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# SAR TEST REPORT

Equipment Under Test

Cellular/PCS GSM/EDGE & Cellular WCDMA/HSPA

Phone with Bluetooth and WLAN

Model No.

LG-P350f (Additional model name: P350f)

**Applicant** 

LG Electronics Inc.

Address of Applicant

60-39, Gasan-dong, Gumchon-gu, Seoul, 153-023, Korea

FCC ID

BEJP350F

**Device Category** 

Portable Device

**Exposure Category** 

General Population/Uncontrolled Exposure

Date of Receipt

2010-11-24

Date of Test(s)

2011-02-11 ~ 2011-02-24

Date of Issue

2011-02-24

Max. SAR

1.22 W/kg (GSM850), 1.26 W/kg (PCS1900) 1.08 W/kg (WCDMA V), 0.349 W/kg (WLAN)

#### Standards:

FCC OET Bulletin 65 supplement C **IEEE 1528, 2003** ANSI/IEEE C95.1, C95.3

In the configuration tested, the EUT complied with the standards specified above.

#### Remarks:

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS Testing Korea Co., Ltd. or testing done by SGS Testing Korea Co., Ltd. in connection with distribution or use of the product described in this report must be approved by SGS Testing Korea Co., Ltd. in writing.

Tested by

: Fred Jeong

2011-02-24

Approved by

: Charles Kim

2011-02-24



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#### **APPENDIX**

3.5

- A. DASY4 SAR Report
- B. Uncertainty Analysis
- C. Calibration certificate



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## 1. General Information

## 1.1 Testing Laboratory

SGS Testing Korea Co., Ltd.

Wireless Div. 2FL, 18-34, Sanbon-dong, Gunpo-si, Gyeonggi-do, Korea 435-040

Telephone : +82 +31 428 5700 FAX : +82 +31 427 2371 Homepage : www.kr.sgs.com/ee

#### 1.2 Details of Manufacturer

Manufacturer : LG Electronics Inc.

Address : 60-39, Gasan-dong, Gumchon-gu, Seoul, 153-023, Korea

Contact Person : Hyeon Kyun Kim Phone No. : 82-2-2033-1113

## 1.3 Version of Report

Version Number	Date	Revision
00	2011-02-21	Initial issue
01	2011-02-24	Revision 01

## 1.4 Description of EUT(s)

EUT Type	: Cellular/PCS GSM/EDGE & Cellular WCDMA/HSPA Phone with Bluetooth and WLAN
Model	: LG-P350f (Additional model name : P350f)
Serial Number	: 101KPTM000353
Mode of Operation	: GSM850, PCS1900, WCDMA V, WLAN, Bluetooth
<b>Duty Cycle</b>	: 8(GSM), 8(GPRS 1Tx Slot), 4(GPRS 2Tx Slot), 2.67(GPRS 3Tx Slot), 2(GPRS 4Tx Slot), 1(WCDMA), 1(WLAN)
Body worn Accessory	: None
Tx Frequency Range	: 824.2 MHz ~ 848.8 MHz (GSM850) 1850.2 MHz ~ 1909.8 MHz (PCS1900) 826.4 MHz ~ 846.6 MHz (WCDMA V) 2412 MHz ~ 2462 MHz (WLAN) 2402 MHz ~ 2480 MHz (Bluetooth)
Conducted Max Power	: 32.30 dBm(GSM850), 30.00 dBm(PCS1900), 22.58 dBm(WCDMA V), 15.05 dBm(WLAN), 1.71 dBm(Bluetooth)
Battery Type	: 3.7 V d.c. (Lithum-ion Battery)



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#### 1.5 Test Environment

Ambient temperature	: (22 ± 2) ° C
Tissue Simulating Liquid	: (22 ± 2) ° C
Relative Humidity	: (55 ± 5) % R.H.

#### 1.6 Operation Configuration

The device in GSM and WCDMA mode was controlled by using a Communication tester (CMU 200). Communication between the device and the tester was established by air link. And the client provided a special driver and test program which can control the frequency and power of the WLAN module. Measurements were performed at the lowest, middle and highest channels of the operating band. The EUT was set to maximum power level during all tests and at the beginning of each test the battery was fully charged.

The DASY4 system measures power drift during SAR testing by comparing e-field in the same location at the beginning and at the end of measurement. Based on the RF Power and antenna separation distance, stand-alone BT SAR and simultaneous SAR evaluation are not required.



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#### 1.7 EVALUATION PROCEDURES

- Power Reference Measurement Procedures

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The Minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. The minimum distance of probe sensors to surface is 4 mm. This distance cannot be smaller than the Distance of sensor calibration points to probe tip as defined in the probe properties (for example, 2.7 mm for an ET3DV6 probe type).

- The entire evaluation of the spatial peak values is performed within the Post-processing engine (SEMCAD). The system always gives the maximum values for the 1 g and 10 g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:
- 1. The extraction of the measured data (grid and values) from the Zoom Scan.
- 2. The calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
- 3. The generation of a high-resolution mesh within the measured volume
- 4. The interpolation of all measured values from the measurement grid to the high-resolution grid
- 5. The extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- 6. The calculation of the averaged SAR within masses of 1 g and 10 g.

The probe is calibrated at the center of the dipole sensors that is located 1 mm to 2.7 mm away from the probe tip. During measurements, the probe stops shortly above the phantom surface, depending on the probe and the surface detecting system. Both distances are included as parameters in the probe configuration file. The software always knows exactly how far away the measured point is from the surface. As the probe cannot directly measure at the surface, the values between the deepest measured point and the surface must be extrapolated. The angle between the probe axis and the surface normal line is less than 30 degree.

In the Area Scan, the gradient of the interpolation function is evaluated to find all the extreme of the SAR distribution. The uncertainty on the locations of the extreme is less than 1/20 of the grid size. Only local maximum within –2 dB of the global maximum are searched and passed for the Cube Scan measurement. In the Cube Scan, the interpolation function is used to extrapolate the Peak SAR from the lowest measurement points to the inner phantom surface (the extrapolation distance). The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1 % for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5 mm.

The maximum search is automatically performed after each area scan measurement. It is based on splines in two or three dimensions. The procedure can find the maximum for most SAR distributions even with



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relatively large grid spacing. After the area scanning measurement, the probe is automatically moved to a position at the interpolated maximum. The following scan can directly use this position for reference, e.g., for a finer resolution grid or the cube evaluations. The 1 g and 10 g peak evaluations are only available for the predefined cube 7x7x7 scans. The routines are verified and optimized for the grid dimensions used in these cube measurements. The measured volume of 30x30x30mm contains about 30 g of tissue. The first procedure is an extrapolation (incl. Boundary correction) to get the points between the lowest measured plane and the surface. The next step uses 3D interpolation to get all points within the measured volume. In the last step, a 1 g cube is placed numerically into the volume and its averaged SAR is calculated. This cube is the moved around until the highest averaged SAR is found. If the highest SAR is found at the edge of the measured volume, the system will issue a warning: higher SAR values might be found outside of the measured volume. In that case the cube measurement can be repeated, using the new interpolated maximum as the center.

#### 1.8 The SAR Measurement System

A photograph of the SAR measurement System is given in Fig. a. This SAR Measurement System uses a Computer-controlled 3-D stepper motor system ( Speag Dasy 4 professional system ). A Model ET3DV6 1782 E-field probe is used to determine the internal electric fields. The SAR can be obtained from the equation SAR=  $\sigma$  (|Ei|2)/  $\rho$  where  $\sigma$  and  $\rho$  are the conductivity and mass density of the tissue-simulant. The DASY4 system for performing compliance tests consists of the following items:

- •A standard high precision 6-axis robot (Staubli RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- •A dosimeter probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
- •A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.



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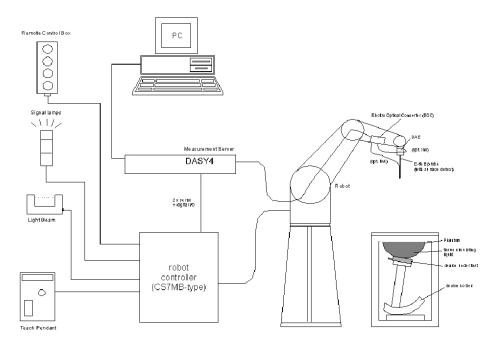


Fig a. The microwave circuit arrangement used for SAR system verification

- The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to the DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
- A computer operating Windows 2000 or Windows XP.
- DASY4 software.
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
- The SAM twin phantom enabling testing body usage.
- The device holder for flat phantom.
- Tissue simulating liquid mixed according to the given recipes.
- Validation dipole kits allowing to validate the proper functioning of the system.



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## 1.9 System Components

#### ET3DV6 E-Field Probe

Construction: Symmetrical design with triangular core Built-in shielding

against static charges PEEK enclosure material (resistant to

organic solvents, e.g. glycol).

Calibration : In air from 10 MHz to 2.5 GHz In brain simulating tissue

 $(accuracy \pm 8 \%)$ 

Frequency: 10 MHz to > 6 GHz; Linearity:  $\pm 0.2 \text{ dB}$  (30 MHz to 3 GHz)

**Directivity** :  $\pm 0.2$  dB in brain tissue (rotation around probe axis)

 $\pm 0.4$  dB in brain tissue (rotation normal to probe axis)

Dynamic Range :  $5 \mu W/g$  to >100 mW/g; Linearity:  $\pm 0.2 dB$ 

Range

**Srfce. Detect** :  $\pm 0.2$  mm repeatability in air and clear liquids over diffuse

reflecting surfaces

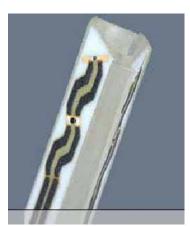
**Dimensions**: Overall length: 330 mm

Tip length: 16 mm Body diameter: 12 mm Tip diameter: 6.8 mm

Distance from probe tip to dipole centers: 2.7 mm

**Application**: General dosimetry up to 3 GHz Compliance tests of mobile

phone



ET3DV6 E-Field Probe

#### **NOTE:**

1. The Probe parameters have been calibrated by the SPEAG. Please reference "APPENDIX D" for the Calibration Certification Report.



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#### **SAM Phantom**

Construction: The SAM Phantom is constructed of a

fiberglass shell integrated in a wooden table. The shape of the shell is based on data from an anatomical study designed to determine the maximum exposure in at least 90 % of all users. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents the evaporation of the liquid. Reference markings on the Phantom allow the complete setup of all predefined phantom positions and measurement grids by manually

teaching three points in the robot

Shell Thickness:  $2.0 \text{ mm} \pm 0.1 \text{ mm}$ Filling Volume: Approx. 25 liters



**SAM Phantom** 

#### **DEVICE HOLDER**

Construction

In combination with the Twin SAM PhantomV4.0/V4.0C or Twin SAM, the Mounting Device (made from POM) enables the rotation of the mounted transmitter in spherical coordinates, whereby the rotation point is the ear opening. The devices can be easily and accurately positioned according to IEC, IEEE, CENELEC, FCC or other specifications. The device holder can be locked at different phantom locations (left head, right head, flat phantom).



Device Holder

#### 1.10 SAR System Verification

The microwave circuit arrangement for system verification is sketched in Fig. b. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within  $\pm$ 10 % from the target SAR values. These tests were done at 835 MHz, 1900 MHz and 2450 MHz. The tests for EUT were conducted within 24 hours after each validation. The obtained results from the system accuracy verification are displayed in the table 1. During the tests, the ambient temperature of the laboratory was in the range (22  $\pm$  2) ° C, the relative humidity was in the range (55  $\pm$  5) % R.H. and the liquid depth above the ear reference points was above 15 cm in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.



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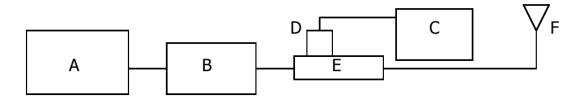


Fig b. The microwave circuit arrangement used for SAR system verification

- A. Agilent Model E4421B Signal Generator
- B. EMPOWER Model 2057-BBS3Q5KCK Amplifier
- C. Agilent Model E4419B Power Meter
- D. Agilent Model 9300H Power Sensor
- E. Agilent Model 777D/778D Dual directional coupling
- F. Reference dipole Antenna



Photo of the dipole Antenna

## **System Validation Results**

Validation Kit	Tissue	Target SAR 1 g from Calibration Certificate (1 W)	Measured SAR 1 g (1 W)	Deviation (%)	Date	Liquid Temp. (°C)
D835V2 S/N: 490	835 MHz Brain	9.62 W/kg	9.64 W/kg	0.21	2011-02-13	21.8
D835V2 S/N: 490	835 MHz Brain	9.62 W/kg	9.72 W/kg	1.04	2011-02-24	21.8
D835V2 S/N: 490	835 MHz Body	9.84 W/kg	9.92 W/kg	0.81	2011-02-14	21.9
D1900V2 S/N: 5d033	1900 MHz Brain	39.4 W/kg	39.7 W/kg	0.76	2011-02-12	21.9
D1900V2 S/N: 5d033	1900 MHz Body	41.3 W/kg	43.2 W/kg	4.60	2011-02-11	21.7
D2450V2 S/N: 734	2450 MHz Brain	51.7 W/kg	53.6 W/kg	3.68	2011-02-15	21.9
D2450V2 S/N: 734	2450 MHz Body	53.5 W/kg	53.2 W/kg	-0.56	2011-02-15	21.9

Table 1. Results system validation



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## 1.11 Tissue Simulant Fluid for the Frequency Band

The dielectric properties for this simulant fluid were measured by using the Agilent Model 85070D Dielectric Probe (rates frequence band 200 MHz to 20 GHz) in conjunction with Agilent E5070B Network Analyzer(300 KHz - 3 GHz) by using a procedure detailed in Section V.

	Tissue			Dielectric Param	neters
f (MHz)	type	Limits / Measured	Permittivity	Conductivity	Simulated Tissue Temp( )
		Measured, 2011-02-13	42.7	0.89	21.8
	Head	Recommended Limits	41.5	0.90	21.0 ~ 23.0
		Deviation(%)	2.89	-1.11	-
		Measured, 2011-02-24	42.6	0.89	21.8
835	Head	Recommended Limits	41.5	0.90	21.0 ~ 23.0
		Deviation(%)	2.65	-1.11	-
		Measured, 2011-02-14	53.6	0.97	21.9
	Body	Recommended Limits	55.2	0.97	21.0 ~ 23.0
		Deviation(%)	-2.90	0.00	-
		Measured, 2011-02-12	38.4	1.46	21.9
	Head	Recommended Limits	40.0	1.40	21.0 ~ 23.0
1900		Deviation(%)	-4.00	4.29	-
1900		Measured, 2011-02-11	52.3	1.55	21.7
	Body	Recommended Limits	53.3	1.52	21.0 ~ 23.0
		Deviation(%)	-1.88	1.97	-
		Measured, 2011-02-15	37.6	1.84	21.9
	Head	Recommended Limits	39.2	1.80	21.0 ~ 23.0
2450		Deviation(%)	-4.08	2.22	-
2430		Measured, 2011-02-15	51.1	2.01	21.9
	Body	Recommended Limits	52.7	1.95	21.0 ~ 23.0
		Deviation(%)	-3.04	3.08	-



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#### The composition of the brain tissue simulating liquid

The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

Ingredients	Frequency (MHz)									
(% by weight)	4:	50	83	35	9	15	19	00	24	50
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Water	38.56	51.16	41.45	52.4	41.05	56.0	54.9	40.4	62.7	73.2
Salt (NaCl)	3.95	1.49	1.45	1.4	1.35	0.76	0.18	0.5	0.5	0.04
Sugar	56.32	46.78	56.0	45.0	56.5	41.76	0.0	58.0	0.0	0.0
HEC	0.98	0.52	1.0	1.0	1.0	1.21	0.0	1.0	0.0	0.0
Bactericide	0.19	0.05	0.1	0.1	0.1	0.27	0.0	0.1	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.8	0.0
DGBE	0.0	0.0	0.0	0.0	0.0	0.0	44.92	0.0	0.0	26.7
Dielectric Constant	43.42	58.0	42.54	56.1	42.0	56.8	39.9	54.0	39.8	52.5
Conductivity (S/m)	0.85	0.83	0.91	0.95	1.0	1.07	1.42	1.45	1.88	1.78

Salt: 99  $^{+}\%$  Pure Sodium Chloride Sugar: 98  $^{+}\%$  Pure Sucrose Water: De-ionized, 16  $M\Omega^{+}$  resistivity HEC: Hydroxyethyl Cellulose DGBE: 99  $^{+}\%$  Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy)ethanol]

Triton X-100 (ultra pure): Polyethylene glycol mono [4-(1,1, 3, 3-tetramethylbutyl)phenyl]ether

#### 1.12 Test Standards and Limits

According to FCC 47CFR §2.1093(d) The limits to be used for evaluation are based generally on criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate ("SAR") in Section 4.2 of "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," ANSI/IEEE C95.3–2003, Copyright 2003 by the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017. These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in "Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields," NCRP Report No. 86, Section 17.4.5. Copyright NCRP, 1986, Bethesda, Maryland 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards. The criteria to be used are specified in paragraphs (d)(1) and (d)(2) of this section and shall apply for portable devices transmitting in the



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frequency range from 100 kHz to 6 GHz. Portable devices that transmit at frequencies above 6 GHz are to be evaluated in terms of the MPE limits specified in § 1.1310 of this chapter. Measurements and calculations to demonstrate compliance with MPE field strength or power density limits for devices operating above 6 GHz should be made at a minimum distance of 5 cm from the radiating source.

- (1) Limits for Occupational/Controlled exposure: 0.4 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 8 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 20 W/kg, as averaged over an 10 grams of tissue (defined as a tissue volume in the shape of a cube). Occupational/Controlled limits apply when persons are exposed as a consequence of their employment provided these persons are fully aware of and exercise control over their exposure. Awareness of exposure can be accomplished by use of warning labels or by specific training or education through appropriate means, such as an RF safety program in a work environment.
- (2) Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure. Warning labels placed on consumer devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section.(Table .4)

Human Exposure	Uncontrolled Environment General Population	Controlled Environment Occupational	
Partial Peak SAR (Partial)	1.60 m W/g	8.00 m W/g	
Partial Average SAR (Whole Body)	0.08 m W/g	0.40 m W/g	
Partial Peak SAR (Hands/Feet/Ankle/Wrist)	4.00 m W/g	20.00 m W/g	

Table .4 RF exposure limits



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# 2. Instruments List

Maunfacturer	Device	Туре	Serial Number	Due date of Calibration
Stäubli	Robot	RX90BL	F03/5W05A1/A/01	N/A
Schmid& Partner Engineering AG	Dosimetric E-Field Probe	ET3DV6	1782	April 28, 2011
Schmid& Partner Engineering AG	835 MHz System Validation Dipole	D835V2	490	May 21, 2012
Schmid& Partner Engineering AG	1900 MHz System Validation Dipole	D1900V2	5d033	May 26, 2012
Schmid& Partner Engineering AG	2450 MHz System Validation Dipole	D2450V2	734	May 27, 2012
Schmid& Partner Engineering AG	Data acquisition Electronics	DAE3	567	January 27, 2012
Schmid& Partner Engineering AG	Software	DASY 4 V4.7	-	N/A
Schmid& Partner Engineering AG	Phantom	SAM Phantom V4.0	TP-1299 TP-1300	N/A
Agilent	Network Analyzer	E5070B	MY42100282	March 31, 2011
Agilent	Dielectric Probe Kit	85070D	2184	N/A
Agilent	Power Meter	E4419B	GB43311126	September 28, 2011
Agilent	Power Sensor	Е9300Н	MY41495307 MY41495308	October 01, 2011 October 01, 2011
Agilent	Signal Generator	E4421B	MY43350132	September 28, 2011
Empower RF Systems	Power Amplifier	2001- BBS3Q7ECK	1032 D/C 0336	March 31, 2011
Agilent	Dual Directional Coupler	777D 778D	50128 50454	September 28, 2011
Microlab	LP Filter	LA-15N LA-30N	N/A	October 01, 2011
R&S	Mobile Test Unit	CMU 200	107279	March 31, 2011



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# 3. Summary of Results

#### **3.1 FCC Power Measurement Procedures**

Power measurements were performed using a base station simulator under digital average power.

The handset was placed into a simulated call using a base station simulator in shielded chamber. SAR measurements were taken with a fully charged battery. In order to verify that the device was tested and maintained at full power, this was configured with the base station simulator. The SAR measurement Software calculates a reference point at the start and end of the test to check for power drifts. If conducted power deviations of more than 5 % occurred, the tests were repeated.

#### 3.2 RF Conducted Power

#### **GSM**

			Conducted Average Power(dBm)					
	Channel	Frequency(MHz)	GSM		GP	RS		
			USM	1 Tx Slot	2 Tx Slot	3 Tx Slot	4 Tx Slot	
CCM 050	128	824.2	32.3	32.3	28.8	27.1	25.9	
GSM 850 Band	190	836.6	32.2	32.2	28.7	26.9	25.8	
Band	251	848.8	32.1	32.1	28.5	26.7	25.6	
P.CC 1000	512	1850.2	29.8	29.8	26.3	24.4	23.3	
PCS 1900 Band	661	1880.0	29.9	29.9	26.4	24.5	23.4	
Band	810	1909.8	30.0	30.0	26.5	24.6	23.5	

			Conducted Power(dBm)				
	Channel	Frequency(MHz)		ED	GE		
			1 Tx Slot	2 Tx Slot	3 Tx Slot	4 Tx Slot	
CCM 070	128	824.2	27.0	25.5	24.6	22.6	
GSM 850 Band	190	836.6	26.9	25.4	24.4	22.4	
Build	251	848.8	26.7	25.3	24.3	22.3	
DGG 1000	512	1850.2	25.9	24.4	23.4	21.4	
PCS 1900 Band	661	1880.0	26.0	24.5	23.5	21.6	
Build	810	1909.8	26.1	24.6	23.6	21.6	



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## WCDMA V

Band	Mode	Channe	l Free	quency(MHz)	Condu	icted Pow	ver(dBm)
WCDMAN	RMC	4132		826.4		22.51	
WCDMA V	RMC	4183		836.6		22.53	
(RMC)	RMC	4233		846.6		22.58	
		4132		826.4		22.33	
	Sub-test 1	4183		836.6		22.40	
		4233		846.6		22.38	
		4132		826.4		22.23	
	Sub-test 2	4183		836.6		22.37	
		4233		846.6		22.36	
	Sub-test 3	4132		826.4		21.79	
WODMAN		4183		836.6		21.96	
WCDMA V		4233		846.6		21.95	
(HSDPA Active)		4132		826.4		21.30	
	Sub-test 4	4183		836.6		21.44	
		4233		846.6		21.39	
		С	d	ACK,	NACK,	CQI	AGV
	Sub-test 1	2	15		8		ı
	Sub-test 2	12	15		8		1
	Sub-test 3	15	8		8	·	1
	Sub-test 4	15	4		8	·	



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## WLAN

802.116	Mode	Rated	Measured Power
Frequency (MHz)	Channel No.	(Mbps)	(dBm)
		1	14.57
2412	1	2	14.44
2412	1	5.5	14.47
		11	14.28
		1	15.03
2437	4	2	14.12
2437	6	5.5	14.75
		11	14.55
		1	15.05
2462	11	2	14.69
	11	5.5	14.17
		11	14.55

802.11g Mode		Rated	Measured Power
Frequency (MHz)	Channel No.	(Mbps)	(dBm)
		6	11.01
		9	10.48
		12	10.70
2412	1	18	10.44
2412	1	24	10.20
		36	10.76
		48	9.97
		54	9.89
		6	11.32
		9	10.20
	6	12	10.17
2437		18	10.01
2437	U	24	9.94
		36	10.87
		48	9.91
		54	9.81
		6	11.42
		9	10.44
		12	10.24
2462	11	18	10.98
	11	24	10.57
		36	10.17
		48	10.53
		54	9.97

### Bluetooth

Channel	Frequency (MHz)	GFSK (dBm)	8DPSK (dBm)
Low	2402	0.99	-1.34
Middle	2441	1.71	-0.64
High	2480	1.56	-0.77



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## 3.3 KDB 648474 D01 SAR Handsets Multi Xmiter and Ant v01r05 \_Sept. 2008

Summary of SAR Evaluation Requirements for Cell Phone with Multiple Transmitters

These procedures were followed according to KDB 648474 document "SAR Handsets Multi Xmiter and Ant v01r05", September 2008. The procedures are applicable to phones with built-in unlicensed transmitters, such as 802.11 a/b/g and Bluetooth devices.

#### < Output Power Thresholds for Unlicensed Transmitters>

	2.45	5.15 - 5.35	5.47 - 5.85	GHz	
$P_{\mathrm{Ref}}$	12	6	5	mW	
Device output power should be rounded to the nearest mW to compare with values specified in this table.					

#### <SAR Evaluation Requirements for Cellphones with Multiple Transmitters>

	Individual Transmitter	Simultaneous Transmission
Licensed Transmitters	Routine evaluation required	SAR not required: Unlicensed only
Unlicensed Transmitters	When there is no simultaneous transmission — o output $\leq$ 60/f: SAR not required o output $\geq$ 60/f: stand-alone SAR required When there is simultaneous transmission — Stand-alone SAR not required when output $\leq$ 2- $P_{bef}$ and antenna is $\geq$ 5.0 cm from other antennas output $\leq$ $P_{Ref}$ and antenna is $\geq$ 2.5 cm from other antennas output $\leq$ $P_{Ref}$ and antenna is $\leq$ 2.5 cm from other antennas, each with either output power $\leq$ $P_{Ref}$ or 1-g SAR $\leq$ 1.2 W/kg Otherwise stand-alone SAR is required when stand-alone SAR is required o test SAR on highest output channel for each wireless mode and exposure condition of SAR for highest output channel is $\geq$ 50% of SAR limit, evaluate all channels according to normal procedures	<ul> <li>when stand-alone 1-g SAR is not required and antenna is ≥ 5 cm from other antennas</li> <li>Licensed &amp; Unlicensed</li> <li>when the sum of the 1-g SAR is &lt; 1.6 W/kg for all simultaneous transmitting antennas</li> <li>when SAR to peak location separation ratio of simultaneous transmitting antenna pair is &lt; 0.3</li> <li>SAR required:</li> <li>Licensed &amp; Unlicensed antenna pairs with SAR to peak location separation ratio ≥ 0.3; test is only required for the configuration that results in the highest SAR in stand-alone configuration for each wireless mode and exposure condition.</li> <li>Note: simultaneous transmission exposure conditions for head and body can be different for different style phones; therefore, different test requirements may apply.</li> </ul>
Jaw, Mouth and Nose	Flat phantom SAR required  o when measurement is required in tight regions of SAM and it is not feasible or the results can be questionable due to probe tilt, calibration, positioning and orientation issues  o position rectangular and clam-shell phones according to flat phantom procedures and conduct SAR measurements for these specific locations	When simultaneous transmission SAR testing is required, contact the FCC Laboratory for interim guidance.



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### <KDB 648474 Simultaneous SAR evaluation>

Mode (f)	P (dBm)	P (mW)	Stand-alone SAR
GSM 850	32.30	1698.24	Yes
PCS 1900	30.00	1000.00	Yes
WCDMA V	22.58	181.13	Yes
WLAN	15.05	31.99	Yes
Bluetooth	1.71	1.48	No

<sup>⇒</sup> Simultaneous and Stand-alone SAR for Bluetooth is not required.

## <Simultaneous Transmission Summation for Held to Ear Voice Call with Hotspot Active Scenario>

Simultaneous TX	configuration	850 GSM SAR(W/kg)	WIFI SAR (W/kg)	∑SAR (W/kg)
	Right Cheek	0.853	0.193	1.046
Hand CAD	Right Tilt	0.425	0.180	0.605
Head SAR	Left Cheek	0.824	0.349	1.173
	Left Tilt	0.397	0.182	0.579
Simultaneous TX	configuration	1900 GSM SAR(W/kg)	WIFI SAR (W/kg)	∑SAR (W/kg)
	Right Cheek	0.644	0.193	0.837
Hand CAD	Right Tilt	0.265	0.180	0.445
Head SAR	Left Cheek	0.703	0.349	1.052
	Left Tilt	0.262	0.182	0.444
Simultaneous TX	configuration	WCDMA V SAR(W/kg)	WIFI SAR (W/kg)	∑SAR (W/kg)
	Right Cheek	1.010	0.193	1.203
Hood CAD	Right Tilt	0.442	0.180	0.622
Head SAR	Left Cheek	1.000	0.349	1.349
	Left Tilt	0.423	0.182	0.605



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### <Simultaneous Transmission Summation for 2G/3G Hotspot Data and WIFI Hotspot Active Scenario>

Simultaneous TX	configuration	850 GSM SAR(W/kg)	WIFI SAR (W/kg)	∑SAR (W/kg)
	Back	1.220	0.164	1.384
	Front	0.714	0.159	0.873
Body SAR	Right Edge (B)	0.354	0.161	0.515
bouy SAK	Left Edge (A)	0.392	-	0.392
	Top Edge (D)	-	0.067	0.067
	Bottom Edge (C)	0.108	1	0.108
Simultaneous TX	configuration	1900 GSM SAR(W/kg)	WIFI SAR (W/kg)	∑SAR (W/kg)
	Back	1.260	0.164	1.424
	Front	0.600	0.159	0.759
D a Jac C A D	Right Edge (B)	0.160	0.161	0.321
Body SAR	Left Edge (A)	0.196	-	0.196
	Top Edge (D)	-	0.067	0.067
	Bottom Edge (C)	0.648	-	0.648
Simultaneous TX	configuration	WCDMA V SAR(W/kg)	WIFI SAR (W/kg)	∑SAR (W/kg)
	Back	1.080	0.164	1.244
	Front	0.936	0.159	1.095
Dody SAD	Right Edge (B)	0.427	0.161	0.588
Body SAR	Left Edge (A)	0.499	-	0.499
	Top Edge (D)	-	0.067	0.067
	Bottom Edge (C)	0.115	-	0.115

<sup>\*\*</sup> The above tables represent the worst-case simultaneous transmission scenarios possible with this device.

Note: "-" SAR results shown in the table are zero for summation purposes. SAR was not required to be measured due to exclusions mentioned in Section "3.4 SAR Test Configuration".

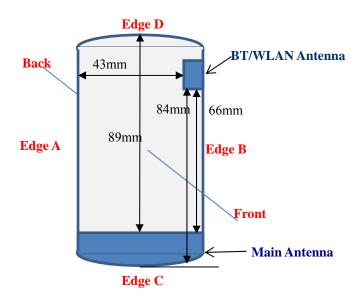
The above numerical summed SAR was below the SAR limit. Therefore, the above analysis is sufficient to determine that simultaneous transmission cases will not exceed the SAR limit. Therefore, no volumetric SAR summation is required since the numerical sums are below the limit.



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## 3.4 SAR Test Configuration

	U					
Mode	Front	Back	Edge A	Edge B	Edge C	Edge D
GPRS 850	О	О	О	О	О	X
GPRS 1900	О	О	О	О	О	X
WCDMA V	О	О	О	О	О	X
WLAN	О	О	X	О	X	О





### 3.5 SAR Data Summary

Report File No.: F690501/RF-SAR001918-A1

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Ambient Temperature (°C)	21.8
Liquid Temperature (°C)	21.8
Date	2011-02-13, 24

## **GSM850 Head SAR**

- TT 1	Traffic (		Channel	Power	1 g SAR	1 g SAR
Head	Position	Frequency (MHz)	Channel	Channel Drift(dB)	(W/kg)	Limits (W/kg)
	Cheek	824.2	128	-0.065	0.730	
Left	Cheek	836.6	190	-0.198	0.824	
Ear	Cheek	848.8	251	-0.108	0.820	
	Tilt	836.6	190	-0.148	0.397	1.6
	Cheek	824.2	128	-0.019	0.652	1.0
Right	Cheek	836.6	190	0.068	0.853	
Ear	Cheek	848.8	251	0.132	0.757	
	Tilt	836.6	190	0.016	0.425	

- 1. The test data reported are the worst-case SAR value with the position set in a typical configuration.
- 2. All modes of operation were investigated, and worst-case results are reported.
- 3. Battery is fully charged for all readings and the standard batteries are the only options.
- 4. Liquid tissue depth was at least 15 cm.
- 5. Justification for reduced test configuration: Per FCC/OET Bulletin 65 Supplement C [July 2001], if the SAR measured at the middle channel for each test configuration is at least 3.0 dB lower than the SAR limit, testing at the high and low channel is optional for such test configurations.



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<b>GSM850</b>	<b>Body</b>	Hotspot	SAR
---------------	-------------	---------	-----

Ambient Temperature (°C)	21.9
Liquid Temperature (°C)	21.9
Date	2011-02-14

Test Mode	EUT	EUT Position Slot	Traffic (	Traffic Channel		1 g SAR	1 g SAR
	Position		Frequency (MHz)	Channel	Drift(dB)	(W/kg)	Limits (W/kg)
	Front	2 Tx	836.6	190	0.000	0.714	
	Back	2 Tx	824.2	128	-0.022	0.868	
	Back	2 Tx	836.6	190	-0.055	0.912	
	Back	2 Tx	848.8	251	0.017	0.986	1.6
	Edge A	2 Tx	836.6	190	-0.052	0.392	
	Edge B	2 Tx	836.6	190	-0.047	0.354	
	Edge C	2 Tx	836.6	190	0.000	0.108	
CDDC	Back	1 Tx	824.2	128	0.019	0.957	
GPRS	Back	1 Tx	836.6	190	0.043	1.020	
	Back	1 Tx	848.8	251	-0.026	1.220	
	Back	3 Tx	824.2	128	0.018	0.827	
	Back	3 Tx	836.6	190	-0.015	0.876	
	Back	3 Tx	848.8	251	-0.170	1.01	
	Back	4 Tx	824.2	128	0.039	0.852	
	Back	4 Tx	836.6	190	-0.004	0.893	
	Back	4 Tx	848.8	251	0.000	1.05	

- 1. The test data reported are the worst-case SAR value with the position set in a typical configuration.
- 2. All modes of operation were investigated, and worst-case results are reported.
- 3. Battery is fully charged for all readings and the standard batteries are the only options.
- 4. Liquid tissue depth was at least 15 cm.
- 5. Justification for reduced test configuration: Per FCC/OET Bulletin 65 Supplement C [July 2001], if the SAR measured at the middle channel for each test configuration is at least 3.0 dB lower than the SAR limit, testing at the high and low channel is optional for such test configurations.
- 6. The distance from EUT to flat phantom for testing Body SAR is 10 mm.
- 7. Edge D was not tested since the antenna distance to edge was greater than 2.5 cm per Oct. 2010 TCB workshop guidance.



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Ambient Temperature (°C)	21.9
Liquid Temperature (°C)	21.9
Date	2011-02-12

## PCS1900 Head SAR

Haad	H. J. EUT		Traffic Channel		1 g SAR	1 g SAR Limits
Head	Position	Frequency (MHz)	Channel	Drift(dB)	(W/kg)	(W/kg)
Left	Cheek	1880.0	661	0.042	0.703	
Ear	Tilt	1880.0	661	-0.070	0.262	1.6
Right	Cheek	1880.0	661	0.070	0.644	1.0
Ear	Tilt	1880.0	661	-0.097	0.265	

- 1. The test data reported are the worst-case SAR value with the position set in a typical configuration.
- 2. All modes of operation were investigated, and worst-case results are reported.
- 3. Battery is fully charged for all readings and the standard batteries are the only options.
- 4. Liquid tissue depth was at least 15 cm.
- 5. Justification for reduced test configuration: Per FCC/OET Bulletin 65 Supplement C [July 2001], if the SAR measured at the middle channel for each test configuration is at least 3.0 dB lower than the SAR limit, testing at the high and low channel is optional for such test configurations.



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<b>PCS1900</b>	<b>Body</b>	Hotspot	SAR
	Doug	LICUSPUL	DIAI

Ambient Temperature (°C)	21.7
Liquid Temperature (°C)	21.7
Date	2011-02-11

Test Mode	EUT	EUT Position Slot	Traffic Channel		Power	1 g SAR	1 g SAR
	Position		Frequency (MHz)	Channel	Drift(dB)	(W/kg)	Limits (W/kg)
	Front	2 Tx	1880.0	661	0.014	0.600	
	Back	2 Tx	1850.2	512	-0.050	0.748	
	Back	2 Tx	1880.0	661	-0.073	0.945	
	Back	2 Tx	1909.8	810	0.000	1.24	1.6
	Edge A	2 Tx	1880.0	661	0.004	0.196	
	Edge B	2 Tx	1880.0	661	-0.033	0.160	
	Edge C	2 Tx	1880.0	661	-0.092	0.648	
CDDC	Back	1 Tx	1850.2	512	-0.042	0.727	
GPRS	Back	1 Tx	1880.0	661	0.017	0.997	
	Back	1 Tx	1909.8	810	-0.122	1.26	
	Back	3 Tx	1850.2	512	0.012	0.720	
	Back	3 Tx	1880.0	661	-0.041	0.923	
	Back	3 Tx	1909.8	810	-0.059	1.17	
	Back	4 Tx	1850.2	512	-0.093	0.713	
	Back	4 Tx	1880.0	661	-0.014	0.968	
	Back	4 Tx	1909.8	810	-0.125	1.22	

- 1. The test data reported are the worst-case SAR value with the position set in a typical configuration.
- 2. All modes of operation were investigated, and worst-case results are reported.
- 3. Battery is fully charged for all readings and the standard batteries are the only options.
- 4. Liquid tissue depth was at least 15 cm.
- 5. Justification for reduced test configuration: Per FCC/OET Bulletin 65 Supplement C [July 2001], if the SAR measured at the middle channel for each test configuration is at least 3.0 dB lower than the SAR limit, testing at the high and low channel is optional for such test configurations.
- 6. The distance from EUT to flat phantom for testing Body SAR is 10 mm.
- 7. Edge D was not tested since the antenna distance to edge was greater than 2.5 cm per Oct. 2010 TCB workshop guidance.



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Ambient Temperature (°C)	21.8
Liquid Temperature (°C)	21.8
Date	2011-02-13

## WCDMA V Head SAR

HJ	EUT	Traffic Channel		Power	1 g SAR	1 g SAR
Head	Position Frequency (MHz) Channel		Drift(dB)	(W/kg)	Limits (W/kg)	
	Cheek	826.4	4132	0.166	0.747	
Left	Cheek	836.6	4183	-0.123	0.865	
Ear	Cheek	846.6	4233	-0.074	1.000	
	Tilt	836.6	4183	-0.050	0.423	1.6
	Cheek	826.4	4132	-0.068	0.798	1.0
Right	Cheek	836.6	4183	-0.039	0.857	
Ear	Cheek	846.6	4233	-0.176	1.01	
	Tilt	836.6	4183	-0.055	0.442	

- 1. The test data reported are the worst-case SAR value with the position set in a typical configuration.
- 2. All modes of operation were investigated, and worst-case results are reported.
- 3. Battery is fully charged for all readings and the standard batteries are the only options.
- 4. Liquid tissue depth was at least 15 cm.
- 5. Justification for reduced test configuration: Per FCC/OET Bulletin 65 Supplement C [July 2001], if the SAR measured at the middle channel for each test configuration is at least 3.0 dB lower than the SAR limit, testing at the high and low channel is optional for such test configurations.
- 6. WCDMA mode was tested under RMC 12.2 kbps with HSPA inactive.



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Ambient Temperature (°C)	21.9
Liquid Temperature (°C)	21.9
Date	2011-02-14

Test	EUT Position	Slot	Traffic Channel		Power	1 g SAR	1 g SAR
Mode			Frequency (MHz)	Channel	Drift(dB)	(W/kg)	Limits (W/kg)
	Front	N/A	826.4	4132	0.009	0.770	
	Front	N/A	836.6	4183	0.023	0.824	
	Front	N/A	846.6	4233	-0.156	0.936	
	Back	N/A	826.4	4132	-0.063	0.965	
RMC	Back	N/A	836.6	4183	-0.078	0.999	1.6
	Back	N/A	846.6	4233	-0.013	1.08	
	Edge A	N/A	836.6	4183	-0.038	0.499	
	Edge B	N/A	836.6	4183	0.022	0.427	
	Edge C	N/A	836.6	4183	0.012	0.115	

- 1. The test data reported are the worst-case SAR value with the position set in a typical configuration.
- 2. All modes of operation were investigated, and worst-case results are reported.
- 3. Battery is fully charged for all readings and the standard batteries are the only options.
- 4. Liquid tissue depth was at least 15 cm.
- 5. Justification for reduced test configuration: Per FCC/OET Bulletin 65 Supplement C [July 2001], if the SAR measured at the middle channel for each test configuration is at least 3.0 dB lower than the SAR limit, testing at the high and low channel is optional for such test configurations.
- 6. The distance from EUT to flat phantom for testing Body SAR is 10 mm.
- 7. WCDMA mode in Body SAR was tested under RMC 12.2 kbps with HSPA inactive.
- 8. Edge D was not tested since the antenna distance to edge was greater than 2.5 cm per Oct. 2010 TCB workshop guidance.



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Ambient Temperature (°C)	21.8
Liquid Temperature (°C)	21.8
Date	2011-02-10

## **WLAN Head SAR**

Head	Test Mode	EUT Position	Traffic Channel		Power	1 g SAR	1 g SAR
			Frequency (MHz)	Channel	Drift(dB)	(W/kg)	Limits (W/kg)
Left Ear	11b	Cheek	2412	1	0.131	0.349	1.6
	11b	Cheek	2437	6	-0.151	0.327	
	11b	Cheek	2462	11	-0.142	0.306	
	11b	Tilt	2437	6	0.018	0.182	
Right Ear	11b	Cheek	2437	6	0.160	0.193	
	11b	Tilt	2437	6	0.151	0.180	

- 1. The test data reported are the worst-case SAR value with the position set in a typical configuration.
- 2. All modes of operation were investigated, and worst-case results are reported.
- 3. Battery is fully charged for all readings and the standard batteries are the only options.
- 4. Liquid tissue depth was at least 15 cm.
- 5. Justification for reduced test configuration: Per FCC/OET Bulletin 65 Supplement C [July 2001], if the SAR measured at the middle channel for each test configuration is at least 3.0 dB lower than the SAR limit, testing at the high and low channel is optional for such test configurations.
- 6. WLAN could be used for data transmission during voice communication at the same time.
- 7. KDB 248227 <SAR Measurement Procedures for 802.11 a/b/g Transmitters>
  - Channel 1, 6 and 11 were tested by the definition of "default test channels".
  - Highest average RF output power channel for the lowest data rate were selected for SAR evaluation. Other mode were not tested since the average output powers were not greater than 0.25 dB than that of the corresponding channel in the lowest data rate IEEE 802.11b mode.



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Ambient Temperature (°C)	21.8
Liquid Temperature (°C)	21.8
Date	2011-02-10

## WLAN Body Hotspot SAR

Body	Test Mode	EUT Position	Traffic Channel		Power	1 g SAR	1 g SAR
			Frequency (MHz)	Channel	Drift(dB)	(W/kg)	Limits (W/kg)
Body	11b	Front	2437	6	0.191	0.159	1.6
	11b	Back	2412	1	-0.057	0.148	
	11b	Back	2437	6	0.145	0.164	
	11b	Back	2462	11	0.059	0.137	
	11b	Edge B	2437	6	0.069	0.161	
	11b	Edge D	2437	6	-0.132	0.067	

- 1. The test data reported are the worst-case SAR value with the position set in a typical configuration.
- 2. All modes of operation were investigated, and worst-case results are reported.
- 3. Battery is fully charged for all readings and the standard batteries are the only options.
- 4. Liquid tissue depth was at least 15 cm.
- 5. Justification for reduced test configuration: Per FCC/OET Bulletin 65 Supplement C [July 2001], if the SAR measured at the middle channel for each test configuration is at least 3.0 dB lower than the SAR limit, testing at the high and low channel is optional for such test configurations.
- 6. The distance from EUT to flat phantom for testing Body SAR is 10 mm.
- 7. KDB 248227 <SAR Measurement Procedures for 802.11 a/b/g Transmitters>
  - Channel 1, 6 and 11 were tested by the definition of "default test channels".
  - Highest average RF output power channel for the lowest data rate were selected for SAR evaluation. Other mode were not tested since the average output powers were not greater than 0.25 dB than that of the corresponding channel in the lowest data rate IEEE 802.11b mode.
- 8. Edge A and Edge C was not tested since the antenna distance to edge was greater than 2.5 cm per Oct. 2010 TCB workshop guidance.



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## Appendix

## List

Appendix A	DASY4 Report (Plots of the SAR Measurements)	<ul> <li>- 835 MHz, 1900 MHz,</li> <li>2450 MHz Validation Test</li> <li>- GSM850 Test</li> <li>- PCS1900 Test</li> <li>- WCDMA V Test</li> <li>- WLAN Test</li> </ul>
Appendix B	Uncertainty Analysis	
Appendix C	Calibration Certificate	- PROBE - DAE3 - DIPOLE



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# Appendix A

**Test Plot - DASY4 Report** 



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## 835 MHz Validation Test\_Head

Date: 2011-02-13

Test Laboratory: SGS Testing Korea File Name: <u>Validation 835 MHz\_Head.da4</u>

Input Power: 250 mW

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:490

Program Name: Validation 835 MHz

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: f = 835 MHz;  $\sigma = 0.891$  mho/m;  $\varepsilon_r = 42.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 - SN1782; ConvF(6.26, 6.26, 6.26); Calibrated: 2010-04-28

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP\_900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

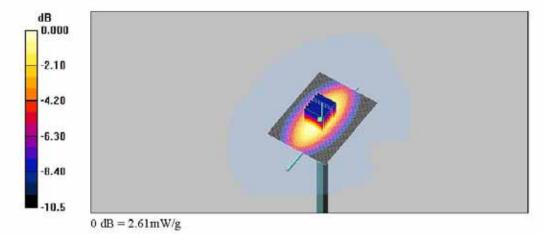
Validation 835 MHz/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 2.61 mW/g

Validation 835 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.0 V/m; Power Drift = -0.028 dB

Peak SAR (extrapolated) = 3.55 W/kg

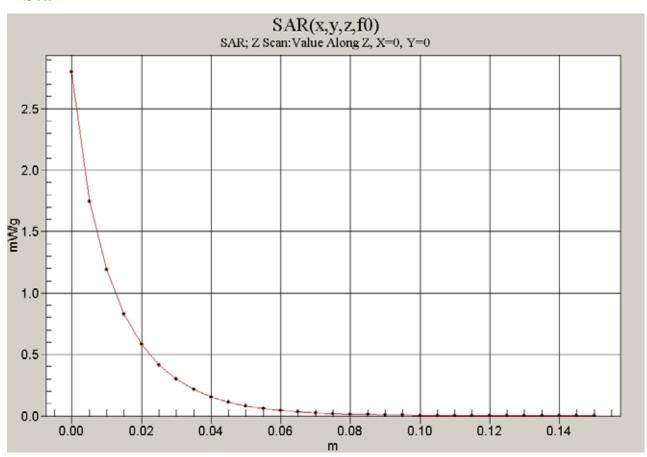
SAR(1 g) = 2.41 mW/g; SAR(10 g) = 1.58 mW/g Maximum value of SAR (measured) = 2.61 mW/g





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## Z Scan





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## 835 MHz Validation Test Head -1

Date: 2011-02-24

Test Laboratory: SGS Testing Korea File Name: Validation 835 MHz\_Head-1.da4

Input Power: 250 mW

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:490

Program Name: Validation 835 MHz

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: f = 835 MHz;  $\sigma = 0.891$  mho/m;  $\varepsilon_r = 42.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 - SN1782; ConvF(6.26, 6.26, 6.26); Calibrated: 2010-04-28

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP\_900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

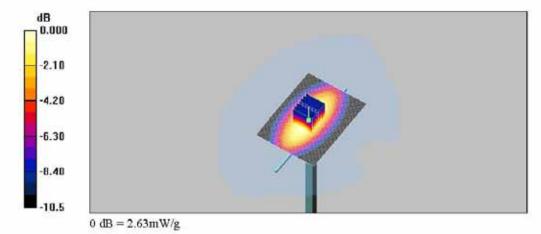
Validation 835 MHz/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 2.62 mW/g

Validation 835 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.2 V/m; Power Drift = -0.018 dB

Peak SAR (extrapolated) = 3.58 W/kg

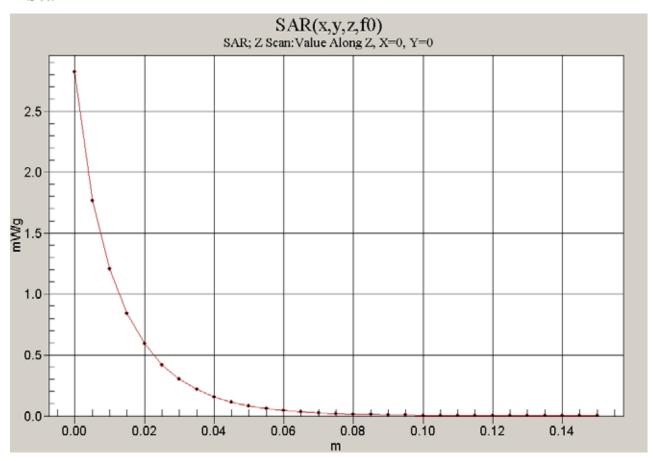
SAR(1 g) = 2.43 mW/g; SAR(10 g) = 1.59 mW/g Maximum value of SAR (measured) = 2.63 mW/g





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## Z Scan





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## 835 MHz Validation Test\_Body

Date: 2011-02-14

Test Laboratory: SGS Testing Korea File Name: Validation 835 MHz Body.da4

Input Power: 250 mW

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:490

Program Name: Validation 835 MHz Body

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): f = 835 MHz;  $\sigma = 0.968 \text{ mho/m}$ ;  $\epsilon_r = 53.6$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 - SN1782; ConvF(6.11, 6.11, 6.11); Calibrated: 2010-04-28

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP\_900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

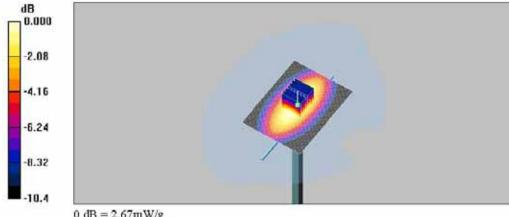
Validation 835 MHz/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 2.68 mW/g

Validation 835 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.5 V/m; Power Drift = 0.003 dB

Peak SAR (extrapolated) = 3.60 W/kg

SAR(1 g) = 2.48 mW/g; SAR(10 g) = 1.63 mW/gMaximum value of SAR (measured) = 2.67 mW/g

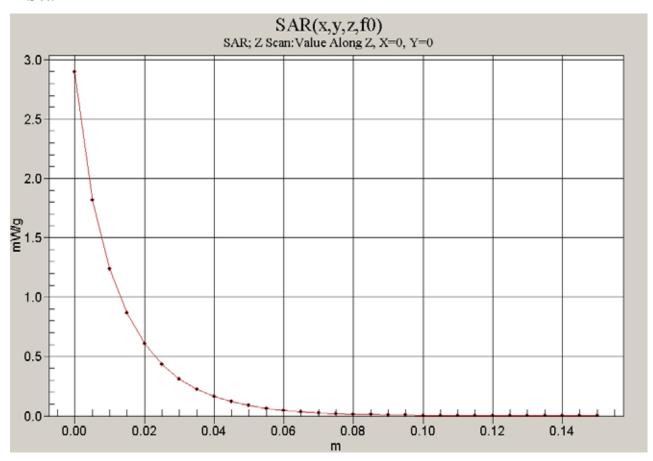


0 dB = 2.67 mW/g



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# Z Scan





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### 1900 MHz Validation Test Head

Date: 2011-02-12

Test Laboratory: SGS Testing Korea File Name: <u>Validation 1900 MHz Head.da4</u>

Input Power: 250 mW

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d033

Program Name: Validation 1900 MHz

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: f = 1900 MHz;  $\sigma = 1.46 \text{ mho/m}$ ;  $\epsilon_r = 38.4$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 - SN1782; ConvF(5, 5, 5); Calibrated: 2009-04-30

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

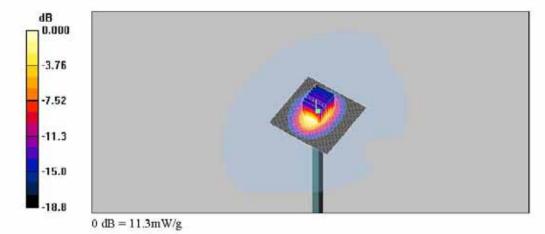
Validation 1900 MHz/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 12.0 mW/g

Validation 1900 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 90.5 V/m; Power Drift = -0.012 dB

Peak SAR (extrapolated) = 17.3 W/kg

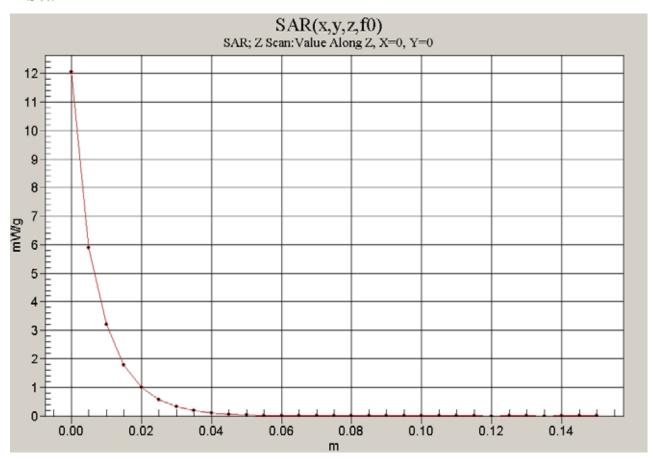
SAR(1 g) = 9.92 mW/g; SAR(10 g) = 5.17 mW/g Maximum value of SAR (measured) = 11.3 mW/g





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# Z Scan





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## 1900 MHz Validation Test\_Body

Date: 2011-02-11

Test Laboratory: SGS Testing Korea File Name: <u>Validation 1900 MHz Body.da4</u>

Input Power: 250 mW

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d033

Program Name: Validation 1900 MHz

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: f = 1900 MHz;  $\sigma = 1.55 \text{ mho/m}$ ;  $\varepsilon_r = 52.3$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.46, 4.46, 4.46); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

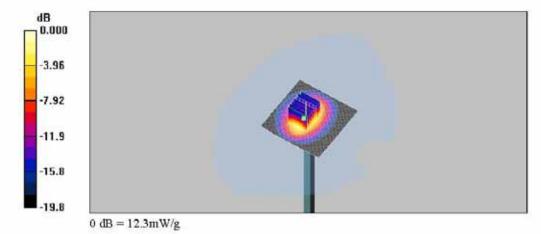
Validation 1900 MHz/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 12.7 mW/g

Validation 1900 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 90.8 V/m; Power Drift = -0.097 dB

Peak SAR (extrapolated) = 17.9 W/kg

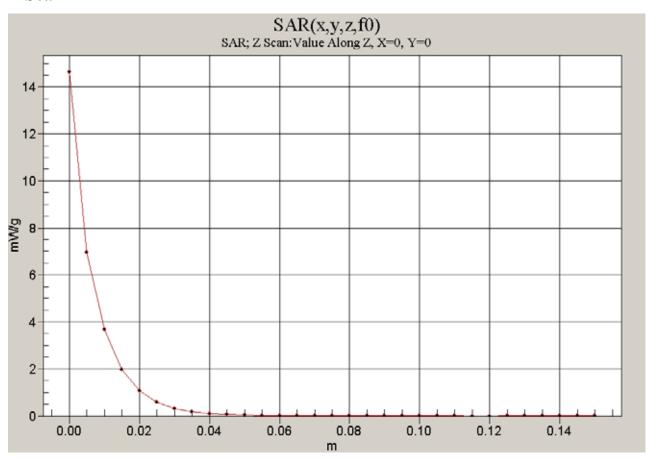
SAR(1 g) = 10.8 mW/g; SAR(10 g) = 5.53 mW/g Maximum value of SAR (measured) = 12.3 mW/g





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# Z Scan





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### 2450 MHz Validation Test Head

Date: 2011-02-15

Test Laboratory: SGS Testing Korea File Name: Validation 2450 MHz Head.da4

Input Power: 250 mW

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:734

Program Name: Validation 2450 MHz

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz;  $\sigma = 1.84 \text{ mho/m}$ ;  $\varepsilon_r = 37.6$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.48, 4.48, 4.48); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

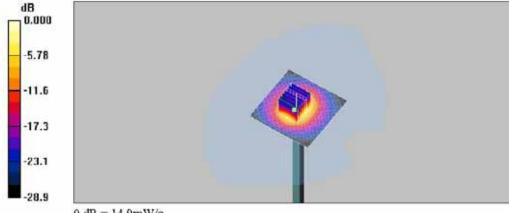
Validation 2450 MHz/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 15.1 mW/g

Validation 2450 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 92.5 V/m; Power Drift = -0.056 dB

Peak SAR (extrapolated) = 33.0 W/kg

SAR(1 g) = 13.4 mW/g; SAR(10 g) = 5.71 mW/gMaximum value of SAR (measured) = 14.9 mW/g

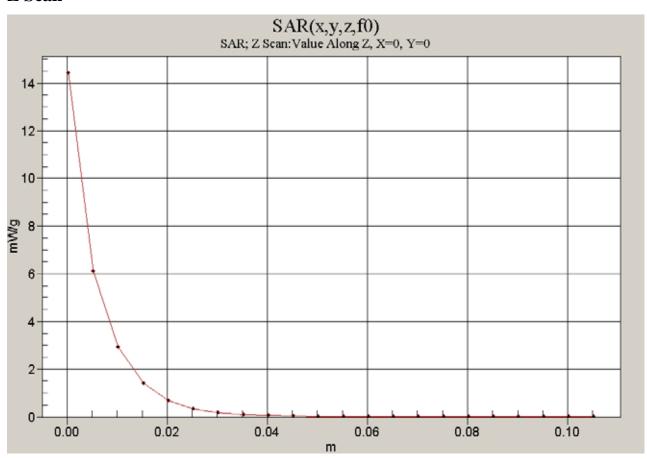


0 dB = 14.9 mW/g



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# Z Scan





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## 2450 MHz Validation Test\_Body

Date: 2011-02-15

Test Laboratory: SGS Testing Korea File Name: <u>Validation 2450 MHz Body.da4</u>

Input Power: 250 mW

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:734

Program Name: Validation 2450 MHz Body

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz;  $\sigma = 2.01 \text{ mho/m}$ ;  $\varepsilon_r = 51.1$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.07, 4.07, 4.07); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

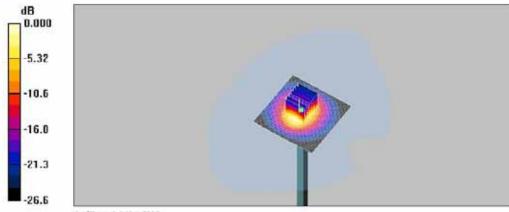
Validation 2450 MHz/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 15.7 mW/g

Validation 2450 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 83.1 V/m; Power Drift = -0.005 dB

Peak SAR (extrapolated) = 33.3 W/kg

SAR(1 g) = 13.3 mW/g; SAR(10 g) = 5.77 mW/g Maximum value of SAR (measured) = 14.6 mW/g

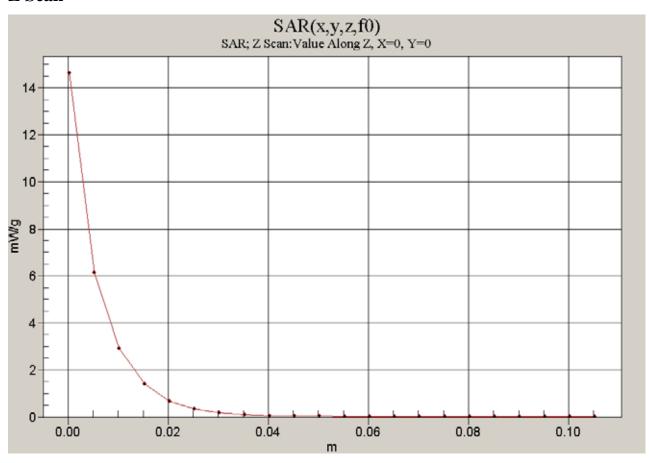


0 dB = 14.6 mW/g



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# Z Scan





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### **GSM 850 Head SAR Test**

Date: 2011-02-24

Test Laboratory: SGS Testing Korea File Name: GSM850 LE-1.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Head

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8 Medium parameters used (interpolated): f = 824.2 MHz;  $\sigma = 0.868$  mho/m;  $\epsilon_r = 42.8$ ;  $\rho = 1000$  kg/m<sup>3</sup> Phantom section: Left Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.26, 6.26, 6.26); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP\_900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

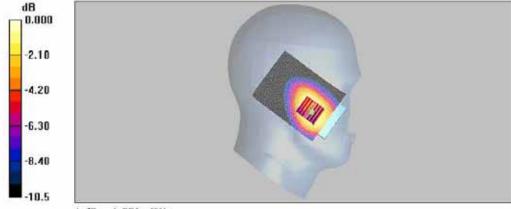
GSM850\_LE\_Low\_Cheek/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.787 mW/g

GSM850\_LE\_Low\_Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.81 V/m; Power Drift = -0.065 dB

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.730 mW/g; SAR(10 g) = 0.525 mW/g Maximum value of SAR (measured) = 0.778 mW/g



0 dB = 0.778 mW/g



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Date: 2011-02-13

Test Laboratory: SGS Testing Korea File Name: GSM850 LE.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Head

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8

Medium parameters used (interpolated): f = 836.6 MHz;  $\sigma = 0.895 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.26, 6.26, 6.26); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GSM850\_LE\_Mid\_Cheek/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.881 mW/g

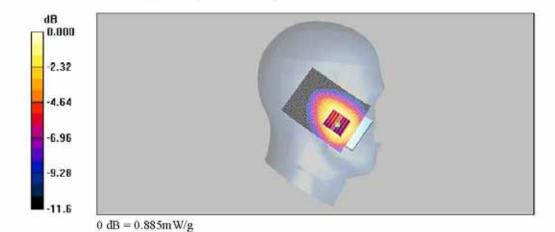
GSM850\_LE\_Mid\_Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

Reference Value = 12.1 V/m; Power Drift = -0.198 dB

Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.824 mW/g; SAR(10 g) = 0.576 mW/g Maximum value of SAR (measured) = 0.885 mW/g





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Date: 2011-02-24

Test Laboratory: SGS Testing Korea File Name: GSM850 LE-1.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Head

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8

Medium parameters used: f = 849 MHz;  $\sigma = 0.922$  mho/m;  $\varepsilon_r = 42.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.26, 6.26, 6.26); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GSM850\_LE\_High\_Cheek/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.890 mW/g

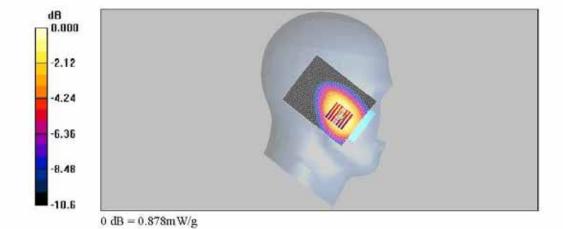
GSM850\_LE\_High\_Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

Reference Value = 9.37 V/m; Power Drift = -0.108 dB

Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.820 mW/g; SAR(10 g) = 0.589 mW/gMaximum value of SAR (measured) = 0.878 mW/g





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Date: 2011-02-13

Test Laboratory: SGS Testing Korea File Name: GSM850 LE.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Head

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8

Medium parameters used (interpolated): f = 836.6 MHz;  $\sigma = 0.895 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.26, 6.26, 6.26); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

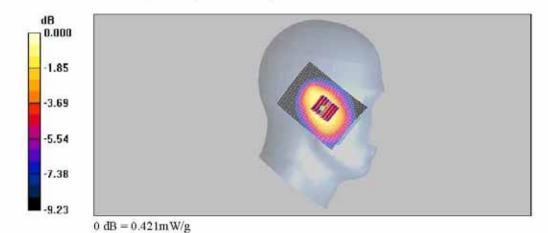
GSM850\_LE\_Mid\_Tilt/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.432 mW/g

GSM850\_LE\_Mid\_Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.8 V/m; Power Drift = -0.148 dB

Peak SAR (extrapolated) = 0.502 W/kg

SAR(1 g) = 0.397 mW/g; SAR(10 g) = 0.292 mW/gMaximum value of SAR (measured) = 0.421 mW/g





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Date: 2011-02-24

Test Laboratory: SGS Testing Korea File Name: GSM850 RE-1.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Head

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8

Medium parameters used (interpolated): f = 824.2 MHz;  $\sigma = 0.868 \text{ mho/m}$ ;  $\epsilon_e = 42.8$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.26, 6.26, 6.26); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GSM850\_RE\_Low\_Cheek/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.690 mW/g

GSM850\_RE\_Low\_Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

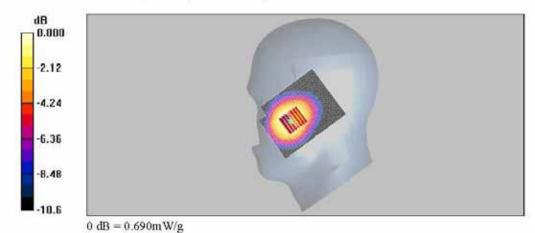
dy=5mm, dz=5mm

Reference Value = 8.41 V/m; Power Drift = -0.019 dB

Peak SAR (extrapolated) = 0.806 W/kg

SAR(1 g) = 0.652 mW/g; SAR(10 g) = 0.485 mW/g

Maximum value of SAR (measured) = 0.690 mW/g





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Date: 2011-02-13

Test Laboratory: SGS Testing Korea File Name: GSM850 RE.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Head

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8

Medium parameters used (interpolated): f = 836.6 MHz;  $\sigma = 0.895 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.26, 6.26, 6.26); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP\_900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GSM850\_RE\_Mid\_Cheek/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.885 mW/g

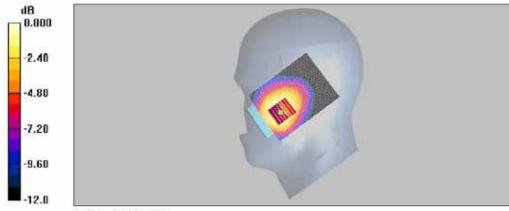
GSM850 RE Mid Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

Reference Value = 11.3 V/m; Power Drift = 0.068 dB

Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.853 mW/g; SAR(10 g) = 0.607 mW/g Maximum value of SAR (measured) = 0.920 mW/g

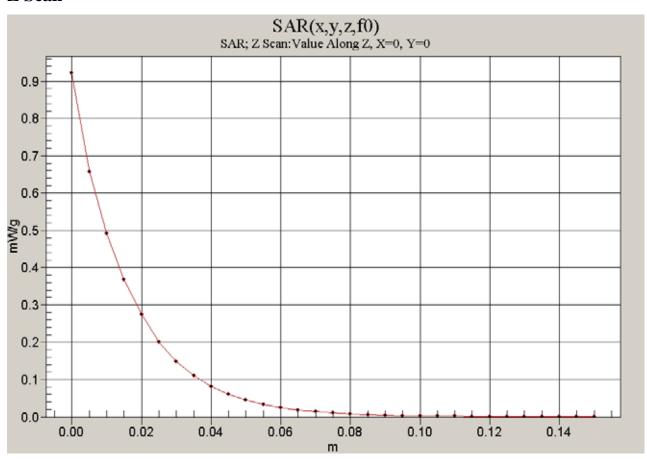


0 dB = 0.920 mW/g



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# Z Scan





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Date: 2011-02-24

Test Laboratory: SGS Testing Korea File Name: GSM850 RE-1.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Head

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8 Medium parameters used: f = 849 MHz;  $\sigma = 0.922$  mho/m;  $\varepsilon_r = 42.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.26, 6.26, 6.26); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GSM850\_RE\_High\_Cheek/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.791 mW/g

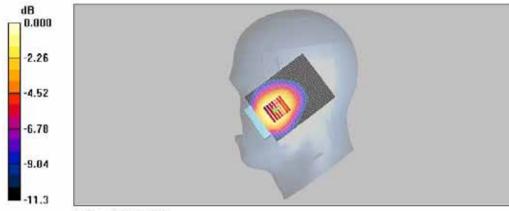
GSM850\_RE\_High\_Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

Reference Value = 8.30 V/m; Power Drift = 0.132 dB

Peak SAR (extrapolated) = 0.941 W/kg

SAR(1 g) = 0.757 mW/g; SAR(10 g) = 0.566 mW/gMaximum value of SAR (measured) = 0.821 mW/g



0 dB = 0.821 mW/g



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Date: 2011-02-13

Test Laboratory: SGS Testing Korea File Name: GSM850 RE.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Head

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8

Medium parameters used (interpolated): f = 836.6 MHz;  $\sigma = 0.895 \text{ mho/m}$ ;  $\epsilon_r = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.26, 6.26, 6.26); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

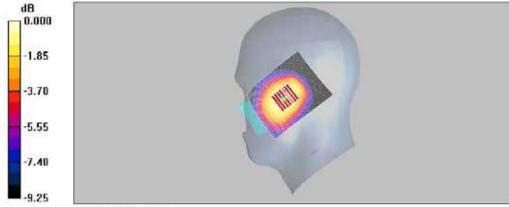
GSM850\_RE\_Mid\_Tilt/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.454 mW/g

GSM850\_RE\_Mid\_Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.5 V/m; Power Drift = 0.016 dB

Peak SAR (extrapolated) = 0.533 W/kg

SAR(1 g) = 0.425 mW/g; SAR(10 g) = 0.313 mW/gMaximum value of SAR (measured) = 0.447 mW/g



0 dB = 0.447 mW/g



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### **GSM850 Body Hotspot SAR Test**

Date: 2011-02-14

Test Laboratory: SGS Testing Korea File Name: GSM850 Body 2Tx Front.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Body

Communication System: GSM850; Frequency: 836.6 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): f = 836.6 MHz;  $\sigma = 0.97$  mho/m;  $\epsilon_r = 53.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.11, 6.11, 6.11); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP\_900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS850\_Front\_Mid\_2Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.752 mW/g

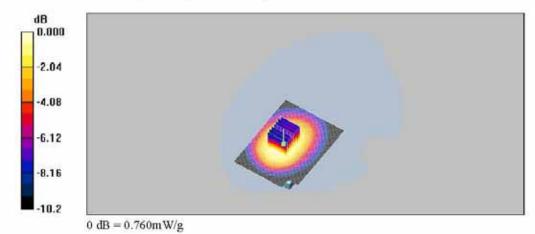
GPRS850\_Front\_Mid\_2Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

Reference Value = 11.3 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 0.947 W/kg

SAR(1 g) = 0.714 mW/g; SAR(10 g) = 0.510 mW/g Maximum value of SAR (measured) = 0.760 mW/g





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Date: 2011-02-14

Test Laboratory: SGS Testing Korea File Name: GSM850 Body 2Tx Back.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Body

Communication System: GSM850; Frequency: 824.2 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): f = 824.2 MHz;  $\sigma = 0.954 \text{ mho/m}$ ;  $\epsilon_r = 53.7$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.11, 6.11, 6.11); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS850\_Back\_Low\_2Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.930 mW/g

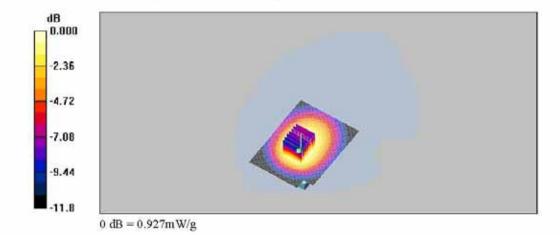
GPRS850\_Back\_Low\_2Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

Reference Value = 12.3 V/m; Power Drift = -0.022 dB

Peak SAR (extrapolated) = 1.16 W/kg

SAR(1 g) = 0.868 mW/g; SAR(10 g) = 0.612 mW/gMaximum value of SAR (measured) = 0.927 mW/g





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Date: 2011-02-14

Test Laboratory: SGS Testing Korea File Name: GSM850 Body 2Tx Back.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Body

Communication System: GSM850; Frequency: 836.6 MHz;Duty Cycle: 1:4

Medium parameters used (interpolated): f = 836.6 MHz;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 53.6$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.11, 6.11, 6.11); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS850\_Back\_Mid\_2Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.968 mW/g

GPRS850\_Back\_Mid\_2Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

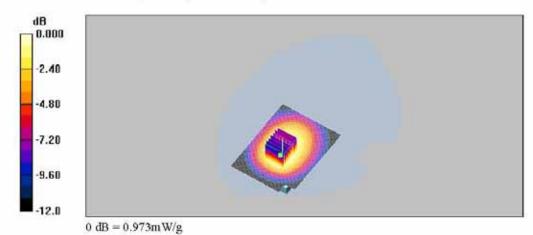
dy=5mm, dz=5mm

Reference Value = 12.7 V/m; Power Drift = -0.055 dB

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.912 mW/g; SAR(10 g) = 0.639 mW/g

Maximum value of SAR (measured) = 0.973 mW/g





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Date: 2011-02-14

Test Laboratory: SGS Testing Korea File Name: GSM850 Body 2Tx Back.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Body

Communication System: GSM850; Frequency: 848.8 MHz;Duty Cycle: 1:4

Medium parameters used (interpolated): f = 848.8 MHz;  $\sigma = 0.985 \text{ mho/m}$ ;  $\epsilon_r = 53.6$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.11, 6.11, 6.11); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS850\_Back\_High\_2Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.06 mW/g

GPRS850\_Back\_High\_2Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

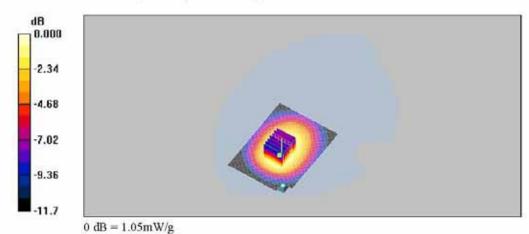
dy=5mm, dz=5mm

Reference Value = 12.9 V/m; Power Drift = 0.017 dB

Peak SAR (extrapolated) = 1.30 W/kg

SAR(1 g) = 0.986 mW/g; SAR(10 g) = 0.695 mW/g

Maximum value of SAR (measured) = 1.05 mW/g





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Date: 2011-02-14

Test Laboratory: SGS Testing Korea

File Name: GSM850 Body 2Tx Edge A&B.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Body

Communication System: GSM850; Frequency: 836.6 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): f = 836.6 MHz;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 53.6$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.11, 6.11, 6.11); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP\_900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS850\_Edge A\_Mid\_2Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.420 mW/g

GPRS850\_Edge A\_Mid\_2Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

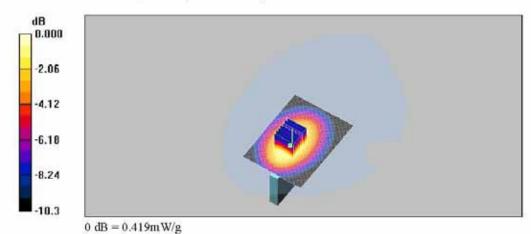
dy=5mm, dz=5mm

Reference Value = 10.7 V/m; Power Drift = -0.052 dB

Peak SAR (extrapolated) = 0.547 W/kg

SAR(1 g) = 0.392 mW/g; SAR(10 g) = 0.267 mW/g

Maximum value of SAR (measured) = 0.419 mW/g





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Date: 2011-02-14

Test Laboratory: SGS Testing Korea

File Name: GSM850 Body 2Tx Edge A&B.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Body

Communication System: GSM850; Frequency: 836.6 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): f = 836.6 MHz;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 53.6$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.11, 6.11, 6.11); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS850\_Edge B\_Mid\_2Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.379 mW/g

GPRS850\_Edge B\_Mid\_2Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

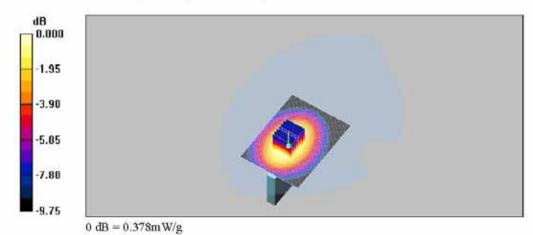
dy=5mm, dz=5mm

Reference Value = 9.86 V/m; Power Drift = -0.047 dB

Peak SAR (extrapolated) = 0.497 W/kg

SAR(1 g) = 0.354 mW/g; SAR(10 g) = 0.246 mW/g

Maximum value of SAR (measured) = 0.378 mW/g





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Date: 2011-02-14

Test Laboratory: SGS Testing Korea

File Name: GSM850 Body 2Tx Edge C.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Body

Communication System: GSM850; Frequency: 836.6 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): f = 836.6 MHz;  $\sigma = 0.97$  mho/m;  $\epsilon_r = 53.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.11, 6.11, 6.11); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS850\_Edge C\_Mid\_2Tx/Area Scan (61x71x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.114 mW/g

GPRS850\_Edge C\_Mid\_2Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

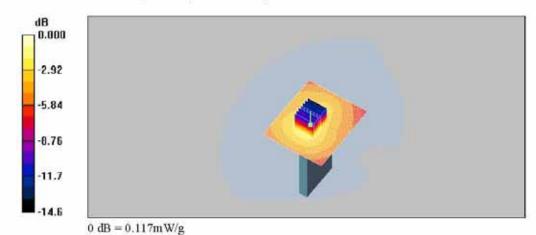
dy=5mm, dz=5mm

Reference Value = 11.0 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 0.239 W/kg

SAR(1 g) = 0.108 mW/g; SAR(10 g) = 0.060 mW/g

Maximum value of SAR (measured) = 0.117 mW/g





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Date: 2011-02-14

Test Laboratory: SGS Testing Korea File Name: GSM850 Body 1Tx Back.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Body

Communication System: GSM850; Frequency: 824.2 MHz;Duty Cycle: 1:8

Medium parameters used (interpolated): f = 824.2 MHz;  $\sigma = 0.954 \text{ mho/m}$ ;  $\varepsilon_r = 53.7$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.11, 6.11, 6.11); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP\_900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS850\_Back\_Low\_1Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.965 mW/g

GPRS850\_Back\_Low\_1Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

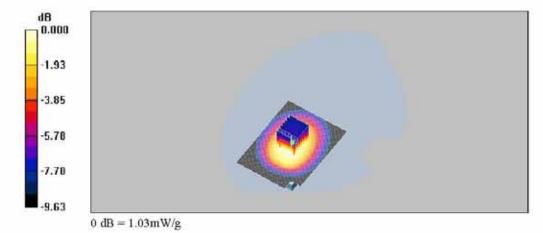
dy=5mm, dz=5mm

Reference Value = 13.3 V/m; Power Drift = 0.019 dB

Peak SAR (extrapolated) = 1.31 W/kg

SAR(1 g) = 0.957 mW/g; SAR(10 g) = 0.678 mW/g

Maximum value of SAR (measured) = 1.03 mW/g





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Date: 2011-02-14

Test Laboratory: SGS Testing Korea File Name: GSM850 Body 1Tx Back.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Body

Communication System: GSM850; Frequency: 836.6 MHz; Duty Cycle: 1:8

Medium parameters used (interpolated): f = 836.6 MHz;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 53.6$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.11, 6.11, 6.11); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS850\_Back\_Mid\_1Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.09 mW/g

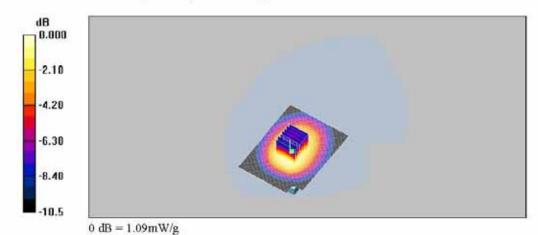
GPRS850\_Back\_Mid\_1Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

Reference Value = 13.6 V/m; Power Drift = 0.043 dB

Peak SAR (extrapolated) = 1.37 W/kg

SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.715 mW/gMaximum value of SAR (measured) = 1.09 mW/g





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Date: 2011-02-14

Test Laboratory: SGS Testing Korea File Name: GSM850 Body 1Tx Back.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Body

Communication System: GSM850; Frequency: 848.8 MHz;Duty Cycle: 1:8

Medium parameters used (interpolated): f = 848.8 MHz;  $\sigma = 0.985 \text{ mho/m}$ ;  $\varepsilon_r = 53.6$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.11, 6.11, 6.11); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS850\_Back\_High\_1Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.30 mW/g

GPRS850\_Back\_High\_1Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

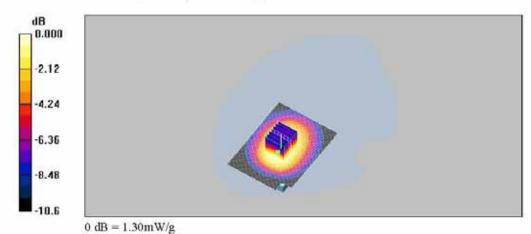
dy=5mm, dz=5mm

Reference Value = 15.0 V/m; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 1.65 W/kg

SAR(1 g) = 1.22 mW/g; SAR(10 g) = 0.853 mW/g

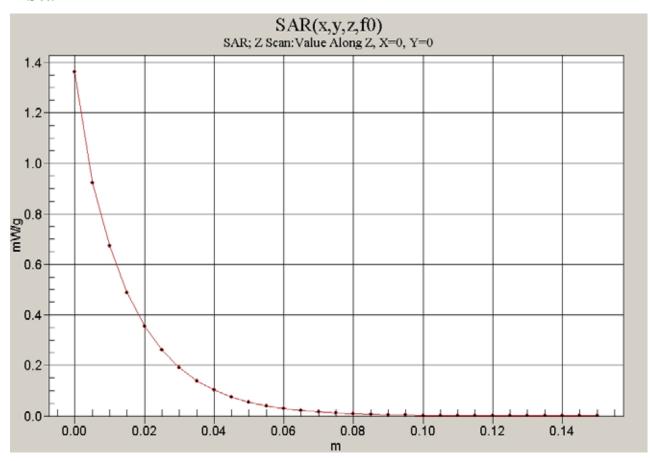
Maximum value of SAR (measured) = 1.30 mW/g





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# Z Scan





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Date: 2011-02-14

Test Laboratory: SGS Testing Korea File Name: GSM850 Body 3Tx Back.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Body

Communication System: GSM850; Frequency: 824.2 MHz; Duty Cycle: 1:2.67

Medium parameters used (interpolated): f = 824.2 MHz;  $\sigma = 0.954 \text{ mho/m}$ ;  $\epsilon_e = 53.7$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.11, 6.11, 6.11); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS850\_Back\_Low\_3Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.873 mW/g

GPRS850\_Back\_Low\_3Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

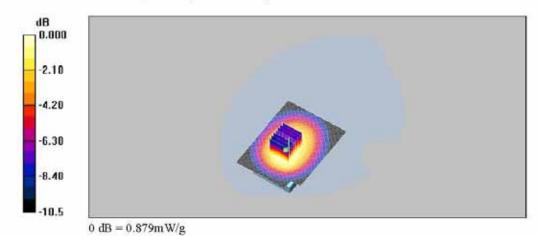
dy=5mm, dz=5mm

Reference Value = 12.4 V/m; Power Drift = 0.018 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.827 mW/g; SAR(10 g) = 0.588 mW/g

Maximum value of SAR (measured) = 0.879 mW/g





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Date: 2011-02-14

Test Laboratory: SGS Testing Korea File Name: GSM850 Body 3Tx Back.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Body

Communication System: GSM850; Frequency: 836.6 MHz; Duty Cycle: 1:2.67

Medium parameters used (interpolated): f = 836.6 MHz;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 53.6$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.11, 6.11, 6.11); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS850\_Back\_Mid\_3Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.930 mW/g

GPRS850 Back Mid 3Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

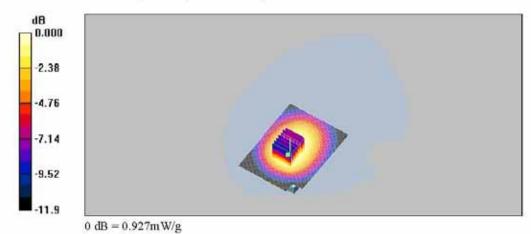
dy=5mm, dz=5mm

Reference Value = 12.8 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 1.16 W/kg

SAR(1 g) = 0.876 mW/g; SAR(10 g) = 0.616 mW/g

Maximum value of SAR (measured) = 0.927 mW/g





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Date: 2011-02-14

Test Laboratory: SGS Testing Korea File Name: GSM850 Body 3Tx Back.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Body

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:2.67

Medium parameters used (interpolated): f = 848.8 MHz;  $\sigma = 0.985 \text{ mho/m}$ ;  $\epsilon_e = 53.6$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.11, 6.11, 6.11); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS850\_Back\_High\_3Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.10 mW/g

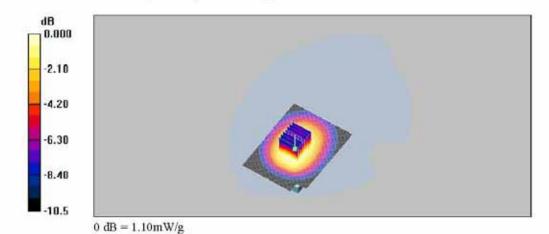
GPRS850\_Back\_High\_3Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

Reference Value = 13.9 V/m; Power Drift = -0.170 dB

Peak SAR (extrapolated) = 1.38 W/kg

SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.721 mW/gMaximum value of SAR (measured) = 1.10 mW/g





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Date: 2011-02-14

Test Laboratory: SGS Testing Korea File Name: GSM850 Body 4Tx Back.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Body

Communication System: GSM850; Frequency: 824.2 MHz;Duty Cycle: 1:2

Medium parameters used (interpolated): f = 824.2 MHz;  $\sigma = 0.954 \text{ mho/m}$ ;  $\varepsilon_r = 53.7$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.11, 6.11, 6.11); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS850\_Back\_Low\_4Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.899 mW/g

GPRS850\_Back\_Low\_4Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

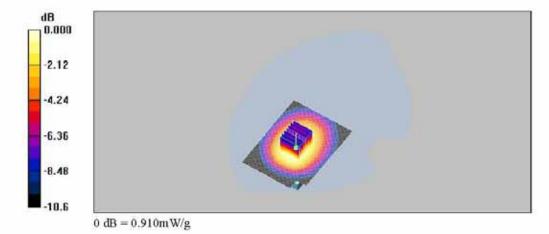
dy=5mm, dz=5mm

Reference Value = 12.7 V/m; Power Drift = 0.039 dB

Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.852 mW/g; SAR(10 g) = 0.606 mW/g

Maximum value of SAR (measured) = 0.910 mW/g





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Date: 2011-02-14

Test Laboratory: SGS Testing Korea File Name: GSM850 Body 4Tx Back.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Body

Communication System: GSM850; Frequency: 836.6 MHz;Duty Cycle: 1:2

Medium parameters used (interpolated): f = 836.6 MHz;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 53.6$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.11, 6.11, 6.11); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS850\_Back\_Mid\_4Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.948 mW/g

GPRS850\_Back\_Mid\_4Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

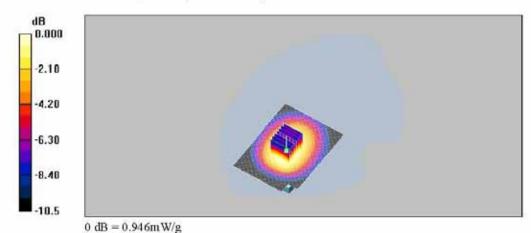
dy=5mm, dz=5mm

Reference Value = 12.9 V/m; Power Drift = -0.004 dB

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.893 mW/g; SAR(10 g) = 0.635 mW/g

Maximum value of SAR (measured) = 0.946 mW/g





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Date: 2011-02-14

Test Laboratory: SGS Testing Korea File Name: GSM850 Body 4Tx Back.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: GSM850\_Body

Communication System: GSM850; Frequency: 848.8 MHz;Duty Cycle: 1:2

Medium parameters used (interpolated): f = 848.8 MHz;  $\sigma = 0.985 \text{ mho/m}$ ;  $\epsilon_r = 53.6$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.11, 6.11, 6.11); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS850\_Back\_High\_4Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.11 mW/g

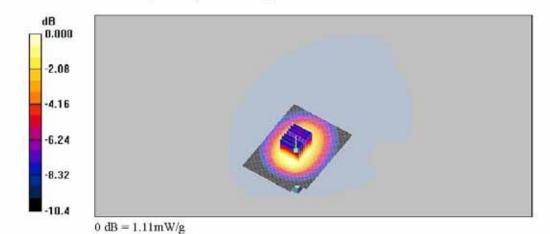
GPRS850\_Back\_High\_4Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

Reference Value = 14.3 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 1.39 W/kg

SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.746 mW/g Maximum value of SAR (measured) = 1.11 mW/g





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### PCS1900 Head SAR Test

Date: 2011-02-12

Test Laboratory: SGS Testing Korea File Name: PCS1900 LE.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Head

Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:8 Medium parameters used: f=1880 MHz;  $\sigma=1.45$  mho/m;  $\epsilon_r=38.6$ ;  $\rho=1000$  kg/m<sup>3</sup>

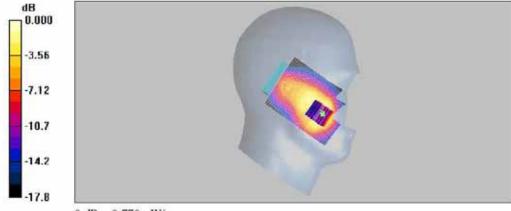
Phantom section: Left Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(5.04, 5.04, 5.04); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

#### LE\_Mid\_Cheek/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.807 mW/g.

LE\_Mid\_Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 9.49 V/m; Power Drift = 0.042 dB Peak SAR (extrapolated) = 1.28 W/kg SAR(1 g) = 0.703 mW/g; SAR(10 g) = 0.366 mW/g Maximum value of SAR (measured) = 0.770 mW/g

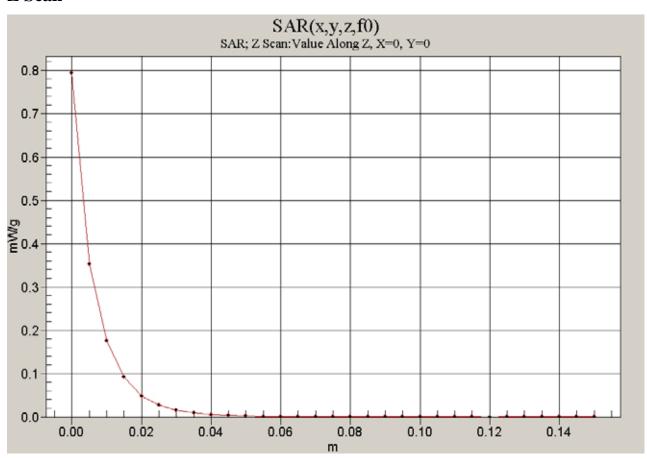


0 dB = 0.770 mW/g



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# Z Scan





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Date: 2011-02-12

Test Laboratory: SGS Testing Korea File Name: PCS1900 LE.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Head

Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:8

Medium parameters used: f = 1880 MHz;  $\sigma = 1.45$  mho/m;  $\epsilon_r = 38.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

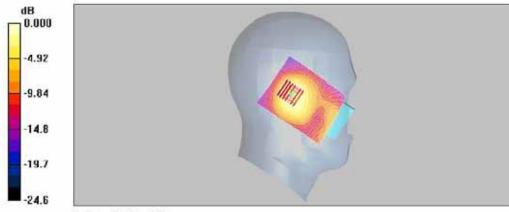
Phantom section: Left Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(5.04, 5.04, 5.04); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

## LE\_Mid\_Tilt/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.314 mW/g

LE\_Mid\_Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 13.6 V/m; Power Drift = -0.070 dB Peak SAR (extrapolated) = 0.453 W/kg SAR(1 g) = 0.262 mW/g; SAR(10 g) = 0.144 mW/g Maximum value of SAR (measured) = 0.285 mW/g



0 dB = 0.285 mW/g



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Date: 2011-02-12

Test Laboratory: SGS Testing Korea File Name: PCS1900 RE.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Head

Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:8

Medium parameters used: f = 1880 MHz;  $\sigma = 1.45 \text{ mho/m}$ ;  $\varepsilon_r = 38.6$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(5.04, 5.04, 5.04); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

RE\_Mid\_Cheek/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.703 mW/g

RE\_Mid\_Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 8.47 V/m; Power Drift = 0.070 dB

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.644 mW/g; SAR(10 g) = 0.339 mW/g Maximum value of SAR (measured) = 0.719 mW/g

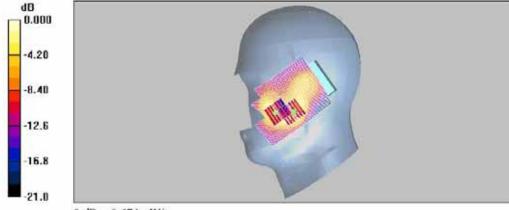
RE\_Mid\_Cheek/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.47 V/m; Power Drift = 0.070 dB

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.599 mW/g; SAR(10 g) = 0.304 mW/g

Maximum value of SAR (measured) = 0.674 mW/g



0 dB = 0.674 mW/g



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Date: 2011-02-12

Test Laboratory: SGS Testing Korea File Name: PCS1900 RE.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Head

Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:8

Medium parameters used: f = 1880 MHz;  $\sigma = 1.45 \text{ mho/m}$ ;  $\varepsilon_r = 38.6$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(5.04, 5.04, 5.04); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

RE\_Mid\_Tilt/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.339 mW/g

RE\_Mid\_Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 14.3 V/m; Power Drift = -0.097 dB Peak SAR (extrapolated) = 0.413 W/kg

SAR(1 g) = 0.265 mW/g; SAR(10 g) = 0.156 mW/gMaximum value of SAR (measured) = 0.291 mW/g

-4.22 -8.44 -12.7 -16.9 -21.1 0 dB = 0.29 lmW/g



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## PCS1900 Body Hotspot SAR Test

Date: 2011-02-11

Test Laboratory: SGS Testing Korea File Name: PCS1900 Body 2Tx Front.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Body

Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:4

Medium parameters used: f = 1880 MHz;  $\sigma = 1.53$  mho/m;  $\epsilon_r = 52.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

## DASY4 Configuration:

Probe: ET3DV6 - SN1782; ConvF(4.46, 4.46, 4.46); Calibrated: 2010-04-28

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS1900\_Front\_Mid\_2Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.706 mW/g

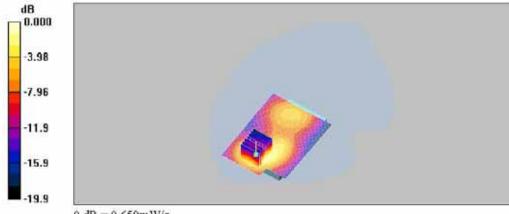
GPRS1900\_Front\_Mid\_2Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

Reference Value = 9.83 V/m; Power Drift = 0.014 dB

Peak SAR (extrapolated) = 0.970 W/kg

SAR(1 g) = 0.600 mW/g; SAR(10 g) = 0.323 mW/g Maximum value of SAR (measured) = 0.659 mW/g



0 dB = 0.659 mW/g



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Date: 2011-02-11

Test Laboratory: SGS Testing Korea File Name: PCS1900 Body 2Tx Back.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Body

Communication System: PCS 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:4

Medium parameters used (interpolated): f = 1850.2 MHz;  $\sigma = 1.5 \text{ mho/m}$ ;  $\epsilon_r = 52.5$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.46, 4.46, 4.46); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS1900\_Back\_Low\_2Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.873 mW/g

GPRS1900\_Back\_Low\_2Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

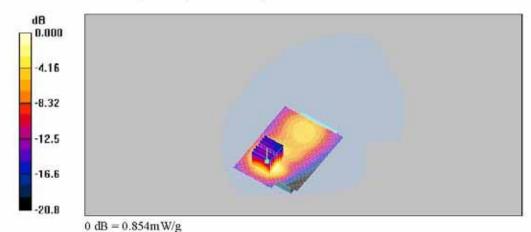
dy=5mm, dz=5mm

Reference Value = 10.7 V/m; Power Drift = -0.050 dB

Peak SAR (extrapolated) = 1.24 W/kg

SAR(1 g) = 0.748 mW/g; SAR(10 g) = 0.392 mW/g

Maximum value of SAR (measured) = 0.854 mW/g





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Date: 2011-02-11

Test Laboratory: SGS Testing Korea File Name: PCS1900 Body 2Tx Back.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Body

Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:4

Medium parameters used: f = 1880 MHz;  $\sigma = 1.53$  mho/m;  $\epsilon_r = 52.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.46, 4.46, 4.46); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS1900\_Back\_Mid\_2Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.08 mW/g

GPRS1900\_Back\_Mid\_2Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

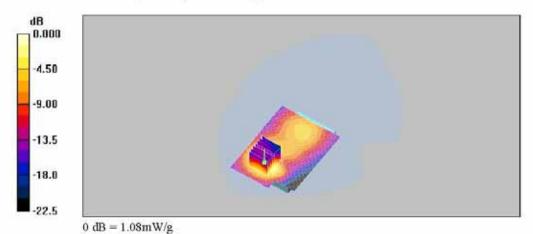
dy=5mm, dz=5mm

Reference Value = 10.9 V/m; Power Drift = -0.073 dB

Peak SAR (extrapolated) = 1.59 W/kg

SAR(1 g) = 0.945 mW/g; SAR(10 g) = 0.488 mW/g

Maximum value of SAR (measured) = 1.08 mW/g





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Date: 2011-02-11

Test Laboratory: SGS Testing Korea File Name: PCS1900 Body 2Tx Back.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Body

Communication System: PCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:4 Medium parameters used: f = 1910 MHz;  $\sigma = 1.57$  mho/m;  $\varepsilon_r = 52.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.46, 4.46, 4.46); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS1900\_Back\_High\_2Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.39 mW/g

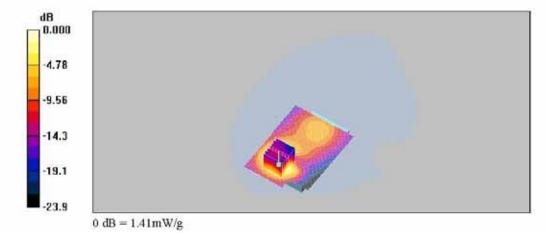
GPRS1900\_Back\_High\_2Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

Reference Value = 10.7 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 2.11 W/kg

SAR(1 g) = 1.24 mW/g; SAR(10 g) = 0.629 mW/g Maximum value of SAR (measured) = 1.41 mW/g





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Date: 2011-02-11

Test Laboratory: SGS Testing Korea

File Name: PCS1900 Body 2Tx Edge A&B.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Body

Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:4

Medium parameters used: f = 1880 MHz;  $\sigma = 1.53$  mho/m;  $\epsilon_r = 52.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.46, 4.46, 4.46); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS1900\_Edge A\_Mid\_2Tx/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.223 mW/g

GPRS1900\_Edge A\_Mid\_2Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

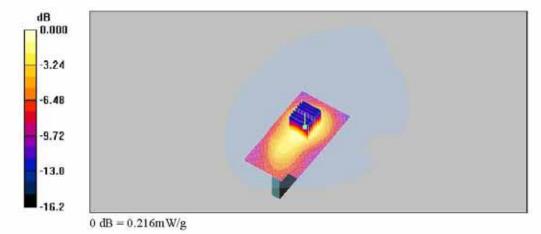
dy=5mm, dz=5mm

Reference Value = 7.82 V/m; Power Drift = 0.004 dB

Peak SAR (extrapolated) = 0.284 W/kg

SAR(1 g) = 0.196 mW/g; SAR(10 g) = 0.119 mW/g

Maximum value of SAR (measured) = 0.216 mW/g





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Date: 2011-02-11

Test Laboratory: SGS Testing Korea

File Name: PCS1900 Body 2Tx Edge A&B.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Body

Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:4

Medium parameters used: f = 1880 MHz;  $\sigma = 1.53$  mho/m;  $\epsilon_r = 52.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.46, 4.46, 4.46); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS1900\_Edge B\_Mid\_2Tx/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.179 mW/g

GPRS1900\_Edge B\_Mid\_2Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

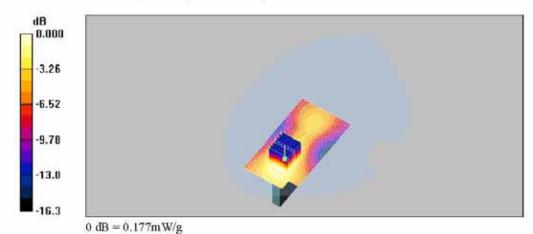
dy=5mm, dz=5mm

Reference Value = 7.60 V/m; Power Drift = -0.033 dB

Peak SAR (extrapolated) = 0.239 W/kg

SAR(1 g) = 0.160 mW/g; SAR(10 g) = 0.094 mW/g

Maximum value of SAR (measured) = 0.177 mW/g





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Date: 2011-02-11

Test Laboratory: SGS Testing Korea

File Name: PCS1900 Body 2Tx Edge C.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Body

Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:4

Medium parameters used: f = 1880 MHz;  $\sigma = 1.53$  mho/m;  $\epsilon_r = 52.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.46, 4.46, 4.46); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS1900\_Edge C\_Mid\_2Tx/Area Scan (51x71x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.819 mW/g

GPRS1900\_Edge C\_Mid\_2Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

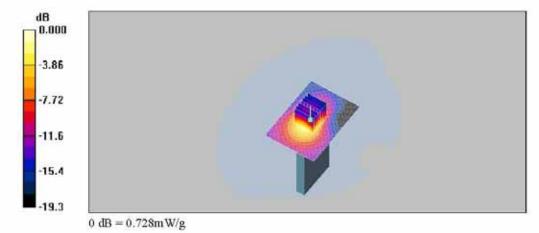
dy=5mm, dz=5mm

Reference Value = 22.9 V/m; Power Drift = -0.092 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.648 mW/g; SAR(10 g) = 0.342 mW/g

Maximum value of SAR (measured) = 0.728 mW/g





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Date: 2011-02-11

Test Laboratory: SGS Testing Korea File Name: PCS1900 Body 1Tx.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Body

Communication System: PCS 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8

Medium parameters used (interpolated): f = 1850.2 MHz;  $\sigma = 1.5 \text{ mho/m}$ ;  $\epsilon_r = 52.5$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.46, 4.46, 4.46); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS1900\_Back\_Low\_1Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.883 mW/g

GPRS1900\_Back\_Low\_1Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

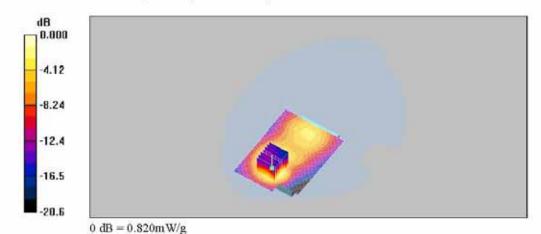
dy=5mm, dz=5mm

Reference Value = 12.1 V/m; Power Drift = -0.042 dB

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.727 mW/g; SAR(10 g) = 0.393 mW/g

Maximum value of SAR (measured) = 0.820 mW/g





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Date: 2011-02-11

Test Laboratory: SGS Testing Korea File Name: PCS1900 Body 1Tx.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Body

Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:8

Medium parameters used: f = 1880 MHz;  $\sigma = 1.53$  mho/m;  $\epsilon_r = 52.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.46, 4.46, 4.46); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS1900\_Back\_Mid\_1Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.20 mW/g

GPRS1900\_Back\_Mid\_1Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

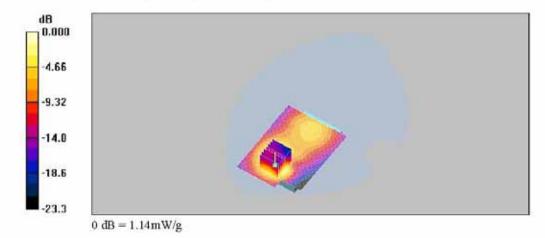
dy=5mm, dz=5mm

Reference Value = 12.0 V/m; Power Drift = 0.017 dB

Peak SAR (extrapolated) = 1.66 W/kg

SAR(1 g) = 0.997 mW/g; SAR(10 g) = 0.517 mW/g

Maximum value of SAR (measured) = 1.14 mW/g





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Date: 2011-02-11

Test Laboratory: SGS Testing Korea File Name: PCS1900 Body 1Tx.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Body

Communication System: PCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8 Medium parameters used: f = 1910 MHz;  $\sigma = 1.57$  mho/m;  $\varepsilon_r = 52.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.46, 4.46, 4.46); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS1900\_Back\_High\_1Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.50 mW/g

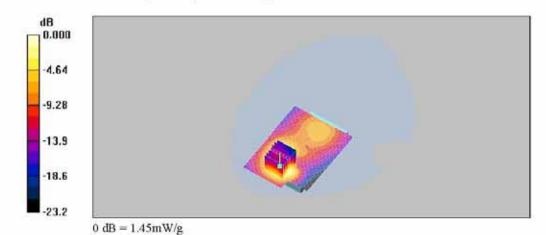
GPRS1900\_Back\_High\_1Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

Reference Value = 11.8 V/m; Power Drift = -0.122 dB

Peak SAR (extrapolated) = 2.12 W/kg

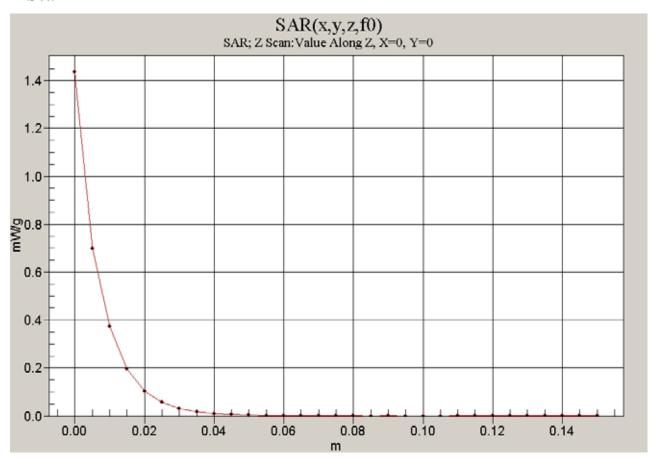
SAR(1 g) = 1.26 mW/g; SAR(10 g) = 0.639 mW/g Maximum value of SAR (measured) = 1.45 mW/g





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# Z Scan





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Date: 2011-02-11

Test Laboratory: SGS Testing Korea File Name: PCS1900 Body 3Tx.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Body

Communication System: PCS 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:2.67

Medium parameters used (interpolated): f = 1850.2 MHz;  $\sigma = 1.5 \text{ mho/m}$ ;  $\epsilon_r = 52.5$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.46, 4.46, 4.46); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS1900\_Back\_Low\_3Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.835 mW/g

GPRS1900\_Back\_Low\_3Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

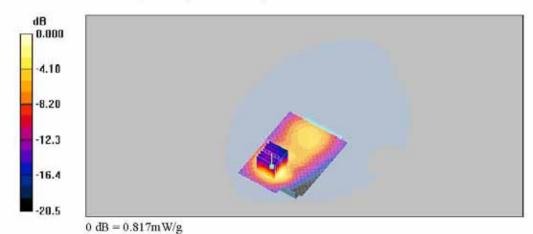
dy=5mm, dz=5mm

Reference Value = 10.5 V/m; Power Drift = 0.012 dB

Peak SAR (extrapolated) = 1.18 W/kg

SAR(1 g) = 0.720 mW/g; SAR(10 g) = 0.380 mW/g

Maximum value of SAR (measured) = 0.817 mW/g





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Date: 2011-02-11

Test Laboratory: SGS Testing Korea File Name: PCS1900 Body 3Tx.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Body

Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:2.67 Medium parameters used: f = 1880 MHz;  $\sigma = 1.53$  mho/m;  $\varepsilon_r = 52.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.46, 4.46, 4.46); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS1900\_Back\_Mid\_3Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.06 mW/g

GPRS1900\_Back\_Mid\_3Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

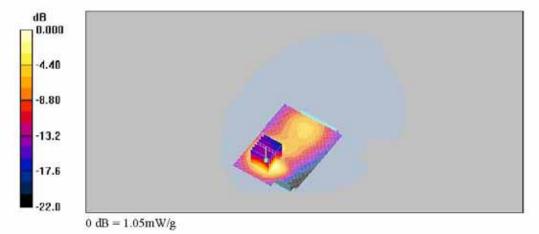
dy=5mm, dz=5mm

Reference Value = 10.7 V/m; Power Drift = -0.041 dB

Peak SAR (extrapolated) = 1.54 W/kg

SAR(1 g) = 0.923 mW/g; SAR(10 g) = 0.478 mW/g

Maximum value of SAR (measured) = 1.05 mW/g





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Date: 2011-02-11

Test Laboratory: SGS Testing Korea File Name: PCS1900 Body 3Tx.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Body

Communication System: PCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:2.67 Medium parameters used: f = 1910 MHz;  $\sigma = 1.57$  mho/m;  $\varepsilon_r = 52.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.46, 4.46, 4.46); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS1900\_Back\_High\_3Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.36 mW/g

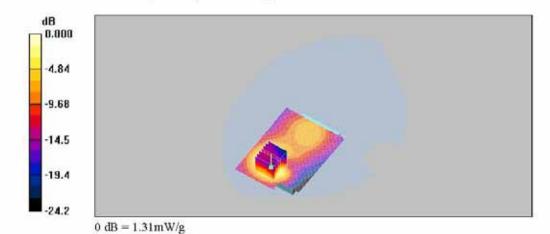
GPRS1900\_Back\_High\_3Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

Reference Value = 10.6 V/m; Power Drift = -0.059 dB

Peak SAR (extrapolated) = 1.97 W/kg

SAR(1 g) = 1.17 mW/g; SAR(10 g) = 0.598 mW/g Maximum value of SAR (measured) = 1.31 mW/g





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Date: 2011-02-11

Test Laboratory: SGS Testing Korea File Name: PCS1900 Body 4Tx.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Body

Communication System: PCS 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:2

Medium parameters used (interpolated): f = 1850.2 MHz;  $\sigma = 1.5 \text{ mho/m}$ ;  $\epsilon_r = 52.5$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.46, 4.46, 4.46); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS1900\_Back\_Low\_4Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.865 mW/g

GPRS1900\_Back\_Low\_4Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

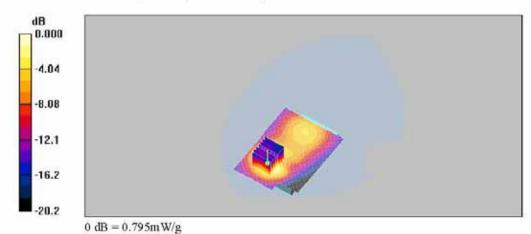
dy=5mm, dz=5mm

Reference Value = 10.7 V/m; Power Drift = -0.093 dB

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.713 mW/g; SAR(10 g) = 0.378 mW/g

Maximum value of SAR (measured) = 0.795 mW/g





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Date: 2011-02-11

Test Laboratory: SGS Testing Korea File Name: PCS1900 Body 4Tx.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Body

Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:2

Medium parameters used: f = 1880 MHz;  $\sigma = 1.53$  mho/m;  $\epsilon_r = 52.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.46, 4.46, 4.46); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS1900\_Back\_Mid\_4Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.12 mW/g

GPR\$1900 Back Mid 4Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

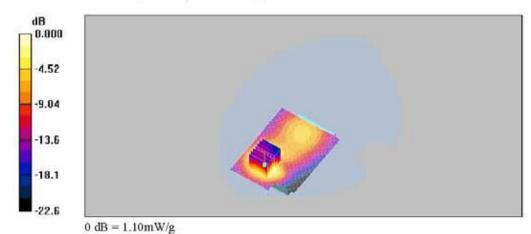
dy=5mm, dz=5mm

Reference Value = 11.0 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 1.62 W/kg

SAR(1 g) = 0.968 mW/g; SAR(10 g) = 0.500 mW/g

Maximum value of SAR (measured) = 1.10 mW/g





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Date: 2011-02-11

Test Laboratory: SGS Testing Korea File Name: PCS1900 Body 4Tx.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: PCS1900\_Body

Communication System: PCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:2 Medium parameters used: f = 1910 MHz;  $\sigma = 1.57$  mho/m;  $\varepsilon_r = 52.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(4.46, 4.46, 4.46); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP; Type: SAM MIC #2000-93; Serial: TP-1299
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

GPRS1900\_Back\_High\_4Tx/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.47 mW/g

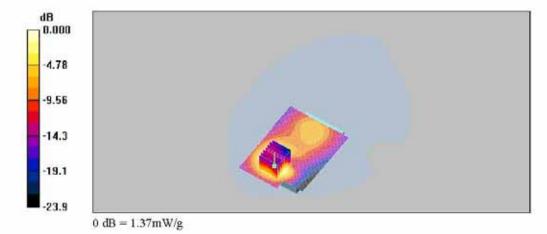
GPRS1900\_Back\_High\_4Tx/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

Reference Value = 10.8 V/m; Power Drift = -0.125 dB

Peak SAR (extrapolated) = 1.99 W/kg

SAR(1 g) = 1.22 mW/g; SAR(10 g) = 0.625 mW/gMaximum value of SAR (measured) = 1.37 mW/g





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## WCDMA V Head SAR Test

Date: 2011-02-13

Test Laboratory: SGS Testing Korea File Name: WCDMA V LE.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: WCDMA V\_Head

Communication System: WCDMA V; Frequency: 826.4 MHz;Duty Cycle: 1:1 Medium parameters used: f = 826.5 MHz;  $\sigma = 0.873$  mho/m;  $\epsilon_r = 42.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.26, 6.26, 6.26); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP\_900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

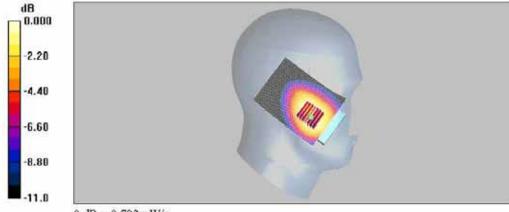
WCDMA V\_LE\_Low\_Cheek/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.795 mW/g

WCDMA V\_LE\_Low\_Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.8 V/m; Power Drift = 0.166 dB

Peak SAR (extrapolated) = 1.04 W/kg

SAR(1 g) = 0.747 mW/g; SAR(10 g) = 0.534 mW/g Maximum value of SAR (measured) = 0.793 mW/g



0 dB = 0.793 mW/g



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Date: 2011-02-13

Test Laboratory: SGS Testing Korea File Name: WCDMA V LE.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: WCDMA V\_Head

Communication System: WCDMA V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): f = 836.6 MHz;  $\sigma = 0.895 \text{ mho/m}$ ;  $\epsilon_e = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.26, 6.26, 6.26); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WCDMA V\_LE\_Mid\_Cheek/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.918 mW/g

WCDMA V\_LE\_Mid\_Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

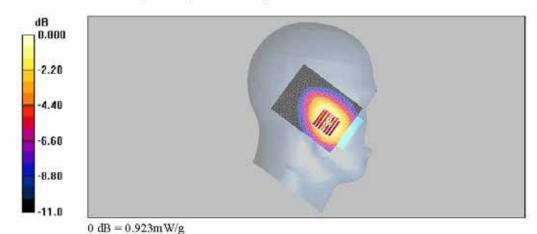
dy=5mm, dz=5mm

Reference Value = 12.7 V/m; Power Drift = -0.123 dB

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.865 mW/g; SAR(10 g) = 0.616 mW/g

Maximum value of SAR (measured) = 0.923 mW/g





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Date: 2011-02-13

Test Laboratory: SGS Testing Korea File Name: WCDMA V LE.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: WCDMA V\_Head

Communication System: WCDMA V; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): f = 846.6 MHz;  $\sigma = 0.917 \text{ mho/m}$ ;  $\varepsilon_e = 42.8$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.26, 6.26, 6.26); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WCDMA V\_LE\_High\_Cheek/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.06 mW/g

WCDMA V\_LE\_High\_Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

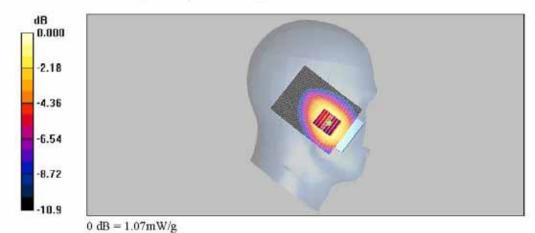
dy=5mm, dz=5mm

Reference Value = 13.2 V/m; Power Drift = -0.074 dB

Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 1.000 mW/g; SAR(10 g) = 0.711 mW/g

Maximum value of SAR (measured) = 1.07 mW/g





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Date: 2011-02-13

Test Laboratory: SGS Testing Korea File Name: WCDMA V LE.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: WCDMA V\_Head

Communication System: WCDMA V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): f = 836.6 MHz;  $\sigma = 0.895 \text{ mho/m}$ ;  $\epsilon_e = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Left Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.26, 6.26, 6.26); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WCDMA V\_LE\_Mid\_Tilt/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.450 mW/g

WCDMA V\_LE\_Mid\_Tilt/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

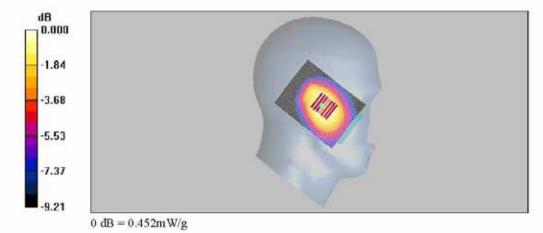
dy=5mm, dz=5mm

Reference Value = 15.6 V/m; Power Drift = -0.050 dB

Peak SAR (extrapolated) = 0.539 W/kg

SAR(1 g) = 0.423 mW/g; SAR(10 g) = 0.311 mW/g

Maximum value of SAR (measured) = 0.452 mW/g





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Date: 2011-02-13

Test Laboratory: SGS Testing Korea File Name: WCDMA V RE.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: WCDMA V\_Head

Communication System: WCDMA V; Frequency: 826.4 MHz;Duty Cycle: 1:1

Medium parameters used: f = 826.5 MHz;  $\sigma = 0.873 \text{ mho/m}$ ;  $\varepsilon_r = 42.8$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.26, 6.26, 6.26); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WCDMA V\_RE\_Low\_Cheek/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.819 mW/g

WCDMA V\_RE\_Low\_Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

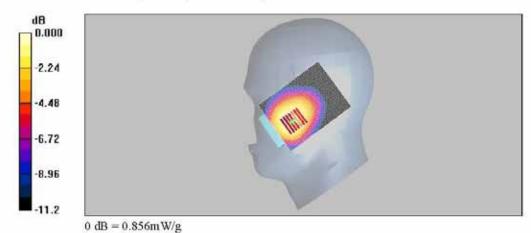
dy=5mm, dz=5mm

Reference Value = 12.3 V/m; Power Drift = -0.068 dB

Peak SAR (extrapolated) = 1.02 W/kg

SAR(1 g) = 0.798 mW/g; SAR(10 g) = 0.573 mW/g

Maximum value of SAR (measured) = 0.856 mW/g





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Date: 2011-02-13

Test Laboratory: SGS Testing Korea File Name: WCDMA V RE.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: WCDMA V\_Head

Communication System: WCDMA V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): f = 836.6 MHz;  $\sigma = 0.895 \text{ mho/m}$ ;  $\epsilon_e = 42.7$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.26, 6.26, 6.26); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WCDMA V\_RE\_Mid\_Cheek/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.877 mW/g

WCDMA V\_RE\_Mid\_Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

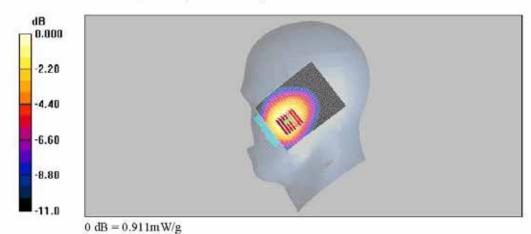
dy=5mm, dz=5mm

Reference Value = 11.3 V/m; Power Drift = -0.039 dB

Peak SAR (extrapolated) = 1.08 W/kg

SAR(1 g) = 0.857 mW/g; SAR(10 g) = 0.618 mW/g

Maximum value of SAR (measured) = 0.911 mW/g





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Date: 2011-02-13

Test Laboratory: SGS Testing Korea File Name: WCDMA V RE.da4

DUT: LG-P350f; Type: Mobile Phone; Serial: 101KPTM000353

Program Name: WCDMA V\_Head

Communication System: WCDMA V; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): f = 846.6 MHz;  $\sigma = 0.917 \text{ mho/m}$ ;  $\epsilon_r = 42.8$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

## DASY4 Configuration:

- Probe: ET3DV6 SN1782; ConvF(6.26, 6.26, 6.26); Calibrated: 2010-04-28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM MIC #2000-93 with CRP 900MHz; Type: SAM MIC #2000-93; Serial: TP-1300
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WCDMA V\_RE\_High\_Cheek/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.05 mW/g

WCDMA V\_RE\_High\_Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

Reference Value = 13.6 V/m; Power Drift = -0.176 dB

Peak SAR (extrapolated) = 1.31 W/kg

SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.721 mW/gMaximum value of SAR (measured) = 1.08 mW/g

