PCTEST

PCTEST ENGINEERING LABORATORY, INC.

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



CERTIFICATE OF COMPLIANCE FCC Part 22 & 24 Certification

Applicant Name: LG Electronics USA 1000 Sylvan Avenue Englewood Cliffs, NJ 07632 United States Date of Testing: June 9 - 10, 2009 Test Site/Location:

PCTEST Lab., Columbia, MD, USA

Test Report Serial No.: 0905281098.BEJ

FCC ID: BEJGD710

APPLICANT: LG ELECTRONICS USA

Application Type: Certification

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

FCC Rule Part(s): §2; §22(H), §24(E)

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

Model(s): GD710

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

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

Max. RF Output Power: 0.989 W ERP Cell. GSM (29.95 dBm) / 1.132 W EIRP PCS GSM (30.54 dBm)

0.469 W ERP EDGE850 (26.71 dBm) / 0.497 W EIRP EDGE1900 (26.96 dBm)

0.114 W ERP Cell. WCDMA (20.57 dBm) / 0.287 W EIRP PCS WCDMA (24.58 dBm)

Emission Designator(s): 242KGXW (Cellular GSM), 242KGXW (PCS GSM)

240KG7W (EDGE850), 246KG7W (EDGE1900)

4M17F9W (Cellular WCDMA), 4M18F9W (PCS WCDMA)

Test Device Serial No.: *identical prototype* [S/N: 808KPCA102483]

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.

Grant Conditions: Power output listed is ERP for Part 22 and EIRP for Part 24. This device also contains functions that are not operational in U.S. territories. This report is applicable only to U.S. operations.

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





FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 1 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Page 1 of 57

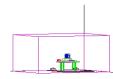


TABLE OF CONTENTS

FCC	PART 2	22 & 24 MEASUREMENT REPORT	3
1.0	INTF	RODUCTION	4
	1.1	SCOPE	4
	1.2	TESTING FACILITY	4
2.0	PRC	DDUCT INFORMATION	5
	2.1	EQUIPMENT DESCRIPTION	5
	2.2	EMI SUPPRESSION DEVICE(S)/MODIFICATIONS	5
	2.3	LABELING REQUIREMENTS	5
3.0	DES	CRIPTION OF TESTS	6
	3.1	MEASUREMENT PROCEDURE	6
	3.2	OCCUPIED BANDWIDTH EMISSION LIMITS	6
	3.3	CELLULAR - BASE FREQUENCY BLOCKS	6
	3.4	CELLULAR - MOBILE FREQUENCY BLOCKS	7
	3.5	PCS - BASE FREQUENCY BLOCKS	7
	3.6	PCS - MOBILE FREQUENCY BLOCKS	7
	3.7	SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL	
	3.8	RADIATED SPURIOUS AND HARMONIC EMISSIONS	8
	3.9	PEAK-AVERAGE RATIO	8
	3.10	FREQUENCY STABILITY / TEMPERATURE VARIATION	
4.0	TES	T EQUIPMENT CALIBRATION DATA	9
5.0	SAM	IPLE CALCULATIONS	10
6.0	TES	T RESULTS	11
	6.1	SUMMARY	11
	6.2	EFFECTIVE RADIATED POWER OUTPUT DATA	12
	6.3	EQUIVALENT ISOTROPIC RADIATED POWER OUTPUT DATA	13
	6.4	CELLULAR GSM RADIATED MEASUREMENTS	14
	6.5	CELLULAR WCDMA RADIATED MEASUREMENTS	17
	6.6	PCS GSM RADIATED MEASUREMENTS	20
	6.7	PCS WCDMA RADIATED MEASUREMENTS	23
	6.8	CELLULAR GSM FREQUENCY STABILITY MEASUREMENTS	26
	6.9	CELLULAR WCDMA FREQUENCY STABILITY MEASUREMENTS	28
	6.10	PCS GSM FREQUENCY STABILITY MEASUREMENTS	30
	6.11	PCS WCDMA FREQUENCY STABILITY MEASUREMENTS	
7.0	PLO	TS OF EMISSIONS	34
8.0	CON	ICLUSION	57

FCC ID: BEJGD710	PCTEST: ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 2 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 2 01 37





MEASUREMENT REPORT FCC Part 22 & 24



§2.1033 General Information

APPLICANT: LG Electronics USA **APPLICANT ADDRESS:** 1000 Sylvan Avenue

Englewood Cliffs, NJ 07632

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

FCC RULE PART(S): §2; §22(H), §24(E)

BASE MODEL: GD710 FCC ID: BEJGD710

FCC CLASSIFICATION: PCS Licensed Transmitter Held to Ear (PCE) **EMISSION DESIGNATOR(S):** 242KGXW (Cellular GSM), 242KGXW (PCS GSM) 240KG7W (EDGE850), 246KG7W (EDGE1900)

4M17F9W (Cellular WCDMA), 4M18F9W (PCS WCDMA)

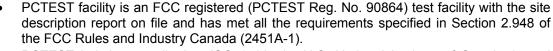
MODE: GSM/EDGE/WCDMA ±0.00025 % (2.5 ppm) FREQUENCY TOLERANCE:

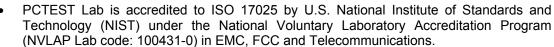
808KPCA102483 ☐ Production ☐ Pre-Production ☐ Engineering **Test Device Serial No.:**

DATE(S) OF TEST: June 9 - 10, 2009 **TEST REPORT S/N:** 0905281098.BEJ

Test Facility / Accreditations

Measurements were performed at PCTEST Engineering Lab located in Columbia, MD 21045, 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 (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.



FCC ID: BEJGD710	<i>(</i> PCTEST	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT	1 LG	Reviewed by:
FCC ID. BEJGD/ 10	SINGINGERING LABORATORY, INC.	(CERTIFICATION)	LG	Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 3 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Fage 3 01 37



1.0 INTRODUCTION

1.1 Scope

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

1.2 Testing Facility

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

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

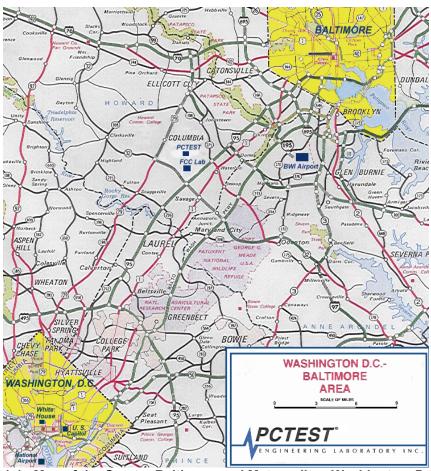


Figure 1-1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area

FCC ID: BEJGD710	ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 4 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Page 4 of 57
@ 0000 DOTEOT Facilities	lakasskas laa			DEV 4 00M/0

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PRODUCT INFORMATION

2.1 **Equipment Description**

The Equipment Under Test (EUT) is the LGE 850/1900 GSM/EDGE/WCDMA Phone with Bluetooth **FCC ID: BEJGD710**. The EUT consisted of the following component(s):

Trade Name / Base Model	FCC ID	Description
LGE / Model: GD710	BEJGD710	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth

Table 2-1. EUT Equipment Description

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

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

2.3 **Labeling Requirements**

Per 2.925

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

Per 15.19; Docket 95-19

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

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

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

Please see attachment for FCC ID label and label location.

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 5 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 3 01 37



3.0 DESCRIPTION OF TESTS

3.1 Measurement Procedure

The radiated spurious measurements were made outdoors at a 3-meter test range (See Figure 3-1). The equipment under test is placed on a wooden turntable 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer. This power level was recorded using a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This level is recorded with the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic antenna are taken into consideration.

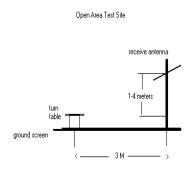


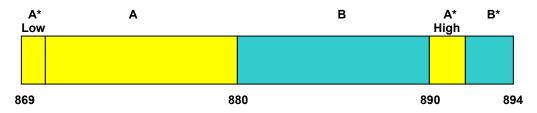
Figure 3-1. Diagram of 3-meter outdoor test range

Deviation from Measurement Procedure.....None

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

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

3.3 Cellular - Base Frequency Blocks



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

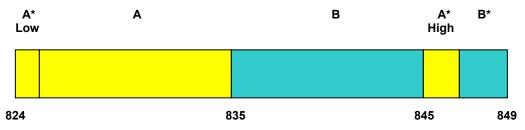
BLOCK 2: 880 – 890 MHz (B) BLOCK 4: 891.5 – 894 MHz (B*)

Test Report S/N: Test Dates: EUT Type:	FCC ID: BEJGD710	ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
	Test Report S/N:	Test Dates:	EUT Type:		Page 6 of 57
0905281098.BEJ June 9 - 10, 2009 850/1900 GSM/EDGE/WCDMA Phone with Bluetooth	0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Fage 0 01 57

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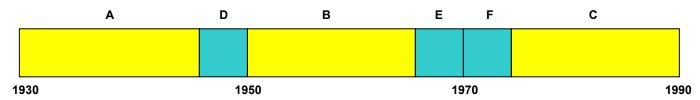
3.4 Cellular - Mobile Frequency Blocks



BLOCK 1: 824 – 835 MHz (A* Low + A) BLOCK 3: 845 – 846.5 MHz (A* High)

BLOCK 2: 835 – 845 MHz (B) BLOCK 4: 846.5 – 849 MHz (B*)

3.5 PCS - Base Frequency Blocks

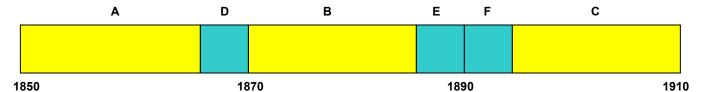


BLOCK 1: 1930 - 1945 MHz (A) BLOCK 4: 1965 - 1970 MHz (E)

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

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

3.6 PCS - Mobile Frequency Blocks



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

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

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

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

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

FCC ID: BEJGD710	ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 7 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		rage / 01 3/



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

Spurious and harmonic radiated emissions are measured outdoors at our 3-meter test range. The equipment under test is placed on a wooden turntable 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer. This level is then measured with a broadband average power meter. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive average power meter reading. This spurious level is recorded with the power meter. For readings above 1 GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration. This device was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Active at 12.2 kbps AMR and TPC bits all set to "1" and in GPRS mode while transmitting with one slot active.

3.9 **Peak-Average Ratio** §24.232(d)

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

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

The frequency stability of the transmitter is measured by:

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

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

Time Period and Procedure:

- 1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
- 2. The equipment is turned on in a "standby" condition for one minute before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
- 3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

FCC ID: BEJGD710	ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 9 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Page 8 of 57
@ 0000 DOTEOT Facilities I	alanastani lan			DEV 4 00M/C



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
-	263-10dB	(DC-18GHz) 10 dB Attenuator	N/A		N/A	N/A
-	No.165	(30MHz - 1000MHz) RG58 Coax Cable N/A		N/A	N/A	
-	No.166	(1000-26500MHz) Microwave RF Cable	N/A		N/A	N/A
-	No.167	(100kHz - 100MHz) RG58 Coax Cable	N/A		N/A	N/A
Agilent	11713A	Attenuation/Switch Driver	12/4/2008	Annual	12/4/2009	3439A02645
Agilent	8449B	(1-26.5GHz) Pre-Amplifier	12/4/2008	Annual	12/4/2009	3008A00985
Agilent	8495A	(0-70dB) DC-4GHz Attenuator	N/A		N/A	N/A
Agilent	85650A	Quasi-Peak Adapter	12/4/2008	Annual	12/4/2009	3303A01872
Agilent	8566B	(100Hz-22GHz) Spectrum Analyzer	12/5/2008	Annual	12/5/2009	3638A08713
Agilent	8591A	(9kHz-1.8GHz) Spectrum Analyzer	8/19/2008	Annual	8/19/2009	3144A02458
Agilent	E8257D	(250kHz-20GHz) Signal Generator	3/25/2009	Biennial	3/25/2011	MY45470194
Agilent	E8267C	Vector Signal Generator	11/15/2007	Biennial	11/15/2009	US42340152
Agilent	N9020A	MXA Signal Analyzer	9/17/2008	Annual	9/17/2009	US46470561
Emco	3115	Horn Antenna (1-18GHz)	9/24/2007	Biennial	9/24/2009	9704-5182
Emco	3115	Horn Antenna (1-18GHz)	10/4/2007	Biennial	10/4/2009	9205-3874
Espec	ESX-2CA	Environmental Chamber	3/30/2009	Annual	3/30/2010	17620
Gigatronics	80701A	(0.05-18GHz) Power Sensor	8/18/2008	Annual	8/18/2009	1833460
Gigatronics	8651A	Universal Power Meter	8/18/2008	Annual	8/18/2009	1835299
MiniCircuits	VHF-1300+	High Pass Filter	N/A		N/A	30716
MiniCircuits	VHF-3100+	High Pass Filter	N/A		N/A	30721
Pasternack	PE2208-6	Bidirectional Coupler	N/A		N/A	N/A
Rohde & Schwarz	CMU200	Base Station Simulator	7/23/2008	Annual	7/23/2009	109892
Schwarzbeck	UHA9105	Dipole Antenna (400 - 1GHz) Rx	6/19/2007	Biennial	6/18/2009	9105-2404
Schwarzbeck	UHA9105	Dipole Antenna (400 - 1GHz) Tx	6/19/2007	Biennial	6/18/2009	9105-2403
Sunol	DRH-118	Horn Antenna (1 - 18GHz)	5/14/2009	Biennial	5/14/2011	A050307

Table 4-1. Test Equipment

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 9 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 3 01 37



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 average receive power meter 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 power meter. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 3700.40 MHz. So 6.1 dB is added to the signal generator reading of -30.9 dBm yielding -24.80 dBm. The fundamental EIRP was 25.501 dBm so this harmonic was 25.501 dBm - (-24.80) = 50.3 dBc.

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 10 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Fage 10 01 57



TEST RESULTS

6.1 **Summary**

Company Name: LG Electronics USA

FCC ID: BEJGD710

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

GSM/EDGE/WCDMA Mode(s):

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
TRANSMITTER MODE (TX)				
2.1049, 22.917(a), 24.238(a)	Occupied Bandwidth	N/A		PASS	Section 7.0
2.1051, 22.917(a), 24.238(a)	Band Edge / Conducted Spurious Emissions	< 43 + log ₁₀ (P[Watts]) at Band Edge and for all out-of-band emissions	CONDUCTED	PASS	Section 7.0
24.232(d)	Peak-Average Ratio	< 13 dB		PASS	Section 7.0
2.1046	Transmitter Conducted Output Power	N/A		PASS	RF Exposure Report
22.913(a)(2)	Effective Radiated Power	< 7 Watts max. ERP (<6.3 Watts max. ERP (IC))		PASS	Section 6.2
24.232(c)	Equivalent Isotropic Radiated Power	< 2 Watts max. EIRP	RADIATED	PASS	Section 6.3
2.1053, 22.917(a), 24.238(a)	Undesirable Emissions	< 43 + log ₁₀ (P[Watts]) for all out-of- band emissions		PASS	Sections 6.4, 6.5, 6.6, 6.7
2.1055, 22.355, 24.235	Frequency Stability	< 2.5 ppm		PASS	Sections 6.8, 6.9, 6.10, 6.11

Table 6-1. Summary of Test Results

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 11 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Fage 110137



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

POWER: PCL "5" (Cellular GSM Mode)

Frequency [MHz]	Mode	Measured Level [dBm]	Substitute Level [dBm]	Antenna Gain [dBd]	Pol [H/V]	ERP [dBm]	ERP [Watts]	Battery Type
824.20	GSM850	-11.570	27.56	0.00	V	27.56	0.570	Standard
836.60	GSM850	-9.180	29.95	0.00	V	29.95	0.989	Standard
848.80	GSM850	-11.980	27.15	0.00	٧	27.15	0.519	Standard
836.60	EDGE850	-12.420	26.71	0.00	V	26.71	0.469	Standard

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

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

Frequency [MHz]	Mode	Measured Level [dBm]	Substitute Level [dBm]	Antenna Gain [dBd]	Pol [H/V]	ERP [dBm]	ERP [Watts]	Battery Type
826.40	WCDMA850	-20.120	19.01	0.00	V	19.01	0.080	Standard
836.60	WCDMA850	-18.560	20.57	0.00	V	20.57	0.114	Standard
846.60	WCDMA850	-19.910	19.22	0.00	V	19.22	0.084	Standard

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

NOTES:

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

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. 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 spectrum analyzer reading. This level is recorded using the power meter. The conducted power at the terminals of the dipole is measured. The ERP is recorded.

FCC ID: BEJGD710	PCTEST' ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 12 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 12 01 37



6.3 Equivalent Isotropic Radiated Power Output Data §24.232(c)

POWER: PCL "0" (PCS GSM Mode)

Frequency [MHz]	Mode	Measured Level [dBm]	Substitute Level [dBm]	Antenna Gain [dBi]	Pol [H/V]	EIRP [dBm]	EIRP [Watts]	Battery Type
1850.20	GSM1900	-10.940	22.54	8.00	Н	30.54	1.132	Standard
1880.00	GSM1900	-11.430	22.05	8.00	Н	30.05	1.012	Standard
1909.80	GSM1900	-13.160	20.32	8.00	Н	28.32	0.679	Standard
1850.20	EDGE1900	-14.520	18.96	8.00	Н	26.96	0.497	Standard

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

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

Frequency [MHz]	Mode	Measured Level [dBm]	Substitute Level [dBm]	Antenna Gain [dBi]	Pol [H/V]	EIRP [dBm]	EIRP [Watts]	Battery Type
1852.40	WCDMA1900	-17.860	15.62	8.00	Н	23.62	0.230	Standard
1880.00	WCDMA1900	-16.900	16.58	8.00	Н	24.58	0.287	Standard
1907.60	WCDMA1900	-19.380	14.10	8.00	Η	22.10	0.162	Standard

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

NOTES:

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

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A Horn antenna was substituted in place of the EUT. This Horn antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This level is recorded using the power meter. The conducted power at the terminals of the Horn antenna is measured. The difference between the gain of the horn and an isotropic antenna is taken into consideration and the EIRP is recorded.

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 13 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 13 01 37



Cellular GSM Radiated Measurements 6.4 §2.1053, 22.917(a)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 824.20 MHz

> 128 CHANNEL:

MEASURED OUTPUT POWER: 29.950 dBm 0.989

MODULATION SIGNAL: GSM (Internal)

DISTANCE:

LIMIT: $43 + 10 \log 10 (W) = 42.95$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1648.40	-47.18	6.08	-41.10	V	71.1
2472.60	-47.62	6.53	-41.09	V	71.0
3296.80	-51.95	6.87	-45.08	V	75.0
4121.00	-49.00	7.21	-41.80	V	71.7
4945.20	-90.22	8.37	-81.85	V	111.8

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

NOTES:

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

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. 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 spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 14 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 14 01 37



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

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 836.60 MHz

> 190 CHANNEL:

MEASURED OUTPUT POWER: 29.950 dBm 0.989

MODULATION SIGNAL: GSM (Internal)

DISTANCE:

LIMIT: $43 + 10 \log 10 (W) =$ 42.95 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1673.20	-46.59	6.09	-40.51	V	70.5
2509.80	-48.29	6.55	-41.73	>	71.7
3346.40	-52.55	6.89	-45.66	V	75.6
4183.00	-51.13	7.43	-43.70	>	73.7
5019.60	-89.90	8.35	-81.55	>	111.5

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

NOTES:

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

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. 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 spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

FCC ID: BEJGD710	PETEST* ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 15 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Fage 15 01 57



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

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 848.80 MHz

CHANNEL: 251

MEASURED OUTPUT POWER: 29.950 dBm = 0.989 W

MODULATION SIGNAL: GSM (Internal)

DISTANCE: 3 meters

LIMIT: $43 + 10 \log 10 (W) = 42.95$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1697.60	-45.36	6.09	-39.26	V	69.2
2546.40	-49.37	6.57	-42.80	٧	72.7
3395.20	-53.35	6.91	-46.44	V	76.4
4244.00	-51.41	7.65	-43.76	>	73.7
5092.80	-89.60	8.33	-81.27	>	111.2

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

NOTES:

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

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. 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 spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

FCC ID: BEJGD710	ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 16 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Fage 10 01 57



Cellular WCDMA Radiated Measurements §2.1053, 22.917(a)

Field Strength of SPURIOUS Radiation

826.40 **OPERATING FREQUENCY:** MHz

> 4132 CHANNEL:

MEASURED OUTPUT POWER: 20.570 dBm 0.114

MODULATION SIGNAL: WCDMA (Internal)

DISTANCE: 3

LIMIT: 43 + 10 log10 (W) = 33.57 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1652.80	-53.01	6.08	-46.92	V	67.5
2479.20	-70.30	6.54	-63.76	V	84.3
3305.60	-66.67	6.88	-59.80	V	80.4
4132.00	-91.10	7.25	-83.85	>	104.4
4958.40	-90.16	8.37	-81.79	V	102.4

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

NOTES:

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

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. 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 spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 17 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Page 17 of 57



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

Field Strength of SPURIOUS Radiation

836.60 OPERATING FREQUENCY: MHz

4183 CHANNEL:

MEASURED OUTPUT POWER: 20.570 dBm 0.114

MODULATION SIGNAL: WCDMA (Internal)

DISTANCE:

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

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1673.20	-54.06	6.09	-47.97	V	68.5
2509.80	-70.26	6.55	-63.71	V	84.3
3346.40	-67.72	6.89	-60.83	V	81.4
4183.00	-91.24	7.40	-83.84	>	104.4
5019.60	-89.94	8.35	-81.59	V	102.2

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

NOTES:

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

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. 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 spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Page 18 of 57	
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		raye 10 01 57	



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

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 846.60 MHz

CHANNEL: 4233

MEASURED OUTPUT POWER: 20.570 dBm = 0.114 W

MODULATION SIGNAL: WCDMA (Internal)

DISTANCE: 3 meters

LIMIT: 43 + 10 log10 (W) = 33.57 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1693.20	-56.93	6.09	-50.84	V	71.4
2539.80	-69.50	6.57	-62.93	V	83.5
3386.40	-66.88	6.91	-59.97	V	80.5
4233.00	-91.43	7.62	-83.81	>	104.4
5079.60	-89.65	8.33	-81.32	V	101.9

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

NOTES:

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

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. 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 spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Page 10 of 57	
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Page 19 of 57	



PCS GSM Radiated Measurements 6.6 §2.1053, 24.238(a)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1850.20 MHz

> 512 CHANNEL:

MEASURED OUTPUT POWER: 30.540 dBm 1.132

MODULATION SIGNAL: GSM (Internal)

DISTANCE:

LIMIT: $43 + 10 \log 10 (W) =$ 43.54 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3700.40	-50.05	9.02	-41.04	Н	71.6
5550.60	-48.87	10.40	-38.47	Н	69.0
7400.80	-45.39	10.50	-34.89	Н	65.4
9251.00	-85.05	11.85	-73.20	Н	103.7
11101.20	-82.59	12.76	-69.83	Н	100.4

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

NOTES:

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

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. 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 spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 20 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Fage 20 01 57



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

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1880.00 MHz

> 661 CHANNEL:

MEASURED OUTPUT POWER: 30.540 dBm 1.132

MODULATION SIGNAL: GSM (Internal)

DISTANCE:

LIMIT: $43 + 10 \log 10 (W) = 43.54$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3760.00	-51.78	8.99	-42.78	Н	73.3
5640.00	-48.98	10.40	-38.58	Н	69.1
7520.00	-45.19	10.62	-34.57	Н	65.1
9400.00	-84.87	11.70	-73.17	Н	103.7
11280.00	-81.79	12.69	-69.10	Н	99.6

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

NOTES:

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

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. 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 spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 21 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 210137



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

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1909.80 MHz

CHANNEL: 810

MEASURED OUTPUT POWER: 30.540 dBm = 1.132 W

MODULATION SIGNAL: GSM (Internal)

DISTANCE: _____ a ____ meters

LIMIT: $43 + 10 \log 10 (W) = 43.54$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3819.60	-51.66	8.97	-42.69	Н	73.2
5729.40	-48.50	10.40	-38.10	Н	68.6
7639.20	-45.07	10.71	-34.35	Н	64.9
9549.00	-84.71	11.64	-73.07	Η	103.6
11458.80	-80.99	12.62	-68.38	Н	98.9

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

NOTES:

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

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. 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 spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

FCC ID: BEJGD710	PETEST* ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 22 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 22 01 37



PCS WCDMA Radiated Measurements 6.7 §2.1053, 24.238(a)

Field Strength of SPURIOUS Radiation

1852.40 **OPERATING FREQUENCY:** MHz

> 9262 CHANNEL:

MEASURED OUTPUT POWER: 24.580 dBm 0.287

MODULATION SIGNAL: WCDMA (Internal)

DISTANCE: 3

> LIMIT: 43 + 10 log10 (W) = 37.58 dBc

	LEVEL @	CURCUITUTE	SPURIOUS		
FREQUENCY (MHz)	ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3704.80	-53.73	9.01	-44.72	Н	69.3
5557.20	-62.50	10.40	-52.10	Н	76.7
7409.60	-58.44	10.51	-47.93	Н	72.5
9262.00	-85.03	11.83	-73.20	Η	97.8
11114.40	-82.53	12.75	-69.78	Н	94.4

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

NOTES:

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

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. 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 spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 23 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 23 01 37



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

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1880.00 MHz

9400 CHANNEL:

MEASURED OUTPUT POWER: 24.580 0.287 dBm

MODULATION SIGNAL: WCDMA (Internal)

DISTANCE:

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

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	TENNA ANTENNA GAIN (dRi)		POL (H/V)	(dBc)
3760.00	-57.98	8.99	-48.98	Н	73.6
5640.00	-61.88	10.40	-51.48	Н	76.1
7520.00	-58.29	10.62	-47.67	Н	72.3
9400.00	-84.87	11.70	-73.17	Ι	97.7
11280.00	-81.79	12.69	-69.10	Ι	93.7

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

NOTES:

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

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. 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 spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Page 24 of 57	
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Fage 24 01 57	



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

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1907.60 MHz

9538 CHANNEL: MEASURED OUTPUT POWER: 24.580 0.287 dBm

MODULATION SIGNAL: WCDMA (Internal)

DISTANCE:

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

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	ANTENNA TERMINALS ANTENNA GAIN (dBi)		POL (H/V)	(dBc)
3815.20	-56.58	8.97	-47.60	Н	72.2
5722.80	-62.32	10.40	-51.92	Н	76.5
7630.40	-59.78	10.71	-49.08	Н	73.7
9538.00	-84.72	11.63	-73.08	Н	97.7
11445.60	-81.05	12.62	-68.43	Н	93.0

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

NOTES:

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

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. 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 spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Page 25 of 57	
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		raye 25 01 57	



Cellular GSM Frequency Stability Measurements 6.8 §2.1055, 22.355

OPERATING FREQUENCY: 836,600,000 Hz

CHANNEL: ______ 190

REFERENCE VOLTAGE: 3.7 VDC

DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

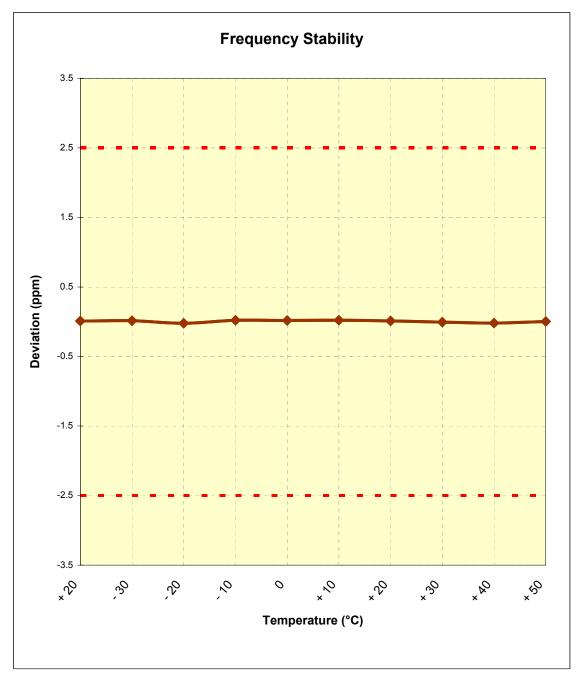
VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.70	+ 20 (Ref)	836,600,008	8	0.000001
100 %		- 30	836,600,012	12	0.000001
100 %		- 20	836,599,981	-19	-0.000002
100 %		- 10	836,600,017	17	0.000002
100 %		0	836,600,015	15	0.000002
100 %		+ 10	836,600,018	18	0.000002
100 %		+ 20	836,600,009	9	0.000001
100 %		+ 30	836,599,995	-5	-0.000001
100 %		+ 40	836,599,984	-16	-0.000002
100 %		+ 50	836,600,003	3	0.000000
115 %	4.26	+ 20	836,599,987	-13	-0.000002
BATT. ENDPOINT	3.41	+ 20	836,599,988	-12	-0.000001

Table 6-18. Frequency Stability Data (Cellular GSM Mode - Ch. 190)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 26 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Fage 20 01 57



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



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

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 27 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 27 01 37



Cellular WCDMA Frequency Stability Measurements 6.9 §2.1055, 22.355

OPERATING FREQUENCY: 836,600,000 Hz

CHANNEL: 4183

REFERENCE VOLTAGE: 3.7 VDC

DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

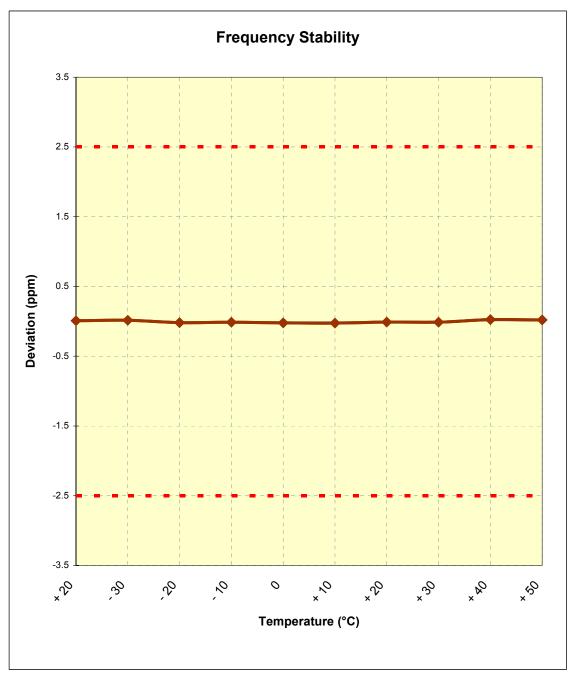
VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.70	+ 20 (Ref)	836,600,007	7	0.000001
100 %		- 30	836,600,013	13	0.000002
100 %		- 20	836,599,985	-15	-0.000002
100 %		- 10	836,599,989	-11	-0.000001
100 %		0	836,599,982	-18	-0.000002
100 %		+ 10	836,599,979	-21	-0.000003
100 %		+ 20	836,599,992	-8	-0.000001
100 %		+ 30	836,599,991	-9	-0.000001
100 %		+ 40	836,600,021	21	0.000003
100 %		+ 50	836,600,017	17	0.000002
115 %	4.26	+ 20	836,599,987	-13	-0.000002
BATT. ENDPOINT	3.41	+ 20	836,599,990	-10	-0.000001

Table 6-19. Frequency Stability Data (Cellular WCDMA Mode - Ch. 4183)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 28 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 20 01 57



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



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

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 29 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Fage 29 01 37



6.10 PCS GSM Frequency Stability Measurements §2.1055, 24.235

OPERATING FREQUENCY: 1,880,000,000 Hz

CHANNEL: ________661

REFERENCE VOLTAGE: 3.7 VDC

DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

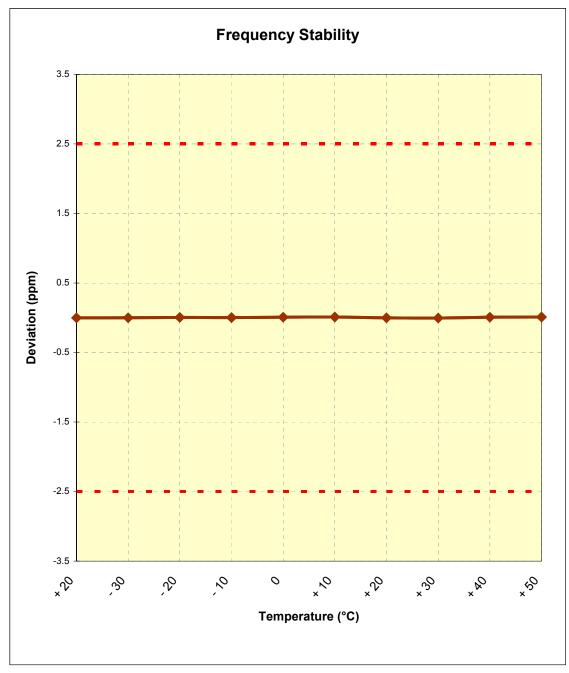
VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.70	+ 20 (Ref)	1,879,999,996	-4	0.000000
100 %		- 30	1,879,999,998	-2	0.000000
100 %		- 20	1,880,000,009	9	0.000000
100 %		- 10	1,880,000,005	5	0.000000
100 %		0	1,880,000,013	13	0.000001
100 %		+ 10	1,880,000,019	19	0.000001
100 %		+ 20	1,879,999,996	-4	0.000000
100 %		+ 30	1,879,999,992	-8	0.000000
100 %		+ 40	1,880,000,013	13	0.000001
100 %		+ 50	1,880,000,018	18	0.000001
115 %	4.26	+ 20	1,879,999,990	-10	-0.000001
BATT. ENDPOINT	3.41	+ 20	1,880,000,009	9	0.000000

Table 6-20. Frequency Stability Data (PCS GSM Mode - Ch. 661)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 30 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		rage 30 of 37



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



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

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 31 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 31 01 37



6.11 PCS WCDMA Frequency Stability Measurements §2.1055, 24.235

OPERATING FREQUENCY: 1,880,000,000 Hz

CHANNEL: 9400

REFERENCE VOLTAGE: 3.7 VDC

DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

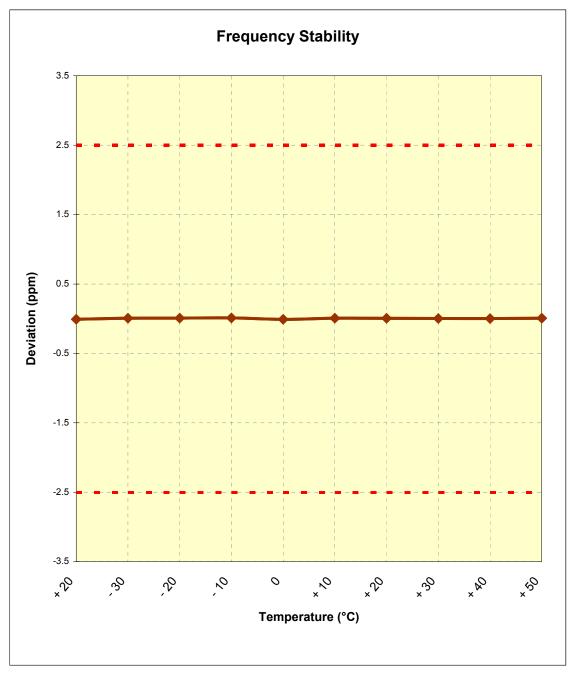
VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.70	+ 20 (Ref)	1,879,999,986	-14	-0.000001
100 %		- 30	1,880,000,013	13	0.000001
100 %		- 20	1,880,000,016	16	0.000001
100 %		- 10	1,880,000,022	22	0.000001
100 %		0	1,879,999,983	-17	-0.000001
100 %		+ 10	1,880,000,014	14	0.000001
100 %		+ 20	1,880,000,011	11	0.000001
100 %		+ 30	1,880,000,007	7	0.000000
100 %		+ 40	1,880,000,003	3	0.000000
100 %		+ 50	1,880,000,015	15	0.000001
115 %	4.26	+ 20	1,880,000,022	22	0.000001
BATT. ENDPOINT	3.41	+ 20	1,880,000,009	9	0.000000

Table 6-21. Frequency Stability Data (PCS WCDMA Mode – Ch. 9400)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 32 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Fage 32 01 37



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

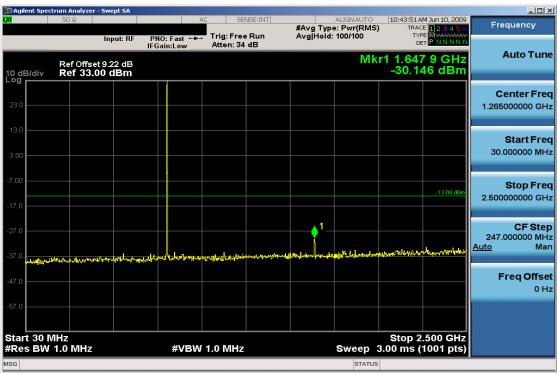


Plot 6-4. Frequency Stability Graph (PCS WCDMA Mode - Ch. 9400)

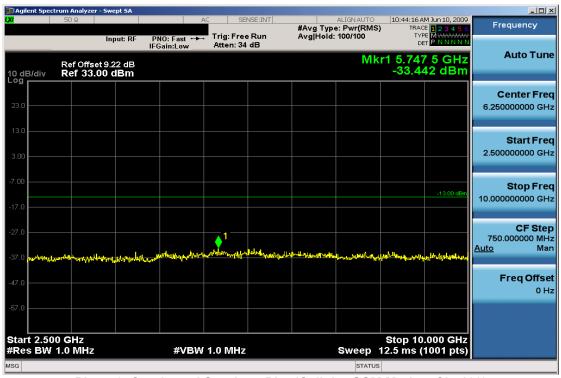
FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 33 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Fage 33 01 37



7.0 PLOTS OF EMISSIONS



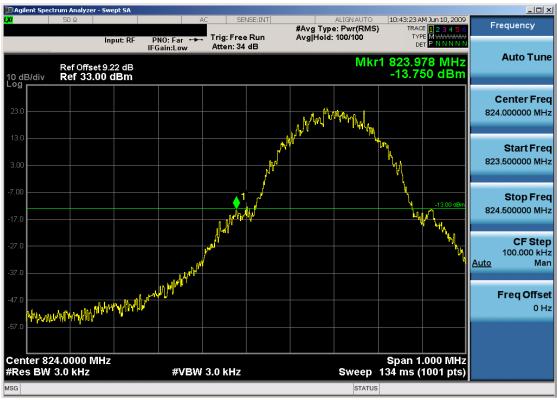
Plot 7-1. Conducted Spurious Plot (Cellular GSM Mode - Ch. 128)



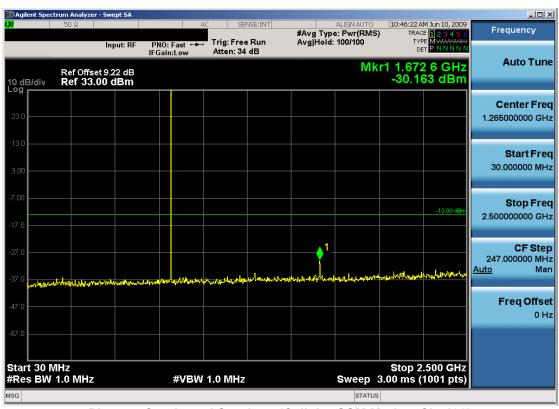
Plot 7-2. Conducted Spurious Plot (Cellular GSM Mode - Ch. 128)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 34 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 34 01 37





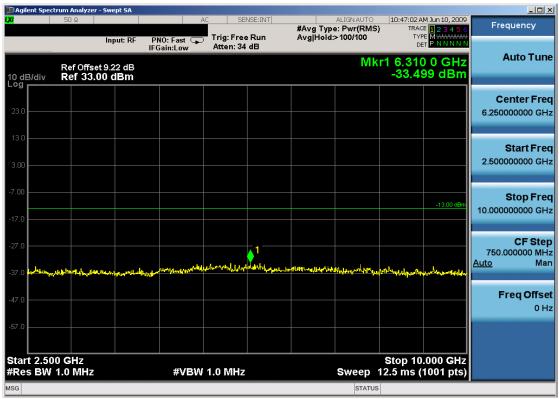
Plot 7-3. Band Edge Plot (Cellular GSM Mode - Ch. 128)



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

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 35 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 33 01 37





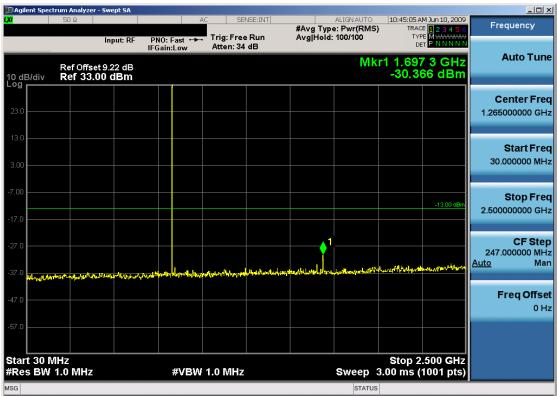
Plot 7-5. Conducted Spurious Plot (Cellular GSM Mode - Ch. 190)



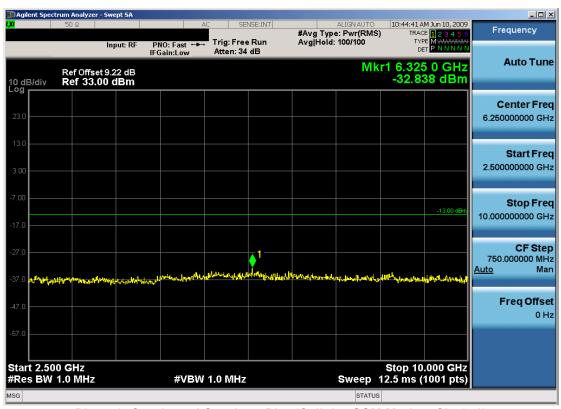
Plot 7-6. Occupied Bandwidth Plot (Cellular GSM Mode - Ch. 190)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 36 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 30 01 37





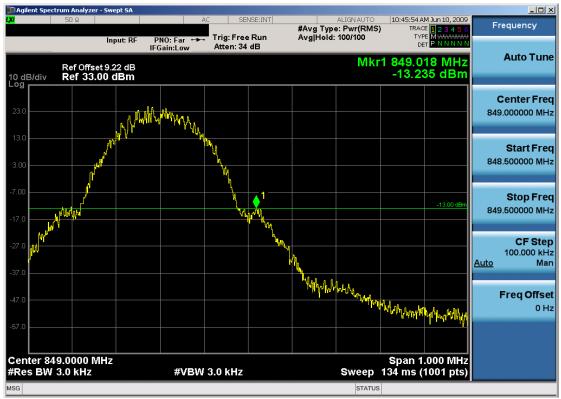
Plot 7-7. Conducted Spurious Plot (Cellular GSM Mode - Ch. 251)



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

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 37 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Fage 37 01 37





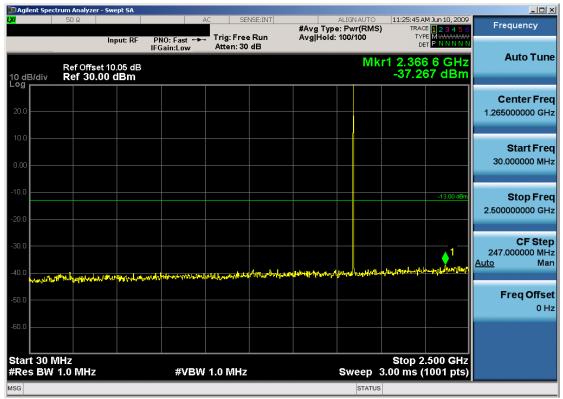
Plot 7-9. Band Edge Plot (Cellular GSM Mode - Ch. 251)



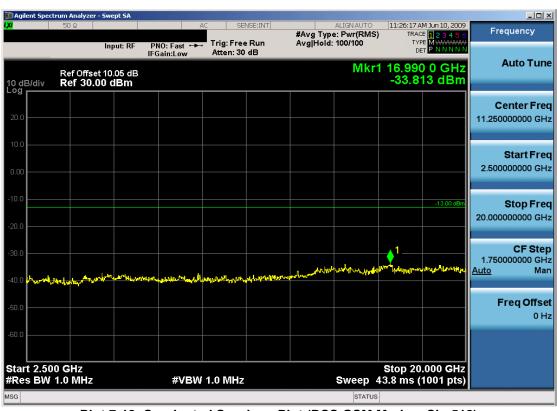
Plot 7-10. Occupied Bandwidth Plot (EDGE850 Mode - Ch. 190)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 38 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		F age 30 01 37





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



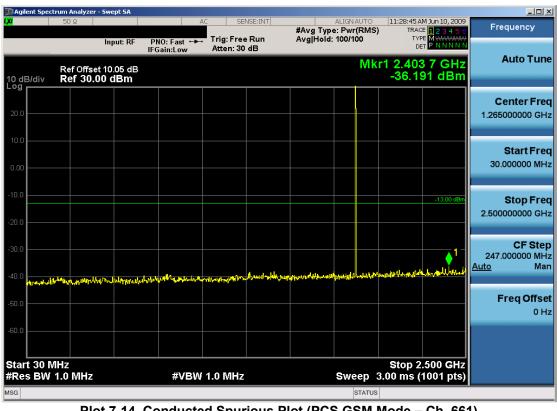
Plot 7-12. Conducted Spurious Plot (PCS GSM Mode - Ch. 512)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 39 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 39 01 37





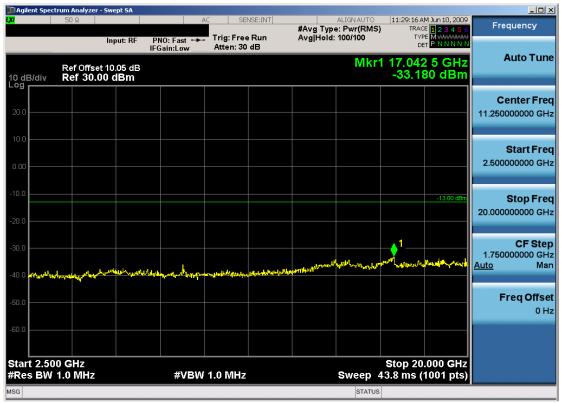
Plot 7-13. Band Edge Plot (PCS GSM Mode - Ch. 512)



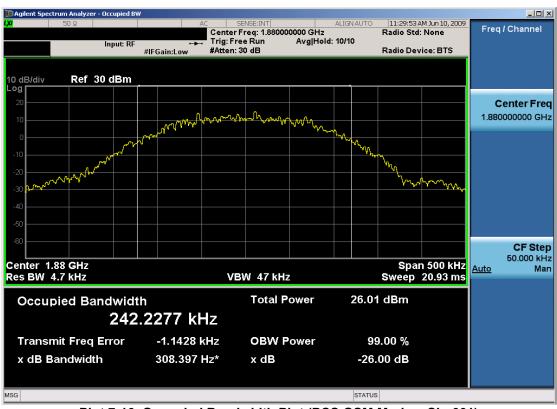
Plot 7-14. Conducted Spurious Plot (PCS GSM Mode - Ch. 661)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 40 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 40 01 57





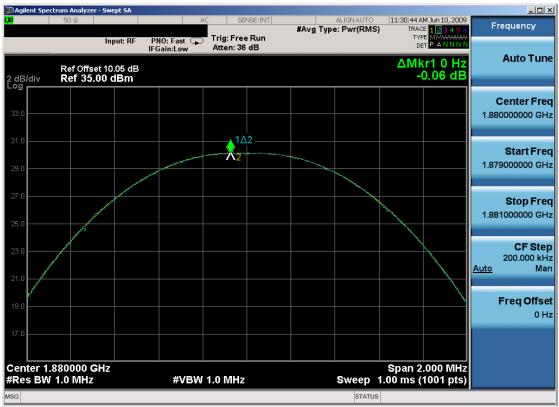
Plot 7-15. Conducted Spurious Plot (PCS GSM Mode - Ch. 661)



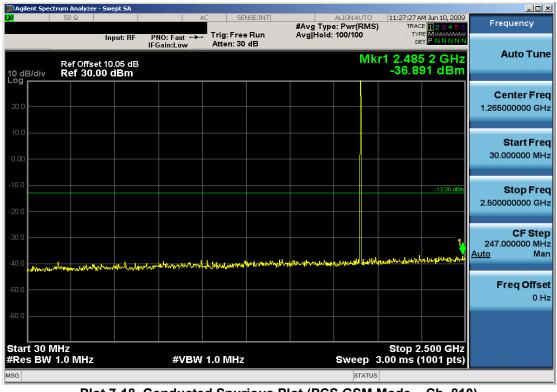
Plot 7-16. Occupied Bandwidth Plot (PCS GSM Mode - Ch. 661)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 41 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 410137





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



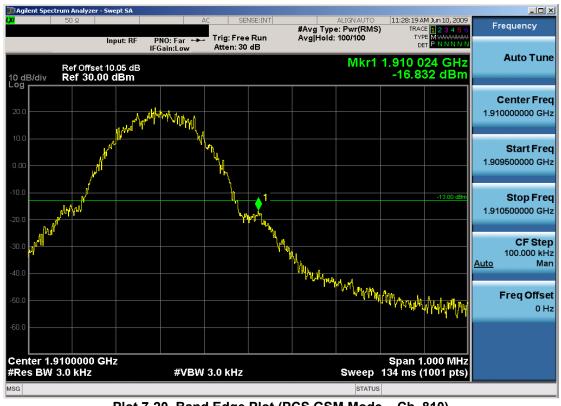
Plot 7-18. Conducted Spurious Plot (PCS GSM Mode - Ch. 810)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 42 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 42 01 37





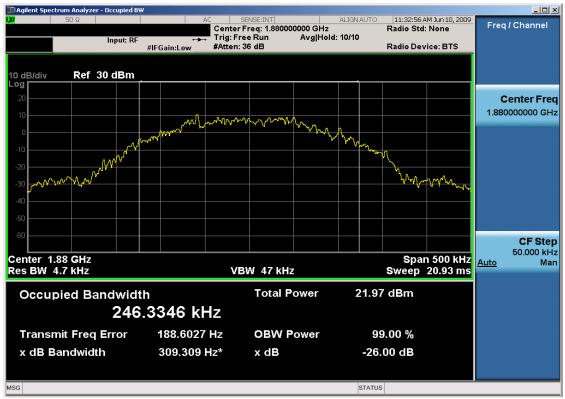
Plot 7-19. Conducted Spurious Plot (PCS GSM Mode - Ch. 810)



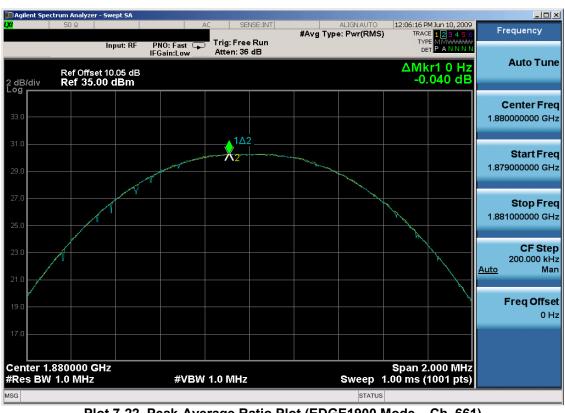
Plot 7-20. Band Edge Plot (PCS GSM Mode - Ch. 810)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 43 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 43 01 37





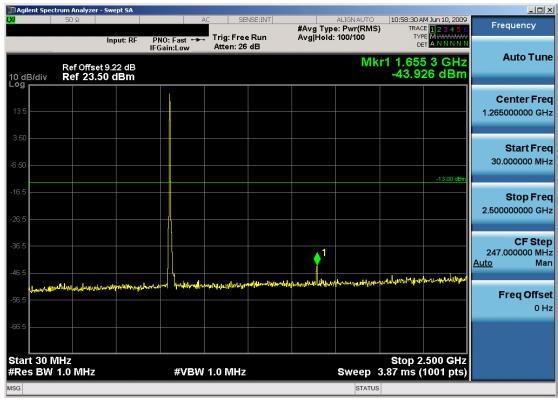
Plot 7-21. Occupied Bandwidth Plot (EDGE1900 Mode - Ch. 661)



Plot 7-22. Peak-Average Ratio Plot (EDGE1900 Mode - Ch. 661)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 44 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		r age 44 01 37





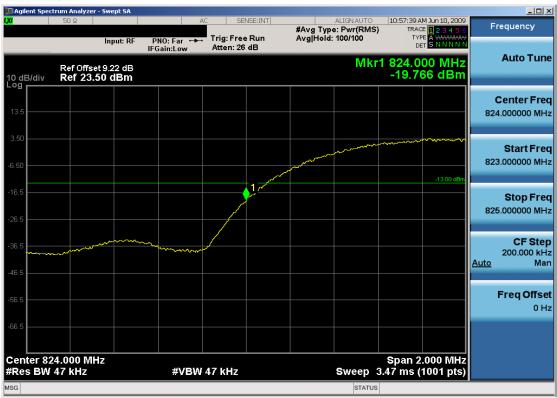
Plot 7-23. Conducted Spurious Plot (Cellular WCDMA Mode - Ch. 4132)



Plot 7-24. Conducted Spurious Plot (Cellular WCDMA Mode - Ch. 4132)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 45 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Fage 45 01 57
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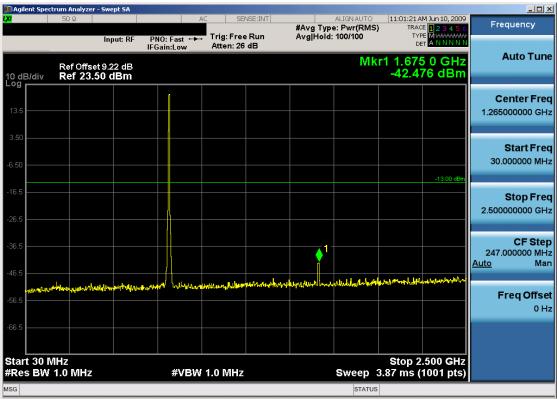
Plot 7-25. Band Edge Plot (Cellular WCDMA Mode - Ch. 4132)



Plot 7-26. 4MHz Span Plot (Cellular WCDMA Mode - Ch. 4132)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 46 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 40 01 37





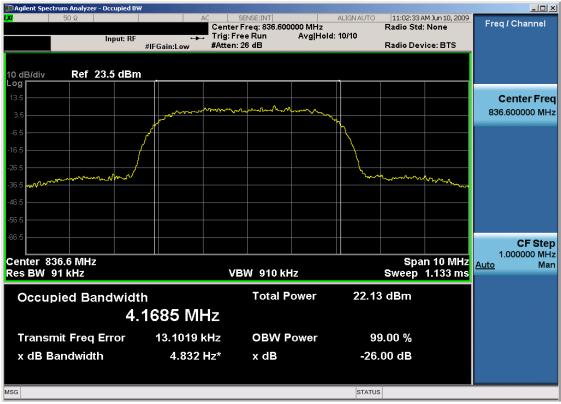
Plot 7-27. Conducted Spurious Plot (Cellular WCDMA Mode - Ch. 4183)



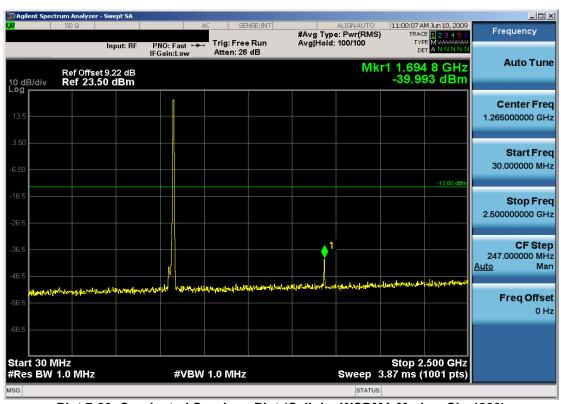
Plot 7-28. Conducted Spurious Plot (Cellular WCDMA Mode - Ch. 4183)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 47 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 47 01 37





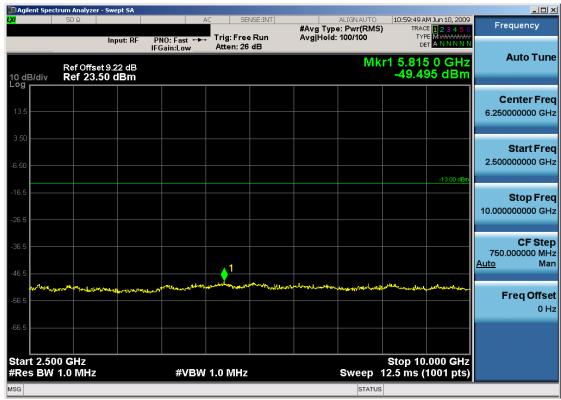
Plot 7-29. Occupied Bandwidth Plot (Cellular WCDMA Mode - Ch. 4183)



Plot 7-30. Conducted Spurious Plot (Cellular WCDMA Mode – Ch. 4233)

FCC ID: BEJGD710	ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 48 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 40 01 37





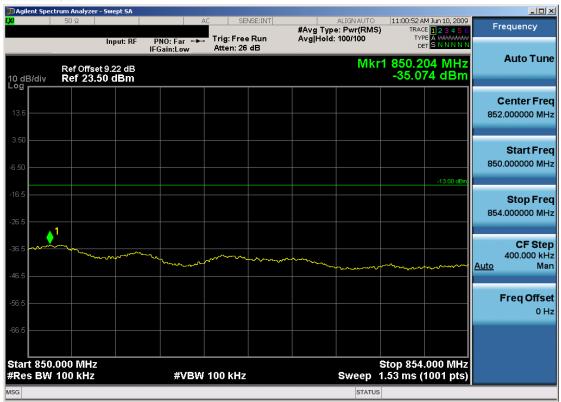
Plot 7-31. Conducted Spurious Plot (Cellular WCDMA Mode - Ch. 4233)



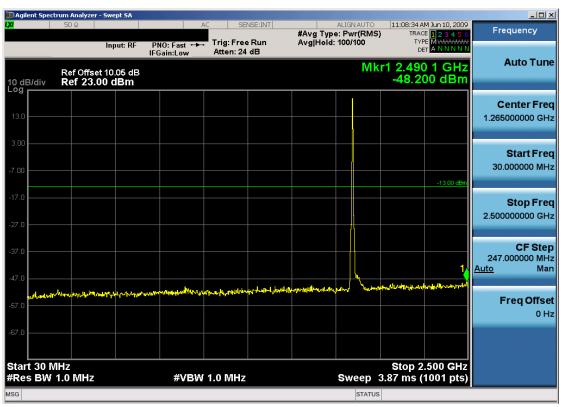
Plot 7-32. Band Edge Plot (Cellular WCDMA Mode - Ch. 4233)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 49 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 49 01 37





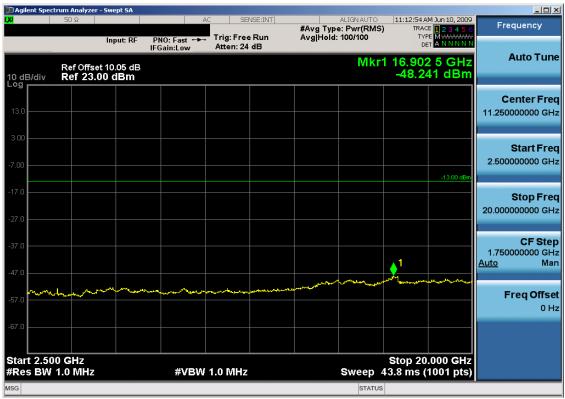
Plot 7-33. 4MHz Span Plot (Cellular WCDMA Mode - Ch. 4233)



Plot 7-34. Conducted Spurious Plot (PCS WCDMA Mode - Ch. 9262)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 50 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 50 01 57





Plot 7-35. Conducted Spurious Plot (PCS WCDMA Mode - Ch. 9262)



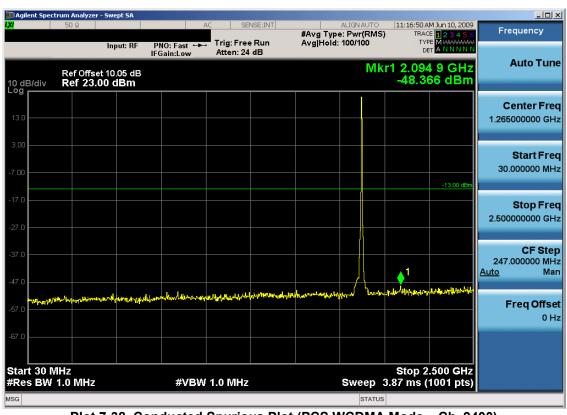
Plot 7-36. Band Edge Plot (PCS WCDMA Mode - Ch. 9262)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 51 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		rage 31 01 31





Plot 7-37. 4MHz Span Plot (PCS WCDMA Mode - Ch. 9262)



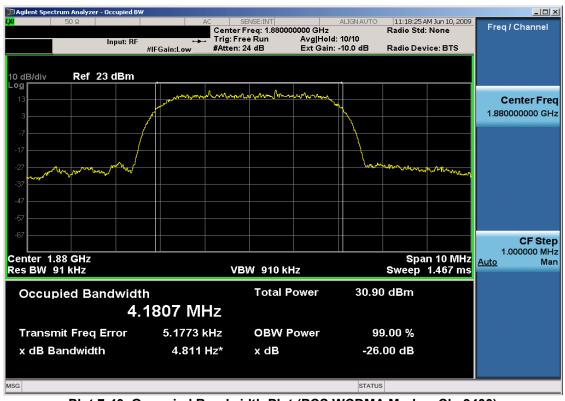
Plot 7-38. Conducted Spurious Plot (PCS WCDMA Mode - Ch. 9400)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 52 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		F aye 32 01 37





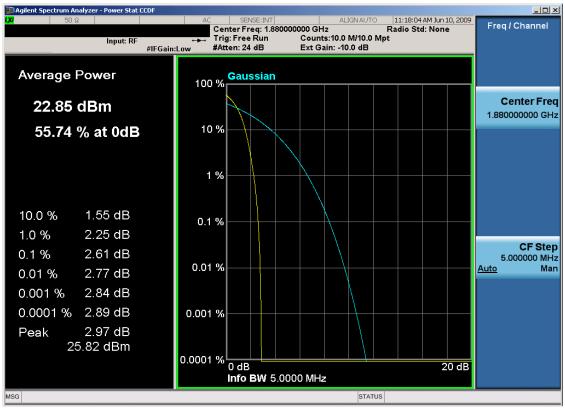
Plot 7-39. Conducted Spurious Plot (PCS WCDMA Mode - Ch. 9400)



Plot 7-40. Occupied Bandwidth Plot (PCS WCDMA Mode - Ch. 9400)

FCC ID: BEJGD710	ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 53 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 33 01 37





Plot 7-41. Peak-Average Ratio Plot (PCS WCDMA Mode - Ch. 9400)

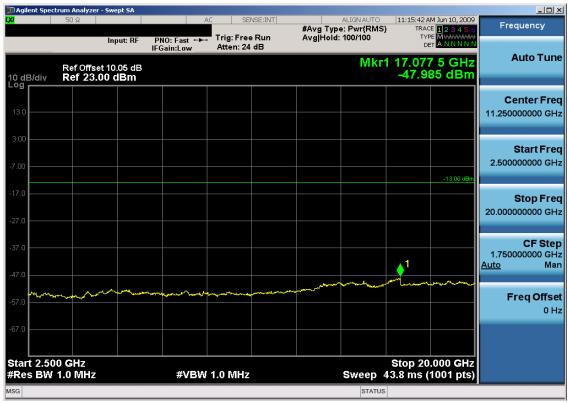


Plot 7-42. Conducted Spurious Plot (PCS WCDMA Mode - Ch. 9538)

FCC ID: BEJGD710	ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 54 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Fage 54 01 57
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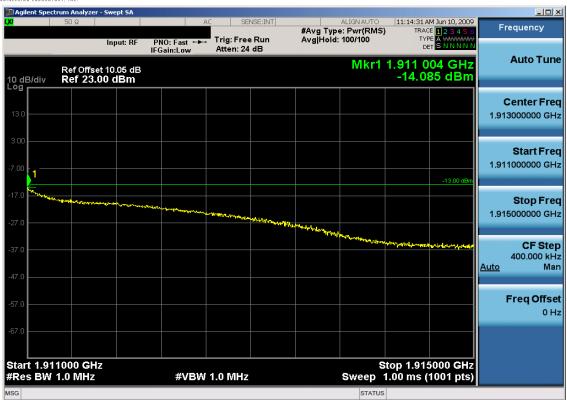
Plot 7-43. Conducted Spurious Plot (PCS WCDMA Mode - Ch. 9538)



Plot 7-44. Band Edge Plot (PCS WCDMA Mode - Ch. 9538)

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 55 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Faye 33 01 37





Plot 7-45. 4MHz Span Plot (PCS WCDMA Mode - Ch. 9538)

FCC ID: BEJGD710	ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 56 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		Fage 30 01 37



8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the LGE 850/1900 GSM/EDGE/WCDMA Phone with Bluetooth FCC ID: BEJGD710 complies with all the requirements of Parts 2, 22, and 24 of the FCC rules.

FCC ID: BEJGD710	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 GSM/EDGE/WCDMA MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Page 57 of 57
0905281098.BEJ	June 9 - 10, 2009	850/1900 GSM/EDGE/WCDMA Phone with Bluetooth		rage 37 of 37