## PCTEST ENGINEERING LABORATORY, INC.



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# MEASUREMENT REPORT FCC Part 22 & 24

**Applicant Name:** 

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

**Date of Testing:** 6/5 - 6/9/2014 Test Site/Location:

PCTEST Lab., Columbia, MD, USA

**Test Report Serial No.:** 0Y1406031158.ZNF

FCC ID: ZNFVN170

**APPLICANT:** LG ELECTRONICS MOBILECOMM U.S.A

Application Type: Class II Permissive Change

LG-VN170, LGVN170, VN170, LG-UN170, LGUN170, UN170,

LGAN170, AN170, LG237C, LG-UN171, LGUN171, UN171, LG-Model(s):

VN170PP, LGVN170PP, VN170PP, LG-UN170PP, LGUN170PP,

UN170PP, LG-AN170PP, LGAN170PP, AN170PP

Portable Handset **EUT Type:** 

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

FCC Rule Part(s): §2 §22(H) §24(E)

ANSI/TIA-603-C-2004, KDB 971168 v02r01 Test Procedure(s): identical prototype [S/N: Main RF C2PC] **Test Device Serial No.:** Class II Permissive Change: Please see FCC change document

**Original Grant Date:** 4/18/2014

		ERP/EIRP		
Mode	Tx Frequency (MHz)	Max. Power (W)	Max. Power (dBm)	
CDMA850	824.70 - 848.31	0.153	21.85	
CDMA1900	1851.25 - 1908.75	0.317	25.01	

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.







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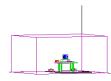


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# MEASUREMENT REPORT FCC Part 22 & 24



## §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:** 7185 Oakland Mills Road, Columbia, MD 21046 USA

FCC RULE PART(S): §2 §22(H) §24(E)

**BASE MODEL:** LG-VN170 FCC ID: ZNFVN170

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

MODE: **CDMA** 

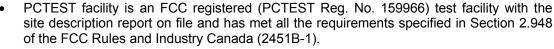
FREQUENCY TOLERANCE: ±0.00025 % (2.5 ppm)

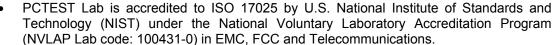
Main RF C2PC ☐ Production ☐ Pre-Production ☐ Engineering **Test Device Serial No.:** 

DATE(S) OF TEST: 6/5 - 6/9/2014 **TEST REPORT S/N:** 0Y1406031158.ZNF

## **Test Facility / Accreditations**

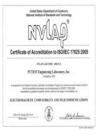
Measurements were performed at PCTEST Engineering Lab located in Columbia, MD 21046, U.S.A.





- 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 (2451B-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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### 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.

#### **Testing Facility** 1.2

The map below shows the location of the PCTEST LABORATORY, its proximity to the FCC Laboratory, the Columbia vicinity, the Baltimore-Washington Internt'i (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 located at 7185 Oakland Mills Road, Columbia, MD 21046. The site coordinates are 39° 10'23" N latitude and 76° 49'50" W longitude. The facility is 0.4 miles North of the FCC laboratory, and the ambient signal and ambient signal strength are approximately equal to those of the FCC laboratory. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2009 on February 15, 2012.

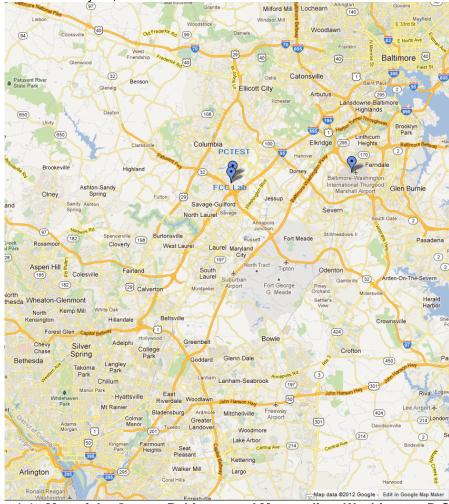


Figure 1-1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area

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# PRODUCT INFORMATION

#### 2.1 **Equipment Description**

The Equipment Under Test (EUT) is the LG Portable Handset FCC ID: ZNFVN170. The test data contained in this report pertains only to the emissions due to the EUT's 2G/3G licensed transmitters.

#### 2.2 **Device Capabilities**

This device contains the following capabilities:

850/1900 CDMA (BC0, BC1), Bluetooth (1x, EDR)

#### 2.3 **Test Configuration**

The LG Portable Handset FCC ID: ZNFVN170 was tested per the guidance of ANSI/TIA-603-C-2004 and KDB 971168 v02r01. See Section 6.0 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.

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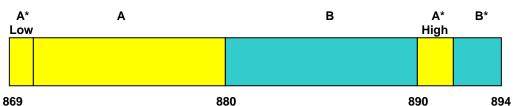
## 3.0 DESCRIPTION OF TESTS

#### 3.1 Evaluation Procedure

The measurement procedures described in the "Land Mobile FM or PM – Communications Equipment – Measurements and Performance Standards" (ANSI/TIA-603-C-2004) and "Measurement Guidance for Certification of Licensed Digital Transmitters" (KDB 971168 v02r01) were used in the measurement of the **LG Portable Handset FCC ID: ZNFVN170.** 

Deviation from Measurement Procedure......None

# 3.2 Cellular - Base Frequency Blocks §22.905



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



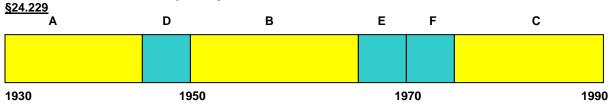
BLOCK 1: 824 - 835 MHz (A\* Low + A)

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)

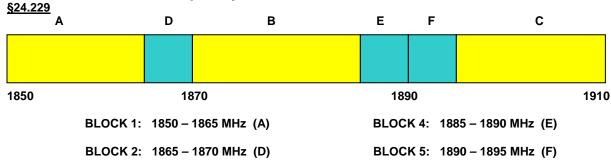
BLOCK 3: 1950 - 1965 MHz (B)

BLOCK 6: 1975 - 1990 MHz (C)

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#### 3.5 **PCS - Mobile Frequency Blocks**



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

#### 3.6 Radiated Measurements §2.1053 §22.913(a.2) §22.917(a) §24.232(c) §24.238(a)

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. The test site inside the chamber is a 6m x 5.2m elliptical, obstruction-free area in accordance with Clause 5, Figure 5.7 of ANSI C63.4-2009. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. An ETS Lindgren Model 2188 raised turntable is used for radiated measurement. It is a continuously rotatable, remote-controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. A 78cm high PVC support structure is placed on top of the turntable. A 3/4" (~1.9cm) sheet of high density polyethylene is used as the table top and is placed on top of the PVC supports to bring the total height of the table to 80cm.

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 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. For the EUT positioning, "H" is defined with the EUT lying flat on the test surface, "H2" is defined with the EUT standing up on its side, and "V" is defined with the EUT standing upright.

Per the guidance of ANSI/TIA-603-C-2004, 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:

Where, P<sub>d</sub> is the dipole equivalent power, P<sub>q</sub> 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  $P_{\alpha \, [dBm]}$  – cable loss  $_{[dB]}$ .

Radiated power levels are investigated with the receive antenna vertically polarized while radiated spurious emissions levels are investigated with the receive antenna horizontally and vertically polarized per ANSI/TIA-603-C-2004.

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# 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
-	RE1	Radiated Emissions Cable Set (UHF/EHF)	5/29/2014	Annual	5/29/2015	N/A
Agilent	8447D	Broadband Amplifier	5/30/2014	Annual	5/30/2015	2443A01900
Agilent	87405C	Pre-amplifier (0.1 - 18 GHz)	3/19/2014	Annual	3/19/2015	MY53010007
Com-Power	AL-130	9kHz - 30MHz Loop Antenna	6/26/2013	Biennial	6/26/2015	121034
ETS Lindgren	3117	1-18 GHz DRG Horn (Medium)	4/8/2014	Biennial	4/8/2016	125518
ETS Lindgren	3164-08	Quad Ridge Horn Antenna	11/7/2012	Biennial	11/7/2014	128338
K&L	13SH10-1000/U1000	N Type High Pass Filter	5/22/2014	Annual	5/22/2015	4
K&L	11SH10-3075/U18000	High Pass Filter	5/2/2014	Annual	5/2/2015	2
Mini-Circuits	SSG-4000HP	USB Synthesized Signal Generator		N/A		
Mini-Circuits	PWR-SENS-4RMS	USB Power Sensor	4/17/2014	Annual	4/17/2015	11210140001
Mini-Circuits	TVA-11-422	RF Power Amp	N/A			QA1303002
Rohde & Schwarz	CMU200	Base Station Simulator	6/6/2014	Annual	6/6/2015	109892
Rohde & Schwarz	ESU40	EMI Test Receiver (40GHz)	5/21/2014	Annual	5/21/2015	100348
Schwarzbeck	UHA 9105	Dipole Antenna (400 - 1GHz) Rx	11/21/2013	Biennial	11/21/2015	9105-2404
Schwarzbeck	UHA 9105	Dipole Antenna (400 - 1GHz) Tx	11/21/2013	Biennial	11/21/2015	9105-2403
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	1/28/2014	Biennial	1/28/2016	A051107

Table 4-1. Test Equipment

#### Notes:

1. Equipment with a calibration date of "N/A" shown in this list was not used to make direct calibrated measurements.

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## SAMPLE CALCULATIONS

## CDMA Emission Designator

## Emission Designator = 1M25F9W

CDMA BW = 1.25 MHz F = Frequency Modulation 9 = Composite Digital Info

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

## **Spurious Radiated Emission**

#### Example: Spurious emission at 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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# TEST RESULTS

#### 6.1 **Summary**

Company Name: LG Electronics MobileComm U.S.A

FCC ID: ZNFVN170

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

Mode(s): **CDMA** 

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
TRANSMITTER	MODE (TX)				
22.913(a.2)	Effective Radiated Power	< 7 Watts max. ERP		PASS	Section 6.2
24.232(c)	Equivalent Isotropic Radiated Power	< 2 Watts max. EIRP	RADIATED	PASS	Section 6.2
2.1053 22.917(a) 24.238(a)	Radiated Spurious Emissions	> 43 + log <sub>10</sub> (P[Watts]) for all out-of-band emissions		PASS	Section 6.3

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 Radiated Power (ERP/EIRP) §22.913(a)(2) 24.232(c)

#### **Test Overview**

Effective Radiated Power (ERP) and Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI/TIA-603-C-2004 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

### **Test Procedures Used**

KDB 971168 v02r01 - Section 5.2.1

ANSI/TIA-603-C-2004 - Section 2.2.17

#### **Test Settings**

- Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation. For signals with burst transmission, the signal analyzer's "time domain power" measurement capability is used
- 2. RBW = 1 5% of the expected OBW, not to exceed 1MHz
- 3. VBW  $\geq$  3 x RBW
- 4. Span = 1.5 times the OBW
- 5. No. of sweep points > 2 x span / RBW
- 6. Detector = RMS
- 7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
  Trigger is set to enable triggering only on full power bursts with the sweep time set less than or equal to the transmission burst duration
- 8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation. For signals with burst transmission, the "gating" function was enabled to ensure that measurements are performed during times in which the transmitter is operating at its maximum power
- 9. Trace mode = trace averaging (RMS) over 100 sweeps
- 10. The trace was allowed to stabilize

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#### **Test Setup**

The EUT and measurement equipment were set up as shown in the diagram below.

#### 3 Meter EMC Chamber

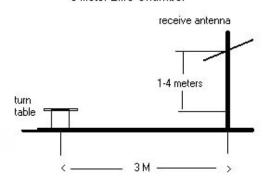


Figure 6-1. Test Instrument & Measurement Setup

### **Test Notes**

- 1) This device was tested under all RC and SO combinations and the worst case is reported with RC3/SO55 with "All Up" power control bits.
- 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 "H" positioning is defined with the EUT lying flat on the test surface, the "H2" positioning is defined with the EUT standing up on its side, and the "V" positioning is defined with the EUT standing upright. The worst case setup is reported in the tables below.

Frequency [MHz]	Mode	Battery Type	Substitute Level [dBm]	Ant. Gain [dBd]	_	EUT Pol.	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
824.70	CDMA850	Standard	15.08	4.60	٧	<b>V</b>	19.68	0.093	38.45	-18.77
836.52	CDMA850	Standard	17.03	4.82	٧	<b>V</b>	21.85	0.153	38.45	-16.60
848.31	CDMA850	Standard	15.45	5.04	٧	٧	20.49	0.112	38.45	-17.96

Table 6-2. ERP (Cellular CDMA)

Frequency [MHz]	Mode	Battery Type	Substitute Level [dBm]	Ant. Gain [dBi]	_	EUT Pol.	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1851.25	CDMA1900	Standard	14.49	9.60	>	>	24.09	0.256	33.01	-8.92
1880.00	CDMA1900	Standard	15.48	9.53	٧	<b>V</b>	25.01	0.317	33.01	-8.00
1908.75	CDMA1900	Standard	14.19	9.47	>	>	23.66	0.233	33.01	-9.35

Table 6-3. EIRP (PCS CDMA)

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# 6.3 Radiated Spurious Emissions Measurements §2.1053 §22.917(a) 24.238(a)

#### **Test Overview**

Radiated spurious emissions measurements are performed using the substitution method described in ANSI/TIA-603-C-2004 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and vertically polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as peak measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

#### **Test Procedures Used**

KDB 971168 v02r01 - Section 5.8

ANSI/TIA-603-C-2004 - Section 2.2.12

### **Test Settings**

- 1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
- 2. VBW ≥ 3 x RBW
- 3. Span = 1.5 times the OBW
- 4. No. of sweep points > 2 x span / RBW
- 5. Detector = Peak
- 6. Trace mode = max hold
- 7. The trace was allowed to stabilize

## Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

#### 3 Meter EMC Chamber

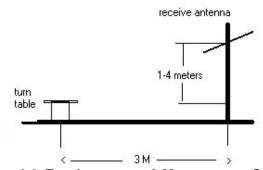


Figure 6-2. Test Instrument & Measurement Setup

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## **Test Notes**

- 1) This device was tested under all RC and SO combinations and the worst case is reported with RC3/SO55 with "All Up" power control bits.
- 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 "H" positioning is defined with the EUT lying flat on the test surface, the "H2" positioning is defined with the EUT standing up on its side, and the "V" positioning is defined with the EUT standing upright. The worst case setup is reported in the tables below.
- 4) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 5) Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.

824.70 OPERATING FREQUENCY: MHz 1013 CHANNEL: MEASURED OUTPUT POWER: 19.68 dBm 0.093 W MODULATION SIGNAL: **CDMA** 3 DISTANCE: meters LIMIT:  $43 + 10 \log_{10} (W) =$ 32.68

Frequency [MHz]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	Ant. Pol. [H/V]	EUT Pol. [H/H2/V]	[dBc]
1649.40	-42.98	3.59	-39.39	V	V	59.1
2474.10	-46.46	3.53	-42.93	V	V	62.6
3298.80	-55.07	5.64	-49.43	V	V	69.1
4123.50	-54.30	6.88	-47.42	V	V	67.1

Table 6-4. Radiated Spurious Data (Cellular CDMA Mode – Ch. 1013)

FCC ID: ZNFVN170	PCTEST	FCC Pt. 22 & 24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)	Reviewed by: Quality Manager
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OPERATING FREQUENCY: 836.52 MHz

> CHANNEL: 384

MEASURED OUTPUT POWER: 21.85 dBm W 0.153

MODULATION SIGNAL: **CDMA** 

> DISTANCE: meters

> > LIMIT:  $43 + 10 \log_{10} (W) =$ 34.85

Frequency [MHz]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	Ant. Pol. [H/V]	EUT Pol. [H/H2/V]	[dBc]
1673.04	-44.91	3.50	-41.41	٧	V	63.3
2509.56	-45.66	3.53	-42.13	V	V	64.0
3346.08	-56.22	5.77	-50.46	V	V	72.3
4182.60	-55.04	7.04	-48.00	V	V	69.9

Table 6-5. Radiated Spurious Data (Cellular CDMA Mode – Ch. 384)

**OPERATING FREQUENCY:** 848.31  $\mathsf{MHz}$ 

> CHANNEL: 777

MEASURED OUTPUT POWER: 20.49 dBm W 0.112

MODULATION SIGNAL: CDMA

> DISTANCE: 3 meters

> > LIMIT:  $43 + 10 \log_{10} (W) =$ 33.49

Frequency [MHz]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBd]	Spurious Emission Level [dBm]	Ant. Pol. [H/V]	EUT Pol. [H/H2/V]	[dBc]
1696.62	-45.36	3.40	-41.96	٧	V	62.4
2544.93	-46.65	3.61	-43.04	V	V	63.5
3393.24	-56.15	5.89	-50.25	V	V	70.7
4241.55	-56.27	7.13	-49.13	V	V	69.6

Table 6-6. Radiated Spurious Data (Cellular CDMA Mode – Ch. 777)

FCC ID: ZNFVN170	PCTEST	FCC Pt. 22 & 24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)	Reviewed by: Quality Manager
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1851.25 OPERATING FREQUENCY: MHz

CHANNEL:

MEASURED OUTPUT POWER: 0.256 24.09 dBm W

MODULATION SIGNAL: **CDMA** 

> DISTANCE: meters

> > LIMIT:  $43 + 10 \log_{10} (W) =$ 37.09

Frequency [MHz]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Ant. Pol. [H/V]	EUT Pol. [H/H2/V]	[dBc]
3702.50	-49.47	8.39	-41.08	٧	V	65.2
5553.75	-55.42	10.55	-44.87	V	V	69.0
7405.00	-56.66	12.04	-44.62	V	V	68.7
9256.25	-54.59	13.21	-41.37	V	V	65.5

Table 6-7. Radiated Spurious Data (PCS CDMA Mode - Ch. 25)

**OPERATING FREQUENCY:** 1880.00 MHz

> CHANNEL: 600

MEASURED OUTPUT POWER: 25.01 dBm 0.317

MODULATION SIGNAL: **CDMA** 

> DISTANCE: 3 meters

> > LIMIT:  $43 + 10 \log_{10} (W) =$ 38.01

Frequency [MHz]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Ant. Pol. [H/V]	EUT Pol. [H/H2/V]	[dBc]
3760.00	-50.12	8.38	-41.74	٧	V	65.8
5640.00	-56.04	10.70	-45.34	V	V	69.4
7520.00	-56.71	12.09	-44.62	V	V	68.7
9400.00	-56.49	13.20	-43.29	V	V	67.4

Table 6-8. Radiated Spurious Data (PCS CDMA Mode - Ch. 600)

FCC ID: ZNFVN170	PCTEST	FCC Pt. 22 & 24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)	Reviewed by: Quality Manager
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OPERATING FREQUENCY: 1908.75 MHz

> 1175 CHANNEL:

MEASURED OUTPUT POWER: 23.66  $\mathsf{d}\mathsf{B}\mathsf{m}$ W 0.233

CDMA

MODULATION SIGNAL:

DISTANCE: meters

> LIMIT:  $\overline{43} + 10 \log_{10} (W) =$ 36.66

Frequency [MHz]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Ant. Pol. [H/V]	EUT Pol. [H/H2/V]	[dBc]
3817.50	-50.73	8.40	-42.33	V	V	66.4
5726.25	-57.27	10.76	-46.52	V	V	70.6
7635.00	-56.15	12.20	-43.96	V	V	68.0
9543.75	-56.76	13.19	-43.58	V	V	67.7

Table 6-9. Radiated Spurious Data (PCS CDMA Mode - Ch. 1175)

FCC ID: ZNFVN170	PCTEST	FCC Pt. 22 & 24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
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# CONCLUSION

The data collected relate only to the item(s) tested and show that the LG Portable Handset FCC ID: ZNFVN170 complies with all the requirements of Parts 2, 22, 24 of the FCC rules.

FCC ID: ZNFVN170	PCTEST*	FCC Pt. 22 & 24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dago 19 of 19
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