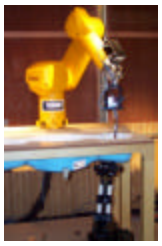

PCTEST Engineering Laboratory, Inc.

6660-B Dobbin Road · Columbia, MD 21045 · U.S.A.
TEL (410) 290-6652 · FAX (410) 290-6654
http://www.pctestlab.com

CERTIFICATE OF COMPLIANCE
FCC Part 24 Certification

LG Electronics Inc.
Kumkang Venturetel Bldg. 1108, Bisan-Dong,
Dongan-Gu, Annyang-City, Kyunggi-Do,
Seoul, KOREA 431-050
Attn: Kevin Lee, Associate Research Engineer
Bruce Choi, General Manager

Dates of Tests: February 4-5, 2002
Test Report S/N: 24.220204033.BEJ
Test Site: PCTEST Lab, Columbia MD U.S.A.

FCC ID	**BEJLP1000**
APPLICANT	**LG Electronics Co., Ltd.**

FCC Classification:	**Licensed Base Station for Part 24 (PCB)**
FCC Rule Part(s):	**§24(E), §2**
EUT Type:	**PCS CDMA Single Mode PCS Phone**
Trade Name/Model(s):	***LGE LP1000***
Tx Frequency Range:	**1851.25 ~ 1908.75 MHz**
Rx Frequency Range:	**1931.25 ~ 1988.75 MHz**
Max. RF Output Power:	**0.313 W EIRP (24.951 dBm)**
Frequency Tolerance:	**0.00025% (2.5 ppm)**
Emission Designator:	**1M25F9W**

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.

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.

Randy Ortanez
President

2 1 0 7 1 6 4 1 9 . B E J

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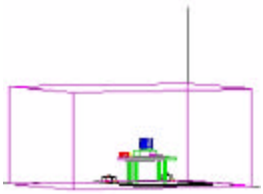


MEASUREMENT REPORT

1.1 Scope

Product Evaluation 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.

General Information

Applicant Name:	**LG Electronics Co., Ltd.**
Address:	**Kumkang Venturetel Bldg. 1108, Bisan-Dong Dongan-Gu, Annyang-City, Kyunggi-Do**
Attention:	**Kevin Lee, Associate Research Engineer**
	Bruce Choi, General Manager

- FCC ID: BEJLP1000
- Trade Name: ***LGE***
- Model(s): ***LP1000***
- Quantity: Quantity production is planned
- Emission Designator: 1M25F9W
- Tx Freq. Range: 1851.25 – 1908.75 MHz
  Rx Freq. Range: 1931.25 – 1988.75 MHz
- Equipment Class: Licensed Base Station for Part 24 (PCB)
- Equipment Type: PCS CDMA Single Mode PCS Phone
- Modulation: CDMA
- Frequency Tolerance: ± 0.00025% (2.5 ppm)
- Max. RF Output Power: 0.313 W EIRP (24.951 dBm)
- FCC Rule Part(s): §24(E), §2
- Battery Pack: 8.4 VDC NiCD 2100 mAh
- Dates of Tests: February 4-5, 2002
- Place of Tests: PCTEST Lab, Columbia, MD U.S.A.
- Test Report S/N: 24.220204033.BEJ

2.1 INTRODUCTION

These measurement tests were conducted at ***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 on October 19, 1992.

PCTEST Lab is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. The Scope of PCTEST Accreditation are for Electromagnetic Compatibility and Telecommunications and FCC.

2.2 PCTEST Location

The map at right shows the location of the PCTEST Lab, its proximity to the FCC Lab, the Columbia vicinity area, the Baltimore-Washington International (BWI) airport, and the city of Baltimore, and the Washington, D.C. area. (see Figure1).

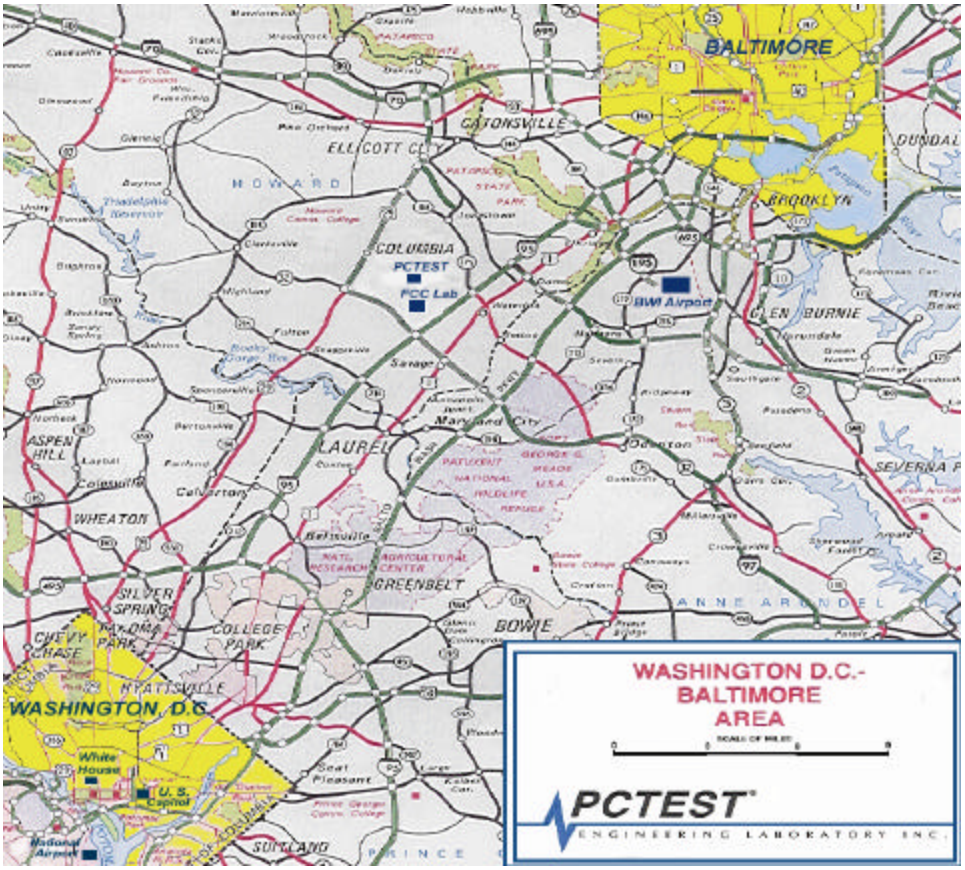


Figure 1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area.

3.1 INSERTS PER

Function of Active Devices (Confidential)

The Function of active devices are shown in Attachment L.

Circuit Diagrams & Description (Confidential)

The circuit diagrams and description are shown in Attachment J.

Block Diagrams (Confidential)

The block diagrams are shown in Attachment I.

Operating Instructions

The instruction manual is shown in Attachment M.

Tune-Up Procedure (Confidential)

The tune-up procedure is shown in Attachment K.

Parts List (Confidential)

The parts list is shown in Attachment K.

Description of Freq. Stabilization Circuit (Confidential)

The description of frequency stabilization circuit is shown in Attachment J.

Description for Suppression of Spurious Radiation, for Limiting Modulation, and Harmonic Suppresion Circuits (Confidential)

The description of suppression stabilization circuits is shown in Attachment J.

4.1 DESCRIPTION OF TESTS

4.2 Occupied Bandwidth Emission Limits

(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 emissions 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.

4.3 Spurious and Harmonic Emissions at Antenna Terminal

The level of the carrier and the various conducted spurious and harmonic frequencies are measured by means of a calibrated spectrum analyzer and microwave pre-amplifier. The spectrum is scanned from 10 MHz or the lowest frequency generated in the equipment up to 20 GHz. The transmitter is set to its maximum rated output power and modulated according to the manufacturer's supplied modulation characteristics.

BLOCK	Freq. Range (MHz) Transmitter (Tx)	Freq. Range (MHz) Receiver (Rx)
A	1850 - 1865	1930 - 1945
B	1870 - 1885	1950 - 1965
C	1895 - 1910	1975 - 1990
D	1865 - 1870	1945 - 1950
E	1885 - 1890	1965 - 1970
F	1890 - 1895	1970 - 1975

Table 1. Broadband PCS Service Frequency Blocks.

4.1 DESCRIPTION OF TESTS (CONTINUED)

4.4 Frequencies

At the input terminals of the spectrum analyzer, an isolator (RF pad), and a high-pass filter are connected between the test transceiver (for conducted tests) or the receive antenna (for radiated tests), and the analyzer. The high-pass filter (signals below 2 GHz) is to limit the fundamental frequency from interfering with the measurement of low level spurious and harmonic emissions and to ensure that the preamplifier is not saturated.

4.5 Radiation Spurious and Harmonic Emissions

Radiation and harmonic emissions above 1 GHz is measured at out 3-meter indoor site. The EUT is placed on the turntable connected to a dummy load in normal operation using the intended power source. A receiving antenna located 3 meters from the turntable receives any signal radiated from the transmitter and its operating accessories. The antenna is varied from 1 to 4 meters and the polarization is varied (horizontal and vertical) to determine the worst-case emission level. To obtain actual radiated signal strength, a signal generator is adjusted in output until a reading identical to that obtained with the actual transmitter is obtained at the receiver. Signal strength is read directly from the generator and recorded on the attached table.

4.6 Frequency Stability/Temperature Variation

The frequency stability of the transmitter is measured by:

a.) **Temperature:** The temperature is varied from -30°C to +50°C using an environmental chamber.

b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the voltage normally at the input to the device or at the power supply terminals if cables are not normally supplied.

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 ±0.0001 (±1 ppm) of the center frequency.

NOTE: The EUT is tested down to the battery endpoint.

5.1 Test Data

5.2 Equivalent Isotropic Radiated Power (E.I.R.P.)

Radiated measurements at 3 meters

Supply Voltage: 3.6 VDC

Modulation: PCS CDMA

FREQ. (MHz)	LEVEL (dBm)	POL (H/V)	Azimuth (o angle)	EIRP (dBm)	EIRP (W)	Battery
1851.25	-18.30	V	60.0	24.78	0.301	Standard
1880.00	-18.30	V	60.0	24.95	0.313	Standard
1908.75	-18.90	V	60.0	24.52	0.283	Standard

NOTES:

ERP Measurements by Substitution Method:
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. 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 ERP 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.

6.1 Test Data

6.2 PCS CDMA Radiated Measurements

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1851.25 MHz
CHANNEL: 0025 (Low)
MEASURED OUTPUT POWER: 24.951 dBm = 0.313 W
MODULATION SIGNAL: CDMA (Internal)
DISTANCE: 3 meters
LIMIT: 43 + 10 $\log_{10}$ (W) = 37.95 dBc

FREQ. (MHz)	LEVEL (dBm)	POL (H/V)	(dBc)
3702.50	-93.40	V	62.2
5553.75	-101.00	V	64.5
7405.00	-117.50	V	77.0
9256.25	< -130		
11107.50	< -130		

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603 (rev.1998):

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. 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.

6.1 Test Data

6.3 PCS CDMA Radiated Measurements

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1880.00 MHz
CHANNEL: 0600 (Mid)
MEASURED OUTPUT POWER: 24.951 dBm = 0.313 W
MODULATION SIGNAL: CDMA (Internal)
DISTANCE: 3 meters
LIMIT: 43 + 10 $\log_{10}$ (W) = 37.95 dBc

FREQ. (MHz)	LEVEL (dBm)	POL (H/V)	(dBc)
3760.00	-93.00	V	61.5
5640.00	-100.80	V	64.1
7520.00	-116.90	V	76.1
9400.00	< -130		
11280.00	< -130		

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603 (rev.1998):

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. 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.

6.1 Test Data

6.4 PCS CDMA Radiated Measurements

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1908.75 MHz
CHANNEL: 1175 (High)
MEASURED OUTPUT POWER: 24.951 dBm = 0.313 W
MODULATION SIGNAL: CDMA (Internal)
DISTANCE: 3 meters
LIMIT: 43 + 10 $\log_{10}$ (W) = 37.95 dBc

FREQ. (MHz)	LEVEL (dBm)	POL (H/V)	(dBc)
3817.50	-93.50	V	61.7
5726.25	-101.90	V	65.0
7635.00	-117.00	V	76.0
9543.75	< -130		
11452.50	< -130		

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603 (rev.1998):

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. 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.

7.1 Test Data

7.2 FREQUENCY STABILITY

OPERATING FREQUENCY: 1,880,000,003 Hz

CHANNEL: 600

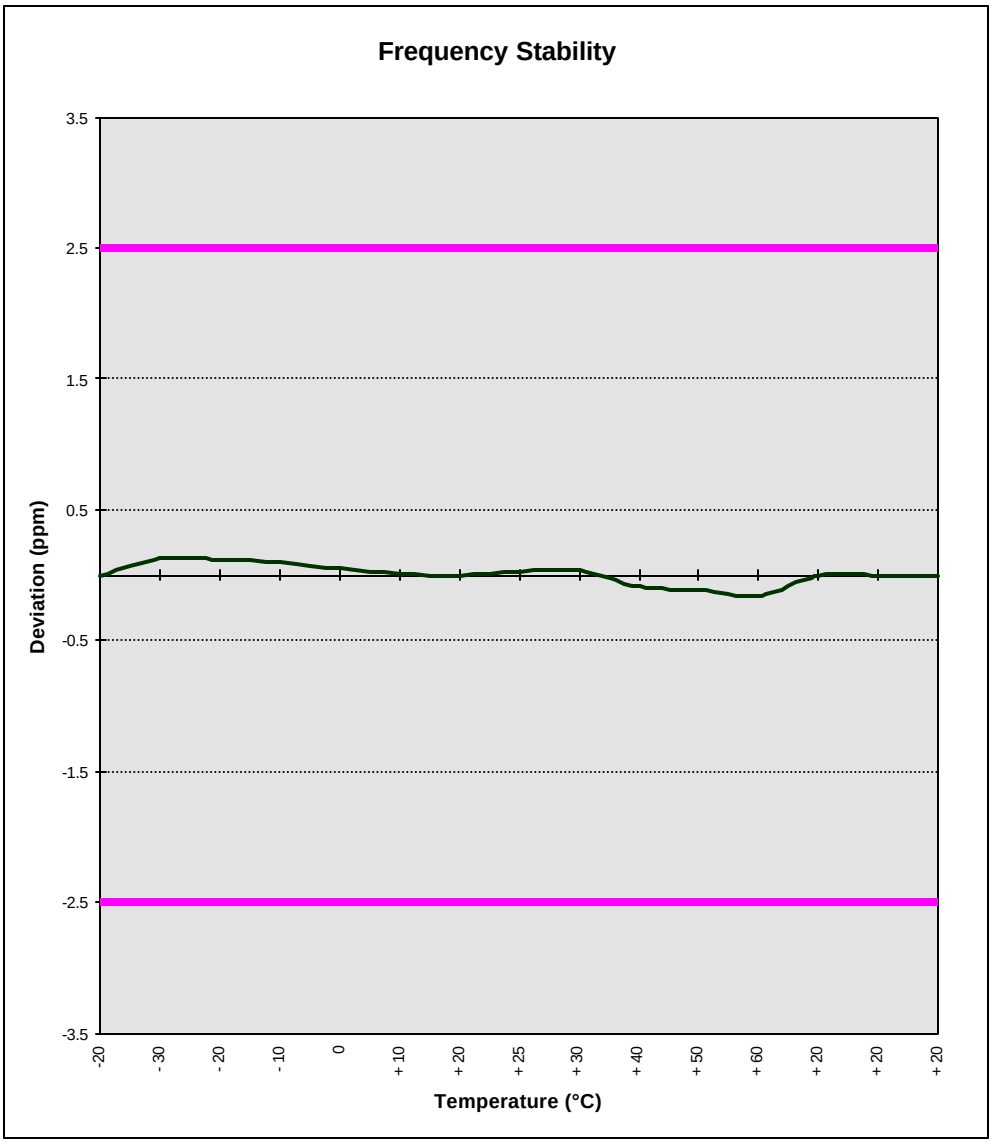
REFERENCE VOLTAGE: 3.7 VDC

DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (ºC)	FREQ. (Hz)	Deviation (%)
100 %	3.70	+ 20 (Ref)	1,880,000,003	0.000000
100 %		- 30	1,879,999,759	0.000013
100 %		- 20	1,879,999,777	0.000012
100 %		- 10	1,879,999,815	0.000010
100 %		0	1,879,999,909	0.000005
100 %		+ 10	1,879,999,984	0.000001
100 %		+ 20	1,880,000,003	0.000000
100 %		+ 25	1,879,999,947	0.000003
100 %		+ 30	1,879,999,928	0.000004
100 %		+ 40	1,880,000,172	-0.000009
100 %		+ 50	1,880,000,210	-0.000011
100 %		+ 60	1,880,000,304	-0.000016
85 %	3.17	+ 20	1,880,000,003	0.000000
115 %	4.26	+ 20	1,880,000,003	0.000000
BATT. ENDPOINT	3.00	+ 20	1,880,000,003	0.000000

7.1 Test Data (Continued)

7.3 FREQUENCY STABILITY



8.1 PLOT(S) OF EMISSIONS

(SEE ATTACHMENT D)

9.1 TEST EQUIPMENT

9.2 Type	Model	Cal. Due Date	S/N
Microwave Spectrum Analyzer	HP 8566B (100Hz-22GHz)	08/15/02	3638A08713
Microwave Spectrum Analyzer	HP 8566B (100Hz-22GHz)	04/17/02	2542A11898
Spectrum Analyzer/Tracking Gen.	HP 8591A (100Hz-1.8GHz)	08/10/02	3144A02458
Signal Generator*	HP 8640B (500Hz-1GHz)	06/03/02	2232A19558
Signal Generator*	HP 8640B (500Hz-1GHz)	06/03/02	1851A09816
Signal Generator*	Rohde & Schwarz (0.1-1000MHz)	09/11/02	894215/012
Ailtech/Eaton Receiver	NM 37/57A-SL (30-1000MHz)	04/12/02	0792-03271
Ailtech/Eaton Receiver	NM 37/57A (30-1000MHz)	03/11/02	0805-03334
Ailtech/Eaton Receiver	NM 17/27A (0.1-32MHz)	09/17/02	0608-03241
Quasi-Peak Adapter	HP 85650A	08/15/02	2043A00301
Ailtech/Eaton Adapter	CCA-7 CISPR/ANSI QP Adapter	03/11/02	194-04082
Gigatronics Universal Power Meter	8657A		1835256
Gigatronics Power Sensor	80701A (0.05-18GHz)		1833460
Signal Generator	HP 8648D (9kHz-4GHz)		3613A00315
Amplifier Research	5S1G4 (5W, 800MHz-4.2GHz)		22322
Network Analyzer	HP 8753E (30kHz-3GHz)		JP38020182
Audio Analyzer	HP 8903B		3011A09025
Modulation Analyzer	HP 8901A		2432A03467
Power Meter	HP 437B		3125U24437
Power Sensor	HP 8482H (30µW-3W)		2237A02084
Harmonic/Flicker Test System	HP 6841A (IEC 555-2/3)		3531A00115
Broadband Amplifier (2)	HP 8447D		1145A00470, 1937A03348
Broadband Amplifier	HP 8447F		2443A03784
Horn Antenna	EMCO Model 3115 (1-18GHz)		9704-5182
Horn Antenna	EMCO Model 3115 (1-18GHz)		9205-3874
Horn Antenna	EMCO Model 3116 (18-40GHz)		9203-2178
Biconical Antenna (4)	Eaton 94455/Eaton 94455-1/Singer 94455-1/Compliance Design		1295, 1332, 0355
Log-Spiral Antenna (3)	Ailtech/Eaton 93490-1		0608, 1103, 1104
Roberts Dipoles	Compliance Design (1 set)		
Ailtech Dipoles	DM-105A (1 set)		33448-111
EMCO LISN (6)	3816/2		1079
Microwave Preamplifier 40dB Gain	HP 83017A (0.5-26.5GHz)		3123A00181
Microwave Cables	MicroCoax (1.0-26.5GHz)		
Ailtech/Eaton Receiver	NM37/57A-SL		0792-03271
Spectrum Analyzer	HP 8594A		3051A00187
Spectrum Analyzer (2)	HP 8591A		3034A01395, 3108A02053
Microwave Survey Meter	Holaday Model 1501 (2.450GHz)		80931
Digital Thermometer	Extech Instruments 421305		426966
Attenuator	HP 8495A (0-70dB) DC-4GHz		
Bi-Directional Coax Coupler	Narda 3020A (50-1000MHz)		
Shielded Screen Room	RF Lindgren Model 26-2/2-0		6710 (PCT270)
Shielded Semi-Anechoic Chamber	Ray Proof Model S81		R2437 (PCT278)
Enviromental Chamber	Associated Systems Model 1025 (Temperature/Humidity)		PCT285

* Calibration traceable to the National Institute of Standards and Technology (NIST).

10.1 SAMPLE CALCULATIONS

A. EIRP Calculation

$$\text{Level } \mu\text{/Vm @ 3 meters} = \text{Log}_{10}^{-1}\left(\frac{\text{dBm} + 107 + \text{AFCL}}{20}\right)$$

$$\text{Log}_{10}^{-1}\left(\frac{-14 + 107 + 31.7}{20}\right)$$

1717908.4 µ/Vm @ 3 meters

Sample Calculation (relative to a dipole)

EIRP (dBm) = $10\ \text{Log}_{10}(((r(\mu V/m)1x10^{6})^{2}/30.0/1x10^{-3})$

EIRP (dBm) = $10\ \text{Log}_{10}(((3(1717908.4)1x10^{6})^{2}/30.0/1x10^{-3})$

EIRP (dBm) = 29.46

B. Emission Designator

CDMA Sample

2M + 2DK

CDMA BW = 1.25 MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data)

Emission Designator = 1M25F9W

11.1 CONCLUSION

The data collected shows that the **LG Electronics, Co., Ltd. PCS CDMA Single Mode PCS Phone FCC ID: BEJLP1000** complies with all the requirements of Parts 2 and 24 of the FCC rules.