



## CERTIFICATE OF COMPLIANCE (SAR EVALUATION)

**APPLICANT NAME & ADDRESS:**

LG ELECTRONICS INC.  
 Communication Terminal Research Lab  
 459-9, Kasan-dong, Keumchun-Ku  
 Seoul 153-023, Korea  
 Attn: E.S. Park, Research Engineer

**DATE & LOCATION OF TESTING:**

Dates of Tests: March 29-30, 2002  
 Test Report S/N: SAR. 220325205.BEJ  
 Test Site: PCTEST Lab, Columbia MD U.S.A.

<b>FCC ID:</b>	<b>BEJBD4000</b>
<b>APPLICANT:</b>	<b>LG ELECTRONICS INC.</b>

<b>EUT Type:</b>	Dual-Mode Cellular Phone (AMPS/CDMA)
<b>Tx Frequency:</b>	824.04 – 848.97 MHz (AMPS) / 824.70 – 848.31 MHz (CDMA)
<b>Rx Frequency:</b>	869.04 – 893.97 MHz (AMPS) / 869.70 – 893.31 MHz (CDMA)
<b>Max. RF Output Power:</b>	0.322 W ERP AMPS (25.073 dBm) / 26.5 dBm Conducted 0.226 W ERP CDMA (23.533 dBm) / 25.0 dBm Conducted
<b>Max. SAR Measurement:</b>	0.960W/kg AMPS Head SAR; 1.270W/kg AMPS Body SAR; 0.545W/kg CDMA Head SAR; 0.697W/kg CDMA Body SAR;
<b>Trade Name/Model(s):</b>	<i>LG-BD4000</i>
<b>FCC Classification:</b>	Non-Broadcast Transmitter held to ear (TNE)
<b>FCC Rule Part(s):</b>	§2.1093; FCC/OET Bulletin 65 Supplement C [July 2001]
<b>Application Type:</b>	Certification
<b>Test Device Serial No.:</b>	<i>identical prototype</i>



This wireless portable device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE Std. C95.1-1992 and had been tested in accordance with the measurement procedures specified in FCC/OET Bulletin 65 Supplement C (2001) and IEEE Std. 1528-200X (Draft 6.4, July 2001).

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

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

  
 Randy Ortanez  
 President



<b>PCTEST™ SAR REPORT</b>	 <b>FCC CERTIFICATION</b>		<b>Reviewed by:</b> Quality Manager
SAR Filename: SAR-220325205.BEJ	Test Dates: March 29-30, 2002	Phone Type: Dual-Mode	FCC ID: BEJBD4000
			Page 1 of 11

## 12. SYSTEM VERIFICATION

### Tissue Verification

Table 12.1 Simulated Tissue Verification [5]

MEASURED TISSUE PARAMETERS									
Date(s)	03/25/02	835MHz Brain		835MHz Muscle		1900MHz Brain		1900MHz Muscle	
Liquid Temperature (°C)	23.0	Target	Measured	Target	Measured	Target	Measured	Target	Measured
Dielectric Constant: $\epsilon$		41.50	43.50	55.20	56.90	40.00	N/A	53.30	N/A
Conductivity: $\sigma$		0.900	0.870	0.970	0.930	1.400	N/A	1.520	N/A

### Test System Validation

Prior to assessment, the system is verified to the  $\pm 10\%$  of the specifications at 835MHz and 1900MHz by using the system validation kit(s). (Graphic Plots Attached)

Table 12.2 System Validation [5]

SYSTEM DIPOLE VALIDATION TARGET & MEASURED				
System Validation Kit: D-835V2, S/N: 406	835MHz Brain	Targeted SAR <sub>1g</sub> (mW/g) 2.375	Measured SAR <sub>1g</sub> (mW/g) 2.41	Deviation (%) + 1.5
System Validation Kit: D-1900V2, S/N: 502	1900MHz Brain	Targeted SAR <sub>1g</sub> (mW/g) 9.925	Measured SAR <sub>1g</sub> (mW/g) N/A	Deviation (%) N/A

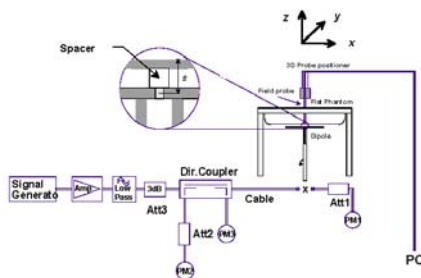


Figure 12.1 Dipole Validation Test Setup

PCTEST™ SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR-220325205.BEJ	Test Dates: March 29-30, 2002	Phone Type: Dual-Mode	FCC ID: BEJBD4000	Page 2 of 11

## 13. SAR TEST DATA SUMMARY

[See Measurement Result Data Pages](#)

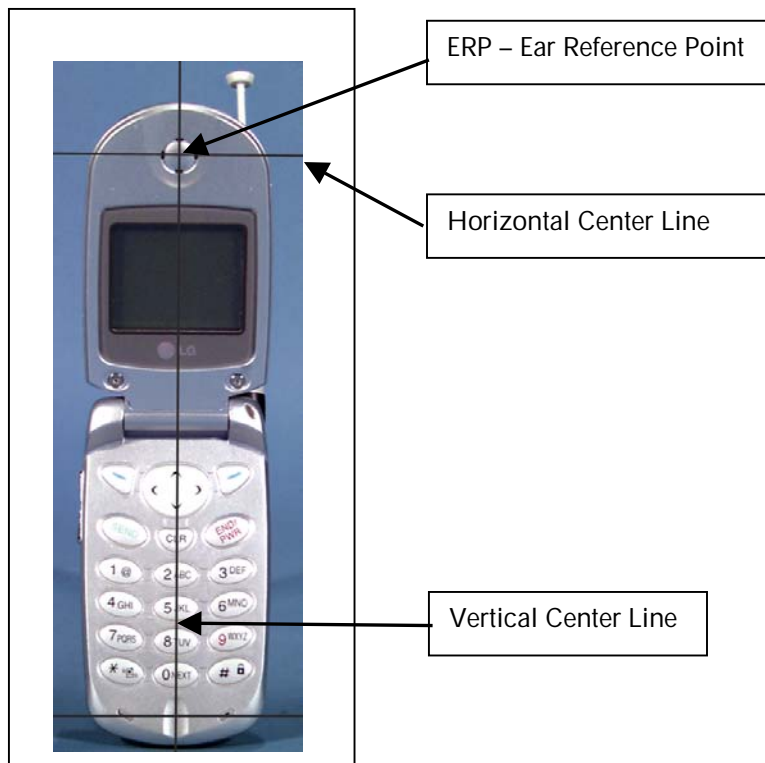
### Procedures Used To Establish Test Signal

The handset was placed into simulated call mode (AMPS, Cellular CDMA & PCS CDMA modes) using manufacturers test codes. Such test signals offer a consistent means for testing SAR and are recommended for evaluating SAR [4]. When test modes are not available or inappropriate for testing a handset, the actual transmission is activated through a base station simulator or similar equipment. See data pages for actual procedure used in measurement.



### Device Test Conditions

The handset is battery operated. Each SAR measurement was taken with a fully charged battery. In order to verify that the device was tested at full power, conducted output power measurements were performed before and after each SAR measurement to confirm the output power. If a conducted power deviation of more than 5% occurred, the test was repeated.

### EUT Handset Reference Points



**Figure 13.1 Handset Reference Points**

PCTEST™ SAR REPORT	 FCC CERTIFICATION 		Reviewed by: Quality Manager
SAR Filename: SAR-220325205.BEJ	Test Dates: March 29-30, 2002	Phone Type: Dual-Mode	FCC ID: BEJBD4000 Page 3 of 11

# SAR DATA SUMMARY

Mixture Type: 835MHz Brain

14.1 MEASUREMENT RESULTS (AMPS Right Head SAR – Touch)								
FREQUENCY		Modulation	Begin / End POWER <sup>†</sup>			Device Test Position	Antenna Position	SAR (W/kg)
MHz	Ch.		(dBm)		Battery			
824.04	0991	AMPS	26.5	26.5	Standard	Cheek / Touch	In	0.562
824.04	0991	AMPS	26.5	26.5	Standard	Cheek / Touch	Out	0.733
836.49	0383	AMPS	26.5	26.5	Standard	Cheek / Touch	In	0.639
836.49	0383	AMPS	26.5	26.5	Standard	Cheek / Touch	Out	0.960
848.97	0799	AMPS	26.5	26.5	Standard	Cheek / Touch	In	0.343
848.97	0799	AMPS	26.5	26.5	Standard	Cheek / Touch	Out	0.529
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Brain 1.6 W/kg (mW/g) averaged over 1 gram		

**NOTES:**

1. The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
2. All modes of operation were investigated, and worst-case results are reported.
3. Battery is fully charged for all readings.

- |                           |                                     |                  |                          |                        |                                     |            |
|---------------------------|-------------------------------------|------------------|--------------------------|------------------------|-------------------------------------|------------|
| †Power Measured           | <input checked="" type="checkbox"/> | Conducted        | <input type="checkbox"/> | ERP                    | <input type="checkbox"/>            | EIRP       |
| 4. SAR Measurement System | <input checked="" type="checkbox"/> | DASY3            | <input type="checkbox"/> | IDX                    | <input type="checkbox"/>            |            |
| Phantom Configuration     | <input type="checkbox"/>            | Left Head        | <input type="checkbox"/> | Flat Phantom           | <input checked="" type="checkbox"/> | Right Head |
| 5. SAR Configuration      | <input checked="" type="checkbox"/> | Head             | <input type="checkbox"/> | Body                   | <input type="checkbox"/>            | Hand       |
| 6. Test Signal Call Mode  | <input checked="" type="checkbox"/> | Manu. Test Codes | <input type="checkbox"/> | Base Station Simulator |                                     |            |
7. Tissue parameters and temperatures are listed on the SAR plots.



R

---

Randy Ortanez  
President



**Figure 14.1 Right Head SAR Test Setup  
-- Cheek / Touch Position --**

PCTEST™ SAR REPORT	 FCC CERTIFICATION 			Reviewed by: Quality Manager
SAR Filename: SAR-220325205.BEJ	Test Dates: March 29-30, 2002	Phone Type: Dual-Mode	FCC ID: BEJBD4000	Page 4 of 11

## SAR DATA SUMMARY (Continued)

Mixture Type: 835MHz Brain

14.2 MEASUREMENT RESULTS (AMPS Right Head SAR – Tilt)								
FREQUENCY		Modulation	Begin / End POWER <sup>†</sup>		Device Test Position	Antenna Position	SAR (W/kg)	
MHz	Ch.		(dBm)	Battery				
836.49	0383	AMPS	26.5	26.5	Standard	Ear / 15° Tilt	In	0.141
836.49	0383	AMPS	26.5	26.5	Standard	Ear / 15° Tilt	Out	0.189
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Brain 1.6 W/kg (mW/g) averaged over 1 gram		

**NOTES:**

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
- All modes of operation were investigated, and worst-case results are reported.
- Battery is fully charged for all readings.

- |                           |  |   |  |
|---------------------------|--|---|--|
| †Power Measured           | <input checked="" type="checkbox"/> Conducted        | <input type="checkbox"/> ERP                    | <input type="checkbox"/> EIRP                  |
| 4. SAR Measurement System | <input checked="" type="checkbox"/> DASY3            | <input type="checkbox"/> IDX                    | <input type="checkbox"/>                       |
| Phantom Configuration     | <input type="checkbox"/> Left Head                   | <input type="checkbox"/> Flat Phantom           | <input checked="" type="checkbox"/> Right Head |
| 5. SAR Configuration      | <input checked="" type="checkbox"/> Head             | <input type="checkbox"/> Body                   | <input type="checkbox"/> Hand                  |
| 6. Test Signal Call Mode  | <input checked="" type="checkbox"/> Manu. Test Codes | <input type="checkbox"/> Base Station Simulator |  |
- Tissue parameters and temperatures are listed on the SAR plots.




  
Randy Ortanez  
President



Figure 14.2 Right Head SAR Test Setup  
-- Ear / 15° Tilt Position --

PCTEST™ SAR REPORT	 FCC CERTIFICATION 			Reviewed by: Quality Manager
SAR Filename: SAR-220325205.BEJ	Test Dates: March 29-30, 2002	Phone Type: Dual-Mode	FCC ID: BEJBD4000	Page 5 of 11

## SAR DATA SUMMARY (Continued)

Mixture Type: 835MHz Brain

14.3 MEASUREMENT RESULTS (AMPS Left Head SAR - Touch)								
FREQUENCY		Modulation	Begin / End POWER <sup>†</sup>		Device Test Position	Antenna Position	SAR (W/kg)	
MHz	Ch.		(dBm)	Battery				
824.04	0991	AMPS	26.5	26.5	Standard	Cheek / Touch	In	0.567
824.04	0991	AMPS	26.5	26.5	Standard	Cheek / Touch	Out	0.689
836.49	0383	AMPS	26.5	26.5	Standard	Cheek / Touch	In	0.711
836.49	0383	AMPS	26.5	26.5	Standard	Cheek / Touch	Out	0.888
848.97	0799	AMPS	26.5	26.5	Standard	Cheek / Touch	In	0.386
848.97	0799	AMPS	26.5	26.5	Standard	Cheek / Touch	Out	0.531
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Brain 1.6 W/kg (mW/g) averaged over 1 gram		

**NOTES:**

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
- All modes of operation were investigated, and worst-case results are reported.
- Battery is fully charged for all readings.

- |                           |  |   |                                     |
|---------------------------|--|---|-------------------------------------|
| †Power Measured           | <input checked="" type="checkbox"/> Conducted        | <input type="checkbox"/> ERP                    | <input type="checkbox"/> EIRP       |
| 4. SAR Measurement System | <input checked="" type="checkbox"/> DASY3            | <input type="checkbox"/> IDX                    | <input type="checkbox"/>            |
| Phantom Configuration     | <input checked="" type="checkbox"/> Left Head        | <input type="checkbox"/> Flat Phantom           | <input type="checkbox"/> Right Head |
| 5. SAR Configuration      | <input checked="" type="checkbox"/> Head             | <input type="checkbox"/> Body                   | <input type="checkbox"/> Hand       |
| 6. Test Signal Call Mode  | <input checked="" type="checkbox"/> Manu. Test Codes | <input type="checkbox"/> Base Station Simulator |                                     |
- Tissue parameters and temperatures are listed on the SAR plots.




  
Randy Ortanez  
President



Figure 14.3 Left Head SAR Test Setup -- Cheek / Touch Position --

PCTEST™ SAR REPORT	 FCC CERTIFICATION 			Reviewed by: Quality Manager
SAR Filename: SAR-220325205.BEJ	Test Dates: March 29-30, 2002	Phone Type: Dual-Mode	FCC ID: BEJBD4000	Page 6 of 11

## SAR DATA SUMMARY (Continued)

Mixture Type: 835MHz Brain

14.4 MEASUREMENT RESULTS (AMPS Left Head SAR – Tilt)								
FREQUENCY		Modulation	Begin / End POWER <sup>†</sup>		Device Test Position	Antenna Position	SAR (W/kg)	
MHz	Ch.		(dBm)	Battery				
836.49	0383	AMPS	26.5	26.5	Standard	Ear / 15° Tilt	In	0.163
836.49	0383	AMPS	26.5	26.5	Standard	Ear / 15° Tilt	Out	0.258
<b>ANSI / IEEE C95.1 1992 - SAFETY LIMIT</b>						<b>Brain</b>		
<b>Spatial Peak</b>						<b>1.6 W/kg (mW/g)</b>		
<b>Uncontrolled Exposure/General Population</b>						averaged over 1 gram		

**NOTES:**

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
  - All modes of operation were investigated, and worst-case results are reported.
  - Battery is fully charged for all readings.
- †Power Measured
- |  |   |                                     |
|--|---|-------------------------------------|
| <input checked="" type="checkbox"/> Conducted        | <input type="checkbox"/> ERP                    | <input type="checkbox"/> EIRP       |
| <input checked="" type="checkbox"/> DASY3            | <input type="checkbox"/> IDX                    | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> Left Head        | <input type="checkbox"/> Flat Phantom           | <input type="checkbox"/> Right Head |
| <input checked="" type="checkbox"/> Head             | <input type="checkbox"/> Body                   | <input type="checkbox"/> Hand       |
| <input checked="" type="checkbox"/> Manu. Test Codes | <input type="checkbox"/> Base Station Simulator |                                     |
- SAR Measurement System Phantom Configuration
  - SAR Configuration
  - Test Signal Call Mode
  - Tissue parameters and temperatures are listed on the SAR plots.




  
Randy Ortanez  
President



Figure 14.4 Left Head SAR Test Setup  
-- Ear / 15° Tilt Position --

PCTEST™ SAR REPORT	 FCC CERTIFICATION 			Reviewed by: Quality Manager
SAR Filename: SAR-220325205.BEJ	Test Dates: March 29-30, 2002	Phone Type: Dual-Mode	FCC ID: BEJBD4000	Page 7 of 11

## SAR DATA SUMMARY (Continued)

Mixture Type: 835MHz Brain

14.5 MEASUREMENT RESULTS (CELLULAR CDMA Right Head SAR – Touch)								
FREQUENCY		Modulation	Begin / End POWER <sup>†</sup>		Device Test Position	Antenna Position	SAR (W/kg)	
MHz	Ch.		(dBm)	Battery				
824.70	1013	CDMA	25.0	25.0	Standard	Cheek / Touch	In	0.420
824.70	1013	CDMA	25.0	25.0	Standard	Cheek / Touch	Out	0.530
836.49	0383	CDMA	25.0	25.0	Standard	Cheek / Touch	In	0.395
836.49	0383	CDMA	25.0	25.0	Standard	Cheek / Touch	Out	0.545
848.31	0777	CDMA	25.0	25.0	Standard	Cheek / Touch	In	0.288
848.31	0777	CDMA	25.0	25.0	Standard	Cheek / Touch	Out	0.382
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Brain 1.6 W/kg (mW/g) averaged over 1 gram		

**NOTES:**

1. The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
2. All modes of operation were investigated, and worst-case results are reported.
3. Battery is fully charged for all readings.

- |                           |  |   |  |
|---------------------------|--|---|--|
| †Power Measured           | <input checked="" type="checkbox"/> Conducted        | <input type="checkbox"/> ERP                    | <input type="checkbox"/> EIRP                  |
| 4. SAR Measurement System | <input checked="" type="checkbox"/> DASY3            | <input type="checkbox"/> IDX                    | <input type="checkbox"/>                       |
| Phantom Configuration     | <input type="checkbox"/> Left Head                   | <input type="checkbox"/> Flat Phantom           | <input checked="" type="checkbox"/> Right Head |
| 5. SAR Configuration      | <input checked="" type="checkbox"/> Head             | <input type="checkbox"/> Body                   | <input type="checkbox"/> Hand                  |
| 6. Test Signal Call Mode  | <input checked="" type="checkbox"/> Manu. Test Codes | <input type="checkbox"/> Base Station Simulator |  |
7. Tissue parameters and temperatures are listed on the SAR plots.

R

---

**Randy Ortanez**  
President



**Figure 14.5 Right Head SAR Test Setup  
-- Cheek / Touch Position --**

PCTEST™ SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR-220325205.BEJ	Test Dates: March 29-30, 2002	Phone Type: Dual-Mode	FCC ID: BEJBD4000	Page 8 of 11

## SAR DATA SUMMARY (Continued)

Mixture Type: 835MHz Muscle

14.6 MEASUREMENT RESULTS (AMPS Body SAR w/o Holster)								
FREQUENCY		Modulation	Begin / End POWER <sup>†</sup>		Separation Distance (cm) <sup>††</sup>	Antenna Position	SAR (W/kg)	
MHz	Ch.		(dBm)	Battery				
824.04	0991	AMPS	26.5	26.5	Standard	1.5 [w/o Holster]	In	0.686
824.04	0991	AMPS	26.5	26.5	Standard	1.5 [w/o Holster]	Out	1.010
836.49	0383	AMPS	26.5	26.5	Standard	1.5 [w/o Holster]	In	0.822
836.49	0383	AMPS	26.5	26.5	Standard	1.5 [w/o Holster]	Out	1.270
848.97	0799	AMPS	26.5	26.5	Standard	1.5 [w/o Holster]	In	0.470
848.97	0799	AMPS	26.5	26.5	Standard	1.5 [w/o Holster]	Out	0.667
<b>ANSI / IEEE C95.1 1992 - SAFETY LIMIT</b>						<b>Muscle</b>		
<b>Spatial Peak</b>						<b>1.6 W/kg (mW/g)</b>		
<b>Uncontrolled Exposure/General Population</b>						averaged over 1 gram		

**NOTES:**

- The test data reported are the worst-case SAR value with the antenna-head position set in atypical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
  - All modes of operation were investigated, and worst-case results are reported.
  - Battery is fully charged for all readings.
- <sup>†</sup>Power Measured                       Conducted                       ERP                       EIRP  
<sup>††</sup>Test Configuration                       With Holster                       Without Holster
- SAR Measurement System                       DASY3                       IDX                        
 Phantom Configuration                       Left Head                       Flat Phantom                       Right Head  
 SAR Configuration                       Head                       Body                       Hand  
 Test Signal Call Mode                       Manu. Test Codes                       Base Station Simulator
  - Tissue parameters and temperatures are listed on the SAR plots.
  - Both sides of the phone were tested and the worst-case side is reported.




  
Randy Ortanez  
President



Figure 14.6 Body SAR Test Setup  
-- w/o Holster --

PCTEST™ SAR REPORT	 FCC CERTIFICATION 			Reviewed by: Quality Manager
SAR Filename: SAR-220325205.BEJ	Test Dates: March 29-30, 2002	Phone Type: Dual-Mode	FCC ID: BEJBD4000	Page 9 of 11

## SAR DATA SUMMARY (Continued)

Mixture Type: 835MHz Muscle

14.7 MEASUREMENT RESULTS (CELLULAR CDMA Body SAR w/o Holster)								
FREQUENCY		Modulation	Begin / End POWER <sup>†</sup>			Separation Distance (cm) <sup>**</sup>	Antenna Position	SAR (W/kg)
MHz	Ch.		(dBm)		Battery			
836.49	0383	CDMA	25.0	25.0	Standard	1.5 [w/o Holster]	In	0.425
836.49	0383	CDMA	25.0	25.0	Standard	1.5 [w/o Holster]	Out	0.697
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Muscle 1.6 W/kg (mW/g) averaged over 1 gram		

**NOTES:**

- The test data reported are the worst-case SAR value with the antenna-head position set in atypical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
  - All modes of operation were investigated, and worst-case results are reported.
  - Battery is fully charged for all readings.
- <sup>†</sup>Power Measured                       Conducted                       ERP                       EIRP
4. SAR Measurement System                       DASY3                       IDX
- Phantom Configuration                       Left Head                       Flat Phantom                       Right Head
5. SAR Configuration                       Head                       Body                       Hand
6. Test Signal Call Mode                       Manu. Test Codes                       Base Station Simulator
7. <sup>\*\*</sup>Test Configuration                       With Holster                       Without Holster
- Tissue parameters and temperatures are listed on the SAR plots.
  - Both sides of the phone were tested and the worst-case side is reported.




  
Randy Ortanez  
President



Figure 14.7 Body SAR Test Setup -- w/o Holster --

PCTEST™ SAR REPORT	 FCC CERTIFICATION 			Reviewed by: Quality Manager
SAR Filename: SAR-220325205.BEJ	Test Dates: March 29-30, 2002	Phone Type: Dual-Mode	FCC ID: BEJBD4000	Page 10 of 11

## 15. SAR TEST EQUIPMENT



### Equipment Calibration

Table 15.1 Test Equipment Calibration

EQUIPMENT SPECIFICATIONS		
Type	Calibration Date	Serial Number
Stäubli Robot RX60L	February 2002	599131-01
Stäubli Robot Controller	February 2002	PCT592
Stäubli Teach Pendant (Joystick)	February 2002	3323-00161
Micron Computer, 450 MHz Pentium III, Windows NT	February 2002	PCT577
SPEAG EDC3	February 2002	321
SPEAG DAE3	February 2002	330
SPEAG E-Field Probe ET3DV6	February 2002	1560
SPEAG Dummy Probe	February 2002	PCT583
SPEAG SAM Twin Phantom V4.0	February 2002	PCT666
SPEAG Light Alignment Sensor	February 2002	205
SPEAG Validation Dipole D1900V2	February 2002	PCT613
Brain Equivalent Matter (835MHz)	March 2002	PCTBEM101
Brain Equivalent Matter (1900MHz)	N/A	PCTBEM301
Muscle Equivalent Matter (835MHz)	March 2002	PCTMEM201
Muscle Equivalent Matter (1900MHz)	N/A	PCTMEM401
Microwave Amp. Model: 5S1G4, (800MHz - 4.2GHz)	January 2002	22332
Gigatronics 8651A Power Meter	January 2002	1835299
HP-8648D (9kHz ~ 4GHz) Signal Generator	January 2002	PCT530
Amplifier Research 5S1G4 Power Amp	January 2002	PCT540
HP-8753E (30kHz ~ 3GHz) Network Analyzer	January 2002	PCT552
HP85070B Dielectric Probe Kit	January 2002	PCT501
Ambient Noise/Reflection, etc.	<12mW/kg/<3%of SAR	January 2002
		Anechoic Room PCT01

**NOTE:**

PCTEST Lab. calibrated the E-field probe by temperature measurement procedure. Dipole Validation measurement is performed by PCTEST Lab. before each test. The brain simulating material is calibrated by PCTEST using the dielectric probe system and network analyzer to determine the conductivity and permittivity (dielectric constant) of the brain-equivalent material.

PCTEST™ SAR REPORT	 <b>FCC CERTIFICATION</b> 			Reviewed by: Quality Manager
SAR Filename: SAR-220325205.BEJ	Test Dates: March 29-30, 2002	Phone Type: Dual-Mode	FCC ID: BEJBD4000	Page 11 of 11

# LGE FCC ID: BEJBD4000 -- FM Head SAR

SAM Phantom; Right Hand Section; Probe:ET3DV6 - SN1560; ConvF(6.78,6.78,6.78)

Med. Parameters 835 MHz Brain:  $\sigma = 0.87$  mho/m  $\epsilon_r = 43.5$   $\rho = 1.00$  g/cm<sup>3</sup>; Antenna Position -- Out; Crest Factor 1.0

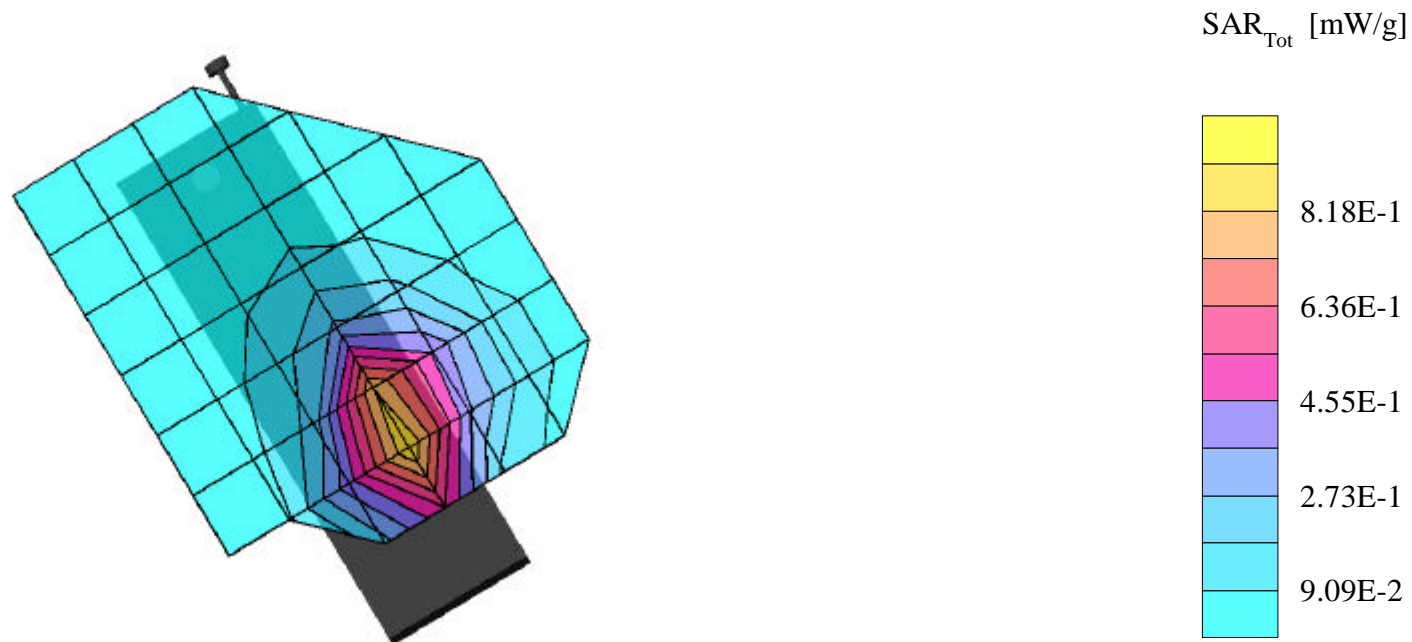
**SAR (1g): 0.960 mW/g, SAR (10g): 0.631 mW/g**

LGE DualMode phone Model: LG-BD4000

AMPS Mode, Ch.383 [836.49MHz]; Standard Battery; Flip = open; Ambient Temp. = 22.2°C / Meas. Tissue Temp. = 22.1°C

Conducted Power = 26.5dBm; Right Head SAR, Cheek/Touch position

Test Date -- 03/29/2002 [FCC/OET Bulletin 65 - Supplement C, July 2001]



# LGE FCC ID: BEJBD4000 -- FM Head SAR

SAM Phantom; Right Hand Section; Probe:ET3DV6 - SN1560; ConvF(6.78,6.78,6.78)

Med. Parameters 835 MHz Brain:  $\sigma = 0.87$  mho/m  $\epsilon_r = 43.5$   $\rho = 1.00$  g/cm<sup>3</sup>; Antenna Position -- Out; Crest Factor 1.0

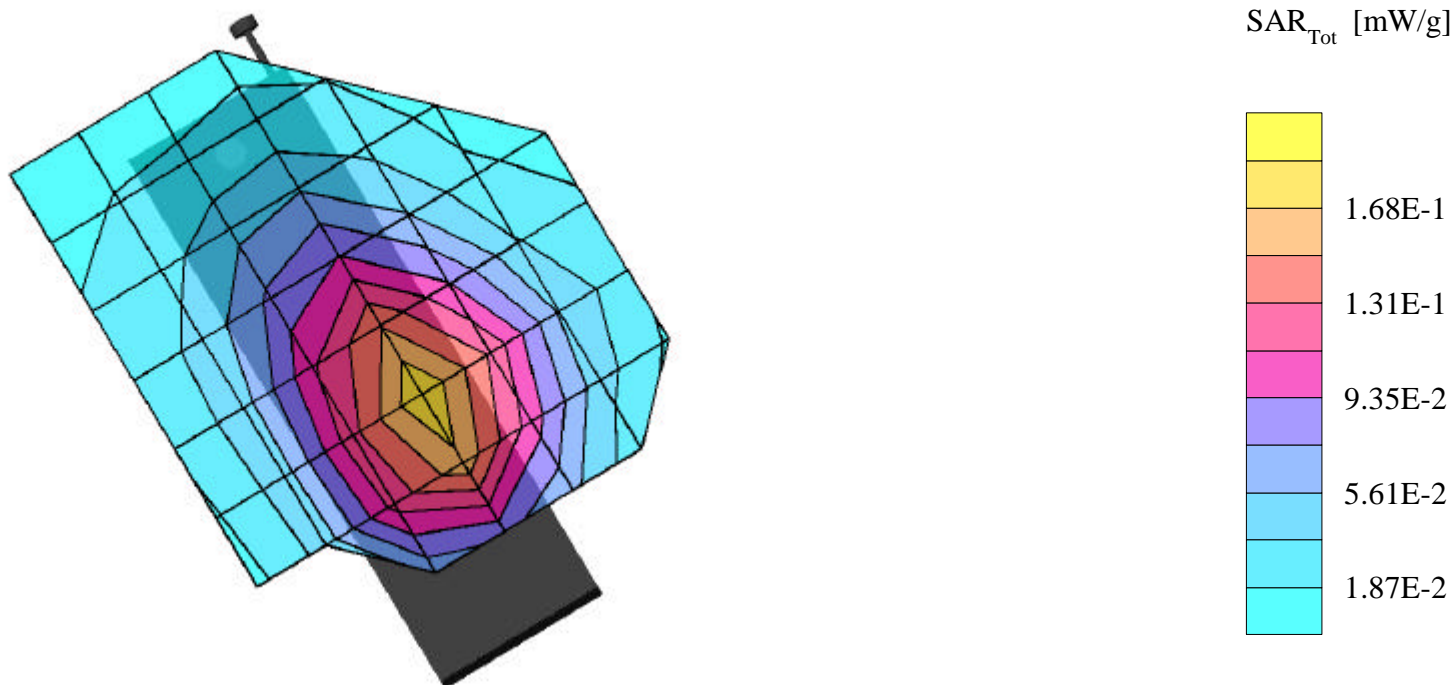
**SAR (1g): 0.189 mW/g, SAR (10g): 0.137 mW/g**

LGE DualMode phone Model: LG-BD4000

AMPS Mode, Ch.383 [836.49MHz]; Standard Battery; Flip = open; Ambient Temp. = 22.2°C / Meas. Tissue Temp. = 22.1°C

Conducted Power = 26.5dBm; Right Head SAR, Ear/15 degree Tilt Position

Test Date -- 03/29/2002 [FCC/OET Bulletin 65 - Supplement C, July 2001]



# LGE FCC ID: BEJBD4000 -- FM Head SAR

SAM Phantom; Left Hand Section; Probe:ET3DV6 - SN1560; ConvF(6.78,6.78,6.78)

Med. Parameters 835 MHz Brain:  $\sigma = 0.87$  mho/m  $\epsilon_r = 43.5$   $\rho = 1.00$  g/cm<sup>3</sup>; Antenna Position -- Out; Crest Factor 1.0

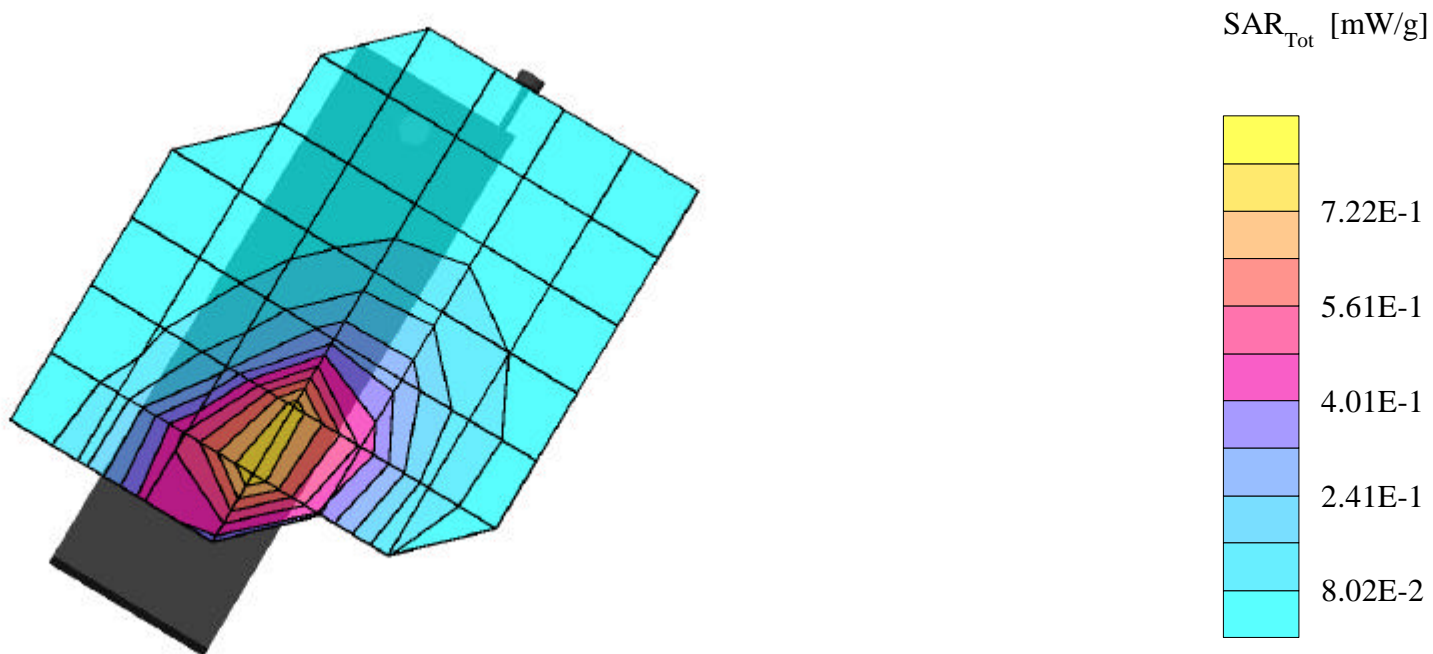
**SAR (1g): 0.888 mW/g**, SAR (10g): 0.592 mW/g

LGE DualMode phone Model: LG-BD4000

AMPS Mode, Ch.383 [836.49MHz]; Standard Battery; Flip = open; Ambient Temp. = 22.2°C / Meas. Tissue Temp. = 22.1°C

Conducted Power = 26.5dBm; Left Head SAR, Cheek/Touch position

Test Date -- 03/29/2002 [FCC/OET Bulletin 65 - Supplement C, July 2001]



# LGE FCC ID: BEJBD4000 -- FM Head SAR

SAM Phantom; Left Hand Section; Probe:ET3DV6 - SN1560; ConvF(6.78,6.78,6.78)

Med. Parameters 835 MHz Brain:  $\sigma = 0.87$  mho/m  $\epsilon_r = 43.5$   $\rho = 1.00$  g/cm<sup>3</sup>; Antenna Position -- Out; Crest Factor 1.0

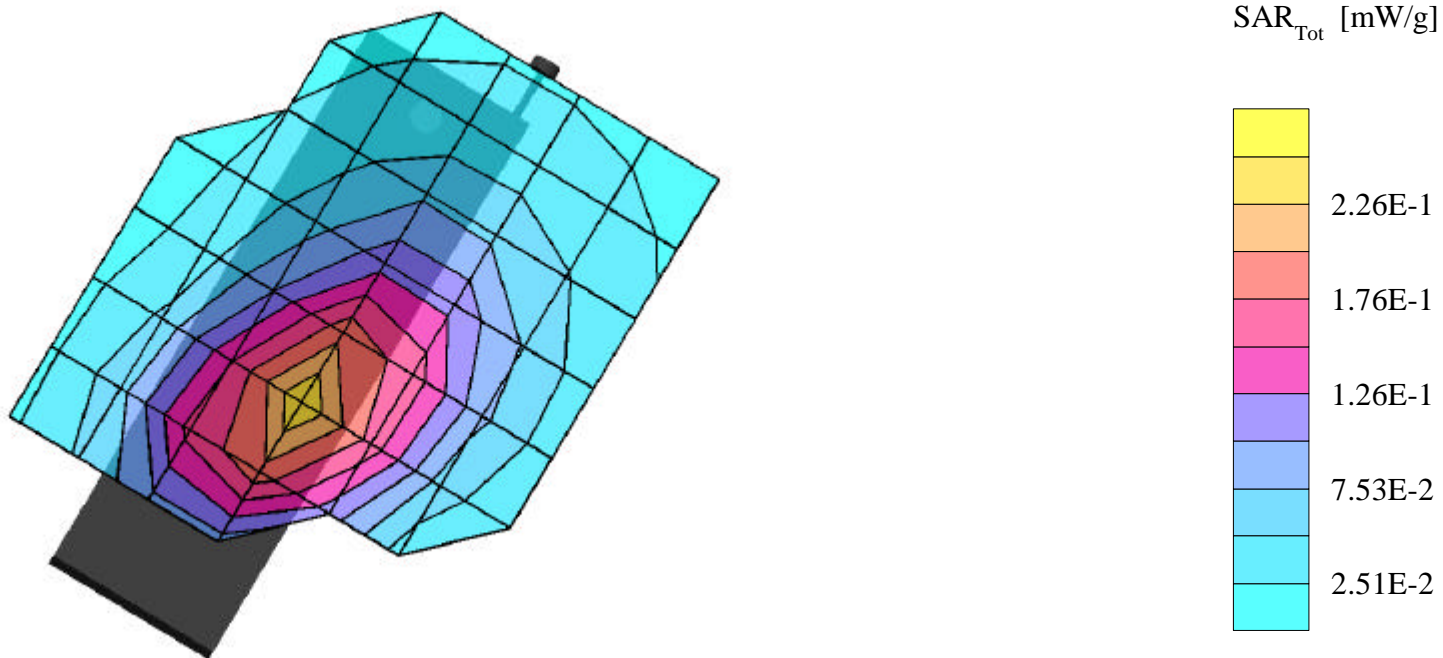
**SAR (1g): 0.258 mW/g, SAR (10g): 0.181 mW/g**

LGE DualMode phone Model: LG-BD4000

AMPS Mode, Ch.383 [836.49MHz]; Standard Battery; Flip = open; Ambient Temp. = 22.2°C / Meas. Tissue Temp. = 22.1°C

Conducted Power = 26.5dBm; Left Head SAR, Ear/15 degree Tilt position

Test Date -- 03/29/2002 [FCC/OET Bulletin 65 - Supplement C, July 2001]



# LGE FCC ID: BEJBD4000 -- Cellular CDMA Head SAR

SAM Phantom; Right Hand Section; Probe:ET3DV6 - SN1560; ConvF(6.78,6.78,6.78)

Med. Parameters 835 MHz Brain:  $\sigma = 0.87$  mho/m  $\epsilon_r = 43.5$   $\rho = 1.00$  g/cm<sup>3</sup>; Antenna Position -- Out; Crest Factor 1.0

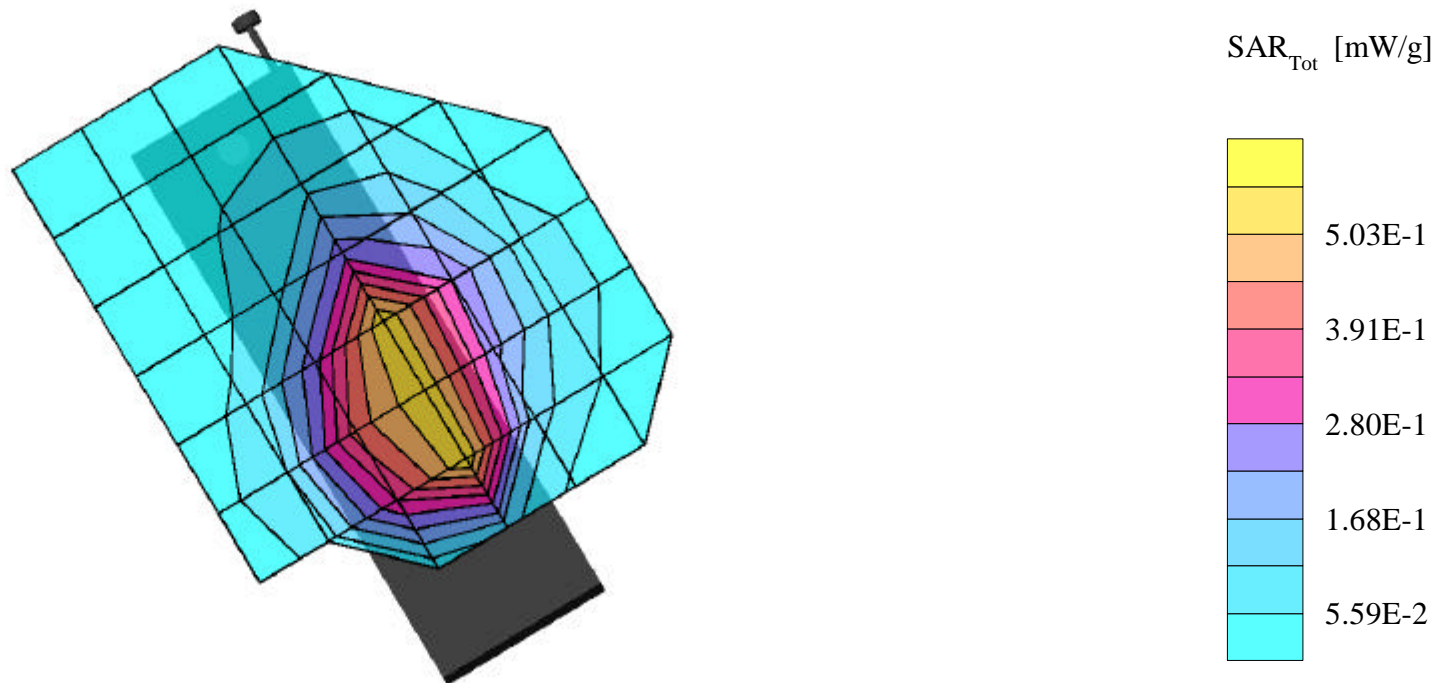
**SAR (1g): 0.545 mW/g, SAR (10g): 0.374 mW/g**

LGE DualMode phone Model: LG-BD4000

Cellular CDMA Mode, Ch.0383 [836.49MHz]; Standard Battery; Flip = open; Ambient Temp. = 22.2°C / Meas. Tissue Temp. = 22.1°C

Conducted Power = 25.0dBm; Right Head phantom, Cheek/Touch position

Test Date -- 03/29/2002 [FCC/OET Bulletin 65 - Supplement C, July 2001]



# LGE FCC ID: BEJBD4000 -- FM Body SAR

SAM Phantom; Flat Section; Probe:ET3DV6 - SN1560; ConvF(6.52,6.52,6.52)

Med. Parameters 835 MHz Muscle:  $\sigma = 0.93$  mho/m  $\epsilon_r = 56.9$   $\rho = 1.00$  g/cm<sup>3</sup>; Antenna Position -- Out; Crest Factor 1.0

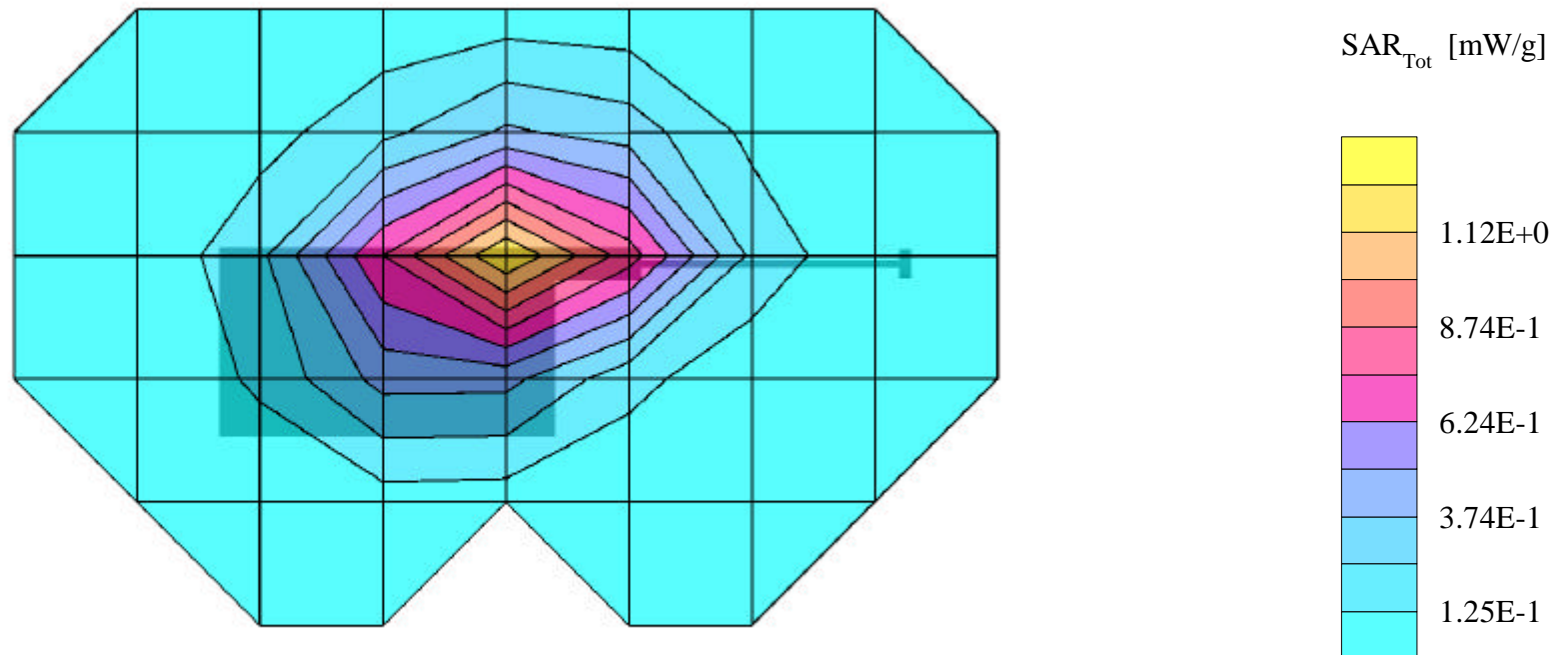
**SAR (1g): 1.27 mW/g, SAR (10g): 0.852 mW/g**

LGE DualMode phone Model: LG-BD4000

FM Mode, Ch.0383 [836.49MHz]; Standard Battery; Flip = closed; Ambient Temp. = 22.2°C / Meas. Tissue Temp. = 22.1°C

Conducted Power = 26.5dBm; Spacing = 1.5cm from EUT (antenna side) to flat phantom, No BeltClip/No Holster

Test Date -- 03/30/2002 [FCC/OET Bulletin 65 - Supplement C, July 2001]



# LGE FCC ID: BEJBD4000 -- Cellular CDMA Body SAR

SAM Phantom; Flat Section; Probe:ET3DV6 - SN1560; ConvF(6.52,6.52,6.52)

Med. Parameters 835 MHz Muscle:  $\sigma = 0.93$  mho/m  $\epsilon_r = 56.9$   $\rho = 1.00$  g/cm<sup>3</sup>; Antenna Position -- Out; Crest Factor 1.0

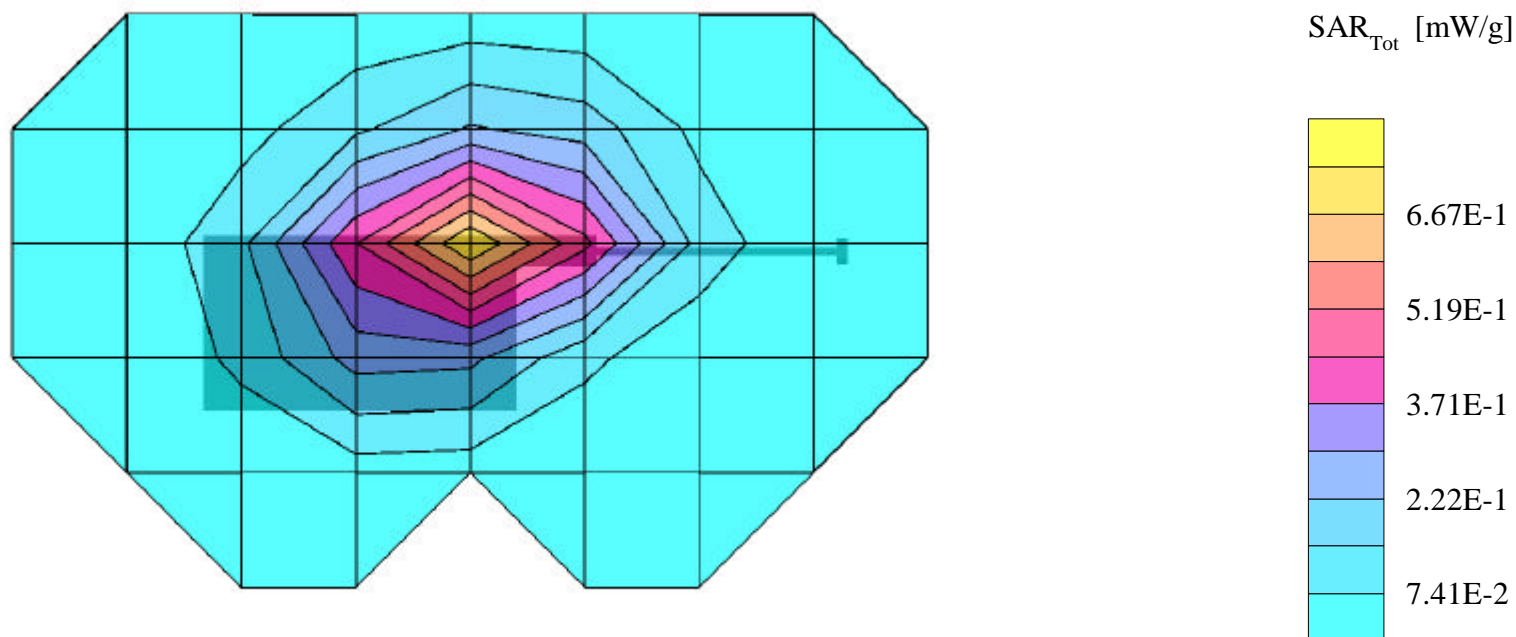
**SAR (1g): 0.697 mW/g**, SAR (10g): 0.466 mW/g

LGE DualMode phone Model: LG-BD4000

Cellular CDMA Mode, Ch.0383 [836.49MHz]; Standard Battery; Flip = closed; Ambient Temp. = 22.2°C / Meas. Tissue Temp. = 22.1°C

Conducted Power = 25.0dBm; Spacing = 1.5cm from EUT (antenna side) to flat phantom, No BeltClip/No Holster

Test Date -- 03/30/2002 [FCC/OET Bulletin 65 - Supplement C, July 2001]



# LGE FCC ID: BEJBD4000 -- FM Head SAR

SAM Phantom; Right Hand Section; Probe: ET3DV6 - SN1560; ConvF(6.78,6.78,6.78)

Med. Parameters 835 MHz Brain:  $\sigma = 0.87$  mho/m  $\epsilon_r = 43.6$   $\rho = 1.00$  g/cm<sup>3</sup>; Antenna Position -- Out; Crest Factor 1.0

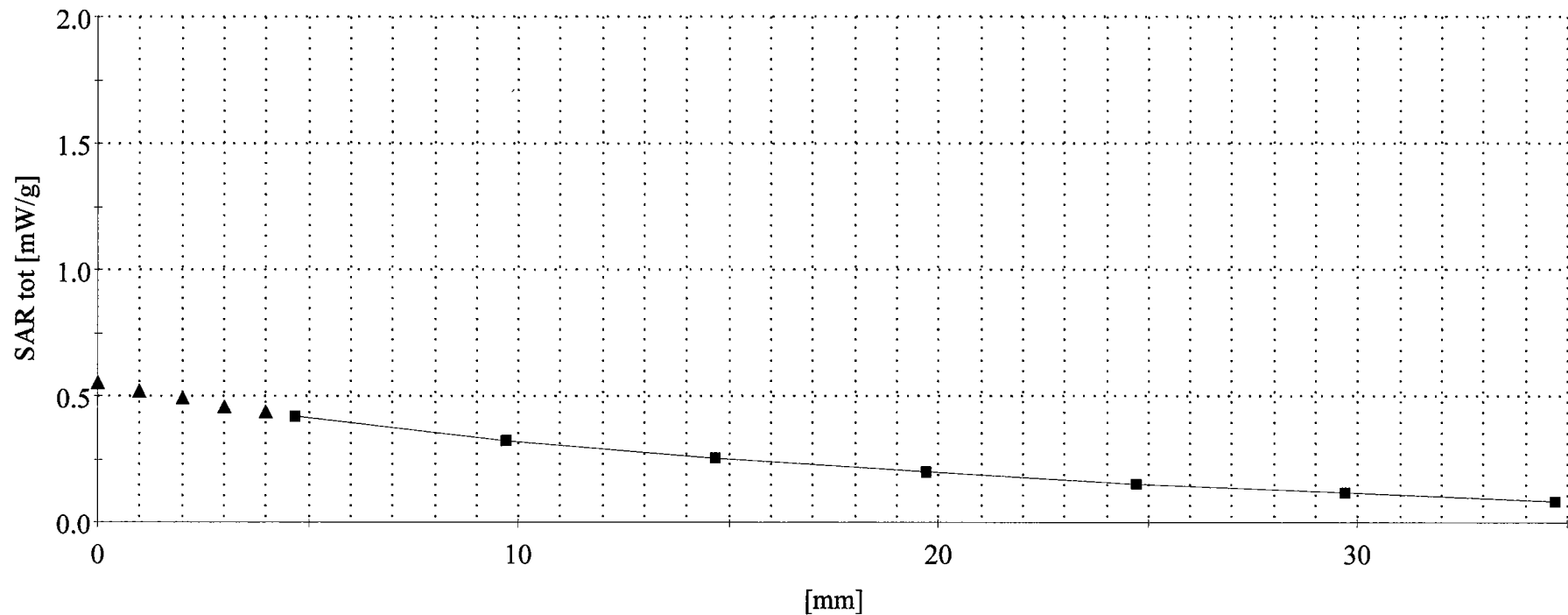
SAR (1g): 0.960 mW/g, SAR (10g): 0.631 mW/g

LGE Dual Mode: LG-BD4000 [S/N:FCC1 ]

AMPS Mode, Ch.383 [836.49MHz]; Standard Battery

Conducted Power = 26.5dBm; Right Head SAR, Cheek/Touch position

Test Date -- 03/29/2002 [FCC/OET Bulletin 65 - Supplement C, July 2001]



# LGE FCC ID: BEJBD4000 -- FM Body SAR

SAM Phantom; Flat Section; Probe: ET3DV6 - SN1560; ConvF(6.52,6.52,6.52)

Med. Parameters 835 MHz Muscle:  $\sigma = 0.93$  mho/m  $\epsilon_r = 56.9$   $\rho = 1.00$  g/cm<sup>3</sup>; Antenna Position -- Out; Crest Factor 1.0

SAR (1g): 1.27 mW/g, SAR (10g): 0.852 mW/g

LGE DualMode phone Model: LG-BD4000

FM Mode, Ch.0383 [836.49MHz]; Standard Battery; Flip = closed; Ambient Temp. = 22.2°C / Meas. Tissue Temp. = 22.1°C

Conducted Power = 26.5dBm; Spacing = 1.5cm from EUT (antenna side) to flat phantom, No BeltClip/No Holster

Test Date -- 03/30/2002 [FCC/OET Bulletin 65 - Supplement C, July 2001]

