML2495A | Power Meter | 10/13/2011 | Annual | 10/13/2012 | 1039008 |
| Espec | ESX-2CA | Environmental Chamber | 6/21/2011 | Annual | 6/21/2012 | 17620 |
| ETS Lindgren | 3117 | 1-18 GHz DRG Horn (Medium) | 7/22/2011 | Annual | 7/22/2012 | 125518 |
| ETS Lindgren | 3160-09 | 18-26.5 GHz Standard Gain Horn | 5/31/2011 | Annual | 5/31/2012 | 135427 |
| ETS Lindgren | 3164-08 | Quad Ridge Horn Antenna | 10/1/2010 | Biennial | 10/1/2012 | 128337 |
| Mini-Circuits | VHF-1200+ | High Pass Filter | 1/15/2012 | Annual | 1/15/2013 | 30923 |
| Mini-Circuits | VHF-3100+ | High Pass Filter | 1/15/2012 | Annual | 1/15/2013 | 30841 |
| Pasternack | PE2208-6 | Bidirectional Coupler | 6/3/2011 | Annual | 6/3/2012 | N/A |
| Rohde & Schwarz | CMU200 | Base Station Simulator | N/A | | N/A | 836072/0063 |
| Rohde & Schwarz | RS-PR18 | 1-18 GHz Pre-Amplifier | 6/9/2011 | Annual | 6/9/2012 | 100071 |
| Rohde & Schwarz | RS-PR26 | 18-26.5 GHz Pre-Amplifier | 6/9/2011 | Annual | 6/9/2012 | 100040 |
| Rohde & Schwarz | ESU26 | EMI Test Receiver | 12/15/2011 | Annual | 12/15/2012 | 100342 |
| Rohde & Schwarz | CMW500 | LTE Radio Communication Tester | N/A | | N/A | 102060 |
| Schwarzbeck | UHA 9105 | Dipole Antenna (400 - 1GHz) Rx | 11/14/2011 | Biennial | 11/14/2013 | 9105-2404 |
| Schwarzbeck | UHA 9105 | Dipole Antenna (400 - 1GHz) Tx | 11/14/2011 | Biennial | 11/14/2013 | 9105-2403 |
| Seekonk | NC-100 | Torque Wrench (8" lb) | 3/5/2012 | Triennial | 3/5/2015 | N/A |
| Sunol | JB5 | Bi-Log Antenna (30M - 5GHz) | 1/26/2012 | Biennial | 1/26/2014 | A051107 |

Table 4-1. Test Equipment

| | | | | |
|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
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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 2nd Harmonic (3700.40 MHz)

The receive spectrum 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 spectrum 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 25.50 dBm so this harmonic was 25.50 dBm - (-24.80) = 50.3 dBc.

| | | | | |
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6.0 TEST RESULTS

6.1 Summary



Company Name: LG Electronics MobileComm U.S.A
 FCC ID: ZNFLG530G
 FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)
 Mode(s): GSM/WCDMA

| FCC Part Section(s) | RSS Section(s) | Test Description | Test Limit | Test Condition | Test Result | Reference |
|------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------------------------------------|----------------|-------------|-----------------------------|
| TRANSMITTER MODE (TX) | | | | | | |
| 2.1046 | RSS-132 (4.4) RSS-133 (4.1) | Transmitter Conducted Output Power | N/A | CONDUCTED | PASS | RF Exposure Report |
| 22.913(a)(2) | RSS-132 (4.4) [SRSP-503(5.1.3)] | Effective Radiated Power | < 7 Watts max. ERP | RADIATED | PASS | Section 6.2 |
| 24.232(c) | RSS-133 (6.4) [SRSP-510 (5.1.2)] | Equivalent Isotropic Radiated Power | < 2 Watts max. EIRP | | PASS | Section 6.3 |
| 2.1053, 22.917(a), 24.238(a) | RSS-132 (4.5.1) RSS-133 (6.5.1) | Undesirable Emissions | < 43 + log ₁₀ (P[Watts]) for all out-of-band emissions | | PASS | Sections 6.4, 6.5, 6.6, 6.7 |

Table 6-1. Summary of Test Results

Notes:

1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.

| | | | | |
|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
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6.2 Effective Radiated Power Output Data

§22.913(a)(2); RSS-132 (4.4) [SRSP-503(5.1.3)]

| Frequency [MHz] | Mode | Battery Type | Substitute Level [dBm] | Antenna Gain [dBd] | Pol [H/V] | ERP [dBm] | ERP [Watts] | ERP Limit [dBm] | Margin [dB] |
|-----------------|--------|--------------|------------------------|--------------------|-----------|-----------|-------------|-----------------|-------------|
| 824.20 | GSM850 | Standard | 30.58 | 0.00 | H | 30.58 | 1.143 | 38.45 | -7.87 |
| 836.60 | GSM850 | Standard | 31.07 | 0.00 | H | 31.07 | 1.279 | 38.45 | -7.38 |
| 848.80 | GSM850 | Standard | 31.13 | 0.00 | H | 31.13 | 1.297 | 38.45 | -7.32 |



Table 6-2. Effective Radiated Power Output Data (GSM)

| Frequency [MHz] | Mode | Battery Type | Substitute Level [dBm] | Antenna Gain [dBd] | Pol [H/V] | ERP [dBm] | ERP [Watts] | ERP Limit [dBm] | Margin [dB] |
|-----------------|----------|--------------|------------------------|--------------------|-----------|-----------|-------------|-----------------|-------------|
| 826.40 | WCDMA850 | Standard | 22.75 | 0.00 | H | 22.75 | 0.188 | 38.45 | -15.70 |
| 836.60 | WCDMA850 | Standard | 21.80 | 0.00 | H | 21.80 | 0.151 | 38.45 | -16.65 |
| 846.60 | WCDMA850 | Standard | 22.19 | 0.00 | H | 22.19 | 0.166 | 38.45 | -16.26 |

Table 6-3. Effective Radiated Power Output Data (WCDMA)

NOTES:

1. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1" and in GPRS mode while transmitting with one slot active.
2. This unit was tested with its standard battery.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

| | | | | |
|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
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6.3 Equivalent Isotropic Radiated Power Output Data §24.232(c); RSS-133 (6.4) [SRSP-510 (5.1.2)]

| Frequency [MHz] | Mode | Battery Type | Substitute Level [dBm] | Antenna Gain [dBi] | Pol [H/V] | EIRP [dBm] | EIRP [Watts] | EIRP Limit [dBm] | Margin [dB] |
|-----------------|---------|--------------|------------------------|--------------------|-----------|------------|--------------|------------------|-------------|
| 1850.20 | GSM1900 | Standard | 22.10 | 4.58 | H | 26.68 | 0.465 | 33.01 | -6.33 |
| 1880.00 | GSM1900 | Standard | 21.19 | 4.83 | H | 26.02 | 0.400 | 33.01 | -6.99 |
| 1909.80 | GSM1900 | Standard | 21.07 | 5.07 | H | 26.14 | 0.412 | 33.01 | -6.87 |



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

| Frequency [MHz] | Mode | Battery Type | Substitute Level [dBm] | Antenna Gain [dBi] | Pol [H/V] | EIRP [dBm] | EIRP [Watts] | EIRP Limit [dBm] | Margin [dB] |
|-----------------|-----------|--------------|------------------------|--------------------|-----------|------------|--------------|------------------|-------------|
| 1852.40 | WCDMA1900 | Standard | 14.60 | 4.58 | H | 19.18 | 0.083 | 33.01 | -13.83 |
| 1880.00 | WCDMA1900 | Standard | 14.22 | 4.83 | H | 19.05 | 0.080 | 33.01 | -13.96 |
| 1907.60 | WCDMA1900 | Standard | 15.26 | 5.07 | H | 20.33 | 0.108 | 33.01 | -12.68 |

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

NOTES:

1. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1" and in GPRS mode while transmitting with one slot active.
2. This unit was tested with its standard battery.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

| | | | | |
|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
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6.4 Cellular GSM Radiated Measurements

§2.1053, 22.917(a); RSS-132 (4.5.1)

Field Strength of SPURIOUS Radiation



OPERATING FREQUENCY: 824.20 MHz
 CHANNEL: 128
 MEASURED OUTPUT POWER: 30.58 dBm = 1.143 W
 MODULATION SIGNAL: GSM (GMSK)
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 43.58 dBc

| FREQUENCY (MHz) | LEVEL @ ANTENNA TERMINALS (dBm) | SUBSTITUTE ANTENNA GAIN (dBd) | SPURIOUS EMISSION LEVEL (dBm) | POL (H/V) | (dBc) |
|-----------------|---------------------------------|-------------------------------|-------------------------------|-----------|-------|
| 1648.40 | -43.89 | 2.60 | -41.29 | H | 71.9 |
| 2472.60 | -49.04 | 2.90 | -46.14 | H | 76.7 |
| 3296.80 | -58.00 | 5.44 | -52.56 | H | 83.1 |
| 4121.00 | -59.21 | 7.05 | -52.17 | H | 82.7 |
| 4945.20 | -92.76 | 7.86 | -84.89 | H | 115.5 |

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

NOTES:

1. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1" and in GPRS mode while transmitting with one slot active.
2. This unit was tested with its standard battery.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

| | | | | |
|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
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Cellular GSM Radiated Measurements (Cont'd)
§2.1053, 22.917(a); RSS-132 (4.5.1)

Field Strength of SPURIOUS Radiation



OPERATING FREQUENCY: 836.60 MHz
 CHANNEL: 190
 MEASURED OUTPUT POWER: 31.07 dBm = 1.279 W
 MODULATION SIGNAL: GSM (GMSK)
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 44.07 dBc

| FREQUENCY (MHz) | LEVEL @ ANTENNA TERMINALS (dBm) | SUBSTITUTE ANTENNA GAIN (dBd) | SPURIOUS EMISSION LEVEL (dBm) | POL (H/V) | (dBc) |
|-----------------|---------------------------------|-------------------------------|-------------------------------|-----------|-------|
| 1673.20 | -49.30 | 2.34 | -46.96 | H | 78.0 |
| 2509.80 | -51.49 | 2.84 | -48.65 | H | 79.7 |
| 3346.40 | -57.17 | 5.64 | -51.53 | H | 82.6 |
| 4183.00 | -59.07 | 7.15 | -51.93 | H | 83.0 |
| 5019.60 | -92.74 | 7.97 | -84.77 | H | 115.8 |

Table 6-7. Radiated Spurious Data (Cellular GSM Mode – Ch. 190)

NOTES:

1. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1" and in GPRS mode while transmitting with one slot active.
2. This unit was tested with its standard battery.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

| | | | | |
|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
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Cellular GSM Radiated Measurements (Cont'd)
§2.1053, 22.917(a); RSS-132 (4.5.1)

Field Strength of SPURIOUS Radiation



OPERATING FREQUENCY: 848.80 MHz
 CHANNEL: 251
 MEASURED OUTPUT POWER: 31.13 dBm = 1.297 W
 MODULATION SIGNAL: GSM (GMSK)
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 44.13 dBc

| FREQUENCY (MHz) | LEVEL @ ANTENNA TERMINALS (dBm) | SUBSTITUTE ANTENNA GAIN (dBd) | SPURIOUS EMISSION LEVEL (dBm) | POL (H/V) | (dBc) |
|-----------------|---------------------------------|-------------------------------|-------------------------------|-----------|-------|
| 1697.60 | -44.38 | 2.08 | -42.29 | H | 73.4 |
| 2546.40 | -47.56 | 3.17 | -44.39 | H | 75.5 |
| 3395.20 | -59.67 | 5.84 | -53.83 | H | 85.0 |
| 4244.00 | -60.39 | 7.24 | -53.14 | H | 84.3 |
| 5092.80 | -92.59 | 8.03 | -84.56 | H | 115.7 |

Table 6-8. Radiated Spurious Data (Cellular GSM Mode – Ch. 251)

NOTES:

1. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1" and in GPRS mode while transmitting with one slot active.
2. This unit was tested with its standard battery.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

| | | | | |
|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
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6.5 Cellular WCDMA Radiated Measurements

§2.1053, 22.917(a); RSS-132 (4.5.1)

Field Strength of SPURIOUS Radiation



OPERATING FREQUENCY: 826.40 MHz
 CHANNEL: 4132
 MEASURED OUTPUT POWER: 22.75 dBm = 0.188 W
 MODULATION SIGNAL: WCDMA
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 35.75 dBc

| FREQUENCY (MHz) | LEVEL @ ANTENNA TERMINALS (dBm) | SUBSTITUTE ANTENNA GAIN (dBd) | SPURIOUS EMISSION LEVEL (dBm) | POL (H/V) | (dBc) |
|-----------------|---------------------------------|-------------------------------|-------------------------------|-----------|-------|
| 1652.80 | -52.53 | 2.55 | -49.98 | H | 72.7 |
| 2479.20 | -53.68 | 2.86 | -50.82 | H | 73.6 |
| 3305.60 | -45.39 | 5.48 | -39.92 | H | 62.7 |
| 4132.00 | -54.14 | 7.06 | -47.08 | H | 69.8 |
| 4958.40 | -56.88 | 7.88 | -49.00 | H | 71.7 |

Table 6-9. Radiated Spurious Data (Cellular WCDMA Mode – Ch. 4132)

NOTES:

1. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1" and in GPRS mode while transmitting with one slot active.
2. This unit was tested with its standard battery.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

| | | | | |
|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
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Cellular WCDMA Radiated Measurements (Cont'd)
§2.1053, 22.917(a); RSS-132 (4.5.1)

Field Strength of SPURIOUS Radiation



OPERATING FREQUENCY: 836.60 MHz
 CHANNEL: 4183
 MEASURED OUTPUT POWER: 21.80 dBm = 0.151 W
 MODULATION SIGNAL: WCDMA
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 34.80 dBc

| FREQUENCY (MHz) | LEVEL @ ANTENNA TERMINALS (dBm) | SUBSTITUTE ANTENNA GAIN (dBd) | SPURIOUS EMISSION LEVEL (dBm) | POL (H/V) | (dBc) |
|-----------------|---------------------------------|-------------------------------|-------------------------------|-----------|-------|
| 1673.20 | -58.17 | 2.37 | -55.80 | H | 77.6 |
| 2509.80 | -54.63 | 2.80 | -51.84 | H | 73.6 |
| 3346.40 | -43.80 | 5.62 | -38.18 | H | 60.0 |
| 4183.00 | -55.04 | 7.13 | -47.91 | H | 69.7 |
| 5019.60 | -56.31 | 7.96 | -48.36 | H | 70.2 |

Table 6-10. Radiated Spurious Data (Cellular WCDMA Mode – Ch. 4183)

NOTES:

1. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1" and in GPRS mode while transmitting with one slot active.
2. This unit was tested with its standard battery.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

| | | | | |
|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
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Cellular WCDMA Radiated Measurements (Cont'd)
§2.1053, 22.917(a); RSS-132 (4.5.1)

Field Strength of SPURIOUS Radiation



OPERATING FREQUENCY: 846.60 MHz
 CHANNEL: 4233
 MEASURED OUTPUT POWER: 22.19 dBm = 0.166 W
 MODULATION SIGNAL: WCDMA
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 35.19 dBc

| FREQUENCY (MHz) | LEVEL @ ANTENNA TERMINALS (dBm) | SUBSTITUTE ANTENNA GAIN (dBd) | SPURIOUS EMISSION LEVEL (dBm) | POL (H/V) | (dBc) |
|-----------------|---------------------------------|-------------------------------|-------------------------------|-----------|-------|
| 1693.20 | -55.32 | 2.13 | -53.20 | H | 75.4 |
| 2539.80 | -50.62 | 3.11 | -47.51 | H | 69.7 |
| 3386.40 | -42.64 | 5.80 | -36.84 | H | 59.0 |
| 4233.00 | -55.50 | 7.22 | -48.27 | H | 70.5 |
| 5079.60 | -53.90 | 8.01 | -45.88 | H | 68.1 |

Table 6-11. Radiated Spurious Data (Cellular WCDMA Mode – Ch. 4233)

NOTES:

1. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1" and in GPRS mode while transmitting with one slot active.
2. This unit was tested with its standard battery.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

| | | | | |
|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
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6.6 PCS GSM Radiated Measurements

§2.1053, 24.238(a); RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation



OPERATING FREQUENCY: 1850.20 MHz
 CHANNEL: 512
 MEASURED OUTPUT POWER: 26.68 dBm = 0.465 W
 MODULATION SIGNAL: GSM (GMSK)
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 39.68 dBc

| FREQUENCY (MHz) | LEVEL @ ANTENNA TERMINALS (dBm) | SUBSTITUTE ANTENNA GAIN (dBi) | SPURIOUS EMISSION LEVEL (dBm) | POL (H/V) | (dBc) |
|-----------------|---------------------------------|-------------------------------|-------------------------------|-----------|-------|
| 3700.40 | -49.41 | 8.40 | -41.01 | H | 67.7 |
| 5550.60 | -53.70 | 10.62 | -43.08 | H | 69.8 |
| 7400.80 | -53.99 | 11.82 | -42.17 | H | 68.8 |
| 9251.00 | -53.66 | 13.30 | -40.36 | H | 67.0 |
| 11101.20 | -56.26 | 13.50 | -42.76 | H | 69.4 |

Table 6-12. Radiated Spurious Data (PCS GSM Mode – Ch. 512)

NOTES:

1. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1" and in GPRS mode while transmitting with one slot active.
2. This unit was tested with its standard battery.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

| | | | | |
|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
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PCS GSM Radiated Measurements (Cont'd)
§2.1053, 24.238(a); RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation



OPERATING FREQUENCY: 1880.00 MHz
 CHANNEL: 661
 MEASURED OUTPUT POWER: 26.02 dBm = 0.400 W
 MODULATION SIGNAL: GSM (GMSK)
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 39.02 dBc

| FREQUENCY (MHz) | LEVEL @ ANTENNA TERMINALS (dBm) | SUBSTITUTE ANTENNA GAIN (dBi) | SPURIOUS EMISSION LEVEL (dBm) | POL (H/V) | (dBc) |
|-----------------|---------------------------------|-------------------------------|-------------------------------|-----------|-------|
| 3760.00 | -51.81 | 8.42 | -43.39 | H | 69.4 |
| 5640.00 | -56.19 | 10.66 | -45.54 | H | 71.6 |
| 7520.00 | -48.90 | 11.92 | -36.98 | H | 63.0 |
| 9400.00 | -52.52 | 13.24 | -39.28 | H | 65.3 |
| 11280.00 | -53.11 | 13.49 | -39.63 | H | 65.6 |

Table 6-13. Radiated Spurious Data (PCS GSM Mode – Ch. 661)

NOTES:

1. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1" and in GPRS mode while transmitting with one slot active.
2. This unit was tested with its standard battery.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

| | | | | |
|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
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PCS GSM Radiated Measurements (Cont'd)
§2.1053, 24.238(a); RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation



OPERATING FREQUENCY: 1909.80 MHz
 CHANNEL: 810
 MEASURED OUTPUT POWER: 26.14 dBm = 0.412 W
 MODULATION SIGNAL: GSM (GMSK)
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 39.14 dBc

| FREQUENCY (MHz) | LEVEL @ ANTENNA TERMINALS (dBm) | SUBSTITUTE ANTENNA GAIN (dBi) | SPURIOUS EMISSION LEVEL (dBm) | POL (H/V) | (dBc) |
|-----------------|---------------------------------|-------------------------------|-------------------------------|-----------|-------|
| 3819.60 | -54.59 | 8.57 | -46.02 | H | 72.2 |
| 5729.40 | -55.42 | 10.69 | -44.72 | H | 70.9 |
| 7639.20 | -49.68 | 12.07 | -37.61 | H | 63.8 |
| 9549.00 | -52.71 | 13.20 | -39.51 | H | 65.7 |
| 11458.80 | -49.88 | 13.42 | -36.46 | H | 62.6 |

Table 6-14. Radiated Spurious Data (PCS GSM Mode – Ch. 810)

NOTES:

1. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1" and in GPRS mode while transmitting with one slot active.
2. This unit was tested with its standard battery.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

| | | | | |
|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
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6.7 PCS WCDMA Radiated Measurements

§2.1053, 24.238(a); RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation



OPERATING FREQUENCY: 1852.40 MHz
 CHANNEL: 9262
 MEASURED OUTPUT POWER: 19.18 dBm = 0.083 W
 MODULATION SIGNAL: WCDMA
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 32.18 dBc

| FREQUENCY (MHz) | LEVEL @ ANTENNA TERMINALS (dBm) | SUBSTITUTE ANTENNA GAIN (dBi) | SPURIOUS EMISSION LEVEL (dBm) | POL (H/V) | (dBc) |
|-----------------|---------------------------------|-------------------------------|-------------------------------|-----------|-------|
| 3704.80 | -31.41 | 8.40 | -23.01 | H | 42.2 |
| 5557.20 | -56.97 | 10.62 | -46.35 | H | 65.5 |
| 7409.60 | -56.83 | 11.83 | -45.00 | H | 64.2 |
| 9262.00 | -92.06 | 13.30 | -78.77 | H | 97.9 |
| 11114.40 | -89.89 | 13.50 | -76.39 | H | 95.6 |

Table 6-15. Radiated Spurious Data (PCS WCDMA Mode – Ch. 9262)

NOTES:

1. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1" and in GPRS mode while transmitting with one slot active.
2. This unit was tested with its standard battery.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

| | | | | |
|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
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PCS WCDMA Radiated Measurements (Cont'd)
§2.1053, 24.238(a); RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation



OPERATING FREQUENCY: 1880.00 MHz
 CHANNEL: 9400
 MEASURED OUTPUT POWER: 19.05 dBm = 0.080 W
 MODULATION SIGNAL: WCDMA
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 32.05 dBc

| FREQUENCY (MHz) | LEVEL @ ANTENNA TERMINALS (dBm) | SUBSTITUTE ANTENNA GAIN (dBi) | SPURIOUS EMISSION LEVEL (dBm) | POL (H/V) | (dBc) |
|-----------------|---------------------------------|-------------------------------|-------------------------------|-----------|-------|
| 3760.00 | -35.67 | 8.42 | -27.25 | H | 46.3 |
| 5640.00 | -55.85 | 10.66 | -45.20 | H | 64.2 |
| 7520.00 | -58.65 | 11.92 | -46.73 | H | 65.8 |
| 9400.00 | -91.89 | 13.24 | -78.65 | H | 97.7 |
| 11280.00 | -89.56 | 13.49 | -76.07 | H | 95.1 |

Table 6-16. Radiated Spurious Data (PCS WCDMA Mode – Ch. 9400)

NOTES:

1. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1" and in GPRS mode while transmitting with one slot active.
2. This unit was tested with its standard battery.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

| | | | | |
|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
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PCS WCDMA Radiated Measurements (Cont'd)
§2.1053, 24.238(a); RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation



OPERATING FREQUENCY: 1907.60 MHz
 CHANNEL: 9538
 MEASURED OUTPUT POWER: 20.33 dBm = 0.108 W
 MODULATION SIGNAL: WCDMA
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10}(W) =$ 33.33 dBc

| FREQUENCY (MHz) | LEVEL @ ANTENNA TERMINALS (dBm) | SUBSTITUTE ANTENNA GAIN (dBi) | SPURIOUS EMISSION LEVEL (dBm) | POL (H/V) | (dBc) |
|-----------------|---------------------------------|-------------------------------|-------------------------------|-----------|-------|
| 3815.20 | -37.71 | 8.56 | -29.15 | H | 49.5 |
| 5722.80 | -51.74 | 10.69 | -41.05 | H | 61.4 |
| 7630.40 | -58.93 | 12.06 | -46.87 | H | 67.2 |
| 9538.00 | -91.66 | 13.20 | -78.46 | H | 98.8 |
| 11445.60 | -89.15 | 13.42 | -75.73 | H | 96.1 |

Table 6-17. Radiated Spurious Data (PCS WCDMA Mode – Ch. 9538)



NOTES:

1. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1" and in GPRS mode while transmitting with one slot active.
2. This unit was tested with its standard battery.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

| | | | | |
|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFLG530G |  | FCC Pt. 22/24 GSM/WCDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE) |  | Reviewed by: Quality Manager |
| Test Report S/N: 0Y1205110678.ZNF | Test Dates: 05/21/12 - 05/23/12 | EUT Type: Portable Handset | Page 25 of 26 | |

7.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **LG Portable Handset FCC ID: ZNFLG530G** complies with all the requirements of Parts 2, 22, and 24 of the FCC rules and RSS-132 and RSS-133 of the Industry Canada rules.

| | | | | |
|--------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFLG530G |  | FCC Pt. 22/24 GSM/WCDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE) |  | Reviewed by: Quality Manager |
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